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WILLIAM DARITY Editor in Chief

International Encyclopedia of the Social Sciences, 2nd edition

International Encyclopedia of the Social Sciences, 2nd edition

VOLUME 1

ABORTION–COGNITIVE DISSONANCE

William A. Darity Jr.
EDITOR IN CHIEF

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International Encyclopedia of the Social Sciences, 2nd edition

William A. Darity Jr., Editor in Chief

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Introduction

Late in 2004 I received a telephone call from Hélène Potter, director of new product development for Macmillan Reference USA—an imprint of Gale. I did not realize immediately that it was *the* telephone call that would shape a large share of my intellectual activity for the next three years. In fact, I recall hearing about a new edition of the *International Encyclopedia of the Social Sciences (IESS)*, but I was wholly unclear about what was being asked of me. I asked Hélène, "So what exactly is it you want me to do? Prepare an article or two for the new edition?" Her response was, "No, no. We would like you to serve as editor of the new encyclopedia." While vaguely glimpsing the labor that would be required to pull this off properly, but also realizing the importance of the project, I agreed.

I was aware of both the 1930–1935 *Encyclopaedia of the Social Sciences*, edited by E. R. A. Seligman and Alvin Johnson, and Macmillan's 1968 *International Encyclopedia of the Social Sciences*, edited by David L. Sills, not only as key reference works of continuing value but also as vital expressions of the state of the social sciences (and the sociology of the social science community) at their respective historical moments. It would be an honor and a unique opportunity to play a key role in the development of the new encyclopedia that would assess the scope of the social sciences at the start of the twenty-first century.

From the outset, the decision was made to commission an entirely new set of articles for the second edition of *IESS*; no articles on overlapping topics from the previous edition would be reproduced in part or in whole. Instead, we would seek new voices and fresh perspectives for all of the entries. In fact, a few contributors even chose to make observations about entries from the previous edition in their articles.

The vision in assembling the new edition was to achieve comprehensiveness in coverage, to identify authors who would give their articles a critical edge and minimize hagiographic treatment of the leading figures in the fields represented, and to produce a set of volumes in which contested intellectual cum ideological terrain is openly and honestly explored. Indeed, the new edition includes a variety of entries related to the philosophy of science that call into question what makes the study of the human "social" a "science" in the first place. Is it a matter of a particular set of practices, that is, variations on the "scientific method"? Is it a perspective or point of view that guides inquiry, that is, a detachment from practical or applied aims or a putative "objectivity"? Or is it something else altogether?

WHAT'S NEW IN THE NEW EDITION

The new edition reflects the impact of the rise of critical theory in its postmodernist forms on the social sciences, especially in the arenas of cultural anthropology, qualitative sociology, and methodology. Simultaneously, it includes the most sophisticated theoretical reaction to those developments—the reaction that has sublated those developments by challenging the nihilistic thrust of postmodernism—in the form of realist theory; the latter is not to be confused with "realism" or "realpolitik." The new edition incorporates transformative developments in the social sciences: the routinization of the use of applied statistics and mathematical modeling in economics, psychology, and sociology; the rise of cultural studies, including the study of popular culture; the exploration of race, ethnicity, phenotype, and identity across the social sciences; the emergence of gender studies and women's studies; the "coming out" of queer studies; the study of memory as something far more than a biomechanical act; and the recent construction and development of concepts like "the other," Orientalism, causality, postcolonialism, the clash of civilizations, the gaze, marginalization, occupational crowding, generation X, and gentrification.

In addition, the new edition embodies the changing demographics of the academy. The 1968 *IESS* had an editorial advisory board consisting of more than 120 members. This was a highly distinguished group of scholars, a number of whom are profiled with biographical entries in the current *IESS*: Gordon Allport, Gabriel Almond, Kenneth B. Clark, Erik Erikson, E. E. Evans-Pritchard, E. Franklin Frazier, Morris Janowitz, Harold Lasswell, Paul Lazarsfeld, Claude Lévi-Strauss, W. Arthur Lewis, Margaret Mead, Robert K. Merton, Gunnar Myrdal, Talcott Parsons, Don Patinkin, Jean Piaget, Paul Samuelson, Herbert Simon, George Stigler, and Jan Tinbergen. Lewis, Samuelson, Simon, Stigler, and Tinbergen all became Nobel laureates in economics. But I count only three women—Mead, Hanna Rizk at the American University in Cairo, and Monica Wilson at the University of Cape Town—out of all of the members of the editorial advisory board.

By the late 1960s, the social sciences remained an overwhelmingly male preserve. Nevertheless, I was startled to find Alvin Johnson making the following remarks in his foreword to the 1968 *IESS* when discussing the genesis of the earlier *Encyclopaedia of the Social Sciences:*

> It was not unnatural that Professor Seligman should ask me to examine the great commission he had undertaken as editor of the *Encyclopaedia of the Social Sciences*. He unfolded his plan—himself as editor, an associate editor, a copy editor (probably a depressed lady scholar), three or four secretaries, and a far-flung farming out of articles.
>
> I loved E.R.A., and I hated to throw cold water on his ideas, but I had to say that this is no way to make a real encyclopedia. In the first place, articles should not be farmed out. Every article should be assigned to the man who is to sign it.

I was particularly startled by Johnson's casual reference to "a depressed lady scholar"—who, if actually depressed, probably became so because of the professional discrimination she faced that assigned her to a position lower than the one she deserved—and the ease with which the assumption was made that the authors of articles would be men. Although we have not yet attained gender equity in the academy—indeed, it was still possible in 2005 to publish a volume titled *The Origins of Law and Economics: Essays by the Founding Fathers*—the current edition of *IESS* is richly alert to the contributions of female scholars in the social sciences.

We are much further from achieving racial equity in the academy, but, arguably, black scholars have made contributions that are disproportionate to their numerical presence in the social sciences. I believe those contributions are fully evident in the current *IESS* as well. Contributions from scholars from marginalized groups—the 1968 editorial advisory board included, at most, five black scholars—appear in the new edition through the regular process of identifying important developments in the social sciences. Their work is so central to ongoing scholarship across the social sciences that it can no longer be ignored, dismissed, or hidden from view.

EXPERT KNOWLEDGE, DEMOCRACY, AND THE ENCYCLOPEDIA

In his introduction to the 1968 edition, David Sills commented on:

> [The] extent to which the social sciences have permeated society itself. It is not just that the vocabulary of the social sciences has infiltrated everyday speech, although it is common for persons with no formal training in the social sciences to use such terms as IQ, subculture, power structure, GNP, and the unconscious in their daily conversation. More important, many people today perceive the world differently because they have been exposed to the perspective of the social sciences; they raise their children differently; they have different attitudes toward government borrowing and spending; they make different judgments of their friends, neighbors, and family members; they view both local and national politics differently; they place a different and more sympathetic interpretation upon the guilt of criminals, drug addicts, and deviants of all kinds; and they make different judgments of their own successes and failures.

Sills's observation is profound. Even on the narrower terrain of vocabulary, the array of terms and phrases that have migrated from the social sciences into popular discourse goes far beyond the brief list he offers: antisocial behavior, self-esteem, Type A or Type B personality, withdrawal symptoms, fixation, penis envy, anorexia, peer pressure, peer culture, inferiority complex, role model, sexual orientation, dysfunctional behavior, introvert and extrovert, conventional wisdom, permissiveness, schizo, hyper, klepto, self-fulfilling prophecy, interest groups, trickle-down, zero-sum game, karma, tough love, self-confidence, behavioral modification, catharsis, sociopath, phallic symbol, phobia, post-traumatic stress disorder, hallucination, blind spot, enabler, codependency, separation anxiety, Oedipus complex, passive-aggressive behavior, cognitive dissonance, obsessive-compulsive disorder (OCD), extrasensory perception (ESP), split personality, upward mobility, attention deficit disorder (ADD), narcissism, pathological liar, critical-thinking skills, déjà vu, closure, positive reinforcement, cultural norms, gender bias.

When concepts migrate they frequently undergo some change in meaning from the body of scholarship where they originated, and they may return to the social sciences under modified guise to be used by a new wave of scholars in a different way. Thus, there is an interdependence between "the experts'" culture and "the people's" culture, a reciprocity that results in the reshaping of both as they interact. Indeed, we now have "the people's" encyclopedia in the form of the online Wikipedia.

While I admire the democratizing aims of Wikipedia, *IESS* is a very different type of project—more informed by attachment to "the experts'" culture. We sought authors for the entries in the new edition who are specialists on the topics about which they were asked to write. In addition, we asked them to write in a style that will be accessible to a general audience, a readership of nonspecialists. That aim largely has been accomplished, with the exception of some of the articles that are devoted to more detailed, technical aspects of statistics and econometrics.

The entries in the second edition of *IESS* are final versions of the articles, and each is signed by its author or authors. We know who is responsible for what has been said; we know precisely who is responsible for arriving at a specific conclusion about a major controversy in the social sciences. Wikipedia has the advantage of having no deadlines (and no final versions since articles can be edited and updated indefinitely) and no limits to the topics that can be covered. It is not a social sciences encyclopedia per se—it is an encyclopedia of all human knowledge; even if it were a social sciences encyclopedia, there would be no boundaries on topics for consideration. My central complaint is the anonymity of authorship, which eliminates the ability to situate the perspective, the context, and possibly the motivation for the position taken by the author. It also eliminates the reader's ability to assess whether the author really does possess sound knowledge about the topic.

Each summer I serve as an advisor to a group of talented students from schools across the United States who participate in the Moore Undergraduate Research Apprentice Pro-

gram at the University of North Carolina at Chapel Hill, a ten-week summer program where students tackle graduate-school-quality research projects of their own design. During the summer of 2007, I advised four students: Angela Perez, who worked on a project on black-Latino relations in post-Katrina New Orleans; Cory Edmonds, who did a critical examination of the *A Better Chance* program; Parfait Gasana, who did fresh work on James Duesenberry's relative-income hypothesis in the context of consumerism literature; and Charnell Covert, who examined Zora Neale Hurston's short stories. While Charnell was engaged in her project, we both took a look at the Wikipedia entry (last modified on August 31, 2007) on Hurston and discovered the following provocative passage:

> During her prime, Hurston was a bootstrap Republican and fan of Booker T. Washington's self-help and accommodationist politics. She was opposed to the collectivist visions (including communism) professed by many of her colleagues in the Harlem Renaissance, such as Langston Hughes, who wrote several poems in praise of the Soviet Union. Hurston thus became the leading black figure on the conservative Old Right, and in 1952 she actively promoted the presidential candidacy of Robert Taft, who was, like Hurston, opposed to integration.
>
> Hurston opposed the Supreme Court ruling in the *Brown v. Board of Education* case of 1954. She felt the physical closeness of blacks to whites was not going to be the salvation her people hoped for, as she herself had had many experiences to the contrary. And she worried about the demise of black schools and black teachers as a way to pass on cultural tradition to future generations of African-Americans. She voiced this opposition in a letter, *Court Order Can't Make the Races Mix*.

The article then refers the reader to LewRockwell.com and the Marcus Epstein archives, where Hurston's August 1955 letter to the *Orlando Sentinel* is reproduced.

Several questions arose for us: Was Hurston in fact a doyenne of the Old Right? Was she an antigovernment libertarian? Was she consistently hostile toward the New Deal in the United States, socialism in general, or the Soviet Union in particular? Were the issues she raised in her letter different or any less reasonable than those raised by W. E. B. Du Bois twenty years earlier in an essay called "Does the Negro Need Separate Schools?" published in the *Journal of Negro Education*? Or was the problem in Hurston's case the sheer timing of her letter, coming immediately on the heels of the *Brown* decision? Who wrote this passage anyway? Was it Marcus Epstein? And, if so, who wrote the rest of the article on Hurston?

In contrast, consider the entry on Hurston in the current *IESS* by anthropologist Irma McClaurin. Most of the article is devoted to Hurston's role as folklorist and ethnologist of African American and southern culture. McClaurin does not take a fixed position on Hurston's politico-ideological orientation because, from McClaurin's perspective, that is a question that remains unresolved on the basis of the available evidence.

Closer in intent and philosophy to the second *IESS* is the *International Encyclopedia of the Social and Behavioral Sciences* (2001) edited by Neil Smelser and Paul Baltes. This extensive, high-quality reference work also is predicated on "the experts'" culture dictating the content of the encyclopedia. One difference between *IESS* and the Smelser-Baltes encyclopedia is that the authors who contributed to the *IESS* were actively encouraged to highlight central fissures, disagreements, and controversies that have arisen in the social sciences, including disputes that have arisen over the interpretation of important historical figures' lives and the interpretation of important historical events. There is a difference, then, in perspective and content.

There is also a difference between *IESS* and the Smelser-Baltes encyclopedia in the range of topics treated. The new edition of *IESS* allots greater emphasis to the impact of critical theory, cultural studies, and the mathematicization of empirical research on the social sciences. This leads, in turn, to a remarkably eclectic mix of articles in *IESS* that ranges from Logistic Regression to Racial Slurs to Hip Hop to Cholesky Decomposition to the Linguistic Turn to Fixed Effects Regression to Labeling Theory to the *Wizard of Oz*.

THE COMMUNITY OF CONTRIBUTORS TO THE SECOND *IESS*

There are more than 2,100 (nonanonymous) authors of close to 3,000 entries for the new edition of *IESS*. And what an impressive array of scholars have written the articles! Economics Nobel laureates Paul Samuelson and Robert Solow unknowingly wrote biographies on one another. Solow also wrote the biography on Nobel laureate Lawrence Klein, who, in turn, wrote the biographies on Nobel laureates Ragnar Frisch and Jan Tinbergen. Klein is one of a small number of distinguished scholars who contributed articles to both the previous edition of *IESS* and the new edition. The others include Terry N. Clark, Philip E. Converse, Richard G. Lipsey, Stanley G. Payne, Thomas F. Pettigrew, and Edward A. Tiryakian.

The close relationship between expertise, authoritativeness, and authorship in the second *IESS* is well illustrated by a slight sample: James Flynn (and there is a separate entry on the Flynn Effect by Matthew Scullin) writes about the IQ controversy, Kay Schlozman writes about political inequality, Burton Malkiel writes about the random walk, Jerry Hausman and Hal White write about Hausman tests, Joseph Inikori writes about the slave-gun cycle that emerged during the course of the Atlantic slave trade, Carol Graham writes about research on happiness, Jonathan Boyarin writes about the history of Jewish peoples, Faye Harrison writes about race and the field of anthropology, and Gananath Obeyesekere writes about reincarnation. This is only a tiny subset of the luminaries who wrote articles for the new edition of the *International Encyclopedia of the Social Sciences*. Numerous authors wrote multiple articles. Those who contributed ten or more entries include David Embrick, Mathew Forstater, Galina Hale, Dudley Poston Jr., Lall Ramrattan, Sean Savage, Michael Szenberg, Bryan S. Turner, and Rossen Vassilev. Without their extraordinary efforts the new edition would not have the depth and quality that it enjoys.

Because of deadlines, limitations on space, and the inability to find authors for every topic that the editorial team deemed worthy of coverage, there are some omissions from the current *IESS*. While, typically, the following scholars make appearances throughout the articles in the new edition, it would have been desirable to have full biographical articles on: Arjun Appadurai, Ruth Behar, David Blackwell, E. A. Boateng, Kenneth Boulding, Hollis Chenery, James S. Coleman, Philip Converse, Louis Dumont, Richard Easterlin, Alvin Gouldner, Harold Hotelling, Nicholas Kaldor, Simon Kuznets, Jacques Lacan, Steven Lukes, Mahmood Mamdani, Robert C. Merton, Daniel Pipes, Myron Scholes, Henri Theil, James Q. Wilson, and Harriet Zuckerman. *IESS* also could have benefited from separate entries on such topics as cultural determinism, reality television, the punk rock movement, and Harry Potter, as well as entries that directly explored the spectacular rise of Jewish scholars in the American and British universities from the 1930s onward and the persistent exclusion of women from the mathematical and statistical sciences.

Those omissions aside, I find myself astonished at the magnitude of the material that is covered—and covered at such a high level of quality—in the current *IESS*. For this to occur, the new edition required a fantastic team of associate editors, who are major scholars in the social sciences in their own right, and an outstanding editorial staff at Macmillan/Gale. I had the great fortune to have the following persons consent to serve as associate editors: Eduardo Bonilla-Silva (sociology), Philip Costanzo (psychology), Patrick Mason (economics), Paula McClain (political science), Donald Nonini (anthropology), David Scott (anthropology), and Theresa Singleton (anthropology). They, in turn, brought on board a trio of consulting editors who made signal contributions to the completion of the encyclopedia: David Dietrich (sociology), J. Alan Kendrick (political science), and Ley Killeya-Jones (psychology). I also wish to extend a special thanks to Robert Dimand and Michael S. Lawlor for suggesting fine author candidates for a number of important economics articles.

While Hélène Potter maintained supportive and wise supervision of the process, I must give special mention to the efforts of Alan Hedblad and Shawn Corridor at Macmillan in bringing the new edition to fruition. Alan, in particular, worked to the finish on the encyclopedia, guiding the process of communication with the authors of the articles (the authors

are the lifeblood of any encyclopedia), managing deadlines, identifying the shifting priorities in tasks to be accomplished, and generally maintaining good spirits in the midst of a high-pressure production with hard deadlines.

I also thank my wife, Kirsten Mullen, and my sons, Aden Darity (who contributed the article *Bamboozled* to the new edition) and William O. Darity, for their love and support during the long process of preparing *IESS*. They shepherded me through recovery from major surgery in the fall of 2005 when, I suspect, the staff at Macmillan was probably concerned that they might actually lose an editor. Kirsten, a folklorist, occasionally made great suggestions about potential contributors and articles, and she helped me assemble the list of terms that have made their way from academic social science into popular discourse.

This has been an adventure of the mind and spirit. I hope that readers of the encyclopedia will find in it the value that those of us who have worked on the set have seen in it during the act of preparation.

William A. Darity Jr.
Duke University, September 5, 2007

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Thematic Outline

The following classification of articles, arranged thematically, gives an overview of the variety of entries and the breadth of subjects treated in the encyclopedia. Along with the index in volume 9 and the alphabetical arrangement of all entries, the thematic outline should aid in the location of topics. Ideally, this feature will facilitate a kind of browsing that invites the reader to discover additional articles, related perhaps tangentially to those originally sought. Because the rubrics used as section headings are not mutually exclusive, certain entries in the Encyclopedia are listed in more than one section below.

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Darwin, Charles
Diop, Cheikh Anta
Dobzhansky, Theodosius
Evans-Pritchard, E. E.
Geertz, Clifford
Herskovits, Melville J.
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Leakey, Richard
Lewis, Oscar
Lowie, Robert
Malinowski, Bronislaw
Mead, Margaret
Mintz, Sidney W.
Montagu, Ashley

Ogbu, John U.
Ortiz, Fernando
Radcliffe-Brown, A. R.
Sahlins, Marshall
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Schliemann, Heinrich
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Hall, Staurt
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Jencks, Christopher
Kariel, Henry S.
Le Guin, Ursula K.
Leary, Timothy
Lynd, Staughton
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ECONOMICS

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Clark, Kenneth B.
Coase, Ronald
Gandhi, Mohandas K.
Hicks, John R.
Hoover, J. Edgar
Houston, Charles Hamilton
Levi-Strauss, Claude
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SEE *Intelligence.*

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ABORTION

Induced abortion, in contrast to spontaneous abortion, is the deliberate termination of an established pregnancy. Induced abortion is a universal phenomenon, present in every known culture—literate or preliterate, primitive or modern. What has differed has been the safety of the methods used; how widespread the practice has been, especially relative to contraception and infanticide; and the role of church and state.

Induced abortion was certainly practiced in ancient societies. The oldest known recipe for abortifacients comes from an ancient Egyptian papyrus dating back to 1550 BCE, which lists substances that terminate pregnancy in the first, second, and third trimesters. Ancient Greeks also used herbal abortifacients, including silphium (a giant fennel), pennyroyal, and myrrh; modern analyses suggest that many of these were effective. Abortion was common in both ancient Greece and Rome, although not nearly as widespread as infanticide. The timing of animation or ensoulment was of great interest to Greek philosophers. Aristotle (384–322 BCE) hypothesized that the fetus had a succession of souls: vegetable, animal, and rational. He also believed that animation occurred in the male fetus forty days after conception and in the female fetus after eighty days. Among Romans, the prevailing view was that the fetus became a person, an entity with a soul, only at the time it began to breathe.

Abortion practices varied widely among early Christians, who generally believed that fetuses did not have a soul until sometime after conception. Saint Augustine (354–430 CE) accepted Aristotle's theory of delayed animation of the female fetus and contributed his own description of fetal development: the first six days in milky form, nine more days for it to turn to blood, twelve days for the mass of blood to solidify, and eighteen more days for the mass to become fully formed with all of its members.

During the Middle Ages, a woman was considered to have had an abortion only if a formed fetus was extracted. Abortion among Christians remained a local issue, and penances imposed for procuring abortions varied widely among localities. In the thirteenth century, the Christian philosopher Thomas Aquinas (c. 1225–1274) expanded upon the ideas of his predecessors, accepting Aristotle's view that male semen alone had the power of creation. He reasoned that since beings tend to reproduce their own kind, the products of conception ordinarily would be male. Females must result from flaws in the semen or an act of God, such as the south wind. Aquinas's ideas influenced Pope Innocent IV (d. 1254), who declared that abortion before the infusion of the soul was not homicide.

The papal position did not change again for three centuries. In 1588 Pope Sixtus V (1521–1590) declared that whoever practiced abortion, which he believed to be premeditated murder, was to be excommunicated and put to death. In 1591 Pope Gregory XIV (1535–1591) withdrew these penalties for the sin of abortion, which he believed were too severe in light of the debate on animation or ensoulment. This remained the Catholic Church's abortion policy until 1869, when Pope Pius IX (1792–1878) restored Sixtus V's declaration, thus eliminating any distinction between an animated and an unanimated fetus.

Despite its change in doctrine, the Catholic Church did not play an important role in the passage of antiabortion legislation in either England or the United States during the nineteenth century. At the beginning of the nineteenth century, English common law, which also applied in the United States, allowed induced abortion until at least quickening, that is, when the woman first feels fetal movements, usually between the fourth and fifth months of pregnancy. The change in British law occurred in 1803 when induced abortion was made illegal throughout pregnancy. The change in American law occurred somewhat later through two waves of state antiabortion legislation.

The first wave occurred between 1821 and 1841. Ten states and one territory enacted legislation to make some abortions illegal. Connecticut passed the first statute in 1821, prohibiting the administration of poisons to produce postquickening abortions. In 1828 New York banned postquickening abortions by all methods. Other than politicians and physicians, there was little popular support for these laws, and they were almost never enforced.

Massachusetts launched the second wave of antiabortion legislation in 1846 with a law that ignored the notion of quickening and included jail sentences and fines for attempted abortions. New York followed suit in the same year and passed an abortion law that also disregarded quickening and prescribed punishments for abortionists and abortion patients. Between 1840 and 1880, forty antiabortion state laws were passed. By 1910 induced abortion at any stage was a criminal offense in every state except Kentucky. The only exception was a therapeutic abortion, performed to save the pregnant woman's life. However stringent, these state laws were ineffective in curtailing abortions—reliable estimates show that abortion rates climbed throughout the nineteenth century.

During the first half of the twentieth century, an estimated one in three pregnancies ended in abortion. Most of these abortions were illegal and unregulated, resulting in high morbidity and mortality rates for poor and rural women. The rationale for therapeutic abortions had also expanded over time. For women who had access to physician services, induced abortions became relatively safe by the mid-twentieth century. Not surprisingly, the medical profession became a principal advocate for reforming the antiabortion laws for which it had lobbied in the previous century.

Abortion was legalized in the United Kingdom in 1967 and throughout the United States in 1973. While these policy changes occurred within about five years of each other, their paths were almost totally divergent. In Britain, the law was liberalized after a fierce political campaign. In the United States, abortion reform occurred judicially rather than through legislative deliberation. In both counties, deaths from abortions plummeted after the abortion laws were liberalized, but these reformed policies have not settled the abortion debate in either country. However, abortion politics have been far more contentious in the United States than in the United Kingdom.

In 1973 the U.S. Supreme Court's decision in *Roe v. Wade* overturned existing state laws by holding that a woman's right to choose abortion was constitutionally protected as part of her right to privacy. This decision prohibited any level of government from interfering with a woman's right to obtain an abortion during the first trimester except to require that it be performed by a licensed physician. During the second trimester, the state had only the power to regulate abortion in ways designed to preserve and protect the woman's health. In the third trimester, the protection of fetal life became a compelling reason to justify state interference with a woman's right to obtain an abortion. Beyond these broad parameters, individual states were free to regulate other aspects of abortion.

By permitting considerable state discretion, *Roe v. Wade* federalized, rather than nationalized, abortion policy. Consequently, state abortion laws differ widely in terms of parental involvement, informed consent, and funding for poor women. Since *Roe*, the U.S. Supreme

Court has decided over thirty abortion-related cases emanating from the states. The changing composition of the Court has meant that American abortion case law has changed over time.

A key question that remained in the early twenty-first century was whether the U.S. Supreme Court would overturn the *Roe* decision. Such a decision would have serious ramifications. In the 2000s, about one in three women in the United States had an abortion by the age of forty-five.

SEE ALSO *Birth Control;* Roe v. Wade

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Deborah R. McFarlane

ABORTION RIGHTS

Abortion (also known as induced abortion, to distinguish it from miscarriage) is the intentional termination of a pregnancy prior to the time when the embryo or fetus is viable. Abortion rights refers to the claim that abortion is a liberty that is or ought to be protected by law.

INTERNATIONAL ABORTION LAWS

Internationally, abortion is legal for about two-thirds of the world's population. Abortion laws vary widely. Abortion in some countries is available on demand (for any reason) throughout part or all of pregnancy. In some countries it is illegal under all circumstances. Some countries take a middle path in which access to abortion is regulated but not prohibited. In these countries legal restrictions, along with the seriousness of the reasons necessary for permitting an abortion, tend to increase along with the gestational age of the fetus. The reasons for permitting abortion may include maternal life and health (sometimes including mental health), pregnancy resulting from rape, social and economic factors, and defects in the fetus.

ABORTION LAWS IN THE UNITED STATES

In the United States, prior to the nineteenth century, early abortion was largely unregulated. Common law considered abortion at most a misdemeanor if it occurred prior to quickening (the perception of movement in the fetus, generally in the fourth month of pregnancy). Termination of early pregnancy was commonly spoken of not as abortion but as restoration of blocked menstruation, which could be accomplished by taking abortifacient herbs or drugs or by mechanical means. Between 1820 and 1900, however, laws were passed by every state prohibiting abortion at any stage of pregnancy, except to save the life of the pregnant woman. The American Medical Association (AMA) advocated for restrictive abortion laws on the grounds that pregnancy was a continuous process, that quickening was not a true indicator of the beginning of fetal life, and that to end fetal life through abortion was unethical unless the pregnant woman's life was endangered.

During the period in which abortion was illegal, it was still practiced, whether outside the law or by physicians acting within the law (sometimes broadly interpreted). Public concern with the issue of abortion increased in response to the well-publicized case of Sherri Finkbine, an Arizona woman who sought an abortion in 1962 after taking thalidomide (a drug known to cause serious birth defects) during her pregnancy. From 1962 to 1965, the birth of thousands of babies with birth defects following a rubella outbreak further contributed to public concern. By 1973 eighteen states, with the support of the AMA, had adopted less restrictive abortion laws. However, in the late 1960s and early 1970s abortion came to be identified as primarily a women's issue rather than a medical issue as it had been in the past. Women's groups such as the National Organization for Women (NOW) and the National Association for the Repeal of Abortion Laws (NARAL) were founded. These and other groups identified abortion as a right of women and called for the repeal, rather than the reform, of abortion laws.

ROE V. WADE (1973)

In 1973 the U.S. Supreme Court handed down opinions in two cases, *Roe v. Wade* (an appeal of a case filed in Texas) and *Doe v. Bolton* (a Georgia case). The majority opinion held that the right of privacy that exists in the Constitution (often attributed to the Ninth and Fourteenth Amendments) "is broad enough to encompass a woman's decision whether or not to terminate her pregnancy" (Section VIII). The court held that the right to an abortion is not absolute, meaning that it can be justifiably infringed for the sake of other interests such as those in "safeguarding health, in maintaining medical standards, and in protecting potential life" (Section VIII). The opinion held, importantly, that the word "person" in the Fourteenth Amendment did not "include the unborn" (Section IX). On the basis of these principles, the justices set up a framework for abortion laws in which each trimester (third) of pregnancy could be treated somewhat differently. In the first trimester, no state interference with abortion would be permitted. Beginning in the second, the states could regulate abortion for the sake of protecting the health of the pregnant woman, and at the point of fetal viability, the states could enact legislation designed to protect the life of the fetus, except when abortion was necessary to protect the pregnant woman's life or health.

AFTER *ROE V. WADE*

This landmark decision was celebrated by supporters of the repeal of abortion laws (pro-choice groups) and decried by groups who were pro-life (those in favor of restrictive abortion laws, such as the National Right to Life Committee). At the state level, between 1973 and 1989 several hundred laws were passed to regulate abortion, for example by allowing a spouse or parent to overrule the pregnant woman's abortion decision, requiring twenty-four-hour waiting periods, or by enacting other restrictions. Many of these laws were challenged and rejected because they did not accord with the framework set forth in *Roe*. Other laws, such as a requirement of parental notification for dependent minors, were upheld. In *Webster v. Reproductive Health Services* (1989), the Supreme Court seemed ready to reject *Roe* when it upheld a Missouri law that declared that human life began at conception and that required second-trimester tests of the fetus for viability. The decision referred to the trimester framework of *Roe* as "rigid" and "unworkable" (Devins 1996, p. 66). However, in *Planned Parenthood of Southeastern Pennsylvania v. Casey* (1992), the court affirmed the central principles of *Roe*, including "recognition of the right of the woman to choose to have an abortion before viability and to obtain it without undue interference from the State" (Section I). The court rejected the trimester framework, adopting instead the standard of an undue burden and stating, "[a]n undue burden exists, and therefore a provision of law is invalid, if its purpose or effect is to place a substantial obstacle in the path of a woman seeking an abortion before the fetus attains viability" (Section IV).

In addition to challenges from state legislatures, other challenges to (and affirmations of) the *Roe* framework came from members of Congress and from the executive branch. The Hyde Amendment to a 1976 Department of Health, Education, and Welfare appropriations bill resulted in an end to Medicaid funding for abortion. Congress considered several proposals that would have either affirmed or overturned the basic principles of *Roe*, but did not adopt any of them. Congress also used its oversight of federal judicial appointments as an occasion to question candidates concerning their views of abortion rights. Particular issues that have galvanized debate in the years following *Roe* have included that of late-term abortion and of the contraceptive RU-486, sometimes called the abortion pill.

Ethical debates concerning abortion turn on the questions of whether the fetus should be regarded as a human being with rights (and if so, at what point in its development it acquires these rights), as well as the extent to which a pregnant woman has a moral obligation to bring a fetus to term, even if doing so requires that her own interests be compromised or sacrificed. Depending on the answers to these questions, abortion may be viewed as primarily an individual woman's right, or as an area in which some degree of state regulation is warranted.

SEE ALSO *Abortion; Pro-Choice/Pro-Life;* Roe v. Wade; *Women and Politics; Women's Liberation; Women's Movement*

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Paulette Kidder

ABSOLUTE AND COMPARATIVE ADVANTAGE

During the seventeenth and eighteenth centuries the dominant economic philosophy was *mercantilism*, which advocated severe restrictions on import and aggressive efforts to increase export. The resulting export surplus was supposed to enrich the nation through the inflow of precious metals. Adam Smith (1776), who is regarded as the father of modern economics, countered mercantilist ideas by developing the concept of *absolute advantage*. He argued that it was impossible for all nations to become rich simultaneously by following mercantilist prescriptions because the export of one nation is another nation's import. However, all nations would gain simultaneously if they practiced free trade and specialized in accordance with their absolute advantage. Table I, illustrating Smith's concept of absolute advantage, shows quantities of wheat and cloth produced by one hour's work in two countries, the United States and the United Kingdom.

Absolute advantage

	U.S.	U.K.
Wheat (bushel/hour)	6	1
Cloth (yards/hour)	4	5

Table I

Division of labor and specialization occupy a central place in Smith's writing. Table I indicates what the international division of labor should be, as the United States has an absolute advantage in wheat and the U.K. has an absolute advantage in cloth. Smith's absolute advantage is determined by a simple comparison of labor productivities across countries. Smith's theory of absolute advantage predicts that the United States will produce only wheat (W) and the U.K. will produce only cloth (C). Both nations would gain if they have unrestricted trade in wheat and cloth. If they trade 6W for 6C, then the gain of the United States is 1/2 hour's work, which is required to produce the extra 2C that it is getting through trade with the U.K. Because the U.K. stops wheat production, the 6W it gets from the United States will save six hours of labor time with which 30C can be produced. After exchanging 6C out of 30C, the U.K. is left with 24C, which is equivalent to almost five hours' labor time. Nations can produce more quantities of goods in which they have absolute advantage with the labor time they save through international trade.

Though Smith successfully established the case for free trade, he did not develop the concept of comparative advantage. Because absolute advantage is determined by a simple comparison of labor productivities, it is possible for a nation to have absolute advantage in nothing. In Table I, if the labor productivity in cloth production in the United States happened to be 8 instead of 4, then the United States would have absolute advantage in both goods and the U.K. would have absolute advantage in neither. Adam Smith, however, was much more concerned with the role of foreign trade in economic development and his model was essentially a dynamic one with variable factor supplies, as pointed out by Hla Myint (1977). David Ricardo (1817) was concerned with the static resource allocation problem when he defined the concept of *comparative advantage*, which is determined not by absolute values of labor productivity but by labor productivity ratios. Ricardo would have interpreted the numbers in Table I by pointing out that, whereas U.S. labor in wheat production is 1.5 (= 6/4) times as productive as it is in cloth production, the U.K.'s labor productivity in wheat is only one fifth of its labor productivity in cloth. Therefore, the United States has comparative advantage in wheat and by inverting these ratios one can show that the U.K. has comparative advantage in cloth. This pattern of comparative advantage will not be affected if the United Sates has absolute advantage in both wheat and cloth, which will be the case if we raise U.S. labor productivity in cloth from 4 to 8. This is because 3/4 will still be greater than 1/5.

The rationale of labor productivity ratios comes from Ricardo's labor theory of value. Ricardo treated labor as the only source of value, as all other factors of production (such as capital) are also produced by labor. Thus the price of a good (P) is simply equal to the wage rate (w) times the labor (L) used in production, divided by output (Q), as profit is zero in competitive markets: $P = (wL)/Q$. Because the average productivity of labor is $a = Q / L$, $P = w / a$. If the labor market is competitive, the wage rate paid in all industries will be the same. Therefore, the ratio between the price of wheat (Pw) and the price of cloth (Pc) will be equal to the ratio between average productivity of labor in cloth (ac) and average productivity of labor in wheat (aw): $[Pw / Pc] = [ac / aw]$. This creates a direct link between comparative advantage and relative commodity prices in a competitive economy. If the United States has comparative advantage in wheat production, wheat will be relatively cheaper in the United States than in the U.K., which provides the basis for trade.

Ricardo's theory of comparative advantage creates hope for technologically backward countries by implying that they can be a part of the world trading system even though their labor productivity in every good may be lower than that in the developed countries. In the Ricardian model, trade is a win-win situation, as workers

in all trading countries are able to consume more of all goods. Ricardo was blissfully unaware of the complications that would be created if his model included another factor such as capital, and if the producers had responded to changes in factor price ratio in favor of the cheaper factor. It was Wolfgang Stolper and Paul A. Samuelson (1941) who later discussed the effect of international trade on income distribution. The comparative advantage model has many unrealistic assumptions, which ignore the fact that the real world consists of many countries producing many goods using many factors of production. Each market is assumed to be perfectly competitive, when in reality there are many industries in which firms have market power. Labor productivity is assumed to be fixed and full employment is guaranteed. The model assumes that technology differences are the only differences that exist between the countries. Finally, in a dynamic context, comparative advantage changes, as trade in goods and capital alters the trading countries' factor endowments. Hajime Oniki and Hirofumi Uzawa (1965) have shown in a formal model how trade and economic growth continuously change patterns of trade and specialization.

In spite of its shortcomings, some of which have been removed by subsequent research (see Chipman 1965–1966), Ricardo's model carries a message that cannot be ignored. Ricardo's most important contribution lies in the fact that he was the first economist to link specialization with opportunity cost, which is the basis of modern trade theory. As for empirical testing of Ricardo's theories, G. D. A. MacDougall (1951–1952) demonstrated that trade between the United States and the U.K. in 1937 followed Ricardo's prediction. As a matter of fact, Ricardian theory performs better in empirical testing than most other theories.

SEE ALSO *Heckscher-Ohlin-Samuelson Model; North-South Models; Ricardo, David; Smith, Adam; Trade, Anglo-Portuguese*

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Monica Das

ABSOLUTE INCOME HYPOTHESIS

The *consumption function*, a key behavioral relationship in macroeconomics, was first introduced by John Maynard Keynes (1883–1946) in 1936. While Keynes offered no precise functional formulation of the *propensity to consume* (in his original terminology), his analysis has come to be associated with a simple version of the consumption function that embodies only the more quantitative aspects of his considerations, popularly known as the simple *Keynesian consumption function* or *absolute income hypothesis* (AIH).

The AIH is readily described using four propositions expressed in terms of the *marginal propensity to consume* (MPC) and the *average propensity to consume* (APC), where the MPC is the change in real consumption (c) for a unit change in real disposable (after-tax) income (y), and the APC is the ratio of consumption to real disposable income:

1. That real consumption is a stable function of real disposable income.
2. That the MPC is a positive fraction.
3. That the MPC is less than the APC, and the APC declines as income rises.
4. That the MPC declines as income rises.

The most common representation of the AIH is the linear function (inclusive of an intercept) that satisfies (1), (2), and (3), but not (4) (see Figure 1). Such a simple linear consumption function is to be found in nearly all introductory macroeconomic textbooks.

While early empirical work found support for the AIH and the proposition that the APC falls as income rises, long-run data offered contrary evidence (Kuznets 1946). This indicated that the APC out of national disposable income appeared not to vary with rising income over the relatively long run; in particular, it did not fall as

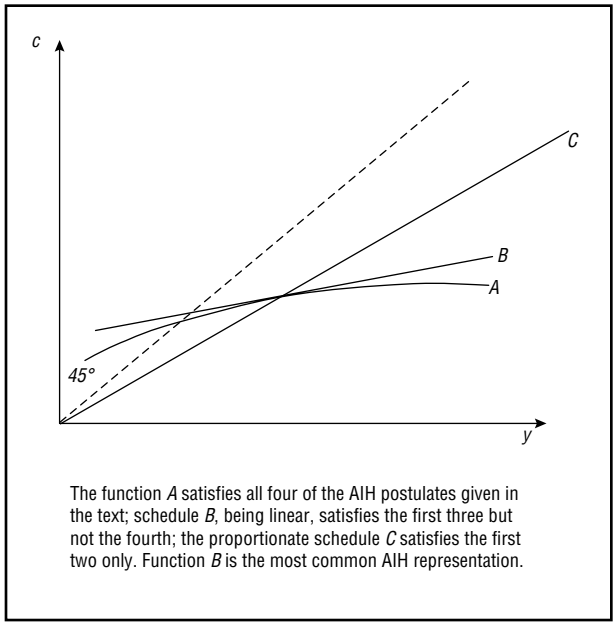

The function *A* satisfies all four of the AIH postulates given in the text; schedule *B*, being linear, satisfies the first three but not the fourth; the proportionate schedule *C* satisfies the first two only. Function *B* is the most common AIH representation.

Figure 1

disposable income rose, as predicted by the linear AIH inclusive of an intercept. Rather, the apparent constancy of the APC suggested a long-run proportional consumption function (C), such that the APC equals the MPC. In contrast, the examination of household budget data (Brady and Friedman 1947) revealed the cross-section consumption function to have a positive intercept, and a lower MPC than APC in any given year (B). The dilemma therefore arose of how to reconcile the long-run proportional consumption function with the finding from short-run and cross-section analyses that the APC exceeded the MPC.

It should also be noted that the AIH predicts a simple positive relationship between consumption and income, such that the two should not move in opposite directions, nor one change and not the other. However, data shows the two variables disobey this suggested relationship, the most prevalent of such irregularities involving an increase in consumption with a decrease in income, which the AIH is unable to account for. Moreover, the AIH consistently underpredicted consumption for the mid-twentieth century. The is partly explained by noting that during and immediately following World War II (1939–1945), increases in income could not be translated into increased expenditure due to rationing, forced holdings of liquid assets being subsequently converted into increased consumption demand following the relaxation of rationing. Such reasoning suggests that assets, and thereby wealth, may be a significant consumption determinant, and gave rise to modern theories of consumption, such as the *life-cycle hypothesis* (Modigliani and Brumberg 1955; Ando and Modigliani 1963) and the *permanent income hypothesis* (Friedman 1957), which emphasize the role of wealth and other factors in explaining the paradoxes noted above.

SEE ALSO *Consumption; Keynes, John Maynard; Life-Cycle Hypothesis; Multiplier, The; Permanent Income Hypothesis; Relative Income Hypothesis*

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Alan E. H. Speight

ABSTRACT THINKING

SEE *Intelligence.*

ABUSE

SEE *Torture.*

ACCIDENTS

SEE *Shocks.*

ACCIDENTS, HISTORICAL

SEE *Disaster Management.*

ACCIDENTS, INDUSTRIAL

The term *industrial accidents* refers to events involving unintended injury, harm, or damage that occur unexpectedly in the process of industrial production.

Definitions of what an accident is and theories concerning industrial accidents have evolved over time, and have differed depending on social context. Preindustrial workplaces were largely unregulated by the state. Tom Dwyer (1991) analyzed accidents in the preindustrial workplace and noted their regulation via moral practice, with Christian notions of "sin" being used to label and control the workplace. As the Industrial Revolution emerged in the United States and Europe, however, so too did new ideas about the worker and the workplace, along with an increased role for the state, rather than small groups and the individual, in defining accidents and addressing the concerns they generated.

The British coal mining industry provides a useful encapsulation of Anglo-American ideas regarding the treatment of industrial accidents in the nineteenth and twentieth centuries. Reports of British mining accidents begin to appear in the early nineteenth century (from 1812 onward), and demonstrate the social value placed on the prevention of industrial accidents. As labor unions emerged, European and American societies also came to expect the state to address concerns about deplorable working conditions in mines and large-scale industrial factories. Workers' grievances regarding accidents were addressed to some extent through the gradual introduction of state regulation. The frequency of accidents, and their pattern and types, reflected the conflict between labor and capital that existed in larger society, as well as the evolution of technology (Dwyer 1991).

Despite the introduction of regulation, life for the typical European or American industrial worker in the late nineteenth and early twentieth centuries was abysmal. Upton Sinclair's *The Jungle* (1906) is often credited with raising consciousness about problems in the industrial workplace, such as long work hours, grotesque injuries, the inability to file complaints and report accidents, and economic exploitation. The American progressive movement brought some of these issues into the political realm, though only the most severe problems were actually corrected during the early twentieth century.

The workers' movement created a new emphasis on the prevention of accidents, leading to state regulations that codified types of violation. Labor unions pressed for safety changes to reduce the incidence of accidental injuries. At the same time, the technology of the industrial workplace became highly specialized. Early workplace safety procedures made use of this increasing specialization of labor, by allowing the worker, for instance, to stop the assembly line and halt production when safety was at risk. New laws were also used to regulate lost time, lost production of goods, damaged or broken equipment, and worker claims against industrial firms. These laws generally favored the financial interests of owners and paralleled the movement toward bureaucratization of management and the workplace.

Industrialization bloomed in the United States and Western Europe in the late nineteenth and early twentieth centuries. So too did social science. The work of Frederic Taylor and the theories of Scientific Management suggested that owners of factories benefited from dividing labor into specialized jobs—that is, it was more productive to divide work into separate, repetitive jobs that could be understood and controlled on the basis of time studies. Ford's use of the assembly line created a highly specialized and linear form of production that set the model for many Western organizations. Accidents, also, came to be viewed as somewhat predictable and thus controllable, with models for prevention arising in response.

Max Weber's work analyzed the ways in which legal/rational authority was used by owners to create a new managerial class that separated owners from workers. A new salaried middle class of managers emerged, with little or no ownership of the industrial factories and firms they managed. The modern corporation shifted responsibility for the day-to-day operations of industrial organizations away from owners to managers. Management became highly specialized as well, with the separation of "thinkers" from "doers" in Scientific Management underlying this division.

Large industrial organizations instituted the complex division of labor into multiple layers of linear production (e.g., the assembly line) and other nonlinear divisions. At the same time, arguably, accidents became less visible, and workers' grievances became internalized within the structures of the organization of production, rather than being dealt with by the state (Dwyer 1991). In the United States, this created a counter-response from labor unions, which began advocating for more state regulation.

The creation of the Office of Safety and Health Administration (OSHA) in 1970, as an agency of the U.S. Department of Labor, was an attempt to codify safety regulations and to centralize the enforcement of statutes and standards in order to address the problem of accidents in industrial and other workplaces. OSHA was established through the National Institute for Occupational Safety and Health Act.

The industrial workplace had become a major locus of death and injury in the United States by the early twentieth century. The worker's means of addressing prevention of accidents were limited, and the drive for profit provided little incentive for change. It was not until the

Year	number of deaths	deaths rate (per 100,000)
1955	14,200	8.6
1960	13,800	7.7
1965	14,100	7.3
1970	13,800	6.8
1975	13,000	6.0
1980	13,200	5.8
1985	11,500	4.8
1990	10,100	4.0
1995	5,018	1.9
2000	5,022	1.8

Table 1 Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries; reported in National Safety Council, 2006.

creation of OSHA that serious attempts were made in industrial workplaces to prevent accidents and address workers' grievances; for the first time also, inspection by outside agencies was legislated and laws were enforced with seriousness. Although accidents were reported to be beginning to drop with the incorporation of internal models of prevention, it was only after the creation of OSHA that trends were most visibly improved, especially during the post-1990 era.

Table 1 shows trends in unintentional injury death rates in the workplace—a key indicator of the rate of industrial accidents—in the United States during the postwar era.

In recent years, theories of accidents have evolved into sophisticated models, often driven by advances in models of rational choice and systems theory in economics and other social sciences. The *normal accident theory* of Charles Perrow (1984, 2000) is the most prominent of these, and is useful for the analysis of highly complex and "tightly coupled" systems of production in industry. It asserts that humans design error into systems of production, whether consciously or not, as a product of human imperfection. Failures within safeguards in system design can co-occur, beyond the imagination of those who created the systems, such that the outcomes are explosively exponential in their potential harm. Accidents thus are unavoidable in nonlinear forms of production, because of unforeseen interactions between different system failures. The accident is thus a "normal" aspect of complexly tight systems built by humans.

In developing nations, the problems associated with Western industries in the past seemingly continue: Nations such as India, China, and Thailand are experiencing many of the same social conflicts and problems surrounding industrialization that the United States and Europe did during the Industrial Revolution. Moreover, the Union Carbide accident in Bhopal, India, in 1983 brought attention to the fact that U.S. laws safeguarding workers and the environment are often ignored by U.S.-based multinationals operating abroad. Whether or not accidents are more or less probable, they are always a product of social organization, and thus in any future consideration of safety regulation, social issues must be central.

SEE ALSO *Factories; Management; Management Science; Marx, Karl; Regulation; Taylorism; Weber, Max*

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Steven Curtis Dreyer

ACCOUNTABILITY

In the context of education, *accountability* refers to the concept that schools are responsible for ensuring that students meet agreed-upon standards of academic achievement. While governmental entities claim accountability is essential for the allocation of resources and the evaluation of policies and budgets, the term has taken on several distinct meanings. The principal dilemma was articulated by Susan Fuhrman and Richard Elmore (2004):

> It is evident that what policy makers and the informed public *think* performance-based accountability is, differs considerably from what it *actually is*. In political discourse, it is common to hear both opponents and advocates speak as if test results were the metric of success in performance-based accountability … [but] the idea of equating student learning with test performance is suspect, both in terms of the technical characteristics of tests and the incentive effects of testing on instruction. (p. 275)

David Figlio and Cecilia Rouse (2006) suggest that accountability in the United States involves two distinct alternatives. The first is the use of test-based performance indicators, followed by sanctions for low-performing schools. The second alternative uses market forces to reward some schools and punish others as parents and students make personal resource-allocation decisions through the use of vouchers. Similar market-based accountability

systems occur through the exercise of enrollment choice in charter schools, magnet schools, or open-enrollment systems (Finn et. al. 2000; Coulson et al. 2006). This article reviews accountability before recent changes in federal legislation and provides alternatives for consideration.

COMPLIANCE-BASED ACCOUNTABILITY

Until 2001 *compliance-based accountability* was the primary mechanism by which school systems and many other recipients of governmental funds were held accountable. If procedures were followed and rules were enforced, then the entity was sufficiently accountable. Despite the evidence that a lot of wasteful and counterproductive effort is spent on generating strategic plans and submitting proof of school improvement (Schmoker 2004; Reeves 2006), compliance-based accountability remains a dominant force throughout the United States and in many other national and provincial school systems.

RESULTS-BASED ACCOUNTABILITY

The prevailing example of results-based accountability is the No Child Left Behind (NCLB) Act of 2001, legislation that is scheduled for reauthorization in 2007. The essence of NCLB is a focus on results as defined by state test scores. While the law makes the National Assessment of Educational Progress (NAEP) a calibration device (Reeves 2001), it also allows each state to establish its own academic standards and its own assessment procedures. Thus, two states using the NAEP can show, respectively, 20 percent and 80 percent of students scoring at a proficient level—but show precisely the reverse when the "results" under consideration are scores generated by state-created tests. Moreover, results-based accountability emphasizes the effects of education without providing insight into the results. Wealthy schools have better results, but it does not necessarily follow that those results stem exclusively from better teaching, leadership, and policy, any more than poorer results in poor schools stem exclusively from inferior teaching, leadership, and policy (Rothstein 2004).

HOLISTIC ACCOUNTABILITY

To supplement exclusive reliance on test scores, expanded accountability systems have been employed in many school systems (see Reeves 2002, 2004a, 2004b). *Holistic accountability* is based on three tiers of indicators: system-wide indicators, including test scores; school-based indicators, including professional practices of teachers and educational leaders; and school narratives, providing qualitative context for quantitative data. One of the best examples of a governmental entity systematically examining both student achievement data and professional practices is provided by Alberta Learning, the system used in the Canadian province of Alberta (unlike the United States, Canada's educational governance is decentralized). Alberta's rigorous standards, consistent tests, holistic accountability system, public reporting, and long-term improvements in achievement suggest that accountability policies can be effective and constructive governance tools.

VALUE-ADDED ACCOUNTABILITY

A growing number of schools are using *value-added accountability*, in which progress is measured by comparing students' present performance to their performance in previous years (Sanders 1998). As of November 2006, ten states have been authorized to experiment with this system. Value-added accountability has the advantage of showing more meaningful comparisons and focusing on growth in achievement, thus encouraging low-performing schools and challenging high-performing schools. Value-added models are complex and in some cases proprietary. Moreover, any test that can show progress will, of necessity, include items below grade level and above grade level. Such tests are not consistent with the prevailing NCLB requirement that state tests reflect grade-level academic standards. This inevitably leads to tradeoffs: A test that addresses multiple grade levels in order to allow students to "show progress" will require more items in order to maintain the reliability of the test—but more test items can subject students (and teachers) to "test fatigue," which itself can impair the validity of the test. If, on the other hand, a fifth grade student takes a test with only fifth grade items on it, it would be possible for immense progress—say, from a second-grade to a fourth-grade reading level—to be substantially overlooked. Emerging models using *item response theory* are being experimentally implemented in some districts, notably by the Northwest Evaluation Association. Item response theory (IRT) is the study of test and item scores based on assumptions concerning the mathematical relationship between abilities (or other hypothesized traits) and item responses (Baker 2001). While the mathematics of IRT can be complex, the practical application in the realm of educational accountability and assessment is straightforward. Without IRT, every student would take the same test. Using IRT, each student would take a test uniquely suited to his or her abilities.

For example, if student A and B are taking a test of Grade 4 reading, student A might get the first question right, while student B gets the first question wrong. In a traditionally constructed test, both students would continue to take the same test, with student A doing well—in fact, failing to be challenged—while student B might

become increasingly frustrated, perhaps to the point of enduring test fatigue and giving up on the exam. Using IRT, however, student A would proceed to a more difficult question, while the next question given to student B would be easier.

ACCOUNTABILITY GUIDELINES

As educational accountability policies are revised in future years, leaders and policymakers can learn from the successes, errors, and unintended consequences of previous policies. In a wide variety of fields, opinions hold sway over evidence, and as Jeffrey Pfeffer and Robert Sutton (2006) warn, leaders are deluded by "dangerous half-truths" and "total nonsense." Many faulty educational practices, often incorporated into detailed long-term strategic plans, continue, even though the evidence does not support them (Childress et. al 2006; Reeves 2006). While market-based accountability surely leads to definitive rewards and sanctions, the invisible hand of the market does not shed light on how accountability policies can be employed to attain their central aim—the improvement of school performance and student achievement. To advance this cause, three essential aspects of accountability need to be kept in mind:

1. The purpose of accountability is to improve performance. It is not merely a reporting vehicle used to rate, rank, and sort students, teachers, schools, and states. Therefore, of necessity, an effective accountability system must include not only results, but also inferences about how to improve results. An accountability system that includes only student test scores without a measurement of teaching and leadership practices is like a healthcare accountability system that counts death rates, but does not ask how patients died.
2. Accountability requires coherent data. To allow for hypothesis testing, data must be distributed and warehoused in a way that makes it accessible and usable. While national educational standards remain politically impossible, there should be national standards for accountability systems that would permit meaningful comparison of the data generated by them.
3. The smaller the unit of analysis, the more meaningful inferences from the data will be. The evidence on the impact of classroom teachers on student learning is overwhelming (Darling-Hammond and Sykes 1999). Goodlad (1990, 1994) also makes a persuasive case that the individual school leader can have a profound impact on student achievement. However, when considered on a larger scale, the relationship between policy and results is less clear. Attempts to track district-level "progress" are bedeviled by countless confounding variables. Even school-level accountability—the focus of present law—can lead to a label of success or failure for an entire school based on the performance of one group of students in one grade in one subject.

SEE ALSO *Bureaucracy; Corruption; Democracy; Education, Unequal; Education, USA; Government; Principal-Agent Models; Private Sector; Public Sector; School Vouchers; Schooling in the USA; Transparency; Whistle-blowers*

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Douglas B. Reeves

ACCOUNTING, GROWTH

SEE *Solow Residual, The.*

ACCUMULATION OF CAPITAL

Economists have used the term *accumulation of capital* to express several conceptual ideas in economics. Avoiding those having to do with obtaining more money, more bonds, or more stocks, two principal uses remain: an increase in the amount of physical means of production within an economy or its firms, or an increase in the power of the capitalist class. The former is the usage in neoclassical or mainstream economics while the latter is often considered within Marxist economics (although the exact meaning is still subject to various considerations). It is not unusual for either consideration to lead to discussion of economic crises, specifically to what might be their origins. The issue of crises may be, in turn, connected to disproportionalities among supplies and demands across industries within the economy.

EARLY DISCUSSIONS

In 1776 the Scottish economist Adam Smith made some attempt to define capital, but not its accumulation, while in 1821 the English economist David Ricardo introduced serious discussion of the effects upon workers of the introduction of new machinery, finding that it would not necessarily be beneficial. Ricardo was probably persuaded to undertake this investigation under the influence of the Swiss economist Jean-Charles-Léonard Simonde de Sismondi (1773–1842), whom Ricardo respected enough to visit from the United Kingdom. Sismondi was quite critical of the influence of capitalism upon the population and explicitly discussed the crisis aspects of capitalist development.

The German economist and political philosopher Karl Marx discussed accumulation of capital, yet there are ambiguities in his discussion. Marx was concerned, fundamentally, with the exploitation of the working class by the capitalist class and the capitalist class's capability of earning surplus value off the workers. Surplus value is the difference between working time of workers and the time required to produce the goods workers are able to buy with their wages. His principal book *Capital* (1867) is precisely a focus on that exploitation, so his accumulation of capital ought to be understood as an increase in the numbers of workers being exploited, including the related requirement to have built the factories within which the workers would be working. Crises could result from disproportionalities in production but also from the inability to find outlets for all the products produced under capitalist relations when the standard of living for the mass of workers is continually depressed. The latter concern dates back to Sismondi and the English economist Thomas Malthus (1766–1834), yet has unique aspects of analysis in Marx. The emphasis, generally, on means of production (e.g., machinery) in referring to accumulation of capital did penetrate Marx to some extent and his writing on accumulation.

In the 1890s the Russian Communist leader Vladimir Lenin brought Marxist economic thought back toward Ricardo, and also included more emphasis on technological development and disproportionalities in production than would be consistent with Marx himself. Becoming leader of the Bolshevik Revolution in Russia in 1917, his influence on Marxist economic thought was greater than his depth of understanding of Marx's political economy. Nevertheless, Lenin was not alone as Mikhail Tugan-Baranowsky (1865–1919) and the German economist and statesman Rudolf Hilferding (1877–1941) also emphasized disproportionalities in explaining crises.

TWENTIETH-CENTURY APPROACHES

A distinct approach away from Lenin, Tugan-Baranowsky, and Hilferding was undertaken by Rosa Luxemburg, whose *The Accumulation of Capital* (1913) had a major, albeit controversial, impact. This volume was the first of only two substantial books with the words "accumulation of capital" as the title, both written by women economists. Luxemburg's focus was on the incapacity of a closed capi-

talist system to find sufficient markets, since workers' wages are naturally suppressed, capitalist luxury consumption has its limits (considering the massive quantities of products that can be produced), and producing more and more machines just for its own sake makes no sense. She criticized certain aspects of Marx's work for failure to recognize the problem, even as she is firmly considered to be a Marxist economist.

Following upon the development of neoclassical economics beginning in the 1870s, John Bates Clark's *The Distribution of Wealth* solidified a distinct interpretation of capital as a measure of machines, like acres of land. In other words, all those different types of machines in industrial society were to be reduced to a homogenous measure called real capital. However, unlike land, machinery is a produced element of the production process and is changing much of the time, not just in numbers, but in its very physical characteristics. This was a strange innovation on the part of Clark, but it allowed him to render a marginal productivity theory of income distribution to explain why workers, capitalists, and landowners get what they get out of the national output.

As the mathematization of mainstream economics proceeded apace, capital in the sense of Clark, including its accumulation, proceeded along with it, and the neoclassical production function became widespread, both at the microeconomic level of the firm as well as for national economies.

When Luxemburg's book was translated into English in 1951 it had an introduction by Joan Robinson, and soon thereafter Robinson published her own book, *The Accumulation of Capital* (1956). Having come out of the Keynesian tradition of the 1930s that shared concerns of Malthus, Sismondi, and Marx regarding the possible deficiencies of aggregate demand to sustain the mammoth potentials on the supply side, Robinson's work was little concerned with disproportionalities as an explanation of economic crises.

During the 1960s Clark's conception of capital came under strong criticism when the so-called reswitching controversy arose. This controversy is too involved to summarize in this entry, but it starts with a proof that a simple economy, as wages moved in one direction, could switch from one technology to a second technology, and then, as wages continued to move in the same direction, switch back to the initial technology. The significance was to question how marginal productivity à la Clark could have any meaning.

Meanwhile, the Marxist tradition continued to refer to accumulation of capital as an expression of the inherent tendency of capitalism to extend its domination, but now connected to the possibility of a falling tendency of the average profit rate and thus to economic crises. By and large, accumulation of capital as a concept was anything but well defined and often functioned similarly to the term *capitalism*, with a more serious sound to it. A resolution that refers to increasing proletarianization of the world under the thrust of capital is not well accepted as of 2006.

CONCLUSIONS

Possible empirical work on accumulation of capital follows from the conceptualization. Should capital be measured as real capital then disparate physical items are typically aggregated by some type of weighting by relative prices exhibited in product markets. The trend of capital accumulation would therefore seem to be reflected in the increasing amounts of the individual items of equipment and structures. Yet, there are deep index number problems involved, including the initial base of the weighting, changing relative prices, and, most significantly, the introduction of totally new technologies and the disappearance of old (tractors substituting for iron plows pulled by horses, mules, or oxen; electrical lighting substituting for candles; cash registers for abacuses). In spite of difficulties, a whole segment of empirical economics has developed around such accounting, sometimes additionally integrated into profit-rate calculations.

Should capital be measured by capacity to exploit the labor hours of wage workers one would first have to measure the total employed wage workers and the length of their work hours. One would need to make a distinction between those who produce for capitalists commodities to be sold in the market and those who perform functions such as selling or administrative, as well as exclude those who do not work for capitalists (such productive/unproductive distinction appears, in differing forms, in portions of Smith's and Marx's works). At the level of an enterprise, data may be available, but for national economies they are much less so. No satisfactory work has been done on a global scale.

SEE ALSO *Luxemburg, Rosa; Marx, Karl; Optimal Growth; Primitive Accumulation; Production Function; Ricardo, David; Robinson, Joan; Technological Progress, Economic Growth*

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Paul Zarembka

ACHIEVEMENT

The modern scientific study of achievement began with Henry Murray's seminal study of basic human needs, *Explorations in Personality* (1938). His definition of *achievement*, influential in all subsequent work on the subject, was "To accomplish something difficult. To master, manipulate or organize physical objects, human beings, or ideas. To do this as rapidly and as independently as possible. To overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent" (Murray 1938, p. 164). His definition of *achievement motivation* was "To make intense, prolonged and repeated efforts to accomplish something difficult. To work with singleness of purpose towards a high and distant goal. To have the determination to win. To try to do everything well. To be stimulated to excel by the presence of others, to enjoy competition. To exert will power; to overcome boredom and fatigue" (Murray 1938, p. 164).

MEASURING ACHIEVEMENT

Murray developed a list of twenty human needs. Of these, the Need for Achievement has been the most extensively studied (along with the Need for Affiliation and the Need for Power). Murray also created the most extensively used measure of achievement motivation, the Thematic Apperception Test (TAT). This test asks people to tell stories about each of several pictures of people in a variety of situations. Evaluators then code the stories for the presence of achievement themes. It is an indirect, or *implicit*, measure of interest in achievement, as opposed to an explicit measure in which people are asked to answer questions that probe for achievement motivation (as in the Achievement Motivation Inventory, an explicit adaptation of the TAT). The primary use for these measures is to discover how individuals differ in their degree of interest in achievement and, by implication, the strength of their achievement motivation.

David McClelland, using a refined version of the TAT, showed that child rearing practices have a relation to subsequent strength of achievement motivation, both at the level of the individual parent-child relationship (e.g., the extent of early independence training) and at the level of a society's dominant culture of achievement. McClelland's wide-ranging work at the level of culture-related differences between countries (in such things as the Protestant work ethic and the amount of achievement imagery in children's texts or in the works of prominent writers) to indices of economic activity. This work demonstrated a clear and consistent relation between achievement imagery and economic development among and within nations and across a span of time from ancient Greek civilization to the mid-twentieth century, with increased levels of achievement themes preceding increases in economic productivity. Murray's theory specified that the surrounding cultural context regarding achievement influenced the way that parents reared their children, which in turn created stable achievement motivation in those children as adults, eventually resulting in overall increases in the society's economic output.

John Atkinson and his colleagues developed an influential *expectancy X value* theory of achievement motivation. The tendency to strive for success is, in this formulation, a multiplicative combination of the motivation to succeed, the value placed on success, and the likelihood of success. One of the primary findings using this analysis is that when given a choice among tasks varying in difficulty (probability of success), individuals will prefer tasks of intermediate difficulty, particularly if they are high in achievement motivation. The most likely reason

for this preference is that tasks of intermediate complexity are the best diagnostic tasks in that they give the most information about the meaning of success or failure for one's current level of proficiency. Another implication of this formulation is that when either the probability of success, or the value of success, is extremely low, little motivation to achieve will be generated.

UNDERSTANDING MOTIVATION

A more cognitive approach to achievement motivation emphasizes how individuals understand and explain successes and failures. Bernard Weiner proposed that explanations for performances vary in two dimensions. Explanations may be either *internal* (something about the performer) or *external* (something about the performance situation), and they also vary in whether the cause is *stable* (likely to be the same in the future) or *unstable* (likely to be different in the future). An explanation for a particular performance might be internal and stable (*ability*), internal and unstable (*effort*), external and stable (*task difficulty*), or external and unstable (*luck*). These explanations for performance affect both how individuals feel after success and failure, and how willing they are to persist in the face of an initial failure.

Initial differences in the kinds of explanations people are likely to use also have been shown to underlie the likelihood of persisting or quitting in the face of initial failure. A *mastery orientation* entails a focus on acquiring competence at the task, on the feeling of making progress and getting better. In the face of initial failure, a mastery orientation leads to attributions to effort, and supports task persistence. In contrast, with a *performance orientation* the goal is to show how good one is at the task. When a person takes this orientation, initial failure is likely to be interpreted as a sign of low ability and to lead to decreased task persistence.

STEREOTYPE THREAT

The expectations of others can strongly affect achievement. Stereotypes about how well or poorly a member of a particular group is likely to perform can strongly affect the actual achievement of members of the stereotyped group. Claude Steele and Joshua Aronson introduced the concept of *stereotype threat*. This research demonstrates that when negative performance stereotypes are present, actual performance suffers. For example, women who are quite good at math show poorer math performance in situations in which the stereotype that women are not as good at math as men is salient, showing that the stereotype itself leads to a self-fulfilling prophecy. Steele and Aronson's initial work showed that when stereotype about intelligence is made salient for African Americans in an SAT-like task, performance suffers. Underlying this process of stereotype threat is the fear that performing consistently with the stereotype will serve to confirm it in the minds of others. Worrying about this result unfortunately creates enough anxiety to interfere with performance and paradoxically results in the very behavior about which one is worried.

Achievement and achievement motivation are essential aspects of human nature, and are influenced by learning, by expectations of the value and probability of success, by one's own explanations for task performance, and by the beliefs and expectations of others.

SEE ALSO *Locus of Control; Motivation; Narratives; Parent-Child Relationships; Parenting Styles; Psychology; Scales; Self-Fulfilling Prophecies; Steele, Claude M.; Stereotype Threat*

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ACHIEVEMENT GAP, RACIAL

The black-white achievement gap refers to disparities between African American (black) and European American (white) students on educational outcomes that include standardized test scores, grade-point averages, high school graduation rates, and college enrollment and completion rates. On each of these measures, white students typically outperform their black peers. While scholars have studied the gap in standardized test scores since the early 1900s, interest in this topic reemerged in the 1990s partly in response to a widening of the gap on the National Assessment of Education Progress in the United States after it had narrowed for nearly 20 years. This renewed interest also arose partly in response to the publication of the controversial book *The Bell Curve*, by

Richard J. Herrnstein and Charles Murray (1994), which suggested that the gap resulted from genetic differences between racial groups.

Genetic arguments have been rejected convincingly by research in which scholars identify multiple methodological flaws in such work and point out that the lack of systematic genetic variation across racial categories undermines such arguments. Other explanations for the racial achievement gap, however, have empirical support. For example, racial differences in social class as measured by parents' education, income, and wealth explain a substantial portion of the gap in test scores and educational attainment. Additionally, research shows that black and white students receive different opportunities to learn, even when attending desegregated schools, and that these differences contribute to the gap. Black students are typically placed in lower-ability groups and educational tracks, are overrepresented in special education, are underrepresented in gifted and talented programs, are taught by less experienced and less well trained teachers, and face lower teacher expectations regarding their academic potential than white students.

Additional explanations focus on psychological and cultural mechanisms associated with the gap. For instance, the stereotype threat model devised by the psychologist Claude Steele (b. 1946) demonstrates that black college students underperform on academic tasks because they fear being viewed through the lens of negative racial stereotypes about black intelligence or are apprehensive about confirming such negative stereotypes through poor test performance. Stereotype threat may lead to a process called disidentification, in which black students' personal identities become disconnected from education as a domain, leading to underachievement. More research, however, is needed to further test this hypothesis.

The oppositional culture argument provides a related explanation for the black-white achievement gap. Perhaps best articulated by the anthropologist John Ogbu (1939–2003) and his colleagues—for example, in the contribution to *Urban Review*, "Black Students' School Success" (Fordham and Ogbu 1986)—this perspective suggests that black students respond to race-based educational and employment discrimination by opposing educational achievement. As a result, high-achieving black students may confront negative feedback from their peers for investing in school and receive criticism for "acting white." While this has been an influential explanation for the gap in scholarly and popular discourse, recent research rejects its core hypotheses. Finally, while no scholarly consensus exists, some research suggests that schools, as institutions, respond favorably to and reward white students' cultural styles (such as dress, linguistic practices, and learning styles) and devalue those of black students, perhaps contributing to the gap.

WHY DID THE GAP CLOSE?

It is unclear why the test-score gap narrowed between 1970 and 1988. However, work suggests that greater access to educational resources among black students, reductions in class size, and racial desegregation efforts may have contributed to this pattern. The gap persists in desegregated schools, however, probably because of racial inequalities in opportunities to learn in such contexts. Likewise, aggressive efforts to challenge systematic racial discrimination in educational and employment opportunities following the civil rights movement of the 1950s and 1960s may have led to greater optimism about the economic returns to education among African Americans and increased their already high levels of motivation for educational achievement.

SEE ALSO *Acting White; Civil Rights Movement, U.S.; Class; Determinism, Cultural; Determinism, Genetic; Education, Unequal; Inequality, Racial; National Assessment of Educational Progress; Ogbu, John U.; Schooling in the USA; Standardized Tests; Steele, Claude M.; Stereotype Threat; Tracking in Schools*

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John B. Diamond

ACT TEST, THE

SEE *Standardized Tests.*

ACTING WHITE

African American adolescents sometimes ridicule their peers for behaving in ways they identify as characteristic of whites. A variety of behaviors may trigger this response: manner of speech and dress, choice of television shows or sports, and, most troubling, demonstrating a commitment to academic success by participating in class, studying hard, and enrolling in advanced classes. This phenomenon was given prominence in an article published in 1986 by ethnographers Signithia Fordham and John Ogbu, reporting a study of a predominantly black high school in Washington, D.C. Since then, the burden of "acting white" has emerged as one of the standard explanations for the black-white gap in test scores and academic achievement; gifted black students are dragged down by peer pressure. But the evidence does not provide much support for the view that peer pressure against academic achievement is especially pervasive or important in influencing the academic striving of African Americans.

Ogbu speculated that black students tend to sneer at academic striving because they are influenced by an "oppositional culture" traceable to slavery, discrimination against blacks, and persistent inequality. Academic achievement is devalued because of its association with the dominant and oppressive white culture. A contrary view notes that while both black and white adolescents may sometimes exert (or experience) peer pressure against being "nerdy" and working hard in school, this anti-intellectual norm is not usually racialized.

Fordham and Ogbu reported on their observations from a single school. Several studies based on representative national surveys of high-school students have reached contrary findings. These have demonstrated that the differences between black and white students are negligible with respect to the value placed on education. Blacks express expectations at least as high as whites for graduating from high school and attending a four-year college. On average they attend class and expend as much effort outside of class as whites, and their parents are just as involved.

Whether there is a social penalty for academic success has also been investigated from national survey data. By a number of measures relating to social rejection, top students of both races do no worse (on average) than those in the middle of the grades distribution. Being in the honor society actually appears to protect against social ostracism, especially for black students in predominantly black schools. On the other hand, research by David Austen-Smith and Roland Fryer (2005) has found that the best black students have fewer close friends than those with average grades, especially in the case of males.

Since Fordham and Ogbu's original contribution, there have been several more ethnographic studies of individual schools. These have tended to cast further doubt on the notion of the "burden of acting white." A detailed survey of students in Shaker Heights, Ohio, by Harvard economist Ronald Ferguson (2001) has been especially influential. He found no evidence of an oppositional culture among the black students. Similar proportions of black and white students reported that there was a social penalty for academic striving in this successful and long-integrated school system. Another study of eight schools in North Carolina confirmed that there was some social penalty for high achievement for both races, but in only one of the schools were there reports of a strong racial element to this stigmatization (Tyson, Darity, and Castellino 2005). It did appear that qualified black students sometimes avoided taking advanced placement classes, but that was due more to a concern with being socially isolated (as possibly the only black student in class), rather than a concern with being criticized by their black peers.

The bottom line is that the adolescent norm against academic striving and success is evident among both white and black students. In some times and places, the successful black students are accused of "acting white," but there is little evidence in support of a pervasive black cultural norm against academic striving and success. Finally, whatever the penalties, there are also social rewards for being successful, and in the rough-and-tumble of adolescent society, the top scholars are not doing any worse on average than their peers.

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Philip J. Cook

ACTIVISM

Activism refers to action by an individual or group with the intent to bring about social, political, economic, or even ideological change. This change could be directed at something as simple as a community organization or institution or as complex as the federal government or the public at large. In most cases, but not all, the action is directed toward the support or opposition of a controversial issue. Such issues range from basic human rights (see Blau and Moncada 2005) to the rights of gay men and lesbians (see Hunter et al. 1992) to antiwar or prowar sentiments over the Iraq War.

The First Amendment of the U.S. Constitution guarantees the right of the people to "petition the government for a redress of grievances." While earlier drafts of the First Amendment simply addressed the needs of the people to assemble and petition, later drafts included the rights of free speech, freedom of the press, and religion. However, the right to these freedoms is a matter of debate. Laws such as the Patriot Act, passed shortly after the September 11, 2001, attacks on the World Trade Center in New York City and the Pentagon near Washington, D.C., expand the authority of U.S. law enforcement agencies under the rhetoric of terrorism and limit the constitutional rights of U.S. citizens. In addition, rights to assembly are often viewed by law enforcement agencies and government organizations as a political threat. As a result, there are countless cases in U.S. history where altercations between law enforcement and organizing groups, even peaceful assemblies, have resulted in violence. For instance, a rally in Los Angeles over immigration rights on May 6, 2007, was disrupted when police officers fired rubber bullets into the crowd and pummeled television crews and other journalists with batons (Kahn 2007).

Activism can take many forms, including such actions as civil disobedience, rioting, striking by unions, government or institutional lobbying, verbal or physical confrontation, various forms of terrorism, and the use of music and the media to draw attention to particular issues. The rise of the Internet has allowed new forms of activism to emerge and has also allowed many small, local issues to gain a wider audience and in some cases worldwide attention. Activism is a necessary vehicle for progressive and social change (see Bonilla-Silva 2006). Major movements such as the civil rights movement represent examples of what large-scale activism can accomplish given the right historical conditions and group collectivities.

In addition to individual or group-level activism, there are centers and organizations whose sole purpose is to promote social change through awareness and the bridging of theory and practice. Examples of such organizations include Loyola University–Chicago's Center for Urban Research and Learning, a public sociology center that promotes research addressing community needs and that involves community organizers at all levels of its research process. Similarly, Project South, a leadership-development organization located in the southern United States, works with communities in bottom-up activism over issues pertaining to social, racial, and economic justice.

SEE ALSO *Civil Liberties; Civil Rights; Civil Rights Movement, U.S.; Human Rights; Political Parties; Protest; Resistance; Revolution; Social Movements; Women's Movement*

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David G. Embrick

ACTIVISM, JUDICIAL

Judicial activism is a philosophy that motivates judges to depart from strict adherence to judicial precedent, statutes, and strict interpretation of the United States Constitution. The juridical reasoning behind judicial activism is that the judiciary should have latitude in creat-

ing and interpreting law to protect the rights of political minorities from majoritarian excesses. Judicial activism has frequently been contrasted with *judicial restraint*. Judicial restraint means deference to other political branches, whether by upholding precedent or strictly interpreting statutory or constitutional provisions. The issue of judicial activism versus judicial restraint is volatile because of the consequences it can have on the law and society. Therefore, charges of judicial activism have been strategically used by both conservatives and liberals as concise campaign slogans to extol either the virtue or vice of the opposing candidate or political party. Many times, individuals affiliated with particular political parties or groups who view specific judicial decisions as conflicting with their philosophies characterize the judicial decision as an example of judicial activism. However, to discuss the issue in polarizing terms and apply political labels is overly simplistic. There are numerous Supreme Court decisions in the history of the United States, arguably results of judicial activism, that many would argue were constitutional milestones and others view as setbacks. Among these decisions are some of the most important landmark rulings in ensuring equity and fairness, as well as others that were patently flawed.

The landmark case *Brown v. Board of Education* (1954) ended the segregation in public schools that previously had been directed by the "separate but equal" doctrine. The decision overruled precedents and rejected state legislative statutes that allowed racial segregation in schools. In another example, in 1971 the Supreme Court in *Reed v. Reed* determined that the Equal Protection Clause of the Fourteenth Amendment guaranteed equality for women, and that a state law that discriminated based on gender was unconstitutional despite the fact that the Fourteenth Amendment does not state on its face that women and men should be treated the same. Most people today acknowledge that these Supreme Court rulings could be considered examples of judicial activism, but few would argue that they were not fair and just and should be overturned.

Judicial activism has also produced some less desirable results. In *Dred Scott v. Sandford* (1856), commonly known as the Dred Scott decision, the Supreme Court invalidated the Missouri Compromise and interpreted the Constitution as expressly allowing slavery, and held that people of African descent, whether or not they were slaves, could not be citizens of the United States. This was in direct contrast to the will of Congress, and set the scene for the Civil War.

An example of judicial restraint that resulted in a flawed decision is the Supreme Court ruling in *Plessy v. Ferguson* (1896), which stated that "separate but equal" public facilities met the requirements of the Fourteenth Amendment guarantees. Therefore, states could segregate facilities based on the color of a person's skin. Examples of cases where judicial restraint produced positive results include the civil rights cases of 1964 in which the Supreme Court deferred to Congress and upheld the Civil Rights Act of 1964 (e.g., in *Heart of Atlanta Motel, Inc. v. United States*, 1964).

Neither judicial activism nor judicial restraint should be viewed as an absolute vice or virtue. Judicial activism and judicial restraint by the United States Supreme Court have both produced some of the wisest landmark decisions as well as some of the less desirable rulings. The U.S. experience with judicial review demonstrates that juridical philosophies defined as activism or restraint are not helpful in determining the quality of a judge or a judicial decision.

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Diana C. Noone

ADAMS, JOHN

SEE *Jefferson, Thomas.*

ADAPTIVE EXPECTATIONS

The term *adaptive expectations* refers to the way economic agents adjust their expectations about future events based on past information and on some adjustment term. This implies some sort of correction mechanism: if someone's expectations are off the mark now, they can be corrected the next time, and so on. Economists view decision rules that govern an agent's behavior as being continuously under revision. As new decision rules are tried and tested, rules that yield accurate outcomes supersede those that fail to do so. In this sense, Robert Lucas (1986) refers to the trial-and-error process through which the models of behavior are determined as "adaptive."

Suppose we want to forecast the inflation rate (Π_t), which is itself measured by variations in the price index over time, $(P_t - P_{t-1})/P_{t-1}$. An example from an econom-

ics textbook (e.g., Arnold 2005, pp. 351–352) will help illustrate the principle of adaptive expectations. Let an individual forecast the future inflation rate for Year 5 based on the previous four yearly inflation rates. Observing the declining trend in the inflation rate over time, the forecaster assigns more weight to the more immediate past as follows:

Year 1: 5% inflation rate with weight 10%

Year 2: 4% inflation rate with weight 20%

Year 3: 3% inflation rate with weight 30%

Year 4: 2% inflation rate with weight 40%

The individual's expected inflation rate, $E(\Pi_t)$, will be: 0.05 (0.10) + 0.04 (0.20) + 0.03 (0.30) + 0.02 (0.40) = 0.030, or a 3 percent inflation rate forecast for Year 5.

More generally, inflationary expectations can be calculated by using a weighted average of past actual inflation (Π_t) and past expected inflation measured by $E(\Pi_{t-1})$:

$$E(\Pi_t) = \lambda \Pi_{t-1} + (1-\lambda) E(\Pi_{t-1}) \quad (1)$$

where: $E(.)$ is the expectations operator; and $0 < \lambda < 1$ is the weight of past inflation on current inflation expectations. Algebraic manipulation of (1) yields:

$$E(\Pi_t) = E(\Pi_{t-1}) + \lambda [\Pi_{t-1} - E(\Pi_{t-1})] \quad (2)$$

where the second term (in brackets) is composed by the weight and a forecast error of the previous rate of inflation. Inflationary expectations are thus the sum of the previous term inflation forecast and the forecast error. The error term is going to have a large effect on current inflationary expectations if the parameter λ is large. If λ is zero, the adjustment term vanishes and current expected inflation matches past expected inflation. If, on the other hand, λ is one, the current expected inflation rate equals the past inflation rate.

The adaptive expectations principle found plenty of applications in macroeconomics, such as in the analysis of hyperinflation by Philip Cagan (1956), in the consumption function by Milton Friedman (1957), and in Phillips curves for inflation and unemployment. The empirical success of the idea was ultimately challenged by the rational expectations hypothesis, developed by John Muth (1961) and extended by Thomas Sargent and Neil Wallace (1975) and Lucas (1976). More recent work, such as George Evans and Garey Ramey (2006), follows Muth (1960) and reconsiders the Lucas critique in the context of adaptive expectations.

SEE ALSO *Expectations; Expectations, Implicit; Expectations, Rational; Expectations, Static*

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ADAPTIVE INTELLIGENCE

SEE *Intelligence, Social.*

ADD HEALTH

SEE *National Longitudinal Study of Adolescent Health.*

ADDAMS, JANE

SEE *Poverty, Urban.*

ADDICTION

The term *addiction*, as applied to substance use, denotes an advanced level of dependence on a substance, marked by a compulsive need to obtain and consume it despite negative consequences. Dependency may consist of phys-

ical dependency, psychological dependency, or both. Physical dependency is characterized by withdrawal symptoms that occur if the substance is discontinued. This physical dependence thus produces a cycle in which the individual continues to use the substance to prevent the withdrawal symptoms. Psychological dependency, while no less powerful than physical dependency, refers to an individual's *perceived* need for the substance. When the individual is unable to acquire the drug, negative psychological experiences may occur, prompting the individual to continue substance use. Individuals who experience addiction may find themselves unable to function effectively without the substance or substances to which they are addicted. What distinguishes addiction from less extreme forms of dependence is a loss of control and a markedly intense preoccupation with the substance.

The term *addiction* is not part of the clinical framework presented in the Diagnostic and Statistical Manual of Mental Disorders (*DSM-IV-TR*) of the American Psychiatric Association. Yet, the diagnostic classifications in the 2000 edition of the *DSM-IV-TR* acknowledge the symptoms of physical and psychological dependence, including withdrawal and tolerance. Withdrawal, the prominent feature of addiction, is characterized by physical symptoms and often by inability to function without the substance. Tolerance occurs when over time individuals experience a decreased substance effect or must increase their dosage of the substance to experience the same effect.

Individuals may develop addiction to a variety of substances, including alcohol and drugs. Drugs of addiction include both illicit drugs like heroin and prescription or over-the-counter drugs like prescription oxycodone. Whether individuals can become addicted to behaviors—such as gambling, eating, and sexual promiscuity—is, however, controversial. Scholars who favor an expanded definition of addiction argue that certain behaviors may serve an emotion-regulating function and can thus lead to addiction.

The use of potentially addictive substances is quite prevalent. According to the 2004 National Survey on Drug Use and Health (NSDUH), 7.9 percent of the population aged twelve or older used illicit drugs in 2004 (Substance Abuse and Mental Health Services Administration [SAMHSA] 2005). However, substance use and addiction are not equally prevalent in all social categories. According to the 2004 NSDUH, rates of illicit drug use among those twelve and older increase until ages eighteen to twenty, after which rates gradually decrease (SAMHSA 2005). Rates of current illicit drug use also vary by race/ethnicity, with rates highest among individuals reporting two or more racial/ethnic groups and those of American Indian or Alaskan Native descent (SAMHSA 2005). Rates are similar for whites, Hispanics, and blacks, but markedly lower among Asians (SAMHSA 2005). With regard to socioeconomic status, rates are higher for the unemployed than the employed (SAMHSA 2005).

In addition to variations by social category, distinct patterns are observed for different classes of drugs. Tobacco and alcohol use are even more prevalent than illicit drug use (SAMHSA 2005).

CAUSES OF ADDICTION

Differences in patterns of use may be due to both social and biological factors. Furthermore, factors involved in initial and in continued substance use may differ. For example, individuals may begin use as a means of social enhancement or in response to pressure from peers and may continue use to avoid negative emotions or withdrawal.

Animal models have improved understanding of addiction and, in tandem with the findings of twin studies, strongly suggest a genetic component (see Crabbe 2002 for review). Scientists have identified neurotransmitter systems that are involved in the development of addiction. In recent years, this genetic component has received increasing attention as research on addiction has shifted from the domain of sociologists and psychologists to that of geneticists and neurobiologists. This focus on the role of brain chemistry (e.g., Koob, Sanna, and Bloom 1998) and genetics (e.g., Nestler 2000) has many potential implications for the study and treatment of addiction: It may lead to revolutionary new treatments and reduce addiction's stigma. Especially useful are gene-environment interaction models in which social environments/circumstances and genetics interact to determine whether an individual develops addiction.

CONSEQUENCES AND TREATMENT OF ADDICTION

Addiction is costly to both society and the individual. At the societal level, the prevention, control, and treatment of addiction require substantial resources. The types of societal investments made depend in part on whether addiction is viewed as primarily a medical or a criminal issue. Policies based on medical models favor rehabilitation and other treatments and generally attempt to minimize the stigma of addiction. Policies based on criminal models focus on punishing addicts and deterring addiction in the same way that other crime is deterred. In practice, both policies, or elements of both policies, are observed.

Addiction usually entails a variety of social costs as well. Individuals with addictions are highly motivated to attain the substance of their addictions and may engage in

self-destructive behaviors or criminal acts in this pursuit. Drugs per se do not necessarily make individuals more violent, but the need to attain the drug, often to ward off withdrawal, may disinhibit individuals and lead to unhealthy and/or criminal activity. At the familial level, parents who have an addiction may be unable to responsibly care for their children. Moreover, children of substance users are themselves at increased risk of substance use (see, e.g., White, Johnson, and Buyske 2000). At the individual level, addiction is associated with a multitude of negative health effects. This may be due to the substance itself or to the way that the substance is consumed. For example, drugs that are smoked may contribute to lung cancer, whereas drugs that are taken intravenously pose risks associated with injection (i.e., use of unsterile needles may be associated with the transmission of infectious diseases like HIV). Negative health effects also include withdrawal, which can be fatal with some drugs and with alcohol if not medically supervised.

TREATMENT OF ADDICTION

Many agencies exist to assist individuals in overcoming addiction, including outpatient facilities, residential communities, and hospital-based programs. In addition, self-help groups like Alcoholics Anonymous (AA) are quite common. The twelve-step model of AA has been embraced by the treatment community and often provides the structural framework for both inpatient and outpatient treatment. A variety of pharmacotherapies are available for treating addictions, including agonist medications, antagonists, agonist-antagonist medications, and anticraving medications (see O'Brien 1997 for discussion). Supervised medical detoxification may be required for individuals addicted to certain drugs and for alcohol-dependent individuals with medical problems. Treatment for addiction can be quite costly.

Approaches to the treatment of addiction are predominantly based on a *biopsychosocial* model, which holds that the biological, psychological, and social bases of addiction all need to be addressed. Within that approach, differences in understandings of the causes of addiction may prompt some treatment providers to favor certain approaches over others. For example, some treatment providers favor a medical model in which addiction is viewed as a disease and treated within a medical framework, whereas others may lean toward more behavioral models that conceptualize substance abuse as resulting from deficient coping skills. Some providers more than others pay special attention to social and cultural explanations for addiction and advocate culturally sensitive programs that focus on overcoming social disadvantage. Individualized treatment programs and programs that respond to differences in gender and sexual orientation have great potential for success.

Addiction is a phenomenon with social, medical, and legal dimensions. A multifaceted public health problem, its treatment and prevention require contributions from multiple disciplines. Medical scholars, legal scholars, sociologists, psychologists, and policymakers are all needed if progress is to be made.

SEE ALSO *Drugs of Abuse; Tolerance, Drug*

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ADLER, ALFRED

SEE *Inferiority Complex; Napoleon Complex.*

ADMINISTRATIVE LAW

Administrative law is a branch of public law that includes the laws and legal principles pertaining to the administration and regulation of state agencies, ministries, or departments and the relationship of the state with private individuals. It is a product of the need for a state to perform a multitude of functions for its citizens and deals with the decision making of a state agency in relation to its regulatory framework. Such regulatory frameworks perform a variety of state functions including natural resource protection, transportation regulation, and food

and health safety regulations. Because all administrative law systems are not the same it is imperative for an individual to have knowledge of the political, historical, social, and economic context of the system of a particular state to fully understand its administrative law. In most systems a state's constitution or fundamental law is inextricably linked to its administrative law system and must be considered in light of the system or tradition under consideration.

All but the most oppressive administrative law systems share at least one or more of the following interests: (1) providing justice for injuries inflicted by state personnel and agencies on private citizens; (2) maintaining the legality and propriety of subordinate state agencies and actors; and (3) remedying injuries to bureaucrats by the state. Common law administrative law scholars in the United Kingdom and the United States look to the *Conseil d'Etat* in France because, at one time, French administrative law dominated continental systems. Not all administrative law systems conform, however, to this pattern. At least four other divergent themes have all been noted by H. B. Jacobini in *An Introduction to Comparative Administrative Law* (1991): "(1) the Sinitic Censorate and its derivatives, (2) the Procuracy and other administrative law procedures as found in the communist world, (3) the concept of the ombudsman, and (4) machinery for registering complaints" (p. 12).

The fundamental elements of administrative law in the United States that are similar to many European and other nations include: (1) statutory delegation of powers from an elected legislative body to the executive; (2) an administrative agency that derives its authority from the legislative body, and that implements the relevant law through rulemaking, adjudication, or other forms of administrative process; (3) judicial review by an independent judiciary of the administrative body's actions for compliance with the statutory delegation of powers by the legislative body and other applicable laws; and (4) transparency of the decisional process.

For example, in the United States, administrative agencies are said to have no inherent powers because they must act pursuant to the legal authority delegated to them by the legislative body. The legislative body empowers administrative agencies to act as agents for the executive branch of government through statutory law. The statute that delegates power to an administrative agency sets forth the scope of the agency's authority. Thus, the nature of administrative law is subconstitutional in the United States because the powers of administrative agencies are delegated through statutory law, not through constitutional law. Yet the actions of the administrative agency must ultimately comply with the U.S. Constitution, its fundamental law. In contrast the German Constitution, the *Grundgesetz*, contains provisions specifically relevant to the development of its administrative law system.

Administrative agencies in the United States typically utilize adjudication, rulemaking, and inspection to execute their statutory authority. Adjudication can be either informal or formal and must comport to the U.S. Constitution's due process clause. Rulemaking can also be informal or formal. In addition, the power of inspection is sometimes used as a substitute for adjudication procedures or to determine whether not the existence of certain conditions warrant further administrative action. One example of an administrative agency is the Environmental Protection Agency (EPA), whose mission is to protect human health and the environment.

In many countries the courts play a large part in the development of administrative law. In the United States the power of judicial review allows courts to determine whether or not the actions of administrative agencies exceed the scope of their delegated authority or violate the Constitution. Similar processes of review are found in other countries and, although the legal standards vary, their roles are quite similar. For example, in France the Conseil d'Etat has developed general principles for administrative law. In the United Kingdom, the ordinary courts are competent in administrative law and, generally, this area is subject to common law. There, the Queens Bench of the High Court is more administrative than the ordinary court when it deals with applications of judicial review.

SEE ALSO *Bureaucracy; Government; Judicial Review; Public Administration; Separation of Powers*

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ADOLESCENT HEALTH LONGITUDINAL SURVEY

SEE *National Longitudinal Study of Adolescent Health.*

ADOLESCENT PSYCHOLOGY

Adolescence spans the second decade of life, a phase social scientists describe as beginning in biology and ending in society. Adolescence may be defined as the life-span period in which most of a person's biological, cognitive, psychological, and social characteristics are changing in an interrelated manner from what is considered childlike to what is considered adultlike. When most of a person's characteristics are in this state of change the person is an adolescent.

CHANGING MODELS OF ADOLESCENCE

Since the founding of the scientific study of adolescent development at the beginning of the twentieth century the predominant conceptual frame for the study of this age period has been one of storm and stress, or of an ontogenetic time of normative developmental disturbance (Freud 1969). Typically, these deficit models of the characteristics of adolescence were predicated on biologically reductionist models of genetic or maturational determination (Erikson 1959, 1968) and resulted in descriptions of youth as broken or in danger of becoming broken (Benson, Scales, Hamilton, and Sesma 2006), as both dangerous and endangered (Anthony 1970), or as problems to be managed (Roth, Brooks-Gunn, Murray, and Foster 1998). In fact, if positive development was discussed in the adolescent development literature—at least prior to the 1990s—it was implicitly or explicitly regarded as the absence of negative or undesirable behaviors. A youth who was seen as manifesting behavior indicative of positive development was depicted as someone who was *not* taking drugs or using alcohol, *not* engaging in unsafe sex, and *not* participating in crime or violence.

Beginning in the early 1990s, and burgeoning in the first half decade of the twenty-first century, a new vision and vocabulary for discussing young people emerged. Propelled by the increasingly more collaborative contributions of scholars (Benson et al. 2006; Damon 2004; Roth & Brooks-Gunn 2003), practitioners (Floyd & McKenna 2003; Little 1993; Pittman, Irby, and Ferber 2001), and policy makers (Cummings 2003; Gore 2003), youth are viewed as resources to be developed. The new vocabulary emphasizes the strengths present within all young people and involves concepts such as developmental assets, moral development, civic engagement, well-being, and thriving. These concepts are predicated on the ideas that every young person has the potential for positive youth development (PYD).

This vision for and vocabulary about youth has evolved in the context of the growth of developmental systems, theoretical models that stress that human development derives from dynamic and systemic (and therefore bidirectional and mutually influential) relations among the multiple levels of organization that comprise the human development system. Developmental systems theory eschews the reduction of an individual to fixed genetic influences and, in fact, contends that such a hereditarian conception of behavior is counterfactual. Instead, developmental systems theory stresses the inherent plasticity of human development, that is, the potential for systematic change throughout development. This potential exists as a consequence of mutually influential relationships between the developing person and his or her biological, psychological, ecological (family, community, culture), and historical niche.

These mutually influential relations involve the influence of a young person on his or her context (e.g., his or her influences on parents, peers, teachers, and community) and the influence of the components of his or her world on him or her. Termed *developmental regulations*, these bidirectional influences constitute the key focus of empirical study in contemporary research on adolescent development. When the exchanges between individual and context are mutually beneficial, developmental regulations are termed *adaptive*, and healthy, positive individual development should occur.

Plasticity, then, is instantiated from the regulation of the bidirectional exchanges between the individual and his or her multilevel context. Thus, the concepts of relative plasticity and developmental regulation combine to suggest that there is always at least some potential for systematic change in behavior and, as such, that there may be means found to promote positive development in adolescence.

Thus, plasticity legitimizes an optimistic view of the potential for promoting positive changes in youth. The presence of plasticity in development is a key strength of human development; when combined with the concept of adaptive developmental regulation, and when there is an alignment between the assets of an individual and the assets for positive development that exist in the ecology of youth, one may hypothesize that PYD will be promoted.

The key features of adolescent development underscore the importance of focusing on developmental regulations, in person-context relations, to understand the basic developmental process during this period. This focus allows as well an understanding of how plasticity may eventuate in PYD.

FEATURES OF ADOLESCENT DEVELOPMENT

Adolescent development involves adjustments to changes in the self (e.g., pertinent to puberty, cognitive and emo-

tional characteristics, and social expectations), and also to alterations in family and peer group relations, and often to institutional changes as well (e.g., regarding the structure of the schools within which adolescents are enrolled or opportunities or rules for community service). Not all young people undergo these transitions in the same way, with the same speed, or with comparable outcomes. Individual differences are thus a key part of adolescent development, and are caused by differences in the timing of connections among biological, psychological, and societal factors—with no one of these influences (e.g., biology) acting either alone or as the prime mover of change (Lerner 2004).

In other words, a major source of diversity in developmental trajectories is the systematic relations that adolescents have with key people and institutions in their social context; that is, their family, peer group, school, workplace, neighborhood, community, society, culture, and niche in history. These person-context relations result in multiple pathways through adolescence.

In short, intra-individual changes in development and inter-individual differences in intra-individual change typify this period of life. Both dimensions of diversity must be considered in relation to the general changes of adolescence. The following examples of such general changes illustrate the nature and importance of diversity in adolescence and that the key process within this period (as is the case as well throughout the life span) is a relational one involving mutually influential relations between the developing individual and the multiple levels of the ecology of human development.

MULTIPLE LEVELS OF CONTEXT

Adolescence is a period of extremely rapid transitions in physical characteristics. Indeed, except for infancy, no other period of the life cycle involves such rapid changes. While hormonal changes are part of the development of early adolescence, they are not primarily responsible for the psychological or social developments during this period. Instead, the quality and timing of hormonal or other biological changes influence, and are influenced by, psychological, social, cultural, and historical factors.

Good examples of the integrated, multilevel changes in adolescence arise in the area of cognitive development during this period. Global and pervasive effects of puberty on cognitive development do not seem to exist. When biological effects are found they interact with contextual and experiential factors (e.g., the transition to junior high school) to influence academic achievement. Perspectives on adolescence that claim that behavioral disruptions or disturbances are a universal part of this period of life might lead to the assumption that there are general cognitive disruptions inherent in adolescence. However, evidence does not support this assumption. Rather, cognitive abilities are enhanced in early adolescence as individuals become faster and more efficient at processing information—at least in settings in which they feel comfortable in performing cognitive tasks.

Thus, relations among biology, problem behaviors associated with personality, and the social context of youth illustrate the multiple levels of human life that are integrated throughout adolescent development. For example, in 1993 researcher Avshalom Caspi and colleagues linked the biological changes of early pubertal maturation to delinquency in adolescent girls, but only among girls who attend mixed-sex schools; similarly, Hakan Stattin and David Magnusson linked pubertal maturation and delinquency with girls who socialize with older friends instead of same-age friends. Early maturation among girls in single-sex schools or in sex-age peer groups was not linked with higher delinquency.

ADOLESCENCE AS AN ONTOGENETIC LABORATORY

Given the structure and substance of the range of interrelated developments during adolescence, from the late 1970s to the mid-2000s researchers have come to regard adolescence as an ideal natural ontogenetic laboratory for studying key theoretical and methodological issues in developmental science. There are several reasons for the special salience of the study of adolescent development to understanding the broader course of life-span development.

First, although the prenatal and infant period exceeds adolescence as an ontogenetic stage of rapid physical and physiological growth, the years from approximately ten to twenty not only include the considerable physical and physiological changes associated with puberty but also mark a time when the interdependency of biology and context in human development is readily apparent. Second, as compared to infancy, the cognizing, goal setting, and relatively autonomous adolescent can, through reciprocal relations with his or her ecology, serve as an active influence on his or her own development, and the study of adolescence can inform these sorts of processes more generally. Third, the multiple individual and contextual transitions into, throughout, and out of this period, involving the major institutions of society (family, peers, schools, and the workplace), engage scholars interested in broader as well as individual levels of organization and provide a rich opportunity for understanding the nature of multilevel systemic change.

Finally, there was also a practical reason for the growing importance of adolescence in the broader field of developmental science: As noted by Laurence Steinberg and Amanda Sheffield Morris in 2001, the longitudinal samples of many developmental scientists who had been

studying infancy or childhood had aged into adolescence. Applied developmental scientists were also drawn to the study of adolescents, not just because of the historically unprecedented sets of challenges to the healthy development of adolescents that arose during the latter decades of the twentieth century, but because interest in age groups other than adolescents nevertheless frequently involved this age group. For example, interest in infants often entailed the study of teenage mothers and interest in middle and old age frequently entailed the study of the middle generation squeeze, wherein the adult children of aged parents cared for their own parents while simultaneously raising their own adolescent children.

CONCLUSIONS

The theoretically interesting and socially important changes of adolescence constitute one reason why this age period has attracted increasing scientific attention. To advance basic knowledge and the quality of the applications aimed at enhancing youth development, scholarship should be directed increasingly to elucidating the developmental course of diverse adolescents.

In turn, policies and programs related to interventions must factor in adolescents' specific developmental and environmental circumstances. Because adolescents are so different from one another, one cannot expect any single policy or intervention to reach all of a given target population or to influence everyone in the same way. Therefore, the stereotype that there is a single pathway through the adolescent years—for instance, one characterized by inevitable "storm and stress"—cannot be expected to stand up in the face of contemporary knowledge about diversity in adolescence. In future research and applications pertinent to adolescence, scholars and practitioners must extend their conception of this period to focus on changing relations between the individual characteristics of a youth and his or her complex and distinct ecology.

The future of civil society in the world rests on the young. Adolescents represent at any point in history the generational cohort that must next be prepared to assume the quality of leadership of self, family, community, and society that will maintain and improve human life. Scientists have a vital role to play in enhancing, through the generation of basic and applied knowledge, the probability that adolescents will become fully engaged citizens who are capable of, and committed to, making these contributions. As evidenced by the chapters in Richard M. Lerner and Laurence Steinberg's *Handbook of Adolescent Psychology* (2004), high-quality scientific work on adolescence is being generated at levels of study ranging from the biological through the historical and sociocultural. As the work in this volume demonstrates, the study of adolescent development at its best both informs and is informed by the concerns of communities, of practitioners, and of policy makers.

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ADOPTION STUDIES

SEE *Twin Studies.*

ADORNO, THEODOR

SEE *Frankfurt School; Personality, Authoritarian; Personality, Cult of.*

ADVERSE SELECTION

The concept of adverse selection is used to identify a market process in which low-quality products or customers are more likely to be selected as a result of the possession of asymmetric information by the two sides of the market transaction. In this situation the better-informed side may

take trading decisions that adversely affect the other side, with unwelcome consequences for the market as a whole. Economists usually refer to this situation as a case of market failure: a case in which market dynamics do not lead to an efficient allocation of goods and services.

The notion of adverse selection is applied widely in contemporary economic literature because asymmetric information is often a common feature of market interactions. This typically occurs when the private information available to the sellers is not disclosed to the buyers or vice versa. The most classic example of adverse selection concerns the market for secondhand cars, which usually is referred to as the "market for lemons" since the pioneering work in 1970 of the Nobel laureate economist G. A. Akerlof.

In that market potential buyers cannot distinguish good cars ("peaches") from bad cars ("lemons") easily. However, the sellers are perfectly aware of the characteristics of their cars. Potential buyers are likely to offer the average market price for a particular car model. A peach owner will refuse such an offer, but a lemon owner will agree to sell his or her car for an amount that is likely to be higher than its real value. As a consequence, only sellers with bad cars will offer them for sale, and the potential buyers' willingness to pay for secondhand cars will decrease. The resulting market equilibrium will be inefficient because there will be a number of transactions that are lower than the optimal level.

The role of adverse selection in explaining market inefficiencies has been understood since the beginnings of the economic literature. In his 1776 inquiry on the wealth of nations Adam Smith implicitly applied the concept of adverse selection to the analysis of the credit market. He intuited that a legal rate for loans much above the lowest market rate probably will attract only risky borrowers who are willing to pay a high interest rate. Safe borrowers, who are willing to pay only part of what they are likely to gain through the use of money, will not venture into the competition, and most of the capital probably will be lost.

Inefficiencies in the credit market caused by adverse selection have been used more recently to explain the causes of the Third World debt crisis of the early 1980s. Much of that debt was amassed after the 1973 oil crisis, when European and North American banks lent large amounts of money from the oil revenues deposited in their accounts. The low interest rate that was demanded attracted several Third World countries whose financial capability was not observable by those banks. For some of those countries strong financial constraints resulted in the inability to repay the debt when economic conditions worsened and interest rates increased.

SEE ALSO *Banking; Insurance; Loan Pulling; Loan Pushing; Loans; Moral Hazard; Smith, Adam*

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ADVERTISING

Advertising is a form of mass media designed to promote a specific product, service, or idea on behalf of a business or organization. Advertisers ordinarily use media such as television, radio, print (magazines, newspapers, and billboards), sponsorship of cultural and sporting events, and the Internet.

From the Industrial Revolution to the mid-twentieth century, advertising in the United States and Europe was generally straightforward and usually included an image and description of the product's function, price, and location to be purchased. According to William M. O'Barr in his 2006 article "Representations of Masculinity and Femininity in Advertising," ads were primarily directed toward women because they were responsible for the majority of consumer purchases, the exception being "big ticket" products like cars and major appliances. Since World War II, however, industries have increasingly courted the adult male consumer, and with the advent of youth culture, children, teenagers, and young adults have been targeted as well.

A common strategy for advertisers is to make the consumer feel as though the given product will remedy a specific problem or insecurity. Designers prey on a modern culture obsessed with status, self-enhancement, youth, body image, and gender identity, the latter being a favored theme now aimed at both men and women. Critics such as John Kenneth Galbraith (1969) and Christopher Lasch (1978) charged that advertising functions to create desires that previously did not exist and that advertising serves to promote consumption as a way of life.

A dialectical relationship exists between consumers and advertisers where ads face heavy skepticism and scrutiny, while at the same time receive access and appreciation in the form of high revenue, lavish award ceremonies, and TV programs devoted to airing successful commercials. In the United States, argued Michael Schudson in his 1984 book *Advertising, the Uneasy*

Persuasion: Its Dubious Impact on American Society, the culture is amenable to advertising that is "more pervasive and more intrusive than in any other industrialized country" (p. 128). Millions watch the United States's *Superbowl* programming not for the content of the football game, but rather just to see the premier of new, multimillion-dollar ads.

A crucial difference between previous eras and today is advertising's saturation. In U.S. and European cities a conservative estimate of people's daily exposure to ads is 250 messages a day, while others suggest that that number is closer to 5,000 messages a day. This ubiquity creates a more skeptical and desensitized audience. As a result marketers go to greater lengths to make their products stand out.

Advertisers now use more diverse and insidious mediums such as stickers on food, social networking websites like YouTube, motion sickness bags, and space within public schools. Guerrilla marketing practices like "product placement"—where the intended audience is unaware that they have been exposed to an advertisement, while the desired impression of the given product remains—are now everyday tactics. In 2007 blinking electronic signs promoting a television show were surreptitiously planted on highways and bridges in Boston and mistaken for terrorist bombs.

Given the use of more sophisticated technology and the expansion of the Internet, marketers can better assess the effectiveness of their pitches and the return on investment. Sophisticated techniques like data mining help identify (and subsequently create) niche consumption desires. Additionally hyperspecialized media outlets enable advertisers to target more precise demographics. For example advertisers now design ads for gay men and air them on gay-oriented cable television channels like "Here TV" and "Logo." Targeted marketing and reliable measurements of effectiveness are the holy grail of companies seeking to reduce costs.

In an era of global capitalism, advertising agencies work for clients all over the world and target niche demographics in nearly all continents. Successful advertising for multinational corporations hinges on the familiarity with local habits, symbols, and cultural differences. According to Marieke K. de Mooij in the 2005 publication *Global Marketing and Advertising: Understanding Cultural Paradoxes*, for a global brand like McDonald's—a company that sells its food via more than 30 thousand distribution points, in 119 countries, serving 47 million customers a day—particular attention must be paid to local culture for the pitch to be successful. For example, advertising for McDonald's in France tied into "Asterix and Obelisk," the most famous historical cartoon of the nation (Mooij 2005).

As more advertising proliferates in the globalized context, we are likely to see new, unforeseen forms of consumer reluctance and resistance. Companies will surely continue to manage this dialectic for their own financial advantage.

SEE ALSO *Consumerism; Galbraith, John Kenneth; Goodwill; Hidden Persuaders; Internet; Markets; Media; Television; Veblen, Thorstein; Want Creation; Wants*

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Tyson Smith

AESTHETICS

The philosophy professor and writer Jerrold Levinson defines aesthetics as "the branch of philosophy devoted to conceptual and theoretical inquiry into art and aesthetic experience" (Levinson 2003, p. 3). What makes an experience an aesthetic one is a contentious matter, however, and is indeed one of the main subjects of the theoretical inquiry. Nonetheless, there is general agreement that people experience something aesthetically when, for example, they find it beautiful, elegant, or vulgar. Levinson's definition, which is a fairly orthodox one, indicates that aesthetics developed out of different, though overlapping, concerns: for art, and for an allegedly distinctive type of human experience. The two are different because not only artworks, but also natural scenes and objects encountered in "everyday life" (coffee-machines, say), may be appreciated for their aesthetic qualities, such as garishness or symmetry. In addition, not all philosophical questions about artworks are about their aesthetic properties (e.g., questions about the role of poets' intentions in determining the meaning of poems). The two concerns overlap, however, because the identification of an artwork's aesthetic qualities is often an important ingredient in its appreciation.

Levinson's definition blends two early and different ways of using the term *aesthetics*. Derived from a Greek word for "sensation," it was first introduced by the German philosopher Alexander Baumgarten in 1735 as a name for "the science of how something … is sensitively cognized" (Baumgarten 1954, §16). The scope of the term was later restricted by Immanuel Kant, in his *Critique of Judgement* (1790), to sensation-based judgements of taste or beauty. For Kant, aesthetics had nothing peculiarly to do with art. G. W. F. Hegel, however, doubted the possibility of a general "science" of beauty, and in his *Lectures on Fine Art* in the 1820s he equated the term with "the philosophy of fine art."

Of course, although *aesthetics* was an eighteenth-century coinage, the discipline it refers to has an ancient pedigree. Plato and Aristotle, for example, addressed such paradigmatically aesthetic topics as beauty and the role of emotion in art.

Reflecting the divergent approaches of Kant and Hegel, later aestheticians have often been divided between those focused primarily on the philosophy of art and those concerned with understanding the character of aesthetic experience. Attention of the latter sort has tended to concentrate on an examination of Kant's characterization of aesthetic experience as "disinterested," as disengaged from cognitive and practical interests, and therefore sensitive solely to the appearances and forms of things.

Within philosophy, the status of aesthetics is disputed. For some it is a relatively discrete subdiscipline, while for others it is necessarily parasitic on the insights of other areas of philosophy, including metaphysics. Some thinkers, such as Friedrich Nietzsche, have held that its place is central, since aesthetic concepts such as style and elegance are involved in ethical reflection on the good life and even in philosophical reflection on scientific method.

The relation of aesthetics to the social sciences is also disputed, but many philosophical questions about art and aesthetic experience are certainly closely related to social-scientific issues, and aestheticians often invoke the findings of social science. One such question is "What is art?" John Dewey and Thorstein Veblen, for example, argued against "timeless" conceptions of art. They maintained that the modern concept of art is a nineteenth-century product that reflects the predilections of a dominant and leisured social class. A related theme was developed in Pierre Bourdieu's "social critique" of such distinctions as that between aesthetic and less "pure" pleasures.

Several issues concerning aesthetic experience, especially that of beauty, also engage with cultural anthropological ones. Thus, there has been considerable debate about whether there are broadly universal standards of, say, women's beauty, explicable perhaps in terms of evolutionary factors, or whether such standards are relatively "local" ones, explained instead as functions of cultural pressures exerted by advertisers and the fashion industry. While aestheticians both contribute to and draw upon such empirical debates, most of them also maintain that these debates involve conceptual and evaluative issues that it is not for empirical enquiry to settle, but that instead call for philosophical analysis.

SEE ALSO *Bourdieu, Pierre; Cultural Studies; Culture; Distinctions, Social and Cultural; Literature; Music; Preferences; Psychology; Tastes*

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AFFECT

SEE *Emotion and Affect.*

AFFECT-INFUSION MODEL

SEE *Mood Congruent Recall.*

AFFIRMATIVE ACTION

The term *affirmative action* refers to policy measures designed to reduce the marginalization of groups that have historically suffered from discrimination, exclusion, or worse, and that are underrepresented in a society's desirable positions. The measures may take the form of public laws, administrative regulations, and court orders, or of practices by private businesses and nonprofit institutions. The underrepresented groups are typically "identity groups" defined in terms of characteristics that are physical or cultural, such as race, caste, tribe, ethnicity, and gender.

Affirmative action policies are designed to benefit members of underrepresented identity groups by providing them with more favorable access to certain benefits—usually positions such as jobs, promotions, or admissions

to educational institutions, but sometimes resources such as business loans and contracts, financial aid, or land rights. Membership in an identity group recognized as underrepresented is treated as a positive factor, increasing one's chances of access to such benefits. This may be accomplished by means of a quota system, in which certain benefits are reserved for members of the relevant groups, or by means of a preferential boost system, in which extra weight is accorded to group members in an explicit or implicit measure of qualifications for access to benefits.

Affirmative action in the United States owes its origin to the civil rights movement of the 1950s and 1960s, which demanded an end to the long history of injustices perpetrated against African Americans and called for their full participation as citizens in U.S. society. This movement prodded the U.S. federal government into action to curb the segregation of African Americans into inferior facilities and to provide them with access to rights and opportunities long denied. The term *affirmative action* was first mentioned by President John F. Kennedy in his Executive Order #10925 of March 1961, which established the President's Committee on Equal Employment Opportunity and described positive steps to be taken by federal agencies to root out discrimination against any identity group.

Affirmative action in this sense gained a firm legal foundation in the Civil Rights Act of 1964, championed by President Lyndon B. Johnson and enacted in the wake of the assassination of President Kennedy. Reinforcing the antidiscrimination provisions of the act, President Johnson went on to issue a series of executive orders designed to promote equal opportunity in employment, education, and government contracting. It was initially expected that the assertion of formal legal equality of all citizens, the removal of overtly discriminatory barriers, and a much wider diffusion of relevant information to members of underrepresented groups would lead to significant increases in opportunities for members of such groups—in particular, African Americans. It soon became apparent, however, that affirmative action of this kind would not have a significant impact on the numbers of African Americans in desirable jobs or schools. By the late 1960s, therefore, many government agencies and private organizations began to give some preference to African Americans in selection processes. In this context the term *affirmative action* came to denote positive action in favor of members of underrepresented groups, not simply an effort to abolish all forms of discrimination.

Following the example set by African Americans, other identity groups underrepresented in desirable positions in the United States—such as women, Hispanic Americans, and Native Americans—began to mobilize in the late 1960s and early 1970s for policies to end discrimination and to facilitate improvement of their standing in U.S. society. Soon thereafter, affirmative action programs oriented to African Americans came to include also Hispanic Americans and Native Americans as beneficiaries; and a variety of public and private affirmative action programs were established to increase the representation of women in fields that had long been dominated by men.

Affirmative action has been practiced in many countries of the world. Beyond the United States, significant affirmative action policies are in place in India, South Africa, Malaysia, and Sri Lanka; and some form of affirmative action has been implemented in another dozen countries. India was the first site of such policies—labeled "reservations" since they involved quotas of reserved seats. In the early twentieth century popular movements against Brahmins—the highest Hindu caste, whose members dominated the most elite positions open to Indians under British colonial rule—led in parts of India to the establishment of reserved seats for non-Brahmins in some public services and educational institutions. In the 1930s reservation policies were implemented throughout British India in the form of legislative assembly seats reserved for four of India's minority communities—Muslims, Christians, Sikhs, and Anglo-Indians—and later also the two most depressed communities—untouchables and tribals, officially labeled "Scheduled Castes" and "Scheduled Tribes." The constitution of independent India, completed in 1950, is unusual in making explicit provision for affirmative action in the form of reservations for Schedules Castes and Scheduled Tribes in national and provincial assemblies, as well as in public sector jobs and public institutions of higher education. The Indian constitution also permits reservations for members of "Other Backward Classes"; such reservations have been extended to a variety of groups in most Indian states and, since the 1990s, at the national level.

Wherever they have been implemented, affirmative action policies have proven to be highly controversial, generating heated debate and, at times, mass demonstrations. Where proponents see such policies as a way of rectifying historical injustices and integrating marginalized communities into the life of the society, opponents see these policies as a kind of "reverse discrimination" that contravenes the principle of equal rights for all individuals.

In recent decades academic scholarship has begun to shed light on the actual consequences of affirmative action policies, bringing empirical evidence to bear on debates most often dominated by ethical and political considerations. The evidence makes clear that the direct beneficiaries of affirmative action policies are most often relatively privileged members of underrepresented identity groups, who are in the best position to take advantage of improved

access to desirable positions and resources. It has become increasingly clear that affirmative action does not compensate those individuals most disadvantaged by past injustices, nor does it redistribute effectively from rich to poor. But it does foster greater integration of the societal elite, which can serve to legitimate and energize democratic political institutions, to inspire members of marginalized groups, and to improve the performance of tasks where greater diversity among performers contributes to better quality of service for a diverse clientele. Simultaneously, however, affirmative action heightens attention to identity group status, which may exacerbate divisive identity politics.

SEE ALSO *African Americans; California Civil Rights Initiative; Caste; Civil Rights Movement, U.S.; Discrimination; Hierarchy; Inequality, Political; Inequality, Racial; Politics, Gender; Politics, Identity; Quota Systems; Racism; Underrepresentation*

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AFFLUENT SOCIETY

SEE *Galbraith, John Kenneth.*

AFRICAN AMERICAN STUDIES

African American studies (also called black studies, African and African American studies, Africana and Pan-African studies, and African diaspora studies) combines general intellectual history, academic scholarship, and a radical movement for fundamental educational reform (Alkalimat et al. 1977). From its inception the field has embraced the focus of academic excellence and social responsibility in a unique approach that addresses traditional issues of "town and gown." Though born out of turbulence, the discipline's ability to persevere since its formal establishment in university settings makes it a lasting testament to the legacy of the Black Power movement and the goals of a long list of black intellectuals dedicated to bringing the history and culture of African Americans into a place of prominence in the American academy.

The first concerted calls to break from disciplinary foci that ignored the culture and background of black people came during the 1930s at the annual meetings of the Association for the Study of Negro Life and History (now the Association for the Study of African American Life and History). Building on the efforts of W. E. B. Du Bois (1868–1963) and Carter G. Woodson (1875–1950), Joseph Rhoads (1890–1951) and Lawrence D. Reddick (1910–1995) called for black colleges to expand traditional departments. By the 1940s historically black institutions such as Howard University were offering courses within the traditional disciplines that addressed issues of black concern. Arturo A. Schomburg (1874–1938) joined the efforts of these early proponents of black studies with his enormous collection of materials documenting the black experience. The donation of the collection to the New York Public Library and his work as the curator of its Black Life Collection led to the establishment of the Schomburg Center for Research in Black Culture, hailed by the New York Times (May 11, 2007) as a "cultural anchor in a sea of ideas."

Early twenty-first century formations of African American studies at historically white institutions emerged as institutional responses to the "black studies movement." Once the numbers of black students at historically white institutions developed into a critical mass, the general unrest and civil rights movement of the 1960s fueled the dissatisfaction that often led to aggressive and violent expressions. Cornell, Howard, Michigan, Rutgers, and San Francisco State are a few of the institutions where students demanded that black studies curricula be instituted and black faculty be hired. This black studies movement led to the formation of programs, departments, institutes, and centers at numerous colleges and universities, thus marking the period as a moment of radical rupture in the evolutionary history of the discipline.

The establishment of the first department of black studies occurred under the duress of a student strike. At San Francisco State, 80 percent of the racially and ethnically diverse student body joined forces and "made or supported unequivocal demands" (Rooks 2006, p. 4). Similar strikes occurred at Howard (March 1968), Northwestern (May 1968), Cornell (April 1969), and Harvard (April 1969). San Francisco State responded to the demands with the appointment of Nathan Hare as the acting chair of the Department of Black Studies in 1969. Other universities followed this course, with James Turner at Cornell (1969), Andrew Billingsley at Berkeley (1969),

Ronald Foreman at the University of Florida (1970), Carlene Young at San Jose State University (1970), Herman Hudson at Indiana (1970), and Richard Long at Emory University (1970).

The establishment of black studies as a legitimate academic discipline required intense discussions over the direction the course of study should take. Some of the earliest texts, including *Introduction to Afro-American Studies* (Alkalimat et al. 1977), *Introduction to Black Studies* (Karenga 1982), and *All the Women Are White, All the Blacks Are Men, But Some of Us Are Brave: Black Women's Studies* (Hull et al. 1982), represented the differing perspectives and were foundational beginnings for many departments. Although the application of knowledge from a non-Eurocentric perspective is essential to the diverse intellectual frameworks that constitute the field, Africology, an Afrocentric perspective, was principally established in the work of Molefi Asante. Other (often competing) perspectives—such as St. Clair Drake's Pan-Africanist view, Maulana Karenga's cultural nationalistic Kawaida theory, Abdul Alkalimat's "paradigm of unity" and technologically focused eBlack studies, James B. Stewart's concept of the field as a disciplinary matrix, Gloria T. Hull's focus on black women's studies, Manning Marable's scholarly commitment to the assault of structural racism in the context of global capital, and Henry Louis Gates and Cornel West's focus on cultural studies—make important contributions to the intellectual trajectories of the field. Black British cultural studies in the work of Stuart Hall and Paul Gilroy generate new flows of ideas of a decentered cultural region and add to the discourse on intellectual frameworks for studying the black experience. Key to the mission of black studies throughout its evolutionary stages is the application of knowledge to promote social change, and it is at the core of the diverse intellectual and methodological approaches to the field. As with most social science disciplines, black studies scholars continue to reexamine the field.

The differences within African American studies, though important to each proponent, are far less destructive than many detractors suggest and provide evidence of the vibrancy and necessity of the discipline. Rather than leading to the demise of the field, diversity broadens and strengthens it as the research and scholarship of various practitioners contribute to a growing literature examining the complexity of the historical, social, and cultural phenomena that influence black lives in an increasingly globalized world.

A holistic view of black studies (whether under the formation of African American studies, Africana studies, Afrikan studies, etc.) reveals the focus of the discipline to be a search for understandings of what it means to be of African descent in a world where unequal power relations developed as a result of colonial pursuits. Institutional structure (whether a department, program, center, or institute) and the extent of institutional support determine the strength of the degree programs in African American studies offered by more than three hundred American universities. While many of the programs in this field embrace similar objectives, what they are named (i.e., department, program, center, institute) sometimes signals their intellectual trajectory, programmatic foci, and institutional mission.

The value and success of African American studies can be determined by its contribution to the transformation of higher education. The commitment to blending scholarship and activism instituted by most programs of study is reflected in different ways in other disciplines. The conditions under which feminist studies, ethnic studies, postcolonial studies, gay and lesbian studies, and cultural studies could articulate their positions were established by the introduction of African American studies into the academy.

Important to the continued development of the field are the many organizations and institutions that support African American studies. In addition to repositories such as the Schomburg, the Association for the Study of African American Life and History (ASALH), the National Council of Black Studies (NCBS), the Association of Black Cultural Centers, and eBlackstudies.org are among a number of organizations dedicated to the gathering and dissemination of knowledge on the black experience. Through their meetings, journals, and public programs, these organizations (along with myriads of local community organizations and dedicated scholars) continue to address the diverse challenges facing black studies and the social sciences in the twenty-first century.

SEE ALSO *African Americans; African Studies; Afrocentrism; Black Power; Blackness; Cultural Studies; Du Bois, W. E. B.; Hall, Stuart; Pan-Africanism; Race; Race Relations*

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Marilyn M. Thomas-Houston

AFRICAN AMERICANS

The term *African American* has typically referred to descendants of enslaved and indentured black Africans transplanted by force into what is now the United States. The terms *African American, black*, and *Afro-American* are sometimes used interchangeably. *African American* has supplanted other designations, such as *Negro*, derived from the word *Negroid*, coined in the eighteenth century by European anthropologists. *African American* is sometimes applied more broadly to descendants of all ten million or more Africans forcibly transported to the Western Hemisphere from the beginning of the sixteenth century until the 1860s.

Africans shipped to the United States represented over forty ethnic groups from twenty-five different kingdoms, but constituted only 7 percent of all Africans transported to the Western Hemisphere by 1810. Over time, their descendants in the United States formed a composite identity shaped primarily by shared conditions, since historical circumstances and systematic de-Africanization efforts precluded the tracing of ancestry to precise points of origin. African American identity has been and is continuing to be constructed out of an African cultural and historical legacy, but it is shaped within the framework of intragroup cooperation and intergroup conflict within American society.

Chattel slavery contributed significantly to pre–Civil War economic growth in the United States. The invention of the cotton gin (1793) dramatically increased the demand for slaves by lowering the cost of cotton production and inducing landowners to expand production beyond coastal areas. Approximately one million African Americans were redeployed from the upper to the lower South via a well-organized urban-based internal slave trade. Slavery was a normal feature of southern American cities—in 1860 there were approximately seventy thousand urban slaves. Exploitation of African American labor resulted in a massive increase in cotton production from 300,000 bales in 1820 to nearly 4.5 million bales in 1860. Plantation owners used harsh physical punishments such as whippings, brandings, and amputations along with incentives to garner compliance. Incentives included prizes for the largest quantity of cotton picked, year-end bonuses, time off, and plots of land. Developing reliable estimates of income and wealth generated by slavery is difficult because much of the accumulated wealth of the slave regime was destroyed by the Civil War. Some income financed planters' conspicuous consumption, a portion was converted into personal wealth holdings, and another fraction provided capital for large-scale industrial ventures.

A dramatic disparity in wealth holdings between African Americans and white Americans constitutes one of the most enduring legacies of slavery. While emancipation enabled African Americans to increase the portion of income actually received from agricultural pursuits, forces reproducing wealth disparities ensured continuing subjugation. The arrangements by which most African Americans remained tied to the agricultural sector were characterized as the "tenancy system." Three different classes of tenancy emerged: cash tenancy, share tenancy, and sharecropping. Sharecroppers, the status to which African Americans were disproportionately relegated, owned nothing. Implements were supplied by the landowners on credit and the sharecropper paid half the crop as rent to the landowner. Debt peonage emerged when the croppers' share of the harvest was insufficient to repay the landlord. Landlords often charged exorbitant interest rates for supplies and failed to give croppers their full share of the harvest value. Sharecropping laws required that indebted croppers remain on landlords' land until all debts were satisfied.

Prior to World War I (1914–1918), African Americans remained overwhelmingly rural residents. In 1910 over 90 percent of the 9.8 million African Americans lived in the South and only 25 percent lived in cities of 2,500 or more. Between 1890 and 1910 the percentage of African American males employed in agriculture fell only slightly; the occupational situation of females actually worsened. The persisting effects of institutional discrimination introduced during earlier periods led to an unusual set of circumstances whereby the occupational and economic status of African Americans declined as their absolute and relative education was increasing. The opposite pattern would have been predicted by traditional economic models. Moreover, the trends in inequality that developed during this period were reproduced into the 1980s.

Spurred by floods, crop destruction by boll weevils, and the need for workers in war-related industries, the

first net exodus from the South of about 454,000 African Americans occurred between 1910 and 1920. During World War I, the Division of Negro Economics was established within the U.S. Department of Labor to reduce tensions resulting from the introduction of African American workers into northern factories. The wisdom of this initiative was reinforced by race riots in Chicago, Omaha, and Washington, DC, during the summer of 1919.

Northward migration initiated a redefinition of African American identity that manifested itself most visibly in the cultural movement termed the "Harlem Renaissance" and the associated concept of the "New Negro." The negritude movement that developed in the French African and Caribbean colonies introduced similar reconceptualizations of black identity. The African American scholar Alain Locke (1886–1954) declared that this redefined identity reflected a transformation in psychology such that "the mind of the Negro seems suddenly to have slipped from under the tyranny of social intimidation and to be shaking off the psychology of imitation and implied inferiority" (1925, p. 631).

Efforts to translate this new sense of identity into economic gains proved, however, to be problematic. Throughout the interwar period, rapid technological change increasingly pushed African Americans out of the agricultural sector. By 1930 the percentages of African American males and females employed in agriculture had fallen to 45 percent and 27 percent, respectively. Opportunities for manufacturing employment for African Americans were largely restricted to nonunionized industries, prompting a resurgence of self-organizing efforts, such as those of the Brotherhood of Sleeping Car Porters, formed by the labor leader A. Philip Randolph (1889–1979).

Many African Americans capitalized on the new industrial employment opportunities generated by World War II (1939–1945), and this prospect contributed to a net southern out-migration of 1.6 million between 1940 and 1950. Between 1910 and 1950 the proportion of African American males employed as operatives increased from 6 percent to 22 percent. By 1950 the proportion of African American males and females employed in agriculture had fallen to 25 percent and 10 percent, respectively. For African American women, the decline in agricultural employment was associated with increases in employment as service workers, operatives, clerical and sales workers, and private household workers. These employment shifts contributed to a marked improvement in African Americans' economic progress after World War II. Even before the civil rights movement took center stage in 1956, one in every three urban African American families owned their own home.

The civil rights and Black Power movements signaled shifts in the political and economic consciousness of African Americans catalyzed, in part, by the emergence of a larger and more diverse middle class. The two movements offered different approaches to addressing identity and economic advancement issues. The civil rights movement promoted complete integration of African Americans through elimination of all legalized segregation and discrimination, whereas the Black Power movement emphasized group solidarity and self-determination. It is important to note that the ideologies undergirding these movements were influenced significantly by such Caribbean scholars as Frantz Fanon (1925–1961), C. L. R. James (1901–1989), and Eric Williams (1911–1981), as well as the liberation movements that developed in the African colonies. The most concrete policy outcomes of the civil rights movement were the Civil Rights Act of 1964, the Voting Rights Act of 1965, and the Equal Housing Act of 1968. Measures focusing on redistribution of economic benefits, such as affirmative action, have proved to be more controversial and less successful.

While nondiscrimination and affirmative action policies have undoubtedly contributed to increases in the relative income of African Americans, as well as significant improvements in occupational distribution, many African Americans have not experienced significant improvements in economic well-being. Moreover, data covering the mid-1990s to the first decade of the twenty-first century paint a fairly consistent picture of racial wealth disparities—namely, that the wealth of African American families is less than one-fifth that of whites. Stagnation in the quality of life of many African Americans has resulted, in part, from disproportionate vulnerability to forces associated with transformation of the U.S. economy. Between 1960 and 2000, the percentage of men working as operatives, fabricators, and laborers has declined from 46 to 29 for African Americans and from 25 to 18 for white Americans. About 50 percent of all workers displaced as a result of plant closings and relocations had been employed in manufacturing, and African Americans have been significantly overrepresented among displaced workers. In the wake of these employment shifts, African American men have a much higher unemployment rate than other groups, and between 1991 and 2000 the percentage of African American men not in the labor force has averaged 26, compared to 15 for whites.

Black Power ideology emphasizes African American self-determination, economic self-sufficiency, and black pride; these foci became a catalyst for the displacement of terms like *Negro* and *colored*. *Black* and *Afro-American* were in vogue briefly, but *African American* became the most popular term during the 1980s. Advocates of *African American* argue that this term is consistent with

the nation's immigrant tradition of "hyphenated Americans," which preserves links between people and their or their ancestors' geographic origins. For many, *African American* describes cultural and historical roots and also conveys pride and a sense of kinship and solidarity with other African diasporans.

Embracing the designation *African American* is not symbolic of a commitment to the type of cultural nationalism advocated by Black Power proponents. This is especially the case in the economic arena, although some contemporary commentators claim that African Americans' disposable income constitutes a potential form of collective economic power, an argument reminiscent of those advanced in the past. However, suburbanization of a significant segment of the black middle class has stymied efforts to promote any functional type of economic development in the black community, which would require, among other conditions, the capacity to exercise sufficient control over economic resources to mobilize production processes and create markets.

Ironically, African American suburbanization has also not produced outcomes anticipated by integrationists, such as substantial reductions in residential segregation. Like their inner-city counterparts, African American suburban dwellers experience a high degree of residential segregation. In addition, middle-class suburbanization has increased the isolation experienced by inner-city African American residents, and has made it increasingly difficult to ameliorate persisting economic and social inequalities. The economic prospects of inner-city African American residents are constrained, in part, by a spatial mismatch between job location and place of residence as African Americans generally have the longest travel times to work in all regions of the country where public transportation is available.

Divergence of interests between middle-class and other African Americans creates new complications in defining African American identity. Each group accesses different configurations of "social capital," that is, the complex of resources associated with group membership that individuals can use to enhance well-being. Persisting differences in social capital can generate disparate conceptions of group identity. Conventional notions of African American identity are also challenged by phenotypical discrimination reminiscent of patterns associated with the one-drop rule operative during the slavery and Jim Crow eras that led to formal designations of the extent of African parentage—mulatto (1/2), quadroon (1/4), and octoroon (1/8).

Phenotypical discrimination results in African Americans and Latinos with the darkest and most non-European phenotype receiving lower incomes, having less stable employment, and obtaining less prestigious occupations than counterparts who are lighter or have more European physical features. In some studies, skin tone has been found to be the most important determinant of occupational status other than an individual's education. Internalization of beliefs that skin-shade differences reflect membership in different groups adds ambiguity to efforts to define African American identity. In the 1980s parents of mixed-race children lobbied for the addition of a more inclusive term in census racial designations to reflect the multiple heritages of their offspring, and the term *biracial* has become more widely used and accepted to classify people of mixed race, reintroducing divisions between black and biracial subgroups into the American social-identity fabric.

Contemporary immigration patterns also have important economic and identity consequences for those traditionally defined as *African American*. There is ongoing disagreement about the impact of international migration on African American employment, but some researchers maintain that immigration lowers the wages and reduces the labor supply of competing native workers, with the largest effects on high school dropouts. Increasingly, *African American* is applied to recent immigrants and their offspring from African and diasporan countries, irrespective of preferred self-identification. In every year between 1995 and 2003 (with the exception of 1999), over forty thousand documented immigrants from African nations entered the United States, with the largest numbers originating in Nigeria and Ghana. First-generation African and Caribbean immigrants tend to identify most strongly with their country of origin, although many of their offspring identify with domestic African Americans. Some immigrants from South American countries are also classified as *African American*, but are even less likely to identify with domestic African Americans.

To the extent that the designation *African American* and related terms are increasingly used to collect information regarding economic outcomes for diverse subgroups, researchers should practice extreme care in interpreting data to ensure that aggregate data do not mask inequalities experienced by identifiable subgroups. There are likely to be differences across subgroups in income-generating characteristics. In addition, the types of phenotypical and linguistic discrimination experienced by immigrants may parallel forms of discrimination experienced by domestic African Americans, but, a priori, it cannot be assumed that the consequences for economic outcomes are identical. As a consequence, ameliorative strategies may need to be tailored specifically to address the unique circumstances of various subgroups.

SEE ALSO *Affirmative Action; African American Studies; Black Arts Movement; Black Conservatism; Black Liberalism; Black Middle Class; Black Panthers; Black*

Power; Blackness; Capitalism, Black; Civil Rights Movement, U.S.; Discrimination; Dred Scott v. Sanford; *Ethnic Enterprises; Harlem Renaissance; Harris, Abram L.; Jim Crow; Lewis, W. Arthur; Politics, Black; Politics, Urban; Race; Race and Anthropology; Race and Economics; Race and Education; Race Relations; Racial Classification; Racism; Reconstruction Era (U.S.); Reparations; Separate-but-Equal; Slave Trade; Slavery; U.S. Civil War; Weaver, Robert C.*

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James B. Stewart

AFRICAN CRISIS RESPONSE INITIATIVE

The African Crisis Response Initiative (ACRI) is a program that the United States launched in 1996 to address challenges of peacekeeping and conflict management in Africa. Its formation was prompted by fears that the ethnic massacres that occurred in Rwanda in 1994 might also take place in neighboring Burundi, and by the desire of the United States to avoid getting entangled in local conflicts, as occurred in 1993 when eighteen U.S. Army rangers were killed in Somalia, where the United States had intervened to provide humanitarian assistance.

Initially, the United States wanted to establish an African force that could intervene to save lives in humanitarian crises. After consultations with numerous African and non-African officials, the United Nations, and the Organization of African Unity (OAU), the U.S. government decided to establish a program to build such a capacity among African militaries.

ACRI was established to enable selected African military forces to respond to crises through peacekeeping missions in Africa. The initiative aimed at training and equipping African peacekeepers as rapid-response contingency forces that could be quickly assembled and deployed under the auspices of the United Nations, the OAU, or subregional organizations. Participation in peacekeeping missions depends on decisions at the national level. U.S. special forces soldiers conducted the training on common peacekeeping doctrines and procedures. African militaries were trained in basic soldiering skills at individual, squad, platoon, and company levels. Military personnel received training in logistics, leadership, convoy security, roadblocks and checkpoints, human rights, humanitarian law, negotiation and mediation, protection of refugees, relations with humanitarian organizations, and civil-military relations. The units were equipped with compatible communication facilities, water purification units, night-vision binoculars, mine detectors, uniforms, boots, belts, packs, and entrenching tools.

Brigade-level training for subregional command and control structures was conducted in Senegal and Kenya in 2000 and 2001, respectively. Follow-up training was conducted twice a year after the completion of the initial training period of two and a half years.

The selection criteria for countries participating in ACRI raised questions about U.S. interests. Such an initiative carries the risk of dividing states into those that are considered pro-American and those that are not. It also risks undermining local initiatives for conflict resolution. Countries participating in the program had to have democratic governments and professional militaries with a record of previous peacekeeping. Uganda and Ethiopia did not pass the test, but were selected to participate in the initiative. Several countries that were initially considered for participation became ineligible. Follow-up training was suspended in Ethiopia, Uganda, and Côte d' Ivoire in 1998. Ethiopia was embroiled in a war with Eritrea, as was Uganda in the Democratic Republic of Congo. Côte d' Ivoire had experienced a military coup and was facing civil strife.

ACRI partners contributed to conflict resolution in Africa. Mali and Ghana sent forces to Sierra Leone as part of the ECOMOG (Economic Community of West African States Cease-Fire Monitoring Group) peacekeeping force. Benin provided a contingent to Guinea-Bissau as part of ECOMOG, and Senegal contributed troops to the UN mission in the Central African Republic. The success of ACRI was undermined by the lack of an institutionalized security framework within which it could operate. An African continental security framework for conducting peacekeeping is in its infancy, while subregional security frameworks like ECOMOG and SADC (Southern African Development Community) that have participated in peacekeeping operations are fragile. Programs like ACRI also risk contributing to the militarization of conflicts by strengthening the militaries of conflict-ridden countries and regions. It is likely that the participation of some states in ACRI was motivated by the need to strengthen their militaries to deal with internal and regional conflicts rather than a desire to engage in peacekeeping.

The African Contingency Operation Training and Assistance (ACOTA) program succeeded ACRI in 2004. ACOTA focuses on training military trainers and equipping African militaries to conduct peacekeeping support operations and to provide humanitarian relief.

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Paul Omach

AFRICAN DIASPORA

The *African diaspora* was the dispersal of African peoples to Asia, Europe, and the Americas. The term is used most commonly for the coerced movement in various slave trades, but the word *diaspora* has also been used to refer to voluntary migrations from Africa and for population movements within Africa.

In some ways, the most consequential movement of peoples from Africa was the first, when the early stages of human evolution took place in the highlands of East Africa. From there, over the last million and a half years, human beings spread out across Africa, gradually adapting to different environments, and then into Asia, Europe, and eventually the Americas. More recent large-scale movements of peoples have occurred within Africa. For example, over the last 2,500 years, people speaking Bantu languages have spread out from a base in the Nigeria-Cameroon borderlands over most of southern and central Africa, absorbing most preexisting populations.

THE EMERGENCE OF A MARKET FOR SLAVES

Almost six thousand years ago, complex civilizations marked by powerful imperial states began emerging in the alluvial valleys of Mesopotamia, then in Egypt and India. These were slave-using societies, though not as dependent on slave labor as some more recent societies. They were also involved in long-distance trade. They tended to obtain their slaves from warfare, from trade with less-developed neighbors, and through debt and social differentiation. Athenian Greece, the first real slave society, acquired slaves from the Balkans, the Black Sea areas, and Asia Minor. There was, however, from an early date some movement of Africans into these worlds both as slaves and free persons. Egyptians were involved in conflict with Nubia and were ruled by dynasties from the south. Nubia, and perhaps the Horn of Africa, were sources of Egyptian slaves, though slaves also came from many other groups. Statuary and paintings from ancient Egypt clearly indicate the presence, sometimes as rulers, of people with African physical features. There were certainly Africans elsewhere in the Mediterranean world. Authors of the Old Testament and from classical antiquity were clearly familiar with Africans. Trade across the Indian Ocean was also taking place at least two thousand years ago, and clearly involved some movement of people, both free and slave.

The emergence of Islam in the seventh century and the subsequent conquest of the Middle East and much of the Mediterranean world expanded the market for slaves. Although Islam forbade the enslavement of fellow Muslims, it also created a demand for slaves, particularly as concubines, servants, and soldiers, but also sometimes as laborers. There was, for example, a major revolt in

ninth-century Mesopotamia among the Zanj, East African slaves who were subject to harsh labor draining the swamps of lower Mesopotamia. Exploitation of African slaves seems to have been rare, however. The Muslim empires got most of their slaves from eastern Europe and the Caucasus, as did the Christian cities of southern Europe. For the Muslim Middle East, eastern Europe remained the most important source of slaves into the eighteenth century.

A trade in slaves with Africa, however, remained significant. Christian kingdoms in the middle Nile region paid a tribute to Egypt, which was partly in slaves. Ethiopia seems to have sold slaves to Muslims. The introduction of camels in the first centuries of the Common Era increased trade across the Sahara; trade was further increased when Arab conquerors revitalized the Middle East. The trans-Sahara trade led to the emergence of Muslim states in the savanna belt known as the Sudan, which comes from the Arabic *bilad-es-sudan*, "land of the blacks." For many of these Sudanic states, slaving became a source of labor and services, as well as an export that could be exchanged for Middle Eastern products. For Ghana, Mali, and Songhai, the export of slaves supplemented a trade in gold, but for Kanem and Bornu in the central Sudan, slaves were the major export. Slaves were probably less important to the Swahili cities of the east coast, though they were a constant export.

African slaves from Ethiopia and East Africa served as soldiers and concubines in India. In 1459 there were supposedly eight thousand Africans in Bengal's army. A number of African military commanders became rulers of small states, of whom the best known was Malik Ambar (d. 1626), who was noted for his tolerance and his patronage of the arts. Communities of people of African descent known as *Habshis* or *Sidis* are still found in India and Pakistan. There were also African merchants and sailors in India.

Africans could also be found, in different roles, in many parts of the Arab world. There were, for example, a succession of poets in pre-Islamic and early Islamic Arabia known as the "black crows." One of the companions of the Prophet Muhammad (c. 570–632) was an African, Bilal, who served as the first *muezzin* for the Muslim community. In the Muslim empires, particularly that of the Ottoman Turks, black eunuchs were common. They played an important role in the Ottoman harem. African slaves were particularly important in Morocco and Tunisia and provided much of the labor in the mines and oases of the Sahara. Some scholars have estimated that African slave exports into the Middle East were as numerous as those across the Atlantic. They did not, however, leave as deep a footprint. Most were women who became concubines. As concubines, they produced few offspring and those offspring were free members of their masters' families. Soldiers probably experienced high mortality and thus left behind few identifiable communities. As a result, few self-reproducing African communities developed in the Arab world.

THE ATLANTIC SLAVE TRADE

The Portuguese ships that cruised along the African coast were not primarily interested in slaves, but slaves could be procured. The first were taken in raids, but trade soon proved more effective. Slaves could be purchased from many African societies, and the profits from the slave trade helped pay for many early expeditions. Some slaves were exchanged within Africa—for example, for gold along the Gold Coast—but most were sold in Portugal or at Mediterranean slave markets where a shortage of slaves developed after the Ottoman conquest of Constantinople in 1453 limited Mediterranean access to eastern European slaves. African slaves became important in Lisbon, southern Portugal, and Mediterranean cities.

A more important market soon developed on the Atlantic islands, which had become underpopulated or depopulated when earlier populations were decimated by slaving and by European diseases, though many islands, like Madeira, had no native population at all. Sugar was the key to their prosperity and to the development of a particularly harsh slave system. Venetian and Genoan planters had begun the exploitation of sugar in the eastern Mediterranean during the Crusades. As improved technology reduced the cost of producing sugar, an expanding European market offered large profits, and the Atlantic islands offered European investors an opportunity to extend sugar cultivation. Madeira was briefly the world's largest sugar producer, and then São Tomé. On Madeira and in the Canaries, both slave and peasant labor was used, but the equatorial climate of São Tomé made the island unattractive to European peasants, and a plantation system developed there that depended exclusively on slave labor. In the late sixteenth century, this plantation system was extended to Brazil, where once again, the decimation of Indians by European diseases led to the use of African slave labor. The plantation model was extended to the West Indies in the seventeenth century.

The use of slaves was attractive wherever labor was in short supply and new crops offered prospects of profit. Slave labor produced rice in South Carolina and tobacco in Virginia. Slaves were also used to grow indigo, spices, and coffee. Slaves were found everywhere in the Americas and were important even in the Middle Atlantic colonies. The availability of slaves meant that they could be acquired for many purposes. They worked as servants; they worked on the docks; and after the invention of the cotton gin they provided the labor for the extension of

cotton over the southeastern United States. Sugar, however, created the biggest market for slaves.

Slave exports grew from about a quarter million in the sixteenth century to over six million in the eighteenth. Only in what became the United States did natural population growth among slaves eventually make the slave trade irrelevant. As native slaves either died out or were absorbed into an African population, slavery came to be seen as the lot of the African. This is probably the first time that enslaveability was defined in terms of race.

To meet the steadily increasing demand, slave traders pushed routes deeper and deeper into the interior of Africa. Prices rose, old states were militarized, and new states appeared that were willing to provide the slaves Europe wanted. The late seventeenth and early eighteenth century saw the emergence of a series of powerful slaving states that responded to rising prices and demand in the West Indies. A smaller slave trade emerged in East Africa after islands in the Indian Ocean were colonized. The conquest of what is now the Ukraine by the Russians closed off the major source of white slaves in the late eighteenth century. Increasingly, during the last years of the international slave trade, the Middle East looked to African sources for their slaves. The East African slave trade was also stimulated by the development of a plantation economy in Zanzibar and on the East African coast, as well as economic growth in the Middle East.

THE WORLD OF THE DIASPORA

Many of the early sugar planters treated slaves as expendable. Sugar was a particularly brutal crop, and slaves worked long hours under abusive conditions. The mortality rate, particularly for men, who did the most dangerous work in pressing and boiling rooms, was high. For planters, it was often easier to buy a slave than to raise one, and many early planters literally worked slaves to death. With time, however, family life developed because planters found that slaves worked better when allowed to live in family relationships. Though mortality remained high until the end of the slavery era, the ratio of men and women gradually moved toward parity.

Family life and natural reproduction among slaves developed much more quickly elsewhere. In the tobacco areas of Virginia, the slave population had been growing since the 1720s. Slave culture was shaped by the beliefs and culture that slaves brought with them from Africa, by the conditions of slavery, and by the world of their masters. The perpetuation of slave culture was influenced by the identification of slave status with African origins. In the European world, color became an important boundary that persisted even when slaves were freed.

African roots show especially vividly in religions. Throughout the diaspora, we find religious cults of African origin: *candomblé* in Brazil, *shango* in Trinidad, *Santeria* in Cuba, vodou in Haiti, *gnawa* in Morocco, *bori* in Tunisia, and *zar* in Istanbul and southern Iran, all of them involving spirit possession and the use of music. Like the African systems from which they emerged, these cults assimilated elements of dominant religions, but also in many cases influenced those religions. This is most striking in the United States, where the African impact is found less in distinctive cults than in the way Africans shaped the practice of Christianity, particularly among Baptists. African religious practices, like the ring shout, led to a highly emotive and richly musical practice of Christianity among African Americans. Similarly, in Hindu and Muslim parts of the world, Africans were absorbed into the dominant religion but often infused it with an African approach.

African musical traditions are also prevalent throughout the diaspora: the drumming of *sides* in India, *gnawa* music in Morocco, Afro-Cuban music, and calypso in Trinidad, as well as gospel, blues, and various kinds of jazz. These different traditions have taken on a life of their own and feature a variety of musical instruments, but all have African roots. So too with language. The grammatical structure of African languages often shaped the development of pidgin languages, and African terms became a source of slang. In Maroon communities, formed by runaway slaves, African political traditions also shaped the states that were created. Some scholars see the African family structure in the kind of extended and often fictive family that evolved in the slave quarters and protected Africans from the insecurity of slavery, where a family member could be sold off at any time. African folklore and African craft skills, such as pottery or raffia work, also remained important in many diaspora communities.

FREE MIGRANTS

Not all Africans migrated in chains. Many free migrants traveled within and from Africa, including those who went to Morocco, Egypt, or the Arabian Peninsula to study at Islamic institutions. Many medieval African rulers made the pilgrimage to Mecca, and some supported hostels for their subjects who were studying at Muslim schools. Some of these travelers stayed and married. Africans also migrated to Europe. Missionaries brought Africans to Europe to study, some of whom returned to Africa. Others came as ambassadors. Free Africans also worked on oceangoing vessels in both the Indian Ocean and the Atlantic. The Kru in Liberia, for example, developed a tradition of working on European vessels. By the eighteenth century, there were small populations of free Africans in many major port cities of Europe, the Americas, and the Middle East. In the nineteenth century, the Soninke of the upper Senegal River

area moved from working on riverboats to hiring on to oceangoing vessels. Most went home, but many settled in port cities of Europe.

These migrations increased with the end of slavery, particularly the migration of Africans who traveled to get an education. In the early twentieth century, there were about one hundred South Africans studying in the United States and more in Europe. The establishment of colonial rule also made it easier for Muslim Africans to travel, both for the pilgrimage and to seek an education. During the colonial period, most African migration took place within Africa, but there were also migrations from parts of the diaspora. Jamaicans, for example sought plantation work in Central America and Cuba, and some people from the West Indies immigrated to the United States and England. The number of Africans in North America and Europe increased significantly after World War II (1939–1945); this population was spearheaded by students but also included working-class economic migrants.

There was also a process that Michael Gomez calls "reconnection," as some people from the diaspora went back to Africa. Edward Blyden from the Virgin Islands, for example, became an influential intellectual in nineteenth-century Sierra Leone and Liberia. In addition, missionaries from black churches in Europe and the Americas, particularly the African Methodist Episcopal Church, took Christianity to various parts of Africa. A sense of having roots in Africa was more important to diaspora intellectuals than to those who remained in Africa. Five Pan-African congresses were held between 1900 and 1945, only the last of which included major African participation. Marcus Garvey (1887–1940) organized a "back to Africa" movement, and diaspora intellectuals in France developed the literature of *négritude*.

Migration increased dramatically after independence came to most of Africa in the 1950s and 1960s. Increasing numbers of African students sought higher education abroad during the postindependence period, and African workers started going to Europe and then to North America. Some fled oppressive political conditions, while others left because their home countries' stagnant economies offered them little future. Today, many highly skilled African professors, engineers, and scientists emigrate to better use their skills and achieve a more comfortable life. The Mourides, a Muslim religious fraternity in Senegal, have helped organize the emigration of people who work as street vendors. In the cities of Europe and North America, the different branches of the diaspora are merging, the newest migrants from Africa joining migrants from the West Indies and an indigenous population of African descent. By the beginning of the twenty-first century, these migrations, particularly of unskilled workers, were beginning to meet resistance in Europe.

SEE ALSO *African Studies; Anthropology, Linguistic; Anticolonial Movements; Caribbean, The; Colonialism; Diaspora; Ethnology and Folklore; Immigration; Imperialism; Kinship; Migration; Refugees; Slave Trade; Slavery*

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Martin Klein

AFRICAN NATIONAL CONGRESS

The origins of the African National Congress (ANC) were a conference of black South African notables assembled in 1912 to protest impending legal restrictions on African land ownership. Until the 1940s, the ANC remained decorously circumspect: lobbying, submitting memorandums, and relying heavily on white liberal intermediaries. During World War II (1939–1945), the ANC began to build a mass membership structure and attempted to mobilize popular support by contesting local "advisory board" elections in black townships. By this time, several of its leaders were also members of the Communist Party. Communists had initially concentrated on winning white worker support but switched their efforts to blacks in the 1ate 1920s.

Within the ANC, both communists and a group of young self-professed "Africanists" who formed a Youth League helped to influence the ANC to embrace more

aggressive tactics. It adopted in 1949 a "Program of Action" calling for strikes, boycotts, and civil disobedience as means toward a goal of African "self-determination." The ANC's radicalization coincided with the accession to government of the (Afrikaner) National Party (NP). In power, Afrikaner nationalists began to tighten and extend racial segregation policies. In practice, the NP's apartheid policies sought to confine black participation in the urban economy to unskilled and semiskilled labor.

The Communist Party was banned in 1950. Thereafter its members would work within the ANC. Communist influence as well as older liberal traditions instilled by the Methodist schools that trained most African political leaders ensured that although the ANC itself remained an exclusively African body, it defined its program on a broader basis. It sought allies in the Indian Congress movement, founded in Natal by Mohandas Gandhi in 1894, and in 1952 encouraged the establishment of a Congress of Democrats for white sympathizers.

The ANC's Freedom Charter, adopted in 1956, referred to a democratic future in which all races would enjoy equal rights. In 1952 a "Defiance Campaign" against new apartheid laws failed to win any concessions but succeeded in swelling membership to 100,000. Six subsequent years of mass-based militant resistance helped to convince a number of ANC principals, including its patrician but popular deputy president, Nelson Mandela, that the organization had exhausted the available options of peaceful protest. A breakaway movement, the Pan-Africanist Congress (PAC), formed in 1959 as a more radical alternative. The Pan-Africanists emphasized African racial identity and criticized the role of the Communist Party in "watering down" the ANC's nationalist predispositions. In fact, the Communist Party's influence was most evident in the mild socialism of the Freedom Charter. In 1960 the PAC committed itself to resisting the pass laws. In Sharpeville on March 21, outside Vereeniging, police were confronted by a crowd of five thousand people, and the tense standoff culminated with the police firing and killing eighty. In the national tumult that followed, the government banned both the PAC and the ANC. The ANC reconstituted itself underground and in 1961 formed an armed wing, Umkhonto we Sizwe (Spear of the Nation). In 1963 Umkhonto's high command was arrested and most of its members sentenced to life imprisonment for their leadership of a sabotage campaign.

For the next thirty years, under the leadership of Mandela's close professional associate and friend, fellow ex–Youth Leaguer and attorney Oliver Tambo, the ANC would base itself in Dar es Salaam and Lusaka. Only in the mid-1970s could it begin rebuilding its clandestine organization in South Africa. In exile, the ANC strengthened its alliance with the Communist Party, and in stages between 1969 and 1985 it opened its ranks to whites, Indians, and coloreds (in South Africa, any person of mixed racial descent). Survival in exile required discipline and authority, and communist organizational models were influential. Today, Leninist tenets of "democratic centralism" remain in the organization's constitution. After 1976, ANC guerrillas succeeded in attracting public attention with bold attacks on symbolic targets. So-called armed propaganda brought the ANC considerable public support both in South Africa and internationally, though Umkhonto's campaigning hardly represented a serious military threat to white security.

Meanwhile a charismatic cult developed around the imprisoned leaders on Robben Island, especially Nelson Mandela. Mandela's stature was a key factor in achieving for the ANC the degree of recognition or acceptance it enjoyed outside communist countries: By the late 1980s meetings between its leaders and Western statesmen served to underline its status as a government in waiting. The military command structure controlled the destinies of most of the refugees who joined the ANC after 1976. In this part of the organization communists were especially powerful.

However, around its foreign missions and its own educational establishment the ANC began to foster a group with administrative and technical skills, many of its members the recipients of U.S. and western European higher educations. Members of this group began to develop policy blueprints for a post-apartheid liberal democracy. From within this community the ANC also began to make the first cautious moves toward a negotiated settlement in the mid-1980s, a process in which Thabo Mbeki, the head of the ANC's directorate of international affairs, was a principal actor. Separately, from inside prison, Nelson Mandela began his own program of meetings and conversations with senior government officials and cabinet ministers. In February 1990 the South African government repealed its prohibitions of the ANC and other exiled organizations.

Ironically, the ANC's development over thirty years as a virtual government in exile was the key to its successful reentry into the domestic terrain of South African politics. The international recognition it received brought with it the financial resources needed to build a mass organization in South Africa of unprecedented scope and sophistication. This organization would not only absorb the exile "liberation bureaucrats" and returning soldiers but also bring together a variety of movements that had developed inside South Africa during their absence, including some of the homeland-based political parties and the vast federation of civic bodies led beginning in 1983 by the United Democratic Front.

Between 1990 and 1994 the ANC played a decisive role in negotiating a fresh constitutional dispensation. After elections in 1994, Nelson Mandela would lead a transitional Government of National Unity in which the ANC would share power with its old adversary, the National Party. The ANC won successive electoral victories in 1999 and 2004.

In power, the ANC's market-friendly economic policies, encapsulated in the GEAR (Growth, Employment and Redistribution) program, have reflected leadership concerns about retaining and attracting investment capital. The rewards of economic liberalization have included increases in GDP (currently around 3.5%) and a measure of white support especially after former National Party leaders joined the ANC and Thabo Mbeki's government in 2003. The government has also been successful in promoting a black business class. The ANC's continuing popularity is probably more a consequence of expanded access to pensions and grants. More equitable provisions are unlikely to guarantee that the ANC will hold its political base for very much longer. Free-market policies have failed to check social inequality or unemployment. After more than a decade in office, the ANC today is sharply divided by a conflict over who should succeed President Mbeki. This division reflects deep disagreements between right and left over policy.

SEE ALSO *Apartheid; Colonialism; Mandela, Nelson; Mandela, Winnie*

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Tom Lodge

AFRICAN SOCIALISM

SEE *Socialism, African.*

AFRICAN STUDIES

The studies of African peoples, history, and philosophy; arts, literature, and culture; political, economic, and social organization; geography, ecology, and paleontology are and have long been contested domains of intellectual inquiry. In the modern era this is perhaps best represented by the 1969 annual meeting of the (American) African Studies Association (ASA; founded in 1957 by the anthropologist Melville Herskovits) in Montreal, at which the "highly charged emotional atmosphere" (Cowan 1970, p. 344) "came as an earthquake to Africa scholars" (Wallerstein 1983, p. 14). The outcome of an unsuccessful negotiation between the ASA and a large group of primarily African American members resulted in most of the latter leaving the ASA for the African Heritage Studies Association (AHSA) (Rowe 1970; Clarke 1976). Many of the AHSA members viewed the ASA as "an organization founded … by European American scholars for the Eurocentric Study of Africa" that had made itself the "validating agency in the United States for all matters African, political and academic. … Indeed, some scholars hold that ASA was and is a white, CIA/government-controlled organization" (Gray 2001, p. 70). Nevertheless, dissension in the field is not limited to the United States or the late twentieth century, and the debates continuing into the twenty-first century cannot be neatly packaged into one that is solely about "white versus black" or "African versus non-African" or "Eurocentric versus Afrocentric," although all of these are part of the story.

The reasons behind the controversies are themselves illuminating. Firstly, European scholarly interest in Africa was in part the outcome of the search for humankind's origins and the origins of "civilization." It is now known that Africa was the birthplace of *Homo sapiens sapiens* and that ancient Egypt had great influence on classical Greece (Diop 1967; Bernal 1987). Furthermore the rise of (European) African studies is inseparable from the European concept of race and races and the origins of modern racism (as well as the rise and development of both capitalism and modern science) and even the European self-concept itself. There was no concept of "European" (or "whiteness" for that matter) prior to racist capitalism (Jaffe 1985; Carew 1988; Davidson 1961). The European enslavement of Africans was not the result of racism, but rather racism was an ideological justification of that enslavement, considered necessary for capitalist development (Williams 1944; Cox 1948; Rodney 1972). The ties between anthropology and colonialism are well documented, confirming the role the Euro-American study of Africa played in wresting political and economic control of the continent, its peoples, and its resources (Asad 1973). Sir Frederick Lugard, the first governor of British Nigeria, was head of the Executive Council of the

International Institute of African Languages and Cultures (IIALC), founded in 1926 (Moore 1993). Another important figure associated with the IIALC was A. R. Radcliffe-Brown, whose functionalist approach dominated anthropological study of Africa: "Functional analyses depend on a contrast between the normal and the pathological. If what is European is defined as normal, then the non-European appears to be disordered, abnormal, and primitive" (Mudimbe 1988).

There are both Eurocentric and Afrocentric versions of Africa prior to European contact. The most extreme Eurocentric versions are of "primitive" (and "backward" and "uncivilized") "tribes" and worse—the "Niam-Niam" who had tails, according to Count de Castelnau's 1851 book *Troglodytes*, inhabiting caves and hunting unicorns (Rigby 1996). Spurious claims concerning "Hamitic" and "Caucasoid" Africans accompanied the attempts to de-Africanize ancient Egypt. The African-centered versions focus on ancient Egypt (Kmet) and Ethiopia and the empires of Ghana, Mali, and Songhai in the West and the Zimbabwe, Monomotapa, and Rozwi kingdoms in the South (Williams 1974; Du Bois 1965). Of course there are both oral and written indigenous African and Afro-Arab literatures and histories, including the writings of Ibn Khaldun and Ibn Battuta and works such as *Sundiata: An Epic of Old Mali* (Niane 1965). Since not all whites or Europeans are Eurocentric and not all black or African scholars are Afrocentric, the issues are not at all easy to disentangle. In addition African studies is not simply another branch of an "area studies" curriculum that would include Asia, Latin America, and so on. Each has its own unique history and motivations driving its research. There are also important methodological issues at stake in the various debates. These came to the fore especially during the struggles that gave rise to black studies programs, in many cases resulting in departments and programs that combine African and African American studies, such as Africana, Pan-African, and black global studies programs.

There are Euro-centered frameworks that supported African liberation or that reject race as a biological or natural category, including many Marxian approaches to African studies (of particular note are the French structuralists, e.g., Bonte 1975, 1981). There are on the other hand a variety of African-centered paradigms, some of which reject Marxism, and some that do not necessarily reject the idea of race. A number of periodizations of African studies have been put forward (e.g., Copans 1977; Temu and Swai 1981; Moore 1993), and they are in general agreement concerning colonization, decolonization, and the post–political independence periods, the latter dominated by neocolonialism and imperialism. In the face of ongoing crises on the continent (civil war, famine, epidemics, and so forth), the 1990s saw a surrender to an "Afro-pessimism" (Hyden 1996) that ignored many important victories, large and small, from the end of apartheid in South Africa to the successes of grassroots organizations (e.g., the Green Belt movement).

Postcolonial approaches (Eze 1997) combine materialist and discursive components into an analysis that rejects determinist Marxism, while their qualms about the Afro-centered frameworks are concerned more with the "centrist" part than the African. Just as distinctions must be made between liberatory and fascist nationalisms, one may utilize Afrocentricity in a "strategic essentialist" fashion. In addition a wave of "Afro-Oriental" approaches have been increasingly appearing, going back at least as far as the Bandung Conference of 1955, promoting Afro-Asian unity and international anticolonialism based on the common historical experiences of colonialism and racism while respecting the integrity of cultural differences (e.g., Mullen 2004). "African womanism" offers a wide range of uniquely African-centered feminist perspectives (e.g., Dove 1998). These encouraging developments are examples of the vitality, originality, and creativity of African studies in the twenty-first century.

SEE ALSO *African American Studies; Afrocentrism; Anticolonial Movements; Black Nationalism; Civilization; Colonialism; Diop, Cheikh Anta; Functionalism; Ibn Khaldūn; Pan-Africanism; Radcliffe-Brown, A. R.; Slave Trade; Slavery Industry*

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Mathew Forstater

AFRICAN UNION

SEE *Organization of African Unity (OAU).*

AFRICVILLE (CANADA)

Africville has correctly been called Canada's most famous black community. It has been the subject of books (both scholarly and fiction), award-winning documentaries, thousands of newspaper articles (local, national, and international), hundreds of graduate student theses, poems, songs, a jazz suite, symposia, and an exhibition that traveled across Canada and is now housed permanently at the Black Cultural Centre in Halifax Regional Municipality in Nova Scotia. There remains a continuing negotiation between the city of Halifax and the Africville Genealogical Society, which speaks for the former residents of Africville and their descendants, over compensation for the people of Africville and proper recognition of the community. A United Nations committee has also weighed in on the importance of Africville, the significance of its history, the racism and neglect that eventually made its people vulnerable to the urban renewal process and relocation, and the validity of the Africville Genealogical Society's claims for compensation and recognition. Virtually all the public attention, certainly all the positive characterization, has occurred in the years since the community buildings were bulldozed out of existence and the residents scattered, mostly into neighboring areas of the former seashore site. Africville no longer exists in a physical sense, though surviving members and their descendants and friends usually gather each summer at the former site, now the Seaview Memorial Park, to renew ties, remember, and enjoy themselves.

Africville was founded by black refugees from the War of 1812 and their descendants, when blacks—some free, mostly slave—fled the United States for the promise of freedom and a better life in the British colony of Nova Scotia. Although not without some controversy, sociologists and historians have established that the first black settlers into the Campbell Road area of Halifax purchased their properties from white entrepreneurs in the 1840s. These first black families came from the areas of Preston and Hammonds Plains, where most of the refugees had settled, joining with loyalist blacks who had earlier fled the American Revolution (1775–1783). The move to Halifax was driven by economic need, since surviving on the small lots of scrubland made available to the refugees was difficult, if not impossible. Taking up a new life in the city, though at its outer peninsular edge, made possible both a bucolic lifestyle and opportunities for paid employment. The small community took hold over the next few decades with a church and a school. By the last decade of the nineteenth century, the name Africville had become

widespread and the community was deemed by black leaders in Nova Scotia to be a fine community with much promise.

From the beginning of the Africville settlement, the community was constantly encroached upon by developments in the larger society. Land was expropriated for railway construction, and various facilities, such as sewage disposal pits and an infectious-diseases hospital, were established on the edges of the community in the nineteenth century, reducing the community's residential attractiveness and signaling future intrusions. By the end of World War I (1914–1918), Africville was ringed by facilities rejected by other residential areas of the city and was largely left to fend for itself with respect to housing standards, bylaw enforcement, and policing. Residents petitioned for services but mostly to no avail. City officials claimed there was a minimal tax base there and in any event the Africville area might be better utilized for nonresidential development.

Africville evolved as a small community with considerable social diversity, but increasingly its reputation suffered as small numbers of squatters and transients (often white) moved into the community from the 1930s on. The establishment of an open dump on its doorstep in the 1950s, in addition to its sometimes condemned wells and lack of paved roads, sealed its public image as "the slum by the dump." It was a label that belied the community's strengths and core respectable lifestyle, but one that was widely held in the larger society among both whites and blacks and that made it impossible to resist the pressures of urban renewal, liberal welfare relocation policy, and integrationist civil rights that emerged after World War II (1939–1945) throughout Canada and the United States.

When Africville residents were relocated in 1964 to 1967, the community's population consisted of eighty households and about four hundred people. The relocation was hailed as a fine example of liberal welfare policy. The process was guided by proposals made by a leading Canadian social housing expert, with black and white representatives of an independent human rights commission involved in each relocatee's settlement, and a social worker responsible for working with the residents and developing educational and employment programs. Within a few years, however, the relocation's alleged success began to be sharply challenged as the promised benefits for many Africvilleans and their families were not realized. The educational and employment programs were minimal and ineffective; the housing conditions for many relocatees—public housing and housing in areas scheduled for redevelopment—left much to be desired; and the loss of community was much grieved.

Africville became a symbol of the need for black communities to appreciate their communal culture, build on their strengths, and resist similar pressures, and also of the hubris of a liberal welfare ideology that focused on individuals rather than communities and neglected the significance of social power in ensuring that promises become actualities. Africville became a symbol for the black community's experiences in Nova Scotia, and the lessons learned perhaps a hope for its future.

SEE ALSO *American Revolution; Black Towns; Loyalists; Modernization; Race Relations; Racism; Reparations; Slavery; Slums; United Nations; Urban Renewal; Welfare State*

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Donald H. Clairmont

AFROCENTRISM

Over the last three decades or so, the production, validation, legitimation, and mediation of knowledge about peoples African and of African descent were subjects of often very heated debate. A significant number of the generations of black academics, independent scholars, and teachers who came of age during the civil rights and black power movements became especially aggressive in their efforts to subject knowledge-production and knowledge-mediation to guiding norms of *Afrocentrism*. While many of the concerns now linked with Afrocentrism have older roots—for example, in the antiracist writings of W. E. B. Du Bois (*The Negro*, 1915; *The Souls of Black Folk*, 1903), the rehabilitative historiography of J. A. Rogers (*World's Great Men of Color*, 1946–1947), and the works of George Washington Williams (*History of the Negro Race in America*, 1882)—the predominant steward of Afrocentrism in its modern form has been Molefi Kete Asante, of Temple University's department of African American studies.

Asante's call to become *Afro-centric*—that is, "African centered"—was shaped by twin forces: the politics of knowledge production, mediation, and appropriation, and resurgent black nationalism. The initial focus was on intellectual and political struggles over *black studies*: that is, on how to define, implement, and sustain systematic studies of black peoples (that is, Africans and peoples of

African descent) through the disciplines of history, sociology, political science, psychology, economics, the arts, religion, and literature. Such studies were to be corrective of the denigrating distortions of the histories, lives, achievements, contributions, and possibilities of black peoples perpetuated through centuries of racist, Eurocentric scholarship. Foundational to this corrective work, Asante and others concluded, was the necessity of ensuring that producers and consumers of knowledge of black peoples be "centered" on the values and agendas of black peoples, especially those that originated within the classical African civilizations. A corollary conviction was that the production and consumption of such knowledge must be devoted unequivocally to the liberation of black peoples from Eurocentric constrictions and denials of their humanity. A distinctive contribution made by Asante is his ongoing effort to specify epistemological norms and strategies by which to produce knowledge that is fully and properly Afrocentric.

Thus, *Afrocentrism* (and its evolving cognates *Afrocentricity* and *Afrology*) became a name with multiple references serving several related agendas. On one hand, it referred to epistemological and methodological norms and strategies by which to guide the production of knowledge by, about, and for black peoples. At the same time, the agenda was not merely scholarly: Afrocentric knowledge-production was to give guidance to history-making living in all dimensions of black life—political, sociological, and cultural.

Afrocentrism thus became a complex intellectual, social, political, and cultural movement with substantial impact on proponents and practitioners of black/African/Africana studies. While the Afrocentric orientation is by no means the only or even predominant guiding commitment, it has been an intellectual and political force to be reckoned with, especially by knowledge-workers of African descent. These scholars have felt compelled either to establish their Afrocentric credentials, or to declare their independence from or opposition to Afrocentrism. Furthermore, Afrocentric critiques of what has passed, and continues to pass, for knowledge about black peoples have compelled more than a few scholars, black and white, to undertake reviews and counter-critiques of their own. Moreover, the Afrocentric movement in the United States has spread well beyond college and university campuses and contestations among professional academics. It has challenged curricula and teaching in primary and secondary schools, with notable impact in a number of cities and states (Portland, Oregon, and New York state, for example).

In reaction to Afrocentrism's influence, critics have posed a number of important questions: Do Afrocentric commitments render what is produced more ideology and propaganda than "objective truth"? Is Afrocentric knowledge-work limited by the strictures of racialized epistemology and self-defeating methodological circularity? To answer these challenges, and to address Afrocentrism's potential weaknesses, a number of scholars have sought to refine the concept. Asante has contributed to this refinement through his reworking of the concept of *Afrocentricity* as *Africalogy* in *Kemet, Afrocentricity, and Knowledge* (1990). So, too, has Maulana Karenga, in his *Introduction to Black Studies* (1993). And works by strenuous critics such as Stephen Howe (1998) and Mary Lefkowitz (1997), along with the work of disciplined and deft intellectual historians such as Wilson Jeremiah Moses (1998) have helped to foster healthy reconsiderations and refinements of Afrocentrism.

Irrespective of the excesses and deficiencies of the Afrocentric quest in its various guises, one core insight remains cogent: *All* modes of knowledge-production and mediation are "centered" on particular historically and culturally conditioned values and interests. Proponents of Afrocentrism have sought to make such interests, values, and commitments explicit in terms of the agendas and communities they serve, while disclosing the racist investments in whiteness and imperialism that have distorted so much of supposedly "interest-free," "objective" knowledge-production and mediation.

Here, then, is Afrocentrism's historic contribution: It has compelled us to become more mindful of, and honest about, our "centerings," and, hopefully, inspired us to work much more openly and diligently for the achievement of a true "objectivity" free of the distorting limitations of invidious ethnocentrisms and racisms.

SEE ALSO *African American Studies; African Diaspora; Black Nationalism; Black Power; Blackness; Du Bois, W. E. B.; Ethnocentrism; Racism*

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Lucius T. Outlaw Jr.

AGE

SEE *Period Effects.*

AGE EFFECTS

SEE *Period Effects.*

AGEISM

SEE *Discrimination, Wage, by Age; Gerontology.*

AGENCY IN ECONOMICS

SEE *Principal-Agent Models.*

AGENCY IN PSYCHOLOGY

SEE *Psychology, Agency in.*

AGENDA SETTING

Barbara Sinclair provides a concise definition of agenda setting: "the process through which issues attain the status of being seriously debated by politically relevant actors" (1986, p. 35). The study of agenda setting began as a reaction to the pluralist claim that policy outcomes are the result of competing groups (Dahl 1956, 1961; Truman 1951). E. E. Schattschneider (1960) claimed that groups would not necessarily form on both sides of an issue, given the upper-class bias in the system. Theodore Lowi (1979) highlighted this problem of imperfect competition, arguing that what gets on the congressional agenda is a process of bargaining between a few interested groups, elected officials, and administrators. Finally, Peter Bachrach and Morton Baratz (1969) argued that many issues would be relegated to nondecision-making because leaders only put safe issues on the agenda.

The next logical question is how agenda setting is achieved. Early scholars argued that an item is more likely to get on the agenda as the scope of conflict expands (Schattschneider 1960) and as the groups involved become larger (Cobb and Elder 1972). In John Kingdon's (1984) model, what gets on the agenda is a function of problem and political streams (the proposal stream presents the alternatives), where policy entrepreneurs play a key role in using their resources to push problems onto the agenda. Frank Baumgartner and Bryan Jones (1993) added to this understanding by claiming that strategic actors not only push items onto the agenda through issue definition (Riker 1986; Stone 1988) but also through the choice of policy venues.

Scholars have investigated the role of various actors in setting the agenda. Researchers have found that in the U.S. government the president is more likely to influence the congressional agenda on foreign policy issues (Peake 2001; Peterson 1994), under conditions of unified control (Taylor 1998), when he makes explicit appeals to the public (Kernell 1986) or when his political capital is high (Light 1982; Mueller 1973). Scholars of the U.S. Congress have shown that the majority party exerts negative and positive agenda control through the powers of the speaker (Cox and McCubbins 1993, 2002; also see Riker 1982). Gregory Caldeira and John Wright (1988) find that amicus curiae briefs influence whether the Supreme Court grants writs of certiorari. The media plays an agenda-setting role by influencing public perceptions about which issues are important (Iyengar and Kinder 1987; McCombs and Shaw 1972; MacKuen 1984), which in turn influences the standards used to evaluate leaders (Miller and Krosnick 2000), and by influencing preferences by framing issues (Druckman 2001; Iyengar 1987). While women and minority groups have had a harder time influencing the agenda, issues of concern to these groups are more likely to make it onto the agenda, given strong group organization, innovative policy proposals, and the presence of minorities and women in elected office (Bratton and Haynie 1999; Epstein, Niemi, and Powell 2005; McClain 1990, 1993; Miller 1990; Thomas 1994).

One of the key consequences of agenda setting is that many issues do not make it onto the agenda. This facet leads to the punctuated equilibrium model of Baumgartner and Jones (1993), where long periods of stability on an issue, are seen, followed by an abrupt shift to a new equilibrium, which can be reached as the issue becomes salient and institutional actors benefit from a new alternative.

SEE ALSO *Decision-making; Elites; Nondecision-making; Priming; Public Opinion*

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Jennifer Merolla

AGGREGATE DEMAND

The notion of aggregate demand formally made its appearance in John Maynard Keynes's (1883–1946) *General Theory* in 1936 and, in its numerous guises, quickly rose to become a vital concept in economists' tool

kit of analytical devices. Despite pleas by some economists, notably new classical economists, to reject the aggregate demand/supply framework because of lack of rigorous microeconomic foundations (see, among others, Barro 1994), the aggregate demand function has retained a central but highly debated role in macroeconomic analysis.

Though he regarded it as his major analytical innovation (King 1994, p. 5), Keynes defined his aggregate demand function in a way that would be unfamiliar to most economists nowadays. This is because the aggregate demand function was conceived as a subjective aggregate relation linking entrepreneurs' offers of employment to the anticipated overall market demand (or expected proceeds) for their firms' output. Keynes wrote: "Let D be the proceeds which entrepreneurs expect to receive from the employment of N men, the relationship between D and N being written $D = f(N)$, which can be called the *aggregate demand function*" (Keynes 1936, p. 25). Given entrepreneurial perceptions of firms' investment plans, and expected flow of household consumption arising from hypothetical employment offers, an aggregate functional relation could be delineated in a two-dimensional D-N space: "The aggregate demand function relates various hypothetical quantities of employment to the proceeds their outputs are expected to yield" (Keynes 1936, p. 55).

There is a positive relationship between aggregate income and employment because increased employment offers will bring forth higher expected proceeds from household consumption. Indeed, the greater the share of spending out of each additional dollar of income—that is, the higher the marginal propensity to consume—the higher the level of additional income associated with increased employment (Asimakopulos 1991, p. 45).

When depicted in D-N space with an aggregate supply function (the latter resting on a standard Marshallian microfoundation and representing the desired proceeds that would just make it worth the while of entrepreneurs to employ N workers), short-period equilibrium is achieved at the intersection of the aggregate demand and supply curves, dubbed the *point of effective demand*. On this basis, Keynes rejected classical-type theories founded on the Say's Law principle (that "supply creates its own demand") by arguing that the latter doctrine did not assume an independent aggregate demand function that could conceivably result in an equilibrium point at less than full employment.

While the development of his aggregate demand concept was of major theoretical and policy significance, particularly in its support of activist taxation, spending, and monetary policies of aggregate demand management, there were obvious problems with Keynes's original formulation. For instance, unless the business sector is conceived as one large firm that can envision the impact of its employment decision on its own expected proceeds, how exactly could a multitude of uncoordinated decisions by competitive firms be collectively anticipated by entrepreneurs and represented in an aggregate demand relation? As a result of such theoretical conundrums, the concept was to undergo tremendous transformations during the post–World War II (1939–1945) period as economists sought conceptually less challengeable theoretical constructs.

Even among fundamentalist Keynesians of the early postwar years, such as Sidney Weintraub (1914–1983) and Paul Davidson, the aggregate demand function, D, came to be treated no longer as an expected proceeds curve as perceived by entrepreneurs, but simply as a representation of the intended spending on the part of economic agents (consumers, firms, and governments) associated with hypothetical levels of total employment. Indeed, in the hands of numerous early postwar Keynesians such as Paul Samuelson, Keynes's original association between sales proceeds and employment was to be transformed into a relation between aggregate intended expenditures of economic agents and the level of real income or output, as depicted in the framework of the popular 45-degree diagrams found in many introductory textbooks (Dutt 2002, p. 329).

Because of its implicit assumption of fixed price, the 45-degree aggregate expenditure relation slowly succumbed to alternative formulations of the aggregate demand function as economists struggled to incorporate the effect of changes in prices within a competing analytical framework. This resulted in redefining a downward-sloping aggregate demand function within aggregate price-output space seemingly comparable to its traditional Marshallian microeconomic counterpart. However, to ensure a negative slope, this latter incarnation of the aggregate demand function had to rely on somewhat more questionable assumptions than its previous upward-sloping Keynesian aggregate expenditure relation in the context of 45-degree diagrams. This is because, as prices rise, it is assumed that the purchasing power of household wealth and cash balances declines and thereby household spending (aggregate demand) also declines. These so-called wealth effects and real balance effects assume that currency held by households plus reserves held by banks exceed the value of bank deposits. In fact, however, bank deposits greatly exceed the value of bank reserves plus currency held by households. Hence, the relevance of real balance effects has been seriously questioned. This is why modern macroeconomic textbooks have slowly been abandoning this form of aggregate demand analysis (in price-output space) and relying simply on a dynamic relation that links inflation to an economy-wide capacity utilization rate—a variant of the Phillips Curve. Unfortunately, the latter is a far cry from Keynes's unique

formulation of the aggregate demand function that related aggregate expected proceeds to the level of employment.

SEE ALSO *Aggregate Supply; Economics, Keynesian; Economics, New Classical; Keynes, John Maynard; Lucas, Robert E.; Macroeconomics; Phillips Curve; Propensity to Consume, Marginal; Survey of Income and Program Participation*

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Mario Seccareccia

AGGREGATE DEMAND AND SUPPLY PRICE

Theories of *demand* and *supply* have their roots in the works of the English economist Alfred Marshall, who divided all economic forces into those two categories. In 1890 Marshall introduced the concepts of *supply price* and *demand price* functions to capture the demand and supply factors facing an individual firm or industry. Marshall's demand price function relates the quantity of a specific good buyers would be willing to purchase at alternative market prices. The supply price function relates the quantity of goods sellers would be willing to sell at alternative prices. In equilibrium, market price and sales (equal to purchases) would be established at the intersection of these two micro-Marshallian functions.

In his *The General Theory of Employment, Interest, and Money* (1936), John Maynard Keynes aggregated these Marshallian micro-demand and -supply concepts to achieve an aggregate supply price function and an aggregate demand price function for the macroeconomy. Keynes called the intersection of these aggregate functions the *point of effective demand*. This "point" indicates the equilibrium level of aggregate employment and output.

AGGREGATE SUPPLY PRICE

Keynes's aggregate supply price function is derived from ordinary Marshallian microeconomic supply price functions (see Keynes 1936, pp. 44–45). It relates the aggregate number of workers (N) that profit-maximizing entrepreneurs would want to hire for all possible alternative levels of expected aggregate sales proceeds (Z), given the money wage rate (w), technology, the average degree of competition (or monopoly) in the economy, and the degree of integration of firms (cf. Keynes 1936, p. 245). In other words, the aggregate supply price is the profit-maximizing total sales proceeds that entrepreneurs would expect to receive for any given level of employment hiring they reach.

Gross Domestic Product (GDP) is the measure of the gross total output produced by the domestic economy. For any given degree of integration of firms, GDP is directly related to total sales proceeds (Z). If all firms are fully integrated—that is, if each firm produces everything internally, from the raw materials to the final finished product—then aggregate sales proceeds (Z) equals GDP. If all firms in the economy are not fully integrated, then Z will be some multiple of GDP depending on the average degree of integration of all firms.

Keynes argued (1936, p. 41) that money values and quantities of employment are the only two homogeneous "fundamental units of quantity" that can be added together to provide meaningful aggregates. Accordingly, the aggregate supply price (expected sales proceeds) associated with alternative levels of employment should be specified either in (1) money terms (Z) or (2) Keynes's wage unit terms (Z_w), where the aggregate money sales proceeds is divided by the money wage rate (w). Hence the aggregate supply function is specified as either:

$$Z = f_1(N) \qquad (1)$$

or

$$Z_w = Z/w = (f_1(N)/w) = f_2(N) \qquad (2)$$

The Marshallian supply curve for a single firm (s_f) relates the profit-maximizing output possibilities for alternative expected market prices. This supply price function (s_f) of any profit-maximizing firm depends on the degree of competition (or monopoly) of the firm (k_f) and its marginal costs (MC_f). In the simplest case, in which labor is the only variable factor of production, $MC_f = w/MPL_f$ where w is the wage rate and MPL_f is the marginal product of labor. Accordingly, the Marshallian microeconomic supply price function is specified as

$$s_f = f_3(k_f, MC_f) = f_3(k_f, (w/MPL_f)) \qquad (3)$$

Lerner's (1935) measure of the degree of monopoly (k_f) is equal to $(1 - 1/E_{df})$ where E_{df} is the absolute value

of the price elasticity of demand facing the firm for any given level of effective demand. For a perfectly competitive firm, $k_f = 0$ and only marginal costs affect the position and shape of the firm's supply price function.

The Marshallian industry supply price function (s) is obtained by the usual lateral summation of the individual firm's supply curves

$$s = f_4(k, MC) = f_4(k, (w/MPL)) \qquad (4)$$

where the symbols without subscripts are the industry's equivalent to the aforementioned firm's variables.

Although output across firms in the same industry may be homogeneous and therefore capable of being aggregated to obtain the industry supply quantities (as in equation 4), an assumption of output homogeneity cannot be accepted as the basis for summing across industries to obtain the aggregate supply price function of total output (Keynes 1936, ch. 4). Because every point on the Marshallian industry supply function (s) is associated with a unique profit-maximizing combination of price (p) and quantity (q), the multiple of which equals total industry expected sales proceeds (z) (i.e., $pxq = z$), and because every industry output level (q) can be associated with a unique industry hiring level n (i.e., $q = f(n)$), then every point of equation 4 of the s-curve in p vs. q quadrant space can be transformed to a point on a z-curve in z vs. n quadrant space to obtain

$$z = f_5(n). \qquad (5)$$

These equation 5 industry-supply functions are aggregated across all industries to obtain Keynes's aggregate supply price function in terms of aggregate money proceeds (Z) and the aggregate quantity of employment units (N) as specified in equation 1. To achieve unique aggregation values of Z for each possible N, Keynes assumed that corresponding to any given point of aggregate supply price there is a unique distribution of income and employment between the different industries in the economy (Keynes 1936, p. 282).

Though Keynes describes the aggregate supply price function and its inverse, the employment function, in *The General Theory*, he unquestioningly accepted Marshall's microeconomic supply price concept as the basis for the aggregation he used to aggregate supply price function. Consequently, the bulk of *The General Theory* is devoted to developing the characteristics of aggregate demand price function, for it was the latter that Keynes thought was his revolutionary and novel contribution.

AGGREGATE DEMAND PRICE

Keynes's "Principle of Effective Demand" (1936, ch. 2) attacked classical theory's fundamental building block, known as Say's Law. This law presumes that "supply (equal to total output produced and income earned) creates its own demand." Under Say's Law all income, whether spent on consumption or saved, is presumed to be spent on the products of industry. Accordingly, the total costs of aggregate production incurred by firms (by definition equal to aggregate income earned) at any level of employment is presumed to be entirely recouped by the sale of output at every possible level of employment and output. The factors determining the aggregate demand price for products are presumed to be identical to those that determine aggregate output (aggregate supply price) for every possible given level of output.

Keynes justified his position by declaring that Say's Law "is not the true law relating the aggregate demand price function and the aggregate supply price function.… [Such a law] remains to be written and without … [it] all discussions concerning the volume of aggregate employment are futile" (1936, p. 26). Keynes's *General Theory* developed the characteristics and properties of the aggregate demand price function to explain why it was not identical with the aggregate supply function—that is, why supply does not create its own demand.

Keynes's aggregate demand price function related the expected aggregate planned expenditures of all buyers for all possible alternative levels of aggregate income and employment. An expanded taxonomy for the components of the aggregate demand price relationship was necessary to differentiate Keynes's analysis from the aggregate demand price function implicit in the classical Say's Law. Under Say's Law, all demand for producibles is collected in a single category (D_1) that is solely a function of (and is equal to) income earned (supply) at all possible alternative levels of employment. Keynes split aggregate demand price into two categories, D_1 and D_2, where D_1 represents *all* expenditures that "depend on the level of aggregate income and, therefore, on the level of employment N," and D_2 represents *all* expenditures *not* related to income and employment (1936, pp. 29–30). These two categories make up an exhaustive list of all possible classes of demand.

Unlike the Say's Law D_1 category, Keynes's D_1 spending does not necessarily equal aggregate income, because some income might be saved—and in Keynes's analysis, savings out of current income is never immediately used for the purchase of producibles. Keynes identified D_1 as the propensity to consume (i.e., consumption expenditures) using current income. Keynes argued that some portion of current income was not spent on consumption, but was instead saved in the form of money or other liquid assets to permit the saver to transfer purchasing power to the indefinite future. Moreover, an essential property of money (and all liquid assets) is that it is not producible in the private sector by the employment of labor (Keynes

1936, ch. 17). Thus, the decision to save a portion of income as money or other liquid assets involves "a non-employment inducing demand" (cf. Hahn 1977, p. 39) that is incompatible with Say's Law.

Because all income received goes either to planned consumption or planned savings, if Keynes's second expenditure category, D_2, were to be equal to the planned savings at every possible alternative level of employment, then Say's Law would be reinstalled. To demonstrate why D_2 is not equal to a planned savings function, Keynes assumed the existence of an uncertain future (i.e., a system in which the classic ergodic axiom is not applicable). By *uncertain* Keynes meant that the future can neither be known in advance nor reliably statistically predicted through an analysis of existing market price signals. Given an uncertain (nonergodic) future economy, future profits, the basis for current D_2 investment spending, can neither be reliably forecasted from existing market information, nor endogenously determined via planned savings. Instead, the expected profitability of investment spending (D_2) depends on the optimism or pessimism of entrepreneurs—what Keynes called "animal spirits." In such a world, neither in the short run nor the long run can D_2 expenditures be a function of current income and employment.

Keynes's general theory, therefore, implies that the aggregate demand price function is not identical with the aggregate supply function at every possible alternative level of employment. Thus, the possibility exists for a unique single intersection (the point of effective demand) at less than full employment.

SEE ALSO *Economics, Post Keynesian; Keynes, John Maynard; Macroeconomics; Marshall, Alfred; Z-D Model*

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Paul Davidson

AGGREGATE SUPPLY

Aggregate supply is an aggregate analogue of the concept of supply for individual goods and services markets that is used in microeconomic analysis. The aggregate supply of goods and services is usually taken to be related to the aggregate price level, a relationship that is called the aggregate supply function. The curve representing this relation is called the aggregate supply curve, and is a component of the popular aggregate demand–aggregate supply analysis of short-run macroeconomics, which abstracts from longer run issues such as capital accumulation and technological change.

The economist John Maynard Keynes defined the aggregate supply function as the relation between the level of employment and the aggregate supply price, which is the expectation of proceeds that makes it just worthwhile for firms to offer that level of employment, and distinguished it from the aggregate demand function that shows the relation between the proceeds that firms expect to receive and the level of employment. The modern use of aggregate supply and demand remains close to Keynes's usage but replaces the relation between the value of output (or total proceeds) and employment to that between the price level and the quantity of output. Early economics textbooks after Keynes took the aggregate supply (AS) curve to be positively sloped like its microeconomic counterpart, but as shown in Figure 1, assumed it to be relatively flat at low levels of output, having an upward slope at intermediate levels, and to become increasingly steeper as the economy approaches full employment. At low levels of output many resources, including labor, are unutilized, and increases in output can be obtained without increases in input prices and without experiencing significant diminishing returns, so that firms are willing to produce more without any increase in the price. As output expands, diminishing returns sets in and input prices begin to rise, so that firms require a higher price to produce more. Finally, when full employment of labor is reached with the corresponding output level shown by Y_f in Figure 1, no further expansion in output is possible.

In subsequent (late twentieth-century) presentations this representation has been replaced by a variety of others, the relevance of which depend on the precise assumptions made about the economy and the time horizon one has in mind. The most popular representation, common to a number of Keynesian and monetarist approaches, takes the short-run aggregate supply curve to be positively sloped, as shown by the curve AS in Figure 2, and the long-run aggregate supply curve as vertical as shown by the vertical line at Y_n (denoting the natural level of employment, which is consistent with wage-price stability) in the figure. The short-run curve can extend beyond the long-run curve as shown in the figure, implying that

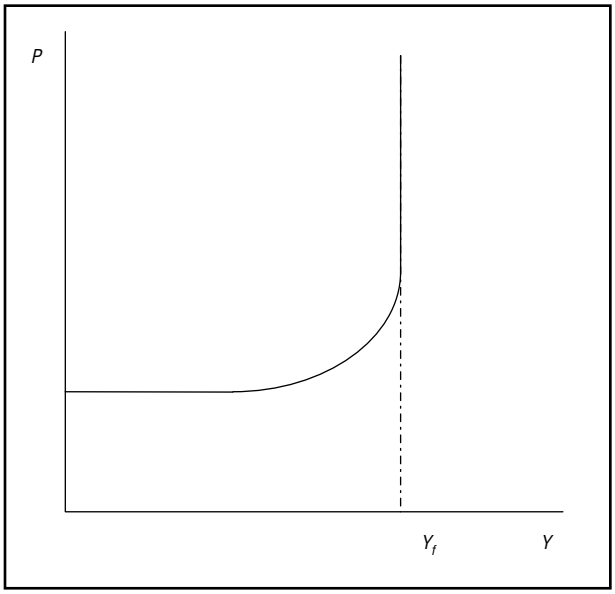

Figure 1

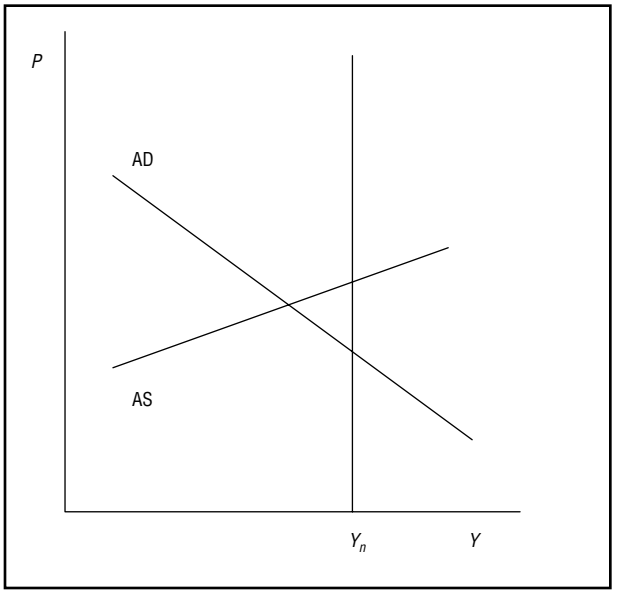

Figure 2

the economy can in fact produce beyond the level shown by the longer-run curve, for instance by hiring more workers than normal by paying overtime wages.

There are several interpretations of this configuration. One interpretation—common among the neoclassical synthesis Keynesians—assumes that firms operate in a perfectly competitive market and with diminishing returns to labor. With the money wage given in the short run, a higher price makes profit-maximizing firms increase employment and production. With the money wage flexible in the longer run, the money wage changes; if there is unemployment, the money wage falls, so that the aggregate supply curve shifts down. In the long run the economy is at full employment, where the demand for labor and the supply of labor (both of which depend on the real wage) are equal, so that the economy is at Y_n in the figure. A second interpretation—made by the early monetarists—takes the price level expected by workers to be given, but allows the money wage to adjust to clear the labor market, in the short run. A higher price increases the money wage as firms increase their demand for workers, and workers supply more labor because with the fixed expected price their expected real wage is higher. Over the longer run the expected price adapts to the actual price, which shifts the AS curve; in long run equilibrium price expectations are fulfilled and the economy is at Y_n. A similar interpretation—often made by new Keynesians—assumes that the money wage depends on the expected price and on labor market conditions reflected by the unemployment rate, and that the price level is determined by firms as a markup on unit labor costs. In the short run, with expected price given, a higher level of output implies a lower unemployment rate, a higher money wage and a higher price. In the longer run, as expected price adapts to the actual price, the AS curve moves; for instance, if the economy produces below Y_n, the expected price falls, so that the AS curve shifts down. The long-run supply curve is given at the natural rate of unemployment at which the wage and price are stable, as determined by labor market conditions and the pricing policies of firms. Unemployment may prevail due to, for instance, firms keeping wages higher than the market, clearing one to make workers exert more effort, thereby becoming more productive.

In all of these interpretations, in the short run the economy is on the AS curve, at a position determined by the AS curve and the downward-sloping aggregate demand (AD) curve. Since the short-run position of the economy is not at Y_n, the price and wage will change; at the intersection shown in Figure 2, the price and wage falls so that AS shifts down, and the economy moves along the AD curve until long-run equilibrium is attained at Y_n, so that the vertical line can be given the interpretation of the long-run AS curve. This adjustment occurs because (as is shown by the negative slope of the AD curve) a reduction in the price reduces the demand for money (since less money is required to make transactions), which makes asset holders want to lend more

thereby reducing the interest rate and inducing more spending. The nature of the short-run and long-run aggregate supply curves, given by AS and Y_n, implies that changes in the aggregate demand curve (such as fiscal and monetary policy shifts, or changes in expectations which affect investment) have an effect on output in the short run, but not in the long run.

This interpretation, however, is not accepted by all approaches. Some take the view that the economy is always on the vertical curve, so that it is the only AS curve for the economy. These views, which are associated with the new classical approach, assume that the money wage is perfectly flexible (in contrast to the neoclassical Keynesians) and that economic agents have rational expectations (in contrast to the early monetarists) and do not make systematic forecasting errors, so that it is inappropriate to take the expected price as given in the short run. In this approach, the AS curve is the vertical curve at full employment, so that aggregate demand shifts do not affect the level of output. However, this result need not hold if there are wealth effects on labor supply. With the traditional interpretation based on the supply and demand for labor and market clearing wage, a change in the price level can affect the value of real wealth, which in turn can affect the supply of labor and the level of employment.

Approaches having the rising short-run AS curve need not accept the interpretation that vertical curve is the long-run AS curve. First, the economy may not converge to Y_n, so that the vertical line cannot be given the interpretation of the long-run supply curve. For instance, if the economy is below Y_n in the short run, the downward shift in the AS curve need not take the economy to Y_n if the AD curve also shifts to the left or because it is not negatively sloped if, for instance, as the money wage falls aggregate demand falls as wage income falls (with a higher propensity to spend out of wage than out of profit income) or because firms reduce investment when the price falls. Second, even if the economy converges toward Y_n, its level may change endogenously, so that the long-run supply curve need not be vertical. For instance, according to some new Keynesian contributions, a fall in output and employment below the natural rate can make outsiders in the labor market lose their ability to reduce the wage, which increases the natural rate of unemployment and reduce Y_n. In these cases the aggregate supply side of the story implies that the aggregate demand side can have effects not only in the short run, but also in the longer run.

SEE ALSO *Aggregate Demand; Economics, Keynesian; Economics, New Classical; Keynes, John Maynard; Lucas, Robert E.; Macroeconomics*

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Amitava Krishna Dutt

AGGRESSION

Aggression is defined as behavior that is intended to harm others and that is perceived as harmful by the victim. Because aggression is such a broad phenomenon, subtypes of aggression have been proposed to reconcile discrepant research findings—for example, that not all aggression is angry. Subtypes of aggression abound, but two classifications are most important: reactive versus proactive aggression, and physical versus social aggression.

Reactive aggression is angry, impulsive, and typically occurs in response to provocation, whereas *proactive aggression* (sometimes called *instrumental aggression*) is more cool and deliberate and is deployed to achieve a social goal. Although reactive and proactive aggression are highly correlated, they seem to be related to different correlates and developmental outcomes (Coie and Dodge 1998). Reactive aggression is related to overattributing hostility in social interactions, whereas proactive aggression is related to expecting that physical aggression will have positive outcomes. Reactive aggression is associated with parental abuse, behavior problems in the classroom, and peer rejection and victimization. Proactive aggression is related to friendship similarity and leadership, and also predicts future antisocial behavior.

Because hurtful behavior can take nonphysical forms, perhaps especially for girls, other important subtypes to consider are physical and social aggression. *Social aggression* is behavior that hurts others by harming their social status or friendships. This form of aggression includes malicious gossip, friendship manipulation, and verbal and nonverbal forms of social exclusion (Underwood 2003). Social aggression is sometimes called *indirect* or *relational aggression*, but the construct of social aggression acknowledges that harm to relationships can be both direct and indirect, and that social exclusion can be both verbal and nonverbal. Here again, children's propensities to engage in social and physical aggression are highly correlated. Both social and physical aggression may take reactive or proactive forms.

Across almost all cultures that have been studied, boys and men are more physically aggressive than girls and women are. However, evidence for gender differences is much less clear for social aggression. Because base rates for girls' physical aggression are so low, without a doubt girls are more socially aggressive than they are physically aggressive. However, this does not necessarily mean that girls are more socially aggressive than boys are, and research findings conflict. Future research should examine whether social aggression unfolds differently in girls' groups than in boys' groups.

DEVELOPMENTAL ORIGINS AND OUTCOMES OF PHYSICAL AGGRESSION

Physical aggression emerges in the first two years of life (Tremblay et al. 2005) and may have biological correlates. Experts disagree as to whether there is a strong genetic component for physical aggression, but genes likely underlie temperamental qualities that have been shown to be related to aggression in childhood, which appears in such forms as impulsivity, negative emotionality, and reactivity. Although testosterone has long been thought to be related to physical aggression, the relation between this hormone and physical fighting is complex and at best indirect. Elevations in testosterone are more related to social ascendance than aggression specifically.

Socialization experiences may relate to a child's propensity for physical aggression. Children who experience harsh, abusive parenting may develop a bias toward interpreting ambiguous social cues as hostile, which leads them to be sensitive to slights and prone to reactive aggression. Children whose parents have an authoritarian style (punitive and low on warmth) may be more likely to have behavior and peer problems. Children who engage in coercive cycles with parents, in which the child's behavior escalates until the parent gives in, thereby reinforcing the highly noncompliant behavior, are more prone to a number of antisocial behaviors that may include physical aggression. Children may also become increasingly aggressive as a result of exposure to media violence on television or in video games, although the direction of causation is difficult to disentangle because physically aggressive children may be more drawn to violent media content.

Physical aggression is associated with a number of adjustment problems, in childhood and beyond. Children who fight are at risk for peer rejection and academic difficulties; as adolescents, they are at risk for dropping out of school, delinquency, and substance use. Although fewer girls than boys fight physically, those that do are just as much at risk for these negative outcomes (Putallaz and Bierman 2004). For girls, physical aggression in childhood is associated with adolescent childbearing, and these adolescent mothers who were aggressive as children are at heightened risk for having children with health and behavioral problems.

DEVELOPMENTAL ORIGINS AND OUTCOMES OF SOCIAL AGGRESSION

Although much less is known about the developmental origins of social aggression, interesting hypotheses are emerging. Children may learn the power of social aggression by watching their parents resolve marital conflicts in ways that involve triangulating others and threatening relationship harm, or by watching how parents refrain from open conflict with friends but instead malign others behind their backs. Children may also learn social aggression by observing peers or siblings, or perhaps even by seeing relationship manipulation and malicious gossip gleefully depicted in television and movies, not only those aimed at children and adolescents but also adult programming.

Engaging in high levels of social aggression and chronically being victimized are both associated with psychological maladjustment for children. Children, especially girls, who are frequently victimized report elevated levels of depression, loneliness, anxiety, and low self-concept. In addition, children who frequently perpetrate social aggression are disliked by peers, and they report feeling lonely and anxious. In young adult women, being nominated by peers as high on social aggression has been shown to be related to bulimia and borderline personality disorder. As suggested by Nicki Crick and Carolyn Zahn-Waxler (2003), high levels of social aggression may be associated with the psychological problems to which girls and women are most vulnerable.

FUTURE RESEARCH

Future research should examine how physical and social aggression are related and unfold together in both real and developmental time. Promising strategies to reduce physical aggression involve training parents to respond strategically to their children by rewarding positive behavior and not reinforcing aggression, and teaching children skills that will help them regulate emotions and form relationships. Some of these same strategies may be helpful for reducing social aggression, and adding components that address social aggression may enhance the effectiveness of violence prevention programs.

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Marion K. Underwood

AGING

SEE *Gerontology.*

AGNOSTICISM

Agnosticism concerns the withholding of a person's judgment, or belief, on a matter. Such withholding entails neither believing in favor of nor believing against a phenomenon in question. With regard to the question of God's existence, for instance, an agnostic would believe neither that God exists nor that God does not exist. Agnosticism can be directed toward any alleged phenomenon. It need not be limited to the issue of God's existence. It thus is equivalent to skepticism. One might be agnostic about the external world, minds, God, non-physical entities, causal relations, and future truths, among other things. Sextus Empiricus (fl. c. 150 CE), David Hume (1711–1776), and Bertrand Russell (1872–1970) have supported influential versions of agnosticism.

Cognitive agnosticism about an alleged entity (say, God) entails that, owing to counterbalanced or at least highly mixed evidence, one should withhold belief regarding the proposition that God exists. That is, one should neither believe that God exists nor believe that God does not exist. Doxastic agnosticism about God, in contrast, entails that one actually withholds belief regarding the proposition that God exists. A doxastic agnostic can consistently say: I withhold judgment whether God exists, but I have no commitment regarding the status of the overall available evidence on the matter. So a person could be a doxastic agnostic without being a cognitive agnostic. Cognitive agnostics about God, however, are logically required to recommend doxastic agnosticism about God, at least on cognitive grounds, even if they fail at times actually to withhold judgment regarding God's existence.

A common motivation for agnosticism regarding an issue is a concern to avoid error or at least to minimize the risk of error in one's beliefs. The concern is that if relevant evidence is highly mixed, then in answering either yes or no to a question, one seriously risks falling into error, that is, false belief. The better alternative, according to agnostics, is to refrain from answering either yes or no, that is, to withhold judgment. Refraining from believing that something exists while refraining from believing that it does not exist can save one from mistaken belief. There is, however, a price to pay: One will then miss out on an opportunity to acquire truth in the area in question. For instance, it is true either that God exists or that God does not exist. Agnostics in principle forgo acquiring a truth in this area of reality.

Agnostics about the issue of God's existence do not endorse atheism about God. They do not affirm that God does not exist; nor do they propose that our overall available evidence indicates that God does not exist. Agnostics hold that (at least for their own situation) atheism goes too far in the negative direction, just as (they hold for at least their own situation) theism goes too far in the positive direction. Theism, like agnosticism and atheism, can be either cognitive or doxastic. Doxastic theists hold that God exists. Cognitive theists hold that, owing to the overall available evidence, one should believe that God exists. Agnostics hold that, at least for their own situation, theism and atheism go too far, positively or negatively, in the area of belief.

An underlying assumption of cognitive agnosticism is that God's existence would need to be more obvious to justify acknowledgment. This assumption has given rise to extensive contemporary discussion about divine hiddenness and elusiveness. The discussion shows no sign of ending any time soon.

SEE ALSO *Atheism; Monotheism; Reality; Religion; Theism*

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Paul K. Moser

AGRIBUSINESS

Agribusiness is related to the production of food and fiber. Agribusiness includes agricultural input industries, commodity processing, food manufacturing and food distribution industries, and third-party firms that facilitate agribusiness operations including bankers, brokers, advertising agencies, and market information firms. Harvard Business School professor Ray A. Goldberg introduced the term *agribusiness* together with coauthor John H. Davis in 1955 in a book titled *A Concept of Agribusiness*. Food and fiber products that rely upon agricultural production, which is inherently decentralized and subject to the vagaries of weather and disease, often are perishable and require specialized economic institutions and public policies including sanitary regulations. Decentralized farmers of a particular commodity, such as milk, have organized agricultural marketing cooperatives to aggregate their product and coordinate sale to large food-manufacturing firms in a fashion that enhances product quality, economic efficiency, and fairness of the market pricing system.

Similarly, on the input side there are tightly coordinated (contract farming) arrangements for chicken and pork. In the beef and grain industries, agribusiness coordination uses complex pricing mechanisms, such as futures markets, to hedge risk and price products. Closer to the consumer, large supermarket chains have integrated back into the wholesaling of food products and developed private-label food products (such as bread with the supermarket's name on it) to countervail the power of branded food-product manufacturers who would charge a premium for their products.

Public policies toward the agribusiness sector have been critical in creating the food and fiber system that is seen throughout the world. Food safety and health regulations are critical. Agricultural commodity and pricing policies in developed countries aid in the pricing of commodities such as milk, wheat, corn, soybeans, cotton, and other products. These policies attempt to stabilize commodity price cycles and to ensure the economic health of the agricultural industries.

Public policy also aids in the organization of agricultural marketing and input supply cooperatives and the development of commodity promotion programs wherein farmers fund advertising efforts such as the "Got Milk?" program in the United States. Here the desire is to improve the incomes of farmers by enhancing their bargaining power and expanding the demand for their products.

Antitrust and competition policy also affects agribusiness. Over time the food systems in the United States and other countries have become industrialized. Relatively few large food processing firms and relatively few large retailing organizations sit between decentralized agricultural production and the general consuming public. Antitrust/competition policy examines proposed mergers and acquisitions in these concentrated industries to determine whether they would increase pricing power to the disadvantage of consumers or farmers. Those policies also prohibit price-fixing cartels and attempts to monopolize industries.

In the March-April 2000 issue of the *Harvard Business Review*, Goldberg revisited the concept of agribusiness with Juan Enriquez. He observed that ethanol, an additive to gasoline, and pharmaceutical products were made from agricultural outputs. Agribusiness in the 2000s also includes forestry and forest products and the plant nursery industry.

SEE ALSO *Agricultural Industry; Banana Industry; Cattle Industry; Coffee Industry; Cotton Industry; Flower Industry; Peanut Industry; Slave Trade; Slavery Industry; Sugar Industry; Tea Industry; Tobacco Industry; Vanilla Industry*

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Ronald W. Cotterill

AGRICULTURAL ECONOMICS

The field of agricultural economics deals with resource allocation and utilization and income distribution and growth in land-intensive activities. Traditionally such activities were confined to crops and livestock production, which, accordingly, have been the accepted domain of agricultural economics. As the relative economic importance of agriculture declines (steeply in the case of the industrialized nations) and as natural resource depletion and degradation loom large, agricultural economics has come to be seen as inseparable from the economics of renewable resources and the environment.

Established areas of study in agricultural economics include farm-level decision making, production economics and resource use efficiency, household economics and consumer behavior, agricultural markets and market outcomes, food safety and variety, international trade in agricultural commodities, and nutrition. The contemporary

field includes natural resource and environmental economics, agribusiness, forestry economics, and aspects of health economics, community and rural development, food security, and economic development (see, for example, Cramer, Jensen, and Southgate, 2001).

The affinity between traditional agricultural economics and environmental and resource economics is more than a matter of their common concerns with land, water, and other natural resources; it is also rooted in shared principles and methods of research. This accounts for the reincarnation of most academic departments of agricultural economics as departments of agricultural and resource economics since the early 1980s.

Agricultural economics is a branch of neoclassicism, the reigning paradigm in economics. Its origins are coterminous with the ascendancy of neoclassicism from the 1870s on. Indeed, agricultural economics has provided its parent with the archetype of the neoclassical textbook ideal: firms without market power (farms), workers without bosses (peasant families), and products without private identities (cereal commodities). This model remains the hobbyhorse not just of agricultural economists but of economists generally; ironically, though, agricultural markets have long ceased to be guided by the invisible hand, given ubiquitous state interventionism. Nonagricultural markets ruled by competition, on the other hand, have long been exceptions, not the rule.

Apart from supplying a deceptively persuasive model bolstering neoclassical preconceptions, the theoretical significance of agricultural economics consists in its unwavering adherence to these preconceptions. Agricultural economics has always been highly micro-oriented in both theoretical and empirical analyses, relying on the standard models of rational decision making by households (as both consumers and producers) and of profit-maximizing farms (see Norton 2004).

Claiming universal validity for this paradigm, Nobel prize winner Theodore Schultz famously described developing nations' agriculture-dominated economies as "poor but efficient," a narrowly technical-economic conclusion that seemed incongruous with endemic resource underutilization, including underemployment, egregious social structures of exploitation, and momentous instances of agrarian conflict and revolution (Rao 1986).

If agricultural economics deals with the narrowly technical issues of resource allocation and utilization that arise in our relation to nature and its cultivation, agrarian economics may be taken to deal with broader issues of social structure and regulation that arise in our relation to each other as we relate to nature. Advancing socially relevant knowledge in these twin fields is vital to our future. But this will depend on conscious efforts to integrate the twin fields rather than, as agricultural economics has done, ignoring the social dimension by hypostatizing itself.

SEE ALSO *Agribusiness; Agricultural Industry; Development Economics; Economics; Economics, Classical; Green Revolution; Harris-Todaro Model; North-South Models; Optimizing Peasant; Peasantry; Primitive Accumulation; Production; Production Frontier; Quota System, Farm; Rent; Returns, Diminishing; Returns, Increasing; Returns to a Fixed Factor; Returns to Scale; Slavery; Stages of Life; Subsidies, Farm; Subsistence Agriculture*

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J. Mohan Rao

AGRICULTURAL EXTENSION PROGRAM

SEE *Development, Rural.*

AGRICULTURAL INDUSTRY

The emergence of agriculture was one of the most prominent events in human history, and transformations in agriculture have proved to be among the most significant sources of social change. Even in the postindustrial world, agriculture and agricultural change continue to have major implications for human societies. Fundamentally, humans remain absolutely dependent on agriculture for food and many other products used on a daily basis.

The emergence of and subsequent developments in agriculture have transformed human societies in at least three major ways: First, when compared to hunting and gathering, agriculture greatly increased the amount of food that could be produced and made food production much more consistent and dependable. With an ever-increasing and more dependable food supply, the human population that the earth can support has increased dramatically (Vasey 1992). Second, agriculture made permanent settlement possible because it was no longer

necessary for humans to follow herds of animals or go out in search of edible plants. Third, as agriculturally based societies developed, the ownership or control of agricultural lands became perhaps the most important source of wealth and power. Extensive inequality quickly followed.

Agricultural production has always been, and continues to be, totally dependent on two broad sets of input. These include: (1) the force, energy, or labor to accomplish necessary agricultural tasks such as preparing the soil, planting seeds, removing weeds, and harvesting; and (2) environmental resources such as soil, water, and sunshine (Schlebecker 1975). From the beginning, attempts to procure these resources have had substantial societal impacts.

For most of agriculture's long history, human beings, with assistance from domesticated animals, have provided the bulk of agricultural labor. Agriculture has always faced the unique and somewhat troublesome challenge of securing an adequate labor supply: While an industrial labor force can generally be used consistently and efficiently throughout the year, the same is not true in agriculture, where the production of most commodities is seasonal. Consequently, throughout the year there are periods of extensive labor needs, primarily during planting and the harvest, followed by periods when labor requirements are minimal as biological processes unfold (Mann and Dickinson 1978). Employing an agricultural workforce large enough to meet labor requirements during peak seasons means that during most of the year this labor force will be underutilized, while the cost of feeding and housing workers remains constant. On the other hand, if a year-round workforce is not retained and attempts to secure a sufficient temporary labor force during critical labor-intensive periods fail, the results could be disastrous.

Throughout history, attempts to deal with the unique labor problems of agriculture have taken a variety of courses. Initially, approaches revolved around securing an adequate but relatively cheap human labor supply. More recently, technological solutions were sought in which machines were developed to replace human labor in the production process. Both paths have had major social consequences.

MAINTAINING AN ADEQUATE LABOR FORCE

Historically, agricultural lands have often been unequally distributed, largely controlled by wealthy and powerful landowners who sought for ways to maintain a sufficient agricultural labor force at relatively low costs. Some of the solutions have resulted in some of the darkest chapters of human history. In the past couple of centuries more equitable labor solutions have been attempted.

Feudalism During the Middle Ages in Europe, and at times in Japan, China, and other areas, feudalism emerged as a complex and varied cultural system that provided a way for the wealthy and powerful aristocracy to maintain a constant and relatively inexpensive agricultural labor force. In theory, feudalism resembled a pyramid. At the top of the pyramid was the monarch—a king, emperor, or shogun—who owned all of the land within the kingdom. Since it was impossible for the monarch to supervise or control such a large area, he or she divided the land and granted control of various segments to upper-class nobles. These nobles were the second level on the pyramid. In exchange for the land grant, the noble would swear an oath of loyalty to the monarch, collect taxes from the land to be shared with the monarch, and provide soldiers when requested. Often upper-level nobles would further subdivide the land under their control and provide land grants to lower-level nobles, who in turn, were expected to collect taxes to be shared with those above them and to provide soldiers. Further subdivisions were found in some areas. If production increased, greater levels of wealth would flow to all levels up the pyramid. The higher up the pyramid an individual resided, the greater the power, prestige, and financial benefits.

At the base of the pyramid were the peasantry and serfs, who often comprised up to 95 percent of the population. These individuals provided a constant and cheap source of agricultural labor, became soldiers when requested, and generally lived near abject poverty. They owned virtually nothing, spent their days working as day laborers on the lands of the aristocracy, and had few freedoms. The entire feudal system was based on ascribed status, where a person's position in life was almost entirely a function of his or her birth.

Slavery Slavery has a long and painful chapter in world history. While slaves have been used in a variety of economic endeavors, slavery has most prominently been a way of maintaining a consistent and cheap agricultural labor force. Although slavery has been a part of numerous cultures throughout the world, perhaps the most vivid example of slave labor in agriculture involved exporting Africans to the Americas to work as agricultural slaves. Studies by David B. Davis estimate that between 1500 and 1870, about 9.4 million Africans were transported to the Americas. About 48 percent of the slaves arrived in the Caribbean Islands, 41 percent were sent to Brazil, about 6 percent arrived in the southern United States, and the remaining 5 percent were sent to mainland Central and South America (Davis 2006).

Slavery was a part of an extremely productive agricultural system that generated great wealth to those who owned land and slaves and allowed most slaveholders to

live a life of relative comfort. However, this wealth was generated by the labor of slaves who endured torture, degradation, and were treated as property. Individuals were often separated from friends and family and sold like animals. One of the lasting consequences of slavery is a legacy of racism. To justify the race-based slavery that existed in the Americas, an ideology emerged in which the slave-owning race was defined as superior while the enslaved race was defined as inferior. The ramifications of this ideology continue to have implications for human interactions in modern society.

The Family Farm When the United States became an independent nation, policies were instigated that were intended to create an agricultural system based on numerous medium-sized family farms. The traditional agricultural labor problems would be solved by having the farmer and other family members provide the vast majority of the labor. Family labor was relatively effective because family members could be used extensively when labor needs were high and idled with minimal costs when not needed (Buttel et al. 1990). A nation of family farmers would also largely eliminate the tremendous inequality inherent in a system of landed aristocracy. The Homestead Act of 1862 perhaps best exemplifies the policy of encouraging family farms in the United States. This act made it possible for a settler, after paying a small registration fee and residing on and working 160 acres of land for five years, to gain clear title to that land. The opportunity to own one's own land was the magnet that drew millions of immigrants from Europe to the United States. In time, millions of medium-sized, full-time family farming operations dominated agriculture in the United States.

Collective Agriculture Karl Marx expressed great concern over the inequality inherent in the feudally based agricultural system that prevailed in Europe. He felt the basic problem was that a few individuals owned the land while the masses provided the agricultural labor. Following the Bolshevik Revolution of 1917, the existing agricultural system was totally overturned in areas under communist control. In time a system of large state-owned, centrally controlled collective farms was developed. The manifest goal of collective agriculture was equality. All members of the collective farm worked together and shared equally in the output. Despite an egalitarian land-ownership system and production units that were conducive to machinery and other modern technology, the productivity of collective farms was never as extensive or as efficient as communist leaders hoped it would be.

THE MECHANIZATION OF AGRICULTURE

Prior to about 1800, the vast majority of the world's population lived on farms in rural areas in an economy based on subsistence agriculture. It was necessary for nearly everyone to be involved in agriculture because most farms were barely able to produce what was needed by their own workers, and thus there was little surplus. Then in the mid-eighteenth century, the Industrial Revolution emerged in Great Britain. Developments in science, technology, and machinery greatly increased the efficiency of human labor. Initially, the industry most extensively affected was agriculture. By using increasingly advanced machines, farmers were able to produce an ever-greater surplus of food and fiber. With fewer workers needed in agriculture, a labor force was available to work on the new machines coming into use in manufacturing and industry.

For many farmers, the development of machines was a welcome solution to agricultural labor problems. Machines had several advantages over human labor. Once a machine was purchased, it could be stored during periods of disuse for little additional cost and made quickly available when needed. Additionally, machines eliminated much of the back-breaking work once associated with farming.

Despite some nineteenth-century breakthroughs, a large proportion of the world's population remained directly involved in agricultural production into the early decades of the twentieth century. Between about 1940 and 1970 the mechanization of agriculture proceeded rapidly in economically advanced nations. The impact of this process was dramatic. The mechanization of agriculture changed the very nature of farm work, totally transformed the face of rural areas, and had dramatic implications for urban and nonfarm populations as well. By utilizing new technologies, the labor capacity of farmers was greatly increased, which enabled them to operate progressively larger farms. With a rapid increase in farm size, there was a corresponding decline in the number of farms (Albrecht and Murdock 1990). In the United States, Calvin Beale (1993) described the subsequent transition as the largest peacetime movement of people in history as millions of people left the farm and moved to urban areas seeking industrial employment. The industrialization of agriculture also significantly altered what was once a family-farm-based agricultural structure. Increasingly, agriculture in the United States and other advanced economies became more dualistic: Most production now comes from a number of large and highly mechanized farms, with another large segment of the farm population running small part-time retirement or hobby farms. The number of medium-sized family farms has declined substantially.

The extent to which agriculture has been transformed by industrialization varies greatly from one part of the world to another. In economically advanced nations, a highly mechanized agricultural sector is extremely productive and typically less than 5 percent of the labor force is involved in agriculture. The large nonfarm sector is then able to produce goods and services that add to the quality of life in these countries. By contrast, in less developed countries a majority of the labor force remains involved in agricultural production and the standard of living is much lower.

AGRICULTURAL ENVIRONMENT AND SOCIETY

Agricultural production has always been and continues to be closely tied to the natural environment (Albrecht and Murdock 2002). The quality and quantity of resources available play a major role in determining which commodities can be produced and in what quantity. While innumerable environmental factors influence agricultural production, a few are obviously vital. Successful agricultural production requires the appropriate combination of soil, water, and temperature. If these factors are missing or vary too widely, production will either not occur or will be somewhat limited. Although the production of agricultural commodities requires all of these essential resources, the amounts required vary substantially from one commodity to another. Wheat can be produced in areas that experience harsh winters and have relatively short growing seasons, while citrus fruits cannot, and rice production requires substantially more water than cotton production. Thus basic environmental differences severely limit farm production in some areas, and certain commodities cannot be effectively produced in other areas.

Throughout history, humans have attempted to overcome the shortcomings of their agricultural environment. Unwanted vegetation is removed, complex irrigation systems carry water to land whose natural rainfall is insufficient, and fertilizers, including animal manure, are added to the soil to improve its natural fertility. As a continuation of these efforts, scientists are seeking to overcome environmental limitations through developments in biotechnology. The implications are extensive. On the one hand, agricultural production far exceeds what it would be otherwise. On the other hand, some environmental resources have been severely depleted and other significant environmental pollution problems have emerged.

In many cases agricultural production has severely impaired the environment. Soil erosion is a classic example. Many great civilizations of the past were founded on an extensive base of fertile soil. Ample soil allowed for surplus farm production, which freed part of the population from agriculture and permitted some workers to become artisans, engineers, and artists (Dale and Carter 1955; Lowdermilk 1953). However, with few exceptions, humans have not been able to sustain a progressive civilization in one locality for more than a few hundred years. Over time the natural resource base (particularly the soil base) that permits surplus production becomes depleted. As resources are depleted, surplus production decreases and the civilization declines (Brown 1981). Lowdermilk (1953), for example, found evidence of over a hundred dead villages in Syria. These villages now stand on bare rocks with the soils completely washed or blown away. He concluded that "if the soils had remained, even though the cities were destroyed and the population dispersed, the area might have been repeopled and the cities rebuilt. But now that the soils are gone, all is gone" (p. 10). In most cases, the more technologically advanced the civilization, the shorter its period of progressive existence and expansion (Diamond 2005; Dale and Carter 1955). Similarly, in Mesopotamia, the rich soils of the Tigris and Euphrates valleys supported some of the world's greatest civilizations. Through the centuries the soils have been severely eroded and today the land supports less than one-sixth of the population that lived there during its historic peak.

Dale and Carter state:

> Let's not put the blame for the barrenness of these areas on the conquering hordes that repeatedly overran them. True, those conquerors often sacked and razed the cities, burned the villages, and slaughtered or drove off the people who populated them. But while the soil and other resources … remained, the cities were usually rebuilt. It was only after the land was depleted or exhausted that the fields became barren and the cities remained dead. (1955, p. 15)

Even today, many of the world's most severe environmental problems are a direct result of modern farming practices. These problems include soil depletion; water pollution from eroded soils, fertilizers, and pesticides; and the depletion of critical resources, including groundwater and nonrenewable energy supplies. The extent to which societies deal with these problems effectively will profoundly influence the world in years to come.

Agriculture of the future will no doubt look substantially different from the agriculture of today, and its evolution will continue to have significant societal impact. Three factors are likely to play significant roles. First, technological developments have always figured prominently in agriculture and will continue to do so. Second, the emergence of a true world economy will have massive implications for prices and production in communities throughout the world. Third, the depletion of resources and environmental change will drastically alter agriculture. Of special concern is global warming, which could

significantly alter the agricultural environment in a myriad of ways. The role of social scientists in understanding these issues will be of continued significance.

SEE ALSO *Agricultural Economics; Boserup, Ester; Change, Technological; Civilization; Food; Green Revolution; Industry; Irrigation; Malthus, Thomas Robert; Overpopulation; Quota System, Farm; Slavery; Subsidies, Farm; Subsistence Agriculture*

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Don E. Albrecht

AGRICULTURE

SEE *Agricultural Industry.*

AID TO FAMILIES WITH DEPENDENT CHILDREN (AFDC)

SEE *Public Assistance.*

AIDS

As the twenty-first century moves forward, the HIV/AIDS (human immunodeficiency virus/acquired immunodeficiency syndrome) epidemic remains a major public health concern. As of 2006, a cure for HIV/AIDS remained to be found. While medical researchers focus their efforts on finding a cure and a vaccine, social scientists work hard to find ways to prevent the spread of HIV/AIDS. These efforts have emphasized reducing behaviors that increase the risk of exposure to HIV, such as having unprotected vaginal or anal sex and sharing needles when injecting drugs. Such efforts require an understanding of which groups of people are most at risk for contracting HIV.

During the late 1990s and early 2000s, the Centers for Disease Control and Prevention (CDC) estimated that approximately forty thousand new cases of HIV infection occurred each year in the United States. Among the 23,153 men diagnosed with HIV in 2003 (73 percent of all cases reported by thirty-three states), men who have sex with men (MSM) accounted for the largest proportion (63%), followed by those reporting heterosexual contact (17%) or injection-drug use (14%), MSM and injection-drug use (5%), and other-unspecified (1%). Among women diagnosed with HIV in 2003 (27% of all cases), heterosexual contact accounted for the largest proportion (79%), followed by injection-drug use (19%), with 2% reported as other-unspecified. While a much higher percentage of men are infected with HIV in the United States, women make up a rising percentage of those living with HIV/AIDS (their numbers increasing from 14% in 1992 to 22 percent in 2003), and heterosexual transmission has become an increasingly important factor for men. Race/ethnicity diagnoses in 2003 were disproportionately led by African Americans (50%), followed by whites (32%) and Hispanics (15%).

Social scientists use demographic information to design and implement prevention programs specifically tailored to minimize exposure for population groups at risk for HIV/AIDS. Because each population is primarily at risk through a single but unique means of HIV/AIDS transmission, prevention programs vary tremendously in emphasis depending on the target population. Identifying and effectively targeting those at risk for HIV/AIDS are fundamental to setting up a situation in which social pre-

vention programs can be effective. The late 1990s and early 2000s have seen a variety of prevention programs, ranging from intense, individual therapy to group programs and public announcements addressing a large audience.

Three primary components of prevention programs appear most effective: providing attitudinal arguments, basic information, and behavioral skills training. Although attitudes do not always predict behavior, research has shown that certain attitudes can influence the likelihood that one engages in a certain behavior. For example, positive attitudes toward condoms are associated with more frequent condom use. Basic information made available in prevention programs typically includes discussions of how the virus is transmitted, how to evaluate one's personal level of risk exposure, and how to prevent transmission. Behavioral skills training allows participants to practice skills related to reducing high-risk sexual behavior. Training can include skills such as discussing condom use with partners, condom application and removal, and cleaning and disinfecting needles and syringes. Although attitudinal arguments, basic information, and behavioral skills training are common components of effective prevention programs, an individual's gender, ethnicity, age, and risk group can have an impact on that effectiveness.

Other prevention approaches have produced varied results. Programs providing only basic information have little impact on reducing risky behaviors. Fear-based approaches most often target mass audiences, but are only effective if an individual believes he or she can accomplish the desired behavior and that doing so will lead to the expected outcome. With condom use, for example, fear-based appeals only work when people believe they can use condoms and that, if they do, they won't get HIV/AIDS.

There are several barriers to HIV/AIDS prevention efforts. These barriers include, but are not limited to, religious objections to sex education, substance use, unknown HIV status, underestimating risk, denial of sexual preference, sexual inequality in relationships, and AIDS stigma. Despite the extremely low rates of HIV/AIDS in countries with rigorous sex education programs, such as the Netherlands and Sweden, religious-based objections to sex education remain an obstacle for prevention researchers. People under the influence of alcohol or drugs are more likely to engage in high-risk behaviors, such as unprotected sexual intercourse. An additional factor in the spread of HIV is people living with HIV/AIDS who are unaware of their status, an estimated 250,000 people in the United States alone. Research has shown that a high percentage of those testing positive for HIV considered themselves at low risk for the virus. This is problematic because those who underestimate their risk of infection are less likely to engage in risk-preventing behaviors. Similarly, and particularly among African American MSM, denial of sexual preference is high. In addition to underestimating risk, these men are less likely to respond to, and thus benefit from, prevention efforts targeting MSM. Among women, perceived inequality in a relationship can reduce prevention efforts. For example, some women may fear violence or abandonment should they insist that their partners use condoms.

Perhaps the strongest barrier to prevention efforts comes from "AIDS panic" or AIDS stigma. There are three primary sources of AIDS stigma: fear of HIV infection; the labeling of risk groups (e.g., identifying AIDS as a "gay disease"); and negative attitudes toward death and dying. In addition to implementing programs aimed at reducing risky behavior, social scientists also work to eliminate stigmas associated with HIV/AIDS. By 2006, there was some evidence of positive effects from these programs; however, research in this area is limited, and the observed effects may be minor and short-lived. Nonetheless, continuing these efforts is important because of the severe negative effects stigma can have on those living with HIV/AIDS. These effects include psychological problems such as anxiety and depression, strained social relationships, abandonment by family members, loss of medical insurance, and employment discrimination.

Although most barriers to prevention are widespread, internationally the AIDS epidemic is even more troubling and the additional barriers to prevention in Africa, Asia, and third world countries have elevated the challenges facing prevention researchers. A person's religious beliefs may discourage the use of condoms for contraceptive reasons, for example. In some countries, poor economic conditions and access to medical care or antiviral medications, coupled with an even greater social stigma associated with the virus, decrease the likelihood of persons living with HIV/AIDS seeking and receiving medical treatment. The early twenty-first century is marked by a global effort to help countries where HIV/AIDS cases are alarmingly high yet medical resources are scarce.

In the absence of a vaccine, social science offers the only effective means of preventing HIV/AIDS transmission. The 1900s and early 2000s have seen great advances in the effectiveness of prevention programs, especially those targeting specific high-risk groups. Despite these efforts, HIV/AIDS remains an international epidemic requiring an international response.

SEE ALSO *AIDS-HIV in Developing Countries, Impact of; Developing Countries; Disease; Medicine*

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AIDS/HIV IN DEVELOPING COUNTRIES, IMPACT OF

Developing countries include low- and middle-income economies as well as those in transition from central planning. A wide diversity of political, economic, social, religious, and cultural systems is embraced within such countries, resulting in markedly different HIV/AIDS experiences between neighbors as well as within the nations themselves.

Several HIV epidemics often operate in tandem, including injecting drug-use, unprotected heterosexual or male-to-male sexual contact, mother-to-child infection (either in the womb or by breast feeding), and contaminated blood products. Even within a country, epidemics can be extremely diverse.

Ninety-five percent of the 38 million adults and 2.2 million children estimated to be living with HIV worldwide at the end of 2005 lived in developing countries. Worst affected is Sub-Saharan Africa, where an estimated 25.8 million have the disease, including the 3.2 million new infections during 2005. South and Southeast Asia follow with 8.3 million, Latin America and the Caribbean with 2.1 million, Eastern Europe and Central Asia with 1.6 million, East Asia with 870,000, and North Africa and the Middle East with 510,000. Worldwide, 26 million people have died from AIDS and related illnesses, 3 million of these in 2005 alone.

During that year some 4.8 million adults and children were newly infected with HIV in developing countries, 98 percent of the global total. The full extent of the problem is hidden because of inadequate testing and reporting facilities in some countries and regions within them. People may not want to be tested, and continue living with HIV without being aware of it, but even if testing positive, they may not tell their partners, seek treatment, or negotiate safer sex.

THE EMERGENCE OF EPIDEMICS

Epidemics usually pass through stages, beginning with injecting drug-users sharing needles and syringes, commercial sex workers having unprotected sex with clients, and men having unprotected sex with men. As HIV spreads more widely among these groups, it begins to percolate into the wider population, as has occurred in Indonesia, Vietnam, and Malaysia. Then, when the overall infection rate exceeds one percent, as in Thailand, Cambodia, and Myanmar, the epidemic is considered to have become generalized.

In most countries high rates of infection are associated with marginalized groups like sex workers, truck drivers, and men having sex with men. Epidemics in India, Pakistan, Libya, Uruguay, and Ukraine are being driven by injecting drug-use; in the Russian Republic HIV prevalence is four times greater in prisons than in the population at large. Some groups are especially at risk. Women and girls with little income may turn to risky commercial sex. In Sub-Saharan Africa, for example, those aged between fifteen and twenty-four are three times more likely to be HIV-positive than men in a similar age group.

The origins and early spread of HIV/AIDS remain controversial but it seems to have emerged in Central Africa toward the end of the 1970s and in the United States and Europe in the early 1980s. Elsewhere it appeared later, with the first HIV cases being reported in Thailand and the Philippines in 1984, in India and the People's Republic of China in 1985, and in Myanmar in 1988. The early data are very unreliable. In 1992, for instance, estimates of total HIV infections in Thailand ranged from 333,000 to 696,000 depending on how studies of military conscripts were analyzed and varying assumptions about the age and gender distribution of the disease. In societies where religious and political leaderships had close relationships, HIV was initially explained away as an outcome of lax morals in Western societies. Sometimes there were disputes between departments, as in Thailand, where the Tourism Ministry was concerned that health authority warnings about HIV/AIDS would deter foreign visitors.

By the mid-1990s HIV/AIDS had emerged in virtually every country. The vast differences in population make raw numbers misleading. In India the 2,095 cumulative AIDS cases in adults and children reported to the World Health Organization in December 1995 represented a rate per 100,000 population of less than one, whereas the forty-three cases in New Caledonia represented a rate of twenty-five. The wide geographical spread of the disease in Asia alone can be seen from the fact that

by 1995, 570 cases had been reported in Myanmar, 292 in Vietnam, 259 in Malaysia, and 220 in the Philippines. Actual numbers were probably much higher.

Most people living with HIV/AIDS are in the prime of their working life. Industry and commerce thus suffer from absenteeism, lower productivity, and lack of investment. Police recruitment, and the maintenance of law and order, become more difficult. Dwindling government revenues and rising expenditures (on health care, for example) can put at risk decades of development progress. In twenty-five Sub-Saharan countries average life expectancy rates have fallen dramatically since about 1988, due mainly to HIV/AIDS. Worst affected is Botswana, with life expectancy expected to fall from 60 to 27 years by 2010. In Asia, the Caribbean, and the Russian Republic steep declines are also in evidence.

In Sub-Saharan Africa there are 12.1 million orphans (80 percent of the global total), children under eighteen who have lost one or both parents to AIDS. In Nigeria alone AIDS orphans number 1.8 million and in South Africa 1.1 million. Some live with relatives or in institutions, but many end up as abused street kids who will be ill-equipped as adults to become professionals such as teachers and doctors, drive industry and commerce, or run the bureaucracy.

Often the opportunity for early intervention was missed. Thus, the Chinese government maintained that homosexuality and prostitution were not only illegal but contrary to Chinese morality. Despite warnings by health officials in 1993 that 100,000 people could be living with HIV by 2000 and 20,000 with full-blown AIDS, it was not until 2001 that the government admitted to a semi-official estimate of 600,000 infections spread over almost all parts of the country. Earlier and more vigorous intervention might have slowed the spread of the disease.

Large variations exist between individual countries, between rural and urban areas, and between men and women. Thus HIV prevalence rates are below 1 percent in Mauritania and Senegal but reach almost 40 percent in Botswana and Swaziland. Prevalence among some pregnant women in Namibia exceeds 50 percent.

In Asia the main driver of HIV infection is injecting drug-use, often accompanied by unsafe sexual practices. The huge populations of some countries reduce the average adult HIV prevalence rate to only about 0.4 percent, disguising the fact that in Asia as a whole at least 8.3 million adults and children were living with the disease in 2005. During the previous year 1.1 million people were newly infected and 520,000 died of AIDS.

In most countries several epidemics are underway: in India (which had 5.1 million people living with HIV in 2003) the disease is being mainly spread by unprotected sex in the south and injecting drug-use in the northeast. Widespread ignorance about safe sex and a growing propensity for youngsters to engage in sexual activities are further boosting the spread of HIV in countries like Indonesia, Vietnam, Pakistan, Malaysia, and Japan.

HIV/AIDS has a massive impact on societies. It places a huge financial burden on health care (even without costly antiretroviral therapy) and on medical facilities, hospitals, and nursing staff. Households and nutrition suffer when people are too ill to work, while caring for the sick reduces the time other household members can spend on activities such as farming. Children, especially girls, may be taken out of school to reduce costs or to help look after the sick, which has implications for literacy, skill development, and even dissemination of knowledge about diseases.

More than 15 million people had already died of AIDS in Sub-Saharan Africa by 2005 and, without massively expanded intervention programs and antiretroviral therapy, deaths will increase as people infected with HIV eight to ten years ago succumb to full-blown AIDS.

The AIDS epidemic continues to outstrip the global efforts to contain it. In mid-2005 only one person in ten in Africa and one in seven in Asia who needed antiretroviral treatment was receiving it. Progress is mixed. An estimated one-third of the people in need of antiretroviral treatment in Botswana and Uganda were receiving it in mid-2005, but in many African countries it is available to less than one in ten. Since 1996 Brazil has been providing free treatment, to 170,000 people in 2006, while Indian drug companies are making treatments available at more affordable prices. For most of the developing world, however, more basic initiatives are needed, with HIV/AIDS being seen as part of the wider problems of access to clean water, malnutrition, poverty, discrimination, and unemployment. Much has to be done to educate people, especially women and those living in rural areas, about this and related diseases and ways of avoiding them, but perhaps only one in ten people living with HIV has been tested and knows that he or she is infected.

SEE ALSO *AIDS; Demography; Developing Countries; Disease; Drugs of Abuse; Economic Growth; Medicine; Morbidity and Mortality; Sexual Orientation, Social and Economic Consequences; Sexuality*

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Godfrey Linge

AINSWORTH, MARY
1913–1999

It is difficult to overestimate the influence Mary D. Salter Ainsworth has had on the field of developmental psychology. Her work has been cited by over 7,000 social science sources, with over 2,500 of these citing her seminal work on patterns of infant attachment (Ainsworth, Blehar, Waters, and Wall 1978). Moreover, her professional life, which spanned five decades and three continents, exemplifies the gendered and circuitous career path taken by many women.

Mary Salter was born in 1913 to parents who were both college graduates. Her family moved to Toronto, Canada, when she was five, and it was there that she received her PhD in psychology from the University of Toronto in 1939, did her World War II (1939–1945) service in the Canadian Women's Army Corps, and accepted a postwar teaching appointment at her alma mater in the area of personality psychology. William Blatz, first as dissertation advisor and then as colleague, influenced Mary Salter's research interests in the contribution of a secure relationship between parent and child to healthy growth and adjustment.

Marriage to Leonard Ainsworth, a graduate student at the University of Toronto, complicated her staying at the university as a faculty member. The couple relocated to England in 1950 when Leonard was accepted to a doctoral program at University College, London. Mary Ainsworth soon began a research position at the Tavistock Clinic with John Bowlby, who was using evolutionary and ethological theory to explore the development of attachments to caregivers and the consequences of maternal separation and loss for young children.

In 1954 Leonard Ainsworth accepted a job at the East African Institute of Social Research in Kampala, Uganda. Mary Ainsworth moved to Africa with her husband and secured an appointment at the Institute. She then embarked on a longitudinal field-based study of infant-mother interactions in their natural setting using the skills she had developed in analyzing naturalistic observations at Tavistock. The commonalities she observed in the developing relationships of Ugandan infants to their mothers and the attachment development of infants in industrialized nations was striking to Ainsworth and consistent with Bowlby's theoretical explorations. When the Ainsworths returned to the United States at the completion of Leonard's two-year appointment, Mary brought back extensive field notes. A decade later these became the basis for her book *Infancy in Uganda* (1967), which provided some of the first empirical evidence supporting Bowlby's ethological theory of attachment development and in general made a significant contribution to the emerging field of infant social development.

On returning from Africa, Mary Ainsworth obtained a teaching and clinical position at the Johns Hopkins University. She also began to organize an intensive observational study of infant-mother pairs in Baltimore from birth through age one. In a series of papers, Ainsworth examined the sensitivity and responsiveness of mothers across a variety of daily contexts, such as feeding, face-to-face interaction, greetings, explorations, and the exchange of affection. She found connections between individual differences in maternal sensitivity and an infant's later responses to a series of separations and reunions from his or her mother. Compared to infants of less responsive mothers, infants of more responsive mothers evidenced more secure maternal attachment in their reaction to separation and reunion.

To quantify the infant's attachment security, Ainsworth and her colleagues developed a twenty-minute procedure (known as the Strange Situation) involving a series of separations and reunions between mother and toddler. Three main patterns of attachment were observed: (1) anxious/avoidant, in which the child tended not to be distressed at the mother's departure and to avoid her on return; (2) securely attached, in which the child was distressed by mother's departure and easily soothed by her on return; and (3) anxious/resistant, in which the child tended to become highly distressed at the mother's departure, only to seek comfort and distance simultaneously on her return by engaging in behaviors such as crying and reaching to be held, but then attempting to leave once picked up.

The Strange Situation has become one of the most commonly used procedures in child development research, and it has been extended to studies of attachment behaviors and correlates in rhesus monkeys, chimpanzees, and dogs used as pets and guide animals for the blind (Fallani, Prato-Previde, and Valsecchi 2006; Inoue, Hikami, and Matsuzawa 1992; Prato-Previde, Fallani, and

Valsecchi 2006; Stevenson-Hinde, Zunz, and Stillwell-Barnes 1980). Ainsworth's original interpretations have also prompted several lines of research to explicate the origins and meanings of behavior in the Strange Situation (e.g., Mangelsdorf, McHale, Diener, et al. 2000; Marshall and Fox 2005).

Mary Ainsworth moved from Johns Hopkins to the University of Virginia in 1975. She died in 1999, leaving behind forty published papers or books and scores of investigators whose work is securely attached to her own.

SEE ALSO *Attachment Theory; Bowlby, John; Child Development; Developmental Psychology; Parent-Child Relationships; Personality; Psychology*

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Doreen Arcus

AIRLINE DEREGULATION ACT

SEE *Aviation Industry.*

AIR MAIL

SEE *Aviation Industry.*

AKERLOF, GEORGE A.

1940–

American economist George Akerlof received the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel in 2001. He was awarded this prize jointly with economists Michael Spence and Joseph Stiglitz, for their work on *asymmetric information*—a situation in which agents in a market have differing levels of information (e.g., regarding the quality of a product). In his seminal paper "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism" (1970), Akerlof demonstrates how asymmetric information is persistent in the market for used cars. In the simplest example, there are two types of cars: a high-quality car with price C^H and a "lemon," or defective car, with price C^L. Only the seller is aware of the type of car being sold, whereas the consumer faces significant uncertainty about the quality of the pur-

chase. Given that the probability of receiving a car of high quality is q, where $0 < q < 1$, and low quality is $1 - q$, the buyer will only be willing to pay the expected value of the car, or $q \cdot C^H + (1 - q) \cdot C^L$. As a result, lemons will drive owners of high-quality cars, who have little incentive to sell at the average price, out of the market. Akerlof also suggests that institutions, such as warranties and chain brands, may help circumvent the problem of asymmetric information. Despite critical acclaim for this work, some researchers have criticized Akerlof's theoretical model for its failure to explain observed empirical patterns.

Akerlof has also made significant contributions to the understanding of *efficiency wages*—that is, wages set above the market-clearing wage as a way to induce worker efficiency and productivity. In 1967 Akerlof spent a year at the Indian Statistical Institute in New Delhi as a visiting professor. He describes what he learned in India during that time as "the keystone for [my] later contributions to the development of an efficiency wage theory" (2001). Almost twenty years after his return from India, he published "Efficiency Wage Models of the Labor Market" (1986), written with his wife, economist Janet Yellen. This paper explains the motivation behind efficiency wages, which are an oft-cited theoretical explanation for market failures resulting in involuntary unemployment. Akerlof and Yellen show that firms pay efficiency wages because they minimize the labor cost per efficiency unit.

Akerlof was born on June 17, 1940, in New Haven, Connecticut. He attended high school at the Lawrenceville School in Princeton, New Jersey, and in 1958 entered Yale University, where he earned his BA degree. He later attended the Massachusetts Institute of Technology, from which he received a PhD in economics in 1966. He has been a visiting professor at the Indian Statistical Institute (1967–1968) and the Cassel Professor of Money and Banking at the London School of Economics (1978–1980), and has also served as senior economist at the Council of Economic Advisers (1973–1974). Akerlof is currently Koshland Professor of Economics at the University of California, Berkeley.

SEE ALSO *Economics, New Keynesian; Economics, Nobel Prize in; Information, Asymmetric; Information, Economics of; Involuntary Unemployment; Productivity; Quality, Product; Stiglitz, Joseph E.; Wages*

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Mai N. Hubbard

AL JAZEERA

Al Jazeera satellite television was founded in 1996 in Doha, Qatar. Within less than two years of its founding, it dramatically transformed the media and information climate in the entire Arab world. The station capitalized on the emergence of satellite reception in the Arab world from the early 1990s, which created potentially large regional markets that began to be filled up by commercial and state-owned stations. When Al Jazeera was launched, it was clear that no Arab government was willing to tolerate uncensored news media. The founding staff of Al Jazeera was in fact recruited from the ranks of an earlier British Broadcasting Corporation Arabic television service that had been set up in Saudi Arabia, but that had its contract canceled because of the Saudi government's objection to its editorial content.

Conceived as an independent station but supported with loans or grants from the then new, reform-oriented emir of Qatar, Hamad bin Khalifa Al Thani, the station devoted itself to news and information, and became known for a daring style in which it presented issues that would have been routinely censored by any Arab government. It interviewed opposition figures and members of banned parties. It moved away from the traditional news format of staid, official news, focusing instead on items relevant to a wide pan-Arab audience. Almost all Arab governments levied complaints against the station with the government of Qatar at one point or another. The Saudi government went a step further, banning companies that advertise on Al Jazeera from operating in the country. In this way it attempted to economically undermine what seemed to be, for a few years, the freest channel of information with a pan-Arab audience. The station also drew bitter complaints from the U.S. government over its graphic coverage of the wars in Iraq and Afghanistan, as well as for allegedly inflaming Arab feeling by its equally poignant coverage of the suffering in the occupied Palestinian territories. During the Afghanistan and Iraqi wars, U.S. aircraft in fact bombed and destroyed Al Jazeera's offices in Kabul and Baghdad, killing some jour-

nalists, and in both cases the official story was that the bombings were mistakes.

Realizing that Al Jazeera was here to stay, many commercial as well as government-owned channels in the Arab world changed their formats or saw some relaxation of rigid censorship so as to compete with Al Jazeera, which by 1998 had become the most widely watched station in the entire Arab world. Even the Saudi government, once the station's severest critic, set up al-Arabiyya, a competing satellite station that mimicked Al Jazeera's style of uncensored news and reporting. In view of the station's association with the emir of Qatar and its location in that country, its coverage of Qatar appears scant, although the country itself is small and is of little importance in the context of the more pressing pan-Arab issues.

In addition to news and investigative reporting, Al Jazeera also broadcasts programs on religion and modern life, featuring modernizing and popular Muslim clergy, and provides historical education in the form of lengthy interviews with "witnesses of the age," namely important intellectuals and former government or revolutionary figures. Al Jazeera regularly interviews U.S. ambassadors, secretaries of state, and other notables from around the world and was the first Arab channel to interview Israeli officials.

SEE ALSO *Arab League, The; Arabs; Media; Pan-Arabism; Television*

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Mohammed A. Bamyeh

ALAMO, THE

SEE *Mexican-American War.*

ALCOHOL MYOPIA

SEE *Steele, Claude M.*

ALCOHOLISM

While those individuals who consume alcohol to the point of abuse or dependence comprise only a small percent of the general public, the impact of their actions is relatively broad, as it can be felt by families, friends, and even communities as a whole. In other words, alcohol abuse and dependence on alcohol have implications not only for the health and welfare of individual drinkers, but also for the lives of persons around them. Alcoholism is therefore an important public health concern, the symptoms and effects of which are crucial to understand.

To identify alcoholism and distinguish it from alcohol abuse, researchers and clinicians in the United States typically rely on diagnostic criteria found in the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*. Alcoholism, or more appropriately *alcohol dependence*, is a chronic disease that endures throughout an affected individual's lifespan. Typically, dependence is suspected when alcohol use is coupled with the following warning signs or symptoms:

1. The strong urge or compulsion to consume alcohol. An individual experiencing such craving spends a great deal of time obtaining and using alcohol, as well as recovering from its effects.
2. Loss of control over drinking habits. When this symptom is present, individuals can no longer limit their consumption or cease drinking once beginning. Alcohol is consumed in greater quantities and over longer periods of time than intended, and there are frequent failed efforts to cut down on or control alcohol use.
3. Tolerance to the effects of alcohol. In this phase, markedly increased quantities of alcohol must be consumed in order to experience intoxicating effects (i.e., get "high"); if the amount of alcohol consumed remains constant, a noticeably diminished effect is experienced.
4. Physical dependence. This state is characterized by withdrawal symptoms, such as anxiety after drinking has stopped, nausea, and shakiness; alcohol is consumed in order to alleviate or avoid these physical manifestations.

Individuals who do not meet the diagnostic criteria for alcohol dependence, but drink despite recurrent physical, psychological, interpersonal, legal, or social problems resulting from their drinking behaviors, are categorized as *alcohol abusers*. It is important to note that someone who abuses alcohol may not necessarily be an alcoholic or ever develop alcohol dependence; however, an alcoholic is an alcohol abuser.

THE EFFECTS OF ALCOHOLISM ON THE DRINKER

Individuals who are dependent on alcohol expose themselves to numerous conditions that threaten the quality of

their lives. For example, because the liver is the human body's primary organ responsible for metabolizing (i.e., eliminating) alcohol, it is particularly susceptible to alcohol-related damage. Injury to the liver due to heavy alcohol consumption is termed *alcoholic liver disease* (ALD) by researchers. ALD encompasses three stages or conditions: (1) steatosis (or "fatty liver"); (2) alcohol hepatitis; and (3) the most commonly known, cirrhosis.

While the first stage of ALD, steatosis, can occur after only a few days of heavy drinking, it can be reversed once drinking ceases. The second and more serious stage, alcohol hepatitis, occurs after longer periods of heavy drinking. The National Institute of Alcohol Abuse and Alcoholism equates the following indicators with alcoholic hepatitis: lack of appetite, nausea or vomiting, abdominal pain, fever, and jaundice. This condition can be potentially life threatening. If heavy alcohol consumption continues, inflammation due to alcoholic hepatitis will eventually lead to the final stage of ALD, cirrhosis. Cirrhosis is characterized by fibrosis, also known as scar tissue. As a result of continued abuse of the liver, scar tissue forms and takes the place of healthy liver cells. Consequently, the liver loses its ability to perform essential functions. The presence of alcoholic hepatitis is a telltale sign that cirrhosis could shortly follow.

Cognitive impairment (i.e., brain damage) is another potential consequence of alcohol dependence. Many alcoholics exhibit mild to moderate deficiencies in their intellectual performance, along with alterations to brain-cell activity in various sections of the brain. A very small percentage of long-term, heavy drinkers develop overwhelming, irreversible brain-damage conditions such as Wernicke-Korsakoff syndrome. This amnesic disorder is characterized by the inability to acquire new information or form new memories. Numerous other conditions such as gastrointestinal problems, heart disease and stroke, and carcinoma have also been associated with alcohol dependence.

THE EFFECTS OF ALCOHOLISM ON SOCIETY

In addition to documenting the damaging and potentially life-threatening consequences of alcohol dependence for the individual drinker, researchers have also identified numerous impacts of alcoholism that affect those surrounding an alcoholic. Often referred to as social consequences, these include:

1. The impact on communities: Intoxication can lead to unintentional accidents—such as automobile crashes and fires—as well as to criminal behavior or disorderly conduct, such as violence toward others and vandalism.
2. The impact on families: Alcoholics may neglect familial responsibilities, such as caring and providing for children or spouses; if they exhibit violent or aggressive behavior, this may lead to marital conflict, child or spousal abuse, or divorce. If maternal alcohol consumption occurs during pregnancy, serious birth defects such as fetal alcohol syndrome may develop.
3. The impact on the workplace: Alcoholism can result in lost workplace productivity due to time-off for alcohol-related illness or injury, in termination due to decreased job performance or absenteeism, and in increased company costs when termination makes it necessary for new employees to be recruited and trained.

OVERCOMING ALCOHOL DEPENDENCE

While some of the damage caused by alcohol dependence cannot be reversed, there are numerous treatment options available to alcohol-dependent individuals that may allow them to return to a more balanced and healthy lifestyle. It is important to note, however, that alcoholism cannot be cured. Alcoholics cannot address their affliction and the effects they experience by "cutting back" on the amount they consume. If actual progress is to take place, it is essential that an alcoholic "cut out" any and all drinking. Thus, to guard against relapse, alcoholics must avoid any contact with alcoholic beverages. Permanent sobriety is a long and arduous road; however, there are treatment options available that have shown promise in helping individuals to remain sober.

SEE ALSO *Addiction; Dependency; Disease; Drugs of Abuse; Mental Health*

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Adam E. Barry

ALGER, HORATIO

1832–1899

Horatio Alger Jr. is the author most closely associated with the American rags-to-riches story. His name has become synonymous with the experience of rising from relative poverty to substantial fortune without an inheritance; such a trajectory is often termed a "real Horatio Alger story." The son of a Unitarian minister living in Revere and Marlborough, Massachusetts, Alger graduated from Harvard University in 1852 and from the Harvard Divinity School in 1860. The Harvard Unitarians were heirs to the Calvinists, the Puritans, and the Congregationalist tradition. The Unitarians were steeped in a belief in the importance of character and the role of both the individual and the community in maintaining the character and ethical sensibility in the young. At Harvard, Alger studied Greek and Latin and read Scottish common-sense philosophers such as Francis Bacon and Thomas Reid. The Harvard Unitarian moralists of the antebellum era sought to render Plato's teachings compatible with Christianity, and as Alger saw it, Socrates believed in divine retribution for earthly sinners. Alger also studied with the poet Henry Wadsworth Longfellow (1807–1882) and later sought his favor when he published his own volume of adult poetry in 1875. One of Alger's mentors was Harvard president Edward Everett (1794–1865).

Alger served briefly as a minister in Brewster, Massachusetts, but left the ministry in 1866 and moved to New York City to earn his living by his pen. An author of modest literary talent, Alger wrote fiction aimed at pleasing large audiences, but amassed no riches in doing so. In addition to writing, Alger also tutored the sons of wealthy New Yorkers, including those of the Seligman and Cardozo families. Alger published 123 works as novels, serializations in newspapers and magazines, and books of poetry. Most of his formulaic fiction was aimed at juvenile readers. Alger created nineteenth-century characters who are "risen from the ranks," who "strive and succeed" and are "bound to rise"; they manage to transform themselves with "luck and pluck" and with the help of benevolent mentors from bootblacks, newsboys, or street peddlers to respectable adults with comfortable middle-class incomes. Some late heroes attain more remarkable fortunes, particularly in the era of the robber barons. Several novels feature heroines, such as Jenny Lindsay, the title character in *Tattered Tom*, who is saved from street life before she attains adolescence. Quite a few heroes leave New England farms and villages where their families cannot support them and go to the big city, but some heroes depart for Western adventures and one is sent, with the help of the Children's Aid Society, from the city to the countryside to be brought up in a healthier environment. Alger kept his heroes out of the way of modern factory labor. Genteel moralists of his era believed that manliness required independence; factories were seen as both breeding dependence and bringing the young into contact with fellow workers who endangered virtue. Alger's most famous and popular work, *Ragged Dick*, was published in 1867 and featured a young, spirited, cheerful but ragged orphan bootblack who captures the attention of a benefactor who helps him attain middle-class respectability. Alger asserted that his story *Phil, the Fiddler*, featuring a very young Italian street musician, helped to end the exploitive padrone system, a system that involved the near-enslavement of young children brought from Italy to work for the benefit of those to whom they were contractually bound. The author befriended and assisted various young boys, and informally adopted at least two of them.

Alger heroes not only work hard and help themselves but also possess steadfast character, are loyal to their employers, and help others along the way who are deserving. In Alger's formula, character is capital. Its value is recognized wherever it goes. Stories arrange for accidents through which the character of the struggling young person comes to the attention of a benefactor. Foils are excessively focused on money, social status, and finery; they consume but do not produce, and have no fellow feeling. Alger's morality tales frequently arrange justice for such characters. These stories not only provided graphic detail of neighborhoods of New York but also told readers how to avoid crime and confidence games. However, by the 1890s, some moralists inveighed against juvenile fiction, including Alger's, for planting false ideas of life in the heads of impressionable young people, encouraging them to leave their homes for adventure in the city or out West. Many libraries removed Alger novels in this period.

The fiction of Horatio Alger Jr. fueled the American dream of rising through the ranks and becoming self-made. Poverty was not an insurmountable barrier to success, and character—a key ingredient of success—was under one's own control. Many Americans would subsequently conclude that failure was the individual's own fault. While it was appropriate for charitable organizations and benevolent individuals to help deserving young people along the way, for quite a few Americans the self-help creed precluded public, governmental efforts to address poverty and inequality.

SEE ALSO *American Dream; False Consciousness*

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Carol Nackenoff

ALGERIAN REVOLUTION

SEE *Battle of Algiers, The.*

ALI, MUHAMMAD (MEMET)

1769–1849

The history of modern Egypt opens in 1798 with Napoleon Bonaparte's (1769–1821) invasion of the Ottoman province, destroying the army of the Mamluk rulers at the Battle of the Pyramids. With the Mamluks and the Ottomans in disarray, the French troops also withdrew after the defeat of the French fleet at Abu Qir, leaving a political vacuum. Muhammad Ali (or Mehmet Ali), born in the Macedonian town of Kavalla in the Ottoman Empire, was a young officer serving with the Albanian contingent against the French. He successfully filled this vacuum by creating a power base in the villages, and by joining forces with local clerics and merchants in Cairo. He removed three successive governors sent from Istanbul. Appointed *wali* or Ottoman viceroy of Egypt in 1805, Muhammad Ali used brutal methods to establish his control over Egypt, including breaking the power of the Mamluks by massacring their leaders in 1811. Regarded as the founder of modern Egypt, he created a dynasty that ruled Egypt until 1952.

Recognizing that modern political power rests on a modern, disciplined army, Muhammad Ali conscripted peasants from Upper Egypt to train them in the Napoleonic army system. He undertook a number of military campaigns, but his military and dynastic ambitions were thwarted by British, French, or Russian intervention. These powers had their own designs on the dismemberment of the Ottoman Empire, and their interests were not compatible with the strategic objectives of Muhammad Ali. Between 1820 and 1822, he conquered the Sudan in search of gold and slaves, founding the city of Khartoum in 1823. Some thirty thousand Sudanese slaves had been trained, and these *nizami* troops, led by Muhammad Ali's son Ibrahim (1789–1848), were sent against the Greeks in 1827 in the Greek war of independence. Although his troops were relatively effective, the Ottoman navy was destroyed at the Battle of Navarino in 1827.

To fund his military reforms, Muhammad Ali established long-staple cotton as a cash crop and modernized Egyptian agriculture for cotton production to supply the British textile industry. To secure his rule and to support cotton production, he confiscated the lands of the ruling class, made large land grants to his own family, and reclaimed uncultivated land, thereby creating a new landed class to support his political rule.

His modernization program also included the reform of educational institutions, the creation of a teaching hospital, the building of roads and canals, the construction of state factories, and the development of a shipbuilding foundry at Alexandria. These industrial developments provided the military platform that led Muhammad Ali to invade Greater Syria in 1831 and again in 1839. Alarmed by his success, the British intervened, blocked the Nile Delta and defeated him at Beirut. In the Treaty of London in 1841, he surrendered Crete and Hijaz and abandoned his military ambitions; in return, he and his descendants were given hereditary rule over Egypt. He died in 1849, being buried in the Muhammad Ali Mosque in the Citadel of Cairo, the mosque that he had commissioned.

Muhammad Ali was the last of the military adventurers who periodically seized power in the Ottoman provinces, giving their military domination a mask of legitimacy by creating a dynasty. He was fortunate to rule in a period of Ottoman decline, taking advantage of French military officers to modernize his army.

SEE ALSO *Ottoman Empire*

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Bryan S. Turner

ALI, MUHAMMAD (USA)

1942–

Muhammad Ali was one of the greatest heavyweight boxing champions. He also stands as a powerful symbol of

social and cultural change in the United States during the second half of the twentieth century.

Ali was born Cassius Marcellus Clay Jr. in Louisville, Kentucky, on January 17, 1942. He began boxing at an early age and had a distinguished amateur career that culminated in winning a gold medal at the 1960 Rome Olympics. He then turned professional, and on February 25, 1964, he defeated Sonny Liston (1932?–1970) to become heavyweight champion at the age of twenty-two.

Already at this point in his career Ali demonstrated the outspoken demeanor that reflected the changing racial climate of the times. The civil rights movement that had begun in the United States in the years following World War II (1939–1945) was coming to a climax, with widespread activism, the charismatic leadership of Martin Luther King Jr. (1929–1968), and the passage of landmark federal legislation, including the Civil Rights Act of 1964 and the Voting Rights Act of 1965. The more violently confrontational Black Power movement was about to begin. The history of the heavyweight championship and Ali's role in it serves to reflect these elements of change. Following a controversial black champion, Jack Johnson (1878–1946), in the early years of the century, no African American was allowed to fight for the heavyweight championship until the arrival of Joe Louis (1914–1981) in the 1930s. Louis, who held the title from 1937 to 1949, and other black champions who followed, most notably Floyd Patterson (1935–2006) during the late 1950s and early 1960s, were submissive and noncontroversial. The young Cassius Clay, however, was brash and outspoken. Shortly after becoming heavyweight champion, the aura of controversy surrounding him grew when he announced that he had become a member of the Nation of Islam and was officially changing his name to Muhammad Ali. In 1966, as U.S. military involvement in Vietnam became an increasingly divisive national issue, Ali announced that he was seeking exemption from military service as a conscientious objector. As a result of this, and his subsequent refusal of induction when his draft board failed to grant the exemption, he was formally stripped of his boxing title early the following year.

Ali was kept out of the sport for next three years. In 1970, however, he was again able to obtain a boxing license, and in 1971 the U.S. Supreme Court overturned his conviction for refusing induction. Returning to the ring at the age of twenty-eight, he went on to fight some of his most memorable bouts, including his stunning victory over George Foreman in Zaire in October 1974 in which he regained the heavyweight title. He continued to fight through the rest of the decade, losing and regaining the title a third time in 1978. He fought his last fight and left the ring for good in 1981.

In the latter part of his fighting career, Ali began to display the effects of his many years in boxing. In the early 1980s he was diagnosed with pugilistic Parkinson's syndrome. Despite deteriorating health following his retirement, he continued to make public appearances and to serve as a spokesperson for anti-imperialist and anticolonial movements throughout the world. During this period also, his reputation in the United States gradually underwent a transformation, from a figure of controversy to a national icon. In 1980 he was sent to Africa by President Jimmy Carter in an unsuccessful effort to gain African support for the U.S. boycott of the Moscow Olympics. A diplomatic effort in Iraq in 1990 secured the release of several of the U.S. hostages being held by Saddam Hussein (1937–2006) in the period immediately preceding the 1991 Gulf War. As the 1990s progressed, Ali's rise to iconic status continued. In 1996, with an estimated three billion people around the world watching on television, he lit the Olympic flame to open the Atlanta Summer Olympics, and nine years later, in 2005, he was awarded the Presidential Medal of Freedom at a ceremony in the White House.

It is extremely difficult to separate the real from the mythic Ali. His stature, clearly, extends far beyond his skill in the boxing ring, and is attributable to the natural charisma and sincerity of the man, to the work of the many journalists and publicists who wrote about him, and finally to the times in which he lived. Never a profound or original thinker, Ali's activities and pronouncements on various issues—his support, for example, of Republican presidential candidates Ronald Reagan (1911–2004) and George H. W. Bush in the 1980s—often appeared inconsistent and contradictory. In the end, however, it is in the transition from a figure of controversy to a national icon, and the manner in which it serves to symbolize the social and cultural change occurring in the United States during the second half of the twentieth century, that his greatest significance lies.

SEE ALSO *Black Power; Bush, George H. W.; Colonialism; Imperialism; Malcolm X; Nation of Islam; Neocolonialism; Olympic Games; Reagan, Ronald; Sports; Sports Industry; Vietnam War*

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Scott Wright

ALIENATION

Alienation is a term that is employed commonly in a number of disciplines to describe and explain the sense of estrangement that organizes the relationship between the subject and itself on the one hand and the subject and its relationship to history, power, and authority on the other hand: estrangement from the state in Georg Hegel, from God in Ludwig Feuerbach, from labor in Karl Marx, or from essential sexuality in Sigmund Freud. Anthropology, philosophy, economic theory, sociology, and political science all refer to the tensions that result from the sense of alienation experienced by the subject. The word *alienation*, however, comes from the Latin term *alius*, meaning "other" or "another," from which the term *alienus*, meaning "of another place or person," is derived. In this way the meaning of alienation has a spatial and existential significance. In the fifteenth century it came to mean the loss of mental faculties and thus the presence of insanity, and by the mid-nineteenth century physicians who concerned themselves with mentally disturbed patients were called alienists.

Alienation is a developmental process in Hegel's *The Phenomenology of Mind* (1807) and in 1844 writings by Marx that engage two gestures: *Entfremdung* (estrangement) and *Entāuberung* (externalization). The "unhappy consciousness" of Hegel is unhappy precisely because it is conscious of its own divisions, of its alienated relationship to its world, and thus cannot attain the unity that it seeks. In the ideality of the state this unhappy consciousness materializes itself as a subject. In Marx, labor itself is an object from which the worker is alienated, a realization that becomes possible only through the development of class consciousness. This materialization of the subject in late Marx (*Grundrisse* [1867] and *Das Kapital* [1857–1858]) through the experience of alienation from the labor process acquires a materiality that is expressed in *Vergegenständlichung* (reification), enabling the transformation of Hegel's idealism into Marx's materialism, a point that later, as reification, acquires centrality in the work of Gyorgy Lukács and the Frankfurt School.

In Marx the worker experiences the object of his or her labor as alien and threatening so that, despite the fact that it has been produced through the worker's labor, it is not accessible to the worker. For Marx abstracted forms of consciousness such as religion are symptomatic of the alienating experiences of workers, and only through the recognition of those forms as symptomatic of a frustrated historical experience, along with the abolition of capitalist ownership of the means of production that will interrupt the alienation of the worker from his or her labor, can they be overcome and allow for the emancipation of the subject.

For Feuerbach (1841) religion constitutes the alienated form of human realization of the divided subject. This is a process in which the subject understands itself as having been alienated from its own human essence and has turned that essence into an abstracted object of worship. In *Future of an Illusion* ([1928] 1975), *Moses and Monotheism* (1938), and *Civilization and Its Discontents* [1930] 1962), Freud recognizes civilization as the location where the understanding of the frustrated relationship of the subject with itself takes place. The overcoming of the sense of alienation is engendered either by the recovery of the subject's relationship to the divine (in the theological tradition) or by the recovery of the libido (in Freud). However, since alienation belongs to the historical process of subject formation and recognition, a process that reveals as much as it constitutes the process of civilization itself, alienation is taken to be the ransom of civilization, a point of no return (to nature or essence) for the human subject.

In the work of the Frankfurt School, particularly in that of Theodor W. Adorno (Horkheimer and Adorno [1944] 1972), alienation is the result of the rationalization of the process of cultural production, a process that is analogous to the injustice that is produced through the rationalization of the market. In that sense Adorno sees alienation not as part of the process of subject formation that has within it the potential for emancipation, as Marx saw it becoming as part of the historical process, but as constitutive of the new, modern subject that rests on reason, a reason that in modernity has become bankrupt without any prospects of resistance.

SEE ALSO *Alienation-Anomie; Consciousness; Frankfurt School; Freud, Sigmund; Hegel, Georg Wilhelm Friedrich; Lukacs, Georg; Marx, Karl; Power; Religion; Sexuality*

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Neni Panourgiá

ALIENATION-ANOMIE

Since 1844, when Karl Marx (1818–1883) first used the concept, alienation has been an important instrument for social critique. Marx saw alienation as inevitable in a capitalist social order where workers were paid for the time they spent producing commodities whose value for market rests on the labor congealed within, but the worker gets very little of the market price. For the capitalist who sells the goods for profit, the accumulation of wealth is the primary value. When, however, workers sell their time as a commodity, they too become commodities—they become alienated, that is, both objectified and estranged. In producing commodities, workers are rendered powerless and their lives meaningless. They are estranged from their "species being," the innate human ability to see themselves as members of a species. Their creativity and humanity are thwarted and their social world is fragmented. Marx understood alienation as a multidimensional concept with implications for the social structure and for groups and with psychological consequences for individuals.

The discipline of sociology emerged with the tumultuous changes consequent on the French Revolution (1789–1799), industrialization, and urbanization. Avoiding a political stance, sociologists explained the upheavals in different ways. Max Weber (1864–1920) explained the process of modernization as one of relentless rationalization that trapped people in the "iron cages" of bureaucratic organization. For Georg Simmel (1858–1918), people could have little concern for one another in the superficial anonymity of urban life. For Émile Durkheim (1858–1917), the erosion of social bonds meant that people were isolated and lonely. When they could not adjust to the emergent values of a modern society, with its high division of labor and advanced technologies, they were subject to anomie, normlessness.

Sociologist Robert K. Merton (1910–2003) explored modes of response to anomie and alienation by devising a typology for different kinds of fit between cultural goals and the institutionalized means available for realizing them. When goals and means are upheld, a group demonstrates conformity, while rejection of both signals *retreatism* (a withdrawal into mental illness or addiction). Two additional types of adaptation are *innovation*, developing new means to attain agreed-upon goals, and *ritualism*, remaining fixated on means while rejecting culturally sanctioned goals. *Rebellion* is the name Merton gave to the search for new goals and means. Stemming from alienation and unrest, rebellion can feed into movements for a different kind of society.

In the late twentieth century, there was a renewed interest in alienation as a tool for critiquing globalizing late capitalism and for seeking out alternative visions of a de-alienated society. Displaced from their social moorings by global changes while facing assaults on their values, alienated people tend to resort to religious fundamentalisms and resurgent nationalisms to gain a sense of stable identity, community, and meaning. For others, consumerism and popular culture feed upon alienation, at once containing discontent and reproducing the conditions that lead to this discontent. This is not new, for the advertising industry has long exploited feelings of loneliness and frustration in order to sell goods that promise to ameliorate alienation. But there are some indications of how alienation can be overcome. Many people unite to effect liberation in movements that celebrate, for example, feminism, environmentalism, and global justice.

Formulated in the nineteenth century, the concept of alienation remains a fruitful tool for understanding the contemporary world. Rooted in Marx's critique of wage labor, the concept has been expanded to consider culture, political trends, and grassroots movements, as well as aspects of everyday life. As long as changing social conditions sustain unequal power and wealth, alienation and loneliness are likely to thwart creativity and neutralize people's power to change. And sociologists will be there to chart the expression of alienation and how we may try to overcome it.

SEE ALSO *Alienation*

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ALIGHIERI, DANTE

SEE *Purgatory.*

ALIMONY

SEE *Divorce and Separation.*

ALL DELIBERATE SPEED

SEE *Brown v. Board of Education, 1955.*

ALLAIS, MAURICE

SEE *Non-expected Utility Theory.*

ALLEGORIES

SEE *Narratives.*

ALLENDE, SALVADOR

1908–1973

Salvador Allende Gossens was the democratically elected socialist president of Chile from 1970 until his death during a military coup d'état on September 11, 1973. Allende was born in Valparaíso on June 26, 1908, to an upper middle-class family. He trained at the University of Chile as a medical doctor, but he became involved in politics as a student and spent most of his adult life in politics. He was elected to the lower house of congress in 1937, served as minister of health from 1939 to 1942, and was elected to the senate in 1945. He ran for president in 1952, 1958, and 1964, and finally won in 1970 as the leader of a coalition of leftist parties, called Popular Unity.

As president, Allende sought to lead the country through a peaceful electoral transition to socialism, an endeavor known as the *via chilena*, or Chilean path. Popular Unity's ambitious platform called for state control of much of the economy. The Chilean path was premised on nationalizing key industries such as copper. In addition, Allende accelerated the agrarian reform program initiated by the prior Christian Democratic government, promoted the creation of public-private firms, and vowed not to interfere in the affairs of small businesses, which were numerous in Chile. Allende also promised to improve the access of poor Chileans to education and health care.

The failure of Allende's *via chilena* has inspired fierce debate among scholars. Many critics emphasize that Allende was a minority president who won only a plurality of the vote in 1970. However, minority presidents were common in Chile, with only Eduardo Frei Montalva (1911–1982) of the Christian Democratic Party winning a clear majority in the modern era (55% of the vote in 1964). In addition, the platform of the Christian Democrats in 1970 was similar to that of Popular Unity. Julio Faúndez suggests that a clear case can be made that "in 1970 more than two-thirds of the electorate voted in favor of radical reform" (1988, p. 180).

Some scholars argue that Allende's policy mistakes led to the coup. For example, Paul Sigmund (1977) questions the legality of Popular Unity's nationalization policies and emphasizes Allende's tactical error of failing to form a coalition government with the Christian Democratic Party, which would have ensured an electoral majority. Other scholars, such as James Petras and Morris Morley (1975), emphasize the role of the opposition (including the U.S. government) in thwarting Allende's policy objectives.

While scholars disagree over what ultimately caused the 1973 coup, there is a virtual consensus that the U.S. government and several large U.S.–based American businesses were determined to prevent Allende from being elected and once in office sought to destabilize his government. Allende had nearly won the presidency in 1958 as the leader of a leftist coalition. Faúndez (1988) notes that Allende's near victory led to an unprecedented degree of U.S. intervention in Chilean politics. From 1958 to 1970, the U.S. government financially supported the electoral campaigns of Christian Democratic Party candidates. The United States also helped establish conservative think tanks and helped produce and disseminate popular media criticizing a hypothetical Allende administration. In fact, Faúndez notes that from 1958 to 1970, the opposition to Allende (Christian Democrats, conservatives, and the U.S. government) worked hand-in-hand to prevent an Allende victory.

In spite of these efforts, the opposition was divided in 1970 and Popular Unity won. Once Allende was elected, Henry Kissinger, President Richard Nixon's (1913–1994) secretary of state, famously quipped, "I don't see why we need to stand by and watch a country go Communist due to the irresponsibility of its own people" (Faúndez 1988, p. 182). U.S. government documents included in the Senate report *Covert Action in Chile, 1963–1973* (1975) clearly show that Nixon and Kissinger, working with the Central Intelligence Agency, actively sought to prevent Allende's confirmation as president by the Chilean

Congress in 1970 and worked to destabilize the Allende government until its demise in 1973. That said, critics of Allende and some analysts who supported the *via chilena* (e.g., Roxborough et al. 1977) have argued that even if the U.S. government had played no role in ousting Allende, the Popular Unity government would have failed due to its own mistakes and the fierceness and unity of the opposition.

At the end of an intense battle against military forces, Allende asked those who fought alongside him to evacuate La Moneda, the presidential palace. Rather than face capture, or likely execution at the hands of the military, Allende committed suicide. In the days leading up to the coup, Allende swore to his supporters that he would die defending his presidency and, more importantly, democracy in Chile. The military government that overthrew Allende ruled Chile from 1973 until 1989, when the dictator Augusto Pinochet stepped down after a popular referendum. During and after the coup, thousands died and thousands more were tortured.

Why was the U.S. government so intent on preventing an Allende victory? On one hand, the zero-sum game of politics during the cold war dictated that success by leftists anywhere was a threat to the United States. Thus, the *via chilena* had to be undermined to maintain the status quo between the United States and the Soviet Union. However, a more plausible explanation might lie in the fact that Allende and other Latin American leftists posed a threat to the hegemonic development model for Latin America and the third world, which favored large multinational firms. Allende and other leftist leaders emphasized that the region needed development models that benefited their countries and the poor. Key to this endeavor was limiting the repatriation of exorbitant profits by U.S.–based companies. The U.S. government was determined to protect the interests of U.S.–based companies and also to undermine a new socialist government in the hemisphere.

SEE ALSO *Central Intelligence Agency, U.S.; Cold War; Developing Countries; Kennedy, John F.; Politics, Latino; Socialism; Third World*

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Robert Sean Mackin

ALLIANCES

Alliances are a primary form of international relations (IR) and national security policy. In conventional usage, an alliance is a formal agreement between governments to provide military support under specific political conditions. This may include military operations separately planned and executed, or highly coordinated and integrated, and other measures such as arms transfers, intelligence sharing, and the use of bases, air space, waterways, and territory. Their most important dimensions fall into three categories: (1) basic purpose and function; (2) internal politics; and (3) external affects.

BASIC PURPOSES AND FUNCTIONS

The primary function of an alliance is to combine military strength against adversaries. The combined strength may be used in various ways to advance collective and individual purposes. It is most often used for deterrence, to signal to potential aggressors that they will meet such combined resistance that aggression will not pay. But it may also be used more offensively to compel others into political submission. Both of these coercive strategies, nevertheless, hinge on the most basic alliance function, to promote cooperative war fighting, for that is what makes them credible.

Although the process is never frictionless, alliances tend to form and deform in response to shifting concentrations of power and the threats they pose. Because threats are a function of intentions as well as power, compatibility of national aims tends to drive alliance patterns. Alliances may also form along lines of ideological or religious affinity, because the shared values are likely to be endangered by common threats. In late-nineteenth-century Europe, for example, a conservative alliance based on monarchical solidarity—the Three Emperors League of Prussia, Russia, and Austria-Hungary—formed against the spread of radicalism at home and abroad. Thus the political logic of combining strength against a common threat holds, even when the calculus is not determined by external power configurations alone.

When alliances fight in general wars the common interests they stand for tend to reflect status quo or revisionist goals. The former seek to uphold the prevailing territorial divisions and political frameworks of an international system. The latter seek to overthrow them. At the start of World War II, the revisionist alliance (or "Axis") of Germany, Italy, and Japan joined in rejecting the League of Nations, and in pursuing territorial conquests and a new international economy. It was opposed by a status quo alliance composed of Britain and France, and their allies in Eastern Europe.

But allies' purposes are often more complicated than such broad generalities suggest, for partners will also seek parochial and perhaps contradictory aims, including control over each other. Once the Soviet Union and the United States joined Britain in World War II, their Grand Alliance sought not only to eliminate enemy regimes in Rome, Berlin, and Tokyo, but also to preserve fading empire, extend new spheres of influence over satellites, and create the United Nations and a multilateral liberal economic system. There were obvious tensions among these goals, and they were amply manifest in the international politics of the cold war.

INTERNAL POLITICS

Alliances require material and/or political sacrifices. They can also multiply dangers by provoking counter-alliances and new threats. Allies will thus struggle over the distribution of the costs and benefits of their enterprise, each trying to shift obligations and dangers onto the others. Two basic organizational features shape these internal politics: the number and relative strength of the allies. Increasing the number of allies makes it harder to reconcile disparate priorities. Equality of power among allies adds to the trouble by making it harder to determine whose contributions and priorities must trump. In bilateral alliances, the internal politics are least complicated between strong and weak partners, and more complicated between roughly equal ones. In multilateral alliances of unequal partners the internal politics are yet more difficult, and most difficult of all are multilateral pacts of equals. Regardless of what form an alliance takes, each partner will try to avoid two elementary risks: The first is being abandoned by one's allies at a moment of grave danger; the second is being entrapped in a fight for an ally's parochial interest that harms one's own. These twin risks pose an inherent dilemma of alliance politics, and especially during periods of international crisis, much of alliance politics reflects the strivings of each ally to navigate through it.

Although it creates the danger of entrapment, forging an alliance in peacetime is advantageous because it allows allies to send diplomatic signals and coordinate military plans and forces in ways that increase deterrence and the prospects for military victory. In principle, the more deeply allies coordinate and integrate national strategies, forces, and operations the more effective and beneficial the alliance will be. Yet even when allies agree strongly about their common political purposes, and share a high degree of trust, the business of coordinating let alone integrating military strategies, postures, and operations, can be deeply divisive—within governments as much as between them. Traditional wisdom holds that divisions will recede as common dangers increase, and grow as common dangers fade. Thus wartime alliances tend to unravel after victory, as the Anglo-American–Soviet alliance did after World War II. However, the cleverest and most menacing adversaries will incite and exploit divisions within opposing alliances; then even great danger will not mute debilitating internal politics.

Important questions in IR concern the conditions for taming corrosive alliance politics. Shared norms and transparent decision-making may help liberal democracies to make and keep stronger alliance commitments. Institutionalized alliances, possessing routine processes for political decision-making and military coordination, supported by deliberative bodies and bureaucracies, may also be more robust. Such institutionalization, especially in an alliance of democracies, may even be transforming, creating an unusually cohesive security community in which partners tend to interpret and react to world politics in increasingly convergent ways. The North Atlantic Treaty Organization (NATO)—the most institutionalized and democratic alliance in history—may for this reason have continued to function and adapt long after its main opponent, the Soviet-led Warsaw Pact, crumbled.

EXTERNAL EFFECTS

Alliances are a primary means for balancing power in international politics. Most dramatically this occurs when broad alliances form against an aggressor, like Napoleonic France, that threatens to suborn the international system. Short of such extremes, alliances may foster international order and stability by spreading deterrence and predictability among states and a sense of assurance and restraint within them. But alliances have often been seen as causing more not less international warfare. First, because competitions in alliance building can create spirals of insecurity that make war more likely. Second, because once small local wars start, alliances may widen them and make them more destructive through webs of commitments on each side. That pathology is most associated with the start of World War I in 1914 when two tight alliances, with France and Russia on one side, and Germany and Austria-Hungary on the other, became deadlocked during a crisis between Austria-Hungary and Serbia. Though both were conceived as defensive alli-

ances to prevent war, they seem to have dragged the European powers, and much of the rest of the world, into catastrophe.

The idea that alliances promote peace and stability was boosted by NATO's cold war successes in deterring a Soviet-led Warsaw Pact attack on Western Europe, and fostering cooperation within the alliance between historical enemies West Germany and France. Expectations about reproducing the latter effect motivated NATO expansion after the cold war, when former Warsaw Pact members in Eastern Europe were left in a region of strategic uncertainty without alliance safeguards. NATO's members overcame internal disputes over the scope and pace of enlargement, and agreed to expand the alliance eastward to project stability and promote democracy within the new member states. This logic for projecting security through alliance growth thus evoked the idea that democratic alliances can instill deep bonds of common identity and security community.

In the first decade of the twenty-first century, the strongest case for such bonding remained the Anglo-American alliance: forged in world wars, it was deepened and institutionalized bilaterally and multilaterally through NATO during decades of cold war. As their security concerns shifted to nuclear proliferation and transnational terrorism, those two allies showed surprising cohesion in fighting wars in Iraq and Afghanistan. With other NATO members, however, especially concerning Iraq, there was greater political acrimony and less evident commitment to joint effort, showing that even the deeply democratic and institutionalized transatlantic security community remains vulnerable to divisive and perhaps debilitating internal politics.

As the century unfolds, two issues concerning alliances will loom largest for students and practitioners of international relations. The first is the extent to which traditional alliance frameworks can be retooled and mobilized to redress amorphous transnational terrorist threats that are less amenable to solutions based on combined military strength. The second is the extent to which traditional alliance frameworks will come into play against the largest and fastest-growing powers. Will new alliances form and tighten in reaction to preponderant American military power? Will alliances in Asia and the Pacific endure and grow—or whither and fracture—as China's military posture and prestige climbs? The broad contours of twenty-first-century international politics will be defined by answers to these questions.

SEE ALSO *Cold War; Confederations; Cooperation; Deterrence; Ideology; League of Nations; North Atlantic Treaty Organization; United Nations; War; Warsaw Pact; World War I; World War II*

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Timothy W. Crawford

ALLPORT, GORDON
1897–1967

Gordon Willard Allport was a leading personality and social psychologist of the mid-twentieth century. His initial fame came from his central role in establishing the scientific study of personality as a major component of academic psychology. In 1924 he taught at Harvard University what was probably the first personality course in North America. But it was his 1937 volume, *Personality: A Psychological Interpretation*, that firmly grounded the field. Immediately hailed by reviewers as a classic, this unique work offered a counter to the then-rising popularity of Freudian theory. The book legitimized personality as a scientific topic, and shaped the agenda for the study of personality for the ensuing decades.

Allport vigorously advocated an open-system theory of personality with emphases upon individual uniqueness, rationality, proaction, consciousness, and the united nature of personality. He stressed human values, dynamic traits, and the self. He focused more on the mature adult than on the early years of childhood. As such, Allport's position was less anti-Freudian than it was a correction to right the balance in the conception of personality. This is illustrated by his proposition that the bulk of human motives and the personal attributes of adult persons become *functionally autonomous* from their likely developmental roots.

In 1954 Allport published his second classic work: *The Nature of Prejudice*. It too shaped its field for half a century. This book departed from previous conceptions of prejudice and advanced an array of new insights later supported by research. Two theoretical stances proved especially important. Allport held that intergroup contact under favorable conditions could substantially reduce prejudice and offer a major means of improving intergroup relations. Research throughout the world, as well as such events as the ending of apartheid in South Africa, support the theory. Allport also countered the then-fashionable assumption that group stereotypes were simply the aberrant cognitive distortions of prejudiced personalities. Advancing the view now universally accepted, Allport insisted that the cognitive components of prejudice were natural extensions of normal processes. Stereotypes and prejudice, he concluded, were not aberrant but all too human.

Though known principally as a theorist, Allport also had an active empirical career. In his efforts to forge a broad psychology, he employed a range of methods—from the study of personal documents to nomothetic tests and ingenious experiments. His most famous test measured basic values. His influential experiments opened up research on eidetic imagery, expressive movement, radio effects, and rumor.

Critics of Allport's personality theory regard it as too static and overly oriented to the sane and mature. Social science critics regard Allport's work as too individualistic and detached from social factors. Nonetheless, he remains one of the most cited writers in the social psychological literature.

Allport's lasting influence is based on three interwoven features that characterize all his work (Pettigrew 1999). First, he offered a broadly eclectic balance of the many sides of psychology. Second, he repeatedly formulated the discipline's central problems and proposed innovative approaches to them. Typically, his suggested solutions were loosely sketched out and not readily accepted. Years later, however, his ideas often gained acceptance and were expanded with new concepts. Finally, Allport's entire body of scholarly work presents a consistent and seamless perspective both forcefully advanced and elegantly written.

SEE ALSO *Developmental Psychology; Erikson, Erik; Personality; Prejudice; Self-Esteem; Self-Identity*

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Thomas F. Pettigrew

ALMON LAG

SEE *Lags, Distributed.*

ALMOND, GABRIEL A.

1911–2002

Gabriel A. Almond was one of the most creative political scientists of the latter half of the twentieth century. He carried out major work on public opinion and foreign policy; he did pioneering work on political culture, making the study of the subject much more systematic; he was the leading figure in the field of comparative politics, in which he broke down the single-country focus and made the field truly comparative; he brought sophisticated psychological analysis into the study of politics; and he ended his long career with significant work on religious fundamentalism.

The American People and Foreign Policy, published in 1950, was one of the earliest works in behavioral political science. Almond used survey data to explain the periodic swings of American public opinion toward international affairs—from idealistic to cynical attitudes, from a support for withdrawal to support for intervention, and from optimism to pessimism. In *The Appeals of Communism*, published in 1954, he used surveys and in-depth interviews to demonstrate the fundamentally different nature of the appeals of the communism in countries where it was the "normal" ideology of the working class and in countries where it was a less class-based manifestation of alienation.

Almond's most lasting contribution was to the systematic study of comparative politics. *The Civic Culture* (1963, coauthored with Sidney Verba) was one of the first large-scale cross-national survey studies. With its examination of the cultural roots of democracy in five nations, it opened the new field of comparative surveys and was one of the first attempts to study cultural factors in comparative politics systematically. In *The Politics of the Developing Areas*, Almond and James S. Coleman proposed a broad analytical framework for identifying the basic institutions and processes of social change. In *Crisis, Choice, and Change*, Almond and his collaborators considered the role of leadership and strategic choice in political change.

Almond also contributed analyses of the state of political science. In *A Discipline Divided*, he called for a political science that was open to many approaches, a political science that was empirical and whose conclusions were open to testing and falsification.

Late in life, Almond led a large-scale project on fundamentalisms sponsored by the American Academy of Arts and Sciences. The project culminated in an overview volume, *Strong Religions*, authored by Almond, R. Scott Appleby, and Emmanuel Sivan. The authors consider the role of fundamental religion most broadly, from its social roots to its political consequences. They do not simplify and reduce all forms to a single pattern, but instead allow one to see beyond the particularities of each of the forms of fundamentalism.

SEE ALSO *Political Science, Behavioral; Verba, Sidney*

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Sidney Verba
Lucian Pye

ALPHA FEMALE

SEE *Alpha-male.*

ALPHA-MALE

In 1802 P. Huber related the concept of dominance to the social behavior of bumblebees. Almost 100 years later, Thorleif Schjelderup-Ebbe (1935) wrote about "pecking orders" in chickens, describing a hierarchy in which the top-ranking chicken could peck all the others with impunity and the second-ranking could do the same thing to all except the first one, down to the last-ranking bird, which was pecked by all and could peck none in return. The idea of dominance was applied to explain the directionality of aggressive behavior in animals that live socially and was defined as a relationship learned through previous experience.

DOMINANCE IN NONHUMAN PRIMATES

Ray Carpenter applied the concept to nonhuman primates and considered it a universal principle that shapes all primate social organizations (1954). Interest quickly was focused on individual attributes that might account for the achievement of high rank and its consequences. Size and strength may contribute, but Masao Kawai and Syunzo Kawamura (1958) and Bernard Chapais (1992) demonstrated that social skills and alliances are far more important in determining the dominance positions of monkeys. Irwin Bernstein and colleagues showed that dominance ranks have meaning only in a specific social context (1980). In different groups individual ranks can be reversed, and the highest-ranking individual in one group can be the lowest-ranking in another. Dominance thus is not an attribute that can be studied in an isolated individual.

The functions of dominance were speculated to relate to instrumental aggression, a process in which aggression is used to gain something at the expense of a rival. Dominant individuals were expected to have priority of access to food, mates, and other resources. However, the existence of mixed evolutionarily stable strategies was interpreted to mean that alternative means might obscure the expected correlation between rank and resources. If dominance meant access to incentives, it was speculated that individuals would strive actively for high rank, but William Mason and Sally Mendoza found little evidence that primates fight specifically to attain rank (1993). Moreover, empirical studies of genetic fitness and high rank have not always demonstrated the expected correlation. Market theories that suggest that animals should perform "favors" for those of high rank in exchange for "services" such as agonistic aid and tolerance also have received mixed support. Although there are good correlations between grooming and dominance in some groups, the tendency for kin or other close associates to both groom and aid one another can override any tendency for lower-ranking animals to groom higher-ranking animals.

BIOLOGICAL CORRELATES AND BEHAVIOR

The search for biological correlates of dominance rank revealed that whereas some characteristics may contribute to the attainment of high rank, others may follow as a consequence of achieving that rank. Robert Rose and colleagues initially assumed that the correlation between male testosterone levels and dominance suggests that hormones contribute to dominance (1971) but later found that recent histories of winning or losing a fight account for profound changes in testosterone levels. The correlation with dominance pertained only immediately after fighting had established or changed dominance positions. Robert M. Sapolsky reported that cortisol levels were lower in dominant individuals, but only when the group was in a period of social stability (1984). Hormone levels both influence social interactions and are a result of those interactions.

Since dominance relationships are often linear, the first position is called alpha and the last is called omega. The alpha animal can be expected to be the "leader" of a primate group, but high agonistic rank does not lead routinely to leadership of group movements or other activities. The alpha individual may be assumed to be integral to the defense of the group against external and internal threats, but the "control role" often is played by individuals other than the alpha. In macaque and baboon societies sexual dimorphism in body size, canine size, and other features may contribute to a male becoming the alpha animal in the group, but sometimes a female may outrank all the males. Among the lemurs females routinely assume the alpha position. Nonetheless, with the original assumption that males would be the highest-ranking individuals, investigators asked whether females also have an "alpha" with special characteristics, as is assumed for alpha males. Of course this required separating the sexes in determining relative ranks, and some researchers went so far as to suggest that all adult males outrank all adult females. Whereas this occasionally may be true for some species, it is far from a general rule.

The focus on biological correlates of "alphaness" led to considerations of the evolutionary consequences of natural selection on behavior. If males were selected on the basis of their ability to defeat other males to obtain access to females (Charles Darwin's intrasexual selection), larger, more aggressive males would have higher genetic fitness. Aggression was expected in males, whereas females were expected to be more passive and even "coy," inciting males to demonstrate their superior prowess. Male aggression also could be directed against females to coerce mating

(reducing the effect of Darwin's second principle of sexual selection: epigamic selection, or "female choice"). With a long history of natural selection favoring aggressive males that fought other males and coerced females, one would expect strong differences in the aggressiveness of the sexes, and such differences were assumed and supported by the more extreme consequences of male aggression. This, however, is a poor indicator of differential initiation, participation, and duration of aggression. Because of different anatomic capabilities, aggression by females may take forms different from those of male aggression and inflict less damage, but does this mean that verbal aggression or social ostracism (presumed to be more common in human females) is any less aggressive than physical attacks? In many species the frequency and duration of female aggression exceed those of males, although the consequences of male aggression are usually more severe.

If, however, evolution has favored males that are highly aggressive and engage in sexual coercion, it is not surprising that males, with their correlated higher levels of male hormones, are more aggressive than females. (The relationship with male testosterone is widely assumed and castration often is recommended to reduce aggression in animals and human males, but there is little proof that there is a direct correlation between testosterone levels and aggression.) If male aggression is "natural," Richard Wrangham and Dale Peterson argued in 1996, males are possessed by "demons" that drive their behavior. They fight and copulate at every opportunity because evolution has shaped them to do that. If natural selection is responsible, should they be blamed, or should researchers be more accepting of male aggression and sexual coercion? Does this excuse the inexcusable? Are people really programmed by their "hormones" and heredity so that "free will" has little influence on "typical" sex behavior? Is sexual dimorphism proof that males have greater physical fighting abilities so that they can defeat other males in contests for mating, or is it possible that other factors promote a sexual division of labor that favors larger size and fighting ability in males and/or smaller size in females? Sexual dimorphism could as easily be due to differences in the social roles of males and females with regard to group defense against predators, rival groups, or other sources of potential disturbance or even to differences in foraging patterns that reduce competition for food within a group. Plausibility seems the only argument for favoring one interpretation over another, and sexual dimorphism often is assumed to be proof of male mating patterns.

THE HUMAN ALPHA

The application of speculations about nonhuman primate behavior to the understanding of the human condition is fraught with peril. "Alphaness" is more an artifact of people's ability to count than a matter of biology. Linear hierarchies are appealing, but the game paper, scissors, rock also can describe dominance. Researchers see an entire group, but animals may be more self-centered and see only their individual relationships with the members of the group. They may not have abstract concepts of group organization.

Dominance in human groups may be pronounced in institutions with a rank hierarchy such as the military; an alpha may be suggested when groups have a clear leader and the others are all more or less equal followers, but some human groupings do not show structures that suggest that individuals have histories of coercive relationships that lead to recognized superiors. Christopher Boehm suggested that many human social structures have specific mechanisms that preclude the development of alpha positions (1994). The existence of leadership does not require aggression or a history of aggressive contests, although that may occur in some circumstances. Superior reproductive success can correlate with high social status, but it need not. (Genetic fitness is defined by the number of replicates of an individual's genes that show up in a future generation compared to the average individual in the population—roughly equivalent to the number of grandchildren or great grandchildren that one has. For the last several decades there has been an inverse relationship between economic status and genetic fitness.) Presumed correlates of dominance or alpha status cannot be construed as evidence that alpha status exists.

If the term *alpha-male* is used to indicate a male that uses social position to obtain more mating or power over others, surely females might do the same and there would be alpha females. These concepts are a far cry from the origins of the term in animal behavior, where *alpha* was used to designate the individual that could aggress against others without fear of retaliation. Whether dominance leads to increased mating or access to resources is an empirical question, and the data do not always support such hypotheses. Thus, the relationships among dominance rank, genetic fitness, and status are empirical questions with regard to humans as well, and one cannot assume that success in any one area implies success in the others. Researchers may describe alpha individuals of either sex or of a group, but they should describe data and not assume data on the basis of theory.

SEE ALSO *Aggression; Hierarchy; Men; Military; Organization Theory; Social Dominance Orientation; Sociobiology; Violence*

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AL-QAEDA

Al-Qaeda, an Arabic word meaning "base," is an international Islamic terrorist group led by Osama bin Laden, who founded Al-Qaeda along with Abdullah Azzam (1941–1989) in Afghanistan in 1988 (*9-11 Commission Report,* p. 56). Al-Qaeda's administrative and recruitment foundation sprang from the associations of Muslim warriors (*mujahideen*) that had formed in the early 1980s to fight the Soviet invaders in Afghanistan. These fighters later became the backbone of Al-Qaeda's forces.

After the Soviet retreat from Afghanistan in February 1989, bin Laden returned to his native Saudi Arabia. When Iraq invaded Kuwait on August 2, 1990, bin Laden offered to raise a volunteer Islamic army to fight Iraq. The Saudi government refused, preferring to seek help from the United Nations. During the ensuing war, bin Laden opposed American involvement, calling the United States an "enemy invader." Following his disagreement with the Saudi regime, bin Laden and his supporters went to Sudan in 1991 (*9-11 Commission Report,* p. 57). International pressure on the Sudanese government later obliged bin Laden to return to Afghanistan in 1996, where he and his supporters remained until the Taliban government was defeated following the invasion of the American-led coalition forces in 2001.

Since 1991 Al-Qaeda has launched several attacks on various Western targets: suicide car bombings of the American embassies in Nairobi, Kenya, and Dar es Salaam, Tanzania, on August 7, 1998; the suicide attack on the USS *Cole* in the port of Aden in Yemen on October 12, 2000; the September 11 attacks on the Pentagon and the World Trade Center in the United States in 2001; and the suicide attack in Riyadh, Saudi Arabia, on May 12, 2003. When American-led coalition forces invaded Iraq on March 20, 2003, Al-Qaeda–linked groups swung into action. On October 21, 2004, they united as "Al-Qaeda in Iraq" under the leadership of Abu Musab al-Zarqawi, a Jordanian who was killed by American forces on June 7, 2006.

Al-Qaeda and its ideology were established on a background of the decline of socialism and communism in the face of Western culture and capitalism and increasing Islamic influence. Al-Qaeda was influenced mainly by the extreme ideologies of the Salafi stream of Islam, particularly those of Sayyid Qutb (1906–1966), an Egyptian religious theoretician. Qutb viewed the West and its culture as the greatest threat to Islam and advocated the establishment of an Islamic state based on Muslim religious law. This idea became associated with bin Laden's contention that Westerners violate the honor of Muslims, humiliate them, and try to possess their lands. Muslims must therefore fight against the West in a jihad holy war. The concept that best represents Al-Qaeda's ideology is that of "defensive jihad," according to which it is every Muslim's religious obligation to fight the attackers, seen as the Western countries headed by the United States.

This ideology molded Al-Qaeda's goals, which are: (1) to establish Islamic regimes like the Taliban, based on Islamic religious law, in all the Arab states; (2) to free all Islamic lands from any Western presence or influence; and (3) to establish the "pious caliphate" (a pan-Arabic Islamic kingdom) over all the Muslim lands. These goals were expressed in bin Laden's fatwa (religious legal proclamation) of February 23, 1998, although he himself has no religious authority. In the fatwa, bin Laden asserted that the United States, through its policies in Muslim lands, had declared war on God, his Messenger, and all Muslims.

Al-Qaeda is one of the few terrorist groups structured with a distinct separation between the *majlis a-shura* (the core leadership) and the action groups. This structural difference makes it easier for Al-Qaeda to function without a home country as a base that provides it with political and military sponsorship and hosts its training camps and administrative headquarters. As a result, cells of activists have become semi-independent centers of activity. Each cell is composed of a few members, some natives of their locale, all ready to die for their cause when the leadership so orders. Al-Qaeda cells are scattered throughout the world, with a conspicuous presence in Europe, and often have only Internet connections with the leadership.

SEE ALSO *Al Jazeera; Arab League, The; Arabs; Arafat, Yasir; bin Laden, Osama; Fundamentalism, Islamic; Palestine Liberation Organization (PLO); Palestinian Authority; Palestinians; Pan-Arabism; September 11, 2001; Terrorism; Terrorists; Violence in Terrorism*

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ALTHUSSER, LOUIS

1918–1990

Born in Algeria, the troubled and reclusive French philosopher Louis Althusser revolutionized Marxist phi-

losophy with his radical theses on Karl Marx's oeuvre and influenced several generations of students at the École Normale Supérieure, including Michel Foucault, Étienne Balibar, Jacques Ranciere, and Régis Debray. Many of Althusser's arguments, often theoretical interventions in French Communist Party (of which he was a member) and international Left debates, were published in socialist journals or articulated in public lectures and seminars (and subsequently compiled as volumes) in keeping with his determination to "intervene as much in politics as in philosophy, alone against the world" (Althusser 1993, p. 173).

Arguing that socialism was scientific and humanism ideological, Althusser challenged Hegelian and humanistic readings of Marx's work as a coherent whole, by marking an "epistemological rupture" between Marx's early (pre-1845), humanistic writings and his subsequent "mature," "scientific" works such as *Reading Capital*. The *problématique* (theoretical framework that encapsulates both presence and absence of concepts) of Marx's mature work was described as historical materialism, a "science of history" that provided a revolutionary conceptualization of social formation and change. This "History Continent" discovered by Marx, was original and unprecedented and "induced" the birth of a new, "theoretically and practically revolutionary philosophy"—dialectical materialism—distinct from historical materialism (1970a, p. 14).

Althusser's "symptomatic" reading performed the dual function of revealing the "unconscious" of Marx's texts and illuminating their underlying deep structures, while demonstrating the methodology mobilized by Marx himself in reading classical political economy. Contrary to the prevalent economically deterministic readings of *Capital*, Althusser identified a wider range of *pratique* (processes of production or transformation) that constituted a social whole or "structure in dominance" that had no essence or center. Each economic, political, ideological structure "existed in its effects," and was asymmetrically related but autonomous, the economic determining "in the last instance" which element was to be dominant. This dominance was not fixed but varied according to the "overdetermination" of the contradictions in social formation and their uneven development (1970b, p. 188).

While Althusser was influenced by his teachers such as Maurice Merleau-Ponty and Georges Canguilhem, his indebtedness to psychoanalysis was profound and particularly evident in his expositions on ideology. He distinguished between *Ideology* (eternal, omni-historical and structural, like Freud's notion of the unconscious) and *ideologies* (particular, sociohistorical). Ideology is a "representation of the imaginary relationship of individuals to their lived conditions" and has a material existence in practices and apparatuses. Of these, Ideological State Apparatuses (ISAs) such as religion, schools, and family are significant as they *interpellate* or "hail" subjects to accept their role within the system of production relations by "misrecognizing" their subjecthood as agency. Thus, an individual is simultaneously subject (of) and subject (to) ideology (1971, pp. 160–170).

Althusser consistently refuted accusations that his omni-historical, structuralist formulations disenabled revolutionary practice by insisting that he was never a structuralist but rather a Spinozist; structuralism was an accidental by-product of his antihumanist, theoreticist deviation via Spinoza's notion of structural causality. Further, his Marxism could never be structuralism because it affirmed the primacy of class struggle and thus "rests on revolutionary class theoretical positions" (1976, p. 130).

Althusser battled unbearable sadness and mental instability for much of his adult life. Althusser's murder of his wife, Helene Rytman, with whom he shared an extremely intense emotional and intellectual relationship, and his subsequent efforts to "answer charges" in his memoirs, *The Future Lasts Forever* (1993), are respectively horrific and poignant examples of the fragile balance between madness and reason upon which he constantly teetered while nevertheless always being aware of the powerful role that violent organizations had played in his life.

SEE ALSO *Lenin, Vladimir Ilitch; Leninism; Marx, Karl; Marxism; Structuralism*

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Malathi de Alwis

ALTRUISM

One fundamental question about human nature is whether people are ever capable of genuinely altruistic acts. The term *altruism* is typically used to reflect one of two concepts. The first is *evolutionary altruism*, which refers to helping behavior that benefits another at some

cost to oneself. Evolutionary altruism reflects behavior caused by many different habits and motives assumed to have evolved in a species because they promote the long-term reproduction of species members' genes. The term *altruism* is also used to reflect *psychological altruism*, which refers to a motivational state with the goal of increasing another's welfare. Psychological altruism is typically contrasted with *psychological egoism*, which refers to a motivational state with the goal of increasing one's own welfare.

There has been much debate about whether humans possess the capacity for psychological altruism. One claim that assumes psychological altruism exists is the empathy-altruism hypothesis, which states that feelings of *empathic concern* for a person in need evoke an altruistic motive. Feelings of empathic concern have been contrasted with feelings of *personal distress*. Feelings of personal distress are assumed to evoke motivation to reduce these unpleasant emotions by either escaping continued exposure to the person's suffering or by helping, whichever happens to be the least costly option in the situation. Consistent with these claims, research suggests that people feeling empathic concern tend to help even if they can easily escape exposure to the victim's suffering, whereas people feeling personal distress tend to help only when escape from continued exposure to the person's suffering is difficult or impossible.

The tendency for an observer to help a needy other as a result of evolutionary altruistic or psychological altruistic processes is also influenced by factors that affect helping behavior more generally. For example, research demonstrates that observers are more likely to help a person if they (1) notice the person and (2) recognize that the person is in need. Even then, help is likely only if observers (3) assume personal responsibility for reducing the person's need. Research also suggests that the number of observers witnessing the need situation can actually reduce the likelihood that any one observer will offer help (i.e., the *bystander effect*). However, observers who experience psychological altruism may be immune to this diffusion of responsibility because empathy may promote feelings of responsibility for the victim regardless of the number of additional bystanders present in the situation.

In development, helping behavior appears to emerge as early as two years of age in humans. However, the cause of these behaviors (e.g., evolutionary altruistic versus psychological altruistic processes, or neither) has been debated. There is also debate about the extent to which evolutionary altruistic or psychological altruistic processes influence, or are influenced by, an individual's personality characteristics. Some research shows that people scoring high on personality measures that assess altruism-relevant characteristics (e.g., perspective-taking, emotionality, and responsibility for others' welfare) are more likely to help than people scoring low on these measures. Again, it is unclear whether such behavior reflects evolutionary altruistic processes, psychological altruistic processes, or neither. Future research will almost certainly address, and hopefully answer, these and other questions about the existence of altruism in humans.

SEE ALSO *Altruism and Prosocial Behavior; Empathy; Evolutionary Psychology; Sociobiology*

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ALTRUISM AND PROSOCIAL BEHAVIOR

Social scientists use the word *altruism* to describe two distinct phenomena—*motivation* and *prosocial behavior*. Although it is more common to describe altruism as a motivational state with the goal of increasing another's welfare, some researchers, especially within the field of sociobiology, use the term as a synonym for *prosocial behavior*, which refers to any behavior that benefits someone other than oneself, regardless of the motivation involved. The factors that predict when, and for whom, prosocial behavior will occur can be divided into three categories—dispositional, situational, and evolutionary.

Dispositional factors are personal characteristics that predispose an individual to engage in prosocial behavior. These include sensitivity to norms of personal and social responsibility, internalization of prosocial values, moral reasoning ability, a tendency to empathize, intelligence, nurturance, religiosity, and self-esteem. Although none of these factors alone predicts prosocial behavior well, a combination of empathic tendencies, moral reasoning ability, and sensitivity to norms of personal and social responsibility constitute what some have called an *altruistic personality*. A person may also be prone to engage in prosocial behavior as a consequence of social learning. Those who have received (or observed others receive) rewards for helping, or punishments for not helping, are more likely to help than are those who have not.

Situational factors are stimuli in an individual's environment that promote prosocial behavior. There are many

situational factors that affect prosocial behavior, but only a few have received detailed scientific attention. Among these is the presence of bystanders. In an emergency situation, as the number of bystanders increases diffusion of responsibility for helping also increases, which, in turn, reduces the likelihood of prosocial behavior. Another factor is the presence of prosocial norms, which are written and unwritten rules of behavior that communicate when, how, and for the benefit of whom help is to be provided. If a situation promotes attention to prosocial norms, then prosocial behavior is more likely to occur. Information about the cause of a victim's need also affects prosocial behavior such that those viewed as not responsible for their need are more likely to be helped. Factors that increase positive mood and feelings of empathy promote prosocial behavior, as do situations that promote negative mood or personal distress, but only if prosocial behavior is perceived as rewarding or if escape from such feelings is possible only through helping.

Evolutionary factors are those that promote prosocial behavior as a consequence of natural selection. According to sociobiologists, individuals are predisposed to benefit those who are likely to share or promote their own genes. *Kin selection* suggests that people are more likely to benefit genetically related individuals because helping kin can promote the survival and reproduction of one's own genes in future generations. Similarly, *reciprocal altruism* suggests that people will help those who are likely to help them back because doing so increases the likelihood that one's own genes will be protected or promoted when in need at a later date. Research also suggests that younger individuals are more likely to receive aid (suggesting an evolved sensitivity to those displaying characteristics typical of offspring) unless essential resources are scarce, in which case only those capable of reproduction are likely to be helped.

SEE ALSO *Altruism; Empathy; Evolutionary Psychology; Mood; Norms; Reciprocity, Norm of*

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ALZHEIMER'S DISEASE

Alzheimer's disease (AD) constitutes about two-thirds of all dementia cases. Dementia is defined as cognitive impairment of sufficient severity to interfere with daily functioning. AD currently affects twelve million people worldwide, including over four million in the United States. These numbers could triple by 2050 due to increasing life expectancies. The prevalence of AD is approximately 1 percent among those under 70 years and increases with age to about 40 percent in those 85 years and older. It is the fourth-leading cause of death in the United States among persons older than 65 years. The term *senility* was used in the past to indicate severe age-related cognitive changes. It is now recognized that subtle cognitive changes do occur with aging, but very marked changes are unexpected unless there is an underlying disease process. The recognition of AD as a disease syndrome has transformed cognitive impairment from an expected stage of life to a medical problem, prompting public concern, new policies, and advocacy.

AD is characterized by a subtle onset and gradual decline. The most prominent early symptom is memory impairment, particularly the ability to remember recent events or names of familiar people or objects. This is accompanied by other, initially subtle, cognitive deficits, such as impaired verbal, spatial, or problem-solving skills. Other symptoms may include disorientation, increased irritability, mood lability, depression, anxiety, and sleep disturbance. Delusions are common, as are behavior problems (e.g., aggression, wandering, disregard for normative social conduct). As the disease progresses, basic activities of daily living, such as eating and dressing, become impaired. Late-stage AD is marked by the loss of recognizable speech and the inability to control bodily functions, leaving patients completely dependent on caregivers. Death occurs approximately eight to ten years after diagnosis (range three to twenty years).

The causes of AD are currently not fully understood. The most evident brain abnormalities are neuritic plaques (clumps of beta amyloid protein) and neurofibrillary tangles (Tau protein strands). Soluble forms of these abnormalities may be toxic to the brain. There is also a deficiency in the neurotransmitter acetylcholine, clogging of the NMDA-glutamate receptor, and considerable brain atrophy (shrinkage).

AD can be familial (inherited) or sporadic. Familial AD is rare and begins earlier in life (age 30 to 60 years). There are at least three genes that can cause familial AD: presenilin 1, presenilin 2, or the amyloid precursor protein gene. Sporadic AD typically occurs after age 65 and accounts for 90 percent of all AD cases. The primary risk factor for sporadic AD is age. Others include a family history of AD, carrying the E4 allele (variant) of the

apolipoprotein E (ApoE) gene, being female, Down syndrome, head injury, a prolonged loss of consciousness, diabetes, and cardiovascular disease. Compared to Americans of European descent, African and Hispanic Americans are at greater risk for AD, whereas Asians and Native Americans are at lower risk. It is unclear whether these differences are due to genetic heritage, health, or social or cultural differences between ethnic groups. Protective factors include higher occupational attainment, education, literacy, physical exercise, and engagement in socially and intellectually stimulating leisure activities.

Current drug treatments of AD consist of cholinesterase inhibitors, which increase the neurotransmitter acetylcholine, and NMDA receptor antagonists, which block glutamate from activating NMDA receptors. There is some evidence that antioxidants (vitamins E), anti-inflammatory agents (ibuprofen, aspirin), and estrogen may slow the progression of AD. All current treatments are symptomatic and only marginally helpful. There is weak support for the effectiveness of cognitive interventions in improving cognitive and emotional health during early AD.

The burden of AD is enormous, both to society and to individual caregivers, who suffer from financial and emotional distress. Lack of effective treatment, high health care costs, and increasing numbers of patients make AD one of the most challenging medical conditions.

SEE ALSO *Dementia; Disease; Medicine; Mental Health; Mental Illness*

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AMBEDKAR, B. R.
1891–1956

Bhimrao Ramji Ambedkar contributed to the development of the Indian nation during the formative stages of its history in the first half of the twentieth century. Ambedkar was born into a low-caste untouchable family in Maharashtra state in western India. Because his father had been in the military service through a limited opening given by the British during the middle of the nineteenth century, young Bhimrao gained access to an education at a time when the majority of untouchables were excluded from education. He graduated in 1912 and later earned MA and PhD degrees from Columbia University in New York City and a degree in law and DSc from the University of London. His studies were facilitated by fellowships awarded in 1913 by the philanthropic king of India's Baroda state.

Untouchables in India traditionally hold a low position in Hindu social order based on the caste system, which denies basic human rights to them. They are considered polluting and suffer from social and physical segregation. Ambedkar himself faced discrimination in various stages of life as a student, as a government servant and lecturer, as a lawyer, and occasionally even when he occupied high positions of power as a minister and on other occasions in his public life.

CIVIL RIGHTS ACTIVIST AND POLITICAL LEADER

India gained independence from British colonial rule in 1947 and adopted its own constitution in 1950. Ambedkar was at the forefront of Indian politics as a scholar, a civil rights activist, and a political leader from 1920 until 1956. His nation-building contributions were multiple, and included writing books and memoranda on a number of issues of national importance and serving as a chief framer of the Indian constitution and as a policymaker. Above all, he was a leader of the excluded group of untouchables.

Ambedkar began his civil rights campaigns against caste discrimination and untouchability in the 1920s, mobilizing untouchables for access to public water tanks in the town of Mahad and entry into temples in the cities of Amravati and Nasik. With these struggles and the symbolic burning of the Manusmriti (a traditional Brahmanic law book) in 1927, the movement spread to the countryside. In the 1930s, struggles of workers and tenants against landlords were organized.

From 1930 onward, the focus shifted to seeking adequate representation for low-caste untouchables in the legislature, public employment, and in educational institutions, as well as to seeking general economic empowerment. Ambedkar published weekly papers, created associations, and established political parties. His first organization was the Bahishkarit Hitkarni Sabha (Association for the Welfare of the Ostracized), founded in 1924. In 1936 he created the Independent Labor Party, which was renamed the Scheduled Caste Federation in 1942, and converted finally into the Republican Party of India in 1956. Ambedkar also set up a Peoples' Education Society in 1946 beginning with a college in Bombay, and

he organized the Indian Buddhist Council to help spread Buddhism.

SOCIAL ANALYST AND POLICYMAKER

Ambedkar was a scholar as well as a man of action. His aim was to use insights from various studies on Indian history and society to restructure Indian society on the principles of equality, liberty, and fraternity. He had differences both with contemporaries like Mahatma Gandhi (1869–1948) and with India's leftists. In Ambedkar's view, the problem of the untouchables was rooted in the caste system, which was based on the principle of inequality, isolation, and exclusion, with an ideological support from Brahmanic-Hindu religious philosophy. Gandhi, in contrast, believed that the institution of untouchability had no base in Hinduism and treated it as an aberration. The leftists, on the other hand, believed that the caste system had economic foundation and could be resolved through industrialization and a move toward socialism. Solutions differed correspondingly. Gandhi emphasized moral solutions and a change of heart among Hindus. Marxists advocated economic equality for the annihilation of caste discrimination. Ambedkar, however, favored dismantling both the religious-ideological and economic foundations of the caste system. At the social-religious level, he argued for the acceptance of the egalitarian Buddhist religious tradition in Indian society. Economically, he favored a strong state, a democratic socialism oriented to rapid economic development, and a system of compensatory affirmative action policy that included "reservations" in legislature, public services and educational institutions to ensure equal access to economic opportunities. As a minister for energy and irrigation under the last British government, Ambedkar played a major role in initiating economic planning in India.

Ambedkar turned toward Buddhism and converted with a large number of followers in 1956. Buddhism, in his view, was a harbinger of economic and social/cultural egalitarianism and political democracy. This perspective on the problems of Indian society had an immense impact on the issue of reform in Hindu society.

Ambedkar also had a profound impact on the development of policies opposing discrimination and facilitating the empowerment of discriminated groups. Because Hindu society is exclusionary and discriminatory in character, it requires policies of social inclusion. The set of measures aimed at ending discrimination and increasing equal opportunity and economic empowerment included equal rights legislation, legal safeguards against discrimination, and affirmative action to ensure fair participation to the discriminated and excluded groups of untouchables. Legal safeguards against discrimination came with the Anti-Untouchability Act of 1955, and affirmative action came with the Reservation Policy for representation in legislatures, educational institutions, and public jobs, measures that were instituted in 1935 and were finally incorporated into the constitution of India in 1950. In support of economic empowerment, Ambedkar favored a particular type of socialistic economic framework, which in his view would ensure economic equality to poor and marginalized groups. Ambedkar's contribution is, thus, valuable both in social thought and in the shaping of policies against discrimination. As chairman of the drafting committee of the Indian constitution, he helped to create the basic political, economic, and social framework under which Indians live today.

Ambedkar died in 1956, and the Indian state recognized his unique contributions. He was posthumously awarded the country's highest civilian honor, the Bharat Ratna (Jewel of India) on April 14, 1990.

SEE ALSO *Buddhism; Caste; Caste System, The; Dalits; Development; Gandhi, Mohandas K.*

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Sukhadeo Thorat

AMBIGUITY AVERSION

SEE *Non-expected Utility Theory.*

AMERICAN ANTHROPOLOGICAL ASSOCIATION

The establishment of the American Anthropological Association (AAA) in 1902 was the culmination of a gradual process of professionalization in American anthropology that revealed subdisciplinary, regional, and theoretical tensions within the emerging discipline. The first anthropological society in the United States was the American Ethnological Society, founded in New York by Albert Gallatin (1761–1849) in 1842 and revived by Franz Boas (1858–1942) in the 1890s to balance the Washington-based Bureau of American Ethnology's potential stranglehold that threatened to dominate anthropology on a national scale. Section H of the American Association for the Advancement of Science, established in 1882, already provided annual meetings for anthropologists but not visibility among the social science disciplines or discrete professional identity.

Abortive efforts to establish a separate organization in 1897 floundered over Washington hegemony, with the compromise being a new series of the Bureau of American Ethnology–based journal *American Anthropologist* co-organized by W. J. McGee (1853–1912) of the bureau and Boas in New York. The diverse editorial board reinforced the revamped journal's claim to national representation and self-consciously built toward a formal professional organization in the near future. Boas wanted to wait until he had trained more professional anthropologists and solidified his organizational control over the discipline.

The American Anthropological Association that was established in 1902 compromised between Boas's insistence on professional gatekeeping and McGee's populism, a contrast reflecting their respective institutional frameworks of university and government. The Washington contingent, backed by Frederick Ward Putnam's (1839–1915) archaeological bailiwick at Harvard's Peabody Museum of American Archaeology and Ethnology, supported evolutionary theory in the mode of Lewis Henry Morgan (1818–1881), whereas Boas critiqued this paradigm in favor of historical particularism.

Boas succeeded in restricting the organizational meeting to forty carefully chosen professionals, but McGee ensured that any interested person could join. The AAA began with 175 members, including sixteen women, incorporating members of the Anthropological Society of Washington. McGee became the first president, but his successors were carefully chosen to represent alternative regional and local components of the national membership. Boas served as the third president of the AAA in 1907 to 1908, succeeding Putnam, who had long been the permanent secretary of the American Association for the Advancement of Science. When the inclusive structure rapidly proved unwieldy, the establishment of an executive council further enshrined Boas's aspirations to professionalism by limiting decision-making power to the established elite, increasingly under his patronage.

World War I (1914–1918) polarized the hyperpatriotism and racialism of the National Research Council against Boasian autonomy of science on both ethical and intellectual grounds. Boas was German and a pacifist about the war, a critic of eugenics, and ambivalent about collaboration between universities and museums. Archaeology and physical anthropology were left tacitly to Putnam at Harvard. In 1919, after the war had officially ended, Boas accused unnamed anthropological colleagues working in Mexico, representing his still powerful long-term nemeses in the Cambridge/Washington axis, of spying under cover of research. In the resulting furor, Boas was removed as anthropology's representative to the National Research Council, censured by his own professional association, and removed from its council. Despite the apparent defeat, however, this was the last time that anti-Boasian forces would challenge successfully his organizational leadership, commitment to professional credentials, and effective critique of evolution, or that the institutional core of American anthropology would be academic. Thereafter, Boas's former students and protégés edited the *American Anthropologist*, represented the AAA on the three research councils, and headed the growing number of university programs credentialing new anthropologists. The discipline and the AAA grew incrementally during the interwar years under this balanced structure.

During World War II (1939–1945), many anthropologists entered government service. At the war's end, the discipline was poised for exponential growth. The 1945 annual meeting narrowly averted schism led by archaeol-

ogists and younger anthropologists. During the annual meeting of 1946, concurrent sessions were held for the first time. The 1946 AAA meeting introduced a distinction between members and fellows that persisted until the 1970s. The new structure maintained the inclusive subdisciplinary scope of cultural, physical, archaeological, and linguistic specialization (although the three latter also participated in independent associations). This structure was intended to render anthropology competitive among the social sciences. An AAA Research Committee was established to seek philanthropic support for anthropology in the transition to government funding and beyond. Increasingly, the competition would be interdisciplinary, seeking a place for anthropology among the social science disciplines.

The political upheavals of the 1960s initiated centrifugal as well as further numerical expansion in American anthropology. By the 1970s, the academic job market had contracted and many fledgling anthropologists found themselves working outside the ivory tower. Practicing anthropology emerged as the fifth subdiscipline in the AAA structure to accommodate this growing diversity within its membership. Increasingly, the most salient internal schism was a generational conflict between activism and objective science. Many anthropologists on both sides considered these mutually exclusive.

Under the presidency of Anthony F. C. Wallace in 1972, the AAA began its restructuring to mitigate the increasing size and cumbersomeness of the organization and to incorporate its ever more diverse versions of anthropology by establishing specialized sections, while retaining the overall organization as an umbrella. As the powerful university-based old guard was challenged by younger and more radical critics, the AAA strove to legitimize both the activists and the scientists within its membership. A new constitution in 1983 formalized this structure, producing over thirty sections and numerous interest groups and committees by the mid-1990s. Sociocultural anthropology dominated, as it had throughout the history of the AAA, but the other subdisciplines retained their affiliation with the umbrella organization.

Centripetal forces perhaps have come to the forefront again with the decision that AAA membership includes subscriptions to the *American Anthropologist* as well as section publications. Many AAA members belong to multiple sections and value this acknowledgement of the diversity within their profession. The organization is active in seeking a public voice for anthropology and anthropologists and in maintaining internal dialogue among anthropologists of diverse persuasions.

SEE ALSO *Anthropology; Anthropology, Public; Anthropology, U.S.*

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Regna Darnell

AMERICAN ASSOCIATION ON MENTAL RETARDATION

SEE *Mental Retardation.*

AMERICAN CIVIL LIBERTIES UNION

SEE *Public Interest Advocacy.*

AMERICAN CREED

SEE *American Dilemma; Myrdal, Gunnar.*

AMERICAN DILEMMA

Published in 1944, amid the massive destruction and racial genocide of World War II (1939–1945), *An American Dilemma: The Negro Problem and Modern Democracy*, by the Swedish economist and sociologist Gunnar Myrdal (1898–1987), not only challenged America's democratic principles but also offered firm testament to their promise. Myrdal's epic study has framed racial discourse for more than half a century. Consistent with the times, Myrdal's research team included some of the leading black intellectuals of the era—Ralph Bunche (1904–1971), Kenneth Clark (1914–2005), E. Franklin Frazier (1894–1962), Charles S. Johnson (1893–1956), and Ira Reid (1901–1968)—who were forced by custom

and discrimination to work as his racial, if not intellectual, subordinates.

Myrdal saw the American race problem as a moral dilemma, concluding that legal segregation and the racial caste system were inconsistent with the American creed and its commitment to freedom, equality, and democracy. For Myrdal, one solution was located in the American system of education. Education represented a vehicle for combating racist beliefs as well as a way to improve black people's material conditions. Increased educational opportunities for blacks, and improved education about race for whites, he argued, represented an important step toward reducing racial prejudice, ending segregation, improving black economic development, and ultimately solving the puzzle of race in America.

THE AMERICAN DILEMMA AND ECONOMICS

In *American Dilemma*, Myrdal rightly described the economic situation and prospects of black Americans at the close of the Second World War as dark. His work highlighted four barriers to black employment prevalent at the time, namely: (1) exclusion of blacks from certain industries; (2) limited mobility or segregation within industries in which they were accepted; (3) relegation to unskilled or undesirable occupations; and (4) geographical segregation, which resulted in little to no black labor in the small cities of the North and a surplus in large northern cities. Myrdal identified race prejudice as a chief explanation of these barriers, citing three ways in which prejudice operated in the economic sphere: (1) the tendency for even well meaning whites with egalitarian values to resist competition from blacks in their own industries or unions; (2) objections by white customers opposed to being served by blacks in nonmenial positions; and (3) the belief among many white employers that blacks were simply inferior for most kinds of work.

Myrdal described the conditions of economic discrimination against blacks as self-perpetuating, arguing, "the very fact that there is economic discrimination constitutes an added motive for every individual white group to maintain such discriminatory practices" (Myrdal 1944, p. 381). His argument hinged on what he referred to as two mutually reinforcing variables, "white prejudice" and blacks' "low plane of living," which he believed to interact in a "vicious cycle," a situation in which a negative factor is both cause and effect of one or more other negative factors. As he described the cycle, "on the one hand, the negroes' plane of living is kept down by discrimination from the side of the whites while, on the other hand, the white's reason for discrimination is partly dependant on the negroes' plane of living" (Myrdal 1944, p. 1066). In other words, blacks' opportunities to transcend their relatively low standard of living were limited or cut off by white discrimination, while at the same time the low standard of living imposed on black Americans led to a host of negative outcomes such as poverty, low levels of education, and health problems, which whites pointed to as justification for continued discrimination.

This cycle is further explained through Myrdal's use of the theory of cumulative causation. According to Myrdal, each of the attributes described above (poverty, education, health, and white prejudice against blacks), along with a host of others, is itself in a relationship of cumulative causation with all of the other attributes. For example, if an individual is denied access to education necessary to attain employment, he or she will be unable to find work in a skilled field. With only the least skilled and lowest-paid jobs available, he or she will be forced into what may be physically demanding work for little pay. The resulting physical and mental stress and poverty is likely to lead to high levels of anxiety, a poor diet, and inadequate health care, all of which can be devastating for his or her health. Frequent illness may result in an inability to hold down even the most menial of jobs, which in turn only worsens the poverty of the individual. A person in such a state may appear to be incapable of benefiting from an education, and thus educational opportunity will continue to be denied.

In Myrdal's assessment, given the interconnected relationship among these attributes and between blacks' standard of living and white prejudice and discrimination against blacks, the welfare of individual black people and of blacks in the United States was at best in a state of unstable equilibrium. The slightest change—an increase in white prejudice, a decrease in the availability of educational opportunities, loss of employment opportunities, or the onset of an illness—could send all of these attributes spiraling downward in a vicious cycle. Despite the tendency for changes in any one of these attributes to result in a vicious cycle, Myrdal suggested that the unstable equilibrium that characterized blacks' lives, though mostly negative, offered hope for reducing white prejudice and raising black Americans' plane of living. For if any of the attributes of a black person's life were to improve, the other attributes would be expected to improve as well, and white prejudice would more than likely decrease as its justification vanished.

To this end, Myrdal proposed a campaign aimed at educating whites about their own prejudices and at attacking prejudice and discrimination everywhere they were found. In his words, "the objective of an educational campaign is to minimize prejudice—or, at least, to bring the conflict between prejudice and ideals out into the open and to force the white citizen to take his choice" (Myrdal 1944, pp. 385–386). Myrdal felt that given the choice,

most whites, especially in the North, would side with their egalitarian ideals and that "the breakdown of discrimination in one part of the labor market [would facilitate] a similar change in all other parts of it," or in other words, "the vicious cycle [could] be reversed" (p. 385).

THE AMERICAN DILEMMA AND EDUCATION

Myrdal's study highlighted the extreme educational disadvantages of African Americans in 1944. Concentrating on the South, where the overwhelming majority of blacks lived, he outlined the systematic efforts of whites to limit black educational opportunities. Black schools were underfunded, black efforts at educational empowerment were thwarted, and black access to educational opportunity was denied as part of a larger strategy to prevent blacks from challenging white dominance. Myrdal's *An American Dilemma* placed much of the responsibility for solving the problems of blacks on the system of education. He argued that schools are the great levelers in American democracy, providing equal opportunity for all regardless of race, gender, ethnicity, region, or class origins. On the level playing field of fair, open competition, merit would determine who won society's choicest prizes—prestigious jobs, high salaries, fine homes, the good life. As evidenced by the persistent social and economic inequality that continues to dog blacks, Myrdal's ideal notion fails the test of reality even today.

Despite his overly optimistic vision, Myrdal's examination of black educational trends and problems seemed, for the most part, to predict accurately the years following publication of his study. However, the assimilationist political thrust of the study also limited its predictive power in important respects. Myrdal accurately foresaw the formal dissolution of the dual school system in the South. He also predicted the virulent racist reactions of lower-class whites to increased black educational access, as white racial privilege was threatened by the dissolution of segregation. On these points, Myrdal's analysis was particularly insightful and accurate. However, his assimilationist approach to solving America's race problem has not proven sufficient to address the factors that perpetuate racial inequities in education (e.g., residential segregation, unequal funding, inequity in quality of schooling).

In the chapter titled "The Negro Community as a Pathological Form of the American Community," Myrdal argued that the African American community and its culture are essentially "distorted developments" or "pathological conditions" of the general American community and culture. Under this reasoning, the assimilation of white culture is the "final solution" to overcome America's race problem. Education would serve to change African American culture fundamentally (i.e., remove its pathological elements) and eventually bring blacks into the larger American community: "The trend toward a rising educational level of the Negro population is of tremendous importance for the power relations discussed in this Part of our inquiry. Education means an assimilation of white American culture. It decreases the dissimilarity of the Negroes from other Americans" (Myrdal 1944, p. 879). This analysis suggested that blacks and whites must go to school together in order for blacks to assimilate into the larger American culture. Although Myrdal's assimilationist stance saw black institutions and culture slowly disappearing or merging with those of white America, today black education in fact remains a separate and problematic issue. This is primarily due to the intractability of American racial beliefs and to structured racial disadvantage that reinforces the social, economic, and political underdevelopment of the black community.

In his final analysis of the "American Dilemma" (chap. 45), Myrdal envisioned a gradual erosion of the American caste system. While this held true with regard to formal practices and laws, the emergence of a white backlash in the late 1960s and early 1970s, coupled with the persistence of American racial beliefs, betrayed Myrdal's optimistic assimilationist view. Today, the *American Dilemma* is manifested in the continued failure of this society to deliver on its promise of equal opportunity. Despite educational gains made by African Americans since the publication of *An American Dilemma*, disproportionate black economic deprivation persists, as does de facto racial segregation and negative, stereotypic racial beliefs about black people (Brown et al. 2003; Farley and Allen 1989; Feagin 2006; Jaynes and Williams 1989; Kirschenman and Neckerman 1991; Massey and Denton 1993; Schumann et al. 1985). African Americans are disadvantaged in the quantity and quality of education made available to them over their lifespan. At the same time, their hopes for progress in a society that places a premium on educational attainment are thwarted, resulting in the continued subordination of black people in American society (Winfield and Woodard 1994).

As a primarily moral argument for addressing racism, it is on these grounds that Myrdal's work is often criticized. The sociologist Oliver Cox (1901–1974) described Myrdal's *American Dilemma* as a "mystical approach to the study of race relations," citing his repeated references to a common set of American values or the "American creed" (Cox 1959, p. 509). He argued that such an approach to the dilemma of racism in the United States fails to take into account the material interests that sustain racism and "may have the effect of a powerful piece of propaganda in favor of the status quo" (p. 538). Cox put forward that racism was in fact a system designed by the ruling political class to maintain control over the proletariat, of whatever color, by distracting them from the exploitation

brought on by upper-class whites and discouraging class unity across color lines.

Describing Myrdal's stance on the solution to the American dilemma, Cox referred to the agenda of reformism, which "never goes so far as to envisage real involvement of the exploitative system with racial antagonism. Its extreme aspiration does not go beyond the attainment of freedom for certain black men to participate in the exploitation of the commonality regardless of the color of the latter" (Cox 1959, p. 535). Myrdal's *American Dilemma* then, as Cox saw it, was at best a useful source of data with no consistent theory of race relations or solution to the problem of racial discrimination. At worst, Myrdal's treatise represented a propaganda piece designed to reinforce class exploitation by framing racism as simply a moral problem.

Myrdal was correct in pointing to an American dilemma; however, he misconstrued this as a moral dilemma. Rather, the dilemma with which America wrestles—and has wrestled for centuries—is how best "to reconcile the practical morality of American capitalism with the ideal morality of the American Creed" (Ellison 1973, p. 83). That is, how can a system that is inherently exploitative be accommodated within the rhetoric of equality? This is a dilemma that goes beyond the black/white issues of Myrdal's time. Recently this dilemma includes how the American educational system has dealt with other nonwhite groups (Stanton-Salazar 2001). Although now far more diverse, the country's racial climate remains in many ways unchanged from the years of Myrdal's research, giving a new urgency to the questions that many felt had been answered by the immense undertaking of *An American Dilemma* and the subsequent period of social change. The challenge before the country now, as was the case in 1944, is "Will America commit to change and to a new, more democratic future or will the country continue to cling to its heritage of racial exploitation and oppression?" (Feagin 2006).

SEE ALSO *Cox, Oliver C.; Cumulative Causation; Myrdal, Gunnar; Mystification; Race Relations; Racism*

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AMERICAN DREAM

The term *American Dream* traditionally has meant the ability of all Americans to attain a better standard of living, including owning a home and an automobile, and having access to higher education. The term first appeared in 1932, coined by James Truslow Adams in his book *The Epic of America*. In an indirect sense, it was a reaction to Theodore Dreiser's novel *An American Tragedy* (1925), in which the protagonist is portrayed as bent on bettering his current status in life, regardless of the consequences.

Although the term had not yet been coined, the dream became part and parcel of the national psyche during the 1920s, when consumer goods such as radios, cars, and, most importantly, homes, became readily available. To achieve widespread consumerism, manufactured items came with consumer credit offered on a revolving basis, often by the manufacturers of the goods. During that decade, about two-thirds of the gross national product

became attributable to consumer spending; this share has persisted ever since.

The idea was aided immeasurably by political events from the 1930s through the 1970s. The concept of home ownership and mortgage credit was the first part of the dream to be given government assistance, beginning in the 1930s. Using a model first developed during World War I to aid farmers by providing standard mortgages, the Hoover administration, followed by the Roosevelt administration, began extending government intervention to the banks making residential mortgages. During the Great Depression many banks failed, and in order to preserve their assets and stabilize the market for home mortgages, Congress created several agencies dedicated to preserving the market for mortgages, to benefit both homeowners and banks. The Federal Housing Administration and the Federal National Mortgage Administration were created to guarantee home loans to banks, and the result was that mortgages were easier to obtain.

After World War II subsidized mortgages were offered by the Veterans Administration to returning servicemen, extending the concept into the postwar period. In 1957 higher education also benefited from intervention by the government when the Department of Education began offering student loans. As a result of the two programs and the modifications they underwent in the 1970s, homeownership and higher education were within the reach of many people who otherwise might not have been able to access them.

The concept has been extended to other sections of the economy as well, but the presence of government-sponsored enterprises dedicated to supporting residential mortgage loans and higher education loans attests to the enduring quality of the American Dream, both for politicians as well as social commentators. Its essential definition remains unchanged over the years.

SEE ALSO *Americanism*

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Charles Geisst

AMERICAN ECONOMIC ASSOCIATION

The American Economic Association is the premier organization of professional economists in the world. It was organized in 1885 at a meeting in Saratoga Springs, New York. Richard T. Ely, who was active in founding the association, was its first secretary (an administrative officer) and was later a president of the association. Francis Amasa Walker, then president of the Massachusetts Institute of Technology, was its first president.

The association has three purposes: to encourage economic research, especially historical and statistical studies; to issue publications on economic subjects; and to encourage freedom of economic discussion. Because of a controversy about whether the association would be used for political advocacy that confounded its formation, the association is prohibited by charter from taking a position on practical economic questions. The spirit of these objectives has been maintained throughout the association's history.

The association's initial membership consisted mainly of college and university economics teachers. However, with growing interest in economics in the twentieth century, the association has attracted members from business and professional groups. In 2005 membership was approximately 19,000, including over 5,000 members from beyond North America. About 60 percent of members are associated with academic institutions; 20 percent with business, industry, and consulting; and 15 percent with government and not-for-profit research organizations. More than 4,000 libraries, institutions, and firms subscribed to the publications of the association in 2005.

The association employed about thirty people full-time in 2005, most involved in producing publications and organizing an annual convention. Its headquarters is in Nashville, Tennessee, and its publications office is in Pittsburgh, Pennsylvania.

Members annually receive thirteen issues of three journals: the *American Economic Review*, the *Journal of Economic Literature*, and the *Journal of Economic Perspectives*. The *American Economic Review* publishes about 100 articles a year on various economic topics chosen from among 1,200 submissions on the basis of double-blind peer review (neither author nor reviewer know the other's identity). The *Journal of Economic Literature* annually publishes about 20 comprehensive interpretive essays on topics that synthesize the relevant literature, and about 150 reviews of recently published books on economics. The *Journal of Economic Perspectives* publishes about 50 articles a year that explain current research on topics in theoretical and empirical economics or analyze public-policy issues. Articles in the *Journal of Economic Perspectives* are written to be accessible to an audience of

nonspecialists. Articles in the *Journal of Economic Literature* and the *Journal of Economic Perspectives* are commissioned by the editors. The association also produces a searchable bibliography, *EconLit*, of the economic literature.

The association organizes an annual three-day conference of economists each January. About 8,000 people attend. About 1,500 research papers are presented, many of which are subsequently published in scholarly journals. The association publishes a monthly listing of job openings for economists and awards its Clark Medal biannually to the economist under age forty who has made the most important contributions to economic research. It also annually names three distinguished fellows and runs a summer program to help prepare students from underrepresented groups for PhD study in economics.

SEE ALSO *Economic Commission for Latin America and the Caribbean; Economics; National Economic Association (NEA)*

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AMERICAN ENTERPRISE INSTITUTE

SEE *Neoconservatism.*

AMERICAN INDIAN MOVEMENT

From first contact, American Indians have striven to be treated with the respect due members of sovereign and culturally distinct nations. Governmental policy toward American Indians has shifted over the centuries from overt attempts at genocide to removal and assimilation to respect for sovereignty. By the 1950s, policy preferences were clearly in favor of acculturation and assimilation. Government boarding schools sought to help turn American Indian children into "cultural soldiers," whose mission was to help destroy indigenous cultures from within. The national government also began to combine policies of *relocation*, moving Indians off of their reservations and into urban environments, promising help with housing and employment (promises that were more often broken than kept), and *termination*, ending official recognition of tribal status.

This combination of policies—boarding schools, relocation, and the threat of termination—led to the creation of Indian ghettos in major cities, increased incidence of social problems such as alcoholism and drug addiction, and an increased awareness of the threat to Indian resident cultures and homelands. Thus, these policies also facilitated an increasing sense among peoples of diverse tribes of both a common cause and a common enemy. That realization helped forge a common identity. American Indians did not cease thinking of themselves as members of distinct tribal communities, but many of them began to also consider themselves part of a larger whole: as "Indian" as well as Kiowa or Chickasaw.

As American Indians found themselves uprooted from their land and their cultures and facing poverty, disease, overt racism, police brutality, and other forms of discrimination, their anger at these conditions began to build. They looked to the successes of the burgeoning civil rights movement, and they too began to organize.

In 1960 Vine Deloria Jr., Clyde Warrior, Mel Thom, Shirley Witt, and Herb Blatchford formed the National Indian Youth Council, an organization explicitly based on traditional American Indian values and specifically dedicated to furthering the interests of American Indian peoples. By 1964 American Indians in the Northwest began to defend their legal and historic treaty rights through "fish-ins," events that often led to confrontations with local citizens, governments, and police forces. Finally, in 1968, Vernon Bellecourt, his brother Clyde, and Dennis Banks incorporated the American Indian Movement (AIM) in Minneapolis, Minnesota. AIM was explicitly founded to protect local Indians from police brutality and other forms of discrimination. It soon became national, and its purpose expanded as well.

In November 1969 a group calling itself Indians of All Tribes claimed Alcatraz Island in San Francisco Bay "by right of discovery" and remained there in defiance of the federal government for nineteen months. The occupation of Alcatraz began a series of occupations of other government properties, as well as protests led by AIM leaders Dennis Banks and Russell Means at Mount Rushmore and, on Thanksgiving Day in 1970, at Plymouth Rock. Such protests signaled the beginning of increased media attention to what was styled "Indian militancy" or the "Red Power Movement."

These protests in turn indicated the peculiar situation of American Indian activists: changing governmental policies depended, in large part, on mobilizing public sympathy, which depended on gaining public attention. That depended on keeping the attention of the media, which often also meant staging public events and maintaining public images that relied upon the prevalent stereotypes of Indian peoples—the same stereotypes activists believed contributed to the very policies they were trying to change. And in trying to change governmental policies, they were up against a powerful array of social, bureaucratic, and economic forces.

To combat these forces, AIM organized a series of caravans in 1973 that would travel the nation by separate routes, meeting in Washington, D.C., called the Trail of Broken Treaties. The caravans arrived in Washington on November 3, 1973, with a list of Twenty Points that the activists hoped to bring to the attention of the federal government. The Twenty Points included demands that the government recognize the sovereign status of Indian nations, reestablish treaty relations, and allow an Indian voice in the formation of policies regarding Indian interests.

When housing arrangements turned out to be unsuitable, the protestors converged on the Bureau of Indian Affairs (BIA) seeking assistance. They were turned away. Some of the protestors refused to leave, and ended up taking over the building, which they held for a week. The Trail of Broken Treaties, like the Alcatraz occupation, signaled the extent of the tension between the Indians, especially AIM, and the federal government. That tension escalated as many of the AIM Indians left Washington and headed for the Lakota Sioux reservation at Pine Ridge, South Dakota. Pine Ridge had long been sharply divided between those Indians favoring assimilation and accommodation with the national government and those favoring traditional Indian ways. The tribal chair, Richard Wilson, was solidly in the assimilationist camp, and was seen by the traditionalists as unfair and often violent in his treatment of them.

On February 27, 1973, a caravan of some three hundred Indians left Pine Ridge and headed for Wounded Knee, the site of a famous massacre in 1890. They occupied the small village there, and the government responded with an unprecedented show of force. The standoff continued for seventy-three days, comprised hours of negotiations, and led to the deaths of two Indians. Both sides considered it a moral victory, but little changed.

After Wounded Knee, the government began to escalate its actions against AIM and its leaders. Through arrests, court battles, and the operations of its COINTELPRO (counterintelligence program), which was designed to infiltrate and destroy activist organizations from within, the federal government sought to bankrupt, distract, and eliminate AIM.

The final confrontation between AIM and the federal government was also the most tragic: on June 25, 1975, FBI agents claiming to be in hot pursuit of a suspect ventured into an AIM compound on the Pine Ridge reservation. A firefight broke out, and in the melee one Indian and the two agents were killed. The rest of the Indians fled. Two (Bob Robideaux and Dino Butler) were later apprehended and tried in Cedar Rapids, Iowa, for the murder of the federal agents. An all-white jury found them not guilty. Later, a third Indian, Leonard Peltier, was also tried for the murders, was convicted, and has been in prison since 1976.

The trial of Leonard Peltier marked the end of the period of Indian activism, although not the end of AIM. AIM leaders remained active, albeit in a smaller way. Many of them have been in movies, such as Michael Apted's *Thunderheart* (1992) and *Incident at Oglala* (1992) and the animated film *Pocahontas* (1995). Banks, Means, and Peltier have authored autobiographies. John Trudell, the voice of Radio Free Alcatraz, is the subject of a 2006 documentary. AIM continues to agitate, in less dramatic ways, for treaty rights, against Indian mascots, and on other issues of concern.

SEE ALSO *Activism; Civil Disobedience; Civil Rights; Native Americans; Protest; Trail of Tears; Tribalism; Tribes*

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AMERICAN INDIANS

SEE *Native Americans.*

AMERICAN NATIONAL ELECTION STUDIES (ANES)

The American National Election Studies (ANES) is a well-known, widely used, and broadly collaborative scientific study of elections. It focuses its efforts on providing high-quality data about voting, turnout, and participation to a wide range of social scientists. ANES data has served as the basis for hundreds of books and thousand of articles. Around the world, researchers, students, government agencies, and interested members of the public use ANES data to gain a deeper understanding of citizens and elections in the United States.

Angus Campbell, Philip E. Converse, Warren Miller, and Donald Stokes started the project in 1948. From 1952 to 1977 it was called the Michigan Election Studies and was run by the Center for Political Studies and the Survey Research Center of the Institute for Social Research at the University of Michigan. The founders introduced many valuable methodological and procedural innovations, and their book *The American Voter* is a focal reference in the study of American politics. In 1977, following an agreement with the National Science Foundation, the study was renamed the National Election Studies and has received its primary funding from the National Science Foundation ever since. This agreement stabilized the project's funding and instituted procedures to increase the number of political scientists who contributed to the design of ANES data collections.

Throughout its history, the focal activity of ANES has been the production of a comprehensive national survey taken before and after every major election. Collectively, these studies are known as the ANES Time Series. ANES Time Series surveys are carried out via face-to-face interviews conducted in people's homes. The combination of high response rate and carefully worded questions results in data that deeply and uniquely reflect voter perceptions and attitudes. Each survey includes many questions, including some questions that appear repeatedly over time. Such attributes allow researchers to test a wide range of hypotheses about citizen attitudes and perceptions.

In 2005 the National Science Foundation agreed to fund a substantial expansion of the project. The University of Michigan, Stanford University, and other universities are using this opportunity to give the project a new interdisciplinary emphasis. While the project's mandate continues to be providing survey-based resources for studying voting, turnout, and participation, it is now led by a team of scholars from across the social sciences. The new ANES also features a more transparent governance and consultation structure, including the ANES Online Commons, which allows scholars to make, amend, view, and review proposals for future data collections as they are being developed. New data-collection activities include a twenty-one-month panel study. This panel interviews the same people multiple times, with the interviews starting well before the onset of presidential primary elections and ending well after the election. This strategy allows original and deeper testing of hypotheses about how and when citizens make decisions about presidential candidates and how actions taken during the election year affect public views of the new president, and hence the president's ability to pursue new policies, in the initial months of the new president's term.

SEE ALSO *Elections; Electoral Systems; Political Science; Politics; Research, Survey; Survey*

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Arthur Lupia

AMERICAN NATIONAL ELECTION SURVEY

SEE *American National Election Studies (ANES).*

AMERICAN POLITICAL SCIENCE ASSOCIATION

The American Political Science Association (APSA) is a professional association of scholars from all over the world dedicated to the study of politics in all of its dimensions. The association was established in 1903 at Tulane University in New Orleans, Louisiana, and celebrated its one hundredth anniversary in Philadelphia in 2003. The one hundredth anniversary of the association's annual convention was held in Chicago in 2004. Originally, the association was formed to distinguish a "science of politics" from the study of history and economics. In the early years, however, close cooperation with the American Historical and American Economic Associations was encouraged. The primary purpose of a separate association for political science was to "encourage" the "scientific study of politics, public law, administration and diplomacy" (Willoughby 1904, p. 109). In 2007, the associa-

tion consisted of more than 15,000 members from more than eighty countries. The objectives of the association are to promote research in the discipline of political science, to nurture quality teaching regarding the principles of good government and citizenship, to encourage diversification within the discipline, to provide challenging opportunities to members, to recognize outstanding contributions to the study of politics through awards programs, to develop and maintain high professional standards among scholars in the discipline, and to serve the public through the widespread dissemination of research findings.

The association is governed by a twenty-six-person council headed by a president. All members of the council and the president are elected by ballot by members of the association. A number of distinguished scholars have served as president of the APSA, including Woodrow Wilson, Charles E. Merriam, Charles A. Beard, Harold D. Lasswell, V. O. Key Jr., Carl J. Friedrich, Gabriel A. Almond, Robert Dahl, David Easton, Heinz Eulau, Samuel P. Huntington, Theodore J. Lowi, and Judith N. Shklar, the APSA's first woman president. Ralph J. Bunche, in addition to winning the Nobel Peace Prize in 1950, became the first African American president of the APSA in 1953. With few exceptions, the addresses of presidents, a highlight at the national convention each year, are available at the APSA Web site. These addresses examine major issues and trends in the discipline and allow students of politics at all levels to gauge the perspectives and concerns of scholars, as opposed to state officials, on changing global political dynamics.

The APSA sponsors a number of programs to further its objectives. Among these is the Congressional Fellowship Program, which since 1953 has been dedicated to expanding an understanding of Congress and its operations. Participants in this program serve on Congressional staffs and include journalists and federal executives as well as political scientists. Another program provides grants of various types, such as those to assist graduate students to attend and present papers at the annual conference, and, through the Minority Fellows Program, those to assist minority students with tuition grants. Other programs provide services both to departments of political science and to individual members, such as the ejobs Placement Service. The latter service is designed to assist recent graduates of master's and doctoral programs and current faculty on the job market to find faculty or other full-time positions.

Other major activities of the association are the publication of three journals, the *American Political Science Review*, *Perspectives on Politics*, and *PS: Political Science and Politics*, and the presentation of awards for outstanding scholarship in political science or outstanding public service. Among the awards are the Ralph J. Bunche Award for the best work in the previous year in the area of American ethnic studies or cultural pluralism, the James Madison Award for an American scholar who has made a particularly outstanding contribution to the study of politics, the Victoria Schuck Award for the best work in the previous year on women and politics, and the Benjamin E. Lippincott Award for a work of exceptional merit in political theory that is still considered meritorious after at least fifteen years. Awards are also given each year for the outstanding doctoral dissertations within subfields of the discipline. A highlight of the association's activities is the annual convention, which in recent years has brought together more than 7,000 scholars participating in more than 700 panels in 47 divisions of the discipline. There are also numerous affiliated societies that regularly hold their annual conferences in conjunction with the APSA annual convention.

SEE ALSO *Bureaucracy; Political Conventions; Political Science; Political Science, Behavioral; Political System; Political Theory; Politics; Professionalization*

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AMERICAN PSYCHIATRIC ASSOCIATION

SEE *Post-Traumatic Stress.*

AMERICAN PSYCHOLOGICAL ASSOCIATION

The American Psychological Association (APA) is the world's largest scientific and professional association of psychologists, with 90,000 members and 65,000 student and teacher affiliates, international affiliates, and associate

members. The APA was founded on July 8, 1892, by a small group of psychologists meeting in Professor G. Stanley Hall's study at Clark University. The thirty-one charter members, not all present at the founding meeting, were primarily scientific and academic psychologists. In the first few decades, rival associations were formed by psychologists who felt that their theoretical or professional orientations were not adequately represented in the APA. During World War II these differences were set aside and a national coordinating committee channeled the skills of the entire psychological community toward America's war effort.

In 1945 the member organizations of the coordinating committee enacted a plan to preserve the harmony of the war years by creating a reorganized APA, governed by a council of representatives of divisions and state and provincial associations and administered by a board of directors. Division status was accorded to seventeen special interest groups and formerly independent organizations, the largest being the American Association for Applied Psychology (AAAP). The basic structure of the modern APA is composed of the governance elements created in 1945. The APA constitution provides for the creation of new divisions, and by 2006 the number of divisions had grown to fifty-six.

The reorganized APA promptly hired its first professional staff and located its headquarters in Washington, D.C., where it has occupied a series of increasingly larger buildings. In 2006 the APA employed a professional staff of nearly five hundred people and administered an annual budget of about $60 million.

Since the mid-twentieth century, growing numbers of applied psychologists have joined the organization, the majority of whom are mental health service practitioners. In the 1980s a significant number of research-oriented psychologists proposed a new reorganization of the APA that would have moderated the influence of practitioner-oriented divisions. When the proposal was not approved by the membership, the reform group founded the American Psychological Society (APS). The APS draws its members primarily from the academic and scientific communities.

The contemporary APA is a vigorous leader in many domains. The APA publishes forty-nine of the most influential scientific and professional journals in the field. It publishes a comprehensive list of books for psychological scientists, practitioners, and the general public. The *APA Publication Manual*, its handbook of writing standards for published articles, first appeared in 1929 and has become the standard for professional writing in many fields. The association publishes standards for the conduct of psychologists, including standards for educational and psychological testing, for the ethical treatment of humans and nonhuman animals in research, and for ethical professional conduct by psychological service providers.

After World War II the APA developed standards for professional training programs to meet the national need for well-prepared clinical psychologists. In the early twenty-first century the APA endorsed training models that combine both scientific and professional practice skills by reviewing and accrediting doctoral educational and internship programs in clinical, counseling, and school psychology. Through its liaisons with state associations of psychology, the APA has promoted rigorous state licensure standards for psychological service providers.

Since 1894 the APA has published abstracts of the world's scientific and professional literature in psychology. This resource, called PsycINFO, is composed of more than two million abstracts and sophisticated online searching tools. The association makes full text versions of its journal articles and book chapters electronically available.

The APA has brought the science of psychology to bear on social issues. For example, it promotes awareness of ethnic minority, gender identity, and age-related concerns in educational, counseling, and clinical treatment settings, it advocates for culture-fair aptitude and achievement testing, and it promotes studies of women's social, professional, and health-related issues. When legal cases involve critical psychological matters, the APA has filed amicus curiae briefs and has supported litigants with a legal defense fund. Among the APA's advocacy goals are infusing federal public policy with the findings of behavioral science, extending drug prescription privileges to specially trained psychologists, and elevating support of psychological health services and research to equal that of physical health programs.

SEE ALSO *Mental Health; Mental Illness; Professionalization; Psychology*

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AMERICAN REVOLUTION

The American Revolution began in the early 1760s with changes in British colonial policy. Resistance opened a large problem: belonging to Britain while residing outside the British realm. The problem proved insurmountable as argument and riot led to open warfare. But virtually until independence in 1776, most rebels wanted only to stave off unwanted changes, and in this sense the Revolution was "conservative."

Abandoning British loyalty and identity forced enormous changes. Monarchy yielded to republicanism, easy to accept as an ideal but hard to work out in practice. Hierarchy beneath a king gave way to proclaimed equality. Ordinary white men who had been marginal claimed full political citizenship. White women and enslaved people of color, whom the old order had virtually excluded from public life, demanded that American liberty should apply to them, as well. Both slaves and Native Americans waged their own struggles for independence, and slavery did begin to crumble. Wartime needs gave rise to a national economy.

By the Revolution's end a separate, republican American people existed, with powerful political institutions to achieve its will. Energies had been released that would transform both the American people and the American continent. However, entirely new problems had emerged and only some of them were resolved. Others would prove as difficult as the questions on which the British Empire had foundered. In these senses, the Revolution was radical and transforming.

AN EMPIRE FALLS APART

In 1763 Britain stood triumphant over its ancient rival France. British merchant capitalism was delivering unprecedented wealth. Britons and Europeans alike celebrated British liberty, based on the premise that the British monarch could rule only with the consent of Parliament, the legislative body of Great Britain. White colonials joined in the celebrations, singing "Rule Britannia!" and huzzahing for the youthful George III (1738–1820), their "best of kings." Like their fellows in "the realm," the people of the overseas dominions were fully and proudly British.

But being British had two possible meanings. From London's viewpoint, all Britons owed obedience to the supreme authority, the king-in-parliament, which was Great Britain's absolute sovereign power. The British House of Commons represented the interests and protected the liberties of all Britons everywhere. Colonials had given little thought to such matters, but if pressed they would have said otherwise. Parliament could address large imperial questions, but their assemblies protected their local liberties and privileges. As long as Parliament did not exercise its claims, the question was effectively moot.

Defeating the French, however, had been very expensive, and British officials believed that Americans had not done their part. They also thought that the local assemblies were fractious and needed to be reined in. Some feared the northern colonies would become rivals. The answer seemed simple. Tax the colonies directly and control their economies. The money would stay in America, to pay salaries and maintain troops. But Parliament, not the local assemblies, would raise it.

The result was the Sugar Act (1764), the Stamp Act (1765), and the Townshend Acts (1767), as well as a host of administrative changes. None of the taxes matched what Britons paid at home, but they were to be paid in coin, which was scarce in America. Further, the new laws were to be enforced in vice-admiralty courts, whose judges could be fired and where no juries sat. The Stamp Act, in particular, threatened the well-being of the entire commercial economy. The act undercut the power of colonial elites to use finance as a weapon in their ongoing struggle with royal governors. It also threatened colonials with taxes on virtually all business transactions, to be payable in hard coin, which they simply did not have.

Colonials protested with words and deeds, and the British retreated twice. But at the end of 1773, when Bostonians destroyed three shiploads of valuable East India Company tea rather than pay the one import duty still in effect, Parliament decided that it had retreated enough. It would isolate Boston and Massachusetts and punish them severely. Shocked and in awe, the other colonies would retreat.

OLD ISSUES DIE, NEW PROBLEMS EMERGE

Instead, matters worsened. Troops occupied Boston, and people in rural areas refused to let Parliament's attempt to reform the province take effect. By the late summer of 1774, British authority in Massachusetts extended only where royal troops could march. Their commander, General Thomas Gage (1721–1787), was also the governor of the province, and he knew that rural armies were being formed. Acting under orders from London, he tried to seize a cache of supplies at Concord, Massachusetts, on April 19, 1775, along with rebel leaders who were there. Instead, he launched a war.

By that time the effort to isolate Massachusetts had failed. One Continental Congress (the federal legislature of the thirteen American colonies and later of the entire United States following the American Revolution) had met, and another was preparing to assemble. Provincial

congresses and local committees were draining power from the old institutions. People from New Hampshire to Georgia rallied to support Massachusetts. George Washington emerged as American commander and began the long task of turning a haphazard volunteer force into an army capable of facing Britain.

But for fourteen more months Americans held on to the idea that they could turn back the clock. In January 1776 Thomas Paine's *Common Sense* argued that all monarchy needed to end and that for Americans it was "time to part." Paine's powerful language and vision of a transformed world reached people of all sorts, and they began to assert their own claims, challenging the ideas that the "better sort" deserved to rule the rest and that women should not have political voices, and that among America's precious liberties was the privilege of holding slaves. Nonetheless, for many slaves and native people, the king seemed to offer a better prospect for freedom than any congress.

The Declaration of Independence was more temperate than Paine's pamphlet. Thomas Jefferson (1743–1826), who drafted it, and Congress, which edited and adopted it, knew that attacking all monarchy would not play well with the French king, who already was giving secret aid. At the center of the document, Jefferson penned a crescendo-like indictment of "the present king of Great Britain," presenting "facts" to a "candid world." As his last count, Jefferson tried to blame the king both for forcing black slavery on unwilling white Americans and for encouraging slaves to rise. It was bad history and worse logic, written in tortured language. Congress dropped it, but it did demonstrate one point. Slavery was on the new republic's agenda, ultimately to the point that it nearly destroyed what the Revolution achieved.

THE NEW AMERICAN ORDER

Immediately, however, the revolutionaries had to confront two urgent problems. One was winning the war. Excited by early successes and convinced of their own virtue, they expected a short conflict. But what began with a firefight in Massachusetts turned into a global conflict, involving not just France, which became an American ally in 1778, but most of Europe. The main North American war ended at Yorktown, Virginia, in 1781. The very last hostilities involving Europeans were in India. French forces first intervened there in 1778, and between 1780 and 1782. The two sides fought on the Indian mainland, Ceylon, and in Indian waters. Word of the Treaty of Paris arrived just as the British were about to lay siege to the major French stronghold, at Cuddalore, south of Madras. For native people, threatened by the American victory and abandoned by the British at the Treaty of Paris in 1783, the conflict simply continued.

Secondly, the war brought major changes, requiring a national economy in order to meet the army's needs and creating a national elite, the men who went on to create the United States in its present form. It shook slavery, and it stimulated women, left to manage affairs, to think and act for themselves. It drove out thousands of loyalists, white, black, and native, who left rather than accept the Revolution's triumph.

Nobody gave any thought to calling a European prince, in the way that the English had called William and Mary to the throne when they overthrew James II in 1688. There was no question that the Americans would be republican. But creating a republican order proved very difficult. Most fundamentally, it raised the problem of how to give real meaning to the idea that "the people" now were the final authority. The earliest state constitutions were simply proclaimed into effect. Not until 1780 in Massachusetts was there a popular vote on whether to accept a state's proposed constitution. In all the states, debate raged between the idea of a remote, complex government and the idea of simple, responsive institutions. The new institutions brought men to the center of affairs who had been mere onlookers under the old order. New York split, as Vermont seceded from it, and people in the other states thought of doing the same. In 1786 Massachusetts erupted into armed conflict as farmers rose to close the courts rather than let tough fiscal policies threaten their farms. Looking around at the time, George Washington saw the danger of similar insurrections everywhere.

In 1784 Washington had seen that Americans had acquired "a mighty empire," stretching from the Atlantic to the Mississippi and from Florida to the Great Lakes. At its center was the extremely weak Confederation Congress (the immediate successor to the Second Continental Congress), where each state had one vote and every state could veto major change. Under Congress, the United States had won the war and negotiated a very successful peace. It laid down its own colonial policy, by providing for new states in the western territories, if it could force native people out.

But in peacetime, Congress withered and men like Washington worried about the states. The result was the United States Constitution, written by a special convention in Philadelphia in 1787 and brought into effect when New Hampshire became the ninth state to ratify it in June 1788. Writing the Constitution required great creativity. Ratifying it meant hard conflict among people with widely differing visions of the American future.

Farmers, city artisans, women, slaves, and natives: All of these as well as the familiar "Founding Fathers" took part in the Revolution's course. All of them had voices in what the Revolution wrought. Together, though rarely in agreement, they forged an unprecedented republic that

that was capitalistic and democratic, elitist and open, racist and egalitarian, imperial and inclusive, operating under a political settlement—the Constitution—that included all those qualities. They had abandoned the problems that went with being British. They solved many of the problems that rose from independence and republicanism. But they were only beginning to address the more profound social and ideological issues that their revolution raised.

SEE ALSO *Bill of Rights, U.S.; Burr, Aaron; Confederations; Congress, U.S.; Constitution, U.S.; Coup d'Etat; Declaration of Independence, U.S.; Empire; Franklin, Benjamin; Hamilton, Alexander; Loyalists; Monarchy; Parliament, United Kingdom; Political System; Republicanism; Revolution; Slavery; Violence; Voting; Washington, George*

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Edward Countryman

AMERICAN SOCIOLOGICAL ASSOCIATION

Historically, the social sciences in the United States were the province of amateurs, clergy, and practitioners who belonged to the interdisciplinary American Social Science Association. During the early twentieth century, the social sciences came to be the province of academically trained PhDs working in separate disciplines. Sociology broke away from the American Social Science Association and later became part of the American Economics Association. Finally, fifty sociologists formed the American Sociological Association (ASA) in 1905. Since its founding, the ASA has grown to an organization of nearly 14,000 members. During its first 100 years, the ASA grew in complexity as well as in size as it attempted to meet members' needs and responded to contentious as well as ordinary issues—issues that continue to affect the discipline as a whole.

PROFESSIONALISM

The professorate in sociology has become professionalized along several dimensions: its long training period terminating in a PhD, its claim to autonomy and freedom in research and in the classroom, its relative freedom from supervision, its body of specialized knowledge, and its adherence to a code of ethics. As of 2000, about 70 percent of sociology PhDs were employed in academia. Since 1933, especially during periods of economic downturn, the ASA or its members have attempted to develop positions for professional sociologists outside of the professorate. These efforts, an effort to control the labor supply, were buttressed by claims about the overproduction of PhDs. At the same time, there were strong feelings that practicing sociology outside of the academy, especially in political or business settings, compromised scientific objectivity and theoretical rigor. The distinction between scientific sociology and client-oriented sociology decreased with the growth of pressure for academics to seek outside funding and with the increase in state-mandated accountability and assessment requirements for faculty. The most recent rewriting of the ASA Code of Ethics bound both academic and nonacademic sociologists to avoid conflicts of interest, assure confidentiality, and respect people's "rights, dignity, and diversity."

ACADEMIC FREEDOM

Because norms of autonomy and control are important in research and teaching, the ASA developed institutional mechanisms for dealing with issues of academic freedom. In the early years, the ASA joined with the American Economics Association and the American Political Science Association in a Committee on Academic Freedom and Academic Tenure. This committee produced one report. During the 1950s, members of the ASA passed a resolution at the annual business meeting "deploring such discriminatory requirements" as loyalty oaths on account of the special interest of social scientists in inquiring about controversial social, political, and economic issues. In the 1980s the ASA's elected Council founded the Committee on Freedom in Research and Teaching (COFRAT) to protect individual freedom of research and teaching. During the 1980s this committee served in a fact-finding capacity on individuals' complaints against institutions and recommended institutional sanctions if warranted. These efforts became increasingly acrimonious as institutions protested COFRAT's work. A committee appointed to review COFRAT's mission recommended that COFRAT should

deal with systematic abuses rather than individual cases. COFRAT reported difficulty in monitoring systematic or institutional conditions and became increasingly inactive. When the ASA restructured in the late 1990s, COFRAT was discontinued.

SPECIALIZATION

As its membership grew, there were internal pressures for the ASA to respond to members' requests for new projects, services, and processes. In so responding, the association became more a complex organization composed of an Executive Office, standing committees, and single-issue task forces. Growth also brought a proliferation of new membership subgroups, "sections" formed around substantive, theoretical, and methodological specialty areas. By 2005 there were forty-two sections, with most members joining at least one section. The larger sections include Medical Sociology; Sex and Gender; Organizations, Occupations, and Work; Sociology of Culture; Theory; and Family. Some members argue that the diversity of sections reflects the fragmentation of the discipline. Others, however, claim that the growth of sections promotes networking within the organization. While the number of specialty sections increased within the association, the ASA continued to participate in such multidisciplinary institutional efforts as the Social Science Research Council, the American Council of Learned Societies, and the Council of Social Science Associations.

SOCIAL PRACTICE

Early U.S. sociologists often engaged deeply in public issues. The writings and activism of Lester Ward, W. E. B. Du Bois, and Jane Addams affected public debate on such issues as racism, poverty, employment conditions, feminism, and social welfare. Others practiced sociology in the public arena by writing reports for courts, health departments, foundations, and government agencies. Social activism was criticized as "unscientific" by academic sociologists who enjoyed higher status, assumed leadership positions, and published in leading journals. Over time, public sociologists tried to legitimate their work. In the 1980s they petitioned for a practice section within the ASA, initiated a short-lived journal of practice, and pressed for a task force that would create bridges to the public sphere. In 2004 a new task force on "institutionalizing public sociology" was formed to provide rewards and incentives to "bring sociology to publics beyond the academy." During this time, debate resurfaced about whether the ASA should take sides on political issues. Although the membership did not endorse an antiwar resolution in 1968, they endorsed positions favoring the withdrawal of troops from Iraq in 2003 and opposing a Constitutional amendment banning gay marriage. In response to the debate, the ASA's Council developed criteria requiring scientifically supported evidence before putting hot-button issues before the membership for final approval.

TEACHING

Since the ASA's inception, debates about the sociology curriculum concerned not only content and teaching methods but also whether the craft of teaching is rewarded and respected on par with scholarly pursuits. During the 1970s the ASA Executive Office opened a Teaching Resource Center; added teaching workshops to the annual meeting; awarded grants for enhancing teaching; formed a departmental visitation program to improve curricula, teaching, and the status of the craft; and began a new journal, *Teaching Sociology*. These activities paralleled a growing movement to develop a scholarship of teaching and learning that challenged the denigration of teaching within academia.

GENDER

Only one woman attended the founding meeting of the ASA. Since then, women's involvement within the ASA increased dramatically, though not without a struggle. By 1944 about 25 percent of PhD-level sociologists were women, although the percentage decreased until the late 1960s. As the number of sociology doctorates awarded to women increased, feminists worked to change both the substance of the field and their treatment within it. After women engaged in sit-ins, founded a separate organization (Sociologists for Women in Society), held an alternative convention, and formed a Women's Caucus, the ASA's Council responded by establishing a standing Committee on the Status of Women in Sociology in 1971. ASA members successfully petitioned to create a specialty section on the study of sex and gender, now among the largest ASA sections. Later in the decade, the first annual Jessie Barnard Award was given "in recognition of scholarly work enlarging the horizons [of sociology] to encompass fully the role of women in society." At the centennial of the ASA, women received about 60 percent of all sociology PhDs. Yet the 2004 report of the Committee on the Status of Women in Sociology to the Council presented evidence suggesting that women are a "majority minority" in the discipline—not equally represented at the discipline's highest ranks, facing chilly climates at work, experiencing uneven policies to balance work and family, and relatively ignored in ASA journals that include few articles on women's issues.

RACE AND ETHNICITY

Papers on race relations, racial attitudes, cultural differences among races, and the concept of race as a social cat-

egory have been presented at every annual meeting since 1907. According to many African American and Hispanic sociologists, the growth of sociology in the United States was related to studies of the problems of racial and minority groups rather than to struggles for social justice. With the growth of the civil rights movement, an ad hoc group was formed to increase the visibility and the voice of minority sociologists within the ASA. The Black Caucus formed in 1969, and by the 1970 annual meeting it had presented a number of resolutions, including one for the establishment of a program to provide stipends for graduate training. Independently of the ASA, the Association of Black Sociologists was formed in 1970 to promote "scholarship that will serve Black people in perpetuity." The ASA responded to these efforts throughout the 1970s. A specialist in racial and minority relations was hired, the Council instituted the Du Bois-Johnson-Frazier Award, and it later created a standing Committee on the Status of Race and Ethnicity. In the wake of a Black Caucus recommendation, a training grant from the National Institute of Mental Health has provided stipends for nearly 400 doctoral students of color since 1974. The ASA has continued to address race and ethnic issues by participating in the Clinton Administration's Initiative on Race, producing the ASA Statement on the Importance of Collecting Data and Doing Research on Race, and presenting an amicus brief to the Supreme Court for *Grutter v. Bollinger*, a case concerning affirmative action at the University of Michigan's Law School. Despite these efforts, in response to a recent review of sociology in its 100th year, James Blackwell, a renowned black sociologist, noted that members of minority groups remain tokens at most traditionally white colleges and universities. That may not change in the near future. Even as late as 2003, only 32 of 106 graduate programs awarded a doctorate of sociology to an African American, and only 18 programs awarded a doctorate to a Hispanic.

In the beginning of its second hundred years, the ASA continues to face both ordinary and contentious issues raised by sociologists of diverse positions and interests as it attempts to meet their professional needs, advance the discipline, and engage the public.

SEE ALSO *Sociology*

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Roberta Spalter-Roth

AMERICANISM

Americanism is an ideology that holds that the cultural and political values of the United States are the most ideal and desirable of any in the world. It is closely linked with American exceptionalism, a phrase coined by Alexis de Tocqueville (1805–1859) in 1831. Tocqueville argued that, because of its historical evolution, national credo, historical origins, and distinctive political and religious institutions, the United States is qualitatively different from other nations. Some have characterized Americanism and its beliefs as a "civic religion."

Seymour Lipset identifies five key elements of Americanism: liberty, egalitarianism, individualism, populism, and laissez-faire. He avers, "Being an American,

however, is an ideological commitment. It is not a matter of birth. Those who reject American values are un-American" (Lipset 1997, p. 31). Americanism emphasizes equality of opportunity, as opposed to equality of outcomes, and attaches greater importance to social and political individualism.

American veneration of these ideals grew out of the country's historical development and the distinctive role of Protestantism. John Winthrop (1588–1649), governor of the Massachusetts Bay Colony, described the early Puritan community in New England as a "city on a hill" with which God had made a special covenant. According to Winthrop, the early colony should serve as a moral and political example for the rest of the world. The American Revolution (1775–1783), with its emphasis on democracy, liberty, and republicanism, is often cited as proof that the United States offers unlimited potential and opportunity to those who work hard. Americanism is often associated with manifest destiny, the idea that Americans had a mission from God to spread liberty and democracy across the American frontier and around the world. Later, supporters of Americanism have pointed to the durability of the U.S. Constitution, the failure of socialist parties to take root in the United States, and the defeat of the Soviet Union in the cold war as proof of the superiority of American values.

Theodore Roosevelt (1858–1919) greatly popularized Americanism. In an 1894 magazine article, he wrote that "no other land offers such glorious possibilities to the man able to take advantage of them as does ours" (1897, pp. 38–39). He argued that any person could become an American, provided they adopted the American beliefs in democracy, hard work, capitalism, and egalitarianism; learned English; and left behind their previous sectarian identities. Roosevelt encouraged immigration to the United States, but with the proviso that immigrants fully embrace the American way of life. He also adopted these same ideals in his foreign policies, leading American military involvement in Cuba and the Philippines under the guise of bringing liberation, democracy, and the American way of life to these countries.

During both world wars, German and Japanese communities in the United States came under suspicion for not fully believing in American values and identifying too closely with their homelands. This resulted in both relatively harmless colloquial changes (renaming sauerkraut "liberty cabbage") and overtly discriminatory policies like the forced internment of twelve thousand ethnic Japanese (most of whom were U.S. citizens) in camps throughout the western United States during World War II (1939–1945). Later, during the cold war, mass media and government officials often juxtaposed Americanism with Communism as a battle between liberty and tyranny. President George W. Bush has relied on Americanism arguments to justify American operations in Iraq, positing that the United States is freeing the Iraqi people from tyranny and delivering American-style democracy and liberty.

In recent years, Americanism has been at the heart of the debates about legal and illegal immigration. Samuel Huntington (2004) has argued that immigration, primarily from Latin America, threatens the very character of American society because recent immigrants remain too attached to their homelands, refusing to learn English or adopt American beliefs in hard work, individual responsibility, and capitalism.

Critics have long chastised Americanism for relying on a selective, uncritical reading of U.S. history. They point out that the United States itself often fails to uphold Americanist ideals for its own citizens through such means as denying voting rights, restricting citizenship, and promoting discriminatory policies. This hypocrisy not only undermines the argument that egalitarianism and liberty are at the heart of the American experience, but also calls into question whether the United States can (or should) promote these values to other countries. Others have called Americanism imperialism cloaked in a rhetoric of values and human rights. They also question the use of military force in places like the Philippines, Vietnam, and Iraq to promote democracy and liberty.

Americanism shares some commonalities with both nationalism and patriotism, as all three attach positive values to one's home country and its upholding of national beliefs and symbols. In a crucial distinction, though, Americanism specifies the nature of the United States' distinctness from the rest of the world. Further, Americanism allows that persons born outside the United States can become Americans if they adopt American beliefs; nationalism often holds that one's membership in a nation is determined by birth and remains constant throughout life.

SEE ALSO *American Dream; Nationalism and Nationality; Patriotism*

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Jeremy Youde

AMIN, IDI

c. 1925–2003

Idi Amin became the president of Uganda in January 1971 after a military coup removed the elected leader, Milton Obote, and he fled into exile to Saudi Arabia on April 11, 1979 after a war with Tanzania. In the intervening eight years his name became synonymous with mass murder, destruction, militarism, and the worst features of political misrule in Africa.

Idi Amin was born in northwest Uganda in 1925 or 1926; that his birthdate is imprecise illustrates the marginalization and isolation of the peoples of that part of Uganda under British colonial rule. Britain had claimed Uganda as a protectorate at the end of the nineteenth century, and Uganda was integrated into the East African Command of the King's African Rifles (KAR). Later the events of Amin's life became more precise—the records show that he was recruited into the KAR in 1946, one year after the end of World War II. Amin was deployed by the British to participate in the counterinsurgency war against the freedom fighters in Kenya, and there he engaged in brutality and wanton murder against Africans. Based in the Muranga region of Kenya between 1953 and 1956, Amin learned all of the techniques of low-intensity warfare when the British incarcerated more than 1.5 million Kenyans and hanged thousands.

Idi Amin was both a pugilist and militarist; from 1951 to 1960 he was the light heavyweight boxing champion of Uganda. He also rose through the colonial army, eventually attaining the rank of *effendi* (warrant officer), the highest rank that a black African could attain in the KAR at that time. The Uganda that became independent in 1962 was plagued with deep divisions based on regional, religious, and ethnic alliances. Because of uneven colonial penetration, the areas in the south of the country—including the precolonial kingdoms of Ankole, Buganda, Bunyoro, Toro, and Busoga—were more involved with colonial cash crops, and hence in these regions there was a higher proportion of Africans educated by the missionary schools. These regional differences were interpreted in ethnic terms, so much of the writings on Uganda portrayed Idi Amin as coming from the tribally backward north. This social reality was compounded by the fact that there were close to 100,000 Asians who dominated the interstices of the colonial economy and owned sugar and tea plantations. At the time of independence in 1962 there was not a single black African wholesaler on the main business street in Kampala, the capital.

Amin was promoted rapidly in the Ugandan army, becoming general and commander in 1966. By 1969 the social divisions in Uganda had deepened to the point where Obote's government increasingly depended on the military to maintain its power. The military was mobilized against trade unions, against village cooperatives, against cattle rustlers, against political opponents, and against students.

The military coup of January 25, 1971, took place while the prime minister, Milton Obote, was attending a Commonwealth summit meeting in Singapore. The military takeover immediately plunged the society into a bloodbath. The coup could not have been consolidated without the support of imperial security networks, especially those of Britain and Israel, and later, records showed that the governments of Israel and Britain were indeed involved in planning, executing, and defending the military coup in January 1971.

The relations between Britain and Uganda changed one year later, however, when Amin declared an economic war, which involved the expulsion of more than 80,000 Asian citizens who held British passports. Many Asians (primarily of Indian origin) owned businesses in Uganda, and by deporting them Amin gained domestic political support amid increased repression in the society. But their expulsion placed Amin on a collision course with the West, and brought the conditions of the people of Uganda to the attention of the international media.

At the height of the cold war, Amin became the chairperson of the Organization of African Unity (OAU). The selection of Amin was possible, in large part, because of the divisions unleashed by the cold war in Africa. The Soviet Union supported leaders who declared themselves to be anti-imperialist. When Amin had seized power in the 1971 military coup, Uganda was diplomatically allied to the United States, Israel, and the United Kingdom. After the expulsion of the Asians in 1972, Uganda became a close ally of Libya, Saudi Arabia, and the Soviet Union. Inside Africa, Amin formed a close alliance with known butchers and militarists such as Mobutu Sese Seko of Zaire and Michel Micombero of Burundi. In the same year Amin expelled the Asians, Micombrero carried out genocide in his own country, killing more than 300,000 citizens. The selection of Amin to be the chairperson of the OAU brought disgrace to the organization insofar as Amin used the clause of noninterference in the internal affairs of states to prevent pan-African intervention to stop the killings.

The killings and wanton destruction of lives in Uganda intensified between 1972 and 1978, and it has been estimated that by the end of his regime Amin had killed more than 300,000 Africans (another estimate puts the number as high as 500,000). In addition, there were more than one million Ugandans living in exile in neighboring countries.

The Ugandan army invaded Tanzania and occupied the Kagera province in October 1978, precipitating the war between Uganda and Tanzania. The Tanzanian army

counterattacked and supported Ugandan exiles in launching their own counteroffensive (as the Uganda National Liberation Army, or UNLA) against the Amin regime. At the end of this war, in April 1979, when the combined forces of the Tanzanian army and the UNLA took Kampala, Amin fled the city to exile, first in Libya, then in Saudi Arabia, where he lived until his death in August 2003.

When Amin came to power in 1971 he had been hailed as an archetypal common man, and Western social scientists had declared that Uganda's military government could serve as a model for modernization in Africa; Makerere University in Kampala was a veritable laboratory for the ideas of modernization and nation-building. But Amin's regime left a tradition of destruction, low respect for human life, and cross-border warfare that is still plaguing the regions of eastern and central Africa. The continuing war between the Ugandan government and the Lord's Resistance Army, a rebel paramilitary group in northern Uganda, remains one of the outstanding legacies of this period of militarism, masculinity, and warfare.

SEE ALSO *African Studies; Colonialism; Dictatorship; Genocide; Militarism; Military Regimes; Obote, Milton*

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Horace G. Campbell

AMIN, SAMIR

1931–

Samir Amin was born in Cairo, the son of two doctors, his father Egyptian and his mother French. He lived in Port Said in northern Egypt and attended the French lycée there, receiving his baccalaureate in 1947. Amin then enrolled at the Lycée Henri IV in Paris to study mathematics and at the Institut d'études Politiques to study law, which at the time was the way to study economics. He received a diploma in political science in 1952 and a license in law and economics in 1953 and then opted to pursue a doctorate in economics. He also obtained a diploma in statistics from the Institut de Statistiques de L'université de Paris in 1956. In June 1957, Amin received a doctorate in economics under the direction of Maurice Byé and with the additional guidance of François Perroux. As a student, Amin spent much of his time as a militant with various student movements and from 1949 to 1953 helped publish the journal *Étudiants Anticolonialistes*, through which he met many of the future members of Africa's governing elite.

From 1957 to 1960, Amin worked in Cairo on economic development issues for the Egyptian government, then moved to Bamako, Mali, where he was an adviser to the Malian planning ministry (1960–1963). In 1963 he moved to Dakar, Senegal, where he took a fellowship (1963–1970) at the Institut Africain de Développement Économique et de Planification (IDEP). He became a director at IDEP (1970–1980) and subsequently was named director of the Third World Forum (1980–). Amin has at various times held professorships in Poitiers, Dakar, and Paris.

The author of more than thirty books, Amin's brilliant 1957 dissertation, subsequently published in 1970 as *L'accumulation à l'échelle mondiale; critique de la théorie du sous-développement* (translated in 1974 as *Accumulation on a World Scale: A Critique of the Theory of Underdevelopment*), was the earliest significant work to argue that underdevelopment in much of the world was a direct consequence of the way the capitalist economy functions. He argued that this polarization is due to transfers of profits from the poor countries to the rich, which help alleviate potential underconsumptionist problems in the industrial economies, allowing the industrial world to pay higher salaries or offer lower prices to consumers than would be possible were the labor theory of value to work simply at the national level.

Amin's new emphasis on the global economy as a unit of analysis is intended to explain global salary and price differences within a Marxist labor theory of value. Even his later works (e.g. *Obsolescent Capitalism* and *Beyond U.S. Hegemony*) have built on this model to critique imperialist projects generally and post–September 11, 2001 U.S. hegemonic efforts more particularly. Amin argues for a polycentric world that can counteract monopolies in areas such as technology, finance, natural resources, media, and weapons production that consistently hurt poor countries.

Amin's reliance on a labor theory of value and underconsumptionist theory has limited his analytical outlook and led him to make overly simplistic predictions even as it has allowed a holistic historical materialistic perspective. Nevertheless, his criticisms of neoclassical equilibrium

models and imperialistic projects have long since been joined by those of economists and social scientists from many different theoretical persuasions.

SEE ALSO *Capital; Development; Development Economics; Economics; Social Science*

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AMNESTY INTERNATIONAL

SEE *Civil Liberties.*

AMOS 'N' ANDY

SEE *Minstrelsy.*

ANALYSIS OF VARIANCE (ANOVA)

SEE *Statistics in the Social Sciences.*

ANARCHISM

Anarchism is a theory and way of life rooted in the belief that the individual should be free to pursue his or her own interests without coercion, especially by the state and its laws and institutions. The term is derived from the ancient Greek word *anarkhia*, meaning "no ruler," and originally was used to denote a disruption of the normal civic order that often implied a condition of civil war. As with *democracy* and *democrat*, the words *anarchy* and *anarchist* were typically used as terms of abuse until the nineteenth century, when with the rise of commercial society and the decline of feudalism the idea of self-rule by "the people" became increasingly accepted.

The political theory of anarchism properly begins only with William Godwin (1756–1836) and Pierre-Joseph Proudhon (1809–1865), though important elements of anarchist thought can be found in the ancient Greeks, among them Aristippus of Cyrene (c. 435–c. 360 BCE) and the founder of Stoicism, Zeno of Citium (c. 334–262 BCE). Strains of anarchist thought can also be found in the medieval era, in the Anabaptists of the Reformation, and in the Diggers of the English Revolution of the mid-seventeenth century. However, Godwin is the first exponent of the philosophic doctrine of anarchism, though he does not use the term *anarchist* to describe himself; it is Proudhon who first calls himself an anarchist. In Proudhon's *What Is Property?* (1840) he lays out a vision of socialism in which the individual is liberated from the shackles of capitalist property relations, and is instead free to reap the benefits of his labor under a form of communal production. Anarchism became increasingly relevant to the political world of the late nineteenth and early twentieth centuries, first through the writings of Mikhail Bakunin (1814–1876), who opposed the overly centralized socialism of Karl Marx (1818–1883), and later through Peter Kropotkin (1842–1921) and Emma Goldman (1869–1940).

Anarchist thought is extremely diverse, but is generally characterized by opposition to the state, capitalism, and religion. Rather than seeing the legal apparatus of the state as a means of protecting individual freedom, anarchists contend that the state and its laws merely represent the self-serving interests of powerful groups in society. In this view, law is a means of oppressing the vast majority of the people, and the best way to eliminate this oppression is to do away with the institutions that create and reinforce it—especially the state and private property. Private property is a particular concern for anarchists, in that it corrupts the democratic process by controlling the inputs and outputs to the political system, and also because it directs people to think merely about their own self-interest rather than about how to cooperate with their fellow citizens. Because private property uses the state to benefit

the members of the ruling class or elite, anarchists are not in favor of representative democracy as it is currently practiced.

Anarchists promote their goals by multiple means, including sometimes violent revolution, but also through democratic evolution and the creation of independent communal societies that function outside the domain of the state. In the Spanish Civil War (1936–1939) anarchists and anarcho-syndicalists (linked industrial worker-councils) formed an important element in the opposition to Francisco Franco's fascist coup, and shared governmental authority with a socialist coalition, particularly in Barcelona. This experiment, though short-lived, provided an example of anarchist "government" in practice, and was characterized by the liquidation of the landed estates and the parceling of the land into agricultural cooperatives, the establishment of a federation of worker-controlled factories, and the elimination of the social indications of class status that had marked Bourbon Spain. Although defeated in the war, Spanish anarchism continues to be a model for other nations, because it is here that one of the largest worker-run cooperatives in the world, the Mondragon Cooperative Corporation, has been functioning for more than fifty years.

Among anarchists in the early part of the twenty-first century there are several prominent trends, some of which are substantially in tension with one another. Libertarian anarchists such as Murray Rothbard (1926–1995) defend capitalism, arguing that the protection of private property under capitalism provides the surest foundation for promoting individual liberty. Unlike most libertarians, Rothbard claims that even the most minimal state is an unnecessary evil, but this is almost the only thing that unites him with anarchist-socialists such as the protesters at the World Trade Organization (WTO) and G8 meetings in Seattle in 1999 and Geneva in 2001. Though not united by a systematic program, these protesters represented groups that are dissatisfied with the current system of neoliberal trade promoted by the WTO, which to them represents an extension of the rule of private property over the globe.

Anarchism is not highly visible in most developed western nations, but it remains a powerful underground current that both the Left and the Right continue to find useful as a stimulant to political thought and political action. Anarchism will continue to be relevant as long as the meaning of the terms *democracy*, *property*, and *freedom* is not self-evident.

SEE ALSO *Austrian Economics; Capitalism; Democracy; Fascism; Franco, Francisco; Freedom; Harris, Abram L., Jr.; Liberty; Mill, John Stuart; Political Theory; Politics; Property, Private; Religion; Socialism; Spanish Civil War; State, The; Syndicalism*

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Stefan Dolgert

ANARCHO-SYNDICALISM

SEE *Syndicalism.*

ANDERSON, PERRY

1938–

Perry Anderson (born in 1938) is one of the most important Marxist authors of the past forty years. As the principal editor of *New Left Review* since 1962, he has introduced and shaped English-language readers' understanding of the principal Western European Marxist theorists of the twentieth century, above all the Italian Antonio Gramsci, whose concept of hegemony is now central to Marxist scholarship. Under Anderson's guidance, *New Left Review* has brought the work of European and third-world Marxists to a broader public of intellectuals and activists. *New Left Review* has also published continuous analysis of contemporary political economy and culture that seeks to find openings for leftist politics and provides criticism of contemporary social scientists, philosophers, novelists, and artists. In addition, Anderson has made a major scholarly contribution to the understanding of England's particular political development and to the analysis of European absolutism.

Anderson's political orientation was shaped by two events of 1956 (the year he arrived at Oxford University as a student): the Soviet crushing of the Hungarian Revolution and the Israeli, French, and British invasion of Egypt. He was part of the New Left, which condemned both Soviet repression and Western imperialism against

Egypt. Anderson, throughout his intellectual career, has argued that contemporary politics needs to be understood in the context of the historical development of states and classes. He has contributed to such a historical-materialist analysis through his study of the formation of the English state. His aptly titled "Origins of the Present Crisis," published in *New Left Review* in 1964, explains the failure of British socialism in terms of England's unusual historical trajectory, especially its lack of a bourgeois revolution. His analysis quickly came under attack from historian E. P. Thompson on both empirical and theoretical grounds ("The Peculiarities of the English"). Anderson responded with *Arguments within English Marxism* (1980), a book-length analysis of Thompson. Written as an appreciation and critique of Thompson's historical and political writings, Anderson sees Thompson's main contribution as a reassertion of the importance of culture and morality in socialist intellectual discussions. Anderson believes that Thompson slights the search for effective strategies of socialist politics. That is the task to which Anderson has devoted himself and *New Left Review* in recent years.

Anderson's greatest intellectual contribution is his study of absolutist states and their role in the development of the European bourgeoisie. *Passages from Antiquity to Feudalism*, the first volume of Anderson's study of transitions, provides the context for his analysis of feudalism in *Lineages of the Absolutist State*. *Passages* explores the dynamics of the slave mode of production and explains variations in feudalism across Europe in terms of divisions in the Roman Empire and the sorts of class struggle that erupted during the empire's decline. *Lineages of the Absolutist State* (1974) reconceived the social dynamics that followed the Black Death of the fourteenth century (the liberalization of peasant obligations in England and France and the reimposition of serfdom in much of Eastern Europe). Feudalism, in Anderson's analysis, was neither destroyed nor replaced by a new mode of production. Instead, feudalism was reconstituted, as the aristocracy reasserted its dominance through the larger social form of the absolutist state rather than within local manors.

Anderson views the bourgeoisie as an inadvertent outcome of absolutist state polices designed by aristocrats to safeguard their collective interests. Both state and capital grew and profited from the monetization of taxes and rents, the sale of state offices, and the establishment of protected domestic monopolies and colonial ventures. Anderson explains the different trajectories of Eastern European and Western European states, and of England and France, in terms of the strength of aristocrats' organization within estates, the extent of town autonomy, and the results of military competition. He was able to show how a new social group, the bourgeoisie, developed at particular sites within certain absolutist states, yet he never attempted to explain why the bourgeoisie was unable to continue to pursue its interests within absolutism. As a result, *Lineages*, despite its significant insights, was not able to serve as the foundation for Anderson's planned but as yet unwritten study of the bourgeois revolutions. Since the early 1980s Anderson has moved away from historical studies and has concentrated his writings on contemporary politics and criticism.

SEE ALSO *Capitalism; Marx, Karl; Marx, Karl: Impact on Sociology; Sociology*

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Richard Lachmann

ANGER

SEE *Emotion.*

ANGLO-CHINESE WAR

SEE *Opium Wars.*

ANGLO-CONFORMITY

SEE *Melting Pot.*

ANIMISM

According to animism, all phenomena—everything that is seen, heard, touched, or felt; every animal, plant, rock, mountain, cloud, or star, and even tools and implements—are believed to possess a soul, which is understood to be conscious and endowed with an ability to communicate. Considered the original or first human religion, animism originates from the Latin *anima*, meaning

"soul," which comes from the earlier Greek word *animus*, meaning "wind" or "breath." It is defined as belief in spiritual beings or entities that are thought to give all things, both animate and inanimate, a certain kind of potency or life force.

Animism is a primal belief system dating back to the Paleolithic era, yet it is estimated that 40 percent of the world's population still practices some form of animism, often in syncretism with Christianity, Islam, Buddhism, and Hinduism. Contemporary people find animism a belief system that infuses their real-life situation with the sacred and provides guidance in addressing everyday problems, concerns, and needs, such as healing sickness, bringing success, or receiving guidance. Animism can be practiced by anyone who acknowledges the existence of spirits, but it does not require any affiliation with an organized religion.

As the first human thought system to interface with the nonhuman or spirit realms, animism recognizes an ontological connection between material things and their spiritual source. The artifacts and remains that document the symbolic nature of animism are unimaginably old, created long before human culture gave birth to language and recorded history. For millions of years humans have deified ancestors, animals, plants, stones, rivers, and stars, each of which was thought to be enlivened by a particular "anima" or soul, having the capacity to leave the body both during life and after death.

Animism was not discovered, created, or developed by any one individual or group; instead, it was a way of living in reciprocity with the larger natural environment and not separate from it. Indigenous people followed a kind of rudimentary animism that served many functions. Not only did animism provide answers to pressing philosophical questions—how the universe came into being, the nature of the forces operating within it, the origins of the ancestors—but also it addressed more immediate issues concerning how to live, how to die, and what happens in the afterlife.

Shaman was the name given to the holy men and women who were considered sacred leaders called on to sustain the tribe's connection to the spirit realm and the land of the dead. Shamans were able to navigate through various cosmic levels so as to ensure that all things in nature were kept interdependent and integral to the whole universe. The basis of animism is an acknowledgement of a spiritual realm, within the physical world, that humans share with the cosmos. To become a shaman required that one have special proximity to the spirit world. Using preternatural powers, trance, ritual, dance, and shamanic "journeys," the shaman ensured that the relation between the human community and the natural ecosystem it cohabited was reciprocal and mutual.

Western philosophical schools have employed the term *animism* to describe an awareness of a living presence within all matter. Aristotle's idea supporting the relation of body and soul was animistic, as was Plato's belief in an immaterial force behind the universe. Gottfried Wilhelm Leibniz (1646–1716) and Arthur Schopenhauer (1788–1860) expanded the notion of animism with the assertion that all substances are essentially force, tendency, and dynamism. The modern concept of vitalism challenges the idea that all phenomena can be traced back to chemical and mechanical processes and offers a perspective that presupposes an animistic understanding of human nature and the natural world. In his work *Primitive Culture* (1871), Edward. B. Tyler coined the term *animism* to refer to the original form of human spirituality and the first primitive religion. In this book, he described primitive religion as operating at a lower level of cognitive and social development than more evolved religions with coherent, systematic theologies. Primitive religion is now understood in a less ethnocentric way and is valued for its direct link to the primal mind. Today those practicing animism see themselves as part of the natural world rather than the masters and rulers of it.

Animism is emerging as a critical voice in response to the ecological crisis and is a serious topic that science, technology, and the social sciences must consider. Many in search of a new spirituality are discovering animism to offer a world view that is naturally connected to the earth, nature, and broader ecosphere. Animism fosters an attitude that reinforces living respectfully with all things.

SEE ALSO *Buddhism; Christianity; Hinduism; Indigenous Rights; Islam, Shia and Sunni; Judaism; Philosophy; Primitivism; Religion; Rituals; Shamans; Spirituality*

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ANNEXATION

Annexation is the physical takeover of conquered territories as part of a greater state policy of expansionism. In most cases, annexation begins with the occupation of a subordinate territory through military possession and ends with formal political recognition of the acquisition by both parties involved. In some cases, the involved parties seek a cooperative agreement either to avoid war or because they recognize a common benefit through shared political, economic, and social institutions. The process of annexation, however, is usually driven by coercive measures: a compelling use or physical threat of force, intimidation or fear tactics, and other means of direct or indirect pressure. Annexation may produce either a long-lasting or a temporary political, economic, and social relationship between two states.

States that adopt annexationist policies are driven to satisfy their "land hunger" through the acquisition of lands that are outside of their original borders. These lands may be adjacent to the annexing state and represent the fulfillment of irredentist or nationalist goals. For example, Germany's annexation of Austria and the Sudetenland in 1938 was part of a larger foreign policy aiming to unite all Germanic peoples under one larger empire. This policy of national expansion also directed the United States' annexation of Texas in 1845. In this case, annexation was at the heart of the United States' greater policy of Manifest Destiny; it believed that "winning the West" was part of fulfilling its natural destiny in North America. States may also seek to expand their colonial empire through the annexation of foreign territories. The annexation of Madagascar by France in 1896 illustrates this form of expansionism. In 1868 a treaty between the Merina peoples and the French government designated Madagascar as a French protectorate. British recognition of this arrangement in 1890 legitimized the French presence on the island, but only after France's defeat of the Merina army in 1895 did Madagascar become fully annexed by France.

In either case, the expansion of national influence through the physical acquisition of land, peoples, and natural resources drives a state's annexationist policies. The absence of international laws that regulate annexation allows each state to develop its own process of annexation. Some states' annexationist policies are or have been governed by domestic national law, as was the case with Italy's 1936 annexation of Ethiopia, which occurred with a formal decree issued by the king of Italy, and the United States' acquisitions of Texas (1845) and Hawaii (1898), which were directed by joint resolutions in the U.S. Congress. Other states do not or have not constructed a legal framework for determining the process of annexation. For example, Japan completed the annexation of its Korean protectorate in 1910 through a simple proclamation by the emperor. Only the illegal use of force is condemned by the charter of the United Nations.

Annexed regions become part of the greater entity when the sovereign authority of the annexing state is recognized by both parties. Even though annexationist policy is a form of unilateral politics—a one-sided agreement imposed by the dominant party—the process of annexation is complete once a legitimization of the acquisition is accepted by the international community. In some cases, international treaties may aid in the process of annexation, as in the case of Norway's annexation of the Svalbard Islands in 1925. The terms of the country's final configuration, however, are determined solely by the annexing state. For example, the annexing state has the right to force the citizens of the annexed territory to adopt new national laws and customs. In many instances, the process of annexation leads to the destruction of the subordinate territory's cultural identity. For example, the annexation of Hawaii by the United States and the subsequent declaration of Hawaiian statehood in 1959 have resulted in the Americanization of the Hawaiian Islands. Many native populations of permanently annexed lands have dedicated themselves to the preservation of their culture through peaceful educational movements or active resistance to deculturation.

Conversely, annexationist policies may be underscored by distinct humanitarian goals. A dual desire to promote industrial growth in the South and greater racial equality in American society as a whole drove the annexationist program of Northern Radical Republicans at the end of the U.S. Civil War (1861–1865). These abolitionist politicians advocated a program of Reconstruction that included the annexation of Southern states with the express purpose of destroying plantation society and establishing a unified liberal capitalist federal nation. In this case, the politics of annexation reflected a desire for the institutionalization of Radical Republican Judge Albion Tourgée's (1838–1905) philosophy of "color-blind justice" for freed persons of the South and should be noted for its progressive commitment to social justice.

Annexation is not the inevitable outcome of military conquest, but rather one of many possible outcomes of conquest. For example, the military occupation of Germany and Japan after World War II (1939–1945) did not lead to the annexation of either country by the Allied powers. In both cases the Allies expressly rejected annexation of the subordinate territories at the time of occupation. Annexation can therefore be seen as a calculated, deliberate domestic or international policy.

SEE ALSO *Cooperation; Empire; Imperialism; Land Claims; Reconstruction Era (U.S.); Unilateralism*

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ANNULMENT

SEE *Divorce and Separation.*

ANOMIE

SEE *Alienation-Anomie; Durkheim, Émile.*

ANOREXIA NERVOSA

SEE *Body Image; Undereating.*

ANTHONY, SUSAN B.

SEE *Suffrage, Women's.*

ANTHRAX

SEE *Bioterrorism.*

ANTHROPOLOGY

Anthropology is the study, analysis, and description of humanity's past and present. Questions about the past include prehistoric origins and human evolution. Study of contemporary humanity focuses on biological and cultural diversity, including language. Compared to other disciplines that address humanity such as history, sociology, or psychology, anthropology is broader in two ways. In terms of humanity's past, anthropology considers a greater depth of time. In terms of contemporary humans, anthropology covers a wider diversity of topics than other disciplines, from molecular DNA to cognitive development and religious beliefs.

This depth and breadth correspond to the wide variety of sites and contexts in which anthropologists conduct research. Some anthropologists spend years in harsh physical conditions searching for fossils of early human ancestors. Others live among and study firsthand how people in Silicon Valley, California, for example, work, organize family life, and adapt to a situation permeated by modern technology. Anthropologists may conduct analyses in a laboratory studying how tooth enamel reveals an individual's diet, or they may work in a museum, examining designs on prehistoric pottery. Yet other anthropologists observe chimpanzees in the wild.

Research methods in anthropology range from scientific to humanistic. In the scientific mode, anthropologists proceed deductively. They formulate a hypothesis, or research question, and then make observations to see if the hypothesis is correct. This approach generates both quantitative (numeric) data and qualitative (descriptive) data. In the humanistic approach, anthropologists proceed inductively, pursuing a subjective method of understanding humanity through the study of people's art, music, poetry, language, and other forms of symbolic expression. Anthropologists working in the humanistic mode avoid forming a hypothesis, and they rely on qualitative information.

No matter whether it is conducted in a rainforest settlement or a university laboratory, or pursued from a scientific or a humanistic perspective, research in anthropology seeks to produce new knowledge about humanity. Beyond generating knowledge for its own sake, anthropology produces findings of relevance to significant contemporary issues. Knowledge in anthropology is of value to government policy makers, businesses, technology developers, health care providers, teachers, and the general public.

FOUR-FIELD ANTHROPOLOGY IN NORTH AMERICA

In North America anthropology is defined as a discipline comprising four fields that focus on separate but interrelated subjects. The subjects are archaeology, biological anthropology (or physical anthropology), linguistic anthropology, and cultural anthropology (or social anthropology). Some North American anthropologists argue that a fifth field, applied anthropology, should be added. Applied anthropology, also called practicing or practical anthropology, is the use of anthropological knowledge to prevent or solve problems, or to shape and achieve policy goals. The author of this essay takes the

position that the application of knowledge is best conceived of as an integral part of all four fields, just as theory is, rather than placed in a separate field.

The depth and breadth of anthropology have both positive and negative implications. The advantages of the depth and breadth of the four-field approach are the same as those that accrue to any kind of multidisciplinary work that requires thorough dialogue across domains about theories, methods, findings, and insights. Such dialogue tends to advance thinking in original and fruitful ways. Those who do not support anthropology as a four-field discipline point to the disadvantages of combining so much depth and breadth in one discipline. The main issue here is the differences between the scientific and humanistic approaches to understanding humanity.

In North America, the four-field approach is maintained to a large extent in the departmental organization and degree requirements at larger colleges and universities, and in professional associations such as the American Anthropological Association (AAA) and the Canadian Sociology and Anthropology Association (CSAA). Some notable splits in departments occurred in the late twentieth century. In 1998, the former single Department of Anthropology at Stanford University divided into the Department of Cultural and Social Anthropology and the Department of Anthropological Sciences, with the former focusing on humanistic anthropology and the latter on scientific anthropology. Duke University has a Department of Cultural Anthropology and a Department of Biological Anthropology and Anatomy. Archaeology is housed within the Department of Classics. In some North American universities archaeology is a separate department, but archaeology is generally housed in anthropology departments.

Outside North America the four fields exist in separate academic units. The word "anthropology" in such contexts often refers only to biological anthropology. The English term "ethnology" or its equivalent in other languages corresponds to North American cultural anthropology. "Folklore" studies continue to be important in many European countries and in Japan. Linguistic anthropology is less prominent outside North America.

Archaeology Archaeology means, literally, the "study of the old," with a focus on human culture. Archaeology, which began in Europe in the nineteenth century, centers on the excavation and analysis of artifacts, or human-made remains. Depending on one's perspective about valid evidence for the first humans, the time-depth of archaeology goes back to the beginnings of early humans with the earliest evidence of human-made tools approximately two million years ago.

Archaeology encompasses two major subfields: prehistoric archaeology and historical archaeology. Prehistoric archaeology covers the human past before written records. Prehistoric archaeologists identify themselves according to major geographic regions: Old World archaeology (Africa, Europe, and Asia) or New World archaeology (North, Central, and South America). Historical archaeology deals with the human past in societies that have written documents.

Another set of specialties within archaeology is based on the context in which the research takes place. One such specialty is underwater archaeology, which is the study and preservation of submerged archaeological sites. Underwater archaeological sites may be from either prehistoric or historic times. Industrial archaeology focuses on changes in material culture and society during and since the Industrial Revolution. Industrial archaeology is especially active in Great Britain, home of the industrial revolution. In Great Britain industrial archaeologists study such topics as the design and construction of iron bridges, the growth and regional distribution of potteries and cloth mills, and workers' housing.

Worldwide, archaeologists seek to preserve the invaluable remains of humanity's cultural heritage of the past, and therefore archaeology has a strong applied component. Applied archaeologists work in a variety of domains. Many archaeologists are employed in cultural resource management, assessing possible archaeological remains before such construction projects as roads and buildings can proceed. Industrial archaeologists contribute to the conservation of endangered sites that are more likely to be neglected or destroyed than sites that have natural beauty or cultural glamour attached to them. Archaeologists are becoming increasingly involved in making findings relevant to local people and to improving their welfare. Collaborative archaeology projects that involve community members in excavation, analysis, stewardship, and financial benefits are a growing trend.

Biological Anthropology Biological anthropology, or physical anthropology, is the study of humans as biological organisms, including their evolution and contemporary variation. The history of biological anthropology was strongly influenced by the work of Charles Darwin (1809–1882), especially his theories of evolution and species survival through competition. The three subfields of biological anthropology are primatology, paleoanthropology, and contemporary human biology. The three subfields share an interest in the relationship between morphology (physical form) and behavior.

Primatology is the study of the order of mammals called primates, including human and nonhuman primates. The category of nonhuman primates includes a

wide range of animals from small, nocturnal creatures to gorillas, the largest members. Primatologists record and analyze how animals spend their time; collect and share food; form social groups; rear offspring; deal with conflict; and how all of these are affected by captivity.

Paleoanthropology is the study of human evolution on the basis of the fossil record. Paleoanthropologists search for fossils to increase the amount and quality of evidence related to how human evolution occurred. Genetic evidence suggests that human ancestors diverged from the ancestors of chimpanzees between five and eight million years ago in Africa. Fossil evidence for the earliest human ancestors is scarce for this period and researchers are searching for fossils to fill the gap. An equally important activity of paleoanthropologists is labwork focused on dating, reconstructing, and classifying fossils.

Anthropologists who study contemporary human biology define, measure, and seek to explain similarities and variation in the biological makeup and behavior of modern humans. Topics include diet and nutrition, fertility and reproduction, physical growth and health over the life cycle, and urban stress and pollution. Genetic and molecular analyses are of growing interest and importance for tracing similarities and differences in human biology including susceptibility to certain health conditions such as sickle cell anemia, Down syndrome, and diabetes.

Biological anthropology has many applied aspects. Applied primatologists provide data for designing nonhuman primate conservation projects. Paleoanthropologists serve as advocates for programs to protect fossil sites from looting and to ensure that important fossils and knowledge about them are part of public education. Biological anthropologists with specialized knowledge of human anatomy work in forensics, identifying crime victims and providing expert testimony in courts. Many forensic anthropologists are involved in investigations of human rights abuses around the world. Biological anthropologists in the subfield of contemporary human biology provide knowledge relevant to development projects seeking to improve people's nutrition and health.

Linguistic Anthropology Linguistic anthropology is the study of communication, mainly among humans but also among other animals. Linguistic anthropology emerged in Europe and North America in the latter half of the nineteenth century. At that time its major topics of interest were the origins of language, the historical relationships of languages of different regions and continents, and the languages of "primitive" peoples.

Two factors shaped linguistic anthropology in its early days: the discovery that many non-European languages were unwritten and the realization that the languages of many non-European peoples were dying out as a consequence of contact with Europeans. Linguistic anthropologists responded to the discovery of unwritten languages by developing methods for recording unwritten and dying languages. They learned that non-European languages have a wide range of phonetic systems (pronunciation of various sounds) that do not correspond to those of Western languages. Linguistic anthropologists invented the International Phonetic Alphabet, which contains symbols to represent all known human sounds. In response to the discovery of dying languages, many early linguistic anthropologists devoted efforts to recording dying languages in work that is called "salvage anthropology."

Linguistic anthropology has three subfields. The first, historical linguistics, is the study of language change over time, how languages are related, and the relationship of linguistic change to cultural change. The second is descriptive or structural linguistics. This subfield is the study of how contemporary languages differ in terms of their structure, such as in grammar and sound systems. The third subfield is sociolinguistics, the study of the relationships among social variation, social context, and linguistic variation, including nonverbal communication. Sociolinguistics is closely related to cultural anthropology and some North American anthropologists rightfully claim expertise in both fields.

Beginning in the 1980s, four new directions emerged in sociolinguistic anthropology. First is a trend to study language in everyday use, or discourse, in relation to power structures at local, regional, and international levels. For example, in some contexts, powerful people speak more than less powerful people, while in other contexts more powerful people speak less. Second, globalization has prompted new areas of inquiry include the study of "world languages" such as English, Spanish, and the emerging role of Chinese. Third, study of the media is a major growth area with attention to the relationship between language and nationalism, the role of mass media in shaping culture, mass communication and violence, and the effects of the Internet and cell phones on identity and social relationships. Fourth, linguistic anthropologists are increasingly focusing on language rights as human rights.

Applied roles for linguistic anthropologists are expanding. One professional area is education policy and school curriculum. Applied linguistic anthropologists consult with educational institutions about how to meet the needs of multicultural school populations and improve standardized tests for bilingual populations. They conduct research on classroom dynamics, such as student participation and teachers' speech patterns, in order to assess possible biases related to ethnicity, gender, and class. Applied linguistic anthropologists contribute to the recovery of "dead" and declining languages as invaluable cul-

tural heritage of descendant populations. Linguistic anthropologists work with governments, advocating for particular policies about the official status of languages in multicultural settings.

Cultural Anthropology Cultural anthropology is the study of the culture, or the learned and shared behavior and beliefs of groups of living humans. Prominent subfields within cultural anthropology are economic anthropology, medical anthropology, psychological anthropology, kinship and family studies, social organization and social stratification, political anthropology, legal anthropology, religion, communication, expressive culture, and development anthropology.

History. The earliest historical roots of cultural anthropology are in the writings of Herodotus (fifth century BCE), Marco Polo (c. 1254–c. 1324), and Ibn Khaldun (1332–1406), people who traveled extensively and wrote reports about the cultures they encountered. More recent contributions come from writers of the French Enlightenment, such as eighteenth century French philosopher Charles Montesquieu (1689–1755). His book, *Spirit of the Laws*, published in 1748, discussed the temperament, appearance, and government of non-European people around the world. It explained differences in terms of the varying climates in which people lived.

The mid- and late nineteenth century was an important time for science in general. Influenced by Darwin's writings about species' evolution, three founding figures of cultural anthropology were Lewis Henry Morgan (1818–1881) in the United States, and Edward Tylor (1832–1917) and James Frazer (1854–1941) in England. The three men supported a concept of cultural evolution, or cumulative change in culture over time leading to improvement, as the explanation for cultural differences around the world. A primary distinction in cultures was between Euro-American culture ("civilization") and non-Western peoples ("primitive"). This distinction is maintained today in how many North American museums place European art and artifacts in mainstream art museums, while the art and artifacts of non-Western peoples are placed in museums of natural history.

The cultural evolutionists generated models of progressive stages for various aspects of culture. Morgan's model of kinship evolution proposed that early forms of kinship centered on women with inheritance passing through the female line, while more evolved forms centered on men with inheritance passing through the male line. Frazer's model of the evolution of belief systems posited that magic, the most primitive stage, is replaced by religion in early civilizations which in turn is replaced by science in advanced civilizations. These models of cultural evolution were unilinear (following one path), simplistic, often based on little evidence, and ethnocentric in that they always placed European culture at the apex. Influenced by Darwinian thinking, the three men believed that later forms of culture are inevitably superior and that early forms either evolve into later forms or else disappear.

Most nineteenth century thinkers were "armchair anthropologists," a nickname for scholars who learned about other cultures by reading reports of travelers, missionaries, and explorers. On the basis of readings, the armchair anthropologist wrote books that compiled findings on particular topics, such as religion. Thus, they wrote about faraway cultures without the benefit of personal experience with the people living in those cultures. Morgan stands out, in his era, for diverging from the armchair approach. Morgan spent substantial amounts of time with the Iroquois people of central New York. One of his major contributions to anthropology is the finding that "other" cultures make sense if they are understood through interaction with and direct observation of people rather than reading reports about them. This insight of Morgan's is now a permanent part of anthropology, being firmly established by Bronislaw Malinowski (1884–1942).

Malinowski is generally considered the "father" of the cornerstone research method in cultural anthropology: participant observation during fieldwork. He established a theoretical approach called functionalism, the view that a culture is similar to a biological organism wherein various parts work to support the operation and maintenance of the whole. In this view a kinship system or religious system contributes to the functioning of the whole culture of which it is a part. Functionalism is linked to the concept of holism, the perspective that one must study all aspects of a culture in order to understand the whole culture.

The "Father" of Four-Field Anthropology. Another major figure of the early twentieth century is Franz Boas (1858–1942), the "father" of North American four-field anthropology. Born in Germany and educated in physics and geography, Boas came to the United States in 1887. He brought with him a skepticism toward Western science gained from a year's study among the Innu, indigenous people of Baffin Island, Canada. He learned from that experience the important lesson that a physical substance such as "water" is perceived in different ways by people of different cultures. Boas, in contrast to the cultural evolutionists, recognized the equal value of different cultures and said that no culture is superior to any other. He introduced the concept of cultural relativism: the view that each culture must be understood in terms of the values and ideas of that culture and must not be judged by the standards of another. Boas promoted the detailed study of

individual cultures within their own historical contexts, an approach called historical particularism. In Boas's view, broad generalizations and universal statements about culture are inaccurate and invalid because they ignore the realities of individual cultures.

Boas contributed to the growth and professionalization of anthropology in North America. As a professor at Columbia University, he hired faculty and built the department. Boas trained many students who became prominent anthropologists, including Ruth Benedict and Margaret Mead. He founded several professional associations in cultural anthropology and archaeology. He supported the development of anthropology museums.

Boas was involved in public advocacy and his socially progressive philosophy embroiled him in controversy. He published articles in newspapers and popular magazines opposing the U.S. entry into World War I (1914–1918), a position for which the American Anthropological Association formally censured him as "un-American." Boas also publicly denounced the role of anthropologists who served as spies in Mexico and Central America for the U.S. government during World War I. One of his most renowned studies, commissioned by President Theodore Roosevelt (1858–1919), was to examine the effects of the environment (in the sense of one's location) on immigrants and their children. He and his research team measured height, weight, head size and other features of over 17,000 people and their children who had migrated to the United States. Results showed substantial differences in measurements between the older and younger generations. Boas concluded that body size and shape can change quickly in response to a new environmental context; in other words, some of people's physical characteristics are culturally shaped rather than biologically ("racially") determined.

Boas' legacy to anthropology includes his development of the discipline as a four-field endeavor, his theoretical concepts of cultural relativism and historical particularism, his critique of the view that biology is destiny, his anti-racist and other advocacy writings, and his ethical stand that anthropologists should not do undercover research.

Several students of Boas, including Mead and Benedict, developed what is called the "Culture and Personality School." Anthropologists who were part of this intellectual trend documented cultural variation in modal personality and the role of child-rearing in shaping adult personality. Both Mead and Benedict, along with several other U.S. anthropologists, made their knowledge available to the government during and following World War II (1939–1945). Benedict's classic 1946 book, *The Chrysanthemum and the Sword* was influential in shaping U.S. military policies in post-war Japan and in behavior toward the Japanese people during the occupation. Mead likewise, offered advice about the cultures of the South Pacific to the U.S. military occupying the region.

The Expansion of Cultural Anthropology. In the second half of the twentieth century cultural anthropology in the United States expanded substantially in the number of trained anthropologists, departments of anthropology in colleges and universities, and students taking anthropology courses and seeking anthropology degrees at the bachelor's, master's, and doctoral level. Along with these increases came more theoretical and topical diversity.

Cultural ecology emerged during the 1960s and 1970s. Anthropologists working in this area developed theories to explain cultural similarity and variation based on environmental factors. These anthopologists said that similar environments (e.g., deserts, tropical rainforests, or mountains) would predictably lead to the emergence of similar cultures. Because this approach sought to formulate cross-cultural predictions and generalizations, it stood in clear contrast to Boasian historical particularism.

At the same time, French anthropologist Claude Lévi-Strauss (b. 1908) developed a different theoretical perspective influenced by linguistics and called structuralism. Structuralism is an analytical method based on the belief that the best way to learn about a culture is by analyzing its myths and stories to discover the themes, or basic units of meaning, embedded in them. The themes typically are binary opposites such as life and death, dark and light, male and female. In the view of French structuralism these oppositions constitute an unconsciously understood, underlying structure of the culture itself. Lévi-Strauss collected hundreds of myths from native peoples of South America as sources for learning about their cultures. He also used structural analysis in the interpretation of kinship systems and art forms such as the masks of Northwest Coast Indians. In the 1960s and 1970s French structuralism began to attract attention of anthropologists in the United States and has had a lasting influence on anthropologists of a more humanistic bent.

Descended loosely from these two contrasting theoretical perspectivies—cultural ecology and French structuralism—are two important approaches in contemporary cultural anthropology. One approach, descended from cultural ecology, is cultural materialism. Cultural materialism, as defined by its leading theorist Marvin Harris (1927–2001), takes a Marxist-inspired position that understanding a culture should be pursued first by examining the material conditions in which people live: the natural environment and how people make a living within particular environments. Having established understanding of the "material" base (or infrastructure), attention may then be turned to other aspects of culture, including social organization (how people live together in groups, or

structure) and ideology (people's way of thinking and their symbols, or superstructure). One of Harris' most famous examples of a cultural materialist approach is his analysis of the material importance of the sacred cows of Hindu India. Harris demonstrates the many material benefits of cows, from their plowing roles to the use of their dried dung as cooking fuel and their utility as street-cleaning scavengers, underly and are ideologically supported by the religious ban on cow slaughter and protection of even old and disabled cows.

The second approach in cultural anthropology, descended from French structuralism and symbolic anthropology, is interpretive anthropology or intepretivism. This perspective, championed by Clifford Geertz (1926–2006), says that understanding culture is first and foremost about learning what people think about, their ideas, and the symbols and meanings important to them. In contrast to cultural materialism's emphasis on economic and political factors and behavior, interpretivists focus on webs of meaning. They treat culture as a text that can only be understood from the inside of the culture, in its own terms, an approach interpretivists refer to as "experience near" anthropology, in other words, learning about a culture through the perspectives of the study population as possible. Geertz contributed the concept of "thick description" as the best way for anthropologists to present their findings; in this mode, the anthropologist serves as a medium for transferring the richness of a culture through detailed notes and other recordings with minimal analysis.

Late Twentieth and Turn of Century Growth. Starting in the 1980s, several additional theoretical perspectives and research domains emerged in cultural anthropology. Feminist anthropology arose in reaction to the lack of anthropological research on female roles. In its formative stage, feminist anthropology focused on culturally embedded discrimination against women and girls. As feminist anthropology evolved, it looked at how attention to human agency and resistance within contexts of hierarchy and discrimination sheds light on complexity and change. In a similar fashion, gay and lesbian anthropology, or "queer anthropology," has exposed the marginalization of gay and lesbian sexuality and culture in previous anthropology research and seeks to correct that situation.

Members of other minority groups voice parallel concerns. African American anthropologists have critiqued mainstream cultural anthropology as suffering from embedded racism in the topics it studies, how it is taught to students, and its exclusion of minorities from positions of power and influence. This critique has produced recommendations about how to build a non-racist anthropology. Progress is occurring, with one notable positive change being the increase in trained anthropologists from minority groups and other excluded groups, and their rising visibility and impact on the research agenda, textbook contents, and future direction of the field.

Another important trend is increased communication among cultural anthropologists worldwide and growing awareness of the diversity of cultural anthropology in different settings. Non-Western anthropologists are contesting the dominance of Euro-American anthropology and offering new perspectives. In many cases, these anthropologists conduct native anthropology, or the study of one's own cultural group. Their work provides useful critiques of the historically Western, white, male discipline of anthropology.

At the turn of the twenty-first century, two theoretical approaches became prominent and link together many other diverse perspectives, such as feminist anthropology, economic anthropology, and medical anthropology. The two approaches have grown from the earlier perspectives of cultural materialism and French structuralism, respectively. Both are influenced by postmodernism, an intellectual pursuit that asks whether modernity is truly progress and questions such aspects of modernism as the scientific method, urbanization, technological change, and mass communication.

The first approach is termed structurism, which is an expanded political economy framework. Structurism examines how powerful structures such as economics, politics, and media shape culture and create and maintain entrenched systems of inequality and oppression. James Scott, Nancy Scheper-Hughes, Arthur Kleinman, Veena Das, and Paul Farmer are pursuing this direction of work. Many anthropologists use terms such as social suffering or structural violence to refer to the forms and effects of historically and structural embedded inequalities that cause excess illness, death, violence, and pain.

The second theoretical and research emphasis, derived to some extent from interpretivism, is on human agency, or free will, and the power of individuals to create and change culture by acting against structures. Many anthropologists avoid the apparent dichotomy in these two approaches and seek to combine a structurist framework with attention to human agency.

The Concept of Culture Culture is the core concept in cultural anthropology, and thus it might seem likely that cultural anthropologists would agree about what it is. Consensus may have been the case in the early days of the discipline when there were far fewer anthropologists. Edward B. Tylor (1832–1917), a British anthropologist, proposed the first anthropological definition of culture in 1871. He said that "Culture, or civilization … is that complex whole which includes knowledge, belief, art, law, morals, custom, and any other capabilities and habits acquired by man as a member of society" (Kroeber and

Kluckhohn 1952, p. 81). By the 1950s, however, an effort to collect definitions of culture produced 164 different definitions. Since that time no one has tried to count the number of definitions of culture used by anthropologists.

In contemporary cultural anthropology, the theoretical positions of the cultural materialists and the interpretive anthropologists correspond to two different definitions of culture. Cultural materialist Marvin Harris defines culture as the total socially acquired life-way or life-style of a group of people, a definition that maintains the emphasis on the holism established by Tylor. In contrast, Clifford Geertz, speaking for the interpretivists, defines culture as consisting of symbols, motivations, moods, and thoughts. The interpretivist definition excludes behavior as part of culture. Again, avoiding a somewhat extreme dichotomy, it is reasonable and comprehensive to adopt a broad definition of culture as all learned and shared behavior and ideas.

Culture exists, in a general way, as something that all humans have. Some anthropologists refer to this universal concept of culture as "Culture" with a capital "C." Culture also exists in a specific way, in referring to particular groups as distinguised by their behaviors and beliefs. Culture in the specific sense refers to "a culture" such as the Maasai, the Maya, or middle-class white Americans. In the specific sense culture is variable and changing. Sometimes the terms "microculture" or local culture are used to refer to specific cultures. Microcultures may include ethnic groups, indigenous peoples, genders, age categories, and more. At a larger scale exist regional or even global cultures such as Western-style consumer culture that now exists in many parts of the world.

Characteristics of Culture Since it is difficult to settle on a neat and tidy definition of culture, some anthropologists find it more useful to discuss the characteristics of culture and what makes it a special adaptation on which humans rely so heavily.

Culture is based on symbols. A symbol is something that stands for something else. Most symbols are arbitrary, that is, they bear no necessary relationship to that which is symbolized. Therefore, they are cross-culturally variable and unpredictable. For example, although one might guess that all cultures might have an expression for hunger that involves the stomach, no one could predict that in Hindi, the language of northern India, a colloquial expression for being hungry says that "rats are jumping in my stomach." Our lives are shaped by, immersed in, and made possible through symbols. It is through symbols, especially language, that culture is shared, changed, stored, and transmitted over time.

Culture is learned. Cultural learning begins from the moment of birth, if not before (some people think that an unborn baby takes in and stores information through sounds heard from the outside world). A large but unknown amount of people's cultural learning is unconscious, occurring as a normal part of life through observation. Schools, in contrast, are a formal way to learn culture. Not all cultures throughout history have had formal schooling. Instead, children learned culture through guidance from others and by observation and practice. Longstanding ways of enculturation, or learning one's culture, include stories, pictorial art, and performances of rituals and dramas.

Cultures are integrated. To state that cultures are internally integrated is to assert the principle of holism. Thus, studying only one or two aspects of culture provides understanding so limited that it is more likely to be misleading or wrong than more comprehensively grounded approaches. Cultural integration and holism are relevant to applied anthropologists interested in proposing ways to promote positive change. Years of experience in applied anthropology show that introducing programs for change in one aspect of culture without considering the effects in other areas may be detrimental to the welfare and survival of a culture. For example, Western missionaries and colonialists in parts of Southeast Asia banned the practice of head-hunting. This practice was embedded in many other aspects of culture, including politics, religion, and psychology (i.e., a man's sense of identity as a man sometimes depended on the taking of a head). Although stopping head-hunting might seem like a good thing, it had disastrous consequences for the cultures that had practiced it.

Cultures Interact and Change Several forms of contact bring about a variety of changes in the cultures involved. Trade networks, international development projects, telecommunications, education, migration, and tourism are just a few of the factors that affect cultural change through contact. Globalization, the process of intensified global interconnectedness and movement of goods, information and people, is a major force of contemporary cultural change. It has gained momentum through recent technological change, especially the boom in information and communications technologies, which is closely related to the global movement of capital and finance.

Globalization does not spread evenly, and its interactions with and effects on local cultures vary substantially, from positive change for all groups involved to cultural destruction and extinction for those whose land, livelihood and culture are lost. Current terms that attempt to capture varieties of cultural change related to globalization include hybridization (cultural mixing into a new form) and localization (appropriation and adaptation of a global form into a new, locally meaningful form).

ETHNOGRAPHY AND ETHNOLOGY

Cultural anthropology embraces two major pursuits in its study and understanding of culture. The first is ethnography or "culture-writing." An ethnography is an in-depth description of one culture. This approach provides detailed information based on personal observation of a living culture for an extended period of time. An ethnography is usually a full-length book.

Ethnographies have changed over time. In the first half of the twentieth century, ethnographers wrote about "exotic" cultures located far from their homes in Europe and North America. These ethnographers treated a particular local group or village as a unit unto itself with clear boundaries. Later, the era of so-called "village studies" in ethnography held sway from the 1950s through the 1960s. Anthropologists typically studied in one village and then wrote an ethnography describing that village, again as a clearly bounded unit. Since the 1980s, the subject matter of ethnographies has changed in three major ways. First, ethnographies treat local cultures as connected to larger regional and global structures and forces; second, they focus on a topic of interest and avoid a more holistic (comprehensive) approach; and third, many are situated within industrialized/post-industrialized cultures.

As topics and sites have changed, so have research methods. One innovation of the late twentieth century is the adoption of multi-sited research, or research conducted in more than one context such as two or more field sites. Another is the use of supplementary non-sited data collected in archives, from Internet cultural groups, or newspaper coverage. Cultural anthropologists are turning to multi-sited and non-sited research in order to address the complexities and linkages of today's globalized cultural world. Another methodological innovation is collaborative ethnography, carried out as a team project between academic researchers and members of the study population. Collaborative research changes ethnography from study of people for the sake of anthropological knowledge to study with people for the sake of knowledge and for the people who are the focus of the research.

The second research goal of cultural anthropology is ethnology, or cross-cultural analysis. Ethnology is the comparative analysis of a particular topic in more than one cultural context using ethnographic material. Ethnologists compare such topics as marriage forms, economic practices, religious beliefs, and childrearing practices, for example, in order to discover patterns of similarity and variation and possible causes for them. One might compare the length of time that parents sleep with their babies in different cultures in relation to personality. Researchers ask, for example, if a long co-sleeping period leads to less individualistic, more socially connected personalities and if a short period of co-sleeping produces more individualistic personalities. Other ethnological analyses have considered the type of economy in relation to frequency of warfare, and the type of kinship organization in relation to women's status.

Ethnography and ethnology are mutually supportive. Ethnography provides rich, culturally specific insights. Ethnology, by looking beyond individual cases to wider patterns, provides comparative insights and raises new questions that prompt future ethnographic research.

CULTURAL RELATIVISM

Most people grow up thinking that their culture is the only and best way of life and that other cultures are strange or inferior. Cultural anthropologists label this attitude ethnocentrism: judging other cultures by the standards of one's own culture. The opposite of ethnocentrism is cultural relativism, the idea that each culture must be understood in terms of its own values and beliefs and not by the standards of another culture.

Cultural relativism may easily be misinterpreted as absolute cultural relativism, which says that whatever goes on in a particular culture must not be questioned or changed because no one has the right to question any behavior or idea anywhere. This position can lead in dangerous directions. Consider the example of the Holocaust during World War II in which millions of Jews and other minorities in much of Eastern and Western Europe were killed as part of the German Nazis' Aryan supremacy campaign. The absolute cultural relativist position becomes boxed in, logically, to saying that since the Holocaust was undertaken according to the values of the culture, outsiders have no business questioning it.

Critical cultural relativism offers an alternative view that poses questions about cultural practices and ideas in terms of who accepts them and why, and who they might be harming or helping. In terms of the Nazi Holocaust, a critical cultural relativist would ask, "Whose culture supported the values that killed millions of people on the grounds of racial purity?" Not the cultures of the Jewish people, the Roma, and other victims. It was the culture of Aryan supremacists, who were one subgroup among many. The situation was far more complex than a simple absolute cultural relativist statement takes into account, because there was not "one" culture and its values involved. Rather, it was a case of cultural imperialism, in which one dominant group claimed supremacy over minority cultures and proceeded to change the situation in its own interests and at the expense of other cultures. Critical cultural relativism avoids the trap of adopting a homogenized view of complexity. It recognizes internal cultural differences and winners/losers, oppressors/victims. It pays attention to different interests of various power groups.

APPLIED CULTURAL ANTHROPOLOGY

In cultural anthropology, applied anthropology involves the use or application of anthropological knowledge to help prevent or solve problems of living peoples, including poverty, drug abuse, and HIV/AIDS. In the United States, applied anthropology emerged during World War II when many anthropologists offered their expertise to promote U.S. war efforts and post-war occupation. Following the end of the war, the United States assumed a larger global presence, especially through its bilateral aid organization, the U.S. Agency for International Development (USAID). USAID hired many cultural anthropologists who worked in a variety of roles, mainly evaluating development projects at the end of the project cycle and serving as in-country anthropologists overseas.

In the 1970s cultural anthropologists worked with other social scientists in USAID to develop and promote the use of "social soundness analysis" in all government-supported development projects. As defined by Glynn Cochrane, social soundness analysis required that all development projects be preceded by a thorough baseline study of the cultural context and then potential redesign of the project based on those findings. A major goal was to prevent the funding of projects with little or no cultural fit. The World Bank hired its first anthropologist, Michael Cernea, in 1974. For three decades, Cernea influenced its policy-makers to pay more attention to project-affected people and their culture in designing and implementing projects. He promoted the term "development induced displacement" to bring attention to how large infrastructure projects negatively affect millions of people worldwide and he devised recommendations for mitigating such harm.

Many cultural anthropologists are applying cultural analysis to large-scale institutions (e.g., capitalism and the media) particularly their negative social consequences, such as the increasing wealth gap between powerful and less powerful countries and between the rich and the poor within countries. These anthropologists are moving in a new and challenging direction. Their work involves the study of global–local interactions and change over time, neither of which were part of cultural anthropology's original focus. Moreover, these cultural anthropologists take on the role of advocacy and often work collaboratively with victimized peoples.

Anthropologists are committed to documenting, understanding, and maintaining cultural diversity throughout the world as part of humanity's rich heritage. Through the four-field approach, they contribute to the recovery and analysis of the emergence and evolution of humanity. They provide detailed descriptions of cultures as they have existed in the past, as they now exist, and as they are changing in contemporary times. Anthropologists regret the decline and extinction of different cultures and actively contribute to the preservation of cultural diversity and cultural survival.

SEE ALSO *AIDS; American Anthropological Association; Anthropology, Biological; Anthropology, British; Anthropology, Linguistic; Anthropology, Medical; Anthropology, Public; Anthropology, U.S.; Anthropology, Urban; Archaeology; Boas, Franz; Cold War; Colonialism; Cultural Relativism; Culture; Developing Countries; Ethnography; Ethnology and Folklore; Feminism; Geertz, Clifford; Globalization, Anthropological Aspects of; Observation, Participant; Poverty; Primates; Race and Anthropology; Social Science*

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Barbara D. Miller

ANTHROPOLOGY, APPLIED

SEE *Anthropology, Public.*

ANTHROPOLOGY, BIOLOGICAL

Biological anthropology is concerned with the origin, evolution and diversity of humankind. The field was called physical anthropology until the late twentieth century, reflecting the field's primary concern with cataloging anatomical differences among human and primate groups. Under the name of biological anthropology, it is an ever-broadening field that encompasses the study of: human biological variation; evolutionary theory; human origins and evolution; early human migration; human ecology; the evolution of human behavior; paleoanthropology; anatomy; locomotion; osteology (the study of skeletal material); dental anthropology; forensics; medical anthropology, including the patterns and history of disease; primatology (the study of non-human primates); growth, development and nutrition; and other related fields.

The kinds of questions that biological anthropologists ask include:

What makes humans different from other species?

Where did modern humans arise and when?

What does evidence show about the original human migrations throughout the world?

What kinds of biological differences exist between populations, including anatomical, genetic, and behavioral, or patterns of growth and

development, and how did the biological differences arise?

What can we learn about human evolution and behavior from non-human primates or other species?

How did uniquely human traits such as bipedalism and language evolve?

What can molecular genetics add to the understanding of evolution and human variation?

How does normal development happen, and what can it contribute to knowledge about evolution?

METHODS

Biological anthropology has a rich collection of methods, new and old, for answering these questions. Methods used include: field methods for finding specimens; comparative anatomy and morphological measurement; fossil analysis; population genetics; demographic and epidemiologic methods; and the use of model animals such as mice or non-human primates. Modern technologies—computed tomography (CT) scanning, molecular genetic and bioinformatic analytic techniques—are used to address questions about human diversity with studies of DNA variation and its history, for example. Tiny details of bones and fossils can be visualized and compared with high-powered imaging techniques to yield clues about the evolution of various traits.

In the late twentieth century, the largest change in biological anthropology has been the rapid incorporation of modern genetics. There are genetics laboratories in anthropology departments around the world, working on a wide variety of questions concerning human origins and diversity. Anthropologists also collaborate with non-anthropologists who have expertise in a broad spectrum of technical fields in order to use a wide variety of methodologies in their research.

HISTORY

Although people have been interested for several millennia in characterizing how populations differ, the work of Swedish botanist Carolus Linnaeus (1707–1778) cataloging all known species was the first modern systematic classification of human variation. Linnaeus developed the binomial naming convention (*Homo sapiens*, for example) still used today. He classified humans into groups based on geographic origin and skin color, and subsequently on behavior. Probably not surprisingly, Europeans ranked highest in Linnaeus's schemes.

A number of people worked on cataloging human variation in the eighteenth and nineteenth centuries, including Georges Buffon (1707–1788, who published *Varieties of the Human Species* in 1749), Jean-Baptiste Lamarck (1744–1829), and Georges Cuvier (1769–1832). Johann Friedrich Blumenbach (1752–1840) is often considered the founder of physical anthropology. Inspired by Linnaeus, Blumenbach was interested in documenting the anatomical differences among humans, establishing the field of comparative anatomy to do so. He published *On the Natural Variety of Mankind* in 1795, in which he proposed five distinct races.

Blumenbach's grouping became the basis of the scientific classification system for race, which was developed and expanded in the nineteenth and twentieth centuries. But, as Darwin pointed out in *The Descent of Man*, race is a slippery concept. The number of races catalogued in Darwin's day alone ranged from two to sixty-three. In modern time, race as a useful biological concept is largely considered by anthropologists to be without scientific merit. By any biological measure, even human groups long isolated geographically are more similar than they are different. Yet race is an issue that will not go away because the concept of race is as much political and social as it is biological.

Although in the twenty-first century biological anthropology is thoroughly grounded in the study of human diversity, nineteenth century biological (physical) anthropologists were preoccupied with such questions as whether humans were part of the natural world, or more than one species. Darwin's theory of evolution, first published in 1859 in *The Origin of Species*, gave biological anthropology a conceptual framework. Old questions were immediately resolvable; evolutionary theory confirms that humans are part of the natural world and share a common origin with every other species on Earth. Other questions were not resolvable. For example, the question of how many species humans comprise became a question of how many races, and this question preoccupied anthropologists, along with human geneticists, for decades.

Homo sapiens (modern human) is the only surviving species of those that comprised the 1.5 to 2.5 million year old *Homo* lineage. Paleontologists still debate what extinct species should be considered *Homo* (based on fossil evidence), or the extent to which there were contemporary *Homo* species alive during the approximately 2 million years of hominid history. If *Homo sapiens* and *Homo neanderthalensis* (a *Homo* species, commonly known as Neanderthal, that lived in Europe and parts of western Asia from about 130,000 to 24,000 years ago, now extinct) were contemporaneous 30,000 and more years ago, for example, did they interbreed? Some anthropologists believe that the tools of modern molecular genetics may help answer this question. The 2003 finding of 12,000-year-old fossils of apparently small people in a cave on the Indonesian island of Flores, *Homo floresiensis*

(Man of Flores), raises the question of whether other *Homo* species were alive until even more recently than Neanderthals. This issue will be debated for some time to come. Whatever the question of interest to contemporary biological anthropologists, from comparisons between species to the origins of human traits, biological anthropologists will continue to couch questions within the framework of evolutionary theory.

SEE ALSO *Anthropology; Anthropology, Medical; Archaeology; Burial Grounds; Darwin, Charles; Disease; Genomics; Leakey, Richard; Natural Selection; Primates; Race; Racial Classification; Racism*

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Anne Buchanan

ANTHROPOLOGY, BRITISH

A. R. Radcliffe-Brown once said that anthropology has two beginnings: the first in 1748 and the second around 1870. For British anthropology, one could add a third beginning, around 1922, when both Radcliffe-Brown and Bronislaw Malinowski began teaching in earnest and published their major field monographs. Radcliffe-Brown's first date, 1748, marks the first publication, in French, of Montesquieu's *Spirit of the Laws*. Within two years an English edition appeared, and this greatly influenced the anthropological ideas of Scottish writers such as Adam Smith. His anthropological approach, modeled on Montesquieu's, became known as "conjectural history." The idea was that speculation and logical deduction, often supplemented by knowledge from early ethnographic reports, should lead us to understand the early history of society.

Institutional anthropology in Britain began in 1843 with the founding of the Ethnological Society of London, which merged with a rival society in 1871 to become the Anthropological Institute. Major publications around that time include Sir Henry Maine's *Ancient Law* (published in 1861), J. F. McLennan's *Primitive Marriage* (1865), and Sir Edward Tylor's *Primitive Culture* (1871). Maine's book overthrew the Enlightenment notion of the "social contract" in favor of the family as the basis of society, and it also created the study of kinship as the central interest of the British tradition. One early debate centered on which came first, patrilineal or matrilineal descent? Maine favored the former, while McLennan favored the latter. Tylor's contribution included his famous definition of *culture* as "that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society" ([1871] 1958, p. 1).

Polish immigrant Bronislaw Malinowski began teaching at the London School of Economics in 1922, the year of publication of his *Argonauts of the Western Pacific*. That book describes the inhabitants of the Trobriand Islands, where Malinowski spent World War I and where he created the modern style of anthropological fieldwork (working in the native language and through participating in as well as observing daily activities of the people). Meanwhile, Radcliffe-Brown had the year before obtained a professorship at the University of Cape Town. He later moved to Sydney and to Chicago before returning to Britain to take a chair at Oxford University. His major monograph, also published in 1922, was *The Andaman Islanders*. Together Malinowski and Radcliffe-Brown came to emphasize contemporary society over social evolution. Malinowski called this new approach "functionalism," and the idea was to see how each aspect of society related to other aspects. Radcliffe-Brown shied away from the word, but what others called his "structural-functionalism" emphasized further the relations between institutions in social systems, the classic four systems being kinship, politics, economics, and religion. He published his collected essays as *Structure and Function in Primitive Society* in 1952, and his theoretical approach (borrowed partly from Émile Durkheim's sociology) together with Malinowski's fieldwork methods became the twin hallmarks of the British tradition. These two men trained the first generation of professional anthropologists (most of the earlier ones having been amateur scholars), and established British anthropology as a great world tradition and the idea of the departmental seminar as the main means of teaching graduate students.

The United Kingdom became the world's most expansive imperial power in the nineteenth century, and British anthropologists through the first half of the twentieth century took advantage of this. The Malinowskian emphasis on fieldwork encouraged interaction between indigenous populations of the empire and anthropologists, and also between anthropologists and colonial officers. Some of the latter even studied anthropology in British or Commonwealth institutions, and indeed, so too did some residents of the colonies, most famously Jomo Kenyatta, later the first president of Kenya, who did his PhD under Malinowski in the 1930s.

From the 1950s other influences came in. Max Gluckman, from South Africa, and other members of the "Manchester school" that he founded, introduced an interest in conflict and dispute settlement. Fredrik Barth, a Norwegian who studied at Cambridge University, emphasized individual action and fluent group boundaries over rigid social structures. Radcliffe-Brown's successor at Oxford, Sir Edward Evans-Pritchard, pushed against functionalism from another angle. He came to see anthropology as more like the art of history-writing than like the practice of the biological sciences (Radcliffe-Brown's favorite analogy was "society is like an organism"). Especially in his study of the religion of the Nuer of Sudan, Evans-Pritchard argued that anthropologists should aim to understand things such as religious belief from the native point of view and "interpret" them so they can be understood in one's own culture.

British followers of the French structuralist Claude Lévi-Strauss became prominent in the 1960s, especially Sir Edmund Leach. In *Political Systems of Highland Burma* (1954), Leach argued that the Kachin he had lived with before and during World War II exhibited two forms of social organization, one being egalitarian and the other hierarchical. Groups oscillated between the two according to ecological influences, and the political structure too was apparent in the ways in which lineages were related through marriages. Leach, along with Rodney Needham, took to Lévi-Strauss's "alliance theory" in kinship, and the great battle of the 1960s was between this idea (stressing relations between groups through marriage) and "descent theory" (the older British approach stressing the importance of descent groups). The 1970s saw battles within the alliance theory camp, with Needham and most other British alliance theorists looking to reflect accurately ethnographic realities of what they called "prescriptive" systems of alliance (where one must marry someone of a particular category of kin), whereas French thinkers tended to prefer idealized models far removed from ethnography.

In the 1970s Marxism became a dominant force, with work such as that of Talal Asad critiquing relations that had existed between colonialism and the development of British anthropology. Other British-based anthropologists, including Maurice Bloch, Jonathan Friedman, and Joel Kahn, argued for greater awareness of historical global influences such as colonialism and capitalism on the populations anthropologists work with. Through the 1980s and 1990s the influence of American anthropology further watered down classic British interests, and today there is little difference, except in the way the history of the discipline is construed, between British anthropology and other traditions. That said, British anthropology retains particular strengths in studies of conflict, social development, and kinship (including new reproductive technologies), as well as in ethnographic writing. It also retains strong pedagogical elements from its earlier times, notably the tradition of departmental seminar as a means of teaching and of debate.

SEE ALSO *American Anthropological Association; Anthropology; Anthropology, Biological; Anthropology, Linguistic; Anthropology, Medical; Anthropology, Public; Anthropology, U.S.; Anthropology, Urban; Archaeology; Boas, Franz; Culture; Functionalism; Geertz, Clifford; Globalization, Anthropological Aspects of; Race and Anthropology*

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Alan Barnard

ANTHROPOLOGY, LINGUISTIC

Linguistic anthropology examines the links between language and culture, including how language relates to thought, social action, identity, and power relations. It is one of the four traditional subfields of American anthropology, sharing with sociocultural anthropology its aims of explaining social and cultural phenomena, with biological anthropology its concern over language origins and evolution, and with archaeology the goal of understanding cultural histories. Linguistic anthropology has developed through international work across social science disciplines, as researchers attend to language as a key to understanding social phenomena. The discipline overlaps most closely with the sociolinguistic subfield of linguistics. But while sociolinguistics generally considers social factors in order to explain linguistic phenomena, linguistic anthropology aims to explain social and cultural phenomena by considering linguistic information.

Linguistic anthropology, as a part of American anthropology, has its origins in the work of Franz Boas's 1911 *Handbook of American Indian Languages*. Inspired by his work with Native American groups, Boas introduced the concept of linguistic and cultural relativism, the premise that a particular language or culture can only be understood with regard to its own internal logic. The concept of linguistic relativism was developed further by Edward Sapir and Benjamin Whorf, who argued that languages predispose the speakers to experience the world in particular ways. This axiom has come to be known as the "Sapir-Whorf hypothesis." Researchers have since explored the extent to which language shapes thought, for example, with studies of color terminologies. These trends led to "ethnoscience," a field of research founded in the 1960s that focused on the systematic ways of understanding the world that are encoded in language. This approach was strongly influenced by the work of Swiss linguist Ferdinand de Saussure, whose analysis of language as an idealized social system set the foundations for the structuralist approach in anthropology. Recognizing the unique value of every language, linguistic anthropologists continue to document the grammars, cognitive maps, and traditional knowledge of threatened cultures and their languages in an effort to preserve and revitalize them.

The interest in language as a window on thought was paralleled by an interest in language as a means of acting upon the world. This line of inquiry drew on the work of philosophers John Austin and John Searle. They examined the performative function of language in speech acts (called performativity), actions that are accomplished as words are spoken, such as promising and marrying. Linguistic anthropologists extended the concept of performativity, viewing all language in use as a constructive activity and not just a means of relaying pre-existing information. Language is social action at many levels, from the construction of personhood and beliefs, to negotiation of social status between people, to the assertion of authority and group identities at the level of nations or transnational groups.

From analysis of contextualized speech acts, anthropologists John J. Gumperz and Dell Hymes introduced the ethnography of communication in the 1960s. This approach examines the rich cultural and contextual knowledge required to communicate competently, beyond knowledge of words and grammar. The speech community was proposed as a unit of analysis based on observed interactions, in place of pre-existing idealized categories. The ethnography of communication had much in common with the ethnomethodology approach developed in sociology starting in the 1960s by Harold Garfinkel and Erving Goffman. The methods of conversation analysis were elaborated by scholars in both anthropology and sociology, relying on analysis of recordings to uncover the rules governing interactions that usually function below the level of awareness (e.g., norms for turn-taking, timing, topic control, and other factors shaping social positioning). Linguistic anthropologists examine these interactional dynamics and rules across cultures and, among other things, seek to explain the reasons for cross-cultural miscommunication.

Discourse analysis expands from a focus on conversations to include analysis of language use in any context in both verbal and written form, including speeches, storytelling, ritual, performance, television, newspapers, and the Internet. Discourse analysis methods attend to both content and linguistic forms used (e.g., active or passive grammatical construction, inclusive or exclusive pronoun choice, formality of language) to show how linguistic forms affect people's thoughts, actions, and identities. In linguistic anthropology, a major concern in the analysis of discourse is how inequalities of power are created, expressed, and manipulated through language. Also of particular interest are processes of socialization (how children or adults learn new social rules) and how agency (an individual's ability to act) is expressed and enacted in speech. At the broadest level, analysis of discourse can also refer to examination of discourse as the systems of logic pervading a society (e.g., ways of thinking and talking about things, ways of arranging things in space) that shape social differences and power inequalities. This way of thinking about discourse was proposed by philosopher Michel Foucault.

The study of language as social action has also led to a view of language as a fluid, shifting, and heterogeneous medium, replacing Saussure's notion of languages and cultures as discrete idealized units. Influential in this develop-

ment was the work of Russian linguists Valentin Voloshinov (*Marxism and the Philosophy of Language*) and Mikhail Bakhtin (*Discourse in the Novel*), who theorized that language is "heteroglossic," its meanings never fixed but always emerging anew between speakers, shaped by histories of social experiences, intentions, and desires. This approach posits language as the site of struggles over social power, supporting the analysis of the role of language in political economy. This area of research examines in part how authoritative and prestigious languages are constructed, how named languages and correlating national or ethnic units and identities are defined, and how language values are negotiated in multilingual situations. Beginning in the 1990s, interest in the relationships between language, power, and identity led to a focus on language ideology, the ideological link between linguistic forms (e.g., different languages, registers, or word choices) and social forms (ethnic, gendered, socioeconomic, or other social distinctions). Researchers studying these topics examine the meaning-making processes and stances through which people construct identities, taking into account both historical trajectories and contemporary contexts of language use.

While linguistic anthropology overlaps with many other fields in its topics of inquiry, its distinctiveness as a field lays in its holistic comparative cross-cultural approach and fieldwork-based research methods.

SEE ALSO *Anthropology; Boas, Franz; Culture; Discourse; Goffman, Erving; Identity; Inequality, Political; Inequality, Racial; Linguistic Turn; Logic; Performance; Power; Racial Slurs; Socialization; Structuralism; Theory of Mind*

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Laada Bilaniuk

ANTHROPOLOGY, MEDICAL

Medical anthropology is the subdiscipline of anthropology that focuses on the intersection of health, medicine, society, and culture. Generally thought to include the study of the impact of disease on society and the impact of society and culture on health and disease, medical anthropology encompasses several different paradigms for research, including biocultural anthropology; ethnomedicine; social and cultural factors in the incidence, prevalence, and treatment of disease, or social epidemiology; the political economy of health; and the inclusion of cultural and social concerns in the planning, implementation, and evaluation of projects, which is the core of applied medical anthropology.

ORIGINS OF MEDICAL ANTHROPOLOGY

In 1978 George Foster and Barbara Anderson, following Khwaja Hassan (1975), suggested that the field of contemporary medical anthropology has four distinct roots that came together in the mid-twentieth century to form a recognized subfield of inquiry: the interest in variation in human morphology and paleopathology that began in the mid-nineteenth century, carried out in part by anatomists and early physical anthropologists; the culture and personality movement, or psychological anthropology, that began in the early twentieth century as both an offshoot of and a critical alternative to Freudian psychology but gained strength during World War II because of increasing interest in understanding the psychological makeup of the different cultures involved in that conflict; the study of ethnomedicine, which began as part of ethnography in the nineteenth century but became a focus of study for culturally oriented medical anthropologists after the posthumous publication of W. H. R. Rivers's *Medicine, Magic, and Religion* in 1924; and the

applied anthropology of public health, which arose from the post–World War II interest in improving health practices and introducing biomedicine in developing countries. The continuation of these themes can be seen in contemporary medical anthropology in the form of biocultural anthropology, ethnomedicine, critical medical anthropology (CMA), applied medical anthropology, and psychological anthropology.

REVIEWS AND ORGANIZATIONS

The first review that addressed the subfield was William Caudill's 1953 article "Applied Anthropology in Medicine." As the title suggests, it was a review of the inclusion of anthropological concepts and ethnographic methods in medical settings, or in medical sociologist Robert Straus's terms, social science *in* medicine (1957). The first review article with the title "Medical Anthropology" was published by Norman Scotch in 1963 and was more comprehensive in its approach. Subsequent reviews by Horacio Fabrega in 1971 and Anthony Colson and Karen Selby in 1974 continued to debate the nature of the field, with the latter article discussing whether medical anthropology constituted a subfield of anthropology or the intersection of anthropology and medicine.

By the mid-1970s, however, there was a well-organized association representing the field of medical anthropology that embraced the full range of work by people who called themselves medical anthropologists. The Society for Medical Anthropology (SMA) started as the Steering Committee for the Organization of Medical Anthropology, which began publication of the *Medical Anthropology Newsletter* (MAN) in 1968. MAN later became the *Medical Anthropology Quarterly* (MAQ). In 1987 MAQ achieved status as a peer-reviewed quarterly journal that publishes across the full range of research in medical anthropology.

PHILOSOPHIES AND THEORIES

Biocultural anthropology draws heavily on the work of the neoevolutionary theorists of the mid-twentieth century and the adaptation paradigm that entered medical anthropology in the 1970s after the publication in 1970 of Alexander Alland's *Adaptation in Cultural Anthropology: An Approach to Medical Anthropology*. It includes anthropologists trained in cultural anthropology and those trained in biological anthropology and generally examines the way in which adaptation to particular physical and social environmental conditions shapes the experience of disease and illness in societies and the ways in which society adapts to challenges presented by disease. It also involves researchers working in human biology, and early interest among physical anthropologists and anatomists in paleopathology is represented currently by forensic anthropology. Biocultural anthropology has been criticized by writers with a CMA perspective for its failure to assess the assumptions in the adaptation/neoevolutionary theoretical framework critically. However, current theorists such as Goodman and Leatherman (1998) and Andrea Wiley (2004) have attempted to include a political economy approach in biocultural anthropology.

Critical medical anthropology and the political economy of health approaches draw heavily on the work of Marxist and later poststructural social theorists such as Michel Foucault (1975). The central project of CMA is a critical examination of the assumptions and practice of biomedicine, their application in medicine and health policy, and the diffusion of biomedical understandings to non-Western settings, in Straus's terms, social science *of* medicine (or ethnomedical systems). Drawing on the work of Rudolf Virchow, it also can include the application of theory from political economy to the understanding of the distribution of health and illness. Key books in this area include the works of Paul Farmer (1999, 2003), Merrill Singer (2006a, 2006b), and Nancy Scheper-Hughes (1992) and more comprehensive works such as *Medical Anthropology in the World System* (Baer, Singer, and Susser 2003).

Applied medical anthropology has its roots in the international public health movement that gained momentum after World War II. One of the first series of studies of the role of ethnomedical beliefs in the adoption of public health practices and biomedical treatment was carried out by anthropologists working for the Smithsonian Institution's Bureau of American Ethnology under contract to the Office of Special Studies, which later became the U.S. Agency for International Development. Some of this work is summarized in *Health, Culture, and Community*, edited by Benjamin Paul (1955), which argued for the inclusion of the study of ethnomedical beliefs in the design and implementation of public health programs. A number of anthropologists have worked with bilateral and multilateral health organizations such as the U.S. Agency for International Development and the World Health Organization. Interest in the study of non-Western medical systems also has been incorporated, including Mark Nichter's work on ethnomedical systems and medical change (1989, 1992). The line dividing primarily theoretically oriented and primarily applied research has become blurred. Several critical theorists, such as Merrill Singer and Paul Farmer, are deeply involved in the design and implementation of interventions and use a political economy approach to understand the epidemiology of disease and illness.

SEE ALSO *Anthropology; Anthropology, Biological; Disease; Ethno-epidemiological Methodology; Foucault, Michel; Marxism; Medicine; Poststructuralism*

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Kathleen Musante DeWalt

ANTHROPOLOGY, PHYSICAL

SEE *Anthropology, Biological.*

ANTHROPOLOGY, PRACTICING

SEE *Anthropology, Public.*

ANTHROPOLOGY, PUBLIC

Public anthropology focuses the distinctive perspectives and methods of anthropology on public issues. Since the founding of anthropology as an academic discipline in the late nineteenth century, it has changed a great deal and divided into numerous specialties and schools of thought, but certain key features abide. Anthropology is comprehensive of space and time: it covers the entire world, and it treats humankind throughout its history and prehistory, including the present. It is also comprehensive in aspect, treating biological as well as cultural features of humans, and it tends to be holistic, considering how various aspects of life fit together rather than attending mainly to one aspect, such as economics or politics. Finally, anthropology relies strongly on fieldwork, whether archaeological excavation or participant observation of all manner of contemporary situations. Public anthropology deploys these characteristic approaches of anthropology to address public issues.

Some consider public anthropology to be an extension of an older field, *applied anthropology*, which is also termed *practicing anthropology*. That is a valid perspective, but public anthropology tends to focus less on specific problems than on the issues and policies that create the

problems. Applied anthropology, for example, might aid a community in correcting a problem with pollution, while public anthropology might address the policies or culture that create the pollution. Among those practicing and defining public anthropology, emphases and terminologies vary. *Public interest anthropology*, for example, emphasizes that the issues the field is concerned with are defined by public bodies' interests (Sanday), while Rob Borofsky would include the publicizing of anthropology—connecting public figures and public arenas to anthropology.

Whereas anthropologists generally attempt to understand and appreciate all human behaviors, a public anthropologist may conclude that some behaviors or situations should change. She or he may judge that some actions violate human rights and move beyond cultural relativism to take a position against torture, child slavery, or the oppression of women, for example, and then work to prevent those actions or even to change the situations and culture that support them.

Moving from scholarly understanding to advocacy and action, public anthropology may modify classic methods. Ethnographic fieldwork is excellent for in-depth analysis but may take too long to be a good way of investigating urgent problems. Holism offers breadth but can distract attention from a problem at hand. Anthropology as a discipline offers much, but the work of addressing public issues cannot be confined to a single discipline. Instead, it requires a combination of academic disciplines and necessarily reaches beyond academics to involve the entire community. Researchers may need to engage with or even become leaders, administrators, and advocates. Public anthropology welcomes such disciplinary intersections and forms of engagement (Peacock 1997).

Historically and in the early twenty-first century, a variety of anthropological efforts illustrate possibilities for public anthropology, though they are not always labeled as such. Lee Baker's account suggests that the founder Franz Boas's efforts to combat racism were an early example of public anthropology. Boas utilized careful research to demonstrate, for example, that the shape of one's head is influenced by the environment. From this, he argued against racism on the ground that the environment, including culture, is a major factor in shaping physical characteristics that many of his contemporaries identified as being specific to race. Boas's student Margaret Mead (1928) followed his lead by demonstrating through her fieldwork in Samoa that adolescence is culturally shaped and not merely biologically determined. After completing fieldwork in New Guinea and Bali, Mead went on to apply anthropology to a range of public issues, one of which was gender. She utilized her fieldwork to show how definitions of male and female depend on cultural context, and hence she argued for a more flexible understanding and acceptance of wider variation in the roles of both women and men (Mead 1949).

Early twenty-first century examples of public anthropology are diverse. Paul Farmer, a physician and anthropologist, practiced in Haiti initially and addresses public-health issues globally (Kidder 2003). Johnnetta Cole is an anthropologist who has served as a college president, first of Spelman College and then of Bennett College—both historically black colleges for women that Cole has shaped into institutions that nurture positive values. Other examples range from James Peacock's (2007) efforts to build international concerns at a state university and in a regional context to the creation of a union of academics and activists (CIRA) and investigation of public issues in communities (Holland et al. 2007).

Among formal anthropological organizations, public anthropologists can be found in the National Association of Practicing Anthropologists and the Society for Applied Anthropology and among the thirty-plus sections of the American Anthropological Association (identified by specialty or cultural/ethnic focus) as well as in the Royal Anthropological Institute and many international organizations. Several universities offer programs in public anthropology, and there are publications focused on the discipline. The work also occurs in interdisciplinary and nonacademic organizations ranging from local legislatures to international bodies, such as the United Nations.

Public anthropology, then, is not easily defined by pinpointing a single organizational affiliation or any certification; one is not certified to practice public anthropology. It is best recognized as an approach or practice that utilizes anthropological training, knowledge, and perspectives in addressing societal issues.

In a global and diverse world, issues require comprehensive perspectives. More so than most disciplines, anthropology is comprehensive, encompassing a century of field experience in diverse global contexts. The challenge for public anthropology is to deploy that experience in active engagement to address pressing issues effectively. On the one hand, public anthropology must broaden its vision beyond its British and North American academic origins as diverse cultures and communities assume leadership roles; on the other, it must hone its methods to make an impact.

SEE ALSO *Activism; American Anthropological Association; Anthropology; Boas, Franz; Human Rights; Mead, Margaret; Public Policy*

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James Peacock

ANTHROPOLOGY, URBAN

Throughout history, cities have been important places of associated life, human diversity, and interaction. However, while twentieth-century sociologists have been at the forefront of urban studies, social and cultural anthropologists have long neglected the city as a relevant field of research. In the late 1930s a few anthropologists, such as Robert Redfield (1897–1958), shifted their attention from tribal and rural communities to peasant city-dwellers. Influenced by the Chicago school, some American anthropologists engaged in problem-centered studies that focused on poverty, ecology, and minorities; they developed such concepts as the "culture of poverty," cited by Oscar Lewis in *Five Families: Mexican Case Studies in the Culture of Poverty* (1959). Many of these studies examined rural-urban migration in slums and shanty towns in Mexico and other Latin American countries. Meanwhile, a group of anthropologists led by the South African Max Gluckman at the Rhodes Livingston Institute of Northern Rhodesia studied the effects of urbanization on tribal economy and social relations, particularly in the Copperbelt area of central Africa. Research in African cities, however, was not really considered urban research, according to Ralph D. Grillo in *Ideologies and Institutions in Urban France: The Representation of Immigrants* (1985). Although such pioneering work was later criticized for its functionalist approach, it did contribute to the development of new anthropological methods, such as case and network analysis.

More generally, anthropologists seemed to consider the city a new laboratory in which to carry out traditional studies on kinship, small-group dynamics, and belief and value systems. This trend continued throughout the 1960s, prompting Ulf Hannerz in *Exploring the City; Inquiries toward an Urban Anthropology* (1980) to question whether urban anthropology had a specific subject of study.

A more eclectic and regionally diversified urban anthropology emerged during the 1970s as field research was conducted in Japan, India, and Indonesia, and across Africa and South America. Such socioeconomic and geopolitical variety raised some confusion in precisely defining the term *urban*. For some, *urban* referred to population aggregates of a certain size. Others defined *urban* in terms of occupations other than agricultural or subsistence production. Still others defined *urban* as the density of social interaction rather than just demographic or physical density. From a Marxist perspective, it was argued that class struggle constituted the essence of urban life. Two main positions eventually emerged. One regarded the city as a totality that should be studied in itself. The other argued that the city could not be studied as an isolated unit separated from the wider national and international context. Richard G. Fox in *Urban Anthropology: Cities in Their Cultural Setting* (1977) expanded on this position by including historical analysis in the locally significant global context.

By the early 1980s anthropologists appeared to be divided between those who focused on so-called third-world societies—continuing to address town-country relations, rural migration, and urban adaptation—and those with an interest in industrial societies. The latter were mainly native anthropologists.

In Euro-American societies, urban anthropology grew in parallel to the study of the anthropologist's own society. However, many European anthropologists, especially in Britain, regarded the study of one's own society as not "distant" enough to be fit for anthropological research. In contrast, American anthropologists had a long tradition of domestic interest. Their so-called exotic subjects were American Indians, urban migrants, and immigrant ethnic communities. Hannerz, who had carried out a pioneering study of "ghetto" culture and community in *Soulside* (1969), later criticized this approach for viewing the city as a mosaic in which each piece presented different problems. In his later work, *Exploring the City* (1980), he saw the failure to bring together the various pieces as a major limitation of earlier urban research. Criticism aside, American anthropologists such as Ida Susser (1982) and Leith Mullings (1997) have produced in-depth analyses on such issues as urban poverty, ethnicity, and gender.

RELUCTANCE TURNED TO NEW METHODS

Anthropologists' reluctance to engage in urban research originated in the fear of losing their disciplinary identity and in the view that the disciplinary paradigm, which had been developed for the study of village and tribal communities, could not be applied to larger, more complex communities. This debate developed into an advocacy for new methods.

While urban geographers such as Doreen Massey (1999) and sociologists such as Herbert J. Gans (1967) have become increasingly interested in the ethnographic methodology, anthropologists such as Sandra Wallman have doubted the applicability of participant observation in metropolitan areas. In her research in East London, published in *Eight London Households* (1984), Wallman applied research methods borrowed from other disciplines, calling it "anthropology by proxy." In contrast, Italo Pardo's research in Naples in the mid-1980s, presented in *Managing Existence in Naples* (1996), eminently proved that not only was participant observation possible, but that a holistic study in the anthropological tradition could productively be done in urban Europe. Key points of Pardo's work are a focus on the agency-system relationship, on the link between micro- and macro-level analysis, and on the sociological relevance of "strong continuous interaction" (Pardo 1996, pp. 11–12) between the material and the nonmaterial in people's rational choices. New urban research followed, including that of Giuliana B. Prato (2000), on the interactions among economic, political, and cultural aspects of urban life, which contextualized local dynamics and change in national historical processes. Later works, such as that of Manos Spyridakis (2006), have used such an approach to examine the relationships between local and national processes and global restructuring.

The diversity of the societies studied by anthropologists inevitably led to different forms of urban anthropology worldwide. In the 1980s a new trend emerged in the United States. Apart from studying the poor, the marginal, and ethnic minorities, anthropologists began to examine such topics as inherited wealth, congressional patronage, and transnational migrants. Ethnographies on African societies moved to new grounds, examining the dramaturgy of power and status symbolism, the economic role of women, informal activities, ethnic conflict, the reemergence of witchcraft, and new urban segregation. Work, class, gender, religion, and bureaucracy, along with urban planning, became major topics of urban research in Asia. Many urban ethnographies on Latin America focused on economic policies, local politics, women's work, urban development and planning, and indigenous rights.

Urban research in Europe appeared more geographically diversified in the early years of the twenty-first century. Sweden was at the forefront of urban research, addressing welfare institutions, class, and culture in relation to ethnicity. In Britain, apart from a few exceptions, urban research mainly focused on ethnic groups from Commonwealth countries. Urban France attracted the attention of both British and native anthropologists. In spite of a slow start, more urban research was carried out in southern and eastern Europe.

The fields of study mentioned thus far are by no means exhaustive of urban anthropological research. They represent major trends that have developed over the years. Throughout the 1990s, new developments in urban anthropology—notably those of Pardo (2000, 2004)—have investigated the relationships among elite groups, those between ordinary people and the ruling elite, and the legitimacy of governance. In the early twenty-first century—marked by transnationalism, globalization, the reemergence of localism, and the project of multiculturalism—this trend addressed the urgent need to understand the city as a crucial arena in which citizenship, democracy, and, by extension, belonging are critically renegotiated and the morality of law and politics are increasingly questioned and scrutinized.

SEE ALSO *Anthropology; Chicago School; Cities; Class; Colonialism; Culture; Elite Theory; Elites; Ethnography; Functionalism; Geography; Ghetto; Marxism; Metropolis; Migration, Rural to Urban; Multiculturalism; Observation, Participant; Slums; Sociology, Urban; Suburbs; Urban Renewal; Urban Studies; Urbanization; Welfare State*

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Giuliana B. Prato

ANTHROPOLOGY, U.S.

Some trace the concept of anthropology, an academic discipline devoted to understanding every aspect of humans and their societies, to the Greek culture from which its name, *anthropos* (human being) and *logos* (knowledge), derives. According to Merwyn S. Garbarino in *Sociocultural Theory in Anthropology: A Short History* (1983), it is the breadth of anthropology's coverage, and its ability to combine the categories and interests of other fields like economics, political science, social psychology, sociology and even biology that brands it as unique—a holistic approach to "the study of …[humankind] the animal and …[humankind] the social being through time and space" (Garbarino 1983, p. 2).

ORIGINS

Anthropology is very much rooted in European intellectual traditions (Herodotus's descriptions of other societies in the fifth century BCE), Europe's expansion as a colonial power (Marco Polo's *ethnographic* details of the court of Kubla Khan in Peking around 1275), and the rise of imperialism. The Enlightenment was a time of profound and systematic inquiry into the nature of humans (cast during that time as the nature of *man*), and the ideas of Enlightenment scholars shaped many of the core questions that still direct anthropology in the early-twenty-first century. Building upon the approaches of natural history, the precursor to what is now called science, scholars like Jean Jacques Rousseau, Thomas Hobbes, and John Locke attempted to explain human social and cultural variation

by seeking to uncover the *natural laws* that governed the rational order of the universe. The logic behind Newton's *Principia Mathematics* and Locke's *Essay Concerning Human Understanding*, two of the most influential works of the time, could best be summarized as follows: "*The universe was rationally ordered, and laws could be discovered that explained the motions of the planets and the behavior of people*" (Garbarino 1983, p. 12, emphasis original). These principles were thought to be the key to answering two questions about humans as social creatures and human cultural and biological variation: "Why do people behave the way they do?" and "What causes human diversity?" The theories developed in anthropology were attempts to answer these two questions about human behavior and observable differences in societies and in human phenotypes using natural science methodology.

Colonial contact with non-complex, non-industrial other societies gave Europeans the understanding that such societies were *primitive* because they did not mimic European society. By the nineteenth century, social theorists, like anthropologists, adhered to a "doctrine of progress," according to editors W. L. Partridge and E. M. Eddy in *Applied Anthropology in America* (1978). As they described it, "Throughout centuries of progress, the modern, 'superior,' 'moral,' social life of nineteenth century industrialism was believed to have developed from 'primitive,' 'immoral,' 'childlike' societies" (p. 7). Anthropologists believed that by studying such societies, one could trace the progress from so-called primitive societies to their own contemporary status, always holding European social development as the ideal. The two theoretical camps that emerged in the mid-nineteenth century were those who interpreted non-western societies through a lens of *unilinealism*, and argued that "all societies passed through a single evolutionary process," and those who professed a belief in diffusionism, an attempt to explain "the spread of a cultural item from its place of origin to other places" (King and Wright 2003).

Underpinning these theories, and many of the other ideas that would shape anthropology, was the belief in cultural evolution, led by Herbert Spencer. He believed "evolution to be one of the fundamental processes in the universe" (McGee and Warms 2000, p. 7). Charles Darwin also cited Spencer's work in his theory on biological evolution. At the close of the nineteenth century, Europeans dominated the development of anthropological theories and practices: from Lewis Henry Morgan (1818–1881) and Edward Burnett Tylor (1832–1917) to Sir James Fraser (1854–1941); Karl Marx, whom Garbarino argues did not do "competent anthropology" (Garbarino 1983, p. 39); his collaborator and benefactor, Friedrich Engels; and Émile Durkheim.

Some of these great theorists, such as Fraser and Tylor, had never conducted field research, drawing their generalizations from the ethnographies of anthropologists who conducted ethnographic fieldwork as well as from the nonscholarly observations and descriptions of missionaries and travelers. In England and France, sociocultural anthropologists remained separate from those studying archaeology and physical anthropology, and colonialism, fueled by theories of unilineal evolutionism, further reinforced ethnocentric views that so-called primitive societies were at a lower scale of development than those in Europe. Durkheim's use of the cross-cultural approach to understand "social development, suicide, religion, and above all, social cohesion," moved French sociology into the realm of anthropology, and Durkheim is claimed by the discipline today as a key figure (Garbarino 1983, p. 38).

THE EMERGENCE OF AMERICAN CULTURAL ANTHROPOLOGY

Cross-cultural comparison, the culture concept, cultural relativism (introduced by Charles Louis de Secondat, Baron de la Brede and de Montesquieu [1689–1755], generally referred to as Montesquieu), the professionalization of data collection (including William H. R. Rivers's genealogical method used to trace descent and describe kinship patterns as a window onto understanding general social relations), and critiques of unilineal evolutionist approaches to explaining sociocultural variation were all part of the emerging field of anthropology. Also part of it was a belief among "British and American anthropologists … that good ethnographic information would help government personnel avoid mistakes that might be not only costly but also painful and destructive to native peoples" (Garbarino 1983, p. 44). This cozy relationship between colonial administrators and anthropology, such as the Royal Anthropological Institute's training center for colonial administrators, would come back at the end of the century to haunt anthropology, produce a distrust between former colonial people and the discipline in the so-called Third World or the Global South, and give anthropology the unfortunate, but accurate for the period in question, moniker—"child of imperialism and colonialism" (Garbarino 1983, p. 44).

In the United States, at the American Museum of Natural History, a transplanted German, Franz Boas, embarked on the Jesup North Pacific Expedition (1897–1902). The data he collected affirmed the value of anthropologists doing their own research rather than relying on the reports of others. "He encouraged his students to collect as many ethnographic data as possible—total recovery was his goal" (Garbarino 1983, p. 48). Boas turned his back on the tendencies prevalent in the disci-

pline: sweeping and broad generalizations and comparisons. Rather, he stressed to his students that they accumulate large bodies of data using a holistic approach before venturing toward any conclusions. What set Boas apart from his peers was that "while evolutionists had searched for similarities, …[he] looked for diversity." He also paid close attention to history, "believing that each society could be understood only in light of its particular past" (Garbarino 1983, p. 48). In his 1920 essay, "The Methods of Ethnology," Boas summed up his critique of the flawed logic of both evolutionism and diffusionism in the following way: "These methods are essentially forms of classification of the static phenomena of culture according to two distinct principles, and interpretations of these classifications as of historical significance, without, however any attempt to prove that this interpretation is justified" (Boas 2000, p. 135).

According to McGee and Warms's discussion of Boas in their history of anthropological theory, Boas "pioneered the concept of cultural relativism in anthropology." Further, his approach of historical particularism emphasized the discipline's holism, and drew upon the study of "prehistory, linguistics, and physical anthropology" (McGee and Warms 2000, p.131). Boas's desire to introduce scientific rigor to this emerging academic field and his quest for holism were directly responsible for academic American anthropology acquiring the four-field signature of cultural (social) anthropology, archaeology (or prehistory), biological (or physical) anthropology, and linguistics anthropology (Miller 2004, p. 2). This holistic approach would distinguish American anthropology, going forward, from its European progenitors. Boas also brought to this emerging discipline a new "agenda for social reform" as well as theories of race that challenged the prevailing status quo beliefs. He believed that environment and nurturing were significant factors in human development. In his 1940 essay, "Anthropological Study of Children," Boas noted, "Some observations have been made that illustrate the influence of environment, not only upon growth of the bulk of the body but also upon some of the forms that develop very early in life" (Boas 1982, p. 101). Boas's students were the first generation of formally trained academic American anthropologists, and many would become leading figures in the discipline—Alfred Kroeber, Robert Lowie, Edward Sapir, and Ruth Benedict. Subsequent students included Margaret Mead and Zora Neale Hurston.

American anthropology continues to embrace holism, and although the four-field approach, the culture concept, and cultural relativism have drawn sharp criticism and debate, they remain cornerstones of the discipline's distinctiveness. American anthropology's history of contributing to social reform has also attracted new thinkers that include women, nonwhite, and gay, lesbian, bisexual, and transgendered anthropologists. Their contributions include ongoing interrogations of evolutionist theories, positivism, modernization, critiques of ethnocentrism, homophobia, sexism, and racism, both in the society and within the academy, and challenges to the scientific validity of the concept of race, while acknowledging the power of social race. Their interpretive approaches and use of identity politics support methodologies quite different from the empiricism that H. Russell Bernard (1998) claims is ubiquitous to the discipline. These characteristics, along with the persistence of the four-field approach, and a long-standing tension between humanism and science, continue to distinguish American anthropology from its British and French cousins

SEE ALSO *American Anthropological Association; Boas, Franz*

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Irma McClaurin

ANTICOLONIAL MOVEMENTS

During the eighteenth and nineteenth centuries the states of western Europe projected their power and their rivalries into much of Asia and Africa, establishing an "era of western domination over the rest of mankind" (Emerson 1960, p. 5). This creation of a global imperial order eventually generated a counterrevolution as colonized peoples organized anticolonial movements that asserted their rights to self-government. The age of imperialism spawned an era of nonwestern nationalism that gained great momentum during the twentieth-century world wars, thus changing the face of contemporary international politics.

The competition to acquire overseas territories was fueled by political, economic, and technological factors. European states developed military technologies, including naval maneuverability and enhanced firepower, that allowed them to prevail over the societies they sought to conquer. The search for exotic goods, raw materials, and new markets in which to trade provided a material motive for expansion. Political prestige was at stake as well, as states sometimes sought to compensate for defeats in Europe by victories abroad; doctrines such as the "civilizing mission" were invented to justify colonial empires. This gigantic historical enterprise transformed Asia and Africa, not the least by unleashing the will of the colonized to strike back.

Anticolonial movements such as the Indian National Congress, the Association of Vietnamese Revolutionary Youth, and the United Gold Coast Convention took form in individual colonies to confront different local situations. These diverse local movements were well aware of one another, prompting a transnational sentiment of solidarity against colonial rule. Although each movement adopted its own tactics and strategy according to its local circumstances, they shared a sense of common cause with one another. Some struggles for independence were violent, others primarily diplomatic, and yet other anticolonial forces shrewdly combined political and military means to achieve their goals.

A representative regional example of these historical processes can be seen in the case of North Africa. In 1830 France invaded the territory of Algeria, waging an extremely bloody war of conquest. Finally overcoming prolonged Algerian resistance, the French colonial administration encouraged European settlers to occupy the country. Once established in Algeria, France extended its power by imposing protectorates over Tunisia (in 1881) and much of Morocco (in 1912). Then as World War I (1914–1918) engulfed Europe, the French conscripted North African manpower into its army. When these soldiers returned from the trenches of Europe, they contributed to laying the early groundwork for what became national movements for independence. World War II (1939–1945) further eroded the foundations of empire as another generation of Africans was enlisted in the French war effort. In Algeria the National Liberation Front (FLN) took up arms in 1954, spurring France to negotiate the independence of neighboring Tunisia and Morocco in 1956. Through effective diplomacy as well as armed resistance, the FLN achieved the independence of their nation in 1962.

Movements such as Algeria's FLN emerged, often under the leadership of western-trained elites, throughout the colonized world. Mahatma Mohandas Gandhi and Jawaharlal Nehru mobilized the Indian people against the inherent inequalities of colonial rule in the name of certain liberal principles such as self-determination, as articulated by the U.S. president Woodrow Wilson. The Vietnamese nationalist Ho Chi Minh was inspired by both the U.S. Declaration of Independence and the anti-imperialist ideology of V. I. Lenin. Ho traveled to France and the Soviet Union on his path to organizing the anticolonial movement in Indochina. Kwame Nkrumah of Ghana studied in the United States, where he was influenced by pan-Africanism, another anticolonial doctrine. The Sorbonne trained the Tunisian lawyer Habib Bourguiba (1903–2000), who assumed the leadership of the nationalist Neo-Destour Party. East African leaders such as Jomo Kenyatta and Julius Nyerere studied in British universities. These intellectuals from developing countries found the means to turn the west's rhetorical ideals of justice and democracy into tools of liberation. Thus did the imperial powers plant the seeds of the eventual formation of anticolonial movements.

Not only European wars, but also Asian ones destabilized the imperial order, allowing room for anticolonial movements to consolidate. Japan's ambitions to become an imperial power in China in the 1930s, and later in Southeast Asia, shook the hold of the French in Indochina, the Dutch in Indonesia, and the British in South Asia. In India, where the Indian National Congress had been created as early as 1885 as a primarily elite organization, the anticolonial forces had built a mass movement incorporating a wide range of social groups by the 1920s. Thus the Congress Party was well situated to play a vanguard role in the march to independence in 1947. Nehru declared a neutralist foreign policy that offered support to other anticolonial movements. In rapid succession, Burma (now Myanmar) and Indonesia achieved independence under their prewar nationalist leaders—U Nu (1907–1995), who founded the leftist University Students' Union in the 1930s, and Ahmed Sukarno (1901–1970), who formed the Indonesian National Unity Party in 1927. In Indochina, however, the French chose to resist the anticolonial League for

Vietnamese Independence (or "Vietminh," as Ho's organization was known after 1941). France waged a costly war that lasted until the Vietnamese victory at Dien Bien Phu in May 1954.

The struggle in Vietnam was closely watched by the Algerian nationalists. The anticolonial movement in Algeria had long been divided into competing political parties and religious associations. The model provided by Vietnam's successful guerrilla war inspired the more radical wing of the Algerian movement to organize the FLN, which carried out its first military operation on November 1, 1954, just months after the fall of Dien Bien Phu. Thus did a common anticolonialism lead to common strategy across colonized continents. The Algerian war in turn became a major episode in the history of decolonization. The FLN mounted an exceptionally dynamic diplomacy in the Arab world, Africa, and Asia, enlisting both recently independent governments and sub-Saharan anticolonial political parties in support of Algerian independence in such forums as the United Nations and the Bandung Conference. The latter, held in Indonesia in April 1955, was a meeting of the independent states of Asia and Africa, most of which were former colonies. The conference both celebrated this newly won independence and issued a call for ongoing efforts to end colonialism. The "spirit of Bandung" became a major mobilizational theme for the continuing anticolonial movement. The FLN was an unofficial participant in the conference (its representatives lodged within the Egyptian delegation) and it subsequently insisted upon representation of national liberation movements in similar conferences.

The pressure exerted upon the government of France by the war in Algeria became an asset for anticolonial movements in sub-Saharan Africa, speeding the process of decolonization on the continent. Likewise, the radicalization of the anticolonial movement in Ghana under Nkrumah—who proceeded from organizing the Fifth Pan-African Conference in England in 1945 to editing a paper called *The New African* in 1946 to serving as general secretary of the United Gold Coast Convention (UGCC) in his homeland in 1947—accelerated the pace of events. Disillusioned by the moderation of the UGCC, Nkrumah formed the Convention People's Party in 1949 and promptly initiated a Gandhi-style campaign called "Positive Action," for which he was imprisoned by the colonial authorities. His popularity obliged the British to deal with his movement; by 1954 he won a promise of self-government, by 1957 Ghana was independent, and in 1958 he convened in Accra an All-African People's Conference, which was attended by anticolonial forces from around the continent. Meanwhile, Ahmed Sékou Touré (1922–1984), a trade unionist who had assumed leadership of the Democratic Party of Guinea in 1952, persuaded his compatriots to vote for independence from France in a 1958 referendum organized by French president Charles de Gaulle in his attempt to diffuse the mounting international opposition to the French war in Algeria. Political momentum arising out of this Algiers–Accra–Conakry axis enabled anticolonial forces to sweep away the fractured colonial framework in seventeen more African countries in 1960, the "year of Africa."

The influx of former colonies into the United Nations General Assembly allowed the anticolonial movement to harness that institution to the goal of eradicating the final vestiges of colonialism. The assembly sponsored the passage of, for example, Resolution 1514, the Declaration on the Granting of Independence to Colonial Countries and Peoples (December 1960). They formed new instruments such as the Nonaligned Movement and the Organization of African Unity to pursue the remaining agenda of decolonization in the Portuguese colonies and the settler states of southern Africa. Activist states such as Algeria supported the training of guerrilla movements in Angola, Mozambique, and Portuguese Guinea; upon independence in 1975 the Frelimo government in Mozambique in turn aided the Patriotic Front in Southern Rhodesia (now Zimbabwe) and the African National Congress in South Africa, whereas Angola assisted the Southwest African People's Organization (SWAPO) in Namibia. In South Africa, whose African National Congress (ANC, organized in 1912) was one of the oldest members of the collective anticolonial movement, the release of the activist leader Nelson Mandela in 1990 led to the election of an ANC government in 1994. These were among the final battles in the long march of decolonization.

The historian Hugh Tinker has called anticolonial militants "fighters, dreamers, and schemers." Their common scheme was to build a local organization that could join a larger movement that restored self-rule to their peoples.

SEE ALSO *African National Congress; Battle of Algiers, The; Castro, Fidel; Colonialism; Cuban Revolution; Decolonization; Democracy; Haitian Revolution; Imperialism; Indian National Army; Indian National Congress; Justice; Kenyatta, Jomo; Lenin, Vladimir Ilitch; Mandela, Nelson; Mandela, Winnie; Mao Zedong; Mau Mau; Minh, Ho Chi; Neocolonialism; Nkrumah, Kwame; Nyerere, Julius; Organization of African Unity (OAU); Pan-Africanism; Revolutions, Latin American; Socialism; Union of Soviet Socialist Republics; United Nations; Vietnam War; Violence; Violence, Frantz Fanon on; War; World War I; World War II*

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Robert Mortimer

ANTIPSYCHOTICS

SEE *Psychotropic Drugs.*

ANTI-SEMITISM

Is anti-Semitism a new name for an ancient, uninterrupted phenomenon? It is a recent name, no doubt—its 1878 coinage being attributed to Swiss radical Wilhelm Marr. Yet, new names have become one of the curious features of problems that either refer to a long and obstinate history (e.g., the hatred of the Jews through the centuries) or indicate sites of resistance, the refusal to confront diverse and changing phenomena. Understandably, different interests seeking to isolate and refute or, alternatively, contextualize "anti-Semitism" necessarily run the risk of sacralizing or banalizing it. Thus, inseparable from the study and elusive comprehension of such an object (or objects), the politics of anti-Semitism have involved most manifestly the definition of the word *Semite* (along with its companion, *Aryan,* a term that was invented in German Protestant theological circles circa 1771 and quickly spread to England, France, and their respective empires) and most covertly the very representation of the West vis-à-vis its others.

HISTORY

Scholars and ideologues differ in invoking, for different periods and regions of the world, terms such as *Jew-hatred, anti-Judaism, Judeophobia,* more recently including even *anti-Zionism.* Is there, then, one history of anti-Semitism through the ages (Almog 1988)? Should one not attend instead to the distinct histories of relations between Jews and the populations among whom they have lived? A further claim has been made that some forms of anti-Semitism have thrived, in fact, in the complete absence of Jews. French philosopher Jean-Paul Sartre, for example, famously asserted that anti-Semitism is essentially independent of the Jews, that it rather "makes the Jew" ("c'est l'antisémite qui fait le Juif") (1948, p. 84). Indeed, it now seems as if anti-Semitism has become a unified and universal, indeed global, phenomenon, one that has spread and radiated from its historical center in early Christian theology (borrowing from earlier Greek and Latin writers) and in western Europe to all corners of the planet. When considering the genocidal paroxysm that hostility to Jews reached in Europe (and, incidentally, only there), the temptation has increased to read all prior hostility toward Jews as prefiguring the horrors of the Holocaust (Bernstein 1994).

EXPLANATIONS

Clearly, anti-Semitism demands explanation—and refutation—and many compelling cases have been made in this direction. Some have sought to testify to anti-Semitism's quasi-eternal nature (Netanyahu 2001; Bein 1990) or account for its specific persistence (the recurrence of Christian theological prejudice). Others have explored vectors of change (the well-known, modern shift from religion to race described by Léon Poliakov; the teleological understanding of Daniel Goldhagen) and tried to account for historical distinctiveness (Amos Funkenstein on the changing and proximate nature of the Jewish-Christian dispute; Gavin Langmuir's criterion of "socially significant chimerical hostility" [1990, p. 341]; Jeremy Cohen's description of the medieval transformation of the Jews from "theological witness" to "demonic" figures) and geographical or cultural difference (Poliakov, again, as well as Mark Cohen). At times, Jewish thinkers themselves have gone so far as to consider Jewish "antisocial behavior" as a major source of anti-Jewish hostility (Bernard Lazare; Israel Yuval on Jewish collective suicide in the eleventh century).

Other reasons, equally contentious, have been proposed: materialist reasons, for example, and chief among them, socioeconomic ones ("Jews and money," as the old topos goes, but see also Abram Léon's notion of the Jews as a "people-class"), and political reasons (Karl Marx, but also Hannah Arendt's theory of the modern state and the role of "political anti-Semitism" in it) and psychological reasons as well (Sigmund Freud on sibling rivalry and castration, and Max Horkheimer and Theodor Adorno on mimesis). Historians of science have shown the importance of new categories of thought and classification, including those operative in Jewish self-perception (Gilman 1986; Hart 2000). There are those who have sought to locate anti-Jewish hostility within the larger frame of attitudes toward "outsiders" (Mayer 1982) or as one among numerous features of a "persecuting society" (Moore 1987). A recurring dispute continues to separate those who wish to distinguish exclusionary practices on the basis of their (real or fantasmatic) targets and those who uphold the strategic usefulness of conducting a uni-

fied analysis of (and struggle against) all agents of exclusionary practices. Should all racisms be studied and fought as the different guises of one essence or should differences be acknowledged and exposed?

RECENT DEVELOPMENTS

Hannah Arendt (1958) insisted on the numerous elements and structures that relate attitudes toward the Jews with issues of state formation, modern racism, imperialism, and colonialism. After Arendt, however, the most significant breakthrough in the study of anti-Semitism was made by Edward W. Said (1978). Arguing that the history of Orientalism (and prominent among them "western views of Islam") is the history of anti-Semitism, Said has enabled a novel understanding of the emergence of the category of "Semites" as the most obvious manifestation of an enduring theologico-political problem. This problem, which antedates modernity, is at the heart of the West's own constitution as a historical subject. Relating theological premises to political endeavors, and religion to race, Said demonstrates the necessity of understanding the distributive and dynamic distinctions between Jews and Arabs, between Judaism and Islam, strategically associating and dissociating the two from within the standpoint of Western Christendom and, later, of European colonialism (Anidjar 2003). This dynamic approach also means taking the measure of the late eighteenth-century invention of "Semites" as the unity of race and religion, of Jew and Arab (Olender 1992; Hess 2002). From this novel perspective, it becomes possible to better understand the spread of European anti-Semitism to the Arab world (described, for example, by Bernard Lewis and Geneviève Dermenjian), as well as phenomena like Zionism in its different figures, at once emancipatory and potential manifestations of covert self-hatred (Gilman 1986).

The intricate connections that tie modern anti-Semitism to Zionism may further explain the continued contaminations we witness today between the two (Wistrich 1990; Finkelstein 2005). The Zionist "negation of exile" also participated in the project to reinscribe and undo the unity of the Semites and recast it from within as either a separation of Jews from Arabs (anti-Semitism from Orientalism) or as a binational perspective—advocated by Martin Buber, Gershom Scholem, Arendt, and other members of Brit Shalom, a Jewish group founded in 1925 dedicated to promoting coexistence—seeking to invent and promote collective rights for both Jews and Arabs (Raz-Krakotzkin 2001). The debate over the persistence of anti-Semitism as anti-Zionism can therefore be better understood as the enduring effort to maintain Jews and Arabs as separate and opposed, indeed as objects of different, unrelated, exclusionary practices. Reframed as the unity of a theologico-political complex that manages both hostility to Jews and hostility to Arabs, anti-Judaism and the war on Islam, anti-Semitism and Orientalism, are revealed as indissociable: one and the same in their very difference.

SEE ALSO *Jewish Diaspora; Jews*

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ANTITRUST

Antitrust law—also called *competition law*—limits how competitors may act in the marketplace, unilaterally and especially collectively. The aim of antitrust law is to promote social welfare by protecting the competitive process. Two federal agencies are responsible for U.S. antitrust enforcement—the U.S. Department of Justice and the Federal Trade Commission. In addition, state attorneys general and private parties may bring antitrust suits to enjoin specific conduct or recover damages suffered as a result of antitrust violations.

One major antitrust law is the Sherman Act of 1890. It was the congressional response to the invention of the *trust*, a contractual coordination among competitors used to drive up prices. The U.S. Supreme Court developed two frameworks for applying Section 1 of the Sherman Act, which addresses anticompetitive agreements, including those forming trusts. The *per se rule* prohibits categories of agreements without consideration of their actual effects because they are inherently likely to eliminate competition without any offsetting social benefits. The most important of these categories are cartel agreements through which competitors fix prices, rig bids, or allocate customers. Cartels are prosecuted as felonies, and prosecution of international cartels since the mid-1990s resulted in many fines in excess of $100 million and imprisonment for many corporate executives. The *rule of reason* prohibits agreements in other categories if determined actually to harm competition.

Section 2 of the Sherman Act addresses unilateral conduct that would "monopolize" an industry. It has been applied sparingly, especially in recent decades. Landmark early cases resulted in the breakup of the American Tobacco Company and the Standard Oil Company. The most notable modern case involved Microsoft Corporation and resulted in a variety of prohibitions and requirements on its conduct.

The other major antitrust law is the Clayton Act of 1914, which contains several specific prohibitions, the most important of which applies to mergers that would substantially "lessen competition." Since the 1970s, large mergers have been reviewed by federal agencies prior to consummation. The agencies file suit against roughly a dozen mergers per year, although all but a few are later consummated after the merging parties agree to divest significant assets. Controversial cases include the Justice Department's unsuccessful challenge to Oracle Corporation's takeover of PeopleSoft, and oil industry mergers the Federal Trade Commission allowed to proceed.

Antitrust law and policy have evolved considerably, especially as insights from economics were incorporated through case law development. At the vanguard was the Chicago School, which drew attention to efficiency reasons for business practices and was instrumental in limiting the application of the per se rule. Since the early 1980s, increasingly sophisticated economic analysis has been applied. The federal agencies and the courts rely on economic analysis in predicting the competitive effects of proposed mergers and assessing the effects of ongoing business practices.

Antitrust law was unique to the United States for a considerable time, but more than one hundred countries now have antitrust laws. These laws generally prohibit cartel activity, anticompetitive mergers, various specific business practices, and what is termed *abuse of dominance*. The prohibition of abuse of dominance is similar to Section 2 of the Sherman Act. International views on antitrust have converged a great deal, although complete convergence likely never will be achieved.

Outside cartel enforcement, debates on antitrust policy continue. Nearly all agree on basic goals of antitrust policy, but the best means to achieve those goals remain controversial. Recent debates have focused mainly on the proper standards for evaluating the potentially exclusionary conduct of a single competitor. Controversial practices

include 3M's use of rebates across multiple product lines in sales to retailers (found unlawful in the United States) and Microsoft's inclusion of its media player in its Windows PC operating system (found unlawful in Europe).

SEE ALSO *Antitrust Regulation; Chicago School; Deregulation*

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The views expressed herein are not purported to represent those of the U.S. Department of Justice.

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ANTITRUST REGULATION

Antitrust regulation is accomplished through legal statutes that proscribe anticompetitive conduct and unfair business practices. Its major role is to protect consumers against anticompetitive behavior that raises prices, reduces output, and hinders innovation and economic growth (Baker 2003). Antitrust laws originally were formulated for the purpose of combating business trusts. A trust was a legal form of business entity that was created during the nineteenth century in the United States in which the shareholders of the companies in an industry transferred their shares to a board of trustees in exchange for dividends. That process led to the formation of giant monopoly firms such as John D. Rockefeller's Standard Oil Trust. Eventually the term *antitrust* was used to refer to government regulation of monopolies in general.

IMPACT OF ANTITRUST REGULATION ON ECONOMIC ACTIVITY

The impact of antitrust regulation on the economy has been the subject of long-standing debate. Critics of the concept argue that excessive competition endangers the functioning of industries with high fixed costs and low marginal costs such as railroads and public utilities. In this case engaging in monopoly practices such as price discrimination may enable firms to recover fixed costs and realize economies of scale and scope (Kovacic and Shapiro 2000). There are also concerns about the way competition policy is designed and executed. Some corporate leaders feel that the laws are vague and ambiguous, whereas others think that antitrust statutes give too much power to politicians. Public choice theorists emphasize the idea that antitrust enforcement may not always serve consumers' interest but instead favor private corporate or political interests.

Despite those criticisms competition generally is thought to be desirable for a variety of reasons: It stimulates individualism and innovation, guarantees wider product choices for consumers, and promotes economic efficiency as market participants strive for business success. Competition, however, cannot sustain itself. Without regulation competitors inevitably will agree to raise prices, and the victims of that conduct will be unable to protect themselves.

ANTITRUST REGULATION IN THE UNITED STATES

The first federal antitrust law in the United States, the Sherman Act, was passed by Congress in 1890. It outlawed "every contract, combination or conspiracy in restraint of trade" as well as "monopolization." The legislation made illegal collusive arrangements such as price-fixing, bid rigging, resale price maintenance, and territorial and structural division agreements that would tend to establish a monopolistic practice. The Sherman Act gave federal judges substantial discretion in court, and that led Congress to pass in 1914 two other laws to substantiate the original statute: the Clayton Act and the Federal Trade Commission Act. The Clayton Act outlined particular practices that were deemed illegal, such as price discrimination (Section 2), exclusive dealing and tying contracts (Section 3), and corporate mergers when they were intended to create a monopoly (Section 7). The Federal Trade Commission Act formed an administrative body, the Federal Trade Commission, to design antitrust policy. Today the Federal Trade Commission and the

Antitrust Division of the Justice Department are jointly responsible for the enforcement of antitrust laws in the United States. In a 1993 article B. Dan Wood and James Anderson provided a discussion of the competencies and activities of the government agencies that regulate antitrust.

ANTITRUST REGULATION IN EUROPE AND INTERNATIONALLY

The foundation of antitrust regulation in the European Union is outlined in Articles 81 and 82 of the European Community Treaty. Article 81 outlawed agreements such as price-fixing and market sharing, and Article 82 made illegal the practice of predatory pricing aimed at eliminating competitors from the market. Although similar in spirit to antitrust policy in the United States, competition policy in the European Union is intended to advance economic integration among its members.

There has been increasing cooperation among countries in acting against international cartels. The efforts of law enforcement authorities are coordinated through the International Competition Network, an international body whose goal is convergence in the enforcement of antitrust regulation laws. In the first decade of the twenty-first century more than a hundred countries adopted antitrust laws.

LENIENCY PROGRAMS

Leniency programs are legal incentive schemes that offer the members of a cartel amnesty from prosecution if they report a conspiracy and cooperate with the investigation. The purposes of these programs include detection and successful prosecution of cartel members as well as destabilization of cartels and deterrence of their formation. The United States established a leniency program in 1993; the European Union adopted a revised leniency program in 2002. Countries such as Brazil, Canada, the Czech Republic, Germany, Ireland, Korea, Sweden, and the United Kingdom have used leniency programs as part of their antitrust enforcement efforts. Economists and game theorists increasingly are involved in the design of leniency schemes.

SEE ALSO *Antitrust; Competition; Competition, Marxist; Competition, Perfect; Deregulation; Discrimination, Price; Monopoly; Regulation; Returns, Increasing; Returns to Scale*

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ANXIETY

Anxiety is a universally experienced emotion felt as an unpleasant, tense anticipation of an impending but vague threat. Some 18 percent of the adult U.S. population experiences anxiety symptoms to the extent that they can be diagnosed as suffering from an *anxiety disorder*. Anxious people often feel as if something bad were about to happen to them, although they might be unable to identify an immediate threat. The emotion of anxiety is in many ways similar to fear, although fear is typically defined as an emotional reaction to a clearly identifiable threat, such as a charging elephant or the possibility of falling when leaning over the edge of a tall building.

Fear and anxiety have in common several reaction patterns. One typical anxiety response is a sense of choking or constriction, felt as a lump in the throat. Indeed, the Latin root of the term *anxiety* is *angh*, meaning "constriction." Also related is the Germanic word *angst*. However, an anxiety reaction is more than a lump in the throat, as described by psychologist Stanley J. Rachman, one of the leading authorities on anxiety and anxiety disorders. Most experts agree that there are three partially integrated response systems that account for the various symptoms and therefore make up the full experience of anxiety. These are the cognitive, physiological, and behavioral response systems. Examples of each are described in Table 1.

Sigmund Freud (1856–1939), the founder of psychoanalysis in the late nineteenth century, is credited with explication of the role of anxiety in affecting people's daily lives. Freud postulated three types of anxiety. He called a reaction to a real or potential threat *reality anxiety*, whereas anxiety generated within the psychic apparatus as a threat to the ego was called *neurotic anxiety*. According to Freud, the ego keeps its instinctual sources of threat out of conscious awareness so that the true source of neurotic anxiety remains obscure and is experienced as "free-floating" or unattached anxiety. Freud also described *moral anxiety*, arising from an impending or actual violation of internalized standards. Moral anxiety is experienced as shame or guilt.

Response components that make up the experience of anxiety

Cognitive:	Thoughts that something is wrong, a sense of dread, worry about many things, and difficulty concentrating.
Physiological:	Increased activation of the sympathetic nervous system leading to increases in heart rate, blood pressure, perspiration, respiration rate, pupil dilation, and muscle tension.
Behavioral:	Fidgeting, pacing, jittery movements, irritableness, stuttering, flight from or active avoidance of a harmless but feared situation.

Table 1

Physical conditions that can cause anxiety symptoms

Disordered system	Example conditions or substances
Endocrine disorders	hypoglycemia, hyperthyroidism
Cardiovascular disorders	mitral valve prolapse, angina pectoris, arrhythmia
Respiratory disorders	hyperventilation, chronic obstructive pulmonary syndrome
Metabolic disorders	vitamin B12 deficiency
Neurologic disorders	postconcussive syndrome, vestibular dysfunction
Toxins	paint, gasoline, insecticides
Drug intake	alcohol, amphetamines, sedatives, antihistamines
Drug withdrawal	sedatives, alcohol, cocaine

Table 2

Another, more recent characterization of anxiety types is psychologist Charles Spielberger's *state-trait* distinction. *State anxiety* refers to an individual's anxious feeling at a given time: "Are you anxious right now?" *Trait anxiety* refers to one's state of anxiety in general: "Are you an anxious person?" State anxiety is more akin to fear as a response to a specific situation, whereas trait anxiety is part of one's overall personality.

The most common source of anxiety or fear is the perception that one is in imminent psychological or physical danger, or might be at some future time, such as feeling anxious about an impending dental appointment. Another common source of anxiety is concern over what other people might think of you. This social anxiety is particularly prevalent among adolescents, who worry that they might be scrutinized by others and be found lacking in appearance, skills, or behavior.

Although most anxiety is precipitated by perceived environmental threats, there are clear individual differences in how people perceive and react to potential threats. There is good evidence that some people are genetically predisposed to be more anxiety-reactive than others. Furthermore, a number of physical and medical conditions can cause anxiety symptoms that resolve when the condition is successfully treated. A sample of these anxiety inducing medical conditions is shown in Table 2.

The experience of anxiety is virtually universal among humans and most vertebrate animals. Most anxiety is experienced within the normal range, where it escalates under perceived stressful situations (e.g., taking a test) and then diminishes as the threat wanes. However, for those whose anxiety is severe enough to be diagnosed as an anxiety disorder, the experience of anxiety is chronic, debilitating, and interferes with personal, social, and occupational functioning. The various disorders have in common an exaggerated sense of fear, anxiety, and dread; yet each has a distinctive pattern to its expression.

Specific phobias are morbid and irrational (relative to the potential for actual danger) fear reactions to specific objects and situations. The phobic person attempts to avoid or escape from these objects or situations at all cost. Common examples include phobias of small animals (e.g., rats, snakes, spiders), heights, and injections of medicine. *Social phobia* involves fear and anxiety reactions to situations in which a person believes that he or she might be observed by others and be negatively evaluated or might embarrass himself or herself. Public speaking, using public restrooms, and eating in public are among the more common social phobia situations.

Generalized anxiety disorder involves a chronic state of worry, apprehension, and anticipation of possible disaster, no matter how unlikely it is that the disaster will occur. Individuals with *panic disorder* might have a sudden attack of intense anxiety or panic that hits them unexpectedly, out of the blue. In certain cases, when these unexpected panic attacks occur outside the home, people become fearful that another attack might strike if they go out again. When they become so fearful of having another attack that they cannot leave their home or safe haven, they are diagnosed as having *panic disorder with agoraphobia*. *Posttraumatic stress disorder* can occur following a terrifying event. The person might experience persistent, frightening thoughts and images as *flashbacks* to the original trauma. Individuals with *obsessive-compulsive disorder* experience anxiety-related thoughts and feel compelled to enact compulsive rituals, such as washing their hands repeatedly, lest they experience even more intense anxiety.

One of the most serious consequences of untreated chronic anxiety disorders, which are often accompanied by depression, is the increased risk of substance abuse as a form of self-medication. Other consequences of the con-

Drugs for treating anxiety disorders

Drug class	Examples of trade names
Antianxiety:	
Benzodiazepines:	Valium, Librium, Klonopin, Xanax, Ativan
Buspirone:	BuSpar
Antidepressants:	
Selective serotonin reuptake inhibitors:	Paxil, Zoloft, Prozac, Clozapine, Luvox
Tricyclic antidepressants:	Elavil, Endep, Anafranil

Table 3

stant worry and accompanying physical tension are gastrointestinal distress, insomnia, headache, high blood pressure, hyperventilation, nausea, and fatigue.

Anxiety disorders are among the most successfully treated of all mental disorders. Two basic approaches contribute to this effectiveness: psychotherapy (specifically, *cognitive-behavioral therapy*) and pharmacotherapy. The effective therapeutic processes in cognitive-behavioral therapy include helping patients alter negative anticipatory thoughts that often trigger anxiety symptoms and helping them confront their feared situations directly, which allows the anxiety symptoms to dissipate. To facilitate these processes, training in cognitive coping skills and deep relaxation are typically included in a cognitive-behavioral therapy treatment protocol.

Two classes of drugs are known to be effective in treating some anxiety disorders. Antianxiety drugs, primarily benzodiazepines, can reduce anxiety and panic symptoms but they have the serious drawback of physical dependency if taken for extended periods. Many antidepressants, particularly selective serotonin reuptake inhibitors and tricyclics, also have antianxiety properties. Examples of these antianxiety drugs are listed in Table 3.

SEE ALSO *Coping; Mental Health; Phobia; Psychotherapy; Social Anxiety; Stress*

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ANXIETY, SEPARATION

SEE *Separation Anxiety.*

ANXIETY, SOCIAL

SEE *Social Anxiety.*

ANXIOLYTICS

SEE *Psychotropic Drugs.*

APARTHEID

Apartheid is a word in Afrikaans that originally meant "apartness" or "separateness." Now it is the internationally recognized term for the policies of strict racial segregation and political and economic domination of blacks (Africans, "Coloreds," and Asians) pursued by the National Party government of South Africa from 1948 until its exit from power in the early 1990s.

Apartheid catapulted to prominence as a catchword used by the National Party in its successful 1948 electoral campaign to oust Prime Minister Jan Smuts and his United Party, who were accused of undermining racial segregation. The National Party, headed successively by Prime Ministers D. F. Malan, J. G. Strydom, H. F. Verwoerd, B. J. Vorster, P. W. Botha, and F. W. deKlerk, implemented an interlocking set of policies that together comprised apartheid: intensified segregation, "separate development," and harsh political repression.

Intensified segregation was manifested in a plethora of new laws. Starting with the prohibition of marriage and sexual liaisons between races (Prohibition of Mixed Marriages Act, 1949, and Immorality Act, 1950), the National Party government defined criteria for racial categorization of individuals (Population Registration Act, 1950), mandated racially based residential segregation (Group Areas Act, 1950), required segregation of public facilities (Separate Amenities Act, 1953), established separate education for Africans (Bantu Education Act, 1953), banned trade unions from representing Africans in labor negotiations (Native Labour Act, 1953), and empowered government to reserve specific jobs for particular racial groups (Industrial Conciliation Amendment Act, 1956). State power confronted blacks at almost every turn.

"Separate development" distinguished post-1948 National Party policies from previous segregation in South Africa. All blacks were segregated residentially and commercially under the Group Areas Act. Millions of

blacks were forcibly removed from urban "white" areas into crowded "black" areas. Additionally Africans were assigned to ten ethnic "homelands" (based upon existing "tribal reserves") that were to be the sole legitimate space for black political expression and representation under the Bantu Authorities Act (1951) and the Promotion of Bantu Self Government Act (1959). From 1976 onward four "homelands" (Transkei, Bophututswana, Venda, and Ciskei) were granted fictive independence, recognized only by South Africa. "Coloreds" and Asians were granted nominal representation in separate political bodies.

Opposition to apartheid in the 1950s centered around the African National Congress (ANC), led by Nelson Mandela, Walter Sisulu, and Oliver Tambo. The ANC organized nonviolent campaigns of defiance and boycott in alliance with the South African Indian Congress, the South African Coloured People's Organization, and radical whites in the Congress of Democrats. In 1955 representatives of the congresses, led by the ANC, adopted the Freedom Charter, a document demanding full civil rights for all South Africans, an end to racial discrimination, and major economic reform, including selected nationalization. In 1959 the Pan Africanist Congress (PAC) broke from the ANC, accusing it of subservience to non-Africans and insufficient militancy. It echoed the ANC in calling for demonstrations against passes, the hated government control document carried by all Africans.

Following widespread demonstrations protesting the Sharpeville massacre of 1960—in which sixty-nine unarmed Africans were shot after responding to a PAC call to turn in passes and submit to arrest—the government embarked on sustained repression of opposition. Prior to 1960 it had generally respected legal norms, relying upon the Riotous Assemblies Act (1914) and its amendments (1927, 1929), under which the government could declare a state of emergency and ban individuals from political activity, and the Suppression of Communism Act (1950), which granted additional powers to block political activity deemed communist under a broad definition. In 1960 the government enacted the Unlawful Organizations Act, under which it banned the ANC and the PAC. It followed with General Laws Amendment Acts in 1962 and 1963 and the Terrorism Act of 1966, which legalized house arrest and detention without habeus corpus and provided greater penalties up to death for sabotage and terrorism. Concomitantly police adopted the practices of solitary confinement, physical and mental torture, and assassination.

In the view of the government, harsh police state measures were a necessary response to the decision of the ANC in 1961 to abandon nonviolence for armed struggle—to be led by Umkhonto we Sizwe (MK), a military organization jointly directed by leaders of the banned ANC and the clandestine South African Communist Party (SACP)—and to attacks on whites by POQO, an offshoot of the PAC, in 1962–1963. Relentlessly deploying its strengthened arsenal of repression, the government successfully decimated its internal opposition, as symbolized by the imprisonment in 1964 of ANC leaders, including Mandela and Sisulu, on Robben Island. Tambo, who had left the country in 1960, peripatetically undertook the difficult creation of ANC and MK structures in exile.

The Soweto uprising of June 1976 and the nationwide unrest that followed exploded the government's hopes that blacks might acquiesce to apartheid. The government responded with both reform and repression. African trade union rights were recognized in 1980 and 1981, a new constitution was enacted in 1984 granting subordinate voting privileges to "Coloreds" and Asians, and there was selective relaxation of rigid segregation, including the abolition of the pass system in 1985. Repression of opposition was intensified, however, as symbolized by the 1977 death in police custody of Steve Biko, the charismatic leader who founded the Black Consciousness movement in the late 1960s. Nevertheless, opposition inside the country grew. Post-1976 boycotts, strikes, and township demonstrations metamorphosed in the 1980s into open nationally organized opposition, led by the ANC-oriented United Democratic Front (UDF), a burgeoning trade union movement, and prominent church leaders, most notably the 1983 Nobel Peace Prize winner Archbishop Desmond Tutu. Numerous acts of sabotage and armed attacks—organized by the resurgent ANC/MK underground and the ANC mission in exile—were carried out, complementing the external opposition of the worldwide antiapartheid movement and increasingly extensive economic sanctions.

On February 11, 1990, the newly elected president deKlerk freed Mandela and other ANC leaders from prison and legalized the PAC, ANC, and SACP. Negotiations between the National Party, headed by deKlerk, and its erstwhile antiapartheid opponents led by the ANC, headed by Mandela, commenced in mid-1990, leading in late 1993 to agreement upon a new nonracial democratic constitution. In 1993 the last apartheid laws were repealed.

In South Africa's first election under the new constitution in April 1994, the ANC won a majority of votes, and Mandela became president. Mandela vigorously pursued a policy of reconciliation with those who had supported apartheid. The Truth and Reconciliation Commission, headed by Archbishop Tutu, exposed the workings of the apartheid police state. The ANC-led government adopted policies to reverse the consequences

of decades-long apartheid, but apartheid's entrenched legacies of inequality and black poverty proved hard to overcome.

SEE ALSO *African National Congress; Boer War; Coloreds (South Africa); Discrimination; Discrimination, Wage, by Race; Inequality, Racial; Mandela, Nelson; Mandela, Winnie; Nobel Peace Prize; Racism; Separatism; Truth and Reconciliation Commissions*

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Sheridan Johns

APPALACHIA

The Appalachian Mountains range southwestward from Quebec and Newfoundland in Canada to Alabama in the southeastern United States. The central and southern highlands of this ancient mountain range, consisting of the Blue Ridge and Smoky Mountain ranges, the Allegheny and Cumberland plateaus, and the Great Valley in between, are frequently thought of as comprising a distinct sociocultural region known as "Appalachia."

The Appalachian Regional Commission (ARC) defines Appalachia as 406 counties found in 13 states, including all of West Virginia plus portions of Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia. A more common geographical definition of Appalachia includes the ARC-designated counties in West Virginia, Kentucky, Ohio, Maryland, Tennessee, North Carolina, Virginia, and Georgia.

EARLY POPULATION

A diverse population of Native Americans has lived in the mountain South for around three thousand years. The Iroquois, who were the dominant group in the region, came from the west around 1300 BCE and split into the northern Iroquois and the southern Cherokees. The Cherokees were farmers and hunters who lived in small independent villages.

Although Indians in the Appalachians had sporadic contacts with Europeans as early as 1540, it was not until the period 1700 to 1761 that contact between the two cultures accelerated. The Europeans looked to the backcountry for room to expand their settlements and for sources of skins for trading. The Indians opposed them in an ultimately futile attempt to save their homes and hunting grounds. The final defeat of the Cherokees by the British occurred in 1761, and after this date the number of whites in the Appalachian frontier grew rapidly. The conquest of the Indian lands encouraged settlement, and land speculation in the Appalachian frontier ran rampant.

The areas from which the earliest European settlers in Appalachia came and the routes they took into the backcountry helped form Appalachian culture. There were three major reservoirs of population from which people flowed into the Appalachian region in the eighteenth century: the central valley of Pennsylvania, the Piedmont of North Carolina, and western Pennsylvania. The earliest European immigrants into the Appalachian frontier came from eastern Pennsylvania. Around 1720 the German and Scotch-Irish populations around Philadelphia began to move first into central Pennsylvania, then southward into the Shenandoah Valley. Over time they and their descendants pushed south toward the New River, but instead of crossing the mountains into Indian country, they turned southeastward toward the Carolina Piedmont.

By the middle of the eighteenth century this area became a second population reservoir that fed migrants into the mountains. It was the source of early settlers into far southwestern Virginia, western North Carolina, and upper eastern Tennessee. By 1760 a significant number of Germans and Ulster Scots were also coming into Appalachia from western Pennsylvania. These people drifted down the Ohio River, then followed tributaries into the mountains.

By 1763, in clear violation of the English Proclamation of 1763, settlers began to migrate into the western reaches of North Carolina, the river valleys of the Tennessee-Virginia border country, and, just a few years later, even into central Kentucky. The most important of the communities they formed were the Watauga settlements in eastern Tennessee, the Holston settlements of far southwestern Virginia and western North Carolina, and the Boonesborough and Harrodsburg settlements laid out by Daniel Boone after he traversed the Cumberland Gap in 1775. Although many of these people did not own the land they lived on, and acted as agents for absentee owners, it is nonetheless significant that on the eve of the American Revolution there were scattered settlements deep in the American frontier. The population of the

southern mountains grew steadily from the 1760s until the 1820s.

CIVIL WAR ERA AND INDUSTRIALIZATION

The society that emerged in the mountains was not unlike other rural American farm regions that were not far removed from their frontier origins, and that were dominated by connections between land, family, and work. Until the era of industrialization Appalachia was a region of small, open-country communities, concentrated in valleys and up into mountain coves and hollows. The separate settlements were integrated by transportation and communication systems, but only loosely. Each community of farmsteads was relatively self-sufficient socially and economically, and people tended to avoid routinely crossing mountains to reach another community, if possible.

What held these scattered farms together and molded them into some semblance of community was a shared sense of identity, common values, and shared work. People exchanged food and shelter, worshipped in small, independent congregations, engaged in cooperative community service, had a sense of belonging to a larger group of friends and neighbors, and were united in their love of the land and the place they lived.

The mountain economy was also similar in many ways to other preindustrial economies in rural America. There was a preponderance of noncommercial, semi–self-sufficient farms, although in some areas of Appalachia farming for an external market was common. Some industries also emerged in the mountains before the Civil War, but were not significant regionally and had only a marginal effect on the total economy.

Although the issue of slavery did not emerge in Appalachia as the dominant controversy of the Civil War era, the war did have an impact in the mountain areas of the South. The relative absence of slavery in the mountains was the result of the geographic and economic conditions found there. Because of the mountain terrain, it was simply not profitable to develop commercial agriculture based upon a slave workforce, and what slavery did exist in Appalachia was concentrated in the larger valleys of Virginia and Tennessee. There was considerable industrial slavery in Appalachia in the tanning works, salt mines, and iron foundries of Virginia, and in the brick mills of Tennessee and Kentucky.

As the result of their Civil War experiences, a great many northerners came into contact with the southern mountains, and many were surprised by what they found. Great mineral and timber wealth was coupled with a romantic beauty, just at a time when untamed urban growth, foreign immigration, and technological developments were beginning to unalterably change northern urban society. Capitalists responded to the call of profits, but writers, missionary workers, and teachers accompanied the industrialists into the mountains, and their work there was in some ways as substantial and the effects as long lasting as those of their entrepreneurial counterparts.

The dominant stereotype of Appalachia that was formed during this era of industrial development was ironically an image of a society that still held within it much of its late-eighteenth-century frontier heritage. Mountain people were described as noble and savage, independent, proud, rugged, and violent, but also as dirty and uneducated, yet crafty and practical. They drank too much and were lazy, but managed to produce excessively large families.

The people who were mostly responsible for this image of Appalachia were a group of writers in the Local Color Movement. They described in influential journals, short stories, novels, and travel literature a land of contemporary ancestors who were more Elizabethan than American. Violence, feuding, moonshining, and a traditional culture existed in an Appalachia that had been untouched by the forces of modernization. Appalachia began to be thought of as a region in stark contrast to the progressive, urban culture of the rest of the United States.

One of the results of this new image of Appalachia was the urge felt mostly by middle-class women who came into Appalachia from the Northeast to improve conditions in the mountains and uplift Appalachian culture. They typically perceived the regional culture as deficient in many ways, and they worked diligently to bring schools and modern middle-class values to mountain people.

A second feature of the response to this new image of Appalachia was cultural preservation. What certain cultural workers thought represented the best of mountain culture was preserved and protected from contamination by the evils of modernization. This work to preserve mountain ballads, folk crafts, and dances was carried out by traveling folklorists such as Cecil Sharp and at folk schools such as the one founded by John C. Campbell. What they chose to preserve and value did not always reflect the reality and variety of Appalachian culture, but rather the image that was created and perpetuated by the cultural workers themselves.

A third response to the backward image of Appalachia was to use economic development and industrialization to promote progress, because the local population was believed to be incapable of developing Appalachian resources on its own. Promoters of this idea asserted that economic development would provide needed discipline and order in the mountains, and that through industrialization the Appalachian people could become effective contributors to the progress of the nation. Both technological innovations and rapid urban

growth created demands for labor, minerals, and timber, all of which were in abundant supply in Appalachia. Industrialization depended first upon the building of an adequate transportation system into, out of, and within the mountain regions of the South.

The great era of railroad building in Appalachia lasted from 1870 to 1910. By the end of this period the rail network reached into nearly every county by either a main or branch line. The impact of the railroads on every facet of life in Appalachia is hard to overestimate, but the most immediate effect was to open the doors to full exploitation of the region's natural resources.

Coal was the primary resource that drove the Industrial Revolution in Appalachia. The ambitious men who opened and operated the mines were outsiders from middle- or upper-middle-class backgrounds who established the company town system in Appalachia and wielded enormous political and economic power in the coal fields and beyond. They manipulated the local and state political system to their industry's benefit, sometimes to the long-term detriment of the local economy. The laborers who worked in the mines and moved their families into company towns to live were a varied lot. They were primarily native Appalachians, southern blacks, and immigrants from southern and eastern Europe.

Although coal mining was certainly the most important industrial development in Appalachia, it was not the only one. From 1880 to 1930 industrialization also showed up in forestry and timber exploitation, textile mills, railroading, non-coal mineral mining, and chemicals production.

The impact of industrialization in Appalachia was tinged with good and bad features. At the end of this era, fully two-thirds of Appalachian people made their living from nonfarm work. The economy had moved, by World War I, from a local or regional orientation to a national and international one. Although most mountain people no longer gained their primary incomes from the land, an attachment to the land remained an important regional value. People still farmed on a part-time basis, growing large gardens and raising some livestock. Older values such as strong family ties and conservative religious beliefs remained central to regional culture despite the wrenching economic and social changes of the late nineteenth and early twentieth centuries.

One of the most important results of industrialization in Appalachia has been the negative impact it has had on the long-term economic health of the region. None of the industries in Appalachia, and especially not the coal industry, encouraged rival or spin-off economic development during their boom years. The effect has been sporadic economic growth without real economic development.

POSTWAR TO THE PRESENT

World War II and the years immediately following it were turning points in the history of Appalachia, just as they were for the rest of the United States. Once they returned home from their wartime experiences, many young men and women focused on the lack of economic opportunities in Appalachia, and began to move out of the region again in search of better jobs. This resulted in a great outmigration from Appalachia to the North and Midwest. Between 1945 and 1965 nearly 3.5 million people left Appalachia in search of a brighter economic future in major cities in the Midwest. Sizable subcultures of Appalachian migrants built up in these cities.

Despite the general prosperity in the United States, the 1950s was a time of extreme poverty in Appalachia. A renewed national attention to Appalachia was accelerated by the campaign for the Democratic presidential nomination in 1960 when the major candidates visited West Virginia. After he became president in 1963, Lyndon Johnson pushed the Appalachian Regional Development Act through Congress. The bill called for federal funding for secondary and vocational education programs, highway construction, timber management programs, and widespread promotion of tourism.

Most historians think that though the War on Poverty had some successes, it generally failed in Appalachia. The heritage of the billions of dollars spent on highways and industries in the mountains has been continued poverty amidst pockets of prosperity. Economic development in the 1970s consisted of the coal boom of 1974 to 1978, the tourism-generated land boom in eastern Tennessee and western North Carolina, a growth in textile production, some small-scale component-part manufacturing, and the growth of large-scale chain stores and fast-food establishments located within the more prosperous areas. Outside the few growing towns and cities, there are rural areas where poverty is still the norm.

One important result of the War on Poverty in Appalachia was the emergence by the late 1970s of a strong sense of regional identity and the need to express a positive image of Appalachia when writing or talking about its people, history, and culture. Even the word *Appalachia* became more accepted than it had ever been. To many within the region, the culmination of the organizing and turbulence of the 1960s was an Appalachian Renaissance filled with a strong dose of regional pride that was associated for this first time in American history with being from the mountains.

SEE ALSO *Great Depression; Industrialization; Migration; Mining Industry; New Deal, The; Poverty; Railway Industry; Regions; South, The (USA); War on Poverty*

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Richard Straw

APPEASEMENT

Appeasement is a foreign policy strategy of making concessions to an adversary in order to avoid direct military conflict. As a foreign policy strategy it is rarely advocated today, largely as a result of the failure of British diplomacy vis-à-vis Nazi Germany in the later 1930s. It remains a central concept beyond this historical moment, however, in that it is often invoked in foreign policy debates in the United States and elsewhere as a term of opprobrium to describe concessions to adversaries. Appeasement is not necessarily a policy resulting from fear and weakness, however; it has the potential to be effective if political leaders can understand the distribution of power in the international system.

THE IDEA OF APPEASEMENT

According to the Oxford English Dictionary (1993), the term *appease* means, "to bring peace" and was first used in English around the thirteenth century. *Appeasement*, thus, means "pacification" or "satisfaction." Because it implies the satisfaction of the *demands* rather than the requests of an aggrieved party, *appeasement* has had an underlying negative connotation even when used to describe interpersonal relations. But its strongly negative connotations did not solidify in the English-speaking world until after World War II (1939–1945). Various dictionaries and encyclopedias of the social and political sciences demonstrate this negative valence quite clearly. One author, for example, describes the policy as the "surrender of a vital interest for a minor *quid pro quo*, or for no reciprocal concession at all" (Plano and Olten 1982, p. 229).

Despite this generally negative valence, however, some have described the policy in more positive ways: for example, as a form of conflict resolution (Walker 2005). Indeed, satisfying the demands of an opponent in order to avoid war need not be a negative policy, especially if the opponent is viewed as having been unfairly treated in the past. Conflict resolution often requires the granting of concessions, something that, while very few would call it appeasement, is not that far from the policies that were identified as such in the late nineteenth and early twentieth centuries.

BRITISH INTERWAR DIPLOMACY

Appeasement as a foreign policy strategy is most closely associated with British policies in the interwar years (1919–1939). Martin Gilbert in his *The Roots of Appeasement* (1966) gives the clearest analysis of British appeasement policies. He argues that they should be seen as resulting from a combination of guilt over the harshness of the Versailles treaty, liberal policies favoring economic interdependence, and an abhorrence of war. The end of the "Great War" led to the Paris Peace Conference, during which the allied powers sought to both impose a settlement on Germany and create new institutions that would, it was hoped, eliminate war in the future. Although a desire for revenge animated many at the conference, others sought to counter those impulses. During the conference David Lloyd George, the British prime minister, authored the famous Fontainebleau Memorandum, which sought to limit the harshness of the reparations scheme, a proposal that Gilbert sees as being in the spirit of appeasement.

Appeasement during the interwar period revolved around two issues: reparations and rearmament. After the Versailles settlement, British policymakers soon recognized the precarious position in which Germany had been placed by the imposition of harsh reparations. John Maynard Keynes's influential book *The Economic Consequences of the Peace* (1919) supplied the foreign policy community with strong economic reasons for decreasing reparations. In 1924 the Dawes Plan—the result of an American-led commission, but largely inspired by British attempts to improve the German economic situation—resulted in a reduction of German war reparations. The Young Plan of 1929 further reduced the burden of reparations, which were eventually abolished at the Lausanne Conference in 1932 (Carr 1947).

While the decrease in German reparations payments was generally perceived as positive, concessions on security agreements were more controversial. The Versailles settlement included the provision that the Rhineland was to be occupied for fifteen years by Allied forces and per-

manently demilitarized. Stringent limits were also placed on German armed forces. These limits were violated soon after Adolf Hitler came to power in 1933. Quickly dismantling any semblance of constitutional government in Germany, Hitler began the process of rearming the German nation. On March 7, 1936, Germany remilitarized the Rhineland, a move some British leaders considered acceptable, as in their view it rectified the unjust division of Europe created by Versailles (Rock 1977, p. 38). Others in the British political system, however—most prominently, Winston Churchill and Anthony Eden—were beginning to see the folly of appeasing the Nazis.

At this point, the policy of appeasement began to appear as one of weakness rather than strength. In March 1938, the Germans annexed Austria, an action that resulted in the British undertaking a high-level policy review of relations with Germany. Rather than seeing this as an opportunity to halt an aggressive dictator, however, British leaders proposed to further appease Hitler in order to avoid another shock to the fragile European system. When German troops began massing near the Sudetenland, a region of Czechoslovakia with a large percentage of German speakers, the British sought to convince Prague of the wisdom of appeasement. Failing to convince the Czechs to accept German demands, the British sought to negotiate directly with Germany. After two separate trips to Germany to convince Hitler to moderate his demands, in late September 1938 Prime Minister Neville Chamberlain flew to Munich, where an agreement was signed (without a Czechoslovakian signature) giving the Germans the Sudetenland. Germany occupied the rest of Czechoslovakia in March 1939, leading the British to finally stand up to Hitler by guaranteeing the borders of Poland. When Hitler attacked in September 1939, war erupted and appeasement lay in ruins.

APPEASEMENT SINCE WORLD WAR II

In the postwar period, *appeasement* quickly became a term used to identify a failed or misguided policy. British and American policymakers, embroiled in the cold war, refused to "appease" the Soviet Union when faced with its aggressive policies. In 1956 Prime Minister Anthony Eden, who had resigned from the British government in the 1930s over appeasement policies, intervened in Egypt with the French and Israelis because he believed that concessions to Nasser would be a new form of appeasement. American president Lyndon Johnson's unwillingness to back out of the Vietnam War resulted, in part, from his refusal to appease Ho Chi Minh. In the United States' long war with Iraq, both Democratic and Republican leaders (for example, the Democratic secretary of state Madeline Albright and the Republican vice president Richard Cheney) claimed that to give into Saddam Hussein would be Chamberlain-esque appeasement all over again.

This reflexive view of appeasement as weakness, however, misunderstands its potential. Paul Kennedy points out that appeasement arose from a British tradition of ethical foreign policy reaching back to nineteenth century, when William Gladstone sought to create a foreign policy grounded in peace and economic prosperity. Great powers can indulge in policies of appeasement in order to manage the international system, as Kennedy argues the British did in their relations with the United States during the latter half of the nineteenth century when they allowed an emerging power to take control of the Western Hemisphere (Kennedy 1976).

If an adversary seeks a change in the international system that does not weaken but might actually improve the position of the stronger power, a policy of appeasement might well be a wise move. It is only when it is undertaken in response to the demands of a powerful state bent on aggrandizement that appeasement can be deemed a policy failure. This suggests that appeasement can only succeed if leaders can correctly appraise the distribution of power in the international system. When an adversary who is weak makes demands that will not necessarily increase its strength too much, appeasing those demands might decrease conflict in the future. At the same time, by constantly conceding to demands from different powers, a great power might eventually undermine its ability to deter others in the system.

The realist policy of maintaining a balance of power might include appeasement at key moments, in order to ensure stability. E. H. Carr, one of the leading realists of the twentieth century, suggested in his classic *Twenty Years Crisis* (1940) that British appeasement was a realist policy, in that it combined the interests of Britain with an honest appraisal of power—although in later editions, Carr excised those passages in which he justified appeasement (Hall 2006).

The normative foundations of appeasement that underlay British policies toward Germany in the interwar years correspond with the goals of modern liberal internationalism: defusing conflict, rectifying unjust settlements, and avoiding war. British policymakers' inability to appreciate the emerging power of Germany prevented them from seeing how their good intentions could lead to war. The disastrous consequences of their policy choices continue to influence how appeasement is understood today. Although it is difficult to change the word's connotations, appeasement, from a position of strength, should also be seen as a means to avoid conflict.

SEE ALSO *Annexation; Chamberlain, Neville; Churchill, Winston; Conflict; Foreign Policy; Hitler, Adolf; Keynes, John Maynard; Negotiation; Strategy; War; War and Peace; World War II*

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APPLE

SEE *Microelectronics Industry.*

APPORTIONMENT

The term *apportionment* refers to the decennial process that divides membership in the U.S. House of Representatives among the fifty states according to the size of the states' populations. After apportionment, state governments initiate redistricting, the highly contentious process of revising the intrastate boundaries of the House districts. Article I, Section 2 of the U.S. Constitution mandates that apportionment take place every ten years, and Congress is given the responsibility of managing the procedure. Two amendments to the Constitution influence apportionment: Amendment 14, Section 2 repealed the original provision that considered nonfree persons (slaves) as three-fifths of a person for counting purposes, and Amendment 16 released the federal government from the original bind of having to use a state's population as a basis for determining tax levies.

The Constitution entitles each state to have at least one representative in the House, with the "respective numbers" of each of the states forming the basis for the further distribution of seats. Congress has the power to define the precise manner of dividing up House seats, and this process has been a continuous source of controversy. In issuing his first presidential veto, George Washington "rejected a formula designed by New York's Alexander Hamilton for allocating seats after the 1790 census" (Prewitt 2000, p. 2). More recently, a 1998 U.S. General Accounting Office paper noted that after the number of available House seats was fixed at 435 in 1911, "a gain of representation for any one state came only with a loss of representation for another state" (p. 10). Orville J. Sweeting notes that the cap was instituted because "the House threatened to become so large, if size continued to follow population growth, that it could not properly transact its business" (1956, p. 440).

Southern and rural members of Congress were so fearful of the consequences of losing their seats due to the urban and northward shift of the population that they prevented the constitutional mandate of apportionment from taking place during the 1920s. Although apportionment has occurred in every decade since the 1930 census, the political battles associated with the process have not subsided. As currently written, Title 2 of the U.S. Code requires the use of the "method of equal proportions" to determine the allotment of seats among the states, as described in an online document produced by the Census Bureau. This method has been in place since the apportionment associated with the 1940 census, and it was upheld as constitutional by the Supreme Court in 1992 in the case of *United States Department of Commerce v. Montana*.

In the prelude to the 2000 census, there was a strong debate over whether statistical sampling to adjust for census undercounting could be used in the apportionment process. In 1999, the Supreme Court's five-to-four ruling in *Department of Commerce v. United States House of Representatives* affirmed that Section 195 of Title 13 of the U.S. Code prohibits the use of statistical sampling, but the Court explicitly declined to rule on the constitutionality of using sampling should this section of the code be repealed.

SEE ALSO *Census; Congress, U.S.; Gerrymandering*

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APPROPRIATIONS

Appropriations are legislative acts that authorize the withdrawal of public money from the treasury to fund government programs. Thus, appropriations measures provide the legal authority to spend government money, but are distinct from the act of spending. For example, the legislature could appropriate $100,000 for a public-works program, but the agency responsible for the work could spend only $50,000 to complete the program.

Generally, the two main types of appropriations measures in the United States are for mandatory spending and for discretionary spending. Appropriations for mandatory spending are budget authority for entitlement programs, such as Social Security, set by legal parameters (confusingly, this budget authority is generally considered outside the appropriations process). Appropriations for discretionary spending are budget authority for annual measures. The main work of the Appropriations Committees of the House of Representatives and the Senate is to hold hearings concerning appropriations measures for different areas of discretionary spending. In 2007, there were thirteen areas of discretionary spending: agriculture; commerce, justice, and state; defense; District of Columbia; energy and water development; foreign operations; homeland security; interior; labor, health and human services, and education; the legislative branch; military construction; transportation; veterans administration; and housing and urban development.

The appropriations process is distinguished from many other forms of legislation considered by Congress because of the legally proscribed budgetary cycle. The annual appropriations cycle begins near the start of each calendar year when the president submits his annual budget for the upcoming fiscal year with recommended spending levels. Congress is required by law to respond to the president by passing an annual budget resolution. This resolution provides a guide for subsequent congressional action by setting spending ceilings for the different areas of discretionary spending and by projecting appropriation levels for the next five fiscal years. Once the budget resolution is passed, the legislation is referred to the Appropriations Committees of the House and Senate, and the legislative process continues in much the typical manner.

From the mid-1990s Congress has had increasing difficulty passing separate appropriations bills for the different areas of discretionary spending. This can create problems for government operation because if Congress fails to pass appropriations legislation in time for the next fiscal year, the effected programs lose the authority to spend and must shut down. To prevent the shutdown of government operations, Congress may pass a continuing resolution to provide temporary funding. To speed the legislative process, appropriations measures have been passed with increasing frequency as omnibus legislation that packages multiple areas of spending into one bill.

Article 1, section 9, of the Constitution states, "No Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law; and a regular Statement and Account of the Receipts and Expenditures of all public Money shall be published from time to time." Because the passage of legislation requires the approval of the legislature, this provision provides a strong constitutional check on the president's ability to act without the approval of Congress. Article 1, section 8, of the Constitution gives this check additional weight in military matters by prohibiting congressional appropriations to raise and support armies for more than two years, thereby restricting the legislature's ability to cede full control over the army to the president, who already serves as commander in chief of the military.

SEE ALSO *Congress, U.S.; Gerrymandering*

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ARAB LEAGUE, THE

Officially known as the League of Arab States and consisting in 2006 of twenty-two countries, the Arab League was formed in 1945 by the governments of the then-independent or semi-independent Arab counties of Egypt,

Syria, Lebanon, Transjordan (now Jordan), Iraq, Saudi Arabia, and Yemen. Other Arab countries joined the League as they became independent, including Algeria, Bahrain, Comoros, Djibouti, Kuwait, Libya, Mauritania, Morocco, Oman, Qatar, Somalia, Sudan, Tunisia, and the United Arab Emirates. In addition, the Palestine Liberation Organization (PLO), while not ruling a sovereign territory, was granted full membership in 1976 as the representative of the Palestinians. In 2003 Eritrea became an observer, but has not pursued full membership.

The main purpose of the Arab League is to provide a forum for coordinating policies concerning education, finance, law, trade, and foreign policy among signatory members, and to help resolve their disputes. The secondary institutions that have resulted from that mandate coordinate developments in such areas as communication, transport, construction, medicine, and some minor industries. The Arab Common Market, established in 1965, has generally failed to live up to its expectations and original goals of abolishing custom duties, free movement of capital and labor among member countries, and coordination of economic development.

The most visible feature of the Arab League, however, is its political role as a governmental forum for common Arab national concerns, showcased in its highly publicized, though usually ineffectual, summit meetings. Historically the League sustained a consensus on supporting the independence of still colonized Arab countries. In the same spirit it opposed the creation of the state of Israel in 1948, and for decades supervised a joint Arab boycott of Israel and of companies doing business with it. For ten years after 1979 the League suspended Egypt's membership because of its treaty with Israel—a treaty that violated a prior principle of coordinating Arab policies regarding the Jewish state—and moved its headquarters from Cairo to Tunis, where it remained until 1991 before returning to Cairo.

The political history of the Arab League has often been characterized by factional infighting among member states, which during the cold war took the form of a split between pro-Soviet and pro–United States regimes. A unified stance vis-à-vis Israel was broken when Egypt, Jordan, and the PLO signed separate agreements with Israel, although a semblance of a common position reemerged once the peace process stalled. With the notable exception of Syria, the League also held a unified position supporting Iraq during the devastating Iran-Iraq War (1980–1988). However, it was thrown into turmoil after the Iraqi invasion of Kuwait in 1990, which highlighted a low point in inter-Arab rivalries and also violated the League's charter prohibiting the use of force by member states against each other.

Generally the Arab League is regarded not to have been successful in effectively promoting Arab unity and even coordinating policies, and many Arab governments are reluctant to agree to reforming and strengthening the League so that it could better pursue its aims. However, as a highly publicized forum for Arab governmental discussions, the League maintains an important symbolic status as a voice of a common aspiration for more Arab unity and coordination.

SEE ALSO *Arabs; Peace Process; Zionism*

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ARAB-ISRAELI WAR OF 1967

The Arab-Israeli War of 1967, also known as the Six-Day War, erupted between Israel and several of its neighbors on June 5, 1967, lasting until June 10. When the war was over, Israel had soundly defeated the militaries of Egypt, Syria, and Jordan and seized large amounts of territory, including the Old City of Jerusalem and its attendant holy sites, the Sinai Peninsula, the Gaza Strip, the West Bank, and the Golan Heights. The war transformed the political landscape of the Middle East from a military contest between Israel and its neighbors into (the 1973 Arab-Israeli War notwithstanding) what was primarily a political struggle between Israel and the more than a million Palestinians under Israeli occupation.

THE POLITICAL BACKGROUND

The Six-Day War had its roots in the creation of the Palestine Liberation Organization (PLO) by the Arab League in 1964. While Arab national armies had already been defeated twice by Israel (in 1948 and 1956), the creation of the PLO allowed Palestinian nationals to attack Israel directly and without support from the weakened Arab states in their quest to destroy the Jewish state and create a Palestinian homeland. In 1965 the PLO began attacking Israel from bases in Egypt and Jordan. Despite the fears of Egypt and Jordan that the aggression might lead to a general war, the PLO attacks increased in num-

ber and scale, from 35 in 1965 to 41 in 1966 and 37 in the first four months of 1967.

Furthermore, tensions had been steadily rising between Israel and Syria over Israel's National Water Carrier irrigation project, which channeled water through the Jordan River for use in Israel. A Syrian project begun in 1964 attempted to divert the flow of water; Israel responded in 1965 by bombing the Syrian diversionary project. In retaliation, Syria bombarded Israeli villages and farms in the northern part of the country. A particularly deadly attack on April 7, 1967, provoked Israeli retaliation and six Syrian MiG fighters were shot down.

The Soviet Union, a major patron and ally of both Egypt and Syria, issued warnings on May 13 (now known to be false) that Israel was preparing for an invasion of Syria, prompting Syria to invoke its mutual defense pact with Egypt. The reasons for the Soviet deception are still unclear. Some believe that the Soviets hoped the increasing U.S. involvement in Vietnam would prevent their assisting Israel, creating an opportunity to seriously damage Israel and bolster Egyptian president Gamal Abdel Nasser's power and prestige. It is also possible that the Soviets hoped Israel would prevail and remove Nasser from the scene, to be replaced by a more stable and predictable leader. Either way, despite assurances from UN observers that there were no signs of Israeli troop buildups or preparations for invasion on the Israeli-Syrian border, both Syria and Egypt accepted the Soviet warnings and initiated plans for an invasion of Israel.

PRELUDE TO WAR

On May 15, 1967, Egypt began moving troops into the Sinai Peninsula and massing them near the Israeli border. This was followed on May 18 by a Syrian mobilization that moved forces into position along the Golan Heights. On the same day President Nasser demanded that the United Nations Emergency Force, which had been stationed in the Sinai as a buffer between Israel and Egypt since the 1956 war, be withdrawn. United Nations Secretary-General U Thant complied with the demand, in spite of a prior promise to take any such request before the UN General Assembly.

The withdrawal of the UN troops was quickly followed by an Egyptian blockade of the Strait of Tiran, Israel's only supply route to Asia and the main shipping lane for oil from Israel's largest supplier. Israel had made it clear that any attempt to close the strait would be considered cause for war and, following the 1956 Suez Crisis, had been given assurances by the United States and the United Nations that Israel had right of access to the Strait of Tiran. However, when Israel asked the major world powers to enforce those assurances, Great Britain and France reneged. The United States offered to form an international armada to break the Egyptian blockade, a proposal Israel accepted, although it was expected to take several weeks to assemble the armada and despite the worsening situation in the Sinai and Golan Heights.

On May 30, responding to pressure for Arab unity, Jordan joined the military alliance between Egypt and Syria. This, along with the entrance of Iraq into the alliance on June 4, brought the combined size of the Arab armies to approximately 465,000 troops, 2,880 tanks, and 810 aircraft. Against that force the Israel Defense Forces (IDF) mustered 275,000 troops (including reservists), 1,100 tanks, and 200 planes. Israel's demographics (a relatively small population of around 2.3 million in 1967) and military structure (a small standing army backed by large numbers of reservists who could be called into duty when needed) made it difficult for the army to stay mobilized for long periods of time without doing massive damage to the domestic economy. Faced with hostile armies seemingly gearing up for war on all sides, the closure of a major shipping route, and the prospect of a troop mobilization with no immediate end in sight, Israel chose to launch a preemptive strike.

THE WAR

The Six-Day War officially began on June 5 when Israel launched a surprise attack on the Egyptian air force. The Israeli air force caught the vast majority of Egyptian planes on the ground and destroyed more than three hundred fighters, bombers, and helicopters in less than two hours. After decimating the Egyptian air force, Israel turned its air power against Jordan, Syria, and Iraq, destroying another 107 planes. Israeli losses totaled twenty aircraft, twelve pilots killed, five wounded, and four captured. The preemptive Israeli raids essentially decided the course of the war, leaving Israel with total air superiority. Israeli ground forces could operate without fear of air attack and enjoyed unchallenged air support.

Following the air assaults, Israeli ground forces began moving against Egyptian forces in the Sinai. Relying on its tank divisions to push the assault forward, Israeli forces moved deeply and quickly into the Sinai, without slowing to secure supply lines or transportation routes. By the end of June 6, Israel had seized the Gaza Strip and was moving quickly toward the Suez Canal. As Israeli forces drove to the canal, any Egyptian forces not retreating at top speed were encircled and destroyed. Meanwhile, in a self-proclaimed effort to spare the army total annihilation, the Egyptian commander in chief ordered the entire Egyptian army to retreat across the Suez Canal. Such an order issued so early in the conflict broke the morale of the soldiers and effectively finished the Israeli task of destroying the Egyptian army. Forty-eight hours after the beginning of the war, Israeli forces reached the Suez Canal, and by

the end of June 8, the entire Sinai Peninsula was under Israeli control.

On June 9, the UN Security Council enacted a cease-fire that left Israel in control of the Sinai; Israel accepted the cease-fire immediately, and Egypt followed suit on June 10.

While Israeli tanks were driving through the Sinai, Israel was trying to keep the other major fronts in Jordan and Syria quiet, in accordance with the preferred Israeli strategy of fighting on only one front while holding the others. Israel had warned Jordan's King Hussein to stay out of the conflict, claiming that Israel had no intention of attacking Jordan, Jerusalem, or the West Bank. Israel also indicated its willingness to absorb a so-called barrage of honor, whereby Jordan could shell certain Israeli positions to fulfill its alliance commitments without provoking an Israeli response. However, when the Jordanian artillery barrage expanded and the Jordanian army moved to occupy a UN observation post in Jerusalem, Israel seized the opportunity to reunify Jerusalem and eliminate the Jordanian presence on the west bank of the Jordan River.

Israeli soldiers and paratroopers began moving toward the Old City of Jerusalem on June 5 and by June 6 had encircled the walled city. Israeli tanks also began sweeping through the West Bank, seizing the towns of Ramallah, Latrun, Jenin, and Nābulus, in the process opening the Tel Aviv–Jerusalem road for the first time since 1947. Early on the morning of June 7, Israeli paratroopers broke through Jordanian resistance, entered the Old City of Jerusalem, and seized the Temple Mount, home of holy sites for both Jews (the Western Wall, the last remaining structure from the Second Temple of King Solomon) and Muslims (the Dome of the Rock and al-Aqsa mosques), reuniting the divided city of Jerusalem. Later the same day, Israeli forces occupied Bethlehem and Hebron, placing the entire West Bank under Israeli control. Fighting between Israel and Jordan ended on June 7 as both sides accepted a UN Security Council call for a cease-fire.

On the northern front, Israel and Syria limited their exchange to artillery barrages for the first four days of the war. Israel was content to postpone an invasion of Syria until after Egypt and Jordan had been dealt with, while Syria, despite all the prewar bluster and alliances, seemed satisfied to hang back and leave Egypt to the Israelis. However, Israel began to fear that a cease-fire might take effect before Israel had the opportunity to seize the Golan Heights. On June 9 Israel began an offensive to push the Syrians away from the Syrian-Israeli border and Israel's northern villages and farms. Israeli armored units quickly punched holes in the Syrian defenses and pushed deep into the Golan. By the end of June 10, Israel had occupied the entire Golan Heights. The acquisition of the Golan Heights, along with the Gaza Strip, West Bank, and Sinai Peninsula, more than tripled Israel's previous size. The new territory gained the country important strategic positions, but also created a perennial political problem: Israel now occupied territories inhabited by more than a million Palestinians.

Over the course of the Six-Day War, Israel defeated the combined armies of three Arab nations at a relatively low cost to its own troops. All told, Israel lost approximately 800 soldiers, with about 2,500 wounded and 18 taken prisoner or missing. Egyptian losses were the heaviest: between 10,000 and 15,000 dead, 15,000 wounded, and 5,500 taken prisoner. Jordan had about 2,000 soldiers killed and 5,000 wounded, while Syria had 700 dead, 3,500 wounded, and 500 taken prisoner.

THE POLITICAL AFTERMATH

The Six-Day War is, unquestionably, one of the seminal events in the modern Middle East. The Israeli victory redrew the political map of the region and created an intractable problem that would remain unresolved for decades.

Israel initially hoped that the destruction and humiliation of the Arab armies would pave the way for diplomatic initiatives, and on June 19 the Israeli cabinet voted to restore the prewar boundaries with Egypt and Syria and to offer the newly occupied Sinai and Golan territories back to their former owners in exchange for peace. The offers were, however, rejected by both Egypt and Syria within days. The Gaza Strip and West Bank proved even more difficult to deal with, as neither Egypt nor Jordan wanted the territories, and their Palestinian populations, back. Furthermore Israel, for security reasons, did not want to return the entire West Bank, as doing so would again put Jordan within miles of Tel Aviv and the Mediterranean. Israel held out hopes that the occupied land could be used to exchange for peace; nonetheless, Israel began settling religious Jews in the newly acquired lands. These settlements would prove to be a major obstacle to peace during negotiations between Israel and the PLO in the late 1980s and 1990s.

The major problem resulting from the Six-Day War was that Israel now occupied the land of more than a million Palestinians: 600,000 living in the West Bank, 70,000 in East Jerusalem, and 350,000 in Gaza (210,000 of whom were refugees, of which 170,000 were living in refugee camps). The occupation awakened Palestinian nationalism and led to protests, graffiti, strikes, and clashes between Palestinians and Israeli soldiers. Such displays remained relatively rare, however, until the outbreak of the first intifada, or uprising, in 1987. The PLO, founded before the war, became the de facto representa-

tive of the Palestinian people and formed the vanguard for a new guerrilla war against Israel, hoping to succeed where the conventional armies of the Arab nations had failed.

At a meeting of the Arab League in September 1967, the Arab states reacted to the war and subsequent occupation by issuing the Khartoum Resolution, whose third paragraph became known as the Three No's: no peace with Israel, no recognition of Israel, and no negotiations with Israel. In response to the Arab declaration, Israel publicly backed away from the offer to restore prewar boundaries and instead adopted policies of annexation and settlement. The international community stepped into the dispute by passing United Nations Security Council Resolution 242, which became the starting point for all future negotiations surrounding the occupied territories. Resolution 242 required that Israel withdraw from land occupied in 1967 and that the Arab nations end the war against Israel and acknowledge Israel's right to exist. However, with the exception of Egypt, little progress was made by any side in moving toward peace or resolving the problems of the occupied territories and the Palestinians until the early 1990s.

SEE ALSO *Peace Process*

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Seth Weinberger

ARABS

As an ethno-national term, *Arabs* currently designates the Arabic-speaking population that dominates North Africa and West Asia. The Arabs are considered part of the Semitic peoples, and their migrations out of the Arabian peninsula to the rest of the Middle East in large numbers began in the seventh century. Politically, the term is also applied to the twenty-two member states of the Arab League, whose population in 2005 totaled about 300 million inhabitants, and there were several million more in Europe and North America. The Arab League was originally founded in 1945 to coordinate Arab politics and resolve common issues. The common defining features of an Arab identity include the Arabic language, a sense of shared culture, and similar historical patterns.

In pre-Islamic times, and often in the Qur'an as well, the term *Arab*, or *A'rab*, was often reserved for nomadic populations. However, over time the term came to designate all Arabic-speaking peoples. The career of the Arabs in history began with Islam in the seventh century, a coincidence that continues to give rise to much confusion about the relationship between the two. Arab Muslims in fact comprise only about 20 percent of world Muslims. And while the vast majority of Arabs are Muslims, many Arabs belong to various Christian denominations, such as Coptic, Maronite, Orthodox, and Assyrian. Also, until at least 1948 many Arab countries, such as Iraq, Egypt, Morocco, and Syria, housed large Jewish communities that were fully assimilated and largely saw themselves as part of Arab culture. The Arab world also contains many Muslim but non-Arab communities, such as the Kurds in Iraq and Syria and the Imazighen (otherwise known as Berbers) in North Africa.

The rise of Islam in Arabia early in the seventh century provided the first catalyst for unifying the various tribes and communities of the Arabian peninsula into a common, religiously defined state. The Islamic conquests following the death of Muhammad (in 632) were carried out of Arabia in the name of Islam, not Arab nationalism, but they quickly changed the political and demographic makeup of the Middle East by moving Arab populations, and imprinting Arab language and culture, over much of the region. Within less than a century after Muhammad, the domain of Islam stretched as far east as the Indian subcontinent and as far west as the Iberian peninsula. The Arabic language, being the language of the Qur'an (which for Muslims consists of the literal revelations of God) and also the language of the new ruling elites and migrating population groups, spread across immense distances over the next few centuries and came to house greatly refined poetic and cultural traditions. Because the classics of the Hellenic and Roman heritage were translated into Arabic during the Abbasid caliphate, and because the new Arab-centered Muslim civilization patronized all branches of science and philosophy, the Arabic language also became the scholarly lingua franca across vast territories stretching from Central Asia to Iberia. It retained that status throughout the European Middle Ages. In fact, the first authoritative set of rules for Arabic grammar were set down during that period by a Persian scholar, Sibawayh (d. 793).

While presiding over the vast expansion of Islam throughout the region, the Umayyad caliphate, which lasted from 661 to 750 and was seated at Damascus, had a largely Arab ruling elite and sought to exclude non-

Arabs from positions of authority. As Islam became genuinely universal, the Arabs lost monopoly over it. With the rise of the Abbasid caliphate in 750, the Muslim ruling elites became ethnically mixed, reflecting the demographic mix of Muslims themselves. Reflecting the growth in importance of non-Arabs among Muslims, the Abbasids moved the center of political power farther east, establishing Baghdad and making it their capital, thereby replacing Damascus as a Muslim political center.

After more than two centuries of glory, Abbasid rule entered a long period of decline toward the end of the tenth century, even though Islam as a faith continued to spread worldwide. The remnants of the Umayyads, who had established themselves over Iberia, proclaimed a rival caliphate there, and the Fatimids, who subscribed to a version of Shi'ism, soon announced a competing claim to the caliphate after capturing Egypt. The Abbasids also lost much temporal power to successive militaristic Turkish dynasties, notably the Buyids and then the Saljuks. Nonetheless, the Abbasid caliphate was retained in Baghdad as a sort of spiritual symbol for Muslims until the Mongols captured and destroyed the city in 1258.

By that point most Arabs had already become familiar with the pattern of non-Arabs exercising effective rule over them. This pattern was exercised first by other Muslims and then by Western colonialism, and thus lasted well into the twentieth century. Insofar as most governed populations were concerned, there is little evidence that the ethnic origins of the rulers mattered much before Western colonialism. The main cities of what is now called the Arab world were ethnically mixed, although Arabs were usually the majority, and many of them were also religiously mixed, being vital nodes of global and regional trade routes.

The modern idea of Arab nationalism began to emerge in the nineteenth century, when much of the Arab World was still ruled by the Ottoman Empire, centered in Istanbul. The original tracts of Arab nationalist intellectuals show that Arabism was often viewed as compatible with an Islamic identity. The early Arab nationalists, many of whom were Christians, focused on reviving Arab high culture and called for more autonomy and local rule within the Ottoman system. Western models of nationalism clearly influenced these ideas, and within the Ottoman system concurrently informed Turkish nationalism, as it later would be advocated by the Committee of Union and Progress, or the Young Turks. The rise of Young Turks into positions of dominance in the empire shortly before World War I helped deepen Arab hostility to an empire they had lived with for four centuries, since the Young Turks tended to treat the Arab provinces more as colonies of a Turkish center. Moreover, such policies as imposing the Turkish language was at odds with the rising Arab cultural sentiment and the accompanying romanticization of an Arab golden age.

Still, at the beginning of World War I, most Arabs did not appear willing to abandon the empire, even though they had become open to suggestions. Such suggestions came during the war, when the British government persuaded Husayn Bin Ali, the Sherif of Mecca, to declare an Arab rebellion with the promise that the Arabs would gain independence after the defeat of the Ottoman Empire. Arab elites and their peoples did not take a unified stance on the rebellion, but they supported it after it became successful.

The aftermath of the war was a bitter disappointment for most Arabs. Rather than gaining independence, the Arab East was divided up between Britain and France. In addition, Egypt had been under British domination since 1882; most of the rest of north Africa had come under French control at various points during the nineteenth century; Libya was already under Italian control; the gulf region was already designated as a British protectorate. Thus virtually the entire Arab world emerged from World War I as a constellation of colonies of European powers.

Arab countries gained independence at various points over the following few decades, but the usual model of power transfer was from a colonial administration to a narrowly based national elite in each country, often clustered around a monarchy. These elites were preoccupied with survival in power, which usually meant maintaining alliances with their former colonial patrons. The failure of the Arab armies to secure Palestine for Arabs in 1948 undermined that system by vastly exposing the weakness of the new regimes, as well as their ineptitude, corruption, subservience to foreign interests, and lack of concern about national interests and common Arab issues. Further, the Palestine debacle highlighted the impotence of a divided Arab World and provided Arabs at large a single great cause around which they could make a unified stand.

During the two decades following the Palestine war of 1948, the era of older postindependence regimes came to an end in most of the Arab World, with the old systems being overthrown in Egypt, Iraq, Syria, Yemen, and Libya, and placed on the defensive in Jordan and Saudi Arabia. The new era was characterized by populism. The most successful figure here was the Egyptian leader Gamal Abdel Nasser. His adoption of pan-Arabism galvanized Arab public opinion everywhere, and his successful challenge to colonial powers by nationalizing the Suez Canal in 1956 and surviving the following tripartite invasion by Britain, France, and Israel, gave Arabs a rare vision of modern success against enemies set on controlling their national wealth and keeping them weak and divided.

The era unleashed by these new regimes also fostered the growth of ideals of social justice, socialism, agrarian reforms, and better distribution of social wealth. However, most of the new ruling elites in places such as Egypt, Syria, Iraq, or Algeria, whose members had to a great extent come from humble social backgrounds, maintained a dictatorial, albeit populist, style of rule. The catastrophic defeat of three Arab armies against Israel in 1967 revealed the continuing vulnerability of the Arabs. It also helped undermine pan-Arab ideals, whose anticolonial, anti-imperialist, and social-justice-oriented content began to be taken up by growing Islamic movements since the mid-1970s. Further undermining pan-Arab ideals were the great disparities among Arab countries caused by oil wealth, with the lion's share going to less populated countries, while the vast majority of Arabs lived in less resourceful, underdeveloped countries.

In spite of the continuing division and lack of coordination among Arab governments, a sense of common Arab identity has been maintained in the public sphere by a media revolution, which started out in the 1990s with the launching of the satellite television station Al Jazeera, based in Qatar. Its success was followed by several imitators and also forced many official governmental media outlets to exhibit more openness so that they could retain their audiences. In recent years satellite dishes have become the most striking feature of the streetscapes of many Arab cities, testifying to an intense interest in uncontrolled information, free dialogue, and a more open public sphere. Common issues include the unresolved question of Palestine and, more recently, of Iraq, which, after undergoing three catastrophic wars in about two decades, again fell under direct foreign control. The new media also foster discussions about other common issues, such as democratization and political reform, the role of Islam in politics and social life, and the status of women. Cultural life in music, the arts, and literature has also remained vibrant, with major figures in each field usually becoming celebrated across the Arab World. Novelists such as Naguib Mahfouz, Abdelrahman Munif, or Ghassan Kanafani are considered important literary figures across the Arab World, as are the poets Mahmoud Darwish or Adnois, for example. Similarly in music it is usual for some singers to attain a pan-Arab appeal in spite of differences in dialects. These include some established singers like Fairuz or Warda, along with more recent talents that are showcased on pan-Arab satellite stations—although none has surpassed the enduring appeal of Umm Kulthum. The notion that there is a common Arab culture and identity remains strong, as does the desire felt among ordinary Arabs for better governance and coordination among Arab countries. There is less conviction, however, that pan-Arab feeling can easily translate into a political union.

SEE ALSO *Pan-Arabism*

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Mohammed A. Bamyeh

ARAFAT, YASIR
1929–2004

Yasir Arafat is best known as chairman of the Palestine Liberation Organization (PLO) and first president of the Palestinian Authority (PA). He was also one of the founding members of *Fateh* (1959), which would later become the most powerful group within the PLO. More than anything else, Arafat is viewed as one of the patriarchs of the Palestinian national movement. In the 1970s, Arafat also attained the standing of a head of state within the Arab world as a result of two events: First, in 1974, the PLO was recognized as the "official" representative of the Palestinian people by the Arab Summit Conference. Second, in 1976 Palestine was granted full membership into the League of Arab States. In 1994 Arafat was the co-recipient of the Nobel Peace Prize with Israelis Yitzhak Rabin and Shimon Peres in recognition of the successful completion of peace negotiations and the 1993 signing of the Declaration of Principles (Oslo Accords) between Israel and the PLO.

Arafat was trained as an engineer in Egypt and graduated from Cairo University. He then moved to Kuwait, where he worked as a civil engineer. It was in Kuwait that Fateh was founded. For the next forty years, Arafat moved around the region, from Kuwait to Syria to Jordan to Lebanon to Tunisia to Gaza and the West Bank, all in pursuit of his ultimate goal: the formation of a sovereign national homeland for the Palestinian people. Arafat's complete dedication to the "Palestinian cause," and the tactics used to further it, often led to tense relations not only with Israeli leaders, but also with his fellow Arab leaders. In fact, it was as a result of some of these tactics that Arafat and his operatives were either jailed (i.e., in Syria) or expelled.

Historians and political commentators have described the tactics used by Arafat and his supporters (either under the banner of Fateh, the PLO, or other organizational names such as Black September) as both guer-

rilla warfare and terrorism. Actions such as sabotage, infiltration into Israel, and airline hijackings were among the measures used by Arafat and these groups. While Israel was the primary target of these attacks, other Western states and assets were also targeted on occasion, particularly with respect to airline hijackings. At the same time, Jordan was also a target of some of these actions as well.

Tensions between Arafat and the leaders of the various Arab states arose from a number of factors, including destabilizing consequences of having the PLO based in one's territory—a factor that led to Arafat and the PLO being expelled from two different states (Jordan and Lebanon), and differing of opinions about how the "struggle" should be run, from where it should be directed, or if a change in strategy (i.e., negotiations with Israel) should be undertaken. By September 1970, Arafat and his followers had created a virtual Palestinian "mini-state" within Jordan and was using it as its base of operations—which was viewed by the Jordanian regime as a substantial threat—and direct clashes broke out between the Palestinian forces and Jordanian troops. As a result of this, Arafat was forced out of Jordan and eventually made his way to Lebanon via Syria.

Once in Lebanon, Arafat and the PLO used Lebanese territory as a springboard for attacks against Israel. This would eventually lead to the 1982 Israeli invasion of Lebanon and Arafat and the PLO's expulsion from that country. From Lebanon, Arafat moved to Tunisia, where he remained until the signing of the Oslo Accords, at which time he returned to take control of the newly created Palestinian Authority in Gaza and the West Bank. After a series of agreements negotiated with the Israelis that formalized elements of the Oslo Accords and established the Palestinian Council and Palestinian Authority (PA), Arafat was elected president of the PA in 1996.

As tense as his relationship was with leaders in the Arab world, he had a different type of relationship with the leadership of Israel. For many years Israeli leaders sought to marginalize him. Regardless of the international recognition granted to Arafat, Israeli leaders refused to talk to Arafat or acknowledge him as the leader of the Palestinian people. Until the 1990s Israeli leaders consistently branded him a terrorist and refused to recognize or legitimize the PLO—referring to the organization as a terrorist group rather than a government in exile. In this respect, the 1993 Oslo Accords were also a personal victory for Arafat in that, for the first time, an Israeli leader granted explicit recognition to Arafat. Rabin publicly shook Arafat's hand on the White House lawn and announced to the world that Israel "had a partner" in Arafat.

Many in Israel, however, quickly reapplied the "terrorist" label to Arafat with the collapse of the Oslo Accords and the resumption of violence in 2000. By the end of Arafat's life, the Israeli leadership had again marginalized the leader; the Israeli government arguing that Arafat was an impediment toward the implementation of a lasting peace between Israel and the Palestinians rather than a real "partner." Arafat and forces under his control were viewed as playing a direct role in the coordination of the violence, and as a result the Israelis reoccupied many areas that had been ceded to PA control. Additionally, the Israel Defense Forces (IDF) forced Arafat to remain at his Ramallah compound for two years. After he became ill in 2004, the Israeli government allowed him to be transferred to France for treatment, where he died of unknown causes that year.

While many viewed his death as an opportunity for resurrecting the peace process between Israel and the Palestinians, as of the mid-2000s this has not yet been the case. Although it is difficult to pinpoint any one culprit, the PA created by Arafat was extremely weak and fractious. In fact, some scholars have argued that the structural weaknesses inherent in the PA were deliberate creations of Arafat to keep the body subservient to his own influence and manipulation.

SEE ALSO *Meir, Golda; Nobel Peace Prize; Palestine Liberation Organization (PLO); Palestinian Authority; Rabin, Yitzhak*

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Rachel Bzostek

ARBITRAGE AND ARBITRAGEURS

Arbitrage is a trading strategy that is used to generate a guaranteed profit from a transaction that requires no commitment of capital or risk bearing on the part of the trader. An arbitrageur is a person who engages in this kind

of trading. Arbitrage can be done when equivalent assets or combinations of assets sell for two different prices.

When the opportunity for arbitrage arises, arbitrageurs exploit that opportunity as long as it generates a profit. A simple example of an arbitrage trade would be the simultaneous purchase and sale of the same security in different markets at different prices. Another example would be cross-rate arbitrage transactions in a foreign currency market, in which three currencies are purchased and sold in different markets to exploit mispricing in the cross-exchange rate.

A third example involves the put-call parity relationship in options markets. A put is an option granting the right to sell the underlying asset at a predetermined price (the exercise price) at or before a predetermined date (the maturity date). A call is similar to a put except that it grants the right to buy. With the same underlying asset, exercise price, and maturing date, prices of European-style put options and call options should have a parity relationship in which owning a call option is equivalent to owning a put option, owning the underlying asset, and selling a risk-free bond that matures on the option's expiration day with a face value equal to the exercise price of the option. If the prices do not conform to put-call parity, an arbitrage strategy can be applied to sell the overpriced instruments and buy the underpriced instruments simultaneously, generating a guaranteed profit that is equal to the amount by which the put or call option is mispriced.

In practice, besides the requisite information, arbitrageurs deal with market imperfections such as transaction costs and limitations on short selling to generate arbitrage profit. If an opportunity is profitable after the full transaction costs have been paid, it is considered pure arbitrage. The arbitrage trade forces the prices of the overpriced assets and the underpriced assets to reach an equilibrium that eventually eliminates the opportunity to generate an arbitrage profit. When there are market imperfections, that equilibrium usually provides boundary conditions that prevent arbitrage opportunities. The principle that no arbitrage opportunities should be available for any significant length of time is one of the elementary principles of derivative pricing. Theoretical boundary conditions of derivative pricing conform to models that assume no arbitrage. That is, the price of a derivative instrument can be modeled on the return of a synthetic portfolio, which is an appropriate combination of the underlying asset and the risk-free asset constructed to replicate the derivative instrument.

Arbitrage profits are examples of abnormal returns and are violations of the principle of market efficiency. In efficient markets arbitrage opportunities are nonexistent or are eliminated quickly. Arbitrage trade facilitates flows of market information. It also forces efficiency in intertemporal resource allocation because arbitrage transactions usually take place over a period of time. The rule of no arbitrage is upheld only if arbitrageurs are vigilant in finding arbitrage opportunities.

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ARBITRAGEUR

SEE *Arbitrage and Arbitrageurs.*

ARCHAEOLOGY

Broadly defined, archaeology is the study of the human past through the discovery, analysis, and interpretation of the material remains of that past over space and time. The bulk of such material evidence is artifactual, which is anything made or modified by human action. Artifacts encompass everything from the stone tools discarded at Gona in Ethiopia 2.5 million years ago to the trash discarded yesterday. Immovable artifacts, such as hearths or postholes, are called features. Non-artifactual evidence that have cultural significance, such as human, faunal, or botanical remains, are called ecofacts. These material remains tend to co-occur at archaeological sites. Collectively, these traces of the past are referred to as the archaeological record. It is the province of the archaeologist to find, record, and preserve, where possible, the archaeological record in order to identify, analyze, explain, and understand past events and processes. They are also interested in contemporary material culture—ethnoarchaeologists study how modern-day people use material culture in their everyday lives. While there are a variety of scientific and other investigative techniques used to reconstruct the past based on this wealth of evidence, archaeological interpretations are constrained by issues of preservation. Not everything discarded in the past will survive in the archaeological record, and thus there will always be gaps in our knowledge.

Archaeologists attempt to bridge these gaps by making use of theoretical models, often based on data provided by ethnographic or ethno-archaeological studies. These theoretical models may vary depending on the training and context of the researcher as archaeology has developed differently in different parts of the world. As will be demonstrated below, archaeology in Europe developed from historical roots and is in some cases regarded as "long-term history." By contrast, archaeology in the United States falls under the aegis of anthropology and is seen as the study of past cultures.

Archaeology can be characterized as an omni-competent human science as it is concerned with the entire scope of human life from our hominid ancestors to the modern-day industrial age. Archaeological projects are conducted at many different scales. They range from studies of how past peoples used and perceived the landscapes that they inhabited to the re-creation of an individual's life and death, as exemplified by the work done on mummified or skeletal remains. Archaeologists study long-term change at sites that have been occupied for hundreds if not thousands of years as well as the immediate at "time capsule" sites such as shipwrecks or Pompeii. It is both a science and a humanity. Many archaeologists also have sub-specializations in the natural sciences such as zoology, botany, and chemistry while others make use of anthropological and historical methodologies and sources.

DOING ARCHAEOLOGY

Archaeologists make use of a diverse methodology. While the most important task is to place finds within a chronological and spatial framework, techniques differ depending on the scale at which the archaeologist is working. The upper end of such a scale is that of the identification of sites within a region. Many finds of archaeological sites and artifacts are still the result of accidental discovery by non-archaeologists, but there are a wide range of survey techniques in existence that allow for the location of archaeological sites within the landscape. These range from systematic pedestrian surveys of a region in search of surface traces to the use of aerial photography and other remote sensing techniques (including ground-penetrating radar, bowsing, and magnetometers) to locate buried remains. Archaeologists often cannot afford either the time or money to achieve total coverage of a region and may thus use sampling techniques designed to either maximize site location or to statistically reflect the occurrence of sites within a region.

Once a site has been located and recorded, the material remains at that site can be further explored and their relationship to one another determined by excavation. Excavation can be conducted either horizontally (clearing excavations) or vertically (penetrating excavations) depending on the nature of the site and the kinds of questions that the researcher is attempting to answer. Most excavation projects will include a mixture of both. Excavation involves the physical destruction of the site and the removal of artifacts and other remains and is thus guided by rigorous standards of recording and fieldwork practice. Most importantly, the context of finds is recorded so that their position in the site and their relationship to one another can be reconstructed once their original provenance has been destroyed.

Context is also crucial for establishing either the relative or absolute age of archaeological remains. Relative dates do not allow a specific age to be assigned to an archaeological find or excavation layer; rather they indicate the age of finds relative to one another. Relative dating was paramount until post–World War I advances resulted in a wide range of chemical and other dating techniques that allow absolute or calendar dates to be assigned to artifacts and sites. Foremost among these are radiocarbon, uranium series, potassium-argon, and thermo-luminescence dating. The most widely used of these is radiocarbon dating, which is used to date organic remains and can provide fairly reliable dates back to forty thousand years ago. The other chemical dating methods mentioned above can be used to date inorganic remains and offer a much greater chronological depth. Archaeologists working in more recent time periods can also use documents or other written evidence to date sites.

Once excavated, artifacts are sorted, classified, and analyzed in an archaeological laboratory. This analysis allows the archaeologist to create order out of a mass of data; to summarize many individual artifacts by identifying their shared characteristics; and to define the variability present within an archaeological assemblage. There are many debates about the best way to classify artifacts. They are mostly analyzed in terms of formal, stylistic, and technological attributes. Philosophically, there is a question as to whether or not the categories of artifacts that archaeologists devise reflect the emic order (items analyzed in terms of their role as structural units in a system) created by the people who produced the artifacts or if they are etic (items analyzed without consideration of their role in a system), artificial categories imposed by the archaeologist. Most archaeologists, however, recognize that the best classification systems are a combination of the two.

The suite of techniques that we associate with modern day, professional archaeology did not, of course, emerge fully fledged but developed over the course of more than a century. While many societies over the centuries displayed an interest in the material remains of the past and there are even instances of past societies excavating to uncover those remains, it was not until the nineteenth century that archaeology truly became a scientific

discipline. Archaeology's roots lie in two disparate contexts: the development of classical studies from the 1500s onward and subsequent discoveries in various parts of the world; and the gradual recognition of the true age of the earth in the eighteenth and nineteenth centuries.

CLASSICAL BEGINNINGS

The fifteenth-century Renaissance in western Europe prompted interest in the Greek and Roman civilizations, particularly as their art and architecture were still highly visible. The buried Roman cities of Pompeii and Herculaneum were rediscovered in the 1700s and were excavated for art and antiquities. The foundation for art history and subsequently much of classical archaeology was laid in 1764 by the publication of Johann J. Winckelmann's *History of Ancient Art* (1764), in which he contextualized the art's production and set out the first systematic chronology for classical remains. Early excavation of these classical sites was by no means methodical. Smaller artifacts and "unimportant" structures were destroyed during the search for highly desirable works of art. It was these classical studies that provided a model for the development of Egyptology and Assyriology, which themselves evolved within a larger context of European imperial expansion.

Egyptology developed as a direct result of Napoleon Bonaparte's (1769–1821) invasion of Egypt in 1798. Accompanying the French army on this expedition was a Commission of Arts and Sciences that published multiple volumes of *Description de l'Egypte* from 1809 onward. The invasion also led to the accidental discovery of the Rosetta Stone, which featured the same passage written in hieroglyphs, Demotic (a cursive form of hieroglyphs), and Greek, thus enabling Jean François Champollion to finally decipher the hieroglyphic script in 1822. At this time there was widespread looting by both locals and foreigners in search of treasure for sale or collection, including not only easily transportable artifacts but also the wholesale removal of large monuments, such as Giovanni Belzoni's 1816 removal of the seven and a quarter ton granite head and torso of Ramesses II from Thebes to Alexandria. Belzoni, and others like him, worked as agents for the European elite and were involved in the discovery and excavation of many sites in Egypt. At this time there was little interest on the part of Egypt's rulers in preserving or investigating their past through the preservation of the remains of that past. They thus sanctioned the activities of many of the European agents at work in the country. It was not until Frenchman Auguste Mariette was appointed as the director-general of the Antiquities Service in 1858 that the sanctioned plunder and export of Egyptian antiquities ended.

There was widespread interest in the Egyptian past and many expeditions were funded, but the systematic excavation and recording of Egypt's archaeological past only began with William Matthew Flinders Petrie (1853–1942) in the 1880s. Petrie emphasized the careful recording of all artifactual material recovered in the excavations as well as the full publication thereof. Further, he developed the first typological sequence dating (based on ceramic jars recovered from graves) to be used in Egypt. His work laid the foundation for other archaeologists such as Howard Carter (1874–1939) who, funded by his patron Lord Carnarvon, discovered and carefully excavated the sealed tomb of Tutankhamun in 1922. As all other tombs discovered in the Valley of Kings had been looted, this find remains one of the most spectacular Egyptian discoveries.

As European governments began to take a political interest in places like Egypt and the Near and Middle East, historical and archaeological scholars followed suit. These areas were of especial interest to the European public because of their link to places mentioned in the Bible. Unlike in Egypt, however, there were few impressive structures that had survived the ravages of time in Asia Minor, Syria, Palestine, Mesopotamia, or Persia. Rather, explorers in the region reported the existence of large mounds that local tradition held to be biblical locations such as Babylon and Nineveh.

The first systematic work on mounds in Mesopotamia was carried out by the French consul in Mosul, Paul Emile Botta, who had previous experience in Egypt. The French government funded his excavations and paid for the transport of finds to Paris. Further research was also carried out by Henry Layard, an Englishman who is best known for his work at Nimrud. Wholesale excavation and exportation of finds was only halted after World War I (1914–1918) when much of the Near East was placed under French or British control. Museums were established, as were departments of antiquity and stratigraphic (layered) excavation, and the recording of all finds became the new standard. This standard was exemplified in Leonard Woolley's excavations at the site of Ur in the 1920s.

While these major discoveries were being made in Egypt and the Near East, the traces of civilizations of equal complexity were being discovered in the Americas. Monumental ruins were not common in North America, but large earthen mounds were often remarked upon. The question of who built these mounds—the ancestors of Native Americans or a lost race of moundbuilders—swiftly became one of the most contentious issues in American archaeology and remained so until the end of the nineteenth century. In 1781 Thomas Jefferson became the first person known to have used the principle of

stratigraphy to interpret archaeological remains during his excavation of a mound on his Monticello estate. Meanwhile in South America, Antonio del Rio "discovered" the Mayan ruins of Palenque in 1786. It was not until 1896, however, that a stratigraphic excavation was conducted on that continent when Max Uhle started working at Pachacamac in Peru. Peru also yielded the well-preserved Inca site of Macchu Picchu, which was located by Hiram Bingham in 1911.

ROOTS OF PREHISTORIC ARCHAEOLOGY

While discoveries were continuing apace in the eighteenth and nineteenth centuries, intellectual trends in Europe were laying the groundwork for an archaeology of Europe's prehistory. These trends eventually led to the emergence of archaeology as an academic discipline rather than merely the occupation of adventurers and collectors, and they include the development of typological sequences, the use of stratigraphy, and the acceptance of the principles of uniformitarianism, all of which center around the key issue of chronology.

Up until the seventeenth and eighteenth centuries, it was widely accepted, based on biblical chronology, that the earth was no older than six thousand years. Several discoveries of stone tools in association with the bones of extinct animals by individuals such as John Frere in 1797 and Jacques Boucher de Crèvecoeur de Perthes in 1837 demonstrated, however, that the earth and human existence on it was much older than had previously been believed. Two theories had been advanced to explain these and other geological and paleontological finds. Catastrophism, advocated by scientists such as Georges Cuvier, was the notion that the earth had been periodically destroyed numerous times in the past, after which a new creation would occur. Uniformitarianism, put forward by geologist Charles Lyell in his *Principles of Geology, Being an Attempt to Explain the Former Changes of the Earth Surface by Reference to Causes Now in Operation* ([1830–1833] 1969), was the theory that the earth had been formed over a long period of time by a series of geological processes that are still observable in the contemporary world. It was this latter theory, in addition to the increasing fossil evidence, that contributed to the theory of biological evolution and the publication of Charles Darwin's *Origin of Species by Means of Natural Selection, or The Preservation of Favored Races in the Struggle for Life* ([1859] 1998). Lyell's work also gifted archaeology with the concept of stratigraphy, and thus the law of superposition, which states that stratigraphic layers are arranged chronologically, with the oldest layers at the bottom and the younger layers at the top, unless disturbed by later processes. This is the foundation for all interpretations of stratified archaeological deposits.

Even before the age of the earth had become widely accepted, chronological sequences for archaeological material, independent of written records, were being developed. One of the first was that of Danish scholar, Christian Thomsen (1788–1865), who was given the task of cataloguing and preparing for exhibition a collection of antiquities in 1816. He used the Three Age System, subdividing the prehistoric period into stone, bronze, and iron. While the idea was not new, Thomsen was the first to apply it to a large artifactual assemblage. He solved the problem of knowing which finds should be placed in which age by using "closed finds," artifacts that had been buried together in hoards and graves. By delineating which types and styles of artifacts were found or not found together he was able to work out a stylistic typology with chronological significance. This kind of stylistic ordering is known as seriation and is an important relative dating technique. Stratigraphic excavations of Danish burial mounds conducted by Jens Worsaae, a student of Thomsen, supported this sequence. The notion of technological progress, coupled with the ideas of biological evolution, gave rise to the unilineal cultural evolution of E. B. Tylor and L. H. Morgan and was expounded in John Lubbock's archaeological text *Pre-historic Times, as Illustrated by Ancient Remains, and the Manners and Customs of Modern Savages* ([1865] 1971).

There were further major developments in archaeological methodology at the end of the nineteenth and beginning of the twentieth centuries. Oscar Montelius refined Thomsen's seriational method of dating using a typological approach, while between 1880 and 1900, Augustus Henry Lane-Fox Pitt Rivers, a retired British general, conducted several excavations of barrows on his estate and developed the standards for excavation, recording, and publication associated with modern-day archaeology. These included the recording of all finds including those not directly related to the research questions being asked, as well as the recognition of the chronological value of even unimportant finds (potsherds, for example) if their context was correctly recorded. Later, it was a student of Pitt Rivers, R. E. M. Wheeler, who developed the grid method of excavation and, in the 1940s, went on to revolutionize the archaeology of the Indian subcontinent with his work at Mohenjodaro and other sites.

THE CULTURE-HISTORICAL APPROACH

The unilineal evolution of the nineteenth century was replaced in the early twentieth century by an interest in historical questions. This shift from an evolutionary perspective to culture-history resulted in an increased empha-

sis on descriptions of past cultures. In Europe there was a desire to discover how particular peoples developed in the past in order to promote national unity. In the United States, where archaeology was regarded as part of anthropology, there was an increased emphasis on data collection as the foundation for the development and testing of theory and explanations, in addition to chronologies.

Culture history, as a theoretical approach, has a normative view of culture. Basically it holds that cultures are composed of shared norms and values and that their members share a particular worldview. Artifacts are therefore seen as expressions of the shared norms and values of any given culture. This approach emphasized data collection, which allowed for the construction of site and regional chronologies. The results of these endeavors were often represented in a time-space grid. In the cultural historical view, change is most often attributed to the action of outside forces, most commonly migration and diffusion, or environmental change.

In the United States this approach was pioneered and applied par excellence by Alfred V. Kidder, who was also the first archaeologist to use the stratigraphic method on a large scale in the Southwest. The first scholar to systematically apply it to archaeological data in Europe was Gustav Kossina in his book *Origin of the Germans* (1911). Kossina argued that cultural boundaries (as reflected in material culture) were also indicative of ethnic boundaries. His work was extremely nationalistic and was later used by the Nazis in the Socialist education system. By tracing the migrations of the Indo-European people and demonstrating the supposed racial purity of the German people, he argued that the Germans were the true heirs of the Indo-Europeans and, by extension, were the true heirs of Europe. Archaeology was thus also used to establish historical rights to territory. Kossina's work had little impact outside of Germany and while British archaeologists recognized the importance of repeated invasions and migrations, they did not rigorously apply the culture concept until the appearance of V. Gordon Childe's *The Dawn of European Civilization* ([1925] 1958), after which the "archaeological culture" became central to European archaeology.

COLONIAL ARCHAEOLOGY

By the end of the nineteenth and beginning of the twentieth century, archaeological fieldwork was also increasingly conducted in colonial contexts. While much of this archaeology was essentially cultural-historical in approach and method, the situation in the colonial arena was complicated by the sociopolitical relations that existed between colonized and colonizer. Bruce Trigger in his 1984 work offers a definition of colonialist archaeology as comprising that archaeology which developed either in countries "whose native population was wholly replaced or overwhelmed by European settlement or in ones where Europeans remained politically and economically dominant for a considerable period of time" (p. 360), specifically, an archaeology as practiced by "a colonising population that had no historical ties with the peoples whose past they were studying." Tied up as it is in land and heritage issues as well as its commentary on the supposed political or social sophistication of the cultures being studied, archaeology in these places had an increasingly political dimension.

This was especially the case in the southern African context. At sites such as Great Zimbabwe, it was denied that the ancestors of local people could have been the builders and inhabitants of what was clearly an advanced civilization. As with the myth of the moundbuilders in the United States, this made it easier to claim a civilizing mission and to take ownership of the land. Great Zimbabwe represents possibly one of the most famous examples of the misuse of the past to suit political purposes in the present. The racist theories of Zimbabwe's past have not been easily laid to rest. Claims that it was the place of King Solomon's mines or was built (variously) by the Queen of Sheba, the Sabaea Arabs, or the Phoenicians were still being disseminated well into the 1970s.

PROCESSUAL ARCHAEOLOGY

By the 1940s some North American scholars were becoming dissatisfied with the shortcomings of culture history, which was severely hampered by a lack of absolute dating techniques that would allow the refinement of chronologies. Walter Taylor called for a conjunctive approach to the past in *A Study of Archaeology* ([1948] 1983), advocating that artifacts should be looked at in their broader social contexts. His book did not spark a revolution, but in the 1960s a series of articles written by a young Lewis Binford (1962, 1967) did. Influenced by the 1950s neoevolutionary anthropology of Julian Steward and Leslie White, Binford and his fellow "New Archaeologists" criticized the normative view of culture as inadequate in that it did not address how people interacted with their environments or how material culture was used as an adaptive tool in that environment. They emphasized the relationship of archaeology to anthropology and stressed the need to go beyond description to explanation. Culture history was seen as too particularistic and its practitioners as not being explicit enough about their research objectives, methods, and expectations.

The school of thought and methodologies for research espoused by the New Archaeology have come to be more generally known as processualism. Processualism, as an approach to archaeology, is heavily influenced by scientific positivism. It is based on a belief in "objective sci-

ence" and aimed to test archaeological propositions against data in order to answer anthropological questions and to deliver broad generalizations—law-like statements—about human behavior. While the most famous processualists are undoubtedly American scholars such as Lewis Binford and Kent Flannery, many of the ideas espoused by them were also taken up by British archaeologists including Colin Renfrew. While Renfrew did not wholeheartedly embrace all aspects of processualism such as the search for law-like generalizations, its systemic approach to the study of culture and the new methodologies proved attractive.

The New Archaeology was characterized by a battery of new methods, techniques, and aids fostered by advances in scientific dating methods. The most important of these was the development of radiocarbon dating, which made internal development more likely than migration and diffusion as an explanation of change. It also meant that archaeologists were finally free to focus on broader questions of cultural and social significance rather than on the development of regional chronologies. Other scientific advances included the use of computers and, in the study of the environment, pollen diagrams and soil geomorphology. The application of these to archaeology necessitated increasing specialization on the part of archaeologists; and increased funding from bodies such as the National Science Foundation led to the scientification of archaeology, especially in the United States.

Fieldwork also became more rigorous and standardized. This was partly a response to the expansion of cultural resource management, which meant an increased need for systematic control and monitoring. Most processual archaeology has strong environmental overtones and thus new field and research methods were developed to accommodate those questions. Regional approaches—the analysis of sites in their settlement systems and environments—were developed, as well as new survey, sampling, and screening techniques to recover the most environmental evidence possible.

The New Archaeology changed the way in which archaeological research projects were administered and carried out. Advocates of this school adopted a formalized methodology that had hypothesis testing as its central emphasis. Archaeologists were expected to clearly and explicitly state the conditions and expectations of their hypotheses. Models employed by processual archaeologists include systems models, cultural ecological models, and multilinear cultural evolution models. One of the best-known case studies is Kent Flannery's use of systems theory to explain the increasing reliance on maize agriculture in Mesoamerica, which he detailed in 1968.

One of the most important aspects of processualism was the desire for an objective evaluation of ideas and research designs. To achieve this Binford developed Middle Range, or bridging, theory. This solved one of the primary problems facing archaeologists, that of inference, the linking of the (observable) present with the (unobservable) past. In order to understand what happened in the past, a way had to be found to link the dynamics of human action in the past with the static material traces of those activities in the present. Binford felt that archaeologists should observe the processes that give rise to the patterns and their variations, discernible in the archaeological record. This interest of Binford's in actualistic studies led to an increased focus on experimental- and ethno-archaeology.

The greatest contribution of processualism was methodological, in the sense that issues of sampling, inference, and research design were paramount. These were of course closely linked to the increased use of scientific techniques in archaeological fieldwork and analysis. The second contribution is seen as the shift away from description to explanation, particularly the notion of culture as adaptive and the interconnectedness of social and ecological variables. It also moved archaeology forward in the consideration of long-term processes. While processualism was seen as advancing research in some areas, it was also seen as retarding research into others. While significant advances were made in the study of prehistoric economies, topics such as the role of the individual decision-making, conflict and negotiation between different social groups, and prehistoric ideology were neglected while certain actors/interest groups were excluded from analysis. Many of these arise directly from the processual focus on entire systems and the overriding view that the environment plays the most important role in bringing about change.

POST-PROCESSUALISM

In the light of these limitations, by the late 1970s and early 1980s some archaeologists were arguing that while processual archaeology aimed to explain the past, it could not understand it. In *Reading the Past* (1986) Ian Hodder argued that material culture and past events had to be understood with reference to people's attitudes and beliefs, not just their adaptation to an external environment and, further, that archaeological remains could be "read" as a "text." Similarly, Michael Shanks and Christopher Tilley critiqued the scientific focus of processual archaeology in *Re-constructing Archaeology* (1987), arguing that archaeologists have to be critical of the context in which archaeological interpretations of the past are produced and that multiple interpretations of the past are valid. This critical approach has also been adopted by feminist archaeologists, such as Margaret Conkey and Janet Spector (1984), who have highlighted in "Archaeology

and the Study of Gender" the androcentric bias in representations of the past and the practice of archaeology.

While *post-processual and cognitive archaeology* is an umbrella term incorporating many different theoretical approaches, it is characterized by its cognitive—as opposed to normative or adaptive—view of culture. Thus culture is seen as being actively constructed and reworked by individuals in order to fit the context of their own lives. The various approaches included within post-processualism can be divided into three different categories. The first deals with approaches that have at their base a concern with structure, such as structuralism, cognitive approaches, and Marxism. Second is contextual archaeology, which views material culture as a text that can be read. The third incorporates a variety of approaches that seek to offer alternative perspectives on the world and the way in which archaeological results are communicated, such as phenomenology, feminism, and postmodernism. Post-processual approaches have been especially embraced by historical archaeologists, who also have written documents to draw on. James Deetz, for example, used structuralism in his seminal study *In Small Things Forgotten* (1977) to explore the changing worldview of North American immigrants while Mark Leone has adopted a critical approach in his study of ideology in Annapolis.

Undoubtedly the post-processual critique has made contributions to the discipline. It has moved archaeology away from modeling the environment as the prime mover in past human societies and has added greatly to our ability to understand the past. The political nature of the study of the past and the sociopolitical context of the researcher have also been problematized. More attention is now paid to the way in which archaeologists interact with contemporary groups that have a stakehold in the past and how that past is represented. It remains, however, a largely Anglo-American phenomenon and has hardly affected archaeology on the European continent.

AN EVOLVING SCIENCE

Since the 1980s archaeology has been characterized by a wide diversity of approaches that draw on a range of theory from other social sciences including anthropology, sociology, geography, history, and political science. Like their counterparts, archaeologists make use of practice theory, agency theory, political economy, cultural ecology, world systems theory, and so on. Many times these viewpoints are combined or applied in interesting new ways to the archaeological record.

Archaeology is a constantly evolving discipline. New fields of study are always being created. Since the 1950s sub-disciplines such as landscape, historical (post-medieval), and industrial archaeology have grown rapidly. Further archaeological discoveries and fine-grained analysis continue to make important contributions to ongoing research that include, *inter alia*: the study of human origins; the origins of agriculture; human migrations; human use (and abuse) of the environment; the rise and fall of civilizations; the processes and impact of colonialism; as well as the lives of people who are generally overlooked in major historical narratives, such as slaves. Yet there are still many parts of the world which, due to environmental, political, or economic factors, have very sparse archaeological coverage, for example sub-Saharan Africa, especially when compared with Egypt. Many times archaeologists in these countries do not have adequate resources with which to pursue research.

Archaeologists are also actively involved in cultural resource management and the conservation of archaeological sites. Sites are threatened by the ever-increasing development that results from expanding urbanization and industrialization. Many sites are destroyed without ever being recorded. Even well known monuments are under threat from wars, pollution, and vandalism. The worldwide antiquities market, which fueled wholesale looting during the early development of archaeology, remains in existence. Archaeology is also a highly politicized discipline, and the balancing of archaeological research objectives with those of other stakeholders, including conservation authorities and local communities, remains an ongoing challenge.

SEE ALSO *Agricultural Industry; Anthropology; Anthropology, Biological; Burial Grounds; Cultural Landscape; Cultural Resource Management; Culture; Feminism; Geography; Leakey, Richard; Material Culture; Migration; Postmodernism; Schliemann, Heinrich; Structuralism; World-System*

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Natalie Swanepoel

ARCHITECTURE

Architecture is the art and science of building the human environment. Because that environment is meant to enclose, enhance, and shape human activity, architecture thus extends beyond abstract issues of formal geometrical design and structural science into a far broader social dimension. As Winston Churchill is famous for saying to Parliament in 1943: "First we shape our buildings, and then our buildings shape us."

Exactly when the conscious, deliberate shaping of the human environment began defies dating, since the earliest structures most likely were made of organic materials that quickly returned to earth. Archaeological evidence discovered near Marseille, France, however, revealed repeated construction of wood-framed dwellings dating back as far as 300,000 to 400,000 years ago, and several skin coverings and wooden house frames from 13,500 years ago were surprisingly preserved at a Chilean site called Monte Verde. The well-known stone structures of megalithic Europe date to 6,000 years ago, but it is significant that these were almost universally built for ceremonial or religious purposes, while the construction of dwellings apparently still relied on vegetable and animal materials long since vanished. Hence, the first intentionally permanent architecture was shaped for the most fundamental of social communal purposes—to bring a sense of visible order to the cosmos and to provide a link to the dead.

Architecture is a decidedly social activity, for it involves the interactions of many individuals, beginning with the patron—individual, committee, or organization—who calls a building into being. The architect and assistants, or architectural firm, then translate the client's wishes into abstracted drawings and other construction documents that are used in turn by an army of construction specialists to fabricate the final product. At every step of this process, social exchanges, discussions, and negotiations are required to adjust the design to changing needs and costs. This multidisciplinary social process involves large numbers of people specializing in many occupations, such as drawing and computer design, materials acquisition, preparing written specifications, scheduling construction, arranging construction materials, assembling the prepared materials, and applying the interior finishes, among many others. For the most complex buildings, additional management specialists are required to ensure that materials and subassemblies arrive at the building site with optimal timing to prevent costly delays.

As a social art, architecture is subject to a range of controlling forces to ensure public safety. In ancient Rome, huge privately financed urban apartment blocks, called *insulae*, sometimes were so shoddily built that they collapsed. With the establishment of a firmer centralized authority during the Roman Empire, regulations were enforced to curb the worst of these building shortcuts. Later, during the seventeenth and eighteenth centuries, governing authorities in France and Britain similarly instituted building regulations to reduce the spread of urban fires. In the United States, following disastrous fires in Boston and Chicago in the late nineteenth century, building codes and regulations were instituted in larger cities. To ensure general public safety, nearly every community now has zoning regulations and building codes controlling where types of buildings can be located and governing density as well as engineering requirements of design

and durability of building materials. These regulations apply equally to commercial and governmental buildings, as well as to private residences.

Making architecture involves the shaping of space in a way reached by no other art. Whether fully enclosed or an open external area, architectural space has several different properties. Initially designed to accommodate some function of human activity, this space is definable as square feet or meters. If the space is enclosed by glass, then the user's view extends beyond the physically enclosed space, and this larger reach constitutes perceptual space less easily quantified. If some substantial object is permanently fixed in that space—a large table, for example—the physical presence of that object emphatically conditions human use of the space, giving definition to the social parameters of behavioral space.

Beyond these three-dimensional aspects, another important spatial quality is the distance members of a particular species place between themselves. This strong determinant of social behavior, called personal space, can be seen in the way birds space themselves along a telephone wire. Seemingly genetically programmed, impinging upon personal space may produce socially aberrant behavior. Among humans, however, Edward T. Hall notes in *The Hidden Dimension* (1966) that personal space seems to be significantly determined by culture in addition to any fixed internal programming.

Making places for human use extends from the design of a single room and its interior furnishings in ever-increasing scales: from a small building to a large multistory office or institutional structure, to a group of interconnected buildings such as a college campus, to an urban neighborhood, even to the planned organization and pattern of use of a region. Architectural design involves not only physical structures but also the landscape in which the buildings are placed.

MEANING IN ARCHITECTURE

Buildings embody wishes and aspirations on several levels, beginning with the desires of the client. Typically, images a client might envision for a building are part of a general collection of accepted communal formal qualities, evolved over time and called by a style name. These stylistic qualities are understood by most of the community and symbolize its values at any given time.

This concept is the iconography of a particular architectural style. To later historians, additional layers of meaning might be discernible, but these interpretations may not have been part of the consciousness of the original builders. This more embracing concept is the iconology of a time period.

THE SOCIAL FUNCTION OF ARCHITECTURE

In sketching the general iconological content of past architecture, one might make several observations:

- that ancient Greek architecture, particularly temples, represented humans striving to achieve the highest level of excellence in construction;
- that ancient Roman architecture borrowed details from Grecian architecture for use in buildings of vast scale devoted to public purposes;
- that the most important medieval architecture served to reinforce human religious life in anticipation of an eternity in heaven;
- that Renaissance architecture sought to fuse this inherited religious meaning with a renewed appreciation of the geometric logic of classical architecture; and
- that Baroque architecture endeavored to appeal to emotions to enhance religious mysticism (in the ecclesiastical realm) or to make a political impression through magnificence or vastness of scale (in the aristocratic realm).

Architects of the nineteenth century struggled to master new industrial technologies while attempting to understand the enormously rich and complex history of architecture around globe.

What changed in the early twentieth century was an added layer of social utopianism, an outgrowth of the Arts and Crafts movement in England. Through the exploitation of industrial production processes, and using industrial materials such as concrete, steel, and glass, architects were challenged to devise a radically new architectural style that would eliminate slum housing. Moreover, this new millennial architecture was to be shaped by an idealistic view of the way things *should be* (at least in the eyes of the architects and theorists), rather than shaped by the way things actually were. The resulting new communities were to provide fresh air, clean water, and open space in the belief that these transformations would permanently improve society. Architect and polemicist Charles-Édouard Jenneret (who called himself Le Corbusier) declared in his 1923 *Vers une Architecture* that it was either this new architecture or social revolution. He even suggested the creation of a normative type—one building type for all people everywhere. Begun in Europe at the dawn of the twentieth century, the new architecture became public policy in the 1920s and 1930s, with more limited application in the United States. Although this social utopianism was well intended, it often fell short of the objective. It may have been supremely utilitarian, but

as Hannah Arendt would observe in her 1958 *The Human Condition*, utility established as meaning generates meaninglessness.

The perceived lack of referential meaning in the International Modern style (as it came to be known by mid-twentieth century) led to a reaction by a new generation of architects, particularly Robert Venturi and Denise Scott-Brown in the United States. Beginning with the use of broadly and whimsically altered historic details, postmodern architecture appeared in the mid-1960s, entering the professional mainstream by the end of the 1980s and extending worldwide by the 1990s. In referencing the past, postmodernism also validated reexamination of traditional regional architectural styles around the globe. Architects in Hungary, Egypt, Saudi Arabia, Sri Lanka, and scores of other nations began to draw inspiration from their own ancient regional traditions in new buildings of wholly original design and construction; such architecture proved rich in meaning to its users. Architecture in the late twentieth century was viewed once again as capable of being a powerful element in how people envision themselves in time and place.

NEW ARCHITECTURAL CONSIDERATIONS FOR THE TWENTY-FIRST CENTURY

The end of the twentieth century was marked by the emergence of certain mega-architects identified by their unique building forms. Most notable was Frank Gehry, known for his multiply curved, metal-clad, irregularly shaped "swoosh" buildings. Exploitation of computer-aided design has rendered such complex building forms more cost effective, marking a dramatic change in the imagining and construction of buildings and doing away with traditional drafting instruments largely unaltered for centuries. The unfolding effect of this fundamental change in design methodology will shape twenty-first century architecture.

An equally significant shift in the nature of the discipline is the emergence of women in a field dominated for centuries by men. Women began to make important contributions beginning at the dawn of the twentieth century, but their names were seldom widely known and their numbers were few. This advent of women as major players in the discipline was vividly demonstrated by the award of the prestigious international Pritzker Architecture Prize to Zaha Hahid in 2003.

Perhaps more significant for Earth's future is the movement toward sustainable "green" architecture. The traditional energy-consuming methods of making construction materials—toxic in themselves and leaving toxic residue from their manufacture—resulted in buildings that, once completed, further consumed prodigious amounts of energy for lighting, heating, cooling, and ventilating. Nowhere was this old-style architecture more evident than in the thin-walled modernist glass-sheathed boxes of the mid-twentieth century. In contrast, the emerging philosophy of sustainable green architecture promotes using less toxic materials and forming buildings in ways that allow them to work with, rather than against, nature. For example, windows can be shaded by calculating orientation and latitude to prevent internal solar heat gain, and buildings may be cooled in part by facilitating natural ventilation, practices of architect Ken Yeang. The future social implications of such a design approach, especially in the reduction of long-term operating costs, are enormous.

SEE ALSO *Archaeology; Cities; Human Ecology; Material Culture; Postmodernism; Religion; Rituals; Telecommunications Industry; Urbanization*

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Leland M. Roth

ARENDT, HANNAH
1906–1975

A political theorist endowed with a flair for grand historical generalization, Hannah Arendt focused contemporary thought, particularly in scholarly circles, on the novelty of the tyranny that afflicted Europe in the twentieth century. Her most influential book, *The Origins of Totalitarianism*, emphasized the parallels between the Third Reich under Adolf Hitler and the Soviet Union under Joseph Stalin.

Arendt was born on October 14, 1906, to middle-class Jewish parents in Hanover, Germany. After studying theology and philosophy at the University of Marburg, she specialized in philosophy at the University of Heidelberg. As the National Socialists drew closer to power, she became a political activist and, beginning in 1933, helped German Zionists publicize the plight of the victims of Nazism. For the remainder of the decade, Arendt lived in Paris, aiding in the efforts to relocate German Jewish children to Palestine. In 1940 she married a former communist, Heinrich Blücher; later that year they were interned in southern France along with other stateless Germans and Jews after the Nazi invasion. Arendt and her husband landed in the United States in May 1941. While living in New York City during and after World War II, Arendt wrote *The Origins of Totalitarianism*, published in 1951, the year she secured U.S. citizenship.

No book traced more insightfully the steps that Hitler and Stalin took toward creating their distinctively modern despotisms, nor calculated more evocatively how grievously wounded civilization had become as a result of the concentration camps, the slave labor camps, the extermination camps. In exposing the operations of "radical evil," she demonstrated that with the superfluity of life toward which it aimed, totalitarianism marked a crucial discontinuity in the very notion of what it has meant to be human. *The Origins of Totalitarianism* asserted that the hell that medieval visionaries could only imagine had been put into practice in Auschwitz and Treblinka and in the Gulag Archipelago.

Her book exerted its greatest impact during the bleakest phase of the cold war, because of Arendt's insistence upon the resemblances between Nazi Germany and Stalinist Russia. Such claims also engendered doubt among scholars, who noted her limited access to Soviet sources. Nevertheless, her emphasis on the precariousness of European Jewry while Enlightenment ideals of human rights were collapsing, plus her argument that Nazism was conducting two wars—one against the Allies, the other against the Jewish people—became truisms in the history of the Holocaust.

In 1963 came a sequel of sorts, and her most controversial work. *Eichmann in Jerusalem: A Report on the Banality of Evil* did not portray the S.S. lieutenant colonel who had directed the transportation of Jews to their deaths as an anti-Semitic fanatic. He was instead an energetic organization man whose primary attribute was a sense of duty. Nonetheless, her book endorsed the Israeli verdict that he be hanged for his crimes. Arendt's view that Eichmann's iniquity did not stem from sadistic impulses to orchestrate genocide, but was the result rather of sheer thoughtlessness (a failure to think through what he was doing), led her back in the final phase of her career to the formal philosophical approaches that had marked her German education. Arendt died in New York City on December 4, 1975.

SEE ALSO *Totalitarianism*

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Stephen J. Whitfield

ARISTOCRACY

The term *aristocracy* derives from the Greek words *aristos* and *kratos,* meaning "rule by the best." In denoting hierarchy and social differentiation, *aristocracy* has often been used synonymously with *elites* or *oligarchy*. More broadly, the term has been used in modern formulations such as "America's aristocracy" to denote a *plutocracy* of wealth and privilege in the United States, or as "labour aristocracy" in the United Kingdom to refer to a privileged stratum of skilled workers within the nineteenth-century working class. Indeed, its modern usage is so broad that many commentators have concluded that *aristocracy* is now impossible to define.

The aristocracy in preindustrial European states combined specific economic, social, and political characteristics that differentiated it from other social strata at the time, and from subsequent notions of aristocracy in industrial and postindustrial societies. For a period of over five hundred years, before the rapid spread of industrialization in the nineteenth century, predominantly agrarian societies in Europe were structured in feudal hierarchies and governed by monarchs in varying alliances with landed aristocrats. In these hierarchies, aristocrats were differentiated from monarchs in one, upward direction,

and from gentry, merchants, and peasants in the opposite direction.

In economic terms, aristocracy in preindustrial societies was defined in relationship to the land. Initially in feudal systems, monarchs granted feudal lords the rights to income from large estates or manors in return for military support and local administration of justice. Thus, aristocrats derived their income primarily from land, either directly through the extraction of services and dues from peasants, or, latterly, indirectly through sharecropping contracts or lease-renting arrangements with small farmers.

The economic differentiation of the aristocracy was reinforced by social distinctiveness. Monarchs conferred not only economic rewards but also status rewards in the form of titles. Although titles were not an exact indicator of membership in the aristocracy, they were, when combined with land ownership, the most effective defining characteristic of the aristocracy. Noble rank reinforced notions of social exclusivity, and even among the aristocracy there was an internal hierarchy of titles that distinguished landed magnates from lesser nobility.

The aristocracy's combined economic and social dominance was sustained over centuries through inheritance laws based on primogeniture (where succession passes to the firstborn son). In this manner, the indivisibility and continuity of landed estates was secured and the social status of titular rank was passed from one male generation to the next.

A deliberate cult of ostentation characterized the lifestyle of most European aristocrats. "Living nobly" entailed architectural recognition in the construction of grand country residences and palatial dwellings in capital cities; cultural recognition in the patronage of the arts and music; fashionable recognition in elaborate dress and tailoring; and educational recognition in, for example, the value placed upon multilingualism by European aristocrats.

Political power was closely associated with the economic and social power of the aristocracy. Nonetheless, there were wide variations in the political relationships between monarch and aristocracy from one country to the next. By the seventeenth and eighteenth centuries, there were marked contrasts between France, where the aristocracy was politically enfeebled, and England, where the landed aristocracy effectively restricted monarchical power through representation in Parliament. Eventually, with the transition to industrial capitalist economies, the political, social, and economic ascendancy of the aristocracy was eroded in all European states. Even in the twenty-first century, however, residues of aristocratic status and wealth can still be traced in many European countries.

SEE ALSO *Authority; Conspicuous Consumption; Distinctions, Social and Cultural; Elitism; Feudalism; Gentility; Hierarchy; Landlords; Meritocracy; Monarchy; Monarchy, Constitutional; Power; Wealth*

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David Judge

ARISTOTLE

384–322 BCE

Aristotle was born near the Greek village of Stagira. While he was still a young man, this area came under the control of the kingdom of Macedonia. Aristotle's father was a physician in the royal Macedonian court, which led to the son's early interest in biology and, later, to his becoming the tutor of Alexander the Great (356–323 BCE). At the age of eighteen, Aristotle departed for Athens, where he attended Plato's Academy for twenty years. After Plato's death, Aristotle spent a couple of years in Asia Minor, where he married and engaged in biological research. When Alexander became king of Macedonia in 336 BCE, Aristotle returned to Athens, where he established the Lyceum, a rival school to Plato's Academy. Plato's Academy continued until it was closed by Emperor Justinian in the sixth century CE. After Alexander's death in 323 BCE, Aristotle came under suspicion as an agent of Macedonia and was forced to flee Athens.

Aristotle's works may be broadly classified into those dealing with the theoretical sciences (e.g., physics, mathematics, and metaphysics) and those dealing with the practical sciences (e.g., ethics, political science, rhetoric, and poetics). Informing all of Aristotle's works is his approach to logic. The six logical works are the *Categories, On Interpretation*, the *Prior Analytics*, the *Posterior Analytics*, the *Topics*, and *On Sophistical Refutations*. These works are traditionally collected together under the title of the *Organon*. Important works in the theoretical sciences are the *Physics, On the Soul,* and the *Metaphysics*. In the practical sciences, the *Nichomachean Ethics*, *Politics*, and *Poetics* are particularly noteworthy. All of these works have been influential, in varying degrees, in the development of the modern social sciences. But Aristotle's influence has been particularly important in the development of politi-

cal science, and the seminal works here are the *Nichomachean Ethics* and the *Politics*.

In most of the contemporary social sciences a fact-value dichotomy is observed. That is, the researcher must carefully distinguish between facts based on empirical observation and values based on personal preferences. This distinction is denied in Aristotle's works, however, and one must read the *Nichomachean Ethics* and the *Politics* as one extended work. Thus, Aristotle distinguishes six types of states, according to qualitative as well as quantitative considerations. Monarchy is the rule of one in the interest of all, while tyranny is a corrupted form of monarchy. Similarly, aristocracy is the rule of the few in the interest of all, while oligarchy is the selfish rule of the few. Polity, finally, is the rule of the many in the interest of all, while democracy is the decayed rule of the many in their own interest. To Aristotle, human beings are political by nature, for they develop in association with others—beginning with the household, progressing through a village organization, and coming to full maturity in the *polis*, or city-state. This teleological approach to the human or social sciences pervades all of Aristotle's writings on the practical sciences.

Aristotle's influence in Western civilization is such that he was considered "the philosopher" throughout the Middle Ages. His influence has also been considerable in Christian theology, especially through the works of Thomas Aquinas (1225–1274); in philosophy, especially in his teachings regarding intellectual and moral virtues; in the physical sciences, notably as the target of extensive criticism by modern giants such as Galileo Galilei (1564–1642); and in the modern social sciences, with particular reference to political science.

SEE ALSO *Philosophy; Plato; Political Science*

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Timothy Hoye

ARMED FORCES

SEE *Military.*

ARMS CONTROL AND ARMS RACE

Arms control is a form of international security cooperation, or "security regime," aimed at limiting, through tacit or explicit agreement, the qualities, quantity, or use of weapons. The term *arms control* has been used loosely to denote many things in international politics involving the reduction or elimination of weapons or the tensions that lead to their use, and even as a euphemism for militarily enforced disarmament, like that imposed on Iraq by the United Nations in the 1990s. But such phenomena often do not reflect the conventional meaning of the term as it is used by arms control scholars and practitioners: a meaning that implies a cooperative relationship involving reciprocity and mutually agreed restraints.

The three most important goals of arms control are (1) to lower the likelihood of war; (2) to reduce its destructive effects; and (3) to curtail the price of preparing for it. The first aim can be met by encouraging military postures that enhance deterrence and defense and thus make aggression less attractive; by reducing the instabilities of arms racing that may lead to war (see below); and by taking steps that make military "accidents" or unauthorized uses of force less liable to happen or to lead to war if they do. As for the goal of limiting damage when wars do break out, arms control measures may forbid the production, deployment, or use of certain military technologies. Finally, cost-savings can be garnered through quantitative or qualitative arms limitation agreements. Such economies are an important policy consideration, for resources not sunk into certain types of weapons can be used to promote security in other ways, or put toward other welfare-enhancing activities.

Regardless of how it mixes or prioritizes these objectives, arms control has a few essential interrelated characteristics. First, it is a political relationship between actors: Unilateral arms control is an oxymoron. This does not preclude unilateral steps toward disarmament or demobilization that one state may take in order to elicit reciprocity from others and thus launch an arms control process: The determining factor is the conception of an end-state involving mutual reductions, limitations, or other restraints. Second, arms control involves strategic interdependence—the parties engaged in it are sensitive to each other's postures and actions, and their decisions to agree and comply with arms control depend on their beliefs about each other's willingness to do likewise. Third, it involves at least tacit if not explicit bargaining because the incentives to cooperate that infuse the relationship are always mixed with some degree of conflict and incentives to compete.

TYPES OF ARMS CONTROL

It is useful to distinguish between rivalry-specific and general arms control measures. In the rivalry-specific form, adversaries seek to manage their security competition through agreements that are tailored to the shape of their strategic relationship, in order to make a more stable or at least less costly military balance. By contrast, general arms control measures aspire to universality: With a broad ambit and generic guidelines, they are meant to exert desired effects over the multitude of strategic relationships in international politics.

The 1922 Washington Naval Treaty, for example, was rivalry specific. In it, the United States, Britain, and Japan agreed to reductions in battleship fleets according to specific ratios of strength between them, and to a ten-year hiatus on new construction, as well as limitations on battleship tonnage and armaments. The goal was to stabilize the existing balance of naval forces at lower levels, and to forestall an arms race among the three parties. Similarly, in 1972, at the peak of cold war détente, the United States and the Soviet Union pledged in the first Strategic Arms Limitation Talks agreement (SALT I) to limit the number of ballistic nuclear missile launchers to then-current levels, and to abide by major limitations on the deployment of strategic missile defense systems. Behind these arrangements were mutually held cooperative and competitive goals: to slow down the arms race and reduce worrisome instabilities and to maximize restraints on the other side while minimizing those on one's own side.

As for general arms control measures, the most extensive early efforts were the conventions produced at the Hague Conferences of 1899 and 1907. Those widely endorsed conventions promulgated, among other things, prohibitions on the use of certain types of arms, such as "dum-dum" bullets, poisonous chemical weapons, or bombs dropped from balloons. In 1925, during the heyday of the League of Nations, the Geneva Protocol was added to the conventions, reinforcing the prohibition on the use of deadly gases. Later in the interwar period, participants in the World Disarmament Conference in Geneva (1932–1936) tried to enact a blanket prohibition on the use and development of "offensive" weapons, which were (and still are) thought to be conducive to war. The effort was ill fated for many reasons, but chief among them was the bane of many such qualitative exercises—the thorny and politicized issue of distinguishing between offensive and defensive weaponry. At the Geneva conference, for example, Britain, France, and the United States argued that aircraft carriers were essentially defensive; conversely, Germany, Italy, the Soviet Union, and Japan asserted that they were inherently offensive because they were useful for launching surprise attacks. In the era of the United Nations, similar attempts to foster far-reaching agreements have been carried forward by groups of states in the General Assembly; the current locus of these efforts is the sixty-six-member Geneva Conference on Disarmament (CD). Begun in 1979, the CD has been the forum for adoption of the 1992 Chemical Weapons Convention and the 1996 Comprehensive Test-Ban Treaty, and for negotiating various additions to the 1975 Biological Weapons Convention.

The most recent general effort was the tightly focused 1997 Ottawa "Landmines" Convention, which prohibits the use, stockpiling, production, and transfer of antipersonnel mines and mandates the destruction of existing stocks. As a general measure with aspirations to universality, the treaty has had mixed success. As of 2007, 155 member states had joined, while 37 had not, including 3 permanent members of the United Nations Security Council: the United States, Russia, and China. However, although the United States has not signed the treaty, it has funded and supported demining efforts worldwide. Thus, even though many important countries have not signed the convention, it has had a tangible humanitarian impact. Demining efforts catalyzed by the convention have resulted in the removal of hundreds of thousands of mines, saving a large number of lives worldwide.

General and rivalry-specific characteristics of arms control can overlap—for example, when a rivalry-specific formula is nested within a more general arms control agreement. The most important and contentious arms control agreement of the early twenty-first century—the Nuclear Nonproliferation Treaty (NPT)—is a good illustration of this. The NPT, which first came into force in 1970, has a nearly universal membership (by 2007, 188 of the 192 members of the United Nations were signatories). Its general aims are to reduce and eventually eliminate the role of nuclear weapons in international politics. Behind these sweeping generalities are a variety of undertakings that apply specifically to two different "classes" of signatories—the Nuclear Weapons States (NWS) and the Non-Nuclear Weapons States (NNWS). The NWS parties "legitimately" possess nuclear weapons, but must work to reduce them (eventually to zero), and must not share them with states that do not possess nuclear weapons. The NNWS cannot "legitimately" possess nuclear weapons, but in return for foreswearing them, they are entitled to develop nuclear energy for peaceful purposes, and to international support for those efforts channeled through the International Atomic Energy Agency (IAEA). Thus, although the NPT is a nearly universal and general agreement, it is politically oriented toward managing a dangerous and difficult imbalance between the nuclear haves and have-nots. Similarly, the parties to the 1990 Conventional Forces in Europe (CFE) treaty were all members of either the NATO or Warsaw Pact alliances. Although a general aim of the treaty was to reduce conventional forces in

Europe, its organizing principle was military balance between the two blocs. There was thus a strong rivalry-specific core within the broader general agreement.

Yet another form of arms control is the supplier-cartel regime, in which participants who share a leading position on a given weapons technology agree to restrict its transfer to other parties outside the cartel. A formula of this sort is wired into the NPT in that the NWS agree not to transfer nuclear weapons to NNWS. But the purest example is the Missile Technology Control Regime (MCTR), which enjoins parties possessing advanced ballistic missile capabilities not to export the technology to other states. Begun in 1987 by the United States and six of its closest allies (Britain, Canada, France, West Germany, Italy, and Japan), the MCTR cartel grew to thirty-three members, including Russia, and also attracted the "unilateral" adherence of a number of other key players, most notably China and India.

PROBLEMS AND CRITIQUES OF ARMS CONTROL

The most important general critique of arms control is that if states become or threaten to become aggressive, arms control is rendered irrelevant and even pernicious: It encourages false hopes, wastes political energies on panaceas, and, worst of all, lowers defenses that need rather to be raised. By the same token, critics contend, arms control is most readily achieved and likely to work when it is least needed—that is, when international politics are placid or when foes concur that the weapons in question lack utility. In the 1991 Strategic Arms Reduction Treaty (START I), struck *after* the cold war evaporated with the end of the Warsaw Pact and the withdrawal of Soviet forces in Eastern Europe, Washington and Moscow achieved stunning success in agreeing to 30 to 40 percent cuts in the number of deployed strategic nuclear weapons: Such cuts had been impossible in the hostile and distrustful atmosphere of earlier decades. Once the political bases for enmity are removed, arms control can seem easy.

In circumstances of rivalry, in which trust and confidence-building is most needed, solutions to the verification problem (of measuring compliance with arms control agreements) can prove elusive. Insistence on highly intrusive forms of verification, moreover, can mask a basic unwillingness to reach agreement and negotiations can become a charade: Here the goal is not to find common ground but merely to avoid taking the blame for the failure to do so. Assuming a workable verification mechanism can be agreed on, there remains, as Fred Iklé famously observed, the enforcement problem—how to punish the cheaters that are caught. There is nothing about an arms control treaty that can make sanctions automatic: Although effective verification may make it harder for cheaters to covertly "break out" of agreements, the basic political problem of when, where, and how to counter their threatening military power remains, and will be decided by the parties that are both willing and able to do something about it. Thus, although it is a form of international cooperation, arms control does not transcend power politics.

There is one more note of caution: Effective arms control agreements that do produce mutual verifiable cuts will expose new gaps and asymmetries in the balance of forces among potential rivals, and, as a result, may encourage them to channel new investments into other—and potentially more destabilizing—weapons systems. This is most likely to occur when, despite major agreements, the embers of political competition continue to smolder. One of the important effects of the Washington Naval agreements was to facilitate the parties' shift of focus and resources to competitive aircraft carrier development—with portentous consequences for the outbreak and conduct of World War II in the Pacific.

Proponents of arms control do not deny that these problems exist, but they point out that arms control is not always hostage to the vagaries of the political environment—it can shape that environment too. Arms control is more than just a means by which states press fixed national interests; it involves a political process that may permit them to learn more about each other, to deflate exaggerated images of "the enemy," and to conceive of interests in more compatible ways. If it is folly to pursue arms control with irredeemably aggressive states, it is just as foolish *not* to pursue it when the situation is less clear-cut, for arms control itself may help not only to bring clarity but also to prevent potentially aggressive states from becoming aggressors.

ARMS RACE: CONCEPT AND CONTROVERSIES

An arms race occurs only when parties for whom war is a possibility engage in strategically interdependent increases in the quantity and/or quality of weapons: Their respective acquisitions and buildups are meant to match or overcome the strengths of the other side. The element of strategic interdependence is central to the identification of the arms race as a phenomenon *of* international politics, which requires states to rely ultimately on their own military forces for security, because the military forces of other states may threaten them and there is no world government to protect them. In such a milieu, where falling behind one's competitors can potentially lead to the gravest consequences, arms racing can be seen as a normal, survival-enhancing behavior.

Nevertheless, arms races are often considered harmful because they lead states that are trying to outpace each other to devote more resources to military preparations than would otherwise be necessary for their security. Increased military buildup, in turn, means that fewer resources can be devoted to other, welfare-enhancing activities. When the competitive dynamic of arms racing comes to dominate other principles for controlling acquisitions, the buildup (and concomitant waste) can mount precipitously. For example, during the most dramatic upswing of the cold war nuclear arms race, as the Soviet arsenal grew and American planners became ever more ambitious in their target selection, the U.S. nuclear warhead stockpile climbed from approximately 1,000 in 1955, to 18,000 in 1960, to 32,000 by 1967. It was very hard to understand why a much smaller (and cheaper) arsenal of warheads would not have been sufficient to achieve the main strategic purposes: deterring a Soviet nuclear strike on the United States, or a conventional assault on Western Europe.

The worst fears about arms races, however, are not that they are wasteful but that they can cause wars by feeding *conflict-spirals* that do not just reflect enmities, but create and reinforce them. In this view, arming itself may become the stuff over which states fight. The conflict-spiral premise is what makes many figurative uses of the term *arms race* inapt. It has, for example, been used to describe the spike in steroid use among the "slugger-elite" of professional baseball, and also the steady pace of miniaturization and computing-capacity innovation among microchip developers. But few would argue that the greatest danger of steroid use in baseball is that the supersized sluggers will eventually fall on each other in sudden bat-wielding melees, or that the technology race among microchip producers will lead to a cataclysmic collapse of the high-tech economy.

Two objections to the conflict-spiral conception of arms racing are often raised. The first and most intuitive is that arms races do not cause hostility but are its consequence. They reflect the maneuvering of rivals consciously seeking a margin of advantage that will permit aggression or deter it, not some unfortunate misunderstanding—and that being the case, buildups may prevent war, because they reinforce mutual caution. Second, even if an arms race between status-quo-oriented states does sometimes culminate in war, their decisions to fight are based on concrete stakes and complex political judgments that simply cannot be reduced to reciprocal fears caused by the arms race itself.

Nevertheless, there is an impressive amount of research on the connection between arms races and war, most of which has tended to focus on a few key questions: Given that some arms races culminate in wars, whereas others do not, are certain types more conducive to war than others? Do the dynamics of qualitative races (in which competitors seek innovative capabilities that will render their rival's obsolete) differ from quantitative races (in which competitors seek a numerical advantage in relatively comparable weapons)? Samuel Huntington's answer to these questions blended the two concerns by arguing that quantitative arms races are more dangerous than qualitative ones because, among other reasons, quantitative races require increasingly costly sacrifices that put pressure on states to seek a quick and violent escape from the competition. Others have suggested that arms races that generate large swings back and forth in relative strength (thus creating tempting opportunities for aggression by the temporary leader) are the most dangerous. Still others have made the intuitive point that arms races which give big advantages to states that favor the status quo are more likely to result in peace than those which give big advantages to states with aggressive intentions (although this ignores the possibility that a status-quo state may want to use its temporary margin of strength to defeat an aggressive adversary before it, in turn, becomes stronger).

During the cold war, these concerns were amplified by the fact that the arms race in question was nuclear: If it had led to war, it would truly have been a "race to oblivion." The survival of human life—let alone civilization—following a major nuclear exchange between the cold war rivals would be questionable. Furthermore, it was clear that unless effective arms control measures were taken to interrupt the competitive dynamic, the superpowers' nuclear race would metastasize, creeping into other rivalries throughout the international system. Even if arms racing increased the likelihood of war only by small margins, as the number of nuclear "racers" multiplied so too would the prospects for nuclear holocaust. Concerns such as these provided the impetus behind the rivalry-specific and general nuclear arms-control efforts discussed above, and while the politics of the NPT remain contentious, and a number of crucial nuclear-weapons states are not members (Israel, India, Pakistan, and North Korea), the NPT does appear to have helped stem the contagion of nuclear arms and arms races among states.

As the cold war recedes, and with it the chilling imagery of a nuclear-arms-race-spiral, the concept of an arms race remains useful. It has striking relevance to an important issue of international security today: the militarization of outer space. From the 1960s to the 1980s, the Soviet Union and the United States experimented with weapons designed to destroy earth-orbiting satellites, which have tremendous civilian and military utility. The feared arms race in such weapons did not then materialize, and the end of the cold war put the issue on ice. In 2007, however, China surprised the world by testing an antisatellite weapon, challenging the presumption of the

United States' military preeminence in space. Thus, the prospect of a space arms race was resurrected, and the question of whether such a race could become so intense as to raise the probability of war was reopened—along with the question of whether arms control could serve to prevent war.

Still, in the early twenty-first century concerns over the arms-race-spiral as a potential cause of nuclear war seemed to decline relative to fears of another nuclear nightmare scenario—that of "loose nukes" getting into the hands of terrorists. This perceived and perhaps real shift in nuclear risk raises important questions about the future agenda of arms control concerning nuclear weapons and other weapons of mass destruction: Can the existing nonproliferation regimes—with some clever rewiring—furnish satisfactory solutions? Or must a new matrix of rivalry-specific, general, and supplier-cartel agreements be contrived to manage risky relationships between states and nonstate actors? And if the latter is necessary, will the supportive international political context on which arms control depends take shape and be maintained? For common danger does not make security cooperation inevitable. Without a countervailing common will, a construct entirely contingent on politics, the states that oppose this danger will make a rabble, not a regime.

SEE ALSO *Cold War; Deterrence, Mutual; Gorbachev, Mikhail; Huntington, Samuel P.; League of Nations; Militarism; National Security; Politics; Reagan, Ronald; Terrorism; Union of Soviet Socialist Republics; United Nations; Weaponry, Nuclear; Weapons Industry; Weapons of Mass Destruction*

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Timothy W. Crawford

ARMSTRONG, LOUIS

SEE *Jazz.*

ARONSON, ELLIOT

1932–

Elliot Aronson is a prominent American social psychologist. Born in Revere, Massachusetts, on January 9, 1932, his career has spanned nearly fifty years. He is renowned as a creative methodologist who conducts carefully crafted, highly impactful experiments to explore the causes and consequences of human social behavior. His style of experimentation builds on the legacy of Kurt Lewin (1890–1947) and Leon Festinger (1919–1989). Aronson's textbook, *The Social Animal* (9th ed., 2003), is widely used and highly regarded for its pedagogical innovations. He is also known for his work as coeditor of two editions (1969, 1985) of the important *Handbook of Social Psychology*. He has been a highly successful mentor of doctoral students, including many who have made significant contributions to the field of social psychology during distinguished careers.

Aronson earned a bachelor's degree in 1954 at Brandeis University, where he was mentored by Abraham Maslow (1908–1970). He then earned a master of arts degree at Wesleyan University in 1956, and completed the PhD program at Stanford University in 1959, where his mentor was Festinger, known for developing the theory of cognitive dissonance. Aronson subsequently held faculty positions at Harvard University, the University of Minnesota, the University of Texas at Austin, and the University of California at Santa Cruz, where he has been professor emeritus since 1994. Since 2001 he has also been distinguished visiting professor at Stanford University.

Beginning in 1959 and continuing through the mid-1960s, Aronson published a number of widely cited experiments that tested derivations from the theory of cognitive dissonance, providing support for dissonance-theory explanations of such phenomena as effort justification (evaluating an outcome more positively after a high degree of effort was required to attain it) and insufficient deterrence (devaluing a forgone pleasure when the threatened aversive consequence was minimal). Aronson proposed a useful modification to the theory of cognitive dissonance by asserting that the dissonant cognitions must be self-relevant, and that dissonance reduction will be directed at preserving one's self image. In the 1990s he returned to this topic in experiments that show that making salient a discrepancy between the behavior that one advocates for others and one's own behavior (hypocrisy)

induces dissonance that is reduced by adopting behavior more in accord with what one has advocated for others.

Aronson's contributions include his work on the effects of disconfirmed expectancies, and a substantial body of work on the antecedents of interpersonal attraction, notably the *gain-loss hypothesis*, predicting that changes in the level of esteem received from another would be a more important determinant of attraction to that person than the overall amount of esteem received. Aronson is also well known in the field of education for his work on the *jigsaw classroom*. He and his colleagues conducted field experiments demonstrating that creating interdependence within student teams working on a school assignment leads to reduced prejudice against minority students or other out-groups, while maintaining or enhancing academic achievement. This technique is widely used in classrooms at all levels of elementary, secondary, and post-secondary education.

Aronson has received many academic and scientific honors, including the American Psychological Association's Distinguished Teaching Award (1980), its Donald Campbell Award for Distinguished Research in Social Psychology (1980), and its Distinguished Scientific Contribution Award (1999). He was also elected to the American Academy of Arts and Sciences in 1992, and received the Distinguished Scientific Career Award from the Society of Experimental Social Psychology in 1994. He received a William James Fellow Award for 2006–2007 from the Association for Psychological Science.

SEE ALSO *Cognitive Dissonance; Festinger, Leon; Social Psychology*

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ARONSON, JONATHAN

SEE *Steele, Claude M.; Stereotype Threat.*

ARRANGED MARRIAGES

SEE *Marriage.*

ARROW, KENNETH J.

1921–

One of the most active, influential, and respected economists of the twentieth century, Kenneth J. Arrow was born in New York City in 1921 and remained in that city through his early adulthood. After receiving a bachelor of sciences degree in mathematics from the City College of New York in 1940, he obtained a master's degree in the same field from Columbia University in 1941. During his graduate training in mathematical statistics his teachers Harold Hotelling (born 1895) and Abraham Wald nudged him toward economics. After working at the Cowles Commission in Chicago and the RAND Corporation in Santa Monica, Arrow received a doctorate in economics from Columbia University in 1951. He started his career at Stanford University and returned to that institution after spending the years from 1968 through 1979 at Harvard University. It was during that period, in 1972, that Arrow shared the Nobel Memorial Prize with John R. Hicks "for pioneering contributions to general equilibrium theory and welfare theory." In welfare theory Arrow's impossibility theorem is a towering achievement, and in general equilibrium theory Arrow is one of the founding fathers, along with Gerard Debreu.

THEORIES

Three distinct schools can be identified in post–World War II (1939–1945) American neoclassical demand theory (Mirowski and Hands 1998): the Chicago School, the Cowles Commission (at the University of Chicago), and Paul A. Samuelson's Massachusetts Institute of Technology (MIT). All three offered different solutions to the problem of the relationship of the law of demand to utility maximization and the interdependence of income constraints and income effects.

Arrow's contributions concern the so-called Cowles approach. Arrow's impossibility theorem was developed in his doctoral dissertation and established that under certain assumptions about people's preferences between options it is always impossible to find a collective choice rule in which one option emerges as the most preferred. In other words, it is logically impossible to add up or otherwise combine the choices of individuals into an unambiguous social choice. This has major implications for welfare economics and theories of justice. Along with Debreu, Arrow gave the first rigorous proof of the existence of a market-clearing equilibrium given certain restrictive assumptions. He extended the analysis to incorporate uncertainty, evaluate stability, and assess efficiency. The restrictive conditions under which the existence of equilibriums could be established, the difficulties encountered in efforts to prove the stability and uniqueness of competitive equilibriums,

and the general perception of limited usefulness have caused a shift away from Arrow-Debreu general equilibrium theory toward game theory in microeconomics.

Areas in which Arrow's legacy is most persistent are growth theory and information economics. In growth theory his research on innovation and learning by doing has served as a major inspiration for endogenous growth theory. For instance, Arrow was the first to construct a theoretical model of learning by doing, which was followed by many empirical studies by others. Yet whereas Arrow had imposed the restriction that increasing only capital (or only labor) does not lead to increasing returns, endogenous growth theorists such as Paul Romer (b. 1955) have gone to great lengths to disqualify that restriction. In information economics Arrow's evaluations of problems caused by asymmetric information in markets endure in analyses of moral hazard, adverse selection, and so on. Arrow's asymmetric information insights are of further importance for analyzing specific topics such as discrimination and education. For instance, Arrow offered the best and most complete model of racial wage differentials that are not based on productivity by making the phenomenon compatible with competitive equilibrium theory, more specifically by developing a model that includes signaling and screening mechanisms under conditions of asymmetric information.

CRITICISMS

Arrow's insights have not gone without criticism. His impossibility theorem in particular has sparked a literature that has found other impossibilities as well as some possibility results. For example, if one weakens the requirement that the social choice rule must create a social preference ordering that satisfies transitivity and instead only requires acyclicity, there exist social choice rules that satisfy Arrow's requirements. In addition, Amartya Sen (1982) has suggested at least two other alternatives based on relaxation of transitivity and removal of the Pareto principle. This has enabled Sen to show the existence of voting mechanisms that comply with all of Arrow's criteria but supply only semitransitive results. In response to Arrow's model of racial discrimination, others have developed a long list of criticisms and countered that the phenomenon must be understood in terms of the dual labor market hypothesis or radical models that build on the work of multiple labor analysts yet have added twists of their own. In spite of or perhaps as a result of these critical responses, Arrow's legacy within the economics profession is as rich as his work.

SEE ALSO *Adverse Selection; Arrow Possibility Theorem; Arrow-Debreu Model; Debreu, Gerard; Discrimination, Statistical; Economics, Nobel Prize in; Equilibrium in Economics; General Equilibrium; Information, Asymmetric; Information, Economics of; Moral Hazard; Samuelson, Paul A.*

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Esther-Mirjam Sent

ARROW-DEBREU MODEL

The Arrow-Debreu Model is named after the Nobel laureates Kenneth Arrow (b. 1921) and Gerard Debreu (1921–2004). It is a formalized Walrasian economic equilibrium system, and the existence of its competitive equilibrium was proven by Arrow and Debreu in their joint work in 1954. Solving the long-standing problem of proving the existence of equilibrium in a Walrasian system, the Arrow-Debreu Model has been the central piece of the general equilibrium theory of economics since the 1950s.

At around the same time, the economist Lionel McKenzie (b. 1919) proved the existence of a competitive equilibrium of a general equilibrium model using a similar set of techniques, so the Arrow-Debreu model is sometimes also referred to as the Arrow-Debreu-McKenzie model.

The Arrow-Debreu model specifies a competitive economy in which there are finite numbers of consumers, commodities (some being used as production inputs), and production units. Consumers have a set of well-defined preferences (continuous, nonsatiated, and convex), and each consumer holds an initial endowment of the commodities, with a positive quantity of at least one commodity. The technology that converts inputs into outputs is either nonincreasing returns to scale or constant returns to scale. In this economy, every producer maximizes profit and every consumer maximizes utility over their budget sets. The equilibrium of the economy is characterized by a set of prices at which the excess demand is zero for every commodity, and producers make zero profit. These market-clearing prices are reached through a *tâtonnement* process, in which "a fictitious price-setter" facilitates the price adjustment following a set of rules that resembles the way in which prices are reached in the real competitive economy.

Formulated in a purely mathematical form, the Arrow-Debreu model can be easily modified into spatial or intertemporal models with proper definition of the commodities based on the commodity's location or time of delivery. When commodities are specified to be conditional on various states of the world, the Arrow-Debreu model can easily incorporate expectation and uncertainty into the analysis. Theoretical extensions and applications have been made to analyze financial and monetary markets and international trade, as well as other subjects. With a general equilibrium structure, the model is applicable in assessing the overall impact on resource allocation of policy changes in areas such as taxation, tariff, and price control.

The model has been subject to the criticism that many of the assumptions it makes do not fit the workings of the real economy. However, this criticism is not unique to the Arrow-Debreu model; it also applies to all general equilibrium models that are heavily dependent upon rigorous mathematical proofs. In the case of the Arrow-Debreu model, the assumption that each consumer has to have in the initial endowment at least a positive quantity of all commodities (strong survival assumption) or of at least one commodity (weak survival assumption) has drawn substantial criticism. The *tâtonnement* process, which requires that all purchases be made when the competitive equilibrium is reached, is also claimed to be incompatible with the workings of a real economy, where purchasing at non-market-clearing price is often observed.

SEE ALSO *Arrow, Kenneth J.; Debreu, Gerard; General Equilibrium; Market Clearing; Prices;* Tâtonnement

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Chung-Ping A. Loh

ARROW IMPOSSIBILITY THEOREM

SEE *Arrow Possibility Theorem.*

ARROW POSSIBILITY THEOREM

The Arrow (im)possibility theorem can be viewed as a generalization of the Condorcet paradox. Assume that three girls, Ann, Beryl, and Cathy, wish to have dinner together in a restaurant. They have a choice of three restaurants: a Chinese *(c)*, a French *(f)*, and an Italian *(i)*. Ann, Beryl, and Cathy have different preferences and unanimously decide that they will choose the restaurant on the basis of majority rule: a restaurant *x* will be ranked before a restaurant *y* if at least two of them prefer *x* to *y*. But Ann prefers the Chinese to the French and the French to the Italian (and, of course, the Chinese to the Italian); Ann's ranking is *cfi* (*c* is ranked first, *f* ranked second, and *i* ranked third). Beryl prefers the French to the Italian and the Italian to the Chinese (and the French to the Chinese); Beryl's ranking is *fic*. Cathy prefers the Italian to the Chinese and the Chinese to the French (and the Italian to the French); Cathy's ranking is *icf*. Using majority rule, the Chinese is ranked before the French, the French is ranked before the Italian, and the Italian is ranked before the Chinese (*cfic* …). A choice is impossible.

For Arrow's theorem, one considers a set *X* of alternatives (social states, candidates to an election, etc.) and a set of individuals (in the case of an election, voters), the number of individuals being a positive integer. Individuals have preferences over alternatives. If the number of alternatives is a positive integer (i.e., if *X* is finite), they rank these alternatives from the most preferred to the least preferred with possible ties. For instance, with three alterna-

tives, one can have a first ranked, a second ranked, and a third ranked (six possibilities), or two alternatives ranked first and the third alternative ranked last (three possibilities), or an alternative ranked first and the other two ranked second (three possibilities), or the three alternatives tied. This makes thirteen possibilities (thirteen complete preorders or *weak orderings* as they are indifferently known in mathematics). The main question of social choice is to associate a social preference or a choice—an alternative in X or a subset of X—to the individual rankings (one ranking by individual). An Arrovian social welfare function is a rule that associates a social preference that is a weak ordering (i.e., a social ranking if X is finite) to the individual weak orderings (i.e., individual rankings if X is finite). Among these rules, one can consider the rule saying that the social weak ordering is the weak ordering of some specified individual, or the rule saying that the social weak ordering is fixed whatever are the individual weak orderings. To avoid these kinds of rules, Arrow imposes four conditions.

Condition U (Universality). This condition states that the individuals can have any weak ordering (there is no extra rationality condition where some weak orderings could be excluded due, for instance, to some homogeneity in the preferences of the individuals). Consequently, for three alternatives and three individuals, there are 13^3 data of individual weak orderings and 13^{2197} social welfare functions (10^{2000} is 1 followed by 2,000 zeros!).

Condition I (Independence). The social preference between two alternatives, say *a* and *b*, depends only on the individual preferences between *a* and *b*. For instance, the social preference between *a* and *b*, given five alternatives *a, b, c, d*, and *e*, other things being equal, will be the same whether some individual ranks the alternatives *abcde* or *acdeb*. Majority rule satisfies this property, but scoring rules where points are attributed to alternatives according to their ranks in the individual rankings and the social preference is based on the sums obtained do not. This excludes, in particular, the standard American and British voting rules and the famous Borda's rule. (For Borda's rule, if individuals rank k alternatives without ties, the alternative ranked first in an individual ranking gets k -1 points, the alternative ranked second gets k-2 points, and so forth, and the alternative ranked last gets no point. The social ranking is determined by the sum of points obtained by the alternatives, with the alternative socially ranked first being the alternative whose sum of points is the greatest. Ties are possible in the social ranking; to avoid ties, one can use some tie-breaking device. For instance, if alternatives are election candidates, their age may be used to break a tie.)

Condition P (Pareto Principle). If the individuals unanimously prefer any alternative, say *a*, to any other alternative, say *b*, then in the social preference *a* is preferred to *b*. This condition, given Condition U, excludes constant rules. In particular, rules that would be imposed by a moral or religious code are excluded.

A dictator is an individual who imposes the "strict" part of his preference, that is, of his weak ordering (he does not impose indifferences—ties); *a* is socially preferred to *b* whenever he prefers *a* to *b*.

Condition D (Nondictatorship). There is no dictator.

The Theorem can now be stated: If there are at least two individuals and at least three alternatives, there is no social welfare function satisfying Conditions U, I, P, and D. The enormous number of social welfare functions has been "reduced" to none.

A common but somewhat dishonest interpretation is that democracy is impossible or possible only in a two-party system. It is clear that, from a formal point of view, one can challenge Condition U. This is done by restricting individual weak orderings—for instance, the concept of single-peaked preferences introduced by Duncan Black (1958) just does this. One can also challenge Condition I. This has been done by Donald Saari (1995) in his studies on scoring rules.

Kenneth Arrow's book and papers on this topic are among the most brilliant scientific works of the last century. They were crucial in the introduction of the use of modern logical and mathematical concepts in economics and other social sciences, and were at the origin of a new scientific domain, social choice theory, that is now flourishing at the frontier of economics, political science, mathematics, philosophy, psychology, and sociology.

SEE ALSO *Arrow, Kenneth J.; Choice in Economics; Preferences; Social Welfare Functions*

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Maurice Salles

ARTIFICIAL INTELLIGENCE

SEE *Computers: Science and Society.*

ARYANS

The term *Aryan* is derived from the Indic word *ārya* (noble). The ancient Hindu *Rig Veda* (variously dated 4000–1200 BCE) uses ārya as a self-designation of its authors. According to another Hindu text, the *Manu Smriti* (c. sixth century BCE), the inhabitants of the *āryāvarta* (the Hindu heartland) were setting the standards for *dharma*. In the *Bhagavad Gita* (c. second century BCE), the Hindu god Krishna tells the warrior Arjuna that it would be *an-ārya* not to fight a just war. In Buddhism, *ariya* has an ethical connotation: not birth but high moral standards make one an ariya. Gautama Buddha (c. sixth century BCE) taught the *ariya saccāni*, or the "(four) noble truths." Jains also use the word as an expression of moral excellence. The word ārya also occurs in the *Zend-Avesta*, the oldest scripture of the Zoroastrians, which states that Iran is the "ariya country." In 1875 Swami Dayananda Saraswati (1824–1883) founded the Ārya Samāj, a Hindu reform movement aimed at restoring Vedic religion by eliminating all later accretions to sacred Hindu writings known as Purana and excluding all foreign influences.

"Aryan" entered European scholarly discourse in the mid-nineteenth century through philology as a generic name for Indo-European languages. A major international interdisciplinary enterprise appeared under the title "Indo-Aryan research." The Sanskrit scholar F. Max Müller (1823–1900) cautioned other scholars not to load the linguistic term with racial overtones, as had already been done by some anthropologists of his time. Joseph Arthur Conte de Gobineau (1816–1882) maintained that within the "white race," the "master race," the blue-eyed, blond-haired, dolichocephalic Aryans constituted the highest variant. Variously Scandinavia, Lithuania, the (dried-out) North Sea, northern Germany, southeastern Russia, the North Pole, and the (mythical) Atlantis were claimed as the cradle of the Aryans. For at least two thousand years, Europeans, relying on ancient Greco-Roman traditions and on the *Genesis* story of the peopling of the earth after the great flood, assumed that their ancestors had migrated westward from the East. By the nineteenth century, when it had become accepted that the earth and humankind were much older than six thousand years and the claim of European cultural superiority seemed to have been established, the direction of migration was reversed. The Aryan Invasion Theory (AIT) that arose in England in the second half of the nineteenth century specifically suggested that "Aryan" conquerors brought horses, iron, Sanskrit, and the Vedas to India around 1500 BCE.

By the early twentieth century, it had become impossible to find any scholarly agreement on either the identity or the origin of an Aryan race: now ideology took over. Widespread racism in Europe and North America led to the creation of "scientific" race theories that not only justified white-black segregation, but also supported an increasingly militant anti-Semitism. Houston Stewart Chamberlain's (1855–1927) *The Foundations of the Nineteenth Century* (1899) inspired the Nazi ideologue Alfred Rosenberg (1893–1946) to claim in his 1930 book *Der Mythos des 20. Jahrhunderts* (The Myth of the Twentieth Century) that the preservation of the purity and dominance of the Aryan race was the main agenda of the twentieth century. Rosenberg also used the publications of the racist-nationalist Gustaf Kossinna (1858–1931) and Hans Reinert (1900–1990), who held the chair for "Prehistory and Early Germanic history" at the University of Berlin, to prove his thesis. The so-called Aryan race, or *Herren Rasse*, included besides the North Germans also the Scandinavians, the English, and the (Nordic) North Americans. Rosenberg's *Mythos* offered "scientific" grounding to the *Arier Paragraphen* (legislation requiring pure Aryan ancestry) through which the Nazi government in early 1933 forced all German Jewish civil servants into retirement; it also provided theoretical support for the genocide later carried out on Jews, Gypsies (Roma), and other so-called inferior races.

For many years following the Holocaust, the term "Aryan" rarely appeared in scholarly literature. It resurfaced in the 1990s in a controversy about the Aryan Invasion Theory in connection with the early history of India. While archaeological, anthropological, and DNA research has proven the (AIT) all but untenable, some philologists, such as Michael Witzel, and some historians, such as Romila Thapar, defend it. Karl Marx (1818–1883) had also believed in it.

In a different context, but related to the older race ideologies, the "Aryan Nations" movement in the United States, founded in 1974 by Richard G. Butler (1918–2004), has revived the issue through its use of Nazi symbols and vocabulary to promote its white supremacist anti-Semitic agenda. The Aryan Nations movement openly advocates the aims and strategies of Adolf Hitler

(1889–1945), and supporters strive to establish a worldwide "Fourth Reich" dominated by "Aryans."

SEE ALSO *Anti-Semitism; Gobineau, Comte de; Hinduism; Jews; Myth and Mythology; Nazism; Race; Racism; Roma, The; White Supremacy; Whiteness*

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Klaus K. Klostermaier

ASANTE, MOLEFI KETE

SEE *Afrocentrism.*

ASCH, SOLOMON

1907–1996

Solomon Elliott Asch was a Polish-born American psychologist noted for his dedication to psychology as a natural science, his talent for designing arresting experiments, and a humanism that embraced cultural knowledge and sensitivity. For Asch, behaviorists and Freudians were alike in their reductionism. Asch aimed instead to represent the breadth and depth of *Homo sapiens* in a Gestalt psychology that focused on context and relationships.

Asch was born in Warsaw in 1907 and moved to the United States as a teenager. At City College of New York he majored in both literature and science. While completing his graduate studies in psychology at Columbia University, he took an interest in anthropology and attended seminars with Ruth Benedict (1887–1948) and Franz Boas (1858–1942). In 1930 Asch married Florence Miller and took her with him on a summer fellowship to study Hopi children and their culture in Arizona. Although these experiences laid the foundation for Asch's humanist interests, his graduate work was more conventional. Henry E. Garrett (1894–1973) supervised his Ph.D. research and, in the custom of the day, gave Asch his thesis problem: to find out whether all learning curves had the same form.

After completing his doctorate in 1932, Asch became a faculty member at Brooklyn College. Soon after taking up this position, he met Max Wertheimer (1880–1943), a Gestalt psychologist who became the major intellectual influence in Asch's life. When Wertheimer died in 1943, Asch succeeded him as chairman of psychology at the New School for Social Research.

Asch moved to Swarthmore College in Pennsylvania in 1947 and spent twenty productive years there. At Swarthmore, Asch was in daily contact with two of the brightest stars of Gestalt psychology: Wolfgang Kohler (1887–1967) and Hans Wallach (1904–1998). It was in this environment that Asch developed his classic studies of social psychology: "Forming Impressions of Personality" (1946); "The Doctrine of Suggestion, Prestige, and Imitation in Social Psychology" (1948); and "Studies of Independence and Conformity: I. A Minority of One against a Unanimous Majority" (1956). Each of the three investigations joins an elegantly simple method with a question of surprising depth, and each poses a striking conflict.

For personality impressions, the conflict is between positive and negative traits in descriptions of a single person. Perhaps the most important result is that students given inconsistent information (that a person is both cold and friendly) have no difficulty producing a unified impression (friendly manner, cold eyes). One can imagine a world in which students complain that they can do no more than repeat back the trait list—how can they say more? Creativity in integrating information about others is so natural that it takes an experiment to make us wonder at our capacity.

For prestige suggestion, the conflict is between evaluation of a quotation ("a little rebellion, now and then, is a good thing, and as necessary in the political world as storms are in the physical") and evaluation of the source to which the quotation is attributed (Thomas Jefferson or Vladimir Lenin). Others had found that agreement with an argument was higher when the source held a higher status. These studies had concluded that humans are irrational in attending to the source associated with an argument. Asch showed that the perceived meaning of the quotation is different, depending on the source: Jefferson's rebellion is reform; Lenin's is blood in the street. The difference in agreement comes not from blind associations but from creative interpretation of the combination of statement and source information. (Asch's irony was that the quotation came, in fact, from Jefferson, and, in context, Jefferson meant blood in the streets.)

For conformity research, the conflict is between social and sensory information, as a phony majority contradicts visual reality about the length of a line. In the standard situation, the real subject has to render a judgment after six "fellow students" give the same obviously wrong answer. These conformity test trials are interspersed among numerous trials in which all give the correct judgment. Overall, subjects remain independent on two-thirds of the

test trials, but three-quarters of subjects conform to the majority on at least one test trial. Many have understood this result as indicating human weakness in the face of social pressure. Asch emphasized instead that independence was twice as likely as conformity and noted that social life requires sensitivity to the opinions of others.

These experiments are revealing because, in all of them, conflicting inputs elicit the human capacity for creative integration of these inputs. During the decades in which psychology was dominated by stimulus-response psychology and behaviorism, Asch was an inspiration for those who could still see the complexity of human perception and the richness of human culture. Asch's 1952 textbook, *Social Psychology*, conveyed his experimental humanism to generations of undergraduate students and remains worth reading today.

SEE ALSO *Autokinetic Effect; Norms; Social Psychology*

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Clark McCauley

ASHKENAZIM

SEE *Jews.*

ASIATIC MODE OF PRODUCTION

In twentieth-century Marxist politics and social sciences, the concept of the Asiatic mode of production was at the center of debates and controversies over how to apply the idea of *mode of production* to non-Western societies. Marxist theorists also turned to the Asiatic mode of production to argue for different revolutionary strategies in societies subject to colonial and imperialist domination.

The concept's status within Marx's own work is uncertain. The young Marx's references to Asian societies are influenced by a political tradition that, from Aristotle (384–322 BCE) to Charles Montesquieu (1689–1755) and Georg W. F. Hegel (1770–1831), saw the Asian continent as characterized by political despotism and socioeconomic stagnation. The initial theorization of modes of production in Marx's *German Ideology* (1845) makes no mention of an "Asian" mode. His *Misery of Philosophy* (1847), however, discusses India as a society where village-based production coexists with common land property. After 1850 Marx's view of Asia became more systematic, and he outlined a specific mode of production for the region. A series of articles he wrote in 1853 for the *New York Daily Tribune* dealt in detail with the Indian case, and to a lesser degree with China. The chapter on "precapitalist economic formations" in the *Grundrisse* (1857–1858) inserted the Asiatic mode of production into a theory of stages of social development, where it followed "primitive communism." Marx tended to chronologically overlap the Asiatic mode of production with slavery and feudalism as two other, successive precapitalist societies where laborers are not separated from the means of production.

Marx's definition of the Asiatic mode of production included the absence of private ownership of land, autonomous village communities, and a despotic centralized state in charge of public works, especially irrigation. To finance public infrastructure, the state extracts, mainly through coercion and the control of the armed forces, an economic surplus produced by local communities in the form of tributes and collective work. Once surplus is extracted, village communities remain relatively independent within their "self-sustaining" economies.

After the first volume of *Capital* (1867), the Asiatic mode of production almost disappears from Marx's writings. Friedrich Engels's (1820–1895) analysis of precapitalist societies in *The Origins of Family, Private Property, and the State* (1884) did not mention it. In the early twentieth century, socialist reformists of the Second International took the concept as a metaphor for Asia's backwardness; they saw in colonialism a force of development and modernization. Fervent disputes on the Asiatic mode of production reemerged in the aftermath of the Russian Revolution (1917). Vladimir I. Lenin (1870–1924) had, in fact, stigmatized the "Asiatism" of czarist Russia. The Stalinist Third International (Comintern), however, rejected the Asiatic mode of production in 1921 when in colonial societies it chose to support alliances between the proletariat and nationalist bourgeoisies against imperialism and indigenous ruling classes. The Comintern defined the latter as "feudal," avoiding in this way the concept of the Asiatic mode of production, which was seen as too closely associated with political despotism and therefore liable to be used against the Stalinist regime itself.

The critical positions of Leon Trotsky (1879–1940) and Evgenij Varga (1879–1964) nonetheless alluded to the Asiatic mode of production in proposing anticolonial alliances of workers and peasants against both foreign imperialism and local bourgeoisies. The concept was finally expunged from orthodox Marxism after 1930, as Stalin codified a rigid, mechanical succession of modes of production. Conversely, in *Oriental Despotism* (1957) the former Marxist sinologist Karl Wittfogel (1896–1988) employed Marx's original formulation as a polemical indictment of the Soviet state, which he characterized as a manifestation of totalitarianism akin to Asia's "hydraulic civilizations."

The Asiatic mode of production resurfaced in Marxist historiography and anthropology during the 1960s in a context of intensified anticolonial and anti-imperialist resistance. Maurice Godelier and other contributors to the French journal *La pensée* (Thought) asserted that this mode of production remained central throughout the work of Marx and Engels. Jean Chesneaux did not limit the concept's validity to Asia, but extended it to a variety of traditional societies. At the same time, these authors argued for a dynamic perspective to depart from the Eurocentric bias of orthodox Marxism, which saw precapitalist non-Western societies as stagnant and undeveloped. The Asiatic mode of production has also been severely criticized in Marxist debates. Barry Hindess and Paul Hirst refused to define it as a mode of production because it presupposes the state rather than explaining it through the analysis of social relations. Maxime Rodinson considered the concept a blunt and simplified way to encase highly complex societies. Claude Meillassoux noted the concept's excessive generalization as it conflates diverse social formations that share a tributary extraction of surplus. The distinctiveness of African realities led Catherine Coquery-Vidrovitch to propose an "African," kinship-based, mode of production-reproduction. Finally, postcolonial studies have rejected the Asiatic mode of production concept, following Edward Said's *Orientalism* (1978), seeing it as a reflex of the cultural stereotypes that underpinned European imperial expansion.

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Franco Barchiesi

ASSEMBLY LINE

SEE *Factories.*

ASSETS

SEE *Wealth.*

ASSIMILATION

Assimilation is the process by which individuals or groups adopt (either voluntarily or forcedly) the language and cultural norms and values of another group. In most cases, it is the minority group that is expected to conform to the normative practices and ideals associated with the majority group. Additionally the issue of assimilation is often an issue of racial supremacy. That is, who is allowed to assimilate into the dominant culture largely depends on the whether that group will fit into the political, social, and economic desires of the dominant group, a group that historically has been (and continues to be) comprised of European white ethnic groups. In the United States, for example, Native Americans, African Americans, and Mexican Americans have lived in the United States much longer than most European American groups, but instead of being viewed as the normative culture (or part of the normative culture), these groups are viewed as "others" outside the "American" culture.

WHY SOME GROUPS ASSIMILATE MORE QUICKLY THAN OTHERS

There are three main factors that explain why some racial and ethnic groups tend to assimilate more quickly than others. The first explanation, which is especially relevant for understanding assimilation in the United States but also instrumental for understanding assimilation in countries that have faced European colonialism, can be summed up as having to do with racial discrimination and in particular white supremacy. For instance, although many European ethnic groups that immigrated to the United States in the 1800s faced racial and ethnic discrimination and prejudice, eventually they were able to integrate into American society as "whites." Groups that were unable to pass as whites because of skin color, phenotype,

or even accent remained largely excluded from full assimilation into American society.

Much research has been conducted on the relationship between minority group size and racial prejudice and discrimination. Some scholars have suggested that a perceived "racialized" threat to the dominant group from a minority group, even if the threat is unfounded, leads to increased prejudice against the minority group (Quillian 1995; Burr, Galle, and Fossett 1991; Fossett and Kiecolt 1989; Blumer 1958; Blalock 1967).

The second factor involves socioeconomic status or class. Groups that have economic resources tend to assimilate into society more quickly than groups that have few or limited resources. Groups with large financial resources are able to have greater access to education, jobs, and even politics. In the United States, for example, Cubans have achieved a greater level of assimilation compared to Mexicans (Saenz 2004). Although skin color is a factor explaining the relatively higher success of assimilation for Cubans (they tend to have lighter skin tones compared to Mexicans), the fact that Cuban Americans tend to be better off economically allows them greater mobility and access to good jobs and better education.

Finally, a third factor has to do with the historical context of a society. A number of scholars have argued that prejudice against immigrant groups is higher during economic downturns than in times when the economy is prosperous (Becker 1971). During economic difficulties, there is a tendency for the majority group to blame minority groups for a perceived loss of jobs, economic insecurities, and threat of job competition, and the level of hostility toward racial and ethnic minorities tends to rise. In other words, there is an inverse relationship between a society's economic prosperity and discrimination against minority groups.

Although all three factors provide plausible explanations for understanding why some groups are more likely than others to assimilate, more contemporary analysis of assimilation reveals that a complex intersectionality exists between race, class, and the economy. However, many scholars have argued pointedly that race and colorism continue to be the most salient reasons why many minority groups are still referred to as "hyphenated Americans" (e.g., African Americans or Mexican Americans) rather than simply "Americans" (Bonilla-Silva 2001).

EARLY ASSIMILATION THEORIES

Robert Erza Park (1864–1944), one of the first American sociologists and scholars to focus on ethnic relations, is considered a founding father of early assimilation theories, although his take on assimilation can be traced to the works of earlier social scientists, such as Herbert Spencer, Hermann Schneider, William Sumner, Franz Boas, and Ruth Benedict, among others. Indeed it was Herbert Spencer's analysis and explanation of how larger societies capture and integrate other peripheral cultures and societies into their own, often forcing them to adapt to the larger and more powerful society's normative climate and values, that enticed Park into thinking more about the role race and ethnicity played in the larger equation. Other influential scholars who helped to shape Park's sociological imagination were John Dewey, George Simmel, and Booker T. Washington.

Before Park, racial implications of assimilation were minimally discussed at best, but there were models centered on cultural or national levels of assimilation. For example, Hermann Schneider in his two-volume book *World Civilizations* (1931) developed (albeit on a very macro-level) one of the earliest models of assimilation, though he never used that term. According to Schneider, as civilizations advance technologically, they grow larger and begin to incorporate other cultures in a three-stage process. At stage one it is through migration, invasion, or conquest that civilizations progress. At stage two, a period of miscegenation and amalgamation takes place in which the two cultures physically mix with one another. Finally, stage three begets a period of internal conflict in which class dynamics are restratified and there is a re-creation of new cultural symbols in the form of art, music, literature. Schneider never envisioned this process as a linear one but rather as a cycle that repeated itself every time a civilization progressed.

Park's assimilation theory, widely referred to as the "race relations cycle," was one of the first to incorporate the term *assimilation* into a model. Park suggested that immigrants are incorporated into a given society in four stages: contact, conflict, acculturation, and assimilation. His theory was that all immigrants face hostility and struggles initially, but gradually they are able to shed their ethnic identities and conform to the normative climate of the dominant group in society. Eventually, then, the group melts right in with the dominant group (i.e., A + B = A). At the time that Park was conceptualizing his cycle of race relations theory, a massive number of immigrants from European countries (e.g., Irish, Italians, Jews) were slowly being incorporated into the social, economic, and political spheres of the United States. However, it remained unclear whether African Americans and other non-European groups would be able to do the same. Park assumed that, given time, non-European groups would be able to assimilate into the dominant culture in the same manner that European groups were already doing.

Park's theory was widely accepted (Duncan and Duncan 1955; Burgess 1928), but not everyone agreed with the simplicity of his model. For instance, Emory Bogardus developed his own model in which he proposed

seven steps toward assimilation, including the native population's curiosity about immigrants, followed by an economic welcoming, then competition, legislative antagonism, fair play, quiescence, and finally partial second- and third-generation assimilation (Bogardus 1930). The last stage of Bogardus's model is worthy of attention because he never claimed that immigrants would be able to assimilate fully into the receiving society but rather that second and succeeding generations would be accepted partially yet still sometimes scrutinized depending on their country of origin (i.e., A + B = A + b). Here the little *b* represents the partial acceptance of certain second- and third-generation immigrants and their cultures. This is different from the concept of cultural pluralism, or the "salad bowl theory," which suggests that both cultures remain intact and get along with each other. Bogardus's model has some of the same problems as Park's in that he made too many assumptions, particularly in regard to the initial acceptance of immigrants as mostly favorable. Bogardus is better known for his social distance scale (the "Bogardus scale") used to measure the preferred distance between two groups of people. Although Bogardus's model of assimilation has remained relatively unknown, especially in comparison to the works of other assimilation scholars of his time, his social distance scale has been widely adopted as a measurement tool for racial and ethnic attitudes and levels of intimacy between groups, and both of these factors have been used as indicators of assimilation.

Milton Gordon dramatically overhauled and expanded Park's theory in the 1960s with a more complex model of two main stages along a mostly linear path to assimilation: acculturation and social assimilation. Stage one, acculturation, deals with the initial contact and the conflicts experienced by immigrants coming into another society. Stage two, social assimilation, is the interaction and slow process of developing friends, social networks, and intermarriage within the dominant culture, eventually leading to total assimilation, which is broken down into seven substages: cultural (acculturation), structural (participating in education, church, etc.), marital (amalgamation), identificational (self-identifying and shedding of ethnic background), attitudinal changes (prejudice), behavioral changes (discrimination), and finally civic assimilation.

As minority groups went through these stages, Gordon theorized three possible assimilation outcomes: Anglo conformity, cultural pluralism, and the melting pot. Anglo conformity, which Gordon dealt with in *Assimilation in American Life: The Role of Race, Religion, and National Origins* (1964), refers to the idea that the assimilation of the minority group into the majority group (i.e., Anglos) results in a loss of the norms, values, language, and culture of the minority group (i.e., A + B = A). Outcome two, cultural pluralism (also referred to as the "salad bowl theory" or "multiculturalism"), refers to the idea that minority groups are able to assimilate into the dominant groups' social structures (e.g., schools) while continuing to maintain their own cultures, traditions, and languages (i.e., A + B = A + B). Finally, Gordon's notion of the melting pot theory refers to idea that the culture of a society changes as elements of minority groups are taken and incorporated into the values, norms, and institutions of the dominant group (i.e., A + B = C).

ASSIMILATION'S ROLE IN SCHOLARSHIP

Assimilation theorists took a beating in the 1960s and 1970s from scholars who argued that many racial and ethnic groups remained unassimilated in the United States, even though in some cases they had been in the country for three generations (Glazer and Moynihan 1963; Novak 1972). However, starting in the middle to late 1980s and continuing in the early twenty-first century, research on assimilation has been picked up and expanded upon by a whole new group of scholars. Changing the notion of what it means to be assimilated into the dominant culture, scholars such as Lisa Neidert and Reynolds Farley (1985) argued that although they have not achieved assimilation as defined by Park in his race relations cycle model, newer immigrant groups in the United States have achieved some level of socioeconomic success. Edward Murguia (1975) has suggested that anti-Anglo-conformity practices, such as those initiated by the Chicano movement in the 1960s, could also have drastic consequences for Mexicans and other immigrants who were seen as troublemakers and discriminated against because of their culture and heritage. A groundbreaking article by Richard Alba and Victor Nee (1997) offered a staunch counterargument to scholars critical of the assimilation concept. Their basic argument was that it is unnecessary to abandon the concept of assimilation in favor of new terminology, especially considering that the assimilation model is still useful in studying contemporary immigration in the United States.

One the best known assimilation theories, introduced in the early 1990s by Alejandro Portes and Min Zhou (1993), was segmented assimilation. Segmented assimilation refers to the idea that there are multiple routes to assimilation and that these routes are not necessarily positive in their outcomes. Depending on their national origins, wealth, skin colors, phenotypes, accents, social networks, and opportunities, some groups may be able to assimilate more quickly or easily than other groups. Historically western European and other lighter-skinned immigrants have been more successful in assimilating into mainstream American society compared to their darker-

skinned counterparts. Mary Waters's *Black Identities* (1999) rocked assimilation theorists still using methods derived from Park and Gordon by suggesting that there are some immigrants (e.g., English-speaking Caribbeans) who are doing better than native-born Americans. Other authors, such as Portes and Ruben Rumbaut (1996), suggested that some second- and third-generation immigrants, because they are losing their cultural identities, fare less well compared to their parents and grandparents, who are viewed, for example, as hard workers.

Although Park's assimilation model has proven unsuccessful at predicting assimilation of groups such as African Americans or Mexican Americans, it remains debatable whether assimilation theories have outlived their usefulness in the social sciences. Nonetheless, for many immigration experts, such as Richard Alba and Reynolds Farley, assimilation models are still a good predictor of future outcomes, because many social scientists predict that the United States will one day have a "majority minority," which will change the pattern of who gets assimilated into the system and who does not.

SEE ALSO *African Americans; Benedict, Ruth; Boas, Franz; Business Cycles, Theories; Class; Colorism; Discrimination, Racial; Immigrants to North America; Immigrants, European; Immigrants, Latin American; Immigration; Mexican Americans; Minorities; Native Americans; Park School, The; Park, Robert E.; Race Relations; Race Relations Cycle; Spencer, Herbert; White Supremacy*

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David G. Embrick

ASSISTED DEATH

Assisted death is an umbrella term for a death that requires an intentional act or omission on the part of a second person. There are five categories of assisted death.

Withholding of potentially life-sustaining treatment is the failure to start treatment that has the potential to sustain the life of a person (for example, not providing car-

diopulmonary resuscitation to a person having a heart attack).

Withdrawal of potentially life-sustaining treatment is the stopping of treatment that has the potential to sustain the life of a person (for example, removing a feeding tube from a person in a persistent vegetative state).

Potentially life-shortening symptom relief is pain- or suffering-control medication given in amounts that may but are not certain to shorten a person's life (for example, ever-increasing levels of morphine necessary to control an individual's pain from terminal cancer where the morphine is known to potentially depress respiration even to the point of causing death, but it is not known precisely how much is too much as the levels are slowly increased).

Assisted suicide is the act of intentionally killing oneself with the assistance (i.e., the provision of knowledge or means) of another (for example, a person is bedridden with ALS, also known as Lou Gehrig's disease, and her sister brings her a lethal dose of a barbiturate ground up in a glass of orange juice, and the bedridden person drinks it through a straw).

Euthanasia is an act undertaken by one person with the motive of relieving another person's suffering and the knowledge that the act will end the life of that person (for example, a person is bedridden with ALS and her physician gives her a lethal injection of potassium chloride).

CONTENTIOUS ISSUES

It has been widely accepted for some time that the withholding and withdrawal of potentially life-sustaining treatment are both legally and ethically acceptable. Indeed, courts, legislatures, and professional health-care bodies have recognized that patients have a right to refuse treatment and that free and informed refusals made by competent individuals (or substitute decision makers on behalf of individuals) should be respected. However, two areas of significant tension remain. First, there is debate about whether artificial hydration and nutrition are different from other forms of treatment (e.g., cardiopulmonary resuscitation) and therefore should be treated differently. Second, there is debate about whether health-care professionals have the authority to unilaterally withhold or withdraw potentially life-sustaining treatment—for example, where the family of a patient in a persistent vegetative state believes that ongoing treatment is what the patient would have wanted or is in the patient's best interests, while the health-care team claims that the treatment would be "futile." Can the health-care team proceed against the family's wishes and stop treatment? This is a question that has not yet been settled in either law or in ethics.

It has also been widely accepted that the provision of potentially life-shortening symptom relief can be appropriate end-of-life care. However, there is still a great deal of uncertainty at the margins. That is, how much medication is too much? When does symptom relief shade into euthanasia? Are there limits on when such symptom relief is appropriate? For example, does a patient need to be terminally ill or could potentially life-shortening symptom relief be provided to someone with a chronic illness? There is also growing controversy over the practice of total or terminal sedation (sedation to the point of unconsciousness). The practice is controversial largely because it creates a physical dependence on artificial hydration and nutrition, which can then be withheld, leading to certain death.

Both assisted suicide and euthanasia are clearly illegal in the United States (with the notable exception of Oregon, which has legalized physician-assisted suicide). Many books and articles have been written about the legal and ethical arguments for and against decriminalization of euthanasia and assisted suicide. Opponents frequently emphasize beliefs about the sanctity of life, dignity, and slippery slopes. Proponents frequently emphasize beliefs about autonomy and dignity and reject slippery-slope arguments. A sharp divide can be found on the issue of whether there is a valid moral distinction between the withholding and withdrawal of potentially life-sustaining treatment, and the provision of potentially life-shortening symptom relief on the one hand and euthanasia and assisted suicide on the other. Public opinion is certainly split but, with consistency over a significant period of time, a strong majority of Americans support both euthanasia and assisted suicide.

SEE ALSO *Death and Dying; Euthanasia and Assisted Suicide; Murder*

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Jocelyn Downie

ASSOCIATION OF BLACK SOCIOLOGISTS

SEE *Black Sociologists.*

ASSOCIATIONS, VOLUNTARY

Voluntary associations are associations that people voluntarily join. Voluntary associations may be religious, fraternal or sororal, economic, social, cultural, or political. There are three types of membership incentives: social solidary (a term used by James Q. Wilson), purposive, and material (Wilson 1995). Social solidary incentives include the satisfaction of getting to know other people and networking with others. Purposive incentives involve working with an association to fulfill a social, political, or economic interest in society. Material incentives provide members with some tangible benefit (e.g., a discount card).

Associations facilitate people's participation in civil society. Such civic engagement makes for a more connected society. As people get to know one another by way of their civic associations, they can in turn use their relationships to help accomplish other goals or objectives. People thus gain capital socially, what is also referred to as *social capital*. Social capital is composed of those "features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions" (Putnam 1993, p. 167). As one's social networks increase, one's ability to organize and effect change in one's interests is also increased (Putnam 1993, 2000). Increased interconnectedness is believed to increase social productivity. Yet social capital may be used for positive or negative circumstances. Positive uses of social capital contribute to a better society.

Those who participate in organizations face problems of collective action (Olson 1971). They have to overcome problems related to coordinating tasks among group members and problems related to limited resources. Limited resources can exist in the form of smaller memberships, limited financial resources, limited communication between members, and limited networks with other associations or institutions. Trust is a resource that can reduce some of the problems related to collective action. Those who are more trusting in others, who exhibit more social trust, can associate with others more freely and can later use these relationships to their benefit by asking for reciprocation.

While trust is an important resource in social relations, it is also important in the relationships between people and government, where it is referred to as *political trust* (Hetherington 1998, 2001, and 2005). When citizens trust in government, the relationship between citizens and government is more positive (Hardin 1998). Political efficacy affects perceptions of trust in government: Those who feel that they have a say in government or who feel that they have some effect on changes in government tend to trust in government more (Brehm and Rahn 1997). Those who exhibit more social trust also trust in government more (Brehm 1998). Over time, social trust (Putnam 2000; Rahn and Transue 1998) and political trust (Putnam 2000; Hetherington 2005; Rahn and Transue 1998) have been declining in the United States. Since their heyday in the late nineteenth and early twentieth centuries, memberships in associations have also been declining (Gamm and Putnam 1999).

Distrust of people or government may have a deleterious effect on society. As social networks decrease, memberships in associations also decrease. Distrust leads citizens to feel less connected to government, but it also protects people against the possibility that their relationships with others or with government might be abused (Hardin 2004).

Collective action can also be important for countering government actions that disfavor people's interests. People, however, also may face collective action problems when they try to coordinate large numbers of people to participate in activities to represent their interests. Despite the organization of associations, some people may be more likely to participate in associational activities than others. This leads to those who do not participate in associational activities free-riding on the work of those who do participate and still reaping the benefits of collective action (Olson 1965). The power of collective action, however, is also evident by way of social movements, when large numbers of people and sometimes several associations and their members can protest en masse for change. Moreover, social movements can connect the networks of many people and many associations to represent their interests more broadly (Tarrow 1994).

SEE ALSO *Social Capital*

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Shayla C. Nunnally

ASYMPTOTES

SEE *Probability Theory.*

ASYMPTOTIC NORMALITY

SEE *Properties of Estimators (Asymptotic and Exact).*

ASYMPTOTIC THEORY

SEE *Probability, Limits in.*

ATHEISM

Atheism, put simply, is the view that God does not exist. Cognitive atheism entails that, owing to the direction of the overall available evidence, people should believe that God does not exist. Doxastic atheism, in contrast, entails that one actually believes that God does not exist. A doxastic atheist can say: I believe that God does not exist, but I have no view regarding the status of the overall available evidence regarding God's existence. A person could thus be a doxastic atheist without being a cognitive atheist. Cognitive atheists about God, however, are logically required to recommend doxastic atheism about God, at least on cognitive grounds, even if they fail at times actually to believe that God does not exist. In the history of philosophy, Democritus (c. 460–c. 370 BCE), Epicurus (341–270 BCE), Ludwig Feuerbach (1804–1872), and Friedrich Nietzsche are widely regarded as supporters of atheism.

Theism is the denial of atheism. Cognitive theists hold that, owing to the overall available evidence, people should believe that God exists. Doxastic theists, in contrast, hold that God exists, even if they have no position on the overall available evidence regarding God. Cognitive theists must recommend doxastic theism about God, at least on cognitive grounds, even if they fail at times actually to believe that God exists. Another alternative to atheism is agnosticism, whose cognitive version entails that, owing to highly mixed overall evidence, people should withhold judgment (neither believe nor disbelieve) that God exists. Cognitive atheism entails that cognitive theism and agnosticism get the available evidence wrong. It implies that the evidence counts decisively against the existence of God.

If reality is just material bodies in motion, then atheism is true, since God would not be just a material body in motion. That would be a quick case for atheism, but a problem arises: decisive evidence for holding that reality is just material bodies in motion is lacking. At least this is a topic of ongoing controversy among philosophers.

Another case for atheism would be: If God exists, the evil found in this world would not exist; this world's evil does exist; so God does not exist. Here, again, the case would not be decisive. No decisive reason exists to think that God would not allow the evil found in this world. Certainly God could allow for various kinds of beings with free wills, and they could be causally responsible for much, if not all, of the evil in this world. A problem arises from the limited cognitive resources of human beings. People are simply not in a position to know that God would not allow the evil found in this world. God would be a moral tyrant in causing the evil in this world, but theism does not imply otherwise.

A big issue concerns whether cognitive atheism allows for due cognitive modesty for humans. Can one reasonably suppose that all available evidence has been canvassed in a way that calls for belief that God does not exist? This is a tall order, and it seems doubtful that one can plausibly answer yes. At any rate, God might seek to be elusive for various reasons, as recent work on divine hiddenness indicates. So atheism invites reasonable doubt about itself,

owing at least to the limited cognitive resources available to humans.

SEE ALSO *Agnosticism; Monotheism; Polytheism; Reality; Religion; Theism*

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Paul K. Moser

ATROCITIES

SEE *Battle of Algiers, The; Conformity; Darfur; Genocide; Guantánamo Bay; Interrogation; Killing Fields.*

ATTACHMENT THEORY

Attachment theory, formulated by British psychiatrist John Bowlby (1907–1990), focuses on the child-parent relationship and the influence of that relationship on subsequent child development (Bowlby 1969/1982, 1973, 1980). Since Bowlby's original writings were published, attachment theory and research have burgeoned, largely bearing out Bowlby's tenets about the importance of attachments to human development across the life span.

BOWLBY'S ATTACHMENT THEORY

According to attachment theory, the infant-parent attachment is an evolutionarily adaptive relationship whose principal function is the protection of the child. Bowlby argued that all people are genetically predisposed to form enduring and preferential relationships with principal caregivers because in the earliest environments of human beings such relationships were evolutionarily advantageous.

In addition to his concern with all people's attachments, Bowlby focused on differences between individuals. At the heart of Bowlby's thinking about individual differences is the notion of *internal working models*. Specifically, Bowlby argued that individuals draw on their earliest experiences to create mental maps, or internal working models, to guide their behavior. Internal working models guide people's expectations, attention, interpretations, and memories. These processes then guide behavior.

According to attachment theory, it is the responses of parents to their infants' earliest behaviors (crying, looking, reaching) that most heavily influence the development of the infants' internal working models. Specifically, Bowlby asserted that repeated daily interactions between infant and parent lead the infant to develop expectations about the parent's caregiving. These expectations are gradually organized into internal working models of the caregiver and of the self in relation to this caregiver. Sensitive, supportive caregiving leads to the development of an internal working model of the caregiver as trustworthy and helpful, and of the self as deserving of supportive care. Insensitive, unsupportive caregiving leads to working models of the caregiver as unavailable and untrustworthy, and of the self as unworthy of supportive care.

With continual use, internal working models come to operate automatically and unconsciously. Over time, individuals are more likely to define their experiences using existing working models than to modify their internal working models to accommodate new, possibly inconsistent information. In particular, people's working models guide the development of subsequent relationships. This occurs initially by their guiding the individual's expectations about others' emotional availability: "the kinds of experiences a person has, especially during childhood, greatly affect . . . whether he expects later to find a secure personal base, or not" (Bowlby 1979, p. 104). Barring major changes in the environment or the individual, the principal qualities of the infant-parent attachment(s) will be replicated in subsequent close relationships: infants who received sensitive, supportive care will subsequently form supportive, nurturing, close relationships; infants who received insensitive, unsupportive care will form close relationships in which the giving and receiving of care is distorted.

It is important to note that internal working models are not considered to be immutable. As environments and individuals change and develop, working models are likely to require updating; major changes in the environment or in the person require the reformulation of internal working models. Factors such as traumas, losses, and new attachments are those most likely to alter internal working models.

PATTERNS OF ATTACHMENT

American psychologist Mary Ainsworth (1913–1999) was a lifelong collaborator with Bowlby. Ainsworth's development of the laboratory Strange Situation procedure galvanized the systematic study of individual differences in infant-parent attachment (Ainsworth et al. 1978). The Strange Situation is a twenty-minute videotaped assess-

ment with a twelve- to twenty-month-old infant, the infant's parent, and an unfamiliar female "stranger." There are two brief infant-parent separations during which the infant remains in a laboratory playroom with a selection of toys. Based largely upon the infant's response to the parent during the two reunion episodes, the Strange Situation classification system distinguishes three main patterns of infant-parent attachment: secure, insecure-avoidant, and insecure-ambivalent.

Approximately 65 percent of infants in most nonpathological samples are classified as secure. During reunion, these infants actively seek to reestablish contact with their parent. Comforted by their parent's return, secure infants then return to play. In their inclination to seek and receive comfort from their parent and then resume exploration, secure infants are thought to use their parent as a "secure base from which to explore."

Approximately 20 percent of infants in most nonpathological samples are classified as insecure-avoidant. Infants classified as avoidant are unlikely to cry during the separations. During reunion, these infants actively avoid interaction with the parent and may appear to ignore their parent completely. In their lack of comfort-seeking, avoidant infants appear less able than secure infants to rely on their parent as a secure base.

Approximately 15 percent of infants in most nonpathological samples are classified as insecure-ambivalent. Infants classified as insecure-ambivalent are highly likely to express distress during the separations. During reunion, however, these infants appear to derive little comfort from their parent's return. These infants demonstrate ambivalence about interacting with the parent that is frequently accompanied by angry, resistant behavior. In their inability to be soothed by their parent, ambivalent infants appear less able than secure infants to rely on their parent as a secure base.

Following Ainsworth's identification of these three patterns, Mary Main and Judith Solomon (1986) identified a fourth group: insecure-disorganized. Disorganized, disoriented, and frightened reunion behaviors characterize the infants in this group. When an infant is classified as disorganized, the infant is also assigned to the principal attachment pattern (secure, avoidant, or ambivalent) that most strongly coexists with or underlies the infant's disorganization.

The four patterns of attachment are especially valuable for understanding human development because, as demonstrated by a large body of research, early patterns of attachment consistently forecast later development (Thompson 1999). In brief, children who are classified as secure during infancy later appear more socially competent than children who were classified as insecure. They have more positive interactions with friends and peers; they are also more empathic and less hostile, aggressive, or withdrawn. Infants classified as disorganized are considered most at risk for future emotional and social problems. In addition, consistent with Bowlby's earliest predictions, these four patterns are also consistently predicted by specific patterns of parenting behavior (Berlin and Cassidy 2000). The disorganized pattern is consistently associated with parental maltreatment (abuse or neglect).

Since the advent of the Strange Situation, numerous other assessments of individual differences in attachment have been developed: the Attachment Q-Sort is an adult-report measure of attachment in infants and young children (Waters et al. 1995). Using modified Strange Situation procedures, researchers have also developed systems for classifying attachment patterns in preschool children (Cassidy and Marvin 1992; Crittenden 1994) and in five- to seven-year-old children (Main and Cassidy 1988). (See Solomon and George [1999] for a discussion of these and other measures.)

After the Strange Situation, the second most widely used assessment of attachment is the Adult Attachment Interview (AAI) (George et al. 1985; Hesse 1999), a one-hour semistructured interview that assesses the adult's current "state of mind with respect to attachment" (i.e., the current internal working models). During the AAI, adults are asked to discuss early childhood experiences and their influences on adult personality. Although the AAI draws heavily on recollections of early attachment experiences, it is the ways in which the interviewee discusses these experiences that figure most importantly in the individual's classification into one of four patterns: secure, insecure/dismissing, insecure/preoccupied, or insecure/unresolved. Consistent with the theory, adults' patterns of attachment reliably predict: (1) the adults' parenting behaviors, and (2) the quality of their child's attachment to them. A second arm of adult attachment theory and research uses adults' self-reports about the way they usually feel and act in romantic relationships to assess "adult attachment style," both in terms of romantic attachments and more generally (Bartholomew and Horowitz 1991; Hazan and Shaver 1987; Rholes and Simpson 2004).

CLINICAL APPLICATIONS

Since the late 1980s, interventions based on attachment theory and research have proliferated in various settings across the United States and abroad. The field of attachment-based interventions has only just begun to gain order and systemization, especially with respect to the use of theory- and research-based protocol (Berlin et al. 2005). Attachment theory and research are also beginning to be integrated into the diagnosis and treatment of children with *reactive attachment disorder*, a set of seriously

aberrant and problematic attachment behaviors typically associated with parental maltreatment or disruptions in early caregiving relationships Theory- and research-based interventions to enhance early attachments among high- and low-risk parents and children are a promising avenue toward supporting human development on the whole.

SEE ALSO *Ainsworth, Mary; Bowlby, John; Parenting Styles; Relationship Satisfaction; Separation Anxiety*

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ATTENTION-DEFICIT/ HYPERACTIVITY DISORDER

Attention-deficit/hyperactivity disorder (ADHD) is a diagnostic label describing children and adults who demonstrate developmentally inappropriate levels of inattention, hyperactivity, and impulsivity. This disorder has been identified by many different names in the past, including attention-deficit disorder (ADD) with and without hyperactivity. It is one of the most commonly diagnosed disorders of childhood and accounts for a significant percentage of referrals to mental health and primary care clinics. Once considered a childhood disorder that one would "grow out of," it is now recognized that symptoms and impairment persist across the lifespan for many individuals, with an increasing number of adults seeking treatment. Although prevalence rates vary as a function of diagnostic method, it is estimated that 5 to 8 percent of children and 1 to 3 percent of adults meet criteria for ADHD as outlined by the American Psychiatric Association (1994). ADHD is more often diagnosed in boys, but prevalence rates are fairly consistent across diverse geographic and racial populations.

DIAGNOSIS

The *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*-IV), the primary reference for mental health professionals in the United States (APA 1994), identifies three subtypes of ADHD: predominantly inattentive, predominantly hyperactive-impulsive, and combined. At

least six of nine inattentive or hyperactive-impulsive symptoms must be present for at least six months for diagnosis, with the subtype determined by which symptoms are predominant. Inattentive symptoms include inattention to details or making careless mistakes, difficulty sustaining attention, not listening, not following through and completing tasks, avoiding or disliking tasks requiring sustained mental effort, disorganization, forgetfulness, losing things, and distractibility. Hyperactive symptoms include fidgeting, difficulty remaining seated, being "on the go," running or climbing excessively (feelings of restlessness in adults), difficulty playing quietly, and talking excessively. Impulsive symptoms include blurting out, difficulty waiting, and interrupting or intruding on others. These symptoms must be sufficiently maladaptive and developmentally inappropriate to warrant diagnosis.

DSM-IV criteria also require that at least some of the symptoms must have caused impairment for the individual before the age of seven. Although symptoms may be overlooked in some children when they are younger, particularly those who are higher functioning, the developmental nature of the disorder requires a chronic and pervasive pattern of difficulties across time. Thus, one cannot develop "adult onset" ADHD. When symptoms present in adulthood for the first time, there is often an alternative explanation for them, such as anxiety, depression, or another medical condition. Because inattention and hyperactivity-impulsivity can have numerous causes, diagnosis actually requires that symptoms are not better accounted for by another psychiatric disorder and that they do not occur solely in the context of a pervasive developmental disorder, schizophrenia, or other psychotic disorder. Finally, ADHD-related impairments must occur across settings (i.e., in the home, during social activities, and at school or work) and there must be evidence of clinically significant impairment in social, academic, or occupational functioning. That is, the symptom severity is more than mild and interferes in individuals' daily lives and activities. Although these criteria have limitations, notably their appropriateness for different ages and subtypes, they are the most rigorous and empirically derived in the history of ADHD.

When the *DSM*-IV criteria are carefully followed using well-defined practice parameters for children (AACAP 1997; AAP 2000), ADHD can be reliably diagnosed. The parent interview lies at the core of the assessment process and covers questions regarding symptoms, impairment, history (medical, developmental, psychiatric, and family), and alternative explanations for the child's behavior. Developmental history forms, symptom screening checklists, and diagnostic interviews are useful tools in collecting this information. Standardized parent and teacher rating scales that include ADHD-specific items aid in documenting developmental deviance and pervasiveness of symptoms. Additional feedback from the child's school, including testing reports and observations, may also be obtained. Although medical and cognitive tests are not routinely indicated, they may help identify coexisting conditions. Assessment of ADHD in adults includes the same basic components, with age-appropriate interviewing tools and the use of rating scales completed by the adult and another informant, such as a spouse or coworker (Weiss and Murray 2003). The reliability and validity of these measures are less well established, however.

Despite concerns about large-scale overdiagnosis, epidemiological studies have found little evidence of this. According to the 2003 National Survey of Children's Health that assessed over 100,000 U.S. children through parent phone interviews, approximately 7.8 percent of 4–17 year olds were reported to have been identified by a professional as having ADHD (Centers for Disease Control 2005). Similarly, William J. Barbaresi, Slavica K. Katusic, Robert C. Colligan, et al. (2002) found that 7.5 percent of children in a birth cohort of over 5,000 in Minnesota had received clinical diagnoses of ADHD according to medical record documentation. These numbers closely resemble prevalence rates found in carefully conducted diagnostic studies (Barkley 2006), suggesting that there is not substantial over-identification in practice. The American Medical Association came to a similar conclusion after reviewing over 20 years of literature using a National Library of Medicine database (Goldman et al. 1998). Rather, more children, particularly girls and adolescents, are being identified than in the past, particularly with recently changed and expanded diagnostic criteria. Nonetheless, some practitioners who do not conduct thorough evaluations using validated diagnostic criteria may be inappropriately diagnosing and treating children. Dramatically increasing prescription rates for medications to treat ADHD are also believed to represent more effective treatment patterns, although concerns of misuse and diversion are recognized.

COURSE, IMPACT, AND COMORBIDITY

Children with ADHD experience frequent learning difficulties and are more likely than others to be placed in special education, retained, and suspended; they are also more likely to fail to graduate. Furthermore, they are at higher risk for peer rejection, physical injury, delinquency, and substance use (Barkley 2006). Adults with ADHD are also at higher risk for smoking, drug abuse, driving citations and accidents, and poorer physical and mental health. They often experience higher levels of anxiety and depression, more job-related turmoil, and relationship difficulties (Wender 1995).

Outcomes for children with ADHD vary based on risk factors and the presence of coexisting psychiatric conditions, which commonly include oppositional behavior and conduct problems, anxiety, depression, tic disorders, and learning disorders. Overall, 15 to 20 percent of children with ADHD appear normalized as adults; 20 to 30 percent experience marked impairments in occupational, relational, and mental health functioning, and the remainder exhibit persistent symptoms with mild to moderate difficulties (Biederman et al. 1998). Factors predicting a worse outcome include psychosocial adversity, a family history of ADHD, and the presence of oppositional behavior (Biederman et al. 1996).

HISTORY OF THE DISORDER AND ITS TREATMENT

First described in the early 1900s, thousands of studies on ADHD were conducted in the latter half of the twentieth century, making this the most well-researched childhood disorder. Significant advances have been made in our understanding of the nature of ADHD, resulting in changes to diagnostic criteria and ongoing exploration of risk factors and prognosis. Once attributed to brain injuries or environmental maladjustment, the neurobiological nature of the disorder is now well established (Barkley 2006). Research suggests that the causes of ADHD are complex, although most cases can be accounted for by heredity. Neuroimaging research has identified frontal lobe functioning deficits and structural brain abnormalities associated with ADHD, and molecular genetics studies are investigating specific genes that may be implicated, with a goal of developing more sophisticated treatment strategies (Biederman 2005).

A wide range of treatments for ADHD has been developed, with many having little or no empirical basis (e.g., dietary interventions, biofeedback, and optometric training). Proven treatments for ADHD include parent-management training, direct behavior modification in schools and specialty camps, and stimulant medications, primarily methylphenidate products (AACAP 1997; Pelham et al. 1998). More recently, efficacy has been demonstrated for specific norepinepherine reuptake inhibitors such as atomoxetine. A multimodal treatment approach is generally considered the best practice, although knowledge of long-term benefits and methods for individualizing treatments is limited. There is also a lack of information on the availability and effectiveness of typical community and school services for ADHD. Use of stimulant medications remains controversial, although there is considerable evidence of short-term benefit for core symptoms in children (MTA Cooperative Group 1999) and growing support for the use of these medications in adults. Psychosocial treatments for adults that incorporate behavioral compensation skills and cognitive-behavioral modification are being developed but have not yet been well evaluated.

SEE ALSO *Anxiety; Disability*

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ATTITUDES

Attitude, one of the key concepts of social psychology, refers to people's evaluations of entities in their world. Formally defined, attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor. An individual's evaluation is directed to some entity or thing that is its object—such as a person (Oprah Winfrey), a city (Chicago), or a theory (Darwinian evolution). The entity that is evaluated, known as an *attitude object*, can be anything that is discriminable or held in mind, sometimes below the level of conscious awareness.

Attitudes are initially formed when an individual's first reaction to an exemplar of an attitude object leaves a mental residue that predisposes the individual to respond with the same degree of evaluation on subsequent encounters with the attitude object. This mental residue is a *tendency* to respond with some degree of positivity or negativity to an attitude object. Once an attitude is formed, it is expressed through the cognitive, affective, and behavioral responses that the attitude object elicits. The cognitive aspect of attitudes consists of associations that people establish between an attitude object and various attributes that they ascribe to it. The affective aspect of attitudes consists of feelings and emotions and physiological responses that accompany affective experience. The behavioral aspect of attitudinal responding refers to overt actions toward the attitude object as well as to intentions to act. These cognitions, affects, and behaviors all express positive or negative evaluations of attitude objects.

As people form attitudes based on cognitive, affective, or behavioral responding to an attitude object, they form associations between the attitude object and these responses. As evaluative meaning is abstracted from these associations, an overall abstract attitude may be derived from these more elementary associations. Yet attitudes do not necessarily take the form of simple, unitary evaluations. To represent attitudes' complexity, psychologists have assumed that the mental associations underlying attitudes can have structural properties. For example, mental associations may be more or less *ambivalent*, or evaluatively inconsistent with one another. In addition many important structural properties derive from attitudes' links to other attitudes—for example, attitudes may form *ideologies* when they are linked by a common theme, such as liberalism or conservatism.

Attitudes may be implicit or explicit. Explicit attitudes are evaluations that are consciously experienced and may be reported by the person who holds the attitude. In contrast, implicit attitudes are those that people do not consciously recognize. These implicit attitudes may be automatically activated by the attitude object or cues associated with it. Regardless of whether attitudes are explicit or implicit, they are a source of motivational and cognitive bias and therefore generally foster attitude-consistent beliefs, affects, and behaviors.

Attitudes are usually assessed through questionnaire techniques that elicit respondents' endorsement of statements or other stimuli (called *items*) that imply positive or negative evaluation of an attitude object. Researchers typically combine each respondent's reactions to these items according to a mathematical model that scales the reactions along an evaluative continuum that extends from very negative to very positive. Implicit measures of attitudes seek to assess attitudes without asking respondents for direct verbal reports of these attitudes. Such techniques may disguise attitude measures as tests of knowledge, assess physiological responses, or monitor the speed with which respondents associate an attitude object with positive or negative stimuli.

ATTITUDE CHANGE

Attitudes can be changed on the basis of cognitive, affective, and behavioral processes. Most research on change has concerned persuasion by informational messages. Classically the independent variables studied by persuasion researchers are categorized as source, message, channel (or medium), recipient, and context variables. Variables within a single category do not necessarily affect persuasion similarly, nor do they necessarily act on attitudes through similar processes or through similar processes in varying circumstances. The reasons for this empirical complexity lie in the multiple psychological processes that can mediate attitude change.

Persuasion theory, which has a long history in social psychology, examines psychological processes that serve as mediators of the effects of information on attitudes. Some of these theories have emphasized what can be termed *systematic processing*, that is, the detailed processing of a communication's content that produces acceptance of its conclusions. Yet dual-process models of persuasion emphasize that, in addition to careful, systematic scrutiny of the content of messages, people may use simple decision rules or cognitive heuristics to assess the validity of

messages. For example, the decision rule that "experts' statements can be trusted" might underlie persuasion by an individual expert communicator. A key assumption of dual-process theories is that people process information superficially and minimally unless they are motivated to turn to more effortful, systematic forms of processing. Furthermore systematic processing can only take place if they have the capacity or ability to evaluate the argumentation contained in messages. Therefore persuasion theory's predictions about the effects of variables such as the characteristics of message sources are contingent on the ability and motivation of members of the target audience.

Another technique for changing attitudes is to induce people to engage in behavior that has implications for their attitudes. This research has featured competing theoretical positions that make differing assumptions about the psychological processes that produce such change. The best-known theory, cognitive dissonance theory, took the view that the behavior of advocating a position inconsistent with one's attitude creates *cognitive dissonance*, an unpleasant state of arousal that motivates attitude change. Behavior inconsistent with an attitude changes this attitude toward the behavior, but only when the incentive for the behavior is not seen as the main reason for the behavior. Dissonance is particularly motivating when an individual accepts personal responsibility for his or her behavior bringing about an unwanted consequence. An example of such an unwanted consequence is provided by the case of a speaker who persuades audience members to adopt a viewpoint that he or she does not privately endorse. If the inducement for this behavior is small and personal responsibility is present, the speaker would be likely to show attitude change toward the position advocated. This attitude change occurs because such behavioral acts threaten the speaker's self-identity or integrity unless attitude change makes the advocacy seem more consistent with his or her attitudes.

THE EFFECTS OF ATTITUDES ON BEHAVIORS

One of the greatest successes of attitude research is the substantial progress made in predicting behavior from attitudes. Relatively good prediction can be readily achieved if researchers design their measures of attitudes and behaviors appropriately. However, debates have ensued concerning the psychological processes by which attitudes influence behaviors. Many theories have assumed that people take the utility of behaviors into account in a rational cost-benefit calculation that determines behavior. However, other theorists have emphasized automatic links between attitudes and behaviors as well as the more deliberative route involving analysis of the utility of behaviors. According to the automaticity approach, attitudes can be formed automatically and then cause behavior to follow without any conscious reasoning process. Increasing the plausibility of relatively automatic attitude-behavior links is research suggesting that implicit measures of attitudes—but not explicit measures—can predict a variety of relatively spontaneous and subtle behaviors, such as nonverbal behaviors, that are for the most part not consciously controlled.

SCOPE OF ATTITUDE THEORY AND RESEARCH

In summary, many specific research topics are encompassed within the broad area of attitudes, which in general pertains to the evaluative aspects of human experience. Researchers are concerned with the causes of attitudes and their effects. A wide range of causes can form and change attitudes. The attitude itself can have various structural properties and may be implicit or explicit. Attitudes in turn influence cognition, affect, and behavior.

SEE ALSO *Attitudes, Behavioral; Attitudes, Political; Behaviorism; Cognition; Cognitive Dissonance; Communication; Ideology; Lay Theories; Personality; Persuasion; Research, Survey; Scales; Self-Perception Theory; Social Influence; Social Psychology; Values*

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ATTITUDES, BEHAVIORAL

Attitudes are judgments people have about ideas, experiences, and other people. They can be conscious (explicit) or unconscious (implicit) beliefs that may influence behavior and decisions. Behavioral attitudes are attitudes that develop as a direct result of certain behaviors. However, because one may hold a negative attitude toward a specific behavior yet still engage in that behavior,

a person's behavior does not always reflect his or her attitudes.

Social research on nonconformity at the group and societal level has yielded insights into attitude formation and behavior. An early and influential work was Oscar Lewis's *La Vida: A Puerto Rican Family in the Culture of Poverty, San Juan, and New York* (1966). Lewis intended to show that the behavior of poor people—his book's subjects—revealed key insights into how poverty itself generated a way of life that Lewis described as a distinct "culture of poverty." Lewis's work set off a highly politicized controversy in social scientific and policy circles over the causes of poverty and the complex issue of which social groups set and define the "norms" used to judge behavior as favorable or unfavorable. According to Lewis, poverty's enduring nature cannot be attributed to structural constraints only, but also to poor peoples' own attitudes and beliefs that prevent them from succeeding according to mainstream standards.

Research on unfavorable behavior has revealed the key role that norms play in all attitude formation, whether these norms are sanctioned at the group level, the societal level, or both (see for example Erikson 1966; Becker 1991). Many social scientists emphasize the way in which shared or socially held beliefs and attitudes—"norms"—link the individual to society (Tesser and Shaffer 1990). In contrast to a singular or independently developed attitude, belief systems are larger structures that link individual attitudes together. Human behavior is thus continuously mediated between socially situated attitudes (norms) and an individual's attitudes. Jary and Jary (1991), integrating various definitions, argue that attitudes contain three elements: the cognitive, the affective, and the behavioral. Using the framework of behavioral action and attitudes, social scientists have focused their empirical research on the societal and group context in which attitudes and beliefs, and their attendant actions, occur. Some social scientists differ over the weight to ascribe to the individual, group, or society in attitude formation, but generally their numerous studies of behaviors—both conforming and deviant—have revealed the complex nature of the interactions between the various levels at which attitudes are formed, beliefs are generated, and behaviors are enacted. The behavioral attitudes exhibited by Lewis's subjects, for example, may not have been a reflection of their individual-level "positive regard" for the behaviors so much as the group-level "coping strategy" for dealing with the results of generations of poverty.

SEE ALSO *Culture; Culture, Low and High; Culture of Poverty; Moral Sentiments; Norms, Social; Values; Youth Culture*

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ATTITUDES, POLITICAL

Political attitudes can be broadly defined as the opinions and values individuals hold about political issues, events, and personalities. Social scientists first began the systematic study of these attitudes in the 1930s and 1940s. Surveys had been used sporadically prior to this time, but it was not until the publication of *The Peoples Choice* in 1944 that scholars began to examine the impact of media exposure and campaign-related events on evaluations of the major party presidential candidates. This study by Paul Lazarsfeld, Bernard Berelson, and Helen Gaudet of the 1940 U.S. presidential election focused on a single community in Ohio and found that political messages conveyed through the mass media were not especially persuasive. That is, instead of media messages influencing voters to support a candidate they might otherwise have opposed, it simply reinforced existing predispositions.

Other studies followed with essentially the same conclusion. Messages conveyed through the mass media could be effective in passing along information, but not in changing opinions. Subsequent research modified this finding somewhat by uncovering a variety of indirect effects from media exposure. It turns out that, although the media cannot effectively tell individuals what to think, it can often influence them as to what to think about. This effect, known as *agenda setting*, stipulates that when the mass media focus on a particular topic—for example, defense spending—those exposed to the message are more likely to think this issue is an important one for the country. Similarly, when the media highlight a particular issue or set of issues, these matters become more important in the evaluation of political candidates. For example, a variety of experimental and survey-based studies have found that emphasizing racial considerations in the media results in attitudes about race being more heavily correlated with

attitudes about crime, welfare, or candidate preferences. In short, the mass media tend to have greater indirect effects rather than direct effects on public opinion.

GROUP DIFFERENCES IN PUBLIC OPINION

One common theme in the study of public opinion is the examination of various social group differences in political attitudes. Scholars have typically focused on age, gender, class, and racial group differences. Often, attitudinal differences across these demographic groups are relatively small and inconsistent. For example, the elderly and the nonelderly rarely differ on matters of public policy. The elderly are more attentive to perceived threats to programs such as Social Security or Medicare, but the overall levels of support are virtually indistinguishable. Gender differences in public opinion are also less pronounced than some might think. On a wide variety of issues, the views of men and women are remarkably similar. There are some exceptions, however. In terms of partisanship and ideology, women are somewhat more likely than men to identify as Democrats and liberals. Similarly, since at least 1980, women have been somewhat more likely than men to support Democratic presidential candidates. The differences usually range from ten to fifteen percentage points. In the area of policy preferences, the most prominent gender differences are with issues concerning violence and the use of force. Women tend to be less supportive of these issues (e.g., war, capital punishment, permissive gun control, etc.) than men. Women are also more supportive of gay rights and slightly more liberal on social welfare spending, some measures of racial attitudes, and environmental issues. Interestingly, men and women do not differ dramatically in their levels of support or opposition to abortion, although women do tend to regard the issue as more important than men.

The effects of social class on political attitudes are also uneven. On balance, voters in the bottom half of the income distribution tend to vote for Democratic presidential candidates but this association is not strong and it has been declining over time. In terms of pubic opinion, studies show that citizens with lower incomes are more likely to support social welfare programs. These differences are usually on the order of ten to fifteen percentage points. Less affluent citizens are not, however, more likely to favor a progressive income tax or other taxes that disproportionately affect the wealthy. On most noneconomic issues there are virtually no class differences.

Racial differences in public opinion represent, by far, the largest demographic divide in political attitudes. This is especially true in the case of the views of whites and African Americans. On a range of racially tinged issues, such as efforts to end employment discrimination, support for school desegregation, and affirmative action in the workplace and in higher education, blacks and whites have differed by as much as fifty percentage points. Racial differences also emerge, of only slightly smaller magnitudes, on ostensibly nonracial issues, such as funding for welfare, food stamps, education, and Medicare. Donald R. Kinder and Nicholas Winter explored these differences in a 2001 article and tried to isolate the causes. Their results differ depending on whether the issue domain involves race-based policies or social welfare issues. In the case of the former, the racial divide is primarily explained by differences between African Americans and whites in political principles (e.g., egalitarianism and limited government), as well as in-group identification and out-group resentment. Class differences do not play a significant role. In the case of social welfare attitudes, the racial divide is mostly driven by all of the previous factors listed along with, to a lesser extent, social class differences between blacks and whites.

One final feature of public opinion with respect to groups is worth mentioning. Since the early part of the twentieth century, there has been a dramatic change over time in attitudes about disadvantaged groups in society. This is perhaps best illustrated in the case of attitudes about women's rights and tolerance toward African Americans. In both cases, these changes are due, at least in part, to the conscious efforts of social movements to change public opinion. For example, Howard Schuman and his colleagues (1997) report that in 1942, 68 percent of whites in a nationally representative sample endorsed the idea that black students should go to separate schools from whites. By 1995, however, this figure had declined to a mere 4 percent. Similarly, in the case of attitudes about gender roles, Virginia Sapiro notes that in the early 1970s roughly one-third of Americans agreed that women should "take care of running the homes and leave running the country up to men" (2002, p. 35). By 1998, only about 15 percent of respondents adopted this position.

SEE ALSO *Ideology*

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ATTITUDES, RACIAL

Attitude is one of the oldest concepts in the field of social psychology, but its proper meaning has often remained obscure. The basic understanding has been that, when presented with an "object of thought" regarding a person, group, policy, or idea, an individual will possess an attitudinal judgment on a scale of favorableness. However, this definition is contested; others argue that attitudes are much more complex cognitive structures than simple judgments regarding an object of thought (e.g., van Dijk 1987). Nevertheless, social psychologists most often use the former definition and measure racial attitudes, and how they change over time, using survey methods. In many ways, this dominant form of measurement downplays the complexity within people's belief systems.

PROBLEMS WITH MEASUREMENT

The study of racial attitudes arose in the 1930s from concerns over anti-Semitism and the European Holocaust. The first major study of racial attitudes linked individual possession of anti-Semitic views with authoritarian personality traits (Adorno et al. 1950). These early researchers conceptualized racist views as stemming from the larger society but as choice items a person could choose to either adopt or decline, based on one's psychological needs. The continued focus by social psychologists on individual characteristics of the attitude-holder has been criticized, because the historical, social, and rhetorical aspects of the attitudes are often ignored. In other words, thinking itself is a cultural product rather than an individual process, which emerges from a certain social context (Billig 1991).

The most well-known, comprehensive study of racial attitudes in the United States analyzes changes in survey data from the early 1940s until the mid-1990s (Schuman et al. 1997). The findings show a consistent liberalization of racial attitudes of white Americans toward African Americans. One major problem with this and other studies of racial attitudes is that much of the alteration in survey responses over time could be attributed to changes in social norms, not necessarily attitude changes.

A related problem occurs when old survey questions are reused for the sake of longitudinal analysis, but, eventually, their relevance diminishes. All questions are created within a certain context, and the social environment inevitably changes over time. For example, a question asked throughout six decades in the United States is: "Do you think white students and Negro/black students should go to the same schools or to separate schools?" This question found nearly 70 percent in favor of separate schools in 1942, and by 1996, decades after the matter had been settled by federal law and public schools were integrated, only 4 percent retained a preference for separate schools—to which they would admit when surveyed.

Some changes in attitude trends can be attributed to changing social norms, but it is likely that another significant factor in the apparent liberalizing trend is people learning how to express themselves in a way that will prevent them from sounding racist. In a society like the United States, where being a "racist" is now equated with being a bad person, many people try to avoid sounding racist, even if they do hold some strong, prejudiced views (Bonilla-Silva 2006).

Traditionally, attitude theorists see the views that people express in surveys as representing the inner thoughts and feelings of respondents. Rather, in people's talk there is evidence that responses to abstract objects ("blacks") rely on specifics (e.g., marriages between whites and blacks)—the context of the question in the discussion or the particular social issues of the day. Additionally, people express their views in much more complex ways than can be predicted by traditional attitude theory (e.g., Billig 1991; Potter and Wetherell 1987; van Dijk 1987). For example, an initial positive reflection on the object of thought may in actuality be a *disclaimer*, after which the individual, if allowed, will explain why they do not actually feel completely favorable on the issue (Potter and Wetherell 1987; Bonilla-Silva 2006). Because of this, survey responses may be better viewed as discursive acts instead of attitudinal expressions, and they should be used in conjunction with in-depth interviews whenever possible.

However, there are additional factors to consider within the more in-depth interview format. For example, how the question is framed will affect the respondent's interpretation; the object of thought may not be consistent between researcher and respondent (Potter and Wetherell 1987). Additionally, whether it is within the format of a survey, interview, or focus group, the researcher (a stranger) may not put respondents sufficiently at ease to answer openly in an artificial environment.

ATTITUDES AND BEHAVIOR

A final critique of racial attitude research is that the correlation between attitudes and behavior is indirect and unclear (Fishbein and Azjen 1975). Research frequently finds inconsistencies between people's behavior and their stated attitudes. One major factor in this dynamic is that behavior arises not simply from attitudes but is also

shaped significantly by social norms (van Dijk 1987). "Social behavior is controlled to a considerable extent by exactly the same norms that control the expression of attitudes in surveys, and one should not look to either for final evidence of what goes on in the hearts of men and women" (Schuman et al. 1997, p. 7). Thus, even when there is consistency between behavior and expressed attitude, there is no assurance that the attitudes themselves are dictating the behavior. Furthermore, there is evidence in social psychological research that one's behaviors can affect attitudes and feelings; people observe their own behavior and make inferences about their internal motivation for such acts.

How important are racial attitudes if their correlation to behavior is not direct? From the perspective of those experiencing racial oppression, gauging the internal feelings of oppressors may not seem nearly as important as understanding, in a practical way, the behaviors of racially dominant group members. From this understanding, strategies may be devised to challenge the way dominant groups treat subordinate groups. These are the tangible battles that can be fought in courtrooms—places where people are held accountable for their actions, not their attitudes, or emotions, or fears, which they may or may not reveal to others, no matter the circumstances.

SEE ALSO *Affirmative Action; Anti-Semitism; Authoritarianism; Holocaust, The; Ideology; Norms; Personality, Authoritarian; Prejudice; Race-Blind Policies; Race-Conscious Policies; Racism; Self-Presentation; Self-Representation*

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ATTRACTION

SEE *Similarity/Attraction Theory.*

ATTRIBUTION

It is important to understand why things happen in order to control outcomes or prevent future undesirable occurrences. *Attributions* answer the question of "why" something happens. People tend to seek attributions for unexpected events, and generally infer that things happen either because of factors internal to the actor (personality or dispositional factors) or because of situational influences.

This distinction between situational and personality attributions can be traced to Fritz Heider's seminal book, *The Psychology of Interpersonal Relations* (1958). Heider further identified a stability dimension of attributions. That is, stable situational forces, such as test difficulty, can cause outcomes—but so too can unstable forces, such as a chance opportunity for cheating. Personality can be conceptualized similarly. Stable personality factors include such forces as ability or intelligence. Examples of unstable personality factors are motivation and effort, both of which can change over time and across situations.

Inspired in part by Heider's ideas, Edward Jones and Keith Davis (1965) developed *correspondent inference theory* (CIT) to predict whether observers of an event will make personality or situational attributions for the actor's behavior. According to CIT, the more clearly a person has freely chosen to do something unexpected, and the more clear the intended effects of the activity are, the more likely perceivers are to make personality attributions. When free choice of behavior is limited, when the behavior is not perceived to depart from the norm, and when the intention of the behavior is unclear, perceivers are less likely to make personality attributions.

Another early attribution theory based on Heider's work is Harold Kelley's *covariation theory* (1967). This theory explains that effects are attributed to causes with which they "covary." That is, perceived causes will differ, depending on whether or not an effect is associated uniquely with a particular object, a class of objects, or other people. If a person were happy after seeing a movie, one would attribute the happiness to the person's liking of that particular movie. However, if one knew this person

was happy after most movies, one would attribute the happiness to the person being a movie buff.

Given the complexity of the reasoning involved in making attributions in accord with Jones and Davis's and Kelley's notions, it is not surprising that attributions do not always follow theoretical predictions. Such departures often are referred to as *attributional biases*. Well-known biases include the *fundamental attribution error* (FAE)—the tendency to overestimate personal, and underestimate situational, causes for behavior—and the *actor-observer effect*, or the tendency to commit the FAE more strongly when explaining others', rather than one's own, behavior. Additionally, the *self-serving bias*, identified by Gifford Weary Bradley in 1978 as reflecting self-esteem concerns, is the tendency of people to attribute good outcomes to causes that are internal, do not change over time, and have global implications for success in other areas. When bad things happen, however, people tend to invert this pattern. They attribute failures to external, temporary causes that have few implications outside of the specific context they take place in. All together, much research has focused on attributional biases. Together with an understanding of past theories, new findings permit ever more accurate models of how people ask "why?"

SEE ALSO *Causality; Kelley, Harold*

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ATTRITION, SAMPLE

SEE *Sample Attrition.*

AUBURN SYSTEM

SEE *Prisons.*

AUCTIONS

The word *auction* is derived from the Latin *augere*, which means, "to ascend" or "increase." The concept of auctioning, however, is not confined solely to bidding processes in which the price is raised successively until only one bidder remains. Rather, the term encompasses a variety of trading methods and is broadly understood as "a market institution with explicitly set rules, which determine resource allocation and prices on the basis of bids from market participants" (see McAfee and McMillan 1987, p. 701).

HISTORY OF AUCTIONS

Auctions have been used since antiquity and have a colorful history. One of the earliest written records of an auction is a description by Herodotus and dates back to 500 BCE (see Cassady 1967, p. 26). At that time in Babylon, women were sold annually as brides in auctions. Auctions were also used in ancient Rome for commercial trade and for the sale of almost anything from slaves to plundered booty and debtor's property. Martin Shubik (1983) provides an entertaining sketch of the history of auctions in the Roman and Babylonian empires, while Ralph Cassady Jr. (1967) discusses the types of auctions used in England and America in the seventeenth and eighteenth centuries and the establishment of the world-renowned auction houses Sotheby's and Christie's.

STANDARD AUCTION TYPES

Despite the variety of auction methods, only four basic types of auctions are commonly used: the *ascending bid auction*, the *descending bid auction*, the *first-price auction*, and the *second-price auction*. In the ascending-bid auction (also called *English* or *open outcry auction*), the price is successively raised until only one bidder remains, and that bidder wins the auction at the final price. This auction form is most familiar to the general public and is usually used to sell art and other collectibles. In the descending-bid auction (also called *Dutch auction*, as it has been used for the sale of flowers in the Netherlands), the auctioneer starts at a very high price. The price is gradually lowered until one bidder accepts paying the current price for the auctioned item. This auction is commonly used to sell perishables like fish or flowers. In the other two standard auction formats—first-price sealed bid and second-price sealed bid auctions—bids are submitted in sealed envelopes. In both sealed bid auction formats, the winner is the person with the highest bid. The auctions differ in their payment requirements, however: In the first-price auction, the winner pays the amount they have bid; in the second-price auction, the winner pays the second-highest bid. These auctions are most commonly used for procurement of government contracts.

AUCTION THEORY

Although auctions have existed for many centuries, the theory of auctions is a relatively new field in economics.

Auctions are market institutions with well-defined rules that determine how the winner is selected and what the payments are, depending on the bids. For that reason auctions are typically modeled and analyzed as bidding games of incomplete information. The first treatment of auctions, which identified the strategic aspect of bidding, is found in the work of William S. Vickrey (1961). Vickrey assumed that each bidder knows precisely how highly he values the item, but does not know anyone else's valuation of the item. The other bidders' valuations are perceived to be uncertain; they are drawn from the same probability distribution and are stochastically independent. All bidders are considered risk neutral. Vickrey's major contribution is the celebrated *revenue equivalence theorem*. It states that under the above premises all four auctions generate the same average revenue for the seller. His model is known as the *independent private value model* and is well suited to situations in which consumers buy an item for their own use. If the item is bought for the purpose of resale, however, it has a single, objective value (the resale value), though bidders may have different guesses about what this value would be. To analyze such a situation, one would need to employ a *common value model*. The most general treatment of the auction problem, which allows for interdependence among bidder's valuations and includes the common value and the private value models as special cases, was developed by Paul R. Milgrom and Robert J. Weber (1982). This entry will establish a revenue ranking for the four standard auction formats, and show that on average, revealing information about the quality of the item put up for sale increases equilibrium bids and, consequently, seller's proceeds.

The purpose of auction theory is twofold. On the one hand, auction theory attempts to explain the existence of certain trading institutions and the functioning of the price formation and exchange processes. On the other hand, it provides a guide on how to tailor the trading mechanism to certain information environments and suggests improvements in already existing institutions. A line of inquiry of both practical and theoretical interest is the design of *optimal* auctions—auctions generating the highest expected revenue for the seller. In an influential paper, Roger B. Myerson (1981) introduced a method that allows one to design the best-performing trade mechanism for a wide class of environments. Jeremy I. Bulow and D. John Roberts (1989) made Myerson's approach accessible to a much broader audience of economists by recasting it in terms of marginal revenues and marginal cost and linking it to the theory of monopoly pricing. The theoretical work on auctions continues to grow rapidly—by December 2006 the Econ Lit Database contained more than two thousand entries with the words *auction* or *auctions*, about half of them theoretical.

AUCTION EXPERIMENTS AND COMPUTER SIMULATIONS

Experimental studies of competitive bidding in auctions first appeared in the early 1980s, with a primary focus on testing the theoretical properties of the standard auction formats. The experimental results established several facts about behavior relative to the theoretical predictions. For instance, the revenue equivalence theorem concerning private value auctions fails in the laboratory. Bids in first-price auctions are higher than in Dutch auctions and bids in second-price auctions are higher than in English auctions. These results remain consistent when the number of bidders is changed. The comparative static predictions of the equilibrium model, however, remain valid. Bidders with higher valuations bid higher and bids generally increase with an increased number of bidders. This picture changes in common value auction environments. In a common-value auction, bidders face a more complicated strategic problem because such auctions involve a combination of competitive bidding and value estimation. Inexperienced bidders often fall prey to the *winner's curse*: The bidder who ends up winning the auction has the most optimistic estimate of the value of the auctioned item. This leads to excessively high bids and to winners who pay prices higher than the value of the item on sale. John H. Kagel (1995) provides a comprehensive overview of the experimental literature on auctions. The use of computer simulations to study the performance of market institutions has been proposed by researchers on the crossroad between economics and engineering (for a discussion, see Roth 2002.)

ONLINE AUCTIONS: PHENOMENA AND PSYCHOLOGY OF BIDDING

Since the 1990s online auction sites have been a popular place to trade a variety of goods. By far the most popular online auction site is eBay, which was founded in 1995 and has evolved from a simple online mechanism for buying and selling collectibles to a major marketplace, where in 2001 about $9 billion worth of goods were traded. This is three times more than, for instance, the total sales of Amazon for that year. A phenomenon widely observed on eBay is the tendency of bidders to submit bids in the last seconds of bidding. (This phenomenon, called *last-minute bidding* or *sniping*, is pertinent only to eBay-style auctions, which have a predetermined deadline. Amazon-style auctions do not have a hard close. Rather, they have an automatic extension rule that allows bidding to continue if bidding activity is registered in the last ten minutes of an auction.) Explanations for the practice of last-minute bidding have fallen into two categories. One idea, advanced by Patrick Bajari and Ali Hortacsu (2003), attributes this effect to the existence of experts, who wait until the very

end of the auction because they do not want to reveal their interest in the item on sale. This argument is valid for common value auctions where expert opinion matters. The late bidding phenomenon also exists in private value auctions and Roth and Axel Ockenfels (2006) provide another rationale for bidding close to an auction's end in these circumstances. Waiting until the end allows bidders to acquire an item at a lower price by preventing "bidding wars" (the successive escalation of bids). Other issues of interest to both psychologists and economists are the effect of minimum bid and secret reserve prices on bidding behavior. Bajari and Hortacsu (2004) provide an extensive review of the economic research on Internet auctions.

SEE ALSO *Economics, Experimental; Game Theory*

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AUDITS FOR DISCRIMINATION

An audit is a survey technique that isolates the impact of a person's group membership on the way he or she is treated in the marketplace. Audits, also called tests, first appeared in the 1950s. Since then they have been used to study racial, ethnic, or gender discrimination in car sales, hiring for entry-level jobs, home insurance quotes, preapplication treatment in the mortgage market, house sales, and apartment rentals. National audit studies of housing discrimination were conducted in the United States, for example, in 1977, 1989, and 2000, and audits have been used to help enforce civil-rights laws, particularly in the housing market.

AUDIT METHODOLOGY

In an audit study, people from two groups are selected, trained, and paired so that they are equally qualified in the market being studied. Audit teammates may be equally qualified to buy a house or a car, for example. One member of the team belongs to a legally protected minority group and the other belongs to the comparable majority group. A sampling frame, such as newspaper advertisements, is then selected; a sample is drawn; and an audit is conducted for each observation in the sample. Audit teammates paired for an observation successively visit the associated economic agent, usually in random order, to engage in the relevant market activity, such as applying for a job or inquiring about an available apartment. Each teammate then independently records how he or she was treated. Discrimination exists if minority auditors are systematically treated worse than their teammates. Most audit studies observe several types of agent behavior; discrimination may exist for some types and not for others.

Audits are an alternative to regression studies, which use statistical procedures to determine whether some economic outcome is less favorable for people in a minority group, after controlling for relevant individual characteristics. This approach leads to biased results if key characteristics are omitted from the regression. An audit study minimizes the possibility of omitted-variable bias by matching similar individuals; giving them the same training; assigning them similar or identical characteristics, such as income or education, for the purposes of the audit; and sending them to visit economic agents in

response to the same advertisement within a short time of each other. These procedures ensure that audit teammates do not differ significantly in terms of any characteristic, other than group membership, that might influence their treatment in the marketplace.

Audit studies face many challenges of design and management. Researchers must decide, for example, whether audits should be "blind" in the sense that teammates are unaware of the purpose of the study or that they have a teammate. Some scholars believe that this step is needed to protect the integrity of audit results. Discriminatory treatment is sometimes so egregious, however, that it can upset auditors to the point of compromising their ability to fill out the audit survey forms. To preserve the accuracy of the audit information, therefore, it sometimes makes sense to tell auditors the purpose of the study and train them to fill in the forms as objectively as possible, no matter what happens during the audit.

Audit results must be interpreted with care. An audit study indicates the discrimination that occurs when members of a certain minority group with certain assigned traits visit a random sample of economic agents identified through a particular sampling frame. Because discrimination may not be the same under all circumstances, however, the discrimination experienced by the average member of a group may not be the same as the differential treatment of that group in an audit study. Moreover, audit studies do not provide comprehensive measures of discrimination, but instead measure discrimination only in certain types of behavior, and they may not be not feasible for complex market transactions.

Audit studies also face challenging statistical issues. Different statistical procedures are required to measure discrimination for different types of agent behavior, for example, and statistical tests need to recognize that some factors relevant to the treatment of auditors, such as the skill or mood of the agent being audited may be shared by teammates but not observed by the researcher. In addition, audit studies must recognize that people in a legally protected minority are sometimes favored, for either systematic or random reasons. This fact leads to two different measures of the incidence of discrimination, which serve as upper and lower bounds. The gross incidence of discrimination is the share of audits in which the nonminority auditor was favored. The net incidence is the gross incidence minus the share of audits in which the minority auditor was favored. The net incidence measure is accurate if all favorable treatment of minority auditors is due to random factors, so that subtracting this favorable treatment is a correction for randomness. Minority auditors might be favored for systematic reasons, however. Systematic favoring of minority auditors is troubling in its own right, of course, but it should not be subtracted from gross incidence to determine systematic unfavorable treatment of minorities; a real estate broker who refuses to show any houses to black customers is discriminating regardless of whether or not another broker fails to show white customers any houses in black neighborhoods.

Finally, audit studies raise ethical questions because they make demands on economic agents, including many agents who do not practice discrimination. In 1982 the U.S. Supreme Court decided in *Havens Realty Corporation vs. Coleman* that housing audits are a legitimate investigative technique. Nevertheless, scholars conducting audits have a responsibility to make certain that their studies are well managed and do not make unnecessary demands on the economics agents being audited.

RESULTS FROM AUDIT STUDIES

Audit studies have uncovered racial, ethnic, and gender discrimination in several countries. Recent audits studies in the United States have found discrimination against blacks and women in car sales, against blacks and Hispanics in hiring for entry-level jobs, against women in hiring for servers at expensive restaurants, and against blacks and Hispanics in preapplication mortgage procedures. The 2000 national housing audit study found, among other things, that both blacks and Hispanics receive less information about available housing units than do non-Hispanic whites in both the sales and rental markets. In the sales market, for example, white auditors but not their black teammates were shown additional units similar to the advertised unit in 22.9 percent of the audits (gross incidence), whereas black auditors were favored over their white teammates on this measure of treatment in 16.0 percent of the audits. The difference between these measures, 6.9 percent, is the net incidence of discrimination.

Not all audit studies find discrimination, however, and some audit studies find that certain types of discrimination are declining. An audit study of the home insurance industry, for example, found no clear evidence of discrimination. Moreover, a comparison of the results of the 1989 and 2000 national housing studies reveals significant declines in many types of discrimination, including several associated with housing availability. This comparison also reveals increased discrimination against blacks and Hispanics in some other types of agent behavior, including the number of housing units shown and steering, which is defined as directing different customers to different types of neighborhoods based on their race or ethnicity. Real estate agents were more likely, for example, to steer black customers away from white neighborhoods in 2000 than in 1989.

Finally, audit studies provide some insight into the causes of discrimination. One study found, for example,

that the more expensive a house, the more likely it is to be withheld from black customers. Because black and white teammates in this study had the same qualifications and made the same requests, this result suggests that some real estate brokers act on the basis of a stereotype that black households cannot afford expensive houses, rather than on the basis of a customer's stated income and wealth.

SEE ALSO *Correspondence Tests; Discrimination; Inequality, Gender; Inequality, Racial*

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John Yinger

AUSTRIAN ECONOMICS

Austrian economics, so named for its country of origin, is distinguished by its methodological precepts and by its theories of capital, money, and the business cycle. Carl Menger (1840–1926), who taught at the University of Vienna, is the acknowledged founder of this school of thought. Menger's writings, particularly his *Principles of Economics* (1871) and his *Investigations into the Method of the Social Sciences* (1883), set out the principles and methods that guided the development of a worldwide Austrian tradition.

Menger rejected the German historicism of Wilhelm Roscher (1817–1894), which offered an inductive approach to economic understanding; and he deviated markedly from the eighteenth-century British classicism of David Ricardo (1772–1823) and John Stuart Mill (1806–1873), which featured long-run relationships among the different economic classes of people (workers, capitalists, and landlords). Menger's theory of economic institutions does bear a striking resemblance to the invisible-hand theorizing of Adam Smith (1723–1790). However, given Smith's cost-based theory of value, the appropriateness of linking Menger and his followers to the reputed father of economic science is a contentious issue among contemporary Austrian economists.

Menger focused on the individual market participant and on his or her choices as governed by perceived needs and wants. This general approach to economics was termed *methodological individualism* by the sociologist Max Weber (1864–1920). Menger's notion of economic value derives from the purposes of the individuals doing the valuing rather than from the qualities of the objectively defined goods being valued. Menger's value theory, termed *methodological subjectivism* and now embedded (though not consistently) in modern economics, stood in contrast to Marxism's labor theory of value and classicism's cost-of-production theory of value.

Methodological individualism and the closely related methodological subjectivism allow for a straightforward accounting of the gains from trade. Individuals value various goods differently, such that trading goods allows both traders to gain. Direct exchange (goods for goods) leads quite naturally to indirect exchange (goods for more-easily-tradable goods for actually-sought-after goods). The more-easily-tradable goods are called *media of exchange*. Over time, the practice of indirect exchange gives rise to *a most commonly accepted medium of exchange*. This is Menger's theory of money—with early monies taking the forms of salt or cattle and later monies, silver or gold. (The fact that modern paper money is a result of governmental institutions overriding the would-be choices of market participants is seen as supporting Menger's theory.)

Whether exchange is direct or indirect, market values never pertain to the whole of the supply, such as the diamond supply or the water supply. Rather, they pertain to the smallest quantities of the goods subject to potential trades, that is, the marginal unit. Because of relative scarcities, the value of the marginal unit of diamonds exceeds the value of the marginal unit of water—despite water's being the more useful of the two goods. This is Menger's resolution of the so-called diamond-water paradox, which was identified by Adam Smith (who distinguished value in use from value in exchange) but not satisfactorily resolved until the "Marginalist Revolution" of the 1870s. Menger was one of three revolutionists, the others being British economist William Stanley Jevons

(1835–1882) and French economist Leon Walras (1834–1910). The latter two formulated the issues mathematically by writing the equations for total and marginal utility (Jevons) and for the equilibrium relationships among all the prices in a frictionless market economy (Walras).

Historians of economic thought sometimes see the Austrian theory as applying only to the demand side of the market—with supply and demand finally being juxtaposed by Alfred Marshall (1842–1924), who drew supply from the classicists and demand from the marginal revolutionists. But Menger applied his value theory to the means of production as well as to the ends. Consumption goods were designated as *goods of the first order*. Markets for goods of the second, third, and higher orders guide the time-consuming production activities that proceed from the highest to the lowest order. This reckoning, together with the concept of *opportunity costs* introduced by Friedrich von Wieser (1851–1926), established the Austrian supply-side relationships.

Eugen von Böhm-Bawerk (1851–1914) developed Menger's conception of the production process into a theory that he explicated in *Capital and Interest* (vol. 2, 1889). The rate of interest governs the extent to which resources can profitably be tied up in the production process: The lower the interest rate, the more roundabout, or time-consuming, the production process. Unfortunately, Böhm-Bawerk's use of a crude arithmetic reckoning of roundaboutness (the average period of production) diverted attention from the otherwise Mengerian construction and played into the hands of critics who questioned the relevance of such a metric.

In his *Theory of Money and Credit* (1912) Ludwig von Mises (1881–1973) used marginalist thinking to account for the value of money and, drawing on Böhm-Bawerk's capital theory, set out a theory of the business cycle. Interest rates held artificially low by central banks stimulate investment and cause production processes to be unduly roundabout. In the absence of sufficient resources to complete all of the production processes, the boom eventually gives way to a bust. In essence, the boom-bust cycle is an instance of economic discoordination attributable to an interest rate that does not accurately reflect the valuations and choices of market participants.

Mises systematized Austrian economics in his *Human Action* (1949), calling its method *praxeology*, which literally means "action logic." He distinguished between economics and history, denying that there is a unilateral testing of economic theory with historical data but recognizing that the two disciplines are essential complements in our understanding of real-world economies. Mises's praxeology, an exclusively deductive system of logic based on self-evident axioms (e.g., human action is purposeful), stands in contrast to Milton Friedman's "methodology of positive economics" (1953), according to which contrary-to-fact assumptions can be used in the formulation of theory, which can then be accepted or rejected on the basis of empirical evaluation. In Mises's hard-drawn Austrianism, empirical studies serve to identify cases or episodes in which a particular theory is applicable.

In his *Prices and Production* (1935), Friedrich A. Hayek (1899–1992) developed the business-cycle theory, offering this means-ends theorizing about booms and busts as an alternative to the circular-flow theorizing of John Maynard Keynes (1883–1946). By many accounts, Hayek's theory lost out to Keynes's primarily because of its lack of politically attractive policy prescriptions. Israel M. Kirzner (b. 1930) developed the essential entrepreneurial aspects of the Austrian theory and, along with Hayek, offered a market-as-a-process view that stands in contrast with the more conventional mathematics of market equilibria. In both microeconomic and macroeconomic contexts, the Austrians have argued that governments are ill-advised to override market forces with central planning or to supplement those forces with economic stimulants. The policy prescription of laissez-faire is emphasized by Murray Rothbard (1826–1995) in his *Man, Economy, and State* (1962).

Through his introduction and selection of articles, Israel Kirzner offers, as an Austrian sampler, a three-volume *Classics in Austrian Economics* (1994). Dating from the mid-1970s, numerous books and articles have made Austrian economics a living tradition. Some developments and extensions are intended to compete with modern mainstream thinking; others to reconcile with it. In the contemporary world of economics, the Austrian principles of microeconomics (the subjectivity of value and opportunity costs) are widely accepted, although they are often observed in the breach because of considerations of mathematical tractability and data availability. By contrast, Austrian macroeconomics, which is rooted in capital theory and focuses on the allocation of resources over time, has been neither widely accepted nor well understood. Dating from the Keynesian revolution, capital theory is seen as foundational for theories of economic growth but as largely irrelevant for macroeconomics, which deals instead with overall levels of output and inflation.

SEE ALSO *Austro-Marxism; Hayek, Friedrich August; Libertarianism; Mises, Ludwig Edler von*

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AUSTRO-LIBERTARIANISM

SEE *Libertarianism.*

AUSTRO-MARXISM

The term *Austro-Marxism* was probably introduced by the American socialist Louis Boudin to characterize a specific Austrian version of Marxism. Established at the turn of the twentieth century, Austro-Marxism became a powerful political and cultural movement during the Austrian First Republic (1918–1934). For analytical purposes, Gerald Mozetič (1987) distinguishes three versions of Austro-Marxism. First, there was the political Austro-Marxism put forth by political intellectuals such as Otto Bauer, Karl Renner, Rudolf Hilferding, Max Adler, and Friedrich Adler. This version represents what might be called a third way of thinking, located between (or beyond) socialist revisionism and Leninism. It was more radical than the First Socialist International as well as more democratic (or moderate) than the Bolshevist approach to Marxism. In contrast to other Marxist conceptions, Austro-Marxism was not based on Hegelian dialectics but on two rather distinctive philosophies: the materialism of natural scientist and philosopher Ernst Mach (1838–1916), and the idealism and ethics of Immanuel Kant (1724–1804).

Second, there was Austro-Marxism as scholarship. Outside the universities that were dominated by conservatives, and even suffused with anti-Semitism, there were institutions offering extramural teaching and adult education at which a large number of socialist intellectuals were active in various academic disciplines, such as economics, law, sociology, history and, last but not least, the natural sciences. Their institutional and personal cooperation established interdisciplinary work and combined scholarship with political commitment and activism. A number of scholars and social scientists, such as Otto Neurath, Paul Lazarsfeld, and Marie Jahoda, worked in this particular context, which has been referred to as an "alternative institutionalization" of social sciences and cultural studies (cf. Sandner 2006).

Third, mention must also be made of Austro-Marxism as a way of life. Austrian socialism was organized into a number of political and cultural associations that claimed to establish within bourgeois society a counterculture based on socialist values and attitudes, such as solidarity, class consciousness, and the socialist reform of everyday life.

In a way, Austro-Marxism was the political theory of the socialist camp (in contrast to the Catholic-conservative and the pan-German camps), although not all Austrian socialists were Austro-Marxists. However, Austro-Marxism existed not only on a theoretical level; it was closely connected with the socialist counterculture in "Red Vienna" (the socialist-governed capital of Austria) between 1918 and 1934 (cf. Gruber 1991; Rabinbach 1983, 1985). In certain political fields, such as housing and adult education, its practitioners were able to bring about remarkable improvements in the social and cultural conditions of the working class.

Theoretical Austro-Marxism's rather nondeterministic and undogmatic approach enabled it to broadly partake of and to absorb modern intellectual currents—including psychoanalysis and empirical sociology—and led to a wide-ranging intellectual exchange, even among nonsocialist politicians and scholars. In actual practice, both its strict parliamentary strategy and the socialist-governed Red Vienna project worked successfully for a long period. It eventually collapsed, in contrast to other socialist-oriented experiments, through no fault of its own (i.e., undemocratic practices), under the weight of the violent policies of Austro-Fascism (1934–1938) and National Socialism (1938–1945). By the end of World War II, most of Austro-Marxism's representatives were dead, while the majority of those that emigrated did not return to Austria.

SEE ALSO *Marxism; Socialism*

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Günther Sandner

AUTHORITARIANISM

Authoritarianism is one of the three main types of political systems (or *regimes*), democracy and totalitarianism being the other two. Social science scholars have identified a number of features of authoritarianism in its *ideal type* form. The ideal criteria may not be present in practice in actually existing authoritarian systems. Rather, descriptions of the ideal type provide a measuring stick for analysts to assess how authoritarian a particular system is. Scholars also increasingly recognize a hybrid between authoritarianism and democracy as forming its own ideal type regime, generally called either *semi-authoritarian* or *semi-democratic* systems (Ottaway 2003).

DEFINING FEATURES OF AUTHORITARIANISM

Defining features of authoritarianism include the existence of a single leader or small group of leaders with ultimate political authority. Believing in the supremacy of the authority of the state over all organizations in society, authoritarian leaders make all important government policy decisions. The state's needs are paramount; individualism is encouraged only to the extent that it benefits the state. Ideal type authoritarianism lacks both official and unofficial limitations on its power, although Mark Hagopian (1984, p. 118) has argued that, in practice, powerful social groups can maintain unofficial, "extralegal" constraints over authoritarian leaders.

Whereas totalitarianism strongly emphasizes an official and overarching ideology serving as a blueprint for the remaking of society, authoritarianism is less concerned with ideology. When authoritarian leaders come to power, they often have a set of policy goals—such as eliminating corruption or resurrecting the economy—as well as what Juan Linz (1975) calls a "mentality" about the purpose of their rule. But this is quite different from the kind of ideology present in an ideal type totalitarian system.

Authoritarian systems commonly emerge in times of political, economic, and social instability, and thus, especially during the initial period of authoritarian rule, authoritarian systems may have broad public support. The stereotype of an authoritarian leader as uniformly despised by the general population is rarely accurate. In the majority of authoritarian systems, however, these public (and publicly supported) goals take a back seat to the maintenance of the regime's power if the latter is threatened. Over time, if the government fails to achieve its policy goals, the public may withdraw its support.

Because of the government's control of the state's repressive mechanisms, declining support need not translate into popular unrest and antigovernment mobilization. Indeed, another of authoritarianism's defining features is the limiting of mass political participation. Democratic and totalitarian systems encourage the general public's political participation, although in the totalitarian case the state or ruling party controls all aspects of mass political mobilization. Authoritarian leaders typically prefer a population that is apathetic about politics, with no desire to participate in the political process. Authoritarian governments work to develop such attitudes, both by fostering a sense of a deep divide between society and government and by repressing expressions of dissent, violently if necessary. Consequently, authoritarian leaders view the rights of the individual, including those considered to be "human rights" by the international community, as subject to the needs of the government. Concern about the possible emergence of potential political opposition can become an obsession of authoritarian leaders, weakening their effectiveness as leaders and the policy performance of the government.

TYPES OF AUTHORITARIANISM

Just as social scientists identify various types of democratic systems, scholars highlight three types of authoritarianism. A *military authoritarian* system is one in which the military is not only privileged—as it typically is in all authoritarian systems—but actually in control of all major aspects of government decision-making. The rule of

Augusto Pinochet in Chile from 1973 to 1988 is the classic example of a military authoritarian regime.

In *party authoritarian* systems, on the other hand, a single political party dominates the system. Though this is also true of totalitarian systems (e.g., Stalin's USSR or Hitler's Germany), party authoritarian systems penetrate into society less than totalitarian systems. Party authoritarian systems may even tolerate small opposition parties and use mechanisms of democracy like elections in an effort to increase their legitimacy with the public. Mexico's authoritarian system prior to the reforms of the 1990s and 2000s is an example of a party authoritarian system.

Bureaucratic authoritarian systems are run by the military but rely heavily on experts in the fields of economics and other policy areas, often allowing them significant autonomy to set and oversee government policy. Social scientists often label these officials *technocrats*. Military leaders point to the technical expertise of these bureaucrats as a key component of their economic modernization policies, which are introduced under harsh authoritarian conditions to prevent opposition to economic reforms. Guillermo O'Donnell identifies Argentina from the mid-1960s to the mid-1970s as the classic example of bureaucratic authoritarianism.

SEE ALSO *Bureaucracy; Democracy; Democratization; Dictatorship; Human Rights; Leadership; Military Regimes; Oligarchy; State, The; Technocrat; Totalitarianism*

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AUTHORITARIAN PERSONALITY

SEE *Personality, Authoritarian.*

AUTHORITATIVENESS

SEE *Parent-Child Relationships.*

AUTHORITY

In the first volume of *Economy and Society* (1978), Max Weber defines authority as the belief in the legitimacy of individuals to exercise power, such that they are able to influence others to do their will even with resistance, and a specific group will likely follow those orders.

Weber develops a schema of legitimate authority, identifying three pure forms. Legal authority, sometimes referred to as rational authority, is based on rules and laws. Under these laws, people have the right to exercise authority through the office they occupy. It is the position itself that holds authority, with obedience being owed to the office, such as chief executive officer or the presidency. The office continues to hold authority after the officeholder vacates it. Traditional authority is based on tradition or custom. Obedience is owed to individuals such as tribal leaders or kings through tradition. When the individual vacates the position, tradition determines who will fill the position. Finally, charismatic authority is based on dedication to the extraordinary personality of an individual and the standard or norm he or she establishes. Obedience is owed to the individual charismatic leader. Weber considered charismatic authority to be a revolutionary force in that it renounces tradition and submission is guaranteed through proof or the display of a miracle.

Jürgen Habermas notes the importance of discourse, or speech, as it relates to authority. Mark Warren (1995) recounts Habermas's argument that authority is created through discourse, particularly in those settings that prevent other forms of authority from intruding. Through discourse, citizens in a democracy make known the issues that concern them and are able to understand others. The result is a form of consensus by which laws are created and normative changes are instituted.

Theodor Adorno and colleagues, in *The Authoritarian Personality* (1950), notes that an individual's submission to the authority of a parent may be linked to submission to authority in general. In particular, he finds that opposition toward parents' authority is often evidenced as resistance to authority in general. As a result of this study, Adorno identified an authoritarian personality type. As James M. Henslin (2005) summarizes, this individual is highly prejudiced against minority groups, while also being highly conformist and respectful of authority.

Ralf Dahrendorf, in *Class and Class Conflict in Industrial Society* (1959), identifies authority in relation to class. One class exercises authority in industry yet may also be subject to authority from others. Others are sub-

ject to authority from supervisors but do not exercise their own authority. The classless do not exercise authority and are not subject to authority, such as independent workers. Thus, class is determined by the degree of authority one holds. Since industry plays a large role in one's life, a person's authority may be influential in other spheres, including the family.

Stanley Milgram (1974) experimentally tested individual obedience to authority. Authority is contextual in nature, meaning that a person with authority in one situation will not necessarily have the same authority in another. Authority comes from a person's power in a social situation, not from personality. In certain situations, there is an expectation that an authority will exist. The authority becomes apparent through (1) self-identification of the individual with authority; (2) external objects, such as uniforms, identifying the individual as an authority; (3) the lack of a competing authority; and (4) the lack of obvious inconsistencies. In his infamous shock experiments, Milgram found that individuals, who may have protested against the shocking of individuals, were willing to continue with the experiment when an authoritative individual encouraged them on.

Organizational theory has further developed the notion of authority. Philippe Aghion and Jean Tirole (1997) note the distinctions between formal and real authority. They define formal authority as "the right to decide" while real authority is defined as "the effective control over decisions" (p. 1) with the former not necessarily granting the latter.

SEE ALSO *Aggression; Alpha-male; Conformity; Experiments, Shock; Leadership; Legal Systems; Milgram, Stanley; Personality; Power; Social Dominance Orientation; Social Psychology; Weber, Max*

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Gabriela Guazzo

AUTISM

SEE *Theory of Mind.*

AUTOCORRELATION

SEE *Serial Correlation.*

AUTOCORRELATION FUNCTION

SEE *Time Series Regression.*

AUTOCRACY

From the Greek word *autokratôr* meaning self-ruler, or ruler of oneself, the term *autocracy* refers to one-person rule, or a government led by a single person with unlimited power. The autocrat has uncontrolled and undisputed authority over the people and others in the government, controlling all aspects of social, economic, and political life. Autocracies come in two forms: an inherited autocracy is also referred to as a monarchy while a nonheredity

autocracy is a dictatorship. Autocracy is often used interchangeably with the terms despotism, tyranny, and dictatorship.

Autocracies did not develop in a formal way until the emergence of the state. Human culture has experienced four basic political organizations: bands, tribes, chiefdoms, and states. Band societies are characterized by being nonstratified, essentially egalitarian, kin-based groups whose leadership is based on ability. They are highly local and, because they are kin-based, have very small membership groups. Decision-making in band society is typically done by consensus, meaning that members of the group discuss an issue until everyone agrees on a particular course of action. Tribes are larger, more regionalized groups that share many of the characteristics of bands with the exception of size. As regionalized groups, tribes are linked together and often act together in times of conflict or need. Chiefdoms and states, unlike bands and tribes, are hierarchical or stratified. The head of state or chief rules by the power of their office and can command armies and exact tribute (taxes are a form of tribute). The difference between chiefdoms and states is that chiefdoms are kin-based while states are bureaucracies. Bureaucracies are formalized public bodies that perform particular tasks such as law-making. Chiefdoms and states have large memberships and leaders may not have direct contact with most of their followers or members. Members may also have no authority in choosing those who are in positions of leadership. This is generally the case with an autocratic form of government.

In Roman times the terms *imperator, Caesar,* and *Augustus* were used to signify an autocratic form of government. *Autokratôr* was often used in place of *imperator.* Perhaps the best example historically of an autocracy would be the Russian Czarist (Tsarist) system of government. The czars were referred to as *Imperator i Samodyerzhets Vserossiysky,* which translates as "all-Russian emperor and autocrat." Late-twentieth-century forms of autocratic rule (though often challenged by subjects) include the government of Saddam Hussein in Iraq. Hussein, a member of the Ba'ath party, often ruled Iraq through intimidation and acts considered to be crimes against humanity. Because of this, many people in Iraq lived in fear, many were executed and murdered, and many others rose to positions of power within his government. This contrasts with other forms of government such as democracies in which leadership is decided by the people and where there are clear limits on the power of the chief executive and members of the government. The United States is technically a democracy, but is administered as a republic, wherein representatives are elected to serve the people in the House of Representatives and the Senate. There are three branches of government: the executive branch (president and the cabinet), the judicial (Supreme Court and federal court system), and the legislative (House and Senate). This configuration is designed to prevent any single branch of government from wielding too much power, including that of the executive branch and the president. Despite this, the president holds the power of veto, wherein decisions of the other branches may be overruled, and the president may also make decisions in times of emergency without consultation with or support from the other branches of government. Ultimately, this power could lead to autocratic-like authority. In the twenty-first-century United States, President George W. Bush has been compared to an autocrat in some of his decisions regarding the Iraq War, the imposition of a democratic-style government in Iraq, and in his relationship with the other branches of government in the United States.

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AUTOKINETIC EFFECT

The autokinetic effect is an optical illusion. It occurs when a perceiver staring at a stationary pinpoint of light in an otherwise completely dark visual field believes that the light moves from its fixed position. This "self-motion" (auto-kinetic) is caused, in part, by the nearly imperceptible movements of the eye known as saccades. Ordinarily the visual system compensates for these naturally occurring motions of the eye, but when only a single light is visible with no frame of reference, the light appears to wander in unpredictable directions and at variable speeds. This illusion was first noted by astronomers when viewing a single star on a very dark night.

Muzafer Sherif made use of the autokinetic effect in his 1936 studies of the development of social norms. Norms provide individuals with frames of reference that guide their thoughts, emotions, and actions in social situ-

ations. Individuals sometimes conform to others' responses deliberately, but norms also emerge spontaneously in ambiguous settings as people gradually align their behaviors until consensus in actions emerges. Sherif examined this process by asking men seated in an otherwise completely dark room to state aloud their estimates of the distance a tiny dot of light moved. Individuals who made judgments alone came to fix their estimates within a specific range, which varied from one to ten inches. When people made their judgments with other people, however, their personal estimates converged with those of other group members until a consensus was reached. The men eventually accepted a socially shared estimate in place of their own idiosyncratic standard. Moreover, in subsequent individual sessions subjects still relied on the group's standard, suggesting that they had internalized the norm. Sherif, by capitalizing on the natural ambiguity of the autokinetic situation, succeeded in creating a social norm in an experimental setting.

Sherif's procedures provided a paradigm for subsequent studies of social influence, such as Solomon Asch's (1907–1996) 1955 discovery that individuals sometimes conform to a group's decision even when they know that others' judgments are biased or in error. Subsequent studies also confirmed that once norms develop they become stable frames of reference that resist change. When an individual with extreme judgments joined the group, other group members' judgments shifted so that a more extreme norm formed. Once this arbitrary standard was created a new member took the place of the source of the norm. The group continued to base its judgments on the group norm, however, and the newest member gradually adapted to the higher standard. As members were replaced with naive subjects, the new initiates continued to shift their estimates to match the group norm. The arbitrary norm eventually disappeared, but not before the group's composition changed many times. This finding shows how norms, once they are established, can become part of the group's social structure. Even when individuals who fostered the norm are no longer present, their normative innovations remain a part of the organization's traditions, and newcomers change to adopt that tradition.

SEE ALSO *Asch, Solomon; Norms; Sherif, Muzafer; Social Psychology*

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AUTOMOBILE INDUSTRY

The turn of the twentieth century witnessed the dawning of the automobile industry. Tinkering by bicycle, motorcycle, buggy, and machinery entrepreneurs in Europe and the United States led to the first prototypes of automobiles in the late nineteenth century. French woodworking machinery makers Rene Panhard and Emile Levassor built their first car in 1890 with an engine designed in Germany by Gottlieb Daimler and Wilhelm Maybach. Armand Peugeot, a French bicycle maker, licensed the same engine and sold his first four lightweight cars in 1891. German machinist Carl Benz followed the next year with his four-wheeled car and in 1893 Charles and Frank Duryea built the first gasoline-powered car in the United States. Ransom Olds is credited as the first mass producer of gasoline-powered automobiles in the United States, making 425 "Curved Dash Olds" in 1901. The first gasoline-powered Japanese car was made in 1907 by Komanosuke Uchiyama, but it was not until 1914 that Mitsubishi mass-produced cars in Japan.

Each region in the triad—North America, Europe, and Asia—has made significant contributions to process, product, and organization throughout the twentieth century. These innovations together have shaped the competitive structure of the automotive industry that exists today. The organization of production inputs—such as labor and suppliers of components and materials—as well as the configuration of distribution channels are also important dimensions of the growth and evolution of the industry. Furthermore, various forces outside the industry shape industry structure and strategies: trade flows; regional and international movement of capital; regional and global policies on trade, environmental regulation, and intellectual property, particularly in emerging economies; and the infusion of information technology throughout the procurement, production, and distribution systems.

The automotive industry is dynamic and vast, accounting for approximately one in ten jobs in industrialized countries. Developing countries often look to their local automotive sector for economic growth opportunities, particularly because of the vast linkages that the auto industry has to other sectors of their economy.

MODERN ECONOMIC ORIGINS OF THE AUTOMOBILE INDUSTRY

The auto industry has passed through several stages: (1) craft production (1890–1908), in which dozens of small enterprises vied to establish a standard product and process; (2) mass production (1908–1973), precipitated by Henry Ford's moving assembly lines, which became the standard operating mechanism of the industry; and (3)

lean production (1973–present), which was initially developed at Toyota under the leadership of Taichi Ohno during the 1950s, and which introduced a revolutionary management process of product-development and production.

Mechanization of auto production has also been transformed over the past century, led by the need for faster and lower-cost production on the supply side of the industry. Ford's mass-production system relied on standardized designs to enable the construction of assembly plants that were fully automated and utilized interchangeable auto parts. In its heyday, between 1908 and 1920, Ford streamlined the assembly process to the point where it took just over an hour and a half to produce one car. Setting the industry standard for production enabled Ford to take the lead in market share, but it also led to a complacent mindset that hindered innovation. In the 1920s General Motors improved on Ford's assembly line process by introducing flexibility into the production system, enabling faster changeovers from one model to the next. However, it took half a century after Ford stopped mass producing Model T's in 1927 for another production paradigm to emerge as the standard in the global automotive industry. Toyota's lean production system—which had its beginnings in 1953—drove productivity to new heights by replacing the "push" system with a "pull" system. Instead of producing mass quantities of vehicles and pushing them through to dealerships to sell to customers or hold as inventories, the lean system pulled vehicles through the production process based on immediate demand, minimizing inventories at suppliers, assemblers, and dealerships. Just-in-time production also gave a larger responsibility for product design, quality, and delivery to assembly workers and suppliers than did the mass-production system. Suppliers were not vertically integrated into auto assembler operations, but rather networked to the assemblers via long-term contracts. This total system of cost-minimization and responsiveness to customer demands revolutionized auto manufacturing on a global scale, although the model has been adapted to regional conditions.

Product innovation in the automotive industry has mainly been a response to customer demands, although product positioning is a critical strategic variable for automakers. Ever since General Motors began producing different types of vehicles for different product segments, thereby ending the reign of Ford's low-price, monochromatic Model T, the ability to vary products on several dimensions has been the main strategic variable of auto producers. U.S. automakers have mainly been responsive to customers' desires for comfort, speed, and safety, and have developed rugged drive trains, plush suspensions and interiors, and stylish chassis and bodies. In contrast, European auto producers have focused their attentions on performance and agility features of vehicles, such as steel-belted radial tires, disc brakes, fuel injection, and turbo diesel engines. For Japanese producers, the miniaturization culture and the scarcity of fuel, materials, and space largely determine the specifications of cars.

Organizational innovations have also occurred over the past century. In concert with the introduction of mass production techniques came the vertical organization of production processes. Auto assemblers internalized the production of critical components in an effort to minimize transaction costs associated with late deliveries and products that were not produced to exact specifications. For example, the share of components purchased from outside suppliers relative to the wholesale price of an American car dropped from 55 percent in 1922 to 26 percent in 1926. During the Great Depression, this propensity to internalize production eased, with suppliers gaining independence and importance in the replacement parts market. Automakers found that a highly vertical organizational structure did not permit the flexibility in operations necessary for product innovation. In the 1930s, Ford's vertically integrated and centrally controlled organizational structure gave way to the multidivisional organizational structure that was implemented by Alfred Sloan at General Motors Corporation (GM). Sloan's decentralized configuration of GM fostered an independent environment for the development, production, and sales of a wide variety of vehicles. With the lean production revolution came the introduction of organizational reform referred to as the *extended enterprise system*: Although Japanese auto manufacturers established and diffused efficient mechanisms of supply chain management throughout the industry, Chrysler Corporation is credited with successfully implementing these innovations in the American venue.

COMPETITIVE STRUCTURE

Rivalry among assemblers in the automotive industry, once contained within national boundaries, has evolved into global competition. First movers established market dominance in the early 1900s, and their brands are still the most recognized by consumers today. The fact that auto producers choose market strategies based on what their rivals are doing indicates that this is an oligopolistic industry. What is interesting here is that market leadership remains dynamic: It is not a given that General Motors or Toyota or DaimlerChrysler will be the market leader of tomorrow.

Before industry standards for products and production were established, hundreds of automakers existed, each vying to establish a beachhead in the industry. In the United States, for example, the year 1909 saw the largest number of automakers in operation in a given year—272 companies. It is estimated that in the first twenty years of

the industry's existence, over five hundred firms entered the industry in the United States alone. The 1920s brought a wave of precipitous exits by auto manufacturers, with many firms merging into more profitable companies. In the 1930s General Motors became the market leader, with Ford slipping to second place because of a yearlong changeover in production from the Model T to the Model A. By 1937 General Motors, Ford, and Chrysler—long referred to as the Big Three—had 90 percent of total sales in the U.S. market, forming a dominant-firm oligopoly (General Motors accounted for 44.8%, Chrysler 25%, and Ford 20.5%). By the 1960s, only seven domestic auto producers remained.

In the late 1990s Japanese auto manufacturers took over more than a quarter of the U.S. market, and Big Three market share slipped below 70 percent. Today, there are only two-and-a-half U.S. automakers—General Motors, Ford, and DaimlerChrysler—collectively capturing 58.7 percent of the U.S. market. GM still has the largest share of the U.S. market (27.3%), but Toyota's market share in the United States is just one percentage point below Chrysler's (13%). Worldwide, market concentration has also been declining since the mid-1980s, with entrants such as Hyundai/Kia diluting the collective market share held by dominant automakers.

Market rivalry in the auto industry centers on two strategic variables: (1) product variety and quality, and (2) transactions price, which is manipulated to boost sales. The tension between shareholder concerns about short-term profitability and a company's desire for long-term viability is palpable. Automakers must attract and maintain a solid customer base, building allegiance to brand name in an effort to maximize earnings in the long term. Maintaining high customer repurchase rates is critical to long-term profitability in the industry. Therefore, automakers attempt to attract and keep customers from the purchase of their first car in their late teens until retirement and thereafter. Product variety at all of the major automakers spans the full spectrum from small to full-sized cars, although some automakers are better known in particular market niches. For example, Mercedes, BMW, Lexus, Infiniti, and Acura capture a third of the upscale market in the United States, whereas Buick, Ford, Mercury, and Toyota are known for their family-styled traditional cars. Turnkey reliability is the hallmark of Japanese makes, whereas Ford, Chevrolet, and Toyota appeal to buyers of small or sporty vehicles. The fastest growing market segment in the United States in recent years has been sport utility vehicles (SUVs). By the early 2000s, SUVs captured 55 percent of vehicle sales.

Auto producers have used various means to develop a full line of product offerings for a broad spectrum of customers. For example, GM has historically used acquisition or shareholdings to offer a variety of brands—including Chevrolet, Oldsmobile, Pontiac, Buick, GMC, and Cadillac. In the late 1970s, GM purchased shares in Suzuki and Isuzu subcompacts and imported those vehicles, in part to satisfy Corporate Average Fuel Efficiency requirements. In recent years, Ford-Mercury-Lincoln has also diversified its portfolio by acquiring Volvo and Jaguar. Toyota, Honda, and Nissan initiated a clever marketing ploy in the 1980s aimed at selling luxury vehicles in the United States: They named their luxury brands Lexus, Acura, and Infiniti, respectively, even though these cars are built on the same platforms as their other vehicles.

Product quality has been converging over time. As recently as 1998, European and Japanese makes had fewer vehicle defects than average for cars in their first few months on the road, whereas U.S. and Korean cars had more defects than average. By 2004 vehicles from all four regions were within ten defects per hundred vehicles of the average, which had fallen from 176 to 119 defects per hundred vehicles. Interestingly, both the Japanese and the South Korean newcomers outperformed U.S. and European vehicles on this quality scale.

To attract customers to a brand, small cars are at times used as a loss leader; that is, a firm will sell their low-end vehicle at a price below invoice, while recuperating large returns on SUVs, luxury brands, and specialty cars. Another pricing strategy that is often used by automakers to clear inventories and to get the customer in the door is discounting. At particular times of the model year (which typically begins in October and ends in September of the following year) direct assembler-to-customer discounts as well as dealer-to-customer discounts are used to adjust transaction prices to ebbs and flows in demand. If the revolutionary pull system becomes pervasive in the auto industry, the need to manage inventories through end-of-model-year discounting could become obsolete. However, product positioning will continue to be an important competitive variable for automakers because demographic attributes drive the needs and desires of customers.

Automotive suppliers have been gaining global importance in the automotive industry, taking on the primary responsibility for product development, engineering, and manufacturing for some critical systems in the automobile. In its initial stage of development, the auto industry was comprised of auto assemblers that integrated parts production into the enterprise. Independent auto parts producers mainly supplied aftermarket parts. Throughout the twentieth century, this vertically integrated structure within assemblers has been replaced by a more network-oriented tiering structure. Here, assemblers coordinate design and production efforts with premier first-tier suppliers, while these suppliers are responsible for global coordination of the supply of their subassemblies

and for the coordination of production by sub-tier parts manufacturers. Thus, first-tier suppliers have been rivaling automakers in market power and in share of value added to any given vehicle. While it seems unlikely at this time that such suppliers will evolve into complete vehicle manufacturers, the profit generated by the sale of a vehicle is shifting toward the supplier and away from the traditional assembler. Automakers, therefore, face stiff rivalry both from other automakers and from dominant suppliers. Only a select few suppliers have achieved "true global competency" in the production of automotive systems, but the industry trend is pointing in this direction. The "Intel Inside" phenomenon seen with computers—in which the supplier's brand identity is critical for the sale of the final product—has not yet taken over the automotive industry, although "Hemi Inside" could be an emerging example.

As manufacturing momentum shifted toward auto parts suppliers, so too did the share of labor. Since the early 1960s, total employment in the U.S. auto industry has ranged between 700,000 and just over 1 million workers. Up until the mid-1980s, auto assemblers employed the majority of those workers, but from then on the employment share for automotive parts suppliers in the United States has consistently been greater than the share of workers at assembly plants. Between 1987 and 2002, the share of automotive sector employment at assembly plants declined from 44 percent to 36 percent, whereas the share of workers at automotive suppliers increased from 46 percent to 54 percent. Add to this change the influx of mostly non-unionized automotive transplants (foreign suppliers and assemblers), the outsourcing of parts and assembly to foreign nations, and the general sectoral shift away from manufacturing toward the service sector, and it is clear that the 1980s marked a turning point for labor in the U.S. auto industry.

Labor unions that represent autoworkers in the United States have had to weather a myriad of undulations in domestic business cycles since 1935, when the United Auto Workers (UAW) was founded. (Other unions that represent auto workers in the United States include the International Association of Machinists and Aerospace Workers of America, the United Steelworkers of America, and the International Brotherhood of Electrical Workers.) Recent changes in the organization of the auto industry and in the ownership of domestic firms, however, present uniquely formidable challenges to union strength. First, the implementation of lean manufacturing techniques and the drive to achieve globally competitive prices, quality, and delivery standards is likely to precipitate job cuts as suppliers strive to increase productivity. Second, only a few automotive transplants in the United States allow union status—namely, NUMMI (GM-Toyota), Diamond Star (Chrysler-Mitsubishi), and Auto Alliance (Ford-Mazda), all of which are joint ventures with U.S. companies. Yet, total transplant employment is rising: Between 1993 and 2003 employment at transplants in the United States rose from 58,840 to 93,408. The UAW continues to strive to organize labor at transplants and is targeting supplier parks near unionized assemblers in an attempt to maintain locational control. Third, outsourcing of production in a continuously globalizing industry diminishes the bargaining power of unions not just in the United States, but in Europe as well. Fourth, auto assemblers and suppliers are increasing their utilization of temporary workers. In Germany, BMW has a pool of temporary workers that can be utilized at different factories as needed, and in the United States auto assemblers are increasingly employing contract workers to reduce costs.

The globalization of the auto industry appears to challenge the status quo for labor in traditional regions of vehicle production. As employment in the industry shifts toward the supplier sector and toward emerging economies, the attempt to maintain good wages at traditional plants is paramount for autoworkers. Total hourly labor cost at GM and Ford for 2005 was estimated at $65.90, with $35.36 in wages and $30.54 in benefits, healthcare, and retirement costs. Other estimates for 2004 show earnings of production workers at assembly plants at $1,217 per week, whereas workers at parts plants earn $872 weekly, and workers in all manufacturing industries make an average of $529 per week. Autoworkers—particularly those who work in assembly plants in developed countries—certainly have a great deal at stake as the industry continues to globalize.

By contrast to labor, the power that dealerships exert on assemblers has historically been minimal. The push system of production meant that dealerships were the repositories for the inventory overruns of auto assemblers. Also, up until the 1960s, dealerships could legally be controlled by automakers. Therefore, auto dealers earn the majority of their profits from aftermarket sales of parts, accessories, supplies, and service, all of which are a small portion of their business. With the movement toward a pull system of production, dealerships could play a more important role in the automotive industry. However, the countervailing threat to dealerships is Internet-based sales, an innovation that stands to mitigate the market power of dealerships vis-à-vis auto assemblers.

MAJOR COUNTRIES OF PRODUCTION AND CONSUMPTION

The Worldwide Big Three automakers are General Motors, Toyota Motor Corporation, and Ford Motor Company. In 2004 these companies had worldwide mar-

ket shares of 13 percent, 11 percent, and 10 percent, respectively, and production shares that closely mirrored these numbers. Interestingly, the geocenter of automotive production is the Asia-Pacific region, with over 23 million units produced in 2004. Japan was the dominant producer, with China a distant second at half of Japan's output that year. Western Europe and North America ranked a distant second and third in worldwide production, respectively, producing between 16 and 17 million vehicles in 2004. Germany is the dominant producer in western Europe, while the United States produces the lion's share of vehicles in North America.

The biggest consumers of vehicles are North Americans, with Asian Pacific and western European customers a close second and third. Although per-capita ownership of vehicles in China is very small (1.5 vehicles per 100 households compared to 50 vehicles per 100 households in Japan in 2001), the number of vehicles sold in China in 2004 fell only a few hundred thousand short of vehicle sales in Japan. In addition, the growth rate of sales in Japan between 2003 and 2004 was a sparse 0.1 percent, whereas China experienced a 17.2 percent growth in vehicle sales during that period. The other countries with over a million in vehicle sales per year that also had double-digit growth in vehicle sales in 2004 were Russia (24 percent), India (18.2%), Brazil (17%), Mexico (11.8%), and Spain (10.2%). Market opportunities in these countries are highly dependent on macroeconomic performance and policies. Hence, automakers pursue a portfolio approach to production and marketing, given the fragility of economic growth in these regions.

Since the 1960s, auto analysts have looked to a few regions for sources of new productive capacity: Eastern Europe, Latin America, India, and China. By 1980, however, the eastern European motor industry had stagnated and during the 1980s severe economic and political turmoil caused halting growth in the Latin American automotive sectors. In the 1990s liberalization of trade and investment policies gradually emerged in India and China. Today, China has captured attention as the location for new automotive productive capacity. Beginning with Volkswagen's investment in 1985, all of the major automakers have established productive capacity in China through joint-venture relationships with local automakers.

In the mid 1970s passenger car production was practically nonexistent in China. Thirty years later, sales and profit rates had soared, although capacity utilization is low (between 50% and 60%) and inventories are high relative to their Japanese, European, and U.S. competitors. If China continues on its pathway from centrally planned economy to modest marketization, and continues to become more fully integrated into the global economy, then its domestic automotive industry will most likely steadily expand.

IMPORTANCE OF THE INDUSTRY FOR MACROECONOMIC ACTIVITY AND INTERNATIONAL TRADE

The automotive industry is an important sector of the overall economy, particularly in industrialized countries. For example, the automobile is second only to a house in purchase value for the average American household. The average manufacturing job in the automotive sector pays 60 percent more than the average U.S. job. It is estimated that the industry generates 10.4 jobs for every worker directly employed in automotive manufacturing and support services (excluding auto dealers) in the United States. Employment spillovers are seen in manufacturing and nonmanufacturing industries, including retail trade and services. In 2000 motor vehicles and equipment (assemblers and suppliers) expenditures on research and development (R&D) outpaced R&D spending in many of the thirty-nine largest industry groups, including pharmaceuticals and medicines, semiconductors and other electronic components, communications equipment, and computers and peripheral equipment.

Motor vehicles are also a major component of international trade and foreign direct investment between countries. In 2000 the share of automotive products in world trade was 9.4 percent, unchanged from its share a decade earlier. Western Europe, North America, and Asia in declining order are the global leaders in exports and imports. While western Europe and Asia are net exporters of vehicles, North American imports far outpace exports. In North America, exports have remained relatively flat since the 1980s, whereas imports have ratcheted up. North America, eastern Europe, the Middle East, and Africa are all net importers of automotive products. Intraregional trade figures show that intra–western European trade was the largest in value at almost US$200 billion that year, intra–North American trade was second at US$87.7 billion, and intra-Asian trade was the lowest at US$19.6 billion. Interestingly, intra–North American trade declined by 10 percent compared to 1990. The fastest growing region-to-region trade was North America's trade with its European and Latin American partners.

From time to time barriers have been erected around the globe to protect local automotive sectors. For example, over the past twenty years, countries in North America and Europe have erected tariff and non-tariff barriers specifically applied to trade in automobiles. Between 1981 and 1988, the United States and Japan "voluntarily" agreed on a fixed number of vehicle units that Japan would export to the United States. The European Union

and Japan also entered a voluntary export agreement (VER) between 1990 and 1999, as Japanese imports to Europe began to surge. In both cases, the VERs were partly responsible for an increase in transplant production, as Japanese auto producers jumped over the trade barriers to erect manufacturing plants in the United States and Europe. Although the transplants have become a critical component of the local manufacturing landscape, the jobs and exports that they generate are weighted against their dampening effect on wages and the costs that some local governments incur to attract foreign firms to their region.

In developing countries, trade and investment restrictions in the automotive sector take the form of local content rules, tariffs, and quotas. The impetus behind these protectionist measures is to give local producers a chance to develop before they face competition from world-class auto producers that are more productive and therefore have lower unit costs. In recent decades, regional trade pacts have been implemented that liberalize many of these local content, investment, and trade restrictions. The North American Free Trade Agreement (NAFTA), which was implemented in 1994, is one significant example. When the United States and Canada included Mexico in their free trade pact on trade in automobiles and parts, Mexico reduced tariffs for its northern partners and lifted restrictions on local investment for all foreign companies, allowing domestic status for transplant operations.

One of the critical determinants of the location of assembly plants and their related suppliers is production cost. Production costs and market opportunities are the primary reasons why jobs are shifting away from the traditional geographic centers of vehicle production. At the same time, implementation of the lean production paradigm is shifting the operational center of vehicle production toward first-tier suppliers with global capabilities. Variable costs of production—costs that depend on the number of vehicles produced—include expenditures on materials and labor. In the automotive industry, material costs range between 22 and 50 percent, whereas labor costs range from 10 to 20 percent. Because these costs vary by region and product produced, auto assemblers and suppliers are actively engaged in assessments and adjustment processes that lead to changes in the configuration and operations of their plants. Yet, the evolution of North American, European, Asian, and South American trading blocs has significant implications for the geographic configuration of production and trade flows. While it remains an important factor, comparative advantage is not the sole determinant of trade patterns in the automotive industry.

CHANGES AND CHALLENGES IN THE AUTOMOBILE INDUSTRY

Auto industry analysts anticipate major organizational and geographical changes in the global auto industry in response to innovations in auto-manufacturing techniques, reconfigurations in the loci of demand for vehicles, and growing environmental concerns. A new model of labor utilization will develop as suppliers and automakers adjust to flexible manufacturing practices and the globalization of their operations.

As of 2007, overcapacity in the global automotive industry is estimated at 20 million units, which is approximately one-third of global annual production or the productive capacity of the western European automakers. With minimum efficient scale of production at an assembly plant estimated at 200,000 vehicles, dozens of assembly plants are likely to close as automakers strive to improve their profitability. Capacity unitization of about 75 percent is the tipping point below which automakers are in jeopardy of experiencing financial losses.

Overcapacity, therefore, has triggered mergers, acquisitions, and network alliances. Auto companies are consolidating and simplifying control and development functions, and attempting to minimize new investment initiatives, the number of unique parts in their vehicles, the number of design and production tools used, the number of components made in-house, and the number of direct supplier relationships. Assemblers are also utilizing modularization to simplify final assembly processes, and they are experimenting with various organizational designs as part of the restructuring process. Automakers and parts suppliers are utilizing vertical and horizontal strategic alliances with the expectation that they will facilitate the development of new products and the spread of automotive productive capacity to new geographic regions. These ventures, however, will also create new competitors, particularly in emerging economies.

However, consolidation has not proven to be a panacea for optimizing productive capacity in the industry. Mergers have typically occurred between companies that have complementary product lines and therefore the opportunities for retiring some plants are diminished. Effective rationalization brings job losses. Yet mergers between companies from different countries (such as Germany's Daimler-Benz and Chrysler in the United States) have not typically brought capacity reduction, because political forces strive to maintain domestic jobs.

Analysts anticipate that production will shift away from traditional regions in North America, Europe, and East Asia to Brazil, China, India, and countries in Southeast Asia. Trade liberalization will facilitate this geographical shift in production, as well as increased *commonilization*—the sharing of principal components and

platforms—although consumer tastes will militate against the full introduction of a homogeneous "world car" from each automaker. Commonilization—coupled with the differentiation of products based on regional tastes—is already practiced by Ford and Honda, and other automakers are also adopting this practice. There is no clear evidence, however, that automakers are converging on one comprehensive paradigm of production.

Economic growth in East and South Asia is also expected to influence the locational decisions of auto producers. For example, economic and political developments in China during the past decade have had considerable influences on global sourcing and production decisions of German, American, and Japanese automakers. Growing disposable income among middle- and upper-income citizens, burgeoning industrial development in coastal regions, and the periodic liberalization of personal finance markets are driving demand for passenger cars and commercial vehicles in China. Given these trends and the size of the market, automakers anticipate good returns from their productive capacity in the Far East. Yet, exuberance over the potentially hot auto market in China is tamed from time to time by the prospect that the underpinnings of that market rests importantly on government fiat.

The automobile industry will also need to continue to address a range of environmental concerns related to carbon dioxide levels and other health risks. While estimates vary widely as to the impact that vehicle emissions have on the global environment, automakers have made emissions and safety adjustments to their automobiles over time. In the United States, rules and guidelines that originated in the 1970s—such as the Corporate Average Fuel Efficiency Standards (CAFE) and federal safety regulations—have brought about significant emission reductions. Thirty years since CAFE standards were put in place, new cars in the United States emit approximately 1 percent of the smog-producing compounds emitted by new cars in the 1970s. This progress is not solely the result of government regulations, however. The Alliance of Automobile Manufacturers—a trade association of nine automakers from the United States, Germany, and Japan—has identified clean energy technologies as a means to further economic growth in the industry. It is important to note, however, that increased use of vehicles and persistent use of vehicles with old technology mitigate some of these important strides.

Automakers around the globe are also engaged in developing new technologies and products, such as electronic fuel cells, navigational systems that manage congestion problems, and "telematics" (telecommunications capabilities). Information technology networks will be fully integrated into the R&D, procurement, manufacturing, and distribution functions of the enterprise structure. The Internet and Web-based communications are expected to drive the next transformation in the automobile industry. The next frontier in distribution channels is fully to implement a build-to-order system. While dealerships might not become obsolete, the efficiency of the pull system will reduce their inventories and associated costs. Implementing a system similar to the Dell Direct model could mean significant cost reductions in the distribution and purchasing functions of firms in the industry.

SEE ALSO *Ford Motor Company; General Motors*

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AUTONOMY

Since the Enlightenment, the concept of autonomy has implied the capacity for self-regulation, and as a corollary of this capacity, the right to self-determination. Although many early thinkers from both the East and the West espoused the idea of self-regulation in some form, including Tertullian (second and third centuries), Thomas Aquinas (thirteenth century) and the Chinese philosopher Lao-tzu (sixth century BCE), it is generally associated with the development of Kantian philosophy and with the liberalism of the English philosophers John Stuart Mill (1806–1873) and John Locke (1632–1704), as well as the Scottish economist Adam Smith (1723–1790).

The most significant figure in the development of autonomy as a grounding concept of moral philosophy is undoubtedly Immanuel Kant (1724–1804), whose critical philosophy rests on the presumption that all human beings are rational beings and that reason is defined by the capacity for self-regulation. Reason, in Kant's analysis, is a faculty that permits individuals to subject themselves to law, not merely because it is their desire to do so, but because moral law, as the product of reason rather than empirical deduction, has a quality of necessity that is independent of any question of ends and, hence, of the desires felt by individual subjects. A crucial aspect of Kant's moral philosophy, one that was later developed by Karl Marx (1818–1883), was the notion that reason and desire could be opposed to one another, and indeed, that the autonomy of moral law implies the independence of reason from desire.

Like Jean-Jacques Rousseau (1712–1778), who influenced him greatly, Kant felt that the implications of moral autonomy extended to the political realm: The development of individual capacities for self-regulation required freedom from restraint by those forces that might otherwise cultivate desire against reason. Accordingly, he is often

interpreted as an advocate of limited government—though his conception of what constituted limited government should not be confused with that of the political liberals following Mill and Locke, or the Smithian economists.

Mill in particular shared with Kant a sense that the opposite of moral autonomy is "servile dependence." Significantly, then, it was not society per se so much as the hierarchy of obligation and indebtedness that threatened the autonomy of the individual and his or her capacity to make free judgments. In the political realm, Mill's theory implied that individuals exercise their freedoms in relation to other individuals, and it is this cooperation that provides the means by which consensual governments are constituted.

It fell to Adam Smith to explicate the processes by which individual freedom and the complex organization of society could be accommodated and sustained independently of any legislative authority. He theorized a natural tendency to "truck, barter, and exchange" as the ground of those processes by which the division of labor develops naturally. In the forms of economic liberalism that owe their debt to Smith, the idea of autonomy was thus closely linked to one of spontaneous self-order. And it was used to legitimate arguments against governmental intervention in markets and other forms of economic life.

Kant was never fully able to extend the formalism of his own argument to all persons (he withheld the faculty of reason from Africans and aboriginals, and he doubted the capacities of women or servants to exercise free judgment). Moreover, the formalism that was intrinsic to his argument also encouraged a conflation between the presumption of a universal faculty (reason) and the universal equality of all to exercise this faculty of judgment in the actual social sphere. Smith's argument, like that of the liberal political economists who followed him, presumed that government exercises a more coercive and inhibiting influence on individuals than do other social forces, such as capital or organized labor. This presumption—that only states (through their legislative bodies) interfere with individual autonomy—has been one of the major objects of critique within radical political philosophy, from Marx forward. The crux of such critique has been a recognition of the complex social determinants of the very consciousness within which reason appears as a faculty, and a value as such. Even within liberal traditions, there is disagreement as to whether individual autonomy is better served by a government that regulates capital and other social institutions, or by one that allows corporations (including not only economic but also religious institutions) to be considered as individuals, and hence as entities whose regulation would constitute a violation of their rights.

Politically, the concept of autonomy no longer applies exclusively to the relationship between individuals and social institutions; it also describes the status of recognized minority communities within larger social contexts, and particularly state formations. In this case, autonomy is closely linked to the idea of a collective right to self-determination, and as such is provided for by the United Nations under the terms of the International Covenant on Economic, Social and Cultural Rights (adopted in 1966 and entered into force in 1976). This covenant not only provides for a right to self-determination, but also recognizes the right of "all peoples to freely dispose of their natural wealth and resources." However, just as liberal theory is conflicted in its assertion of the rights of individuals while it insists that these rights cease to exist when they intrude upon the rights of another individual, the rights of "peoples" may conflict with the perceived prerogatives of states. This is especially likely when such states comprise several distinct ethnolinguistic communities, and when one or another community dominates numerically, economically, or historically through the exercise of force. The structure by which states "grant" autonomy to regions within their territorial jurisdiction expresses the ambivalence of this concept of autonomy.

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AUTOREGRESSIVE CONDITIONAL HETEROSKEDASTICITY (ARCH) MODEL

SEE *Autoregressive Models.*

AUTOREGRESSIVE INTEGRATED MOVING AVERAGE (ARIMA) MODEL

SEE *Autoregressive Models.*

AUTOREGRESSIVE MODELS

The statistical analysis of "time series" data, which are common in the social sciences, relies fundamentally on the concept of a *stochastic process*— a process that, in theory, generates a sequence of random variables over time. An autoregressive model (or autoregression) is a statistical model that characterizes or represents such a process. This article provides a brief overview of the nature of autoregressive models.

BACKGROUND

In the discussion to follow, I will use the symbol y_t to represent a variable of interest that varies over time, and that can therefore be imagined as having been generated by a stochastic process. For example, y_t might stand for the value of the gross domestic product (GDP) in the United States during a particular year t. The sequence of the observed values of GDP over a range for t (say, 1946 to 2006) is the *realization*, or *sample*, generated from the process y_t. One can imagine that, before they are known or observed, these values are drawn from a probability distribution that determines the likelihood that y takes on particular numerical values at any point in time. Time-series analysis is the set of techniques used to make inferences about this probability distribution, given a realization from the process. A key aspect of time series, especially when compared to cross-sectional data, is that for most time series of interest, probable values at a particular point in time depend on past values. For example, observing a larger than average of GDP in one year typically means observing a larger than average value for GDP in the following year. This time, or serial, dependence implies that the sequential order of a stochastic process matters. Such an ordering, however, is usually not important for observations on, say, individual households at a point in time because this ordering is arbitrary and uninformative.

A general way to characterize a stochastic process is to compute its *moments*—its means, variances, covariances, and so on. For the scalar process above, these moments might be described as:

$$E(y_t) = \mu \tag{1}$$

$$E(y_t - \mu)(y_{t-k} - \mu) = \nu_k. \tag{2}$$

Equation 1 defines the (unconditional) mean of the process, while equation 2 defines the (unconditional) covariance structure—the *variance* for $k = 0$, and the *autocovariances* for $k > 0$. (Some distributions, such as the well-known normal distribution that takes on the shape of a "bell-curve," are fully characterized by means and covariances; others require specification of higher-order moments.) Autocovariances measure the serial dependence of the process. If $\nu_k = 0$ for all $k \neq 0$, then the process is serially uncorrelated, which implies that past values of the process provide no information that will help predict future values. Such a process is called *white noise*.

The moments in equations 1 and 2 are quite general, but they are often difficult to estimate and use in practice. Time-series models, on the other hand, impose restrictions on this general structure in order to facilitate estimation, inference, and forecasting. Typically, these models focus on conditional probability distributions and their moments, as opposed to the unconditional moments in equations 1 and 2 above.

AUTOREGRESSIVE MODELS

An autoregression (AR) is a model that breaks down the stochastic process y_t into two parts: the conditional mean as a linear function of past values (to account for serial dependence), and a mean-zero random error that allows for unpredictable deviations from what is expected (given the past). Such a model can be expressed as:

$$y_t = a_0 + a_1 y_{t-1} + \cdots + a_p y_{t-p} + \varepsilon_t. \tag{3}$$

Here, a_0 is a constant, a_1 through a_p are parameters that measure the specific dependence of y on its past (or lagged) values, p is the number of past values of y needed to account for the serial dependence in the conditional mean (the lag order of the model), and ε_t is a white-noise process with variance $E\varepsilon_t^2 = \sigma^2$. The value ε is interpreted as the error in forecasting the current value of y based solely on a linear combination of its past realization. The lag order p can take on any positive integer value, and in principle it can approach infinity. Because y_{t-1} depends only on random errors dated $t-1$ and earlier, and because ε_t is serially uncorrelated, ε_t and y_{t-k} must be uncorrelated for all t and whenever k exceeds zero.

Equation 3 is a p^{th} order autoregressive model, or AR(p), of the stochastic process y_t. It is a complete representation of the joint probability distribution assumed to generate the random variable y at each time t. These models originated in the 1920s in the work of Udny Yule,

Eugen Slutsky, and others. The first known application of autoregressions was that of Yule in his 1927 analysis of the time-series behavior of sunspots (Klein 1997, p. 261). An autoregression explicitly models the conditional mean of the process. Because the mean of the error term ε is zero, the expected value of y_t, conditional on its past, is determined from equation 3 as:

$$E(y_t \mid y_{t-1}, y_{t-2}, \cdots) = a_0 + a_1 y_{t-1} + \cdots + a_p y_{t-p} \quad (4)$$

There is, however, a unique correspondence from the unconditional moments in equations 1 and 2 to the parameters in the AR model. This correspondence is most easily seen for the AR(1) process (i.e. $p = 1$, so that only the value of the process last period is needed to capture its serial dependence). For the AR(1) model, the unconditional mean and covariance structure are, respectively,

$$\mu = \frac{a_0}{1 - a_1} \quad (5)$$

$$\nu_k = a_1^k \left(\frac{\sigma^2}{1 - a_1^2} \right) \text{ for all } k. \quad (6)$$

This correspondence clarifies how the AR model restricts the general probability distribution of the process. (Note that a large number of unconditional moments can be concisely represented by the three parameters in the model, a_0, a_1, and σ^2.)

STATIONARITY AND MOVING AVERAGES

A stationary stochastic process is one for which the probability distribution that generates the observations does not depend on time. More precisely, the unconditional means and covariances in equations 1 and 2 are finite and independent of time. (Technically, these conditions describe covariance stationarity; a more general form of stationarity requires all moments, not just the first two, to be independent of *t*.) For example, if GDP is a stationary process, its unconditional mean in year 2006 is the same as its mean in, say, 1996, or any other year. Likewise, the autocovariance between GDP in 2006 and 2005 (one year apart) is the same as the autocovariance between GDP in 1996 and 1995 (one year apart), or any other pair of years one year apart. Stationarity is an important condition that allows many of the standard tools of statistical analysis to be applied to time series, and that motivates the existence and estimation of a broad class of linear time series models, as will be seen below.

Stationarity imposes restrictions on the parameters of autoregressions. For convenience, consider once again the AR(1) model. A necessary condition for the AR(1) process y_t to be stationary is that the root (z) of the following equation be greater than one in absolute value:

$$1 + a_1 z = 0. \quad (7)$$

Since the root of equation 7 is $1/a_1$, this condition is identical to the condition $|a_1| < 1$. The proof of such an assertion lies beyond the scope of this article, but equation 6 shows, heuristically, why the condition makes sense. From this equation, we can see that if $a_1 = 1$, then the variance of the process approaches infinity; if a_1 exceeds 1 in absolute value, then the variance is negative. Neither of these conditions is compatible with a stationary process. The general condition for the stationarity of the AR(p) model is that the p roots of the following equation be greater than one in absolute value (Hamilton 1994, p. 58):

$$1 - a_1 z - a_2 z^2 - \cdots - a_p z^p = 0. \quad (8)$$

For an autoregressive process of any order that satisfies this condition, the q^{th} order moving average (MA) representation of the process can be written as:

$$y_t = \mu + \varepsilon_t + c_1 \varepsilon_{t-1} + c_2 \varepsilon_{t-2} + \cdots + c_q \varepsilon_{t-p}. \quad (9)$$

Here, ε is the white-noise forecast error, and the parameters c_1, c_2, …, c_k approach 0 as k gets large. For example, using the tools of difference equation analysis, we can show that, for the AR(1) model, $c_1 = a_1$, $c_2 = a_1^2$, …, $c_k = a_1^k$, and so on. Clearly, the limit of a_1^k as k gets large is zero given the stationarity condition above. The correspondence between the MA coefficients and the autoregressive coefficients in the more general AR(p) case is more complex than for the first-order case, but it can be obtained from the following iteration, for values of k that exceed 1 (Hamilton 1994, p. 260):

$$c_k = a_1 c_{k-1} + a_2 c_{k-2} + \cdots + a_p c_{k-p}. \quad (10)$$

(When applying this iteration, recall that $c_0 = 1$.) As with the autoregressive form, the order of the MA process may approach infinity.

The MA model is an alternative way to characterize a stochastic process. It shows that a stationary process can be built up linearly from white-noise random errors, where the influence of these errors declines the farther removed they are in the past. Indeed, Herman Wold (1938) proved that any stationary process has such a moving average representation.

Wold's theorem has an interesting implication. Suppose we start with the assumption that the stochastic process y_t is stationary. We know from Wold that a moving average exists that can fully characterize this process. While such a moving average is not unique (there are

many MA models and forecast errors that are consistent with any given stationary stochastic process), only one such MA model is invertible. *Invertibility* means that the MA process can be inverted to form an autoregressive model with lag coefficients a_1, a_2, …, a_k that approach zero as k gets large. Thus, the use of moving average and autoregressive models can be justified for all stationary processes, not just those limited to a specific class.

RANDOM WALKS AND UNIT ROOTS

Although economists and other social scientists mostly rely on stationary models, an interesting class of nonstationary autoregressive models often arises in time-series data relevant to these disciplines. Suppose that for the AR(1) model $y_t = a_0 + a_1 y_{t-1} + \varepsilon_t$, the parameter a_1 is equal to the value one. As seen in equation 7, such a process is nonstationary. However, the first difference of this process, $y_t - y_{t-1}$, is serially uncorrelated (the *first difference* of a stochastic process is simply the difference between its value in one period and its value in the previous period). If the constant term a_0 is zero, this process is called a "random walk." If a_0 is not zero, it is called a "random walk with drift." (Actually, for a process to be a random walk, its first difference must be independent white noise, which is a stronger condition than the absence of serial correlation. A process for which the first difference is serially uncorrelated, but not necessarily serially independent, is called a martingale difference.)

The change in a random walk is unpredictable. A time-series plot of such a process will appear to "wander" over time, without a tendency to return to its mean, reflecting the fact that its variance approaches infinity. If the process has, say, a positive drift term, it will tend to grow over time, but it will deviate unpredictably around this growth trend.

Although the idea of a random walk dates back at least to games of chance during the sixteenth century, the British mathematician Karl Pearson first coined the term in 1905 in thinking about evolution and species diffusion (Klein 1997, p. 271). The French mathematician Louis Bachelier (1900) led the way in using the notion of the random walk (although he did not use the term) to model the behavior of speculative asset prices. This idea was picked up by Holbrook Working in the 1930s, and it was formally developed in the 1960s by Paul Samuelson, who showed that when markets are efficient—when prices quickly incorporate all relevant information about underlying values—stock prices should follow a random walk.

The random walk is actually a special case of a more general nonstationary stochastic process called a *unit root* (or *integrated*) process. As seen above, for the AR(p) to be stationary, the roots of equation 8 must exceed one in absolute value. If at least one of these roots equals one (a unit root) while the others satisfy the stationarity condition, the process has infinite variance and is thus nonstationary. The first difference of a unit-root process is stationary, but it is not necessarily white noise. In general, if there are $n < p$ unit roots, differencing the process n times will transform the nonstationary process into a stationary one. David Dickey and Wayne Fuller (1981) developed appropriate statistical tests for unit roots (see also Hamilton 1994, chapter 17), while Charles Nelson and Charles Plosser (1982) first applied these tools to economic issues.

ESTIMATION AND FORECASTING

The AR(p) model in equation 3 can be seen as representing all possible probability distributions that might generate the random sequence y_t. *Estimation* refers to the use of an observed sample to infer which of these models is the most likely to have actually generated the data. That is, it refers to the assignment of numerical values to the unknown parameters of the model that are, in some precise sense, most consistent with the data.

Ordinary least squares (OLS) is an estimation procedure that selects parameter estimates to minimize the squared deviations of the observed values of the process from the values of the process predicted by the model. Under certain conditions, OLS has statistical properties that are deemed appropriate and useful for inference and forecasting, such as *unbiasedness* and *consistency*.

If an estimator of unknown parameters is unbiased, its expected value is identical to the true value no matter how large the sample is. Clearly, this is a desirable property. Unfortunately, the OLS estimator of the autoregressive parameters in equation 3 is not unbiased, because the random error process ε is not independent of the lagged values of the dependent variable. When the error and lagged dependent variables are not independent, the OLS estimator of the AR parameters will systematically underestimate or overestimate their true values.

Nonetheless, OLS remains the common method for estimating AR models, because the OLS estimator, though biased, is a consistent estimator of the actual values. With a consistent estimator of a parameter, the probability that it will deviate from the true value approaches zero as the sample size becomes large. For a stationary process, all that is needed for consistency of the OLS estimator of the autoregression is that ε_t be uncorrelated with $y_{t-1}, y_{t-2}, \ldots, y_{t-p}$ for all t in the sample. As noted above, in theory this condition will hold because of the assumption that ε is serially uncorrelated. In practice, the condition is likely to hold if a sufficient number of lags are included in the estimated model. The upshot is that OLS will provide good estimates of the AR parameters, pro-

vided the sample is sufficiently large and the model is properly specified.

In the social sciences, the primary use of estimating AR models is to help forecast future values of a random variable by extrapolating from past behavior (using the conditional mean in equation 4). The foundations for exploiting the structure of AR and MA models for forecasting are based on the work of George Box and Gwilym Jenkins (1976). Although newer techniques have supplanted the exact methods of Box and Jenkins, their work has been extremely influential.

Because the true model of a particular stochastic process is unknown, forecasters must first determine the model they will estimate. The overriding rule of model determination suggested by Box and Jenkins is *parsimony*, which involves finding a model with the fewest parameters possible to fully describe the probability distribution generating the data. For example, while the data may, in concept, be generated by a complicated autoregressive process, a slimmed-down mixture of autoregressive and moving average components—an ARMA model—may provide the most efficiently parameterized model, and thus yield the most successful forecasts:

$$y_t = a_1 y_{t-1} + \cdots + a_p y_{t-p} + \varepsilon_t + c_1 \varepsilon_{t-1} + \cdots + c_q \varepsilon_{t-q}. \qquad (11)$$

Here, the autoregressive component contains p past values of the process, while the moving average component contains q past values of the white noise error; hence this model is expressed as an ARMA(p,q).

With the methods of Box and Jenkins, it is important that the data be stationarity since unit-root nonstationarity can overwhelm and mask more transitory dynamics. The autoregressive-integrated-moving average process, or an ARIMA(p,d,q) model, is an ARMA(p,q) model applied to a process that is integrated of order d; that is, the process contains d unit roots. For example, the simple random walk model above can be described as an ARIMA(0,1,0) process, because it is white noise after being transformed by taking its first difference.

EXTENSIONS TO THE BASIC AUTOREGRESSIVE MODEL

Thus far, the focus here has been on univariate autoregressive models (those having only one random variable). It is often advantageous to consider dynamic interactions across different variables in a multivariate autoregressive framework. The AR model is easily generalized to a vector stochastic process:

$$y_t = A_1 y_{t-1} + \cdots + A_p y_{t-p} + \varepsilon_t. \qquad (12)$$

In this case, y_t is now taken to be an $n \times 1$ vector of random variables, each of which varies over time, and each of the A matrices is an $n \times n$ matrix of coefficients. The random behavior of the process is captured by the vector white noise process ε_t, which is characterized by the $n \times n$ covariance matrix $E\varepsilon_t\varepsilon_t' = \Sigma$. This model is commonly denoted as a vector autoregressive (VAR) model.

To get a clear idea of the nature of this multivariate generalization of the scalar AR model, suppose that each of the coefficient matrices (A_k, for $k = 1, \ldots, p$) is diagonal, with zero values in the off-diagonal cells. The VAR is then simply n separate univariate AR models, with no cross-variable interactions. The important gain in using VAR models for forecasting and statistical inference comes from the type of interaction accounted for by nonzero off-diagonal elements in all the A_k matrices. VAR models can also capture *cointegrating* relationships among random variables, which are linear combinations of unit-root processes that are stationary (Engle and Granger 1987).

In economics, VAR models have been effective in providing a framework for analyzing dynamic systems of variables. For example, a typical model of the macro economy, potentially useful for implementing monetary policy or forecasting business cycles, might be set up as a VAR with the four variables ($n = 4$) being gross domestic product, the price level, an interest rate, and the stock of money. The VAR would capture not only the serial dependence of GDP on its own past, but also on the past behavior of prices, interest rates, and money. Christopher Sims (1980) produced the seminal work on the use of VAR models for economic inference, while James Stock and Mark Watson (2001) have reviewed VAR models and their effectiveness as a modern tool of macroeconometrics.

Finally, many random variables exhibit serial dependence that cannot be captured by simple, linear autoregressive models. For example, returns on speculative asset prices observed at high-frequency intervals (e.g., daily) often have volatilities that cluster over time (i.e., there is serial dependence in the magnitude of the process, regardless of the direction of change). The autoregressive conditional heteroskedasticity (ARCH) model of Robert Engle (1982) can account for such properties and has been profoundly influential. If the scalar ε_t follows an ARCH(p) process, then the conditional variance of ε varies with past realizations of the process:

$$\varepsilon_t = z_t h_1^{\frac{1}{2}} \qquad (13)$$

$$h_t = E(\varepsilon_t^2 | \varepsilon_{t-1}, \ldots) = \alpha_0 + \alpha_1 \varepsilon_{t-1}^2 + \cdots + \alpha_p \varepsilon_{t-p}^2. \qquad (14)$$

Indeed, it is straightforward to show that an ARCH process is tantamount to an autoregressive model applied to the square of the process, in this case ε^2. Tim

Bollerslev's (1986) generalized ARCH (GARCH) model extends Engle's ARCH formulation to an ARMA concept, allowing for parsimonious representations of rich dynamics in conditional variance:

$$h_t = \alpha_0 + \alpha_1 \varepsilon_{t-1}^2 + \cdots + \alpha_p \varepsilon_{t-p}^2 + \beta_1 h_{t-1} + \cdots + \beta_q h_{t-q}. \quad (15)$$

Even this model has been extended and generalized in many ways. Numerous applications of the GARCH family of models in economics, finance, and other social sciences have substantially broadened the reach of autoregressive-type models in the statistical analysis of time series.

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William D. Lastrapes

AUTOREGRESSIVE MOVING AVERAGE (ARMA) MODEL

SEE *Autoregressive Models.*

AVERAGE AND MARGINAL COST

Total (or global) cost, represented mathematically as C_T, represents the total expenses needed to produce a given output. It is the sum of two kinds of costs: Fixed costs, represented as C_F, are independent of the volume of output; they include expenses such as rents, insurance, maintenance of equipment, interest payments, and that portion of overhead and labor costs that is independent of the level of activity.

Variable costs, represented as C_V, increase with activity. In the short run, modifications in the level of output are realized by modifying employment and raw material spending, with fixed equipment and plant costs. Some costs may be strictly proportional to production (for instance, raw material consumption); in other cases, cost variation may be more complicated, either for technical reasons (e.g. fuel consumption is not strictly proportional to speed), or for financial reasons (e.g. paying overtime hours). Let $C_V = \psi(Q)$. A frequent assumption is that the rate of increase is always positive ($\psi' > 0$) but variable: In a first phase of activity it decreases ($\psi' < 0$), and increases in a second phase ($\psi' > 0$); consequently, and obviously, it goes through a minimum ($\psi' = 0$) between the two. In some cases, variable cost is considered as a constant, independent of the activity level for some production ranges.

Average total cost, or C_A, is unit cost, that is, total cost divided by number of units produced: $C_A = \frac{C_T}{Q} = \frac{C_F + C_V}{Q}$. In a similar way, one can define average fixed cost as $C_{AF} = C_F / Q$ and average variable cost as $C_{AV} = C_V / Q$.

Marginal cost (C_m) is the additional cost of producing one more output unit. It depends on cost in the fol-

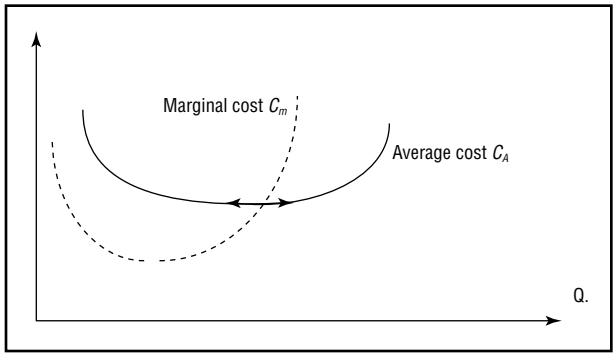

Figure 1

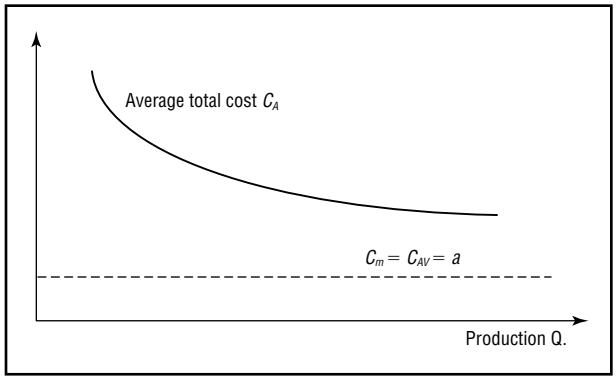

Figure 2

lowing way: An additional production of δQ units means an additional cost of δC_T euros (or dollars), thereby marginal cost is represented as $C_m = \delta C_T/\delta Q$. Given infinitely small increases of output, marginal cost is defined as derivative of total cost function: $C_m = \delta C_T/\delta Q = \varphi(Q)$. Marginal cost is independent of fixed cost and depends only on variable cost.

The following two cases will illustrate these principles: one using variable average costs, another using (total) variable costs strictly proportional to production, and, consequently, linear variable cost function.

VARIABLE AVERAGE COSTS

When production starts, the average cost curve decreases because fixed costs are recouped through increasing sales of production units. With further production increases, however, variable costs increase more than proportionally to the output level because of increasing production difficulties; eventually this factor prevails and the cost curve increases. Consequently, at a given production level average cost reaches a minimum.

The marginal cost curve in such cases follows the course indicated in Figure 1 decreasing at first when production starts and then increasing with output level. When production starts, any increase in production level implies a decrease of average cost; consequently marginal cost is inferior to average cost, and the marginal cost curve is under the average cost curve. With high production levels, marginal cost is superior to average cost (since it is very costly to produce additional output). Consequently, marginal cost curve intersects average cost curve on the minimum of this one.

This can be demonstrated mathematically as follows:

$$C_A = \frac{C_T}{Q} = \frac{C_F + C_V}{Q} = \frac{C_F + \varphi(Q)}{Q}$$

By derivation of C_A to Q (using standard rules of functions derivation), we arrive at the following:

$$\frac{d(C_A)}{dQ} = \frac{Q\varphi'(Q) - [C_F + \varphi(Q)]}{Q^2} = 0 \text{ for } \varphi'(Q) = \frac{C_F + \varphi(Q)}{Q} = C_A$$

VARIABLE COSTS STRICTLY PROPORTIONAL TO PRODUCTION

When costs are considered in strict proportion to production, the variable cost function is linear, and with a as a proportionality factor, $C_V = aQ$ and $C_T = C_F + C_V = C_F + aQ$.

Marginal cost is here constant, independent of production level

$$C_m = \frac{d(C_T)}{dQ} = \frac{d(\alpha Q)}{Q} = a$$

and equal to average variable cost defined as $C_{AV} = \frac{C_V}{Q} = \frac{aQ}{Q} = a$.

Both functions are identical and represented by one parallel to the quantity axis.

Average total cost C_A is a constantly decreasing curve with two asymptotes, the vertical axis on one hand and the marginal cost line, or variable cost line, on the other (Figure 2).

This representation may be considered characteristic of cost functions for new products and especially for new technologies in information and communication. Development of new exploitation systems, new software, new aircraft, new medicines, cars, or drugs can cost millions of dollars. Reproduction may be quite cheap: a few dollars to manufacture a software program, more to produce a car; but the representation is also relevant since variable cost may in some cases amount to only 10 or 15

percent of total cost; the difference represents the costs of research and development, marketing, patent registration, and of course corporate profit. All these examples are characterized by very high fixed costs and constant marginal cost at very low level for large production ranges.

In the long run (which is not necessarily the same as a long time) changes in equipment and physical plant must be taken into account. The distinction between fixed and variable costs is no longer relevant because all production factors can be considered variable. With an increase in output, the average cost of production may decrease because of economies of scale due either to technical factors (improvement in task specialization, better division of labor, utilization of bigger and/or more specialized equipment) or for financial reasons (larger firms have more bargaining power with banks and suppliers).

Inversely, an excessively large production scale may create expenses: "diseconomies of scale" caused by administrative complexity, bureaucratic red tape, or organizational difficulties that may lead to increases in production costs. Such increases or decreases in costs are typical of internal economies (or diseconomies) of scale because they are the result of a firm's own decisions. But costs may increase or decrease because of factors external to the firm that may modify its cost functions. Better organization of national production factors (raw material, labor), improvements to infrastructure such as the construction of roads and highways, or reductions in input prices or taxes qualify as external economies because they can improve a firm's production costs regardless of the firm's decisions. Conversely, external diseconomies may have a negative effect on production cost, such as deterioration in infrastructures, traffic jams, pollution, and tsunamis.

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AVERAGE REVENUE

SEE *Revenue.*

AVERSION THERAPY

SEE *Psychotherapy.*

AVIATION INDUSTRY

The aviation industry is defined as the design, manufacture, use, or operation of aircraft; the term *aircraft* refers to any vehicle capable of flight. Aircraft can either be heavier than air or lighter than air. Lighter than air craft include balloons and airships, and heavier than air craft include airplanes, autogiros, gliders, helicopters, and ornithopters.

As early as 400 BCE the Greek scholar Archytas built a wooden pigeon that moved through the air, which is the earliest aviation experiment. The Americans Orville Wright and Wilbur Wright are generally credited with making the first controlled, powered, heavier than air human flight on December 17, 1903. In 1905 Charles and Gabriel Voisin, two French fliers, started the world's first aircraft company. The military value of aircraft was quickly recognized during World War I (1914–1918), and production increased significantly to meet the rising demand. More powerful motors, enabling aircraft to reach speeds of up to 130 miles per hour, were developed. After World War I, thousands of military planes were converted to civilian use. By 1917 the U.S. government adopted something totally new: airmail. The Contract Air Mail Act of 1925 was the first major legislative step toward the creation of the private U.S. airline industry. Henry Ford, the automobile manufacturer, jumped into aircraft manufacturing and produced one of the first all-metal planes. On May 21, 1927, the pilot Charles Lindbergh flew across the Atlantic Ocean. This event made aviation an established industry by attracting millions of private investment dollars. For the airlines to attract more passengers away from the railroads, larger, faster, and safer airplanes were needed, and aircraft manufacturers responded to the challenge. There were so many improvements to aircraft in the 1930s that many believe it was the most innovative period in aviation history. Newton's Third Law theorizes that a rearward-channeled explosion can propel a machine forward at a great rate of speed. The British pilot Frank Whittle applied this law to the first jet engine in 1930. During World War II, aircraft production became the world's leading manufacturing industry.

Aviation is broadly grouped into three categories: general aviation, air transport aviation, and military aviation. By 1947 all the basic technology needed for aviation had been developed, including jet propulsion, aerodynamics, and radar. Civilian aircraft orders drastically increased from 6,844 in 1941 to 40,000 by the end of 1945. Among the minor military contractors was the

Boeing Company, which later became the largest aircraft manufacturer in the world. With all the new technologies developed by this time, airliners were larger and faster and featured pressurized cabins. New aerodynamic designs, metals, and power plants resulted in high-speed turbojet airplanes. By 1950 the airliner was well on the way to replacing the railroad and the ocean liner as the primary means of long-distance travel. The economic, social, and political consequences included the creation of global markets, opportunities for global travel undreamed of a generation before, and increasing cultural homogeneity.

In 1938 the Civil Aeronautics Authority, an independent regulatory bureau, was developed. The airline industry resembled a public utility, with a government agency determining the routes each airline flew and overseeing the prices charged. On October 24, 1978, the Airline Deregulation Act was approved, and the industry became market driven, with customer demand determining the levels of service and price. A major development that followed deregulation was the widespread development of hub-and-spoke networks, which enable the airlines to serve far more markets than they could with the same size fleet if they offered only direct, point-to-point service. Another important development following deregulation was the advent of computer reservation systems. These systems help airlines and travel agents keep track of fare and service changes, which occur rapidly. The systems also enable airlines and travel agents to efficiently process the millions of passengers who fly each day. In manufacturing, several mergers in the 1990s led to the disappearance of several historic U.S. airplane builders, such as McDonnell Douglas, which merged into Boeing. International partnerships became increasingly significant, with Airbus capturing one-third of the world market in jet airliner sales in the 1990s.

A number of researchers examined the impact of the 1978 Deregulation Act on the productivity of U.S. carriers and the demand for their services as well as how the international deregulation of the industry that accelerated in the ensuing years impacted the supply and demand for airline service worldwide. The studies pointed to an increase in efficiency of airline carriers due to increased competition, a provision of more service at lower prices, and an eroding of service quality as carriers competed on the basis of price instead of on the basis of in-flight amenities and flight frequency with relative low load factors.

On September 11, 2001, terrorists hijacked four commercial airplanes and deliberately crashed two into the towers of the World Trade Center in New York City and one into the Pentagon building in Washington, D.C. The fourth hijacked plane crashed in Somerset County, Pennsylvania. After the hijackings, U.S. airports and airlines sought new ways to protect against terrorist attacks. Congress passed legislation requiring federal employees to handle all passenger and baggage inspection in U.S. airports by the end of 2002.

Fears of terrorism and a sluggish world economy contributed to a decline in air travel in the early 2000s. In 2003 British Airways and Air France discontinued all Concorde flights because the flights were no longer profitable.

Although many countries continue to operate state-owned airlines, most large airlines in the early twenty-first century are privately owned and therefore governed by microeconomic principles to maximize shareholder profits. The airline industry as a whole has a cumulative loss during its history, once subsidies for aircraft development and airport construction are included in the cost. The lack of profitability and continuing government subsidies are justified with the argument that positive externalities, such as higher growth due to global mobility, outweigh microeconomic losses. A historically high level of government intervention in the airline industry can be seen as part of a wider political consensus on strategic forms of transport, such as highways and railways, both of which are also publicly funded in most parts of the world.

U.S. airlines face substantial upheavals in the forms of mergers, failures, bankruptcy filings, reorganizations, and operating loss reports. This situation has raised concern that the future is bleak in terms of the number of carriers that will survive and prosper. Profitability is likely to improve as carriers find ways to be more cost-efficient and more competitive low-cost carriers proliferate.

SEE ALSO *Automobile Industry; Externality; Military; Railway Industry; September 11, 2001; Shipping Industry; Space Exploration; Terrorism; Transportation Industry; World War I; World War II*

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Robin Sickles
Ying Fang

AXIOMATIC THEORY OF PREFERENCES

SEE *Tastes.*

B

BA'ATH PARTY

SEE *Hussein, Saddam.*

BABY BOOMERS

The baby boom in the United States, which occurred between 1946 and 1964, took many social scientists by surprise, especially demographers. Few social scientists expected that the general fertility rate in the United States would rise from a record low in the mid-1930s to a record high in 1957 and then fall to a new record low in 1976. About 75 million more babies were born during the baby boom than expected, based upon previous fertility rates. Social scientists have pointed to two events that may have contributed to the baby boom: the Great Depression and World War II. The economic hardship that accompanied the Great Depression had a profound impact on American families, inducing the conscious decision by many to limit family size or to remain childless altogether. Births were postponed not only during the Great Depression but also during World War II, when many men were fighting overseas and many women working outside of the home (Macunovich 2002).

The conclusion of World War II brought a feeling of optimism and a period of prosperity, manifested in part by a rise in births. After World War II, soldiers returned home with entitlements that enabled them to participate in a housing boom that was one of the single greatest opportunities for wealth accumulation ever. Women who had been working in the labor force, some for the first time, returned home, and many remained there for decades to come. Individuals and families enjoyed a growth of pensions and Social Security for retirement. This feeling of great affluence and hope removed, at least temporarily, an interest in postponing childbearing. The resulting baby boom created a population bulge, the impact of which would be felt for years to come.

At the beginning of the twenty-first century, baby boomers represented about 33 percent of the total U.S. population. They have left their mark on various social institutions as they reached key points in the life cycle. School-aged baby boomers resulted in overcrowded educational facilities. As baby boomers became teenagers and young adults, crime rates increased, especially crimes committed by individuals 15 to 24 years of age. Thanks to the relative prosperity of their parents, baby boomers became the first ever generation of children and teenagers with significant buying power.

Many baby boomers came of age during a time of immense social change marked by such historic events as the civil rights movement. Baby boomers were observed to have different lifestyles and attitudes relative to previous generations. Unlike their parents, baby boomers delayed marriage and childbearing while simultaneously increasing their educational levels.

There is evidence that even with increases in education and accompanying increases in incomes, baby boomers are a diverse group (Sykes 2003). About 18 million baby boomers (24%) are racial minorities. Racial minorities in general have lower levels of income, education, and wealth than their white counterparts. Even families with similar income levels often have very different levels of wealth. Baby boomers are more likely than their

parents to be sole heads of households. Single-headed households are disproportionately found among the poor. About 10 percent of baby boomers never graduated from high school.

By 2030 the youngest baby boomers will have reached retirement age, yet some will not be financially ready (U.S. Congressional Budget Office 2003). About 25 percent of baby boomers will not have adequate savings to finance their own retirement and will place a strain on existing social programs such as Social Security and Medicare. By 2019 Social Security will provide as much as 70 percent of the retirement funds for baby boomers at the lowest levels of income, and there will be 3 retired baby boomers for every 10 workers—facts that compromise the ability of this safety-net program to meet the needs of current and future workers. Policy makers have debated about the impact that aged baby boomers will have on Social Security and other programs. Plans to address the issue include privatizing Social Security, which some argue would place the retirement futures of at-risk groups like African Americans, Native Americans, Hispanics, women, the poor, and the elderly in economic peril.

The baby boom was a tremendous population shift occurring not only in the United States but also in other parts of the industrialized world. Individuals born between 1946 and 1964 have altered the age ratios of various populations and have profoundly affected social institutions and social programs as they reach various milestones. Proposed changes to long-standing social programs like Social Security and Medicare are thought to have a disproportionate negative impact on those at greatest risk, namely racial minorities and the elderly.

SEE ALSO *Demography; Population Growth*

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Lori Sykes

BACHELIER, LOUIS

SEE *Efficient Market Hypothesis.*

BACK TO AFRICA

SEE *Repatriation.*

BACKWASH EFFECTS

Economic growth provides benefits and costs in the region in which it occurs. It has a positive impact on nearby localities if jobs, population, and wealth spill over into these communities. Alternatively, it has adverse effects on the nearby localities if growth in the core region attracts people and economic activity away from these peripheral areas. *Spread* refers to the situation where the positive impacts on nearby localities and labor markets exceed the adverse impacts. *Backwash* occurs if the adverse effects dominate and the level of economic activity in the peripheral communities declines.

The idea of backwash originated in international-trade theory in a book by Gunner Myrdal (1957). Myrdal noted that an increase in exports from a region may stimulate capital and labor flows into the region to the detriment of the localities from which the resources came. Thomas Vietorisz and Bennett Harrison (1973) later proposed that spread and backwash feedbacks between labor markets contributed to a divergence of technology levels, labor productivity, and wages in these markets. Gary Gaile (1980) used backwash concepts to describe the potential negative effects of urban growth on peripheral areas.

A renewed interest in backwash effects was stimulated by the "new economic-growth theory." An enhanced role for innovative activity and increasing returns to scale in economic development increase the competitive advantage of larger urban areas as the location for economic activity. This growth in urban (core) areas may lead to a decline in rural (peripheral) population and employment (a backwash effect) if rural-to-urban flows weaken rural economies. Five types of flows contribute to backwash: Rural funds are invested in urban areas to take advantage of entrepreneurial activities and relatively rapidly growing markets for goods and services. Spending in rural trade and service markets declines owing to increased competition from urban businesses. Rural residents move to the expanding urban areas for improved access to jobs and urban amenities. Rural firms in the innovative stage of their life cycle move to urban areas to benefit from proximity to specialized services, skilled labor, and expanding markets. And finally, political influence and government spending may shift to the more rapidly growing core areas.

The adverse rural-to-urban flows occur in conjunction with the spillover of people, jobs, and funds from the growing core to peripheral areas (spread effects). The size and geographical extent of the beneficial and adverse forces on rural areas depend on the characteristics of the

rural and urban areas and the nature of rural-urban linkages. In general, the beneficial forces are stronger for rural areas near urban cores, while the adverse flows dominate in regions more peripheral to the growing urban areas. Thus, backwash is more likely in rural areas outside of the rural-to-urban commuting zones.

The policy implications of backwash are that localities distant from urban growth centers will likely be adversely affected by regional economic-development policies that focus on innovation and entrepreneurial development in urban areas. These remote regions will need to devise economic-development programs that emphasize competitive advantages specific to their economies.

SEE ALSO *Cumulative Causation; Myrdal, Gunnar; Stockholm School*

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David L. Barkley

BAHRO, RUDOLF
1935–1997

Rudolf Bahro was born November 18, 1935, in Bad Flinsberg in Lower Silesia (now Poland). As a child refugee at the end of World War II (1939–1945), fleeing the advance of the Soviet armies, Bahro lost his mother and both his sisters. Bahro studied philosophy at Humboldt University in Berlin from 1954 to 1959, during which time he joined the East German Communist Party. He worked as an editor for municipal and party papers, and later became a consultant to the presiding board of directors at the only trade union academy in East Germany. In 1965 Bahro took over the post of acting head editor for the newspaper *Forum*. The unauthorized publication of a critical piece, Volker Braun's "Kipper Paul Bauch," led to his resignation in 1967. Afterward, he worked at the paper as a production supervisor.

By the 1970s Bahro had emerged as a prominent critic of the East German Communist Party (Sozialistische Einheitspartei Deutschlands, abbreviated SED). It was entirely clear, however, that the leadership of the SED had absolutely no intention of entering into a dialogue with Bahro on the issue of basic reform in late-Stalinist East Germany. Robert Havemann, the other prominent critic of the East German regime, was under house arrest in Grünheide near Berlin, guarded by operatives of the East German security police (the Stasi). On August 23, 1977—shortly after publishing "Against Oneself and against One's People" in the West German news magazine *Der Spiegel* and discussing his forthcoming book, *The Alternative*, in several television interviews—Bahro was arrested by the Stasi.

Bahro, who developed his critique within a Marxist framework, accused the Communist Party leadership of betraying socialist ideals. Characterizing the states of Eastern Europe as systems of organized irresponsibility, he analyzed their political economy and aspects of their industrial production. He recommended far-reaching reforms of the administrative apparatus—indeed, an overhaul of the entire political structure. In Bahro's view, the Eastern Bloc was not merely an example of deformed socialism, but rather a social reality based on entirely different principles. He accused the Soviet leadership of having, through its invasion of Czechoslovakia in 1968, robbed itself and the peoples of Eastern Europe of the experience of socialism with a human face. He demanded true economic democracy, without wage privileges for tiny elites, and also the elimination of the existing division of labor. Genuine institutional self-rule, Bahro declared, must gradually develop from below, with freedom of personal development a necessary condition. He believed that a coalition drawing from all political tendencies could lead the way out of self-imposed imprisonment. All this was conceived as a new vision of communism. Altogether some 300,000 copies of *The Alternative* were sold, and the book was translated into numerous other languages.

Bahro was sentenced to eight years in prison. The international league for human rights awarded him the Carl von Ossietzsky medal, and numerous authors and political figures demanded his release. Bahro was granted amnesty in 1979 and left for West Germany, where he became one of the cofounders of the Green Party. Believing that a political solution to the ecological crisis could only be achieved through a broad coalition spanning existing political divisions, he embraced everyone from the left-wing student activist Rudi Dutschke to the right-wing ecologist Herbert Gruhl. In his early years in West Germany, Bahro also devoted much of his time to the peace movement. He favored unilateral disarmament for both sides.

Because the Greens operated on the basis of an "ecocosmetic" and reformist mode of power-sharing, Bahro left that party in 1985. Bahro's second major work, *Logik der Rettung* (The logic of salvation, 1987; revised and translated as *Avoiding Social and Ecological Disaster*,

1994), traced the connections between the ecological crisis facing civilization and Western political-economic systems. The industrial capitalist "megamachine" was globally overstepping the boundaries of nature, causing irreparable climate change. It would be necessary to decrease industrial production tenfold, through changes in economic structures and lifestyles. There would have to be a sociopsychological alteration of the attitudes characteristic of business, so that a new spirit could be born. Bahro also asserted the need for a democratically run ecological superauthority, to monitor and enforce ecological change.

In 1990 Bahro returned to East Germany. Between 1990 and 1997, he gave well-attended lectures at Humboldt University, in which he addressed questions of spirituality and communal action in a socioecological context, drawing on influential thinkers from Lao-Tse to Martin Heidegger to Erich Fromm. His lectures and interviews were published in several books: *Rückkehr* (The return, 1991), *Apokalypse oder Geist einer neuen Zeit* (Apocalypse or the spirit of a new age, 1995), and *Wege zur ökologischen Zeitenwende* (Means of the end of an ecological era, 2002). In another book that remains unpublished, he set out his views and asked which elements of Marxism and of the collapsed East German state ought to be maintained.

Bahro died of leukemia in 1997. In 2002, in Germany, Guntolf Herzberg and Kurt Seifert brought out a comprehensive biography of this prophetic thinker.

SEE ALSO *Marxism*

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Marko Ferst
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BAKER, ELLA

SEE *Student Nonviolent Coordinating Committee.*

BAKKE DECISION

SEE Grutter *Decision.*

BALANCE OF PAYMENTS

The balance of payments is an accounting statement that records transactions (trade in goods, services, and financial assets) between a country's residents and the rest of the world. Those transactions consist of receipts and payments—credits (entries that bring foreign exchange into the country) and debits (entries that record a loss of foreign exchange), respectively—that are recorded through the use of double-entry bookkeeping. Balance-of-payments data usually are reported quarterly in national publications and also are published by the International Monetary Fund.

THE CURRENT, CAPITAL, AND FINANCIAL ACCOUNTS

The balance of payments consists of the current account, the capital account, and the financial account (see the illustration). The current account includes trade in merchandise (raw materials and final goods), services (transportation, tourism, business services, and royalties), income (from salaries and direct, portfolio, and other types of investment), and current transfers (workers' remittances, donations, grants, and aid). The current account is related to the national income accounts because the trade balance corresponds broadly to the net export value recorded in the national income accounts as one of the four components of the gross national product

(GNP), along with consumption, investment, and government expenditures.

The capital account records all international capital transfers. Those transfers include the monetary flows associated with inheritances, migrants' transfers, debt forgiveness, the transfer of funds received for the sale or acquisition of fixed assets, and the acquisition or disposal of intangible assets. The financial account records government-owned international reserve assets (foreign exchange reserves, gold, and special drawing rights with the International Monetary Fund), foreign direct investment, private sector assets held abroad, assets owned by foreigners, and international monetary flows associated with investment in business, real estate, bonds, and stocks.

The balance of payments should always be in equilibrium. The current account should balance with the sum of the capital and financial accounts. However, because in practice the transactions do not offset each other exactly as a result of statistical discrepancies, a separate line with those discrepancies is included in the statistical presentation.

If the current account is in equilibrium, the country will find its net creditor or debtor position unchanging because there will be no need for net financing. Equilibrium in the capital and financial accounts means no change in the capital held by foreign monetary agencies and reserve assets. In the case of disequilibrium arising when a country buys more goods than it sells (i.e., a current account deficit), the country must finance the difference through borrowing or sale of assets (i.e., there is an inflow of capital and thus a capital and financial account surplus). In other words, the country uses foreign savings to meet its consumption or investment needs. Similarly, if a country has a current account surplus, the capital and financial accounts record a net outflow, indicating that the country is a net creditor. The exchange rate regime is an important determinant of the adjustment toward the new equilibrium. With fixed exchange rates, central banks must finance the excess demand for or supply of foreign currency at the fixed exchange rate by running down or adding to their reserve assets. Under floating exchange rates, balance of payments equilibrium is restored by movements in the exchange rate.

THEORIES AND ASSESSMENT OF THE BALANCE OF PAYMENTS

A number of theories have been developed to explain the adjustment process of the balance of payments. In a world without capital flows the elasticities approach provides an analysis of how changes in the exchange rate affect the trade balance, depending on the elasticities of demand and supply for foreign exchange and/or goods. An exchange rate depreciation increases the domestic price of imports and lowers the foreign price of exports. However, depreciation reduces imports only if import demand is

United States balance of payments, 1970–2005

(In millions of U.S. dollars)

	1970	1980	1990	2000	2005
Current account					
Exports of goods and services and income receipts	**68,387**	**344,440**	**706,975**	**1,421,515**	**1,749,892**
Exports of goods and services	56,640	271,834	535,233	1,070,597	1,275,245
Income receipts	11,748	72,606	171,742	350,918	474,647
Imports of goods and services and income payments	**259,901**	**−333,774**	**−759,290**	**−1,778,020**	**−2,455,328**
Imports of goods and services	−54,386	−291,241	−616,097	−1,448,156	−1,991,975
Income payments	−5,515	−42,532	−143,192	−329,864	−463,353
Unilateral current transfers, net	**−6,156**	**−8,349**	**−26,654**	**−58,645**	**−86,072**
U.S. Government grants	−4,449	−5,486	−10,359	−16,714	−31,362
U.S. Government pensions and other transfers	−611	−1,818	−3,224	−4,705	−6,303
Private remittances and other transfers	−1,096	−1,044	−13,070	−37,226	−48,407
Capital account					
Capital account transactions, net	**—**	**—**	**−6,579**	**−1,010**	**−4,351**
Financial account					
U.S.-owned assets abroad, net (increase/financial outflow (−))	**−8,470**	**−85,815**	**−81,234**	**−560,523**	**−426,801**
U.S. official reserve assets, net	3,348	−7,003	−2,158	−290	14,096
U.S. Government assets, other than official reserve assets, net	−1,589	−5,162	2,317	−941	5,539
U.S. private assets, net	−10,229	−73,651	−81,393	−559,292	−446,436
Foreign-owned assets in the U.S., net (increase/financial inflow (+))	**−6,359**	**62,612**	**141,571**	**1,046,896**	**1,212,250**
Foreign official assets in the United States, net	6,908	15,497	33,910	42,758	199,495
Other foreign assets in the United States, net	−550	47,115	107,661	1,004,138	1,012,755
Statistical discrepancy (Sum of above items reversed)	**−219**	**20,886**	**25,211**	**−70,213**	**10,410**

SOURCE: Bureau of Economic Analysis, International Economics Accounts, U.S. Department of Commerce, http://www.bea.gov/international, Washington, D.C., 2006.

elastic; the same is the case for the behavior of exports after a decline in export prices. Thus, the final impact on the current account balance depends on the elasticity of demand in each country for the other country's goods and services.

The absorption approach emphasizes the way in which domestic spending on domestic goods changes relative to domestic output: The trade balance is viewed as the difference between what the economy produces and what it spends. In an economy that is operating below its full potential an exchange rate depreciation tends to increase net exports (given the elasticity conditions noted above) and bring about an increase in output and employment. In an economy operating at full potential, in contrast, a depreciation tends to increase net exports, but because it is not possible to increase output, the result is higher prices of domestically produced goods.

In the modern global economy with well-developed financial markets and large-scale capital flows, financial assets play an important role in the analysis of the balance of payments. The lifting of controls on the movement of capital and financial flows has been fundamental to promoting world trade and eventually greater incomes. The unrestricted movement of capital allows governments, businesses, and individuals to invest capital in other countries, thus promoting not only foreign direct investment but also portfolio investment in the capital market.

With perfect capital mobility, monetary and fiscal policies affect the balance of payments through the interest rate channel. Under fixed exchange rates an increase in the money supply will reduce interest rates and lead to capital outflows, tending to cause a depreciation that will have to be offset by sales of foreign exchange by the central bank. This will then reduce money supply until it reaches its original level. Thus, monetary policy is ineffective in increasing output. Fiscal policy, however, is highly effective because a fiscal expansion tends to raise interest rates, leading the central bank to increase the money supply to support the exchange rate, reinforcing the impact of the expansionary fiscal policy. Under floating exchange rates, monetary policy is highly effective and fiscal policy is ineffective in changing output. A monetary expansion leads to depreciation and higher exports and output. Fiscal expansion, in contrast, causes an appreciation of the exchange rate and crowds out net exports.

The introduction of interactions between prices and changes in the exchange rate leads to a model that postulates that price flexibility ultimately moves an economy to full employment. The mechanism involves changes in the domestic money supply that take place as the central bank keeps selling foreign exchange to domestic residents in exchange for domestic currency. A monetary contraction thus reduces prices, improves competitiveness, and increases net exports and employment. Under floating exchange rates, in the short run a monetary expansion increases output and reduces interest rates, causing a depreciation of the exchange rate. In the long run, however, a monetary expansion increases the price level and the exchange rate, keeping real balances and the terms of trade unchanged.

The monetary approach to the balance of payments postulates that disequilibrium in the balance of payments is essentially a monetary phenomenon. It emphasizes the central banks' balance sheet identity—a change in net foreign assets equals the difference between changes in high-powered money and in domestic credit—which shows that sufficient contraction of domestic credit will improve the balance of payments. This improvement comes about through higher interest rates and lower domestic income and employment. Finally, the asset market (or portfolio) approach incorporates assets besides money. In recognition of the fact that asset markets across countries are well integrated, changes in the demand for and supply of assets will affect interest rates, exchange rates, and the balance of payments.

MACROECONOMIC STABILITY

Maintaining a favorable balance-of-payments position is important for macroeconomic stability, and countries gear their policies toward achieving that goal. Although current account deficits that are financed through non-debt-creating capital flows may not pose an immediate threat, large and unsustainable deficits can transform into chronically unfavorable balance-of-payments positions that may affect the stability of the currency. Correcting such unfavorable positions is done through the adoption of stabilization programs that sometimes are supported by the International Monetary Fund through the provision of short-term financing to ease the burden of temporary problems.

SEE ALSO *Balance of Trade; Capital Controls; Capital Flight; Equilibrium in Economics; Exchange Rates; Exports; Imports; Interest Rates; International Monetary Fund; Mundell-Fleming Model; Policy, Fiscal; Policy, Monetary; Reserves, Foreign; Trade Deficit; Trade Surplus*

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Costas Christou

BALANCE OF TRADE

A nation's balance of trade, also called "net exports," is a measure of the net flow of goods and services between that country and the rest of the world. Given domestic output (or income) (Y), domestic spending on domestic output (D), exports (X), and imports (M), the balance of trade is $B = Y - D = X - M$. The balance of trade is in surplus if $B > 0$, and it is in deficit if $B < 0$. This formulation suggests that fluctuations in domestic output can be absorbed by fluctuations in the trade balance, keeping domestic spending relatively stable. In 2005, the balances of trade relative to GDP (gross domestic product) for the United States, South Korea and Brazil was –5.7 percent, 2.6 percent, and 4.6 percent, respectively.

A nation's income, the income of its trading partners, and the relative price of domestic goods (compared to foreign goods) determine its balance of trade. As domestic income (Y) rises, expenditure on all goods—including foreign-produced goods—increases. Thus, imports increase and the balance of trade decreases. Similarly, when the income of a nation's trading partners increases, so do its exports, thus increasing the balance of trade. The relative price (R) of domestic to foreign goods is $R = SP/P^*$, where S is the spot exchange rate (the foreign currency price of the domestic currency) and P and P^* denote the native currency prices of domestic and foreign goods, respectively. With short-run price inflexibility, a change in the exchange rate (S) is fully reflected in a change in the relative price.

Since domestic and foreign outputs have a degree of substitutability, the nominal exchange rate affects both exports and imports. Generally, an exchange-rate depreciation (a decrease in S) switches spending away from foreign goods toward domestic goods and increases the balance of trade.

Reflecting an excess of domestic spending over domestic income, a balance-of-trade deficit may be offset by a net inflow of labor and asset incomes from abroad. Otherwise, overspending must be funded through a depletion of national wealth, possibly in the form of increased indebtedness to foreign entities through the sale of domestic bonds or of outright sales of equity or other assets. This net inflow of foreign capital requires that foreign savers be willing to lend against, or buy, domestic assets. If they are unwilling to do so or if they are not allowed to do so because of domestic capital controls, the domestic currency will depreciate and eliminate the deficit. If this does not occur and if the exchange rate is fixed, the central monetary authority must sell its gold or foreign currency reserves, causing the domestic money supply and, over time, the domestic price level to decrease and reverse the deficit.

A nation may sustain a balance-of-trade deficit for short periods but not persistently. Rising indebtedness would cause foreign lenders to fear that their claims would not be honored, leading to a reduction of further investment in domestic assets. Moreover, the government's corpus of gold and foreign currency reserves is finite. The existence of a long-term trade imbalance that is not offset by factor-income inflows is of concern because it reflects a fundamental divergence between domestic income and domestic spending. Many countries have learned, sometimes from bitter experience, that persistent failure to harmonize income and spending can lead to corrective forces, sometimes resulting in economic crises in the form of large increases in interest rates, unemployment, or a sharp depreciation of domestic currency.

Policymakers must balance short-run conflicts in maintaining the trade balance at a targeted level B^* (possibly zero), while also maintaining domestic output at a level Y^* consistent with full employment and constant inflation. In a fixed-exchange-rate regime, these goals can be met by judiciously mixing domestic demand and exchange-rate levels. Assuming stability, the relationships $Y^* = D + B\ (Y^*, S)$ and $B^* = B\ (Y^*, S)$ together yield unique values of domestic demand and exchange rate, D_0 and S_0, consistent with the goals. The level D_0 is achieved by adjusting fiscal policy; monetary policy cannot be used independently under a fixed exchange rate regime.

It may be inferred that if fiscal policy is set at D_0 but the exchange rate is overvalued ($S > S_0$), a trade deficit will result, accompanied by unemployment. It may also be inferred that if the exchange rate is undervalued ($S < S_0$), a trade surplus will accrue, along with inflationary pressure. Similarly, if the exchange rate is set at S_0 but fiscal policy is too restrictive ($D < D_0$), a trade surplus will coexist with unemployment, while an expansive fiscal policy ($D > D_0$) results in a trade deficit and inflationary pressure.

If the exchange rate is flexible, both fiscal and monetary policies will quite likely affect the balance of trade. Both affect the interest rate (r) and, thereby, the exchange rate, which moves to equilibrate international asset markets by equating the expected returns on domestic and foreign assets. If the foreign interest rate exceeds the domestic interest rate, the difference is offset by an expected appreciation of the domestic currency; otherwise, the foreign asset yields excess returns. Given an unchanged expected future exchange rate, a decrease in r

causes the domestic currency to depreciate (it decreases *S*) immediately, thus generating expectations of a forthcoming appreciation. The depreciation increases the balance of trade.

Fiscal and monetary expansions, by increasing *Y*, cause an incipient worsening of the trade balance, which works to depreciate the domestic currency. Additionally, a monetary expansion decreases *r* and causes capital outflows, compounding this depreciation and causing the balance of trade to improve. However, a fiscal expansion increases *r*, stimulates capital inflows, and appreciates domestic currency. The appreciation caused by sufficiently high capital mobility can overwhelm the depreciation effect of output expansion and worsen the balance of trade. Thus, a budget deficit can give rise to a trade deficit, invoking the label "twin deficits."

SEE ALSO *Mundell-Fleming Model; Trade Deficit; Trade Surplus*

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Vikram Kumar

BALLET

SEE *Dance.*

BALLOTS

A ballot is a device for casting a vote. Traditionally, the word referred exclusively to a piece of paper, but modern usage also applies the term to electronic voting methods. Generally, ballot format covers both how the choices for various electoral contests are arranged and how choices (votes) are recorded.

The information conveyed on a ballot varies by voting system. Some electoral rules require rankings of multiple candidates, others require the selection of one or more alternatives from a set, and others involve multiple choices, such as picking one party from a list and also ranking various individuals from that party. There is also much variation in how access to the ballot is gained, precisely what information about candidates is listed, how choices are ordered, and whether voters check boxes, punch out perforated tabs of paper, press buttons, write out numbers or names, and so on.

Probably the most fundamental aspect of ballots is whether they are cast in secret. Voting in early democracies was done openly, and ballots were even produced by parties in distinct colors and shapes, to allow observers to determine how individuals voted.

Secret ballots were first introduced in Australia, and the term *Australian ballot* is still often used to refer to any ballot cast privately, even in places that share no other electoral rules with modern Australia. Many polities have made early and absentee voting (usually done by mail) easier in recent decades, in an effort to boost turnout. However, since absentee ballots are not cast in secret, they make old-style fraud, such as vote buying, much easier.

American elections usually feature many contests. In parliamentary democracies, it is more common for ballots to feature few races, sometimes only one. When ballots do cover multiple races, an important distinction is whether all candidates seeking a given office (as representatives of different parties) are grouped together or, instead, all candidates from a given party (seeking different offices) are grouped together. Sometimes ballots include an option to vote for all candidates from a party in a single stroke, though this so-called straight-ticket option has gradually become less common in American states.

In the 2000 American presidential election, Palm Beach County, Florida, used the now-famous butterfly ballot, wherein the names of competing candidates alternated from appearing to the left or the right of their associated punch-holes as one moved down the list. Analysis later suggested that many voters were confused by the format.

On a spoiled ballot, the choice(s) of the voter cannot be discerned. More complicated electoral systems and ballots featuring more contests tend to see higher rates of spoilage (including overvoting, the selection of more candidates than are legally permitted) and of undervoting (selective abstention, which is usually allowed).

As jurisdictions increasingly employ varieties of electronic voting, new issues with ballot formats have emerged. One important issue is whether computer voting systems generate a hard paper copy of the choices of voters along with the electronic copy, as a means of limiting fraud or accidental vote loss.

SEE ALSO *Compulsory Voting; Elections; Electoral Systems; Party Systems, Competitive; Voting; Voting Patterns; Voting Rights Act; Voting Schemes*

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Brian J. Gaines

BAMBOOZLED

Shelton Jackson ("Spike") Lee (1957–) and his 40 Acres and a Mule production company have made thirty-five films since 1983. Two of his films—*Do the Right Thing* (1989) and *Four Little Girls* (1997)—have been nominated for Academy Awards (Best Original Screenplay and Best Feature Documentary, respectively). Lee's films are known for their social commentary, sometimes presented in excessively didactic fashion, and their edgy exploration of recent developments in popular culture and politics. Extremely outspoken about social issues and public policy, Lee has made especially strong statements about the Tuskegee Syphilis Study and the U.S. government's labored response to the impact of Hurricane Katrina on Gulf Coast communities. Indeed, his much acclaimed recent documentary, *When the Levees Broke* (2006), specifically addresses the failure of state, local, and federal authorities to address the needs of the citizens of New Orleans when Hurricane Katrina flooded the city.

In 2000, Lee released the film *Bamboozled*, which tells the story of Pierre Delacroix, played by Damon Wayans. Delacroix is a black television writer who has grown frustrated with the business. Tired of repeatedly having his "best-foot-forward" black pilots rejected for less positive fare, Delacroix recreates "The New Millenium Minstrel Show" show in hopes of getting fired. He heads to the office of his white boss, Dunwitty (played by Michael Rappaport), accompanied by his assistant Sloan (played by Jada Pinkett) and Womack and Man Ray (played by Tommy Davidson and tap dancer Savion Glover, respectively), two homeless squatters he finds performing on the street. Dunwitty, whose office is a veritable museum of black sports history and whose wife is black, is the iconic, self-described white man who knows more about black people than black people know themselves.

After pitching his show as a satire and casting the pilot from dozens of actors who attend the audition, Delacroix shoots the pilot. To his surprise, despite featuring actors in blackface and scenes of chicken and watermelon stealing, the show is an immediate hit, much to the dismay of black activists Jesse Jackson and Al Sharpton, who make cameo appearances as themselves. The show also angers the Mau Maus, a misguided group of militants led by Sloan's brother, who make plans to sabotage the show after being rejected at their audition to serve as the program's house band. As the show and Man Ray—now known as Mantan—grow in popularity at the hands of a stable of white writers, the Mau Maus plot to end his career by whatever means they have at their disposal.

Their goal comes to fruition as they succeed in kidnapping and killing Mantan on a live broadcast shortly before being gunned down by the police themselves. Only one-sixteenth black, the member of the Mau Maus who is phenotypically white is spared by the police despite his pleas for them to kill him also. Here Lee is evoking an actual event: In the early 1990s a California street gang was shot by the police and only two gang members survived, one emerging unscathed and the other suffering a leg wound. Both were white. The sight of her brother's and his comrades' deaths drives Sloan to enter a despondent Delacroix's home and shoot him fatally. Delacroix's final acts are to wipe her fingerprints off of the gun and lament his decision to develop the minstrel show that resulted in tragedy.

While Lee's films *Do the Right Thing* (1989) and *Malcolm X* (1992) are more heralded, *Bamboozled* stands as his most shrewd social critique and, excluding the magnificent documentaries *Four Little Girls* and *When the Levees Broke*, his lone masterpiece. Disturbing, terrifying, and polarizing, *Bamboozled* opened to little fanfare in 2000. Early trailers for the film elicited uncomfortable squirms from audiences and prayers that the sight of black characters on screen in blackface meant that a hearty satire was in store. Lee even begins the film with a Damon Wayans voiceover reciting the definition of satire. What Lee has in fact constructed is a horror story.

In Pierre Delacroix, Lee creates a modern Dr. Frankenstein. Mary Shelley's allegory plays out as Delacroix's creation—the minstrel show—spirals out of control and wreaks havoc. Delacroix even refers to himself as Frankenstein before the show's premier. Lee has been criticized for the movie's somber ending, but, in keeping with Shelley's template, the monster and the monster's

creator must suffer. Both must be perpetrators and victims of the destruction that has been released.

The character Man Ray exemplifies this theme. Literally lifted off the streets, he and Womack are savvy enough to recognize that what they are doing is ethically wrong but hungry enough to ignore their reservations. Man Ray's simultaneous status as victim and perpetrator becomes the metaphor for the general condition of the black artist in the entertainment world. Ironically, Man Ray accuses Delacroix of sounding like a packaged voice from the popular media without realizing that that is precisely who Delacroix is and who Man Ray himself is becoming. Indeed, it is Delacroix's parents who expose Delacroix to the audience as a fake whose given name at birth was Peerless Dotham.

By naming Savion Glover's character Man Ray and then renaming him as Mantan, Lee pays homage to black artists who were denied proper credit for their comic talents during their lives, like Mantan Moreland. Womack is called "Sleep 'n' Eat" on Delacroix's minstrel show. The character name refers to the billing assigned to Willie Best, who for a large part of his film career was called only "Sleep 'n' Eat," if he was listed at all. Moreland, Best, and Lincoln Perry (known widely as Stepin Fetchit) were gifted actors, but their comedic talents were devoted exclusively to roles in which they portrayed the most demeaning stereotypes associated with black men—lazy, foot-shuffling, slow thinking, cowardly, and wholly subservient to whites. They were consistently the "Uncle Toms" or "Coons" (Bogle 2001), posing no danger to whites no matter the magnitude of the latter's acts of racist indignity.

The Mau Maus exemplify well-intentioned but misguided revolutionaries everywhere, and their behavior culminates in the killing of the target they can reach most easily. But, Man Ray/Mantan was really no more than a well-paid pawn in a programming venture executed by studio executives. As Delacroix's auditions demonstrate, there is always a long list of actors eager to play any part.

Bamboozled actually resembles a documentary because its tiny budget resulted in the film being shot with fifteen MiniDV digital cameras. While the budget permitted only a relatively low-quality print, Lee and consultant Michael Ray Charles used this limitation to their advantage in creating the film's motif. Visual artist Charles used his experience both as a historian and as an actual subject in a documentary to lend accuracy and a gritty, eerie look to the film. His artwork adorns Sloan's living room, but that room, like the offices in Delacroix's building, including Dunwitty's office with its prints of black athletes, still seems lifeless and barren.

The film's music also contributes to the chilling tone. The minstrel show's theme song, "I Wish I Was in Dixie"—performed by the Roots—is obvious, but the smooth Terrence Blanchard horn riffs that play during Mantan's death and Delacroix's subsequent moment of shame and remorse are a sonic counterpoint to the horrific images on the screen. Delacroix chooses to black his own face in this moment of mourning. In contrast to the actors on his minstrel show or their audience, there is nothing celebratory about his act of blackface; it is, instead, an act of penance manifesting his spiritual and moral nadir.

If the film can be faulted, it is for being overly ambitious. Arguably, the film tries to skewer too many subjects at once. The commercials for "Bomb" malt liquor and "Timmy Hilnigger" jeans are overkill. However, Lee is not interested in subtlety. He has stated publicly that he believes the movie does not overstate conditions in the film or television industry and that the characters are the types of people he encounters daily in Hollywood. Furthermore, he says that the idea of a live prime-time snuff broadcast is not that far in the future, comparing it with graphic war or riot footage that is aired frequently.

Bamboozled grazes over the subject of gender inequality. Lee's movies have often been criticized for their gender politics, but in this film Sloan is dynamic and complex, not just a victim or opportunist. Her initial objections to Delacroix's plan are mollified by his caress on her shoulder. He refers to her as his "little lamb," and it is only in the third act that the actual history of her relationship with Delacroix is made known.

Like all the characters in the film, Sloan raises the ethical question of how far a person will go and at what price. Is ignorance of the full consequences an excuse? Do black artists have a responsibility to be conscious of racial representation in everything they do? Are black artists during the first half of the twentieth century granted clemency because of the constraints of their times, and, if so, what is the point when forgiveness ends and pointed criticism begins? Womack/Sleep 'n' Eat does leave the minstrel show, but only after he has made a substantial sum of money. Sloan also withholds her own moral concerns and personally teaches Man Ray and Womack how to black their faces correctly, voicing objections based only on the potential adverse community reaction.

When the film was made, Lee may have intended it to convey a dystopic vision of a not-so-distant future, but many viewers in the years following its release recognized familiar images in real-life entertainment. Created in a post–Rodney King, pre-9/11 era, the film shows how easily the public can become desensitized. The audience at the opening of the minstrel show moves quickly from appalled silence to reluctant nervous laughter to full participation in the racist skits. The transition is eased by the fact that the performers are talented (as were Moreland,

Best, and Perry), and the skits are, despite their political and social ramifications, inspired and funny.

Ultimately, the film is an extended cautionary tale for the American media's continuing to put forth images that are similar to the minstrel tradition. It serves as a warning to individuals who bear direct or proximate responsibility for perpetuating stereotypes. In *Bamboozled* Lee is confronting the actions of producers, directors, and established actors, not just the desperate dirt-poor squatters, represented by Mantan and Sleep 'n' Eat, eager for a break.

SEE ALSO *Blackface; Blackness; Disaster Management; Film Industry; Humiliation; Jim Crow; Mau Mau; Memín Pinguín; Militants; Minstrelsy; Parody; Race; Racial Slurs; Racism; Sambo; Satire; Shame; Stereotypes; Tuskegee Syphilis Study; Uncle Tom; Whiteness; Whitening*

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Aden L. M. Darity

BANANA INDUSTRY

The production, consumption, and sale of bananas are important activities for many developing and low-income countries, generating employment, sustaining rural livelihoods, enhancing nutrition, and contributing to food security. The banana in 2002 was the fourth most important food crop in terms of value and ranked highest among fresh fruit exports in volume and in terms of export revenue to developing countries. Most bananas produced are consumed locally, with only 11 percent exported. At the start of the twenty-first century 85 percent of production was carried out by small producers using limited technological inputs.

COMPETITIVE STRUCTURE

Banana production for export employs a variety of systems, including small-scale, labor-intensive production on farms between 0.1 and 10 hectares and large-scale plantations ranging from 100 to 4,000 hectares. The latter produce 80 percent of fruit traded, employing high levels of technological innovation, including cable cars and extensive irrigation. These systems result in varying levels of efficiency, evident in a wide range of yields from as high as 60 tonnes per hectare on modern plantation systems to a low of 4 tonnes on smaller farms. The banana trade is highly concentrated. In 2002 four transnational corporations (TNCs), Del Monte, Chiquita, Dole, Fyffes, and Noboa, an Ecuadorian company, controlling more than 80 percent of the trade, which includes shipping, ripening, and distribution. Dole, Chiquita, and Del Monte, whose predecessors United Fruit Company and Standard Fruit and Steamship Company pioneered the vertically integrated production and distribution system that characterized the origins of the industry in Latin America and the United States, continue their involvement in fruit production, accounting for over 50 percent of the fruit traded. Independent banana producers often engage in contract arrangements with banana companies to export their bananas. The structure of the market is grossly unequal, with international trading companies, distributors, and retailers earning 88 percent of the retail price, producing countries under 12 percent, and laborers less than 2 percent.

The conditions of workers involved in banana production vary widely. Low labor costs and cheap prices for bananas are key features of the industry's competitiveness. The first is oftentimes achieved by poor working conditions, restrictions on workers' rights to join trade unions of their choice, discrimination against women, and the use of child labor. Low prices, which result from the intense competition for markets, characterize the industry and translate to poor wages for workers, and increase the survival challenge for small-scale, independent producers.

INTERNATIONAL TRADE IN BANANAS

Developing countries are the main suppliers of banana exports and developed countries the main markets for imports, accounting for over 80 percent in 2002. There are three main markets for banana exports: Europe, North America, and Asia, in order of importance. The European Union (EU) became the largest market for banana imports in 2004 with the accession of ten new member states, absorbing one-third of the world trade in 2005. Together the EU and the United States accounted for over 60 percent of imports, while Japan and the Russian Federation combined imported roughly 12 percent.

Latin America (Ecuador, Costa Rica, Colombia, and Panama) is the largest exporting region, with Ecuador being the largest exporter in the world, exporting 4,653,900 tonnes in 2005. The Philippines was a distant second, exporting 1,904,700 tonnes, followed by Costa Rica. Latin American producers supply most of the United States and the Russian Federation. Ecuador and

the Philippines are the major suppliers of the Japanese market. Latin America supplied 67 percent of the EU market in 2004; African Caribbean Pacific (ACP) countries (Cameroon, Ivory Coast, and several Caribbean countries, including the Windward Islands) supplied 17 percent; and producers within the EU (Martinique and Guadeloupe, Canary Islands, Madeira) supplied 16 percent.

REGIMES GOVERNING THE IMPORTATION OF BANANAS

A variety of arrangements govern the importation of bananas, ranging from wholly unregulated to highly regulated markets. The U.S. market is the most open, with no tariffs, quotas, or sanitary and phytosanitary (SPS) requirements (to ensure food safety and animal and plant health and product standards). Japan operates a seasonal preferential tariff rate. The European Community (EC), up to January 2006, was the most regulated market for bananas, with a complex system of quotas, tariffs, and licenses designed to provide preferential access to suppliers from the ACP countries.

EC Council regulation 404/93, which brought into being the Common Market Organisation for bananas and unified the EU banana market in 1993, changed significantly after the United States, on behalf of banana companies, and Ecuador, Honduras, Guatemala, and Mexico successfully challenged the legitimacy of some of its provisions under World Trade Organization (WTO) rules. It is now a simple tariff quota system, with a tariff of euro 176 per metric ton, and a duty-free quota of 775,000 tonnes for ACP producers on a first come, first served basis. This represents a significant reduction in the protection ACP countries had enjoyed. Latin American producers, particularly Ecuador, and some ACP producers are the main beneficiaries of this change at the expense of higher-cost, small farm driven production systems that exist in some Caribbean ACP exporting countries. In the Windward Islands, which has some of the smallest farming systems, production declined by 46 percent between 1994 and 2004, and the industry is not expected to survive further tariff reductions.

ANTICIPATED CHANGES IN THE INDUSTRY

The international trade in bananas is dynamic, with a steady increase in production but fluctuating prices. The output in the period between 1984 and 2000 saw a dramatic growth in the industry, which resulted in an increase in banana exports of 5.3 percent, more than twice that of the previous twenty-four years. This growth has been attributed to increased areas of production and, to a lesser extent, an increase in yields, rising demand in newly liberalized markets in eastern Europe and China, and increased income in major banana importing countries in the 1990s. Projections to 2010 show the banana trade growing from 12.6 million tonnes in 2004 to 15 million tonnes, although at a slower rate than the previous decade, with Ecuador and the Philippines continuing to lead production.

Increasing Chinese domestic production suggests that China may become an important player in the export trade. The EU is expected to continue the trend of attracting a greater share of imports, especially in light of the reorganization of its market. Developing countries and transition countries, however, are expected to play a larger role as import markets for bananas, with some developing countries becoming major players after 2010. The production of bananas under organic and fair-trade labels is expected to increase. This market remains small, however, with organic bananas accounting for only 1 percent of the trade in 2002 and fair-trade bananas largely confined to the EU market. The evolution of supermarkets as major players in the production process, especially in standard setting, intensifying price competition, and the increasing use of contractual arrangements with suppliers is likely to strengthen, resulting in a further concentration of the trade at all stages: production, supply, and retail.

ENVIRONMENTAL AND LABOR PRACTICES

The extensive use of inputs to enhance quality and to control diseases and pests has contributed to concerns about the industry's impact on the environment. These surround the monocultural cultivation of the crop, which increasingly is focused on a single variety, the Cavendish, and its implications for biodiversity and vulnerability to disease and adverse weather; the intensity of production and the implications for soil fertility; the heavy usage of agrochemicals, including pesticides, fungicides, and fertilizers, and the dangers they hold for contaminating water supplies and for workers' health; and the proper disposal of plastic bags and other waste products.

Cultivation of organic and fair-trade bananas has developed in response to these concerns. Both systems are geared at mitigating the negative effects of production on the environment, with fair trade also focused on improving labor conditions, especially low wages, which can potentially increase the sustainability of small scale production. Environmental and food safety concerns have also led to a proliferation of standards to address some of the more egregious aspects of cultivation. The main standard setting institutions are the International Organization for Standardization (ISO 14001), the Food and Agriculture Organization/World Health Organization (FAO/WHO)

Codex Alimentaris Commission for organic bananas, and the Fair Trade Labelling Organisation (FLO).

CHALLENGES FACING THE INDUSTRY

The main challenge facing the industry, to quote the Costa Rican union leader Gilberth Bermudez Umana from a paper delivered at the International Banana Conference II, lies in "achiev[ing] a system of banana production based on social justice and on a development model in harmony with nature" (Umana 2005). Such a system should also result in a more equitable sharing of profits along the banana production and distribution chain in favor of laborers and small-scale producers. The difficulty, however, is that this is to be accomplished in an industry where cheaper fruit is attained at the expense of the living conditions of banana producers and the environment.

SEE ALSO *Agricultural Industry; Caribbean, The; Colonialism; Dependency; European Union; Industry; Irrigation; World Trade Organization*

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Patsy Lewis

BANANA PARABLE

The banana parable is found both in *A Treatise on Money* (Keynes 1930) and in John Maynard Keynes's exposition to the McMillan Committee, which was established in 1930 by Prime Minister Ramsay MacDonald to evaluate the performance of the economy in Great Britain. The committee consisted of senior ministers and outside experts, of which Keynes was one. In the *Treatise* it is presented as an illustration that saving by itself does not guarantee that investment will increase proportionally. In the explanation to the MacMillan Committee it is presented in relation to a closed or an open economy with a gold standard and in the context of an evaluation of the role of the banking system in effecting saving and investment.

In the 1920s Great Britain experienced high levels of unemployment with large fluctuations in its economy. Keynes turned his attention to those issues in *A Treatise on Money*, in which he attempted to reexamine the relationships among money, prices, and unemployment. He believed that the main cause of unemployment and economic fluctuations was the relationship of saving to investment. When individuals save more than the amounts businesses want to invest, that leads to excess capacity and too few buyers of the goods produced.

The saving-investment relationship was an important concern that was brought out in Keynes's "banana parable." In the story Keyes envisions a simple economy that produces and consumes only bananas and in which "ripe" bananas keep only for a week or two. There is a thrift campaign in that closed economy to increase saving with no corresponding increase in investment in bananas. With the same amount of bananas being produced as before the thrift campaign, savings will lower demand, causing the price to fall. This might seem desirable, Keynes points out, for it may increase saving and reduce the cost of living. However, if wages have not changed along with the falling price, the cost of production becomes greater than the revenue represented by the price and businesses will lose an amount of money equal to the saving rate. The consequence is that businesses need to cut costs by lowering wages or by firing workers, and this only makes matters worse. As the overall income level falls, this pushes the economy into a deeper recession. Keynes argued that the best way out of the economic downturn is for the central bank to pump more money into the economy to increase investment.

This parable presented a significant critique of classical economics by showing that flexible wage rates do not lead automatically to full employment. It also raised questions about the classical view of Say's law and the relationship between saving and investment. The parable also can be looked at as a demonstration of the neutrality of money wages as brought out in Keynes's *General Theory*, in which

money wages follow falling prices so that the real wage remains relatively unchanged. The importance of this parable and the way in which it led Keynes to his views in the *General Theory* on the consumption function and the principle of effective demand is explained by Ingo Barens (1989).

The parable also provides insights into the debate between Friedrich Hayek and Keynes about the market economy. Hayek believed that market forces always align saving and investment in a smooth way unless there are distortions in the markets caused primarily by monetary policy. Keynes saw the economic landscape quite differently, positing that monetary policy and credit creation are absolutely necessary to stabilize the relationship between saving and investment, as is brought out in the parable.

SEE ALSO *Involuntary Unemployment; Keynes, John Maynard; Unemployment; Wages*

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Ric Holt

BANDITOS

SEE *Villa, Francisco (Pancho).*

BANDURA, ALBERT

1925–

Considered by some to be the father of behavioral psychology, Albert Bandura was born on December 4, 1925, in Mundare, a small town in Alberta, Canada. As a teenager, Bandura decided to take a psychology course to fill a space in his high school schedule. The result was a love for the subject that extended through his college years. He received his PhD in 1952 from the University of Iowa.

Promoted to full professor at Stanford University in 1964, Bandura often attributed his motivation for research to his collaborations with researchers such as Jack Barchas and Craig Barr Taylor. The joint research allowed them to combine different expertise and laboratory resources. One outcome of these research efforts was the finding that people regulate their level of physiological arousal (i.e., hormonal release) through their belief in self-efficacy. Bandura's contributions to personality theory and therapy incorporated a three-way interaction between the environment, behavior, and psychological processes at a time when dynamic systems theory had yet to be defined. Bandura focused on observational learning, or modeling, and he showed that children learn behavior through watching others. His most famous study, known as the *Bobo dolls* study, established that children do not need punishment or reward to learn. With his then doctoral student Richard Walters, Bandura found that hyperaggressive adolescents often had parents who modeled hostile attitudes; the results led to Bandura's first book, *Adolescent Development* (1959).

Bandura's decision to relabel his theoretical approach from *social learning* to *social cognition* was due to his growing belief that the breadth of his theorizing and research had expanded beyond the scope of the social learning label. Bandura presented a social cognitive vision of the origins of human thought and action and the influential role of self-referential processes to motivation, affect, and action. He depicted people as self-organizing, proactive, self-reflective, and self-regulative in thought and action, rather than as merely reactive to social environmental or inner cognitive-affective forces. A major focus of Bandura's theorizing addressed the extraordinary ability of humans to use imagery and symbolism. Drawing on their symbolic capabilities, people can comprehend their environment, construct guides for action, solve problems cognitively, support forethoughtful courses of action, gain new knowledge by reflective thought, and communicate with others at any distance in time and space. By symbolizing their experiences, people give structure, meaning, and continuity to their lives.

A further distinctive feature of social cognitive theory that Bandura singles out for special attention is the capacity for self-directedness as well as forethought. People plan courses of action, anticipate their likely consequences, and set goals and challenges for themselves to motivate, guide, and regulate their activities. The focus that Bandura gave to self-efficacy brought the term into mainstream conversation. Social learning theory is a general theory of human behavior, but Bandura and people concerned with mass communication have used it specifically to explain media effects. Bandura warned that children and adults acquire attitudes, emotional responses, and new styles of conduct through filmed and televised modeling. Bandura's warn-

ing struck a responsive chord in parents and educators who feared that escalating violence on television and other forms of media would transform children into bullies. Although Bandura does not think this will happen without the tacit approval of those who supervise the children, he regards anxiety over televised violence as legitimate. That stance caused him to be blackballed by network officials from taking part in the 1972 *Surgeon General's Report on Violence*. The psychologist Kevin Durkin, who reviewed the research on violent video games in 1995, reported that studies had found "either no or minimal effects." Indeed, he added, "some very tentative evidence indicates that aggressive game play may be cathartic (promote the release of aggressive tensions) for some individuals" (Durkin 1995, p. 2). Durkin and Kate Aisbett reported in a 1999 follow-up survey that "early fears of pervasively negative effects" from video games "are not supported"; "several well designed studies conducted by proponents of the theory that computer games would promote aggression in the young have found no such effects" (Durkin and Aisbett 1999, p. 3). These findings were echoed by other scholars.

To combat public policy problems, Bandura presided over the founding of the Association for the Advancement of Psychology as an advocacy group for promoting the influence of psychology in public policy initiatives and congressional legislation. He was elected to the presidencies of the American Psychological Association in 1974 and the Western Psychological Association in 1981. He was also appointed honorary president of the Canadian Psychological Association. In August 1999 Bandura received the Thorndike Award for Distinguished Contributions of Psychology to Education from the American Psychological Association (APA). In 2001 he received the Lifetime Achievement Award from the Association for the Advancement of Behavior Therapy. In August 2004 he received the APA's Outstanding Lifetime Contribution to Psychology Award. He has written seven books and edited two others, which have been translated into numerous languages.

SEE ALSO *Social Learning Perspective*

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BANKING

Banking is the name given to the activities of banks. The word *bank* is derived from the Italian *banca*, which means bench. Moneylenders in Northern Italy originally did business in open rooms or areas, with each lender working from his own bench or table. In the modern era banks are financial firms that simultaneously issue deposits, make loans, and create money.

A deposit is issued when a household or a business brings cash or currency to a bank in exchange for an equivalent amount of stored value, which can either be used to meet payment obligations or saved for future expenditure needs. Loan making is a form of credit. Credit comes into being when one economic unit (the creditor) authorizes another (the debtor) to acquire goods prior to paying for the goods received. A bank makes a loan when it authorizes a borrower to make expenditures on the bank's account up to a contractually agreed maximum level, in exchange for repayment of these advances later in time. Loans are usually made for expenditure purposes that are agreed on in advance (for example, the purchase of housing or of education services). Borrowers are normally authorized to use loan funds for a certain period of time and are required to repay the amount of the loan plus some amount of interest, which reflects the cost of the loaned funds. Common types of loans are working-capital loans, used by businesses primarily for buying supplies and making wage payments, and mortgage loans, which provide long-term funds (often for a duration of thirty years) for purchasing residences.

There are two principal types of bank deposits. Demand deposits are used primarily to handle transaction needs. They are completely liquid, as they can be withdrawn at will and without notice by the deposit holder. Time deposits are used primarily to store savings. They are less liquid than demand deposits, as they are normally contracted for fixed time periods (often six months or one year). In compensation for this loss of liquidity, those holding time deposits receive compensation in the form of (higher) interest payments.

The process of making loans may create money. A financial institution creates money in making loans when it creates demand deposits that can be spent by its borrow-

ers. These borrowers did not possess these deposits before receiving loans, nor were these deposits taken from any of the bank's deposit customers. The ability to create money by making loans makes banks' behavior procyclical: Their loan making tends to expand when the economy is growing, further accelerating growth, and to slow when the economy does.

Banking is heavily regulated for two reasons. First, maintaining an orderly economy requires maintaining reliable transaction processes and financial markets, and banks are at the heart of these processes and markets. Second, banks are a source of instability within the economy. The default risks inherent in loan making interact with banks' ability to expand the money supply through loan making. In a worst-case scenario, unsound bank loan making (or choices of other assets) can weaken an economy and subject it to bank or currency runs, and/or expose an economy to stagnation, deflation, and even recession.

Banking has always been a heavily regulated field of activity. For one, banks typically require a bank charter issued by regulators. Moreover, every economy normally has a central bank, which attempts to control money and credit growth and which is responsible for rescuing the banking system in times of acute crisis. Regulation is especially important at the beginning of the twenty-first century, because banks' behavior in loan making has changed so much over time. From the 1930s to the 1960s, banks were relatively cautious. They made loans up the amount of their excess reserves, that is, the amount of currency on hand beyond that needed to meet its deposit customers' normal withdrawal demands. Over time, banks became more aggressive in finding funds to lend. Banks evolved the practice of liability management, in which they set targets for asset and loan growth and reach those targets by borrowing reserves, primarily from other banks in the interbank market.

Banks have also become more aggressive in loan making, as a result in part of their deepening links to financial centers such as Fleet Street and Wall Street. Since the late 1970s, banks have competed to make loans in hot markets, including overseas borrowers. This has led to severe crises of loan repayment and refinancing, the most spectacular cases being the Latin American debt crisis of the 1980s and the East Asian financial crisis of 1997–1998 (Stiglitz 2003). Despite these recurring crises, banks continually push into new areas of loan making, searching for new ways to earn revenue. In the 1990s and 2000s, banks have increasingly extended personal credit (often via credit cards), and have gotten involved in such nonbanking activities as derivatives and options, mutual funds and insurance.

The recurring problems in loan markets have made banking behavior a central topic in economic research. One key question is why lending booms and busts occur; another is why borrowers default (that is, are unable to repay loans according to their contractual obligations). Economists focusing on the first question have emphasized that banks are driven by competition to overlend in boom periods, leading to rising financial fragility (more debt obligations relative to available income), which eventually triggers a downturn (Minsky 1982). Economists addressing the second question focus on the distribution of information in credit markets; they emphasize that borrowers may seek to cheat lenders, and that banks may not accurately determine which potential borrowers are competent and which are not (Freixas and Rochet 1997). Banks can avoid default by extracting timely information about borrowers, their competence, and their intentions. Yet the social neutrality of the criteria that banks use to decide which borrowers are creditworthy has been called into question. Economic studies have generated substantial evidence that banks sometimes treat racial minorities, residents of minority and lower-income communities, and even disadvantaged regions unfairly in their credit-market decisions (Austin Turner and Skidmore 1999).

SEE ALSO *Financial Markets; Loans; Overlending*

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BANKING INDUSTRY

The modern banking industry is a network of financial institutions licensed by the state to supply banking services. The principal services offered relate to storing, transferring, extending credit against, or managing the risks associated with holding various forms of wealth. The precise bundle of financial services offered at any given time has varied considerably across institutions, across time, and across jurisdictions, evolving in step with changes in the regulation of the industry, the development

of the economy, and advances in information and communications technologies.

FUNCTIONS

Banks as financial intermediaries are party to a transfer of funds from the ultimate saver to the ultimate user of funds. Often, banks usefully alter the terms of the contractual arrangement as the funds move through the transfer process in a manner that supports and promotes economic activity. By issuing tradable claims (bank deposits) against itself, the bank can add a flexibility to the circulating media of exchange in a manner that enhances the performance of the payments system. These deposits may support the extension of personal credit to consumers (retail banking) or short-term credit to nonfinancial businesses (commercial banking). If so, the bank aids the management of liquidity, thus promoting household consumption and commerce. By facilitating the collection of funds from a large number of small savers, each for a short period, the bank promotes the pooling of funds to lend out in larger denominations for longer periods to those seeking to finance investment in larger capital projects. Financing investment may take the form of underwriting issues of securities (investment banking) or lending against real estate (mortgage banking). By specializing in the assessment of risk, the bank can monitor borrower performance; by diversifying across investment projects, the bank minimizes some types of risk and promotes the allocation of funds to those endeavours with the greatest economic potential. By extending trade credit internationally (merchant banking), the bank can facilitate international trade and commerce. As one last example, by lending to other banks in times of external pressures on liquidity, the bank can manage core liquidity in the financial system, thus potentially stabilizing prices and output (central banking).

To discharge its various functions, banks of all types manage highly leveraged portfolios of financial assets and liabilities. Some of the most crucial questions for the banking industry and state regulators center on questions of how best to manage the portfolio of deposit banks, given the vital role of these banks in extending commercial credit and enabling payments. With bank capital (roughly equal to the net value of its assets after deduction of its liabilities) but a small fraction of total assets, bank solvency is particularly vulnerable to credit risk, market risk, and liquidity risk. An increase in non-performing loans, a drop in the market price of assets, or a shortage of cash reserves that forces a distress sale of assets to meet depositors' demand can each, if transpiring over a period of time too short for the bank to manage the losses, threaten bank solvency.

ORIGINS OF MODERN BANKING

The modern banking industry, offering a wide range of financial services, has a relatively recent history; elements of banking have been in existence for centuries, however. The idea of offering safe storage of wealth and extending credit to facilitate trade has its roots in the early practices of receiving deposits of objects of wealth (gold, cattle, and grain, for example), making loans, changing money from one currency to another, and testing coins for purity and weight.

The innovation of fractional reserve banking early in this history permitted greater profitability (with funds used to acquire income earning assets rather than held as idle cash reserves) but exposed the deposit bank to a unique risk when later paired with the requirement of converting deposits into currency on demand at par, since the demand at any particular moment may exceed actual reserves. Douglas Diamond and Philip Dybvig have, for example, shown in their 1983 article "Bank Runs, Liquidity, and Deposit Insurance" that in such an environment, a sufficiently large withdrawal of bank deposits can threaten bank liquidity, spark a fear of insolvency, and thus trigger a bank run.

Means of extending short-term credit to support trade and early risk-sharing arrangements afforded by such devices as marine insurance appear in medieval times. Italian moneychangers formed early currency markets in the twelfth century CE at cloth fairs that toured the Champagne and Brie regions of France. The bill of exchange, as a means of payment, was in use at this time as well.

Over the course of the seventeenth and eighteenth centuries, the industry transformed from a system composed of individual moneylenders financially supporting merchant trade and commerce, as well as royalty acquiring personal debt to finance colonial expansion, into a network of joint-stock banks with a national debt under the control and management of the state. The Bank of England, for example, as one of the oldest central banks, was a joint-stock bank initially owned by London's commercial interests and had as its primary purpose the financing of the state's imperial activities by taxation and the implementing of the permanent loan. This period was also marked by several experiments with bank notes (with John Law's experiment in France in 1719–1720 among the most infamous) and the emergence of the check as simplified version of the bill of exchange.

Eighteenth-century British banking practices and structures were transported to North America and formed an integral part of the colonial economies from the outset. The first chartered bank was established in Philadelphia in 1781 and in Lower Canada in 1817. Experiments with free banking—as a largely unregulated business activity in

which commercial banks could issue their own bank notes and deposits, subject to a requirement that these be convertible into gold—have periodically received political support and have appeared briefly in modern Western financial history. Public interest in minimizing the risk of financial panics and either limiting or channelling financial power to some advantage has more often, however, dominated and justified enhanced industry regulation.

BANK REGULATION

Various forms of bank regulation include antitrust enforcement, asset restrictions, capital standards, conflict rules, disclosure rules, geographic and product line entry restrictions, interest rate ceilings, and investing and reporting requirements. The dominant view holds that enhanced regulation of this industry is necessary because there is clear public sector advantage, or for protecting the consumer by controlling abuses of financial power, or because there is a market failure in need of correction.

Where public sector advantage justifies the need for regulation, government intervention may appear in the form of reserve requirements imposed on deposit-taking institutions for facilitating the conduct of monetary policy or in the various ways in which governments steer credit to those sectors deemed important for some greater social purpose. Limiting concentration and controlling abuses of power and thus protecting the consumer have motivated such legislation as the American unit banking rules (whereby banks were limited physically to a single center of operation) and interest rate ceilings (ostensibly designed to prohibit excessive prices), as well as various reporting and disclosure requirements.

The latent threat of a financial crisis is an example of a market failure that regulation may correct. Here, the failure is in the market's inability to properly assess and price risk. The systemic risk inherent in a bank collapse introduces social costs not accounted for in private sector decisions. The implication is that managers, when constructing their portfolios, will assume more risk than is socially desirable; hence, there exists a need for government-imposed constraint and control. State-sanctioned measures designed to minimize the threat of bank runs include the need for a lender of last resort function of the central bank to preserve system liquidity and the creation of a government-administered system of retail banking deposit insurance.

Regulation explicitly limiting the risk assumed by managers of banks includes restrictions that limit the types and amounts of assets an institution can acquire. A stock market crash will threaten solvency of all banks whose portfolios are linked to the declining equity values. Investment bank portfolios will be, in such a circumstance, adversely affected. The decline in the asset values of investment banks can spill over to deposit banks causing a banking crisis when the assets of deposit banks include marketable securities, as happened in the United States in the early 1930s.

The Bank Act of 1933 (the Glass-Steagall Act) in the United States as well as early versions of the Bank Act in Canada, for example, both prohibited commercial banks from acquiring ownership in nonfinancial companies, thus effectively excluding commercial banks from the investment banking activities of underwriting and trading in securities. This highly regulated and differentiated industry structure in twentieth-century North America contrasts sharply with the contemporaneous banking structures of Switzerland and Germany, for example, where the institutions known as universal banks offer a greater array of both commercial and investment banking services. The question for policymakers then is which industry structure best minimizes the risk of banking crises and better promotes macroeconomic stability and growth.

BANKING AND MACROECONOMIC ACTIVITY

The relationship between credit, bank notes, bank deposits, and macroeconomic stability has been the focus of much debate in the history of Western monetary thought. This debate grows more vigorous in the wake of financial panics and crises, when its focus turns to causality between banking crises and economic downturns.

Between 1929 and 1933 more than 40 percent of the American banks existing in 1929 failed. With no deposit insurance, bank failures wiped out savings and forced a severe contraction of the money supply. Milton Friedman and Anna Schwartz (1963) maintain that inaction by the American central bank permitted the sudden contraction of liquidity and magnification of real economic distress. Ben Bernanke (1983), too, believes that monetary conditions lead real economic activity, arguing that bank failures raise the cost of credit intermediation and therefore have an effect on the real economy. Charles Kindleberger (1986) alternatively suggests that non-monetary forces lie at the root of the problem, but that it was the failure of the Credit-Anstalt bank in Austria that proximately forced a sudden withdrawal of credit from the New York money markets and, in domino fashion, a contraction of credit throughout the United States. For Hyman Minsky (1982), the evolving margins of safety between the streams of asset income in relation to the contemporaneous changes in the cost of credit both characterize and explain financial instability.

Whichever the direction of primary causation, there is substantial agreement on the fact that there exists an important relationship between a sudden contraction of

credit and liquidity and a considerable decline in economic activity. Consensus arises also around the likelihood that central bank last resort lending, in the manner suggested by Henry Thornton (1802) or by Walter Bagehot (1873), had it been exercised, might have substantially mitigated these effects.

Despite being subjected to similar nonmonetary shocks, and despite existing in an economy that roughly mirrored the American economy at the time, the Canadian banking system of the 1930s proved itself less vulnerable to collapse. Two factors may explain the relative stability of the Canadian banking sector: a lower level of integration of commercial and investment banking activities and a much more highly concentrated industry, with only a few large banks dominating the Canadian banking landscape. While Richard Sylla (1969) suggests that monopolistic elements in the post-bellum U.S. banking industry were present and may explain the apparent inefficiencies he observes in the data, Michael Bordo, Hugh Rockoff, and Angela Redish (1994), for example, argue for an absence of evidence in support of any similar claim that Canadian bank cartels created gross differences in pricing. Contrary to common suspicion, stability, it appears, was not at the cost of any significant loss in efficiency, at least in the Canadian industry. Nevertheless, American apprehension about concentrations of financial power continued to prevail. Legislation designed to minimize the future possibility of such crises focused instead on enforced portfolio adjustments.

The relationship between crises and economic downturns has its counterpart in a later debate about the financial structure and economic growth. In broad strokes, as an economy develops in scale and scope, formal financial arrangements gradually (however incompletely) replace informal ones. As the economy's need for larger amounts of funds to finance larger capital projects rises, the increasing inefficiency of many informal financial systems yields to the efficiency of formal codified transactions. As Rondo Cameron and Hugh Patrick (1967, p. 1) explain in *Banking in the Early Stages of Industrialization, A Study in Comparative Economic History*, the proliferation of the number and variety of financial institutions and a substantial rise in the ratio of money and other financial assets relative to total output and tangible wealth are "apparently universal characteristics of the process of economic development in market-oriented economies."

In "Finance and Growth: Theory and Evidence" Ross Levine (2005, p. 867) examines the theory and evidence and concludes, "better functioning financial systems ease the external financing constraints that impede firm and industrial expansion, suggesting that this is one mechanism through which financial development matters for growth." Whether the industry is segmented (with an enhanced role for capital markets) or not (as with universal banking systems, and their greater role for banks), does not seem to matter much, however. Several mutually reinforcing changes have stimulated a renewed public interest in this question about the preferred industrial structure.

POST-1980 INDUSTRY DEVELOPMENTS

The period from 1980 onward has been marked by increasing consolidation of banks, substantial loss in the share of financial activity to financial markets (disintermediation), greater market concentration, and considerable blurring of the traditional distinctions between banks and other financial institutions. Banks are increasingly offering a broader array of financial services in an increasing number of jurisdictions. The result is that banks in many countries where their scope was once limited are becoming more like universal banks.

Forces of change affecting the financial system since 1980 include market forces, legislative changes, and technological advances affecting communication and information. The dynamic tension and interplay between these forces have contributed significantly to the growth of new markets, new institutions, and new instruments, many of which fall outside the purview of existing regulation by virtue of their location or definition or both. The result is that an increasing amount of financial activity escapes regulation of any kind.

National responses have been largely to advocate and initiate deregulation of the domestic financial systems, justified by the same arguments that once supported the regulation. The elimination of interest rate ceilings, for example, should increase choice and competition, result in better and cheaper services for the customer, and increase the efficiency with which the economy allocates scarce funds. Permitting the integration of commercial and investment banking activities should produce greater efficiencies by permitting firms to capture greater economies of scale and scope. Notably, the legal separation of these activities was repealed in the United States with the 1999 Financial Services Modernization Act.

To date, international financial regulation is limited to the right-of-access rules negotiated by the European Union member states and by Canada, Mexico, and the United States, as part of the North American Free Trade Agreement, for example. Other international efforts have been largely and significantly restricted to international agreements to incorporate proposed rules into national legislation. The 1988 Basel Accord on the international convergence of capital measurements and standards, for example, recommended minimum common levels of capital for banks conducting international business. The twelve original signatories gradually adopted these capital

requirements, as did several other countries. The second Accord, reached in 2004, broadened the scope of the earlier agreement and increased its flexibility to meet the objective of setting standards for minimizing both credit and operational risks. There remain, however, several markets and instruments in the international arena that have yet to be regulated or at least have the relevant national regulation coordinated.

FUTURE DIRECTIONS

The future may well see an increased extent and variety of the bundling of financial services as techniques and technologies of securitization, networking, and outsourcing offer new organizational possibilities. The result thus far has been a blurring of the traditional distinctions between banking and non-banking financial activity. Bank mergers and mergers of banks with other financial firms are occurring with increasing frequency and magnitude, suggesting that the future may well witness both a greater dominance of universal banking structures and a greater international concentration of financial assets.

Perhaps more profound is the potential for the blurring of any clear distinction between financial and nonfinancial activities. Nonfinancial retailers are joining forces with banks or opening their own lending facilities outright. Developments in electronic communications and software have the potential to erode the banking industry's relative monopoly over bank deposits as the nation's dominant medium of exchange. It may only be a matter of time before the provision of commercial and retail credit already offered by some nonfinancial communications companies effectively challenges even these most traditional of banking activities. Whatever the precise institutional details—and they will continue to vary from jurisdiction to jurisdiction—the difference between financial and nonfinancial enterprises may be expected to become increasingly difficult to define and regulate as the banking industry continues to evolve.

SEE ALSO *Financial Instability Hypothesis; Regulation*

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BARDS

SEE *Storytelling.*

BARGAINING

SEE *Negotiation; Screening and Signaling Games.*

BARRIERS TO TRADE

Barriers to trade include those made by policy and those posed by nature. Both policy barriers and natural barriers include several important types. Overall, despite much talk of globalization, barriers to trade of both types remain high (see Anderson and van Wincoop 2004 for a review of evidence).

POLICY BARRIERS

Policy barriers include tariffs and quotas. In past years and still in many countries, these have been substantial barriers to international trade. Tariffs and quotas discriminate in the treatment of goods between those produced at

home and those produced abroad. Other policy barriers can also be discriminatory.

Product standards, such as health and safety requirements, are on the surface nondiscriminatory. All autos sold in the United States must meet emissions standards. Under the surface, however, product standards are often used to discriminate. It is very difficult to make systematic evaluations of the effect of discrimination in product standards. Anecdotes abound, as in the notorious exclusion of Mexican trucking firms via discriminatory use of safety standards from the North American trade they are entitled to under the North American Free Trade Agreement.

The legal system's treatment of aliens is often different than that of nationals, even though the laws themselves are mostly formally nondiscriminatory. Fair treatment of aliens is to some degree a policy choice. Again, anecdotes abound, but systematic evaluation of the effective policy discrimination is very difficult. Statistical inference that relates the pattern of bilateral trade to economic variables and to the quality of institutions (as measured by surveys of businessmen) suggests that bad-quality institutions harm international trade. For example, Anderson and van Wincoop (2004) report that Latin America's institutional deficit relative to European norms reduces its imports by as much as Latin America's tariffs.

NATURAL BARRIERS

Nature too imposes barriers to international trade. Most obviously, trade requires shipping, which increases in cost with distance. Distance reduces international trade relative to domestic trade because markets within nations are closer together on average than markets between nations. Transportation costs between most international markets are larger, usually much larger, than tariffs or tariff equivalents of quotas. Distance may also be associated with higher nontransportation trade costs, as it appears to reduce trade by more than can be accounted for by transportation.

Asymmetric information is another natural barrier to trade. Businessmen tend to know more about local markets than foreign markets. Information can be discovered at a cost, and this constitutes another trade cost. Statistical inference suggests that information costs can be large. Language differences, cultural differences, and institutional differences all reduce trade while ethnic ties increase it.

Attempts to infer the size of border barriers of all types give some idea of the size of barriers to trade. Inference can be done by comparing trade between regions of a single country with trade between regions in different countries, controlling for other influences, such as distance, on the size of trade. The average trade reduction associated with crossing a border implies very substantial border barriers that are a large multiple of tariffs and the tariff equivalents of quotas (see Anderson and van Wincoop 2004 for detailed discussion).

SEE ALSO *Liberalization, Trade; North American Free Trade Agreement; Quotas; Quotas, Trade; Tariffs; Trade; Trade, Bilateral*

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James E. Anderson

BARRO-GROSSMAN MODEL

The Barro-Grossman model, proposed by Robert J. Barro and Herschel I. Grossman, was first published in 1971 in what was to become, seventeen years later, the most frequently cited article in the *American Economic Review*. It was further developed in Barro and Grossman's *Money, Employment, and Inflation* (1976), though this latter work never became a dominant graduate textbook, as it was overtaken by what has been called the rational expectations revolution. Barro himself largely abandoned the Barro-Grossman model in the late 1970s. Though work based on the model continued to appear, and in that sense the model never disappeared, it was taught in very few graduate programs and fell out of fashion in the early 1980s.

The central idea of the model is that of an *equilibrium with rationing*, sometimes called the *economics of disequilibrium*. Suppose that for some reason—such as an external shock—an economy develops a significant level of unemployment. Workers will find that they cannot sell as much labor as they would normally expect to sell, and they will have to cut back on their purchases of consumption goods. Firms will find that they cannot sell the goods they wish to sell at the prevailing prices, and so will not be willing to employ more labor. The economy gets stuck in a "Catch 22" situation, in which spending cannot rise because workers cannot find jobs, even if they offer to work for a lower wage, and firms will not employ more workers, because even if they lower prices, they cannot increase their sales revenue. Both groups are *rationed*—that is, they face constraints on the quantities they can sell at the prevailing prices.

The key to the model is a distinction introduced by Robert Clower (1965) between *effective* and *notional*

demands, the former being calculated with quantity constraints taken into account, the latter with constraints ignored (notional demands are sometimes called *Walrasian*). In an equilibrium with rationing, effective demand equals supply. For example, workers may wish to sell more labor and purchase more consumption goods, but they cannot do so. Thus, if price changes depend on effective demands, there is no pressure to change prices. It is therefore possible to have an equilibrium with rationing in which there is high unemployment, even if wages and prices are at the level consistent with full employment. Market forces will not bring the economy back toward full-employment equilibrium.

The Barro-Grossman model was a fixed-price model in the sense that prices were taken as a parameter when determining quantities of employment and output. They were not necessarily constant—the 1976 version of the model allowed for inflation by having prices change in response to effective excess demands—but they adjusted much more slowly than quantities. In the late 1970s, Barro interpreted this as meaning that prices were fixed by long-term contracts, and when it was shown that it would not be optimal for such contracts to specify "sticky" prices (that is, prices that do not change immediately to eliminate potential differences between supply and demand), he abandoned the approach. However, other users of such models interpreted equilibrium with rationing differently. Clower had been interested in dynamic price-adjustment mechanisms in markets that were typically not perfectly competitive. Axel Leijonhufvud (1968), who had done more than anyone to popularize the idea of disequilibrium macroeconomics, was more interested in the idea of intertemporal disequilibrium. Jacques Drèze (1975), who pioneered the incorporation of quantity constraints in general equilibrium models, came to them through problems of information.

The folklore in macroeconomics is that the Barro-Grossman model went out of fashion in the 1970s because it did not make sense to assume rigid prices when inflation was running at levels that exceeded 25 percent in some OECD countries. However, paradoxically, it was precisely because of inflation that some economists turned to such models. Edmond Malinvaud (1977) used a model of equilibrium with rationing (not the Barro-Grossman model, but a member of the same family of models) because it was the only framework he could find in which to make sense of *stagflation*—that is, of simultaneously rising inflation and unemployment. Taking the wage rate and the price level as parameters was the first step in discussing what might cause an economy to move between different regimes: Keynesian unemployment (unemployment accompanied by a surplus of goods), classical unemployment (unemployment and a shortage of goods), and repressed inflation (shortages of labor and goods).

Possibly the main significance of the Barro-Grossman model in the history of macroeconomics is that it was an important part of the search for microfoundations of macroeconomics. Barro and Grossman wanted to construct a macroeconomic model with rigorous microeconomic foundations (rigorous in the sense of being based on maximizing behavior by individual firms and households). It should be seen as parallel to the search for microfoundations of Edmund Phelps and his collaborators (1970). Because macroeconomics was at that time synonymous with Keynesian economics, Barro and Grossman created a Keynesian model. Their model comprised a representative household and a representative firm. When Barro abandoned the fixed-price approach, he retained those elements, and when household and firm were combined, there emerged the representative agent model that is characteristic of modern macroeconomics.

SEE ALSO *Economics, New Keynesian; Excess Demand; Excess Supply; Inflation; Macroeconomics; Microfoundations; Prices; Shocks; Stagflation; Stocks; Unemployment*

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BASEL BAN AMENDMENT

SEE *Toxic Waste.*

BASEL CONVENTION

SEE *Toxic Waste.*

BASIC NEEDS

SEE *Needs, Basic.*

BA'TH ARAB SOCIALIST PARTY

SEE *Hussein, Saddam.*

BATISTA, FULGENCIO

SEE *Cuban Revolution.*

BATTLE OF ALGIERS, THE

Often presented as an account of the Algerian struggle for freedom, Italian director Gillo Pontecorvo's 1966 film *The Battle of Algiers* (*La battaglia di Algeri*) is in fact more precisely defined as an analysis of the strengths and limitations of counterinsurgency measures during the Algerian War (1954–1962) for independence from France and, as such, remains very relevant to the early twenty-first-century "global war on terror." Though one of the major films of the 1960s, rightly rewarded with the top prize, the Lion of Saint Mark, at the Venice Film Festival in 1966, *The Battle of Algiers* is, in terms of its production, a marginalized film. Coproduced by Igor Films in Rome and shot in Algeria with an Italian crew, it is a key work of the Italian post-neorealist generation. Yet it is ignored (along with its director) in such standard English-language studies of Italian cinema as Millicent Marcus's *Italian Film in the Light of Neorealism* (1986) and Pierre Sorlin's *Italian National Cinema, 1896–1996* (1996). At the same time, it is self-evidently, with its Italian director, not part of Algerian national cinema, despite the major contribution of Yacef Saadi.

Saadi was the National Liberation Front (FLN) leader for the autonomous zone of Algiers, and it was his arrest by French General Jacques Massu on September 24, 1957, that brought to an end the Battle of Algiers, which had begun in January of that year with an eight-day general strike called by the FLN. Saadi's book of memoirs, *Souvenirs de la bataille d'Alger* (Memories of the Battle of Algiers, 1962), is often cited as the source of the film (though it is not mentioned in the credits). Saadi also coproduced the film through his own company, Casbah Films, the only independent production company allowed to operate in postliberation Algeria, and he plays the role of the (fictional) insurgent leader, Djafar. But Saadi's direct experience has been shaped into a knowingly constructed film narrative, which, far from offering the Algerian experience from within, presents instead a reflection on this experience from the outside perspective of two committed Italian Marxists, Gillo Pontecorvo and his regular scriptwriter, Franco Solinas.

The film begins at the end of a torture sequence, when the Algerian victim has been broken and has given the required information, and, for the opening credits, shifts smoothly into a French military raid over the roofs and through the alleyways of the casbah to the hiding place of Ali la Plante, the last FLN leader to remain at large. This opening sequence sets the tone and style of the entire film: grainy black-and-white photography and location shooting, but at the same time fast-paced, action-film editing and the emotive use of music. The film's ambiguous attitude to the French torturers is apparent early in the film: they are men doing their job without personal animosity, and the colonel, their leader, is a man who tolerates no joking at the expense of the victim. Italian composer Ennio Morricone's music for the French assault is jaunty and positive, echoing the music used for scenes of Italian partisan raids in neorealist films a decade and a half earlier. From a close-up of the trapped Ali's faced framed in darkness, there is a dissolve into a flashback to Algiers in 1954 and the start of Ali's career.

Ali's story is the conventional tale of a petty criminal who discovers his political awareness when he witnesses a prison execution. The film follows his rise within the FLN from impetuous newcomer to resourceful leader. His story is intercut with scenes of a trio of women who take on the key role of placing bombs in the French quarter of the city, which is ringed with barbed wire and accessible only through heavily guarded checkpoints, but is otherwise unsuspecting and unprepared. There is no attempt to minimize the horror of bomb attacks on defenseless men, women, and children or in any way to condone the French settlers' revenge attacks, which occur with police connivance. The choice of Ali as protagonist—rather than the true leader and planner, Djafar—means that we never see the terror attacks as part of any coherent strategy, with thought-out objectives and tactics, on the part of the FLN. Within the film, the suffering of the Algerian people is depicted as leading "naturally" to the violence, so that the notoriously murderous internecine struggles within the FLN leadership are simply airbrushed out of the picture. Djafar is seen and heard only when he is a man on the run, aware that his very presence within the

city brings danger to his followers. Thus the uprising in *The Battle of Algiers* is shown in narrative terms as an enigma: How is all this violence organized and how can it be stopped?

The man to resolve the enigma and deal with the stalemate of violence and counterviolence, Colonel Mathieu, makes his stirring entry into the film marching proudly at the head of his paratroopers past crowds of cheering settlers. Though we are notionally still within Ali's flashback, it is Mathieu who is the driving force in the film from this point onward. His briefings to his troops are lessons in counterterrorism and his press conferences present the justification for the use of torture by the French. If politicians will the outcome, they have to accept the necessary methods, however distasteful these may be. There is nothing personal about torture: it is just part of a job that has to be done. It is also Mathieu who lucidly points out—as the film takes on an increasingly didactic tone—that winning a battle is not the same as winning a war, and he goes to his next assignment "in the mountains" aware that none of his efforts can ultimately defeat a united Algerian people. His insights form a context in which Ali's choice of death rather than surrender can seem a fitting resolution to his personal story, while the audience can derive a wider emotional satisfaction from the spontaneous popular uprising in Algiers in 1960, which presaged the ending of French rule and with which the film concludes.

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Roy Armes

BATTLE OF THE LITTLE BIG HORN

The Battle of the Little Big Horn took place from June 25 to June 27, 1876, along the river of the same name in what is now south-central Montana. The result is well known. Lakota Sioux, Northern Cheyenne, and a handful from other Northern Great Plains tribes defeated the 7th U.S. Cavalry regiment. The battle included several fights. In a separate engagement, the companies led by Major Marcus Reno (1834–1889; the regiment's second-in-command) weathered a thirty-six-hour siege after warriors thwarted their attack on the Indian camp.

The Custer fight is historically the most visible event of the Little Big Horn affair. Shortly after Reno retreated, on a river bluff about four miles from Reno's defense site, warriors wiped out to the man five companies (approximately 210 men) and their acting regimental commander, Lieutenant Colonel (Brevet Major General) George Armstrong Custer (1839–1876).

The event is indelibly fixed in the American social consciousness. It has been a symbol of bravery and spirit, of folly, and of oppression. This symbolism is largely a function of Custer's presence. Its perception as folly, most visible during socially liberal times, is amply illustrated in the motion picture *Little Big Man* (1970; Dustin Hoffman, Faye Dunaway), and in various biographies, such as Frederic Van de Water's *Glory Hunter* (1934), that portray Custer as an egotist willing to sacrifice others in his pursuit of glory.

Negative conceptions of the Battle of the Little Big Horn have their roots in the attitudes of Custer's contemporaries. Custer had achieved national prominence for his often daring (and usually highly successful) Civil War exploits (see Urwin's *Custer Victorious* [1983]). With success came jealousy, criticism, and accusations. Little Big Horn reinforced such views, ensuring their survival to this day. Conversely, the battle guaranteed Custer and his men symbolic immortality. At a time when the nation was celebrating its centennial, many Americans saw their deaths as noble sacrifices in the service of Manifest Destiny.

Promoters of Custer capitalized on these emotions, especially Custer's widow, Elizabeth (née Bacon; 1842–1933). Libbie (as Custer affectionately called her) never remarried and spent the rest of her long life, as Shirley Leckie chronicles in *Elizabeth Bacon Custer and the Making of a Myth* (1993), carefully constructing the image of an heroic last stand—a steadfast fight to the final man against hopeless odds.

This image of the Battle of the Little Big Horn as a "last stand" has also been promoted by historians and Custer biographers. Charles Kuhlman's *Legend into History* (1951) and Frederick Whittaker's *Complete Life of General George A. Custer* (1876) are but two examples from a voluminous literature. Generally "last stand" symbolism assumes prominence during socially conservative periods; the wartime film epic *They Died with Their Boots On* (1941; Errol Flynn, Olivia de Havilland) exemplifies

this. Here the doomed men fight bravely to the last man, in this case Custer himself.

Whatever the collective social mood of a given period, Custer's "last stand"—as Brian Dippie argues in *Custer's Last Stand: The Anatomy of an American Myth* (1976)—has for the majority of Americans come to symbolize an indomitable American spirit. This is not the case in Native American circles. Rather, the Custer battle symbolizes triumph over oppression, perpetrated against not only Native Americans but also minorities in general (see Deloria's *Custer Died for Your Sins*, 1969). Such symbolism is not confined to the Lakota and Cheyenne; it exists among Native Americans in general, and circulates widely among non-natives as well.

The symbolic value of the Battle of the Little Big Horn dwarfs its military importance. The battle, one of many during the Northern Plains Indian War Period (1862–1877), was a minor event. It had no influence on Indian policy, the foundations of which were formulated over two decades earlier. Nonetheless, followed as it was by the Army's relentless winter campaign (1876/1877), it did indirectly hasten the surrender of Lakota and Northern Cheyenne bands (spring and summer of 1877). The defeated tribes were confined to reservation tracts, including the Great Sioux Reservation (originally the western half of present South Dakota, then reduced to small tracts in the Dakotas and Montana), established in 1868, and the Northern Cheyenne reserve (in south-central Montana), formed by Congress in 1884.

Custer the man permeates studies of the Little Big Horn battle, typically at great peril to objective analysis. Apologists are driven to absolve Custer of blame, most frequently by constructing events in ways that finger Major Reno. Like apologists, anti-Custer factions sometimes go to absurd lengths—but in order to blame Custer for the debacle, not one of his subalterns. Ultimately, the two sides find common ground in "last stand" imagery—whatever the chain of events, and whoever is blamed, Custer's battalion fights to the end against impossible odds.

Only comparatively recently has the venerable notion of a "last stand" been challenged, by Douglas Scott, Richard Fox, and others in two books, *Archaeological Insights into the Custer Battle* (1987) and *Archaeological Perspectives on the Battle of the Little Bighorn* (1989). Using forensic analysis of firing pin marks on spent cartridges systematically recovered from the Custer battlefield, Fox shows in *Archaeology, History, and Custer's Last Battle* (1993) that instead of mounting a resolute stand, Custer's battalion fell apart. Cartridge case patterns show the command maintained tactical order (skirmish lines) initially, but subsequently lost cohesion. Denouement came amid panic and fear. Numerous eyewitness reports by Indian warriors support this interpretation. They speak of soldiers who "acted as if drunk," "threw down their guns," and so on. Native testimonies also indicate the end came in half an hour or so.

In the new synthesis, two independent lines of evidence—the material and documentary records—converge, providing interpretive confidence. Before the gathering of archaeological evidence, studies of the Battle of the Little Big Horn relied solely on highly contradictory historical documentation, which was easily manipulated in support of one or another preconceived notion of Custer and his men.

The historical-archaeological synthesis has not ended debate in Custer battle studies—but the case for a "last stand" is now far more difficult to argue. Authors who wish to keep this image of the battle alive—for example, Gregory Michno in *Lakota Noon* (1997)—are typically compelled to resort to special pleading, circular reasoning, revision, and selective use of evidence.

SEE ALSO *Archaeology*

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Richard A. Fox

BAUER, BRUNO

SEE *Imperialism.*

BAUMRIND, DIANA

1927–

Diana Baumrind's seminal work on research ethics and parenting styles has shaped research and practice since the 1960s. Baumrind earned her undergraduate degree from Hunter College in 1948 and her PhD from the University of California, Berkeley, in 1955. Following a postdoctoral residency at Cowell Hospital, Baumrind joined the Institute of Human Development at the University of California, Berkeley, where she heads the Family Socialization and Developmental Competence Project as of 2007.

RESEARCH ETHICS

In response to Stanley Milgram's 1963 study of obedience to authority, Baumrind published an influential commentary on research ethics (1964). Baumrind has continued to address ethical issues in research on humans through consultation with the American Psychological Association and published work. On the use of deception in research, Baumrind has emphasized multiple levels of potential harm: to the participant, to the credibility of psychology as a profession, and to society.

PARENTING STYLES

In 1966 Baumrind published a ground-breaking article on parenting styles, followed by a 1967 article with Allen Black examining the effects of parenting styles on girls' and boys' development. Baumrind's three parenting styles involve different combinations of parental demand and control (confrontation, monitoring, consistent discipline, punishment) and responsiveness and affection (warmth, attachment, reciprocity, friendly discourse). Authoritative parents are moderately to highly demanding and highly responsive. Their children tend to be assertive, able to regulate themselves, socially responsible, and respectful to adults. Authoritarian parents are highly demanding and unresponsive to their children. Children of authoritarian parents tend to be moody, fearful of new situations, and low in self-esteem. Permissive parents are undemanding and nondirective. They are responsive to their children and avoid confrontation. Their children tend to be creative, sociable, and friendly, but may also be impulsive, aggressive, and resistant to limit setting. In 1983 Eleanor Maccoby and John Martin proposed a fourth style, uninvolved parenting. Uninvolved parents are undemanding and unresponsive, and their children may participate in deviant or high-risk behaviors.

Baumrind's typology has formed the foundation for much research on parental socialization of children and children's developmental outcomes. In her own work, Baumrind has examined parenting styles in parents of children of preschool age through adolescence. Outcomes that Baumrind has examined encompass academic achievement, emotion regulation, moral development, peer relations, social skills, substance abuse, and teenage sexuality. Baumrind has found authoritative parenting to be associated with better outcomes for children. This parenting style provides a model for children of care and concern for others' needs and of confident and controlled behavior. Beginning in the late 1980s, researchers expanded Baumrind's paradigm to families with low incomes and from diverse cultural backgrounds. Despite cultural differences in the degree of endorsement of different parenting styles and in the strength of the association of authoritative parenting with better outcomes in children, Baumrind's typology has been largely supported.

More controversial has been Baumrind's stance on physical punishment. While Baumrind argues that occasional, mild physical punishment may not lead to negative long-term outcomes in children when used as part of an overall authoritative parenting style, other researchers contend that parents' greater use of physical punishment is associated with negative outcomes in children and that such use may escalate to physical abuse (Gershoff 2002b, p. 609). A point of agreement is that cultural norms regarding physical punishment influence the extent to which such punishment is perceived as harsh and is likely to have negative outcomes.

SEE ALSO *Milgram, Stanley; Parenting Styles*

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BAUXITE INDUSTRY

Bauxite is the only commercially viable ore used as a source material for primary aluminum production. After iron, aluminum is the world's second most used metal, having a wide variety of applications in transportation and packaging. Most of the world's bauxite reserves and production are found in a wide belt around the equator, with Australia, Brazil, Guinea, China, Jamaica, and India being the world's leading producers. While short-term demand for bauxite depends upon the demand for aluminum and is therefore cyclical, supplying countries have sufficient reserves to meet long-term projected demand for the foreseeable future.

The separation of primary aluminum from the other elements found in bauxite involves a distinct two-stage production process. First, 4 to 5 tons of bauxite is chemically refined into 2 tons of the white powder alumina (aluminum oxide), then these 2 tons of alumina are smelted into 1 ton of aluminum ingot. Both processes are highly capital intensive, and smelting is also highly electricity intensive. Of the bauxite mined worldwide, about 95 percent is converted to alumina; the remaining 5 percent is used in other applications such as abrasives and cement additives.

The world aluminum industry, from mining to fabrication, is both highly concentrated and vertically integrated. Multinational aluminum companies typically mine bauxite, which then feeds their alumina refinery operations, which then often feeds their own smelters. As a result, open markets do not generally exist for bauxite. Nearly all bauxite consumed in the United States is imported, mostly from Guinea and Jamaica.

Most of the world's bauxite reserves are found in developing countries, but these countries account for a much smaller percentage of world alumina production and very little of the world's aluminum production. Although bauxite and alumina production can typically play significant roles in terms of foreign exchange and gross domestic product in these economies, these capital-intensive production processes do not typically have significant macroemployment effects.

Nearly all of the world's bauxite is produced through opencast mining. This can have significant environmental effects, including detrimental effects on flora and fauna, water runoff resulting in groundwater contamination and soil erosion, and generation of dust affecting surrounding areas. The *Third Bauxite Mine Rehabilitation Survey*, published by the International Aluminum Institute in 2004, details these impacts and the progress that the industry has made at protection and reclamation.

Jamaica provides an example of the importance to the industry of a relatively small country and the key role that the industry plays in a supplying country's economy. Bauxite and alumina account for more than half of Jamaica's exports, and they are the country's second leading source of foreign exchange after tourism. The country's relationship with the industry has been historically confrontational. In the 1970s Jamaica was instrumental in forming an attempted bauxite cartel, the now defunct International Bauxite Association, while simultaneously but unilaterally implementing a domestic bauxite production levy. At the time, Jamaica was the world's leading producer of bauxite. After periods of industry stagnation and even contraction, the government changed approaches, and now directly participates in consortia with several of the world's leading aluminum companies in the country's bauxite and alumina operations. It has also replaced the bauxite levy with taxation on profits.

Two major issues face the industry: environmental impacts, and the desire by supplying countries to accrue a larger share of the benefits (income and employment) resulting from the downstream processing of their bauxite. The experiences of Jamaica and other countries have taught supplying countries and multinationals that direct equity participation in bauxite and alumina consortia by private or public supplying country partners is the most effective way to protect various stakeholders' interests.

SEE ALSO *Caribbean, The; Mining Industry*

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BAY OF PIGS

The Bay of Pigs invasion flowed from a directive signed by Republican President Dwight D. Eisenhower on March 17, 1960, authorizing the U.S. Central Intelligence Agency (CIA) to begin operations to remove the Castro government from power in Cuba (Kornbluh 1998, p. 269). This quickly evolved into a plan to land an invasion force of some 1,200 Cuban exiles near the city of Trinidad, Cuba, at the foot of the Escambray Mountains. The invasion force, called the Brigade 2506, trained in Central America and by the end of 1960 was making final preparations for the landing.

Meanwhile, however, presidential elections had been held in the United States. Vice President Richard Nixon, the Republican candidate, lost, and the Democratic candidate, Senator John F. Kennedy, won. The latter might have been expected to cancel the invasion plan, once informed of it, but this would have been difficult for him to do. During the election campaign, he had sharply criticized the Eisenhower-Nixon administration for allowing this Communist foothold to emerge only 90 miles to the south of the United States. Had he canceled the invasion, the Republicans would doubtless have gone public and pointed out that they had had a plan to remove the "foothold," but Kennedy had abandoned it.

Further, Kennedy quickly developed confidence in Richard Bissell (1910–1994), the CIA's deputy director for plans, who was masterminding the operation (Wyden 1979, p. 96). Thus, Kennedy let the invasion plan go forward. He did insist, however, that a landing so near the city of Trinidad would be "too spectacular," and requested that it be moved to a more remote location (Wyden 1979, p. 100). Bissell obligingly moved the site some 70 miles to the west, to the Bay of Pigs (Bahía de Cochinos). This meant, however, that if the invasion failed, the invaders could not melt away into the mountains and become guerrillas, as Bissell had suggested to Kennedy, for the mountains were now far away across impenetrable swamps (Wyden 1979, p. 102).

The invasion force of approximately 1,200 exiles seemed totally inadequate to the task at hand, given that they would face a regular army of 60,000 armed with Soviet tanks and artillery, and backed by a militia force of 100,000. Bissell assured Kennedy, however, that the invasion would spark a massive popular uprising against Fidel Castro. Unfortunately, this assurance was not based on any hard intelligence. Indeed, it turned out to be utterly baseless (Kornbluh 1998, p. 12).

Preparatory air strikes against Cuban airfields, flown by exile and CIA pilots operating from Central America, were quickly revealed to be exactly that and not strikes by defecting Cuban pilots, as the United States claimed. Adlai Stevenson (1900–1965), the U.S. ambassador to the United Nations (UN), was deliberately misinformed by the White House, however, and gave a speech in the UN saying the raids had been carried out by defecting Cuban pilots. Outraged when he found out the truth, he complained to Kennedy, who ordered the next day's air cover to be canceled. Nevertheless, as the CIA's own report on the operation later stated, this was not "the chief cause of failure" (Kornbluh 1998, p. 12). The chief cause, rather, was the glaring disparity between the numbers of the invading force and the number of defenders. The former never really had a chance. They went ashore in the early morning hours of April 17, 1961, and by 2 p.m. of April 19, facing overwhelming odds, were forced to surrender. In retrospect, that surrender seemed so inevitable that the Bay of Pigs invasion came to be described as that rarest of all things—a perfect failure (Smith 1987, p. 70).

The failure of the United States at the Bay of Pigs had three crucial consequences. First, it solidified Castro in power. Second, seeing that if the United States used its own forces, he would need Soviet support to survive, to persuade Moscow to provide that support, Castro announced on April 16 that Cuba was a "socialist" state and he began to transform it into one, with a system patterned after the Soviet Union. And third, flowing in part from this transformation, Nikita Khrushchev the next year decided to place missiles in Cuba, thus leading to the October missile crisis of 1962.

SEE ALSO *Castro, Fidel; Central Intelligence Agency, U.S.; Cold War; Communism; Cuban Missile Crisis; Cuban Revolution; Democratic Party, U.S.; Eisenhower, Dwight D.; Kennedy, John F.; Republican Party; Socialism*

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Wayne S. Smith

BAYES' THEOREM

With one posthumous publication on probability, Reverend Thomas Bayes inspired the development of a new approach to statistical inference known as Bayesian

Inference. "An Essay Toward Solving a Problem in the Doctrine of Chances" was published in 1764, but its impact was not felt until nearly two hundred years after his death, when in the 1950s Bayesian statistics began to flourish. His work remains at the center of one of the main intellectual controversies of our time.

Bayes was the first to solve the problem of inverse probability. In its simplest form, given two events A and B with nonzero probability, the probability of A and B can be written as:

(1) $\Pr(A \text{ and } B) = \Pr(A|B)*\Pr(B)$ or

(2) $\Pr(A \text{ and } B) = \Pr(B|A)*\Pr(A)$

Equating both right hand sides of (1) and (2) yields:

(3) $\Pr(A|B) = \Pr(B|A)*\Pr(A)/\Pr(B)$

In words, given the conditional probability of B given A, $\Pr(B|A)$, one can obtain the reverse conditional probability of A given B, $\Pr(A|B)$. For example, given that r heads out of n coin flips are observed, what is the probability of a head in a single coin flip? This allows one to work backwards, given the outcome or effect, to discover what is the probability of the cause. Viewed in this manner there is no controversy concerning Bayes' theorem. It is a direct consequence of the laws of probability. However, viewing A as the parameters θ and B as the sample D one obtains the following result from Bayes' theorem:

(4) $P(\theta|D) = P(D|\theta)*P(\theta)/P(D)$

where $P(\theta|D)$ = posterior distribution of the parameters given the information in the sample

$P(D|\theta)$ = likelihood function summarizing the information in the sample

$P(\theta)$ = prior distribution of the parameters before the data is observed

and $P(D)$ = normalizing constant so that one obtains a proper posterior distribution.

In words, (4) states that:

(5) posterior distribution α likelihood x prior distribution,

where $\propto$ represents the relation "is proportional to."

This relation is the foundation of Bayesian statistical inference, with the posterior distribution being the main component of statistical analysis. This provides a formal process of subjective learning from experience by showing how one can revise or update prior beliefs about parameters in the light of relevant sample evidence. The role of judgment or outside information in statistical modeling is made explicit in the Bayesian approach. The Bayesian approach views the parameters of the model as being random, and thus one can make meaningful probability statements about the parameters.

There are two major issues of contention in the Bayesian approach. The first is the subjective, or reasonable degree of belief, view of probability, which differs from the classical view of probability as the limit of the relative frequency of an event occurring in infinite trials. The second issue is the necessity and choice of an accurate prior distribution incorporating known information. The controversy over views of probability is a philosophical one that has yet to be resolved. Bayesians have suggested a wide variety of possible approaches for obtaining the prior distribution. The Bayesian approach requires more thought and effort, and thus the classical approach has a significant advantage in that it is much easier to apply in practice. The debate and interaction between these two contrasting approaches to statistical inference promises to lead to fruitful developments in statistical inference. Donald Gillies asks the interesting question, "Was Bayes a Bayesian?" and concludes, "Yes, he was a Bayesian, but a cautious and doubtful Bayesian" (1987, p. 328).

SEE ALSO *Bayesian Econometrics; Bayesian Statistics; Classical Statistical Analysis; Probability Theory; Statistics*

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William Veloce

BAYESIAN ECONOMETRICS

Bayesian econometrics employs Bayesian methods for inference about economic questions using economic data. In the following, we briefly review these methods and their applications.

Suppose a data vector $X = (X_1, \ldots, X_n)$ follows a distribution with a density function $p_n(x|\theta)$ which is fully characterized by some parameter vector $\theta = (\theta_1, \ldots, \theta_d)'$. Suppose that the prior belief about θ is characterized by a density $p(\theta)$ defined over a parameter space Θ, a subset of a Euclidian space $\mathbb{R}^d$. Using Bayes's rule to incorporate the information provided by the data, we can form posterior beliefs about the parameter θ, characterized by the posterior density

$$p_n(\theta \mid X) = p_n(X \mid \theta)p(\theta)c,$$
$$c = 1 / \int_{\Theta} p_n(X \mid \tilde{\theta})p(\tilde{\theta})d\tilde{\theta}. \quad (1)$$

The posterior density $p_n(\theta|X)$, or simply $p_n(\theta)$, describes how likely it is that a parameter value θ has generated the observed data X. We can use the posterior density to form optimal point estimates and optimal hypotheses tests. The notion of optimality is minimizing mean posterior loss, using various loss functions. For example, the posterior mean

$$\hat{\theta} = \int_{\Theta} \theta\, p_n(\theta)\, d\theta, \quad (2)$$

is the point estimate that minimizes posterior mean squared loss. The posterior mode θ^* is defined as the maximizer of the posterior density, and it is the decision that minimizes the posterior mean Dirac loss. When the prior density is flat, the posterior mode turns out to be the maximum likelihood estimator. The posterior quantiles characterize the posterior uncertainty about the parameter, and they can be used to form confidence regions for the parameters of interest (Bayesian credible regions). The posterior α-quantile $\hat{\theta}_j(\alpha)$ for θ_j (the j-th component of the parameter vector) is the number c such that $\int_{\Theta} 1\{\theta_j \leq c\} p_n(\theta)d\theta = \alpha$.

Properties of Bayesian procedures in both large and small samples are as good as the properties of the procedures based on maximum likelihood. These properties have been developed by Pierre-Simon Laplace (1818), Peter Bickel and J. A. Yahav (1969), and Il'dar Ibragimov and R. Z. Has'minskii (1981), among others. With mild regularity conditions (which hold in many econometric applications), the properties include:

(1) consistency and asymptotic normality of the point estimates, including asymptotic equivalence and efficiency of the posterior mean, mode, and median;

(2) asymptotic normality of the posterior density;

(3) asymptotically correct coverage of Bayesian confidence intervals; and

(4) average risk optimality of Bayesian estimates in small and hence large samples.

The regularity conditions for properties (1) and (2) require that the true parameter θ_0 is well identified and that the data's density $p_n(x|\theta)$ is sufficiently smooth in the parameters. Mathematically, property (1) means that

$$\sqrt{n}(\hat{\theta} - \theta_0) \approx \sqrt{n}(\theta^* - \theta_0) \approx$$
$$\sqrt{n}(\hat{\theta}(1/2) - \theta_0) \approx_d N(0, J^{-1}), \quad (3)$$

where J equals the information matrix $\lim_n -\frac{1}{n}\frac{\partial_2 E \ln p_n(X \mid \theta_0)}{\partial\theta\partial\theta'}$, $\approx$ indicates agreement up to a stochastic term that approaches zero in large samples, and $\approx_d N(0, J^{-1})$ means "approximately distributed as a normal random vector with mean 0 and variance matrix J^{-1}." These estimators are asymptotically efficient in the sense of having smallest variance J^{-1} in the class of asymptotically unbiased estimators. Property (2) is that $p_n(\theta)$ is approximately equal to a normal density with mean $\hat{\theta}$ and variance J^{-1}/n. Property (3) means that in large samples

$$Prob[\hat{\theta}_j(\alpha/2) \leq \theta_{0j} \leq \hat{\theta}_j(1-\alpha/2)] \approx 1-\alpha. \quad (4)$$

In nonregular cases, such as in structural auction and search models, consistency and correct coverage properties also continue to hold (Chernozhukov and Hong 2004). Property (4) is implied by the defining property of the Bayes estimators that they minimize the posterior mean risk (Lehmann and Casella 1998). The property continues to hold in nonregular cases, which proved especially useful in nonregular econometric models (Hirano and Porter 2003; Chernozhukov and Hong 2004).

The explicit dependency of Bayesian estimates on the prior is both a virtue and a drawback. Priors allow us to incorporate information available from previous studies and various economic restrictions. When no prior information is available, diffuse priors can be used. Priors can have a large impact on inferential results in small samples, and in any other cases where the identifiability of parameters crucially relies on restrictions brought by the prior. In such cases, selection of priors requires a substantial care: See Gary Chamberlain and Guido Imbens (2003, 2004) for an example concerning simultaneous equations, and Harald Uhlig (2005) for an example dealing with sign restrictions in structural vector autoregressions. Conversely, priors should have little impact on the inferential results when the identifiability of parameters does not crucially rely on the prior and when sample sizes are large.

The appealing theoretical properties of Bayesian methods have been known for many years, but computational difficulties prevented their wide use. Closed-form solutions for estimators such as (2) have been derived only for very special cases. The recent emergence of Markov Chain Monte Carlo (MCMC) algorithms has diminished the computational challenge and made these methods attractive in a variety of practical applications; see for example, Christian Robert and George Casella (2004) and Jun Liu (2001). The idea of MCMC is to simulate a possibly dependent random sequence, $(\theta^{(1)}, \ldots, \theta^{(B)})$, called a chain, such that stationary density of the chain is the posterior density $p_n(\theta)$. Then we approximate integrals such as (2) by the averages of the chain, that is, $\hat{\theta} \approx \sum_{k=1}^{B} \theta^{(k)}/B$. For computation of posterior quantiles, we simply take

empirical quantiles of the chain. The leading MCMC method is the Metropolis-Hastings (MH) algorithm, which includes, for example, the random walk algorithm with Gaussian increments generating the candidate points for the chain. Such random walk is characterized by an initial point u_0 and a one-step move that consists of drawing a point η according to a Gaussian distribution centered on the current point u with covariance matrix $\sigma^2 I$, then moving to η with probability $\rho = \min\{p_n(\eta)/p_n(u), 1\}$ and staying at u with probability $1 - \rho$. The MH algorithm is often combined with the Gibbs sampler, where the latter updates components of θ individually or in blocks. The Gibbs sampler can also speed up computation when the posterior for some components of θ is available in a closed form. MCMC algorithms have been shown to be computationally efficient in a variety of cases.

The classical econometric applications of Bayesian methods mainly dealt with the classical linear regression model and the classical simultaneous equation model, which admitted closed-form solutions (Zellner 1996; Poirier 1995). The emergence of MCMC has enabled researchers to attack a variety of complex nonlinear problems. The recent examples of important problems that have been solved using Bayesian methods include:

1. discrete choice models (Albert and Chib 1993; Lancaster 2004);
2. models with limited-dependent variables (Geweke 2005);
3. nonlinear panel data models with individual heterogeneity (McCulloch and Rossi 1994; Lancaster 2004);
4. structural vector autoregressions in macroeconomics, including models with sign restrictions (Uhlig 2005);
5. dynamic discrete decision processes (Geweke, Keane, and Runkle 1997; Geweke 2005);
6. dynamic stochastic equilibrium models (Smets and Wouters 2003; Del Negro and Schorfheide 2004);
7. time series models in finance (Fiorentini, Sentana, and Shephard 2004; Johannes and Polson 2003); and
8. unit root models (Sims and Uhlig 1991).

Econometric applications of the methods are rapidly expanding.

There are also recent developments that break away from the traditional parametric Bayesian paradigm. Jayanta Ghosh and R. V. Ramamoorthi (2003) developed and reviewed several nonparametric Bayesian methods. Chamberlain and Imbens (2003) developed Bayesian methods based on the multinomial framework of Thomas Ferguson (1973, 1974). In models with moment restrictions and no parametric likelihood available, Victor Chernozhukov and Han Hong (2003) proposed using an empirical likelihood function or a generalized method-of-moment criterion function in place of the unknown likelihood $p_n(X|\theta)$ in equation (1). This permits the application of MCMC methods to a variety of moment condition models. As a result, there are a growing number of applications of the latter approach to nonlinear simultaneous equations, empirical game-theoretic models, risk forecasting, and asset-pricing models. The literature on both theoretical and practical aspects of various nonparametric Bayesian methods is rapidly expanding.

SEE ALSO *Econometrics; Least Squares, Ordinary; Regression; Regression Analysis; Simultaneous Equation Bias*

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Victor Chernozhukov

BAYESIAN INFERENCE

SEE *Inference, Bayesian.*

BAYESIAN STATISTICS

Bayesian statistics is concerned with the relationships among conditional and unconditional probabilities. Suppose the sampling space is a bag filled with twenty black and eighty white balls. The probability of a white ball being drawn at random is .8, as defined by the relative frequency of such balls. If three more bags with seventy black and thirty white balls each are in play and a ball is drawn at random from one bag, the probability of it being white is .8 · .25 + .3 · .75 = .425. Once a white ball is in evidence, the probability that it was drawn from the bag containing mostly white balls is larger than .25, and the probability that it was drawn from a bag containing mostly black balls is less than .75. The estimation of these *inverse probabilities* is the object of Bayes's theorem.

Let the idea that the obtained white ball came from the bag containing mostly white balls be H, for "hypothesis," and the idea that the ball came from a bag containing mostly black balls be ~H; let the drawing of a white ball be E, for "evidence." Bayes's theorem states that $p(H|E) = \frac{p(E|H)\cdot p(H)}{p(E|H)\cdot p(H) + p(E|\sim H)\cdot p(\sim H)}$ $= \frac{p(E|H)}{p(E)}\cdot p(H)$, here .471. The ratio of $\frac{p(H|E)}{p(H)}$ expresses the degree to which the probability of H changes in light of the evidence. This degree of probability change can be seen before the posterior probability of H is calculated because $\frac{p(H|E)}{p(H)}$ is equal to the ratio $\frac{p(E|H)}{p(E)}$, here 1.882.

The prior probability of a hypothesis constrains the degree to which it can be changed by evidence. If the evidence supports the hypothesis, the magnitude of the Bayesian revision decreases as the prior probability becomes larger. Consider the odds version of Bayes's theorem, which is $\frac{p(H|E)}{p(\sim H|E)} = \frac{p(E|H)}{p(E|\sim H)}\cdot\frac{p(H)}{p(\sim H)}$. Now, $\frac{p(H|E)}{p(H)} = \frac{p(E|H)}{p(E|\sim H)}\cdot\frac{p(\sim H|E)}{p(\sim H)}$, which is equal to $\frac{p(E|H)}{p(E|\sim H)}\cdot\frac{p(E|\sim H)}{(pE|\sim H)\cdot p(\sim H) + (pE|H)\cdot p(H)}$. Note that a larger p(H) reduces the second ratio, and thus reduces the product of the two ratios (where the first ratio > 1 if the evidence supports H). Analogously, a large p(H) leads to a stronger updating if the evidence is contrary to H.

The Reverend Thomas Bayes (1702–1761) worked out his eponymous theorem, but his solution was only published two years posthumously (see Stigler 1999). The validity of the theorem is given by its mathematical coherence. Any of its constituent probabilities can be recovered if the others are known. As a model of scientific and of everyday inference, the theorem formalizes inductive reasoning. Scientists seek to corroborate or discredit certain hypotheses, and laypeople (and animals) need to mold their beliefs at least in part with reference to the observations they make. For inductive reasoning, not only the

probable truth of certain beliefs is of interest, but also the probability that certain events will recur. In the previous example, the sampling of one white ball not only alters the probability that any particular bag was sampled, it also increases the probability that a white ball will be sampled again (assuming the next draw will be made from the same bag).

In the short run, the revision of the probability of the evidence may not reduce uncertainty. In the present example, where p(E) rises from .425 to .535, one would be slightly less confident to bet on any particular color for the next draw. Over repeated sampling, however, p(E) converges on either p(E|H) or on p(E|~H), and p(H) converges on 0 or 1. Prior uncertainty is greatest when there are many equiprobable hypotheses. If there were 101 bags, each with the different proportion of white balls, p(E) = .5. Pierre-Simon Laplace's (1749–1827) *rule of succession* states that once a sample is drawn, the probability that the next draw (after replacement) will replicate the result is $\frac{k+1}{n+2}$, where k is the number of successes and n is the sample size. For an infinite number of hypotheses, this rule is obtained with integral calculus.

Bayesian alternatives to conventional hypothesis testing, confidence-interval estimation, meta-analysis, and regression are available, though computationally cumbersome. In practice, most researchers remain committed to orthodox methods that exclude prior knowledge. Fisherian null hypothesis significance testing, for example, yields the probability of the evidence under the null hypothesis, p(E|H). What the researcher really wants, namely p(H|E), cannot be estimated because, in the absence of p(E|~H), the likelihood ratio remains undefined. If, however, the researcher specifies ~H (as in the Neyman-Pearson approach) and assigns a probability to it, p(H|E) can be quantified. Indeed, prior probabilities can be represented as a distribution over possible outcomes. The mean of the posterior distribution is given by the weighted average of the prior mean and the empirical mean of the data, where the weights depend on the relative precision (i.e., the reciprocals of the variance of the means) of the prior mean and the mean of the data. Likewise, the standard deviation of the posterior distribution becomes smaller as the precision of the prior distribution or the distribution of the data increases (see Howard et al. [2000] for formulas and a numerical example).

Despite their reluctance to use Bayesian statistics for data analysis, many social and cognitive psychologists model the reasoning processes of their research participants along Bayesian lines (Krueger and Funder 2004). Any reasoning activities involving decisions, categorizations, or choices are natural candidates. Given some probative evidence, people need to decide, for example, if a person is male or female, guilty or innocent, healthy or sick. Likewise, they need to decide whether they should attribute a person's behavior to dispositional or situational causes, and how much they should yield to a persuasive message. Even strategic choices between cooperation and defection in social dilemmas depend on what people assume others will do, given their own presumed choices.

The question of whether everyday reasoning satisfies Bayesian coherence remains controversial. In some contexts, such as jury deliberations, people appear to form their beliefs on the basis of narrative, not probabilistic, coherence. In other contexts, such as the Monty Hall problem, they fail to see how Bayes's theorem can be readily applied. These difficulties can partly be overcome by altering the presentation of the problem. For example, diagnostic decisions in medicine are improved when the data are presented as frequencies instead of probabilities.

Many orthodox significance testers, who disavow the estimation of inverse probabilities, reveal implicit Bayesianism in their research practice. After a series of successful experiments, the probability of the null hypothesis being true becomes very small, and reasonable researchers desist from wasting further resources. The evidence of the past becomes the theory of the present, thus blurring the distinction between the two. Other hypotheses, such as the idea that a concerted mental concentration of a collective of people can alter the earth's magnetic field, are so improbable a priori that even devout Fisherians would not consider testing them.

SEE ALSO *Prediction; Probability; Psychometrics; Regression*

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Joachim I. Krueger

BEAR MARKET

SEE *Bull and Bear Markets.*

BEARD, CHARLES AND MARY

The American historian Charles Austin Beard (1874–1948) in 1900 married Mary Ritter (1876–1958), a fellow Indiana-born DePauw student who became his lifelong intellectual companion and in her own right a pioneering historian of women. Mary followed Charles to Oxford University in 1900 and later enrolled for graduate work at Columbia University (1902), but pressures of child rearing and her growing involvement in Progressive community causes ended her work there. Charles Beard studied British legal institutions for his PhD in political science at Columbia, where he taught history (1904–1917); there he also wrote textbooks on European history with James Harvey Robinson and joined the New History movement to revitalize historical practice. Members of the New History movement, or Progressive historians, as they were also known, reoriented history toward solving current problems and integrated social, economic, and intellectual subjects into their political narratives. Beard was not only a Progressive but also a political activist seeking reform of government through the application of academic knowledge when he joined the New York Bureau of Municipal Research in 1914. Resigning from Columbia in protest over the dismissal of an antiwar colleague in 1917, Beard became increasingly dissatisfied with conventional academia as too intellectually conservative, and he helped to found the interdisciplinary and Progressive-oriented New School for Social Research (1919).

Though trained as an historian, Beard's contribution straddled the porous borderland between the politics and history disciplines of the era. He wrote, among other works, *American Government and Politics* (1910), *American City Government* (1912), and *The Economic Basis of Politics* (1922). In 1927 he became president of the American Political Science Association, though historians continued to claim his allegiance, and he served as American Historical Association (AHA) president in 1933. Beard assumed a key role in the AHA's attempted reform of high school history curricula as part of the Carnegie-funded Commission on the Social Studies in Schools (1929–1934). While working on the commission, he advocated in *A Charter for the Social Sciences in the Schools* (1932) the integration of the social sciences around Progressive history.

Beard was an avowed exponent of the economic interpretation of history as the study of interest groups, though he was not committed to class analysis in a Marxist sense. His controversial *An Economic Interpretation of the Constitution* (1913) examined the relationship of economics and politics at the Federal Convention of 1787, showing a clash of landed and mercantile property interests. His study of Treasury records revealed that those favoring the Federalist position held securities likely to be repaid if a federal government with a stronger financial basis were established; in a similar interpretive vein, he also wrote *Economic Origins of Jeffersonian Democracy* (1915). Empirical studies and a counter-Progressive trend in historiography eventually challenged his account of the Constitution, revealing a much more complex array of economic interests within the Federal Convention. His larger intellectual dominance faded by the 1950s, but in the meantime, he had influenced a generation of scholars from the 1920s. Increasingly he had become a public intellectual, reaching a wide audience through popular history books written with his wife.

Mary Beard not only served as a coworker, but also influenced his intellectual vision. She was herself an activist who worked in the suffrage and trade union movements before World War I. Seeing supposedly "objective" scientific history as biased because historians did not recognize women's past contributions to human society, she stimulated Charles Beard's relativist views. These later became a foundation for his presidential address to the AHA, "Written History as an Act of Faith," which enunciated his "frame of reference" approach to historical knowledge. Mary and Charles collaborated on *The Rise of American Civilization* (1927), a work that sold more than 130,000 copies in early editions and won wide acclaim along with its successor volumes *America in Midpassage* (1939) and *The American Spirit* (1942). *The Rise of American Civilization* innovatively interpreted the Civil War (1861–1865) and Reconstruction (1865–1877) as a second American Revolution in which the forces of a (Northern) industrial civilization overcame the agrarian South. The volumes together sought to capture a synthetic view of a holistic and unique civilization shaped by American material abundance, thus linking the economic interpretation to cultural and social history. Mary added much social and cultural history thematic material and textual evidence to these works that examined media, urban life, and social reform.

Mary Beard also wrote on her own, most notably *Woman as Force in History* (1946), in which she argued that women as much as men had shaped society over the course of human social evolution, and she criticized male historians for neglecting to recognize those contributions. The book did not achieve the success that she had hoped for, but later feminist scholars rediscovered its pioneering ideas. Her efforts to stimulate collection of women's history archives, begun in 1935, added to this legacy concerning her pioneering role.

In their later years the Beards became increasingly alienated from the American mainstream as Charles espoused political isolationism and attacked the foreign policy of Franklin Roosevelt in *President Roosevelt and the*

Coming of the War: A Study in Appearances and Realities, 1941 (1948), but their legacy continued to influence the "consensus" historians of the 1950s, who tried to transcend the Beards' work.

SEE ALSO *Gilded Age*

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Ian Tyrrell

BEAUTY CONTEST METAPHOR

John Maynard Keynes, in his famous chapter 12 of the *General Theory of Employment, Interest, and Money* (1936), wrote of the ways in which "enterprise" (the attentive study of fundamentals) would become less important to the workings of the stock market, and of the ways that "speculation" (predicting the psychology of the crowd under conditions of radical uncertainty) would increasingly determine market outcomes. In doing so, he likened speculation to a beauty contest run by a newspaper, where the winner is not the candidate that is the most beautiful (by some set standard), but the candidate that most people think is the most beautiful. If one wants to win, therefore, one does not choose the candidate one actually thinks is the most beautiful, but the candidate one thinks most other people will think is the most beautiful.

But there is a problem. As soon as one thinks this way, one imagines others may be thinking this way as well. One must then choose not the candidate one thinks most people think is the most beautiful, but the candidate one thinks most people think most people think is most beautiful. But as soon as one thinks this way, one again imagines others will think this way as well, and so on and so forth. This phenomenon, when agents consider not only their own forecasts but the forecasts of others and their forecasts of others, has been referred to as higher-order beliefs (Monnin 2004) or endogenous uncertainty (Kurz 1974).

It is easy to see how this approach can be used as a metaphor for the stock market. A trader is not interested, strictly speaking, in the "fundamentals" of a company, such as market outlook and technological capabilities, because if no one else buys that stock it really doesn't matter. Its price will not rise. On the other hand, even if the fundamentals of a company do not look promising, if others believe that it is a good buy, for whatever reason, they will buy the stock and its price will rise. The lesson is not to buy the stock of a company one thinks is the best by some particular standard, but to buy the stock of a company one thinks others think is the best. But this soon leads to the same conundrum as occurs in the beauty contest, with the investor perpetually trying to stay one step ahead of everyone else. Keynes wrote that on a normal day this could expand to up to "four or five" iterations. In other words, a trader will be trying to anticipate what stocks on average "people think that people think that people think that people think that people think" are the best. At this point, values are completely separated from underlying fundamentals, and some of the best minds are engaged not in productive enterprise but guessing at mass psychology, subject to waves of optimism and pessimism, sometimes in response to phenomena difficult to get a handle on, or even to seemingly irrelevant factors. It has been shown, both theoretically and empirically, that such markets are highly volatile (see Monnin 2004).

SEE ALSO *Casino Capitalism; Economic Psychology; Economics, Keynesian; Financial Instability*

Hypothesis; Financial Markets; Keynes, John Maynard; Speculation; Stock Exchanges; Stocks

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Mathew Forstater

BECKER, GARY S.
1930–

Born in Pottsville, Pennsylvania, Gary Becker obtained his undergraduate education at Princeton University. He did his graduate work in the economics department at the University of Chicago, where his interest in social issues was reinforced by the intellectual prowess and encouragement of his mentors, foremost Milton Friedman, but Gregg Lewis and T. W. Shultz as well. There he wrote his dissertation on the economics of discrimination in 1957.

After serving a few years as assistant professor, he moved to Columbia University in New York City, where he spent twelve years combining teaching with research at the National Bureau of Economic Research. During this period Becker produced perhaps his most influential work, *Human Capital* (1964), and published his seminal papers on fertility in 1960, the allocation of time in 1965, and crime and punishment in 1968. He returned to Chicago in 1969, where he produced his *Treatise on the Family* (1981, expanded in 1991), and has continued to develop his economic way of looking at behavior.

Becker received the John Bates Clark Medal in 1967. His contributions won him the Nobel Prize in economic sciences in 1992. His professional and public contributions include serving as President of the American Economic Association in 1987, writing the Economics Viewpoint column in *BusinessWeek* from 1985 to 2004, and co-authoring the popular Becker-Posner Internet Blog with Richard Posner.

METHODOLOGY

Becker remains one of the most creative and influential economists in the early-twenty-first century. To characterize his vast theoretical contributions is a daunting task, which is helped by Becker's own characterization of his work, as well as by attempts by others, including Sherwin Rosen, Agnar Sandmo, Ramon Febrero and Pedro Shwartz, and the Nobel Committee, to assess it. All recognize at least four areas of impact: discrimination, crime and punishment, human capital, and the family, to which should be added Becker's work on economic growth. Another way to characterize Becker's impact is by the methodological features that unite his work. For example, he applies the basic principle of rational behavior—preference maximization subject to objective opportunities or constraints—to all human behavior rather than merely behavior in the marketplace. Becker facilitates such applications by enriching the specification and interpretation of relevant opportunities and preferences, including explicit and implicit markets in which economic agents interact. He expanded both the *opportunity set* to incorporate time as a major scarce resource, and the structure of preferences to allow for material self-interest, as well as altruism, hate, discrimination, and moral values, emphasizing also the role of past experiences and social interactions in shaping these preferences.

Armed with these methodological innovations Becker expanded the boundaries of economics into areas that were traditionally the domain of sociology and political science. He pursues human behavior *from cradle to old age*, more or less in that order: discrimination, fertility, investment in human capital, time allocation, illegal behavior, self-protection, family behavior, politics, addiction, demographic change and economic growth, and social economics. More recently, Becker shifted his interest to health and aging issues.

MODELS: HUMAN CAPITAL, HUMAN BEHAVIOR, FAMILY BEHAVIOR

Another feature of Becker's work is the formulation of models that produce empirically testable implications, in the tradition of Friedman's positive economics. He explains variations in human behavior by focusing on the role of varying opportunities and market conditions rather than shifting tastes or deviations from rationality.

Becker's work on discrimination was his first undertaking of an important social problem. By its economic definition, discrimination in the marketplace exists when employers, employees, or consumers are willing to incur costs in order to refrain from entering into transactions with other agents because of their race, gender, or religion. Such behavior yields private utility to those with a taste for discrimination but creates misallocation of resources and lowers economic efficiency. The theory explains not only why discrimination exists but also the variations in

its prevalence and impact on segregation and wage disparity over time and space based on varying production technologies, competition, population shares of the discriminating and discriminated groups, distribution of tastes for discrimination, government intervention, and economic growth.

The literature on human capital did not begin with Becker. However, he formulated and formalized the basic micro foundations and equilibrium analysis that transformed it into a theory of investment in various forms of human capital, wage differentials, and earning distribution. Becker's model, bolstered by the parallel development of Jacob Mincer's human-capital-earnings functions, has had a profound impact on the measurement of private and social rates of return to schooling and training and offered important insights concerning *general* and *specific* training, bonding between employers and employees, optimal wage contracts, and the sources of inequality in the distribution of labor income. The overarching importance of human capital has made the work relevant in virtually all areas of economic inquiry.

Crime and punishment was an area of inquiry of classical economists such as Cesare Beccaria, William Paley, and Jeremy Bentham, but Becker offered a systematic treatment of crime and public law enforcement, using optimization analysis and welfare theory. Taking offenders to be responsive to incentives, he applied the basic principles of rational behavior to specify their reaction to probability and severity of punishment. The main thrust of the work has been to derive propositions about optimal enforcement strategies concerning the balance between probability and severity of punishment, imprisonment and fines, compensations in civil litigations, and private enforcement, based on maximization of social income. Becker's work led to the development of a vast literature on the *economics of crime*, and influenced the *law and economics* movement.

Becker's fascination with the economics of the household and the family started with the economics of fertility and the allocation of time, and evolved into a wide range of family issues involving marriage, divorce, allocation of tasks within the family, parental altruism, inheritance, and investment in children, culminating in his expanded edition of *A Treatise on the Family* (1991). Becker also considered the long-term effects of human capital investments within the family. Following Robert Lucas's 1988 work on endogenous growth, in which human capital is identified as the engine of long-term sustainable growth of an infinitely lived agent, Becker and his colleagues offered a dynastic framework where altruistic parents make investments in children by partly trading off fertility and human capital investments. The work explains the process of development as a transition between stages of economic development, from a Malthusian Trap to a steady state of perpetual growth, over which period fertility declines.

IMPACT BEYOND ECONOMICS

Becker's influence transcends economics. At the outset, his work was met with skepticism and distrust, to some extent inside economics, as in Sandmo (1993), but mainly outside the profession where the controversy centered largely on the applicability of the rigorous economic methodology to complex social issues. Some even found the now universally established term *human capital* to be offensive, on the grounds that it likened humans to machines. Despite this, Becker persevered in his research and gradually gained wide acceptance among economists, as judged by the frequency with which his work is cited in, and augmented by, the research of others. Specific aspects of demography and health economics constitute one example, the economics of crime and law constitute another, and the literature on labor issues has been dominated by Becker's work on discrimination, time allocation within households, and human capital. But Becker also made inroads into other social sciences where sociologists and political scientists more frequently work with models based on rational choice. His belief in the widest applicability of economics as a social science links Becker, perhaps more than any other modern economist, with major classical economists who also adopted an all-embracing approach to social issues. His quest for a truly general science of society is continuing.

SEE ALSO *Bentham, Jeremy; Crime and Criminology; Discrimination, Racial; Economic Growth; Economics, Nobel Prize in; Family; Fertility, Human; Friedman, Milton; Human Capital; Law and Economics; Optimizing Behavior; Punishment; Rational Choice Theory; Rationality; Time Allocation*

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Isaac Ehrlich

BEGGAR-THY-NEIGHBOR

In economics, the term *beggar-thy-neighbor* describes economic policies that aim to enrich one country at the expense of other countries. Most commonly, the term *beggar-thy-neighbor* is used in relation to such international trade policies as the application of tariffs and other restrictions on imports, as well as currency devaluations that are intended to improve the international competitiveness of the goods the country is exporting. The policy is considered to be beggar-thy-neighbor when the welfare gain in the country imposing the policy is offset by the welfare loss in the countries affected by the policy.

Beggar-thy-neighbor trade policies could be aimed at protecting domestic industries that compete against imported goods. These policies may take the form of import quotas or import tariffs, both of which are aimed at restricting imports and also making them more expensive. For example, an import tariff will benefit the country because the tariff improves the nation's terms of trade. That is to say, by raising the price of imports the tariff causes the ratio of export prices to import prices to fall and thus makes the country's sales to others (exports) cheaper, while simultaneously making the price of purchases from its trading partners (imports) more expensive. Thus, an import tariff is a beggar-thy-neighbor policy (Feenstra 2004, chap. 7).

One of the roles of the World Trade Organization is to prevent such beggar-thy-neighbor trade policies. However, it should be noted that if import tariffs or currency devaluations are accompanied by other policy measures designed to increase economic growth in the country, they might not be beggar-thy-neighbor. The tariff, for example, will reduce imports but economic growth encourages an increase of imports.

Currency devaluations are considered beggar-thy-neighbor if they are conducted solely for the purpose of boosting the country's exports by making them cheaper for foreigners to buy and therefore increasing the country's global market share. The trading partners of the country that undertakes a beggar-thy-neighbor devaluation may retaliate by devaluing their currency as well. Such a phenomenon, known as *competitive devaluation*, is an example of a beggar-thy-neighbor policy. Similarly, wage

repression policies could be beggar-thy-neighbor if their sole purpose is to increase a country's competitiveness in the international markets, which forces their competitors to repress wages as well.

During the Great Depression, the countries that were adhering to the gold standard, fixing the value of their currency to the value of gold, engaged in a series of competitive devaluations. In addition, many countries, including the United States, imposed protective import tariffs (the Smoot-Hawley Tariff Act of 1930 raised U.S. tariffs to historically high levels). Many economists have argued that such beggar-thy-neighbor policies worsened the economic decline during the Great Depression. Nevertheless, Barry Eichengreen showed that "competitive devaluations of the 1930s redistributed the Depression's effects across countries but did not worsen it overall" (1988, p. 90).

In July 1944 the delegates of forty-four countries met at the United Nations Monetary and Financial Conference at Bretton Woods, New Hampshire, and established the system of fixed exchange rates known as the *Bretton Woods system*. In addition, the conference instituted the International Monetary Fund and the World Bank. One of the purposes of the creation of these institutions was to avoid the return of the beggar-thy-neighbor policies of the 1930s.

In the early 2000s exports from China increased substantially. Some economists argue that such a fast increase can be partly attributed to the Chinese policy of keeping Chinese currency, the renminbi, at an artificially depreciated level in order to make exports from China very competitive. If this is the only reason the Chinese government keeps the value of the renminbi low, the policy could be classified as beggar-thy-neighbor.

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Galina Hale

BEHAVIOR, SELF-CONSTRAINED

Self-imposed constraint or restraint has typically been defined in terms of willpower or other personal attributes assumed to be completely within the control of the individual, such as abstinence from pleasurable (sex) or unpleasurable (pain/illness) behaviors and conditions and the ability to cope with stress and dysfunction in one's life. For the vast majority of students of self-restraint, there are significant moral and social features of the behavior, and much research has attempted to address and even control these conditions. Featured below are some examples of what is known or believed about personal self-restraint from this research.

Research on self-restraint runs the gamut from the most basic (e.g., monitoring of food intake) to a middle range of investigations of control over sexual promiscuity or aggressive impulses, to the most serious forms of behavior, such as drug addiction or child abuse. Most research in food intake has addressed dieting behaviors and disorders, such as obesity or anorexia nervosa/bulimia, and these have largely been studied through genetics or other biological conditions. Much less work has been done on the most severe forms of problem restraint, with the exception of addictive disorders, where often an imprisoned or similarly institutionalized population is more readily available to be studied. The heaviest concentration of studies have been in the area in the middle, which tries to understand the triggers—personal, psychosocial, and environmental—that lead to initiation, maintenance of, or abstinence from risky or healthy behaviors. Most research links the problems to interventions to help solve them.

Additional work has addressed the efforts of individuals and their professional "helpers" to regulate their potentially excessive behavior. In the medical field, it is increasingly common for patients to ask their doctors to impose constraints by limiting or removing the opportunity for pain relief. For example, women who fear harmful side effects of anesthesia will preemptively insist that their doctors not administer drugs. Identified as "anticipatory self-command" and associated with rational choice theory, this behavior highlights the tension between individual preference and professional responsibility. The doctor is charged with minimizing discomfort and maximizing healthy outcomes. But it is, after all, not the doctor's body that is in question. In this case, both parties must or choose to administer self-constraints in order to ensure a desirable outcome. Lest this example seem isolated, think of how often people ask family or close friends to help them not do something, such as smoking ("you hold my cigarettes"), overspending ("hide my credit card from me"), or eating badly ("if you bring those into the house, don't tell me where they are"). Similar work has emphasized the need to acknowledge past behaviors and choices and build a present around this knowledge—that is, to constrain choices mostly by better understanding the self.

There is a vast literature about youth aggression and violence, much of it around sport, leisure, and play, which

tries to understand adolescent impulses toward healthy or risky behaviors. Generally researchers agree that a combination of personal factors, including gender and age, and social factors, including home/family environment, school setting, and peer relationships, affect youth participation in aggression/violence, delinquency, drug or alcohol use, sexual behavior, and the like. Studies show strong connections between personal qualities, such as a resilient personality, adaptive learning, and coping/resistance skills, and higher achievement in school, less problem behavior, and lifelong success. Many of these same studies show strong associations between social-environmental influences, such as strong bonds to healthy community institutions (e.g., school, family, neighborhood) and positive life outcomes. This research has led to a number of strong programs for youth that help build skills and strengthen the social environment, including Life Skills Training, All Stars, and Family Strengthening. Critical to the success of these programs is the skills building and environmental strengthening they combine with information sharing—information alone does not help and may actually hurt the people it is aimed at.

Another significant body of literature shows connections between personal (including DNA) and social-environmental forces and the most severe problem behaviors, such as eating disorders, HIV/AIDS, and drug addiction. Much of the genetic research that has been done on animals focuses on individual stimulus-response (Skinnerian) behaviors. For instance, scientists have been able to decrease desires for a substance (something as simple as sugar) by combining it with an unpleasant one (such as morphine). Many studies have shown that releasing addicts or criminals from prisons back to their unhealthy environments arouses the same "cravings" in them and is likely to lead to re-offending or re-abusing substances; some of these cravings can be controlled with "safe" stimulation and personal control practices that help internalize the value of abstinence. Research on dopamine, naturally produced by the body, suggests it can be regulated to affect drug and eating disorders and may hold a key to reducing problems of obesity and addiction. Similar studies point to the importance of serotonin, or seroconversion, in HIV/AIDS intravenous drug users. Even heavily individual and biological studies, however, point to the glut of social and environmental forces that are beyond the control of the individual and suggest the need to improve this environment. For instance, two cardinal features of human eating disorders are binge eating and body weight/body image, so understanding the social norms around a healthy body, controlling the availability of unhealthy eating patterns (e.g., "Supersize me"), and providing mechanisms to control behavioral and neurochemical abnormalities are critical.

SEE ALSO *Choice in Psychology; Obesity; Optimizing Behavior; Overeating; Rationality; Self-Monitoring; Undereating*

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Augusto Diana

BEHAVIORISM

Behaviorism is a twentieth-century term, made popular by the psychologist John Watson (1878–1958) in 1913. Although Watson introduced *psychological behaviorism*, there is also a version called *philosophical behaviorism.*

Psychological behaviorism is the view that psychology should study the behavior of individual organisms. Psychology should be defined not as the study of the mind and internal mental processes via introspection, but as the

science of behavior. The most famous proponents of psychological behaviorism were John Watson and B. F. Skinner (1904–1990). Other notable behaviorists were Edwin Guthrie (1886–1959), Edward Tolman (1886–1959), Clark Hull (1884–1952), and Kenneth Spence (1907–1967).

Philosophical behaviorism, by contrast, is a research program advanced primarily by philosophers of the twentieth century. This school is much more difficult to characterize, but in general, it is concerned with the philosophy of mind, the meaning of mentalistic terms, how we learn this meaning, and how we know when to use these terms. Important philosophical behaviorists include Bertrand Russell (1872–1970), Gilbert Ryle (1900–1976), Ludwig Wittgenstein (1889–1951), Rudolf Carnap (1891–1970), Otto Neurath (1882–1945), Carl Hempel (1905–1997), and W. V. O. Quine (1908–2000). Other philosophers such as Daniel Dennett (b. 1942), Wilfrid Sellars (1912–1989), Donald Davidson (1917–2003), and Richard Rorty (b. 1931) have behavioristic sympathies to varying degrees.

Besides these two generic versions of behaviorism, there are several subvarieties (see Kitchener 1999; Zuriff 1985). *Eliminative behaviorism* is the denial that there are any mental states at all; there is just behavior. *Methodological behaviorism* is the view that it does not matter whether there is a mind or not; psychologists should just study behavior. *Logical behaviorism* (also called *analytic behaviorism* or *semantic behaviorism*) is the view that all mentalistic terms or concepts can be defined or translated into behavioral terms or concepts. *Epistemological behaviorism* and *evidential behaviorism* hold roughly the view that the only way to know about a mental state is by observing behavior.

A BRIEF HISTORICAL OVERVIEW

It should be noted that in the intellectual history of western culture there have been individuals who held views very similar to theories supported by one or both of these movements, even though they did not use the term *behaviorism*; others have championed views that may not be characterized as "behavioristic," but which have had a strong impact on behavioristic ways of thinking (see Peters 1973–1974; Harrell and Harrison 1938). The writings of Aristotle (384 BCE–322 BCE), in particular his *De Anima*, his account of practical rationality in the *Nicomachean Ethics*, and his scientific work on animals (*De Motu Animal*), contain ideas that were assimilated by later behaviorists. Likewise, the writings of the Stoics and the Skeptics contain several theoretical accounts that are sympathetic to a general behavioristic approach, especially their views about animal cognition.

Several seventeenth- and eighteenth-century works inspired behavioristic followers, including Thomas Hobbes's generally mechanistic account of the mind, *The Leviathan* (1651), René Descartes's 1637 account of animal behavior, *Discourse on Method*, and the writings of several individuals who belonged to the French Encyclopedists tradition of the Enlightenment, such as Julien de La Mettrie's *Man a Machine* (1748), Pierre Cabanis's *On the Relations between the Physical and the Moral Aspects of Man* (1802), and Baron d'Holbach's *The System of Nature* (1770), among others.

The Cartesian Tradition A major philosophical issue emerging in the seventeenth and eighteenth centuries concerned the question of the nature of the human mind and the animal mind: Is it possible to provide a mechanistic, materialistic, and deterministic account of the human mind, or must one appeal to principles that are quite different from those used in modern physics? Descartes argued that the human mind is made of a substance different from any found in the natural world, one that operates by principles at odds with the ordinary causal processes of inorganic matter. Although humans possess this special kind of spiritual being, animals do not; they are, quite simply, machines that operate by ordinary "matter in motion" (Descartes 1637). Humans are radically different from such animals because the human mind is made of a quite different substance that is not observable by ordinary naturalistic methods; however, humans have a kind of special access to their own minds, found by means of internal reflection or introspection. None of this was true of animals, all of whose behavior can be explained mechanistically in terms of simple mechanical principles (see Rosenfeld 1941).

The question that arose, therefore, was this: If Descartes was correct about his animal psychology, was he also correct about human psychology? Do we need to appeal to a special nonmaterial substance to explain the behavior of humans, or can all of their behavior be explained in the same ways we explain animal behavior? Although Descartes's answer was widely accepted, there were a few individuals who argued that humans are no different from animals, and hence if animal behavior can be explained along naturalistic lines—by observing their behavior and trying to explain it by deterministic laws of matter in motion—the same is true of humans. This was the view of some eighteenth-century thinkers who championed a purely naturalistic, materialistic, deterministic, and mechanistic account of humans. They were the forefathers of mainstream psychological behaviorism.

The nineteenth century produced philosophers and scientists who, in one form or another, contributed ideas that were fuel for the behaviorists' fire. An example are the

post-Kantian German idealistic philosophers, many of whom stressed the importance of *praxis*, or human action. These ideas in turn strongly influenced members of the philosophical/psychological school of pragmatism, including Charles Sanders Peirce (1839–1914), William James (1842–1910), and John Dewey (1859–1952). These pragmatists were concerned with understanding and providing an account of humans and animals that focused on their action—something that organisms did, something they tried to accomplish as they interacted in their physical and social environment. Strongly influenced by the Darwinian revolution, the pragmatists employed a Darwinian model of organisms adapting to their environments to understand action. Such an approach at once stressed the problem-solving nature of human and animal mentality and the assumption that everything that exists must be understood in a "functional" way—that is, how entities such as ideas are useful in an organism's struggle to survive in its environment. All intelligence was to be explained in this way, as an "instrument of action."

Although Sigmund Freud was no behaviorist, he did aid the behaviorist cause by challenging the reigning Cartesian model of the mind that maintained that humans had an immediate and privileged access to the inner workings of their minds that employed a first-person rather than a third-person perspective on the mind, and that tended to draw a sharp distinction between the human mind and the animal mind. Freud argued that the mind is not transparent to our internal gaze because most of our mental activity is going on below the surface at the level of the unconscious (Freud 1900). If this is correct, then the method of psychology cannot be assumed to be introspective. This opened the way to alternative methods of psychological investigation.

The work of Ivan Pavlov on the conditioned reflexes of dogs ([1927] 1960), as well as the work of other Russian physiological scientists, provided behaviorists with scientific accounts of behavior. Behavior occurs, persists, and changes as a result of *classical conditioning*: An original stimulus elicits some response; another stimulus is subsequently paired with the original stimulus, thereby acquiring the power to elicit the response. This version of S-R psychology is the paradigm for at least early behaviorism, providing an explanation of behavior. The other kind of learning employed by behaviorists was instrumental conditioning (operant conditioning, trial and error learning), first introduced in 1898 by Edward Thorndike (1874–1949). In instrumental conditioning, a response is learned because it is reinforced by a stimulus—the reward—where the response is instrumental in obtaining the reward. Classical and instrumental learning promised to explain all of behavior. None of this seemed to require private internal workings of a special kind of substance. Psychology could take its place among the objective natural sciences.

PSYCHOLOGICAL BEHAVIORISM

In psychology, behaviorism began with John Watson, who coined the term *behaviorism* and set forth its initial premises in his seminal article "Psychology as the Behaviorist Views It" (1913). Behaviorism, Watson suggested, should be considered an objective, natural science, one that studies the public, observable behavior of organisms. Rejecting the method of introspection practiced by his predecessors, Watson suggested a different method to be used by psychologists: Study the observable behavior of others, and to explain it, given the stimulus, predict the response; given the response, predict the stimulus. The aim of psychology, therefore, was the prediction and control of behavior. What then of the mind, that special substance that Descartes claimed was the special province of humans? Watson gave several different answers over the course of his career, including eliminative behaviorism, methodological behaviorism, and, later, the view that the mind exists but is the same as behavior. In short, Watson's argument was this: Humans and animals are not radically different from each other, and since the behavior of animals can be explained without appealing to consciousness, the behavior of humans can be explained without appealing to consciousness, too. With the rise of the cognitive sciences in the 1960s, this conclusion was denied, and so was the claim that the behavior of animals can be explained without appealing to consciousness.

The key question is, what did Watson mean by "behavior"? Was it a mechanical physical movement of the body or something more complex—the intentional, purposive action of a rational agent? If the latter, then how can a purely mechanistic science account for it? This perplexing question remained at the center of discussion for decades. Doubts about a mechanistic approach gave impetus to versions of *purposive behaviorism* found in the writings of William McDougall (1912), Edwin Holt (1915), and E. C. Tolman (1932). Indeed, McDougall and Holt had been proposing a kind of teleological behaviorism before Watson had appeared on the scene.

We can divide the history of psychological behaviorism into several periods: (1) classical behaviorism, (2) neobehaviorism, (3) operant behaviorism, and (4) contemporary behaviorism. The first period (1912–1930) introduced the theory of behaviorism championed by John Watson and several other early advocates of behaviorism, including Max Meyer, Albert Weiss, Walter Hunter, and Karl Lashley. These behavioristic accounts were, by and large, naive, sketchy, and inadequate, but they set forth the general program of psychological behaviorism.

The second period (1930–1950) was the era of *neobehaviorism*, so called because its philosophical underpinnings were somewhat different from its predecessors. Neobehaviorism was wedded to classical learning theory (see Koch 1959), and neobehaviorists were concerned with what form an adequate theory of learning should take. The main figures were Edwin Guthrie, Edward Tolman, Clark Hull, B. F. Skinner, and Kenneth Spence. All of these individuals spent a great deal of time laying out the philosophical bases of their respective kinds of behaviorism, and in doing so, they borrowed heavily from the school of logical positivism, which was influential at the time (but see Smith 1986). This resulted in an emphasis on the importance of operational definitions, a preference for a hypothetico-deductive model of theory construction, and a focus on issues about intervening variables versus hypothetical constructs, and the admissibility of neurological speculation. This move toward postulating internal mediating responses continued with later Hullian neobehaviorists such as Charles Osgood, Neal Miller, O. H. Mowrer, Frank Logan, and others.

The last two phases of behaviorism are more difficult to characterize. Skinner's version of behaviorism—operant behaviorism—is markedly different from most of the other neobehaviorists, and yet he is perhaps the best-known behaviorist. Indeed, after the demise of Hullian learning theory in the 1960s, the main thrust of the movement switched to Skinner's distinctive version of behaviorism.

Denying he was an S-R psychologist, Skinner championed an operant account of learning, in which a response that occurs is reinforced and its frequency is increased (1938). The response—for example, a bar press or a key peck—is not elicited by any known stimulus, but once it has occurred, its rate of response can be changed by various kinds of reinforcement schedules. The response can also be brought under experimental control when it occurs in the presence of a discriminative stimulus (e.g., light). Such a relationship—discriminative stimulus, response, reinforcement—is sometimes called a contingency of reinforcement, and it holds a central place in Skinner's brand of behaviorism. Skinner himself characterized his behaviorism as a "radical behaviorism" because rather than ignoring what is going on inside the organism, it insists that such events are still behavior (1974). However, such behavior still is caused by environmental variables.

Skinnerian behaviorism was the dominant version of behaviorism in the 1970s, and Skinner extended his approach to consider more and more complex behavior, including thought processes and language. His 1957 book *Verbal Behavior*, an example of this extrapolation, was reviewed by the linguist Noam Chomsky, who subjected it to devastating criticism (Chomsky 1959). Skinner declined to respond to Chomsky, and many individuals took this as a sign of the demise of behaviorism. This was not completely true, as can be seen in the current era of behaviorism, which features teleological behaviorism, interbehaviorism, empirical behaviorism, and so on (see O'Donohue and Kitchener 1999). Although behaviorism does not have the hegemony it once did, it continues to exist, but is restricted to pockets of research. Indeed, there are several scientific journals devoted to behaviorism, including the *Experimental Analysis of Behavior* and *Behavior and Philosophy*.

Philosophical Behaviorism Although psychological behaviorism can be described relatively clearly, philosophical behaviorism cannot. Fundamentally, a philosophical behaviorist is one who has a particular theory of the philosophical nature of the mind. All philosophical behaviorists are opposed to the Cartesian theory of mind: that the mind is a special kind of nonphysical substance that is essentially private, and introspection is the only or primary way of knowing about the contents of the mind, such that the individual has a privileged access to his mind. One or more of these tenets is denied by the philosophical behaviorist, who believes that there is nothing necessarily hidden about the mind: It is not essentially private, not made of a special substance, not known by any special method, and there is no privileged access to the mind.

In effect, the philosophical behaviorist claims that the mind is essentially something public, exemplified in one's actions in the world, and that mentalistic properties are those displayed in certain kinds of public behavior. Such a view was championed by Bertrand Russell (1921, 1927; see Kitchener 2004). But what particularly distinguishes twentieth-century philosophical behaviorism is its commitment to *semantic behaviorism*, the view that philosophy is concerned with the analysis of the meaning of mentalistic terms, concepts, and representations. This "linguistic turn" in philosophy (Rorty 1967) means that instead of talking about the nature of the mind as an object in the world, philosophers should be concerned with our linguistic representations of the mind. This type of philosophical behaviorism is called logical (analytic, conceptual) behaviorism. Philosophical behaviorism, therefore, is different from psychological behaviorism.

Ludwig Wittgenstein is sometimes called a behaviorist, largely because he was critical of the Cartesian model of the mind, especially its assumption that the meaning of a mentalistic term must be given in terms of one's private sensations or states of consciousness. Such an account would amount to a private language because only the individual can know the meaning of a mentalistic term, an

item of his necessarily private experience. Private languages are not possible according to Wittgenstein, because any language must (initially) be a public language; the meaning of mentalistic terms must be intersubjective and public (1953). In order to use a word correctly, Wittgenstein claimed, there must be public criteria for its correct employment. Most individuals insist that Wittgenstein's kind of behaviorism is radically different from the psychological behaviorism of Watson and Hull. Whether it is fundamentally different from Skinner's behaviorism is still an open question.

Gilbert Ryle is also sometimes characterized as an analytic or logical behaviorist. Also rejecting the Cartesian conception of the mind, Ryle showed that mentalistic terms have to have public criteria for their correct use, and hence that mentalistic terms and states are not essentially private to the individual, but must be understood (largely) as complex behavioral dispositions, or actions (and tendencies to act) in certain kinds of physical and social situations (1949). According to Ryle, therefore, mentalistic terms are to be understood in the same way we understand the meaning of, for example, the term *punctual*: An individual is punctual if she shows up to class on time, regularly meets her appointments, and so on. Ryle had strong reservations about calling his views "behavioristic," largely because he thought behaviorism was committed to a mechanistic account of bodily movements and this was certainly not what behavior (or better, action) was.

As Ryle was influenced by Wittgenstein, so were other philosophical behaviorists. Rudolf Carnap and Carl Hempel were members of the group of philosophers known as logical positivists. According to a fundamental principle of logical positivism, the meaning of a statement consists of its method of verification. The meaning of a mentalistic term must be verifiable to be meaningful, and in principle, its meaning consists in how one verifies it by means of empirical observation. For example, the statement "Paul has a toothache" is (approximately) equivalent in meaning to the procedures one uses to verify that Paul has a toothache. Although this might consist in observing Paul's physical behavior, it might also consist in observing the state of Paul's tooth. Hence, for logical positivists, analytic behaviorism merged into the identity theory of mind and central state materialism—the view that mental states are central states of the brain. It remains unclear, therefore, to what extent they should be called "logical behaviorists"; certainly their version of logical behaviorism was quite different from Wittgenstein's and Ryle's.

The last notable philosophical behaviorist was Willard Quine, who was strongly influenced by Carnap (and Wittgenstein); nevertheless, his views are not easily assimilated with theirs. His views about meaning (and hence the meaning of mentalistic terms) were verificationist in spirit (because he was an epistemological behaviorist), but he did not share certain of Carnap's views about how to give a behavioral translation of mental terms. It cannot be done atomistically, but only holistically: One cannot give the meaning of single mentalistic term by giving observational conditions for its use. Indeed, Quine was suspicious of the very notion of "meaning" because such things, if they do exist, would be difficult to reconcile with naturalism and physicalism, and therefore the meaning of a mentalistic term cannot be equivalent to some item of behavior. Quine was also skeptical of the very possibility of verifying a statement by means of a set of observations; scientific observation is a much more theoretical affair than this. Nevertheless, Quine insisted that any science is committed to the observation of behavior (epistemological behaviorism, evidential behaviorism), and hence that mentalistic terms are, in some sense, equivalent to behavior. This is, in part, due to the public nature of language (Quine 1960). We obviously do learn what words mean in the process of learning a language, but all of this occurs in the public arena. We are taught how to use words by our linguistic community: In the presence of a public object such as snow, we learn (by principles such as those indicated by Skinner) to utter the word *snow*. Hence, Quine's behaviorism is sometimes called a *linguistic behaviorism* because he insisted that all we have to go on when we teach and learn a language is the public behavior of individuals. This is closely tied to the importance of empirical observation and verification. Furthermore, Quine was committed to *semantic behaviorism*, the view that the meaning of words is necessarily tied to (or consists of) public behavior. Meanings are, therefore, not "in the mind." This is a close cousin to the logical behaviorism of earlier philosophers.

With the rise of computer science and artificial intelligence in the 1960s, an interesting question arose concerning how one could decide if a machine such as a computer was intelligent or not (i.e., whether it "had a mind"). Alan Turing proposed a test—the "Turing test"—for deciding this question (Turing 1950). Basically, the Turing test holds that if you cannot distinguish a computer from a human in terms of its behavior, for example by asking them both questions and reading their answers, then because the human is intelligent, it would be difficult to deny that the machine is intelligent too.

The Turing test raises the issue of behaviorism once more, this time in the context of computers: Is it the actual behavior of the computer that is decisive in ascribing intelligence to it, or are the internal workings of the computer (e.g., using a lookup table) important? Those who answer yes to the latter question might be considered mentalists rather than behaviorists (Block 1981). There is reason to believe that Turing himself thought the internal

processing of the computer were important, something most behaviorists have never really denied.

OBJECTIONS TO BEHAVIORISM

Psychological behaviorism and philosophical behaviorism have been criticized since the beginning of the twentieth century.

Objection: Behaviorism Ignores or Denies Consciousness Critics charge that because the behaviorist focuses on behavior—and this means external behavior—he or she ignores or dismisses the private internal realm of consciousness.

Let us assume that consciousness does exist, that individuals are aware of their internal mental thoughts and sensations. The methodological behaviorist argues that this realm can be ignored (from a scientific point of view) by simply refusing to consider it. Radical behaviorists argue that behaviorism does not have to ignore this realm; instead, one can simply treat consciousness as internal behavior not unlike the behavior of one's stomach when it digests food. Or, a behaviorist might reply that consciousness is not actual occurrent internal behavior, but rather a behavioral disposition. This is what we ordinarily mean when we say things such as, for example, "the cat is awake and thinking about the mouse."

One property of consciousness that it is particularly difficult for the behaviorist to accommodate are *qualia*—the internal "feel" of certain mental states or events, like the taste of chocolate or the feeling of a sharp pain. A related problem is how a behaviorist can handle images, for example, the image I have of my morning breakfast.

Objection: Behaviorist Explanations Are Inadequate Most behaviorists take behavior as that which needs to be explained—why it occurs, what its form consists of, why it ceases, and so on. But what provides the explanation of such behavior? The standard answer is that stimuli—external stimuli—provide explanations, together with psychological principles concerning the relation of such stimuli to responses. But according to the critic, it remains doubtful that external stimuli can provide such all-encompassing explanations. Instead, one must refer to certain kinds of internal states—typically cognitive states—to explain the behavior.

A very sketchy behaviorist reply would be that all explanatory internal states—including all "cognitive" states—can be explained in terms of the ordinary concepts of stimulus and response, as long as these terms are suitably modified. This typically has taken the form of saying that there are internal states occurring between the external stimulus and the external response but that these internal states are understood to be internal stimuli and internal responses; for example, according to Hull, internal states might be fractional anticipatory goal responses together with sensory feedback from them. These internal mediating mechanisms are not popular by contemporary cognitive standards, but if behaviorism is to be a viable research program, it must clearly postulate such an internal mechanism or something analogous. Whether these behavioristic models are sufficiently cognitive or representational remains an open question.

Objection: The Behaviorist Concept of *Behavior* Is Inadequate According to one popular argument (Hamlyn 1953), the behaviorist sees ordinary behavior as a mechanistic, physical response, like the movement of an arm. But this is an inadequate conception of human behavior, which is better thought of as an action, such as waving, signaling, flirting, or gesturing. The behaviorist cannot handle this kind of conception because actions are not mechanistic but rather intentional, teleological, rule-governed, governed by social norms, and so on, and these are incompatible with the behavioristic program.

The standard behaviorist reply is to deny the distinction between movements and actions and/or to argue that the behaviorist has always been interested in actions (Kitchener 1977), and that such a concept is consistent with a causal account.

Objection: The Behaviorist Cannot Adequately "Analyze" or Define a Single Mentalistic Term by Means of a Set of Behaviors Logical behaviorists attempted to translate a mentalistic term such as *belief* into a corresponding set of behaviors, for example, a verbal response. But such a translation is only plausible if we assume other mental states in our account, for example, other beliefs, desires, and so on. Hence we have not gotten rid of mentalistic terms (Chisholm 1957; Geach 1957) because there is no term-by-term reduction or elimination.

This objection carries little weight because logical behaviorists such as Carnap and Hempel very early in their careers gave up such a term-by-term approach in favor of a more holistic, theoretical approach, and this commands a central place in Quine's holistic behaviorism.

Objection: The Spartan Objection and the Dramaturgical Objection A mental state, such as pain, is not equivalent to a set of public behaviors because it is possible for one to be stoic about pain: I might be in intense pain but never show it because, say, it is not "macho" to show pain. Likewise, I might manifest pain behavior but not really be in pain, as when I simulate pain as an actor in a play. Hence pain behavior is neither sufficient nor necessary for being in pain (Putnam 1975).

Both of these objections assume a very naive, "peripheral" behaviorism in which the behavior in question is publicly observable. It is necessarily restrictive because behaviorists can hold more sophisticated forms involving "internal" (covert) behavior along with the inclusion of behavioral "dispositions." Secondly, the behaviorist has insisted that one learns the meaning of the term *pain* and to use the word correctly only in the context of public behavior, a view shared by Wittgenstein, Carnap, Quine, Sellars, and Skinner. There must be public criteria for the correct use of *pain*. So originally a certain kind of behaviorism must be correct; later, we may learn how to suppress such behavior and to internalize it. The basis of this claim concerns the learning of language and is based on Wittgenstein's arguments against a private language, or on arguments similar to his.

CONCLUSION

Few individuals would claim that behaviorism today enjoys the popularity it once had. Indeed, many (or most) argue that behaviorism is dead—both in psychology and in philosophy. The claim is easier to make with respect to psychology, particularly in the aftermath of the cognitive revolution. Nevertheless, the reports of the death of behaviorism are somewhat exaggerated. Not only are there viable and interesting research programs that are behavioristic in name, there are signs that even in cognitive science and cognitive psychology there is a reemergence of behaviorism, for example, in connectionism (neural nets), robotics, and dynamic systems theory. In fact, according to some, it remains unclear how cognitive psychology differs from behaviorism, since most behaviorists have also been concerned with central cognitive states. Still, psychological behaviorism is currently a minor opinion.

In philosophy the matter is somewhat different. This is because of the centrality of language learning in analytic philosophy, which seems to demand something like a rule-following conception that presupposes a public or social conception of behavior. This view is shared by those sympathetic to Ryle, Wittgenstein, or Quine. The logical behaviorism of Carnap and Hempel is passé because it was abandoned early in favor of a central state theory of mind. But although psychological behaviorism may have seen its day, philosophical behavior, in one form or another, still claims the strong allegiance of many philosophers (depending on how one characterizes *behaviorism*).

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Richard F. Kitchener

BELIEF SYSTEMS

SEE *Lay Theories.*

BELL, DERRICK

SEE *Critical Race Theory.*

BELL CURVE

SEE *Distribution, Normal.*

BEM, DARYL

SEE *Self-Perception Theory.*

BENEDICT, RUTH

1887–1948

One of the major figures in the development of American cultural anthropology, Ruth Benedict was educated at Vassar College (AB, 1909) and Columbia University (PhD, 1923), where she studied under the American anthropologist Franz Boas. Starting in the late nineteenth century, Boas and his students mounted an attack on social-evolutionary theories of human history. Boasian anthropologists showed that the evolutionists' hypothesis of universal stages of development ("primitive," "barbarian," "civilized") were belied by historical facts, especially by the diffusion of cultural materials and the movements of people. That people borrowed language and culture from one another meant that no group of people, and no

cultural whole or stage, had an identity that remained fixed over time. But this concept left open the question of what Benedict came to call "cultural integration." Given that cultures were ceaselessly changing, how were anthropologists to talk about the coherence that people experienced in their life-worlds? Benedict's two masterworks, *Patterns of Culture* (1934) and *The Chrysanthemum and the Sword* (1946), provide elegant answers to that question.

Benedict begins *Patterns* by pointing out that because the possibilities for a viable way of life are almost limitless, "selection" becomes a "prime necessity" of human history (p. 23). A group of people creates, borrows, and selects materials that it "integrates" into a consistent pattern, a cultural totality. In Benedict's approach, the meaning of any item that has been incorporated into the whole depends upon its place within that whole; over time, disparate culture traits are woven together in a fundamental pattern such that any one of them can be understood only in terms of its relationship to all the others. Moreover, because cultural wholes are patterns of values in terms of which humans understand the world, people tend to understand (and misunderstand) other cultures by interpreting them in terms of their own. There is, therefore, a tension in Benedict's anthropology between scientifically authoritative descriptions of integrated cultural patterns and ironic reflections on the way Western cultural values structure her readers' (and her own) understandings of other cultures.

This tension is exemplified in *Chrysanthemum*, a book that came out of Benedict's work analyzing cultures for the United States government during World War II. *Chrysanthemum* begins with a discussion of Japanese conceptions of hierarchy and indebtedness, for these contradict the crucial American values of equality and freedom. For example, because Japanese understand family relationships as grounded in indebtedness, they accept both filial and parental duties that to Americans seem overly severe and lacking in love. Similarly, civic duty in Japan is understood as repayment of debt to the supreme authority at the apex of the social hierarchy (the emperor). A person's self-respect is bound to his fulfillment of such duties. By contrast, American self-respect depends on freedom, hence Americans tend to view governmental regulation as a violation of their dearest values—leading Japanese to find Americans to be lawless. Each culture misunderstands the other because apparently similar traits take on different significances in each.

As her study of Japan illustrates, Benedict believed that anthropology, by helping people to see their culture in a new light, could lead them to change customs that were no longer useful or humane. But such reforms were not to be imposed by force; rather, they should emerge, Benedict thought, from democratic discussion, both nationally and internationally. Benedict herself was willing to assert strong value judgments in her work, as, for example, in her critique of the obstacles women of her time and milieu experienced trying to balance family and career (a balance that was difficult for her to achieve, as her biographers make clear). Moreover, the work of Benedict and other anthropologists on the Japanese (carried out while Japanese Americans were being placed in internment camps) has come to seem problematic to historians and anthropologists who, since Vietnam, have become increasingly dubious that social science in the service of political power can promote democratic ends. Yet, as American difficulties in places like Iraq at the turn of the twenty-first century make clear, there is a place for the kind of anthropologically informed understanding of other cultures that Benedict did so much to advance. It is no surprise, therefore, that a *New York Times* essay on the rebuilding of Iraq concludes with the question, "Where are the new Ruth Benedicts?"

SEE ALSO *Anthropology, U.S.; Boas, Franz; Mead, Margaret*

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Richard Handler

BEN-GURION, DAVID
1886–1973

David Ben-Gurion, along with Theodor Herzl (1860–1904) and Chaim Weizmann (1874–1952), is considered one of the three architects of Zionism and the most effective figure in founding the state of Israel. An early convert to Zionism, Ben-Gurion migrated to then Ottoman Palestine in 1906 at a point when the territory housed about 55,000 Jewish inhabitants—only about 1 percent of whom were Zionist pioneers—as opposed to nearly 700,000 Muslim and Christian Arabs. He devoted himself fully to organizing the *Yishuv*, or Jewish community, in Palestine prior to 1948 and to encouraging Jewish immigration to create a sufficient demographic basis for a Jewish state. In 1921 he became the secretary general of the *Histadrut*, the General Federation of (Jewish) Labor in Palestine, a position he retained until becoming the chairman of the Jewish Agency in 1935 before finally becom-

ing the first prime minister and minister of defense of Israel in 1948, positions he held, except for a brief period (1953–1955), until his retirement in 1963. After the creation of the State of Israel in 1948, Ben-Gurion adopted a more confrontational policy with Arab states than many of his compatriots in the leadership of labor, and his return to the cabinet in 1955 corresponded with preparations for the Sinai Campaign in 1956 in which Israel sought to invade Egypt in collaboration with Britain and France during the Suez crisis.

Ben-Gurion also played a key role in formulating a synthesis of labor ideology and Zionist nationalism, as evident in his early affiliation with *Poalei Zion* (Workers of Zion), which he represented during a three-year stay in the United States from 1915 to 1918, then the *Mapai* party and the Labor Party and as the first leader of the *Histadrut*. The *Histadrut* functioned as both a trade union and large employer in its own right, representing Jewish workers and creating Jewish economic enterprises. Its membership was exclusively Jewish, and it actively discouraged Jewish businesses from hiring non-Jewish inhabitants of Palestine. During the British Mandate period following World War I until 1948 when Palestine was administered by Britain, Ben-Gurion developed a working relation with the British administration, which allowed him to emerge as the face of the more "moderate" section of the Zionist movement at the same time that it facilitated his building of the paramilitary Haganah, which by 1948 had become the strongest and best organized military group in the land.

While far more pragmatic than other Zionist leaders, notably Ze'ev Jabotinsky (1880–1940) and, later, Menachem Begin (1913–1992), Ben-Gurion's vision of Zionism made, in fact, little accommodation to the Palestinians. Throughout his life Ben-Gurion regarded the Arab Palestinians as economically, socially, and culturally inferior to the Jewish immigrants. Early in his career he believed that Arab Palestinians had no collective sense of nationalism and that a Jewish state could be built without infringing on them. He never accepted that they had political rights. Significantly, while he was versed in nine languages, he never made an effort to learn Arabic. Thus, in addition to being one of the greatest figures in the history of Zionism, he was also one of the main architects of an enduring conflict.

SEE ALSO *Zionism*

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Mohammed A. Bamyeh

BENIGN NEGLECT

The concept of benign neglect was coined by the late Senator Daniel Patrick Moynihan (D-NY) in a January 1970 memo to President Richard M. Nixon while he served as the latter's Urban Affairs counselor. The widely circulated memo, which was leaked to the press in March of that same year, read: "The time may have come when the issue of race could benefit from a period of 'benign neglect'." At that historical juncture, Moynihan declared, Americans needed "a period in which Negro progress" continued and "racial rhetoric" faded. Moynihan believed that the antipoverty programs of the "Great Society" of the 1960s had failed miserably, not only because they had attempted to use money alone to solve the nation's inability to properly educate the African American poor but also because they did not raise issues in reference to the viability of integration as a solution to U.S. racial problems. To most liberals—especially many civil rights leaders of the period—Moynihan had provided the rationalization for what Swedish political economist Gunnar Myrdal, in his classic *An American Dilemma* (1944), labeled a "laissez-faire" or "do-nothing" approach to racial problems. Most liberals at the time thought—and they thought correctly—that Moynihan's concept was fatalistic—that is, that the intervention of the federal government on behalf of the African American could not alter the inexorable social forces that could only be assuaged by local initiatives. In short, the concept of benign neglect for all intents and purposes suggested that social programs that were endorsed and funded by the federal government created attitudes of dependency among the African American poor.

In contradistinction to Moynihan's dire assessments, the recent research on antipoverty programs, conducted by such persons as Lisbeth B. Schorr, Daniel Schorr, Phoebe Cottingham, David T. Ellwood, James Comer, and many others, which were based on substantive, empirically verifiable data, demonstrated that social programs, when properly planned and executed, succeeded in reducing infant mortality and the incidence of low birth weight. Furthermore, programs such as Head Start and Job Corps succeeded in helping to remedy such problems as chronic unemployment and poor school achievement; and aided in the prevention of teenage pregnancy. The aforementioned programs, which had their origins in Lyndon B. Johnson's Great Society initiatives, helped

many African Americans break the cycle of disadvantage. In essence, the concept of benign neglect, which was not based on empirical reality, ultimately blamed the victim and thus ignored the effects of the flawed structure of society in this nation.

Nevertheless, there has been a recent revival of the benign neglect arguments, which resulted in the 1996 welfare reforms and the introduction of the rhetoric of a "compassionate conservatism" into the presidential campaign of 2000. Furthermore, conservative black politicians and spokespersons have promulgated variants of the concept, which rationalized a terribly flawed social system.

SEE ALSO *Culture of Poverty; Great Society, The; Lewis, Oscar; Moynihan, Daniel Patrick; Neoconservatism; Nixon, Richard M.; Race; Racism; Welfare; Welfare State*

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Vernon J. Williams Jr.

BENJAMIN, JUDAH P.
1811–1884

Judah P. Benjamin, lawyer, U.S. senator, and Confederate official, was called "the dark prince of the Confederacy" and "the brains of the Confederacy." Born in St. Thomas, Virgin Islands, a British subject, Benjamin achieved greater political power than any other Jew in the United States in the nineteenth century. His struggling Sephardic Jewish family settled in Charleston, South Carolina, in 1813. When Judah was fourteen, a wealthy Jewish merchant sponsored him at Yale University to study law. He mysteriously left after two years and in 1831 moved to New Orleans to begin his life as an apprenticed young lawyer. A strategic marriage to Natalie Martin, whose family belonged to the Catholic Creole aristocracy in New Orleans, and the 1834 publication of his book of reported Orleans and Louisiana Supreme Court decisions propelled him into financial success as an appellate lawyer, largely in commercial cases, and subsequently into a political career. But his wife humiliated Benjamin with her affairs and left him in 1845, in the midst of scandal, to move to Paris with their daughter.

In 1852 Benjamin was elected to the U.S. Senate. Before he was sworn in, he declined an offer from President Millard Fillmore for a seat on the U.S. Supreme Court. He was more interested in a political career. Soon Benjamin met Jefferson Davis (1808–1889), beginning a long friendship. With his reasoned and eloquent oratory, Benjamin became the most celebrated spokesman for the southern moderates. He was reluctant to leave the Union and favored compromise to head off war. He was quick to answer critics who attacked his religious background. "When my ancestors were receiving their Ten Commandments from the immediate Deity," he said during a Senate debate on slavery, "the ancestors of my opponent were herding swine in the forests of Great Britain" (Kohler 1905, pp. 83–84). It was a rare reply. Usually when newspapers, political enemies, or military leaders ridiculed his Jewishness, he never answered but simply retained "a perpetual smile."

After secession, Benjamin became attorney general of the Confederacy and Davis's lieutenant and chief "implementer," writing thousands of memoranda and orders and many speeches for the president. At times he seemed almost to be Davis and even was able to convene the cabinet and ask for a vote to give him constitutional authority to act in the president's name, seeking presidential approval later. He was the only member of the cabinet without slaves, having sold his plantation with 140 slaves after his election to the Senate.

Soon promoted to secretary of war, Benjamin became the scapegoat when the war went badly and was bitterly attacked with anti-Semitic slurs—one newspaper referred to him as "Mr. Davis's pet Jew" (Woodward 1981, p. 233)—and Confederate military officers groused publicly that he knew "as much about war as an Arab knows about the Sermon on the Mount" (Hunter 1905, p. 566). But Davis stood by him and made him secretary of state in 1862.

When the quick collapse of the Confederacy left Richmond in flames, Benjamin traveled south by train and then on horseback with the Confederate leadership. Soon he complained of saddle weariness and left Davis and his guard to escape in a broken-down horse and wagon, posing as a French doctor named "Monsieur Bonfals" (Cajun French for "a good disguise"). Sympathizers smuggled him to the Caribbean and then to London, as he fled the false accusation of involvement in the assassination of Abraham Lincoln.

Especially after the publication of his 1868 treatise on mercantile law, quickly known as "Benjamin on Sales," Benjamin developed a flourishing law practice in international trade. He served in the House of Lords as a queen's counsel, becoming familiar with the leading figures in English cultural and political life. Benjamin never spoke publicly about the war again and ignored charges that the fortune he built in England resulted from his escape with the Confederate gold.

After more than thirty years apart from his wife, Benjamin finally joined her in Paris in 1883. Benjamin died there on May 6, 1884, and was buried in Père Lachaise Cemetery with the great figures in French history.

Benjamin was the main beneficiary of the nineteenth-century emancipation of the Jews and its most visible symbol in the United States. Though he was a nonpracticing Jew, he never attempted to deny his faith, and his contemporary society treated him as Jewish. His election to the Senate was a watershed for American Jews, and because of the Civil War, he became the first Jewish figure to be projected into the national consciousness.

Benjamin has fascinated historians because of the extraordinary role he played in southern history and the ways Jews and non-Jews reacted to him. He remains as he always was—the prototype of the contradiction of the Jewish southerner, a stranger in the Confederate story.

SEE ALSO *Caribbean, The; Confederate States of America; Davis, Jefferson; Jews; Secession; Slavery; U.S. Civil War*

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Eli N. Evans

BENTHAM, JEREMY
1748–1832

Jeremy Bentham, a philosopher and reformer, was born in London, entered Oxford University in 1760, and was admitted to the bar in 1769. Rather than practicing law, he devoted himself to its reform. His first major publication, *A Fragment on Government* (1776), attacked the jurist William Blackstone's (1723–1780) *Commentaries on the Laws of England* (1765–1769) for failing to distinguish between description and criticism of the law and for adopting a nonexistent moral standard, the natural law.

Bentham argued that the only proper moral standard was the principle of utility, of which he gave his best-known exposition in *An Introduction to the Principles of Morals and Legislation* (printed 1780, published 1789). An action was morally right to the extent that it promoted the greatest happiness of the greatest number. Happiness consisted in a balance of pleasure over pain. The utilitarian legislator, by means of punishments and rewards, would encourage those actions that promoted happiness and discourage those that led to suffering.

The task of the legislator was to promote the "subends" of utility, namely subsistence, abundance, security, and equality. Security for person, property, reputation, and condition in life was essential for civilized existence, and, therefore, took priority. To promote equality at the expense of security of property would, for instance, prove counterproductive, since the disappointment of fixed expectations would produce pain in the individuals concerned, and ultimately threaten social stability. Nevertheless, Bentham recognized that inequality was in itself an evil, and he understood and applied the principle of diminishing marginal utility, advocating an equal distribution of resources insofar as this could be achieved without infringing security. Furthermore, in determining the utility of an action, the interests of each individual (irrespective of gender, religious beliefs, or social status) had to be given equal weight. From here, it was a short step to democracy, which Bentham first advocated in writings composed in 1788 and 1789 on the subject of the French Revolution (1789–1799). As the revolution became more extreme, Bentham, like most of his countrymen, became worried by the threat to social order and for many years put aside any consideration of political reform.

In the 1790s Bentham's life was dominated by his attempt to build a panopticon prison in London. The panopticon consisted of a circular building, with the cells arranged around the circumference. The cells were thereby made visible at all times from a central inspection tower. The rejection of the scheme by the government in 1803 propelled Bentham into political radicalism. In writings on judicial evidence and procedure, he concluded that lawyers pursued their own selfish goals rather than the happiness of the community. In 1809 he began to extend this analysis to the political establishment, eventually calling for democratic reform in *Plan of Parliamentary Reform* (1817). He thereafter committed himself to republican-

ism, and concentrated on writing the *Constitutional Code* (1830), a blueprint for representative democracy.

Bentham's most sustained period of writing on economic questions took place from 1787 to 1804. The promotion of abundance, or the creation of wealth, which was both a security for subsistence and a source of pleasure in itself, was the subject of economic policy. In general, Bentham adhered to the free market principles associated with Adam Smith (1723–1790), on the grounds that individuals were the best judges of how to deploy their own resources. He also accepted Smith's principle that trade was limited by capital, arguing that there should be no prohibitions, bounties, or monopolies on foreign trade. There were, moreover, no economic advantages to the mother country in colony-holding, and those colonies able to govern themselves should be emancipated. Bentham advocated state interference in certain well-defined areas, including the provision of grain stores, encouragement of research, and dissemination of information. He was totally opposed to slavery and the slave trade, though he recognized that the abolition of the former would, in practice, require careful planning and execution.

Bentham's political thought, with its emphasis on the individual and democratic sovereignty, has contributed significantly to the development of liberalism. In economics, his notion of a calculation of utilities inspired the economist W. S. Jevons (1835–1882), and through him Alfred Marshall (1842–1924), in their development of the modern technique of cost-benefit analysis. Bentham's influence on the doctrines of classical economics is, however, less clear. His conception of economics was opposed both to the strand of political economy associated with Thomas Malthus (1766–1834), in that he rejected theology as an appropriate basis for legislation of any kind, and to the scientific strand associated with David Ricardo (1772–1823), in that he rejected the attempt to divorce economics from ethics. A proper assessment of Bentham's place in the history of economics will need to await the production of an authoritative collection of his writings on the subject.

When Bentham died, his body, following his instructions, was dissected for the benefit of anatomical research. His remains were then used to create the "auto-icon," the combination of skeleton, clothes, and wax head that is today displayed at University College London. The story that Bentham generally attends meetings of the College Council, and that the minutes record "Mr. Bentham present but not voting," is unfounded.

SEE ALSO *Ethics; Gaze, Panoptic; Malthus, Thomas Robert; Marginalism; Marshall, Alfred; Ricardo, David; Utilitarianism*

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Philip Schofield

BEQUESTS

A bequest is the act of leaving personal wealth to a person or heir by a will. The distribution of bequests not only has potentially important consequences for the distribution of wealth but also the distribution of income. Bequests often take the form of income yielding assets, such as farms, businesses, rental property, financial assets, and more. The income from such assets is an important component of total household income, and the proportion of total household income from nonlabor sources increases as total income increases. In other words, high income households receive a higher proportion of their total income from nonlabor sources than low income households. Thus, inequality in the distribution of bequests not only contributes to wealth inequality but income inequality as well.

The impact of bequests on the observed wealth inequality depends on the importance of bequests in total household wealth. If bequests are a large share of household wealth, then bequests may be an important factor in explaining the observed inequality in the distribution of wealth. And vice versa, if bequests are only a small share of household wealth, then the unequal distribution of bequests may play only a minor role in explaining the observed wealth inequality. Accordingly, considerable effort has been devoted to gauging the importance of bequests in household wealth. Economists Keiko Shimono and Hideaki Otsuki provide a review of the empirical evidence for Japan, the United Kingdom, and the United States in the early-twenty-first century. They report that the empirical evidence is mixed, with a wide range of estimates for each country. Generally speaking, some researchers find that bequests make up a large proportion of household wealth, with estimates as high as 80 percent; whereas others estimate that bequests are only a minor share, with estimates as low as 20 percent. The disparity in estimates for a given country derives mainly from the varying treatment of the interest income from bequests.

EXPLAINING BEQUESTS

In addition to gauging the potential effects of bequests on the distribution of household wealth, there are a variety of

theories in the economics literature attempting to explain what motivates individuals to leave bequests. In other words, why don't people simply consume all of their wealth during their lifetime? A prominent explanation for bequest behavior is that parents may be altruistically motivated to save and thereby accumulate wealth in order to leave a bequest to their children and thus increase their children's future happiness. This is often referred to as the bequest motive for saving. Formally, the parents' utility or happiness may be a function of their children's utility, and, in turn, each child's utility is assumed to be a function of the bequest received from their parents.

Such theories can have interesting twists. The Samaritan's dilemma, as explained by Ritsuko Futagami and his colleagues, describes a situation in which a child may save an inadequate amount of money in order to maximize the bequest from their parents, and the *rotten kid* theorem suggests that parents may give larger bequests to their delinquent or rotten children in order to elicit *good* behavior from them in the future. In any event, such theories suggest that the so-called bequest motive of saving may be an important explanation of household saving. As such, there is an extensive literature attempting to model the bequest motive as well as measure its importance in explaining household savings and the accumulation of wealth.

Mohamed Jellal and Francois-Charles Wolff find that parents who themselves are given bequests are more likely to give bequests to their children. As such any policy that affects current bequests to children may affect the bequest behavior of future generations. In this view, any program that currently affects the level of public taxes and subsidies will have a long-term impact on the provision of bequests due to habits passed on to them by the example set by their parents. In other words, parents who are net-beneficiaries of government programs will redistribute more resources to their children because they have higher incomes and the social safety-net provided by government programs reduces the need for precautionary bequests. In addition, by making a bequest, parents shape the preferences of their children, who in turn leave larger bequests to their own children.

BEQUESTS AND PUBLIC POLICY

Modeling the bequest motive is not merely of academic interest; the nature of the bequest motive also may have important implications for public policy. For example, according to the bequest motive of savings, a change in government tax or transfer programs may influence the future welfare of future generations. If parents care about the future happiness of their progeny, then households may adjust their savings behavior to leave a bequest which partially or fully offsets the anticipated change in government policy on the future welfare of their children, and, perhaps, their children's children. For example, if parents and grandparents perceive that a government financed retirement program has made them better off at the expense of higher current or future taxes on their children and grandchildren, they may leave larger bequests in order to offset the deleterious effects of the program on their children and grandchildren's welfare.

The bequest motive of savings also has important implications for the economic effects of inheritances taxes and government deficits. If parents save in order to leave a bequest, then changes in inheritances taxes may change their savings behavior because it changes the cost or net-of-tax price to the individual of a bequest of a given amount. More specifically, if the inheritance tax rate is 50 percent, then a $1.00 transfer net-of-taxes requires a $2.00 transfer. David Joulfaian traces the effects of income and estate and gift taxes on the net-of-tax price of wealth transfers. His estimates suggest that taxes may have a significant effect on the timing of transfers, which suggests that the wealthy are influenced by taxes in setting their lifetime transfers, adding another dimension to the literature on bequests.

Regarding the implications of bequests for government deficits, many economists maintain that deficit financing of government expenditures may result in higher interest rates and thereby crowd out private investment. If the return to private investment is higher than the return to public investment, then the crowding-out effect of deficits could be harmful to economic growth. According to Robert Barro a deficit-financed cut in current taxes leads to higher future taxes. Parents, however, may adjust their savings in order to leave larger bequests to their children in order to offset the effect of future tax liabilities on their children's future income (wealth). In this case, there is no crowding-out effect from deficit financing because the future tax liabilities are offset by an increase in current savings; there is no change in the interest rate, and private investment is unaffected.

SEE ALSO *Altruism; In Vivo Transfers; Income Distribution; Inequality, Income; Inequality, Wealth; Inheritance; Wealth*

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Mark Rider

BERG, IVAR E.
1929–

Ivar Berg is a sociologist who has made important contributions to the study of education (especially higher education), labor markets and social stratification, human resources, managers and corporations, and industrial sociology generally. In more than a dozen well-known books and more than seventy articles and chapters, Berg has addressed a variety of scholarly issues related to these topics. He is best known for his pathbreaking study *Education and Jobs: The Great Training Robbery* (1970), which posed a significant challenge to conventional economic theory's treatment of human capital and income distribution.

Berg was born on January 3, 1929, in Brooklyn, New York, where he attended kindergarten through high school. His undergraduate education was interrupted twice by service in the U.S. Marine Corps: He was on active duty from 1946 to 1948 and 1950 to 1952, serving in infantry communications in the First and Second Marine Divisions (he resigned in 1965 at the rank of major). He obtained his AB with high honors in political science from Colgate University in 1954. Returning to his Norwegian roots, he was a National Woodrow Wilson fellow and a Fulbright scholar at the University of Oslo from 1954 to 1955. He did his doctoral work at Harvard University from 1955 to 1959, receiving his PhD in 1959 under the tutelage of Alex Inkeles.

He has been a member of the faculties of Columbia University and Vanderbilt University, where he was a professor of economics and sociology, and in the sociology department at the University of Pennsylvania. Toward the end of his sixteen-year-long stay at Columbia University he served as the associate dean of Columbia's fourteen faculties in an interim administration following the upheavals in 1968 related to the Vietnam War. Berg later chaired the University of Pennsylvania's Department of Sociology (1979–1983), and served as dean of Penn's College of Arts and Sciences from 1984 to 1989 and as dean of Social Sciences from 1989 to 1991. In 2001 he was awarded the University of Pennsylvania's Ira Abrams Award for Excellence in Undergraduate and Graduate Teaching. Berg is also a member of Phi Beta Kappa, and has been elected a Fellow of the American Association for the Advancement of Science, the New York Academy of Sciences, and the International Academy of Management.

Berg's research focuses primarily on the relationship of education to work, as well as on the work structures (e.g., organizations, industries, unions, occupations) that characterize industrial societies. He has argued forcefully for the importance of studying the social bases of market phenomena, maintaining that analyses of social institutions and employers' motivations are needed to supplement economists' emphases on supply-side dynamics to understand labor market outcomes (Berg 1981). Moreover, Berg has consistently urged that it is essential to study work and its correlates at multiple levels of analysis (see Berg 1979; Kalleberg and Berg 1987). Explanations should include work structures and institutions operating at macroscopic (such as government policies and relations among nations in a world economy), mezzoscopic (such as industry sectors and labor force developments), and microscopic (such as the job definitions and human resource practices that take place within organizations) levels of analysis.

Berg's classic book *Education and Jobs: The Great Training Robbery* still exerts a profound impact upon the ways employers, academic leaders, and public policy makers have come to think about the linkages between education, personal development, income distribution, and employment. He argued that despite the claims of human capital theory in economics, peoples' educational attainment does not always correspond to their skill levels. On the contrary, Berg's analyses found evidence that employers frequently hire people with certain required levels of education to work in jobs that do not make use of their education (hence, the "great training robbery"), and that employees with more education are not necessarily more productive, and in some cases are actually less productive than workers with less education. Moreover, Berg's results showed that the rise in educational requirements for jobs in the United States reflected primarily the increase in educational attainments of workers (and an emphasis on "credentials"), not the actual technical requirements of jobs.

Berg's study cast doubt on economists' assertions that people with more education earn more because they are more skilled and productive. It also cautioned against using educational credentials as indicators of skills, an insight that played a major role in a landmark civil rights decision by the U. S. Supreme Court, *Griggs v. Duke Power Company* (1971). Moreover, Berg's notion of credentialism was credited with providing the bases of the formal theory of market signaling, for which George A. Akerlof, A. Michael Spence, and Joseph E. Stiglitz shared the 2001 Nobel Prize in Economics.

SEE ALSO *Education, Returns to; Human Capital; Marginal Productivity; Productivity; Schooling*

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Arne L. Kalleberg

BERGMANN, BARBARA

SEE *Crowding Hypothesis.*

BERLE AND MEANS

SEE *Capitalism, Managerial.*

BERLIN WALL

On the night of August 13, 1961, police officers strung barbed wire along the border of East Berlin to keep East German citizens from fleeing to West Germany. During the previous half year about 160,000 refugees had escaped from the German Democratic Republic (GDR), bringing the total to over three million who had sought a better life and more freedom in West Germany. Because the Soviet leader Nikita Khrushchev had failed to neutralize the western sectors of the former capital of Germany in the Berlin crisis of 1958, he allowed the East German leader, Walter Ulbricht, to seal the border under the guise of protection against capitalist subversion to stop the outflow.

The barrier gradually was turned into an insurmountable concrete wall that averaged 12 feet high and 96 miles long, dividing neighborhoods, streets, and even houses. An elaborate system of fortifications with a back wall, a minefield, a jeep road, guard dogs, watchtowers, and searchlights made the wall impenetrable, and those who wanted to get out had to build tunnels, break through with trucks, fly across in balloons, or forge passports. More than 125 people died in the attempt because the border guards had orders to shoot all escapees. Because the GDR had built the wall on its side, angry Western governments could only insist on their right to cross at Checkpoint Charlie and reassure the residents of their sectors that they would not abandon them. In 1963 President John F. Kennedy expressed his solidarity with the words "I am a Berliner."

The political effect of the wall was ambivalent. In the short run it increased cold war tensions, culminating in the Cuban missile crisis. In the medium term it stabilized the Communist regime by closing off the "exit" option and forcing East Germans to come to terms with the dictatorship of the SED (Socialist Unity Party). The wall also compelled West German leaders to accept the existence of a second German state and sign agreements with it to permit some travel through a handful of crossing points such as Friedrichstrasse. In the long run, however, the ugly edifice demonstrated symbolically that the GDR was forced to imprison its people because it remained rather unpopular. Anti-Communist leaders never tired of demanding, like President Reagan in 1987, "Mister Gorbachev, tear down this wall."

The inhumanity of the wall eventually prompted its fall. Many East Germans continued to try to leave, supported by a West German policy that recognized them as citizens and paid ransom for their release. When the Hungarian government opened its Austrian border in the summer of 1989, tens of thousands fled, sparking mass demonstrations among those left behind in the GDR. Because that democratic awakening overthrew Erich Honecker, his successor, Egon Krenz, attempted to initiate a more liberal travel policy. Its premature announcement on November 9 inspired citizens to mass at the crossing points and force them to open, thus toppling the wall. Not only East and West Berliners but many people around the world celebrated its fall, which signified the collapse of communism and allowed Germans to reunify and Europeans to reunite.

SEE ALSO *Communism*

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Konrad H. Jarausch

BERNOULLI, DANIEL

SEE *Expectations; Expected Utility Theory; Utility, Von Neumann-Morgenstern.*

BEST, LLOYD

SEE *Lewis, W. Arthur.*

BETTELHEIM, BRUNO

1903–1990

The lifework of Austrian-born American psychologist Bruno Bettelheim was devoted to what he called "helping others in their becoming"—improving the treatment of severely disturbed children (1950, 1955, 1967, 1974) and the parenting of all children (1962, 1976, 1987, 1993) through careful attention to their inner experience and developmental needs. His greatest achievement was his pioneering work in *milieu therapy*, developed when he served as director (1944–1973) of the University of Chicago's residential Orthogenic School, whose philosophy and functioning he first described in *Love Is Not Enough* (1950).

Bettelheim's thinking was strongly influenced by his experience as a concentration camp prisoner in Germany during the late 1930s (see *The Informed Heart* 1960). He coined the term *extreme situation* to describe the self-disintegrating trauma of the camp experience, where prisoners knew they might be killed any moment at the whim of the guards, but they were unable to take meaningful action because there was no predictable relationship between the prisoners' behavior and how the guards treated them. Experiencing his own personality disintegrating under these dehumanizing conditions, Bettelheim understood that the Nazis were trying to destroy individuality—in the camps and in Germany generally—and he began to realize the centrality of autonomy in mental health. If an environment designed to promote terror, unpredictability, helplessness, and hopelessness could destroy personality, he reasoned that a therapeutic environment designed to promote safety, predictability, autonomy, and hope ("love is not enough") could heal personality. This became the model for the Orthogenic School.

Recognizing that the "symptoms" prisoners developed—often resembling those of schizophrenia and autism—were actually survival mechanisms, Bettelheim developed an overall adaptational viewpoint that stresses active mastery and that views symptoms as adaptations to complex internal and external conditions rather than pathological dysfunctions. In *The Empty Fortress* (1967), his groundbreaking study of autism, Bettelheim outlined a formal developmental theory that regards autonomy as one of the two core needs of the self (along with intimacy), adumbrating an original "self-psychology" significantly different from that of Heinz Kohut (1913–1981) (Frattaroli 1994).

Bettelheim's important contribution to the phenomenology and treatment of autism has unfortunately been overshadowed by the controversy over his theory of etiology. He viewed autism as the child's adaptive response to the mortal terror and powerlessness of growing up in an extreme situation created by inadequate or pathological mothering. He emphasized, however, that "it is not the maternal attitude that produces autism, but the child's spontaneous reaction to it" (Bettelheim 1967, p. 69). He thought that autistic children might have a neurologically based hypersensitivity to sensory and emotional stimuli, such that they experience ordinary negative emotions (including their own anger) as overwhelming and life-threatening. They then "try, in defense, to blot out what is too destructive an experience for them" (Bettelheim 1967, p. 398) by withdrawing into the self-protective "empty fortress" of autism.

Contrary to modern theories that autistics are neurologically impaired in their ability to recognize emotional cues, their hypersensitivity to emotions is now well documented. As Karen Zelan (2003, 2006) describes, this is much more hopeful for treatment. A collaborator with Bettelheim in his study of autism, Zelan has built on his positive contribution in her subsequent work with autistic children, but she rejects his ideas about bad parenting. Autistic children feel overwhelmed by—and need to withdraw from—any sensory and emotional stimulation, whether from the outside world or from within. Their development is stalled when they cannot tolerate the overstimulating presence of the very people they love—their parents. Parents may develop negative attitudes *in reaction to* the autistic withdrawal, but once they understand the underlying problem of hypersensitivity, Zelan finds that most parents are quite sensitive to their children's needs and become crucially important partners in the treatment.

Shortly after Bettelheim's death, several former students alleged that he was a sadistic tyrant who had beaten them abusively (Sutton 1996, prologue). They were students during Bettelheim's last years at the Orthogenic School, when he was preoccupied with medical problems that forced his retirement and was worried about the school's survival. As Sutton suggests, they may have felt cheated by his withdrawal and emotional disengagement during those years. Perhaps they felt betrayed when he killed himself after a life of preaching hope. And perhaps in the heat of these understandable emotions, they reacted, in a one-sidedly negative way, to real experiences with Bettelheim, who could be autocratic, impatient, and intimidating, and who did hit the children.

Ironically, Bettelheim's therapeutic rationale for hitting children was to make himself a frightening but man-

ageable object for just this sort of extreme negative emotion, so that staff members could maintain their vital positive role in the children's lives. Psychological healing requires an atmosphere of safety, in which staff treat children with respect, acceptance, and understanding. But in any residential setting, the atmosphere will be charged with the children's intense negative emotions—rage, hate, paranoia, shame, guilt, self-loathing, and so on—and with tension generated by their impulsive, potentially destructive or self-destructive acting-out of these emotions. In such an atmosphere, staff can easily lose their therapeutic attitude, reacting to patients' negativity and acting-out with their own negativity, provoking further acting-out and creating an unsafe atmosphere. To protect staff members from being overwhelmed in this way, Bettelheim intentionally made himself the focus of all the negativity by assuming the role of feared and hated "big bad wolf" disciplinarian (Sutton 1996, chap. 14).

The perspective expressed in this article reflects the professional and personal experience of the writer, who was inspired to become a psychiatrist and psychoanalyst through working with Bettelheim during Bettelheim's last years at the Orthogenic School (1970–1973). He experienced the school under Bettelheim's direction as a loving, magical, transformative place, very much the "home for the heart" described in Bettelheim's 1974 book (Frattaroli, 1994). He has also written about Bettelheim's contributions to psychoanalytic theory, as well as his clinical teaching and therapeutic philosophy (Frattaroli 1992; 2001, chaps. 5, 6).

The writer saw Bettelheim hit children many times, but never maliciously or abusively. He hit them when their behavior was unsafe or threatened the staff's ability to manage groups. Bettelheim's practice of hitting was deliberate, controlled, predictable, and safe.

As former student Stephen Eliot (2003, chap. 7) describes, the children knew exactly what to expect from Bettelheim, an open-handed slap on the face that was humiliating enough to be a deterrent, but not physically harmful.

Bettelheim often said that because his hitting of children was not done in anger, it was much kinder than what the children would otherwise have done to themselves—out of guilt and self-hatred—or what they may have provoked staff to do to them in anger. Bettelheim's regular practice, immediately after hitting a child, was to talk with staff members about the situation that had required his intervention, pointing out where they had missed or misunderstood important signals that could have told them what the child needed. His keen sense of the children's needs and vulnerabilities in these discussions confirms that he was not angry with them. One cannot be in an abusive rage at a child one minute and show a thoughtful, empathic respect for that child the next minute.

Standard methods of behavioral control used in hospitals nowadays—any of which can become abusive in the angry impulse of the moment—include leather restraints, locked and padded seclusion rooms, and powerful psychotropic drugs, often used indiscriminately, always without regard for their long-term impact on growth and development (about which nothing is known). Having experienced all these methods in action as a psychiatrist, this writer considers Bettelheim's approach to have been more humane and less destructive to patients' trust and self-esteem. The writer does not advocate such a treatment approach for anyone else, but it was appropriate for Bettelheim and the unique conditions of the Orthogenic School, which functioned more like an extended family than a hospital.

The above account is entirely this writer's, but it is consistent with Sutton's (1996, chap. 14) more detailed and well-documented discussion of Bettelheim's practice of hitting. At stake in this controversy is arguably the most important twentieth-century contribution to the wise, humane, ethical, and effective treatment of severely disturbed patients.

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Elio Frattaroli

BEVERIDGE CURVE

The term *Beveridge curve* describes the negative relationship between the unemployment rate and the vacancy rate in an economy's equilibrium. It is named after William Henry Beveridge (1879–1963), a British economist and reformer and one of the preeminent inspirers of postwar British welfare state. His seminal reports to Parliament in 1942 and 1944 (*Social Insurance and Allied Services* and *Full Employment in a Free Society*) promoted a comprehensive social program aimed at reaching full employment, and they laid the foundation for the later development of an improved social security system to support people "from the cradle to the grave," as well as the National Health Service in Britain.

Labor markets in equilibrium are characterized by the coexistence of people seeking jobs and vacant jobs employers want to fill. This is the result of frictions that make the process of matching job seekers to job vacancies costly and time consuming. This process can be approximated through a matching function that relates the number of hires (or job matches) M to the number of unemployed workers U and job vacancies V: $M=M(U,V)$. The function is increasing in both arguments; that is, it assumes that the number of hires rises when more workers and employers search in the labor market. In equilibrium, when the number of job separations equals the number of matches, it is possible to identify a negative relationship between unemployment and job vacancies. This negative relationship is known in the literature as the *Beveridge curve*.

Cyclical labor market dynamics are commonly reflected by movements along the Beveridge curve. Expansions are characterized by higher vacancy rates and lower unemployment rates, whereas the opposite is true for contractions. Positive comovements of the job vacancy rate and the unemployment rate can be interpreted instead as the result of changes in the structural properties of the underlying job matching process—that is, in the capacity of the unemployed to be matched to job vacancies. These structural changes can be imputed to a number of factors, such as institutional change, mismatch between the skills of the unemployed and the skills required by new jobs, search effort, or effectiveness. According to this interpretation, a shift to the right of the Beveridge curve may be associated with an increase in equilibrium unemployment. Economic policy then should be aimed at increasing the effectiveness of job matching, shifting the Beveridge curve to the left and thus alleviating the underutilization of the available labor resources in the economy.

On the empirical side, there are a number of difficulties that complicate the estimation of a Beveridge curve. First, the researcher often lacks proper vacancy data and therefore resorts to vague approximations, using available series whose relationship with the vacancy rate may not be constant over time. Second, the pool of workers available for a match may include other categories of workers in addition to the unemployed, such as employed workers searching for new jobs, or even individuals only temporarily out of the labor force. Third, shifts in the Beveridge curve are usually hard to detect in a nonarbitrary way.

SEE ALSO *Business Cycles, Empirical Literature; Macroeconomics; Unemployment; Unemployment Rate*

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Luca Nunziata

BEVERIDGE MODEL

SEE *Welfare State.*

BHAGWATI, JAGDISH

1934–

Jagdish Bhagwati was born and raised in India. He went to Cambridge University in 1954 and graduated from there in 1956 with a first in Economics Tripos (*Tripos*

refers to the system of honors degrees and examinations at Cambridge). He then studied at the Massachusetts Institute of Technology (MIT) and Oxford, returning to India in 1961 as professor of economics at the Indian Statistical Institute in New Delhi. In 1963, he moved to the Delhi School of Economics as professor of international trade. He visited Columbia University during 1966–1967 and joined the permanent faculty of MIT in 1968, where he later became the Ford International Professor of Economics. In 1980, Bhagwati joined Columbia as Arthur Lehman Professor of Economics and Professor of Political Science. In 2001, he became a University Professor at Columbia University.

Bhagwati has served as economic policy adviser to the director-general of the General Agreement on Tariffs and Trade (GATT) (1991–1993), as special adviser to the United Nations (UN) on Globalization (2001), and as an external adviser to the World Trade Organization (WTO). He also recently served as a member of UN secretary-general Kofi Annan's advisory group on New Partnership in Africa's Development (NEPAD) and was a member of the Eminent Persons Group on the future of the UN Conference on Trade and Development (UNCTAD).

Bhagwati has published more than 300 articles and fifty volumes. He is regarded as one of the foremost international trade theorists of his generation. His very first article, "Immiserizing Growth: A Geometrical Note," published in the *Review of Economic Studies* in 1958, is regarded a classic and spawned a large body of literature. In it, he showed that growth that expanded a country's export sector could so drastically worsen its terms of trade as to actually lower its real income and welfare.

Bhagwati's most influential scientific contribution is "Domestic Distortions, Tariffs, and the Theory of Optimum Subsidy" (1963), written jointly with V. K. Ramaswami. This paper was written at a time when the relevant analytic literature was characterized by ambivalence with respect to the superiority of trade over autarky. It had been pointed out that when domestic distortions such as unionized wage or externalities existed, there was no guarantee that free trade would be superior to autarky. Bhagwati and Ramaswami demonstrated that once an appropriate policy was adopted to eliminate the existing distortion, the case for free trade was restored. They also introduced the idea of policy ranking. In the context of the wage-distortion model, they showed that from a welfare perspective, wage subsidy was the first best instrument, followed by output subsidy and tariff in that order.

Subsequently, Bhagwati led the way in numerous areas of research, including brain drain, illegal international trade, noneconomic objectives and optimal policy interventions, directly unproductive profit-seeking (DUP) activities, nonequivalence of tariffs and quotas, and preferential versus multilateral trade liberalization. He coauthored many of the contributions in these and other areas with T. N. Srinivasan of Yale University. The two together also wrote the influential book *Foreign Trade Regimes and Economic Development: India*.

Currently, Bhagwati is the foremost advocate of free trade. His critics have sometimes argued that he only cares about free trade and does not pay social issues such as labor and environmental standards, income equality, and the gender gap the importance they deserve. Yet such criticisms are the result of a superficial reading of his writings. In his recent celebrated book *In Defense of Globalization* (2004), he carefully dissects all of the important and controversial social issues and advocates their promotion rather than playing them down in favor of free trade. Where he differs from his critics is in the use of trade protection or trade sanctions as instruments for achieving these objectives. Instead, he advocates the use of multiple instruments to achieve multiple objectives. Thus, for example, he recommends using the instrumentality of the International Labour Organization and nongovernmental organizations to promote labor standards and the World Trade Organization to promote trade liberalization.

SEE ALSO *Brain Drain; Free Trade; Immiserizing Growth; International Nongovernmental Organizations (INGOs); Nongovernmental Organizations (NGOs); Protectionism; World Trade Organization*

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Arvind Panagariya

BHOPAL

SEE *Disaster Management.*

BICAMERALISM

Parliaments are unicameral or bicameral. In a unicameral parliament all members of parliament sit in the same chamber and vote on major policy decisions. In a bicameral parliament members meet and vote in two separate chambers, usually called the lower house and upper house. The lower house is usually based proportionally on population with each member representing the same number of citizens in each district or region. The upper house varies more broadly in the ways in which members are selected, including inheritance, appointment by various bodies, and direct and indirect elections.

In most bicameral legislatures, the lower chamber predominates. Especially in parliamentary systems, in which the cabinet is responsible for the parliament, ensuring that the cabinet is responsible only to one chamber is critical. Usually, the upper house is able only to delay legislation passed by the lower house. Sometimes the upper house can veto certain types of legislation. In Germany, for instance, the Bundesrat has veto power over legislation that affects the power of the states (the Länder). In Britain the House of Commons is the dominant partner: Ministers and governments emerge from the lower chamber and remain accountable to it.

A majority of the world's parliaments are unicameral. However, in 2000, 37 percent of the world's 178 parliaments had two chambers. This proportion has decreased since World War II as several established democracies have abolished their second chamber, and as new, unitary, and postcommunist states have adopted unicameral assembly. On all continents unicameral assemblies are more common than bicameral ones. For the most part bicameral systems may be found in South and North America and Europe. On the contrary, in Africa and Asia bicameral systems are rather unusual.

According to the political scientist Andrew Heywood (1997), the major benefits of bicameralism are:

- Second chambers check the power of first chambers and prevent abuses of majoritarian rule.
- Bicameral assemblies more effectively check the power of the executive, because there are two chambers to expose the failings of government.
- Two-chamber assemblies widen the basis of representation, allowing each house to articulate a different range of interests and respond to different groups of voters.
- Second chambers act as a constitutional safeguard, delaying the passage of controversial legislation and allowing time for discussion and public debate.

The major drawbacks are:

- Unicameral assemblies are more efficient, because the existence of a second chamber can make the legislative process unnecessarily complex and difficult.
- Second chambers often act as a check on democratic rule, particularly when their members are nonelected or indirectly elected.
- Bicameral assemblies are a recipe for institutional conflict in the legislature, as well as government gridlock.
- Second chambers introduce a conservative political bias by upholding existing constitutional arrangements and, sometimes, the interests of social elites.

In terms of authority and political power bicameral legislatures show large variation. The weakest upper chambers are hardly more than retirement posts for politicians of great merit. On the other hand, with respect to political influence the strongest upper chambers are comparable with the lower chamber or the executive power.

SEE ALSO *Congress, U.S.; Parliament, United Kingdom; Parliaments and Parliamentary Systems*

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Guy-Erik Isaksson

BIG BROTHER

SEE *Personality, Cult of.*

BIG PUSH

SEE *Threshold Effects.*

BIGOTRY

Throughout human history, civilizations have been plagued by the problems that result from people's prejudice and bigotry toward one another. In this context, *prejudice* is a negative attitude that occurs when people prejudge disliked others, and *bigotry* is an extreme form of it. Social scientists have written extensively about the correlates of prejudice because of its relationship to group conflict and violence (e.g., Janowitz 1969). Much of this attention has focused on the connections between group conflict and a host of social phenomena that are associated with prejudice, including though not limited to stereotyping, rioting, terrorism, and, not the least among them, bigotry (e.g., Hovland and Sears 1940; Green et al. 1998). Common terms related to bigotry include *ethnocentrism* and *intergroup hatred.*

Bigotry refers to extreme intolerance of members of a socially recognized and vilified out-group. An *out-group* is a group other than the one in which individuals perceive themselves to belong. Prejudice refers to negative attitudes toward members of a group that may or may not be expressed. Though similar (e.g., they both refer to a bias in perception of others), the two terms—bigotry and prejudice—may be distinguished, with bigotry representing a more extreme and brazen form of prejudice.

Bigotry, though not an intractable problem, is one that has shaped the nature of interaction between groups of people throughout history and around the world. For example, intergroup relations between blacks and whites in the United States, Germans and Jews in twentieth-century Europe, Israelis and Palestinians in the Middle East, Africans and Afrikaners in South Africa, heterosexual and gay people, and men and women have all been affected by bigotry and bigoted attitudes. Bigotry and the corresponding problems that ensue from it remain high on the list of "social evils," and most people perceive the bigot to be a person who is obstinately narrow minded, antisocial, and lacking the moral acuity that many believe themselves to possess.

In general, researchers who study bigotry recognize the difficulties involved in identifying its causes. This is because there are often important related variables to consider, including differences (or similarities) in cultural orientation, national identity, and religious background, as well as contact and familiarity—all of which can be associated with bigotry. Not surprisingly, more is known about the consequences of bigotry (e.g., harassment, assault, riots, terrorism) than about the factors that give rise to it.

Researchers have employed a host of methods to assess the presence of bigotry. In earlier years, attempts to measure bigotry often involved direct questionnaires in which respondents indicated the degree to which they liked or disliked an out-group. More recently, changing social norms prohibit direct expression of prejudice and bigotry in most settings. Consequently, researchers have employed more covert measures, such as reaction-time tests in which the time needed to respond to a stimulus is taken as an indirect indicator of a person's attitude. In other cases, behavioral measures, such as seating choice and proximity to a member of an out-group, have been used as indicators of bigotry.

STUDIES OF BIGOTRY

Importantly, some of the earliest social science research addressing the problem of bigotry focused on patterns of interaction and violence perpetrated by whites against African Americans in the United States. Until the late 1950s, blatant racism and physical violence directed at African Americans was normative and well entrenched within the social fabric of American society. Whereas some blamed white fears about miscegenation (i.e., interracial sexual relations) for the collective violence directed at the newly freed class of citizens, others generally attributed the problem to the expanding rights of African Americans.

Contemporary research and theory on bigotry can be conceptualized along a continuum. At one end are those theories that locate the causes of bigotry outside of the individual at the societal level (i.e., the macro level of analysis). These types of theories are largely context dependent. At the other end of this conceptual continuum are explanations for bigotry that attribute causality to internal factors such as deficiencies in the individual's personality, limitations in information-processing capacities, or physiological and biological mechanisms.

Many of the efforts toward understanding the problem of bigotry have involved individualistic accounts of prejudice focusing on such cognitive processes as stereotyping, categorization, and learning. In the U.S. tradition of social psychology, researchers have tended to focus on the individual's thought processes and experiences while overlooking or minimizing ways that the wider social context can instigate bigotry (Bar-Tal and Teichman 2005). In contrast, researchers outside of the United States, as well as many of those within the discipline of sociology (e.g., Feagin and Feagin 1986), have focused upon the institutional and structural factors that can be both causes and effects of bigotry. According to this approach, current institutional policies and organizational structures continue to discriminate because they were established in the past by those most privileged by discriminatory policies. Because of these policies, people who were targets of prejudice in the past continue to experience discrimination long after explicit expressions of bigotry and acknowledgement of prejudice have ceased to occur.

Although interest in studying bigotry has varied over the years, a renewed interest in the topic is evident among researchers addressing issues related to cyberhate, terrorism, and religious and nationalistic fanaticism. In the case of cyberhate, the speed of the Internet and its widespread accessibility make the spread of bigotry almost instantaneous and increasingly available to vulnerable populations (Craig-Henderson 2006). As for the relationship between bigotry and nationalism, there are a host of researchers studying the Arab-Israeli conflict in the Middle East (e.g., Bar-Tal and Teichman 2005). That particular conflict has roots in the Zionist occupation of the country of Israel, formerly known as Palestine. Because of the historical realities that have created the state of Israel, today's Arabs and Jews in that region have very distinct group identities that have given rise to their intergroup conflict. Social science researchers who study this kind of group conflict have demonstrated that the strength of identification with one's in-group is associated with one's expressed bigotry toward the out-group. In many situations, the more strongly one identifies with an in-group, the more bigoted one is against members of the out-group.

Bigotry can be minimal and manifested in avoidance or social exclusion of the out-group, or it can be severe and deadly. In 1998 James Byrd Jr., an African American man in Jasper, Texas, was murdered by white supremacists who dragged him to death behind their pickup truck after offering him a ride home. As members of a white supremacist group, Byrd's murderers were extreme in their bigotry. As a black man, Byrd was perceived by his murderers to be a member of a despised out-group.

Similarly brutal attacks have targeted sexual minorities. In 1998 the murder of the college student Matthew Shepard near Laramie, Wyoming, was attributed to anti-gay bigotry. Most public opinion polls reveal continuing evidence of this form of bigotry (Herek 2000). Shepard's bigoted murderers were highly prejudiced toward gay people. Other examples of well-known bigots include David Duke, the former leader of the Knights of the Ku Klux Klan; Nazi chancellor of Germany Adolph Hitler (1889–1945); and French politician Jean-Marie Le Pen.

RESOLVING BIGOTRY

One popular and long-standing idea within the social psychological literature has been that bigotry can be reduced with intergroup contact. That is, through contact with one another under ideal conditions, formerly bigoted out-groups could come to look favorably upon one another and thereby attenuate conflict and bigotry. However, this optimistic outlook has fallen out of favor in recent years as its theoretical underpinnings have been challenged by a number of researchers studying bigotry. For example, when one considers the pervasiveness of gender bias against women and the paradoxical intimacy that characterizes relations between heterosexual males and females, it becomes clear that contact, while necessary, is not sufficient to eliminate bigotry. Furthermore, there is relatively little research investigating the extent to which contact between different real-world racial and ethnic groups can actually breed harmony. How then to solve the problem of bigotry? The best strategy is one that includes education, interaction, and legislation. Indeed, any efforts aimed at eliminating bigotry must involve attention to each aspect of this tripartite approach.

SEE ALSO *Ethnocentrism; Prejudice; Racism*

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BILATERALISM

Bilateralism concerns relations or policies of joint action between two parties. It can be contrasted with unilateralism (where one party acts on its own) and multilateralism (where three or more parties are involved). Typically, the term has applications concerning political, economic, and

security matters between two states. Bilateralism has both costs and benefits, and there is a debate on its merits relative to unilateral or multilateral approaches.

States have traditionally related to each other on a bilateral basis. They recognize each other as states and agree to send ambassadors to each other's capital. Diplomatic relations can be unilateral, of course, but unless relations are bilateral, some tensions are likely. China and the United States concluded a Joint Communiqué on the Establishment of Diplomatic Relations on January 1, 1979, and formally established embassies in Beijing and Washington, DC, on March 1, 1979. The result was a normalization of relations, which had often been turbulent between 1949 and 1972.

Economic bilateralism is common. In trade, for example, countries have struck bilateral agreements in which they mutually agree to lower their tariffs. The effect is to encourage trade between the two sides to their mutual benefit. Such arrangements can also lead, however, to conflict with third parties excluded from such benefits. Bilateral agreements tend to be more common during or just after periods when economic nationalism (unilateralism) dominates or when multilateral options are stalled.

In security affairs, bilateralism is also found in agreements between states to come to each other's defense if attacked or threatened by a third party. Otto von Bismarck negotiated such a treaty with the Austrian Habsburg Empire in 1879. That treaty also antagonized Russia and helped fuel insecurities that gave rise to World War I. During the cold war, the United States and the Soviet Union concluded a number of agreements to mutually limit nuclear weapons, such as the Strategic Arms Limitation Treaty (SALT) and the Strategic Arms Reduction Treaty (START).

Bilateralism has advantages and disadvantages in comparison with the alternatives. With respect to unilateralism, it offers less freedom of action. Yet it also offers the ability to realize mutual gains that may be available only from acting jointly, for example, greater economic activity from freer trade, reduced armament burdens from agreed limitations, and greater security from cooperation against external threats.

With respect to multilateralism the calculus reverses itself. Bilateralism affords greater freedom and efficiency of action because fewer actors are involved. The League of Nations and its successor, the United Nations, have often been criticized for ineffectiveness because too many parties are involved.

Yet bilateralism is too costly and is insufficient to deal with some world problems. For example, the multilateral World Trade Organization is a much easier way to organize free trade than to have every country negotiate bilateral free-trade agreements with each other. And bilateral agreements would be unwieldy and not comprehensive enough for a systemic problem like global warming. The efficacy of bilateralism depends on the issue and the situation.

SEE ALSO *International Relations*

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Jeffrey W. Legro

BILL OF RIGHTS, U.S.

The first ten amendments to the U.S. Constitution are known as the Bill of Rights. The guarantees of the Bill of Rights include freedom of religion, the rights of expression and association, the right to privacy, the right to due process, and freedom from unjust restraint or trial and from cruel and unusual punishment. The U.S. Bill of Rights has served as a model for other nations in the development of their own constitutions.

The U.S. Constitution was shaped in large part by compromises between Federalists who advocated a strong, centralized government, and Anti-Federalists who believed that the balance of power should favor the states. One of these compromises involved the adoption of a bill of rights—an enumeration of the fundamental and inalienable rights of citizens.

A proposal to include a bill of rights was rejected by the Constitutional Convention of 1787. The Federalists believed that a bill of rights was unnecessary since the government possessed only those powers enumerated in the Constitution. They asserted that state constitutions protected individual rights and that the federal Constitution did not repeal those protections. The Federalists also feared that a listing of specific rights would endanger rights that were not listed. Not persuaded by these arguments, some Anti-Federalists withheld their signatures from the final document because of the absence of a bill of rights. Others proposed that a second constitutional convention be held to draft a bill of rights.

At state conventions to consider ratification of the Constitution, opposition focused on the failure to include a bill of rights. Anti-Federalists asserted that the

Constitution lacked sufficient safeguards for individuals against abuses of power by the federal government, and they pushed to postpone ratification until the Constitution was amended appropriately. The Federalists stood their ground initially, but when it became apparent that ratification was in jeopardy, they agreed to a compromise—they would accept proposed amendments for inclusion in a bill of rights with the ratification instruments of the states.

James Madison (1751–1836), who was elected to represent Virginia in the First Congress, had made a campaign pledge to his Anti-Federalist constituents that he would sponsor a bill of rights and work toward its passage. In June 1789 Madison introduced a proposed bill of rights in the U.S. House of Representatives. Madison's bill of rights reflected the recommendations of the state ratifying conventions, but it also drew upon the Magna Carta of 1215, the English Bill of Rights of 1689, and the Virginia Declaration of Rights of 1776. Congress approved twelve of Madison's proposed amendments, and ten were ratified by the states. The Bill of Rights was added to the Constitution in 1791.

The Bill of Rights limits the powers of the federal government, but in the late nineteenth century the U.S. Supreme Court began using the Fourteenth Amendment to make the Bill of Rights applicable to state governments as well. According to the Court's incorporation doctrine, the Fourteenth Amendment prohibits states from violating those provisions of the Bill of Rights that represent the "fundamental principles of liberty and justice which lie at the base of all our civil and political institutions" (*Hebert v. Louisiana* 1926). Between 1897 and 1969, the Supreme Court made nearly all of the protections of the Bill of Rights binding upon the states.

SEE ALSO *Civil Liberties; Civil Rights*

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Malia Reddick

BIN LADEN, OSAMA
1957–

Osama bin Laden was born the seventeenth of Muhammed bin Laden's fifty-two children and the seventeenth of his twenty-four sons, in Riyadh, the capital of Saudi Arabia, on March 10, 1957. Osama bin Laden was, however, the only child of Alia Ghanem of Syria, perhaps the most beautiful of Muhammed bin Laden's many wives, but different and separate from the Saudi clan and soon to be divorced by her husband. Muhammed bin Laden began life as a poor Yemeni bricklayer, uneducated and one-eyed. He became an enormously wealthy building contractor in Saudi Arabia after crafting intimate ties with the royal family.

Osama bin Laden's youth was spent in Hejaz, a southern Arabian province. In 1976 he graduated from private school, the Al Thagher Model School, near the port town of Jedda where he grew up. Described by former teachers and classmates as an outstanding student, bin Laden spent his extra time involved in a for-credit after school Islamic study group for exceptional students. Many believe it could be there that he first acquired a formal education in jihad. Classes were on the principles of the Muslim Brotherhood, an Islamist organization founded in Egypt in the 1920s and based on Islamic activism, political consciousness, and jihad. Bin Laden graduated from Jedda's prestigious King Abel Aziz University with a degree in civil engineering. The stories of bin Laden as a hard-drinking partygoer in Beirut in his youth are almost certainly wrong (and probably confuse him with one of his many brothers or other family members). On the contrary, at the university bin Laden was earnest and studious. He took the Qu'ran, at least his fundamentalist reading of it, to heart.

In 1979 the Soviet Union invaded Afghanistan in what would turn out to be a disastrous war that would lead to Soviet defeat and the collapse of the empire. There immediately arose throughout the Muslim world a mythic call for jihad—embraced by the Saudi royal family itself—in defense of the Islamic peoples of Afghanistan against the godless "infidel" Russians. Osama bin Laden responded warmly to that call. At first he raised money for the cause, then in the early 1980s, with his spiritual mentor, Abdullah Azzam (1941–1989), established the Maktab al-Khidamat (services offices) in Pakistan's University of Peshawar to direct support and resources to the fighters out in the field. In 1986 the twenty-nine-year-old Osama bin Laden added a heroic battlefield experience to his expanding mythic vita at the battle of Jaji. In his account, which is probably as much inspirational fairy-tale as actual history, he and the Afghan fighters were thirty meters from the Russians. He came close to being captured, but was so peaceful in his heart that he went to sleep for a while. Mortars fell around him and miraculously failed to explode. "We beat the Soviet Union," he said (bin Laden, 2005). "The Russians fled."

Bin Laden's Islamist triumphalism and his insistence on the continuation of jihad made him a nuisance in

Saudi Arabia, which forced him to leave the country in 1991 and finally revoked his citizenship in 1994, despite his impeccable family ties. He spent the next half-decade in Sudan, a remote and lawless land in which he could operate mostly outside of international control as he plotted his next move. One important event in these years that led to his further radicalization was the Gulf War of 1991. He was appalled that Saudi Arabia would allow American troops to be based on what he saw as sacred Saudi soil as they massed troops for an attack against a fellow Muslim country. He personally despised Iraqi president Saddam Hussein (1937–2006) but regarded Iraqis as brethren in faith. Bin Laden became so extreme in his extravagant rhetoric against the royal family that the Saudi government in 1994 finally revoked his citizenship and tried to strip him of all of his assets, though by then his considerable fortune was invested in many global enterprises and out of their reach.

But Sudan in turn eventually succumbed to pressure from the United States, and in 1996 bin Laden was expelled. A man without a country, he chose to relocate in what was by then an Afghanistan controlled by the fundamentalist Taliban. It was there that bin Laden breathed new life into Al-Qaeda, or base, for global terrorist operations, an organization founded in 1988 as the Soviets were pulling out of Afghanistan. For the next five years he operated with virtual impunity in a remote land under Islamist control. In the Afghan camps, thousands of jihadis received training in terrorism. They were committed to the ideals of global jihad and to Osama bin Laden, to whom they took a personal vow of loyalty. Most of those in the camps were foot soldiers, but some, such as Khalid Sheikh Mohammed (who devised what was called the "planes projects" or what became the terrorist attacks of September 11, 2001) and Mohammed Atta (the head of operations for the 9/11 attacks) were central figures in the Afghan camps.

Bin Laden's chief lieutenant was Ayman al-Zawahiri, an Egyptian medical doctor who had been tortured in Cairo prisons. Al-Zawahiri had been inspired in the 1950s and 1960s by the writings of Sayyid Qutb (1906–1966), an Islamist intellectual who was hanged in prison by Egyptian president Gamal Abdel Nasser (1918–1970). It was Qutb who resurrected an idea at least seven centuries old that violent jihad was at the center of the faith, that purification of Islam went along with eradication of infidels, and that the only goal worth pursuing was the re-creation of a world modeled on that which the Prophet specifically created. Bin Laden, of course, knew the writings of Qutb, though probably mostly through others inspired by Qutb, such as al-Zawahiri and Azzam. Al-Zawahiri, however, was important in other ways to bin Laden. Al-Zawahiri was not an effective leader himself, and in 1996 he merged his Al-Jihad into bin Laden's Al-Qaeda, formally joining the long Egyptian tradition of the Muslim Brotherhood with Wahhabi fundamentalism. Al-Zawahiri proved a formidable ally, able to conceptualize a global jihad and help implement it organizationally.

Al-Qaeda was structured along the lines of a multinational corporation. Bin Laden was the CEO, and each unit, which could thrive apart from the other divisions, was headed by the equivalent of a vice president. It was a structure intended to survive attack and disruption. Funding came in part from bin Laden himself, though his personal fortune was far less than most imagined and probably not more than a million or so dollars a year. Most funding came from donations and a global network of "charities." Until 9/11 bin Laden did not seem short of funds.

It was his ideology of jihad that made bin Laden remarkable in these years. He was a religious fanatic and a well-organized businessman, a mystic and master of bureaucratic detail, a man plotting mass destruction and death, and a soft-spoken dreamer who reinvigorated an Islamist movement in ways that have not been seen in the Muslim world since Saladin in the twelfth century. On August 23, 1996, in his "Declaration of Jihad" bin Laden called on all his "Muslim brothers" to help him share in the jihad against the "enemies of God, your enemies the Israelis and Americans" (bin Laden 2005, pp. 23–30). And on February 23, 1998, in his declaration of the World Islamic Front, bin Laden declared a kind of universal declaration of war against "Jews and Crusaders" and declared it was an "individual duty incumbent on every Muslim in all countries" to kill Americans and their allies (bin Laden 2005, pp. 58–62). This declaration of war took the fight outside of the sectarian battles in the Middle East and into the very heart of the enemy lands. Bin Laden wanted concrete political things: American troops out of Saudi Arabia, the defeat of Israel and the liberation of the Palestinians, and the overthrow of corrupt secular Muslim rule in the Middle East. But he also harbored millennial dreams involving the annihilation of American, Western, and Jewish culture in a forge of violence that was redemptive and purifying.

On September 11, 2001, Al-Qaeda struck New York City and the Pentagon near Washington, D.C., in an extraordinarily successful terrorist attack. That the attacks worked as well as they did was also in large part due to pure luck on bin Laden's part. The World Trade Center collapsed in an inferno of fire mainly due to failures in the architectural conception of the buildings themselves. The whole operation cost well under half a million dollars, and it has caused several hundred billion dollars in direct and indirect damage.

But the spiritual and political costs of 9/11 are incalculable. The 2,749 people who died that day in New York

lingered in the air, literally, and many were inhaled by New Yorkers with dust from the collapsed towers. It all made for incomplete mourning that certainly lasted through the months of clearing away the debris but also into the two wars that soon followed, the second of which is the extended war in Iraq. Many live with a special dread from that day, and it serves to symbolize the malevolence of contemporary history. Most Americans believe, if asked in the right way, that if Osama bin Laden had possessed nuclear weapons before 9/11 he would have placed one on a plane crashing into those towers.

Thankfully, Osama bin Laden did not possess such a weapon. As of 2007, he was hiding somewhere, probably in the mountainous border region of Pakistan and Afghanistan, basically out of commission, though by remaining alive he inspires others to act in his name and may even continue to direct some actual operations. Bin Laden's legacy is mixed. There is no question he has changed the world and the violence he directed may occasion a realignment of power in the relationship between the West and the Muslim Middle East. It also energized the new terrorism for many years and disrupted advanced economies in ways few could have imagined possible before 9/11. On the other hand, the violence of bin Laden and Al-Qaeda may backfire for the Muslim world, leading to disruption and civil war and further isolation, rather than renewal along the lines of Islamist fantasies. It may be many years before we will know with any degree of certainty whether the twenty-first century will be relatively free of terrorism and violence.

SEE ALSO *Central Intelligence Agency, U.S.; Fundamentalism, Islamic; September 11, 2001; Terrorism; Terrorists*

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BINARY OPPOSITIONS

SEE *Symbols.*

BIOETHICS

The field of bioethics, as distinct from medical ethics, has existed since the 1960s. Unlike medical ethics, which for centuries has examined the duties and responsibilities of physicians to their patients and to other doctors, the development of bioethics can be traced to the rapid progress in technology and science experienced in the United States in the 1960s. Organ transplantation, chemotherapy, kidney dialysis, respirators, the contraceptive pill, genetic screening, and intensive care units were extraordinary medical breakthroughs that were seen as highly beneficial but also costly and sometimes harmful. This explosion of technological success brought in its wake a set of daunting ethical dilemmas that medicine, academics, legislators, and the public had never previously been forced to face.

In the wake of these developments, issues of healthcare access and rationing, withdrawal and withholding of lifesaving care, dignity in dying, and how to define death and manage the high cost of medical care now loomed large as urgent ethical quandaries. At the same time, societal changes placed greater emphasis on individual autonomy and rights, which prompted the public to press the

field of medicine for more patient involvement and control over medical treatment. The ethical dilemmas generated by these advances in science and medicine required interdisciplinary study and reflection that traditional academic disciplines were ill-equipped to handle. In response to these pressing ethical problems, scholars began to venture outside of their traditional subject matter to discuss, debate, and write about these new dilemmas, and bioethics became a new area of academic attention.

Some of the original dilemmas are still at the core of bioethics today. The field now focuses ethical problems in clinical, preventive, and research medicine that involve truth telling, informed consent, confidentiality, end-of-life care, conflicts of interest, nonabandonment, euthanasia, and substituted judgment for incompetent persons. Bioethics has established both the right to informed consent and the right to control one's medical treatment as key tenets of American law and ethics. With each new technological breakthrough, the field of bioethics expands its scope to address new ethical dilemmas, most recently those involving the human genome project, stem cell research, artificial reproductive technologies, the genetic engineering of plants and animals, the prospect of human reproductive cloning, preimplantation genetic diagnosis of embryos, nanotechnology, and xeno-transplantation. Bioethics has also more recently begun to reflect on the health-care challenges faced in developing nations, such as whether national or local standards should govern the conduct of medical research or the problems of rationing access to innovative treatments in nations besieged by devastating epidemics such as malaria or AIDS.

Since the 1960s, the field of bioethics has gained legitimacy as an independent academic discipline, and that new status has brought significant changes in the structure and institutions of the field. Originally, the institutions of bioethics were independent think tanks. Today, the trend is the creation of academic bioethics departments, either within a medical school or school of arts and sciences. The professionalization of bioethics has taken it from the academic margins to an accepted place within universities, hospitals, regulatory bodies, the media, and industry.

SEE ALSO *Medicine*

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BIOLOGICAL ANTHROPOLOGY

SEE *Anthropology, Biological.*

BIOLOGICAL WEIGHT

SEE *Obesity; Body Image; Body Mass Index; Obese Externality; Overeating; Undereating; Weight.*

BIOTERRORISM

Terrorism is the intentional use or threat to use violence against civilians or civilian targets in order to attain political ends. Bioterrorism uses microorganisms or toxins that are derived from living organisms to produce death or disease in humans, animals, or plants. Animals and plants are of concern because of the economic consequences of terrorism on food production and exports.

Historically, terrorists have relied primarily on conventional weapons such as guns and explosives to further their objectives. While conventional weapons will continue to be the most accessible, biological weapons are becoming increasingly available, and terrorists have turned from low-casualty, high-visibility targets to targets that can result in mass casualties, where biological weapons are an ideal choice. One of the most important advantages of biological weapons is cost. One dollar's worth of anthrax can kill as many people as $2,000 worth of conventional explosives.

Biological agents had been used as weapons only twice in the United States. On September 9, 1984, a religious cult, the Rajneeshees, sprayed *Salmonella typhimurium* on salad bars in The Dales, Oregon, causing 751 cases of food poisoning. No deaths occurred. The second U.S. attack occurred in September 2001, when *Bacillus anthracis* spores were distributed through the U.S. Postal Service. This attack resulted in twenty-two cases of anthrax infection and five deaths. The production of this

weapons-grade anthrax required a high degree of scientific knowledge and sophisticated equipment. Approximately two grams of the anthrax spores, if aerosolized effectively, could kill tens of thousands of people. Although the 1995 subway attack in Tokyo by the religious extremist group Aum Shinrikyo used a chemical agent, Aum had previously attempted to use anthrax and botulinum toxin.

Terrorists have access to hundreds of potential biological agents to use as weapons. These weapons can be in liquid or powder form, and they can be dispersed successfully as an aerosol if particle sizes are small enough to enter the lungs. The particles can be aerosolized from a stationary location or from a moving source either outdoors or indoors. Furthermore, many biological agents can be delivered in food or water.

The North Atlantic Treaty Organization (NATO) has identified thirty-one potential agents that bioterrorists can use. The United States Army Medical Research Institute of Infectious Diseases (USAMRIID), has reduced this list to six primary agents: anthrax, smallpox, plague, tularemia, botulinum toxin, and agents of viral hemorrhagic fever. Many of these agents cause diseases that present-day physicians have never seen, decreasing the likelihood that they can be rapidly diagnosed.

The United States, United Kingdom, and other countries have developed national response plans to deal with natural disasters and acts of terrorism, including bioterrorism. These plans will be important for mounting a coordinated response to a bioterrorist attack. Equally important are plans to respond to a global outbreak of an infectious disease because similar response mechanisms will be used for bioterrorism. Both the World Health Organization and the United States released plans in 2005 for responding to a pandemic of influenza. Other countries are developing similar plans, and these plans will be important not only for a naturally occurring infectious disease but also for a bioterrorist attack.

An effective response to an attack will also require modifying existing laws so that governments can maximize their response efforts. Governors must be able to suspend provisions that regulate how state agencies do business in order for them to rapidly respond to public health emergencies. Public health authorities must be able to close and order the decontamination of buildings and destroy or safely dispose of any material or human remains that have been contaminated. They must also be able to take every available measure to prevent the transmission of infectious disease, including the use of isolation and quarantine, and to ensure that all cases of contagious disease are properly controlled and treated. Laws will also need to be modified to allow for the rapid purchase of pharmaceutical agents and the rationing of scare supplies. Public health authorities must be able to provide temporary licenses to out-of-state health care providers and modify liability laws to protect state officials and health care providers during a declared emergency.

Although extreme measures are called for during an emergency such as a bioterrorist attack, civil liberties must be protected. Gross negligence or willful misconduct should not be exempt from liability. Provisions of the law must be in place for rescinding the emergency orders when health conditions that caused the emergency no longer pose a high probability of a large number of deaths. Lawyers have developed a model emergency health powers act that can be used to strengthen government's ability to respond to bioterrorism and at the same time protect civil liberties.

SEE ALSO *Terrorism*

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R. Gregory Evans

BIPOLAR DISORDER

SEE *Manias; Manic Depression; Schizophrenia.*

BIRTH CONTROL

Birth control refers to the means used to limit or space human fertility. The technological development of these means, the organization of their use, and the fairness of their application are the province of scientists, policymakers, religious leaders, and the users of birth control. The definition includes recent methods such as condoms, sterilization, intrauterine devices, and the birth control pill. It also includes older methods, such as abortion, prolonged nursing of infants, periodic abstinence from sex, herbal tonics, and coitus interruptus.

The question of the comparative effectiveness of various techniques often comes up in discussions of birth control. Abortion, some forms of surgical sterilization, and complete abstinence from intercourse are the most effective at preventing births. Yet, effective birth prevention is only one of the goals considered by users of birth control and by the persons and institutions promoting its use. Safety and ease of use are, for example, other important dimensions of birth control technologies. In fact, limiting births is sometimes not even the main goal of a birth control practice, but its side effect. For example, inducing an abortion could be a means to save a woman's life. Likewise, the contraceptive effect of prolonged nursing may be subordinate to a woman's inclination to breastfeed. Moreover, practitioners of periodic abstinence and coitus interruptus can see these actions as enhancing their own self-worth because of the sacrifices they entail.

In 1798 the English economist Thomas Robert Malthus (1766–1834) argued for the eventual scarcity of natural resources given the rate of population growth worldwide. This argument became the basis of the first organized efforts to limit population sizes in the West. The fact that most of these efforts were directed at the poor, the ill, and the criminal made for an enduring link between birth control and eugenics, the belief that only the "fittest" humans should reproduce. Among the methods touted for their effectiveness were condoms, which became increasingly popular after 1860 with the use of rubber in their manufacture, replacing animal intestines and silk sheaths. Douching solutions and vaginal pessaries also became more effective in the nineteenth century. Sterilization required developments in medical antisepsis and anesthesia, which were only coming of age in the 1870s.

Opponents to organized birth control emerged in the 1870s; they included Anthony Comstock (1844–1915), founder of the New York Society for the Suppression of Vice, and the Catholic Church. To them, birth control was bound to a deep moral crisis in society. Yet the number of users of birth control grew, and ideas about family size and women's roles in society changed. Activists like Margaret Sanger (1883–1966) aided in the popularization of birth control, linking it to greater freedom for women. Sanger coined the term *birth control* in 1913 to replace the label of *neo-Malthusianism*. As the birth control movement became more popular, it attracted allies that began to reframe birth control as more than just fertility limitation. This is how the notion of birth control became associated with that of family planning by the 1930s.

Birth control acquired an additional political meaning in the 1950s with the Cold War. While population growth stabilized in Europe and North America, it accelerated in the so-called third world. The contraceptive pill emerged in this context and was promoted not only as a convenient contraceptive but also as a tool to lower population growth rates. Devised by the biologist Gregory Pincus (1903–1967) with funds from philanthropist Katharine McCormick (1875–1967) and Sanger's support, and marketed by G. D. Searle, the pill became the most popular form of birth control by 1965 in the United States.

During the late 1960s, the prospect of misery, anarchy, and socialist advances in the third world led to international development policies like the U.S. Alliance for Progress and the involvement of philanthropies like the Rockefeller Foundation in population control programs. The latter were tied to the intervention of governments in the developing world, some of which applied policies throughout the 1960s, 1970s, and 1980s to quickly lower population growth rates to match objectives set by medical and social science experts in industrialized nations. As was evident following the United Nations World Population Conference of 1974 in Bucharest, however, third world nations often suspected that population control programs were implemented only for the benefit of developed nations, while hurting the interests of the third world and failing to address the root causes of poverty and inequality. Third world nations also claimed often that population control programs sometimes conflicted with local and personal beliefs about the worth of individual births. Today, with the exception of China's "one-child policy," instituted in 1978, birth control programs in most countries have retreated from the aggressive promotion of some methods in favor of voluntarism, informed choice of contraceptives, sex education, and the insertion of birth control provisions within broader systems for health care delivery, particularly maternal and infant health. This trend began as early as the mid-1960s. Yet, even now, as in the eighteenth century, the free choices and additional services implied in family planning are part of a complex process involving individual decisions, social values, and material constraints.

SEE ALSO *Contraception; Demography; Population Control; Population Studies*

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BIRTH OF A NATION

D. W. Griffith's film *Birth of a Nation* appeared in 1915 to the outrage and dismay of the National Association for the Advancement of Colored People and other supporters of black Americans' citizenship rights. The film was an adaptation of Thomas Dixon's novels *The Clansman* (1905)—the film's original title—and, to a lesser extent, *The Leopard's Spots* (1902), which, along with *The Traitor* (1907), formed Dixon's self-consciously white supremacist trilogy. Following Dixon's novels, the film advanced a relentlessly proslavery narrative of the slaveholding South, the Civil War, and especially Reconstruction. It depicted blacks either as simple and ignorant ciphers or as brutish fiends driven by compulsions to put on airs and accost white women. Abolitionists and whites aligned with the freedpeople after the Civil War appeared as irresponsibly naive, venal, or malevolent, motivated by greed or base desires to humiliate and destroy the South through the agency of black dupes. In this depiction, black enfranchisement was a travesty that enabled degenerate whites and incompetent blacks to dominate the formerly secessionist South's governance and to impose a corrupt tyranny on the region's whites.

The interpretation put forward in Dixon's novels and Griffith's film was propagated aggressively by southern elites during the years between their successful campaign to disfranchise blacks and many poor whites and the onset of the First World War. This interpretation became scholarly historical orthodoxy, in no small measure through the work of Columbia University historian William A. Dunning. Dunning's book, *Reconstruction, Political and Economic: 1865–1877* (1907), systematized the southern white supremacist view and gave it the appearance of academic objectivity. Instructively, epigraphs from the book are interspersed throughout the film, which stands as an epic cultural expression of the Dunning school's line. In this regard, the film, along with Dixon's novels, is also the direct lineal ancestor of Margaret Mitchell's *Gone with the Wind* and the film adapted from it. In addition to striking structural parallels between the two films' narratives, Mitchell had been an avid reader of Dixon's novels, and he wrote her a gushing fan letter on her novel's publication.

Birth of a Nation has been widely celebrated for its technical cinematic innovations. Griffith's film is typically credited with pioneering use of such techniques as deep focus, the jump cut, and facial close-ups. Its large-scale battle scenes were also unprecedented. Its use of seemingly authentic daguerreotypes that shifted into live action also fed an illusion of historical accuracy. For these and other such accomplishments—as well, presumably, as its popularity at the box office (it was by far the highest grossing film of its era)—the American Film Institute lists Griffith's melodrama as one of the most important films of the twentieth century. However, although the film's technical achievements no doubt contributed to its visibility when it was released, its inflammatory politics are what generated the strongest reaction. *Birth of a Nation*'s opening provoked riots in many cities, as groups of whites were moved by the film, or took the occasion of its screening, to rampage against blacks. The film was banned in several other cities, including Chicago, and in the state of Ohio.

The film's story line is a conventional, heavy-handed romance that is a thinly allegorical template for projecting southern elites' vision of sectional reconciliation on explicitly white supremacist grounds. The plot follows two upper-status families—the northern Stonemans and the southern Camerons—from the late antebellum period through Reconstruction. The northern family's patriarch is modeled to evoke Pennsylvania Radical Republican Thaddeus Stevens; the southern family embodies the sympathetic stereotype of a planter class defined by grand manners and genteel paternalism. The families are linked socially before the Civil War, and one of the Stoneman sons falls in love with a Cameron daughter on a visit to the latter family's antebellum plantation. However, the war divides the two families and disrupts the potential romance. Both families lose sons in the war, which also further entwines their fates. A Cameron son is wounded and captured in battle and, in a Union hospital, encounters and falls in love with Stoneman's daughter, who is volunteering as a nurse. In this narrative love thus transcends and is disrupted by the sectional conflict, which brings the film's first part to a close.

Establishment of the romantic story line drives *Birth of a Nation*'s first part. In the film's second part, shown after an intermission, the romance becomes a platform for an equally sentimentalized narrative of the respectable white South's suffering under Reconstruction. This account is a purely partisan fantasy of the years after the Civil War. Conniving and malcontented mulattoes aspire to reach above their station, ultimately through intermarriage. Ignorant and brutish blacks make a travesty of the exercise of government. They and their base white allies reduce patient, suffering upper-class white southerners to poverty and heap one indignity after another upon them. Tellingly, in Griffith's narrative, having to extend the routine civilities of social etiquette to blacks, acknowledge their equal citizenship, and confront their unwanted sexual advances are interchangeable affronts, and the first two inevitably lead to the third.

The melodramatic story line feeds this linkage. In one of the film's more incendiary sequences, Flora, the Cameron's spirited but virginal daughter—whose very name identifies her as a flower of southern womanhood—is mortified by a proposal of marriage from Gus, a Union soldier and former slave. She flees hysterically with Gus in

pursuit and leaps to her death to preserve her honor. Gus, whom Griffith describes as "a renegade, a product of the vicious doctrines spread by the carpetbaggers," is captured and summarily lynched by the Ku Klux Klan. The Klan subsequently rides to the rescue of the beleaguered whites, rises to overthrow the Reconstruction tyranny, and forcibly disfranchises blacks. This resolves to a happy ending that unites the Cameron and Stoneman lovers and restores the natural social order to the South. Gus's character was portrayed by a white actor in blackface, as were all the black characters who had physical contact with whites. Thus the film featured both black and white actors playing black characters.

Griffith's melodrama, by grounding its Reconstruction narrative in the personal story of the Cameron and Stoneman families, conveniently sidesteps the potentially troublesome issue that disfranchisement violated black southerners' constitutional rights under the Fifteenth Amendment. Just as the first part of the film's depiction of the South Carolina plantation world gives no hint that slavery was fundamentally a system of coerced labor, the second part obscures the fact that the foundation of post–Civil War southern politics was a struggle between the freedpeople and their allies to craft a social order based on free labor and equal citizenship and the dominant planter class's desire to restore a social and economic system as near as possible to the slave society that Union victory had destroyed.

Instead, *Birth of a Nation* propounds a view in which race is the single fulcrum of politics, the authentic basis of identity and allegiance. Such views were prevalent among Americans of all sorts during the early twentieth century, perhaps more so than at any other time before or since. Putatively scientific race theories purported to link human capacities, including the capacity for democratic government, hierarchically to racial classification. Several features of the social landscape at the time helped to give such views of the bases and significance of human difference presumptive credibility, particularly among opinion-shaping elites. Upper-status reactions against labor and populist insurgencies fueled a political conservatism readily open to arguments that manifest social inequalities were rooted in immutable natural differences. Advocates of imperialist expansion also asserted unabashedly racial arguments, typically adducing an irrepressible Anglo-Saxon or Teutonic racial spirit for conquest, along with a racialized notion of American providential entitlement, to justify international adventurism in Latin America and the Pacific. Especially in the North and Pacific West, intensifying anxiety about increasing immigration from the margins of Europe and Asia further propelled racialist discourse, as race scientists and courts sought to determine whether immigrants originated from groups capable of assimilating to "American" civilization. Fears concerning immigrants' dilution of nativist American cultural authority also contributed to a growing conviction among elites that voting and political participation should be seen not as a right but as a privilege, that fitness to vote should be proven, not assumed, and that the respectable classes are the natural stewards of the polity.

The political and ideological environment that took shape during that period also supported those tendencies within the national Republican Party and northern opinion that argued for retreat from aggressive support for the southern freedpeople's rights and for sectional reconciliation on lines that favored the southern planter and merchant class. That sentiment underwrote the withdrawal of federal military occupation in 1877 and a shift in the courts' willingness over the ensuing decades to protect blacks' rights. In its ruling in the 1883 *Civil Rights Cases*, the U.S. Supreme Court invalidated the 1875 Civil Rights Act, and in its 1896 *Plessy v. Ferguson* ruling the Court legitimized legally imposed racial segregation, enunciating the infamous "separate but equal" doctrine. Residual northern liberal inclinations to defend southern blacks were further assuaged by Booker T. Washington's emergence as a prominent voice of black acquiescence to white supremacy in the South and his endorsement of blacks' expulsion from the region's civic life.

Griffith's film reflected and exploited this environment. In a clear effort to appeal to northern sensibilities, the film's first part ends with a mournful depiction of the assassinated Abraham Lincoln as a kindly figure who would not have permitted the white South to be abused. The fabrication of Austin Stoneman as a stand-in for Thaddeus Stevens similarly rationalizes sectional reconciliation. The real Stevens never wavered in his Radical Republican convictions, to the point that he insisted on being buried in a black cemetery. Griffith's fictional character, on the other hand, abjures his support of blacks' rights once he is confronted by his mulatto protégé's attempt to marry his daughter. The film's message is clear: Decent northerners who had been abolitionists were misguided, and even the staunchest of them would come to see the need for white supremacy. This message drives the film's climax. In building to the crescendo of the Klan's rescue, the fleeing white victims are given refuge in a rude shack occupied by former Union soldiers who had remained in South Carolina after the war, living as modest yeomen. The northern men respond to the situation from the race loyalty that unites Americans from both sections, and they take up arms to fend off the pursuing black militia. This, then, is the definitively racial basis on which *Birth of a Nation* proposes sectional reconciliation. As Griffith narrates, "The former enemies of North and South are united again in common defence [sic] of their Aryan birthright."

Instructively, the film quotes Woodrow Wilson, then president of the United States, explaining that "The white men were roused by mere instinct of self-preservation … until at last there had sprung into existence a great Ku Klux Klan, a veritable empire of the South to protect the Southern country" (Wilson 1902, pp. 59–60). Wilson had been Thomas Dixon's classmate at Johns Hopkins University and enjoyed a private screening of *Birth of a Nation* at the White House. Wilson embodied the victory of the white supremacist politics *Birth of a Nation* advocates. A native southerner, he was at different times president of Princeton University and governor of New Jersey, as well as president of both the American Political Science Association and the American Historical Association, as Dunning had been some years before him. Wilson's scholarly writing and his public actions were shaped fundamentally by the race theories of the day and the presumptions of white supremacist ideology in particular. As president of Princeton, he sought to impose white-only admissions; as president of the United States, he more consequentially imposed full racial segregation on the District of Columbia and drove blacks from federal employment.

SEE ALSO *Blackface; Ku Klux Klan; Race Relations; Racism*

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Adolph Reed Jr.

BIRTHS, MULTIPLE

SEE *Multiple Births.*

BIRTHS, OUT-OF-WEDLOCK

Every society has mechanisms and institutions for birthing and rearing children. These may or may not be similar to what we call *wedlock.* In describing domestic groups, sociologists traditionally treated as normative those households made up of a man and a woman who are formally joined in a long-term relationship and jointly raising their shared biological children. However, from a broader historical and cultural perspective, we know that this is just one of scores of possible domestic arrangements. In numerous cultures, the husband-wife relationship is less important than the extended multigenerational family in terms of child-rearing responsibilities. Households in many societies are polygynous, with children of multiple wives, concubines, or slaves fathered by the same man. In some societies a young woman is not considered an attractive marriage candidate until she has proven her fertility by bearing one or more children. In some societies the biological contribution of fatherhood is not acknowledged; rather, the spiritual or social father is salient. And in some societies the mother's brother normatively functions as the significant man in the lives of children.

While all societies have ideas and rules concerning who is encouraged, allowed, discouraged, or forbidden to bear or raise children, these vary from place to place and over time. Distinctions between legitimate and out-of-wedlock childbearing are not universal, nor are they always consistently applied within a particular society. It tends to be the case that the domestic arrangements of higher-status or wealthier households are considered nobler, more moral, or in some other way better. However, the wealth and day-to-day functioning of those households may depend upon the services and labor provided by people whose domestic arrangements are not in line with whatever constitutes the so-called "ideal" in a particular time or place.

ATTITUDES TOWARD OUT-OF-WEDLOCK BIRTH IN THE UNITED STATES: HISTORICAL TRAJECTORY

The history of out-of-wedlock childbearing in the United States must be understood in the context of the racialized social, economic, and political structures that both preceded and followed independence. Nonmarital birth was an integral part of the slave system: White men married white women but entered into non-legal unions with women who were black or "colored." While policies varied over time, until the early-to-mid-nineteenth century slave marriages were rarely allowed.

For the free and white population in colonial America, "bastardy" was considered a sin. While the notion that out-of-wedlock childbearing constitutes a moral failure never totally disappeared, during the eighteenth and early nineteenth centuries, nonmarital births increasingly came to be framed in terms of the economic burdens borne by communities forced to support fatherless children. By the end of the nineteenth and beginning of the twentieth century, public discourse, at least regarding white women, shifted from concern with "fallen women" (a pejorative moral category) to concern with "ruined girls" (an innocent population deserving of help). Progressive reformers understood that out-of-wedlock childbearing was a product as well as a cause of social disorder, and thus advocated sex education and better wages for women so that women would be less susceptible to the sexual advances of wealthy men.

The belief that unmarried mothers are at fault for their situation took on new life in the 1920s as experts began treating out-of-wedlock childbearing as "sex delinquency." Using a new language of psychology and the unconscious, authorities diagnosed sexually active girls as unable to govern their impulses, and growing numbers of young women were sent into the newly created juvenile justice system. Throughout the twentieth century and into the twenty-first, the policy of incarcerating women because of sexual crimes (e.g., prostitution) has continued.

Intertwined moral and economic discourses reached new levels of codification when Congress passed the 1996 welfare reform known as the Personal Responsibility Act. The Act opens by proclaiming that, "Marriage is the foundation of a successful society," and goes on to link various issues—teenage pregnancy, out-of-wedlock births, children raised in single-parent homes, and fathers who fail to pay child support—to high rates of violent crime, children with low cognitive skills, and other highly negative putative outcomes. According to Sharon Hays,

> a reading of this statement of the law's intent would lead one to believe that the problem of poverty itself is the direct result of failures to live up to the family ideal.… Single mothers on welfare are effectively punished for having children out of wedlock or for getting divorced. The punishment they face is being forced to manage on their own with low-wage work. [The Act sets a five-year lifetime limit for public aid regardless of need and a two-year limit for finding full-time employment]. (2004, pp. 17–18)

Race has continued to play a key role in attitudes and policies toward out of wedlock birth in the United States. Criticism of high rates of single-mother families often seems to be thinly disguised criticism of black single mothers, who are variously portrayed as sexually promiscuous, addicted to drugs, or out to "cheat the system" by having more babies for the state to support. Kenneth J. Neubeck and Noel A. Cazenave coined the term "welfare racism" to describe the stereotyped discourse and discriminatory programming associated with the welfare system: "Today, the words *welfare mother* evoke one of the most powerful racialized cultural icons in contemporary U.S. society" (2001, p. 3).

In the last decades of the twentieth century, "Fathers' Rights" organizations and evangelical Christian groups have been vocal in asserting that female-headed families are psychologically and socially pathological and that children raised without their fathers are more likely to fail in school, use drugs, and end up in jail. Sociological studies tend not to support this view. The absence of the father does not have a significant impact on the psychological well-being of either daughters or sons. More important than physical presence or absence is how children perceive their relationships with their parents (Wenk et al. 1994). Moreover, given the high divorce rates in the United States, children born to a married mother and father have no guarantee of growing up with their two biological parents. In fact, studies show that unwed U.S. fathers actually see their children more often than do divorced fathers who have remarried.

RATES OF OUT-OF-WEDLOCK BIRTHS IN THE UNITED STATES AND EUROPE

In the United States in 1970, 10.7 percent of all live births were to non-married women. The percent rose throughout the 1980s, leveling out at about 32 to 33 percent in the mid-1990s, and going up to 34.6 percent in 2003. The biggest increase was among white women for whom rates rose from 5.5 percent in 1970 to 29.4 percent in 2003. For black women, the percent of out-of-wedlock births doubled from 37.5 percent in 1970 to 68.2 percent in 2003. Among Hispanic women, the rate increased from 23.6 percent in 1980 to 45 percent in 2003.

Over these years, the age distribution of out-of-wedlock childbearing indicates a shift toward purposeful out-of-wedlock childbearing among more mature women. In 1970, 50.1 percent of live births to unmarried women were to women under the age of twenty, 31.8 percent to women twenty-one to twenty-four, and 18.1 percent to women twenty-five and older. By 2003 only 24.3 percent of out-of-wedlock births were to women under the age of twenty, while 38.8 percent were to women twenty-one to twenty-four, and 36.9 percent to women twenty-five and older.

In 2004 nearly a third of the 4.8 million babies born in the European Union were born out-of-wedlock. The phenomenon is particularly noticeable in Scandinavia and the three Baltic member-states with a ratio of 57.8 percent in Estonia, 55.4 percent in Sweden, 45.4 percent in Denmark, and 45.3 percent in Latvia. The lowest levels of children born out of wedlock are in southern Europe with 3.3 percent in Cyprus, 4.9 percent in Greece, and 14.9 percent in Italy.

It should be noted that in statistics from Europe and the United States, the term *out-of-wedlock* means only that the newborn's parents are not registered with the government as "married"; it does not mean that the child is being raised only by its mother. In the Scandinavian countries, in particular, nonmarital births generally take place in long-term committed relationships to parents uninterested in church weddings and not in need of government-issued marriage certificates in order to have pensions or other benefits. Americans too are much more likely than ever before to bear children in reasonably stable partnerships—including same-sex partnerships—that are not legally recognized marriages.

EXPLAINING NONMARITAL BIRTHS

Efforts to explain rates of out-of-wedlock births in the United States have been characterized more by sentiment than scientific evidence. Conservatives typically attribute the increase to overly generous federal welfare benefits that encourage poor women to have children. However, a comparison of out-of-wedlock birth rates with changes in welfare benefits over time does not show a correlation between the two. Liberals have tended to attribute the increase to declines in the marriageability of black men due to shortages of jobs for less-educated men, the disproportionate deaths of black men in the military, and high rates of incarceration of young black men. Demographic studies indicate, however, that only a small percentage of the decline in black marriage rates can be explained by the shrinking of the pool of eligible men.

A popular set of explanations maintains that single parenthood has increased because of changes in attitudes toward sexuality. While some analysts blame sex education in schools for encouraging early sexual activity, others advocate the benefits of sex education in helping teens make informed decisions regarding sexuality and contraception. Still others argue that the legalization of abortion and increased availability of contraception (birth control pills) give women tools to control the number and timing of their children. These tools empower women to make choices regarding childbearing and curb customs such as "shotgun marriages" that traditionally reduced rates of out-of-wedlock births (though not of out-of-wedlock conception).

SEE ALSO *Birth Control; Marriage; Slavery; Welfare*

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Susan Sered

BIRTH STRIKE

SEE *Demographic Transition.*

BISHOP, MAURICE

SEE *Grenadian Revolution.*

BISMARCKIAN MODEL

SEE *Welfare State.*

BITKER, BORIS

SEE *Restitution Principle.*

BLACK AMERICANS

SEE *African Americans.*

BLACK ARTS MOVEMENT

Characterized by African American poet, activist, and theorist Larry Neal as "the aesthetic sister of the Black Power concept" (Neal 1989, p. 62), the Black Arts Movement (BAM) is one of the most controversial cultural movements of the modern era due to its racialist intellectual bases; its commitment to economic, political, and cultural autonomy for African America; and its overtly revolutionary intentions. It carried through the African American educator and writer W. E. B. Du Bois's 1926 call for art "about us," "by us," "for us," and "near us" (Du Bois 1926, pp. 134–136). It was, in poet Kalamu ya Salaam's words, "the only American literary movement to advance 'social engagement' as a sine qua non of its aesthetic" (Salaam 1997, p. 70). Initiated in the early 1960s, though rooted in a radical tradition dating back at least to the Haitian Revolution of 1791, it flourished, suffered setbacks in the mid-1970s from federal government harassment via the FBI's counterintelligence program and from economic downturn, and continues in the early twenty-first century. Such continuity challenges the African American scholar Henry Louis Gates Jr.'s contention that the BAM was the "shortest and least successful" cultural movement in African American history (Gates Jr. 1994, pp. 74–75).

Although other media such as painting, poetry, dance, and music were significant, theater and drama played a preeminent role due to their communal nature, focus on transformation, and institutional, organizational, and economic demands. Neal writes, "Theater is potentially the most social of all the arts. It is an integral part of the socializing process" (Neal 1989, p. 68). Especially influential were Amiri Baraka's *Dutchman* (1964) and the institution he co-founded in 1965, Harlem's Black Arts Repertory Theatre/School. This focus on aesthetic innovation within institutional development reflects the thinking of social scientists such as John Henrik Clarke, C. Eric Lincoln, and Harold Cruse. A generation of artists was fostered in organizations such as BLKARTSWEST, the African Commune of Bad Relevant Artists, Spirit House, and the New Lafayette Theatre, and in the many black studies programs created in universities and colleges across the United States in part due to the actions of BAM artists and intellectuals.

Other significant influences can be identified. First, within the movement there was a focus on popular and folk culture via Du Bois (1868–1963), the African American educator and critic Alain Locke (1886–1954), the Italian Marxist theorist Antonio Gramsci (1891–1937), the black Trinidadian historian and activist C. L. R. James (1901–1989), the African American writer and ethnographer Zora Neale Hurston (1903–1960), and the Chinese theorist of cultural warfare Mao Zedong (1893–1976). The Black Muslim leader Malcolm X (1925–1965) was perhaps the most influential in the formation of the movement: "Our cultural revolution must be the means of bringing us closer to our African brothers and sisters" (Malcolm X 1970, p. 427). This is a matter of content, but also production conditions—where, by whom, and for whom the art is created. It is also a matter of technique: In *Performing Blackness: Enactments of African-American Modernism* (2000, p. 28), Kimberly Benston argued for the primacy of methexis ("communal helping-out of the action by all assembled") over mimesis ("the representation of an action"). In practice, this meant: (1) participatory works such as the National Black Theatre's *A Revival! Change! Love! Organize!* (1969) or Sonia Sanchez's "a/coltrane/poem" (1970), which supplies directions such as "sing loud & long with feeling" (Sanchez 1991, p. 184); (2) a call to action, as in the agitation-propaganda poetry of Don L. Lee or Nikki Giovanni or the "revolutionary commercials" of Ben Caldwell; and (3) invitation to the audience to discuss and criticize, most notably the public discussion panel convened at the New Lafayette Theatre in the fall of 1968 to discuss its controversial production of Ed Bullins's *We Righteous Bombers*, a play that scathingly critiques those who advocate revolutionary violence.

A second influence was radical theology, the assumption being that the most invidious effect of slavery and colonialism was spiritual. As James T. Stewart asserted, "[E]xisting white paradigms or models do not correspond to the realities of Black existence. It is imperative that we construct models with different basic assumptions" (Stewart 1968, p. 3). Ritual dominated the stages and

periodicals of black theater in the late 1960s. Religious content was a constant in the visual arts, as in Margo Humphrey's Afrocentric take on *The Last Supper, The Last Bar-B-Que* (1988–1989). That said, religion was not universally appreciated; Caldwell showed no sympathy for the theologically minded in *Prayer Meeting, or, The First Militant Minister* (1969). It depicts a hilarious bit of subterfuge by a quick-on-his-feet burglar and a hopelessly gullible liberal preacher who mistakes the intruder for God. Likewise, Joyce Green criticized her compatriots—especially men—for their tendency to cloak misogyny in metaphysical vestments.

Finally, music—popular and avant-garde—enabled the dynamic of tradition and innovation called for by cultural revolutionaries such as Amilcar Cabral, Kwame Nkrumah, Mao, and Malcolm X. Blues, rhythm-and-blues, gospel music, and jazz were considered the "key," as Neal put it, to expanding the movement's connections to local, national, and international currents (Neal 1968, p. 653). Studied with an eye to their aesthetic, conceptual, and communal dimensions, traditions such as the blues were understood to be modes of critical discourse whose contours could be mapped onto other aesthetic and critical-theoretical forms.

Too often, as Cedric Robinson demonstrated in his *Black Marxism: The Making of the Black Radical Tradition* (1983), the continuity of the black radical tradition has been obscured. As in music, such continuity exists not only between BAM artists and critics and their forebears, but also to the post-BAM generation. To adequately account for the success or failure of the BAM, one must understand it as merely the epiphenomenon of a history that preceded it and continues in the twenty-first century.

SEE ALSO *Black Power; Blackness; Culture; Social Movements*

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Mike Sell

BLACK CONSERVATISM

Despite its seeming novelty and the monolithic nature of its contemporary precepts, black conservatism has a history that reaches back to at least the late eighteenth century and is capacious enough to include figures as diverse as Frederick Douglass, Zora Neale Hurston, Malcolm X, and Bill Cosby. The tradition, often but not exclusively peopled by the middle class, constellates around three key features. The first is a deep desire for racial autonomy that, in being effected, would ultimately result in personal independence. In short, black conservatives take a citizen's constitutional prerogative to pursue happiness very seriously. The second is the commitment to obliterate race as a limiting factor or indexical feature of human achievement. Toward this end, black conservatives are quick to repudiate theses that pathologize African American life, producing a defensive posture that once impelled Ralph Ellison to famously question, "Can a people live and develop for over 300 years simply by reacting to white racism?" (Ellison 1995, p. 339). The third is a compulsion toward social respectability, one that includes obeisance to society's laws, a hearty work ethic, religious piety, family values, sexual morality, and a kind of "role model" politics that if unable to exemplify admirable black behavior to other blacks, would at least prevent the race from being

embarrassed in the eyes of the (white) American public. This ethos not only resulted in Rosa Parks rather than the impoverished, less refined, single mother Claudette Colvin becoming the cause célèbre of the 1955 Montgomery bus boycott; it also at times has inspired impassioned jeremiads that scold the black masses for behavior conservatives deem dissolute and licentious. This policing practice has also at times kept an unnecessary harness on more demonstrative resistances to U.S. racism.

For conceptual purposes, the tradition, like most other American phenomena, can be divided into its modern and postmodern versions, with the assassination of Martin Luther King Jr. marking the decisive break. Black conservatism of the past pragmatically accepted racial segregation as a fact of American life and sought to thrive despite its imposed social constraints. Consequently, there is a manifest enthusiasm toward exclusively black institutions. Starting with the accomplished shipbuilder James Forten and through the agrarian wizardry of Booker T. Washington, the marketing genius of Madame C. J. Walker, and the urban entrepreneurialism of Elijah Muhammad, black conservatism saw racially homogeneous business relations, education, and religious life as an existential and economic antidote to their social marginalization, thus creating the irony that the lion's share of this epoch's black conservative politics proffered radical opposition to the will of the American mainstream.

In distinction from this strain, postmodern conservatism is a child conceived in the political atmosphere following the putative fall of legalized segregation and thus does not find its grounding in institutions that organically emerged from a discrete black body politic. Instead its birth site may be located in the strategic conference rooms of the Republican National Congress in 1968 when party leaders founded Heritage Groups (later to become the Heritage Foundation) to increase minority membership among its ranks. More beholden to American individualism and noninterventionist government than their predecessors, theorists such as Thomas Sowell, Shelby Steele, Alan Keyes, and Angela McGlowan find in the passing of civil rights legislation in the 1960s the indisputable end of American racism. With race no longer impeding black accomplishment, these commentators encourage African Americans to defrock themselves of long-standing resentments about discrimination and embrace what they see as a future of unlimited opportunity. Leader of the antipreference movement the Civil Rights Initiative, Ward Connerly, asks blacks to assume the following empowered, optimistic posture that he has perpetually donned: "I have made my commitment not to tote that bag of racial grievances and I've made it more frequently than I'd like to admit because the status of victim is so seductive and so available to anyone with certain facial features or a certain cast to his skin" (Connerly 2000, p. 18).

Bent on preventing past black victimization from entering contemporary discussions about social justice, today's black conservatives saturate the public discussion with diatribes about black victimization in the present, which they believe come in the form of government welfare programs that allegedly enfeeble black ambition and limit black achievement. They claim that whatever black failure persists does so because of the dependent, lower class culture that such programs perpetuate.

This generation of black conservatives has been criticized for silencing their outrage toward blatant gestures of racism, accommodating the avarice of neoliberal economics, and supporting the neonationalism that underwrites the aggressions of contemporary U.S. imperialism. Though officeholding conservatives have only been tepidly responsive to the appeals of their black supporters (Republican administrations have continued to tolerate affirmative action programs), the latter are viewed by Americans with both skepticism and seriousness because of the largesse they command from powerful mainstream organizations such as the Heritage Foundation, the Hoover Institute, and the Fox News Corporation.

SEE ALSO *Black Liberalism; Black Power; Capitalism, Black; Conservatism; Imperialism; Libertarianism; Liberty; Race-Blind Policies; Racism*

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Tyrone Simpson II

BLACK IMMIGRANTS

SEE *Immigrants, Black.*

BLACK LIBERALISM

While the term *black liberalism* is often seen as a pejorative favored by black conservatives and black nationalists, it is better understood as part of the epistemology of black political thought. In his 2001 work on contemporary black political ideologies, Michael Dawson distinguishes black liberals from black nationalists and black Marxists by the liberals' belief in race-neutral constitutional order, liberal democracy, and capitalism. Dawson sees the tension black liberals face in trying to avoid the pessimism of black nationalists and black Marxists, who believe that liberal democracies or capitalism cannot be free of the implicit racist constructs of the white hierarchy. He defines black liberals as unique from white liberals in the black liberal belief that the liberal construct of equal rights includes economic, social, and political egalitarianism; and that America will be better if it can fulfill that egalitarian ideal for blacks. Put succinctly, Dawson quotes Malcolm X to say that black liberals have "a version of freedom larger than America's prepared to accept" (p. 239).

In Dawson's view, black liberals see racism as a potent force that is contradictory to and independent of liberal democracy and capitalism. Black nationalists believe that liberal democracies, born at a time of European colonialism and American slavery, not only fail to handle the contradiction between liberalism and colonial subjugation and slavery, but also implicitly incorporate the contradiction by enshrining racial hierarchies. Black Marxists see capitalism as inherently racist, based on models of capitalist exploitation.

W. Avon Drake (1991) offers another perspective, contrasting black liberals with social democrats. In Avon's view, black liberals see racism as the primary impediment to black social progress, while social democrats stress class differences, with neither seeing either liberal democracy or capitalism as inherently racist. Social democrats see impediments to blacks as based on differences in class: Racial disparities are viewed primarily as economic class disparities. Thus programs designed to address poverty and issues of inequality are seen as more useful than programs aimed directly at racial disparities. Proponents of black social democracy include Abram Harris and, later, William J. Wilson.

The major triumphs of black liberalism include the 1954 Supreme Court decision in *Brown v. Board of Education*, the Civil Rights Act of 1964, and the Voting Rights Act of 1965. Research shows that these policies dramatically reduced racial income inequality in the southern United States (McCrone and Hardy 1978; Donohue and Heckman 1991). In 1965 the poverty rate for black children stood at 65.6 percent and fell to 39.6 percent by 1969. Principle architects of black liberalism include W. E. B. Du Bois in his earlier writings, Charles Houston, Thurgood Marshall, Martin Luther King Jr., and A. Philip Randolph.

Black liberalism has faced several challenges. The rise of the American conservative movement and the dominance of conservative ideology on the national level put black liberals at odds with the American political establishment. Cornel West (1994) has pointed out that the crisis for black liberalism has been its inability to handle the increase in economic inequality resulting from the deindustrialization of the U.S. economy. The poverty rate for black children remained above 40 percent from 1975 to 1992, rising as high as 47.3 percent in 1982. *Crisis* magazine, the official organ of the NAACP, pointed to an earlier conflict addressed by black liberalism, when between 1933 and 1953—from the time of the New Deal to the *Brown* decision—the fruits of the white liberal agenda in the New Deal excluded the black community (Anderson 1980).

The conservative challenge to black liberalism rests on one of three arguments: (1) blacks have developed a pathological culture in opposition to mainstream culture that fails to reward the elements needed to succeed in a capitalist system; (2) blacks are inherently inferior, an argument based on a genetic definition of race; (3) blacks for various reasons of history and culture lack the requisite skills to succeed in a capitalist system because market forces make discrimination in the marketplace of minimal importance. On the basis of these arguments, government intervention to combat racism is seen as an unwarranted intrusion of the government into the marketplace. (William Darity and Patrick Mason refute these points in their 1998 work, arguing that the evidence fails to support the belief that blacks have a pathologic culture and that discrimination within the marketplace is substantial.)

Black liberals view blacks as "liberal man"—rational in the liberal sense of acting consistently to advance black well-being and economic success (as opposed to irrational, or pathological, failing to act in their economic interests). Black liberals explain racial disparities in economic and political life as the result of racism and, in a nod to black nationalists and Marxists, posit that there are institutional barriers born of the implicit racist pact that allows for legal segregation and slavery in a liberal democracy. The conservative argument views blacks as not rational, as making choices not in their best interest. The resulting caricature by conservatives is that black liberals portray blacks as victims, and the term *black liberal* has often come to be defined by this pejorative view. Conservatives also allege that the black liberal agenda creates a dependency on government, which is what makes black culture pathological and is the real source of racial disparities in economic and political life.

SEE ALSO *Black Conservatism; Black Power; Capitalism, Black; Du Bois, W. E. B.; Harris, Abram L.; King, Martin Luther, Jr.; Liberalism; Pathology, Social; Radicalism; Wilson, William Julius*

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William E. Spriggs

BLACK MIDDLE CLASS

In the United States, where blacks have comprised a sizable minority in relation to a white majority, and in South Africa, where blacks have comprised a considerable majority in relation to a white minority, the growth of a black middle class has been regarded as an important benchmark for blacks' social and economic standing. A growing black middle class would seem, at least, to indicate improving social mobility, greater affluence, and expanded life chances for blacks.

In fact, the social science literature suggests that middle-class status, with all that it promises, is precarious for those blacks who have achieved it, and still out of reach for many others. As members of a minority group, middle-class blacks face historical and persistent marginalization, discrimination, and racism; consequently, their experience differs from that of the white middle class. Scholars have struggled to decide who among minority black populations should actually be considered middle class. Nevertheless, studies dedicated to defining and describing the black middle class confirm that inequities persist between blacks and whites in the United States and South Africa, as well as between middle-class blacks and poor blacks, despite the dismantling of legal structures that discriminate against blacks.

UNITED STATES

Prior to the civil rights movement in the United States, a small black elite emerged that often was defined by skin color—that is, lighter-skinned blacks had greater opportunities for social advancement than darker-skinned blacks. This elite has been called the "black bourgeoisie" (the title of a controversial book by E. F. Frazier) and the "old black middle class" (a term used by the academic Bart Landry). It was associated with the educated strata of the black population, which W. E. B. Du Bois hoped would produce a "talented tenth" to serve as intellectual leaders for American blacks. Members of this group typically engaged in professional services to the black community, holding occupations such as teacher, social worker, pastor, mortician, and, occasionally, doctor or lawyer, as well as business owner. The success of these business owners was contingent in part on the existence of a market protected by segregation. Because they were excluded from working with or for whites, this "old" black middle class relied on the limited resources of black patrons and enjoyed only limited social mobility.

The civil rights era gave rise to a "new" black middle class. Some scholars have traced the origins of the black middle class to an earlier period, when restrictions on immigration (especially the Immigration Act of 1924) were introduced after World War I (1914–1918). These restrictions created opportunities for black workers to move in great numbers from the agricultural economy of the South to the industrial economy of the North. However, the scholarly literature generally attributes the growth of the black middle class chiefly to increased economic prosperity following World War II (1939–1945); to improved job opportunities for blacks after civil rights, especially in the public sector; and to the expanding economy of the 1960s.

Defining the Black Middle Class Scholars have struggled to define the black middle class. The most commonly employed criteria for membership have been income, education, occupation, and wealth. These measures are used either in combination or independently. The difficulty with using these measures to define the black middle class is that pronounced disparities between blacks and whites exist for all these variables. A black middle class defined by the middle range of black incomes, for instance, is not comparable to a white middle class defined by the middle range of white incomes. The 2000 U.S. census reported that whereas half of all black households have incomes of

$29,423 or more (based on 1999 dollars), the corresponding figure for white households is $44,687, a difference of more than $15,000. In addition, scholars have disagreed about which occupations should be defined as "middle class"; opinions range from a strictly white-collar criterion to a less restrictive one that includes protective services, skilled craftsmen, and clerical and sales workers. Furthermore, discrimination in the workplace prevents occupational prestige from being a reliable marker of blacks' social positions, especially the social position of middle-class blacks. Several scholars have proposed that lifestyle, values, and behaviors are much more meaningful measures of black middle-class experience than income, education, occupation, and wealth. Other social scientists have questioned whether it is appropriate to classify blacks as members of the middle class at all, given the pronounced disparities between the black and white middle classes, as well as broader problems with defining *class*.

Describing Black Middle-Class Experience An extensive literature characterizes the black middle class in terms of the inequities that middle-class blacks experience in relation to middle-class whites. These inequities include unequal residential patterns, occupational profiles, wages and wealth, and family structures. Middle-class blacks live in less socioeconomically attractive neighborhoods, close to the black poor; this phenomenon, dubbed *racial residential segregation*, may prevent social mobility. Middle-class blacks work disproportionately in the public sector, especially in city, state, and federal government. Of blacks who work in the private sector, the majority are pigeonholed into positions where they interact chiefly with black patrons.

Although middle-class blacks have moved increasingly into white-collar occupations, they have not received wages comparable to their white counterparts: In the closing decades of the twentieth century, blacks made 70 percent of what their white counterparts made. One consequence of this disparity in wages is that blacks receive less of a financial return on their personal investments in education than do whites. One study found that the black/white disparity is even more pronounced for men with more education (Tomaskovic-Devey, Thomas, and Johnson 2005). The black/white disparity is evident when comparing not only wages (income) but also wealth (assets). Home ownership is a primary means for individuals to establish and maintain their wealth status, but black home ownership lags behind white home ownership. In 2000, 46 percent of blacks and 71 percent of whites were homeowners. A few years earlier, a study reported that blacks had only 15 percent of the wealth that their white counterparts had. Thus, although the cohort whom scholars call the black middle class has grown historically, members of that cohort remain at a disadvantage compared to their white counterparts.

Related to labor and wealth are three characteristics of the black middle-class family structure that make that middle-class status precarious. First, black wives have to participate in the labor force to secure and maintain middle-class status for their families. Second, wealth disparities relative to whites leave middle-class blacks with fewer assets to bequeath to the next generation. Third, middle-class blacks have an extended family structure that emphasizes their moral obligation and social responsibility to invest assets in the larger black underprivileged community. These factors contribute to continuing economic disadvantages for the black middle class in the United States as compared to the white middle class.

SOUTH AFRICA

Apartheid had produced a South African black elite that was employed in—but confined to—serving a black clientele. Opportunities for social mobility expanded momentously after the end of apartheid in the 1990s. On winning control of government in 1994, the African National Congress (ANC), guided by the National Democratic Revolution theory, set out to foster a black middle class. The ANC pursued this goal by promoting growth and redistribution of wealth and by transforming social institutions and economies through "equality employment" and "Black Economic Empowerment." These developments (which were similar to affirmative action programs in the United States) enabled South African blacks to move into the public sector. While some blacks gravitated to government employment, others obtained degrees and found work in the private sector.

Despite the new opportunities for blacks that opened in the post-apartheid period, scholars have remained concerned about the relatively small size of the black middle class and about growing gaps between the black middle class and the black poor. Although opinions vary as to size of the black middle class, the consensus is that this group is quite small relative to the larger population. Out of a total population of 44 million, the black middle class comprises somewhere between 2.5 to 3.6 million. Black employees in South Africa are highly unionized, a fact that both increases wages and improves work conditions; however, these benefits do not extend to poor unskilled blacks, who are prevented from unionizing and thus have greater difficulty in securing fair wages. As a result, though unionization has decreased inequality between whites and blacks, it has increased inequality between middle-class and poor blacks. South Africa presents the same problem seen in the United States: The black middle class is making modest strides toward parity with the white middle

class, whereas a class of impoverished blacks falls further and further behind.

SEE ALSO *Acting White; Apartheid; Class; Jim Crow; Middle Class; Racism; Sellouts*

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Kris Marsh

BLACK NATIONALISM

In the strictest meaning of the term, *black nationalism* refers to those ideas and movements that are associated with the quest to achieve separate statehood for African Americans. The goal of statehood was especially important during the "classical" period of black nationalism—the time of Marcus Garvey (the 1920s) and of the early activists who preceded him. During the "modern" period, especially after World War II, black nationalism encompasses more broadly both those who favored true political sovereignty through separate statehood, and those who favored more modest goals like black administration of vital private and public institutions—the latter being the common cause of those who invoked the slogan of "Black Power" after 1966. Black nationalism must always be understood in its historical context, therefore, as particular ideas and movements invariably bear the marks of their respective eras.

CLASSICAL BLACK NATIONALISM

Classical black nationalists advocated political sovereignty and they insisted that such a goal required the creation of a nation-state with clear geographical boundaries. There was not much support for this idea before the passage of the Fugitive Slave Act of 1850. Part of the Compromise of 1850, this act denied captured slaves (or those simply accused of being fugitive slaves) the right to a trial and granted marshals the power to force citizens to assist in the recapture of runaway slaves. It also prohibited testimony by those accused, and thus raised the possibility that free blacks could be captured into slavery. This was an era in which the U.S. political elite defined the meaning of citizenship in "white nationalist" terms. Justice Taney stated this perspective forcefully in the infamous 1857 *Dred Scott* case. Concerning the phrase "all men are created equal," Justice Taney commented that "it [was] too clear for dispute that the enslaved African race [was] not intended to be included and formed no part of the people who framed this declaration." The African race, Taney argued, had "no rights which the white man was bound to respect." Until the eve of the Civil War, politicians worked to expand and secure rights for the majority of whites (males), while at the same time they increasingly restricted the rights of free blacks with prohibitions against intermarriage, rules that barred the migration of blacks to different states, and laws that denied suffrage and that even established formal segregation. Thus, by the mid-nineteenth century Martin Delaney, James T. Holly, and others began to argue that black people should leave the United States for Canada, Haiti, or other destinations.

What set apart these "nationalists" from other black historical actors of the period were their positions on emigration and nation-building, not their views of culture. As Wilson Moses explains in his *Golden Age of Black Nationalism* (1978) and other writings, classical black nationalists were Christians, and they believed that Western civilization was the measure of progress when it came to letters, arts, commerce, and governance. All free black Americans of this period shared these views. It was not until after World War II that black (cultural) nationalists began to try to break entirely from Western convention.

Marcus Garvey founded the Universal Negro Improvement Association (UNIA) in 1918, and built the largest black nationalist movement in the history of the United States. The movement originated in Harlem, New York, and grew out of the social, economic, and political experience of native and foreign-born blacks of the period. Garvey's nationalism was "classical" in the sense that his final goal was political autonomy, and he was Western in orientation. In terms of ideas and practice, however, the UNIA also reflected developments unique to its era. The 1920s was a period of heightened anticolonial, nationalis-

tic consciousness among many oppressed peoples of the world, and thus in tone, if not in substance, the arguments advanced by supporters of Garvey's vision was akin to arguments against colonial domination seen in, say, Ireland or India—especially in the Caribbean region, where the UNIA established a number of chapters. The 1920s might also have represented the height of white American nationalism in the United States. The Ku Klux Klan peaked in membership (at several million), by defending "pure womanhood" and opposing immigration and all forms of labor activism. This was also the period when, in 1924, the U.S. government instituted immigration quotas that favored Northern Europeans over all others. In terms of membership numbers and visibility, the UNIA's apex was congruent with the rise of white American nationalism of its time.

In terms of its program, the UNIA was conservative socially, economically, and politically. Although Garvey initially explained the ambitions of the organization in language that clearly reflected the influence of revolutionary (Bolshevik) thought, as well as anticolonialism, very quickly after the founding of the UNIA his message (in the United States) reflected conventional, even reactionary, thinking about race and political empowerment in the United States. Echoing conventional wisdom about the enduring significance of "racial" identity, Garvey argued for racial purity. While Garvey and his followers articulated a kind of racial chauvinism, a pride in black identity, that few had previously articulated, he nevertheless was reproducing the racist ideology of that period. After all, it was the Klan who argued most forcefully for racial purity. Starting with an organic view of racial identity—which ignored diversity *among* black people—Garvey eschewed talk of class struggle and union organization and argued for a strategy of building black businesses, believing the race would find redemption in the economic marketplace. The most prominent of the UNIA business ventures was the unsuccessful Black Star Line. Unlike the National Association for the Advancement of Colored People (NAACP), Garvey and the UNIA did not devote much effort toward expanding civil rights for blacks in the United States. In this respect, the organization foreshadowed the Nation of Islam, arguably the most successful black nationalist organization in the postwar period.

Garvey is known for his "back to Africa" philosophy, but his organization was working for selective emigration, not mass return. Garvey argued that full equality in the United States was illusory at best, and so he supported a "Negro Zionism." Black people in the Western hemisphere, he argued, should support the creation of an African nation in the eastern hemisphere (his choice was Liberia); by ensuring the development of the Negro Zion, black people in the United States, the Caribbean, and Africa would elevate their status. This reasoning was similar to that of James T. Holly and others of the antebellum period.

Black nationalism must also be understood with a number of spectra in mind. Since the second decade of the twentieth century, there have been disagreements among nationalists on "social" issues like "racial purity," and religious belief. There have also been differences in terms of economic philosophy—specifically whether black equality could be achieved under capitalism. Nationalists have differed over political tactics—for example, they have argued over whether black people could win emancipation through lobbying and electoral strategies or only through armed insurrection. During the 1920s, the UNIA vastly dwarfed another organization, the African Blood Brotherhood (ABB), which combined racial nationalism with a socialist critique of capitalism. The ABB's founder, Cyril Briggs—a native of St. Kitts in the West Indies—argued that black people constituted a separate nation, but unlike Garvey he sought to establish political sovereignty by revolutionary means. The Fenian Irish Republican Brotherhood was the likely model for the ABB. At its peak, the organization claimed several thousand members. It was eventually absorbed by the Communist Party.

MODERN BLACK NATIONALISM

Of the "modern" black nationalist organizations operating in the postwar period, the National of Islam (NOI) has been the largest and most enduring. The Nation of Islam expanded in size and significance largely due to the efforts of one convert, Malcolm X. Born Malcolm Little, Malcolm X converted to Islam while in prison, abandoned his slave name, and adopted the *X* to represent the African name lost as a result of slavery. Malcolm X's organizing skills and street savvy helped to expand the organization and vastly increase its visibility in the United States, while his oratorical gifts helped spread Elijah Muhammad's message. In some respects this message was a form of neo-Garveyism: It endorsed black pride, self-help through economic enterprise, and the creation of a separate territory in the American South. However, the NOI's unique, heretical interpretation of Islam—Elijah Muhammad was believed to be a prophet—set the organization apart from other black nationalist groups of the period. The NOI established mosques in cities across the country. Among their business activities were laundromats, restaurants, and a newspaper, *Muhammad Speaks*. The NOI also established separate schools for the children of its members.

The fact that the organization eschewed political engagement might have been its most striking feature. The late 1950s and 1960s was the period of civil rights

struggle, and the NOI did not participate in any of the major campaigns of the era. Indeed, in his *Autobiography* (1965) Malcolm X makes it clear that he was bothered by the common criticism of NOI—that it was all talk, and little action. After leaving the organization, he spent the final years of his life seeking to fashion a secular, and *engaged* version of black nationalism that was represented in his short-lived Organization for Afro-American Unity (OAAU). The OAAU called for black control of the various institutions that touched black life. Malcolm X, who was assassinated in 1965, might have had his greatest impact in death. Most nationalists of the Black Power era (post-1965) drew inspiration from the life and martyrdom of Malcolm X—especially his explicit rejection of integration as a goal of the black freedom struggle, and his questioning of nonviolence as a political strategy.

Among the groups operating during the 1960s and early 1970s that adopted and propounded an explicitly nationalist agenda were the post-1965 Student Nonviolent Coordinating Committee (SNCC) and Congress of Racial Equality (CORE), Mualana Ron Karenga's US organization, the Revolutionary Action Movement (RAM), and the Black Panther Party for Self-Defense (BPP).

These organizations and activists were influenced by the anticolonial struggles of the 1950s, and especially the independence of a number of sub-Saharan African nations, starting with Ghana in 1957. Part of the inspiration came out of the fact that black activists in the United States and around the African Diaspora had long embraced Pan-Africanism—the idea that black people of the African Diaspora shared a common destiny. For nationalists of the period, the significance of these anticolonial struggles was also theoretical. First, activists understood anticolonial efforts as analogous to the struggle for civil and economic rights in the United States: Throughout the Diaspora, "African" liberation meant transforming, if not rejecting, Western social, political, and economic beliefs. Second, the nature of anticolonial struggle informed discussions of tactics within the United Sates. In some cases independence came peacefully. In other cases Africans gained political sovereignty through armed and bloody confrontation.

While proponents of black nationalism all pondered the same general questions during the 1960s, they arrived at different conclusions. Karenga, US, and "cultural" nationalists of the period believed that liberation was tied to the recovery of an "African" identity. Karenga therefore urged his followers to learn and speak Swahili, to dress in traditional African garb, and to live according to seven principles (the Kawaida) that distilled elements of an African cosmology. The Black Panther Party hoped to topple capitalism, and rejected the view that black equality could be achieved by changes in lifestyle that did not directly change political and economic realities. To help change those realities, they published a newspaper and established schools, health clinics, and free breakfast programs. US and the BPP were fierce rivals, and this rivalry (which in part was fueled by the FBI) proved deadly in 1969 when members of US shot and killed a member of the Los Angeles chapter of the BPP.

Both organizations, along with other black nationalist groups of the era, were active in what is known as the "Black Power" phase of the civil rights struggle. "Black Power," first proclaimed as a slogan in 1966, had as many definitions as it did adherents. At base, its meaning was captured by another popular slogan of the time—"black faces in previously white places." The basic idea—that blacks as a group should organize and pursue power collectively as other "ethnic" populations had done previously—was elaborated in Stokely Carmichael and Charles Hamilton's *Black Power* (1967). Black Power demands for control of school curricula and city administrations coincided with the rioting (or urban rebellions) that marked the era—outbreaks that affected hundreds of cities across the United States. By the early 1970s, however, it was clear that Black Power represented conventional tendencies far more than radical ones. For a number of reasons, starting with the success of U.S. intelligence in undermining the strength of radical black nationalist organizations, Black Power soon looked more like "ethnic pluralism" than like a programmatic orientation that could transcend the terms of and limitations of urban politics in the United States (Allen 1970).

THE POST–CIVIL RIGHTS ERA

In the post–civil rights context, the NOI has been the principal representative of black nationalism as a political movement. After the death of Elijah Muhammad in 1975, one of his sons, Warith Deen Muhammad, took control of the organization and adopted Sunni Islamic beliefs and practices. This meant, among other things, that the organization was no longer racially separatist, nor working toward political sovereignty. Louis Farrakhan subsequently led a group of defectors out of that organization and reestablished the NOI along traditional lines.

Farrakhan enjoyed considerable popularity among black Americans, especially during the early to mid-1990s. He drew large audiences to hear his lectures/sermons. Farrakhan organized the Million Man March in 1996, which drew upward of 750,000 black men to Washington, D.C. The Million Man March was intended to serve as a catalyst for the creation of a broad-based political movement that would tackle the problems that continued to plague black America—disproportionately high levels of unemployment, high rates of incarceration,

unequal access to capital, and so on. However, the fundamental theme of the march was "atonement," and so—unlike the famous march on Washington of 1963, which demanded "Jobs and Freedom"—it demanded nothing but greater black male responsibility. It did not trigger a new wave of grassroots mobilization, and indeed might have had the opposite effect. By maintaining a view of political action that depends on "group consciousness" and eschews collaboration with movements that cross racial and class lines, such as organized labor, the NOI has not been able to transcend limitations that have hampered the organization from its inception.

Less overtly political, but also quite visible during the late 1980s and 1990s was the academic push for an "Afrocentric" paradigm. *Afrocentric* had once been synonymous with Pan-Africanist, but by the 1990s the term had developed a narrower connotation. Molefi Kete Asante of Temple University was the chief architect of this new usage. He insisted that to study "African" people—be they black Americans in Detroit, black West Indians in Barbados or Dominica, or the Wolof of Senegal—scholars must look to "classical" Africa, by which he meant ancient Egypt, or "Kemet." Just as Ancient Greek thought provides the basis of Western philosophy, so too, he argued, did ancient Egypt serve as the basis of "African" philosophy. For Asante, this was more than an intellectual point. Rather, this counter-epistemology was a first step toward black empowerment. In this regard, Asante and proponents who shared his views extended the arguments of cultural nationalists of the 1960s—and of the NOI—who had insisted that black empowerment depended on an embrace of a lost cultural identity. Asante was not the first to emphasize an understanding of black or "African" history, nor to suggest that proper knowledge of identity could be emancipatory; however, Afrocentricity as Asante and other proponents spelled it out added ingredients of its time—especially the theoretical bent toward "post-structural" modes of understanding. In the end, though, his was only an *attempt* at a counter-epistemology. Despite Asante's claim that Afrocentricity was a first step toward black empowerment, the conservative aspects of this ideology should be clear: This was fundamentally an intellectual, as opposed to a political, movement.

CONCLUSION

In a very broad sense, black nationalism and Black Power are not uniquely American phenomena. South Africa and more recently Brazil are other countries where activists have pushed for a consciousness about (black) identity as a way to catalyze and organize for social change. However, a proper understanding of black nationalism in *any* context requires special attention to the specificity of a given political and historical context. Simple analogies between movements that emphasize black or African identity invariably miss crucial differences. When scholars who revisit the Black Power era in the United States, or Black Consciousness in South Africa, focus on what activists did as well as what they said, the significance of *local* context becomes clear. Analogies to anticolonial struggle, or Pan-African solidarity, or black pride do not change the fact that black nationalists ultimately face the challenge of building social movements within national boundaries.

SEE ALSO *African Americans; Afrocentrism; Black Conservatism; Black Panthers; Black Power; Blackness; Capitalism, Black;* Dred Scott v. Sanford; *Garvey, Marcus; Ku Klux Klan; Malcolm X; Marxism, Black; Nation of Islam; Nationalism and Nationality; Pan-African Congresses; Pan-Africanism; Reconstruction Era (U.S.); Separatism; U.S. Civil War*

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Dean E. Robinson

BLACK PANTHERS

The Black Panther Party (BPP) was conceived as the next stage in the evolution of the African American struggle, building off of a trajectory that is mistakenly divided into two discrete movements: civil rights and Black Power (Hill 2004; Tyson 1999). Fusing the political thought of Robert F. Williams on armed self-defense with the philosophy of Malcolm X on black self-determination, Max

Stanford developed a unique approach to activism that would become the Black Panther Party (BPP) (Marable 2007). The basic goal was to advance Black Power and national liberation throughout the United States in general but especially in the North by improving the political, economic, social, and psychological well-being of African Americans (Hilliard and Cole 1993; Holder 1990; Jones 1998). This was to be achieved through a diverse repertoire of activities, but it was the ideas of armed self-defense and guerrilla warfare (if deemed necessary) that garnered the most attention.

From the beginning the organization was divided by a fundamental split based on important tactical differences. On the East Coast the first BPP chapter was created in New York City by Stanford in 1965 (see Marable 2007). This organization advocated a clandestine approach and opted to remain underground until it could more effectively pursue its claims openly. On the West Coast the second BPP chapter was created by Huey P. Newton and Bobby Seale in Oakland, California, in 1966 (see Seale 1970). This chapter advocated a more public presence and attempted to garner as much attention as possible. Both wings of the party developed chapters throughout the United States (especially during a period of particularly rapid growth between 1967 and 1968). In late 1969 and 1970, in an effort to avoid negative publicity and the attention of authorities, the Panther name was changed to the National Committee to Combat Fascism in many locales.

Because it drew the primary focus of the media as well as of political leaders, activists, and academics, the West Coast faction has largely shaped our understanding of the BPP. This bias is perhaps inevitable, because the West Coast faction was involved in many of the most dramatic incidents and activities associated with the Panthers. These include the storming of the California State Assembly in Sacramento in 1967, numerous shoot-outs with the police throughout Oakland (especially those involving Newton, Eldridge Cleaver, and "Li'l" Bobby Hutton), the Free Huey movement, the Chicago 8 trial, the shooting of George Jackson in San Quentin Prison, and the failed kidnapping of a judge in a Marin County courtroom by Jackson's brother Jonathan (see Holder 1990; Seale 1970; United States Congress 1971). In addition the West Coast Panthers developed numerous high-profile programs that were later imitated, such as the free breakfast program, the liberation school, sickle cell anemia tests, and the Black Panther Intercommunal News Service (see Abron 1993; Cleaver and Katsiaficas 2001). Also highly influential was the imagery associated with West Coast Panthers: Their military berets, leather gloves and hats, bright powder-blue shirts, and Afro hairstyles were as symbolically important to the Black Power movement as the phrase "Power to the People." The impact of this imagery was immediate and resonated across the United States as well as throughout the world.

Although in some respects the BPP was part of a continuum of black struggle, in other respects it represented a major divergence from the traditional black nationalist program. For example, the BPP was hesitant about calling for a black "nation"—a major goal for black nationalists. Newton, the main theoretician for the Panthers, suggested that until "the oppressive state of America" was wiped out, there would be no freedom for blacks even with a separate state. The disagreement, then, was over timing, not over nationhood per se. The BPP members were also somewhat disdainful of those who believed that the path to African American salvation was the adoption of African culture or a return to the African continent—both major planks of the black nationalist program. Indeed the Panthers were quite American and Western in their objectives and in many of the means used to attain them. Finally, the BPP decided relatively early on that coalitions should be formed with white liberals, radicals, and any other groups that wished to bring about political-economic change—a stance that further distanced them from other black nationalists.

Divided tactically and organizationally from the rest of the Black Power movement, the BPP soon became the target of a highly repressive campaign. This effort extended from J. Edgar Hoover's Federal Bureau of Investigation, which in 1968 identified the party as "the greatest threat to the internal security of the United States" (Cunningham 2004), to "red squad" and antisubversive units in local police departments throughout the country (Donner 1990). These organizations engaged in a wide variety of actions: setting up physical and electronic surveillance; sending false letters; planting informants and agents provocateur; conducting raids; making arrests for a multitude of offenses, from murder to running an intercom without a license; and even carrying out targeted assassination. The actions of both the state and the Panthers escalated to such a level of violence over several years that diverse citizens' alliances began to form calling for an end to the conflict.

By 1973, due to the efforts of the U.S. government to eliminate it and the difficulties of managing a high-profile and contentious organization, the original BPP was effectively dismantled (Calloway 1977; Goldstein 1978; Hopkins 1978; Johnson 1998; Jones 1998). In its place there developed an organization with new leadership (most of the original governing committee was no longer involved), new tactics (confrontation was replaced by electoral and civil service efforts), and new members (largely female).

The Panthers were by no means finished at this time, however. Several of their earlier programs persisted up

until 1980 (Abron 1993). Ideologically and tactically, to both good and bad effect, the Panthers influenced the white Left (who considered them to be the "vanguard" of the revolution), other African American organizations (the New Black Panther Party), Latinos (the Young Lords), Native Americans (especially the American Indian Movement), diverse activists around the world (e.g., the Black Panther Parties in Australia and Israel as well as the Dalit Panthers in India), and even the social service programs of diverse state and local governments. Additionally, through popularization in film, television, music, poetry, and fiction, the BPP and its legacy continue to exert an influence on America and the rest of the world (Cleaver and Katsiaficas 2001; Kelley 2002). Indeed as one of the most visible and aggressive responses to the diverse problems confronting blacks in the United States, the Black Panthers are likely to remain inspirational to those resisting racism, the U.S. government, or capitalism for some time to come.

SEE ALSO *African Americans; Black Power; Civil Rights Movement, U.S.; Human Rights; King, Martin Luther, Jr.; Malcolm X; Marxism, Black; Militants; Repression; Resistance*

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Christian Davenport

BLACK POLITICS

SEE *Politics, Black.*

BLACK POWER

The Black Power movement is one of the most misunderstood and understudied protest movements in American history (Jeffries 2006). Many whites believed that Black Power was synonymous with violence and black racism. Some black leaders viewed the movement as separatist, following a similar path to that of such earlier movements as Marcus Garvey's (1887–1940) Universal Negro Improvement Association (UNIA), the National Movement for the Establishment of the Forty-ninth State, the Peace Movement of Ethiopia, and the National Union for People of African Descent.

The Black Power movement emerged at a time when the modern civil rights movement was in its final stage as a viable movement for social, political, and economic change. While some contend that the civil rights and Black Power movements were vastly different endeavors, the latter was indeed a logical extension of the former. In fact, many have maintained that Willie Ricks, a civil rights activist, introduced the Black Power slogan during a march in 1966. In 1968 Kwame Ture (then Stokely

Carmichael, 1941–1998) defined Black Power as "the ability of black people to politically get together and organize themselves so that they can speak from a position of strength rather than a position of weakness" (quoted in Ladner 1967, p. 8). It is apparent though, that while the Black Power movement was a continuation of the struggle waged by the civil rights movement, it was distinct in many ways.

Black Power organizations such as the Black Panther Party, US, the Republic of New Africa, the League of Revolutionary Black Workers, the Revolutionary Action Movement, and others saw themselves as the heirs to Malcolm X (1925–1965). Malcolm had argued that the nonviolent tactics of Dr. Martin Luther King Jr. (1929–1968) were not a viable option for black people. Malcolm viewed integration as a surrender to white supremacy, for its aims of total assimilation into white society implied that African Americans had little that was worth preserving.

Malcolm's candid and fiery rhetoric appealed to many urban blacks, and his autobiography was devoured by Black Power advocates. Nat Turner (1800–1831), Che Guevara (1928–1967), Frantz Fanon (1925–1961), Amílcar Cabral (1924–1973), Kwame Nkrumah (1909–1972), Patrice Lumumba (1925–1961), Sékou Touré (1922–1984), and Toussaint Louverture (1743–1803) were also held in high regard. Black Power advocates were inspired by the struggle for African independence.

For many in the Black Power movement, Fanon's *The Wretched of the Earth* (1961) was considered a blueprint for revolution in America. *The Wretched of the Earth* distilled the lessons of the Algerian war for anticolonial movements everywhere. In terms of organization building, Garvey's UNIA served as a model for many Black Power advocates.

The 1965 assassination of Malcolm X coupled with the urban uprisings of 1964 and 1965 ignited the Black Power movement. Some young black activists committed themselves to continuing the unfinished work of Malcolm X's Organization of Afro-American Unity by forming their own organizations. During the summer of 1965, the predominantly black Watts district in Los Angeles reached its boiling point and erupted in violence in response to the mistreatment of a black motorist by members of the California Highway Patrol. This uprising was arguably the most catastrophic of its era; it signaled to America that some blacks were willing to lash out against the establishment in a violent way when consistently denied the most basic of human rights. Ironically, this rebellion occurred just a few days after the passing of the Voting Rights Act of 1965. Consequently, for many blacks it was clear that oppression was too deeply entrenched in America's institutions to be overcome by civil rights legislation that addressed the symptoms and symbols of black inequality rather than the root causes.

By 1968 the Black Power movement was in full gear. Thousands of blacks all over the country took to the streets in response to the killing of Dr. King. Months later, black athletes staged protests at the Olympic Games in Mexico City as a way of bringing attention to the plight of African Americans in the United States.

The Black Power movement was dispersed throughout the United States. The civil rights movement, on the other hand, was to a large extent a southern-based movement. Unlike the civil rights movement, whites were prohibited from joining any of the Black Power organizations. With the exception of the Black Panther Party, Black Power organizations did not form alliances with white groups. Black Powerites sought to be free of any white influence or interference.

While all of the Black Power organizations believed in black control of their communities, they were not monolithic in their approach to that end. The civil rights movement sought to dismantle desegregation in public accommodations and to exercise the right of black Americans to vote. For many Black Powerites, integration was a nonissue and nonviolence was out of the question. The political philosophy of the organizations that comprised the Black Power movement ran the gamut. Some were black nationalist, others were cultural nationalist, while still others considered themselves Marxist-Leninist.

The Black Power movement was preoccupied with increasing black people's level of consciousness. Black people began calling themselves *black* instead of *negro*. Congressman Adam Clayton Powell (1908–1972) of New York spoke of Black Power at a rally in 1965 in Chicago and elaborated on it in his Howard University commencement speech the following year. He exclaimed that Black Power was "a working philosophy for a new breed of cats … who categorically refuse to compromise or negotiate any longer for their rights … who reject the old-line established white financed, white controlled, white washed Negro leadership" (quoted in Muse 1970, p. 242).

The Black Power movement not only represented a change in tactical strategy, but also a change in mind-set. For instance, the black music industry, with its roots in gospel and rhythm and blues became nationalist in an extraordinary way. Songs like James Brown's "Say It Loud, I'm Black and I'm Proud" (1968), the Temptations' "Message to a Black Man," (1969) and the Impressions' "We're a Winner" (1967) established a distinctive sound that became the preferred expression for a generation of politically conscious young black Americans. Some blacks chose to don African garb and adopt African names. Some chose to wear their hair in ways that were more distinctively nonwhite. In the fall of 1966, Howard University

students elected as homecoming queen a woman who ran on a Black Power platform and wore the emerging Afro hairstyle. "Black Is Beautiful" became the mantra among Black Powerites.

Young black activists from Cornell University in Ithaca, New York, to the University of California at Berkeley established black student unions and demanded black studies programs, more black faculty, and proactive recruitment and admissions policies. Black Power advocates claimed that most African Americans knew little about their history. Carter G. Woodson (1875–1950) had made the same point years earlier: "The Negro knows practically nothing of his history and his 'friends' are not permitting him to learn it.… And if a race has no history, if it has no worth-while tradition, it becomes a negligible factor in the thought of the world, and it stands in danger of extermination" (Wiggins 1987, p. 45; Young 1982, p. 100).

Black Power advocates felt little need to prove to whites that they were deserving of the same rights. From their standpoint, to whom were whites to be equal? They believed that their time would be better spent educating the community, building institutions, and meeting the daily needs of the people by providing protection, food, shelter, and clothing.

The Black Power movement did not grow out of a vacuum; it was firmly rooted in the rich tradition of black protest. Like the slave rebellions and the Garvey movement, it was extensively organized. Its use of the written word, art, and culture to heighten the consciousness of the black community also linked the movement to the Harlem Renaissance (or the New Negro Renaissance), which relied heavily on these black expressive endeavors.

The Black Power movement also heightened the consciousness of other oppressed peoples throughout the world and greatly influenced the direction of their movements. The Black Power movement had a profound impact, for example, on the struggle for equality in the Caribbean, where freedom fighters started the Afro-Caribbean movement, activists in Barbados formed the People's Progressive Movement, and grassroots organizers in Bermuda launched the Black Beret group (Jeffries 2006).

By the mid-1970s, the Black Power movement was for all intents and purposes over. Government repression, which included assassinations of Black Panthers Mark Clark and Fred Hampton in Chicago, and Carl Hampton of Houston, raids, arrests, and harassment of many of the movement's members, gets much of the credit for the decline of the Black Power movement. In addition to repression, by 1973 African American activists had begun to concentrate their efforts on getting blacks and progressive whites elected to public office. Some saw the electoral process as a significantly less dangerous undertaking. Intragroup squabbles and government programs such as welfare (which underwent a loosening of eligibility requirements) also worked to dampen militant activism. While a few Black Power organizations remained active well into the mid-1970s, by the time of the election of President Jimmy Carter in November 1976, the Black Power movement was dead.

SEE ALSO *Black Panthers; Civil Rights Movement, U.S.; Congress of Racial Equality; Student Nonviolent Coordinating Committee*

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Judson L. Jeffries

BLACK SEMINOLES

SEE *Osceola.*

BLACK SEPTEMBER

The Black September Organization (BSO) was a Palestinian terrorist group most active in the early 1970s. The BSO named itself after the particularly bloody month in 1970 when King Hussein of Jordan declared military rule, expelling and killing thousands of Palestinian *fedayeen* (self-sacrificers). These *fedayeen* threatened to undermine Hussein's power in working with a "state within a state," the Palestine Liberation Organization (PLO), established to mobilize the Palestinian population against Israel. Black September most likely began as the

Revenging Palestinians, a group dedicated to avenging the death of Abu Ali Iyad, the last charismatic leader of the *fedayeen*, whose torture and murder was intended as a symbol of defeat for the Palestinian guerrillas. After regrouping in Lebanon, where they were given control of fifteen refugee camps by the government, the Revolutionary Council of al-Fatah (the PLO's military force) met in Damascus, Syria, and debated whether it should continue using the tactics of Iyad's followers. The council, it is suspected, agreed to remain affiliated with the group, which later renamed itself Black September, and agreed to operate as a clandestine arm of al-Fatah.

Black September carried out its first act of violence on November 28, 1971, with the assassination of Jordanian Prime Minister Wasif al-Tali. Al-Tali, believed to have personally killed Abu Ali Iyad, was attending the Arab League summit in Cairo, Egypt, when four gunmen shot him outside the Sheraton Hotel. The BSO also attempted to assassinate King Hussein and Zaid al-Rifai, Jordan's ambassador to London and former chief of the Jordanian royal court, in December 1971. These acts of revenge foreshadowed several bold attempts that the BSO would make to alter the political landscape of the Middle East and advance the cause of the Palestinian people.

The BSO is probably best known for taking members of the Israeli team as hostages on September 5 of the 1972 Munich Olympics. In return for the hostages, the BSO demanded the release of roughly 220 prisoners (mostly Palestinian) from West German and Israeli jails. After attempts to negotiate failed, the BSO members demanded to be transported by helicopters, with the Israelis in tow, to the nearby military base of Furstenfeldbruck, where they hoped to board a jetliner that would allow them to escape to an Arab country. Shooting broke out between German officials and the BSO at Furstenfeldbruck as West Germany made its last attempt to prevent the hostages from being taken out of the country. By the end of the bloody ordeal early September 6, all eleven Israeli hostages were dead (two at the Olympic village, the other nine at Furstenfeldbruck). Also killed were five members of the BSO and one German police officer, shot at the airbase.

In response to the massacre at Munich, Israel declared war on terrorist activity and targeted Black September and al-Fatah equally. Some of Israel's immediate retaliatory acts included killing hundreds of people, most of whom are believed to have been unaffiliated with the terrorist group, during raids of Palestinian refugee camps in Lebanon and Syria. These attacks added to already existing tensions between Israel and its neighboring Arab nations, and they would ultimately lead to further military conflict. In the fall of 1973 the PLO dissolved Black September. A year later Yassir Arafat, the PLO's leader, ordered his followers to withdraw from acts of violence outside Israel, the West Bank, and the Gaza Strip.

SEE ALSO *Palestine Liberation Organization (PLO)*

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Tehama Lopez

BLACK SOCIOLOGISTS

Because race and social inequality have been central points of concern in sociology, it is not surprising that the discipline has a rich and deep history of contributions from African American sociologists. Indeed, prior to the emergence of sociology as a formal field of inquiry, African Americans were constructing and applying what would later become bedrock tools for sociological research. One such individual was Ida B. Wells (1862–1931), a journalist and social activist who documented and advocated against the lynching of African Americans in the postbellum South. In order to make her case she conducted what may have been the first formal field studies of lynchings. She accumulated statistics on the frequencies of lynchings and assessed that data in terms of the rationals given (at least in public records) for these events and the socioeconomic conditions of the communities where such events occurred. Ultimately, she discovered that occurrences of lynchings were not so much due to perceived or actual incidents of sexual interaction between African American men and white American women, but to vast increases in the business activity and economic success of African Americans residing in or near communities where lynchings occurred. Having conducted her investigations in the late 1800s, Wells stands as a pioneer figure in the statistical analysis of causal relationships.

A few years after Wells's foray into social analysis, W. E. B. Du Bois (1868–1963) initiated a more formal sociological agenda for research on black Americans. In publishing *The Philadelphia Negro* (1899), Du Bois introduced a multimethod approach (including ethnography, demographic and document analysis, and historical inquiry) for the purpose of producing a comprehensive study of an urban-based, African American residential community. Du Bois also published *The Souls of Black Folk* (1903), which helped establish, among other objectives, a tradition of social theoretical considerations or the social significance of race, racial identity, and race relations.

Anna Julia Cooper (1858?–1964) was a much-less recognized, but still highly significant, contributor to a black sociological tradition. She was the first African American woman to obtain a PhD in sociology (receiving one in 1925 from the Sorbonne in France, decades after she completed the majority of her writings). In her work, mostly published in the late nineteenth century, she argued for a feminist perspective on the African American condition by exploring what she believed to be the rightful place of women in both civic affairs and on the home front.

In the decades following the contribution of these figures, and after the founding of the first department of sociology in the United States (at the University of Chicago in 1895), other African Americans emerged in the discipline to advance research on, and interpretation of, the African American social condition. In the first half of the twentieth century, the University of Chicago's Department of Sociology produced: E. Franklin Frazier (1894–1962), who pursued a social-organizational approach to studying the African American family and African American adjustment to the urban sphere as a result of the southern to northern migration; Charles S. Johnson (1893–1956), who studied the social-psychological impact of racism and discrimination on African Americans; St. Clair Drake (1911–1990), perhaps more formally known as an anthropologist, but who, with sociology student Horace Cayton (1903–1970), explored the cultural and social-interactive dimensions of African American adjustment to the urban sphere; and Oliver C. Cox (1901–1974), who introduced a Marxist-informed paradigm for exploring what he regarded to be the caste-like arrangement of racial groups in the United States, which he also situated in a larger world-systems framework for understanding how capitalism encouraged racial subordination and conflict. Other African American sociologists who published between 1910 and 1950 also contributed to a canon of African American sociology that largely focused on the social problems and prospects associated with African American migration to metropolitan regions (e.g., Ira de Augustine Reid [1901–1968] and George Edmund Haynes [1880–1960]).

By the post–World War II era, many African American sociologists began expressing frustration with the dominant sociological paradigm that emphasized assimilation and adaptation to a rapidly maturing Western capitalist society. Their frustrations were not only based on the historical exclusion of African American sociologists from the canon of the discipline, but also the perceived inadequacy of assimilation perspectives for interpreting the social condition and possibilities of the African American community. This frustration, coupled with the motivation to pursue new frames of thinking, were captured in *The Death of White Sociology* (1973) edited by Joyce Ladner. In this and other works produced between 1960 and the early 1970s, many African American sociologists began calling for studies of the positive aspects of African American identity and the virtues of varied patterns of family formation, peer associations, and other social processes and organizational dynamics that reflected strong differences between black Americans and others in the American landscape.

While some of the claims and arguments made during this period were challenged in later years for being more polemical than scholarly, the efforts of many African American sociologists during that time did result in the creation of the Association of Black Sociologists in 1972 (which, itself, had origins in the Black Sociology Caucus, which was created following the 1969 American Sociological Association meetings in San Francisco). The creation of the association resulted in there being a more pervasive sense that African American sociologists had achieved a visible and durable status in the mainstream areas of the discipline. Since the 1960s, some African American sociologists assumed central positions in the discipline as they helped introduce or define areas of inquiry that constitute much of the contemporary agenda of the discipline. For instance, urban poverty research became a major subfield in sociology as a result of the publications of William Julius Wilson, who emphasized the importance of taking a structural perspective on the social location and concentration of the urban poor as a foundation for better understanding certain behavioral and cultural dynamics that became manifest for this constituency. Furthermore, Patricia Hill Collins has advanced African American feminist theory in sociology through her publications. Moreover, Lawrence Bobo has advanced survey research on racial attitudes in the post–civil rights era in the United States.

Professors Wilson, Collins, and Bobo represent some of the most visible African American sociologists in American sociology. One reason for their visibility is that rather than trying to advance a distinct and autonomous field of African American sociology, they have striven to incorporate the ideas, arguments, and methods of sociology more generally into specific considerations of African Americans. The changing American racial landscape, largely a by-product of the civil rights era, created the space for these sociologists to function more effectively as mainstream scholars. Despite their rich and varied contributions, the African American sociologists of previous periods were often relegated to African American higher educational institutions in a segregated southern region of the country, where their work was not incorporated into the mainstream canon of the discipline. Accordingly, the methodological, theoretical, and empirical contributions of these early figures often do not get registered (or do not get registered as fully as they should) as significant

moments in the progression of American sociological thought.

The success of figures such as William Julius Wilson and Elijah Anderson in achieving mainstream status has not come without certain criticism. Contemporarily, those and other higher-profile black sociologists have been read as traditionally liberal rather than critical analysts of American social inequality. Consequently, it has been argued that their achieving of mainstream status came about through their promoting or implying more passive and sanitized assessments of mainstream American society rather than the progressive, critically centered, and Marxist-infused perspectives of early figures such as Du Bois and Cox, who indicted American and global capitalism and its cultural manifestations more directly and fully as causal factors for the enduring social predicament of African Americans.

SEE ALSO *American Sociological Association; Sociology*

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Alford A. Young Jr.

BLACK STUDIES

SEE *African American Studies.*

BLACK TOWNS

African Americans have a long history of forming separate settlements and towns in what is today the United States. More than eighty black towns and settlements were established in the United States in the nineteenth and twentieth centuries. Prior to the Civil War, most black settlements were informally organized. Brooklyn, Illinois, founded in 1830 by runaway slaves and Quakers, was an exception to this general rule. Most black towns were formed after the Civil War and could be found all over the United States from Eatonville, Florida, to Allensworth, California. However, most of these towns were established in the Midwest and Southwest between the end of Reconstruction and World War I. During this period, often referred to as the "nadir" of African American history, many black southerners lost hope that their rights and freedoms would ever be protected in white-dominated communities. Some African Americans contemplated emigrating from the United States to escape the violence, racism, and discrimination they were forced to endure, but others attempted to form separate enclaves within the United States. Although these towns were usually very small, their citizens owned property, governed themselves, educated their children, and ran their own farms and businesses. Like other small towns, over the years black towns often struggled to remain economically viable. Most black towns lasted only a few decades, but a few continue to survive today.

Two of the oldest and longest surviving black towns in the South were Eatonville, Florida, and Mound Bayou, Mississippi. Founded in 1886 and incorporated in 1887, Eatonville was the beloved childhood home of Zora Neale Hurston. Mound Bayou was founded in 1887 by Isaiah T. Montgomery but has its roots in an antebellum slave community known as Davis Bend. Booker T. Washington was a strong supporter of Mound Bayou. Although their development and growth were curtailed by racism and limited economic opportunities, both Eatonville and Mound Bayou continue to function today.

The history of Rosewood, another Florida black town, demonstrates the extreme effects of racism that black towns could be subject to. In January 1923, a white woman from a neighboring community accused a black man of attacking her. Over a period of several days, white vigilantes sought out residents of Rosewood whom they believed aided the alleged attacker. Their attacks escalated from lynching individuals to an all-out assault on the town and its residents. As the town was torched, residents escaped to nearby swamps where they hid for days. Those who did not escape to the swamps, including the elderly and infirm, were murdered. Seventy years later the state of Florida granted reparations to the surviving victims of the riot.

One of the best known black towns in the west, Nicodemus was founded in Kansas in 1877. It was a popular destination for Exodusters, southern blacks led into Kansas by Benjamin "Pap" Singleton. Singleton, a former slave from Tennessee, helped lead a movement of 10,000 to 20,000 blacks from Louisiana and other southern states into Kansas. Although most of the migrants settled in cities, others continued on to live in Nicodemus or one of the other black colonies founded by Singleton and other African Americans in western Kansas. In 1879, at the height of the Kansas migration movement, Nicodemus

had a population of about 700 people. Early settlers endured difficult conditions, including bad crops, but they held on to the belief that the railroad would come through their town and make it an economically viable place. Unfortunately, Nicodemus could not survive the decision of the Union Pacific Railroad to build away from the town, and it began to decline by 1887.

Oklahoma was home to more black towns than any other state in the nation. Some of these towns predate 1889, the year the Oklahoma Territory officially opened to non-Indian settlement. Others were founded in Indian Territory before or after Oklahoma statehood in 1907. In the early days of black settlement in Oklahoma, some blacks, led by Edward P. McCabe, lobbied to make the future state all black. McCabe was a native New Yorker, but he had moved to Kansas in 1878, been part of Nicodemus, and then was elected Kansas state auditor. Although his efforts to be appointed territorial governor of Oklahoma failed, McCabe moved to Oklahoma Territory in 1890 and founded the town of Langston, which became home to Langston University in 1897. The choice by founders to give these settlements such names as Langston, Vernon, and Bookertee, in honor of important black statesmen such as John Mercer Langston, William T. Vernon, and Booker T. Washington, reflected the inspirations and aspirations of their inhabitants.

The largest and most famous of Oklahoma's black towns was Boley, founded in 1903 by an interracial group. Unlike many black towns, Boley had a railroad, which brought in new settlers by the carload and shipped their cotton to market. Boley and several other black towns had newspapers that were sold all over the South and used to encourage black Southerners to emigrate to them. By 1910, Boley had a population of over 1,000 with as many as 5,000 black farmers living around the town.

When Oklahoma became a state in 1907, the hopes of black townspeople came to a halt. The first law passed by the new state congress segregated public schools and public conveyances such as trains and streetcars. Then in 1910, the state passed a law that disenfranchised blacks. These laws were accompanied by an increase in violence against blacks. There were lynchings, and some towns and counties tried to run all African Americans out of their borders. In spite of these setbacks, Boley's population remained strong until the late 1920s and 1930s, when the Great Depression forced many of its residents to head to cities in the North and West.

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Melissa Nicole Stuckey

BLACKFACE

Blackface, which dates back to as early as the Middle Ages, is the theater performance practice of wearing soot, cosmetics, paint, or burnt cork to blacken the face. In medieval and Renaissance English theater, blacking up was prevalent in religious cycles and morality plays, where it was used to represent evil, badness, or damnation. Evil characters were portrayed with the color black in order to suggest that they were the antithesis of white, which stood for goodness, purity, or salvation. Blackface was also commonly used as a signifier of negative attributes in other realms of English life. As European global exploration progressed, blackface on the stage began to be used to represent newly encountered peoples of the world.

The sixteenth century witnessed a rise in the variety of blackface characters as a result of the popularity of William Shakespeare's plays. In one of the most famous of Shakespeare's plays, *Othello*, the main character is a Moor, who was often portrayed by a white man in blackface. Shakespeare's plays brought a change in the role of blackface characters from merely symbolizing evil, to signifying the social expectations and ideals of black people. At the same time, the negative attributes of blackface were reflected in the development of the African as the "exotic other" in Western society.

BLACKFACE IN NORTH AMERICA

In the New World, the institution of slavery contributed to the continuance and evolution of blackface characters on the theater stage. In the eighteenth-century United States, white traveling actors known as Ethiopian Delineators, who used burnt cork to blacken their faces, sang slave songs between the acts of plays. These performances, which were given in England as well, slowly began to grow in popularity and developed into lengthy spectacles known as *minstrels* (or *minstrel shows*).

The first mainstream minstrel character, Jim Crow, was introduced in the 1830s by Thomas Dartmouth Rice on a Northern stage. The minstrel show consisted of satirical portrayals of black Southern plantation slaves, presented by white male performers with blackened faces, lips colored to suggest exaggerated size, wooly wigs, and ragged clothing. Minstrel shows were one of the most

popular forms of entertainment in the United States from the 1840s to the 1880s, and did much to disseminate and perpetuate negative stereotypes of blacks in America. After the Civil War, African Americans themselves began to blacken up their faces and perform on the minstrel stage. Blackface was also adapted by European immigrants: Irishmen, Italians, and Jews began to blacken their face in minstrel shows during the early twentieth century and developed some of the most popular blackface characters. Blackface offered to these European immigrants a way to become accepted as American whites through their embrace of the racist ideology dominant in the United States. Immigrants erased the negative stereotypes associated with their ethnic group by using blackface to highlight their "normalcy" in comparison to blacks. For blacks in America, however, minstrel shows functioned as venues for their public humiliation and degradation.

The emergence of film as the new dominant entertainment medium led to the transitioning of blackface characters from theater stage to screen. In the 1920s and 1930s, films continued the tradition of the blackface minstrel show. One of the most famous blackface performers was the Jewish actor Al Jolson. The negative stereotypes of blacks that blackface actors created and perpetuated were manifested beyond stage and film in literature, advertisements, comic strips and comic books, postcards, cookie jars, lawn accessories, and other consumer products. The popularity of blackface in American culture influenced its extension to the international community.

INTERNATIONAL BLACKFACE

Traveling theater troupes introduced the blackface satirical performances of the American minstrel to several countries. Ironically, blackface shows that were initiated in England returned within the American minstrel in the mid-nineteenth century. British audiences consumed the blackface performances from the United States and created their own national variant through blackface characters such as the Golliwog.

U.S. influence on the internationalization of blackface is demonstrated by the development of the Cape Town Coon Festival in Cape Town, South Africa. In the late nineteenth century, Orpheus M. McAdoo and the Virginia Jubilee Singers traveled to South Africa, where they remained for almost five years. These traveling troupes introduced the American blackface minstrel performance style and greatly influenced the emergence of the blackened Coon disguise used in a grand festival held in the city center of Cape Town, the origins of which can be traced back to the late 1880s. This festival, the name of which was changed to the Cape Town Minstrel Carnival in 2003, continues to present blackface displays and is one of the area's most famous tourist attractions.

Traveling American minstrel troupes also influenced the development of Cuba's *teatro bufo*, a form of comedic blackface performance featured in musical and theatrical entertainment. Blackface performances first appeared in Cuba in the mid-nineteenth century, as part of a range of satirical representations of the African found throughout Cuban literature, theater, and music.

The broad influence exerted by the American blackface minstrel also contributed to the development of blackface characters in Mexico. Memín Pingüín, a fictional and stereotypical Mexican blackface character, first appeared in a comic book in the 1940s. He was a popular, if controversial, figure, and the comics he was featured in continued to be published until the 1970s. In June 2005, the Mexican Postal Service issued character stamps with images of Memín, sparking international controversy.

The above-mentioned countries are only a few of the many that incorporated blackface: It was also performed in Jamaica, Nigeria, Ghana, India, China, Ukraine, Indonesia, Australia, the Netherlands, and Spain, among numerous other countries. Blackface, which still continues to be performed throughout the world, has done much to continue and disseminate negative stereotypes of African Americans throughout the globe.

SEE ALSO Bamboozled; Birth of a Nation; *Exoticism; Film Industry; Immigrants to North America; Jim Crow; Memín Pinguín; Minstrelsy; Other, The; Racism; Representation; Satire; Stereotypes; Uncle Tom; Whiteness*

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Katrina D. Thompson

BLACKNESS

Blackness is first a descriptive category that refers to people of African descent and the degree to which they look like the African stereotype before and after their biological mixture with other groups in the Atlantic world. The mixtures referred to here began with Africa's contact with Europe and continued with the slave trade, the creation of African communities in the New World, and the rise of colonialism. The varying shades of blackness created competing and contradictory definitions of whiteness and blackness. The phenotypical attributes of individuals—hair texture, dark skin, blunt features, and body type—became the physical markers of blackness, but as these markers were compromised by racial mixture, it became necessary to certify whiteness.

Racial mixture required new terms to ensure the "purity" of whiteness. For example, in Europe, Latin America, and Africa, terms such as *preto* (black), *mulatto* (half-white, or brown), *mestizo* (Indian and white), and many more were commonplace by the eighteenth century. Another means to certify whiteness was to define blackness legally. In the United States, for example, the "one drop rule" rendered anyone with even one known drop of black blood as legally, fractionally black. Racial mixture was codified in law. Mulatto (one-half black), quadroon (one-quarter black), and octoroon (one-eighth black) were social and legal categories to determine who was not fully white. As more and more individuals had features that suggested white ancestry—straight or wavy hair, thin features, or brown to very light skin—blackness based on physical type alone was unstable. In the United States blackness had to include mixtures. In Latin America and elsewhere, mixture was often a means of distancing oneself from blackness but rarely allowing one to be white. In the United States, the only option was to pretend to be white or present oneself as white, provided the physical markers and cultural bearing allowed the deception. This practice was known as "passing" and hundreds, perhaps thousands, managed to pull off the deception.

In South Africa, in contrast, "black" referred to all those of African appearance, and "colored" signaled those of mixed background, with whites as the pure, uncontaminated group. East Indians in South Africa were also a separate group, but in England, East Indians embraced their own version of blackness. Their physical darkness had meaning in this context. Blackness and whiteness are therefore linked in these societies to the extent that who is black can only be ascertained by determining who is white. But blackness also exists in societies with no significant white population. In Guyana and Trinidad, for instance, blackness exists in a population that is dominated by other dark-skinned people: East Indians. Physical features other than color become salient in these societies, and culture takes on profound meaning.

BLACK CONSCIOUSNESS

Blackness, secondly, is a conscious mental attitude expressed in political practice, social organizations, and commitment to the group. It is embraced by those who by law or custom experience racial discrimination and identify themselves as a group in the struggle toward the realization of their aspirations. Black consciousness is also concerned with the consequences of defining oneself as black. It forms the basis for a transnational politics and subjectivity that creates relationships between Africans in Africa and the African diaspora.

In the eighteenth and nineteenth centuries black consciousness was expressed in slave revolts and runaway slave communities known as "maroons." Free blacks organized against slavery as well as struggled for their rightful place in society. After slavery ended, black consciousness took many forms that were grounded in an affirmative black identity. In the postbellum U.S. South, black towns emerged to form self-sustaining communities that remained relatively free from the harsher elements of Jim Crow society. But in this segregated world, the act of choosing separation and becoming economically independent invited the very violence that blacks sought to avoid. By the 1920s not only was lynching commonplace, but inhabitants in all-black towns and the "black backside" of white towns were targets of white terror. The all-black section of Tulsa, Oklahoma, was leveled in 1921 by angry whites who destroyed black businesses, churches, banks, and all signs of black independence. In the same decade, the black inhabitants in Rosewood and Ocoee, Florida, were massacred, their homes and businesses destroyed. Black consciousness that resulted in economic and political parity was not to be tolerated. This racial violence and the discrimination that it supported were key elements in forging a black consciousness and a sense of group affiliation and pride that led to an activism characterized by black self-help and political formations that spoke to needs of the black underclass. Organizations such as the National Association for the Advancement of Colored People (NAACP), the Nation of Islam, the United Negro Improvement Association, the African Blood Brotherhood, the black women's club movement, black unions, and many more fought for black rights and achievement in the early part of the century.

This assertive black mentality found expression in the modern black freedom struggle and the black power movements of the 1960s and 1970s. In the United States, with boycotts of segregated institutions, freedom marches, and political activism, blacks achieved the removal of the most egregious forms of segregation, if not complete eco-

nomic and social parity. These movements were possible in large measure because of the deep sense of historical and cultural separateness blacks feel as a people. Pride and a commitment to the freedom struggle underpinned a race-based black nationalism that had been evident in the nineteenth century and flowered dramatically in the twentieth century.

Similarly, in Brazil after slavery ended in 1888, former slaves and free blacks struggled to challenge the racial discrimination that relegated them to second-class citizens. Black Brazilians (*pretos*) found themselves locked at the bottom of a hierarchy defined by gradations of color with whites at the top. Morenos, mulattos, and mestizos (mixed race), in contrast, fared better socially and economically. As in all of Latin America, whites in Brazil held political and economic power while colored folk jockeyed for positions relative to whites, often using their distance from blackness as a measure of social and political success. Yet, by the twentieth century, blacks in Brazil had formed organizations that specifically addressed racial discrimination and their position as blacks. In the 1930s they formed the Frente Negra Brasileira (Black Brazilian Front), an organization concerned with racial uplift, integration, and Afro-Brazilian mobility. In the 1970s and 1980s a flurry of organizations appeared in Brazil focusing on blackness and black issues, the most important being the Movimento Negro Unificado (United Black Movement).

In Spanish-speaking America, too, black groups pushed for inclusion through activism and protest. In Cuba, for example, during slavery the *cabildos da nacions* (council of nations) retained ethnic identities and created new ones based on memories from an African past. The survival of African belief systems and cultural forms facilitated an African ethnic consciousness well into the twentieth century. But alongside these African cultural forms, a more generalized black consciousness also emerged that unified free and slave populations. From these formations, leaders with a distinct black consciousness emerged in the late nineteenth century to challenge slavery and efforts to subject black people to white racist domination. One organization that grew from these slave nations and the revolutions in 1868 and 1898 against slavery and Spain was the Partido Independiente de Color, the first black political party in the Americas (1908). Its purpose was to work for inclusion within the Cuban state and a national identity that embraced black people as Cuban. Both Africans (i.e., dark-skinned persons) and mulattos were members of this organization, and they affirmed a black political identity as Afro-Cuban. The efforts to create a Cuban identity that was both black and Cuban resulted in a violent backlash in the race war of 1912, when members of the Partido were massacred by white Cubans. In the aftermath of this massacre, blacks did not abandon their black consciousness, but were forced to articulate that consciousness culturally and intellectually rather than in political organization.

Black voices were more audible in the years after the Cuban Revolution in 1959. Although the economic and social situations improved, racism has not been eliminated and, in some respects, has increased particularly in moments of extreme economic distress. The strength of Afro-Cuban culture and the long tradition of black consciousness in Cuba has created a black Cuban identity that is both black and Cuban.

In other parts of Spanish America, attempts to forge a black identity have met considerable resistance, historically. In Puerto Rico and the Dominican Republic, for example, blackness was not only denied, but also challenged with the powerful ideology of *mestizaje* (the racial and cultural mixing of Amerindians and Europeans), which excludes both blacks and indigenous people. Yet, black groups in each society have maintained their autonomy and challenge the official interpretation of their heritage as Spanish and not African.

The migration of so many Puerto Ricans to the United States has aided the continuation of a black consciousness among both dark-skinned and mixed-race members that often brings them into conflict with white Puerto Ricans. Class differences as well as the overt racism in the United States and Puerto Rico are also important factors in the development of black consciousness among Puerto Ricans. *Mestizaje* has had an even more powerful impact upon Dominicans, and their location in the United States has exposed the contradictions inherent in their physical blackness and their determination to claim a mestizo consciousness despite the racism that they experience in the United States.

In the English-speaking Caribbean, a consciousness based on color emerged during and after slavery. A white colonial class and a colored elite dominated a peasant and working-class black majority. In Jamaica, efforts to challenge this domination took shape in many movements such as Rastafarianism, the Garvey movement, and the black power movements of the 1970s. In Trinidad as well, black consciousness found expression in organizations and challenges to colonial authority. A black power movement emerged there in the 1970s, as it did in several other islands. These movements testify not only to black consciousness in the islands, but also to the links between African societies in the diaspora.

BLACK CULTURAL TRADITION

Blackness, thirdly, is a cultural signature that transcends physical markers, and often transcends, under certain historical conditions, national identifications. It is expressed in language, mannerisms, dress, hairstyles, cultural forms,

social organization, and religious practices. Languages formed from the amalgamation of African, European, and Indian languages pepper the west coast of the Atlantic. Dialects and tonal cadences of blackness in English, French, Spanish, Portuguese, and other European languages are spoken in African communities, and often are rejected as part of the larger culture in which the group resides—that is white or European culture.

Black intellectual traditions in all of these societies emphasize the heroic efforts of slave rebels and military leaders such as Haiti's Toussaint Louverture (c. 1739–1803) and Jean-Jacques Dessalines (1758–1806); freedom fighters such as Jamaica's Sam Sharpe (1801–1832) and Marcus Garvey (1887–1940); civil rights giants such as the United States' Martin Luther King Jr. (1929–1968); and revolutionary leaders such as Guyana's Walter Rodney (1942–1980), Puerto Rico's Jesús Colón (1901–1974), Mozambique's Amílcar Cabral (1924–1973), and Ghana's Kwame Nkrumah (1909–1972). Radical thinkers such as the Americans W. E. B. Du Bois (1868–1963) and Richard Wright (1908–1960), the Barbadian Richard B. Moore (1893–1978), the Trinidadian C. L. R. James (1901–1989), the Puerto Rican Arturo Schomburg (1874–1938), the Martinican Frantz Fanon (1925–1961), and the American Malcolm X (1925–1965), among others, established the norms of black thought.

This approach to black consciousness often denies the importance of gender and sexual difference. Feminists and homosexual members of the group also embrace blackness, but in so doing, critique the masculine bias often inherent in notions of race pride, authenticity, and stigmatization. Black intellectual traditions have tended to construct the black subject as masculine and North American, thereby erasing the feminist and diasporic perspectives on black consciousness. These traditions have been equally resistant to homosexual perspectives. The perspectives of women and homosexuals in black communities render black consciousness as a contested terrain of gender and sexual politics, where the very definition of consciousness is at stake.

SEE ALSO *African Americans; African Diaspora; Black Nationalism; Black Power; Coloreds (South Africa); Colorism; Identification, Racial; Jim Crow; Miscegenation; Moreno/a; Mulattos; Pardo; Passing; Phenotype; Racial Classification; Racism; Rastafari; Slavery; Stigma; Whiteness; Whites*

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Tiffany Ruby Patterson

BLACKS

SEE *African Americans; Blackness.*

BLAIR, TONY

1953–

Born on May 6, 1953, in Edinburgh, Scotland, Tony Blair was elected Member of Parliament (MP) for Sedgefield in 1983. He became leader of the Labour Party in 1994, and prime minister of the United Kingdom (UK) in 1997. He played a key role in resetting Labour Party policy in the early 1990s, a resetting designed to address three things: Labour's inability to win general elections; the impact of Prime Minister Margaret Thatcher's neoliberal policies on UK politics and society; and the need to reposition the United Kingdom in the new global age. Blair responded to four election defeats in a row by reaching out to median floating voters, and by making real and symbolic breaks with Labour's previous policy stance. He responded to Margaret Thatcher's powerful legacy by linking her passion for markets to Labour's traditional commitment to social justice. He actively welcomed globalization as a trigger to UK economic competitiveness and as an arena in which a Labour government could play a more active and ethical role.

Blair led the Labour Party to three election victories in a row, the first two (1997, 2001) with huge majorities (179 and 167 seats in the House of Commons, respectively). The 1997 victory came after a relabeling of the Labour Party as New Labour, and the rejection of what had hitherto been many of Labour's defining policies. Out went public ownership, "tax and spend" welfare policies,

unilateral nuclear disarmament, and withdrawal from the European Union. In came private funds for public investment, a freeze on direct taxation, a welfare-to-work program, and a new pro-European ethical foreign policy.

Over time, New Labor under Blair traded increased spending on health and education for public service agreements linking resources to the achievement of rising performance targets. His government made extensive use of private funds for capital projects in the public sector, and increased the degree of market competition allowed between public service providers. Blair governments also developed social policies that traded rights for responsibilities, tackling social exclusion and child poverty while simultaneously toughening the criminal code, restricting immigration, and even punishing parents for the truancy of their children.

New Labour under Blair's leadership played a crucial leadership role in the European response to the crisis in the Balkans, in the wake of which Blair spoke regularly of the need for the international community to be proactive to avoid crimes against humanity. Accordingly, he was the key architect of the broad coalition of support for the U.S.-led invasion of Afghanistan after the September 11, 2001, terrorist attacks; and, more controversially, he remained President George W. Bush's main ally in the subsequent invasion of Iraq.

Blair's final years in office were blighted by growing unease—in party circles and the wider electorate—with the consequences of privatization in the welfare sector and of his close alliance with the United States in Iraq. That unease was compounded by tensions with his chancellor of the exchequer over a deal, struck in 1994, that Blair would eventually cede the premiership to him. Relationships soured over time between the factions formed around each man, eventually forcing Blair reluctantly to announce that he would resign office in 2007.

SEE ALSO *Iraq-U.S. War; Labour Party (Britain); Parliament, United Kingdom; Social Exclusion; Thatcher, Margaret*

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David Coates

BLAMING THE VICTIM

SEE *Culture of Poverty.*

BLANQUEMIENTO

SEE *Whitening.*

BLAU, PETER M.

1918–2002

Peter M. Blau, the son of nonpracticing Jews, was born on February 7, 1918, the year that the Austro-Hungarian Empire fell. While in high school, Blau wrote articles for the underground socialist worker's newspaper. Arrested at age 17, he was convicted of high treason and incarcerated by the Austrian fascist government. Meanwhile, Hitler was attempting to build the Nazi Party in Austria. That same year, 1936, the Austrian chancellor Kurt Schuschnigg conceded to Hitler that he would lift the ban on political activity, and so freed all political dissidents. Blau was allowed to finish high school.

Hitler and his troops officially took over power of Austria on March 13, 1938. Blau, having applied for a visa to emigrate, attempted to cross the Czech border. There the Nazi border patrol captured him and tortured and detained him for two months.

He lived in Prague until the Nazis invaded Czechoslovakia. Peter returned to visit his family for one night. He managed to go by the last train to France, where he was arrested and detained in a labor camp as an "enemy alien." When his visa number came up, he waited in Le Havre for passage and had the good fortune to meet theologians who, to his great surprise and exceeding pleasure, gave him a refugee scholarship to attend Elmhurst College.

Blau attended Elmhurst College in Illinois, majoring in sociology. After completing his BA, Blau volunteered for the U.S. Army and served in the Normandy Invasion. He later learned that his family had been murdered in Auschwitz in May 1942, the same year he graduated from college.

His sociological writings amplify his conviction that democracy and human reason will prevail and his belief that one can judge a society by the extent that it fosters fairness and equality. He was profoundly skeptical of claims to personal authority, as distinct from ethical imperatives that emanated from widely shared norms. For his achievements, Blau received notable distinctions: election to the National Academy of Sciences, the American Philosophical Society, the American Academy of Arts and Sciences, and the presidency of the American Sociological Society. He taught at the University of Chicago, Columbia University, the State University of New York at Albany, Tianjin University, and the University of North

Carolina at Chapel Hill. Blau continued to enjoy teaching into his eighties.

Blau did pioneering work in four areas of sociology: organizations, social exchange, stratification, and intergroup relations. While his empirical work on organizations of many kinds was central to the development of organizational sociology, and *Exchange and Power in Social Life* (1964) continues to influence research on interpersonal interaction, here only the latter two areas are highlighted.

With his coauthor Otis Dudley Duncan, Blau, in *The American Occupational Structure* (1967), developed a radical new way of studying intergenerational social mobility. This work examined how social stratification occurs across generations and how factors such as education, occupation, and income determine an individual's status to a lesser or greater degree than the parents' status. This work stimulated an entire field of substantive research on occupation and mobility while developing new methods of structural equation modeling and processes of analyzing multidimensional data that remain in use.

Inequality and Heterogeneity (1977) and *Crosscutting Social Circles*, coauthored with Joseph Schwartz (1984), deal thematically with the sorts of social conditions in metropolitan communities that best bridge group differences. In *Inequality and Heterogeneity*, Blau lays out three parameters of communities: the extent to which communities are diverse along multiple dimensions; the extent to which there are prevailing inequalities; and the extent to which inequalities cut across group differences or are confounded with group differences. In *Crosscutting Social Circles*, Blau and Schwartz examine variation within 125 metropolitan communities, focusing on the extent to which inequalities are random or vary systematically across and within groups. Next they ask how such variation affects intergroup relations, as measured by intermarriage, and how heterogeneity promotes social equality.

In a career of more than fifty years, Blau played an important role in shaping the field of modern sociology. Many of the inquiries upon which he embarked became the basis for new fields and methodologies of mainstream sociology. His theories of social exchange, social structure, wealth distribution, diversity, and social reproduction are still widely used.

Blau conveyed in his writings a confidence that American institutions are inherently reasonable and that American educational institutions are open. He was optimistic that American society would be increasingly inclusive. As a private citizen, he was a socialist, supported dissenters and activists, and was impatient with the United States for being less than what he dreamed it to be in his early years. His political and social convictions are veiled in his work, as perhaps was the case with other social scientists of his generation.

Except in *Exchange and Power in Social Life*, which advances a number of sensitizing concepts, Blau used statistical techniques to answer the questions he posed. Heavily influenced by Karl Popper's approach to scientific reasoning and falsification of hypotheses, much of Blau's work illustrates how rigorous social science can be, while it masks his understanding of the important role that an author's passion for truth and justice plays in scholarly pursuits.

SEE ALSO *Networks*

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Reva Blau
Judith Blau

BLINDER-OAXACA DECOMPOSITION TECHNIQUE

The Blinder-Oaxaca decomposition technique, or simply the Oaxaca decomposition, decomposes wage differentials into two components: a portion that arises because two comparison groups, on average, have different qualifica-

tions or credentials (e.g., years of schooling and experience in the labor market) when both groups receive the same treatment (explained component), and a portion that arises because one group is more favorably treated than the other given the same individual characteristics (unexplained component). The two portions are also called *characteristics* and *coefficients effect* using the terminology of regression analysis, which provides the basis of this decomposition technique. The coefficients effect is frequently interpreted as a measure of labor market discrimination. For a comprehensive review of issues related to labor market discrimination, see Joseph Altonji and Rebecca Blank (1999).

The Blinder-Oaxaca decomposition technique is named after two economists, Alan Blinder and Ronald Oaxaca, who introduced it to economic literature in the early 1970s. A similar version of this technique was explored in sociology during the late 1960s and early 1970s in order to examine sources of racial wage differentials (e.g., Duncan 1969; Althauser and Wigler 1972). The Blinder-Oaxaca decomposition technique has provided a practical way to apply economist Gary Becker's (1971) definition of discrimination as unequal treatment among equivalent people due to race or gender. This decomposition technique has become a basic tool for studying racial and gender wage differentials and discrimination, and it has been allowed in court litigation on discrimination (Ashenfelter and Oaxaca 1987).

ILLUSTRATION

Suppose that only years of schooling affect the determination of wages for men and women. The illustration can be easily extended to a more complicated model in which several variables help determine wages. A linear equation is estimated using a regression technique in statistics. The two equations, the first for men and the second for women, are: $W_M = \alpha_M + \beta_M S_M + e_M$, and $W_F = \alpha_F + \beta_F S_F + e_F$, where W is wages; α and β are the intercept and the coefficient of years of schooling (S); e is an error term; and subscript M and F are men and women, respectively. Economists usually use the natural logarithm of wages for W, while sociologists usually use level wages.

In order to examine sources of wage differentials between men and women, a counterfactual equation is constructed where women are treated as men. In other words, the intercept and coefficient in the women's equation are replaced by those of the men's equation. The counterfactual equation becomes $W_F^* = \alpha_M + \beta_M S_F + e_F$. Wage differentials between men and women, on average, can be decomposed into a characteristics effect $\overline{W}_M - \overline{W}_F^* = \beta_M(\overline{S}_M - \overline{S}_F)$, that is, differences between men's wages and counterfactual wages, and a coefficients effect $\overline{W}_F^* - \overline{W}_F = (\alpha_M - \alpha_F) + (\beta_M - \beta_F)\overline{S}_F$, that is, differences between counterfactual wages and women's wages. The Blinder-Oaxaca decomposition equation is: $\overline{W}_M - \overline{W}_F = [\beta_M(\overline{S}_M - \overline{S}_F)] + [(\alpha_M - \alpha_F) + (\beta_M - \beta_F)\overline{S}_F]$.

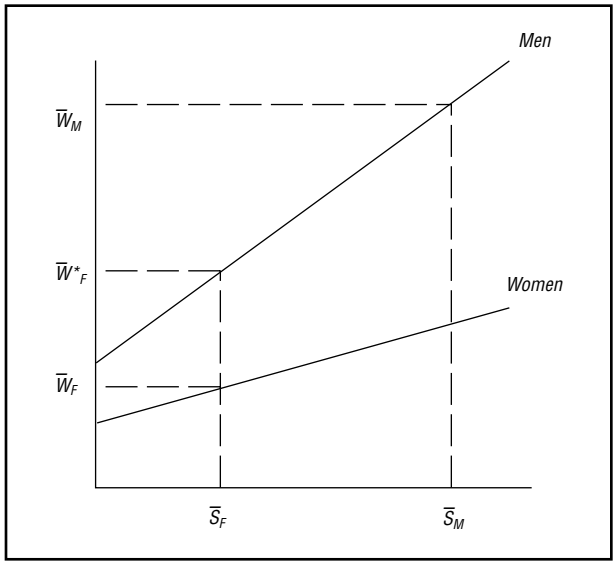

Figure 1

Figure 1 shows the intuition behind the Blinder-Oaxaca decomposition technique. The diagram depicts a situation where men start off at higher wages without schooling (higher intercept) and receive a bigger payoff for each year of schooling (steeper slope). The wage differentials due to differences in intercepts and coefficients $\overline{W}_F^* - \overline{W}_F$, that is, the increases in wages when women are treated as men, are attributed to coefficients effect or discrimination. The remaining wage differentials $\overline{W}_M - \overline{W}_F^*$, the characteristics effect, arises because women have fewer years of schooling than men, although women are treated as men.

INTERPRETATION

The existence of discrimination and its measurement using the Blinder-Oaxaca decomposition technique has been a center of controversy. Those who believe that discrimination does not exist in the labor market or that the Blinder-Oaxaca decomposition technique overestimates the degree of discrimination point out that the wage equation cannot include all relevant variables measuring skills and individual productivity; hence, observationally equivalent people based on the characteristics in the wage equation may not be equivalent. In Figure 1, for example, the same years of schooling do not guarantee that both men and women are equally productive because men may be more motivated for work; therefore, the coefficients effect is not due to discrimination but to unobserved differences in productivity between men and women. As long as

people believe that the two comparison groups possess systematically different but difficult to observe characteristics, such as motivation, ability, and effort, they will argue that the measure of discrimination from the Blinder-Oaxaca decomposition technique is biased, and gross wage differentials can be explained by differences in skills and productivity between the two groups.

On the other hand, those who believe that there is prevalent discrimination or that the magnitude of discrimination is bigger than the coefficients effect itself argue that even differences in qualifications and credentials may be the result of premarket discrimination. In Figure 1, for example, it is possible that women were discouraged against pursuing higher education due to existing discriminatory barriers in the labor market (e.g., the glass ceiling) and elsewhere in the economy. Though current employers are not responsible for the different levels of schooling between men and women, society is. Therefore, those who believe in widespread discrimination in society may argue that the coefficients effect underestimates the magnitude of discrimination; hence, gross wage differentials may be an outcome of discrimination.

EXTENSIONS

In spite of the difficulties in interpreting the Blinder-Oaxaca decomposition equation, this decomposition technique has provided a starting point for studying racial and gender wage differentials and discrimination since its introduction in the early 1970s. Although the Blinder-Oaxaca decomposition technique was introduced to decompose racial and gender wage differentials, this technique is also suitable for studying changes in wages over time. In this case, the characteristics effect represents wage growth arising from changes in qualifications and credentials over time, and the coefficients effect shows changes in wages due to structural changes in wage determination over time. In principle, the Blinder-Oaxaca decomposition technique can be applied to decomposing differentials or changes of any continuous variable, such as hours of work. The flexibility of this technique is further demonstrated by extending it to decomposing differences or changes in binary choice variables, such as the labor-market participation rate (e.g., Yun 2004), and differences or changes in wage inequality measured with variances of log wages (e.g., Yun 2006). The Blinder-Oaxaca decomposition technique has been and will continue to be widely used in studying differences and changes in various socioeconomic variables due to its simplicity and flexibility in implementation, and the insights it offers.

SEE ALSO *Discrimination; Economics, Labor*

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BLOC VOTE

The term *bloc voting* (or *block voting*) refers to a set of voting systems used to elect several representatives from one constituency. Although there are significant variations in types of bloc voting, they all allow voters to cast multiple votes for one or more candidates and have the potential to result in several officials being elected based on one specific distribution of voter choices. Among the variables associated with different types of bloc voting are the number of votes available to each voter, the possibility of candidate ranking, and the decision rule for determining winners (Farrell 2001). These variables have consequences with regards to the advantages and disadvantages experienced by different aggregations of voters (see the excellent essays in Grofman and Lijphart 1986).

In *plurality bloc voting*, all candidates compete with one another. Each voter is allowed to cast one vote per candidate. The total number of votes available to a voter is the same as the number of seats to be filled. The candidates who are victorious are those who receive the highest number of votes. In some systems with plurality bloc vot-

ing, voters are required to cast all five of their votes for any one of their votes to count. This is sometimes referred to as a full ballot requirement. Plurality bloc voting allows one majority of voters, if it has a consistent set of preferences, to select all candidates to office. Such voting can be especially detrimental to the interests of a minority of voters who have preferences different from those of the majority.

Preferential bloc voting is a system in which voters are required to rank candidates by first-choice preference to the *n*th preference, with *n* referring to the number of positions to be filled. No two candidates can receive the same preference ranking from any one voter. Candidates who receive the smallest number of first-choice rankings are eliminated in the first round of counting. The second-choice preferences of these voters are then counted as their first-choice preferences and distributed to the relevant candidates. The process of elimination of the candidates with the lowest first-choice preferences continues until the top *n* redistributed first-choice candidates are identified.

Another type of bloc voting is referred to as *cumulative voting*. In this system, each voter is given a number of votes equal to the total number of positions to be filled. Voters, however, are able to express the intensity of their preferences for candidates by casting all of their votes for one candidate or otherwise distributing one, two, three, or four votes for one or more candidates. In such a system, tactical voting through strategic aggregation to enhance the probability that a voter's first choice candidate(s) will be chosen is possible.

A related type of bloc voting is *limited voting*. In this system, voters are given a number of votes smaller than the total number of elected positions to be filled. Voters can either be required to cast one vote per candidate or group their votes as in cumulative voting. Among the identified advantages of limited voting is the way that it prevents one majority of voters from electing all of their highest-choice candidates to office. As a result, aggregations of voters with preferences distinct from this majority are guaranteed some success. Limited voting can result in a selection of officials that is more consistent with the proportional distribution of voter preferences.

Specific aggregations of voter choices, especially when two such groupings are in opposition to one another, are sometimes referred to as manifestations of a bloc vote. As discussed above, different types of bloc-voting systems can directly affect the chances that a specific type of block vote will appear.

SEE ALSO *First-past-the-post; Plurality; Voting; Voting Schemes; Winner-Take-All Society*

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BLOCK RECURSIVE MODELS

SEE *Recursive Models.*

BLOOD AND BLOODLINE

"Blood" is a historical explanation for inherited traits that were believed to pass through "bloodlines," meaning lines of kinship descent. This understanding of heredity derives from the ancient Greek concept that eventually became known as pangenesis. Hippocrates believed that "pangenes" formed throughout the human body. The Greeks conceived of pangenes as tiny pieces of body parts, which moved through bodily fluids into the genitals, from which they were passed on to offspring.

The theory of pangenesis was revitalized by European scientists in the seventeenth century. In the mid-nineteenth century, American racial scientists began to posit a scientific link between bloodlines, culture, and racial groups. According to this view, bloodlines determined one's behavioral traits as well as physiological traits. This theory of heredity profoundly influenced European conceptions of kinship and group identity and formed a scientific justification for racism. Modern science did not fully supplant pangenesis until the twentieth century.

As biologists began in the late nineteenth century to move away from pangenetic theories, the parallel science of biometrical eugenics emerged. Eugenics preserved the notion of blood heredity, thus permitting scientific racism to hold sway well into the mid-twentieth century. Francis Galton (1822–1911), a pioneering eugenicist, argued that human intervention was needed "to give to the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable than they otherwise would have had" (Field 1911). Such intervention—or eugenics—would involve ensuring that people of different races did not intermarry or interbreed, thus preserving the blood purity of the superior races, thereby ensuring the

continuing transmission of their superiority through their bloodlines.

At the peak period of the eugenics movement's influence in the United States between 1910 and 1930, numerous federal and state laws were passed that reflected the obsession with purity of blood and the desire to regulate bloodlines. Existing antimiscegenation laws were strengthened and more rigorously enforced. Madison Grant (1865–1937), a leading eugenicist, wrote in *The Passing of the Great Race* (1916): "When it becomes thoroughly understood that the children of mixed marriages between contrasted races belong to the lower type, the importance of transmitting in unimpaired purity the blood inheritance of ages will be appreciated at its full value."

Consequently, a recent cultural innovation—the "one drop" definition of nonwhiteness—was institutionalized into law in a number of American states. The one-drop doctrine held that a person with any nonwhite ancestry whatsoever in his or her ancestral bloodlines could not legally be classified as white. Virginia's Racial Integrity Act of 1924 was the classic expression of one-drop doctrine, holding that "the term 'white person' shall apply only to such person as has no trace whatever of any blood other than Caucasian." Virginia's act prohibited interracial marriage, mandated that the race of every newborn be recorded and registered with the state government, and provided for a penalty of up to a year in prison for making a false report of racial identity.

Eugenic initiatives eventually moved beyond segregation and antimiscegenation laws. From the 1920s through the 1940s, a number of states in the United States set up programs to medically sterilize people defined as inferior—primarily on the basis of perceived mental disability—to ensure that they would not reproduce their traits in offspring. The Eugenics Record Office constructed pedigrees on thousands of families and determined that people who were mentally disabled came mostly from poor and minority families. Such findings only reinforced stereotypes of inferior bloodlines.

Eugenics principles were also invoked to justify anti-immigrant initiatives and exclusionary laws in the United States. Most notable was the Immigration Restriction Act of 1924, which was specifically intended to drastically reduce the flow of immigration of Italians and eastern European Jews, whom eugenicists considered to be of inferior stock. Australia, Canada, and New Zealand also passed exclusionary laws based on race, motivated by scientific racist notions of inferior bloodlines. Eugenics also took hold in some Latin American countries, where elites advocated increased immigration from Europe and the eradication of indigenous groups. The goal was to "whiten" society by reducing the number of nonwhite bloodlines. In Brazilian Portuguese this process was known as *branqueamento*. In Argentinean Spanish it was called *blanqueamiento*.

The most extreme form of eugenics took place in Nazi Germany, where Adolph Hitler's obsession with blood purity led not only to antimiscegenation and sterilization programs but also an expansion into full-blown genocide against minority groups. The notion of a "Final Solution"—the extermination of inferior bloodlines—was not original to Hitler. It had already been entertained by Madison Grant, the prominent American eugenicist.

While scientific racism was significantly discredited in the late twentieth century, the use of blood as a metaphor for kinship remains firmly ensconced in popular discourse. The use of "blood quantum" persists in federal law, which mandates a requisite minimum of one-quarter Indian blood to qualify for some services reserved to American Indians. Most American Indian tribes have written their own laws mandating a minimum blood quantum as a requirement for tribal citizenship.

Some people have found ways to take advantage of American culture's unresolved relationship with the notion of bloodlines. There are numerous cases in which an apparently white person claims an invisible "one drop" of black or Indian blood in order to gain access to minority entitlements. For example, in 1985 Boston firefighters Philip and Paul Malone were found guilty of "racial fraud" for falsely claiming a black grandmother in order to receive affirmative action employment advantages. More recently, Ward Churchill enjoyed a long career as a Cherokee academic and activist before being exposed by the Indian tribe in which he falsely claimed enrollment.

The archaic and scientifically discredited notion of blood as racial-ethnic identity persists in contemporary culture, bolstered by the historical echoes of pangenesis to be found in popular misunderstanding of DNA research. Many new business enterprises sprang up in the early twenty-first century that were designed to capitalize on this misconception, playing on the old theme of racial-ethnic bloodlines. For a fee, one can submit a DNA sample that firms purport to use to determine the percentages of various racial and ethnic identities in a person's ancestral pedigree.

SEE ALSO *Ethnicity; Eugenics; Heredity; Hitler, Adolf; Kinship; Miscegenation; Multiracials in the USA; Nationalism and Nationality; Nazism; Race Mixing; Racial Classification; Racism; Social Exclusion; Whitening*

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BLOODY LEGISLATION

SEE *Primitive Accumulation.*

BLUE COLLAR AND WHITE COLLAR

Studies of the nature of blue-collar and white-collar work are conducted in a variety of social sciences, most notably economics and sociology. Although methodologies often differ in those disciplines—for example, sociologists are more likely to perform case studies, whereas economists generally use statistical analyses—the underlying phenomena are the same. Both fields study the decision-making behavior of workers, including how they choose an occupation and what constrains their choices. Those occupational choices affect their work lives, their social class, and the society as a whole. For instance, in 1945 the humorist and poet Odgen Nash observed, "People who work sitting down get paid more than people who work standing up." Many people who work standing up are employed in blue-collar jobs, and most people who work sitting down are in white-collar occupations.

DEFINING BLUE-COLLAR AND WHITE-COLLAR WORK

The distinction between blue collar and white collar arose from the blue uniforms traditionally worn by men performing manual labor, in contrast to the white button-down shirts worn by men in professional occupations. These uniforms have become less prevalent with time, but it is possible to observe important differences between those occupational classifications. Blue-collar work can be unskilled, low-skilled, or highly skilled, ranging from relatively simple assembly-line manufacturing to the use of computerized equipment by automobile mechanics. Unskilled work does not require a great deal of training or human capital formation. Human capital is a worker's productive capacity: his or her knowledge and skill in performing tasks. Common methods of acquiring human capital include formal schooling, apprenticeship programs, and on-the-job training. In addition, blue-collar jobs generally involve manual labor and physical tasks. Some of the occupations in this category are construction, maintenance, carpentry, assembly, plumbing and heating, typesetting, and truck driving.

Blue-collar workers often are paid an hourly rate and are eligible for overtime pay. Traditionally, many union jobs have been blue collar, and union bargaining power has contributed to higher wages for those workers.

Some aspects of blue-collar jobs are unpleasant, such as the risk associated with construction, fire fighting, and law enforcement. In general blue-collar work is often standardized and less autonomous than other types of work. Particularly in manufacturing, workers have seen periods of low job security for many reasons, including the substitutability of physical capital, which is the machinery and equipment used in production. Throughout the twentieth century production processes became much more capital-intensive as machines were introduced to perform tasks that previously had been done by workers. Another important characteristic is that blue-collar work has been done mostly by men. For instance, in 1999, 38 percent of male workers were employed in blue-collar occupations whereas only 9 percent of women were.

White-collar jobs generally require a fair amount of formal schooling, including college degrees ranging from associate's degrees through professional degrees such as medicine and jurisprudence and academic degrees such as doctorates. Much of this white-collar work is performed sitting at a desk in an office environment, such as engineering, architecture, and bookkeeping. Many of these jobs are well paid, largely because of the amount of education and skill building required to enter these occupations. The acquisition of human capital also spurs greater income growth over time.

Highly educated workers who develop expertise receive promotions within the corporate hierarchy. White-collar jobs often require strong communication skills, either written or oral, for working in teams, communicating with clients or customers, and conveying information within the company. Many white-collar jobs, particularly professional and technical jobs such as accountancy, law, and computer technology, are paid on a salaried basis. Hours worked per week tend to be very high in highly skilled white-collar jobs, with some employees spending more than sixty or seventy hours per week working. Corporate culture and promotion goals account for the long hours, and companies have an incentive to encourage salaried employees to work more hours because those workers are not eligible for overtime pay.

Throughout the twentieth century the majority of job growth was in the service sector. According to definitions from the U.S. Department of Labor, service occupations include health-care support jobs such as nursing and physical therapy; protective service jobs such as police and security work; food preparation; building and grounds maintenance; and personal services provided by hairstylists, child-care workers, flight attendants, and animal care workers. The service sector is not uniformly blue collar or white collar. For instance, washing dishes in a restaurant clearly involves manual labor and little training, but nurses are highly skilled professionals. Many of these workers are paid an hourly wage, but few are unionized. Some jobs, such as chefs, require not only strong communication skills but also the ability to manage a large staff.

TRENDS IN BLUE-COLLAR AND WHITE-COLLAR JOBS

In the mid-1950s well over 30 percent of American jobs were in manufacturing, and in the next fifty years that declined to 17 percent, whereas nongovernment services rose from 48 percent to 67 percent of all jobs. In the late twentieth century American employment in agriculture and manufacturing declined substantially, whereas construction and transportation jobs became more prevalent, revealing a new composition of blue-collar work in the United States. At the same time there have been vast increases in professional and technical work as well as work in the service sector and retail trade. There are also substantial differences in hourly pay rates across types of jobs. As is shown in the illustration, white-collar jobs are very well paid, with professional and technical workers earning approximately $30 per hour on average in 2005. In contrast, blue-collar workers received $15 on average, with those working in skilled craft and repair fields earning more and laborers earning less. The lowest-paid work was in the fastest-growing sector; service workers earned an average hourly wage of $11.

There are many sources of the changing mix of jobs from traditional blue-collar to white-collar work. One of the most important factors has been the steady increase in educational attainment in the U.S. population. In the early 1900s, 38,000 Americans earned bachelor's degrees. By 2000, well over one million Americans completed that level of education. Both men and women have pursued higher education in greater numbers. In 1940 just over 5 percent of men age twenty-five and over and nearly 4 percent of similarly aged women earned college degrees. By 2000 those proportions grew to 29 percent and 24 percent, respectively. In the early twenty-first century many students entered college because it appeared that a college degree was necessary for a good job: one with a high salary, good benefits, and pleasant working conditions. Therefore, the characteristics of the labor force (the labor

Hourly wages 1997 through 2005

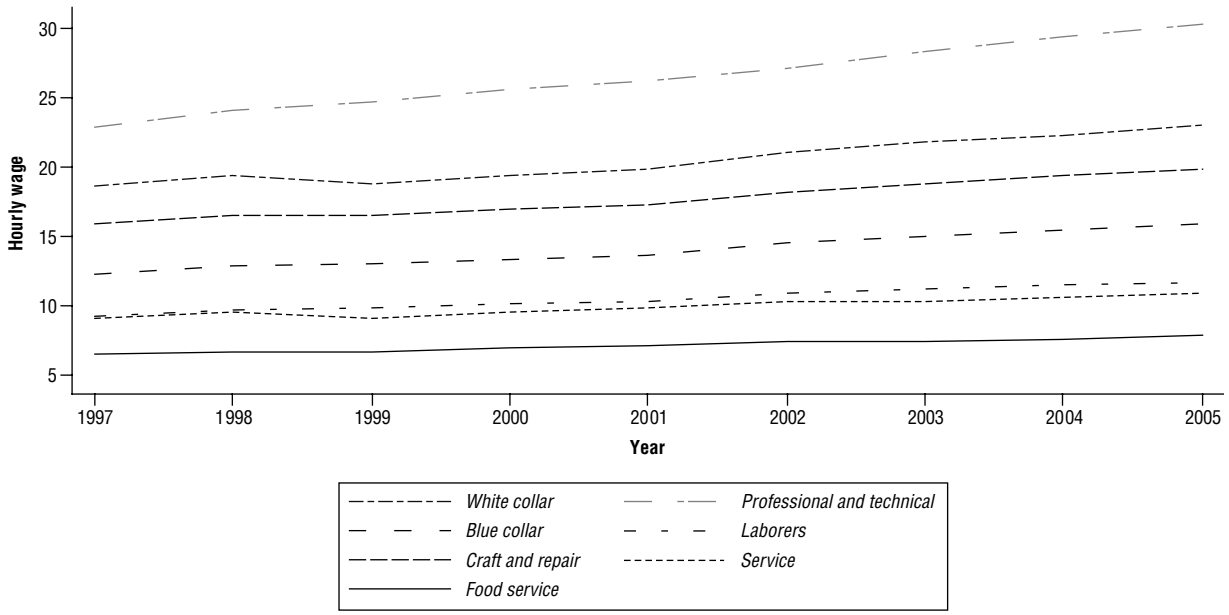

SOURCE: From U.S. Bureau of Labor Statistics Compensation Survey.

supply) have changed substantially. Though some blue-collar jobs are highly skilled, few require a college degree. The majority of highly educated workers seek and usually find white-collar jobs.

In basic labor economic theory it is expected that vast increases in the supply of a certain type of labor will coincide with downward pressure on wages. If companies have a seemingly endless stream of potential hires, there is an incentive to lower costs by offering lower wages. However, the data reveal that the earnings of college graduates have grown substantially so that the premium for degree recipients compared with those with only a high school diploma has remained high. Many researchers have focused on estimating the returns to formal schooling to better understand this dynamic. For example, in 1974 Jacob Mincer found that each year of schooling provides 10 percent higher earnings on average for white men. Furthermore, those returns to college education are greater in the United States than in most other Organization of Economic Cooperation and Development (OECD) countries, helping explain why increasing numbers of young people pursue those degrees and fewer work in manufacturing and trades.

In addition, the technology used in production has changed significantly. During the nineteenth and twentieth centuries electricity and internal combustion engines fueled the transition from a mostly agrarian society to a highly industrialized nation. Into the twenty-first century advances in telecommunications and computers have led workers away from manufacturing and into more service jobs. The use of technology has coincided with more productive workers, but there is also more capital that substitutes for workers, particularly in traditionally blue-collar jobs. Increased use of computers has led to consistently increasing demand for white-collar workers who use that physical capital in production, particularly employees who use personal computers at work.

It is assumed that companies consistently maximize profit and lower production costs. Common methods of cutting costs have had a disproportionately negative impact on blue-collar workers. In the 1970s and 1980s the United States saw many mass layoffs in manufacturing, most prevalently during times of recession, when many companies coped with deficient demand by closing plants. In some cases plants were moved out of the Northeast and Midwest and into the South for cheaper labor. In the 1990s layoffs were used more commonly to restructure firms and increase competitiveness. Some already profitable firms used layoffs to generate even more profit. Overall, in the last decades of the twentieth century over 10 percent of American jobs were lost through business contractions and plant closings.

Workers who have been laid off generally face a permanently lower standard of living. The workers who find a new job earn 15 to 40 percent lower wages than they had previously. One reason for this has been the prevalence of seniority-based raises in the manufacturing sector. Workers who displayed loyalty to the firm were rewarded with higher earnings and more vacation time during their long tenure. A worker who begins at a new plant therefore starts over with a lower wage. In addition, layoffs can cause persistent unemployment if workers have obsolete skills. This happened with many blue-collar jobs as the mix of production in the United States moved from manufacturing to service.

In the twenty-first century, firms continued to move production processes in order to become more profitable. Rather than move within the country, it is increasingly common to move offshore. This practice of offshoring is related to outsourcing. Outsourcing entails moving a business function (often administrative) out of the firm, and many companies do this with human resources or marketing. Offshoring occurs when a company moves some of the business (managerial, administrative, or production) to another country. Many jobs have been moved to Asia. In fact, after China entered the World Trade Organization in 2001, many manufacturing jobs were relocated there from the United States. The majority of American jobs lost to offshoring have been in blue-collar manufacturing, but white-collar workers have not been immune to this trend. For instance, advances in technology and computer support in India have led many American firms to employ white-collar workers there.

PRIMARY AND SECONDARY LABOR MARKETS

In the early twentieth century John Stuart Mill (1909) observed a lack of competition across segments of the labor market. He described one sector that required a fair amount of training and another that did not. Basically, the direct and indirect costs associated with the training kept some workers from competing in the market for well-paid jobs. Direct costs include out-of-pocket costs for training and the related supplies and materials. The indirect cost of forgone earnings arise because the time devoted to skill building is not devoted to work that earns a wage. Many in Mill's class of "labourers" therefore were unable to take the time necessary to pursue higher-status occupations because they could not afford the associated costs. Thus, the labor market is seen as being segmented into two parts: a primary market and a secondary market.

Primary labor market jobs are characterized by good earnings, job security, a reasonable probability of promotion, good benefits, and agreeable working conditions such as autonomy and a pleasant working environment.

Many white-collar jobs match this description, and those jobs are plentiful and growing. Blue-collar jobs that are within the primary market appear in construction, mining, durable goods manufacturing, and transportation. In contrast, secondary labor market jobs have low earnings, few or no fringe benefits, high turnover, little job security, and few or no promotions. Many blue-collar and service jobs fit this description, and continuing increases in the service sector could create a larger secondary labor market. In this market, there are no clear returns to education and in some cases there are negative returns to experience.

OCCUPATION, INCOME INEQUALITY, AND SOCIAL MOBILITY

A person's social class is defined by many factors, including income, wealth, education, location of residence, and family background. Occupation is also a main determinant of social class in terms of prestige (for example, surgeon versus construction worker), education required, and earnings received. White-collar jobs traditionally have paid well and carried more prestige than blue-collar jobs, contributing to common attributions of working-class or middle-class Americans. In the mid-twentieth century many working-class Americans had relatively good blue-collar primary market jobs in manufacturing. In contrast, working-class jobs around the year 2000 were more common in the service sector. Those secondary market jobs are not prestigious or well paid, in stark contrast to the growth of quality white-collar jobs for middle-class and upper-class Americans.

Concurrent with changes in class in the United States was the rise of income inequality throughout the twentieth century. To understand the nature of this inequality, it is valuable to make comparisons within the OECD countries, which include nations in North America, Europe, and some parts of Asia. Approaching the year 2000, the United States had the most unequal distribution of post-tax income. Many developing countries have even more inequality, but the best comparison group appears to consist of countries that are similar in industry mix and economic health: those in the OECD.

There are many sources of the unequal distribution of income in the United States. From the 1940s to the 1970s real mean wages rose, but in the next thirty-five years real wages were stagnant. The overall income distribution became more unequal, and more Americans lived in poverty. One of the commonly cited reasons for this is the lack of increases in the minimum wage over that period. Because minimum wages are raised only by government mandate, the legislature must vote on increases. No adjustments are made for purchasing power. If there are no legislated increases for a lengthy period, any wage gains are eroded by inflation (higher prices). At the same time more highly paid white-collar workers saw increased earnings, and in the United States the rich did become richer in the twentieth century.

Another factor explaining low wages for blue-collar workers is the decline in unionization. Compared with most West European countries, the United States has low union rates. In 2004 the percentage of workers covered by collective bargaining agreements was 68 percent in Germany, 33 percent in the United Kingdom, 93 percent in France, and only 14 percent in the United States. However, some strong U.S. unions remain in transportation, utilities, and construction jobs. In contrast, the growing service sector has few unions, and attempts to unionize those workers are generally unsuccessful. Labor economists debate the value of unions. Some cite unions as a potential source of gains for low-paid workers, whereas others believe that unions cause unfair restraints for businesses. When both blue-collar jobs and unions were more prevalent in the United States, the ratio of white-collar to blue-collar wages was lower than it became in the early twenty-first century; the premium to white-collar work grew as unions became weaker. In light of trends in wages and employment for white-collar, blue-collar, and service sector jobs, it appears that the U.S. income distribution is likely to continue expanding, with more inequality over time.

SEE ALSO *Class; Class Conflict; Class Consciousness; Employment; Employment, White Collar; Income Distribution; Labor; Labor Market; Labor Market Segmentation; Labor Union; Middle Class; Mills, C. Wright; Occupational Status; Organization Man; Sociology; Stratification; Unions; Working Class*

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Sherrilyn M. Billger

BLUEGRASS

Bluegrass is a highly stylized genre of American popular country music, ostensibly created in the late 1930s and early 1940s by the mandolinist Bill Monroe (1911–1996). Indeed, Monroe is the widely accepted Father of Bluegrass. However, the genre has diverse antecedents in the Scots-Irish fiddle tradition, "old-time" country music, country blues, small-group jazz performance, stereotyped "barn-dance" radio entertainment, and vaudeville. Monroe channeled and refined these influences into a tightly arranged, high-energy, radio-performance genre later termed *bluegrass*, which mediated between the rural and the newly urban on WSM radio's widely broadcast *Grand Ole Opry*, a program that also functioned as a savvy popular representation of supposed "country ways" during a time of great urban relocation.

Today, due to its acoustic instrumentation, its highly foregrounded adherence to its own aesthetic tenets, and its widespread performance by passionate amateur musicians, bluegrass functions as a marker of musical authenticity in the world of country music more generally. This perceived authenticity is as much a part of bluegrass's identity as any of its sonic features.

Following a dip in popularity due to the emergence of rock and roll in the 1950s, bluegrass has experienced periodic revivals, functioning as a badge of country legitimacy at points of overcommercialization or political uncertainty. It has thus become associated, on one hand, with radical populist movements (such as the so-called folk scare of the McCarthy era), as well as with proud nationalism, traditionalism, and social conservatism, on the other.

HISTORY

Bluegrass is inextricably linked to three groups of musicians living and performing in the Appalachian piedmont during the late 1930s. These groups played a common style that became an extremely popular genre in the 1940s and early 1950s. Mandolinist and singer Bill Monroe and his older brother had played so-called hillbilly music on the guitar and mandolin, touring professionally as the Monroe Brothers during the 1930s. After they parted ways, Bill Monroe founded a new band, the Blue Grass Boys, named after his home state of Kentucky (the Blue Grass State), and the band soon held a regular position on Nashville's *Grand Old Opry*, one of country music's most acclaimed radio shows. The classic sound of what came to be known as *bluegrass* crystallized in 1946 as the band's repertoire and core group of musicians stabilized. This group included Earl Scruggs, who immediately popularized an impressive new technique for the five-string banjo, in which chords are arpeggiated and ornamented extremely rapidly with three picking fingers (rather than strummed or played more melodically). The appearance of this new banjo style on the radio helped generate a wave of popular enthusiasm for the Blue Grass Boys across the Southeast.

Citing fatigue, Scruggs and vocalist/guitarist Lester Flatt (1914–1979) left the band at the height of its popularity, and soon formed their own group, the Foggy Mountain Boys, the second of the classic bluegrass triumvirate. Trading on Scruggs's vaunted virtuosity and Flatt's smooth vocal style and engaging stage presence, Flatt and Scruggs quickly achieved widespread success. The third of these widely acknowledged innovators was the Stanley Brothers, Ralph (b. 1927) and Carter (1925–1966), who initially imitated the sound of Monroe's Blue Grass Boys, whom they had heard on the radio and on records. However, the Stanley Brothers soon began to emphasize older musical traditions, such as balladry, thus cementing history and nostalgia as integral to the bluegrass aesthetic.

Despite its origins as a new sort of sophisticated country music (the Blue Grass Boys all wore unconventionally formal attire), and its dependence on modern mass media for its dissemination and popularity, the core of bluegrass's identity has come to rely on concepts of nostalgic authenticity, linked to ostensibly bygone ideals of purity, straightforwardness, and honesty. These tropes of purity are expressed lyrically, through themes that emphasize labor, family, nostalgia, pathos, regret, and grim prospects, and musically through the use of string instruments that do not require "modern" electricity (though the sounds of these instruments are commonly electrically amplified). This instrumentation typically includes the five-string banjo, mandolin, fiddle (violin), steel-string acoustic guitar, upright (double) bass, and often the resophonic guitar (Dobro), with the occasional pragmatic addition of light percussion or electric bass.

PERFORMANCE

Professional bluegrass performance is mostly executed on summer tours, supported by an informal network of locally organized festivals. These festivals specialize in bluegrass, though other closely related genres may be rep-

resented. Local groups are typically given earlier slots on festival schedules, and participating professional and amateur musicians commonly congregate and play before and after performances. Casual "parking-lot picking" on festival grounds is an important aspect of these events, as amateur performance is a highly valued aspect of bluegrass music. Amateur performance is also widely sustained through informally organized (but highly regular) jam sessions and "pickin' parties."

GENRE FEATURES

Bluegrass has proven to be a remarkably robust genre, maintaining a generic coherence over many decades. It is notable for its foregrounded adherence to its own genre rules, commonly stated among practitioners thus: "If it don't have *X*, it ain't bluegrass." However, it exists both as a generic template that can be applied to other kinds of music (a successful series known as Pickin' On markets bluegrass-style versions of the music of nonbluegrass artists, such as *Pickin' on Dylan*, *Pickin' on R.E.M.*), as well as a flexible paradigm that can absorb other musical parameters without losing its identity (for example, Pete Wernick's 2002 recording *Live Five* interpolates clarinet and vibraphone).

Emerging from vernacular musical traditions, the bulk of the bluegrass repertoire has typically been written in keys that allow for playing in open or first positions, utilizing open strings for accompanying drones and full, ringing chords or double (or triple) stops. However, fast tempi and tight arrangements have bred a sense of virtuosic pride into bluegrass performers, and many pieces written in formerly "awkward" keys are now commonplace.

Instrumentals are commonly written as tunes to be repeated with different musicians playing the melody in sequence. Typical repeatable forms are AABB or AABA. Vocal pieces are commonly in verse/chorus A(A)BABA form, though strophic ballads, true to bluegrass's nostalgic bent, are also common (AA … A). As noted above, however, the pride of bluegrass musicians in their technical abilities has allowed for many idiosyncratic song forms.

SEE ALSO *Music; Music, Psychology of*

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Jonathan T. King

BLUES

The blues, a term coined by the writer Washington Irving in 1807, is defined by *Webster's Dictionary* as a type of music "marked by recurrent minor intervals"—so-called *blue notes*—and by "melancholy lyrics." These lyrics reflect the oppression experienced by people of African descent in the United States: slavery, prison, chain gangs, and the indignities of the Jim Crow era.

Blues is a typically American music with its earliest roots in African forms. It originated with the slaves that were brought over from West Africa. The contemporary Malian musician Ali Farka Touré considers blues to be the type of music most similar to his own; specifically, Touré hears echoes of Tamascheq music in the music of blues artists such as John Lee Hooker. Because slaves were forbidden to use drums, they turned to traditional African "ring shouts" and created rhythms with their hands and feet. Through ring shouts slaves worshipping in "praise houses" connected the newly imposed Christianity to their African roots. "Field hollers," produced by slaves as a means of communication, were another early vocal style that influenced the blues. Work songs sung by prison road gangs also highly influenced the blues in its early days. The art of storytelling is another important element of the blues. Lyrically, the blues ranges from forms based on short rhyming verses to songs using only one or two repeated phrases.

Over time, the blues evolved from a parochial folk form to a worldwide language. The influence of the blues can be found in most forms of popular music, including jazz, country, and rock and roll. The lines between blues and jazz are often blurred. Kansas City jazz, for example, is known for its bluesy sound. Certain artists, such as Charles Brown, Jimmy Smith, Jimmy McGriff, and Mose Allison—all masters of the keyboard—make music that is hard to categorize as either purely jazz or purely blues. Likewise, gospel is closely related to the blues. The music of the "father of gospel," Thomas A. Dorsey, was a blend of blues and spirituals.

Ashenafi Kebede (1982) assigns the blues to four categories: country blues, city blues, urban blues, and racial blues. Country blues was traditionally performed by street musicians without any formal training. City blues is a standardized version of country blues. During the 1940s, as a result of the impact of communication media, city blues evolved into the more commercialized and formalized urban blues, a style characterized by big band accompaniment, modern amplification devices, and new instruments like the saxophone and electric guitar. Racial blues are songs based on racial distinctions between blacks and whites.

The great composer and musician W. C. Handy (1873–1958) was one of the first to bring blues into the

popular culture, around 1911. Instrumental blues was first recorded in 1913. Aaron Thibeaux (T-Bone) Walker—whose recording debut, "Wichita Falls Blues," was cut in 1929 for Columbia Records—is believed to be the first bluesman to use an amplified acoustic guitar.

The first vocal blues was recorded by an African American woman, Mamie Smith, in 1920. Angela Davis (1998) argues that in the early 1920s African American females were given priority over African American males as recording artists due to their initial success (p. xii). Bessie Smith is said to be the greatest and the most influential blues singer of the 1920s. Bessie Smith's catalogue of blues recordings still stands as the yardstick by which all other female blues singers are evaluated. Gertrude "Ma" Rainey is also regarded as one of the best of the classic 1920s blues singers. She was "most likely the first woman to incorporate blues into ministerial and vaudeville stage shows, perhaps as early as 1902" (Santelli 2001, pp. 386–387). Alberta Hunter is identified as helping to bridge the gap between classic blues and cabaret-flavored pop music in the 1920s (Santelli 2001, p. 226).

Artists such as Buddy Guy, Otis Rush, and Magic Sam moved the blues guitar into the modern era. Other prominent figures of the second half of the twentieth century include Son Seals, one of the leading guitar stylists of Chicago's post-1960s blues generation; Muddy Waters, who has been dubbed the "patriarch of post–World War II (1939–1945) Chicago blues"; and Howlin' Wolf, who was a singer, a songwriter, a guitarist, and a harmonica player. Sonny Boy Williamson was responsible for the transformation of the harmonica (or blues "harp") from a simple down-home instrument into one of the essential parts of the Chicago blues sound. Little Walter is noted for his revolutionary harmonica technique, and was also a guitarist. Blues guitarist Luther Allison, from the late 1960s, was influenced by Freddie King, who was considered to be one of the linchpins of modern blues guitar. Albert King, who played left-handed and holding his guitar upside down, was one of the premier modern electric guitar artists. Jimmy Reed sold more records in the 1950s and early 1960s than any other blues artist except B. B. King, who is the most successful blues concert artist ever. Bobby "Blue" Bland is considered one of the creators of the modern *soul blues* sound. Blues giant John Lee Hooker is known as the father of the *boogie*—an incessant one-chord exercise in blues intensity and powerful rhythm.

While the blues was historically an African American form, in the early 1960s the urban bluesmen were "discovered" by young white American and European musicians. Prior to this discovery, black blues artists had been unable to reach a white audience. Among the best-known English blues artists are Eric Clapton and John Mayall; celebrated white American bluesmen include Paul Butterfield, Charlie Musselwhite, Johnny Winter, and Stevie Ray Vaughan. All were heavily influenced by the great African American blues artists.

At the start of the twenty-first century, the blues is still going strong, as evidenced by the numerous national and international blues societies, publications, and festivals.

SEE ALSO *Bluegrass; Jazz; Music; Music, Psychology of; Popular Music; Rock 'n' Roll; World Music*

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Dorothy Hawkins
Shakuntala Das

BLUMER, HERBERT
1900–1987

Herbert George Blumer earned his doctorate in 1928 at the University of Chicago and went on to teach there until 1951. He later became the founding chair of the Department of Sociology at the University of California, Berkeley. In 1983 the American Sociological Association honored him with its Career of Distinguished Scholarship Award, acknowledging the importance of his codification of the fundamental theoretical and methodological tenets of the sociological perspective that he called *symbolic interactionism*.

While it is not possible to capture the great range and significance of his contributions to the study of human group life in a single quotation, this oft-cited passage from his most influential and widely read work, *Symbolic Interaction: Perspective and Method*, sets out the cardinal premises of symbolic interactionism and the central message of his scholarship:

> The first premise is that human beings act toward things on the basis of the meanings that the things have for them.… The second premise is that the meaning of such things is derived from, or arises out of, the social interaction that one has with one's fellows. The third premise is that these meanings are handled in, and modified through, an interpretative process used by the person in dealing with the things he encounters (Blumer 1969, p. 2).

Accordingly, individual and collective actions of any scale or complexity reflect the meanings that people assign to things, as these meanings emerge in and are transformed within the context of human group life. Blumer incorporated these assumptions into his vision of social life as an ongoing stream of situations handled by people through self-indication and definition.

Blumer synthesized the pragmatist philosophy of George Herbert Mead (1863–1931) with Charles Horton Cooley's (1864–1929) notion of sympathetic introspection, particularly as it informs contemporary ethnography, to develop a sociologically focused approach to the study of human lived experience. In opposition to behaviorist, structuralist, and positivist views that have dominated the social sciences, Blumer championed using an interpretivist perspective when examining social life. He contended that theoretical and methodological approaches to the study of human behavior must recognize human beings as thinking, acting, and interacting entities and must, therefore, employ concepts that authentically represent the humanly known, socially created, and experienced world.

Blumer's pioneering sociological perspective informed his analysis of a broad array of subjects including collective behavior, social movements, fashion, social change, social problems, industrial and labor relations, public opinion, morale, industrialization, public sector social science research, social psychology, and race relations. And, because his rendition of symbolic interactionism invariably portrays people as possessing agency, as reflective interactive participants in community life, he routinely called into question analyses of social life that rely on more stereotypical factors-oriented approaches.

Although Blumer's 1958 article "Race Prejudice as a Sense of Group Position" challenges psychological and psychoanalytic explanations of race relations by emphasizing social processes entailed in conflict, institutionalized power relations, and collective definitions of the situation, his most consequential contribution to the study of intergroup relations was his 1971 article "Social Problems as Collective Behavior."

SEE ALSO *Behaviorism; Groups; Industrialization; Intergroup Relations; Mead, George Herbert; Meaning; Positivism; Pragmatism; Prejudice; Public Opinion; Race; Race Relations; Racism; Social Psychology; Sociology; Stereotypes; Structuralism; Sympathy*

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Thomas J. Morrione

BLYDEN, EDWARD

SEE *Pan-Africanism; Socialism, African.*

BOAS, FRANZ

1858–1942

Franz Boas is recognized widely as the "father of American anthropology" because at Columbia University he trained a generation of graduate students who transformed an assortment of classificatory schemes based on evolutionary hierarchies into a comprehensive four-field discipline that integrated linguistics and archaeology with biological anthropology and cultural anthropology. In addition, Boas was a pioneering public intellectual who used science to challenge ideas of racial inferiority and the barbarism of certain cultures by employing empirical research to demonstrate how racism, the environment, and the history of specific cultures can explain difference and diversity.

EDUCATION AND WORKS

Born in Minden, Germany, Boas attended universities in Heidelberg, Bonn, and Kiel. His first academic appointment was in 1888 at Clark University, where he initiated a comprehensive research program that began to challenge

some of the basic assumptions of racial categories; those efforts culminated in a major project for the U.S. Immigration Commission and were published as *Changes in Bodily Form of Descendants of Immigrants* (1912). In that work Boas demonstrated that the environment plays a significant role in determining physical attributes, such as head size, that often were used at that time to demarcate racial difference.

During the late nineteenth century racial categories were classified by head size, body type, and skin color and were linked to behavior, language, customs, and morality. Boas asserted that body type and race are discrete modalities and are not linked to customs and belief systems. Furthermore, he argued, one could not demarcate distinct racial categories accurately and cultures could not be rank-ordered within the then-current terminology as savage, barbarian, and civilized. His most definitive treatment of these issues was in *The Mind of Primitive Man* (1911).

The foundation of that theoretical paradigm shift in the natural and social sciences was Boas's understanding that cultures and languages should be evaluated in the context of their own complex histories and on their own terms as opposed to analyzing societies in terms of stages of evolution along a singular road to a civilization or an apex of culture. Much of Boas's research and theory was grounded in empiricism, participant observation, and detailed transcription of grammars, myths, kinship terminology, and folklore, using the interpretive framework of the people he studied.

Opposed to imposing an analytical framework on a set of traits and tendencies to deduce laws of culture, Boas instead relied on the use of inductive methods to identify patterns in process and the diffusion of material culture or folkloric themes through time and between cultural groups. Most of his ethnographic fieldwork was focused on the complex indigenous communities of the Pacific Northwest. To achieve such exhaustive empirical studies Boas relied on key informants who served as important collaborators. One of the most influential of those collaborators was George Hunt (Lingít), who was raised among the Kwakwaka'wakw near Fort Rupert on Vancouver Island in British Columbia. Hunt was instrumental in helping Boas develop his definitive work on the Kwakiutl language and kinship.

In 1896 Boas began to lecture at Columbia University, and in 1899 he became its first professor of anthropology. At that university he developed the distinctly North American four-field approach to anthropology. He also helped curate anthropological exhibits at the American Museum of Natural History, where he worked from 1895 to 1905.

In addition to his ethnographic work Boas conducted detailed studies on the growth of children and the head sizes of immigrants. Between 1908 and 1910 he measured 18,000 adults and children, using the data to produce the study *Changes in Bodily Forms of Descendants of Immigrants* (1912). Although there has been debate about the validity of his data, that study, among others Boas conducted, demonstrated that the physical metrics used to demonstrate the putative superiority and inferiority of racial groups and thus justify Jim Crow segregation and selective immigration restrictions were erroneous. African American intellectuals and early civil rights organizations welcomed the new science, and Boas actively supported the National Association for the Advancement of Colored People and formed lasting working relationships with scholars such as Carter G. Woodson (1875–1950) and W. E. B. Du Bois. Boas was also a champion of peace, academic freedom, and equal opportunity.

INFLUENCE

Perhaps Boas's greatest contribution to the field of anthropology was inspiring and training a generation of students who shaped the field in enduring ways. Many were women, and several were people of color. The list of students and colleagues whom Boas influenced at Columbia is impressive. Alfred Kroeber and Robert Lowie established the anthropology program at the University of California at Berkeley, Edward Sapir (1884–1935) and Faye-Cooper Cole (1881–1961) developed anthropology at University of Chicago, Leslie Spier (1893–1961) brought anthropology to the University of Washington, and Melville J. Herskovits organized an anthropology program at Northwestern. Other notable students include Margaret Mead, Ruth Benedict, and Zora Neale Hurston whose collective influence on American science and letters is much greater than his male students. Others included William Jones (1871–1909), a member of the Fox Nation and one of the first American Indian anthropologists; the Mexican anthropologist Manuel Gamio (1883–1960); the African American ethnographer Eugene King (1898–1981); Elsie Clews Parsons (1875–1945); Gene Weltfish (1902–1980); Gladys Reichard (1893–1955); and Alexander Goldenweiser (1880–1940). Together they went well beyond Boas's careful empirical studies to develop an understanding that cultures are dynamic and fluid, language is an integral aspect of culture that has internal structures and logics, history and ethnographic methods are central facets of anthropological research, and racial categories are scientifically untenable bases of analysis.

SEE ALSO *Anthropology, Biological; Anthropology, U.S.; Benedict, Ruth; Culture; Du Bois, W. E. B.; Ethnography; Ethnology and Folklore; Herskovits, Melville J.; Hurston, Zora Neale; Jim Crow; Kroeber, Alfred; Lowie, Robert; Mead, Margaret; National*

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Lee D. Baker

BODY IMAGE

Body image is a familiar phrase in contemporary American culture. The fourth edition of the *American Heritage Dictionary* (2000) defines it as "the subjective concept of one's physical appearance based on self-observation and the reactions of others." In the scientific literature, body image is considered a multidimensional construct encompassing self-perceptions and attitudes regarding one's physical appearance across cognitive, affective, perceptual, and behavioral domains.

The systematic study of body image began in the 1960s when psychiatrist Hilde Bruch (1904–1984) posited that negative body image was a causal mechanism in the development of anorexia nervosa. Since that time, numerous studies have linked body-image disturbance to the development of eating disorders and the onset of dieting. Although studies of non-treatment-seeking obese individuals indicate that there is no difference in the prevalence of psychopathology among obese and normal weight individuals, obese people consistently report higher dissatisfaction with body image and physical appearance than normal weight individuals (Rosen 2002). Furthermore, negative body image in treatment-seeking obese individuals is associated with psychological distress (Friedman et al. 2002).

A renewed interest in body image arose in the 1980s. Judith Rodin and colleagues (1984) described the widespread concerns about body image among women as a "normative discontent." This early research found a greater risk for body dissatisfaction among Caucasian women than men and women of color. Among females body-image dissatisfaction tends to be associated with the desire to lose weight, whereas among males body-image dissatisfaction is often associated with the desire to increase muscularity (McCreary and Sasse 2000). Recent evidence suggests that ethnic differences in body-image dissatisfaction may be decreasing, although more research is needed (Shaw et al. 2004). Sexual orientation is another factor that is associated with body-image concerns: homosexual males are more likely to report body dissatisfaction than heterosexual males and homosexual women (Siever 1994).

Body-image concerns typically surface with the onset of puberty. Adolescence may be an especially challenging time for girls because the thin-body ideal is inconsistent with normal pubertal changes such as increased body fat (Bearman et al., 2006) In contrast, muscle development associated with puberty in boys is more consistent with the athletic male body ideal. Normal growth and gender-specific social ideals may help explain the discrepancy in the prevalence of body dissatisfaction between females and males.

Interpersonal relationships during adolescence also appear to be related to negative body image. In particular, being teased about one's body by peers and family is associated with body-image disturbance (Keery et al. 2005; Eisenberg et al. 2003). Perceived pressure about weight from friends and parents also may play a strong role in promoting body dissatisfaction (McCabe and Ricciardelli 2005). Sociocultural theories suggest that the cultural emphasis on female appearance, especially weight, contributes to the development of body-image dissatisfaction. The impact of the mass media on body image seems to

depend on the extent to which individuals internalize messages about beauty (Stice and Whitenton 2002).

SEE ALSO *Body Mass Index; Obesity*

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BODY MASS INDEX

Body Mass Index, or BMI, is a common measure of weight status in adults. BMI can be calculated by multiplying weight in pounds by 703, divided by height in inches squared, and it serves as an index of weight-for-height measured in kg/m^2. BMI indicates overweight between 30 kg/m^2 and 34.9 kg/m^2; obesity between 35 kg/m^2 and 39.9 kg/m^2; and clinically severe obesity above 40 kg/m^2. BMI is an indirect estimate of body fat and is highly correlated with body fat at about .7 (Gray and Fujioka 1991). Although there are more accurate measures of body fat (e.g., underwater weighing and DXA), they are more expensive, inaccessible, and cumbersome compared to BMI (Blew et al. 2002). The widespread use of BMI is likely due to its cost-effectiveness and ease of calculation.

The measurement and definition of overweight and obesity has varied over time. For much of the twentieth century, physicians and researchers referenced Metropolitan Life Insurance Company (MLIC) tables, which recommended ideal weight-for-height. The MLIC tables suffered from limitations (e.g., unstandardized and inaccurate measurement protocols) that prompted the government to adjust the weight guidelines in the 1980s (Kuczmarski and Flegal 2000). In the mid-1980s BMI became the preferred measurement of weight status, and recommendations were based upon data from national epidemiological surveys such as the National Health and Nutrition Examination Survey. BMI emerged in the first annual federal report on the prevalence of obesity in the United States, and a National Institutes of Health (NIH) panel defined overweight in terms of sex-specific BMI cutoffs (Kuczmarski and Flegal 2000; National Center for Health Statistics 1984; National Institutes of Health Consensus Development Panel 1985).

The current classification system adopted by the National Heart, Lung, and Blood Institute uses BMI to determine weight category. Classification of weight status is important because numerous medical comorbidities are associated with increased BMI. The BMI cutoff for overweight has decreased over time from 30 to 27, and most recently 25. Further, BMI provides a relative index of growth stunting, a condition that may result in significant developmental delays and adverse physiological effects (Dickerson 2003).

Weight category	BMI (kg/m2)
Underweight	<18.5
Normal	18.5–24.9
Overweight	25.0–29.9
Obesity Class I	30.0–34.9
Obesity Class II	35.0–39.9
Obesity Class III	40+

There is empirical evidence that BMI may be more predictive of body fatness in certain subgroups (e.g., younger adults, Caucasians) than others (Baumgartner, Heymsfield, and Roche 1995; Gallagher et al. 1996). Thus, two individuals with an identical BMI may have a different percentage of body fat depending on factors such as age, gender, body shape, and ethnicity (Prentice and Jebb 2001). BMI also overestimates body fat in persons who are very muscular (e.g., athletes), does not distinguish lean mass (muscle and bone) from fat mass, and does not determine the distribution of body fat. In children, BMI must be adjusted for growth. Despite these shortcomings, BMI classifications are still valuable for research and health care.

BMI is used to diagnose and make treatment recommendations. Epidemiological studies measure BMI to identify population trends in growth retardation and obesity along with associated adverse health consequences. Mounting evidence indicates an increased risk of mortality among obese individuals. Increased BMI has been associated with medical comorbidities including cardiovascular disease, reduced fertility, sleep apnea, metabolic syndrome, hypertension, type 2 diabetes, and certain cancers. In addition to medical risks, evidence suggests that there is a powerful social stigma associated with obesity. Discrimination affects overweight individuals in numerous facets of life, including employment, education, and psychological well-being (Friedman et al. 2005; Puhl and Brownell 2003).

SEE ALSO *Body Image; Obesity*

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BOER WAR

The Boer War (or Anglo-Boer War) was a conflict in which the British Empire fought the forces of two "Boer Republics" from 1899 to 1902 in southern Africa. The

Boers lost the war, but resistance gained them concessions even in defeat. One of many conflicts that heightened international tensions before 1914, the war accelerated patterns of violence that came to mark twentieth-century warfare, especially violence toward civilians.

The "Boer" population—mostly of Dutch Calvinist background—originated with a Dutch East India Company colony planted at the Cape of Good Hope in the seventeenth century. Britain acquired the Cape Colony during the Napoleonic Wars. After clashes with the British administration, many settlers migrated northward in the "Great Trek" between 1835 and 1841, establishing two "Boer republics": the South African Republic (or the Transvaal) and the Orange Free State. The term *Boer* means "farmer" in Dutch and in the related language that developed among these settlers, which today is called *Afrikaans*.

The earlier war associated with the terms *Boer War* and *Anglo-Boer War* (1880–1881) was the result of British attempts to establish control over the republics. The British lost militarily but gained Boer agreement to nominal British rule over the autonomous republics. The conflict more commonly called the *Boer War* began in 1899 and was connected to the discovery of gold in the territory of the Transvaal in 1886. Europeans poured in to run the mines and recruit African labor. In the nineties, colonial authorities pushed to gain the vote for resident "foreigners" (*uitlanders*), a measure that would have enabled the *uitlanders* to vote the republics into dissolution. Transvaal President Paul Kruger (1825–1902) opposed the plan vehemently. The Jameson Raid of 1895, sponsored by Cecil Rhodes (1853–1902; Cape Colony premier), was an effort to establish British control by force. After the defeat of the filibuster, German Emperor Wilhelm II (1859–1941) sent a telegram congratulating Kruger, to the irritation of the British. More concretely, the Germans also sent arms to the Boers in an attempt to counter their imperial rival, Britain.

Assisted by mining interests, in the late 1890s British Colonial Secretary Joseph Chamberlain (1836–1914) and British High Commissioner Sir Alfred Milner (1854–1925) pressured the republics to give full citizenship to all resident British subjects. An attempt at reconciliation at the Bloemfontein Conference in mid-1899 failed, and the sides exchanged ultimata. The Boers struck first, invading the Cape Colony and Natal with a force based on the militia-like pattern of Boer defense, the commando system. The keys to their powerful blows against professional British units were expert marksmanship, good weapons, and mobility (mostly on horseback). From October 1899 to February 1900, Boer forces enjoyed success, defeating larger British units in a series of conventional battles, climaxed by the Battle of Spioenkop (earlier, Spion Kop), where British troops failed to carry the Boer lines after assaulting them for two days and losing 1,683 men, compared to 198 on the part of the Boers.

The tide of the war turned in February 1900, when British Field Marshall Lord Frederick Sleigh Roberts (1832–1914) arrived with reinforcements. Though the British continued to sustain high losses, they were now able to overpower Boer forces, which retreated back to the Transvaal and the Orange Free State. Roberts followed and captured the Boer capitals by early June. The largest remaining Boer force was defeated in August 1900. Yet the Boers had already decided to move away from conventional warfare and adopt a guerrilla war of raids and ambush; by June this campaign was in full swing. Several capable commanders emerged, especially Christiaan de Wet (1854–1922) and Jan Smuts (1870–1950). The British columns were deadly, but the Boer commandos were frequently elsewhere by the time the British were ready to strike.

Hence, although they nominally occupied the republics, British forces seemed stymied. Soon 250,000 British troops were engaged, but this number still represented a relatively low ratio of troops to area: The territory of the Transvaal alone (111,196 square miles) almost equaled that of the British Isles. The British military compensated for this low density of troops with a network of hundreds of "blockhouses," outpost structures giving protection to small garrisons and linked by barbed-wire fences, designed to disrupt Boer movements.

Lord Roberts resigned in November 1900 because of sickness, and Herbert Lord Kitchener (1850–1916) took command. Kitchener intensified the "scorched-earth" policy that Roberts had already begun, which paralleled similar strategies in other contemporary colonial conflicts. His plan was to destroy Boer homes and crops and appropriate their livestock to deny the commandos food, supplies, and hiding places; in two years the army burned some 30,000 Boer dwellings.

A byproduct of the "scorched-earth" policy was the creation of "concentration camps" to house those made homeless. Among the refugees were Boer women, children, and elderly, but also black Africans associated with Boer farming economies, or simply those displaced by military operations. British commanders also hoped that holding the refugees in tent camps surrounded by barbed wire, with limited food and rough hygiene, would bring about Boer surrender. Kitchener built forty concentration camps containing 116,000 prisoners, most of them women and children. Malnutrition and disease killed a high percentage. In a year and a half, well over 26,000 Afrikaners died, over 20,000 of them children under sixteen. The British also rounded up black Africans into camps, where as many as 17,000 died of disease and poor

conditions. Some 12,000 of those seem to have been children. The total of black African deaths caused by the war is unknown. Nearly all the relevant mortality figures have been disputed, but it is not in dispute that the primary killer, even in the case of military deaths, was disease.

Whatever the effect of British tactics on the outcome of the war, it is clear that the Boers did not have the resources to fight on indefinitely. Several larger-scale battles in 1902 led to losses that thinned the already sparse commando ranks. The Boers surrendered in the spring of 1902, and the war ended with the Treaty of Vereeniging, signed on May 31, 1902. The two republics became undisputed British possessions, but they emerged with considerable autonomy, allowing for self-government and continued use of the Dutch (later redefined as Afrikaans) language in schools, courts, and other institutions. The British agreed to pay a large sum for reconstruction in compensation for war damage. On the question of the enfranchisement of black Africans in the region, the treaty stipulated that no discussions of the issue would be held until after the region had been granted self-government.

Historians generally understand the war to have promoted and accelerated social trends marginalizing black African and racially mixed populations in South Africa. Hence, the institutionalization of *apartheid* (separateness) after World War II is seen as a later stage in developments resulting from the settlement of the Boer War. New legal restrictions based on race appeared in South Africa in the following decades. The Boer War also seems to have set in motion or intensified dislocation and the breakup of traditional cohesions among black South African ethnic groups, trends that shaped later racial relations in South Africa.

The war was an international affair, particularly on the British side. Some 22,000 soldiers of the British Empire died, and hundreds of thousands served. Yet, thousands were not from the British Isles. Africans served in various capacities. Many Indians living in South Africa likewise served in the war (Mohandas Gandhi [1869-1948] was a stretcher-bearer in the volunteer Indian Ambulance Corps). Australia's involvement in the Boer War became a significant part of Australian history and identity. Over 10,000 Australians served in Australian units alone, and many others in British units. Some 500 Australians died in the war, about half from disease. Nearly 7,500 Canadians served, with deaths totaling 219, and New Zealand sent some 6,500 troops, with 229 resulting deaths. The war was, after all, an imperial effort.

The unity implied by these contributions did not reflect universal support back home. In Britain pacifists, liberals, socialists, and others were outspoken opponents of the war. Among the best known was political activist Emily Hobhouse (1860–1926). Opposing the war forcefully, she organized the Relief Fund for South African Women and Children in 1900 and traveled to South Africa to visit the concentration camps. Her efforts led to official inquiries and eventually a lowering of the mortality rates in the camps. Another prominent opponent was economist John A. Hobson (1858–1940), who produced a critique that far outlasted the events he observed. Covering the war for the *Manchester Guardian*, he wrote in *The South African War: Causes and Effects* (1900) that the war had been foisted on Britain by a "small confederacy of international mine-owners and speculators" lobbying for the war to support their own investments in South Africa. Hobson later generalized these and other arguments to apply to the whole of European imperialism in *Imperialism* (1902). Vladimir I. Lenin (1870–1924) adapted some of Hobson's ideas in writing *Imperialism: The Highest Stage of Capitalism* (1916).

SEE ALSO *Apartheid; Concentration Camps; Imperialism*

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BOGARDUS, EMORY

SEE *Assimilation.*

BOLL WEEVILS

SEE *Southern Bloc.*

BOLSHEVISM

The Bolsheviks were the party that V. I. Lenin created in exile in 1903 and then used to conduct the successful Bolshevik Revolution in November 1917. *Bolshevism* is a

western intellectual construct that helped to focus a debate on whether the Stalinist system was the logical consequence of Lenin's principles, or whether Bolshevism was a more subtle and complex phenomenon with which Stalinism had only a tangential relationship.

Lenin firmly rejected the growing movement that promoted a peaceful evolution of socialism. In 1902 he split with his closest revolutionary allies over control of their newspaper, *Iskra*, and over who could join their party: Lenin insisted that the party membership be limited to those who accepted strict party discipline and the duty to work actively for the revolution. The opposition had a more western view of a decentralized party that accepted anyone who would support the party program and pay dues. When it was put to a vote, Lenin had a (narrow) majority, so he called his supporters the *Bolsheviks* (from *bolshinstvo*, "majority") and his opponents the *Mensheviks* (from *menshinstvo*, "minority").

The tsar responded to the Revolution of 1905 by creating a limited parliament, the Duma, and expanding political rights. Lenin was willing to use these institutions only tactically, to promote revolution, but the Mensheviks gradually became a western, social-democratic party that saw capitalism as the next long-term stage in Russian history. Other issues became politically crucial. Lenin's centralized party implied a strong Russian empire, whereas the Mensheviks' position implied a looser one. Lenin's rigid orthodoxy implied that modern western culture was the tool of bourgeois rule, and his rejection of cooperation with liberals appealed to those who rejected westernization.

When Russia's failure in World War I led to the overthrow of the tsar in March 1917, plunging Russia into chaos, Lenin rallied a large coalition—his traditional worker-peasant support, intellectual radicals, and antiwar forces, including some in the military. In these conditions, the party was opened to all applicants, and this continued during the civil war. There is still debate about whether the broader membership of the party, together with Lenin's toleration of private agriculture and trade in the New Economic Policy, would have produced a more tolerant one-party system in the Soviet Union had Lenin or an appropriate successor been chosen. Some historians contend that Lenin's massive purge of party members from 1921 to 1923 and his decision to rule through the party apparatus under Stalin's control suggest that the openness in 1917 and during the civil war was an aberration. The answer is unknowable.

During the late Soviet period, reformers painted a softer picture of Lenin in order to claim they were true Leninists: The modern generation is less concerned about "what if" questions about Lenin and more likely to focus on Bolshevism's appeals. The successes of both Lenin and Stalin rested on the peasants and first-generation workers who flowed into the cities in massive numbers. Around the world, Communism was most successful at that stage of history, and it collapsed in Russia when the nation reached a new stage of development. In other countries, however, frightened peasants moving to the cities continued to be attracted to leaders who appealed to their grievances with a rigid doctrine, a centralized control of disorder, and antiwesternism. Other doctrines that appealed to the same social forces took hold, and religious fundamentalism was the first of them.

SEE ALSO *Lenin, Vladimir Ilitch; Leninism; Peasantry; Revolution; Russian Revolution; Stalin, Joseph; Stalinism*

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Jerry Hough

BONACICH, EDNA
1940–

Edna Bonacich is one of the leading scholars on race and class in the United States. Her work focuses on social inequality, labor, immigration, sweatshops, and global production. She gained prominence in the 1970s based on the publication of three seminal articles in the *American Sociological Review*. Bonacich later coauthored books on middlemen minorities and immigrant entrepreneurs (with John Modell and Ivan Light, respectively) and she coedited two volumes on Asian immigration. She also coedited a book on the apparel industry in the Pacific Rim region and coauthored (with Richard Appelbaum) *Behind the Label* (2000), an award-winning book that examines the Los Angeles garment industry and the resurgence of sweatshop labor.

Bonacich was born in Connecticut in 1940. She lived in New York City for several years before moving with her father (a Jewish reform rabbi), mother, and two siblings to South Africa in 1950. Witnessing the "world's most racist regime" first-hand profoundly influenced her career as a sociologist. While living in South Africa, she joined a Zionist youth organization that focused on establishing collective farms (*kibbutzim*) in Israel. After graduating from high school, she lived in Israel for a year, living on

two separate *kibbutzim*, before she became disillusioned with Zionism (Bonacich 2005). She eventually moved back to South Africa and became a student at the University of Natal, where she graduated with a Bachelor's of Social Science degree in sociology, psychology, and English in 1961. She obtained her master's and doctoral degrees in sociology from Harvard University in 1966 and 1969, respectively. In 1970 she started working in the Sociology Department at the University of California, Riverside (UCR), and she stayed there until her retirement in 2006.

Bonacich's experiences in South Africa and Israel strongly shaped her views about race and class. Those views included the well-known but controversial claim that racism and capitalism emerged nearly simultaneously, and that both systems of inequality should therefore be concurrently challenged and abolished. Split labor markets (in which one group of workers is paid more than another) and middlemen minorities prevented these changes from taking place, however. Rather than create coalitions with mostly lower-paid workers of color, higher-paid white workers have typically favored exclusionary legislation in the United States. Meanwhile, both white workers and workers of color have often singled out middlemen minorities, who occupy an intermediate strata (or "buffer") between capital and labor. These middlemen minorities are treated as scapegoats as both white workers and workers of color blame them for their problems in the workforce. Before World War II (1939–1945), for example, Japanese American farmers faced racist legislation that prevented them from owning land. During the war, they were put into concentration camps and lost nearly all their possessions.

More recently, many Korean-owned businesses in Los Angeles established a vibrant middlemen minority community in the 1970s and 1980s (Bonacich and Light 1988), only to have them targeted and burned down during the 1992 riots. Capitalism's longevity is thus largely based on these racial and ethnic antagonisms.

This perspective, while theoretically and empirically rich, has generated concerns among some Marxist-oriented sociologists and historians. Bonacich, these scholars claim, mistakenly assumes that the working-class was primarily responsible for creating and sustaining racism. Michael Omi and Howard Winant (1994), in contrast, find Bonacich's "economic determinism" and "class reductionism" troubling. Miles and Brown (2003), moreover, suggest that racism exists autonomously from capitalism, meaning that it predates capitalism and persists in socialist societies. It has also been claimed that class is no more important than gender, race, or sexuality, and that social movements and nation-states socially construct "race" around certain practices, projects, and discourses (Anderson and Collins 2006; Omi and Winant 1994). The fact that Omi and Winant's "racial formation paradigm" became so influential in the 1980s and 1990s is extremely ironic because discussions about class—that supposedly "anachronistic" and "old-fashioned" concept—made a "comeback" as economic inequality rose in the United States and around the world during that same time period.

Globalization, or what some Marxists call imperialism, is largely responsible for this latter trend. Capitalism reproduces itself through imperialism, which generates poverty and misery within the "Third World," leading to migration into developed countries like the United States. This fact, coupled with U.S. support for neoliberal economic policies and right-wing dictatorships, facilitated significant migration from Mexico and Central America in the 1980s and 1990s. These Latino migrants made up the backbone of the Los Angeles garment industry, which became the nation's largest site for apparel production in the 1990s.

Los Angeles garment workers have endured "sweatshop" conditions, involving very long hours and extremely low pay. The "return of the sweatshop" resulted from the restructuring of the U.S. economy following the worldwide economic crisis of the 1970s. "Restructuring" involved cutting back social programs, attacking labor unions, and rolling back legal protections for workers. The resistance efforts of workers have not been very effective, however, because garment workers sometimes see their immediate employer, typically an Asian immigrant contractor, as their "enemy" (Bonacich and Appelbaum 2000). But the real power brokers in the garment industry are giant retailers and manufacturers like Wal-Mart and Nike, which are usually controlled by wealthy white men. Class conflict, therefore, is played out along racial lines. The middlemen minority group (Asian contractors) is blamed for labor's woes, while capital goes largely unchallenged.

Bonacich and Appelbaum note that even when capital is challenged—such as when the U.S. garment workers union, UNITE, targeted Guess Inc. in the mid-1990s—it can simply shut down and move someplace else. The Guess campaign and many others inside and outside the United States were undermined by capital mobility in the 1990s. Because the garment industry is so mobile, better opportunities for labor organizing may lie within nonmobile sectors like the logistics industry. Bonacich, along with Jake B. Wilson, has been studying the possibility of organizing longshore, trucking, transportation, rail, and warehouse workers (mostly people of color), who could potentially bring global capitalism to a standstill if they refused to handle goods that came through the ports of Los Angeles and Long Beach.

These have been the hallmarks of Professor Bonacich's distinguished career. She has not only interpreted the world, but, as Marx famously said, she has worked to change it for the better through her research, teaching, mentoring, and involvement with the labor and anti-sweatshop movements. Her provocative work on split labor markets, middlemen minorities, immigration, sweatshops, and global production has influenced numerous scholars and activists. Split labor market theory, for instance, is mentioned in most introductory sociology textbooks, while her studies on the Los Angeles garment and logistics industries have been invaluable for labor unions and community organizations. She is a true role model for progressive academics who wish to combine scholarship with activism.

SEE ALSO *Middleman Minorities; Migrant Labor; Textile Industry*

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Ralph Armbruster-Sandoval

BOOTSTRAP METHOD

The *bootstrap method,* introduced by Bradley Efron (1979, 1982), is a technique for making statistical inference. In the typical estimation scenario, one draws a sample $Y = [y_1, \ldots, y_n]$ from an unknown distribution F and then computes an estimate $\hat{\theta} = g(Y)$ of some parameter or quantity θ that is of interest. If the distribution of $(\hat{\theta} - \theta)$ were known, it would be straightforward to find values c_1, c_2 such that

$$P(c_1 \leq \hat{\theta} - \theta \leq c_2) = 1 - \alpha \qquad (1)$$

for some small value of α, say 0.1 or 0.05. Rearranging terms inside the parentheses results in a confidence interval, $\hat{\theta} - c_2 \leq \theta \leq \hat{\theta} - c_1$, for the quantity θ. The distribution of $(\hat{\theta} - \theta)$ is unknown in most situations, however. In some cases, the finite-sample distribution of $(\hat{\theta} - \theta)$ can be approximated by the limiting distribution, but this may not work well in some cases.

The bootstrap method is based on the idea of replicating the estimation scenario described above by drawing B samples $Y^* = |y_1^*, \ldots, y_n^*|$ from an estimate $\hat{F}$ of F and computing estimates $\hat{\theta}_b^* = g(Y^*)$, $b = 1, \ldots, B$. Given the B values $\hat{\theta}_b^*$, it is straightforward to find values c_1^*, c_2^* such that

$$P(c_1^* \leq \hat{\theta}^* - \hat{\theta} \leq c_2^*) \approx 1 - \alpha \qquad (2)$$

by finding appropriate percentiles of the differences $(\hat{\theta}_b^* - \hat{\theta})$. Substituting the values c_1^*, c_2^* into (1) yields

$$P(c_1^* \leq \hat{\theta} - \theta \leq c_2^*) \approx 1 - \alpha. \qquad (3)$$

Rearranging terms inside the parentheses in (3) yields an estimated confidence interval

$\hat{\theta} - c_2^* \leq \theta \leq \hat{\theta} - c_1^*$.

Here, confidence intervals have been estimated based on the differences $(\hat{\theta}_b^* - \hat{\theta})$, but other approaches may also be used (see Efron and Tibshirani [1993] for examples). The approximation in (2) is due to the fact that B must be finite, while the approximation in (3) is due to the fact that the original estimate $\hat{\theta}$ is based on a finite sample of size n; the first approximation improves as $B \to \infty$, and the second approximation improves as $n \to \infty$.

Variants of the bootstrap method also differ according to how the bootstrap samples Y^* are constructed. In the *naive* bootstrap, Y^* is constructed by drawing from the empirical distribution of the original data Y. This approach "works" in the sense of yielding estimated confidence intervals with correct coverages whenever the limiting distribution of $\hat{\theta}$ is normal, as proved by Enno Mammen (1992). However, the naive bootstrap often fails in other situations (see Bickel and Freedman [1981] for examples). In cases where data are bounded, constructing bootstrap samples by drawing from a smooth estimate of F, rather than the empirical distribution function, often yields confidence intervals with correct coverages; this approach is called a *smooth* bootstrap. The smooth bootstrap has been used with data envelopment analysis (DEA) estimators to estimate confidence intervals for measures of technical efficiency (see Simar and Wilson [1998, 2000] for details).

The bootstrap method has been increasingly used as computers have become faster and cheaper. It is particularly useful in situations where limiting distributions involve unknown parameters that may be difficult to estimate, which is often the case with nonparametric estimators such as DEA. The method is also useful in situations where limiting normal distributions provide poor approximations to finite-sample distributions of estimators. By constructing bootstrap samples by drawing from either the empirical distribution or a smooth estimate of the distribution of the original data, the bootstrap method incorporates information about higher moments (e.g., skewness, kurtosis, etc.) that is ignored when limiting normal distributions are used to approximate finite sample distributions. This sometimes leads to bootstrap confidence interval estimates with better coverage properties than more conventional confidence interval estimates.

SEE ALSO *Data Envelopment Analysis; Econometric Decomposition; Frequency Distributions*

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Paul W. Wilson

BOOTSTRAPS

SEE *Alger, Horatio.*

BORDERLANDS

SEE *Borders.*

BORDERS

All territorial entities have borders, defined as the area where one territory ends and another begins. Borders can be delineated along natural divisions such as mountain ranges or rivers or they can be artificially created. Once delineated, governments demarcate significant portions or all parts of a border with actual markings such as fences, posts, or border checkpoints. The majority of the world's borders are agreed upon, but border disputes exist in all regions of the world. Because border disputes can escalate to armed conflict or war, governments pay significant attention to borders. For this reason, the study of borders is primarily a political issue, but also involves economic and cultural issues.

Politically, borders are most significant for states to signal where their sovereign power exists. Borders are important to states both in actual and symbolic terms. In actual terms, borders protect the state and its population

from foreign intrusions and potential threats. Most states maintain strict border controls, mandating that foreigners apply for entry or check in with government officials at the borders. Borders are also often secured to prevent potential attacks from hostile neighboring states or individuals. In a few cases, states such as those in the European Union have demilitarized their borders and opened them to allow for the free flow of people, goods and services, and money, making state borders less relevant. In symbolic terms, borders act as clear indicators to neighboring states that they should not interfere in the governing of territory beyond the border. A key component of sovereignty is territorial control as delineated by a state's borders.

A territorial dispute exists when one state challenges the recognized location of a border. Some of the best-known border disputes have been between India and Pakistan, Ethiopia and Eritrea, Israel and Lebanon, and China and Vietnam. States can resolve border disputes in a variety of ways. The challenging state can attempt to use armed force to move the location of the border, creating an armed conflict. The competing states can also work through bilateral or multilateral negotiations, mediation, arbitration, or adjudication through the World Court. Once a border dispute is settled, the competing states sign a treaty agreeing to the delineation and demarcation of the revised location of the border.

In economic terms, borders signify where a state's economic control exists regarding its gross national product, standard of living, economic policies, currency use, and imports and exports. Borders act as checkpoints for the movement of workers, goods, and services, preventing the ease of sharing labor between states. Culturally, borders often separate distinct cultural groups, both in real terms and metaphorically. In most cases, crossing a border indicates a shift in language, religious practices, social practices, customs, traditions, and food. Borders can also divide one cultural group so that members of a group live in two or more states. In some cases, divided cultural groups seek to reunite through secession or irredentism, causing tension or armed conflict. Borders have both positive and negative connotations, depending on which side of the fence one is located.

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BORICUA

The ethnic expression Boricua describes someone or something native to Boriken, Borique, Boriquén, Borinquén, Boriquí, or Boriquer—all variations of the Arawak name for the island that Christopher Columbus claimed for Spain in 1493 during his "discovery" of the Americas. While the Iberians later christened it Puerto Rico (Rich Port) in the mistaken belief that it was a veritable gold mine, in 1552 the chronicler Francisco López de Gómara referred to it as "San Juan del Boriqua." Maintaining that the aboriginal population had died out, Spanish colonial authorities made only sporadic use of either Borinquen or Boricua during the next two centuries. Their tallies rarely took into account the undercounting of Tainos by colonists seeking to dodge taxes and import "sturdier" African captives, nor of Tainos who fled into the interior or were reclassified as mestizos. Although some 2,000 "indios" still existed in Puerto Rico at the start of the nineteenth century, Boricuas had undergone a significant ethnogenetic transformation since 1493 as a result of miscegenation with poor, persecuted whites and enslaved Africans who also fled to the mountainous interior.

Over time, a pluricultural population of rural mulatto-mestizo peasants known as *jíbaros* emerged in Spanish colonial Puerto Rico. Characterized by a conscious rejection of Roman Catholic orthodoxy, forced labor, and Iberian cultural hegemony, they dwelled on the periphery of their colonial overseers where they evoked, celebrated, and perpetuated the original pre-Columbian names for the island and its aboriginal people. The *jíbaros* embraced a libertarian ethos that appealed to anticolonial and antislavery causes. For instance, an independence conspiracy led by the German general Ducoudray Holstein in the early 1820s called for the establishment of a República Boricua. An 1853 novel by ardent abolitionist and pro-independence militant Ramón Emeterio Betances was titled, *Les Deux Indiens. Episode de la Conquéte de Borinquen.* Even the national anthem of Puerto Rico, "La Borinqueña," a *danza* penned in the 1860s, retained the Antillean appellation. A vast number of modern-day rural barrios, neighborhoods, roads, urban communities, streets, and avenues across the island are called Borinquen. Countless literary, artistic, and musical productions make use of Borinquen and/or Boricua instead of their Spanish counterparts.

Puerto Rican separatists operating in the United States starting in the late 1860s, among them Betances,

laid the groundwork for the first Hispanic Caribbean enclaves in New York. By the early 1890s, Francisco Gonzalez Marín y Shaw, Inocencia Martínez Santaella, Sotero Figueroa Fernández, Bernardo Vega, Arturo Alfonso Schomburg, and Eugenio María de Hostos became prominent members of the embryonic Boricua *colonia*. Fittingly, the asylees congregated at the New York clubs Borinquen and Dos Antillas. Other Boricuas joined them following the 1898 Cuban-Spanish-American War, their numbers swelling slowly but perceptively after the passage of the 1917 Jones Act that conferred U.S. citizenship on Puerto Ricans. The pre–World War II (1939–1945) writings of Schomburg (1874–1938) and William Carlos Williams (1888–1963), whose mother was born in Mayagüez and father in England but raised in the Dominican Republic, spoke to a number of Antillean diasporan concerns such as race, identity, and colonialism. Significantly, Schomburg self-identified as *"afroborinqueño"* and named one of his U.S.-born children after the Taino *cacique* (chief or political leader) Guarionex, who led the 1511 uprising against the Spanish colonizers. The expansion of the New York's Boricua community in the post-1950s eventually led to the founding of the Museo del Barrio (1969), Taller Boricua (1970), and Boricua College (1974). There, local Boricua artists, musicians, poets, educators, and community activists further fashioned a Nuyorican (stateside Puerto Rican) expressive culture built largely but not exclusively on Puerto Rico's suppressed Taino and African heritage. Today, the Boricua identity has become a vehicle of cultural affirmation and cultural nationalism as diasporic Puerto Ricans continue to forge a place for themselves in the United States.

SEE ALSO *Blackness; Colonialism; Harlem; Identity; Immigrants, New York City; Nuyoricans; Race; Taino; War of 1898*

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BOSE, SUBHAS CHANDRA AND SARAT CHANDRA

Political leaders from Bengal involved in the Indian nationalist movement in the first half of the twentieth century, Sarat Chandra Bose (1889–1950) and Subhas Chandra Bose (1897–1945) were brothers from a successful high-caste family headed by their father, Janaki Nath Bose. The two brothers attended Presidency College, Calcutta, one of the leading colleges of British India.

Sarat Bose went to Great Britain and was called to the bar from Lincoln's Inn and had a lucrative legal career before the Calcutta High Court for more than three decades. Meanwhile, his more impetuous and devoted younger brother was dismissed from college for involvement in an attack on a British professor who had insulted India. However, Subhas Bose continued his education at Scottish Churches College, graduated, and went on to secure a high position in the examination for the Indian Civil Service in 1920.

Preferring to work in the nationalist movement led by Mahatma Gandhi (1869–1948), Subhas Bose resigned from the civil service and joined the struggle against British rule in his home province of Bengal. In 1924 he became chief executive officer of the Calcutta Corporation (city government), but was arrested soon thereafter for suspicion of smuggling arms. He was imprisoned in Burma and released in 1927. Meanwhile, his activity drew his older brother into nationalist politics and Calcutta affairs.

After his release, Subhas Bose became an important leader of the younger, socialist-inclined nationalists in the Indian National Congress (INC), the main nationalist organization. Although he worked with the nonviolent Gandhian movement, he also had links to underground nationalists who committed acts of violence against their British rulers. In 1930 Subhas Bose was elected mayor of Calcutta and participated in Gandhi's civil disobedience movement. Again arrested in 1932, Subhas Bose was released to go to Europe for medical treatment. Sarat Bose was also arrested and spent 1932 to 1935 in prison.

In the late 1930s Subhas Bose became president of the INC at Gandhi's behest and his brother Sarat was leader of the opposition in the Bengal Legislative Assembly. A conflict with Gandhi led to Subhas Bose's resignation from his INC leadership post in 1939 and then his suspension for disobeying INC strictures about demonstrations. Sarat Bose continued playing an important role in Bengal politics until December 1941. The opening of World War II (1939–1945) changed everything in India.

Believing that the British would never leave India peacefully, Subhas Bose departed India secretly in January 1941 and made his way to Germany, where he set up a propaganda center and organized a small force of Indians into the Indian Legion. He decided to cooperate with the enemies of the British Empire to help destroy it. Because his younger brother was working with the enemy, Sarat Bose was imprisoned from 1941 to 1945.

In 1943 Subhas Bose traveled to Southeast Asia and with Japanese help organized the provisional government of free India and reorganized the Indian National Army (INA) to oppose the British. The Japanese and the INA invaded India in 1944 but were defeated by the Allies. Subhas Bose died in a plane crash in Taiwan in August 1945 as the war ended. Members of the INA were tried for treason, convicted, but then released by the British. In death, Subhas Bose (called "Netaji" or revered leader) became more beloved than in life. Some even disputed that he had ever died in the plane crash.

Sarat Bose was briefly a cabinet minister in the interim government in 1946 and worked to prevent the partition of India as the British prepared to leave the country. After independence and partition in August 1947, Sarat Bose became an opponent and critic of the ruling Congress Party in India, but he died shortly thereafter in 1950.

SEE ALSO *Indian National Army; Indian National Congress*

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Leonard A. Gordon

BOSERUP, ESTER
1910–1999

Ester Boserup was born in Copenhagen in 1910 and graduated from the University of Copenhagen in 1935 in theoretical economics within a broad social science background. Her research work began with a decade at the United Nations and its agencies in the late 1940s; she spent the remainder of her career as a consultant and independent researcher. She died in 1999.

Boserup's primary focus is the relationship between population growth and food supply. The English economist Thomas Robert Malthus (1766–1834) and his followers believed that food supply can only grow slowly and is the main factor governing the rate of population growth. Population growth is therefore seen as the result of previous changes in agricultural productivity. Boserup approaches the problem from the opposite direction. She sets out to demonstrate that the primary stimulus to agricultural productivity is population growth itself.

Boserup groups land use into five different types in order of increasing intensity. The first is *forest-fallow*, in which plots of land are cleared in the forest and planted for a year or two. The land is then left fallow for twenty to twenty-five years in order for the forest to regenerate. With *bush-fallow*, this period is only six to ten years, in which time the land is covered in bush and small trees. *Short-fallow* is a system in which the fallow period is one or two years, during which the land is invaded by wild grasses. With *annual cropping*, the land is left uncultivated for only several months between harvest and planting. Finally, *multicropping* occurs when the same plot of land bears two or more crops every year. But Boserup does not mean the land-use typology to be a classification scheme only; rather, it is meant to characterize the main stages of the evolution of agriculture from prehistoric times to the present.

Once "frequency of cropping" is used as a measure of intensification, theories of the development of agriculture can be directly linked with changes in local landscape, flora, and fauna. For example, as people shorten the fallow period, forests deteriorate and bushes take over the land. Further intensification will bring wild grasses. In this way, many forest and bush areas gradually became savannah as a result of the intensification of agriculture. These new grasslands provide food for cattle, horses, and other animals suitable for domestication.

Both the methods of cultivation and fertilization must become more labor intensive with the shortening of fallow. While such methods produce more crops per acre, they also require far more human labor to produce these yields—and the increase in yield is not commensurate with effort. The short-term effect of intensification, Boserup maintains, necessarily lowers output per man-hour. The investments in labor are so large that they are not likely to be made unless population increase makes them necessary. But there are "secondary effects" of the growth of population that lead to real economic growth in the long term. These secondary effects include a compulsion to work harder and more regularly, changing work habits that raise overall productivity, and the facilitation of urbanization, communication, education, the division of labor, and the further intensification of agriculture.

Yet another major contribution Boserup made to the literature on development was her book *Woman's Role in Economic Development* (1970). In this book, Boserup made clear that gender is one of the main criteria for the division of labor in all societies; but, she argued, there is a great diversity in this division of labor between the sexes across societies. The primary factors that are related to the work and subsequent status of women are population density and the availability of land. This division of labor in farming systems carries over into nonfarm activities as well.

Boserup does not so much refute Malthus as round him out by providing a more complete picture of the multitude of relationships between population, agricultural production, and the environment. While Malthus focused upon the necessity to keep human numbers in line with the food that could be produced, Boserup focuses upon how the amount of food that can be produced is dependent upon human numbers. She demonstrates that agricultural production is quite responsive to increased labor. Malthus, on the other hand, also recognized that the production of food could be increased, but he asserted that such intensification could never equal natural population growth for long. Boserup did not dispute this; she did document the fact, however, that a growing population often stimulates an intensification of agricultural production. Malthus made similar assertions in his *Essay on the Principle of Population* (1798). For Malthus, the principle of population "keeps the inhabitants of the earth always fully up to the level of the means of subsistence; and is constantly acting upon man as a powerful stimulus, urging him to the further cultivation of the earth, and to enable it, consequently, to support a more extended population" (Malthus [1798] 2001, p. 281). Boserup's main contribution is in clearly positing these relationships and empirically verifying them throughout the social evolutionary process. Her basic model had great influence on the social evolutionary theory of Mark Cohen, Marvin Harris, and Gerhard Lenski.

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Frank W. Elwell

BOURDIEU, PIERRE
1930–2002

Pierre Bourdieu was one of the most prolific and influential social theorists of the second half of the twentieth century. Not only was his output astonishing, but his work has been cited continuously and approvingly by an array of scholars from many disciplines. His initial work intervened in sociology, but as his scholarship broadened, he sought to influence philosophy, anthropology, cultural criticism, psychology, gender studies, linguistics, economics, and finally, for the last two decades of his life, the political arena itself. He is well known for introducing a number of important sociological concepts that have since gained wide currency.

The son of a postal employee, Bourdieu spent his earliest years in a small town in southwestern France, speaking the provincial language, Gascon. At eleven he moved to a boarding school, and by sixteen he was attending the Lycée Louis-le-Grand in Paris. From there he gained entrance to the prestigious École Normale Supérieure. After this background at the top schools of the nation, Bourdieu became a teacher himself; but military service took him to Algeria (then still a colony of France), where he secured a teaching post.

His earliest study, *Sociologie de l'Algérie* (1958, translated as *The Algerians* in 1962), published in the midst of the war of independence in Algeria, established Bourdieu as an important and daring sociologist. In this first book, he divided the peoples of Algeria into four major ethnic categories and showed how colonization had impacted their lives, in effect causing what he called "the total disruption of society." In this book's core distinction between traditional and modern life, the former being swept aside by the latter, one can already see the seeds of Bourdieu's major theoretical concerns with social domination and practice theory. His lifelong ethical commitment to the notions of autonomy, fairness, and equality also gained its first footing in this study.

After returning from his five-year stay in Algeria in 1960, Bourdieu taught at the Sorbonne and was later appointed director of studies at the École des Hautes Études en Sciences Sociales in 1964. In 1975 he launched his influential journal, *Actes de la recherche en sciences sociales* (Records of Research in the Social Sciences), and

by 1981 he had attained the prestigious chair of sociology at the Collège de France.

While still publishing influential articles and books on Algeria, he also became interested in social reproduction and began to look deeply into the French educational system and the culture of the Bearn, the part of France where he grew up. As he admitted in several interviews, his own dramatic social trajectory along these same paths contributed much to the sparks of insight that led to his most illuminating theories.

In his much-cited *Outline of a Theory of Practice* (1977), Bourdieu sets forth many of his central ideas, including *symbolic capital*, *doxa*, *habitus*, and *misrecognition*. His signal contribution in advancing these ideas was to overcome the limits of subjectivism and objectivism then current in much social thought, divided as it was between the phenomenological tradition and the structuralist one. As a major contributor to the emergent school of poststructuralism, Bourdieu continued to rely heavily on the central dichotomies and contradictions that he found prevailing throughout social life, but he attempted to return agency to the individual within these "objective" structures; this was masterfully displayed, for example, in his analysis of the gift in the *Outline*.

Bourdieu's *Distinction: A Social Critique of the Judgement of Taste* (1984) remains as influential as the *Outline* (it was named one of the "books of the century" by the International Sociological Association); in it, he uses extensive empirical data to show that cultural preference is constituted by endless competition over scarce symbolic, cultural, and economic capital. *Distinction* also stands as strong testimony to Bourdieu's commitment to inductive research methods.

In many ways, Bourdieu was a stalwart defender of the scientific heritage of the social sciences. He issued methodological statements concerning the best way to maintain an objectivist stance while undertaking necessarily subjectivist research, and his central belief in the process of misrecognition revealed that, for Bourdieu, the social world was clouded and distorted by the interests of specific powerful players. The task of sociology was then to unveil the actual reality lying underneath these strategies.

Late in life, Bourdieu joined with another French scholar, Loïc Wacquant, in applying these theories to the social world of scholarship itself. In a salvo titled "On the Cunning of Imperialist Reason" (1999), Bourdieu and Wacquant accused American social science of employing its financial and social clout in order to export American folk theories of race to the rest of the globe, much as he had documented the French state's exportation of social categories to Algeria long ago. In this manner, the misrecognized American system of race was insidiously imposing itself abroad and was seen to be creating racial categories where perhaps none existed previously. John French, a scholar of Brazil, strongly rebuked Bourdieu and Wacquant, not least by pointing out that their argument rested upon an idealized French folk theory that imagines the creation of a social world devoid of all forms of prejudice. Further, the debate revealed a central weakness of the concept of misrecognition by showing that it is built upon the problematic idea that good scientists can gain access to a non-socially produced, and therefore "objective," reality.

In this regard, Bourdieu can be seen as an heir to Auguste Comte (1798–1857) and Johann Fichte (1762–1814), for he strongly believed that a rationalist social science could liberate humankind from its current "objective conditions." Bourdieu put this belief into practice consistently in the latter part of his life, as he became one of the more outspoken and articulate opponents of neoliberalism and globalization.

SEE ALSO *Lévi-Strauss, Claude*

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Gustav Peebles

BOURGEOIS MODE OF PRODUCTION

SEE *Capitalist Mode of Production.*

BOURGEOISIE

In classical Marxian theory, *bourgeoisie* refers to the ruling class of capitalist society. Superseding the feudal aristocracy, its origins have been traced to a relatively early stage in capitalist development, when it was defined by ownership of the means of production. Since the 1800s the functions of management and ownership have become separated, however. As this has occurred, the explanatory value of the term *bourgeoisie* has become attenuated, particularly in discussions of advanced or late capitalism in the era of finance.

In French, *bourgeoisie* originally referred to the society of free men in towns, implying a citizen subject to civil law. The German political philosopher Karl Marx (1818–1882) and his collaborator, the German socialist Friedrich (also spelled Frederick) Engels (1820–1895), understood the bourgeoisie to have emerged from the class of "chartered burghers" in medieval towns, and in their works they trace the development of this class through several stages, from relative oppression under the feudal nobility, to militarized self-governing associations, to independent republics and taxable estates. They also linked the rise of this class to the simplification of class antagonism into a fundamentally binary opposition between the bourgeoisie and the proletariat. Marx never described the actual composition of the bourgeoisie as completely as he described the proletariat, and often the term appears to be interchangeable with *capitalist*.

The factors facilitating the rise of the bourgeoisie were both economic and geopolitical, and these two were related. In Marx's analysis, the drive to accumulation inherent in capitalism must be understood in terms of two kinds of capital, including constant capital (the value of the means of production) and variable capital (the value of labor power). Any expansion in total capital requires a growth in variable capital, which is generally achieved through the enhancement of technological means enabling the increased productivity of labor. A contradiction lies at the heart of this relation, however, for the variable portion of the capital grows more slowly than does the constant portion. This is overcome, says Marx, by increasing the scale of production; the larger the enterprise, the more capacity for accumulation it will have.

The process is, nonetheless, not linear. To begin with, the drive to accumulation generates competition among different capitalists. The result is a complex dialectic between accumulation and concentration, as well as centralization. In this environment, large-scale capital is not only advantaged in relation to smaller capital, because it can control more labor, but it grows at the expense of smaller capital. Such centralization is made possible by the credit system. Moreover, as the economist Rudolf Hilferding has argued, it is the merging of banking and industrial capital that permits and actualizes this centralizating dynamic—though not without countervailing pressures.

Through the credit system, the idle money that accumulates in the course of production is gathered together and made available for investment in production. Time is of the essence here, for the period during which money is not invested in production is, from the perspective of capital, lost. What the banks do, then, is permit enterprises to keep their own money in production, while still being able to draw on it for enhancement or expansion when opportunity arises. When assisted by banking institutions, the corporations no longer have to keep their money in reserve for such opportunities. There is, then, a phantomatic extension of the corporation through credit.

At the same time, other institutions, such as the stock market, permit the creation of joint-stock companies in which collectivities rather than individuals come to function as owners. This "special institution," as Hilferding termed it, provides a market for "titles to interest, or *fictitious capital*" (1981, pp. 107–180). Money is transformed into productive capital through the stock market because the shareholders only expect a return on the yield of the company, and their sale of title does not lead to a withdrawal of money from the corporation's productive machinery.

In this sense, the shareholder is not an owner of the means of production. He is, rather, representative of a new kind of capitalist, a money capitalist, defined by Hilferding as one liberated from the status of industrial entrepreneur. Like the manager, his actions serve the interests of the company and hence of corporate capital, but only in an extremely mediated fashion. Accordingly, many thinkers, most notably Nicos Poulantzas, argue for a reconceptualization of the bourgeoisie as a class defined not by ownership of the means of production but by the function of economic control. Others have disputed this and have preferred to see managers as special kinds of wage laborers.

With the rise of the stock market, and speculation more generally, the creation of value appears to become increasingly separated from the question of production. Initially, this market sought to attract large-scale capital, accumulated by members of a relatively conventional bourgeoisie. Other institutions, such as mutual funds, have extended this process however and, consequently, helped to disseminate the capitalist ideal even among those who are merely wage laborers. They represent a profound cultural transformation and may perhaps help explain the subversion of class consciousness in social milieus defined by financialization. Nonetheless, it is important to understand that industrial capital continues to play a crucial rule even in financialized contexts, and

the vast majority of the world's labor remains engaged within it, even though a disproportionate amount of value is produced in and by financial capital.

The forces that would ultimately lead to the political and social transformation of capitalism were, Hilferding thought, internal to capitalism itself. Other, liberal theorists agreed, though for different reasons. Adolf Berle, for example, saw the concentration and centralization of capital in the huge corporations of the United States in the mid-twentieth century as a direct product of joint stock organization. But while relying upon state regulation, which, for example, provides tax incentives for philanthropic giving, Berle argued that the new corporations themselves assumed a "quasi-political" role. He argued further that the greatest incentive to corporate growth and rationalization is the threat of competition from state enterprises. Corporate investment in local infrastructural development and education as well as international diplomacy carried out by corporate representatives constitutes, for Berle, the hallmark of a specifically American form of corporatist capitalism whose defining attribute is its antipathy to statism.

Berle's conception of what might be termed, in an idiom coined by the French philosopher Michel Foucault, corporate "governmentality" may be contrasted to Marx's original conception of the relationship between bourgeois political and economic form. Marx had argued that the bourgeoisie assumed economic predominance partly through its development of a political form capable of representing its interests, namely bourgeois democracy. Although a national entity, the bourgeois democratic state was nonetheless made possible only by the reordering of local economies in colonial territories—to produce markets for European goods and to permit the extraction of natural resources for processing in metropolitan centers or, later, to serve as export processing zones. Hilferding went so far as to argue that the inhibiting influences of cartelization and protectionism within European states could only be overcome by outward expansion, and hence that the development of European capital led inevitably to imperialism, a thesis shared in different ways by both the Russian Communist thinkers Nikolay Bukharin (1888–1938) and Vladimir Lenin (1870–1924).

Toward the end of the twentieth century, economic theorists began to observe a rupture in the relationship between nation-states and corporate capital, and a supersession of the bourgeois nation-state by regional trade bodies and economic consortia (such as the North American Free Trade Agreement, the European Union, and the G8) that, while backed by the governmental authority of nation-states, attempt to ensure that domestic protectionism, which might have been deployed by national capital, does not inhibit the expansion of capital, per se. As Hilferding anticipated, financial institutions have assumed an increasingly dominant role in such contexts, and access to credit has become a significant index of economic power for both corporations and individual persons. The development of a sphere of value-creation relatively unmoored from production, through currency trading, real estate speculation, and derivatives trading, suggests that the old bourgeoisie has not only been liberated from the function of industrial entrepreneur but that the money capitalist has become the new bearer of capital's own self-interest.

SEE ALSO *Capitalism; European Union; G8 Countries; Globalization, Social and Economic Aspects of; Marx, Karl; Marxism; North American Free Trade Agreement; Poulantzas, Nicos*

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BOURGEOISIE, PETTY

The term *petty bourgeoisie* originally referred to the class of people involved in small-scale commercial enterprises who owned their means of production. It included merchants and traders, and, in some cases, wealthier land-owning farmers. Thus conceived, this class partakes of the structures of private property on which capitalist society is grounded, but it does not own sufficient capital to reap the benefits of large-scale industrialization and workplace rationalization. Moreover, its members are not dependent upon the sale of their own labor-power. They occasionally employ others, although, unlike capitalists, they them-

selves must also work, and often do so alongside their employees, including family members.

The petty bourgeoisie has been assigned a particularly significant role in Marxian historiography by virtue of Karl Marx's (1818–1883) claim that, during the failed revolution of 1848 in France, they transferred their allegiance from the proletariat to the bourgeoisie. In the mid-1840s, a period of famine and widespread discontent throughout Europe but especially in France, the petty bourgeoisie had fought alongside members of the urban proletariat and students to demand workers' rights and liberal political reform. However, when this conflict began to assume anarchic dimensions, they joined with the bourgeoisie, the conservative peasantry, and residual feudal powers to support a counterrevolution whose outcome was the establishment of the Second Republic and a new era of European despotism.

By the late twentieth century, the term had receded from usage, and has been replaced in large measure by *middle class*. This has occurred at the same time that the term *middle class* has come to be dissociated from its original referent of the bourgeoisie. The reasons for this development, particularly in the United States, reveal much about both the nature of economic life in contemporary capitalist society and the ideology by which it is sustained. This ideology can be described as one that valorizes the middle class, that sees its expansion as the necessary condition of economic growth and democratization, and that links middle classness to upward mobility.

Significantly, this understanding rests on a slippage in the definition of the middle class from Marx's time. Friedrich Engels (1820–1895) had warned against this possibility in a letter to Marx in 1852. There, he distinguished the middle class as that group between the nobility, which it had superseded, and the proletariat, which would ultimately displace it. In this sense, *middle class* meant *transitional class* for Engels, rather than simply the class of small business people and professional managers now typically associated with the term.

However, the question of transition has itself become problematic in economic history. The joint stock company, which Marx believed to be a mere stage in the development and transformation of capital, now dominates capitalist enterprise, and its professional managers (as well as their support service workers) now form the core of what is sometimes referred to as the "new petty bourgeoisie."

Like the more classically conceived proletariat, these individuals are also employees of capitalist enterprises. However, they do not own the means of production in the sense that enables them to alienate it, and they are somewhat contradictorily positioned as the representatives of capitalist interests. Various theorists have tried to exclude this new form of the petty bourgeoise from the categories of both the bourgeoisie and the working class, on the basis that they perform "unproductive" mental labor which is antithetical to the interests of the proletariat (Poulantzis 1975); that they do not own the means of production despite exercising the "function" of capital (Carchedi 1977); or, more generally, because older notions of property ownership no longer describe the ambiguous distribution of rights over property that define modern joint stock companies today (Olin Wright 1978). In each of these cases, the managerial classes are thought of as a problem for both theory and radical political organization. Allin Cottrell (1984) nonetheless suggests that the variability in forms of ownership, social roles, and ideological commitments that characterize the managerial classes in contemporary capitalist societies requires a new conception of class, and prohibits any predictive model identifying the new petty bourgeoisie with any particular political orientation.

The older model of the petty bourgeoisie nonetheless retains great ideological force in many neoliberal societies, where the idea of the self-employed businessperson who is free from the demand to sell his or her own labor continues to occupy a dominant position in popular representations of the middle classes. It is often associated with radical individualism, as well as the values of personal autonomy and rational decision making. Moreover, it is frequently imagined as the ideal form of immigrant assimilation—and serves as a counter-image to balance other immigrant economies, including those of short term contract labor in the agricultural or energy sectors, and the feminized economies of domestic and sexual labor.

SEE ALSO *Bourgeoisie; Capitalism; Class; Liberalism; Marx, Karl; Marxism; Middle Class; Neoliberalism; Welfare State*

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BOWLBY, JOHN
1907–1990

John Mostyn Bowlby was a British child psychiatrist who developed *attachment theory,* which posited that poor relationships (attachments) to caregivers in early childhood are the primary cause of most childhood disorders. When first introduced in the 1940s, attachment theory was shunned by the psychoanalytic movement because it conflicted with some principles of psychoanalysis that were popular at the time. Attachment theory is now highly regarded as a well-established and well-researched explanation of childhood behavioral and emotional problems.

Born in 1907 to an upper-middle-class family in London, Bowlby was raised in traditional British fashion by nannies, until he was sent to boarding school at age seven. After his 1928 graduation from the medical college at the University of Cambridge, he volunteered at two homes serving "maladjusted and delinquent" children. While there, he began to investigate the early influences of the family on later childhood difficulties. To further develop his ideas on the impact of family relationships on the mental health of children, Bowlby returned to school to study child psychiatry, psychoanalysis, and psychotherapy.

At the British Psychoanalytic Institute, Bowlby trained with instructors who were among the most influential analysts of the time, including Melanie Klein (1882–1960). Although trained primarily in adult psychiatry, Bowlby returned to his work with the London Child Guidance Clinic in 1937.

In 1940 Bowlby wrote the first of several controversial papers demonstrating his divergence from contemporary psychoanalytic trends. Bowlby stated that psychoanalysts should study the "nature of the organism, the properties of the soil, and their interaction" (1940, p. 23) rather than the unconscious drives or urges that characterized the Freudian approach to understanding childhood behaviors and emotions. While at the London Clinic, Bowlby began systematic research using patient case histories to link symptoms to parental "deprivation and separation" (Bretherton 1992, p. 761).

After World War II (1939–1945), Bowlby headed the Children's Department at the Tavistock Clinic and began studying homeless children and children separated from their parents by hospitalization. In 1952 Bowlby and colleague James Robertson (1911–1988) filmed the documentary *A Two-Year-Old Goes to Hospital,* which alarmed clinicians regarding the impact of maternal separation, and influenced hospitals to change strict visitation policies.

In 1957 Bowlby presented the first formal statement of his theory that the mother-child attachment has an ethological-evolutionary foundation—that is, children, like the young of most animals, have innate behaviors promoting contact with the parent to enhance survival. Bowlby concluded that a child's survival is more likely when the child is emotionally connected and in proximity to the mother. Bowlby eventually split completely from the Kleinian psychoanalytic school and established a research unit focused on mother-child separation, continuing his work with influential researchers, including Mary Ainsworth (1913–1999). Ainsworth's research on the normative child-mother relationship across various cultures complemented Bowlby's research. Ainsworth's findings supported Bowlby's theory of the importance of early parental relationships on the behavioral and emotional well-being of children.

Bowlby continued to develop attachment theory, and spent the last decades of his life, until his death in 1990, refining the clinical application of the theory.

SEE ALSO *Ainsworth, Mary; Attachment Theory; Separation Anxiety*

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BOX-COX TRANSFORMATION

SEE *Regression Analysis.*

BOYD, RICHARD

SEE *Realist Theory.*

BRACERO PROGRAM

In August 1942, more than ten thousand men converged on Mexico City. They were answering the government's call to combat fascism by signing up to do agricultural work in the United States. Although initiated as a temporary measure to alleviate a tightening U.S. labor market brought on by World War II, the Mexican–U.S. Program of the Loan of Laborers lasted for 22 years and awarded more than 4.5 million work contracts to nearly two million Mexican men. Competition for contracts also stimulated undocumented migration of at least that many. Many Mexican men (women could not participate) benefited economically from this regulated migration, but the biggest beneficiary of the Bracero Program, the unofficial name for the series of binational agreements, were large growers. The availability of thousands of desperate braceros, as the migrants were called, generated massive corruption in both countries, acted as a downward push on farm wages, undercut unionization efforts, and enabled growers to delay mechanization until it was cost-effective.

Soon after entering World War II, the U.S. government approached Mexico about the possibility of bringing laborers north. Most important to Mexico was that the U.S. government, not individual growers, be responsible for men migrating under the program, and that both governments monitor the proper functioning of the program and investigate abuses. For all but a brief interlude (1948–1951) did this condition stand. Complaints multiplied during this interlude, and the condition was reinstituted with the start of the Korean War, when Mexico's bargaining hand was strengthened because of a contraction in the U.S. labor market due to the war. Bracero agreements also contained wage guarantees (braceros were to be paid the area's prevailing wage for the crop picked) and requirements for sanitary housing, access to medical care, and a minimum of weeks for which they would be paid, regardless of weather conditions, making braceros' protections far stronger than those extended to U.S. domestic farm workers. Although the agreement stipulated that growers prove they had attempted to recruit U.S. workers before their request for Mexican laborers be granted, in practice this requirement was waived or ignored. Generally growers, relying on long relationships with local government officials, had only to say they could find no U.S. laborers to work for the advertised wage and their request for braceros would be granted. Over time these practices depressed wages and undermined unionization.

The United States always controlled the maximum number of bracero spots offered, and Mexico could allocate these spots (or fewer ones) according to domestic needs. Thus, Mexico theoretically retained the right to decide where braceros worked. It acted on this right initially when it refused to send men to Texas, citing a history of discrimination against Mexican citizens and Mexican Americans. In response, in 1943 Coke R. Stevenson, the governor of Texas from 1941 to 1947, instituted the Good Neighbor Commission to investigate the problem. Convinced that Texas was taking steps to address the problem or merely recognizing that undocumented migrants were crossing into the United States anyway, Mexico consented and by 1947 state-sanctioned braceros were heading to that state. Also negotiated by the two countries was the location of reception centers where the final bracero selection would occur. Mexico repeatedly pushed to place centers a great distance from the United States' preferred locations at the border. Mexico also sought to reduce costs—Mexico paid men's transportation and board to reception centers, after which the United States took over—and to control the outflow of migrants to prevent its own farm-labor shortage in northern Mexico, where workers were poorly paid and scarce. As reception centers moved closer to the border, undocumented migration increased. This move also drew men away from less well-paid farm labor in northern Mexico and aroused the ire of these large landholders. Initially the binational agreement also contained a provision that 10 percent of workers' wages be put in escrow until the men returned. Mexico fought hard for this provision, in force between 1942 and 1948, as it wanted to guarantee that, in contrast to earlier migrations, the men would return home with funds that could be used to purchase tractors and other equipment. While Mexico was heavily invested in this provision, few workers knew of it, and most have yet to recoup these funds.

With alarmist discussion of a labor shortage, growers pressured the U.S. government to replicate the informal contract system that had prevailed during World War I, when labor agents recruiting in Mexico promised workers wages and living conditions that were too often unmet. The United States recognized, however, that Mexico would not agree to any program of regulated migration without certain conditions. Furthermore, the United States was not in a position to ignore conditions sought by Mexico, for much had changed since the earlier informal program. Not only did the United States government initiate the formal exchange of workers, but President Franklin Roosevelt (in office 1933–1945) had entered office determined to establish better relations with Latin America. In contrast to earlier doctrines, his Good Neighbor Policy emphasized cooperation and guaranteed the sanctity of each sovereign American nation. As well, the Mexican president, Lázaro Cárdenas (in office 1934–1940), had, in a show of national sovereignty, nationalized oil fields in 1938, many of which had been owned by U.S. companies. Although Cárdenas had

offered compensation according to the value companies listed on earlier tax rolls, the companies balked, saying that nationalized fields were worth more. Thus, in exchange for the Bracero Program and a recognition of Mexico's sovereignty, the United States had not much earlier settled the compensation issue and conceded to some of Mexico's demands. Over the course of the program, Mexico lost its leverage because its economy could not offer enough jobs, leading many men to migrate.

AFTER THE BRACERO PROGRAM

In the forty-plus years since the end of the Bracero Program, there have been numerous calls to bring it back in various forms. The most recent was President George W. Bush's push to institute a guest-worker program similar to the Bracero program. An idea proposed during his 2000 campaign for president, it was put on hold immediately after September 11, 2001, then resurfaced in 2003. By then, his expanded proposal added a post-9/11 heavy dose of border security (including a physical and virtual fence), increased enforcement of laws already on the books, and the removal of all persons in the country without the proper documentation in exchange for his guest worker program; it was also part of a larger package of changes to immigration laws.

President Bush's revised proposal garnered attacks from all sides. Citing downward pressure on workers' wages and fearing the cultural impact of largely poor immigrants of color, the anti-immigration faction countered the Bush proposal by demanding that only the removal and enhanced-security conditions be instituted. This anti-immigration position is best exemplified by the Minutemen Civil Defense Corps and Congressman Jim Sensenbrenner of Wisconsin. The Minutemen, an armed volunteer force and a visible symbol of a growing nativist sentiment operating largely in border states, have taken it upon themselves to secure U.S. borders that they see the federal government leaving unprotected. Sensenbrenner spotlighted a focus on security with a bill called the Border Protection, Anti-terrorism, and Illegal Immigration Control Act of 2005. This legislation, which passed the House by a vote of 239 to 182, would have made it a felony for anyone to "assist" an undocumented person to "remain in the United States." Although the bill stalled in the Senate, it generated a strong reaction, not only from pro-immigration groups, but from the immigrants themselves. On May 1, 2006, hundreds of thousands of immigrant protesters took to the streets in Chicago, Los Angeles, and other parts of the country in reaction to Sensenbrenner's restrictive legislation; they demanded a comprehensive reform package that included a path to legal residency and citizenship. This immigration debate also heightened simmering tensions between Latinos and African Americans. Often pitted against Latinos and recent immigrants for low-wage jobs and shrinking economic resources more generally, many African Americans see themselves ever more on the losing end of a direct competition with Latinos and immigrants.

Immigrants again turned out across the United States for peaceful May Day 2007 marches as federal officials increased their investigations of job sites known or thought to cater to immigrants. These raids have brought quick arrests of undocumented workers. In the aftermath, children—often United States citizens—have been separated from undocumented parents and wives from husbands, sending reverberations through immigrant communities. In 2007 another immigration bill, the Security through Regularized Immigration and a Vibrant Economy Act of 2007 (or STRIVE Act), was introduced in Congress. Although it was not guaranteed passage in the Democrat-controlled Congress, this compromise between pro- and anti-immigration factions has sought to combine heightened border security and a Bracero Program–like guest-worker program with a real path to citizenship for the estimated 12 million undocumented persons living in the United States.

SEE ALSO *Fascism; Immigrants, Latin American; Korean War; Labor; Migrant Labor; Nationalization; World War II*

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BRAHMINS

The word *Brahmin* appeared for the first time in Purush-Sukta, a section of the Rig Veda. The Purush-Sukta described the divine origin of human beings into the four social groups, or castes, that comprise Hindu society: Brahmin, Kshatriya, Vaishya, and Sudra. According to the Purush-Sukta, God Brahma gave birth to the divinities associated with each caste: Brahmin was born from the mouth, Kshatriya from the arms, Vaishya from the thighs, and Sudra from the calves of Brahma. Later on this concept of the divine origin of Brahmins and other castes was repeated in numerous religious texts, including the Manusmriti, the famous Hindu religious compendium of customary laws.

The Manusmriti codifies the Hindu social order—that is, the caste system. The caste system assigns rights to each of the four castes. These civil, cultural, and economic rights are divided in an unequal manner; however, Brahmin are placed at the top of the hierarchy of castes and given special privileges over the other castes, while basic rights are denied to other castes.

The Manusmriti makes it clear that Brahmin is the best of all creations on earth. Manu prescribed six main deeds for Brahmins: learning, teaching, performing *yajña*, getting *yajña* performed, giving donations, and taking donations. Kshatriyas were assigned the duty of war and defense, Vaishyas were directed to conduct business, and Sudras were enjoined to serve the three other castes.

The Brahmin was treated as the supreme creation based on the concept of purity, whereas other castes, especially the Sudras, were declared impure and hence inferior. This social construct was spread through a variety of subsequent religious texts, such as the Purānas. The mythical concepts underlying caste divisions became so powerfully resonant that even in the early twenty-first century some people carry the notion of the supremacy of Brahmins due to their blind faith in the Purānas.

The concept of Brahmin emerged in ancient India. References to the cultural and religious practices of early Brahmins reveal that they were basically a ritualistic group following a variety of primitive faiths. They invented numerous religious rituals around their philosophy of *yajña* (a religious ritual to satisfy the god). In the initial stage of their development, *yajñas* were associated with the sacrificing of animals and a few other rituals. They also became the source of earnings for the Brahmins through the religious concept of *daan-dakshina* (donation). Over time rituals became associated with more and more aspects of social and cultural life, as Brahmins began to prescribe rituals for every social and individual event, from birth to death. This development made the Brahmin community into a priesthood that also became divine. On the basis of this priesthood, the Brahmins claimed to be mediators between God and humans. Such ideas created the belief that God could be pleased only through Brahmins. Even kings became subservient to Brahmins. In this context it is interesting to note that Brahmins did not assign the office of king to themselves. They believed that kings would never go to heaven, because they have to engage in sinful activity to run the state. For this reason Brahmins chose Kshatriya, the next in the caste hierarchy after them, to become kings. At the same time Brahmins exerted indirect control over kings by acting as their advisers or prime ministers. Through this system, Brahminism became the rule of law not only in terms of religious practice but also in the day-to-day affairs of the state and society.

The divinity attributed to Brahmins and the caste system created huge inequities in society, such as the denial of certain basic rights to other castes and extreme forms of deprivation, particularly for the low-caste Sudras (the former untouchables). In reaction to these circumstances, Gautama Buddha challenged the Brahmin claim to a divinely based supremacy over other people and castes. According to Buddha, no one was born a Brahmin or a Sudra and anyone could become Brahmin or Sudra through his or her actions. He also challenged the infallibility of Vedas that had been declared divine by Brahmins. Buddha propounded the principle of social equality and argued that Brahmin, Kshatriya, Vaishya, and Sudra were all born similarly from the same part of the body as a result of biological union between man and woman. He also denied the existence of God and the soul.

Buddha's teachings spread among all levels of the Indian population, which ultimately resulted in the rapid deterioration of the Brahminical order and the supremacy of Brahmins. There was, however, a revival of Vedic rituals in the last quarter of the ninth century associated with

Adi Shankarcharaya. This led to a corresponding decline in the influence of Buddhism. As Brahminism reemerged, the caste system became more rigidly based on an extreme form of untouchability. B. R. Ambedkar has described this victory of Brahminism over Buddhism as a cultural counterrevolution.

In the early twenty-first century the Indian constitution provides for equal individual rights and does not recognize distinctions based on the caste system and the traditional superiority of Brahmins. However, the residual consequences and effects of caste traditions are still felt in some cultural, social, and religious spheres if not all.

SEE ALSO *Buddha; Buddhism; Caste; Caste, Anthropology of; Dalits; Hierarchy; Kshatriyas; Purification; Religion; Rituals; Stratification; Sudras; Vaisyas*

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Sukhadeo Thorat

BRAIN DRAIN

Approximately 3 percent of the world's population were immigrants in 2000 (International Organization for Migration [IOM] 2005). Within this group was a significant proportion of highly skilled and educated individuals who left their country of birth and settled elsewhere. This process is referred to as the *brain drain* because the sending countries in many instances lose a significant number of their most highly skilled people.

The economists' approaches to discussing the brain drain were laid out in the early 1970s in a series of articles coauthored by Jagdish Bhagwati (1973, 1974, 1975, 1976). Although he was not the first economist to address the brain drain (see for example Grubel and Scott 1966, Johnson 1967, and Berry and Soligo 1969), Bhagwati and his coauthors were the first to address it systematically at a theoretical, empirical, and policy level. And many of the issues raised in these articles have become staples of the debate surrounding the phenomenon of the brain drain.

Although worldwide estimates of the proportion of immigrants who contribute to brain drain are not available, reliable estimates of immigrants and education status in Organization for Economic Cooperation and Development (OECD) countries are available. While highly skilled immigrants do immigrate to other countries, these OECD countries represent a significant destination. These estimates report that approximately 35 percent of immigrants over twenty-five years of age to OECD countries had a tertiary education, while only 11 percent of the worldwide labor force had the equivalent education (Docquier and Marfouk 2006). This means that on average those who emigrated were more highly educated than the population they left. In most instances the sending countries tend to be developing countries, which have lower rates of highly skilled workers in the population, while the receiving countries are developed countries. This occurs because most of this type of emigration is driven by the wage and opportunity differentials between countries and the preference given to the immigration of skilled labor by developed countries.

The magnitude of this phenomenon increased during the 1990s, and all evidence suggests a continuation of this trend (Docquier and Marfouk 2006). This is cause for worry for policymakers in developing countries, as they lose significant parts of their most educated individuals. For example, while individuals with tertiary degrees make up only 3 percent of the sub-Saharan African population, 43 percent of the emigrants have this level of education. Other regions face a similar problem. According to the World Bank in 2005, the numbers for tertiary educated individuals and emigrants with tertiary degrees are 6 and 47 percent respectively for Asia and 9 and 39 percent for the island nations of the Caribbean. These are not only significant proportions of the emigrants but can also be very large proportions of the stock of educated individuals within the country. For example, most Caribbean nations lose between 61 and 89 percent of their tertiary educated individuals to emigration, while numerous African countries lose over 30 percent (Docquier and Marfouk 2006).

While there are numerous concerns for sending countries, and often these may differ by country, three main concerns have been identified. The first is that these countries lose individuals who are important in the delivery of crucial public services such as health and education. Compounding this loss is that in these areas the sending countries do not have sufficient personnel. The second concern is that the individuals lost are among those most capable of contributing to the dialogue for both progressive political and socioeconomic change in the country. The third concern is that in most instances the significant cost of training these individuals has been primarily borne by the public sector and is now not recoverable in taxes these individuals would have paid and services they would have provided to the community (IOM 2005; Ozden and Schiff 2006). In contrast, receiving nations gain by filling in gaps in skilled personnel at a lower cost than they would have otherwise, and gaining in the different knowledge and insights that the immigrants bring. For example it has been estimated that a reduction in visas for graduate students and skilled immigrants to the United States

would result in a reduction in both patent and grant applications (Chellaraj, Maskus, and Mattoo 2006).

The concern with brain drain has also resulted in the discussion of two related phenomena, brain gain and brain waste. Brain gain is the idea that because emigration raises the rate of return of education in the sending country, more investment might take place in education and could possibly lead to a net gain in educated personnel. This idea was formalized in the literature by Bhagwati and Hamada (1974). The most recent and comprehensive study, however, finds that the gains are small and do not replace the loss due to brain drain (Ozden 2006). Brain waste is a concern, raising the question of whether the receiving countries are efficiently using the skilled emigrants they receive. From the data available it appears that a large number of skilled immigrants to OECD countries often end up in jobs for which they are significantly overqualified. This can be the result of language or cultural barriers or lack of understanding of how to interpret qualifications from different educational institutions.

The brain drain has evaded easy policy prescription because successful policy that maintains an individual's right to emigrate and recognizes the society's loss from this emigration would require the collaboration of both receiving and sending nations. One of the more interesting and thought-provoking proposals addressing a number of the concerns raised by brain drain is a "brain tax" initially proposed by Bhagwati and Hamada (1974). The proposed tax was to be imposed on the émigrés and the funds collected administered by an international organization such as the United Nations Development Programme (UNDP) for development in less industrialized countries. The strength of this proposal was that it did not interfere with an individual's right to migrate, but by taxing the individual it recovered some of the cost and positive externalities that the sending country had lost. It also marginally reduced the incentive to migrate by reducing the post-tax income of émigrés.

SEE ALSO *Bhagwati, Jagdish; Globalization, Social and Economic Aspects of; Human Capital; Immigration*

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Mwangi wa Gīthīnji

BRANDING

SEE *Advertising.*

BRAZELTON, T. BERRY

1918–

In his roles as researcher, clinician, and advocate for parents, T. Berry Brazelton has been one of the formative influences on pediatrics in the United States for over fifty years. For much of the earlier part of the twentieth century, it was assumed that the newborn infant was a "blank slate," operating at a brain-stem level, and the care of the newborn seemed to reflect this assumption. It can be

argued that one of the most important advances in the study and treatment of the newborn infant was the development and publication of the Neonatal Behavioral Assessment Scale (NBAS) by Brazelton and his colleagues in 1973. Unlike the classic neurological scales, which were designed to identify abnormalities in newborn functioning, the NBAS examines the competencies of the newborn infant while at the same time identifying areas of concern. It has been used in hundreds of research studies to assess the effects of a wide range of prenatal and perinatal influences on newborn behavior, including prematurity and low birthweight and prenatal substance abuse. From the time it was first published, the NBAS has been used to document cultural variation in newborn behavior across a wide range of cultures. In recent years, it has also been successfully used as a method of helping parents understand and relate to their infants.

Critics acknowledge that whereas the NBAS provides the most comprehensive description of the newborn's current level of neurobehavioral functioning, and although a number of studies have reported a relationship between patterns of change in newborn behavior and future parent-child relations and developmental outcome, the NBAS's predictive validity has not been convincingly established. Moreover, although many population studies have been conducted with the NBAS, it has never been standardized. Because of its emphasis on "examiner flexibility" and the importance of eliciting the infant's "best performance," the scale does not have a standard order of item administration and thus is judged by some researchers to lack the objectivity required by the classic psychometric assessment tradition. Brazelton and his colleagues maintain that careful training of examiners to the 90 percent inter-rater agreement level ensures the reliability of the results across settings.

Brazelton was born in Waco, Texas, on May 10, 1918, and graduated from Princeton in 1940. In 1943 he graduated from the Columbia University College of Physicians and Surgeons in New York City, where he accepted a medical internship. In 1945 he moved to Boston to serve his medical residency at Massachusetts General Hospital, before undertaking pediatric training at Children's Hospital. His interest in child development led to training in child psychiatry at Massachusetts General Hospital and the James Jackson Putnam Children's Center. With Professor Jerome Bruner, he was a Fellow at the Center for Cognitive Studies at Harvard University. The process of integrating his dual interests—primary care pediatrics and child psychiatry—culminated in 1972, when he established the Child Development Unit, a pediatric training and research center at Children's Hospital in Boston.

Like Benjamin Spock, to whom he has been compared, Brazelton has written books for parents that have influenced the beliefs and practices of parents everywhere. What characterizes Brazelton's writings for parents is his focus on the nature of individual differences in behavior. Indeed, in the preface to Brazelton's classic book *Infants and Mothers*, Jerome Bruner remarks, "What delights me most is Dr. Brazelton's unflagging sense of human individuality." Brazelton has published many other books for parents, including the *Touchpoints* and *Brazelton Way* books, and his work also includes the development of a fourth edition of the *Neonatal Behavioral Assessment Scale* with his colleague J. Kevin Nugent.

Brazelton is a professor emeritus of clinical pediatrics at Harvard Medical School and a professor of psychiatry and human development at Brown University. In 1995 Harvard University Medical School established the T. Berry Brazelton Chair in Pediatrics. Brazelton is founder of the Brazelton Touchpoints Center at Children's Hospital, Boston. Established in 1993, Touchpoints is a preventative outreach program that trains professionals to better serve families of infants and toddlers.

SEE ALSO *Child Development; Developmental Psychology; Motherhood; Parent-Child Relationships; Parenthood, Transition to; Parenting Styles; Psychoanalytic Theory; Spock, Benjamin*

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J. Kevin Nugent

BRETTON WOODS

SEE *Exchange Rates; Gold Standard; International Monetary Fund.*

BREZHNEV, LEONID
1906–1982

Leonid Brezhnev, leader of the Soviet Union from 1964 until his death in November 1982, was at the Soviet helm longer than anyone besides Joseph Stalin (1879–1953). Brezhnev grew up in Ukraine in an industrial working-

class family (his father worked in a steel plant). Not intellectually inclined, Brezhnev was a hard worker, a good organizer, and a decent student; moreover, he showed early signs of leadership and political ambition, quickly joining the Komsomol (communist youth group) and the Communist Party. Professionally, Brezhnev trained in both industrial and agricultural sectors. He worked in factories, certified as a land surveyor (1927), and received an engineering degree (1935), all while demonstrating leadership within his trade union and party organizations.

In 1936 in Ukraine, Brezhnev's political career began, oddly thanks to Stalin's "Great Terror," which left high-ranking posts empty, allowing eager beginners like Brezhnev to advance quickly. By 1941 he had achieved the post of regional party secretary for defense industries and, crucially, made a lasting, good impression on Nikita Khrushchev (1894–1971), Ukrainian first secretary. During World War II (1939–1945), Brezhnev was assigned to the political administration of the Red Army. Though political administration was physically safer than other wartime assignments, Brezhnev later tended to exaggerate his heroic war performance, heaping an absurd number of medals on himself.

In 1950 Brezhnev began his ascent to the highest echelons of Soviet power when he was named first secretary of Moldova, charged with "Sovietizing" it. Two years later Stalin promoted Brezhnev to candidate member of the Presidium (Politburo), possibly to replace another lieutenant scheduled for removal by purge. Despite Stalin's death in 1953, Brezhnev lost little political momentum, thanks to his Ukrainian connections to the new leader, Nikita Khrushchev. Khrushchev named him first secretary of Kazakhstan in 1955 in charge of the "Virgin Lands" scheme, and elevated him to full membership of the Presidium in 1957. By 1963 Brezhnev had become a secretary of the Central Committee, controlling daily party organization. From that powerful position, Brezhnev helped plan and execute Khrushchev's overthrow in 1964, condemning Khrushchev's impulsiveness and excessive power. Brezhnev then became one of three leaders, until he consolidated his paramount position by the mid-1970s. From then on, Brezhnev was clearly the most authoritative figure within a collective leadership.

Those eighteen years—the Brezhnev era—saw the Soviet Union rise to become one of the two global superpowers dominating the world. Living standards increased, while classes of modern, educated professionals expanded. There were no terrors, cataclysms, or major conflicts; life was stable for two decades. Accordingly, when Russians are asked to assess the best time to have lived in their country in the twentieth century, the Brezhnev era usually comes out on top. Yet, Brezhnev's regime was a one-party dictatorship with no regard for human rights. It ruled through security police and censorship, and kept Eastern European nations in captivity. It brutally crushed the 1968 reform movement in Czechoslovakia, and invaded Afghanistan in 1979. The time of stability was also an era of stagnation and economic and social rot. Brezhnev's collective leadership style led to extreme bureaucratic inertia, a government of enervated gerontocracy. When Brezhnev died, Yuri Andropov (1914–1984) inherited a superpower in deep decline. Though he made initial stabs at correcting those problems, Andropov's protégé, Mikhail Gorbachev, would go further than anyone ever imagined.

SEE ALSO *Cold War; Communism; Gorbachev, Mikhail; Khrushchev, Nikita; One-Party States; Stalin, Joseph; Union of Soviet Socialist Republics; Warsaw Pact*

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Julie M. Newton

BRIBERY

In the strictest sense, *bribery* is defined as the giving of money or other valuables to public officials in exchange for that official not performing his or her required duties. For example, traffic police may be paid to overlook a traffic violation, or a judge to render a decision favorable to the briber. The concept of bribery often is used outside the context of government officials to include any instance of a person disregarding the obligations of his or her position in return for a payment; for example, a salesperson may pay the purchasing manager at a client firm to continue to order their goods. A useful working definition is given by Harvey James (2002): "any payment made to an agent is a bribe if the agent retains the payment" (p. 199). A payment made to a government official that stays with that official and is not deposited into government coffers is considered a bribe.

As is often the case in economics, James's definition does not distinguish between bribery and extortion. *Extortion* refers to a situation in which an agent demands payment for a good or service that the payee has a right to have without any payment; in contrast, in *bribery* the agent demands payment for an *extra* benefit. Although there may be philosophical, moral, or ethical differences between the two terms, for economists they often fall under the same category, largely because of the similar

effects of these types of payments in competitive situations. If all of a firm's competitors offer to bribe a government official to speed up the delivery of a required permit, then that firm must also pay the bribe in order to avoid falling behind the competition. Here the distinction between bribery and extortion is blurred.

Andrei Shleifer and Robert Vishny (1993) suggest that bribery harms firms more than an equivalent tax because of the secrecy associated with bribery. Government officials may encourage firms to produce goods or invest in sectors that are more easily subject to bribery. The effort to create bribe opportunities can make economies more inefficient. Paolo Mauro (1995) finds that countries with higher levels of corruption have lower investment and lower economic growth. At the micro-level, Simon Johnson, John McMillan, and Christopher Woodruff (2002) find that firms that are faced with paying bribes reinvest less of their profits back into their business. Bribery can cause firms to make inefficient decisions that can interfere with the overall growth of an economy.

International agencies such as Transparency International and the World Bank have focused international attention on the problem of bribery. Both publish country rankings based on perceived levels of corruption and bribery. Developing countries usually occupy the lower rungs of these rankings. These rankings, along with the evidence on the correlation between low growth and corruption, have made bribery a key issue in economic development. Although bribery is conceptualized as primarily an interaction between two individuals, a bribe-payer and a bribe-taker, it has far-reaching effects for firms and entire economies.

SEE ALSO *Corruption; Ethics, Business*

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Larry W. Chavis

BRIDE PRICE

SEE *Dowry and Bride Price.*

BRIMMER, ANDREW

1926–

Andrew Felton Brimmer, born in Louisiana in 1926 to sharecropping parents, became one of America's premier public economists, serving as a member of the Board of Governors of the Federal Reserve System from 1966 to 1974 and as chairman of the Financial Control Board of the District of Columbia in 1996. He also founded and manages Brimmer and Associates, a private consulting company with many corporate clients since 1977.

In 1944 the young Brimmer moved to the state of Washington and worked as an electrician's helper in the shipyards before joining the U.S. Army for two years. He later earned his BA (1950) and MA (1951) degrees in economics from the University of Washington. After a year of scholarly work in India supported by a Fulbright grant, he completed his PhD in economics in 1957 at Harvard University. Following a second Fulbright grant in 1958 that allowed him to help establish the Central Bank of Sudan, he served for five years as an economist at the Federal Reserve Bank of New York.

In 1963 President John F. Kennedy (1917–1963) appointed Brimmer to the post of deputy assistant secretary for economic affairs in the U.S. Department of Commerce. In this position, he authored an influential study documenting the effects of racial discrimination in public accommodations on interstate commerce, thus providing the constitutional justification for federal regulation of activities that otherwise might have been considered purely local matters to be left to the states. Brimmer summarized his contribution by noting that:

> What I did was to design an [e]conomic [m]odel which enabled me to examine the differential impact of segregation and discrimination on African Americans—from the point of view of travel, entertainment, consumer expenditure patterns, and the level of money income.… I was able to do computer simulations that tracked travel along three separate routes from Washington, D.C., … to Miami, Florida, … New Orleans, and … Chicago. The net result was that we were able to demonstrate that African Americans had to travel about twice as far and roughly twice as long as white Americans. This violated the Guidelines of the National Safety Council.
>
> Once the Public Accommodations Section of the Civil Rights Bill became law in the summer of 1964, it was challenged by the defenders of segregation. The case quickly got to the U.S. Supreme Court, which unanimously upheld its constitutionality. The Court based its decision substantially on the testimony I prepared. (U.S. Supreme Court 1964; Brimmer 2006)

Brimmer has returned frequently to issues of black economic progress, arguing strenuously for more black entrepreneurship, increased adoption of the corporate mode of organization (Brimmer 1973), strong educational achievement (Horatio Alger Association 1974), and careful attention to personal finances. He has simultaneously noted that the economic costs of unequal treatment accorded African Americans has significantly hampered access to higher-paying jobs and slowed the rate of black entry to managerial professions. Noting the national interest in ending unequal treatment, he argued that such discrimination deprived the U.S. economy of $215 billion in 1991, roughly 3.8 percent of GDP (Brimmer 1995).

In 1966 President Lyndon B. Johnson (1908–1973) appointed Brimmer to a fourteen-year term with the Federal Reserve Board of Governors (of which he served eight). He was the first African American to serve in this elite position. Recognizing Brimmer's objectivity and analytical skills, President Johnson declared:

> I do not expect Dr. Brimmer to be an easy-money man or a tight-money man.… I expect Dr. Brimmer to be a right-money man, one who, I believe, will carefully and cautiously and intelligently evaluate the Nation's needs and the needs of all of its people, and recommend the policies which his conscience and his judgment tells him will best serve the national interest. (Johnson 1966)

Brimmer returned to public service in 1996. Willing to grapple with the daunting budgetary crisis of the nation's capital, Brimmer accepted President Bill Clinton's appointment to serve as chairman of the District of Columbia Financial Responsibility and Management Assistance Authority (the Control Board) in 1996. The Control Board was given sweeping authority over nine major city departments, including public works, health, education, and welfare. The Control Board met with resistance from some sectors of the District, including from those who resented the loss of the limited sovereignty that the District had obtained in 1973 and from public sector trade unions that objected to the fiscal austerity that was the federal mandate given to the Control Board.

As chairman of the Control Board, Brimmer was vested with a wide range of powers to deal with the fiscal deficits that the city had incurred. It was a contentious period. For instance, during his tenure, Brimmer sought as a top priority to improve the D.C. school system, which was in shambles (District of Columbia Financial Responsibility and Management Assistance Authority 1996). The Control Board took the institutional step of transferring authority from the Board of Education to an Emergency Transitional Education Board of Trustees that it had created. The U.S. Court of Appeals for the District of Columbia Circuit found that the Control Board could not legally do this, modifying Brimmer's efforts at educational reform. Brimmer's critics were harsh on both his management style and his policies. One even argued that "Brimmer's imperiousness runs up and down the organization: never retreat, never admit you were wrong, and never, ever say you're sorry. Brimmer believes that he and his cohorts are on a mission and that he has a sovereign right to run over all objections" (Stabile et al. 1998). During this period, controversies were legion. For instance, in 1997 Brimmer was forced by outraged District residents, Control Board members, and members of Congress to withdraw approval of a $625,000 lease of a luxury suite requested by the city's elected mayor. At the end of his term, Brimmer was succeeded by Alice Rivlin. Brimmer returned to his consulting and scholarly role, proud that he had, in his view, resisted the politicization of important economic and management issues facing the District of Columbia.

A pioneering economist, Brimmer was elected to the Washington Academy of Sciences in 1991 and has held leading elected roles in the American Economics Association, the Eastern Economics Association, and the North American Economics and Finance Association. He has served as an economics professor at Michigan State University, the Wharton School of Finance, and Harvard University, and holds a faculty position as the Wilmer D. Barrett Professor of Economics at the University of Massachusetts, Amherst. Brimmer has also been a member of the Black Enterprise Board of Economists and the Board of Overseers of Harvard University, and he continues to serve as chairman of the Tuskegee University Board of Trustees.

Brimmer's scholarly interests have focused on monetary issues (see, e.g., Brimmer 1986, 1989, 1993, 1998) and the economic costs to society of racial discrimination (Brimmer 1973, 1995, 2000). Brimmer has long been known for his rigorous mentorship of promising young economists, especially African American scholars. He has brought many of them into his firm, where they have absorbed the critical role of rigorous evaluation of data in advancing their professional economics careers.

No stranger to the private sector, Brimmer's firm has provided expert economic analysis and testimony for many of the nation's leading corporations. He has held board positions in such companies as DuPont, Gannett, United Airlines, BlackRock Mutual Funds, and Bank of America. He remains a leading force in the economics profession and corporate America.

SEE ALSO *American Economic Association; Discrimination, Racial; Federal Reserve System, U.S.;*

Johnson, Lyndon B.; National Economic Association; Policy, Monetary; Supreme Court, U.S.

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Padma Venkatachalam
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BRITISH BROADCASTING COMPANY

SEE *Television.*

BRITISH PARLIAMENT

SEE *Parliament, United Kingdom.*

BROWN V. BOARD OF EDUCATION, 1954

Legal segregation under "Jim Crow" was a social system that whites developed after the abolition of slavery. Jim Crow's primary function was to continue the social system of servitude, the racial caste hierarchy, and the economic control of African Americans. After 1896 all aspects of public accommodations, such as transportation, schools, hotels, and parks, were legally segregated in the United States. The legal segregation laws declared that African Americans could not vote, testify against whites, or serve on juries and could attend only segregated schools, orphanages, and hospitals. According to Joe Feagin, "The legal and informal Jim Crow practices meant racial subordination and an imposed badge of degradation on all African Americans in many areas of the United States" (Feagin 2006, p. 123).

In southern states and some northern states legal segregation operated like the system of slavery it replaced. Segregated government agencies exercised extreme control over every aspect of the lives of African Americans. Exploitation and oppression were enshrined by racial violence and discrimination in foundational legal, economic, and social institutions. Numerous challenges to segregated public schools were made before *Brown v. Board of Education* (1954) ended up in the Supreme Court. Peter Irons notes that the first challenge to segregated public schools began in "1849 with a lawsuit filed in Boston by Benjamin Roberts, after his five-year-old daughter, Sarah, was turned away from the primary school nearest her home on the ground of her being a colored person" (Irons 2002, p. ix). The court decided it was best that she continue to attend a segregated school. This Massachusetts Supreme Judicial Court decision preceded the landmark 1896 Supreme Court case of Homer Plessy, an African American man, who refused to sit in the "colored" section on a train, which reinforced local U.S. segregation laws. The decision in *Plessy v. Ferguson* (1896) paved the way for segregation by affirming that separate facilities for blacks and whites could be "separate but equal," including

racially segregated public schools. The U.S. Constitution and federal court decisions created contemporary forms of the racist institutions functioning in the early twenty-first century.

According to Derrick Bell (2004), in the years leading up to the *Roberts* and *Brown* cases, there were pressures from leaders and protestors in the black civil rights movement to end legal segregation. Using a strategy that focused on exposing the actual racial inequality that existed in educational institutions, the National Association for the Advancement of Colored People (NAACP) attorneys Thurgood Marshall and Charles Houston had successfully litigated several cases that led to desegregation in graduate schools. These successes were the inspiration that led them to attempt to dismantle all official segregation in the educational system by arguing that racially segregated schools could never be equal. Marshall combined several cases from states in which racially segregated education was mandated by law, and these cases led to the Supreme Court decision in *Brown v. Board of Education of Topeka, Kansas* (1954) (Kluger 2004).

THE 1954 CASE

Brown v. Board of Education combined five cases: *Belton v. Gebhardt* (1951) in Delaware, *Brown v. Board of Education* (1951) in Kansas, *Briggs v. Elliott* (1947) in South Carolina, *Davis v. Prince Edwards County School Board* (1951) in Virginia, and *Bolling v. Sharpe* (1951) in the District of Columbia. Even though *Brown* was a class-action suit, Oliver L. Brown, the father of the third-grader Linda Brown, was named as the first plaintiff in the case. Several attorneys were instrumental in the successful litigation of the case, including Robert L. Carter, Marshall, Spottswood W. Robinson, Houston, Charles S. Scott, Louis L. Redding, Charles Bledsoe, Jack Greenberg, George E. C. Hayes, James M. Nabrit, Harold P. Boulware, Oliver W. Hill, and George M. Johnson. The NAACP Legal Defense Fund worked with scholars such as John A. Davis, Kenneth Clark, John Hope Franklin, and C. Vann Woodward to formulate a strong argument against the "separate-but-equal" doctrine.

In 1954 the landmark decision in *Brown* overturned the infamous "separate-but-equal" doctrine of *Plessy v. Ferguson*. The decision was based on the tireless work of African American men, women, and children, including members of the NAACP. Irons notes that once parents of African American children in South Carolina, Virginia, the District of Columbia, Delaware, and Kansas bravely challenged legal segregation in public schools, at great personal risk to themselves and their families, "the Supreme Court finally agreed to decide whether school segregation violated the Constitution's promise that every American—black or white—will receive *the equal protection of the laws*" (Irons 2002, p. xi).

THE IMPACT OF *BROWN V. BOARD OF EDUCATION*

At the center of the *Brown v. Board of Education* 347 U.S. 483, 495 decision are the words of Chief Justice Earl Warren: "We conclude that in the field of public education 'separate but equal' has no place. Separate educational facilities are inherently unequal. Therefore, we hold that the plaintiffs and others similarly situated for whom the actions have brought are, by reason of the segregation complained of, deprived of the equal protection of laws guaranteed by the Fourteenth Amendment" (Feagin 2004, p. 68).

Warren specifically focused and based his decision to end school segregation on the social science research of Clark, who showed that when given a choice, black children viewed white dolls as superior to black dolls. Fundamentally the finding of the Clark research project showed that there was deep psychological damage done to the psyche of black children who were forced to attend segregated schools. The *Brown* decision impacted school systems and changed American institutions forever. It focused on the public school systems, but its effects reached far beyond the educational institutions. According to Bell, for months following the *Brown* decision, African Americans participated in organized acts of resistance against other public facilities that were segregated, such as buses and restaurants. The elected white officials of local communities refused to desegregate public facilities, and the violent white responses to peaceful protestors were televised regularly for the entire world to witness. "In addition to publications and the Voice of America broadcasts, the government encouraged and often sponsored Black leaders to travel to foreign countries and convey positive reports about race relations" (Bell 2004, pp. 60–61).

The United States was painfully cognizant of the fact that foreign countries such as Russia were utilizing the heightened racial violence to encourage African Americans to join Communist forces against the country that was denying them their civil rights. Ironically, an unforeseen benefit of the *Brown* decision was that it mobilized ordinary white citizens, who were horrified by the display on television of brutal attacks against peaceful black civil rights protestors—in most instances women and children—and who joined in public resistance against segregation.

THE CIVIL RIGHTS MOVEMENT

James Patterson (2001) points out that African American men and women who were involved in the civil rights

movement were inspired by the 1954 *Brown* decision. With the support of liberal whites, African Americans began to fight harder for their civil rights in hopes that legal segregation would finally come to an end. After the *Brown* decision, African Americans organized sit-ins, boycotts, and demonstrations to end legal segregation. "The civil rights movement was heroic.… it inspired even higher expectations than *Brown* had in 1954" (Patterson 2001, p. xxi). Bell affirms this point: "*Brown* was the primary force and provided a vital inspirational spark in the post–World War II civil rights movement. Defenders maintain *Brown* served as an important encouragement for the Montgomery bus boycotters, and that it served as a key symbol of cultural advancement for the nation" (Bell 2004, p. 130).

BROWN V. BOARD OF EDUCATION REVISITED

Bell notes that Warren used extremely ambiguous language in his ruling, stating that because of the "wide applicability of this decision, and because of the great variety of local conditions, the formulation of decrees in these cases present problems of considerable complexity" (Bell 2004, p. 18). With these words, the Court postponed ordering any immediate action and ordered the plaintiffs to return to court later to address the issue of implementation.

Consequently the 1954 *Brown* decision had to be revisited one year later. But even after the courts revisited the issue of implementation, the Supreme Court never provided a specific legal remedy for the desegregation of schools. White southerners objected to the ruling of the Supreme Court and violently resisted the integration of the public school system. Furthermore the consensus in the local courts and among the general white public was that school desegregation could not be achieved. The Supreme Court faced resistance from local legislative and executive levels of government. Seeming to fear the threat of mass resistance to its ruling in *Brown*, the Supreme Court in the *Brown II* decision issued an extremely vague directive holding that the implementation of desegregation plans must be conducted "with all deliberate speed."

IS SEPARATE-BUT-EQUAL BEST?

In 1935 W. E. B. Du Bois expressed grave concerns about the possible outcomes of black children going to white schools where "white children, white teachers, and white parents despised and resented the dark child … and literally rendered its life a living hell" (Du Bois 1935, p. 330). There was no consensus in the African American community about how to proceed with ensuring that their children had schools and resources that were equal to those of white children. "A separate Negro school, where children are treated like human beings, trained by teachers of their own race, who know what it means to be black … is infinitely better than making our boys and girls doormats to be spit and trampled upon and lied to by ignorant social climbers whose sole claim to superiority is ability to kick 'niggers' when they are down" (Du Bois 1935, p. 335).

African American community leaders, parents, and the NAACP worried about the future of their teachers, schools, and universities, and they initially fought to ensure that their institutions were equal to white schools (Patterson 2001). However, in 1950, "after much debate within the NAACP … Marshall [dared] to demand the demolition of Jim Crow in the schools" (Patterson 2001, p. 7).

There have been numerous discussions among scholars who question the success of school integration, the possibility of Marshall and his attorneys fighting for "separate-but-equal" instead of fighting for school integration, and the possible outcomes for African American children. Many parents who attended integrated schools feel positively about the benefits they received and feel good about their children attending integrated schools. The lives of millions of Americans, white and black, have been profoundly influenced by the *Brown* decision. The failure of the federal and state courts to preserve the gains since *Brown v. Board of Education* is as deeply troubling as the false notion that segregated schools are more beneficial for children (Boger and Orfield 2005).

THE RESEGREGATION OF SCHOOLS

In the early twenty-first century public schools are more racially segregated. The Harvard Civil Rights Project (2006) reports that more than 70 percent of African American students attend public schools that are overwhelmingly nonwhite. There have been significant challenges against affirmative action in federal and state courts. According to Gary Orfield and Chungmei Lee of the Harvard Civil Rights Project:

> Since the Supreme Court authorized a return to segregated neighborhood schools in 1991 [*Board of Education of Oklahoma City v. Dowel* (1991)], the percentage of black students attending majority nonwhite schools increased in all regions from 66 percent in 1991 to 73 percent in 2003–2004.… Over the twelve-year period, the percent of Southern black students in majority non-white schools rose from 61 percent to 71 percent, and the percent of black students in such schools grew from 59 to 69 percent in the Border States. (Orfield and Lee 2006, pp. 9–10)

In 2006 the Supreme Court agreed to hear two cases, *Parents Involved in Community Schools v. Seattle School District* and *Meredith v. Jefferson County Board of*

Education. Based on the Supreme Court's decision, these cases could overturn *Brown*. The two cases focus on the right of public schools to decide, in their efforts to promote diversity, where children should go to school based on their race. The white parents in both cases want their children to go to their neighborhood schools. In response to the Supreme Court's agreement to hear these cases, over 500 social scientists signed a statement urging the Supreme Court to allow American public schools to maintain their ongoing efforts to diversify public schools. Crystal Meredith, the mother of one of the students and the person who filed the *Meredith v. Jefferson County Board of Education* lawsuit, thinks that a policy that color codes any child denigrates and damages that child's self-esteem (Benac 2006). The issue of self-esteem, self-worth, and feeling inferior was a central part of the doll research conducted by Clark that was instrumental in the 1954 Supreme Court decision.

Margaret Beale Spencer (1982, 1984), however, criticized Clark and his doll studies research. She conducted extensive research into the relationship between identity and the self-esteem of African American children. Her findings indicate that even though "preschoolers show majority group racial attitudes[,] eighty percent of the sample obtained positive self-concept scores, while demonstrating pro-white biased cultural values on a racial attitude and preference measure" (Spencer 1984, p. 440). Therefore the children in the Clark doll study who chose the white doll were not necessarily demonstrating that their self-esteem was damaged or that they felt inferior because they picked the white doll. Spencer felt that black children chose the white doll because they knew it was valued by society. "Even the Clarks found that seven-year old black children had largely shifted in preference behavior; they more frequently preferred the black dolls" (Harpalani 2004, p. 6).

In the 1940s some scholars criticized the implementation of Clark's test and the difference in the aesthetics of the dolls. Since black dolls were difficult if not impossible to find in the 1940s, the white doll was more aesthetically appealing and thus one of the reasons black children picked it (Harpalani 2004). However, in 2005 the high school student Kiri Davis created a video, *A Girl like Me*, that demonstrated that young African American children are still choosing the white doll over the black doll, even though both dolls are aesthetically similar. Indeed there was not a consensus in the African American community about what to do in the 1950s, and there is not a consensus in the early twenty-first century about the success of *Brown v. Board of Education* in assuring quality education for black children.

SEE ALSO Brown v. Board of Education*, 1955; Civil Rights; Civil Rights Movement, U.S.; Civil Rights, Cold War; Clark, Kenneth B.; Cold War; Desegregation; Desegregation, School; Integration; Marshall, Thurgood; National Association for the Advancement of Colored People (NAACP); Schooling in the USA; Segregation; Separate-but-Equal; Supreme Court, U.S.; Warren, Earl*

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BROWN V. BOARD OF EDUCATION, 1955

The original intent of the 1954 Supreme Court decision in *Brown v. Board of Education of Topeka* was to dismantle the separate-but-equal policy in American public schools. Joe Feagin (2004, p. 68) argues that the language used by Chief Justice Earl Warren (1891–1974), who wrote the *Brown* opinion, intentionally focused only on public schools: "in the field of public education, the doctrine of 'separate but equal' has no place. Separate educational facilities are inherently unequal." However, the landmark *Brown* decision did not put an end to segregation in public schools due to the hostile response the decision received from white elites.

Derrick Bell (2004, p. 18) argues that Warren's use of extremely ambiguous language in his opinion hindered the implementation of desegregation. Specifically, Warren stated that "because of the wide applicability of this decision and because of the great variety of local conditions, the formulation of decrees in these cases presents problems of considerable complexity." With these words, the Supreme Court postponed any immediate action and ordered the plaintiffs to return to court at a later date to address the issue of implementation.

Consequently, the 1954 *Brown* decision had to be revisited one year later in the *Brown* II case, which specifically addressed the issue of remedying racial segregation in American educational facilities. White southerners objected to the Supreme Court's 1954 ruling, and openly expressed racist sentiment, insisting that they had no intention of integrating the public school system. Furthermore, the consensus among local courts and the white public generally was that school desegregation could not be achieved. The Supreme Court faced outright resistance from state and local branches of government and from lower courts. With this social backdrop, the Court heard legal arguments in 1955 concerning the issue of implementation, and issued the *Brown* II decision.

According to Bell:

> The Court expected a prompt and reasonable start toward full compliance, with defendants carrying the burden of showing that requests for additional time were necessary in the public interest and consistent with good faith compliance at the … earliest practicable date.… The court returned the cases to the district courts with the admonition that orders and decrees be entered to admit plaintiffs to public schools on a racially nondiscriminatory basis, "with all deliberate speed." (Bell 2004, p. 18)

Bell suggests that the Court, in using such weak language as "all deliberate speed," confirmed that its earlier *Brown* decision was "more symbolic than real" (2004, p 19). The phrase "with all deliberate speed" was met with a wide range of responses. As Paul Finkelman points out, "*Brown* II might have been more forceful and direct. In hindsight we might argue that there should have been more emphasis on speed and less on deliberate" (2004, p. 36).

Bell describes how federal judge J. Harvie Wilkinson III, "two decades after *Brown*, offered practical details why *Brown* II was a mistake.… The enormous discretion of the trial judge in interpreting such language as all 'deliberate speed' and 'prompt and reasonable start' made his personal role painfully obvious" (2004, p. 19). Judges who wanted to implement desegregation were often met with violent opposition from local whites when they used the words of the Supreme Court. Mindful of the history of racial violence against African Americans in the South, these judges cautiously phrased how the implementation of school desegregation would take place to avoid a violent backlash against African American communities. Furthermore, the failure of the Court to delineate a specific remedy for school desegregation allowed judges who favored racial segregation the means to stall, thus perpetuating segregation in education (Kluger 2004).

In the face of massive resistance from white southerners and from southern courts and legislatures, it took nearly twenty years for the United States to begin large-scale implementation of the *Brown* decision (Feagin 2004). Today, although racial segregation in schools can no longer be legally imposed, many American schools from kindergarten through twelfth grade remain racially segregated, and in some regions even more segregated than they were before *Brown*. Education scholars have suggested that this segregation is largely the result of the successful stalling techniques employed in the South, combined with de facto racism in the North, all of which was facilitated by the "all deliberate speed" phrasing of the Supreme Court in 1955 (Orfield and Eaton 1997).

SEE ALSO Brown v. Board of Education*, 1954; Desegregation, School; Education, USA; Racism; Segregation; Supreme Court, U.S.*

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BRYAN, WILLIAM JENNINGS

SEE *Scopes Trial.*

BUBBLES

Bubbles occur when there is excessive investment in financial assets, such as stocks, or in real assets, such as housing. The bubble "bursts" when the value of the investment plummets. The value of the investment may plummet for several reasons, including (1) investors realizing that they previously had overvalued the investment, resulting in a massive selling of the investment, and/or (2) the price of what the investment produces falls.

One of the most famous speculative bubbles in history is Dutch Tulipmania (1634–1638), which involved people mortgaging their homes and industries to buy tulip bulbs, which they expected to resell at higher and higher prices. These expectations were based on past increases in prices. In early 1637 prices for some bulbs fell from a peak of several times a typical person's annual income to almost nothing. The Mississippi Bubble (1719–1720) and the South Sea Bubble (1720) involved the taking over of part of (respectively) France's and England's national debts by powerful trading monopolies. Expected monopoly profits from expanding trade drove these bubbles. When people lost faith in those monopolies, the value of their stocks plummeted. The U.S. stock market enjoyed spectacular growth during the 1920s, and people hoping to get rich through the stock market used ever increasing amounts of credit to buy more stocks. The bursting of this stock market bubble in 1929 ushered in the Great Depression. Likewise, the bursting of the Japanese bubble in the 1980s ushered in the worst recession that Japan had suffered since World War II. The Japanese bubble was driven partially by Japanese companies using the money from selling stocks for speculative purposes rather than to produce goods and services that could be sold to the public.

Although Albert Frederick Mummery and John Atkinson Hobson only briefly mention "bubble companies" in *The Physiology of Industry* ([1889] 1989, p. 140), their book provides one of the earliest analyses of what causes excessive investment (bubbles). They argue that the ultimate goal of investment is to produce goods for consumption. If there is no one to consume what the investment produces, then there is no ultimate value gained by investing. A bubble occurs when excessive savings leads to excessive investment that causes excessive production of goods that will not be bought due to insufficient consumption. If one person increases his or her savings, then others must increase their consumption in order to make the first person's savings valuable. If everyone saves more, then the goods produced by using the increased savings will not sell, making the increased savings worthless. According to Mummery and Hobson, excessive investment is synonymous with underconsumption. To produce sustainable growth, a correct mix must be found between savings, which is needed to finance investment, and consumption, which is needed to buy what the investment produces.

A global perspective can be added to the above analysis by noting that a correct mix of savings and consumption needs to be found on an international level. In a globalized world, countries with excess savings can export their extra savings to countries with excess consumption. One way to export savings is by fixing the exchange rate below its true value to another currency (such as the U.S. dollar), thereby encouraging exports and discouraging imports and thus lowering national savings.

Because bubbles involve "excessive" investment, they logically involve people making mistakes. These mistakes can be based on overreacting, following the herd (fads), decision making by inexperienced traders, viewing investments as a gamble (and enjoying the gambling), or basing

future expectations solely on performance in the recent past. However, contemporary social science is built on an assumption of "rationality," and the above explanations imply that people make "irrational" mistakes. Thus, many theorists either deny that bubbles occur, or they try to find a rational basis for bubbles.

One explanation that denies that bubbles occur is based on the premise that asset markets adjust more quickly than goods markets. Because of this, a shock in the goods markets can create what appears to be an exaggerated reaction (bubble) in the asset market; however, contrary to appearances, these reactions actually involve the entire system trying to achieve a new equilibrium as quickly as possible. Similar models have been built based on capital, money, and cash-in-advance constraints. Taking a different tack, some explanations hold that high uncertainty about the future productivity of a new technology can cause what looks like a bubble, but that it will go away once the uncertainty is eliminated.

Some explanations that attempt to find a rational basis for bubbles are based on different investors having different beliefs (or information) and on short-selling constraints. Simon Gilchrist, Charles P. Himmelberg, and Gur Huberman show that, under these conditions, firms can issue new shares at inflated prices (2005). By so doing they reduce the cost of capital and increase real investment. Furthermore, they show that even large bubbles are not eliminated in equilibrium. Another group of theories argue that the "results" of bubbles may be "rational" due to the bubbles causing dynamically inefficient states (states with excess investment) to become more efficient (i.e., to reduce their excess investment).

Despite this last group of theories, most experts agree that it is best to avoid bubbles. The chairmen of the central banks of the United States and Japan in the 1990s (Alan Greenspan and Yasushi Mieno, respectively) both emphasized reducing speculative bubbles. One way to reduce the chance of speculative bubbles is to warn investors of excessive investment; Greenspan is well known for repeatedly condemning "irrational exuberance" in the U.S. stock market in the 1990s. Other policy responses are to increase taxes on investment and, for countries with excess investment, to promote consumption. Because the rich tend to invest more than the poor and the poor tend to consume more than the rich, policies that create a more equitable income distribution help.

To the extent that some speculative bubbles are based on incomplete or misleading information, the government can play a role in improving information. Furthermore, the punishments should be severe for corporate leaders who are found guilty of misleading investors, and insider trading should be prohibited because it gives insiders an incentive to create a speculative bubble and then exit right before the bubble bursts.

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BUCK, CARRIE

SEE *Sterilization, Human.*

BUDDHA

Though often used in a general sense to identify any individual who has achieved enlightenment without the aid of others, the term *Buddha* usually denotes the historical founder of Buddhism, Siddhārtha Gautama. Scholars generally deem Gautama a historical figure who passed along to his followers the foundations of Buddhist philosophy and practice. Frequently referred to as "the Buddha," or the "Enlightened One," most Buddhists believe Gautama to be the Buddha for this age (though there have been numerous buddhas throughout history). Accurately reconstructing the precise details of the Buddha's life and teaching, however, proves difficult. The first biographies of his life did not appear until centuries after his death and it is often impossible to ascertain exactly where the biographies reconstruct the Buddha's life according to ideal patterns as opposed to historical realities.

LIFE

Conventionally, the Buddha was believed to have lived circa 560–480 BCE, though more-recent scholarship suggests the later dates of circa 485–405 BCE. Born in northern India (present-day Nepal), Gautama's father was king of the city of Kapilavastu. Just prior to his birth, Gautama's biographers hold that Gautama's mother dreamed of a white elephant coming into her womb; this

in turn led soothsayers to predict Gautama's future as a buddha. Prepared throughout his previous lives for this his final reincarnation, Gautama could walk and talk immediately following his birth. Throughout his youth, however, Gautama's father, Śuddhodana, sought to guard him against suffering and prepared Gautama to succeed him as king. Gautama also married during this period and had a son, Rāhula (according to some traditions Rāhula [literally "fetter"] was not born until the day Gautama achieved enlightenment).

At age twenty-nine, however, Gautama's life profoundly changed when he ventured outside the palace and encountered "four signs": an old man, a sick person, a corpse, and a mendicant (Buddhist sources indicate that the gods orchestrated these events). Troubled by what he saw, Gautama then took on the life of an ascetic for the next several years and searched for an answer to the suffering he had encountered. In his search for enlightenment, Gautama excelled in meditation and ascetism (at one point it was said that he lived off a daily ration of one pea). Two teachers, Udraka Rāmaputra and Alāra Kālāma, guided him during this period. Gautama eventually rejected the positions of his mentors, though, and concluded that strict self-denial did not free an individual from suffering.

According to Gautama's biographers, six years after leaving the palace he finally experienced enlightenment. One night he sat under a bodhi tree determined not to leave until he found an answer to the perennial problems of suffering and death. A period of temptation ensued as Māra, the god of desire, assailed him through various means. Gautama resisted these assaults, however, and meditated throughout the night. By dawn, Gautama's meditation culminated in a breakthrough. Though some traditions differ as to the exact nature of his enlightenment that night, the biographers agree that Gautama achieved the status of a buddha; he eliminated the ignorance that trapped individuals in the suffering (*duḥkha*) associated with the endless cycle of reincarnation.

TEACHINGS

Following this experience, the Buddha's biographers indicate that he basked in his experience for several weeks and stayed near the tree; soon thereafter he preached his first sermon at Deer Park in Sarnath, passing along to others his insight into the dharma (the truth). This first sermon is often referred to as the "first turning of the wheel of dharma." Though it is important to note that many of the Buddha's teachings reflect the influence of Hinduism, the Buddha thoroughly modified various Hindu concepts and did not embrace the Hindu caste system. The theme of his teaching revolved around the Four Noble Truths. The first Noble Truth stipulated the reality of suffering. Put simply, suffering persists throughout all the various stages of life. The second Noble Truth indicated that desire (*tṛṣṇā*) originated from ignorance (*avidyā*) and inevitably caused suffering. According to the Buddha, humans mistakenly posit the existence of an autonomous, permanent self (*ātman*). As such, they inevitably experience suffering as they try to maintain a permanent hold on things that are constantly changing and impermanent. Instead, the Buddha's teachings advanced the doctrine of "no-self" and insisted on the impermanence of all things. The third Noble Truth, the cessation of suffering (*nirvāṇa*, literally "blowing out"), claimed it was possible to eliminate desire and ignorance and free an individual from suffering. Finally, the fourth Noble Truth pointed to the path that brings about the cessation of suffering, often referred to as the Eightfold Path. The path includes (1) right view, (2) right intention, (3) right speech, (4) right conduct, (5) right livelihood, (6) right effort, (7) right mindfulness, and (8) right concentration. This "Middle Path" avoids both the extreme of self-denial and the extreme of self-indulgence, and leads an individual to recognize the impermanence of all things.

Often, the different parts of the Eightfold Path are grouped under three main headings: moral precepts, concentration, and wisdom. The moral precepts (*śila*) usually include basic prohibitions against killing, stealing, lying, sexual promiscuity, and intoxication (these are commonly accepted by most Buddhists, though monks and nuns usually adhere to more stringent guidelines). Concentration (*samādhi*) involves various forms of meditation that differ among Buddhist traditions. Generally, however, Buddhist meditation requires careful control of the process of breathing and discipline of the mind. Finally, wisdom (*prajñā*) reflects the necessary insights required to eliminate desire and ignorance and achieve enlightenment.

The Buddha would continue to teach throughout northeastern India for the next forty-five years of his life, and he soon attracted a cadre of followers. Many of his biographies say relatively little about this period of the Buddha's life. Tradition indicates that the Buddha formed a magical double of himself, that he ascended to heaven to teach his mother who had died, and that he tamed a wild elephant. The Buddha also formed a monastic order of monks and nuns, though the Buddhist community (*saṇgha*) included laymen and laywomen as well. During this time, other accounts also suggest that the Buddha's authority was challenged by his cousin Devadatta.

At age eighty, the Buddha died. Just prior to his death, the Buddha delivered one final message and lay down between two trees. According to tradition, the Buddha's death signaled his *parinirvāṇa*, or his release from the cycle of birth and rebirth. Following this event,

his followers cremated his body and distributed his relics to be enshrined in what are known as stupas.

With no named successor, a council of elders formed and orally perpetuated the Buddha's teachings. Centuries later, canonical collections of his teachings were created, such as the Tripiṭaka. These scriptures contain material directly attributed to the Buddha (*buddhavacana*) as well as authoritative commentaries. Elaborate works of art depicting various events from the Buddha's life were also developed. Devotees lavished gifts on relics associated with the Buddha and annually celebrated his birth, enlightenment, and entrance into nirvana. Sites associated with the Buddha's life served as places of pilgrimage. These included his birthplace (Lumbinī), the setting where he achieved enlightenment (Bodh Gayā), the location of his first sermon (Deer Park), and his place of death (Kuśinagara).

GROWTH OF BUDDHISM

Because Buddhism—unlike Hinduism—operated outside of the caste system, allowing its followers to interact freely with others, this helped it to spread beyond India and into other parts of Asia following the Buddha's death. Different Buddhist traditions eventually took shape, spreading and elaborating on the Buddha's teachings within various cultural contexts. The Theravāda tradition (literally "doctrine of the elders") claims to adhere strictly to the Buddha's original teachings. The Mahāyāna tradition, however, often referred to as the "Great Way," recast many of the more traditional positions. In one key example, the Mahāyāna give a higher priority to the bodhisattva—the person who puts off nirvana to help others achieve enlightenment—as opposed to the arhat ideal, in which individuals focus on achieving enlightenment for themselves. The Buddha's life, then, was reread as the quintessential model of the bodhisattva ideal. Numerous other traditions would follow as the religion initiated by the Buddha spread, ultimately attracting followers across the globe. By the nineteenth and twentieth centuries, for example, many Westerners became fascinated by the Buddha's life and teachings, as can be seen in the popularity of *Siddhartha* (1922), a novel by Hermann Hesse. As Buddhism attracted adherents in countries such as the United States, however, many criticized Westerners for promoting superficial forms of Buddhism and of the Buddha's teachings.

At the start of the twenty-first century there were approximately 400 million Buddhist adherents worldwide. Though the various Buddhist schools differ on the exact nature of the Buddha's teachings and how to interpret them, the Buddha remains a venerated figure for all Buddhists; his life and teachings continue to shape the religious sensibilities of numerous followers around the world.

SEE ALSO *Buddhism; Hinduism; Orientalism; Reincarnation; Religion; Visual Arts*

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BUDDHISM

With roughly 400 million adherents worldwide, Buddhism represents one of the world's largest religious traditions. Originating in India, the majority of Buddhists are now found in China, Japan, North and South Korea, Mongolia, Sri Lanka, Thailand, Tibet, and North and South Vietnam. Buddhism also spread to Western nations such as the United States and Canada beginning in the nineteenth century. Since its inception, Buddhism has developed along numerous trajectories and in different cultural settings. Though certain commonalities historically unite the various Buddhist communities—such as a commitment to the "Three Jewels of Refuge" (i.e., the Buddha, his teachings, and the Buddhist monastic community)—it is difficult to isolate a definitive set of beliefs and practices shared by all Buddhists.

EARLY HISTORY AND PRACTICES

The history of Buddhism begins with the career of Siddhārtha Gautama. Scholars generally deem Gautama a historical figure who passed along to his followers the foundations of Buddhist philosophy and practice. Traditionally, Gautama was believed to have lived circa 560–480 BCE, while more-recent scholarship suggests the later dates of circa 485–405 BCE. Though Buddhists

maintain that there have been numerous buddhas throughout history, most consider Gautama the Buddha for this age (though some hold that there can be more than one buddha per age). Accurately reconstructing the precise details of the Buddha's life and teaching, however, proves difficult. The first biographies of his life did not appear until centuries after his death and it is often impossible to ascertain exactly where the biographies reconstruct the Buddha's life according to ideal patterns as opposed to historical realities.

According to tradition, Gautama's previous lives prepared him for his final reincarnation before achieving the status of Buddha. At age twenty-nine, Gautama's life was profoundly altered when he ventured outside the palace and encountered "four signs": an old man, a sick person, a corpse, and a mendicant (Buddhist sources indicate that the gods orchestrated these events). Troubled by what he saw, Gautama embraced the life of an ascetic for the next several years and searched for an answer to the suffering he had encountered. According to Gautama's biographers, six years after leaving the palace he finally experienced enlightenment. One night he sat under a bodhi tree, determined not to leave until he found an answer to the perennial problems of suffering and death. Though some traditions differ as to the exact nature of his enlightenment that night, the biographers agree that Gautama achieved the status of a buddha; he eliminated the ignorance that trapped individuals in the suffering (*duḥkha*) associated with the endless cycle of reincarnation.

Following this experience, the Buddha preached his first sermon, often referred to as the "first turning of the wheel of dharma." Though it is important to note that many of the Buddha's teachings reflect the influence of Hinduism, the Buddha thoroughly modified various Hindu concepts and did not embrace the Hindu caste system. The theme of his teaching revolved around the Four Noble Truths. The first Noble Truth stipulated the reality of suffering. Put simply, suffering persists throughout all the various stages of life. The second Noble Truth indicated that desire (*tṛṣṇā*) originated from ignorance (*avidyā*) and inevitably caused suffering. According to the Buddha, humans mistakenly posit the existence of an autonomous, permanent self (*ātman*). As such, they inevitably experience suffering as they try to maintain a permanent hold on things that are constantly changing and impermanent. Instead, the Buddha's teachings advanced the doctrine of "no-self" and insisted on the impermanence of all things. The third Noble Truth, the cessation of suffering (*nirvāṇa*, literally "blowing out"), claimed it was possible to eliminate desire and ignorance and free an individual from suffering. Finally, the fourth Noble Truth pointed to the path that brings about the cessation of suffering, often referred to as the Eightfold Path. The path includes (1) right view, (2) right intention, (3) right speech, (4) right conduct, (5) right livelihood, (6) right effort, (7) right mindfulness, and (8) right concentration. This "Middle Path" avoids both the extreme of self-denial and the extreme of self-indulgence and leads an individual to recognize the impermanence of all things.

Often, the different parts of the Eightfold Path are grouped under three main headings: moral precepts, concentration, and wisdom. The moral precepts (*śila*) usually include basic prohibitions against killing, stealing, lying, sexual promiscuity, and intoxication (these are commonly accepted by most Buddhists, though monks and nuns usually adhere to more stringent guidelines). Concentration (*samādhi*) involves various forms of meditation that differ among Buddhist traditions. Generally, however, Buddhist meditation requires careful control of the process of breathing and discipline of the mind. Finally, wisdom (*prajñā*) reflects the necessary insights required to eliminate desire and ignorance and achieve enlightenment.

Following his experience of enlightenment, the Buddha continued to teach throughout northeastern India for the next forty-five years. With no named successor upon his death, a council of elders formed and orally perpetuated the Buddha's teachings. Centuries later, the oral traditions associated with the life of the Buddha were codified in Buddhist scriptures; these scriptures contained material directly attributed to the Buddha (*buddhavacana*) as well as authoritative commentaries. The earliest extant canon, the Pāli canon (also referred to as the Tripiṭaka), consists of Vinaya (monostic law), Sūtras (the Buddha's discourses), and Abhidhamma (commentaries). The Chinese canon and the Tibetan canon took shape at later dates and incorporated new material.

As Buddhism grew following the Buddha's death, ritual practices developed along various trajectories. For example, though differences appeared among the various Buddhist traditions regarding their view of the Buddha, he remained a venerated figure for all Buddhists. Devotees lavished gifts on relics associated with the Buddha and annually celebrated his birth, enlightenment, and entrance into nirvana. Sites associated with the Buddha's life soon became places of pilgrimage. These included his birthplace (Lumbinī), the setting where he achieved enlightenment (Bodh Gayā), the location of his first sermon (Deer Park), and his place of death (Kuśinagara). Beginning in the common era, artists created images of the Buddha. Furthermore, Buddhist monastic communities (*saṇgha*) quickly formed after the Buddha's death. Ordination ceremonies took shape for both monks and nuns, signaling their abandonment of worldly pursuits. Laypersons also began to venerate monks for their spiritual attainments and frequently showered them with gifts and offerings. Buddhist funeral and protective rites also emerged.

In time, Buddhism spread beyond India and also began to influence the activities of states. Beginning in the third century BCE, for example, Aśoka (c. 300–232 BCE, the emperor in India, took on the title of "righteous king" (*dharmaraja*) and formally supported the monasteries. Aśoka's son, Mahinda (c. 270–c. 204 BCE), then carried the Buddhist message outside his homeland and attracted followers in Southeast Asia. At the beginning of the common era, Buddhist missionaries entered China and spread their message through the efforts of figures such as Bodhidharma (c. early fifth century CE) and Kumārajīva (350–409/413 CE). While early Hindu missionaries also accompanied traders and merchants and helped spread Hinduism to Southeast Asia during the same period, Buddhism had key advantages that facilitated its growth. In particular, unlike Hinduism, Buddhism operated outside of the caste system, allowing its followers to interact freely with others. (This advantage carried over into the twentieth century as the Indian politician B. R. Ambedkar gained a large following among fellow Dalits ["untouchables" within the Hindu caste system]; Ambedkar viewed Buddhism as a solution to the social inequality associated with the Hindu caste system and encouraged Hindus to convert.) Through these missionary efforts, different Buddhist traditions formed as Buddhist practices and beliefs often underwent significant modification as they took root in various cultural contexts.

MAJOR BUDDHIST TRADITIONS

The Theravāda (literally "doctrine of the elders") tradition claims to adhere strictly to the Buddha's original teachings. It treats the Pāli canon as the only authoritative Buddhist scriptures and perpetuates the Hīnayāna tradition from the earliest days of Buddhism (within Buddhist literature, Hīnayāna, literally the "Inferior Way," served as a pejorative term directed at more conservative Buddhists in contrast to followers of the later Mahāyāna tradition). Very strong in Burma (now Myanmar), Cambodia, Laos, Sri Lanka, and Thailand, Theravāda first spread to Southeast Asia with the missionary activities of Mahinda in Sri Lanka. Unlike other Buddhist traditions that recognize several present buddhas and bodhisattvas, Theravāda focuses solely on the life of the historical Buddha. Ideally, every individual should imitate the Buddha's example and achieve enlightenment through self-effort. For this reason, the monastic ideal of achieving personal enlightenment (arhat) serves as the focal point of Theravāda Buddhism. Monastic complexes—often consisting of a bodhi tree and images of the Buddha, as well as stupas where relics associated with the historical Buddha are enshrined—facilitate the veneration of the Buddha. According to tradition, it is impossible for laypersons to achieve enlightenment (in some locales, however, a form of temporary ordination has arisen that serves as a rite of passage into adulthood). For nonelite practitioners, ritual and meditation often provide a means to gain merit and improve their lot in life when reincarnated, or to better their present circumstances.

The Mahāyāna tradition (literally the "Great Way") developed later than the Theravāda tradition and recast many of the more traditional Buddhist positions; it also eventually attracted a larger following than the Theravāda tradition. Particularly strong in China, Japan, Korea, and Tibet, many scholars date the beginning of Mahāyāna to around the second or first century BCE. Groups within this Buddhist tradition usually focus on particular teachings of the Buddha, referred to as the "second turning of the wheel of the dharma," believed to have been passed along by a select group of Buddhists for centuries following his death. Unlike Theravāda Buddhism, Mahāyāna allows for the possibility of multiple buddhas to exist at the same time. Not surprisingly, alongside the historical Buddha, a number of other buddhas and bodhisattvas have appeared over the centuries. Accordingly, various Mahāyāna festivals have developed to venerate these figures. In general, Mahāyāna gives a higher priority to the bodhisattva, the person who puts off nirvana to help others achieve enlightenment; it also stresses the virtues of compassion (*karuṇā*) and wisdom (*prajñā*). The Buddha's life is reread as the quintessential model of the bodhisattva ideal that values highly a strong sense of communal responsibility. Usually, the Mahāyāna sense of communal responsibility is read as a reaction to the Theravāda arhat ideal in which Buddhists focus on achieving enlightenment for themselves in an individualistic quest for nirvana. Some scholars, however, have begun to complicate the sharp historical distinctions between the Mahāyāna and Theravāda traditions.

A third major tradition in Buddhism, Vajrayāna (literally the "Diamond Way," also referred to as tantric Buddhism) emerged around the third or fourth century CE as an amalgamation of Buddhism, Hinduism, and other popular religious practices in the region. According to Vajrayāna teachings, principles in the world that appear to be fundamentally opposed are actually united and one. Enlightenment occurs when individuals grasp this reality. Whereas earlier Buddhist sources emphasized a long path to enlightenment, Vajrayāna offers instead enlightenment in this lifetime through the disciplined practice of meditation. Often, adherents visualize various deities during meditation. Among elite practitioners, these deities are often considered representations of inner states within the individual, though this is less often the case for the average adherent.

Vajrayāna proved very influential in the formation of Tibetan Buddhism, though the two terms are not synonymous. (Tibetan Buddhism is often considered a branch of

Mahāyāna Buddhism, as is Vajrayāna.) According to Tibetan sources, Buddhism arrived in the region during the reign of the first Buddhist emperor Songtsen Gampo (Tib., Srong-btsan sgam-po, d. 649/650). By the twelfth century various Tibetan Buddhist sects emerged. One particular religious order, the Gelukpa (Tib., Dge-lugs-pa, literally "Virtuous Ones"), began to rule in Tibet by the mid-seventeenth century.

Tibetan Buddhists consider the Dalai Lama (a member of the Gelukpa school) an incarnation of the lord of compassion (Avalokiteśvara) and the rightful spiritual and temporal leader of the state. Each Dalai Lama is believed to be a reincarnation of the first Dalai Lama, Gedun Drupa (Tib., Dge-'dun-grub-pa, 1391–1474). As a result of the Dalai Lama's role, Buddhism has historically been intimately tied to politics in Tibet more so than in any other state. The current Dalai Lama (b. 1935), however, lives in Dharmsala, India, following the Chinese invasion of Tibet in 1950 and his exile from there in 1959. Nevertheless, he has gained international recognition for his nonviolent protests against Chinese abuses of Tibetans and received the Nobel Peace Prize in 1989.

Various schools within the three main traditions named above (Theravāda, Mahāyāna, and Vajrayāna) have developed over time. In Japan, for example, the Shingon school represents a form of tantric Buddhism, whereas the eclectic Tendai school adheres more closely to traditional Buddhist practices. Tendai was eventually overshadowed by its more popular offshoots: Pure Land Buddhism, Zen Buddhism, and Nichiren Shōshū, a particularly mission-oriented form of Buddhism that was reinvigorated beginning in the twentieth century through the Sōka Gakkai organization. Numerous other schools have also formed as distinct Buddhist movements within different Asian countries.

MODERN BUDDHISM

Buddhism has undergone important changes during the modern era. Beginning in the sixteenth century, Buddhist nations for the first time came into contact with Western culture as well as Western imperialism. At times, adherents adapted Buddhist practices to Western—and particularly Christian—ways, as can be seen in the adoption of Sunday meetings and Sunday schools by some Buddhists (in the West, some Buddhist groups also called themselves "churches"). In another sign of changes brought about through globalization, Buddhist societies formed to unite Buddhists worldwide. These include the Maha Bodhi Society (1891), the World Fellowship of Buddhists (1950), and the World Buddhist Sangha Council (1966).

Ultimately, Buddhism spread to the West during the nineteenth and twentieth centuries. One form of Mahāyāna Buddhism, Pure Land Buddhism, would eventually find a significant following in the United States. One of the most prominent subbranches of the Mahāyāna tradition, Pure Land Buddhism focuses on the figure of Amida Buddha, who was believed to have formed the "Pure Land" once he achieved buddhahood. In turn, individuals who devote themselves to the Amida Buddha are reborn in this Pure Land and achieve enlightenment. In a significant revision of traditional Buddhist teachings, Pure Land Buddhism emphasizes trust in the Amida Buddha as the key to enlightenment and places less stress on self-effort. Scholars often point to the strong similarities between these teachings and aspects of Christianity to help explain the success of Pure Land Buddhism in the West.

Zen Buddhism, another Mahāyāna school, has also been successful in the West. Literally Japanese for "meditation," the Zen tradition grew out of the Chan school in China and traces its lineage back to the historical Buddha. The movement stresses experience through the disciplined practice of meditation and often plays down the importance of Buddhist scriptures. There are three contemporary schools in Japan—Rinzai, Sōtō, and Ōbaku—that perpetuate these highly specialized forms of meditation.

In the West, Rinzai Zen first gained attention when Shaku Sōen (1859–1919) attended the World's Parliament of Religions in Chicago, Illinois, in 1893. He wrote books extolling Zen as a rational religion that fit well with modern trends. During the first half of the twentieth century, Shaku Sōen's disciple, D. T. Suzuki (1870–1966), then continued to promulgate a form of Zen in the United States that was less rigorous than traditional Zen. As awareness of Zen grew in the United States, it eventually became incorporated into popular culture. Though sometimes criticized for promoting a superficial form of Zen, figures such as Allen Ginsberg (1926–1997), Jack Kerouac (1922–1969), Gary Snyder (b. 1930), and Alan Watts (1915–1973) developed what is commonly referred to as "Beat Zen." Focusing on Rinzai Zen, which stresses sudden enlightenment, these figures embraced a popularized form of Zen during the social upheavals of the 1950s and 1960s in the United States. Here, Zen represented the ideals of liberation and freedom and served as a tool to combat the perceived materialism, imperialism, and consumerism of American society. In addition to Rinzai Zen, Sōtō Zen (which lacks Rinzai Zen's focus on sudden enlightenment and instead emphasizes quiet meditation) has also attracted a significant number of adherents in various parts of the United States as individuals such as Suzuki Shunryū (1904–1971) established meditation centers. The growth and popularity of both Rinzai and Sōtō Zen in the United States during the twentieth century reflect the increased awareness of Buddhism in the West.

The very practical, empirical nature of Buddhism has also facilitated various forms of spirituality that intermix elements from other religious traditions with Buddhism. Thomas Merton (1915–1968) serves as a prominent example. Merton, an American Catholic monk, sought to develop a dialogue between Christian and Buddhist forms of meditation during the mid-twentieth century (see, for example, his *Mystics and Zen Masters* [1967]). Also indicative of combinative trends, many Jews have either embraced Buddhism or sought to combine Buddhist insights with their own heritage (see, for example, Rodger Kamenetz's *The Jew in the Lotus: A Poet's Rediscovery of Jewish Identity in Buddhist India* [1994]). Some individuals have also combined Buddhist concepts with various aspects of Western science. While figures such as Watts sought to explain Zen using the terminology of Western science and psychology, others such as Mark Epstein (b. 1953) have also used Buddhist concepts to inform psychotherapeutic models.

Finally, Engaged Buddhism (sometimes referred to as Socially Engaged Buddhism) also represents a recent development within Buddhism. Initiated by figures such as the Vietnamese monk Thich Nhat Hanh (b. 1926), the movement is in part a reaction to a perceived passivity in the contemporary practice of Buddhism. Followers attempt to enlist Buddhism on behalf of various causes and address social and ecological ills. Engaged Buddhism has attracted attention from Buddhist laypersons and monks in both the Eastern and Western world, and had an impact on mainstream Buddhism as a whole. Diverse in its forms and dispersed across the globe, Buddhism has shaped the religious sensibilities of countless adherents throughout history.

SEE ALSO *Ambedkar, B. R.; Buddha; Caste; Hinduism; Reality; Reincarnation; Religion*

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BULIMIA

SEE *Body Image.*

BULL AND BEAR MARKETS

The origin of the terms *bull* and *bear markets* is unclear. Don Luskin (2001) cites an English book by a Thomas Mortimer, printed in 1785 (*Every Man His Own Broker, or, A Guide to Exchange Alley*), that identifies a "bull" with a trader who invests heavily in stocks on borrowed money in the hope of selling at a profit before the loan repayment date. In contrast, a "bear" was a short-seller, that is, someone who borrows shares and sells them in the present and perhaps lends out as the proceeds at interest because he expects the price of stocks to decline after which he can buy the securities cheaply and return them to the lender. In any case, the terms *bull* and *bear markets* are popularly used and understood to mean durations of successive large stock price increases and large stock price decreases, respectively. The implication is that there is duration dependence in stock prices—that is, once prices begin increasing in a bull market, they tend to continue increasing, whereas decreasing prices in a bear market tend to continue decreasing.

However, there has been disagreement amongst researchers as to whether bull and bear markets exhibiting such duration dependence even exist. It is known that even if price changes are independent, they can after the fact seem to exhibit bull and bear phases; theories based on this idea hold that bull and bear markets are simply the result of after the fact categorization of stock market data. Other theories hold that bull and bear markets do exhibit predictability. And even if there is predictability in prices, they can be of two kinds—rational and irrational. Irrational cycles might be fueled by fads that ignite an increase in stock purchases and then die out, leading to mean reversion in prices. Rational cycles might exhibit bubble-like characteristics—although they might satisfy no-arbitrage conditions, they might still be influenced by nonfundamental factors.

One example of stock price predictability is an economy where, for some reason, a bubble develops, that is, asset prices differ from the present value of all future expected dividends. Prices each period are, nevertheless, equal to the sum of the present values of next period's expected dividend and next period's expected asset price. Each period, the economy finds itself in one of two regimes—one where the bubble persists and another where the bubble bursts; the greater the size of the bubble, the greater the probability of the bubble bursting. Simon van Norden and Huntley Schaller (2002) use U.S. stock market returns to test the (irrational) fads hypothesis set in a regime-switching model against a (rational) bubble alternative. They find in favor of the bubble alternative. However, the power of such tests depends strongly on the auxiliary assumptions used, as well as the alternative hypothesis specified. As a result, it is very difficult to reject the "irrationality" hypothesis entirely. For example, Jerry Coakley and Ana-Maria Fuertes (2006) find that market sentiment does play an important transitory role.

There is also a parallel literature that looks at mean reversion in stock prices and the existence of momentum effects in the context of investment strategies (e.g, Jegadeesh and Titman 1993). This literature finds negative autocorrelation in stock prices at short intervals and positive autocorrelation at longer intervals. In any case, there is now a solid body of work that seeks to use quantifiable rules to document and measure the bull and bear markets. There are two widely used algorithms—one by Gerhard Bry and Charlotte Boschan (1971) that mimics the qualitative rules used by the National Bureau of Economic Research to decide upon turning points of business cycles, and another that uses a Markov regime switching model (Maheu and McCurdy 2000).

Asset prices are used as signals by economic agents in several ways. First, because asset prices are considered to be aggregators of information and generally forward-looking, higher asset prices in a given sector are interpreted as greater growth potential in that sector, or concomitantly as a reduction in the cost of capital; this then allows investment to go where there is the greatest potential. Second, they are used as measures of value in various other contexts, such as in executive compensation. Third, asset prices, particularly real estate values, are also used by individuals as measures of wealth to help plan consumption. Finally, the Federal Reserve also uses asset prices to set monetary policy. When asset prices are divorced from true value, all these uses are affected. This is also true when there is a lot of asset price volatility, because the signal to noise ratio drops.

The integrity of the financial infrastructure can also be affected if there is an unexpected swing in asset prices, particularly downward, such as in October 1987, when the U.S. stock market dropped 23 percent in one day. The payments system could be affected, as well as the mechanisms for settling trades in securities markets. Also, because bank loans are often tied to property and stock market values, swings in asset prices are related to swings in lending and hence to swings in consumption and investment. These effects vary across countries. In financial systems characterized by a greater degree of arm's-length transactions, households are more sensitive to asset prices because market forces are used more than customary relationships for borrowing and investment purposes. Of course, such systems are overall more resilient and able to adjust to changes in growth opportunities. The empirical validity of asset market price swings causing swings in real activity is difficult to establish because any correlation in asset prices and real activity might be due simply to the reflection of future real activity in forward-looking asset prices.

There is also research that shows the generally negative effect of fluctuations in economic activity, that is to say business cycles on growth and human welfare. However, Matthew Rafferty (2005) shows that although unexpected volatility is related to lower growth, expected volatility is related to higher growth. Similarly, Jaume Ventura (2004) suggests that asset price bubbles could moderate the effect of financial market frictions and improve the allocation of investment across countries.

There has been more work recently on the globalization of business cycles and asset price cycles. This is related to the issue of correlation between different geographical asset markets, because lower correlation implies greater value for international portfolio diversification. François Longin and Bruno Solnik (2001) find that correlation between international equity markets has increased in bear markets, but not in bull markets. Javier Gómez Biscarri and Fernando Pérez de Gracia (2002) find that European stock markets seem to have become more concordant over time, as would be expected from the continuing integration of European financial markets. Furthermore, Christian Dunis and Gary Shannon (2005) find that, at least for the United Kingdom and the United States, there are still benefits from diversifying over emerging economy stock markets, ranging from Indonesia, Malaysia, and the Philippines to Korea, Taiwan, China, and India. However, the extent of such benefits may drop off with the continuing integration of India and China into world security and product markets.

SEE ALSO *Beauty Contest Metaphor; Bubbles; Business Cycles, Real; Economic Crises; Federal Reserve System, U.S.; Financial Instability Hypothesis; Financial Markets; Herd Behavior; Keynes, John Maynard; Market Correction; Speculation; Stock Exchanges; Stocks; Wealth*

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BULL MARKET

SEE *Bull and Bear Markets.*

BUNCHE, RALPH JOHNSON

c. 1904–1971

Ralph Johnson Bunche was an American social scientist and statesman. Two weeks after the State of Israel was established in May 1948, the United Nations Security Council sent a delegation to restore peace between the Arabs and Israelis. Under the leadership of Bunche, the delegation would be singularly successfully in achieving direct negotiations between the two groups over territory, an armistice, and a UN peacekeeping force. Yet, fate would have to intervene to put Bunche in the Nobel Prize–winning position when the original head of the delegation, the Swedish diplomat Folke Bernadotte (1895–1948), was assassinated, along with everyone in his car, on an Israeli road. Fortunately for Bunche, he was delayed by the police on his way to meet Bernadotte in their efforts to strengthen the UN role in the region.

Long before going to the Middle East, Bunche had built an academic foundation for his influential career in political science and international relations. That foundation is illustrated by his involvement with a diverse group of Howard University colleagues in a 1935 national conference on "race" in New York. In concert with sociologist E. Franklin Frazier (1894–1962), economist Abram Harris (1899–1963), and philosopher Alain Locke (1886–1954), among others, Bunche gave definition to the second (professorial) phase of his scholarly leadership. For much of his life he would engage in an evolving struggle to balance race-conscious and class-conscious approaches to political and economic analysis. At the same time, he could never easily abandon political engagement for scholarly detachment. He wanted to "change the world" enough to join leftist labor union protests as a young professor and to participate in civil rights demonstrations even after retirement. Yet, he often withdrew to Howard University social science conferences or immersed himself in African- or African American–oriented research. By 1953, however, when he returned to campus for the inaugural Phi Beta Kappa lecture, he had already reached the pinnacle of the third and defining phase of his career: he was a celebrated United Nations diplomat.

Somewhere between his work as a U.S. delegate in the formative weeks of the United Nations in the 1945 talks in San Francisco, and his mediation of the 1949 negotiations leading to an agreement on the Palestinian issues and a foundation for the State of Israel, Bunche left academics to become a renowned international peacemaker. However fragile the peace resolutions he helped fashion in Israel and Africa, they were as solid as any that followed. For example, he labored under hopeless circumstances with limited success in the former Belgian Congo to bring Patrice Lumumba (1925–1961) into reconciliation with military and separatist Congolese factions.

Although his indefatigable pursuit of international conflict resolution earned him the 1950 Nobel Peace Prize, he repeatedly expressed skepticism about the primacy of peace in the foreign policies of UN member

states. In addition to cautions about nuclear war in his speeches, he warned in his Nobel lecture that "some in the world … are prematurely resigned to the inevitability of war." He added: "among them are the advocates of the so-called 'preventive war,' who … wish merely to select their own time for initiating it" (Bunche 1950).

Returning to the United States, the discomfort he had long felt with American racism had become more difficult to tolerate. The optimism of his successful school-days in Los Angeles had long since faded. He had gone from valedictorian at UCLA (1927) to become the first black PhD (1934) in political science, graduating from Harvard University. Although it had not been easy, raised largely by his grandmother in Los Angeles after his early years in Detroit, he worked his way through the universities with some critical scholarship assistance. While supporting his wife, Ruth, with whom he would later have three children, he began working at Howard before he completed his doctorate. Yet the global demands of his career would continually place strains on his family life.

Once settled in the Political Science Department chairmanship at Howard, the black experience and the international exposure came together for him when he worked on the 1940s publication of the groundbreaking study of race relations with the Swedish sociologist Gunnar Myrdal (1898–1987). Although Bunche is not credited as an author of Myrdal's *An American Dilemma* (1944), the 3,000-plus pages of research he contributed to the Carnegie report attest to his indispensable role. Better suited to his earlier years than to the second phase of his life, when he saw class conflict as a pivotal issue, the study was optimistic about race relations. The country was increasingly coming to recognize the contradiction for the "democratic creed" that racial discrimination entailed, according to Myrdal, and a positive resolution of this "moral dilemma" could soon be expected. As for Bunche's views, they were less reflected in this conclusion than they were in his own short book, *A World View of Race* (1936), which suggests a more deeply rooted material basis for racial inequality (Henry 1995).

While Bunche continued to break racial barriers—for example, becoming the first black president of the American Political Science Association in 1954—he grew more race conscious. He shared the stage with Martin Luther King Jr. (1929–1968) in the 1963 March on Washington, and he shared King's reservations about the progress made and to be expected in American race relations. Ironically, the complexity of his thought and beliefs on this and many social issues was largely obscured by his success in world affairs. Still, given the breadth of his political views, he could not escape the intrusive attention of the Senate Judiciary Subcommittee on Internal Security in the heat of Washington's anticommunist hysteria. He was interrogated in 1953 about his presumed association with black communists and communist sympathizers. In particular, his 1930s organizing role in the National Negro Congress was targeted. An FBI initiative to charge him with perjury for denying membership in the Communist Party fell through because it was built on a misunderstanding of his civil rights politics.

In 1904, when Bunche was born, the United States was an isolationist country internationally that further isolated African Americans internally from access to society's resources. When he died in 1971, the United States was internationally engaged and interracially progressing, and he, far more than most leaders, had helped to make the changes possible.

SEE ALSO *Myrdal, Gunnar; Nobel Peace Prize*

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Lorenzo Morris

BURAKU OR *BURAKUMIN*

The *buraku* people, or *burakumin* (literally, "village people"), are a group of approximately three million ethnic Japanese that is discriminated against by the majority Japanese population. This discrimination manifests itself in higher illness rates and higher unemployment than for mainstream Japanese, lower wages for the same jobs, the existence of illegal blacklists that corporations buy and use to avoid hiring *buraku* people, the discouragement of

marriage between *burakumin* and non-*burakumin* Japanese, and the historic complicity of Japanese religious bodies in segregating temples and bestowing prejudicial death names (*kaimyo*). From the 1990s to 2006, the Internet has been used to post defamatory statements against the *buraku*.

The discrimination ostensibly is based on historic, familial occupations that were deemed "unclean" by Japanese religions (Buddhism and Shinto), such as butchery, tanning, and leatherwork; however, in modern Japan, although descent is an operative factor, the primary determinant of *buraku* identity is location, as many *buraku* people live in designated government-supported housing and support areas (*dōwa chiku*). Today, an emergent issue is the question of what constitutes *buraku* identity: some residents of *dōwa chiku* claim ancestral *buraku* lineages, and others are socially defined as *buraku* people simply because they live in areas designated for *burakumin*.

There is scholarly debate as to the historical origin of *buraku* discrimination. During the Heian period (794–1185) the lowest in society (*senmin*, as opposed to the *ryomin*, the "good") often handled leather armor for warlords (*daimyo*), and in return they usually were provided with some tax relief and poor land. They were also given "unclean" jobs such as jailer and executioner, and were expected to be the first line of defense in case of attack. Some scholars conjecture that this social segmentation was the beginning of what came to be the *buraku* designation; however, it was distinctly in the Tokugawa period (1603–1867) when the discriminatory policies and structure were established in a stratified social order (samurai, farmer, artisan, and merchant) that excluded the *eta* and the *hinin*. (These discriminatory terms, which respectively mean "much filth" and "nonhuman," were used as social designations at the time.) The ostracized *eta* and *hinin* groups are considered the precursors of today's *burakumin*. In 1871 discrimination against this subgroup was abolished by the Emancipation Edict (*Eta Kaihō Rei*), but the edict had little effect on bettering conditions.

In March 1922 the National Levelers Association (*Zenkoku Suiheisha*) was founded to address the persistent discrimination against the *buraku* people. With the rise of the Japanese military establishment, the organization was outlawed in 1937, then reinstituted itself in 1946 as the National Committee for Buraku Liberation (then the Buraku Liberation League in 1955). In 1969, through sustained political activism by the *buraku* organizations and their supporters, the Japanese government enacted special legislation (Laws on Special Measures for Dowa Region) that dramatically bettered conditions for the *buraku* people. It remains to be seen how the expiration of this legislation in 2003 will continue to affect the *buraku* community and the notable advances they have made in such areas as education, housing, and employment. While living conditions have improved and exogamous marriage increases, the major issue for the *buraku* liberation effort—as with many human rights efforts across the globe—is how to sustain the energy and communal effort to improve the majority Japanese attitude toward the *buraku* people into the next generation.

SEE ALSO *Caste; Discrimination; Minorities; Racism*

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Leslie D. Alldritt

BURDIAN'S ASS

SEE *Conundrum.*

BUREAUCRACY

History discloses political orders different from each other. These orders evolve as a result of each society's self-organization toward representative structures that confer validity on its rules and continuity. It was German sociologist Max Weber's insight that these structures rely on systems of authority, such that every system attempts to establish and cultivate the belief in its legitimacy, as the grounds of authority, for which he found three pure types: charisma, tradition, and instrumental reason.

Bureaucracy, a term that literally means government by offices or agencies with prescribed functions, exemplified for Weber the organizational structure associated with legitimacy grounded in instrumental reason. He devoted considerable attention to bureaucracy in part because he believed that, despite exhibiting no unilinear development or progress, history had demonstrated a trend toward

increasing rationalization, or what he referred to as a "disenchantment," so that bureaucracy represents in organizational structure a deeper cultural tendency, especially in the West. In order to grapple with increasing rationalization, he had to understand what it meant for the ordering of society.

Bureaucracy has a distinct character, which Weber delineated. Individuals with documented qualifications fill positions circumscribed by rules, in order to ensure the perpetual fulfillment of the bureau's function. These rules tend to be stable and exhaustive. The resulting structure trends toward hierarchy. Incumbents are expected to keep their work separate from their private lives, so they can concentrate on their duties, which are based more on the processing of documents or files in the abstract and not on interactions with individual persons directly. Consistent with this tendency toward abstraction, the official is then rewarded abstractly by means of job security and a salary in a money economy, thereby making this career a distinct profession.

James Burnham examined the significance of bureaucratic administration as a profession in *The Managerial Revolution,* published in 1941. Burnham worried as a disillusioned leftist that the managerial revolution would derail the transition from capitalism to socialism. His work influenced the British futuristic novelist George Orwell, author of *Animal Farm* (1944) and *1984* (1949). It also inspired social scientists to conduct empirical studies of his primary thesis, and even in the 2000s Burnham's book "occupies a prominent place in postindustrial theories of society" (Demers and Merskin 2000, p. 105). Burnham foresaw the rise of a new ruling elite composed of managers with organizational skill and technical knowledge. These managers were going to displace owners and capitalists in day-to-day operations. The research conducted since tends to bear him out.

The economist John Kenneth Galbraith extended Burnham's argument in *The New Industrial State* (1967), noting that managers as a ruling elite had given way to a group even more embedded in the staff of bureaucracy, a group named by Galbraith as the technostructure. Due to increasing complexity, decision making in bureaucracy requires the specialized scientific and technical knowledge, talent, and experience of multiple persons exchanging and testing information. In this group, one might include engineers, accountants, and lawyers. Without the requisite mastery and information, managers must rely on the resulting apparatus for group decision. Although the apparatus known as the technostructure puts a check on individual initiative and ambition, taken as a whole it works toward its collective survival, autonomy, and growth, in that order. For Galbraith, the technostructure is the decision-making apparatus emblematic of bureaucracy. Seventeen years later, Galbraith saw no reason to amend these findings, except to emphasize the technostructure's "deteriorative tendencies" (1988, p. 375).

At one time, scholars such as Ludwig von Mises might have wanted to isolate bureaucracy as a phenomenon that thrives only in the public sector, in government, but the evidence suggests that it is precisely in the technostructure described by Galbraith that the public and private sectors intertwine to share an overlapping fate, as large firms in the private sector attempt to manage their environment and as the government increasingly executes the laws by means of the technostructure within private firms. According to Galbraith, bureaucracy has emerged in every sector.

Bureaucracy not only has a distinct character, it also plays a distinct role in the routinization of charisma, the ordering of society into a rational form. Bureaucracy exerts pressure to domesticate creativity and genius, removing the element of mystification that accompanies charisma, in order to bring it into service without allowing it to supplant instrumental reason as the legitimating ground for authority. Bureaucracy thereby tends to channel or frustrate freedom, with astonishing success, which is why Weber famously lamented the "iron cage" that rationalization was building throughout society.

In the second chapter of *Images of Organization* (1986), Gareth Morgan echoed Weber by associating bureaucracy with an image of organizations that would be construed as mechanistic, structures invented and developed to perform a goal-oriented activity. Not surprisingly, with the mechanization of the Industrial Revolution came the widespread mechanization of organizational structures. Writers such as Frederick Taylor then made the process conscious, offering a scientific approach to managing organizations, on the principle that mechanistic thinking had succeeded in so many other aspects of life. And it had.

Bureaucracy contributes to the goal-oriented activities of any organization. Weber listed these advantages: "[p]recision, speed, unambiguity, knowledge of the files, continuity, discretion, unity, strict subordination, reduction of friction and of material and personal costs.…" (1958, p. 214). In contradistinction to previous structures, bureaucracy exists to remove less predictable elements such as individual favor from the conduct of business. This means it offers stability to a regime. Disputes are more easily resolved by appeals to reason and rules, which guide officials in their work. Bureaucracy also fits many purposes of large-scale government especially, where other bases of legitimacy have been outlawed or discredited. Since the Enlightenment, Western culture especially has preferred legitimacy based on instrumental reason.

Despite its promise of efficacy, bureaucracy meets with considerable resistance, especially from two sources. One source of resistance has been the concern previously expressed already by Max Weber that bureaucracy inhibits freedom and all that freedom promises. Ralph Hummel sharpened the critique in *The Bureaucratic Experience* (1994): Over time, given its prevalence and power, bureaucracy shapes human psychology, language, and culture, transforming what it means to be human in exchange for values including security and efficiency. Critics such as Orwell, Franz Kafka, Aldous Huxley, and in cinema Terry Gilliam (e.g., *Brazil,* 1985) have depicted an implicit terror and malaise in bureaucratic regimes that can only be described as inhuman. In his 1995 book *Kinds of Power,* for example, psychologist James Hillman cited the predatory practices of bureaucratic fascism and communism as the logical extension of the Enlightenment's emphasis on instrumental reason.

The resistance to bureaucracy from this source emphasizes the trade-off that comes with empowering an elite of professionals at the expense of democratic participation in the decisions that affect our lives, since bureaucrats are not supposed to be directly responsive to voters, to markets, or even to beneficiaries of the services provided by that bureau. Weber noted that bureaucracy accompanies the rise of mass democracy, in that it promises status only in exchange for meritorious service and not kinship, for example, or race, yet bureaucracy by no means enhances the power of the people to govern themselves directly.

Principles of diversity challenge the basis for choosing officials as somehow biased in favor of certain privileged social groups who acquire credentials disproportionate to their numbers in the population.

The second source of resistance to bureaucracy derives from the claim that there are more effective ways for organizations to work, since bureaucracy has a number of limitations. For instance, bureaucracy tends to hide its work from scrutiny, even from one bureau to another, whereas in an information age secrets impede innovation and cast doubt on a bureaucracy's legitimacy. Bureaucracy also offers persistence at times that organizational structures should adapt to changing circumstances. The bureaucrat's loyalty to the bureau might displace his or her loyalty to the bureau's originating purpose; accusations leveled at fascist administrators who were "only doing their jobs" have been especially vivid.

Since the 1970s, organizational theorists such as Gifford and Elizabeth Pinchot have called for flattened hierarchies, cross-functional coordination, greater transparency, and shorter timelines than a conscientious bureaucracy can meet. These theorists borrow principles from the marketplace, urging bureaucracies to cultivate a more entrepreneurial spirit, taking risk and competing. Theorists also notice the power of flexible networks, rather than rigid silos. Writing in 1999, Richard Brinkman uncovered as evidence of bureaucracy's weakening hold the tendency of management to pursue short-term profit in part by downsizing elements of the technostructure, yet it can be said that reports of bureaucracy's demise are greatly exaggerated.

SEE ALSO *Bureaucrat; Weber, Max*

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BUREAUCRAT

The term *bureaucrat* refers to a professional administrator, a career official employed to serve a bureau or office. Often used pejoratively, the term describes a predominantly stabilizing function in which the career interests of the administrator align with the bureau's norms and values.

The German sociologist Max Weber (1864–1920) embedded in his classic analysis of bureaucracy in *Economy and Society* (originally published in 1925 and translated in 1958) a section on the position of the official whose activities are fixed and ordered by rules, so that authority will be seen to derive from a rational and impersonal basis. For Weber, the bureaucrat is simply intrinsic to this process of rationalization that so typifies moder-

nity. Such an official would have been expected to possess certain qualifications in order to occupy the position in the first place, presumably as a result of rigorous training in management generally and in the rules of the bureau. At all times, official activities are supervised by a higher authority within the organization; nevertheless, the official owes loyalty not to the supervisor, but to the bureau and its purpose. A bureaucrat assumes appointment to the office by accepting "a specific obligation of faithful management in return for a secure existence" (Weber 1958, p. 199). As a result, the official is meant to enjoy a status commensurate with rank. An official's expertise and authority will tend to protect the officeholder from "arbitrary dismissal or transfer" (Weber 1958, p. 202). Weber held that for the sake of stable employment the bureaucrat will accept a lower salary compared to the private sector, although presently bureaucrats appear in every sector, including the private sector—to the consternation of critics. One critic, James Burnham, famously warned in 1941 against their domination as a class.

According to the economist Ludwig von Mises in *Bureaucracy* (1944), allegiance to the bureau and relative insulation from "arbitrary dismissal or transfer" contributes to the perception that bureaucrats tend to be unresponsive to external complaint. The primary reason is that there exists no way to calculate the bureaucrat's performance, except of the extent to which he or she adheres to the prescribed rules and stays within budget.

Bureaucrats stabilize the office in part because they learn not to take risks. Ralph Hummel explains in *The Bureaucratic Experience* that the supervisor assumes the role of conscience and ego function, deciding what needs to be done and how, and leaving it to the bureaucrat to fulfill the explicit terms of the employment contract. Any other than instrumental rationality is not required. Mises spoke for many critics when he argued that bureaucracy "kills ambition, destroys initiative and the incentive to do more than the minimum required" (Mises 1983, p. 61). Rather than undertake risk, a prudent bureaucrat will not only conform but also take steps to secure the future by protecting the bureau from threat of dissolution. For this reason, whatever the originating and legitimating purpose had been for the creation of the bureau, the bureaucrat owes a primary allegiance to the perpetuation of the bureau itself. Keeping a job becomes more important than doing the job, which is goal displacement. For example, in 1978 the communist Rudolf Bahro identified bureaucrats in socialist states as jealous and exploitative rulers, responsible for alienated consciousness and preventing further liberation.

The virtue of bureaucrats, according to Gareth Morgan (1986), lies in professionalism based on expertise, concentration, a relatively transparent mission, and the impersonal nature of workplace relationships—all of which fulfilled the ambition of rational administration consistent with a mechanistic model of organizations, in contrast to prior models based for example on kinship, personal loyalty, or profit seeking.

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BURIAL GROUNDS

A burial ground is a place of interment. It is a tract of land, a yard, or an enclosure for the subterranean deposition of human remains. Often the objects of legend, burial grounds have varied throughout time according to the cultural practices and religious beliefs of different peoples. Whereas Aubrey Cannon (1989) maintains that human expressions of death in burial grounds follow a general cross-cultural pattern that cycles between elitism and emulation, James Deetz (1996) suggests that burial grounds showcase culturally specific symbols that are evident in every aspect of a given society's lifeways.

The first hominids to bury their dead were probably Neanderthals that lived between 20,000 and 75,000 years ago. In fact, many Neanderthal interments exhibited evidence of burial customs that are still practiced, including the placement of flowers and other grave goods with the deceased and the orientation of the dead along an east-west axis. Group interments in large earthen mounds, also called *tumuli, kofun, barrows*, or *kurgans* in different cultural contexts, became common across Europe, Asia, and the Americas in the centuries before and after 1 BCE. Gigantic stone temples that housed burial chambers also occurred across the globe during this time. These mammoth structures included Egyptian and Mayan pyramids and ancient Greek necropolises.

In the centuries leading up to the 1700s, Westerners buried their dead in sacrosanct churchyards according to

specific spatial norms that tied directly to their faith in resurrection. Wealthy individuals were interred within the church itself and on the east side in order to get the most direct view of the rising sun on Judgment Day, the poor were laid to rest to the south of the church, and the north churchyard was reserved for stillborns, bastards, and individuals who committed suicide. Even though these shallow churchyards often teemed with bones, scavengers, and maggots, they were still a center of social activity and frequently hosted markets, gaming events, and other gatherings. It was not until the late 1600s that the English Parliament linked these unsanitary practices with the spread of the plague and outlawed shallow graves, large funerals, and unnecessary burial-ground activities. A chronic shortage of space in churchyards in the 1700s forced a change to burial strategies. The north side of the church was no longer for social outcasts, all of the deceased were packed closer together, and numerous coffins were stacked on top of one another under the topsoil, leading many churchyards to tower a dozen feet or more above the floor of the church.

Just as the stone walls surrounding many European churchyards began to collapse under the pressure of the overcrowded burial ground, Parisian officials enacted a drastically different interment policy, transporting the bones of millions of deceased individuals into catacombs beneath the French capital. This initial act of the eighteenth-century cemetery reform movement also led to the creation of the first garden cemetery—the Père-Lachaise—which spanned hundreds of acres in an uninterrupted picturesque landscape that was far away from the church and the crowded urban city center. Père-Lachaise was the first municipal cemetery, as the government now controlled burial procedures and planning instead of the church. Others quickly followed suit; Boston's Mount Auburn Cemetery, established in 1831, was the inaugural cemetery in the Western hemisphere to embrace this change in burial-ground planning, and it set the standard for large rural garden cemeteries in the United States that persists into the present day.

SEE ALSO *Burial Grounds, African; Burial Grounds, Native American*

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BURIAL GROUNDS, AFRICAN

The final resting places of enslaved and free people of African descent have been examined in diverse contexts throughout the New World. Ranging from late sixteenth-century Mexico to postemancipation Arkansas, these sites reflect the range and complexity of the African diasporic experience. Although many of these sites were examined within a historical forensic paradigm, the greater involvement of African Americans as both clients and producers of burial ground studies is fostering a historically and culturally grounded biocultural approach that is more responsive to the needs and interests of the descendant communities (Blakey 2001; Epperson 1999).

In 2000 construction activity in the city of Campeche on Mexico's Yucatan peninsula resulted in discovery of the foundation of an early cathedral and an associated multiethnic burial ground that was used from the mid-sixteenth century until the construction of a new cathedral in the late seventeenth century. Some 180 individuals were interred at this site, including at least 10 of African ancestry. The presence of dental modifications, in conjunction with strontium isotopic analysis, indicates that at least four of these individuals were born in West Africa. Although there is ample documentary evidence of African slavery in the Campeche region during this period, it should not necessarily be assumed that these individuals were enslaved (Handler and Lange 2006).

At the site of the Newton Plantation in southern Barbados the remains of 104 African-descent individuals interred between 1660 and 1820 have been analyzed. Of particular interest is Burial 72, a male about fifty years old who was buried during the late 1600s or early 1700s with a distinctive assemblage of grave goods suggestive of status as a healer/diviner (Handler 1997; Handler and Lange 1978). In a very different plantation context, investigation of the Belleview Plantation near Charleston, South Carolina, included a sample of twenty-seven individuals who died between 1840 and 1870. These individuals had a high incidence of anemia and infection as well as skeletal changes associated with very demanding physical labor (Rathbun and Scurry 1991).

Excavations in the multiethnic St. Peter Street Cemetery in the French Quarter of New Orleans recovered remains of eighteen individuals, at least ten of whom were of African descent. This cemetery was in use as early as 1720 until the end of the eighteenth century. Within the African American burials, investigators noted the presence of Roman Catholic grave goods and suggested the presence of two occupational groups: house servants and laborers (Owsley et al. 1987).

The African Burial Ground in New York City was in use from the late seventeenth century until about 1795.

Excavations conducted in 1991–1992 recovered the remains of more than four hundred African-born and African American individuals. Analysis of these remains revealed evidence of the rigors of urban slavery as well as the survival and nurturance of West African cultural traditions. Pressure from the descendant community resulted in the development of a research design that placed greater emphasis on the historical and cultural context of the burial ground. The remains were reinterred on the site in 2003 (General Services Administration 2006; LaRoche and Blakey 1997).

Analysis of over 140 burials recovered from the First African Baptist Church Cemetery (in use c. 1822–1848) in downtown Philadelphia, Pennsylvania, revealed that antebellum free African Americans shared many of the rigors of their enslaved kin, suffering high infant and childhood mortality, periodic malnutrition and infectious diseases, and degenerative joint diseases (Angel et al. 1987; Rankin-Hill 1997). Similarly, the rural Cedar Grove Cemetery in southwest Arkansas provides stark evidence that the health of African Americans did not improve during the postemancipation period. Cortical bone analysis of a sample of fifteen females and fourteen males indicates a population that was under extraordinary disease and nutritional stress (Martin, Magennis, and Rose 1987).

SEE ALSO *African Diaspora; Anthropology, Biological; Archaeology; Burial Grounds; Immigrants to North America; Slave Lives, Archaeology of; Slavery Industry*

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Terrence W. Epperson

BURIAL GROUNDS, NATIVE AMERICAN

In nearly every culture—and certainly in every religion—there is some promise of life after death. It is often necessary, therefore, to connect one's mortal remains with after-existence, whether by freeing the soul from its worldly dwelling or preparing those remains for their later state. The meaning attributed to such preparations and the forms they take mirror much of the society they serve and often carry, through the intensity of their attendant emotions, the ideas upon which a culture depends when death threatens the very order of things.

The disposition of the dead by American Indians is as varied as the organization of the groups themselves. For many ancient peoples (c. 1000–200 BCE), as seen particularly in the eastern United States, elaborate burial mounds probably replicated the social order of settlements or the vision of the cosmos at large; for others, like the Choctaw, Plains Indians, or Northwest Coast tribes, the spirits of the dead could only be released by first exposing them to the elements, the scattered remains sometimes being subject to secondary interment; for still others, as among those groups of the Southeast, the dead were often placed in large earthenware jars before burial. As many Indians and Aleuts were converted to Christianity by Hispanics,

Europeans, or Russians, burial in cemeteries, with appropriate religious insignia, became far more common. To the extent that one can generalize, for Native Americans, locale and cosmos came together in the rituals of daily life, including, with special force, the treatment of the place with which the remains of one's predecessors were associated.

Just as white Americans will go to extravagant lengths to recover the bodies of their dead or visit their final resting place, so, too, for Native Americans, deprivation of their dead has been felt with special intensity. The forced removal of Indians from the East, the creation of reservations, and the loss of Indian lands exacerbated the sense of separation from ancestors. Throughout the Indian wars of the nineteenth century, the remains of fallen Indians were collected by the U.S. Army, the bodies stripped of their flesh, and the bones sent back to Washington, D.C. Housed for decades in government and private institutions, thousands of skulls and bones were hidden away or subjected to every passing scientific notion—from the relation of cranial size to intelligence, to the development of civilization as determined by denture, diet, or DNA. Often, too, the remains were placed on view in public or private museums, commonly with unflattering labels or surroundings. To Indians, these collections and exhibits, whether for science or for profit, were nothing short of the desecration to which, they argued, non-Indian remains were never subjected.

Many of these issues came to a head in the 1970s and 1980s, when Indian legal groups filed lawsuits seeking the discontinuance of offensive displays and the return of Indian remains. There was, however, no clear legal right to the return of such remains—whether the 18,500 sets of remains in the Smithsonian Institution or the hundreds of skeletons plundered in the late 1980s from a site in Kentucky. In 1990, therefore, the U.S. Congress passed the Native American Graves Protection and Repatriation Act (NAGPRA), which explicitly classifies human remains as "cultural items" that could be returned to related successor tribes. As museum and university inventories were constructed and tribes asserted the right of return, archaeologists and native groups sometimes came into conflict: Most native peoples object to any scientific studies of their ancestors' remains, while scholars often asserted the benefits of allowing their studies to go forward. A number of states (e.g., California) also passed statutes or entered into agreements with tribes allowing the return of burial remains even from private sites. Further federal protection criminalizing the illegal excavation or trafficking in human remains is afforded by the Archaeological Resources Protection Act of 1978. Tribes themselves have also adopted codes affecting archaeological work on their reservations, and have even sought to make their laws extend to remains housed off Indian lands. Several international human rights conventions have proved an effective basis for the return of remains to peoples of the South Pacific, but since the United States is not a signatory to some of these treaties, international standards have yet to be applied to Native Americans.

Perhaps most difficult has been the question of ancient remains. When a set of 8,000- to 9,000-year-old-bones, known as Kennewick Man, was discovered in Washington State, the Army Corps of Engineers sought to transfer the bones to the five tribes who claimed a connection to them. In 2004 the Ninth Circuit Court of Appeals (in *Bonnichsen v. United States*) held that the requirement that there be some relation of the remains to an existing tribe, people, or culture had not been met in this case, and the court permitted scientists to gain access to the materials. Other cases may also test the meaning of *indigenous* and the criteria for showing *cultural affiliation*, terms that are not clearly defined in the statutes themselves. Nevertheless, where historical connections can be asserted, the capacity of tribes to regain control over their people's burial remains has significantly increased since the 1980s.

Americans have long had a deep-seated ambivalence toward their native peoples. From the restraints that Chief Justice John Marshall (1755–1835) sought to place on the federal government's care of its "domestic dependent nations" to the willingness of white Americans who would never adopt a black child to extend their kinship boundaries to include Indians, the course of American history has never been a simple story of conquest and oppression. The question of science versus heritage, identity versus property, replicates much of white-Indian relations and the ambivalence with which each approaches the actions and intentions of the other. The idea that Indians are like the miner's canary—that they give an early indication of the quality of the environs in which everyone operates—is no less true where archaeological remains are concerned than where land, natural resources, or the constitutional limits of indigenous sovereignty are also at issue.

SEE ALSO *Burial Grounds; Indigenous Rights*

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Lawrence Rosen

BURKE, EDMUND
1729–1797

Edmund Burke was an Irish Protestant author and member of the British House of Commons. Burke's legacy rests on his profundity as a political thinker, while his relevance to the social sciences lies in his antirevolutionary tract of 1790, *Reflections on the Revolution in France*, for which he is considered the founder of conservatism.

Born in Dublin to a Protestant father and Catholic mother, Burke was raised as an Anglican and received his education at a Quaker school and Trinity College. Rejecting a career in law, Burke wrote a treatise on aesthetics, *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful* (1757), and edited the political review *Annual Register*. Burke's talents as an intellectual attracted the attention of a politically powerful patron, the marquis of Rockingham, for whom Burke worked as private secretary and to whom Burke owed his entry into Parliament.

As a member of Parliament from 1765 to 1794, Burke employed his oratorical skills and propensity to connect legislative policy to political philosophy in the interests of the Whig party. Foremost among his causes was the mitigation of harsh penal laws in Ireland. Although a steadfast member of the Anglican Church, Burke's experience in Ireland and his Catholic connections made him deplore the discrimination against Irish Catholics. Burke also urged reconciliation with American colonists, opposing the Stamp Act of 1765 as bad policy even as he defended the theoretical right of Parliament to tax. Throughout his career Burke condemned the East India Company's mismanagement, calling after 1782 for parliamentary control of that body and for the impeachment of Bengal's governor-general, Warren Hastings. In addition, Burke's position in the opposition led to repeated cries for "economical reform," or a diminution in the power of the Crown by limiting the number of government employees who sat in Parliament. Finally, Burke contributed to British constitutional theory in important ways: He defended the formation of political parties, defined as "bod[ies] of men united for promoting by their joint endeavours the national interest" (Ayling 1988, p. 48); and he insisted that in Parliament he represented the common good rather than simply the interests of his Bristol electors.

Burke's *Reflections on the Revolution in France* offered a conservative interpretation of Britain's Glorious Revolution in 1688 and a condemnation of France's revolution in 1789. For Burke, the Whig-led Glorious Revolution merely protected civil liberties and Protestantism by overthrowing the tyrannical and popish James II; it did not usher in an era of natural rights, democratic politics, and the separation of church and state. As such, 1688 constituted a restoration of British liberties under the protection of strong institutions, notably the Church of England and a constitution balanced between a hereditary monarchy and a governing class of landed aristocrats.

Burke excoriated the French Revolution for its radical destruction of the past. Considering society a complex historical development—"a partnership not only between those who are living, but between those who are dead, and those who are to be born" (Burke 1987, p. 85)—he rejected contemporary theories of the social contract. Convinced of the limitations of human reason, he mocked the revolutionaries' reconstruction of the polity on abstract philosophical principles as a chimerical "new conquering empire of light and reason." Viewing rights and liberties as historical patrimony (for example, English liberties founded in the Magna Carta), he recoiled at the notion of universal human rights enshrined in the French *Declaration of the Rights of Man and Citizen*. Reckoning "the restraints upon men" to be among their rights, Burke found such restraints in religion and the establishment of a state church that sanctified the social and political order. Unmoved by paeans to equality, he insisted that "the natural order of things" entitled men of ability and property to govern. In sum, Burke saw the French Revolution as a rejection of the handiwork of God as expressed in the slow development of institutions in history.

Standing at the threshold of a new age of democratic politics, Burke exclaimed: "I put my foot in the tracks of our forefathers, where I can neither wander nor stumble" (Burke 1889). Although such reverence for the past might justifiably merit Burke the title "founder of conservatism," several points are in order. First, *conservative* is not synonymous with reactionary; Burke was no arch-conservative enslaved by the status quo, as evidenced by his advocacy of issues ranging from Catholic relief to the abolition of the slave trade. His guiding principle was conservation and correction, by which he meant that reform was necessary to preserve institutions. Second, Burke's conservatism was British (or "Anglo-American"); in rejecting the French Revolution, he sought to conserve what he considered the liberal and modern order in eighteenth-century Britain. Subsequent thinkers have employed Burke's sus-

picion of reason; his respect for the past; his insistence on religion and property as the foundations of society; and his antipathy to democracy in order to defend absolute monarchy, a hereditary nobility, and religious discrimination—but their doing so only serves as a reminder of the differences between what and why Burke wrote and how he was read.

SEE ALSO *Aesthetics; American Revolution; Church and State; Conservatism; Democracy; Freedom; French Revolution; Liberty; Natural Rights; Parliament, United Kingdom; Political Theory; Revolution*

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Anthony Crubaugh

BURR, AARON
1756–1836

Grandson of Jonathan Edwards and son of the second president of the College of New Jersey (Princeton), Aaron Burr seemingly showed great promise. He sided with the revolutionary cause and served with courage and skill in various campaigns. The real leadership skills he displayed, however, were overshadowed by George Washington's (and Alexander Hamilton's) distrust, which somehow Burr earned in his first contacts with Washington. After the American Revolution he began a career in law and quickly became immersed in politics. His political views, to the extent that they are known, tended toward radical republicanism. Burr was a vigorous opponent of slavery early in his career, and he supported expanding the rights of women. But his enlightened views were tarnished by his ambition and political opportunism. He was elected to the Senate in 1791, where he served one undistinguished term. He was included on the Republican ticket in 1800 in order to secure a victory in New York, where he had created an effective political machine. The outcome of the election plunged the nation into crisis because Burr received the same number of electoral votes as Jefferson. Rather than step aside, as might have been expected from someone who was almost universally held to be the vice-presidential candidate, Burr forced the election into the House of Representatives. Jefferson was eventually victorious in the House, but by then his suspicions of Burr had hardened into hatred and for the next four years he simply ignored his vice president. Burr did preside with competence and fairness over the Senate, including the impeachment trial of Supreme Court Justice Samuel Chase.

Hamilton had thrown his political weight behind Jefferson in the struggle of 1800. Again in 1804 Hamilton worked actively to thwart Burr's campaign to become governor of New York. Burr had had enough. He and Hamilton met on the dueling field on July 11, 1804. Hamilton's death at Burr's hands was the death knell for Burr's conventional political career. He then embarked on the unconventional political career in the American Southwest that would see him charged with treason. The goals of Burr's extensive and well-documented efforts to put together a private military force remain unclear. Did he mean to dismember the Union? Or did he mean only to subvert Spain's empire? Were his goals in some way republican? Or would he have preferred to become the Napoléon of the Southwest? Would he have liberated slaves in the territories he conquered? Was he indifferent among these alternatives?

Significant doubts remain regarding the answers to all of these questions. Burr's own most unequivocal statement as to his intentions came late in his life when, after the Battle of San Jacinto paved the way for an independent Texas, he is said to have remarked, "I was only thirty years too soon. What was treason in me thirty years ago is patriotism today." Whatever the case, rumors of Burr's plans swept the country and, after a period of inaction, Jefferson pursued Burr ruthlessly. He had Burr captured and charged with the capital offense of treason. A spectacular and controversial trial followed. Chief Justice John Marshall strictly construed the constitutional provisions on treason. Only an "overt act" of "levying war" against the United States witnessed by two persons could amount to treason. The jury found that Burr's various plans and meetings fell short of this standard and rendered a verdict of not guilty. After the trial Burr left for Europe, where he spent four years and continued to seek support for his southern scheme.

The rest of Burr's life was sad and uneventful. Burr had admirers such as Andrew Jackson, and impressive figures such as Marshall and John Jay did not view Burr with the same hostility as did Jefferson and Hamilton. Yet it is hard not to conclude that Burr was an anomaly in his generation. When many Americans thought they were walking with history, Burr seemed strangely detached from the

great republican experiment that was going on around him. This is perhaps one key reason why his life is full of extraordinary episodes but his lasting contributions are negligible.

SEE ALSO *American Revolution; Hamilton, Alexander; Jefferson, Thomas; Nationalism and Nationality; Nation-State; Republicanism*

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Peter McNamara

BUS BOYCOTT (1955, SOUTH AFRICA)

SEE *Apartheid; Townships.*

BUSH, GEORGE H. W.
1924–

When George Herbert Walker Bush became the forty-first president of the United States on January 20, 1989, he entered the Oval Office as one of the most experienced political figures to become president in modern times. He had just completed eight years as Ronald Reagan's vice president, and before that had served as U.S. ambassador to the United Nations and to China, had headed both the Central Intelligence Agency and the Republican National Committee, and had been a member of the U.S. House of Representatives from Texas. When he left the White House four years later, Bush's presidency seemed far more successful in terms of foreign policy than in economic policy.

Bush, born into one of the United States' most influential families, graduated Phi Beta Kappa from Yale University after flying fifty-eight missions as a naval aviator during World War II (1939–1945). After graduation Bush moved to Texas to enter the oil business and, eventually, Republican politics. He first ran for president as a Republican moderate in 1980 and became Ronald Reagan's running mate despite criticizing Reagan's fiscal policies as "voodoo economics." Despite Reagan's reliance on Bush throughout the 1980s, the vice president became the 1988 G.O.P. nominee only after defeating several more conservative rivals. Bush then defeated Democrat Michael Dukakis of Massachusetts in a tough campaign waged over prison furloughs and flag burning and marked by Bush's vow: "Read my lips: no new taxes."

As president, Bush pursued a centrist course legislatively, winning support from Democratic majorities in Congress for social programs such as the Americans with Disabilities Act and the 1990 Clean Air Act. As the federal budget deficit expanded, Bush agreed in 1990 to tax increases that he previously had vowed to oppose.

Bush's four years as president were marked by many foreign policy challenges, most notably the collapse of communist governments across Eastern Europe and the dissolution of the Soviet Union itself. Bush's diplomatic negotiating secured reductions in superpower nuclear arsenals, a peaceful end to the cold war, the reunification of Germany, and the development of democratic nation-states in areas that had been under Soviet control for decades. Bush had less success in handling China, which brutally crushed prodemocracy demonstrators in Tiananmen Square in 1989, killing or injuring thousands. When Iraqi president Saddam Hussein invaded Kuwait in August 1990, the diplomatically oriented president built an international coalition that dislodged the dictator from Kuwait.

Bush's 89 percent approval rating after the first Gulf War in early 1991 deterred many prominent Democrats from running for president in 1992. The eventual Democratic nominee, Arkansas governor Bill Clinton, focused on public anxieties over the state of jobs under Bush. Ross Perot, an independent presidential candidate, also attacked Bush's economic policies, saying the president's policies would trigger "a giant sucking sound" as U.S. jobs moved to Mexico. Voters did focus on the economy, not on Bush's foreign policy performance. In addition, some Republicans were angered by what they viewed as Bush's broken promise on taxes. In the end, Clinton received 43 percent of the vote, Bush received 38 percent, and Perot received 19 percent.

SEE ALSO *Bush, George W.; Gorbachev, Mikhail; Gulf War of 1991; Hussein, Saddam*

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Stephen J. Farnsworth

BUSH, GEORGE W.
1946–

George Walker Bush, the forty-third president of the United States, presided over the country during the September 11, 2001, terrorist attacks and led the nation in the resulting overthrow of the Taliban regime in Afghanistan and the invasion and occupation of Iraq.

The son of George H. W. Bush, the forty-first president of the United States, George W. was born in New Haven, Connecticut, in 1946 and grew up in Texas before attending the Philips Academy prep school in Andover, Massachusetts. In 1968 Bush earned a bachelor's degree from Yale University, his father's alma mater. After serving in the Texas Air National Guard, Bush received a Masters of Business Administration degree from Harvard Business School in 1975 and moved to Texas, where he was an executive in a series of oil-exploration ventures. He also ran unsuccessfully for the U.S. House of Representatives in 1978.

In 1989 Bush bought a stake in the Texas Rangers baseball team and became the managing general partner of the team. The public visibility of this position helped him secure the Republican nomination in the 1994 Texas race for governor. He subsequently defeated the incumbent Democrat, Ann Richards, in the general election.

After being reelected as governor in 1998 by a wide margin, Bush became the leading Republican contender for the U.S. presidency. Fighting off a strong primary challenge from Senator John McCain of Arizona, Bush won the GOP nomination. During the 2000 campaign against Bill Clinton's vice president, Al Gore, Bush carefully positioned himself as a "compassionate conservative," who supported education reform, tax cuts, and private accounts in Social Security.

On election night Gore won the popular vote, but it appeared that Bush had won the Electoral College and thus the presidency. However, Gore's aides discovered that Florida was essentially tied, and the vice president retracted the concession he had offered Bush. Gore's campaign quickly requested hand recounts in several counties and the election shifted into a legal battle. The Florida Supreme Court issued a decision allowing the results of such recounts to be incorporated into statewide vote totals, but the U.S. Supreme Court halted the recounts in a controversial 5 to 4 decision. With Bush still ahead in the official state count, the election was over. Bush and his father became the second father and son to both serve as president, following John Adams and John Quincy Adams.

Some observers expected Bush to govern as a centrist and seek bipartisan cooperation in response to the circumstances of his election. Instead, Bush, a self-proclaimed conservative, pushed ahead with his campaign plan for a sizeable tax cut, which was passed into law by June 2001 with significant Democratic support.

Then on September 11 of that year, members of the Al-Qaeda terrorist organization struck the United States, flying jetliners into the World Trade Center in New York and the Pentagon in Washington, D.C., and crashing a fourth jet in a field in Pennsylvania. More than three thousand Americans were killed. After this national trauma, the public united behind Bush, pushing his approval ratings to unprecedented levels. Within months, U.S. air strikes helped the Northern Alliance overthrow the Taliban regime in Afghanistan, which had provided safe haven to Al-Qaeda's leader Osama bin Laden and his followers. However, the United States failed to capture bin Laden.

In the fall of 2002 the Bush administration began to push for an invasion of Iraq, arguing that Iraq's leader Saddam Hussein was an evil dictator who posed a grave threat to the United States due to his possession of weapons of mass destruction and links to Al-Qaeda. Bush and British Prime Minister Tony Blair secured a United Nations Security Council resolution calling on Saddam to disarm and submit to weapons inspections. Yet Saddam continued to resist the inspections, and in response the United States and the United Kingdom called for military action against Iraq. Independent observers and many foreign countries questioned the Bush administration's claims about Saddam's possession of weapons of mass destruction and ties to Al-Qaeda. The United States and the United Kingdom failed to secure a second United Nations resolution approving military action against Iraq, but decided to invade without it, beginning the attack on March 20, 2003. Saddam's regime quickly fell with minimal casualties, and Saddam himself was captured on December 13.

The occupation of Iraq proved more difficult than anticipated. A governing regime was set up, and elections were held, but an insurgency composed of disaffected Iraqis and foreign jihadists became an increasingly deadly threat to coalition forces. By spring 2006, more than two thousand U.S. troops had died in Iraq, and a majority of Americans told pollsters that the war had been a mistake. In addition, convincing evidence that Saddam possessed weapons of mass destruction at the time of the invasion was never found, nor was hard evidence of operational links between Iraq and Al-Qaeda. Over time, Bush increasingly emphasized the cause of creating a democracy in Iraq, which had received relatively little attention before the war.

In the domestic arena, Bush passed several major initiatives after September 11, including the No Child Left Behind Act (which enacted a new accountability regime of school testing), a second tax cut, and a bill adding prescription-drug coverage to Medicare.

In 2004 he defeated his Democratic opponent, Senator John Kerry, in a reelection campaign that emphasized security concerns and such social issues as gay marriage. Bush won 51 percent of the vote and 286 electoral votes in the narrowest presidential reelection victory since Woodrow Wilson in 1916.

The first major initiative of Bush's second term was an effort to create private investment accounts in Social Security, but his proposal failed to gain significant momentum in Congress. By spring 2006 Bush's approval ratings had plunged to less than 40 percent; conservative discontent with his presidency had grown; and calls for U.S. withdrawal from Iraq had begun to mount. However, Al-Qaeda had not successfully attacked the United States again and economic growth remained relatively strong.

SEE ALSO *Al-Qaeda; bin Laden, Osama; Bush, George H. W.; Electoral College; Hussein, Saddam; Iraq-U.S. War; Republican Party; September 11, 2001; Taliban; United Nations*

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Brendan Nyhan

BUSINESS

Business is a commercial activity engaged in as a means of livelihood or profit, or an entity that engages in such activities. The concept mainly applies to activities that are designed to supply commodities (goods and services). The term *business* pertains broadly to commercial, financial, and industrial activity. Business involves managing people to organize and maintain collective productivity toward accomplishing particular creative and productive goals, usually to generate revenue and profit. The etymology of the term refers to the state of being busy, in the context of the individual as well as the community or society. In other words, to be busy is to be doing a commercially viable and profitable activity.

Business is distinguished from households and government, the remaining economic actors in any economy. Households play a pivotal role as suppliers of resources and demanders of final products. Household consumption is the total expenditure by the household sector, which is financed by the sale of resources, mainly labor, in return for income. As society is deeply concerned, on normative grounds, with the equity of income distribution as well as with efficiency of production, the role of government is indispensable to a market economy. The market system generates a range of inefficiencies as a result of market failure (failure to produce goods and services efficiently, or failure to produce goods and services demanded), so ongoing regulatory and redistributive roles are defined for government in a market-driven economy.

PRIVATELY OWNED BUSINESS

The term *business* has at least three usages, depending on the scope of analysis: the aforementioned general usage; the singular usage to refer to a particular company or corporation; and the usage to refer to a particular market sector, such as *agricultural business* or *the business community*, that is, the aggregation of suppliers of goods and services. The singular business can be a legally recognized entity within a market-based society, wherein individuals are organized based on expertise and skills to bring about social and technological progress. In this case, the term *business* is associated with a corporation in which a number of shares are issued, and the firm is owned by shareholders who have limited liability. These corporations are legal entities. The businesses or corporations owned by the shareholders are treated by law as an artificial person.

The corporation becomes a legal entity through registration as a company and through compliance with company law. The owners of the company are issued shares in the company entitling them to any after-tax company profits in proportion to their share ownership. A major advantage of the corporation is that many individuals can pool their resources to generate the finances needed to initiate a business. An additional advantage is limited liability, meaning shareholders' liability for any losses is limited to the value of their shares. A final advantage of this form of organization is that the corporation

has a life as a legal entity, separate and apart from those of the owners. The company continues to exist even if ownership changes hands, and it can be taxed and sued as if it were a person. A corporation's shareholders may not know anything about the actual production of the firm's product, whereas the managers of the firm may not be concerned about the current state of the share market.

With some exceptions, such as cooperatives, nonprofit organizations, and government institutions, in predominantly capitalist economies, privately owned businesses are formed to earn profit and grow the personal wealth of their owners. In other words, the owners and operators of a business have as one of their main objectives the receipt or generation of a financial return in exchange for their work, that is, the expenditure of time, energy, and money. Private business is the foundation of the market capitalist economies.

GOVERNMENT-OWNED BUSINESS

Private business is in contrast to government ownership of business enterprises. Since ancient times, governments have owned and conducted many businesses, such as water systems, sports, theaters, mining, and public baths. In the United States, government units own and manage the public school system, public highways and bridges, dams, land, power, and many other businesses. The importance of public utilities to the community has frequently led to municipal ownership of water, sewerage, electricity, power, gas, and transportation systems. In Europe, where public ownership is more extensive and of longer duration than in the United States, it may include railroads, telephone, radio and television, coal mining, other power resources, and banking. Since World War II, many nations in Europe and North America have practiced public ownership of business through public corporations such as Amtrak. Many developing countries also have large-scale public ownership, especially of vital industries and resources. The distinct characteristic of a government-owned business is that its goal is to serve the wider community by offering services as efficiently as possible, but at the same time as inexpensively as possible. In other words, a government-owned business has a mandate to maximize social welfare, not make a profit, which is the goal of a private business.

Frequently it is argued that government ownership is necessary when private businesses fail to work effectively and fairly. Private businesses may fail to safeguard private property and enforce contracts, or collude to avoid competition. Certain industries may be most efficiently organized as private monopolies, but the market may allow such industries to charge prices higher than are socially optimal. Private businesses may not find it profitable to produce public goods. Prices set solely by the market often fail to reflect the costs or benefits imposed by externalities. Private businesses operating in markets can lead to an extremely unequal distribution of income. Finally, private business behavior does not guarantee full employment and price stability.

When private businesses yield socially undesirable results, governments may intervene to address these market failures. Government programs are designed to (1) promote full employment, price stability, balance of trade equilibrium, and sustainable economic growth in real gross domestic product (GDP); (2) promote competition; (3) regulate natural monopolies; (4) provide public goods and externalities; (5) discourage negative externalities and encourage positive externalities; (6) provide a more equitable distribution of income; and (7) protect private property and enforce contracts.

NONPROFITS

In contrast to a private business, a nonprofit business is a business that supports private or public interests for noncommercial purposes. Nonprofit organizations may be involved in numerous areas, most commonly relating to charities, education, religion, sports, arts, and music. Another class of business is the nongovernmental organization (NGO), an organization that is not directly part of the structure of any government. Many NGOs are also nonprofit organizations and may be funded by private donations, international organizations, or the government itself, or some combination of these. Some quasi-autonomous NGOs may even perform governmental functions. Many NGOs are key sources of information for governments on issues such as human rights abuses and environmental degradation.

COOPERATIVES

A cooperative is an autonomous association of people united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. Cooperative members usually believe in the ethical values of honesty, openness, social responsibility, and caring for others. Cooperatives are often seen as an ideal organizational form for proponents of a number of sociopolitical philosophies. A cooperative comprises a legal entity owned and democratically controlled by its members. Under this structure, ownership and control are exercised by all members of the cooperative in the form of group property. All members of the cooperative have equal rights to participate in the decision-making process. The fundamental characteristic of a cooperative is that it is democratically administered. The decision-making process in cooperative firms is based on the democratic principle of one vote per person, rather than one vote per share. This

is the standard the International Co-operative Alliance requires its members to embrace, and it is also the rule assumed in the theoretical literature.

In private business firms, management employs labor and has the ultimate decision-making power, whereas in cooperatives, labor employs management and ultimate decision-making power remains with the cooperative. In small cooperative firms the cooperative is able to carry out all managerial functions. However, as the size of the firm increases the complexity of organization also increases. Large cooperative firms need some delegation of authority; that is, the appointment of managers. Using their specialized skills, which are distinct from labor skills, managers assist in the formulation of decision-making by the collective; however, decision-making power still resides with the cooperative. Hence, managers are hired and dismissed by the cooperative. Whereas in private business firms managers are ultimately accountable to shareholders, in cooperatives managers are ultimately accountable to the collective.

The cooperative firm requires from its members loyalty, self-monitoring, solidarity, and commitment to the firm and to the ideas of cooperative management. As a result, cooperative firms do not need to dedicate so many resources to monitoring. Bowles and Gintis (1996, p. 320) and Doucouliagos (1995) argued that the proposition that cooperatives are inherently inefficient was not accurate. Participation in decision-making and productivity are positively related. Cooperatives can be as efficient as capitalist firms. Cooperatives do not suffer undue problems associated with investment, monitoring, and incentives, or face higher transaction costs, as assumed in the traditional literature. The dominance of capitalist firms in mature market economies and the relative scarcity of the cooperatives are independent of efficiency considerations. Institutional bias, credit rationing, path-dependent behavior, and the impact of the forces of conformity contribute to cooperative firms being outnumbered in mature market economies (Doucouliagos, 1995, pp. 1097–1098). In mature market economies the prevailing institutions, and not market oscillations, reinforce the duplication of capitalist firms. Therefore, cooperative firms must be considered an alternative to private property.

INTERNATIONAL BUSINESS

International business consists of business transactions (private and governmental) between parties from more than one country. (Daniels et al. 2004, p. 3). International business can differ from domestic business for a number of reasons, including the following: the countries involved may use different currencies, forcing at least one party to convert its currency into another; the legal systems of the countries may differ, forcing one or more parties to adjust their practices to comply with local laws; the cultures of the countries may differ, forcing each party to adjust its behavior to meet the expectations of the other; the availability of resources may differ among countries; and the way products are produced and the types of products produced may vary among countries.

The significance of business, and especially of international business, in the twenty-first century is largely determined by the following: globalization and economic integration; technological improvements in communications, information processing, and transportation; new organizational structures and restructuring processes adopted by companies in order to become more competitive and effective; the changing framework of international competition; and finally the deregulation of key sectors such as telecommunications, which led to the liberalization of capital flows among countries. The increase in international business was largely related to the sharp increase in investments and especially in foreign direct investments in the high-tech and telecommunication sectors in the advanced economies, and in the increase of mergers and acquisitions and cross-border transactions. In addition, developing and transition countries were increasingly liberalizing their economies, opening their borders, and abolishing barriers and obstacles in order to receive decisive foreign direct investment (FDI) flows. Increased FDI flow and international business is also supported by the abolition of monopolies, the elimination of tariffs and quotas, and by increased free-trade transactions as a complement to FDI flows (Bitzenis 2005, pp. 550–551).

E-BUSINESS

E-business (electronic business) is a term used when transactions for business purposes take place online on the World Wide Web. E-business, a name derived from such terms as *e-mail* and *e-commerce*, describes the conduct of business on the Internet, not only for buying and selling, but also for servicing customers and collaborating with business partners. In addition, companies are using the Web to buy inputs from other companies, to team up on sales promotions, and to initiate joint research. Companies are exploiting the cost saving, convenience, availability, and world-wide reach of the Internet to reach customers. Companies such as Amazon.com, originally only a bookseller, are diversifying into other areas and using the Internet profitably. The term *e-commerce* also describes business using the Internet, but *e-business* generally implies a presence on the Web. An e-business site may be extremely comprehensive and offer more than just products and services: some feature general search facilities or the ability to track shipments or have threaded discussions. IBM was among the first to use the term

e-business when, in 1997, it initiated a campaign around the new term.

SEE ALSO *Capitalism; Consumer; Cooperatives; Corporations; Firm; Investment; Organizations; Profits; Venture Capital*

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BUSINESS CYCLES, EMPIRICAL LITERATURE

Business cycle researchers study the temporary deviation of macroeconomic variables from their underlying trend. During the nineteenth century, theories explaining business cycles were typically driven by real factors (as opposed to monetary factors), invariably of agricultural origin. Of course, given the relative size and importance of the agricultural sector at that time, these theories had some degree of success. However, as agriculture began to decline in importance, macroeconomists searched for other driving forces for the business cycle. Friedrich August von Hayek (1899–1992) suggested monetary policy, while John Maynard Keynes (1883–1946) surmised that business cycles were driven by a force he called "animal spirits," with nontrivial roles for sticky prices and wages.

The 1970s saw the birth of the rational expectations approach to macroeconomics, coming mainly out of the new classical economics school of thought. In fact, the rational expectations revolution is often credited with returning real driving factors to the forefront of business cycle research. According to this school of thought, given that people are rational and can accurately forecast future events and the actions of policymakers, monetary and fiscal policies are likely to be ineffective in stimulating the economy (one could say that money is neutral in the former case of monetary policy, and that Ricardian equivalence holds in the latter case of fiscal policy). Additionally, in the absence of market frictions (all markets clear), an assumption held by new classical economists, sticky prices and wages are rendered nonfactors in causing macroeconomic variables to deviate from trend. Therefore, the following questions naturally arise. What are the sources of business cycle movement if people can correctly (or with a great degree of accuracy) anticipate the actions of policymakers? And given that the economy is perpetually self-adjusting so that all markets quickly return to equilibrium (no market friction), how do business cycles arise? That is, given the well-functioning macroeconomy proposed by the new classical school, what causes macrovariables to temporarily deviate from trend? The answer, according to new classical macroeconomists, is that observed cycles are driven by (unanticipated) shocks to real factors, specifically by supply-side factors that alter factor productivity and the capital-labor ratio. This led to the rebirth of *real business cycle* (RBC) theory with technology shock as its driving force, instead of agricultural factors as previously suggested.

In order to assess the applicability of the RBC theory, it should readily lend itself to empirical testing, as should any good economic theory. Economic theory, therefore, should be parsimonious while containing (enough) important features that, when estimated, the theory produces results that accord with the data, in some statistical sense. The RBC theory is no exception, and its success, hitherto, has been the ease with which it lends itself to estimation. To be clear, the purpose of RBC research, the narrow focus of this entry, is to investigate how much output variation or, more broadly, the degree to which cyclical fluctuations in key macroeconomic data over business cycle frequency, can be accounted for by technology shocks.

Calibration and regression methods are the commonly used techniques for empirically testing the RBC paradigm. Each technique, if properly applied, can be a useful tool in testing the merit of a particular model or in differentiating among various classes of models. Unfortunately, however, within the RBC framework, each tool can be subject to abuse by the researcher who wants to promote his or her own agenda at the expense of science. However, such blatant misuse of the empirical tools has been the exception rather than the rule, and the Cowles Commission (a research institute established in 1932 by businessman and economist Alfred Cowles, dedicated to linking economic theory to mathematics and statistics) should be proud to see both theory and estimation, of one form or another, appearing in more and more published articles. If only macroeconomists could agree on a particular theory or method!

BUSINESS CYCLE FACTS

There are four facts that any RBC model should be able to capture (see, for example, Hansen and Wright 1992, p. 3, Tables 1 and 2), namely:

1. Investment is three times as volatile as output.
2. Consumption (nondurable goods) is less volatile than output.
3. Labor input is nearly as volatile as output.
4. Labor and productivity are essentially uncorrelated.

Another auxiliary feature of business cycles is that most variation in output, at business cycle frequency, is due to labor input. In addition, macroeconomic data exhibit a high degree of persistence over the cycle. Researchers invariably interpret the former as implying that movements in capital are unimportant at business cycle frequency and can thus be ignored when modeling business cycle fluctuations, whereas the latter points to the use of driving forces in our model economy that display some degree of persistence. The persistence of the driving forces will find its way into the model data via what is commonly called the *transmission mechanism.* (See Cogley and Nason [1995] for reasons why having the persistence in the data solely due to the driving process is a weakness rather than strength of the model.)

CALIBRATION

Made popular by Finn Kydland and Edward Prescott (1982), *calibration* is defined as the estimation of some parameters of a model, under the assumption that the model is correct, as a middle step in the study of other parameters. Thomas Cooley (1997) describes it as a strategy for finding numerical values for the parameters of artificial economic worlds. Basically, the researcher chooses values for certain parameters (the parameters that he has no interest in making economic predictions) and has the model spit out values for those parameters, left free in the exercise, for which he wants the model to make predictions.

Prescott in his 2004 Nobel Prize lecture lays out what a sound calibrating exercise of an RBC model would entail and closes by stressing the need for scientific discipline during the process by the researcher (see also Cooley 1997). Such discipline can generally be thought of as choosing the relevant parameter values based on sound microeconomic evidence and choosing functional forms for technology and preferences that display properties characteristic of the economy of interest. For example, Prescott (1986) chose his utility function based on the observation that per capita leisure displays no observable trend over time, and he used a Cobb-Douglas production function because of the constancy of capital share over the said period.

In an attempt to match the aforementioned business cycle facts, Prescott calibrates a baseline one-sector neoclassical growth model emphasizing technology shock as the main driving force behind cyclical fluctuations. He found that such a model was able to match not only the magnitude of output fluctuations but also the relative volatilities of both consumption and investment to output. The model failed, however, in its inability to match the facts pertaining to labor (facts three and four in the previous section). The ability of such a simple model, driven solely by technology shock, to match so many elements of the data is what led Kydland and Prescott (and others) in many of their papers, together and singly, to strongly advocate for technology shock and the RBC paradigm as being the impetus behind cyclical fluctuations in macroeconomic data.

An attractive feature of the calibration approach to estimation is its flexibility. A calibrated RBC model can be judged a success or failure depending on how many, and which, of the key business cycle facts it can capture. To be fair, one will scarcely find a model that is able to mimic *all* features of an economy—that is why it is a model. Therefore, economic researchers have to be prepared to judge a model as successful even though it fails on certain grounds—this is where calibration and calibrated RBC models fall short, since no goodness-of-fit statistic is provided with which to judge a model's success. However, this too is where calibration has been unfairly criticized, since any unmatched moment can be considered essential depending on the reader. That said, calibration can prove useful in pointing out dimensions along which existing models can be improved. For example, to improve upon the baseline RBC model, Gary Hansen and Randall Wright (1992) incorporated additional shocks, specifically to fiscal policy, and other features to technology and preferences (for example, accounting for household production) that mainly affected the moments of labor market while leaving the other (successful) elements of the model economy intact. These modifications resulted in modified RBC models that came closer to mimicking the actual U.S. economy. However, Hansen and Wright did not promote one particular modification over another; they left that up to the reader.

There are advantages and disadvantages of calibration over its econometric counterpart. Promoters of calibration usually point to the selection of parameters based on microeconomic evidence as an indication of the strength of the exercise. They claim that more information can be incorporated into the calibration exercise (compared to the econometric approach), which allows the calibrated model to be held to higher standards. The second issue, alluded to

earlier, is the meaning of rejection or acceptance of a model based on statistics. A model that fits the data well along every dimension except one (unimportant) may be rejected based on some statistical test, or a model may fail to be rejected because the data is consistent with a wide range of possibilities (see Chari et al. 2005).

Those opposed to using calibration as an estimation device usually point to the extreme faith that one has to have in the model. Pure calibrators literally accept their model as truth. They also point to the fact that calibrated models are bad for forecasts (making predictions of the future), since they assume constancy of the selected parameters over time. Finally, calibration is only useful in times of structural stability, a point related to the lack of forecast ability.

REGRESSION METHODS

The most popular regression approach to the study of real business cycles and measures of technological innovation was developed by economist Robert Merton Solow (1956). The Solow approach measures inputs to capital and labor, and it labels as technology (more precisely, *total factor productivity*, or TFP) the difference between output and the measured inputs. In a more recent paper, Susanto Basu, John Fernald, and Miles Kimball (2004) modify the Solow approach by incorporating capital utilization and effort on the part of labor. They then measure technology shocks as the difference between output and measures of inputs, capital and labor, at both the extensive and intensive margins.

A more direct approach to the measure of technology shocks can be found in John Shea (1998). Shea uses estimates of research and development and patents to gauge technological changes over time.

More recently, macroeconomists have used the structural vector autoregressive (SVAR) approach to study the technology-driven RBC paradigm (see Gali 1999; Francis and Ramey 2005). Researchers using this method take key identifying assumptions from the theoretical model and impose them on the data. They then perturb the technology shocks identified this way and examine the responses of key macroeconomic variables to such perturbation. The responses are then compared to the business cycle facts in order to make a judgment about the plausibility of the RBC model in driving economic fluctuations.

Overall, the studies employing one or the other regression approach have not been good for the RBC model. These studies have failed to match the business cycle facts and have thus put into question the validity of the technology-driven RBC paradigm.

CONCLUSION

Other empirical RBC studies have brought to life the study of business cycles. The debates have centered on two important themes: (1) finding the correct empirical approach to use when studying this phenomenon; and (2) coming up with an answer to the question of what happens after a technology shock. As of 2006, there was no resolution for either of these problems, leaving room for clever young macroeconomists to shed new light and ideas on a long-standing subject at the heart of the work of many policymakers and academics.

SEE ALSO *Business Cycles, Political; Business Cycles, Real; Business Cycles, Theories; Economic Crises; Financial Instability Hypothesis; Long Waves; Mitchell, Wesley Clair*

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Neville Francis

BUSINESS CYCLES, POLITICAL

Understanding why the economy contracts and expands at regular intervals, commonly called a business cycle, has puzzled economists for centuries. One explanation, dubbed the political business cycle theory, posits that the economy shifts or cycles during presidential election years, or when power is transferred from president to president. Partisan varieties of political business cycle theories associate the political business cycle with the president's political party. The opportunistic approach argues that the desire to be reelected drives the cycle without reference to political party affiliation.

POLITICAL BUSINESS CYCLE THEORIES

Michal Kalecki in *Political Quarterly* (1943) pioneered the idea that governments stimulate the economy prior to elections to garner constituency support and capitalists reverse the stimulus after elections. Kalecki hypothesized that capitalists were opposed to interventionist government spending to create full employment. Capitalists would therefore exploit their influence on politicians after elections creating a political business cycle. His idea was extended decades later by William Nordhaus in the *Review of Economic Studies* (1975). Nordhaus posited that as an election approaches, incumbents reduce unemployment by exploiting the short-run tradeoff between inflation and unemployment described by a Phillips curve. Once elected, the party in power follows a policy of austerity to reduce the inflation that was created earlier by the expansionary policy. The early "opportunistic" models predicted that output growth increases in the year-and-a-half before each election as incumbents stimulate economic growth to improve their chance of reelection. However, if the public is rational then it would be impossible for incumbents to systematically fool the public, and so more advanced models were developed.

In the second wave of these models Ken Rogoff and Anne Sibert, in the *Review of Economic Studies* (1988), demonstrated that opportunistic cycles can occur when voters are assumed to be rational, as long as individual leaders had private information about their competence; that is, the ability to provide government services at a low cost.

The second class of political business cycle models (termed partisan models) requires differences in policy objectives of political parties to be the impulse for the cycle. Left-wing governments stimulate the economy once elected whereas right-wing governments contract the economy due to ideological differences concerning aversion to higher inflation versus higher unemployment. In the most widely accepted specification adopted by Alberto Alesina in the *Quarterly Journal of Economics* (1987), only the unanticipated effects of monetary policy differences between the two parties can be a cause of the political business cycle.

These two approaches to understanding political business cycles generate the following important predictions. First, the partisan model predicts that left-wing governments expand while right-wing governments contract early to midway through their terms. Second, according to the opportunistic model, presidents whose parties subsequently hold on to the presidency at the following election (either by reelection or another member of their party winning) will have expanding economies as the election approaches.

EVIDENCE ON POLITICAL BUSINESS CYCLES

Since World War II the real U.S. economy has grown more rapidly after every Democratic president has begun his term and has grown more slowly after every Republican president has begun his term, providing support for the partisan approach. There is less consistent empirical support for the opportunistic approach to the political business cycle.

Although establishing the empirical regularities of output is an important first step for establishing the existence of a political business cycle, the transmission mechanism through prices is less evident in the data. Inflation should be higher under Democratic administrations than under Republican administrations. For the United States, there is little evidence to support this conclusion. As Allan Drazen noted in *Political Economy in Macroeconomics* (2000), "Democratic administrations have lower average inflation than Republican administrations in the first half of their terms, exactly opposite what the rational partisan theory of inflation surprises predicts" (p. 262).

An alternative theory of the political business cycle, termed the real political business cycle, is found in the *Journal of Public Economics*, in a 2003 article by S. Brock Blomberg and Gregory Hess. Rather than explain the political business cycle as the natural consequence of shifts in regime between two parties who have different tastes for inflation, Blomberg and Hess model the political business cycle as a dynamic process that responds to both partisan and individual leader characteristics in the size and scope of the government. While the parties themselves differ on the size of government, individual leaders also differ in their abilities to deliver on their promises at the lowest cost. Methodologically, their article blends a partisan and opportunistic explanation for the political business cycle with fiscal policy being the impulse for the cycle.

There appears to be stronger empirical support for the transmission mechanism in the real political business cycle. Both tax revenue and spending reveal a strong partisan influence: there is a sharp increase in spending and taxes for Democrats in the second or third years of the election term, with a symmetric decrease in spending and taxes by Republicans. These fiscal changes coincide with the business cycle movements consistent with a real political business cycle. Still, given the mixed evidence supporting certain aspects of real business cycle models, future research is necessary to explain these same aspects in the real political business cycle.

SEE ALSO *Business Cycles, Empirical Literature; Business Cycles, Real; Business Cycles, Theories; Economic Crises*

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S. Brock Blomberg

BUSINESS CYCLES, REAL

It is accepted knowledge in empirical macroeconomics that aggregate data are typically characterized by trend and cyclical components. A natural by-product of this is a dichotomy of (empirical) macroeconomics into those who concentrate on growth and those whose main concern is with the cyclical aspects of the data. Although this entry focuses exclusively on the cyclical side of the dichotomy, the business cycle and growth processes are not mutually exclusive features of macroeconomics. That is, one cannot draw any meaningful conclusion about one feature of the data without a comprehensive understanding of the other. It is invariably the case that empirical results hinge on the methodology used to isolate the trend and cyclical components of the data.

What drives business cycles is an important issue for economists and policymakers alike. In his 1994 article "Shocks," John Cochrane reiterated R. E. Lucas's 1977 assertion that "business cycles are all alike" (p. 296) in that each cycle exhibits co-movements among macroeconomic variables that are so remarkably similar that the cycles are more likely to be driven by a common force and less so by a composite of several shocks. To that end macroeconomic theories have been written suggesting one shock or another that could possibly explain this cyclical phenomenon.

With abundant research devoted to real business cycles (RBC), the search for that one driving force is still ongoing, and from the early-twenty-first-century state of the literature little progress has been made. (Even though the literature does not seem to be converging on one particular shock the search process has resulted in the development of solution techniques that have contributed greatly to macroeconomics and other related literature. For example, researchers have witnessed the birth of dynamic general equilibrium models and the use of dynamic programming to solve such models.) The literature has presented a gamut of candidate shocks responsible for business cycle movements; shocks to individual preferences and tastes (fads), oil price shocks (e.g., OPEC crises in the 1970s and the Gulf War in 1990), monetary policy shocks, government spending and tax shocks, and technology shocks (shocks that shift the production possibility frontier of a nation). All these shocks, with the exception of technology shocks, have been discredited on grounds of either failing to qualitatively match actual business cycle movements or failing to explain a sizeable portion of the forecast error variance in output. That is, they fail to match the data on quantitative grounds. However, since 1999, empirical studies have begun to question the role of technology shocks in the real business cycle. A host of studies finds results that contradict the technology-driven real business cycle hypothesis. However, Finn Kydland and Edward Prescott received the Nobel Prize in economics in 2004 "for their contribution to dynamic macroeconomics: the time consistency of economic policy and the driving forces to business cycles." It is obvious, therefore, that there is indeed some benefit to real business cycle research.

The remainder of this entry provides a brief history of business cycle research and the transition of the literature over the years. This account of the history and transition of the literature to the present will be deliberately brief and could be considered an injustice without any objections from the author of this entry. However, this allows the entry to devote more time to the recent developments in real business cycle research. In the end this entry provides suggestions as to where real business cycle theory should be heading.

A BRIEF HISTORY

Business cycle research examines the periodic upswings and downswings in macroeconomic activity that is a feature of industrialized nations. The notion that business cycles are driven by real factors—termed the real business cycle hypothesis—has itself experienced periods of high and low activity over the years. Prior to the Great Depression real theories was the cornerstone of macroeconomics. The onset of the Great Depression then turned the tide in favor of monetary theory. In fact, monetary policy, more accurately monetary policy errors, was believed to be the impetus behind the devastation of the 1930s and it was widely believed at the time that corrective monetary policy and/or more active fiscal policy were the most likely candidates to turn around the economy.

Since the late twentieth century, real shocks have been the focus of macroeconomists and since the 1970s and early 1980s real business cycle research can be characterized as a period in which candidate shocks began to be eliminated for one reason or another. For example, shocks to government policy fail to deliver the requisite co-movements among macro variables by predicting a fall in household consumption in time of economic expansion. Changes in capital and labor income taxes occur too infrequently to make them serious candidates for business cycle fluctuations. Oil price shocks, even with volatile energy prices are too small a fraction of value added in production to have any sizeable effect. Monetary policy shocks, even with the addition of some type of economic friction, have small effects. However, research conducted in the 2000s has shown that monetary policy used in tandem with technology shocks can produce responses very similar to those observed in the post–World War II U.S. economy.

Technology shock has been the only survivor of this elimination process and thus the literature has accepted it as the main driving force of business cycles. The argument is that when there is a positive technology shock, peoples' marginal productivity increases, causing real wages to rise; workers will work more hours and output subsequently rises. The opposite holds when the technology shock is negative. This is a pattern economists have observed for industrialized economies since the beginning of the nineteenth century.

Kydland and Prescott (1982) have convincingly argued that a dynamic stochastic general equilibrium model driven by technology shocks can mimic the main statistical features of U.S. macroeconomic time series when calibrated using means and variances of macroeconomic data (using reasonable parameter values to fit the real world) from the U.S. economy. An oft-quoted statement used in support of technology shocks attributed to Prescott (1986) can be found on page 7 of Rebelo (2005), asserting that such shocks "account for more that half the fluctuations in the postwar period with a best point estimate near 75%." This conclusion has received its fair share of criticisms but somehow the technology-driven paradigm has addressed any serious criticism hitherto levied against it: the theory survived by adding new features such as labor hoarding, indivisible labor, or capital utilization, which make technology shocks less volatile (thus reducing the probability of technological regress) and enable the theory to better match microeconomic measures of labor supply elasticities.

However, since 1999 a new wave of attacks on the real business cycle hypothesis appears to have delivered the biggest blow yet. These recent studies have found that positive technology shocks, identified using an econometric technique known as structural vector autoregressions, are contractionary on the part of labor input, contrary to business cycle experiences. Contemporary research conducted by Neville Francis and Valerie A. Ramey (2005a) has concluded that the technology-driven real business cycle hypothesis appears dead. The reaction to such a bold statement has been swift and numerous, giving the literature new life. Real business cycle research has reemerged to the forefront of macroeconomics since the mid-1990s.

CONTEMPORARY DEVELOPMENTS

In 1999 Jordi Galí published an article in the *American Economic Review* that empirically challenged the notion that all factors of production should respond positively to positive technological innovations. Using the econometric technique, structural vector autoregression, Galí identified as technology that shock which has positive effects on labor productivity in the long run. Such identifying assumption is a feature of most RBC models. Using this technique to identify technology shock leads to a fall in per capita hours and not a rise as predicted by the standard RBC theory and as evidenced from actual business cycles experiences. Therefore, the empirical prediction for the role of technology shocks in driving business cycles contradicts the underlying theory. In this regard the literature seems to have undergone a paradigm shift and the search for a new theory of business cycle, which matches with the empirics, should be under way.

However, proponents of the technology-driven RBC paradigm have not taken this blow lightly and have tried to save one of the hitherto cornerstones of macroeconomics. Their criticisms of Galí's approach are twofold. First, they state that the manner in which the trend in hours per capita is removed is erroneous. In fact they assume that per capita hours being a bounded series should not be treated as having a long run trend and thus no attempt of removing any such trend should be made. If one agrees with this suggestion one will recover, using said structural vector autoregressions, the result from standard theory

that all factor inputs rise after a technological innovation—here is an example of where the method used to remove trend has implication for the cyclical results as stressed in the opening of this entry. The second point they make is that the tool used in the empirical search, structural vector autoregression, is inappropriate and introduces bias into the results.

In their work in 2004 and 2005, Francis and Ramey address the "trend versus no trend" issue in per capita hours for the United States, both for the post–World War II era and the late twentieth century. They suggest that in order to align the theory to the data there are certain demographic features of the data that are absent from the theory, for example, trends in schooling, aging of the population, and the composition of workers into private and public enterprises. Since the real business cycle theory does not address these issues and they factor so prominently in the data, one might consider removing them from the data. Their removal will make the theory and empirics more compatible. The prediction of labor hours after this exercise is not beneficial to supporters of the technology-driven real business cycle hypothesis as per capita hours again respond negatively to a positive technological innovation.

FUTURE DIRECTION

The search for the driving force of business cycles is ongoing. While researchers have been unsuccessful in finding the candidate shock responsible for this phenomenon they have made some strides in macroeconomics along the way. In particular, research efforts have developed tools like dynamic programming that should figure prominently in economics for some time to come. They have also gone beyond static models and have begun to write models in more dynamic settings. Certainly, this is a practice that is good for the profession, though some researchers have taken it to the extreme by being so mathematical in their approach they have neglected the economics.

The driving force(s) of business cycles is an interesting concept and it will definitely continue. Some have suggested that researchers should first refine the existing model to account for the demographics that are absent from the theory. They maintain that it should not be too much of a stretch to incorporate schooling, aging, and employment composition in the commonly used models of the early twenty-first century. Finally, there are perhaps other shocks out there that have not yet been eliminated. For example, in 1997 Jeremy Greenwood, Zvi Hercowitz, and Per Krusell suggested technology shocks that work through investment goods; however, as of 2006 no consensus has been reached on the plausibility of these types of shocks.

SEE ALSO *Business Cycles, Empirical Literature; Business Cycles, Political; Policy, Monetary*

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Neville Francis

BUSINESS CYCLES, THEORIES

Economic crises of various kinds (financial and commercial failures, crop failures or overabundance, etc.) have afflicted agricultural and industrial societies for centuries. Toward the mid-nineteenth century, however, it was becoming apparent that crises linked to industrial produc-

tion were recurring with some regularity, with common features, and with approximate periodicity. While previous debates on such crises focused on the partiality or generality of "gluts," the emphasis slowly started shifting from the explanation of individual crises (whose cause could be attributed to one or another historical accident) to the determinants of the general pattern. The theory (or theories) of crises gradually gave place to theories of the *recurrence* of crises, and eventually to theories of cycles.

The first stages in the transition were the recognition that crises tended to come in "waves" (Tooke 1823, vol. 1, p. 6), mainly described in terms of prices rising and abruptly falling instead of gently gravitating toward their natural level. The distinction of a number of phases regularly succeeding each other followed: Lord Overstone (1837) and S. Mountiford Longfield (1840), for instance, listed ten, but quickly the list boiled down to three to five. Then, estimates of the average period were formulated. An anonymous American reported in 1829 that "an opinion is entertained by many" that the average period of these "fluctuations" that "do take place, and … always will take place in countries, where paper money has been extensively introduced" is about fourteen years (pp. 303–304). In 1833 John Wade estimated it at about seven years, while a few decades later most writers agreed on a period of about seven to eleven years (see Jevons [1878] 1884, pp. 222–224; Miller 1927, pp. 192–193). The seminal intuition that the explanation of the whole sequence requires phases to be linked to each other seems to be due to Clément Juglar (1862). This now paved the way for theorists to look for a cause, set of causes, or at least some premises common to all crises.

During the latter part of the nineteenth century, however, the emphasis remained on crises. Whether conceived as anomalies and interruptions in the normally smooth working of the system, or as the result of intrinsic malfunctioning of industrial economies, crises—with the havoc they brought—remained the focus of theorists' and practical people's concerns. This is reflected in the asymmetry of the explanations, often focusing on the interruption of the phase of advance, in the asymmetry of the division in phases, and in the asymmetry of the cycle itself, as almost all authors stressed the abrupt and destructive character of the crisis as opposed to the gentleness of the recovery. This is also witnessed by the terminology of the time; in most languages, the subject was named "theory of crises."

In truth, the terminology (especially in German, Italian, and French) was slow to adapt to the theoretical change that rapidly intervened at the turn of the century and was completed in the interwar years. In the hands of authors such as Mikhail Tugan-Baranovsky (1865–1919), Dennis Holme Robertson (1890–1963), Arthur Spiethoff (1873–1957), Albert Aftalion (1874–1956), and others, the explanation of the sequence of events became more and more detailed; the other phases were described not only as a launching pad for, or consequences of, crises, but as phenomena of interest on their own ground; and the focus gradually shifted from the crisis to the overall movement. Crises at first became the name of the upper turning point (Lescure [1907], quickly followed by Aftalion [1913] and Mitchell [1913]), and eventually disappeared altogether. Finally, in the hands of the "econometricians" who formulated the first mathematical theories of the cycle in the early 1930s, the cycle became symmetrical, with an even number of phases, all of which were equally important in the overall sine-curve representation of the cycle. Gradual and smooth transitions from one phase to the next substituted for the violence and suddenness of the crises. The prevalent metaphor also changed: while in the prewar literature crises were frequently depicted as a disease of the system (the normal, healthy state of which corresponded to the prosperous phase), the analogy introduced by mathematical economists was that of the pendulum (or rocking horse).

The cycle was thus becoming a new phenomenon: no longer a sequence of crises, but an entity of its own. It became identified by related fluctuations (not necessarily synchronous nor simultaneous, lags were actually called to play a relevant role) in a number of variables, among which prices gradually lost importance (only to regain the center of the stage with the real and equilibrium business cycles theories). Accordingly, the cycle deserved a proper name of its own: the term *cycle* evokes the returning of the system to a same round of states. The attribute "business" seems to be due to Wesley Clair Mitchell (1874–1948), and reflects his institutionalist creed that the cycle is a phenomenon rooted in the nature of capitalist economies and his emphasis on processes rather than equilibrium. The expression was first used in a number of articles that appeared between 1909 and 1913 and was quickly established in the American literature after the publication of Mitchell's *Business Cycles* (1913). The expression *trade cycle* was already in use in 1879 (Arthur Ellis); it appeared in an article title in 1902 (George Charles Selden), but became established in British usage after the publication of Frederick Lavington's book with the same title in 1922. The term takes up the emphasis on "commercial crises," widely spread in Britain, Germany (*Handelskrisen*) and France (*crises commerciales*).

CYCLES AND EQUILIBRIUM

Almost anyone who counted anything in economics in the first three decades of the twentieth century contributed to the debate on the causes of the business cycle. Not surprisingly, there are as many theories as there are

economists, each emphasizing different mechanisms capable of explaining how the system could go out of gear. New doctrines were formulated, but some of those propounded in the nineteenth century were further elaborated. Among these doctrines are to be cited those relying on the mechanisms of credit and banking, which often blamed overspeculation, and especially the tradition focusing on the lack of demand with respect to supply, whether in the form of underconsumption or of overproduction. The denomination of these and other causes, with its stress on excesses or shortages, reveals the general attitude of arguing in terms of a comparison to some norm, not always explicitly identified but providing nonetheless a reference point.

Other authors focused on the development of vertical or horizontal imbalances, overinvestment, overindebtedness, or psychological mechanisms. The result is a plethora of causal explanations of variegated (and sometimes irreconcilable) character giving rise to currents of thought based on different views as to the working of the economic system, in particular between those who blamed the supply side of the economy and those who lamented the lack of sufficient demand. (For a still-classical classification of theories based on the alleged causes of cycles see Gottfried Haberler [1937], who also attempted to synthesize what is good in these explanations.)

Parallel to the proliferation of cycle theories and models, the interwar years were also marked by reflections on the ultimate nature of crises and cycles and the possibility of theorizing the phenomenon. The divide between two mutually exclusive groups became apparent. On one side, the "orthodox" approach conceived of equilibrium as a state toward which the system ultimately tends. In this view, fluctuations can only be explained as the result of some external force temporarily maintaining the system in disequilibrium. Accordingly, the system's rhythmic movement results from the variable's tendency to return toward its "natural" state (or to move toward a new position, to become the "natural" one), perhaps with some kind of impediment (such as Aftalion's construction lag) in response to an exogenous disturbance to equilibrium. The latter is the cause of the crisis, while the system's structure determines the mode in which movement takes place. The "heretics," on the contrary, believed that the economic system does not have an intrinsic tendency to move toward a position of rest (or a path of balanced growth), but tends instead to further depart from it. In this view, movement is the "natural" state of the system, and the problem is that of explaining how movement is constrained and why the system does not explode or collapse. The cycle results from endogenous forces, although exogenous events can be called to explain the specificity of individual cycles.

The "heretics" themselves (the terminology is due to John Maynard Keynes [1883–1946], who in 1934 claimed to be one of the dissidents) were keen to stress that the "orthodox" assumed cycles and crises away from their premises, and some clearly pointed out that this exclusion regarded the relationship of cycles and equilibrium (e.g., Keynes 1934; Löwe 1987; Bouniatian 1922). Two aspects were involved. One concerned the possible divergence between the individuals' optimizing behavior and the system's capacity of reproducing its own state. While most orthodox economists argued that the individuals' maximization of utility or profit brings an overall satisfactory state of affairs by clearing all markets, a number of heretics argued that this is not necessarily so, and found in this divergence one of the possibility of crises.

The second aspect concerns the stability of equilibrium. The most explicit discussion is due to Adolf Löwe (1893–1995; name changed to Adolph Lowe), who argued that a theory of the cycle is impossible within the premises of equilibrium economics because "the structure of a *process* which is always in equilibrium over time cannot undergo any change by definition" ([1926] 1997, p. 269); Löwe concluded that the presupposition of the stability of equilibrium should be rejected (see also Kuznets 1930). Friedrich Hayek (1899–1992) agreed that the logic of equilibrium theories (he referred to the general equilibrium theory as developed in Lausanne; the argument, however, applies in a wider sense) requires that the disturbances of equilibrium must come from outside. However, he disputed Löwe's conclusion by arguing that the proper procedure is to examine how a suitable disturbance of equilibrium—in particular an expansionary banking policy—gives rise, by the operation of the fundamental forces tending to bring the system back to equilibrium, to permanent oscillations (Hayek [1929] 1933, pp. 42–43). Roy Harrod (1900–1978) dispensed with Hayek's concern with the departure from equilibrium and, as Löwe, focused on the possibility and the persistence of disequilibrium. Harrod's "instability principle," that is, a destabilizing factor introduced at the outset, is a premise to the "very kind of explanation" required for a "rational account of the trade cycle" (Harrod 2003, p. 304; 1934, pt. 3).

The stability issue, in relation to the necessity of relying on exogenous factors, was also one of the main methodological issues among macrodynamic mathematical theorists, whose contribution was also notable for the introduction of modeling in terms of functional equations, linked to a definition of dynamics as the description of "how a situation grows out of the foregoing" (Frisch 1933, 1936). Michal Kalecki's (1899–1970) mathematical model producing constant-amplitude fluctuations (1935) is perhaps the best-known case: it was criticized as being structurally unstable and dependent upon a special

configuration of parameters (Frisch and Holme 1935). Ragnar Frisch (1895–1973), who had originally postulated that one should distinguish the impulse from the propagation problems (1933), suggested instead that Kalecki's interesting model should be damped but kept alive by exogenous shocks. Kalecki struggled all his life with this problem, but failed to solve it to his own satisfaction. Nicholas Kaldor (1908–1986) criticized one of Kalecki's attempts by arguing, similarly to Harrod, that equilibrium must be unstable if the system is to generate endogenous fluctuations (1940).

Richard M. Goodwin (1913–1996) showed that the problem of the persistency of fluctuations, to which Frisch's proposal was a solution, is rooted in the assumption of linear relationships and incapable of giving rise to fully endogenous sustained cycles (1951). If this assumption is relaxed, it is possible to deal at once with cycles and growth (an issue dear to a number of interwar economists, particularly Robertson [1915, 1926] and Joseph Alois Schumpeter [1883–1950, from 1910]). In addition, persistent cycles consist in oscillations (or chaotic movement) around an unstable stationary state—precisely the point advocated, in more generic and intuitive terms, by the "heretics"—kept within bounds by endogenous or semi-exogenous constraints, such as population or resources.

Equilibrium and real business cycle theories took a different route, reviving the "orthodox" approach by taking up two different threads: Hayek's (Lucas [1977]; who, however, eventually admitted [1994] he had misread Hayek) and the impulse approach (more Slutsky's [1937] than Frisch's; see Lines [1990]). The cycle is viewed as the result of the economic agent's rational reaction to signals, transmitted via the price system (in conditions of imperfect information, in the monetary business cycle theory) triggered by exogenous impulses coming either from the monetary system or the real economy (productivity shocks, in particular), respectively. The cycle is no longer the result of a tendency to equilibrium: each configuration of the system is understood as an equilibrium state—as defined by the rational expectations hypothesis.

The contrasts among contemporary business cycle theories therefore reflect the same fundamental conflict of views on the working of an economic system that has characterized the long history of attempts to explain fluctuations. Some believe depressions to be the result of frictions or to be caused by external forces or by mismanagement of the economy on the part of the government. Others, on the contrary, interpret them as the result of the intrinsic absence (or, at least, serious and systematic failures) of self-regulating properties of economic systems (to which, perhaps, only public intervention can give remedy). It would not seem that these lines of thought, relying not only on different worldviews but also on antagonistic methodologies and having different objects of research, can be reconciled. Perhaps this is all for the good of the discipline, for actual crises have always been the stimulus of fruitful theoretical debates, which can only thrive insofar as different viewpoints are held.

SEE ALSO *Business Cycles, Empirical Literature; Business Cycles, Political; Business Cycles, Real; Depression, Economic; Financial Instability Hypothesis; Long Waves; Lucas Critique; Panics; Recession; Say's Law; Shocks*

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Daniele Besomi

BUSINESS ETHICS

SEE *Ethics, Business.*

BUTTERFLY EFFECT

The technical name for the *butterfly effect* is *sensitive dependence on initial conditions*. It was first proposed in meteorology but has an impressive array of implications in a variety of fields. Simply put, the butterfly effect occurs when a very small event has exceedingly large and far-reaching impact. The metaphor of the butterfly is used because a butterfly's wings, fragile as they are, do not stir up much air as they flap, but even that minute movement may initiate a series of changes that grow such that they eventually cause a large storm thousands of miles away. In broad terms, then, the butterfly effect implies that large events may be tied to small, or even minuscule, occurrences.

The butterfly effect was used initially to explain why weather forecasts were frequently inaccurate. Initial conditions, sometimes quite subtle, tended to go unnoticed, so forecasters did not take them into account—yet those minute conditions eventually created hurricanes or similar sizeable changes in the weather. It is this insight concerning the large potential impact of minor occurrences that gives the butterfly effect broad appeal in many other fields, including psychology: It explains why predictions are often inaccurate. Recognizing the importance of initial conditions can dramatically improve the accuracy of scientific predictions.

The butterfly effect was discovered serendipitously and shows the benefits of interdisciplinary research efforts. The meteorologist Edward Lorenz, who first described the butterfly effect, saw meaningful patterns in what appeared to be random events in weather patterns. He studied them mathematically, and eventually caught the attention of other meteorologists. These ideas contributed significantly to the new science of *chaos*. To simplify, what appears to be chaotic may in fact reflect a nonlinear pattern in which seemingly negligible events have dramatic impact. This process is chaotic neither in the sense of being unpredictable, nor in the sense that the contributing factors cannot be determined. Instead, causes are related to effects in a nonlinear fashion, and although the

results may appear to be chaotic, they are in fact deducible if nonlinear reasoning is applied.

Physicists, biologists, epidemiologists, ecologists, and psychologists now consider the butterfly effect, chaos, and nonlinear reasoning when making certain predictions. This has proven to be very useful in various social and behavioral sciences, as well as the physical and biological sciences. Data from a measles epidemic in New York City, for example, supported the new ideas of chaos and the butterfly effect, as did studies of the population variations of the Canadian lynx. Lightning and clouds showed the same trends and patterns, as did phenomena on much smaller scales, such as blood vessels and proteins, and on much larger scales, such as oceans, stars, and galaxies. This is one of the attractions of chaos theory: It applies regardless of scale.

The implications for the social sciences are suggested by the population patterns noted above, but implications for individuals are at least as clear. The butterfly effect in particular has been used to describe a variety of seemingly unpredictable behaviors and seemingly unpredictable thinking patterns. What may appear to be random or meaningless ideation, such as that of some psychotics, can, for example, be understood as a result of nonlinear reasoning. Along much the same lines, creative insights, which are by definition original, may be understood by taking initial perspective into account and allowing for nonlinear cognitive processes that may lead to a surprising insight or creative solution to a problem. Behavioral tendencies such as these were for many years difficult to understand, but the butterfly effect has improved our understanding of them in dramatic fashion.

SEE ALSO *Chaos Theory; Differential Equations; Hurwicz, Leonid; Nonlinear Systems; Path Dependence; Phase Diagrams; Stability in Economics*

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Mark A. Runco

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CABRAL, AMÍLCAR
1924–1973

Amílcar Lopes Cabral was born on September 12, 1924, in Bafatá, Guinea-Bissau. His father, a Cape Verdean, was a poet, polemicist, and schoolteacher; his mother was a shopkeeper, guest house owner, and later, seamstress. The family moved to the Cape Verde when Cabral was four. He was home-schooled until twelve. He did his primary schooling in Praia and subsequently went to Gil Eanes Lyceum in Mindelo, São Vincente Island. Gil Eanes was then a literary and social beehive, alive with discussion groups and social activists examining Cape Verde's social and economic deprivation amid continuing droughts and famine. Cabral was deeply influenced by these discussions and the reality surrounding him. By the time he left for Portugal to pursue university studies in the autumn of 1945, he was transformed, committed to leading an active, socially transformative life.

During his seven years in Portugal Cabral studied agronomy. He developed an aptitude for detailed fieldwork and quantitative analysis. He deepened his qualitative analytical skills and mastered the art of public speaking and diplomacy. And he proved highly successful at organizing discussions, meetings, and study groups while foiling surveillance.

Cabral graduated in 1952. He subsequently returned to Guinea-Bissau, where he stayed intermittently until 1959. While there, he helped found Partido Africano da Independéncia de Guinea e Cabo Verde (PAIGC), or the African Party for the Independence of Guinea and the Cape Verde Island.

Cabral and his leadership have attracted wide-ranging views. As a doer, however, Cabral is more graspable. He helped found the PAIGC as a binationalist party, tying the Cape Verde Island's political future and logistical fate to that of Guinea-Bissau. As a political strategist he was said to have masterminded a countrywide mobilization campaign preparing Guinea-Bissauans for liberation. As the PAIGC's chief negotiator and diplomat, he traveled internationally for nearly thirteen years, paying over eighty visits to twenty-odd countries, logging some 600,000 miles. These visits brought in much-needed military aid and humanitarian assistance vital to sustain the war effort and nation building.

Cabral was shot dead at point blank range on January 20, 1973, just as he was getting out of his vehicle outside his home in Conakry. His killing was politically motivated. His murderer, Innocencio Kani, led a group of dissidents who wanted Cabral replaced with someone less "Cape Verdean" and more "Guinea-Bissauan." On the other hand, the Portuguese armed forces, then led by General António Spinola, aided and abetted this group to have Cabral replaced with someone willing to reach a negotiated settlement for Guinea-Bissau only.

Cabral wrote extensively. His poems sought to capture the travails of Cape Verdeans, the fragility of their culture in a rapidly emaciating economy, and the social and emotional consequences of such hardships on culture, identity, and social cohesion. Of his numerous professional monographs, none surpass in importance the 1956 200-page fieldwork document evaluating Guinea-Bissau's agricultural demography. The study took several years to complete and entailed traveling some 37,000 miles to visit 2,248 peasant holdings.

Cabral's work on race and colonialism is steeped in his lived-in experience. He deeply felt the need for Africans, and for that matter anyone under colonial rule, to "re-racialize"—to return to the source. He saw this as an imperative for self-determination, a preconditional rediscovery of one's identity and culture, as it were, to begin the real overt fight to set oneself free from coloniality and colonialism.

SEE ALSO *Anticolonial Movements; Colonialism; Geography; Identity; Liberation; Liberation Movements; Self-Determination*

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Mustafah Dhada

CAIRNS, ROBERT

SEE *Social Cognitive Map.*

CALIFORNIA CIVIL RIGHTS INITIATIVE

The California Civil Rights Initiative, a 1996 ballot measure also known as Proposition 209, ended affirmative action for women and minorities in California public education and contracting. It gained little attention when it was first written by two California academics, Thomas E. Wood and Glynn Custred, in the early 1990s. However, during their second attempt to put the initiative on the 1996 ballot, it won the support of Governor Pete Wilson and the financial backing of the state Republican Party. Both Wilson and the party saw it as a potent way for the Republicans to win California's fifty-four electoral votes in the 1996 presidential election. They hoped it would become the same type of political wedge issue that the anti-immigrant Proposition 187 became in 1994, the year the Republican Party took control of Congress and nearly every state office in California.

Midway through the 1996 campaign, the conservative African American businessman Ward Connerly, appointed to the University of California (UC) Board of Regents by Wilson, became the chair and chief spokesman for the initiative. The language of the initiative and the campaign were both designed to take advantage of what polls have consistently demonstrated: that whereas in general a slight majority of Americans support affirmative action for women and minorities, the vast majority will oppose it if it is described as preferences for women and minorities. Both the initiative's language and the political campaign to support it used the word *preferences* and omitted any mention of affirmative action.

The opposition campaign, run by a collection of grassroots organizations—the Feminist Majority, NOW, the ACLU, and the NAACP Legal Defense and Education Fund—began its fight early, but never earned the political or financial support of the state or national Democratic Party. President Clinton, who visited California several days before the vote, never urged voters to reject the initiative.

In the end, the initiative won approval with 54.6 percent of the vote, including 58 percent of white women voters and 66 percent of white men. Although some voters remained confused on Election Day about the initiative's intent, it was the use of the word *preferences*, and the public's long aversion to affirmative action when described using this word, that insured the measure's victory.

Moreover, voters who benefited from affirmative action or preferences no longer connected their success to these programs. White women, for example, had been the main beneficiaries of affirmative action or preferences, but polling by both campaigns showed that white women no longer connected their success to these programs and many believed that affirmative action hurt job prospects for their male children and husbands.

A *Los Angeles Times* exit poll showed that the initiative was rejected by 74 percent of African Americans voters, 76 percent of Latinos, and 61 percent of Asians. The Asian vote surprised some analysts because Asians are well represented at the state's premiere universities, but their own experience of facing discrimination after graduating from college and the leadership of the late UC Berkeley chancellor Chang-Lin Tien encouraged Asians to support affirmative action.

The impact of the California Civil Rights Initiative has been tremendous. Latino and African American enrollment at UC Berkeley and UCLA has never recovered. State contracting for firms owned by women and minorities has dropped sharply. Copycat initiatives have failed in Florida and Houston, but succeeded in Washington and in Michigan.

SEE ALSO *Affirmative Action; Elites; Equal Opportunity; Equality; Inequality, Gender; Inequality, Racial; Meritocracy*

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Lydia Chávez

CALIFORNIA V. BAKKE

SEE Grutter *Decision.*

CALYPSO

Calypso is a style of Caribbean music associated with the island of Trinidad in the West Indies and linked very closely to the annual celebration of the pre-Lenten carnival. The music, as well as the name itself, has uncertain roots, yet scholars generally agree that calypso is an example of a hybrid musical form resulting from the interactions of colonizers, slaves, and others from the eighteenth century onward. While calypso grew out of a myriad of traditions, it has spawned a number of separate musical genres such as soca, rapso, talkalypso, chutney soca, and others.

Although there is no general agreement as to the origin of the term, there are references in Trinidadian newspapers of the nineteenth century to *cariso* and *kaiso*, both song forms characterized by the performance of extemporaneous, satirical lyrics. The term *kaiso*, which was shouted to encourage or praise successful singers, is considered a possible source for the word *calypso*, and indeed is still used instead of *calypso*. The *cariso* is only one of many song forms to emerge from the colonial era in Trinidad. Creole slaves and free Africans contributed a variety of songs and dances, including the *bel air* (derived from both African and French sources), the *juba*, the *bamboula*, the *calinda* (both a martial art and a song style), and the *lavway* (a road chant performed during carnival processions). Combined with these forms were British ballads, French folk songs, Venezuelan string music, and other types of Creole West Indian songs. Furthermore, as new musical forms were created or introduced to the island—American jazz, Venezuelan *paseos*, and ultimately such diverse forms as Hindi film music, reggae and dancehall, soul, and rhythm and blues—they were incorporated into calypso.

HISTORICAL BACKGROUND

Claimed for Spain by Christopher Columbus in 1498, Trinidad has played host to colonizers, slaves, indentured laborers, and immigrants from diverse cultural backgrounds, many of whom contributed their own musical forms to the mix. However, the African musical forms of the slaves and the musical styles of French, English, and Spanish colonizers exercised perhaps the greatest influence.

Trinidad was opened by Spain to French colonists first in the 1770s and later in 1783. The French dominated the cultural life of the island up to and even beyond the English conquest in 1797. The French imported their pre-Lenten festival of carnival, and much of the earliest carnival music was sung in Creole or patois. During the nineteenth century, English culture, language, and religion increased in importance and influence, and many of the folk musical styles gradually changed from French Creole to English. As the English extended their hegemony over the island, they also embarked on a mission of reforming the carnival. By the 1880s unruly masqueraders and riots against police repression resulted in a massive campaign of controlling and channeling the public celebration into a manageable event. By the early 1900s calypso music, marked lyrically now by social satire, political commentary, humor, and sexual innuendo, was largely being performed in "calypso tents," temporary venues in which calypsonians competed against each other for prizes offered by private sponsors.

The first calypso recordings were made in 1914, and by the 1920s and 1930s Trinidad's finest calypso singers, such as Attila the Hun, Roaring Lion, and Lord Invader, were regularly recording and performing in the United States. "Rum and Coca-Cola" (1944) by the Andrews Sisters, a sanitized reinterpretation of a Lord Invader song, became an American hit. It also spawned a landmark lawsuit by Lord Invader against the American actor Morey Amsterdam, who illegally copyrighted the lyrics. Invader won the suit.

Although they faced routine censorship by the British colonial authorities, the calypsonians of this period, sometimes referred to as the golden age of calypso, displayed enormous creativity and invention in circumventing restrictions placed on them and creating songs rife with double entendre, inside jokes, and subtle parody. Audiences relied on clever calypsonians for insight into the ironies of colonial rule, the hypocrisy of the ruling classes, the meaning of certain scandals and outrages, and so on. Savvy politicians could often "take the temperature" of the public by the attitudes of their calypsonians.

SOCIAL COMMENTARY

From its earliest days, calypso music served as a forum for the expression of social and political views within the Caribbean. Remarkably, the criticism mounted by calypsonians was not limited to broad appeals against inequality, racism, poverty, and oppression, but tackled precise specificity laws, domestic policy, proposed legislation, foreign policy, labor relations, actions by public figures, and even speeches given by notable persons. Thus, in addition to humorous rivalries between singers, songs about the beauty of the land, and compositions with a ribald flavor, calypsos were composed with such titles as "Prison Improvement," "Shop Closing Ordinance," "The Commissioner's Report," "The European Situation," "Devaluation," "Slum Clearance," "Reply to the Ministry," and, fittingly, "The Censoring of Calypsoes Makes Us Glad."

AFRICAN-INDIAN RELATIONS

The arrival of indentured laborers from South Asia from the 1840s until 1917 dramatically changed the ethnic makeup of Trinidad. Competition for work and land created tensions between the island's Africans and South Asians that ultimately manifested in political divisions being drawn along ethnic lines. Although never reaching the violence and discord of Guyana, where a similar immigration took place, the presence of Indians in Trinidad was closely followed by calypsonians. Initially, many calypsos dealing with Indians discussed "strange" customs, delicious food, and beautiful women. Creole calypsonians often commented in song on how they fell in love with an Indian girl or how they were able to participate in an Indian feast. As political tensions heated up during the 1950s, however, calypsos became more pointedly political. By 1961 the calypsonian Striker, registering his dismay at the deep ethnic division present in local politics, remarked in song that "Negro can't get a vote from Indian." Today there are a number of noted Indian calypsonians, both men and women, as well as African artists performing in the Indian-influenced genre of *chutney soca*. Even so, tensions between the two communities persist and are often played out musically over the airways and in the calypso tents of Trinidad.

In addition to the rebellious and resistant side of calypso, there was a strong dose of patriotism (songs in favor of England during the Boer War [1899–1902], World War I [1914–1918], and World War II [1939–1945], for instance, were common). Furthermore, calypsonians recorded the achievements of the British Empire and the royal family with great enthusiasm. Compositions in favor of the Empire coexisted with little discomfort alongside songs detailing the often oppressive conditions under which the children of the Empire labored.

Although not technically a calypso, the well-known "Banana Boat Song," a traditional Jamaican folksong whose best-known rendition was recorded by Harry Belafonte on his 1956 album *Calypso*, helped to make that album the first to sell more than a million copies.

CALYPSO SINCE INDEPENDENCE

In 1956 a calypsonian known as the Mighty Sparrow penned "Jean and Dinah," a commentary in song about the sudden availability and desperation of prostitutes in Port of Spain after the departure of the free-spending American sailors stationed in Trinidad during World War II. While the song became an international hit, and won the calypso "crown" for Sparrow, it is perhaps even more important as a testimony to the renewed sense of cultural and political confidence then being experienced across the Caribbean as independence movements were flourishing. The 1950s marked a pivotal point in the development of calypso and perhaps inaugurated what might be called the "independence period" in calypso.

As Trinidad, Jamaica, Barbados, and other English-speaking islands continued their drive toward independence from the United Kingdom, folk idioms such as calypso, carnival, steel band, the musical form ska, and even sports such as cricket began to take on a nationalist tone. Nation-building calypsos, as they are sometimes called, emerged to praise the efforts of certain political parties and politicians and to encourage proper behavior and decorum among the populace.

The 1960s brought to the Caribbean not only independence but also the Black Power movement. Calypso reflected this new cultural consciousness lyrically; it also reflected the cultural source from which it came—the United States. One of the most important figures to emerge at this time was the Mighty Chalkdust, a teacher and calypsonian who obtained his Ph.D. from the University of Michigan and has, under his given name, Hollis Liverpool, researched and published widely on calypso, carnival, and Trinidadian culture in general.

Traditionally accompanied by acoustic music, calypso increasingly came to incorporate electronic instrumentation and the influence of North American musical styles such as rhythm and blues and soul. Alongside Black Power came the women's liberation movement and increasing (though still small) numbers of women singers. Indeed, women as calypsonians are not given nearly the attention they deserve in the literature. Although largely excluded from the ranks of early recorded calypsonians, and often derided in songs such as "Jean and Dinah," women have been instrumental in the development of Trinidadian music as *chantwells* (praise singers for stickfighters and

singers of road marches) and in religious music. In the 1960s, attitudes toward women calypsonians began to change, and it was, perhaps ironically, the Mighty Sparrow who gave the then-unknown singer Calypso Rose her start. Along with Singing Francine and Denyse Plummer, Rose has become one of the most popular calypsonians of all time.

With the rise of outside influences from North America came further influences from diverse musical sources, including Jamaican reggae and (due to the presence of a large and thriving Indian population) Hindi film music. The result has been the development of new musical forms, such as soca, chutney soca, rapso, raga, and others.

Born in 1941, Garfield Blackman, known as Lord Shorty, would become the creator of soca music. Concerned that calypso was declining in relation to reggae, Lord Shorty experimented with the calypso rhythm. He combined Indian instruments such as the dholak, tabla, and dhantal with traditional calypso instrumentation. The result was a new musical hybrid that he called *solka*. With his 1974 album *Endless Vibrations* and the single "Shanti Om," Shorty sparked a revolution in Caribbean music. Initially the term *solka* referred to an attempt to recapture the "soul of calypso," which he felt was one of inclusion, common struggle, and resistance to oppression. Shorty hoped that the "Indianization" of calypso would bring together the musical traditions of Trinidad and Tobago's two major ethnic groups, the descendants of African slaves and of indentured laborers from India. The name was later changed to *soca*, and it is routinely if erroneously explained as a fusion of soul and calypso.

By the turn of the 1980s soca was rapidly becoming the music of choice for Trinidadians during carnival time. The Montserratian singer Arrow did much to popularize soca internationally with his 1983 number-one soca classic "Hot Hot Hot." Due to the globalization of the music industry, soca has evolved swiftly and has incorporated many outside influences, spawning such diverse subgenres as ragga soca and chutney soca. Although soca has become increasingly popular, many critics within the region have pointed to its reluctance to be anything more than "party music." The political and social commentary once so central to calypso has had to find a new home in other Caribbean musical genres. In Trinidad this mantle has largely been taken up by *rapso*. Rapso is a unique style of street poetry from Trinidad and Tobago that originated in the 1970s (although it was not named *rapso* until the 1980s by Brother Resistance). Often credited to Lancelot Layne, rapso was created in a spirit of political protest and social justice. Layne's 1970 hit "Blow Away" is considered the first rapso recording. Layne is also well remembered for his 1971 recording "Get Off the Radio."

Beginning as a folk music of protest, social commentary, and political satire, calypso has emerged as one of the most important, internationally recognized, and fecund musical forms of the twentieth century.

SEE ALSO *Caribbean, The; Music; Popular Music*

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CAMBRIDGE CAPITAL CONTROVERSY

The Cambridge capital controversy refers to a debate that started in the 1950s and continued through the 1970s. The core of the debate concerns the measurement of capital goods in a way that is consistent with the requirements of neoclassical economic theory. The debate involved economists such as Piero Sraffa, Joan Robinson, Piero Garegnani, and Luigi Pasinetti at the University of Cambridge in England and Paul Samuelson and Robert Solow at the Massachusetts Institute of Technology in Cambridge, Massachusetts. In a now-famous *Quarterly Journal of Economics* publication from 1966, Samuelson admitted the logical validity of the British critique of the neoclassical theory of capital (Samuelson 1966). Yet, Solow (1963) claimed the debate was largely a sideshow to the core of neoclassical analysis.

The essence of the debate revolved around the fundamental premises of the theories of value, distribution, and growth, each of which depends upon an aggregate production function where the inputs or factors of produc-

tion for capital and labor are aggregated in some fashion prior to the determination of the rate of profit (interest) and the wage rate. According to neoclassical theory, the price of each factor of production is determined by its marginal contribution to production; furthermore, there exists substitutability between factors of production that gives rise to diminishing returns. As a consequence, the rate of profit (or interest) is the price of capital and as such reflects capital's relative scarcity; more specifically, a relative abundance of capital, in combination with the law of diminishing returns of a factor of production (whereby the greater use of an input will imply a lower marginal product, other things being equal) will give rise to a low rate of profit (interest). The opposite would be true in the case of a relative scarcity of capital. Capital income would amount to the product of the rate of profit times the amount of capital employed.

Piero Sraffa pointed out that there was an inherent measurement problem in applying the neoclassical model of value and income distribution, because the estimation of the rate of profit requires the prior measurement of capital. The problem is that capital—unlike labor or land, which can be reduced to homogenous units stated in their own terms (for example, hours of the same skill and intensity or land of the same fertility)—is an ensemble of heterogeneously produced goods, which must be added in such a way as to enable a cost-minimizing choice of techniques. From the various alternatives, neoclassical theory chooses to measure capital goods in value terms; that is, the product of physical units (buildings, machines, etc.) times their respective (equilibrium) prices. Joan Robinson (1953), inspired by Sraffa's teaching and early writings, and later Sraffa himself (1960), argued that the value measurement of capital requires the prior knowledge of equilibrium prices, which in turn requires an equilibrium rate of profit that cannot be obtained unless we have estimated the value of capital.

Clearly, there is a problem of circularity here that the Cambridge, Massachusetts, economists sought to resolve. Paul Samuelson, in particular, presented a model based on the heroic assumption that capital-intensity is uniform across sectors, which is equivalent to saying that there is a one-commodity world. In such an economy, as income distribution varies, the subsequent revaluation of capital gives rise to results that are absolutely consistent with the requirements of neoclassical theory. In fact, Samuelson derived a straight-line wage–profit rate frontier (the mirror image of the usual convex isoquant curves), each one representing a cost-minimizing technique, and this gave rise to a well-behaved demand-for-capital schedule. Parenthetically, Samuelson attacked Marxian value theory for its alleged inability to explain relative prices. However, if one applies Samuelson's heroic assumption of an equal capital intensity across all industries to Marx's labor theory of value, then all of Samuelson's criticisms of Marx become irrelevant. This irony was not unnoticed by the British participants in the capital debates.

Samuelson's assumption was attacked for lack of realism by Garegnani, Pasinetti, and Amartya Sen, among others, who showed that once we hypothesize different capital intensities across industries, the neoclassical results do not necessarily hold. The idea is that as relative prices change the revaluation of capital can go either way, and it is possible for an industry that is capital-intensive in one income distribution to become labor-intensive in another. As a consequence, we no longer derive Samuelson's straight-line wage–profit rate frontiers, which are consistent with the cost-minimizing choice of technique and give rise to well-behaved demand-for-capital schedules. In the presence of many capital goods and various capital intensities across industries it follows that the wage–profit rate frontiers are nonlinear and may cross over each other more than once, which means that for a low rate of profit one may choose a capital-intensive technique. As the rate of profit increases, the technique with a lower capital intensity may be chosen, and for a higher rate of profit the original technique of higher capital intensity is chosen again. We observe that a capital-intensive technique may be chosen for both low and high rates of profit, a result that runs contrary to the neoclassical theory of value and income distribution. Under these circumstances we cannot determine a well-behaved demand for capital schedule and so the whole neoclassical construction is under question.

It is important to point out that the capital theory critique does not affect the classical theory of value and income distribution, because the classical theory does not claim that relative prices of factors of production reflect relative scarcities; additionally this theory assumes one of the distributive variables, usually the real wage, as a datum that in combination with the given technology and output level determines the relative equilibrium prices together with the equilibrium rate of profit. Furthermore, the evaluation of heterogeneous capital goods can be achieved in terms of labor values; hence there might be a problem of consistency because variables estimated in terms of labor values will differ from those estimated in terms of equilibrium prices. This, however, is mainly an empirical question and the empirical research has shown that the two types of prices are close to each other, and variables estimated in labor values or equilibrium prices are approximately equal to each other (Shaikh and Tonak 1994, p. 143).

The capital controversy had an initial effect on neoclassical economics, but soon it was forgotten to the point that the new generation of neoclassical economists either dismisses it or simply does not know it. As a result, both

theoretical and empirical neoclassical research makes use of aggregate production functions, where capital is still used along with labor in the determination of output and the marginal products of these inputs are estimated on the assumption of substitutability between factors of production, as if the capital controversy never happened. At the close of the twentieth century, there were new efforts by the so-called modern classical economists to revive the classical approach, and once again the capital theory began to surface in mainstream journals, which may revive theoretical questions that puzzled the best Cambridge economists in England and the United States.

The Cambridge capital controversy revived interest in Marxian economics, contributed to the founding of neo-Ricardian or Sraffian economics, and inspired the development of post-Keynesian economics. Indeed, it was Sraffa's 1920s critique of the neoclassical theory of the firm and Sraffa's proto-critique of neoclassical value theory that greatly influenced Keynes's *General Theory of Employment, Interest, and Money* (1936). British interpretation of Keynes's influential publication assumed a classical theory of value and distribution, while the U.S. interpretation sought to integrate Keynes into the neoclassical theory of value and distribution. This difference in understanding Keynes led Joan Robinson to refer to her American counterparts as "bastard Keynesians" (Harcourt 1982, p. 347). Finally, in another famous barb, Robinson once said that because she never learned math she was always forced to think. Robinson's mathematics never went beyond basic algebra and very elementary geometry—the kind of math mastered by many American students in the first two years of high school. On the other hand, Samuelson's economic analysis has led the way in the use of calculus, linear algebra, differential equations, real analysis, and mathematical programming. Robinson's biting comment is a warning to economists to not allow mathematical technique to triumph over substantive understanding of how real-world economies operate.

SEE ALSO *Capital; Pasinetti, Luigi; Robinson, Joan; Samuelson, Paul A.; Sen, Amartya Kumar; Solow, Robert M.; Sraffa, Piero; Substitutability*

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CAMBRIDGE UNIVERSITY

The University of Cambridge, it is generally accepted, came about as a result of a migration from the University of Oxford in 1209. The existence of a *studium* at Cambridge was recognized by a papal degree of Gregory IX dated June 14, 1233, and by about 1250 a draft of its statutes had arrived in Rome (Anglica MS 401). These were preceded by recognition from the Crown in 1231. The university's first college, Peterhouse, was founded in 1284, and today there are thirty-one colleges, the latest, Robinson, founded in 1977.

The earliest studies of the university followed the usual pattern for medieval universities, with a particular emphasis on canon law, a trend encouraged by the foundation in Cambridge of large Franciscan and Dominican houses, to be followed by several other orders.

In 1381, in a manifestation of the Peasants' Revolt, the townspeople of Cambridge made assaults on both the university and the colleges, notably on Corpus Christi College which, uniquely, had been founded by the amalgamated town gilds of St. Mary and of Corpus Christi (in 1352). This resulted, ironically, in royal charters greatly increasing the university's dominance of the town, including the oversight of weights and measures and other day-to-day business.

Although royal and papal recognition came earlier to Cambridge than it did to Oxford, Cambridge was certainly the lesser of the two universities until the English Reformation in the sixteenth century. Cambridge men were dominant in both church and state under Henry VIII (e.g., Thomas Cranmer) and Elizabeth I (e.g., William Cecil and John Whitgift), but during the English Civil War (1642–1649), when the royal court removed to Oxford, the balance was reversed.

Academically, Cambridge's eminence was enhanced in the early eighteenth century by the pupils of Isaac Newton, and for more than a century thereafter mathe-

matics was the prime field of study and the only subject in which examinations for degrees were conducted. In the nineteenth century degrees became available in law (1816) and classics (1824), and later in the century other honors courses were introduced, natural sciences first, then moral sciences (philosophy) and gradually others. Although students of the natural sciences were at first few, it was this school that from the 1870s raised Cambridge to the status of a world-class university, with researchers coming from far and wide to work with the physicists James Clerk Maxwell (Cavendish Professor of Experimental Physics, 1871–1879) and his successors J. W. Strutt, Baron Rayleigh, J. J. Thomson, and Ernest Rutherford. Since Thomson (1906), Cambridge has been home to some thirty Nobel laureates, including Francis Crick and James Watson, the discoverers of DNA, and since Rayleigh and Kelvin (1902) some forty holders of the British Order of Merit. A roll call of the many earlier luminaries connected with Cambridge must include the teachers Erasmus of Rotterdam, St. John Fisher, Roger Ascham, Sir John Cheke, Richard Bentley, William Whewell, Lord Acton, Sir James Frazer, G. H. Hardy, Bertrand Russell, John Maynard Keynes, E. M. Forster, F. R. Leavis, and Ludwig Wittgenstein; and the alumni Oliver Cromwell, Charles Darwin, and the poets, to name but a few, Edmund Spenser, Christopher Marlowe, John Milton, Alfred Lord Tennyson, Samuel Coleridge, and William Wordsworth.

Barring several false starts in the medieval period and one (Durham) in the seventeenth century, Cambridge and Oxford were the only English (as opposed to British) universities until the 1840s. Given that, they have naturally been the universities of choice for long-established families and schools, and although there was always a variable amount of scope for the admission of the less affluent, in recent years the catchment of both universities has expanded vastly. Except in the sixteenth century, Oxford historically maintained closer relations with church and state (thus sending out more future prime ministers and archbishops), but Cambridge was never very far behind, sending out mathematicians and poets, as well as competing with Oxford for places in the civil service, seats in Parliament, and other influential positions. Some of this perception of prestige continues today, but it has been amply supported by recent national and international rankings that attract students, especially graduate students, from all over the world.

The colleges of the university, in order of foundation, are:

1284: Peterhouse

1326: Clare

1347: Pembroke

1348: Gonville Hall; refounded 1557 as Gonville and Caius College

1350: Trinity Hall

1352: Corpus Christi College

1441: King's College

1448: Queen's College; previously St. Bernard's College (1446); refounded 1465; and known as Queens' College from c. 1831

1473: St. Catharine's College

1496: Jesus College

1505: Christ's College, incorporating Godshouse (1439)

1511: St. John's College

1542: Magdalene College, incorporating Buckingham College (1428)

1546: Trinity College, incorporating King's Hall (1317) and Michaelhouse (1324) and expropriating Physwick Hostel (1393) from Gonville Hall

1584: Emmanuel College

1596: Sidney Sussex College

1800: Downing College

1869: Girton College

1871: Newnham College

1882: Selwyn College

1885: Cambridge Training College for Women, now known as Hughes Hall, Recognised Institution of the University 1949

1892: Fitzwilliam Hall, housing noncollegiate students, known as Fitzwilliam House from 1924; full college status as Fitzwilliam College (1966)

1894: Homerton College, moved to Cambridge (formerly in London from 1822) as a teacher training college; recognized by the university as an Approved Society (1977)

1896: St. Edmund's House, a Roman Catholic training college recognized as a House of Residence; recognized as an Approved Society (1965); known as St. Edmund's College from 1985

1954: New Hall

1960: Churchill College

1964: Darwin College

1965: Lucy Cavendish College

1965: University College, known as Wolfson College from 1973

1966: Clare Hall

1977: Robinson College

Of these, Newnham, New Hall, and Lucy Cavendish are for women only, and Darwin, Wolfson, and Clare Hall are for graduate students.

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Elisabeth Leedham-Green

CAMPAIGN REFORM

SEE *Congress, U.S.; Elections.*

CAMPAIGNING

Campaigning is the art and science of "selling" political candidates to voters. Candidates engage in a variety of campaign activities aimed at winning elections, including raising money, building name recognition, making public appearances, purchasing political advertisements, and debating with other candidates. Social scientists who study politics are interested in campaigns and elections because they are important components of American democracy. Elections allow citizens to select leaders and hold them accountable.

Campaigns for public office generally have two stages: the primary election and the general election. The goal of the primary campaign is to gain endorsement from a political party in order to advance to the general election. Primary campaigns appeal to the *party faithful*, that is, voters who identify with a certain political party. Candidates will often present more extreme policy positions during the primary campaign because they have to appeal to party members who are more ideologically extreme in their views than the general public. During the general election phase, candidates adopt more moderate voter appeals to market themselves to the broader public.

THE EVOLUTION OF CAMPAIGNING

Campaigning techniques changed significantly in the late twentieth century as a result of the popularity of mass communication, namely, television and the Internet. The 1960 presidential race between Richard Nixon and John F. Kennedy marked a turning point in American politics where television gained prominence as a medium for reaching and persuading voters. During this election, listeners who heard the Kennedy-Nixon debate on the radio believed that Nixon had won the debate, whereas viewers who saw the television broadcast thought that Kennedy was the victor.

In addition to requiring candidates to be camera-friendly, television enabled candidates to reach voters directly instead of relying on their political party. The rise of candidate-centered campaigns deflated the power of the major parties in American politics. In response, party officials have come up with new and creative ways to maintain relevance in the electoral process, namely, by providing candidates with media assistance and funding. The political parties' ability to raise funds is crucial for candidates given that a contemporary national election costs about twenty times more than elections did in the 1950s.

The Internet has played an increasingly important role in campaigns for political office. Voters turn to political blogs and other online resources to get information about elections and candidates. For example, the Web site YouTube makes it possible for people to look at campaign ads from across the country with the click of a button. Not surprisingly, a growing number of candidates for public office are using Internet appeals to reach voters. Experts anticipate that the Internet will become an influential campaigning tool as this medium becomes a popular means of distributing tailored information to voters.

CAMPAIGN FINANCE AND REGULATION

The rise of media-centered campaigns has brought about an increase in the cost of campaigning. According to the Center for Responsive Politics, the 2004 presidential contest cost over $1.2 billion. Some scholars argue that the high price tag attached to winning public office is antidemocratic in that only wealthy candidates have the necessary resources. Others counter that the electoral process

remains democratic because a majority of campaign contributions come from private individuals. Lawmakers passed several campaign finance reform laws in the late twentieth century and early twenty-first century in an effort to limit the amount of special interest money in campaigns.

The 1971 Federal Election Campaign Act (FECA) limited campaign contributions and required candidates for federal office to disclose all of their financial contributions. FECA also outlawed financial contributions from corporations to candidates. In response, corporate-related organizations—Political Action Committees (PACs)—were formed to influence elections. Subsequently so-called *527* organizations have formed that advocate for certain policies instead of specific candidates, although their media and other political tactics aim to influence election outcomes. Through *issue advocacy* advertising, or ads that discuss a political issue in a way that critiques a certain candidate, 527s play an increasingly influential role in elections.

Congress made sweeping changes to FECA in 2002 with passage of the Bipartisan Campaign Reform Act, also known as the McCain-Feingold Act. This legislation outlawed *soft money*, or money that is ostensibly donated to political parties for "party-building activities" but is often used to help candidates. It also restricted 527 organizations from running issue advocacy ads in the months leading up to an election. It is unclear whether this legislation will have the effect lawmakers intended or special interests will find loopholes enabling them to get around the new restrictions.

GOING NEGATIVE

Candidates have the option of running three different types of political advertisements: *issue*, *image*, and *negative*. Issue ads present the candidate's stance on policies, whereas image ads attempt to enhance the candidate's reputation in the eyes of voters. Candidates are increasingly *going negative*, that is, emphasizing their opponent's negative aspects instead of their own positive attributes. Most researchers agree that this approach can help candidates win elections, but there is debate as to its potential liabilities. Some argue that negative ads tend to be dishonest, can alienate more moderate voters, and might cause voters to tune out of politics and not vote at all on Election Day. Others argue that negative ads are more memorable than positive ads, increase voter awareness of candidates, and cause more people to turn out to vote. The jury is still out on the overall impact of going negative, suggesting perhaps that its effects vary from race to race.

SEE ALSO *Advertising; Computers: Science and Society; Democracy; Elections; Internet; Internet, Impact on Politics; Kennedy, John F.; Nixon, Richard M.; Persuasion; Political Parties; Primaries; Propaganda; Television; Voting*

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Caroline Heldman

CAMPBELL, ANGUS
1910–1980

Angus Campbell was born in Indiana, but grew up in Portland, Oregon. He studied psychology at the University of Oregon, and completed his doctorate at Stanford University in 1936 under E. R. Hilgard. He taught at Northwestern University for six years, until World War II brought him to Washington, D.C., to study effects of the war on the public. He was introduced there to large sample surveys, as well as a group of like-minded social scientists headed by the psychologist Rensis Likert.

After the war Likert, Campbell, and colleagues moved to Ann Arbor, establishing the Institute for Social Research at the University of Michigan. Likert headed the institute, and Campbell became director of its largest component, the Survey Research Center (SRC). Here he enjoyed a field staff of interviewers spread over the country who produced valid national samples according to the strictest precepts of modern sampling theory. He also had access to the university's economists, sociologists, social psychologists, and public health experts who were excited by the new capability to represent the nation with a modest sample of one thousand or two thousand respondents.

While various scholars did studies through SRC every year, Campbell directed a few personally to address his own wide-ranging interests. He launched a national study of voters before and after the 1952 presidential election. This study has been repeated biennially (to include "off-

year" congressional elections) ever since. This series yields an amazing panorama of trends in America's democratic processes for more than a half-century.

From the outset Campbell believed that party loyalties are a dominant force in the voting decision, but that voters defect from these loyalties occasionally, depending on the candidates and issues of the day. He wrote a central question to measure such underlying party identification, which remains a critical component of voting studies today.

Among the hundreds of publications from the election series over the years, Campbell and collaborators Philip Converse, Warren Miller, and Donald Stokes wrote a synthesis of early progress, *The American Voter* (1960), which achieved very wide circulation. Its impact was strong on political science as a discipline, which hitherto had focused mainly on historical and institutional studies. This "behavioral science revolution" brought quantification, hypothesis-testing, and estimation of causal flows to the discipline of political science, lending new weight to the "science" in its name. The international impact was also large: Foreign scholars visiting SRC were soon organizing parallel voting studies in their own democracies in Western Europe. By 2006 election studies had spread to nearly four dozen nations, and were intercommunicating to match measurements in order to maximize comparative studies of the voting process.

Campbell himself moved on to other topics. In the civil rights ferment of the 1960s he studied change in U.S. interracial attitudes. By the 1970s he turned to studies of the quality of life as perceived by the U.S. population. Once again, this subject rapidly became popular, and as before, the primary question Campbell wrote to measure a person's most global sense of well-being remains an essential item for replications of such studies here and abroad.

SEE ALSO *American National Election Studies (ANES); Attitudes, Racial; Behaviorism; Consumerism; Elections; Happiness; Likert Scale; Miller, Warren; Social Welfare Functions; Survey; Voting Patterns; Welfare*

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Philip E. Converse

CAMPBELL, DONALD
1916–1996

Donald Thomas Campbell was a master methodologist whose intellectual passions and scholarly achievements spanned the fields of social science research methodology, epistemology and philosophy of science, and the sociology and psychology of science.

Campbell's best-known works are on the methodology of social experimentation and quasi-experimentation (Campbell 1957; Campbell and Stanley 1963; Cook and Campbell 1979; Shadish et al. 2001). They are among the most influential contributions to the methodology of applied social science in the twentieth century. Although others had written about field experiments—for example, the preeminent statistician Ronald Fisher (1890–1962)—it was Campbell who introduced the methodology of *quasi-experimentation*, an inductive (but *non*statistical) methodology that seeks to understand the effects of the many unmanageable contingencies that lie beyond the control of experimenters. Although quasi-experimentation is "applied," especially in contexts involving the evaluation of social programs, it is nevertheless "theoretical." It is grounded in Campbell's philosophy of critical realism, his epistemology of pragmatic eliminative induction, his methodology of triangulation and the multitrait-multimethod matrix, his theory of pattern matching in science, and his sociology of science (Campbell 1988).

SOCIAL EXPERIMENTATION AND QUASI-EXPERIMENTATION

Experimentation and quasi-experimentation are extensions of *representative design*, a theory of inquiry developed by Campbell's two most influential teachers at Berkeley, Egon Brunswik (1903–1955) and Edward Tolman (1886–1959). Representative design requires that experiments be conducted in settings that are representative of an organism's typical ecology. Representative design is a fundamental departure from the classical experiment, in which one independent (treatment) variable is manipulated in order to determine its effect on a dependent (outcome) variable, with all other factors held constant through random selection and statistical controls. Representative design is appropriate when social experiments are carried out in uncertain, unstable, and causally complex environments.

The classical experiment, which involves an independent (treatment) variable that is manipulated in order to determine its effect on a dependent (outcome) variable, requires a treatment and control group, random selection of subjects, and random assignment of subjects to treatment and control groups. If any of these requirements are absent, it is not a classical ("true") experiment, but a

quasi-experiment. Many of the most important social policy and program interventions are quasi-experiments because political, administrative, and ethical constraints rarely make it possible to satisfy the requirements of the classical experiment.

CRITICAL REALISM AND THE EPISTEMOLOGY OF PRAGMATIC ELIMINATIVE INDUCTION

Quasi-experimentation is expressly designed for research settings in which manifold contingencies are beyond the control of the experimenter. These contingencies give rise to many rival hypotheses (alternative explanations of the same outcome) that can threaten the validity of causal claims. Plausible rival hypotheses must be tested and, where possible, eliminated. This process of eliminative induction is an extension of John Stuart Mill's (1806–1873) *joint method of agreement and difference* ; it also represents a (heavily qualified) version of Karl Popper's (1902–1994) *falsificationist* principle that hypotheses can be falsified but never proved.

Pragmatic (not logical-analytic) eliminative induction is part of Campbell's evolutionary critical-realist epistemology (Campbell 1974), according to which knowledge grows through processes of trial-and-error learning and selective retention. Quasi-experiments in education, welfare, health, and other social policy arenas embody such processes. When entire societies self-consciously and systematically engage in trial-and-error learning and selective retention, they are *experimenting societies* (see Campbell in Dunn 1998).

METHODOLOGICAL TRIANGULATION AND THE MULTITRAIT-MULTIMETHOD MATRIX

What we know as "truth" or objective knowledge is actually a product of theory interacting with data. Emblematic of Campbell's methodological work is its synthesis of subjective and objective, perception and reality, theory and data. He accomplished this synthesis through methodological triangulation—a process of comparing two or more perspectives toward the "same" object. His work with D. W. Fiske (1916–2003) on the multitrait-multimethod matrix (Campbell and Fiske 1959) represents a form of theory and method triangulation, where traits posited by a theory interact with methods of observation. The product is some level of convergent and discriminant validity. Underlying the multitrait-multimethod matrix is an epistemology usually referred to as a *coherence theory* of truth. Campbell and Fiske's 1959 paper is one of the most widely cited papers in the social and behavioral sciences.

PATTERN MATCHING IN SCIENCE

To the degree that products of the social and behavioral sciences merit the term *knowledge*, it is because they are grounded in representations of the social world achieved by matching observations of that world with abstract concepts of it. For Campbell, pattern matching is essential for attaining knowledge of everyday cultural objects and indispensable for achieving knowledge of inferred entities in science—the size and brightness of distant stars, the existence and magnitude of latent psychological variables such as alienation or intelligence, and the structure of complex social processes such as social mobility and economic growth. Campbell argued that these and other inferred entities are known indirectly and vicariously, through a process of pattern matching (Campbell 1966). He also contended that case studies can be a methodologically powerful form of pattern matching in the social sciences (Campbell 1975).

THE SOCIOLOGY OF SCIENTIFIC VALIDITY

Traditional sociology of knowledge, because it describes the social, political, and cultural conditions affecting science and other knowledge formations, is descriptive. Campbell's sociology of knowledge, which goes beyond description, sought to explain how differences in the social structures and processes of sciences affect the degree of validity achieved by those sciences. He called this normative sociology of science the *sociology of scientific validity* (Campbell 1986). Among the social factors that affect scientific validity are institutional incentive systems that reward quality research and punish those whose research is flawed by violating norms of science.

SEE ALSO *Experiments; Methodology; Natural Experiments; Philosophy of Science; Popper, Karl; Public Policy; Social Experiment; Sociology; Sociology, Knowledge in; Tolman, Edward*

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William N. Dunn

CANNIBALISM

The belief in the existence of man-eaters just beyond a culture's boundary is a time-honored and cherished notion for many parts of the world. In what we call advanced societies, such as our own, cannibals are thought to inhabit the remaining mysterious distant fringes of civilization such as the highlands of New Guinea and the rain forests of the Amazon. There, the inhabitants with a more limited view of the world suspect cannibals in the next valley or around the bend of the river. How and why this imagery came into existence and continues to be so compelling for both the lay public and academics alike is as debatable as it is apparent.

No better example of the longstanding Western proclivity to label distant people as cannibalistic can be found than in the work of the fifth century BCE Greek traveler Herodotus, the father of history and anthropology. Not far from the limits of Hellenic culture in an area we now recognize as central Asia, he noted (in *Herodotus: A New and Literal Version,* 1879) that "beyond the desert Anthropophagi dwell, … the only people that eat human flesh" (pp. 243, 273.) With these characteristic remarks, the author of the first account of exotic peoples set the paradigm generally employed over the succeeding centuries: First, those who did not share Western culture, those both different and inferior, are *the other*; and second, they were often labeled sight unseen as man-eaters.

This theme was repeated in some of the classic Roman texts and then later by medieval travel accounts of the then known world. Over time, many peoples, such as the Irish and the Scots, as well as the European Jews and North African Muslims, were cast by one or another obscure writer as consumers of human flesh. Eventually, the list of itinerant raconteurs included the famous Marco Polo, who in the late fourteenth century claimed to have traversed the Eurasian continent from Venice to China before residing there for a number of years.

Although the veracity of his account is now debated, what is significant is his report of unobserved cannibals on Jipangu (Japan) on the border of Kubla Khan's Mongol empire. A copy of this text, which even then was popular, was later in the library of Christopher Columbus and also occupied his imagination as he sailed into the New World while erroneously assuming he was on the eastern border of the Old World. Believing that he was in the vicinity of Jipangu, the admiral also recorded an encounter with cannibals in what was actually the Caribbean, probably in the vicinity of Cuba. Thus, for the first time contact with the rumored man-eaters was made, and the word *cannibal*, a Spanish derivation of Carib, entered the lexicon to replace Anthrophagi. Although the suspected cannibals were then seen, the act of cannibalism continued to go unobserved. This new context necessitated a revision of the ideological paradigm, which now assumed that the custom was repressed by conquest. There were also more profound practical implications, for at the time those degenerate enough to eat their own kind could be enslaved. In subsequent eras the label legitimized conquest and colonization as Western nations came into contact with a host of far-flung would-be cannibals.

This assumption and powerful image of the other as cannibal remained a feature of Western ideology for some centuries until it was eventually challenged in *The Man-Eating Myth* (Arens 1979). A review of some of the literature on the most infamous reputed man-eaters from North America, Africa, and New Guinea led to the book's conclusion that the idea of *gustatory cannibalism*—that is, an activity engaged in on a regular basis with social approval—could not be substantiated by the usual standards of academic inquiry.

The initial negative reaction to the conclusion, most explicit in a series of essays by cultural anthropologists (Brown and Tuzin 1983) has gradually lessened over time. Once the question whether it could be that so many, if not

most, people of color were cannibals until contacted by white Europeans was explicitly framed for debate, it became intellectually and politically untenable in the postcolonial era to maintain what was formerly an implicit affirmative conclusion. There was also the eventual realization that the proposal did not rule out *survival and ritual cannibalism*. This new perspective, though, leads to related issues regarding how those implicated in this sort of activity are labeled, and then how to define *ritual* in a consistent manner.

As for the consumption of human flesh under dire conditions, it has been long recognized that this behavior is possible in any culture. This impression is substantiated by European shipwreck tales, as well as by the Donner Party incident when the party's members survived on the remains of their compatriots while stranded in California's Sierra Nevada Mountains in 1846. In no instance are those implicated—the French, the English, and Americans—subsequently labeled as *endo-cannibals*, eaters of their own kind. Similarly, this behavior may have been characteristic of, for example, the Inuit or other Native Americans, as deduced from historical sources or archeological evidence, such as that reported in Billman, Lambert, and Leonard's (2000) detailed article about the Mesa Verde region in the twelfth century. However, these groups are not stigmatized as cannibals by the general public. These contradictory impressions are objectively unacceptable.

The issue of *ritual* cannibalism is more complicated. Desiccated human body parts were sold as remedies for various human ailments by European and American apothecaries until the early twentieth century (Gordon-Grube 1988); some American food cultists advocate the consumption of the human placenta (Janszen 1980); and there is the use of human cadaver extracts in contemporary biomedicine, presumably to capture the strength of the deceased. These domestic customs may be considered bizarre, misguided, or even guided science, but they are never labeled ritual cannibalism. However, South American groups reported to consume the ashes of the dead for whatever reason are ipso facto deemed ritual cannibals. Again this situation is intellectually unacceptable and hints at cultural discrimination.

A recent consideration of the issue in Gananath Obeyesekere's *Cannibal Talk* (2005) recommends that we reserve the term *cannibalism* for the irrational fear that the other wants to eat us and use the term *anthropophagy* to refer to the actual practice in ritual and survival contexts. Perhaps it would be simpler to conclude that there are no cannibals in the sense of how the situation was once subjectively viewed; alternately, from a more objective contemporary perspective, we could all be cannibals. What is more obvious is that the cannibal epithet, as leveled by one culture against another, is more common than the deed itself.

SEE ALSO *Anthropology; Religion; Rituals; Warfare, Nuclear*

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William Arens

CANTILLON, RICHARD

c. 1680–1734

Richard Cantillon was an Irish banker and economist who emigrated to Paris, where he profited from the financial scheme known as John Law's Mississippi bubble (1720). His lone surviving book, *Essai sur la nature du commerce en général* (Essay on the Nature of Commerce in General) was written around 1730 and circulated in manuscript form for a quarter century in France until it was published anonymously in 1755. Legend has it that Cantillon was murdered in London, although his biographer, Antoin Murphy, convincingly hypothesizes that he staged his murder and left the country to avoid impending legal battles.

Cantillon's *Essai* is often considered a product of his financial exploits because it contains a defense of usury that justifies charging illegally high rates of interest. It also contains an analysis and condemnation of what caused the Mississippi bubble. But it is much more than a mere posi-

tion paper. Brevity notwithstanding, its scope and probity raise the *Essai* to the level of a theoretical treatise.

When the economist William Stanley Jevons (1835–1882) rediscovered Cantillon's *Essai* in 1880, he called it the "cradle of political economy" and "the first treatise on economics." The English translator of the *Essai*, Henry Higgs (1864–1940), wrote that Cantillon was "the economist's economist." Joseph Schumpeter (1883–1950) labeled the *Essai* the first "bird's-eye view of economic life" Schumpeter (1954, p. 222), and Murray Rothbard (1926–1995) dubbed Cantillon "the founding father of modern economics." Antoin Murphy concluded that the *Essai* has "stood the test of time and is of increasing interest to modern-day economists."

Cantillon's contributions to economics include critical aspects of methodology, such as the use of *ceteris paribus*, price and wage determination, the crucial role of the entrepreneur, the circular-flow nature of the economy, the price-specie flow mechanism, the function of money, and the problems of inflation. He showed that wealth was determined not by money but by the ability to consume, and that the source of wealth was land and productive labor. He demonstrated that saving and investment were critical to productivity and higher wages, and he maintained that in the absence of government intervention, markets—including the market for loans—would be regulated by competition. He also analyzed the forces that cause business cycles and stock market bubbles. It has been asserted that Cantillon's puzzling use of the term *intrinsic value* now represents the discovery, 140 years prior to its conventional dating, of the concept of opportunity cost, by means of which the economist analyzes not just the ticket price of a good, but the full cost to the decision maker, including his or her time.

Despite its relative obscurity, Cantillon's *Essai* was very influential. It provided a major stimulus to the founding of the physiocrat school in 1757. There is now strong evidence that it influenced David Hume's (1711–1776) economics. Adam Smith (1723–1790) referred to Cantillon in the *Wealth of Nations* (1776), where even the *invisible hand* is evocative of Cantillon. There are also strong parallels between Cantillon and Charles Louis Montesquieu (1689–1755), Étienne Bonnot de Condillac (1715–1780), Anne Robert Jacques Turgot (1721–1781), and Jean-Baptiste Say (1767–1832). Thus, Cantillon foreshadowed the physiocrat and classical schools of economics and the economics of the French Enlightenment.

SEE ALSO *Economics; Economics, Classical; Hume, David; Inflation; Laissez Faire; Law, John; Money; Physiocracy; Scottish Moralists; Smith, Adam; South Sea Bubble; Value*

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Mark Thornton

CAPACITY, FULL

SEE *Full Capacity.*

CAPITAL

Capital can mean many things, including a sum of money, an invested fund, a set of produced means of production, or human skills ("human capital"). In the theory of production, distribution, value, and growth, the term *capital* refers to capital goods or investment goods and skills. In this perspective, capital is an accumulable factor of production, as opposed to land and simple labor, which are not. The means of production encompass raw materials, tools, and instruments of production, and in the writings of some earlier authors also the means of subsistence enabling workers to perform their tasks. To the extent that natural resources, such as land, first have to be brought into a form that can be used productively, the investment in these resources and the resources themselves become amalgamated into what Karl Marx (1818–1883) referred to as "la terre-capital" (land-capital).

Capital in the sense of capital goods is typically grouped in broad categories, including the following. *Circulating* or *working* capital refers to capital goods advanced at the beginning of the period of production that contribute exclusively to the period's output: they "disappear" from the scene at the same time as their value is transferred to the product. *Fixed* capital, in contrast, refers to capital goods that are long-lived and cannot be traced on a given unit of output. In their case, the idea of a material-cum-value transmigration into the product seems to lose any foundation. However, as was suggested already at the time of the classical economists and was rigorously shown by the mathematician John von Neumann (1903–1957) and the economist Piero Sraffa (1898–1983), a coherent treatment is possible using a joint-products framework: a fixed capital item that enters production at the beginning of the production period is considered a different commodity from the item that exits

at its end. In this way, fixed capital can be reduced to circulating capital.

In Marx we find the distinction between *constant* and *variable* capital: the latter refers to raw materials, tools, and instruments of production and represents *dead labor;* the former refers to wage goods spent in employing living labor, which, according to Marx, is the sole creator of value. American economist John Bates Clark (1847–1938) distinguished between *capital* and *capital goods*, the former being a fund of value earning its owner a return, interest, which equals the *marginal productivity of capital*.

As these examples show, a main issue in capital theory is whether capital is "productive" in the sense that it explains the existence of *profits* or *interest*. Critical reviews of early profit theories were put forward by Marx (1905–1910) and the Austrian economist Eugen von Böhm-Bawerk (1884). These authors developed their own approaches against the background of the earlier literature. At the cost of severe simplification, the various traditions in the theory of capital and distribution may be divided into two principal groups, one rooted in the surplus approach of the classical economists, the other in the demand and supply approach of the marginalist authors. Both traditions developed their arguments essentially within a long-period general framework of the analysis centered on the concept of a uniform rate of profit (or interest) and the corresponding set of normal prices.

The classical authors explained profits in terms of the *surplus product* left after the means of production used up in the course of production of given outputs in the system as a whole and the means of subsistence in the support of workers had been deducted from these outputs. Given wages are thus a characteristic feature of the early classical economists' approach. (The level of wages was then discussed in another part of the theory, typically by taking into account, for example, whether the society was "improving" or stagnant.) Production was conceived as a *circular flow* involving a strong degree of interconnectedness of the different industries of the economy. The rate of profits, expressed in material terms, is the ratio between the social surplus and social capital, that is, two aggregates of heterogeneous commodities. A comparison of these two vectors necessitated the development of a theory of value. The classical economists tried to tackle this problem typically by first identifying an "ultimate measure of value," which was designed to render heterogeneous commodities homogeneous. Several authors, including David Ricardo (1772–1823) and Marx, then reached the conclusion that "labor" was the sought standard and therefore advocated some version of the labor theory of value. By means of this theory, some of these authors, in a first step, determined the rate of profits and afterward, in a second step, used their finding to determine normal competitive prices. Ladislaus von Bortkiewicz (1868–1931) aptly called this approach *successivist*.

Yet, as Sraffa showed, the successivist approach cannot generally be sustained: "the distribution of the surplus must be determined through the same mechanism and at the same time as are the prices of commodities" (1960, p. 6), that is, simultaneously. The classical authors did not have the instrument of simultaneous equations and the mathematics needed in order to solve them at their disposal. This helps to explain why they had recourse to the labor theory of value. This landed them, in the case of Marx, in the (in)famous problem of the "transformation" of labor values in prices of production. Commodities were produced by means of commodities and there was no way to circumnavigate simultaneous equations. Sraffa showed that a coherent formulation of the classical approach that was independent of the labor theory of value was possible: The rate of profits and competitive prices could be determined consistently in terms of the givens of the problem under consideration: (1) the system of production in use, characterized by the dominant methods of production employed to produce given gross outputs; and (2) the ruling real wage rate(s), or the share of wages.

The alternative marginalist explanation traced profits back to the productivity-enhancing effect of the use of capital goods. It consisted essentially of a generalization of the principle of intensive diminishing returns in agriculture indiscriminately to all industries and all factors of production alike. The older marginalist authors, with the exception of the French economist Léon Walras (1834–1910), were aware of the fact that in order to be consistent with the concept of a long-period equilibrium, the capital endowment of the economy could not be conceived as a set of given physical quantities of heterogeneous capital goods, but had to be expressed as a value magnitude: its commodity composition was seen to be a part and parcel of the equilibrium solution, determined by (1) preferences, (2) the technical alternatives from which cost-minimizing producers can choose, and (3) initial endowments of the economy of labor, land, and "value capital." The formidable problem for the marginalist approach consisted in the necessity of establishing the concept of a *quantity of capital*, which could be expressed independently of the *price of its service*, or the rate of profits, and whose relative scarcity then determined that rate. If such a concept could be shown to exist, profits could be explained analogously to intensive rent on homogeneous land, and a theoretical edifice could be erected on the universal applicability of the principle of demand and supply.

Doubts as to the sustainability of this concept had already surfaced at an early time, and had prompted some authors such as Friedrich August von Hayek (1899–

1992), Erik Lindahl (1891–1960), and John R. Hicks (1904–1989) in the late 1920s and early 1930s to abandon the long-period method and adopt instead temporary and intertemporal equilibrium methods (Garegnani 1976). Yet it was only during the so-called Cambridge controversies in the theory of capital in the 1960s and 1970s that the concept was conclusively shown to be untenable in general (see Garegnani 1970; Kurz and Salvadori 1995, chap. 14). The concept can only be used in exceedingly special cases, and it is ironic to see that these are precisely those cases in which the labor theory of value applies. Despite these findings, the concept is still widely employed, in much of macrotheory, for example, with its reliance on the (infamous) aggregate production function. In more recent times, temporary and intertemporal models have also come under attack (see the contributions by Pierangelo Garegnani and Bertram Schefold in Kurz [2000]).

With the process of globalization going on, there is a tendency toward an internationalization of capital and the worldwide equalization of the rate of profits. An analysis of the factors affecting this rate is an important task in contemporary accumulation and growth theory.

SEE ALSO *Cambridge Capital Controversy; Equity Markets; Hedging; Liquidity Premium; Marx, Karl; Physical Capital; Psychological Capital; Social Capital*

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Heinz D. Kurz

CAPITAL, HUMAN

SEE *Human Capital.*

CAPITAL, PHYSICAL

SEE *Physical Capital.*

CAPITAL, PSYCHOLOGICAL

SEE *Psychological Capital.*

CAPITAL, SOCIAL

SEE *Social Capital.*

CAPITAL ACCOUNT

SEE *Balance of Payments; Currency Appreciation and Depreciation.*

CAPITAL ACCUMULATION

SEE *Accumulation of Capital.*

CAPITAL ASSET PRICING MODEL

SEE *Finance.*

CAPITAL CONTROLS

Capital controls are the legal and quasi-legal regulations that govern the movement of capital (money, credit and

other financial assets; direct investment, and capital goods) across national borders, to restrict or stimulate outflows or inflows, particularly speculative and abnormal flows, of capital. In short, capital controls are government practices that influence the volume, direction, character, and/or timing of short- and long-term capital transfers. The capital control regulations a government uses are categorized into four types: foreign exchange regulations (and exchange rate regimes); tax and revenue-generating policies (surcharges); investment and credit regulations; and trade or commercial restrictions. The status and enforceability of capital controls range from official/legal restrictions that are fully enforceable (if the administration desires), to bureaucratic restrictions left to the policies and discretion of regulatory agencies (and their resources), to social/customary restrictions that are enforced more through custom, cultural mores, and goodwill between the parties than any explicit law or policy.

PURPOSES, USES, AND FUNCTIONS

Although often maligned as counterproductive or ridiculed as ineffective, capital controls are used more than trade restrictions, and have been used throughout economic history by almost every country. Countries use capital controls for various purposes and for a wide variety of reasons, in particular to lessen the effects of volatile disequilibriating capital flows; to lessen capital flight; and to protect infant industries. Justifications for the use of capital controls include sheltering or isolating a country from volatile capital movements; saving foreign exchange and keeping domestic and foreign finances under national control; facilitating domestic full employment; forcing repatriation of nonreported capital; and generating government revenues.

In twentieth-century history the worldwide financial instability of the 1920s and 1930s led many economists and policy makers to advocate the use of capital controls. In the early 1930s, the English economist John Maynard Keynes was a strong proponent of capital controls and argued for their international institutionalization with the establishment of the International Monetary Fund (IMF) at the Bretton Woods conference in 1944. The IMF charter included a compromise, accepting the use of capital controls, particularly on capital account transactions, under specific conditions with a finite timetable, but promoting the principles of free trade.

Studies that have examined the use of capital controls find them to have helped countries control capital flight, maintain the desired exchange rate and desired level of international reserves, reduce exchange and interest rate volatility, retain domestic savings and protect labor's wage share, increase government revenues, and maintain the domestic tax base.

In her *Capital Control, Financial Regulation, and Industrial Policy in South Korea and Brazil* (1996) Jessica Gordon Nembhard explained that capital controls have a purpose within a country's development plan, in particular as the apex of a triad of complementary industrial development policies including credit controls and government entrepreneurship and economic planning. During the 1980s both the Republic of Korea (South Korea) and Brazil, for example, used similar financial strategies to encourage and support industrial development. These policies included capital controls, credit controls and preferential credit allocation, fiscal incentives, and trade restrictions to both control and reward the domestic public and private sectors for following the national development plans. There were structural differences, however, between the level of financial control, the types of restrictions used, and the two countries' abilities to effectively implement and maintain policies and planning efforts. The Republic of Korea was more successful than Brazil because of the specific types and configuration of controls used, the high level of financial control held by the state, the comprehensiveness of the coordination of government planning, and the administrative skills and consistency of implementation and enforcement exhibited by the Korean bureaucracy. South Korea had a more commercially open but financially closed economy. This combination worked well for many years.

CONTEMPORARY UTILIZATION OF CONTROLS AND TRENDS IN USE

Even with the international pressure for liberalization of capital controls coming mostly from the United States and the multilateral organizations such as the IMF and the World Bank, at the end of 2000 97.8 percent, or 182 of the 186 member countries of the IMF, maintained some level of restriction on capital account transactions (Monetary and Exchange Affairs Department [MEAD] 2003, p. 43). Most widely used restrictions were on transactions by commercial banks and other credit institutions, foreign direct investment, and real estate transactions. This was an increase in capital account restrictions from the 180 in 1997 and the 136 of 178, or 77.5 percent, of members in 1992. In addition, 133 countries, or 71.5 percent, continued to have controls on current account transactions in 2000 (MEAD 2003, p. 55), an increase from the 92 or 51.6 percent of countries in 1992. Most widely used were controls on import payments and on export proceeds, although few countries classified as "advanced" used current account restrictions. Among the group of countries categorized as "less developed" or "developing," use of controls actually increased between 1975 and 1989, when many European countries (members of the Organization for Economic Cooperation and Development [OECD])

were reducing their use of controls, and were maintained for the most part (with some fluctuation) throughout the 1990s.

According to the Monetary and Exchange Affairs Department of the IMF (2003), between 1997 and 2001 the "momentum of liberalization" slowed even though financial globalization continued and exchange rate regimes tended to move toward greater flexibility. MEAD found an increased use of certain types of capital controls on selected capital transactions such as those affecting institutional investors. MEAD suggested that countries become increasingly concerned with "risks associated with capital account liberalization following a series of crises in emerging market economics," which may explain the increased use of restrictions (MEAD 2003, p. 40).

LIBERALIZATION, ARGUMENTS AGAINST, AND THEORY OF THE SECOND BEST

Arguments against capital controls based on traditional economic theory assume that unrestricted capital movements and free trade are *Pareto optimal* (perfectly competitive) in a Walrasian economy. Restricted financial markets are assumed to be inefficient, to distort capital movements and to impede economic growth, because they misallocate resources, reduce investment opportunities, and hamper exchange rate flexibility and other automatic stabilizers. In addition, capital controls are considered ineffective because it is assumed that they cannot be enforced and only autarkic countries use them. Black markets, usury, and other illegal exchanges are presumed to be the evidence of inefficient markets and lack of enforceability. Governments, organizations, and scholars interested in promoting international economic integration, and the right of the owners of capital to take their resources and make their profits anywhere, support liberalization or easing of capital restrictions. Countries are supposed to use exchange rate and interest rate adjustment (flexible rates and devaluation) to address volatile capital movements and not use capital controls.

In traditional models capital controls are sometimes justified as a second-best solution in the face of temporary rigidities or distortions in the market, such as when it is necessary to defend an exchange rate disequilibrium, or when equalizing domestic with world interest rates limits the effectiveness of national monetary and fiscal policies. Some studies find that capital controls work well in the presence of other protectionist policies. Capital controls can, or should according to theory, be lifted or liberalized when the other distortions are removed, once a country's economy is more advanced, and/or in order for a country to join the world economy and open up its markets. Proponents of capital controls find that the distortions and inequities are not temporary conditions, but perpetual market failures that require intervention. Empirical studies find that the use of controls continues. Restrictions on capital accounts can be rational and effective, evasion can be mitigated, and enforcement strengthened, especially when they are part of a set of strategic economic development policies.

SEE ALSO *Capital Flight; Dirigiste; Economic Growth; Financial Markets; Industrialization; Liberalization, Trade; Theory of Second Best*

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Jessica Gordon Nembhard

CAPITAL FLIGHT

Capital flight is generally defined as an outflow of funds from a country motivated by an adverse change in the country's economic, political, or social environment. Some believe that this definition is too broad. They distinguish between outflows that reflect "normal" international diversification motivated by marginal changes in risk-adjusted returns and funds fleeing or propelled across national borders during a crisis. According to this view, only the latter category represents true capital flight. Related definitions restrict capital flight to short-term speculative outflows—"hot" money—or to an outflow of illegal transactions only. Some studies distinguish between the determinants of the outward flow of funds and those of the accumulated stock of capital flight over a period of time. To a great extent, the precise definition of capital flight used in any study is determined both by the purpose of the study and the available data.

Developmental economists tend to define capital flight broadly as the net unrecorded capital outflows for any reason from any capital-poor developing country. Other critics argue that this use of the term is more of a judgment than a definition—that *capital flight* is just a pejorative term for international diversification by a developing country. Defined in this way, capital flight presents developmental economics with a paradox. It is often observed that residents of a developing country engage in capital flight at the same time that entities in high-income countries are lending to or investing in the same developing country. How can both of these decisions be rational?

BURDEN OF CAPITAL FLIGHT

If the scale of capital flight is large enough, it will have both short-term and long-term adverse impacts. An example of the former is the sharp increase in capital flight during the Asian financial crisis of the late 1990s. The ability of countries in the region to deal with the bursting of domestic asset bubbles was severely constrained not only by a rapid and large outflow of capital but also by the necessity to immediately impose higher interest rates and capital controls in an attempt to slow the capital flight, even though these policies worsened the domestic situation.

In the long-term, capital flight tends to reduce gross domestic product (GDP) growth. Especially in developing countries, domestic savings diverted into foreign holdings will not result in domestic investment. This is especially harmful because the marginal social benefit of investment in such countries tends to be greater than the marginal private benefit. Capital flight is also generally associated with an increase in a country's foreign debt. Furthermore, the possibility of capital flight limits a government's policy choices, as some monetary and exchange-rate policies will lead to an acceleration of such flight.

In addition, capital flight tends to not only shrink a country's tax base but also make taxes less progressive. Wealthier families tend to have more opportunities to hide their funds abroad in order to conceal them from the tax collector. Capital flight facilitates corruption by providing concealment and sanctuary for ill-gotten gains. Finally, the possibility of large-scale capital flight discourages aid from international organizations and investment from other countries.

ESTIMATING CAPITAL FLIGHT

Capital flight involves a balancing of secrecy, expected returns, and risk. Attempts to increase the secrecy of capital flight, perhaps to avoid detection by a tax authority, tend to reduce return or increase risk. This necessary compromise increases the likelihood that capital flight will leave indirect evidence. While there are many methods of estimating capital flight, most are variations of either the balance of payments method or the residual method.

The balance of payments method assumes that the most important characteristic of flight capital is that it is "hot" money. Small changes in perceived returns or risks could result in a rapid discontinuous transfer or *wave* of funds moving out of the country. This wave will come to an end when investors have adjusted the share of each country's assets in their portfolios based on the new perceived return/risk profile. Based on this characteristic, the balance of payments estimate of capital flight is equal to the sum of (1) reported short-term capital exports by the

nonbank sector and (2) the balancing entry, errors, and omissions. The inclusion of the latter reflects the belief that errors and omissions are largely composed of unrecorded short-term capital flows.

A more widely accepted method of estimating capital flight concentrates on capital flight as a residual. The current account balance, changes in international reserves, and the amount of net foreign direct investment determine a country's necessary amount of international borrowing. If actual foreign borrowing exceeds this necessary amount, then it is assumed that the difference (or residual) represents additional borrowing to offset capital flight. The balance of payments method and the residual measure tend to provide a similar rough guide to the pattern of a country's capital flight, but the residual method usually results in larger estimates of the size of these outflows.

Most studies of capital flight adjust their estimates to reflect the unique characteristics of each country both with respect to the treatment of foreign financial assets and liabilities, and the possibility of misinvoicing. Not all foreign financial assets are taken as evidence of capital flight; some may be necessary to facilitate foreign trade and finance and will have been reported to the developing country's government. These "legitimate" foreign financial assets are often subtracted from capital flight estimates. Another common adjustment is to use creditor data to fill gaps in a country's foreign debt statistics.

A more important adjustment is to correct for deliberate trade misinvoicing used to circumvent trade controls, avoid import tariffs, or facilitate capital flight. A resident may underinvoice his exports and then direct the unreported difference between the invoice amount and his actual receipts to some financial haven. Underinvoicing of exports (or overinvoicing of imports) widens the reported trade deficit and therefore reduces the residual estimate of capital flight. Counterpart data can be used to correct for misinvoicing. The export (or import) numbers of a country are replaced by the import (or export) numbers, adjusted for the cost of insurance and freight, of any of its trading partners that are believed to publish more reliable trade data.

DETERMINANTS OF CAPITAL FLIGHT

There is no consensus on the primary determinates of capital flight. The most widely held view is that capital flight results from attempts by portfolio holders to maximize risk-adjusted returns. The optimal portfolio will be based on the differential between domestic and foreign interest rates, beliefs about the relative over- or undervaluation of exchange rates, and expectations of monetary and credit policies at home and abroad as well as the relative risks that investors face in both countries. If one of these variables shifts in favor of another country, capital flight will occur. However, if the shift is in favor of the home country, there will be a repatriation of flight capital.

The simple portfolio model fails to explain the paradoxical situation in which portfolio holders in a developing country engage in capital flight at the same time that portfolio holders in high-income countries are investing in the country. One explanation is that domestic and foreign portfolio holders face discriminatory treatment—that is, they face different risks or returns. A developing country may provide tax benefits to foreign investors from high-income countries, or these investors may believe that they face less risk of an adverse change in regulation because of the implied protection of their home governments. As discussed below, this differential in benefits may lead to *round-tripping* or *revolving-door* transactions.

Transaction costs may provide another explanation of this paradox. Transaction costs include the costs of gathering accurate information about an asset or liability, finding and evaluating the other parties involved, negotiating an agreement, and possibly enforcing this agreement. In well-developed financial markets, transaction costs tend to account for only a small fraction of the value of a financial transaction, and the costs associated with international transactions tend to be higher than those associated with domestic ones.

However, in developing countries, neither of these assumptions is necessarily true. Developing countries tend to have a lower capital/labor ratio than high-income countries, and therefore the real return on capital in developing countries should be higher. However, the existence of large transaction costs may motivate portfolio managers in developing countries to split their holdings based on desired maturity. Short-term holdings will be invested internationally where transaction costs are lower (capital flight). However, long-term holdings, with a desired maturity long enough to amortize higher transaction costs, will take advantage of the higher real return and be invested at home. Therefore domestic and foreign investors with a long enough maturity preference may be willing to invest in a developing country experiencing capital flight.

Capital flight and external borrowing tend to be highly correlated for a variety of reasons. Both may simultaneously increase as a reaction to poor economic management. Foreign borrowing may cause capital flight by increasing the likelihood of a debt crisis and therefore increasing economic uncertainty. Capital flight may cause foreign borrowing in order to replace lost capital and foreign exchange. Foreign borrowing may occur to provide the funds for capital flight. Finally, round-tripping or revolving-door transactions may simultaneously increase

both flight and debt. Round tripping occurs when portfolio holders in developing countries send funds to foreign banks with the understanding that these banks will lend these funds to entities in the less-developed countries controlled by the portfolio holders. The usual motivation for round tripping is to take advantage of government guarantees for foreign loans.

Corruption, the abuse of public power for private benefit, is often associated with capital flight because corruption increases the risk of investing in a country. Also individuals may send funds abroad to hide them from corrupt government officials, and these officials may illegally shift funds abroad to launder the bribes that they received. Foreign banks may also facilitate capital flight by either lending to corrupt governments in return for generous fees or providing special saving facilities to help corrupt officials hide their loot. In addition, studies have found that capital flight tends to be a function of past capital flight, the general macroeconomic environment, and political factors, such as political instability and poor governance.

CAPITAL CONTROLS AND OTHER MEANS OF REDUCING CAPITAL FLIGHT

Capital controls seek to reduce capital flight by reducing its risk-adjusted returns. When controls are enforced, financial or trade activities associated with capital flight may require additional documentation, permission, fees, or the posting of bonds. Despite the widespread use of capital controls, they appear to be more effective as a means of slowing capital flight rather than of preventing it entirely. The value of capital controls is that by acting as a speed bump they provide decision makers with time to decide on policies, coordinate their efforts with international organizations such as the International Monetary Fund, and execute policies effectively before uncontrolled capital flight brings about a financial collapse.

However, there are at least four reasons why capital controls may fail to reduce net capital flight—capital flight minus repatriation—in the long term. First, imposition of capital controls may be a signal that a government intends to adopt perverse fiscal or monetary policies. Second, before they will repatriate existing flight capital, portfolio holders will now require a higher degree of confidence in future relative risk-adjusted returns because new controls will make future capital flight more difficult. Third, reporting requirements, currency controls, enforcement procedures, and bureaucratic influence intended to prevent capital flight may significantly reduce the risk-adjusted return on domestic investments. Finally, imposition of a particular set of capital controls may simply encourage a search for new methods of capital flight. This policy-avoidance response may be as simple as bribing a new official, or it may shift capital flight into an entirely different channel. The longer capital controls are in place, the less effective they become.

A long-term strategy for reducing capital flight should focus on getting the economic fundamentals right. In addition to achieving reasonable exchange and interest rates, the adoption of a pro-growth economic policy may be the most important way to reduce capital flight and encourage repatriation. In developing countries, an aggressive anticorruption effort should also be a part of any pro-growth policy.

SEE ALSO *Bribery; Capital; Capital Controls; Corruption; Crime and Criminology; Economic Crises; Finance; Hot Money; Loan Pushing; Political Instability, Indices of; Transaction Cost*

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CAPITAL MEASUREMENT

SEE *Cambridge Capital Controversy; Capital.*

CAPITAL PUNISHMENT

SEE *Punishment.*

CAPITAL THEORY

SEE *Capital.*

CAPITALISM

Capitalism, first used as a term by Werner Sombart around the beginning of the twentieth century, is a social system dominated by economic relations, particularly market relations. The institution of private property is elaborately developed and well secured, and property owners derive income from the sale of output made with labor hired for wages or salaries. The income of property owners can appear as profit, interest, or rent, depending mainly on the kind of property involved. Workers have little or no income-earning assets other than their capacity to labor, which they contract to sell to property owners (capitalists) for a definite period of time but not for a definite intensity. Property income may be increased by getting workers to increase the intensity of labor, that is, to work harder, faster, or smarter.

Although markets existed in a great variety of social systems, appearing back to the furthest extent of recorded history, capitalism is unique in the degree to which market relations affect every aspect of the social order. According to Karl Polanyi in *The Great Transformation* (1944), the rise of capitalism represents a major institutional reversal. Precapitalist societies often provided for markets within an elaborately structured cultural framework, in which social status and social roles were already established, such that markets played a decidedly subordinate role. Trade and traders had their place, often clearly delimited in time, space, and permitted function. Under capitalism, in contrast, the market itself increasingly provides the framework for the determination of social status and social roles; market relations increasingly determine the time, space, and function of every other aspect of the culture. Cultures are modified and subordinated to global markets, creating a world system beyond any single culture's design.

RESOURCE MARKETS: LAND AND LABOR

Specifically the rise of capitalism involves legal developments allowing for efficient markets for land and other natural resources. The sovereign rights of the state and the blood rights of family, clan, and tribe—whatever these may include—become limited and clearly distinguished from modern property rights, so that real estate and rental markets as well as more esoteric markets in mineral rights may thrive unencumbered by ambiguities and restrictions of tradition.

Similarly efficient labor markets are developed to accommodate wage labor on a massive scale that transcends or escapes human relationships based on tradition, intimate acquaintance, or direct coercion. In practically all precapitalist societies, there are some kinds of "subsistence" activity—perhaps in hunting, gathering, farming, fishing, or herding—to which almost anyone could turn for a living in default of any more exalted assignment or organized function. In developed capitalist societies, there is no default living. Access to requisite land or natural resources is not free and not otherwise institutionally guaranteed. Significant property ownership is neither universal nor necessarily even widespread in the population. In fact in the long actual history of the establishment of legal private property in its modern form in many countries, the bulk of property, through force and fraud, came into the hands of old elites and entrepreneurial upstarts, leaving most people without property and without legal access to resources or means of production. Hence involvement in market relations and in social networks becomes inevitable, and that presents a distinct set of challenges to the propertyless, more or less forcing many of them into the labor market and into a weak bargaining stance vis-à-vis the owners of property rights in the means of production.

An essential insight in Karl Marx's *Capital* (1867) is that the captive excess supply of labor, or in Marx's vivid terms the "reserve army of labor," creates a competitive environment in which workers can be expected to be compliant and wages are negotiated down to subsistence level. Specifically wages are not expected to bear any particular relation to the value of goods produced and sold by the employer-owners, and that provides a nonfleeting source of profitability. Thus Marx demonstrated that regular profit can come from property ownership in the means of production, even if those means of production are themselves produced entirely by workers.

Naturally the state of the capitalist labor market presents some glorious opportunities to employers, but it also presents challenges. Mere biological subsistence turns out to be quite distinct from maintenance of healthy, reliable, motivated, and skilled employees. To the extent that employers scan their labor supply for quality as well as quantity, they seek a labor market different in structure from that envisioned by classical and Marxist economists. As the experience of industrialists from Robert Owen in the 1820s to Henry Ford in the early 1900s repeatedly illustrated, it can be profitable under certain circum-

stances to invest more in the labor force, paying workers more than is customary or appears necessary in terms of current labor market conditions. This insight gave rise to the concept of human capital, according to which investment in workers can yield a return as readily as might investment in any other kind of productive equipment; to human resource management, including elaborate segmentation and structuring of the labor market; and finally to a variety of state-sponsored programs socializing the cost and standardizing the practice of basic education, sanitation, health care, and other basic investments in the population thought to improve the overall efficiency and productivity of labor. In short, actual labor markets fail to correspond to the classical vision to the extent that labor power cannot be merely "reproduced" in families outside the market, as in the Marxist model, but requires capitalist or socialized investment for its construction and maintenance.

Another challenge facing employers is to manage workers and the work environment so that the potential for profit is actually realized. Employees rarely work at peak productivity on their own initiative based on their own organizational efforts, so investment in human capital does not in itself suffice to maximize productivity and profits. Hence the need for management to organize and supervise on behalf of the enterprise owners, and hence the constant struggle at the work site between management and labor.

ENTREPRENEURSHIP AND THE BUSINESS FIRM

Unlike in precapitalist cultures, the organizing principles of capitalism are abstract and general. Law is highly formal, aspiring to universal reach, and markets involve stereotyped interactions among anonymous participants. It is no coincidence that capitalist processes are often comprehensible as games, as witnessed by the elaboration of game theory and its rapid extension beyond political science to economics and sociology. This creates an environment uniquely amenable to entrepreneurship.

Of course entrepreneurship even as currently understood is omnipresent in all social orders. History is full of accounts of military adventurers, poseurs, prophets, travelers, and merchants who preceded the arrival of the modern capitalist epoch. Presumably no society could be so structured, so rigid and predetermined, existing under circumstances so regular and predictable, as to provide no space for the restless and adventurous to innovate through that recognizable yet undeterminable combination of design and accident. Yet modern capitalist society was the first to recognize entrepreneurship as a regular rather than extraordinary function in a wide variety of fields of endeavor. It is even encouraged.

Two aspects of entrepreneurship deserve particular attention for purposes of understanding capitalism. The first is risk taking; the second is innovation. A certain amount of risk taking is encouraged under capitalism simply through the institution of property. Legally well-defined property rights allow an unprecedented expansion of the credit system by allowing enormous amounts of value to be put at its disposal in the form of collateral without the items constituting that collateral having been withdrawn from current productive use.

Even more space for purposeful investment in potentially risky ventures is provided by the modern corporate structure of business firms responsible for the large majority of the value of goods and services produced each year. This structure has evolved to spread and limit risk and thus to encourage voluntary contributions of funds. The spreading of risk is accomplished by selling shares, each of which is typically a miniscule fraction of the firm's total outstanding value and often fairly liquid—meaning that it can often be quickly sold if the need for cash arises. Limitation of risk is accomplished by the legal device of "limited liability." The maximum an investor can lose, unlike in a sole proprietorship or normal partnership, and the maximum an investor can be held legally liable for by virtue of that kind of participation is the total value of shares he or she holds. By allowing small, limited bets on the future, the corporation encourages risk taking and provides resources for entrepreneurship.

In most societies innovation—anything new that disrupts or undermines traditional ways of doing things—is vigorously rejected, and that rejection is overcome only by enormous endurance and determination or by forcible imposition. Under capitalism, this resistance is diminished. Property is protected, but its market value is not guaranteed. According to Joseph Schumpeter in *Theory of Economic Development* (1911) and *Business Cycles* (1939), economic growth comes in waves of innovations, often revolving around some central innovation, such as alternating current, the internal combustion engine, or the microchip. The initial innovation may be accompanied by a flurry of activity amid limitless hopes and give rise to a boom, but then follows disappointment and more importantly the destruction ("creative destruction"—another term first used by Sombart) of value in now obsolete goods, equipment, technologies, and skills; this tends to lead to depression. Eventually the further spread of economic activity based on the innovation helps lead to a recovery, but these innovation-led developments would perhaps never occur were the way not first cleared during the depression by "creative destruction."

THEORETICAL CURRENTS

Economists have come to view capitalism in three major ways. The classical and neoclassical schools emphasize the spread of market relations and describe efficiency gains expected as a consequence. Marxist and related schools (e.g., that inspired by Henry George's 1879 *Progress and Poverty*) focus on power relations and class structures implied by the prevailing system of property rights and emphasize how those hamper the achievement of many of the goals typically viewed as part of social progress, such as greater equality, more democracy, and more security. The Austrian school, including Schumpeter, deemphasizes efficiency and instead promotes the innovative potential of decentralized knowledge and action. Though property rights are formally protected, the value of actual property is freely created and destroyed in the course of progress.

SEE ALSO *Competition; Development Economics; Laissez Faire; Markets; Marx, Karl; Mode of Production; Primitive Accumulation; Profits; Rate of Profit*

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Michael J. Brun

CAPITALISM, BLACK

The term *black capitalism*, which came into frequent use in the 1960s, refers to an increased interest in business, investment, entrepreneurship, and, broadly, economic development as a component of an overall strategy of black advancement. It built on several centuries of interest among African Americans in business ownership and participation, which had been opposed and stifled by overt white opposition. It was seldom espoused simply as a desirable "free market" principle in its own right.

EARLY APPROACHES

Black capitalism represented a change from the earlier stress on community-based development, citizen participation, community organizing, and collective strategies in the War on Poverty. In its late-twentieth-century form, it also was a Republican alternative to Democratic Party priorities that had emphasized broad-based spending on education, housing, training, and public works projects. Black capitalism eventually was embraced by many black activists who saw political potential in developing strong economic institutions, both for-profit and nonprofit. They considered businesses to be potential platforms for political action. Thus, black capitalism was warily and partially embraced by some black nationalists, some separatists, and by the Nation of Islam, as compatible with their distinct objectives.

Starting in the 1960s the federal government encouraged African Americans to develop businesses, and thousands were started, but their economic impact was small. Their slow growth led federal policy makers, politicians, activists, and business leaders to look for ways to accelerate the process by using direct government and private financing, and consulting assistance targeted to those businesses that had the greatest chance of growing into substantial companies. They also encouraged increased government and corporate purchasing as a stimulus to growth. By the 1980s success was judged by normal business criteria, rather than social criteria.

In the early phases of black capitalism (1965–1970), federal policy encouraged primarily retail and service businesses. The policy was implemented through direct government and guaranteed loans, government-sponsored management and technical assistance, and government purchasing, but results were small: The thousands of businesses started with the help of federal loans and technical and procurement assistance did not become a substantial factor in community development as was originally hoped. A new view emerged—that federal policy should emphasize the creation and development of businesses that stand the best chance of becoming large and competitive, and economically significant. The new approach promoted acquisitions of larger, going concerns, the creation of sizeable venture financing companies, and new, stronger banking relationships from mainstream credit sources. This approach helped individuals who had an idea but seldom the right experience, training, or capital to run a successful business. Later, a job creation rationale

was added to give the policy broader appeal. But the idea of building truly strong competitive businesses continued to be resisted by policy makers and bureaucrats charged with making Federal programs work.

The policy was a hasty response to the political and social pressures of the poverty program era. But managerial inexperience, poor locations, faulty business planning, market inadequacies, and capital shortages led to business failures. Shoplifting, employee pilferage, and other crime also increased business costs and raised risks. Racially discriminatory lenders, investors, and purchasing officers in government and corporations also impeded progress. The policy was defective, and the results were poor. The small retail and local service businesses had lower than average revenues, high costs, inexperienced management, weak capital structures, and other competitive handicaps. They concentrated in low-growth and low-margin sectors, and provided little full-time employment. Typically, they had poor locations and limited access to the wider general market. Manufacturing companies were grossly underrepresented.

For gross comparison, "minority" business receipts in 1978 were $35 billion in a $2 trillion economy—2 percent of total receipts. The goal became to increase aggregate demand, with better federal government and corporate procurement policies, to lift "minority" receipts by 1982 to $75 billion in a $2.5 trillion economy, or 3 percent of total receipts.

THE SHIFT TO SUCCESS

By 1980 to 1985, several things changed. First, there emerged a pool of African American managers and entrepreneurs with MBAs from top business schools. Second, the federal government changed its practice on delivering technical consulting assistance. Previously, management and technical assistance had suffered because of political pressures to give contracts and grants for these services to inexperienced or ineffectual local consulting organizations; the government began to give fewer but larger grants to the best of the consulting groups, and this paid off in better assistance to clients with demonstrated capacity to make consistent profits. Finally, early skeptics among the trade unionists and community activists, as well as among political Republicans and Democrats, came to recognize the value of a stronger African American business sector.

Corporate Action The disappointing results from early efforts encouraged policy makers to look for better approaches. Federal practice moved upscale, to provide financing for larger businesses, including in manufacturing, and investment in firms with the potential to become publicly held. These operations sometimes became African American–led through acquisition. This approach was implemented through expanded venture capital, investments in promising businesses, corporate spin-offs, strengthened African American banks, and the use of existing private and government programs to increase purchasing and subcontracting from minority companies.

This tactic of building on strengths helped more businesses to become significant and competitive. An additional effect was saved and new jobs when the companies were located in labor-surplus or distressed areas—primarily in northeastern and midwestern cities and rural areas—and might otherwise have closed or moved away. So this approach also served the interests of the Department of Housing and Urban Development, the Economic Development Administration, the Community Services Administration, and the Business and Industry Office of the Farmers Home Administration in the Department of Agriculture.

Venture Capital Another step that made black capitalism effective was the growth of venture-capital firms created by farsighted companies. Although they quickly evolved into private firms with no government funding, they began by using government funds provided by minority enterprise small business investment companies (MESBIC) programs.

In 1970 the government had initiated a venture-capital program, the MESBIC, which began as an outgrowth of the previously established small business investment company (SBIC) concept. MESBICs, like SBICs, ran into financial and operating problems during the early and mid-1970s, and many of their investments did poorly or failed, but they recovered and became increasingly important financing sources in major transactions.

The MESBIC program continued to evolve, and it became more attractive to corporate investors when legislation made it possible to leverage private participation up to four times with funds at less than market interest rates. Used imaginatively by corporate sponsors, the MESBIC program provided significant equity and debt to businesses that became reliable contractors, suppliers, customers, and partners. The new thinking was that private venture-capital firms, corporate venture groups, insurance companies, investment-banking firms, and commercial finance companies could, in the right circumstances, increase their participation in these business ventures as normal business practice.

The policy worked through a network of sources to find, screen, structure, and close substantial investments, especially in the acquisition of manufacturing businesses. In the early stages, companies acquired had annual sales averaging $3 million, and were purchased for an average of $1 million. In one case, a precision screw products

company was bought for $1.4 million, and a few years later, in 1978 it had sales of $3 million. The African American purchasers raised $30,000, and the remaining $1,370,000 was financed privately. This model became a basis for moving upscale and into the mainstream.

These business deals were notable only because they involved African Americans—such financings were normal in everyday business. The criteria used in selecting businesses for acquisition were not limited to specific industries or types of companies, though manufacturing was preferred. Tests of risk, profitability, manageability, and return on investment were applied. The pool of African American investor-managers remained a constraint. The flow of ventures and the availability of finances were greater than the supply of appropriate investor-managers. But the discrepancy narrowed as well-trained MBAs reached the career points where moving into these situations was appropriate.

Several major corporations established MESBICs and then capitalized them at higher levels—up to $10 million. These larger MESBICs were often industry specific. In some cases, they financed businesses that the sponsors felt could become consistent suppliers. In the entertainment industry, MCA had a MESBIC that financed entertainment-related projects and companies in music and records. MCA New Ventures and three other MESBICs put together a package of $5.3 million in cash, loans, and services for the record company T-Elect. With $7.5 million capitalization, the National Association of Broadcasters established a MESBIC that will work with the National Telecommunications and Information Administration of the Commerce Department and with the Federal Communications Commission to help African Americans acquire radio and television stations.

Ironically, MESBIC staffs—African American professionals—tended to approach investments more pragmatically than many white senior managers from sponsoring corporations. They continued to think in terms of social responsibility, and thus preferred deals that were most risky and least attractive according to normal investment criteria. Such differences in viewpoint led to conflicts: What was the real point—businesses that can grow and become competitive and profitable, or social tokenism?

Spin-Offs In the late 1970s government representatives met with senior managers of General Motors, Eastman Kodak, Bankers Trust, First Pennsylvania Bank, Chase Manhattan, Hewlett-Packard, Levi Strauss, Kaiser Aluminum and Chemical, and others to discuss selling corporate units. No deals resulted, but the meetings served the purpose of raising expectations about black capitalism.

Corporations were encouraged to sell units that could operate independently. Spin-offs and independent acquisitions were carried out as straight business transactions at market prices and with normal fees to brokers and private financial participants. No subsidies or contributions from the corporate sellers or other private parties were sought. Applicable federal, state, and local loan and guarantee programs were used to augment private financing.

Commercial Banks Another policy change toward African American business development was an effort to upgrade the 100 commercial banks. The Federal Reserve System, the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Commerce Department worked to improve the management, staff efficiency, marketing skills, and permanent capital base of these banks. These banks grew, some by acquiring branches of major banks, during the consolidation wave of the 1980s.

Corporate Purchasing Another dimension was the growing interest from major corporations. The government encouraged purchases by providing operating grants to and encouraging corporate participation in the National Minority Purchasing Council (NMPC), which included many "Fortune 1000" companies. Through the NMPC, African American companies received $1.8 billion in purchases from corporate businesses in 1978, and this volume grew steadily over the next twenty-five years.

Government regulations and programs also encouraged or required purchasing, contracting, and subcontracting. For example, the government required companies bidding on government work worth more than $500,000 to "minority" subcontract participation. Opposition to this practice led to reversals in the courts, but it became normal business practice for many large companies.

The 8a Program Federal procurement was a key element in accelerating black capitalism. The Small Business Administration's 8a program directed government contracts to "minority" businesses. In 1977, federal policy called for the rate of federal procurement from "minority" businesses to increase substantially, from $1.8 billion annually to $3 billion. Steady increases continued over the next twenty-five years, providing a substantial revenue base. Offices of Small and Disadvantaged Business Utilization (OSDBUs) in every federal agency institutionalized this policy and increased awareness of it among bureaucrats.

Black capitalism, and the policies that followed, were initially based on the mistaken assumption that the government could help cure poverty by transforming some of

the poorest into entrepreneurs and managers, almost overnight. A sober assessment of these policies led to new insights—that building on strength was a more sensible route.

The managers and entrepreneurs in whom the government and private investors invested emerged as the kinds of people whom venture capitalists and other private financiers normally bet on. The approach, thus, called for specially designed government loans and other such financing only to the extent that these approaches were needed to reduce perceived risks stemming from businesses' locations or other unusual characteristics. Another tool that stimulated acquisition opportunities was tax incentives to sellers. These tax code provisions stimulated many sales of businesses in the 1980s and 1990s. Together, these evolving techniques, practices, and strategies made possible the phenomenon that came to be known as black capitalism.

SEE ALSO *Affirmative Action; African Americans; Black Conservatism; Black Liberalism; Black Nationalism; Business; Capitalism; Collectivism; Garvey, Marcus; Nation of Islam; Poverty; Separatism*

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Richard F. America

CAPITALISM, MANAGERIAL

Managerial capitalism emerged in the late nineteenth and early twentieth centuries in the United States, and challenged the traditional regime of personal capitalism, which was built on competitive interaction among small firms within industries. Managerial capitalism, dominated by big firms, prevailed during the 1950–1970 period.

As pointed out by Alfred Dupont Chandler Jr. (1984), despite differences in the pace, timing, and nature of change, large firms in the United States, Europe, and Japan tended to evolve according to a common pattern. They were characterized by what Adolph Berle and Gardiner Means (1932) identified as the separation between ownership and control. Dispersed ownership associated with the concentration of power in the hands of top management defines the managerial revolution (Chandler 1977). Managerial capitalism underscored the problem of controlling managers, who were shown to trade desire for growth against fear of mergers and takeovers. In this perspective, inspired by the institutionalist approach of Thorstein Veblen (in particular his 1921 work *The Engineers and the Price System*), John Kenneth Galbraith (1967) developed a vision of managerial capitalism as an economic system based on a logic of endless accumulation where firms are run by the real decision makers—the managers (who make up the technostructure)—and not by the capital owners. For Robin Lapthorn Marris (1964), the long-run growth rates of large-scale "managerial" corporations are determined by the financial and market environment, on the one hand, and by the interests of both managers and shareholders, on the other hand.

While large conglomerates and powerful industrial groups were emblematic of affluent economies, social problems were raised, particularly in the United States. William A. Darity Jr. explains that "the social dominance of the captains of industry has given way to the social dominance of … a professional-managerial elite" (1990, p. 247). Class divisions and economic inequalities are derived from the managerial age. In this context, Darity justifies government intervention on the basis of employment policy, including recommendations for work-sharing and early retirement.

In the last two decades of the twentieth century, competition increased, technological change began advancing at a stronger pace, and finance became more widely available. In this context, managerial capitalism was challenged by the emergence of patrimonial capitalism. Patrimonial capitalism arrived with financial globalization and the increased importance of small shareholders and pension funds, notably in the United States. Therefore, a new mode of corporate governance based on financial criteria has been imposed. The main objective is to protect external investors by limiting the obstacles that affect their control. Transparency, responsibility from top management, contestability of corporate control, and managerial compensation associated with the maximization of shareholder value are advocated. However, scandals in the early 2000s involving the management of public corporations such as Enron, Vivendi Universal, or WorldCom stress the contradictions of a growth system built on market finance. In parallel, new kinds of firms built around human capital have arisen (Rajan and Zingales 2000), and

interfirm relationships have rapidly increased (Langlois 2003). As a result, forms of capitalism—managerial and financial capitalism—experienced so far are highly questioned. The coevolution of organizational forms and the economic system (Chandler 1990) suggests a renewed capitalism that would protect the interests of all corporate stakeholders and guarantee social equality.

SEE ALSO *Class, Rentier*

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CAPITALISM, STATE

Depending upon the evolution of social institutions, especially the state, capitalism assumes distinctive characteristics in different nations. The state—that is, government organizations of a nation and its territorial subdivisions and localities—protects and provides a legal framework for businesses operating through markets. In state capitalism, broadly defined, the state actively fosters, subsidizes, provides services to, regulates, and sometimes controls investor-owned business.

Many varieties of state capitalism can be found throughout the world. In formerly communist nations, for example, the state determines how the enterprises it previously owned can adopt features of capitalism, such as private ownership and buying and selling on open markets. State capitalism also includes established capitalist economies where authoritarian or fascist states direct the economy. In most democratic nations, state capitalism takes the form of welfare-state capitalism. For the market-oriented capitalism of the United States, strong military and international organizations are used to enforce a hierarchical economic order around the globe.

THE STATE AND THE TRANSITION TO CAPITALISM

Some communist regimes, like that of the People's Republic of China, have opted for a gradual transition to state capitalism. Despite the expansion of markets and private ownership, much state ownership and control remains. In contrast, Russia and Eastern Europe having attempted a rapid shift from communism to extensive private ownership and markets, can be characterized as transitional-state capitalism.

In the state capitalism of the People's Republic of China after 1993, markets and capitalism coexist with continuing state and collective ownership and government plans that determine the quantity of goods produced and the prices paid to enterprises for their products. Nevertheless, Chinese firms purchase materials and hire labor through markets. One-quarter of industrial goods were produced in 1999 by state-owned enterprises, one-third by collectively owned enterprises, and two-fifths by individually and family-owned enterprises and ventures with foreign corporations. In state enterprises one-third of the shares were privately owned. Top local government and party officials control collectively owned enterprises. In contrast, foreign joint ventures are freer from government interference and corruption and are judged by economists to be more efficient producers. However, much of China's economic growth stems from local government leaders who act as "bureaucratic entrepreneurs" (Gore 1998, p. 96), promoting growth in their communities.

"State capitalism" was initially a controversial concept that was coined and applied to the Soviet Union in 1950 by socialists sharply critical of the regime of Joseph Stalin. C. L. R. James used the term *state capitalism* to argue that the Soviet Union, far from being a worker's paradise as

claimed by Stalinist communists, actually extracted surplus value from Soviet workers. Although there were practically no capitalist private enterprises in Stalin's Soviet Union, the Soviet state, according to James, exploited workers through bureaucratic regimentation just as capitalists did elsewhere.

At the end of the twentieth century in Russia, capitalism was not merely a conceptual label but rather a tangible reality of privately owned, profit-driven enterprises, operating in global markets. The capitalism in Russia could be considered state capitalism because the state, while somewhat less authoritarian than before, nonetheless has exercised tremendous power to create a new capitalist society. In Russia and Eastern Europe, the government has been a transitional state, setting policies for a very rapid adoption of capitalism. Russian and Eastern European leaders, in contrast to the Chinese, have pushed for a "shock therapy" transition through neo-liberal policies, opening their nations to global trade, attempting to stabilize their currency in relation to the dollar, and privatizing state-owned enterprises. Beginning in 1992, shares in Russian state-owned enterprises were purchased by employees of the enterprises (who held 40% of the shares in 1996), managers (held 18%), other Russian firms (11%), and individuals (6%). Although the government offered a voucher to each citizen to buy shares, most citizens sold or gave away their vouchers or placed them with investment funds. Enterprises whose shares had been largely sold accounted for more than 90 percent of Russian industrial output by 1998. The government then exchanged additional shares for loans from selected Russian private banks and investments from Western corporations. A small group of Russians received huge financial windfalls through their connections with government elites who directed the privatization process. Privatized enterprises were even more likely to show a loss than enterprises that remained in state hands. Privatization has not revived the ailing Russian economy, which lost one-half of its domestic production between 1989 and 1999.

In the transitional-state capitalism of the Czech Republic, compared to Russia, more shares of companies are held by the public, and fewer by workers in state enterprises. In the Czech Republic, shares amounting to one-half the value of state enterprises were privatized through vouchers distributed to citizens by 1995. Two-thirds of the vouchers were handed to investment privatization funds, run by state banks, which purchased shares of enterprises for individuals. In Poland, the state maintains an even larger role, maintaining more public enterprises and deciding which key enterprises are made available for foreign joint ownership.

STRONG STATES AND CAPITALISM, ORIENT AND OCCIDENT

The concept of state capitalism can also be applied to capitalist economies where an authoritarian, one-party government actively directs the economy. In South Korea, the military regime of Park Chung Hee (1917–1979) in the 1960s gave money to exporters, raised tariffs on imports, created industrial zones, controlled wages, and channeled capital to favored *chaebol* (coordinated industrial conglomerates), thereby producing rapid development of the steel, cement, shipbuilding, and machinery industries, followed by the chemical, auto, and electronics sectors in succeeding decades.

In the more established capitalist economy of Germany in 1933, the fascist regime that took power allowed cartels of large businesses to continue under the same ownership. Whereas the cartels preferred state policies to increase their exports, Führer Adolf Hitler developed an autarkic economy (independent from trade with rival industrial nations) to fight wars. Production increased because of new state-subsidized industries in motor vehicles, aviation, aluminum, and chemicals. After World War II, dictatorships in Spain, Portugal, and Greece supported the dominance of domestic banking and commercial establishments that played a junior rule to large U.S. and European firms.

In democratic nations with advanced economies, some national governments have brought together trade unions and big business associations into "corporatist" agreements on wages, prices, government budgets, welfare-state programs, investments, and economic growth. In Japan, the government Ministry of International Trade and Industry (MITI) brought business, labor, and government officials together and, between 1950 and 1980, successfully encouraged economic growth through an industrial policy that subsidized exports, developed technologies, and promoted new industries.

In Sweden, Norway, and Denmark, strong social-democratic political parties rooted in trade unions have produced relatively generous subsidies for children, paid leave for parenting, unemployment and medical insurance, and relatively egalitarian, government-provided retirement benefits. On the continent of Europe, welfare-state programs have been geared toward male breadwinners who have stable and well-paying jobs in unionized industries. As welfare-state spending has been cut throughout Europe, Anthony Giddens has advocated trimming subsidies for consumption and boosting investments in people, such as job training, education, and health care to make more productive workers.

Government programs providing pensions and health care in the United States, compared to other economically developed nations, have been less generous and compre-

hensive and have been adopted later in history or not at all. Presidents such as Ronald Reagan and George W. Bush attempted to cut welfare spending for the poor, reduce tax rates and business regulation, and increase spending for the military and foreign affairs.

Since the fifteenth century, dominant nations have developed strong states to gain a superior position in a world system of capitalism. By the beginning of the twenty-first century, national sovereignty had been eroded amid the rapid flow of goods, investments, and knowledge that spanned the globe. In their book *Empire* (2000), Michael Hardt and Antonio Negri argued that capitalism still requires state power; not in the form of a colonizing nation but rather in the form of international elites and institutions backed by the military power of the United States.

SEE ALSO *Capitalism*

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Clarence Y. H. Lo

CAPITALISM AND SLAVERY

SEE *Williams, Eric.*

CAPITALIST MODE OF PRODUCTION

The concept of the capitalist mode of production (CMP) occupies a central place in Karl Marx's (1818–1883) view of productive relations, forms of exploitation, and conflict in modern society. The very notion of capitalism was used predominantly by Marxists well into the twentieth century, when it started to be thoroughly analyzed in a non-Marxist perspective by Max Weber (1864–1920) and Werner Sombart (1863–1941).

THE CAPITALIST MODE OF PRODUCTION IN THE THEORY OF KARL MARX

In his work, especially the *Grundrisse* (1857–1858) and the first volume of *Capital* (1867), Marx defined capitalism as a mode of production characterized by the separation of the direct producers, the working class, from the means of production or the productive assets, which are controlled by the bourgeoisie as private property. Ownership of the means of production enables the bourgeoisie to organize the industrial labor process, where individual workers are driven to seek employment by the needs of their own reproduction. Contrary to previous modes of production such as slavery and feudalism, the laborer is compelled to enter an employment relation not by external compulsion, but by economic necessity.

As a result, the employment relation is formally an individual contractual transaction between bourgeois capitalists and workers, who are juridically free. Once they enter the capitalist labor process, workers are remunerated with a wage, a monetary sum representing the "exchange value" with which the capitalist purchases the worker's labor power. The wage is expressed in terms of the duration of the working day, and is calculated on the basis of the goods that workers need to reproduce their ability to work. Therefore, the wage does not recognize specific forms of labor or skills, it only compensates "abstract" labor power.

In the productive process, workers operate machines and other means of production with which they create commodities whose values exceed workers' remunerations. When capitalists sell commodities on the market, "realizing" their value, they therefore appropriate the difference between the value of such goods and the value of the labor power used to produce them. Marx calls this dif-

ference "surplus value," which for him is the defining feature of the exploitative nature of capitalism. The money capitalists earn from realizing their surplus value contains a profit, which capitalists reinvest to restart the productive cycle in what Marx calls "extended reproduction" of capital. Marx saw the origins of profit and surplus extraction in the very process of production, not in market dynamics of supply and demand, as in the "bourgeois" political economy of Adam Smith (1723–1790) and David Ricardo (1772–1823). Nonetheless, Smith and Ricardo influenced Marx's concept of the division of labor and his "labor theory of value," respectively. Marx, however, regarded the market not as a realm of free individual initiative, but as an institution that materializes human exploitation and alienation.

For Marx, the CMP is a social process riddled with contradictions that originate from its own "laws of motion." The growing "concentration" of accumulated capital is what ultimately allows individual capitalists to increase their profits and drive competitors out of the market. The elimination of uncompetitive capitals produces a centralization of ownership in a smaller number of large companies. But successful competition also requires increasing investment in machinery ("constant capital"). As a result, the surplus value extracted from human labor is eroded and, in the long term, the rate of profit for the CMP as a whole tends to fall. In the process, masses of workers are expelled from the production process and end up swelling the unemployed "relative surplus population."

Marx described the laws of motion in the CMP far more precisely than in other modes of production. His aim was in fact to scientifically demonstrate how the demands of the working class are ultimately incompatible with capital's exploitative nature. As the contradictions of the CMP manifest themselves in periodic crises, workers become conscious of their own exploitation as a class. Therefore they organize to accelerate capitalism's eventual demise and establish a socialist society where class domination is abolished.

Marx tended to present the development of the CMP as a social dynamics whose general laws of motion could be scientifically ascertained. He was nonetheless quite aware that the process he described was historically specific and located largely in Western Europe. England had for him a prototypical CMP. There, the birth of a capitalist agriculture and the rise of mechanized manufacturing in the late eighteenth and early nineteenth centuries enabled the Industrial Revolution, which benefited from world trade and technological innovation. Marx associated the rise of capitalism with the establishment of a form of state whose laws and institutions protect private property, capital accumulation, and formal liberties that enable contractual relations between workers and capitalists. This stage of political development is represented by the liberal state, whose juridical and ideological "superstructure" is functional to reproduce the "base" of capitalist relations of exploitation.

CAPITALISM AND IMPERIALISM IN EARLY MARXIST DEBATES

Marx's awareness that the birth of capitalism was a historically and geographically specific process led him to recognize, as in his 1881 letter to Vera Zasulich, that Western Europe's "pure" transition to capitalism is not immutable and necessary for all societies. Many debates on the CMP in twentieth-century Marxism revolved around the different ways in which the economic structure of capitalism determines social and political relations, capitalist crises, the role of the state, and the significance of class struggles and workers' agency. Reformists in the Second International (1889–1916), especially Eduard Bernstein (1850–1932), argued that capitalism was not necessarily heading toward unsolvable crises, because governments' interventions in the economy could actually improve the conditions of the working class. In this view, therefore, socialism could be established through workers' participation in electoral politics, rather than revolution.

Vladimir Lenin's theory of imperialism, influenced by Rudolf Hilferding's *Finance Capital* (1910), argued that capitalism leads to a growing concentration of ownership in large monopolistic conglomerates. Antonio Gramsci (1891–1937) added to such trends the transition toward "Fordist" mass production. For Lenin (1870–1924) and Nikolai Bukharin (1888–1938), the growth of gigantic capitalist corporations, and their need for new markets, propelled Europe's colonial expansion and imperialist control of non-Western economies. In Rosa Luxemburg's *The Accumulation of Capital* (1913), colonialism and imperialism are responses to overproduction in metropolitan economies, and are coterminous with the ruthless destruction of precapitalist societies, what Marx referred to as "primitive accumulation" (1867). In contrast to reformist socialists, such views maintained that capitalism is shaped by crises and conflicts, and rejected the argument, held to some extent by Marx himself, that colonialism was a progressive force that destroyed pre-existing despotism and backwardness.

POSTWAR MARXIST PERSPECTIVES ON CAPITALISM, PRODUCTION, AND THE STATE

After World War II growing government intervention in the economy, and the rise of the welfare state, renewed interest in the relations between capitalism and the state among Marxist scholars. Important examples are the work of the "Frankfurt school" (especially Friedrich Pollock and

Herbert Marcuse) and Paul Sweezy's *Theory of Capitalist Development* (1942). In the 1970s and 1980s Ralph Miliband, James O'Connor, and the "regulation paradigm" (Michel Aglietta, Robert Boyer) underlined the important role of the state in stabilizing capitalism by financing the reproduction of the working class. Similarly, Nicos Poulantzas referred to the "relative autonomy" of the state as the manager of capital's "general interests." His reevaluation of the relevance of politics was linked to the work of "structuralist" Marxists, especially Louis Althusser (1918–1990), who viewed the economy as "determining" social relations without being necessarily "dominant."

Meanwhile, colonialism and imperialism led Marxist theorists of "dependency," especially André Gunder Frank (1929–2005), and of the "capitalist world economy," particularly Immanuel Wallerstein (b. 1930), to see capitalism as a global system articulated in "core" and "peripheral" societies. In both views, capitalist trade links the growth of industrialized countries to the continued underdevelopment of the world's peripheries. Critics, however, accuse such theories of making the periphery a passive object of domination, neglecting processes of production and the complexities of social relations in the global south. Structuralist analyses of the "articulation of modes of production" (by, for example, Althusser, Etienne Balibar, and Harold Wolpe) propose a view of capitalism as an "uneven" social formation that subordinates precapitalist societies, which nonetheless retain their specificities. "Uneven capitalist development" also features prominently in David Harvey's work, which also focuses on capitalism's negative environmental impacts.

Starting from the 1970s the concept of CMP also has been criticized by feminist Marxists (e.g., Mariarosa Dalla Costa, Leopoldina Fortunati, Maria Mies, Heidi Hartmann) who indicted its neglect of gender contradictions. In fact, they emphasized, capitalist production is made possible—also with the complicity of a working-class image of waged work as a manly occupation—by the confinement of women to the household role of unpaid workers.

Finally, "autonomist" Marxists—largely influenced by Italian "workerists" of the 1950s and 1960s (Raniero Panzieri, Mario Tronti, Antonio Negri) and by the work of Michel Foucault, Gilles Deleuze, and Felix Guattari—criticized traditional Marxist views of social relations as mechanically determined by economic dynamics. Instead, they considered class struggles and workers' subjectivity to be the main causes of capitalist crisis. In this view, as in Antonio Negri's and Michael Hardt's *Empire* (2000), capitalist responses to national class struggles ultimately opted for the economic liberalization policies that underpin the globalization of production and finance. Autonomists, in fact, see globalization as part of capital's broader strategy to establish its control beyond the workplace to the totality of the "social factory," human interactions, and everyday life.

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Franco Barchiesi

CARDINALITY

SEE *Ordinality.*

CARIBBEAN, THE

The Caribbean lies at the heart of the Western hemisphere and was pivotal in Europe's rise to world predominance. Yet the islands that once marked the horizon of the West's self-perception, as well as the source of its wealth, have been spatially and temporally eviscerated from the imaginary geography of Western modernity. The physical incorporation and symbolic exclusion of the Caribbean from

the imagined time-space of "modernity" has made certain ideas of "the West" viable, and they must therefore inform any effort to describe the Caribbean within the social sciences. Since their inception, the social sciences have used non-Western places as counterfoils for Western modernity—they have been viewed as "backward" or "traditional" places against which processes of modern progress, urbanization, industrialization, democratization, rationalization, individualization and so on could be gauged. Yet the Caribbean has never fit easily into such dichotomous visions of the world, for it was always a product of modernity and was in many ways postmodern *avant la lettre* (before it existed). The anthropologist Sidney Mintz has argued that the Caribbean was "the first part of the non-Western world to endure an era of intensive Westernizing activity." Thus, "the Caribbean *oikumenê* became 'modern' in some ways even before Europe itself; while the history of the region has lent to it a coherence not so much cultural as sociological" (Mintz 1996, p. 289).

Mintz supports a processual definition of the Caribbean as an *oikumenê* (ecumene, or "inhabited land"), a historic unit that is "an interwoven set of happenings and products" (Mintz 1996, p. 293). Franklin Knight likewise argues that "the sum of the common experiences and understandings of the Caribbean outweigh the territorial differences or peculiarities" (Knight 1990, p. xiv). The geographical region includes the islands of the Greater Antilles, the Lesser Antilles, and the Bahamas, as well as the coastal areas of Central and South America that have been politically and culturally linked to the Caribbean by processes of colonization, plantation development, and migration. It is also sometimes extended to include far-flung diasporas, especially in Europe and North America. While there are quite distinct traditions of study linked to areas such as the British West Indies, the French West Indies, or the Spanish Antilles, there has also been an increasing amount of comparative and cross-regional research. And while there are differences in the study of dependencies or colonies versus independent states, the Caribbean as a whole can be understood as being marked by complex and uneven processes of imperial decline, postcolonial nation-building, and regional integration.

Above all, the Caribbean was constituted by the global mobilities of colonization, slavery, and the transatlantic plantation system. With the rise of the sugar "plantation complex" the region was marked by the displacement of indigenous peoples by those arriving from northern and southern Europe, eastern and western Africa, and, later, the Indian subcontinent, China, and the Levant. Being more deeply and continuously affected by migration than any other world region, the essence of Caribbean life has always been movement. The very idea of this dispersed and fragmented region as a single place—and its naming and contemporary material existence—are constituted by mobilities of many different kinds, including flows of people, commodities, texts, images, capital, and knowledge. Thus, the Caribbean exists at the crossroads of multifaceted networks of mobility formed by the travels of both people and things, as well as by those people and things that do not move. Alongside the work of capitalist expansion and contraction associated with commodities such as tobacco, sugar, coffee, rum, salt, cotton, indigo, and, later, bananas and tropical fruit, the Caribbean has also been indelibly shaped by the work of imagination and culture-building over the past five hundred years.

Creolization is one of the crucial elements of Caribbean culture building, conceived as a process of indigenization, hybridization, and contested "creation and construction of culture out of fragmented, violent and disjunct pasts" (Mintz 1996, p. 302). Later, the arrival of Caribbean migrants in the metropoles such as London, New York, Toronto, and Miami allowed for the emergence of new kinds of pan-Caribbean identifications, arts movements, musical amalgams, and cultural events like Carnival. This region, more than any other, has long been at the forefront of transnational processes through its uprooted people, Creole cultures, and diasporas traveling across the world. It thus became central to the theorization of transnationality, diaspora, and postmodernity in the 1980s, and to the subsequent emergence of Black Atlantic studies and world history in the 1990s. Social scientists studying globalization turned to Caribbean theoretical concepts such as transculturation, creolization, and *marronage* to describe contemporary global cultural processes, even while they ignored some of the historical specificity and nuances of these concepts within Caribbean studies.

At the beginning of the twenty-first century, the region is enmeshed in complex mobilities, including circuitous migrations of people and diverse cultures; transnational flows of capital investment and financial services; technologically mediated flows of information, communication, and intellectual property; and unpredictable global risks and threats to security (e.g., drugs, diseases, criminals, hurricanes). These new mobilities and immobilities, both intra- and extra-Caribbean, are transforming the nature, scale, and temporalities of families, local communities, public spaces, governance structures, and individuals' commitments to a specific nation. Caribbean mobilities and moorings are paradigmatic of the complex rescaling of urban, national, and regional space. Daily practices of commuting, accessing goods for consumption, moving through public spaces, and communicating with the diaspora help to perform the presences and absences, the proximities and distances, that inform the

lived experience of spatiality in the Caribbean and its transnational diasporas.

Global risks associated with criminal activities, terrorism, environmental disasters, and other security issues are also producing new modes of surveillance and the governance of local mobilities within and outside of the region, with significant impact on forms of belonging and exclusion, of connection and disconnection. Thus, Caribbean societies—and the idea of the region as a whole—are being rescaled and respatialized by changes in the infrastructure of transportational and informational mobility, and cultural practices of travel and migration. Understanding exactly how the contemporary Caribbean is being both "demobilized" and "remobilized," and both deregulated and re-regulated, within the processes of urban, state, regional, and global restructuring can enable social scientists to move beyond the imagery of states as spatially fixed geographical containers for social processes, and to question scalar logics such as local-global. Thus, a rethinking of the processes that are remaking the Caribbean in the twenty-first century will be crucial to advancing the social sciences' approach to area studies and global studies in ways that finally move beyond its Eurocentric origins and assumed forms of territoriality.

SEE ALSO *Colonialism; Creolization; Economic Commission for Latin America and the Caribbean; Rastafari; Sociology, Latin American*

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Mimi Sheller

CARMICHAEL, STOKELY (KWAME TURE)

SEE *Black Nationalism; Black Power.*

CARRYING COST

Carrying costs have played both a practical and a theoretical role in economics. From the practical standpoint, carrying costs are known as the costs of interest, warehousing, wastage, and possible decline in marketability, which holding for future use implies for marketable commodities. Thus those goods for which there has historically arisen a formal method of grading and of trading over time—forward or futures markets—are subject to such carrying costs and the existence of them is a well known fact for financial traders and commentators.

Theoretically, carrying costs entered the literature with Henry Crosby Emery's influential *Speculation on the Stock and Produce Exchanges of the United States* (1896). Emery noted that the level of carrying costs forms one determinant of future prices, along with expectations of price change, themselves dependent on expectations of future supplies and demand. In this way Emery put forward a doctrine of the social usefulness of commodity exchanges to end users, such as farmers and manufacturers, by virtue of the possible unburdening from these economic actors to traders of the risk of price fluctuations by the buying or selling futures contracts. Further, this explanation acquitted the commodity exchanges of the charge (frequently leveled in the nineteenth century) that they fostered antisocial speculation. Emery's view was given wide exposure in the works of Irving Fisher and Alfred Marshall, among many others.

The further development of the carrying cost concept was mostly due to the work of the English economist John Maynard Keynes. Keynes first suggested in his *A Tract on Monetary Reform* (1923) that a theory of the (then new) organized forward markets in different international currencies could be based on the short-term interest rates available to holders of currency in different money markets. This notion was to become carrying cost more generally in his later work, and his discussion centered on its role in the currency trade (in which he himself was actively engaged).

Keynes laid out a theory according to which such trading would be driven to a configuration of spot and future prices such as to ensure the traders could both pay the inevitable carrying cost of taking a long position and also make a (typically small) competitive profit. The premium or discount at which the future price stands in relation to the spot price is thus a barometer of expectations

about the course of the price in the future. In normal times, under the expectation of steady or growing output the future price will be above the spot, and the traders can earn their "turn" and still pay their carrying costs (in currency in interest) out of this difference. In the parlance of his *A Treatise on Money* (1930), this is known as a "backwardation." In abnormal times, though, when there is a sudden onset of a "bear" position on any currency (as in the expectation of a recession or of political upheaval), it might be that the spot price prices are forced to fall below both the quoted and expected future price in order to induce traders to hold stocks of the good in question for the period of the contract. Such a "contango" on futures markets was evidence of the need to continue to pay mounting carrying costs (in the special case of easily stored and infinitely lived money, purely an interest charge) into an uncertain period of decline expected in its value.

In *A Treatise on Money* this theory of carrying costs and the economic role of futures trading was expanded to commodity markets (which Keynes also actively speculated in) and the term and concept was explicitly introduced. There it also played a part in a more systemic view of economic cycles. The main point made (in argument with Ralph G. Hawtrey) is that one should not look to futures trading to alleviate the severity and duration of downturns, because carrying costs severely limit the degree to which such markets may profitably carry over redundant stocks of liquid capital goods during the downturn. In consequence those stocks cannot be expected to be available to provide the working capital, and so ease the transition to, the next upturn (as Hawtrey had argued). In pursuing this line of reasoning, Keynes also suggested that the concept was of wider import, as even "less organized markets" (p. 128) were subject to carrying costs, but not in so formal and obvious a manner. This is the hint that was to be expanded into of full-blown theory of unemployment in his next book.

In *The General Theory of Money, Interest and Employment* (1936) Keynes suggested, particularly in chapter 17, that this theory of the forward market could be generalized to the whole economy, and, significantly, that it contained the clue to the answer of why economies might get "stuck" in unemployment equilibria (such as was then happening in Europe and North America). His generalization started from the notion that all outputs have carrying costs (often so high as to make their carrying over of them in inventory all but impossible). These costs formed a third element alongside the essential liquidity and productivity that all goods might possess in some degree. But some goods, considered as an asset, had the peculiar and socially defined quality of having the highest liquidity in excess of their carrying costs among all outlets for storing saved income. Such "money" goods would be sought, for their superior ability to maintain their value through time. This quality, Keynes argued, was of particular importance in periods of economic downturns, since it provided harbors of safety for owners of wealth, who might therefore be reluctant to engage in alternative investments such as purchasing and using employment-generating "productive" assets. The lack of any social mechanism to discourage this individually rational, but perhaps socially dysfunctional, "flight to money," could explain the phenomena of high and persistent unemployment such as characterized the advanced capitalistic economies of the world in the 1930s and still often threatens them in the early twenty-first century.

SEE ALSO *Contango; Interest, Real Rate of; Keynes, John Maynard*

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Michael S. Lawlor

CARTER, JIMMY
1924–

James Earl Carter, a U.S. naval officer, farmer, Georgia state senator and governor, and the thirty-ninth president of the United States, was the most inexperienced politician to serve as president in the latter half of the twentieth century. This inexperience contributed to President Carter's mixed legacy in foreign and domestic policies, despite having the largest majority of Democrats in the U.S. Congress since the Lyndon Baines Johnson (1908–1973) administration, as well as initial support from the American people to chart a new course in presidential politics.

Elected the first southern president since before the Civil War (1861–1865), Carter campaigned against corruption and dishonesty in Washington, maintaining that he would never lie to the American people. His honest character and an anti-Washington environment, includ-

ing lingering public resentment over Gerald Ford's pardon of Richard Nixon (1913–1994), undoubtedly helped Carter build an early and commanding thirty-point lead in polls. But Carter needed the help of Ford's own gaffe in the second presidential debate, during which Ford stated that the Soviet Union did not dominate Eastern Europe, to narrowly defeat the incumbent and former vice president by only fifty-seven electoral votes. Carter would later understand the impact that the media could have on his presidency when they focused more on his cardigan sweaters (style) than his policy message about the oil shortage (substance) during his short-lived fireside chats.

In foreign policy, President Carter achieved significant victories and stunning defeats. Just as Nixon was the first U.S. president to visit China, Carter was the first to normalize relations with the Communist country. Carter also helped broker the Camp David Accords, which brought peace between Egypt and Israel in March 1979. He had earlier won a hard-fought victory in the Senate (however unpopular) when it ratified the Panama Canal Treaty in April 1978, turning control of the canal over to the Panamanian government partially in October 1979 and completely on December 31, 1999.

Despite receiving a bump in his job-approval ratings (from 31 to 52%, according to the Gallup Poll) following the seizure of hostages in Iran, Carter was criticized for his decision to admit the ailing shah of Iran into the United States for medical treatment. This action precipitated the taking of more than sixty American hostages from the U.S. embassy in Tehran on November 4, 1979. This crisis plagued the Carter presidency until his successor, Ronald Reagan (1911–2004), took the oath of office on January 20, 1981, when all the hostages were released. Previous diplomatic, economic, and military efforts to secure the release of the hostages had failed. Most politically damaging to the president and his reputation as chief diplomat and commander in chief was a failed rescue mission on April 24, 1980, in which three malfunctioning helicopters forced the operation to be aborted. Carter's inability to secure the hostages' release defined his presidency as a failure in foreign policy, despite its numerous diplomatic successes.

The relationship of the United States with the Soviet Union also proved mixed during the Carter presidency. Carter signed the SALT II arms control treaty with Soviet premier Leonid Brezhnev (1906–1982) in June 1979, but the U.S. Senate did not ratify it. The Soviet invasion of Afghanistan in December 1979 all but ended the administration's hope for ratification. The invasion also precipitated a U.S. grain embargo of the Soviet Union (ended by Reagan in 1981), a United Nations resolution calling for the withdrawal of Soviet troops from Afghanistan, and a boycott of the 1980 Summer Olympics in Moscow by the United States and sixty-three other nations. It also led to the "Carter Doctrine," outlined in Carter's last State of the Union address in January 1980, which established that any attempt by the USSR "to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States."

Carter is often blamed for failing to deliver what all presidents must deliver to be politically successful and ensure their own reelection: a strong economy. His difficulties in convincing Congress and the American public to adopt his massive energy program are tantamount to the policy problems he faced. The final energy statute was much weaker than what he had requested, and the American people did not receive well his pleas for sacrifice and conservation, despite the intended benefits. Carter is often viewed as an unskilled legislative leader, in part because he proposed too many major legislative initiatives (Light 1999). Yet, his domestic victories have had a lasting impact on American society. Two major successes—founding the departments of Energy and Education—withstood calls for abolishment by the Reagan administration and remain influential and indicative of the legacy of the Carter presidency. Other successes, such as deregulation of the airlines (1978), natural gas prices (1978), and the trucking industry (1980) continue to affect American consumers, just as the Alaska Land Act (1980) set aside over 100 million acres of federal land for wilderness areas and national parks.

The failures of the Carter presidency clearly overshadowed his important policy successes. His opponent in the 1980 presidential election, the former Republican governor of California, Ronald Reagan, simplified voters' decisions to a retrospective evaluation of the current administration—are you better off now than you were four years ago? Carter lost by 10 percent in the popular vote, but won only six states and the District of Columbia—forty-nine electoral votes or 9 percent of the total—in his failed reelection bid on November 4, 1980.

As a former president, Carter has been involved in numerous humanitarian and diplomatic missions. Well known as a volunteer for Habitat for Humanity, Carter also led a diplomatic convoy to avert a crisis in Haiti (1994), lectured in political science at Emory University, and won the Nobel Peace Prize in 2002 "for his decades of untiring effort to find peaceful solutions to international conflicts, to advance democracy and human rights, and to promote economic and social development" (Nobel Committee 2002). Just as when he was president, Carter continued to foster human rights around the world. In these and other ways, Carter has been uniquely more respected and influential after 1980 than he was during his term as president.

SEE ALSO *Presidency, The*

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Matthew Eshbaugh-Soha

CARTOONS, POLITICAL

Throughout world history, political cartoons have illustrated the age-old adage that a picture is worth a thousand words. Since the sixteenth century, illustrated caricatures have been used as satire, drawing attention to important political and social events of the day. But in 1843, the practice gained a new name when England's *Punch* magazine published a drawing parodying preliminary sketches of paintings commissioned for the houses of Parliament. "Cartoon No. 1," as the illustration was called, was the first use of the word *cartoon* to describe humorous, satirical, or witty drawings or caricatures. It used simple imagery to communicate a message aimed at influencing public debate and the political process.

A surprising forefather of the political cartoon is Martin Luther, the sixteenth-century religious reformer, who used illustrated booklets and posters in a campaign to reform the Catholic Church. In *Passional Christi und Antichristi* (1521), illustrated by the printmaker Lucas Cranach, Luther contrasted easily recognizable scenes from the Bible with scathing caricatures of the Catholic Church. One set of illustrations juxtaposed Christ driving the moneylenders out of the Temple with the Pope selling indulgences. The practice of using satirical drawings to make political commentary caught on in Europe, and the practice eventually spread around the world.

Political cartoons were very influential in early American political culture. In 1754, Benjamin Franklin became the first to publish a cartoon in an American newspaper. Franklin, a supporter of unifying the colonies for protective purposes, used a common superstition to get his message across. It was believed that a snake that had been severed would come to life again if its pieces were put back together before nightfall. Franklin drew a picture of a snake cut into eight pieces, with the caption "Join, or Die." Using easily recognizable symbols as shorthand for commentary remains a staple of modern political cartoons.

Even in the eighteenth century, political cartoons traveled around the world, crossing language and cultural barriers. One famous example is that of William "Boss" Tweed, the head of the political machine that had run New York City since 1789. Tweed was caricatured as a crook in a series of political cartoons by Thomas Nast in the American publication *Harper's Weekly*. "Stop them Damn Pictures," demanded Tweed, "I don't care so much what the papers write about me. My constituents can't read. But damn it, they can see pictures." When Tweed fled an American jail for Spain, a Spanish official recognized him from his cartoon likeness, leading to his arrest and return to America.

In the twenty-first century, cartoons are often used as a vehicle for disseminating political commentary around the world. Political cartoons now come in many forms, from the one-frame cartoons found on the editorial pages of newspapers to multipaneled cartoons commonly referred to as *comic strips*. Political content can also be found in other popular cartoon forms, such as comic books, graphic novels, and Japanese anime, and in different media venues, such as television, movie theaters, and the Internet. Recurring politically charged comic strips, or "funnies," are particularly well suited to using humor to deal with significant issues. Comic strips are able to address social and political issues by weaving them into the day-to-day lives of their characters. In America, the syndicated comic strips *Doonesbury* and *The Boondocks* are examples of daily comic strips that provide biting social commentary and critiques of the government.

SEE ALSO *Nast, Thomas*

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Katina Stapleton

CARVER, GEORGE WASHINGTON

SEE *Peanut Industry.*

CASE METHOD

The case method (or the case study) is a prolonged, intimate, and detailed investigation of a single case or a set of cases. The in-depth analysis of a case or small set of cases illuminates larger sociological processes and phenomena. The case method is used in urban and rural ethnographies, life histories, and social histories of a group of people or an event. Cases can be empirical, theoretical, or "discovered" during the research process. The case method requires an ongoing, engaged, and critical conversation between data collection and data analysis. Typically, the social scientist using the case method refines her definition of a case throughout the course of a study (Becker 1992). The case method is especially useful in illuminating social worlds that are not appreciated or understood by others.

The history of the ethnographic case study is grounded in a volume of works produced by the Chicago school during the early twentieth century. Early Chicago school scholars used the case method to illuminate people's understanding of urban culture (Zorbaugh [1929] 1976), race and ethnic relations, and social problems such as homelessness (Anderson and Council of Social Agencies of Chicago 1923), poverty and segregation (Wirth 1928), deviance, and delinquency (Thrasher 1927). The *naturalistic case study* grounds observations and concepts in everyday social interactions and processes, which are observed directly by the researcher. Social scientists using the *extended case method* seek to complicate or "extend" extant concepts and theory by explicitly linking the case under study to local, national, and global trends and histories (Burawoy 1998).

Today, the case method is valued for its utility in labeling previously undocumented or misunderstood activities and understanding complicated social or historical phenomena, including social problems such as poverty, homelessness, drug use, and inner-city violence. Like early Chicago school scholars, contemporary social scientists use participant observation and in-depth interviews to systematically examine a social group or social phenomenon, while also developing new and innovative ways to collect data (Emerson 2004). In addition to data collected from direct and participant observation, the case method also takes advantage of the available quantitative data, including public records, and, at times, archival data. The primary data source for ethnographic case studies is the field researcher's notebook. Throughout the research process, the social scientist takes copious field notes, which are essential to data analysis and to the final presentation of the study to outside audiences (Emerson 2004). A common analytical tool used in case studies is analytical induction; a working hypothesis is developed once the researcher begins to collect data on his first case and then tests and refines his developing theory throughout the process of data collection and analysis (Becker 1998). Typically, the findings from a case study are presented in narrative form, as a story that conveys the lived experience of the social group, actor, organization, or historical event.

Large quantitative studies (such as a population census or a large-scale survey) emphasize researcher objectivity. In contrast, the case method uses a researcher's subjectivity (Ragin 1997) or reflexivity (Burawoy 1998) as a tool to deepen one's understanding of a social group or phenomenon. Field researchers who are concerned with limiting the influence of researcher bias may construct a team of field researchers that will effectively standardize the process of data collection and analysis (for example, Newman 1999). A noted strength of the case method approach is the validity of its findings. Typically, the researcher using the case method has a wealth of sources including field notes, interviews, media reports, and archived materials to "triangulate" or cross-check during the research process. Critics also argue that the case study method does not allow for the generalization of findings to a much larger population of cases. Some researchers identify this as a limitation of the case method in the presentation of their findings, while others argue that one can generalize from a single case study to others, if similar conditions exist (Becker 1967).

Social scientists who use the case method help to complicate our understanding of everyday life, social processes, and social phenomena in ways that are elusive or impossible for quantitative-based studies to accomplish. At times, the most rigorous case studies will form the foundation of larger quantitative studies. The deep insight generated from the case study illuminates the many problems that concern contemporary social scientists.

SEE ALSO *Anthropology; Case Method, Extended; Ethnography; Social Science*

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Nikki Jones

CASE METHOD, EXTENDED

The extended case method was initially developed by anthropologists Max Gluckman (1911–1975) and Jaap van Velsen (1921–1990) in the late 1950s and early 1960s. It was designed to confront the decontextualized abstractions of structural approaches with richly detailed accounts of the actions and choices of real individuals. As conceived by Gluckman, the method places less emphasis on identifying structural regularities and more on detailed analyses of social processes wherein individual strategies and choices reveal the context of everyday life. He placed particular emphasis on extending case studies temporally, as "the most fruitful use of cases consists in taking a series of specific incidents affecting the same persons or groups, through a long period of time, and showing … [the] change of social relations among these persons and groups, within the framework of their social system and culture" (1961, p. 10).

Gluckman distinguished extended cases from two more restricted uses of the case study, both of which tended to serve structuralism's concern with social morphology: *apt illustration* (describing a simple event or action in such a way that it serves as a persuasive illustration of some general normative principle), and the analysis of *social situations* (whereby more complex microsocial events are analyzed to reveal structural characteristics at the macro level). By contrast, the extended case method includes "analyzing the interrelation of structural ('universal') regularities, on the one hand, and the actual ('unique') behavior of individuals, on the other" (van Velsen 1967, p. 148).

Van Velsen, who preferred the term *situational analysis*, also noted that: "[Structural] analysis does not allow for the fact that individuals are often faced by a choice between alternative norms" (1967, p. 131). Moreover, for van Velsen, what ultimately recommends the method is its ability to illuminate the complex relationship between a social world of "norms in conflict" (1967, p. 146) and the strategies and choices of individuals. Van Velsen also suggests that extending case studies over a broad geographical area may help researchers clarify the problem of defining the appropriate unit of study (1967, pp. 145–146).

One of van Velsen's students, sociologist Michael Burawoy, further defined the extended case method by highlighting its reflexivity (i.e., applying its method to the investigation itself) and by advocating it as a means to reexamine the relationship between data and theory. Burawoy closely associates the extended case method with what he calls a *reflexive model of science* (1998). Like Gluckman and van Velsen, he emphasizes the importance of variations in the case through time and space, as these often help to delineate the forces shaping a particular society (1991).

Burawoy also proposes that field researchers use their observations of specific cases to challenge and reconstruct existing theory. On this line of thinking, cases are selected specifically for their theoretical relevance, and by using a case to challenge existing theory, generalization from a single case study becomes possible (1991). This is accomplished through identification and analysis of anomalous cases (i.e., cases not accounted for by the existing theory). According to Burawoy, careful attention to such anomalies "leads directly to an analysis of domination and resistance" (1991, p. 279), thereby qualifying the extended case method as "the most appropriate way of using participant observation to (re)construct theories of advanced capitalism" (1991, p. 271).

SEE ALSO *Case Method; Ethnography*

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Peter Hennen

CASE STUDIES

SEE *Case Method.*

CASINO CAPITALISM

In common parlance, the term *casino capitalism* refers to the unregulated excesses associated with the "boom and bust" cycles of large speculative ventures, such as Enron. Its origins in the literature probably lie with John Maynard Keynes (1883–1946) and his famous *General Theory of Employment, Interest, and Money*, first published in 1936. In this vigorous attack on the classical and neoclassical economics that was predominant at Cambridge in the 1930s, Keynes refers to the "casino capitalism" embodied in the winning and losing of fortunes on the stock market. Keynes had already spoken in the 1920s of the immoral and insidious influence of an economy freed from restraint, believing that unfettered greed would create a wave of social problems. In chapter 12 of the *General Theory*, Keynes refers to casinos twice, first when he comments:

> Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done. The measure of success attained by Wall Street, regarded as an institution of which the proper social purpose is to direct new investment into the most profitable channels in terms of future yield, cannot be claimed as one of the outstanding triumphs of *laissez-faire* capitalism. (Keynes 1936, p. 159)

Later in the same chapter, Keynes comments:

> It is usually agreed that casinos should, in the public interest, be inaccessible and expensive. And perhaps the same is true of Stock Exchanges. That the sins of the London Stock Exchange are less than those of Wall Street may be due, not so much to differences in national character, as to the fact that to the average Englishman Throgmorton Street is, compared with Wall Street to the average American, inaccessible and very expensive. (Keynes 1936, p. 159)

In her 1986 book *Casino Capitalism*, British economist Susan Strange (1923–1998) comments: "The Western financial system is rapidly coming to resemble nothing as much as a vast casino." Strange argues that, between about 1965 and 1985, considerable increases in risk and uncertainty in economic markets gave rise to substantial social and political disruptions in the global system. She links these changes to five major trends: (1) innovations in the way financial markets operate; (2) the increased scope of markets; (3) the shift from commercial to investment banking; (4) the rise of the Asian investment markets; and (5) the removal of government regulation from banking. Strange argues for increased regulation and more substantial American leadership, which she believes is required because of the predominant role of the United States in the world markets. Coming as it did during the period of Reaganomics, her advice fell on deaf ears.

The term *casino capitalism* also appears in the work of Irving Fisher (1867–1947) and Hyman Minsky (1919–1996). Fisher, along with others in the 1930s, was faced with the problem of explaining the tragedy of the Great Depression. The common view among economists of this era, of whom Keynes may be representative, was that financial markets were like casinos, rather than "markets" in the usual sense of the word, and that these speculations contributed mightily to the social ills of the day. Fisher, along with John Burr Williams (1900–1989) and Benjamin Graham (1894–1976), claimed that the casino metaphor was misplaced. Instead, they argued that the asset prices of financial assets reflected "intrinsic value," which in turn could be calculated by deciding the total value of dividends likely to be produced in the future.

As with the work of Strange, who found value in the ideas associated with the term *casino capitalism*, Minsky contributed to an analysis of uncertainty in markets. Minsky is famous for proposing the *financial instability hypothesis*, which argues that most forms of capitalism tend toward instability. He supported long-term large-scale economies with decided government intervention. Dimitri Papadimitriou and L. Randall Wray (1998) argue that Minsky's work, in this way, is best labeled *post-*

Keynesian because he attempted to set out the precise institutional means by which the casino system might be better regulated, whereas Keynes made only the most general of comments. In all these cases, the notion that capitalism is essentially speculative and little more than a system of big and small bets in a grand game of chance is at work, and most of the writings around this topic focus on ways to make this irrational system more susceptible to reason and stability.

SEE ALSO *Beauty Contest Metaphor; Business Cycles, Empirical Literature; Business Cycles, Political; Business Cycles, Real; Business Cycles, Theories; Economic Crises; Economics, Post Keynesian; Financial Instability Hypothesis; Financial Markets; Fisher, Irving; Keynes, John Maynard; Minsky, Hyman; Speculation; Stock Exchanges*

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Christopher Wilkes

CASTANEDA, CARLOS
1925–1998

Born in Cajamarca, Peru, in 1925, Carlos Castaneda moved to Los Angeles in 1955. He completed creative writing classes before enrolling at the University of California, Los Angeles (UCLA), in 1959. Castaneda's third book was approved as his UCLA doctoral dissertation in anthropology in 1973, after he changed its title and added a dissertation abstract (Fikes 1993, pp. 46, 101). His ten books (now twelve) had sold some eight million copies in seventeen languages when he died in 1998.

From 1968 to 1976, Castaneda was America's most celebrated anthropologist. His fame was subsequently eclipsed as scholarly critiques exposed fraudulent elements in his ethnography. Debunking, however, has done little to diminish Castaneda's standing as a New Age icon. Within that distinctly antirational audience, he inspired shamanic tourism and a religious cult.

Most anthropologists assumed that Castaneda's first three or four books were ethnographically factual. The most compelling evidence of fraud in Castaneda's books is textual inconsistency, especially two mutually incompatible assertions made by him, or his fictional (composite) mentor, don Juan Matus, whom Castaneda called a "Yaqui Indian sorcerer." The ingestion of three species of sacred plants was, Castaneda claimed, integral to his apprenticeship with don Juan, who "related the use of *Datura stramonium* (jimsonweed) and *Psilocybe mexicana* (sacred mushrooms) to the acquisition of power he called an 'ally.' He related the use of *Lophophora williamsii* (peyote) to acquisition of wisdom, or knowledge of the right way to live" (Castaneda 1969, p. 9). In Castaneda's third book, don Juan revoked the value originally ascribed to acquiring allies, via jimsonweed and mushrooms, and learning righteousness with peyote, proclaiming instead that administration of those plants was merely a strategy to shatter Castaneda's "dogmatic certainty" about his worldview. By removing that obstacle, don Juan could implant his perspective on sorcery (Castaneda 1974, pp. xii–xiii; Fikes 1996, p. 140). Don Juan's new emphasis on his teaching of sorcery annuls the tutelary function he originally attributed to the spirits contained in peyote and the other plant allies.

Self-contradictory statements resulted when Castaneda addressed skeptics without reconciling those responses with his original statements. In 1968, shortly after Castaneda's first book appeared, R. Gordon Wasson (1898–1986), a renowned specialist on sacred mushrooms, wrote to Castaneda. Replying to Wasson, Castaneda, without justification, removed jimsonweed (*Datura*) from the category of plants possessing allies, as originally defined by don Juan (Castaneda 1969, p. 9). Castaneda's letter to Wasson asserted that, "unlike peyote and Jimson weed, the mushrooms contained don Juan's ally." Richard de Mille recognized another textual inconsistency in Castaneda's letter. Don Juan allegedly imposed a rule of "total secrecy" about revealing how he collected those mushrooms (de Mille 1980, p. 323). Castaneda violated that rule by divulging details: "Don Juan always picked the mushrooms with his left hand, transferred them to his right, and then put them through the neck of the gourd" (1980, p. 324). Another textual inconsistency documented by de Mille (1980, pp. 322–329) concerns Castaneda's "field notes," which put him in Sonora, Mexico, on September 6, 1968, the same day he dated his letter from Los Angeles to Wasson.

Disparities between Castaneda's claims and the reports of independent researchers also attest to fabrication. Castaneda's method of achieving ecstasy by smoking a mixture of plants—including psilocybin mushrooms—has never been corroborated by any other ethnographer. Actual verification is impossible because most of the plants in that mixture were never identified. His claim of becoming a crow after smoking those mushrooms, and

being hypnotized by don Juan, is singular (Fikes 1996, p. 141).

Castaneda's textual inconsistencies and the numerous discrepancies between his books and at least one thousand reports of independent researchers render his portrait of peyotism an inane parody. Similarly, Weston La Barre (1911–1996), a specialist in peyote rituals performed in the Native American Church (NAC), condemned Castaneda's first two books as pseudo-ethnography (La Barre 1989, p. 272). Paradigmatic here is don Juan's momentous decision to accept Castaneda as his apprentice, because "Mescalito" (an erroneous name for the peyote spirit) had, in the form of a dog, caroused with Castaneda (1969, pp. 33–41). That assertion is aberrant (Fikes 1993, pp. 61–62) and was contradicted when don Juan usurped the tutelary function originally ascribed to peyote.

Castaneda failed to distinguish the most elementary aspects of peyote meetings, including the purpose of such meetings and the leader's identity (Fikes 1996, pp. 138–139; Fikes 2004). Don Juan declared that a light hovering above Castaneda in a peyote ritual was an omen. Castaneda never saw that light, and don Juan never clarified its meaning (Fikes 1996, p. 139). This unexplained "omen" contrasts with momentous experiences comprehended by recipients and validated by others, as illustrated by the light that led NAC leader Albert Hensley to read the biblical passage describing Jesus' baptism. Hensley's revelation set a precedent for baptism in the NAC (Fikes 1996, p. 139).

Castaneda's followers have sought shamans comparable to don Juan among the Yaqui (who do not venerate peyote) and Huichol (whose peyote pilgrimages are legendary). Recognizing peyote as the cornerstone of Castaneda's alleged apprenticeship, American tour operators have guided sightseers into the sacred land where Huichols venerate the peyote spirit. A steadily rising tide of tourists has stimulated Mexican authorities to incarcerate Huichol peyote hunters and has incited traditional Huichols to prohibit outsiders from entering their homeland without permits (Fikes 1999; Fikes and Weigand 2004). Castaneda's legacy survives in the Tensegrity cult based on his teachings.

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CASTE

Nearly all societies have had some form of social stratification, whether ascriptive or achieved, based on race, class, religion, ethnicity, language, education, or occupation. The Hindu ascriptive caste system in India is perhaps the most complex and rigid. It is based on birth, which determines one's occupation (especially in contemporary rural India), and is maintained by endogamy, commensality, rituals, dietary practices, and norms of purity and pollution. The English term *caste* is derived from the Portuguese word *casta*, which refers to lineage, breed, or race.

THE HINDU CASTE SYSTEM

The Hindu caste system is interpreted in two ways. First is the standard *varna* description of the caste system as a fourfold division of Hindu society. Its origins are noted in the *Rig Veda*, one of the sacred texts of Hinduism, which dates back some 3,000 years. The term *varna*, which literally means color, does not reference the actual racial features of those who fall into the four *varnas*, as many scholars have established. *Brahmins* constitute the sacerdotal order, which has priestly duties including the interpretation of numerous complex religious texts in Sanskrit, a language that traditionally only they mastered. Below them are the *Kshatriyas*, the caste of warriors and rulers. They are followed by the *Vaisya*, who typically engage in trade and commerce. The bottom is the *Shudra*, or peasant and laborer caste, a large and diverse group that comprises artisans ranging from goldsmiths to washermen and peasants who may own sizeable tracts of land. Outside the fourfold system are the "untouchables," now commonly referred to as *Dalits* ("the oppressed"), who perform the

most menial tasks. Normally, women in the top three *varnas* do not pursue the hereditary occupations, whereas Shudra and Dalit caste women do. The vast majority of India, which is rural, is caste-based as far as inheritance of occupations is concerned.

The hierarchy among various castes is further based on the notions of ritual purity and pollution. The higher the caste, the greater the purity of the group, while lower caste status is associated with pollution. Moreover, the nature of the occupation that one is born into also confers purity or pollution. For example those who dig graves, clean latrines, sweep streets, or work with leather are more polluting than those in "clean" occupations such as trade or priesthood. Those usually engaged in polluting occupations must maintain a prescribed distance from the castes deemed pure to avoid polluting them through contact. For this reason, it is not uncommon for lower caste groups to live in segregated colonies on the outskirts of Indian villages even today.

M. N. Srinivas (1962) and André Béteille (1996), among others, consider the *varna* description simplistic because it does not represent the empirical reality of caste in either ancient or modern India. Their interpretation of the caste system as a constellation of more than 3,500 *jatis* with internal and regional variations has gained validity among scholars. Whenever ordinary Indians refer to caste, they are referring to *jati*, not to *varna*. In the words of Béteille, "whereas *varna* refers primarily to order and classification, the primary reference of *jati* is to birth and the social identity ascribed by birth" (p. 22). In most sociological analyses (and here) the term *caste* is used to represent its *jati* dimension.

CASTE IN MODERN INDIA

Although the caste system has eroded to some extent, it still has a hold in contemporary Indian society. One factor in this has been the Indian constitution, which empowers the state to make special provisions for the advancement of low-caste citizens, including the more than 160 million Dalits (who are listed in a schedule attached to the constitution and thus called "Scheduled Castes"), the nearly 50 million tribals (also listed in a schedule and hence called the "Scheduled Tribes"), and the 500 million "Other Backward Classes." Under these provisions 15 percent of government jobs and university places have been reserved for members of the Scheduled Castes, 7 percent for Scheduled Tribes, and 27 percent for the Other Backward Classes. Initially, this affirmative action was to remain in place only until these marginalized castes caught up with the more privileged upper castes, but this has not yet happened, and there are strong pressures not only to extend indefinitely these policies but also to include caste groups that traditionally belong to Shudra status. The constitution also provides for the reservation of electoral seats for Scheduled Castes in the parliament of India and all the state legislatures. Similar rules govern elections for village and district councils. Although these measures are necessary to create a level playing field for historically deprived caste groups, they also go against another constitutional objective—the elimination of discrimination based on caste.

The affirmative action measures have empowered Dalits to some extent. In 1997, a Dalit, K. R. Narayanan, became the president of India, and by 2001 more than 13 percent of senior bureaucrats in the government of India were Dalits (Gupta 2001, p. 13). However, such gains are overshadowed by the stubborn continuation of inequalities. Dalits and Scheduled Tribes, particularly women, are at the bottom of the economic ladder (Deshpande 2002). Dalits in rural India are still forced into indentured farm labor. In some parts of the country there is still strong opposition to them owning land and sharing public facilities such as temples and wells.

A second factor that has enabled the caste system to flourish is its function as a "vote bank." More often than not, elections are fought not so much over political ideologies and programs but on the caste identity of the contestants. Virtually all castes have well-organized and well-funded associations that mobilize voters for their caste's candidates. Although such mobilization enhances political awareness and participation by various castes, at the same time it also undermines efforts to create a casteless society.

A third factor is that at the individual level, caste identity is still hereditary. Unlike Christianity and Islam, Hinduism does not approve proselytization, and it has no ecclesiastical order. Effectively, then, caste functions as the church of Hinduism, operating with centuries-old customs, norms, and values. Given these conditions, there are no recognized means by which, for example, a Dalit can move up the *ritual* hierarchy, or a Brahmin move down. However, following India's independence in 1947 and adoption of a constitution that stipulated creation of a secular society, various mechanisms have evolved that have enabled members of lower castes, as a group, to claim superior *social status* when they emulate the customs, rituals, and way of life of upper castes (Srinivas 1962; Shah 2005). This process is called *Sanskritization*. For example, an individual (or a group) belonging to Shudra *jati* may become vegetarian, worship the gods that upper castes worship, and even recite Sanskritic hymns as part of its regular prayers, thus claiming status mobility (but not mobility in the ritual hierarchy). Sanskritization is an informal and voluntary process that does not involve participants' merging their identities with the caste whose way of life they imitate, nor will the higher *jati* welcome

them to its fold just because they adopted their ways. Sanskritization is most effective when it occurs at the group level. However, the basic nature of ascription continues. For example, an African American can earn high status in terms of his accomplishments, but his ascriptive status remains unchanged—he is not white. Likewise, an untouchable in India can rise to the position of president of India, but he is still characterized in the media as first untouchable to become president: his caste identity precedes his accomplishment.

A fourth factor that facilitates the continuity of caste is endogamy. The vast majority of marriages in India are still arranged by elders who ensure that their children marry from their own caste. However, a recent report in a south Indian newspaper titled "An Arranged Love Marriage" refers to the flexibility that is emerging in arranged marriages (*Deccan Herald*). Such marriages are becoming common among the urban middle class when future partners who belong to same caste (and perhaps, class too) meet at work and go on "dates." When they find they are mutually suitable, the couple seek the consent of their parents who are more than willing to bless the union since it liberates them from the hassle of dowry negotiations, etc. And yet, this is still an urban phenomenon occurring only among a minority of those who are in the marriage market.

SOME VISIBLE CHANGES IN CASTE RELATIONS

Some aspects of the traditional caste system are changing, especially in urban areas. First, the inheritance of occupations by birth is no longer common except among the Dalits, especially in rural areas. More urban Dalits have succeeded in availing themselves of affirmative action measures. Furthermore, those of lower castes who live in urban areas have greater access to higher education, which makes them more competitive in the job market, especially in the private sector, where reservation policies are not applicable. At the time of this writing, the government of India has proposed to increase quotas for Old Backward Classes in all centrally funded institutions such as the Indian Institutes of Management, Indian Institutes of Technology, and others. This move has resulted in a public debate about the continuing centrality of caste in admission policies which in the end works against value of merit (for details see *India Today*).

Second, although restrictions based on purity and pollution continue to shape social distance and interactions between high and low castes in villages of India, where roughly 70 percent of India's population resides, they are becoming increasingly hard to observe or enforce in large towns and cities. Although it is easy to identify a Dalit in a small village, it is not that easy to identify a Brahmin or a Dalit among, for example, public-transit passengers in a large city. As Indian society becomes increasingly modern, the norms of purity and pollution that are central to the traditional caste system are weakening.

Finally, traditionally caste-based dietary practices are eroding, especially in urban areas, due in part to the way in which nonvegetarian meals are packaged, especially in Western fast-food outlets. Many upper-caste Hindus may not cook meat in their homes, but they have few qualms about breaking dietary taboos in McDonald's, Pizza Hut, or similar fast-food outlets, which are becoming fashionable dining places for urban upwardly mobile Indians.

OTHER RELIGIONS AND CASTE

Many of the religions that entered India during the last five to ten centuries targeted poor and marginalized castes for conversion, but becoming a Christian or Muslim did not accord converts a status free of caste. Instead, for the vast majority, their caste identities stayed with them, and their children and grandchildren have been unable to shed them. At the same time, the converts have been denied by many legal jurisdictions the constitutional benefits of Scheduled Caste and Scheduled Tribe status. Recent attempts by those who converted to Christianity from the lowest castes of Hinduism (Scheduled Castes) to claim Scheduled Caste status and thus eligibility for constitutionally guaranteed benefits have not been successful. The same failure has greeted attempts by individuals in some regions of the country whose status is in proximity to Scheduled Castes, such as *dhobis* (washermen) and *chamars* (leather workers). In fact, conversion of a Dalit, who is Hindu by definition, to Christianity has not been advantageous to many. It might have given them a sense of hope and status but it also deprived them of some privileges that their old status as oppressed Hindus, entitled by the constitution to certain privileges, afforded.

Features of caste continue even in those religions such as Sikhism that emerged in protest against the rigidity of Hindu rites and rituals and, more importantly, against the ascriptive caste system. Over time, social divisions resembling caste hierarchy became part of Sikh society as Sikhs strongly protected and promoted their identities as Jat, Mazabi, and Ramgarhia Sikhs, with claims to superiority over each other and norms of endogamy.

Buddhism arose around the sixth century, partly in protest against the Hindu caste system. Although its founder was a Kshatriya, the most likely candidates for conversion have come from lower castes. While Buddhism extended its influence beyond the shores of India, it was not a great success in India until the 1950s, when Dr. Babasaheb Ambedkar, a Dalit who gave independent India its constitution, encouraged fellow Dalits to convert to Buddhism; millions did, and some still continue to do

so. However, conversion to Buddhism (just as in the case of Christianity) did not amount to renunciation of one's caste identity. Although changing one's religion may be an act of protest against the caste system, Buddhist converts are reluctant to renounce their caste identity because they still want to obtain the benefits that the Dalit status entitles them to under the Indian constitution—a situation which is contradictory because converts to Christianity are not entitled to similar privileges.

CASTE OUTSIDE INDIA

In the late nineteenth and early twentieth centuries Britain, the colonial ruler of India, encouraged Indians to migrate to its other colonies in the Caribbean and Africa as indentured laborers in its bid to maintain its economic success. Most of the Indians who chose to migrate were members of lower castes who saw migration as an opportunity for upward mobility. Although the first generation of immigrants tended to retain their caste identities, particularly in matters of marriage and religious rites (Schwartz 1967), subsequent generations did not, because of the assimilative nature of economic, political, and juridical forces (Motwani, Gosine, and Barot-Motwani 1993; Gosine and Narine 1999). Caste cannot be easily transplanted to an environment where Hinduism is not the operative religion.

Systems of stratification comparable to the Indian caste system have been identified in other parts of the world. For example, in Nigeria the relations between the Ibo and Osu groups are similar to those of upper and lower castes. In Somalia a social group called Midgam or Madibhan suffers from all the impediments that Dalits experience: impurity, pollution, and social distance. The Burakumin of Japan have been compared with the Dalits, as they have faced similar restrictions. These restrictions were outlawed in 1871, but, as in the case of Dalits, discrimination continues, especially in matters of employment and marriage (Henshall 1999). These dichotomous divisions, however, do not come close to the intricate caste system. At best, they compare two opposite ends of caste system with another system similar to it, ignoring the middle, wherein lies the heart of caste system.

Even though there have been stout rejections of the claim that caste can be equated with race (see, among others, Gupta 2001) purely on the grounds of universal practices of discrimination based on ascription, scholars such as Gerald Berreman (1960; 1972) have attempted to compare American blacks to untouchable castes in India. However, the black-white dichotomous system in the United States differs from the fourfold caste system in India in that it is ordained not by religious considerations, but by economic and social ones (Cox 1948).

Nearly all societies are stratified in one way or another, and some groups will always be relegated to the margins. However, the Indian caste system is unique because of its complexity, its religious foundation, its hereditary occupational system, and its norms of endogamy. More important, caste has served to energize Indian polity because it has been a primary means of motivating and mobilizing citizens to take part in electoral politics. Perhaps that has been a positive aspect of caste in Indian society, but the time may come to look for other means of motivating the electorate in India.

SEE ALSO *Caste, Anthropology of; Hierarchy; Inequality, Political; Segregation; Stratification*

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CASTE, ANTHROPOLOGY OF

The term *caste* refers, paradigmatically, to a social institution in India and elsewhere in South Asia in which endogamous descent groups, known as *castes* or *subcastes*, are hierarchically ranked. It has also been used to described hereditary forms of social stratification in non–South Asian contexts, such as Japan, the American South, and elsewhere. The validity of usage outside of South Asian contexts, however, ultimately turns on how we are to understand the paradigmatic Indian case—a matter of considerable and ongoing debate. This article therefore confines itself to the study of caste in India, from its emergence in the colonial period to today.

BEGINNINGS OF CASTE THEORY

Throughout South Asia individual castes and subcastes are referred to as *jāti*, an Indo-Aryan word meaning a category of related persons thought to be of the same physical and moral substance, though the word can also mean genus, species, or race and other allegedly natural types. *Caste*, meaning the systematic basis upon which individual *jātis* are organized, has never perfectly conformed to either popular or scholarly models; not only do the customs and practices of *jāti* hierarchies vary from region to region, they also are commonly interpreted in different ways even within a single village. All this has been well known since the colonial period. But while scholars had a growing appreciation of this empirical complexity, their basic interpretive framework remained, until recently, remarkably stable.

From the late eighteenth century, the colonial picture of caste society was shaped by Brahmin informants who regarded caste as a religious matter and who saw local *jāti* hierarchies as depending on the scriptural theory of *varṇa*—an idealized four-fold social division that proclaimed the spiritual authority of the *brahmana* (Brahmin) superior to the worldly power of the *kṣatriya* (warrior/king), who it enjoined to enforce brahminical law over the *vaiśya* (merchant) and *śūdra* (laborer). Colonial observers construed brahminical ideology as historical reality: The wily Brahmin had devised a hidebound social order that locked each caste into a particular occupation serving elite interests. Preoccupied with their own racial distinction, colonizers furthermore envisioned low-ranked laboring castes as conquered indigenes and high-ranked castes as the descendents of ancient Aryan colonizers. The guiding thread of colonial caste theory, however, was an orientalist notion of religious determinism—namely, that an elaborate ritual code had engendered universal respect for brahminical authority, enabling high-ranked castes to maintain unbroken control over the toiling masses for millennia.

THE RITUAL CONSENSUS

Speculative histories and detailed catalogues of caste-based customs dominated colonial anthropology until systematic village-based fieldwork in the 1950s looked at these customs' everyday context to see how caste actually worked. That more sophisticated approach, which the influential Indian anthropologist M. N. Srinivas exemplified, helped undermine stereotypes of caste society as static and passively determined by religious ideology. Srinivas showed that wealth and physical force often trumped mere ritual (1959), and that, although an individual's ritual status was indeed fixed by their *jāti*, whole *jātis* could sometimes increase their status by adopting the customs of higher-ranked castes (1956). Srinivas's important insights nevertheless remained within the received picture of the caste system as an essentially religious affair by treating the control of land and servile labor, merchant capital, the state, and sheer physical dominance—all of which were termed *secular*—as extrinsic factors that might interact with caste, but were not an inherent part of it.

The tendency to idealize caste as inherently distinct from these less exotic aspects of social reality was taken to a new extreme by French sociologist Louis Dumont, whose *Homo Hierarchicus* went so far as to attack empiricism itself as "Westernistic" and therefore incapable of grasping caste's true, Indian essence (1980 [1966], p. 32). For the closer anthropologists had looked, the more caste appeared to be but congeries of variable and even contradictory elements, its singular essence reduced to a vanishing point. If such an approach were "logically carried out," Dumont had observed in 1958, "we should have to pretend … that India is a mere geographical entity [i.e., lacking a singular cultural essence] similar to Africa" (p. 50). Dumont's solution was to redefine the object of inquiry itself as being, not the messy realities of everyday life, but the flexible ideological principle that rendered such realities coherent. He named this principle *hierarchy*, novelly defined as a universal consensus of values pervading all levels of society and cognition, subordinating the individual to the social whole, political and economic power to the spiritual authority of brahminical religion, and the substantial historical realities of *jāti* to the timeless ideal of *varṇa*—all of which he explained as the hierarchical "encompassment" of the impure by the pure. Those who saw caste as exploitive or as stifling individual freedom had simply failed to grasp the reality of a culture that simply does not accept the West's egalitarian and individualist ethic. Exploitation cannot exist in a caste society, Dumont reasoned, because "an economic phenomenon [like exploitation] presupposes an individual subject," whereas in caste society, "everything is directed to the whole … as part and parcel of the necessary order" (1980 [1966], p. 107).

Dumont's brilliant synthesis of the existing scholarship made *Homo Hierarchicus* a standard reference for all future discussions of caste, despite disagreement over its visionary epistemology. At one extreme, American anthropologist McKim Marriott (1976) embraced an all-determining cultural hiatus between India and the West even more absolute than Dumont's, for the secular factors Dumont had merely downgraded to a subordinate level were dissolved entirely in Marriott's *ethnosociology*—an account built completely on native categories, thereby consigning non–culturally recognized reality to theoretical oblivion. On the other side, many sober-minded anthropologists continued to regard both secular realities and caste ideology as a matter of empirical inquiry, while nevertheless accepting the culturalist definition of caste as ritual order.

POST-DUMONTIAN CRITIQUE

This picture, however, would soon be questioned by two distinct groups of researchers: ethnographers studying the lowest-ranked "untouchable" castes (today called *Dalits*), and historians investigating transformations of native society under colonial rule. Both questioned the social and political bases upon which official knowledge about caste had been produced; both ceased to assume that caste had some singular cultural essence, analyzing it instead as a composite phenomenon intrinsically and irreducibly involving relations of power.

Throughout India the panoply of local caste differences are overshadowed—especially in the traditional heartlands of deltaic civilization—by a singular social division today commonly identified with a ritual distinction between "touchable" *jātis* and "untouchable" ones. The latter, whose *jāti* names were once used interchangeably with terms for slave, remained largely beyond the pale of Hindu society until the early twentieth century. Quintessential outsiders, Dalits were paradoxically indispensable to the very existence, symbolic and material, of caste society: Compelled to remove polluting substances, their labor guaranteed that others remained pure; hereditarily tied to producing for others, they underwrote other castes' material privilege. Were "untouchables" consigned to a life of hard agricultural labor on account of their impurity, or was being coded impure and assigned polluting tasks simply part of what it meant to be under the total domination of others? One can abstract a noetic model of ritual purity from the complex social phenomenon of caste, à la Dumont, but it is unclear why caste itself should be defined by the result of this exercise. Not only would this seem to reduce the anthropological explanation of a society to that society's own self-understanding, it was also far from clear that what Dumont described was not simply the view of some Indians but not others. As anthropologist Owen Lynch (1977) would argue, Dumont's claim to have accessed a civilizational truth encompassing all socially locatable and interested representations amounted to a form of theoretical solipsism. Specifically, Dumont's synthesis had ignored the testimony of the most dominated peoples, prompting Dalit specialist Gerald Berreman to dismiss it as merely the "rationale for a system of institutionalized inequality as advertised and endorsed by its … beneficiaries" (1971, p. 23), which only seemed plausible in the context of an anthropological tradition that had itself habitually privileged certain forms of representations and discounted others.

It would be wrong to assume, however, that anthropologists' neglect of the subaltern evidence meant they had simply reproduced the timeless ideology of elites. On the contrary, considerable evidence suggests that much of what anthropologists—as well as most Indians—have come to recognize as caste is a fallout of colonization and the practices by which colonizers sought to know and control the colonized. Research by historian Nicholas Dirks (1993), for instance, suggests that the subordination of kingly power to brahminical ritual, seen by Dumont as Hindu civilization's timeless truth, was in fact the handiwork of colonial power, which had reduced indigenous kings, for the first time in history, to a purely symbolic and genuinely inferior status. With the political authority of India's autonomous kingdoms no longer the legitimating framework for localized *jāti* arrangements, something quite new was born. As historical anthropologist Bernard Cohn (1984) showed, the novel idea that geographically and culturally distant *jātis* composed a single ritual order became an institutional reality, when, in the 1870s, census officials began to publicly rank all castes on this basis.

The claim is not, Dirks (2001) has stressed, that the British invented caste *ex nihilo*, but that they conceptually and administratively redefined it. Once formed and conceptualized within multiple, local logics—military, agrarian, mercantile, and (in the signal case of the Brahmin) religious—all of which were intrinsically political, caste was now subsumed under a single, allegedly apolitical, specifically Hindu, and pan-Indian social order. Defining caste religiously—as the ritual essence of a newly imagined Hindu community—made outsiders of Muslims and undermined real communities of allied Hindu and Muslim *jātis*. Dalits, conversely, were proclaimed (ritually disadvantaged) Hindus in the 1871 census, and were soon embraced as such by Hindu nationalists and reformers like Gandhi, who saw their inclusion within Hinduism as vital to national strength. Equally significant, however, was the fact that geographically disparate Dalit *jātis* had even been brought together into a single, officially recognized category. For in the 1920s they too would begin to

assert an autonomous political identity, under the leadership of Dalit statesman B. R. Ambedkar, and to reject the Gandhian claim that their interests lay with the Hindu community and caste elites.

Liberated from foreign rule, the democratic Republic of India has introduced numerous policies to protect Dalits from abuse and to better their lot (as long as they do not renounce Hinduism for Islam or Christianity), and, in the arena of electoral politics, parties representing Dalits and other disadvantaged castes have begun to encroach on what was once the preserve of caste elites. Yet Dalits remain significantly below non-Dalit counterparts in all social and economic indicators, and as Smita Narula's well-corroborated Human Rights Watch report (1999) attests, in much of rural India dominant castes continue to stigmatize, exploit, and violently suppress Dalits. Even in more urbane settings, Dalits describe a pervasive climate of discrimination in housing, the workplace, and classrooms, and Dalit activists have sought international recognition for their plight—most prominently at the 2001 U.N. World Conference against Racism, Racial Discrimination, Xenophobia, and Related Intolerance. Indians from more privileged backgrounds, however, frequently lament Dalit antagonism as the "politicization of caste," a development they trace to colonial divide-and-rule policies. Indeed, in the latter decades of their rule, British officials had actively sought to undermine the nationalist movement by exploiting tensions between Dalits and the movement's overwhelmingly elite, high-caste Hindu leadership. The colonial roots of modern caste politics, however, go deeper and are more tangled than this observation implies. For claims about a "politicization of caste" are every bit as political and socially locatable as the Dalit activism they decry, and—by representing caste as formerly distinct from the political—are less a critique of colonial caste policy than the restatement of its fundamental premise.

SEE ALSO *Caste*

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CASTE SYSTEM, INDIA

SEE *Caste.*

CASTRATION

SEE *Sterilization, Human.*

CASTRO, FIDEL

1926–

Fidel Castro, a first-generation Cuban, was born August 13, 1926, to a wealthy farming family in the eastern region of Oriente. Their 11,000 hectares produced wood, sugarcane, and cattle. His father had migrated from Galicia, Spain, while his religious peasant mother had been born in Cuba of Spanish parents. Both parents learned to read and write although neither went to school. Fidel Castro was one of six children.

When Castro was three years old, the worldwide economic depression hit rural Cuba. From 1929 to 1933 the island experienced widespread social and political upheaval, culminating when Fulgencio Batista (1901–1973), a sergeant, led a military revolt that put a radical government in power. Batista, at the behest of the American ambassador, then overthrew it and continued to dominate Cuban politics until 1959.

Castro initially went to a small rural school. At age six, in 1932, he left for a private Catholic elementary boarding school in Santiago de Cuba. Later he went to the leading elite Jesuit secondary school, Colegio Belén, in Cuba's capital city of Havana. From the Spanish priests he learned self-discipline. In 1943 he earned an award as the country's best secondary-school athlete. During school breaks, he visited the family farm and read newspaper reports about the Spanish Civil War (1936–1939) or World War II (1939–1945) to his parents and workers. In the Spanish conflict, his family supported Francisco Franco (1892–1975).

ENTERING POLITICS

In September 1945, at the age of nineteen, Castro entered the University of Havana. The campus was his springboard to national politics. Just the previous year, national elections had allowed the Partido Revolucionario Cubano (PRC), also known as the Auténtico Party, to set up a government. The PRC promised major social reforms and greater national independence. Castro immediately became involved in the tumultuous politics of the time. Students and professors transformed courses into discussions of Cuba's social, economic, and political problems.

In 1947 he participated in setting up a new populist political party, the Partido del Pueblo Cubano, or Ortodoxo Party, which had separated from the PRC. The Ortodoxos shared the same values as the PRC but claimed the Auténtico government had failed to deliver on its promised reforms and instead had become thoroughly corrupt.

Early in his life Castro had absorbed anticapitalist ideas based on Catholic counter-reformation conservative thought. While attending high school, he discovered the nationalist, anti-imperialist revolutionary writings and biography of the Cuban patriot José Martí (1853–1895). At the University of Havana he became acquainted with radical works, including those of the German political philosopher Karl Marx (1818–1883) and the Russian Communist leader Vladimir Lenin (1870–1924). He claims that in those days he became a utopian socialist and cites Martí as his primary influence.

During his university years, from 1945 to 1950, Castro was a political activist. In September 1947 he joined an armed expeditionary force composed of Cubans and exiles from the Dominican Republic intending to oust the government of the dictator Rafael Leónidas Trujillo (1891–1961). The invasion was never launched. The next year, in April 1948 as a representative of the Law Students Association of Cuba, Castro went to a Latin American University Students Congress in Bogotá, Colombia, which coincided with the United States' initiation of the Organization of American States and the advent of civil war in Colombia. The populist leader of the opposition was assassinated. For two days Castro participated in some of the early armed skirmishes, and then he returned home. Both incidents indicate that he, like many contemporaries in Cuba, identified with political struggles in the region. He was also involved in a political organization promoting the independence of Puerto Rico. By then he had acquired lifelong contacts with Latin American progressive political parties and leaders.

He graduated in 1950 with a law degree, having specialized in international law and social sciences. His main interests were politics, sociology, history, theory, and agriculture. As a student leader, radio commentator, and investigative political journalist, he developed a significant following among young people. The Ortodoxo Party recognized his oratorical and organizational skills and nominated him for the planned June 1952 national congressional election. However, on March 10, 1952, the military, led by Batista, carried out a second coup d'état, ending hopes that electoral politics could reform the island and throwing Cuba's constitutional system into a crisis.

ARMED REVOLUTIONARY

Like many other political reformists, the young Ortodoxos became committed revolutionaries, clandestinely organizing to oust the new military rulers. On July 26, 1953, civilians led by Castro attacked Santiago de Cuba's Moncada army barracks, the second largest in the country. It ended in failure. Some men were killed in the confrontation; others were captured and then assassinated. The survivors ended up in prison. From the summer of 1953 to May 1955, Castro was imprisoned at the Isle of Pines, but he continued to organize his associates inside and outside prison. He also read about political, economic, and social matters. In mid-May 1955, the Moncadistas were granted a political amnesty. Batista hoped such a move would earn him legitimacy. It did not. Meanwhile, by serving time, Castro had become one of the primary national opposition leaders in Cuba.

He spent May 1955 to November 1956 in exile in Mexico, where he organized and trained a guerrilla force. On December 2, 1956, eighty-two men who had embarked from the Mexican port of Tuxpan days earlier landed in Cuba in the southern portion of the Oriente.

The guerrilla insurgency had begun. The guerrillas gained control of significant portions of territory, launched an agrarian reform, recruited peasants, and created an alternative set of political institutions. Castro broadcast daily from a rebel shortwave radio station. From the Sierra Maestra Mountains, he coordinated the military and political struggle. From 1957 to 1958 the guerrillas were able to build a multi-class popular front against the dictatorship.

On December 31, 1958, the Batista military regime and political machine collapsed. This was a first in Latin America: a rural insurgency that defeated a regular military force supported by the U.S. government.

REVOLUTIONARY IN POWER

On January 1, 1959, less than six years after the initiation of open opposition to the Batista regime, Castro's revolutionary forces seized power. The Cuban revolution was about to begin. The fundamental questions of how the society's institutions would be organized and what the relationship would be with the United States and Latin America soon became paramount issues as the multi-class alliance that had supported the guerrillas fractured. Portions of the bourgeoisie and the middle classes wanted a return to a constitutional government without affecting social and economic institutions. However, landless peasants and the seasonally unemployed, among others, favored radical changes.

Moreover, the Cuban revolutionaries were aware of the political processes unfolding in Asia, Africa, and the Middle East. While the United States and the Soviet Union were engaged in the cold war, third-world countries were addressing the pressing problems of national independence, integration, decolonization, and socioeconomic development. Some of the same issues needed to be addressed in Cuba.

Even before the guerrillas left the Sierra Maestra, the U.S. government tried to prevent them from seizing power. Also, the United States gave political refuge to Batistianos, allowing them to plunder Cuba's national treasure. In January 1959, right-wing Batista forces in exile in the United States began hit-and-run attacks by air and sea, but the U.S. government turned a blind eye. Foreign relations between the two governments deteriorated rapidly.

Moderates and radicals within the new revolutionary regime immediately discovered the interconnection of domestic and foreign policy. Attempting to distribute land to the landless created confrontation with the United States because the best land was owned by American corporations. Increasing wages also affected American-owned corporations. Import-export policy impinged on the businesses that did precisely that, mostly American ones. Moreover, the administration of President Dwight D. Eisenhower (1953–1961) had no intention of forfeiting American privileges enjoyed since 1898.

Nevertheless, the Cuban nationalists sought to bring about unprecedented independence. Any attempt to reform Cuba's social, economic, and political institutions would create confrontation between the two countries. American opposition only contributed to the radicalization of the revolutionary process.

Cuba had a mono-export economy, with one major buyer (the United States), yearly cyclical high unemployment, and much social inequality. Cuba was a poor and underdeveloped country, although different in one respect from other nation-states in the Caribbean. With Cuban capitalism so closely connected to American investments, nationalist efforts to control the country's resources easily became equated with anticapitalism. Cuban businesses did not come to the fore to defend their interests by differentiating themselves from U.S. interests. Rather, Cuban capital attached its politics and fate to the U.S. government.

RADICALIZATION OF THE REVOLUTION

The early Cuban revolutionary regime developed a threefold strategy: a progressive redistribution of income, a radical change in the property system, and a lowering of major daily costs (such as food, rent, transportation, and public services) to benefit the lower classes. This resulted in broader political support among the lower classes and a reduction of the income and wealth of the upper classes, thus diminishing their available resources for counterrevolutionary activity.

As this radicalization advanced, the moderates within the revolutionary coalition joined the opposition or went into exile. Many members of the professions did the same. As the country lost skilled personnel, the state further centralized political, administrative, and economic resources. Facing a shortage of expertise, the revolutionary regime relied on the politically trustworthy, usually people who were radical, including Communists. Such trends further exacerbated the political climate and relations with the U.S. government.

By March 1960, the United States had begun formal covert programs to overthrow the government and kill its leaders. In April 1961, a Cuban exile invasion (Bay of Pigs) was organized, trained, financed, and directed by the Central Intelligence Agency. The fact that it was defeated by the Cubans reinforced the United States' commitment to oust the revolutionaries. The John F. Kennedy administration (1961–1963) further retaliated by organizing a second expeditionary force and imposing an economic embargo in February 1962.

NUCLEAR GAMBLE AND RELATIONS WITH SOVIETS

Havana and Moscow replied by surreptitiously installing tactical nuclear weapons on the island in 1962. Interestingly, Castro urged the Soviets to announce to the world that missiles were going to be installed as a matter of sovereign right on the part of Havana. The Soviet premier, however, did not listen to his advice.

Between April 1961 and March 1962, Castro removed key pro-Soviet Communists from critical positions in the government and the economy while negotiations with Moscow on missile installations were conducted. After October 1962, because of the way the Soviets handled the resolution of the Missile Crisis (Cubans were not informed of the negotiations), relations cooled. Havana made numerous moves to publicly assert its independence. The Soviets put up with Cuba questioning their position on the Sino-Soviet conflict, on the electoral politics of Communist parties in Latin America, the methods of building socialism, and the importance of politics based on moral rather than materialist perspectives. Havana, in other words, was to the left of Moscow. Such were the tense relations until 1972.

From 1972 to 1985, on domestic matters Cuba followed policies that were in accord with the Soviet model, but Castro constructed a foreign policy that challenged the Soviets. This was the case in Angola (1975), Ethiopia (1977), Nicaragua (1979), and an international organization called the Non-Aligned Movement (NAM; 1979). In 1980, Moscow informed Havana that it would not defend the island if U.S. military forces were to attack. Cuba had to develop its own military doctrine and structure from that point on. Thereafter, the political and ideological distance between the two countries grew, even though the island depended on Soviet economic subsidies.

From 1985 to 1990, Castro elaborated a critique of the old Soviet model while rejecting the reforms of Soviet leader Mikhail Gorbachev. The government in Moscow responded by further reducing assistance.

SPECIAL PERIOD

The demise of the Soviet bloc from 1989 to 1991 had major domestic implications in Cuba. It initiated the most difficult economic period in the history of the island—the so-called Special Period.

The United States took advantage of that juncture to increase Cuba's economic isolation. It was an extraordinary accomplishment that Castro's regime adapted its policies and survived. Moreover, by 2000 the island had slowly begun to regain the economic standards it had enjoyed in the early 1980s.

To break away from American-imposed isolation policies while distancing itself from the Soviets, Cuba developed a global foreign policy. Castro cultivated a personal relationship with key political, social, and cultural leaders from Africa, Asia, and Latin America. His close friends have included such nationalist progressives as Nelson Mandela (b. 1918; South Africa), Lázaro Cárdenas (1895–1970; Mexico), Omar Torrijos (1929–1981; Panama), Juan Bosch (1909–2001; Dominican Republic), Salvador Allende (1908–1973; Chile), Daniel Ortega (b. 1945; Nicaragua), Juan Domingo Perón (1895–1974; Argentina), Sékou Touré (1922–1984; Guinea), Ahmed Ben Bella (b. 1918; Algeria), Luiz Inácio Lula da Silva (b. 1945; Brazil), João Goulart (1918–1976; Brazil), Josip Broz Tito (1892–1980; Yugoslavia), Jawaharlal Nehru (1889–1964; India), and many others. The closest of all associations has been between Castro and Hugo Chávez (b. 1954), the president of Venezuela beginning in 1999. The older man recognized the revolutionary qualities of the Venezuelan as early as 1994. The two have similar national histories with a heavy reliance on mass mobilization. Chávez, however, attained and has maintained political power through electoral politics. Moreover, while the younger man respects the elder statesman, there is a unique reciprocity of respect and influence. Castro provides political and tactical advice, and Venezuela's economic resources have permitted Chávez to help Cuba surmount the economic crisis that began in 1991. Radical and revolutionary ideas and organization have been extended by their alliance beyond anything that Castro could have imagined.

In 1961 the Non-Aligned Movement was established in Belgrade, Serbia. Cuba was the only country from Latin America that was a founding member. In 2007 the NAM had 118 third-world countries. Twice Castro has been elected to lead the organization, an explicit mark of esteem for the political example and strategic perspectives of the Cuban revolutionary. Thus, Cuba has become identified with selfless internationalism, sending assistance, for example, to Angola, Mozambique, Nicaragua, Grenada, Venezuela, Algeria, North Vietnam, Ethiopia, Pakistan, and Haiti.

Once the Soviet Union and its Eastern European allies were gone, the government in Havana devised more activist policies toward the third-world nations, providing them with the human capital the island had been so successful in creating, particularly teachers, doctors, dentists, and technical people. In January 2007, Cuba had diplomatic relations with 183 countries.

Relations between the United States and Cuba have gone through different periods, but they have never been friendly. Full diplomatic relations were broken by the United States in January 1961. Thirteen months later,

normal economic transactions were terminated by Washington. Only during the administration of President Jimmy Carter (1977–1981) was there a brief period during which some diplomatic ties were restored and travel between the two countries resumed. However, during the administration of George W. Bush (starting in 2001), travel to the island from the United States was highly restricted, including family and academic travel. Cuba cannot use the U.S. dollar in any international transaction, receive international credits, or use any banking institution tied to U.S. capital. Third parties outside the United States are also pressured not to engage in trade with the island. The degree of U.S. financial support to the opposition has increased, and the economic blockade/embargo has been heightened. Every year, the United Nations' General Assembly overwhelmingly votes against the U.S. policy, but the policy remains.

REVOLUTIONARY LEADER

Castro has been the paramount strategist, executive officer, ideologist, and macromanager of the revolutionary regime. He has been the revolution's main leader, spokesman, and coalition builder. Relying on historical reference, example, and metaphor, he has taught that action is the best educator. A radical nationalist, he integrated Martí and Marx. His political thought is rooted in ethical values rather than materialist theory. He has synchronized socialist European traditions with third-world customs while recognizing that each country must find its own way. He has dealt with development theory, nation building, internationalism, foreign debt, globalization, sustainable development, social justice, party building, and human psychology. Since the 1950s his political strategy has stressed unity among revolutionists. Mass mobilization has been a constant instrument and has included the literacy campaign, childhood vaccination, the creation of a territorial militia, and anticorruption campaigns.

Since 1959 resources have been concentrated in the rural areas and small towns, and the city of Havana has suffered. An ideology of inherent rights and entitlements has developed with a system that provides universal education, health and dental care, child care, and burial service free of charge. The state also assumes the responsibility of providing employment or giving the unemployed financial support. Cuba is one of the most educated countries in the third world, with a life expectancy of 77.5 years and an infant mortality rate of 6.5 per 1,000 live births (as of January 2007). Education and health claim 23 percent of the gross internal product. The number of libraries, schools, hospitals, and dams increased dramatically from1959 to the mid-1980s. Food has been subsidized since 1962, but it has been rationed as well. Just as libraries lend books, there are also centers that lend musical instruments at no cost. Every municipality has computer clubs where access is free. Thirteen percent of the population benefits from universal social security, and 4.2 percent receives social assistance checks.

The political system has changed from its original high dependence on charismatic leadership based on mass popular organizations (1959–1976) to a formal institutionalized political regime where officials are directly elected by the population, with no campaigning or Communist Party–proposed candidates. Still, charismatic authority continued to operate to balance and control the administrative state. Castro's contact with the population, which began in 1959 through mass rallies, has been preserved. He has been the unifying and integrating force among disparate factions in the revolutionary family.

Cuba does not permit alternative political parties or a political opposition to openly publish political materials. However, thirty-two Catholic publications do express positions that are opposed to the government, although in a subtle fashion. The political leadership maintains, based on Federalist Paper No. 8 by the U.S. founding father James Madison (1751–1836), that the external threat posed by the U.S. government's policies—including confrontation, isolation, invasion, financial assistance to opponents within the island, and an economic embargo that has lasted more than four decades—do not provide much space for a political opposition.

By the end of July 2006, Castro had transferred political power, in a provisional manner, to his brother and other individuals in what constitutes the establishment of a collective leadership. The question for most foreign observers is whether the Cuban revolution will survive the death of its leader. History will tell.

SEE ALSO *Authoritarianism; Bay of Pigs; Bush, George H. W.; Bush, George W.; Chavez, Hugo; Cuban Missile Crisis; Cuban Revolution; Franco, Francisco; Guerrilla Warfare; Khrushchev, Nikita; Leninism; Madison, James; Marx, Karl; Marxism; Reagan, Ronald; Revolution; Socialism; Spanish Civil War; Third World; Totalitarianism*

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Nelson P. Valdes

CATASTROPHE THEORY

Much of quantitative social science (such as principal factor analysis, linear regression, and least squares) seeks linear relationships among many variables. "Nonlinear" methods often seek to warp variables to bring them into linear relations, just as taking logarithms changes exponential growth into correlation with time, but allow more transforms. This approach fails for topologically nonlinear relationships such as (see Figure 1) the condition $x^2 + y^2 = 1$ between x and y. Knowing the value of x limits what is possible for y, but evenly scattered points (x,y) on the circle show no linear correlation between x and y, and no principal factor in any direction. No transformations of the variables improves this.

A mutual information test would reveal a link between x and y, but say little about its structure. Local analysis says more. The region D shows a strong linear relation between x and y, just as linearly testing temple attendance versus income on one Delhi suburb works better than on worldwide data. Around the points A or B, fitting a linear $y(x)$ reveals little: y is no function of x there (or at P and Q, vice versa). Nevertheless, x and y have a fold relation of a very common type. Just as "more equations than unknowns means no solutions," almost every failure of a $y(x)$ model for an (x,y) curve is a fold. With a smooth reparametrization it fits a piece of parabola. Globally there may be more than one fold: Figure 2 shows a more common relation between the two than the circle. This is more common partly because it can arise as part of the cusp (see Figure 3), which Hassler Whitney in the 1950s showed to be the almost-universal local relation between two surfaces where they cannot be adjusted to a linear or fold description.

René Thom in the 1960s developed a more general theory. This emphasizes the curves, surfaces, and so forth, arising as sets of minima, maxima, and other level points when changes in an external factor modify a function F of a multivariable internal x. Level points (energy-minimum equilibriums, etc.) represent simpler long-term behavior than limit cycles and chaotic attractors, and Thom thus referred to this as "elementary" catastrophe theory.

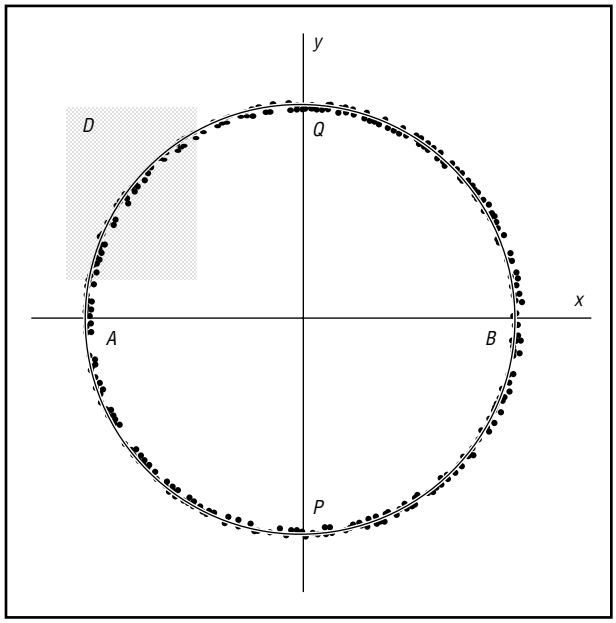

Figure 1

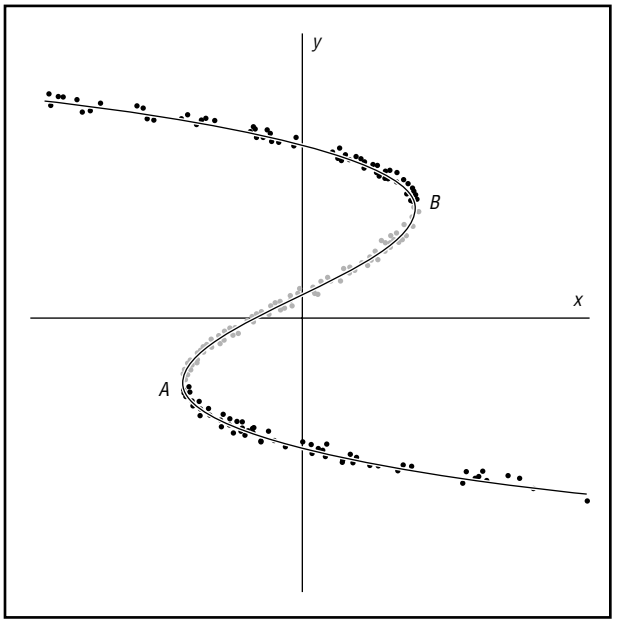

Figure 2

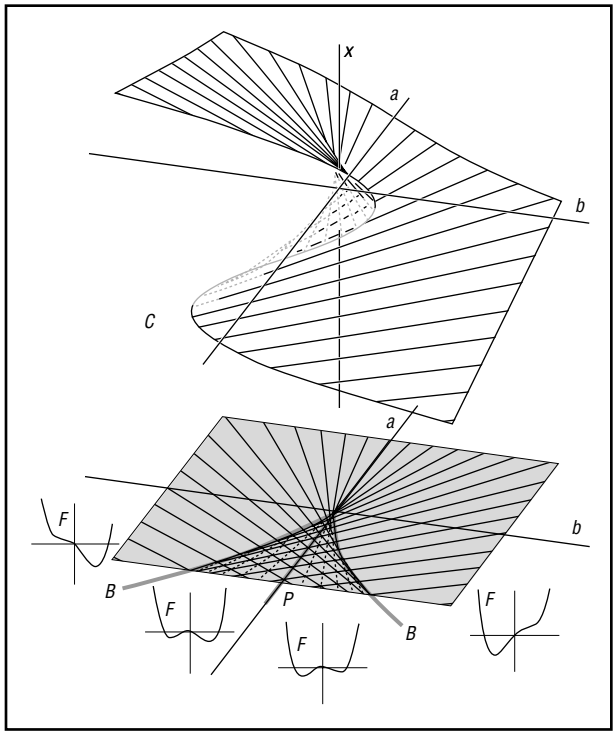

Figure 3

"General" catastrophe theory would include changes of chaotic regime, but the term has settled on the narrower use. The cusp, fold, and so on arise in both contexts. The (*a*,*b*) plane in Figure 2 generalizes the "phase diagram" of thermodynamics: crossing *P* changes which minimum is the deepest, while crossing B changes which minima even exist. Some systems always adopt the deepest minimum, others hold to a minimum until it vanishes, but in either case a smooth change in (*a*,*b*) can force a jump in *x*. The external factors might be, for example, gross economic indicators, while *x* represents all the alternatives of hiring, capital expenditure, shift timing, and so forth, over which a firm must maximize profit *F*—subject to the modifying external factors. (Figures 2 and 3 gray out states such as local minima of profit or maxima of pain, which a system actively avoids.)

Rigorous treatments of the mathematics include the work of V. I. Arnold, while Tim Poston and Ian Stewart aim at a wider scientific audience. Remarkably, the fold and cusp structures arise regardless of any (finite) number of variables needed to describe *x*. For 1-D and 2-D external factors, with scalar *F* and in the absence of special symmetries, any other structure falls apart into cusps and folds as easily as three planar lines through a common point fall into three crossings. They can occur in multiple places, such as the two folds in Figure 2, and in continua for *n*-D externals, such as the fold curve C (not isolated fold points) in Figure 3, but 1-D and 2-D externals make them the universal local forms or "elementary catastrophes" (suggesting in French sudden discontinuity, as in departing "en catastrophe," but not necessarily disaster). Three external dimensions allow three more of these forms: 4-D gives another two, for the total of seven, which caught media attention. In higher dimensions they can still be classified, and have been applied in quantitative physics, but arise in continua of types rather than a small finite set. When the function *F* is replaced by vector dynamics, there are discontinuities (such as onset of oscillation or chaos, and self-organized criticality) not covered by this "elementary catastrophe" list.

Physics, engineering, and, increasingly, biology have successfully applied the methods by which the classification is reached, usually as part of the general "bifurcation theory" toolkit, to nonlinear models with precise data. Research in the social sciences has often attempted to use the classification theorem, not always appreciating the reparametrizations essential to it, or its local nature (folds and cusps are often multiple). Social complexity and noisy social data require multivariable models and statistical tools, even when a linear model is possible. A nonlinear model with few parameters can sometimes replace a linear one with many, as Johannes Kepler's (1571–1630) three laws replaced the hundreds of circles of Ptolemy (2nd century CE) and Nicolaus Copernicus (1473–1543). More often, essential nonlinearity in a few key directions must be combined with linearizability (differentiability) in many other directions: simply superposing the (*b*,*x*) folds around *C* in Figure 3, without adjusting for *a*, masks their structure. Bifurcation modeling for the social sciences must include tools such as principal factor analysis, not replace them. This extended theory is not yet in place, but the work of Courtney Brown represents important progress.

SEE ALSO *Chaos Theory; Phase Diagrams; Social Science; Statistics in the Social Sciences; Topology*

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Tim Poston

CATASTROPHIZING

SEE *Psychotherapy.*

CATHOLICISM

SEE *Christianity; Church, The; Roman Catholic Church.*

CATTLE INDUSTRY

The cattle industry is one of the world's most important agricultural enterprises. According to the United Nations, there were over 1.37 billion cattle worldwide in 2004. On a percentage basis, approximately 35 percent of these animals were in Asia, 23 percent in South America, 17 percent in Africa, 12 percent in North America, 10 percent in Europe, and 3 percent in Australia and Oceania. While this distribution is slanted toward Asia and South America, the livestock systems and uses of cattle vary substantially by location. For example, cattle often have dual purposes, particularly in Asia, where cattle are often used principally for traction and secondarily for meat and milk. In North and South America, however, cattle are used principally for meat and milk products.

According to William Lesser, a professor at Cornell University, cattle have been domesticated for several thousand years. He suggests that domesticated livestock provided early societies with four important functions: (1) a supply of high-quality protein, (2) the ability to store foodstuffs not directly consumable by humans, (3) hides for clothing and shoes, and (4) motive (traction) power (Lesser 1993, p. 31).

Lesser indicates that prior to the Industrial Revolution, cattle systems were relatively primitive. Cattle were kept without shelter, for example, and they had to forage for themselves. However, with the rise of the modern city during the Industrial Revolution, the cattle industry evolved from being a very local industry—where cattle generally provided traction, meat, leather, and livestock products for individual families—to an industry organized to produce cattle products that were transported from rural areas to urban centers.

Cattle primarily consume various types of forage, or fodder, and livestock systems have evolved in order for cattle and other livestock to harvest forages and convert the energy contained in forages into protein. This protein is then consumed by humans primarily in the form of milk and meat. Leather produced from cattle hides is also an important material used in making shoes, other clothing items, and clothing accessories.

In the United States, the evolution of the cattle industry may be best illustrated by the large cattle drives of the 1880s, where cattle were trailed (walked) from the south-central United States to rail centers such as Dodge City, Kansas. The cattle were then transported by rail to urban centers like Chicago, where they were slaughtered and processed. The beef was then shipped to urban consumers. The era of the cattle drive was the heyday of the American cowboy. Cowboys were necessary to control the cattle herds as they moved northward. This period of American history has been romanticized, as has the role of the cowboy as an independent free spirit who battles the elements to care for the cattle under his care. Today, of course, anyone who cares for cattle could be considered a cowboy, but the American cowboy remains an icon of the American West. The South American gaucho has also been romanticized in a similar fashion. Both the American cowboy and the gaucho are known for their distinctive clothing, equipment (such as a lariat), and their horsemanship.

Important technologies for shipping cattle carcasses and marketing cattle products were developed in the late 1800s by companies such as Cudahy, Wilson, and Swift. According to Lesser, this led to the rise of modern meatpacking, which was originally conceived on the same principles as the automobile industry. Henry Ford developed the idea of the modern assembly plant at the beginning of the twentieth century. Modern meatpacking plants have used the idea of product assembly in reverse, for they are essentially large disassembly plants. In meatpacking plants, cattle are slaughtered and their carcasses are disassembled and protected by plastic wrapping. The parts are then reassembled with like parts, referred to as "cuts," before being placed in a cardboard box for shipment. One of the most important innovations in meatpacking during the last decades of the twentieth century was the development of this boxing operation, which has largely replaced the traditional method of shipping whole cattle carcasses to butcher shops and retail outlets. Today, boxed beef is usually shipped directly to retailers, who are then required to provide only a minimal amount of additional preparation before the beef can be served or sold to the final consumer.

International trade in cattle and beef is now dominated by a few large exporting and importing countries. The United States is the world's largest beef and veal producer, though it holds a relatively small portion of the

total international beef market. Other large beef-exporting countries include Brazil, Argentina, Uruguay, Canada, and Australia. Large beef-importing countries include Japan, South Korea, the United States, Canada, and Mexico. As the international trade in beef has increased, animal disease control and food safety have received increased attention. For example, concerns related to standardizing trade issues affected by bovine spongiform encephalopathy (BSE, or mad cow disease) and foot-and-mouth disease have become important issues in the international beef trade. Concerns regarding input use, such as growth-enhancing hormones, and the tracking of animals and meat have also resulted in trade frictions, especially between the United States and the European Union.

Systems for producing beef in the developed world are differentiated primarily by the types of feeds used during the final stages of growing the animal prior to slaughter. This final feeding stage is referred to as "finishing." In locations with abundant forage resources, cattle are primarily finished by grazing the animals. For instance, grass-fed beef is the primary type of beef produced in Argentina, Brazil, and Australia. In locations with abundant grain supplies, cattle are typically finished by feeding them grains. Grain-fed beef is common in North America, especially the United States and Canada.

The modern beef industry in the developed world faces a number of significant challenges. Some of these are related to the relatively small number of large firms involved in meatpacking and food retailing, which leads to fears on the part of farmers and consumers that these firms may have too much influence on prices and the variety and types of beef products that are available.

Other challenges involve building better connectivity and coordination in the marketing channel between the processes used to produce beef and the characteristics desired by consumers. For example, some consumers perceive that there are significant inconsistencies in the tenderness and flavor of beef, both of which are desirable characteristics, from one eating experience to the next. A growing number of consumers in developing countries are also demanding more information about the types of inputs and processes used to produce beef. This has led to more information being provided to consumers about beef products through labeling and certifications. For example, certifications such as "organic," assurances about the beef being produced under "natural" conditions, and assurances about the traceability of the beef are becoming more common. *Traceability* is defined as being able to track the beef product backward through all handlers and processors in the marketing chain to the original farm where the animal was born.

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DeeVon Bailey

CAUCASIANS

SEE *Race and Psychology.*

CAUSALITY

In economics and the social sciences the value of many variables (such as price of a product, crime rate, level of illiteracy, personal income, and consumption) is observed with great regularity. As a result, an empirical generating mechanism can be postulated that produces the observed values of the variable of interest. The investigation and understanding of this mechanism is one of the main tasks for social scientists and by doing so the issue of causation inevitably arises. Causation can be discussed in very general, abstract terms or the discussion can focus on the specific question of whether or not it is possible to test for causation using the data available.

The latter requires an operational procedure and definition (mechanisms and subsystems) and this formulation arises because of a lack of understanding of the working of a complex system. In this formulation, each mechanism, which might be represented by an equation, determines the value of a particular variable as a function of some others. The variable whose value is so determined (dependent or endogenous variable) is called the effect of the working of that particular mechanism, while the values of other variables entering into the mechanism (independent or exogenous variables) are the causes of that effect.

As a specific example, theoretical analysis may say that "y is a function of x," that is, changes in the independent variable x generate changes in the independent variable y. One might write this as $y = f(x)$. Empirical analysis then attempts to estimate the actual strength of the relationship between y and x. So, empirical seeks to uncover the data generating mechanism $y = \beta_0 + \beta_1 x$. Hence, if x increases by 1 unit y will increase by β_1 and if $x = 0$ then $y = \beta_0$.

Much of economics and social science is concerned with cause-and-effect propositions insofar as these disci-

plines pose causal relationships that postulate that a dependent variable's movements are causally determined by movements in a number of specific independent variables. However, one should not be deceived by the words *dependent* and *independent.* Although many theoretical economic relationships are causal by their nature, statistical analysis, for example linear regression, cannot prove causality. All regression analysis can do is test whether a significant quantitative relationship exists, measure the strength of this relationship, and postulate the direction of the quantitative relationships involved. Regression analysis cannot confirm causality. Judgments referring to causality are made through various causality tests.

The objective of any causal analysis is to try to influence the degree of belief held by an individual about the correctness of some causal theory. Hence, the task of the analysis is not to be complete in itself, but rather to have enough value to make one consider one's belief. There are basically two types of causal testing situations. In a cross-sectional causality analysis the question asked is why this variable behaves differently from the other. In a temporal causality analysis the question asked is why this variable changes behavior from period to period. Although many important economic questions can be phrased in the cross-section causal situation, they have received little causal testing in that context and many tests have been conducted for economic questions that can be stated as temporal causation. The definitions of causality and their interpretations may differ between cross-section and time-series cases. In all cases, however, the classification of variables into *exogenous* and *endogenous* and the causal structure of the mechanism (econometric model) are under scrutiny.

The relation between exogeneity and causality is the heart of any investigation into causal analysis. There are a number of definitions of exogeneity: weak, super, and strong exogeneity. A variable is said to be weakly exogenous for estimating a set of parameters if inference on the parameters conditional on this exogenous variable involves no loss of information. The concept of superexogeneity is related to the Lucas critique, which states that if a variable is weakly exogenous and the parameters in the equation remain invariant to changes in the marginal distribution of the variable, then the variable is said to be superexogenous. A variable is strongly exogenous if it is weakly exogenous and at the same time is not preceded by any of the endogenous variables of the model. The concept of strong exogeneity is linked to the concept of Granger causality, and should be considered as a test of precedence rather than causality as such. Hence, a variable is defined to be strongly exogenous if it is weakly exogenous and it is not caused by any of the endogenous variables in the Granger sense. However, in the usual simultaneous equations literature there is doubt as to what extent the test for Granger noncausality is useful as a test for exogeneity. Nevertheless, some argue that Granger noncausality is useful as a descriptive device for time-series data.

The Granger causality test is based on two axioms, that the cause will occur before the effect and that the cause contains unique information about the effect. In practice, Granger causation tests whether *A* precedes *B*, or *B* precedes *A*, or they are contemporaneous. It is not a causality analysis as it is usually understood and in this limited sense Clive Granger (1969) devised some tests which proceed as follows: consider two time series, x_t and y_t. The series x_t fails to Granger cause y_t if in a regression of y_t on lagged y's and x's, the coefficients of the latter are zero. The lag length is, to some extent, arbitrary. An alternative test provided by Sims states that x_t fails to cause y_t in the Granger sense if in a regression of y_t on lagged, current, and future x's, the latter coefficients are zero. Although between the two tests there are some econometric differences, the two tests basically test the same hypothesis of precedence. This is the reason that many econometricians have suggested the use of the term *precedence* rather than Granger causality, since all one is testing is whether or not a certain variable precedes another and one is not testing causality as it is usually defined and understood.

The causality issue arises also in forecasting problems and techniques. Forecasting is the prediction of the behavior of future events and causal models are used to derive numerical forecasts. The causal models are regression and autoregression models used to produce numerical time series forecasts. The subject of a causal model is to identify one series as the main series of interest and to use another series as the predictor for the main series. It is argued that economic theory is necessary in order to provide the information needed to specify the causal relationships, because forecasts may not involve causal relationships.

In a general formulation of a causal time series model the predictor variable (exogenous) enters the equation at the same time as a contemporaneous variable and as a lagged independent variable. Even a simple causal model is fraught with difficulties. This is typically due to the problem of distinguishing the autocorrelation between the dependent and independent variables from the cross-sectional correlation between the two. Cross-sectional correlations that appear significant but are induced by autocorrelations are called *spurious correlations.* The problem of spurious correlation arises because in many instances, the predictor variable is stochastic and thus we need to forecast its time series. Several causal models have been developed to cope with this problem and the most

common is the regression model with autoregressive disturbances.

The estimation of the causal effect arises also in the case of random experimentation. The central idea of an ideal randomized experiment is that the causal effect can be measured by randomly selecting observations from a population and then randomly giving some of the observations a treatment, the causal effect of which researchers then investigate. If the treatment is assigned at random then the treatment level is distributed independently of any of the other determinants of the outcome, thereby eliminating the possibility of omitted variable bias. The causal effect on Y of treatment level X is a difference in expected values and thus is an unknown characteristic of a population. One way to measure the causal effect is to use data from a randomized control experiment. Because the treatment is randomly assigned, the causal effect can be estimated by the difference in the sample average outcomes between the treatment and control groups.

Despite the advantages of randomized controlled experiments, their application to economics faces severe hurdles, including ethical concerns and cost. The insights of experimental methods can, however, be applied to quasi experiments that provide ecometricians with a way to think about how to acquire new data sets, how to manipulate instrumental variables in their analysis, and how to evaluate the plausibility of the exogeneity assumptions that underlie Ordinary Least Squares (OLS) and instrumental variables estimation. In a quasi-experiment technique there are special circumstances that make it seem "as if" randomization has occurred. In quasi experiments, the causal effect can be estimated using a differences-in-differences estimator, possibly augmented with additional regressors; if the "as if" randomization only partly influences the treatment, then instrumental variables regression can be used instead. An important threat confronting quasi experiments is that sometimes the "as if" randomization is not really random, so the treatment (or the instrumental variable) is correlated with omitted variables and the resulting estimator of the causal effect is biased.

The issue of causality is very important in economic and social analysis but unfortunately not all analysts give the same meaning to this word. In discussing causal links, many economists emphasize the relevance of a sound economic theory in deriving causal propositions and they argue that caution should be applied in the inferences derived from the analysis.

SEE ALSO *Instrumental Variables Regression; Natural Experiments; Reflection Problem; Regression; Seemingly Unrelated Regressions; Selection Bias; Simultaneous Equation Bias*

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Persefoni Tsaliki

CAYTON, HORACE

SEE *Poverty, Urban.*

CENSORING, LEFT AND RIGHT

Censoring occurs when values of a variable within a certain range are unobserved, but it is known that the variable falls within this range. This differs from *truncation*, where values of a variable within a certain range are unobserved and it is unknown when the variable falls within this range. Both phenomena represent a loss of information, but the loss is less with censoring than with truncation. The two are sometimes confused in the literature; some examples are given in Léopold Simar and Paul Wilson (2007). George Maddala (1983) and Takeshi Amemiya (1984) list a number of empirical applications where censoring occurs.

Consider a sample of n draws Y_i, $i = 1 \ldots, n$ from a distribution function $F(y) = P(Y \leq y)$. If the sample is left-censored at c_1, then the values Y_i are not observed; instead, values Y_i^* are observed, where $Y_i^* = Y_i$ if $Y_i > c_1$ and $Y_i^* = c_1$ otherwise. For the cases where $Y_i^* = c_1$, all that is known about the underlying corresponding values Y_i is that they are less than or equal to c_1. Alternatively, if the sample is right-censored at c_2, then values Y_i^* are observed, where $Y_i^* = Y_i$ if $Y_i < c_2$, and $Y_i^* = c_2$ otherwise. In this scenario, for the cases where $Y_i^* = c_2$, all that is known about the Y_i is that they are greater than or equal to c_2. Samples can also be both left- and right-censored.

In models of duration, right-censoring often occurs, but left-censoring can also occur. For example, if agents are observed in some state (e.g., unemployment, in the case of individuals, or solvency, in the case of firms) until either they are observed to exit the state or until the period of observation ends, then some agents may still be in the

given state at the end of the observation window. Observations on these agents will be right-censored. Similarly, at the beginning of the study, some (perhaps all) agents are observed to be already in the state of interest; for any agents whose time of entry into the state is unknown, their duration in the given state is left-censored (and perhaps also right-censored).

To illustrate censoring in a regression context, suppose

$$Y_i = \beta_1 + \beta_2 X_i + \varepsilon_i \qquad (1)$$

where $E(\varepsilon_i) = 0$. If Y_i is censored, then one must estimate the model

$$Y_i^* = \beta_1 + \beta_2 X_i + \varepsilon_i^* \qquad (2)$$

after replacing Y_i in (1) with Y_i^*, which necessarily results in a new error term in (2). Unless the censoring occurs in the extreme tails of the distribution of Y, ordinary least squares (OLS) estimation of the coefficients in (2) will yield biased and inconsistent estimates since OLS does not account for the censoring.

Censored regression models are typically estimated by the maximum likelihood method. If the errors in model (1) are assumed normally distributed with mean 0 and variance σ^2, then in the case of left-censoring at c_1 the likelihood function is given by

$$LF = \prod_{i|Yi^*=c1} \frac{1}{\sigma} \Phi\left(\sigma^{-1}(c_1 - \beta_1 - \beta_2 X_i)\right)$$

$$\prod_{i|Yi^*>c1} \frac{1}{\sigma} \varphi\left(\sigma^{-1}(Y_i^* - \beta_1 - \beta_2 X_i)\right) \qquad (3)$$

where ψ and Φ denote the standard normal density and distribution functions, respectively. This model was first proposed by James Tobin (1958), and is sometimes called the *tobit model*. The first product in (3) gives, for each observed value Y_i^* equal to c_1, the probability of obtaining a draw Y_i from $F(y)$ less than c_1.

The models presented above potentially suffer from several problems. Heteroskedasticity in the error terms can lead to inconsistent estimation. D. Petersen and Donald Waldman (1981) proposed modifications of the tobit-type models involving specification of particular models for the error variances. John Cragg (1971) proposed a generalized version of the tobit model that allows the probability of censoring to be independent of the regression model for the uncensored data. Perhaps the most vexing problem is the requirement of a distributional assumption for the errors in (2). It is straightforward to assume distributions other than the normal distribution and then work out the resulting likelihood functions, but rather more difficult to avoid such assumptions altogether by using semi- or nonparametric methods. Adrian Pagan and Aman Ullah (1999) discuss several proposals, but these involve significant increases in computational burden or data requirements.

SEE ALSO *Censoring, Sample; Heckman Selection Correction Procedure; Heteroskedasticity; Logistic Regression; Probabilistic Regression; Properties of Estimators (Asymptotic and Exact)*

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Paul W. Wilson

CENSORING, SAMPLE

In order to define censoring in sample data, researchers first distinguish between latent data, the data that are hidden from the observer, and observed data, which are their measured counterparts. The latent data are modified between the original data creation and the observation by the analyst. Censoring occurs when certain values in the latent data are transformed so that their identities in the original data are masked or hidden from the observer.

A natural, familiar case is institutional censoring. Certain government statistics, such as income data on individuals and line of business data on firms, are censored to mask the identities of the persons or businesses. Thus income might be reported not as their original values, but only as being in a certain bracket. Censoring also occurs naturally in the way that certain data are observed. A leading example is the observations on durations in medical statistics. Observed data on the longevity after the

surgery of heart transplant patients, or the length of survival after onset of a disease, are naturally censored if the individual leaves the observation setting before the transition takes place. Thus the hospital may at some point lose contact with the heart transplant patient. The observation consists of the knowledge that the patient was still alive at the time of his or her exit from the study, but not how long he or she survived. In another familiar case, the true levels of demand for sporting and entertainment events are not revealed by ticket sales because the venue may sell out. The observed reflection of the demand is only ticket sales, limited by the capacity of the venue. Some economic phenomena, known as corner solutions, also lead to censoring when the observed counterpart to a variable of interest has a boundary value. Thus the amount of insurance an individual desires may be censored at zero. The amount of investment that a business undertakes might be recorded as zero if the assets of the business are allowed to depreciate, such that the true investment is actually negative.

IMPLICATIONS FOR MODELING

Models of statistical phenomena usually describe relationships between, or co-movements of, variables. Censoring interferes with this sort of modeling. (See Greene 2003 and Maddala 1983 for analysis and extensions.) Suppose that the relationship occurs between the latent variables of interest. If a variable x* is expected to explain the movement of variable y, and x* is censored to reveal x, then the analyst will measure movements in y that are associated with movements in x* when x does not change. In the opposite case, when it is y* that is censored and x that is not, the analyst will observe movement in x that should be associated with movement in y, but is not. Either case leads to a distortion in the measured relationship between a censored variable and an uncensored one. Contemporary model builders accommodate this type of distortion by building specific models for the censoring process along with the relationship of interest. Controversy arises over the many assumptions that must be made in order to make reasonable analysis feasible. Ultimately, the estimated relationship, such as that between prices and ticket sales for sporting events, is also a function about what is assumed about the underlying process whereby true underlying data are translated into observed, censored data, for example, how true demand is translated into ticket sales.

SEE ALSO *Censoring, Left and Right*

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William Greene

CENSORSHIP

Censorship—or prior restraint—is the halting of a message by the government before the message is uttered. In the United States it has been called the "most serious, least tolerable" infringement of free speech because it halts speech before it can reach the marketplace of ideas (*Nebraska Press Association v. Stuart*, 1976). That is, the speech is not subject to discussion, debate, or rebuttal because it is stifled before such opportunities can be pursued. The word *censorship* has been applied to a wide variety of activities—including newspapers deciding not to publish controversial cartoons, department stores refusing to sell certain magazines, or private organizations firing newsletter editors because of the articles they published. None of these examples constitute censorship, however, because they do not involve government action.

Some governments defend control over expression on the grounds that full debate, particularly of governmental actions, is risky, in that it can undermine the government or be detrimental to national security. Even governments that adhere to doctrines prohibiting prior restraint, however, recognize that not all speech is allowed in all circumstances. Certain kinds of speech, such as that which might harm national security, cause a violent breach of the peace, or tempt a person into illegal conduct, can be restrained by the government. In the United States, recognition of the right to impose censorship in exceptional situations was established in the 1931 case of *Near v. Minnesota*, and has been reaffirmed in subsequent cases. For example, justices on the U.S. Supreme Court have noted that words that are likely to cause "direct, immediate and irreparable" harm to the country may be censored (*New York Times Co. v. United States*, 1971).

Governments that guarantee expressive rights without prior restraint do so generally on the basis that robust, open debate—even when expression is obnoxious or controversial—is the better avenue for decision-making.

Some confusion over the reach of the prior restraint doctrine has emerged because of governmental control over broadcasting, particularly in the United States and Canada. Broadcasting is regulated by the Federal Communications Commission in the United States, and by the Canadian Radio-Television and Telecommunications Commission in Canada. Neither agency has direct control over the content of broadcasting, but each

provides a mechanism through which broadcasters make their messages available to listeners and viewers through a system of licensing. Such governmental regulation in both the United States and Canada has come to be known as the trusteeship model. The model is based on the rationale that the airwaves constitute a natural resource and, as such, belong to the citizenry. Because broadcasting's electronic spectrum is limited, there must be, therefore, some mechanism for picking and choosing among potential broadcasters. Broadcasters, then, are acting as trustees for the public in their use of the airwaves. Both Canada's Broadcasting Act of 1991 and the United States' Telecommunications Act of 1996, which amended the Communications Act of 1934, stipulate that individual broadcasters maintain control over the content of their broadcasts, but also prohibit certain kinds of communication, such as indecent or obscene speech.

SEE ALSO *Bill of Rights, U.S.; Civil Liberties; Freedom; Journalism; Liberty; McCarthyism; Media; Oppositionality, Schooling; Repression; Repressive Tolerance; Taboos; Tolerance, Political*

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W. Wat Hopkins

CENSUS

A census is a periodic, systematic enumeration of a population. Census-taking activities that counted at least certain segments of the population, such as those expected to be available for military service or to pay taxes, have been documented from ancient times. Modern censuses, broader in scope and content, are taken in many countries and gather statistical data that are used for myriad purposes.

Population counts were made in ancient Babylonia, Egypt, China, and India, some before 2000 or even 3000 BCE. Enumerations occurred in ancient Greece, and a comprehensive census was taken by the ancient Romans. Accounts of enumeration activities, largely to determine numbers of men available for military purposes, are included in the Old Testament. In the New Testament, the Roman census is central to the nativity story; it is said to be occurring at the time of the birth of Jesus Christ, necessitating that people travel to be properly counted and taxed.

During the Middle Ages, censuses occurred periodically, including those in Japan, France, and Italy. The *Domesday Book*, compiled during the eleventh century for economic purposes under King William I (c. 1028–1087), provided a detailed "description of England." Later enumerations occurred after the plague swept through the population. During the eighteenth and nineteenth centuries, census efforts were undertaken in various countries around the globe. The first census in North America was conducted in 1666 in New France (Canada). Censuses were taken in Virginia and in most of the British territories before the Revolutionary War (1775–1783). Censuses are now routine in nations worldwide.

The U.S. decennial census, first taken in 1790, is the longest-running periodic census. It is required by Article 1, Section 2 of the Constitution for the primary purpose of reapportionment of the U.S. House of Representatives (i.e., determining the number of seats to which each state is entitled). Census data are also used in redistricting, the redrawing of political districts after reapportionment. More than five hundred other uses of census data have been mandated by federal laws.

Modern census data have numerous government, demographic, social, and economic uses. These uses include marketing research, strategic and capital planning, community advocacy, funding and resource allocation, and disaster relief. Census data are also widely used in academic, government, and genealogical research. Australian census data were even used to connect cases of maternal rubella (German measles) during pregnancy with deafness in children.

Census use, language, and content, however, have controversial implications. Censuses routinely track and quantify diversity by examining social demographics such as race and ethnicity, age, sex, class, disabilities, living arrangements, and family composition. Census "head of household" designations have been challenged as reflecting and perpetuating patriarchal patterns of power and authority implied in such terminology. Racial and ethnicity categorizations have proven contentious and continue to evolve, as do social constructions of those concepts. The analysis of same-sex couples has received increasing attention as well. When the 2001 census in England and Wales added a question on religion, 390,000 respondents recorded "Jedi" (the belief system featured in the popular *Star Wars* science fiction movies) as their religious preference, having been urged to do so by an Internet campaign. The campaign apparently had the unintended positive effect of encouraging people in their late teens and early

twenties to complete their census forms. No census manages to count every member of the population. Certain categories of people, such as immigrants and the homeless, are the most likely to be missed and, therefore, undercounted and potentially underserved.

Some censuses, such as colonial censuses in Africa, have also raised concerns regarding motive, and some censuses have even involved human rights abuses of vulnerable subpopulations, such as the forced migrations of Native Americans in the nineteenth century. These abuses have been particularly evident during times of war. After the 1941 attack on Pearl Harbor, U.S. census data was used by the War Department (now the Department of Defense) in the identification and relocation of Japanese Americans to detention camps. Census data from Germany and occupied regions was central to furthering Nazi interests before and during World War II (1939–1945). It was used in propaganda, in the identification of Aryans and non-Aryans, in the extermination of Jews and others, and in advancing the regime's military goals.

The United Nations Statistics Division, through the World Population and Housing Census Program, has been active in supporting national census-taking worldwide, including the development of census methodology, the provision of technical assistance in conducting censuses, and the dissemination of census data. As census technology, techniques, procedures, research, and guidance become increasingly refined, awareness of various issues is heightened and they can be better addressed.

SEE ALSO *Aryans; Data; Data, Pseudopanel; Demography; Ethnicity; Human Rights; Measurement; Native Americans; Nazism; Population Growth; Population Studies; Public Health; Racial Classification; Religion; Survey*

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Kathy S. Stolley

CENTER FOR POLITICAL STUDIES

SEE *Pollsters.*

CENTER-PERIPHERY

SEE *Dependency Theory.*

CENTRAL BANKS

Central banks came into being in Europe in the late seventeenth century (Sweden in 1668, England in 1694) as government sponsored banks that were either state-owned (Swedish Riksbank) or privately owned (Bank of England). Their initial functions were basic in nature: giving financial support to the state in return for legislative advantages and monopoly power in the banking business. Central banks were also established to help centralize and standardize payments systems in countries such as Italy, Germany, and Switzerland, and, in Austria in 1816, to restore the value of the currency after government overspending during the Napoleonic wars. Regardless of the

initial functions assigned to central banks, they slowly evolved into bankers' banks—in addition to being the government's bank—by becoming the main reserves depository institutions for the banking system.

Theories on central banking did not emerge until the late nineteenth century, when it was recognized that discretionary monetary policy had macroeconomic consequences for domestic economic activity as well as international trade balances, especially with regard to exchange rate policies under the gold standard, which was a commodity-money system since the currency was backed by gold reserves at the central bank (and the Bretton Woods system in the twentieth century, under which the U.S. dollar replaced gold as the international reserve currency). One of the early analysts of central banking, Walter Bagehot (1826–1877), founder of *The Economist* magazine, argued in his famous *Lombard Street* (1873) that central bankers are incapable of thinking theoretically about the daily transactions they engage in.

THEORY

Central banks play a crucial role in macroeconomic policy by acting as a lender of last resort to the banking system and by regulating and supervising the financial system. Policy priorities and the emphases of policies, however, differ depending on the theoretical framework from which central bank economists draw their policy inspiration.

Mainstream Approach The mainstream (neoclassical) approach argues that central banks should focus on price stability through money-supply targeting or inflation targeting. According to the logic of this argument, money is neutral in the long run; therefore any increase in the quantity of money would only lead to inflation in the long run. The mainstream approach recommends that the central bank be completely independent from the fiscal authority to prevent monetary expansions by irresponsible governments. Instead, the central bank is commissioned to expand the money supply steadily at a pre-announced rate (a monetary rule). This approach relies on the assumption that the central bank can actually control the quantity of money (verticalist or exogenous money approach) through the three traditional monetary tools: required reserve ration, discount rate, and open market operations. Hence the central bank can increase the quantity of money by decreasing the required reserve ratio, decreasing the discount rate, or buying bonds; and it can decrease the money supply by doing the opposite. The neoclassical view holds therefore that the quantity of money is exogenously determined by the central bank, whereas the interest rate is an endogenous variable determined by the interaction between money supply and money demand. This neoclassical model came under attack during the Great Depression by Cambridge University economist John Maynard Keynes, and later by the followers of the Keynesian revolution.

Post-Keynesian Approach The Post Keynesian approach, by contrast, argues that the money supply is an endogenous process over which the central bank has no control. The quantity of money is driven by the demand for credit by the private sector. The demand for credit is systematically accommodated by profit-seeking banks regardless of the required reserves available to them (horizontalist approach). In a fractional reserve banking system, financial innovation is the key to a successful banking operation. Banks usually extend credit to creditworthy customers, then worry about meeting their reserve requirements. Reserve requirements can be met by borrowing from domestic or foreign banks, by selling financial assets, signing repurchasing agreements with other financial institutions, shifting checking account balances to low-reserve requirement savings accounts, and, as a last resort, borrowing from the central bank (the lender of last resort). Post-Keynesian economists argue that the central bank has no control over an expanding economy, as it is the demand side that is pulling reserves from the central bank, with the latter being compelled to accommodate the market or else risk a financial crisis. For instance, a rapidly expanding economy requires a credit expansion by the entire banking system; the latter will face an inevitable shortage of reserves, thus driving up short-term interest rates above the central bank's target rate. The central bank must therefore intervene by providing liquidity to the market to prevent financial instability due to rising interest rates. The Post-Keynesian approach holds that the central bank's policy target cannot be the quantity of money, but rather the short-term interest rate that serves as a benchmark for the entire economy. Hence the interest rate is set exogenously while the quantity of money is an endogenous phenomenon.

Major financial crises have been prevented through central bank intervention as a lender of last resort, as for example after the September 11, 2001, attacks in the United States. In anticipation of a panic after the reopening of financial markets, the Federal Reserve Bank in an emergency meeting lowered its short-term interest rate target by fifty basis points; but most important, it snapped up all government securities offered by dealers, thus pumping up a record sum of $70.2 billion on September 13, 2001. As Paul Davidson notes in his 2002 book, the liquidity injection served not only to prevent a bond-market crash but also to reinstate positive expectations about the stability of the financial system.

Central bank leaders also play a crucial role in the formation of market expectations. Financial investors pay close attention to statements made by central bank officials because they know that central bankers have access to more accurate economic information and unpublished economic indicators, in addition to being in charge of key interest rates that act as benchmarks for the rest of the economy. If, for instance, investors detect a signal from the central bankers suggesting that the central bank is worried about inflation acceleration, and that the central bank is about to raise interest rates, then one would expect bond prices to go up, thus encouraging bond investors to buy more bonds and sell them at a later date; the reverse would ensue if investors were led to believe that the central bank was about to lower interest rates.

CENTRAL BANK INDEPENDENCE

The advocates of central bank independence argue that politicians cannot be trusted to make the tough political decisions as they tend to give in to political pressures, thus only an independent central bank can take action without fear of political retaliation. An independent central bank is expected to slow down the economy by raising interest rates when the unemployment rate drops low. This neoclassical argument rests on the idea that there is a trade off between unemployment and inflation, and that low unemployment rates will inevitably lead to accelerating inflation.

In addition to improved credibility and transparency, central bank independence favors the implementation of monetary rules. This is based on the New Classical view that money is neutral and that monetary policy is ineffective. The Lucas policy ineffectiveness argument states that any anticipated monetary policy will not affect output (thus will not affect employment). The policy ineffectiveness argument does not hold in the case of long-term labor contracts because policymakers in this case can change their behavior (for instance, the central bank can cheat on the announced rate of growth of the money supply). Thus a systematic monetary policy can have real effects. Finn Kydland and Edward Prescott (1977) argue that private agents are rational and thus expect the central bank to reoptimize its (previously announced) policy in the future. In game theory terms, this can be illustrated in a noncooperative Stackelberg game in which the central bank is the leader (it has private information and could change its policy at almost any time) and the private agents are the followers. This will lead the economy to a time-consistent suboptimal (Nash) equilibrium in which the social welfare function is not optimal, even though both the leader and the followers have tried their best to maximize their own respective utilities. It is noteworthy that the concept of the monetary authorities' credibility is of critical importance to the dynamic game described above, if the central bank wishes to implement a monetary rule rather than discretionary monetary policy because of the repeated aspect of the game.

Between 1970 and 1982 New Classical economists demonstrated that anticipated monetary policy is ineffective because economic agents are rational. During that period they produced a substantial literature explaining business cycle fluctuations in terms of the rational expectations hypothesis and supply-side (mainly technological) shocks. The rational expectations hypothesis states that economic agents' subjective expectations concerning economic variables will coincide with the true or objective mathematical conditional expectations of those variables. This assumption should not, however, be considered as synonymous with perfect foresight. Rational expectations in the forward-looking approach (as opposed to the backward-looking approach of the adaptive expectations) imply that economic agents will use the publicly available information and will not systematically form wrong expectations. William Nordhaus used this approach to show that "a perfect democracy with retrospective evaluation of parties will make decisions against future generations" (1975, p. 187). Politicians can use an expansionist monetary policy during an electoral period in order to reduce unemployment and thereby collect more votes. Once reelected, the government can start fighting against the inflation caused by money expansion and therefore push unemployment probably above its initial level. Governments succeed in making use of this political business cycle because the public has a short memory and will not recognize the use of this policy during the next election. The political business cycle theory represents a major argument for central bank independence, meaning that an independent central bank is more likely to implement a noninflationary monetary policy that is consistent with the stability of the general level of prices. The empirical evidence, however, does not show any significant correlation between central bank independence and inflation. In fact, one of the key variables used to measure the central bank independence index is inflation. This approach tends to reduce inflation to expansionary monetary policy and does not take into account other factors such as price-setting power and external shocks in international commodity markets.

DEVELOPING COUNTRIES

Central banks in developing countries face considerable challenges. The conventional wisdom argues that developing countries must maintain a steady inflow of financial capital to finance their savings gap and to fuel the process of economic development. To ensure such conditions, the central bank has to keep inflation low and stable and the

exchange rate pegged to a basket of hard currencies, and in some cases to a single hard currency such as the U.S. dollar or the euro. Such strategies entail keeping interest rates high and the value of the currency artificially overvalued—thus the need to accumulate hard currency reserves to defend the value of the currency. Most developing countries, however, run trade deficits that must be financed through borrowing in hard currencies, which accounts for most developing countries' recurring external debt problem. In order to prevent financial crisis, the central bank is then obliged to cater to the needs of financial markets by keeping interest rates artificially high, which helps create an inadequate climate for domestic investment. This neoliberal view has dominated central banking in developing countries since the 1980s. The primacy of the low-inflation goal over other macroeconomic goals has crippled many economies in the developing world. As Gerald Epstein (2005) argues, this approach stands in sharp contrast to what central banks have historically done in both developed and developing countries, namely financing government spending, promoting full employment, managing exchange rates, enforcing capital controls, and allocating credit to sectors of special social need such as health care, education, and housing.

WHAT CENTRAL BANKS CAN ACHIEVE

Post Keynesians argue that the central bank can help coordinate the achievement of full employment in both developed and developing countries. Because the government is the monopoly-issuer of its sovereign currency, it follows that there can be no financial constraint on government spending. Money is injected into the system through government spending, and is withdrawn from it through taxation or bond sales. Bonds are not issued to "finance" government deficits, but rather to give the private sector an interest-bearing alternative to cash. The government accepts its own money in payment of tax liabilities, hence creating a demand for the sovereign currency. The value of money then depends on the government's (and the central bank's) capability to manage the quantity of money and the level of interest rates in the economy. From this perspective, the government can finance a full employment program by offering to hire anyone at a fixed, socially established living wage to perform socially desirable tasks that the private sector would not otherwise perform. The role of the central bank becomes crucial in financing the program, managing the national debt, and adopting a flexible exchange rate regime. As L. Randall Wray (1998) observes, the central bank independence mantra becomes meaningless if one accepts the necessity of policy coordination between the treasury and the central bank in order to accommodate the economy.

SEE ALSO *Business Cycles, Real; Economic Crises; Economics, Keynesian; Economics, Neoclassical; Economics, New Classical; Economics, Post Keynesian; Expectations, Rational; Federal Reserve System, U.S.; Financial Markets; Full Employment; Game Theory; Inflation; Interest Rates; Macroeconomics; Monetarism; Monetary Base; Monetary Theory; Money; Nash Equilibrium; Policy, Monetary; Unemployment*

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Fadhel Kaboub

CENTRAL INTELLIGENCE AGENCY, U.S.

As a U.S. senator (D-MO), Harry S. Truman was well aware of the significant loss in lives and matériel that resulted from America's inadequate intelligence prior to the Japanese attack on Pearl Harbor in 1941. During his

three-month tenure as vice president and, upon becoming president when Franklin D. Roosevelt died in April 1945, Truman experienced further dissatisfaction with the lack of coordination among U.S. intelligence units throughout the remaining months of World War II. After the war, the avoidance of a future Pearl Harbor—that is, achieving reliable warning, the premier objective of intelligence—became a high priority for the Truman administration as it pursued the establishment of a modern intelligence system. Lawmakers on Capitol Hill also evoked the memory of Pearl Harbor as they debated how to prevent surprise attacks against the United States.

The Truman administration soon faced another reason for making improvements in U.S. intelligence: a sense in 1946 that the Soviet Union had emerged on the world stage as a formidable and hostile adversary. War-weary American soldiers had barely returned home from Europe and Asia when Soviet-phobia began to grip Washington, D.C., stirred by Winston Churchill's "Iron Curtain" speech in 1946 and waves of vitriolic anti-West propaganda emanating from Moscow. As intelligence scholar Rhodri Jeffreys-Jones stated in *Eternal Vigilance* (1997), "past weaknesses" like Pearl Harbor served as part of the backdrop for the debate about reforming U.S. intelligence in 1946–1947, but more important were "present imperatives" (p. 23)—above all, the rise of Soviet power in the world. Just as the United States could have benefited greatly from having better indications and warning (I&W, in the intelligence acronym) about the movements of Japanese warships in 1941, so five years later did leaders in Washington seek reliable intelligence on the military capabilities and intentions of the Union of Soviet Socialist Republics (USSR).

THE CENTRAL INTELLIGENCE GROUP

One of Truman's top aides, Clark Clifford, recalled in his memoir *Counsel to the President* (1991): "By early 1946, President Truman was becoming increasingly annoyed by the flood of conflicting and uncoordinated intelligence reports flowing haphazardly across his desk" (p. 166). On January 22, 1946, he signed an executive order that created a Director of Central Intelligence (DCI) and a Central Intelligence Group (CIG), with the express purpose of achieving a "correlation and evaluation of intelligence relating to the national security." The order allowed the CIG to "centralize" research and analysis and "coordinate all foreign intelligence activities." Truman's original intent was, as he told biographer Merle Miller in the book *Plain Speaking* (1973), to avoid "having to look through a bunch of papers two feet high" and instead receive information that was "coordinated so that the President could arrive at the facts" (p. 420). In twenty-first-century terminology, he longed for the "all-source fusion" of intelligence or, in a military term, intelligence jointness.

Yet the president never saw his hope fulfilled. From the beginning the CIG proved weak. One of its primary tasks was to put together the *Daily Summary*, the precursor to today's *President's Daily Brief*. Yet, intelligence units in the various departments balked at handing over information to the CIG. Secretary of State James F. Byrnes, for example, refused to pass along cables from his staff overseas, maintaining that he would tell the president directly what he needed to know. In response to this intransigence, Truman weighed in on behalf of the CIG and ordered Byrnes to cooperate in the preparation of the *Daily Summary*. Nevertheless, departments remained resentful and often resistant to the concept of intelligence sharing. White House support for the CIG notwithstanding, putting together the *Daily Summary* quickly became an exercise in futility.

The administration turned toward the idea of creating a stronger organization: a Central Intelligence Agency, or CIA. It soon became clear to President Truman, however, that the acquisition of a truly centralized intelligence system would come at too steep a price, in light of an even more urgent goal the White House sought to achieve: military consolidation. World War II had been rife with conflict between the services, often interrupting the pursuit of battlefield objectives. President aide Clark Clifford reflected in his memoir on how the administration had to play down intelligence reform in favor of settling the "first order of business—the war between the Army and the Navy." The "first priority," he continued, "was still to get the squabbling military services together behind a unification bill."

The creation of a Department of Defense, replacing the old Department of War, would provide a means for drawing the services closer together. The president did not wish to complicate the fight for unification by seeking, at the same time, intelligence consolidation that was bound to roil the military services as a threat to their own confederal and parochial approaches to intelligence. The one point that all the military services, as well as the Department of State and the Federal Bureau of Investigation (FBI), agreed on was that they did not want a strong central agency controlling their intelligence collection programs.

As a result, the Truman administration retreated from its goal of intelligence consolidation. The diluted language of the National Security Act of 1947 provided for only a weak DCI and a CIA that was little different from the failed CIG. As Clifford conceded, the effort fell "far short of our original intent" (p. 169). The landmark National Security Act of 1947 would mainly address the issue of military unification; intelligence was only a secondary

consideration. The statute created a Central Intelligence Agency, but left the details vague on just how the new independent agency was supposed to carry out its charge to "correlate," "evaluate," and "disseminate" information to policymakers in light of the powerful grasp that the policy departments (like Defense and State) retained over their individual intelligence units. The law represented a delicate attempt to create a CIA that, as historian Michael Warner wrote in his study *Central Intelligence* (2001), would have to "steer between the two poles of centralization and departmental autonomy." As a result, the CIA "never quite became the integrator of U.S. intelligence that its Presidential and congressional parents had envisioned" (pp. 45, 47).

The rhetoric of "intelligence coordination" expressed in the law sounded good; but the reality of bringing coordination about was a different matter altogether. Genuine integration of America's intelligence agencies required a strong DCI, leading a truly central intelligence agency with budget and appointment powers over all the other secret agencies. In 1952 this cluster of secret agencies became known by the misnomer "the intelligence community." In reality, they remained separated organizations ("stovepiped," in intelligence slang) with their own powerful program directors ("gorillas") and allegiance to their own department secretaries. The DCI's authority as spelled out in the National Security Act of 1947 was feeble, leaving the nation's spymaster in a position of having to cajole, persuade, plead, even beg for coordination, rather than order it through the threat of budget and personnel retaliation against those "gorillas in the stovepipes" who failed to comply with the DCI's directives.

While the DCI more or less controlled the CIA and had a main office there, the other fourteen agencies (sixteen in the mid-2000s) enjoyed considerable autonomy. The Director was unable even to determine how the nation's intelligence budget of some $44 billion would be spent each year. In addition to the CIA, the other agencies include the National Security Agency (NSA); the National Geospatial-Intelligence Agency (NGA); the National Reconnaissance Organization (NRO); the Defense Intelligence Agency (DIA); the State Department's Intelligence and Research (INR); intelligence units in the Departments of Energy, Homeland Security, and Treasury; FBI intelligence; the Drug Enforcement Administration; the Coast Guard; and intelligence units within each of the military services (army, navy, air force, marines). Even twenty years after the creation of the CIA, one of its deputy directors, Adm. Rufus Taylor (who served from 1966 to 1969), referred to the various intelligence agencies as little more than a tribal federation.

An important part of the CIA's history since the Truman administration has been a series of efforts to overcome the flaw in its original design—that is, to strengthen the DCI and the CIA in their roles as collator and disseminator of information from throughout the broad intelligence community. The steam went out of each of these efforts after they confronted resistance from the various agency "gorillas" (the chiefs of each of the agencies) and the department secretaries, especially the secretary of defense in alliance with the congressional Armed Services Committees. "For the duration of the Cold War, the White House kept nudging successive Directors of Central Intelligence to do more to lead the Intelligence Community," Warner concluded. But a towering obstacle persisted: "Cabinet-level officials . . . saw no reason to cede power to a DCI" (p. 49).

THE PURPOSE OF THE CIA

The precursor to the CIA during World War II was the Office of Strategic Services (OSS). During that war, the OSS provided covert assistance to resistance movements in Europe and Asia, and became adept at providing research relevant to the war effort and on occasion carried out derring-do secret operations behind enemy lines. Its most long-lasting effect, though, was to serve as a training ground for individuals who would help create and lead the CIA once it was created in 1947. The OSS was disbanded after the war, but many of its experienced personnel soon entered the new CIA, including future directors Allen Dulles, Richard Helms, and William Colby.

The CIA, an independent organization situated neither within the organizational framework of the Pentagon nor in any of the other cabinet departments, continued the kind of operations employed by the OSS during World War II—only now with a much more prominent position in the government and a new adversary: the communist nations of the world. "The Agency," as the CIA is called by its own personnel, has three primary missions: the collection and interpretation ("analysis") of information gathered from every corner of the globe; the protection of U.S. government secrets against hostile intelligence services and other spies ("counterintelligence"); and the clandestine manipulation of events in foreign lands on behalf of America's interests, through the use of propaganda, political activities, economic disruption, and paramilitary operations (collectively known as "covert action" or "special activities").

Intelligence Collection and Analysis The collection of intelligence relies on machines (satellites and reconnaissance airplanes, for example; so-called technical intelligence or "techint," in the professional acronym); on human means (classic espionage or human intelligence;

"humint"); and on the sifting of information available in the open literature (newspapers, public speeches, and the like; sometimes referred to as open-source intelligence or "osint"). Each method has its drawbacks. Photographs taken by satellites can be useful, but Al Qaeda and other contemporary terrorist organizations have become adept at hiding in caves in Southwest Asia, out of sight from the cameras. Moreover, the CIA lacks sufficient spy handlers ("operations officers") abroad with good foreign language skills to recruit local agents ("assets"), especially in places where the United States has never had much of a presence (such as in China and nations in the Middle East and Southwest Asia). As a result, the human intelligence flowing back to the CIA is insufficient.

Even if this humint problem were solved, the community faces another, equally serious human deficiency: analytic brain power. The CIA does not have enough talented information interpreters ("analysts") to lend insight to the fire hose of data that streams into its offices each day from overseas. On the eve of the second Persian Gulf War, for instance, the agency had few analysts fluent in Arabic. It is deficient, too, in the number of analysts who understand the history and culture of places like Iran and Pakistan that the United States largely ignored during its concentration on the Communist part of the world during the cold war.

Counterintelligence The CIA's counterintelligence mission received its greatest setback in the period from 1984 to 1996. During that time, a CIA officer by the name of Aldrich H. Ames secretly spied on his own organization for the Soviet Union. He identified for the Soviets over 200 CIA operations against the USSR and revealed the names of nine CIA agents in Moscow, all of whom were then executed by Soviet officials. The CIA's top counterintelligence challenge is to protect the agency's computers and other facilities from foreign "moles"—penetration agents engaged in treason against the United States on behalf of terrorist groups or other American adversaries.

Covert Action Covert action has been the most controversial of the CIA's missions. It may be defined as those activities carried out by the agency to secretly influence and manipulate events abroad. This approach is often referred to as the "Third Option"—in between, on the one hand, sending in the marines and, on the other hand, relying on the diplomatic corps to achieve America's goals. The use of military force is "noisy" and likely to draw a quick reaction from adversaries, as well as stir widespread debate at home; and diplomacy can be notoriously slow and often ineffectual. Thus, covert action has had a special appeal to some policy officials: with this tool, they can move rapidly and in relative quiet, avoiding lengthy public discussions over tactics and broader objectives (hence, the "quiet option" is another euphemism for covert action).

Covert action has often failed, as with the failed Bay of Pigs operation against Cuba in 1961 and the Iran-Contra scandal in 1986. The latter especially discredited covert action, because the Reagan administration carried out CIA paramilitary operations against Nicaragua despite vociferous congressional opposition. After the Iran-Contra episode, the budget for covert action plummeted to its lowest levels: less than 1 percent of the CIA's annual budget. It would take the terrorist attacks against the United States on September 11, 2001, to stimulate a renewed interest in this approach to foreign policy and funding for covert action began a rapid rise upward in the name of combating world terrorism. In 2001–2002, the use of CIA paramilitary operations against the Taliban regime in Afghanistan, in tandem with overt military operations by the indigenous Northern Alliance and U.S. bombing missions, opened a new chapter in America's reliance on covert action. Today the most lethal weapon of covert action is the Predator, a pilotless drone armed with Hellfire missiles.

While the CIA's secret propaganda operations against the Soviet Union and China during the cold war have been praised, the agency's operations in the developing world have been subjected to widespread criticism. The best known and most controversial example is Chile during the 1960s. In the Chilean presidential election of 1964, the CIA spent $3 million to blacken the reputation of Salvador Allende, the Socialist candidate with suspected ties to Moscow. On a per capita basis, this amount of money was equivalent to the secret expenditure of $60 million in a U.S. presidential election at the time, a staggering level of funding. The CIA managed to thwart Allende's election in 1964, but he persevered and in 1970 was elected president of Chile in a free and open election.

The CIA then turned to a range of propaganda and other covert actions designed to undermine his regime. The agency poured another $3 million worth of secret propaganda into the country between 1970 and 1973, in the form of press releases, radio commentary, films, pamphlets, posters, leaflets, direct mailings, paper streamers, and vivid wall paintings that conjured images of Communist tanks and firing squads that would supposedly soon become a part of life in Chile. Printing hundreds of thousands of copies, the CIA flooded the country (predominantly Catholic) with an anti-Communist pastoral letter written many years earlier by Pope Pius XI. The effect was to substantially weaken the Allende government.

Another well-known CIA covert action operation occurred in 1953, when the CIA joined British intelligence operatives in the overthrow of Mohammed

Mossadegh in Iran. In his place, the CIA installed a pro-West leader known as the shah of Iran, who provided the United States with loss-cost oil and a friendly government in the heart of the Middle East. The shah, though, lost the support of his people over time and was finally deposed by a revolution in 1979 that brought to power a fundamentalist Islamic regime in Iran.

The Special Case of Assassination Plots A special category within the domain of paramilitary operations is the assassination of foreign leaders. This option has gone by a number of euphemisms: "executive action," "terminate with extreme prejudice," and "neutralization." At one time during the cold war, proposals for assassination were screened by a special unit within the CIA called the "Health Alteration Committee."

Fidel Castro was America's prime target for assassination during the Kennedy administration. The agency emptied its medicine cabinet of drugs and poisons in various attempts to kill or debilitate the Cuban leader. Agency assets planned to dust his combat boots with depilatory powder, in hopes the chemical would enter his bloodstream through the soles of his feet and cause his charismatic beard to fall off. When this plot was abandoned (Castro's boots were not so accessible), other agents sought to inject his cigars with the hallucinogenic drug LSD, as well as with a deadly botulinum toxin. Again, the operations failed. Various other plots using guns failed as well, even though the CIA recruited the Mafia to assist in the assassination attempts inside Cuba. Another target of a CIA assassination plot was Patrice Lumumba of Congo, who was killed by a rival African faction just before the agency tried to poison him.

The most widely reported CIA operation to eliminate large numbers of lower-level officials from the scene arose in the context of the Vietnam War. Code-named the "Phoenix Program," the intention was to subdue the influence of the Communist Viet Cong (VC) in the South Vietnamese countryside. Some twenty thousand VC officials were killed as a result of this operation, though mostly in the context of military or paramilitary combat with South Vietnamese or U.S. troops.

In 1976 U.S. public revulsion toward the murder plots against foreign heads-of-state led to the signing of an executive order by President Gerald R. Ford prohibiting assassination as an instrument of U.S. foreign policy. The order, which states that "no person, employed by or acting on behalf of the United States Government, shall engage in, or conspire to engage in assassination," has been endorsed by every president since Ford. The executive order has been interpreted to have a wartime waiver, which allowed presidents to use assassination as an instrument of combat in Iraq and against Al Qaeda. Proponents of covert action argue that the defeat of such venal powers as the Communists during the cold war or terrorists today justifies the use of this method. Those taking a more ethical approach to foreign policy have objected, though, to the "anything goes" approach to a national security.

The Church Committee Inquiry The assassination plots were uncovered in 1975–1976 by the Church Committee in the U.S. Senate, named after its chairman Senator Frank Church (D-ID). This investigative panel formed after reporting in the *New York Times* in late 1974 indicated that the CIA may have used its secret powers to spy on American citizens, in an operation known as CHAOS. Investigators discovered the *Times* was correct about the illegal opening of mail sent or received by some 1.5 million American citizens, but this was only part of the story. The Committee discovered as well that the CIA had engaged in drug experiments against unsuspecting subjects, two of whom died from the side effects; had manipulated elections even in democratic regimes like Chile; and had infiltrated religious, media, and academic organizations inside the United States.

In the aftermath of this inquiry, Congress established permanent intelligence oversight committees in the Senate and the House, and passed legislation to provide closer supervision by lawmakers over the secret agencies. The purpose was to establish safeguards to ensure that Congress would be in a position to halt abuses by the CIA and America's other intelligence organizations. This is not to say that the Church Committee created a foolproof system of intelligence accountability. The Iran-Contra affair of 1986–1987 served as a reminder that even robust legislative safeguards are no guarantee against the misuse of power by determined conspirators in the executive branch. That scandal led to a further tightening of oversight procedures, including the creation of a CIA Office of Inspector General directly answerable to Congress.

The fear in 1975, when the Church Committee revealed the extent of intelligence abuses, was that the CIA and its companion agencies might begin to function as a secret government, subject to little review or restraint. Certainly, the Committee's findings suggested this had become the case. America had to relearn anew an old lesson well understood by the founding fathers, namely, that power can have a corrupting influence on those who hold it—the central idea that guided the writing of the Constitution in 1789. With the safeguards established by the members of the Church Committee and other key officeholders in 1976, citizens of the United States are far less likely to suffer abuse at the hands of the secret agencies than during the earlier years of benign neglect when the intelligence organizations were relatively free of supervision.

Some have faulted this increased accountability as an impediment to the conduct of swift and flexible intelligence operations necessary to defeat America's enemies abroad. The debate continues over the proper balance between accountability and efficiency—whether or not to have meaningful checks and balances in the domain of intelligence operations.

9/11 AND THE NEW INTELLIGENCE DEBATES

In the aftermath of the 9/11 terrorist attacks and mistakes about the existence of weapons of mass destruction (WMDs) in Iraq, official inquiries into the performance of the intelligence community pointed to the need for a strengthened DCI who could improve the sharing of information among the CIA and the other secret agencies. In July 2004, the 9/11 or Kean Commission (after its chair, Thomas H. Kean, a Republican former governor of New Jersey) advocated, along with a series of other reform proposals, the creation of a director of national intelligence, or DNI, with full budget and appointment powers over the intelligence community. In December 2004, Congress passed an intelligence reform bill, known as the Intelligence Reform and Terrorism Prevention Act, which established the DNI office. The Department of Defense and its allies in Congress managed, however, to dilute and obfuscate the authorities of the new intelligence director. As a result, the DNI—just like the DCI before—has ambiguous authority over budgets and hiring for all sixteen agencies. Not even the shock of the 9/11 and WMD intelligence failures have been enough to bring about the consolidation of the intelligence community.

Even a strong DNI with full authority over intelligence budgets and a mandate to bring about better information-sharing would not solve, in itself, America's intelligence weaknesses. Reformers agree that other necessary changes included the development of better human intelligence in places like the Middle East and Southwest Asia (so-called humint—old fashioned espionage); improved foreign language skills and knowledge of foreign countries among collectors and analysts; better data-sifting to sort through the flood of data that pours into Washington from collectors around the world, separating the important "signals" from the large mass of "noise"; and fully integrated information technology, both horizontally throughout the federal government and vertically from Washington, D.C., down to state and local counterterrorism officials.

THE FUTURE OF THE CIA

The 9/11 attacks and subsequent investigations failed to produce reforms that would have fulfilled President Truman's hopes for a strong national intelligence chief. On the contrary, in a paradox the post-9/11 reforms have led to a diminution in the powers of the DNI and a decline in the coordinating role originally assigned to the CIA in 1947. The CIA is no longer the central focus in America's intelligence establishment; it has become just one of the nation's sixteen secret agencies. Even its authority over humint, once full, is now shared with the Department of Defense. Moreover, unlike the DCI, the DNI is not located at CIA headquarters, but rather in a building at Bolling Air Force Base, near National Airport, cut off from the CIA's experienced analytic and report-production facilities—indeed without any infrastructure beyond a small support staff. The DNI is in a weak position for trying to resolve the fissile tendencies of the intelligence "community." The CIA has been weakened, too, by its 9/11 and WMD failures.

During the second Bush administration, the United States found itself involved simultaneously in three wars: in Afghanistan and Iraq, as well as against global terrorism. Yet its intelligence agencies continued to display the same attributes that so troubled President Truman in 1947. They had yet to acquire firm leadership from a strong director of national intelligence, and they continued to be plagued by an inability to work together in a cohesive manner. Even the modest centralization of intelligence provided by the CIA in earlier years was on the wane as the agency found itself no longer at the core of the intelligence establishment.

SEE ALSO *Allende, Salvador; Bay of Pigs; Fahrenheit 9/11; Intelligence; Lumumba, Patrice*

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Loch K. Johnson

CENTRAL LIMIT THEOREM

The central limit theorem (CLT) is a fundamental result from statistics. It states that the sum of a large number of independent identically distributed (iid) random variables will tend to be distributed according to the normal distribution. A first version of the CLT was proved by the English mathematician Abraham de Moivre (1667–1754). He showed how the normal distribution can be used to approximate the distribution of the number of heads that will result when a coin is tossed a large number of times.

The CLT is the cornerstone of most estimation and inference of statistical models, which in turn are widely used in empirical work in the social sciences. Statistical models involve unknown population parameters that are estimated from a sample. The estimators often take the form of sample averages. According to the CLT, the estimators will therefore be approximately normally distributed for a sufficiently large sample size. This result can be used to draw inference about the population parameters. One example of a statistical model used in social sciences is the linear regression model. Here, the CLT can be used to quantify whether a chosen set of variables explains the variation in a certain response variable.

THE THEOREM

Let $\{x_1, \ldots, x_n\}$ be a sample of n iid random variables with mean μ and variance σ^2. Consider the sum $S_n = x_1 + x_2 + \ldots + x_n$. One may easily check that the mean and standard deviation of S_n is $n\mu$ and $\sqrt{n\sigma}$. Normalize S_n as follows,

$$Z_n = \frac{S_n - n\mu}{\sqrt{n}\sigma}$$

such that Z_n has mean zero and standard deviation 1. The CLT then states that $Z_n \approx N(0,1)$ for n large enough. Formally, the above equation should be read as follows: For any $-\infty < z < +\infty$, $P(Z_n \leq z) \rightarrow \Phi(z)$ as $n \rightarrow \infty$, where $\Phi(\cdot)$ is the cumulative density function of the normal distribution.

A major drawback of the CLT is that it is silent about how large n should be before the quality of the approximation is good. This will depend on the distribution of the x_i's making up the sum.

APPLICATIONS

The CLT has a broad range of applications. Consider, for example, a binomial random variable S_n with parameters (n,p). This variable describes the number of heads in n tosses of a coin with probability $0 < p < 1$ of heads. Its distribution is given by

$$P(S_n = j) = \binom{n}{j} p^j (1-p)^{n-j},\ j = 0, 1, \ldots, n.$$

For n large, this distribution can be difficult to compute. Another way of representing S_n is as a sum of n iid Bernoulli random variables $\{x_1, \ldots, x_n\}$. That is, $S_n = x_1 + x_2 + \ldots + x_n$ where the distribution of x_i is $P(x_i = 1) = 1 - P(x_i = 0) = p$, $i = 1, \ldots, n$. So we can apply the CLT on S_n, which tells us that $S_n \approx N(np, np(1-p))$ for n large enough since $\mu = E[x_i] = p$ and $\sigma^2 = Var(x_i) = p(1-p)$. This result was first proved by de Moivre in 1733.

The most important use of the CLT is probably in drawing inference about population parameters in statistical models. Most estimators of parameters can be written as sums of the sample, and so the CLT can be used to obtain a measure of the precision of the estimator. In particular, it can be used to test hypotheses regarding the parameters. As a simple example, consider an iid sample $\{x_1, \ldots, x_n\}$with unknown population mean μ and variance σ^2. A simple estimator of the parameter μ is the sample average,

$$\bar{x} = \frac{x_1 + \ldots + x_n}{n} = \frac{1}{n} S_n.$$

We can now use the CLT to conclude that

$$\frac{\bar{x} - \mu}{\sigma\sqrt{n}} = \frac{S_n - n\mu}{\sqrt{n}\sigma} \approx N(0,1)$$

Since the variance is unknown, it needs to be estimated. This can be done using the sample variance,

$$\hat{\sigma}^2 = \frac{1}{n} \sum_{i=1}^{n} (x_i - \bar{x})^2.$$

One can now use the normal approximation for inferential purposes. For example, we can estimate the standard error of $\bar{x}$ as $\hat{\sigma} / \sqrt{n}$. Also, we know that $\bar{x} - 1.96\sigma / \sqrt{n} \leq \mu \leq \bar{x} + 1.96\sigma / \sqrt{n}$ with approximately 95 percent probability, where 1.96 is the 97.5th percentile of the normal distribution; one normally refers to this as the *confidence interval*. The CLT can furthermore be used to test specific hypotheses regarding μ.

SEE ALSO *Descriptive Statistics; Distribution, Normal; Law of Large Numbers; Variables, Random*

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Dennis Kristensen

CENTRAL TENDENCIES, MEASURES OF

The *mean*, the *median*, and the *mode* are measures of central tendency, used singly or jointly, to summarize information about a variable. Percentage frequency distributions and graphs may also be used, but measures of central tendency are more concise and provide a single "typical" or "average" score for the variable under consideration. They are easy to calculate and are readily understood by the public. Each of the three measures of central tendency has assets and liabilities. The combined use of all three measures provides information about the degree of symmetry in the distribution of the variable because in a normal (i.e., Gaussian) distribution, the mean, median, and mode will all be the same.

The mean is generally assumed to be the arithmetic mean or the average; it is calculated by summing the individual scores of the variable and dividing these by the total number of scores. The formula for the population mean is $\mu = \Sigma X_i / N$, where μ is the population mean, X_i is the score on the variable for the i^{th} subject, and N is the total number of subjects. The formula for the sample mean is $\bar{X} = \Sigma X_i / N$, where $\bar{X}$, sometimes referred to as *X-bar*, is the sample mean.

Although the problem of examining a set of observations and estimating an overall value was entertained as early as three centuries BCE by Babylonian astronomers (Plackett 1958), the arithmetic mean as a statistical concept did not appear until many centuries later. The term is first found in the mid-1690s in the writings of Edmund Halley (1656–1742), and it has been used to summarize observations of a variable since the time of Galileo (1564–1642). Carl Friedrich Gauss (1777–1855) may have been the first to show that lacking any other information about a variable's value for any one subject, the arithmetic mean represents the most probable value (Gauss [1809] 2004, p. 244).

The mean is an efficient description of the distribution of a variable's scores. For example, educators and students use the mean or grade point average (GPA) to describe academic achievement. Its primary limitation is that it works best when the variable it is describing is distributed normally. If there are outliers in the distribution—for example, one score or several scores lying outside the normal range—the mean will be skewed and may thus be misleading. The mean is heavily influenced by outlying values, and is thus not as robust as the median (see below). Second, the mean requires interval/ratio data, whereas the median can be used with both interval/ratio and ordinal data, and the mode can be used with nominal data.

The median, sometimes abbreviated *Md* or *Mdn*, is the halfway point or the midpoint score in a distribution of scores. Half of the scores are greater, and half the scores are less, than the median. The median is the score that divides the distribution exactly in half. If there is an odd number of scores, the median is the middle number; if there is an even number of scores, the median is the average of the two middle scores. The median is less likely to be influenced by extreme outliers, and is usually the preferred measure of central tendency for skewed data, such as income. The median has no special notation and is obtained in the same way for both a population and a sample.

The median gives a better description than the mean of a skewed variable. For example, if one is comparing the income in an area where there is only one person who is a billionaire and the bulk of the population lives in poverty, the median will more accurately reflect the central income of the population. The median can also be used when there are undetermined or infinite scores, making it impossible to determine a mean. The median also has limitations. It works best with small samples, or with large samples that are normally distributed. It is less efficient and more subject to sampling fluctuations than the mean. An early use in English of the statistical concept of median was Francis Galton's (1822–1911) observation that "the median … is the value which is exceeded by one-half of an infinitely large group, and which the other half falls short of" (1881, p. 245).

The mode is the score that occurs most frequently in a distribution. It has no special notation and is obtained in the same way for both a population and a sample. The mode has several advantages over the other measures of central tendency. First, it may be used with nominal data. Second, one can use the mode as a single number with discrete variables. Third, the mode is simple to calculate and present visually. Fourth, it provides a shape of the distribution as well as a measure of central tendency. Unlike the mean and the median, a distribution can have more

than one mode. A single score that occurs most frequently is the modal score. If there are two scores that occur the most frequently, the distribution is referred to as *bimodal*. If there are multiple scores that occur at the same high frequency, then the distribution is labeled *multimodal*. The mode also has limitations, one of which is that it is inefficient in its use of data in that much of the data are not used. Although modal descriptions are easily understood, the mode is rarely used in research except as additional information or when included in the narrative. An early use of the statistical concept of the mode was by English mathematician Karl Pearson (1857–1936) in 1895 when he stated that "I have found it convenient to use the term mode for the abscissa corresponding to the ordinate of maximum frequency" (1895, p. 345).

Two limitations of all three measures of central tendency are that although they are commonly used as descriptive statistics, they do not provide sufficient statistical analysis to describe variation in a population or to elaborate the differences between cases or people. Therefore, they usually do not function in a stand-alone manner as a sole statistical description. Fortunately, the mean also functions as a basis for other statistical analyses that fill the gap, since what is most important in social research is not only the average but also the variation within the population. The mean is used in many statistical formulae. It is used as a basis for statistical analysis of variation, including the standard deviation (i.e., deviation from the mean), the coefficient of determination or R^2, covariance, analysis of variance, and regression. The mean is also used frequently in meta-analyses.

SEE ALSO *Mean, The; Mode, The; Regression Analysis*

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CENTRISM

In politics, *centrism* refers to the tendency to avoid political extremes by taking an ideologically intermediate position. A centrist promotes moderate policies by finding a middle ground between the left and the right and downplays ideological appeals in favor of a pragmatic or "catch-all" party platform. Centrism can be seen as a means to maximize electoral support, especially among swing voters (those who will vote across party lines).

The left-right political spectrum is a traditional way of classifying ideologies, political positions, or political parties. The terms *left*, *right*, and *center* are believed to originate from the manner in which parliamentary factions were seated in the French Convention after the Revolution of 1789. Seated on the left were radicals such as the Montagnards and the Jacobins, who wanted to abolish the monarchy, the aristocracy, and even religion in France. Seated on the right were royalists and conservatives such as the Feuillants, who supported the king and the Catholic Church. Seated in the center were moderate republicans like the Girondins, who wanted to abolish the Bourbon monarchy but opposed radical demands for revolutionary terror and exporting the revolution to the rest of Europe.

In contrast to the center, both the left and the right are understood to represent well-defined political positions, or ideologies, that are polar opposites of each other. The left-right spectrum is linked to the rise of three main ideologies—conservatism, liberalism, and socialism. Conservatism is associated today with a right-wing stance; conservative ideology resists progressive social change and tries to conserve the status quo, or bring back the status quo ante of the *ancien regime*. Those to the right of conservatives are sometimes called ultraconservatives or the Far Right; These labels may refer to fascists, national socialists (Nazis), ultranationalists, religious extremists, and other reactionaries. Next to emerge was liberalism, which situates itself in the center of the political arena, claiming to be moderate, reformist, and thus centrist. The last of the three ideologies to arise, socialism is commonly seen as left-wing or radical, because socialists view themselves as the radical or militant heirs of the French Revolution. Unlike self-styled centrist liberals, socialists believe that social progress cannot always be achieved by gradualist liberal reforms alone and may require radical social change or even social revolution. Those to the left of socialists are typically labeled ultraleftists or the Far Left, often referring to anarchists, Communists, Trotskyists, Maoists, and other extreme leftists.

Center-leaning politicians or parties usually seek compromise between conflicting political extremes and often take middle-of-the-road stances designed to bridge opposite ideological camps. Political centrism is thus by

definition a relational concept, because the positions considered centrist depend on the specific policies of the competing ideological poles that the moderates are trying to reconcile. Centrism is important in the early twenty-first century because it is believed to apply to a very large section of the politically active population. In many countries, most members of the voting public tend to identify themselves as independent rather than as either left-wing or right-wing. The *Economist* stated in April 2005, "Most Americans have fairly centrist views on everything from multiculturalism to abortion. They like to think of themselves as 'moderate' and 'non-judgmental.' More people identify themselves as independents (39%, according to the Pew Research Centre for the People & the Press) than as Democrats (31%) or Republicans (30%)."

Politicians of various parties thus try to appeal to this presumed majority in the center to reach beyond their traditional, narrow constituencies and win elections. Left-wing and right-wing parties dilute their more extreme positions, for both know that the bulk of voters are somewhere near the center. With ideological considerations toned down, centrism tends to make politics more tranquil and stable. The post–cold war decline of left-right divisions has hastened the spread of a new centrist ideology, which is more supportive of democracy and capitalism.

But this center-seeking or centripetal approach entails some risk. Candidates advocating centrist policies to gain wider voter appeal risk demobilizing potential voters and losing support from the more ideologically minded partisans of their own party. Calling itself "New Labour," the revamped British Labour Party won three successive general elections, but voter turnout declined from 71.29 percent in 1997 to 61.36 percent in 2005, as Prime Minister Tony Blair's policy of abandoning key socialist tenets and embracing the center ground alienated many Labour loyalists.

SEE ALSO *Cold War; Conservatism; Fascism; French Revolution; Left and Right; Left Wing; Liberalism; Moderates; Nazism; Right Wing; Socialism*

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Rossen Vassilev

CHAMBERLAIN, NEVILLE
1869–1940

Although Arthur Neville Chamberlain entered Parliament in 1918 at the age of almost fifty, the election of a Conservative government in 1922 paved the way for his meteoric rise from postmaster-general, via the Ministry of Health to the Treasury and the second place in Stanley Baldwin's government within only ten months. Thereafter, a dynamic period of social reform between 1924 and 1929 and his leading role during the Conservative Party and financial crises of 1930–1931 ensured that he emerged swiftly as Baldwin's heir-apparent; claims powerfully reinforced by his success as chancellor of the exchequer between 1931 and 1937 when he presided over Britain's spectacular recovery from the Great Depression. Although there is much debate about the reasons for Britain's rapid return to prosperity, Chamberlain attributed it to a combination of a general tariff (introduced March 1932) and a "cheap money" policy designed to stimulate economic activity through low interest rates. Equally central to Chamberlain's strategy was an ostensibly rigid commitment to balanced budgets. Although condemned by critics as proof of an unimaginative passivity in face of mass unemployment, Chamberlain staunchly defended the policy as crucial to the maintenance of investor confidence that there would be no departure from "sound finance" into the hazardous realms of loan-financed public works.

From 1934 onward, Chamberlain was deeply preoccupied with the problems of defending a vast and vulnerable global empire from the cumulative threats posed by Japan, Italy, and Germany at a time when Britain could not afford to rearm sufficiently ever to contemplate the possibility of fighting three major powers in widely separated areas. After his succession to the premiership in May 1937, Chamberlain's response to this conundrum was to pursue with far greater vigor and determination his so-called double policy of rearmament and appeasement. The former was intended to repair defensive deficiencies at a pace the country could afford without jeopardizing long-term economic stability: Britain's so-called fourth arm of defense. The latter policy simultaneously attempted to achieve better diplomatic relations with the dictators by redressing their legitimate grievances, and in so doing either to remove the underlying causes of tension or to expose Germany's Adolf Hitler as an insatiable mentally unstable leader bent on world domination. Chamberlain thus described his strategy as one of hoping for the best while preparing for the worst.

In September 1938 this policy culminated in the Munich conference at which the largely German-speaking

Sudeten area of Czechoslovakia was ignominiously ceded to Hitler. Although Chamberlain's success in averting an imminent and probably unwinnable war was initially hailed as a great personal triumph, his ill-judged promise of "peace for our time" soon came back to haunt him when Hitler seized the remaining (non-German) part of Czechoslovakia in March 1939 and then invaded Poland six months later. Despite continuing as prime minister throughout the so-called Phoney War, increasing discontent with Chamberlain's leadership erupted in a parliamentary debate on May 7–8, 1940, when a substantial revolt of Members of Parliament inflicted a crushing moral (but not technical) defeat upon Chamberlain. He resigned as prime minister two days later but remained a key member of Winston Churchill's all-party coalition until shortly before his death from cancer on November 9, 1940.

SEE ALSO *Appeasement; Churchill, Winston; Conservative Party (Britain); Great Depression; Hitler, Adolf; Nazism; World War II*

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CHANGE, TECHNOLOGICAL

Technological change refers to the process by which new products and processes are generated. When new technologies involve a new way of making existing products, the technological change is called *process innovation*. When they include entirely new products, the change is referred to as *product innovation*. The invention of assembly-line automobile production by the Ford Motor Company is a widely cited example of the former, while automated teller machines (ATMs) and facsimile machines can be seen as product innovations.

Broadly speaking, technological change spurs economic growth and general well-being by enabling better utilization of existing resources and by bringing about new and better products. Besides benefits to suppliers or inventors of new technologies via disproportionate profits, new technologies have benefits for consumers (e.g., innovations in health care) and for the society (e.g., better oil-drilling techniques enabling less wastage and a more effective utilization of the oil in the ground). Current technologies also make the development of future technologies easier by generating new ideas and possibilities.

Changing technologies, however, can have negative consequences for certain sectors or constituencies. Examples of negative aspects include pollution (including environmental, noise, and light pollution) associated with production processes, increased unemployment from labor-saving new technologies, and so forth. This suggests that society must consider the relative costs and benefits of new technologies.

The process of technological change can be seen to have three stages: invention, development, and diffusion. The invention stage involves the conception of a new idea. The idea might be about a new product or about a better technique for making existing products. The invention might be due to a latent demand (e.g., the cure for an existing illness); such inventions are referred to as *demand-pull inventions*. Inventions can alternately be supply driven, when they are by-products of the pursuit of other inventions. For instance, a number of products, such as the microwave oven, were by-products of the U.S. space program. Yet another possibility is that a new product or process might emerge as an unplanned by-product of the pursuit of another technology (serendipitous invention). In the development stage, the prototype of the invention or the idea is further developed and tested for possible side effects (as with pharmaceutical drugs) and reliability (as with vehicles and airplanes). The invention is also made user-friendly in this stage.

The final stage of the innovation process involves making it accessible to most users through market penetration. The benefits of an innovation, both to inventors and to society, are maximized only when the innovation is efficiently diffused. Some innovations are easy to adopt while others involve effort on the part of adopters. For instance, one must learn how to use a computer, a new type of software, or a new type of airplane. Thus, the diffusion of technologies takes time. A useful concept in this regard was provided by Zvi Griliches (1930–1999). Griliches examined the time path of diffusion for hybrid corn seeds. He found that the technology diffused like an S-curve over time, implying that initially diffusion occurred at an accelerated rate, then at a declining rate, and eventually the rate of diffusion tapered off. Various studies have examined the diffusion of other technologies (new airplanes, ATM machines, etc.), and generally the evidence seems to bear out the prevalence of the S-curve of diffusion.

There are different avenues of cooperation between the private and public sector in the three stages of innovation. For example, all three stages might take place in the same sector, or there might be cooperation in only some stages (e.g., government agriculture extension services subsidize the diffusion of many farming technologies).

Austrian economist Joseph Schumpeter (1883–1950) made significant contributions to the economics of technological change around the middle of the twentieth century. His best-known concept is referred to as the *Schumpeterian hypothesis*. According to this hypothesis, which linked market structure and innovation, monopolies (due to their large reserves) are perhaps better suited than competitive firms at bringing about new products and processes. This concept called into question the then widely held view that competitive markets were superior in all respects, and provided a redeeming feature of monopolies. Since its inception, the Schumpeterian hypothesis has been a matter of much debate and analysis in the economics literature.

The nature of technological change can vary across sector and products and over time. Broadly speaking, economists tend to classify technological change as *Hicks-neutral*, *Harrod-neutral*, or *labor-saving* (see, for example, Sato and Beckmann 1968). Under Hicks-neutral technological change, the rate of substitution of one input for another at the margin (think of substituting capital for one worker) remains unchanged if the factor proportions (i.e., capital-labor ratio) are constant. Harrod-neutral technological change refers to a constant capital-output ratio when the interest rate is unchanged. Finally, labor-saving technological change favors the capital input over labor. Numerous technologies involving increased computerization in recent years are examples of labor-saving technological change. Over time, researchers have conducted studies to test the nature of technological change for various sectors and countries.

A number of theories of technological change have been proposed by economists. Some of these theories have evolved over time by refinements of earlier theories, while others have benefited from new revelations. Adam Smith (1723–1790) recognized the role of changing technologies. According to him, improvements in production technology would emerge as a by-product of the division of labor, including the emergence of a profession of schedulers or organizers akin to modern-day engineers. A specialized worker doing the same job repetitively would tend to look for ways to save time and effort. In Smith's world, productivity could also increase indirectly via capital accumulation.

Karl Marx's (1818–1883) notion of the tendency of the rate of profit to fall stems from a recognition of technological change (process innovation) leading to more efficient production, and the replacement of labor with capital or machinery. Labor-saving innovation or mechanization occurs when Marx's capitalists are unable to further lengthen the working day and therefore are unable to extract further surplus value in absolute form from labor.

Kenneth Arrow introduced the notion that production processes may be refined over time as workers gain greater knowledge from repeat action. Thus, new process technologies might emerge; such change is formally described as *emerging* from learning-by-doing. The degree of appropriability of research benefits was considered by Arrow to be a strong incentive for firms to engage in research and development. Nathan Rosenberg postulated that the degree of innovation opportunities dictates the research effort that firms put forth. For instance, innovation opportunities expand with new developments in basic science. Richard Nelson and Sidney Winter proposed an alternative theory of technological change. This theory, referred to as the *evolutionary theory*, argues that technological change evolves over time as newer generations (or improvements) of existing technologies are developed. In other words, the evolutionary theory considers technological change to be less drastic.

The process of technological change is uncertain in that there is no guarantee of whether, when, and at what scale the innovation will occur. Four types of uncertainties are generally associated with the process of technological change. One, there is market uncertainty resulting from the lack of information about the winner of the innovation race. For example, of the many pharmaceutical firms pursuing a cure for an illness, none is certain about who will succeed, or when. This uncertainty sometimes results in excessive resources being devoted to the pursuit of a particular innovation as firms try to improve their odds of beating others. Two, there is technological uncertainty regarding a lack of knowledge about research resources sufficient to guarantee success. Will a doubling of the number of scientists employed by a drug company double its odds of inventing a successful cure? Third, there is diffusion uncertainty regarding the eventual users and market acceptance of the innovation. Finally, there is uncertainty about possible government regulatory action that the new product or process might face. These regulations might deal with safety, reliability, or the environment.

The pace of technological change can vary across industries, firms, and countries, depending upon the resources devoted to research and the nature of products or processes pursued. For instance, the electronics industry, by its nature, has more room for technological improvement than, say, the paper industry. Governments try to increase the rate of technological change by various means. These measures include directly engaging in research, providing research subsidies or tax breaks, inviting foreign investment (and consequently technology) in specific industries, and strengthening the laws for protecting intellectual property. Sometimes, however, governments have to monitor the introduction of new products and processes to ensure societal well-being. Examples of such cases include drug-testing regulation and testing for

the environmental impacts of new technologies before they are introduced in the market.

In closing, our understanding of the process of technological change has improved over time. Technological change is an important input to a country's economic growth, and we owe a large part of our improving living standards to changing technologies. Some technologies, however, can have undesirable side effects. Another issue is that technological progress across nations is uneven, and the rapid diffusion of new technologies from developed nations to developing nations remains a challenge.

SEE ALSO *Growth Accounting; Physical Capital; Production; Schumpeter, Joseph; Solow Residual, The; Technology; Technology, Transfer of*

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Rajeev K. Goel

CHAOS THEORY

Chaos theory is a theory of systems dynamics; that is, the analysis of the laws of motion of various systems over time. Complex dynamics investigates why certain systems, while evolving in a predictable fashion for some time, may display at other times a behavior, which looks erratic (random), hence unpredictable. In this context, the main thrust of chaos theory has been to demonstrate that behind this seemingly random behavior or disorder, there is, however, a deterministic underlying structure, which can be described and analyzed by means of differential equations that do not involve uncertainty.

Formally chaos is a nonlinear deterministic process that looks random, a case in which a dynamic mechanism yields a time path so erratic that it passes most standard statistical tests of randomness. Chaotic time paths often have the following features: (1) a trajectory that sometimes displays sharp qualitative changes, such as those associated with large random disturbances; (2) a time path that is extremely sensitive to microscopic changes in the values of its parameters; and (3) a time path that never returns to any point it had previously traversed, but which may, however, display an oscillatory pattern in a certain bounded region. The terms *chaos*, *strange attractors*, and *complex dynamics* have been used interchangeably in the literature to characterize these complex processes.

In linear dynamics, small causes give rise to small effects, and large causes produce large effects. Hence there is a certain sense of proportionality in linear thinking. Nonlinearity, on the other hand, connotes lack of proportionality: very small causes (small changes in the initial conditions, for instance) can give rise to very large effects. One implication of chaos theory, in this context, is to show that nonlinearities are not the exception but the rule of nature and life. Weather forecasting, for instance, is difficult because very small fluctuations in the environment give rise to very large-scale changes. Chaotic systems often possess fractal structures and time-dependent feedback mechanisms. A fractal structure consists of two major features: self-similarity (or scale-invariance) and lack of smoothness. Self-similarity refers to a system that always looks the same regardless of how many times the system is magnified. On the other hand, lack of smoothness relates to the disconnected appearance of fractals.

While the origins of chaos theory date back to the seminal work conducted in 1890 by the French mathematician Jules Henri Poincaré on the so-called three-body problem, it is Edward Lorenz's 1963 research on atmospheric dynamics and Benoit Mandelbrot's pathbreaking 1983 investigation of fractal geometry that have rekindled interest in chaos theory since the mid-twentieth century. Applications of complex dynamics have found fertile grounds in several fields such as fluid dynamics, plasma physics, chemistry, electrical engineering, signal processing, cardiology, finance, and time series econometrics and economics, some of which are surveyed in Julian Sprott's *Chaos and Time Series Analysis* (2003).

The roots of chaos analysis in economics can be traced back to the literature on business cycles, that is, the analysis of irregular fluctuations in the output level of an economy. While exogenous business cycle theories have become the orthodoxy during the last four decades, the emergence of chaos theory hinted at the possibility that erratic output fluctuations are due to the complex interaction of economic factors, and hence may be endogenously generated.

Chaos studies in theoretical economics have attempted to model economic systems in such a way that chaotic dynamics emerge during the adjustment period to equilibrium or in the evolution of the system itself over time. On the other hand, several empirical investigations have been done in order to identify chaotic behavior in financial and economic time-series data. While earlier empirical studies claimed to have found evidence of chaotic behavior in a number of economic time series, such as U.S. business cycle data, various monetary aggregates, and precious metal prices, subsequent research, such as that conducted by Aydin Cecen and Cahit Erkal in 1996, demonstrated that there is little evidence in favor of deterministic chaos in exchange rate returns.

SEE ALSO *Catastrophe Theory; Shocks*

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Aydin A. Cecen

CHARITABLE FOUNDATIONS

SEE *Foundations, Charitable.*

CHAUVINISM

SEE *Jingoism.*

CHÁVEZ, CÉSAR
1927–1993

Of Mexican American ancestry, César Estrada Chávez was born in Yuma, Arizona, with deep roots in the American Southwest. He was the second-born child of Librado Chávez and Juana Estrada, whose families were displaced from their land, much like many other Mexicans who were tricked by attorneys, had their loans rejected because others coveted their land, or lost their land as a result of owing back taxes. On August 29, 1937, the Arizona state government took possession of the Chávez family's land, and later auctioned it off to the bank president who had refused the elder Chávez a loan to reclaim his property (La Botz 2006, p. 7; see also Montejano 1987 for a discussion of land displacement). The loss of their land forced the family to work in the agricultural fields of Arizona, and later in California's San Joaquin Valley, beginning when César was just a child of ten. As migrants, the family struggled under the most difficult of conditions, including grossly substandard pay. Despite having only an eighth-grade education, Chávez served in the Navy during World War II (1939–1945). After two years of service, he returned to grueling agricultural work; there was not much else available for a man who lacked a formal education and whose employment options were limited by racism.

Chávez's organizing career began as a result of a stint with the Community Services Organization (CSO), where he worked under the guidance of Fred Ross and Father Donald McDonnell in San José, California. After two years of struggle with CSO's board, who refused to support many of his proposals, Chávez set out on his own to organize the agricultural workers' union, using strategies he developed through his work with CSO, and guided by insights gained from personal experience of oppressive work conditions. Chávez patiently and systematically devised nonviolent strategies, such as the secondary boycott, which targeted specific businesses that bought goods from growers who refused to negotiate with or recognize the union. He also used fasting to highlight the shameful conditions under which farmworkers labored.

Chávez forged alliances with Filipinos and other workers of color and their families to organize the United Farm Workers Organizing Committee, which later became the United Farm Workers of America (UFWA). His ability to work in coalition with people of other faiths and political persuasions created lifelong partnerships, including with Gilbert Padilla and Dolores Huerta, who like him had been influenced by the pragmatic philosophy of Saul Alinsky's Industrial Areas Foundation. Together the three organized the first table boycott and negotiated a contract with the Schenely Corporation, signed on April 7, 1966. This agreement marked the success of a national campaign that was carried out by the farmworkers themselves. Their effort also pointed the way toward the formation of national alliances with Democratic and liberal politicians, and drew the support of the United Auto Worker's Union, as well as competition from the

Teamsters Union, after the Schenely Corporation brought Teamsters to the negotiating table. Later, the Teamsters would vie for contracts against the UFW.

Through his life work, Chávez created a revolution in agriculture and inspired the birth of the Chicano civil rights movement. His tireless support of American agricultural workers made him oppose governmental agreements such as the Bracero Program, which allowed Mexican workers to work in U.S. fields, and led him to fight against the use of undocumented workers, because they weakened unionization and adversely impacted the wages of Mexican Americans. Chávez was harshly criticized for these positions and lost the support of those who believe in workers' rights regardless of origin, especially when he later sided with conservatives who pushed for immigration restrictions in the 1980s. Still, Chávez maintained enough support to achieve the first agricultural workers law in a nation that had not allowed the unionization of farmworkers in the past. This was the California Agricultural Labor Relations Act, signed by Governor Jerry Brown in 1975, which established the Agricultural Labor Relations Board (ALRB) to oversee elections and to settle appeals.

Because of Chávez's willingness to confront racism and poverty in the agricultural fields, conditions for workers improved. The fruits of his labor included the eradication of the dreaded short hoe, the availability of portable toilets, the accessibility of drinking water, the creation of a hiring hall, the foundation of a service center and health clinic, and improvement of wages and benefits. A believer in nonviolence, Chávez continued to use legal means in his pursuit of social justice until the end. He passed away in Yuma, Arizona, working to fight a lawsuit against the UFW brought by Bruce Church Incorporated, the largest producer of lettuce and vegetables in Salinas, California. This was perceived as a move to destroy an already weak union; Church was suing the UFWA for millions of dollars in damages resulting from the 1980s lettuce boycott. In death, Chávez has become an icon, as a result of his activism and commitment to the struggle for farmworkers' rights and social justice, a commitment he selflessly carried out to the end as he sought to improve the lives of those who feed the nation. For his extraordinary efforts and to mark the legacy of his accomplishments and his service to humanity, President Bill Clinton awarded Chávez with a posthumous Medal of Freedom in 1994. As Paul Chávez remarked in the *San Jose Mercury News*, "when history writes its final chapter, [César Chávez] … will be remembered as a man who lived by his principles and who wasn't afraid of taking uncomfortable positions" (1993, p. 1A).

SEE ALSO *Agricultural Industry; Migrant Labor*

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Josephine Méndez-Negrete

CHÁVEZ, HUGO
1954–

Venezuelan president Hugo Chávez and his policies have sparked controversy at home, throughout the Latin American region, and in the United States. Whereas Chávez's supporters value his social agenda, critics perceive him as ideological, intolerant, and impractical. Chávez, however, has stayed in power through democratic means and carries overwhelming support, despite large-scale attempts to remove him from office.

Hugo Rafael Chávez Frías was born in Sabaneta, Barinas, on July 28, 1954. He graduated from Venezuela's Academy of Military Sciences with a degree in engineering in 1975. Chávez first gained national attention in 1992 when he led an unsuccessful military coup to oust President Carlos Andrés Pérez. Chávez and a group of fellow military officers had founded the Revolutionary Bolivarian Movement ten years earlier; the group honored the nineteenth-century Venezuelan freedom fighter Simón Bolívar (1783–1830). Chávez sought to restore the Bolivarian ideas of national sovereignty, economic independence, and social services for the people. With these ideals, Chávez led the failed 1992 revolt, and was subsequently imprisoned for two years.

By 1994 Chávez had transformed from a "military rebel to a democratic player" (Canache 2002, p. 69). He founded the political party Movement of the Fifth

Republic leading up to the 1998 presidential elections. His platform emphasized his desire to end corruption, return oil to state control, and eliminate poverty (Marcano and Tyszka 2004, p. 31). This platform earned him political victory in 1998 with 56 percent of the vote, in 2000 with 60.3 percent, and in 2006 with 63 percent (Canache 2002, p. 69; Marcano and Tyszka 2004, p. 31; Political Database of the Americas). Chávez's popularity has grown since he shifted from the military to the political stage.

Chávez's mass appeal remains debatable. Scholars and journalists attribute his success to his emphasis on the country's poor through health and education programs (Canache 2002, p. 70; Fukuyama 2007, p. A18). Francis Fukuyama writes that Chávez maintains local appeal because of his social agenda, in which he "has opened clinics staffed with Cuban doctors in poor barrios throughout Venezuela" (2007, p. A18). The rise in oil prices on the world markets has allowed the government to increase social spending despite the country's external debt (Guevara 2005, p. 36).

However, critics argue that the statistics contradict the myth. Francisco Rodríguez argues that social spending in Venezuela decreased from 31.5 percent prior to Chávez's administration to 29.3 percent by 2004. The reduction of illiteracy dropped slightly, from 1.1 million before Chávez became president to 1.0 million illiterate Venezuelans over the age of fifteen during his tenure (Rodríguez 2007, p. 2). The percentage of poor families increased from 42 percent in 1999 to 60 percent in 2004, and unemployment levels reached 15 percent in both 1999 and 2004 (Marcano and Tyszka 2004, p. 390). Instead, Chávez's popularity is based on the country's double-digit economic growth, according to Rodriguez.

Chávez's opponents have threatened his grasp on power. In April 2002 rebel military officers staged a failed coup, which some Venezuelan officials believe was backed by the U.S. government (Morsbach 2006). Two years later, the opposition conducted a failed recall referendum, in which 59 percent of Venezuelans voted to allow Chávez to complete the remainder of his term (BBC News 2004).

As of 2007, Venezuela's economy remained stable while a large number of Venezuelans lived in deep poverty. Nevertheless, Chávez's support surpassed that of his critics.

SEE ALSO *Coup d'Etat; Left Wing; Nationalization; Petroleum Industry; Populism; Poverty; Social Movements; Socialism*

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Sarita D. Jackson

CHECKS AND BALANCES

Although scholars dispute the precise origin of the phrase *checks and balances*, the basic idea of limiting political power through various institutional means is both ancient and modern. In the ancient worlds of the Greek city-state and the Roman Republic, a mixed constitution of the one, the few, and the many provided checks on governmental power, whether in the form of a monarchy (the rule of one), an aristocracy (the rule of the few), or a democracy (the rule of the many). This scheme of balancing and checking power, particularly as expressed in the works of Aristotle, Polybius, and Cicero, was a powerful influence in early modern Europe during the period of the Renaissance as expressed in the works of Niccolo Machiavelli, James Harrington, and Algernon Sydney. This ancient and Renaissance concept of a mixed constitution may also be found in the eighteenth-century works of Charles de Montesquieu, Francis Hutcheson, and William Blackstone. All of these works influenced the founders of the United States, notably John Adams, James Madison, and Thomas Jefferson. The classic literary study of the political dynamics in this scheme is William Shakespeare's play *Julius Caesar*.

The modern concept of checks and balances derives primarily from a mechanical view of the universe made popular in the seventeenth and eighteenth centuries by Galileo Galilei and Isaac Newton, among others. For Alexander Hamilton, in *Federalist* No. 9, a concept of "legislative balances and checks" was among the modern

improvements in the science of politics. According to the modern view—as reflected in the United States Constitution—the legislative, executive, and judicial functions of government must check and balance each other in order to prevent any one branch of government from dominating the others. In the American scheme, for example, presidents may veto acts of Congress, but Congress has the power to override presidential vetoes by a two-thirds majority vote of both houses. Similarly, as established in the U.S. Supreme Court case of *Marbury v. Madison* (1803), federal judges may rule acts of Congress unconstitutional as occurred in the cases of *City of Boerne v. Flores* (1997) and *Clinton v. City of New York* (1998).

Checks and balances also refers often to issues of federalism, or the relationship between the national and state (or regional) governments. In the United States, for example, the Tenth Amendment to the United States Constitution grants "reserved" powers to the states. This has meant, according to the courts, the power of state governments in the United States to regulate health, safety, and morals. But the Fourteenth Amendment, ratified in 1868, checks this power by asserting that no state may deny any person "life, liberty, or property, without due process of law," nor may a state deny "equal protection of the laws." In a number of recent cases, the U.S. Supreme Court has interpreted these constitutional provisions so as to limit state prerogatives in such areas as capital punishment, affirmative action, privacy rights, and voting rights. For some, checks and balances also refers to modifications in American political practice outside of formal constitutional change or judicial interpretation. Among these modifications are the rise of national political parties, the expansion of presidential power, the creation by Congress of independent regulatory agencies (such as the Environmental Protection Agency), and changing technologies, particularly as these technologies make possible the more rapid exchange of information, such as through widespread access to the World Wide Web.

SEE ALSO *Aristocracy; Constitution, U.S.; Democracy; Machiavelli, Niccolò; Monarchy; Separation of Powers*

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Timothy Hoye

CHERNOBYL

SEE *Disaster Management; Union of Soviet Socialist Republics*

CHEROKEES

The Cherokees have been one of the most historically significant indigenous cultural groups in the southeastern United States. There were three federally recognized Cherokee Indian nations at the beginning of the twenty-first century: the Eastern Band of Cherokee Indians (EBCI) in North Carolina, the Cherokee Nation of Oklahoma, and the United Keetoowah Band in Oklahoma. In addition, more than fifty other organizations in at least twelve states, as well as many individuals, claim Cherokee descent. The question of who is legitimately Cherokee and how many individual Cherokee Indians exist in America is a point of contention, and the distinction between individual claims to cultural or biological identity, on the one hand, and legal membership or citizenship in federally recognized tribes or sovereign tribal nations, on the other, is an important one.

Other issues facing Cherokee communities in the early twenty-first century include development and refinement of mechanisms for self-governance, political factionalism, increased economic development of tribal communities (including gaming, tourism, and natural resource management on tribal lands), cultural preservation, and the implementation of tribal programs and services for media, education, health, mental health, and social services. Like many other Native American communities, the Cherokees face high rates of drug and alcohol dependency, suicide, and health issues such as diabetes, and communities are particularly concerned about their at-risk youth.

Cherokees and their ancestral culture, believed to be related to the Iroquois, have lived in the southeastern region for at least 12,000 years. Lands once occupied by the Cherokees—before European contact in the 1500s and then forced removal in the 1830s to Oklahoma—encompassed parts of what are now nine states, including most of the Southern Appalachian mountain and foothill region. From original lands that covered 250,000 square miles, the Eastern Band maintained its culture on approximately 56,000 acres in western North Carolina as of 2007; the tribal assets of the Cherokee Nation of Oklahoma include about 66,000 acres.

SOCIAL ORGANIZATION, CULTURAL PRACTICES, AND LANGUAGE

Unlike many of the Plains tribes, the Cherokees were primarily agricultural rather than nomadic and called themselves *Ani'Yun'wiya*, the Principal People. They are matrilineal and matrilocal, meaning that they trace their descent through the women in their society and they live in the mother's or wife's household, since women traditionally owned all property. Traditional Cherokee social organization was structured around seven matrilineal clans, run by a Council of Grandmothers, reflecting the relationship of balance between the natural and spiritual worlds: *Anigilo(la)hi* (Long Hair); *Anisahoni* (Blue or Panther); *Aniwaya* (Wolf); *Anigatogewi* (Wild Potato); *Ani(k)awi* (Deer); *Anitsisqua* (Bird); *Aniwodi* (Paint). Each clan has traditional vocations, knowledges, and sacred ceremonial affiliations, and marriage within a clan is forbidden.

Throughout the Cherokee year, the communities have traditionally celebrated festivals or religious observances that reflected significant events related to the seasons, such as New Moon Festivals and Green Corn Ceremonies. Such events include feasting, dancing, purifications, sacred fires, and other ceremonies and rituals. The traditional Cherokee wedding is also a distinctive ceremony and a time for community celebration. Cherokees also actively participate in dances and ceremonies within the tribe as well as intertribal powwows to exhibit their traditional dance and music arts.

The arts have been a significant part of Cherokee culture and usually reflect the spiritual relationship between the Cherokees and the stone, wood, river cane, or clay from which various objects—baskets, pottery, carvings—are shaped. A revitalization of traditional arts is flourishing among the Cherokees through cooperatives and foundations such as the Qualla Arts and Crafts Mutual, Inc.

The Cherokee language, called *Tsalagi*, a member of the Southern Iroquoian language family, has a number of dialects and was spoken by about 22,000 Cherokees as of 2007 (only about 5 percent of the Cherokee population, due to nineteenth- and twentieth-century U.S. government policies punishing native speakers), although numbers are growing since it has become a required subject in many Cherokee schools and universities.

CHANGES WITH EUROPEAN CONTACT

Spanish explorer Hernando de Soto's entry into Cherokee territory in 1540, in his search for gold and silver, forever changed the way the Cherokees lived. DeSoto's party killed and enslaved many Cherokees, and the European invaders brought disease, death, and what would be permanent cultural dislocation to the Cherokees. Some estimate that as many as 95 percent of the Cherokee population died within the first two centuries of European contact.

By the eighteenth century, when waves of European settlers pushed westward into Cherokee territories, treaty lines were created but ultimately failed to protect the Cherokees from encroachment into their lands. Most of the remaining Cherokees reorganized and incorporated many aspects of European society into their dynamic culture to adapt to the changing demands of living near and among the new settlers. A more conservative faction, called the Old Settlers, voluntarily entered into a treaty with the U.S. government in 1817 to receive land in Arkansas in order to avoid assimilation; these were the ancestors of the United Keetoowah Band, the most conservative and traditional of the Cherokees.

A silversmith, Sequoyah, introduced a written form of the Cherokee language, called a syllabary, which was officially adopted by the Cherokee Nation in 1825. This led to widespread literacy and the publication of books, religious texts, almanacs, and newspapers. The tribe adopted a bicameral national government, a constitution, and a Supreme Court by 1827.

However, after white settlers discovered gold on Cherokee lands in north Georgia in the late 1820s, the state and federal government collaborated to confiscate Indian land and then offer this prized land to white settlers through land lotteries. President Andrew Jackson authorized the Indian Removal Act of 1830, beginning the tragic removal period when Cherokees were forced to leave behind their farms, homes, and land. However, the removal was not without opposition and a legal struggle.

Cherokee statesmen and leaders, such as Chief John Ross, and other Americans, including Daniel Webster, Henry Clay, and Samuel Worcester, passionately spoke out against removal and challenged Georgia's attempt to extinguish Indian title to land. These legal cases—especially *Worcester v. Georgia* (1832) and *Cherokee Nation v. Georgia* (1831)—became the two most influential decisions in Indian law. The U.S. Supreme Court ruled for Georgia in the 1831 case, but in the 1832 case affirmed Cherokee sovereignty. However, President Jackson defied the Court and ordered the Cherokee removal, using as justification the 1835 Treaty of New Echota, a treaty that had been signed by about 100 Cherokees who agreed to relinquish all lands east of the Mississippi River in exchange for land in Oklahoma and the promise of money, provisions, and other benefits.

The signing and the removal led to bitter factionalism among the Cherokees. However, the U.S. Army, under General Winfield Scott, enforced the Removal Act in

1838 and forced about 15,000 to 20,000 Cherokees from their homeland. An estimated 4,000 died from hunger, exposure, and disease along the "Trail of Tears" by boats and on foot to Indian Territory in Oklahoma.

THE EASTERN BAND OF CHEROKEE INDIANS

However, hundreds of Cherokees in the mountains of North Carolina had been able to escape from forced removal in 1838, and their descendants make up the Eastern Band today. After several years of legal limbo, in 1848 the U.S. Congress agreed to recognize their treaty rights if the state would accept them as permanent residents; it was not until 1866, following the Civil War, that North Carolina agreed, and in 1868, the tribal tripartite government reconstituted and held its first elections since the removal. In the 1870s, the federal government established the Qualla Boundary (a reservation) for about 1,200 Cherokees. By 2006, over 13,000 enrolled members of EBCI lived on the Eastern Cherokee lands held in trust by the federal government.

The EBCI, incorporated in 1889, is a sovereign nation whose members are not subject to county property taxes or state income tax. Enrollment in the EBCI requires 1/32 degree of Cherokee blood through descent from an enrollee on the 1924 Baker Roll, a census carried out the same year that Native Americans were granted U.S. citizenship. Tribal governance is carried out by an elected principal chief and vice chief, a Tribal Council representing the various communities and clan townships, and appointed judicial positions.

Tourism and gaming are the two primary sources of economic development of the modern Eastern Cherokee, with an active tribal Office of Economic Development. With tribal lands nestled in the Blue Ridge and Great Smoky Mountains and surrounded by national parks and forests—as well as the cultural appeal of the Indian heritage attractions such as living heritage museums and an outdoor historical drama—tourism has long been the major economic base of the EBCI. Harrah's Cherokee Casino opened in 1997 and became the largest tourist attraction in North Carolina. The introduction of gaming has radically affected living conditions in what was once one of North Carolina's most impoverished areas, because of the advent of the per-capita distribution of tribal and casino profits to all enrolled tribal members (an amount totaling nearly $100 million in fiscal year 2004). In addition to tribal agencies, the independent Cherokee Preservation Foundation works to preserve Cherokee culture, create jobs and other economic development opportunities, and renew the environment on tribal lands.

THE CHEROKEE NATION OF OKLAHOMA

In Oklahoma, the Trail of Tears survivors soon rebuilt a democratic form of government, churches, and educational system, newspapers, and businesses, with Tahlequah as their capital and center of cultural activity. In 1844, the *Cherokee Advocate*, printed in both Cherokee and English, became the first newspaper in a Native American language, and the literacy level among the Cherokees became higher than among their white counterparts. Prosperity flourished until the Civil War, when most Cherokees sided with the Confederacy. The government divided what remained of Cherokee tribal land into individual allotments given to Cherokees listed in the Dawes Roll in the late 1890s. Descendants of those original enrollees make up today's Cherokee Nation tribal citizenship.

The Cherokee Nation has the sovereign right, granted by treaty and law, to control and develop tribal assets. With about 280,000 enrolled tribal members as of mid-2007, the Cherokee Nation is the largest American Indian tribal nation (followed closely by the Navajo Nation with approximately 250,000 enrolled members). The land base remaining under federal trust relationship comprises more than 90,000 acres consisting of half tribal land and half allotment land belonging to individual tribal members.

The Cherokee Nation has a tripartite democratic government with a constitution, revised in 1976. Executive power is vested in the elected principal chief, legislative power in the elected Tribal Council, and judicial power in the Cherokee Nation Judicial Appeals Tribunal, comparable to a Supreme Court. It is the highest court of the Cherokee Nation, and it administers the Cherokee Nation Judicial Code as well as district courts and a law enforcement system.

The Cherokee Nation operates several enterprises, including Cherokee Nation Enterprises, which owns casino facilities, retail outlets, and Cherokee Nation Industries, Inc., a supplier to several major defense contractors. The Cherokee Nation also owns a landfill, golf course, ranch, and apartments for the elderly and disabled, and in total employs about 7,000 people, most of whom are tribal members.

SEE ALSO *Culture; Gambling; Gold, God, and Glory; Government; Identity; Iroquois; Land Claims; Mankiller, Wilma; Mental Health; Native Americans; Sequoyah; Sovereignty; Trail of Tears*

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Pamela S. Wilson

CHIANG KAI-SHEK
1887–1975

Chiang Kai-shek was a Chinese political and military leader who took power after the death of Sun Yat-sen (1866–1925). Born into a salt-merchant family in Zhejiang province, Chiang's education included a military academy in Japan from 1908 to 1910, during which time he joined the anti-Manchu movement called the Revolutionary Alliance and became a disciple of Sun, the leader of Guomindang, the Nationalist Party.

In 1923 Sun took Russian advice to accept the Chinese Communist Party as an ally for his cause of national revolution and sent Chiang to the Soviet Union for military training. Upon his return Chiang was appointed head of the Whampoa Military Academy, which later became the most important political capital for Chiang, as many cadets had a personal allegiance to him. In 1925, upon Sun's death, Chiang became the new leader in the Guomindang and soon launched the Northern Expedition (1926–1928), the military campaign against the northern warlords, to unify the country. After a military success Chiang decided that he could not tolerate the Communists, who had been his ally during the expedition but who also began to encourage workers and peasants to launch a social revolution. He ordered a bloody suppression of Communists and labor activists in Shanghai, and his cooperation with the Communists was broken. Chiang established the Nationalist Government in Nanjing on April 28, 1927, six days after the Shanghai massacre.

Chiang's government made efforts to modernize the country, and his governing ideology was a mixture of Confucianism and European fascism. But Chiang faced challenges both at home and from abroad. In 1931 the Japanese occupied Manchuria by force and created a national crisis for Chiang, who decided to take issue with the Communists first before facing foreign invaders. The Communists, led by Mao Zedong, established rural bases through a policy of land redistribution. Despite continuous suppression from the government, the Communists survived and received popular support, first in Jiangxi in the southeast then, after the Long March, in Shaanxi in the northwest. In December 1936 Chiang was kidnapped in Xian by his military deputy, Zhang Xueliang (1898–2001), who resented Chiang's policy of not fighting the Japanese. The crisis ended peacefully as Chiang agreed to work with the Communists in fighting the common enemy. During the second Sino-Japanese War (1937–1945), Chiang remained China's national leader although the country was divided. The United States and China became allies during the war, but Chiang had a rocky relationship with his chief of allied staff, American general Joseph Stilwell (1883–1946), who was finally recalled by Washington in 1944. The American advisors were dismayed by the corruption of Chiang's government, as well as its ignorance and indifference.

Under Mao's leadership the Communists grew stronger during the war. Civil war broke out between Chiang's government and the Communists soon after World War II ended. Despite strong American financial and military support, Chiang lost the war, and his government was forced from the mainland to Taiwan. Chiang remained the president of the Guomindang Government, an authoritarian regime long supported by the United States, until his death in 1975.

SEE ALSO *Mao Zedong; Sun Yat-sen*

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Kan Liang

CHIAPAS

Chiapas is a land of stark contrasts: geographically, economically, and socially. One can find everything from frigid mountains to steaming jungles, from poor peasant farmers to wealthy oil executives, and deeply rooted ethnic differences between indigenous Maya and ladinos (those who trace at least part of their ancestry to Spain).

Chiapas is Mexico's southernmost and eighth most populous state (3.9 million in 2000). Most residents live in rural areas. Only three cities have more than 100,000 inhabitants: Tuxtla Gutiérrez, the political and economic center, Tapachula, a coastal port, and San Cristóbal de las Casas, a colonial city in the highlands. Chiapas's population is also the youngest in all Mexico with 50 percent at twenty years of age or younger. Many are indigenous; over 25 percent speak one (or more) of Chiapas's Mayan languages (Tzotzil, Tzeltal, Chol, Tojolobal, to name only the most common). Most are Catholic (64%), with a growing number of Protestants (14%), and a few Jewish, Muslim, and those without religious beliefs.

Agro-extractive industries dominate. Chiapas is one of Mexico's leading producers of coffee, corn, cattle, and cocoa. From Chiapas comes 54 percent of Mexico's hydroelectric power, 24 percent of its crude oil, and 47 percent of its natural gas. However, broad scale economic and social development was historically a low priority and not everyone has benefited equally. Twelve percent of homes lack electric power. Twenty-six percent of homes lack running water, and 43 percent adequate sewage. Fifty-three percent cook with wood. Chiapas also has the highest rate of illiteracy in Mexico (22%), the fewest doctors per person (1 per 17,856), and the second lowest life expectancy (sixty-seven years).

Inequities, exploitation, and ethnic distinctions began in the colonial period and continued after independence. In 1528 the Spanish conquistador Diego de Mazariegos subdued the indigenous populations of Chiapas. Chiapas had no mineral wealth, no gold, no silver. Its riches were agricultural products, including cochineal (red dye), cocoa, sugarcane, and tobacco, and forced indigenous labor, granted to Spaniards by the Crown, made their production possible. The conditions were so extreme and treatment so cruel that many died, others fled, and some rose in rebellion (the Tzeltal Rebellion of 1712, the Tzotzil Uprising of 1868). Independence in 1824 changed the form but not the nature of relations between indigenous and ladino. Liberal reforms privatized land held by the Catholic Church and indigenous communities. In Chiapas, ladinos used these reforms to obtain title to vacant lands, which often belonged, though not officially, to indigenous people. On these they established coffee and cattle ranches and obligated the very indigenous from whom the land had been taken to work for them, in forms often bordering on slavery. Thereby the general trend of wealthy landed ladino and poor landless indigenous continued.

Inequitable landholding was one of the causes of the Mexican Revolution in 1910 and land became a focal point for indigenous organizing in Chiapas. Article 27 of the Mexican Constitution of 1917 granted landless people the right to petition the government for land, which the government could expropriate from large landowners. The process was long and drawn out, pitted landless indigenous against landed ladino, and often required secretive organizing, land invasions, and armed confrontations. Indigenous organizing grew throughout the century, especially in the 1970s and 1980s, so that by 1992 over one-half the land in Chiapas was *ejido* (commonly held) and the indigenous had gained control of many local political offices and some commerce.

In 1992 the Mexican president Salinas de Gortari changed the constitution, abolished the *ejido,* and in so doing dashed the hopes of many landless poor and exacerbated political unrest. That unrest came to a head in 1994 with the Zapatista Rebellion. The day that the North American Free Trade Agreement (NAFTA) took effect poor, largely indigenous men and women—the EZLN, Zapatista Army of National Liberation—rose in rebellion. The Zapatistas had begun organizing in 1984 and voted to go to war in 1992. As their charismatic leader, *subcomandante* Marcos, put it, "If you don't have land, you're living dead, so why live. It is better to die fighting" (Russell 1995, p. 40). The Zapatistas demanded a wide range of social and political reforms. By 1996 the government and the Zapatistas had negotiated an uneasy truce. The Zapatistas refuse anything having to do with the "bad government," but receive important contributions from abroad. The government offers many forms of aid to those who reject *zapatismo* and acknowledge the government. In their intransigence both sides have polarized the countryside, pitting, to unprecedented degrees, indigenous against indigenous: the most devastating manifestation being the massacre in Acteal, during which more than fifty women and children, of a nonviolent Zapatista faction, were brutally murdered by a pro-government faction.

From the mid-1970s to the present, Chiapas has seen many changes: large-scale indigenous organizing, religious conversions, and rebellions. More so than ever before people migrate to cities in search of opportunity and, almost unheard of in the 1990s, residents, especially the young, leave Chiapas by the thousands bound for the United States.

SEE ALSO *Indigenous Rights; Liberation Movements*

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Pete Brown

CHICAGO *DEFENDER*

It can be argued that the most influential and radical voice for racial equality in the first quarter of the twentieth century was a Chicago-based newspaper, the Chicago *Defender*. Within the paper's first ten years of publication, its owner, Robert S. Abbott, had turned the one-time local black paper into the largest selling black newspaper in the United States. Scholars estimate that weekly circulation from 1915 to 1925 was as high as 250,000 a week, with the large majority of the copies distributed south of the Mason-Dixon Line.

With its sensationalistic and crusading editorial policy, the paper quickly gained the reputation of being the most radical and racially conscious black newspaper in America. This bold editorial philosophy was never more evident than during the turbulent period between 1916 and 1919, the epoch marked by America's involvement in World War I, the Great Black Migration out of the South, and the northern race riots of 1919.

The first of these events to grab the *Defender*'s attention was of the mistreatment of black soldiers in military training camps during the early years of World War I and the exclusion of prominent "race men" from the ranks of officers. The paper unflinchingly demanded safety, equal rights, and recognition for black soldiers who sacrificed their lives for freedom in Europe. Abbott was also diligent in underscoring the hypocrisy of the United States government, which asked men of color to die for the cause of liberty in Germany while it systematically denied them their basic civil rights at home.

While maintaining its concern for the black soldier in Europe, the *Defender* also began detailing both the atrocities inflicted on blacks in the American South and the burgeoning opportunities awaiting them in the industrialized North. By 1916, the recognition of this juxtaposition had evolved into a full-scale migration campaign. Abbott and his paper began encouraging a southern exodus away from the oppressive South and toward the "Promised Land" of the North. Black southerners read of the thousands who had already said, "FAREWELL TO THE SOUTH" (January 6, 1917) or of the "2 MILLION NEEDED" (October 4, 1916) to work in America's second city. They memorized Mr. Ward's poem, "Bound for the Promised Land," sang William Crosse's inspirational words to "The Land of Hope," and laughed at Fon Holly's political cartoons, "DESERTION" and "THE AWAKENING" (September 2, 1916, and August 19, 1916).

In the spring of 1919, however, the *Defender*'s "Promised Land" was undergoing a metamorphosis. As thousands of white soldiers returned home after the war, they found that the jobs, communities, and lifestyles they had left behind in Chicago were appropriated by thousands of black migrants.

This tension ultimately led to a three-day (July 27–30, 1919) race riot in Chicago—an event that forever changed the tenor of the *Defender*'s migration discourse. The bold headlines of the paper's August 2, 1919, issue summarized the situation: "RIOT SWEEPS CHICAGO," and "GHASTLY DEEDS ON RACE RIOTERS TOLD." When the dust settled, 23 blacks lay dead, with at least 537 others wounded. The call for southern migration ceased after the (blood) "Red Summer" of 1919. Abbott could no longer promise his readers a better life in his once-beloved city of Chicago.

In 1940 John H. Sengstacke, Abbott's nephew, assumed editorial control of the paper. Under his leadership, the *Defender* protested the treatment of African American servicemen fighting in World War II (1939–1945) and, once again, called for the integration of the U.S. armed forces. Facing the threat from the U.S. government of sedition charges, however, the *Defender* attenuated its traditionally radical editorial policy.

On February 6, 1956, the *Defender* became a daily newspaper. Nine years later, Sengstacke again expanded his influence as a voice for black equality by purchasing three additional black papers: the *Pittsburgh Courier*, the *Michigan Chronicle* in Detroit, and the *Tri-State Defender* in Memphis.

By the 1970s, however, the *Defender*, like many of the nation's other black newspapers, began to rapidly lose readership. At the time of Sengstacke's death in 1997, the *Defender*'s circulation declined to less than 20,000. In 2003 Abbott's heirs were forced to sell the legendary Chicago *Defender* to black-owned Real Times, Inc.

SEE ALSO *Politics, Black*

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Alan D. DeSantis

CHICAGO SCHOOL

The post–World War II (1939–1945) period saw the emergence at the University of Chicago of a significant alternative in economics to both the tradition of American institutionalism and the emerging traditions of Keynesianism and general equilibrium theorizing. Usually associated with the work of Milton Friedman (monetarism) and George Stigler, and their students Gary Becker and Robert Emerson Lucas, the Chicago approach to economics is also present in the agricultural and development economics of Theodore W. Schultz, D. Gale Johnson, and Zvi Griliches; the labor economics of H. Gregg Lewis, Al Rees, and Sherwin Rosen; the industrial economics of Lester Telser, Harold Demsetz, and Sam Peltzman; the law and economics of Aaron Director, Ronald H. Coase, and Richard Posner; the economic history of Robert Fogel and Deidre McCloskey; the international economics of Harry Johnson and Arnold Harberger; and the social economics of Kevin Murphy and Steven Levitt. Two themes tie together these various manifestations of the Chicago approach: in each of them, Marshallian price theory is taken seriously, and economics is understood to be an applied science.

At a time when the economics discipline was moving toward both formalized general equilibrium models and refined econometric techniques, Chicago economists continued the interwar tradition of price theory taught by Jacob Viner and Frank H. Knight. From 1930 to the mid-1980s, graduate students read and reread a canon of books and essays by Viner, Knight, Henry Simons, Friedman, Stigler, Coase, and Becker to gain an intuitive appreciation for how economics could be applied to any social or economic problem. As Friedman's 1953 essay "The Methodology of Positive Economics" made clear, the Chicago approach applied a small set of simple tools to economic problems because they retained their predictive success despite their generality. Chicago's predilection for the application of price theoretic models to policy issues was also supported by the analytical egalitarianism of Becker and Stigler's 1977 essay "De Gustibus Non Est Disputandum": look for explanations of economic change in the set of cost constraints individuals face, because people across time and place are assumed to hold similar values and tastes.

The methodological underpinnings of the Chicago approach were driven home to graduate students and faculty alike every week in the workshops that met regularly in the University of Chicago's Department of Economics, Graduate School of Business, and Law School. Starting in the mid-1940s, the workshops became the locus of most research and graduate training in economics at Chicago. After passing comprehensive examinations at the end of the first year, graduate students associated themselves with one or more workshops. Each workshop met weekly for critical examination of papers by faculty members, invited external guests, or senior graduate students. Most workshops functioned by "Chicago rules": papers were distributed prior to the meeting, which was devoted to discussion, rather than presentation, in order to uncover the methodological, theoretical, or empirical problems in the paper. The collective enterprise embodied in the workshop model encouraged faculty and graduate students to pursue interesting applications of price theory in settings where it was commonly understood to not be applicable: antitrust and anticompetition policy, economic development, crime and habitual behavior, law, religion, corporate finance, the family, history, and politics. In all these areas, Chicago economics extended the reach of the discipline by showing that useful, empirically based criticisms of policy frameworks could be built upon basic price-theoretic analytical foundations (Reder 1987).

Chicago economics has not shied away from controversy, either internal or external. The circle around Knight sparred with institutionalists and empirical economists within and outside the department during the 1930s and 1940s. From 1939 to 1955, the University of Chicago was the home of the Cowles Commission, a leader in formal modeling and hence at odds with the Chicago School approach. Alfred Cowles brought Oskar Lange, Jacob Marschak, and Tjalling Koopmans to Chicago, and played an important role in the development of both econometrics and Walrasian general equilibrium theory. The creation of the Shadow Open Market Committee in the early 1970s provided a public forum for the long-standing dispute between Chicago monetarists and the Federal Reserve System's general Keynesian orientation. Finally, the Chicago department's long-standing relation with Latin American students became the center of controversy when a group of Chicago-trained economists became the architects of economic transformation in Chile under General Augusto Pinochet. The impact of Chicago-inspired reforms there contributed to the spread of the Chicago approach across the developing world, and

became the center of a global debate over privatization and market-based reforms.

SEE ALSO *Becker, Gary; Business Cycles, Real; Friedman, Milton; Harris, Abram L.; Laissez Faire; Law and Economics; Monetarism; Money Illusion; Permanent Income Hypothesis*

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CHICANO MOVEMENT

SEE *Mexican Americans.*

CHICANO/CHICANOS

SEE *Mexican Americans.*

CHIEF JOSEPH

c. 1840–1904

Chief Joseph, or *Hin-mut-too-yah-lat-kekht* (Thunder Rolling in the Mountains), was the outstanding leader from 1871 to 1904 of the largest and most influential band of nontreaty Nez Perce Indians. He was also one of several leaders who directed his people through the Nez Perce War of 1877 and the valiant but doomed effort to resist forced removal from their homeland in the Wallowa Mountains of northeastern Oregon.

Like many terms for American Indian people and places, *Nez Perce* is a misnomer. French traders first applied the term, attributing to the entire people an only occasional practice of nose piercing. The Nez Perce people refer to themselves as *Nimíipuu*, which translates roughly as "we people." Compared to their far more warlike eastern neighbors of the upper Plains, until the mid-nineteenth century the Nez Perce were mostly hospitable to American colonial agencies such as schools and missionaries. This relationship changed fairly dramatically shortly after the Treaty of 1855.

Joseph, born around 1840, was the son of Tuekakas, also known as Old Joseph, himself a powerful leader of the Nez Perce. Although some debate persists, Tuekakas was apparently a signatory to the Treaty of 1855 wherein a great deal of Nez Perce land was ceded to the United States in exchange for annuities. This treaty, which was abrogated by the U.S. government's failure to provide the promised annuities, began the process of Nez Perce expropriation that created a more or less permanent schism among the Nez Perce bands, and had a host of other penurious effects.

Joseph succeeded his ailing father as leader of the Wallowa Valley band of Nez Perce in 1871. He inherited a complex and finally insurmountable set of cultural and political problems that can be traced most directly to the Treaty of 1863, which came to replace the abrogated Treaty of 1855. The Treaty of 1863 formalized the division of the Nez Perce into "treaty" and "nontreaty" factions. The "upper" Nez Perce, represented by a man named (ironically) Lawyer, agreed to a massive sale of territory that included the Wallowa Valley. Critically, however, four Nez Perce bands, including Joseph's, did not sign and flatly refused the terms of the treaty. U.S. officials nevertheless asserted Lawyer's authority to cede, effectively, his neighbor's land. The U.S. government thus asserted that Joseph's homeland was federal territory, an assertion emphatically not shared by Joseph, his father, and the Wallowa Valley Nez Perce. Federal claims to the Wallowa Valley did much to precipitate the momentous Nez Perce War of 1877 and brought national attention to the Nez Perce and Chief Joseph.

Joseph made his first appearance as the principal representative of his people at a meeting with U.S. agents in March 1873. The U.S. position was that Joseph's band must leave Wallowa and move onto the Lapwai Reservation. Joseph responded to the demand unequivocally:

> The white man has no right to come here and take our country.… Neither Lawyer nor any other chief had authority to sell this land. It has always belonged to my people. It came unclouded to them from our fathers, and we will defend this land as long as a drop of Indian blood warms the hearts of our men. (Howard 1978, p. 92)

Joseph impressed the U.S. representatives with both the quality of his character and his legal arguments. Consequently, an executive order from President Ulysses S. Grant withdrew the Wallowa Valley from settlement;

however, this order, hotly contested by settlers, was reversed in 1875. In 1877 the U.S. Department of the Interior made the decision to compel Joseph and his band, by force if necessary, to remove to the Lapwai Reservation.

U.S. agents and representatives of Nez Perce nontreaty bands held a final council at Lapwai in 1877. The council went very badly for the Nez Perce, and their extraordinary record of peacefully tolerating a host of injustices came to an end. Although it appears that Joseph, with the utmost reluctance, agreed to remove to Lapwai, he and the other nontreaty bands were overtaken by events when a few young Nez Perce warriors exacted revenge killings on several settlers. Thus the Nez Perce war of 1877, the final significant conflict of the era of Indian wars, began.

The Nez Perce fought a brilliant running battle, complete with narrow escapes and decisive victories, against U.S. forces for several months and over 1,700 miles. In October 1877, after the Battle of the Bearpaw Mountains, they were finally surrounded and forced to surrender, a day's march short of refuge in Canada. Joseph was the only principal Nez Perce leader to survive the hostilities, so the surrender agreement fell to him, and he responded with one of the most powerful examples of American Indian oration that we have on reliable record. The oration famously concludes: "Hear me, my chiefs. I am tired; my heart is sick and sad. From where the sun now stands I will fight no more forever" (Howard 1978, p. 330). The sun stood at 2:20 P.M. on October 5, 1877.

In violation of the assurances made to Joseph by Colonel Nelson Miles at the surrender, Joseph and the remaining Nez Perce were interred on reservations in Kansas and then Oklahoma for the next twelve years. In 1885 they were moved to the Colville Indian Reservation in eastern Washington. Chief Joseph died September 21, 1904.

SEE ALSO *Annexation; Colonialism; Land Claims; Native Americans*

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CHILD BEHAVIOR CHECKLIST

The Child Behavior Checklist for Ages 6 to 18 (CBCL/6–18) is a standardized questionnaire for assessing children's behavioral, emotional, and social problems and competencies. It can be self-administered by parent figures or administered by interviewers. A version for ages one-and-a-half to five years (CBCL/1.5–5) assesses language development as well as problems. These questionnaires are components of the Achenbach System of Empirically Based Assessment (ASEBA). The ASEBA also includes questionnaires completed by preschool teachers and daycare providers (for ages one-and-a-half to five), school teachers (for ages six to eighteen), youths (ages eleven to eighteen), clinical interviewers, observers, and psychological test administrators. Additional ASEBA questionnaires are available for assessing adults (ages eighteen to fifty-nine and sixty to ninety-plus). Because behavior may vary from one situation to another, the different questionnaires are designed to capture both the similarities and differences in behavior across different situations, as seen by different people.

Starting in the 1960s, psychologist Thomas Achenbach began developing the ASEBA to provide practical, low-cost measures of problems and competencies for clinical and research purposes. Statistical analyses of ASEBA questionnaires have identified syndromes of problems that are scored on profiles. The profiles display an individual's scores on syndrome scales in relation to norms for peers of the same age and gender. Examples of syndromes include attention problems, aggressive behavior, anxiety/depression, and social problems. Additional scales are provided for scoring broad groupings of problems designated as *internalizing* (problems within the self) and *externalizing* (conflicts with others and with social mores).

ASEBA forms are also scored on *DSM*-oriented scales that consist of problems identified by international panels of experts as being consistent with diagnostic categories of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*-IV, 1994). Examples of *DSM*-oriented scales scored for ages six to eighteen include anxiety problems, attention-deficit/hyperactivity problems, oppositional defiant problems, and conduct problems.

ASEBA questionnaires have been translated into over seventy-five languages. Their use has been reported in some six thousand publications from sixty-seven countries. The publications span hundreds of topics, such as child abuse, adoption, aggression, bullying, anxiety, asthma, autism, cancer, cross-cultural findings, delinquency, depression, diabetes, stress, substance abuse, suicidal behavior, and treatment. ASEBA questionnaires, lists of translations, research summaries, and other informa-

tion can be obtained at the ASEBA Web site. Computer programs are available for scoring all ASEBA questionnaires. The programs compare reports by different people (e.g., mother, father, youth, teachers) via side-by-side displays of scores obtained from each form that was completed for the individual who is being assessed.

A multicultural computer program provides norms based on parent, teacher, and self-reports obtained for tens of thousands of children and youth from over thirty countries. This program enables users to compare individuals' scores with norms for various groups of countries. It is valuable for assessing children residing in their own countries and also for assessing immigrant children living in host countries. A Web-based application enables users to transmit questionnaires electronically and respondents to complete questionnaires on the Web. The ASEBA is widely used in mental health services, schools, medical practices, child and family service agencies, health maintenance organizations, public health agencies, child guidance, training programs, and research.

No assessment instrument can tap every characteristic that might be potentially relevant to every individual in every culture. Consequently, people completing ASEBA questionnaires are invited to add problems and strengths not already listed and to provide open-ended descriptive information. Because no single source of data is sufficient for comprehensive assessment, users are urged to obtain data from multiple informants and multiple assessment procedures. Users are also advised that no scores on ASEBA scales should be automatically equated with particular diagnoses or disorders. Instead, users should integrate ASEBA data with other types of data to provide comprehensive evaluations of functioning.

Most ASEBA forms are designed to be self-administered by people having at least fifth-grade reading skills. However, for people who are unable to complete the self-administered forms independently, interviewers without specialized training can read the questions aloud and record the respondent's answers. The Test Observation Form (TOF) and Semistructured Clinical Interview for Children and Adolescents (SCICA) require training in direct assessment of children. The Direct Observation Form (DOF) requires training in observation of children in group settings, such as classrooms. Interpretation of data from all ASEBA instruments requires training in standardized assessment equivalent to the master's degree level in psychology, education, or related fields, or two years of residency in medical specialties such as psychiatry or pediatrics.

Critiques of ASEBA questionnaires have been published by Amanda Doss (2005), Robert McMahon and Paul Frick (2005), and Robert Spies and Barbara Plake (2005).

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CHILD DEVELOPMENT

Child development is the study of the different processes assumed to influence human growth and development from birth through adolescence. Development takes place within multiple domains (e.g., cognitive, physical, socioemotional). Yet the processes underlying development can be common across the different domains of development.

TYPES OF PROCESSES THAT INFLUENCE DEVELOPMENT

In-wired Development Although human beings grow and develop at different paces, there are some aspects of development that are consistent for most, if not all, human beings. This consistency suggests that human bodies are designed to grow and develop in a relatively sequential and orderly fashion because the mechanisms responsible for these changes are *in-wired.* That is, these mechanisms are present at birth and are essentially time-released through adolescence and beyond. For example, an infant will exhibit a grasping reflex when his or her palm is

touched. At a later stage, that same infant will develop greater strength and more finely tuned motor skills, such as the ability to intentionally pick up and manipulate an interesting toy.

Development Through Acting Upon the Environment Children are born with sense systems (i.e., vision, smell, hearing, taste, and touch) that allow them to explore and act upon people and objects in their environments. Children may throw different things to see if they bounce or make interesting sounds (e.g., balls, cups, keys). They may place different things in their mouths (e.g., their mother's fingers, rattles) to see if they are hard or soft or can fit inside their mouths. Children may perceive certain smells and associate them with different experiences. It is through active exploration that children begin to learn the properties of different things and relate them to other things that they "know."

Development Through Passive Reactions to the Environment Children's development can also be stimulated by their exposure to the activities that take place in the contexts in which they live and function. For instance, language development is stimulated by immersion within specific language environments. Researchers have found critical periods in early infant development whereby simple exposure to everyday conversation helps children develop the ability to produce certain phonemes (speech sounds) specific to a language. If immersion within specific language environments occurs after a certain period—approximately six to nine months of age—then the child will not be able to make some speech sounds in the same manner as a native speaker.

DIFFERENT DOMAINS OF CHILD DEVELOPMENT

Child development researchers seek to identify and understand age-related developmental changes and abilities and how outside influences such as context (e.g., Urie Bronfenbrenner's ecological systems theory) and culture (e.g., A. Wade Boykin's triarchic theory of minority child development) affect developmental outcomes. Below are brief descriptions of the different domains in which development can take place.

Biological Domain *Physical development* refers to the development of the entire human body, including changes in physical stature and strength, pubertal changes in adolescence, the development of perceptual and motor skills, and brain development. Arnold Gesell's (1880–1961) maturational theory proposed that children's growth and development is biologically driven and unfolds in a series of fixed sequences or milestones in physical, motor, and perceptual domains. Although children vary in their rates of development (e.g., they don't all start to crawl or talk at exactly the same age), they all progress through the same sequences.

Sensory and perceptual development. Perception is the organization and interpretation of information received through our *senses.* Although sensory systems are functional at birth, they are not yet mature. In *The Construction of Reality in the Child* (1954), Jean Piaget (1896–1980) asserted the belief—also held by other theorists—that senses function independently at birth, and with development and experience become more interconnected. By interacting with the environment, children actively construct an understanding of the world, gradually making connections between different types of sensory information.

Other theorists, such as Eleanor Gibson (1910–2002) in *Principles of Perceptual Learning and Development* (1969), argue that the main task of perceptual development is for children to discover the function or permanent properties of objects. Gibson developed the first *visual cliff* method to assess depth perception. The visual cliff strategy helped demonstrate that most infants refused to crawl over the edge of a small cliff with a drop-off covered by glass. Their refusal to crawl over the "edge" was assumed to indicate that they could perceive depth and that depth perception is not learned. Rather, the environment is learned in that it contains information necessary for individuals to make decisions about how to navigate it (e.g., where to walk and not walk). These experiences demonstrate the interconnections between the child's physical world and cognitive development.

Cognitive Domain Piaget's theory of cognitive development describes how children construct an understanding of the world by interacting with their physical and social environments. Children adapt to their environments by developing mental organizations, or *schemes,* to organize their understanding of the world. Adaptation consists of two processes—assimilation and accommodation. Assimilation involves fitting new information into existing schemes (e.g., a child calling a cat "doggy" because it has four legs and fur). Accommodation involves altering existing schemes to accept new information (e.g., a child altering his or her scheme for "doggy" to include barking so that the scheme can no longer include cats).

Lev Vygotsky's (1896–1934) sociocultural theory stresses the importance of social interactions to cognitive development. Vygotsky asserted that learning is a socially mediated, cultural activity that takes place within the *zone of proximal development* (ZPD). Specifically, the ZPD denotes the difference between what children can do on

their own and what they can accomplish with the support of more knowledgeable individuals from their culture.

It is important to note that what and how children learn is influenced by their cognitive developmental status. For example, children might be able to learn and repeat complex words and phrases in middle childhood, yet not be able to understand them conceptually—in abstract terms—until adolescence.

Psychosocial Domain *Socioemotional development.* There are critical precursors of social and psychological development. For instance, *attachment* refers to the development of an emotional bond between infant and mother or primary caregiver. Mary Ainsworth (1913–1999) developed the *Strange Situation* to determine the quality of the attachment between caregiver and child. This strategy assesses children's reactions to their mothers after their mothers leave them alone in a room that is later entered by a stranger. The strategy assumes that if a child reacts in negative ways to the mother upon return, there is a poor relationship between caregiver and child. The importance of attachment to socioemotional and cognitive development was recognized by studies of infants in orphanages during the 1950s and 1960s. In the absence of an attachment relationship, these infants experienced severe developmental delays.

Ego-identity development. Sigmund Freud (1856–1939) believed that personality is formed in the first years of life as children deal with inner conflicts. Erik Erikson (1902–1994) extended Freud's theory, proposing that development unfolds in a series of stages spanning infancy to old age. Each developmental stage involves a challenge and corresponding consequence if that challenge is not met. For example, during infancy the challenge is for infants to develop a sense of trust in the world based on responsive caregiving. If the infant's needs are not consistently met, the infant does not trust that the world is a safe place. This sense of mistrust affects children as they get older and face the developmental challenge of becoming more independent from their parents during adolescence.

While Erikson would characterize adolescence as the period in which identity development is the primary challenge to be resolved, the precursors of identity development can be recognized much earlier. Identity develops along a number of dimensions (e.g., gender, race, ethnicity, social class, physical ability, etc.). Often, different aspects of identity will only become salient for individuals when they become aware of specific differences between themselves and others (e.g., skin color, socioeconomic status, abilities, etc.). Children become aware of differences in treatment and the presence of stereotypes.

Mamie Phipps Clark (1917–1983) and Kenneth Clark (1914–2005) used doll studies to demonstrate the early awareness of social devaluation and negative racial stereotypes. The Clarks posited that black children become aware of racial stereotypes and develop personal racial preferences early in childhood. Doll studies are experimental strategies using dolls that do and do not share characteristics of a child (e.g., gender, skin color, clothing) in order to determine what and with whom a child identifies and the characteristics a child attributes to himself or herself. This strategy assumes that what children believe about the dolls can be indicative of their beliefs about themselves and their sense of identity and self-esteem. In 1954 the Clarks' research was used in a landmark U.S. Supreme Court case, *Brown v. Board of Education*, to demonstrate that segregation—which limited black American's access to high-quality educational institutions and other resources readily available to white Americans—resulted in low self-esteem among African American children. Specifically, the children in the Clarks' studies associated being black (or having dark skin) with negative connotations (i.e., bad, dirty, not smart).

About twenty years later, Margaret Beale Spencer revisited the Clarks' work, demonstrating how *cognitive egocentrism*—a normative, cognitive developmental process—can protect the identity development of young black children, allowing them to maintain high self-esteem despite their awareness of negative racial stereotypes. That is, when they are still cognitively egocentric, children can be aware of color connotations yet not apply their "knowledge" of color connotations to themselves. Spencer's subsequent research demonstrates how improvements in the ability to assume the perspectives of others and how becoming less cognitively egocentric in later developmental stages—another normative cognitive developmental process—results in cognitive dissonance. That is, in the absence of positive racial socialization, young people face the difficult task of reconciling their perceptions of societal stereotypes with their perceptions of themselves and others who share their physical characteristics (i.e., phenotype). In contrast to the Clarks' research, Spencer demonstrates both the complexity of identity formation processes and the multiple influences on identity development. While normative processes of cognitive development can influence how children perceive and make meaning of their daily experiences in terms of differences in race and varied indicators of social class, other external factors, such as racial socialization by parents, serve a protective function and mitigate the potentially detrimental effects of negative racial stereotypes on identity development.

More recent studies using similar methods to assess children's awareness of negative stereotypes and color connotations have yielded similar findings. Yet, if the differences in interpretations asserted by the Clarks and Spencer are any indication, such findings must be inter-

preted within the specific social and historical contexts in which they are conducted. That is, in addition to cognitive developmental status, current social norms and socialization experiences must also be taken into account.

CHANGING METHODOLOGIES IN THE STUDY OF CHILD DEVELOPMENT

Given the diverse theories of development, there are different methodologies for determining the existing and emergent abilities of children and young people (e.g., the Strange Situation, mirror studies, puppet interviews, habituation studies, doll studies, etc). These strategies are based on assumptions about development, the meaning and function of observable behaviors, and similarities among the contexts in which children live and function. Some of these assumptions may be problematic, at best, when considering the experiences of diverse youth of color, immigrants, and youngsters from families that experience intergenerational poverty. As social scientists come up with improved theories, greater cultural competence, and better strategies for studying child behavior, increasingly articulated and nuanced understandings of child development are formulated.

SEE ALSO *Adolescent Psychology; Ainsworth, Mary; Attachment Theory; Child Behavior Checklist; Children; Clark, Kenneth B.; Developmental Psychology; Erikson, Erik; Freud, Sigmund; Piaget, Jean; Research, Longitudinal*

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CHILD LABOR

Child labor is work done by persons under age eighteen (or younger, depending on applicable national law) that is harmful to them for being abusive, exploitive, hazardous, or otherwise contrary to their best interests. It is a subset of a larger class of children's work, some of which may be compatible with children's best interests (variously expressed as beneficial, benign, or harmless children's work). Broadly defined, *child labor* recognizes that childhood is a culturally specific concept and that the particular contexts within which children's work is assigned and organized tend to determine both its costs and its benefits (Ennew, Myers, and Plateau 2005). While in most cultures some work by children is viewed as healthy for maturation and socialization, child labor is not. It is understood to violate human rights law and policy.

The number of children who are engaged in child labor globally is uncertain. The answer to this question varies according to activity, place, society, and other factors. It is estimated that in 2007 there exist some 250 million child workers worldwide (predominantly in developing countries), with perhaps as many as 75 percent of them working in agriculture and related activities, most of the remainder in the nonagricultural informal sector, and only a small portion in the formal sector. Yet unknown is the exact percentage of these working children who experience child labor specifically.

It nevertheless is widely accepted that large numbers of the world's working children toil in appalling conditions, are ruthlessly exploited to perform dangerous jobs with little or no pay, and are thus often made to suffer severe physical and emotional abuse—in brick factories, carpet-weaving centers, fishing platforms, leather tanning shops, mines, and other hazardous places, often as cogs in the global economy; in domestic service, vulnerable to sexual and other indignities that escape public scrutiny and accountability; on the streets as prostitutes, forced to trade in sex against their will; and as soldiers in life-threatening conflict situations. Working long hours, often beaten or otherwise abused, and commonly trafficked from one country to another, their health is severely threatened, their very lives endangered. Many, if they survive, are deformed and disabled before they can mature physically, mentally, or emotionally. Typically, they are

unable to obtain the education that can liberate and improve their lives, a condition that is deemed generally to constitute child abuse in and of itself (Bissell 2005; Bissell and Shiefelbein 2003).

The causes of child labor, while steeped in culture, are linked to economics—primarily poverty, necessitating that children contribute to family income. Likewise, the reduction and eradication of child labor is tied fundamentally to economics. In North America and western Europe, for example, major economically based trends (e.g., industrial development, higher wages, technological innovation, more accessible and prolonged education, lower birth rates, the entry of women into the workforce) best explain, along with state regulation and changing popular ideas about childhood, most of the long-term declines in child labor. Labor movements and other forms of social action also have played an important role, shaping public perceptions and values about children and child rearing.

Because of this variety and complexity, economists and other experts point out that effective policies to combat child labor require flexibility to accommodate the many and diverse factors involved in its reduction and eradication. They especially emphasize the critical importance of presenting poor families and children with economic opportunities and incentives that can free them from having to rely on child labor for survival (Basu 1999; Basu and Tzannatos 2003; Anker 2000, 2001; Grootaert and Patrinos 1999).

Human rights discourse and activism—especially since the 1989 United Nations Convention on the Rights of the Child—have likewise become influential in combating child labor, advancing the case for at least minimal standards of socioeconomic and political justice to hasten its elimination. Increasingly child labor is understood to be a multidimensional human rights problem in violation of a broad panoply of entitlements with which all members of the human family are endowed (Weston and Teerink 2005a, 2005b). The Convention on the Rights of the Child ensures that children specifically, including working children, are not overlooked in this regard. Thus does Article 3(1) stipulate that "in all actions concerning children … the best interests of the child shall be a primary consideration"; and thus, to this end, does Article 32(1) recognize "the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development."

While poverty and other economic factors will continue as driving forces behind child labor, a human rights approach to the individual child and society—holistic and multifaceted—is indispensable to holding the world community and its member states accountable in eradicating the phenomenon (Weston and Teerink 2005a, 2005b). Recognizing child labor as a human rights problem signals that notions of human dignity are central to all aspects of a working child's life and to the means by which child labor is reduced or eliminated. In this setting, states, multilateral international organizations, nongovernmental organizations, and business enterprises are expected to act affirmatively to guarantee that children's rights are not violated within either the work in which they are engaged or the means by which that work is controlled. In addition, children must be informed of their rights so as to be able to engage their full participation in the realization of their rights. To assert a *right* of a child to be free from abusive, exploitative, and hazardous work bespeaks duty, not optional—often capricious—benevolence.

SEE ALSO *Children's Rights; Human Rights*

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Burns H. Weston
William E. Myers

CHILD STUDY MOVEMENT

SEE *Maturation.*

CHILD SUPPORT

SEE *Divorce and Separation.*

CHILD CARE

SEE *Day Care.*

CHILDLESSNESS

The term *childlessness* refers to a lifetime of being childless and can be applied both to couples that have never borne a child and to single women or men. Most research, and hence most available data, focuses on women. In some populations the proportion of women experiencing childlessness has been as low as 2 or 3 percent, and in others it has been ten times this minimum level. In the twentieth-century United States, for instance, the level of childlessness for women born in the first decade of the century (and bearing children during the depression of the 1930s) and for those born in the 1950s (and bearing children during the century's last three decades) was approximately 20 percent. By contrast, it was approximately 10 percent for U.S. women born in the 1930s (and bearing children during the baby boom of the 1950s).

There are four dominant paths to childlessness. First, persons can decide at a young age that they want no children and maintain this position over their lifetimes. Second, persons can intend to have children but postpone childbearing to an age when they are unable to have children, because of subfecundity or infecundity (i.e., limited ability or inability, for biological reasons, to conceive and carry a birth to term). Third, persons who desire and expect children but who are willing to have them only if they are married or in a stable union may become childless as a result of failing to establish such unions. Finally, persons can be unable to bear children due to infecundity present from a young age. The prevalence of each of these reasons for childlessness varies across time and place. In the United States and Europe in the early twenty-first century, the second and third reasons are most prevalent.

There have been many attempts to distinguish voluntary from involuntary childlessness, but this distinction is problematic. Voluntariness is ascribed to those who deliberately choose childlessness and involuntariness to those who are infecund due to congenital abnormalities, malnutrition, or disease. Note that only the first and fourth pathways described above neatly conform to this distinction. The second pathway (postponement followed by infecundity) combines a period of voluntary childlessness with an involuntary period. The third pathway (childlessness due to non-marriage) is in some sense involuntary but is due to a social constraint (the pressure to establish an appropriate union) rather than something biological.

Subfecundity and infecundity, both major contributors to childlessness, have two sources. First, reduced fecundity can occur at any age due to a large number of diseases. For instance, many sexually transmitted infections can lead to pelvic inflammatory disease that results in scarring of the fallopian tubes, thus inhibiting the release of ovum in females. This particular problem may be solved by assisted reproductive technology (ART), which encompasses techniques such as in vitro fertilization. In the United States in 2005, 1 percent of all births resulted from in vitro fertilization. The second cause of infertility is senescence-related (i.e., due to aging). From the time women are in their mid- to late twenties, fecundity declines at an increasing rate with increasing age. ART can overcome some of these senescence-related problems, but technologies still cannot overcome many of them.

Childless adults face a stigma, although its degree varies by time and place. Stigma is greatest in contexts where there are few or no life-course alternatives to marriage and parenthood. In these contexts being unmarried or childless places one outside acceptable adult statuses. The consequences for women are often more severe than for men. Childlessness can lead the husband to take another wife or can provide justification for divorce or abandonment of the wife. In the late twentieth century many societies experienced feminist social movements and assertions that parenthood and childlessness are equally legitimate lifestyle choices.

While childbirth is the dominant pathway to parenthood, the permanently childless may become parents through adoption. Like childless adults, adopted children face a stigma that varies across time and place.

SEE ALSO *Family; Feminism; Fertility, Human; Infertility Drugs, Psychosocial Issues; Stigma*

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S. Philip Morgan

CHILDREN

Although seemingly intuitive, the meaning of the term *children* depends on the context. From a strict biological perspective, the term *children* refers to the offspring of a female and male who have mated. However, the term need not refer only to biological offspring, as it also applies to socially defined categories of children including stepchildren, adopted children, and foster children. By law, one is considered a *minor* until the age of eighteen. However, the law distinguishes children from minors in general. According to the law, a child under the age of fourteen is a "*child of tender age*." The term *juvenile* is used to categorize individuals between fourteen and seventeen years of age, thus distinguishing juveniles from children.

The United Nations' *Convention on the Rights of the Child* (1989) sets forth the universal human rights of children: "the right to survival; the right to develop to the fullest; the right to protection from harmful influences, abuse and exploitation; and the right to participate fully in family, cultural and social life." The four core principles of the convention are: "non-discrimination; devotion to the best interests of the child; the right to life, survival and development; and the right to participation."

Although these meanings are valid, the meaning of the term *children* extends beyond the concrete terms imposed by legal and biological reality. From a developmental standpoint, the term can be used to describe individuals from infancy through preadolescence (before puberty), thus including the following periods of human development: infancy, early childhood, and middle childhood. Children undergo significant biological, cognitive, and social changes during each of these stages.

Growth during infancy is characterized by rapid changes in height and weight. Children are born with reflexes such as those that enable them to suck and turn their heads. They are also sensitive and responsive to the facial features and vocalizations of others, particularly their primary caregivers. By twelve to eighteen months of age, children are able to share attention between a person and an object, known as "joint attention," and they use words and gestures such as pointing to communicate. Children also transition through the stages of locomotion, from crawling to independent upright walking and their early fine motor skills develop. Social interactions initially emerge in dyadic turn-taking bouts between caregiver and child and features of temperament (personality) also emerge. By age two, children are able to recognize their reflections (self) in a mirror, combine words to communicate, search for hidden objects, and manipulate objects during play. Early experiences in infancy set the stage for children's later growth and development. Developmental outcomes during this period are strongly influenced by both nature (genetic influences) and nurture (environmental influences) and risk susceptibility.

Ages two to five mark the early childhood/preschool age period of children's development. By age three, although children's body weight is only 20 percent of its adult size, children's brain size is 80 percent of its adult size. By age five, children's lexicon contains approximately 5,000 to 10,000 words and the syntactic complexity of their language increases significantly. Further developments in children's self-concept and increased narrative skills facilitate children's ability to form and share information about past events (autobiographical memory). Problem-solving skills involving planning and the use of strategies also emerge. Between ages three and five, children's ability to distinguish their thoughts and beliefs from others, known as "theory of mind," develops. Young children's egocentrism affects their view of the world, themselves, and others and is reflected in their inability to effectively coordinate their actions with their peers in play contexts. Play during the early childhood years is "parallel" in nature, defined as two or more children engaged in related activities in close physical proximity to each other. Although parents actively structure and facilitate the social lives and experiences of their children during this period, peers also serve as influential forces.

The hallmark of the middle childhood period is the transition to formal schooling. Although many children attend daycare and/or preschool during the early childhood period, the first day of school marks a cultural passage around the world. Children's physical growth is slow, yet consistent during this period. Between ages five and seven, children's thought shifts from egocentric to concrete operational thought—children are now capable of abstract thinking and understanding and interpreting the thoughts and beliefs of others. Executive functioning capacities, including their conscious ability to control and inhibit their actions, as well as problem-solving, reasoning, working memory, and attention further develop. The peer group becomes increasingly important, as children spend more than 40 percent of their day with peers. Children are labeled by their peers; categories such as

"popular" and "rejected" emerge, as well as the consequences of such social status labels. The development of the self-concept in relation to self-esteem and self-competence as well as moral understanding and beliefs also play integral roles during this period. From a developmental perspective, childhood ends with the onset of puberty.

In addition to legal, biological, social, and developmental definitions of children, one must also consider the impact of the sociohistorical and sociocultural context in which children develop. Children learn by actively participating in cultural activities that promote their growth. Opportunities to learn are embedded in activities at play, school, and work contexts. However, the opportunities afforded to children vary as a function of their cultural upbringing, including the social and economic status of their community and the belief systems regarding their participation in cultural activities.

Children are the product of complex interactions between their genes and the environments in which their development is nested, including, but not limited to, family, school, and community contexts, and the broader cultural belief systems espoused by their nation. Children's experiences and outcomes set the stage for their future development and adjustment in the next stages of human development: adolescence and adulthood.

SEE ALSO *Attachment Theory; Child Behavior Checklist; Child Development; Development; Developmental Psychology; Family; Family Structure; Parent-Child Relationships; Self-Awareness Theory; Stages of Development*

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Joann P. Benigno

CHILDREN'S RIGHTS

Children's rights involve a double claim. First, they reaffirm children as full members of the human family and assert that children have an equal right to the protection of their fundamental human rights without discrimination based on age. Second, children's rights acknowledge children's developing capacity as well as their vulnerability and encompass additional, special rights for children.

The concept of children's rights has gradually evolved and has not always included both equal and special human rights. Children's rights emerged at the end of the nineteenth century in the context of uncontrolled industrialization and its dire consequences for the living conditions of poor working-class children. The child protection movement considered it a moral duty to alleviate the plight of vulnerable children, who were seen as passive victims and mere objects of intervention. These concerns gave rise to the development of child protection legislation and policies regarding child labor, compulsory education, and juvenile justice, and also led to the adoption of the *1924 Declaration of the Rights of the Child* (Geneva Declaration) containing a list of protections that ought to be granted to children.

With the advent and development of the welfare state, throughout the twentieth century, children's rights became increasingly framed within social welfare discourse. In addition to protection against all forms of neglect, cruelty, and exploitation, children's rights now also included the right to special provisions, such as education, health care, family support, and social welfare services. This welfarist view is reflected in the *1959 United Nations Declaration of the Rights of the Child*, which builds upon children's dependency on both their family and the state. During the 1970s, in step with other civil rights and anti-authoritarian emancipation movements, the children's liberation movement began to challenge the exclusive attention being paid to children's protection and welfare rights. The movement argued in favor of children's right to autonomy, including the right to freedom of speech, freedom of assembly, and due process guarantees in judicial proceedings. The child liberationist's claim for children's equal rights was directed against both family and state, whose paternalistic approaches to children were viewed as an impediment to young people's pursuit of autonomy and full participation in society.

The protectionist, welfarist, and liberationist approaches to children's rights converged in the *1989 United Nations Convention on the Rights of the Child* , a legally binding international instrument that has been ratified by all UN member states, except for Somalia and the United States. This convention contains a broad range of rights, including civil and political rights as well as social, economic, and cultural rights, and can be summarized by the so-called "three Ps," which include protection rights (e.g., against violence or exploitation), provision rights (e.g., education or health care provisions), and participation rights (e.g., freedom of expression or right to information). The convention's core message is that children are no longer to be seen as mere passive objects of inter-

vention, but should be recognized as bearers of rights. Children therefore have the right, in accordance with their evolving capacities, to actively take part in shaping their own lives and environments. Since its adoption, various interest groups have made intensive use of the convention as an advocacy tool in a vast array of fields directly and indirectly relating to children's lives and promoting both children's equal and special rights.

SEE ALSO *Child Labor; Children; Civil Rights; Human Rights*

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Karl Hanson

CHINESE AMERICANS

Chinese Americans can trace their roots to the mid-nineteenth century. Although it is not known when the first Chinese ventured into North America, Harry H. L. Kitano and Roger Daniels (2001) suggest that the first major wave of Chinese immigration to the United States occurred just before the California gold rush of 1849. Although Chinese Americans do not have the long history of African Americans and Latino Americans, they are also not a new immigrant group. Rather, Chinese Americans are a well-established U.S. ethnic group that has faced long-standing social, political, and economic discrimination as well as outright government exclusion (e.g., via immigration laws and policies). Chinese people immigrated to the United States during a variety of periods, and they differed demographically from one another: some were professional elites, while others were cheap labor. Initially most were men.

HISTORY OF CHINESE IMMIGRATION TO THE UNITED STATES

The United States has a long history of immigration and naturalization laws and policies that excluded Chinese from entering the country. In the mid- to late nineteenth century there were no formal policies to prevent immigrants from coming to the United States. As a result Chinese laborers, fleeing from what Sucheng Chan (1991) refers to as a time of natural disasters and extreme political turmoil in China, sought work in the United States, a place that many Chinese believed offered unlimited wealth, resources, and opportunities for success. Unlike other minority groups, such as Africans, who were forced to come to America against their wills, most Chinese immigrants were sojourners who intended to work in the United States for a short time and eventually return to their homes in China. However, similar to other racial minorities in the United States, Chinese workers were relegated to second-class citizenship and often treated as inferior or subhuman compared to whites. Large numbers of Chinese laborers were coerced and even physically forced to work on plantations, in mines, and on the railroads. When their labor was no longer needed, exclusionary immigration laws based on race and nationality were instituted, preventing new Chinese workers from entering the United States. The Chinese Exclusion Act, passed in 1882, prevented Chinese laborers from immigrating to the United States for ten years and prohibited naturalization. In 1888 the Scott Act barred all Chinese laborers legally residing in America reentry into the United States after visiting China. The Geary Act (1892) extended the Chinese Exclusion Act for another ten years. Chinese laborers were barred from entering the United States indefinitely in 1902. In 1917 the U.S. Congress prohibited the entry of natives from China, South and Southeast Asia, Afghanistan, and parts of what is now known as the Middle East.

The anti-immigration movement of the early twentieth century was coupled with violence and racism against all Asian immigrants but in particular the Chinese. The anti-immigrant sentiments prevalent during this time were based on numerous fears, particularly a fear of "foreignness," or the idea of difference, usually based on ethnocentric notions of biological and cultural inferiority. White Americans also feared that immigrants would take their jobs, jobs that in many instances were not sought by whites.

In 1943 the Chinese Exclusion Act of 1882 was repealed, and a quota of 105 Chinese immigrants per year was established. The War Brides Act of 1945 allowed veterans of World War II (1939–1945) to bring their foreign-born wives and children to the United States, increasing the number of Chinese women who were allowed to immigrate to the United States. Until then the Page Act of 1875, implemented in an effort to reduce the number of Asian prostitutes in the United States, limited the immigration attempts of most Chinese women. The McCarran-Walter Immigration and Nationality Act of 1952 eliminated racial and ethnic restrictions from the country's immigration and naturalization policies and opened the door for many Chinese women wanting to immigrate to the United States. Likewise the Immigration and Naturalization Act of 1965 removed quotas for immigrants from the Eastern Hemisphere, resulting in high lev-

els of immigration from China, Japan, and various Southeast Asian countries. The new immigration guidelines allowed 170,000 immigrants from the Eastern Hemisphere to enter the United States, with no more than 20,000 per country, along with 120,000 immigrants from the Western Hemisphere. The law also prioritized reunification of families and made it easier for Chinese immigrants to become naturalized. Additionally children of immigrants were granted citizenship, a privilege that was typically denied in the past.

As a result of the Immigration and Naturalization Act of 1965, the rate of immigration to the United States increased, and the nature of immigration changed as more people of color were allowed entry to the United States, creating a substantial shift in the racial and ethnic composition of the population. The number of Chinese immigrants and Chinese Americans in the United States increased from around 125,000 in the early 1900s to well over 1.6 million by 1990.

CHINESE AMERICANS AND THE MODEL MINORITY MYTH

Some researchers argue that American-born Chinese began to outnumber immigrants from China residing in the United States starting in the 1940s, and that trend has continued into the twenty-first century. Chinese Americans are not a monolithic group but rather a diverse population. Some have enjoyed the economic success that comes with higher education and a professional career, but many Chinese Americans are low-skilled laborers with little education and low socioeconomic status. Stereotypes of Chinese Americans often misrepresent their experiences, and according to Frank Wu (2002), racial prejudice and discrimination directed at Chinese Americans often result from such stereotypes. For example, the *model minority* myth, which arose in the mid-1960s, holds that the success of Asian Americans, including Chinese Americans, is due to their hard work and diligence, ignoring how race, class, and reasons for migration can influence the experiences of different immigrant groups.

The model minority myth also exacerbates conflict between Asian Americans and other U.S. minority groups by setting Asian Americans on a pedestal as a "model" group that has "made it" because of dedication and a positive work ethic that other minority groups may lack. Furthermore the model minority myth ignores the fact that many Chinese Americans are not highly educated professionals but are low-skilled laborers who do not experience economic success. Thus the model minority myth obscures the contextual situation of each immigrant group. Chinese immigrants who migrated shortly after the Immigration Act of 1965, for example, were predominantly educated professionals, giving them and their children an economic advantage that many earlier Chinese immigrants lacked.

The model minority myth deflects attention from racist structural factors that have impeded the success of many immigrants and people of color in the United States. It promotes the ideology of individuality as a way to achieve success in America and ignores the barriers (such as racist immigration laws and policies) facing many immigrant groups and their children in achieving success.

CHINESE AMERICANS AND CITIZENSHIP

Although Chinese Americans have fared better in the United States than some other Asian groups (e.g., Filipinos, Vietnamese, Hmong), they have been far from immune to the effects of racism. Numerous studies have documented incidents of overt racism experienced by Chinese Americans, ranging from verbal insults and differential treatment to hate crimes and violence. The murder of Vincent Chin, a young Chinese American man, exemplifies the type of racially motivated violence that Asian Americans may experience. Chin was severely beaten on June 19, 1982, outside a bar in Detroit. He died four days later, five days before his wedding. The perpetrators, two out-of-work autoworkers, claimed they had mistaken Chin for Japanese, a group they blamed for problems within Detroit's automobile industry.

Chinese Americans have also had their citizenship questioned. Citizenship was once legally denied to both Chinese immigrants and their American-born descendants because of their race. In the early twenty-first century, although Chinese Americans are legal citizens, they are often not culturally viewed as citizens because they are not white. Scholars argue that racialized ethnics, such as Chinese Americans, are often assumed to be foreign rather than American. Mia Tuan's 1998 study of the Asian Americans' experience revealed that many Asian Americans, including Chinese Americans, are often asked where they are from. When "America" is the response, most whites, unsatisfied that Asians can be Americans, will continue by asking, "no, where are you *really* from." Thus as Frank Wu (2002) pointed out, Asian Americans are seen as "perpetual foreigners" in the United States. The perpetual foreigner syndrome was evident in some media coverage of the 1998 Winter Olympics. During the figure skating competition, Michelle Kwan, a Chinese American skater, lost the gold medal to Tara Lipinski, a white American. A subsequent MSNBC headline read, "American Beats Out Kwan," suggesting that Kwan was not as American as Lipinski. Four years later, in the *Seattle Times*, a similar headline appeared when Kwan lost to another white American, Sarah Hughes, in the 2002 winter Olympics: "Hughes Good as Gold: American

Outshines Kwan, Slutskaya in Skating Surprise." Both headlines are examples of how a sense of belonging, a privilege associated with citizenship, is denied to Chinese Americans because of their race and how racialized ethnics are not able to fully assimilate into the mainstream.

While Chinese cultural centers and Chinatowns reflect one of the many impacts Chinese Americans have had on American culture, Chinese American laborers represent another major contribution to American culture and history. In 1869 the Union Pacific Railroad and the Eastern Pacific Railroad were joined together by the Transcontinental Railroad, connecting the eastern part of the United States to the western. Chinese laborers provided a substantial number of workers to complete the project and were paid less than their white counterparts. The completion of this railroad aided in the economic development of the western part of the United States. Thus while Chinese American laborers have historically been exploited financially and faced racial discrimination, they were integral in the economic development of the United States through their hard work on the railroads.

Chinese Americans have lived in the United States for more than a century, but their history has been plagued with racism. Racist immigration and naturalization laws and policies excluded Chinese from migrating to the United States and denied them rights and privileges associated with citizenship. Although these laws and policies have been dismantled, Chinese Americans still face stereotypes, such as the model minority myth, that minimize the breadth of their experiences. The history of Chinese immigrants provides a contextual framework with which to understand the situation of Chinese Americans.

SEE ALSO *Assimilation; Citizenship; Immigrants, Asian; Immigration; Model Minority; Nativism; Naturalization; Racism*

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Saher Selod
David G. Embrick

CHINESE DIASPORA

Diaspora is a Greek term, meaning the widespread scattering of seeds. Its biblical use refers to the dispersal of the Jews around the Roman Empire. Until the 1990s it was rarely found in the social sciences, and is also absent from previous editions of this Encyclopedia and from the 1994 *Dictionary of Sociology*. The international distribution of middlemen minorities during premodern times was long considered of only historical interest, with little relevance to the modern world of capitalist corporations and nation-state societies. Members of various diasporas were conceptualized as *ethnic groups*, *minorities*, and *immigrant communities*, with a focus on their place within individual host societies, rather than on their transnational connections.

Only in the last decades of the twentieth century, with increasing globalization, did the need for a collective term become apparent. Daniel Chirot and Anthony Reid proposed the term *essential outsiders*; Joel Kotkin used *global tribes*. Neither term caught on, however. Khachig Tololyan launched the journal *Diaspora*, in December 1991, with the claim that transnational diasporas were "the exemplary communities of the trans-national moment," and new diaspora studies (of Africans, Chechens, Indians, Irish, Italians, Palestinians, and Filipinos) have multiplied.

Diaspora is a collective noun, referring to people who have (themselves or their ancestors) been scattered from a place of origin, and to elements of their common identity and culture. If a diaspora is only constituted by shared memories and common attributes, these are likely, with the passage of generations, to fade through assimilation. Long-term survival for diasporic communities generally depends on continuing transnational communication and flows. Thus, historically, the most tenacious diasporas have often been those interconnected by long-distance trade.

THE CHINESE OUTSIDE MAINLAND CHINA

China has for over two thousand years been a great power in the East, yet it has nearly always seen itself as a land-based empire, indifferent or hostile to the traders and emigrants who left its shores, fleeing poverty or conflict or seeking economic opportunities. Chinese have been important traders around the South China Sea since before the twelfth century. They were predominant middlemen in precolonial and colonial times in Southeast Asia and Vietnam, and served as intermediaries between local producers and colonizers. Like other such groups, they suffered periodic persecutions and expulsions. Chinese trading communities around the region and the world thus largely established themselves and their transnational relations with each other as self-regulating entities, with limited state support or protection and with their own associations and welfare provision.

Wang Gungwu (in *China and the Chinese Overseas*, 1991) argues that these Chinese established a *peripheral capitalism*, on the fringes or outside the reach of the imperial (and later the Communist) state. Only here was Chinese merchant culture able to flourish, away from a repressive and contemptuous mandarinate, whose Confucianism emphasized ritual and hierarchy and disapproved of trade, risk, and profit. Wang describes how the Chinese overseas created their own distinctive institutions, by reshaping and developing the traditions they had brought with them and combining them with influences from the lands where they settled and the local women they married. These traditions included the Taoist and Zen Buddhist beliefs common in southern China, the sophisticated monetary and lending practices of Chinese peasants, and a facility in forming cooperative organizations. Another resource, described by Gary Hamilton (in *Business Networks and Economic Development in East and Southeast Asia*, 1991), was the experience some brought of imperial China's urban guilds, which had set their own standards for weights and measures and had enforced contracts without relying (as had the guilds of medieval Europe) on state enforcement.

Most diasporic Chinese came from the outer parts of the empire, from its southern coastal provinces of Guangdong and Fujian, where state control was looser, or via treaty ports or the ceded territories of Hong Kong or Macao. One concentration of emigrants from the mainland was based in Taiwan, which was only attached to China late and insecurely. Settled from China from the sixteenth century—often by merchants and pirates from Fujian, who were seeking a base for maritime activities, and by rebels against the Manchu dynasty—Taiwan only came under central control after 1684, and was always lightly administered and notoriously lawless thereafter. From 1895 until 1945 it was a colony of Japan and after 1949 it was ruled by Kuomintang exiles from the Communist mainland.

In time, many diasporic Chinese assimilated completely, yet continuity was assured by new waves of emigrants, who worked for, learnt from, and then replaced their predecessors. In Chinese business culture today there are some direct continuities with features of merchant culture and institutions in the China of five hundred years ago. Yet most of the members of modern diasporic communities can trace their own family's origins to villages in China left at most only a couple of generations ago. For a majority in Southeast Asia, the migration of their family occurred in the period preceding the last world war. For most in Hong Kong it is even more recent—until 1981 those born in China were a majority. Thus a persisting feature of these often-ancient communities is their intense social mobility and constant self-rejuvenation.

In the mid-nineteenth century, gold rushes attracted significant numbers of Chinese to California and Australia, where many remained. By the end of the century, however, restrictions on immigration and widespread discrimination led to a decline in numbers, the demise of associations, and ghettoization within narrow economic niches. Ivan Light, in *Ethnic Enterprise in America* (1972, p.7), comments that the "classic small businesses of prewar Chinese were … monuments to the discrimination that had created them." In contrast, the 1920s saw large-scale movements, including of women, into flourishing Chinese settlements in Southeast Asia.

In the decades after World War II the situation reversed. Postcolonial nationalist or Communist regimes in Southeast Asia and Vietnam restricted, persecuted, or expelled the Chinese in their midst, whereas racially based barriers to entry were lifted in the United States in 1965 and the White Australia policy was terminated in 1973.

Chirot and Reid (1997) explore the analogies between diasporic Chinese in Southeast Asia and Jews, viewing both as "essential," but periodically scapegoated, "outsiders." In Malaysia, discriminatory rules favored *bumiputras* (indigenous Malays) but failed to halt the rise of Chinese business. In Thailand, Chinese de-sinified their names. Many were expelled from Vietnam after the Communist victory. In Indonesia, Chinese cultural expression was banned until recently, and widespread anti-Chinese riots and rapes followed the Asian Crisis and the fall of Suharto in 1998.

In the last decades of the twentieth century, new waves of secondary immigration increasingly moved from Asian countries of settlement to North America and Australia and fresh flows came from Mainland China. Today, at the start of the twenty-first century, Chinese communities are to be found everywhere in the world,

including throughout the Americas and Europe, as well as in Russia. There is, for example, an active Chinese Association in Johannesburg.

A CHINESE DIASPORA?

Can the some twenty-five million Chinese outside China (double that number if we include those in Hong Kong and Taiwan), sometimes called the *ethnic Chinese* or the *overseas Chinese* or the *Chinese overseas*, be called a *diaspora*? The suggestion has been academically controversial, and not only among those who wish to reserve the concept for the Jewish people.

An academic divide long carved up Chinese studies into segments, placing in separate compartments the China specialists, the East Asianists, the Southeast Asianists, and the experts on ethnic Chinese in Western countries. Those who speak of a diaspora have been accused of oversimplifying and blundering into areas beyond their competence. Reality is indeed varied and complex, but these particular divides result from the staking out of academic and political territories, rather than from insurmountable barriers in lived experience. If questions about linkages are not posed, however, the answers are unlikely to obtrude on our vision because there are also statistical divides, created by the political units for which data are collected and presented. Also a factor are the ideological preferences of those who wished to focus on national loyalties and assimilationist hopes, and to deny any transnational attachment, especially one that might involve a Cold War opponent. To justify the concept of a Chinese diaspora, two arguments need to be made, showing both similarities and interrelationships between and among diasporic communities.

First, it must be demonstrated that despite the multiplicity of national, political, and class loyalties and the diversity of cultural and historical trajectories, there exist significant similarities and elements of a shared identity. Evidence for such commonalities is particularly to be found in studies of the economic activities of Chinese around the world, which demonstrate clearly a strong tendency to establish mainly small family businesses, with important elements of a distinctive and shared business culture and mode of operating.

John T. Omohundro (1981) describes the Chinese of Iloilo in the Philippines in 1970 as a one-class community, without gentry, in which the vast majority were self-employed descendants of penniless immigrants. In this community, young employees saw themselves as the rich businessmen of the future and old employees were seen as ex-apprentices who had bungled their chances. The status of women and junior members within the family rose as the family business grew and their role within it expanded. Similar accounts from many other times and places (including America and Australia) demonstrate how both opportunities (including their own effective business traditions and skills) and legal and discriminatory barriers (which often excluded them from agriculture and the military, and from managerial and bureaucratic positions in the state or big business) pushed every person with any ambition into self-employment.

Even education was more likely to lead back into business, or at least into an independent profession, than into high-status employment. Within the Chinese business community, managerial and bureaucratic positions were rare and these tended to be subject to owners' mistrust, while access to top positions was reserved for family members. Independent business activities have provided the predominant role model, the community leadership, and often the most common activity for mature adults in diaspora communities.

In most Chinese diasporic communities, one of the central and continuing attributes of business is a persistence of family control over entrepreneurial decision-making, even in the largest companies, where professional management and public flotation may be well-established. The tendency, with a few noteworthy exceptions, has been toward a multiplication of relatively small units in a conglomerate structure under the family's control, rather than the expansion of size and market share of large bureaucratically organized firms. This too has reduced the visibility of the concentrations of capital involved. Western and Japanese systems of capitalism have tended to present a duality of large corporations and small and medium firms, with major differences between them and limited opportunities to move back and forth. In Chinese capitalism, many features are common to both large and small operators, leading to greater similarities and continuities and opportunities for mobility up and down. Small firms, with large entrepreneurial ambitions and transnational networks, and with a leading role for highly educated family members, can grow fast by multiplication. Tycoons may own hundreds of such small firms and retain the personalistic style of small operators; they may also be weakened or have their wealth split up if key managers leave to set up independently or if inheritance is divided.

In their external relations (with lenders, borrowers, suppliers, customers, contractors, and subcontractors), Chinese capitalists tend to minimize reliance on legal protection. Chinese capitalism is distinguished by a preference for long-term, personalized, but opportunistically extensible networks, based on trust and upheld by the indispensability of reputation.

Another feature, at least in recent times, has been a preference for a strategy of diversification, in the interests of maximizing flexibility, not "putting all your eggs in one basket," and taking advantage of novel and unpredictable

opportunities that open-ended networks may present. This allows individual family members to carve out a territory of their own, promoting harmony, and is facilitated by the freedom of owner-managers to make rapid decisions.

The temporary usefulness of this Chinese business culture was rarely contested. It used to be claimed, however, that these distinctive features were transitional, doomed to decline as they adjusted to modernity and the mainstream or were driven out by competition with modern capitalism. By the 1980s, however, "modernity" itself had been changed by processes of globalization, including cheap and rapid communications, growth in the flows of people, goods, money, and information, the spread of deregulation, the opening of the frontiers of previously largely autarkic Communist regimes, the weakening of economic control by national governments, increasing worldwide subcontracting, and direct foreign investment in globally integrated production. The balance of advantage shifted to the flexible, entrepreneurial businesses of the diaspora, whose previously largely redundant transnational "sleeper" networks now sprang into life.

THE CHINESE DIASPORA IN THE ERA OF GLOBALIZATION

The second requirement for justifying the term *diaspora* is to show that the similarities between separate communities create the conditions for actual transnational linkages and interrelationship. Through much of the twentieth century, such linkages and interrelationships were at best incipient and potential, blocked as they were through a long period of nationalism and stagnant world trade. Only in the last decades of the century, in the period of globalization, have constant and increasing transnational diasporic activities and movements across various divides become apparent. Experts within particular fields of Chinese studies have tended, however, to be blind to these newly growing linkages, constructed by the movement of goods and capital and by people (business people, refugees, students, visitors) investing and trading, remigrating, or returning to their place of origin, all weaving far-flung networks of kinship and friendship. Widely noticed or not, such linkages and the similarities that facilitate them are likely to persist, insofar as they are an asset in an age of globalization.

From the 1980s, locally initiated and funded manufacturing, finance, and markets were developing faster within East and Southeast Asia, along with a progressive integration of regional trade and investment flows. The previously discrete Chinese trading or manufacturing communities around the region now had the motive and opportunity to start diversifying, upgrading, and linking up, using their transnational networks to benefit from and contribute to the export-led economic growth of the region.

The volume of trade of the countries in which Chinese diaspora networks were active (including China, Hong Kong, and Taiwan and the countries of Southeast Asia—the Philippines, Indonesia, Singapore, Thailand, Malaysia, and Vietnam) grew slowly between 1980 and 1985 and then more than doubled by 1990. By 1996 it had increased by another 126 percent, over a period during which total world trade increased by only 56 percent. Intraregional trade, between these countries, increased even faster, up by nearly 160 percent from 1990 to 1996. All parts of the region experienced accelerated growth. Trade between the two great Chinese entrepôts of Hong Kong and Singapore (including the re-exports they channeled in both directions between China and Southeast Asia) increased at rates similar to those of intraregional trade as a whole.

In the 1990s the countries in which diasporic Chinese were prominent economic actors emerged as major international investors. Already by the late 1980s their combined outward investments were jointly on a par with those of Japan. After 1991, as Japan substantially reduced its global foreign investment, they clearly overtook her. By 1996 these countries provided around 14 percent of total world flows of realized foreign direct investment, most of it directed to the countries of their own region. There can be no doubt that most of this investment came from Chinese diaspora sources within these countries. In contrast, Japan was by then providing only about half that proportion of the world total, most of it directed outside the region.

Turn-of-the-century studies of Chinese ethnic business concentrations in America and Australia—in California, Vancouver, and Brisbane, for example—have also found a trend for traders and investors to start using their transnational networks to develop a role as bridges to Asia, adding their weight to the diaspora's global flows.

The most significant opportunity for the diaspora, both the small businesses and the tycoons, was the economic opening of, first, China's Pearl River Delta after 1985, and then of all of the coastal provinces (from which most in the diaspora had originated) and the rest of the country. Diasporic Chinese were responsible for some 80 percent of the massive foreign investment in China up to the end of the twentieth century and were still accounting for over 50 percent in the middle of the first decade of the twenty-first. They served as a bridge between China and the world economy, helping to transform China into one of the great exporting nations of the world, and a rising economic superpower. Their role, and the crucial importance of the transnational networks that made it possible, is documented in some detail in Lever-Tracy et al (1996).

CONCLUSION

Before the turn of the century, the multiplication of successful contacts with other parts of the diaspora and with the mainland was promoting re-sinification. Children were now often encouraged to learn Chinese, new Chinese associations proliferated, and dormant Chinese identities and knowledge were resurfacing. Economic success has bred a new ethnic pride and a cultural flowering, and diasporic Chinese are now even able to influence the Chinese government.

SEE ALSO *East Indian Diaspora; Jewish Diaspora; Palestinian Diaspora*

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Constance Lever-Tracy

CHINESE EXCLUSION ACT

SEE *Chinese Americans; Immigrants to North America*

CHINESE REVOLUTION

The term *Chinese Revolution* refers to a series of great political upheavals in China between 1911 and 1949 that brought the classical, Confucian, imperial era to an end and eventually led to Communist rule and the establishment of the People's Republic of China. The first phase of the Chinese Revolution started with the republican revolution of 1911, which came about as a result of growing social unrest, the disruptive and humiliating presence of Western and Japanese troops on Chinese soil, and the inability of the imperial government to launch the process of China's belated modernization or even to defend national sovereignty and dignity. The Manchu-descended Qing dynasty (1644–1912) was easily overthrown by a popular rebellion led by nationalist leader Sun Yat-sen (1866–1925), his National People's Party (Guomindang), and other revolutionary groups. The last Qing monarch, child emperor Pu Yi (1906–1967), was forced to abdicate on February 12, 1912. A republic was proclaimed under the provisional Nanjing Constitution of 1912, which was supposed to translate into practice Sun Yat-sen's three principles for the revolution: democracy, nationalism, and socialism.

A republican government headed by General Yuan Shikai (1859–1916), the military leader of the most powerful revolutionary faction, was established in the ancient capital, Beijing. In spite of his greater popularity, Sun Yat-sen, who briefly became nominal president in 1913, had to step aside in Yuan's favor in order to avoid a civil war. Having initially committed himself to a constitutional order in China, General Yuan proved to be more interested in imposing a centralized personal dictatorship. He suspended the republican constitution, dispersed the fledgling national assembly in Nanjing, proclaimed himself president for life, and even tried to bring back the abolished monarchy with himself as emperor. Yuan Shikai was deposed in 1916 and replaced by another military warlord in Beijing. This political crisis only deepened the power vacuum in Chinese politics, which persisted until the ultimate triumph in 1949 of Communist leader Mao Zedong (1893–1976).

The Paris Peace Conference of 1919 after World War I (1914–1918) sparked great nationalist turmoil in the young Chinese Republic. Having participated in the war on the side of the victorious Entente allies, the Chinese hoped to see an end to the imposed and unequal foreign treaties under which China had been coerced to grant

Western powers and Japan "extraterritorial" rule over the main Chinese seaports, as well as unfair and predatory trade privileges. They felt betrayed when the so-called treaty port system was left in place, frustrating Chinese hopes for territorial integrity and national self-determination. To add insult to injury, defeated Germany's land "concessions" in China were turned over to Japan as a result of a secret treaty signed in 1917 by Britain, France, and the warlord government in Beijing. The ensuing sense of national outrage and betrayal ignited a storm of popular unrest in Beijing, in which angry Chinese from all walks of life participated in a student-led demonstration held at the famous Tiananmen Square on May 4, 1919. The Tiananmen protesters were later joined by many other patriotic-minded Chinese in a nationwide wave of demonstrations, marches, strikes, and boycotts of Japanese goods that became known as the "May Fourth movement" and which contributed immensely to the explosive growth and radicalization of Chinese nationalism.

The second phase of the Chinese Revolution was the Nationalist revolution, which began in the early 1920s. By 1923 Sun Yat-sen had formed a military-political alliance with the recently formed Chinese Communist Party (CCP) in an attempt to restore national unity and prevent a civil war. Inspired by the example of Vladimir I. Lenin (1870–1924) and his Bolshevik revolution in Russia, Sun Yat-sen also established close ties with Moscow, receiving Soviet advisers, weapons, military training, and economic assistance. With Soviet help, Sun Yat-sen and his associates set up a Nationalist government in Guangzhou, which modified Sun's "Three Principles of the People" to stress a more radical, anti-imperialist, and anticapitalist ideological agenda. The Guomindang's National Liberation Army, led by General Chiang Kai-shek (Jiang Jieshi, 1887–1975), Sun's brother-in-law, fanned out of Guangzhou to challenge the power of local warlords, who had sprung up across China in the absence of a strong central authority. But Sun's death in 1925 left the Chinese Republic without a unifying figure, and it soon fell into the internecine conflict and bloodshed that he had feared.

By 1927 Chiang Kai-shek had emerged as the Guomindang's new leader, trying to extend the authority of the Guangzhou government and meet the serious challenge posed by local warlords and their separatist ambitions, as well as by growing Communist influence throughout the country. In a military effort to reunify China, he and his Communist allies waged a successful military campaign against the powerful northern warlords, overrunning half of China's provinces and many important cities. But a new civil war broke out when Chiang moved to destroy his alliance with the Communists and also severed most ties with the Soviet Union. Under pressure from wealthier and more conservative members of the Guomindang, he turned on his erstwhile Communist allies, starting with the so-called Shanghai massacre of 1927, in which tens of thousands of Communist Party members were brutally executed by the Nationalists in Shanghai and many other Chinese cities in what came to be known as the Nationalist "White Terror."

With the Communists temporarily crushed and driven out of the cities, Chiang resumed his northern expedition against the local warlords and their private armies. By 1928 most of China, including Beijing, was finally brought under Nationalist control, thereby ending the period of warlordism (even though some northern warlords continued to defy the central government's authority until 1937). The new Guomindang government established at Nanjing, however, was weakened by the stubborn opposition of the Communists and especially by imperial Japan's invasion and occupation of Manchuria in 1931. Even after the Japanese attack, Chiang pressed the fight against the Communists, whom he regarded as the more dangerous enemy. His decision not to fight Japan's aggression in Manchuria cost him and his party a loss of support among the more nationalistic sectors of Chinese society, who began to view the Communists, rather than the Nationalists, as leading the struggle for national sovereignty and unification.

Chiang launched a series of military offensives that surrounded the Communist troops in southeast China in 1930, but legendary Communist military commander Zhu De (1886–1976) managed to break out of the encirclement and resorted to rural guerrilla warfare to harrass his Nationalist opponents. Zhu De had created a well-trained, disciplined, and highly mobile professional military corps, the Red Army, which was based on the peasantry as the main revolutionary force in a country that was predominantly rural, agrarian, and agricultural. Under constant attack by the numerically superior Guomindang troops, the Communists retreated to the southeastern province of Jiangxi, where they proclaimed the short-lived Chinese Soviet Republic (1931–1933). They introduced radical land reforms, which attracted significant support among the poor peasants. After more Nationalist assaults, the Communists were forced to flee Jiangxi, which led to their famous Long March to escape total rout. The 6,000-mile Long March to the northwest, which took place from October 1934 to October 1935, depleted the Communist ranks from over 100,000 to little more than 20,000 survivors, mainly as a result of skirmishes with the pursuing Guomindang soldiers, as well as the harsh weather and terrain conditions. But it also resulted in the emergence of Mao Zedong as the ablest and most charismatic Communist leader. The exhausted Red Army troops finally settled around Yenan in Shanxi Province, where they remained until 1946.

Chiang Kai-shek ordered the Manchurian units of his army to move against Mao's weakened forces in 1936, but his plan to finish off the Communists backfired. Determined to liberate their home region from Japanese occupation and encouraged by the Communists, mutinous Manchurian officers arrested Chiang and held him captive for two weeks, demanding an end to the civil war and the formation of a united front against Japan. Their patriotic revolt eventually led to an uneasy alliance between the Guomindang and the Communists to expel the foreign invader. For a while, most of China rallied behind the Guomindang government for an all-out resistance against the Japanese. In 1937 full-scale fighting broke out between the Chinese and the Japanese Imperial Army in the so-called Second Sino-Japanese War, which later merged with World War II (1939–1945). The Japanese armies overran most of eastern China and the main coastal cities, which forced the Guomindang government to relocate its capital far inland to Chongqing. Japan's brutal occupation and wanton disregard for Chinese lives was symbolized by the infamous "rape of Nanjing," in which Japanese soldiers pillaged and burned the city, while systematically massacring nearly three hundred thousand men, women, and children. With logistical and air support from the United States and Britain, the Chinese troops—especially the militarily more effective Communist guerrilla units—managed to tie down the bulk of the Japanese Imperial Army inside mainland China. Abandoned by the Guomindang government, millions of poor peasants in eastern China turned away from the Nationalists, relying instead on the Red Army for protection from the Japanese occupation forces. The national mass mobilization in the struggle against Japan only reinforced the existing bonds of unity and cooperation between the peasantry and the Communists that had originated in the years of their Yenan retreat. Animosity between the Nationalists and the Communists persisted, however, as Chiang's army continued to blockade the areas under Mao's control.

The last phase of the Chinese Revolution was the Communist revolution, which began with the resumption of the civil war, temporarily interrupted by the Sino-Japanese War of 1937 to 1945, and culminated with Communist Party rule being established throughout China in 1949. While all Chinese had pooled military resources against the Japanese during World War II, open civil war flared up again in 1946, when the Red Army (now renamed the People's Liberation Army) and the ruling Nationalists resumed fighting each other. Dominated by the conservative landlord class, which was determined to preserve the traditional semifeudal order, the Guomindang was losing the support of urban-based middle-class professionals and businessmen, who demanded wide-ranging social and economic reforms. Using skillful propaganda and moderating their radical land redistribution program, the Communists mobilized millions of disaffected Chinese, especially in the impoverished countryside. By 1945 the Communist Party had more than 1.2 million members and the People's Liberation Army numbered about 1 million soldiers ready to fight to the death for the proclaimed Communist ideals of economic equality, social justice, and national independence. With strong support from Moscow, the Communists had acquired the numbers, organizational resources, and military strength necessary to successfully challenge Guomindang rule. Diplomatic efforts, spearheaded by U.S. general George Catlett Marshall (1880–1959), to mediate a negotiated agreement between the warring parties failed to prevent the renewal of all-out conflict.

At first the strategic initiative was in the hands of the Nationalists, who were receiving substantial U.S. military and financial assistance. American ships and planes helped transport Chiang's troops, who captured all principal cities, including Yenan, the coastal areas, and most of northern China, but failed to weaken the Communist stranglehold on the countryside. Communist military leader Zhu De used aggressive guerrilla tactics, launching hard-hitting counterattacks against the enemy's overstretched overland lines of communications and supply. Throughout 1948 the Communist "war of the villages against the cities" proved to be so effective in encircling enemy-held areas and urban centers that the Nationalist troops in Manchuria were completely cut off and had to be resupplied by air. By the end of the year, all of China north of the Yangtze River was under Mao's control. In 1949 the demoralized Nationalist forces were decisively defeated, compelling Chiang Kai-shek to resign the presidency and seek a negotiated peace with his adversaries. But it was too late for any compromise settlement with the victorious Communists. Meeting only token resistance, the People's Liberation Army began its final push to capture the remainder of China south of the Yangtze, including the major cities of Nanjing, Guangzhou, and Shanghai. On January 31, Beijing fell to the advancing Communist forces. Following their total defeat, Chiang, his government, and fifty thousand surviving Nationalist soldiers were evacuated to the island of Formosa (now Taiwan), where the Guomindang was the dominant political party into the 1990s. With the civil war finally over, on October 1, 1949, Mao Zedong proclaimed the People's Republic of China before huge cheering crowds in Beijing's Tiananmen Square.

SEE ALSO *Communism; Guerrilla Warfare; Mao Zedong; Mobilization; Nationalism and Nationality; Revolution; Sun Yat-sen; Union of Soviet Socialist Republics*

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Rossen Vassilev

CHISHOLM, SHIRLEY
1924–2005

Shirley Anita St. Hill Chisholm, the first black woman elected to the U.S. Congress, was born in Brooklyn, New York, on November 30, 1924. Chisholm graduated from Brooklyn College in 1946 and began her career as an educator. Her belief in the power and necessity of education motivated her to earn her master's degree in early childhood education from Columbia University in New York in 1952 and eventually launched the political career for which she is revered. Working with the New York City Bureau of Child Welfare, along with her involvement in local organizations, Chisholm solidified many of the relationships that led to her election to the New York State Assembly in 1964. Only four years after assuming that position, Chisholm made the transition from state politics to national politics with her election to the U.S. House of Representatives in 1968, becoming the first black woman elected to Congress.

In Congress, Chisholm continued to live up to her campaign slogan of "Unbought and Unbossed." She routinely spoke against politics and policies that she viewed as unfavorable to the American people. Moreover, Chisholm did not let the exigencies of reelection rule her actions in Congress. She did what she thought was right, proper, and best. This frequently made her unpopular both with her mostly male colleagues and her constituents. As a result, much of Chisholm's career was spent on the margins. She was conscious of how both her race and gender excluded her from the male dominated social network that ran Congress. Her commitment never waned, despite this opposition, and as a result she was elected to seven terms in the House of Representatives before retiring in 1982. She was also one of the founding members of the Congressional Black Caucus in 1971.

Despite her historical importance as a congresswoman, Chisholm is best known for her run for the U.S. presidency in 1972. Chisholm ran in the Democratic primary against several male contenders, but not to win in a conventional sense. Chisholm felt that her candidacy served primarily a reform function by keeping her male counterparts focused on the issues. Despite her intentions in entering the race, she faced discrimination from the mostly male political establishment. Many felt that Chisholm should have allowed a black man to run for president before a women tried to do so. Furthermore, her presence in the race was unwelcome, as evidenced by the lack of media coverage of her candidacy. Well aware of these dynamics, Chisholm was undaunted and entered the primary. Though she would lose, she was able to make a notable showing in the primary. After her foray into presidential politics, Chisholm returned to the House of Representatives, where she served until 1982. Upon retiring, Chisholm settled into a quiet life with her husband, Arthur Hardwick. In 1991 Chisholm, now a widow, relocated to Florida where she lived until her death in January 2005.

Chisholm's success came from her commitment to humanistic, people-centered leadership. She wanted to inspire individuals, especially women, to believe in their abilities to effect change in their world. Her goals transcended color as she worked tirelessly for a responsive government that would act for the sake of all people, not for special interests. Though it cost her at times, Chisholm remained faithful to the principles of democracy. She was a reflective leader at a tumultuous time, and this is the legacy her leadership leaves behind.

SEE ALSO *National Organization of Women; Women and Politics*

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Niambi Carter

CHI-SQUARE

The term *chi-square* (χ^2) refers to a distribution, a variable that is χ^2-distributed, or a statistical test employing the χ^2 distribution. A χ^2 distribution with k degrees of freedom (*df*) has mean k, variance $2k$, and mode $k - 2$ (if $k > 2$), and is denoted χ^2_{df}. Much of its usefulness in statistical inference derives from the fact that the sample variance of a normally distributed variable is χ^2-distributed with $df = N - 1$. All χ^2 distributions are asymmetrical, right-skewed, and non-negative. Owing to the broad utility of the χ^2 distribution, tabled χ^2 probability values can be found in virtually every introductory statistics text.

X^2 TEST FOR POPULATION VARIANCES

A test of the null hypothesis that $\sigma^2 = \sigma_0^2$ (e.g., H_0: $\sigma^2 = 1.8$) is conducted by obtaining the sample variance s^2, computing the test statistic

$$G = \frac{(N-1)s^2}{\sigma_0^2} \qquad (1)$$

and consulting values of the χ^2_{N-1} distribution. For a two-tailed test, G is compared to the critical values associated with the lower and upper $(50 \times \alpha)$% of the χ^2_{N-1} distribution. Rejection implies, with confidence $1 - \alpha$, that the sample is not drawn from a normally distributed population with variance σ_0^2.

X^2 TESTS OF GOODNESS OF FIT AND INDEPENDENCE

The χ^2 goodness of fit test compares two finite frequency distributions—one a set of observed frequency counts in C categories, the other a set of counts expected on the basis of theory or chance. The statistic

$$G = \sum_{i=1}^{C} \frac{(O_i - E_i)^2}{E_i} \qquad (2)$$

is computed, where O_i and E_i are, respectively, the observed and expected frequencies for category i given a fixed total sample size N. G is approximately χ^2-distributed with $df = C - 1$. If the null hypothesis of equality is rejected, the test implies a statistically significant departure from expectations.

This test can be extended to test the null hypothesis that several frequency distributions are independent. For example, given a 3×4 contingency table of frequencies, where $R = 3$ rows (conditions) and $C = 4$ columns (categories), G may be computed as

$$G = \sum_{j=1}^{R} \sum_{i=1}^{C} \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \qquad (3)$$

and compared against a $\chi^2_{(R-1)(C-1)}$ distribution. Expected frequencies are computed as the product of the marginal totals for column i and row j divided by N. Rejection of the null hypothesis implies that not all rows (or columns) were sampled from independent populations. This test may be extended to any number of dimensions.

These χ^2 tests have been found to work well with average expected frequencies as low as 2. However, these tests are inappropriate if the assumption of independent observations is violated.

COMPARISON OF DISTRIBUTIONS

A common application of χ^2 is to test the hypothesis that a sample's parent population follows a particular continuous probability density function. The test is conducted by first dividing the hypothetical distribution into C "bins" of equal width. The frequencies expected for each bin (E_i) are approximated by computing the probability of randomly selecting a case from that bin and multiplying by N. Observed frequencies (O_i) are obtained by using the same bin limits in the observed distribution. The one-tailed test is conducted by using equation 2 and comparing the result to the critical value drawn from a χ^2_{C-1} distribution. Note that the number of bins, and points of division between bins, must be chosen arbitrarily, yet these decisions can have a large impact on conclusions.

The χ^2 distribution has many other applications in the social sciences, including Bartlett's test of homogeneity of variance, Friedman's test for median differences, tests for heteroscedasticity, nonparametric measures of association, and likelihood ratios. In addition, χ^2 statistics form the basis for many model fit and selection indices used in latent variable analyses, item response theory, logistic regression, and other advanced techniques. All of these methods involve the evaluation of the discrepancy between a model's implications and observed data.

SEE ALSO *Distribution, Normal*

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Kristopher J. Preacher

CHOICE IN ECONOMICS

The theory of choice, individual and social, was mainly developed by economists, with crucial contributions from psychologists, political scientists, sociologists, mathematicians, and philosophers.

Individual choice concerns the selection by an individual of alternatives from a set. In standard microeconomic theory, the individual is supposed to have a preference over a set (or a utility function, that is, a numerical representation of the preference). A standard behavioral assumption asserts that the individual selects the best alternatives according to his or her preference. This implies that the preference and the set of alternatives have appropriate mathematical properties. This is the case, for instance, if the set of alternatives is *finite* (the number of alternatives is a positive integer) and the preference is a *weak ordering* (a ranking of the alternatives from the most preferred to the least preferred with possible ties). When the set of alternatives is the standard budget set of microeconomics, the selection is still possible when appropriate topological assumptions are made on the weak ordering and the space of goods. The selected alternatives are the *demand set*. If there is a single alternative, it is the *individual demand*. It will depend, given a preference, on the budget set that is defined by the individual's wealth and the prices. For a given wealth, as a consequence, demand depends on prices. The behavioral maximization assumption is illuminatingly discussed by Amartya Sen (2002).

Although in microeconomics the standard direction is from preference (or utility) to choice (or demand), *revealed preference theory* reverses this direction. It is alleged that choice is observable, but preference is not. In revealed preference theory, choice is supposed to reveal preference. More precisely, if choice satisfies suitable consistency properties, one can retrieve preference. As an example of such a consistency condition, imagine that you are making a choice in a department store that includes a food department. Your choice in the entire store that happens to be food must be identical to the selection of food you would make if you visited only the food department. Given this kind of consistency condition, it is possible to retrieve a preference that is a weak ordering.

Uncertainty in individual choice differs whether it is *objective uncertainty*, à la John von Neumann (1903–1957) and Oskar Morgenstern (1902–1977), or *subjective uncertainty*, à la Leonard Savage (1917–1971). This entry will discuss only objective uncertainty. In this case, the recourse to utility functions is imperative. The set of alternatives is the set of probabilities over prospects—say, lotteries if the prospects are prizes. The individual has a preference given, for instance, by a weak ordering over the set of lotteries. With a utility function representing a weak ordering (which is possible given appropriate conditions), the only property of the real numbers one can use is the ordering property ("greater than or equal to"). The utility functions are said to be ordinal. They are unique up to a strictly increasing transformation. Over lotteries (with further assumptions), one obtains a utility function (called the *von Neumann-Morgenstern utility function*) that satisfies the expected utility hypothesis: The utility of a lottery is equal to the sum of the utilities of the prizes weighted by the probabilities. For instance, in a lottery with two prizes, a bicycle and a car, if the probability to win the bicycle is .99 and the probability to win the car is .01, the utility of the lottery is equal to .99 times the utility of the bicycle plus .01 times the utility of the car. When the expected utility hypothesis is satisfied, the utility function is unique up to an affine positive transformation, and differences of utility become meaningful because these differences can be compared according to the "greater than or equal to" relation. Such utility functions are called *cardinal*. They are used as the basic element of decision theory under risk, where some further assumptions are made on the utility function (concavity, derivability and properties of derivatives).

Social choice is about the selection of alternatives made by a group of individuals. There are obviously two aspects of social choice corresponding to its double origin: voting and social ethics. Although there were precursors in antiquity and medieval times, the birth of social choice theory is generally attributed to the Marquis de Condorcet (1743–1794) and Jean-Charles Borda (1733–1799), two French scholars, at the end of the eighteenth century. The tremendous modern development of this theory stems from the works of Kenneth Arrow and Duncan Black (1908–1991). Individuals are supposed to have preferences over a set of alternatives. Since these preferences are generally conflicting, one must construct rules to obtain a synthetic (or social) preference or a social choice. Arrow's (im)possibility theorem asserts that there does not exist any rule satisfying specified properties. On the other hand, Black's analysis demonstrates that majority rule generates a social preference provided that some homogeneity of individual preferences (single-peakedness) is assumed.

Arrow's book ([1951] 1963) established the formalism in which social choice theory has developed since then. Two major results are due to Sen and to Allan Gibbard and Mark Satterthwaite. Sen showed the impossibility of having a rule that admits a minimal level of liberty in the society (the group of individuals) and a principle of unanimity (according to which the social preference or the social choice must respect the unanimous preferences of the individuals). Gibbard and Satterthwaite proved independently that there was no rule that was immune to the strategic behavior of individuals—that is, there are situations in which it is advantageous for an individual to reveal a preference that is not his or her sincere preference.

When individual preferences are over uncertain prospects and are represented by von Neumann-Morgenstern utility functions, John Harsanyi (1920–2000) showed that the utilitarianism doctrine could be revived. In a rather caricatural way, the utilitarianism doctrine asserts that social utility is the sum of individual utilities and that social utility has to be maximized. In some of his works, Harsanyi provided a scientific foundation for a kind of weighted utilitarianism. Harsanyi's utilitarianism is often opposed to the liberal egalitarianism of John Rawls (1921–2002).

A major trend of recent research on voting theory is about scoring systems (e.g., the plurality rule used in the United States and Great Britain or Borda's rule). Donald Saari's contributions to scoring rules are a major advance in social choice and voting theory, with important possible applications.

SEE ALSO *Arrow, Kenneth J.; Condorcet, Marquis de; Constrained Choice; Expected Utility Theory; Maximization; Paradox of Voting; Rationality; Rawls, John; Risk; Trade-offs; Uncertainty; Utilitarianism; Utility Function; Utility, Von Neumann-Morgenstern; Von Neumann, John; Voting Schemes; Welfare Economics*

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Maurice Salles

CHOICE IN PSYCHOLOGY

Since the mid-twentieth century the term choice has been operationally defined in a variety of different ways in psychology. Consequently, the study of choice in psychology reflects this variability. Choice has often been studied as the outcome of a decision-making process. Economic theories of rational choice assume both that the decisions individuals make will determine their behavior and that decisions will be made based on a general set of rational laws. In particular, it is assumed that (1) the decision maker is able to compare all of the alternatives; (2) all comparisons will be consistent (i.e., if *A* is preferred to *B*, and *B* to *C*, *C* may not be preferred to *A*), and (3) the decision maker will engage in utility maximization; that is, will always choose the most preferred option to achieve desired ends.

Aware of the reality that the decisions people make do not always conform to conventional economic assumptions of rational choice, the psychologist Herbert Simon proposed the notion of bounded rationality. That is, rational choice is limited by the cognitive capability of the individual and the complexity of the environment in which a decision is made. Simon proposed that agents will, therefore, engage in satisficing, or accept a choice that is good enough but not necessarily perfect. Simon's assertions pointed to a notable difference between economic and psychological views of rationality. Namely, traditional economic theories assume that the world is perceived as it really is and that there are no limits on the decision maker's cognitive capabilities. Consequently, economics takes a substantive view of rationality. That is, choices can be predicted based entirely on knowledge

about the real world because decision makers always reach a decision that is objectively optimal. In contrast, a strength of the psychological view of rationality is that it is assumed that the decision maker has limited knowledge and cognitive capacity and does not necessarily perceive the world the way it really is. Consequently, psychological theories focus on the process by which decisions are made.

Building on Simon's contributions, cognitive psychologists Amos Tversky and Daniel Kahneman originated prospect theory to explain irrational human economic choices. In empirical studies on framing, Tversky and Kahneman demonstrated systematic reversals of preference when the same problem is presented in different ways. For example, when decisions are framed in terms of a potential gain, individuals are more likely to engage in risk aversion. Whereas when decisions are framed in terms of a loss, individuals will be more likely to choose the risky option. Tversky and Kahneman documented a number of judgment heuristics and biases that influence the way people assess probabilities under uncertain conditions and thus influence the decisions they make. Notable heuristics and biases include the availability heuristic, base-rate fallacy, anchoring and adjustment, conjunction fallacy, clustering illusion, and representativeness heuristic.

Psychologists have also studied choice as an experience that has consequences for an individual's sense of personal control, motivation, and self-regulation. According to Edward Deci and other theorists, it is theorized that autonomy and competence are fundamental human needs that underlie intrinsic motivation, the drive to engage in a task for its own sake. Social contexts that satisfy these needs will enhance intrinsic motivation and related outcomes. Consequently, research on the topic has suggested that the provision of choice may be one contextual factor linked to adaptive motivational and achievement outcomes. Even the perception of choice, as opposed to true choices, has been demonstrated to have beneficial effects on motivation-related constructs.

However, late-twentieth-century research has suggested that choice is not ubiquitously beneficial. In particular, although Caucasian Americans seem to benefit from making personal choices, individuals from Asian cultures seem to benefit more when choices are made by significant others. Further, proponents of self-regulatory perspectives of choice have shown that choice may actually have detrimental effects to the extent that making a choice is effortful, resulting in decreased energy needed for future tasks. In fact, research has shown that having fewer choices is more motivating than having an extensive, and potentially overwhelming, array of choices. Potential explanations for contradictory findings have been offered. In particular, the nature of the choice experience may be influential moderator of the effect.

SEE ALSO *Choice in Economics; Decision-making; Rational Choice Theory; Rationality*

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CHOLESKY DECOMPOSITION

The Cholesky decomposition factorizes a positive definite matrix A into a lower triangular matrix L and its transpose, L':

$$A = LL'$$

This decomposition is named after André-Louis Cholesky (1875–1918), a French artillery officer who invented the method in the context of his work in the Geodesic Section of the Army Geographic Service.

The $k \times k$ real symmetric matrix A is positive definite if and only if $x'Ax > 0$ for any nonzero k-vector. For such matrices, the corresponding Cholesky factor L (sometimes called the *matrix square root*) always exists and is unique. Matrices of this sort arise in many econometric contexts, making the Cholesky decomposition a very useful computational tool. For example, it can be used to solve the normal equations of least squares to produce coefficient estimates in multiple regression analysis. In this case, the place of A is occupied by the matrix of squares and cross-products of the regressors, $X'X$.

Given the Cholesky decomposition of A, the set of linear equations $Ax = b$ in the unknown vector x may be written as $LL'x = b$. Writing y for $L'x$, we get $Ly = b$, which may be solved for y, then $y = L'x$ is solved for x. It is trivial to solve equations on the pattern $Mx = b$ for triangular M.

Algorithms for computing the decomposition are based on the following relationships between the elements a_{ij} of A and the elements l_{ij} of L:

$$l_{i,j} = \frac{1}{l_{j,j}} \left(a_{i,j} - \sum_{k=1}^{j-1} l_{i,k} l_{j,k} \right), \quad i > j \qquad (1)$$

$$l_{i,i} = \sqrt{a_{i,i} - \sum_{k=1}^{i-1} l_{i,k}^2} \qquad (2)$$

Element l_{ij} can be computed if we know the elements to the left and above. The Cholesky-Crout algorithm starts from the upper left corner of L and calculates the matrix column by column.

The beauty of the Cholesky method is that it is numerically stable and accurate (as noted by Turing 1948) while requiring fewer floating-point operations and less workspace (computer memory) than alternative methods. It does, however, have a problem if the matrix A is very ill-conditioned. (In the econometric context mentioned above, this occurs if there is a high degree of collinearity among the variables in the data matrix X.) Computing the decomposition requires that we calculate a sequence of square roots. The values under the square root sign in equation (2) are always positive in exact arithmetic, but for ill-conditioned A they may be very small. Given the rounding error inherent in finite-precision computer arithmetic, these values may go negative—in which case the algorithm cannot continue—or they may simply fall below the magnitude at which rounding error is an acceptable proportion of the computed value. A practical implementation of the Cholesky algorithm for a digital computer must check for this condition and terminate if need be. If the Cholesky method fails, one can resort to the computationally more expensive QR or SVD decomposition methods.

Besides solving sets of linear equations, the Cholesky decomposition has a further use in econometrics that deserves mention, namely, decomposing the covariance matrix for a set of residuals in the context of a vector autoregression. This sort of analysis was pioneered by Christopher Sims (1980) and quickly became popular. The role of the decomposition is to permit the simulation of the response of a system to a disturbance in any one of the variables, and also to perform an accounting of the proportions of the forecast error variance attributable to disturbances in each of the variables.

SEE ALSO *Matrix Algebra*

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Allin Cottrell

CHOMSKY, NOAM

1928–

In the field of linguistics, Noam Chomsky occupies a position close to that held by Isaac Newton in physics during the eighteenth century. Because language is central to being human, Chomsky has also long occupied a foundational role in the cognitive sciences that have burgeoned since the middle of the twentieth century. While Newton had an equally intense and ambitious career as an alchemist and a doomsday Biblical scholar, the politic Sir Isaac kept these careers, largely successfully, a dark secret. Chomsky, however, has published dozens of books and countless articles throughout his life expressing leftist, egalitarian, anarchist views with almost unimpeachable moral authority and meticulous scholarship. Yet Chomsky has insisted that his scientific work in no way supports or "proves" his political views, other than his insistence that humans, in having cognitive command of a discrete infinity of linguistic structures, are beyond the comprehension of the empiricist behaviorism dominant in mid-twentieth-century American academic circles.

Born in Philadelphia in 1928, Chomsky pursued his undergraduate studies at the University of Pennsylvania, where he studied with Zellig Harris, a structural linguist who saw linguistics as the compact description of a community's time-bound finite corpus of utterances (literally, sonic sequences of supposed phonetic atoms). Chomsky completed his graduate work while a Junior Fellow at Harvard University between 1951 and 1954, and he became a professor at MIT in 1955, rapidly advancing to a series of distinguished professorships. His books *Syntactic Structures* (1957) and *Aspects of the Theory of*

Syntax (1965), which have made him the most cited living author, soon revolutionized linguistics.

The opening three sentences of *Syntactic Structures* tersely render his formalized, mentalist, and nativist view:

> Syntactical investigation of a given language has as its goal the construction of a device for producing the sentences of the language under investigation.… The ultimate outcome of [such] investigations should be a theory of linguistic structures in which the descriptive devices utilized in particular grammars are presented and studied abstractly.… One function of this theory is to provide a general method for selecting a grammar for each language, given a corpus of this language. (Chomsky 1957, p. x)

Formally speaking, one cannot describe a human language by listing its sentences, simply because there are an infinite number of them. One must therefore describe a device that would generate these, and only these, sentences. This "device" would display the knowledge that a competent human speaker of this language has. Language is the device, the internal brain/mind device, not the finite behavioral outputs that this device, coupled with others, produces. Linguistics is thus a branch of psychology.

Behaviorists such as B. F. Skinner thought that knowledge of language consisted of associations between particular words (heard sound sequences). Through repetition, humans learn the sound sequences "How are you," "I would like a red apple," and "I am fine," but not "Are you how," "Red a like would I apple," "Am fine I," and so on. An associative grammar like this is called *finite state* grammar; it fits well with the empiricist notion that humans learn everything through (sequences of) sensory experience, and it makes no use of "dubious" abstractions such as noun, pronoun, verb, auxiliary verb, or adjective.

Yet there is massive evidence that people routinely produce new sentences that they have never heard before and that have never been produced in the history of their language. Even if sentences are limited to fifteen words or less, there are literally trillions of different but perfectly grammatical sentences of English. In fact, Chomsky gave a decisive formal proof that no human language could be generated by a finite-state grammar. We simply have to internalize at least a *phrase structure* grammar that makes use of rules that deal in abstract categories such as noun phrase, verb phrase, noun, pronoun, verb, auxiliary verb, adjective, and so on. Indeed, Chomsky proved that even a phrase-structure grammar is not all that is needed, and that the surface structure of a sentence is not a reliable guide to its deeper features.

Human languages have in common many principles and processes, word forms and structures, and rules and features. What the linguist describes, therefore, belongs to human language as much as to a particular language (abstracting, of course, from the peculiarities of particular idiolects and dialects toward humanly universal cognition). Indeed, every one of the hundreds of human language that has been described makes use of the same phrase-structural concepts of noun phrase, verb phrase, pronoun, verb, adjective, and so on. In the linguistic theory of the last two decades, it appears that a small number of principles and initial parameter settings determine every aspect of grammar that makes a human language and differentiates it from other human languages (a good thing, too, because the human baby seems equally prepared to take on any human language to which it is exposed). Chomsky has speculated that a Martian anthropologist would regard all human languages as essentially the same language.

"A general method for selecting a grammar for each language," given a sample corpus, would also be the knowledge a human child brings to the samples of a language to which the child is exposed. A vast body of evidence about child language development has persuaded nearly all linguists and cognitive scientists that the human child is preprogrammed with a "language acquisition device." To give an example from personal experience that is familiar to investigators of language learning, the two-year-old daughter of this author, Casey, exploded into using auxiliary verbs and tag negations over the space of two weeks, saying "I am going," "I can't," "Susan isn't here." All of the auxiliary verbs came in at virtually the same time, and Casey tag-negated only those verbs, no others: She never said "I eatn't," "I gon't," "Susan walkn't," or "The cat grabn't the bird." She also said "I amn't" and "I am going, amn't I." No one around Casey ever said "amn't," but she went on happily using the construction, and it wasn't until she started school two years later that she realized no one else talked that way. Of course, Casey was doing what comes naturally. In some sense, she (or some part of her brain/mind) knew what auxiliary verbs and regular verbs were, and she knew that you could tag-negate (put "n't" after) auxiliaries but not after other verbs. She also never said "I am going, aren't I," because she knew that "am" is a singular verb, that "are" is a plural verb, and that "I," being a singular pronoun, could not take a plural verb ("are").

Now, of course, Casey had never heard the English words "noun," "verb," "auxiliary verb," "tag-negate," "pronoun," "plural," or "singular." Nonetheless, she (or some part of her brain) knew perfectly well the word kinds that these English words name, just as a monolingual speaker of Urdu knows what nouns, pronouns, and verbs are, although he may have no idea what spoken label (in Urdu or English) to use for these perfectly familiar word kinds. It is this sense of knowing, of linguistic competence, that linguistics now clearly emphasizes.

But how did Casey know about these things when no one around her ever tried to explain them to her? The linguist's answer is that hearing something is an auxiliary verb or a pronoun is just like seeing that something is a red ball or a small animal. So Casey, just like any other human child whether in a literate or tribal community, identified the different word kinds present in her environment, although no one was explicitly coaching her to do this. She recognized that auxiliary verbs, but not other verbs, could be tag-negated, so she said "I amn't," just as she said "I can't" or "He isn't," because she saw that "am" was an auxiliary verb, and so could be tagged with "n't." Speaking and hearing a natural language is a competence acquired naturally (in the first several years of life), while reading and writing requires—unfortunately—years of effort and explicit instruction. Similarly, our basic visual/motor competencies come to us naturally in our first years. Our recently burgeoning "cognitive sciences" attend to this central aspect of being human, the characteristic competencies or faculties that make us *homo sapiens*.

Chomsky maintains that his work in linguistics, and cognitive science generally, have virtually no connection with his political and moral views—views for which he claims no expertise, although he has published countless articles, books, interviews, and commentaries on political and moral matters. He claims no professional expertise in such matters because he believes that no one really has such expertise. To Chomsky, political and moral matters can and must be understood by all citizens, not just by elites or would-be professional apologists for elites (or, more particularly, corporate wealth and power). Chomsky rose to public attention (and the Nixon White House's "enemies" list) for his opposition to the Vietnam War, although his subsequent opposition to U.S. imperialism more generally, particularly in the Middle East, and his criticism of the U.S. media bias have muted his ability to address the U.S. public. Hence, Chomsky and his political and moral views are better known outside of the United States. It should be said that Chomsky has consistently maintained that U.S. behavior, as a dominant world power, is no worse than previous dominant world powers, such as Britain in the eighteenth and nineteenth centuries and Imperial Rome.

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CHOW TEST

The term *Chow test* refers to a family of statistical tests used mainly, but not exclusively, in econometrics. The aim of all the tests in the family is to test for parameter constancy across all the observations of the sample of data under analysis. In econometric modeling, parameters usually have some economic interpretation, such as the responsiveness, or elasticity, of some variable to changes in another. If a model is to have any predictive power, it is important to check the assumption of parameter constancy. A Chow test is a way to perform such a check.

Economic data frequently take the form of time series. A time series constitutes a record of the history of an economic variable, such as the unemployment rate. Each individual observation of a time series is associated with a given period of time, which may be a year, a quarter, or even, in the case of financial data, a few minutes. In time series modeling, one looks for patterns in the dynamic evolution of a set of series. Such patterns can take various general forms, but all of them depend on parameters, the values of which are usually unknown.

From time to time the economic environment undergoes structural changes. A classic example is the Great Depression of the 1930s, a later one the abandonment in the 1990s of many European national currencies in favor of a single currency, the euro. Changes of this importance can be expected to lead to changes in the values of at least some of the parameters of economic models, and these changes often can be detected by a Chow test.

The term *cross-section data* is used to designate data sets that record aspects of economic units, such as firms, households, or governments, at a particular point in time. Failure of parameter constancy can arise in cross-section models if the observed units display too much heterogeneity so that, for instance, men may be described by parameters different from those suitable for women, rich countries may differ from poor ones, and small firms from large ones.

In 1960 Gregory Chow, then an associate professor at Cornell University (and from 1970 to 2001 a professor of economics at Princeton University, where the Econometric Research Program is now named in his honor), published a paper in *Econometrica* in which he laid out various versions of the Chow test. Chow's main research interest at that time was the demand for automobiles in the United States. In earlier work he had proposed

an econometric model based on data for the years 1921 to 1953, and as data had become available for the period 1954 to 1957, Chow wanted to see whether his old model could explain the new data. He used the tests he had developed in his earlier paper for this purpose, and concluded that the old model was still good.

Students of econometrics in the 1960s found Chow's paper hard to understand. Consequently, in 1970 Franklin Fisher, a professor of economics at the Massachusetts Institute of Technology, published an article in *Econometrica* in which he set Chow's tests in the context of the statistical literature, and showed how they all could be viewed as F tests, that is, standard tests used to check whether a parameter or parameters are significantly different from zero. As a result of Fisher's exposition, the Chow test became a very widely used tool of applied econometrics, implemented in all standard software.

SEE ALSO *Test Statistics*

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Russell Davidson

CHRISTIANITY

Christianity, as its name suggests, is a religion practiced worldwide devoted to the worship and example of Jesus Christ. Jesus was a preacher who lived and taught in Israel two thousand years ago. The word *Christ* means "anointed" and refers to the fact that his followers believed he was anointed by God, whom many Christians believe to be his father, to redeem Israel. These disciples considered the work of Jesus to be the fulfillment of prophesies in the Hebrew scriptures, which they came to call the Old Testament. For a New Testament they added gospels (stories of his life) and epistles, which were letters to early Christian communities. These focus on the account of Jesus' death by crucifixion, their belief that he was raised from the dead, and the idea that his disciples were commissioned to carry his message to the entire world.

THE JEWISH HERITAGE AND CHRISTIAN EXPANSION

Despite the common roots of Judaism and Christianity, almost at once Christians and Jews went separate ways and sometimes fell into conflict, which led to Christian anti-Semitism and frequent persecutions of Jews. In the twenty-first century serious efforts are bringing the two communities into conversation and often common action, but relations remain tense in some communities.

From their original home in Jerusalem, believers in Jesus quickly moved north and east, where at Antioch in Syria they were first named "Christians." During the next four centuries this faith born in Asia also became a vigorous presence in North Africa, which was part of the Roman Empire, and in Europe, with which it came to be most identified until the twentieth century. In the fourth century Christianity, once harassed or forbidden, became the favorite of emperors and the established religion of the Roman Empire. In and after the sixteenth century missionaries and colonialists took the faith into South and North America, and in the early twenty-first century its churches prosper most in the Americas, sub-Saharan Africa, and Asia. About two billion followers, almost one-third of the human race, consider themselves Christian.

CENTURIES OF CONFLICT AND ENTERPRISE

Though Roman emperors were some of the first enemies of Christianity, the sudden rise of Islam in the seventh century led to Muslim conquests of most of North Africa, where Christianity eventually all but disappeared. Muslims also conquered Palestine—the "Holy Land" to Christians, Jews, and Muslims—and advanced in Europe. During the eleventh, twelfth, and thirteenth centuries Christian leaders called for crusades to retake the holy places, especially in Jerusalem, and undertook many military ventures against then-Islamic territories.

Internal conflicts also beset Christianity. In the eleventh century the Eastern and Western churches, long in tension over doctrine and practice, separated. At issue in the separation was both the refusal of the Eastern Christians to regard the pope as the supreme authority and a doctrinal point about how Jesus Christ related to God the Father. Many political and cultural issues also led to the break. Within Western, or Roman Catholic, realms there was also conflict, some of it marked by the Inquisition, a name given to severe efforts by official Catholicism to purge itself of individuals and groups that were suspected of heresy against the church (which generally included anyone who was not a practicing Catholic or who refused to convert). The Protestant Reformation, beginning in the early sixteenth century, permanently divided the Western church. That Reformation was fought over, among other things, the authority of the church and the Bible, with Protestants claiming that they relied only on the divinely inspired scriptures and not on human authority, such as that of the pope (the leader of

the Roman Catholic Church). In more recent times Protestants have argued among themselves over biblical authority: was the Bible the "inerrant" word of God, or might it be interpreted in such ways that its human elements also stand out?

Through it all the same zeal that produced crusades, inquisitions, schisms, and reformations inspired clerics and laypeople alike to create distinctive cultures marked by the invention of the university in the late Middle Ages, cathedrals, great art, and institutions for providing health care. Such energies also led to diversity in teaching and governance. Roman Catholics remained loyal to the pope. Lutheranism, inspired by the German religious reformer Martin Luther (1483–1546), eventually became recognized worldwide as another denomination of Christianity. Similarly the Church of England (Anglicanism), or in the United States the Episcopal Church, rejected papal authority. A third tradition, often called Reformed—informed by the writings of the French theologian and reformer John Calvin (1509–1564) in Switzerland, parts of Germany, and the Netherlands along with John Knox (1513–1572) in Scotland—stressed divine sovereignty. Still another cluster, sometimes called Radical or Anabaptist because its adherents "rebaptized" those who had been received into the church through infant baptism, spread, though its members were often persecuted by other Christians.

STORIES, DOCTRINE, AND ORGANIZATION

While Christian teaching draws most deeply on the Bible, its leaders found it necessary to advance from telling informal stories to engaging in more formal expression in doctrines—official teachings that define the tenets of the faith. At a series of ecumenical (worldwide) councils during and after the fourth century, theologians, emperors, and bishops wrestled with basic questions. Christianity is strongly monotheistic, professing faith in one God (as is Judaism and Islam). But Christians also believe in a complex doctrine called the Holy Trinity, by which God is considered as existing in three persons: the Father (God), the Son (Jesus), and the Holy Spirit. They also wrestle with the ways to affirm and proclaim that the human Jesus also has divine status. Later councils dealt with the workings and effects of Christ in the church and in the greater community. According to Christian doctrine, Jesus is regarded as the "savior" of believers from their sin, which has distanced them from God, as well as the one who brings them salvation and inspires them to acts of love and justice.

Christians have worked with many forms of organization, usually stressing either episcopal government—which means rule by bishops, as in Roman Catholicism, Eastern Orthodoxy, and Anglicanism—or more "democratic" patterns, such as rule by elders or congregants themselves in the millions of local Protestant congregations or parishes. Referring to Christianity as a community may seem strained, because it is broken into around thirty thousand subcommunities called church bodies or in some places denominations. In the third millennium the most rapid new growth is in Pentecostalism, a movement of believers who profess the power of the third person of the Trinity, the Holy Spirit. Pentecostalism stresses the immediate experience of God through "signs," such as healing or speaking in indecipherable spirit-guided vocalizations (speaking in tongues).

The central act of Christians everywhere is worship, usually guided by an ordained or specially appointed leader, named a priest, pastor, or preacher. Christian worship can be formal in cathedrals or informal in home and outdoor settings. Most Christians stress preaching at worship, meaning pronouncing judgment on erring believers and verbally offering forgiveness or grace to those who repent and set out to change their ways.

The other feature in most Christian assemblies is the sacramental life. Most Christians baptize new members with water and offer followers a sacrament, or Eucharist, which was instituted at Jesus' Last Supper, where bread and wine are consecrated and consumed in remembrance of Jesus' death (also called the Communion). Through this sacrament it is believed that members receive forgiveness, deepen their community life, and are empowered to serve God, especially by serving their neighbors and people in need.

SOCIAL AND CULTURAL CONTEXTS

Throughout its history Christianity has been influenced by the societies in which it thrives. After opposition within the Roman Empire early on, Christianity became the religion established and protected by law. The spectrum of attitudes within the Christian community includes everything from ascetic monasticism to artistic creations. In early Christianity church and regime were separate, and in modern free societies "church and state" remain legally distinct. At the same time Christian faith is very much a public affair, promoting movements of social reform and charity. Furthermore while Jesus' own teaching inspires pacifists and other peacemakers, faith in a powerful and judgmental God has also authorized arbitrary rule and wars.

Devoted as Christians have been to social, cultural, and often political expressions, their creeds or statements of faith also teach that the world as it is now will someday end. While many Christians may agree that the future and the end are determined by God, they differ widely on the

questions of how the end will come, though somehow most associate it with the "Second Coming" of Jesus Christ.

SEE ALSO *Church, The; Church and State; Coptic Christian Church; Greek Orthodox Church; Heaven; Hell; Jesus Christ; Judaism; Martyrdom; Orthodoxy; Protestant Ethic; Protestantism; Rastafari; Religion; Roman Catholic Church; Santería*

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Martin E. Marty

CHURCH, THE

The English word *church* and the German *Kirche* derive from the Greek *Kyriake*, which means "that which belongs to the Lord." The Romance languages derive their words for church (*iglesia*, *chiesa*, *église*, etc.) from the Latin word *ecclesia*, which derives from the Greek, *ekklesia*, which means "convocation" or "assembly." In the Greek Septuagint translation of the Hebrew Bible, *ekklesia* is used about 100 times to render Hebrew words like *qahal* that refer to the "assembly" of the Lord. In the New Testament the term *ekklesia* occurs 114 times and is used either for the whole Christian community (Gal. 1:13; 1 Cor. 15:9; Matt. 16:8) or for local or particular churches (1 Cor. 1:2; Rev. 1:4, 2:1, etc.).

Only one of the four Gospels, Matthew, uses the word *ekklesia* (Matt. 16:8; 18:17), but the term is used twenty-three times in Acts, sixty-five times in Paul, and twenty times in Revelation. This absence of *ekklesia* in three of the Gospels is probably the result of the Christian belief that the church only replaces Israel as the "People of God" following Jesus' death, resurrection, and ascension and the outpouring of the Holy Spirit on the day of Pentecost (Acts 2). Christians, however, see the words and actions of Jesus during his earthly ministry as foundational for the church, and they look upon the history of Israel from the time of Abraham to Jesus as the "preparation" or "prefiguring" of the Christian Church.

THE EARLY CHURCH

The New Testament relates the spread of the Christian Church through the preaching of Jesus' disciples (followers) and apostles (those commissioned by Jesus to preach his message). The Acts of the Apostles, written by Luke, tells the story of the spread of the church from "Jerusalem, throughout Judea and Samaria, and to the ends of the earth," namely, Rome (Acts 1:8).

In the early church, leadership seems to have been both charismatic (some were "prophets"; 1 Cor. 12:48) and hierarchical (with overseers/bishops; elders/presbyters, and ministers/deacons; Phil. 1:1; 1 Tim. 3:1–13, 5:17–20; Titus 1:7–9). In the early second century Ignatius the Martyr (d. c. 107) testifies to three distinct ministries or orders in the universal ("catholic") church: bishop (*episkopos*), presbyter (*presbyteros*), and deacon (*diakonos*). By the end of the second century Irenaeus (c. 130–200), the bishop of Lyons, points to the Church of Rome as having a "more powerful principality" because it is the church of the apostles Peter and Paul.

The "rule of faith" in the early church was the teaching of Jesus and the apostles. By the late second century, however, Bishop Irenaeus upholds the normative value of the four written testimonies to Jesus' life and mission known as the Gospels of Matthew, Mark, Luke, and John (written c. 65–90 CE). The letters attributed to Paul also achieve scriptural status, and by the late fourth century (367) Bishop Athanasius of Alexandria, Egypt, specifies the definitive list, or "canon," of the twenty-seven writings of the New Testament as they remain in the early twenty-first century. The African Councils of Hippo (393) and Carthage (397) endorse the longer list of forty-six Old Testament books as canonical (a list later upheld by the Catholic Council of Trent in 1546, although the Protestant Reformers favored the shorter Old Testament of thirty-nine books).

The Christian Church spread throughout the Near East and the Mediterranean basin during the first three centuries of the Common Era in spite of periodic persecutions from Roman emperors, such as Nero (64–68), Domitian (95–96), Trajan (106–117), Marcus Aurelius (161–180), Decius (249–251), and Diocletian and Galerius (303–311). The spread of the faith amid such persecutions prompted the Christian writer Tertullian (c. 150–220) to remark that "the blood of the martyrs is the seed of Christians."

In 313 the Roman emperor Constantine (later baptized a Christian) granted legal recognition and religious freedom to Christianity by the Edict of Milan. In 330 he moved the capital of the empire from Rome to Byzantium in Asia Minor (later renamed Constantinople). This move led to the recognition of Constantinople as the "New Rome" and a leading center of Christian culture. By the

fifth century there were five major centers or "sees" of the Christian Church: Rome in Italy, Constantinople in Asia Minor, Alexandria in Egypt, Antioch in Syria, and Jerusalem.

THE DEVELOPMENT OF CHURCH DOCTRINE

Between 325 and 787 seven major (ecumenical) church councils were held to clarify points of doctrine in resistance to various teachings considered to be false or heretical. A profession of faith linked to the first two ecumenical councils of Nicea I (325) and Constantinople I (381) summarized the basic points of Christian faith, especially the belief in the Trinity (three persons in one God: the Father, the Son, and the Holy Spirit) and Jesus Christ as consubstantial or "one in essence" with the Father. This profession of faith, known as the Nicene-Constantinopolitan Creed (or simply the Nicene Creed) also describes the Christian Church as "one, holy, Catholic and apostolic."

Other doctrinal proclamations followed. The Council of Ephesus in 431 affirmed Mary as the "God-bearer" or "Mother of God." The Council of Chalcedon in 451 described Jesus as one person with two natures (human and divine). The Second Council of Nicea in 787 condemned iconoclasm (opposition to the use of sacred images or icons) and reaffirmed the right to give veneration (though not worship) to icons of Jesus, Mary, the angels, and the saints. This council also reaffirmed the condemnation of forced conversions to the Christian faith.

Although these councils sought unity in the church, various groups of Christians resisted their teachings and formed separate ecclesial bodies. The Arian churches (named after the Egyptian Christian priest Arius) denied the full divinity of Christ and rejected Nicea I and Constantinople I. The Church of the East, or "Nestorian Church," rejected the teaching of Ephesus (431) on Mary as the Mother of God. It found refuge in the Persian Empire and spread to parts of India and China. Large numbers of Christians in Armenia, Egypt, Ethiopia, and East Syria resisted the doctrine of Chalcedon (451) and formed the "Monophysite" (one-nature) churches, also known as the Oriental Orthodox churches.

THE CHURCH IN THE MIDDLE AGES

In the 600s Islam rose under Muhammad (570–632), beginning in Arabia. The Muslims, or followers of Islam, denied the Trinity and understood Jesus as a prophet/messenger of God rather than the divine Son of God. They claimed that their holy book, the Qur'an, corrected the mistakes of the Jewish and Christian scriptures. The Muslims became a military power and conquered Jerusalem in 638; Alexandria, Egypt, in 642; Carthage, North Africa, in 698; and Spain in 712. The Muslims were set to conquer the rest of Europe but were defeated by Charles Martel in 732 in France.

Because of the threat of Islamic expansion, the popes in the West formed an alliance with the Franks for military protection. The crowning of the Frankish king Charlemagne as the Holy Roman Emperor by Pope Leo III in 800 can be understood as the beginning of the Middle Ages in the West. The Byzantine Christians resented the recognition of another "Roman" emperor because they saw themselves in continuity with the empire of Constantine. This resentment contributed to the 1054 schism (split) between the churches of Rome and Constantinople, which led to an enduring separation of the Eastern Orthodox Churches from the Catholic Church under the pope. The split was mostly over the Orthodox rejection of the pope's primacy of jurisdiction over the churches in the East and the addition of the phrase "and the Son" (*filioque*) to the creed. Later attempts at reunion in 1274 and 1439 were not successful.

In spite of the split between Rome and Constantinople, the perceived threat of Islam, now under the rule of the Turks, led to the Byzantine emperor appealing to the pope for military aid. The result was the Crusades, a series of military ventures authorized by the popes and other Christian leaders to recapture the Holy Land from the Muslims. These Crusades began in 1095 and ended in 1291. Jerusalem was captured by the crusaders in 1099 and a Latin kingdom established. The Muslims, however, regained control of the holy city in 1187, and the other Crusades were mostly failures. Some tragedies also took place, such as the sack of Constantinople in 1204 by the Western crusaders, which deepened the split between Rome and Constantinople.

The church, as a cultural and political entity, played a major role in the history of western and eastern Europe during the Middle Ages (c. 800–1400), and it provided inspiration and support for education and the arts. Though elements of pre-Christian classicism revived during the Renaissance (c. 1400s–1500s), Europe remained essentially Christian, and the secular rulers defended the church (though tensions did exist). Non-Christians, such as the Jews, also lived in Christian Europe during this time, but their situation was sometimes precarious.

THE RISE OF PROTESTANTISM

The Reform or Protestant movements of the 1500s resulted in new Christian churches distinct from the Catholic Church under the pope. The Protestant movements—identified traditionally as Anglican, Lutheran, Calvinist/Reformed, Anabaptist, and Spiritualist—tended

to accept only the Bible as the normative Christian authority. When Protestant groups differed in their interpretations of the Bible, multiple Protestant groups were formed.

The Protestant movements resulted in wars of religion when nations and rulers sided with either the Protestants or the pope. By the time of the Treaty of Westphalia of 1648, the landscape of Europe was broken up into various Catholic and Protestant regions, with the prevailing policy of following the religion of the local region's ruler (*cuius regio, huius religio*). Beginning in the 1500s Catholic and Protestant explorers began to bring their church structures with them to Asia, Africa, and the Americas.

THE CHURCH IN THE MODERN WORLD

Christianity in the early twenty-first century comprises three main groups, Catholic, Orthodox, and Protestant, with Anglicans claiming aspects of both Catholicism and Protestantism. For Catholics (often called "Roman Catholics") the church is held in communion by the three visible bonds: unity of faith, unity of seven sacraments, and unity of ecclesial government (bishops in communion with and under the pope, the bishop of Rome). Catholics also conceive of the church as visible and invisible, consisting of three states: the faithful on earth, those undergoing postmortem purification, and the saints in heaven.

Orthodox Christians (those of right worship and doctrine) see themselves as the "one, holy, apostolic and Catholic Church" of the Nicene Creed. This one church is a communion of self-governing (autocephalous) churches bound together by the apostolic succession of true bishops, divine worship and the seven sacraments (or mysteries), and the apostolic faith of the first seven ecumenical councils (Catholics, though, accept twenty-one councils as ecumenical).

Except for the Anglicans/Episcopalians (who see themselves in continuity with the apostolic succession of bishops), Protestant Christians tend to understand the church as "the congregation of the saints" (Lutheran Confession of Augsburg, 1530) or as "the universal Church, which is invisible," consisting of "the whole number of the elect" (Calvinist Westminster Confession of Faith, 1643). While the visible church is important for the teaching of correct doctrine and the rightful administration of the sacraments (reduced from seven to baptism and the Lord's Supper), Protestants tend to understand the church more as an invisible communion of those chosen by God for justification in Christ. Especially among contemporary "evangelical" Christians, the denomination of one's Christian community does not matter as much as one's faith and commitment to Jesus Christ as Lord and Savior.

Since the rise of modern secular states (late 1700s–1900s), the Christian churches generally no longer enjoy the patronage of state support. They do, however, play an important role in various works of charity, education, and involvement with causes of peace and social justice. The witness of the church has grown to be more moral than political, although a political dimension is clearly present in many cases.

SEE ALSO *Christianity; Church and State; Coptic Christian Church; Greek Orthodox Church; Islam, Shia and Sunni; Jesus Christ; Militarism; Muhammad; Protestantism; Religion; Roman Catholic Church; Vatican, The; War*

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CHURCH AND STATE

Relations between the sacred and the secular have long been important issues in Western democracies. In particular, legal questions surrounding the relationship between church and state in the United States have frequently animated American politics since World War II (1939–1945). The 1940 Supreme Court decision in *Cantwell v. Connecticut* had the effect of incorporating the religion clauses of the First Amendment of the U.S. Constitution, and applied these provisions to the acts of state governments. The incorporation of the First Amendment clauses dealing with religion has resulted in a large outpouring of case law during the final third of the twentieth century, as well as the first decade of the twenty-first.

THE ESTABLISHMENT CLAUSE

The First Amendment of the U.S. Constitution begins with the phrase, "Congress shall make no law respecting an establishment of religion." This phrase, usually termed the *establishment clause*, has, in recent decades, defined the limits under which government (and, by extension, popular majorities) can provide symbolic support for religious values or material support for religious organizations.

There are two general theories by which the establishment clause can be interpreted. According to advocates of *accommodationism*, the establishment clause simply prohibits government from designating an official church, or providing preferential treatment to one church or religious tradition. Neutral, nonpreferential assistance to religion is considered permissible by accommodationists. By contrast, adherents of *separationism* believe that any assistance for religion by government is unconstitutional and that there must exist a "high wall" of separation between church and state.

The operative legal precedent with respect to establishment-clause jurisprudence is the 1971 case of *Lemon v. Kurtzman.* In *Lemon*, the court held that government assistance to religion was not constitutional unless such assistance: (1) had a primarily secular purpose; (2) had a primarily secular effect; and (3) did not result in "excessive entanglement" between church and state. The *Lemon* test is considered to represent a generally separationist precedent, since it limits general assistance to religion, as well as assistance to particular religions.

In general, the Supreme Court has employed the *Lemon* test in cases posing establishment clause issues, but the Court has begun to relax its application of the criteria under which government assistance to religion can be rejected as unconstitutional. To illustrate, in *Agostini v. Felton* (1997), the Court ruled that state governments could provide (and fund) remedial instructors in parochial schools. Similarly, by a five-to-four margin, the Court held in *Zelman v. Simmons-Harris* (2002) that a program of government-financed tuition vouchers for students at private schools did not violate the "effects" prong of *Lemon*, despite the fact that a large majority of private schools in Ohio were religiously affiliated. Thus, the U.S. Supreme Court is gradually moving in a more accommodationist direction from a generally separationist precedent.

Of course, many governmental accommodations to religion are politically popular, and are therefore frequently enacted by elected officials. Most conspicuously, the policy of government-supported "faith-based initiatives" was proposed by President Bill Clinton and enacted with the support of President George W. Bush. The constitutionality of such initiatives had not been subjected to court tests as of 2006, and recipients of such grants had to conform to certain standards to ensure that government funds were only used for "secular" purposes. This trend is clearly moving in the direction of a looser interpretation of the establishment clause, although the actual amount of government assistance to religious bodies is uncertain.

THE FREE EXERCISE CLAUSE

The second First Amendment clause that deals with religion—"or prohibiting the free exercise thereof"—is generally termed the *free exercise clause*. The free exercise clause has usually defined the limits of governmental power to control religiously motivated activities.

There are two general theories of the free exercise clause. *Libertarianism* entails a belief that religious obligations often supersede the requirements of citizenship and that government should be very deferential to religious beliefs. Proponents of *communalism* believe that religion is accorded no special protection under the free exercise clause and that the clause simply prohibits government from singling out religious practices for specific regulation. However, communalists believe that generally neutral laws that happen to restrict religious liberty pose no constitutional difficulty.

In the 1990s the Supreme Court's free exercise jurisprudence took a drastic shift in the direction of communalism. Prior to 1990, the Court's reading of the free exercise clause could generally be characterized as libertarian. Based on precedents such as *Sherbert v. Verner* (1963) and *Wisconsin v. Yoder* (1972), the Court held that government could only interfere with religious free exercise if the restriction on religious freedom served an "essential" government purpose, and if the means of achieving that purpose were the least restrictive available. The *Sherbert-Yoder* test was thus quite deferential to the free exercise claims of religious minorities.

In 1990 the Court held in *Employment Division v. Smith* that otherwise valid laws that had the effect of restricting religious freedom were constitutionally permissible, unless religious practice was singled out for specific regulation, or unless the legislature had made an explicit exception. In *City of Boerne v. Flores* (1997), the Supreme Court reaffirmed this ruling and struck down a congressional statute intended to restore the *Sherbert-Yoder* standard. Thus, the *Smith* ruling signaled an important change in the manner in which the Court interprets the free exercise clause.

Some critics have charged that the *Smith* ruling was intended to make it easier for government to regulate religions that lie outside of the theological or cultural mainstream. Indeed, one effect of *Smith* has been to permit government at all levels to be less deferential to unconventional religious traditions. However, the Court's reaffirmation of the *Smith* ruling in *Boerne* (which limited the free exercise prerogatives of the Roman Catholic Church in a

predominantly Catholic area) suggests that the Court is willing to limit the scope of the free exercise clause in a relatively uniform manner. Of course, elected officials are more likely to regulate the activities of unpopular religious groups, and Americans have been shown to be less tolerant of practitioners of faith traditions outside of the Judeo-Christian tradition.

TENSION BETWEEN THE RELIGION CLAUSES

In general, courts in the United States have tended to treat establishment clause issues separately from issues involving the free exercise clause. However, many actual controversies have seemed to involve both considerations, and supporters of different policies have typically invoked both clauses in support of their positions. For example, the U.S. Supreme Court has, in a long string of decisions, restricted state-sponsored religious expression in public schools on establishment clause grounds. These decisions have proscribed organized classroom prayer, a moment of silence for "prayer or meditation," ceremonial prayers at high school sporting events or graduations, and restrictions on the teaching of evolution in biology classes. In such cases, opponents of these decisions have criticized these court rulings on free exercise grounds.

Parties to these decisions, as well as members of Congress and state legislators, have argued that the right of religious free exercise entails the right to express one's religious beliefs publicly, and government policies that limit such expression violate the free exercise clause. Such arguments typically emphasize the "voluntary" nature of school prayer or an "even-handed approach" to the creation-evolution controversy, and suggest that the courts are restricting constitutionally protected religious expression with an overly broad interpretation of the establishment clause.

Arguably, it matters a great deal whether a particular controversy is characterized as an issue of religious establishment or a question of religious free exercise. While many legal scholars have attempted to provide a general solution to the tension between the Constitution's two religion clauses, such arguments typically involve the assertion that one of the religion clauses has priority over the other. However, neither the text of the Constitution nor recent Supreme Court rulings provide meaningful guidance as to how apparent conflicts between the establishment and free exercise clauses should be resolved.

CHURCH-STATE RELATIONS IN COMPARATIVE PERSPECTIVE

Although the tension between the religion clauses of the First Amendment of the U.S. Constitution is a frequent source of confusion (as well as litigation), comparison with other Western democracies suggests that the combination of establishment and free exercise concerns may be fortuitous for the practice of American politics. Religion is a visible but hardly dominant force in political discourse in the United States, which provides multiple sources of transcendent values for political life.

By contrast, several other democracies provide government support for religious bodies (such as subsidies for schools or clergy salaries), which would be considered a violation of the establishment clause in the United States. Indeed, several European nations have legally established churches. Some analysts have suggested that this sort of governmental support results in a decline in religious membership and practice, since government support reduces the need for churches to attract support from members or potential members.

In other nations, such as France and Turkey, a policy of *laicite* constitutes attempts by the government to reduce or eliminate the presence of religion in the public life of the nation. In such settings, some religious adherents (especially those who identify with minority faith traditions) appear to experience divided loyalties between the demands of citizenship and discipleship. Religious behaviors (including such matters as clothing or the display of religious symbols) are frequent sources of social and political conflict in such nations.

SEE ALSO *Church, The; Religion; State, The; Theocracy; Tolerance, Political*

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Ted G. Jelen

CHURCHILL, WINSTON
1874–1965

Winston Churchill was a British politician, writer, and orator. He is best remembered for his opposition to the appeasement of Nazi Germany in the 1930s, for his inspirational leadership of the United Kingdom from 1940 to 1945, and for his warnings about the dangers of Soviet expansionism in 1946.

CHILDHOOD AND EARLY EXPERIENCE

Winston Leonard Spencer Churchill was born at Blenheim Palace in Oxfordshire on November 30, 1874, the eldest son of the Conservative politician Lord Randolph Churchill and his American wife, Jennie. His grandfather was the Seventh Duke of Marlborough and, despite his half American parentage, he had a very traditional British aristocratic upbringing, attending boarding schools from the age of seven at Ascot, Brighton, and Harrow. His behavior was often willful and rebellious and although his academic performance was not exceptional, when engaged he could show considerable ability. His passion was for the army, and in 1893 he was admitted to the officer training school at Sandhurst. The death of Lord Randolph in January 1895 had an enormous effect on the young Churchill, motivating him to prove himself as a worthy son.

Between 1895 and 1899 Churchill saw active military service in Cuba, India, and the Sudan. He used the periods between campaigns to improve his general education, and wrote up his military experiences as newspaper articles and books in order to earn fame and fortune. He was determined to enter politics and left the army to unsuccessfully contest the seat of Oldham in 1899. A few months later he became a war correspondent, covering the conflict between the British and the Boer republics in South Africa. He was captured, but managed to escape. This adventure made him an international celebrity and ensured his election to Parliament in 1900.

POLITICAL LIFE

Churchill began his political life as a Conservative. Yet when the Conservative Party began to move away from the policy of free trade toward one of tariff protection, Churchill refused to move with them and dramatically crossed the floor of the House of Commons to become a Liberal. He rose rapidly within his new party, becoming a government minister in 1908. The Liberal government introduced social change at home, while wrestling with increasing international tension abroad. Churchill was responsible for basic unemployment insurance and oversaw improvements in prison conditions. There were always clear limits to his radicalism. He was a strong opponent of socialism, took a tough line against industrial unrest, and opposed the campaign of the female suffrage movement.

By the outbreak of World War I in 1914 Churchill was the minister with responsibility for the British navy, a role he clearly relished. Unfortunately, his determination to bring the fleet into action led to his support for the disastrous Dardanelles campaign, during which attempts were made by British submarines to pass through the Dardanelles and disrupt Ottoman Empire shipping in the Sea of Marmara. Churchill lost his job, but after a brief spell in the trenches on the western front, was brought back as a member of Lloyd George's national government, serving in a succession of government posts until the fall of the administration in 1921.

Churchill became increasingly concerned with the spread of communism abroad and socialism at home. He broke with the Liberal Party and rejoined the Conservatives, serving as chancellor of the Exchequer from 1924 until 1929. He was undoubtedly a great public figure but many regarded him as past his prime. A lifelong defender of the British Empire, Churchill was out of sympathy with mainstream political thinking over his opposition to greater independence for India. He found himself excluded from the national governments of the 1930s and was forced to spend time at Chartwell, his beloved home, writing history. From 1933 onward he became increasingly concerned by the threat posed to Europe by a revived militaristic Germany under Adolf Hitler's national socialist regime, and was a vocal opponent of the Western powers' policy of appeasement toward the fascist dictator. In the aftermath of the dismemberment of Czechoslovakia, public opinion shifted decisively behind Churchill and when Britain declared war on Germany in September 1939, Prime Minister Neville Chamberlain had no choice but to bring him back into the government as First Lord of the Admiralty.

POST AS PRIME MINISTER

Churchill became prime minister of a national government on May 10, 1940, the day that Hitler launched his blitzkrieg offensive against France and the Low Countries. The next few months saw him lead Britain during a period of crisis, when, following the collapse of France, Britain faced the threat of invasion and was subjected to the full onslaught of the German air force. Churchill's great achievement was to imbue his administration and, through the power of his oratory, the wider British public with the will to resist. He turned himself into an iconic figure, with his trademark cigar, bow tie, and two-fingered "Victory" salute. Behind the scenes, he worked hard to

win increasing support from the United States. Following the German invasion of the Soviet Union and the Japanese attack on Pearl Harbor, he engaged in difficult shuttle diplomacy to build and sustain the Grand Alliance with Soviet political leader Joseph Stalin and President Franklin D. Roosevelt. His stature remained high, even as Britain's war contribution paled beside that of the United States and Soviet Union. Put simply, his policy was to take the offensive and to strive for victory.

There is no doubt that Churchill expected to win the general election of 1945, but the Conservatives were defeated by the Labour Party, and he found himself out of office. He remained a major figure on the international stage, and in March 1946 he used his stature to warn of the dangers of Soviet expansionism in his famous "Iron Curtain" speech delivered at Fulton, Missouri. He also called for European reconciliation and spoke in support of the nascent United Europe movement. Not yet ready to retire from public life, he published his account of *The Second World War* (1948–1954) before winning a further term as prime minister in 1951. His policy was to call for summit discussions with the Soviet Union while building up Britain's nuclear force and strengthening relations with the United States. Ill health finally forced his retirement in 1955. His reputation now secure, he published his *A History of the English-Speaking Peoples* (1956–1958). In the last two decades of his life he received many honors, including knighthood, the Nobel Prize in Literature, and honorary American citizenship.

Sir Winston Churchill died on January 24, 1965, seventy years to the day after the death of his father. He was given a state funeral and is buried in Bladon parish churchyard, within sight of his birthplace at Blenheim.

SEE ALSO *Chamberlain, Neville; Conservative Party (Britain); Hitler, Adolf; Iron Curtain; Stalin, Joseph; Union of Soviet Socialist Republics; World War I; World War II*

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Allen Packwood

CIA

SEE *Central Intelligence Agency, U.S.*.

CIRCULAR FLOW

SEE *Quesnay, Francois.*

CIRCUMPLEX MODEL

SEE *Leary, Timothy.*

CITATIONS

A citation is a reference to any published work as well as any form of communication with sufficient details to uniquely identify the item. When academics, scientists, and other professionals refer to any published work in their own published work, they *cite* it, giving the author, year, title, and locus of publication (journal, book, working paper, etc.).

In academia, according to the principle of meritocracy, scholars, departments, and institutions are evaluated through objective criteria. One of the main instruments used to measure the quantity and quality of academic output is *citation analysis*. A citation count is used as a proxy of impact, signaling quality, because it informs how often a given published work, author, or journal is cited in the literature. It allows us to build rankings of scholars, departments, institutions, and journals. These rankings are subjected to significant variations over time. For instance, in economics, only three journals—*American Economic Review*, *Econometrica*, and the *Journal of Political Economy*—appear consistently in the list of top ten journals of the profession during the 1970–1995 period (e.g., Laband and Piette 1994; Hodgson and Rothman 1999).

According to David Laband and J. P. Sophocleus (1985), citations are the scientific community's version of dollar voting by consumers for consumption goods. Holding prices constant, consumers decide to buy goods from certain producers because of the quality of their merchandise. Whether the purchase decision is influenced by the buyer's friendship or family relationship with the seller does not matter. The relevant point is the volume of sales in which market shares are based. The same holds true for the consumption of scientific literature. What matters is the volume of citations, not the motivation behind each specific citation.

Any citation count has several dimensions. Among them, the sample of authors and journals, the time period in consideration, and self citations play an important role in defining the relative importance of an author, article, and journal.

In two papers in the journal *Science*, David Hamilton (1990, 1991) showed that about half of all science papers were never cited within five years after publication. David Pendlebury (1991) corrected the figures to show that "uncitedness" figures were 22 percent in the physical sciences, 48 percent in the social sciences, and 93 percent in humanities. Based on these figures, *Newsweek* concluded that "nearly half the scientific work in this country is worthless" (p. 44), suggesting that resources invested in science are wasted.

According to Arjo Klamer and Hendrik van Dalen (2002, 2005), the skewed distribution of citations is part and parcel of what they call the *attention game* in science. Because there are too many articles for any scholar to pay attention to, she has to make a selection and usually follows others in doing so. There is a snowball effect in the sense that one scholar reads an article because others cite it; by citing it in her work, others may turn to the article as well. This is consistent with the reward system of science and in particular with the Matthew effects of science (Merton 1968) in which a few scientists get most of the credit and recognition for ideas and discoveries made by many other scientists. For instance, Diana Crane (1965) found that highly productive scientists at a major university gained recognition more often than equally productive scientists at a less prestigious university.

Besides the leadership effect described above, the number of citations may also be influenced by academic networks because of their positive externalities. Any scholar with a wide academic network can more easily communicate her work through seminar presentations, workshops, and conferences, and publish it in influential books, monographs, and professional journals. Another important source of citations related to academic networks is the relative importance of the scholar's network. A scholar working in any given field who has access to leading professionals, departments, associations, and their respective publication venues may find it easier to be influential and therefore to be widely cited.

The number of citations increases with the number of publications or the type of journals in which a scholar publishes. João Ricardo Faria (2003) presented a model in which the scholar is assumed to maximize the success of her career as measured by the number of citations of her work. The scholar may choose to publish in top journals, which have a higher rate of rejection, therefore making the expected number of publications low; a scholar with these preferences is called a *K*-strategist. If the scholar chooses to publish in lesser-known journals with lower rejection rates, she ends up having many papers accepted for publication; in this case, she is an *r*-strategist. Faria showed that any scholar following either an *r*- or *K*-strategy may achieve the same final amount of citations, and he conjectured that the most successful strategy is the one that combines both approaches to quantity and quality, a strategy called *Samuelson ray*. Samuelson ray is named after Paul A. Samuelson, because he has been one of the most productive and influential economists to date.

The number of citations to a scholar's publications may vary over time with the quality of her work, the reputation of the journals where she has published, and the number of papers the scholar has published. Faria (2005) studied a Stackelberg differential game with scholars and editors. Journal editors are leaders who maximize the quality of the papers they publish, while the scholar is the follower willing to maximize the number of papers published, constrained by the way her work is cited. Faria showed that the number of citations increases with rules aimed at increasing a scholar's productivity (i.e., tenure requirements) and with a journal's reputation.

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João Ricardo Faria

CITIES

The earliest cities were created more than 5,500 years ago in Mesopotamia. Those and other ancient cities were few in number and by twenty-first-century standards had small populations, primitive housing, and simple technology. However, cities brought enormous changes in human society. Over the years cities have existed, only a minority of the human population has lived in them; nevertheless, cities have been the locus of political, economic, cultural, and environmental changes that have transformed life on Earth.

URBAN TRANSFORMATION THEORIES

Scholars studying cities identify many significant transformations in them. This section summarizes five perspectives on these changes.

One perspective contends that city characteristics (i.e., high population density, diversity) cause city people to behave as they do. For example, increased occupational division of labor is associated with the shift from village to city. This important element of the urban transformation is usually explained by the French sociologist Emile Durkheim's "dynamic density" principle: when many people try to survive in a concentrated area they specialize and refine the work they do to avoid direct competition with others, avoid redundancy, and improve the quality of their products or services. Similarly, cities are filled with strangers who have few preexisting bonds of loyalty, trust, or obligation. To enable them to better deal with each other, city life relies extensively on written contracts, laws, and courts to enforce them.

Likewise, Georg Simmel explained city-dwellers' social behavior with inherent qualities of cities. He observed that compared to people from small towns, urbanites are reserved, blasé, aloof, calculating, more attuned to fashion, and engaged in "extravagances of mannerism and caprice" (Simmel 1969 p. 57). This, he argued, is because large cities are filled with people and things that generate a plethora of cacophonous, threatening, and contradictory images and messages. Urbanites' traits previously mentioned are useful screening and coping devices they use to avoid those disconcerting stimuli and maintain a semblance of sanity and individuality.

Louis Wirth's 1938 article "Urbanism as a Way of Life" epitomizes the notion that city characteristics produce a particular urban pattern of social life. He defined a city as "a relatively large, dense, and permanent settlement of socially heterogeneous individuals" (Wirth 1969, p. 148), and derived numerous social interaction patterns as consequences of population size, density, and diversity. Wirth proposed that in cities bonds of kinship and neighborliness weaken; tradition and familial authority attenuate and are only partially replaced by formal control mechanisms. Although individuals gain greater personal freedom and both social and spatial mobility are common, city residents' social relations are segmented, impersonal, anomic, and imbued with "a spirit of competition, aggrandizement, and mutual exploitation" (Wirth 1969, p. 156). Wirth also indicated that as cities dominate their hinterlands, business corporations in them become more cut-throat and soulless, and cities' subareas become "a mosaic of social worlds" (Wirth 1969, p. 155) with stark contrasts between nearby neighborhoods' socioeconomic level, ethnic composition, housing, businesses, and land uses. Finally, Wirth suggested that in cities individual people count for little, have difficulty knowing how they fit in or what is really in their own best interests, and therefore they become susceptible to mass movements or charismatic leaders. Wirth's portrait of urban life suggests that social problems and alienation are inherent elements of large modern cities.

Other perspectives, including Herbert Gans' *Urban Villagers* (1962), contradict Wirth's. One counter-response is a "rediscovery of community" perspective arising from many empirical studies in cities and suburbs. Together these studies suggest that the depersonalized, alienated, contract-driven urban world of attenuated local and familial bonds described above is an overgeneralization and is contradicted by the continued existence of close-knit neighborhoods and strong group ties in parts of many cities.

This rediscovered community perspective claims Wirth's "urbanism as a way of life" has not swept community from every corner of the metropolis. It contends that the kinds of people (i.e., their socio-economic level, life-cycle stage, ethnicity, sexual orientation, and socio-political values) living in a neighborhood has a greater effect on social life in it than does the place's population size, density, and heterogeneity. Depending upon the kinds of people in an area (i.e., their needs and interests) they may work to create or maintain an active local community life, or they may let it languish and disappear. Also, community institutions preserve or build strong personal relations in city or suburban neighborhoods. Certain stores, religious institutions, "third places" (e.g., bars, coffee shops), or social clubs become the ground from which community ties grow. These are supplemented by per-

sonal networks such as those established in chain migrations to cities or by local community activists.

Another perspective on city life emphasizes underlying economic processes, inequalities, and the distribution of power. The key contention here is that the most powerful causal forces in a city are not inherent qualities of cities, but instead are conflicts of interests among the city's economic classes, land ownership laws, and land use decisions that serve certain groups' interests. The first analysis of urban poverty, Friedrich Engels' mid-1840s study of working-class sections of England's industrial cities, illustrates this perspective. Engels argued that neither of these cities' two salient features—(1) huge differences in living conditions between a small upper class and a huge impoverished class of factory workers; and (2) disintegration of society into isolated individuals—is caused by anything inherent in large cities. Instead, he contended that these are produced by the capitalist economy, which causes brutal competition, exploitation, lowered wages, and unstable employment in these cities. Engels also said that the upper class controlled decisions regarding land use. This enabled them to arrange that cheap low-quality housing for workers is far from the better neighborhoods of the rich, guaranteeing the affluent would not have to see or be threatened by the squalor, unhealthy conditions, and misery of factory workers' slums.

For much of the twentieth century the Engels/Marxian perspective was eclipsed in urban studies by the influence of Wirth and an urban ecological perspective embodied in Ernest Burgess's concentric zone model (and revisions by geographers' sector and multiple nuclei models). It contended that in any era cities develop a characteristic socio-spatial structure produced by the era's primary mode of transportation, construction technology, local topography, and, most importantly, economic competition for prime urban locations among individuals, groups, and businesses with unequal purchasing power. Segregation of immigrants and racial-ethnic minorities was attributed to a desire for living near others with similar culture and low economic standing, which prevents them from living in cities' better neighborhoods.

By the 1970s the ecological perspective received criticism for the meager attention it gave to racism as causing urban racial ghettos and underestimation of the role of powerful government and private interest groups in making urban transportation and land use decisions. Researchers with critical perspectives developed explanations showing how cities are influenced by globalization, "growth machines," "place entrepreneurs," public-private partnerships, and institutionalized norms regarding gendered and racialized space. The city, in Mark Gottdiener and Ray Hutchison's "sociospatial" perspective, no longer is the large dense dominant heart of the metropolitan area, where the skyscrapers, theaters, and museums are located; instead the city is a vast "multinucleated metropolitan region" containing dispersed centers and realms (e.g., "edge cities") that perform most economic and cultural functions the central city once performed. In this perspective the strongest creators and modifiers of the new metropolis are government programs that subsidize suburbanization, real estate industries' land use decisions, and cultural innovators (in architecture, design, advertising, or arts) who craft new forms, symbols, and desires for the metropolitan public.

MODERN CITIES AND THEIR PROBLEMS

Today's largest metropolitan areas are in Asia and Latin America. Of the twenty with the highest populations, only New York, Los Angeles, Moscow, and London are in Europe or the United States. Since 1970 Asian and Latin American cities (Seoul, Shanghai, Mexico City, Sao Paulo) and African cities (Cairo, Lagos) have grown tremendously due to internal migration. Migrants pour in largely because governments' and large corporations' attempts at economic development disrupt local subsistence patterns in the countryside (e.g., conversion to capital-intensive agriculture, resource extraction). With insufficient housing and sanitation to absorb so many migrants, overcrowding and pollution are serious problems. Newcomers in rapidly growing Latin American and African cities have taken over land and created impoverished squatter settlements. Urban population growth outpaces these cities' supply of jobs. This oversupply of workers causes low wages and results in enormous informal economies, with their attendant problems. Cities in Asia's newly industrialized countries (e.g., Korea, Singapore) are marked by the development of global corporations engaged in manufacture, commerce, financial services, and technology. These businesses' profitability and power enhance cities' standing among world cities and turn sections of them into cosmopolitan centers. Moreover, their executives and white-collar workers expand the ranks of the cities' upper and middle class and generate demand for goods and services provided by lower paid workers. Nevertheless, these mega-cities, like those of Latin America, remain places with a small middle class; huge gaps exist between the living conditions of the small privileged class and the poor population.

Cities in the United States face problems so severe that many observers believe they will never regain the prominence they had from 1900 to 1970. Due to suburbanization, initially by affluent whites and later by middle-class blacks and immigrants, only 30 percent of the U.S. population lives in cities. In many large cities most residents are African American or Latino, and often neigh-

borhoods have highly concentrated poverty. With this demographic shift, political clout in legislatures moved from cities to more conservative suburbs. Old cities in the Northeast and Midwest deteriorated. With deindustrialization many cities lost well-paying manufacturing jobs, which were not replaced with sufficient well-paying service industry jobs. City residents experienced high unemployment, cuts in city services, poor schools, and high crime rates. Older neighborhoods saw disinvestment by federal housing policy, which funneled money and new construction into white suburban areas, and by private lending and insurance companies, which "red-lined" city areas, making it more costly for families and businesses to move into or upgrade city neighborhoods. Ironically, federal programs that did make large investments (highway construction, public housing, urban renewal) in cities from 1950 to 1970 have been criticized as doing more to destroy than improve city neighborhoods.

Since 1990, many cities experienced some revitalization, population increase, and reduction in poverty concentration. Federal policy closing large public housing projects and creating mixed-income areas (HOPE VI) is partly responsible for this. Additionally, efforts by community development corporations (assisted by private foundations and city government) have improved housing and safety in some city neighborhoods. Revitalization also occurs with gentrification, as affluent people buy and renovate cheap housing close to the center of a city and then move in or sell to other affluent residents. While this process enlarges cities' middle class and brings new businesses (improving the tax base), it can displace the less affluent. Where gentrification is extensive it reduces low-cost housing and can put the poor at greater risk of homelessness. Although the cities' situation may not be as bleak as in the late 1980s, the problems are by no means resolved. In fact, many are appearing elsewhere, especially the older ring of suburbs near cities' boundaries.

SEE ALSO *Sociology, Urban; Suburban Sprawl; Towns; Urban Renewal; Urban Sprawl; Urban Studies; Urbanity; Urbanization*

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Charles Jaret

CITIZENSHIP

Citizenship can be succinctly defined in terms of two component features. First, it constitutes membership in a polity, and as such it inevitably involves a tension between inclusion and exclusion, between those deemed eligible for citizenship and those who are denied the right to become members. In its earliest form in ancient Greece, the polity in question was the city-state. In the modern world, it was transformed during the era of democratic revolutions into the nation-state. Second, membership brings with it a reciprocal set of duties and rights, both of which vary by place and time, though some are universal. Thus paying taxes and obeying the law are among the duties expected of citizens in all nations, while the right to participate in the political process in various ways—by voting, running for office, debating, petitioning, and so forth—is an inherent feature of democratic citizenship. This leads to a final point: citizenship exists only in democratic regimes, for in nondemocratic ones people are subjects rather than citizens. In this regard, there are three crucial features that characterize the democratic political system: (1) the right to participate in the public sphere; (2) limitations on the power of government over the individual; and (3) a system based on the rule of law, not the arbitrary rule of rulers.

The principal fault lines used to define the boundaries of inclusion versus exclusion have historically been based on three major social divisions: class, gender, and race. And, indeed, though much has changed, these divisions remain significant—and in fact tend to be intersecting. During the formative period of all the modern democratic regimes, beginning in the eighteenth century, the privileged white, property-owning male citizens were intent on disqualifying a majority of their nation's residents from citizenship rights. Confronted with a disjunction between the egalitarian ideals of democratic theory and the desire to exclude from full societal membership certain categories of persons who did not share their class, gender, or racial identities, they responded by creating justifications for social exclusion. For their part, the white working class, women, and nonwhites responded, always

in difficult circumstances and with varying degrees of success, by creating social movements aimed at acquiring the political voice that had been denied them. The white working class had, by the late nineteenth century, succeeded in being included, though not as genuine equals. A similar inclusion would come slower for women and racial and ethnic minorities, where in many cases this did not occur until the later part of the twentieth century. Thus, American blacks did not overcome the barriers created by Jim Crow until the 1960s, Australia's Aboriginal population did not receive the right to vote until the same time, and in some Swiss cantons women did not acquire the right to vote until 1990.

As with inclusion, the development of the rights of citizens entails a dynamic process. Analyses of this process are generally framed in terms of the thesis advanced by the British social theorist T. H. Marshall, who distinguished between three types of rights: civil, political, and social. In his view, these types are distinct not only analytically, but also historically. Civil rights refer to such aspects of individual freedom as free speech, freedom of religious expression, and the right to engage in economic and civic life. Political rights involve those rights that ensure the ability to actively participate in the realm of politics. Finally, social rights involve the rights to various welfare provisions designed to guarantee to all a minimum standard of living necessary for the other two rights to be meaningful. Included are guarantees of educational opportunities, health care, decent and affordable housing, pensions, and so forth. Marshall thought that civil rights emerged in the eighteenth century, political rights in the nineteenth, and social rights in the twentieth, with the birth of modern welfare states. The historical record calls into question the unilateral depiction of the evolution of rights, but it is the case that all of the world's liberal democracies did develop welfare states guaranteeing various forms of social rights. In his view, whereas the other types of rights do not challenge capitalism's production of unacceptable levels of inequality, social rights are intended to do so. Inequality does not cease to exist, but it becomes less consequential in shaping the life chances of individuals and impeding the goal of the equality of people qua citizens. The historical record indicates that welfare states have not actually managed to achieve this goal, and moreover, the neoliberal assault on the welfare state has resulted in an increase in levels of inequality.

Debates over the duties of citizens have pitted republican (and communitarian) theory versus liberal theory. The former position calls for an involved citizenry, while the latter is less inclined to ask or require citizens to be too actively engaged in politics. For example, republicans would be inclined to support universal conscription into military service or some alternative form of public service while liberals would not. Nevertheless, both positions believe that for democracies to succeed they need an informed and active citizenry. The distinction between the two traditions has much to do with differing perspectives on the levels of activity required. By the latter part of the twentieth century, a lively discourse emerged about the presumed tendency on the part of citizens in the United States, and to a somewhat lesser degree elsewhere, to withdraw from civic and political involvement, as evidenced, for instance, in the widespread interest in the Harvard political scientist Robert Putnam's "bowling alone" thesis.

If in the past citizenship has been construed in terms of the individual, multiculturalism has raised the specter of the emergence of group rights. Although many, but not all, of the world's liberal democracies have developed a multicultural sensibility, only two to date have implemented official state policies designed to promote multiculturalism: Canada and Australia. While some observers contend that the multicultural moment has ended, they fail to appreciate its novelty, specifically, as the scholar Jeffrey Alexander has argued, insofar as it signals a new form of civil society. Moreover, even without explicit multicultural agendas, there is evidence of a growing appreciation that difference and integration are not necessarily antithetical.

Finally, there is evidence of a growing interest in developments that suggest the world is entering a new era in which the nation-state's monopoly on defining citizenship is being challenged. In part, this is due to the rapid expansion of people with dual or multiple citizenships and the growing willingness by governments to legalize or tolerate this situation. This increase is largely attributable to transnational immigration, which though not entirely new is more significant today due to new communications technologies and improved transportation networks. Whether or not transnationalism is largely a phenomenon of the immigrant generation, or will persist into the generations of their children and grandchildren, is an unanswered question in the early twenty-first century. Likewise, it is also unclear whether dual citizenship becomes merely formal, in which the citizenship of primary residence is the only salient one, or whether active involvements in two nations' political systems persist.

Second, as exponents of postnationalist thought contend, supra-state entities such as the United Nations and the European Union (EU) are increasingly coming to assume some of the roles traditionally located solely with the nation-state. This is particularly the case with the issue of human rights, where there is evidence of the embryonic form of a global human rights regime. It is also relevant to environmental concerns, as the Kyoto Protocol makes clear, for these are matters that transcend existing political borders. Although the EU is unique, the fact that citizens of its member states can treat their social rights as apply-

ing outside of their national boundaries signals yet a new development of interest. In such a situation, social rights are portable within the EU, thus for example allowing German retirees to move to Portugal while collecting their German pensions, while at the same time permitting Portuguese workers free access to German labor markets. Much remains uncertain about where these developments might lead, but given the pace of change since the mid-twentieth century many social scientists predict that the twenty-first century will see changes in the location of citizenship brought about by globalization. At the same time, some of the earlier enthusiasm about the prospects for the decline of the nation-state has been unrealized, and in fact in the so-called age of terrorism nation-states have reasserted themselves and in the process raised concerns about the erosion of some rights.

SEE ALSO *Civil Rights; Civil Society; Immigrants to North America*

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Peter Kivisto

CITY-STATE

City-state refers to a sovereign political entity composed of an urban area and its surrounding territory. It can be usefully contrasted with *country*, which typically has a greater geographical expanse and larger population. Politically, city-states have been governed by a variety of regimes ranging from authoritarian to democratic. In many cases, they enter into formal or informal alliances with others because of economic or military interests, but they usually maintain their basic political autonomy. Culturally, city-states are often homogeneous. Their relatively small size limits diversity and facilitates a sense of commonality among citizens.

The history of the city-state extends back to the ancient world and includes several ages in which it played particularly significant political roles. The first city-states developed among the ancient Sumerians in the lower part of Mesopotamia. Later, they became the fundamental political unit for the classical Greek civilization in the southern-most region of the Balkan Peninsula. During the medieval and early modern periods they were prominent in Italy and areas of Germany. However, with the rise of the modern nation-state, many city-states lost or gave up their political autonomy. Today, city-states continue to exist, but usually as isolated enclaves in a world of larger political entities.

Perhaps the best-known examples of the city-state are the ancient Greek *poleis* of Athens and Sparta. These two city-states were bitter military and political rivals, although there were instances of cooperation to repel Persian invaders. The political and cultural differences between the two are quite striking. Sparta was a militaristic state ruled by a mixed government combining monarchical, aristocratic, and democratic elements. Its citizens lived very austere, disciplined lives. Little attention was given to the arts. In contrast, Athens was the center of Greek culture, producing great works of architecture, art, literature, and philosophy. Among its citizens there was an appreciation of leisure and intellectual activities. The Athenian city-state is especially known for its development of a direct form of democratic government. All male citizens were allowed to participate in the assembly, and older (male) citizens were eligible to sit on the council.

Contemporary examples of city-states include Monaco, Singapore, and Vatican City. Monaco is a very small constitutional monarchy that borders the Mediterranean Sea on the southern coast of France near the Italian border. Even though it relies on France for military protection, Monaco continues to be a politically autonomous state. Singapore is an island state located between Malaysia and Indonesia. It was founded as a British trading colony in 1819 and became an independent city-state in 1965. Singapore is currently governed by a parliamentary republic. Vatican City is a tiny enclave located in the city of Rome. It gained political autonomy in 1929 and has maintained an ecclesiastical form of government, with the Pope serving as the chief of state. Italy is responsible for the defense of Vatican City, with the Pontifical Swiss Guard providing limited security within the city.

The city-state's political significance has certainly waned in the contemporary world—it may even seem like an anachronism in the age of the large modern state. Nonetheless, the idea of a small, politically autonomous community can still have power over the political imagination; it can provide valuable inspiration for communi-

tarians and advocates of direct democracy.

SEE ALSO *Vatican, The*

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Johnny Goldfinger

CIVIC ENGAGEMENT

SEE *Volunteerism.*

CIVIL AERONAUTICS AUTHORITY 1938

SEE *Aviation Industry.*

CIVIL DISOBEDIENCE

Civil disobedience is a form of sociopolitical protest consisting of the deliberate and intentional breaking of a law that is believed to be unjust. As John Rawls defines it in *A Theory of Justice* ([1971] 1991), civil disobedience is "a public, nonviolent, conscientious yet political act contrary to law usually done with the aim of bringing about a change in the law or policies of the government" (p. 320). It is marked by several distinctive and defining features. Firstly, to qualify as civil disobedience, such lawbreaking must be undertaken only after other legal and political avenues have been exhausted (or blocked repeatedly by civil authorities). Secondly, it must be done openly and in plain view of a wider public. Thirdly, the protesters' reasons for breaking the law must be articulated and explained to that public. (Taken together, the second and third criteria are sometimes called the *publicity requirement.*) Fourthly, such disobedience must be nonviolent and cause no harm or injury to anyone other than the protesters (in the event that the authorities use physical force). And fifthly, the protesters must accept whatever punishment is meted out to them by civil authorities.

The term *civil disobedience* was coined by the editors of Henry David Thoreau's posthumously published works. Apparently believing that Thoreau's "Resistance to Civil Government" (1849) had a title that sounded too militant, they renamed his now classic essay "Civil Disobedience." In that brief essay, Thoreau articulates and defends the idea that passive resistance is a right and duty of democratic citizens. To act in ways that cause "friction" in the "machinery" of injustice is not itself unjust; quite the contrary, Thoreau contends. In Thoreau's own case, resistance took the form of refusing to pay taxes that would help support the extension of slavery into Mexican territory by means of the Mexican War. This led to his arrest and brief imprisonment.

Thoreau's token act of resistance had little effect, but it led him to write the brief essay that has since been read, reread, and translated into dozens of different languages. "Civil Disobedience" has inspired dissidents and dissenters as varied as Leo Tolstoy in czarist Russia, Mohandas K. Gandhi in British-ruled India, Nelson Mandela and Steve Biko in South Africa, Andrei Sakharov in the Soviet Union, and Martin Luther King Jr. in the United States as well as Wei Jingsheng and the student protesters in China's Tiananmen Square. In short, Thoreau's little acorn of an essay has sprouted a forest of oaks.

Civil disobedience has both moral and practical aspects. The fundamental moral principles upon which civil disobedience rests are that it is unjust to accept or to turn a blind eye to injustice, that it is categorically wrong for one human being to harm another, that it is wrong to return harm for harm, and that it is better to suffer injustice than to act unjustly. To critics who claim that breaking the law is ipso facto unjust, defenders of civil disobedience reply that to obey an egregiously unjust law constitutes a "crime of obedience" (Kelman and Hamilton 1989). Moreover laws are made by human beings who are fallible and are capable of acting (or legislating) in unjust ways. If the law in question cannot be changed legally, it may be challenged extralegally and in nonviolent ways. As Rawls notes, in a perfectly just democracy, civil disobedience would be out of place, but that is not the sort of society in which we actually live. Therefore an almost just or imperfectly just democratic society that aspires to be just must make provision for civil disobedience (Rawls 1999, p. 319). By contrast, in an unjust and undemocratic society, more covert and clandestine forms of resistance may be undertaken and justified, as was the case with the pre–Civil War Underground Railroad that smuggled escaped slaves to freedom or the actions of those who during the Holocaust hid and protected Jews in defiance of Nazi law. Because such covert actions violate the publicity requirement, they do not count as acts of civil disobedience but fall instead under the heading of "conscientious refusal" (Rawls 1999, pp. 323–326).

Moving from the moral to the practical side of civil disobedience, its defenders maintain that to counter violence with violence only begets more violence, producing an ever-wider spiral of attack and counterattack. To inter-

vene nonviolently might initially provoke more violence, but over the longer haul, it helps break the spiral of violent action and reaction. On an equally practical note, bystanders who witness the suffering of civilly disobedient protesters may be moved to sympathize and side with their cause (as happened, for example, when fire hoses and fierce dogs were turned on peaceful civil rights protesters in the American South).

The theory and practice of civil disobedience holds that an individual or group should counter violence with nonviolence, hatred with love, injustice with justice. This is a most demanding doctrine and typically requires training in the tactics and techniques of nonviolence. It also requires, as King (1963) and others have pointed out, that we look for and appeal to the best in our adversaries. Civil disobedience requires not only that resisters rely on their own consciences but also that they act in ways that appeal to the consciences of those they act against as well as to the consciences of bystanders or witnesses. Because of this, acts of civil disobedience may, at least potentially, perform important and perhaps indispensable mobilizing and corrective functions for flawed and sometimes dysfunctional democratic societies (Power 1972; Ball 1972, chap. 4; Rawls 1999, p. 336).

SEE ALSO *Democracy; Ethics; Gandhi, Mohandas K.; Justice; King, Martin Luther, Jr.; Law; Mandela, Nelson; Morality; Passive Resistance; Protest; Rawls, John; State, The; Thoreau, Henry David; Violence*

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Terence Ball

CIVIL LIBERTIES

Civil liberties are individual freedoms intended to protect citizens from government. These freedoms include, but are not limited to, equal protection under the law, freedom of speech and association, religious freedom, and the right to a fair hearing or trial when accused of committing a crime. While many tend to use the terms *civil liberties* and *civil rights* interchangeably, civil liberties can be distinguished from civil rights in some fundamental ways. The primary distinction is that civil rights are protections by government against discrimination on the basis of individual characteristics like race, ethnicity, gender, or disability status, whereas civil liberties are most appropriately thought of as protections from government encroachment. Thus civil rights tend to require government action, while civil liberties are typically best served by government inaction.

Civil liberties are typically enumerated and guaranteed via the constitution of a nation-state but can also be guaranteed by other legal documents and conventions. One example of an enumeration of civil liberties that is not contained in a state's constitution is the International Covenant on Civil and Political Rights (ICCPR), a United Nations treaty created in 1966 and designed to protect civil rights and liberties globally. The ICCPR obliges nations who ratified it to protect individual liberties like freedom of speech, the right to a fair trial, and equal protection under the law via appropriate legislative, judicial, and administrative measures. Another example is the European Convention on Human Rights (ECHR), adopted by the Council of Europe in 1950. In addition to enumerating civil liberties and many civil and human rights, the ECHR established the European Court of Human Rights to adjudicate cases brought by individuals and groups who feel their rights under the ECHR were violated.

The United States is an example of a nation with constitutionally guaranteed civil liberties. In the U.S. Constitution, the most important protections for citizens against government imposition are set forth in the Bill of Rights, which are the first ten amendments to the Constitution. Additionally, in its capacity as the arbiter of disputes between government and the citizenry, the fed-

eral judiciary of the United States has slowly expanded the coverage of the Bill of Rights to include protections from state and local governments. This process is generally referred to as the *nationalization* or *incorporation* of the Bill of Rights, and occurred via expanded interpretation of the due process clause and the equal protection clause of the Fourteenth Amendment of the U.S. Constitution.

Though many governments profess civil liberties protections through various legal documents and conventions, it is not uncommon for these same governments to violate these protections and infringe upon the individual freedoms of their citizens, especially in times of crisis. For example, when national security concerns conflict with an individual's right to privacy or protection from unlawful imprisonment, many governments privilege national security over civil liberties and are thus more inclined to commit violations. Because of some governments' proclivity to infringe upon individual liberties, nonprofit organizations, such as Amnesty International, Human Rights Watch, and the American Civil Liberties Union, have been established with the missions of protecting and extending individuals' rights and liberties and holding governments accountable for their encroachments.

SEE ALSO *Bill of Rights, U.S.; Citizenship; Civil Rights; Constitution, U.S.; Constitutions; Due Process; Equal Protection; Freedom; Government; Human Rights; Individualism; Liberty; National Security; Nation-State; Public Rights; United Nations*

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CIVIL-MILITARY RELATION

The term *civil-military relations* denotes the field of social science inquiry that analyzes the relationship between the armed forces and society and/or the state. Since the state is often defined, following Max Weber, as the organ of society that holds the monopoly on the legitimate use of force, the relationship between formally constituted bodies of force and the state or society is a major indicator of the nature of that state. Indeed, in our own time the presence of independent military organizations or paramilitaries organized along political, sectarian, or ethnic lines and not answering to the command of a legitimate state testifies to the presence of the phenomenon of state failure in such countries as Iraq, the former Yugoslavia, Lebanon, and several sub-Saharan African states. Where all political power literally grows out of the barrel of a gun, the state and a legitimate political order are absent and anarchy, if not a war of all against all, reigns.

Alternatively, although the method by which the armed forces are subordinated to the executive and accountable to the legislative body varies in democratic states, the depoliticization of armed forces (including the police), their inability to take part in partisan politics, and their enforced accountability to legitimately elected organizations and heads of state testify to the democratic tendencies of the state. In these states, the use of force is under legal control, and ideally force can be employed only with legislative approval. In such a state the military similarly regulates itself by means of the internal rule of law (military law codes), which ensures that officers and soldiers are accountable for their acts. In the twentieth century and beyond, efforts have been made, beginning with the Nuremberg and other anti-Nazi trials, to extend that accountability to the international sphere, making commanding officers and even soldiers responsible to properly organized international tribunals for their acts.

Likewise in antidemocratic—that is, authoritarian—states, a critical signifier of the nature of the state lies in the sphere of civil-military relations. If the armed forces and police are divided into multiple overlapping forces with overlapping jurisdictions and the authority to monitor each other, this indicates that the legislature is weak and has been bypassed in its role of enforcing accountability. It entails as well the supremacy of the executive, which is above accountability to the legislature and its ability to exercise direct control over the armed forces through such multiple overlapping militaries. In such a state the military is politicized, a player in partisan politics, or else the means by which ambitious politicians seize power. Alternatively, a general or generals may decide to use the forces under their command, whether regular army, secret police, or some other force, to seize power for themselves. Here again the forms of such relationships among the executive, legislative, and military may vary widely among states. Nevertheless, these symptoms of authoritarianism and lack of legal accountability lead to the presumption of the existence of an authoritarian if not totalitarian state. And in totalitarian states, if not authoritarian ones, the

primary function of the state is to prepare for war. Such states are frequently, if not always, organized for military action against either internal or external adversaries. In this case, not only are democratic controls over the armed forces absent but also war and a military ethos for the state administration are glorified. Even if a state is not militaristic in the sense of glorifying war, such regimes often promulgate a cult of so-called military virtues and discipline that should characterize the state administration.

This leads to the question of the relationship of the military to society. Crucial questions here are whether the soldiery is organized as a professional volunteer force or conscripted, the ethnic and religious composition of the armed forces, and the relationships among different armed forces, the police, and the military—or what in Europe is increasingly called the security sector. It also is critical to determine if the military and its commanders, as well as the police, can break criminal laws with impunity or whether they are truly subordinate and accountable to their country's laws. This consideration obviously includes the extent of economic corruption and the ability simply to seize property by force, the latter being a sign of a demoralized military and a failing state. In this connection the field of civil-military relations also embraces the question of public support for the armed force and the image society holds of its members.

The public standing of the armed forces in any society is a good indicator of the nature of the relationship between that society and its armed forces. For all that the armed forces are trained specialists in the use and control of violence, they are recruited from society and cannot be artificially isolated from a society's values or pathologies. Thus a society undergoing stress will find that stress translated into its armed forces, even if there is a lag between them.

The field of civil-military relations encompasses the entire range of relationships between the various forms and missions that armed forces take and the society and state that empowers them to act. It is an inherently comparative field because all states and societies have armed forces with which they interact. Indeed, the absence of either the state or the armed forces in the equation underscores the severity of a crisis for the community in question. Yet despite this inherent bias toward a comparative approach, each state and society relates uniquely to its own armed forces. The topicality of this relationship remains crucial to the understanding not only of our own state and government but to the broader world of international relations.

SEE ALSO *Authoritarianism; Civil Society; Democracy; Ideal Type; Janowitz, Morris; Militarism; Military; Military Regimes; Nazism; Selective Service; State, The; Totalitarianism; War; War and Peace; War Crimes; Weber, Max*

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Stephen Blank

CIVIL RIGHTS

The term *civil rights* refers to equal treatment for individuals under the law. Political scientists Morris Fiorina, Paul Peterson, D. Stephen Voss, and Bertram Johnson define civil rights as "embody[ing] the American guarantee to equal treatment under the law—not just for racial groups, as people often assume, but more generally" (2007, p. 381). Civil rights are related to, but distinct from, civil liberties and human rights. In the American context, *civil liberties* are the freedoms granted to citizens in the Bill of Rights, the first ten amendments to the U.S. Constitution. These include, among other things, the freedoms of speech, peaceable assembly, and religion; protections against unreasonable searches and seizures, forced self-incrimination, and cruel and unusual punishment; and, for criminal suspects, the rights to a trial by jury and to representation by an attorney. These protections derive largely from the First, Fourth, Fifth, Sixth, and Eighth Amendments, all part of the Bill of Rights. Many other nations also grant both civil rights and civil liberties to their citizens through their constitutions or legislation.

Human rights are those rights that most scholars believe all human beings should have, regardless of which nation they live in. In 1948 the United Nations adopted the Universal Declaration of Human Rights, which declares that human rights include, among other things, rights to life, liberty, security, travel, property ownership, education, free thought and religion, work, rest, leisure,

and an adequate standard of living. The declaration also prohibits governments from certain practices, including torture and arbitrary arrest and detention. Human rights, then, are conferred not by individual nations, but by virtue of being human. Human rights may also be more broadly defined to include some rights outside the reach of both civil rights and civil liberties.

CIVIL RIGHTS AND DIFFERENT TREATMENT OF INDIVIDUALS

Civil rights derive from the U.S. Constitution, specifically the Fourteenth Amendment's equal protection clause, which states that government cannot "deny to any person within its jurisdiction the equal protection of the laws." In practice, government often draws distinctions between individuals, and the Fourteenth Amendment prohibits some, but not all, of these distinctions. When governments can treat people differently is a question often resolved by the courts. Some distinctions, such as race, are automatically suspect; the courts apply "strict scrutiny," where government must demonstrate a "compelling state interest" and show there is no other way to pursue that interest. This test is very difficult to meet. In 1978 the Supreme Court prohibited a strictly race-based quota system for admitting students to the medical school at the University of California at Davis. In 1995 the Court prohibited a program that awarded municipal contracts to minority-owned firms on the basis of race.

Other distinctions, such as gender, receive "heightened scrutiny," which is somewhat less demanding. Still, the courts often overturn government actions that treat men and women differently. In 1976 the Supreme Court overturned an Oklahoma law that established a drinking age of twenty-one for men but eighteen for women. And in 1996 the Court prohibited the state-run Virginia Military Institute's policy of admitting only male students. Still other distinctions, such as age, are evaluated by the courts based on whether the government can show a "rational basis" for its action. For example, states seeking to place special restrictions on issuing driver's licenses to people over seventy-five years old must only show that the state's actions are reasonably related to promoting a legitimate government purpose. In short, the answer to the question "when can government treat individuals differently?" depends on the basis for classifying people.

CONSEQUENCES OF THE ABSENCE OF CIVIL RIGHTS

Civil rights are widely regarded as essential in democratic societies. The absence of civil rights would mean governments have few limits against enacting laws that enshrine unequal treatment by declaring some groups superior to others. American history provides many examples. The extreme racial segregation and discrimination against southern blacks between 1880 and 1965 resulted from the conviction among most southern whites that civil rights did not exist for blacks. Without civil rights, government could pass laws prohibiting blacks from holding certain kinds of jobs or requiring black and white schoolchildren to attend segregated schools, as many, mostly southern, states did before the Supreme Court prohibited segregated public schools in 1954. Without civil rights, government could not require that women be admitted to state-supported military academies, be allowed to practice the occupation of their choice, or even be allowed to hold checking accounts in their own name. Without civil rights, public buildings would not necessarily be accessible to the physically disabled, as the 1990 Americans with Disabilities Act requires. Without civil rights, governments would be free to declare same-sex sodomy (but not opposite-sex sodomy) illegal—as Texas and several other states did before the Supreme Court overturned such laws in 2003. Without civil rights, governments could pass restrictive immigration laws targeting people of certain national origins, denying them entry.

Guarantees of civil rights, then, protect people based on race and ethnicity, but also other factors, including nationality, gender, disability status, and sexual orientation. The presence of civil rights protects citizens against discrimination by their government, and often, by private action. The absence of civil rights opens the door to group-based domination, discrimination, and oppression, and would raise serious doubts about any society's claim of upholding "liberty and justice for all."

SEE ALSO *Black Power; Citizenship; Civil Disobedience; Civil Liberties; Civil Rights Movement, U.S.; Constitution, U.S.; Disability; Due Process; Equal Protection; Human Rights; Public Rights; Sexual Orientation, Social and Economic Consequences*

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CIVIL RIGHTS, COLD WAR

During the cold war, civil rights violations within the United States captured the interest of the world, causing many to wonder whether race discrimination undermined the nation's global leadership. How could American democracy be a model for the world to follow, peoples of other nations asked, when within the United States citizens were disenfranchised, segregated, and sometimes lynched because of their race? Discrimination was widely seen as the nation's Achilles' heel.

In 1947, after violent attacks on African American World War II veterans in the South raised concern at home and abroad, President Harry S. Truman's Committee on Civil Rights issued a report which argued that the United States needed to improve its civil rights record, in part because race discrimination harmed U.S. foreign relations. By the late 1940s, the Soviet Union used racial discrimination in America as a principal anti-U.S. propaganda theme. Soviet propaganda was often exaggerated, but propaganda on race was particularly effective, simply because there was so much truth to it.

Global interest gave the civil rights movement international allies. In 1947 W. E. B. Du Bois wrote a petition for the National Association for the Advancement of Colored People (NAACP) to the new United Nations, "An Appeal to the World," to enlist U.N. support for the rights of African Americans. Du Bois, Paul Robeson, and others who criticized American race discrimination in an international context, lost their passports during the 1950s. Meanwhile, through the Voice of America and overseas information programs, the U.S. government tried to rehabilitate the image of American race relations, casting it as a story of enlightened progress under democracy. Some civil rights leaders, such as NAACP Executive Secretary Walter White, were staunchly anti-Communist and tried to aid the effort to convince peoples of other nations that African Americans could flourish in the United States, and that democracy was a better system of government than communism. Ultimately, however, American leaders believed that only civil rights progress would dampen the negative effect of racial problems on U.S. foreign relations.

In 1952 the Justice Department filed an Amicus Curiae brief in support of school desegregation in *Brown v. Board of Education* (1954), citing Secretary of State Dean Acheson as authority, and arguing that a crucial national interest was at stake in the case: foreign relations. When the Supreme Court ruled that segregation was unconstitutional, the decision was celebrated around the world. A challenge soon arose when Arkansas governor Orval Faubus blocked nine African American students from attending Little Rock's Central High School (1957). The Little Rock Crisis generated global criticism, and led jazz artist Louis Armstrong to cancel a State Department–sponsored trip to the Soviet Union; if "people over there ask me what's wrong with my country," Armstrong asked, "what am I supposed to say?" (Giddins 2001, p. 127). President Dwight D. Eisenhower, concerned with damage to U.S. foreign relations and other factors, sent in federal troops to escort the students into school. The world press lauded the president for putting the force of the U.S. government behind civil rights.

International interest gave the civil rights movement important leverage in the 1960s. The Nobel Peace Prize awarded to Martin Luther King Jr. in 1964 was one sign of global support. When Police Commissioner Eugene "Bull" Connor ordered fire fighters and police to use high-powered fire-hoses and police dogs on civil rights demonstrators marching in Birmingham, Alabama, in 1963, images of these violent tactics filled the world press. Domestic and international pressure led President John F. Kennedy to call for a strong civil rights bill. Passage of the Civil Rights Act of 1964 was celebrated around the world as a sign that the U.S. government was firmly behind civil rights reform. Formal legal change helped restore the image of America, even though inequities in American communities remained.

SEE ALSO Brown v. Board of Education, *1954; Civil Rights; Civil Rights Movement, U.S.; Discrimination; Discrimination, Racial; Du Bois, W. E. B.; Eisenhower, Dwight D.; Kennedy, John F.; McCarthyism; National Association for the Advancement of Colored People (NAACP); Nobel Peace Prize; Robeson, Paul; Roosevelt, Franklin D.; Truman, Harry S.; Union of Soviet Socialist Republics; White, Walter*

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CIVIL RIGHTS MOVEMENT, U.S.

The civil rights movement in the United States is most commonly identified as the long-term effort to achieve legal, political, social, economic, and educational equality and justice for African Americans, especially the interval from 1954 to 1968.

ORIGINS OF THE CIVIL RIGHTS MOVEMENT

After Reconstruction ended in 1877, state and local governments in the South quickly enacted and enforced laws that required or allowed private racial discrimination and the racial segregation of public institutions and services. Other state laws circumvented the Fifteenth Amendment by using poll taxes, literacy tests, grandfather clauses, and white primaries to prevent blacks from voting. Collectively known as Jim Crow, these laws were unofficially enforced by the Ku Klux Klan, a white terrorist organization.

U.S. Supreme Court decisions also helped to legitimize Jim Crow laws and discourage renewed federal intervention. In the "Civil Rights Cases" of 1883, the Supreme Court struck down the Civil Rights Act of 1875. Congress did not pass another civil rights bill until 1957. In the *Plessy v. Ferguson* decision of 1896, the Supreme Court upheld a Louisiana law that required the segregation of railroad passengers. The court ruled that such segregation laws were constitutionally allowed under its "separate but equal" interpretation of the Tenth and Fourteenth Amendments.

LEGAL AND POLITICAL ACTIVISM OF THE CIVIL RIGHTS MOVEMENT: 1910–1968

In 1910 W. E. B. Du Bois (1868–1963), a black educator and writer, established the National Association for the Advancement of Colored People (NAACP). The NAACP Legal Defense and Educational Fund's initial purpose was to promote civil rights for African Americans through court cases. This organization's most famous legal victory was the Supreme Court's unanimous decision in *Brown v. Board of Education* (1954). The *Brown* decision overturned *Plessy* and ordered the end of de jure racial segregation in public education. Thurgood Marshall (1908–1993), the association's chief legal counsel in this case, became the first black Supreme Court justice in 1967.

Racial segregation and the disfranchisement of southern blacks continued during the 1950s and early 1960s. Most southern states refused to effectively implement the *Brown* decision. Southern governors such as George C. Wallace (1919–1998) of Alabama, Ross Barnett of Mississippi, and Orville Faubus of Arkansas exploited racial issues by dramatically resisting federal court orders to integrate public schools and state universities. Senator J. Strom Thurmond of South Carolina, who ran for president in 1948 as the nominee of the anti–civil rights "Dixiecrat" Party, tried to prevent passage of the Civil Rights Act of 1957 through a record-breaking filibuster. In major nonsouthern cities with growing black populations, African Americans experienced de facto segregation in public schools, as well as racial discrimination in housing, jobs, and customer service.

The civil rights movement became better known to Americans nationally because of televised news coverage of civil rights demonstrations in the South, especially those led by Martin Luther King Jr. (1929–1968), a black minister in Alabama. There was also national media coverage of President Dwight D. Eisenhower's (1890–1969) use of the U.S. Army to enforce racial integration at a high school in Little Rock, Arkansas, and the racially motivated murders of fourteen-year-old Emmett Till in Mississippi in 1955 for allegedly whistling at a white woman, and of three civil rights activists in Mississippi in 1964.

Organized as the Southern Christian Leadership Conference (SCLC), King's movement attracted white legal, financial, and political support from throughout the nation. Influenced by the nonviolent civil disobedience of Mohandas K. Gandhi (1869–1948), King's first success in defying and ending racial segregation was the Montgomery, Alabama, bus boycott of 1955 to 1956. After Rosa Parks (1913–2005), a black seamstress, was arrested for violating the segregated seating of bus passengers, King led a boycott of local buses, which forced the end of segregated bus seating in Montgomery. The Montgomery bus boycott inspired similar peaceful protests elsewhere in the South, such as the sit-in protests by black college students seeking service at lunch counters and the Freedom Riders seeking to racially integrate Greyhound buses and passenger facilities on an interstate basis.

Many of the participants in the Freedom Rides and the voter registration project in Mississippi during the summer of 1964 were members of the Student Nonviolent Coordinating Committee (SNCC) and the Congress of Racial Equality (CORE). SNCC and CORE were also prominent in organizing King's August 1963 March on Washington. Earlier, in his "Letter from a Birmingham Jail," King expressed his exasperation with people who urged caution and patience in his incessant yet peaceful quest for civil rights and justice for African Americans.

Malcolm X (1925–1965) was the most militant and prominent critic of King's pacifism. Malcolm X, a black Muslim religious and political leader based in New York City, asserted that African Americans should reject pacifism and arm themselves for protection against whites. He also rejected racial integration in a white-dominated society and urged the development of black separatism in order to promote economic independence and an African-based cultural identity among blacks. Although Malcolm X was murdered by rival black Muslims in 1965, his influence on the civil rights movement persisted in the formation of the Black Panthers and King's later opposition to the Vietnam War (1957–1975), his linkage between racial justice and economic justice, and his increased activism on racial issues in northern cities, especially Chicago.

The most significant national legislative accomplishments of the civil rights movement were the Civil Rights Acts of 1964 and 1968 and the Voting Rights Act of 1965. The Civil Rights Act of 1964 prohibited racial discrimination in public accommodations, public facilities, employment, and the use of federal funds. The Voting Rights Act of 1965 authorized the federal government to register voters and supervise elections, prohibited literacy tests, and expressed opposition to poll taxes. The most controversial provision of the Civil Rights Act of 1968 prohibited racial discrimination in the sale and rental of housing.

THE LEGACY OF THE CIVIL RIGHTS MOVEMENT

After the assassination of King in 1968, the further advancement of civil rights for African Americans became more controversial among whites as they associated the civil rights movement with black militancy, affirmative action, and court-ordered busing to racially integrate nonsouthern schools. Nevertheless, the black civil rights movement inspired other civil rights movements in the United States, especially those for women, gays, opponents of the Vietnam War, and Latinos, the latter led by César Chávez (1927–1993) and the United Farm Workers of America.

SEE ALSO Brown v. Board of Education, *1954; African Americans; Black Power; Civil Disobedience; Civil Liberties; Civil Rights; Congress of Racial Equality; Du Bois, W. E. B.; Eisenhower, Dwight D.; Gandhi, Mohandas K.; Human Rights; Integration; Jim Crow; King, Martin Luther, Jr.; Marshall, Thurgood; Militants; National Association for the Advancement of Colored People (NAACP); Passive Resistance; Public Rights; Reconstruction Era (U.S.); Segregation; Social Movements; Student Nonviolent Coordinating Committee; Supreme Court, U.S.; Vietnam War; Voting Rights Act*

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Sean J. Savage

CIVIL SOCIETY

Civil society (from the Latin *civilis societas*) is the realm of independent activity and voluntary association that is not organized by the state. The origin of the term is often traced to the Scottish Enlightenment philosopher Adam Ferguson (1723–1816) and his *Essay on the History of Civil Society* (1767). Ferguson saw the new commercial civilization then displacing the older clan-based feudal order of the Scottish Highlands as enhancing individual liberty through the introduction of "civil society," "civil life," and "economic society." In the same intellectual tradition, another Scottish Enlightenment philosopher and social theorist, Adam Smith (1723–1790), referred to the notion of civil society as the capacity of human communities for autonomous self-organization. For both Ferguson and Smith, the example of the free, self-regulating economic market demonstrated the possibility of social organization without the heavy-handed supervision of the state.

But it was the German idealist philosopher Georg Wilhelm Friedrich Hegel (1770–1831) who first drew the boundary between the spheres of state and society in his *Elements of the Philosophy of Right* (1820). For Hegel, civil society (*bürgerliche Gesellschaft*) was the realm of the particular counterpoised to the state. It occupied the mesolevel (or intermediate stage) between the dialectical opposites of the macrocommunity of the state and the

microcommunity of the family. In his view, civil society was a temporary mode of relations interposed between the individual (or the family) and the state, which was to be transcended when particular and common interests combined.

There are several competing definitions of what the concept of civil society involves. For some writers, like the French Enlightenment philosopher Charles Louis de Montesquieu (1689–1755) and the French social commentator Alexis de Tocqueville (1805–1859), civil society was the realm of intermediate associations that stood between the individual and the state. It includes social and economic arrangements, ethical and legal codes, contractual obligations, and institutions apart from the state, but its key attribute is that it refers to public life rather than private or household-based activities. Civil society is juxtaposed to the family and the state and exists within the framework of the rule of law, accepting a certain commitment to the political community and the rules of the game established by the state. Most writers in this tradition seem to have in mind the domain of public participation in voluntary organizations, the mass media, professional associations, labor unions, social movements, and the like. In their writings, civil society becomes a description for all nonstate aspects of society, including the economy, culture, social structures, and even politics.

Other thinkers, like the Swiss-born Enlightenment philosopher Jean-Jacques Rousseau (1712–1778) and the German social theorist and revolutionary Karl Marx (1818–1883), tended to be more critical of civil society, which they saw as an economic and social order, developing in accordance with its own rules and independently of the state. In this conceptualization, civil society meant the social, economic, legal, and ethical arrangements of modern, industrial-capitalist society considered apart from the state. The concept generally referred to the specific mode of relations between the state and self-organized social groups which was first attained by the modern European nations, although its seeds can be found in earlier periods. While praising civil society, which is voluntarily formed by the citizens as a sphere of social self-organization between the private realm of the domestic and the state, Rousseau (1762) recognized that civil society can be plagued by evils such as social injustice, elitism, and economic inequality that contradicted his idea of the "general will" of the entire citizenry (*volonté générale*). While Marx stressed the economic character of civil society in the fashion of Ferguson and Smith, he viewed it as an expression of crass materialism, brutal exploitation, anarchic competition, and economic inefficiency (Marx 1843). According to him, civil society was a morally decadent, oligarchic society rife with greed, egoism, individualism, and alienation that benefited only the privileged class of the "bourgeoisie" (that is, the wealthy owners of productive capital) who lived off the labor of the rest of society, especially the industrial working class (the "proletariat").

For the prominent Italian Marxist theorist Antonio Gramsci (1891–1937), civil society was the bastion of "hegemony" by the economically dominant "bourgeois" class. In contrast to Marx, he defined civil society as a predominantly cultural and ideological sphere rather than an exclusively economic domain. He argued that in the developed capitalist countries, the state has close institutional and ideological links with civil society, in which the "active consent" of the mass public is manufactured on a daily basis. Public consent is not achieved through political democracy but through ideological hegemony—that is, propaganda, indoctrination, public education, and the inculcation of a worldview biased in favor of the socially and politically dominant class. Therefore, civil society is ultimately supportive of the "bourgeois" state, which uses it to shape popular beliefs and aspirations in its own ideological image (Gramsci 2001).

Today the study of civil society focuses on the causal link between democratization and the nonpolitical aspects of the contemporary social order, leaving open to debate the question of whether or not there is incongruence and conflict between civil society and the state. The existence of a self-organized, vibrant, and fully developed civil society that is free of the state and has numerous autonomous public arenas within which various voluntary associations regulate their own activities and govern their own members is a necessary, but not sufficient, condition for a viable democracy and the transition from an authoritarian or totalitarian regime to a democratic one. Civil society discourse has more recently drawn on the experience of the collapse of communism in Eastern Europe, where the anticommunist opposition embraced the revival of civil society as its raison d'être during the years leading up to the revolutions of 1989. In fact the downfall of communism has often been linked theoretically to the revolt of residual or nascent civil society against the political intolerance and ideological rigidity of the communist state.

SEE ALSO *Associations, Voluntary; Authoritarianism; Capitalism; Communism; Democratization; Gramsci, Antonio; Hegel, Georg Wilhelm Friedrich; Hegemony; Ideology; Marx, Karl; Rousseau, Jean-Jacques; Smith, Adam; Society; State, The; Tocqueville, Alexis de*

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Rossen Vassilev

CIVIL WAR, MEXICAN

SEE *Mexican Revolution (1910–1920).*

CIVIL WARS

Since the end of World War II (1939–1945), civil wars (wars within nations) have surpassed interstate wars (wars between nations) as the most frequent and destructive forms of organized armed conflict in the world. The Correlates of War Project, a major data archive on armed conflict, reports that there were only twenty-three interstate wars between 1945 and 1997, resulting in 3.3 million battle deaths. By contrast, there were more than four times as many civil wars (108), resulting in almost four times as many casualties (11.4 million; Sarkees 2000).

A second shift in the patterns of conflict is that until the breakup of the Soviet Union in 1991, almost all of the civil wars that occurred since 1945 took place in third world nations of Asia, Africa, and Latin America. By contrast, the interstate wars that punctuated the historical record of the three centuries prior to World War II took place primarily in Europe among the major powers of the international system (Holsti 1996). Yet from 1945 until 1991, Europe was almost completely free of armed conflict on its soil (Holsti 1992, p. 37; 1996).

A third salient pattern in the recent wave of civil wars is that once a nation experienced one civil war, it was very likely to experience a second one. The 108 civil wars in the Correlates of War data set occurred in only fifty-four nations. Only twenty-six of those nations had one and only one civil war, while the remaining twenty-eight nations had at least two and as many as five separate civil wars. Thus, for a certain subset of nations, civil war is a chronically recurrent condition.

One encouraging trend to emerge since the end of the Cold War is the willingness of the international community to broker negotiated settlements to civil wars and to support those settlements with peacekeeping forces. Nineteen of the twenty-six civil wars that ended in negotiated settlements were resolved after 1988, including United Nations (UN)–mediated settlements to protracted civil wars in Cambodia, Mozambique, and El Salvador, to name but a few. Not all of these peace settlements have lasted: the peace established by settlement agreements in Angola, Colombia, and Lebanon, for example, later broke down into renewed civil war. However, when negotiated settlements are supported by UN peacekeeping forces, the resulting peace has proven to be rather durable (Fortna 2004; Doyle and Sambanis 2000).

FORMS OF CIVIL WAR

The term *civil war* is used to describe organized armed conflict between the armed forces of a sovereign state and one or more rebel organizations drawn from the population of that nation. Two subtypes of civil war can be distinguished: *revolutions* and *secessionist revolts.* In a revolution, the rebels seek to overthrow the existing government and assume control of the state themselves. Civil wars in Nicaragua (1978–1979), El Salvador (1979–1992), and Cambodia (1970–1975, 1979–1991) are examples of revolutionary civil wars. In a secessionist revolt, the rebels seek not to take over the existing state but to gain independence from it by creating a second sovereign nation-state out of a portion of the territory of the original nation. The Tamil revolt in Sri Lanka that began in 1983, the Eritrean revolt against Ethiopia (1974–1990), and the Biafra revolt in Nigeria (1967–1970) are examples of secessionist revolts.

A further distinction among civil wars concerns whether they are *ethnic conflicts* or not. Among revolutionary civil wars, those that are nonethnic or *ideological* typically involved peasant-based insurgencies in nations where the agricultural sector dominates the economy. Where land ownership is concentrated in the hands of a small landed elite, the large peasant majority is often relegated to a life of poverty as landless or land-poor cultivators. When an authoritarian state employs repression to preserve the prerogatives of the landed elite against peasant-based dissident movements, revolutionary insurgencies can arise by drawing support from landless and land-poor peasants. The civil wars in El Salvador, Peru, Colombia, and Guatemala followed this pattern.

In ethnic conflicts, the same issues of inequality and repression generate the grievances that motivate rebels and

their supporters. However, ethnicity adds another dimension to the conflict between state and society. In ethnic revolutions, ethnicity and inequality often coincide: those who are victims of various forms of inequality are from one ethnic group, while those who enjoy a disproportionate share of the advantages available in the nation are from a different ethnic group. Ethnic divisions add cultural and identity issues to the fuel of conflict. Members of one ethnic group fear the suppression of their culture, language, religion, and heritage at the hands of a regime dominated by a rival ethnic group. Where ethnic groups out of power are concentrated in geographic enclaves, their response to this *ethnic security dilemma* is often to launch a secessionist war aimed at establishing their homeland as a separate sovereign nation. The Eritrean secession from Ethiopia fits this pattern. Where ethnic groups are more intermixed geographically, groups out of power often resort to revolutionary violence in an attempt to overthrow a state dominated by their ethnic rivals and to establish themselves in power. The ethnic revolutions in Angola and Rwanda fit this pattern.

CAUSES OF CIVIL WAR

The observable patterns of conflict discussed earlier provide some clues as to the factors that make a nation more or less susceptible to the outbreak of civil war. The fact that until 1991 almost all civil wars occurred in third world nations suggests that factors common to third world nations but not postindustrial democracies or former Leninist regimes might be implicated in the causal process leading to civil war. One such feature is that almost all of these nations were at one time colonies of European powers. Colonial powers harnessed the economies of these regions to serve the demands of markets in Europe and North America. In so doing, they disrupted existing patterns of agricultural production for local markets, as well as the patterns of community organization that supported that production and provided indigenous communities with reliable survival strategies (Migdal 1988).

Decolonization may have conferred formal sovereignty on former colonies, but rarely did the departing colonial power endow the postcolonial state with the institutional capacity or economic wherewithal to develop a strong and effective state capable of providing its constituents with civil order and a reasonable level of material well-being. Lacking legitimacy based on effective performance, weak states came to perceive any dissident challenge—peaceful or otherwise—as a threat to the state itself. The weak state responded with the one policy instrument at its disposal: military repression. Repression forced challengers to resort to violence of their own in order to advance their claims and defend themselves against the state. This cycle of violence begetting violence often escalated to civil war.

Empirical research on predictors of civil war onset provides support for the proposition that the *weak state syndrome* described above is associated with susceptibility to civil war. A number of correlates of the weak state syndrome consistently distinguish nations that experience civil war from those that do not. Not surprisingly, civil wars are more likely to occur among nations that have lower levels of economic development (Fearon and Laitin 2003; Collier and Hoeffler 1998). Where poverty is widespread, the opportunity costs of participating in armed rebellion are lower: participants have less to lose by joining an armed rebellion than would be the case were they more prosperous. Rebel recruiting is facilitated by low levels of economic well-being (Collier and Hoeffler 1998). Economic underdevelopment also constrains the capacity of the state to respond to dissident movements with accommodative reforms that might defuse tensions short of armed conflict.

Other dimensions of state strength affect a nation's susceptibility to civil war as well. Although the evidence is mixed, there is some support for the proposition that both democracies and autocracies are less likely to experience civil war than weak authoritarian regimes (Henderson and Singer 2000; Auvinen 1997; Hegre et al. 2001). The institutions of democracy provide aggrieved groups with an alternative to violence as a means to seek redress of their grievances. Elected leaders have an electoral incentive to address those grievances with accommodative policies, and they risk electoral costs if they respond with repression. Highly autocratic regimes are also relatively immune to civil war because the overwhelming coercive capacity of such states precludes armed uprisings by repressing dissent preemptively.

It is the weak authoritarian regimes (anocracies) or nations undergoing the transition to democracy that are the most susceptible to civil war (Hegre et al. 2001). They lack both the institutional capacity to resolve popular grievances through accommodative policies and the coercive capacity to repress dissent preemptively. When faced with a dissident challenge, such regimes attempt to repress it but fail, confronting dissidents with the choice of withdrawing from politics and suffering in silence or adopting violent tactics of their own to overthrow the incumbent regime.

HOW CIVIL WARS END

One feature of civil wars that has drawn considerable attention recently has been the question of their duration (how long they last) and their outcome (whether they end in a government victory, a rebel victory, or some sort of negotiated settlement). Civil wars do tend to last longer

than interstate wars: the 108 civil wars described in the Correlates of War lasted an average of 1,665 days, whereas the twenty-three interstate wars lasted only 480 days on average. Because civil wars have lasted so long, new civil wars began at a faster rate than ongoing wars ended (until about 1994), with the result being a relentless accumulation of ongoing civil wars (Fearon 2004). The long duration of civil wars also accounts for their destructiveness. The rate at which casualties occur is usually lower in civil wars than in interstate wars; interstate wars are, on average, more intensely destructive. However, because civil wars last so much longer than interstate wars, their cumulative death toll usually exceeds that of interstate wars.

The duration of civil wars also affects their outcome. There is evidence that military victories by either the government or the rebels usually occur fairly early in the conflict if they occur at all. For rebel movements especially, the evidence suggests that if they are going to win, victory will occur within the first two or three years of the conflict. Governments, too, tend to win early if they win at all (Mason et al. 1999). Past some point (about eight to ten years into the civil war), neither side is likely to achieve military victory, and they settle into what William Zartman has termed a *mutually hurting stalemate* (1993, p. 24), whereby neither side has the capacity to defeat the other, but both sides have the capacity to deny victory to their rival.

It is at this point that civil wars become ripe for resolution. Third-party mediation—usually by the United Nations—can bring about a negotiated settlement to the conflict. While negotiated settlements are more likely than military victories to be followed by renewed conflict (Licklider 1995), negotiated settlements supported by UN peacekeeping forces are more likely to last (Fortna 2004; Doyle and Sambanis 2000). Peacekeepers provide both sides with credible guarantees that they can disarm and demobilize without fear of their rival violating the agreement and achieving through deception what they could not achieve on the battlefield (Walter 2002). Data from the UN's Department of Peacekeeping Operations indicate that forty-seven of the sixty peacekeeping operations established since 1945 have been deployed in civil wars, and forty-three of those were deployed after the cold war ended. Thus, UN brokering of peace agreements and deployment of peacekeeping forces have brought about a decline in the frequency, duration, and deadliness of civil wars, developments that offer some hope for future trends in the frequency, duration, and destructiveness of civil war.

SEE ALSO *Coup d'Etat; Destabilization; Diplomacy; Dissidents; Genocide; Guerilla Warfare; Lebanese Civil War; Peace; Spanish Civil War; U.S. Civil War; United Nations; Yugoslavian Civil War*

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T. David Mason

CIVILIZATION

A Latinate word *civilization* ranks among the master concepts in the history of modernity. As such, it bears enormous semantic and historical density and has important relations with other master concepts of the modern, such as *history* (in the modern sense of a collective singular totality), *progress, development, culture* (in both the high and low senses), and *modernity* itself. The earliest recorded use of the term *civilization* in English dates from the first decade of the eighteenth century, though it appeared in a strictly legal context, referring to the conversion of a criminal matter to a civil one; this meaning is now obsolete (even as a juridical dimension extends into present usage). In its relevant modern sense, *civilization* was established in the second half of the eighteenth century—especially in the wake of the French Revolution (1789–1799)—and was further consolidated through the nineteenth century as a comparative and hierarchizing metahistorical, metaanthropological concept. The term has since experienced a complex trajectory, shot through with ethico-political moment, always with the Euro-American world (especially the habits and ideologies of its elite classes) as the critical reference point.

The noun *civilization* built on the seventeenth-century verb *civilize* to indicate both the process of uplifting to a higher state of humanity and of subjection to law, as well as the denouement of such development. Civilization was thus understood to be simultaneously the process and the end state of progress. This process was further understood to be stadial, progressing from savagery through barbarism to civilization, a schema that was variously rearticulated and nuanced over the course of the nineteenth century. Though other civilizations were recognized (e.g., ancient Egypt)—typically state-based and stratified societies of imperial reach, with major cities, monumental architectural features, and significant written literatures—these were found to be lacking in some aspect of leading contemporary Western societies and were considered to that extent barbaric.

The semantic elements of *civilization* correspond closely with features of the European historical horizon in which the term emerged and matured. This horizon, extending from circa 1500 onward, includes: colonialism (co-emergent with the Renaissance, but accelerating from the second half of the eighteenth century through the nineteenth); the intensification of urbanization and the eventual emergence of major European capitals; the interrelated processes of the marginalization of the Catholic church in the European state system, the emergence of Protestant sects, and the spiritualization of strands of Christian theology; the monopolization of violence by the absolutist state, and the related development of courtly manners; the achievement of a law-governed European inter-state system (first through the 1648 Treaty of Westphalia, and then the 1815 Congress of Vienna); the spread of disciplinary institutions and technologies of the self; the global rise of European capital, and the correlative emergence and consolidation of European bourgeois classes and consumerism; the development of private property from the late seventeenth century and accelerating from the second half of the century (e.g., in England with the enclosures movement); the interrelated development of parliaments, national polities/states, and electoral democracy (beginning in the seventeenth century in England for the propertied classes and extending both horizontally and vertically throughout the eighteenth, nineteenth, and twentieth centuries to universal adult franchise, excluding the non-European colonies); and of course the development of the arts, sciences, and technology, especially at an accelerated pace since the Enlightenment (i.e., roughly the eighteenth century).

Thus, the significations accruing to *civilization* have been the following: European/Western; urban and urbane; secular and spiritual; law-abiding and nonviolent (i.e., limited to legalized violence, both within and between states); polished, courteous, and polite; disciplined, orderly, and productive; laissez faire, bourgeois, and comfortable; respectful of private property; fraternal and free; cultured, knowledgeable, and the master of nature. The uncivilized conversely are: non-Western; rural, or worse, savage; idolatrous, fanatical, literalist, and theocratic; unlawful and violent (i.e., given to violence outside juridical procedure); crude or rude; lazy, anarchic, and unproductive; communistic, poor, and inconvenienced or beleaguered; piratical and thievish; fratricidal (or, indeed, cannibalistic) and unfree; uncultured, ignorant, illiterate, superstitious, and at nature's mercy. Given this stark set of binaries, it is not surprising that the *civilizing mission* (a related concept that emerged in the nineteenth century) has often been the ideological counterpart of projects of colonial domination and genocide, especially in the non-Western world, but also in the European hinterland and vis-à-vis European minorities and subaltern classes.

Marginal to the main thrust of the concept's history, critiques of civilization have accompanied it throughout, from Jean-Jacques Rousseau (1712–1778) in the mid-eighteenth century through Romanticism to anarcho-primitivist strands in the contemporary antiglobalization movement (Zerzan 2005). These critiques, especially in

German lands in the nineteenth century (Elias 2000), have often relied on the concept of *culture* as a more local, authentic, egalitarian, and communitarian alternative, though just as often culture has been co-opted by nationalist projects. There is ultimately much slippage between culture and civilization. This slippage is evidenced in Samuel Huntington's much discussed book, *The Clash of Civilizations and the Remaking of World Order* (1996), where the concept of civilization appears to be just culture on a grand scale—which is moreover decoupled from the now largely archaic concept of civility: Would it be possible to imagine a "clash of civilities"?

The first recorded use of the word *civilization* in its relevant, modern, as opposed to the archaic juridical sense, points toward another semantic element that has received remarkably little attention given its extraordinary significance. It is now accepted that the term was first used in 1756 in *L'ami des hommes* (The Friend of Man) by Victor de Riqueti (1715–1789), the marquis de Mirabeau, an important physiocrat. In this work, Mirabeau asserts: "Religion is without doubt humanity's first and most useful constraint; it is the mainspring of civilization" (cited in Mazlish 2004, p. 5). The close association in Mirabeau between religion and civilization (at a time when the term *religion* was all but synonymous with Christianity, non-Christian peoples being found to be either lacking religion, or possessing more or less pale approximations or deviations of Christianity) surprises only because of the inherited dogma that the civilizational process coincides with the vanishing of religion (in which direction the first step is the avowed rationalization of religion, that is, the emergence of the Protestant sect). In fact, civilization has been coupled with Christianity and (Western) Christendom throughout its career (Perkins 2004), and missionaries have been key and continuing agents of the civilizing mission. Even today, a measure of merely the iceberg's tip in this regard is the character of debates on the accession of Turkey to the European Union, as well as the statements of prominent Western opinion makers and leaders in the wake of the events of September 11, 2001 (most explicitly U.S. president George W. Bush and Italian prime minister Silvio Berlusconi). Even in high scholarship, an important sociologist of religion, Rodney Stark, published a book in 2005 under the title *The Victory of Reason: How Christianity Led to Freedom, Capitalism, and Western Success*.

Given the historicist character of civilization, this coupling is inevitable: If civilization arose, or developed its standard form, in Christendom, how can the latter not continue to be credited and effectively associated with its achievement? Relatedly, if secularism (an important constituent of civilization) emerged out of the Protestant Reformation—as is frequently avowed, especially in the United States—how can the latter not be so accredited and effectively linked? The same can be said for the originary relationship between capitalism and civilization, a view registered in the cold war perception of the Soviet Union as an example of barbarism and "Asiatic despotism." This view is no doubt also indebted to the shifting cartography of the "uncivilized" Orient, which has often extended into eastern Europe (or even central Europe, as during the Third Reich), not to mention the enduring if older legacy of the secession of the Eastern Church from Rome.

In charting the trajectory of civilization, contemporary scholars often index and discuss attitudes of superiority in premodern and non-Western contexts (e.g., the old Chinese binary of "*kaihua/wenming* versus *fan*," which roughly corresponds to "civilized versus barbarian"). But it is important to keep the following in mind: It is no doubt the case that all human collectivities have ways of distinguishing themselves from others, and this process takes on an increasingly hierarchical accent in large stratified collectivities. With stratification, moreover, come concepts that discriminate between members of various levels and groups within. However, both the flexibility and form of the inside-outside distinction, as well as the forms of internal hierarchy, vary widely, and are in each case specific, even if dynamic. For the exercise to have any meaning, therefore, it is critical that analysis stays with this specificity. The surest guide in this regard is the material language of the concept in its discursive trajectory, that is, the Latinity of *civilization*. Furthermore, the non-Latinate analogs that have emerged since the mid-1800s (e.g., the Japanese *bunmeikaika*, coined circa 1880) are translations carried out in a highly asymmetrical historical context dominated by the Latinate, and are thus both defensive and derivative. Indeed, the force of Eurocentric civilizational discourse has been such that anticolonial ideologies have attempted to claim the origins of "civilization" for themselves, as in the Afrocentric scholarship of Cheikh Anta Diop. However, if other conceptions of civilization did hold out some hope in the first half of the twentieth century, as anticolonial movements highlighted the inconsistencies between the theory and practice of European civilization, and attempted to imagine alternatives—exemplified by Mohandas Gandhi's (1869–1948) famous quip about Western civilization that "it would be a good idea"—at the beginning of the twenty-first century, civilization appears to function as the master concept for the legitimation of elites everywhere.

SEE ALSO *Culture; Diop, Cheikh Anta*

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CIVILIZATIONS, CLASH OF

The "clash of civilizations" is a thesis that guides contemporary social science research in a comparative and global perspective. It is also a concept frequently used in political and public discourse, especially regarding the relationship between the "West" and Islam. This entry is intended to provide readers with an understanding of the origins and meaning of the clash of civilizations, selected research pertinent to this thesis, and a critical examination of this thesis and research.

Although historian Bernard Lewis had used the term earlier, the political scientist Samuel P. Huntington popularized the "clash of civilizations" in a highly influential 1993 article in the journal *Foreign Affairs* and in a best-selling book, *The Clash of Civilizations and the Remaking of World Order* (1996). In these works, Huntington puts forth the clash of civilizations thesis in an attempt to explain the causes, character, and consequences of divisions among people and between states after the collapse of Eastern European Communism in the late twentieth century. The thesis combines historical insights with contemporary developments, such as the increasing importance of religion and the rise of religious fundamentalism. Huntington writes, "the most important distinctions among people [today] are not ideological, political, or economic. They are cultural" (1996, p. 21). "The most important groupings of states are no longer the three blocs of the Cold War," Huntington further asserts, "but rather the world's seven or eight civilizations" (1996, p. 21). These civilizations contain all of the elements of culture, such as language, history, identity, customs, institutions, and religion, but the clash of civilizations thesis holds that religion is the major fault line. Accordingly, the world's people and states are classified into the following civilizations, largely on the basis of their religious traditions: Sinic (Chinese), Japanese, Hindu, Islamic, Orthodox, Western (Christian), Latin American, and "possibly," African. As evidence in support of this thesis, Huntington points in his 1993 article to fighting among (Western Christian) Croats, (Muslim) Bosnians, and (Orthodox) Serbs in the former Yugoslavia, U.S. bombing of Baghdad, and the subsequent negative Muslim reaction. Furthermore, Huntington predicts, "the next world war, if there is one, will be a war between civilizations" (1993, p. 39). The most dangerous civilizational conflicts, from Huntington's perspective, will arise from Western arrogance, Muslim intolerance, and Sinic assertiveness.

In the wake of the September 11, 2001, attacks, the global "war on terror," and the U.S.-led invasion of Iraq in 2003, social scientists increasingly turned their attention to Huntington's claims of an Islamic-Western clash of civilizations. The main controversy centers on whether religious traditions, such as Islam, are impediments to democracy. In fact, Muslim countries (e.g., Saudi Arabia, Iran, and Pakistan) are more likely than Western countries (e.g., the United States, most of the countries in the European Union, and Australia) to have authoritarian regimes in which citizens have little or no say in government. From Huntington's perspective (1996), this is because Western Christianity emphasizes democratic pluralism, separation of religion and state, rule of law, and individual rights to a greater extent than Islam: Islamic tenets hold that God rules the universe; there is no separation of religion and state in Islam; Islamic law reflects God's, not humans', desire; and Muslims are treated as unitary, without regard to any social divisions. However, Huntington (1993) recognizes that the West attempts to impose its liberal-democratic values on other civilizations through its control of international governmental organizations, such as the United Nations.

Social scientists have challenged the general propositions of the clash of civilizations thesis, including the perception that Islam and democracy are incompatible. To begin, the thesis ignores variation within civilizations, as people may identify with their nation, race/ethnicity, or even their religious denomination or sect to a greater extent than they identify with their civilization. More

specifically, social scientists point out that there is nothing inherently antidemocratic about Islam. To the contrary, Mansoor Moaddel notes a correspondence between concepts in Islamic scripture and democratic political arrangements: "Such concepts as *shura* (consultative body), *ijma* (consensus), and *masliha* (unity) pointed to an affinity between Islam and democracy" (2002, p. 365). Still other social scientists have collected survey data from people in Muslim countries and found that their values are not as monolithic as the clash of civilizations thesis suggests, except on issues regarding secularism. People in Muslim countries also hold evaluations of democracy that are similar to those of their counterparts in Western countries. Yet, people in Muslim countries are more likely to favor religious political leaders and are less supportive of gender equality and homosexuality than people in Western countries (Inglehart and Norris 2003; Norris and Inglehart 2004), a finding seemingly supporting the clash of civilizations thesis.

While it is clear that there are institutional and value differences between countries, including between countries that form Islamic and Western civilizations, it is unclear if these differences are due to the nature of religious traditions. An alternative explanation that Huntington rejects is that these differences may instead be the consequence of countries' different levels of "modernization" and economic development. Economic development is positively related to the institutionalization of democracy and a political culture emphasizing democratic values (Geddes 1999; Norris and Inglehart 2004). From this perspective, it thus makes sense that Western countries, which tend to be substantially more wealthy than countries in the Islamic or African civilizations, are more likely to be democratic.

In sum, social science research indicates that some of the patterns that the clash of civilizations thesis posits are real. Although contemporary events might seem to lend further credence to this thesis, there is limited systematic evidence on the extent to which civilizations clash with one another. Finally, social scientists are divided on whether these patterns and conflicts are due to religious traditions, economic development, or other factors.

SEE ALSO *Civilization; Huntington, Samuel P.*

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Jeffrey C. Dixon

CLARK, KENNETH B.
1914–2005

Kenneth Bancroft Clark and his wife, Mamie Phipps Clark (1917–1983), were arguably the most famous African American psychologist couple of the twentieth century. Their research was cited in the U.S. Supreme Court's 1954 *Brown v. Board of Education* decision that declared segregated schools unconstitutional. During the 1940s and early 1950s, they conducted tests that were designed to identify racial identification and racial preference in young children. One of these experiments came to be known famously as the *doll test*. The Clarks concluded that racial segregation created psychological damage in African American and white children, although the Court neglected to address the latter issue. However, many scholars, teachers, and social welfare professionals since the 1960s have contended that this research was flawed, particularly the methodology used in the doll tests. They argued that the tests were too limited in their capacity to lead to the conclusion that African American children in particular were psychologically damaged. They maintained that the Clarks posed African Americans as damaged for political purposes in order to gain white support for racial integration.

Clark was born in Panama, the son of Jamaican migrant workers. When he was five, his mother moved to Harlem in New York City with him and his younger sister. He graduated from Howard University with B.A. and M.A. degrees in psychology in 1935 and 1936. His professors included political scientist Ralph Bunche (1904–1971) and Francis Cecil Sumner (1895–1954), the first African American to earn a PhD in psychology. In 1940 Clark became the first African American to receive a PhD in psychology from Columbia University; his wife became the second two years later (they had married in 1938). During graduate school, he worked on Gunnar Myrdal's (1898–1987) famous study, *An American Dilemma* (1944). After teaching at Hampton University, Clark became in 1942 the first African American psychol-

ogy professor at City College in New York. He remained there until his retirement in 1975.

Clark is best known for his involvement in the *Brown* case; much of his research was included in his first book, *Prejudice and Your Child* (1955). To his supporters, his career exemplified a steadfast dedication to integration; his detractors on the other hand ridiculed his integrationist positions. Yet Clark was far more complicated intellectually. He viewed racism as part of a larger problem involving what he called the "dilemma of power." Because humanity had never resolved "the issue of power versus ideals," human beings could rationalize conflicts between abstract concepts of justice and equality on the one hand, while maintaining privilege and status on the other. In other words, he pushed further W. E. B. Du Bois's (1868–1963) contention that the problem of the twentieth century was the color line. Clark also disagreed with Myrdal's position that racism contradicted the American creed; instead, he argued that beliefs in equality and white supremacy were not contradictory but compatible.

This intellectual framework shaped Clark's research and activism during the 1960s and 1970s, especially his second and third books, *Dark Ghetto, Dilemmas of Social Power* (1965) and *Pathos of Power* (1974). The former work used Harlem as a prism to present a bleak and pessimistic view of the impact of ghettoization on the daily lives of its citizens. Many readers interpreted his work as an endorsement of the "culture-of-poverty" thesis that was in vogue at the time among many scholars in fields such as anthropology, sociology, and education, but Clark presented a much more complex analysis of African American life in the ghetto than he has generally been credited for. He was highly critical of the cultural approach, charging that such analyses substituted for discredited biological theories to explain and justify racial differences. Instead, he argued, for instance, that "educational deprivation" was a more accurate term to describe what was actually happening in schools once they became predominately poor and black; because of their powerlessness, they no longer received the basic services—good teachers, competent administrators, decent buildings—that wealthier and whiter communities received. In that sense, *Dark Ghetto* was more of an indictment of American society, rather than solely a critique of African American community life.

In addition to his writings, Clark was influential in both activist and policymaking circles. In 1946 he and his wife founded the Northside Center for Child Development, the first interracial institution of its kind in New York City. His research led to his participation in the 1950 White House Conference on Children and Youth. Aware that the problems of education and poverty were linked, he designed the ambitious Harlem Youth Opportunities Unlimited (HARYOU) program in the early 1960s as a model for the "war on poverty." He was named in 1966 to the board of regents of the New York State Department of Education and in 1968 to the board of the New York State Urban Development Corporation. In 1967 Clark founded the Metropolitan Applied Research Center (MARC), which led a concerted effort to reject the culture-of-poverty thesis through publications and applied programs. MARC also worked to close the educational achievement gap through such efforts as its program (known as the Clark Plan) to reform the Washington, D.C., school system. Finally, in 1971, Clark became the first African American elected president of the American Psychological Association.

Despite his accomplishments, Clark grew pessimistic about the state of racial progress. He thought that he had failed at his most important work—HARYOU, the Clark Plan, and his efforts on school desegregation—to empower the black poor and close the educational achievement gap. Ironically, the man who wrote so eloquently about the lack of power in African American life concluded that he too lacked power.

SEE ALSO *Achievement Gap, Racial;* Brown v. Board of Education, *1954*

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CLASS

Much has been written on class in the years since Seymour Martin Lipset wrote his entry in the first edition of this encyclopedia, published in 1968. Lipset viewed the literature on class in terms of "social stratification," which he believed was divided into two approaches, the functionalist and the "social change" perspectives. Nevertheless, the bulk of his piece was centered not on contemporary studies, but on Karl Marx (1818–1883), Max Weber (1864–1920), and Émile Durkheim (1858–1917), who, Lipset argued, continued to animate the central debates of his time. The classics are no less important today, but this essay will aim to balance them with the now canonical

debates of the mid-twentieth century and the vast and multifaceted literature that has amassed since then.

MARX, WEBER, AND DURKHEIM

Any discussion of class must begin with Karl Marx. As Lipset once noted, while David Ricardo (1772–1823), Adam Smith (1723–1790), and others may have written about class before Marx, it was Marx who set the terms of debate for later sociological thinkers (Lipset 1968). For Marx, classes do not exist in societies where production for the group results in an equitable distribution of resources and requires that each member or unit contribute to the collective requirements of life. Classes emerge only when one subset of a community seizes private control of the means of production (e.g., land, factories) and coercively extracts *surplus labor* from another subset of the community, that is, labor that neither the first group needs nor the second group must give in order to survive.

Marx viewed the extraction of surplus labor as a fundamentally exploitative act, since the real exchange value of any given commodity is only ever equal to the labor time socially necessary to make it. This is called the *labor theory of value*. Any effort to squeeze out *surplus value* requires that human beings be forced to work for free beyond the labor time socially necessary both to maintain their labor power (e.g., through food and raiment) and to produce its equivalent in commodities. Thus, one's class is determined by one's relationship to the means of production: those who own the means of production and therefore forcibly extract surplus value comprise one class, while those who do not own the means of production and are therefore coerced to generate surplus value form another class. Like master and bondsman under slavery and lord and serf under feudalism, capitalism is predicated on two classes: the factory owners or *bourgeoisie* and the factory workers or *proletariat*. All of these, however, only form "objective" classes, meaning that they are classes determined merely by their proprietary relationship to the means of production. The subjective form of class, by contrast, is a class that is conscious of itself as a collectivity of similarly positioned individuals and is therefore capable of class action. The distinction between objective and subjective forms of class is infamously that of the class-in-itself (*an sich*) and the class-for-itself (*für sich*).

According to some interpretations of Marx's work, particularly those of the *Communist Manifesto* (1848), the transition from a merely existing working class to a conscious and therefore revolutionary working class is inevitable, as is the classless communist society that workers will eventually found. Because of its revolutionary and progressive potential in every epoch of production, class is said to be the very motor of history (Marx and Engels [1848] 1998; Marx [1852] 1996; Marx [1867] 1906). Hence, the oft-quoted claim, "The history of all hitherto existing society is the history of class struggles" (Marx and Engels [1848] 1998, p. 34).

Max Weber did not doubt the existence of exploitative class relations in modern society. Rather, he questioned Marx's definition of class, its centrality in modern life compared to other forms of domination, and the apparent inevitability of class action in Marx's work. In Weber's foundational piece on this subject, "Class, Status, Party" (1922), class is conceived of not as a group but as a sea of unconnected individuals who share the same "life chances," of which ownership of the means of production is just one example. Life chances comprise the bargaining power that one brings to the market for the purpose of maximizing income and includes professional authority, skills, and education. Just because one shares a similar set of life chances with others, however, does not mean that one will join with similarly positioned individuals in class action. Shared life chances are a necessary condition of class action, but they are by no means a guarantee, for there are other forms of domination apart from the economic that have the capacity to contravene class action. Societies that are organized according to "status" are less susceptible to class action, because they are stratified according to noneconomic concerns such as family, ethnic, or religious heritage. Partisan allegiances may also be an impediment to class solidarity (Weber 1946).

Émile Durkheim's foremost contribution to class analysis was to conceive of it in terms of occupational specialization in a modern and largely peaceful division of labor. Durkheim sought to explain the transition from the "mechanical solidarity" of primitive societies, whose coherence was based on the resemblance of actors and the dominance of a collective consciousness, to the "organic solidarity" characteristic of modern societies, whose coherence was based on the complementarity of highly specialized individuals. Organic solidarity breaks down only when individuals are coerced into tasks that they do not want to perform. Thus, the central challenge of modern societies is to match individuals with tasks that suit their natural talents. This is why organic solidarity may be achieved by contracts or exchange, which bind individuals through a system of rights and duties, and in turn give rise to rules that guarantee regular cooperation between the divided functions (Durkheim [1893] 1960).

STRATIFICATION

Kingsley Davis (1908–1997) and Wilbert Moore's (1914–1987) now-foundational piece, "Some Principles of Stratification" (1945), marked the translation of Durkheimian sociology into contemporary debates on class. Davis and Moore took as their challenge the ques-

tion of how modern societies so successfully channeled their members into an elaborate and specialized division of labor. Infusing Durkheim with Weber's emphasis on skills as life chances on the market, they reasoned that this monumental undertaking would require nothing less than a mechanism that could motivate the most qualified people to train for, seek, and perform the duties of the most important positions. Famously they hypothesized that an unequal system of occupational rewards was necessary to track the talented to their rightful place in the division of labor. Thus, professionals earn more than manual laborers, because the former positions must have greater built-in economic incentives to motivate the most highly talented to undertake the costly educational sacrifice necessary for those jobs. Social inequality, in other words, was not the result of the exploitation of one part of society by another and therefore a thing to be abhorred, but merely the system through which society unconsciously placed its most talented members into the most functionally important roles, without which society would be imperiled.

Among the more prominent early responses to Davis and Moore was that of Melvin Tumin (1919–1994), who argued that "functional importance" is an ideological construct. Power, he insisted, is a better measure of who gets ahead, such that the result of stratification, far from tracking the most talented people to the top, actually strangles talent at the bottom, making stratification deeply dysfunctional. Later Lipset and Reinhard Bendix (1916–1991) showed conclusively that the belief in upward mobility far exceeded the actual rate in the United States, while Peter Blau (1918–2002) and Otis Duncan (1921–2004) introduced path analysis to demonstrate the enduring effects of parental background and schooling on occupational attainment (Tumin 1953; Lipset and Bendix 1959; Blau and Duncan 1967).

But if Davis and Moore marked the introduction of Durkheim and Weber into the functionalist approach to class, then Ralf Dahrendorf (1957), the founder of modern conflict theory, did so for Marx and Weber. Dahrendorf sought to create an alternative to Talcott Parsons's (1902–1979) functionalist social system that could better account for internal conflict. A "Left Weberian" who saw class as fundamentally exploitative, Dahrendorf argued that Marx's focus on property as the ultimate marker of class was limited, especially in light of the control exercised by nonowner managers. Property and the coercive extraction of surplus value were for him subordinate forms of a more general social relation, authority, which served as the basis of binary "class conflict" in a variety of social settings including, but not limited to, industrial production. Dahrendorf, however, was criticized for expanding the meaning of class so far beyond the economic realm as to make the term meaningless (see, for example, Coser 1960).

Responding to Nicos Poulantzas (1936–1979), whose *Political Power and Social Classes* (1973) identified a "new petty bourgeoisie," Erik Olin Wright (1978, 1997) argued that a new class of white-collar workers had emerged as a result of elaborate organizational hierarchies and the separation of ownership from directive control of large industrial corporations (Giddens and Held 1982). Workers and owners continued to occupy diametrically opposed class positions, but white-collar workers had come to occupy "contradictory class locations" in which the latter enjoyed some degree or combination of autonomy, skill, and authority on the job. Though critics have argued that Wright smuggled Weber into his Marxist framework by expanding the basis of class location beyond exploitation and production, Wright nevertheless found a dividing line between white-collar employees who identify more with labor and those who identify more with capital, thus articulating a bourgeois-proletarian divide for a new age.

TWO CHALLENGES

In the aftermath of the Soviets' repression of democratic movements in Hungary (1956–1957) and Czechoslovakia (1968–1969), class analysis and in particular Marxism were assailed on several fronts both for what was seen as the perversion of Marx's humanist vision by state-sponsored socialism and for the exclusion of non-class-based identities, inequalities, and movements from public discourse. With respect to the latter, Frank Parkin (1979), another Left Weberian like Dahrendorf, criticized structural Marxism's assumption of internally homogeneous classes, as well as its inability to account for the enforcement of social boundaries between elites and workers. As an alternative, Parkin advanced the concept of "social closure," the process by which social collectivities, whether by class, race, gender, or a combination of these, seek either to maximize rewards by restricting access to resources and opportunities (in the case of elites) or to usurp rewards previously denied to them (in the case of nonelites).

Alberto Melucci (1980) likewise criticized the social-movement literature for emphasizing the political realm of movement activity while neglecting its nonpolitical or "social" dimensions. This, he noted, made sense in the study of working-class movements, which often have an institutionalized political arm, but did not square with women's movements, for instance, which, in addition to struggling for political rights, also seek to address social concerns of difference and recognition and do not vie for state power. More recently, Sonya Rose (1992) has argued that gender is not a secondary by-product of class relations as Friedrich Engels (1820–1895) and some Marxist feminists have suggested, but rather a central component thereof. Thus, in late nineteenth-century England, factory wages were adjusted by gender not only to the benefit of

capital, but also to the benefit of men, as it reinforced a discourse of female respectability tied to the subordination of women in the household and society at large.

E. P. Thompson's (1924–1993) critique of structural Marxism in the *Making of the English Working Class* (1963) was a lightning rod for emerging controversies within Marxism itself. The main point of this critique is that workers do not constitute a class because they share a similar structural position, but because they forge themselves into a class through their own language, culture, and struggle. The working class on this account is always already a conspirator in its own creation, thereby negating the analytical necessity for the in-itself/for-itself dichotomy. This challenge to the structural Marxism of Poulantzas, Perry Anderson (1980), and Louis Althusser (1971), among others, was led initially by the British cultural studies school of Thompson, Raymond Williams (1977), and sociologist Stuart Hall (1983).

Subsequent research, not all Marxist, has celebrated the agency of class actors, as in James Scott's account of subversive everyday behavior in *Weapons of the Weak* (1985); the indigenous culture of workers, such as Craig Calhoun's "reactionary revolutionaries"; and the processual, as opposed to the positional, dimensions of class formation exemplified by Anthony Giddens's concept of "structuration" and Pierre Bourdieu's (1930–2002) "habitus" (Bourdieu 1977; Przeworski 1978; Sewell 1980; Calhoun 1983; Bourdieu 1984; Giddens 1984; Katznelson and Zolberg 1985; Fantasia 1988; Bourdieu 1990; Steinmetz 1992; Somers 1997).

For Bourdieu, as an example, class typically functions at the level of shared dispositions or *habitus* (e.g., tastes, bodily carriage, language), which, though stemming from certain shared material conditions, manifests itself more as a "feel for the game" than as a primarily economic relationship. One is, without the effort of reflection, a "virtuoso" in negotiating the social terrain of one's class, very much as a professional soccer player, to use Bourdieu's analogy, knows precisely when and with what force and curvature to kick the ball in a breakaway situation. These dispositions only emerge recognizably as "class" when crises drag the material and dispositional differences among groups from the field of the unspoken (referred to as *doxa*) to the field of public opinion. Habitus, it is important to note, is not a fixed set of dispositions, but rather given to improvisation and thus to transforming the terms of class belonging. The analytical result is that class, through habitus, is neither structure nor agency, but structuring or both simultaneously.

THE FUTURE

One possible implication of this constant reworking of class is that it is no longer a workable analytical concept. Paul Kingston's *The Classless Society* (2000) is among the latest in a long line of studies that question the predictive power of class in shaping mobility, culture, voting, and consciousness, among other outcomes. On the other hand, there is a movement afoot to rebuild class analysis. David Grusky and Jesper Sørensen (1998), for example, contend that class models can be made more plausible if analysts radically disaggregate occupational categories to the unit occupational level. Moreover, the eclipse of the Soviet Union in 1991 and the attendant rise of neoliberalism have put the question of class back on the table if there had ever been any doubt. Noting the deepening class polarization since the late 1970s, David Harvey (2006) has argued that neoliberalism is a failed utopian rhetoric masking a far more successful project to restore economic power to the ruling classes. Future lines of inquiry include new forms of international class formation, the evolving relationship of party to class as the institutionalized Left goes into decline, and the disappearance of wage-based employment and thus of the very basis of social citizenship and welfare.

SEE ALSO *Bahro, Rudolf; Bourdieu, Pierre; Bureaucracy; Capitalism; Class Conflict; Durkheim, Émile; Elites; False Consciousness; Feudal Mode of Production; Feudalism; Habitus; Hierarchy; Labor; Labor Theory of Value; Left and Right; Marx, Karl; Mode of Production; New Class, The; Oligarchy; Poulantzas, Nicos; Power Elite; Ricardo, David; Slave Mode of Production; Smith, Adam; Stratification; Surplus; Thompson, Edward P.; Weber, Max; Working Class*

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Cedric de Leon

CLASS, LEISURE

In *The Theory of the Leisure Class* (1899), American economist Thorstein Veblen (1857–1929) distinguishes between two classes of individuals, the class that is focused on productive labor and the *leisure class*, a division that developed during the barbarian/feudal stage of society. These groups can be understood as similar to Karl Marx's (1818–1883) notion of classes within capitalism, in which the proletariat and the capitalist (bourgeoisie) class are in conflict over the distribution of society's wealth, power, and the division of labor. However, Veblen incorporates culture into this division with an understanding of production and consumption, material life, status, and economic stratification. According to Veblen, modern economic behavior was based on the struggle for competitive economic standing, as the aristocratic consumption of luxuries served as a litmus test for elite status during the peak of capitalist industrialization. The leisure class itself consists of social elites, businesspeople, and captains of industry (those at the top of the social-class pyramid), who engage in pecuniary activities that detract from the productive aspect of society.

Members of the leisure class attempt to garner status and competitive social advantage through their patterns of consumption (of goods and symbols) and their conduct, thereby driving economic life around status rather than utility. Social status is symbolized by the leisure class through *conspicuous waste*, *conspicuous consumption*, and *conspicuous leisure*, which are used to communicate and enhance social position and social standing and to obtain heightened self-evaluation. Conspicuous waste is evidence that one can afford to be frivolous with items as well as time (no need to work); conspicuous consumption is the socially visible display of expensive goods that signify class status. Both of these activities indicate wealth and the ability to afford leisure, meaning the lack of a need to perform manual and useful labor.

Conspicuous leisure is the benchmark for determining elite status and serves as a symbolic statement that one is above laboring. In this way, it functions similarly to what Pierre Bourdieu (1930–2002) referred to as *cultural capital* in that it is a description of class compounded with status. Lower-status groups emulate the leisure class in an attempt to increase their own status. Veblen discusses how women are exploited by men through vicarious conspicuous consumption, waste, and leisure, where women perform the conspicuous activity of leisure, and men benefit in terms of status from these activities. For example, ideals of feminine beauty (frailty, weakness, paleness—indicating that the woman is not able to labor), certain restrictive fashions that incapacitate labor, and the removal of women from socially visible productive labor all contribute to the good name of the household and its master.

SEE ALSO *Capitalism; Conspicuous Consumption; Stratification; Veblen, Thorstein*

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Ryan Ashley Caldwell

CLASS, MANAGERIAL

SEE *Managerial Class.*

CLASS, RENTIER

Rentier is a class of people who derive their incomes from financial titles to property. Though the term makes an analogy with the old rent-earning class of great landowners, rentiers are characterized by their more distant relationship to the property they own. Rather than living in an estate in the midst of their property, they own a variety of anonymous income-earning assets, most typically shares and instruments of debt. From the rentiers, all vestiges of the paternalism, noblesse oblige, and personal dependence that once characterized the landowning aristocracy have vanished, leaving them as pure consumers of financial revenues.

While with industrialization a portion of the landowning class transformed itself into rentiers—particularly those, like the duke of Westminster, whose lands became urban—the existence of a rentier class can be seen as an inevitable consequence of the development of capitalist financial institutions. The term *rentier* came to prominence in the early twentieth century and remained influential in economic discourse during the 1920s and 1930s. In the early twenty-first century it is again attracting attention as the financial sector comes to be dominant in mature capitalist economies.

What causes the financial sector to replace manufacturing as the bedrock of the economy? Its supposed role is to fund investment. Savings are meant to be channeled through the banks, investment trusts, and the stock market into firms that want to carry out investment in new capital stock. This process obviously does occur, but in many capitalist countries the financial accounts show that industrial and commercial companies are net suppliers rather than users of funds. It is by no means obvious why, in the face of continuing improvements in information-processing technology, the sector that carries out this channeling of funds should over time absorb a larger and larger portion of national resources and appear to contribute an increasing share of national income.

Channeling funds is manipulation of information. The "funds" are records kept by the banking system, and their channeling is a sequence of transfers between records. The records long ago moved from paper to computer databases. The power of computers has improved by leaps and bounds. One would have thought that the labor required to manage this system would have declined. The mechanization of agriculture eliminated the peasantry, but computers have not laid waste to the City of London. Why?

The key to this paradox is to realize that, despite the modern jargon of a financial services "industry" that offers financial "products" to customers, the financial sector is not a productive industry in the normal sense. Its structural position in capitalistic information flows ensures its

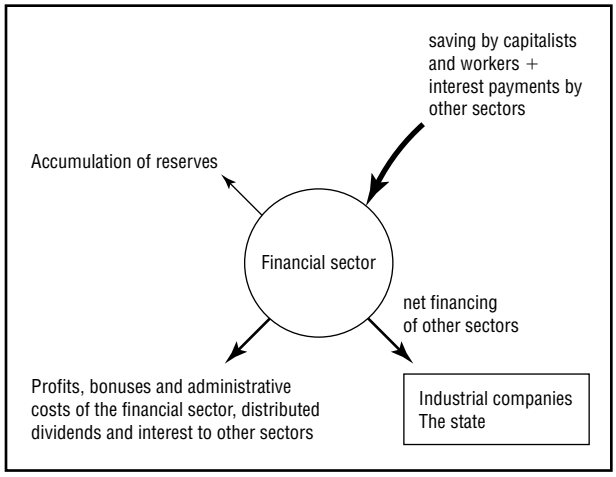

Figure 1

continued command over resources despite changes in technology that would decimate any other industry.

Figure 1 shows in summary form the flows of funds into and out of the financial sector. Savings by individual capitalists, by firms, and from the pension schemes of employees enter the system. Funding flows out to firms carrying out capital investment and also typically to the state to fund the public debt. However, money also flows out as costs: the income of the financial sector itself. This comprises wages of its employees, the bonuses it pays, the distributed dividends of financial companies, and the costs of buildings and equipment that the sector uses. Let us denote savings by σ, bonuses and costs by β, and funding of investment by φ.

The residual, which we will denote by δ, is made up by the change in the money balances of the financial sector itself: $\delta = \sigma - \beta - \varphi$. We need to explain why β, the costs/income of the financial sector, rises as a share of national income over time.

It has been argued that the real rate of return on capital tends to decline over the course of capitalist development (Marx [1894] 1971; Lebowitz 1976; Moseley 1990; Michaelson, Cockshott, and Cottrell 1995; Duménil 2002; Edvinsson 2003, 2005). If the rate of interest does not fall at a corresponding rate, then the level of voluntary fundraising by firms will decline, because a diminishing portion of firms will be making enough profits to cover the rate of interest. However, the level of savings will not necessarily decline at a corresponding rate.

The distribution of income in capitalist societies will be highly uneven (Levy and Solomon 1997, 1998; Reed 2001, 2003). A large proportion of income goes to a small part of the population. People with high incomes tend to save most of it. A decline in the rate of profit on capital will not alter this. It just means that the book value of the assets of those with high incomes rises. So savings going into the financial system will not decline. The disproportion between share issues and savings tends to make share prices rise; this in turn will induce a rise in the costs of the financial sector β through bonuses and so on.

A feedback mechanism is at play here. The average price of shares rises until the extra bonuses earned by the financial sector absorbs any excess of savings over investment. The argument above takes certain things as given—in particular, the separation of the capitalist class into a set of rentiers and a set of firms engaged in direct production. While this is a realistic portrayal of mature capitalism, it is not capitalism's aboriginal condition. In an earlier phase of capitalism, the rich did not save through financial intermediaries; they saved by investing in their own businesses. One has to ask what mechanism caused an initial population of capitalist masters to polarize into these two subgroups: functioning businesspeople and rentiers who invest only indirectly.

The transition process can be understood as a consequence of the dispersion of profit rates in an initial population of capitalists. Capitalists whose profit rates are above average find it beneficial to borrow funds to invest in their own business; those whose profit rates are below the interest rate gain more by depositing their profits with financial institutions than they would by reinvesting. Borrowing raises what is called the *gearing ratio* of borrowing firms and lowers that of lenders. Industrial capitalists initially earning a low rate of return in industry come, by lending, to acquire negative gearing ratios. In the process they transform themselves from entrepreneurs into rentiers.

The designation rentier was initially applied to individual people, but it applies equally well to any legal entity in the same situation. Limited companies, with respect to their fellow companies, have begun to function as rentiers: that is, they derive their income primarily from their financial rather than their industrial assets. As the demand for funds in the industrial and commercial sector dries up in the face of high interest rates, lending comes to be directed increasingly toward the funding of state debt and consumer credit. With a growing portion of capital depending on interest rather than industrial profit, there develops an increased political pressure to maintain high interest rates. This baneful effect of the rentier interest, which was already lambasted by J. A. Hobson (1902) and John Maynard Keynes (1925, 1936) for its role in consuming capital and hindering investment, looks set to grow. Early twentieth-century critics of the rentier class like Hobson, Keynes, Thorstein Veblen, and even V. I. Lenin identified another trait—its predatory character. To this trait they attributed the disaster of World War I and the deferred disaster of the Versailles treaty.

The rentier interest stood ultimately on moral grounds quite alien to those of natural right. Speaking of the absentee ownership of natural resources, Veblen remarked, "The owners own them not by virtue of having produced or earned them. … These owners own them because they own them, … title is traceable to an act of seizure, legalized by statue or confirmed by long undisturbed possession" (1923, p. 51). This trait is best exemplified today by Russian rentiers like Roman Abramovich, whose billions derive from the greatest undisguised seizure of natural resources within living memory.

SEE ALSO *Capitalism, Managerial*

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Paul Cockshott

CLASS, SOCIAL

SEE *Class.*

CLASS CONFLICT

Class conflicts are a crucial determinant of historical change, for "history … is the history of class struggles" (Marx and Engels [1848] 1998, p. 2); they are endemic because class interests are contradictory, and irresolvable as long as the mode of production remains unchanged. Class conflicts are inherent in the relationship between owners of means of production, who appropriate most of the surplus value created through production, and the direct producers whose share allows them, at best, only to reproduce themselves as workers. Non-Marxist theories of class, based on functionalist or Weberian perspectives, tend to underemphasize the collective dimension of class and its foundation in the objective relationship of people to the means of production. They define class, instead, as an attribute of individuals constructed on the basis of their education, occupation, income, ownership of resources, place in the occupational hierarchy, and so on. Consequently, they conflate class with socioeconomic status, thus obscuring the qualitative differences between class structure and social stratification.

In precapitalist social formations, class struggles assumed different forms, depending on the level of development of the productive forces, and the forms of appropriation of the surplus. Land was the main means of production and complex patterns of land ownership were reflected in complex networks of class relations and struggles between masters and slaves, "patricians and plebeians, lords and serfs, guild-master and journeyman" (Marx and Engels [1848] 1998, p. 2), landowners and tenant farmers, and so forth. The Roman and Greek economies, for example, were "slave economies," despite the presence of free, independent peasants and small producers, because "the main way in which the dominant propertied classes of the ancient world derived their surplus … was due to unfree labor" (de Ste. Croix 1981, p. 52). And the process of "primitive accumulation" through which money and commodities became capital, and serfs, independent peasants, and small producers became wageworkers, entailed the expropriation of direct producers from the land through unrelenting class struggles; its history "is written

in the annals of mankind in letters of blood and fire" (Marx [1867] 1967, pp. 713–716).

In capitalist social formations today, where labor is formally free, the struggle centers around wage levels and the length of the working day, for capitalists seek to keep wages low, working hours long, and profits high. In the market, where workers and capitalists meet as equal commodity owners, capitalists purchase the only commodity workers can sell: labor power. The use value of labor power is the production of value far greater than its own (i.e., the value of the wages capitalists pay); this value is embodied in the product. In the context of production, there is no equality: Capitalists control working conditions, the labor process, the length of the working day, and they own the product (Marx [1867] 1967, chs. VI and VII). Workers' demands for the eight-hour day led to violent class struggles in the nineteenth and early twentieth centuries (Foner 1986). Conflicts about the length of the working day persist today; some employers impose overtime rather than hire more workers and low wages force many workers to hold more than one job or work more than eight hours a day.

The revolutionary worldwide confrontation between capital and labor predicted in the *Communist Manifesto* (Marx and Engels [1848] 1998) has yet to happen, however, and localized attempts in Eastern Europe, China, and Latin America have failed. Workers today do not have class consciousness in the classic sense; they do not share a sense of themselves as a class with common anticapitalist grievances and, consequently, they are not a "class for itself" united and with clarity of purpose (Marx [1846] 1947). They are only concerned with economic survival, not with the overthrow of capitalism: They are merely a "class in itself," objectively identifiable by social scientists, but lacking self-awareness. Workers' spontaneous consciousness is largely individualistic and "economistic," a phenomenon that Marxist theorists have addressed in different ways.

V. I. Lenin argued that "the working class, exclusively by its own effort, is able to develop only trade union consciousness" ([1902] 1967, p. 122), hence his support for the role of a "vanguard party" and the bourgeois intelligentsia in politically educating the working class. Adhering to the principle of historical materialism, that social existence determines consciousness (Marx and Engels [1846] 1947, pp. 13–14), Georg Lukacs emphasized the role of *praxis* or human activity in the formation of class consciousness. It is through working-class praxis that society can become conscious of itself, for the proletariat is both the subject and object of history (Lukacs 1971, pp. 18–19). Only from the class standpoint of the proletariat is it possible to comprehend social reality as a totality, a crucial prerequisite to acting as a self-conscious class (p. 20). It is unclear, however, how this comprehension will emerge, because the forces of history unfold independently of individuals' intentions and consciousness. Consciousness, Lukacs states, is "*subjectively* justified" in its historical context, though it "*objectively* … appears as 'false consciousness' … [because] it by-passes the essence of the evolution of society … [and] fails to express it adequately" (pp. 47–50; italics in original). Whatever the intended motives and goals of this "false consciousness" may be, however, they further "the *objective* aims of society" (p. 50; italics in original).

Class consciousness, consequently, is something different from the ordinary thoughts individuals develop through praxis; it is neither "the sum nor the average of what is thought or felt by the single individuals who make up the class" (p. 51). Rather, it is "the appropriate and rational reactions 'imputed' … to a particular typical position in the process of production" (p. 51). Using Weber's methodology (Kalberg 2005, pp. 14–22), Lukacs constructs an ideal type of class consciousness, by relating it to society as a whole and then inferring the thoughts and feelings that individuals in different class positions would have if they had access to knowledge of the totality (i.e., the mode of production) and of their place in it (p. 51). Impeding the development of "true" proletarian class consciousness are commodity fetishism and other reifications characteristic of capitalist culture. Lukacs's arguments imply, however, that as capitalism develops, workers will eventually discern their place and objectives in the totality and will therefore consciously further the "aims of history."

Whether social reality will eventually become "transparent" or ideology will always cloud class consciousness and, more generally, people's spontaneous understanding of their conditions of existence, remains an unresolved issue. Louis Althusser's view is that ideology as such, unlike specific ideologies, "has no history"; it is, like Freud's unconscious, omnipresent and eternal (Althusser 2001, p. 109). To say that ideology is eternal is to point out that individuals, spontaneously, cannot penetrate the logic of history and thus acquire knowledge of the unintended consequences of their actions. The opacity of social reality is a transhistorical aspect of the human condition, unlikely to change even after capitalism has been superseded by a society in which the direct producers are in control of the mode of production. And to say that ideology has no history is to recognize that all forms of consciousness and all systematic products of intellectual labor (morality, religion, philosophy, and politics) are the outcome of human material practices under historically specific conditions of existence (Marx and Engels [1846] 1947, pp 14–15).

The capitalist state rules through repressive (e.g., army, police, prisons) and ideological (e.g., family,

schools, media, religion) state apparatuses. Through the latter, individuals are transformed into subjects, uncritically accepting their subjection to the Subject (i.e., God, Race, Nation, and Capital) whose power is exerted through the subjectification process. Ideologies have a material existence in practices, rituals, and institutions; they interpellate individuals as particular subjects (e.g., male, female, black, white, worker, capitalist, criminal), eliciting immediate recognition because individuals, whose social existence is embedded in ideological and material practices and rituals, are "always-already subjects" (Althusser 2001, pp. 112–119). In a society in which class is part of the common sense understanding of the world and of political discourse, class would enter into the formation of subjectivities. In the United States, however, where people are "afflicted with a serious case of social amnesia" (Aronowitz 1992, p. 72), it is the interpellation of cultural identities that structures people's subjectivities. It is through identities, rather than class, that people understand their lives and this is why the power of ideology stems from "the degree to which, in Althusser's terms, it becomes … lived experience" (Aronowitz 1992, p. 36). Thus conceived, ideology precludes the spontaneous emergence of class consciousness, without the intervention of political parties and intellectuals bringing to the working classes an analysis of their lives that may tear away the ideological veils.

In the *Communist Manifesto*, Marx and Engels confidently predicted that class conflicts would eventually result in the overthrow of capitalism. Their argument rests upon the notion of a dialectical relationship between the active and the reserve armies of labor, which assumed that the same workers would, because of the ebbs and flows of capital accumulation, experience both periods of poverty and unemployment and of economic well being. These experiences would, presumably, be the material condition for the rise of a class-conscious working class, the "grave diggers" of the bourgeoisie, self-consciously engaging in anticapitalist class struggles (Marx and Engels [1848] 1998, pp. 23–24; Arrighi 1990, pp. 29–30). But while that was the case in the nineteenth and early twentieth centuries, as capitalism spread throughout the world it divided the global working classes, with most of the active armies located in the advanced capitalist countries and most of the reserve armies located in the poorer countries. Within countries, the gap between the active and the reserve armies grew large, and the ideological effects that emerged from workers' sharing common conditions of existence largely disappeared after World War II. Today, globalization has produced a "reshuffling" of the global working classes; most of the active army is now in the poorer countries, whereas workers in the wealthy countries face declining wages and competition from immigrant labor willing to work for less (Arrighi 1990, p. 53).

As these changes accelerate, class conflicts might become more widespread, but this does not necessarily mean that class consciousness will eventually replace other forms of workers' consciousness, such as, for example, identity politics, racism, or xenophobia. In any case, class conflicts will continue for as long as capitalism remains the dominant mode of production. Such conflicts have been and will continue to be fought under a variety of ideological banners because people, as "ensembles of social relations" (Marx 1947, p. 198), live their lives at the crossroads of multiple experiences. Marx pointed the way toward an understanding of the relationship between social change, conflicts, and consciousness. In the process of studying change, "it is always necessary to distinguish between the material transformation of the economic conditions of production, which can be determined with the precision of natural science, and the legal, political, religious, artistic or philosophic—in short, ideological forms in which men become conscious of this conflict and fight it out" ([1859] 1970, p. 21). From Marx's standpoint, class consciousness should not be understood in purely economic terms, but in all its complexity. It emerges from changes in people's experiences and participation in class conflicts, which together pose challenges to the ideologies that have shaped their representations of those conflicts and experiences. Common experiences, the basis for the emergence of class consciousness, are "determined" by the productive relations into which men are born—or enter involuntarily. Class consciousness is the way in which these experiences are handled in cultural terms (Thompson 1966, pp. 9–10). These insights from Marx and E. P. Thompson indicate that it is necessary to examine the underlying class basis of contemporary processes of political mobilization and of struggles such as those happening in Bolivia, Mexico, and Venezuela. Underlying populist and indigenous movements for social justice and national independence from imperialist and corporate domination are material class interests, which fuel the rise of political leaders like Evo Morales (Bolivia), Lopez Obrador (Mexico), and Hugo Chavez (Venezuela), as well as the national and transnational opposition to them.

While class conflicts are inherent in class societies, this does not mean that if classless societies become possible in the future, conflicts will end. Class conflicts are grounded in struggles around the production and appropriation of the surplus. Under capitalism, they presuppose the existence of the capitalist and working classes. Were these classes to be abolished and some form of collective ownership of the means of production to replace capitalism, social conflicts would not end, however; the division of labor would continue to divide the population according to occupation, skills, and economic rewards. Struggles over redistribution of income would replace class conflicts focused on the abolition of the mode of production. And

because racial, ethnic, gender, and other differences irreducible to class would continue to exist, struggles about recognition (Fraser 1995) would continue as well. Conflicts based on social stratification would continue for as long as the subjective and material conditions inherited from capitalism persisted and competed with new forms of consciousness, practices, institutions, and so forth. The interconnections between experience and consciousness suggests, however, that as class conflict disappeared, the material conditions for social antagonisms at the level of social stratification would likely be eroded as well. In any case, as long as capitalism is the dominant mode of production, class conflict will continue to shape national and transnational political struggles.

SEE ALSO *Class; Marx, Karl; Middle Class; Surplus Value*

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Martha E. Gimenez

CLASS CONSCIOUSNESS

The concept of class consciousness emerged in nineteenth-century socialist theories of social emancipation, mainly in the work of Karl Marx (1818–1883). Marx's critique of the idealist philosophy of Georg W. F. Hegel (1770–1831) led him to state, in his *German Ideology* (1845), that human consciousness is determined by material experiences and conditions, and not the reverse. As Marx argued in the *Eighteenth Brumaire of Louis Bonaparte* (1852), class consciousness entails both the common interests of a social class as arising from its material situation ("class in itself") and the solidarity articulated from such interests in the struggle against another class ("class for itself").

The protagonist of Marx's idea of class consciousness is mainly the proletariat in the capitalist mode of production. Working-class consciousness is in this view the highest and truest form of consciousness ever expressed by a subaltern social group. In fact, for the first time in history, the consciousness of the oppressed can directly confront the economic mechanisms of exploitation. It does not, therefore, have to deal with the religious ideas, customs, and traditions that, in the words of the *Communist Manifesto* (1848), had "veiled" social relations in earlier epochs.

Marx's analysis of class consciousness remained, however, unfinished as part of his general discussion on classes in the third volume of *Capital* (1894), a project that was interrupted when Marx died. Twentieth-century Marxists developed the concept in debates that to a large extent revolved around the relations between class consciousness and the organization of workers. Georg Lukács's (1885–1971) *History and Class Consciousness* (1971) saw "true" class consciousness as the proletariat's awareness of its revolutionary goal and, at the same time, as the most adequate set of reactions that could be "imputed" to particular positions in the production process. The revolutionary party is for Lukács the personification of the collective consciousness of the working class. Vladimir I. Lenin (1870–1924) and Karl Kautsky (1854–1938) emphasized the role of organization by arguing that real class consciousness can only be brought to the working class from outside, a task that for Lenin required a party of professional revolutionaries. Below this level, Lenin saw a realm of merely "economist" consciousness, symbolized by trade unions' struggles for their immediate demands.

The views of Lenin, Kautsky, and Lukács have been widely debated and criticized by various Marxist activists and scholars. In contrast to Lenin's theory of the party, Rosa Luxemburg (1870–1919) argued that class consciousness arises spontaneously from workers' experiences of struggle, especially mass strikes. Karl Korsch's (1886–1961) *Marxism and Philosophy* (1923) asserted that class

consciousness is not the mere subjective reflection of economic conditions because ideology and politics can also independently shape social power relations. The autonomous role of ideology was further discussed in the structuralist tradition, especially in the work of Louis Althusser (1918–1990). It was, however, Antonio Gramsci (1891–1937) who placed this aspect at the center of his analysis. He argued that class struggle involves a contestation over "hegemony," whereby the working class needs "organic intellectuals," of which the party is an expression, who must be able to engage and shape the "common sense" of society.

Marxist analyses have since departed from earlier views of class consciousness as merely determined by economic conditions and ultimately represented by formal organizations. Social historians Edward P. Thompson and Eric J. Hobsbawm underline the complexity of workers' consciousness, and the fact that their everyday experiences do not necessarily progress toward revolutionary ideas, being indeed often influenced by precapitalist notions of justice or collective identities. The view of human subjectivity in the work of members of the Frankfurt school, especially Herbert Marcuse (1898–1979), is influenced by psychoanalysis, and argues that consumerism has largely subdued the radicalism of a working class that is increasingly co-opted by capitalism. In Jean-Paul Sartre's (1905–1980) "political economy of everyday life," and in Wilhelm Reich's (1897–1957) theory of psychic oppression, class consciousness is replaced by a theory of "serialized" and alienated human nature.

Such analyses tend to agree that as capitalism is able to extend middle-class consumption patterns, workers in industrialized countries lose their revolutionary potential. Conversely, class consciousness is replaced by a multiplicity of oppositional identities in the work of feminist scholars and in currents influenced by postmodernism, such as "autonomist Marxism." Workers' centrality in anticapitalist politics gives way to the development of social movements that express the specific demands of women, the unemployed, students, and indigenous people. At the same time, critics of the Leninist idea of the party stress the importance of horizontality and consensus as conditions for a shared awareness to emerge among diverse social actors. Moreover, production is no longer seen as the principal terrain where collective consciousness is developed. For Henri Lefebvre (1901–1991), the broader social space and everyday life become battlefields for the advancement of projects of social emancipation. After the 1970s, "cultural studies" scholars like Dick Hebdige and Stuart Hall, strongly influenced by Gramsci, emphasized contestation over symbolic practices, subcultures, and the media as autonomous terrains of analysis.

SEE ALSO *Alienation; Marxism*

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Franco Barchiesi

CLASSICAL CONDITIONING

The formation of connections or associations between related sensations, emotions, or thoughts is the basis for an evolutionarily old and important form of learning known as *classical conditioning*. Since the late nineteenth century, a collection of standardized conditioning (training) procedures have been used to study associative learning and, more recently, its neurobiological underpinnings.

IVAN PAVLOV

The Russian physiologist Ivan Pavlov (1849–1936) is customarily credited with discovering classical conditioning. In fact, the idea that associations develop between stimuli that are close together (contiguous) in space or time was first articulated by the Greek philosopher Aristotle (384–322 BCE). Pavlov did discover (i.e., identify and develop) an empirical approach for studying classical conditioning, codifying the procedures and terminology that remain the standard (Pavlov 1927).

Pavlov's interest in classical conditioning emerged out of his research on the physiology of digestion, for which he was awarded the Nobel Prize in medicine in 1904. Pavlov and his technicians realized that a dog's stomach secretions could be triggered not only by food reaching the stomach, but also by seeing or chewing the food, and even by the environment in which the food is delivered. The secretion of saliva was also found to be associable, with dogs salivating to stimuli that regularly preceded the presentation of food, including novel stimuli, such as a bell, that had never before induced salivation.

CLASSICAL CONDITIONING

With classical or Pavlovian conditioning, the neutral *conditioned stimulus* (CS) is paired with a biologically signifi-

cant *unconditioned stimulus* (US), until such time that the CS comes to elicit a learned or *conditioned response* (CR). Returning to Pavlov's dogs, after experiencing repeated pairings of the bell (CS) and food (US), the previously neutral bell began to elicit salivation. In this example, both the CR and the *unconditioned response* (UR) happen to be a salivatory response. This need not always be the case—the CR can also oppose or be entirely unrelated to the UR.

Two aspects of the CS-US temporal relationship impact the strength of Pavlovian conditioning: (1) the amount of time that elapses between the onset of the first and second stimulus (i.e., the *interstimulus interval*, or ISI); and (2) the order in which the CS and US are presented. In short- and long-*delay conditioning*, the CS precedes the US with a shorter or longer ISI, respectively. The addition of a break between the offset of the CS and the onset of the US results in *trace conditioning*. *Simultaneous conditioning*, as its name implies, requires that the CS and US be presented at the same time. Finally, with *backward conditioning*, the CS is presented after the onset of the US. As a general rule, the rate of learning in classical conditioning accelerates as the CS grows progressively more accurate in predicting the US. Delay conditioning is normally acquired fastest, followed by trace conditioning. Simultaneous and backward conditioning typically produce little or no learning.

APPETITIVE/AVERSIVE CONDITIONING

Appetitive conditioning utilizes a positive reinforcing stimulus—for example, access to food, water, or sex. Interestingly, animals conditioned with an appetitive stimulus, such as food, will often approach and contact the stimulus signaling its availability. If a localized visual stimulus (CS) repeatedly signals the delivery of food (US), pigeons will often peck at the CS before approaching the food cup, although pecking is not required for food access. Interestingly, the tracking of a food signal appears to be modality-specific. When trained with an auditory CS, which is presumably less localized in space, pigeons do not peck at the CS but instead advance toward the food cup directly (Brown and Jenkins 1968).

Aversive conditioning is accomplished with a mildly painful or otherwise unpleasant US. The two-process model of aversive conditioning posits that emotional (i.e., fear) CRs emerge first, followed by more specialized and adaptive motor CRs (Konorski 1967). Fear and motor conditioning are normally studied independently of one another—each utilizing distinct experimental procedures.

In a typical fear-conditioning experiment, the tone or light CS is paired with a mild electrical shock or loud noise US. Fear conditioning, which engenders a variety of autonomic and behavioral responses, is a very rapid form of learning—requiring only a single CS-US pairing under the right conditions (LeDoux 2000).

The most commonly studied motor CR is the anticipatory eyeblink. After being paired with an air puff or a mild shock to the eye (US), the tone or light CS comes to elicit a blink CR. Hundreds of trials are often required to properly time the response, but subjects eventually learn to execute the CR just before US onset (Christian and Thompson 2003).

The amygdala, in the brain's medial temporal lobe, is critical for acquiring conditioned fear. The anticipatory eyeblink, on the other hand, is reliant on circuitry in the brain stem and cerebellum. In both cases, the repeated pairing of the CS and US allows the neural signals initiated by each stimulus to converge and interact. CS-US associative synaptic plasticity in the amygdala and cerebellum enables changes in CS neural activation patterns, bringing emotional and motor-conditioned responses, respectively, under control of the CS.

EXTINCTION

To this point, classical conditioning has been discussed in terms of nascent or established associations among stimuli. In the real world, such relationships rarely remain static—the CS may over time lose its ability to accurately predict the US. In a procedure called *extinction*, the CS is presented alone, once conditioning is complete, in order to weaken or extinguish the CS-US association and, by extension, the behavioral CR. The reduction in conditioned responding is not due to simple forgetting, however, which may occur following a prolonged absence of the CS. Extinction requires new learning on the part of the organism—learning that the CS is no longer predictive of the US.

Results from several behavioral phenomena make clear that extinction is not the result of unlearning the CS-US association. First, relearning the CS-US association is significantly faster following extinction then during the original acquisition. Second, an extinguished CR can temporarily reappear if an arousing or sensitizing stimulus is presented just before the CS. Third, over time an extinguished CR can spontaneously recover if the CS is represented. All three findings support the idea that the original CS-US association remains intact—though inhibited—once extinguished.

THERAPEUTIC/CLINICAL APPROACHES

Classical conditioning principles underlie many therapeutic techniques. *Exposure therapy*, for instance, is designed to aid patients who respond to particular objects or situa-

tions with unrealistic or excessive fear. For instance, *Counterconditioning* requires that the triggering stimulus be paired with a positive event or object. A patient might be shown a spider and then given a teddy bear—associating the spider with the comfort afforded by the bear. With *desensitization*, a patient's irrational fears are rendered incompatible by slowly introducing progressively stronger versions of the triggering stimulus—for example, a picture of a spider, a plastic spider, and then a real spider.

Classical conditioning can also be applied to clinical studies that focus on human behavioral and cognitive processing. The brain regions engaged by classical eyeblink conditioning—including the brain stem, cerebellum, and limbic system—are the same brain regions affected by numerous clinical disorders. Discerning differences in the acquisition and timing of eyeblink CRs for patients, relative to control subjects, is an effective diagnostic tool for studying the brain-behavior correlates of clinical pathology. Autistic subjects, for instance, acquire eyeblink CRs at a faster rate and with an earlier onset time than age-matched controls (see Steinmetz et al. [2001] for a review).

PSYCHOLOGICAL PHENOMENA

Classical conditioning plays a role in many psychological phenomena. Emotions, as already noted, condition rapidly and easily, especially when the emotion is intensely felt. A traumatic experience can elicit strong emotions that become associated with other aspects of the situation, including the location, other people involved, and even the time of day. Attitudes and preferences are equally susceptible to modification by association. Attitudes toward people of other races, nationalities, or religions can be influenced by how they are portrayed in the news or entertainment media. Similarly, advertisers have long recognized the benefits of linking a consumer product, be it beer, jeans, or a car—with a positive reinforcer, such as an attractive model.

DRUG ADDICTION

Drug use is typically associated with a specific environment and a specific administration ritual (e.g., injection). These cues can be conditioned to predict the onset of the drug's effect and, in turn, generate compensatory responses to counteract those effects—helping the body maintain homeostasis. A drug that decreases a user's heartbeat would eventually, if taken in the same place and way, be offset by a compensatory heart rate increase. The activation of compensatory CRs also coincides and contributes to drug tolerance, necessitating more drug be taken for the same effect. Inasmuch, the chance of an overdose increases—due to a limited compensatory CR—if the drug is taken in a new environment or administered in a novel fashion (Siegel 1999).

OPERANT/INSTRUMENTAL CONDITIONING

Another form of associative learning, termed *operant* or *instrumental conditioning*, depends on association formation between the stimulus and response (S-R learning), unlike classical conditioning, which relies on S-S learning. Edward Thorndike (1874–1949) pioneered much of the early research on operant conditioning. He famously observed that a cat placed inside a latched cage would, through trial and error, learn how to unlatch the cage if rewarded with a piece of fish on the outside. From these observations and others, Thorndike formulated the *law of effect*, which states: the S-R association is strengthened or weakened depending on whether the consequent effect (US) is reinforcing or punishing.

By the mid-twentieth century, the premiere researcher on operant conditioning was B. F. Skinner (1904–1990). Skinner found that an animal's behavior could be shaped by progressively narrowing the range of reinforced behaviors, a process called *successive approximation*. He also developed free-operant procedures for studying S-R learning. The typical Skinner box contained one or more stimulus lights, one or more levers that an animal could press, and one or more places in which reinforcers, like food, could be delivered. With hundreds to thousands of potential lever-press responses per session, Skinner focused his analyses on how rapidly the animal repeated the response.

SEE ALSO *Operant Conditioning; Pavlov, Ivan; Reinforcement Theories*

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CLASSICAL MUSIC

European classical music is both a topic of research and a source of ideas for social science. It can be studied as a set of specialized professions, an economic system, or an example of small-group interaction processes. As a source of ideas it helps social scientists reconsider classical social-science theories of culture types and the rise and fall of civilizations that have fallen out of favor but have much to contribute.

As Europe developed, technologically and socially, to become the dominant civilization in the world, its music also developed, embodying many of the same cultural tendencies that led to the spectacular success of this small region. One can chart the developments in complex vocal and orchestral music from roughly 1600, when a late–Italian Renaissance attempt to revive ancient Greek music drama led to the creation of grand opera, or starting as early as 1200, when music began to express European nationalism. An example is the 1228 "Palestina Song" by Walther von der Vogelweide, celebrating the Sixth Crusade's capture of Jerusalem.

For centuries, among the most complex machines were European musical instruments: church organs, harpsichords, and pianos. Among the most complex civilian activities on earth were performances of major European musical works, such as Claudio Monteverdi's 1607 opera *L'Orfeo*, Johann Sebastian Bach's Mass in B-minor completed in 1749, and Ludwig van Beethoven's 1824 Ninth Symphony. Coordination of such complex social activities required a system of musical notation far more advanced than possessed by any other civilization, division of labor among many highly skilled professionals, development of musical theory tied to mathematics and aesthetics, and strict discipline within a social system that rewarded individual achievements by composers, conductors, and soloists.

From the Crusades until World War I, European music evolved in a rather linear direction, for example, first gradually rationalizing musical scales until the time of Bach, and then progressively exploiting the chromatic possibilities of the well-tempered scale, notably in Richard Wagner's 1859 *Tristan and Isolde*. These were made possible by technological developments, such as from increasingly complex harpsichords to the powerful eighty-eight-key modern piano and the addition of valves to brass instruments. Serious music had reached the limits of progress in this direction in Arnold Schoenberg's ponderous oratorio *Gurre-Lieder*, first performed in 1913, the same year that Igor Stravinsky's dynamic *Rite of Spring* sought to revive the European spirit through an influx of primitivism. To a very real extent, war brought an end to the European dream in 1914. Schoenberg's response was to develop a system of atonal composition that was either a rejection of the European sense of melody or the fulfillment of the European evolution toward chromaticism in harmony. His mathematical *twelve-tone method* based a piece on a *tone row*, a series of the twelve tones of the octave, not repeating one until the other eleven had been played. He attempted to compose an entire religious opera, *Moses und Aron*, based on a single tone row representing God's law. Schoenberg was unable to finish this work, and although many composers adopted his system, Stravinsky among them, it marked the effective end of European classical music rather than a new beginning.

European classical music illustrates the theory of Oswald Spengler, who argued that each great civilization begins with a unified set of ideas, builds on them, and attains their logical conclusion, at which point the civilization collapses. Pitirim Sorokin described this cycle of birth and death as a gradual shift from the original set of ideas that flourish in the civilization's *ideational* or growth phase, to the gradual loss of faith that comes in the *sensate* or decline phase, which could be followed by another ideational phase.

Crosscutting these cyclical theories was Friedrich Nietzsche's explicitly music-based theory of competition between *Apollonian* and *Dionysian* styles—roughly intellectual versus intuitive, or what Curt Sachs called *ethos* and *pathos*—as in the difference between Bach and Wagner. Following an information-theory approach, Leonard Meyer has argued that listeners develop expectations about what is to come next in music, both in a single work and within a broad tradition, and creativity violates these expectations. Thus, novelty gradually expanded the scope of European music, often by alternating between Apollonian and Dionysian extremes, leading in the twentieth century either to collapse or to a fluctuating stasis. The fact that every feature of European music differs from other traditions, such as the Arabic or Chinese, dovetails with Samuel Huntington's theory that the world is not converging on one "modern" culture but faces a clash of civilizations.

SEE ALSO *Civilization; Civilizations, Clash of; Culture, Low and High; Distinctions, Social and Cultural; Division of Labor; Music; Music, Psychology of; Nationalism and Nationality; Professionalization*

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William Sims Bainbridge

CLASSICAL STATISTICAL ANALYSIS

Classical statistical analysis seeks to describe the distribution of a measurable property (descriptive statistics) and to determine the reliability of a sample drawn from a population (inferential statistics). Classical statistical analysis is based on repeatedly measuring properties of objects and aims at predicting the frequency with which certain results will occur when the measuring operation is repeated at random or stochastically.

Properties can be measured repeatedly of the same object or only once per object. However, in the latter case, one must measure a number of sufficiently similar objects. Typical examples are measuring the outcome of tossing a coin or rolling a die repeatedly and count the occurrences of the possible outcomes as well as measuring the chemical composition of the next hundred or thousand pills produced in the production line of a pharmaceutical plant. In the former case the same object (one and the same die cast) is "measured" several times (with respect to the question which number it shows); in the latter case many distinguishable, but similar objects are measured with respect to their composition which in the case of pills is expected to be more or less identical, such that the repetition is not with the same object, but with the next available similar object.

One of the central concepts of classical statistical analysis is to determine the empirical frequency distribution that yields the absolute or relative frequency of the occurrence of each of the possible results of the repeated measurement of a property of an object or a class of objects when only a finite number of different outcomes is possible (discrete case). If one thinks of an infinitely repeated and arbitrarily precise measurement where every outcome is (or can be) different (as would be the case if the range of the property is the set of real numbers), then the relative frequency of a single outcome would not be very instructive; instead one uses the distribution function in this (continuous) case which, for every numerical value x of the measured property, yields the absolute or relative frequency of the occurrence of all values smaller than x. This function is usually noted as $F(x)$, and its derivative $F'(x) = f(x)$ is called frequency density function.

If one wants to describe an empirical distribution, the complete function table is seldom instructive. This is why the empirical frequency or distribution functions are often represented by a few parameters that describe the essential features of the distribution. The so-called moments of the distribution represent the distribution completely, and the lower-order moments represent the distribution at least in a satisfactory manner. Moments are defined as follows:

$$m_k = 1/n \sum_{i=1}^{n} (x_i - c)^k,$$

where k is the order of the moment, n is the number of repetitions or objects measured, and c is a constant that is usually either 0 (moment about the origin) or the arithmetic mean (moment about the mean), the first-order mean about the origin being the arithmetic mean.

In the frequentist interpretation of probability, frequency can be seen as the realization of the concept of probability: It is quite intuitive to believe that if the probability of a certain outcome is some number between 0 and 1, then the expected relative frequency of this outcome would be the same number, at least in the long run. From this, one of the concepts of probability is derived, yielding probability distribution and density functions as models for their empirical correlates. These functions are usually also noted as $f(x)$ and $F(x)$, respectively, and their moments are also defined much like in the above formula, but with a difference that takes into account that there is no finite number n of measurement repetitions:

$$m_k = \sum_{x=0}^{\infty} (x - c)^k f(x)$$

$$m_k = \int_{-\infty}^{\infty} (x - c)^k f(x)\, dx,$$

where the first equation can be applied to discrete numerical variables (e.g., the results of counting), while the second equation can be applied to continuous variables.

Again, the first-order moment about 0 is the mean, and the other moments are usually calculated about this mean. In many important cases one would be satisfied to know the mean (as an indicator for the central tendency of the distribution) and the second-order moment about the mean, namely the variance (as the most prominent indicator for the variation). For the important case of the normal or Gaussian distribution, these two parameters are sufficient to describe the distribution completely.

If one models an empirical distribution with a theoretical distribution (any non-negative function for which the zero-order moment evaluates to 1, as this is the probability for the variable to have any arbitrary value within its domain), one can estimate its parameters from the moments of the empirical distributions calculated from the finite number of repeated measurements taken in a sample, especially in the case where the normal distribution is a satisfactory model of the empirical distribution, as in this case mean and variance allow the calculation of all interesting values of the probability density function $f(x)$ and of the distribution function $F(x)$.

Empirical and theoretical distributions need not be restricted to the case of a single property or variable, they are also defined for the multivariate case. Given that empirical moments can always be calculated from the measurements taken in a sample, these moments are also results of a random process, just like the original measurements. In this respect, the mean, variance, correlation coefficient or any other statistical parameter calculated from the finite number of objects in a sample is also the outcome of a random experiment (measurement taken from a randomly selected set of objects instead of exactly one object). And for these derived measurements theoretical distributions are also available, and these models of the empirical moments allow the estimation with which probability one could expect the respective parameter to fall into a specified interval in the next sample to be taken.

If, for instance, one has a sample of 1,000 interviewees of whom 520 answered they were going to vote for party A in the upcoming election, and 480 announced they were going to vote for party B, then the parameter π_A—the proportion of A-voters in the overall population—could be estimated to be 0.52, but this estimate would be a stochastic variable, which approximately obeys a normal distribution with mean 0.52 and variance 0.0002496 (or standard deviation 0.0158), and from this result one can conclude that another sample of another 1,000 interviewees from the same overall population would lead to another estimate whose value would lie within the interval [0.489, 0.551] (between 0.52 ± 1.96 0.0158) with a probability of 95 percent (the so-called 95 percent confidence interval, which in the case of the normal distribution is centered about the mean with a width of 3.92 standard deviations). Or, to put it in other words, the probability of finding more than 551 A-voters in another sample of 1,000 interviewees from the same population is 0.025. Bayesian statistics, as opposed to classical statistics, would argue from the same numbers that the probability is 0.95 that the population parameter falls within the interval [0.489, 0.551].

SEE ALSO *Bayesian Statistics; Descriptive Statistics; Inference, Bayesian; Inference, Statistical; Sampling; Variables, Random*

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CLASSICAL TEST THEORY

SEE *Psychometrics.*

CLASSIFICATION, RACIAL

SEE *Racial Classification.*

CLAY-CLAY MODELS

SEE *Vintage Models.*

CLEAVAGES

In political science, cleavages explain the underlying dimensions of contestation in countries as well as the formation and persistence of political party systems. But cleavages are more than just political divisions. In their seminal article "Cleavage Structures, Party Systems, and Voter Alignments" (1967), Seymour Martin Lipset and Stein Rokkan defined cleavages as having three main characteristics. First, a cleavage involves a social division that separates people by sociocultural or socioeconomic characteristics. Second, people involved in the division must be aware of their collective identity and must be willing to

act on the basis of that identity. Finally, a cleavage must be expressed in organizational terms, such as political parties or interest groups. These characteristics not only distinguish a cleavage from a temporary issue-based conflict but also allow researchers to consider the persistence or decay of cleavages.

In Western Europe, four main cleavages defined the party systems of the post–World War II period (Lipset and Rokkan 1967). The national revolution yielded two potential cleavages: the religious and the center/periphery. Historians and political scientists alike recognize the significance of religious conflict in the formation of party systems. It pitted state builders against the church, especially in Catholic countries. The religious cleavage is unevenly distributed across Europe, being especially significant in those countries with a substantial Catholic minority or majority, such as Belgium, Germany, Italy, and the Netherlands (Lijphart 1999). In political terms, this cleavage contributes to the social left-right dimension in many countries on contested issues such as divorce, abortion, and gay rights. In the early twenty-first century a new religious cleavage may be emerging in European countries with significant Muslim minorities.

The center/periphery cleavage also arose during nation-building times, between centralizing forces and the peripheral peoples who sought to retain independence or autonomy. In almost all countries in Western Europe, there are organizational manifestations of regionalist or ethnic groups. The social characteristics that define this cleavage can be linguistic or ethnic differences. The center/periphery or cultural-ethnic cleavage is contested in all the societies that Arend Lijphart, in *Patterns of Democracy* (1999), considers plural, that is, having substantial cultural or ethnic diversity.

In plural societies, especially beyond the developed world, contestation over this cleavage may be associated with ethnic violence. But, as Robert Dahl, in *Preface to Democratic Theory* (1956), argues, plural societies, like the United States, can achieve a level of democratic success if cleavages are cross-cutting rather than reinforcing. In other words, most individuals belong to more than one group and, so long as the memberships do not overlap, a coherent and tyrannical majority is unlikely to form.

In addition to the national revolution, the industrial revolution created or strengthened two additional cleavages. First, the national revolutions in Europe often pitted rural and agrarian interests against industrial entrepreneurs. Second, the industrial revolution crystallized the class conflict between workers and owners in many European countries. Politically, this cleavage manifests itself as the political-economic left-right dimension. As Lipset and Rokkan note (1967), the worker/owner cleavage is "the expression of the democratic class struggle." This cleavage remains the main dimension of political contestation in almost all advanced industrial democracies (Lijphart 1999).

In retrospect, party systems institutionalized the existing cleavages in European society. Thus, the Conservative party in Britain represented the owners against Labour, while elsewhere in Europe, Christian Democratic parties represented Catholic social doctrine. In the late twentieth century, many political scientists considered whether European party systems remained frozen around these underlying cleavages, or whether new cleavages had emerged, such as a postindustrial or postmaterialist cleavage. The concept of cleavage thus retains its significance in both theoretical and empirical research.

SEE ALSO *Dahl, Robert Alan; Pluralism; Politics*

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Seth Jolly

CLIENTELISM

Political scientists, sociologists, and anthropologists use clientelism to describe a certain type of relationship between individuals and larger groups of people that is not based on other types of relationships such as common class, ethnicity, or religion. In this sense, clientelism is a residual concept that can be used to explain strong patterns of allegiance and loyalty within larger groups in situations where they cannot be explained by other more traditional means.

Although definitions of clientelism vary, most suggest that at the level of individuals it involves a direct relationship between two people that is based on personal and intense feelings of comradeship and loyalty. From this starting point, larger clusters of such interpersonal relationships can form that result in the construction of collectivities such as labor unions and political parties. Regardless of the type of collectivity that is being studied, social scientists that use clientelism as a concept for explaining behavior share the view that the collectivity is

based upon a complex and sophisticated set of interpersonal relationships.

In the social sciences, this concept has been most extensively used by political scientists attempting to explain patterns of allegiance and loyalty either in urban settings or in rural areas where there are high concentrations of poor people. For example, there is a large body of literature that attempts to explain the nineteenth- and early-twentieth-century politics in cities such as New York, Chicago, and Boston in terms of the existence of personal networks in urban slums that connected individual workers and their families to ward healers, and eventually to the bosses who ran these cities. It is argued that this system of so-called machine politics was the result of a tacit bargain between leaders and followers. In exchange for jobs and favors from the bosses and their local representatives, the bosses were able to maintain loyal cadres of supporters who served as the basis for the establishment of modern political parties.

Because such machine politics in large U.S. cities came to be viewed by social scientists and citizens alike as a breeding ground for patronage and corruption, clientelism came to have a highly negative connotation. In fact, it came to be associated with the so-called primitive form of democratic politics practiced in developing regions of the world. During the 1960s and 1970s, a good amount was written concerning the specific nature of the pathology of clientelism in Asia, the Middle East, Africa, and Latin America. Perhaps because of its combination of emerging democratic politics, rapid industrialization, and feudal patterns of landholding, Latin America received more attention than any other developing region.

In Latin America clientelism was frequently referred to in terms of patron-client relationships. Historically, the patron was a large landowner who was able to offer his peasant "clients" physical protection and job security in exchange for his labor and political support. Given the largely feudal nature of many Latin American societies, the patron-client relationship was hierarchical (vertical) in nature. Such patron-client patterns have been used by political scientists to explain the history and evolution of parties and party systems in countries such as Mexico and Colombia.

Although the concept of clientelism is not used as extensively as it was during the 1960s and 1970s to explain political phenomena, it continues to prove beneficial for assessing developments in certain regions of the world. For example, it has been used to explain how Hizbollah (the Party of God) has been able to create a loyal following among Palestinian refugees living in Lebanon despite the fact that these refugees are not permitted to vote in Lebanese elections.

SEE ALSO *Corruption; Crony Capitalism; Hierarchy; Patronage*

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Steve C. Ropp

CLINTON, BILL
1946–

Bill Clinton was the forty-second president of the United States, serving from 1993 to 2001. He was born William Jefferson Blythe III on August 19, 1946, in Hope, Arkansas. His father, William Jefferson Blythe Jr. (1918–1946), was a salesman who died in an auto accident before Clinton was born. When Bill Clinton was fourteen, he legally adopted the surname of his stepfather, Roger C. Clinton Sr. (1908–1967).

While attending Georgetown University, Clinton interned with Senator J. William Fulbright (1905–1995) of Arkansas, a prominent critic of the Vietnam War (1957–1975). Avoiding military service, Clinton was awarded a Rhodes Scholarship to study at Oxford University in 1968 and earned a law degree from Yale University in 1973. While at Yale, Clinton met and later married fellow law student Hillary Rodham.

In addition to opposing the Vietnam War, Clinton worked in the 1972 Democratic presidential campaign and unsuccessfully ran for a congressional seat in Arkansas in 1974. In 1976 Clinton was elected attorney general of Arkansas. He was elected governor of Arkansas in 1978, but was defeated for reelection in 1980. In 1982 Clinton was again elected governor of Arkansas and served in this position until December 12, 1992. During his second stint as governor, Clinton projected a more moderate, populist image to Arkansas voters. His policies emphasized public school reforms, economic development, and tax relief for the elderly.

THE 1992 PRESIDENTIAL ELECTION

Bill Clinton formally announced his candidacy for the 1992 Democratic presidential nomination in Little Rock on October 31, 1991. After securing an impressive, sec-

ond-place finish in the New Hampshire primary and winning southern primaries, Clinton's victories in the New York and California primaries assured him of the Democratic presidential nomination. Meanwhile, Republican president George H. W. Bush's reelection campaign was weakened by the lingering effects of the 1990–1991 recession, Bush's violation of his 1988 promise not to raise taxes, dwindling public concern with foreign policy, and the independent presidential candidacy of Ross Perot, a Texas billionaire.

The Democratic national convention of 1992 highlighted the need for generational change in the White House by nominating baby boomers Bill Clinton for president and Senator Al Gore Jr. of Tennessee for vice president. Clinton won the election with 43 percent of the popular votes. Perot's receipt of 18.9 percent of the popular votes enabled Clinton to carry most states in the Electoral College.

CLINTON'S FIRST TERM

With a Democratic Congress, Clinton signed into law the Family and Medical Leave Act of 1993, the Omnibus Budget Reconciliation Act of 1993, the Brady Handgun Violence Prevention Act of 1993, the AmeriCorps Act of 1993, and the North American Free Trade Agreement (NAFTA) in 1994. Clinton's inexperience in dealing with Congress was evident in his withdrawal of Lani Guinier's nomination as assistant attorney general for civil rights following criticism of her writings on affirmative action. The most controversial and unsuccessful domestic policy initiative of Clinton's presidency was his proposed Health Security Act, that is, a universal health-care plan. He appointed Hillary Clinton as the chair of the Task Force on National Health Care Reform and announced this task force's proposal in a speech to Congress on September 22, 1993. Public and congressional opposition to Clinton's plan increased as its complex, confusing details were criticized as socialized medicine by Republicans, conservative media commentators, and interest groups. The rejection of Clinton's health-care plan contributed to the Republican landslide in the 1994 congressional elections.

After the Republicans won control of Congress in 1994, Clinton repositioned himself as a moderate seeking bipartisan cooperation and compromise. His poll ratings steadily improved in 1995 and 1996 as the public perceived Republicans in Congress, especially Speaker of the House Newt Gingrich, as excessively conservative and unreasonable in their policy relationship with Clinton. Clinton, however, waited until after the 1996 Democratic national convention to sign the Welfare Reform Act of 1996, which most House Democrats opposed. With a prosperous economy and no major foreign policy crises, Clinton was easily reelected president in 1996.

CLINTON'S FOREIGN POLICY

Bill Clinton perceived the post–cold war era as an opportunity for the United States to improve and expand multilateral efforts to promote democracy, free trade, environmental protection, humanitarian relief, and the resolution of political and military conflicts in Northern Ireland, Bosnia, Somalia, and Palestine. Clinton ordered brief, unsuccessful U.S. military interventions in Somalia and Haiti. The United States also joined NATO allies in aerial bombings to end Serbia's "ethnic cleansing" and force an end to the war in Bosnia. Responding to Iraqi president Saddam Hussein's (1937–2006) expulsion of UN weapons inspectors and other violations of international law, Clinton publicly supported "regime change" in Iraq but limited his military response to launching cruise missiles.

Clinton wanted to avoid a stronger military response toward Iraq that might alienate European and Middle Eastern allies, the United Nations, and the American public. Following the 1993 terrorist bombing of the World Trade Center in New York City, however, Clinton signed into law tougher antiterrorism legislation. Nonetheless, George W. Bush's Republican presidential campaign in 2000 criticized Clinton for failing to effectively address Iraqi and other threats to national security.

SCANDALS, CONTROVERSIES, AND IMPEACHMENT

Before his sexual affair with White House intern Monica Lewinsky became a public issue in 1998, Clinton had experienced media, congressional, and judicial investigations into his sexual behavior in the lawsuit of Paula Jones, Hillary Clinton's involvement in the failed Whitewater investment, and his firing of employees in the White House travel office. Some conservative critics also accused Clinton of ordering the murders of Vincent Foster (1945–1993), the deputy White House counsel, and Secretary of Commerce Ron Brown (1941–1996). Foster's death was officially ruled to be a suicide, and Brown died in a plane crash in Croatia.

Independent counsel Kenneth Starr began to investigate Lewinsky's affair with Clinton because of contradictions between her testimony and Clinton's in the Jones case. At a January 1998 press conference, Clinton firmly denied having "sexual relations" with Lewinsky. Clinton continued to receive high job approval ratings, and the Democrats gained five House seats in the 1998 elections. Newt Gingrich soon resigned from the speakership and the House. Nonetheless, the House of Representatives impeached Clinton on charges of perjury and obstruction of justice on December 19, 1998. After a trial in the Senate, the Senate acquitted Clinton on February 12, 1999. Throughout these proceedings, polls indicated that

most Americans opposed Clinton's impeachment, trial, and removal from office.

Bill Clinton devoted the remainder of his term to improving race relations, achieving a budget surplus, and negotiating a new trade agreement with China. In order to benefit Al Gore's presidential campaign and Hillary Clinton's Senate campaign in New York, he frequently reminded audiences of his administration's domestic policy successes and the country's prosperous economy. Wanting to avoid association with Clinton's scandals, especially in fund-raising for the 1996 election, Gore carefully limited Clinton's role in his unsuccessful 2000 presidential campaign. Some political analysts have argued that had Clinton been more involved in the campaign, Gore might have carried Clinton's home state of Arkansas and his own home state of Tennessee. Winning these two states would have won the election for Gore, regardless of the outcome of the disputed electoral votes in Florida.

As Bill Clinton prepared to leave office in 2001, he attracted controversy when he pardoned Marc Rich. Rich was a billionaire who fled to Switzerland because of charges of tax evasion and violations of oil embargoes against Iran and Libya. Denise Rich, his wife, had previously made large contributions to the Democratic Party and Clinton's presidential library and foundation.

PUBLIC PERCEPTION OF CLINTON DURING HIS PRESIDENCY

Americans generally expressed an ambivalent, complex perception of Bill Clinton. During his second term, most Americans gave Clinton high job approval ratings, especially on the economy, and opposed his impeachment while simultaneously perceiving him to be dishonest, politically expedient, and detrimental to the moral character of the presidency. Among specific demographic groups, Clinton attracted consistent, loyal support from African Americans, Jews, unmarried women, and young adults, along with consistent, staunch opposition from married white men, white Christian fundamentalists, and gun owners. Criticism of Clinton's policies and personal character was hardened and intensified by the rise of conservative talk radio programs, the Fox news network, and the Internet.

POSTPRESIDENCY ACTIVITIES

Besides supervising his presidential library and foundation, Bill Clinton regularly traveled nationally and internationally as a well-paid public speaker. Clinton raised funds for his foundation, the Democratic Party, and philanthropy, especially AIDS research and treatment, environmental protection, and relief for victims of Hurricane Katrina and the 2004 Asian tsunami. In some of these charitable efforts, Clinton teamed with former president George H. W. Bush. After Senator Hillary Clinton became a candidate for the Democratic presidential nomination of 2008, Bill Clinton became more publicly prominent in his relationship with her when he and she performed a parody of the television show, *The Sopranos*.

SEE ALSO *Baby Boomers; Bush, George H. W.; Democratic Party, U.S.; Elections; Hussein, Saddam; North American Free Trade Agreement; Presidency, The; Terrorism; Welfare; Welfare State*

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Sean J. Savage

CLIOMETRICS

From a purely etymological standpoint, the term *cliometrics* should have a very broad meaning. After all, Clio was the muse of history in ancient Greek mythology, and *metrics* comes from the Greek and Latin word for measurement. Hence, cliometrics could encompass any application of measurement to history, placing it in the same inclusive inventory of methods as biometrics, psychometrics, and econometrics. That is, it would represent a quantitative method that does for history what the others do for biology, psychology, and economics, respectively. Yet the term is most often applied to a very specific form of economic history, namely, that in which historical data are analyzed using modern economic theory and econometric methods. By this restricted application, it may be said to constitute a specialized branch of economics rather than a method in history.

HISTORICAL ORIGINS

Although it is always difficult to assign a precise date to any intellectual movement, cliometrics is often said to have begun with the 1958 article "The Economics of Slavery in the Ante-Bellum South," which Alfred Conrad and John Meyer published in the *Journal of Political Economy*. Whether this was truly the genesis or not, a full-fledged cliometric revolution definitely took off sometime in the 1960s. In that decade it became apparent that the practitioners of standard economic history—many of whom were strictly historians rather than economists—had to confront those who advocated what was called the

"new economic history." In 1960 Douglass North, an early champion of this innovative approach, became coeditor of the *Journal of Economic History*, the official publication of the Economic History Association. Just a few years later the journal *Explorations in Entrepreneurial History* (soon renamed *Explorations in Economic History*) emerged as a major outlet for cliometric research. Also in the early 1960s Purdue University in Indiana became the site for annual cliometrics meetings where the new economic historians could present and discuss applications of the discipline's theory and methods to history.

Once cliometrics began to enjoy a conspicuous presence in the research on economic history, the next step was for the practice to become institutionalized as a formal subdiscipline within economics. As noted on their Web site, this step was taken in 1983 with the founding of the Cliometric Society, which was explicitly identified as "an academic organization of individuals interested in using economic theory and statistical techniques to study economic history." Although the cliometrics revolution began in the United States, the movement gradually spread to other countries that featured active scholarship in economic history, such as France and Germany.

CENTRAL CONTRIBUTIONS

The single most important sign that cliometrics had come of age occurred in 1993. In that year the Nobel Prize in economics was bestowed upon Robert Fogel and Douglass North, the two most prominent researchers in the field. Fogel and North were honored specifically "for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change." This was the first time that any economic historian had received this prestigious award. North's contributions to cliometrics went well beyond his role as coeditor of the *Journal of Economic History*; he also wrote a series of now-classic volumes in the new economic history that illustrated the assets of the technique. Among these is the 1973 *The Rise of the Western World: A New Economic History* (with Robert Thomas).

Yet, in some respects, Fogel's place in the history of cliometrics is even more striking. Indeed, he is sometimes described as the founder of econometric history as well as the person who actually coined the term *cliometrics* for the new methodology. These claims aside, it is his name that has been most strongly associated with the movement, and his involvement was apparent from the very outset of his career: His doctoral dissertation applied the innovative approach to the impact of the railroads on economic growth in the United States prior to the Civil War. This cliometric research was later published in *Railroads and American Economic Growth: Essays in Econometric History* (1964). One central feature of Fogel's analysis was the use of "counterfactual" arguments. By a detailed cost-benefit analysis he investigated how the early U.S. economy would have been affected had the railroads not been built, an assumption clearly contrary to historical reality.

Another basis for Fogel's prominence is the highly controversial nature of the research he conducted with Stanley Engerman on the economic profitability of slavery in the antebellum United States. Their conclusions were published in *Time on the Cross: The Economics of American Negro Slavery* (1974). This book consisted of two volumes, the first devoted to scrutiny of the basic substantive issue, the second assigned to a detailed discussion of their data sources and statistical analyses. Because Fogel and Engerman showed that slavery was indeed profitable and that black slaves were in certain ways better off than white industrial laborers in northern cities, some critics accused them as composing an apology for slavery, that "peculiar institution." Yet that accusation was unjustified. The authors were simply arguing that slavery constituted an efficient means of production—however morally repugnant.

GENERAL CRITIQUE

The cliometric revolution of the 1960s and 1970s was supremely successful. It began as a movement led by a few "young turks" against an "old guard" who dominated the leadership positions of the profession. Still, in less than twenty years the new economic history emerged as the prevailing approach in the discipline. Moreover, because cliometrics applied macroeconomic models and econometric methods, its proponents had much more in common with economists than with historians. As a result, departments of economics at major U.S. research universities became increasingly inclined to hire cliometricians rather than conventional economic historians. In a sense, economic historians had been replaced by historical economists, that is, by scholars who differ from their colleagues mostly in that they use older rather than newer data.

Despite this apparent success, the victory was not absolute. Although cliometrics dominates economic history in its country of origin, it has had somewhat less success abroad. For instance, at the beginning of the twenty-first century a bona fide cliometric revolution had yet to take place in German economic history. Moreover, the procedure still has its vocal critics. Some observers believe that cliometrics has relied too heavily on standard macroeconomic models that cannot capture the complexities of the economic systems being analyzed. Other critics doubt whether the available historical data can bear the weight of econometric inferences, particularly when they

entail strong counterfactual arguments. Even so, it seems likely that cliometrics will continue to consolidate its presence within economic history. This prognosis is supported by the founding of the French Cliometric Association in 2001. Furthermore, in 2007 this association, in collaboration with the Cliometric Society, began publishing *Cliometrica: Journal of Historical Economics and Econometric History*. Hence, the growth curve for cliometrics still exhibits an upward trajectory.

At least this conclusion holds for cliometrics in its narrow meaning. If the term is used according to its broader etymology, quantitative history has made much less progress outside of economics. For instance, research devoted to the quantitative but psychological analysis of historic creators and leaders—more often called *historiometrics*—remains a peripheral enterprise within psychology. Cliometrics may have had a more intrinsic connection with economics than it did with other disciplines that occasionally analyzed historical data. More specifically, economics is not only highly quantitative but also strongly historical insofar as change and growth are crucial components of economic theory and analysis. Hence, the supremacy of cliometrics may remain confined to economics, thereby justifying a restricted conception of the term.

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Dean Keith Simonton

CLIQUES, PEER

SEE *Peer Cliques.*

CLOCK TIME

Throughout most of history, the passage of time was registered by familiar regularities such as day and night and the phases of the moon, or more accurately by the apparent motions of certain stars. The second was defined by the ancient Babylonians to be 1/84,600 of a day. Modern calendars are still based on *astronomical time* using the Gregorian calendar, introduced in 1582, in which the year is defined as 365.2425 days.

Until the scientific revolution and the ages of exploration and industrialization that followed, most people had no need for accurate clocks. Farmers and fishermen measured time in relation to familiar processes in the cycle of work and domestic chores. Labor took place in the natural period from dawn to dusk. The sundial was widely used to tell time during the day. The great advance in the accuracy of household clocks came about in the mid-seventeenth century with the application of the pendulum, which had been introduced into scientific experiments by Galileo in 1602. English clock- and watchmaking became dominant in 1680 and remained so until competition from the French and Swiss caught up about a century later.

In 1759 John Harrison produced a clock that could keep exact Greenwich Mean Time (the mean solar time of the meridian of the Royal Observatory in Greenwich, England, used as the prime basis of standard time) at sea, enabling mariners to determine their longitude on the globe and making accurate marine navigation possible for the first time. Today the primary time standard is provided by a Cesium Fountain atomic clock at the National Institute for Standards and Technology laboratory in Boulder, Colorado, which will not gain or lose a second in more than 60 million years.

With the rise of science, the second has undergone several redefinitions to make it more useful in the laboratory. The most recent change occurred in 1967, when the second was redefined by international agreement as the duration of 9,192,631,770 periods of the radiation corresponding to the transition between the two hyperfine energy levels of the ground state of the Cesium^{133} atom at rest at absolute zero. The minute remains 60 seconds, the hour remains 60 minutes, and the day remains 24 hours, following ancient traditions. The day is still taken to be 84,600 seconds, as in ancient Babylonia. Modern calendars need to be corrected occasionally to keep them in harmony with the seasons because of the lack of complete

synchronization between atomic time and the motions of astronomical bodies.

Nothing seems so ubiquitous—so absolute and universal—as time. Yet, in his 1905 "special theory of relativity" Albert Einstein showed that the times measured on clocks are different for clocks that are moving with respect to one another—an effect called "time dilation." This called into question some of the deepest intuitions of time. No moment in time can be labeled a universal "present." There is no past or future that applies to every point in space. Two events separated in space can never be judged to be objectively simultaneous. The whole notion of cause and effect has to be carefully rethought.

Unless one is making highly precise measurements with atomic clocks, time dilation is important only when the relative speeds of clocks are near the speed of light, so there are not noticeable effects in everyday life. However, Einstein's theory has been confirmed by a century of experiments involving high-energy particles that move near the speed of light, as well as low-speed measurements with atomic clocks. Although it is not necessary to take into account the relativity of time in the social sphere, it is important not to draw universal, philosophical, or metaphysical conclusions based on notions related to time that are inferred from normal human experience.

Philosophers and theologians have introduced alternate "metaphysical times" more along the lines of common experience, but these have no connection with scientific observations. Scientific models uniformly assume that time is, by definition, what is measured on a clock and that time is relative.

SEE ALSO *Capitalism; Industrialization; Industry; Modernization; Productivity; Revolutions, Scientific; Science; Thompson, Edward P.; Work; Work Day*

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Victor J. Stenger

CLOSED SHOP

SEE *Labor Law.*

CLOWER, ROBERT

SEE *Barro-Grossman Model; Walras' Law.*

CLUB OF ROME

Founded in Rome in early 1968 by a group of European businesspeople and scientists, the Club of Rome is a nonprofit nongovernmental organization (NGO) that serves as an international think tank on global issues. The Club of Rome is run by an Executive Committee of eleven members that appoints a president, vice presidents, a secretary-general, and a treasurer. The president of the club represents the organization to the outside world; HRH Prince El Hassan bin Talal of Jordan became president of the Club of Rome in 1999.

Individual membership in the Club of Rome is restricted to those who are elected by the Executive Committee. There are three levels of individual membership. (1) Active members are persons of established reputation whose work is international in scope and whose views on global issues are congruent with the Club of Rome. Serving terms of five years, the number of active members is limited to one hundred. The Club of Rome's professed aim is to balance membership in this category by regions, cultures, professions, age, and gender. The public listing of active members reveals men and women from such fields as banking, private industry, academe, government (both elective office and bureaus), and other NGOs. (2) Associate members are individuals who are involved with the work of the club or wish to cooperate in the future. They may apply for membership or be recommended by a member of the club and are elected by the Executive Committee for five-year terms. Again, associate members are drawn from those who have attained distinction in a variety of fields, though those from academe and research institutes dominate this category. (3) Honorary members are persons of high reputation or office whose work can support the mission of the club. Honorary members must be proposed by a member of the club and are elected by the Executive Committee. The membership of this group is dominated by former high government officials, though there are a few academics as well.

The professed mission of the Club of Rome is to "act as a global catalyst of change" by sponsoring studies and conferences and issuing reports and news releases that focus on long-term global problems and their interrela-

tionships. The club is committed to an interdisciplinary perspective that highlights both the increasing interdependence of and problems among nation-states. From its first report in 1972, titled *The Limits to Growth*, the Club of Rome has dedicated itself to identifying the most critical problems facing humanity; analyzing the interrelationships of these problems on the basis of an interdisciplinary, holistic, and global perspective; and positing future scenarios based on humanity's response to these problems. The club has identified a number of significant global issues, referred to as *world problematique*, facing humanity, including: depletion and pollution of the environment; demographic problems of both growth and aging; uneven development within and between nations; the decline of traditional values; dysfunctional governments; the quality and distribution of work; the sociocultural impact of new technologies; dysfunctional educational systems; the globalization of the economy; and international financial disorder.

The best-known report sponsored by the Club of Rome was its first, *The Limits to Growth*. The book was based on multiple simulations of a "systems dynamics" computer model of five major human activities: industrial production, population, agricultural production, resource use, and pollution. The basis of systems dynamics is the assumption that the often complex and intricate interrelationships between components of a system are essential in determining the behavior of the components as well as of the overall system itself. Accordingly, levels and rates of change in each of the sectors were interrelated through mathematical formulae that sought to simulate the impact of growth in one sector (for example, a growth in agricultural production) on levels and rates of change in the other four sectors. The model was then run under differing assumptions regarding physical limits to growth (supposing the known reserves of resources versus doubling those known reserves). The results of the simulations lent support to the idea of physical limits to continued growth consisting of resource depletion and pollution, with the authors arguing that if present growth trends continue, these limits will probably be reached within the next century; the typical mode of hitting these limits was one of "overshoot and collapse." Rather than a simple prediction of doom, however, the report argues that the world can move quickly to establish a condition of economic and population stability that is sustainable and a state of global equilibrium that more equitably distributes resources to each person on earth.

The Club of Rome's main focus is upon global problems associated with population and economic growth. It espouses a neo-Malthusian agenda of limiting population growth and promoting sustainable economic development in order to address perceived problems of environmental degradation.

SEE ALSO *Birth Control; Elites; Limits of Growth; Malthus, Thomas Robert; Malthusian Trap; Natural Resources, Nonrenewable; Overpopulation; Population Control*

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CLUSTER ANALYSIS

Quantitative social science often involves measurements of several variables for a number of cases (individuals or subjects). Searching for groupings, or *clusters*, is an important exploratory technique. Grouping can provide a means for summarizing data, identifying outliers, or suggesting questions to study.

A well-known clustering is that of stars into a main sequence, white giants, and red dwarfs, according to temperature and luminosity. The military has used cluster analysis of anthropometric data to reduce the number of different uniform sizes kept in inventory. Cluster analysis in marketing is called *market segmentation;* consumers are clustered according to psychographic, demographic, and purchasing behavior variables. The United States has been divided into a number of clusters according to lifestyle and buying habits.

Establishing the *profile* of a case, an observational unit, is the first step in cluster analysis. The profile of a case is its pattern of scores across a set of correlated variables. Cases with similar profiles should be in the same cluster; cases with disparate profiles, in different clusters. The mean profile of a cluster is the *centroid*, the set of means of the variables, for the individuals in that cluster. Cluster profiles provide a good summary of the data. Examining them provides insight as to what the clusters mean. A cluster's profile can suggest an interpretation and a name for it.

There are two broad types of clustering algorithms: hierarchical clustering and nonhierarchical clustering (partitioning). Hierarchical clustering follows one of two approaches. *Agglomerative clustering* starts with each case as a unique cluster, and with each step combines cases to form larger clusters until there is only one or a few larger clusters. *Divisive clustering* begins with one large cluster and splits it into smaller clusters.

There are several ways to define intercluster distance. This can be done by forming all pairs of objects, with one object in one cluster and one in the other, and computing the distances between the members of these pairs. *Single linkage* is based on the shortest of these; *complete linkage* on the longest; and *average linkage* on their mean. Joe Ward's method (1963) is based on the sum of squares between the two clusters, summed over all variables. The centroid method is based on the distance between cluster centroids.

Nonhierarchical clustering is partitioning of the sample. The *K*-means algorithm assigns each case to the cluster having the nearest centroid. The process begins by partitioning the cases into *K* initial clusters and assigning each case to the cluster whose centroid is nearest. The centroids of the cluster receiving the new case and the cluster losing the case are updated. This is repeated until no more reassignments take place. The ISODATA algorithm is similar to *K*-means, except one loops through all cases before the centroids are updated. An alternative to starting with an initial clustering is to start with an initialization of the centroids—for example, as the first *K* cases in the dataset or as *K* cases randomly chosen from it.

The notion of *nearest* requires a notion of *distance.* Often, rightly or wrongly, researchers use *Euclidean distance*, which is the length of the hypotenuse of a right triangle formed between the points. Euclidean distance is appropriate for variables that are uncorrelated and have equal variances. Standardization of the data is needed if the range or scale of one variable is much larger than that of others. *Mahalanobis distance* (statistical distance), which adjusts for different variances and for the correlations among the variables, is preferred.

It is sometimes suggested that researchers start with hierarchical clustering to generate initial centroids, and then use nonhierarchical clustering. A conceptual model for clustering is that the sample comes from a mixture of several populations. This leads to a mathematical probability model called the *finite mixture model.* If the within-cluster type of distribution is specified (such as multivariate normal), then the *method of maximum likelihood* can be used to estimate the parameters. This is done with an iterative algorithm.

There are several procedures for determining the number of clusters. This task should be guided by substantive theory and the practicality of the results. A criterion such as between-groups sum of squares or likelihood can be plotted against the number of clusters in a *scree plot.* When a normal mixture model is used, model selection criteria such as Akaike information criterion (AIC) and Bayesian information criterion (BIC) can be used.

Once the clusters are formed, researchers can use *discriminant analysis* to determine which variables account for the clustering and to classify new cases into the clusters. Some cluster techniques operate on distances or similarities rather than raw data. Variables can be clustered using their correlations as similarities. Simultaneous clustering of cases and variables is called *block clustering.* If a subset of the cases has similar values on a subset of the variables, these cases and variables form a block.

James MacQueen's development of his *K*-means algorithm (1967) was a milestone in the development of cluster analysis. John Wolfe (1970) was the first to program maximum likelihood clustering for the finite normal mixture model. John Hartigan's *Clustering Algorithms* (1975) did much to stimulate interest in cluster analysis. Geoff McLachlan and David Peel's *Finite Mixture Models* (2000) is a comprehensive presentation of model-based clustering.

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COALITION

The term *coalition* encompasses a wide range of political activities and outcomes. At the most basic level, a coalition is said to exist when two or more political groups or actors agree to pursue some common objective(s), pool resources in pursuit of such common objective(s), and actively communicate during joint action to achieve such common objective(s). In contrast to the competitive, majoritarian, "winner-take-all" approach to politics, coalitions emphasize collaboration and group coordination. Understanding coalitions helps scholars and practitioners answer one of the immutable questions of politics: Why do avowed adversaries sometimes cooperate? If politics is largely about bargaining and compromise, then the transformation of political competitors into allies is of the utmost importance, whatever the situation, setting, or scope.

Researchers and theorists ask three classes of questions about coalitions: those concerning coalition *formation*, those concerning coalition *maintenance*, and those concerning coalition *termination*. Observers of coalition formation attempt to explain, and purport to predict, the outcomes and payoffs to political actors engaged in bargaining over the composition of a coalition. Much less studied but no less important is coalition maintenance—the concerns of coalition maintenance shift analysis from outcomes to processes, asking questions about communication among partners, joint decision making, policy output, and the efficacy of an alliance. A more recent scholarly concern with coalition termination seeks to identify the sources and consequences of coalition breakup.

As a basic unit of analysis in political science, coalitions are scrutinized as they occur among such actors as interest groups in society, political parties in the electorate, legislative factions in representative assemblies, and states in the international arena. There are, for example, constellations of small grassroots groups that coalesce as *social coalitions* to advance a shared agenda (as illustrated by the Rainbow/PUSH Coalition for advancing civil rights in the United States). There are *electoral coalitions* in which cooperating political parties agree to transfer voter support to one another in districts where doing so enhances the likelihood of victory (as in France's double-ballot system for parliamentary elections). There are ad hoc *legislative* or *voting coalitions* in which members of political parties agree to join forces in support of specific policy or legislation (as in the U.S. Congress).

Perhaps most prominent in the political science literature on coalitions is the scrutiny given to *power sharing* or *governing coalitions*, in which political parties agree to collaborate in the joint distribution of cabinet posts and government ministries. Often, small minority parties located strategically in between major party blocs become "kingmakers," holding disproportionate power to make or break a winning coalition. Outside the Anglo-American democracies, from Italy to Israel and Belgium to Germany, such governing coalitions are typically the norm in parliamentary systems. In international politics, strategic alliances linking two or more states in pursuit of some commonly shared objective may be referred to as coalitions (as in the case of the United States' "coalition of the willing" designed to oust Saddam Hussein's regime in Iraq). A rich body of literature seeking to develop and test coalition theories has focused on the motivations that lead political actors to pursue coalitions of different sizes (*minimum-winning coalitions* or *oversized coalitions*), ideological complexions, and novelty.

SEE ALSO *Alliances; Coalition Theory; Congress, U.S.; Cooperation; Democracy; Government, Coalition; Hussein, Saddam; Minorities; Parliaments and Parliamentary Systems; Political Parties; Politics*

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William M. Downs

COALITION THEORY

Political scientists, along with counterparts in other social science disciplines, have sought a number of theoretical approaches to describing, explaining, and predicting coalitional behavior. Coalitions arise in situations with at least three actors (individuals, groups, countries), wherein no single actor can achieve an optimal outcome on its own; rather, cooperation with one or more other actors is necessary. Coalition theories purport to shed light on why alliances emerge, why they take the forms they do, how they endure, and why they collapse.

Much of coalition theory embraces the basic assumptions of rational political behavior. Faced with dilemmas about how to maximize gains through cooperation with one or more other parties, rational political actors will weigh preferentially ordered alternative strategies and consistently pursue coalition options connected with more preferred outcomes. The game-theoretic tradition, which has dominated coalition research, flows directly from this foundational assumption of rationality. Game theorists view the process of coalition formation as a social interaction in which bargaining behaviors can be modeled by a priori assumptions and deductive propositions about what the negotiators value most.

Conventional coalition theory generally makes four assumptions: relevant players in the coalition game are unified parties, each of which can be considered a single bargaining entity with indivisible motives; the coalition game is zero-sum, with gains by one party constituting losses for another; the universe of possible coalitions is formed by all "winning" combinations of actors; and the game of coalition formation is a single-shot event, independent of previous or future bargaining between the par-

ties to the game. From these baseline assumptions, formal coalition theory has advanced at least two major strands of research: size-criterion studies (the "office-seeking" tradition) and ideological/policy distance (the "policy-seeking" tradition).

In his 1962 book William Riker deduced a "size principle" by which in *n*-person "games" coalitions of minimum size would be expected to form. Hoping to craft a minimum-winning coalition large enough to win but no larger, rational actors in Riker's model would, for example, consistently decide to form coalitions of no more than 201 members in a 400-seat parliament. Similarly, in the hypothetical 400-member parliament a coalition of two equally powerful parties combining for 60 percent of the seats would be preferred to a coalition of four equally powerful parties with 60 percent of the seats. The clear assumption is that the overwhelming motivation of rational political actors in coalitional situations is the zero-sum maximization of a fixed prize to be shared among the fewest actors possible. Self-interested actors driven by garnering for themselves the largest share of a fixed-sum prize tend to see the virtues of compromising principles or policies if doing so increases the likelihood of winning.

Advocates of a rival policy-seeking theoretical approach to understanding coalitions countered that actors seek to build alliances with those partners closest to them ideologically and do not simply jump to form alliances with any constellation of "strange bedfellows" that produces victory. In this theoretical camp, articulated most clearly by Abram De Swaan in his seminal 1973 book, the argument is that players in the coalition game seek to minimize the range of policy disagreement and ideological heterogeneity among members of a potential winning coalition. In a legislative context, this anticipates that the most frequent type of coalition found would be those in which members of the winning government would be adjacent or "connected" if placed on an ordinal, single-dimension left-right ideological scale.

Coalition theory has developed considerably since the pioneering works of Riker, De Swaan, and others. Scholars now seek to replace the traditional office-seeking versus policy-seeking dichotomy by borrowing from spatial theories of party competition to model bargaining on the basis of multiple policy dimensions. Still, criticisms of traditional coalition theory abound. Detractors contend that formal theories based on rational choice/game theoretic propositions fail to capture the practice and reality of coalition politics. Models of unconstrained minimalist rationality operating within the context of laboratory-pure "games," say the critics, cannot account for the frequent departures from minimum-winning coalitions (namely, the occurrence of oversized "surplus majority" coalitions or undersized "minority" coalitions). Further, it may be wrong to assume that all coalition actors pursue the same goals, behave as monolithic unitary actors, and engage in the same kind of complex calculus of mathematical alternatives. Whereas some political scientists see the way forward as a choice between formal coalition theory (based on deductive assumptions about rational behavior) and rich description (detailing cases and actor characteristics), others claim such a choice to be a false dichotomy. Advancing knowledge about political coalitions, this latter group contends, will come through systematic and meaningful measurement of structural features that constrain rational behavior.

SEE ALSO *Coalition; Game Theory; Government; Left and Right; Majorities; Minorities; Parliaments and Parliamentary Systems; Political Science; Politics; Rational Choice Theory; Zero-sum Game*

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William M. Downs

COAL MINING

SEE *Appalachia; Mining Industry.*

COARD, BERNARD

SEE *Grenadian Revolution.*

COASE, RONALD

1910–

Economist Ronald Harry Coase was born in Middlesex, Great Britain, in 1910. At the age of eighteen, Coase enrolled at the London School of Economics, studying for a bachelor of commerce degree. He passed his degree examinations in 1931, and "knew a little about economics as well as a little about law, accounting, and statistics" (Coase 1991a, p. 37). After graduating, he was awarded a traveling scholarship, which brought him to the United States to study the structure of American industry. In 1932 Coase started his academic career in Great Britain as an assistant lecturer at the Dundee School of Economics and Commerce, where he was a colleague of Duncan Black (1908–1991). Subsequently, Coase worked at the University of Liverpool (1934–1935) and the London School of Economics (1935–1951). In 1951 he moved to the United States, where he taught at the University of Buffalo (1951–1958) and the University of Virginia (1958–1964) before joining the economics faculty at the University of Chicago in 1964. He remained there until his retirement in 1981. While in Chicago, he also served as editor of the *Journal of Law and Economics* (1964–1982).

In 1991 Coase was awarded the Nobel Memorial Prize in Economics, primarily on the basis of his paper "The Nature of the Firm," published in *Economica* in 1937. In this paper, Coase asks why there should be a coordinating organization "in view of the fact that it is usually argued that co-ordination will be done by the price mechanism?" (Coase 1937, p. 388). In addressing this question, Coase strikes gold when he introduces the concept of *transaction cost*: "The main reason why it is profitable to establish a firm would seem to be that there is a cost of using the price mechanism" (p. 390). This explanation brings the firm and any other organization or institution within the economic domain. It creates neoinstitutional economics. Rereading his own paper years later, Coase claims to have been struck by its extreme simplicity (Coase 1991b, p. 52).

Another paper cited by the Swedish Academy when awarding Coase the Nobel Prize was "The Problem of Social Cost" (1960). This paper elaborates on a question posed in Coase's earlier article "The Federal Communications Commission" (1959), a question similar to that posed in "The Nature of the Firm": Why does etheric scarcity require government regulation, whereas for other scarce means, such as capital and labor, the price mechanism is used? Coase argues that the absence of property rights blocks the use of the price mechanism to allocate the etheric scarcity to its highest bidder. At the same time, in a zero-transaction-cost world, all welfare effects, side effects included, will be traded efficiently. This idea is what economist George Stigler (1911–1991) termed the *Coase theorem* (Stigler 1966, p. 113). Assignment of property rights may reduce transaction cost and induce trade, for example, in externalities.

Coase's position is that a transaction cost is positive, underlining that this cost profiles economic transactions and their accompanying social arrangements. Otherwise, economic theory may result in "blackboard economics," that is, formulating economic theory without taking account of information problems. Coase has a coherent view of the economic system, which he owes to his London School of Economics master Arnold Plant (1898–1978), who he claims "introduced me to Adam Smith's 'invisible hand.'" (Coase 1991d, p. 229). This view enabled Coase to formulate his seminal 1937 paper as "a young man who knew virtually no economics" (Coase 1991c, p. 62). Coase shows the normal working of the economic system in the light of transaction cost. The winning of the Nobel Prize induced Coase to remark: "It is a strange experience to be praised in my eighties for work I did in my twenties" (Coase 1991d, p. 231).

SEE ALSO *Coase Theorem; Economics, Institutional; Economics, Nobel Prize in; Social Cost; Transaction Cost*

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Piet de Vries

COASE THEOREM

In 1960 Ronald H. Coase, who won the Nobel Prize in Economics in 1991, published his paper *The Problem of Social Cost*. It presents the Coase Theorem as a new perspective on external effects, particularly harmful effects. Coase formulated his theorem as follows: "With costless market transactions, the decision of the courts concerning liability for damage would be without effect on the allocation of resources" (1960, p. 10). This theorem floors Arthur Pigou's welfare-economic approach of externalities. Since the publication of Pigou's *The Economics of Welfare* (1920) economists were used to seeing externalities (side effects) as divergences between private and social net products. In this respect, the conventional thought is that if A inflicts harm on B, A should be restrained. The harm is a (social) cost to B, not having been taken account of in A's private-cost-benefit calculation. Governmental interventions such as taxes remedy this private-social-product divergence, as a prerequisite for economically efficient decisions in the market place. This is the Pigovian approach.

The case of *Sturges v. Bridgman*, used by Coase, may illustrate the Pigovian approach, and shows that the Pigovian route runs into serious problems: For many years, a confectioner has had some machinery in operation on his premises. A doctor then occupies neighboring premises. After some years, the doctor builds a consulting room right next to the room containing the confectioner's machinery. The vibration and noise produced by the confectioner's machinery makes the doctor's use of the consulting room impossible, resulting in an income loss of, say, $100. The doctor goes to court and the court orders the confectioner to refrain from using his machinery. This judgment matches the Pigovian line of thought. The confectioner's production decision did not take the doctor's (social) costs into account. At the same time, the sentence makes clear that considering the problem in terms of private and social products ignores the reciprocal nature. Suppression of the confectioner's harm to the doctor inevitably harms the confectioner. It might be that the sentence harms the confectioner for more than $100. In that case, it is inefficient to ban the confectioner's business. The social net product is less than it might be.

Coase's perspective on the problem of social cost is "to avoid the more serious harm" (Coase 1959, p. 26). Coase formulated this starting point of his theorem in a paper preceding the "Social Cost" paper. In his paper, "The Federal Communications Commission" (1959), Coase wondered why etheric scarcity requires government regulation, whereas for other scarce means such as capital, labor, and land the American economic system uses the price mechanism. Coase identified that it is the absence of property rights in radio frequencies that blocks the use of the pricing system. Well-defined property rights for frequencies will lead to wave trade, allocating a frequency to the highest bidder. "Chaos disappears; and so does the government except that a legal system to define property rights and to arbitrate disputes is, of course, necessary" (p. 14).

In his "Social Cost" paper Coase elaborated this property-rights perspective. Referring to the *Sturges v. Bridgman* case, the liability sentence affects the property rights concerning the neighboring premises, and foremost defines these property rights. The confectioner's liability will induce him to indemnify the doctor if his business brings him an income higher than the doctor's harm of $100. Similarly, the confectioner will move his machinery if this option costs less than $100. On the other hand, if the sentence had been that the doctor had no right to stop the confectioner's business, the doctor might pay the removal option, if priced at less than $100. Property rights bring about trade when mutual benefits are present. It must be said that the cost of transaction may hinder a beneficial deal. However, the Coase Theorem claims that market transactions allocate property rights to the highest bidder provided that transaction cost is zero.

Coase regretted that the zero-transaction-cost-world assumption of the theorem, in which "people can negotiate their way to efficiency" (Farrell 1987, p. 113), has received so much emphasis in the economics literature. People certainly do not live in such a world. Therefore, the most compelling message of the Coase Theorem is to take into account positive transaction cost in fashioning social arrangements. Key variable transaction cost should urge lawyers and legislators to identify in what manner the social net products might be increased. An elaboration of the Coase Theorem is the creation of air-polluting-emission rights. These rights induce polluters to seek emission-reduction alternatives, opening options to sell the rights profitably to the highest bidder.

SEE ALSO *Externality; Overfishing; Pollution; Property Rights; Tragedy of the Commons; Transaction Cost*

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COBWEB CYCLES

Cobweb cycles are the result of lagged response of commodity production to price changes, due to the intrinsic delay between production decisions and actual supply of goods. The typical example is agricultural production, where gestation lags can vary from one season (as with corn) to a few seasons (livestock) to some years (fruit trees).

The idea is rather old: It was applied to agricultural cycles in the 1820s, and it provided the basis for a nonagricultural cycle model by John Wade in 1833. In more recent times, Albert Aftalion's business cycle theory also relied on prices sending wrong signals to entrepreneurs because of a lag between production and supply preventing the system from settling into equilibrium (1913). The first analytical treatment, however, came in 1930, when the independent researches of Jan Tinbergen, Umberto Ricci, and Henry Schultz (all published in German) looked at such cycles as examples of the introduction of time lags in the adjustment process after a disturbance to equilibrium in the commodity market occurs. These authors, elaborating on Arthur Hanau's finding that hog production in Germany was influenced by past hog prices, showed that lags generate two-phase discontinuous cycles, of a period twice the lag and of constant, increasing, or decreasing amplitude depending on the relative elasticities of the supply and demand curves. Figure 1, which represents the diverging case, is self-explanatory as to the origin of the term *cobweb cycle* (apparently coined by Kaldor 1934 in English and by Leontief 1934 in German).

In 1934 Wassily Leontief examined the case of nonlinear supply and demand curves, and showed that certain conditions can give rise to persistent limit cycles, to which the system would converge.

The analysis was further generalized in two directions. The simplest treatment assumed that production decisions react on the market price prevailing at the time, thus implying specific rules about the formation of expectations. A first generalization considered distributed lags, either by treating the expected price as a weighted average of past prices, or by supposing that producers react not to

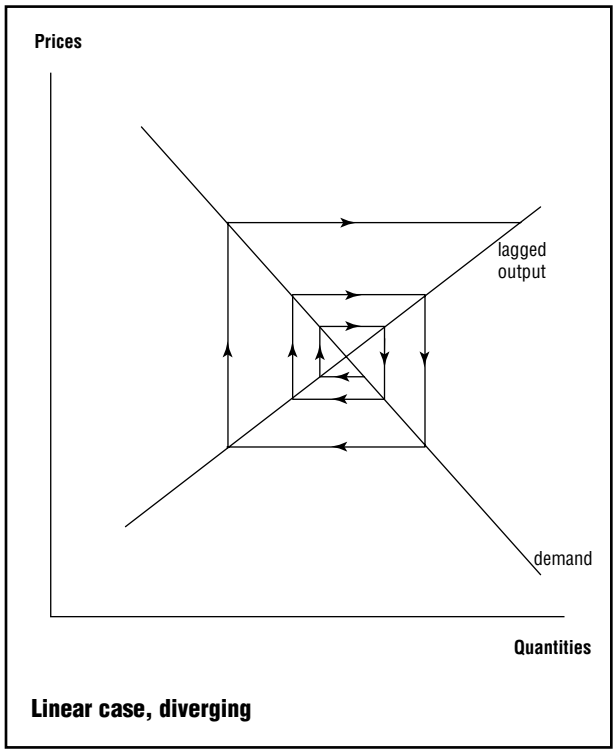

Figure 1

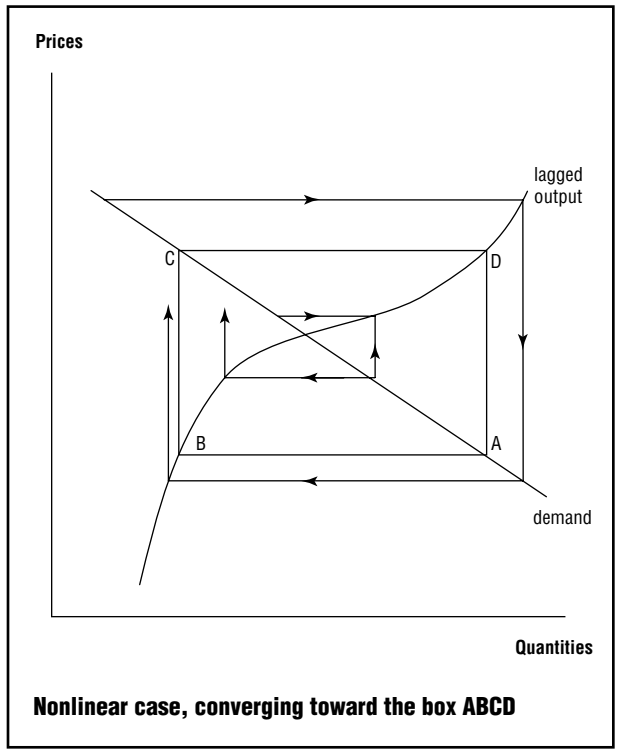

Figure 2

immediate price variations but to their expectation as to the "normal" price level; the latter is revised period after period, adapting it to the movement of actual prices (Nerlove 1958). This stabilizes the model to some extent, the more so the less the weight of recent events with respect to past ones.

A second generalization disposed of the determinism of the model by introducing an error term. The corresponding modelling develops the suggestion derived from John Muth's observation that "farmers' expectations and the prediction of the model have the opposite sign" (Muth 1961, p. 331; similarly, pp. 333–334): Stochastic models have been elaborated assuming instead that expectations are rational, thus postulating that they are unbiased with respect to the theory's prediction—that is, not systematically wrong in an easily predictable way (see, for example, Pashigian 1970).

As these developments of the simplest model occurred, the reflection on the epistemic implications of the cobweb phenomenon was turned on its head. Its first formulation immediately suggested that the instability potentially caused by the lag could offer an escape to the contradiction, widely perceived in the 1920s and 1930s, between the persistence of cycles and the dominant static economic theory, which postulated that a disturbed system would gravitate toward its equilibrium position so that persistent fluctuations could only be explained in terms of systematic exogenous shocks (Ezekiel 1938, pp. 255 and 278–280; Kaldor 1934, pp. 132–136; Rosenstein-Rodan 1934, pp. 91–92). The limit cycles of the nonlinear cobweb led to the interpretation of the cycle as a "generalized equilibrium state" (Samuelson 1948, pp. 371–373), that is, of a possible state of periodic or quasi-periodic motion as "natural" as the stationary state was for static economics.

The reflections on expectations brought the discussion about how to explain the cycle back to its starting place. The assumption of adaptive expectations itself implied an increased stability of the system by electing the long-run normal price as the determinant of output (Mills 1961, p. 334). Finally, the postulate that expectations are rational assumes the cycle away, except as the consequence of the summation of random exogenous shocks on which the burden of the explanation is shifted (Muth 1961, p. 333; Pashigian 1970, p. 352).

SEE ALSO *Adaptive Expectations; Business Cycles, Theories; Expectations; Expectations, Rational*

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Daniele Besomi

COCAINE

SEE *Drugs of Abuse.*

CODE NAPOLÉON

SEE *Napoléon Bonaparte.*

CODETERMINATION

Codetermination guarantees worker representation in the management of a firm. It is commonly found in coordinated market economies such as Germany. Liberal market economies, such as the United States, typically do not legislate mandatory worker representation in firms.

Germany introduced codetermination in 1951, establishing employee participation at two levels of corporate governance: the firm level, with works councils, and a higher level, with employee representatives on the supervisory board. Employee representation is most extensive in the coal, iron, and steel industries, where near parity is legislated, nominally giving equal representation to employees and employers. In 1976 the German government extended codetermination to other industries, but without full parity (European Foundation 2005c). Under these rules, worker representation is extensive but not uniform across issue areas. Most significantly, workers have a voice on issues that concern health and safety at work, personnel matters, training, and renumeration (European Foundation 2005d).

In Austria codetermination allows employees to influence firm decisions that affect their employment conditions, but it is limited to disciplinary procedures and some renumeration matters where firms must receive the works council's approval before making changes (European Foundation 2005a). Codetermination reinforces norms of trust between firms and employees, yielding an environment of relatively peaceful industrial relations.

Sweden established rules in 1976 that promoted employee participation in firm decision making, but the laws pertain only to firms that have collective bargaining agreements with their unions (European Foundation 2005e). Similarly, the 1978 Co-operation Act in Finland regulates industrial relations, allowing employees to participate in decision making on limited matters, including training and worker welfare (European Foundation 2005b). Although the policies in Sweden and Finland are often called codetermination, the policies are neither as extensive nor as broadly applicable as in Germany. Thus, the institution of codetermination varies across countries, industries, and issue areas.

As the barriers to trade and labor mobility are lowered in the European Union, analyzing the costs and benefits of codetermination is critical. In the case of full parity, as in the coal and steel industries in Germany, board members perceive slower decision making due to worker inclusion as a significant disadvantage (Hopt 1984). This cost must be balanced against the advantages of trust and information sharing. In a more recent survey in Sweden, for instance, a majority of directors had a "rather positive" or "very positive" view of worker representation on employee boards. And in fact, the Swedish survey demonstrated that codetermination actually increased efficiency (Levinson 2001, pp. 265–266).

Further, increased worker representation should result in better working conditions for employees and for greater industrial peace; otherwise, either workers or employers would oppose the policy. Analysis of hourly earnings confirms that codetermination does increase hourly earnings (Svejnar 1981, p. 194). Codetermination also seems to have a positive effect on cooperation between firms and their employees (Levinson 2001, p. 266).

Nevertheless, codetermination may not be suitable for every country or firm. Legislating codetermination in multinational corporations is complicated by legal and economic factors, as the Netherlands implicitly acknowledges by granting multinational corporations exemptions from codetermination (Hopt 1984, p. 1363). Also, codetermination is a characteristic of coordinated market economies, where coordination by nonmarket mechanisms is critical to economic success (Hall and Soskice 2001). Mandating codetermination in liberal market economies may be counterproductive because the market itself provides the critical source of coordination, providing comparative advantages.

SEE ALSO *Diplomacy; International Relations*

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Seth Jolly

COFFEE INDUSTRY

The coffee plant is a woody perennial evergreen belonging to the Rubiaceae family. There are two types of coffee, arabica (*Coffea arabica*) and robusta (*Coffea canephora*). Arabica, which accounts for about two-thirds of global output, is grown at high altitudes in Latin America and northeastern Africa. It has more aroma and less caffeine than robusta, which is grown in humid areas at low altitudes in Asia and western and southern sub-Saharan Africa. The coffee plant can grow up to 10 meters high, but it is usually kept at about 3 meters. It takes two to three years for the coffee plant to produce cherries. Scientific evidence indicates that arabica is indigenous to Ethiopia, while robusta is indigenous to Uganda. It appears that coffee was produced in Ethiopia at a larger scale and then spread to other parts of Africa. Coffee cultivation was introduced to Java by Dutch traders in 1699. A few years later the French introduced coffee to Martinique. Coffee was first cultivated in Brazil in 1727.

Although the origins of the coffee drink are unknown, the usefulness of coffee beans was probably recognized as early as 1000 CE by Arab traders who chewed coffee beans in order to suppress their appetite and stay awake, thus helping them cross large distances in the desert. The world's first coffee shop reportedly opened five centuries later in Constantinople (now Istanbul, Turkey). Coffee was introduced to the West by Italian traders in the early seventeenth century, with the first coffee shops opening in London and Paris later in that century.

The processing of coffee involves several steps. After harvesting, the skin of the cherry is removed, and the bean is cleaned to become a green bean, the internationally traded commodity. The green beans are roasted, giving them a dark brown color. Following the grinding of roasted beans, consumers use various brewing techniques to convert the ground beans into a beverage. In Europe, most coffee is consumed in espresso-like form, whereas in North America coffee is mostly consumed in drip form (although that practice has been changing since the beginning of the "Starbucks revolution" during the 1990s). In Asia, most people drink instant coffee. Scandinavian countries lead the world with per capita consumption of almost 10 kilograms of coffee per year from 2000 to 2005. The European Union average during this period was 5.0 kilograms, followed by the United States (4.1 kilograms), and Japan (3.2 kilograms), according to U.S. Department of Agriculture estimates (USDA 2006).

PRODUCTION, TRADE, AND PRICES

Most tropical countries produce coffee. Latin America accounts for 60 percent of global output, followed by Asia (24%) and Africa (16%). From 2001 to 2006, more than half of world output was produced in three countries: Brazil (35%), Vietnam (11%), and Colombia (10%). Other significant producers were Indonesia (5%) and Ethiopia, India, and Mexico (4% each). Coffee in some countries, notably Brazil, is produced on large farms with modern equipment, including irrigation, tractors, and even coffee harvesters. In other regions, especially Central America, Africa, and Asia, coffee is produced by smallholders. In some Africa countries, smallholders own as little as one-quarter of a hectare of land. In this setting, the key input is labor and, to a limited extent, chemicals. In some East African countries there are also coffee estates that use large numbers of permanent workers.

More than 80 percent of coffee is traded internationally and consumed mainly by high-income countries. In some years, coffee is the second most-traded commodity after crude oil, generating about $15 billion in export revenue. The United States accounts for about 18 percent of global consumption, followed by Brazil (13%), Germany (9%), Japan (6%), and France and Italy (5% each).

Coffee is traded in green bean form. Although there are numerous coffee trading companies, most coffee trade is handled by five or six large multinationals. Coffee prices are determined in futures exchanges. Highly-liquid coffee futures contracts are traded at the New York Board of Trade for arabica and at the London International Financial Futures and Options Exchange for robusta. Less-liquid contracts are traded at the Commodity Exchanges of São Paulo, Singapore, and Bangalore.

Coffee prices are generally highly volatile (much more so than other commodity prices). This volatility reflects the fact that Brazil, the dominant supplier, suffers occasional frosts, thus subjecting its coffee output to considerable fluctuations. Hedge funds also play a role in price volatility, especially in the short term. Beginning in

2000, coffee experienced one of the most dramatic price declines in the history of the industry (an episode referred to as the *coffee crisis*). In October 2001 arabica averaged $1.24 per kilogram, a nine-year low, while in January 2002 robusta dropped to $0.50 per kilogram (the lowest nominal level since the price of $0.49 per kilogram set in May 1965). The main factor behind the price collapse was oversupply, especially in Brazil, which averaged a record output of thirty-three million bags of coffee during the previous four seasons, and in Vietnam, which emerged as the dominant robusta producer, overtaking Colombia as the world's second-largest coffee producer. The oversupply, caused by lower-cost producers, led some to argue, convincingly, that the coffee crisis was a market-driven outcome of the coffee industry adjusting to new global market realities (Lindsey 2003).

THE POLICY ENVIRONMENT

The coffee market has been subject to considerable policy interventions both at national and international levels. Takamasa Akiyama (2001) reported that only fifteen of the world's fifty-one coffee-producing countries had private marketing systems in 1985. Twenty-five countries sold coffee through state-owned enterprises, while another eleven had mixed state- and private-sector marketing bodies. By 2007 the coffee sectors of most countries were operating with private-sector marketing arrangements.

The coffee market has also been subject to a series of coffee agreements administered by the International Coffee Organization (ICO), which was established in 1962 to stabilize coffee prices by dictating how much coffee each producer could export. Research has shown that coffee prices were higher under the ICO than they would have been otherwise (Gilbert 1995). There were likely political reasons behind the ICO's supply measures. According to Robert Bates (1997), the United States, a powerful ICO member, used the organization during the 1960s and 1970s to increase the income of Central American coffee-producing countries in the hope that this action would contain the spread of communism in the region. Similarly, western European countries viewed ICO-induced high coffee prices as a way to provide aid to their former African colonies.

Most coffee-producing countries (accounting for 90 percent of global output) and almost all developed coffee-consuming countries were members of the ICO (interestingly, communist countries, which were not members of the ICO, bought coffee under free trading arrangements). The last international coffee agreement was effective from September 1980 to July 1989, after which the ICO was abandoned. A more recent attempt to regulate supplies through another organization, the Association of Coffee Producing Countries, failed.

FACTORS INFLUENCING THE INDUSTRY'S LONG-TERM OUTLOOK

In the absence of new international initiatives or domestic policies by dominant producers, the outlook for the coffee market depends entirely on supply-and-demand forces. Vietnam's emergence as a major robusta producer is likely to influence robusta prices for many years. In 1980 Vietnam produced 140,000 60-kilogram bags of coffee—less than 0.2 percent of world production. In 2001 Vietnam exceeded 13.3 million bags—more than 11.4 percent of world production. Vietnam is a low-cost producer, and as of 2007 its coffee trees were very young and had yet to reach maximum yields. Brazil has been able to maintain unprecedented output levels, averaging more than 39 million bags during 2003–2006. Extensive mechanization of coffee harvesting has lowered production costs, while better varieties with higher yields have been developed and adopted. Shifting production north, away from frost-prone areas in the south, has reduced the likelihood of weather-related supply disruptions. And the extensive use of irrigation has stabilized and sustained yields.

On the demand side, the coffee industry faces growing competition from the soft drink industry. For example, the 1970 annual per capita consumption of soft drinks in the United States was 86 liters; by 1999, annual per capita consumption had exceeded 200 liters, according to U.S. Department of Agriculture data.

Numerous other factors are likely to influence the coffee industry's long-term outlook. First, new technologies enable roasters to eliminate the harsh taste of some coffees, essentially achieving a higher level of quality from lower-quality beans. Second, roasters have been more flexible in their ability to make short-term switches between coffee types, implying that the premia of certain types of coffee cannot be retained for long. Third, a small segment of the market has emerged that focuses on product differentiation, such as organic, gourmet, and shade coffee. The implication of these developments is that the demand outlook is likely to differ from one coffee producer to another. Specifically, any expansion in coffee demand is likely to occur at the two ends of the spectrum: lower-quality beans (reflecting improved technology) and specialty coffees (reflecting expansion to niche markets).

Several new patterns have emerged in coffee promotion and distribution as well. Coffee promotion used to take the form of national brands, represented by the familiar Juan Valdez campaign of the National Federation of Coffee Growers of Colombia. Other types of promotions were undertaken by coffee-trading companies, such as Maxwell House's "Good to the Last Drop" campaign. The

market and trade setting has shifted considerably since the mid-1980s.

In 2007 as much as 10 percent of coffee is branded according to such characteristics as subnational origin (e.g., Kilimanjaro coffee rather than Tanzanian coffee, or Harare coffee rather than Ethiopian coffee); social aspects (e.g., fair trade coffee, which ensures a minimum price to growers); and organic, shade, or bird-friendly production (which ensures compliance with certain environmental criteria).

A second emerging pattern is the development of direct relationships between major coffee retailers, such as Starbucks, and producer organizations that can ensure that the coffee these retailers sell adheres to certain social criteria. Initially, it was believed that, in addition to offering more choices to consumers, these new marketing and branding mechanisms would provide a boost to the income of small coffee growers. While this was the case initially, research has shown that the premia received by coffee growers have declined and are likely to shrink even more as increasing numbers of producers join the specialty coffee marketing channels (Kilian et al. 2006).

SEE ALSO *Addiction; Agricultural Industry; Colonialism*

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COGNITION

Cognitive psychology is the scientific study of the mental processes that underlie behavior. These mental processes comprise a number of areas, including attention, memory, perception, thinking, reasoning, problem solving, decision making, language, knowledge representation, mental imagery, and motivation and concept formation. This focus on mental processes contrasts with behaviorism, which studied only behaviors that could be directly observed. Cognitive psychology is flourishing at the beginning of the twenty-first century, and its principles have been applied to clinical and counseling psychology, personality theory, developmental psychology, social psychology, comparative psychology, forensics and legal psychology, and education, among other disciplines. Other independent schools of thought have developed from cognitive psychology, including cognitive science and cognitive neuroscience.

HISTORY

Some historians have argued that cognitive psychology represents a shift in the psychological paradigm away from the limits of behaviorism (Gardner 1985; Sperry 1993). Others suggest that cognitive psychology simply represents a return to the same topics that existed prior to the founding of behaviorism (Hergenhahn 1994, p. 555). Extensive evidence indicates that cognitive psychology does not represent the study of a novel topic but a return to a focus on mental events that behaviorism failed to allow. Throughout the history of psychology, some form of cognitive psychology always existed (Hergenhahn 1997, p. 551). The questions raised by cognitive psychologists also occupied early thinkers. The ancient Greek philosopher Aristotle (384–322 BCE), for example, wrote on various topics in cognitive psychology. However, during the 1930s to 1950s, when radical behaviorism was experiencing its strongest period, it was generally accepted that cognitive events either did not exist or should be ignored by psychologists because they could not be studied objectively (Hergenhahn 1997, p. 551). However, as psychologists became less captivated by behaviorism, they began to shift toward a cognitive approach that was broader in scope than behaviorism.

The Downfall of Behaviorism Several findings led to the downfall of behaviorism and the eventual rise of cognitive psychology. According to strict behaviorism, two things must occur if an organism is to learn: (1) the organism must actually perform the behavior, and (2) the behavior must lead to some type of a consequence (i.e., reinforcement or punishment). The continuation of behaviorism's control of psychology rested on these basic premises. However, three major findings showed these premises to

be unnecessary: cognitive maps, latent learning, and observational learning (or modeling).

Cognitive Maps and Latent Learning The American psychologist Edward Chace Tolman (1886–1959) is best known for his research on cognitive maps and latent learning. His work with cognitive maps showed that an organism could possess a mental representation of a physical space that would allow the organism to follow alternate routes to a food reward even if the organism was never reinforced for that route in the past (Tolman et al. 1946). Tolman's work with latent learning showed that rats were able to learn their way through a maze even if they never received reinforcement while they explored the maze (Tolman and Honzik 1930). In Tolman's study, the number of errors made by rats that were regularly rewarded gradually decreased as they learned their way through a maze. Other rats in a no-reward condition received no reinforcement for the first ten days of training but were simply placed in the maze for the same amount of time as the regularly rewarded rats. On the eleventh day, these rats were given a food reward. Much to the behaviorists' surprise, these rats made the same number of errors as the regularly rewarded rats on the twelfth day of training, rather than showing the gradual learning curve predicted by behaviorists. This research showed that the rats learned the maze, even without reinforcement.

Observational Learning and Modeling Psychologist Albert Bandura is probably best known for his work demonstrating observational learning. Bandura showed that organisms can learn by watching another organism receive reinforcement or punishment (Bandura et al. 1966). Thus, it is not necessary that the learner actually perform the behavior, nor must the learner receive reinforcement or punishment in order to learn.

Each of these findings failed to validate the most basic behaviorist premises. Additionally, many psychologists began to become less enchanted with behaviorism because of the limitations concerning what could be studied. For example, behaviorists felt that psychology should study only topics or phenomena that could be studied objectively and directly observed. Although cognitive psychology retained the practice of studying topics in an objective, scientific manner, the inclusion of only those topics that were based on direct observation was eliminated. While many research topics of interest to psychologists (thinking, perception, attention, motivation, emotion, decision processes, problem solving, language, etc.) stood outside the realm of psychological study under behaviorism, many of these topics became central to the cognitive psychology movement and are still studied today.

The Rise of Cognitive Psychology Richard Robins, Samuel Gosling, and Kenneth Craik (1999) have presented an analysis of the gradual decline in the behaviorist approach and the eventual rise of cognitive psychology. Cognitive psychology became more and more influential as it overtook the behaviorist approach by 1970 based on the number of articles published in the most prominent psychology journals. There were, however, several important earlier publications and studies that led to the resurgence of cognitive psychology.

The German psychologist Hermann Ebbinghaus (1850–1909) demonstrated in 1885 that complex mental processes, such as memory, could be studied using an objective, experimental approach. He studied nonsense syllables (or letter strings that did not make up words, such as YHB) and recorded the number of trials it took to learn the list to perfection. He then measured the *savings score* (i.e., how much time was saved as one learned the list to perfection again) as a measure of memory.

The Principles of Psychology (1890) by William James (1842–1910) cited numerous studies investigating cognitive phenomena and discussed many topics that currently interest cognitive psychologists, such as attention, perception, memory, and reasoning. James also argued that the human mind does not simply react to stimuli in the environment (a common behaviorist idea) but instead is dynamic and interactive.

Remembering: A Study in Experimental and Social Psychology (1932), by British psychologist Frederic Charles Bartlett (1886–1969), showed that memory was predictable and subject to systematic errors. In particular, Bartlett noted that memory errors were influenced by the rememberer's attitudes, beliefs, schemas, and preconceptions. He proposed that memory is a constructive process such that our own interpretations and biases have a huge impact on what we remember, rather than remembering strictly verbatim information.

American psychologist George A. Miller is probably the one scientist who has had the largest impact in the formation of cognitive psychology as a formal school of thought. In fact, many historians have suggested that his article "The Magical Number Seven, Plus or Minus Two: Some Limits on our Capacity for Processing Information" (1956) was the official beginning of cognitive psychology. This article essentially defined the capacity limits of short-term memory.

Several additional events were also critical for the development of cognitive psychology as a formal school of thought. World War II (1939–1945) led to the development of cognitive psychology and human factors engineering (Proctor and Van Zandt 1994, p. 5). As more complex instruments were developed, the U.S. military became increasingly interested in how humans interacted

with such instruments. These questions involved such topics as attention, memory, perception, and decision making. On September 11, 1956, many important researchers attended a symposium at the Massachusetts Institute of Technology and become excited about the direction of this new approach (Matlin 2005, p. 7). So important was this symposium that some historians have argued that this date marks the official beginning of cognitive psychology.

German-born psychologist Ulric Neisser coined the term *cognitive psychology* with the publication of his book *Cognitive Psychology* in 1967. The journal *Cognitive Psychology* was founded in 1969, providing an outlet for researchers specifically interested in cognitive topics. Fifteen additional journals focusing on cognitive psychology were established during the next twenty years, indicating a rise in interest in cognitive topics and the rise of cognitive psychology.

AREAS OF INTEREST IN COGNITIVE PSYCHOLOGY

Attention. This area of research looks at an array of topics that focus on our ability to pay attention to specific stimuli while excluding other stimuli (selective attention) or to pay attention to two stimuli at the same time (divided attention). Topics include pattern recognition, object recognition, selective attention, divided attention, and subliminal perception.

Perception. Perception is the use of previous knowledge to gather and interpret stimuli registered by the senses (Matlin 2005). This process actively organizes and interprets sensory information in order to make it meaningful. Perception is usually discussed in conjunction with sensory processes with simple stimuli, but it is also studied in terms of how it functions in more complex social situations. For example, if someone bumped into you while walking down the street, your perception of the incident might be dependent upon the characteristics of the other individual. You might interpret it as an accident if an elderly woman bumped into you, but your interpretation might be different if the other person was a member of a group of boisterous teenagers.

Memory. This broad area of research focuses on the encoding, storage, and retrieval processes involved when one remembers information at a later time. Experts generally agree that memories are a result of not only the specific event that is being remembered but also the specific thoughts, emotions, and knowledge that the rememberer possesses. Furthermore, events or thoughts that occur after the encoded event also have an impact on what is remembered.

Language. This area of research focuses on how humans (and nonhumans) acquire and use language. There is also a major focus on the specific language rules (or grammar) that accompany language processing.

Thinking. This broad area of research includes various topics such as problem solving, decision making, mental imagery, and logic. The general focus is on the internal thought processes. Such thought processes may occur prior to overt behavior or during overt behavior, or they may occur as a result of external stimuli. Cognitive neuroscience may use brain-imaging techniques to provide objective measurements of when thinking occurs and which part of the brain is active during specific tasks.

Knowledge Representation. This area of research investigates how information is stored and accessed by the brain. Much of the research in this area focuses on mental models that explain how knowledge is stored in the brain. The two main codes that have been proposed for knowledge representation are based upon analog or propositional codes. Other major areas of research include categorization and how people utilize schemas and scripts in everyday life.

Artificial Intelligence. The information-processing approach to cognitive psychology uses the computer as a model for the human mind. This branch of cognitive psychology led to connectionist frameworks and the parallel distributed processing approach to studying cognition. The analogy that is the basis for the study of artificial intelligence is that computer connections between stored knowledge or idea units are similar to the physical, neural networks present in the brain (McClelland and Rumelhart 1985).

OTHER DISCIPLINES THAT EVOLVED FROM COGNITIVE PSYCHOLOGY

Cognitive Neuroscience. This area combines the basic research techniques and issues from cognitive psychology with various methods (e.g., brain scanning, event-related potential, and single-cell recording) to evaluate the physiological functioning of the brain. Cognitive neuroscience has helped scientists better understand how the brain works and what each part of the brain does, and it provides insight into brain abnormalities or damage.

Cognitive Science. Cognitive science is a multidisciplinary field that studies the workings of the mind by combining the approaches of cognitive psychology, neuroscience, and computer science. It may include other fields, such as philosophy, sociology, linguistics, and anthropol-

ogy (Sobel 2001). Cognitive science takes a more holistic approach, since it utilizes techniques and theories from many different fields of study.

SEE ALSO *Memory; Social Cognition*

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COGNITIVE BALANCE

SEE *Cognitive Dissonance; Equilibrium in Psychology.*

COGNITIVE-BEHAVIOR THERAPY

SEE *Learned Helplessness.*

COGNITIVE-DEVELOPMENTAL PERSPECTIVE

SEE *Developmental Psychology.*

COGNITIVE DISSONANCE

Cognitive dissonance is a social psychological theory introduced by Leon Festinger (1957), describing the way in which people cope with and rationalize inconsistencies in their experience, such as holding incompatible beliefs, acting in ways that violate their values, being forced to choose one of two equally attractive alternatives, or discovering that their efforts were not worth the result obtained. The term refers both to a lack of harmony among one's thoughts and to the discomfort that results from this, which individuals are motivated to reduce by changing their mind or their behavior in the service of greater cognitive consonance. From its initial focus on discordant thoughts, the theory has evolved over the years to stress that the ultimate motivation for reducing dissonance is to preserve the belief that one is a good and rational person, and the theory is now primarily used to understand processes by which individuals justify past behavior to themselves. The concept has also been fruitfully borrowed by other social sciences: Sociologists, for example, use the theory to study the experience of individuals with conflicting identities, to analyze the maintenance of myths, and to explore aspects of religious life. Economists have used it to understand investment decisions, happiness with allocation decisions, or satisfaction with welfare policies.

EXPERIMENTAL DEMONSTRATIONS OF THE POWER OF DISSONANCE

In the first experimental demonstration of how people reduce dissonance, Festinger showed that when students

agreed to lie to a peer for a token reward of one dollar (by saying that a boring task was in fact interesting), they came to like the task more than if they were compensated with twenty dollars. The discomfort of having lied with no obvious justification was alleviated by deciding that it was not such a lie after all. Unable to change the memory of their past behavior, they addressed the dissonance by altering the other incompatible cognition, and pronounced the task more interesting. This finding was inconsistent with learning theories prevalent at the time, which predicted that organisms would prefer those behaviors for which they are rewarded most. It was also a striking demonstration of how, contrary to the common perception that attitudes always govern behavior, behavior can also influence attitudes.

Later dissonance research relied heavily on two experimental procedures capturing the discomfort that lingers after difficult decisions. Most inspired by the original Festinger demonstration, the *induced compliance* paradigm requires that participants write an essay on a topic that they care about, but in support of a position opposite to their own. When the experimenter emphasizes that participants are free to refuse to write the essay, they still write it, but eventually change their stance from their original position toward the position in the essay. No such change happens when participants are simply instructed to write the essay with no room for choice. As before, the discomfort caused by misrepresenting their attitude without sufficient justification led high-choice participants to bring their attitudes more in line with their actions.

A second widely used procedure, the *forced choice* paradigm, introduced by Jack Brehm (1956), illustrates how people cope after they have had to pick one of two options when they had no clear-cut initial preference. After making such a choice (in Brehm's study, housewives had to pick one of two moderately but equally attractive household appliances to take home as a gift), a typical reaction is to immediately start liking the chosen option more, and the rejected option less. This spread of alternatives prevents postdecisional regret and increases comfort with one's decision. Difficult choices in everyday life are followed by similar mental work aimed at reducing dissonance by bringing to mind thoughts that support one's choice, such as benefits of the chosen option or flaws of the rejected one.

A noteworthy feature of the theory is its proposal that a "cold" incompatibility between pieces of information in the mind would lead to a "hot" motivational state, a discomfort that individuals would feel a strong urge to reduce. What does this discomfort feel like? In the induced compliance paradigm, individuals report psychological discomfort just after agreeing to write the essay, but less so after they have been given a chance to express their revised attitude. Stress measures such as skin conductance have also been used to show that individuals experiencing dissonance are more physiologically aroused. Dissonance researchers have also relied on *misattribution* instructions to show the role of discomfort more indirectly: When participants in an induced compliance paradigm were told that a pill they just took might make them feel tense, the discomfort arising from writing the essay was ascribed (misattributed) to the pill, and participants changed their attitude less than when the pill was revealed to be just a placebo. This again demonstrates that attitude change results from discomfort with the inconsistent cognitions, because cognitions are left alone when discomfort is attributed elsewhere.

Besides these powerful experimental demonstrations, social psychologists have also used the theory to understand, for example, why new members disappointed by a group still appreciate it more if they went through harsh initiation practices to get admitted (effort justification), how individuals come to terms with doing things that they know are bad for them (e.g., smoking), or how, more encouraging, people who are reminded that their habits do not fit their values sometimes start practicing what they preach. And while the bulk of the research has focused on attitude change as the means to reduce dissonance, psychologists have shown that discomfort can also be reduced by trivializing the inconsistency, denying responsibility for the problematic behavior, looking for social support for a disconfirmed belief, or by taking substances such as alcohol that directly alter one's psychological state.

CONTROVERSIES AND ALTERNATIVE MODELS

Cognitive dissonance is the theory that has inspired the most debate and reinterpretation in social psychology. One early attempt at reappraisal was Daryl Bem's *self-perception* theory (1972), which argued that what looks like attitude change does not result from inconsistent cognitions, but rather from the fact that individuals first learn about their own preferences and attitudes by observing their own behavior. As they would if observing others, individuals who saw themselves agree to write an essay for little reward inferred that they must be sympathetic with the position defended—and discomfort need not be involved. Similarly, individuals choosing one option over another in the forced-choice paradigm inferred that they must like the chosen option more. After much debate, psychologists now believe that self-perception explains the effects observed in unimportant domains, where people do not hold strong preformed attitudes, but that in important domains where individuals have strong attitudes, dissonance (and its accompanying discomfort) is a

better account of the evidence available. In fact, later theorists have framed dissonance more in terms of threats to the self than in terms of purely cognitive inconsistency. They argued that inconsistency is only aversive if it threatens the actor's sense of integrity (Aronson 1969), or that the behaviors elicited in dissonance paradigms violate the actor's self-standards. Claude Steele (1988) suggested that they threaten the actor's sense of moral and adaptive adequacy, and predicted that asserting any valued aspect of the actor's self would suffice to alleviate dissonance without need for attitude change, even if this self-affirmation was unrelated to the inconsistency at hand. Indeed, he showed that individuals for whom art was very important did not exhibit as much dissonance in an unrelated induced compliance paradigm if they had a chance to express and reflect on their artistic interests beforehand. Finally, cross-cultural comparisons suggest that dissonance might be uniquely aversive to individuals from cultures emphasizing an independent self and analytic forms of thinking (e.g., Americans), based on the finding that classic dissonance inductions are much less effective with individuals from cultures that emphasize an interdependent self and holistic forms of reasoning with greater tolerance for inconsistency (e.g., Japanese).

SEE ALSO *Attribution; Choice in Psychology; Cognition; Festinger, Leon; Lying; Self-Perception Theory; Social Cognition; Social Psychology; Steele, Claude*

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VOLUME 2

COHABITATION–ETHICS IN EXPERIMENTATION

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COGNITIVE DISTORTIONS

SEE *Psychotherapy.*

COGNITIVE MATRIX

SEE *Rituals.*

COHABITATION

Cohabitation is defined as a situation in which opposite-sex couples live together outside of marriage. Much of the literature on cohabitation is derived from research findings by sociologists and psychologists, which places this literature in a central position within the social sciences. This entry provides a brief discussion of who cohabits, why people choose to cohabit, and the consequences of cohabitation for couples, children, and society.

Cohabitation has become increasingly popular since the 1960s, with the majority of young adults in the United States experiencing cohabitation. For most couples, this is a relatively short-term experience, with only one-third of American couples cohabiting for at least two years and only 10 percent doing so for at least five years. About 60 percent of these unions eventually result in marriage. In 2007 nearly five million opposite-sex couples in the United States were living together outside of marriage, largely without legal protections, which is particularly problematic for female cohabitants. This compares to 500,000 cohabiting couples in 1970.

This growing popularity of cohabitation has resulted in a concern among some observers that the practice presents a challenge to marriage as a method of coupling. They argue that marriage is being redefined as one of several choices. The literature suggests that for older cohabitants and for African American couples this lifestyle choice does represent an alternative to marriage. For most Americans, however, marriage remains the primary choice for coupling. Cohabitation is increasingly viewed as a transitional stage between single life and marriage, rather than as an alternative to marriage. Unlike in the United States, however, cohabitation is a significant alternative to marriage for young Scandinavian couples. In addition, increasing economic inequality in the United States is decreasing the opportunities for marriage among less-affluent Americans.

The most commonly cited reasons for moving in together are romance, convenience, the need for housing, and the chance to save money. How well do cohabitants get along with each other? Recent research has found that cohabiting couples are significantly less satisfied in their unions than those who are legally married. This is due, in part, to the fact that cohabiting couples often have more precarious economic circumstances than do married couples. In addition, the presence of children, which reduces satisfaction levels for both married and cohabiting couples, has a more profound effect on nonmarital unions. This is significant in that children are present for 40 percent of cohabiting couples. Further, it is widely assumed that the outcomes are worse for children raised by cohab-

iting couples, as opposed to children raised by married parents.

Lastly, does living with one's partner prior to marriage increase the likelihood of success after marriage? Couples who move in together before marriage have up to two times the odds of divorce compared to those couples who do not live together prior to marriage (Blackwell and Lichter 2000). Some argue that living together creates social pressure to get married, which can contribute to poor mate selection.

SEE ALSO *Family; Marriage*

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COHORT EFFECTS

SEE *Period Effects.*

COINCIDENT INDICATORS

SEE *Lagging, Leading, and Coincident Indicators.*

COINTEGRATION

Time-series data consist of multiple observations of firms, households, persons, or other entities over several time periods. Many economic time series have empirical distributions that are nonconstant over time, with changing means and variances, making these series nonstationary. Stochastic trends occur when there are persistent long-term movements in time series data; and such trends represent a major source of nonstationarity, causing variables to drift over time. Series with stochastic trends are thus called "integrated" or "unit-root" processes.

In 1982, Charles Nelson and Charles Plosser showed that, empirically, many macroeconomic time series appear to be integrated of order one [denoted I(1)]. Growth rates of these series do not tend to drift, which is consistent with the growth rates being nonintegrated, I.E., integrated of order zero [denoted I(0)]. Moreover, efficient-market theories in economics and finance suggest that asset and commodity prices follow a random walk, which is the simplest I(1) process.

Cointegration occurs when a relationship ties together nonstationary economic time series such that a combination of those time series is I(0). The concepts of integration and cointegration are intrinsically statistical in nature. Cointegration formalizes, in statistical terms, the property of a long-run relation between integrated economic variables.

SOME ECONOMIC IMPLICATIONS OF COINTEGRATION

While cointegration is a statistical concept, it has economic implications. For example, it plays important roles in five aspects of economics: (1) long-run relations, (2) agent optimization, (3) the problem of nonsense regressions, (4) equilibrium correction (or error correction) models (ECMs), and (5) economic forecasting.

First, cointegration embeds the economic notion of a long-run relationship between economic variables in a statistical model of those variables. If a long-run relation exists, then the variables are cointegrated.

Second, market forces or optimizing behavior often provide an economic rationale for cointegration. For instance, consumers' expenditure and income may be cointegrated because of economic agents' budget constraints or because of intertemporal optimization plans for lifetime saving.

Third, the statistical theory of unit-root processes aids inference about the empirical existence of cointegration. Econometric theory historically relied on the assumption of stationary data even though many observed economic time series were trending and nonstationary. Cointegration explicitly allows for nonstationarity, thus providing a sounder basis for empirical inference. Cointegration also clarifies the problem of nonsense regressions, in which intrinsically unrelated nonstationary time series are highly correlated with each other.

Fourth, cointegration implies, and is implied by, the existence of an equilibrium correction representation of the relevant variables. Cointegration thus solidifies the statistical and economic bases for the empirically successful class of equilibrium correction models, in which past disequilibria in levels have an effect on current changes in the variables. Through ECMs, cointegration provides a systematic framework for jointly analyzing short-run (e.g., cyclical) and long-run properties. This framework also resolves the debate on whether to model data in levels or

in differences, with classical econometric models and George Box and Gwilym Jenkins's time-series models both being special cases of ECMs.

Fifth, optimal forecasts of cointegrated variables are themselves cointegrated. Hence, the existence of cointegration may improve the long-term forecasting of economic time series.

HISTORY

The history of cointegration was examined by David Hendry in "The Nobel Memorial Prize for Clive W. J. Granger" (2004). Hendry and Mary Morgan, in *The Foundations of Econometric Analysis* (1995), highlight the following events in that history. In 1901, R. H. Hooker illustrated and analyzed the difficulties attendant to nonstationarity, which he viewed as "common trends." In 1926, G. Udny Yule showed that I(1) and I(2) observations would generate "nonsense correlations"; for example, high correlations lacking causal explanation, such as between church marriages and mortality rates. In 1974, Clive Granger and Paul Newbold reemphasized the dangers of nonsense correlations, and Peter Phillips presented a formal analysis in 1986, which he updated in 1998. Klein's great ratios of economics (e.g., of consumption to income) suggested that variables' levels can be closely related. J. Denis Sargan established the link between static-equilibrium economic theory and ECMs in 1964. In the 1980s, Granger and Robert Engle developed cointegration analysis as such.

MODEL SPECIFICATION

In 1987, Engle and Granger established an isomorphism between cointegration and ECMs. Cointegration entails, and is entailed by, an ECM, which explicitly embeds a steady-state solution for its variables, while also allowing them to deviate from that steady state in the short run. In a nonstochastic steady state, an equilibrium relation would typically be motivated by economic theory. Hence, economic hypotheses are testable in a cointegration framework. In empirical work, conditional ECMs have been popular and may be interpretable as agents' contingent plans. Applications include wages and prices, consumers' expenditure, and money demand.

TESTING FOR INTEGRATION AND COINTEGRATION

Cointegration makes the economic concept of equilibrium operational; that is, data allow tests of whether a long-run relation holds. With suitable tests, asymptotically correct inferences can be obtained. In addition, spurious regressions can be detected and avoided, as can unbalanced regressions involving variables of different orders of integration.

Economic theory rarely specifies orders of integration for variables, so a practitioner must analyze the data for both integration and cointegration. While the presence of unit roots complicates inference because some associated limiting distributions are nonstandard, critical values have been tabulated for many common cases. David Dickey and Wayne Fuller calculated critical values of tests for unit roots in univariate processes, and many robust unit-root tests have subsequently been developed.

Numerous cointegration tests have also been designed. In 1987, Engle and Granger proposed a single-equation approach that is intuitive and easy to implement, though it includes nuisance parameters in inference and may lack power (see Hendry 1986). A test of cointegration is also feasible in the corresponding ECM (see Neil Ericsson and James MacKinnon 2002).

Søren Johansen has provided a system-based approach in which cointegration relations are estimated via maximum likelihood in a vector autoregression (VAR). Johansen's test statistics for cointegration generalize the Dickey-Fuller statistic to the multivariate context. Several authors have tabulated critical values, which are also embodied in software such as Cats for Rats and PcGive. In Johansen's framework, hypotheses about cointegration properties are also testable. For instance, testing the long-run homogeneity of money with respect to prices is equivalent to testing whether the logs of money and prices are cointegrated with a unit coefficient. Other hypotheses, such as weak exogeneity, can be tested in Johansen's framework as well. Weak exogeneity is satisfied if the cointegrating vector entering the conditional model does not appear in the marginal model of the conditioning variables. Under weak exogeneity, inference on those parameters from the conditional model alone is without loss of information relative to inference in the complete system.

In summary, cointegration and equilibrium correction help us understand short-run and long-run properties of economic data, and they provide a framework for testing economic hypotheses about growth and fluctuations. At the outset of an empirical investigation, economic time series should be analyzed for integration and cointegration, and tests are readily available to do so. Such analyses can aid in the interpretation of subsequent results and may suggest possible modeling strategies and specifications that are consistent with the data, while also reducing the risk of spurious regressions.

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Neil R. Ericsson
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COLD WAR

The term *cold war* generally refers to the post–World War II global geostrategic, economic, and ideological competition between the East, led by the Soviet Union, and the West, led by the United States. Although there is no real agreement on the beginning of the cold war, its onset is often associated with the Yalta Conference in February 1945, when the United States, the United Kingdom, and the Soviet Union (led by Franklin D. Roosevelt, Winston Churchill, and Joseph Stalin, respectively) met to discuss the war in the Pacific and the postwar division of Germany. The term itself denotes the absence of direct armed conflict, but this period was characterized by mutual perceptions of hostile intentions between the U.S. and Soviet military-political alliances. The competition between East and West, which lasted from 1947 until 1991**,** vacillated between confrontation and cooperation. Stalin's refusal to honor an agreement to support democratic elections in Eastern Europe ultimately became a critical factor in East-West relations (see Schlesinger 1971). The end of World War II ushered in a bipolar, global balance of power, which rendered the once dominant powers of Europe militarily, economically, and psychologically dependent of the United States. This was due, in part, to the perceived menacing presence of the Soviet Union. The policy of containment, then, became the cornerstone of U.S. national security during the cold war years.

The dissolution of the European colonial empires provided the arena in which the two superpowers played upon each other's fears and competed for influence.

Competing across an ideological divide symbolized by the "Iron Curtain," they sought allies, trading partners, military bases, strategic minerals, and investment opportunities in Asian, African, Middle Eastern, and Latin American countries. Diplomatic maneuvering, economic pressure, selective aid, intimidation, propaganda, assassinations, low-intensity military operations, and full-scale proxy wars were used as instruments of influence and control from about 1947 until the decline of the Warsaw Pact (the Communist bloc of nations, led by the Soviet Union) in the late 1980s.

There are also variations in the intensity of the cold war relations that can be tied to changes in U.S. and Soviet political leadership. A slight weakening of hostilities following Stalin's death in 1953 was followed by escalating tensions following the Soviet launch of the Sputnik satellite in 1957, the erection of the Berlin Wall and the failed U.S. Bay of Pigs Invasion in 1961, and the Cuban Missile Crisis of 1962. Tension eased a bit with signing of the Nuclear Test-Ban Treaty in 1963, but Leonid Brezhnev's consolidation of power in the Soviet Union contributed to growing hostilities, which waned again in the 1970s during the era of détente and the Strategic Arms Limitation Talks (SALT I) Agreement.

The cold war also witnessed the largest arms race in history, leading to widespread global fears of a potential nuclear war (see Clausen 1993). The nuclear arms race, which began after the Korean War, was influenced by the actions and perceptions of both U.S. president John F. Kennedy and Soviet premier Nikita Khrushchev. Although the arms race made the policy of deterrence credible, it was very costly for both sides. In fact, the theory of mutual assured destruction (MAD) led to the militarization of both the United States and Soviet Union. Mikhail Gorbachev's ascension to power in the 1980s, however, paved the way for future reductions in nuclear weapons and improved U.S.-Soviet relations.

SEE ALSO *Arms Control and Arms Race; Bay of Pigs; Berlin Wall; Communism; Cuban Missile Crisis; Deterrence; Deterrence, Mutual; Gorbachev, Mikhail; Iron Curtain; Proliferation, Nuclear; Reagan, Ronald; Stalin, Joseph; Warsaw Pact; World War II*

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COLEMAN, JAMES

SEE *Education, Unequal.*

COLLECTIVE ACTION

The logic of collective action (Olson 1965), which has proved to be applicable to a broad range of social and economic situations, assumes that cooperation must be explained by the individual's cost-benefit calculus rather than that of the group because the group as a whole is not rational but can only consist of rational individuals. Groups often seek public goods that are available, once they have been generated, to everyone, including those who did not contribute to producing them. Because individuals potentially can receive the benefits of public goods without having contributed to their production, they have an incentive to let others pay for them.

In classic examples of collective action problems, such as preserving the environment, sharing a natural resource, participating in national defense, voting in mass elections, and engaging in social protests, group members gain when all individuals do their share, but for any individual the marginal benefit of contributing exceeds the cost. If each individual follows his or her self-interest, the outcome—total defection—is worse for everyone than if all had cooperated in supplying the public good. Studies of collective action using game theory, laboratory experiments, and historical cases have been used to identify the conditions under which rational actors are likely to cooperate when they have a strong incentive to be free riders.

Many groups alter cost-benefit calculations by offering selective incentives in the form of material rewards to cooperators and punishments to free riders. Shame, praise, honor, and ostracism can be viewed in this regard as nonmaterial social selective incentives. The administra-

tion of a system of selective incentives by a central authority or by group members, however, usually entails a separate collective action problem that requires further explanation because individuals have an incentive not to contribute to the maintenance of such a system.

Another potential selective incentive is the psychological or expressive benefit inherent in the activity. In this case the motivation for cooperation is not the outcome sought through collective action but the process or experience of participation. For some people, political and organizational activity builds self-esteem and feelings of political efficacy, symbolizes political citizenship, reinforces moral convictions, and constitutes an enthralling experience.

Aside from changing individual incentives, cooperation in groups can be fostered by repeated social interactions that introduce long-term calculations. In iterated social interaction, a person can try to influence the behavior of others by making his or her choices contingent on their earlier choices. Cooperation is therefore possible among self-interested individuals if they care sufficiently about future payoffs to modify their current behavior.

Conditional cooperation is less likely to solve the collective action problem as group size increases because defection is harder to identify and deter when many people are involved. Intuitively the members of small groups are likely to have closer personal bonds, individual contributions will have a greater impact on the likelihood of collective success, and individual defections can be observed more readily. For this reason contingent cooperation in large-scale ventures is facilitated when collective action entails a federated network of community groups and organizations.

There is no reason to suppose that successful collective action can be driven by a single motivation, either coercive or voluntary. Self-interested calculations that are based on selective material incentives and ongoing social exchange often have to be supplemented by moral and psychological considerations and coordinated by political leadership to motivate people to contribute to collective goods. Also it is not necessary to assume that all contributors to collective action will employ the same cost-benefit calculus. Collective action frequently relies on the initiative and sacrifice of committed leaders who supply information, resources, and monitoring and lay the foundation for subsequent conditional cooperation among more narrowly self-interested actors.

SEE ALSO *Cooperation; Cost-Benefit Analysis; Free Rider; Groups; Interest Groups and Interests; Mobilization; Public Goods; Rational Choice Theory; Tragedy of the Commons; Transaction Cost*

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Dennis Chong

COLLECTIVE ACTION GAMES

A collective action problem arises when two or more individuals have the potential to jointly coordinate on some mutually beneficial action, but do not face the right incentives to act in this manner. Such situations are ubiquitous in economic and social life, and arise in the context of political mobilization, electoral turnout, pollution abatement, common property resource use, and the private provision of public goods such as irrigation systems, parks, and national defense.

Collective action problems are often modeled using the theory of games. A simple example is the *public goods game*, which has the following structure. Consider a group of n individuals, each of whom can either "contribute" or "not contribute" to the provision of a "public good." The private cost of contributing is c. Each individual's contribution results in a benefit b to *each* member of the group, including those who do not contribute. The aggregate benefits resulting from a contribution are therefore equal to nb. If $b < c < nb$, then the benefit to the group of a contribution exceeds the cost, but the benefits that accrue to the contributor are less than the cost. In this case, individuals who are unconcerned with the effects of their actions on others will fail to contribute, and if the entire group is composed of such individuals, no contributions will be observed. This is a worse outcome from the perspective of each individual than would arise if all were forced to contribute. Each member of the group can therefore benefit if, instead of being allowed to freely make their own choices, they were all subject to "mutual coercion, mutually agreed upon" (Hardin 1968, p. 1247).

When some individuals behave in a manner that is beneficial to the group while others choose in accordance with their private interests alone, the latter are sometimes referred to as *free riders*. There are several ways in which collective action problems may be mitigated through the

punishment of free-riding behavior. If the group is sufficiently small and stable, and interactions among its members are repeated over a long horizon, actions that benefit the group can be sustained by the fear that an individual deviation will trigger deviations by others, resulting in the complete collapse of prosocial behavior. Alternatively, even if interactions are not repeated, collective action can be sustained if individuals have the ability and the inclination to impose direct punishments on each other for free riding. Experimental evidence suggests that many individuals do indeed have such preferences for "altruistic punishment," and that such propensities have played a key role historically in the sustainable management of common property resources.

The most common solution to collective action problems is through the intervention of a centralized authority that can set rules for behavior and impose sanctions on those who fail to comply. Sometimes these sanctions take the form of monetary fines, as in the case of tax evasion or the failure to meet pollution standards. In many instances, however, punishments can take the form of ostracism or expulsion, as in the case of clubs, trade unions, or political parties.

SEE ALSO *Common Knowledge Rationality Games; Evolutionary Games; Game Theory; Noncooperative Games; Screening and Signaling Theory Games; Strategic Games*

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Rajiv Sethi

COLLECTIVE MEMORY

Contemporary usage of the term *collective memory* is largely traceable to Émile Durkheim (1858–1917), who wrote extensively in *The Elementary Forms of the Religious Life* (1912) about commemorative rituals, and to his student, Maurice Halbwachs (1877–1945), who published a landmark study on *The Social Frameworks of Memory* in 1925. For Halbwachs, who accepted Durkheim's sociological critique of philosophy, studying memory is not a matter of reflecting on the properties of the subjective mind; rather, memory is a matter of how minds work together in society, how their operations are structured by social arrangements: "It is in society that people normally acquire their memories. It is also in society that they recall, recognize, and localize their memories" (Halbwachs 1992, p. 38). Halbwachs thus argued that it is impossible for individuals to remember in any coherent and persistent fashion outside of their group contexts. Group memberships provide the materials for memory and prod the individual into recalling particular events and into forgetting others. Groups can even produce memories in individuals of events that they never experienced in any direct sense. Halbwachs thus resisted the more extreme intuitionist subjectivism of philosopher Henri Bergson (1859–1941) (whose work had nevertheless led Halbwachs to his interest in memory), as well as the commonsense view of remembering as a purely—perhaps even quintessentially—individual affair.

In contrast to Halbwachs's discussion in *The Social Frameworks of Memory*, however—in which he argues that what individuals remember is determined by their group memberships but still takes place in their own minds—in *The Legendary Topography of the Holy Land* (1941) and elsewhere Halbwachs focused on publicly available commemorative symbols, rituals, and representations. This more Durkheimian discussion in turn undergirded Halbwachs's contrast between "history" and "collective memory" not as one between public and private but as one based on the relevance of the past to the present: Both history and collective memory are publicly available social facts—the former "dead," the latter "living." Halbwachs alternately referred to *autobiographical memory*, *historical memory*, *history*, and *collective memory*. Autobiographical memory is memory of those events that we ourselves experience (though those experiences are shaped by group memberships), while historical memory is memory that reaches us only through historical records. History is the remembered past to which we no longer have an "organic" relation—the past that is no longer an important part of our lives—while collective memory is the active past that forms our identities.

While rightly credited with establishing "collective memory" both as a concept and as a subject for sociolog-

ical research, Halbwachs is far from the only scholar to have thought systematically about the (changing) relationship between the past and the present. Before Halbwachs, the German philosopher G. W. F. Hegel (1770–1831) had distinguished among original history (eyewitnessing and chronicling), reflective history (scientific), and philosophical history (teleological). Friedrich Nietzsche (1844–1900) in turn distinguished among antiquarian, monumental, and critical uses of the past.

In contemporary scholarship, the so-called history of mentalities has pursued a "collective psychology" approach to cultural history, seeing images of the past as part of "the whole complex of ideas, aspirations, and feelings which links together the members of a social group" (Goldmann 1964, p. 17), and thus forms an important topic for historical investigation. In Germany, many historians and social scientists have revived an older, philosophical concept of "historical consciousness" (*Geschichtsbewusstsein*) to guide analysis, linking it to concerns about "the politics of history" (*Geschichtspolitik*), which indicates both the role of history in politics and the role of politics in history. Yet another camp has employed the awkward yet insightful term *mnemohistory*, which "unlike history proper … is concerned not with the past as such, but only with the past as it is remembered" (Assmann 1997, p. 9). Mnemohistory thus calls for a theory of cultural transmission that helps us understand history not simply as one thing after another nor as a series of objective stages, but as an active process of meaning-making through time, "the ongoing work of reconstructive imagination" (Assmann 1997, p. 9). Yet another similar argument comes out of the hermeneutic tradition, particularly as articulated by German philosopher Hans-Georg Gadamer (1900–2002), in which the meaning of life can be found in our ongoing making and remaking of self-consciousness through interpretation without end.

No matter what the specific conceptualization, what may be called *social memory studies* (Olick and Robbins 1998) has become a prominent feature of scholarly discourse in recent decades, when Western societies in particular have been experiencing a sort of "memory boom" (Winter 2006). Indeed, explaining this boom has been an important topic for social memory studies. Scholars have variously sought to explain the rise of interest in the past, memory, commemoration, nostalgia, and history in contexts ranging from consumer promotions, popular culture, interior and exterior design, and public space, as well as the rise of reparations, apologies, and other forms of redress in domestic and international politics. Answers have included the decline of the nation-state as a carrier of identity, the end of faith in progress, the rise of multiculturalism, and postmodernity more generally. Most famously, and most generally, the French historian and editor Pierre Nora has claimed that we spend so much time thinking about the past because there is so little of it left: Where we earlier lived lives suffused with pastness—the continuities of habit and custom—we now live disconnected from our pasts, seeing ourselves as radically different than our forebears. In Nora's terms, where once we were immersed in *milieux de mémoire* (worlds of memory), we moderns now consciously cultivate *lieux de mémoire* (places of memory) because memory is now a special topic. In a related manner, the Marxist historian Eric Hobsbawm has distinguished between worlds of custom and worlds of "invented tradition." Since the late nineteenth century, not only have nation-states sought to shore up declining legitimacy by propagating fictional pasts and a sense of their institutions' ancientness, people have invented the very category of tradition (as opposed to custom): the idea of self-conscious adherence to past ways of acting (whether genuine or spurious) is itself a product of our distance from the past, which has come to be seen as "a foreign country" (Lowenthal 1985).

SEE ALSO *History, Social; Identity; Memory*

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COLLECTIVE WISDOM

The term *collective wisdom* refers to the notion that the totality of knowledge, experience, and skills possessed by the members of a group, whether large or small, typically exceeds that of any individual in the group, and that the members acting in concert are thus capable of judgments, problem-solving, and decision-making that will lead to better outcomes than one could expect of any one of them acting alone. Such a belief, in part, lies at the base of democratically organized groups, as well as larger, more complex social entities. It is also reflected in such popular expressions as, "Two heads are better than one."

The above presumptions have been objects of skepticism historically, as James Surowiecki (2004) has aptly illustrated in citing the less than charitable views of such notable figures as Henry David Thoreau, Thomas Carlyle, Gustave Le Bon, and Friedrich Nietzsche, all of whom took a dim view of the virtues of collective judgment and action. Surowiecki credits Carlyle, for example, with the observation, "I do not believe in the collective wisdom of individual ignorance" (p. xvi). The derogatory phrase "pooling of ignorance," which one frequently hears critics ascribe to group decision-making and problem-solving, clearly resonates with Carlyle's cynicism, as well as that of others.

Underlying the skepticism, unfortunately, is a misrepresentation of the concept. The notion of collective wisdom does not entail the presumption that informed thought, judicious choice, and effective action result in some magical, inexplicable way from the combination of individuals who are not singly capable of these things. Rather, it assumes that the knowledge, experience, and skills of those acting as an entity are often complementary, as well as compensatory. As a result, the entity enlarges its potential for effective judgment, choice, and action. The potential of the group, however, does not exceed the limits of its members. Hence, a group whose members, for instance, lack relevant task-related expertise and ability is not one we would expect to surpass the performance of a single individual who does, let alone a group whose members are all in possession of such expertise and ability. Indeed, evidence supports this presumption (see Beach and Connolly 2005; Shaw 1981).

Collective wisdom was the focus of a good deal of scholarly interest early in the history of social psychology and the concept has continued to attract attention. From the 1920s to well into the 1960s, much attention was paid to questions concerning the relative superiority/inferiority of individuals versus groups in respect to judgment (e.g., Jenness 1932), problem-solving (e.g., Davis and Restle 1963), and learning (e.g., Yuker 1955). Comparative inquiries provided reasonably substantial evidence in support of the presumptions associated with the concept of collective wisdom, as in many cases groups were revealed to make better judgments, show greater effectiveness in problem-solving, and experience larger gains in learning than individuals with whom they were compared. Other later evidence from research on brainstorming further indicated that groups are capable of generating more ideas, as well as a higher proportion of high-quality and novel ideas, than individuals acting alone. Such findings by no means have been unequivocal, however, especially in respect to brainstorming (see Beach and Connolly 2005, Frey 1997; Shaw 1981).

Determining reasons for the discrepancy between the potential collective wisdom affords and the observed performance of groups in particular has been a focus of at least three different areas of scholarly inquiry: diversity of membership, the influence of social variables, and, most recently, collective information-sampling bias. Each offers a different understanding of and insight into the reasons for the inconsistency.

The oldest of the areas of inquiry mentioned is that relating to diversity. Early research had as a focus similarities and differences among the members of groups, initially in respect to abilities and demographic characteristics and later on the basis of personality profiles. On the whole, heterogeneous groups have been found to outperform homogeneous groups (Frey 1997; Shaw 1981). One explanation for why groups do not consistently outperform individuals, then, is suggested by such outcomes. Specifically, groups whose members are too similar to one another have little potential for displaying collective wisdom that exceeds the abilities of any given individual member. Conversely, diversity, while often an asset to a group, can also be a source of disruption that impairs relationships among members and thereby impedes performance (Porter and Samovar 2003).

Social variables can also limit the potential for collective wisdom to operate consistently. This has been demonstrated by Irving Janis's studies (1972, 1982, 1989) of groupthink, its sources (such as pressure for uniformity, the desire to maintain a harmonious climate, and the undue influence of those in positions of authority), and the heuristics, or mental shortcuts, to which the members of groups often resort when under groupthink's influence. If the interaction among the members of such groups does not function to overcome the constraints that contribute to the abandonment of rational forms of judgment and choice, one cannot expect to see groups perform more effectively than individuals (Gouran and Hirokawa 1996, 2003). In fact, one would have reason to predict that such bodies might well perform less effectively.

Finally, and most recently, some scholars have begun to focus on an interesting phenomenon in group interaction that has further explanatory value in accounting for

the inconsistently demonstrable superiority of groups as compared to individuals: collective information-processing bias (see Beach and Connolly 2005; Propp 1999; Stasser and Titus 1985). There has been much evidence of a tendency for the members of groups to focus in decision-making and problem-solving discussions on the information they all have in common rather than information they as individuals uniquely possess. Under these circumstances, there is no reason to expect that a group would be more likely to arrive at better decisions and more effective solutions to problems than the most knowledgeable, experienced, and able individual member.

In conclusion, scholarship has established through empirical evidence that collective wisdom is a property of groups. It is not, however, a property that universally enables a group to surpass the performance or exceed the wisdom of its most competent member. How well it functions to assist groups in maximizing their performance depends on the amount they possess, as well as the extent to which other counteracting variables become intrusive.

SEE ALSO *Attitudes; Attitudes, Political; Conformity; Decision-making; Democracy; Elitism; Groupthink; Knowledge; Nietzsche, Friedrich; Rational Choice Theory; Rationality; Social Judgment Theory; Social Psychology; Thoreau, Henry David*

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Dennis S. Gouran

COLLECTIVISM

Collectivism is a term used to describe various social, political, and economic relations that stress the primacy of the collective, which may be a group of individuals, a society, a state, a nation, race, or social class, over that of the individual. Collectivists subscribe to the belief that the group's societal or communal "will" takes precedence over that of the individual, who must then sacrifice self-interest for the good of the whole. Thus the group is the fundamental unit of social, political, and economic concern.

From a social perspective, collectivism maintains that humans are interdependent and closely linked to one or more groups. This doctrine views group harmony and solidarity as more important than personal desires and goals. In this case, the group might take the form of a family, race, social class, or religious denomination. Thus, respectfulness, cooperation, and conformity to group norms are expected. Competition and conflict are devalued within the group but viewed as acceptable intergroup behaviors.

Politically, collectivism might be viewed as a doctrine that maintains that the "will" of the people supersedes that of the individual, who must subordinate personal interests

to those of the majority. Thus society as a whole is the standard of moral value. An early example of this kind of collectivism has been associated with Jean-Jacques Rosseau's social contract. In this work, Rousseau posits that human society is organized along the lines of an implicit contract between members of society, with the terms of the contract, such governmental powers, citizens' rights and responsibilities, defined by the "general will." This notion of collectivism is often equated with democracy.

As an economic doctrine, collectivism holds that material resources should be owned by the group and used for the benefit of all rather than being owned by individuals. Although this view of collectivism advocates public over private ownership of property, the state is not necessarily the manager or overseer of collective property, as has been the case with most modern day manifestations of communism. It should also be noted that the principle of collective ownership of property might refer to the means of production or to all commodities that are valued.

While there are many examples of societies characterized as collectivist, few, if any, are entirely collectivist. Moreover, one can find characteristics of collectivism in most societies. Perhaps the best-known practical applications of collectivism are those associated with the agriculture sector of societies. Many of these attempts, however, have resulted in some well-documented failures. For example, the Soviet state's experiment with agricultural collectivization in the 1920s and 1930s was abandoned owing to negative economic consequences. Similarly, Operation Dodoma, which refers to Julius Nyerere's 1974 program of forced collectivization of farming in Tanzania, was largely unsuccessful as a means of increasing benefits perceived to accrue from collective farming. China's 1958 attempt at collectivization of agricultural production, though somewhat more successful than that of the Soviet Union and Tanzania, also failed to yield perceived economic benefits.

SEE ALSO *Agricultural Industry; Communalism; Communism; Democracy; Rousseau, Jean-Jacques; Social Contract; Socialism; Socialism, African; Stalin, Joseph; Union of Soviet Socialist Republics*

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Kathie Stromile Golden

COLLECTIVIZATION

SEE *Collectivism.*

COLLUSION

SEE *Competition, Imperfect.*

COLONIALISM

The matrix of structures, ideologies, and actions that have formed both historical and contemporary patterns of colonialism have shaped the world-system in irreversible and deeply influential ways. Serious consideration of colonialism recognizes that no matter where the starting point for analyzing colonialism is set, the process, structure, and lingering effects of such a geohistorical phenomenon cannot be grasped in a simplistic or one-dimensional way by either academics or those who continue to live colonized lives, for the implications of such naïveté are too severe. Numerous critical scholars—such as Edward Said, Gayatri Spivak, Ania Loomba, Samir Amin, Immanuel Wallerstein, and Wole Soyinka—have devoted their academic careers (which are often rooted in their lived experience within colonial rule and systemic colonial endeavors) to understanding the social, cultural, and political project that is colonialism. While the terms *colonialism*, *empire*, *imperialism*, and even *globalization* have been employed to describe analogous processes, the realities behind colonialism are complex and systematically, structurally, and culturally catastrophic for the colonized. Colonialism can be critically discussed through three primary lenses: (1) the colonialism project as a structure of domination subjugating one group of people to another across political entities; (2) internal or domestic colonialism as a similar structure occurring within a given nation-state, typically against socially marked groups; and (3) the colonialism of the mind, wherein the colonized are institutionally, pedagogically, linguistically, and cognitively conquered by the colonizer.

Most common definitions of colonialism describe a general process in which a nation-state expands its territory as well as its social, cultural, and political structures into extant territories beyond its own national boundaries. Most standard definitions also describe a process in which

one power exerts and maintains control over what ultimately becomes a dependent area or people. Yet such definitions are deeply insufficient for critical scholars of history, sociology, literary theory, anthropology, and other areas of study. Indeed, colonialism is a geopolitical, sociocultural, linguistic, and hegemonic project of domination and oppression rooted in the racialized and gendered contracts emerging out of Europe in the fifteenth and sixteenth centuries (see Mills 1997; Pateman 1988). As a project of the European Enlightenment, colonialism is critically seen not as aberration but as a purposeful design intended to spread a hegemonic structure whereby one people ("whites") benefit from the exploitation and subjugation of another people ("nonwhites"). Colonialism is a form of systemic oppression and domination. The basic, descriptive form of colonization existed before the emergence a distinctly European, racist, hegemonic project (e.g., in the ancient empires of Egypt, Persia, Macedonia, Mongolia, China, and Central and South America). But while the processes of colonialism were of a radically different form, the consequences for those who were colonized in ancient times were as thorough and deep as they were for those colonized in Africa, India, Latin America, and other areas by Europeans in the eighteenth and nineteenth centuries. In the contemporary world, neocolonialism and imperialism often mirror earlier colonization efforts through complex and ultimately exploitative economic, military, political, social, and cultural processes. Many see such processes at work in various episodes of foreign intervention by the United States either directly (Grenada, Panama, Iraq) or indirectly (Chile, Cuba, Indonesia).

Understanding the oppressive and exploitative nature of colonialism in the world-system is crucial. However, solely attending to such processes across sociopolitical boundaries can divert critical awareness away from similar ideologies and structures of colonization within a given context. Indeed, similar processes and exploitative "contracts" have emerged within countries since the fifteenth century. In the U.S. context, several critical scholars (e.g., Andre Gunder Frank, Robert Blauner, Immanuel Wallerstein, Maulana Karenga, and Vine Deloria Jr.) have raised the question about whether groups such as African Americans and Native Americans represent internal colonies within the United States.

Questions surrounding internal or domestic colonization focus on the fulfillment of several social structural components, highlighting the internal relationships of colonialism between oppressor and oppressed. First, if a particular group is politically disenfranchised within their own country (e.g., through electoral structure or limited access to discourse or positions), then that group may be an oppressed internal colony. Second, if the group in question is economically disadvantaged and exploited within the society it calls home, then the group represents the possibility of domestic colonization. Third, when members of a group are occupationally subordinated through segregation, impeded structural access to opportunities, or de facto discrimination and racism (e.g., African Americans or Native Americans), they are internally colonized within a matrix of colonialism. Fourth, when individuals in an ethnic or minority group are sociopsychologically humiliated through media misrepresentation, decentering (objects of history, rather than subjects) in education, and interactional isolation, they are part of an internal colony. Finally, minority groups often become culturally manipulated and commodified within their own societies through the market, the media, and campaigns of fear and consumption, and this can lead to domestic colonization. States often utilize the tools of colonialism against people within their own borders to effectively create internal colonies.

As the social landscape is also reflected and embedded within our mental and cognitive landscapes, existence within a structure of colonialism can affect individual and collective repertoires of action, thought, belief, and behavior. Thus, another lens through which one can view colonialism is that of the colonization of cultural, ideological, and cognitive terrains. The political philosopher Frantz Fanon, who was born in the French colony of Martinique, illuminated such a form of colonialism through his critical, structural, and psychoanalytic analysis of colonization. Fanon and others identified a "colonization of the mind," an internalization of inferiority that persists long after colonial powers have physically left. While some authors have discussed the kind of moral and epistemological psychology needed for oppressors to engage in colonialism, writers from the Brazilian educator Paulo Freire to Fanon recognize that, in a system of colonialism, the oppressor, buttressed by the system and enjoying systemic privilege, maps systemic forms of domination within the minds of the oppressed that fundamentally alter strategies of resistance, protest, political opposition, and notions of individual and collective identities.

Colonialism, in the almost 600 years of its world-system domination, is a systemic, hegemonic, and totalizing form of oppression stemming from the project of European Enlightenment, and as such it has structured the world-system in favor of the West. While direct colonialism, through colonial rule, may eventually wither away through anticolonial movements and processes of "decolonization," the effects of such a system linger in the international relations, internal structures, and mental cartography of the colonized. Such a structure has proved not only catastrophic for the colonized, but also, as Freire would argue, for the colonizer as well.

SEE ALSO *Anticolonial Movements; Decolonization; Empire; Imperialism; Neocolonialism; Postcolonialism*

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David L. Brunsma

COLONY, INTERNAL

During the 1960s in the United States there arose, in response to the militancy of the urban black masses, and secondarily because of the black power movement, a burgeoning, if unevenly sophisticated literature that defined the situation of the African population within U.S. borders as colonial. In *Black Power: The Politics of Liberation in America* (1967), Stokely Carmichael and Charles Hamilton argued that the black condition in the United States is essentially colonial, even if not perfectly analogous to classic colonialism in the sense that there is not a separation of territory and no exploitation of raw materials. Such distinctions, however, were merely technicalities, they asserted, because politically, economically, and socially the black community is directly controlled by predominantly white institutions, even if these institutions also make use of indirect rule. For Carmichael and Hamilton the key role for black people in the United States is as a source of cheap and unskilled labor. Captive black communities also provide merchants, creditors, real estate interests, and so on with a market for cheap and shoddy goods.

Another important exponent of the "internal colonialism" notion was Robert Allen, who argued that "Black America is an oppressed nation, a semi-colony of the United States" (Allen 1970, p. 1), and that the black freedom struggle should thus take the form of a national liberation movement. Unlike Carmichael and Hamilton, who considered the comparison with colonialism inexact, Allen sought to avoid the "lack of perfect fit" by aligning himself with the position taken by Jack O'Dell (1967). O'Dell argued that "it is the role of the institutional mechanisms of colonial domination which … [is] decisive. Territory is merely the stage upon which these historically developed mechanisms of super-exploitation are organized into a system of oppression" (p. 8). And thus for Allen, colonialism was the "direct and overall subordination of one people, nation, or country to another with state power in the hands of the dominating power" (Allen 1970, p. 8). Allen and others have argued that in the United States the urban rebellions of the 1960s gave rise to a more neocolonial form of control, utilizing indirect rule. Under this system, black power became black capitalism, and a black middle class, militant rhetoric and all, was allowed to get a larger piece of the pie for themselves.

Bob Blauner's theory of internal colonialism (1972) added additional elements that had not been clearly argued previously. Blauner contended that while the conditions of black people do not really fit the traditional criteria of colonialism, which imply the establishment of domination over a "geographically external political unit, most often inhabited by people of a different race and culture" (p. 83), a common *process* of social oppression characterizes race relations in both classical and internal colonialism, because both developed out of similar technological, cultural, and power relations. According to Blauner, colonial systems—including black internal colo-

nialism—are defined by certain processes and characteristics:

1. the colonized's mode of entry into the dominant society, or into a relationship with the dominant society, is forced, not voluntary;
2. the indigenous values, orientations, and ways of life of the colonized are destroyed;
3. the colonized have a special relationship to the governing or legal order in which they view themselves as being managed and manipulated by outsiders;
4. the colonized are characterized as inferior on the basis of alleged biological characteristics, as part of a process of social domination by which they are exploited, controlled, and oppressed socially and psychically; and
5. a separation in labor status occurs between the colonized and the colonizers.

A less widely known, but nonetheless influential examination of internal colonialism, Harold Cruse's article "Revolutionary Nationalism and the Afro-American," was published in *Studies on the Left* in 1962. Cruse placed internal colonialism in a broader historical context than most of the more popular exponents of the theory. He argued that the black domestic colony should be seen as a part of the worldwide colonial empire established by Pan-European capitalism. While the United States did not establish a colonial empire in Africa, it brought African colonial subjects home and installed them within the Southern states. From that time, blacks have existed in a condition of domestic colonialism everywhere within the United States. Cruse views the colonial revolution against capitalism, rather than the Western workers movement, as the leading edge of the revolutionary struggle. Some early 1960s black radicals, such as the Revolutionary Action Movement, took up Cruse's position and circulated his article widely among other black radicals.

While most exponents of the internal colony theory have been political activists, the issue has also been taken up by some economists. William Tabb (1970) argued that there are two key relationships that must exist before the colonial analogy can be accepted: (1) economic control and exploitation, and (2) political dependence and subjugation. The maintenance of such relationships requires social separation and inferior status (p. 23). Tabb agreed with black radicals who argued that the spatial separation of colony from colonizer was secondary to the actuality of control from the outside. Bennett Harrison (1974) viewed the internal colony as a social entity similar to a " 'less developed country' with a severe 'balance of payments' deficit and with 'foreign' control of the most important local political and economic institutions" (p. 4). While he rejected the internal colonialism model, Harrison nonetheless saw striking similarities between the structural dualism pervading so many of the least developed countries and the segmentation of the American economy into a growing "core" and ghetto "periphery" (p. 6). Barry Bluestone (1969) expressed a more nuanced view of the ghetto economy. Like W. E. B. Du Bois in the 1930s, he argued that through developing the inner city economy the black community could gain the strength to win concessions from the government and corporate elites.

Ron Bailey (1973) stressed the racial dimension of internal colonialism. Bailey held that "race has always been a significant and relatively independent force in shaping material reality in capitalist society" (p. 162). He is critical of conventional Marxist analysis, which has not accorded race its proper significance, and has overlooked the centrality of "internal colonialism as the domestic face of world imperialism and the racist conquest and exploitation of people of color by Europeans" (p. 162). Bailey traces the black internal colony to the enslavement of Africans in the Americas as part of a global capitalist world-system. For Bailey, the black internal colony is a reservoir of superexploited labor, relegated to the lowest-paid and least-desirable jobs, and also supplies a large pool of unemployed workers that facilitates the exploitation of noncolonized workers. It is a zone of dependent development locked in the logic of spiraling impoverishment, and an expendable buffer zone used to cushion the antagonism-producing operations of the American capitalist economy.

Bailey argued that relations of monopoly and dependency were at the heart of the economic domination of the black internal colony. The black internal colony is a zone of white control both internally and externally. Whites control and monopolize the mechanisms of production, exchange, and distribution, in addition to mechanisms of economic diversification (banks, credit, technology). This dependent position of the black internal colony is a by-product of capitalist growth *outside* of the colony. The enclave structure of the black community generates employment outside the black community while black labor goes unemployed (Bailey 1973, p. 175).

For Bailey, dependency theory offered a set of organizing ideas that clarified how the black internal colony is a consequence of a set of historical forces and structures that consign it to underdevelopment and dependence (Bailey 1973, p. 176). Bailey concluded that the essential role of the black internal colony is to insure the smooth functioning of the relations of production and exploitation and that to guarantee the continued existence of this system, tokenism is used to pacify the black bourgeoisie.

Writing with Guillermo Flores (1973), Bailey argued that despite the affluence and power of the United States, "racial minorities remain unconquered by policies of forced assimilation, acculturation, and cultural extermination" (p. 158). Colonized minorities within U.S. borders are distinct from their people of origin, but also from white society within the United States, where they are rejected by the society that they helped build. For Bailey and Flores, the "national liberation struggles of racial minorities within the U.S. are important negations of U.S. capitalist domination inside its borders and converge with and strengthen the national liberation struggles of other third world peoples" (Bailey and Flores 1973, p. 158).

During the 1960s many in the United States came to equate the "colonial question" with the "social question." This equation had been the basis of past coalitions, but there had also been controversy over which of the two was primary. The old Left had consistently argued for the leading role of the working class, but that position was forcefully challenged by the concept of internal colonialism during the concept's heyday. By the 1980s one rarely found authors who supported the concept. Both Robert Allen and Robert Blauner recanted and adopted more pragmatic positions, in line with a change in the relations of force in favor of the dominant strata within the United States and on a world scale. In 2005, however, Allen published a reassessment in which he reasserted many of his earlier views.

SEE ALSO *Black Middle Class; Black Power; Colonialism; Du Bois, W. E. B.; Slave Mode of Production; Slavery*

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COLOREDS (SOUTH AFRICA)

Contrary to international usage, in South Africa the term *Colored* does not refer to black people in general. It instead alludes to a phenotypically varied social group of highly diverse cultural and geographic origins. The Colored people are descended largely from Cape slaves, the indigenous Khoisan population, and other black people who had been assimilated into Cape colonial society by the late nineteenth century. Because they are also partly descended from European settlers, Coloreds are popularly regarded as being of "mixed race" and have held an intermediate status in the South African racial hierarchy, distinct from the historically dominant white minority and the numerically preponderant African population.

There are approximately four million Colored people in South Africa today. Constituting no more than 9 percent of the population throughout the twentieth century and lacking significant political or economic power, Colored people have always formed a marginal group. There has, moreover, been a marked regional concentration of Colored people. Approximately 90 percent live within the western third of the country, more than two-thirds in the Western Cape, and over 40 percent in the greater Cape Town area.

ORIGINS OF COLORED IDENTITY

In the decades after the emancipation of the Khoisan in 1828 and of slaves in 1838 the heterogeneous black labor-

ing class in the Cape Colony started developing an incipient shared identity based on a common socioeconomic status and a shared culture derived from their incorporation into the lower ranks of Cape colonial society. The emergence of a full-fledged Colored identity was precipitated in the late nineteenth century by the sweeping social changes that came in the wake of the mineral revolution that altered the social and economic landscape of the subcontinent. Significant numbers of Bantu-speaking Africans started going to the western Cape from the 1870s onward. Also, assimilated colonial blacks and a wide variety of Bantu-speaking African people who had recently been incorporated into the capitalist economy were thrust together in the highly competitive environment of the newly established mining towns. These developments drove acculturated colonial blacks to assert a separate identity as Colored people in order to claim a position of relative privilege in relation to Bantu-speaking Africans, on the basis of their assimilation into Western culture and their being partly descended from European colonists.

RACIAL DISCRIMINATION AGAINST COLOREDS

The most consistent feature of Colored political history until the latter phases of apartheid was the continual erosion of the civil rights first bestowed nonracially in the Cape Colony by the British administration in the mid-nineteenth century. The attrition started in the late nineteenth century with franchise restrictions aimed at black voters. In the first decade of the twentieth century Colored people were excluded from the franchise in the former Boer republics after the Anglo-Boer War and were denied the right to be elected to parliament with the creation of the South African state in 1910. In the 1920s and 1930s, the economic advancement of the Colored community was undermined by the government's "civilized labor" policy of hiring white workers at high wages in the public sector, as well as by laws designed to favor whites over blacks in the competition for employment in the private sector. Furthermore, in 1930 the influence of the Colored vote was more than halved when white women were enfranchised, and Colored and black women were not.

It was during the apartheid era, however, that Colored people suffered the most severe discrimination. Their forced classification under the Population Registration Act of 1950, which categorized all South Africans according to race, made the implementation of rigid segregation possible. The Prohibition of Mixed Marriages Act of 1949 and the Immorality Amendment Act of 1950 outlawed marriage and sex across the color line, respectively. Under the Group Areas Act of 1950, over half a million Colored people were forcibly relocated to racially exclusive residential areas on the periphery of cities and towns, and in 1953 the Separate Amenities Act segregated all public facilities, creating deep resentment. In 1956, moreover, after a protracted legal and constitutional battle, the National Party succeeded in removing Colored people from the common voter's roll.

COLORED POLITICAL ORGANIZATION

Although the earliest Colored political organizations date back to the 1880s, the first substantive Colored political body, the African Political Organization (APO), was established in Cape Town in 1902. Under the leadership of the charismatic Abdullah Abdurahman, who served as president from 1905 until his death in 1940, the APO dominated Colored protest politics for nearly four decades. Until its demise in the mid-1940s, it was the main vehicle for expressing this community's assimilationist aspirations as well as its fears at the rising tide of segregationism. The failure of the APO's moderate approach contributed to the emergence of a radical movement within the better-educated, urbanized sector of the Colored community during the 1930s. Prone to fissure and unable to bridge the racial divisions within South African society, the radical movement failed in its quest to unite blacks in the struggle against segregation. Organized opposition to apartheid from within the Colored community was quelled by state repression following the Sharpeville shooting of March 1960, which initiated a harsh crackdown on the extraparliamentary opposition by the apartheid state. Organized Colored resistance only reemerged in the wake of the Soweto uprising of 1976.

RECENT DEVELOPMENTS

From the latter half of the 1970s, with the popularization of black-consciousness ideology within the Colored community, the nature of Colored identity became contentious as growing numbers of politicized people who had been classified "Colored" rejected the classification. The Soweto revolt of 1976 greatly accelerated this trend because it fomented a climate of open resistance to apartheid and fostered a sense of black solidarity. Coloredness increasingly came to be viewed as an artificial categorization imposed on the society by the ruling minority as part of its divide-and-rule strategies. The burgeoning of the nonracial democratic movement in the 1980s under the leadership of the United Democratic Front fed Colored rejectionism.

In spite of this, the salience of Colored identity has endured. During the four-year transition to democratic rule under President de Klerk, political parties across the ideological spectrum sought support by making ever more strident appeals to Colored identity and postapartheid South Africa has witnessed a resurgence of Colored

assertiveness. This has been due partly to a desire to project a positive self-image in the face of the pervasive negative racial stereotyping of Colored people and partly to attempts at ethnic mobilization to take advantage of the newly democratic political environment. It has also been motivated by a fear of African majority rule and the perception that, as in the old order, Coloreds were once again being marginalized. Though far from allayed, these anxieties have, in recent years, been alleviated by the fading influence of "black peril" tactics in South African politics and by the acclimatization of people to the new political order.

SEE ALSO *Apartheid; Inequality, Racial; Miscegenation; Mulattos; Sex, Interracial*

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Mohamed Adhikari

COLORISM

Colorism is the allocation of privilege and disadvantage according to the lightness or darkness of one's skin. The practices of colorism tend to favor lighter skin over darker skin, although in rare cases the opposite practice also occurs. Colorism is present both within and among racial groups, a testament to its role as something related to but different than race. Colorism is enacted among racial groups in various contexts, from preferences in classroom settings and hiring decisions to patterns in sentencing. For example, it has been shown that lighter-skinned minorities, particularly blacks and Latinos, attain a higher educational level and a higher workforce status than darker-skinned minorities. According to research by Arthur Goldsmith, Darrick Hamilton, and William Darity (2006), employers tend to prefer light-skinned black employees over dark-skinned black employees. Further, their research indicates that there is a much greater discriminatory wage penalty for darker-skinned African American men compared to their lighter-skinned counterparts. That is, lighter-skinned African American men tend to earn higher wages compared to darker-skinned African American men.

Studies by Verna Keith and Cedric Herring (1991) as well as those by Margaret Hunter (2002) suggest that the effect of skin tone remains even when other socioeconomic factors such as parental income and educational statues are controlled. Further, a study by Trina Jones (2000) demonstrates that darker-skinned blacks receive longer sentences than lighter-skinned blacks for crimes against whites, despite similarities in criminal records. Similarly, research by Jennifer Eberhardt, Paul Davies, Valerie Purdie-Vaughns, and Sheri Lynn Johnson (2006) demonstrates that "blacker-looking" African American males are more likely to receive the death penalty compared to their lighter-skinned counterparts for comparable capital crimes. Their findings remain significant even after controlling for defendant attractiveness and other nonracial factors that are typically known to influence sentencing, such as murder severity or victim's socioeconomic status. Most social scientific studies of the effects of colorism have shown that there has been little improvement in this form of discrimination since the civil rights movement in the 1960s.

However, previous research on colorism tended to focus on color-based discrimination within racial groups, as evidenced by the historical existence of such groups as the Blue Vein Society, a black-created social club that excluded dark-skinned blacks. Studies show that nonwhites tend to embrace the beauty standards prevalent in most societies, which grant a higher desirability to lighter skin than to darker skin. This has been shown to affect not only the self-worth of nonwhites but also mate selection. Light skin attains a higher socioeconomic status in its own right, through greater access to education and workforce mobility; lighter-skinned nonwhites also disproportionately attract spouses with higher socioeconomic statuses. Most studies have found that gender interacts with the effect of skin tone, making lighter skin a form of social capital for both black women and Latinas, again having an impact that cannot be explained by generational privileges alone. Famously explored in Wallace Thurman's novel *The Blacker the Berry …* (1929) and Toni Morrison's *The Bluest Eye* (1970) but rarely discussed openly, colorism is a continuing line of discrimination among and within racial groups worldwide. Although frequently collapsed into discussions of racism, colorism often occurs independently of racism, thus meriting independent analysis.

Racism and colorism share some commonalities, despite being independent practices. Fundamentally, both

ideas of race and perceptions of skin color are social constructions, created in historically specific contexts and used to justify various practices of power. Although racial boundary drawing often involves perceptions of skin color, skin color alone rarely has been the sole determinant of racial categorization. At the same time, within racial categories there exists a wide range of skin coloration and various other physical attributes that are given social meaning in the process of allocating power and status. Thus conflating racism and colorism misses a distinct mode of stratification. With colorism, discrimination is not based on racial categorization but rather on assumptions about the meaning associated with one's skin color. In this way, we can distinguish racism as the social meaning associated with one's racial group and colorism as the social meaning associated with one's pigmentation.

Although colorism is frequently found in societies whose histories include a significant era of European colonialism, colorism has also been noted in Japan, a nation whose history does not involve a Euro-colonial past. This has allowed some scholars to explore the symbolic dimensions associated with colorism's typical privileging of lightness over darkness. In many differing cultural contexts, whiteness or lightness often has been associated with purity, cleanliness, beauty, intelligence, morality, and civilization, whereas in deliberate contrast, blackness or darkness has been associated with sin, filth, ugliness, stupidity, deviance, and backwardness. Anthropologists estimate that out of 312 cultures worldwide, 51 use skin color as a determinant of beauty. Among them, only four contain a preference for dark skin over light.

Such symbolic associations have in many cases justified the political and economic strains of colonialism, which play a central role in the origins of colorism. In Brazil, for example, the Portuguese invasion in the sixteenth century created a color hierarchy that persists in the early twenty-first century. Although roughly 80 percent of Brazilians are of African or indigenous descent, whites still are privileged politically and economically. A similar correlation of color and privilege is found throughout much of Latin America. In India traces of colorism favoring light skin are known to have existed before British colonial rule. Under the caste system, skin color and caste shared a similar gradient of privilege, and even in the early twenty-first century color-based tensions pervade Indian society.

In the United States the arrival of Europeans initially fostered race mixing, although with increased entrenchment of power among European descendents, particularly after the beginnings of slavery, an effort was made to draw clear (albeit biologically arbitrary) boundaries among the races. Antimiscegenation laws, such as the "one-drop rule" or "hypo-descent rule" that proclaimed that any amount of African ancestry was enough to constitute legal or social black status and that classified people racially as the subordinate group, were first created in response to moral questions over slavery for mixed-race individuals. For instance, throughout most of U.S. history and in some regions in the U.S. in the early twenty-first century any person with a trace of African ancestry has been considered black. In the Deep South during the era of slavery, although children of white plantation owners and their slave mistresses often were treated harshly and faced conditions similar to other slaves, these children in some instances were given coveted indoor jobs. In a few instances they also were given freedom, property, and even their own slaves. The social status associated with such freedom and ownership was a privilege for many mixed-race individuals, who after emancipation worked to self-segregate from darker-skinned blacks via elite social clubs and various churches, colleges, and other social institutions that were open to light-skinned blacks only, perpetuating a color-based gradient of privilege that persists in the early twenty-first century.

Although there have been substantial challenges to the practice of colorism, ranging from Marcus Garvey's criticism of W. E. B. DuBois to Spike Lee's challenging film *School Daze*, colorism is still widely practiced within and among racial groups. As long as lighter skin allocates disparate practices in housing, education, employment, sentencing, and perceptions of beauty, it remains a significant line of stratification.

SEE ALSO *Attitudes, Racial; Colonialism; Du Bois, W. E. B.; Garvey, Marcus; Miscegenation; Phenotype; Prejudice; Race Mixing; Racism; Stratification*

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COLUMBUS, CHRISTOPHER

c. 1451–1506

School children across the United States immediately recognize the name Christopher Columbus. He has assumed iconic status as the instigator of European imperialism in the Americas. Much of the historical Columbus, though, became obscured by eighteenth- and nineteenth-century mythology that valorized the sailor.

Christopher Columbus (Cristóbal Colón in Spanish, Cristoforo Colombo in Italian) first approached the king of Portugal in 1484 with a bold plan to reach Asia by crossing the Atlantic Ocean. The king's advisors, however, scorned Columbus's ideas. Contrary to folklore, most educated Portuguese conceptualized the earth as a sphere by 1484. Skeptics of Columbus's plans, in other words, did not believe that Columbus would sail off the edge of a flat world. Rather, Columbus's dubious calculations about the size of the earth troubled many in the Portuguese court. Columbus proposed that only three thousand nautical miles separated Europe and Asia, a distance that ships of the day could easily traverse. Portuguese authorities did not know about the existence of North and South America, but they understood, based on their own calculations, that Columbus had seriously underestimated the globe's size. Indeed, reaching Asia via the Atlantic would mean traveling a distance of 10,600 nautical miles, more than three times the distance Columbus predicted. Portuguese scientists conjectured that Columbus and his crew would starve before reaching Asia, and they likely would have had they not happened upon the Western Hemisphere. Rather than adopting Columbus's westward plan, Portugal banked on reaching Asia by voyaging around Africa.

Rejected by Europe's major naval power, Columbus looked to Portugal's emerging rivals, Spain's Queen Isabella (1451–1504) of Castile and King Ferdinand (1452–1516) of Aragon. When Isabella and Ferdinand married, they united Spain's two largest kingdoms and ruled jointly. Isabella initially rejected Columbus's proposals as fantastical and expensive. Columbus persisted for seven years, however, eventually winning Isabella's approval on his third official proposal. Ferdinand later claimed credit for convincing Isabella to set aside her misgivings about Columbus. The Catholic sovereigns financed Columbus, offered him the title of governor for the lands that he claimed for Spain, and provided him with a modest fleet of three ships: the *Niña* and *Pinta*, two caravels, and the *Santa Maria*, a square-rigged vessel.

Columbus's ships crossed the Atlantic in twenty-nine days. The crew aboard the *Pinta* first spotted land on October 7, 1492, and made landfall three days later. Columbus encountered the indigenous Taíno (or Arawak) on Guanahani island, which he renamed San Salvador. During his first voyage, Columbus scouted various other islands throughout the Caribbean, including Hispaniola (now Haiti and the Dominican Republic) and Cuba.

Columbus did not understand or accept that he had arrived on lands unknown to contemporary Europeans. Instead, he steadfastly claimed to have reached Asia. The inexperienced navigator believed Cuba's mountains to be India's Himalayas, and he thus dubbed the indigenous people *Indians*.

Having lost the *Santa Maria* off the coast of Cuba, Columbus set sail with the *Niña* and *Pinta* for Spain on January 4, 1493. Encountering wicked storms and bad luck, he did not return to Castile until March.

Columbus found much glory when he entered the royal court. Spaniards marveled at the many unknown items he displayed from his first voyage, including a tobacco plant, a turkey, and a pineapple. He also showed several kidnapped natives, whom Columbus suggested would not interfere in Spain's colonization efforts.

Columbus's second voyage to the Western Hemisphere, which lasted from 1493 to 1496, showed the brutality and limits of European imperialism. Columbus had seventeen ships and 1,200 men to colonize the Taíno and Arawak territory. He created an elaborate design for the colonial capital, which he named Isabella. The town and expedition, however, largely failed.

Columbus navigated and charted islands in the Caribbean, including Puerto Rico. He also advocated enslaving the indigenous populations. Though Isabella and Ferdinand shunned the idea of outright enslavement, Columbus ultimately took 1,600 Arawaks into bondage. He dispatched around 550 of these Arawaks to Spain, but almost half died during the journey. Those who did survive spent a lengthy time imprisoned as Spain's legal system decided their fate. Ultimately, Spain ordered that they be shipped back to their native lands.

Columbus continued to petition the monarchy to consider their new colonies as a source for slaves. They, however, consistently refused. The monarchs' refusals over

unconditional slavery, however, did not mean that they did not expect the indigenous to labor on their behalf as repayment for their conversion to Christianity.

Perhaps the greatest brutality during the second voyage resulted from the Spaniards' search for gold. Though they found some precious metals, Columbus's men could not locate the massive reserves that he had imagined existed. On the island of Haiti, Columbus imposed an unrealistic quota system on the indigenous population. The governor ordered the hands chopped off of any adult over the age of fourteen who failed to reach his quota in the gold mines. Even with this viciousness, Columbus failed to collect much gold during his second journey. He left behind, however, several permanent colonies for Spain.

Columbus's third journey to the Americas was notable for two reasons. First, a young Bartolomé de las Casas (1474–1566) traveled onboard one of the six ships. Las Casas would later gain fame for chronicling the abuse of indigenous people at the hands of Spain's colonists. Second, royal authorities arrested Columbus on August 23, 1500. Many of the colonists had grown angry with Columbus and his unfulfilled promises of wealth. Spain's monarchs eventually released Columbus, but stripped him of his title of governor.

Columbus's final trip to the Western Hemisphere lasted from 1502 to 1504. During this voyage, Columbus continued to hunt for gold and other material treasures. He made landfall in Central America, probably along the coasts of the modern-day nations of Honduras, Nicaragua, and Costa Rica. Bad weather, though, ultimately resulted in Columbus spending most of his final year in Jamaica. He returned to Spain on November 7, 1504, and never returned to the Americas again.

Columbus spent the last few years of his life fighting court battles in Spain. The seafarer sued the Spanish Crown, demanding it honor its original contract with him, which guaranteed 10 percent of the profits from his explorations. The court battles ultimately extended across five decades, with Columbus's heirs losing the fight.

COLUMBUS'S LEGACY

Columbus's entry into the Western Hemisphere radically changed the direction of Europe, Africa, and the Americas. Ideas about imperial expansion had already become part of Europe's most powerful kingdoms. European society quickly recognized that they could use their existing technology to colonize lands previously unknown to them.

In 1494 Spain and Portugal almost went to war over control of the world. Spain argued that the route and lands encountered by Columbus belonged to them. Portugal countered that Columbus could not have succeeded without Portuguese technology. Pope Alexander VI (1431–1503) negotiated a settlement, the Treaty of Tordesillas (1494), that pleased both Spain and Portugal. Essentially, the pontiff divided the globe on a line located 270 leagues west of the Azores. Any lands west of that line went to Spain, any lands to the east went to Portugal. Europeans had little idea of the size or shape of the Americas, but the line resulted in Portugal's claims to Brazil and Spain's initial dominance in North America. Alexander VI and the Iberian powers ignored whatever concerns the indigenous inhabitants might have had about this arrangement.

Most historians argue that Iberian subjugation of the Canary Islands became the model for the initial settlement of Europeans in the Western Hemisphere. Establishing colonies in the Canary Islands created imperial apparatuses for controlling lands and populations thousands of miles away from the center of government. Ostensibly a mission of religious conversion, Christian invaders interpreted resistance as a divine sanction for their colonial enterprise. Moreover, authorities rarely recognized the rights of baptized Canarians. Within a short period, Iberians sold tens of thousands of Canarians into slavery and confiscated their lands.

Columbus's immediate legacy, therefore, involved Spain importing these brutal methods to take control of indigenous lands in the Americas. By 1512 as many as ten thousand Spaniards lived in Hispaniola, supported by the forced labor of the original inhabitants. Puerto Rico, Cuba, and all the lesser islands soon fell to Spain's conquistadors. The Arawaks and Caribs faced exploitation under the guise of religious conversion.

Starting around 1515, Spaniards began to construct sugar mills, importing both technicians and African slaves to replace the indigenous people dying from disease and mistreatment. In 1519 Hernando Cortés (c. 1484–1547) entered to the core of the Aztec Empire in the center of modern-day Mexico. By 1600 Spain's imperial authority extended from the Río Grande del Norte to the Río de la Plata in southern Peru. Other European powers soon followed, including Portugal, Britain, France, and the Netherlands.

European invasion of the Americas brought profound suffering and death to indigenous groups. Overwork and lack of adequate provisions compounded the spread of disease as epidemics ravaged the Americas. The Mesoamerican population dropped from more than twenty million to as little as two million during the first century of contact. Populations on the Greater Antilles almost entirely disappeared.

Many historians frame Columbus's legacy around notions of exchange. As already suggested, the most profound exchange that occurred involved the transmission

of diseases. Europeans brought typhus, measles, strains of influenza, and smallpox to the Americas for the first time. Some debate exists about whether syphilis originated in the Americas and, therefore, had been previously unknown in the Eastern Hemisphere. Recent studies, however, suggest that Europeans already had experiences with syphilis before Columbus set sail.

Outside of disease, the exchange of different plants, animals, and cultural practices radically altered the landscape and diets of Europeans, Africans, and Native Americans. Native Americans had never seen pigs, sheep, sugar, or domestic cattle. Arguably the most important addition, however, was the horse. Horses had not roamed the Americas since the last Ice Age. Native Americans quickly adapted the horse to their needs, using them for hunting, transportation, and warfare.

American crops, likewise, transformed European and African life and nutrition. Columbus brought back nutrient-packed maze (corn) on his first trip. During the next century, American beans, squash, potatoes, peppers, and tomatoes all became European staples. Tobacco became a prized commodity in Europe by the seventeenth century.

Columbus's voyage also had tremendous significance for Europe's minority populations, particularly the Jewish community. On March 30, 1492, less than a month before Columbus signed his crown contract, Isabella and Ferdinand issued a decree expelling Jews from Spain. Those Jews who did not convert to Christianity by August 2 forfeited their property to the royal couple and had to leave their kingdom.

Jews had already faced centuries of persecution throughout Europe. A sizable group opted to convert to Christianity, some out of religious faith, others for expediency. Their Christian neighbors, however, continued to disdain these *conversos* (converts), despairingly naming them *marannos* (literally, swine). Many conversos, often referred to as *crypto-Jews*, secretly maintained their Jewish faith and practices. This community, however, faced dire consequences if discovered. Under the Catholic Church's Inquisition, these conversos came under intense scrutiny. Church authorities executed any conversos who showed signs of practicing Judaism.

Columbus benefited from both the Jewish community and also their persecution. While in Lisbon, Columbus consulted with prominent Jewish and converso scientists like Joseph Veinho and Martin Behaim (1459–1507). Columbus also received substantial funding for his expedition from a converso in Ferdinand's royal court. Moreover, he employed numerous conversos in his crew, some just barely out of the Inquisition's clutches. Many recently baptized Christians even held key positions in his first fleet, including Rodrigo Sanchez, the comptroller; Alfonso de la Calle, the second mate; Maestro Bernal, the physician; and Luis de Torres, Columbus's interpreter.

The purge of Jews from Spain, though, also provided part of the royal funding for Columbus's various voyages. Seizure of Jewish property provided an immense budget for the second voyage, in particular. Much of the money for that expedition derived directly from the confiscation of Jewish lands and valuables, including some priceless synagogue artifacts.

Spain's expansion into the Americas, though, also provided unexpected opportunities for conversos and crypto-Jews. Colonization's first century offered a literal escape from Europe's Inquisition. Though officially forbidden from settling in Spain's new colonies, conversos often found the royal court more than willing to sell exemptions. If one could not obtain royal sanction, captains in the imperial navy also showed themselves ready to provide transport for the right price. By the 1630s, conversos could be found in almost every town in Spain's empire. Frontier locations, such as New Mexico or Florida, attracted a disproportionate number because of their remoteness from the Inquisitors' grasps.

THE HISTORICAL COLUMBUS AND THE COLUMBUS LEGENDS

Though widely known today, Columbus's name had almost been forgotten even before his death in 1506. In December 1500, Amerigo Vespucci (1454–1512) published a sensational account of his travels across the Atlantic. Vespucci claimed credit for finally establishing that Europeans had encountered previously unknown continents in the Western Hemisphere. When an authoritative German cartographer printed the first major world map in 1507, he gave the continents the name *America*, a feminine version of Vespucci's first name.

During the eighteenth century, however, Columbus's fame experienced a resurgence thanks, in part, to the tensions between North American colonists and the British government. As early as 1700, British colonists used *Columbia* as another name for the Americas. After U.S. independence, the historical Columbus and the feminine coinage Columbia became symbols for distinguishing the fledgling republic from its European counterparts. King's College in New York, for instance, found a new start as Columbia College. In 1791 the seat of government became known as the District of Columbia. Though 1692 passed with little fanfare, the leaders of the newly created United States made 1792 a year of fetes. Celebrating three centuries since his first journey, U.S. leaders declared Columbus the first "American" hero.

Columbus gained even greater notoriety with the publication of Washington Irving's (1783–1859) three-volume biography in 1828. Publishers have issued over

175 different editions of Irving's hefty study. In 1844 federal authorities commissioned a statute of the sailor for the U.S. Capitol building. His popularity continued to serge in the United States through the second half of the nineteenth century. Between 1830 and 1860, the U.S. Catholic population grew from three hundred thousand to over three million. These foreign-born immigrants faced intense hostility by nativist Protestants who believed Catholicism irreconcilable with U.S. nationalism. In response, the Catholic Church used Columbus as a symbol of Catholic legitimacy in the nation. A renewed mythology developed around the explorer as a man who brought Christianity to the Americas. A prominent Catholic fraternal group, for instance, assumed the name the Knights of Columbus in 1882. The immigration of Italians, which added roughly another four million Catholics to the United States between 1880 and 1920, increased the worship of Columbus. Because of Columbus's connection to Genoa, Italians felt a special claim to him. The increased fervor around the explorer resulted in spectacular celebrations in 1892 to mark the four hundredth anniversary of his sailing.

Through the twentieth century, scholars and activists became more critical of Columbus and his legacy. By 1992 almost equal attention was being given to the devastating consequences that befell indigenous and African populations following Columbus's journey five hundred years earlier. Though he became an iconic hero, conjecture abounds about Columbus's ancestry. Around the turn of the twentieth century, the Spanish historian Celso Garcia de la Riega speculated that a fifteenth-century Galcian family named Colón might have been Columbus's progenitor. Moreover, de la Riega suggested that the Galcian Colóns had married into a seemingly Jewish family, leading the historian to propose that Columbus had been a Jew or a "New Christian." Scholars have also pointed to Columbus's frequent references to the Hebrew Bible in his logs and letters. Moreover, he used the Jewish calendar for his personal records. His private letters also tantalize modern historians with their frequent references to such Hebrew Bible figures as King David and Moses.

Other theories developed that questioned the traditional story that Columbus hailed from Genoa, Italy. Among these propositions were theories that Columbus was Greek, Basque, and Portuguese. The most astounding and least plausible story proposed that Columbus was really Native American, had been blown by a storm to Europe, and proposed his naval venture as a means to return home.

Though this type of wild speculation continues, few new historical documents related to Columbus actually surfaced during the twentieth century. In early 2006, an international team of genetic researchers launched an ambitious DNA research project. Composed of scientists from Spain, the United States, Italy, and Germany, this team hopes to use the known remains of Columbus's brother and son to end the controversy about Columbus's origins.

SEE ALSO *Christianity; Colonialism; Exploitation*

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Anthony Mora

COMBAHEE RIVER COLLECTIVE

SEE *Intersectionality.*

COMEDY

The social sciences have led the way in the scholarship on humor, looking to social dynamics to explain what people find funny, and why they find it funny. This enquiry began with *Le Rire: Essai sur la signification du comique* (1899), in which the French philosopher Henri Bergson, thinking as a social scientist might, explored how comedy depends upon the rupture of socialized standards of group behavior. A few years later, Sigmund Freud, in *Der Witz und sein Beziehung zum Unbewussten* (*Jokes and Their Relation to the Unconscious*, 1905), posited that it was the violation of social constructs (functions of the ego and superego) that makes people laugh.

Bergson would go on to cite "the worthless act" as a central component to laughter in the modern and mechanized world, explaining in "Laughter: An Essay on the Meaning of the Comic" (1911) that humor allows one to distance oneself from the dehumanizing effects of modern, civilized life. Modern scholarship might be said to begin an extension of this logic, looking not only to the essence of humor but also to its social functions. The Czech sociologist Antonin Obrdlik's "Gallows Humor, a Sociological Phenomenon," which first appeared in the March 1942 edition of the *American Journal of Sociology*, argued that "gallows humor" served as relief from the devaluation of human life at the hands of the Nazis.

Since World War II, the social sciences have continued to explore the social functions of humor, often contextualizing these functions by way of well-established theoretical models. In his introductory textbook *Humor and Society* (1988), Marvin R. Koller addresses the work of Obrdlik directly, examining gallows humor as an example of "relief theory." Koller then contextualizes relief theory as one of four "macrotheories of humor," the others being "ambivalence theory" (an embracing of a social construct while simultaneously holding it at arm's length), "superiority theory" (excluding other social groups from human commerce by way of pronouncing one's own their "betters"), and "incongruity theory" (reminding us of the perils in thinking we have codified our world more definitively than we have). As any seasoned sociologist will recognize, these theories are familiar approaches drawn from elsewhere in the discipline. Nonetheless, they are profitable means of categorizing and appreciating how humor is more than simply "funny."

A second contribution to humor scholarship has come from the willingness of the social sciences to look at how what people find funny can be determined by the groups of which they are a part. The social sciences in general, and sociology in particular, have explored the nature of humor by gender, by medium (e.g., print, television, motion pictures), by region, by professional group, and by race. Surely the most impressive scholarship in this regard has explored the relationship between humor and ethnicity. The early work in this area often employed "conflict-aggression" interpretations of ethnic humor, depicting ethnic humor as a means of ranking ethnic groups in a social hierarchy. More recent work though has found the phenomena to be flexible, even fluid. Christopher Davies, in *The Mirth of Nations* (2002), suggests that Polish jokes, for instance, ebb when definable tensions between Poles and other groups are most pronounced. Conversely, Polish jokes flourish when tensions are lowest.

The reach of scholarship in the social sciences is at once broad and deep. The work is yet to be fully synthesized however. Initially spread across psychology, sociology, and anthropology, it is now also found in related fields such as philosophy, communications, folklore, and media studies. Hence, the most exciting scholarship is more often discovered in articles in interdisciplinary journals than in full-length books devoted to a particular social-science discipline.

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Jay Boyer

COMIC BOOKS

Comics have a long history, especially in Europe, Japan, and the United States. The Arab states, China, India, Mexico, and South America also contribute to this history. U.S. comic books have played an important role in the entertainment industry, attracting varying degrees of academic attention since regular publication began in the late 1920s. The earliest U.S. comic book was Rodolphe Töppfer's *The Adventures of Obadiah Oldbuck*, published in September 1842. In 1896 Richard Outcault's *The Yellow Kid* became the first syndicated newspaper comic strip published in color. Dates for early comics vary depending on new discoveries and evolving definitions; Scott McCloud's *Understanding Comics* (1993) is considered a classic in defining comics.

Early U.S. comic books were compilations of Sunday newspaper comics. The importance of twentieth-century comics has been partially mapped out in Ian Gordon's *Comic Strips and Consumer Culture, 1890–1945* (1998) and Thomas Inge's *Comics as Culture* (1990); both analyze how comics sold newspapers, generated a vast array of merchandising, and influenced U.S. culture and language.

In 1938 Superman appeared in *Action Comics* number 1. The growth of comic book publishing expanded until the 1950s. The height of the comics industry occurred from 1950 to 1954. Americans spent close to $1 billion on comics and there were comics readers in more than 40 percent of U.S. households. A variety of genres existed, comprising over 600 titles. During the 1950s public opinion turned against comic books, due in part to Fredric Wertham's *Seduction of the Innocent* (1954).

Although the medium was perceived by most as children's literature, publishers were adapting to an aging readership who wanted more violence, sex, satire, and political/adult themes. The protests, spurred in part by Wertham's book, general public outcry, and a congressional hearing, resulted in the industry's self-censoring comics code, a sanitizing of comics, and a major drop in sales. Among the long list of dos and don'ts, the code regulated acceptable versus unacceptable titles (e.g., titles could not contain the words "horror," "fear," or "terror"), established a modest dress code for female characters, ensured that good would always win over evil (criminals were always caught), and reduced violent scenes (e.g., blood, decapitation, and torture were not allowed). The code also regulated language use, not allowing swear words or language alluding to sexual situations.

The 1960s saw two important developments. First, in mainstream comics, Marvel Comics slowly became DC Comics's major competitor by creating a new line of superheroes marketed to an emerging and economically important youth culture. These new superheroes were young, and some were teenagers themselves. Most of them acquired their powers through some type of accident or experiment related to radiation, and the story lines centered around the superhero's personal problems and struggles to understand and use the newfound powers. These new comics also made reference to current social issues such as drug use, the counterculture, the different social movements, and racism. The heroes of these comics included Spiderman, the Incredible Hulk, X-Men, and the Fantastic Four. The Black Panther and Luke Cage, the first African American superheroes, were an important addition, even though their earliest appearances followed a trend toward "blaxploitation" as opposed to a serious look at race issues. In the 1970s superheroes became more socially relevant and serious. Marvel revamped or modernized many earlier superheroes such as Captain America and Flash in a further effort to make their comics more relevant in terms of the youth culture and society at large. Marvel and DC Comics remained the dominant comics publishers, becoming almost indistinguishable in content until the 1980s, when DC Comics released their Vertigo line for more mature readers.

The second important development during the 1960s was the birth of underground "comix," which reflected counterculture sensibilities and rebelled against the comics code and social taboos. Important cartoonists from this period include Robert Crumb, Justin Green, Richard "Grass[hopper]" Green, Michele Brand, and Roberta Gregory. The undergrounds were especially important in terms of their influence on a future generation of comics creators and the types of innovative comics that emerged during the late 1980s and continued through the first half-decade of the 2000s.

After comics' silver age in the 1970s, significant developments began in the 1980s. The code weakened, many comics publishers ceased carrying the code's seal, or in addition to coded books, they carried a "mature" line which did not carry the seal. Groundbreaking works appeared, including Alan Moore's *Watchmen*, Frank Miller's *The Dark Knight Returns*, Art Spiegelman's *Maus*, and the Hernandez brothers' *Love and Rockets*. Independent and alternative publishers such as Dark Horse Comics, Fantagraphics, and Image lessened DC Comics's and Marvel Comics's control of the market. Self-publishing (e.g., Dave Sims's *Cerebus*) further expanded comics' potential as a diverse art form.

The term *graphic novel* became popular beginning in the late 1970s. Initially, the term was used to distinguish artistic or novelistic comics from mainstream, superhero comics. Some early examples include *Contract with God* by Will Eisner, *First Kingdom* by Jack Katz, and *Sabre* by Don McGregor and Paul Gulacy. Later, the term was used exclusively as a marketing tool and applied to hardback or paperback "drawn novels," collected superhero story-arcs, longer book-length comics, and anthologized comic strips (for example, *The Far Side* and *Calvin and Hobbes*).

Importation of European and Japanese comics (*manga*) saw a marked increase in the 1980s (and the importance of *manga* in the U.S. market continued through 2006). Finally, the 1989 film release of Tim Burton's *Batman* spawned other comics-related films and video and computer games. These trends grew exponentially during the first half-decade into the 2000s. Superhero stories accounted for most of the films' adaptations, but there were also adaptations of novelistic and slice-of-life comics (e.g., *American Splendor*, *Ghost World*, and *Road to Perdition*). Major book publishers such as Random House began publishing "drawn novels," and more book-length comics appeared without prior serialization; examples include Marjane Satrapi's *Persepolis*, Craig Thompson's *Blankets*, and Chris Ware's *Jimmy Corrigan: The Smartest Kid on Earth*.

Academic attention to comics increased substantially in the 1990s and continued through the first half-decade of the 2000s. Scholarly analysis focuses on comics history, fandom, the inner workings of the comics publishing and distribution industry, defining comics by applying formalist or structuralist theories, applying literary theory or semiotics for interpretation and analysis, and analyzing comics' cultural impact.

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Jeff Williams

COMMON CAUSE

SEE *Public Interest Advocacy.*

COMMON GOOD, THE

The common good refers to activities or policies that benefit the community. It is concerned with the well-being of the group as opposed to simply the interests of a particular individual or subgroup. What this well-being actually involves, however, is not self-evident. There is no generally accepted method for identifying the common good. Nonetheless, scholars have offered a number of theoretical approaches, which can typically be categorized as either liberal or communitarian.

A fundamental distinction between these two theoretical orientations is how they conceptualize the relationship between the individual and community. The liberal perspective tends to understand the community in terms of its individual members. The whole is considered the sum of its parts. Consequently, the common good is based on the interests of the individual members. The communitarian view, in contrast, conceives of the community as having ontological priority over its individual constituents; that is, the community has an existence that goes beyond its membership. The whole, therefore, is seen as greater than the sum of its parts. In this case, the community provides the standard for determining the common good.

Liberal theories share the general notion that the common good should be based on individual preferences and interests, which are all weighed equally. Examples of liberal procedures include utilitarian, deontological, and deliberative. Utilitarianism generally associates the common good with maximizing social welfare. Its basic goal is to produce the greatest overall utility for the greatest number of individuals. Utility, however, may be defined differently depending on the version of utilitarian theory being considered. Deontological approaches connect the common good to the maintenance of individual rights. These rights are considered inalienable; they cannot be taken away. Deontological theories identify sets of opportunities and resources that should be enjoyed equally by all individuals. Deliberative methods attempt to identify the common good through democratic discourse. Ideally, individual members of the community deliberate together and reach a consensus about what the common good entails. The outcomes of public deliberation are considered legitimate if the procedure meets certain requirements such as fairness, rationality, and reciprocity.

Communitarian theories assume communities have distinct ways of life shaped by custom and tradition. The common good, in this situation, involves advancing and maintaining the community's particular way of life. It identifies communal ends that are to be collectively embraced and pursued. Individual interests and preferences are seen as subordinate to the common good, which reflects the transcendent good of the community. Communitarian theories do not necessarily neglect the desires and needs of individuals; members, however, are expected to prioritize and share in their community's way of life. The common good, therefore, requires that individuals put aside their personal concerns in favor of communal goals.

In practice, liberal and communitarian attempts to achieve the common good reflect their respective emphases on the individual and community. The liberal approach often advocates the extension of social welfare for individuals and the protection of individual rights. The communitarian approach typically uses public institutions to inculcate civic virtues, facilitate social solidarity, and take care of the public welfare. The former advances the interests of individuals, while the latter promotes the well-being of the community.

SEE ALSO *Aristotle; Bentham, Jeremy; Communalism; Mill, John Stuart; Public Welfare; Social Welfare System; Utilitarianism*

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Johnny Goldfinger

COMMON KNOWLEDGE RATIONALITY GAMES

When two or more agents knowingly interact in the sense that each knows how the outcomes for them depend not

just on their own actions (strategies) but also on the actions of the others, they are playing a game. Each is rational when acting instrumentally to maximize his or her subjectively expected utility associated with the outcomes, and the game is a *common knowledge of rationality* (CKR) game when, in addition, (1) each knows that each is rational, and (2) each knows that each knows that each is rational, and so on in an infinite chain of recursively built knowledge.

The purpose of CKR is to place each agent, so to speak, in the mind of others with the result that no one will behave in a manner that surprises. In particular, CKR licenses the iterative deletion of dominated strategies. Strategies are dominated when they yield a worse outcome in every eventuality than some other available strategy (for example, the cooperative strategy in a prisoners' dilemma game).

Thus in a two-person game, when *A* knows that *B* is rational, he or she knows that *B* will not play a strategy that is dominated (so any such strategy can be effectively deleted). *B*, knowing this, also knows that *A* will not select a dominated strategy in terms of the payoffs that remain once *B*'s dominated strategies have been removed, and any such strategy of *A* can now also be ignored and so on. The strategies that remain are now referred to as *rationalizable* (Pearce 1984; Bernheim 1984); and in some, but far from all, games the result is a single strategy for each player (i.e., a unique prediction for rational agents will do).

It was sometimes thought that CKR delivered something potentially stronger: the Nash equilibrium solution concept, which identifies rational action with strategies that are best responses to each other. It is now typically accepted that in general the Nash equilibrium solution concept has to be motivated not only by CKR but also an assumption of common priors whereby rational agents hold a common view as to how a game will be played rationally. If there is such a unique, albeit possibly probabilistic, way in which each rational agent will play the game, then it will be apparent that, with CKR, rational actions must be best replies to each other (otherwise at least one agent would not be acting rationally).

CKR is sometimes modified so that agents only engage in some fixed level of reasoning of this sort. Thus first-order CKR refers to the case where *A* knows that *B* is rational and vice versa. Second-order CKR has in addition that *A* knows that *B* knows that *A* is rational and so on. Given the brain's limited processing capacity, this is often more appealing than full-blown CKR; and in experiments, it seems that most people rarely engage in more than second-order CKR (see Camerer 2003).

SEE ALSO *Collective Action Games; Dynamic Games; Evolutionary Games; Game Theory; Nash Equilibrium; Noncooperative Games; Prisoner's Dilemma (Economics); Screening and Signaling Theory Games; Strategic Games*

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COMMON LAND

Common ownership of land, or a *commons*, is one of the most enduring social systems for owning and managing natural resources. Common land is controlled and managed by a defined group of people—tribes, peasants, and civic associations—for the collective benefit of its members.

This social regime of land management was the norm in prehistoric and medieval times, and it persists in the twenty-first century around the world, especially in developing countries. Even developed countries such as the United States have modern variants of common land, including land trusts, neighborhood-managed parks, and community-supported agriculture.

Common land stands in contrast to land owned as private property, in which individuals may possess the land and exclude others. It is also distinct from public land, in which government determines who may use the land and how, and from open access land, in which there are no property rights and no restrictions on how land may be used.

Collectively managed land has been a familiar socioeconomic institution in Latin America, Africa, Asia, India, and many developing nations for millennia. In societies with limited wealth and civil infrastructure, a commons provides an environmentally sustainable way to manage and allocate farmland, forests, water, wild game, and other natural resources. It also provides a certain measure of social equity in access and use of such resources. Community norms and sanctions tend to prevent anyone from abusing the land or appropriating more than his due share.

Since in a commons everyone is personally rooted to the land, there are keen incentives for responsible stewardship of resources. For this reason, common land systems

tend to promote long-term sustainability over short-term productivity.

Since the 1990s a branch of political science and economics has studied the dynamics of "common-pool resources," or CPRs. Much of the case literature focuses on the specific ways in which communities in developing nations manage shared natural resources. Professor Elinor Ostrom of Indiana University is widely credited with pioneering research into common-pool resources in the early 1990s. Much work in the field is associated with the Workshop on Political Theory and Policy Analysis at Indiana University and the International Association for the Study of Common Property. The Digital Library of the Commons is a major online repository of academic monographs and bibliographies about a wide variety of commons.

THE FEUDAL COMMONS

In Western societies, the classic embodiment of a common land regime is the commons of feudal England and Europe. In this system, a medieval baron or lord was involved in a dense web of reciprocal economic and social relationships with peasants. In return for giving military service, a portion of crops, and personal loyalty to the manor, peasants shared usage rights to the manor's arable farmlands, pasture, and "waste" (forests, ponds, wetlands). Commoners might till their own individual strips of land, but no one had exclusive possession of the land or unrestricted freedom of use. Everyone's usage of the land was dependent upon the needs of the rest of the community.

Although this medieval system of commons was quite stable and sustainable, it required plentiful supplies of labor, and was not especially efficient or open to innovation. The system began to experience serious pressures, therefore, when the Black Death of the fourteenth century killed millions of people, and in the fifteenth and sixteenth centuries, when peasants often left the manor for towns in order to become tradesmen and entrepreneurs.

Further pressures on the commons arose when the landed gentry of England saw the money-making potential of wool production and trade with Europe. Especially in the seventeenth and eighteenth centuries, the nobility persuaded Parliament to override the common law and authorize it to "enclose," or privatize, the commons. This expropriation of common land cleared the way for a more efficient market use of common lands, and inaugurated the modern system of private property rights in land.

But the enclosures also caused enormous social disruptions and hardship as commoners were left to fend for themselves as landless, unskilled laborers. People whose lives were once nestled in stable, hierarchical communities that assured access to life-sustaining food, fuel, and household resources were thrust into a churning market order of shifting social roles and uncertain employment.

THE TRAGEDY OF OPEN ACCESS

In response to the triumph of capitalism and the decline of the commons, many modern economists and policy experts have come to believe that land cannot be managed effectively as a shared resource. Perhaps the most notable statement to this effect was an acclaimed 1968 essay, "The Tragedy of the Commons," by biologist Garrett Hardin. Hardin argued that people who share land as a commons will inevitably overexploit it. He cited the archetype of a common pasture to which anyone may add more livestock for grazing without restriction. In such circumstances, when individual farmers can reap private benefits from the commons without regard for its overall "carrying capacity," a shared resource will be overexploited and fall into ruin, said Hardin. Hence, the "tragedy of the commons."

The only solution to this tragedy, according to many economists, is to assign private property rights in land. Unlike commoners or government, it is argued, private landowners have the necessary incentives to take care of the land and make worthwhile investments in it. To support this general conclusion, neoclassical economists often cite "prisoner's dilemma" game experiments that demonstrate the difficulties of getting individuals to cooperate to solve shared problems. In his influential book, *The Logic of Collective Action* (1965), economist Mancur Olson argued that "rational, self-interested individuals will not act to achieve their common or group interests" (p. 2). Drawing upon such analyses, a generation of economists and policy experts has denigrated common ownership of land as impractical.

Many critics, however, have challenged the tragedy of the commons narrative and prisoner's dilemma experiments as unrealistic representations of real-world circumstances. They point out that social trust and communication are usually present in actual communities, and that these capacities can help groups overcome barriers to organizing collective-action solutions.

It has also been pointed out that the tragedy scenario that Hardin described is not, in fact, a commons, but rather a regime of unregulated open access. The land is "nonproperty" in the sense that no one has a recognized right to possess the land. There are no resource boundaries or governance rules, and anyone can appropriate whatever he or she wishes.

A commons, by contrast, is a system of governance and shared property rights for controlling access to and use of a resource. Successful commons generally have well defined boundaries, for example, and rules that are well understood by identifiable participants in the commons.

The governance rules may be informal and implicit, and embodied in social traditions and norms, or they may be explicit and formally codified in law. In either case, there is a shared social understanding about who has rights to use the land's resources and under what terms.

A commons regime depends critically upon socially enforced cooperation and the exclusion of outsiders. It also requires the ability to identify and punish "free riders" who try to use more than their allotted share of the land's resources. With sufficient transparency in the commons, participants are able to prevent cheaters from taking more of the resource than they are entitled to under the social compact.

Collective management of land can have environmental advantages because it is more likely to treat the land as an organic ecosystem rather than a fungible commodity. A system of private property might divide the land into a collection of parcels, for example, perhaps resulting in the over-harvesting of timber in one plot of land that then leads to soil erosion or habitat destruction in an adjacent plot. But when commoners manage land holistically as an intact ecosystem, any abuse or overexploitation by individual users is likely to be identified and controlled.

Especially in poorer communities, collective management of lands can offer economic advantages. Villages and regional governments may find it expensive to maintain a system of courts, land titles, and private attorneys to manage individual property rights, and even fencing may be prohibitively expensive. Social rules and norms can serve as less expensive substitutes.

Others argue, however, that the lack of clear property rights in land is precisely what prevents poor people in developing countries from improving their economic lot. If peasants were more able to obtain clear and enforceable title in their land, for example, they would be able to use their land as collateral and participate more effectively in the market economy. Hernando de Soto makes this argument in his book *The Mysteries of Capital* (2000).

It is a mistake to regard systems of common land and private property as totally distinct and mutually exclusive. Private landowners are frequently restricted in the use of their lands by zoning ordinances, access easements, environmental laws, and other expressions of public needs and values. Conversely, unless a piece of land is managed communally, even commons can accommodate a certain measure of individual autonomy.

Ultimately, however, there is a fundamental, unbridgeable difference between a commons and a system of private property rights. In the latter, a person may sell and transfer individual ownership rights for cash. In a commons, by contrast, one cannot own the land as an individual nor alienate usage rights for commercial purposes. Usage rights are wrapped up in a web of particular social relationships, and cannot be bought and sold.

SEE ALSO *Primitive Accumulation*

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COMMON MARKET, THE

The term *common market* has multiple connotations in the European Union (EU). It is a term that was once used as a synonym for the European Economic Community (EEC), one of the organizations that evolved into the European Union. It is also a term that refers to the market integration of the participating states within the EU. In this respect the terms *single market*, *internal market*, or *single European market* are now more widely used.

Following the end of World War II a central goal of politicians in Western Europe was the maintenance of peace, and particularly the desire to ensure that Germany would no longer threaten this peace. Of critical importance here were the views of Jean Monnet, a French civil servant. Monnet believed that the best way to secure lasting peace between France and Germany was by institutionalizing cooperation between the states. This plan led to the creation of an organization that linked the coal and steel industries and markets of France, West Germany, Italy, the Netherlands, Belgium, and Luxembourg.

Monnet also believed that integration between France and Germany, and other states that were willing to participate, would not stop at coal and steel but would spill over into other sectors. This proved to be the case when the original six member states signed the Treaty of Rome in 1957 and created the EEC.

A central element of the Treaty of Rome was the common market, which remains one of the major components of the EU. The common market aimed to link the economies of the participating states by creating a customs union (that is, removing internal tariff barriers and creating a common external tariff for goods coming from outside the common market), by approximating economic policies, and by allowing the free movement of people, goods, services, and capital inside the participating states.

The customs union was put in place by 1968 but the other elements of the common market have proved to be more contentious and slower in developing. The members of the EU made a renewed commitment to the creation of a common market in 1986 when they signed the Single European Act (SEA). The centerpiece of the SEA was a commitment to remove all barriers to the free movement of people, goods, services, and capital by the target date of December 31, 1992. As in the case of the earlier Treaty of Rome, this target was not met and indeed considerable gaps remain in the common market. People cannot, for example, move freely around all of the twenty-seven EU member states in search of work. There has, nevertheless, been remarkable progress toward the completion of the common market, especially when compared to the situation in 1950. In the 2000s, the European Union has a highly integrated economic market that contains more than 450 million consumers. It is a powerful trading bloc and many non-European businesses adjust their products or working patterns in order to comply with economic regulations established within the EU.

SEE ALSO *Euro, The; European Union; Tariffs; Unions*

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COMMONS, THE

SEE *Tragedy of the Commons.*

COMMONWEALTH, THE

Commonwealth is a term (in Latin, *res publica*) with a rich and varied usage. It literally means the wealth or well-being of a public or whole body of people and sometimes implies a specific form of government. In the English language it was much used from the sixteenth century onwards, by Shakespeare for example. In the seventeenth century it was the name for England's government, from the overthrow of King Charles I in 1649 until the abdication of Richard Cromwell in 1659. It is also part of the official names for a few U.S. states and, since 1901, for Australia. The term also is used sometimes for a community or organization with shared interests, as in the phrase "the commonwealth of learning."

The principal and best-known contemporary use of the term is in relation to the more than fifty states that are members of what is today known simply as "the Commonwealth," which evolved out of what was earlier known as "the British Commonwealth." This Commonwealth as it is today emerged over decades out of the erstwhile British Empire and showed a considerable ability to modify, adapt, and reinvent itself. Britain initially ran the Commonwealth in tandem with the so-called *dominions* of Canada, Australia, New Zealand, South Africa, and, from 1921 to 1949, Ireland. Although it is a diplomatic ensemble, the Commonwealth has never been a clear cut economic or trade unit. While there was considerable overlap, the sterling area of the 1930s to the 1970s, made up of countries that used the pound sterling or pegged their currency to it, was never exactly coterminous with the Commonwealth.

By joining the Commonwealth in the late 1990s, India, Pakistan, and Ceylon (from 1972 Sri Lanka) turned membership from a white man's club into a postimperial multiracial association. In the late twentieth century, decolonization and anticolonial movements, including opposition to South Africa's apartheid policies, provided dynamism and led to expanding membership. In 1949 there were eight members; by 1965 when the Commonwealth Secretariat was launched (as a servicing bureaucracy for the whole Commonwealth), there were twenty-one members; by 2006 there were fifty-three members, of whom over half were small states with populations of less than 1.5 million each (many had much smaller populations, numbered merely in tens of thousands).

Today, the Commonwealth has an extensive range of special associations amounting to over one hundred non-governmental organizations. Its two most publicized activities are the biennial Heads of Government Meetings (colloquially known by the acronym CHOGM) and the Commonwealth's Games held every fourth year. Over the

past century there has been a very extensive literature of books, journals, and pamphlets devoted to the Commonwealth's characteristics, achievements, and shortcomings.

In addition to the commonwealth discussed above, there is another that attracts little publicity: the Commonwealth of Independent States (CIS). The CIS was founded on December 8, 1991, in Vistuli, capital for the Belarussian government, as a community of independent states that proclaimed itself the successor to the Union of Soviet Socialist Republics in some aspects of international law and affairs. The member states are the founders, Russia, Belarus, and Ukraine, plus nine subsequent adherents: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, and Uzbekistan.

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COMMUNALISM

Communalism is the name for sets of social movements and theories (religious, social, and political). People usually live in communities, the exceptions being a few hermits, more slaves, and many more city dwellers (in the Roman Empire and in modern advanced societies). The city dwellers who live in society but not in community require the distinction between community and society. In parallel to this, Georg F. W. Hegel (1770–1831) and more explicitly Ferdinand Tönnies (1855–1936) offered the distinction between culture and civilization, observing that (the older) community lives by local custom and (the newer) society obeys the law of the land that Hegel sneered at, calling the equality that it supports "merely formal." Hegel and Tönnies tacitly advocated the return to communal life, alleging that strife and alienation are lesser there and culture is more integrated; the basis of culture is religion, whereas the basis of civilization is (scientific) technology.

The original communalist movement was Talmudic Judaism. It underwent deep reform after the abortive Bar Kokhba revolt (132–135 CE). Unable to endorse or reject the Roman cruel peace (*Pax Romana*), the Talmudic sages decided to sit it out and act, meanwhile, as the bearers of morals and enlightenment. To that end they geared Jewish law to utterly decentralized communal living rooted in education and family life, with each community politically, morally, and religiously autonomous; each rabbi is a supreme doctrinal authority functioning as a teacher of the community. This traditional description misses the major specific characteristic of Jewish communal theory and practice, which is that the diverse autonomous communities were linked in a powerful informal grassroots cultural network (called "Knesset Israel," in allusion to its role as a surrogate parliament).

Hardly noticed, this decentralized network was emulated in great variations in medieval Europe, with communities controlled by the church and fused under secular rulers, and in traditional Islam of the caliphate (with the caliph as both religious and lay ruler) run as a network. For centuries it was the social institution nearest to democracy, making the traditional West distinctive and amenable to its later, spectacular changes. The lesser authority of the Protestant minister—as compared to that of the Catholic priest—strengthened communal networks; these have survived and in the early twenty-first century are misnamed "family values" and promoted by some neoconservatives and by religious communalist philosophers, including Alastair MacIntyre and Charles Taylor, both Catholics. Most contemporary communalists, however, deem them obsolete.

Modernity began with the individualism of the Enlightenment movement that found its expression chiefly in the advocacy of individual reasoning and thus of science as superior to faith, as well as in the view that the free choice of citizens is the only possible legitimate source for the right of governments to rule. (This is the doctrine of the social contract.) The Enlightenment movement ignored the community as unproblematic and outmoded. The Romantic reaction to it preferred the community over the polity, and custom over law. In efforts to compromise between the two movements, utopian communities were repeatedly founded. Their standards were intolerably high and so they failed, although always while raising the standards of their societies, thereby making significant contributions to the modern lifestyle. They gave way to the new welfare state and the newer communalist efforts to bring society and community together. Only neoconservatives advocate the return of welfare services to the community, and even they admit implicitly that this return cannot be total.

Philosophically, as the Enlightenment movement anchored everything social in the individual, its problem was: How does society emerge out of a cluster of individuals? This question is unanswerable, said the Romantic philosophers, because the pre-social individual is fictional. They, on the contrary, considered society an organism and the individual a limb with no independent existence. This

is empirically more tenable but not enough, and it is morally useless. A search began for an alternative, a *via media* and a *modus vivendi*. Georg Simmel (1858–1918) and Karl Popper (1902–1994) assumed the existence of both individual and society. Gustav Landauer (1870-1919) and Martin Buber (1878–1965) deviated less from traditional philosophy. Buber declared that both individual and society owe their existence to the individual's essential disposition for interpersonal relations; this disposition is (theoretically) prior to both.

This centrality of the disposition for interpersonal relations led to communalism as a new view of society that is more visionary than explanatory. Buber viewed the community as a network of individuals tied in a more-or-less face-to-face relation and the nation (more specifically, the culture) as a network of such communities. He played down the difference between society and community as he envisioned (in his 1946 book, *Paths in Utopia*) an urban society comprising a conglomerate of cooperative communes. He did not view all communities as communes or all communes as living in kibbutz style, but unlike the older utopians he did not elaborate. He considered the alienation of the modern urban individual a serious challenge, and communalism as its answer. The question is, where does politics enter the picture? Buber suggested that this question is less important than another question: How can politics be tamed so as to prevent it from destroying communal life. He found this question more practical than theoretical (unlike Popper who developed democratic theory around it). So he invested in communalist political activity.

The new communalists, with Amitai Etzioni (b. 1929) as their leader, aim at filling this theoretical gap. Etzioni founded the George Washington University Institute for Communitarian Policy Studies (and continues to serve as its director) as well as the Communitarian Network (1990). His communitarian principle is meant to be applicable to national and even international politics. To a large extent it is simply the applications of (updated) agreeable liberal attitudes to diverse political problems with an accent on individual responsibility. To the extent that there is a new principle here, it is this: Both society and community are essential for a quality life, and so political concerns should include attention to communal concerns and *vice versa*. This is not a proposal to unite community and polity but to increase their cooperation. The recent development of nongovernmental organizations (NGOs) and their contributions to both community and polity alike is a remarkable example.

The expected development of former colonies into liberal nation-states was halted because colonialists had encouraged community life as a poor substitute for national independence. As after independence different communities within one country struggle to maintain their relative independence there, the overall result is inter-communal strife and thus damage to national liberty. The proper move should be towards western-style pluralist nations with a heightened sense of community. This is easier said than done.

SEE ALSO *African Americans; Civilization; Communitarianism; Culture; Ethnic Fractionalization; Ethnicity; Family; Groups; Hegel, Georg Wilhelm Friedrich; Identity; Individualism; Jews; Marx, Karl; Marxism, Black; Nationalism and Nationality; Politics, Identity; Popper, Karl; Race*

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Joseph Agassi

COMMUNICATION

Communication is inseparable from social and behavioral activities; as a consequence it has become an integral part of research and discussion in the social sciences. Mass media and rhetoric thus closely relate to political science, while semantics and rhetoric enrich the study of law. Perception, the tool used to make sense of messages, generates much discussion in psychology and psychiatry and both areas benefit from careful communication. As the psychotherapist Carl Rogers noted in *On Becoming a Person* (1961), "The whole task of psychotherapy is the task of dealing with a failure in communication" (p. 330). Sociology, in part the study of human interactions, benefits greatly from an understanding of communication's roles in those interactions.

Sociology focuses on groups while psychology focuses mainly on the individual. However, they blend in social psychology, and probably the greatest social science focus on communication has been in social psychology. This blended discipline studies the psychological basis of people's

relationships with one another. Social psychologists posit that people have few if any solely individual attributes.

In the study of interaction patterns among people and methods of influencing people, much of the work done by these scholars naturally relates to communication. In seeking to determine these patterns, social psychologists follow the work of Erving Goffman as they speak of the self, a collection of attributes, social identity, self-concept, and appearance. Interpersonal communication is affected by where a person is in the social structure as well as by the influence of others.

Relative to communication, pioneering social psychologists like Robert Bales (1950) explored interactions in small groups, while Solomon Asch (1955) detailed the impact social factors have on perception. Michael Argyle looked at patterns of social relationships across social class, while more recently Deborah Tannen (1990) examined the social characteristics of gender and gender's effects on interactions.

Social psychological research in communication owes a heavy debt to scholars like Paul Ekman, W. V. Friesen, and Raymond Birdwhistell who focused on the complex patterns nonverbal communication takes. Their research has also explored possible commonalities in meaning of nonverbal signals within and across cultures.

While people engage in communication almost unconsciously, it remains a complex subject which defies simple explanations and calls for continued research. Overall, the insights into human interaction developed following social psychology research have led to numerous practical applications, especially in the business world.

COMMUNICATION DEFINED

In its simplest form, the term *communication* refers to the process by which one person transmits information (new knowledge) to another person (or persons). A number of communication models exist, but common elements delineated by Claude Shannon and Warren Weaver (1949) link them: a sender, a receiver, a channel, the message itself, and some effect or impact resulting from the message exchange (including feedback).

Feedback, a crucial part of the communication process, represents the response to a received message (not necessarily to the message intended to be sent, but to its interpretation). While an element in the overall process, feedback's transmission duplicates the communication process it responds to, and thus involves sending and receiving, as well as media, and it can be impacted by communication barriers. Feedback, in turn, may lead to a response. Mechanistic approaches like the classic Shannon-Weaver model are appealing in their simplicity in explaining the communication process, but they do not reflect communication's complexity, especially in terms of perception (which reflects the application of past events as well as the context in which the message is being received). Perception, in fact, accounts for much of the complexity of the communication process.

PERCEPTION

The sender (often) and the receiver always use perception to make sense of the message passing in the communication interchange. The perceiver processes the message's signs, its tangible factors, to determine the meaning (intended or not intended). These signs include what is seen, heard, felt, tasted, or smelled. The receiver then uses the mental filters of past experience to sort the signs and apply the meanings gained from similar past sensory experiences. Meaning derives from that past experience as one makes sense of the present through that experience.

The sender of a message may intend one meaning for what is sent, but the experiences the sender draws on in assigning that intended meaning may be only partly shared with the receiver. The meaning derived is thus imperfectly shared between the parties if at all. Few (if any) messages represent a pure transfer of identical meaning. While spoken communication is usually interpreted by the receiver almost immediately and often in a close spatial context (mass media and telephonic messages are obvious spatial exceptions), written communication is likely to be received and interpreted after some time lag and at a spatial distance. The context in which it is received will most likely have changed through time, and these changes may affect the perception of the message. Additionally, in any communication interchange, the very experience of receiving the message alters the receiver's perception and will affect the next message that comes through. Perception is a dynamic, ongoing process, as communication theorist C. Glenn Pearce noted, and the sender and receiver's own perceptual filters change constantly as a result of the interaction.

COMMUNICATION AND INTENT

Even when unintentional, communication can still occur. A hapless job interviewee might make a poor first impression with unpolished shoes, a weak handshake, or slouching posture (elements of nonverbal communication). The interviewee likely intends to signal competence, but the outcome differs from that intended. Of course, much communication is intentional. The more effective sender learns skills to help achieve the intended results, but perception is still a major factor. Yet, if what one applies to interpret a message varies widely from the sender's intent, common meaning may not be achieved, especially in communication between cultures.

COMMUNICATION BARRIERS

Communication barriers, elements external to the message, also complicate the process. Barriers can be as simple as physical noise or can derive from intrapersonal, interpersonal and even organizational sources. These barriers are inevitable and communicators (senders and receivers) need to work to overcome them (where possible) to enhance communication effectiveness. Steven Golen's (1990) research into communication barriers has revealed their myriad sources and the challenges communicators face in overcoming them.

Some barriers are easier to overcome. Physical noise, for example, can be overcome by isolation or simple muting. However, the intrapersonal barrier of defensiveness is more challenging in calling for one's self-awareness and empathy. An organizational barrier like the serial transmission effect (the tendency for messages to change in passing through an organization's levels) calls for objective message management skills.

The goal of a message is to transmit information, knowledge the receiver does not already know. Shannon noted that the entropy rate, the amount of information the sender wishes to transmit, cannot exceed the channel capacity without creating uncorrectable transmission errors. Keeping the sender's entropy rate below channel capacity greatly reduces errors and enhances information transfer and helps combat communication barriers. Redundancy is another useful element in communication.

REDUNDANCY

Communication systems naturally utilize redundancy to help combat problems with communication barriers and perceptual differences. Redundancy, predictability built into the message to help insure comprehension, backs up the message. While redundancy can seem to be mechanical, senders use it naturally without even thinking. It derives largely from repetition, exemplification, orthography, grammar, syntax, and format. David Gibson and Barbara Mendleson (1984) explored the dynamics of redundancy and showed the linking of information and probability theories to semantics.

Messages sharing a common grammar, syntax, and orthography are likely to be more redundant and thus help ensure the receiver shares much of the sender's intended meaning. When redundancy is minimal, additional communication barriers can arise. Redundancy can be overused, of course, particularly in terms of exemplification or repetition.

NONVERBAL COMMUNICATION

Another source of information in communication exchanges is nonverbal communication. Although less precise than formal language, it is a very significant source of information in most interpersonal exchanges and often contains more information than in the spoken element of the message. A message's nonverbal elements include all the sources of information apart from the words themselves. Gestures, posture, tone, pitch, message duration, and intensity all add nuances to the message, and complexity. This latter is particularly the case in those cases where the nonverbals contradict the other signals. Social psychologists, notably Ekman and Friesen (1974), have closely studied nonverbal communication not just as a source of information in a message, but as a source of nonverbal leakage of deception as well.

The sender controls many nonverbal elements, of course, but other elements over which the sender has little or no control can be sources of meaning in communication. Thus one's age, race, gender, height, hair color, and even physical attractiveness can represent encoded signals for the receiver to interpret. Here intent is lacking, but the nonverbal signals still play an important role.

Whatever the source of the signs giving messages meaning, communication is a relevant part of the social sciences. While communication seems deceptively simple at first glance, its underlying complexity richly repays careful study both in terms of more effectively preparing (and understanding messages) and in terms of understanding and improving the human interactions in which communication takes place.

SEE ALSO *Contempt; Culture; Fanon, Frantz; Gaze, The; Goffman, Erving; Linguistic Turn; Nonverbal Communication; Recognition; Representation; Sartre, Jean-Paul; Stare, The*

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John L. Waltman

COMMUNISM

Communism, simply put, is a socioeconomic political doctrine that advocates a classless and stateless society wherein there is collective ownership and control of property and all means of production. The term *communism*, however, means different things to differently situated people and as such might be a function of time and place. Some people associate the term with liberation from colonialism or other forms of oppression and a defense of lower-class working-class interests, while others equate it with an idealized state, a political movement, or a way of life. Still others regard it as a rejection of traditional European and North American sociopolitical values. Despite such variations in meaning, embedded in each is the notion of change. Change, however, is not always organic but is, instead, often orchestrated by those overseeing societal transformation.

A core aspect of the practical application of communism, then, has been a strong centralization of decision-making and state planning, especially in the economic sector. State planning, as practiced in the Soviet Union, Eastern Europe, and the Third World, coupled with the need to effectively silence opposition to the imposition of the Communist political and economic order, has often hinged on the effective use of authoritarian practices and single-party rule. This does not mean, however, that authoritarianism is a necessary and sufficient condition for the flourishing of Communist practices. Moreover all political systems encompass a certain degree of authoritarianism and centralization.

DEVELOPMENT OF THE THEORY OF COMMUNISM

The notion of communism dates back to ancient Greece, where it was associated with a myth concerning the golden age of humanity, when society lived in full harmony. Plato (in *The Republic*) and other ancient political theorists advocated a kind of communal living, which is viewed as a form of communism. It is Karl Marx, however, with the assistance of Friedrich Engels, who is most often credited with providing the most popularized expression of communism. As expressed in the *Communist Manifesto* (1848), their theory of communism is underpinned by antecedent philosophical arguments about the history of humankind that include the dialectical and historical materialism of Georg Hegel and Ludwig Feuerbach and others who expressed views on socialism and communism prior to and during the beginning of the European socialist movements of the 1840s. Marx's view of communism was influenced by a long and established tradition of "utopian" socialists, but he embraced a "scientific" approach that added a new twist to existing thought. Moreover Marx and Engels referred to communism as *scientific socialism*.

Socialism, as a political theory, developed during the European working-class rebellions, when the predicament of workers was viewed against the backdrop of the prevailing liberal logic of the day. Its point of departure, according to the political scientist Alfred Meyer, was the assertion that the ideals associated with the American and French Revolutions—namely liberty, equality, fraternity, and the right to a human existence—had been aborted. Thus the promise of these revolutions could be fulfilled only when political rights were consonant with social and economic equality, which necessitated wiping out the differences between rich and poor. Drawing from this and earlier philosophical arguments and movements, Marx and Engels embarked on an attempt to further develop the theory.

Marx viewed communism as the highest stage of socialism and the history of humankind as imbued with struggles between the capitalist class (the owners of capital) and the working class (proletariats). His theory, as articulated in the *Communist Manifesto*, viewed the movement of society toward communism as a scientific fact. This view holds that inherent contradictions of capitalism paved the road to revolution, which would be fueled in part by class consciousness. According to Marx, a socialist society, ruled by the working class, would emerge out of

this revolution. Eventually the socialist society would evolve into communism—a classless society free of exploitation, poverty, and government coercion. Although Marx continued to view economic classes as engines for moving society to higher stages of historical development, his later works encompassed more detailed and refined arguments, including an emphasis on the polarization of the impoverished working class. The emergence of the Communist society envisioned by Marx has never come into fruition, and this failure has facilitated the rise of other schools of communism. Nevertheless, the terms *communism*, *socialism*, *Marxism*, and *Marxism-Leninism* are often used interchangeably.

The school of communism associated with Vladimir Lenin, like that associated with Marx, is informed by precursor philosophies and is grounded in the Russian reality of the 1900s. Lenin's theoretical interpretations and practical application of doctrines espoused by Marx also contributed to the development of communism. Whereas Marx predicted that the proletarian revolution would occur in capitalist society, Lenin believed that revolution could occur in precapitalist colonial societies, no matter how primitive. His theory also holds that imperialism is the highest stage of monopoly capitalism, which results from the contradictions of capitalism that fuel the search for foreign outlets for surplus capital and production. The "dictatorship of the proletariat" would be implemented by a small, dedicated elite of the Communist Party, who would lead the revolution.

Lenin's interpretation of Marxist doctrines was shaped by events associated with the Russian Revolution of 1917, which convinced him that a successful revolution in Russia could not occur as a spontaneous popular uprising. He concluded that the revolution would have to be the work of a well-organized group of professional revolutionaries. Thus he pulled together a group comprised of discontented intellectuals, workers, and peasants of different nationalities who happened to be in the right place at the right time to seize the levers of state control in Russia.

RISE OF COMMUNIST STATES

Although Marxist communism was implemented in other areas of the world outside the Soviet Union, its expansion did not occur until after World War II (1939–1945). Prior to that time many Communist parties existed in various countries, though none held the reins of governmental power. Communism, as developed by Lenin, facilitated the spread of Communist states in Eastern Europe and other parts of the world. In fact underdeveloped societies facing a crisis of modernization implemented Marxism or Marxism-Leninism at a greater rate than did capitalist societies. Thus it can be argued that Marxism-Leninism had a greater impact on the world than any other modern philosophy during the twentieth century.

According to Meyer, Third World Marxism originated in Asia in the early 1920s and gradually spread to Africa, Latin America, and other areas that were fighting traces of colonialism. This form of Marxism had the Leninist theory of imperialism as its base. The majority of states, however, were brought into the Communist sphere after World War II, fueled by the cold war rivalry between the United States and the Soviet Union. Soviet communism was appealing because of its focus on expunging imperialist exploitation and domination from Third World states. And though the Communist Party of the Soviet Union had developed into an exportable model of success, communism, as practiced in the third world, took on a variety of forms. The Soviet model, like earlier concepts of Marxism, was altered by its application in other countries. Third world (non-Western) communism took on characteristic features of the Chinese brand of communism rather than that of the Soviet Union.

There were also conscious attempts to break free of the Soviet model of communism in Eastern Europe. The first successful attempt occurred in Yugoslavia, where the leader of the Communist Party, Josef Broz Tito, did not owe his position to Josef Stalin. James Ozinga, in *Communism: The Story of the Idea and Its Implementation* (1991), notes that Yugoslavia became a middle ground between Soviet communism and the West, owing to Tito's abandonment of rural collectivization and implementation of free enterprise and real elections, among other non-Soviet practices. The second major attempt to loosen Soviet control occurred in Hungary in 1956, followed by Poland. A third attempt surfaced twelve years later in Czechoslovakia. Efforts to remove tight Soviet control began with these nations' Communist parties and represented an expressed desire for greater liberty and a more national approach to the socialist goal (see Lerner 1993).

Communism officially came to power throughout China in 1949, following the defeat of the Nationalist (Kuomintang) forces by the Red Army. The early Chinese Communist ideology was heavily influenced by the thoughts of Mao Zedong, but Marxism-Leninism provided the theoretical foundation for the Chinese Communist ideology and served as the guiding principle for the party and state. Mao's thoughts provided the principles for practical application.

Chinese communism, as articulated by Mao Zedong, viewed the peasantry as the class that had to be mobilized for the revolution. Unlike Lenin's enlightened leadership elite, Mao advocated use of the peasantry as a major rather than a secondary force in the revolution. This meant a reliance on a rural-based group, rather than an urban proletariat, to bring about a socialist transformation. Suzanne

Ogden, a Northeastern University professor who has written often on China, notes that an orthodox Marxist-led revolution against urban capitalism made no sense in China because few workers had been exploited by the capitalist class. Mao also believed that putting revolutionary theory into practice was critically significant in guiding expected social contradictions in the right direction. Thus dialectical confrontation did not end with the triumph of the political revolution but continued into socialism and communism, according to Mao's theory. Jiwei Ci argues in *Dialectic of the Chinese Revolution* (1994) that the establishment of the Communist regime in 1949 marked the successful acquisition of Marxism as cultural self-identity, and China's possession of it became monopolistic after its ideological break with the Soviet Union in 1960.

Similarly in Cuba traditional Communist doctrine (Soviet communism) was revised to reflect Cuba's historical reality. During Fidel Castro's 26th of July movement, the Communist Party played a secondary role. José Martí, not Marx, symbolized Cuban independence from Spain and inspired dramatic change. It was his ideas that were embraced by Castro. Thus the movement began with Castro and a group of dedicated nationalists. After the movement crushed the government forces, the new regime immediately committed to Marxism-Leninism and to Soviet patronage. This patronage was born more out of economic necessity than ideological congruence. By 1963 Castro realized that orthodox Communists were a threat to Cuba's contact with regional revolutionary regimes, which compelled him to reinvigorate the revolutionary will. Thus his Communist Party exercised doctrinal independence and was charismatic rather than bureaucratic.

A cursory historical examination of Communist states, both in Eastern Europe and in the developing world, reveals a wide range of differences in ideologies and approaches to the practical application of communism. It is clear that the revolution, as envisioned by Marx, never swept Communists into power in any country. Historical evidence indicates that internal conflicts between the petit bourgeois and the ruling class, external relations, and other intervening variables had as much if not more relevance for the implementation and the nature of the Communist rule in Africa, Asia, and Latin America than did working-class consciousness and commitments to the Marxist-Leninist philosophy per se.

Many of the Communist states that developed in tandem with the cold war politics of the United States and the Soviet Union took on the character of the individuals who came to power rather than strict adherence to the Soviet model. The "revolutionaries" turned Communist state leaders understood the nature of their societies and knew exactly when to infuse their articulation of Communist doctrine with interpretations that were more relevant to national realities. One must then consider the intersection of historical events and personality as important variables in explaining variations in Communist states. Obviously different interpretations make it almost impossible to speak in terms of the "theory of communism."

THE COLLAPSE OF COMMUNIST STATES

Mikhail Gorbachev's rise to power, which precipitated the collapse of the Soviet Union in 1991, contributed to the demise of Communist Party rule in Eastern Europe and other parts of the world. Gorbachev believed that a Soviet foreign policy based on military might was a luxury that could no longer be afforded. Thus he reversed the Brezhnev Doctrine, which for years had protected unpopular Communist regimes from their population. His message was simple: the Soviet Union would no longer intervene to save faltering Communist regimes. This, coupled with events in 1989 and 1990, signaled changes that were about to occur in the Soviet bloc. In the Soviet Union the constitutional monopoly of the Communist Party was repealed, and power gradually shifted to new, mostly elected institutions of government, while opposition parties in Eastern Europe defeated Communist candidates in many local and national elections in 1990.

By the early 1990s the only states in which communism was firmly entrenched were in East Asia and a few other regions, notably China and Cuba. The collapse of the Soviet Union in 1991 rendered the United States the sole superpower, which had enormous implications for the collapse of Communist regimes in other parts of the world. By the mid- to late 1990s more and more Third World Marxist-Leninist regimes were replaced by regimes willing to play to the U.S. global political and economic agenda. This by no means resulted in the complete demise of Communist regimes, however, but it did motivate a substantial number of old-guard Communist leaders to present themselves as reformed or rehabilitated advocates for a different kind of democratic rule and free enterprise. In 2007, in parts of the former Soviet Union, Eastern Europe, and other regions of the world, post-Communist states are led by former Communists who are authoritarian, dictatorial, and cloaked in corruption. This could create an environment conducive to the return of the Communist state.

SEE ALSO *Castro, Fidel; Cold War; Gorbachev, Mikhail; Iron Curtain; Lenin, Vladimir Ilitch; Mao Zedong; Marx, Karl; Stalin, Joseph; Union of Soviet Socialist Republics*

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COMMUNISM, PRIMITIVE

Primitive communism is the earliest mode of production in Marxist thought. Karl Marx proposed that Asiatic, ancient, feudal, and bourgeois modes of production are epochs that mark the transitions of societies. Also, the changes in the mode of production from primitive communism through slavery, feudalism, capitalism, and socialism to communism are due to the method of dialectic, and the theory of materialism. The dialectic method involves the meeting of extreme forces that merge into synthesis. At the early state of primitive communism, primitive forms of hunting gave way to primitive forms of agriculture and cattle rearing. Also, dialectic changes of the matriarchate to the patriarchate types were recognized. In the matriarchate form, women played a dominant role in production under primitive agriculture, while the men roamed the forest after game. In the patriarchate form, men played the dominant role in the hunting and cattle-rearing stages because they were efficient with a bow, arrows, spears, and lasso. The actual process of analyzing the changes of modes of production follows a materialistic theory. Through evolution, human beings developed a consciousness that became sensitized to material change. In primitive societies, production was in the simple form of adapting to nature. Land was cultivated before it was divided, and the consciousness was communal. As production processes changed, envisaging private ownership, people's consciousness changed in that direction.

One purpose of studying primitive communism is to understand how the three major classes—wage-laborers, capitalists, and landlords—have developed under capitalism. During primitive communism property belonged to the community and labor owned all the product of its labor in the absence of capital- and land-owning classes. If one tribe was conquered by another, the conquered tribe became propertyless, as was the case with slavery and serfdom. A tribe and its property formed a sort of unity that originated from the mode of production where individuals related to one another and to nature. The object of production was to reproduce the producer. For Marx, production is not possible without capital. In primitive communism capital could be just the hands of a hunter-gatherer. Strictly speaking, capital is specific to the bourgeois mode of production. Tools are not capital outside of capitalism. And production is not possible without human labor, not tools, which are a product of human labor and natural resources.

Marx wrote, "In early communal societies in which primitive communism prevailed, and even in the ancient communal town, it was this communal society itself with its conditions which appeared as the basis of production, and its reproduction appeared as its ultimate purpose" (Marx 1967b, p. 831). Primitive communism dissolved when the mode of production changed.

In specific forms of primitive communism, one finds two major forms of unity between labor and production conditions. This unity was observed in Asiatic communal systems and in small-scale agriculture (Rosdolsky 1977, p. 273). Marx appraised the small and ancient Indian community as possessing common ownership of land, blending agriculture and handicraft, and possessing an invariable form of division of labor. As the market was

unchanging, the division of labor could not evolve to, for instance, the manufacturing level.

If population increases, a new community is formed on vacant land. Production is governed by tradition, rather than by command or markets. According to Marx, "this simplicity supplies the key to the secret of the unchangeableness of Asiatic societies" (Marx [1867] 1967a, pp. 357–358).

For Marx, logical methods based on observation and deduction can lead one to "primary equations" that point to the history of capitalism (Marx [1894] 1967b, pp. 460–461). It starts "… from simple relations, such as labor, division of labor, need, exchange value, to the level of the state, exchange between nations and the world market" (Marx [1857] 1973, pp. 100–101). These simple relations explain how production, distribution, and consumption are conducted within all societies. These activities are in turn subsumed under relations of production and forces of production. A fact of primitive communism is that although "the categories of bourgeois economies possess a truth for all other forms of society.… They contain them in a developed, or stunted, or caricatured form, etc., but always with an essential difference" (Marx [1857] 1973, p. 106).

Marx's writings on primitive communism occupied his mind all his life. The 1880–1882 *Ethnological Notebooks* containing his study of the ethnologists Lewis H. Morgan (1818–1881), John Phear, Henry Maine, and John Lubbock remain his last view on the subject. Morgan sourced property rights in primitive societies to personal relationships and Maine to impersonal forces, but to Marx the source is from the collective. Marx basically accepted Morgan's view on the ethnology of primitive peoples. He studied primitive groups for the origin of civil society and the state and he traced the production mode from these primitive groups to modern society.

Further exposition of primitive communism was taken up by Friedrich Engels (1820–1895), based on the works of Morgan, whose materialistic conception of history was similar to Marx's. Morgan discovered a kinship system among the Iroquois Indians that was common to all the aboriginal inhabitants of the United States. He found that the system was common to Asia, and to some extent to Africa and Australia. Morgan introduced the concepts of the matriarchate and patriarchate to characterize primitive communes. The order of primitive communes originated with the production of food, or subsistence needs. The human race has progressed from lower to higher forms to modern civilization as lower forms of savagery and barbarism have progressed to higher forms. The arts of subsistence advanced as inventions and instruments evolved. Property, government, and family progressed in this natural process. For instance, evolution bequeathed group marriage for savages, pairing marriage for primitive communes, and monogamy for civil societies. Morgan's process paralleled Marx's ideas expressed some forty years earlier.

SEE ALSO *Asiatic Mode of Production; Communism; Division of Labor; Egalitarianism; Ethnography; Ethnology and Folklore; Marx, Karl; Marxism; Materialism; Mode of Production*

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COMMUNITARIANISM

Communitarianism is a political philosophy that often stands in opposition to the principles of liberalism. Communitarians theorize that the community is the most important element of a society or culture. As such, the stability of the community must be enhanced and protected. Within the public sphere, communitarians explicitly argue against individualistic and pragmatic liberalism, citing a loss of moral and civic orientation. Communitarians posit that true ideals in a democracy cannot survive without a cohering center. Some communitarians, such as Robert Spaemann and Alan Bloom, consider that individualistic legacies of Enlightenment thinking have led to the decline of community as a way of life by harming the ability of the moral imagination to find solutions to community problems such as poverty or discrimination. Communitarians such as Markate Daly advance the notion that community is a part of life. As such, every

individual is a member of a community and through this membership develops identities, relationships, and attachments with others; the members of a community express their values through their institutions and social needs. Those such as Amitai Etzioni criticize values of autonomy, natural rights, neutrality, universality, and individual interests in favor of values that emphasize traditions, common good, character, solidarity, social practices, and social responsibility. Communitarian goals bring about changes in habits, public policies, and morality that allow a community to work toward a future based on strong community goals and values.

Communitarians also posit that not all communities are moral. Communities that seek to destroy or diminish human life and property would not be allowed within the communitarian rubric. Rather, a true communitarian seeks stability and a community that flourishes. Democracy is seen as communitarian in that it joins community interests and institutions to bring about the will of the people.

Another common tenet of communitarianism is that loyalty is given to the community and group for the greater good of the community. As a political philosophy, resources for moral judgment and action are located in the established mores of the family, the workplace, and the like rather than within the individual; as such, the point and purpose of individual lives is to serve institutional needs and goals rather than vice versa. This system needs persons who can commit themselves to collective behaviors.

Some communitarians theorize that community views should not be challenged. It is more important that community leadership reinforce and strengthen the status quo. For example, the communitarian journalist should reinforce information necessary to maintain community values.

Additionally, communitarian leadership focuses on attaining ideals and keeping the group together, thereby maintaining a hard-earned position in the social structure. The group provides a presentation of a united front possessing power or the illusion of power. Individual members gain self-confidence from merely belonging but also will lose some individual identity. The system is more basic than the rights of individual members, so concepts of justice or fairness are sometimes ignored in favor of preservation of the group. Further, to some communitarians, loyalty to the group transcends the cause of truth.

Within the political realm, the community is usually advancing a cause, thereby seeking strength in numbers. Often the group is formed because of misuse of individual rights in a particular area, creating an attitude of "us versus them." Often the community remains together even after the goals for forming it are met. Additionally, the group has the ability to banish members who do not follow the rules of the community and individualist members who find a cause or a truth the group would rather not explore. Rules are set by the community, and often examination of the rules is not necessary. Because of a reluctance to examine rules, members are slow to develop their own moral reasoning and rely on the morality of the group.

Noted contemporary communitarians such as Alasdair MacIntyre find that the individualistic legacies of Enlightenment thinking have been "historically implicated in developments that have led to the decline of community as a way of life" (1984, p. 52). Amitai Etzioni celebrates these individuals who are committed to the community rather than to individual rights by stating that "communitarians are dedicated to working with our fellow citizens to bring about the changes in values, habits, and public policies that will allow us to do for society what the environmental movements seeks to do for nature: to safeguard and enhance our future" (1993, p. 3).

Philosopher Markate Daly (1994) believes it is essential that communitarianism become a way of life. In communitarian theory, philosophers assume that community is part of life; as such, every individual is a member of a community and through this develops identities, relationships, and attachments with others. The members of a community express their values through their institutions and social needs, tempered by kindness. She contrasts communitarian with liberal notions as, "instead of such values as individual interests, autonomy, universality, natural rights and neutrality, communitarian philosophy is framed in terms of the common good, social practices and traditions, character, solidarity and social responsibility" (Daly 1994, p. 17).

Jürgen Habermas (1990), a prominent continental philosopher, uses a system of communitarian philosophy in proposing a dialectic that must be open to the community. Within his system, all decisions, particularly problematic decisions, can be made by the collective. Each member who is competent to speak to the subject is given equal time and input into the decision process.

Wendell Berry (1990) reminds that not all communities are moral, and those communities set to destroy or diminish human life and property should not be considered communities. Clifford Christians, John P. Ferre, and P. Mark Fackler confirm Berry's sentiments, stating that "because a moral community is a condition for personhood, a group is not ipso facto good, and no community can excuse inhumane behavior" (1993, p. 69). Berry and Christians are examples of communitarian thinkers who realize the need for a conception of individual good to balance the supreme good of community stability.

Communalism is a distinct political theory and political practice. It differs from communitarianism in many

ways. It generally involves a group of individuals committed to communal living and common ownership. This commitment involves loyalty to the interests of the communal minority or ethnic group rather than to society as a whole. Some forms of communalism work toward abolishing the state, not seizing power but doing away with power and the particular power attached to the business model of capitalism. Often, religion is a driving force in communal living.

A commune is described as the basic living habitat for the communal organization. Most are serious about being self-sustaining in both consumption and production. This means that the group should own enough land to feed itself and have a specialized means of commerce. Examples of successful communal groups are the Hutterites, who were financially successful craftsmen and agriculturalists. Oneida, Amana, and in the twentieth century the Brüderhof are also examples of successful communes.

In practice, Friedrich Engels and Karl Marx wrote extensively about the ideals of communist living in general but sometimes specifically about the ideals of communal life. *Socialism: Utopian and Scientific*, a pamphlet originally published in 1880 by Engels (2006), delineates the notions of communalism and contrasts it with socialism. Their plan calls for a new society founded on quality of life rather than slavish work. However, it does not give a plan for the ideal community.

Often the term *utopia* is used in conjunction with communalism, moving the commune to a visionary or an ideally perfect state of society. Sir Thomas More's *Utopia* ([1516] 2003) describes an imaginary island with the ideal social, legal, and political system. Humans can strive to create this within a community or globally in an effort to live more civilly. Sometimes *utopian* is used in a negative way to discredit ideas seen as impossible to realize.

SEE ALSO *Communalism; Democracy; Ethics; Leadership; Liberalism; Morality; Philosophy, Political; Utopianism*

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Elaine E. Englehardt

COMMUNITY ACTION

SEE *War on Poverty.*

COMMUNITY ECONOMIC DEVELOPMENT

Community economic development is a term for the processes of change generated through place-based economic activities that are controlled by, or at least oriented toward, local residents for their betterment (Gordon Nembhard 1999, p. 297). Community economic development strategies encompass a variety of community empowerment and business development approaches, such as political advocacy, constituency group organizing, entrepreneurship development, education, job training, and labor development (University of Illinois at Chicago Center for Urban Economic Development 1987). Economic activities include job creation, entrepreneurship and business development, housing development, the provision of financial services, and the development of capital markets.

Local economic development practices can be categorized into five general chronological and overlapping phases: state industrial recruitment (starting in the 1930s); political critiques, advocacy planning, and community focus (1960s); export orientation, labor market research and development, and equity strategies (1970s and 1980s); environmental sustainability and social justice (1980s); and privatization and regional integration (1990s) (see Fitzgerald and Leigh 2002, pp. 9–26). Scholars and practitioners, particularly starting in the 1960s, have honed the term *community economic development* to focus on grassroots activity that is local and indigenous. Such efforts are centered on people and a variety of stakeholders (residents, workers, business owners, policymakers, civic and political organizations, etc.). Community control and economic stability, independence, and prosperity are the goals.

Economic development models range from traditional private business/corporation-centered models to alternative community-based, cooperative, and employee-owned models (see Gordon Nembhard 1999). The corporate model uses strategies to retain or attract businesses to the community, as well as strategies to make the residents "good" employees for those businesses. Municipalities attract the businesses with tax incentives and abatements, subsidies, below-market loans, favorable zoning changes, utility cost reductions, infrastructure improvements, the establishment of commercial districts, and the designation of industrial parks and business incubators. Using traditional strategies, municipalities will also try to ensure corporations a relatively cheap and dependable labor force, even though many of these businesses hire few local residents.

Community-based and community-initiated development, in contrast, combines public, private, and nonprofit economic activities to increase residents' and workers' human, social, and cultural capital; to facilitate organizational, managerial, and microenterprise experiences in establishing and maintaining small local businesses that are owned and operated by residents (and tend to hire more residents); and to maintain affordable housing. These kinds of enterprises include consumer, producer, worker, and housing cooperatives; credit unions; democratic ESOPs (employee stock ownership plans) and other employee-owned businesses; community land trusts; community development financial institutions; community development corporations; nonprofit businesses (social entrepreneurship); and municipally owned companies (Gordon Nembhard 1999; Democracy Collaborative 2005). Debates about contending strategies often revolve around false tradeoffs between pollution and jobs, education and recreation, livable wages versus subminimum wages, unionization and corporate growth, cooperative ownership and private property, and affordable housing and prosperous real-estate markets.

Community economic development focuses on the neighborhood and municipality level, as separate from regional, state, federal, and international economic activity. Interactions are thus more intimate and intertwined, and the range of activities are more oriented toward and affected by place. A focus on community economic development often elevates microlevel activity and small-scale community-initiated projects as strategies to reach marginal and underserved populations. However, the effectiveness can be limited. Sometimes solutions to economic problems require broader participation and enhanced or increased resources pooled at the regional, state, or federal levels. On the other hand, higher-level policies can also undermine progressive local policies, such as national or international trade rules that do not recognize, or actually invalidate, local environmental or labor standards and tax laws. Corporate globalization increasingly undermines many aspects of community economic development by removing resources and control from local communities (Blakely and Bradshaw 2002; Gordon Nembhard 1999). Local strategies, particularly asset-based strategies that help residents develop and own a variety of wealth-producing assets, have become increasingly popular in the face of persistent poverty and globalization. Community economic development strategies anchor capital and keep the benefits circulating among those who produce it, service it, and need it.

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Jessica Gordon Nembhard

COMMUNITY POWER STUDIES

Power is a contested concept, with little agreement about what exactly to study or how to go about it. It is also a concept that belongs to many disciplines—political science, sociology, and psychology all accord it special importance. Furthermore, disciplinary differences overlap ideological ones.

One of the most intensely debated applications of power is in the study of local communities. Although concerned most directly with local politics, community power is linked to issues about the basic nature of democracy in modern society. The work that drew attention to power was Floyd Hunter's 1953 book on Atlanta, *Community Power Structure: A Study of Decision Makers.* Earlier community studies dealt with power only incidentally. Hunter made it central. Coming from a background in sociology and social work, Hunter nonetheless focused on politics and on how the system of representative government worked in practice. In response a pluralist school of thought headed by Robert Dahl (2005) challenged Hunter's finding that the business sector with its rich supply of economic and organizational resources could determine a locality's policy agenda. Instead, this school argued that governing is autonomous and that popular elections are the guiding force that keeps policy choices in line with citizen sentiments.

In its formative stage the community power debate set forth sharp alternatives. Are local communities dominated by the local business class like the pre–World War II "Middletown" studied by Robert S. Lynd and Helen M. Lynd (1929, 1937), or are they governed by shifting coalitions, with public officials often in the key role, like Dahl's postwar New Haven, Connecticut? With different cities at different times yielding different findings, grounds for amicable coexistence among researchers proved hard to establish. Hunter's *Community Power Structure* thus triggered a cross-disciplinary, ideologically infused controversy that lasted for a quarter of a century or longer. Each side elaborated a case for its argument and against the opposing argument, largely neglecting alternative possibilities. With the research task framed narrowly, pluralists could demonstrate that, as in New Haven, a small elite is not in control. However, their critics could also show that less-privileged segments of the population are left out and have little voice in governance. Contending sides consistently talked past one another, a pattern that has much to do with the nature of power and an initial focus on power as control.

Besides power as the ability of one actor to dominate another, some scholars see power as a shared activity in which people come together to do something that individually they could not do. The two forms can be thought of as *power over* and *power to.* The first refers to conflict where the preferences of one clash directly with the preferences of another. The second refers to circumstances in which the capacity to act comes through a combined effort, preferences are not firmly fixed, and conflicts are largely indirect and inferred. While the two forms of power may seem to have little to do with each other, in a community setting there are ample instances of both, and oftentimes they overlap. In conflict scenarios efforts to dominate often generate resistance, thus running up the cost of control. Attempted domination may give way to tacit bargaining over the degree of control and can even evolve into a form of exchange in which each party decides to give up something to receive something. This form of bargaining can shade into instances of power to.

As bodies of people with shared concerns, whether it be to maintain public safety or provide a medical facility, communities have a need to act collectively. To the extent that they have this capacity, they can be self-governing; but that capacity does not come free of complications involving both forms of power. In complex societies the governing function takes a distinct form, seemingly differentiated from other functions, and thereby becomes somewhat separated from the people as a whole. Under such a separation some elements may come together in support of their particular version of how to meet community needs. In this way they give strength to a capacity to act, that is, give shape to a form of power to. However, if others find themselves left out, then those left out may experience power as a form of being dominated. A capacity by one set of actors to shape a priority agenda potentially leaves others in a marginal position in the governance of the community.

In principle representative government is a check against one element of society ignoring the concerns of others. Essentially, then, the community power debate is over how the representative process functions in practice, with wide disagreement about the degree to which formally democratic systems operate in line with the ideals of

representative government. In a classic form set forth by Dahl, the pluralist school of thought sees politics as basically open and inclusive. No group is consigned to a marginal political standing. Pluralism, however, has been subject to a variety of critiques, including the charge that it is a legitimating ideology rather than an evidence-based explanation of how democratic politics actually works (Merelman 2003; see also Kariel 1966). Some antipluralists maintain that the central facts of local political life are about how some segments of society are well positioned to act on their concerns and to protect their interests while others suffer an unending disadvantage.

APPROACHES AND UNDERLYING ASSUMPTIONS

Pluralists and their critics (the latter variously called stratificationists, elitists, neo-elitists, or, the term used here, antipluralists) differ sharply in the assumptions they make about the political world to be studied. Although scholars do not divide into two highly unified camps, there are distinctly different schools of thought. Contrasting their assumptions is illuminating.

Pluralist

1. The authority of government is an important base of action, and in representative government competitive elections have a potential to make officials responsive to the citizenry. Although social and economic inequalities are consequential, universal suffrage can serve as a check against the accumulation of power in the hands of a few.
2. Society shapes politics in the following way: Over time deference to persons of high family status and wealth yields to instrumental understandings of authority. With increasingly differentiated roles and associated calculations of self-interest, conflicts are issue-specific and changeable. In this setting the exercise of control is costly and power inherently centrifugal.
3. Power is manifest in conflicting preferences and is evident in the observable actions of individuals.

Antipluralist

1. Because governing involves more than formal institutions of government, elected public officials have limited autonomy. They often seek support and cooperation from highly useful, even essential nongovernmental sources. Therefore, elections are not the pivot around which actual governance turns. Although there are rituals celebrating democracy and popular participation, they may disguise rather than reveal political reality. In a society in which investment capital is privately owned and various elements of society differ in capacity to mobilize, public officials are easily drawn to those who control abundant and attractive resources.
2. The functional usefulness of a governing capacity and the strategic advantages of positions within a governing arrangement serve to make resistance to those arrangements difficult. Although Robert Michels's (1959) law of oligarchy is less than ironclad, it is a factor because the leadership function is to varying degrees not subject to popular control. Therefore, even in a complex society, power is not inherently centrifugal.
3. Highly visible policy actions are insufficient evidence for understanding power. The flow of decisions and nondecisions is potentially more telling than specific controversies. Hence, agenda control is more fundamental than outcomes in particular issues. Asymmetrical dependencies, reputations for power, issue suppression, and manipulated rules and procedures are aspects of power important to study.

FINDINGS AND THEIR INTERPRETATION

Pluralist

1. In the continuing debate over community power, Dahl and other pluralists favor the term *dispersed inequalities*. It is contrasted with *traditional inequality*, in which a small group of notables enjoy the combined advantages of status, wealth, and political office. The claim of dispersion rests on two dynamics. One is that, with electoral popularity differentiated from historical forms of deference, numbers can counterbalance wealth and social standing. If any high-status group aims for an expanded scope of influence, then its members must contend for popular support rather than pursue control on their own terms. The other dispersing force comes from the distribution of immediate interests. Everyone cares intensely about only a few matters of special concern. Because complex society produces highly differentiated concerns, intensities fragment to coincide with highly particular interests. Thus, interest group rather than class is the most useful term of analysis.
2. Because contenders for electoral office have incentives to be responsive to those most concerned about any given issue, the intensely concerned are influential in their special area of interest. And because the overall pattern is one of fragmentation,

those who are influential on one narrow issue carry little weight on many other issues. The narrowness of issues means that over time many different groups can be satisfied to some degree, although few groups get all they want. Politics is fluid, and the central political factor is the electoral connection between vote-seeking politicians and a citizenry capable of mobilizing against any threat to its particular but varied interests. While most citizens are politically passive most of the time, elite competition keeps the system open.

Antipluralist

1. Although antipluralists come in various guises, their shared position is that social and economic inequalities have deep roots with profound consequences for political mobilization. For example, Rodney E. Hero (1992) finds what he labels two-tiered pluralism, which has a surface layer in which lesser issues correspond to pluralism and a deeper layer of issues about race and ethnicity that formal equalities in suffrage and legal standing are ineffective in addressing.
2. Political arrangements have limited pliability. Conflicts compete with one another and any established arrangement constitutes a mobilization of bias that is not easily overturned. When applied to local governance, one body of issues may crowd others out and elections may be captive to historic or other loyalties, thereby reducing their potential for exacting accountability.

ALTERNATIVE PERSPECTIVES

Despite decades of debate and criticism, there remains a tendency for pluralism to be defined operationally as the absence of control by a small, cohesive elite. However, meeting this loose definition is not the same as the claim that politics is open and widely inclusive. For critics of pluralism the puzzle is how, beyond such specific factors as the mobility of capital, to account for the ongoing political weakness of the less privileged. After its peak in the 1960s and 1970s, the pluralist-antipluralist debate receded in salience, in part because both sides cast their argument in terms too narrow to address the full picture of local governance. Still, the community power concept is appealing in part because in principle it addresses the whole of the local political order and not just the actions of officeholders.

The whole of the local political order should not, however, be equated with a self-contained form of rule. European scholars have long cautioned against such an assumption and have called attention to national context (e.g., see Dunleavy 1980). They explain that the structure of intergovernmental relations may impinge greatly, and, depending on the circumstances that vary from country to country and from time period to time period, the business sector may not have a strong incentive to involve itself in local politics.

In the 1980s the aim of addressing the whole of the local political order regained footing through the idea of an urban regime. This concept shifts emphasis from who governs to questions about how governance takes place—which concerns have priority and why, what various participants in the process contribute, and how efforts come to be coordinated around some issues but not others. How key actors understand their situation is important, and this includes matters they take as a given. As a concept, urban regime provides a way of acknowledging that governance involves much more than operating the levers of the formal machinery of government. A regime consists of "the informal arrangements by which public bodies and private interests function together in order to be able to make and carry out governing decisions" (Stone 1989, p. 6). Arrangements, of course, do not just happen. They are created and maintained as a way of pursuing a set of aims, perhaps seeking to loosen some constraints while accommodating others. Because different agendas call for different kinds of arrangements, regimes in some sense indirectly compete. Any established arrangement for governing may hold a preemptive edge. While that edge may be surmountable, it takes a considerable combination of resources and effort to bring a new governing arrangement into being.

However, as with community power itself, it is important to remember that localities have only a constrained freedom to maneuver. Local governing arrangements mediate but do not control external forces. Thus, urban regimes are not autonomous, free-forming entities. Every regime is shaped by context, by the distribution of policy-relevant resources, by the mix of ideas at work, and by the ease with which various policy efforts can yield results. The internal dynamics of regime formation thus do not provide a sufficient basis for understanding how agendas take shape. Local agendas and the political arrangements that support them are, for example, greatly influenced by the position of a locality within a metropolitan region. Economic competition, the extent of revenue equalization through the intergovernmental system, and the ways in which local boundaries divide the metropolitan region socioeconomically all have a bearing on how agendas take shape and on what form political mobilization assumes. As a result, a full analysis of a local political order must pay close attention to context, both what part of the local context key players respond to actively and what part they take as a given.

The analysis of urban regimes calls for seeing power in a broader framework than power over. A useful step is to move away from the notion that actors are simply intentional agents pursuing self-defining interests. Such an understanding puts undue emphasis on who prevails in conflicts or who is positioned to suppress potential issues. It neglects the processes of attraction between potential coalition partners and how these processes affect policy aspirations.

If the world is seen as thoroughly relational in the sense that aims take shape in relations among actors who inform one another through deeds and words about opportunities and constraints, then it is understandable why socioeconomic inequalities are not easily overridden politically. Those inequalities are part of the building material out of which governing arrangements are constructed. There is deep tension between the ideal of political equality and the reality of socioeconomic inequality. Still, community power is about politics, and politics is about choosing. Political agency is the means for adjusting the terms on which socioeconomic inequalities and the equality of citizenship are accommodated to one another. Hence, the research task involves identifying creative ways to alter conditions and build new capacities. Some steps can make governing arrangements more open and inclusive, others less so. For that reason the study of community power remains timely even as the debates of the formative period have become less compelling.

POWER AND CONSTRAINED POLITICAL AGENCY

Since the publication of Dahl's classic work in 1961, debate has often centered on the adequacy of the pluralist conception of politics. For example, Patrick Dunleavy charges that pluralists simply assume that conventional "input processes" determine political and policy outcomes (1980, p. 13). Historically, this assumption reduced Hunter's concern with leadership in a broad community context to Dahl's question of who governs. Moreover, by highlighting particular leaders, Hunter's work also contributed to a preoccupation with who are the key policymakers. Subsequent work has only gradually returned to Hunter's original insight that power is embedded in relationships, in networks of how people are related to one another in perceiving and responding to a community's problems. The evolving intellectual challenge is to understand how human agents act within structured relationships, relationships that contain inconsistencies and are often in tension with one another. For example, one person/one vote is at odds with what Charles E. Lindblom terms the *privileged position of business* (1977). Because structures impinge on one another, they reach accommodations of varying depth and duration. For researchers, charting these accommodations is no easy mater, and the question of how deeply economic relationships affect others continues as a matter of debate.

While human agents have a creative capacity, they are constrained to act collectively, not as asocial individuals, but as actors within an array of economic, social, and political relationships in place. Although change is feasible, working through well-established relationships is easier than bringing about fundamental change in relationships. However, because altering relationships is possible, one must look at varying capacities to reconstruct governing arrangements. This dimension of power is not evident on the surface in much political activity, because it works within and does not challenge most relationships. Standing alone, power over does not capture this deeper level. This deeper level involves the degree of difficulty encountered in reshaping power to. In short, some realignments are easier to bring about than others, but the complexity of that process defies being expressed in any succinct formula.

Consider the two aspects of power to. It has an output side—what human agents can produce together—and an input side—the factors that bring people together in a form of cooperation. Just as there are features that enable one actor to dominate or resist another, so there are features that make cooperation between actors more attractive or less so. To the extent that alignments for cooperation compete for governing space, competition may be indirect and lack overt expression. For example, some alignments may preemptively displace other possible alignments. Power at this level is hard to observe except through its expression in a long flow of events and their counterfactuals.

If analysts assume that politics is a kind of zero-sum game of openly clashing policy preferences, then they will not engage this underlying dimension of power. Players in the political game compete, but a different understanding of power emerges in realizing that they also have varying degrees of attraction to one another. As they come together, one constellation of attractions may foreclose others. Attraction stems partly from the objectives that players can achieve by combining efforts, but other considerations come into play as well.

The study of community power is ultimately about understanding how competition and attraction toward cooperation interact. Competition is easier to observe through the immediate actions of individuals. In contrast, attraction toward cooperation is embedded in and reinforced through relationships, some of which may simply be taken as a given. Political creativity is partly about altering relationships by developing new channels of awareness and thereby posing new possibilities.

That power has an intentional aspect should not lead to the conclusion that it operates only in an intentional manner. Discovery of the possible is part of the power process, and discovery may precede fully developed intention. However, discovery is constrained by the greater difficulty of altering some relationships over others. That is why power to is a necessary complement to power over. Because constructing some versions of power to is easier than others, a full understanding of community power has to include both power over and power to—both have a bearing on how the politics of democratic representation operates in practice.

The future prospects of a democratic way of life rest on an ongoing exercise of political creativity, but that creativity is itself constrained by the multiple networks of relationships within which it is exercised. Community power is a concept that treats power as relational and relations as structured by the ways in which multiple facets of life intersect. Questions about community power have not disappeared, but instead, since the formative period of debate, have evolved to take into account an expanded appreciation of the complexity of the local setting.

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COMMUNITY STANDARDS

SEE *Censorship; Obscenity.*

COMPARATIVE DYNAMICS

Comparative dynamics does for dynamics what comparative statics does for statics. The difference lies in the fact that comparative dynamics is concerned with the effects of changes in the data (parameters, exogenous variables, initial conditions) on the whole motion over time of a dynamic economic model. This motion will usually be some sort of dynamic equilibrium path, such as, for example, a steady-state growth path where all variables grow at constant rates, or an optimal path deriving from a dynamic optimization problem.

The method of comparative dynamics can be summarized as follows. We have a set of dynamic functional equations, whose solution gives the time path of the economic system. In this solution, parameters, exogenous variables, and initial conditions also appear. Therefore, a different solution (time path) corresponds to a different set of data. It is then possible to ascertain the effect on the solution of a change in any one of the data.

Comparative dynamics, as such, does not say anything about the transition from one equilibrium growth path to another: The study of this transition belongs to stability analysis. Additionally, the conditions of stability of the equilibrium path may be useful in obtaining information on comparative dynamics: This can be regarded as the dynamic analogue of Paul Samuelson's *correspondence principle* in comparative statics, with *dynamic equilibrium path* replacing *static equilibrium point*.

This is about as far as one can go with intuition. Formally, take the case of steady-state growth and consider a differential equation system

$$\frac{dx(t)}{dt} = f[x(t), \omega(t), \theta], \qquad (1)$$

where x is a vector of endogenous variables, f is a vector of functions, ω is a vector of exogenous variables (given functions of time, also called forcing functions), and θ is a vector of parameters. We are interested in a particular solution of this system that serves as the reference path for comparative dynamics. If we assume that all the exogenous variables grow at a constant proportional rate (which may be equal or different across variables), we have

$$\omega_i(t) = \omega_i(0)e^{\gamma it},\ i = 1, 2, \cdots, n, \qquad (2)$$

where $\omega_i(0)$ and γ_i are given. A steady-state (or balanced-growth) path is a particular solution to system (1) having the form

$$x_i(t) = x_i(0)e^{\rho it}, \qquad (3)$$

where the initial values $x_i(0)$ and the growth rates ρ_i are to be determined. This particular solution is usually obtained by the method of undetermined coefficients: equations (2) and (3) are substituted into system (1) and the values of $x_i(0)$ and ρ_i are determined so that the system is identically satisfied. This will give rise to a set of equations in the unknowns $x_i(0)$ and ρ_i: Typically, the ρ_i are obtained by solving the equations derived from equating to zero the coefficients of the terms containing t, whereas the $x_i(0)$ are obtained by solving the equations derived from equating to zero all the other terms not containing t.

The solution will express the unknowns in terms of the data; usually we shall obtain

$$\rho_i = h_i(\gamma, \vartheta), \qquad (4)$$

$$x_i(0) = \phi_i(\omega(0), \gamma, \theta), \qquad (5)$$

where $\vartheta \subset \theta$, that is, ϑ is a vector containing just a few parameters of the full set of the model's parameters. The functions h_i are typically fairly simple, while the functions φ_i are often very complicated. All results from comparative dynamics are obtained calculating the partial derivatives of the functions h_i and φ_i with respect to the element we are interested in.

SEE ALSO *Comparative Statics; Eigen-Values and Eigen-Vectors, Perron-Frobenius Theorem: Economic Applications; Phase Diagrams; Stability in Economics; Steady State*

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COMPARATIVE STATICS

Comparative statics is a methodological concept of economic theory and is related to *economic models*. An economic model consists of a set of relations among economic variables. These relations may be definitional, behavioral, or technological in nature. For instance, in the model of a competitive market there are three relations. The first two are behavioral relations describing how the buyers and sellers behave in the market. The behavior of the buyers is summarized in a demand relation in which the quantity of a good demanded in the market depends on its price and the total income of the buyers. The supply relation states that the quantity of the good supplied in the market depends on its price and the number of sellers supplying the good. The third relation of the model defines equilibrium as a situation in which the quantity demanded is equal to the quantity supplied. The market model involving these three relations is designed to explain the values of three *endogenous* variables: quantity demanded, quantity supplied, and the price of the good. Under certain conditions the model can be solved to get the values of endogenous variables in a static equilibrium. But there are two *exogenous* variables in the model—the total income of the buyers and the number of sellers—and the model is not designed to explain the values of these variables. A static equilibrium may be disturbed when there is a change in number of sellers, for instance. An increase in the number of sellers may occur if new firms enter the market where the existing firms are earning economic profits. In this case, a new static equilibrium will emerge. The methodology of comparative statics allows the theorist to compare these two static equilibria.

Comparative statics was introduced by the British economist Alfred Marshall (1842–1924) in his book *Principles of Economics* (1890), in which he discussed the effect of entry or exit of firms on market equilibrium. Later, Paul Samuelson developed the concept of comparative statics systematically in his book *Foundations of Economic Analysis* (1947), along with the related concept of comparative dynamics. Comparative static methodology is used in all branches of economic theory because it enables the theorist to derive a set of hypotheses that can be empirically tested. Theoretical econometrics and applied econometrics owe their existence largely to the development of comparative static methodology, and the contribution of these two allied fields of economics to economic policy analysis is tremendous.

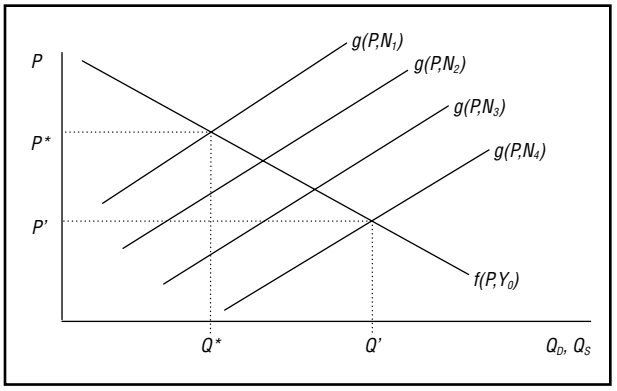

To illustrate comparative statics in a market model let us state the demand and supply relations as:

1. $Q_D = f(P, Y)$
2. $Q_S = g(P, N)$
3. $Q_D = Q_S$

The endogenous variables in this three-equation market model are Q_D (quantity demanded), Q_S (quantity supplied) and P (price). The exogenous variables are Y (income) and N (number of sellers).

The figure above shows an inverse relationship between price and quantity demanded for a given level of income, Y_0. The relationship between price and quantity supplied is a positive one, and the diagram shows four supply curves for the number of sellers ranging between N_1 and N_4. The price quantity combination (P^*, Q^*) is one static equilibrium when the number of suppliers is N_1. Another static equilibrium is represented by the price quantity combination (P', Q') when the number of suppliers increases to N_4.

It is possible to derive a testable hypothesis by using comparative static methodology, provided that certain conditions are satisfied. First, the two static equilibria that we are comparing must exist and be stable. If the demand and supply curves do not intersect at all or if they do not intersect in the positive orthant, market equilibrium does not exist. Second, we must have an established theory connecting the number of firms that is exogenous to the model with the quantity supplied that is endogenous. Because the theory of supply predicts a positive relationship between the quantity supplied and the number of firms, the testable hypothesis that emerges is: as the num-

ber of firms increases in the industry, price falls and more quantity of the good is bought and sold in the market.

Comparative static methodology is also used in optimization models, where the conditions under which it works are somewhat different. In economic theory, consumers maximize utility subject to their budget constraint, or the producers maximize profits subject to technological constraints. These models also have a set of endogenous and exogenous variables. If we take the case of a competitive firm, the quantity of output produced or the quantities of inputs used in production are endogenous variables, but the prices of goods produced or the prices of inputs are exogenous variables. In the consumer model, the quantities of goods purchased are endogenous variables, but prices paid for these goods as well as amount of money spent are exogenous variables. A typical testable hypothesis is the law of demand that says that if the price of a good decreases, the consumer tends to purchase more quantities of that good. This hypothesis can be analytically derived by the use of comparative static methodology, provided that a *maximum* of the consumer's utility exists subject to the budget constraint. Similarly, for deriving any hypothesis related to the behavior of producers it is necessary that the profit function have a maximum. Thus, the comparative static methodology fails in the competitive model if there are increasing returns to scale, because profit function does not have a maximum. Under increasing returns to scale, the firm can always reduce unit cost by expanding the scale of output that can be sold at a fixed price.

Many economic variables such as quantity demanded or supplied are nonobservable. Econometricians can estimate both demand and supply functions only under certain conditions. In the figure above, demand is stable, but supply curve shifts as the number of firms changes. In this case, the demand curve can be estimated from data on price and quantity, but the supply curve cannot. Empirical estimation is crucial for predicting the effects of a tax or subsidy on welfare.

SEE ALSO *Comparative Dynamics*

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Monica Das

COMPASSIONATE CONSERVATISM

SEE *Benign Neglect.*

COMPENSATING VARIATION

SEE *Wages, Compensating.*

COMPENSATION, UNEMPLOYMENT

Unemployment compensation (or benefit) consists of an insurance payment, generally financed by payroll contributions, that is paid to workers entering unemployment. This public insurance payment allows workers to smooth their consumption patterns when facing adverse employment outcomes in the presence of financial market imperfections and incompleteness that make it impossible or too costly for private, for-profit insurance firms to cover workers against such risks. The compensation is usually available for a limited amount of time, during which unemployed workers are supposed to search for a new job.

The first unemployment insurance system was introduced in 1789 in Basel, Switzerland, by a local trade union. More comprehensive schemes, managed by local authorities, were set up in France, Belgium, and Switzerland in the late nineteenth century. The first national program was established in the United Kingdom in 1911. Germany and the United States followed with, respectively, the Job Placement and Unemployment Insurance Act of 1927 and the Social Security Act of 1935 in response to the Great Depression. Nowadays unemployment compensation schemes are widespread under alternative enforcement rules and regulations in many Organization for Economic Cooperation and Development (OECD) countries.

One way of measuring the generosity of the unemployment compensation program adopted in a country is by calculating the amount of the average compensation as a ratio of the average wage. This indicator is known in the economic literature as "replacement ratio." Another important characteristic of unemployment compensation schemes is the duration of the benefit, which can range from a few months to indefinitely. A further important element of unemployment compensation programs is the strictness of the enforcement rules governing the reception of the benefit. For example, sometimes unemployment compensation is conditional on the recipient's actively searching for a new job or on accepting any job

offered. These rules may be enforced with different degrees of strictness, depending on the formal and informal rules prevailing in each country. In the United States unemployment benefits are paid only to workers who lose their jobs as a result of dismissals; employees who voluntarily quit their jobs and new entrants to the labor market are not eligible. Federal law provides general guidance for administering unemployment compensation schemes, and each state has its own regulations and eligibility criteria.

Despite helping the unemployed in hard times, unemployment compensation schemes may also have perverse effects. Economic theory predicts that generous unemployment benefits tend to increase reservation wages. As a result, if the compensation is provided for an indefinite period, unemployment could increase as workers have less incentive to enter employment. In turn this could increase the average length of unemployment spells, triggering a rise in long-term unemployment. With this in mind, many countries have constructed unemployment compensation schemes that are limited in duration and contingent on active job search.

SEE ALSO *Duration Models; Psychological Capital; Recession; Unemployment; Welfare; Welfare State*

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COMPETITION

In neoclassical economic theory, the highest state of competition is called *perfect competition* in which there are a large number of small-sized firms each of which is assumed to be a passive price taker. With perfect information flows and mobility, inter-industrial competition ensures equalized profit rates across all sectors. Finally, intra-industrial competition ensures identical technologies thereby leading to equalized profit rates between firms within each industry. At equilibrium there is full capacity utilization.

Various models of *imperfect competition*, in which firms are price setters, are seen as the opposite of perfect competition. Under *monopolistic competition* there are a large number of firms. With free entry and exit, each firm's downward-sloping demand curve intersects the average total cost to the left of its minimum point on its average total cost curve. At the resultant equilibrium, there is excess capacity with higher-than-minimum cost and price.

Under *oligopolistic competition*, game theory is used to model strategically competitive behavior among a relatively small number of firms whose market power allows them to erect barriers to entry. Game theory, in which each firm is assumed to have the information to be able to anticipate precisely the actions of rival firms, generates a payoff matrix and devises the most optimal competitive strategy. At equilibrium, each firm maintains excess capacity to deter competition (Dockner et al. 2000, p. 253). As discussed below, this situation is likely to be unsustainable under Keynesian uncertainty when each firm strives to cut costs and prices.

The problem with all the above models is that none includes price- and cost-cutting behavior, an odd failing given the reality of outsourcing to low-wage regions of the world. The remaining part of this essay deals with three different theoretical schools that have rejected the neoclassical theory of competition. We first deal with the classical Marxian perspective (Clifton 1983; Shaikh 1980, 1982; Semmler 1984; Botwinick 1993). The central argument in this literature is that the quantity and size of firms is immaterial with regard to pricing: *all* firms are aggressive price setters. The pursuit of surplus value leads to increased levels of mechanization. Thus a larger scale of investment forces firms to increase their market shares in order to make such large investments profitable. Price- and cost-cutting constitute the main methods by which each firm "makes room for itself" in the market. Furthermore, this literature rejects the notion that large-sized firms have market power and therefore erect barriers to entry, since in recessions such firms can face *barriers to exit*. The presence of large amounts of sunk costs makes it difficult for such firms to disinvest, thereby making them subject to potentially heavy losses.

Indeed, it is the presence of varying levels of fixed capital that makes capital mobility across industries a relatively slow process. Quite simply, it takes time to invest and disinvest. Thus profit rates are likely to be different from one another at any given moment. Profit rate equalization happens only as an *approximate* process over what Karl Marx (1818–1883) called "the cycle of lean and fat years" (Marx 1894, p. 208).

Finally, technological change and fixed capital imply the existence within an industry of different technology

vintages, each with its own unit production costs. With roughly equal selling prices, this implies the coexistence of different profit rates. The issue of monopoly power is irrelevant to both intraindustrial and interindustrial competition.

Based on the prewar survey work done by the Oxford Economists' Research Group (Andrews 1949), Roy Forbes Harrod (1900–1978) radically revised the conventional model of imperfect competition. As in the classical Marxian perspective, price- and cost-cutting are at the core of Harrod's critique (1952).

Harrod's critique begins with the standard assumptions of monopolistic competition: price-setting behavior, free entry and exit, and a downward-sloping demand curve faced by each firm. Harrod argues that the standard equilibrium in which there is excess capacity with above-minimum costs and prices is not sustainable since each firm faces a penalty for not minimizing costs and prices. The threat from potential low-cost rivals in a world of Keynesian uncertainty makes every firm defensively lower its costs and prices in an attempt to safeguard its market share. In the event of excess capacity, each firm will cut back investment, thereby reducing its capacity. In the aggregate, the reduction of investment will also reduce aggregate demand and thus output. With overutilization of capacity, the increase in investment will raise both aggregate capacity and output (demand). In either case, a solution to the knife-edge problem (Shaikh 1989) will ensure that output and capacity are approximately equal to each other around the minimum point of each firm's cost curve.

Finally, the Austrian school contends that static equilibrium and perfect information preclude the real-world rivalrous competitive behavior that entrepreneurs engage in under capitalism (Kirzner 1997). Austrian authors emphasize the fact that competition actually takes place under conditions of fundamental uncertainty that are not subject to probabilistic calculations. This in turn implies that price and quantity setting by firms may propel the system away from equilibrium for considerable periods, although there could also be tendencies toward equilibration. Competition is, in effect, a dynamic process.

SEE ALSO *Competition, Managed; Competition, Perfect*

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Jamee K. Moudud

COMPETITION, CLASSICAL

SEE *Long Period Analysis.*

COMPETITION, IMPERFECT

Imperfect competition exists in markets that are not perfectly competitive—that is, markets in which some buyer(s) or seller(s) have market power. That market power may derive from a limited number of buyers or sellers or from differentiation between each firm's products. Although almost every one of the world's markets falls into this category, we often study the simpler case of perfect competition first, then study monopoly, and follow those benchmarks with more detailed models of imperfect competition.

Perfect competition—that is, identical products sold to many buyers and available from many sellers who may easily enter and exit—may be one of the most unrealistic of market assumptions. Because there are many buyers and sellers, no single market participant can have a signif-

icant effect on the market price. As a result both buyers and sellers take the market price as fixed and use it to determine their levels of consumption and production. The market for wheat is an example of perfect competition. There are many buyers, many sellers, and little differentiation among each farmer's product. Although the theory of perfect competition appears unrealistic, many of its results are similar under other market structures. As Milton Friedman (1953) emphasizes, the usefulness of a theory lies not in its realism but in its ability to predict outcomes. Perfect competition does this well, and we should judge models of imperfect competition not on their realism but on their ability to make useful predictions and provide improved insights into the functioning of markets.

MONOPOLY AND MONOPSONY

Monopoly falls under the category of limited competition because it assumes that a single producer sells a product with no close substitutes to many buyers and benefits from barriers to entry by other firms. It is the simplest model of limited competition and lies at the opposite end of the spectrum from perfect competition. An example of monopoly in the early twenty-first century is Microsoft Corporation's operating system Windows (*U.S. v. Microsoft*, Civil Action No. 98–1232 [2000]). When a seller has market power, the price may remain higher than a competitive market would otherwise.

As in perfect competition, there are few markets that actually satisfy our assumptions, but this simple model of monopoly allows us to understand the basic features of market power. But even in the case of Microsoft, market share does not reach 100 percent.

The market power held by a monopolist can be measured in several ways. The Lerner Index (Lerner 1934) considers the price markup over marginal cost as a fraction of price: $(P - MC)/P$. It can be shown that this also equals the inverse of the own-price elasticity of demand (technically, its absolute value). Thus the more willing buyers are to do without the monopolist's product, the smaller the monopolist's profit-maximizing markup. Measuring marginal cost is difficult in practice (Fisher 1987) because economic cost (rather than accounting cost) is required. Typically neither policymakers nor the courts have good measures of the firm's true costs; if any measure is available, it is usually average cost rather than marginal cost. Elasticity is easier to measure than marginal cost. In antitrust proceedings, both the own-price elasticity (the reaction of a product's demand to changes in its own price) and various cross-price elasticities (the reaction of one product's demand to changes in other products' prices) are estimated to determine the extent of an alleged monopolist's market power. The legal definition of monopoly is 80 percent market share of the relevant market, where the markets are often defined using estimates of cross-price elasticities. It is important to note that monopolies are not illegal under U.S. law, but any firm found to have monopoly power is subject to more stringent laws concerning potential abuse of that firm's market power.

Monopsony is also a model of limited competition that lies at the opposite end of the spectrum from perfect competition; its simplicity is that a single buyer purchases from many sellers. For example, the steel mill in a town without other steel employers can be modeled as a monopsony, and so can the National Football League. In this case, the buyer has market power and may keep the price lower than a competitive market would otherwise. In our two examples, the "price" that is depressed due to market power is workers' salaries.

One economic cost to monopoly and monopsony (and to market power in general) is due to "allocative inefficiency," an outcome where marginal benefit (the marginal buyer's willingness to pay) is not equal to marginal cost (the marginal seller's willingness to sell). In the case of monopoly, this is because marginal cost is greater than the price charged, whereas in the case of monopsony, marginal benefit is less than the price paid. In both cases, market power causes too few goods to be traded—fewer goods, that is, than would be allocated by a competitive market.

If the number of buyers or sellers is small, they may "collude" to limit competition. This is referred to as a buyer or seller "cartel." Such behavior is illegal in the United States, but cartels such as the Organization of Petroleum Exporting Countries may operate internationally. Because the largest reward that any single seller or group of sellers can receive from participation in a market is the monopoly profit, we can consider a producers' cartel to be acting to maximize the members' joint profits. It is likely that any cartel will have difficulty policing its members' behavior. Each individual firm has an incentive to deviate from the seller cartel-maximizing price (by selling at a slightly lower price) or quantity (by selling slightly more quantity). A buyer cartel likewise has the incentive to deviate by offering a slightly higher price and buying more quantity than the buyer cartel's joint-maximizing price and quantity.

MONOPOLISTIC COMPETITION

With these simpler models described, we now consider firms with market power acting noncooperatively. As mentioned above, product differentiation is one reason market power may arise. This is the model of "monopolistic competition" (Robinson 1934; Chamberlin 1933) or "differentiated products" (Hotelling 1929; Salop 1979; Eaton and Lipsey 1989). Here, as in perfect competition,

there are no barriers to entry, and as a result firms receive zero economic profits in the long run. Yet because differentiated products face a downward-sloping demand curve, price is still above marginal cost, and the market is not allocatively efficient. This does not tell us the entire story, however; we cannot ask firms to charge a lower price, as we might imagine asking the monopolist to do. The monopolistically competitive firms expect zero economic profits in the long run already. Instead, we focus on the incentive for firms to enter the market, to find products that differ in some aspect from existing products. This behavior results in "excessive product differentiation" and "excess capacity." Production costs are higher than they might otherwise be. Due to the many different products produced, firms do not minimize their average costs as perfectly competitive firms would. Just as many "realistic" markets are made up of many firms with differentiated products, this prediction of the models rings true as well. Do we really need so many different kinds of shoes, bicycles, and mystery novels to choose from? Of course in these cases it is also difficult to justify regulation that would lead to an improved outcome. One case in which we may observe market participants' bargaining to improve the outcome is in the health care industry. For example, Preferred Provider Organizations limit patients' choices in return for lower fees and physicians' lower average costs (*Arizona v. Maricopa County Medical Society* 457 U.S. 332, 334 [1982]; Lynk 1988).

OLIGOPOLY AND OLIGOPSONY

Market power may not only arise from differentiated products; it may also be due to the existence of only a few sellers in the market (oligopoly) or only a few buyers (oligopsony). Oligopolies' market power can be measured by an average of the firms' Lerner indices as well as through the firms' market shares. An industry's n-firm "concentration ratio" (CRn) is the market share held by the largest n firms. The Department of Justice and the Federal Trade Commission typically use the 4-firm concentration ratio, although in the early twenty-first century cellular phone market 2-firm concentration ratios are reported (because CR4 is often 100 percent), and in other markets the antitrust authorities may report 8-firm concentration ratios. Alternatively market power can be measured by the Herfindahl-Hirschman Index (HHI), which equals the sum of the squared market shares of all firms in the industry. Thus the HHI can vary from a limiting value of zero under perfect competition to $(100)^2 = 10{,}000$ under monopoly. Most cross-country industry studies measure similar variation for the HHI and CR4.

The study of oligopoly and oligopsony requires the mathematics of game theory because each firm takes into account its rivals' reactions to and anticipation of its own actions. Such behavior can lead to strategic decisions that are intended solely to constrain the choices of current and potential rivals. For example, an incumbent firm may choose to increase its productive capacity to deter other firms' future entry (Dixit 1979).

INTERNATIONAL TRADE

Market power can also explain the level of trade between nations (Helpman and Krugman 1985; Helpman 1988; Baldwin 1992). Two examples illustrate the effect of both sources of market power—product differentiation and few domestic producers—on international trade. Under perfect competition, it is hard to justify why two countries would trade the same product—wheat or potatoes, for example. Each country should focus on the good in which it has a comparative advantage. But when consumers value variety, as in the case of differentiated products such as computers or cars, then two countries can produce more varieties of the good than one country can. Rather than limiting consumers' choices to the varieties their own country produces, a wider market—an international market—can exist for both countries' varieties. Market power can even explain the prevalence of cross-border trade with identical products produced in each country if each firm has monopoly power (or equivalently, a cartel) in its domestic market. In this case, each country's monopolist has an incentive to compete with the other country's monopolist, as long as transportation costs are not too high, precisely because domestic prices are above marginal cost. Although consumers in both countries benefit because of the effect this international competition has on prices, the fact that both firms incur transportation costs to export from their home country means that the outcome is less efficient than if each firm had just increased its own domestic production.

SEE ALSO *Competition; Competition, Managed; Competition, Marxist; Competition, Monopolistic; Competition, Perfect; Consumer Surplus; Discrimination, Price; Game Theory; Monopoly; Monopsony; Producer Surplus; Robinson, Joan*

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Christopher S. Ruebeck

COMPETITION, MANAGED

This idea for the reform of health-care finances was conceived by Alain C. Enthoven of Stanford University and fostered by a think tank of health-care professionals in Jackson Hole, Wyoming. Managed competition formed the basis of the proposed health-care reforms of the Bill Clinton administration. The plan required the creation of large health-insurance purchasing cooperatives, which were designed to have the leverage to enforce competition among different health-care plans. Managed competition aims to maintain quality of service and protect universal criteria of provision while also containing costs.

This strategy of financial management for health-care organizations has emerged since the mid-1970s in a context of mounting costs resulting from the increasing demand for services, especially in societies where aging populations and the decline of the family have put greater strain on existing services and institutions. Managed competition can be technically defined as a purchasing strategy to maximize value for both consumers and employers by adopting principles from microeconomics. A sponsor, whether in the private or the public sector, acting in the interests of a large number of subscribers, regulates the market to avoid attempts by insurers to suppress price competition. Through this strategy, the sponsor attempts to create price-elastic demand and reduce market risks. This type of financial management has been attractive for employers and insurers in the U.S. health sector because, while controlling prices, it offers pluralism in services and maintains individual choice for consumers, but it also approximates universal coverage.

In *The Logic of Health-Care Reform* (1994) the sociologist Paul Starr outlined several elements that are necessary for this strategy to achieve its objectives: There must be standard benefits that can guarantee a minimum level of coverage (such as hospitalization), thereby making comparisons in quality between plans possible; services should be accessible in principle to all customers regardless of any preexisting health condition (such as diabetes), and the premiums should not be unfairly influenced (for example, by age or gender); and the competition should force plans to provide detailed cost information to both consumers and employers.

Managed competition should be distinguished from *managed care* in health delivery. In managed care, networks of hospitals, physicians, and care providers offer accessible and economical care—for example, through preferred provider organizations (PPOs) that have contracted with insurers or employers for a discounted fee. However, such fee-discounting arrangements cannot in the long run monitor quality of service.

The aim of Enthoven's scheme was in fact to ensure that customers rather than employers would make health-care choices on the basis of cost. The difficulty facing most forms of health care is how to achieve equity in care between the chronically sick and the relatively healthy while also controlling costs. In the Enthoven scheme, one strategy to address this situation is through the creation of regional centers of medical technology to share technical costs with a range of groups.

Although managed competition as an idea has been around since the 1970s, it is generally agreed that the U.S. health-care system is failing in terms of cost control, quality, and provision of services across society. The employer-based system does not offer coverage to individuals whose employer does not offer health insurance or to those who are self-employed or who are unemployed but not poor. In the early twenty-first-century situation, there is little incentive for improving efficiency on the part of providers. In short, there is no market mechanism to create incentives for delivery systems to reduce the costs of care.

The health-care systems of all advanced societies are exposed to similar problems of price inflation, administrative inefficiencies, and mounting costs resulting from dependence on advanced medical technology, the health-

care needs of aging populations with chronic illness, and the rising expectations of customers for better services. These difficulties face societies such as the United Kingdom and Sweden, which have had, at least since the end of World War II (1939–1945), state-supported, universal health care with free provision of services at the point of delivery. In these societies, however, there has been growing privatization of health care through greater provision of private medical insurance. In the United Kingdom both Conservative and Labour governments encouraged the creation of quasi-markets inside the National Health Service (NHS) to promote price controls through competitive tendering and outsourcing for services. Despite these reforms, there are many problems with the NHS, such as significant regional inequalities in provision—the so-called postcode lottery—and difficulties in recruiting adequately trained staff. Despite claims that managed competition has been successful (e.g., in Florida and Indianapolis) in cutting costs, it is not clear that any of these reforms have successfully sustained equality in services and cost-effectiveness in delivery.

SEE ALSO *Competition; Competition, Perfect; Medicine; Medicine, Socialized; Microeconomics; National Health Insurance; Public Health; Welfare State*

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Bryan S. Turner

COMPETITION, MARXIST

The treatment of competition captures the methodological difference between the neoclassical and materialist (Marxist) approach to social and economic relations. In the former, competition is the interaction of individual economic agents through exchange in pursuit of self interest, be they consumers, workers, or owners of capital. The principle conditions necessary for competition are many buyers and sellers, and free entry to and exit from the market. Thus, competition is a question of numbers. Competition declines as the number of producers declines; monopoly is the absence of competition. In this analysis competition is an equilibrating force that brings efficiency to markets. The restriction of competition by government action undermines this efficiency. Private sector barriers to competition, such as collusion among producers, represent market failure.

Marx criticized this approach as an "absurdity of regarding [competition] as the … existence of free individuality in the sphere of consumption and exchange. Nothing can be more mistaken" (Marx [1858] 1973, p. 649). Briefly stated, Marx argued as follows: Capitalist production arises historically from the separation of labor from the means of production; in order to produce and live, workers must be employed by capital ("free wage labor"). This labor relation gives capital its mobility, both geographically and across sectors of production. Competition among producers (or "capitals," Marx's term) results from the conceptually prior competition between capital and labor: "Free competition … is first the free movement of capital and nothing else" (Marx 1973, p. 651). A producer may temporarily monopolize the production and sale of a particular commodity, but cannot monopolize the market for labor services (labor power).

From this analysis it follows that as the number of competitors in a sector of industry declines, competition intensifies:

> In practical life we find not only competition, monopoly, and the antagonism between them, but also the synthesis of the two.… Monopoly produces competition, competition produces monopoly.… The synthesis is such that monopoly can only maintain itself by continually entering into the struggle of competition. (Marx and Engels 1976, p. 197)

By this line of argument, competition is not an equilibrating force, but a destabilizing conflict among capitalist enterprises, leading to imperialism and wars between capitalist powers (this is explained in Weeks 1981, Chapter 6). While this approach may seem strange to the point of bizarre to twenty-first-century economists, in the mid-twentieth century it was very much part of the mainstream. In 1947, K. W. Rothschild linked competition to conflict in an article in the *Economic Journal*, the most prestigious publication in the profession at the time. His argument is quite consistent with Marx's analysis:

> [A] theory of markets can be complete and relevant only if its framework includes all the main aspects of the struggle [by corporations] for security and position. Like price wars, open imperial-

> ist conflicts will not be the daily routine of the oligopolistic market. But, like price wars, their possibility and the preparation for them will be a constantly existing background … and the imperialistic aspects of modern wars or armed interventions must be seen as part of a dynamic market theory just as the more traditional "economic" activities like cut-throat pricing … for there is no fundamental difference between the two. (Rothschild 1947, p. 319)

In light of the international tensions, conflicts, and wars since the end of the cold war, in some cases involving access to resources, it is perhaps worth revisiting Marx's analytical approach to capitalist competition.

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John Weeks

COMPETITION, MONOPOLISTIC

Economists have a spectrum of models with which to analyze how competing firms interact. The simplest of these involve situations in which firms can choose quantities and other variables (product quality, and advertising), without having to consider the reaction their choices might generate from other firms. Obviously, when there is a single firm in a market (a monopolist), this occurs by definition, as there are no other firms to do the reacting. However, it is also the key assumption underlying perfect competition, where firms are assumed to take prevailing prices as given. Specifically, firms believe that if they charge a higher price than the market price, they will lose all of their customers. The problem with perfect competition is that, in reality, competing firms have some discretion over the price, and they can therefore raise them without losing all of their sales. In this situation, however, firms might be "small," and so it might be reasonable to presume that they can be modeled independently of other firms' potential reactions.

Monopolistic competition is the term given to this "middle ground." An industry is defined as monopolistically competitive if: (a) there are many producers and consumers in the industry; (b) consumers have preferences that may cause them to favor one specific firm over another; and (c) there are no barriers to entry or exit. Conditions a and c are also features of perfect competition, so the critical distinction comes from condition b, whereby the products sold by firms are not homogeneous (i.e., perfectly substitutable) in the eyes of consumers. Consumers may favor one firm over another because of location, branding issues, knowledge of quality, advertising and marketing appeal, or individual product characteristics.

In many respects, the outcomes from monopolistic competition are similar to those from perfect competition. First, in long-term equilibrium with identical firms, profits are dissipated by competition, and entry occurs at the point where the marginal firm is earning enough to cover fixed or sunk-market entry costs. Second, prices reflect average production costs. However, because the firms have some pricing discretion, they will charge a mark-up over their marginal costs (even in the long-run) and conceptually will be able to recover fixed costs associated with, say, product development. This also means that, compared with perfect competition, prices will be higher and quantity lower in monopolistic competition, leading to a debate as to whether this sacrifice is made up for by product variety.

It is this latter implication that has perhaps proved most significant in giving monopolistic competition greater prominence in economic analysis. Monopolistic competition was independently developed by Edward Chamberlin and Joan Robinson in the early 1930s. Each was motivated by a problem with perfect competition identified by Piero Sraffa, who noted in 1926 that if firms had fixed production costs and falling average costs (i.e., economies of scale), then perfect competition imposed no limit to firm size. This could not be reconciled with the reality of smaller firms even where economies of scale appeared to be present. Chamberlin and Robinson saw the reconciliation of this problem in the notion that competing firms might have downward sloping individual demand curves. Chamberlin assigned this trend to the existence of product differentiation, while Robinson found that it came about because of an imperfect adjustment response from other firms (today termed "residual demand"). This meant that individual firms would be limited in their ability to realize scale economies because of entry by others who could pick up some consumers by supplying a differentiated product.

The marrying of economies of scale and competitive pressures led to important developments in other areas of economics. In 1977, Avinash Dixit and Joseph Stiglitz

developed a tractable model of monopolistic competition that allowed for a convenient analysis of product variety (and showed that too few products would be produced relative to the social optimum). This model formed the basis for new trade theory (Krugman 1979), new growth theory (Romer 1987), and new economic geography (Krugman 1991), each of which required a model that enabled firms to have economies of scale, yet also be limited by competitive pressure.

SEE ALSO *Competition; Competition, Imperfect; Discrimination, Price; Monopoly; Price Setting and Price Taking; Robinson, Joan*

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COMPETITION, NEOCLASSICAL

SEE *Competition, Perfect.*

COMPETITION, PERFECT

The concept of perfect competition is an idealization of friction-free, smoothly functioning, anonymous markets that, at best, serves as a benchmark to the markets that exist. Perfect competition is an abstraction based on underlying assumptions concerning: (1) the number of competitors; (2) the homogeneity of the product being sold; (3) the ease of entry into the market; (4) the level of knowledge and competence of competitors; and (5) the independence of competitors' behavior.

Heuristically, these five conditions are satisfied when: (1) both the number of buyers and the number of sellers are sufficiently large that it is virtually costless to switch trading partners; (2) the goods being traded by various sellers are more or less perfect substitutes for each other; (3) the entry and exit by buyers and sellers are more or less cost free and swift; (4) all agents are more or less aware of the previous market prices, and they are close together; and (5) the agents do not form coalitions in trading, and they act independently and more or less anonymously.

These conditions are easy to grasp in nontechnical terms, but making them mathematically precise is both worthwhile and difficult. Historically, the work in the economics of oligopoly of A. A. Cournot (1836) and Edward Chamberlin (1933) provides the basic examples for competition with homogeneous and differentiated goods. In the first instance, perfect substitutes are traded; in the second, the product of each individual differs from the others. The difference between oligopoly and perfect competition is that in the latter, numbers are assumed to be so great that it is not worthwhile for individuals to attempt to consider the detailed actions of other individuals. They thus view price and the market as an aggregate.

In perfect competition, the conditions for entry into the market amount to the proposition that there are no high barriers, such as hard-to-obtain licenses, social pressures, or extremely high set-up costs, to prevent potential new entrants from going into business. The condition that is possibly the most difficult to make precise is that on information. In the dynamics of the market, it is extremely difficult to determine who knows what from minute to minute. If there is a formal trading mechanism that forms price, such as a simultaneous sealed bid, the conditions can be described precisely. In an open-cry market, however, with bidders milling around the floor, description at best is only of aggregates.

In markets that meet frequently with established traders, it is feasible that over time implicit or explicit collaboration or collusion could evolve, even with numbers such as ten or twenty. This is ruled out by assumption in a competitive market; but it raises the question of how many competitors are necessary before collusion can be ruled out.

The formal methods of the theory of games have been utilized since the 1960s to make these intuitively simple concepts precise (see Shubik 1984). Even today, however, in highly practical problems, such as information leaks and insider trading in the stock market, an

understanding of how to guarantee the appropriate conditions on information has not been reached.

Perfect competition is a useful ideal if it is not followed too slavishly. Possibly the closest approximation to it is provided by the New York Stock Exchange, where a reasonably close level of approximation to competition has been achieved through the building up of an enormous body of laws and regulations required to level the playing field in an actual market.

SEE ALSO *Competition; Competition, Imperfect; Competition, Managed; Price Setting and Price Taking*

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Martin Shubik

COMPETITION, PURE

SEE *Competition, Perfect.*

COMPLEMENTARY/ ATTRACTION THEORY

SEE *Similarity/Attraction Theory.*

COMPLEXITY THEORY

SEE *System Analysis.*

COMPREHENSIVE SYSTEM

SEE *Rorschach Test.*

COMPULSORY VOTING

In order to be termed democratic, a regime must have certain characteristics. Even though political theorists debate the scope and depth of the characteristics of a democracy, there is a common understanding that certain minimum requirements comprise a democratic regime. In *Democracy and Its Critics* (1989), Robert A. Dahl identifies seven characteristics that should typically exist in a democracy. These are elected officials, free and fair elections, inclusive suffrage, right to run for office, freedom of expression, alternative information, and associational autonomy. The practices of these and similar characteristics vary from country to country. Inclusive suffrage in most representative democracies is understood as a requirement, allowing citizens the opportunity to influence their government through voting, and universal suffrage is seen as a sufficient condition. In some regimes, however, inclusive suffrage has been made mandatory by the introduction of compulsory voting.

There are different levels of compulsory voting. In its simplest form, there are legal regulations according to which voting is compulsory. The regulations can be stated through a common law or they can be coded in the constitution of the country. Moreover, this legal obligation can either be sanctioned or remain a mere moral proclamation. Further, sanctions can either consist of economic penalties in the form of a fine or there can be other legal consequences. The legal consequences vary, from the voter providing a legitimate reason for his or her abstention to disenfranchisement to imprisonment, the most severe consequence. Although imprisonment is not generally enforced as a penalty, in theory a court of justice can impose imprisonment if the nonvoter has failed to pay the fine. In any case, compulsory voting should not be seen as a discrete variable, but rather as an ordinal scale with different levels of compulsion.

Regulations on compulsory voting are not very common. According to an estimate by *International Idea* (Gratschew 2002), only some thirty countries have regulations on compulsory voting and of these only eight enforce it strictly. These countries are Australia, Belgium, Cyprus, Fiji, Luxembourg, Nauru, Singapore, and Uruguay. Also in the canton of Schaffhausen in Switzerland compulsory voting is strictly enforced, whereas voting in the other Swiss cantons is voluntary. In any case, less than one-fifth of the world's countries have any regulation on compulsory voting. Further, strictly enforced compulsory voting is a rarity; in less than 5 percent of all countries, compulsory voting is strictly enforced.

Compulsory voting has documented effects on voting behavior, particularly turnout. Strictly enforced compulsory voting boosts turnout, but also weakly enforced voting tends to increase turnout. However, merely a moral compulsion does not seem to affect turnout. Based on data from the Comparative Study of Electoral Systems,

Module 1, Pippa Norris in her book *Electoral Engineering* (2004) demonstrated that countries in which compulsory voting is strictly enforced have an average of 20 percentage points higher turnout than countries where voting is optional or where compulsory voting is not sanctioned in any way. Countries with weakly enforced compulsory voting systems fall in between, with an average turnout of 84 percent.

Compulsory voting tends to increase the number of invalid votes. Voters who do not have clear preferences but are still forced to the polls protest by voting blank or casting an invalid vote. According to David Farrell in his *Electoral Systems* (2001), the highest share of invalid votes in the 1990s was cast in Brazil, where the share was 19 percent. In Brazil, compulsory voting is weakly enforced.

Compulsory voting does not seem to contribute to a politically literate electorate. According to Kimmo Grönlund and Henry Milner in their article "The Determinants of Political Knowledge in Comparative Perspective" (2006), Belgium, a European country with a proportional electoral system and a multiparty system in combination with strictly enforced compulsory voting, deviates from its relevant European family in the dispersion of political knowledge. Political knowledge is highly dependent on the level of formal school education in Belgium, a pattern that is more typical for newly developed and developing countries, and not typical for European old democracies with proportional electoral systems.

Compulsory voting interferes with the logic of rational voting and abstaining. Since educated voting always involves personal effort, such as acquiring information and comparing parties' policies, it is rational that many people do not want to vote. In his book *Economic Theory of Democracy* (1957), Anthony Downs deduced that if voting were costless only people with preferences would vote and people with no preferences would abstain. In a system with compulsory voting the odds that a single vote is decisive are less than in a system where voting is optional and some people always abstain. The incentives to form an informed electoral opinion in order to cast a vote are therefore low in systems with strictly enforced compulsory voting. Contrary to policymakers' efforts to engage citizens politically by introducing compulsory voting, the system is more likely to increase the probability of uninformed and randomly assigned voting than to educate citizens. In the mid-2000s, however, there are no reliable comparative data on the effects of compulsory voting on political knowledge and informed voting.

SEE ALSO *Elections; Electoral Systems; Voting; Voting Patterns; Voting Schemes*

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Kimmo Grönlund

COMPUTER SIMULATION

SEE *Computers: Science and Society.*

COMPUTERS: SCIENCE AND SOCIETY

For decades, pundits with scholarly credentials have been predicting that computer and information technology would radically transform both science and society. Ultimately, they may be right, but the apparent changes to date have been limited and often contradictory.

SOCIETAL IMPACT OF COMPUTING

It is often said that rationalization, mechanization, and computerization of work contribute to the degradation of skills and thus the demotion of the workforce. Yet the research has shown varying effects: In 1987 William Form reported that technology sometimes led to the loss of skills but at other times required increased skills. Surveying a

different large body of research, Jeffrey Liker, Carol Haddad, and Jennifer Karlin reported in 1999 that the consequences for work organization of new technologies are highly variable and contingent on a number of factors, including labor-management relations and the specific social process through which the technology was developed and introduced. Information technology has long been considered a tool that large corporations use to control their workers and governments use to monitor their citizens. This is true both in the United States, where much of the information technology has been developed, and in countries into which such technologies have been introduced, despite their very different social conditions. In 1977 Philip Kraft argued that corporate desires for control over employees led to routinization and fragmentation even of the profession of computer programming itself, with a consequent loss of innovativeness.

Perhaps ironically, 1977 was also the year in which the first really successful personal computer, the Apple II, was introduced, created by a tiny company started by two friends in a garage. Since that time computer innovation has resulted in a remarkable scenario: Visionary individuals develop a prototype of an innovation and found a start-up company, which either becomes a major corporation overnight or is purchased for millions of dollars by an existing major corporation. In many cases, such as Google and the first Web browsers, the innovators were graduate students who received government support from grants to their professors who were working on something only indirectly related.

In 1973 the sociologist Daniel Bell proclaimed "the coming of post-industrial society," a new form of information-intensive society that would be marked by five primary features:

1. Economic sector: the change from a goods-producing to a service economy.
2. Occupational distribution: the preeminence of the professional and technical class.
3. Axial principle: the centrality of theoretical knowledge as the source of innovation and of policy formulation for the society.
4. Future orientation: the control of technology and technological assessment.
5. Decision making: the creation of a new "intellectual technology."

In such a postindustrial society, social scientists and information scientists might have been expected to enjoy great prestige and their profession to have achieved a position of dominance. Yet in the United States, where modern information technology largely arose, almost the opposite has occurred. Since 1982, when the Reagan administration sought to eradicate social science from the National Science Foundation and did succeed in cutting budgets to 40 percent of their prior levels (and cutting all budgets for social scientists; Larsen 1992), the influence of social scientists (other than economists and, rarely, demographers) on American policies has been insignificant. During the Clinton administration of the 1990s, there was a brief government flirtation with social science as applied to the Internet, before the second Bush administration ended it.

The so-called digital divide was the subject of much discussion in the mid- to late 1990s. The term refers to the tendency of disadvantaged groups to have less access to the Internet, and thus to information in general, than other more privileged groups. When numerous studies found this digital divide in schools as well as in the adult world, some voiced concerns that computers, though they might have the potential to reduce socioeconomic inequality, were actually increasing it. By this logic, government should invest in Internet-related technologies as a fundamental solution for social problems stemming from poverty and lack of opportunities for education. Once most middle-class households hooked up to the Internet on home computers, the novelty of the issue faded, and unequal access to information came to be taken for granted.

Internet and other modern computer technologies raised ethical issues that were mostly updated versions of old ones—for example, product liability, with software manufacturers forcing customers to agree to licenses in which the producers promised nothing. Some of these ethical issues may be more acute in the information context, notably those concerning privacy and intellectual property rights, but they are not unprecedented. An extended debate has raged over whether computers degrade social relationships in society, enhance them, or merely provide a new environment in which they may take place. As Leah Lievrouw (2003) has observed, the Internet has become contested territory on which individuals and small groups assert their autonomy, major corporations monopolize attention and attempt to criminalize activities that threaten profits, and activists launch counterattacks against corporate tyranny. This is seen not only with respect to file sharing of music, but also blogs revealing government or corporate secrets, posting of programs called "mods" (modifications) that alter commercial software, and coopting commercial chatrooms to organize radical cultural, political, sexual, and economic networks.

Ray Kurzweil, among the most influential computer entrepreneurs and visionaries, argues in his 2005 book that technology is driving humanity toward a *singularity*, utterly transforming human life during the present century. He raises the possibility that humans may no longer

be limited to biological bodies but dwell within robots or computers, and that artificial intelligences will surpass human intelligence. Whatever one thinks of this extreme possibility, Kurzweil suggests an interesting principle that puts all such prognostications in context: People tend to overestimate the near-term impact of a technological revolution and to underestimate the long-term impact. Social scientists have tended to stumble along these lines, asserting that the computer revolution has arrived but not contemplating where and when its greatest impacts will be felt.

IMPLICATIONS FOR SOCIAL SCIENCE

Arguably, the computer revolution began for social science at the beginning of the twentieth century, when Hermann Hollerith developed programmable, punch-card counting machines to analyze data from the 1900 U.S. census and founded what later became the IBM corporation. Thus social-science computing is a mature field, yet many promising computer methods are underused in the social sciences.

After decades of development, computer simulation still has only a marginal position in most of the social sciences. In 1974 Donella Meadows and colleagues published a dire and influential warning about the human future, called *The Limits to Human Growth*, based on computer simulations of the global socioeconomic system; but three decades later social scientists were still debating whether the approach has merit. A number of social scientists with classical training have taken up computer simulation as a methodology for developing theory and testing its logical consistency. For example, William Bainbridge (2006) used a system of 44,100 artificial intelligent agents to model the way that religious cognitions and social influences interact in a community the size of a small city. But much of the simulation work on human societies ignores traditional work on the same topics, thereby failing to integrate the simulation community with the rest of social science. A striking but not unusual example is the otherwise excellent textbook, *Simulation for the Social Scientist* (2005), by Nigel Gilbert and Klaus Troitzsch, which cites in its extensive bibliography almost none of the simulation studies published in mainstream social science journals.

The general field of human-centered computing (HCC), including the subfields called human-computer interaction (HCI) and computer-supported cooperative work (CSCW), has become major research territory, although a large fraction of the scientists come from outside the classical social sciences, and very little of this work is published in mainstream social science journals. The goal of these HCC researchers is generally to develop or evaluate hardware or software systems, rather than test general theories, and their methodologies rarely meet social science standards of rigor. This "wild west phase" in the history of HCI and CSCW may be coming to an end, as evidenced by the papers presented at the international Communities and Technologies conferences that tend to cite a good mixture of traditional social science along with computer science work on Internet-based communication networks.

Although every social scientist today uses Internet search engines, few seem to realize that they are versatile tools for social analysis, and that other potentially useful tools can be found on commercial Web sites. A Web search engine needs not only to find Web sites that contain a particular word, but also to arrange the Web sites in descending order of probable value to the user, on the basis of *natural language processing* (NLP) and analysis of the network of links connecting Web sites. These methods could be used by social scientists to map the culture and society that produced all the Web sites. Business sites, such as Amazon and Netflix, include *recommender systems* (or *collaborative filtering* systems) that create advertisements personally tailored for the individual user, based on the buying patterns and expressed preferences of previous customers. Applied, for example, to books about politics, these methods could tell political scientists much about how citizens view leaders and issues. Even as social scientists study the impact of information technology on the rest of society, they should contemplate how it might transform their own disciplines, for good or ill.

SEE ALSO *Digital Divide; Internet; Internet, Impact on Politics; Knowledge Society; Limits of Growth; Managerial Class; New Class, The; Reagan, Ronald; Social Science; Society; Technological Progress, Economic Growth; Telecommunications Industry*

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William Sims Bainbridge

COMTE, AUGUSTE
1798–1857

Auguste Comte was a French philosopher best known for founding the field of sociology and the philosophical school of positivism. Born into a Catholic and monarchial family in Montpellier on January 17, 1798, he rejected Catholicism and royalism at the age of thirteen and entered the progressive École Polytechnique in Paris three years later. He soon began a close association with the French social reformer Claude Henri de Rouvroy Saint-Simon (1760–1825) and served as his secretary for several years. After breaking with Saint-Simon and then suffering a mental collapse in 1827, Comte recovered and published the six volumes of his seminal *Course of Positive Philosophy* between 1830 and 1842. He also served as a tutor and examiner at the École Polytechnique beginning in 1832, but was dismissed in 1842 as a result of a dispute with its directors. He had gained a considerable following by this point, and for much of the remainder of his life his admirers and disciples supported him financially. In the early 1850s he began formulating his own humanitarian and non-theistic religion, the Religion of Humanity. His second and final major work, the four-volume *System of Positive Polity*, was published from 1851 to 1854. Soon afterward Comte's perennially poor health deteriorated even further, and he died of stomach cancer on September 5, 1857.

Comte is perhaps most famous for his "law of three stages," according to which intellectual and social development progresses through three chronological steps: the theological stage, in which events are attributed to the actions of gods and supernatural forces; the metaphysical stage, in which the world is explained through abstract concepts such as "nature" and "final causes"; and the final, positive stage, which is characterized by a willingness to simply observe the world without searching for a metaphysical cause or final principle that governs it. Comte believed that the "positive" method that had triumphed in mathematics, astronomy, and physics would eventually prevail in other fields such as economics and politics; this belief system made him an important forerunner of positivistic social science as it emerged in the mid-twentieth century, which held that mixing "facts" and "values" would entail a betrayal of scientific thinking. According to Comte, the positive method would culminate in a new science, sociology, the goal and achievement of which would be nothing less than the synthesis of all human knowledge and the resolution of the crisis of the modern world through the reorganization of society.

Comte maintained that nearly all social problems could be solved by organizing society into an all-embracing hierarchical system in which an intellectual elite helps to regulate education and public morality, an outlook which the English biologist Thomas H. Huxley (1825–1895) described as "Catholicism minus Christianity" (Pickering 1993, p. 17). The English philosopher John Stuart Mill may have overstated the case in arguing that Comte aimed at establishing "a despotism of society over the individual, surpassing anything contemplated in the political ideal of the most rigid disciplinarian among the ancient philosophers" (Comte 1975, p. xxviii), but it is difficult to deny that Comte's emphasis on hierarchy and obedience put him sharply at odds with liberalism and democracy.

SEE ALSO *Mill, John Stuart; Positivism; Sociology*

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Dennis C. Rasmussen

CONCENTRATION CAMPS

The concentration camp has become a paradigmatic symbol for oppression of the racial or ethnic "other." The *Oxford Dictionary* defines a concentration camp as "a camp where non-combatants of a district are accommodated." While this definition captures the basic description it does not articulate that concentration camps have become synonymous with starvation, rape, torture, violence, and mass extermination. Some camps also involve forced labor in addition to the other forms of inhumane treatment. Many states—Western and non-Western, democratic and undemocratic—have used concentration camps as tools to target civilian populations and hated ethnic groups. The justification for camps has generally been to cleanse the society of perceived internal threats to security and order. In most cases a distinct ethnic group or class of people is determined to be a threat and subject to internment by state decree in order to guarantee stability and prevent insurgency. Thus the development of concentration camps is driven in its earliest form as a counter-insurgency technique against anticolonial struggles.

The first use of concentration camps was by the British during the Boer war (1899–1902). Boers and black Africans were placed in camps so that they would be unable to aid Boer guerrillas. It is reported that more than 27,000 Boers and 14,000 Africans died in the camps from disease and starvation. Most of the dead were children, clearly noncombatants in the conflict. The British also employed the use of concentration camps in Namibia, the Isle of Man, Cyprus, Kenya, Channel Islands, and Northern Ireland. In Kenya during the Mau-Mau rebellion the British placed 1.5 million Kikuyu rebels in concentration camps. More than 300,000 Kenyans died as a result of these policies. These cases make it clear that even when concentration camps are not explicitly designed to exterminate large portions of the enemy population they are no less deadly in their effect.

Camps have almost always been justified by and surrounded conflicts whether civil or international. Some of the most notable examples have surrounded multinational conflicts like World Wars I (1914–1918) and II (1939–1945). During World War I, Austria-Hungary placed Serbs and Ukranians in concentration camps during the war. However, the most prominent examples emerge from the experience of World War II.

The experience of Nazi Germany in World War II stands as the paradigmatic example of concentration camps. The Nazi government led by Adolf Hitler and an ideology of cleansing the German nation and controlled territories of Non-Aryans, developed camps for mass extermination and forced labor. The primary groups targeted by Germans were Jews from Germany and territories occupied by Germany during World War II like the Netherlands, France, and Poland. However, while the Nazi camps are known for their extermination of Jews they were not the only populations placed in camps. Nazis also placed the Roma (Gypsies), Africans, homosexuals, and communists in camps for forced labor and extermination.

The Nazi camps first began in 1933 largely for internment but were converted to the cause of extermination in 1941. Evidence shows that more than six million Jews and some unknown others perished in the Nazi camps of Treblinka, Belzec, Auschwitz-Birkenau, and Sobibor. Methods of extermination included starvation, gas chambers, disease, and firing squads. According to some sources groups of individuals were used at times as target practice for German soldiers.

The Nazi concentration camp spawned immense creativity and social scientific work. Psychologist Viktor Frankl developed his psychological perspective called *logotherapy* based upon his experiences in Auschwitz and Dachau. Italian theorist Giorgio Agamben has developed theories around the *state of exception* and the *bare life* to see the concentration camp as a product of modern state sovereignty rather than as an aberration. Italians also placed Jews and communists into camps during World War II and camps also existed in the Netherlands and France.

However, Germany and Italy were not the only nations to use internment during World War II. The United States put ethnic Japanese, many of who were American citizens, into what were called internment camps beginning in 1942. This action was undertaken by the Roosevelt administration under executive order 9066 following the bombing of Pearl Harbor by Japan in December of 1941. More than 120,000 Japanese Americans and some German Americans, two-thirds of whom were U.S. citizens, were placed in internment camps. Lt. General J. L. DeWitt wrote in a letter to the Chief of Staff, U.S. Army, June 5, 1943, that, "The security of the Pacific Coast continues to require the exclusion of Japanese from the area now prohibited to them and will so continue as long as that military necessity exists" (p. vii).

Many Japanese died or suffered poor health and neglect in the camps. In order to leave the camps young men had to swear allegiance to the United States and agree to enter the U.S. military. Many refused and were punished, and their stories are captured in the novel *The No, No Boys* (1978)[MS1] referring to their decline of swearing allegiance to the U.S. and their decline of military conscription. In 1988 the U.S. Congress formally apologized to Japanese American victims of internment camps and granted reparations to the group according to the Japanese-American Reparation Act.

Japanese internment is not the only instance in the United States of the perceived use of what many identify as concentration camps. The practice of placing Native Americans on Indian reservations that had few services and little or no economic opportunities has been likened to the practice of concentration camps. The Native American experience begins with the Indian Removal Act of 1838, which relocated Southern tribes east of the Mississippi River and set the stage for moving them to reservations. Others like Stanley Elkins in his work on slavery compared slave plantations to concentration camps.

In the twenty-first century the detention and torture of terror suspects and so-called illegal combatants outside of the Geneva conventions at "Camp X-Ray" in Guantanamo Bay, Cuba, has been likened to concentration camps. Detainees have been subjected to a range of forms of extralegal torture that do not conform to the Geneva Conventions or other international law.

Latin America has not been free from the experience of concentration camps. The military junta in Argentina used camps to torture and kill more than 30,000 disappeared dissidents between 1976 and 1983 during what is called the "Dirty War." The military regime of Augusto Pinochet (1915–2006) in Chile also used similar camps to deal with dissidents during its reign following the coup against democratically elected leftist President Salvador Allende (1908–1973).

Between 1895 and 1898 the Spanish in Cuba employed camps to combat the insurgents fighting for Cuban independence. The atrocities in the camps, the bombing of the *Maine*, as well as the imperialist designs of the United States are cited as reasons the United States invaded Cuba in the Spanish-American War (1898). The Spanish also used camps in the Philippines in 1901 to quell descent against colonial rule.

Other uses of the concentration camp have involved the Khmer Rouge regime headed by Pol Pot (1925–1998) in Cambodia, North Korea, and the Peoples Republic of China reform and labor camps. The camps in Cambodia caused the deaths of 1.7 million enemies of the Khmer Rouge (1975–1979); the camps in North Korea held 1.6 million enemies of the state (1948–1994); and countless millions in the camps in China developed during the Great Leap Forward and the Cultural Revolution (1958–1961 and 1966–1969). In each case, these were communist regimes that used camps to "reform" political dissidents or those who were perceived to be ideological or ethnic enemies of the regime. In each case, thousands died in camps from starvation or from overwork or were executed. Soviet leader Joseph Stalin (1878–1953) used concentration camps called *gulags* to address political dissenters, Jews, and other ethnic groups in Russia. These camps included Trotskeyite political foes, and ethnic Ukranians, Chechens, Inguish, Crimean Tartars, Tajiks, Bashkirs, and Kazaks.

One of the more recent experiences with concentration camps was the Balkan War, following the break-up of Yugoslavia. In Bosnia and Herzegovina between 1992 and 1995 more than 200,000 Croats, Serbs, and Muslim were killed in camps and by acts of ethnic cleansing.

The widespread use of concentration camps for social scientists demonstrates the willingness of various kinds of states in different contexts to engage in this harsh form of population regulation. The camps themselves demonstrate the extensive power of modern states to regulate all aspects of everyday life for citizens and other populations contained within national, colonial, or imperial boundaries. Camps have also provided opportunities to understand the psychology of the oppressors and the oppressed. The concept of authoritarian personality was developed in part to understand the participation of regular Nazi soldiers in the extermination of Jews. Further, the works of Stanley Elkins, Avery Gordon, Agamben, and Frankl, among others, examine the effects of camps on individuals and groups. Beyond psychology, notions of collective memory and haunting have also been developed to analyze the way the experience of concentration camps structures the lives and memories of generations beyond the initial victims. Concentration camps are a devastating product of modern nation states and civil and international military conflicts. At the same time, they are a rich but disturbing area of study for those who seek to understand the role of the state and the psychology of violence and oppression.

SEE ALSO *Colonialism; Contempt; Genocide; Hitler, Adolf; Holocaust, The; Imperialism; Imprisonment; Incarceration, Japanese American; Jews; Nazism; Personality, Authoritarian; Reparations*

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Mark Sawyer

CONDITIONALITY

Conditionality is the practice used by international financial institutions (e.g., the International Monetary Fund and the World Bank) and bilateral donors to link their provision of financial support to developing and middle-income countries to the implementation of prespecified policy reforms.

Conditionality has its origins in the Articles of Agreement of the International Monetary Fund (IMF), adopted at the United Nations Monetary and Financial Conference in Bretton Woods, New Hampshire, in 1944, and amended several times since. The Articles of Agreement state that one of the purposes of the IMF is to provide temporary balance-of-payment support to countries that need it under "adequate safeguards" that the loans will be repaid (Article I(v) of the IMF Articles of Agreement). Since the early 1950s, these safeguards have been achieved through the imposition of specific policy conditions, set out in the stand-by arrangements negotiated by the IMF with countries receiving its support. These conditions were designed to ensure that the recipient country adopted macroeconomic policies that would allow it to be in a position to repay the foreign exchange funds lent by the IMF in the foreseeable future. Conditionality therefore acted as a substitute for the collateral used to guarantee loans between private companies.

The nature of conditionality has evolved since the early practice of the IMF. Initially, conditionality only included macroeconomic policy reforms aimed at addressing the external disequilibrium experienced by the recipient countries (e.g., reduction in domestic absorption, policies to promote exports). In the 1970s and 1980s conditionality became more extensive, and included structural conditions too (e.g., privatization of state-owned entities), in order to address larger balance-of-payments crises. Moreover, donors other than the IMF (most notably the World Bank) started to impose conditionality too, to ensure that their project lending would take place in a sound policy environment. Conditionality is still being used by the IMF in its support of middle countries experiencing significant currency crises (e.g., several East Asian countries in the late 1990s and Argentina from 2000 to 2002) and by all donors that lend money or give grants to developing countries. Conditionality applies to a wide variety of policy areas (including governance), even though donors are seeking to streamline its use.

Conditionality has been frequently criticized for its lack of effectiveness. One area of criticism relates to the type of orthodox economic policies (e.g., sharp reductions in expenditures and tight monetary policies) typically demanded by donors through conditionality. Critics have seen these policies as ineffective in stimulating growth and reducing the social costs from adjustment.

The second reason why conditionality has been seen as not effective is because of its lack of credibility. Countries receiving donor support can often anticipate that even if they do not fully implement the policy reforms demanded under conditionality, they will still receive support from the donors. This is because donors may have an interest in providing support even if conditionality is not adhered to, due to, for example, geopolitical considerations, pressure to spend aid budgets, and the need to ensure the repayments of past loans. This undermines the effectiveness of conditionality, leading only to partial implementation of the policy reforms demanded by donors in return for financial support.

SEE ALSO *International Monetary Fund; World Bank*

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Giulio Federico

CONDORCET, MARQUIS DE

1743–1794

Marie Jean Antoine de Caritat, Marquis de Condorcet, a descendant of the ancient family of Caritat, was born on September 17, 1743, at Ribemont, Aisne, in France. His father died early, and Condorcet's devoutly Catholic mother ensured that he was educated at the Jesuit College of Rheims and at the College of Navarre in Paris. A talented young mathematician, he soon came to the attention of the mathematicians Jean le Rond d'Alembert (1717–1783) and Alexis Clairault (1713–1765). In 1765 Condorcet published a work on mathematics entitled

Essai sur le calcul intégral (Essay on Integral Calculus), and he was elected to the *Académie Royale des Sciences* four years later. After becoming acquainted with Anne Robert Jacques Turgot (1721–1781), who served as controller-general of finance under King Louis XV (1710–1774), Condorcet was appointed inspector general of the Monnaie de Paris (Paris Mint) in 1774. Condorcet later wrote a sympathetic *Life of Turgot* (1786), which supported Turgot's economic theories. In 1777 Condorcet was appointed secretary to the Académie des Sciences; in 1782 he became secretary of the Académie Française; and in 1789 he published his *Life of Voltaire*. Thomas Malthus's (1766–1834) *Essay on the Principle of Population* (1798) was published partly in response to the optimistic views on the perfectibility of society that Condorcet expressed in his writings.

Condorcet remains influential in the social sciences because he applied mathematical ideas to social and political problems. He became famous for what is now known as *Condorcet's paradox*, first presented in his *Essay on the Application of Analysis to the Probability of Majority Decisions* (1785), which describes the intransitivity of majority preferences in electoral politics. An election can occur even when there is no clear candidate whom the voters prefer to all other candidates. In such a situation, known as a *majority rule cycle* or *circular tie*, one majority prefers candidate *A* over *B*, another majority *B* over *C*, and a final majority *C* over *A*. To break such electoral circles, Condorcet invented a method in which voters rank candidates in order of preference; these electoral procedures are known as the *Condorcet method*, which is designed to secure a definite *Condorcet winner*.

Condorcet played a leading role in the French Revolution of 1789. In 1791 he was elected to represent Paris in the Legislative Assembly, where he presented plans for the creation of a state education system and drafted a new constitution for France. He also campaigned for the abolition of slavery and advocated female suffrage, publishing a pamphlet titled "On the Admission of Women to the Rights of Citizenship" in 1790. Although he was a revolutionary, he did not support the execution of the French king, and aligned himself with the more moderate Girondist Party. He opposed the so-called Montagnard Constitution, which he thought was too radical and far-reaching. As a result, he was regarded as a traitor and a warrant was issued for his arrest. While in hiding, Condorcet wrote his famous *Sketch for a Historical Picture of the Progress of the Human Mind*, which was published posthumously in 1795. This major text of the French Enlightenment describes the historical connection between the growth of science and the development of human rights.

In March 1794 Condorcet attempted to escape from Paris, but he was arrested and imprisoned, and was later found dead in his cell; the cause of his death has never been determined. Condorcet was interred in 1989 in the Panthéon in Paris in honor of the bicentennial of the French Revolution.

SEE ALSO *Human Rights; Majority Rule; Voting*

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Bryan S. Turner

CONFEDERATE STATES OF AMERICA

The Confederate States of America was officially founded in February 1861, after seven Southern states (South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas) seceded from the United States. For years, Northern and Southern states had been debating the issue of slavery, especially in the territories, where it was not constitutionally protected. These debates had escalated during the 1850s, sometimes to the point of violence. When Abraham Lincoln, who represented a specifically antislavery party and wanted to end slavery in the territories, was elected president of the United States in 1860, these seven states declared they had had enough and left the Union.

They quickly went to work forming a provisional government. Shortly after announcing the new country, the Confederate Congress appointed Jefferson Davis president (he would be officially elected to office in November). It named Montgomery, Alabama, as the new nation's capital, and it adopted a constitution. This constitution was modeled largely on the United States Constitution (Confederates, like their Northern brothers, insisted they were the true heirs of the Founding Fathers) with several important exceptions. Where the federal Constitution had never used the words *slave* or *slavery,* but implicitly protected the peculiar institution, the Confederate document explicitly protected slavery—even deeming that Congress could pass no law that would impinge on "the right of property in negro slaves." Unlike the Americans, however, the Confederates immediately banned the international slave trade, except with states remaining in the Union. The president served a six-year term, and he could not be reelected. He also had the right to a line-item veto.

When fighting broke out with the Union in April, four more states (Virginia, Tennessee, North Carolina, and Arkansas) joined the Confederacy. In an acknowledgment of Virginia's importance, Confederate leaders quickly agreed to move the capital to the industrial and commercial city of Richmond. For the South in particular, this decision made Virginia the military focal point of the war. Because the Confederate leadership did not have the sense of urgency about the West that it did about Richmond, less able generals were often in command there, and the rebels suffered loss after loss.

War dominated the life of the Confederacy. Leaders at the state and national levels were constantly challenged with the problem of keeping the ranks filled and with feeding and clothing the army. The country had 5.5 million whites and about 3.5 million black slaves who would not be allowed to serve. By 1862 Confederates were so desperate for men that they resorted to a national draft. This was a deeply ironic development in a country that had embraced individual liberties and states' rights as being among its banner causes. Meanwhile, a successful Union blockade and the lack of internal infrastructure complicated efforts to procure and transport needed supplies. (The same issues made it exceedingly difficult for Southerners to export their main commodity, cotton.) Financing the war was another problem, one that Confederates never mastered. Relying principally on loans and the printing press to pay for the war, the government helped drive inflation through the roof. Congress passed a comprehensive tax measure in 1863, but the government did not effectively enforce it, and so it made little impact. Over the course of the war, prices increased by a factor of more than 90.

The stresses of war had profound effects at home. Rising prices, shrinking availability, speculation, and a drought in 1862 meant that civilians started to go hungry that year. By the following spring, bread riots were breaking out, including one on April 2, 1863, in Richmond that Davis personally broke up. Hoarding and price gouging only compounded matters, and concern for starving families led many Confederate soldiers to desert, especially in the last year of the war. Meanwhile, war itself forced many families into flight. The presence of federal armies also prompted many slaves to abandon their masters and run to the safety—and freedom—of Union lines.

A prickly micromanager, Davis was unable to lead the nation effectively. He had a running argument with more than one general (Robert E. Lee was the only general to whom he regularly deferred), and his cabinet was a revolving door (he had five secretaries of war, for instance). He never reached out to members of Congress or the press, and was barely on speaking terms with his own vice president, Alexander Stephens. Davis had repeated tussles with various governors, particularly Joseph Brown of Georgia and Zebulon Vance of North Carolina, both of whom resisted what they believed were Davis's encroachments on states' rights. In fairness, Davis's management troubles were not entirely of his own making. The one-term rule set out by the constitution rendered Davis a lame duck from the moment he stepped into office. Historians widely believe that the lack of political parties in the South, which blamed partisanship for many of its antebellum fights with Northerners, meant that criticism against Davis was not channeled and came at him from every angle. Without partisan machinery and the attendant patronage, Davis had no way to punish his enemies or reward his supporters.

By the end of the war, the Confederacy was a tangle of contradictions. In a nation founded partly on the principle of individual liberties, Davis suspended habeas corpus and declared martial law in some parts of the country, while Congress passed the first conscription measure in what had been the United States. In a country that was predicated on states' rights, the federal government had to consolidate power at the expense of the states in order to prosecute the war. And in the most striking irony, this state that had been founded to protect slavery decided in March 1865 to arm slaves in a last-ditch effort to hold off the Northern armies. The policy could not be implemented, however, before Lee surrendered to General Ulysses S. Grant on April 9, 1865. Although it took some time for news of the war's end to reach the far corners of the Confederacy, for all intents and purposes the Confederate States of America died with Lee's army.

In the 1870s, Southern white women in particular set out to venerate their fallen men and the Old South. In doing so, they created what has come to be known as the Lost Cause mythology, a moonlight-and-magnolias view of the slave-owning South and the Civil War. The central ideas behind the Lost Cause are that the Confederacy lost the Civil War because the North overwhelmed it with superior numbers, not better fighting, and that defeat ennobled the South rather than discredited it. This ideology is evident in various monuments, works of fiction, and film, with the most notable and culturally penetrating work being *Gone with the Wind*.

SEE ALSO *Civil War; Davis, Jefferson; Lee, Robert E.; U.S. Civil War*

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CONFEDERATIONS

A confederation is a voluntary association of sovereign, independent nation-states or political communities that manages, in limited ways, its members' common concerns, such as defense, foreign relations, trade, postal services, and a common currency. A confederation, therefore, ordinarily entails cooperative unity across a broader range of governmental functions than a customs union in which the member nations eliminate trade barriers among themselves and implement a common tariff policy toward nonunion nations.

The word *federal* comes from the Latin *foedus*, meaning "covenant," which signifies a partnership or marriage wherein individuals or groups consent voluntarily to unite for common purposes without surrendering their fundamental rights or identities. The verb *confederate* has traditionally meant to form an alliance to carry out the will of a coalition of interests, none of which relinquish sovereignty.

Commonly cited examples of confederations include the Aetolian (367–189 BCE) and Achaean leagues (280–146 BCE) of ancient Greece, the Iroquois Confederacy in North America (c. 1142–1794), the Swiss confederations (1291–1798 and 1814–1848), the Polish-Lithuanian Commonwealth (1569–1795), the Dutch Republic (1589–1795), the Articles of Confederation of the United States (1781–1789), the Germanic Confederation (1815–1866), and the southern Confederate States of America (1861–1865).

Before the framers of the U.S. Constitution invented modern federalism in 1787 the word *federal* referred to what is today called *confederal*. The U.S. founders transformed the historic concept of federalism as confederation into the modern concept of federation, thus generating today's widely held view that confederations are weak, even outmoded. Indeed, most modern confederations have been short-lived. Recent examples include the United Arab Republic (1958–1961), the West African union of Senegal and the Gambia (Senegambia, 1982–1989), and the State Union of Serbia and Montenegro (2003–2006) in southeastern Europe.

Confederations established before the 1700s sometimes lasted for several centuries, but confederations established since the 1700s have usually lasted less than a decade, in part because the modern nation-state and its attendant nationalism militate against merely confederal unity. Additionally, the complexity of modern governance strains the capabilities of confederations, while the availability of alternate means of functional cooperation, such as military alliances and trade agreements, render confederations less necessary. These problems are illustrated by the Commonwealth of Independent States (CIS), a quasi confederation established in 1991 by twelve successor states of the Union of Soviet Socialist Republics. Although the CIS still exists in form, it is weak, fractious, and pockmarked by separate alliances and agreements among subsets of its members.

A confederation is usually established by, and based on, a written document called *articles*, a *convention*, a *treaty*, or some other term. The document states the confederation's purposes, terms, structure, procedures, and specific powers. Attributes of sovereignty are not usually vested in a confederation; individuals retain citizenship in the separate member states; and member states can exit the confederation. Hence, a confederation usually possesses only limited, expressly delegated powers, and can exercise only those powers explicitly stated in the founding document. It cannot increase its powers through interpretation.

An important, common difference between a federation and a confederation is that a confederation usually cannot legislate for individuals. Consequently, the confederal government under the U.S. Articles of Confederation could not tax, fine, arrest, or regulate individuals, or conscript citizens of the constituent states into the confederal military. Ordinarily, a confederation can act only through its member states. Also, it possesses no independent sources of revenue to support its operations; instead, it must rely on contributions or dues payments by its member states.

All member states ordinarily have equal representation and one vote each in the confederation's decision-making council. The representatives are usually appointed and also paid by their member governments rather than being elected by the people of the member states and paid by the confederal government. Thus, the members of a confederal council are more like ambassadors than representatives. Frequently, majority voting is rejected in favor of supermajority and unanimous voting.

There is no precise, universal definition of *confederation* or exact distinction between confederation and federation because confederations, as well as federations, vary in their characteristics. Attributes of confederation and federation get mixed together in response to political cir-

cumstances. For example, Switzerland's constitution is titled the Federal Constitution of the Helvetic (or Swiss) Confederation. The European Union's (EU) core decision-making structure is confederal; yet, many of its operational features are federal. The EU is a hybrid—a confederal federation—that has endured because its confederal features guarantee the continuing authority and integrity of the member states, while its evolving federal features guarantee the operational viability of the union within its limited but gradually growing sphere of authority.

SEE ALSO *Confederate States of America; European Union; Pan-Arabism; Pan-Caribbeanism; Sovereignty; Union of Soviet Socialist Republics*

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John Kincaid

CONFIDENCE INTERVALS

SEE *Statistics in the Social Sciences.*

CONFIDENCE LIMITS

SEE *Probability, Limits in.*

CONFISCATION

Legislation enabling courts to confiscate or remove illegal gain has grown rapidly in a wide range of both civil and common-law countries. The concept is not new: forfeiture was part of Roman law as early as 451 BCE and was also used by the ancient Greeks. In more recent times, confiscation has usually been introduced as a part of the fight against organized crime and drugs, either directly in drugs legislation or in a penal code and applicable to all kinds of crimes. In 1970 the U.S. Congress passed the first criminal forfeiture statutes in U.S. history. In the United Kingdom forfeiture was introduced in the Drug Trafficking Offences Act 1986 and has been subsequently strengthened and extended to other areas of crime via the Criminal Justice Act 1988 and 1993, the Drug Trafficking Act 1994, and the Proceeds of Crime Act 2002. In other countries the sanction of removing illegal gain has been introduced for a wide array of crimes, extending even to environmental statutes.

The power of courts to impose this sanction varies substantially across areas of the law and also across jurisdictions. In some countries, such as the United States, the proceeds of drug trafficking can be forfeited under civil powers, independent of any criminal proceedings. Although in the United States forfeiture is technically considered to be a civil sanction, the Supreme Court has recognized that forfeiture constitutes a significant punishment and is thus subject to constitutional limitations under the Eighth Amendment. In other countries, such as the United Kingdom, the confiscation of such assets is only possible as a subsidiary part of criminal proceedings.

The goal of removing illegal gain, according to legal doctrine, is to achieve *restitutio ad integrum*. This means that criminals should be put back in the situation in which they would have been had the crime not been committed. This corresponds to the general notion that crime should not pay. This restitutive goal may not be fully achieved with the imposition of other sanctions, such as fines or imprisonment: A fine may well be much lower than the profit from an offense, and imprisonment is no guarantee that the offender will be left without the profits of a crime. For offenses such as theft, the offender can be required to return stolen goods or to pay compensation to the victim of the crime. But for so-called "victimless crimes" such as environmental pollution or drug trafficking, the harm caused by crime is experienced by society at large rather than by identifiable victims, in which case the confiscation of illegal gain replaces individual compensation.

The goal of providing restitution through confiscation also has important consequences for legal character. Confiscation is not usually considered a criminal sanction, as is a fine or imprisonment, but a measure. (There are exceptions to this, however; in France confiscation may be a supplement to a penal sanction or, in some cases, even the primary sanction.) Measures are designed to be correc-

tive or to provide restitution and aim either at protecting society or at restoring a loss. Therefore criminal sanctions are usually said to have a punitive goal, whereas this is not the case for measures.

Confiscation occurs after a crime has been committed and thus has little to add by way of deterrence, assuming the courts are applying efficient sanctions that already take illegal gain into account. But if the courts have been applying fines that exclude illegal gain, then a role for confiscation may emerge. Bowles, Faure, and Garoupa (2000, 2005) have argued that there are certain types of offense for which the removal of illegal gain provides a punishment superior to more traditional sanctions. Offenses committed sequentially and where the victims are unaware of offenses being committed may be very difficult (and costly) to detect. For example, a drug dealer may accumulate wealth from a large number of small illegal transactions, or a polluting firm may discharge illegal effluent over a prolonged interval. In such instances it is impracticable to prosecute each illegal action individually. Confiscation can be a way to tie sanctions more closely to an offender's cumulative ill-gotten gains and to increase the scale of sanctions. This can help compensate for weak deterrence in crimes such as illegal trading, where conviction probabilities are low and the fines imposed are low in relation to the potential gains.

SEE ALSO *Violence, Role in Resource Allocation*

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CONFLICT

In general usage, a *conflict* is a disagreement or incompatibility of goals. In conflict resolution literature, however, *conflict* is distinguished from *dispute*, with the former being a long-term, deep-rooted problem, and the latter being a short-term, more superficial difference that can usually be resolved through simple negotiation. Conflicts, in this sense, are often caused by attacks on, or the absence of, basic human needs, especially identity, security, and a sense of self-worth. Most conflicts between ethnic groups, for example, are of this type. One group may threaten the legitimacy and value of another's identity, or it may attack or threaten them physically, psychologically, socially, economically, or politically, thereby causing a conflict.

Conflicts can also be caused by disagreements about fundamental moral values (e.g., definitions of right and wrong). In the United States, the conflicts over abortion rights, homosexual marriage, and the role of Christianity in public affairs are all examples of such value conflicts.

Finally, conflicts can involve disagreements about rights or denial of rights. These can include fundamental human rights, which are laid out in the Universal Declaration of Human Rights, or they can be more narrowly defined in national or state constitutions or laws, or in local ordinances. In all of these cases, the problem is not easily negotiable: people do not negotiate about their religious beliefs, nor do they compromise their basic rights. They fight for them.

Disputes, on the other hand, are often differences of interests: who is going to do what and when, how much someone will pay for something, or how a limited good will be distributed. Such disputes are usually negotiable, and a so-called win-win, or integrative, solution can often be found through which everyone is satisfied and the dispute is resolved.

Politics, being about the distribution and use of power, is inherently conflictual. It could be argued that all politics is conflict and conflict resolution, because it involves the processes used to determine who has power to make decisions and to prevail in disputes at the family, organizational, community, national, and international levels. At all of these levels, institutions have been developed to routinize the management of such disputes: families may use a consensus process or one of parental control; organizations have management policies and procedures; communities, nations, and even the international system have laws, legislatures, executive branches, and courts. All of these institutions are designed to resolve conflicts over who will do what, what rights people have, and even what moral codes will be followed (as, for instance, with abortion laws).

In general, these mechanisms work fairly well, and most conflicts are successfully prevented or resolved. Sometimes, however, established mechanisms break down and destructive and protracted conflicts develop. These may take the form of domestic violence or protracted family disputes between spouses or between parents and children. Also common are long-running conflicts within organizations over such topics as who will lead, what goals will be pursued, or how work is to be accomplished. When routinized conflict resolution mechanisms break

down at the national or international level, insurgencies or overt war is often the result.

SEE ALSO *Government; Social Contract*

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Heidi Burgess

CONFLICT RESOLUTION

SEE *Conflict; Negotiation.*

CONFLICT THEORY

SEE *Sociology, Political.*

CONFORMITY

Ever since Émile Durkheim (1858–1917), considered one of the founders of sociology, conformity has often been discussed in sociology as a solution to the problem of social order. The basic norms and values in a society are internalized through the process of socialization. This process results in conformity, which contributes to keeping society together without resorting exclusively to external force or violence. These ideas were further developed by sociologists Talcott Parsons (1902–1979) and Robert K. Merton (1910–2003), among others, and became highly influential during the mid-twentieth century. For Merton two elements of the social and cultural structure of society are of particular importance: culturally defined goals, purposes and interests, which function as legitimate objectives that define what is "worth striving for"; and institutionalized norms that regulate "the acceptable modes of reaching out for these goals" (Merton 1957, pp. 132–133). Only insofar as an aggregate of people conforms to such values and norms may we call it a society, according to Merton; people who reject both the cultural goals and institutional means of a society are "strictly speaking in the society but not of it" (Merton 1957, p. 147). Non-conformers are likely to be met by a variety of negative sanctions, formal as well as informal, which will put pressure on them to change their behavior, if not their beliefs.

INTERNAL AND EXTERNAL CONFORMITY

When discussing conformity it is important to bear in mind the distinction between conformity in beliefs or attitudes and conformity in behavior. People may conform behaviorally without giving up privately held deviant beliefs in order to escape negative sanctions or be rewarded economically or socially. The social psychologist Leon Festinger (1919–1989) emphasized this distinction by distinguishing between "internalization" (both belief conformity and behavioral conformity) and "compliance" (behavioral conformity but not belief conformity). Compliance is more likely to occur if a person is restricted from leaving a group or society and when there is a threat of punishment for non-compliance. The likelihood for internalization increases if the person is attracted to the group and wishes to remain a member.

During the 1950s, psychologist Solomon Asch conducted a series of social-psychological experiments that strongly influenced the scholarly discussion of conformity during the following decades. Individuals were asked to match the length of a line with other lines of different length. All but one of the individuals in the group was instructed to make a match that was obviously wrong. When the last, uninformed individual in each group was asked to make a match, one third of the participants yielded to the obviously erroneous judgment of the majority. Among the conforming subjects, a majority later said they conformed because they lacked confidence in their own judgement and concluded they must have been mistaken and the majority was correct. The second most common reason for the individuals were to believe that the majority was wrong, but to suppress this knowledge because of an unwillingness to deviate from the group. Asch showed that a majority of three persons was sufficient to have this effect.

Research in the 1990s by psychologist David A. Wilder has shown that people tend to conform more when the majority consists of ingroup-members, that is, people belonging to the same social category, while they conform less when it consists of outgroup-members, that is, people belonging to other social categories. As argued by psychologist John C. Turner, this fact indicates that group identity is a salient factor for understanding conformity. However, it is of crucial importance that the majority is unanimous; otherwise, conformity decreases dramatically. In a classic 1975 study by psychologist Vernon L. Allen, conformity decreased from about thirty-three to five percent when a single individual deviated

from the group by giving the correct answer. Moreover, as demonstrated by psychologists Rod Bond and Peter B. Smith in 1996 in a meta-analysis of 133 studies from seventeen different countries, people conform more in collectivistic cultures than in individualistic ones.

Conformity is also more likely in cohesive groups and tends to decrease as groups or societies become more complex in terms of role differentiation. This fact indicates that conformity should decrease as societies become more modernized and individualized, a prediction that is supported by Bond and Smith's analysis.

WHY CONFORMITY OCCURS

Attempts to explain conformity can be grouped into explanations that focus on "normative influence" and those that focus on "informational influence." In normative influence, people conform in order to avoid negative sanctions or social ridicule. Such explanations have been common in sociology and in 1955 were put forward by Morton Deutsch and Harold Gerard in the field of social psychology. Informational influence is principally associated with Leon Festinger and proposes that processes of social comparison or social reality testing lead to increased belief conformity. In situations of subjective uncertainty in which people lack objective reference points for beliefs, people tend to compare their beliefs to those of significant others. The more their beliefs harmonize with those of significant others, the more valid they judge their beliefs. When people discover that their beliefs harmonize with the beliefs held by most others in the group, people tend to become confident in their rightness and seldom change their opinion. Situations in which people's beliefs harmonize poorly with those held by significant others, on the other hand, tend to aggravate the feeling of subjective uncertainty. To remedy this situation, people may either try to change the beliefs held by others in the group or change their own beliefs to better reflect those of the group, which is often far easier.

As sociologist Peter Hedström, among others, have argued, it is often a rational strategy to imitate others' behavior in situations of uncertainty, such as when one glances at other diners for information about which fork to use for the first course, or when the choice of restaurant is based on the number of other people already dining there. However, one risk associated with this strategy is that everyone may imitate the others, and that everyone may think that they alone are uncertain and confused or feel doubt about the rightness of the majority behavior. This phenomenon has been discussed in terms of "pluralistic ignorance." Pluralistic ignorance, especially when people experience strong normative and informational influence, may lead people to conform to a majority that actually does not exist. In other words, as in Hans Christian Andersen's story *The Emperor's New Clothes*, the conformers may all come to believe that everyone else has understood something important of which they themselves are ignorant, and refrain from questioning the consensus because of fear of ridicule or ostracism. Pluralistic ignorance and conformity in general may thus undermine the potential for creativity and productiveness in a group or society.

Research by psychologist Irving Janis (1918–1990) on "groupthink" showed that compliance within cohesive groups may have disastrous consequences for decision making in crucial situations. The pressure on people to conform to the ingroup increases in polarized situations in which the cost of remaining a deviant or a passive bystander increases. As a result, moderates may suppress their true preferences, which give radical or fanatical elements disproportionate influence.

Conformity thus has a distinctly negative potential. This was demonstrated by research following the 1963 classic experiment by social psychologist Stanley Milgram (1933–1984). Milgram's experiment showed that many people would blindly follow authorities in situations of uncertainty. By combining these insights, many scholars have argued that conformity is an important prerequisite for military atrocities and fascist practices. As argued by psychologist Rupert Brown for instance, "the well-documented instances of group-instigated atrocities against civilians in Vietnam, former Yugoslavia and other war zones before and since suggest that social pressures to conform [can be] both prevalent in their frequency and tragic in their consequences" (Brown 2006, p. 131).

SEE ALSO *Asch, Solomon; Authority; Collectivism; Cults; Deviance; Durkheim, Émile; Experiments, Shock; Fascism; Festinger, Leon; Groupthink; Herd Behavior; Ignorance, Pluralistic; Merton, Robert K; Milgram, Stanley; Norms; Organization Man; Parsons, Talcott; Peer Influence; Social Psychology*

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CONGRESS, U.S.

The principal features of the U.S. Congress affecting its operation and outputs are the elements of its institutional structure, including its size, the manner in which its members are elected, its leadership offices, and the role of political parties. The outputs of Congress are significant because one of the main functions of Congress is to translate citizens' preferences and needs into government policies. Because Congress does not make decisions in isolation, its interactions with other branches of government also affect its functions.

INSTITUTIONAL STRUCTURE

Article 1, section 1 of the United States Constitution invests all legislative powers in a bicameral (two-house) Congress consisting of a House of Representatives and a Senate. The Constitution further provides that each state will have at least one member in the House of Representatives and two senators.

The House of Representatives contains 435 seats in accordance with federal legislation. Its size has not changed since the 1910 census reapportionment, the process by which the remaining 385 House seats are divided on the basis of state population after each state is allotted its constitutionally guaranteed representative. According to the Constitution, candidates for the House must be at least twenty-five years old, have been a citizen of the United States for seven years, and be a resident of the state (but not district) in which they seek election. House members are elected every two years in single-member (one member per district), plurality (first past the post) legislative districts in elections that must take place on the Tuesday after the first Monday in November in even-numbered years. As a result, every four years members of the House are elected on the day of a presidential election. House districts must be geographically compact and contiguous, have roughly equal population, and be racially fair.

The United States Senate is composed of 100 seats, with two senators elected from each of the fifty states regardless of state size or population. From 1789 to 1913 senators were elected by state legislatures. Senators currently are elected directly by citizens within states in accordance with the 17th Amendment of the U.S. Constitution. A senator must be at least thirty years old, have been a citizen of the United States for at least nine years, and be a resident of the state in which he or she is elected.

Congress uses a system of committees to organize itself. In the first Congresses, the body relied on ad hoc rather than standing committees, in which membership and policy jurisdiction are stable. In the early 1800s the failures of the ad hoc, or select, committee system resulted in a gradual expansion of the standing committee system, although its emergence was slower in the Senate than in the House. Major reductions of the number of committees in both chambers took place in the 1920s and 1940s. The majority party has usually held more seats than the minority on each standing committee. For more than a century, the parties have relied on a seniority rule to determine the chairs of committees.

In the early Congress, formal leadership of each chamber was minimal. There was frequent turnover of the House Speakership and only weak leadership in the Senate. During this period, first the floor and then the increasingly common standing committees often challenged party leaders for control. After the Civil War, polarization of the parties facilitated greater influence by their leaders. However, a lack of cohesion within the Democratic Party in particular, due to the distinctiveness of southern Democrats from the early 1900s to the 1960s, meant that committees, rather than party leaders, were used to organize authority in Congress. In the post-reform

Congress (1974 to the present), the parties have become more internally homogenous and differentiated, leading to greater assertiveness among party leaders such as Newt Gingrich, Speaker of the House from 1995 to 1999. The components of the parties' leadership structures include (if in the majority) the Speakership in the House and the president of the Senate, and for both parties the majority/minority leader and whip. Each party also maintains a caucus/conference committee, a policy committee, a committee to allocate committee seats, and a campaign committee charged to maximize the party's seats.

REPRESENTATION

A member of Congress's (MC) career is influenced by different goals, including crafting effective legislation and turning personal political preferences into public policy, maximizing his or her influence within the legislature, career ambition, and securing reelection. A week spent meeting with concerned lobbyists and raising campaign funds in Washington is usually followed by a weekend back home with one's constituents, listening to their specific needs and ensuring that the MC is not viewed as "out of touch."

The nature of congressional elections differs by chamber. House elections tend not to be competitive, with roughly 95 percent or more of incumbents who choose to stand for reelection retaining their office. In contrast, the Senate is more competitive, and Senate seats are much less likely to go unopposed. The cost of a congressional election is enormous and growing, with a majority of campaign expenditures used to purchase advertisements on television. Accordingly, MCs spend much of their time raising money for their next campaign from both political action committees and individual constituents, and potential challengers must prove they can raise the campaign funds necessary to be considered viable candidates. Much of federal campaign finance law is laid out in the Federal Election Campaign Act (FECA) of 1971. A Supreme Court decision, *Buckley v. Valeo* (1976), upheld FECA's contribution limits and reporting requirements but struck down restrictions on expenditures by candidates and independent political groups.

To be reelected, MCs must closely monitor their constituents' attitudes. They must also attempt to appeal both to their primary constituency, or the subset of constituents who will participate in their party's primary, and their geographic constituency, or the citizens eligible to vote in the general election. Representation of constituents' interests includes casework, bill sponsorship, committee selection and effort, making speeches on the floor, and roll-call voting. Empirical work has shown that MCs' roll-call votes tend to match closely the preferences of their district, and those MCs who deviate too far from their constituents receive fewer votes and are less likely to be reelected. In addition, MCs who represent competitive districts and homogenous districts tend to be more responsive to constituents. Senators are more responsive to constituents in the final two years of their six-year terms than in the first four years. Finally, retiring legislators appear to be somewhat less responsive to constituents' interests.

CONGRESS AND THE PRESIDENT

The relationship between Congress and the president is defined by constituencies and political parties. Each member of Congress must keep the interests of his or her district in mind when taking positions on legislation. The president's constituency, by contrast, encompasses the entire nation. The political and legislative priorities of the president are thus likely to be different from those of individual members of Congress, even those members within the president's own party.

Political parties also shape the relationship between the president and the Congress. If the president is affiliated with the majority party in Congress, in particular both of its chambers, the agendas of the president and congressional leadership are more likely to be similar, and opportunities for crafting and passing legislation are greater. If the president is affiliated with the minority party in Congress—a situation known as divided government—these opportunities may be fewer. However, the president may choose to bypass the legislative process in Congress through the use of direct action such as executive orders, which bear the force of law but are not approved by the Congress, or through the threatened or actual use of the presidential veto.

SEE ALSO *Checks and Balances; Consensus; Constitution, U.S.; Democracy, Representative and Participatory; Democratic Party, U.S.; Elections; Negotiation; Presidency, The; Republican Party; Roll Calls; Separation of Powers; U.S. Civil War; Voting Patterns*

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CONGRESS OF RACIAL EQUALITY

The Congress of Racial Equality, or CORE, played a leading role in the civil rights movement of the 1960s. CORE is best known for organizing freedom rides to challenge segregation in interstate busing.

CORE was founded in Chicago in 1942 as "a permanent interracial group committed to the use of nonviolent direct action opposing discrimination" (Meier and Rudwick 1973, p. 8). The key components of CORE's ideology—interracialism and nonviolent direct action—stemmed from the teachings of Mahatma Gandhi (1869–1948). The charter members of CORE included both blacks and whites, many of whom were students at the University of Chicago. Several of CORE's founders had been jailed or interned as conscientious objectors to war.

CORE affiliates soon formed in cities across the country. The local affiliates organized sit-downs, or sit-ins as they later became known, to challenge racially segregated public accommodations. They also mounted campaigns to end discrimination in employment, housing, and schools.

In 1947 the national organization organized the Journey of Reconciliation, a two-week bus trip through the upper South to enforce a recent U.S. Supreme Court decision outlawing segregated seating on interstate buses and trains. The participants, who included eight black and eight white men, were arrested and jailed along the way, but most of the charges were later dropped. Although segregation in interstate travel persisted, CORE believed the publicity garnered by the journey made it a success. The Journey of Reconciliation provided the model for the freedom rides of the 1960s.

The student sit-in at a Greensboro, North Carolina, lunch counter in early 1960 gave new life to CORE's campaign to end segregation in public accommodations. Along with the National Association for the Advancement of Colored People (NAACP) and the Southern Christian Leadership Conference (SCLC), CORE helped to organize the sit-ins that spread throughout the South after Greensboro and resulted in the arrests of thousands of protesters. These organizations joined forces again in 1963 to launch a voter registration drive in the South.

James Farmer (1920–1999), who had been a founding member of CORE, was appointed national director in 1961. Farmer's leadership propelled the organization to the forefront of the civil rights movement. His first project was the Freedom Ride of 1961. The 1961 ride differed from the Journey of Reconciliation in a few respects—the riders included women, they traveled through the deep South, and they challenged segregated terminal facilities as well as seating. The severe violence encountered by the riders, including beatings and the firebombing of a bus, drew national attention to the cause. Other freedom rides followed.

The efforts of those involved in the civil rights movement came to fruition with the passage of the Civil Rights Act of 1964, banning racial discrimination in public accommodations, and the Voting Rights Act of 1965, enforcing the right to vote.

In the mid-1960s CORE's focus began to shift from direct action and voter registration to community organization and black identity. At the same time, the group's membership changed as well, from a balance between white and black members to a predominantly black makeup. At its 1966 national convention, CORE adopted "Black Power" as its slogan and renounced absolute nonviolence, and Floyd McKissick (1922–1991) was selected to succeed Farmer as national director. McKissick resigned in 1968 and was replaced by Roy Innis, who maintained the organization's emphasis on political and economic empowerment for blacks. At the end of the twentieth century, CORE had approximately 100,000 members.

SEE ALSO *Civil Rights; Civil Rights Movement, U.S.*

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CONGRESS PARTY, INDIA

The Indian National Congress (INC) has, since the beginning of modern electoral politics in India in the 1920s, been India's dominant political party. Its leader, Jawaharlal Nehru, became the country's first prime minister in 1947, the party's leaders framed the country's 1950 Constitution, and until 1989, except for a brief interlude from 1977 to 1979, the party always had a solid majority in the Indian parliament. Since 1989 the INC's position has weakened, with the emergence of a host of regional and caste-based parties that now account for around 40 percent of the seats in the Indian parliament, but the party

has nonetheless retained its position as one of the two national parties capable of forming a coalition in New Delhi. Whether the INC or the Bharatiya Janata Party (BJP) wins power today is in large part a function of who makes the better preelection deals with these regional parties. In the 2004 elections, the INC played this game much better than the BJP: It won only 145 out of 543 seats outright, but its preelection deals gave the INC coalition as a whole 219 seats, unexpectedly enabling the INC to form the national government with the additional support of the Communists and a few smaller parties (Wilkinson 2005).

Unlike many of its rivals, the INC has always been a party of national breadth that has tried to incorporate members of all India's major religious, linguistic, regional, and caste groups. In contrast to the opposition BJP, the INC has supported a secular state in which minority rights are fully safeguarded, though at times—such as in their complicity in the anti-Sikh riots in Delhi after Indira Gandhi's assassination by her Sikh bodyguards in 1984—some members of the party have conspicuously failed to live up to the party's declared principles.

The INC was founded in 1885. In its first few decades it represented a relatively loose association of India's middle and upper middle classes, dedicated to improving Indians' political rights and employment opportunities within the context of British rule. In the 1920s and 1930s, however, under younger and more radical leadership, it was transformed into a mass party advocating for autonomy and then independence from Britain. Crucial to widening the party's appeal to the masses was the moral leadership of Mohandas K. Gandhi (1869–1948), who from his first noncooperation *satyagraha* in 1920 pioneered tactics of massive nonviolent resistance to colonial rule, tactics that would later be influential in civil rights movements in the United States and elsewhere. In the early 1920s, under Gandhi's influence, the INC forged a wide and deep party organization throughout the country. From 1923, when the INC first decided to compete in the new provincial legislatures set up by the British in 1919, until the late 1930s, the INC used this organization as well as mass campaigns of civil disobedience to establish itself as the country's dominant political party.

At its height, from the 1930s until the late 1960s, the INC was a strong, internally democratic party that used regular local, district, and national party elections to decide which leaders would receive "party tickets" for seats in the state and national assemblies. This *Congress system*—a term coined by Rajni Kothari (1963)—provided existing party leaders with an incentive to reach out to newly mobilized groups of voters from middle and lower castes in order to win party elections, and also gave leaders who won these party, state, and national elections broad political support and legitimacy. This internal party democracy has been seen as a major factor in India's democratic success compared to Pakistan, where the Muslim League was highly centralized, and had no equivalent of the INC's local party organization, giving it a narrow leadership base that relied on state decrees (Weiner 1990). Unlike the Muslim League, which largely collapsed in Pakistan after the death of its two main leaders (Jinnah in 1948 and Liaquat Ali Khan in 1950), the INC had a solid cadre of democratically elected senior leaders that allowed it to overcome the untimely deaths of Mohandas K. Gandhi in 1948 and Home Minister Sardar Vallabhai Patel in 1950.

The INC's open membership was not always an unmixed blessing, however. The party's membership shot up from half a million to four and a half million in the two short years after the party's unexpected victory in five major provinces in the 1936 provincial elections, and Nehru complained to Gandhi in 1938 that many of these new members were more interested in the INC's patronage power than in the ideals of the party (Brown 2003, p. 131). Corruption and the abuse of patronage power at all levels of the party remain an issue for the INC, and have periodically helped increase support for various opposition parties, such as Swatantra in the 1960s and the BJP in the 1980s.

Several years after Nehru's death in 1964, a power struggle broke out in the party between his daughter, Indira Gandhi (prime minister 1967–1984, except for 1977–1979), and a "Syndicate" of INC party barons in the states. This struggle split the party in 1969, after which Mrs. Gandhi used her position as prime minister and her control of state resources to outflank her political opponents within and outside the party—for instance, through development programs that channeled money to her own supporters in the states and away from her opponents, and election finance reforms that effectively denied funding to the opposition Swatantra. In the 1971 national elections, Mrs. Gandhi campaigned as the victorious war leader who had just defeated Pakistan, and also on a platform of abolishing poverty. Her faction of the INC won more than two-thirds of the seats and over the next three years used its majority to push through large-scale nationalization of the financial sector, as well as large-scale nationally funded antipoverty and development programs. Both these programs served a dual purpose: fulfilling the party's ideological goals and providing large-scale patronage resources for INC leaders.

Under Mrs. Gandhi, however, the INC became more and more centralized—the visible symbol of which was the thousands of INC party hopefuls who traveled to New Delhi before national or state assembly elections to secure her family's nomination. In 1975 Mrs. Gandhi declared a

national emergency to end growing opposition to her centralizing rule. Much of this opposition, ironically, was from INC members using the same nonviolent tactics they had used in earlier decades against the British. The emergency was deeply damaging to the party's reputation among lower castes and minorities, many of whom suffered disproportionately from slum clearances and sterilization projects directed by Mrs. Gandhi's son Sanjay. The emergency ended in 1977, when Mrs. Gandhi called national elections and then lost power to a hastily put together Janata coalition, which governed for two years before the INC won power back in 1980. The INC's crushing 1977 loss did not, however, lead to a fundamental reorganization and democratization of the party. No internal INC party elections have been held since the late 1960s, and the party has since the 1970s been run largely by members of the Nehru-Gandhi family and their allies: by Indira Gandhi (until her assassination in 1984), by her son Rajiv Gandhi (until his assassination in 1991), and then by Rajiv's Italian-born widow Sonia and her children Rahul and Priyanka.

Since the late 1980s the INC has been committed to reform of the "Permit Raj" regulation of much of industry and the economy instituted by the party under Nehru and Mrs. Gandhi. A balance of payments crisis in 1991 forced Prime Minister P. V. Narasimha Rao's INC coalition government to accelerate reforms, which have been largely continued and extended by subsequent BJP and INC governments. But because fundamental reforms would require large cuts in subsidies and a substantial scaling back of political patronage, both of which would threaten the INC's own "vote banks," the movement to reform is stop-start. In its attempts at reform, the INC government of Manmohan Singh (Rao's reforming finance minister in the early 1990s) has had to strike a balance between support from industrialists and opposition from many of its own voters and its coalition partners on the Left.

SEE ALSO *Ambedkar, B. R.; Caste; Coalition; Democracy; Gandhi, Indira; Gandhi, Mohandas K.; Indian National Army; Indian National Congress; Jinnah, Mohammed Ali; Minorities; Nehru, Jawaharlal; Parliaments and Parliamentary Systems; Politics*

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CONJUNCTURES, TRANSITIONAL

In Marxian theory, the term *transitional conjunctures* refers to a bounded geographical space over a discrete temporal interval within which a revolutionary transformation in class processes occurs. There is general agreement about five class processes based on the particular arrangement by which workers are organized to perform surplus labor: slave, feudal, capitalist, ancient (petty commodity production or self-employment), and communist. A capitalist society is one in which the capitalist class process prevails. A transitional conjuncture occurs when there is a switch of prevalence from one class process to another within a social formation. The holy grail of Marxian economic history has been the dynamics by which transitional conjunctures occurred in the period roughly from the fifteenth to the seventeenth centuries within the geographic space known as western Europe, resulting in a switch from the prevalence of feudal class processes to the prevalence of capitalist class processes.

One of the most influential hypotheses was that the transition from feudalism to capitalism was triggered by the rise of commodity production. Some Marxian theorists, such as Paul Sweezy (1976), assumed that monetized trade led inevitably to the dissolution of feudal relations of production and the rise of capitalist labor power markets. Maurice Dobb (1964) countered this argument by pointing out that serfs producing goods for a monetized market could still be bound in a feudal relationship. The lords could simply extract surplus value in money form, rather than in kind or in direct labor services. Dobb argued that the dissolution of feudal relations was, instead, the result of an economic and demographic crisis triggered by feudal appropriators extracting too large a surplus from the direct producers. The lords took so much surplus value that the serfs were unable to meet the subsistence needs of their families. These conditions resulted in a decline in population and a critical shortage of labor. According to Dobb, it was these conditions that triggered transitional conjunctures in most, if not all, European social formations.

Historian Perry Anderson argued that money exchange and commodity production did not signal a transition to capitalism, but were often precursors to more

centralized versions of feudalism, under absolutist states. Another historian, Robert Brenner, analyzed the classic transitional conjuncture in England and argued that the lords implemented this transition as a profit-maximizing choice, not out of crisis. Based on historical evidence, Brenner reached an essentially postmodernist conclusion that transitional conjunctures varied among the societies of western Europe. Immanuel Wallerstein (1979), on the other hand, rejected the notion of multiple transitional conjunctures in favor of a singular world transition wherein hegemonic capitalism rose to incorporate all modes of production. Stephen Resnick and Richard Wolff (1979), returning to a Marxian class analytical framework grounded in the microeconomics of surplus labor performance and appropriation, argued that transitional conjunctures were not the result of a narrow subset of social factors, whether economic or political, but were, instead, the consequence of the entire matrix of social and environmental factors present in a social formation prior to the transition. For Resnick and Wolff, transitional conjunctures were the overdetermined result of the displacement of multiple conditions for the prevalence of one class process by multiple conditions in favor of the prevalence of an alternative class process.

SEE ALSO *Feudal Mode of Production; Feudalism*

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CONNERLY, WARD

SEE *Race-Blind Policies.*

CONSCIENTIOUS OBJECTORS

SEE *Pacifism.*

CONSCIENTIOUS REFUSAL

SEE *Civil Disobedience.*

CONSCIOUSNESS

Consciousness is a multifaceted phenomenon, and many terms are used to describe its facets. *Consciousness*, *conscious*, *aware of*, *experience* (noun), and *experience* (verb)—all these words have different meanings in different contexts and for different people, so generalizations about their meaning will necessarily have limited validity. Considerable discrepancies also exist between the conceptual tools available in different languages for classifying consciousness and related phenomena. So, for example, the French *conscience* encompasses both "consciousness" and "conscience," as the latter words are used in English; in German the subtle difference between the meanings of the English words "consciousness" and "awareness" is lost when both these words have to be translated as *Bewusstsein.*

BASIC DEFINITIONS AND PHILOSOPHICAL ISSUES

Because of these linguistic and conceptual problems, every systematic treatment of consciousness has to start with a set of distinctions and definitions for the purpose at hand. The task of formulating these in a way that makes them useful for people with different mother tongues is far from simple. However, aspects of consciousness and related phenomena can be classified in three basic categories: cognitive consciousness, phenomenal consciousness, and control consciousness. All are the subject of ongoing philosophical debates.

Cognitive Consciousness Also referred to as *intentionality*, *consciousness-of*, *awareness-of*, and *transitive consciousness*, cognitive consciousness entails a mental relation to an object (not necessarily an existing one), and encompasses phenomena such as *thinking of* a dragon, *becoming aware of* the presence of another person, *attending to* a problem and *knowing* facts about a certain field. In English, *awareness* is often a more natural choice than *consciousness* when the cognitive aspect of consciousness is intended. However, the term "consciousness" is not seldom used in an exclusively cognitive sense—for example,

the sociological and political terms *class consciousness*, *gender consciousness*, and *environmental consciousness*. Here consciousness stands for habitual attention to, and knowledge about, the issues in question.

The common denominator of all cognitive consciousness is its directedness toward an object, which may be concrete or abstract. It is an important conceptual fact that a person can properly be said to be cognitively conscious although she is in another sense (phenomenal consciousness, as discussed below) not conscious at all. For example, an environmentally conscious person is still environmentally conscious when sleeping dreamlessly. Similarly, since a person in dreamless sleep *knows* her mathematics, she is cognitively aware of mathematical facts while sleeping. On the other hand, there are forms of cognitive consciousness that cannot plausibly be ascribed to a dreamlessly sleeping subject, for example, *thinking of* or *presently attending to* the facts that she knows.

In this context it should also be mentioned that *self-consciousness*, which is not seldom given a fundamental role in conceptual schemes for handling matters of consciousness, can plausibly be argued to be a species of cognitive awareness (namely, of oneself). The same holds for *reflexive consciousness*.

Phenomenal Consciousness A good alternative term is *experiential consciousness*; *sentient consciousness* is often given a similar sense but can also have other connotations. A dreamless sleeper does not have any present experiences (or we may suppose so for the sake of this discussion), and is therefore not conscious in the phenomenal sense. An awake person, on the contrary, usually has sensory and perceptual experiences, feels emotions, and entertains mental imagery; all these belong to her phenomenal consciousness.

Two long-standing controversies in philosophy of mind primarily concern phenomenal consciousness: the *mind-body problem* and the *problem of other minds*. What is the relation between the brain and phenomenal consciousness? The philosopher David Chalmers (1996) has called this "the hard problem of consciousness." The problem of other minds is, can we ever know what another person's, or another animal's, experiences are like?

The relations between cognitive awareness and phenomenal consciousness have been the topic of many philosophical debates. One classic debate concerns whether cognition is necessarily rooted in phenomenal consciousness, or whether one could give an explanation of it in purely nonphenomenal (for example, physical) terms. Philosophers in the so-called phenomenological school argue for the first position, whereas most present-day analytical philosophers and cognitive scientists, not only those of a strictly materialist bent, defend the second. Today this discussion is usually presented as an issue about the nature of mental representations. Another important controversy concerns whether phenomenal consciousness depends on cognition: Is a pain or a thought phenomenally conscious only by virtue of one's being conscious *of* it, or is phenomenal consciousness rather an intrinsic quality of experiences that can be possessed independently of any reflexive consciousness?

Control Consciousness The meaning of this term, for which there are no common synonyms, partly overlaps with that of what Ned Block (1994) calls *access consciousness*. In our commonsense understanding of ourselves and other people, as well as in many psychological, psychiatric, and neuroscientific theories, consciousness is given a role for initiating and/or controlling behavior. We talk about doing things with or without *conscious intention*. Psychologists and neurophysiologists speak about *automatic* versus *consciously controlled* behavior. A good example of the latter distinction is given by our ordinary, unconscious control of bodily posture versus conscious attempts not to fall when the automatic control fails for some internal or external reason. In some psychiatric theories, consciousness is even given the role of the superordinate controlling instance of mental life, and all mental disturbances are seen as results of more or less deep-seated *disturbances of consciousness*.

A philosophically controversial issue here is: How can consciousness have a causal role to play in behavior, if all our behavior stems from processes in the brain (as neuroscience seems to say)? This problem is sometimes taken as a motive for a materialistically reductive analysis of control consciousness. Control consciousness is then explained in terms of physical or biological regulatory processes. However, such an approach also has to explain the fact that many paradigm cases of conscious control (e.g., consciously regaining posture) also have a phenomenal aspect.

HISTORICAL CONCEPTIONS OF CONSCIOUSNESS

The French philosopher and mathematician René Descartes (1596–1650) formulated a philosophical conception of consciousness in which the concept was differentiated from conscience, with which it was previously conflated. Descartes's dualism is well known, and already in the seventeenth century it posed an embarrassing philosophical issue, the body-mind problem. He regarded body and mind as two separate but interacting substances, body (or matter) being essentially characterized by spatial extension whereas mind is characterized by thinking. For Descartes the presence of conscious states was a mark of

human beings, in contrast with animals, which he thought were mechanical automata.

Although a clear emphasis on cognitive consciousness can be discerned in Descartes's writings, the cognitive, phenomenal, and control dimensions of consciousness cannot really be disentangled in them. In seventeenth- and eighteenth-century British empiricist philosophy, phenomenally conscious processes and our consciousness of them are the main concerns. However, the problems of cognitive consciousness are still of central concern. For the British empiricists, *ideas* are experiential states that are accessible by means of introspection, but they are also themselves essentially *about* things.

John Locke (1632–1704) formulated the distinction between an outer sense—our experiential access to material objects—and an inner sense, reflecting on one's own experiences. His theory of inner sense can be regarded as the first systematic treatise of introspection. By consciousness Locke meant all ideas that passed in a man's own mind and his self-consciousness about them. Consciousness, not bodily continuity, was regarded as constitutive of personal identity.

The famous principle of *association of ideas* can be traced to Aristotle, but it was the British empiricists who made it the foundation of a whole new science. Locke's formulation of the principle became of utmost importance for the development of psychological ideas in later centuries. Our understanding of the world and of ourselves was seen as built up from associations between ideas that are similar or contrasting, or that just happen to be contiguous in our experience. Later schools of associationist philosophy and psychology (as exhibited in the work of David Hartley, David Hume, James Mill, John Stuart Mill, and Alexander Bain) took it for granted that conscious experience is built up from elements and processes that are discernible to the self-conscious mind. Simple ideas are copies of sensations, and complex ideas are construed from simple ideas according to the laws of association. Mental elements and the principles according to which conscious thoughts—or ideas—are built up and interact can be investigated by introspection.

In the late eighteenth century the German philosopher Immanuel Kant (1724–1804) questioned the program of the British associationist philosopher-psychologists. According to Kant, a science in the strict sense requires both mathematical measurement and experimental procedures. None of this is possible in the case of consciousness, as thoughts do not exist in a spatial continuum and as man cannot divide himself into one observing subject and one observed object.

THE BIRTH OF EXPERIMENTAL PSYCHOLOGY

Trying to overcome the obstacles put up by Kant, German philosophers in the nineteenth century formulated several programs for a science of psychology defined as the study of conscious processes. Based on the psychophysical methods the physicist Gustav Theodor Fechner (1801–1887) had devised in 1860, the German physiologist and philosopher Wilhelm Wundt (1832–1920) institutionalized the new science in Leipzig in 1879 as an experimental laboratory discipline. Wundt and his students defined psychology as the study of immediate experience. They held that it was a proper scientific discipline and that mental processes can be measured provided that one uses controlled experimental methods. Simple introspection was therefore replaced by experimental self-observation, a method that required a painstaking training before the subject could correctly describe the phenomena in his consciousness.

In his *Principles of Psychology* (1890), the American physician and philosopher William James (1842–1910) described psychology as "the science of mental life." He tried to give a holistic description of consciousness, stressing consciousness as personal, intentional, selective, shifting, and continuous. James's discussion of consciousness as "a stream of thought" is very similar to the understanding of consciousness in the theories of Franz Brentano, Carl Stumpf, and Edmund von Husserl. During the late nineteenth and early twentieth centuries, the latter philosophers developed what Husserl (1859–1938) in his 1900–1901 work named *phenomenology*. Phenomenology is a philosophy that emphasizes the intentionality of consciousness and the importance of investigating the detailed intentional structure of consciousness. This should be done by means of a certain method, which, although systematically related to introspection, is not identical to it.

In opposition to the British associationists, the phenomenologists stressed the fact that conscious ideas need not be similar to that which they are ideas of. In other words, it is not essential to ideas that they are *images* of their objects. At the beginning of the twentieth century, the psychologists of the so-called Würzburg school (Narziss Ach, Karl Bühler, Oswald Külpe, and others) took an interest in deeper descriptions of phenomena of consciousness. They found in the experimental subjects' introspective reports instances of "imageless" conscious phenomena (*Bewusstseinslagen*) that in their opinion questioned the traditional associationist psychology.

BIOLOGICAL, FUNCTIONALISTIC, AND BEHAVIORIST PERSPECTIVES

During the late nineteenth century there was widespread interest in the possibility of *unconscious* mental phenomena. Sigmund Freud (1856–1939) famously formulated a systematic theory, or rather several theories, about the unconscious mind. Such an enterprise requires a theory of consciousness. In a crucial paper written in 1915, Freud distinguishes between a "systematic" and a "descriptive" sense of "consciousness." The systematic sense is close to what is here called control consciousness. The descriptive sense has essentially to do with knowability, but Freud also speculates that a descriptively conscious mental state is conscious by virtue of its possessing a certain intrinsic quality. In Freud's later thinking, control consciousness is instead described in terms of the mental systems named *ego* and *super-ego*.

Within the American school of functionalism that William James was part of, the aim of studying consciousness was regarded with suspicion. In 1904 James even stated that consciousness did not exist, but he meant that it did not exist as an entity, only as a function. With the behaviorists of the early twentieth century, however, the interest radically shifted from consciousness (now often regarded as a metaphysical concept) to behavior. Humans should be understood through their actions and not their thoughts. The idea of finding the basic laws of mental elements using introspective methods was abandoned. The alternative, nonassociationist approaches, such as phenomenology and Gestalt psychology, were also relegated to a minor role in the psychological community. The behaviorists took diverse philosophical positions: Some took the strong metaphysical position that consciousness does not exist, whereas others only defended a moderate methodological statement to the effect that introspective methods should be abandoned as unscientific in favor of behavioral observation.

Behaviorism was to dominate the behavioral and social sciences from about 1920 to 1960. During this time the Gestalt psychologists, who thought in ways related to both phenomenology and the Würzburg school, kept up a keen interest in the study of perception and other forms of experience and did much valuable research on the structure of consciousness. In many respects the thrust of their work was biological, and they were much opposed to explanations of experience by means of *mental* laws. In Gestalt theory, immediate experience is a direct result of brain processes and cannot be explained by any association of mental elements.

Consciousness research continued throughout the behaviorist era in the fields of psychiatry and neurology. Karl Jaspers (1883–1969), a psychiatrist and philosopher in the phenomenological tradition, in 1913 created a classification scheme for pathological disturbances of consciousness that is still in use. During the whole of the twentieth century, the understanding of consciousness and its pathology was generally regarded as essential for the psychiatric understanding of patients. Around midcentury, the French psychiatrist Henri Ey (1900–1977)—who was also influenced by phenomenological thinking—formulated a new theory about consciousness, stressing its functional and controlling aspects. In most present-day psychiatric theories, however, consciousness is not given such a central explanatory role.

The Cognitive Revolution In the 1960s an important methodological and theoretical shift in the behavioral and social sciences occurred that is often referred to as the cognitive revolution. It was partly inspired by the possibilities offered by computer modeling of rational processes, and it is no coincidence that the main focus of cognitive psychology is memory and thinking. Consciousness was no longer a forbidden territory. Since the 1960s, cognitive psychologists have also shown a renewed interest in unconscious mental processes such as implicit memory, subliminal perception, and other forms of perception without phenomenal perceptual consciousness (e.g., blindsight).

Although consciousness and several different kinds of introspective procedures have once again been admitted into psychology, the terms introspection and consciousness are not used as frequently by psychologists as they were in the early twentieth century. This may not be of any importance in itself, but it reflects the more serious circumstance that there is a fundamental break of tradition between the old psychology and the new. This break also means that several philosophical and methodological issues, which were common knowledge in the psychological community in the early 1900s, seem to be little known by many behavioral and social scientists of the twenty-first century.

However, there are signs that this situation is changing. Since the 1990s a large amount of interdisciplinary work on consciousness has been accomplished, partly under the auspices of independent organizations such as ASSC (Association for the Scientific Study of Consciousness), but also within the academic programs of many universities around the world. Neuroscientists and philosophers, as well as behavioral and social scientists, participate in this effort. The body-mind problem occupies one focus under the name of a search for "the neural correlate of consciousness." The role of consciousness in perceptual and motor processes is another much researched and hotly debated topic. Finally, "mentalizing" (ascribing mental states to other people) is a third area of

central concern for today's interdisciplinary study of consciousness.

SEE ALSO *Anthropology, Linguistic; Aristotle; Cognition; Epistemology; Freud, Sigmund; Gestalt Psychology; James, William; Kant, Immanuel; Knowledge; Locke, John; Mill, James; Mill, John Stuart; Phenomenology; Philosophy; Psycholinguistics; Psychology; Self-Consciousness, Private vs. Public; Theory of Mind*

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CONSCRIPTION, MILITARY

SEE *Napoléon Bonaparte; Selective Service.*

CONSENSUS

Consensus refers both to a state of common feeling or agreement in a group and to a decision rule by which a group or society determines legitimate political authority and coordinates political action. The term derives from the Latin *consens*, which is closely related to *consent*, and was first used in modern times to describe the relationship between different parts of a system in working toward the purpose of the whole. Characteristic of many nineteenth-century writers, Émile Durkheim posits the analogy of a "spontaneous consensus of parts" in the body social as a necessary condition for the preservation of order in increasingly differentiated societies (1984, p. 297). Contemporary theories of communitarianism, civic culture, and liberal pluralism follow Durkheim, to different degrees, in staking democratic order on a value consensus embedded in social norms, practices, and institutions.

Theorists of participatory and deliberative democracy often abandon the search for an empirical consensus underlying social order and instead hold consensus as a normative ideal of political decision making amid human conditions of difference and conflict. For Jean-Jacques Rousseau, legitimate political authority rests not on the consent of the majority—the domination of a part of society over the whole—but on a consensus that accounts for the interests of all members of society. Consensus thus seeks to preserve individual freedom and political equality. Indebted to Immanuel Kant's (1724–1804) theory of common sense, Jürgen Habermas (1990) locates the ideal of consensus in the fundamental practice of communication, which presupposes the possibility of shared understanding between speakers. The expectation of rational consensus inherent in speech establishes certain norms for political deliberation, most notably reason, inclusion, participation, and publicity. On many accounts, consensual politics requires both constitutionally protected public spaces and institutionalized procedures that incorporate the previous norms into decision-making processes.

Critics of consensualism worry that the ideal of consensus carries normalizing and repressive effects on groups and societies. Theorists of agonistic democracy, such as Iris Marion Young (2000) and William E. Connolly (1991), contend that commitment to a strong rational consensus privileges certain modes of expression and participation to the exclusion of others and often brackets difficult issues from public discussion altogether. Thus, consensual ideals of political engagement and outcome effectively silence some points of view. While agonistic democracy affirms the possibility of agreement on particular issues in particular circumstances, it recognizes the contingencies and exclusions that constitute any strong value consensus and emphasizes a care for difference and struggle as central elements of politics.

In practice, consensual politics have long embodied the ideals and tensions of these competing theoretical strains. While consensus was the aim, if not always the abiding practice, in the political assemblies of ancient Athens, classical writers from Thucydides (c. 460–c. 400 BCE) to Aristotle cautioned against the dangers of popular rhetoric in fomenting collective tyranny. The Iroquois

Confederacy explicitly protected dissenting views during consensual processes by establishing mechanisms for veto power and for the revisiting of contentious issues. The Religious Society of Friends and the peace and environmental movements of the late twentieth century are examples of groups that use consensus decision-making practices.

SEE ALSO *Conflict; Egalitarianism*

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Laura Grattan

CONSERVATISM

The term *conservative* is derived from the word *conserve*, and in a political sense is often used to indicate a desire to preserve existing political and social arrangements, institutions, policies, or customs. This conception of conservative leaves as a critical defining question what it is that one is seeking to conserve.

Both European and American conservatism contain numerous strands, but share some points of commonality. To a significant extent, both developed as a response to revolutions from the Left, the violent revolution of the guillotine in France in the 1790s and the peaceful revolutions of New Deal economics and counterculture social mores in the United States in the 1930s and 1960s. Both European and American conservatism have been imbued with a strong sense of anti-utopianism and a greater deference for religion, tradition, experience, and property than that found on the Left. On many other scores, however, the two versions of conservatism—or some of their constituent strands—are quite distinct. Those strands are defined by the question of whether they are a subset of liberal democratic politics or a reaction against it.

EUROPEAN CONSERVATISM

Representing one pole of European conservatism was Edmund Burke (1729–1797), the English parliamentarian who wrote *Reflections on the Revolution in France* in 1790. *Reflections* embodied not so much an ideology as an anti-ideology, a marked preference for experience, tradition, decentralization, and prudence over the abstract theorizing that drove the French Revolution and that, Burke predicted, would lead to a new and unconstrained form of despotism. Burke favored evolutionary, rather than revolutionary, change, though he supported the moderate American Revolution. He also favored a trustee model of representation consistent with his fear of mass democracy unchecked by moderating institutions. In essence, Burke advocated the conservation of liberal society though caution and prudence. Directly descended from Burke, nineteenth-century British conservatives like Benjamin Disraeli (1804–1881) called for "Tory democracy," reforms aimed at giving the lower classes a greater stake in the preservation of traditional English liberty. This conservatism retained, to some extent, an aristocratic and paternalistic cast.

The other pole of European conservatism was starkly reactionary, calling for a restoration of absolute monarchy and Catholic faith summed up in the slogan "throne and altar." Chief among these clerical monarchists were Count Joseph de Maistre (1753–1821) and Louis de Bonald (1754–1840). Where Burke extolled ordered liberty, Maistre and Bonald were content with order. In his *Essay on the Generative Principle of Political Constitutions* (1810), Maistre argued against rationalism in politics. He held with Burke that attempting to remake society on the basis of abstract conceptions through such devices as a declaration of rights or a written constitution was foolhardy (and often destructive). Human society was too complex to manipulate in that way. However, to Maistre, absolutism, tempered by religion—the combination of "Pope and executioner"—was the solution for social instability.

In nineteenth-century Germany, the antirationalist and clerical romantic school—heavily influenced by Maistre, but both political and literary in character—developed among thinkers like Adam Muller, K.L. von Haller, Joseph von Radowitz, and Karl von Vogelsang, idealizing the German Middle Ages. At the same time,

Joseph von Gorres, a former supporter of the French Revolution, swung around to embrace Maistre's theocratic vision. His Gorres circle of thinkers was important in German intellectual life at midcentury, and some argued that it contributed to subsequent German and Austrian authoritarianism.

Also clustered nearer to Maistre's pole than to Burke's, a strand of extreme nationalism appeared in the late nineteenth century, though its ultimate form arguably represented a repudiation of traditionalist conservatism rather than a completion of it. In France, Maurice Barres (1862–1923) and Charles Maurras (1868–1952) advocated nationalism as the sole source of social rootedness and authoritarianism as the means of expressing that nationalism. Maurras, unlike both Barres and traditional conservatives, embraced mass agitation and atheism and ultimately veered into fascism. More directly influencing national socialism, Heinrich von Treitschke (1834–1896), author of *German History in the Nineteenth Century* (1879–1894), advocated a blunt philosophy of racial nationalism, power, and militarism, themes at odds with the mainstay of European conservatism.

Clustered around Burke's pole were a variety of thinkers whose aim was not restoration of the Middle Ages but the ennobling and conservation of European liberty in one form or another. Like Burke, the Frenchman Alexis de Tocqueville (famous for writing *Democracy in America* in the 1830s and *Ancient Regime and the Revolution* twenty years later) was supportive of popular constitutional government and evolutionary change but cautioned against democracy's potential for excess. Indeed, it is an interesting conceptual question whether Tocqueville should be considered a liberal conservative or a conservative liberal. To the French revolutionaries, egalitarianism and liberty went hand in hand. To Tocqueville, the two values could easily conflict, as local liberty and individual difference might be sacrificed to a single-minded pursuit of equality. Tocqueville thus called for countervailing features like freedom of the press, independent courts, local government, a strong civil society, and Christian morality to preserve liberty.

Another school focused on economic liberty. From Adam Smith in the eighteenth century to the Austrian school of Ludwig von Mises and Friedrich Hayek in the twentieth, these thinkers shared an appreciation for private property, decentralization of power, and organic evolutionary change. While far removed from Maistre, they were compatible with Burke and Tocqueville. Hayek assaulted central planning in his 1944 book *The Road to Serfdom*, in which he argued that central planning invited both tyranny and economic inefficiency. Hayek preferred to call himself a liberal, but in the context of the rise of both democratic and totalitarian socialism, must be (and usually was) counted a conservative.

In between the poles, Clemens von Metternich served as foreign minister of the Habsburg Empire from 1815 to 1848 and was a key figure in the Congress of Vienna, the 1815 diplomatic conference in which the kings of Europe agreed on a framework to keep the peace after the Napoleonic wars. That framework relied on the defense of monarchy and the suppression of radicalism. Although Metternich is widely criticized as a reactionary, he was also cosmopolitan and pacific and advised the Hapsburg emperor to grant more constitutional rights to Hungary and other outposts of the empire. He called his philosophy "conservative socialism": socialism defined as organic social unity in preference to atomistic individualism, a notion that defined much of European conservatism. Metternich's secretary Freidrich Gentz translated Burke's *Reflections* into German, wrote widely himself, and shared Metternich's cosmopolitanism.

In postwar, increasingly secular, Europe, both extreme nationalism and clericism withered; Maurras fell with Vichy France, and the last European outpost of Maistre was arguably Franco's Spain. Rather, the conservatism of the last half of the century was dominated by figures influenced most by the Burkean pole's paternalistic offshoot (the British statesman Winston Churchill [1874–1965], who sought to model himself after Disraeli), by its free-market offshoot (Britain's Margaret Thatcher or Italy's Silvio Berlusconi), or by Metternich's cosmopolitanism (Germany's Konrad Adenauer and Helmut Kohl and other European Christian Democrats).

In the nineteenth and twentieth centuries, a Latin American conservatism arose that largely paralleled its European counterpart. After independence, Maistre dominated, as conservatives promoted close church-state connections and centralized state authority. The twentieth century saw a divide between Maistre's conservatism, reflected in extreme form in the Argentinean junta among others, and a free-market, neoliberal conservatism more comfortable with Burke and Smith. (The Chilean military dictatorship incongruously melded Maistre's politics and Smith's economics.) In contrast to Europe, however, the Burkeans seemingly gained the upper hand only in the last fifth of the century.

AMERICAN CONSERVATISM

Historian Louis Hartz famously argued in 1955 that there were no true conservatives in America, only rival species of liberals. Nevertheless, American thinkers as disparate as the anti-federalists, Alexander Hamilton, John Adams, and John Calhoun have sometimes been labeled "conservative." Modern American conservatism, however, grew out of opposition to the New Deal and the rise of the wel-

fare state. Its first mobilization took the form of the American Liberty League in the 1930s, consisting of an alliance between Republican businessmen and Jeffersonian Democrats. This nascent conservatism drew on a belief that the New Deal threatened constitutional principles by centralizing power, undermined the free enterprise system, and corrupted the civic virtue of Americans. If equality was the first value of the New Deal, the chief aim of these conservatives was the preservation of Lockean liberty. Like Hayek, President Herbert Hoover long argued that he was the real liberal, as he—not Franklin Roosevelt—had remained true to the tenets of limited government and free markets that defined classical liberalism. Senator Robert Taft (R-OH), though sometimes dubbed "Mr. Conservative" by contemporaries, fell in this category as well.

A number of other influential figures came to advance free-market economics and limited government. Among these was Nobel economist Milton Friedman, whose Chicago school advocated "monetarism"—an emphasis on free markets and control of the money supply—as an alternative to liberal Keynesianism. Though not as libertarian as the Austrian school of Hayek and von Mises, Friedman favored limits on government spending, taxing, and regulation, as well as school vouchers and a negative income tax as an alternative to welfare. In the 1970s, a school known as supply-side economics was advanced by economic thinkers like Arthur Laffer, Robert L. Bartley, and Jude Wanniski. The supply-siders emphasized improved incentives for work and investment. While differing on many specifics, the revived schools of free-market economics agreed that political liberty and economic liberty were intertwined.

A second strand of conservatism was skeptical of mass politics and abstractions like natural rights, and was concerned with the decline in importance of religion and traditional social forms and morals. The postwar traditionalists were anticipated in some respects by a school known as Southern Agrarianism (Richard Weaver, John Crowe Ransom, and others), whose unhappiness with industrialism and materialism was laid forth in their 1930 manifesto *I Take My Stand*. Traditionalism's most noteworthy spokesmen in the 1950s were Willmoore Kendall and Russell Kirk, the latter of whom argued his case for "the permanent things" in *The Conservative Mind from Burke to Eliot* (1953). Unlike many of the constitutionalists and the libertarian-leaning economists, these thinkers were not averse to the label "conservative." While these traditionalists may have been the most European strand of American conservatism, none were enamored of authoritarianism. Indeed, their fear was that tyranny would result from the collapse of virtue that they diagnosed. The traditionalists sought refuge for liberty in the Anglo-Saxon tradition of liberty rather than in natural rights, and what they sought to conserve above all was Western civilization.

A third strand of postwar conservatism consisted of a strong anticommunist movement. While Senator Joseph McCarthy (R-WI) is perhaps the best-known, and most notorious, anticommunist conservative of the era, anticommunism was widely shared by millions of Americans who were concerned by the totalitarian character of Leninist ideology, the international threat posed by the Soviet Union, and the penetration of domestic communism into American social and governmental institutions. Key intellectual figures in this movement were the former Trotskyite James Burnham and former communist Whittaker Chambers. Chambers testified against State Department official and Soviet spy Alger Hiss and wrote the widely read book *Witness* (1952) to chronicle his religious and political conversion. Anticommunism was an essential glue, appealing both to the religious scruples of the traditionalists and the limited government views of the economic conservatives.

While not part of the broad public resurgence of conservatism, other rightward intellectual currents of the time were represented by anti-utopian philosophers such as Leo Strauss (1899–1973) and Eric Voegelin (1901–1985). Strauss looked to classical Greek philosophy for guidance to the good life and best society. Voegelin fashioned a philosophy emphasizing experience and both the transcendence and limits of humans.

The conservative movement as a coherent force was forged in the mid-1950s when the three major strands of conservatism coalesced. A key moment in that effort was the founding by William F. Buckley of the conservative journal *National Review* in 1955. *National Review* advanced what became known as fusion, a conception of conservatism that balanced and wove together the three strands.

While the conservative movement was coming together at the intellectual level, it was also gaining at the grassroots level. Arizona Senator Barry Goldwater's 1964 Republican presidential campaign recruited tens of thousands of conservative volunteers into Republican politics and shifted the party to the right. Goldwater was the first major American political figure in the postwar era to embrace the label "conservative." In his 1960 book *Conscience of a Conservative*, Goldwater laid out a "fusionist" doctrine that was economically free-market, politically constitutionalist, vehemently anticommunist, and religiously grounded. It was also populist in the style of the English Whigs, the "country party" that regularly took the "court party" to task for its elitism, corruption, and autocratic tendencies. After Goldwater's landslide defeat against Lyndon Johnson in 1964, many commentators

concluded that conservatism as a political force in America was finished.

However, developments in the 1960s and 1970s from stagflation to moral permissiveness to Soviet advances abroad made the conservative critique seem increasingly plausible. At the same time, three new ingredients were added to the stew of American conservatism. One was the growth of black intellectual conservatism represented by thinkers like economists Thomas Sowell and Walter Williams, social commentator Shelby Steele, and future Supreme Court Justice Clarence Thomas. Another was the development of neoconservatism in the form of figures such as Midge Decter, Nathan Glazer, Jeane Kirkpatrick, Irving Kristol, Norman Podhoretz, and Ben Wattenberg. Neoconservatives were typically once-liberal intellectuals who had shifted significantly to the right on the ideological spectrum owing to concerns about Soviet expansionism and cultural issues. While limited in number, the neoconservatives also added considerable intellectual heft to the conservative movement through organs such as *Commentary* and *The Public Interest*.

Finally, a new mass movement of social and religious conservatives arose to complement the traditionalist intellectuals. This movement was distressed by what it perceived as the moral breakdown of American society and the role of government policy in abetting that breakdown. Ultimately known as the "religious right" or the "Christian right," it was catalyzed by the Supreme Court's abortion, school prayer, and obscenity decisions, the fight over ratification of the Equal Rights Amendment, and rules proposed by the Internal Revenue Service during the Carter administration that threatened the tax-exempt status of many Christian schools. Mass organizations like the Moral Majority and, later, the Christian Coalition formed to promote socially conservative policies.

The growing strength of American conservatism helped lead to the 1980 and 1984 presidential victories of former California governor Ronald Reagan, by then the unquestioned standard-bearer of the conservative movement. Reagan, like Goldwater, promoted a populist blend of free market economics, cultural conservatism, and anticommunist nationalism, though without Goldwater's harder edges. Although falling short of many of his goals, Reagan achieved a significant rightward move in public policy and forged a strong Republican electoral coalition that contributed to the Republican takeover of Congress in 1994 and to Republican electoral successes in the early twenty-first century.

Nevertheless, when President Bill Clinton successfully stymied many of their policy departures after 1994, many conservatives searched for a new approach. In his 2000 campaign and subsequent presidency, George W. Bush offered what he called "compassionate conservatism," a reorientation of conservatism that would accommodate big government rather than trying to curtail it, and would institute reforms aimed at making it more accountable and more subject to citizen choice.

CONTRASTS AND TENSIONS

In Europe, a considerable distance separated Burke from Maistre, and a vast gulf divided Burke, Tocqueville, and even Metternich on one hand from the outliers Maurras and von Treitschke on the other. Even within the narrowed range of postwar European conservatism, divisions remained, for example between free-market Thatcherites and their more paternalistic and statist Tory compatriots in Britain. Arguably, not as much distance has divided American conservatives, who largely agreed that what they wanted to conserve was the synthesis between Lockeanism, biblical republicanism, and classical Western civilization that they held to be essential parts of the nation's heritage. Nevertheless, they have differed about what themes to emphasize, and have often differed over specific means. The more libertarian-leaning of the economic conservatives have an uneasy relationship with the social/cultural conservatives. Those traditionalists who eschew natural rights have clashed with other conservatives who defend the natural rights paradigm. Even the monetarists and the supply-siders have engaged in sometimes bitter disputes. When some post-Reagan conservatives argued for a conservatism grounded not in limited government but in promotion of "national greatness" or of a more accountable form of big government, this innovation brought vehement opposition from others. George W. Bush's compassionate conservatism was at the center of that debate.

American conservatism has been more populist and dynamic than its European counterpart, and less paternalistic, aristocratic, authoritarian, and clerical. There is no influential American counterpart to the tradition of Maistre, let alone Maurras. However, the gap between the continents has narrowed substantially as postwar European conservatism shifted decisively in favor of its Burkean pole. Reagan's kinship with Thatcher in the 1980s illuminated an increasing convergence in favor of a conservatism that seeks to preserve the (classical) liberal polity against more radical challenges at home and abroad.

SEE ALSO *Black Conservatism; Liberalism; Neoconservatism*

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CONSERVATISM, BLACK

SEE *Black Conservatism.*

CONSERVATIVE PARTY (BRITAIN)

The British Conservative Party is one of the oldest and most successful democratic political parties in the world. The party originated in the late seventeenth century as the aristocratic "Tory" faction in parliament, with the name "Conservative" achieving currency only in the nineteenth century. In 1894 the party's official name became the "Conservative and Unionist Party" following a merger of the Conservatives and the Liberal Unionist Party. The merger was a result of a protracted conflict that split the Liberal Party into "home rule" and "unionist" groups, with the latter joining the Conservatives to maintain the union of Great Britain and Ireland. In the twentieth-century, the Liberals were replaced by the socialist Labour Party as the Conservatives' principal rivals for power following a further Liberal split during the First World War. The Liberals did not disappear, but they remained an ideologically centrist "third" party whose fortunes mostly waned, and occasionally waxed, over time.

There are three major components in Conservative thought. The first—often labeled "Tory" Conservatism—has roots in the ideas of the British philosopher-politician Edmund Burke (1729–1797). Burke argued that societies were organic, but not static, entities. Social change should be gradual and evolutionary, rather than abrupt and revolutionary. A principal task of the Conservative Party and its leaders was to guide change in ways that would preserve the essential elements of Britain's social fabric. For Burke, the maintenance of hierarchy, continuity, and an interlocking system of mutual social obligations were the ends of good government.

Burke's ideas were given renewed force in the late nineteenth century by Benjamin Disraeli (1804–1881). Leading his party and country when the Industrial Revolution was creating a new urban working class, Disraeli propounded the idea that Britain was "One Nation." Rather than arraying itself in a coalition with the middle and upper classes that was indifferent to working class concerns, Disraeli proposed that the Conservatives develop policies that would serve the interests of all classes.

Inspired by Disraeli's "One Nation" ideas, many subsequent Conservative politicians and political thinkers endorsed the broad panoply of social programs characteristic of the twentieth-century welfare state. Much of this was prompted by the Labour Party's victory in the general election of 1945 and the popular program of policy changes introduced by their government. By doing this, the Conservative Party was able to recover lost ground and capture power again in 1951. "One Nation" Conservatives also adopted assumptions of Keynesian economics, particularly the idea that substantial state intervention in the economy could control inflation and unemployment, while also promoting growth and innovation. By the late 1950s, Conservative and Labour policies had become rather similar, leading observers to coin the term *Butskellism*—an amalgam of the names of the leading Conservative politician "Rab" Butler and the Labour leader Hugh Gaitskell—to describe the convergence between the parties' platforms.

A third, "laissez-faire," component of Conservative thought rejects the interventionist thrust of the Disraeli-Butler tradition. This reflects the free-market ideas associated with Adam Smith that were originally embraced by the Liberal Party. Beginning in the late 1960s, Sir Keith Joseph and other advocates of free-market economics and smaller government became increasingly influential in the party. This neoliberal movement found a champion for its ideas in Margaret Thatcher, who succeeded Edward Heath as the party leader in 1975. In 1979, a combination of accelerating economic decline coupled with mounting social and political turmoil enabled Thatcher to lead her party to power. Thatcherism subsequently came to describe a mix of policies designed to promote free-market economics and lessen public reliance on what Mrs. Thatcher derisively termed the "nanny state." In foreign affairs, following Winston Churchill and other earlier Conservative leaders, Thatcher vigorously opposed communism and promoted strong ties with the United States.

Although initially unpopular, Thatcher's public standing improved markedly in 1982 as a result of

Britain's victory over Argentina in the Falklands War. After leading her party in two more successful general elections, her tenure as prime minister abruptly ended in November 1990 when she was ousted in an intra-party revolt. Her replacement was John Major, who achieved a very narrow and widely unexpected victory in the 1992 general election. Conservative support was then driven sharply downward by a relentless combination of recession and economic mismanagement, internecine conflict over relations with the European Union, and persistent allegations of "sleaze."

The party's vulnerability was enhanced by the resurgence of the Labour Party. Labour had lurched to the ideological left in the late 1970s, effectively making itself unelectable for nearly two decades. However, under the leadership of Neil Kinnock and John Smith, and then Tony Blair, Labour again became a serious contender for power. Chosen party leader in 1994, Blair argued that a Labour government should use the tools of capitalist economics to generate the resources needed to achieve egalitarian policy goals, specifically to fund cherished social programs cut by successive Thatcher-Major governments. In 1997, Blair's "New Labour" party won a landslide victory, reducing the Conservative vote to 30.7 percent, the lowest figure in over 100 years. In two ensuing general elections, that figure increased only marginally—to 31.7 percent in 2001, and to 32.4 percent in 2005.

In the early twenty-first century, the Conservatives are no longer the dominant force that prompted observers to lionize them as Britain's "natural governing party." Searching for new ideas with widespread appeal, subject to continuing intraparty conflict, and suffering much reduced local party membership, Conservatives have struggled to find a formula for renewal. Acting on the correct assumption that one part of a winning formula is leadership, the party has fielded four leaders—William Hague, Iain Duncan Smith, Michael Howard, and David Cameron—since their 1997 debacle. Two of these people (Hague and Howard) promptly led the party to electoral defeat, and one (Duncan Smith) was ousted before he had a chance to do so. However, Cameron may fare better. He is attempting to cast off the legacy of Thatcherism by moving his party back to the ideological center ground and casting himself as both competent and compassionate. His efforts to improve Conservative fortunes are being helped by widespread dissatisfaction among Labour supporters with Tony Blair, and by a series of misfortunes similar to those that beset the Conservatives in the 1990s. Whether this combination of strategy and circumstance will prove a winning one for the Conservative Party remains to be seen.

SEE ALSO *Labour Party (Britain); Liberal Party (Britain); Parliament, United Kingdom; Thatcher, Margaret*

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CONSISTENCY

SEE *Properties of Estimators (Asymptotic and Exact).*

CONSPICUOUS CONSUMPTION

The American economist Thorstein Veblen first introduced the term *conspicuous consumption* in his work *The Theory of the Leisure Class* (1899). The theoretical starting point for discussing the term is the evolution of hierarchical structures in societies, which produce more than is required for subsistence. An unproductive leisure class emerges that accumulates wealth and secures status that is not enjoyed by the laboring class. Conspicuous consumption is the vehicle by which members of the leisure class convey their position of wealth and status to other members of society. Veblen maintained it is not enough to be wealthy; to have status individuals must display their position of wealth via consumption.

In its most traditional guise, leisure is the main focus of conspicuous consumption. The old aristocracy spent much of the social calendar hunting, fishing, horse racing, and whatever else was of interest. As societies became more atomized, however, and capitalist enterprise became the main source of wealth, consumer goods became the main vehicle for social signaling.

Economists have used conspicuous consumption as an explanation of growth in consumer spending. For Veblen it was the main driving force behind the consumer

boom that started in the 1890s. In 1982, the historians Neil McKendrick, John Brewer, and J. H. Plumb argued that it provided the birth of the consumer society itself at the time of the Industrial Revolution. This view has been contested by historians and scholars, who point out that most of the growth in consumption during the Industrial Revolution was in items such as domestic coal, for which there was no social cachet.

This separation between goods that confer status and goods that are more basic, or less visible, is usually employed in economics. Often a utility function that individuals maximize (the mathematical equation relating consumption to utility) is decomposed into two parts representing social and private utility. Under this neoclassical approach, an opportunity for welfare-improving taxation is afforded by individuals choosing wasteful conspicuous consumption. This approach has also been used to explain why indicators of happiness are stagnating in developed countries, since individuals are failing to achieve their status objectives.

Sociologists have emphasized the power of social structure on the consumption of all commodities. In his *Social Structures of the Economy* (2005), the leading theorist of consumption, Pierre Bourdieu, said, "While economics is about how people make choices, sociology is about how they don't have any choice to make" (p. 1). Instead of consciously choosing to engage in conspicuous consumption according to rational calculation, individuals are driven by cultural forces beyond their control. In the French housing market, for example, the desire to own a house takes on mythical proportions. People force themselves to go into large debt in order to meet a societal ideal.

Bourdieu's emphasis on the unconscious formation of social identities also offers a more subtle interpretation of conspicuous consumption than its usual crude association with overt displays of status. During the postwar period the rich have become less overt in distinguishing their consumption from the expenditure power of the rising middle classes. Bourdieu's work offers a framework in which the consumption patterns of the rich appear to be based on their cultural capital, made to appear natural as part of the unequal structure of power.

SEE ALSO *Class, Leisure; Consumption; Malthus, Thomas Robert; Relative Income Hypothesis; Veblen, Thorstein*

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CONSTITUENCY

A *constituency* is the portion of a nation, state, or locality represented by a particular elected official or other political leader. The term can refer to a group of people (for instance, the constituency of a U.S. senator from Illinois includes all the people who live in Illinois) or a geographic area (the state itself). Political scientist Richard F. Fenno Jr. (1978) parses the term more finely, to incorporate four types of constituencies. A *geographic constituency* is defined by boundaries fixed by legislative or court action; it can be based on a district's size, its location, its industrial or business character, or the socioeconomic status, ethnicity, or other characteristics of its population. A *reelection constituency* consists of the people in a district whom a representative considers his or her supporters: that is, those likely to vote for the candidate's reelection. A *primary constituency* includes a representative's strongest supporters—his or her "base," often including activists for groups that ally themselves with the candidate. Finally, the term *personal constituency* refers to a representative's closest advisers and confidants, who may influence his or her decision-making. When a representative speaks of *constituency*, then, it is important for a social scientist to determine how the representative defines that term.

Research shows that a constituency can be represented in many ways (Eulau and Karps 1977). *Policy responsiveness* occurs when a representative advocates the preferred issues of the majority of his or her constituents. In the case of *service responsiveness*, the representative works to provide benefits for individual constituents or groups, ranging from tours of Congress to intervention with a government agency on a constituent's behalf. In the case of *allocation responsiveness*, the representative serves the constituency by "bringing home the bacon," including tangible, pork-barrel projects such as new highways. *Symbolic responsiveness* involves less tangible efforts by the representative to gain constituents' trust. A related notion is *mirror representation*, in which the representative shares salient characteristics with the constituency, such as race or gender. The value of mirror representation rests on the presumption that, for instance, an African American legislator can better understand and speak for the needs of African American constituents than a white legislator can (Pitkin 1967). This assumption helped lead to the cre-

ation of majority-minority legislative districts under the Voting Rights Act beginning in the 1980s.

The term *constituency* can also refer to the supporters of a public figure or the clientele of a business or interest. A prospective Senate candidate might direct his or her appeals to a national constituency of campaign contributors or to a specific group such as gun rights enthusiasts. Even an unelected public official, such as a bureaucrat working for the National Labor Relations Board, may well make decisions with the concerns of organized labor or small business owners in mind. Or a newspaper might change its format in order to expand its appeal to a local constituency of readers.

Democratic nations vary a great deal in constituency size and in the way constituencies are represented. For example, British Members of Parliament (MPs) have, on average, only one-seventh as many constituents as do American members of Congress, and MPs' constituencies tend to be much smaller geographically. However, constituency representation in the American Congress has traditionally focused more on service and allocation than is the case in Britain, despite the greater size of U.S. congressional constituencies, due to the American constitutional emphasis on separation of powers and federalism, which inhibits the development of stronger national political parties. Thus, members of Congress have greater independence from their parties, and consequently a greater need for a personal tie with constituents than do MPs. In recent years, however, personal ties have become more characteristic of the MP-constituent relationship (Cain, Ferejohn, and Fiorina 1987).

The power of a constituency to elect its representatives is central to the working of a democratic system, in that it offers the potential for popular control over government. The existence of that control in practice may be limited by several factors, however. Constituents have been found to gather relatively little information about public policies and the behavior of their representatives. Furthermore, the vote frequently fails to convey specific sets of instructions from constituents to their elected representatives as to what actions to take—especially in American elections, which are regularly scheduled and therefore do not necessarily occur at a time of special relevance for a particular issue. To communicate specific concerns, constituents can lobby their representatives through letters and e-mails, campaign contributions, protests, interest-group and party activism, media ads, visits to legislators, and testimony given to congressional committees—all costly to constituents in time, effort, and money.

Despite these very real limits on the ability of constituents to control their elected officials, the existence of a constituency with the power to select its representatives is nonetheless one of the most important checks on government power. Constituents also serve as the support for political parties and interest groups, two of the other primary restraints on government.

SEE ALSO *Authority; Campaigning; Democracy; Elections; Fenno, Richard F.; Gerrymandering; Interest Groups and Interests; Lobbying; Pitkin, Hanna; Political Parties; Political Science; Representation; Voting Patterns; Voting Rights Act*

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CONSTITUTION, U.S.

In 1787 delegations from twelve of the thirteen states of the fledgling United States (all but Rhode Island) descended on Philadelphia, Pennsylvania, to consider revising the Articles of Confederation, which had provided a roadmap for national government since their ratification in 1781. Over the course of four sweltering months, these delegations met under a cloak of secrecy to consider how best to keep the United States whole. The proposal that emerged in late September 1787 was not a revision of the Articles of Confederation but an entirely new document which, upon ratification, became the Constitution of the United States of America. That Constitution has survived, more or less intact, for more than 200 years.

In the years between the Revolutionary War and the Constitutional Convention, the United States operated pursuant to the Articles of Confederation. As the name implies, the Articles envisioned a confederation of autonomous states, with a limited national government to provide national defense and otherwise manage foreign affairs. The national government, however, could do little without the consent of at least nine of the thirteen states.

The Articles of Confederation proved unworkable. The national government had difficulty collecting funds from the states to pay the immense debts incurred during

the war, and they could not even compensate the soldiers who had fought on behalf of independence. Moreover, as the states coined their own money, forgave debts of their citizens owed to citizens of other states, and erected trade barriers among themselves, the national economy floundered. Among the country's leaders, James Madison of Virginia and Alexander Hamilton of New York lobbied the loudest for reform. Shays' Rebellion, an armed insurgency by a band of impoverished Massachusetts farmers, lent a sense of urgency to their demands and the national Congress decided to convene a delegation of reform in Philadelphia.

The Philadelphia Convention brought together some of the most prominent political voices of the time. Some, such as James Madison, considered the convention an opportunity to create a strong national government. In a tactical coup, Madison and his delegation from Virginia arrived early, marshaled their arguments, and proffered a coherent plan for sweeping reform—the Virginia Plan—a mere four days after the convention was called to order.

Delegates who favored state sovereignty and limited national government proposed alternatives, most notably the New Jersey Plan. The Virginia delegation, however, had successfully framed the debate, and while the convention debate prompted considerable compromise, the proposal that emerged from the convention vastly increased the power of the national government relative to the states.

Specifically, the proposed constitution created a bicameral legislature, with representation based on population in one house and equal for every state in the other; a unitary executive; and a Supreme Court. Perhaps most importantly, the proposed constitution vested control over interstate and foreign commerce with the national government and gave the national government the power to levy taxes rather than rely upon the largesse of the states for funds. Overall, the proposed document gave the national government control over the nation's economy and foreign affairs; while states retained significant sovereign power, the document explicitly rendered that power inferior to that of the national government.

While the proposed constitution increased the power of the national government, it nevertheless reflected a deep skepticism of any unchecked power. The institutions of national government are each constrained by the others, forcing deliberation, compromise, and incremental policy making. Similarly, while the Congress and the president are ultimately accountable to electoral pressures, the Supreme Court is insulated from such forces by life tenure. In this way, the U.S. Constitution reflects the core concerns of classical liberal philosophy: a government guided by majority rule but providing protection for minority rights.

While the rhetoric surrounding the Revolutionary War and the framing of the Constitution emphasized equality and the inherent rights of man, the founders defined equality quite narrowly. Specifically, at the time of the founding, most states denied the right to vote and other privileges of citizenship to large classes of people, including women and citizens who did not own real property. Perhaps the most striking conflict between the ideals and the reality of the early United States was the institution of slavery.

The same citizens who were willing to fight and die for liberty during the Revolutionary War turned a blind eye to the institution of slavery or, in many cases, actually participated in it. While there were doubtless delegates who held personal moral objections to slavery, serious efforts to abolish slavery would have fragmented the foundling nation. The delegates to the Constitutional Convention discussed the issue of slavery, but the only serious concern was how slaves should be counted for purposes of taxation and representation. The ultimate compromise position—that each slave would count as three-fifths of a free person—remains an embarrassment to the nation.

The terms of the proposed constitution required ratification by nine of the thirteen states. Supporters of the new constitution, known as Federalists, appealed to middle-class merchants and creditors, exhorting the need for economic stability. Many state and local politicians, whose power was threatened by a strong national government, opposed the new constitution; these Anti-Federalists made emotional appeals about the burden of taxation the new government would create and raised the specter of Britain's tyranny over the colonies.

The Anti-Federalists spread their message through public rallies and through a series of essays published in newspapers across the country. These essays, written under pseudonyms such as "Cato" and "The Federal Farmer," later became known as the *Anti-Federalist Papers*. In response, Alexander Hamilton, John Jay, and James Madison collectively penned a series of 85 essays, dubbed the *Federalist Papers*, which sought to allay fears of government tyranny. These essays stand as perhaps the best defense of the United States' republican system of government.

Ultimately the Anti-Federalist forces lacked coordination and failed to offer a single, coherent alternative to the new constitution. By January 1788, five of the necessary nine states had ratified the new constitution. The Federalists ultimately attracted additional support by promising to recommend, as a first order of business for the new government, a series of amendments designed to protect individual liberty against the tyranny of the state; these amendments are known as the Bill of Rights. The

Constitution was ratified on June 21, 1788; almost two years later Rhode Island became the last of the original thirteen colonies to ratify the Constitution.

Since its ratification in 1788, the U.S. Constitution has endured remarkably well. Amending the U.S. Constitution is difficult, and this difficulty insulates the document from the most capricious tides of public sentiment, contributing to its stability. Amendments must first be proposed by two-thirds of both chambers of Congress or by a convention called by two-thirds of the state legislatures; ratification then requires approval from three-fourths of the states. Apart from the Bill of Rights, the United States has ratified only seventeen constitutional amendments. Most of the successful amendments have expanded the franchise or involved the administration of government; generally, efforts to amend the Constitution to implement social policy have failed. There are, however, two notable exceptions.

First, in the wake of the United States Civil War, the nation ratified three constitutional amendments related to the issues of race and slavery. The Thirteenth Amendment abolished slavery and involuntary servitude. The Fourteenth Amendment guaranteed citizens equal protection under the law and required the states to afford citizens due process. The Fifteenth Amendment required the states to extend the right to vote to all adult men, regardless of race or previous condition of servitude. Collectively, these amendments radically changed the social structure of the United States; while racial equality continued to evolve for the next century and, indeed, continues to elude the United States, these amendments have served as a moral compass pointing toward true equality.

The other successful attempt to regulate social policy through constitutional amendment was, frankly, only successful for a brief moment in time. In 1919 the United States ratified the Eighteenth Amendment, which prohibited the manufacture, sale, and trade of intoxicating liquors. For the next fourteen years, this policy—known as Prohibition—created a black market for alcohol and contributed to a dramatic increase in organized crime. In 1933 the Twenty-First Amendment, which repealed the Eighteenth, was ratified.

While the Constitution is stable, it is not rigid. Rather, interpretation of the Constitution has adapted to changing social and political circumstances, and thus insured its continued political viability. Specifically, the U.S. Supreme Court, through the mechanism of judicial review, interprets the U.S. Constitution, and fluidity in its interpretation has allowed the Constitution to bend to adapt to political demands.

For example, the equal protection and due process provisions of the Fourteenth Amendment—which were intended to protect racial minorities from mistreatment and discrimination—were construed by the Supreme Court to provide protection to large economic interests. Similarly, the Supreme Court has repeatedly recognized a "right to privacy" implicit in the protections of the First, Fourth, Fifth, and Fourteenth Amendments; the Supreme Court has determined that this right to privacy essentially protects most sexual and reproductive decisions from government interference.

Ultimately, the U.S. Constitution is a document born of necessity and compromise, but it has proven remarkably robust and resilient. As society and technology have evolved, the Constitution, too, has evolved. But its evolution has occurred, primarily, through changing interpretation of static language. As a result, the Constitution has adapted but its essential character—the basic principles of liberty, equality, and democracy reflected in its language—has endured.

SEE ALSO *American Revolution; Bill of Rights, U.S.; Civil Liberties; Civil Rights; Declaration of Independence, U.S.; Supreme Court, U.S.*

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CONSTITUTIONAL COURTS

Although Alexander Hamilton, one of the founders of the oldest constitutional court, promoted the judiciary as the "least dangerous" branch of government in 1788 (*The Federalist No. 78*), judicial practice has since proven that constitutional courts have considerable power potential and are less feeble than Hamilton suggested. Since the mid-twentieth century, constitutional courts have become particularly popular features in the constitutions of newly democratized states, specifically due to their potential to powerfully constrain the other governmental branches. In these states, constitutional courts carry the burden

(though not always effectively) of safeguarding the democratic system.

Constitutional courts may have such political impact because they are specialized tribunals, charged (either exclusively or as the highest appellate court) with upholding the constitution and exercising judicial review by invalidating any legislative acts (or government actions) violating constitutional mandates. However, two schools of thought disagree whether this renders constitutional courts effective policymakers.

One school, known as the *dynamic court* view, holds that the exalted position of constitutional courts within the political system makes them more powerful than policymakers in other governmental institutions. However, this causes these courts to clash with other branches of government, producing what Alexander M. Bickel (1986) calls the *countermajoritarian difficulty*. Because they are not popularly elected, constitutional courts typically enjoy considerable independence from political pressures while wielding the power to invalidate acts of the popularly elected branches of government, frustrating the will of the (legislative) majority. Thus, their ability to shape public policies by setting constitutionally allowable parameters for legislation without being subject to traditional mechanisms of democratic accountability has prompted allegations of judicial activism.

In contrast, a second school of thought known as the *constrained court* view (Rosenberg 1991) argues that even the powerful U.S. Supreme Court is rarely able to effect social change because it is too constrained by the Constitution, by other institutions of government, and by its lack of policy-development tools. This school of thought is unconcerned about the countermajoritarian difficulty.

Notwithstanding this debate, constitutional courts are generally believed to have some (though not completely unrestrained) powers that may allow them to be effective guarantors of a democratic constitutional order. Scholars have begun to specify factors boosting a court's political power, including a store of political capital; the court's ability to pick from a wide range of cases (e.g., through generous standing rules, through the powers of both concrete and abstract review, as well as through a posteriori and a priori review), while being able to limit the docket; and the court's insulation from political pressures (e.g., through long terms of office). Neither centralized nor diffuse systems of judicial review appear to present power advantages to the court.

Interestingly, some constitutional courts established their power through their own rulings (c.f. the U.S. Supreme Court in *Marbury v. Madison* [1803], or the European Court of Justice in *Costa v. ENEL* [1964]), rather than through explicit constitutional empowerment clauses. Some observers, such as C. Neal Tate and Torbjörn Vallinder, even detect a significant global trend toward the "judicialization of politics" (1995, p. 5) that increasingly puts constitutional (and ordinary) courts in the limelight of political conflict. Consequently, political analysis is no longer complete without a consideration of constitutional courts as political actors.

SEE ALSO *Judicial Review*

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CONSTITUTIONALISM

Modern nation-states enact constitutions to bring society from its natural state of chaos to organization based on the rule of law. Unlike the war of all against all described by the English philosopher Thomas Hobbes (1588–1679), John Locke's (1632–1704) view of the state of nature recognized that humans have organized in family and cultural units throughout history. Though unnecessary for protection from outsiders, society could benefit from a *social contract*. Participants must agree to create structure (a legislature to make decisions), to designate an impartial judge, and to establish enforcement powers (an executive branch) in order to sustain a peaceful society. These entities, according to Locke, can only be created through the efforts of the members of a society to contract for continued institutional support.

The social contract is often embodied by a constitution, a set of principles by which a group of people agrees to govern and be governed. In order to operate as a constitution, these rules need not take the form of a written document. The social contract metaphor is limited in several ways, including, in most circumstances, the lack of

third-party enforcement. It is more important that constitutional law represents the conventions accepted in a society, and that societal order is coordinated around these conventions. A "dualist" understanding views constitutions as frameworks within which other politics and institutions operate. They establish second-order rules that must be followed when making more specific laws.

By constraining rulers, constitutions aim to protect citizens' rights. When a constitution stipulates judicial review, citizens can petition courts to invalidate laws that violate constitutional principles. Although, as with the unwritten British constitution, not all provisions are judicially enforceable, they may nonetheless serve as focal points for legal interpretation and political debate, as well as indicators of which government interventions will be accepted by citizens.

A constitution serves, in some sense, to codify existing social relations. Constitutional design, therefore, is constrained by internal and external power dynamics. Resulting agreements reflect these relationships rather than pure legal ideals. As a result, underrepresented groups continue to be excluded, unless they gain influence by extraconstitutional means.

Russell Hardin (1999) sees constitutions more as models of mutual advantage than as binding contracts. It is usually in the best interest of all parties to uphold the rules that maintain order within their society. There are relatively few occasions when it would be more difficult to follow existing rules than to renegotiate the terms of a constitution.

Those rare circumstances on which recoordination is less costly for society are constitutional moments (Ackerman 1991). Changes in power alignments, in relation to internal politics or external influence, may necessitate a change in the substance of a constitution. These moments may involve major amendment to an existing constitution, as in the post–Civil War United States, or they may require a complete overhaul of the constitution, as in South Africa following the inclusion of the black population as full citizens in the 1990s. At these times, questions of legitimacy arise because the constitutional authors have not been elected by a process representing the new social contract, and may not represent the people who will be bound by the new document. If a new constitution is to remain a stable set of rules for the polity, it must represent a credible commitment by citizens and leaders who will not have an incentive to override or renegotiate it, or resort to violence. Such constitutional moments may arise in the context of postwar reconstruction, independence movements, domestic upheaval, or union of existing polities. In each situation, citizens encounter distributional gains and losses reflecting societal change.

SEE ALSO *Judicial Review; Locke, John*

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CONSTITUTIONS

Constitutions can be defined as a set of rules that aim at regulating the channels of access to principal government positions, the allocation of powers among different branches of government, and the rights of citizens. Most constitutions also include rules establishing procedures for their own amendment and the conditions under which constitutional provisions can be suspended.

Nearly all countries in the contemporary world have written constitutions, often identified as the "fundamental law." Even for these countries, however, it would be misleading to restrict the constitution to a single document so named. Some of the rules that create the structures of government and delimit their authority are also contained in statute law (such as laws establishing the jurisdiction and powers of governmental departments or independent agencies) and in judicial decisions (such as the rulings of a constitutional court) that are not codified in a single document. In addition, there are always unwritten conventions that regulate the behavior of representatives and citizens, particularly in areas where written rules are silent or unclear. Moreover, most parts of a constitution can be composed of unwritten conventions, as is the case of the United Kingdom, New Zealand, and Israel.

Constitutions generally attempt to prevent the arbitrary use of state power. But there is a wide variation in the degree to which state authorities effectively abide by the constitution. Rulers are more likely to observe a constitution that emerged out of a democratically elected body representing a plurality of political forces. They are also likely to comply with the constitution when citizens agree on the authority of the constitution as a set of impartial procedures for the resolution of conflicts. This consensus, however, is often lacking when societies are divided by overlapping cleavages of an economic, religious, or ethnic nature.

Constitutions that are at least minimally enforced are essential for the existence and legitimacy of democratic

regimes. Citizens would not be free to criticize the government and keep its decisions in check without basic constitutional rules guaranteeing freedom of expression and providing remedies against arbitrary state action. Truly competitive elections could not exist without constitutional rules guaranteeing freedom of assembly and organization.

There is great variation in the way constitutions organize a democratic regime. Constitutional democracies can be presidential, if the chief of government is elected by the people for a fixed term, or parliamentary, if he or she is elected by the assembly and responsible to the legislative majority. Legislative assemblies can be unicameral or bicameral. States can be unitary or federal. Most contemporary constitutions establish independent courts responsible for interpreting the constitution. Constitutional courts, however, vary in organization, composition, and powers. Finally, while the majority of constitutions include amendment rules that attempt to make constitutional reforms more difficult to pass than ordinary laws, these rules can be relatively flexible or extremely rigid.

In the twenty-first century constitutions are implicitly or explicitly central to some of the most important research fields in social sciences. Constitutions and their various designs are considered to have a crucial impact on the stability and quality of democracy, on economic policy and economic performance, and on the rate of policy change in political regimes.

SEE ALSO *Authority*

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CONSTRAINED CHOICE

Constrained choice occurs when an economic agent must determine the optimal combination of choice variables (given some relationship between combinations of those variables and payoffs) in the face of a constraint limiting the set of feasible combinations for those variables available to the agent. For instance, a consumer seeks to choose the combination within his or her means of consumption goods and services that maximizes welfare. More specifically, if C_1 and C_2 are the goods for which the consumer must choose the optimal combination, the consumer's problem is to maximize utility ($U(C_1,C_2)$) given a budget constraint: $p_1{}^*C_1 + p_2{}^*C_2 \leq M$, where p_1 and p_2 are the prices of the two goods and M is the consumer's overall income or purchasing power.

The concept of constrained choice has been extended both theoretically and empirically to more elaborate settings. It arises naturally when agents must make forward-looking decisions or when agents are uncertain. For instance, life cycle models of saving and consumption focus on the challenge presented to agents who must maximize discounted lifetime utility given the constraints imposed by current and future income, and prices and opportunities to save or borrow. Agents may face uncertainty in terms of future income and prices, as well as the returns to savings. The simple budget constraint posed must then be recast in intertemporal terms in a fashion that reflects the impact of per period saving or borrowing, as well as uncertainty regarding future income flows, returns to saving, and prices. A common way of approaching this is the value function method, which essentially reduces the rather complex intertemporal problem to a series of two-period problems.

The concept of constrained choice has also been extended to other behavioral settings, such as joint decision-making. For example, household bargaining models attempt to capture a household's members' efforts to maximize their personal utility from the consumption of goods and services, given a limit to overall household purchasing power. The household bargaining example also speaks to alternative approaches to choice. For instance, much of game theory studies interactive decision-making. This approach focuses on the constraints placed on an agent's decision-making by other agents' likely responses to his or her decisions. Thus the agent does not necessarily face a static, internal (to him- or herself) constraint as in the examples previously presented, but other agents' likely reactions to the agent's behavior, and their responses' implications for the agent's own payoff function, effectively constrain his or her behavior.

SEE ALSO *Choice in Economics*

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CONSTRUCTIVISM

Although the term *constructivism* is used as a label for an important movement in art history (as in Russian constructivism), *constructivism* in the social sciences refers to a distinctive approach to theory and research that is opposed to the dominant empiricist, naturalist, and realist frameworks of mainstream social thought. This general approach is also frequently designated by the terms *social constructivism* and *social constructionism*.

The constructivist outlook can be formulated based on three general claims: (1) the ontological thesis that what appears to be "natural" is in reality an effect of social processes and practices; (2) the epistemological thesis that knowledge of social phenomena is itself socially produced; and (3) the methodological thesis that the investigation of the social construction of reality must take priority over all other methodic procedures.

Historically, constructivist epistemologies have opposed both empiricist and realist philosophies of science. Empiricism is rejected for its passive view of mind and its assumption that beliefs and knowledge are formed through associative patterns of theory-neutral "sense data." Realism—the belief in independently existent objects—is criticized for ignoring the various interpretive and constructive processes through which cognition of objects is actually realized. Against these naïve epistemologies, constructivism commends something like a Copernican revolution in our taken-for-granted ways of conceptualizing knowledge and reality. For the constructivist, cognition is no longer viewed as an objective representation of the real, but is approached as an active construction of reality, shaped by particular interests, actions, representational media, and social practices. Human beings do not merely "adapt" to a preexisting world; rather, as active agents, they participate in the interpretive construction of reality.

One primary form of interpretation can be found in practical interaction mediated by everyday language and communicative forms. Thus, what might seem to be pregiven "natural" categories and relations are seen as products of particular social practices and interests. Moreover, such categories and relations are subject to historical change. Against empiricism and naturalism, constructivists argue that we should see every phenomenal order as the product of active processes of social interaction. The "real," in other words, is viewed as a construction of agents and productive activities. Whatever beliefs we hold about reality are contextually defined and culturally constructed. Orthodox epistemology and commonsense thinking influenced by it tend to be atomistic, monological, and representational, whereas constructivism is holistic, instrumentalist, and pragmatic.

This conflict between forms of realism and more pragmatic and praxis-oriented worldviews can be traced back to the scientific revolution of the seventeenth century and the thinking of the eighteenth-century Enlightenment. The constructivist spirit was symbolically expressed by a principle that was first proposed by the great Italian philosopher Giambattista Vico (1668–1744)—the *verum-factum principle*—according to which historians and social theorists can only truly know what has been made or shaped by human intention and design. For Vico, this idea opened the continent of history as a realm of contingent social constructions.

The other important philosophical source of constructivist themes is the antiempiricist critical epistemology formulated by Immanuel Kant (1724–1804) toward the end of the eighteenth century. Against the dominant empiricism of his day, Kant argued that cognition is not a passive reception of sensory data, but is, rather, the outcome of constructive processes of active cognition (involving a priori forms of intuition, categories of the understanding, and so on).

In keeping with the changing forms of empiricism and realism, the development of constructivism in the nineteenth and twentieth centuries took many forms. These include the historicist perspective of historical materialism (with Karl Marx's [1818–1883] elaboration of a more praxis-based "dialectical" realism); Émile Durkheim's (1858–1917) image of the social as a collective "social fact"; the *verstehende* or interpretive sociology defended by Wilhelm Dilthey (1833–1911), Georg Simmel (1858–1918), and Max Weber (1864–1920); Edmund Husserl's (1859–1938) transcendental phenomenology; the philosophical hermeneutics associated with the philosophers Hans-Georg Gadamer (1900–2002) and Paul Ricoeur (1913–2005); the social phenomenology of Alfred Schutz (1899–1959); the sociology of knowledge represented by Karl Mannheim (1893–1947); and a range of interpretive sociologies influenced by these thinkers. Perhaps the seminal text in post–World War II (1939–1945) American sociology was Peter Berger and Thomas Luckmann's *The Social Construction of Reality* (1966), which developed a sociology of knowledge synthesized from Marxist, Durkheimian, Meadian, and phenomenological traditions.

Constructivism became an influential current of thought in the 1960s and 1970s as it converged with new approaches to the understanding of the constitutive rules and regulatory processes that inform the framework of social life. This was particularly important in so-called labeling theories of deviance and the "new criminology"; in debates about the symbolic sources of social identity (in the symbolic interactionist tradition); in the study of stereotyping, prejudice, and authoritarianism in the field of ethnicity and race relations; in the renewed concern with the historical and political construction of sexuality and gender relations (associated, in particular, with feminist sociology); and in the emergence of more microsociological inquiries into the negotiated character of everyday social orders.

The constructivist outlook has had a major impact in shaping the landscape of contemporary intellectual life. Among the most important fields influenced by constructivism are: semiotics and structuralism, critical theory, general systems theory, structuration theory, postmodern theory, and gender theory.

In semiotics and structuralism, the structuralist movement explicitly embraces the constructive role of language and other cultural systems as reality-shaping forms of social production and reproduction (in terminology derived from Ferdinand de Saussure [1857–1913], language becomes a differential system of meaning construction). In psychology, Jean Piaget's (1896–1980) structuralism provided one of the first explicit constructivist conceptions of human cognition, learning, and socialization, and James Gibson's (1904–1979) theory of active *affordances* has led to constructivist research in perception and cognition (Gibson 1966).

In critical theory, the revision of historical materialism began with the Frankfurt School and continued under Jürgen Habermas and his students. Habermas's differentiation of knowledge into three basic interest-defined types—instrumental (knowledge constructed in relation to work and labor), interpretive-hermeneutic (knowledge concerned with practical understanding in social life), and emancipative (knowledge linked to social criticism and change)—is an example of constructivism in critical theory.

In general systems theory, societies actively construct their "environments" through cultural codes and representations. Structuration perspectives take as their theme the variable practices and differential processes of culturally mediated world construction. Examples of the latter are the "structuration" theories of society in the work of Pierre Bourdieu (1930–2002) and Anthony Giddens, and the closely related genealogical investigations of power/discourse formations associated with the work of Michel Foucault (1926–1984). Constructivism in postmodern theory is represented by the theory of language-games in Jean-François Lyotard (1924–1998) and the theory of simultation and hyperreality formulated by Jean Baudrillard. Gender theory has become especially marked in accounts of the discourse-constructed character of gendered identities, sexual inequalities, and patriarchal power influenced by post-structuralist theories of language.

Constructivist approaches can be found in a wide range of perspectives in contemporary social thought. The first and most pervasive is the so-called linguistic turn within contemporary philosophy and, closely linked to this, the "cultural" turn across all the social sciences. This insight into the radically constitutive implications of cultural processes challenges naturalistic methodologies by demonstrating the way in which all social relations and spheres of society are culturally produced, organized, and reproduced (Burr 1995; Gergen 1999). One example is the influence of a type of discursive "genealogy" influenced by the writings of Foucault (in essence, Foucault's studies of disciplinary practices are inquiries into the discursive construction of "normal" schooling, penal practices, clinical medicine, and so on). In moving from a framework of individual construction (for example, the early work of Piaget) to theories of social construction, we emerge with a more radical sociology of the frameworks of knowledge viewed as cultural formations.

It is no exaggeration to say that a field such as ethnicity or "race" relations has been transformed by constructivist approaches to the discourses of "racial" differences and "racialized" inequalities and disadvantage. The history and sociology of racism has developed in ways that demonstrate how particular categories of ethnic difference have been constructed historically in order to sustain particular systems of domination. Viewing human groups in terms of "races" is a relatively recent example of the violence that can be inflicted upon populations and whole societies by social categories. Every ideology based upon a belief in the innate or culturally prescribed inferiority of one group defined by some physical attribute, characteristic, or trait is seen as an example of wider processes of socially mediated power and domination. Constructivism thus not only offers new avenues of research into the workings of racist discourse but also has led to a renewed sense of the ethical and political problems inherent in using "racial" terms and ethnic stereotypes. Divisions between groups and communities based upon such discourses are primary examples of socially constructed relations. The problem of institutionalized discrimination and how such inequalities are maintained by racialized discourse is seen as being central to the workings of power and domination in society (an insight that has led to renewed interest in the historical dynamics of colonial and postcolonial systems).

Another field in which constructivist approaches have been highly productive is the branch of microsociology inspired by the writings of Harold Garfinkel, Aaron Cicourel, David Sudnow, and Harvey Sacks. Their work has led to the emergence of a distinctive framework of research concerned with the sense-making activities of everyday discourse and conversation (usually referred to as *conversation analysis*). *Discourse perspectives* have also been influential in social psychology (as seen, for example, in the work of Jonathan Potter and Margaret Wetherell), including the explicitly social understandings of debates in experimental and physical science (Mulkay 1979; Knorr-Cetina 1981; Latour and Woolgar 1986), as well as the constructivist sociology of science associated with the Edinburgh School and approaches to the symbolic construction of organizations and organizational cultures (for example, in Karl Weick's *Sensemaking in Organizations* [1995]). Further analysis of the constructivist program would need to distinguish between the different varieties of sociological and phenomenological constructivism, symbolic interactionism (Plummer 2000), linguistic constructivism, moderate and radical constructivism, and more ideologically sensitive discourse-theoretical models of knowledge construction (Gadamer 1975; Edwards and Potter 1992; Gergen 1982 and 1999; Grint and Woolgar 1997; Potter 1996; Potter and Wetherell 1987).

Social constructivist approaches have actively transformed almost every subdisciplinary field within sociology and, more creatively, given rise to new research configurations and inquiries, most particularly associated with the sociology of the body, the self, cultural identity, and systems of difference. These approaches are most explicitly evident in the concept of embodiment regarded as a symbolically mediated process (Shotter 1993; Shotter and Gergen 1988); discursive psychology (Edwards and Potter 1992; Potter and Wetherell 1987); the symbolic dynamics of social identity and identity construction (Levine 1992; Bayer and Shotter 1998); the sociology of sex roles, sexuality, gender, and gender socialization (Burr 1998); critical investigations of ethnicity, racism, sexism, prejudice, and stereotyping (Billig 1991); the social construction of health and illness (White 2002); and more radical programs of reflexive social theory into the different forms of power and domination in everyday life and society (Sandywell 1996; Steier 1991). All of these approaches depend upon a more critical understanding of the historical dynamics of the construction of identity and difference in and as social relations. The challenge faced by contemporary constructivism is to open dialogues with these new problematics and to develop more reflexive frameworks that respect the constructive processes of social existence.

SEE ALSO *Realism; Structuralism*

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Barry Sandywell

CONSUMER

The consumer plays a central role in mainstream economic analysis. This analysis explains economic behavior in terms of individual optimization, and the consumer, who buys and uses goods and services to maximize utility or seeks his or her highest level of satisfaction given the constraints he or she faces, is a central locus of decision making. Mainstream economics is often defined as the subject that examines how scarce resources are allocated to alternative uses to satisfy human wants, and these wants are embodied in the preferences of the consumer. Many of the key ideas of mainstream economics—such as the existence of general equilibrium in a market economy, and its property that this equilibrium is socially efficient—can be illustrated with economic models in which the only economic agents are consumers with given endowments of goods, interacting with others through market exchanges (without the producer, the other important agent in economics).

BASIC THEORY OF THE CONSUMER

The basic theory of the consumer examines an economic agent with a preference ordering over bundles of consumer goods. It is assumed that this ordering is complete (i.e., that the consumer can order all possible alternatives), reflexive, and transitive, and that more of any good is preferred to less (Barten and Bohm 1982). Under these assumptions the consumer's preferences can be represented by a utility function that assigns a real value to commodity bundles

$$U = U(q_1, q_2, \ldots, q_n)$$

where utility, U, increases with the quantity of each of N goods consumed, q_i. The consumer is also assumed to have a budget constraint given by $p_1q_1 + p_2q_2 + \cdots + p_nq_n \leq Y$,

where p_i denotes the (money) price of good i, exogenously given to the consumer, and Y is the (money) income of the consumer. The consumer is also assumed to maximize utility by choosing quantities of goods consumed, q_i. The solution of this maximization problem is usually shown

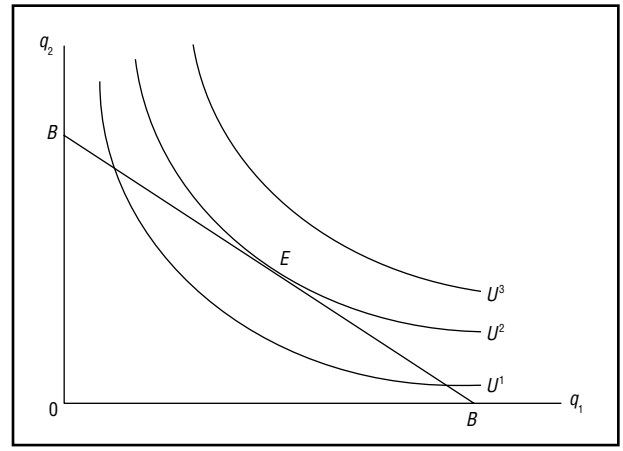

Figure 1

for the case of two goods ($N = 2$) with an indifference curve diagram as shown in the figure above, where the line BB is the consumer's budget line, which shows combinations of consumption bundles that satisfy the budget constraint with an equality (with the consumer spending his or her entire income) and the curves marked U are indifference curves, each one denoting a particular level of utility of satisfaction for the consumer, and drawn "smooth" and convex to the origin to show that consumers prefer "mixed" baskets to baskets containing a large amount of one good.

The consumer maximizes utility or reaches his or her highest level of satisfaction at the bundle E, which is the consumer's equilibrium. At equilibrium, the consumer equates the price ratio, p_1/p_2, the slope of the budget line, which shows the rate at which the consumer can substitute between the two goods at their prevailing prices, to the marginal rate of substitution between the two goods, the slope of the indifference curve, which shows the rate at which the consumer prefers to substitute between them to leave utility unchanged. In the general case with more than two goods, the consumer's equilibrium requires that the price ratio between any two goods is equated to the marginal rate of substitution between them.

This basic theory has a number of implications. First, given prices and preferences, an increase in income shifts the budget line outwards without changing its slope and increases the consumption of all goods if they are "normal" goods, and increases the consumer's utility. For some goods it may be that the quantity demand falls with income; these are called *inferior goods*. Second, other things remaining constant, a fall in the price of a good rotates the budget line outwards and increases the consumption of that good, provided it is a "normal" good. This increase occurs both because the relatively lower price of the good makes the consumer substitute away

from the other good along an indifference curve (the "substitution effect"), and because the lower price in effect increases the real income of the consumer, inducing him or her to buy more of all goods (the "income effect"). This yields the consumer's demand function and curve showing the relation between the price and quantity consumed of a good. This, when aggregated over all individuals in the market, provides the market demand function and curve of the good. If the good is inferior, it is possible that the fall in the price of the good can lead to a fall in the quantity of the good consumed, with the consumer buying less of the good because he or she feels richer. Third, if the prices of all goods and the consumer's income change by the same proportion, the budget line will be unchanged, and the consumer will choose the same bundle. In other words, consumer demand is homogenous of degree zero in income and prices, which is known as the *homogeneity property*. Fourth, a shift in preferences favoring a good shifts the indifference curves towards the axis that measures the quantity of that good, and increases the consumption of that good.

ALTERNATIVE APPROACHES

This discussion has used utility and the level of satisfaction interchangeably. However, the early analysis of the consumer provided a hedonic interpretation of utility, identified it with pleasure, and took it to be cardinally measurable (Stigler 1950). It was assumed that utility increases with the level of consumption of a good, so that marginal utility—the change in utility due to the change in the quantity of a good consumed—is positive, but increases at a diminishing rate, so that marginal utility diminishes with increases in consumption. In this approach consumer equilibrium occurs when the marginal utility obtained from a commodity divided by its price is the same for all commodities. This equilibrium implies that an additional unit of money is allocated over different goods in such a way that it yields the same additional utility.

Concern with cardinal measurability led to the development of the ordinal utility theory of the consumer, with early contributions by Vilfredo Pareto (1909) and Eugene Slutsky (1915), and with later developments by John R. Hicks (1934) and Roy G. D. Allen (1934). In this theory, the concept of diminishing marginal utility is not meaningful, and is replaced by the assumption of the diminishing rate of marginal substitution (which states that the amount of a good that the consumer requires to stay at the same level of utility when he or she gives up a unit of another good increases as the consumer has more of the latter good), which is equivalent to indifference curves being convex to the origin. The implications of changes in income, prices, and preferences are the same with this approach as with the earlier one, without requiring the stronger assumption of cardinally measurable utility. The marginal rate of substitution between two goods is equivalent to the ratio of their marginal utilities.

The assumptions required for analyzing consumer behavior using Paul A. Samuelson's revealed preference approach (1938) are even less stringent, with no utility functions being assumed. Only the implications of observed behavior and the consistency of preferences are used to develop consumer theory.

Despite this trend towards requiring fewer assumptions, some analyses of consumer behavior, for example the examination of decision making in risky situations, and the evaluation of the well-being of the consumer, require stronger assumptions about the measurability of utility.

APPLICATIONS

The basic theory of the consumer has found many applications in economics (and even outside it) by suitable interpretations of "goods." The choice made by the consumer between consumption and leisure treats leisure as a good and takes into account the time constraint faced by the consumer that is allocated to work (which yields income) and leisure (which provides satisfaction but not income). This analysis is used to examine the labor-supply decision of the consumer. The choice made by the consumer between consumption in one period and consumption in the next (assuming a two-period life of the consumer, for simplicity) addresses the intertemporal dimension of the consumption-saving decision, with the relative price of consumption this period being determined by the interest that is yielded by savings. The additional amount of the good in the next period with which the consumer must be compensated (so that the consumer's level of utility does not change) for giving up a unit of the good this period is assumed to be greater than one by an amount that is called the *consumer's rate of time preference*, which measures the consumer's degree of impatience. In this theory, an increase in the interest rate reduces consumption in this period and increases saving through the substitution effect by making consumption this period more expensive, but it may reduce saving through the income effect of making the consumer increase consumption now. More generally, the consumer can be assumed to have a life-time horizon of longer than two periods. Sometimes the time horizon is taken to be infinitely long. The approach is used to examine choice when the consequence of choices is not certain. It is assumed that the outcome of a choice has a probability distribution, and the consumer maximizes expected utility, that is, the utility derived from each possible outcome weighted by its probability of occurrence. The approach is

also used in the analysis of the portfolio choice among different assets for the asset-holding consumer. For example, if the consumer prefers higher returns to assets and lower risk, the consumer is taken to have a utility function over return and risk. Given the return and risk characteristics of different assets, the consumer can then choose the overall return and risk of his or her portfolio, and hence the allocation of wealth among different assets.

EMPIRICAL ISSUES

The empirical analysis of consumer behavior traditionally has been conducted using econometric methods, with the estimation of demand curves for particular products and systems of demand functions. This type of empirical work usually refers to an aggregate of consumers—for example, to all consumers in a country. Because the theoretical implications regarding individual consumers do not carry over to aggregates, additional theoretical assumptions, implying the existence of a representative consumer, are sometimes used to translate the theory regarding individual consumers to aggregate data. More recently, empirical estimation at the individual level has been conducted using survey and experimental data, as mentioned below.

The inverse relation between quantity demand of a product and its price has been repeatedly confirmed by the evidence. Charles Davenant's 1699 estimation of an inverse relation between the price of corn and the amount harvested is perhaps its earliest example. Subsequent attempts at estimating the demand functions for individual products and systems of demand functions yield the same result. Although the so-called "Giffen good," for which the quantity demand rises with the price, has been much discussed, no such empirical relationship has actually been documented.

This, however, should not be taken to imply that basic theory of consumer behavior is validated by empirical evidence. As mentioned earlier, the theory does not necessarily imply that quantity demanded falls with the price. Moreover, as shown by Gary Becker (1962), the inverse relation between price and quantity demanded can be explained in terms of individual behavior that is totally random (though restricted by the consumer's budget constraint) or determined by habit (as long as the consumer can afford to be governed by it), rather than by optimization, as assumed in consumer theory. Some other aspects of consumer theory do not seem to be consistent with empirical evidence. For instance, the homogeneity property is not usually confirmed. Survey evidence suggests that levels of utility as measured by self-reported indicators of happiness do not rise with the level of consumption and income, at least beyond a certain point. This casts doubt on the assumption that increases in consumption imply increases in utility. The usefulness of empirical work on consumer behavior arguably lies not in testing the validity of consumer theory but in exploring empirical regularities such as the well-established Engel's law, which finds that people spend a smaller proportion of their budget on food as their income rises.

CRITICISMS AND DEVELOPMENTS

The theory of the consumer has been criticized from numerous angles, some of which have prompted its modification. Three may be briefly mentioned.

First, it is not clear who the consumer, the decision-making agent, really is. Given the preoccupation of mainstream economic theory with the optimizing agent, it is natural to interpret the consumer as an individual person. However, in studies of consumer behavior the consumer is often taken to be the household, or family, or even in some cases the family dynasty; this often leads to ignoring intrafamily differences. Even the idea of the individual as the consumer may be problematic if individuals are thought of as having multiple selves (Elster 1986).

Second, the notion that consumers can actually choose optimally over all possible consumption bundles has been criticized on the grounds that (1) they do not have easy access to all relevant information; (2) in uncertain environments they are unable to calculate realistic probabilities of outcomes; and (3) they do not have the information-processing capability of computing the optimal outcomes even if they had all the necessary information. Herbert A. Simon (1955) has argued that consumers and other economic agents are "satisficers" (a term he coined) rather than optimizers, in that they try to achieve satisfactory rather than optimal outcomes, and that they have, at best, bounded rationality. Because what is satisfactory is not as well defined as what is optimal, this approach has led to research on how consumers actually behave, using survey and experimental data. This research suggests that actual consumer behavior can deviate from what is considered optimizing behavior. For example, consumers give more weight to actual money costs than to opportunity costs (contrary to much of consumer theory), are more averse to gains than to losses, give greater weight to their own experiences and those of others that they know personally than to more objective data in making decisions in uncertain situations, and are myopic about the future.

Third, the notion that consumers have exogenously given preferences over commodity bundles flies in the face of evidence that people are affected by advertising, that they form habits that are difficult to break, and that they are affected by the behavior of other consumers. Many of these ideas can be incorporated into consumption theory by modifying it suitably. For example, it has been argued that a consumer's utility depends not only on the absolute

level of consumption of the consumers, but also on what he or she consumes relative to other consumers (especially peers), and this may occur because of information issues, network externalities, and status. Although this modification can be made within the optimizing framework of consumer theory, it may have implications very different from it. For example, individual optimization may be inconsistent with social optimality (i.e., everyone could be better off if they consumed less and enjoyed more leisure, but they are prevented from achieving this outcome because they value their relative consumption level), and people may not be significantly (or even not at all) better off with significant increases in consumption (as mentioned earlier) when others consume more as well (Frank 1999).

SEE ALSO *Business; Consumption Function; Cooperatives; Firm; Labor Supply; Venture Capital*

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Amitava Krishna Dutt

CONSUMER PROTECTION

Typically, competition aligns the interests of producers with those of consumers. Consumers want higher quality and less costly products, and producers have an incentive to provide them because, if they do not, their rivals will. However, this alignment can break down in a variety of circumstances. For example, if consumers lack information about quality or price, they can end up purchasing products they would not have otherwise wanted. If there are enough uninformed consumers, producers may have the incentive to set prices that are too high or quality that is too low.

Consumer protection laws and regulations are designed to realign the incentives of producers with the goals of consumers by preventing certain kinds of firm behavior, like deceptive advertising, and by mandating others, like information disclosures. However, these regulations also raise costs, so assessing whether consumers are better off under these regulations requires careful benefit-cost analysis.

For example, in 2005 the European Commission required that airlines compensate passengers in the event of canceled flights, regardless of the cause. So when airlines sell tickets, they must bundle what amounts to trip insurance with the tickets. Consumers are better off if the price of airline tickets goes up by less than the value that consumers place on the trip insurance. But if some consumers value trip insurance while others do not, then unbundling tickets from insurance may be a better solution, as it allows those consumers who do not value the flight insurance to purchase tickets without it. Finally, there is the consideration of safety. If airlines were forced to pay more for canceled flights, one would expect to see more flights in bad weather, with a corresponding decrease in safety. Balancing all of these considerations is necessary to determine whether the regulation helps or hurts consumers.

Consumer protection agencies want to enforce regulations and laws where there is the biggest net benefit, and this has led them to focus most of their enforcement resources on prosecuting deception. If sellers misrepresent their products or services, mislead consumers about the terms of the bargain, or unilaterally try to change those terms postpurchase, then transactions can occur that reduce welfare. Such behavior is most likely where products are infrequently purchased, where claimed characteristics of the product are not verifiable by consumers or rival sellers at low cost, where seller reputations are unimportant for profitable sales, or where buyers are particularly vulnerable or gullible. Governments focus much of their consumer protection efforts on such markets. In this role, government can act as an efficient agent for the mass

of consumers who might have suffered injury, but do not pursue individual legal remedies because of the cost. Governments attempt to obtain remedies that will correct the wrong, and also efficiently deter future violations by the offending firm (called specific deterrence) and others (called general deterrence).

Beyond simply deterring deception, consumer protection actions can sometimes improve market outcomes through the provision of information (e.g., health warnings by governments or by firms), by development of standard metrics that make consumer shopping and market competition more efficient (e.g., uniform interest rate calculations), or by regulating the conditions for sale of valuable, but potentially unsafe, products or services (e.g., minimum quality standards for drugs, or vehicle tires). Also, in instances of extreme consumer susceptibility, governments sometimes intervene to regulate the terms of implicit or explicit contracts (e.g., "at need" funeral purchases, unmonitored marketing to children, or mandatory waiting periods for finalizing mortgages).

Early-twenty-first-century changes in consumer protection laws and enforcement have been caused by the migration of advertising away from magazines and newspapers to broadcast radio and TV, cable, direct mail, telephones, and the Internet. Because the newer media span the globe and because retail marketing by distant sellers has become more common, consumer protection has become an international and multilingual endeavor, with cross-border partnerships being formed by regulators from different nations. Law revisions are designed to more efficiently deter deception, but some are aimed at ensuring consumer privacy. One of the most effective efforts is the 2003 Do Not Call rule that allowed U.S. consumers to choose to avoid a large portion of marketing calls. By 2005 more than 100 million Americans chose to have their phone number included on the list, allowing them to avoid unwanted telemarketing calls.

In the United States, consumer protection laws began in the early 1900s, by protecting competitors—not consumers—from damage resulting from rivals' deceptive claims. Over time, the law became more centered on harm to consumers, but the fear of monopoly power was often the only effect economists considered. Systematic thought about the economics of consumer issues began with George Stigler's 1961 paper inviting academics to think about how information and advertising might play a positive role in shaping market outcomes. At the same time, economist, social reformer, and U.S. Senator Paul H. Douglas (D-IL) drafted one of the first major consumer information rules—the Truth in Lending Act—that was enacted by Congress in 1968. A decade later, a small group of economists began working on consumer issues at the U.S. Federal Trade Commission.

SEE ALSO *Consumerism*

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CONSUMER SOVEREIGNTY

SEE *Value, Subjective.*

CONSUMER SURPLUS

Consumer surplus, following the French economist and engineer Jules Dupuit (1804–1866) and the British economist Alfred Marshall (1842–1924), is a monetary measure of the benefits to consumers from being able to buy what they want at the going price. It is used to evaluate the gains from policy changes: cost-benefit analysis recognizes that much of the benefit may accrue in the form of surplus and so is not measured in actual market transactions. Consumer surplus is traditionally depicted as the area below the (ordinary, or Marshallian) demand curve and above the horizontal line representing price.

To illustrate, suppose that there are ten people whose individual reservation values (maximum willingness to pay) range from $10 down to $1 in one-dollar decrements. All consumers with reservation values above the market price buy, and each buyer enjoys a surplus equal to his or her reservation value minus the amount paid. So, if the market price is $6.50, four consumers buy, with surpluses ranging from $0.50 to $3.50, for a total (aggregate) consumer surplus of $8. This consumer surplus equals the gross benefit ($34 in the above example) minus consumer expenditures. A drop in price to $5.50 raises consumer surplus to $12.50: $1 extra accrues to each previous consumer directly from the price reduction, and one more consumer (who then enjoys $0.50 surplus) is induced to buy.

The same idea applies to a consumer buying several units of a good (or when many consumers each buy several units). Suppose the demand system described above represents the valuations of a single consumer for successive units purchased: the consumer will buy until the value of another unit falls below the price charged. At a price of $6.50, she buys four units and enjoys $8 in surplus. A price drop to $5.50 will induce her to buy more. Her surplus gain is $4.50 (more than the $4 saved on the previous four units). While the marginal unit purchased is valued at the price, all other (inframarginal) units provide surplus. Total consumer surplus aggregates these gains over all units purchased by all buyers.

The simple procedure described above gives the exact measure of the true benefit to consumers only under certain restrictive conditions. If there are "wealth effects," the consumer's willingness to pay for the marginal unit changes with the amount paid for the previous units. There is, thus, not just one measure of surplus change, but many. Most prominent are the *equivalent variation* (the additional money needed to make the consumer just as well off as the price change) and the *compensating variation* (the money that could be taken away after the price change to leave the consumer as well off as before). The consumer surplus change is bracketed between the equivalent and compensating variations. Fortunately, for small changes or when the good in question attracts a small fraction of expenditure, it has been shown that these three measures give similar results.

Consumer surplus counts $1 in surplus the same irrespective of how deserving the recipient might be. Critics argue that it overemphasizes the preferences of the wealthy, insofar as they have greater willingness to pay. Defenders of consumer surplus argue that it is useful in measuring economic efficiency, while redistribution issues should be addressed separately.

SEE ALSO *Producer Surplus*

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CONSUMERISM

Consumerism may be defined as a belief system that promotes high and rising levels of the personal consumption of material goods and services among a large segment of the population, ascribing to consumption a central role in promoting individual happiness. It is also associated with the view that the main goal of the economy should be to meet the (freely chosen) consumption decisions of people in the most efficient way.

It can be argued that economic development necessarily leads to consumerism. According to this view, the inherent competitiveness of people—which makes them try to stay ahead of, or at least to keep up with, the consumption of others—induces people to consume far beyond what is necessary for them, and to give consumption more importance in their lives when economic advancement makes this possible. This does not follow, however, since people need not increase their consumption significantly or attach much importance to consumption if they react to economic growth by increasing their leisure time (rather than to producing and consuming more) or to devoting more resources to nonrival consumption goods (like museums and public parks), or if they compete in spheres other than consumption. This appears to be confirmed by the fact that despite the wide reach of consumerism in the contemporary world, there are significant variations in its intensity (between, say, the

United States and Europe). Indeed, explanations of the emergence and growth of consumerism in the past have been sought in the weakening of traditional religious values and in the efforts of rising commercial and industrial interests to increase their profits by increasing the demand for their products. The spread of consumerism around the world, including to less-developed countries, can be explained in terms of globalization made possible in large part by technological changes that allow the easier spread of information (thereby strengthening what has been called the international demonstration effect) and by free market economic policies (such as free trade and fewer labor market regulations, which seek to allow consumers to obtain goods at lower prices).

Consumerism has been criticized by many, including religious leaders, moral philosophers, socialists, and environmentalists, for: diverting people's attention from arguably more noble goals, such as spiritual development; saving less and thereby slowing down economic growth that can benefit society; making people self-centered and willing to do less for others in society who are less fortunate than themselves; exacerbating inequality by inducing the poor to reduce saving and human capital formation, become more indebted, and accept an inequitable socioeconomic order; and harming the natural environment. However, it has also had its defenders. The critics have been dismissed as elitist in not recognizing the democratic appeal of the spread of consumerism and its ability to give pleasure, even of an artistic and spiritual kind, and of failing to show why some goods are necessities and others are luxuries. Consumerism has been applauded for providing people with incentives for hard work to improve their lives, for keeping profits up by causing a growth in the aggregate demand for goods and services, and for being the driving force for economic growth and for all the benefits it brings about.

While much of this debate has focused on the appropriate meaning of "the good life" and on the effects of consumerism on society, a recent literature, making use of self-reported happiness surveys, addresses directly whether higher levels of income and consumption actually make people happier by their own reckoning. This literature suggests that although the rich report higher levels of happiness than the poor in a given society, across countries increases in material well-being do not make people significantly happier beyond a certain threshold level of real income, and that in economically advanced countries increases in income and consumption do not significantly increase happiness. The finding that the growth of luxury consumption has not led to increases in happiness has been explained in a number of ways. Since people get habituated to higher levels of living and consumption norms, and because more goods and services are required to satisfy the same needs as average income increases (for instance people need better clothing to be socially acceptable), higher actual levels of consumption need not make them happier. To the extent that people consume more to obtain higher status by consuming more than others they expend more effort and experience more stress without improving their position because others do the same. The quest for more consumption leaves people less time to enjoy what they consume, less time for friends and family, and causes them to lose social connectedness, having an adverse effect on their happiness.

SEE ALSO *Conspicuous Consumption; Consumer; Consumer Protection; Consumption; Hidden Persuaders; Relative Income Hypothesis; Subliminal Suggestion; Want Creation*

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CONSUMPTION

The study of consumption is important in many fields of social science, including anthropology, sociology, economics, and psychology. A key definition of *consumption* is one that reflects our use of the term in daily life. That is, consumption may be defined as the personal expenditure of individuals and families that involves the selection, usage, and disposal or reuse of goods and services. In this respect, we are all consumers, choosing and using goods and services, which we pay for with earnings, savings, or credit.

As late as the last century, the term was primarily linked to disease: *consumption* was another term used to describe pulmonary tuberculosis (TB). Because of this fact, as well as the conventional use of the term to designate wasting or destruction, *consumption* had a decidedly

negative connotation until the middle to late twentieth century.

While there is a tendency to associate consumption of goods and services with modernity, where it has become central to the lives of individuals and the social and economic lives of communities and societies, consumption is part of any social order. In premodern societies, there was typically a closer relationship between the producer and consumer: for instance, the cows of a particular farmer produced milk, some of which he kept for his own use and some of which he may have traded to a neighbor in exchange for part of her crop of soybeans. Production and consumption were closely partnered and reflected an economic system constructed on subsistence production and precapitalist means of exchange, such as barter.

The capitalist economy is built on the relationship between production and consumption, and goods and services are exchanged for money and credit. In contrast to earlier economic forms, the distance between producer and consumer grows as the division of labor becomes more complex and fewer people grow their own food, make their own clothing, or receive education, protection, or other services from within their own family, clan, or other small group.

Classical economics, the product of eighteenth- and nineteenth-century thinkers like Adam Smith (1723–1790) and David Ricardo (1772–1823), theorized capitalist markets and argued for the power of the free market. Classical economics posited the notion of consumer rationality, assuming that consumers of goods and services are rational and spend money in ways that maximize satisfaction from purchases.

Another aspect of consumption theorized in economics is the phenomenon of underconsumption. In underconsumption theory, economic stagnation is fostered by an imbalance between consumer demand and the production of goods. Though underconsumption theory is not central in contemporary economics, it influenced both academic thinking and public policy in the early twentieth century. Beginning around this time, concerns about underconsumption spurred governmental intervention in the economy, particularly public-works spending, which was seen as central to putting disposable income into the hands of American consumers.

Economist John Kenneth Galbraith's (1908–2006) most widely recognized book, *The Affluent Society* (1958), offers a mid-twentieth-century perspective on economics and consumption. Galbraith proposed a corrective to the conventional theories of economics, which assumed a scarcity of resources. This scarcity, he suggested, justified increased private-sector production and limited government regulation and taxation. However, Galbraith believed the contemporary period on which he focused was characterized by an "affluent society" in which scarcity was not a central concern. As such, he posited that government economic practices were misguided and, in fact, fostered a paradoxical situation of private-sector affluence and public-sector squalor. That is, while private consumption grew, public spending on infrastructure projects, including parks and schools, diminished. Galbraith's support of public-sector spending has influenced liberal and neoliberal thinkers who followed him. Interestingly, the "affluent society" of which Galbraith wrote and about which he was concerned consumed far less than the consumer society of the late twentieth and early twenty-first centuries.

While Marxist economic theory is commonly associated with concerns about capitalism and production, Karl Marx (1818–1883) did not neglect to recognize the function of consumption in capitalist society. In the *Grundrisse*, he argued that a condition of production in capitalism is "the discovery, creation, and satisfaction of new needs arising from society itself.… [Capitalism involves] the developing of a constantly expanding and more comprehensive system of different kinds of labor, different kinds of production, to which a constantly enriched system of needs corresponds" (Marx [1857–1858] 1973, p. 409). While Marx highlighted production as a driving process of industrial capitalism, consumption, whether driven by need (associated with the proletariat) or materialist desires (associated with the bourgeoisie), was a critical partner.

Though the perspectives of classical economists (the "bourgeois economists," according to Marx) and Marxists differ in many respects, they share a similar perspective on the valuation of consumables (goods and services). The labor theory of value, embraced by classical economists through the middle of the nineteenth century and central to Marxist economic theory, holds that the exchange value of a good or service is derived from the amount of labor (including labor expended on gathering raw materials and producing machinery) required to produce it. Marxist economics, however, adds that the profit derived by capitalist owners of the means of production comes from value added by workers to the consumable good but not paid to them in wages. Capitalist production, thus, is exploitative, as workers produce goods and surplus value is appropriated by the owners.

The labor theory of value has been challenged by social scientists in, among others, the fields of economics and sociology. For instance, the theory of subjective value challenges the notion of intrinsic value that is present in that theory by suggesting that value derives from the power of an object (or service) to meet a need or a desire. The value of a consumable, thus, may derive from variables such as its utility, its scarcity, or its status. Among

sociologists, nineteenth-century French scholar Gabriel Tarde (1843–1904) was among the first to locate the value of goods in the intensity of consumer desire rather than in the production process. Contemporary sociologists have elaborated the point more fully, highlighting the power of modern marketing in creating desire for goods and services.

Sociologist George Ritzer has written extensively on consumption (and overconsumption) as a sociological artifact of modern society. He argues that modern states are characterized far less by production than by consumption. That is, while in earlier decades, the economies of countries like the United States were focused on production of goods, today many modern states produce few tangible goods (though they continue to produce intangible goods like knowledge and information). Rather, consumption is central to the national economy.

In *Enchanting a Disenchanted World*, Ritzer suggests that, in understanding the nexus between consumption, capitalism, and modernity, social scientists need to attend to "the new means of consumption," which he defines as "those things that make it possible for people to acquire goods and services and for the same people to be controlled and exploited as consumers" (1999, p. 57). Examples of the new means of consumption are shopping malls, cruise ships, and Las Vegas–style casinos and resorts. All of these are places that offer the consumer ample buying opportunities but, at the same time, operate as instruments of consumer control, as consumers are convinced to buy what they do not need, to believe that they need what they only want, and to spend beyond their means in order to achieve a sought-after emotional state or status. Even the physical layout of buying venues like supermarkets and malls is constructed with the aim of maximizing spending by fostering impulse buying and forcing consumers to forge a path past a plethora of enticing products or shops before finding the products they need, or even the exit.

In his 1899 book, *The Theory of the Leisure Class*, iconoclastic economist Thorstein Veblen (1857–1929) argued that in well-off societies spending operates as a means by which individuals establish social position. He coined the term *conspicuous consumption*, which he suggested was common among the nouveau riche, a class that emerged from the new wealth generated in nineteenth-century America by the second Industrial Revolution. In this period, the rich flaunted their good fortune with the public consumption of luxury items. In this cultural context, Veblen suggested that ostentatious displays of wealth, rather than honest productivity, showed one's success to society. Of the culture on which he wrote, he commented that "labor comes to be associated in men's habits of thought with weakness and subjection to a master. It is therefore a mark of inferiority" ([1899] 1994, p. 41). That is, it was participation in consumption rather than participation in production (the labor force) that defined one's status in society.

French sociologist Pierre Bourdieu (1930–2002) approached the issue of consumption from another angle. He argued in *Distinction* (1984) that "taste" can be understood as a "field" of contestation. Within this field, "taste" is contested and those with greater resources have the power to define what is in good taste and bad taste. Those in the upper classes, for instance, have the opportunity to both learn and define what is in good taste. By comparison, those in the working class lack the knowledge or the means to exhibit the distinctive ("good") tastes of the upper class and are disadvantaged by their lack of what Bourdieu calls "cultural capital." Bourdieu is not suggesting that these categories of culture are objectively real. Rather, he is arguing that taste is a field of play in which those with more power are able to both define and act out "good taste."

In terms of consumption, the "taste" for burgers or *foie gras*, commercial action films or foreign movies, and mass-produced beer or fine wine, and the classes we associate with those choices, are socially determined but, like many other social phenomena, take on the appearance of being "natural." Consequently, argues Bourdieu, taste is a field in which class inequalities are socially produced and reproduced.

One aspect of consumption that is endemic in the United States and other economically advanced countries like Japan and Australia is competitive consumption. In the middle of the twentieth century, Americans, particularly those in the rapidly expanding suburbs of post–World War II America, were concerned with "keeping up with the Joneses." Economist James Duesenberry (1949), writing in this period, focused on the phenomenon of competitive consumption. The demographic, economic, and technological boom years of the postwar era made acquisition of new consumer goods like dishwashers and color televisions possible, and competitive consumption made their acquisition probable.

Consumption is powerfully influenced by marketing. While this idea is axiomatic today, the power of advertising was not always so widely recognized. In the mid-twentieth century, Vance Packard (1914–1996) illuminated the tactics and techniques of the advertising industry in *The Hidden Persuaders* (1957). Packard described the marketing of goods through the use of motivational research, subliminal advertising, and other subtle but effective methods of persuasion based in scientific study. Packard linked the imperative to sell to a massive tide of production that followed World War II: marketers recognized the importance of creating an imperative to consume that

could take advantage of the rising tide of affluence (also recognized by Galbraith). Packard took a position against consumer manipulation, arguing that it was a "moral question."

As Packard recognized, in contemporary America, competitive consumption is heavily driven by the influence of the media. While the reference groups of the past included neighbors who commonly inhabited the same socioeconomic status, the reference groups of the late twentieth and early twenty-first century include those whose earnings may far outpace those of the average consumer. Economist Juliet Schor's *The Overspent American* (1998) posits that while consumption in early postwar America revolved around keeping up with neighborhood norms, reference groups have "stretched" to include workplace colleagues. The movement of more women into the workplace may have been a catalyst in the transformation of reference groups, as working families may have less time to attend to the habits and acquisitions of neighbors (if they know them at all). Further, reference groups are now also composed of "friends" who inhabit the fantasy worlds of television and films (she gives the example of the popular American television program, *Friends*, on which stylishly dressed twentysomethings inhabited well-appointed apartments in New York City that few of their "real world" contemporaries could afford). Modern efforts to keep up with one's reference groups are thus more costly and more likely to drive one into debt.

Following close behind Schor's careful social scientific dissection of modern consumption is Robert H. Frank's *Luxury Fever* (1999). Frank argues that the "luxury fever" that has gripped modern America is characterized by the pursuit of grander, flashier, more costly goods, ranging from backyard grills (he discovers a top-of-the-line grill that retails for $5,000, not including shipping and handling) to automobiles to megahomes. This pursuit, he notes, is embraced not only by the very rich, but also by consumers with far less disposable income as well, leading to low rates of saving and growing rates of debt. Frank argues that an altered "spending environment," in which expectations regarding one's own consumption or even one's gifts to others, is the product of the profligate spending of those at the top of the economic pyramid and the availability of extravagantly priced products. He elaborates the example of the grill: "The real significance of offerings like the $5,000 Viking-Frontgate Professional Grill … is that their presence makes buying a $1,000 unit seem almost frugal. As more people buy these upmarket grills, the frame of reference that defines what the rest of us consider an acceptable outdoor grill will inevitably continue to shift" (1999, p. 11). To mitigate the effects of the country's febrile state, Frank prescribes tax exemption for savings and the institution of a progressive consumption tax, arguing, as did Galbraith, that there needs to be greater attention given to public infrastructure spending, which falls by the wayside in a society obsessed with private consumption.

The use of advertising to create a "relationship" between material products and people has been examined by Jean Kilbourne. In *Can't Buy My Love* (2000), Kilbourne argues that advertisers seek to spur consumption by disseminating the message that products fulfill human needs for things like love, relationships, and respect. Young people are particularly susceptible to messages that promise that product consumption will give them emotional fulfillment. The message has ample opportunities to reach its audience: according to Kilbourne, the average American is exposed to no fewer than 3,000 advertising messages each day.

Social pressures for status, relentless advertising, and easily accessible credit can bring about hyperconsumption. Psychology recognizes hyperconsumption as a disorder, and the term *oniomania* (which comes from the Greek term *onios,* "for sale") is a label used to designate people obsessed with shopping (conventionally called *shopaholics*). Because the profligate spending of money and the consumption of luxury goods is not only socially acceptable, but often appears desirable, a shopping addiction is less likely to be taken as seriously as other addictions, such as gambling or alcoholism.

Consumption, and arguably even overconsumption, is not only acceptable in the social arena of modern American society, but it is also embraced. Consumer spending accounts for fully two-thirds of all economic activity in the United States. As such, in spite of the substantial debt carried by Americans in contrast to the rest of the developed world, public policy is largely favorable to sustained and even increased consumption. In the wake of the terrorist attacks of September 11, 2001, some political commentators embraced the term *market patriotism* to describe the federal government's entreaties to continue buying and spending.

Modern market patriotism represents an interesting contrast to the wartime sacrifices asked of previous generations of Americans. For instance, during World War II, Americans were entreated to carefully control consumption. External controls like rationing were supplemented by appeals to patriotism, including the Consumer's Victory Pledge signed by millions of American housewives: "As a consumer, in the total defense of democracy, I will … buy carefully. I will take good care of things I have. I will waste nothing."

Internationally, the United States has a low rate of both national and household savings, far below that of Western European countries, Japan, or China. This reflects, in part, the priority given by different states and

individuals in the global community to savings and consumption, as well as adversity to debt.

While the study and theorization of consumption in the social sciences has been in existence for a long time, it has evoked the greatest interest in the decades of the late twentieth and early twenty-first centuries. The growth in consumption, both nationally and globally, correlates with a rise in studies and publications on consumption, consumerism, overconsumption, and the transformation of modern societies from producers to consumers.

SEE ALSO *Absolute Income Hypothesis; Conspicuous Consumption; Consumption Tax; Economics; Macroeconomics; Microeconomics; Permanent Income Hypothesis; Relative Income Hypothesis; Underconsumption*

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Daina S. Eglitis

CONSUMPTION, CONSPICUOUS

SEE *Conspicuous Consumption.*

CONSUMPTION FUNCTION

The classical economists were concerned with the economic categories of *consumption*, *production*, and *exchange*. One description of the classical Say's Law is that it states that production and consumption are identical. From the perspective either of underconsumption or oversaving, one category is perceived as a limit of the other. In the hands of John Maynard Keynes, however, consumption became a function, relating aggregate consumption, C, mainly to aggregate disposable income, Y, defined as income less taxes and transfer payments. This equation has been called the *absolute income hypothesis* (AIH). Like a good gardener, Keynes weeded out many variables that could influence consumption, settling on disposable income as the most important one. Keynes wrote the implicit form of this relation as $C_w = \chi(Y_w)$. In another context, he held that $C = \varphi_1(W, Y)$, where the additional variable W represents the state of the news, a term that changes with long-term expectation.

The relation of consumption to income follows a psychological law stating that consumption increases with income but not by the same proportion. This law makes the consumption function a behavioral relationship that can be juxtaposed with data as opposed to a structural or identity equation. A testable linear form of the AIH is obtained by expanding the implicit relationship between consumption and income by the Taylor series, ignoring the nonlinear terms. The intercept, a, of the line captures *autonomous consumption*, that is, any consumption that is not induced by income. The slope of the line, $0 < dC/dY = b < 1$, is the *marginal propensity to consume* (MPC)—on average, the amount of an additional dollar that is consumed in a community. The Keynesian model uses the MPC to estimate a multiplier that predicts how a change in investment will boost GDP. By examining data for the United States, Keynes estimated the MPC to be between 60 and 70 percent.

The Keynesian consumption function sparked a new research program. For example, significant works by Milton Friedman on the permanent income hypothesis (PIH) and Franco Modigliani on the life cycle hypothesis (LCH) were in large part the catalysts for their Nobel Prizes in 1976 and 1985, respectively. The PIH-LCH models reconciled anomalies in the prediction of the AIH during the post–World War II period. The major anomaly was that the average propensity to consume was over 90 percent, whereas short-run MPC was between 60 and 70 percent. Modigliani and James Duesenberry reconciled the differences by postulating a previous peak income in the consumption function. Whereas Modigliani's work evolved into his LCH hypothesis, Duesenberry's relative income hypothesis (RIH) remained an example of external

effects on consumption in line with Veblenesque norms; defined in terms such as *emulation*, *convention*, and *molding*, it holds that a person's consumption depends on the level and types of other people's consumption. RIH also holds that consumers would want to maintain a consumption pattern established by the highest income they had previously received. During a downswing phase of a business cycle, consumers experience a reduction in income but are hesitant to adjust their spending behavior away from what they had established during a previous peak period. Consumers prefer to draw down their savings or borrow in order to maintain their previous peak consumption. Only when they recover their previous peak level income will their consumption behavior change. The change is an unusual one, a sort of quantum leap or "ratchet" upward, perhaps due to pent-up demand during the downswing. This upward effect amounts to a reconciliation of the short- and long-run MPCs.

Robert Frank expanded and articulated the RIH paradigm in relation to the question of how current relative consumption will dominate future relative consumption. Parents who prefer to buy a house in a good school district now may be negatively affecting their future consumption after retirement. Conversely, spending now on a suit for a job interview may have a positive impact on future income. The experience of low relative consumption now may also set expectations for a low relative consumption in the future. Juliet Schor's "new consumerism" is also based on lifestyles and norms, and posits that consumers elevate their consumption to unsustainable levels that lead to mounting debts and bankruptcies, as well as longer working hours.

The LCH-PIH hypotheses advance consumption theory by introducing wealth or assets as well as income into the consumption function. In this scenario, consumers draw on their lifetime income and assets to smooth their consumption expenditures over their life cycle. We can speak of *permanent income*—changes in which have more significant effects on consumption than temporary or transitory changes in income. The two hypotheses have one major difference: Friedman made the income stream infinite, whereas Modigliani made the income stream finite. For instance, Modigliani estimated the consumption function as: $C = .766Y + .073A$. Here the short run MPC is 0.77, and if assets, A, are approximately five times income, while labor income is approximately 80 percent of income, then a long-run MPC of $0.98 = 0.8(.766Y) + 5(.073Y)$ is reached. Essentially, the presence of wealth in the AIH causes it to drift upward.

With the introduction of these hypotheses, the stage was set for a paradigmatic shift in the consumption function. Friedman estimated the PIH through a distributed lag model, which John Muth showed to be optimal under rational expectation assumptions. Because Friedman left the definition of income vague, Muth proceeded to measure permanent income by an exponentially moving average equal to the conditional expected value under rational expectations. Robert Lucas expanded the rational expectation concept by shifting the meaning of the consumption function from one relating consumption and income, to one relating permanent income and observed income. Robert Hall rescued the consumption function from that line of attack by postulating that only surprising events could be responsible for unexpected results. The model he specified maximizes the expected value of lifetime utility subject to an unchanging real interest rate. He presumed that consumers would make the ratios of marginal utilities for present and future consumption equal to the ratio of their prices. Hall tested his consumption function in the form $C_{t+1} = \lambda C_t + error_t$, a random walk model. Clive Granger referred to the consumption theory as "manna from heaven to macro-econometricians. It was easily stated and understood, and appears to be easy to test" (Granger 1999, pp. 42–43). In practical parlance, consumers will tend to adjust their individual consumption so that it will not differ from an expected level. This fact reinforces the underlying principle that consumers tend to smooth out spending over time, and that this practice relates to some uncertainty about income. Hall's model rendered the lagged income effect insignificant on consumption. If consumers have a quadratic utility function, then they will want to consume at the level where their future income will equal its mean value.

Marjorie Flavin, a student of Hall's, made two findings that furthered the development of the consumption function. One finding is that future consumption is sensitive to the previous level of consumption and can show a strong variation. Another finding is that the surprise element does not cause much variation in future consumption. John Campbell and Gregory Mankiw had the idea of combining these two findings in a convex way. This means that a proportion of the variation will be captured. Following Hall's model, the surprise element varies by a certain proportion and thus income will explain the less than proportional expected consumption. The combination of Hall's model with the LCH consumption equation resulted in a simple test of a change in consumption based on a change in disposable income. Since Hall's work, research on the consumption function has been escalating.

SEE ALSO *Absolute Income Hypothesis; Adaptive Expectations; Class, Leisure; Class, Rentier; Conspicuous Consumption; Consumerism; Consumption; Consumption Tax; Economics, Keynesian; Expectations, Rational; Life-Cycle Hypothesis; Macroeconomics; Permanent Income Hypothesis; Propensity to Consume, Marginal;*

Propensity to Save, Marginal; Relative Income Hypothesis; Underconsumption

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CONTACT HYPOTHESIS

The contact hypothesis holds that contact between the members of different groups tends to reduce whatever negative intergroup attitudes may exist. The greater the contact, the less the antipathy. This idea is a crucial part of the broader theory that ethnic antagonism (as shown in prejudice, discrimination, and stereotyping) has psychological causes (misperception and projection) rather than social or economic causes (conflicts of interest).

The hypothesis can be traced far into the past, but it was given its contemporary form by Gordon W. Allport in *The Nature of Prejudice* (1954). He listed a large number of variables that could modify the effects of quantitative differences in contact. At the beginning of the twenty-first century, these are usually reduced to three or four key conditions for intergroup contact to reduce prejudice: equal status between the individuals having contact, common goals and cooperative interdependence in reaching them, and the support of social and institutional authorities for equal-status contact. In this qualified form, the hypothesis has figured prominently in discussions of racial desegregation in the United States.

As a conjecture about the effects of personal contact on individual attitudes, the hypothesis is easy to test, and the results of several hundred published studies are relatively easy to summarize. Regardless of whether the supposedly necessary conditions for favorable outcomes have been satisfied, greater contact is almost always associated, more or less strongly, with such outcomes (less prejudice and greater acceptance).

Difficulties arise when these results are extended from individuals to groups. It seems obvious that if an increase in contact improves the attitudes of individuals, it must do the same for the relations between groups, even if only a little. Nevertheless, both casual observation and careful studies suggest that there can be strong *positive* correlations at the group level between personal contact and negative attitudes. Comparisons of American states or counties on black-white contact and racial prejudice and discrimination provide the clearest illustrations of this relationship.

Allport's qualifications were meant to deal with this problem. If contact reduces prejudice, how could there be more of it in the South (at least in the 1950s) than in the

North or West? Under favorable conditions, he reasoned, more contact means less prejudice, but under unfavorable conditions (such as in the South), contact increases prejudice. As noted above, research at the individual level has not supported this view. Contact generally reduces prejudice, regardless of the situation.

An alternative approach starts from the assumption that different processes can prevail at the individual and group levels. As H. D. Forbes has shown in *Ethnic Conflict* (1997), the apparently contradictory correlations can be explained by a theory that distinguishes levels of analysis rather than situations or conditions of contact. When only individuals are compared, the standard correlation appears, but when all the individuals in an area are averaged and compared with all the individuals in another area of greater or less contact, generally speaking, the relationship is reversed. This approach is consistent with the contact hypothesis as a generalization about individuals, but it deprives it of much of its broader significance for social theory and public policy. It is not surprising, therefore, that recent reviews of the relevant literature still show a virtually undiminished allegiance to Allport's classic formulation, despite its empirical shortcomings.

SEE ALSO *Discrimination; Race; Racism; Segregation*

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CONTANGO

The term *contango* refers to a case where the futures price exceeds the expected future spot price of the underlying commodity. Futures prices are the prices of futures contracts for the commodity. Expected future spot prices are the prices of the commodity in the spot market that are expected to prevail in the future. Consequently, the futures price will fall to the spot price before the contract maturity date. This scenario is established under the expectation hypothesis, which suggests that futures prices are determined by market expectations. The opposite pattern, called *backwardation,* occurs when the futures price falls short of the expected future spot price. In this instance, the future rises toward the expected future spot price.

The relationship between the futures price and the expected future spot price depends on the net hedging position. Traders in the futures market can be classified into hedgers and speculators. Hedgers have a preexisting risk associated with a commodity and enter the market to reduce that risk, while speculators trade in the hope of profit. Hedgers, taken as a group, may be either long (i.e., they buy more than they sell) or short (i.e., they sell more than they buy). If hedgers are net short, speculators must be net long so that the market reaches equilibrium. To entice speculators, the futures price must be less than the expected future spot price and rise over time; hence the futures market exhibits backwardation. Conversely, if hedgers are net long, speculators must be net short. The futures price must lie above expected future spot price and fall over time to compensate the speculators, leading to contango.

An alternative definition relies upon the cost-of-carry arbitrage argument. Specifically, contango is referred to the case where the futures price exceeds the spot price. Moreover, the price of the futures contract with a distant maturity exceeds that with a nearby maturity. Conversely, backwardation refers to the situation in which futures price is less than the spot price; and the further away the contract maturity is, the smaller the futures price is.

In an efficient, frictionless market, to preclude arbitrage profits futures price must equal the spot price compounded at the risk-free rate, plus the cost of carry, which is future value of the storage costs minus the benefits (also called *convenience yield*) over the life of the contract. Because the cost of carry can be either positive or negative (depending upon the magnitude of the benefits), the futures price can be greater or less than the spot price. In reality, the principles of the cost-of-carry place at best a no-arbitrage bound on the futures prices. Within the bound, expectations are critical in establishing futures prices.

Generally, buyers prefer to receive the commodities right away, whereas sellers need time to produce. Consequently, the spot price tends to be larger than the futures price and backwardation is normally expected. Empirical investigations suggest that backwardation prevails in agricultural commodity and energy markets and contango occurs in currency markets. Nonetheless, the market may revert from backwardation to contango and vice versa from time to time. The financial loss of Metallgesellschaft Refining and Marketing (MGRM), Inc. in 1993 was partially due to contango that prevailed in unleaded gasoline and heating oil futures markets.

SEE ALSO *Hedging*

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CONTEMPT

Contempt is a universal human emotion. While there are minor differences among emotion theorists and researchers, there is general consensus about the features of contempt. First, contempt is an interpersonal emotion; that is, it occurs in social situations, when people are interacting with or observing others. Second, it involves a negative evaluation of another person's behavior, which in and of itself signals one's sense of self-importance relative to others. Third, it involves feelings of moral superiority over the other person—that is, the feeling that the person is lower or unworthy. Fourth, it involves positive feelings about oneself.

Contempt is often confused with other emotions, particularly anger and disgust. Research, however, has demonstrated that contempt has its own unique facial expression—a unilateral curl and/or tightening of the lip corner, but only on one side of the face. This expression often occurs with a slight head raise and tilt, to give the appearance that one is "looking down one's nose" at the other, and/or turning away at the same time. Studies have also shown that individuals may not use the word "contempt" very frequently, and are generally not able to give a definition of it that includes the various components described above. Yet, most individuals certainly understand the situations in which it is elicited, and can reliably match the universal facial expression of contempt with those situations.

One of the functions of contempt is to create or maintain a social hierarchy. Being contemptuous of another person signifies one's judgment of the other person's social rank relative to one's own. Contempt prepares one to establish one's dominance in the hierarchy. Expressing that emotion through one's facial expressions, demeanor, or behaviors sends signals to others of one's intentions to establish hierarchical superiority. Recipients of those signals may either acquiesce, thereby conferring status to the contemptuous person, or they may prepare themselves for dominance struggles, which may set the stage for a new hierarchy.

Another function of the emotion of contempt is to validate one's self-worth. Although contempt is normally considered by many people to be a negative emotion, in reality contempt involves positive feelings about one's own self-worth. Thus, contempt may feel good, even though the situation that elicits it may be viewed as a negative one. Indeed, it may be important for all humans to validate their feelings of self-worth in this manner from time to time.

Although there is a class of emotions that humans share with other animals, there is some evidence to suggest that contempt may be an emotion that is unique to humans. This may be because contempt involves evaluations of one's moral superiority over others. Complex cognitive abilities are required in order for this evaluation to occur, particularly the ability to know that other people are intentional agents (i.e., they do things because they are motivated to do so), and the ability to evaluate the actions of others according to agreed-upon cultural norms and mores. These cognitive abilities exist in humans, but not other animals.

Contempt has unique interpersonal effects. Because contempt signals one's moral superiority over another person, it can lead to destructive outcomes in some social relationships. For example, research on distressed married couples has shown that if contempt is expressed by one member of the couple, especially the husband, when discussing areas of major disagreement, the couple is more likely to be in trouble, report greater marital dissatisfaction, report greater periods of marital separation, and experience greater health problems.

Contempt also has important intergroup effects. It serves to differentiate ingroups from outgroups, and helps individuals to depersonalize others. The depersonalization of others makes it easier for collective violence to occur, as it gives people permission to do unto others what they would normally be restrained from doing. Political leaders in the midst of war often describe the enemy with contempt-related words and phrases, suggesting that the enemy is "beneath" members of their culture, and somehow "unworthy." These feelings may be necessary to provoke humans to engage in collective violence against others. Thus, an analysis of contempt may play a major role in understanding intergroup conflict.

SEE ALSO *Genocide; Humiliation; Shame; Violence*

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CONTENT VALIDITY

SEE *Validity, Statistical.*

CONTINGENCY THEORY

SEE *Organization Theory.*

CONTINUITY THEORIES

SEE *Stages of Development.*

CONTRACEPTION

The Fourth World Conference on Women, held in Beijing in 1995, reinforced that all human beings have the right to "decide freely and responsibly the number and spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health" (para. 95). A discussion of contraception provides us with an understanding of how access to comprehensive family planning services can improve the lives of women, men, and children around the world.

Contraception, or *birth control*, is the deliberate prevention of conception by hormones, devices, surgery, or avoiding intercourse during a woman's fertile time of the month. *Family planning* is the intentional decision on the number and spacing of children a couple will bear.

According to the World Health Organization (WHO), there are approximately 123 million women, mostly in developing countries, who are not using contraception. Some of the reasons include poor access to comprehensive services, inadequate information, male partner disapproval, and fears about side effects and safety. Religious beliefs and public policies also play an important role in methods that are available to couples in both developing and developed nations.

RELIGION AND PUBLIC POLICY

Humans have been using birth control from the earliest times. Ancient Islamic texts, Jewish writings, and Hindu sacred scriptures all mentioned that herbs could be used as temporary contraceptives. Modern religious stances vary according to their definition of the place of sex within marriage; for example, the Catholic Church prohibits any artificial means of birth control because it believes that the sole purpose of sexual intercourse is procreation. Some Christian fundamentalists, Evangelicals, and Anglicans share this view. Orthodox Judaism permits female contraceptives only for health reasons; while Conservative and Reform views leave the decision to the married couple, as does Christianity's Eastern Orthodox Church. The Islamic faith has wide variations on attitudes toward birth control, but despite this, procreation is emphasized as religious duty. There is no prohibition to birth control in Hinduism. As noted by Kathleen O'Grady in her 1999 article "Contraception and Religion, a Short History," the two common concerns of all major religions are fear of illicit sex and immorality, and destruction of the family. Particularly among non-Western religions, the worry is that liberal family planning policies could encourage Western modes of living, not only destroying the family, but family values as well. Some Christian fundamentalists in the United States agree with this stance. On the other hand, women's rights activists argue that prohibiting birth control is a fundamental way to control women and keep them dependent on men.

National and international public policy also plays a role with respect to sponsoring or funding reproductive health services, and policies are modified with changes in national leadership. In the United States, for example, President George W. Bush instituted a global "gag" rule regarding abortion in 2001. This means that foreign agencies, such as the WHO, no longer receive funding if they counsel women about abortion, consequently affecting family planning programs as well.

HISTORY OF CONTRACEPTION AND CURRENT METHODS

Despite religious decrees about contraception, there are many references that document three major methods that go as far back as ancient Greece: the use of herbal remedies as abortifacients, coitus interruptus (withdrawal of the penis from the vagina before ejaculation, hereafter referred to as *withdrawal*), and abstinence. Condoms were described as protection against sexually transmitted infections (STIs) in the early sixteenth century. Rubber condoms became available in the United States in the nineteenth century along with cervical caps, diaphragms, metal pessaries, and male and female sterilization. The birth control pill revolutionized contraception with its

Birth control methods

General Category	Method	Comments
Physiologic Methods (also called Natural Family Planning)	abstinence, withdrawal, fertility awareness, lactational amenorrhea	• Abstinence (not having penile-vaginal intercourse) is the only method that is 100% effective • Physiologic methods are not as effective as hormonal methods, but may fit a couple's cultural beliefs • Do not have systemic side effects.
Barrier Methods	male condom, female condom, diaphragm, Lea's Shield, cervical cap, vaginal sponge	• More effective than physiologic • Latex male condom is protective against STI/HIV
Sterilization	vasectomy; tubal ligation, tubal occlusion implants	• Permanent method • Highly effective
Hormonal methods	combined oral contraceptives (birth control pill), patch, vaginal ring, injectables, progestin only pills, implants, hormonal intrauterine device (IUD)	• Pills, patch, ring same effectiveness • Injectables more effective • IUD highly effective • Systemic side effects • Some contraindications
Other	copper intrauterine device	• Highly effective
Emergency contraception	Plan B	• Should be taken within 72 hours of sexual intercourse • Up to 89% effective in preventing pregnancy

Table 1

debut in 1959. There have been many advances in hormonal and non-hormonal contraceptive technologies for women in the last thirty years. Although research is being conducted on systemic methods for men, condoms, withdrawal, and sterilization remain the only contraceptive options for them. See Table 1 for current methods.

Male latex condoms, when used reliably and properly, are highly effective in preventing STIs and the human immunodeficiency virus (HIV). The female condom is the only female method that is effective in preventing pregnancy and STIs/HIV. People at risk for sexually transmitted infections (STIs) and/or HIV may be afforded dual protection against STI/HIV and pregnancy by using either male or female condoms. Using condoms and another form of birth control are even more effective measures of contraception.

INTERNATIONAL STRATEGIES

The World Health Organization has taken the lead on providing resources for international family planning since its inception in 1948. Paul Van Look, director of the WHO Department of Reproductive Health and Research, has stated that sexual and reproductive health are concerns for everyone at all stages of life and are fundamental to the economic and social development of nations, but also mirror basic inequalities such as wealth and gender. Women have been particularly harmed by lack of access to reproductive health services; research documents that the ability to space pregnancies impacts a woman's health and quality of life, as well as the health of her children. Family planning programs can also improve the economic and social situation of women's lives.

SEE ALSO *Abortion; AIDS; AIDS/HIV in Developing Countries, Impact of; Birth Control; Bush, George W.; Family Planning; Fundamentalism, Christian; Population Control; Population Studies; Reproduction; Sexuality; World Health Organization*

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CONTRACT CURVE

SEE *Welfare Economics.*

CONTRAS

SEE *Sandinistas.*

CONTROL CONSIOUSNESS

SEE *Consciousness.*

CONUNDRUM

Conundrums are problems of several types. They may be riddles with a pun for an answer. They may be puzzling problems that are complicated with intricate features. And they may be presented in the fashion of a rhetorical question, but with only conjecture for an answer.

Conundrums create paralyzing paradoxes or dilemmas. Psychologically, they are similar to approach-approach conflicts, such as a conflict known as Buridan's ass, which was posed by fourteenth-century philosopher Jean Buridan. An ass forced to choose between two equally luscious piles of hay that are equidistant starves to death. This is similar to the Malthusian dilemma, which states that helping the poor (humanitarian) may be increasing starvation (inhuman) when food supplies grow arithmetically while population grows geometrically.

The word conundrum is often used cynically to describe a puzzle that will probably never be solved because of a lack of data. The word conundrum is also used to describe a paradoxically difficult problem, such as the problem faced by economists in the second half of the twentieth century of how to achieve full employment without inflation.

Conundrums are puzzles that call for lateral thinking. In traditional logic puzzles an array chart can be used to sift through the possibilities in a systematic way. In lateral thinking, puzzles are not solved by a linear method but more in the fashion of brainstorming. Every possible piece of the riddle is identified and all solutions are posed as hypotheses with the mostly likely tested first.

Unlike traditional logic puzzles, conundrums use riddles with plays on words that seek to mystify or mislead, or a conundrum may pose a fanciful question that is answered with a pun. For example, the chicken conundrum: which came first, the chicken or the egg?

Conundrums pose problems that seem to defy solution because the problem is in the form of a dilemma wrapped in a riddle. Businesses, voluntary organizations, and other human enterprises often face problems that seem to be insolvable riddles. Should criminal wrongdoing be reported so that justice can be done, but also damage the institution by the exposure? What should be the treatment dilemmas for patients with complicated medical conditions when action "A" kills and inaction kills.

The structure of scientific revolutions has been one in which anomalies do not match the prevailing model. Eventually the anomalies defy the orthodox theory and create a conundrum. How is it possible for things to be both this and not this? What illumination travels like a wave and like a packet, but cannot be simultaneously both? Daylight dancing and waving until it delivers its quantum packets.

In the conundrums faced by political and economic decision-makers, the "play" aspect of conundrums suggests that game theories may help with solutions. Presumptions are abandoned and solutions are sought freely.

SEE ALSO *Economics; Kuhn, Thomas; Mystification; Paradigm; Revolutions, Scientific*

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Andrew J. Waskey

CONVENTIONS

SEE *Norms.*

CONVENTIONS, POLITICAL

SEE *Political Conventions.*

CONVERGENCE THEORY

As early as 1848 in the *Communist Manifesto* Karl Marx contended that human civilization developed in stages from pastoral to communist harmony, driven by an ineluctable historical dialectic. Capitalism from his perspective was an internally contradictory phase destined to be destroyed by a proletarian revolution ushering in a transitory socialist epoch before arriving at the end of history. Private property for Marx was the original sin that caused humanity's expulsion from the Garden of Eden. It provided a legal basis for concentrating community wealth in a few powerful hands, the emergence of market exploitation, the class struggle, and in Marx's view communism's inevitable triumph. Economies featuring private ownership of the means of production and markets consequently were intrinsically inferior (exploitive, inegalitarian, and unjust), and could not be blended with, or supersede, communism.

Vladimir Lenin and his Bolshevik successors accepted these concepts. Markets of various sorts could and did exist according to Soviet ideologists during the socialist interlude following the destruction of capitalism, but not in the final stage of historical dialectic.

However some Western liberals, like Francis Fukuyama, used similar historicist logic to reach the opposite conclusion. They argued that private ownership of the means of production was essential for individual utility maximization. Original sin for them was any power including the state that prevented people from achieving consumer sovereignty in the private sector, and democratic sovereignty over the provision of public goods. People's appreciation for the virtues of democratic free enterprise was weak before the eighteenth-century Scottish economist Adam Smith, but Fukuyama claimed that momentum is building and democratic capitalism will be the end of history (equated by many with globalization). As in the Marxist concept there is no room for blended solutions. Proletarian dictatorial democracy, and private propertyless capitalism are oxymorons. Capitalism and communism cannot converge, and socialism cannot be anything but transitory.

Consequently, Nobel Laureate Jan Tinbergen's assertion in the late 1950s and early 1960s that Soviet and Western market systems were immutably converging provoked a heated reaction from Marxists, democratic free enterprisers, and those who preferred various third ways. True believers of both Marxist and Fukuyamaist persuasions predictably rejected convergence out of hand, while those who supported cold war reconciliation without committing themselves to communism or democratic free enterprise welcomed Tinbergen's theory. Social democrats were especially pleased because Tinbergen's vision prefigured the eventual triumph of the emerging European Union. The end of history would blend democracy, private ownership of the means of production, individual utility seeking, and markets with planning and state-supervised social justice. Of course, as the economist Ota Sik pointed out, the blending could go the other way, substituting authoritarianism for democracy, and Stalinist injustice for the welfare state, but supporters were confident that reason would preclude negative outcomes in the long run.

It is possible to dismiss Tinbergen's musing as partisan wishful thinking. Rationalist historicism is not physics. But convergence theory was predicated on a legitimate insight. Robert Dorfman, Paul Samuelson, and Robert Solow among others had used linear programming to demonstrate that there was a perfect duality between computopic (ideal, but unachievable computer based simulations of optimal market equilibria) planning and competitive market outcomes where planners' and consumers' preferences were identical. It followed that the gulf perceived by Marxist and democratic free enterprise theorists between communism and capitalism was only a matter of efficiency—the practical effectiveness of markets and plans—not a matter of technology or ideals. In an imperfect world where markets are sometimes exploitive and plans inefficient, neither communism nor perfect democratic free enterprise is attainable, and once this is appreciated, Tinbergen claimed democratic socialism would gradually become universally accepted as the pragmatic second best.

This conjecture—although seemingly supported in the 1960s by "converging" growth rates, institutional adaptation including European indicative planning, and the Soviets' partial introduction of profit-based managerial bonus incentives (Liberman reform)—however was not consistent with all the facts. The Soviets had not rescinded their criminalization of private ownership of the means of production, business, and entrepreneurship (Marxist national ownership of the means of production and state monopoly of business) as Tinbergen's theory required. European social democracy did not rely on physical systems management. And the ideal mixing of optimal planning and perfect markets never materialized.

Nor have subsequent developments been more confirming. Postcommunist reassessments of Soviet economic growth have shown that East-West growth convergence was an illusion. Indicative planning, central to Tinbergen's theory, has been largely abandoned by states, and the USSR never relinquished physical systems management, despite the economist John Kenneth Galbraith's predictions to the contrary. And most tellingly of all, the Soviet Union collapsed and Eastern Europe rejected communism in the early 1990s instead of converging. North Korea and

Laos have stayed the communist course rather than blend. And post-Soviet Russia and China failed to transition to social democracy despite adopting mixed economic arrangements. Other nations are resisting transition, and liberalization is altering social democracy as Tinbergen understood it. The evidence suggests that while rationalist historicism has widespread popular appeal convergence—like all end-of-history hypotheses—has little predictive value, a point lost on many theorists who continue to try to show using dubious official aggregate growth trends that alien systems are fundamentally alike, or are converging to a common high economic frontier.

SEE ALSO *Capitalism, State; Cold War; Decentralization; Democracy; Galbraith, John Kenneth; Liberalization, Trade; Marx, Karl; Russian Economics; Samuelson, Paul A.; Socialism; Socialism, Market; Solow, Robert M.; Tinbergen, Jan*

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Steven Rosefielde

CONVERGENT VALIDITY

SEE *Validity, Statistical.*

CONVERSATIONAL ANALYSIS

Conversation Analysis (CA) was inspired by a convergence of Harold Garfinkel's ethnomethodology, Erving Goffman's interactionism, and sociolinguistics. Beginning with Harvey Sacks, Emanuel Schegloff, Gail Jefferson, and Anita Pomerantz in the 1960s, CA has become an international interdisciplinary enterprise. Since the mid-1970s there has been an explosion of interest in CA, which has been widely identified as a rigorous methodology. It has had significant impact on the fields of business (through studies of work and organizations), medicine (through analyses of doctor-patient interaction), legal studies (through examinations of deviance, policing, and courts), science, computer and information studies, robotics, gender studies, race and cross-cultural studies, as well as on sociology and social studies of language, linguistics, communication, and semiotics.

Inspired by Goffman and Garfinkel, largely through their mutual connection with Sacks, the first detailed analyses of conversation, articulated by Sacks, Schegloff, and Jefferson, combined a Goffman-inspired interest in the moral commitment involved in interaction with Garfinkel's interest in the details involved in the production of the fragile intelligibility that required that moral commitment.

The reputation of CA as a rigorous new approach to the study of language and social order was established through a foundational paper on "turntaking," "A Simplest Systematics for the Organization of Turntaking in Conversation," first published in 1974. Written jointly by Sacks, Schegloff, and Jefferson, the paper established an "economy of turns," and preferences related to turntaking orders, as basic organizing features of conversation. This article was augmented by Pomerantz's work on assessments and Alene Terasaki's work on "pre-sequences."

Sacks's lectures, given between 1964 and his death in 1975, were carefully transcribed by Jefferson, then circulated widely as photocopies for more than twenty years, before being published in 1996 in a volume edited and introduced by Schegloff. They had a huge impact on thinking not only about conversational orders, but also about orders of practice in many areas (including medicine, law, science, business, work, and information technology). Schegloff's work on repair and conversational sequencing and his sophisticated critiques of established linguistic and philosophical approaches to language were essential to establishing the CA enterprise. Jefferson also contributed essential work, especially on side-sequences and laughter. The spread of CA to various other disciplines was accomplished through the work of Schegloff, Jefferson, Pomerantz, Christian Heath, Doug Maynard, Don Zimmerman, Candace West, John Heritage, Paul

Drew, George Psathas, Jeff Coulter, and Paul Ten Have, among others.

The basic idea behind CA is that conversation is orderly in its details, that it is through detailed order that conversation has meaning, and that conversational details manifest themselves in specifiable forms. These include turn types, turn transitions, membership categorization devices, and forms of indexicality (words and sentence fragments with multiple possible meanings) that require constant attention to orderly production and ensure that participants maintain interactional reciprocity. The need to display attention to these preference orders solves the problem of how any speaker can know whether or not the listener has understood what was said and provides a way of explaining how the meaning of words are disambiguated in particular situations of use. It also introduces an inevitable moral dimension to interaction.

According to Sacks, the ability of any speaker to take a recognizably intelligible turn next, after a prior turn (given a sufficient degree of indexicality in the talk), displays understanding. Thus, speaking in indexical fragments, which linguistically would appear to be a problem, is a highly efficient device for ensuring mutual intelligibility. It ensures that all participants who take turns are fulfilling their listening and hearing requirements and either understand what has been said, or display their lack of understanding in their next turn. Even speaking last demonstrates attention to a long sequence of turns.

CA referred to this phenomenon as "recipient design," a process in which each speaker, at each next conversational point, designs a turn at talk with the "other," the recipient, and the last turn in the conversational sequence in view. The recipient, in turn, hears the talk as oriented specifically toward the current sequential ordering of turns, in the current interactional situation.

All conversational preference orders have direct implications for what can be done next in conversation and how immediately prior utterances can be heard to follow from those before. The general position on the problem of indexicality and social order was articulated by Garfinkel and Sacks in "On Formal Structures of Practical Actions" (1970). The importance of conversational sequencing was articulated in 1948 by Garfinkel (2006). Each interaction is a context for what occurs within it, but a context that is in essential ways independent of broader social contexts, except as a "context of accountability." This "context-free/context-sensitive" character of recipient design, as Sacks and Schegloff called it, is made possible by a move away from the symbolic content of words, to a focus on the enacted positioning of words in spoken sequences of turns.

Turntaking preferences are sensitive to both the sequential character of conversation, and the presentational selves of participants. There are thus elements of both "within-turn" and "between-turn" preference orders that transcend particular conversations. This view of the "context free/context sensitive" character of particular conversations is quite distinct from the more popular, but problematic idea of context as shared biographies, or shared cultural values—the view that characterizes conventional, postmodern, and interpretive sociologies.

Many social theorists have made superficially similar arguments, but none have been able to ground them in an approach to language and interactional practice that could provide for either the details of situated meaning or the moral commitments required. The tendency is to continue thinking in terms of associations (Bruno Latour) and the content of dialogue (Jürgen Habermas), instead of focusing on the situated and detailed sequential character of conversation.

The CA approach promises to explain not only how the mutual intelligibility of words is achieved in areas of practical, technical, and instrumental importance, but also why persons from different social "categories," including those associated with race, gender, culture and disability, experience conversational difficulties. "Membership-categorization" devices and small differences in the details of preference orders promise to unlock the key to many social issues.

The study of preference orders in medical settings has already made a significant contribution to studies of doctor-patient interaction, the study of diseases such as diabetes, and the delivery of what Maynard calls "bad news" in medical and other settings (see studies by Maynard, Pomerantz, Heritage, Halkowski, Clayman, Heath, and Mondada). Similar advances have occurred in the study of human-machine interaction (see studies by Heath, Greatbatch, Mondada, Orr, Hindmarsh, Button, Vinkhuyzen, and Whalen) Internet financial exchanges (Knorr-Cetina), business and technology (see studies by Heath, Vinkhuyzen, Boden, Hindmarsh, and Whalen), and technology and policing (see studies by Meehan, Zimmerman and Whalen, and Maynard). Paul Ten Have set up and maintained a CA Web site starting in the 1980s. There is also an ASA Section for Ethnomethodology and Conversation Analysis; an International Institute for Ethnomethodology and Conversational Analysis associated with Boston University and Manchester Metropolitan University; a work, *Interaction and Technology Research Group at Kings' College London*; and an Institute for Workplace Studies associated with faculty at Bentley College, all devoted equally to CA and ethnomethodology (EM).

With CA and EM, the sociological promise is transformed and rejuvenated. Instead of beginning with individuals, and aggregating their attachment to beliefs and

symbols across large numbers of persons to reveal alleged underlying causal effects of institutions, CA and EM assume that institutions, where they exert an influence on daily life, will, and indeed must, manifest themselves in the sequential details of interaction. What is necessary is to discover those orders, which, when they are violated, render interaction unintelligible, and how such troubles are repaired. In this way the underlying social facts of social orders can be laid bare.

CA does not a study a *micro* order that accompanies a *macro* order, as some have claimed. Rather, the idea is that all social orders, including politics, race, class, inequality, and justice, must be enacted at the level of conversational and interactional orders, or they would cease to exist. This is not a reductionist argument, as many believe, and does not begin with the individual. The point of refusing to begin with so-called *macro structures* is not to deny that constraints exist beyond local orders of conversation. Rather, the argument is that the result of treating "macro" structures as independent entities that manifest themselves in the beliefs and values of individuals is to render invisible the effects of such constraints on persons engaged in producing living social orders.

Situated interaction itself, in situations of particular sorts, places requirements on what participants can and must do, and those must be understood by researchers. It is these situated requirements, in fact, that are the stuff and substance of EM and CA. Each situation requires persons to mobilize a set of resources in ways that will be recognizable to others in that situation. These orders are a basic feature of modernity—situations not grounded in shared belief—and their study offers a foundation for the discussion of politics and morality in a modern global context.

SEE ALSO *Anthropology, Linguistic; Discourse; Ethnomethodology; Goffman, Erving; Interactionism, Symbolic; Linguistic Turn; Modernity*

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Anne Warfield Rawls

COOK, JAMES
1728–1779

James Cook became one of the most famous eighteenth-century British navigators and cartographers. Cook was born into a farming family in north Yorkshire. At age thirteen, Cook's father sent him to apprentice with a local shopkeeper. According to mythology, the young Cook spent most of his time staring out the shop's window at the sea. Whether true or not, the shopkeeper declared Cook ill-suited for that profession. He then became an apprentice in the merchant navy, where he learned navigation and astronomy.

As Britain prepared for war with France, Cook joined the Royal Navy in 1755. During the French and Indian War (1755–1763), the young sailor earned a reputation for his accuracy in cartography. In 1759 Cook surveyed and piloted the British fleet through the St. Lawrence River. During the critical battle over Quebec, the Plains of Abraham, the British commander depended on Cook's maps of the St. Lawrence River to devise his winning strategy.

After the war, Cook embarked on an often dangerous mission to map the jagged coastline of Newfoundland. The treacherous and unknown elements of the Newfoundland coast challenged both Cook's seamanship and charting abilities. By 1767, however, he produced a remarkably accurate map of Britain's newly acquired territory. The Newfoundland charting mission brought Cook to the attention of British Admiralty and the Royal Society for the Improvement of Natural Society.

Between 1768 and 1779, Cook conducted three extensive navigation missions through the Pacific Ocean. The British Admiralty expected the expedition to locate and chart the Australian continent. During his first voyage, Cook, commanding the HMS *Endeavor*, became the

second known European to land on New Zealand and the first European to explore and chart Australia's eastern coastline. A group of Aborigine inhabitants attempted to prevent the intruders from landing as the British vessel dropped anchor in Botany Bay. The British sailors used their guns to force the warriors to retreat, making the first encounter between Europeans and Aborigines a hostile one. As Cook sailed further north along the coast, his ship struck the Great Barrier Reef. His crew needed to spend several weeks repairing the vessel. During this time, Cook established fairly cordial relations with the surrounding indigenous groups. After publishing the journals from his first journey (1768–1771), he gained a certain level of notoriety in Britain.

Only two months after his first mission, Cook departed for his second major journey (1772–1775). He piloted the HMS *Resolution* and circumnavigated the globe along a southern latitude. He charted South Georgia, Easter Island, Vanuatu, and numerous other islands. This journey resulted in more tense encounters with indigenous populations. Some of Cook's men lost their lives in skirmishes with New Zealand's Maori populations.

During Cook's last major expedition (1776–1779), he became the first European to visit the Hawaiian Islands. Cook initially named these Pacific islands the Sandwich Islands after his benefactor, the fourth Earl of Sandwich. The Polynesian inhabitants, who happened to be celebrating an important religious ritual, greeted Cook with great reverence during their first encounter. This goodwill, however, did not last. On Cook's second trip to Hawaii, his men engaged in a bloody battle after the local population stole one of their smaller boats. During the conflict, the inhabitants stabbed and bludgeoned Cook to death.

Cook's name still has great currency and one can find many monuments in his honor throughout the globe. He also has several universities and other educational facilities named in his honor.

SEE ALSO *Colonialism; Cultural Group Selection; Exploitation; Gaze, Colonial; Imperialism; Natives; Travel and Travel Writing*

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Anthony P. Mora

COOPERATION

Cooperation, wrote Karl Marx (1818–1883), occurs "when numerous workers work together side by side in accordance with a plan, whether in the same process, or in different but connected processes" ([1867] 1977, p. 443). What he describes in this passage about the economic realm is the superficial appearance of cooperation rather than the diverse cultural practices, social relations, and modes of production that underwrite it. He then proceeds to point out the diversity of those forms. Marx was acutely aware that people cooperate for other reasons besides the production of goods or the satisfaction of needs defined narrowly as economic rather than more broadly as intellectual development, aesthetic stimulation, play, or the fulfillment of social functions, to name only a few.

Authors with quite different ontological standpoints have written about cooperation. On the one hand, early theorists of liberalism, such as Thomas Hobbes (1588–1679) or John Locke (1632–1704), who presupposed that individuals existed before society, sought to explain the conditions under which innately competitive, natural men came together to constitute a society in order to pursue collectively life, liberty, and property. For intellectual descendants, like neoliberal policymakers or sociobiologists, the problem is to explain the development of cooperative (altruistic) behavior; their solution resides in exchange broadly written—the market for policymakers, the transmission of genes for sociobiologists. On the other hand, critics of liberal social theory—Georg F. W. Hegel (1770–1831), for example—presupposed the existence of sociality from the beginnings of humankind and sought to explain how the actual conditions of human existence have been transformed by the collective social activity of human beings. The problem from this perspective is to account for competition in a world that exhibits enormous amounts of cooperative activity.

Recent discussions of cooperation may be further obscured by six epistemological tendencies that are frequently encountered either explicitly or implicitly: (1) a philosophical reductionism which postulates that explanations framed in terms of lower-order molecular, neurobiological, or psychological structures (e.g., a universal human nature) are preferable to those couched in terms of emergent social and cultural phenomena; (2) a denial of sociohistorical change which postulates, for example, that the structures of meaning characteristic of the Roman Republic have persisted unchanged for millennia and are effectively the same ones that exist in the West today; (3) an assertion that cultural identities and logics of difference are forged largely in the unequal power relations and one-way discourse between colonizer and colonized; (4) a largely unexamined assumption that earlier writers in the anthropological tradition did not understand what they

saw or were told, especially when their accounts differ from the social relations that exist in the same region today; (5) a related assumption that, since people find it difficult to think outside the analytical categories of their own intellectual tradition, it is also difficult for them to understand other intellectual or cultural traditions; and (6) a belief that all forms of cooperation are structurally equivalent to those of Western capitalism and hence can be adequately explained in terms of capitalist models. Such epistemological presumptions need to be examined carefully and justified, especially as they underpin discussions of cooperation.

Cooperation manifests itself in diverse ways and is buttressed by a variety of social forms. Let us consider briefly a few examples: (1) the factory described by Marx where a number of workers put into motion more or less elaborate technical divisions of labor to produce commodities for the owner; (2) the long-discussed and carefully planned hunting expeditions of San men of southern Africa, which are complete with details of how and with whom meat will be shared; (3) the annual, week-long fiestas in highland Andean communities that are constructed around cleaning and repairing local irrigation canals and terraces; (4) the rotating credit associations, pooling of resources, and almost continuous swapping of goods to defray the costs of everyday needs in rural settlements along the U.S.-Mexico border; (5) the Maasai women in eastern Africa who prepare food and drink for the age-set initiation ceremonies of their sons and husbands; and (6) the improvisations of jazz musicians in a jam session. Cooperation does not always mean that the interpersonal and social relations of the participants are harmonious; frequently, they are tense, and individuals may be cajoled or feel compelled to participate. Nevertheless, not cooperating may be unavoidable, unadvisable, or even unthinkable.

SEE ALSO *Altruism; Altruism and Prosocial Behavior*

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Thomas C. Patterson

COOPERATIVES

People in every society and throughout history have participated in cooperative arrangements, including joint decision-making; economic, social, and political collaboration; and collective ownership. There are a multitude of examples in every culture and era, starting with the early African nations, Aboriginal societies in Australia, the First Nations in the Americas, and Indian and Southeast Asian civilizations. Many grassroots cooperatives have operated throughout the world over the past two to three centuries. In modern history we refer to cooperatives as enterprises, usually businesses (for-profit and not-for-profit) that are jointly owned and governed by a collection of people for a specific economic and/or social purpose. Although these are found throughout the world, the most famous cooperatives have been located in Great Britain, Japan, Italy, Spain, and Canada. In 1752 Benjamin Franklin was one of the founders of the first formal cooperative recorded in history, a fire insurance company in the United States.

Cooperatives are companies owned by the people who use their services, those who formed the company for a particular purpose and are the members of the enterprise, i.e., member-owners. Cooperatives are created to satisfy a need—to provide a quality good or service at an affordable price (that the market is not adequately providing); or to create an economic structure to engage in needed production or facilitate more equal distribution to compensate for a market failure. The International Cooperative Alliance, a nongovernmental association founded in 1895 that represents and serves cooperatives worldwide, defines a cooperative as "an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.… Ranging from small-scale to multi-million dollar businesses across the globe, co-operatives employ more than 100 million women and men and have more than 800 million individual members" (International Cooperative Alliance [ICA] 2005).

Cooperatives are usually classified as consumer-owned, producer-owned, or worker-owned (or a hybrid of some combination of the stakeholders). For example, consumers come together and form a buying club or a cooperative grocery store in order to obtain the goods they need at an affordable price, particularly where fresh produce and natural and vegetarian foods are not supplied

elsewhere or are very costly. In some places consumers also come together to buy electricity, environmentally friendly fuels, pharmaceuticals, child care, financial services (as in a credit union), or almost any good or service. Cooperative retail enterprises such as natural-food grocery stores and rural electric and energy cooperatives are some of the most numerous and successful examples. Cooperative financial institutions such as credit unions are some of the most widely used cooperatives. They make financial services and loans available in underserved communities, and keep financial resources circulating in the community. Producers also form cooperatives to jointly purchase supplies and equipment and/or to jointly process and market their goods, particularly in agriculture and arts and crafts. Workers form cooperatives to jointly own and manage a business themselves, to save a company that is being sold off, abandoned, or closed down, or to start a company that exemplifies workplace democracy and collective management. Worker-owned businesses offer economic security, income and wealth generation, and democratic economic participation to employees, as well as provide meaningful and decent jobs and environmental sustainability to communities (see Gordon Nembhard 2004b, 2002; Haynes and Gordon Nembhard 1999). Cooperative housing expands home or apartment ownership to more people, addressing both financing and maintenance issues, and often builds in long-term affordability. Cooperative ownership is growing in the provision of social services such as home health care, health care, drug rehabilitation, and child care; and in the area of fair trade.

DEMOCRATIC OWNERSHIP

Cooperatives, particularly worker-owned co-ops, are a form of democratically owned economic enterprises that allow members to control their own income and wealth, stimulate the local economy, address market failures, and be agents of change in their local sphere. Cooperatives are characterized by pooling of resources, joint ownership, democratic governance, and sharing risks and profits in the production, distribution, and/or acquisition of affordable high-quality goods and services. Cooperative businesses operate according to a set of agreed-upon values and principles or guidelines that have evolved over the past 150 years. The seven key principles are: voluntary and open membership; democratic control by members (based on "one member, one vote" rather than voting according to number of shares of stock owned); members' economic participation (returns based on use); autonomy and independence (self-help organizations controlled by members); continuous education, training, and information; cooperation among cooperatives; and concern for community (see International Co-operative Alliance 2005; Thordarson 1999). These seven modern cooperative principles are based on the values and principles set forth by the Rochdale Equitable Pioneers Society, started in 1844, whose original members are considered to be "the founders of the Co-operative Movement" (ICA 2005; also Holyoake 1918 and Laurel House Co-op and Laurel Net Cooperative 1999.)

COOPERATIVE ECONOMICS, MARKET FAILURE, AND MULTIPLIERS

Cooperatives often develop and survive as a response to market failure and economic marginalization (see Fairbairn et al. 1991). Worker-owned cooperatives and other democratically owned businesses are some of the most innovative and empowering arrangements for bringing together labor and capital in an equitable and productive relationship. Cooperative economic development has been successful as an urban as well as rural economic development strategy to create jobs, increase incomes (and sometimes wealth), and reduce poverty around the world. Although cooperative models are not well known or well publicized, the United Nations and the International Labor Organization have recently recognized the potential of cooperative enterprises for economic development and poverty reduction (Birchall 2003; International Labour Conference 2002).

Some of the issues that cooperatives address are: local development in an increasingly globalizing world; community control in an age of transnational corporate concentration and expansion; social and community entrepreneurship, particularly when business development is increasingly complicated and especially risky; pooling of resources and profit-sharing in communities where capital is scarce and incomes low; and increased productivity, superior working conditions, and high worker satisfaction in industries where work conditions may be poor, and wages and benefits usually low. There is evidence to suggest that cooperatives lead to superior value creation. David Levine and Laura D'Andrea Tyson surveyed the research and found that "both participation and ownership have positive effects on productivity" (1990). Levine and Tyson also point out that many researchers note the superior working conditions in cooperatives:

> For example, the European worker co-ops, which have been the subject of extensive empirical inquiry, typically have managements committed to employee ownership and representation, job security, compressed status and compensation differentials, and guaranteed worker rights.… The results have been more consistently favorable in correlating worker ownership and management with lower turnover, absenteeism, and higher

> worker satisfaction.… In almost no cases does participation make things worse. (Levine and Tyson 1990)

In a comparison of social and economic indicators in three towns in northern Italy with similar demographics but different levels of cooperative ownership, David Erdal (1999) found that citizens in Imola had a better quality of life than in the other two towns with fewer or no cooperative enterprises. Imola, with 25 percent of the workforce employed in cooperative businesses, is reputed to be the town with the largest number of cooperatives in Italy and Europe. In total, Imola scored highest (positively) on seventeen of the nineteen combined measures about quality of life. Experience of crime, police activity, cardiovascular mortality, and perception of gap between rich and poor, for example, were all lowest in Imola. Positives such as confidence in government, perceiving politicians to be on your side, posteducation training rates, and physical and emotional health, were all highest in Imola.

Cooperatives develop out of the wealth of cultural and social capital in communities, whose diverse residents often have strong social networks and few options but to work together. Cooperatives create social efficiencies derived from the democratic participation of all, self-help, self-management, and concern for community principles that guide them. Cooperatives encourage interaction, teamwork, intercooperation, and giving back to one's community. They also develop social ties among members and between members and the community—that is, social capital—so that networking and working together become the norm, and the skills to facilitate this are developed in all members. Gordon Nembhard and Blasingame (2002) find that co-op members and employee owners become used to the transparency and accountability in their own organizations (e.g., open-book policies, "one member, one vote," shared management, etc.). They come to expect transparency and accountability and help recreate this in civil society and political arenas. Many members become more active in their communities in general, taking on leadership roles both in their co-ops and in voluntary and community organizations (this was found especially with women members and in communities of color). In addition, citizen activism and advocacy often can be effective countervailing forces that increase democracy and participation.

PROMOTING RACIAL AND ETHNIC ECONOMIC INDEPENDENCE

Cooperative enterprises are a particularly effective and responsive way for subaltern populations to participate economically. Because subaltern peoples are discriminated against in mainstream labor, capital, and housing markets, they often have to rely on one another and work together. Subaltern populations often have little personal wealth and are excluded from much of mainstream prosperity and economic stability: The market system does not often work for many members of subaltern groups.

Examples such as the Mondragon Cooperative Corporation (MCC) illustrate the economic power of the combination of ethnic solidarity, democratic ownership and participation, and interlocking economic activities. The Mondragon Cooperative Corporation is a complex of more than 150 industrial, financial, distributional, research, and educational cooperatives, mostly worker-owned, in northern Spain. The holding corporation is "rooted in grassroots networks of cooperative businesses owned by Basque nationalists" who chose cooperative enterprise development as a means to assert their economic independence (see Gordon Nembhard and Haynes 2002). The first cooperative was a worker-owned and worker-managed ceramic heater factory, started in 1956 by graduates of a community-run alternative "polytechnic" high school founded by a priest who taught cooperative economics and worker ownership. Additional cooperatives developed using the same model. Early members also established a credit union, Caja Laboral, that has continued to supply financing, technical assistance, and research and development for future cooperatives. Caja Laboral has become the seventh largest bank in Spain and is the MCC's engine of growth, supporting cooperative development as well as facilitating economic stability among the cooperatives in the system. Other schools and a university were established to support the growing worker-owned factories in the network. The complex of cooperatives also established its own social security system (Lagun-Aro) early on, when the government of Spain would not allow the member-owners to participate in the national system because they were considered to be self-employed. The association grew into a multibillion-dollar cooperative network of manufacturing, service, educational, financial, and distributive enterprises. Trends continue to show progressive growth in assets, sales, and workforce. In 2005, for example, total sales for all the cooperative's companies exceeded $11 billion euros (U.S. $15 billion); total assets were greater than $22 billion euros (U.S. $29 billion). The workforce reached 78,455 in 2005—81 percent of whom were member-owners (Mondragon Corporacion Cooperativa 2006). The fifty-year success of this cooperative holding company and its affiliated companies can be explained best and most fully when the panoply of economic, social, cultural, and political market and nonmarket forces involved are analyzed.

Freedom Quilting Bee in Alberta, Alabama, is another example of a successful cooperative organization that organized itself based on cultural and social solidarity as well as economic need and affinity (Rural Development Leadership Network 2002). In the mid-1960s a group of

African American women in sharecropping families in Alabama formed a craft cooperative to pool their resources to produce and market quilts to supplement their families' earnings. Sharecropping, a system of debt peonage, did not provide self-sufficiency for black farmers. In addition, during the civil rights era, white landowners were evicting black families from the land if they tried to register to vote or were involved in civil rights activity. The co-op helped the women buy sewing machines and other supplies, provided a place for them to quilt together, and marketed and distributed the quilts around the country, including through the Sears Roebuck catalog. The cooperative was so successful that it bought land, built a small sewing factory, started a day care center, and by 1991 was the largest employer in their town. In addition, the co-op was able to use its land to help sharecropping families relocate and eventually buy their own land, especially after they were denied access to their traditional farms because of their political activity. The income earned also was an important supplement to the meager income their families made from farming. In 1967 Freedom Quilting Bee was one of the founding members of the Federation of Southern Cooperatives—a predominantly African American cooperative development nonprofit organization with agencies in six southern states (Federation of Southern Cooperatives/Land Assistance Fund 1992, 2002).

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COORDINATION FAILURE

The notion of coordination failure can be understood by considering the simple coordination game in Table 1. In this game, Player 1 and Player 2 simultaneously and independently choose action A or B. The numbers in the table represent the payoffs associated with the different outcomes of interaction. If both players choose option A, both get a payoff of 1, if both choose B, they both get a payoff of 2, and if one player chooses A and the other B, the one who chose A gets 1, the other gets 0.

Coordination games, as outlined by Russell Cooper in his 1999 work, are characterized by multiple equilibria. In the following example, both players choosing A and both players choosing B are equilibria (in addition, there is a mixed-strategy equilibrium in which both players choose A and B with a probability of ½). These equilibria are Pareto-ranked, meaning that both players are better off in one equilibrium than in the other. In the example, both players are better off if they coordinate on action B than if they coordinate on action A.

A coordination game

		Player 2: A	Player 2: B
Player 1	A	1, 1	1, 0
	B	0, 1	2, 2

Table 1

Coordination failure prevails if players coordinate on the inefficient equilibrium (here: both choose A). Coordination failure is an equilibrium phenomenon because given that one player chooses A, it is in the interest of the other player (i.e., it is a best reply) to also choose A. In colloquial language, the failure to coordinate on any equilibrium is sometimes also called *coordination failure*. It is more precise to talk about miscoordination in this case because a non-equilibrium phenomenon is concerned.

Coordination failure suggests an efficiency-enhancing role for policy intervention and collective action. If agents are in a Pareto-inferior equilibrium, individuals cannot move to the superior equilibrium by individual action (lock-in effect). In contrast, a coordinated move is necessary to reach a Pareto-superior equilibrium.

Coordination failure arises because of strategic uncertainty, not because a conflict of interest prevails. While choosing B is attractive because it possibly yields a higher payoff, it is also risky to choose B. If one player is uncertain that the other player will choose B, he might choose the safe option A. Therefore, confidence and expectations are important determinants of coordination failure.

Multiple equilibria arise in coordination games because of strategic complementarity, meaning that the optimal decision of one agent is positively dependent on the decisions of other players. Coordination games also exhibit positive spillovers in that the payoffs of one player increase as the action by the other player increases (assuming that action B represents a higher level of activity than action A).

EXAMPLES OF COORDINATION FAILURE

More elaborate versions of the coordination game in Table 1 with more than two players and two actions have been used to explain coordination failure in many contexts.

Teamwork Suppose two workers produce a joint output by providing costly effort and both are paid according to team output. Both workers are better off if both exert high effort (action B in the table) and coordination failure prevails if both provide low effort.

Education Acquiring education might be less profitable if others are not educated. If all agents expect others to acquire little education, investments in education might remain low.

Bank Runs If most creditors leave their savings in the bank, the bank is liquid and it is optimal to leave the savings in the bank. If all other creditors withdraw their savings, the bank becomes illiquid and it is best to also withdraw one's savings. A similar reasoning has been used to account for speculative currency attacks and decisions to refinance businesses on the verge of bankruptcy.

Search and Matching If few agents use a specific medium to search for a partner, the other players have little incentives to use this medium because of the low likeliness to find a good match in a "thin market." Coordination failure might therefore explain low intensity of search for employment. A similar reasoning has been used to explain failure to adopt superior technological standards or languages. Applications in development economics emphasize path-dependence and lock-in, suggesting that an economy might be stuck in a development trap today because agents failed to coordinate, possibly due to historical accident, on a Pareto-superior equilibrium in the past.

Macroeconomics Coordination failure has many applications in macroeconomics. A classic example refers to investments and expectations of future output. If most firms expect future aggregate demand to be low, they invest little today. This, in turn, induces low aggregate demand today, which might be interpreted as confirming low expectations. A recession might therefore result from self-fulfilling expectations. The literature on "sunspots" suggests that expectations might be coordinated by irrelevant events or information. For example, leading indicators of macroeconomic activity might be particularly accurate as long as economic agents believe they are good indicators.

The empirical relevance of these examples is contested in the literature because theories of coordination failure are difficult to test in the field. Economists have therefore sought to test the determinants of coordination failure in a broad range of coordination games in the experimental laboratory. Experimental economists have investigated elaborate versions of the game in Table 1, pure coordination games (in which equilibria are equally good, i.e., not Pareto-ranked), and asymmetric games (in which agents coordinate on different actions).

Coordination problems are related to but distinct from cooperation problems. The coordination game in Table 1 is transformed into a cooperation game (a prisoner's dilemma) if the payoffs in the lower left cell are changed to (0,3) and in the upper right cell to (3,0). Actions A and B are often called *defection* and *cooperation*. The resulting cooperation game has a unique and inefficient equilibrium [payoffs are (1,1)]. A rational and self-interested player chooses A (i.e., free-rides) irrespective of what the other player chooses in the cooperation game.

SEE ALSO *Multiple Equilibria; Nash Equilibrium; Prisoner's Dilemma (Psychology)*

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COPING

The stresses inherent in the daily challenges of life create a need for continuous monitoring and adjustment. *Coping* is the behavioral, cognitive, and emotional process of managing a stressful or threatening situation or circumstance. It is a nearly continuous process as people are frequently confronted with new and changing environmental demands that can lead to stress. Minimizing, mastering, or managing a situation in such a way as to render it less distressing is the goal of coping.

Richard Lazarus (1966) offered a three-process model of stress. *Primary appraisal* is the process of perceiving a threat to oneself. *Secondary appraisal* is the process of call-

ing to mind a possible response to the threat. *Coping* is the execution of the response to the threat. The body has its own way of coping with stress. Any threat or challenge an individual perceives in the environment initiates a sequence of neuroendocrine events. These events are conceptualized as two separate responses: a *sympathetic/adrenal response*, in which catecholamines (epinephrine, norepinephrine) are secreted (i.e., the "fight or flight" response), and the *pituitary/adrenal response*, involving the secretion of corticosteroids, which act to restore the biological system to homeostasis (Frankenhauser 1986).

TYPES OF COPING

Lazarus and Susan Folkman (1984) were the first scholars to make the distinction between *problem-focused coping* and *emotion-focused coping*. Problem-focused coping seeks to ameliorate the stress being caused by a given situation by identifying and making efforts to deal with the source of the problem. It may involve taking action to remove a stressor or to evade a threatening stimulus. For example, changing trails to avoid a snake while on a nature walk would be an example of the problem-focused method of coping: By effectively removing oneself from the threatening situation, one lowers the stress it induces.

The goal of *emotion-focused coping* is to reduce the intensity of distressing emotions associated with stress—that is, the aim is to make oneself *feel* better about a real or perceived threat or stressor without addressing the source of the stress. Emotion-focused coping often occurs when problem-focused coping fails to reduce the stress in a situation or when the stressor is so great that problem-focused coping has no real likelihood of helping. It can also come into play when many aspects of a situation are out of one's control, such as when one is dealing with a terminal illness or the sudden death of a loved one.

Charles Carver and his colleagues (1989) developed an instrument to measure coping responses based on a number of conceptually distinct methods of responding to stressful life events. *Active coping* involves taking steps to remove oneself from a threatening situation. *Planning* involves generating strategies to cope with the stressor. Other strategies include *reinterpreting the stressor* as a positive or growth-oriented experience, *suppression of competing activities* (i.e., putting other concerns aside until the stressor sufficiently subsides), *restraint coping* (i.e., waiting for an opportunity to act effectively), *focusing on and venting of emotions* (i.e., expressing grief or "venting" anger), using *humor* to cope with the stressor, *mental* or *behavioral disengagement* (i.e., giving up on trying to solve a problem or reach a goal), *seeking social support*—either *instrumental support*, such as information or resources, or *emotional support*, such as sympathy and understanding—*turning to religion* (i.e., putting the problem in God's hands), and *acceptance*, whereby the threat is accepted as unavoidable (as with, for example, terminal illness).

Sometimes the nature of a stressor is such that it overwhelms an individual's coping resources. When this occurs, rather than engaging in positive coping strategies, the person sometimes seeks to disengage from the stressful situation altogether. This emotion-focused strategy is called *avoidant coping*, and its goal is to escape or avoid feelings of distress. Denial of the existence of the stressor, for example, can be negative if it causes one to neglect to seek medical attention when symptoms of a possibly serious disease appear. Substance use (i.e., using alcohol and/or drugs) can aid in this disengagement from reality, but only for a time. People may also engage in "magical thinking" in an attempt to wish away a stressor. Unfortunately, in the end the stressor remains, and will inevitably resurface.

SOCIAL SUPPORT AND COPING

It is now widely accepted that receiving effective social support from one's social network can play a role in influencing health and well-being. The two main theories of how social support impacts stress and coping are the *main effect hypothesis*, which asserts that social support is beneficial whether or not one is experiencing increased stress, and the *stress buffering hypothesis*, which asserts that social support during time of elevated stress serves to protect an individual from a stressor's harmful effects (Cohen and Wills 1985).

Social support can take many forms. These include *instrumental support* (e.g., providing a family member with money to buy groceries), *informational support* (e.g., providing information about an illness), and *emotional support*—that is, providing care or comfort. For such support to be effective, however, it must be matched with the environmental demands causing the distress and be provided by the appropriate member of one's social network.

CONCLUSION

Often, the best coping strategies are a combination of problem-focused and emotion-focused strategies, which together engage the stressor in an effort to reduce both its force and the negative emotions it evokes. Seeking social support in times of elevated stress can also be an effective coping strategy. When one is faced with stress that greatly exceeds one's ability to cope, professional services may be helpful, both in strategizing ways to deal with the stressor and as a source of emotional support.

SEE ALSO *Emotion; Mental Health; Mental Illness; Neuroticism; Resiliency; Stress; Vulnerability*

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COPPER INDUSTRY

The copper industry's growth and prosperity are based on the metal's inherent properties: an attractive appearance, high conductivity, good corrosion resistance, ability to alloy with other metals, and ease of working. While there are substitutes in specific uses, copper has entrenched and expanding markets in the electrical, electronic, and communications industries. Electrical and electronic products, including power cables, account for over one third of total usage, and construction, including wiring and water tubing, for a similar share. Transport industries use roughly one eighth of the total, industrial machinery and equipment nearly one tenth, and a wide range of consumer and other products the remainder. Global demand, which moves in step with capital expenditure, especially on construction and infrastructure, and with spending on automobiles and consumer durables, has increased from 3.7 million tonnes in 1960 to 6.8 million tonnes in 1970, 9 million tonnes in 1980, 10.9 million tonnes in 1990, 15.1 million tonnes in 2000, and 16.5 million tonnes in 2005. The annual average rate of growth is 3.1 percent, but with marked annual and geographical variations. The geographical center of demand has altered, with the most rapid increases in China, India, and the countries of the Asia-Pacific Rim. In 1980 the main markets were the countries of the European Union of 15 (30 percent), the United States (21 percent), the USSR (12 percent), and Japan (13 percent). By 2005 China had gained first place with 22 percent and the Asia-Pacific region had 14 percent. These increased shares were only partially offset by the collapse of demand in the former Soviet Union and its European satellites. In recent years demand has flattened out, or even fallen, in the United States (14 percent of the 2005 total), Japan (7 percent), and many of the European Union of 15 (20 percent) as their economic activity has become increasingly dependent on service industries and imported manufactures. Global turnover amounted to $21 billion in 2002 and $60 billion in 2005, with increased prices explaining most of the rise. World exports of refined copper metal accounted for 38 percent of production, worth almost $23 billion, in 2005.

Copper is priced on terminal markets, mainly the London Metal Exchange, and prices fluctuate with changes in the balance between supply and demand and with general economic and financial conditions. Whereas demand is cyclical, supply tends to be relatively inelastic as mines need to spread heavy fixed costs over as high an output as possible. The industry is a modest employer of labor, but is capital intensive at both the mining and refining stages. Volatile prices can be hedged in forward markets, but nonetheless create problems for producers and consumers alike. For example, the daily cash price fell from $3065/tonne on January 20, 1995, to a low of $1319/tonne on November 11, 2001, and rose to a high of $4650/tonne on December 28, 2005. The annual averages were $2934/tonne in 1995, $1560/tonne in 2002, and $3684/tonne in 2005. High prices both encourage substitution by other materials, and lead governments and labor to press for increased shares of profits. Weak prices inhibit exploration and new investment and may force the closure of higher cost mines.

The relatively strong growth of demand since the late 1980s has been facilitated by changes in the structure and nature of supply. Global mine production of copper was about 15 million tonnes in 2005, with the balance of demand for refined copper metal met from recycled materials. In many instances ores contain other payable products as well as copper, which can contribute considerably to mine profitability, and can influence production patterns. Because individual ore deposits are finite, continued spending on exploration and mine development is required merely to maintain output, let alone satisfy rising demand. Improved exploration techniques have partly offset the tendency for the average grade of copper ore to fall with the depletion of the richer and most accessible ore deposits. Also, technological improvements and rising mine size have tended to neutralize any impact of falling average grades on production costs. During the 1990s output became increasingly concentrated in large open-pit mines, where economies of scale more than offset the relatively low grades of contained metal in the ore. In 2004 the three largest mines produced about 2.5 million tonnes, or 15 percent of output. The annual copper output of the median mine grew from 75,000 tonnes in 1980 to 110,000 tonnes in 1990 and almost 200,000 tonnes in

2000. Larger mine sizes and falling average grades have greatly increased the local environmental impact of mining, as greatly increased volumes of waste and overburden have to be moved per tonne of recovered metal. Energy needs have also risen sharply. Most mines are located in relatively unpopulated areas, but social and community tensions can arise when they are developed near population centers, particularly where indigenous peoples are involved.

With the exhaustion of many small high-grade mines in Europe and parts of North America since the late 1980s, the geographical focus of output has shifted. That shift has been accompanied by changes in patterns of ownership. Whereas the shares of leading companies in total output have not altered significantly, the identity of those leading companies has changed markedly. During the 1950s, 1960s and early 1970s, many mines were wholly or partially nationalized, largely but not entirely in developing countries in accordance with the then-prevailing ethos of national ownership and control of mineral resources. In countries such as Chile, Zambia, and Zaire, foreign-owned mining companies had dominated, or even distorted, the local economy and exerted considerable political power, often fueling strong local resentment. Some nationalized U.S. companies, like Anaconda in Chile, blocked foreign aid and further investment in their former host countries in the 1970s. The greater part of U.S. mine output was acquired by oil companies during the 1970s. (For example, Anaconda Copper's Chilean assets were nationalized in the 1960s and early 1970s, and its remaining assets were acquired by Atlantic Richfield in the late 1970s.) Subsequent decades have witnessed the complete withdrawal of the oil companies from copper production, and the privatization of copper projects in many countries. As of 2007 only Chile retains a significant state holding, through Codelco, but the company now coexists with privately owned companies and accounts for only 35 percent of a greatly expanded Chilean output, compared with about 82 percent in the early 1980s. Elsewhere, state-owned producers generally failed to invest sufficiently to sustain their output and remain competitive. U.S. mine output collapsed from 1973's 1.6 million tonnes to 1 million tonnes in 1983, and it would have fallen further but for the oil companies' investment and the application of new technology. Until the late 1970s most copper ore was crushed, concentrated by a variety of means, and then smelted and refined. Not all ores are amenable to processing by such means and oxide ores were often left untreated. Acid leaching, followed by solvent extraction and electro-winning (SX-EW) enabled the treatment of such ores and waste dumps, often at low costs, and these hydrometallurgical processes were suitable for many deposits in the Southwestern United States. In consequence, U.S. mine output expanded to 1.8 million tonnes in 1993 and 1.9 million tonnes in 1996, only to contract to 1.1 million tonnes by 2003, after prices had collapsed cyclically in the late 1990s.

Many South American copper ores are amenable to SX-EW processing and by 2004 the technique accounted for 18 percent of global mine output. One advantage is that the process produces saleable copper metal rather than intermediate products requiring further processing. Russian production fell with the collapse of the Soviet Union, and output fell during the 1980s and 1990s in Europe, Canada, Central Africa, and the Philippines. The number of producing countries has dwindled along with the number of mines. As of 2007 Chile accounts for 35 percent of global mine output, followed by the United States (8 percent), Indonesia (7 percent), Peru (7 percent), Australia (6 percent), and Russia (5.5 percent). The leading five copper mining companies supply 38 percent of global output, and the top ten 58 percent—similar shares to those of the mid 1970s. The five leading companies are Codelco (12.7 percent of 2004's output), BHPBilliton (7.3 percent), Phelps Dodge (7.1 percent), Grupo Mexico (6.1 percent), and Rio Tinto (5.1 percent).

There is large global trade in ores and concentrates (28 percent of total mine output, and 34 percent of the output of concentrates) as not all copper is smelted and refined at, or near, the mine site. Some smelters and refineries continued to produce from imported raw materials when local mines were depleted, and some countries, like Japan, Korea, and China, deliberately fostered metal production for strategic or developmental reasons. The main countries producing copper metal are Chile (17 percent), China (15 percent), European Union of 15 (11 percent), Japan (8 percent), and the United States (7 percent). The ownership of copper refineries is rather less concentrated than that of mines, with the ten leading companies having 50 percent of output, rather less than in the mid-1970s.

SEE ALSO *Allende, Salvador; Dependency; Mining Industry*

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COPTIC CHRISTIAN CHURCH

The identity of the Coptic (i.e., Egyptian) Orthodox Church is based on the foundation of the patriarchate of Alexandria by Mark the Evangelist. He is regarded as the first in an unbroken line of patriarchs represented in 2007 by Pope Shenuda III who, like the Greek Orthodox patriarch, is called the Pope of Alexandria and all Africa. The patriarchate is in Abbasiya, Cairo, in the complex of the Coptic Cathedral of Saint Mark, and there are roughly 8 million believers across the country.

Egyptian patriarchs of Alexandria wielded great influence at the various councils convened to reconcile disputes that plagued the early church. In 325, Alexander and his papal successor Athanasius subscribed to the Nicene Creed that God the Father and Christ the Son were full and equal participants in the Godhead; Arius, who presented that the Son was subordinate to the Father, was banished. When Constantinople gained the prestige that once belonged to Alexandria, Arius was recalled and Athanasius was driven into exile on five occasions, which coincided with the appointment of Arian bishops in Alexandria. The dispute was finally resolved in the Council of Constantinople in 381 when the Nicene Creed, defended for decades by Athanasius, was reaffirmed.

Egypt's refusal to endorse the decrees issued at the Council of Chalcedon in 451 was a nationalistic gesture of independence. Earlier, there existed no theological differences between the Church of Alexandria and the Churches of Rome, Constantinople, Antioch, and Jerusalem. The decisions that caused the divisions into "Chalcedonian" and "non-Chalcedonian" or "monophysite" churches were political rather than doctrinal because both claimed authority over the patriarchate of Alexandria. The Coptic Church is committed solely to the first three ecumenical councils: Nicea (325), Constantinople (381), and Ephesis (431), where Saint Cyril of Alexandria, champion of Christian orthodoxy, was honored for his defense against Nestorianism and for his definition of faith as expressed in the *Coptic Synaxarium*: "The Union of the Word of God with the flesh is as the union of the soul with the body, and as the union of fire with iron, which although they are of different natures, yet by their union they become one. Likewise, the Lord Christ is One Christ, One Lord, One Nature and One Will."

In the year 570, Copts appointed their own "pope and patriarch" residing at Wadi Natrun, west of the Delta. Egyptian Orthodox Christians henceforward ignored ecclesiastical representatives from Constantinople, adopted a Calendar of the Martyrs that begins its era on August 29, 284 in recollection of those who had died for their faith in the reign of Diocletion, translated the whole of the New Testament into Coptic, and followed the teachings of Saint Mark.

Periods of peace and persecution comprise the history of the Coptic Church. The Persian army destroyed churches and monasteries in 617. The religious life of the Copts suffered relatively little after the Arab invasion in 641, provided they paid a tax, but when repressive laws were later imposed, they drove the Copts to revolt on several occasions. The Church generally flourished under the Fatimids (969–1171), when there was a revival of Coptic identity, but this was followed by persecution under the Ayyubids (1171–1250). With the rise of the Mamelukes, churches and monasteries were plundered and destroyed, Copts became a small minority, and pressure continued under the Ottomans (1517–1808).

The position of the Coptic Church improved under the enlightened rule of Mohamed Ali's dynasty in the nineteenth and twentieth centuries. In the 1950s nationalization and "Arabization" policies under Egyptian president Gamal Abdel Nasser resulted in an exodus of a professional class abroad, including Copts. There are more than 80 Coptic Churches in the United States and Canada, 26 in Australia, and some 30 in Europe. A missionary movement has resulted in the establishment of six Coptic Orthodox Churches in Africa.

The tremendous cultural revival of the Coptic Church from the 1950s, mainly initiated under Pope Kyrollos and continued under Pope Shenuda, includes a surge of Sunday schools, Coptic institutions, orphanages, old age homes, hospitals, and social service centers.

Since the 1970s, Pope Shenuda has instigated theological discussions with the Roman Catholic Church, and the Greek and Oriental Orthodox Churches, with view to the Copts being fully accepted as Orthodox Christians by all members of the world community. In fact, ecumenical discussions at the Vatican in 1973 led to a general acceptance of the above-mentioned Christological formula of Saint Cyril of Alexandria.

SEE ALSO *Christianity; Church, The*

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Jill Kamil

CORE

SEE *Congress of Racial Equality.*

CORE-PERIPHERY

SEE *Dependency Theory.*

CORN LAWS

The British repeal of the Corn Laws in 1846 is usually seen as the beginning of a unilateral move to free trade that served as the pivotal event in the spread of economic liberalization throughout western Europe. Historians have also seen the Repeal Act as reflecting Prime Minister Robert Peel's (1788–1850) personal devotion to free trade. It was a powerful symbol of his desire to minimize the role of vested interests and state power in the functioning of the economy, even at great political cost to his party (Howe 1997).

But more recent, revisionist work suggests that the transition to a free trade regime did not come as swiftly nor as smoothly as the conventional narrative presents. Nor was the Corn Law repeal as important for the spread of free trade in Europe. Many of the most onerous tariffs and import restrictions that had distorted British trade throughout the eighteenth century remained in place for decades.

Though often seen as symbolic of the various tariffs and quotes on imports denounced by Adam Smith (1723–1790) in his indictment of the mercantile system in *The Wealth of Nations* (1776), the Corn Laws themselves mostly came after Smith's great work. The Corn Laws referred to the various restrictions on both imports and exports of grain and related agricultural products put into place beginning in 1804, which were then followed by further restrictions culminating in the Corn Law of 1815. These laws, in turn, extended regulations in 1773 that had (1) prohibited exports of wheat when prices reached a preset level, and (2) imposed a sliding scale of duties on wheat that declined if market prices were high enough.

The intense attention paid to the political and ideological debates leading to the eventual repeal of these restrictions in the 1840s shows the danger of judging the economic importance of a legislative change by focusing on the political and cultural significance of that event. Whatever the symbolic meaning of the repeal for contemporaries, it is now clear that historical accounts of a lone free-trade Britain are inconsistent with an objective examination of the statistical record of British trade.

One of the reasons why the British tariff repeal has seemed so dramatic was the high level of British average tariffs in the 1820s (the *average tariff* is the value of all import duties as a fraction of the value of all imports). What matters is not how high the statutory level of tariffs was, but the level of tariffs for the goods that represented the bulk of British trade. (For a more technical analysis of the relative importance of British tariff restrictiveness based on a rigorous general equilibrium model, see Dakhlia and Nye [2004] and Nye [2007].) And British tariff levels were among the highest in Europe in the 1820s. Indeed, they were fully comparable to average tariffs for the United States, one of the most openly protectionist nations in the world. A comparison with Britain's traditional rival, France, shows how exaggerated the tale of unilateral British free trade has been. For the first three quarters of the nineteenth century, average tariffs in Britain were consistently higher than they were in France, a nation that was avowedly not a free trader. More refined calculations also indicate that British tariff policies imposed a greater burden on British welfare than did French tariffs on French trade. Part of this is due to the fact that history has exaggerated the extent to which French policy was protectionist.

But the important point is that after the abolition of the Corn Laws, most of the duties that Britain abolished were on manufactures or on items of minor importance to trade. Because Britain had an absolute and comparative advantage in the production of textiles and other manufactures, the effect of these liberalizations on British trade was muted. Though Britain in the 1850s had only a few tariffs, they were set at very high levels and were imposed on consumables such as wine, spirits, tea, coffee, and sugar that composed a large portion of British import trade.

Central to the system were the nearly prohibitive tariffs on wine and spirits—imposed after the War of Spanish Succession in the early 1700s—which were designed to spite Britain's enemy, France, and favor British allies such as Portugal. Britain had been especially concerned with its large trade deficit with France, and the war gave a pretext for crippling the French trade. Despite this, Britain ran a

merchandise trade deficit for much of the eighteenth century and all of the nineteenth. The 1804 Methuen Treaty—cited as a prime example by Adam Smith of the old mercantilist system—established a permanent preferential tariff for Portuguese wines and spirits in exchange for continued British export access to Portuguese markets. Given that almost all Portuguese alcoholic exports went to only one nation, Britain, as a result of this preference, this gives the lie to David Ricardo's (1772–1823) famous example of trade between Britain and Portugal as illustrative of the virtues of comparative advantage.

High tariffs on imported wines and spirits, as well as on substitute beverages such as tea and coffee, had the effect of protecting domestic producers of beer, whiskey, and other spirits. Complicated preferential tariffs also favored colonial products such as rum.

The truly major change came about with the 1860 Anglo-French Treaty of Commerce brokered by Richard Cobden (1804–1865) and Michel Chevalier (1806–1879). Despite the correct claims of committed free traders that unilateral tariff reductions were first-best, the unwillingness of Britain to lower wine tariffs prior to 1860 did little to inspire other nations to move to free trade. However the 1860 treaty led to France removing all prohibitions on British textiles and lowering the overall level of tariffs in exchange for British concessions on wine and spirits. This event, not the repeal of the Corn Laws in the 1840s, was in fact the true start of European free trade. By 1870 almost all of the leading powers in Europe were to sign most-favored-nation trade treaties with Britain and France, thus leading to the rapid creation of a truly extensive and open trading network. Where mere exhortation had done little to induce other nations to liberalize commerce, the threat of being excluded from trade arrangements between the two great European powers was the critical incentive for a sustainable liberal trade regime.

The only major exception in the Western world was the United States. Whereas most nations in Europe were lowering tariffs in the 1860s, the United States began to raise tariffs significantly. To some extent, these restrictions were partially offset by the openness of world capital markets and by America's liberal immigration policy, which allowed free movement of labor.

Toward the end of the century, concerns about falling grain prices due to increased imports from the East caused France and Germany to raise tariffs and abandon the most-favored nation system. But trade in Europe remained fairly open, and British tariffs were at an all-time low. This happy period of open European trade would only be destroyed with the coming of World War I (1914–1918).

SEE ALSO *Economics, Classical; Free Trade; Mercantilism; Ricardo, David; Tariffs*

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CORPORAL PUNISHMENT

Corporal punishment, including spanking, slapping, paddling, or the prolonged maintenance of a physically uncomfortable position, can be defined as the intentional infliction of physical pain in response to a child's misbehavior that has the goal (whether it is met or not) of correcting the misbehavior. A complicated and controversial issue, however, is where to draw the line between corporal punishment and physical abuse. Incidents of physical abuse often develop out of parents' disciplinary behaviors. For example, routine discipline may cross the line to become physically abusive if parents cannot control their anger, are unable to judge their own strength, or are unaware of children's physical vulnerabilities. Nonabusive parents are likely to tailor their punishments to children's misbehaviors, but abusive parents appear to use physical punishment indiscriminately. Moreover, physical abuse appears to be part of a constellation of parenting behaviors that also includes authoritarian control, anxiety induction, and a lack of expressed warmth toward the child.

One argument is that any form of corporal punishment constitutes physical abuse. Indeed, several countries have outlawed the use of corporal punishment. In 1979 Sweden became the first country to do so, adding a provision to the Parenthood and Guardianship Code stating, "Children are entitled to care, security and a good upbringing. Children are to be treated with respect for their person and individuality and may not be subjected to corporal punishment or any other humiliating treatment." Prior to the 1979 ban, more than half of the Swedish population believed that corporal punishment

was necessary in child rearing; just two years after the ban, the rate was reduced by 50 percent, and by 1996, the rate was down to 11 percent. Decreases in rates of use of corporal punishment have accompanied changes in attitudes about its use (from nearly 100 percent before the ban to 40 percent by 2000). Several other countries, including Finland, Denmark, Norway, Austria, Cyprus, Latvia, and Croatia, have also outlawed the use of corporal punishment. Beginning in 1990 with the Convention on the Rights of the Child, the United Nations has placed the protection of children's rights at the forefront of issues before the international community. More recently, the United Nations has launched a global study of violence against children. In his interim report to the General Assembly in October 2005, independent investigator Paulo Pinheiro stated that the "objective of the study must be to ensure that children enjoy the same protection as adults. It will challenge social norms that condone any form of violence against children, including all corporal punishment, whether it occurs in the home, schools and other institutions."

Despite the banning of corporal punishment in several countries and the movement against its use in the international community, about 75 percent of American parents endorse the use of physical discipline, and over 90 percent of parents have used physical discipline with their children (Straus 1996). Individuals who argue that corporal punishment can be used effectively without constituting abuse suggest that corporal punishment should not be overly severe, that parents should be under control and not in danger of "losing it" from anger, that punishment should be motivated by concerns for the child rather than parent-oriented concerns, and that it should be used privately after a single warning with children ages two to six years and accompanied by reasoning (Larzelere 2000).

Across a wide range of countries, males are more likely to endorse the use of corporal punishment than are females, and parents are more likely to use corporal punishment with boys than with girls. Other demographic variables are also related to the likelihood of using corporal punishment. In particular, lower socioeconomic status, having more children, and being affiliated with a conservative Protestant religion are all related to using corporal punishment more frequently. African American parents have been found to use more corporal punishment than European American parents, even after controlling for socioeconomic status.

Cultural norms and parent-child relationships appear to affect how the experience of corporal punishment is related to children's adjustment. Certain family and cultural contexts may moderate the association between parents' behavior and children's adjustment to the extent that they influence children's construal of the parents' behaviors. Children who regard corporal punishment as a frightening experience in which their parents are out of control and acting in a way that is not accepted in their cultural context may interpret the experience as parental rejection (especially in the context of a parent-child relationship that is lacking in warmth) and may respond by escalating externalizing behaviors. On the other hand, children who regard spanking as a legitimate form of discipline that is normative in their cultural context may not interpret the experience of corporal punishment as their parents' rejection of them (especially if the parent-child relationship is generally characterized by warmth), and corporal punishment in this context may not be associated with elevated levels of behavior problems. Ethnic differences in the meaning that children attach to being corporally punished may explain why corporal punishment is related differently to their subsequent externalizing behavior. Among European Americans, parents' use of physical discipline has been related to higher levels of subsequent behavior problems in children, but this association is attenuated or reversed for African Americans. The finding has been replicated using different data sets and measures and controlling for potentially confounding variables. One purported explanation of these ethnic differences is that corporal punishment is more normative for African American than for European American families, which alters the meaning of corporal punishment to the child (Deater-Deckard and Dodge 1997). There is also some evidence that corporal punishment and children's adjustment can be unrelated, if one takes into account parental characteristics such as warmth and involvement, which may offset the potentially deleterious effects of corporal punishment. For example, Vonnie McLoyd and Julia Smith (2002), who examined data from the National Longitudinal Survey of Youth, found that only in the context of low levels of maternal support did spanking predict an increase over time in mother-reported internalizing and externalizing problems.

In a study that addressed the normativeness hypothesis directly, findings from six countries (China, India, Italy, Kenya, Philippines, and Thailand) revealed that countries differed in the reported use and normativeness of corporal punishment and in the way that corporal punishment was related to children's adjustment (Lansford et al. 2005). More frequent use of corporal punishment was less strongly associated with child aggression and anxiety when it was perceived as being more culturally accepted. In countries in which corporal punishment was more common and culturally accepted, children who experienced corporal punishment were less aggressive and less anxious than children who experienced corporal punishment in countries where corporal punishment was rarely used. In all countries, however, higher use of corporal

punishment was associated with more child aggression and anxiety regardless of the level of acceptance.

A paradox is that although individual differences in corporal punishment do not strongly predict individual differences in child aggressive behavior within cultures for which corporal punishment is relatively normative, cultures in which corporal punishment is normative have higher levels of overall societal violence. Carol and Melvin Ember's 2005 analysis of ethnographies from 186 preindustrial societies found rates of corporal punishment use to be higher in societies that also had higher rates of homicide, assault, and war. Within the United States, corporal punishment is used more frequently in the South than in other regions, which is quite likely a reflection of the South's greater acceptance of a "culture of violence" that encompasses higher homicide rates as well as milder forms of violence.

SEE ALSO *Child Development; Children; Parenting Styles; Violence*

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CORPORATE ETHICS

SEE *Corporate Social Responsibility.*

CORPORATE GOVERNANCE

SEE *Capitalism, Managerial.*

CORPORATE SOCIAL RESPONSIBILITY

The term *corporate social responsibility* (CSR) refers to actions and activities undertaken by private profit-making enterprises with the ostensible objective of demonstrating that they are good citizens of the communities in which they operate and that they pursue objectives other than maximizing their profits. Firms engage in CSR activities in response to demand from the public that the firms be responsible to all stakeholders, not just the investors who are interested only in profits. A broadened definition of *stakeholders* can include employees, suppliers, customers, and the society at large. CSR requires firms to take actions and incur expenditures that are not required under the law. This demand from citizens and society, and sometimes even from customers and shareholders, comes at the same time as these firms are being asked to improve their internal management practices, and hence the performance as measured in terms of rates of returns, to reduce chances of fraud or mismanagement by those running the firm. In the post-ENRON world, CSR has become enmeshed with the concept of corporate governance; firms are being asked to be good citizens as well as earn large returns on their investments.

Demand for socially responsible behavior is largely an industrialized world phenomenon. It has come into vogue with the realization by many of the citizens that they are not sharing in the apparent prosperity of their economies. Income distributions within the richer countries appear to be worsening simultaneously with the rise of globalization. Corporations are held responsible for both these developments. They may shift jobs to countries where lax labor, human rights, and environmental standards allow them to escape some costs and restrictions imposed on them in the industrialized world. As capital has become mobile globally, returns for large investors as well as incomes of managers who facilitate the movement of capital have risen, sometimes dramatically, as more and more workers with lesser skills are pushed into minimum-wage jobs. Corporations are also seen as having acquired excessive control of, and manipulated, political and legislative processes for their own profits—processes that are supposed to represent all citizens. Although corporate influence on politics is nothing new, ever-growing segments within the richer societies are willing to question the supremacy of economic growth over all other goals of

societies and hence demand that corporations modify their behavior.

WHAT DOES CSR IMPLY FOR CORPORATIONS?

Most corporations' responses to the demand for CSR fall somewhere between two extremes. At one end, demonstration of concern for socially responsible behavior—behavior for which the firm has to incur additional expenditures—can generate goodwill among customers in the long run. Resulting expansion of the firm's market actually makes the investment in CSR a profitable activity. In such cases investment in CSR is no different from investment in, say, an advertising campaign. It is judged on the basis of its effectiveness measured in terms of the firm's profits. At the other extreme, CSR expenditure becomes an exercise in damage control when it is unlikely to benefit the firm in terms of sales. In most of these cases CSR expenditures become necessary to prevent damage to the corporate brand names from other activities of the firm. This happens if the public takes offense at some corporate activities that, by themselves, may be legal. Past examples include oil companies that have extracted oil with scant regard for the environment or pharmaceutical companies that have tried to charge high prices for their patented medicines well beyond what may be required to justify their research expenditures. If such CSR expenditures were not undertaken, consumers might reject the firm's products or governments might impose stricter legislation that would become costly for the corporation in the long run.

There are many examples of firms that have combined social responsibility with profitable business. A frequently cited case is that of Body Shop. Its founder, Anita Roddick, expanded the firm from 1 outlet in 1976 to about 1,900 outlets in 50 countries by 2005 based on her philosophy of social and environmental responsibility while satisfying consumer needs with natural products. The first outlet was founded on these principles and it would be reasonable to conclude that the subsequent success of this firm was grounded on the philosophy of socially enlightened behavior.

Others have embraced CSR for its strategic value for the growth of the firm. Narayana Murthy, the founder of Infosys in India, is supposed to have created a multibillion-dollar information technology firm on the principles of social responsibility. Given his meager financial sacrifices for these activities, however, others have questioned whether the motivation for the public declarations of support for such behavior represents an enlightened attitude or merely an exploitation of the public's gullibility (Sinha 2005).

At the other extreme, firms have adopted a strategy of being socially responsible to prevent backlash from regulators or consumers. Comeco, a Canadian mining company, followed a policy of awarding service contracts to the native people of northern Saskatchewan to bring them onside to oppose the provincial government's attempts to impose strict regulations on uranium mining activities in that province. The higher cost of these service contracts with the natives was considered a good price to pay to avoid regulations and interference from nongovernmental organizations such as Greenpeace. It was later able to use the same strategy to avoid criticism in Kyrgyzstan after a potentially disastrous sodium cyanide spill in a village water supply.

Corporations appear to make a number of sequential decisions about their approaches to CSR activities. These decisions have to be made only for activities that are not required by law. Should they spend money on CSR activities when they do not have to? The answer would be yes if such activities would generate sufficient sales or would prevent loss of markets to competitors who are perceived as being more socially responsible. When not justified by economic profits, these activities will be undertaken when a costly backlash is expected from the consumers or the government.

RATIONALE FOR DEMANDS FOR CSR

To demand socially responsible behavior above and beyond what is legal is to recognize that ethical standards in a society should exceed the legal ones. Such a demand recognizes that the control of means of production of the society bestows strong powers on those who control them. With the control of means of production comes the temptation to control and manipulate the political and legal apparatus of the society.

From the point of view of the society, the essence of CSR is the clash between economic and noneconomic goals of the society. Pursuit of economic growth yields income that should result in higher welfare. However, what happens when, for example, the health insurance industry influences—legally—the political processes to ensure that the government does not provide health insurance to all citizens because such a move will reduce the number of people who buy insurance from firms within the industry?

How should this apparent conflict between economic and social goals be resolved? One approach would be to demand that those with economic power be held to ethical and moral standards that exceed what has been codified in the law. Mere adherence to the letter of the law would not be sufficient for those who control critical resources of the society. In this approach private enterprises will be judged not only on the products and services they provide but also on how they conduct themselves

within the societies in which they operate. An opposite approach would be to recognize that the best strategy would be to completely separate economics and politics and ensure that economic interests are not allowed to influence the construction of the moral framework of the society. In this approach private enterprises will have to adhere strictly to the letter of the law but will not have to worry about being socially responsible.

SEE ALSO *Bribery; Corporations; Corruption; Crime and Criminology*

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CORPORATE STRATEGIES

The groups of individuals that make up a *firm*, or *corporation*, are responsible for determining its actions. Those decisions are made in the context of the markets in which the firm participates as manufacturer, seller, buyer, and competitor. By defining and categorizing strategies, firms can better understand their options and opportunities. Social scientists and policymakers can also investigate the reasons for firms' success or failure and their contributions to society's welfare.

To understand the motivations behind corporate strategies, one can think in terms of the individual members of the firm who make decisions or in terms of the firm acting as a single entity. In economics, the starting point is to think of the firm as indivisible—essentially as an extension of the owner-entrepreneur whose goal is to maximize profit. Expanding that assumption to encompass long-run profits can account for a large variety of observed behavior. Thus the profit motive helps one understand decisions not only concerning pricing or production in the firm's current markets, but also investment to lower future costs and improve future quality, as well as decisions to enter markets that promise large future profits and exit markets that provide inferior profit opportunities. In this way many of the changes that occur in products and market structure over time can be described. Many business decisions that are not immediately recognized as profit maximization can be understood in these terms—generating growth, creating and maintaining competitive advantages over other firms, and improving the inputs available to the firm. Because the firm wishes to maintain profits today and in the future, it will take actions that are not immediately profitable but provide the firm with greater future profits, so that the project's net present value of future profits exceeds the cost of implementation.

Milton Friedman's (1953) assertion that firms behave "as if" they were profit maximizers, by arguing that firms that do not maximize profits will not survive, was intended to justify behavior that does not immediately appear to maximize profit. Although the literature has found this evolutionary argument difficult to support, improvements in modeling firms' long-run goals have advanced understanding in the field.

Strategies can also be actions designed to make markets more amenable to the firm's success by changing the attractiveness of rivals' options (Bain 1956). For example, the firm can commit to large production by building additional manufacturing capacity or signing binding legal contracts. This in fact limits the firm's options, but as a result is a credible commitment to substantial future production. Potential competitors can then observe that their entry will be less profitable, and as a result the incumbent firm can deter entry. As another example, firms that sell durable goods can benefit from committing to limit future sales (Bulow 1982). This causes the future resale value of present goods to increase, and customers are then willing to pay more for the goods today.

Of course, firms are made up of individuals whose goals and incentives are likely to differ from those of the owners. Thus "the firm" may take actions that are not those of a single profit-maximizing entity. Departures from the owner-entrepreneurs' goals could be characterized as being caused by employees' pursuit of their own self-interest. The principal (the owner or upper-level manager, for example) takes this constraint into account by appropriately adjusting the incentives of the agents (those that report to the principal). These internally motivated dimensions to strategy may affect the firm's ability to pursue plans that would otherwise be optimal from the perspective of a single owner-entrepreneur.

As the firm interacts in markets, the description of its strategies can also be generalized with less precise foundations. In the business and management literatures, these generalized strategies serve as approximate heuristics for

practicing managers. Corporate and business-level strategies may focus on growth (new or existing markets, new or existing products), portfolio analysis (each project's market share, market growth rate, and resulting cash flow), matches between industry opportunities and the firm's strengths and synergies, or fiscal properties such as the creation of shareholder value. These strategies are most successful when they are based on fundamentals from economics: the anticipation of costs, customers' trade-offs, and rivals' reactions. Michael Porter (1980) organizes the forces that affect the industry into these categories: buyers' market power, suppliers' market power, the threat of entry, linkages to substitutes and complements, and rivalry among firms in the industry. The implementation of these strategies in markets requires research in segmenting the market along demographic, geographic, or behavioral categories. Positioning products in chosen segments is particular to the firm's marketing group. These strategies are usually framed in terms of the 4 P's—product, price, promotion, and place (or distribution). An important ingredient for success is the recognition of linkages between these dimensions.

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CORPORATIONS

The rise of the corporation to its position of world preeminence has its roots in the corporate consolidation of finance and industry in the late nineteenth century, most especially in the United States. Competition for capital globally and within the confines of the United States played a central role in the rise of U.S. multinational firms, as revealed by an amendment to the New Jersey corporation law of 1889. Until this date, there were only a few large corporate combines of more than $10 million, except in railroads (Horwitz 1992, pp. 83–90; Roy 1997). The amended New Jersey corporation law, designed by William Nelson Cromwell (1854–1948) and his lawyers from the firm of Sullivan and Cromwell and acceded to by the New Jersey State Legislature as a way to attract capital to its domains, helped change all this. Businesses worth hundreds of millions of dollars fled from New York and other locations to set up shop in New Jersey. By the dawn of the twentieth century, roughly seven hundred corporations worth some $1 billion had incorporated in the state (Lisagor and Lipsius 1988, p. 27). With the expenses of New Jersey now paid from corporate fees, and with other regions losing business, rival states adopted similar laws to attract capital, thus largely curbing state regulation of corporations (Horwitz 1992, pp. 83–87).

Competition for capital, which the German sociologist and economist Max Weber (1864–1920) argued was key to corporate influence over states in the world system, thus displayed its power in the United States. Immediately after the New Jersey law's passage, from 1890 to 1893, the rise of Wall Street and the securitization of finance and equity—a major aspect of the financial expansion of the later twentieth century—began. Corporate stock in the new industrial firms became listed on the stock market and was traded by brokerage firms, being publicly offered for purchase on the stock exchange in 1897 as the U.S. merger movement gathered steam. Stock offerings rose from $57 million to $260 million between 1896 and 1907, and the corporate concentration of U.S. capitalism, warned against by such observers as the French writer Alexis de Tocqueville (1805–1859), was solidified (Horwitz 1992, p. 95).

From 1875 to 1904 approximately three thousand companies merged or consolidated as a full third of the country's largest firms evaporated through mergers and vertical integration. This is roughly the same percentage of Fortune 500 firms (the largest publicly held firms in the United States) eliminated during the merger wave and corporate restructuring of the late twentieth century as investment bankers and corporate lawyers once again ascended to the top of the corporate hierarchy (Sobel 1998, p. 24). Morton Horwitz argues that "if the private law of corporations—that is, the law regulating relations within the corporation as well as with private parties—had not changed after 1880, it is difficult to imagine how the enormous corporate consolidation of the next thirty years could have taken place" (1992, pp. 85–86).

Much the same can be said of the wave of state-corporate globalization occurring in the first decade of the twenty-first century. The proliferation of multinational corporations and related supranational institutions is directly related to this early adumbration of transnational firms freed from territorial regulation in the late nineteenth century, with its earlier roots in the Madisonian emphasis on property rights in the U.S. Constitution. The

American sociologist C. Wright Mills (1916–1962) and others dated the supremacy of corporate power in the United States to the elections of 1866 and the Supreme Court decision in *Santa Clara v. Southern Pacific Railroad Company* (1886), which declared the corporation a person under the Fourteenth Amendment. However, Horwitz argues: "More probably, the phenomenal migration of corporations to New Jersey after 1889 made legal thinkers finally see that, in fact as well as in theory, corporations could do virtually anything they wanted." (Horowitz 1992, p. 101). The subsequent replacement of the "artificial entity theory" of the corporation, which "represented a standing reminder of the social creation of property rights" by "the natural entity theory of the business corporation was to legitimate large-scale enterprise and to destroy any special basis for state regulation of the corporation that derived from its creation by the state" (Horwitz 1992, p. 104).

Corporations arose elsewhere, as exemplified by Japan's *zaibatsu*—the unparalleled family-controlled banking and industrial collaborations exemplified by Mitsui, Mitsubishi, Dai Ichi Kangyo, Sumitomo, Sanwa, and Fuyo—and Germany's heavy industrial corporations with links to universal banks. In the 2000s, of course, corporations extend their reach globally, with new corporate firms arising in such East Asian countries as China, Taiwan, and South Korea. With the growing power of corporate firms in the early twentieth century came increased attempts to regulate them, though in the United States antitrust legislation remained subordinate to the need to rely on corporations during wartime and in support of foreign policy. After the wave of nationalization that arose with the Russian, Chinese, and Cuban revolutions, U.S. corporations became increasingly contested and their relative freedom continued to be a mainstay of Western foreign policy.

In the aftermath of the Soviet Empire's collapse in the early 1990s, thousands of corporate firms and their foreign affiliates control about half of the value of all goods and services in the global economy, while the Fortune 500 is responsible for roughly half of all profits in the U.S. economy. Despite free market rhetoric, corporations are often heavily subsidized by their states; these subsidies include military spending, which is exempted from World Trade Organization bans against certain types of subsidies. Corporate exploitation of developing countries occurs through the use of resources and labor, often through subcontracting, a practice exemplified by one of the world's largest corporations, Wal-Mart. Meanwhile, foreign direct investment gives developed countries control over the economies of their junior partners. Simultaneously, limited liability serves to shelter shareholders and officers from corporate malfeasance, while the huge amount of money available for criminal defense often limits the severity of punishment for corporate crime, as evidenced in the wave of corporate accounting scandals involving such companies as Enron and Arthur Anderson in the early twenty-first century. Despite this, corporate advertising and public relations continue to be used to manipulate tastes for consumer goods and to put a positive public face on corporate business. In addition, lobbying associations such as the Business Roundtable in the United States represent the increased politicization of corporations as they use their immense power to influence legislation.

SEE ALSO *Capitalism; General Electric; General Motors; Lobbying; Transnationalism*

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CORPORATISM

Corporatism is a system of interest intermediation in which vertically organized and functionally defined interest groups are granted official representation in the state policymaking apparatus. Corporatism is usefully contrasted with pluralism, a system in which interest groups openly compete with one another to gain access to the state. Under corporatist systems, groups such as labor and business are represented to the state by peak associations, which tend to be subsidized by the state. Other labor and business associations must thus work through these peak associations to gain access to the policymaking process. The major dilemma of corporatism is the balance between the autonomy and state control of interest groups.

Through the mid-twentieth century, corporatism was associated with the systems of interest intermediation found in Nazi Germany and fascist Italy. In the 1960s and 1970s, however, debate emerged over whether European industrial democracies were also characterized by corporatist arrangements. By the late 1970s, scholars had agreed that corporatism could indeed exist within democratic frameworks. They called this system *liberal* or *neocorpo-*

ratism, contrasting it with the *state corporatism* of earlier periods.

In the European democracies, corporatism was understood as either a response to or an accommodation of industrial capitalism. Neocorporatist systems allowed governments to facilitate consensus over economic policy by bringing together interest groups with significant stakes in the future of economic policy to negotiate with one another in a formal setting. In doing this, corporatist systems implicitly limited who would have the most influential voices in the economic policymaking process—and, as a result, helped shape the contours of the debate. For example, the Austrian Joint Commission on Prices and Wages—a corporatist arrangement that included the three largest agriculture, business, and labor associations in the country—was formed in 1957 to consider the future of Austrian economic policy. Sweden and Switzerland also developed particularly strong neocorporatist systems.

At the same time, scholars of the developing world generally—and Latin America particularly—were observing corporatist systems under nondemocratic regimes. In these nondemocratic polities, corporatism tended more toward a means of political control than a means of building consensus. That is, these corporatist arrangements were designed more to co-opt potentially disruptive political actors than to provide a forum for policy discussion and debate. In authoritarian Mexico, for example, labor and peasant groups engaged the state through peak associations that were heavily subsidized by the government. By creating this system of corporatist intermediation, the Mexican government could co-opt and control powerful social actors that had been influential in the early years of the Mexican Revolution. Brazil in the 1930s and Argentina in the 1940s also developed corporatist systems.

Though the early 1990s witnessed some debate over the possibility of new corporatist arrangements in the post-Soviet bloc, corporatism is no longer as frequently invoked as it was in earlier decades—due in large part to the current dominance of pluralist political and economic models of governance. Nonetheless, corporatism remains a viable alternative form of interest intermediation, should pluralist models of interest intermediation meet significant challenges.

SEE ALSO *Authoritarianism; Elites; Fascism; Interest Groups and Interests; Nazism; Politics; Power Elite*

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CORRECTIONAL MENTAL HEALTH

SEE *Prison Psychology.*

CORRESPONDENCE PRINCIPLE

SEE *Comparative Dynamics; Comparative Statics.*

CORRESPONDENCE TESTS

Correspondence testing is a field-experimental technique used to investigate discrimination in hiring in the labor market.

THE EXPERIMENTAL PROCEDURE

Two carefully matched, fictitious applications are forwarded in response to advertised job vacancies. To avoid detection the applications cannot be identical, but the logic of the technique is to control strictly for all objective factors, such as education, qualifications, and experience, that influence job performance. Consequently, the only distinguishing feature of the two applications is the characteristic—such as race or sex—that is being tested for, with race or sex being identified by the name of the applicant. To safeguard against the possibility that letter style may influence employer response, the letters are regularly reversed and allocated equally between the candidates. In this way, the influence of race, or sex, on selection for interview is isolated.

HISTORY

The social scientists who innovated this technique were Roger Jowell and Patricia Prescott-Clarke. In a test of racial discrimination in England in 1969 they matched applicants with Anglo-Saxon names (John/Mary Robinson) against those with "West Indian" (Errol/Eva Gardiner) and Indian names (Santokh Singh and Ranwi Kaur). The test was at a time when most adult Indians and West Indians in Britain were first-generation immigrants, so that their

race was also identified by their primary schooling having occurred in their country of origin, and by specification of their date of arrival in Britain. Applicants with an Anglo-Saxon name were found to be twice as likely to receive an invitation to interview as applicants with an Indian name. No significant discrimination was detected against applicants who were immigrants from the West Indies.

The first economists to use this technique to test for sexual discrimination were Peter Riach and Judith Rich, who applied the test to seven occupations in Melbourne in the 1980s. They found that men were invited to interview 13 percent more frequently than women in the occupation of computer analyst programmer, and 23 percent more frequently than women in the occupation of gardener. No significant discrimination was detected in the other five occupations. Riach and Rich also tested for racial discrimination in Melbourne in the 1980s, matching an Anglo-Celtic name (Baker) against a Greek name (Papadopoulos) and a Vietnamese name (Nguyen). They found that the Anglo-Celtic applicant was invited to interview 10 percent more frequently than the Greek applicant and 41 percent more frequently than the Vietnamese applicant.

Frank Bovenkerk investigated discrimination against Antilleans in France in the 1970s and found that an applicant with a French name was more than three times as likely to be invited to interview as an applicant with an Antillean name. In the 1990s Bovenkerk, in the Netherlands, found that applicants with Dutch names were 23 percent more likely to be invited to interview than those with Surinamese names and 17 percent more likely to be interviewed than those with Moroccan names.

Doris Weichselbaumer, in Austria, matched a man against a "feminine woman" and a "masculine woman," in two sex-integrated occupations, one female-dominated and one male-dominated occupation. She was able to do this because job applications in Austria include the applicant's photograph. She found that both types of women encountered some discrimination in the male-dominated occupation, that there was no significant difference in the treatment of the two female types, and that both types of women were more than twice as likely as men to be invited to interview in the female-dominated occupation of secretary.

E. Fry in 1986, and Pauline Graham, Antoinette Jordan, and Brian Lamb in a 1992 follow-up, tested discrimination against applicants with the disability of cerebral palsy, which confined them to a wheelchair. The occupation tested was secretary, and in both experiments the able-bodied applicant was approximately 60 percent more likely to receive an invitation to interview.

Full details of the above studies can be found in the critical survey article by Riach and Rich (2002).

TWENTY-FIRST CENTURY ACTIVITY

Marianne Bertrand and Sendhil Mullainathan (2004) made the first attempt to apply the technique to racial discrimination in the United States. They matched distinctive "African American" names, such as Aisha (female applicants) and Kareem (male applicants) against "white" names, such as Anne and Matthew. They tested four occupations in Boston and Chicago, and found that the white applicant was called back 60 percent more frequently than the African American applicant. Fictitious mailing addresses were used; consequently, any postal responses could not be recorded. Instead of sending carefully matched *pairs* of applications, which differed only in name, as in the other cited tests, their resumes were randomly generated from a bank of information and sometimes manipulated to match the advertised vacancy. A further problem has been identified by Roland Fryer and Steven Levitt (2004), who have challenged the control provided by the use of distinctive black names. They have demonstrated that since the 1970s distinctive black names have been highly related to lower socioeconomic background. This means that Bertrand and Mullainathan were recording the experience of a subset of African Americans, and employers could well have been responding to socioeconomic status rather than race. Their study is not a basis for generalizing about the labor market experience of African Americans; nevertheless, they did detect discriminatory hiring behavior. In view of the control established by the randomly generated resumes, employers are demonstrating either a statistical or animus-based discrimination purely in response to applicants' first names. An experiment identifying socioeconomic class by address or schooling would be one way of determining its impact relative to racial discrimination.

The correspondence technique is seriously challenged by racial groups whose mainstream members do not have names that clearly distinguish them from other racial groups. The name Patel identifies an Indian, Nguyen identifies a Vietnamese, and Papadopoulos identifies a Greek. They are all very common names, are not associated with any subset of those races and they are readily recognized by the inhabitants of the countries where they are present in substantial numbers. This is not the case with African Americans and Afro-Caribbeans, whose ancestors lost their original names when they were forcibly removed from Africa in the eighteenth century.

Riach and Rich (2006a) conducted the first experiment examining sexual discrimination in England. They found that in the male-dominated occupation of engineer, men had a 40 percent higher likelihood of invitation to interview; that in the female-dominated occupation of secretary, women were twice as likely to be invited to

interview; and, without precedent, that women were preferred to men in two sex-integrated occupations: They were 67 percent more likely to be interviewed as computer analyst programmers and twice as likely to be interviewed as trainee chartered accountants. Riach and Rich also conducted the first correspondence test of age discrimination, matching two English women who had graduated simultaneously, but were different ages—one twenty-one, the other thirty-nine. The younger graduate was two-and-a-half times more likely to be interviewed than the woman of thirty-nine (Riach and Rich, 2006b).

ALTERNATIVES TO CORRESPONDENCE TESTS

One alternative approach is to train members of different racial groups to attend interviews and present themselves as having the same skills and level of motivation. British social scientists first used this approach in the 1960s and hired professional actors for their skill in role-playing. The Urban Institute in Washington subsequently adopted this approach, but eschewed the use of actors. A principal advantage of this personal attendance at interview is that it solves the problem of groups that are difficult to identify by name, such as Afro-Caribbeans and African Americans. A second advantage of this approach is that it tests discrimination at the point of job offer, rather than selection for interview. The disadvantage of this personal approach is that you do not have, and cannot demonstrate, the same strict control as exists with correspondence testing. Regardless of the level of training, it is always possible that candidates will present themselves in ways that highlight differences in personality and levels of motivation. This point was made by Robin Ward in the 1960s and again by James Heckman in the 1990s (full details are to be found in Riach and Rich 2002). Heckman has recommended that the candidates should be kept ignorant of the fact that they are operating in pairs and testing for employment discrimination. Ian Ayres did exactly this in a test of racial and sexual discrimination in car sales negotiations, but he also conducted equivalent tests in which the testers *were* aware that they were testing discrimination. He recorded similar results for both sets of tests (see Riach and Rich 2004 for full details).

Surveying employers about employment practices involves the possibility that there will be a discrepancy between what they report and what they actually practice; whereas correspondence testing unequivocally captures practice.

Inferring discrimination from racial or sexual wage differentials that are deemed inconsistent with productivity-determining variables, such as education and experience, begs the question of what the appropriate independent variables should be.

SEE ALSO *Discrimination; Racism*

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Peter A. Riach
Judith Rich

CORRESPONDENT INFERENCE THEORY

SEE *Jones, Edward Ellsworth.*

CORRUPTION

Corruption has been a part of human societies since the oldest of times. Corruption, fraud, embezzlement, theft, bribes, and kickbacks are all forms in which people try to increase their income at the cost of others. Beginning in the latter half of the 1990s, an increased recognition of these costs led to many international and nongovernmental organizations demanding that political and business leaders demonstrate high standards of honesty, ethics, and social responsibility. This in turn led to a concerted fight against corruption, money laundering, and black markets around the world as well as to the recognition of the importance of governance.

WHAT IS CORRUPTION?

Although disagreements abound, corruption is most frequently defined as the misuse of public power for personal

gains. Corruption, unlike fraud and embezzlement, refers to decisions that politicians and public bureaucrats (public officials for ease of exposition) make based on authority delegated to them by the populace. When these decisions are motivated by personal gains rather than by the public's interest, other than politicians favoring segments of the population they represent, this is considered corruption. One of the difficulties of identifying corruption is that these self-serving decisions can often be disguised as good public policy.

Corruption exists in two broad forms—although there are many variations within these two categories and often the two will be intertwined with each other. Administrative, or petty, corruption refers to acts of bribery, kickbacks, or grease money, in which public officials extract a payment for implementing an existing decision. In its purest form this type of corruption is an attempt to redistribute rents or profits associated with a decision. When officials accept a bribe for favoring a particular contractor for a public construction project, they are asking the contractor to share profits associated with the contract with them. The main consequence of such an act of corruption is the redistribution of income that in turn will have some influence on resource allocation.

Political, or grand, corruption or "state capture" occurs when political leaders either allocate national budgets or introduce legislation to facilitate projects from which either they themselves or their close associates will benefit. In almost all cases of political corruption the public would not have made the same decision as the political elite if it were in a position to make that decision. The corrupt elite's profits come either in the form of bribes or from direct stakes in the projects that benefit from the decisions. Examples of corrupt politicians accepting bribes exist in almost every country—industrialized or developing. Also, examples of dictators who have managed to enrich themselves while impoverishing their countries abound: Haiti under François Duvalier (1907–1971), Philippines under Ferdinand Edralin Marcos (1917–1989), Zaire under Mobutu Sese Seko (1930–1997), Nigeria under Kwame Nkrumah (1909–1972), and Uganda under Idi Amin (c. 1925–2003) are just some of the examples. Political corruption leads to the misallocation of a country's economic resources while redistributing income within that country.

Corruption is difficult to measure, but it exists in all countries. In countries where corruption is not endemic, corrupt acts are carried out under secrecy. In countries where corruption is widespread, corrupt incomes take so many forms that measurement becomes meaningless. The most consistent attempt to measure corruption has been carried out by Transparency International (TI), a Berlin-based nongovernmental organization (NGO). Every year TI surveys business people and experts, and based on their perceptions it provides a rating between 10 (no corruption) and 1 (most corrupt). Of the 158 countries ranked in 2005, Iceland, Finland, and New Zealand were the least corrupt and Turkmenistan, Bangladesh, and Chad were the most corrupt.

WHY DOES CORRUPTION GROW, PERSIST, OR DECLINE?

To understand why corruption exists, it helps to examine why there is less corruption in some—usually industrialized—countries. One can start by recognizing that authority over public-sector budgets and regulatory frameworks comes with the potential for huge personal benefits. Assuming that only a small percentage of a population is pathologically honest, most public officials will be tempted to take advantage of their authority. Their gains, however, come at someone else's cost. Therefore, those who may lose from corruption want to control and check the powers of public officials. These checks come in the form of well-developed legal, political, and social institutions within the society. As such, the existence or absence of corruption depends on the balance between the powers of public officials against the strengths of institutions and control mechanisms that empower the public.

All countries have laws against corruption. Selection and retention of public officials, at least in democratic societies, will depend on the public officials demonstrating honest behavior. Democratic institutions that allow a fair and wide participation of the public in the selection of public officials create a barrier against the spread of corruption. Offending officials will be identified and punished by the judicial system or at least not reappointed to their positions. A free press accompanied by an independent and honest judiciary forms another barrier that prevents corruption. Institutions and a variety of organizations that represent specific interest groups in a given society will exert influence on public officials if corruption is likely to harm that society. In so far as politicians derive their authority and appointment from their constituencies, these institutions form another line of defense against corruption. Once in power, however, public officials will have means to render these control mechanisms less effective. A dictator usually succeeds in rendering them completely ineffective; hence, dictatorial regimes are often more corrupt than democratic ones. Democratic leaders are restricted by the strengths of the institutions in a society that constrains behavior of public officials.

Thus, institutions that play an important role in controlling corruption include a free press, an independent judiciary, and a free and democratic political system that gives full voice to the populace in the political process. Research clearly establishes that the absence of corruption

within countries correlates with the level of development of these institutions. It is noteworthy that ideology does not seem to play a role in the extent of corruption. Daniel Kaufmann divided countries into "leftist" and "non leftist" regimes (1998, p. 140). The correlation between the extent of corruption and the type of regime was zero.

CONSEQUENCES OF CORRUPTION

Corruption—which is an important component of what is now called governance—is extremely inimical to economic growth and development (Jain 2001). It leads to misallocation of resources, distorts labor markets, discourages investments, and alters income distribution. The myth that corruption helps markets by "greasing the wheels of commerce" has been proven false. While it is true that a bribe may speed up one transaction, it creates incentives for more and higher bribes in previously bribe-free activities. In a remarkable study of bribery, Robert Wade (1985) shows that once bribes are introduced, bureaucracies redirect their attention from providing services to the public to maximizing bureaucrats' illicit incomes.

The most damaging consequence of corruption may be in how it inhibits investment in the economy. Research clearly establishes that countries with high corruption have lower levels of investment and economic growth (World Bank 2001). Corruption, which usually exists in an environment of poor overall governance, makes it difficult for entrepreneurs to invest by increasing the cost of starting a business venture. After investments have been made, corruption creates uncertainty for entrepreneurs because the public officials have an option to extract bribes from the venture should it prove profitable. This option increases entrepreneurs' risks and lowers their returns.

Corruption also distorts the selection of public-sector projects. Small maintenance projects are more effective in terms of their output, but corrupt officials do not like to spend money on smaller projects because they may be carried out by a larger number of contractors, making it more difficult to extract bribes. Thus, corruption biases investment expenditures from high-output to low-output projects. Construction of "roads that go nowhere," "bridges that no one crosses," and unused shells of school buildings that abound in the developing world may have been motivated by bribes, not the needs of the society. In addition, if measured by the extent of bribes as a percent of revenue of a firm, corruption affects small firms more than big ones. Because innovative activities in most economies tend to be taken up by small entrepreneurs, corruption stifles an important source of economic growth. Corruption also discriminates against foreign direct investment because dealing with corrupt officials requires familiarity, which is an advantage that domestic firms may possess.

Corruption affects the labor market by distorting returns for various activities. It distorts the allocation of talent between power-seeking activities and other productive activities in an economy. Furthermore, as noted earlier, corruption discourages the allocation of talent to entrepreneurial activities by lowering rewards and increasing risks.

Corruption does not affect all members of a society equally. The poor suffer relatively more from corruption in two ways. First, bribe payments may represent a higher percentage of their income than similar payments by the rich. In this sense, corruption acts as a regressive tax—lower-income households carry a larger burden than higher-income ones. Second, corruption causes the delivery of public services, for example, health care and education, to deteriorate. Such a deterioration affects the poor more than the rich first, because they may have to pay a bribe to receive the services and second, because they depend more on such services. Corruption may also allow the rich to pay fewer taxes than required by law. This lowers the revenues of the state, further deteriorating the ability of the state to provide services for the poor. Studies confirm that corruption causes income distribution to worsen.

FIGHTING CORRUPTION

Recognizing that corruption is a serious obstacle to fighting poverty, many international and nongovernmental organizations since the latter half of the 1990s have been leading the fight to reduce corruption around the world. This fight focuses on three areas: civil societies in which the public plays a key role, a top-down commitment from the political leadership to fight corruption, and a proactive private sector that accepts its social responsibility to operate in a corruption-free manner. Countries that belong to the Organization for Economic Cooperation and Development have accepted their responsibility in this fight by passing antibribery laws that prohibit their firms from paying bribes in other countries. These laws, however, are rarely strictly enforced.

It is difficult to assess the impact of global efforts to fight corruption. Stories of success tend to be anecdotal. If the ratings of TI are any indication, it will take several years before this fight has a significant impact on the extent of corruption around the world.

SEE ALSO *Accountability; Bribery; Capital Flight; Hot Money; Money Laundering; Transparency*

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Arvind K. Jain

CORTÉS, HERNÁN
1485–1547

Hernán Cortés is best known as commander of the Spanish conquest of Mexico. His life reveals the human, political, and intellectual dimensions of Spain's American empire and the use of history in shaping an understanding of this collective enterprise.

CHILDHOOD, EDUCATION, AND EARLY EXPERIENCE

As commonly occurs in the biographies of self-made heroes, the few facts of Cortés's youth have been supplanted by speculation to invent the lineage, training, and experience that befit so-called singular men of the Renaissance.

Cortés was born in 1485 in Medellín, a small town beside the Guadiana River in Extremadura. His parents were poor *hidalgos* (members of the lower nobility), for whom biographers would claim illustrious ancestors, celebrated for heroism and learning. At fourteen, Cortés was sent to learn Latin with the husband of his father's half-sister in Salamanca. These preparatory studies have been misconstrued and, since 1875, when Bartolomé de las Casas's *History of the Indies* (c. 1560) was published, others have repeated his belief that Cortés held a bachelor's degree in law from the University of Salamanca. However, Cortés returned home after two years, for which the decisive event in his education was instead an apprenticeship with an *escribano* (notary) in Valladolid, from whom he learned the skills used in the Caribbean and later in his own letters, reports, edicts, and briefs.

Cortés departed Spain in 1504, landing in Hispaniola, the administrative center of Spain's colony and only permanent settlement until 1507. He received a small *encomienda* (grant of land with the right to native labor) from the governor Nicolás de Ovando and was made notary of the newly founded town of Azua, in the south of the island, an area subdued with his aid. Because an abscess in his thigh (perhaps syphilis) left Cortés unable to join the ill-fated 1509 expedition of Alonso de Hojeda and Diego de Nicuesa to Darién and Veragua, he remained in Azua until 1511, when he enrolled in the conquest of Cuba, serving its leader, Diego Velázquez, as secretary more than as soldier.

Cortés's years as notary had earned him allies and taught him the workings of the colony at a key juncture in its existence. In 1509, Christopher Columbus's son, Diego Colón, had replaced Ovando as governor, spurring the settlement of neighboring islands. Justifiably wary of Colón's ambitions, the royal treasurer Miguel de Pasamonte would recruit Cortés to report on the conquest of Cuba, a service that Cortés capably performed without alienating Velázquez. Despite such oversight, demands for exploration grew over the next years due to the influx of settlers and the precipitous decline of Hispaniola's native population. The conquests of Puerto Rico (1508), the Bahamas and Jamaica (1509), and Cuba (1511) only temporarily relieved this labor shortage, and did even less to satisfy the ambitions of colonists from Europe.

This state of affairs was further complicated by the protections ceded to the Amerindians under the Laws of Burgos of 1512, the recall of Colón to Spain in 1514, and the death in 1516 of Ferdinand II of Aragon, who had ruled Castile and its overseas possessions as regent after Isabel I died in 1504. Amid uncertainty and competing claims to legitimate and effective authority, the governor of Cuba, Diego Velázquez, sought to steal a march on potential rivals by organizing an expedition to the uncharted lands southwest of Cuba, about which there had been reports as early as 1506, and especially since the voyage of Vasco Núñez de Balboa in 1511. To this end, a small fleet embarked under Francisco Hernández de Córdoba in 1517 and, when this group reported finding a rich land (the Yucatán peninsula) with an advanced, urban population (the Maya), another flotilla was sent under Juan de Grijalva in 1518. Although this expedition met armed resistance, this was seen as a sign of social and political order, a conclusion reinforced by the artisanship of the items obtained in trade and by stories of a great land called México. Using this information, brought in advance of Grijalva's return by a ship bearing the most seriously wounded, Velázquez demanded formal consent to colonize from the Hieronymite friars representing the Crown in Hispaniola, and from the Crown itself in Spain. While awaiting an answer, Velázquez sought to advance his claim to the title of *adelantado* (military and civil governor of a frontier province) by launching a much larger mission, ostensibly to search for Grijalva who had in fact returned, and also "to investigate and learn the secret" of

any new lands discovered (*Documentos cortesianos*, vol. 1, p. 55).

It is possible that Velázquez conspired to have this expedition defy his orders not to settle these new lands, in that Las Casas reported that he later reprimanded Grijalva "because he had not broken his instruction" in this regard (Las Casas 1965, vol. 3, p. 220). In any event, Velázquez did not anticipate the disobedience to be shown by Cortés, whom he made its captain. Velázquez's motives in naming Cortés remain unclear; for although Cortés had served Velázquez and was able to commit resources, he was an independent spirit; although liked and respected, he was not known as a soldier. The difficulty of hiding Grijalva's return and the uncertainty of Cortés's loyalties together explain the haste of the latter's departure, which occurred on February 18, 1519, with six hundred soldiers and sailors in total.

CORTÉS AND THE CONQUEST OF MEXICO

From the expedition's start, there were tensions between hidalgos with holdings in Cuba, loyal to Velázquez, and others hoping to improve their lot by backing Cortés. The voyage along the coast of the present-day states of Yucatán, Campeche, and Tabasco confirmed these lands' civilization and wealth, and provided an essential means for their eventual conquest: a shipwrecked Spaniard held captive by the Maya, Gerónimo de Aguilar, and a Nahuatl-speaking native woman enslaved in Tabasco, Malinche (Malintzin or Marina). Translating in tandem and later independently, they enabled the Spaniards to communicate and gather intelligence.

A key fact learned was that many of the peoples subject to the Mexica (Nahua or Aztecs) deeply resented the tribute imposed upon them, and that others such as the city-state of Tlaxcala were at war. Cortés would astutely exploit these ethnic and regional divisions, which persisted under Spanish rule, but first he needed to free himself and his troops of the commission received from Velázquez so they might lay claim to the profit of their endeavor. To this end, he arranged to found the settlement of Villa Rica de la Vera Cruz and had its *cabildo* (town council) review the legitimacy of Velázquez's orders. The report sent to Spain with an impressive cargo of booty on July 10, 1519, was signed by this cabildo, yet bears Cortés's imprimatur in its style and content. Depicting Velázquez as a self-serving tyrant, it states that the collective will of the Crown's subjects residing in the land was to assist their nation and faith by settling there, so they might lead its people from abhorrent rites to Christian religion. For this, the settlers would answer only to the Crown and had implored Cortés to be their captain. It would not suit Cortés to relate these actions, in which he is said not to rebel but to acquiesce to the legitimate demands of his fellow subjects; it is unlikely that Cortés sent a letter of his own, as he and others have claimed.

Stripping and scuttling his ships so that no one could turn back and sailors might become soldiers, Cortés headed inland toward the Mexican capital of Tenochtitlán with approximately 15 horsemen, 400 foot soldiers, and more than 1,300 Totonac Indians. Claiming to be either an ally or foe of the Mexica in accordance with the loyalties of those encountered, Cortés made his way first to Tlaxcala, and then to Cholula, negotiating an alliance with the former after a series of skirmishes, and defeating the latter in part with intelligence obtained through Malinche, who warned that the Cholulans had prepared an ambush, despite protestations of friendship. Here as later, Cortés used exemplary punishment to make known the cost of treason, executing several thousand Cholulans as a warning to others. Though effective, this act was condemned in later years by political rivals and critics.

On November 8, 1519, the Spaniards were received by Montezuma II in the city of Tenochtitlán. Although impressed by the splendor of the city and Montezuma's control of such a vast and diverse empire, Cortés was concerned by what might happen to his forces, amassed on an island in a lake, should this control falter, as indeed came to pass. For when he left to meet the challenge posed to his authority by an armada sent by Velázquez, hostilities broke out, so that by Cortés's return on June 24, 1520, the fighting was such that Montezuma himself, held prisoner by the Spaniards, could not quell it. Accounts of these events and of Montezuma's death a few days later differ, with blame assigned either to the greed of the Spaniards, who allegedly ordered a celebration held in the main temple to slaughter the Mexican warriors, or to the treachery of the Mexica, who allegedly used this event to arm an attack. In any event, the Spaniards were obliged to flee Tenochtitlán during the night of June 30 (*la noche triste*), losing more than half their forces and nearly all the plunder. These losses fell heaviest on the troops newly recruited, with promises and threats, from among the men sent to arrest Cortés by Velázquez.

Escaping with further casualties to Tlaxcala—which would be accorded special privileges for its partly self-interested loyalty: tax exemptions, the right of its citizens to ride horses and use the honorific title *Don*—Cortés understood that retreat to the coast and on to Cuba or Hispaniola was impossible given the doubtful legality of his status as Captain General of the Spanish forces, which, although Cortés did not know it, Charles V had pointedly left unaddressed after receiving the cabildo's letter and delegates. Cortés therefore began plans to retake Tenochtitlán, rallied his allies and troops (which, after the rout suffered on *la noche triste,* included the most resolute and

battle-hardened of those previously in his command), and wrote to the king on October 30, 1520, assuring success while blaming defeat on Velázquez's meddling, which, he said, had diverted his energies at a crucial moment, undermining his command over the Spaniards and his stature in the eyes of the Mexica.

This letter is key to an understanding of the conquest as a whole. Although it was designed to bolster Cortés's claim to leadership—for example, by recasting fortuitous events as evidence of his foresight and God's favor, or by narrating successful actions in the first-person singular—it also brings to light differences between the mainly political tactics of the first march to Tenochtitlán and the violent means ultimately used in its military conquest. The picture put forth in this letter of an enemy seemingly bewildered by technology (ships, firearms, and iron weapons), horses, psychological warfare, and Cortés's ability to anticipate Montezuma's every move and moreover use rhetoric and his own irrational beliefs against him—notably the idea that the Spaniards had been sent by the god Quetzalcoatl, an idea that would in fact become current only after conquest as justification for defeat—has led to the assumption of cultural superiority. Furthermore, it has prompted neglect of the difficulties encountered by the Spaniards after their initial entry into Tenochtitlán and especially after *la noche triste*. The introduction of diseases such as smallpox to which the Amerindians lacked immunity certainly affected the two sides equally.

The advantages cited by Cortés in his report to the king might have been decisive had the conquest been rapid; but, as it endured, the Mexica were able to devise countermeasures. Even as Cortés ordered thirteen brigantines built to ferry troops and attack Tenochtitlán from the water, where its defenses were most vulnerable, the Mexica were digging trenches armed with sharply pointed sticks and captured lances to kill or hobble the Spaniards' horses. So too would the Mexica make a display of sacrificing and cannibalizing the Spaniards taken in battle to terrorize their comrades as the latter had before used firearms, horses, and dogs to terrorize them. The resulting pursuit of captives for sacrifice would prove costly for the Mexica insofar as it allowed Cortés and others in his company to escape death on several occasions. For this and the far larger number of Mexican combatants—despite the welcome arrival of reinforcements while in Tlaxcala, Cortés reports that in the final assault on Tenochtitlán his forces comprised barely 700 infantry, 118 musketeers and crossbowmen, 86 horsemen, 3 canon, 15 field guns, and an unspecified number of native fighters and bearers, apparently fewer than had supported him on his previous entry—Cortés was obliged to abandon his intent to take the city without destruction.

Despite more than two months of siege, beginning on May 30, 1521, the Mexica, though visibly starving, refused to surrender, prompting the Spaniards to raze the city sector by sector to maximize the effect of canon and to deprive the Mexica of cover for attack. Dismayed by the devastation of these final days and their aftermath, during which little was or could be done to restrain the Tlaxcalan forces, Cortés would remark in his third letter to the Crown (May 15, 1522): "So loud was the wailing of the women and children that there was not one man amongst us whose heart did not bleed at the sound; and indeed we had more trouble in preventing our allies from killing with such cruelty than we had in fighting the enemy. For no race, however savage, has ever practiced such fierce and unnatural cruelty as the natives of these parts" (Cortés 1986, pp. 261–262). On August 13, 1521, Tenochtitlán and its new leader, Cuauhtémoc, surrendered.

CORTÉS'S LEGACY

Although Cortés reorganized and governed the conquered territory, renamed New Spain, until 1528, and led another, this time disastrous, expedition to Honduras (1524–1526), his final years, until his death in 1547, were spent in relative obscurity. His actions in exploring the Pacific coast northward in search of the legendary riches of Cíbola (1532–1536) and in support of Charles V in the unsuccessful assault on Algiers (1541) show a man broken in spirit. It is telling that writers of the sixteenth and seventeenth centuries celebrate Cortés's role, not as military commander, but as an instrument of God, delivering the New World from idolatry and extending the rule of Catholic faith in opposition to Martin Luther, who they wrongly said was born in the same year. Although this image has faded from modern accounts, replaced by that of Machiavelli's ruthless prince, the audacity of Cortés's exploits has not. For this and the power of his discourse, Cortés's letters to the Crown are required reading for scholars of Renaissance society.

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COSMOPOLITANISM

Cosmopolitanism is a term derived from the Greek word *kosmopolite* ("citizen of the world"). It emerged as a philosophical and ultimately cultural worldview during the Hellenistic period, when thinkers traced the conceptual evolution of the people's *mentalité* from that of the citizen of the city-state to that of the citizen of the entire *ecumene* (or extended Hellenic world). After a long eclipse, the concept reemerged in the writings of Kant, where the future evolution of the world into a cosmopolitan society was originally contemplated. Adam Smith should also receive credit, however, for his endorsement of free trade as a cosmopolitan stance. In the nineteenth century, the word gained a negative connotation through its juxtaposition with the popular idea of nationalism, a trend that reached its peak in the word's employment as a derogatory term by the Nazis.

Although cosmopolitanism reemerged as a potentially powerful concept in the late 1990s, it is important to note that the concept continues to lack a universally shared definition. It has been applied to philosophical and normative orientations as well as to political and cultural attributes, and its employment in the discourse of different disciplines is far from uniform. Moreover, cosmopolitanism has been related both to efforts to construct forms of transnational solidarity, and to the various urban cultures of past and present metropolitan centers. Perhaps the most important contributions to the literature on cosmopolitanism can be found in the writings of Ulrich Beck, and in work inquiring into the possibility of cosmopolitanism providing the foundation for a future European identity.

Generally speaking, contributors to the growing literature on cosmopolitanism interpret the term in a threefold manner. Some authors advocate "thin" cosmopolitanism, whereby cosmopolitanism is conceived as a form of detachment from local ties, whereas others argue in favor of "rooted" or context-specific or vernacular cosmopolitanism, whereby cosmopolitanism is conceived as congruent with locality. Finally, some suggest the existence of "glocalized" cosmopolitanism, whereby global detachment and local attachment coexist in a symbiotic relationship. Thus, depending upon the particular definition employed, specific groups of people can be conceived either as carriers of cosmopolitanism or as excluded from it altogether. For example, immigrant groups have been viewed as carriers of vernacular cosmopolitanism, but they are almost by definition excluded from some versions of "thin" cosmopolitanism.

In contrast to the growing body of theoretical work on cosmopolitanism, there is to date only a limited amount of empirical research in the literature. Ultimately, only empirical research will be in a position to determine which one of the different theoretical strands of cosmopolitanism might be the most promising one for sociology. Such work might also help to evaluate whether the world is indeed experiencing a trend toward cosmopolitanism, and might identify which attributes are observable among the public and the extent to which these are related to other trends—such as the growth of transnational connections or a revived sense of religiosity.

SEE ALSO *Cooperation; Globalization, Anthropological Aspects of; Globalization, Social and Economic Aspects of; Internationalism; Trade; Trust*

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COST-BENEFIT ANALYSIS

The process of cost-benefit analysis, or CBA, enables analysts to exploit a set of analytical economic and econometrics tools to evaluate project investments and policy options. It has been made a legal prerequisite for public policy decisions in most countries. In the United States, for example, Executive Order 12991, signed by President Ronald Reagan in 1981, codified CBA as a requirement for agencies when conducting risk assessments in health, safety, and environmental regulation.

There is a large body of literature available dealing with CBA, some of which dates back to the 1920s, when large-scale engineering projects in the United States required some type of project evaluation. Although CBA is not itself a self-contained field of economics—sitting somewhat uneasily between several scholarly discourses, including philosophy, psychology and politics—the central procedures of CBA have been predominantly defined by economists. The standard introductory textbook was written by an economist, Edward J. Mishan. Originally published in 1971, the fourth edition of Mishan's *Cost-Benefit Analysis* appeared in 1988. While the original purpose of CBA was to capture the costs and benefits accruing to a single enterprise, its scope was soon expanded to evaluate policy options applicable to the well-being of society as a whole, and most literature in the social sciences now refers to CBA in this context.

A cost-benefit analysis can be seen as proceeding through a number of stages. First, for any proposal under consideration, including the option of doing nothing, a qualitative statement of its expected costs and benefits is to be provided. Second, each cost and benefit should be rendered in quantitative form, usually as a monetary value. Third, the expected costs or benefits should be aggregated. Finally, a decision should be taken on the basis of which proposal produces the greatest sum of benefits over costs. The first stage seems essential to any rational decision-making process, but each further stage is highly contested on conceptual, economic, and philosophical grounds. Three issue areas in particular are worth pointing out: (1) monetary valuation, (2) aggregation, and (3) the subordination of other values.

MONETARY VALUATION

In order for CBA not to be arbitrary or fetishistic, some connection between the currency of the economic analysis and human well-being must be established. The monetary value of goods is usually chosen for this purpose, because it is said to reflect the strength of individuals' preferences for that good, which in turn is a measure of the well-being provided by it. Yet various objections have been raised regarding this approach. First, some goods and services—such as most ecosystem services—are not traded in markets at all, and therefore no monetary value can be ascertained. The social sciences have developed various surrogate methods to rectify this deficiency, and "contingent valuation" (CV) has been particularly influential. Through CV, economists seek to create hypothetical markets by eliciting people's "willingness to pay" (WTP) for the satisfaction of a preference if there was a market. However, WTP has been criticized as an inadequate proxy for market prices because of the ambiguity and limited reliability of the stated preferences used in CV (as opposed to those revealed in the market). There is also some doubt as to whether coherent preferences on policy issues are actually susceptible to valuation and extractable through interviews or questionnaires.

Second, preferences conceal well-known facts about human nature, and they are therefore not always a suitable basis for policy decisions. For example, individuals may adjust their aspirations to their perceptions of possibilities; preferences may be misinformed or malformed, and they may therefore cause individuals to inflict harm on themselves (e.g., the addict; the gambler) or on others (e.g., the murderer); and preference satisfaction fails to accord the proper moral status to those beings that are incapable of expressing a preference—whether human (e.g., children) or nonhuman (e.g., animals).

Finally, where monetary valuation in a market is possible, that value may not be a valid indicator of the well-being the good provides to society because of the conceptual difference between a good's monetary "exchange value" and its "use value." Gold, for example, has a high exchange value but a low value in actual use. The use value of the air we breathe, by contrast, is infinite (it being a physical necessity for our lives), while its exchange value is zero.

AGGREGATION

Once attributes of well-being have been valued, CBA requires that they be aggregated into a single standard. They need to be compared across lives, so that an increase in well-being for individual A in one dimension can be weighed against the foregone improvement individual B would have experienced in another. This is no easy task. It may be possible to make comparisons of well-being in an ordinal sense—in the case of, say, health care, one person may be able to stipulate that he or she feels better than someone who is in great physical pain—but not in a cardinal sense. That is to say, a person cannot know exactly how much better he or she is. Cardinality presupposes two characteristics of the currency used: (1) a number must be attached to the outcome that represents the strength of the preference relative to others, so that a health state of, say,

0.6 is three times better than one of 0.2; and (2) the scale must have an equal interval property where equal differences at different points along the scale are equally meaningful, so that boosting a patient from, say, 0.1 to 0.2 on that scale is of equal benefit to raising someone from 0.8 to 0.9. Despite various methodological advancements, these requirements are still not met for all CBAs.

THE SUBORDINATION OF OTHER VALUES

Finally, CBA imposes a unitary standard on the valuation and comparison of goods, and it thus subordinates other values to the new standard of monetary exchange value. In environmental CBAs, for example, the existence value of nonhuman species, the survival of which is deemed to be worth protecting, may be overridden by CBA calculations. Their value cannot be priced in real or hypothetical markets because the expected benefit of their survival does not accrue to those who might be asked to reveal or state a WTP for their preference.

As far as human beings are concerned, similar predicaments present themselves: is it permissible to kill one person because his organs could save the lives of four patients whose names are on a donor waiting list? Most of us would consider this option to be objectionable, but given the rationale of CBA it is justifiable, if not mandatory, to proceed that way. The problem encountered here is that with CBA every individual counts as one, and can thus be added up to, or traded against, someone else. In so doing, CBA will override the intrinsic value of human life, a term that denotes our interest in our own continued existence according to which we cannot be used solely as a means for other individuals' ends. Yet, this is what CBA would recommend us to do. Intrinsic values are nonrelational; that is, they are not defined relative to some other human being, species, or object, nor to the benefit it might provide to them.

The objections presented here are not a reason to reject CBA per se, for it does provide relevant information. Yet they are a reminder that economic evaluations such as CBA should be understood as an input into, rather than a substitute for, political deliberation and judgment.

SEE ALSO *Coordination Failure; Prisoner's Dilemma (Psychology); Public Goods; Public Policy; Rational Choice Theory; Tragedy of the Commons; Transaction Cost*

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Dirk Haubrich

COST, CARRYING

SEE *Carrying Cost.*

COTTON INDUSTRY

Gossypium—the scientific term referring to the genus of cotton plants—belongs to the small tribe of *Gossypieae*, which, in turn, is part of the *Malvaceae* family. Four separate species of cotton—two in Asia-Africa (*G. arboreum* and *G. herbaceum*) and two in the Americas (*G. barbadense* and *G. hirsutum*)—have been domesticated independently, a process that is unusual among crop plants. While the geographical point of origin of *G. arboreum* is not known, the origin of *G. herbaceum* is the Arabian peninsula or Africa. The exact time and place of domestication of the Old World cottons is not clear but archeological remains recovered from sites in India and Pakistan indicate that domestication of *G. arboreum* took place about 4,300 years ago. Furthermore, because *G. arboreum* is agronomically superior to *G. herbaceum*, it was widely dispersed throughout northern Africa, Arabia, Iraq, and western India. With respect to the New World cottons, the earlier archeological remains of *G. barbadense* have been located in the coastal areas of Peru and Ecuador, dating 5,000 to 5,500 years ago. The primary route of dispersal appears to have been through the Andes into northeastern South America and later to Central America, the Caribbean, and the Pacific.

The oldest archeological remains of *G. hirsutum* have been located in the Tehuacan Valley of Mexico, dated from 4,000 to 5,000 years ago. The vast majority of cotton varieties used for lint production in the 2000s come either from *G. hirsutum* (referred to as upland cotton in the United States and middling elsewhere, accounting for 90% of global production) or from *G. barbadense* (referred to as long-staple cotton or Pima in the United States and Giza in Egypt, accounting for 10% of global production). The Asian-African species produce low-quality lint with low yields and have been mostly (but not entirely) abandoned. The oldest archeological record of cotton textiles was found in Pakistan and dates back to 3000 BCE. Cotton specimens have been located in northern Peru, dating as far back as 2500 BCE.

Trade of cotton goods was taking place between India and Persia as early as the fifth century BCE. Cotton was brought to southern Europe (Greece, Sicily, and Spain) on a large scale by Arab traders during the ninth and tenth centuries CE while it was imported to North Europe during the thirteenth century. The known history of cotton in the New World begins with the arrival of Spanish explorer Christopher Columbus (1451–1506) in the Bahamas Islands in the autumn of 1492 (see John Baffes's article "The History of Cotton Trade: From Origin to the Nineteenth Century" [2005] for a comprehensive history of the cotton trade).

Considerable growth in cotton production and trade took place toward the end of the eighteenth century. Several factors contributed to such growth. First, advances in industrial revolution lowered the costs of manufacturing textile products. For example, between 1786 and 1882, the labor and capital cost of producing one pound of yarn went from thirty-four shillings to one shilling. Second, the use of cheap slave labor in the United States lowered the costs of cotton picking (cotton along with sugar and tobacco are often referred to as the slave commodities). Prior to the U.S. Civil War, about one-third of U.S. slaves were employed in cotton fields. (In 1897 Mathew Hammond reported that of the 3.5 million slaves in 1840, at least 1.2 million were engaged in the U.S. cotton industry). Third, the invention of the saw gin by Eli Whitney in 1793, which changed the separation of lint and seed from a laborious to a simple mechanical process, freed labor that eventually became involved in cotton production (seed cotton consists of about one-third lint and two-thirds seed; the two byproducts of seed are cotton oil for human consumption and cotton meal for animal consumption).

Cotton trade was further enhanced with the arrival of the first steamer in New York in 1838, which effectively halved the time to cross the Atlantic. Because the steamers would bring information on the U.S. cotton market conditions to England in half the time compared to the actual delivery of cotton, cotton traders in Liverpool, England's dominant cotton trading center at the time, began to trade forward contracts, thus giving rise to speculation. Furthermore, the successful installation of the first transatlantic cable in 1865 would transform cotton trade in a permanent way. For the first time in history, information on market conditions in the U.S. was transmitted instantaneously to England and vice-versa. By the end of the 1880s, five cotton futures exchanges (New York, New Orleans, Liverpool, Le Havre, and Alexandria) spanning three continents were trading cotton futures contracts and were connected by cable.

The global cotton industry was also affected by the U.S. Civil War, which caused exports from the United States to decline to a few thousand tons, from half a million prior to the war. Cotton prices experienced the most dramatic rise in the history of the commodity to cause what was coined later the "cotton famine." England, whose textile industry would collapse without U.S. cotton supplies, sought supplies from elsewhere including Turkey, India, Central Asia, and sub-Saharan Africa. While the United States regained its dominance as the world's key cotton supplier after the war, the other cotton-producing countries also held their position. The structure of cotton production has remained the same in the twenty-first century. However, throughout the twentieth century, especially the second half, cotton consumption moved from Europe to Asia where the most of the textile industry is located and where most of the synthetic fiber production takes place.

THE MODERN COTTON INDUSTRY

Global cotton production at the beginning of the twenty-first century averaged about 25 million tons, worth about $30 billion. About one-third is internationally traded, representing about 0.1 percent of global merchandize trade. Despite its low share in global trade, cotton trade is very important to many poor countries, especially in sub-Saharan Africa where an estimated 2 million rural poor households depend on the commodity.

Since the 1960s cotton production grew at 1.8 percent annually to reach 24 million tons in 2005 from 10.2 million tons in 1960. Most of this growth came from China and India and to a lesser extent from Australia, Greece, Pakistan, Turkey, and Francophone Africa. As of 2005 more than one-quarter of the area allocated to cotton was under genetically modified (GM) varieties, accounting for almost 40 percent of world production. GM cotton in the United States—where it was first introduced in 1996—currently accounts for about 80 percent of the area allocated to cotton. Other major GM cotton producers are Argentina, Australia, China, Colombia, India, Mexico, and South Africa.

China, the leading textile producer, consumes more than one-third of cotton output. Other major textile producers are India, Pakistan, Turkey, and the United States, which together with China account for more than three-quarters of global consumption. Several East Asian countries have emerged as important cotton consumers. For example, Indonesia, Korea, Taiwan, and Thailand, which together consumed 130,000 tons in 1960 (1.2% of world consumption), absorbed more than 1.5 million tons in 2005 (6.5% of world consumption).

Between 1960 and 2005, cotton demand has grown at the same rate as population (about 1.8% per annum) implying that per capita cotton consumption has remained relatively unchanged at about 7.7 pounds. By

contrast, consumption of man-made fibers, which compete closely with cotton, has increased consistently since the mid-twentieth century by 2.2 percent per annum, causing cotton's share in total fiber consumption to decline from 60 percent in 1960 to 40 percent in 2002. Apart from the substantial reduction in their costs of production, the increasing share of chemical fibers reflects new uses, quality improvements which made their properties very similar to those of cotton, increased use for clothing suitable to extreme weather conditions (e.g. rain, cold) and other uses such as sportswear.

The three dominant exporters—the United States, Central Asia, and Francophone Africa—account for more than two-thirds of global trade. In the mid-2000s the ten largest importers account for more than 70 percent of global trade. Three major producers—China, Turkey, and Pakistan—also import cotton to supply their textile industries. The four East Asian textile producers—Indonesia, Thailand, Taiwan, and Korea—accounted for 22 percent of world cotton imports in 2002, compared to just 3 percent in 1960.

Real cotton prices have been declining since the nineteenth century, although with temporary spikes. The reasons for such decline are similar to those characterizing most primary commodities: on the supply side reduced production costs due to technological improvements and on the demand side stagnant per capita consumption and competition from manmade fibers. Between 1960 and 1964 and between 1999 and 2003 real cotton prices fell by 55 percent, remarkably similar to the 50 percent decline in the broad agriculture price index. Reductions in the costs of production have been associated primarily with yields increases (from 270 pounds per acre in 1960 to 625 pounds per acre in 2005). The phenomenal growth in yield has been aided by the introduction of improved cotton varieties, expansion of irrigation and use of chemicals and fertilizers. Technological improvements have also taken place in the textile industry, so that the same quality of fabric can now be produced with lower quality cotton, a trend that has taken place in many other industries whose main input is a primary commodity.

World cotton trade is carried out by a large number of cotton trading companies—the so-called cotton merchants. A survey conducted in 2005 by the International Cotton Advisory Committee (ICAC) found that 21 large companies (either private or state-owned) traded cotton during 2004 with volumes greater than 200,000 tons. Another 48 companies traded cotton with volumes between 50,000 and 200,000 tons, followed by 43 firms with volumes between 20,000 and 50,000 tons and another 362 smaller companies with volumes less than 20,000 tons.

There are two widely used price indicators in the cotton market: the Cotlook A Index and the New York Board of Trade (NYBOT) futures price. The A Index—compiled daily by Cotlook Ltd., a private company located in Liverpool, United Kingdom—is the average of the five lowest quotations of nineteen types of cotton traded in the ports of East Asia. Quotations of NYBOT futures are readily available continuously from the NYBOT. Apart from NYBOT, whose contract exhibits high liquidity, Brazil, India, and China operate cotton futures exchanges.

COTTON POLICIES

Cotton has been subject to various marketing and trade interventions; typically taxation in low income countries, especially sub-Saharan Africa and Central Asia, and subsidization by rich countries, especially the United States and the European Union (EU). The ICAC, which monitors cotton subsidies on a regular basis, reported that in 2001—the year in which support was highest—government assistance to U.S. cotton producers reached $3.9 billion, China's totaled $1.2 billion, and the EU received almost $1 billion. The high level of cotton subsidies also coincided with cotton prices reaching their lowest level ever, causing two noteworthy reactions, the Brazil/U.S. cotton dispute brought to the World Trade Organization (WTO) in 2002 and the Francophone Africa cotton initiative submitted also to the WTO in 2003.

On September 27, 2002, Brazil requested consultation with the United States regarding U.S. subsidies to cotton producers. On March 18, 2003, the Dispute Settlement Body of the WTO established a panel to examine the issues, and on April 26, 2004, the WTO issued an interim ruling in favor of Brazil. The final ruling (issued on September 8, 2004) concluded that the United States is under the obligation to take appropriate steps to remove the adverse effects or withdraw the subsidy. While the United States removed a small share of its subsidies in July 2006, it appears that more must be done in order to fully comply with WTO's ruling.

On May 16, 2003, four West African cotton-producing countries (Benin, Burkina Faso, Chad, and Mali) submitted a joint proposal to the WTO demanding removal of support to the cotton sector by the United States, China, and the European Union and compensation for damages until full removal of support. The West African countries were aided in this move, often referred to as the "cotton initiative," by IDEAS, a Geneva-based nongovernmental organization funded by the Swiss government. It is believed that the inability to successfully deal with the cotton initiative played a role in the WTO's collapse of the Fifth WTO Ministerial in Cancun (September 10–13, 2004). The cotton initiative also fig-

ured prominently in the Sixth WTO Ministerial in Hong Kong (December 13–18, 2005).

THE OUTLOOK

The future of the global cotton industry is likely to follow a similar path as other primary commodities. Prices are likely to decline even further, mainly a reflection of technological improvements. Consumption, which has been growing at the same rate as population growth, will, most likely, continue to grow in a similar fashion. If twenty-first-century trends continue, GM cotton will most likely dominate the global cotton market. Organic cotton, on the other hand, despite concerted efforts has not made much progress. The key reason behind the GM and organic cotton trends is that, because it is not a food crop, there is not much consumer resistance. Finally, the competition from synthetic fibers will continue, although there is evidence that consumers' preferences have changed toward consuming more cotton.

SEE ALSO *Agricultural Industry; Slave Trade; Slavery; Textile Industry; U.S. Civil War*

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John Baffes

COUNCIL OF EUROPE

SEE *Civil Liberties.*

COUNCIL ON ENVIRONMENTAL QUALITY

SEE *Environmental Impact Assessment.*

COUNTERTERRORISM

Many different programs and activities, at all levels of government and in the private sector, help to save lives and property from terrorism and are properly considered aspects of counterterrorism. The activities that are most commonly and explicitly labeled as counterterrorism are offensive efforts by security services to uncover and erode the capabilities of terrorist groups to conduct attacks. Another major element of counterterrorism—although it sometimes bears the label *antiterrorism*—is creating defensive security measures to protect possible targets from terrorist attack. Still another is the development of capabilities to respond quickly to terrorist attacks in a way that will mitigate their damaging effects. Less commonly described as counterterrorism are activities that affect the motivations of groups to use terrorism or of individuals to join terrorist groups in the first place, although this last element can have as great an effect as the others on the incidence of terrorism.

OFFENSIVE AND DEFENSIVE TOOLS

Offensive counterterrorism is aimed chiefly at disrupting or destroying the leadership, planning, finances, and organizational structure of terrorist groups. Common techniques include raids to break up terrorist cells, seizure of documents and materials, arrests of key individuals, and rendition of suspected terrorists to countries where they are wanted for interrogation or prosecution. Intelligence, diplomacy, criminal justice, financial controls, and military force are the principal tools that national governments use to weaken the capabilities of terrorist groups. Each tool has its limitations as well as its strengths, and effective counterterrorist programs use all of them in combination.

Intelligence tends to be the most heavily relied upon counterterrorist tool, particularly because of the hope that it will uncover enough specific information about impending terrorist attacks to preempt the attacks. The inherent difficulties in obtaining highly specific information about closely held terrorist plots, however, means some plots will inevitably escape such exposure. Intelligence makes larger contributions to the disruption of terrorist infrastructures and to the strategic assessment

of threats from particular terrorist groups or in particular countries or regions.

Because terrorism always involves the commission of crimes, criminal justice systems play a major counterterrorist role, both in the investigation of past or possible future terrorist attacks and in the prosecution and incarceration of individual terrorists. Limitations of criminal justice systems include the frequent difficulty in obtaining strong enough evidence for a successful prosecution. Closely associated with intelligence and law enforcement work are efforts, usually centered in finance ministries, to seize or freeze financial assets belonging to terrorist groups. A limitation of financial efforts is difficulty in tracking terrorist money that moves through informal channels outside any banking system.

Diplomacy supports the other offensive tools through, for example, demarches to foreign governments to enlist their cooperation in arresting suspected terrorists or in providing information to facilitate counterterrorist investigations. Counterterrorist diplomacy has also assumed more of a multilateral role, particularly since the 1990s. The negotiation of more than a dozen international conventions on terrorism has provided a framework for cooperation on such matters as the handling of hijacking incidents and the tagging of explosives (insertion of a distinctive chemical during manufacture of explosives, permitting investigators to trace the origin of any one batch of explosives).

Military force has been used relatively sparingly for counterterrorist purposes, and mostly by the United States. Its principal role formerly was to retaliate for terrorist acts already committed, as with U.S. retaliatory strikes against Libya in 1986 and Iraq in 1993. The U.S. intervention in Afghanistan in 2001 marked an expanded use of military force in that it served not only to retaliate for Al Qaeda's attack against the United States in September of that year but also to roust the group from its base of operations and to drive from power its close ally, the Afghan Taliban regime.

Defensive security measures are used to protect individual sites that are potentially attractive to terrorists (e.g., prominent government buildings), systems critical to public safety or the economy (e.g., civil aviation or electric power grids), and national borders. All these areas were included in major efforts, following Al Qaeda's attack in September 2001, to bolster defenses against terrorism within the United States, efforts that collectively come under the title *homeland security*. A major challenge is in finding ways to safeguard inherently open, and thus vulnerable, public facilities and systems such as ports and transit lines without resorting to measures that are economically damaging or that unduly impair civil liberties. Another challenge is that terrorists have the offensive side's advantage of choosing which out of many possible targets to strike.

Incident response capabilities are designed both to limit the physical damage of terrorist attacks and to reassure the public that authorities have emergency situations under control. Counterterrorist response capabilities have focused particularly on the possibility of attacks using chemical, biological, radiological, or nuclear means. With some of these unconventional attack methods, a quick and well-planned response is critical in limiting the effects. An attack using an infectious biological agent, for example, would be less effective insofar as the response included early identification of the agent, isolation of infected persons, and inoculation of other persons in danger of becoming infected.

ORGANIZATIONAL ROLES

Offensive counterterrorist responsibilities exist mainly at the level of national governments, although organizational structures vary. In most developed countries important counterterrorist organizations are domestic security services such as MI-5 in the United Kingdom or the Public Security Investigation Agency in Japan. The United States has no such service; the Federal Bureau of Investigation performs both this role and its criminal law enforcement functions. Intelligence agencies, militaries, and coordinating bodies such as the National Security Council in the United States also play major roles.

Responding to terrorist incidents is more the responsibility of local authorities, with municipal fire or police departments necessarily performing the role of first responders. National resources will often provide augmentation, however, in the event of major terrorist incidents.

Homeland security functions are spread among different levels of government. The biggest organizational innovation was the creation in the United States in 2002 of a Department of Homeland Security, which assumed primary responsibility for border security and the protection of assets such as the civil aviation system. Protection of many individual sites is still at least as much a local responsibility. Moreover, the security of many potential terrorist targets, from power plants to the electronic infrastructure used by financial markets, depends in large part on measures by the private sector.

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Paul R. Pillar

COUNTRY AND WESTERN MUSIC

SEE *Music.*

COUP D'ETAT

Coup d'etat is an important, often violent type of political leadership change. Coups involve a small group of conspirators plotting to seize state power and then doing so on their own or with the support of others. Coup attempts are swift, lasting hours or a few days. Often attempts fail, but if state power is taken and held, the event is a coup d'etat. Both failed and successful coups may involve many deaths as a result of fighting between the coup participants and loyal armed forces, or they may be bloodless coups in which no one dies. Historically most coups have been military coups involving elements from the state's own military and police because their firepower is needed to crush any possible opposition. When coups overthrow constitutionally elected governments, they are forceful, illegal means of political change. When coups are against dictatorships they are sudden, unexpected, and irregular means of political change.

The term *coup d'etat* ("blow against the state") comes from Napoléon Bonaparte's use of his troops on the 18th Brumaire (November 9, 1799) to overthrow the constitution of the First French Republic and ultimately to place himself in power as emperor. After independence in the early nineteenth century, most Latin American states experienced repeated coups (*Los Golpes Militares*) led by innumerable *caudillos* (dictators), a phenomenon lasting until the 1980s. After decolonization, coups d'etat occurred in many new states of North Africa, the Middle East, Asia, and Africa. The 48 states of sub-Saharan Africa have seen the most coups, with 40 states experiencing 83 successful and 112 failed coups between 1956 and 2004. While rare in developed countries, coups have occurred in Europe, in Greece in 1967 and in Portugal in 1974. On some occasions coups have brought to power men who tried to better their countries, but generally coups have produced poor political leadership, further impoverishing their countries.

Coup leaders often proclaim themselves "revolutionaries," but coups are not revolutions. Revolutions involve armed conflict; some coups do not. Revolutions last for months or years, coups last mere hours or days. Revolutions are mass political events involving much of the population; coups are made by a few coup-makers who are often political or military elites. Revolutionaries seek fundamental social, economic, and political change; coup-makers may seek this, but they may act to prevent change or merely to gain the rewards of political office. Revolutions produce profound societal change; coups produce changes in political leadership and often little else.

When countries have weak political institutions—political parties, legislatures, courts, and bureaucracies—they may suffer frequent military interventions into politics. Harvard political scientist Samuel P. Huntington has called such countries *praetorian polities.* The type of coups they experience and the style of the resulting military rule depend upon the degree of political participation among the population: (1) when participation is low, only among elites, *oligarchical coups* and rule occur as in Paraguay under Alfredo Stroessner (1954–1989); (2) when participation is moderate, including both elites and the middle classes, *radical coups* and rule happen as in Egypt under Gamal Abdel Nasser (1956–1970); and (3) when participation is high, including all social classes, the results are *mass coups* and rule as in Argentina under Juan Domingo Perón (1946–1955). Huntington's variables, the strength of political institutions, and the level of political participation are key to understanding why and where coups d'etat happen.

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Patrick J. McGowan

COURTS, CONSTITUTIONAL

SEE *Constitutional Courts.*

COVARIANCE

The covariance is a measure of the magnitude of association between the scores of cases on two variables that have been measured at the interval or ratio level. It describes both the direction and the strength of the association. In

$$COV(X,Y) = \frac{\sum_{i=1}^{N}(x_i - \bar{X})(y_i - \bar{Y})}{N}$$

Figure 1

the social sciences, the covariance is most commonly used in structural equation modeling of systems of linear equations of measured and unmeasured variables.

Formally, the covariance between the scores of c cases (i through N) on the variables X and Y is:

$$COV(X,Y) = \frac{\sum_{i=1}^{N}(x_i - \overline{X})(y_i - \overline{Y})}{N}.$$

That is: subtract the first case's score on X from the mean of X; subtract the first case's score on Y from the mean of Y; multiply these "deviations." Repeat this process for all of the cases, and sum the results. Divide this product by the population size (N).

When the relationship between X and Y is being examined in a random sample of cases drawn from the population, $N - 1$ is usually substituted in the denominator. Most statistical software uses $N - 1$.

The covariance of a variable with itself (e.g., COV (X, X)) is the variance. (For a more in-depth formal treatment of the covariance, see Snedecor and Cochran 1980).

If there is a tendency for higher scores on X to co-occur with higher scores on Y, the covariance will have a positive value; if there is a tendency for higher scores on X to co-occur with lower scores on Y, the covariance will be negative. If the scores on two variables are not associated, the covariance will equal zero. The units of measurement of the covariance are XY; for example, if X was measured in dollars, and Y was measured in years, the magnitude of the covariance would be dollar-years. When we are working with multiple variables, the variances and covariances among all the variables are arrayed in a symmetric "variance-covariance" matrix.

Consider the relationship shown in the scatter-plot, between the level of urbanization (X) and female life expectancy (Y) in nineteen African countries in the mid-1990s. Inspection suggests that the scores positively covary: on the average (but not in all cases), the higher the urbanization, the higher the life expectancy.

The covariance for this relationship is 57.538. The positive value indicates a positive relationship. The strength of the relationship is difficult to assess because the unit of measurement of the covariance is percent-years. Because of this peculiar metric, the covariance is rarely used as a simple description. The Pearson correlation (which is .47 in this example) is preferred.

The covariance is the most commonly used measure of association when research involves predicting Y from X using structural equation modeling. In predictive modeling, there is often the desire to describe the relationship between Y and X in the original scales of the variables: How much Y do we get for each unit of X?

Some warnings: Restricted variation in either variable, non-linearity in the relationship, and non-normality in the joint distribution of X and Y can limit the validity of the covariance as an index of the strength and direction of the relationship.

SEE ALSO *Standard Deviation*

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Robert Hanneman

COX, OLIVER C.

1901–1974

Oliver Cromwell Cox was a Caribbean-born sociologist who challenged the social sciences by pointing out problems with scholarly theories that attempted to explain race relations and the social and economic organization of race. Cox's life itself paralleled the state of race relations during the twentieth century in that his work was for many years overlooked, and he was marginalized both by black and white students of race relations. Yet he made a lasting contribution to the scientific understanding of cultural and sexual relations, as well as the sometimes violent social disorder that develops in the context of race. Unlike earlier scholars, Cox analyzed black-white relations in the United States in terms of race rather than caste, and he criticized what were then the dominant theories for explaining the impact of capitalism on the social system.

Cox was born on August 24, 1901, in Port of Spain, Trinidad. He received his primary school education at the Saint Thomas Boys' School, where he studied algebra, English literature, French, geometry, Greek, history, and Latin—the normal subjects that young boys were required to study in colonial Trinidad. Growing up in Trinidad, Cox also had to contend with colonial society's strict adherence to the social norms of decorum and respectability that were associated with colonial bourgeois pretensions. Obsession with skin color was embedded in Trinidadian culture during Cox's early life. For most black Trinidadians, light-colored skin was thought to be more attractive and worthy of greater social esteem, an idea that

had been introduced into the culture by European colonists. Cox later explored this color line in *Caste, Class, and Race: A Study in Social Dynamics* (1948), in which he argued that such an obsession with skin color prevented social cohesion among blacks, who would otherwise have shared a similar interest in opposing social oppression.

In 1919 Cox moved to the United States and settled in Chicago. The summer of that year became known as "Red Summer" after racial tensions in Chicago erupted into major riots and fighting between whites and blacks, resulting in deaths as well as numerous injuries and arrests. Cox, however, was not particularly concerned with social problems at that time; he was primarily focused on gaining a college education. His schooling in Trinidad was not deemed equivalent to a high school education in the United States, and Cox had to return to high school. He graduated in 1923, and went on to earn a two-year college degree in 1925, and a bachelor of science degree from Northwestern University in 1928. The following year Cox was incapacitated by polio, and he was confined to a wheelchair for the remainder of his life. However, by that time he had decided to become an academic, and he entered the University of Chicago, where he earned a PhD in sociology in 1938 with a thesis on the "Factors Affecting the Marital Status of Negroes in the United States." Cox subsequently held academic appointments at Wiley College in Marshall, Texas (1938–1944), the Tuskegee Institute in Alabama (1944–1949), and Lincoln University in Jefferson City, Missouri (1949–1974).

During his academic career, Cox developed the unique theory that ideology was responsible for producing a social system in which black people were considered inferior to whites. Cox observed that race antagonism developed in the fifteenth century with the rise of capitalism and nationalism, and that race conflict was not a natural or universal phenomenon but a specific ideology that had become embedded in social theory. For Cox, the purpose of this ideology was one group's domination of another. In earlier societies, mechanisms and ideologies other than race, such as religion and culture, were used to subjugate entire groups of people. Cox argued that the ideology of white supremacy is inextricable from the political economy. Ideologies supporting control by whites are not designed to demonstrate that whites are superior to other human beings; rather, they are designed to proclaim that whites must be in control, and violence serves to enforce this arrangement. Racism, then, is not merely a system of beliefs; it is a relationship of power that is coordinated by an assembly of social institutions that work together to marginalize blacks. Cox identified seven "situations of race relations" that account for the varying demographics and organizations that develop in the assembling of social institutions.

At the center of these social institutions is the state. Cox's major work, *Caste, Class, and Race,* demonstrated that a political class that espoused a race ideology had emerged in the United States, as well as in other nations, such as Nazi Germany. In such states, commitment to the state-sanctioned racial ideology leads to a citizen's inclusion into the political class, whose primary goal is to control the state. The political class is organized to promote its heritage, an idea that Cox explored in *The Foundations of Capitalism* (1959) and *Capitalism as a System* (1962). The heritage of a capitalist state is that it emerges from and survives on the exploitation of lesser capitalist or noncapitalist territories and nations. Therefore, capitalism is not a unique development in the United States. Rather, the leading position of the United States in relation to other capitalist states, such as Great Britain, resulted because capitalism was inherited, embedded, and refined in the United States. Cox developed this theory in *Capitalism and American Leadership* (1962).

Cox's views stood in opposition to the caste school of race relations that was led by the social psychologist John Dollard (1900–1980) and the social anthropologist W. Lloyd Warner (1898–1970). These scholars applied the concept of caste to understand the separation between blacks and whites in the United States. Cox argued that caste divisions in India were a coherent system based on the rule of inequality. In such a system, a man's child by a woman of a lower caste, for example, might become accepted into the father's higher caste. In contrast, the U.S. color line contradicted an American creed of equality for all people, and a technique of "passing" developed to conceal the "lower" racial status of a "mixed-blood" person. However, if the mixed blood of a passing individual were ever discovered, it could trigger severe consequences.

In *Caste, Class, and Race*, Cox disputed the twentieth century's major sociological theories examining race relations. In addition to his critique of the caste school, Cox demonstrated the weaknesses in analyses by other major scholars, including the cultural anthropologist Ruth Benedict (1887–1948), the sociologist Robert E. Park (1864–1944), and the sociologist Gunnar Myrdal (1898–1987). Benedict promoted a rhetorical explanation of "racism," while Park saw race relations as cycles starting with contact and ending in assimilation of subordinate groups, and Myrdal argued that racial segregation was a moral problem of the "white" race. In opposing these views, Cox stressed the inextricable relationship between capital and racial antagonism. He argued that capitalism could not have developed out of feudalism, and had to be viewed as a form of social organization in which a capitalist nation is inconceivable without a capitalist world system. Cox concluded that three social forces were essential—an economic order, a national and territorial

government, and a religious structure—before a racial organization could be produced and sustained.

SEE ALSO *Capitalism; Caste; Class; Race*

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Anthony J. Lemelle Jr.

CRAFT UNIONS

SEE *Unions.*

CRAMER'S RULE

SEE *Determinants.*

CRAZY HORSE

c. 1842–1877

Crazy Horse (a translation of his Lakotan name, Tasunke Witko) achieved notoriety while he was alive for his skill as a military leader and his defiant attempt to resist Westernizing influences. Since his death, his actions have taken on further meaning, and he is highly regarded as a symbol of Lakota resistance, oftentimes considered *wakan* (spiritually powerful), and he continues to be emblematic of a traditional past.

Crazy Horse was born in 1841 or 1842 near the Black Hills (South Dakota). He apparently had yellow-brown hair and was initially called Light Hair and Curly. His father was a medicine man; but less is known about his mother, who died young; his father later remarried. He was reportedly good with horses, and this garnered him the name His Horses Looking. His interest in a married woman, Black Buffalo Woman, led to a shooting that left Crazy Horse with a scar. Later, he married Black Shawl and they had a daughter, They Are Afraid of Her, who died at age 2. In 1877 he also married Nellie Laravie, an 18-year-old mixed-blood woman.

His father and grandfather both were named Crazy Horse, and he himself finally earned this name in his teen years. Around this time, Crazy Horse had a vision that involved a horseman who is plainly dressed and riding untouched through a storm. Crazy Horse himself began to dress plainly, with a red-tailed hawk feather, and it was assumed that he and his horse were invulnerable. There are also reports that he would throw dust over his horse before battle and that he wore a small stone, or *wotawe* (sacred charm), for protection. He was a quiet and introspective man who seldom joined in public events.

In an effort to resolve the conflicts following from Western expansion, Red Cloud and Spotted Tail agreed to settle at agencies, camps associated with government Indian agents that later became reservations, with the signing of the 1868 Fort Laramie treaty. Crazy Horse alone resolved to stay on his own lands in the Black Hills, until several events led to his surrender. Gold was discovered in the Black Hills and battles commenced against those who resisted the order to reservation land. Crazy Horse fought his best in the last two great battles, Rosebud and Little Bighorn. On June 17, 1876, assaults forced Brigadier General George Crook's troops to retreat at the Battle of the Rosebud. Days later (June 25), Crazy Horse and others led the victory against Lieutenant Colonel George Armstrong Custer at the Battle of Little Bighorn.

These victories led to increased military pressure and famine. Supplies and morale diminished at Crazy Horse's camp with the dwindling of buffalo, restricted trade, and a cold winter. Given the promise of an agency in the northern country, Crazy Horse led 889 followers to Fort Robinson in May 1877, but the promised agency fell through, and Crazy Horse was given a campsite near Red Cloud's agency close to the White River (Nebraska). There was concern on the part of those trying to maintain stable relations—both Indian agents and Lakota leaders—that Crazy Horse would continue to hunt, given his refusal of rations, and that he would weaken the elders' efforts to maintain peace at the agency. Also, there might have been concern from the Lakota leaders of Red Cloud's and Spotted Tail's agencies that Crazy Horse was gaining too much favor from the Indian agents and unsettling the status of existing agencies.

After four months in the camps, General Crook issued an order for Crazy Horse's arrest. Crazy Horse at first assumed he was going to a council meeting, but resisted when he realized he might be imprisoned. It

seems that his ally Little Big Man restrained him, either to placate him, in order to protect himself from Crazy Horse's knife, or to serve questionable political interests. A low-ranking cavalry soldier named William Gentiles is credited with stabbing Crazy Horse with a bayonet, intentionally or not. Crazy Horse died September 5, 1877, at Fort Robinson, and his father buried his son at an undisclosed site with the agreement of those in attendance that they smoke a pipe and pledge not to reveal its location.

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Larissa Petrillo

CREAMING

Creaming (creaming off, or skimming) is the practice of serving a select client base in order to improve the efficiency or efficacy of a treatment. Creaming generally occurs in a response to incentives. For example, when hospitals receive a fixed reimbursement payment for treating a given ailment, they have an incentive to seek out the most healthy patients among those afflicted with that condition; this improves the apparent efficiency of their care because the most healthy can typically be treated at lower cost. Similarly, job training programs that are evaluated based on the success of their clients obtaining subsequent employment have an incentive to recruit clients who are most likely to succeed following the completion of their training; in doing so the programs appear highly effective. Scholars continue to debate whether specialized schools such as magnet or charter schools practice creaming by attracting the strongest students from within the larger pool of students who are eligible to attend.

The practice of creaming has both social and statistical consequences. When clients (patients, trainees, or students, for example) who are already relatively advantaged obtain the most favorable treatment, inequality of opportunity is exacerbated. In some cases, that may be a goal of the program, such as when the aim is to maximize the number of program completers who are able to perform a specific role following training. More often, however, creaming produces results that are considered undesirable because it allocates resources unequally in favor of those who are already privileged. As an example, school choice programs that allow greater access to specialized schools to children from more educated families tend to increase rather than reduce segregation and inequality.

The statistical consequence of creaming is that it tends to distort efforts to assess program impact. Viewed narrowly as intended for a select population, creaming may limit generalizability; that is, if the program is intended for a particular subgroup, its effects may be properly assessed on that subgroup, but the effects may not generalize to the larger population. This pattern may be uncovered through examination of disaggregated data to identify the relevant subgroups. Generally, however, creaming produces biased estimates of program effects when the estimates fail to take into account the selectivity of the population undergoing the favored treatment in contrast to those without such access. Anderson, Burkhauser, and Raymond showed in a 1993 study that the remarkable performance of the Job Training Partnership Act of 1982 (a federal employment program in the United States) in preparing unemployed persons for work reflected in part the selection of those trainees who were most likely to obtain employment irrespective of their training opportunities. However, the bias was not as large as the critics had supposed. Responses to bias caused by creaming include statistical adjustments, such as instrumental variables analyses and propensity score models, and design-based solutions, such as randomized controlled trials with random assignment of participants to treatment and control groups.

SEE ALSO *Heckman Selection Correction Procedure; Inequality, Political; Instrumental Variables Regression; Sampling; Selection Bias; Statistics*

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CREAMY LAYER, THE

The affirmative action program in India (the reservation, or quota, system) has shown substantial redistributive effects, in that access to education and jobs is spread wider in the spectrum of Scheduled Castes and Scheduled Tribes (SCs and STs) than it had been previously. This redistribution is not spread evenly throughout the beneficiary groups, however. There is evidence of clustering, and the benefits of the program appear to be confined to a narrow, privileged section of the SCs and STs. This elite section is referred to, in popular discourse, as the "creamy layer." The existence of this layer is one of the arguments used to oppose the affirmative action program. However, this tendency toward clustering is not unique to this program, and it probably reflects structural factors, for the better-off sections enjoy a disproportionate share of benefits in every government program in India.

One of the critiques of the reservation system argues that the vast majority of Dalits are rural and poor. *Dalit,* literally "the oppressed," is a term of pride referring to the SCs and STs, the latter a product of official terminology. Because the reservation of jobs and seats in institutions of higher education is meaningful mainly in urban areas, the benefits are cornered by the "creamy layer," leaving the vast majority of Dalits untouched. However, even the limited reservation of jobs has brought a many-fold increase in the number of families liberated from subservient roles. In addition, the reservation of jobs, even if confined to urban areas, offers a potential avenue of employment that even rural Dalits can aspire to.

One of the concerns about the quota system is that, in the short run, beneficiaries might get singled out and experience social rejection in offices, college hostels, and other places where they are introduced through affirmative action. (There is no explicit affirmative action in college hostels, however, and affirmative action in colleges leads to the entry of SC/ST students into college hostels.) In the long run, however, education and jobs weaken the stigmatizing association of Dalits with ignorance and incompetence. Thus, the existence of the "creamy layer" can perhaps play a positive role, for successful members of the Dalit community demonstrate that, when given equal opportunity over a few generations, they can be just as successful as non-Dalits and are not intrinsically "inferior."

The existence of the creamy layer or the Dalit middle class has kept the beneficiary groups and their problems visible to the educated public. Thus, it is no longer possible for any political party to publicly oppose affirmative action. However, given the pro-upper-caste and anti-affirmative-action bias of the political and social elite, this has not translated into motivated widespread concern for the inclusion of Dalits beyond what is mandated by government policy.

One of the objectives of the affirmative action program is to achieve upward social mobility of the Dalits. However, while this mobility is limited and ought to be viewed positively, it is pejoratively described as a "creamy layer" within the Dalit community. Concerns about intra-group inequality are not invalid, but estimates indicate that intra-group inequality is much more significant among the non-Dalits than among the Dalits. Thus, contrary to conventional wisdom, if groups need to worry about their own creamy layer, the concern should be far greater for the non-Dalits than for the Dalits.

SEE ALSO *Affirmative Action; Caste; Dalits*

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Ashwini Deshpande

CREATIONISM

Creationism is an idiosyncratic form of Protestant biblical literalism that developed in the United States in the nineteenth century. Creationism comes in two forms, one that accepts that the earth is probably very old but that insists that there was an intervention of a creative kind at the beginning to populate the world with organisms, and the other—known as *young earth creationism*—that claims that the earth is about six thousand years old (based on the genealogies of the Bible). Creationism should not be confused with the belief by Christians (and others in the Abrahamic tradition) that God created the earth from nothing, nor should it be confused with traditional Christian thinking about the veracity of the Bible. From at least the time of Saint Augustine (354–430 CE), it has

been the position of Christians—Catholics and (later) Protestants—that God often spoke in simplified or metaphorical terms, and that the Bible should not be used as a work of science. In an oft-quoted phrase, the Bible tells human beings where they are going, not where they came from. It should also be noted that although traditional Christianity has always had a place for natural theology, proving God and his attributes through reason, it has never been the case that natural theology has taken the primary role. For Christians, faith is what counts. Hence when skeptics criticize proofs—for instance, pointing out that if one claims that God is the first cause, then who caused God?—believers are not worried. They argue that God is the cause of himself and this is something that is beyond rational proof.

The nineteenth century saw major divisions in the United States, particularly between North and South, exploding into the violent Civil War (1861–1865), something that to this day still marks social and cultural fractures in the country. People in the North, particularly Protestants from older denominations (Episcopalians, Presbyterians, Unitarians), moved steadily in tune with the major movements from Europe, especially the movement to interpret the Bible as a work written by humans (so-called *higher criticism*), and advances in science, especially Charles Darwin's (1809–1882) theory of evolution as expressed in his *On the Origin of Species* (1859).

In the South, and increasingly (as the country moved West) in the central states, Protestants in the more evangelical religions (Baptists and Methodists) turned to the Bible read literally for comfort and understanding. Holy scripture was used to justify slavery and, after the Civil War, many took heart in the ways in which God often punishes or makes life hard for those who have a special place in his heart. The Old Testament story of the Israelites in captivity in Babylon was taken to be a cameo for the way in which, after the war, the South was seen as a society in captivity to the North. New doctrines were added to Christianity, particularly the belief in *dispensations*, or historical periods ended by violent conflagration, the first of which terminated in Noah's flood and the last of which will end with Armageddon and the return of Jesus. Often added to this was a belief in the *Rapture*, according to which the saved will go straight to heaven before the end times, and also the significance of Israel with the return and conversion of the Jews.

This literalism, known in the first part of the twentieth century as *fundamentalism*, was as much a social as a religious movement. The emphasis was on returning to God and working toward personal purity, rather than trying to effect wholesale changes in society for the overall good. This underlying theology was exhibited clearly by the famous Scopes trial of 1925 in Dayton, Tennessee, when a young school teacher was put on trial for teaching evolution to his class. Prosecuted by three-time presidential candidate and ardent evangelical Christian William Jennings Bryan (1860–1925) and defended by noted agnostic Clarence Darrow (1857–1938), the trial was less about gaps in the fossil record and more about the new modes of education and learning that people in the South felt were being imposed on them by northerners.

Many laughed at the literalists of Tennessee, and fundamentalism withdrew from the public gaze. Then, in the early 1960s, the divide was again exposed and deepened, thanks to a book penned by biblical scholar John C. Whitcomb and hydraulics engineer Henry M. Morris (1918–2006). *The Genesis Flood* (1961), much influenced by Seventh-day Adventist views about the very short (less than 10,000-year) span of the earth, argued that all of geology can be traced to the worldwide deluge through which Noah and his family sailed for forty days. Deeply committed to dispensationalism—the belief that the world's history is divided into phases (seven is a popular number), each ending with a disaster—Whitcomb and Morris were determined to show that there had been such an upheaval, and they warned of one to come. Before *The Genesis Flood*, the general belief had been in a long-history earth; now public opinion followed these authors in opting for young earth creationism.

As before, the main message was less one of science and more one of social prescription, with dire warnings about a nation lax on sexual and other morals. Because *The Genesis Flood* was clearly religious in nature and because of the constitutional separation of church and state in the United States, creationists (as they were now called) began to present a supposedly science-based version of their views—*creation science*—and a law mandating its treatment in state-supported schools was enacted in Arkansas in 1981. A federal judge ruled the law unconstitutional, and a similar bill in Louisiana met a similar fate later in the decade. But creationism was evolving and since 1990 has presented itself in a new guise, *intelligent design* theory. Sparked by law professor Phillip E. Johnson, author of *Darwin on Trial* (1991), its supporters claim that the organic world is so complex that it could not have been produced by blind law. Publicly, it is denied that this intelligent designer necessarily has anything to do with the God of the Bible. Privately, both supporters and opponents agree that intelligent design theory is a form of creationism-lite designed to slip through the barriers between church and state.

Legally, intelligent design theory has been no more successful than creation science. In 2005 a federal judge in Dover, Pennsylvania, ruled that it is not science and hence cannot be taught in state schools. But the battle is not yet over, especially given that polls constantly show more than

50 percent of Americans believe that the earth was created in six days less than ten thousand years ago.

Creationism remains a threat to biology, and also to the rest of science. Geological theories about plate tectonics are ruled out, physical theories about big bangs are ruled out, and in the social sciences, at the very least, anthropology and archeology as understood today are made impossible. This point should be emphasized, for often people think that creationism affects only the biological sciences. If one takes a literal biblical view, then it is hard to see how one can have any approach to humankind that argues (for instance) that social factors were supreme in ordering human behavior. The same is true of biological factors with the same effects—for instance, the purported discovery by geneticist Dean Hamer (2004) that there is a gene for belief in God's existence. All of these things—for instance, the suggestion that sexual orientation might not be a function of someone's free will—will be anathematized. So far, science is holding fast, but the battle has not ended.

SEE ALSO *Fundamentalism, Christian; Scopes Trial*

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Michael Ruse

CREATIVE DESTRUCTION

The phrase *creative destruction* was introduced by the economist Joseph Schumpeter (1883–1950) in 1942 to describe the process by which innovation occurs in capitalist societies. A "process of industrial mutation" occurs as markets are opened up, revolutionizing "the economic structure from within, incessantly destroying the old one, incessantly creating a new one." Schumpeter called this process "creative destruction," and he held that it was the "essential fact about capitalism" (1962, p. 83).

For Schumpeter, the competitive process that characterized capitalism was not the timid elements of cost reduction but instead the creation of new products, new technology, or new markets, all of which threatened the lives of currently existing products or firms (1962, p. 84). It was such innovation that, for Schumpeter, generated overall economic growth and development, even while it often destroyed the value of sustained companies and monopoly rents. Successful innovation created new monopoly rents, but the process continued with waves of successive innovation. Schumpeter's theory of creative destruction provides an explanation for dynamic industrial change.

The "Schumpeterian hypothesis" that temporary monopoly power is associated with economic growth has engaged generations of empirical workers who struggle with the requirement to make precise what is understood by "temporary" and "innovation" and what must be treated as exogenous to make such tests. There seems to be evidence for a positive association between research and development productivity and firm size, but it is not clear that this is sufficient for the hypothesis itself. Recent work on endogenous growth theory has attempted to operationalize Schumpeter's notion of creative destruction by which one innovation destroys another.

The creative energy for innovation was supplied, Schumpeter argued, by the entrepreneur. It was the entrepreneur who found the means to put new inventions into place. Like Karl Marx (1818–1883), Schumpeter was persuaded that capitalism was destined to pass away: "Can capitalism survive?" Schumpeter asks in *Capitalism, Socialism, and Democracy* (1942), "No. I do not think it can" (1962, p. 61). But unlike Marx, Schumpeter saw the threat to capitalism coming from its very success, from an overreliance on rationality that he associated with capitalism. And unlike Marx, Schumpeter offered a prediction, not a prescription.

Schumpeter's is a "tory" worldview (Stolper 1994, p. 30), not a sedate caricature of the feudal past but instead something akin to that expressed in Scottish essayist and historian Thomas Carlyle's (1795–1881) description of the captains of industry as the heroes for a new age. Markus C. Becker and Thorbjørn Knudsen's 2002 translation of omitted material from Schumpeter's *Theory of Economic Development* (1911) makes clear the parallel between Schumpeter's entrepreneur and Carlyle's hero. Creative destruction is capitalism in the age of the hero, where the entrepreneur provides the creative energy for innovation and the destruction that it entails. What will

destroy capitalism is the rationality that kills the heroic (Schumpeter 1962, p. 160).

Without the heroic ethic, which regards risk-taking as an obligation, the capitalist could not defend himself against those who wished to arrest the gales of creative destruction. In notes to Schumpeter's "Can Capitalism Survive?" the editor reports this fascinating floor discussion:

> Schumpeter was now asked why the feudal class in its days of glory was so much more capable of defending itself than the bourgeoisie is today. According to Schumpeter the answer was very simple. The knights of the feudal times were trained to fight and in battle they were superior to everyone else. The only way of defending itself that the bourgeoisie, however, has, is to take up the telephone and telephone Senator X and say, "Good God! Good God! Can't you help us?" (Schumpeter 1991, p. 315)

This would not have been the response from an older capitalism manned by those bound to spouse and children, for whom "navigare necesse est, vivere non necesse est" (Seafaring is necessary, living is not), as noted in an inscription on an old house in Bremen, Germany (Schumpeter 1962, p. 160).

On the face of it, Schumpeter's analysis suggests a role for policy in the promotion of growth through patent laws or subsidized research and development. But if Schumpeter's capitalist can call up government assistance with a telephone call, then government policy with regard to technology should be considered endogenous. Once policy related to technological change is endogenous, it may benefit the existing few instead of the uncreated many of the future.

SEE ALSO *Capitalism; Schumpeter, Joseph*

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CREATIVITY

Since the mid-nineteenth century creativity has become increasingly recognized as an extremely valuable natural resource. It plays a role in cultural evolution, innovation, and virtually all societal change. It also plays a significant role on an individual level, contributing to psychological health, learning, and adaptability, as well as to artistic and scientific endeavors. Creativity is not easy to define, in part because it plays such diverse roles.

DEFINING CREATIVITY

When defining creativity most people agree that originality is necessary but not sufficient for creativity. Yet creative things are more than merely original; they must also be fitting, solve a problem, or have some sort of value or aesthetic appeal. This is especially easy to see when creativity is put to use solving problems, for then the creative solution is an original one that also solves the problem. Yet many creative activities and behaviors do not depend on problem solving. Sometimes, creativity is self-expression.

Creativity may also be distinguished from problem solving by defining it to include problem finding, which must occur before a solution is attempted. Problem finding may involve problem identification (recognizing that there is a problem at hand) or problem definition and redefinition (changing a problem such that it can be solved). The German physicist Albert Einstein (1879–1955) and many other unambiguously creative individuals have pointed to problem finding as more important to creative achievement than problem solving.

Definitions of creativity are sometimes debated because it can be difficult to separate self-expression from problem solving. This ambiguity is apparent in the arts, where self-expression is artistic performance; yet artists may be solving problems of technique or solving problems in the sense of finding the best way to express themselves. It may even be that there are preconscious processes at work and the artist is dealing with a problem, even if the artist him- or herself is unaware of the origin or exact nature of the problem. Engaging in artwork can sometimes be an attempt to clarify one's thinking and feelings.

PERSONALITY CHARACTERISTICS

Researchers agree that creativity is tied to motivation. Studies of eminent individuals, as well as investigations that recognize the wider distribution of creative potential, confirm that creativity does not just occur. People work at it, are interested in it, and intentionally nurture or utilize it. Although some creative achievements have been extrinsically motivated, and the creator interested in fame, money, or some sort of reward, it appears as if the vast majority of creative actions are motivated by intrinsic

interests. In fact, when an individual is intrinsically interested to perform in a creative fashion, extrinsic incentives can undermine and lower the eventual creative output. Intrinsic interest is also tied to the creative process in the sense that individuals may be more capable of considering a broad range of options and more capable of finding original insights when extrinsic pressures do not distract them.

Personality studies often include intrinsic motivation as one of the core characteristics of creativity. Other relevant personality characteristics include a wide range of interests, autonomy, openness to experience, and nonconformity. Frequently humor and introversion are tied to creativity, but there is much more variation with these two character traits. Some creative domains, such as the performing arts, preclude introversion. The most widely recognized domains that include creativity are linguistic, mathematical, musical, and scientific, though some theories also pinpoint bodily-kinesthetic, interpersonal, and intrapersonal domains. Contemporary research has supported an everyday domain, which includes original and adaptive behaviors used in daily life (e.g., when driving, cooking, and conversing).

It is not uncommon for social scientists to also include seemingly unhealthy characteristics in the list of personality traits that are related to creativity. Nonconformity can be considered one such trait, in the sense that an individual can have excess nonconformity and thereby be alienated from social activities. Another common example of a potentially unhealthful tendency involves affect, and in particular mood disorders. These are frequently observed in eminent creative individuals, and there are reasons to believe that mood swings can facilitate the creative process. Mood disorders contribute to the long-standing and widely recognized stereotype of the mad genius or the highly eccentric creative person.

Another characteristic that may contribute to the creative process involves the capacity to tap one's unconscious. The Swiss psychologist Carl Jung (1875–1961) emphasized the creative individual's capacity to utilize unconscious material in an effective manner, saying that "the ability to reach a rich vein of such material [from the unconscious] and to translate it effectively into philosophy, literature, music, or scientific discovery is one of the hallmarks of what we call genius" (1964, p. 25). He also concluded that "completely new thoughts and creative ideas can also present themselves from the unconscious—thoughts and ideas that have never been conscious before. They grow up from the dark depths of the mind like a lotus and form a most important part of the subliminal psyche" (p. 25).

For Jung, material from the unconscious often takes a symbolic form. Some symbols are widely shared, as is implied by Jung's theory of the collective unconscious. Jung's view of creativity and the unconscious is entirely consistent with late-twentieth-century views of incubation and its role in creative thought. Biographies of famous creators often describe how good ideas and insights depend on this kind of incubation and only become conscious through sudden insight, often described as the "a-ha!" moment. On the other hand, in 1988 the psychologist Howard Gruber demonstrated that sudden insights are not all that sudden; instead they are protracted and require time and energy. The appearance of the insight is sudden, but the thinking that led up to it is not. However, because insight is an unconscious process, one is not necessarily aware of the work involved in bringing it about.

PROGRAMS AND TECHNIQUES TO ENHANCE CREATIVITY

Many programs and techniques have been designed to encourage and enhance creative potential. Some techniques focus on very specific tactics that can help the individual break mental sets, question assumptions, become more flexible and original, shift perspectives, and produce original insights. Other programs are formal educational efforts and parts of programs for gifted and talented children, which depend heavily on tests of creativity. The most common test utilizes the concept of divergent thinking, which involves performing open-ended tasks that produce a large number of ideas or answers, many of which are divergent or remote. Divergent thinking tasks are statistically independent from convergent thinking tasks (which yield one correct or conventional answer), meaning that children who produce many original ideas may not be the ones who have high intelligence quotients (IQs), and vice versa. Divergent thinking is only moderately predictive of real-world achievement, however, probably because many other factors play a role in the creative process. Intrinsic motivation is an example of one of these other influences on creative work. An individual needs more than the capacity to produce ideas and think in an original fashion; he or she also needs to be interested in doing just that, and perhaps also have the temperament to be unique and unconventional.

Educational programs targeting creativity assume that creativity is widely distributed in the human population. Because creativity is a multifaceted personality trait, existing educational programs and existing tests of creative potential may not fully capture the range of possible creative expressions, nor even the multidimensional nature of the creative process.

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CREDENTIALISM

Credentialism, as a social phenomenon, refers to reliance upon formal credentials conferred by educational institutions, professional organizations, and other associations as a principal means to determine the qualifications of individuals to perform a range of particular occupational tasks or to make authoritative statements as "experts" in specific subject areas. As an ideology, it reflects the ostensibly meritocratic idea that positions within the occupational structure ought to be filled by those who have obtained their qualifications through institutional mechanisms (e.g., training and education within certified schools; successful completion of formal examinations) culminating in the attainment of degrees, diplomas, or certificates. As a social-scientific concept, it is closely associated with the discourses of the sociologies of education and work.

Historically, the concept of credentialism emerged as part of the critique of professionalism and in the service of the "deschooling movement" of the 1960s and 1970s. Radical critics of professional education, such as Ivan Ilich (1971), proceeded from the assumption that most if not all of the skills needed to competently perform the work tasks carried out by many professionals could be acquired through practical experience and with much less in the way of formal schooling than is usually needed to obtain the "required" credentials. From this perspective, the disguised purpose of much formal schooling (its "hidden curriculum") is to impart a particular disciplinary paradigm, ideological orientation, or set of values to those seeking formal credentials to work in prestigious or "high-status" fields such as medicine, law, and education. Furthermore, the credential systems developed in a number of occupational areas are part of the "collective mobility projects" of practitioners to achieve a "professional status" that brings with it greater material and symbolic rewards. Thus credentialism is closely associated with strategies of "social closure" (to use Max Weber's expression) that permit social groups to maximize rewards "by restricting access to resources and opportunities to a limited circle of eligibles" (Parkin 1979, p. 44).

The pursuit of credentials through bureaucratized, institutional channels constitutes a kind of "rite of passage" for those who aspire to socially privileged positions while also allowing established professional or occupational groups to control the supply of practitioners, to regulate their activities, and to maintain a monopoly of legitimacy in the provision of particular services. The credential system also legitimates the establishment of legal restrictions by the state in concert with professional, occupational, or skilled trades associations concerning who is deemed qualified to perform particular tasks or provide specific services. One example has been the legal barriers that have been put into place in many jurisdictions to prevent midwives from providing birthing services to expectant mothers, thereby ensuring that such services will remain the exclusive preserve of medical doctors.

The "credential inflation" that occurred over the last third of the twentieth century was a product of the tremendous expansion in postsecondary education that occurred in many of the more developed industrial or "postindustrial" societies in the post–World War II (1939–1945) era. Jobs previously filled by people possessing only high-school diplomas (for example, insurance salespeople) were increasingly filled by those with college diplomas or undergraduate university degrees. The proliferation of employment opportunities in the "service sector" combined with the contraction of the manufacturing labor force increased labor market competition for "white-collar" jobs requiring reasonably high levels of literacy or numeracy. However, many if not most of these jobs did not require as many specific skill sets as the blue-collar jobs that they displaced. It is therefore arguable whether the shift from a predominantly manufacturing to a "service" or even "knowledge-based" economy has brought with it the imperative of higher levels of formal educational attainment for the mass of the labor force. Even so, the members of this labor force have felt compelled to pursue higher levels of education (as symbolized by college diplomas and university degrees) to avoid relegation to employment in the vast array of poorly paid and menial jobs that characterize the so-called "postindustrial" economy. In this context, a college diploma or undergraduate university degree is not so much a ticket to "success" as a safeguard against migration into the most undesirable regions of the labor market. The corollary to this phenomenon is that many workers regard themselves as overqualified for the jobs they perform and experience workplace dissatisfaction stemming from the perception that many of the intellectual skills they attained through "higher education" are being underutilized or even wasted.

With the advent of globalization and the increased mobility of professionals and workers of all kinds across

national boundaries, the problem of recognizing "credentials" obtained in other countries has come to the fore. On the one hand, professional organizations and other occupational associations are concerned that the influx of such credentialed individuals may weaken their control over the supply of "qualified" labor; on the other hand, governments are under pressure to recognize such "foreign credentials" by a public that is anxious to alleviate a real or perceived scarcity of professional service providers in such areas as medicine and law.

For most of its critics, credentialism is fundamentally a set of practices and an ideology associated with the reproduction of structures of social inequality and the intergenerational perpetuation of class and status distinctions. For its defenders, it is an inevitable concomitant of a rationalized occupational division of labor, necessary to maintaining optimal levels of productivity and performance. There are clearly elements of truth in both positions, but their satisfactory articulation requires recognition of the ways in which class, race, gender, and citizenship shape both occupational and opportunity structures in contemporary societies and of how credentialism conceals and obscures this reality behind a rationale of technical necessity.

SEE ALSO *Division of Labor; Education, USA; Globalization, Social and Economic Aspects of; Hierarchy; Human Capital; Knowledge Society; Managerial Class; Merit; Meritocracy; Productivity; Professionalization; Stratification; University, The*

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Murray Smith

CREDIBILITY LIMITS

SEE *Probability, Limits in.*

CREDIT

SEE *Finance; Loans.*

CRENSHAW, KIMBERLÉ

SEE *Critical Race Theory.*

CREOLE

The English term *creole* derives from the Portuguese antecedent *crioulo*, which was adopted by the Spanish as *criollo* ("person native to a locality") and the French as *créole*. The Portuguese word *crioulo* is a diminutive of *cria*, meaning a person raised in the house, usually a servant. The derivation is from the verb *criar*, "to bring up or raise as children," from the Latin *crere*, "to beget." Thus, from very early on the term has indicated novel creation, usually of a lower-status person, and has implied that this novelty is "irregular," or out of place. The term gained currency during the initial growth of European colonial power in the sixteenth century. As European powers established colonies in the Americas, Africa, Asia, and Oceania, new populations were created out of unions between the colonizers, local inhabitants, and immigrants (initially slaves or laborers) transported by Europeans. Initially, the term *creole* was assigned to people born in the colonies, to distinguish them from the upper-class, European-born immigrants. The application of the term has varied from place to place and era to era in important ways, and has also been used to designate languages that have evolved from historical experiences of cultural contact.

CREOLE LANGUAGE

In general, a Creole language is a defined and stable language that arises from long-standing contact between two or more distinct languages. Prior to "creolization," a rudimentary contact language is known as a *pidgin*. Typically, with Creole languages there are many distinctive features that do not derive from any of the parent tongues. In cases where a Creole person was simply a European born in the New World, there was usually no distinction between the language spoken by foreign colonials and their local, white, counterparts. However, as the notion of a Creole came to include anyone born in the New World, the term came to encompass hybrid linguistic forms, some of whose antecedents were not European languages. Generally, Creole populations occupied a low status in the eyes of European colonial administrators, thus Creole languages were regarded as "impoverished dialects" of the colonial languages, and eventually the term was used in opposition to the term *language*, rather than as a type of language. For example, one might say a French Creole as opposed to a Creole language based on French and Fon (a language of West Africa). However, in contemporary linguistics such distinctions are not made, and Creole languages are treated equally alongside other types of

language. Furthermore, the term *creole* and its cognates in other languages—such as *crioulo*, *criollo*, and so on—are now applied to distinct languages and ethnic groups in many countries and from a variety of eras, and the terms all have rather different meanings.

CREOLE GROUPS

The Portuguese term *crioulo* can be traced to the fifteenth century, when it gained currency in the trading and military outposts established by Portugal in West Africa and Cape Verde. Initially it simply meant a Portuguese person born and raised in the colony. (The word then came into use, in translation, by other colonial powers.) In the Portuguese colonies the *crioulo* population eventually came to comprise people of mixed Portuguese and African ancestry; especially as the growing numbers of people of mixed heritage dwarfed the population of local whites. In time, *crioulos* of mixed Portuguese and African descent produced important ethnic groups in Africa, especially in Cape Verde, Angola, Mozambique, Guinea-Bissau, São Tomé e Príncipe, and Ziguinchor. These groups have come to think of themselves as culturally distinct from their neighbors. In Brazil, a Portuguese colony from the sixteenth century to 1822, the word came to mean a person with especially dark skin, indicating a strong African heritage. African slaves were imported into Brazil from the seventeenth century until the first half of the nineteenth century. The presence of large numbers of Africans from ethnically diverse origins led to a substantial mixed population as Africans and Europeans began to have children. Mixing was encouraged by many nationalist Brazilian intellectuals as a way of "whitening" the population thereby creating a unique, New World Brazilian identity separate from a Portuguese or European one. As a result, *crioulo* came to be a purely phenotypic label, with harsh, negative connotations.

As in the Portuguese colonies, the Spanish term *criollo* initially meant a person of unmixed Spanish ancestry born in the New World. Locally born Europeans were prohibited from holding offices of high rank and were often shunned socially by the ruling *peninsulares*, or Spaniards born on the Iberian Peninsula.

Eventually the exclusion of the *criollos* by the foreign-born Spanish led to widespread rebellion and the development of a nativist movement. By the 1830s these Creole-based nationalist wars of independence had spread throughout Spanish-speaking Latin America in the form of the Mexican War of Independence (1810–1821) and the South American Wars of Independence (1810–1825).

In other parts of the Spanish Empire the term *criollo* did not enjoy the same currency. Inhabitants of the Spanish colony of the Philippines, for example, generally referred to the locally born Spanish as *Filipinos* or *insulares* ("from the islands"). (*Peninsulare* was still the common name for those born in the Iberian Peninsula.) Today the term *Filipino* means quite the opposite, indicating a locally born, often ethnically mixed inhabitant of the Philippines. This transformation came about as a result of the Filipino nationalist movements of the late nineteenth century.

In the United States the word *creole* has a complex cluster of meanings and is often misunderstood. In general, a Creole is a person of any race or racial mixture descended from the original European settlers of French Louisiana prior to its incorporation into the United States via the Louisiana Purchase in 1803. It is quite common for Americans in other parts of the country to assume that a Creole is a person of mixed African and European ancestry in Louisiana, but this is not the way the term has historically been used locally. Creoles encompass a wide variety of people of many ethnicities and races who share a French or even Spanish background. Most commonly, a Creole person can lay claim to a francophone heritage from either France or a French-speaking Caribbean island such as Haiti (Saint Domingue prior to 1804), Martinique, or Guadeloupe. White and "colored" migrants from these regions brought their French-speaking, predominantly African slaves with them, thereby establishing a racially heterogeneous Creole population of Louisianans. The Louisiana French, who trace their ancestry to the Acadians of French Canada, usually identify themselves as Cajun. The distinction is sometimes made for local cuisine as well, with a distinction being made between Creole food, which has many African elements, and Cajun cooking, which derives from the culinary practices of mostly white, often rural Cajun-French speakers in Louisiana.

Although in the Americas Creoles were initially Europeans born in the New World, the idea of a mixed population being a "Creole" population has gained wide currency. Indeed, *creolization* has come to mean the blending of one or more cultural identities into a new, hybrid identity. Toward that end, people of mixed native Alaskan and Russian ancestry are frequently called "Alaskan Creoles." In the late eighteenth century Russian adventurers, hunters, and traders known as *promyshleniki* came into contact with and married or formed unions with native Alaskan women, giving rise to a people who assumed a prominent position in the economy of fur trading in the northern Pacific. For example, by 1880, the U.S. census documented fifty-three "Creoles" (people of Russian-Sugpiaq ancestry) living in Ninilchik, a village located on the west coast of the Kenai Peninsula in Alaska. There also exist varieties of Russian–native Alaskan languages—either pidgins or Creoles—throughout the region, such as Copper Island Aleut, a mixed Aleut-Russian language spoken on Mednyy, or Copper Island.

In the English-speaking Caribbean a Creole was originally a European born in the New World, but the term is

most commonly used to describe anyone, regardless of race or ethnicity, who was born and raised in the region. It is also in the English-speaking, formerly British colonial Caribbean that the term has come to indicate the syncretism or blending of the various cultural forms or institutions: African, French, British, and Spanish, among others. *Creolization* in this context can mean anything from syncretized religious forms such as Vodou, Santeria, and Orisha, to culinary practices, to musical forms such as calypso, reggae, mambo, zouk, merengue, and many others. Yet the term also may have a variety of local meanings. In Trinidad, for instance, Creole culture generally refers to the practices of local African-Trinidadians as opposed to local whites (often known as French Creoles) and Indo-Trinidadians (the descendants of Indian indentured laborers brought to the island from 1845 to 1917).

In Réunion island and Mauritius, in the Indian Ocean, Creoles fall generally into two categories: (Malagasy) Creoles and Creole-Mazambe. The former were brought in as slaves to work the plantations of Mauritius (as well as Réunion and Seychelles). These laborers were mostly Malagasy (natives of Madagascar), but other African minorities, from Mozambique, Malawi, Tanzania, and Zambia, also were enslaved. In present-day Mauritius Creoles of all kinds are outnumbered by the Indo-Mauritians; however, they still form the majority in Réunion and the Seychelles. Although English is the official language of Mauritius, a French-based Creole language is widely used by all ethnic groups.

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CREOLIZATION

Creolization, in its most general meaning, is a process of cultural change, the origins of which lie in encounters between Africans and Europeans, initially in a context of slavery and colonialism. This process produces new "creole" cultures and societies. Creolization is characteristic of the Caribbean, Louisiana, and much of Latin America, where *creole* refers to people, languages, music, and things that are created in the "New World" but are not of indigenous ancestry. The term may also refer to the cultures of Liberia, Sierra Leone, and Mauritius. More specific meanings are demographic, where *creolization* refers to an increasing proportion of the population being locally born of African, European, or mixed descent, as distinct from both indigenous people and immigrants; and linguistic, where it means the development of a new language, such as Haitian or Jamaican Creole, which normally coexists with, but is distinct from, a particular European language.

Creole people, languages, and products resulted from interactions between external influences and local conditions, where power was a pervasive factor. When slave owners, missionaries, and colonial administrators tried to suppress African cultures and impose aspects of European cultures, they were often ignored or resisted. In many Caribbean societies during the period of slavery, most people were enslaved Africans who came from many different cultures, while power was exercised by a minority of Europeans and white Creoles. Africans tried to maintain their traditions, and the process of creolization was an adaptation to the physical environments and social constraints in which they lived. A creole culture is generally not homogeneous, but may be conceived as a continuum between its Afro-creole and Euro-creole variants.

Édouard Glissant, a poet, playwright, novelist, and cultural theorist from Martinique, views creolization as the central cultural process that defines the Caribbean. He emphasizes that creole cultures, like the ceaselessly changing creole languages, are characterized by diverse origins, fragmentation and adaptation, fluidity and openness. Glissant posits that the creolization process, unlike assimilation or acculturation, is creative, accepts difference, and remains open, because people may adopt aspects of "other" cultures without relinquishing their own.

The concept of creolization has ideological and political implications. Creole people and culture are evaluated negatively by those who consider them inferior because they are not "pure" European, but positively by those who view them as being authentic and appropriate to the places where they developed. The positive evaluation of creole culture and identity became an important aspect of cultural nationalism because it emphasizes the local and unifying nature of the creole way of life, but people and cultures that are defined as "noncreole" may be excluded

from full participation in nations that are defined as creole. In Trinidad and Tobago, for example, the Afro-creole culture that includes carnival, calypso, and steel bands is promoted as the center of national culture, so many Trinidadians of Indian descent feel marginalized.

Acculturation, hybridization, and transculturation are related concepts that are more general in application than creolization. Acculturation emphasizes the process in which an ethnic group acquires another culture in a largely one-way process of cultural change, and hybridization implies a process of miscegenation, or biological mixing. Transculturation, a concept coined by the Cuban scholar Fernando Ortiz (1881–1969) in 1940, refers to the multiple interactions and creation of new cultures, not limited to creole cultures in the Caribbean. Creolization, despite its ideological implications, is a useful concept because it focuses on creative aspects of cultural change, without assuming the unlimited power and success of the Europeans, but it is limited by its specific association with cultures that originated from encounters between Africans and Europeans.

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CRIME, ORGANIZED

SEE *Crime and Criminology.*

CRIME, WHITE COLLAR

SEE *Crime and Criminology.*

CRIME AND CRIMINOLOGY

Criminology is the study of crime, criminal behavior, and the criminal justice system. While this captures the essence of the discipline, there has been considerable debate about what constitutes criminal behavior and how it differs from other behaviors widely held to be socially deviant. This debate has produced five types of definitions of criminality: natural law explanations, moralistic explanations, labeling explanations, social harm explanations, and legalistic explanations.

Natural law explanations of criminality are perhaps the oldest of the five. They are influenced by natural law theory, which suggests that some behaviors must be universally prohibited because by their nature they are so morally repugnant or detrimental to the normal functioning of society. Like natural law definitions, moralistic definitions suggest that crime, as defined by statutes and codes, is a direct reflection of society's moral consensus. When the majority of people living in any given society finds a particular action morally reprehensible, their will, often expressed through representative legislators, becomes law.

In contrast to natural law and moralistic definitions of crime, labeling or critical definitions suggest that no behavior is intrinsically criminal, nor is the will of the majority of society members necessarily relevant to the designation of a behavior as criminal. Rather, crimes are behaviors that are defined as such by those in positions of power. In support of these claims, labeling theorists point out that affluent and powerful people are far more likely than the poor and powerless to escape criminal prosecution. In addition, when the affluent *are* subjected to criminal prosecution, because of their social status (which they have in common with those in positions to make law) they tend to escape being labeled as "criminal," a designation typically reserved for the poor and minorities. Other definitions of crime have rested on more pragmatic considerations, such as social harm. Harms-based definitions suggest that crime is any behavior that infringes upon basic human rights or otherwise produces individual or social harm.

Each of these theories has influenced how crime has been defined in different eras, but the definition that most of today's criminologists rely upon to distinguish criminal behavior from other types of social deviance is the legalistic definition. This definition suggests that a crime is any behavior that is legislatively prohibited and committed without defense or justification. When these three elements converge—an act or behavior, a statement by a legislature that these behaviors are unacceptable, and the absence of a legally valid reason for committing the act—then regardless of social harm, moral judgments, or relative power, a person has committed a crime.

One important caveat in any discussion of crime is that virtually everything people do in modern industrial and postindustrial societies is regulated by law, and most of it has nothing to do with the criminal law or crime. Contracts we enter into, nutrition labels on foods, levels of vehicle emissions, the amount of taxes we are required to pay, the methods we use in voting, the height of the buildings in which we work, and nearly everything else we

do and experience in our day-to-day lives are regulated by a complex web of laws that have nothing to do with *criminal* law. Nonetheless, because of the personal nature of many crimes, the criminal law tends to be the most visible category of law in modern societies.

TYPES OF CRIME

For the purposes of data collection and comparison, crime data is usually divided into two broad categories: personal crimes and property crimes. Personal crimes include crimes of violence such as murder and robbery as well as any other criminal offenses that involve direct contact between a perpetrator and a victim, such as rape, aggravated assault, and battery. Property crimes are those in which personal property is the object of the offense and there is no force or threat of force used against the person to whom the property rightfully belongs. Examples of property crimes include larceny-theft, burglary, motor-vehicle theft, and arson. Property crimes occur with far greater frequency than personal crimes, making up between 85 and 90 percent of all crimes reported to U.S. law-enforcement agencies. Expressed differently, according to official data, every 23.1 seconds in the United States a crime of violence is committed, and every 3.1 seconds a property crime is committed.

Beyond the distinction between personal and property crimes, other more detailed differentiations among criminal behaviors exist. Some of the more common crime types include violent crime, white collar and corporate crime, organized crime, and "victimless" crime. Other types not discussed in this article include hate crime, environmental crime, technological crime, and political crime.

Violent Crime There are four major violent crimes tracked by both the Federal Bureau of Investigation and most international policing agencies: murder, rape, robbery, and aggravated assault. Murder/nonnegligent manslaughter involves the willful killing of one human being by another without excuse or justification. In most cases, accomplices are equally as culpable in the victim's death as the person who directly causes the victim's death. Forcible rape involves unlawful sexual intercourse committed against the victim's will. In the United States the trend has been to view both force by the accused and the victim's substantial impairment of power to appraise or control conduct as bases for prosecution for rape. Many countries also recognize statutory rape—sexual intercourse with a person (usually female) under the legal age of consent (which varies from country to country). Robbery involves taking personal property from the possession of another against his or her will by the use or threat of force. The threat of violence is what distinguishes robbery from the lesser offense of theft. Aggravated assault refers to an unlawful attack by one person on another for the purpose of inflicting severe bodily injury.

Among Western industrialized nations, the United States long has been considered a particularly violent and crime-ridden society. However, according to the International Crime Victimization Survey, U.S. victimization rates for many personal and property crimes may not be much different from other nations (Mayhew and van Dijk 1997). This survey notwithstanding, the United States continues to have rates of murder and other serious violent crimes that vastly exceed those of other high-income nations.

White Collar and Corporate Crime The greatest economic costs to society from crime come not from those acts commonly referred to as "street crimes"—that is, the personal and property crimes that receive most of the public's attention—but from white-collar and corporate crime. The term *white-collar crime* was coined by Edwin Sutherland, former president of the American Sociological Association. In his 1939 presidential address Sutherland discussed persons of the upper socioeconomic class whose criminal behavior is dealt with much less severely than that of the lower socioeconomic classes (Sutherland 1940). He defined white-collar crime as "crimes committed by a person of high respectability and high social status in the course of his occupation" (Rosoff et al. 2003, p. 2), distinguishing it from crime committed by persons of a lower occupational status ("blue-collar").

Contemporary criminologists have expanded Sutherland's definition to include other types of crimes committed in the course of someone's legitimate occupation. These more recent definitions of white-collar crime usually contain some or all of the following elements: an illegal act, committed by nonphysical means, with concealment or guile, to obtain money or property, or to obtain a business or personal advantage. Criminologists have also begun to recognize corporate crime as a distinct form of white-collar crime, in which the immediate benefits of the criminal behavior go to a corporation rather than to any particular individual.

In the United States conservative estimates place the material costs of white-collar at more than $300 billion annually. In comparison, losses from property theft/damages, cash losses, medical expenses, and lost pay due to injuries suffered or other activities related to other types of crime cost Americans an estimated $15 to $20 billion per year (Rosoff et al. 2003). Similarly, about 16,000 people are murdered each year in the United States, but far more people die as the result of white-collar criminal activities. For example, more than 100,000 people die each year in the United States because of neglect of worker-safety

requirements, on-the-job accidents, and exposure to hazardous materials in the workplace (Reiman 2003).

Organized Crime Organized crime refers to criminal enterprises that specialize in vice crimes such as gambling, prostitution, drug operations, and other correlated illegal activities, including money laundering and racketeering. The origin of organized crime in the United States is often traced to national Prohibition in the 1920s (Brown et al. 2004). The controversial federal ban on alcoholic beverages brought about by the passage of the Eighteenth Amendment to the Constitution and the Volstead Act created opportunities for criminal syndicates to flourish by illegally supplying liquor; later they were able to expand their enterprises into vice and other illicit activities. Today, in spite of international efforts to control organized crime, various sources estimate that international organized crime syndicates draw about $1 trillion in profits each year (Federal Bureau of Investigation 2006).

Victimless Crime Victimless crime refers to illicit behaviors in which the participants do not recognize that anyone involved in the illegal transaction is directly victimized by the deed. These crimes are often referred to as "complainantless" because nobody directly involved is likely to initiate enforcement by complaining to the police. Examples of victimless crimes include prostitution, pornography, illegal gambling, and drug use. *Victimless crime* is a contentious label because, while none of the parties sees themselves as victims, many people argue that society itself is harmed by the prohibited behaviors. For example, it is argued that illegal drug use drives up healthcare costs for everyone, destabilizes families and communities, drains worker productivity, and leads to a number of additional social problems. Further, a meta-analysis of North American studies on prostitution found that prostitutes are very likely to become victims of violence during the course of their work (Farley and Kelley 2000).

In contrast, other theorists argue that victimless crimes should not be considered crimes at all. Rather, they are private behaviors that, when criminalized, represent an overreach of the state's authority. In support of these latter claims, they highlight the variations in prohibitions from state to state and country to country, and societal ambivalence toward many of the prohibited activities. Toward this last point, in 2004 an estimated 19.1 million Americans aged 12 or older were current illicit drug users, spending around $100 billion on illegal drugs. Critics of the criminalization of these behaviors also refer to substances such as alcohol and tobacco that are legally available but cause greater social harm than illicit substances.

THE SOCIAL PRODUCTION OF CRIME

Perhaps the most understudied area of criminology is the role society plays in fostering certain types of crime, such as domestic abuse, hate crime, and sexual assault. Over the past century most societies have changed for the better with regard to recognizing all people as equals irrespective of characteristics such as race, gender, sexual orientation, and religion. However, the extensive histories of inequality and violence have undoubtedly shaped how crimes are defined, and have also played a role in the types of crimes prevalent in any given society. For example, many theorists have argued that the relatively high rates of serious violent crime in the United States can be traced to the culture of violence produced during its particularly hostile settlement: African slavery, Native American genocide, and warfare related to Manifest Destiny all set the stage for a future mired by violence.

Rape presents another example of the social production of crime. For much of world history, patriarchy has been a primary principle around which societies have been structured. Many theorists have argued that this history of socially constructed male supremacy is strongly correlated with rates of male-on-female sexual assault and has shaped how sexual assault has been defined over time. Only in the latter part of the twentieth century did U.S. lawmakers pass laws against marital rape—that is, a rape committed by a husband upon his lawful wife. Before then, the legal standard in the United States was largely consistent with that expressed by Sir Matthew Hale, a chief justice in seventeenth-century England, who wrote "the husband cannot be guilty of a rape committed by himself upon his lawful wife, for by their mutual matrimonial consent and contract, the wife hath given herself in kind unto the husband which she cannot retract" (European Court of Human Rights 1995).

Tolerance for rape in marriage, as well as rape laws that historically have protected the property interests of men over the personal safety of women, may partially explain why rape is so prevalent: each year in the United States nearly 100,000 forcible rapes are reported to police. This figure does not reflect the estimated 100,000 unreported forcible rapes committed against women each year in the United States, nor does it capture lesser-degree sexual assaults that do not meet the reporting criteria required for a charge of forcible rape.

PREDICTORS OF CRIMINAL BEHAVIOR

Contrary to the efforts of hard-line positivist criminologists who seek to identify biological traits that predispose people to criminal behavior, and rational-choice theorists who suggest people commit crimes of their own free will,

the consensus among most criminologists is that sociological factors play a significant role in producing criminal behavior. Criminological research has shown that there is no one socioeconomic factor that has proved an accurate predictor of criminal behavior. However, there are some variables that seem to affect the likelihood, volume, and type of crimes that occur in particular countries, regions, and communities. For traditional street crimes, socioeconomic variables such as median income, educational attainment and access to education, religion, family conditions (e.g., divorce and overall family cohesion), and job availability have been correlated with criminal behavior. Population density and the degree of urbanization, the concentration of youth in a community, community stability (e.g., population turnover rates and commuting patterns), alcohol and drug use, the strength of law enforcement agencies in a particular area, community attitudes toward law enforcement, and even climate and weather have all been shown to affect the number of and types of crime that occur.

Of all of these links, the correlation between alcohol and drug use and crime receives the greatest attention from both academicians and policymakers. According to the Bureau of Justice Statistics, 35 to 40 percent of all convicted offenders under the jurisdiction of U.S. corrections agencies were estimated to have been under the influence of alcohol when they offended. Alcohol use is widespread among those convicted of public-order crimes, the most common type of offense among those in jail or on probation. Among violent offenders, about 40 percent of probationers, local jail inmates, and state prisoners, as well as 20 percent of federal prison inmates, were estimated to have been drinking when they committed the crime for which they were sentenced. Comparatively, in a recent survey of jail inmates nearly 30 percent reported drug use at the time they committed their offense, and an estimated 16 percent of convicted jail inmates committed their offenses to get money for drugs. According to the National Survey on Drug Use and Health, about 40 percent of adults who were on parole, probation, or some other form of supervised release from jail were classified as drug dependents or drug abusers, compared to 9 percent of the general U.S. population (U.S. Department of Health and Human Services 2005).

In the United States, if recent incarceration rates remain unchanged, an estimated one of every fifteen persons will serve time in a prison during his or her lifetime. However, the lifetime chances of a person being sentenced to a prison term differ based on race, ethnicity, and gender. Men stand an 11.3 percent chance of going to prison, compared to a 1.8 percent chance for women. This dramatic difference remains in spite of the significant increases in rates of female criminality since the 1970s. Of even greater concern to criminologists are the differences that exist along racial and ethnic lines. In 2001, approximately 65 percent of U.S. state prison inmates belong to a racial or ethnic minority. African Americans have an 18.6 percent chance of going to prison, Hispanics have a 10 percent chance, and whites have a 3.4 percent of serving time in a prison. Based on current rates of first incarceration, an estimated 32 percent of black males will enter state or federal prison during their lifetime, compared to 17 percent of Hispanic males and 5.9 percent of white males (Bureau of Justice Statistics).

INADEQUACIES OF THE U.S. CRIMINAL JUSTICE SYSTEM

It comes as no surprise to most criminologists that the U.S. criminal justice system is not an effective tool in preventing crime. One reason for this lies in the uncoordinated structure of the system itself. As Barkan and Bryjak note in *Fundamentals of Criminal Justice*, "the U.S. criminal justice system is only partly a 'system' as usually defined. 'System' implies a coordinated and unified plan of procedure. Criminal justice in the United States is only partly coordinated and unified . . . the U.S. criminal justice system is really thousands of systems" (p. 7). Another reason the criminal justice system is largely incapable of preventing crime is that law enforcement, courts, and corrections are reactive institutions; they respond to crimes already committed rather than addressing the root causes of criminal behavior before they fester into crime. This is not a condemnation of the efforts of law enforcement or corrections officers: the criminal justice system simply does not have the resources, expertise, or capabilities to deal with most predictors of criminal behavior.

Politicians and the public present another obstacle in effectively addressing crime. For many reasons, including sensationalized accounts of crime in news and entertainment media, the inability of academics to package criminological research in a publicly palatable fashion, fear promoted by opportunistic political figures, and the unwillingness or inability of the public to inform themselves on crime and justice issues, the public has a distorted image of the crime problem in the United States (Reiman 2003). This distorted image leads to ill-advised, impractical, and ineffective criminal justice policies such as "three-strikes" laws (laws requiring prison terms of 25 years or more for offenders convicted of their third felony or serious crime), mandatory minimum sentencing, and the mandatory charging of juveniles as adults for certain offenses. These policies appeal to politicians because it allows them to appear to be "tough on crime" and makes the public think that the justice system is working. However, these policies represent knee-jerk responses to complex problems of crime; they divert resources from other approaches that carry a greater likelihood of success,

and they take discretion away from sentencing judges and other criminal justice practitioners who have a more accurate sense of the crime problem. Ultimately, the onus falls upon members of the academic community to debunk crime myths, dispel stereotypes regarding deviant groups, and promote responsible criminal justice policy.

SEE ALSO *Deviance; Justice, Social; Labeling Theory; Norms*

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CRIMES AGAINST HUMANITY

SEE *Genocide.*

CRISES, ECONOMIC

SEE *Economic Crises.*

CRISIS, THE

SEE *Du Bois, W. E. B.; National Association for the Advancement of Colored People (NAACP).*

CRITICAL LEGAL STUDIES

SEE *Critical Race Theory.*

CRITICAL RACE THEORY

Critical race theory is an intellectual and political movement within legal studies to transform the legal academy in terms of its analysis of racial inequalities and use the law to transform society in markedly antiracist directions. The intellectual breadth of critical race theory presages a much larger contribution to the social sciences aimed at understanding race relations in more interdisciplinary manners. Arising from the critical legal studies movement, critical race theory is identified in terms of two separate origins stories. Kimberlé Crenshaw (Crenshaw et al. 1995, 2002) identifies its origins in the work of Derrick Bell and the Harvard Law School. Sumi Cho and Robert Westley (2002) identify the development of critical race theory on the West Coast and the law school of the University of California Berkeley, Boalt Hall, and the free speech and Third World student movements that gripped college campuses in the 1960s.

Crenshaw, Richard Delgado, and Angela Harris identify the official beginning of critical race theory (CRT) in

1989, with the first workshop on the topic held in Madison, Wisconsin. Many of the scholars associated with critical race theory attended this and subsequent workshops. The impetus for a gathering of law faculty and students of color was their shared frustration over the colorblind veneer of critical legal studies.

Critical legal studies and critical race theory share a commitment to understanding the role that law plays in shaping social relations. Challenging the centrist model of jurisprudence that assumes law to be a self-contained, objective, rational entity designed to make maximally efficient decisions under the rule of law, critical legal studies scholars argue that law often structures social inequalities. Law operates like a bureaucratic iron cage that limits equal access and shapes economic and political hierarchies in society.

Focusing specifically on racial inequalities, critical race theory scholars share a commitment to viewing the law as exacerbating inequalities while maximizing its transformative potential. The foremost scholar in critical race theory is Derrick Bell, whose legal storytelling method has shifted scholarly boundaries between fiction and nonfiction, autobiography and legal analysis, legal and social science scholarship, and law and society. Bell's *And We Are Not Saved* (1987) and *Faces at the Bottom of the Well* (1992) feature the fictional character Geneva Crenshaw, a civil rights lawyer who enters into a dialogue with Bell the law professor on the role that race continues to play in a post–civil rights era. Similar dialogues have been composed by Richard Delgado and his fictional student Rodrigo in *The Rodrigo Chronicles* (1995) and *The Coming Race War?* (1996).

For Crenshaw, the origins of the 1989 critical race theory workshop rest in the Harvard Law School and Bell's decision to leave Harvard over the law school's unwillingness to tenure a woman of color. The Alternative Course was a course on civil rights, race and law designed to continue Bell's intellectual legacy and push to diversify a homogenously white, male faculty. Harvard law students of color fought hard through the 1980s to study race from a critical perspective and diversify the law school's students, faculty, and curriculum.

Other legal scholars, particularly Cho and Westley, identify the origins of critical race theory in the Free Speech and Third World consciousness-raising student movements of the 1960s. Particularly on the West Coast, university students from a plurality of minority communities came together to challenge the white, male patterns of privilege and reproduction. Harvard was not the only law school where students challenged the patterns of racial exclusion. The Boalt Coalition for a Diversified Faculty orchestrated the Nationwide Law Student Strike on April 6, 1989, to publicize the dearth of faculty of color at the nation's law schools (30 percent had never hired a faculty member of color, and 34 percent had made only a token or single hire as of 1981).

Today, many of the most influential law professors identify with critical race theory or its progenies. Derrick Bell, Sumi Cho, Kimberlé Crenshaw, Jerome Culp, Richard Delgado, Neil Gotanda, Lani Guinier, Ian Haney Lopez, Angela Harris, Kevin Johnson, Charles Lawrence, Mari Matsuda, Margaret Montoya, Michael Olivas, Robert Westley, Alfreda Robinson, Dorothy Roberts, Mary Romero, Jean Stefancic, Francisco Valdes, Patricia Williams, Robert Williams, and Eric Yamamoto are widely recognized scholars associated with critical race theory. This list is clearly not exhaustive but simply illustrative of a few of the many names associated with the intellectual movement.

Critical race theory finds its most influential, current expression in the New York University Press's Critical America Series, edited by Delgado and Stefancic. Critical race theory is also cultivating offshoots that are blossoming into their own research programs. Current offshoots include: LatCrit, addressing Latinos, law, and identity; OutCrit, addressing the legal predicaments of lesbian, gay, bisexual, and transgender communities; critical race feminism, which takes an intersectional approach to law, race, and gender; NatCrit, addressing Native Americans and law; ClassCrit, addressing social class and law; critical white studies, challenging white privileges inscribed in law; and mixed-race crit, addressing law from biracial and multiracial identities.

The topics of inquiry in critical race theory vary but include hate speech, hate crimes, reparations, diversity in higher education and the legal academy, racial categorizations and law, identities theorized in relation to anti-essentialisms and multi-positionalities, corporate social responsibility, immigration enforcement, racial profiling, civil rights legislation, race-based backlash, and retrenchment. Many CRT scholars were instrumental in the successful reparations claim on the part of Japanese American internees. Reparations for African Americans (based on slavery and Jim Crow institutions), Native Americans (artifacts, land, and treaties), Mexican Americans (for mass repatriation during the Great Depression and the temporary worker or Bracero Program from 1942 to 1964), and Jewish Holocaust survivors represent critical race theory movements where law and politics intersect to advocate for social change.

The contributions to the social sciences include new approaches to narrative inquiry, the legal storytelling tradition, identities, and politics. The narrative storytelling tradition and its validation in the academy serve as major contributions not only to legal studies but to most fields of the humanities and social sciences. The fundamental

epistemological claims of whose knowledge is deemed valid, how we come to "know truth," and the privileged position of outsiders in understanding power relations are revolutionary contributions to an alternative philosophy of science that informs the social sciences.

Finally, fields such as education and interdisciplinary studies in law and society have incorporated critical race theory into their analytical frameworks. University of Wisconsin educators Gloria Ladson-Billings and William Tate's 1995 call for the application of critical race theory to the fundamental issues of race in education has been answered by scholars such as Sofia Villenas, Tara Yosso, and Daniel Solorzano.

SEE ALSO *Bracero Program; Critical Theory; Holocaust, The; Jim Crow; Narratives; Politics; Race; Racism; Slavery; Social Constructs; Social Science; Storytelling; Whiteness*

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CRITICAL THEORY

The Frankfurt school of critical theory is one of the major schools of neo-Marxist social theory, best known for its analysis of advanced capitalism. Opposed to the determinism and scientism of Soviet Marxism, critical theory challenged the philosophical foundations of Marxist theory, and formulated an original analysis and diagnosis of the major changes in social structure that took place in the twentieth century.

The philosopher and social theorist Max Horkheimer (1895–1973) was appointed director of the Institute for Social Research in 1930, and shifted its emphasis from historical research to a project of interdisciplinary social research with an empirical intent. Horkheimer wanted to know why the working class supported the Nazi regime when it was not in their interest to do so. He rejected the deterministic view that consciousness was a product of class position, and looked to integrate psychology, more specifically Sigmund Freud's (1856–1939) psychoanalysis, into a critical theory of society. To carry out his research program, Horkheimer brought into the institute Erich Fromm (1900–1980), a trained psychoanalyst, who fused psychoanalysis with social theory. Horkheimer further expanded the focus of research to include Leo Löwenthal (1900–1993), Herbert Marcuse (1898–1979), later Theodor Adorno (1903–1969), and the lesser-known figures Frederich Pollock (1894–1970), Franz L. Neumann (1900–1954), and Otto Kirchheimer (1905–1965).

The psychological dynamics of rising authoritarian attitudes were the focus of the institute's early empirical research. A larger project that included the study of working-class attitudes toward authority remained uncompleted when the institute fled Germany to avoid the Nazis and went first to Switzerland and then was relocated at Columbia University in New York.

The term *critical theory* is often thought of as a code word to avoid the association of the institute's research with Marxism. *Critical theory*, however, also drew upon German idealism from Immanuel Kant (1724–1804) onward. Kant saw critique as a theory of the scope and limits of understanding that combated dogmatic conceptions of absolute knowledge. The Hegelian tradition came to see critique as a reflective self-consciousness that encompassed both self and social formation in one grasp. Both were crisis-ridden processes of struggle in which humans won their freedom through freedom from necessity and social domination.

Horkheimer rejected the idealism of G. W. F. Hegel's (1770–1831) conception, but saw critical theory as a philosophy of engaged theorizing. Traditional theory took an objective observer perspective. It saw the ideal of theory construction as the achievement of a deductive system of propositions that are systematic and logical. In contrast, critical theory has an interest in freedom from unnecessary constraint and the improvement of practical life. It is a partisan in the struggle for a better life. Theory is tied to emancipation and freedom. Marcuse especially emphasized the Hegelian elements found in Karl Marx's (1818–1883) early manuscripts (then just discovered) and their link to problems of alienation and reification.

The second phase of critical theory, which began at the end of the 1930s, was concerned with the great transformations in economic structure that were occurring in advanced capitalist and socialist societies, such as the rise

of state capitalism. Critical theory linked the increasing concentration of economic power by large corporations and government to the need for state administrative activity to support a crisis-ridden economy. Governments were not watchman states. They had to intervene directly in the economy to assure the conditions of successful economic accumulation.

The Frankfurt school analysis of late capitalism, however, went beyond economic analysis to depict state intervention in socialization processes. Intervention in social processes like schooling and social welfare became necessary in order to effectively manage state capitalism. The school also analyzed the emergence of mass media, which developed sophisticated modes of persuasion and manipulation in order to create a more compliant and agreeable citizenry. The Frankfurt school developed a pessimistic diagnosis of the power of advanced capitalism to control the populace and limit the possibilities of constructive social transformation.

The culmination of this stage was the publication of Horkheimer and Adorno's *Dialectic of Enlightenment* (1944). Here, critical theory becomes a critique of instrumental reason. For Horkheimer and Adorno, reason (and science) no longer retained its link to human freedom, and had, in becoming instrumentalized, transformed into a force for domination and oppression. Marx's thought itself, and not merely its orthodox deformations, were sometimes guilty of a technological determinism. Horkheimer and Adorno, however, unlike some poststructuralists, never fully rejected reason, or looked to a realm of the ineffable or irrational, but were keenly aware of the paradoxes and contradictions of modern instrumental rationality.

Horkheimer and Adorno looked to other dimensions of reason that were resistant to the forces of instrumental rationalization, notably to art, to find potentials for freedom. A somewhat different and more positive evaluation of the role of mass culture and art was developed by Walter Benjamin (1892–1940), a literary theorist who, though marginal in the institute, came to exert a strong influence on Adorno's aesthetic theory.

Adorno's work eclipsed Horkheimer after their return to Germany in 1950. In *Negative Dialectics* (1966) and *Aesthetic Theory* (1970), Adorno formulated a critique of reason using the power of the negative. The latter equated rationalization with reification. Positive reason, which always has a residue of instrumentality, is contrasted with a dimension of reason that can never be fully specified but holds truth content.

In the United States, Marcuse made some significant contributions to critical theory in the 1950s and 1960s. Marcuse's *Eros and Civilization* (1955) was perhaps the school's most successful fusion of Marx and Freud. Marcuse developed a dialectic of civilization that linked labor and economic scarcity with social and psychic repression. Marcuse's acceptance of the death instinct, however, was controversial. His *One-Dimensional Man* (1964) and *An Essay on Liberation* (1969) continued the Frankfurt school's critique of the pathology of technological reason. One-dimensional reason represented a global project of instrumental reason that suppressed the aesthetic aspects of sensibility and feelings. Marcuse's more politically charged version of the dialectic of enlightenment struck a chord with the New Left in the United States and Europe.

Jürgen Habermas is the preeminent figure in the second generation of critical theory. Habermas modified key aspects of critical theory, especially the critique of instrumental reason, and made significant contributions to a critical theory of democracy, a task neglected by earlier theorists. Habermas's first book, *Structural Transformation of the Public Sphere* (1962), took issue with the first-generation reading of the freedom-creating potentials of liberalism. Habermas depicted the rise of a sphere of civil society in early modern Europe as a public sphere of free discussion of political affairs. While Habermas concurred in broad terms with the critique of instrumental reason, he did not equate rationalization with reification. Habermas argued that instrumental reason had a legitimate role and was not inherently repressive. Reliance on technical expertise leaves out the elements of public debate and discussion.

In *Knowledge and Human Interests* (1968), Habermas reformulated Horkheimer's idea of emancipatory social theory. Habermas developed three distinct cognitive interests—instrumental, communicative, and emancipatory—and rejected the idea that critical reason is found in negation alone. Returning to a more Hegelian-perspective critique requires an intersubjective process of understanding that emphasizes critical reflection on the formative processes of self and society. The emancipatory interest is a form of reflection on coequal processes of social formation (instrumental and communicative) that frees action from domination.

Theory of Communicative Action (1981) was the first systematic statement of Habermas's mature theory of society. The cognitive interests were replaced by a broadly interpretive social theory that distinguishes two basic forms of social action: instrumental and communicative. The first is action oriented toward success. The second is action oriented toward mutual understanding.

Habermas's revision of Marx centers on the conflict between intersubjective forms of understanding and the impingement of system imperatives on social life. In complex modern societies, some functions, such as the economy, have become detached from moral and political

regulation in order to efficiently carry out social reproduction. However, in capitalism this rationalization process is one-sided. It replaces realms of communicative action that are constitutive of human subjectivity and intersubjectivity with system imperatives. Habermas coined the phrase "colonization of the life world" to indicate the way in which these communicative spheres are controlled and reified by instrumental and functional imperatives. Reification involves threats to the integrity of communicative subjectivity in the contradictions between democracy and capitalism in modern society.

Most of Habermas's later work has focused on the formation of a cosmopolitan legal, moral, and political theory. This emphasis maintains a tenuous link to emancipatory theory and social crisis. Habermas's discourse ethics revises the Kantian principle of universalization in light of intersubjective aspects of communicative rationality. Kant's categorical imperative applies to the individual who reflects by himself or herself. It asks us to "act only according to a maxim by which you can at the same time will that it shall become a general law" (Kant, 39). In contrast, Habermas's discourse ethics requires a social, intersubjective perspective. Participants have to reflect on the consequences for all those potentially affected by a norm: "for a norm to be valid, the consequences and side effects of its general observation for the satisfaction each person's interests must be acceptable to all" (Lenhardt and Nicholson, 197). The only norms that can be valid are those which can be accepted by all participants in discourse.

In *Between Facts and Norms* (1992), Habermas extends the communicative basis of discourse theory to democratic constitutionalism. Communicative freedom in Habermas's view incorporates aspects of liberal democracy and republican theory. It stresses the self-determination emphasized by liberal theory and the self-realization of republican theories.

Many critics also see Habermas's moral and political theory as a return to a Kantian moral theory. It can, however, also be viewed as an attempt to fuse Kantian insights into Hegelian notions of concrete intersubjectivity. In addition, post-structuralists reject the idea of an inclusive intersubjective foundation for ethics, politics, and law. For Jacques Derrida (1930–2004), for example, law is a closed system instituted through violence. Genuine intersubjectivity is rooted, in contrast, in care and compassion for the other, which is always beyond law and justice. On this reading, Habermas replays the earlier notion of a unified social subject. Habermas's use of systems theory in *Theory of Communicative Action* has also been criticized by interpretive social theorists who believe that Habermas's theory of society is inconsistent with his general commitment to interpretive and critical social science.

SEE ALSO *Alienation; Critical Race Theory; Cultural Capital; Culture; Derrida, Jacques; Discourse; Ethics; Frankfurt School; Freedom; Freud, Sigmund; Habermas, Jürgen; Hegelians; Ideology; Kant, Immanuel; Law; Liberalism; Marcuse, Herbert; Marx, Karl; Marxism; Neumann, Franz; Psychoanalytic Theory; Psychology; Social Psychology; Working Class*

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Brian J. Caterino

CRITICAL WHITE STUDIES

SEE *Critical Race Theory; Whiteness.*

CROATS

Croats are a Slavic people, but theories of their origins are widely disputed. The most widely accepted "Slavic" theory of the origin of the Croats traces their migration starting in the seventh century from the area north of the Carpathian Mountains into the western Dinaric Alps. Croats are predominantly Roman Catholic. The name Hrvat (Croat) was recorded for the first time on the Adriatic coast in 852.

The earliest Croatian state was the Principality of Dalmatia. In 925 the Croatian duke of Dalmatia, Tomislav of Trpimir, united all Croats. He organized a state by annexing the Principality of Pannonia. Throughout history, Croats were subjected to forced Magyarization as well as Germanization. After World War I, most Croats united within the Kingdom of Slovenes, Croats, and Serbs. The state was transformed into the Kingdom of Yugoslavia in 1929, and the Croats became part of a new nation called the Yugoslavs or South Slavs. In 1939 the Croats attained a high degree of autonomy when the Banovina of Croatia was created, which united almost all ethnic Croatian territories within the kingdom. During World War II, the Axis created a puppet state—the State of Croatia, led by fascists whose goal was an ethnically clean Croatian state. At the same time, many Croats joined the antifascist partisan movement led by the Communist Party of Yugoslavia.

Croats have maintained a strong culture and sense of national identity, and the Roman Catholic Church has contributed to this significantly. The most distinctive features of Croatian folklore include *klapas* of Dalmatia (*klapa*, meaning "company" or "ensemble," refers to folksinging groups) and the orchestras of Slavonia. Folk arts are performed at special events and festivals.

In the early twenty-first century, in addition to their homeland, where about 4 million Croats live, 600,000 Croats live in Bosnia and Herzegovina, while 100,000 to 200,000 live in other states of the former Yugoslavia. The largest immigrant groups live in western Europe, primarily Germany, Italy, and Sweden. Outside Europe, Croats live in the United States and Canada as well as in Argentina, Chile, Peru, and Bolivia. The earliest Croatian settlement in America is dated to 1573, when a peasant uprising was crushed in Croatia and many of them left. There are also large Croatian communities in Australia, New Zealand, and South Africa.

The Croatian national identity, which was suppressed in the name of the preservation of an overarching Yugoslav national identity during the cold war, experienced a new resurgence and played a crucial role in Croatia's involvement in the Yugoslav war in the 1990s. This resurgence of Croatian nationalism and the desire for the creation of a nation-state caused the rebirth of historical ethnic tensions with the neighboring Serbs. Part of the reemergence of the national identity was the Croat campaign to distinguish Croatian as a language separate from the previously united Serbo-Croatian language.

SEE ALSO *Ethnic Conflict; Identity; Nationalism and Nationality; Roman Catholic Church; Serbs*

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SEE *Mexican-American War.*

CRONBACH'S ALPHA

SEE *Validity, Statistical.*

CRONBACH'S COEFFICIENT

SEE *Psychometrics.*

CRONY CAPITALISM

The term *crony capitalism* refers to forms of capitalism in which leading businessmen enjoy close personal relationships with key politicians. Crony capitalism is often associated with corruption and many commentators have seen it as a major obstacle to Third World development. Commentators often contrast crony capitalism with highly idealized neoclassical models of capitalism. In actuality, however, significant linkages between political elites and business classes can be found in almost all capitalist regimes, past and present, and the real task is to identify the variety of ways in which such linkages either facilitate or hinder economic development.

In many underdeveloped countries crony capitalism may be perceived both as corrupt and as antinational. Crony capitalists often belong to ethnic minority groups whose activities have been historically concentrated within the business or financial sector and who in some cases had enjoyed protection under earlier colonial regimes. As in the cases of the Lebanese in Sierra Leone, Indians in Kenya, and the Chinese throughout Southeast Asia, perceived government favoritism toward entrepreneurial minorities may lead to fierce ethnic conflicts and the shattering of polities.

Crony capitalism may result in corruption. But corruption's effects on economic development need not necessarily be lethal and corruption is certainly not unique to modern Third World nations. While the World Bank and the U.S. government have intervened to make aid conditional on struggles against corruption, relatively little attention has been given to historical studies of the effects of corruption on economic development. American civic life in the era of the Second Industrial Revolution between 1870 and 1914 was immensely corrupt, though the effect of this corruption on U.S. economic growth remains largely unexplored. In *The Shame of the Cities* (1902) the social reformer Lincoln Steffens documented many cases of corrupt ties between businessmen and politicians during the era of the so-called Robber Barons. Steffens condemned the "shamelessness" of municipal politics in St. Louis, a politics characterized by "government of the people, by the rogues and for the rich." Recent examples of cronyism show that the spirit of the Robber Barons continues: In 2001 the Enron case revealed collusion between politicians and corporate executives, while 2006 saw the conviction of the lobbyist Jack Abramoff, who had served as an intermediary between businessmen and key congressmen.

Some sociologists and political scientists have even maintained that some forms of crony capitalism may be indispensable for capitalist development, particularly when those forms of cronyism help prevent untrammeled corruption. As modern China shows, personal political networks tying central government leaders to regional industrialists may be invaluable in combating entrepreneurial corruption. China's increased movement away from state-owned enterprise has greatly increased opportunities for corruption at the higher ranks of society. Interestingly, however, the emerging Chinese culture of corruption so far seems mainly limited to regional levels, as the political elite that rules China at the national level has resisted absorption into this culture. Much of the success of the current Chinese economy may be due to the combination of local businessmen adept at adapting laws to local conditions and an uncorrupted political elite with ties to regional economic leaders that imposes limits on regional corruption and maintains a legal framework on which local and foreign businessmen can rely.

Cronyism has been an important element of capitalism everywhere, but the relationship between cronyism, business, and politics and cronyism's effect on development vary greatly from nation to nation.

SEE ALSO *Capitalism; Networks*

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Michael Hanagan

CROSS OF GOLD

In a passionate speech to the Democratic national convention on July 9, 1896, William Jennings Bryan (1860–1925) used the "cross of gold" metaphor to attack the U.S. gold standard and defend the "free coinage of silver." Bryan's nomination as the presidential candidate of the Democratic Party made the national currency the central issue of the fall election. Bryan's defeat in the landmark 1896 election ushered in a new political era in American politics.

The federal government had begun to restrict the supply of money in the United States after the Civil War (1861–1865). In 1879 the U.S. government effectively adopted the gold standard, pegging the value of the dollar to a fixed amount of gold. In a nation with a growing pop-

ulation and an expanding economy, this restrictive monetary policy helped force prices downward. Prices for agricultural commodities fell dramatically from the late 1860s to the late 1890s. Falling prices created hardship for many farmers, especially in the South and West. Indebted farmers in these areas resented the flow of capital to creditors in northeastern cities. Naturally, these farmers blamed the gold standard as the reason for their problems. They demanded that the government circulate more currency to alleviate these pressures. At first, they urged the government to support "greenback" (paper) dollars. By the 1870s, they were insisting on the "free coinage" of silver, that is, the circulation of silver and silver-backed currency, valued at a sixteen to one ratio to gold-backed currency. Their resentment of the gold standard fueled the growth of the populist movement in the late 1880s and the 1890s.

The economic depression of 1893 discredited gold supporters in the Democratic Party because it occurred during the presidency of Democrat Grover Cleveland (1837–1908), a staunch defender of the gold standard. The successes of the silver-supporting People's Party in the 1892 election strengthened the influence of Democrats who supported silver in 1896. During a crucial convention debate over the currency plank at the 1896 Democratic national convention, thirty-six-year-old Bryan, a silver supporter and former U.S. representative from Nebraska, gave an electrifying speech for silver. Bryan insisted to gold supporters that "you shall not press down upon the brow of labor this crown of thorns, you shall not crucify mankind upon a cross of gold." Nominated for president on the fifth ballot, Bryan ran a campaign of unprecedented energy, traveling eighteen thousand miles and making over six hundred speeches. Gold standard supporters dominated the 1896 Republican convention and nominated Ohio governor William McKinley (1843–1901) for president, thus making currency the central issue of the election. Bryan lost the popular vote by 4 percent and the electoral college 271 votes to 176. Though Bryan won a wide swath of southern and western states, McKinley carried the more densely populated states of the Midwest and Northeast. The 1896 election revitalized and realigned the American party system, creating a "fourth party system," in which Republicans dominated most national elections. During McKinley's presidency, the U.S. formally adopted the gold standard.

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David Brian Robertson

CROWDING HYPOTHESIS

Societies have been stratified on the basis of income since ancient times. One of the main axes of stratification is the occupational hierarchy. Evidence of the nonrandom distribution of social groups among occupations is apparent in labor markets around the world (e.g., secretaries are disproportionately female). Social groups that are restricted from access to the range of occupations tend to concentrate in those occupations with the lowest economic rewards. For example in *Black Metropolis: A Study of Negro Life in a Northern City* (1993), St. Clair Drake and Horace R. Cayton noted that in 1930, 56 percent of black females in Chicago were servants of some kind.

The *crowding hypothesis* originated in the United States during the women's union movement of 1890 to 1925. In 1922 British economist F. Y. Edgeworth (1845–1926) argued that women's lower pay was explained by the fact that women crowded into a small number of occupations. Unions had excluded women from "men's work," causing an oversupply of female workers and reducing the price (wage) for their labor. Thus crowding was caused by institutional barriers that artificially distorted the operation of the labor market, resulting in lower wages for some groups and higher wages for others. The crowding hypothesis received little attention until 1971 when economist Barbara R. Bergmann published a pathbreaking paper called "The Effect on White Incomes of Discrimination in Employment." She estimated that the integration of black male blue-collar workers into white occupations would have a negative effect on white male incomes. In 1974 Bergmann analyzed crowding among female workers and since then economists have considered occupational segregation by sex to be a major determinant of the gender disparity in wages.

The empirical evidence is clear that crowding benefits some groups by reducing competition for the most desirable occupations. This helps to explain why occupational segregation is so universal. The crowding hypothesis is simple yet very powerful because it employs the fundamental laws of economics, supply and demand, to explain intergroup wage disparity. Sir William Arthur Lewis

(1915–1991), a Nobel-prize winning economist, stated in *Racial Conflict and Economic Development* (1985) that "The essence of discrimination is its measures to restrict relative numbers in higher paid occupations. Race is not a necessary factor; such measures are found even in homogenous societies" (Lewis 1985, p. 43). Discrimination occurs when devices such as unions and credentialing processes restrict entry; it becomes imbedded in the system and is not necessarily intentional. Lewis theorized that restrictions on access to preferred occupations can render groups noncompeting, making it easier to deny discrimination.

A critique of the crowding hypothesis is that crowding could arise from factors other than discrimination. Women may prefer jobs considered "women's work," such as the nurturing occupations of nursing and childcare. Human capital factors such as education and skill level may also influence crowding. Another critique is that market competition should eliminate crowding as profit-seeking employers replace high-wage workers with low-wage workers from crowded occupations. In "The Crowding Hypothesis" (2005) Timothy Bates and Daniel Fusfield reported little evidence of this. They consider racial crowding self-perpetuating because it traps workers in occupations requiring little skill and with high unemployment rates. Workers have little incentive to acquire skills and racial hostility is mutually reinforced—thus crowding is both the cause *and* effect of "racial antagonisms and the lack of human capital on the part of blacks and other minority groups" (Bates and Fusfield 2005, p. 109). The crowding hypothesis offers a most useful way to think about the problems of urban labor market structures (e.g., low wages, little training, and job insecurity) impacting low-income communities of color. Crowding plays an important role in the black unemployment rate, which has been double the white rate since the mid-1950s.

There is ample empirical evidence linking occupational crowding and lower wages, though most studies concern sex segregation. Estimates are that 12 to 37 percent of the U.S. gender wage gap is attributable to crowding. Analytical techniques for measuring this relationship have become more sophisticated to control for worker characteristics and adjust to data limitations, statistical bias, and other problems. Evidence from detailed, matched employer-employee datasets with sex, occupation, industry, and work establishment data supports the crowding hypothesis. Beginning in the 1970s women's opportunities in white-collar and service employment widened. While black male and female occupational patterns (and wages) have improved as well, especially in public sector employment, white males still dominate high-skill blue collar occupations (e.g., carpenter). Blacks have made less progress in white-collar managerial and executive positions. In "Male Interracial Wage Differentials: Competing Explanations" (1999) Patrick L. Mason showed that wage discrimination accounts for 21 percent of the black male/white male wage differential and 17 percent of the Latino/non-Hispanic white male wage differential. However once the differences in the race-gender employment densities of the occupations are accounted for, the black male/white male unexplained wage differential declines to 7 percent, while the Latino/non-Hispanic white male unexplained wage differential declines to 11 percent. Hence crowding accounts for 14 percent of the black/white male wage differential and 6 percent of the Latino/white male differential. Further for all groups individual wages rise with white employment density, though white males receive the largest boost to individual wages.

Affirmative action policies have widened occupational choice for women and racial minorities. Continued occupational crowding, however, reveals the need for more rigorous enforcement of equal employment law. The notion of comparable worth (equal pay for different work) derives from the crowding hypothesis, but policies to achieve it are complicated and face stiff resistance. Some view economic growth as the most effective remedy, however this too has limits. Crowding is increasingly important as an impediment to equality and efficiency in a globalized economy.

SEE ALSO *Affirmative Action; Credentialism; Discrimination; Drake, St. Clair; Economics, Stratification; Hierarchy; Human Capital; Inequality, Gender; Inequality, Racial; Lewis, W. Arthur; Occupational Status; Segregation; Stratification; Unemployment; Unions; Work and Women*

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Karen J. Gibson

CROWLEY, ALEISTER

SEE *Magic.*

CRUSADES

SEE *Church, The.*

CUBAN MISSILE CRISIS

Perhaps no single event in the history of the cold war presented as great a challenge to world peace and the continued existence of humankind as the thirteen days of the Cuban Missile Crisis in October 1962. The outcome of the crisis has been linked to the development of a direct Teletype "hotline" between Moscow and Washington, D.C., the initial stages of superpower détente, and the ratification of a bilateral atmospheric testing ban on nuclear weapons.

LEADING UP TO OCTOBER 1962

Despite the failed U.S. effort to overthrow Cuban dictator Fidel Castro during the Bay of Pigs invasion in April 1961, President John F. Kennedy continued to make Castro's removal a primary goal. In November 1961, Kennedy initiated Operation Mongoose, a covert operations plan designed to incite dissident Cubans against Castro. Perhaps as a result, Castro, who enjoyed the Soviet Union's political and military backing, began receiving regular covert shipments of Soviet arms, ostensibly for defensive purposes only.

SOVIET NUCLEAR MISSILES IN CUBA

On October 14, 1962, a U2 spy plane, flying a routine Strategic Air Command mission over Cuba, snapped a series of photographs that became the first direct evidence of Soviet medium-range ballistic nuclear missiles in Cuba. These missiles clearly constituted an offensive weapons buildup on the island.

On the morning of October 16, National Security Adviser McGeorge Bundy presented a detailed analysis of the photographic evidence to Kennedy at an Oval Office briefing. Just before noon, Kennedy convened the first meeting of fourteen administration officials and advisers. The group became known as the Executive Committee of the National Security Council, or ExComm.

Time was of the essence. ExComm members received estimates that the Soviet missiles could be at full operation within fourteen days, with individual missiles readied within eighteen hours under a crash program. Most missiles were determined to be SS-4s, with a range of approximately 1,100 nautical miles (1,266 statute miles). This placed major American cities, including Dallas and Washington, D.C., within range of a strike. Later, photographic evidence concluded that several SS-5s, with a range of 2,200 nautical miles, were also included in the Soviet arms shipments.

For the next seven days, ExComm debated the merits of three general approaches to the developing crisis, all while keeping a tight public lid on the Cuban discovery. The first was a surgical airstrike targeting as many missile sites as possible. The second was an air strike followed by a U.S. military invasion of Cuba. The third was a blockade of Soviet ships thought to be carrying additional materials in support of the offensive weapons program.

In an attempt to allow diplomatic approaches an opportunity to work, Kennedy opted for the blockade, which was termed a quarantine so as to avoid warlike denotations.

THE QUARANTINE

On October 22, in anticipation of a Cuban and/or Soviet reaction to the quarantine, the joint chiefs of staff placed U.S. military forces worldwide on DEFCON 3 alert. At five that afternoon, Kennedy met with seventeen congressional leaders from both major parties to discuss the situation. The president received some support for the quarantine, but notable exceptions included Senators J. William Fulbright and Richard B. Russell, both of whom believed that the strategy would not compel the Soviets to abandon their missiles.

By six that evening, Secretary of State Dean Rusk met with the Soviet ambassador to the United States, Anatoly Dobrynin, and presented the ambassador with an advanced copy of Kennedy's address. At seven, Kennedy addressed the American public in a seventeen-minute speech. His major objective, in addition to calling public attention to the Soviet missiles in Cuba, was to outline the U.S. response—the quarantine of all offensive military equipment under shipment to Cuba.

Soviet premier Nikita Khrushchev's reply to Kennedy's speech arrived on the morning of October 23.

Premier Khrushchev's letter insisted that the Soviet missiles in Cuba were defensive in nature, and that the proposed U.S. response constituted a grave threat to world peace.

Kennedy was concerned that Berlin, which was divided into segments of East and West at the end of World War II, would become a focal point for Soviet retaliation. As such, he directed the Central Intelligence Agency (CIA) to develop plans for protecting Berlin in the event the Soviets mounted a quarantine around the city.

By the evening of October 23, Kennedy and ExComm had new worries much closer to home. Earlier in the day, the CIA began tracking several Soviet submarines unexpectedly moving toward Cuba. This made the Navy's job of conducting the quarantine more complicated, as it now had to track the changing position of the Soviet subs in order to ensure the safety of its own vessels.

The quarantine, which received the unanimous backing of the Organization of American States, went into effect at 10:00 a.m. on October 24.

Early morning intelligence on that day suggested that sixteen of the nineteen Soviet cargo ships identified as Cuban bound were reversing course. The remaining three, however, were nearing the quarantine line, including the *Gagarin* and *Komiles*. Naval intelligence reported that one of the Soviet subs had taken a position between the two ships. Kennedy, though wishing to avoid conflict with the sub, authorized the aircraft carrier USS *Essex* to take whatever defensive measures were necessary against the submarine. This was perhaps the most dangerous moment of the cold war, as both superpowers were armed and mere moments from turning the war hot. Just prior to any armed hostilities, however, both Soviet ships stopped dead in the water, and eventually reversed course.

Realizing that a diplomatic resolution to the crisis was imperative, Kennedy and senior ExComm advisers began to consider offering the Soviets a missile trade. Specifically, if Khrushchev pulled his missiles out of Cuba, the United States would dismantle and remove its Jupiter missiles in Turkey.

RAISING THE STAKES

October 25 found the U.S. ambassador to the United Nations, Adlai Stevenson, publicly confronting the Soviet ambassador, Valerian Zorin, in front of the United Nations Security Council. The Soviet Union had, until this date, denied that offensive Soviet missiles were in Cuba. At this point, Stevenson showed the council, and the world, several reconnaissance photographs of the Cuban missiles.

This triumph was short-lived. By five that evening, CIA director John McCone reported to ExComm that some of the Cuban missiles were now operational.

By the morning of October 26, Kennedy was convinced that only an invasion of Cuba could succeed in removing the missiles. ExComm initiated preliminary civil defense measures for the American Southeast, while the State Department began to devise plans for establishing a new civil government in the wake of Castro's deposing. By that afternoon, the U.S. military was poised to conduct a land invasion. Secretary of Defense Robert McNamara advised Kennedy to expect heavy American casualties in the campaign.

At six that evening, the State Department received a letter from Khruschev proposing that the U.S. declare it would not invade Cuba in exchange for the Soviets dismantling the missiles. Later that evening, Attorney General Robert F. Kennedy, the president's closest adviser and brother, held another in a series of private meetings with Dobrynin. It was at this meeting that Kennedy, with the president's approval, began to specifically discuss the option of a Turkey-for-Cuba missile trade.

Any positive momentum from this meeting stalled on the morning of October 27. A second letter from Khruschev arrived at the State Department around eleven. This letter replaced the noninvasion pledge with the requirement of a complete removal of U.S. missiles in Turkey. This raised the stakes for the Kennedy administration, as any public agreement on the Jupiter missiles would appear as a quid pro quo, with the U.S. forced to develop its security and foreign policies under severe threat.

The situation deteriorated even further when a U2, piloted by Major Rudolf Anderson, was shot down over Cuba around noon. Sensing that he was losing control of the crisis, Kennedy decided not to retaliate against the anti-aircraft site that fired on Anderson, much to the consternation of his military leaders.

At an ExComm meeting later that evening, the idea of responding only to the offer in Khrushchev's first letter—the noninvasion pledge—while ignoring the terms of the second letter, was debated. President Kennedy eventually came to adopt the proposal. Robert Kennedy was sent to discuss the terms with Dobrynin, which included an agreement not to publicly disclose the Turkey-for-Cuba missile trade, so as to avoid the appearance of a quid pro quo.

MAXIMUM DANGER AVERTED

President Kennedy, while hopeful that a deal would be reached, activated twenty-four Air Force units in preparation for a Cuban invasion to occur no later than October 29.

A CIA update in the early morning of October 28 claimed that all MRBM sites in Cuba were now operational. At nine that morning, Radio Moscow broadcast

Khrushchev's reply to the terms outlined to Dobrynin the night before. In it, Khruschev stated that all Soviet missiles in Cuba would be dismantled and crated. No public mention of the missile trade deal was made. The Cuban Missile Crisis was over, and a world war with nuclear weapons had most likely been averted.

Many historians generally view President Kennedy's performance in the crisis as exemplary, and worthy of emulation by all chief executives. However, some revisionary scholars have criticized Kennedy's interpretation of the threat posed by the Cuban missiles as an overreaction not warranted by a sober assessment of Soviet intentions and strategic goals.

UNDERSTANDING THE CRISIS

Of the many scholarly works devoted to understanding the dynamics of the missile crisis, and its effects on policymakers on both sides of the Atlantic, is Graham T. Allison and Philip Zelikow's *Essence of Decision* (1999). This volume has perhaps the greatest continuing impact for scholars and other interested persons alike. Allison analyzes the crisis through three distinct models. Model One assesses foreign policy from the rational actor approach, which considers each state as an individual or person, and attempts to understand actor behavior according to specified risks and payoffs. Model Two examines the crisis from the vantage point of the individual agencies involved, while Model Three attempts to capture the individual interests and proclivities of the major players involved.

Allison and Zelikow use the unique exigencies presented by the crisis to suggest that the models are incompatible in understanding the strategic calculus between states. Yet their description leaves the models open to the argument that they are not able to account for the novel and immediate adaptations that events, such as the Cuban Missile Crisis, require of government actors. At the same time, it is not clear that there is much true difference between the models, especially two and three, as all three are steeped in the rational choice tradition. Thus, while the examination does help to shed some light on the internal dynamics inherent in government decision-making processes, the uniqueness of the Cuban Missile Crisis and the relative inability of the three models to capture the dynamics at work in both Washington and Moscow serve as a reminder of how critical, and potentially catastrophic, a period the thirteen days in October 1962 truly were.

SEE ALSO *Castro, Fidel; Cold War; Communism; Democracy; Kennedy, John F.; Khrushchev, Nikita; Union of Soviet Socialist Republics*

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CUBAN REVOLUTION

The Cuban revolution headed by Fidel Castro (b. 1926) began on January 1, 1959, after Cuban military dictator Fulgencio Batista (1901–1973) fled the country. Since that time Cuba has been headed by a nationalist, revolutionary government. The prime mover of the revolutionary process has been Fidel Castro himself, although his brother Raúl Castro took over in August 2006 when the 80-year-old president underwent major abdominal surgery.

THE SEEDS OF REVOLUTION

To understand the Cuban revolutionary process, it is necessary to appreciate the philosophy of Cuban patriot and writer José Martí (1853–1895), whose radical anti-imperialist thought was adopted by the Castro government several decades after Martí's death. Martí was the leader of the movement for Cuban independence from Spain and was killed in battle in 1895. It is also crucially important to bear in mind the United States's role in Cuba. After Martí was killed fighting against Spanish forces, the war for Cuban independence dragged on for three more years. Under U.S. president William McKinley (1843–1901), and following the destruction of the USS *Maine* in Havana harbor, U.S. troops intervened, and three months later Spanish forces surrendered. This liberation war (1868–1878, and 1895–1898) is often referred to as the "Spanish American War," an act of historical oversight, since the name ignores the Cuban role in the struggle for independence and the death of over 200,000 Cubans.

From 1899 to 1902 the U.S. military ran the country, under the leadership of two American generals. U.S. investment grew quickly in agriculture, banking, mining,

transportation, and utilities, and by 1911 U.S. investment had reached about $200 million. U.S. military intervention also occurred on several occasions, to shore up governments friendly to Washington. The end result was a profound frustration among many Cubans with U.S. domination of the political and economic systems. This combination of the radical thought of José Martí and a sense of frustrated nationhood brought about the overthrow of Cuban dictator Gerardo Machado (1871–1939) in 1933, and it would later result in the downfall of Batista in 1958.

Fidel Castro was already well known in Cuba before 1959. He had been a candidate for political office in 1952, though those elections never took place since Batista mounted a military coup. Afterwards the young Castro decided to use arms as a means of taking power and attacked the second largest military garrison in Santiago, Cuba, on July 26, 1953. Castro was arrested, but his prison sentence was commuted in an amnesty given by Batista, a costly mistake for the dictator. Castro laid out many of his basic tenets in his defense speech at trial (later published as *History Will Absolve Me*). After his trial Castro left for Mexico where he trained approximately eighty men (including Argentine physician and revolutionary leader Ernesto "Che" Guevara [1928–1967] and his brother Raúl Castro), and on December 2, 1956, they arrived in Cuba in a small yacht called the *Granma*. Castro and his followers took to the mountains where they fought a relentless guerrilla campaign until December 31, 1958, when Batista fled Cuba.

CASTRO SEIZES POWER

There has been much debate as to the nature of the political thought of Fidel Castro when he took over as leader of Cuba in 1959. For some he was a committed Marxist, determined to install a Communist dictatorship in Cuba. Others saw him as a nationalist radical, intent on bringing social justice to Cuba after another mammoth struggle in which an estimated 30,000 were killed—many as the result of acts of barbarism by Batista's forces.

There were several stages in the revolutionary process. The initial years witnessed a political radicalization, with massive social divisions appearing. The revolutionary government brought in sweeping legislation to protect the weakest sectors of society—reforms that were introduced at the expense of the middle class. Of the population of almost six million in 1958, approximately 10 percent formed a powerful middle class, who came second only to Venezuela in terms of per capita income and lifestyle.

Meanwhile, while Havana boasted that in 1954 it sold more Cadillacs per capita than any city in the world, rural Cuba suffered. Some 25 percent of the total labor force worked only 100 days annually (mainly in the sugar industry) and lacked many basic amenities. The urban-rural division was a major factor for many Cubans in supporting the revolution: rural illiteracy, for example, was four times that found in cities, while only 9 percent of rural homes—compared with 87 percent in the cities—had electricity.

The period from 1959 to 1961 was accompanied by social, economic, and political reforms—mainly realized at the expense of the wealthy middle-class sectors. The nationalization of many businesses, a sweeping land reform, an urban reform law, legislation protecting the rights of Afro-Cubans, closure of private schools, and criticism of the influential Catholic Church and opposition media, all resulted in a broad social polarization. Many U.S. businesses were expropriated, and Washington responded by breaking diplomatic relations with Cuba in January 1961.

THE GOLDEN YEARS

After this rupture the revolutionary process appeared in dire straits. Cuba's major export product, sugar, went to one major client—the United States. It appeared only a matter of time before the revolution crumbled. But the cold war with the Soviet Union and the United States was about to warm up considerably, with Moscow arranging to buy all of Cuba's sugar, and to provide arms, industrial training, technology, investment, and aid to Cuba. This arrangement of increasingly close Cuban-Soviet cooperation continued until the implosion of the Soviet Union in 1989–1990.

In many ways the cooperation with the Soviet Union and other socialist countries constituted the golden years for the Cuban revolution. Generous subsidies (approximately $4 billion per year) flowed in, Soviet technology was installed, and military protection was effectively guaranteed. This was seen as being particularly important after the U.S.-sponsored invasion of Cuba by Cuban exiles in April 1961 (known as the Bay of Pigs) and the October 1962 Cuban Missile Crisis, when Soviet nuclear weapons in Cuba were dismantled after enormous international tension brought the world to the brink of nuclear war.

At this time Cuba was largely isolated in international circles, being suspended from the Organization of American States, and ignored by most members of NATO. Gradually, however, Havana was able to make alliances with nations in the developing world, many of whom respected the cooperation that the Castro government provided. In 2006 Cuba reached the zenith of this international support, with its motion condemning the U.S. embargo of Cuba winning the support of 183 countries (with 4 voting against, and 1 abstention). Also in that year Cuba took over as the elected leader of the Non-Aligned Movement (representing countries with 60 per-

cent of the world's population). Moreover, with the exceptions of Costa Rica and El Salvador, Cuba now has excellent diplomatic relations with all countries in Latin America and the Caribbean. Cuban medical assistance is particularly noteworthy, with 30,000 doctors working in 68 countries in 2006.

Until 1990 Cuba was dependent on the Soviet Union for its technology, market, supplies (particularly its oil supply of which 95 percent came from the Soviets), and industrial inputs. In terms of foreign policy, however, it mainly pursued an independent line. Its role in Angola starting in 1975 (when an initial 36,000 Cuban troops were sent to support the MPLA government, otherwise known as the Popular Movement for the Liberation of Angola) illustrates this well, and it is clear that Moscow was not pleased with Cuban military expeditions to Africa and Latin America.

There were several periods of crisis during this period. In 1980, for example, an estimated 125,000 Cubans left for the United States from the port of Mariel in a large flotilla of boats. In all about 10 percent of the Cuban population has left Cuba, and most have settled in southern Florida, where their presence has revitalized the city of Miami. There have been several periods when an attempt has been made to improve relations between Havana and Washington—most notably during the presidency of Jimmy Carter in the late 1970s—but these efforts have largely been fruitless. Intransigence has been the order of the day for almost five decades, with President George W. Bush being the tenth U.S. president in a row seeking "regime change" in Cuba.

CUBA TODAY

Following the demise of the Soviet Union, the Cuban revolution faced major challenges. Again Cuba had to find new markets for its goods, but also it now had to retool its industries, find suppliers for its factories, secure fuel—and it had to do so in a harsh international capitalist market. After some five extremely difficult years, the economy bottomed out, but it has grown annually since 1994. In no small measure this is due to a series of economic reforms, including the legalization of hard currency, the promotion of joint ventures with foreign capital, and the development of the tourism industry. An exchange program with Venezuela—which provides 90,000 barrels of oil per day in return for the medical services of 20,000 Cubans—has also proved beneficial.

The radical thought of José Martí in the late nineteenth century, the resentment of U.S. control, and the subsequent profoundly rooted nationalism, all came together to produce a leader who has held center stage in Cuban politics for five centuries. Despised by a vocal minority (most of whom have voted with their feet and are living in exile), Fidel Castro has acted as a lightning rod for social change in Cuba, a process that has brought about a revolutionary socialist society and which to the present has survived against all odds.

SEE ALSO *Anticolonial Movements; Authoritarianism; Bush, George W.; Carter, Jimmy; Castro, Fidel; Cold War; Cuban Missile Crisis; Justice, Social; Nationalism and Nationality; Protest; Revolution; Socialism; Sugar Industry; Union of Soviet Socialist Republics; Urbanization*

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John M. Kirk

CUE COMPETITION

SEE *Reinforcement Theories.*

CUES

SEE *Priming.*

CULTS

The term *cult* is derived from a Latin root meaning "to break ground," particularly in preparing (cultivating) a field for domesticated crops. The same root is seen in *culture*, in both a specialized scientific sense (a bacteria *culture*) and in a broader social sense (human *culture*). By extension, it was originally used in a religious sense, meaning behavior glorifying a deity or saint (the "cult" of Saint James). By the nineteenth century, the word came to be

used pejoratively about those who were excessively devoted to popular authors (the "cult" of Wordsworth), worshiping them as modern "saints." Around 1900, this pejorative use influenced anthropologists to use *cult* to refer to ancient or allegedly primitive religious practices (as in "cult" objects or "cargo cults").

The popularity of this negative sense makes the term difficult to define objectively, since a "cult" in an outsider's eyes may well be a "new religion" to someone inside the group. Both the positive and negative uses of the term, however, agree that a cult is a small religious group that exists in tension with a predominant religion. In particular, such groups are highly cohesive in structure and are headed by a dominant leader who influences members' behavior in dramatic ways. They pursue a transcendent goal, claiming that the truths they preserve will transform all of society, and encourage direct religious experience through participation in rituals intended to foster ecstatic or supernatural phenomena. Often (though not always) they are apocalyptic in nature, holding that contemporary society is hopelessly corrupt and will soon be destroyed or transformed through the direct intervention of supernatural forces.

Cult behavior in the ordinary sense needs to be differentiated from the popular image of dangerous cults, drawn from the most extreme cases. In the popular imagination, cult leaders prey on impressionable youth and use mind control, brainwashing, hypnosis, and physical and sexual abuse to entrap and hold them against their will. "Cult" activity, in the most sensationalized images, includes ritualized sex abuse, self-mutilation, and, in some unconfirmed accounts, animal and human blood sacrifice. Often the agenda of such groups is thought to be to overturn organized religion or to promote the political agenda of evil others. Contributing to such pejorative images is the faux-etymology of *cult* as derived from *occult*, although this term, originally meaning "hidden" or "concealed," has a distinct history. Few of these claims have ever held up to skeptical inquiry; nevertheless, popular accounts frequently assume that sociopathic behavior is integral to these cults' activities.

Most cults in the historical record have been short-lived, but some persist to become the nuclei of important religious movements. Cults in both senses have been commonplace in European history from ancient times. Mystery cults, common in the Greek and Roman world, clearly were seen as charismatic movements that presented challenges to mainstream religions. Such groups, particularly the Bacchanalia, were frequently accused of being cults in the negative, sociopathic sense. Similarly, the persecution of the early Christian church by Roman authorities was based on persistent rumors that it was a dangerous cult that abducted and cannibalized babies.

During medieval times, Christianity itself fostered the growth of locally based movements devoted to the veneration of a local saint. Many of these developed into cultlike groups, and, while most were limited to a town or region in their influence, some, like the followers of Saint Francis of Assisi (c. 1181–1226), became important institutions (the Franciscan monks) in their own right. In early modern times, a number of breakaway factions of Protestant Christianity similarly began as small, strongly differentiated cults, and then grew into persistent religious movements. Some of these groups, like the Shakers, eventually declined, while others, like the Amish and Mormons (Church of Latter-day Saints) developed into stable institutions.

During the late twentieth century, rumors of cult activities in the United States especially developed around the development of new religious movements. Rumors that such cults engaged in blood sacrifices, orgiastic sex rituals, or child abuse became especially prevalent in the second half of the twentieth century. The Process, an allegedly "satanic" organization active in Great Britain and the United States during the 1960s, was repeatedly targeted as a "cult" in this negative sense, but a detailed sociological study of the group by William Bainbridge (1978) showed that the popular image was misleading.

Yet some cults did engage in violent and abusive acts, giving warrant to these fears. Two notorious examples were the People's Temple, founded by James Warren Jones (1931–1978) in Indianapolis during the 1950s, and the Heaven's Gate movement, begun by Marshall Herff Applewhite (1931–1997) in the Pacific Northwest during the 1970s. Both cults ended their existence in spectacular acts of group suicide, the first in 1978, the second in 1997. Both have been extensively studied, and while both groups came to the same tragic end, the factors leading up to their self-destruction varied considerably. Both can be seen as extreme examples of cult behavior caused by each group's isolation from outside culture and the growing mental instability of their leaders.

Both cults drew much of their ideology from the doomsday worldview prevalent among charismatic groups, which have become an important factor in both Catholic and Protestant Christianity. This ideology emphasizes controlling one's personal and social behavior strictly in preparation for an imminent, violent apocalyptic struggle against demonic forces. This mindset makes such groups potentially dangerous when contacted unwisely by outsiders. The notorious 1857 Mountain Meadows massacre, carried out in part by members of the early Mormon Church, and the bloody counterattacks taken by the Branch Davidian enclave (near Waco, Texas) against federal agents in 1993 illustrate two additional

cases in which embattled cults turned to violent acts against outsiders.

Such extreme cases should not, however, distract scholars from studying objectively the many cults that continue to arise within mainstream religions and as alternatives to them. However, many more such groups remain diffuse enough that their members' involvement in these religious groups does not separate them from their everyday work and social worlds. Such cults have been and will continue to be positive factors in the development of new religions and the modification of mainstream sects in response to the cults' challenge. In addition to cults composed of charismatic Christians, many more such groups have become devoted to reviving neo-pagan rituals and investigating paranormal phenomena such as UFOs. According to the 2001 American Religious Identification Survey, the numbers of self-proclaimed Wiccans increased nearly seventeen-fold from 8000 to 138,000 during the previous ten years, with an additional 200,000 now belonging to a "pagan" or "new age" (Kosmin and Mayer 2001). Such new movements continue to provide individuals with creative means for pursuing religious experience.

SEE ALSO *Christianity; Conformity; Groupthink; Mysticism; Religion; Social Dominance Orientation; Suicide; Unidentified Flying Objects*

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Bill Ellis

CULTURAL CAPITAL

The concept of "cultural capital" posits that the way of life of a community constitutes a dynamic structure, including a number of services, that enhances the livelihood of the people. It also forms the basis of power relations and class. The origins of the concept stem mainly from the work of the French sociologist Pierre Bourdieu (1930–2002), who argued that it represents one of the many forms of capital that people can draw on to enhance their lives. The other forms include social capital, human capital, durable fixed capital, ecological capital, and even bodily capital. The notion of cultural capital is part of the "multiple capital paradigm" (O'Hara 2001), and one must link various capitals to comprehend macro-sociological processes such as inequality, stratification, and conflict.

DIMENSIONS OF CULTURAL CAPITAL

There are three main types of cultural capital: cultural artifacts, institutions, and embodied capital. Cultural artifacts include reproductions of the cultural creations of society. These may be materials in museums, art galleries, and libraries; modes of dress; symbolic commodities; or modes of architecture. These artifacts can be seen as a form of embodied cultural labor, provided they truly form part of the historical or contemporaneous life process of the community. These artifacts may be critical in the study of previous cultures, particularly if there is little or no written record of cultural habits and practices. For contemporary market capitalist economies, artifacts sold for money provide a source of knowledge about the relationship between cultural and economic capitals.

Institutions provide insights into the way of life of the community. For instance, the institutions of nationalism provide insights into the way in which people bond together as a nation-state, while the institutions of education help comprehend the reproduction of knowledge and class in society. The family, as an institution, enables insights into critical forms of gender relations, kinship linkages, and networks of privilege and association. Market institutions, meanwhile, enable one to recognize how symbols, status, and financial advantage are interrelated and reproduced through historical time.

The third form of cultural capital, embodied capital, is a personal form of intergenerational transfer of networks and relations. Families, for instance, provide a series of lifestyle habits and relationships through networks, which become a sort of "advance" to the next generation of children. There is a tendency for these family linkages to shape people's behavior and values from generation to generation. This relates to practices such as manners, connections, qualifications and habits of life and livelihood.

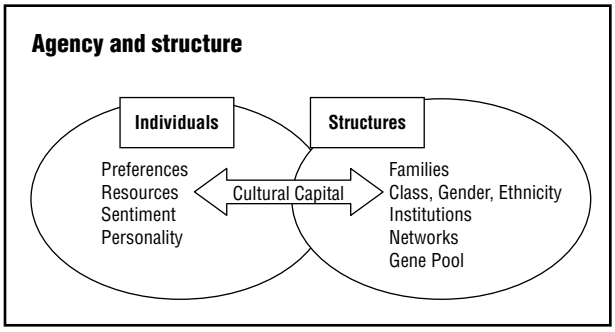

Figure 1

Such linkages are critical to the generation of class differences between people.

AGENCY AND STRUCTURE

Bourdieu's analysis of cultural capital has been quite successful in linking agency and structure in the determination of class, habit, and space. Class relationships are reproduced in a subtle manner through association, upbringing, emotional ties, education, and access to material resources. Individuals are as important as institutions in the generation of privilege and power.

Individuals and structures are linked through cultural capital, as shown in Figure 1. Individuals and structures interact through time in the determination of socioeconomic processes. Individuals have certain preferences, resources, sentiments, and personalities that impact on their quality of life and contribution to society. Structures—in the form of families, classes, gender, ethnicity, institutions, networks, and the gene pool—also impact on individuals. Agency and structure are linked through cultural capital, particularly through the activation of habits in particular cultural spaces.

Bourdieu's notion of "habitus" refers to the acquired habits of dress, manners, modes of perception, ways of speaking, personal hygiene, and other traits of everyday life. Many of these habits have commonalities among certain groups, classes, and nations, and they help to bind people together in networks and institutions.

The notion of "cultural space" or "field" is also important here, for people's everyday behavior is acted out in various relatively autonomous arenas. There are a multiplicity of such spaces, which are interrelated yet become activated through their own logic of operation and motion (see Emirbayer et al. 2005). These include the fields of legal space, economic space, social space, bureaucratic space, familial space, and so on. These can be delimited further—social space, for example, includes further microcosms of fashion, media, literature, art, and academia. The habits of individuals acted out in various cultural spaces demonstrate how people interact as social individuals, thus linking agency and structure.

Evidence shows that, in many contemporary societies, there are distinct differences in the way parents bring up their children, inculcating them with certain habits in familial space. Middle-class parents tend to inculcate a degree of debate and exploration in their children. They also tend to stimulate fairly wide social networks and nurture a degree of independence of thought. Working-class parents, on the other hand, tend to be more specific in their directions and discussions; have stronger family, rather than social, networks; and have children who are more dependent upon them emotionally and physically (see Egerton 1997). These variable forms of cultural capital are critical to the reproduction of privilege, advantage, and power.

POWER, CULTURE, AND POLICY

Cultural capital also illuminates the role of power in society. Power is not simply a product of economic and political relationships. It also emanates more broadly from cultural associations. Power resides in the ability of people to form and maintain dynamic social networks, with reciprocity and friendships being an important part of the process. Power is enhanced by cultural capital through the building and maintaining of relationships and habits of advantage. These advantages take many forms, including material and monetary wealth, political influence, friendships and relationships, health, and safety within the society.

Those individuals and groups seeking power and authority thus either need to be ideally suited (or adapted to) the dominant modes of interplay of habitus and space, or they must try and condition people's habitus through these cultural spaces. They can try and change the very rules through which people act out their social life, but it must be done subtly and with a thorough knowledge of the cultural way of life of the community. Similarly, policymakers must put their measures into practice within the framework of this nexus of individual-social habits and cultural space. Social capital is important in the provision of trust and sociality required to divert resources and assets in the prescribed direction.

Cultural capital is thus part of the multiple capital paradigm, which by linking agency and structure interprets relations of class, power, ethnicity, and social position. Some questions remain in areas such as class, gender, and ethnicity, with a need for more complexity and historical specificity, and for more empirical and theoretical development. Overall, though, cultural capital is a powerful mode of interpretation of structures of diversity, cooperation, and power in the contemporary world.

SEE ALSO *Capital; Human Capital; Physical Capital; Skill; Social Capital; Soft Skills*

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Phillip Anthony O'Hara

CULTURAL DETERMINISM

SEE *Culture; Determinism.*

CULTURAL EQUIVALENCE MODEL

SEE *Parent-Child Relationships.*

CULTURAL GROUP SELECTION

The concept of group selection is controversial in both the natural and social sciences. In contrast to the standard social science assumption of methodological individualism and the biological assumption of the gene as the relevant unit of selection, group selection posits that distinct evolutionary and selection pressures may operate at the level of the group rather than the individual level. As a result, group selection argues that it may be possible for social rules and biological traits to evolve and persist that cause individuals to act *altruistically*, that is, in ways that are good for others or the group as a whole, but detrimental to particular individuals within the group. In group selection models, the relevant level of selection for some questions is thus at the level of the group (family, firm, cultural group, nation) rather than among the constituent individuals that compose those groups.

The concept of group selection gained some intellectual currency in the 1960s and its leading modern advocate in the social sciences was F. A. Hayek. These early naïve group selection models were swept aside by the rise of "selfish gene" theory as the dominant paradigm in evolutionary biology. Selfish gene theory argues that altruism is not an evolutionary stable strategy as an *a priori* matter because selfish individuals will have the incentive and opportunity to free ride by accepting the benefits of others' altruism without bearing the costs. Those with selfish genes will prey on the altruists in the population, thereby rendering the altruistic tendencies unfit for survival and replication. Critics of cultural group selection have similarly argued that those models are similarly suspect because cultural rules and practices are similarly subject to erosion by free riding by selfish individuals who comparatively benefit from refusing to abide by socially beneficial rules (such as prohibitions on fraud or theft) followed by others. Both critiques thus conclude that group selection models lack appropriate microfoundations that ground group level selection in the incentives and interest of the individuals that compose the group and thus should be selected against in the population.

Subsequent analysis, however, has concluded that the plausibility of group selection models is an empirical question, not a priori question. Group selection rests on a tension between two competing forces that push in opposite directions—intragroup selection, that is, competition among different individuals within a given group, versus intergroup selection, or competition between different groups. Intragroup selection promotes individual selfishness and free riding in seeking to appropriate a disproportionate share of the social surplus. Intergroup selection, by contrast, promotes altruism within a given group because it benefits the group as a whole in competition with other groups (and thereby indirectly benefits each member of the group), even though altruistic individuals contribute more to the group than they personally receive in exchange.

In reconciling these competing pressures, the plausibility of a group selection model thus rests on three basic operative conditions. First, the genetic trait or cultural rule must promise sufficient benefits to the group that the members of the group will benefit from adopting it when compared with groups that do not adopt the rule or prac-

tice, that is, a social surplus is generated. These rules may be invented consciously or may simply arise by accident.

Second, there must be some mechanism for between-group competition to occur, that is, for groups with superior traits or practices to displace others. This competition and displacement may occur through warfare and conquest by the more successful group, migration from the less-successful group to the more successful, or imitation of the more successful by the less successful.

Third, the group must be able to restrain free riders that will dissipate the social surplus generated by the beneficial trait or rule. It is not necessary to completely eradicate free riding (which will be virtually impossible given the individual incentives to free ride), but simply to reduce it to the point where the overall benefits to the group are sufficiently large such that the benefits of retaining the trait or practice are large enough to offset the costs imposed by free riders. Social norms against antisocial behavior, legal and political institutions such as police forces that prevent theft, and constitutional institutions that encourage positive-sum wealth creation activities rather than zero-sum redistributive activities (or negative-sum rent-seeking activities), can all be viewed as mechanisms to limit the ability of free riders to dissipate the social surplus.

SEE ALSO *Altruism; Collective Action; Cooperation; Determinism, Biological; Determinism, Genetic; Hayek, Friedrich August von; Microfoundations; Natural Selection; Norms; Sociobiology*

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CULTURAL LANDSCAPE

Landscape is a word introduced into the English language during the late sixteenth century as a technical term used by painters. The word derived from the Dutch *landschap* and was known in English for some time as *landskip*. This painterly source of the landscape notion is significant. Landscape was recognized as such because it reminded the viewer of a painted landscape—a piece of inland scenery (Thomas 1984, p. 265; Groth and Wilson 2003, pp. 2–3).

Landscape became a prominent, if contested, concept in mid-twentieth-century geography through the work of Carl Sauer (1889–1975)(see Livingstone 1992). His ideas about landscape were influenced by the debates between the German geographer Friedrich Ratzel (1844–1904) and the French sociologist Émile Durkheim (1858–1917), debates that focused on the *society-milieu* relationship (Buttimer 1971). Sauer argued that culture shaped the natural landscape to produce a "cultural landscape" (Sauer 1963, p. 343). He sought to avoid the environmental determinism of Ratzel, but acknowledged that it was not possible to devise an objective procedure for the study and comparison of landscape: a subjective, aesthetic, or meaningful element always remained (see Cosgrove 1984; Cosgrove and Daniels 1988).

Independent of this tradition of thought, the cultural and literary critic Raymond Williams (1921–1988) argued in *The Country and the City* (1973) that it is "outsiders"—estate owners, improvers, industrialists, artists—who have recourse to the notion of landscape, not those who live and work "in" the landscape. His influential work introduced the key element of politics and power to the way landscapes—cultural landscapes—are understood (see Bender 1993). Williams's sharp distinction between "insider" and "outsider," though, is difficult to sustain in any particular context and suggests that only some people make use of this concept.

Recent research and writing in anthropology, history, and related disciplines argue that peoples around the world shape and view their surroundings in ways not dissimilar to that captured by the Western concept of landscape and that the distinction between a "natural" and

"cultural" landscape is fraught with problems (see Ingold 2000). Consider the case of the Amazonian rainforest. It is often viewed as a pristine "natural" environment in which separate "cultures" live and draw upon its resources. However, historical ecology has shown that the current form of this environment is the outcome of extensive human manipulation over substantial time periods—creating grasslands, forests, and savannas (see Balée 1998). In a comparable manner the forest-savanna transition zone of Guinea in West Africa has been viewed by environmental policymakers for many decades as a relic of a once-extensive natural forest now destroyed by local farming and fire-setting. By contrast, anthropological research demonstrates that the landscape had been "misread": local peoples explicitly create "forest islands" in which to live, and these are viewed as an index of prosperity and are aesthetically valued (Fairhead and Leach 1996). The historian William Cronon (1983, 1991) has documented analogous transformations in colonial New England and with respect to the rise of Chicago and the West: landscapes—whether prairie or forest—were reformed to enable the production and expansion of property ownership and commodity capitalism. In short, all landscapes are inherently "natural" and "cultural" (see Schama 1995). Landscapes are thus a *process* where people seek to realize, in diverse ways, the possibilities of their culture by simultaneously creating themselves and their environments or natures (see Hirsch 1995, 2004).

SEE ALSO *Culture; Human Ecology; Phenomenology*

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Eric Hirsch

CULTURAL RELATIVISM

More than a century of ethnographic research profoundly supports the theory of *cultural relativity*, the theory that culture shapes beliefs, provides concepts, organizes value systems, and informs and orients human behavior. Anthropologists find it obvious that human behavior is culturally informed and culturally specific, and best approached as a series of "practices" with specific cultural orientations and entailments. Anthropologists are comfortable with cultural relativity as a matter of fact. While other disciplines have struggled to accommodate the realities of cultural relativity, in recent decades anthropologists have debated the social organization of cultural differences in complex societies under modern conditions. Cultural relativism, the paradoxical extension of the facts of cultural difference into an epistemology and moral philosophy doubtful of all absolutes, troubles other kinds of social scientists far more than it does anthropologists, who are, by and large, still confident of their capacity to critically understand matters of fact and questions of value under conditions of cultural variety and complexity. While other disciplines debate the perils of relativism, anthropologists debate the fate of cultural differences in a globalizing world.

Anthropologists are comfortable with facts of cultural difference because such differences are the very stuff of their research. Ongoing successes in the description and analysis of cultural differences are degrees of proof, after all, against strong forms of cultural relativism. Insofar as ethnographers—researchers into particular cultures—can successfully understand and explain unanticipated cultural differences, then regardless of the extremity of differences, cultures are not truly incommunicably and ungraspably variant. To this degree they are not "incommensurable," to use a term from Romanticist philology made popular (by Thomas Kuhn) in twentieth century philosophy of science. However, in other social science disciplines, facts of cultural difference have often seemed to threaten the quality of data rather than integrating it. In some disciplines, acknowledging fundamental cultural differences has seemed tantamount to succumbing to a knowledge-defeating relativism. In psychology and in linguistics, cultural relativism is rendered into an extreme, fascinating, but partly dubious theory of perception; for economics, political science, and sociology it is a challenge to the generalizability of research findings; for philosophy it is a contemptible threat to the certainty and even adequacy of any and all concepts and conclusions. Ironically, thus, cultural relativism means different things in different contexts. What it means and the depth of its threat to knowledge varies significantly according to the premises, needs, and purposes of the various disciplines. The public, like academic disciplines, can also take different stances toward different cultural relativisms; the same person can be a fascinated cosmopolitan when trying new clothing or food, an appalled observer watching a news broadcast, an angry voter, and a generous neighbor. Cultural relativities and cultural relativism can be unevenly acknowledged within a single discipline or person.

Debates about cultural relativism and cultural relativity predate the beginnings of the modern social sciences, and play an important role in their foundation. At one key juncture in the history of ideas, the philosopher Immanuel Kant was challenged by his one-time student, Johannes Gottfried Herder, over the origin and nature of concepts. Herder inspired research in the disciplines of geography, ethnology, and above all philology—the study of the history of words—when he doubted his teacher's theory of pure reason. In a dispute that was simultaneously theological, political, and scientific, Herder argued that human beings observably relied upon signs to gain their concepts, and that their ideas neither came from nor moved toward any ethereal realm but began with words handed down within human communities. Human communities each thereby had their own kinds of knowledge, understanding, and meaning, not passively imbibed but actively fashioned and changed, with each person and each society its own blooming, self-fashioned work of art. Kant's vision was of humanity gaining enlightenment slowly, reaching closer to a single, ultimate, God-given potential, and progressing most when political control was wisest and most absolute. In Herder's view, humans had to rely on signs that were "arbitrary," and highly variant from place to place and time to time, as part of God's divine plan: The unending need to critically assess and change their signs and concepts gave humanity creativity and free will.

As philological research led to nineteenth-century efforts to found a science of language in general, one of the pioneers of this transition, F. Max Müller, coined one of the most extreme expressions of a language-sign-based cultural relativity: "No reason without thought; no thought without language." By this formulation, reason and truth would be entirely dependent on language. Müller debated with Charles Darwin over the origins of language and thought; Müller thought he had found a perfect synthesis of Kant, Herder, and all religion in a theory that posited humanity's active corruption of originally perfect God-given signs and symbols. Darwin argued for a material origin in natural history for thoughts, concepts, and language, and was joined by William Dwight Whitney, another of the founders of linguistics, who reconfigured Herder's conception of the arbitrary nature of signs into a theory of the material, natural origins of words and concepts. Whitney led linguistics to seek an evolutionary theory of language without recourse to divine reason or invention.

By the twentieth century, especially in U.S. anthropology under the leadership of Franz Boas and his students, the debates moved from language to culture, and scholars resorted to theological arguments much more rarely. Perhaps the most famous explorer of linguistic relativity and its significance was anthropological linguist Benjamin Lee Whorf. Whorf proposed that Hopi habitual thought and behavior was organized by ontological premises also present in Hopi language grammar; he claimed especially that the Hopi thought about time differently than Europeans, and organized their way of life, including ritual, politics, and economics, around premises about repetition and duration that were readily understandable from study of their language grammar.

Whorf's arguments have been misunderstood, largely because psychologists had great need for a different argument, suitable for laboratory testing. What became known in psychology as the *Whorf hypothesis* or the *Sapir-Whorf hypothesis* (Edward Sapir being another leading Boasian linguist) was the idea that language shaped human perception of things. This argument could have and probably should have been attributed to Müller, who made it, rather than to Whorf, who did not. (Whorf argued that Hopi perceived space the same way Europeans did, the focusing system of their eyes generating the same

figure-ground gestalt perception of something foregrounded in a larger visual field.) Regardless of the misnomer, much laboratory and field research attempted to operationalize this hypothesis into tests of the relationship of language categories and grammatical structures to perceptions. The results, ironically, were very close to what Whorf would have expected. Human perception is not infinitely plastic, not capable of being rendered wholly unseeing or unhearing of things without name or existence within the logic of language. However, systems of discrimination of types of things are highly sensitive to paradigms, norms, distinctions, and examples provided by language and culture. Training can overcome the difficulties a person has making fine distinctions between sounds or colors to which he or she has never before attended, up to limits provided by the actual range and acuity of sensory systems. But it is not easy to reorient extremely complex and highly developed systems for the perception of very specific things in the world.

Psychologists have been most interested, for obvious reasons, in the significance of variations in language and culture for apparatuses of cognitive function, and in particular the relations of systems of perception and cognition. They find increasingly precise and complex means to identify what is variant and invariant in the structure and organization of human perception and cognition. The situation is different for other social sciences (and for some branches of psychology as well, including social psychology and abnormal psychology, and the emerging field of biosociality). When research focuses not on processes happening within mind and body, but rather on larger social fields of interaction between people, then the issues connected to cultural relativity challenge scholarship differently.

The Boasians also opened up the questions in this area. Ruth Benedict, a student of Franz Boas, wrote extensively in the 1930s and 1940s about social and political implications of cultural relativity. Some credit her with coining the concept. In *Patterns of Culture* (1934) and *The Chrysanthemum and the Sword* (1946) she wrote directly to the U.S. reading public, on a mission to demonstrate the reality and significance of cultural differences. On a "shrinking planet," she argued, with societies increasingly interconnected and interdependent, the hard work of mutual understanding was increasingly vital to achieving peace, health, and prosperity. Americans still strongly tended to imagine that their most cherished values came straight from God, and while few social scientists took that route many still hoped to directly observe behaviors generated by an unmediated human nature, and were disappointed to discover that culture mediated even passions and pleasures, and expectations of risk and reward. At the end of World War II, Benedict was greatly concerned about an American society that mistook for human nature the fundamental tenets of its own political culture, such as the individual's right to the pursuit of happiness, which Americans gave a near sacred status. Benedict argued for culture-consciousness in mature political debate. She exemplified the fact that consciousness of cultural relativity need not lead to relativism in morality and politics. She allied herself with skepticism, not relativism, in philosophy, and had no trouble aligning her science with specific politics, as in her anti-Nazi, pro–civil rights treatise against prejudice in the assessment of race differences, *Race: Science, and Politics* (1940), which disputed allegations of difference in racial capacities, and traced the connection of such allegations to other forms of prejudice.

In the division of labor in the social sciences, anthropologists continue as students of cultural difference and skeptics of claims about human universals, while other disciplines accommodate facts of cultural difference while pursuing more general truths. The tensions here are productive. Anthropologists have also, for decades now, studied the creative conflicts that result when people, societies, and cultures productively and destructively interact. While some political commentators at the end of the twentieth century were convinced that globalization and democratization had brought on "the end of history," few anthropologists agreed. Reflections on the extremities of twentieth-century political violence make moral relativism unsustainable—not only for what it would allow, but also for what it would license us to forget or ignore. But in between moral relativism and universalistic insistence on one best final outcome for all political, social, and cultural questions there are, still, the positions pioneered by the Boasians—scientific skepticism with recognition of cultural relativity, and perhaps room even for a version of the philosophical plenitism pioneered by Herder. If scientists are, by method, skeptical of final claims, it does not make them relativist. The science of culture, even in the most cosmopolitan zones and most self-conscious reflections on selves and others, still produces a plenitude of evaluations—the point is not that "anything goes," but that many things continue and new things come along, and that all things might be improvable with reflective recognition of cultural specificities and differences.

Culture is the condition of possibility of meaning, and in both small scale and large, it thrives and grows with human success in making the world meaningful. It is an irreducible part of the environment, a built environment, an environment that makes human intelligence useable and increasingly useful. Some seek to move beyond cultural relativity, and try to think beyond culture, and seek truths independent of culture or constant across all cultures. Ironically, recurrent and persistent renewal of this quest is a hallmark of the culture of the European enlightenment, especially in the dreams of freedom and independence that it shares with its own countercurrent,

Romanticism. Neither this Enlightenment tradition, nor many other value systems, are likely to submerge easily into a homogenous and unitary global culture, no matter how much our global civil society intertwines.

SEE ALSO *Anthropology; Benedict, Ruth; Boas, Franz; Cultural Studies; Darwin, Charles; Enlightenment; Linguistic Turn; Mead, Margaret; Morality; Paradigm; Prejudice; Racism; Relativism; Science*

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CULTURAL RESOURCE MANAGEMENT

Mostly used in North America, the term *cultural resources* refers to important sites, objects, and places that have some form of legal protection. The term has its origins in the late 1960s as part of an effort to gain the same level of legal protection for places of cultural and historic importance as had been achieved by endangered natural resources. The term *cultural resource management* (CRM) can be defined as the practice of managing cultural resources in response to some legal or policy mandate. The terms *heritage resources* and *heritage management* are common synonyms for cultural resources and CRM, respectively.

Cultural resources include a vast range of properties whose importance derives from their aesthetic, historic, religious, or scientific value. A cultural resource may be a traditional plant-gathering area or an example of high Victorian architecture. The term covers places and objects both glorious and modest: archaeological sites from the most ancient of prehistoric sites of all eras to the remains of 1930s labor camps; buildings ranging from St. Paul's Cathedral in London to a vernacular cabin; structures, including canals and bridges; and places that are important to living cultures, from historic battlefields to sites of religious or traditional significance to indigenous groups.

Despite their diversity of forms, all cultural resources have two characteristics in common: they are regarded as important by a segment of contemporary society (be it a group of neighbors, an Aboriginal clan, or professional archaeologists); and they are considered worthy of some form of protection because of this value.

The goal of CRM is to manage important cultural properties for the public benefit. This is achieved by the application of law and public policy. Since every nation has its own unique and important history and cultures, most have developed their own statutes on national, regional, and even local levels that govern how cultural resources should be treated. In the United States, for example, the National Environmental Policy Act (NEPA), the National Historic Preservation Act, and dozens of state laws, such as the California Environmental Quality Act, require analysis of potential impacts on cultural resources. This process has a general counterpart in the United Kingdom in the requirements of "Planning Policy Guidance 16," in New Zealand in the Historic Places Act (1993), and in Australia in the Environmental Protection and Biodiversity Conservation Act (1999). Like nonfederal governments worldwide, the Australian state of Victoria has enacted its own law—the Heritage Act (1995). This statute offers more protection than is provided by federal legislation, which is principally concerned with nationally significant resources.

The looting of historic shipwrecks located in international waters is a matter of continuing discussion between

nations and the International Congress on Monuments and Sites (ICOMOS), an influential nongovernmental organization. While many national governments have taken measures to protect wrecks from looting within their own waters—such as the United Kingdom's National Heritage Act (2002)—few restrictions apply to the open seas. ICOMOS's Charter on the Protection and Management of Underwater Cultural Heritage (1996) is an attempt to fill this gap; it is, however, still to be ratified by many nations.

As a practical matter, the CRM process is usually set in motion when an activity is proposed and the potential impacts are reviewed by a public agency to comply with an environmental protection law. Building a dam and reservoir, for example, may lead to the inundation of an indigenous group's traditional plant gathering site—a type of cultural resource. Construction projects often involve three phases of CRM: identifying resources by means of an on-the-ground inventory, evaluating their importance, and deciding how impacts to significant examples should be managed.

CRM is not synonymous with preservation. Since it assures a process, not a result, the only guaranteed outcome of CRM is that the values contained in cultural resources are weighed in relation to other social benefits. Thus, a government agency might allow the destruction of an important archaeological site in the interest of improving a dangerous road. In this case, the project proponent may be required to scientifically excavate the site to retrieve important information it contains before the data are destroyed by construction. This commonly imposed mitigation measure is termed *preservation by record* or *data recovery* in the United Kingdom and United States, respectively.

As a profession, CRM is practiced by anthropologists, architectural historians, geographers, environmental planners, historians, and archaeologists, among others. It has been estimated that CRM accounts for over 90 percent of archaeological projects carried out in the United States.

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Adrian Praetzellis

CULTURAL RIGHTS

The term *cultural rights* refers to a claimed entitlement on the part of identity groups—typically based on religion, ethnicity, language, or nationality—to be able to express and maintain their traditions or practices. Such an entitlement usually implies some form of political or legal recognition. Cultural rights have developed as a distinct set of rights claims particularly since the 1960s, and then largely in light of the experience of cultural minorities—such as indigenous peoples, substate nationalities, and immigrant groups—living in a state or society that is characterized by a dominant culture. "Cultural rights" thus figure prominently in discussions of national minority rights and multiculturalism. Nevertheless, cultural rights are commonly understood as a universal human right, one that recognizes the fundamental importance of a sense of cultural identity, membership, and shared values to human well-being and flourishing.

The political and legal recognition associated with cultural rights may take various forms. Such recognition may be symbolic, as when a state includes the symbols of one or more of its minorities in the national flag or observes a minority holiday as a public holiday. It may involve accommodation of specific minority cultural practices, such as granting exemptions from generally applicable dress codes to members of religious minorities who wish to wear their special clothing. It may concern the public subsidization of cultural groups—through direct grants or tax relief—so that they might better preserve their cultural heritage and community life. It may encompass intellectual-cum-cultural property rights that compensate groups for the use of their artifacts, land, or participation. Recognition may also include allowing citizens to hold dual or multiple citizenships, admitting cultural defense in criminal proceedings, or granting cultural or linguistic autonomy to particular groups to run their own educational and cultural institutions in their own languages. Finally, cultural recognition may be overtly political in the sense of granting special political representation or even political autonomy or self-government to particular cultural groups.

As these examples suggest, cultural rights should be distinguished from rights to nondiscrimination and affirmative action policies, which also relate to group membership. Where antidiscrimination legislation seeks to preclude, and affirmative action seeks to redress, the prejudicial denial of offices and opportunities to individuals on the basis of their background group characteristics, cultural rights are concerned with enabling cultural groups or their members to express and maintain their cultural attachments. Nevertheless, an important historical and conceptual connection between antidiscrimination legislation and cultural rights has been the growing

recognition among human rights bodies and governments since the 1970s that generally applicable laws can adversely affect members of cultural minorities unintentionally. So some antidiscrimination provisions implicitly recognize the right to cultural liberty by seeking to remove unintended obstacles to cultural observance.

Cultural rights remain controversial in political theory and practice. A major reservation historically has been that cultural rights undermine the cultural unity of the nation-state and threaten its political integration. In fact, very few nation-states are culturally homogeneous, and *not* recognizing cultural minorities often promotes political conflict and instability. Another widespread concern is that cultural rights sanction cultural relativism or the notion that all cultural practices are equally valuable or legitimate. A related worry is that cultural rights compromise the individual rights of the cultural group's members, especially those most vulnerable, such as women and children. Such criticisms have force where cultural rights are asserted or recognized in the name of preserving cultural identity. However, cultural rights also have been formulated as human rights on the basis of liberal principles of individual liberty and equality and, in this case, oppose cultural relativism. For example, an individual right to the free exercise of culture does not sanction cultural practices such as female genital mutilation that seriously harm particular members, or that are imposed on members against their will, as in the case of coercive or even arranged marriages. In any case, cultural rights claims are subject to the laws and governing public values of the state, as adjudicated by state authorities. In the case of liberal democracies, this qualification typically means that the fundamental rights of the individual are protected over the claims of the group.

Cultural rights have been recognized in various international protocols and legal instruments. The 1948 Universal Declaration of Human Rights states that "everyone, as a member of society" is entitled to "cultural rights indispensable for his dignity and the free development of his personality" (Article 22). Article 15 of the International Covenant on Economic, Social, and Cultural Rights (1966) recognizes the right to "take part in cultural life," and Article 27 of the International Covenant on Civil and Political Rights (1966) asserts the right of "persons belonging" to "ethnic, religious, or linguistic minorities" to "enjoy their own culture, to profess and practice their own religion, or to use their own language." The Declaration on the Rights of Persons Belonging to National or Ethnic, Religious, and Linguistic Minorities (1992) stipulates further that such persons have the right to enjoy their own culture "in private and in public," and that states "shall take measures to create favourable conditions to enable" individuals to exercise their cultural rights (Articles 2 and 4). Although not binding, a major United Nations research report, *The Human Development Report 2004: Cultural Liberty in Today's Diverse World*, helpfully addresses the major issues and concerns surrounding cultural rights by incorporating them into a broader human development framework.

SEE ALSO *Human Rights; Relativism, Cultural*

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Geoffrey Brahm Levey

CULTURAL STUDIES

Anyone attempting a definition of *cultural studies* is confronted at the outset by a paradox. On the one hand, the emergence of cultural studies as a recognized discipline or field of study, particularly from the 1970s onward, can be clearly seen in the proliferation of academic departments, degree programs, academic journals, and scholars who proclaim themselves to be producing work in "cultural studies." On the other hand, what precisely "cultural studies" takes as its object or area of study, its definitive theoretical, epistemological, or methodological approach, is less clearly identifiable—indeed, some scholars have claimed it is this very breadth and eclecticism that is the definition of *cultural studies* (Barker 2003; During 1999, 2005). Colin Sparks has thus described cultural studies as "a veritable rag-bag of ideas, methods, and concerns" (1996, p. 14).

At a basic level, cultural studies is, as the term suggests, the study of "culture." It takes as its focus the ways in which people live, think, and express themselves in everyday practices and contexts. Raymond Williams (1921–1988), one of the founding figures of cultural studies, famously described culture as "a particular way of life, whether of a people, a period, or a group" (1976, p.

90)—a definition that has close links to the anthropological idea of culture. However, the focus for cultural studies has been primarily on Western, modern, and contemporary cultures, on understanding the seemingly ordinary practices, objects, and images that surround us and that make up our sense of who we are—from music and media to education, inner-city subcultures, pubs, and shopping malls. Its focus stretches from the microstudy of local identities, such as gangs, to the global movement of cultural commodities, such as hip-hop or Bollywood films. To this end, cultural studies has been resolutely inter-, multi-, or even antidisciplinary in its approach, drawing from disciplines such as sociology, anthropology, history, and English literature. Similarly, cultural studies utilizes a range of research methods, from in-depth ethnographic fieldwork to textual and visual analysis.

STARTING POINTS: THE BRITISH CONTEXT AND THE CCCS

Cultural studies is now a global phenomenon, but it is generally agreed that the discipline began locally, at the Centre for Contemporary Cultural Studies (CCCS) in Birmingham, England, in the 1960s. Most scholars trace the emergence of cultural studies to the interventions of three men and three seminal texts: Richard Hoggart's *The Uses of Literacy* (1957), Raymond Williams's *Culture and Society* (1958), and E. P. Thompson's *The Making of the English Working Class* (1963). Hoggart, indeed, was the founder and first director of the CCCS, which was established as a postgraduate research center attached to the University of Birmingham in 1964.

What these three texts shared, albeit in very different ways, was a concern with "popular culture" that sought to challenge traditional elitist notions of culture as art and aesthetics—what Matthew Arnold (1822–1888) referred to as "the best that has been thought and said in the world" ([1869] 1960, p. 6)—or as "civilization" (Jenks 2004). In its place, they celebrated culture as ubiquitous, as everyday, and as made by ordinary people—"the study of relationships between elements in a whole way of life" (Williams [1961] 1965, p. 63). There are two key arguments that characterize these texts: firstly, that culture expresses meanings (i.e., it reflects our understanding of the world around us); and secondly, that culture flows from the experiences of ordinary people (hence, Williams's assertion that "culture is ordinary") (Procter 2004). Furthermore, this experience comes out of the historical and social location of individuals and groups—specifically, their class location. In particular, the authors claimed a sense of legitimacy and agency for working-class and popular cultures as valid and valuable sources of cultural expression and meaning making (Hall 1996).

THE STRUGGLE FOR CULTURE

Stuart Hall took over the directorship of the CCCS in 1968, marking a change in the way cultural studies was both thought and done. In particular, Hall brought the center's engagement with Marxism into creative tension with *structuralist* theory, as exemplified in the works of French theorists Claude Lévi-Strauss, Roland Barthes (1915–1980), and Louis Althusser (1918–1990) (Hall 1992a, 1996; Procter 2004). Put simply, structuralism contests the assumed connection between culture and meaning. Rather than seeing culture as simply *reflecting* meaning (as Williams had done), structuralism sees this relationship as *constructed* and arbitrary (Hall 1997). This means that culture is not simply an embodiment of a real experience, but creates that experience and shapes its meaning for us.

Hall sought to bring these two paradigms—*culturalist* and *structuralist*—together through the work of Italian Marxist Antonio Gramsci (1891–1937) and his theory of *hegemony*. This refers to the ways in which a dominant group maintains its control over other groups not through coercion, but through winning and shaping assent "so that its ascendency commands widespread consent and appears natural and inevitable" (Hall 1997b, p. 259). This is achieved in the realm of "culture"—through shaping how people think of and experience their world. However, because our societies are marked by forms of social division and inequality, subordinate groups enter into conflict with the dominant group to contest these meanings. Culture thus becomes the site where social divisions (class, gender, race and ethnicity, sexuality, disability, etc.) are both established and resisted.

Culture, in the traditional cultural studies paradigm, is thus highly contested and politicized. Firstly, it rejects the distinction of high and low culture, and celebrates popular and mass cultures as legitimate forms of expression. Secondly, it sees culture as always changing and dynamic—as a process rather than a possession. Thirdly, it sees cultures as challenging and transforming meanings, images, and understandings (Hall 1997a; Jenks 2004). Fourthly, it has taken as its primary focus of study subordinated and marginalized cultural forms and expressions—particularly around working-class and youth (sub)cultures.

This classic cultural studies approach was challenged in the 1980s and 1990s through the emergence of postmodern and post-structural theories. Although part of a much broader intellectual movement, postmodernism rejects the idea of coherent or stable cultural identities and meanings, and insists instead on the fragmentary and transitory nature of culture. Stuart Hall thus writes of "the breakdown of *all* strong cultural identities . . . producing that fragmentation of cultural codes, that multiplicity of

styles, emphasis on the ephemeral, the fleeting, the impermanent, and on difference and cultural pluralism" (1992b, p. 302). This view of culture is linked closely to the increased globalization and commodification of culture. Individuals become *bricoleurs*, creating their own styles and inhabiting a multiplicity of identities, and opening up a range of cultural options, meanings, and political possibilities (Barker 2003; During 2005).

CULTURAL STUDIES GOES GLOBAL

Through the 1990s, cultural studies has grown both in terms of scope and of content, traversing disciplines and diversifying its subject matter and theoretical and methodological approaches. In particular, as researchers have engaged with the increasingly globalized nature of cultural forms and connections, cultural studies can also be said to have gone global—at once exploring the ways in which culture travels and how it is shaped within particular local or national contexts (During 2005). "Cultural studies" as an academic discipline is now well established in the Anglophone world, particularly in Australia, Canada, and the United States, and is increasingly linked to the arts and media practitioners. Interest in the field is also growing in Asia, Africa, and Latin America, though in all these places it takes on different forms and emphases. In the United States, for example, where "cultural studies" as both a discipline and set of institutions has exploded, cultural studies traces its historical development from postwar American studies and from African American writers, scholars, and activists (During 2005) and is closely linked contemporarily with the study of minorities, postcoloniality, multiculturalism, and race. This is in sharp contrast to the United Kingdom (and Australia), which has traditionally marginalized issues of race and ethnicity—as well as gender—in cultural studies (Hall 1992a).

CULTURAL STUDIES IN CRISIS?

Cultural studies is not without its critics, both from outside and within the field. Indeed, as cultural studies has expanded and transformed, it has been argued that it has lost its original engagement with politics and power, with the lived experiences of "the everyday," and has instead become overly fascinated with cultural commodification, consumption, and production. Focusing on music, film, literature, and the media, cultural studies has, it is argued, privileged texts and discourse over people, and cultural practices and pleasures over the structures of power and material contexts within which these practices and pleasures take shape (Hall 1992a; McRobbie 1992). Still others have argued that the neo-Marxist underpinnings of the cultural studies project have been thrown "into crisis" by its encounter with postmodernism and post-structuralism, which have fractured ideas of power and meaning, and the relationship between them, and have privileged an individualistic and overcelebratory version of cultural expression (Storey 1996; During 2005). The lack of engagement of some strands and traditions of cultural studies with race and gender has already been commented upon. The growth and institutionalization of cultural studies have led some to fear for a loss of focus—that cultural studies could mean anything—and others to fear for a regulation of its critical and political edge in favor of a marketable pedagogy (Hall 1992a).

Clearly, what cultural studies is, or may become, is open to debate, contestation, and transformation. However, as Hall has stated, the study of culture is "a deadly serious matter . . . a practice which always thinks about its intervention in a world in which it would make some difference" (1992a, p. 286).

SEE ALSO *Althusser, Louis; Anthropology, U.S.; Hall, Stuart; Marxism; Structuralism*

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CULTURAL TOURISM

Cultural tourism is a type of special interest tourism involving leisure travel for the purpose of viewing or experiencing the distinctive character of a place, its peoples, and its products or productions. A wide range of destinations and cultural activities fall under the umbrella heading of cultural tourism: visits to UNESCO World Heritage Sites (e.g. China's Great Wall, Chichén-Itzá); tours of historic cities, architectural sites, cathedrals, and battlefields; excursions to museums; trips to sample typical regional foods; tours of ethnic neighborhoods; travel to local music festivals and cultural performances; visits to indigenous villages or distinctive cultural landscapes (e.g. observing farming practices in Asian rice fields). Although cultural tourists' motives vary, some common themes include the desire to experience an "authentic" cultural landscape, interest in other cultures, and an interest in scenery that fosters an engagement with the past.

Since anthropologists and sociologists first turned their attention to tourism in the 1970s, there have been a variety of attempts to classify particular types of tourism. Some scholars, such as Valene Smith (1989), have proposed more refined subdivisions to the broader category of cultural tourism, including ethnic tourism (to see indigenous peoples), historical tourism (focused on the glories of the past, museums, monuments, and ruins), and, in a separate category, cultural tourism, which she defines as travels to see "vestiges of a vanishing lifestyle that lies within human memory" and involves "rustic inns, folklore performances, [and] costumed wine festivals" (Smith 1989, pp. 4–5). While some scholars embrace these taxonomic distinctions, others simply utilize the broader umbrella term cultural tourism. Recognizing that most tourists engage in a variety of activities on any given trip (ranging from sampling local delicacies to touring picturesque villages), more social scientific attention has been directed away from refining taxonomies and toward better understanding the sociocultural transformations that are part and parcel of cultural tourism.

A number of scholars have chronicled how the advent of tourism has transformed local peoples' conceptions of their own identities and cultural products. Tourism literature tends to project fixed and alluring images of destinations, despite the fact that these destinations are undergoing transformations in tandem with the broader dynamics of globalization, including tourism development. In some locales, the promotion of cultural or ethnic tourism has prompted residents to become experts in marketing their own authenticity, playing the native and drawing on and manipulating the cultural symbols spotlighted in the tourist literature for economic gain or to enhance their cultural standing *vis-à-vis* other ethnic groups, as Timothy Oakes (1998) has illustrated in his analysis of ethnic villages in China. As Pierre van den Berghe (1994) and Nelson Graburn (1976) observe, the focus of ethnic tourists' gazes are often Fourth World peoples, members of disempowered communities on the fringes of larger nations. For such peoples, while tourism can potentially bring new sources of revenue, it can also attract outside entrepreneurs who may substantially divert the flow of income.

Likewise, cultural tourism can fuel the commoditization of ethnic arts, dances, and rituals. Although commoditization does not necessarily bring loss of meaning, as Graburn notes, the significance may be transformed. For example, Michel Picard (1990) observes that tourism and tourist productions have become so intrinsic in Bali that they have contributed to shaping contemporary Balinese ethnic identity. Other scholars find that cultural tourism can be a factor in reconfiguring aspects of local gender relations. For instance, Elayne Zorn (2004) documents how the new tourist market for textiles woven by Taquilean women has enabled these Andean women to take on more visible roles in public life. Elsewhere, cultural tourism may contribute to the eroding of local rank hierarchies and to newfound ethnic self-consciousness and cultural pride, as Kathleen Adams (2006) has chronicled among the Sa'dan Toraja of Indonesia.

Cultural tourism can be highly political. As Michel Picard and Robert Wood illustrate, states are deeply involved in structuring cultural tourism and in "shaping the visible contours of ethnicity" (1997, p. 5). In some cases, such as the Mexican government's promotion of Aztec pyramids as national symbols, tourist sites associ-

ated with the heritage of indigenous minorities are used to legitimate the nation. In other cases, such as the bombing of Egyptian pyramids by militant Muslims, cultural tourism is so enmeshed with international politics that destinations frequented by tourists from Western nations become targets.

In some places cultural tourism has led to the transformation of physical settings, environmental degradation, soaring land prices, and reduced access to the land for indigenous peoples. Cultural tourism can also create conflict between tourists, tourism promoters, and locals over the meaning and use of sites. Australia's Ayers Rock is one such setting, where tourists scaling the peak violate indigenous views of it as a sacred site. In some settings, locals have developed strategies to reduce the intrusive aspects of tourism, formally or informally delineating front-stage areas for tourists and back stage areas for local life beyond the tourist gaze (MacCannell 1989).

SEE ALSO *Anthropology; Distinctions, Social and Cultural; Gaze, Colonial; Gaze, The; Going Native; Liverpool Slave Trade; National Geographic; Natives; Other, The; Primitivism; Reflexivity; Sociology; Stare, The; Tourism; Tourism Industry; Tribe; Vacations*

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Kathleen M. Adams

CULTURE

Culture is notoriously one of the most difficult terms to define. The cultural historian Raymond Williams (1921–1988) notes that the difficulty in defining the word is located on its "intricate historical development" in European languages and on the fact that despite its long history the term is relatively new in the English language (Williams 1983, p. 87). The word derives from the Latin *cultura*, which in turn comes from the Latin verb *colere*, which had a wide range of meanings that corresponded to different domains in life: agricultural (to cultivate), domestic (to inhabit), religious (to honor a deity through worship), social (to protect). Williams pointed to the eventual divergences of these original meanings, such as the derivation of the term *colony*, from the meaning of *cultura* "to inhabit," or *cult*, from the meaning "to honor through worship." The primary meaning of cultivation, in *cultura*, has nevertheless been retained within the integrity of the word. Hence *culture* and *cultura* still echo the original main meaning of cultivation. The poet and critic T. S. Eliot (1885–1965), in his 1949 book *Notes Towards the Definition of Culture*, observed that the term "cultivation" applies as much to "the work of the bacteriologist or the *agri*culturalist" as "to the improvement of the human mind and spirit," (p. 19) although he concludes that the primary location of culture is religion.

By the mid-eighteenth century the term appears in both French and English in its proto-modern form, and in German it appears as a borrowing from the French first as *Cultur* (in the eighteenth century) and then as *Kultur* (in the nineteenth century) as almost synonymous with "civilization." The German philosopher Johann Gottfried von Herder (1744–1803) observed that the slippery nature of the two terms denoted the slippery understanding of "culture" and "civilization" and the frequent conflation of the two. Herder separated the notion of "civilization" from the notion of "culture" and developed the theory of "cultures" in the plural, refuting the universalist theories of a unified development of humanity. The anthropological development of the theory of culture rests precisely on this notion of "culture-in-the-plural," the acknowledgment that specific cultures existed in different times and places,

and that even within specific nations there existed a number of different cultures (Herder [1784] 1968).

The English anthropologist Edward Tylor (1832–1917) in 1871 proposed a definition of culture that conflated "culture" with "civilization" and informed early anthropological definitions of the term: "Culture, or civilization … is that complex whole which includes knowledge, belief, art, law, morals, custom, and any other capabilities and habits acquired by man as a member of society" (Tylor 1871, p. 1). Franz Boas (1858–1942), one of the key figures in modern anthropology, especially in the history of U.S. anthropology, comes from the intellectual tradition begun by Herder and furthered by Tylor; Boas developed a theory of culture from which he derived a theory of racism. He noted that cultures cannot be judged according to an a priori value system. Rather, each culture has its own integrity, and all cultures are equal to each other and ought to be gauged according to their own system of values. This relativist approach to culture underlined Herder's original idea that one ought not be thinking about *a* culture to which all the rest would be held accountable but about *cultures* as they appear in different formulations and places over time. Boas wrote: "Culture may be defined as the totality of mental and physical reactions and activities that characterize the behavior of the individuals composing a social group" (Boas 1938, p. 159)—a definition strangely constricted from the one he had produced only eight years earlier: "[C]ulture embraces all the manifestations of social habits of a community, the reactions of the individual as affected by the habits of the group in which he lives, and the products of human activities as determined by these habits" (Boas 1930, p. 79). Leslie White expanded the definition of culture provided by Boas by including in its definition not only the traits that characterize it but also "the traits that do not characterize it" including, thus, within the definition of culture as comprising the characteristic traits of a group those traits which could be considered as marginal, resistant, or, even, abjected (White and Dillingham 1973, p. 32).

The anthropological definitions of culture were in part a reaction to the exclusionary definitions put forth in 1869, two years before Tylor's, by the British poet and critic Matthew Arnold (1822–1888). Against the Herderian opening of culture and civilization to all human societies, Arnold erected the discourse of *a priori* perfection: "I have been trying to show that Culture is, ought to be, the study and pursuit of perfection," Arnold wrote, "and that of perfection as pursued by culture, beauty and intelligence, or, in other words, sweetness and light, are the main characters" (Arnold 1869, p. 11). Arnold thus articulated the difference between what is called "high" culture (sublime, light, sweet, beautiful) and "low" culture (what later came to be called popular culture).

In a critique of this sublimity of culture as presented by Arnold, the literary theorist Edward Said (1935–2003) argued that high culture was complicit with the project of imperialism. In his 1979 book *Orientalism*, Said showed the ways in which the constructed distinctions made between the Orient and Occident as fabricated geographical ideas were mainly located in the internalization of the idea of high culture as intrinsic to Europe set against "cultures" that needed to be translated into the European intellectual idiom.

The Frankfurt School philosophers Max Horkheimer (1875–1973) and Theodor Adorno (1903–1969), in their *Dialectic of Enlightenment*, apply a rigorous critique to popular culture (especially what they call "the culture industry" of Hollywood and jazz music). They argue that popular culture destroys the careful distinctions between the object of high culture (the elevation of the individual as an autonomous subject) and that of popular culture (the degradation of the subject into the position of the nonthinking object). Popular culture as a means of production of a compliant body politic is at the core of the theory of hegemony as developed by the Italian theorist Antonio Gramsci (1891–1937). In a gentle critique of Marx's theory of revolution, Gramsci explains that the reason why the industrial workers of the large capitalist countries did not become a revolutionary force was that capitalism makes enough minor cultural concessions to them (primarily minor commodities) to assure their acquiescence. For Gramsci, keeping the cultural programs of the Italian Fascist state in mind, the process of producing a compliant body politic, what he calls *hegemony*, is mapped onto the process of participation in popular culture. In a tone more celebratory of popular culture, the German critic and philosopher Walter Benjamin (1892–1940) notes how the availability of mechanical reproduction of art problematized the notions (in his view outdated) of genius and creativity. Benjamin proposed that proletarian art might thus be able to participate in the production of a form of culture that would neutralize the distinction between high and low.

The French cultural theorist Jean Baudrillard (1929–2007) in *Symbolic Exchange and Death* attempts to provide a radically different theory of culture. He first presents his theory of the *simulacrum* as the delineation of the relationship between reality and its artistic reproduction. For example, Disneyland is the result of simulation of the reality of southern California in the 1930s and 1940s as it had been represented in the comic cartoons of Mickey Mouse, which, in its turn, has been simulated as its actualization in the United States of the 1950s. In this sense the comic cartoons simulated southern Californian realities in the 1930s and 1940s, which southern California simulated in the 1950s and then Disneyland represented in the 1960s. Baudrillard then substitutes the notion of symbolic

exchange for the classic Marxist notion of exchange value, claiming that symbolic exchange (e.g., the living providing prayers for the salvation of the dead in exchange for the intercession of the dead with God on behalf of the living) dislocates utility from the center of the exchange system and replaces it with a cultural value that rests on a symbolic rather than a monetary value system.

SEE ALSO *Anthropology; Anthropology, British; Anthropology, U.S.; Boas, Franz; Civilization; Cultural Capital; Cultural Relativism; Culture of Poverty; Culture, Low and High; Determinism, Cultural; Disney, Walt; Frankfurt School; Gramsci, Antonio; Hegemony; Marx, Karl; Said, Edward; Symbols*

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CULTURE, LOW AND HIGH

Discussions and analyses of culture are common in the social sciences. Sociologists, anthropologists, and other social scientists are often interested in similarities and differences between groups and societies. An important component of social scientific research on culture revolves around the question of stratification. In other words, are some cultures more valued than others?

According to sociologist Herbert Gans, cultures can be divided according to various tastes. In his article *American Popular Culture and High Culture in a Changing Class Structure* (1986), Gans argues that "taste cultures" are the "array of arts, and forms of entertainment and information, as well as consumer goods available to different taste publics" (pp. 17–18). Taste cultures fall into at least five categories, each differing by preferences in literature, art, consumption patterns, hobbies, and other leisure activities. According to the author, the categories are different, but not implicitly unequal.

However, empirical evidence suggests that not all cultures are equally valued. A stratification system exists in which some cultures are considered "high" cultures while others are considered "low." According to Tia DeNora (1991), the differential valuation of cultures has been present throughout history in a variety of nations and is maintained through an array of institutional practices.

The difference between high culture and low culture is somewhat arbitrary. Both types of culture involve tastes in music, art, literature, and various material goods, for example, so the distinction generally revolves around specific types of tastes within those categories. High culture, in general, involves an interest in classical music or opera, fine art, gourmet foods, and so forth. Low culture tastes, in contrast, fall outside of these particular preferences.

Because high culture is valued more highly than other forms, several advantages are bestowed upon those who participate in high cultural activities. According to Pierre Bourdieu (1977), participation or interest in high culture leads to a form of capital that can be used to produce various types of "profits." For example, several scholars have argued that children who possess cultural capital are advantaged in the school system because teachers may "communicate more easily with students who participate in elite status cultures, give them more attention and special assistance, and perceive them as more intelligent or gifted than students who lack cultural capital" (DiMaggio 1982, p. 190). Numerous empirical studies have supported this claim. Students with higher degrees of cultural capital tend to have higher grades, higher educational attainment, and higher educational expectations.

Theoretically, the opportunity to obtain cultural capital is open to all members of a society. However, there is a strong correlation between cultural capital and socioeconomic status. Since cultural capital is likely to be obtained through socialization, family background strongly influences whether or not individuals will have access to opportunities that could increase their levels of capital. According to Gans, "it takes money to buy culture" (1986, pp. 18–19). Those with low incomes may be unable to afford to participate in high culture activities. Other factors that can affect the accumulation of cultural capital include educational attainment and occupational status. To be able to understand and appreciate high culture, one may need to have a particular level of education. Because information about cultural events is likely to be transmitted through social networks, occupation status becomes important. Because the poor have lower incomes, lower levels of education, and fall into the lower levels of the occupational hierarchy, they may be excluded from opportunities to participate in high culture activities, which will limit the amount of cultural capital they, and their children, possess.

Members of racial and ethnic minority groups may also be excluded from opportunities to obtain cultural capital, partially due to those factors that exclude the poor in general. Members of minority groups are disproportionately represented in the lower classes of society, have lower levels of educational attainment, and are underrepresented in professional occupations. Therefore, like poor whites, they may lack opportunities to participate in high culture activities. However, minority groups may face further exclusion based on various unique circumstances they face as a result of racial or ethnic group status.

As high culture, to a great extent, is synonymous with Euro-American culture, those who are not Euro-American may be particularly disadvantaged with regard to access to cultural capital. According to Paul DiMaggio and Francie Ostrower (1990), historical practices involving overt discrimination excluded African Americans from fully participating in high culture activities. For example, various museums either denied or limited access to blacks, black artists and white artists were segregated, and audiences were often separated by race. Discrimination in education, the economy, and other institutions also played a role in limiting cultural opportunities.

Although opportunities for blacks have expanded since the 1960s, both past and present discrimination may continue to limit access. As noted earlier, race continues to affect socioeconomic status. Due to high degrees of educational and occupational segregation, blacks may lack access to important forms of economic and social capital that could contribute positively to participation in high culture activities. According to DiMaggio and Ostrower, blacks may also participate less in high culture because the benefits of doing so vary by race. For example, attendance at high culture events may be uncomfortable for blacks, as they may be less familiar with these environments, or may be subjected to "'social slurs, unpleasant incidents,' and discrimination" (DiMaggio and Ostrower 1990, p. 758). Therefore, the cost of attendance may outweigh the benefits.

Another important factor to consider is that of taste. DiMaggio and Ostrower find that blacks, for example, are more likely to attend or participate in events that involve jazz, soul, rhythm-and-blues, and other forms of music. Because these tastes are historically associated with African American culture rather than Euro-American culture, they tend to be valued less. Since these tastes are not considered to be as valuable or prestigious, blacks may be excluded from the rewards they might otherwise have received by conforming to dominant cultural tastes.

In conclusion, cultures are not only different but also unequal. Since participation in high culture activities is dependent upon factors such as socioeconomic status, equal opportunity, and taste preferences, poor and minority group members may be excluded from participation, and may therefore also be excluded from the benefits that accompany involvement.

SEE ALSO *Bourdieu, Pierre; Class; Class, Leisure; Culture; Distinctions, Social and Cultural; Gans, Herbert J.; Lewis, Oscar; Lifestyles; Popular Culture; Street Culture; Tastes; Veblen, Thorstein*

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CULTURE, STREET

SEE *Street Culture.*

CULTURE, YOUTH

SEE *Youth Culture.*

CULTURE OF POVERTY

The theory of a "culture of poverty" was created by the anthropologist Oscar Lewis in his 1959 book, *Five Families: Mexican Case Studies in the Culture of Poverty.* The culture of poverty theory states that living in conditions of pervasive poverty will lead to the development of a culture or subculture adapted to those conditions. This culture is characterized by pervasive feelings of helplessness, dependency, marginality, and powerlessness. Furthermore, Lewis described individuals living within a culture of poverty as having little or no sense of history and therefore lacking the knowledge to alleviate their own conditions through collective action, instead focusing solely on their own troubles. Thus, for Lewis, the imposition of poverty on a population was the structural cause of the development of a culture of poverty, which then becomes autonomous, as behaviors and attitudes developed within a culture of poverty get passed down to subsequent generations through socialization processes.

Critics of the culture of poverty theory have pointed out several flaws within both the theory itself and the ways in which it has been interpreted and applied to society. The culture of poverty assumes that culture itself is relatively fixed and unchanging—that once a population exists within the culture of poverty, no amount of intervention in terms of the alleviation of poverty will change the cultural attitudes and behaviors held by members of that population. Thus public assistance to the poor, in the form of welfare or other direct assistance, cannot eliminate poverty, since poverty is inherent in the culture of the poor. Following this reasoning, the culture of poverty theory shifts the blame for poverty from social and economic conditions to the poor themselves. The theory acknowledges past factors that led to the initial condition of poverty, such as substandard housing and education, lack of sufficient social services, lack of job opportunities, and persistent racial segregation and discrimination, but focuses on the cause of present poverty as the behaviors and attitudes of the poor.

Much of the evidence presented in support of the culture of poverty suffers from methodological fallacies, particularly a reliance on the assumption that behavior derives solely from preferred cultural values. That is, evidence of poverty itself, including rates of unemployment, crime, school dropout rates, and drug use, are assumed to be the result of behavior preferred by individuals living within conditions of poverty. The culture of poverty theory presumes the development of a set of deviant norms, whereby behaviors like drug use and gang participation are viewed as the standard (normative) and even desired behaviors of those living in the ghetto. An alternative explanation is that individuals behave in ways that are nominally illegal, like participation in the underground economy or participation in gangs, not because they wish to do so or are following cultural norms, but because they have no choice, given the lack of educational and job opportunities available in their neighborhoods. In other words, individuals living in the ghetto may see themselves as forced to turn to illegal methods of getting money, for example by selling drugs, simply to survive within the conditions of poverty. Thus so-called "ghetto behaviors" are adaptive, not normative, and given sufficient opportunities, individuals within the ghetto would eagerly turn to conventional means of earning a living.

The culture of poverty theory has had a tremendous impact on U.S. public policy, forming the basis for public policy toward the poor since the early to mid-1960s and strongly influencing President Lyndon Johnson's War on Poverty. In 1965 Senator Daniel Patrick Moynihan authored a report entitled "The Negro Family: The Case for National Action." In the report Moynihan stated that poor blacks in the United States were caught in a "tangle of pathology," the core reason for which was the breakdown of the black family—specifically the decline of the traditional male-headed household, resulting in a deviant matriarchal family structure. In Moynihan's conception, this family breakdown was responsible for the failure of black males to succeed, both in school and later in jobs, and that this failure was transmitted down generations. Moynihan argued that the origins of this deviant family structure lay in slavery, where the destruction of the "traditional" family "broke the will of the Negro people," particularly black males. This sense of powerlessness led to, in essence, a culture of dependency.

The related notions of a culture of poverty and a culture of dependency have become the foundations for antipoverty legislation, such as Temporary Assistance for Needy Families, enacted in 1997 and reauthorized in 2005 as a part of welfare reform. This and other programs rely on the assumption that behavior generates poverty, citing the need to end the dependence of the poor on government benefits and promote work and marriage as social norms. Among scholars, sociologists in the field, and government policy makers, the debate as to whether poverty stems from social, political, and economic conditions or from entrenched behaviors on the part of the poor themselves, continues.

SEE ALSO *Benign Neglect; Culture; Culture, Low and High; Determinism, Cultural; Deviance; Lewis, Oscar; Moynihan Report; Moynihan, Daniel Patrick; Pathology, Social; Poverty; Public Assistance; Street Culture; Structuralism; Welfare State*

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David Dietrich

CULTURE OF THE POOR

SEE *Culture of Poverty.*

CUMULATIVE CAUSATION

Cumulative causation refers to a self-reinforcing process during which an impulse to a system triggers further changes in the same direction as the original impulse, thus taking the system further away from its initial position in virtuous or vicious circles of change that may result in a continuing increase in advantages (to some people or activities) and disadvantages (to others).

The term *cumulative causation* was coined by the Swedish economist Gunnar Myrdal (1898–1987), even though the basic hypothesis first appeared in American economist Allyn Young's (1876–1929) analysis of economic progress ("Increasing Returns and Economic Progress," 1928). In *An American Dilemma* (1944), Myrdal used the concept of cumulative causation to explain race relations in the United States. In a vicious circle of social determination, the prejudice of the white populations and the low living standards of the black populations could reinforce each other in a downward spiral: a decline in black living conditions could worsen white prejudice and trigger institutional discriminatory processes, further deteriorating black Americans' standards of living.

In Myrdal's analysis, the circular interdependence between social, economic, and political forces, by hindering identification of the "primary" factors (e.g., economic) behind social issues, challenges traditional scholastic boundaries among the social sciences. Fundamentally, Myrdal's notion of cumulative causation conflicts with the concept of "stable equilibrium" (central to most social sciences, particularly to economics)—that is, the self-stabilization properties of the social system, whereby a disturbance to it will trigger a reaction directed toward restoring a new state of balance between forces. In *Economic Theory and Under-Developed Regions* (1957), Myrdal addressed the failure of neoclassical economic theory to account for the persistence and widening of spatial differences in economic development within and between countries. He ascribes these differences to cumulative processes, whereby regions or nations that gain an initial advantage maintain and expand it as they attract migration, capital, and trade to the detriment of development elsewhere, an idea that permeates the voluminous "nonformal" literature on "uneven development" of the 1960s and 1970s.

As discussed in the valuable surveys by Amitava Dutt (1989) and William Darity and Lewis Davis (2005), in the 1970s and 1980s cumulative causation was incorporated into formal models of "North-South" trade and growth and into models of the "structuralist" tradition that explicitly recognized structural and institutional asymmetries between industrial ("Northern") and developing ("Southern") countries. These models challenged the static neoclassical framework and captured explicitly, by means of dynamic analyses based on differential equations and phase diagrams, the role of history in the evolution of economic processes, resulting in unorthodox effects of trade and in cumulative processes of diverging growth and incomes between countries.

Cumulative causation is also central to the view of economic growth as a "learning process" (resulting from virtuous circles of specialization and technical progress) that emerged in the 1960s and 1970s (e.g., Arrow 1962). However, its assimilation into mainstream economic theory was hampered by the difficulty of modeling "increasing returns," on which it inherently relies. Inspired by Adam Smith (1723–1790) and Alfred Marshall (1842–1924), Young (1928) emphasized how increasing returns stem primarily from the process of the division of labor and specialization in production. In Young's virtuous circle, an expansion of the market deepens the division of labor, ensuing in cumulative increases in production efficiency and in market size. Nicholas Kaldor (1966) formalized this idea in his four-stage model of

industrial development. In Paul Krugman's model (1981), increasing returns in manufacturing effect, via virtuous circles of capital accumulation and cost reductions, uneven patterns of industrialization. Increasing returns are crucial to the self-reinforcing cumulative nature of economic processes and became central to most of the "endogenous" growth literature (whereby growth is generated within the economy), pioneered by Paul Romer (1987), which accounts for persistent international inequality.

The "new" economic geography literature that emerged in the 1990s formalizes cumulative causation mechanisms that account for the uneven geographical distribution of economic activity. Regions or countries with similar underlying structures are shown to endogenously differentiate into a rich "core" and a poor "periphery," as production of manufactures concentrates where the market is larger, which in turn will occur where the concentration of manufactures is higher. In Krugman's seminal paper (1991), the tendency for firms and workers to cluster together as economic integration increases is driven by the interaction of labor migration across regions with increasing returns and transport costs. Larger markets attract more firms, which in turn attract more workers. The larger population eases competition in the labor market and thus attracts more firms.

In Anthony Venables's (1996) model, agglomeration of industry occurs via cumulative processes triggered by input-output linkages between "upstream" intermediate producers and "downstream" final-good firms. With increasing returns to scale, upstream firms have an incentive to concentrate where there is a large downstream industry to produce at a more efficient scale. This in turn will make it attractive to downstream firms to locate where there is a large upstream industry, as the cost of the intermediate goods will be lower there. These models, in which the market output depends on the initial conditions, offer a neat formalization of Myrdal's idea and capture the role of history in determining spatial differences in development, acknowledging how minor changes in the socioeconomic environment may result in large and self-perpetuating asymmetric geographical configurations.

SEE ALSO *American Dilemma; Backwash Effects; Differential Equations; Long Run; Myrdal, Gunnar; Phase Diagrams; Stockholm School; Taylor, Lance*

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CUMULATIVE PROBABILITY DISTRIBUTION FUNCTION

SEE *Probability Distributions.*

CURRENCY

In economics and finance, *currency* refers to paper money and coins that represent the monetary base of a country. Currency is a form of money, which is used primarily as a medium of exchange. In international economics, the word *currency* is used mostly as a reference to foreign currency, the monetary unit of a foreign country.

Currency developed because of the need for a unit of exchange that would be portable, nonperishable, and easily divisible. It appeared with a shift from commodity money to coins made out of precious metals. Currency further developed into *fiat money*, money that carries no intrinsic value, such as coins made out of nonprecious metals and banknotes, the paper money that is used in most countries today. In the form of fiat money, currency's

value is based on the universal acceptance of the currency for payments. For a given level of a country's output, the more currency that is in circulation, the higher would be the level of prices in the country.

Many countries have their own national currency, such as the dollar in the United States. There are some countries, however, that do not have their own currency. Economists separate the latter into two groups: those that belong to a common currency area, and those that simply use foreign currency for transactions in their countries. An example of a common currency area is the European Monetary Union. The members of the European Monetary Union all use the same currency, the euro. Countries and regions that use foreign currency are Panama, Ecuador, and El Salvador, which use the U.S. dollar; Kosovo and Montenegro, which use the euro; and small countries and island nations that use the currencies of their closest neighbors or the country that had formerly governed them as a protectorate. Such economies are referred to as *dollarized*, even if the currency they use is not called "the dollar."

The amount of currency in circulation is determined by the monetary authority of the country and represents one of the instruments of the country's monetary policy. In the United States, the monetary authority is the Federal Reserve System. In the European Monetary Union, the European Central Bank, which includes representatives from all the member countries, determines the amount of currency in circulation. Dollarized countries cannot influence the amount of currency in circulation and therefore do not have an independent monetary policy.

Should each country have its own currency? This question, first analyzed in modern economics literature by Robert Mundell (1961), has been the subject of heated debate ever since. Mundell's theory suggests that two countries should have a common currency if monetary efficiency gain outweighs economic stability loss from having a common currency. This will more likely be the case if the two countries are closely integrated through trade, capital, and labor mobility. Many economists believe that the European Monetary Union is not an optimum currency area because the economies that represent it are too diverse and are not sufficiently integrated. On the other hand, most economists agree that the United States is an optimum currency area, and that it would be costly for each state to use its own currency. Some believe that the world can benefit from the introduction of the single global currency, but most economists think it is not a good idea because independent monetary policy is important to stabilize both real goods and asset markets in conjunction with fiscal policy.

SEE ALSO *Euro, The; Money; Quantity Theory of Money*

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Single Global Currency Association. http://www.singleglobalcurrency.org/.

Galina Hale

CURRENCY APPRECIATION AND DEPRECIATION

In economics, the terms *currency appreciation* and *currency depreciation* describe the movements of the exchange rate induced by market fluctuations. If a country is fixing the exchange rate, official adjustments to the fixed exchange rate are called currency *revaluation* and *devaluation.* Currency appreciates when its value increases with respect to the value of another currency or a "basket" of other currencies. Currency depreciates when its value falls with respect to the value of another currency or a basket of other currencies.

These special terms have to be used because exchange rates can be expressed in different ways, so that using the words "rise" and "fall," or "increase" and "decrease," for changes in the exchange rate can be confusing. For example, if the exchange rate between the U.S. dollar and the euro is expressed in dollars per euro (e.g., 1.20 dollars per euro), an increase in the exchange rate (e.g., to 1.25 dollars per euro) means that the dollar depreciates with respect to the euro and the euro appreciates with respect to the dollar. In other words, the dollar becomes less valuable and the euro becomes more valuable. The same exchange rate can be expressed in euros per dollar (e.g., 0.83 euros per dollar). In this case, an increase in the exchange rate (e.g., to 0.9 euros per dollar) means that the dollar appreciates with respect to the euro and the euro depreciates with respect to the dollar.

In the short run, currency appreciations and depreciations are driven by changes in demand and supply for a currency in the foreign exchange market. The demand and supply of currency depend on a country's imports and exports, international financial transactions, speculations on the foreign exchange market, and, under "dirty float," government interventions in the foreign exchange market. In the long run, currency appreciations and depreciations are determined by the inflation rate and economic growth of the country.

Forecasting currency appreciations and depreciations turns out to be a big challenge for economic theorists. In a 1983 paper titled "Empirical Exchange Rate Models of

the Seventies: Do They Fit Out of Sample?" Richard Meese and Kenneth Rogoff demonstrated that a simple statistical model of the random walk—which states that the best forecast of the exchange rate tomorrow is the exchange rate today—does a better job at forecasting the exchange rate than any of the economic models available at that time. In addition, economic researchers have shown that the exchange rate tends to be "disconnected" from the fundamentals, or the factors that usually affect the exchange rate in economic models. These findings are known as the Meese-Rogoff puzzle and the "exchange rate disconnect" puzzle, respectively. In a 2005 paper, "Exchange Rates and Fundamentals," Charles Engel and Kenneth West demonstrated that given the statistical properties of the fundamentals and the discount factor of the individuals (the weight they place on future consumption relative to today's consumption), it should be expected that exchange rate behavior is similar to a random walk.

In a 2002 paper, "Order Flow and Exchange Rate Dynamics," Charles Evans and Richard Lyons took another approach. They showed that using information on the demand and supply of foreign currency (the order flows by the banks participating in the foreign exchange market), it is possible to forecast currency appreciation and depreciation in the short run better than using the random walk.

Currency appreciation and depreciation affect all the international transactions of a country because they affect international relative prices. In international trade, currency appreciation makes a country's exports more expensive for the residents of other countries if exporters in that country can increase the prices at which they sell their goods to foreign customers. If the exporters cannot increase their sale prices due to competition, their profits fall because the cost of production, which is denominated in their domestic currency, rises relative to their revenues, which are denominated in the foreign currency. If the profits decline a lot, some firms will stop exporting, so that the volume of exports from a country experiencing currency appreciation will decline. The reverse is also true: Currency depreciation will make a country's exports more competitive, increase exporters' profits, and increase the volume of country's exports.

Similar mechanisms link currency appreciation and depreciation to a country's imports. If a currency appreciates, the country's residents will find imported goods inexpensive relative to goods produced domestically, and the volume of imports will increase. Likewise, if a currency depreciates, the country's residents will find that imported goods are very expensive, and they will prefer to switch to buying goods produced domestically, thus lowering the volume of imports. Such changes in trade pattern occur in response to the long-run changes in the exchange rate, and they develop slowly over time because international trade contracts are written well in advance.

Currency appreciation and depreciation also affect international asset trade and the value of the holdings of foreign assets. If a domestic currency depreciates, the value of that country's residents' foreign currency asset holdings increases (because foreign currencies become relatively more valuable), while the value of foreigners' holdings of that country's assets declines. These changes can be described as capital losses and gains due to changes in the exchange rate. In the beginning of the 2000s, the U.S. dollar experienced substantial depreciation. While the United States continued to borrow abroad, its total debt to foreigners did not increase, because dollar depreciation meant capital gains for the U.S. residents and capital losses for the foreigners, which offset new borrowing by U.S. residents. This effect is known in economic literature as a *valuation effect* of exchange rate changes. Cédric Tille, in his 2003 paper "The Impact of Exchange Rate Movements on U.S. Foreign Debt," calculated the exact contribution of the valuation effect to the international financial position of the United States.

When a country accumulates a large amount of foreign currency debt, a sharp depreciation of its currency can be very harmful. If firms' revenues or assets are denominated in their own currency while their debts or liabilities are denominated in foreign currency, the currency depreciation will lower the value of firms' assets relative to liabilities, sometimes so much that firms become bankrupt. Such an effect is known in the economic literature as the *balance sheet effect.* During the financial crises of the late 1990s, the negative balance sheet effects of currency depreciations outweighed their positive effects on exporters' profits. This experience exposed the importance of matching the currency composition of assets and liabilities.

SEE ALSO *Balance of Payments; Central Banks; Currency Depreciation; Currency Devaluation and Revaluation; Dirty Float; Exchange Rates; Greenspan, Alan; Hedging; Macroeconomics; Money; Mundell-Fleming Model; Purchasing Power Parity; Reserves, Foreign; Trade Surplus*

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Galina Hale

CURRENCY DEVALUATION AND REVALUATION

In economics, the terms *currency devaluation* and *currency revaluation* refer to large changes in the value of a country's currency relative to other currencies under a fixed exchange rate regime. These changes are made by the country's government or monetary authority. If a country has a floating exchange rate regime, or if the changes in the exchange rate under a fixed exchange rate regime are small (within the boundaries allowed by the government), the changes in the exchange rate induced by market fluctuations are referred to as currency *depreciation* and *appreciation.*

When a government conducts a devaluation, or devalues its currency, it changes the fixed exchange rate in a way that makes its currency worth less. When a government conducts a revaluation, or revalues its currency, it changes the fixed exchange rate in a way that makes its currency worth more. Since the exchange rates are usually bilateral, an increase in the value of one currency corresponds to a decline in the value of another currency. The convention is to use the term that describes the origin of the policy change. For example, during the period when the Bretton Woods system of currencies was in use (from 1944 to 1973, when many currencies were fixed to the U.S. dollar and the U.S. dollar was fixed to gold), there were cases of devaluations and revaluations. Figure 1 shows how, in November 1967, the British pound was devalued with respect to the U.S. dollar from 2.8 dollars per pound to 2.4 dollars per pound. The pound thus became less valuable with respect to the U.S. dollar, while the dollar became more valuable with respect to the pound. Such an episode is referred to as pound devaluation, rather than a dollar revaluation, because it was originated by the British government.

Before World War II (1939–1945), many countries were fixing their currency to gold. In order to improve the competitiveness of their exporters, the countries engaged in competitive "beggar-thy-neighbor" devaluations, meaning that one country would devalue its currency (with respect to gold and therefore with respect to all other currencies that were pegged to gold) and another would devalue in response. Such competitive devaluations were harmful for the international financial system overall. One reason behind the establishment of the Bretton Woods system and the International Monetary Fund (IMF) in July 1944 was to avoid such competitive depreciations in the future. The charter of the IMF directs policymakers to avoid "manipulating the exchange rates … to gain an unfair competitive advantage over other members."

Governments usually fix the exchange rates to allow for stable conditions in foreign trade or to fight high levels of inflation driven by high inflationary expectations. In the fixed exchange rate regime, the exchange rate is not determined by the markets. It can therefore deviate from the equilibrium exchange rate, creating disequilibrium in international prices. Thus, countries that fix their currency frequently find themselves in a situation in which their currency is either overvalued (is worth more than in equilibrium) or undervalued (is worth less than in equilibrium). In the case of overvalued currency, the government has to keep selling foreign exchange reserves in exchange

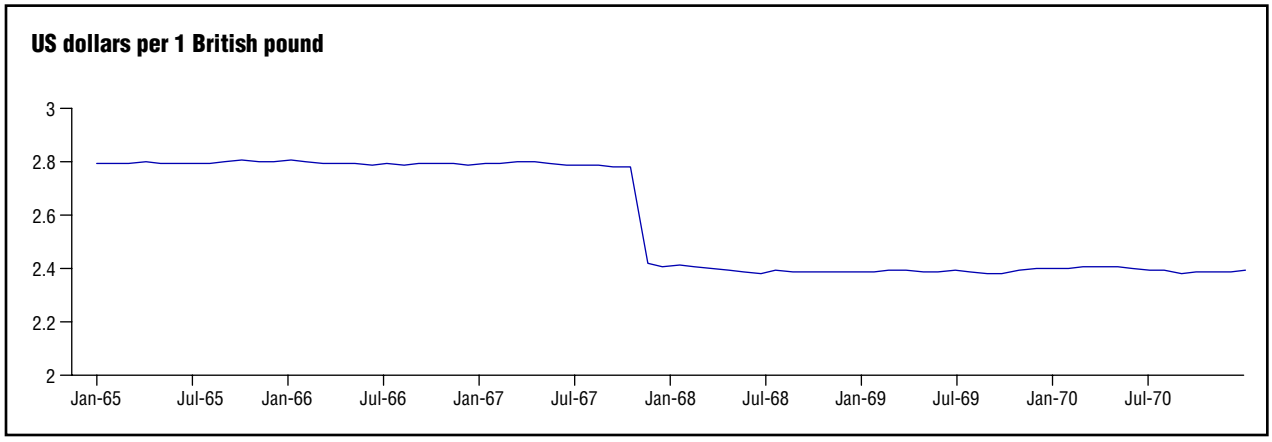

for domestic currency in order to maintain the value of domestic currency above equilibrium. When the reserves run out (or, as Paul Krugman showed in his 1979 article "A Model of Balance-of-Payments Crises," even before the reserves run out), the country has to either devalue the currency or let it float and depreciate while adjusting to its equilibrium exchange rate. Most countries with fixed exchange rate regimes either devalued their currency or switched to a floating exchange rate regime within less than five years after the initiation of the peg (Rose 2006).

The situation is different when the currency is undervalued. In order to keep the value of domestic currency below equilibrium, the government has to keep selling domestic currency in exchange for foreign currency. In this case, the government accumulates foreign exchange reserves and can always print more domestic currency. Thus, there is no well-defined limit on such foreign exchange interventions. Because the cases of undervalued currency are less common, they are less studied in economic literature than cases of overvalued currency.

The most discussed case of undervalued currency is the Chinese renminbi. China was fixing its exchange rate to be equal to 8.3 yuan (a unit of renminbi) per one U.S. dollar between January 1994 and July 2005, when China revalued the renminbi to 8.11 yuan per one U.S. dollar. After July 2005, the renminbi experienced a small controlled appreciation of about 3 percent per year. At the end of 2006, many economists believed that the renminbi remained undervalued, which explains an increasing amount of export from China (because, for the rest of the world, the goods produced in China seem inexpensive). However, since the equilibrium value of the currency is not observed in the fixed exchange rate regime, there was a disagreement as to how much revaluation would be needed to restore the equilibrium. At one extreme, Barry Eichengreen suggested that China allow its currency to float freely and adjust to its equilibrium level. At the other extreme, Michael Dooley and Peter Garber argued that there was no need for renminbi readjustment at all. There was a whole range of opinions in the middle as well, such as suggesting that China revalue its currency by 10 percent right away and let it float some time later, or that China allow a controlled appreciation of the currency.

As outlined by Andrew Rose in a 2006 discussion paper, most economies that are now open to international capital flows let their currencies float freely, meaning that devaluations and revaluations are slowly becoming a phenomenon of the past.

SEE ALSO *Central Banks; Currency; Currency Appreciation and Depreciation; Exchange Rates; International Monetary Fund; Money*

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Galina Hale

CURRENT ACCOUNT

SEE *Balance of Trade; Trade Deficit; Trade Surplus.*

CURRENT POPULATION SURVEY

The Current Population Survey (CPS) is a survey of fifty thousand to sixty thousand households in the United States that has been conducted monthly since 1940 by the U.S. Census Bureau for the Bureau of Labor Statistics. The CPS has been used extensively by social science researchers to address a wide variety of questions, and it is the source used to compile numerous official statistics for the U.S. government.

The CPS emerged from a survey implemented in 1937, the Enumerative Check Census, that attempted to measure unemployment nationwide. One of the largest and most important changes to the survey occurred in 1954 when the number of primary sampling units increased more than threefold. In 1994, due to technological advances in computing, a redesign of the survey was instituted to obtain more accurate and comprehensive information.

THE STRUCTURE OF THE CPS

The CPS is administered to a sample representing the civilian noninstitutional population of the United States living in housing units. (For more on the material in this section, see U.S. Department of Labor 2002.) Each housing unit is in the sample for a total of eight months over a sixteen-month time horizon—four months in, eight months out, and four months in. This rotation cycle ensures that 75 percent of the sample overlaps from month to month and

50 percent overlaps from year to year. (These need not be the same households, since the CPS is a housing unit–based sample rather than a household-based sample.) The survey is administered mostly by phone interviews with occasional site visits. The information is available at the individual, family, and household level.

The core portion of the CPS contains numerous variables portraying the employment status of all members of the households over the age of sixteen, including items such as their status in the paid labor force, occupation, number of hours worked, and reasons for not working. In addition, information on such subjects as age, sex, race, ethnicity, and education is collected. The CPS also collects supplemental data from additional questions besides the core content of the survey. Areas of supplemental data include length of time spent in the same occupation, reasons for changing occupations, use of unemployment benefits or health insurance benefits, migration, citizenship status, birth history, childcare, school enrollment, food insecurity, and food expenditures. Of particular note is the March Supplement of the CPS, where extensive information on income and its sources is garnered along with other relevant demographic variables, including participation in assistance programs.

RESEARCH USES OF THE CPS

CPS data is used by researchers across a wide variety of research topics, including the following four areas. First, researchers and government policymakers use the CPS to assess the nation's economic situation and to obtain unemployment data and information regarding participation rates in the paid workforce. Specific areas examined include wage gaps among different races across different occupations, recent trends in economic status across races, and the hiring and firing experiences of different groups of people. Along the same lines, general income data is generated that is used to address such issues as income distribution among occupations, stability of earnings of males and females in marital relationships, and the relationship between stock market performance and retirement behavior.

Second, data from the CPS is used to study the well-being of families and children. The CPS aids in understanding the prevalence and severity of poverty, the determinants that lead to poverty, and the determinants of participation in government programs, such as the Food Stamp Program (e.g., Gundersen and Offutt 2005). One of the more visible reports is the annual report on income, poverty, and health insurance coverage in the United States (DeNavas-Walt et al. 2004, 2005).

Third, health issues and insurance coverage have been examined utilizing CPS data. Workplace policies to reduce smoking prevalence among workers have been investigated along with job attainment and the number of hours worked among ill individuals. Researchers have also studied the effect of Medicaid care provided by clinics and hospitals on insurance coverage, as well as gaps in health insurance coverage between different races and between men and women.

Fourth, CPS data has been used to explore issues in education. Such topics include the gap in early education between children of different income groups, the influence of maternal age on children's disability status and school progress, and factors influencing educational attainment of immigrant children, adolescents, and adults. Additionally, researchers have explored the relationship between access to home computers and improved educational outcomes.

SEE ALSO *National Family Health Surveys; National Longitudinal Survey of Youth; Panel Study of Income Dynamics; Surveys, Sample*

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CURRICULUM

Curriculum theory, research, and reform have long been informed by a question posed by Herbert Spencer in 1861: "What knowledge is of most worth?" This question has continued to be examined and revised through significant educational and curricular reform movements. As a result, the competing interests of teachers, administrators, academicians, politicians, parents, and other stakeholders have led to a struggle for control of the American curriculum.

There are four major U.S. curricular initiatives that can be identified in the history of curriculum development and reform: (1) academic rationalism, (2) the social efficiency model, (3) progressive education, and 4) social reconstructionism. While each of these movements experienced varying degrees of support and criticism throughout the twentieth century, they more often overlapped in terms of development. For example, the academic rationalist orientation, with its roots during the Enlightenment, focused on the "Great Books" as the foundation of the Western cultural tradition. The goal of this approach, which was very popular at the turn of the century, was to develop the student's mind to tackle life's ultimate purpose, which was seen as a quest for truth, beauty, goodness, and liberty. Academic rationalism, however, continued to have strong support throughout the century. Beginning in the 1920s and continuing into the 1960s with the space revolution, the social efficiency model emphasized the efficient nature of the curriculum through operationally designed skills and knowledge. John Dewey's progressive education movement was especially popular during the first two decades of the twentieth century, and advocated a child-centered approach that allowed the curriculum to accommodate children's natural interests, and thus grow directly from the interests of the child. Lastly, the 1930s saw the advent of the social reconstructionist conception which posits that the curriculum should stress the needs of society over the needs of the individual, redress social injustice, and serve as an agent for social change (Schubert, 1986).

Although each curricular orientation has been vital in the formation of American schooling, the most recent, and most controversial, has been social reconstructionism. One of the most prominent proponents of social reconstructionism was the Brazilian scholar Paulo Freire (1921–1997). In his seminal work *Pedagogy of the Oppressed* (1970), Freire argued that only through "conscientization" can people liberate themselves from political and economic oppression. According to Freire, conscientization is the process by which the individual achieves a deep awareness of the social and cultural reality that shapes his or her life, and of the individual's ability to transform that reality (Freire 1970b).

A product of Freire's work is the concept of critical pedagogy, which emphasizes that education be viewed as a political, social, and cultural enterprise. In order to appreciate the contribution of critical pedagogy to curricular reform, it is imperative to understand the undeniable relationship between curriculum theory, the power of capital, and the state. For example, in light of the focus on the global marketplace that developed in the late twentieth century, capitalist ideology continuously encourages the consumption of commodities as a mechanism to continue the cycle of accumulation. Within educational settings, this is evident in the push toward integrating corporate management pedagogies within the classroom. As a result, academic success is almost exclusively defined in terms of "capital accumulation and the logic of the marketplace" (McLaren 2002, p. 34). Looking at this phenomenon through a Marxist lens, capitalism diminishes the individual to a commodity that can be bought and sold in the name of profit.

Western society, through the school curriculum, teaches that success can only be achieved through intelligence, hard work, and creativity. This type of pedagogical approach affects teachers, middle-class students, and working-class students. Reforms were initiated in the late twentieth century to provide "teacher-proof state-mandated curricula," which some see as reducing the role of the teacher to nothing more than a "semi-skilled, low-paid clerk" (McLaren 2002, p. 187). From this perspective, students who possess the dominant cultural assets (e.g., particular ways of talking, acting, and socializing) are rewarded, while those possessing cultural assets of the oppressed are devalued. As a result, the curriculum perpetuates the unjust system of inequality based on cultural capital. As Freire points out, however, this practice is not perpetuated by force (McNeil 1996). Instead, the dominant culture is able to exercise power over subordinate classes through hegemony. Thus, this domination is maintained through consensual social practices, social forms, and social structures.

Critical pedagogy also advocates an analysis of the "hidden curriculum," or the unintended outcomes of schooling that transmit messages to students through the "total physical and instructional environment" (McLaren 2002, p. 212). The curriculum is inextricably linked to the issue of power not only by culture but also by gender. For example, teachers often allow boys to dominate classroom conversations and offer them more academic praise than girls. While few teachers would admit to intentional sexist ideology, such interactions perpetuate sexist behavior. As a result, girls are often more hesitant to contribute to class discussions. Research also shows that girls are less likely to view themselves as competent in mathematics and science, and by the time they reach high school they are far less likely than boys to enroll in advanced math and science courses (McLaren 2002). Furthermore, girls are more likely to attribute failure to personal factors such as competence and ability.

As a consequence, men and women continue to be affected by the sexist nature of the hidden curriculum well into adulthood. For example, men tend to speak more often than women and frequently interrupt them in both professional and personal settings. It is also more difficult for women to be regarded as experts in their chosen occupations, and they are far less likely to obtain positions of power and authority.

Curriculum, from a critical theorist's standpoint, encourages teachers and students to foster democratic principles in order to question how the curriculum creates inequities between dominant and oppressed groups. Thus, the curriculum could help a society come to terms with its history, helping students understand the inequitable distribution of power and resources common to many nations. Encouraging students to value and articulate their own experiences of injustice are the first steps in creating a new social order.

To date, however, curricular reform in the U.S. that addresses inequity and injustice has been controversial and, at times, considered "dangerous" territory. However, to ignore these issues is to deny students a voice as active, reflective citizens. Just as the current educational system was "made," it can be "unmade" and "made over" (McLaren 2002). The first and most important step is to remove the fear of questioning the unquestionable and realize the role that the curriculum plays in political, social, and cultural life.

SEE ALSO *Education, USA; Pedagogy; Schooling in the USA*

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Shelby Gilbert

CURTIN, PHILIP

SEE *Slave Trade.*

CUSTER'S LAST STAND

SEE *Battle of the Little Big Horn.*

CUSTOMS

SEE *Tradition.*

CUSTOMS UNION

Economic integration is the process designed to eliminate discrimination among economic units located within different political boundaries. The traditional categories include Free Trade Area (FTA), Customs Union (CU), Common Market (CM), Economic Community (EC), and Complete Economic Integration (CEI). The various categories delineate the degree to which barriers to economic interaction are formally removed. In an FTA participating countries agree to remove barriers to trade among each other. In a CU the member countries agree not only to remove barriers to trade but also to set common levels of protection against all nonmember countries. Examples of a CU include the 1940s Benelux countries agreement (among Belgium, the Netherlands, and Luxembourg) and the Southern African Customs Union, signed in 1969 and still in existence. The CM agreement goes a step further than a CU agreement by removing barriers to movements of factors (essentially labor and capital) among members in addition to the CU components. An EC represents an additional step toward complete economic integration in that there is some degree of harmonization of national policies where community policies and institutions take precedence over national policies. An example of the latter is the Common Agricultural Policy of the European Economic Community.

A formal definition of a CU was provided by the General Agreement on Tariffs on Trade (GATT) in 1952:

> A customs union shall be understood to mean the substitution of a single customs territory for two or more customs territories, so that (i) duties and other restrictive regulations of commerce are eliminated with respect to substantially all the trade between the constituent territories of the union … and (ii) substantially the same duties and other regulations of commerce are applied by each of

the members of the union to the trade of territories not included in the union.

The implementation of a CU represents a reduction in protection between member countries, but it keeps in place discriminatory policies against nonmember countries. Although the former represents a clear movement toward less restricted trade and increased world welfare, the discrimination against nonmembers represents a potential loss in world trade and welfare. Thus whether a CU represents an overall movement toward less restricted trade and increased world welfare depends on the relative strength of these two forces, which are typically discussed as the static effects of economic integration under the categories of Trade Creation and Trade Diversion.

Trade Creation refers to the shift from higher-cost domestic producers to lower-cost partner producers. It is thus a shift from less efficient to more efficient production and is trade expanding. It also reflects a gain in country welfare. Trade Diversion refers to the shift from lower-cost nonmember suppliers to higher-cost partner suppliers, which takes place because of the tariff faced by nonmember products. It thus represents a loss in efficiency and a decrease in welfare. There are also accompanying consumption effects as consumers switch from domestic products to the now cheaper import products. Whether or not the CU represents a movement toward less restricted trade and enhanced welfare in the static sense depends on the relative size of these two effects. Whether the overall effect is positive or negative depends on a number of considerations, including the complementarity or competitiveness of the individual economies, the size of transportation costs between member countries, the height of tariffs before and after integration, the economic size of the member countries, and the elasticities of supply and demand within the member countries. Empirical estimates of the static effects of economic integration have generally been a net, though small, positive.

Economists tend to agree that the major benefits of economic integration occur because of the dynamic effects associated with increased economic interaction between member countries. These dynamic considerations include the benefits associated with a more competitive economic environment, which reduces the degree of monopoly power that possibly existed in the preintegration environment. In addition, access to larger markets within the integrated area may result in economies of scale in the expanding export sector as a result of both internal and external economies of scale. The growing and more profitable economic environment may also generate greater investment from both internal and external sources. Finally, there may also be dynamic benefits resulting from increased economic interaction with other countries in terms of increased access to technology, foreign institutions, and cultural factors.

SEE ALSO *Common Market, The; Economics, International; European Union; Free Trade; General Agreement on Tariffs and Trade; North American Free Trade Agreement; Quotas, Trade; Tariffs; Trade*

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Alfred J. Field Jr.

CYBERSPACE

The term *cyberspace*, was originally a creation of late twentieth-century science fiction, and it has come to have two extended uses. In technical training contexts, it has become a useful handle for the notional "space" a person (or "user") enters when logging on to a computer. In a social science context, the term refers to new social spaces fostered by computer-enabled automated information and communication technologies (AICTs). Often, those using cyberspace in this way confer on it important, and even transformative, impacts on "real life" social relations. However, a tendency to assume transformation without demonstrating it means descriptions of cyberspace should be approached with caution.

The term was first used by William Gibson in his 1984 novel *Neuromancer*. By making an electronic connection, or "jacking in," to networked computers, a character in the novel entered into "cyberspace," an alternative and rather dark social universe whose interaction with real life drove the novel's plot. Shedding negative connotations, "navigating in cyberspace" became a helpful metaphor for the experiences of getting around a com-

puter's virtual "desktop," navigating in and out of open software "windows," or projecting a personal "avatar" in an online virtual game or business communications environment.

As computers appeared in more and more human activities, technology talk was similarly cyberspaced. This use paralleled the late twentieth-century, popular use of the term *technology*, which was often equated linguistically with advanced technological forms and innovations. Thus, the realm of technology became coterminous with cyberspace.

It is now common in social science to critique such uses of technology, and thus to be suspicious of cybertalk. Since all cultures are substantially mediated by technologies of one sort or another, to equate the technological with cyberspace is ethnocentric. In the field of STS (science and technology studies), *technology* is used analytically to refer to any complex of artifacts, actors, and practices. Still, social scientists interested in the relationship between technology and social change (e.g., Hakken 1999) have found interactions between cyberspace and real life to be a convenient point at which to start analyzing the dynamics of hybrid (computered and noncomputered) social spaces.

The term *information technology* (IT) also became widely used in this period; it was used to refer to any system of practices involving devices for automatically storing and manipulating digitized information (e.g., computers). IT shifts the focus away from a particular computing machine to the broadening range of more general systems in which it becomes embedded. Particularly with the rise of the Internet and similar technologies of communication with embedded IT, scholars began to talk more about information and communication technologies (ICTs). What is distinctive about computer-mediated ICTs, and thus of cyberspace, is the extent to which information storage, manipulation, and communication take place according to protocols built into hardware and software.

Like other labels, such as *Information Age* or *Knowledge Society*, cyberspace tends to be equated with epochal social change. AICTs are presumed to play a seminal, causal role in globalization (see Friedman 2005). Such presumptions fit neatly into long traditions of theorizing, from Leninist Marxisms to postmodernisms, that privilege technologies as engines of social change. In the long, especially American version of technological determinism, the impact of any other social dynamics on technologies is largely ignored.

Ironically, the social correlates of automated ICTs, and the dynamics of cyberspace, become both more pronounced and harder to see. The attribution of transformational changes in social relations to the adoption of AICTs is reinforced by, and reinforces, popular perceptions of massive, technology-induced social change. That AICTs automate processes (make them more rapid, more far-reaching, etc.) is what gives them their potential to transform. Yet in carrying out interactions among data, information, and knowledge "behind our backs," AICTs also make these social processes more opaque. The political and social theorist Langdon Winner points to a dazzled, computing-induced "technological somnambulism" that has made the age of cyberspace an era of "mythinformation" (Winner 1984).

Thus, there is a belief that cyberspace colonizes real life, that the new social relations engendered by computing first influence and then come to dominate what went before. Its popularity explains why social science attends to cybertalk, but to many observers it should do so as hypothesis, not as presumption. Social scientists need to explore the ways in which the social dynamics of computer-mediated spaces are influenced by, as well as influence, other social dynamics. Some, such as Frank Webster, have studied cyberspace in this even-handed empirical manner, and those with long ethnographic involvement in cyberspace tend to document social continuities between cyberspace and other social dynamics. Yet even this work too often complexifies its own interpretation, performing transformationalist rhetoric irrespective of—and often in contradiction to—its own empirical results.

In practice, university courses on the social impacts of computing outnumber those on the impacts of social processes on computing. The pervasive sense that transformative social change is inevitable, and therefore not worth thinking about too much, may follow functionally from the actions of powerful social forces that have an interest in promoting this view. For all these reasons, social research on cyberspace, like most popular musings on technology, needs to be approached with skepticism.

SEE ALSO *Technology; Technology, Adoption of*

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David Hakken

D

DAHL, ROBERT ALAN
1915–

Robert Dahl, Sterling Professor of Political Science, Emeritus, Yale University, and past president of the American Political Science Association (1967), is most widely known as the leading theorist of pluralist theory, the dominant theory in the study of U.S. politics for about ten years after the publication of his *Who Governs?* in 1961. Dahl was the chief originator of this pluralist theory of political power, which needs to be distinguished from other uses of the term *pluralism* in the social science literature. Three of these are: pluralism as the doctrine opposed to the emphasis of the idea of sovereignty of the state; pluralism as the description of societal ethnic diversity; and pluralism as a value preference for furthering ethnic and gender diversity in state policy. Dahl's pluralist theory of political power often has been mistakenly identified with pluralism as group theory, the idea that political groups are the chief explanatory variable in politics, often carrying the connotation that all groups in the United States are equally free to organize. Dahl explicitly denied this use of pluralism (1961, p. 4; 1982, pp. 207–209).

Dahl's pluralist theory of political power was developed in distinction to power elite theory, as put forth by C. Wright Mills and by Floyd Hunter. Dahl argued that a sufficient research design for the study of political power should incorporate the following elements: (1) the concept of power as gaining one's way through changing the behavior of others, and that *power* should not be equated with the resources used to gain power, such as money or prestige; (2) that power should be observed through construction of case studies of political action; (3) that there are different domains of political action, and power in one is not necessarily the same as power in another; (4) that one should define *power* in terms of the goals of the actors themselves, not in terms of some theoretical construct not understood by the actors.

In *Who Governs?* Dahl found that political power in the city of New Haven, Connecticut, was plural; that is, power in each of the different sectors of action was held by different people, except for the mayor, who was powerful in more than one area, but who was accountable to the voters through regular competitive elections. This pluralist theory of political power stated a general model for studying and interpreting political power, and as such, was readily applied in numerous studies of power in cities and towns, in legislatures, in federalist interactions, and even within the executive branches of various governments. Normally, pluralist studies of power in the United States found that power was dispersed within the institution studied.

Although it provided the dominant political science theory in the study of U.S. politics during the 1960s, Dahl's pluralist theory was soon challenged by a number of arguments. Peter Bachrach and Morton Baratz argued that Dahl provided no method for the study of power over the determination of the agenda for political issues. Theodore J. Lowi Jr. argued that the fragmentation of power in pluralist theory often amounted to the finding of "islands of power," in which unrepresentative coalitions of interest groups, administrative decision makers, and legislative committees controlled an area of public policy without countervailing power from the legislature as a whole. Mancur Olson Jr. propounded *The Logic of*

Collective Action (1965), which indicated that such dominance of particular public policy areas by unrepresentative coalitions is based on a fundamental logic of group formation. Carole Pateman (1970) and other political philosophers criticized *Who Governs?* as based on a constricted view of political participation, omitting the classical viewpoint of participation as public discussion of issues affecting the entire community.

Foreshadowing postmodernist theory, Henry Kariel (1969) argued that political participation sometimes involves the creation of new forms of political reality, an idea precluded by Dahl's empirical studies of individual action in the policy process. Others criticized Dahl for finding interest group domination of politics, leaving little role for policy initiatives organized by government, but this criticism confused Dahl's pluralism with group theory. In addition, Dahl and pluralist theorists were frequently criticized as expressing a favorable view of the political status quo, although in writings after 1970 Dahl clearly indicated he had no such intention. In the final analysis, Dahl's pluralist theory of political power made a major and lasting contribution to the study of power, in that many in succeeding generations of political scientists used most of Dahl's basic methods in the study of power, although they often interpreted research results differently, as exemplified by Lowi's theory of "interest-group liberalism"—the unaccountable "islands of power." After 1980 much political science work in the study of power in public policymaking, in urban politics, and in interest group activity can be described as *neopluralist*, as much of Dahl's outlook has been retained but methodological and interpretive corrections have been made for the problems found in Dahl's pluralism (for instance, allowing for concern for the political agenda and recognition that islands of power exist). These neopluralist researchers include John W. Kingdon (1984), Jack L. Walker Jr. (1991), Frank R. Baumgartner and Bryan D. Jones (1993), Jeffrey M. Berry (1999), and Virginia Gray and David Lowery (2004).

In his studies of democracy, after 1970 Dahl turned from the pluralist theory approach to other approaches based upon comparative political studies and his own egalitarian philosophy. Dahl sometimes used the term *polyarchy*, rule by the many, rather than the controversial *democracy*. At first he stressed the usefulness of comparative indicators of democracy, emphasizing stable electoral competition among political elites (*Polyarchy*, 1971). Realizing that democracy is based on more than regular competitive elections, Dahl broadened his approach to include diversity of political communications, economic development level of society, tolerance of political oppositions, and institutional legitimacy as an antidote to military coups. In addition, Dahl explored issues concerning the extent of political participation and the control of the political agenda, advances beyond his initial pluralist theory. Moreover, Dahl exhibited an egalitarian impulse by exploring contradictions between unequal distribution of wealth and democracy, and he examined possibilities for wider participation in business decision making as a means for controlling corporate power. Dahl's comparative indices of democracy contributed to the theory of democratic peace, the finding that democracies almost never in the last century engaged in war with one another. Comparative indices of democracy are now widely used as a basis for the evaluation of political regimes by political and economic-development decision makers. The conclusions of Dahl's thirty years of writing in the comparative and philosophical vein are summarized in nontechnical language in his *On Democracy* (1998).

Dahl is also known for exploring the links between the logical bases of U.S. governmental and political institutions and political outcomes. At first, in *Preface to Democratic Theory* (1956), Dahl argued that the logic of majority voting did not pose a critical threat to civil liberties and democracy, but later, in *How Democratic Is the American Constitution?* (2003), he became concerned about the effects of equal state representation in the Senate and of imbalanced campaign contributions on representative democracy.

SEE ALSO *Community Power Studies; Democracy; Pluralism; Political Science*

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Andrew McFarland

DALITS

Historically, Hindu society in India has been characterized by a high degree of social stratification and institutional inequality governed by the caste system. The caste system as a societal order of social, economic, and religious governance for Hindus is based on the principle of inequality and unequal rights. The *dalits* or the *untouchables* (known as *scheduled castes* in government parlance) stand at the bottom of the caste hierarchy, and were historically denied equal rights to property, education, and business, as well as civil, cultural, and religious rights. They were also considered to be polluting, and they suffered from social and physical segregation and isolation. The result was a high level of deprivation and poverty.

SOCIAL MOVEMENTS

Past religious and cultural movements, such as Buddhism, opposed Brahmanic Hinduism and attempted to construct Indian society on principles of equality and fraternity. The dalits themselves initiated social movements against the denial of equal rights and oppression in the latter half of the nineteenth century and the first half of the twentieth century, notably the social-political movement of the Indian reformer and politician Bhimrao Ramji Ambedkar (1891–1956). During the 1970s and the 1980s, collective action emerged among the dalits in the form of the Dalit Panther movement in Maharashtra State and the Dalit Sangarsh Samiti in Karnataka, and the rise of such political parties as the Bahujan Samaj Party in the north, and similar efforts throughout the country. A strong nongovernmental organization movement also emerged, particularly in south India. In 1998 these groups formed a coalition of civil society organizations and activists: the National Campaign on Dalit Human Rights. This coalition facilitated the establishment of an International Dalit Solidarity Network in Europe and the United States.

By 2006, dalit assertion has transcended national boundaries with the dalit diaspora organizing itself into the Ambedkar Mission Society, the Federation of Ambedkarite and Buddhist Organization, the Voice of Dalit International in the United Kingdom, Volunteers in Service to India's Oppressed and Neglected in the United States, and similar organizations in Canada. These organizations generate and disseminate literature about problems of the dalits, undertake advocacy, and use modern information and communication tools to generate discussion and build solidarity.

CONSTITUTIONAL PROVISIONS AND STRATEGIES OF SCHEDULE CASTE EMPOWERMENT

The constitution of India (1950) guarantees equality before the law (Article 14); prohibits discrimination on the basis of religion, race, caste, sex, or place of birth (Article 15); and abolished untouchability (Article 17). It further assigned responsibility to the state for the promotion of the educational and economic interests of the dalits (Article 46). On this basis, legal safeguards have been provided, including the Anti-Untouchability Act of 1955, and affirmative action policies in public employment, educational institutions, and the legislature, and other measures for the general economic empowerment of the dalit community. Government policies thus aim to overcome the multiple deprivations that dalits have inherited from exclusion in the past, and provide protection against exclusion and discrimination in the present.

Affirmative action policies are confined to the public sector. In the absence of such policies for the private sector, the state has developed programs for the economic, educational, and social empowerment of the dalits with a focus on improving the private ownership of fixed capital assets, human resource capabilities, and access to basic civil amenities, among other things.

CHANGE AND THE STATUS OF DALITS IN THE TWENTY-FIRST CENTURY

Government policies from 1950 to 2000 indicate both positive change and continuity in deprivation. There has indeed been some improvement. In 2000 about 17 percent of dalits cultivated land, and about 12 percent of dalits in rural areas and 28 percent in urban areas owned small businesses. Literacy rates among dalits have risen from 10.27 percent in 1960 to 54.69 percent in 2001.

The unemployment rate in rural areas has been reduced from 6.77 percent in 1978 to 5 percent in 2000, and from 7.37 percent to 5.20 percent in urban areas for the same periods. Lingering limitations in access to assets are the residue of a similar denial in the past.

Affirmative action policies have seen limited, yet positive, gains. The number of dalits employed in central government jobs increased in 2002, along with the number of dalit employees in public sector undertakings. The number of dalits employed in government banks also rose in 2004. In education, about a third of dalit students enrolled in universities and colleges were pursuing higher education in desirable programs because of reservation policies. As a consequence of such positive changes, poverty among dalits declined from 58 percent in 1984 to 37 percent in 2000 in rural areas, and from 56 percent in 1983 to 38 percent in 2000 in urban areas. Furthermore, caste discrimination against dalits in civil, cultural, and religious spheres has been reduced in some public spheres, although more so in urban than in rural areas.

Notwithstanding these gains, India's dalits continue to suffer in terms of absolute levels of deprivation and indicators of human development. About 70 percent of dalits inhabit rural areas; in 2000 about two-thirds of dalit rural households were landless or near landless (the figure is one-third for nondalits). Less than one-third of the dalit population had access to capital assets (40% for nondalits); 60 percent of dalits were dependent upon wage labor (25% for nondalits); and the dalit unemployment and literacy rate was 5.5 percent and 54.69 percent respectively, compared to 3 percent and 58 percent for nondalits. In addition, the prevalence of anemia among dalit women and mortality among children was high.

Various studies indicate that dalits continue to face discrimination in market and nonmarket transactions, in social services (education, health, and housing), and in political participation. Thus, there remains a long way to go before India's dalits can imagine a reasonable degree of dignity in their lives and livelihoods.

POLICY INITIATIVES

In 1992 the Indian government withdrew from some public spheres under an overall policy of liberalization. This development weakened the possibility of public sector employment for dalits. The government has made efforts to establish affirmative action policies that apply to the private sector; these efforts have seen response from India's corporate sector in 2006, but they have not yet taken any shape in terms of policy. However, other initiatives include reserved spots for dalits in private educational institutions, as well as scholarships for research and technical education. In addition, in 2005 India passed the Employment Guarantee Act, which ensures minimum employment for rural laborers. Such initiatives are likely to enhance the status of the dalits.

During 2006, the Indian government has taken new initiative by extending reservation to Other Backward Castes in public educational institutions and proposed to extend the same to private educational institutions. The reservation in private education institutions would also benefit the Schedule Castes. The progressive extensions of reservation to Other Backward Castes has widened and strengthened the safeguards against the hierarchal discrimination faced by different sections of lower castes. This has encouraged solidarity among Scheduled Castes and Other Backward Castes.

SEE ALSO *Ambedkar, B. R.*

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Sukhadeo Thorat

DANCE

Dance, or the human body making rhythmic patterns in time and space for a purpose transcending utility, has been approached by anthropologists as one aspect of human behavior inextricably bound up with all those aspects that constitute what we call culture. Early ethnographers attended to dance as an adjunct to ritual or as an accompaniment to leisure social activities. Contemporary scholars examine it as belonging to the more general category of embodied knowledge. Their scope extends to classical performance traditions, modern popular forms, and communally embedded traditional dance.

Throughout human history, dance has always elicited powerful responses—on one hand, it has been banned, feared, seen as a corrupting influence, criticized for its sexual nature, and anathema to those who privilege the mind; on the other, dance has been praised for its ability to entertain, viewed as the essential element in rituals of healing, transformation from one state to another, and thanksgiving, and as ordered movement, a symbol of a cosmic "great chain of being." Through its performance by the human body and its ability to elicit a kinesthetic response in performer and viewer alike, it becomes elemental. Its universality across cultures is equaled by the strength of human responses to it, in which there appears to be no neutral position. Anthropologist Maurice Bloch, in his influential 1974 article, argues for the language of song, dance, and music as a special form of assertion toward which no argument is possible. Whatever meanings are encoded in these forms, the listener or viewer may only agree or disagree. There is no dialogue possible.

The medium of dance, composed by individuals and embodied by other individuals, creates meanings that are polysemous and multivocalic. The choreographer of a piece or a ritual may have one message to convey, the performers other interpretations, and the audience yet other understandings. This quality compounds the difficulties faced by scholars who wish to understand how and why dance occupies the position it does in society. Dance can be viewed for its formal aspects, its meanings or content, or for the relationships it has to its larger social context. In the history of American anthropology, the last approach has been the most popular. The reasons for this have to do with an implicit hierarchy of ethnographic areas of inquiry with the arts being relegated to the least central to understanding society. Even within the arts, visual arts have always been favored, perhaps because they are easier to document, unlike performing arts, whose "products" are ephemeral. Secondly, dance is notoriously hard to observe, record, and analyze. A focus on who participates in dance and how it functions within society made dance seem like other social categories. Early descriptions paid minimal attention to form, preferring the safer ground of functional analysis.

Ironically, French anthropologist Marcel Mauss (1872–1950) had no such hesitation in exploring the body in motion. In his article "Body Techniques" (1934), he examined body actions in ordinary life, relating them to expectations about gender, about practice, and about habits of the body. His definition of techniques of the body—highly developed body actions that embody aspects of a given culture—was the foundation for Pierre Bourdieu's (1930–2002) *habitus,* a notion that has influenced much of contemporary social science.

American anthropologist Franz Boas (1858–1942) acknowledged dance as a universal human phenomenon and, in the case of the Kwakiutl of the northwest coast of North America, as an essential part of their culture, but he found the form of dance more difficult to describe than visual arts, house types, music, or kinship systems. He was one of the first, however, to use film to record dance. Although the first system for notating was published in 1588 (*Orchesographie* by Thoinot Arbeau), it would not be until the 1930s, when Hungarian dancer Rudolf von Laban (1879–1958) created a dance and movement notation based on universal and arbitrary symbols, that it was possible to make an adequate record of dance that might be a basis for formal analysis. Laban's system, *labanotation*, and its offshoot, *effort-shape notation*, revolutionized the way in which dance is described and preserved. While most dance ethnographers prefer their own shorthand systems, supplemented by film, for field research, these two notation systems prove invaluable for both structural analyses of dance as well as for permanent records. European folklorists and ethnomusicologists were much quicker than their American counterparts to document such formal aspects of dance as steps, choreography, movement patterns, and floor plans. They were also quicker to use labanotation and effort-shape in their work (Royce 1977).

Attention to the formal aspects of dance did not occur in the United States until dancers trained as anthropologists entered the field. Katherine Dunham (1909–2006), who worked in Haiti and the Caribbean, and Pearl Primus (1919–1994), who examined West African dance and its American forms, approached their subject as dancers and as anthropologists. As dancers, they were comfortable with the dance itself, settling it in their own bodies. As anthropologists, they documented its purpose in those societies they studied. Both women ultimately focused on theatrical performance as a way of bringing the richness of African diasporic cultures to the widest possible audience. Regarded as performers rather than as scholars, their important work was largely ignored.

Gertrude P. Kurath (1903–1992), a dancer with degrees in music, drama, and art history, was initially more successful. Invited by anthropologist Sol Tax (1907–1995) to write an article on dance ethnology for the first issue of *Current Anthropology,* Kurath defined and laid out the shape of research on dance within American anthropology. Sound research on dance, she wrote, could only be done by "dancers who have achieved the insight and point of view of the ethnologist, or by musicians and ethnologists with dance training" (Kurath 1960, p. 247). This, indeed, has been the pattern, with dance-trained anthropologists forming the majority of dance scholars. Kurath herself documented dance in cultures as widely separated as the American Southwest, Mexico, eastern and southern Europe, and ancient Mesoamerica, as well as Iroquois dance. Her most long-lasting contributions to the anthropology of dance have been her meticulous ethnographic description, and her development and use of a notation system easily learned and easily understood by readers. Kurath's superb monograph, *Music and Dance of the Tewa Pueblos* (written with Antonio Garcia, 1970) provided ethnographer Jill Sweet a foundation on which to trace the trajectory of Tewa dance. Sweet, with forty years of involvement with the Tewa, published a second edition of her book *Dances of the Tewa Pueblo Indians* in 2004. Most significantly, she included the voices of Tewa themselves, who reflect on the continuities and disjunctures of their dance.

In the late 1960s and 1970s, a small group of anthropologists elaborated different approaches to dance within anthropology. Adrienne Kaeppler used linguistic analysis to explore the structure of Tongan dance. Drid Williams argued for a linguistic approach based on transformational grammar. Judith Lynne Hanna, working initially with West African and African diasporic dance, employed communications theory as a way to examine dance. Joann Kealiinohomoku took the work of Boas and Melville Herskovits (1895–1963) in new directions, looking at dance holistically as performed by the biological, language-using, social, culturally embedded human being. Anya Peterson Royce weighed the merits of historic, comparative, symbolic, and structural approaches to dance as an aspect of human society. The early contributions of these scholars to the emergence of the anthropology of dance as a scientific field of inquiry is the subject of a 2005 volume, *Anthropologie de la Danse* (Anthropology of Dance). Its editors, Andrée Grau and Georgiana Wierre-Gore, included important European scholars whose work is both fundamental and provocative. These include Rodryk Lange, John Blacking, György Martin, Ernô Pesovár, Anca Giurchescu, and Egil Bakka.

Since the 1980s, dance scholars have kept pace with the discourse of anthropology as it has dealt with issues such as borders and boundaries, postcolonial societies, exile and appropriation, gender, power and agency, the articulation of us and them, and not least, an embodied anthropology of the senses. The tango and the samba provided a multivocalic point of entry into matters of exile, identity, agency, and embodied memory and action for three anthropologists and their work: Barbara Browning's *Samba: Resistance in Motion* (1995), Marta Savigliano's *Tango and the Political Economy of Passion* (1995), and Julie Taylor's *Paper Tangos* (1998). All three authors capture what it means to be embodied in the dance, and communicate it in their writing. Browning writes of the way in which the dancing body communicates as a complex speaking of the body. Savigliano, an Argentine herself, describes the tango from the inside out in words that allow the reader not only to "see" the dance but also to "feel" it. Taylor, who lived in Argentina for more than twenty years, takes us beyond the observable steps into the meanings deep in the dancers' bodies, and does so in language that situates the reader in the tango itself. Taylor and Savigliano speak eloquently and powerfully to the issues of exile and appropriation, the recombination of old stereotypes with new territories, and introspection and memory in the face of political terror. These key themes in contemporary anthropology gain new significance from their embodied treatment.

Browning's important contribution is to speak of the agency in the body, especially the danced body. She writes, "the insistence of Brazilians to keep dancing is not a means of forgetting but rather a perseverance, an unrelenting attempt to intellectualize, theorize, understand a history and a present of social injustice" (Browning 1995, p. 167). The active, creative, and creating body in dance is the subject of studies by Susan Leigh Foster in her perceptive commentaries on theory, by Cynthia Novack (1947–1996), who examined contact improvisation and American culture, and by Kazuko Yamazaki, who describes changing Japanese notions about the gendered body and its implications for innovation in dance.

The nuanced complexities of cultural perceptions and the social manipulations of dance and embodied movement have been the focus of several recent studies. Two of those are Jennifer Nevile's *The Eloquent Body: Dance and Humanist Culture in Fifteenth-Century Italy* (2004) and Anne Décoret-Ahiha's *Les Danses Exotiques en France, 1880–1940* (2004). Nevile discusses the moral divide between the noble dances of the Italian court and the graceless dances of the peasants. Dancing masters, and the court humanists who were the arbiters of intellectual and moral engagement, molded their pupils' bodies into the ordered, virtuous symbols of nobility. The peasantry, in contrast, were divorced from any philosophical foundations of morality, their dances therefore reflecting that lack in their sensual formlessness (Nevile 2004, pp. 2–3).

Décoret-Ahiha contrasts nineteenth-century French popular dance with popular dance between 1900 and 1940. Both periods were fascinated with the "exotic," but how exotic was defined differed. Nineteenth-century exoticism in the form of world's fairs and ethnological exhibits found a welcome audience of people who flocked to see these "primitive" and strange peoples and customs. At the beginning of the twentieth century, exotic dance dominated the music hall scene and drawing rooms. This shifted as artists and companies from all over the world made their way to Paris. Sergei Diaghilev's (1872–1929) Ballets Russes, with its lush ballets on Oriental themes and works that evoked the Russian soul, was one such company. The author's interest lies in the discourses produced by these periods of fascination with the exotic and their impact on society and on the dance itself. Hers is a richly textured commentary that enriches our notion of the "exotic other."

Anthropology of dance has expanded its scope to include studies of form as well as meaning, Western and non-Western dance, historic and contemporary phenomena, classical forms as well as popular or traditional dance, comparative and cross-genre performance traditions, and such issues as aesthetics, virtuosity, and the relationship between creator, performer, and audience. These topics have allowed scholars to move beyond ethnographic description and surface meaning to the kind of theory-building that contributes to all those fields concerned with human thought and behavior. It builds, interestingly enough, upon the generalizations, comparisons, and theories about style and structure that Boas and Claude Lévi-Strauss developed in the visual arts and oral genres. The shifts within anthropology toward process rather than structure, and performance rather than competence, have led scholars to an acknowledgment of the body, embodiment, and embodied knowledge as essential ways of being and of knowing (Royce 2004).

The field has not only grown since Kurath's 1960 statement of its potential. One has only to compare Kaeppler's 1978 review of the field with Susan Reed's 1998 review. Since 1998, dance scholarship has expanded still further. Most importantly, the field has established itself within anthropology as a focus and method that contributes to general theories of culture and society. Whatever issues anthropologists define as worthy of examination, they must pay attention to their embodiment in the repertoire of individual actors and societies. Anthropologists will not be successful in that endeavor unless they acknowledge and practice embodied ways of knowing. They have recognized that dance and performance provide unique and subtle entryways to artistic expression. They have now begun to see the value of that lens for examining cultural understanding as a whole.

SEE ALSO *Anthropology; Boas, Franz; Culture; Entertainment Industry; Ethnography; Ethnology and Folklore; Ethnomusicology; Exoticism; Levi-Strauss, Claude*

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Anya Peterson Royce

DANTE ALIGHIERI

SEE *Purgatory.*

DARFUR

Darfur is the westernmost province of Sudan. A remote region whose concerns were long eclipsed by the civil war in South Sudan, Darfur became a center of international concern when a new civil war emerged there in 2003. The war was fought between nominally "black" ethnic groups and Arab militias called *Janjaweed* who, with support from the Sudanese government, killed and displaced hundreds of thousands of people. The violence had roots in economic underdevelopment and long-standing conflicts over land, but became far more destructive as external political influences grew and as conceptions of ethnic identity changed.

EVOLUTION OF THE CONFLICT

The name *Darfur* is Arabic, meaning "home of the Fur," one of the territory's largest tribes, but the province is home to at least three dozen distinct ethnic groups and many more subgroups. Today, nearly the entire population of Darfur is Muslim, owing to a policy of Islamization carried out in the fourteenth and fifteenth centuries when Darfur was an independent sultanate.

The terms *Arab* and *black* (or, alternatively, *African*) are broad categories used to identify the general affiliation of smaller tribes. The terms do not necessarily relate to physical appearance, and they have not always been decisive in determining political alignments. Arab groups are generally herders, whereas most (but not all) of the black tribes are sedentary farmers. These differing types of agriculture can produce disputes over land use, which in some cases leads to violence between tribes. Until the end of the twentieth century such conflicts in Darfur were generally contained and limited; although intergroup conflict has long been a feature of Darfur's history, it existed alongside considerable constructive economic and social relationships. Intermarriage was common between Arab and African tribes. Cattle herders and sedentary farmers traded for agricultural products such as grains and milk, as well as for grazing rights from farmers. Prosperous sedentary farmers sometimes invested in cattle, further blurring the distinctions between the groups.

Darfur contains rich agricultural land, but the entire region has been threatened by desertification since the 1970s. It experienced a famine in 1984. Dwindling fertile land combined with the lack of alternative economic development increased the potential for conflict at a time when forces from outside began to intervene. Also in the 1970s the Sudanese government began to dismantle the Native Administration system that had been set up by British colonial authorities, by which tribal chiefs were granted considerable autonomy and were often able to mediate intergroup conflict. In the late 1970s and early 1980s Chad's civil war increased the flow of arms in the region, and increased the interests of both Chadian and Libyan governments in the politics of Darfur. In the mid-1980s the Sudanese government began arming militias of Arab tribes in Darfur, fearing that the civil war in the south might spread. These external influences encouraged groups in Darfur to identify themselves as Arab or black and to make this the defining distinction in determining their political affiliation. Along with the influx of weapons from outside, this shift in ethnic identity helped to broaden conflicts that might otherwise have remained isolated.

From 1987 to 1989 a dispute over grazing land erupted between the Fur and some cattle-herding tribes in northern Darfur. The conflict quickly escalated. A new organization called the Arab Gathering emerged, organizing twenty-seven smaller tribes and asserting a platform of Arab supremacy. The Fur conflict also marked the first prominent appearance of Janjaweed fighters, bands of armed men riding horses and camels who attacked Fur villages. By its end, the Fur-Arab conflict killed around 3,000 people and destroyed hundreds of villages.

In the mid-1990s the Sudanese government split Darfur into separate administrative regions, a policy that effectively transferred control of much land to Arab-oriented tribes. In 1996 violence erupted again, this time between Arab militias and the non-Arab Masalit tribe. Masalit villages were burned by Janjaweed attacks, and more than 100,000 Masalit fled into Chad and other neighboring countries.

In the late 1990s Masalit exiles based in Egypt began publishing some of the first international warnings about accelerating ethnic cleansing in Darfur, alleging that attacks on the Masalit and other black groups were planned by Sudanese military leaders. These allegations were initially disregarded by western governments and major human rights organizations, who cast the Darfur conflict as local tribal violence or did not report on events there at all. The United Nations refugee agency refused protection to many asylum seekers from Darfur, arguing that either they were not credible or were not sufficiently at risk.

2003: DARFUR ERUPTS

After 2000 two major opposition organizations emerged among the black population. The first was the Justice and Equality Movement (JEM), which had an Islamist ideological orientation and maintained links with religious leaders who had split from the Sudanese government in the 1990s. Another group, the Sudanese Liberation Movement/Army (SLA) modeled itself on the southern Sudanese Peoples Liberation Movement/Army (SPLA), and offered a secular platform. In February 2003 the JEM

and SLA launched successful military assaults on government targets in Darfur.

With the outbreak of full-fledged civil war, the government adopted what the International Crisis Group called a "scorched-earth" strategy to defeat the rebels. This relied heavily on the Janjaweed to attack the civilian populations that might support the rebellion, backed up by government air strikes. The Janjaweed attacks included mass killings, rapes, whippings, cattle theft, and the burning of hundreds of villages. A small force of 7,000 African Union soldiers entered Darfur in August 2004, but failed to stop the violence. Survivors fled, especially to Chad, and by late 2005 fighting began to cross the border. By the beginning of 2006 up to 2 million people were displaced from their homes and at least 180,000 were dead, most of them members of non-Arab/black tribes.

After 2003 debate grew about whether the Sudanese government and the Arab militias were guilty of genocide, a label that would increase the pressure for strong international intervention. But the complex origins of the violence and the fact that the worst abuses were committed by diffuse Janjaweed bands rather than by government troops fed the dispute about how the atrocities should be described.

On July 23, 2004, the U.S. Congress passed a resolution calling the Darfur conflict a genocide, a position later adopted by the Bush administration. On January 25, 2005 a UN Commission of Inquiry confirmed that "government forces and militias" may be guilty of crimes against humanity in waging a violent campaign to defeat the rebellion. But the commission concluded that the violence could not be labeled genocide because the government's intent was not to destroy any particular ethnic or racial group, the essential legal criteria for applying the genocide label.

On March 29, 2005, the UN Security Council asked the International Criminal Court to investigate the Darfur atrocities. In May 2006 the government of Sudan signed a peace accord with the SLA, but the JEM rejected the agreement, as did splinter factions of the SLA. The UN reported that violence in Darfur actually increased in the months after the accord; divisions among the rebels coupled with the difficulty in disarming Janjaweed militias posed major challenges to restoring order.

SEE ALSO *Civil Wars; Ethnic Conflict; Ethnicity; Genocide; Organization of African Unity (OAU); United Nations*

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Michael Kagan

DARROW, CLARENCE

SEE *Scopes Trial.*

DARWIN, CHARLES

1809–1882

Charles Robert Darwin is regarded as one of the greatest scientists who ever lived. He was the son of a wealthy provincial British doctor and entered into the study of medicine at Edinburgh University, but did not like it. He was then expected by his family to become a clergyman and graduated from Cambridge University. However, he was unenthused about pursuing a career in the church.

Fortunately for him, as well as the world of the biological sciences, he was offered an unpaid position assisting the captain of the British survey ship *Beagle*. From this little ship, Darwin spent the next five years exploring the natural world. His observations fostered a deep interest in biology and geology and motivated him to pursue the sciences as a career and eventually develop the theory of natural selection.

Charles Darwin's theory of evolution by natural selection is the only scientific explanation for the nature and variety of life on our planet. Moreover, if life in other parts of our galaxy is governed by the same natural laws that govern it here, then Darwin's logic also explains the verities of life in distant parts of our galaxy. However, it does not explain the origin of life itself. Darwin's theory leaves the very beginning of life—the formation of the first primitive organic molecules—to chemists, physicists, and maybe even theologians. This entry focuses on the logic of how natural selection shapes the tools that enable organ-

isms to survive the challenges of their environment, on some misconceptions about the theory of evolution, and on how evolutionary theory can help us understand human behavior. Finally, it briefly mentions some of the scientific and political controversies associated with current evolutionary thinking. Those interested in the vast evidence for Darwin's theory should consult Mark Pagel's *Encyclopedia of Evolution* (2002).

DARWIN'S FINCHES AND THE LOGIC OF NATURAL SELECTION

The Galapagos Archipelago is a group of islands off the coast of Peru. Eons ago, a single species of finch landed on one of the islands. Because resources for survival and reproduction were limited, the finches began competing for them. Some finches migrated to other islands. Since the environments of the islands differed, various biological tools, such as the shape of the birds' beaks, differed in their effectiveness for dealing with these environments. Over time, fourteen species of finches evolved in the archipelago. Although the species vary in many ways, such as in size and coloration, differences in their beaks are particularly salient. The study of how the beaks of Galapagos finches contribute to survival and reproduction in the environments of the different islands has contributed greatly to the development of evolutionary theory (Weiner 1994).

Biological tools that contribute to an individual's survival and reproduction are called *adaptations*. An adaptation is a trait—an anatomical structure, physiological process, or behavior pattern—that contributes more to an individual's ability to survive, grow, or reproduce in comparison with alternate traits in the population. The large, powerful beak of the *Geospiza magnirostris* finch, useful for cracking large seeds, and the small, delicate beak of *Certhidea olivacea*, useful for extracting insects from the bark of trees, provide examples. *Natural selection* is the differential contribution of offspring to the next generation by genetically different members of a population, that is, the number of progeny of finches with genes for different beaks. The logic of natural selection can be explained in terms of assumptions and inferences that follow from the assumptions (Crawford 1998).

Assumption 1: The number of descendents of organisms in a population can grow exponentially.

Assumption 2: Resources enabling individuals in a population to exist can expand only arithmetically.

Assumption 3: The size of a population of individuals remains relatively stable across time.

Inference A: Competition for survival and reproduction ensues between individuals in a population.

Assumption 4: Individuals differ on traits that enable them to survive and reproduce.

Assumption 5: Some of the variation in these traits is genetic in origin.

Inference B: There is "differential contribution of offspring to the next generation by genetically different members of a population" (natural selection, by definition).

Inference C: Over many generations, "anatomical structures, physiological processes or behavior patterns that contribute more to individuals' ability to survive, grow and reproduce in comparison with alternate traits in the population" (adaptations, by definition) are created.

In summary, some feature of the environment—for example, the arrival of a new predator or a change in climate—poses a problem for organisms in a population. A solution (e.g., longer legs, thicker fur) aids survival and reproduction. The above assumptions and inferences explain how natural selection provides the solution. Preexisting adaptations, sometimes called *preadaptations*, provide both stepping stones and limits to the solutions natural selection can provide (Pagel 2002).

SOME MISCONCEPTIONS ABOUT DARWIN'S THEORY

Assumptions 1, 2, and 3 do not require nature to be "red in tooth and claw," as the poet Alfred Tennyson described it in *In Memoriam* (1850). A variety of subtle, and not so subtle, adaptations help individuals survive and reproduce. For example, animals in herds, such as wildebeests, may minimize the relative risk of predation by maneuvering to place other animals between themselves and predators (Hamilton 1971). Many types of camouflage coloration have evolved to protect organisms from their predators (Pagel 2002).

Although genes are involved in the development of all adaptations, assumptions 4 and 5 do not require that differences between individuals in evolved traits are genetically preprogrammed. Traits whose development is influenced by environmental factors are called *facultative traits*. Although male white-crowned sparrows, for example, cannot learn the song of another species, when they are nestlings they must hear an adult male of their own species sing and then themselves sing as juveniles if they are to sing a full song as adults (Konishi 1965).

Organisms do not evolve to act for the good of their species or the groups with which they live (Williams 1966). Since an organism's time and energy are limited, an organism that helped a member of its species or group would pay a reproductive cost (i.e., have fewer offspring) to do the helping. Hence, one of its competitors who did not help would leave more offspring, and its kind would spread through the group or species at the expense of the helpers. However, modern Darwinists have two methods of explaining the widespread helping behavior seen in nature. The first is the evolution of cooperation, in which both parties increase their reproductive success by helping the other (Trivers 1971). The second is through helping genetic kin (Hamilton 1964). Genetic kin, such as brothers and sisters, have copies of genes that are identical to those of common ancestors. If a brother inherited a gene from his mother that predisposes him to help his sister produce offspring, that helping gene can spread through the sister's offspring (his nieces and nephews) even though it reduces the brother's own reproductive success. The reason is that the sister has a fifty-fifty chance of inheriting the same helping gene from their mother and passing it on to her children, her brother's nieces and nephews.

Finally, natural selection does not have a goal. It is a purely mechanical process: traits that contribute more to survival and reproduction spread at the expense of traits that contribute less to survival and reproduction. Humans may evolve to be godlike creatures in the distant future. However, if this happens it will not be because natural selection had the goal of producing such beings.

EVOLUTIONARY PSYCHOLOGY

Evolutionary psychology uses the principles of natural selection to understand the origin and functioning of the cognitive and emotional adaptations that helped us deal with problems in our ancestral environment, known as the *environment of evolutionary adaptedness*, and how those mechanisms function now (Crawford and Anderson 1989).

Mating of close genetic relatives, for example, can be detrimental to reproduction and survival because it brings together deleterious recessive alleles, such as those causing some genetic diseases, in the offspring of such mates. Some Darwinists have argued that intimate rearing of brothers and sisters during their first few years, which reduces or eliminates adult sexual attraction between them, may reflect one mechanism humans evolved to avoid this problem (Westermarck 1891). This argument is supported by evidence from: (1) boys and girls reared in the same children's houses in Israeli kibbutzim, who rarely find each other sexually attractive as adults (Shepher 1983); (2) the reduced success of Chinese *shim pau* marriages, in which a genetically unrelated baby girl is adopted into a family at birth with the expectation that she will marry a son of the family at their sexual maturity (Wolf 1995); and (3) sexual attraction between adult genetic siblings who were separated at birth (Bevc and Silverman 2000).

In the upper panel of Figure 1, the assumption is that brothers and sisters with genes enabling them to develop psychological mechanisms to avoid incest had greater lifetime reproductive success across evolutionary time than those who did not. The result is the ancestral genotype for the avoidance mental mechanism. The ancestral developmental environment—intimate rearing with genetic siblings—produced the genetically organized ancestral cognitive and emotional mechanism(s) (the ancestral phenotype) that reduced sexual attraction between adult childhood intimates. The ancestral immediate environment refers to encounters between sexually mature, ancestral, opposite-sex individuals. Finally, natural selection favored the genes that enabled the development of the avoidance mental mechanisms.

The bottom panel represents an infinitesimal segment of evolutionary time—a few years in an Israeli kibbutz or a Chinese *sim pau* marriage or the meeting of an adult brother and sister who were reared apart from birth. In all cases, the putative adaptation functions as it evolved to function with respect to childhood intimates. However, because it functions in novel environments, its decision processes produce consequences that do not serve its evolutionary purpose. That is, it does nothing to prevent the mating of the genetic siblings, while reducing the likelihood of the success of the kibbutz and *shim pau* marriages.

Finally, evolutionary psychology is concerned with: (1) the problems that our hominid and primate ancestors encountered in their daily lives; (2) the psychological adaptations that natural selection shaped to help deal with those problems; and (3) the way the resulting evolved adaptations function in current environments (Crawford and Anderson, 1989).

CONTROVERSIES ABOUT DARWINISM AND HUMAN BEHAVIOR

Because of the great explanatory potential of Darwin's theory of evolution, it engenders continuing scientific, religious, political, and social controversy. For example, if biologically based race, gender, and social class differences in anatomy, physiology, or behavior exist, then evolutionary theory helps explain their origin and significance (Degler 1991; Pagel 2002). However, the most salient issue—the one that underlies most controversies—is the degree of genetic specialization of evolved cognitive and emotional behavior–producing mechanisms. If natural selection produced primarily general-purpose psychologi-

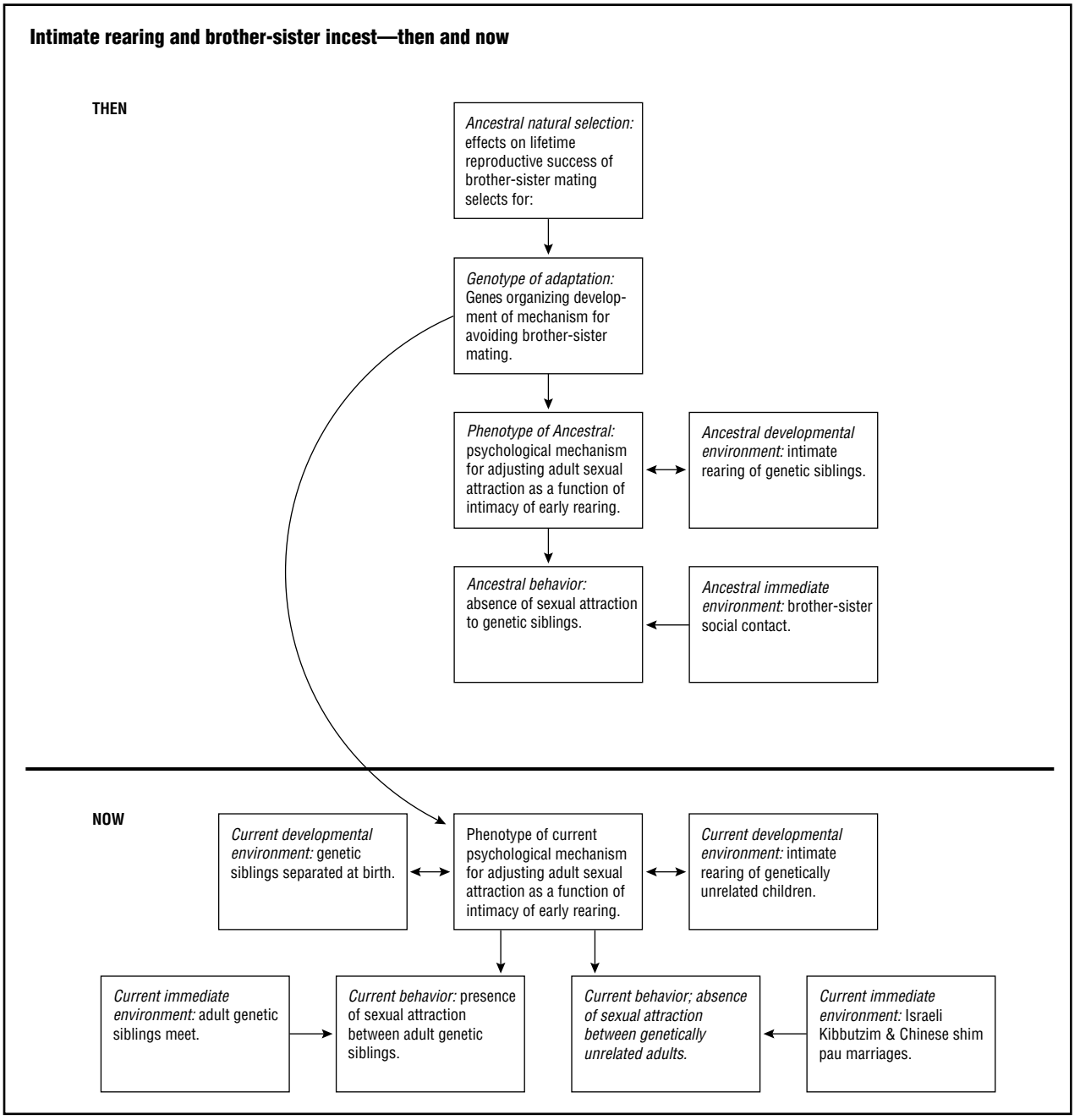

Figure 1: This figure illustrates the evolutionary psychologist's perspective on how an evolved genotype in conjunction with the developmental and immediate environments can produce different behaviors in ancestral and current environments. Note that the genotype that prevented brother-sister incest in ancestral environments can produce either sexual attraction between genetic siblings or absence of sexual attraction between genetically unrelated individuals, depending on the conditions of rearing in the current environment. Because there is a clear distinction between ancestral and current environments, and between ancestral and current phenotypes (although not between ancestral and current genotypes), ancestral and current behavior may differ considerably. Although ancestral behavior contributed to ancestral fitness and, hence, to the evolution of the genotype, current behavior need not contribute to current fitness (modified from Figure 1 in Crawford and Salmon [2004], p.40).

cal mechanisms, as many social anthropologists and social activists argue, then evolutionary theory is of limited use in understanding human behavior. However, if it produced genetically highly-specialized psychological mechanisms, as most evolutionary psychologists argue (Barkow et al. 1992), then it is invaluable for understanding

Outcomes of the debate about the role of ancestrally evolved innate genetic factors in the development of psychological mechanisms

Scientific Theories about the Degree of Innate Genetic Involvement in the Development of Specialized Psychological Mechanisms	Possible States of Nature: Degree of Genetic Involvement in Development of Specialized Behavior Producing Psychological Mechanisms	
	Low: Few Limitations on Social options	**High: Many Limitations on Social Options**
Small role for genetic involvement in development • The social science model of culture (Durkheim,1895/1982) • Tabula rasa – mind as a blank slate • Classic behaviorism • Cultural determinism • Post modernism • Social constructions • Cultural anthropology	**Valid Outcome: Implementation realizable** • Interchangeability of sex roles • Eliminating homosexuality through "education" works • Walden Two (Skinner, 1948/1976) is a harmonious society • Effective laws for regulating sexual/reproductive behavior • Russian communism workable • Gene therapy of no use • *Homosexuality considered abnormal/normal* • *State supported education* • *Socialized medicine*	**Invalid Outcome: implementation difficult – Social Constructionists' Risks** • Attempts to equalize sex roles fails • Eliminating homosexuality through "education" fails • Walden Two (Skinner,1948/1976) produces oppressive society • Ineffective laws for regulating sexual/reproductive behaviour • Russian communism fails • Gene therapy not tried • *Homosexuality considered abnormal/normal* • *State supported education* • *Socialized medicine*
Large role for genetic involvement in development • The evolutionary approach to culture (Barkow *et al.*,1992) • Classic ethology • Behavior genetics • Evolutionary psychology • Sociobiology • Human behavioral ecology • Evolutionary anthropology	**Invalid Outcome: Implementation difficult – Evolutionary Psychologists' Risks** • Inappropriate special schools for males/females/classes/races • Ineffective laws for regulating sexual/reproductive behavior • Communism not tried • American dream not tried • Gene/drug/physical therapy not tried • *Homosexual marriage accepted/rejected* • *State supported education* • *Social class exploitation* • *Socialized medicine*	**Valid Outcome: Implementation realizable** • Appropriate special schools for males/females/classes/races • Effective laws for regulating sexual/reproductive behavior • Communism leads to corruption • American dream for all fails • Gene/drug/physical psychotherapy useful • *Homosexual marriage accepted/rejected* • *State supported education* • *Social class exploitation* • *Socialized medicine*

Modified from p. 10 Crawford, C. B. (2004). Public Policy and Personal Decisions: The Evolutionary Context. Chapter One of Crawford, C. B. & Salmon, C. (Eds.). Evolutionary psychology, public policy, and personal decisions.

Table 1

human mind and behavior and in developing solutions to social problems.

Table 1 shows the consequences for social policy of these two perspectives. The assumption underlying the table is that although specialized peripheral, information-processing mechanisms produce behavior, these specialized mechanisms can be assumed to develop from either a low or a high degree of innate genetic specialization of development. The columns under "Possible States of Nature" describe the possible states of the ancestral genotype shown in Figure 1. The rows indicate the two approaches to developing scientific explanations. Note that several different scientific approaches are listed in each row. The four cells in the table enumerate the outcomes of pairs of possibilities, that is, of pairing a high degree of genetic specialization with the scientific belief in a low degree of genetic specialization. Two cells describe valid outcomes. The two cells labeled "Evolutionary Psychologists' Risk" and "Social Constructionists' Risk" describe invalid outcomes. Many social activists, such as feminists and social constructionists, assume that the consequences of either making an evolutionary psychologist's error or living in a society where ancestral evolved adaptations have an impact on current life, liberty, and happiness are so grave that they reject the possibility of the scientific explanations in the bottom row of the table.

Evolutionary psychologists reject this view. First, they worry about the suffering that could be caused by the

social constructionist errors shown in Table 1. Second, they claim that accurate scientific knowledge about the human mind is crucial for developing more caring and harmonious societies. Third, they claim that natural selection has given the human species many evolved cognitive and emotional mechanisms, such as those underlying reciprocity and kinship, which if their functioning is understood can help us produce a better world. Fourth, they claim that evolutionary psychology is in fact an environmentalist discipline (Crawford and Anderson 1989)—the specialized psychological mechanisms that produce behavior, described in Figure 1, evolved to help humans deal with problems and stresses in their environments. Hence, understanding how these evolved cognitive and emotional mechanisms work can help us create better places to pursue life, liberty, and happiness.

SEE ALSO *Darwinism, Social; Natural Selection*

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Charles Crawford

DARWINISM, SOCIAL

Social Darwinism is a philosophical, economic, social, and scientific movement that claims that the way society functions is, and ought to be, a reflection of the methods and movements of biological evolution. The term is generally applied to thinkers from around 1850 to the end of the nineteenth century, although the term itself was not popularized until the publication of Richard Hofstadter's *Social Darwinism in American Thought* in 1944. Despite the title's reference to Charles Darwin (1809–1882), most scholars think that his fellow English evolutionist Herbert Spencer (1820–1903) was a far more influential figure in Britain and America.

Postulated links between society and biology are as old as evolutionary thinking. In the early eighteenth century, evolutionists such as Denis Diderot (1713–1784) saw biological evolution—the natural rise of organisms from primitive beginnings to sophisticated life-forms, including humans—reflected in the rise of societies. European evolutionists believed societies evolved in the same way organisms did, rising from the savages of Africa and other barbaric (i.e. non-European) parts of the world to the supremely civilized peoples of western Europe. At the end of the eighteenth century, later evolutionists, including Charles Darwin's grandfather Erasmus, likewise saw society as a mirror of what happens in the world of organisms, and like everyone else they happily conflated the way things are with the way things ought to be. Progress was the backbone of evolutionary thinking—from the simple to the complex, from the less desirable to the more desirable, from the monad to the man (in the language of the day)—and the way that things had been was taken as a guide to the way that things ought to be, then and in the future.

THE NINETEENTH CENTURY

In the middle of the nineteenth century, Herbert Spencer began his dizzying rise to fame and influence, casting a

spell over Victorian Britain and much of the rest of the world that lasted until Queen Victoria died in 1901. Spencer was explicit in his belief that the patterns of society were reflected in the ways of biological development; indeed for him they were all part of one world-encompassing process, a process that was perpetually pushing upward, until the human species emerged at the top. Spencer was a liberal in the old-fashioned sense of disliking state interference and (particularly in his early years) he endorsed a strong program of laissez-faire, believing that the government should stay out of everything: the economy, education, welfare, even the provision of lighthouses to guide ships to harbor. This was, in Spencer's view, the only way to guarantee progress.

Superficially Spencer's worldview seemed like a logical application of Charles Darwin's theory of evolution, presented in his *On the Origin of Species* in 1859. There Darwin argued that an ongoing, bloody struggle for existence leads to natural selection, the motive force behind organic change, what Darwin called "descent with modification." Social Darwinism sees a direct corollary between struggle in the biological world and struggle in the social world, with winners moving upward to success and losers eliminated: losing organisms fail to reproduce, losing firms go bust, losing people starve.

In reality, things are a bit more complex. Darwin himself was reluctant to draw a parallel between biological and social evolution. He certainly did believe that certain peoples were superior to others: typically Victorian, he believed the English were superior to other Europeans, and Europeans were superior to everyone else; but he also approved strongly of moves to ameliorate the woes of the less successful. Spencer himself held views far more complex than his legend gives him credit for. In many respects, he saw struggle between peoples as stupid and not at all conducive to progress. He was strongly against militarism and presciently believed the end-of-the-century arms race between Britain and Germany, as each country built ever-bigger battle ships, to be absolute madness.

Spencer's followers were equally complex, especially those in America. Some, like sociologist William Graham Sumner (1840–1910), seem at times to be outdoing the master in prescribing brutal socioeconomic systems, but most held more sophisticated views. The great Scottish-born industrialist Andrew Carnegie (1835–1919) was an ardent Spencerian, but his understanding focused (perhaps unsurprisingly) more on celebrating the worth of the successful than the inadequacy of the unsuccessful. To this end, he became a major philanthropist, funding public libraries in America and elsewhere in the world. His hope was that these institutions would be places where the poor-but-gifted could, through reading and education, rise up in the social scale.

Victorian thinkers took a variety of different routes in the name of evolution. Darwin's fellow evolutionist Alfred Russel Wallace (1823–1913) was a lifelong socialist. Taking the opposite tack from Spencer, he used biology to justify a state welfare system. In his view the evolutionary struggle was between groups, not individuals; therefore people within the same society should band together and help each other. Russian prince and anarchist Pyotr Kropotkin (1842–1921) came from a tradition which saw a struggle less between people as individuals than between organisms and their environment. He therefore believed that biologically all organisms have a sense of caring, an urge to mutual aid, directed toward members of their own species; politically he translated this into anarchism.

THE TWENTIETH CENTURY

Social Darwinism fell out of fashion by the beginning of the twentieth century. A belief in progress, fundamental to the idea that biology was mirrored in the social world, had declined. It became apparent that despite advances in science and industry the world's ills—poverty, disease, violence—persisted. The First World War made the optimism of the nineteenth century seem almost obscene. Coupled with this, more and more people saw something fallacious about equating evolution with behavior. Thomas Henry Huxley (1825–1895), an English biologist and advocate of Darwin's theories, was eloquent on this subject, pointing out that what is moral often requires us to deny our animal heritage and go in a direction contrary to our evolved inclinations.

Nevertheless the ideas of Social Darwinian persisted, if not by that or any other name, transformed to suit the biology and social demands of the twentieth century. Julian Huxley (1887–1975), Thomas Henry's grandson (and the older brother of Aldous, the novelist) believed that biology provides a guide to life showing that progress is a rule that runs through the world, from the living to the social and cultural. He had faith in the power of science and technology; arguing that true progress comes only when the state harnesses its energies and intelligence and uses them for the common good. He considered the Tennessee Valley Authority, which had brought power to millions of people, a paradigmatic example of progress in action.

There was a darker side to Social Darwinism. It has been implicated in the rise of National Socialism, and some think that evolutionary ideas, particularly as promoted by Darwin's great German champion Ernst Haeckel (1834–1919), were significant. There may be truth in this last claim. Certainly, passages in Hitler's *Mein Kampf* (1925) seem to be taken directly from popular accounts of Darwinism as applied to society in *On the Origin of Species*. But the history of German anti-

Semitism is too complex for a straight causal connection to be made. Apart from anything else, the Nazis hated the evolutionary idea that all humans are descended from monkeys and that biologically Aryans and Jews are not much different.

THE TWENTY-FIRST CENTURY

In the twenty-first century, Social Darwinism continues to influence public debate. Harvard entomologist and sociobiologist Edward O. Wilson has been a leader in arguing that biology must inform social policies. He believes that humans have evolved in a symbiotic relationship with other organisms, and that humans must cherish and promote biodiversity or die as a species. Linking Wilson strongly to the nineteenth century is a belief in progress, in both biology and society. For Wilson, the moral imperative to promote biodiversity flows from a belief that if humans become extinct, the highest life form on the planet will have vanished. He sees this in itself as a bad thing and a reason for action.

Throughout the centuries since its inception, Social Darwinism has meant different things to different people. Was it a good thing or a bad thing? As with most philosophies, that question has no simple answer. In the hands of some, Social Darwinism was a force for good, in other hands much less so. We can say that it was important as a social influence, and its underlying ideas persist today, although they often go by other names.

SEE ALSO *Aryans; Darwin, Charles; Hitler, Adolf; Nazism; Sociobiology; Spencer, Herbert*

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Michael Ruse

DATA

The word *data* (singular, *datum*) is originally Latin for "things given or granted." Because of its humble and generic meaning, the term enjoys considerable latitude both in technical and common usage, for almost anything can be referred to as a "thing given or granted" (Cherry 1978). With reasonable approximation, four principal interpretations may be identified in the literature. The first three capture part of the nature of the concept and are discussed in the next section. The fourth is the most fundamental and satisfactory, so it is discussed separately in the subsequent section. Further clarifications about the nature of data are also introduced. A reminder about the social, legal, and ethical issues raised by the use of data concludes this entry.

THREE INTERPRETATIONS OF THE CONCEPT OF DATA

According to the *epistemic* (i.e., knowledge-oriented) interpretation, data are collections of *facts*. In this sense, data provide the basis for further reasoning—as when one speaks of data as the *givens* of a mathematical problem—or represent the basic *assumptions* or empirical *evidence* on which further evaluations can be based, as in a legal context. The limits of this interpretation are mainly two. First, it is overly restrictive in that it fails to explain, for example, processes such as *data compression* (any encoding of data that reduces the number of data units to represent some unencoded data; see Sayood [2006] for an introduction) or *data cryptography* (any procedure used to transform available data into data accessible only by their intended recipient; see Singh [1999] for an introduction), which may apply to facts only in a loosely metaphorical sense. Second, it trades one difficult concept (data) for an equally difficult one (facts), when actually facts are more easily understood as the outcome of data processing. For example, census data may establish a number of facts about the composition of a population.

According to the *informational* interpretation, data are *information*. In this sense, for example, *personal data* are equivalent to information about the corresponding individual. This interpretation is useful in order to make sense of expressions such as *data mining* (information gathering; see Han and Kamber [2001] for an introduction) or *data warehouse* (information repository). However, two major shortcomings show its partial inadequacy. First, although it is important to stress how information depends on data, it is common to understand the former in terms of the latter, not vice versa: information is meaningful and truthful data—for example, "paper is inflammable" (Floridi 2003). So one is left with the problem of understanding what data are in themselves. Second, not all data are informational in the ordinary sense in which information is equivalent to some content (e.g., a railway timetable) about a referent (the schedule of trains from Oxford to London). A music CD may contain

gigabytes of data, but no information about anything (Floridi 2005).

According to the *computational* interpretation, data are collections (sets, strings, classes, clusters, etc.) of *binary elements* (digits, symbols, electrical signals, magnetic patterns, etc.) processed and transmitted electronically by technologies such as computers and cellular phones. This interpretation has several advantages. It explains why pictures, music files, or videos are also constituted by data. It is profitably related both to the informational and to the epistemic interpretation, since a binary format is increasingly often the only one in which experimental observations or raw facts may be available and further manipulated (collected, stored, processed, etc.) to generate information, for example, in the course of scientific investigations (von Baeyer 2003). Finally, it highlights the malleable nature of data and hence the possibility of their automatic processing (Pierce 1980). The main limit of this interpretation lies in the confusion between data and the format in which data may be encoded. Data need not be discrete (digital); data can also be analog (continuous). A CD and a vinyl record both contain music data. Binary digits are only the most recent and common incarnation of data.

Given these interpretations, it seems wise to exercise some flexibility and tolerance when using the concept of data in different contexts. On the other hand, it is interesting to note that the aforementioned interpretations all presuppose a more fundamental definition of data, to which we now turn.

THE DIAPHORIC INTERPRETATION OF DATA

A good way to uncover the most fundamental nature of data is by trying to understand what it means to erase, damage, or lose data. Imagine the page of a book encrypted or written in a language unknown to us. We have all the data, but we do not know the meaning, hence we have no information, facts, or evidence. Suppose the data are continuous pictograms. We still have all the data, but no binary bits. Let us now erase half of the pictograms. We may say that we have halved the data as well. If we continue in this process, when we are left with only one pictogram we might be tempted to say that data require, or may be identical with, some sort of representation. But now let us erase that last pictogram too. We are left with a white page, yet not without data. For the presence of a white page is still a datum, as long as there is a difference between the white page and the page on which something is written. Compare this to the common phenomenon of "silent assent": silence, or the lack of perceivable data, is as much a datum as the presence of some rumor, exactly like the zeros of a binary system. We shall return to this point presently, but at the moment it is sufficient to grasp that a genuine, complete erasure of all data can be achieved only by the elimination of all possible differences. This clarifies why a datum is ultimately reducible to a lack of uniformity.

More formally, according to the *diaphoric interpretation* (*diaphora* is the Greek word for "difference"), the general definition of a datum is: (D) datum = *x* being distinct from *y*, where *x* and *y* are two uninterpreted variables and the domain is left open to further interpretation.

This definition can be applied at three levels: (1) Data as diaphora *de re*, that is, as a lack of uniformity in the world (Seife 2006). There is no specific name for such "data in the wild." A possible suggestion is to refer to such data as *dedomena* ("data" in Greek; note that the word *data* comes from the Latin translation of a work by Euclid entitled *Dedomena*). Dedomena are not to be confused with environmental data. Dedomena are pure data or proto-epistemic data—that is, data before they are interpreted. Dedomena can be posited as an external anchor of information, for dedomena are never accessed or elaborated independently of a level of abstraction. They can be reconstructed as requirements for any further analysis: they are not experienced but their presence is empirically inferred from (and required by) experience. Of course, no example can be provided, but data as dedomena are whatever lack of uniformity in the world is the source of (what looks to information systems like us as) data—for example, a red light against a dark background.

(2) Data as diaphora *de signo*, that is, as a lack of uniformity between (the perception of) at least two physical states of a system, such as a higher or lower charge in a battery, a variable electrical signal in a telephone conversation, or the dot and the dash in the Morse alphabet.

(3) Data as diaphora *de dicto*, that is, as a lack of uniformity between two symbols of a code—for example, the letters A and B in the Latin alphabet.

Depending on one's interpretation, dedomena in (1) may be either identical with, or what make possible, signals in (2), and signals in (2) are what make possible the coding of symbols in (3).

The dependence of information on the occurrence of well-structured data, and of data on the occurrence of differences (dedomena) variously implementable physically, explains why information can so easily be decoupled from its support. The actual *format, medium*, and *language* in which data (and hence information) are encoded are often irrelevant and hence disregardable. In particular, the same data may be analog or digital, printed on paper or viewed on a screen, in English or in some other language, expressed in words or pictures, or quantitative or qualitative.

Interpretations of the support-independence of data can vary radically, for the definition (D) above leaves underdetermined:

- the classification of the relata (taxonomic neutrality);
- the logical type to which the relata belong (typological neutrality);
- the dependence of their semantics on a producer (genetic neutrality).

We shall now look at each form of neutrality in turn.

Taxonomic Neutrality A datum is usually classified as the entity exhibiting the anomaly, often because the latter is perceptually more conspicuous or less redundant than the background conditions. However, the relation of inequality is binary and symmetric. A white sheet of paper is not just the necessary background condition for the occurrence of a black dot as a datum; it is a constitutive part of the (black-dot-on-white-sheet) datum itself, together with the fundamental relation of inequality that couples it with the dot. Nothing is a datum in itself. Rather, being a datum is an external property. This view is summarized by the principle of taxonomic neutrality (TaN): a datum is a relational entity.

The slogan is "data are relata," but the definition of data as differences is neutral with respect to the identification of data with *specific* relata. In our example, one may refrain from identifying either the red light or the white background as the datum.

Typological Neutrality Five classifications of different types of data as relata are common. They are not mutually exclusive, and the same data may fit different classifications depending on the circumstances, the type of analysis conducted, and the level of abstraction adopted.

Primary data are the principal data stored in, for example, a database. Such data may be a simple array of numbers. They are the data an information-management system is generally designed to convey (in the form of information) to the end user. Normally, when speaking of data one implicitly assumes that *primary* data are what is in question. So, by default, the flashing red light of the low-battery indicator is assumed to be an instance of primary data conveying primary information.

Secondary data are the converse of primary data, constituted by their absence. Clearly, silence may be very informative. This is a peculiarity of data: their absence may also be informative.

Metadata are indications about the nature of some other (usually primary) data. Metadata describe properties such as location, format, updating, availability, usage restrictions, and so forth. Correspondingly, *metainformation* is information about the nature of information. The statement "'Rome is the capital of Italy' is encoded in English" is a simple example.

Operational data are data regarding the operations of the entire data system and the system's performance. Correspondingly, *operational information* is information about the dynamics of an information system. Suppose a car has a yellow light that, when flashing, indicates that the car-checking system is malfunctioning. The fact that the light is on may indicate that the low-battery indicator is not working properly, thus undermining the hypothesis that the battery is flat.

Derivative data can be extracted whenever data are used as indirect sources in a search for patterns, clues, or inferential evidence about something other than that directly addressed by the data themselves, as in comparative and quantitative analyses. Derivative data are used, for example, when one infers a person's whereabouts at a given time from her credit card data and the purchase of gasoline at a certain gas station.

Let us now return to the question of whether or not there can be dataless information. The definition of data given above (D) does not specify which types of relata are in question, only that data are a matter of a relation of difference. This typological neutrality is justified by the fact that, when the apparent absence of data is not reducible to the occurrence of negative primary data, what becomes available and qualifies as information is some further nonprimary information x about y constituted by some nonprimary data z. For example, if a database query provides an answer, it will provide at least a *negative* answer—for example, "no documents found." This datum conveys primary negative information. However, if the database provides no answer, either it fails to provide any data at all, in which case no specific information is available (so the rule "no information without data" still applies) or it can provide some data to establish, for example, that it is running in a loop. Likewise, silence, this time as a reply to a question, could represent negative primary information such as implicit assent or denial, or it could carry nonprimary information—for example, about whether the person heard the question or about the level of noise in the room.

Genetic Neutrality Finally, let us consider the semantic nature of the data. How data can come to have an assigned meaning and function in a semiotic system in the first place is one of the hardest problems in semantics. Luckily, the question is not *how* but *whether* data constituting information as semantic content can be meaningful *independently* of an informee. The *genetic neutrality* (GeN) principle states that: GeN data can have a semantics *independently* of any informee.

Before the discovery of the Rosetta stone in 1799, ancient Egyptian hieroglyphics were already regarded as information, even if their semantics was beyond the comprehension of any interpreter. The discovery of an interface between Greek and Egyptian did not affect the semantics of the hieroglyphics, but only its accessibility. This is the weak sense in which meaningful data may be embedded in information-carriers informee-independently. GeN supports the possibility of *information without an informed subject*, and it is to be distinguished from the stronger, realist thesis (supported, for example, by Dretske [1981]), according to which data could also have their own semantics independently of an intelligent *producer/informer.*

CONCLUSION

Much social research involves the study of logical relationships between sets of attributes (variables). Some of these variables are dependent; they represent the facts that a theory seeks to explain. Other variables are independent; they are the data on which the theory is developed. Thus, data are treated as factual elements that provide the foundation for any further theorizing. It follows that data observation, collection, and analysis are fundamental processes to elaborate a theory, and computational social science (high-performance computing, very large data storage systems, and software for fast and efficient data collection and analysis) has become an indispensable tool for the social scientist. This poses several challenges. Some are technical. For example, data may result from a variety of disparate sources (especially when collected through the Internet) whose reliability needs to be checked; data may be obtainable only through sophisticated processes of data mining and analysis whose accurate functioning needs to be under constant control; or the scale, complexity, and heterogeneous nature of the dataset may pose daunting difficulties, computationally, conceptually, and financially. Other challenges are intellectual, ethical, political, or indeed social. Some of the main issues that determine the initial possibility and final value of social research include quality control (e.g., timely, updated, and reliable data); availability (e.g., which and whose data are archived, and using what tools); accessibility (e.g., privacy issues and old codification systems or expensive fees that can make data practically inaccessible); centralization (e.g., economy of scale, potential synergies, the increased value of large databases); and political control (e.g., who exercises what power over which available datasets and their dissemination).

Data are the sap of any information system and any social research that relies on it. Their corruption, wanton destruction, unjustified concealment, or illegal or unethical use may easily undermine the basic processes on which not only scientific research but also the life of individuals and their complex societies depend (Brown and Duguid 2000). In light of the importance of data, their entire life cycle—from collection or generation through storage and manipulation to usage and possible erasure—is often protected, at different stages, by legal systems in various ways and in many different contexts. Examples include copyright and ownership legislation, patent systems, privacy-protection laws, fair-use agreements, regulations about the availability and accessibility of sensitive data, and so forth. The more societies develop into databased societies, the more concerned and careful they need to become about their very foundation. Unsurprisingly, since the 1980s, a new area of applied ethics, known as *information ethics* (Floridi 1999), has begun to address the challenging ethical issues raised by the new databased environment in which advanced societies grow.

SEE ALSO *Data, Pseudopanel; Methods, Qualitative; Methods, Quantitative*

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Luciano Floridi

DATA, LONGITUDINAL

To understand the characteristics and uses of *longitudinal data*, it is first important to understand what *cross-sectional data* are. Social science researchers have used cross-sectional data, which are drawn from surveys of samples of individuals or groups (aggregate data), to investigate the differences or differentiations among the individuals or groups. Unlike longitudinal data, cross-sectional data collect information only one time. As with cross-sectional data, longitudinal data may be used to understand differences among individuals. If repeated, the cross-sectional data could be considered a subset of longitudinal data. However, the major purpose of gathering longitudinal data is to investigate the changes within the samples over a period of time, from a few months to several decades (life-course studies). Researchers explore many different aspects of longitudinal data, including the distribution of values, temporal trends, anomalies, and the relationship between multiple responses and covariates in relation to time.

Researchers who make use of longitudinal data are often most interested in the changes within individuals while considering the changes of other relevant variables, such as ecological changes, situational factors, changes of social interaction over time, and/or developmental life stages. For example, in 1997 the Panel Study of Income Dynamics that updated the sample combinations (representative data for the current population in the United States) was intended to collect detailed information about economic and social disparities in child development on a national scale. A follow-up wave of the same subjects was conducted in 2002. As presented by Robert Mare and Margot Jackson in their 2004 article, researchers used these data to investigate how residential mobility and neighborhood change contribute to the overall socioeconomic variation in children's neighborhoods.

Criminologists use longitudinal data to survey trends in substance use (or other deviant behaviors) within a cohort or individual substance use (or other deviant behaviors) over time. Sociologists have used the National Longitudinal Youth Survey, a longitudinal study that presents self-reports of deviant and illegal behavior from the initial wave of 1976 to the 2003 wave (with data collection ongoing); it also presents other variables relevant to families, schools, and peer association, aiding sociologists in their investigation of the life cycles of families, immigration mobility, and their consequences. The political scientists Michael Delli Carpini and Scott Keeler (1991) used the U.S. censuses over a period of decades to determine whether contemporary U.S. citizens were better or more poorly informed about politics than were citizens of earlier generations. These studies are also referred to as *pseudo-panel studies* because they try to investigate the changes over time in a certain population, while subjects are chosen independently each time. In other words, such studies are not the same as the narrowly defined *longitudinal studies*. Nevertheless, some researchers may view them as such. The social psychologists Howard Kaplan and Cheng-Hsien Lin (2000) investigated whether the link between mental health and deviance is reciprocal or unidirectional by repeatedly surveying the same subjects and, more important, whether both variables covariate over time. This study especially took advantage of the causal implications indicated by longitudinal data to resolve confusion over causal direction suggested by theories.

ADVANTAGES AND DISADVANTAGES

Longitudinal datasets provide several advantages over cross-sectional data. First, such datasets can track the changes among subjects over a short or a long period of time. Social scientists use such data to explore the potential trends underlying social mobility and unexpected trends in a society. Second, longitudinal datasets indicate the nature of covariates among variables over time to clarify their relations. In other words, controlling the previous measures of these variables helps social scientists determine the strength of relations among them. Third, the causal relations between variables can be verified through a clear time sequence of these variables. Researchers can examine many factors, such as deviant peer association and deviant behavior, with regard to their theoretical reciprocal relations only by using longitudinal data analysis. Finally, longitudinal data can indicate developmental (life stages) and historical trends; cross-sectional data can only partially indicate or describe developmental trends because the influences of confounding effects of historical trends cannot be taken into account in the analysis.

Nevertheless, longitudinal data are collected at high cost. First, because they require at least two waves, the cost of their collection is much higher than that of cross-sectional data in terms of both labor required and economic demands. Second, if the initial wave of a dataset was biased for any reason, the follow-ups will amplify the bias because of the repeated survey of the sampled subjects. Third, repeat respondents may develop a pattern of response attitudes to make every follow-up interview easier, which may lead to invalid responses (an effect known as panel conditioning). The developing pattern of interactions between an interviewer and an interviewee may also result in invalid responses. For example, an interviewer may learn that subjects would like to avoid certain sensitive questions, so, to avoid unpleasant confrontations, the interviewer may assume that the subject would give the same or a similar reply as in the earlier sessions of the interview.

Finally, if researchers use a type of longitudinal data collection known as panel study design, panel attrition because of death and/or withdrawal of some participants may bring unexpected bias to the data analyses. For example, studies that collect data about delinquent behavior among juveniles may lose some of the more serious delinquents in the first wave if they in fact become criminals, are arrested and imprisoned, or die from their criminal activities. Such first-wave respondents are less likely to hold a long-term job and thus will be difficult to locate for future interviews. It is not surprising that these subjects are quite different from the rest of the samples. Conclusions to be drawn from analyses of the longitudinal data are thus at risk.

TYPES OF LONGITUDINAL STUDIES

Longitudinal data have different forms. Trend studies use the same measurements to investigate samples of a society at intervals to see if the society has held certain attitudes or values over time. Such studies survey different sampled groups in every wave of data collection and then compare the changes. Research on political preferences in different decades often makes use of trend data. A potential problem in trend studies is the possibility of incomparable samples collected in different waves. For example, a common problem is that the sample interviewed in an early wave is less educated than the second wave because educational attainment tends to increase in subsequent generations. Since educational attainment is often closely related to other social and individual factors, the discrepancy in educational attainment between generations may make the data suggesting changing trends of certain social attitudes and values less credible.

Cohort data tighten the selection of samples by focusing on a cohort or a subpopulation in a society. Although it may sample different groups out of the whole population, every sampled group shares a common feature. They might have been born within a certain span of years or raised during a particular societal event, such as World War II or the civil rights movement. The analyses of cohort data provide information about how a generation's attitudes may change over time. It avoids the problem of generational differences that are compounded by trend studies.

Panel data collect information from the same group of subjects over time and are intended to examine the changes within individuals specifically. Whereas in general trend data and cohort data indicate overall changes in the society or a studied subgroup, panel studies attempt to examine how each subject's attitudes and behaviors changed individually over the studied years. The most serious problem in collecting panel data is sample attrition, but this method provides the most comprehensive data on change. Researchers must be aware of the risk when drawing conclusions based on their studies.

Longitudinal data have grown in popularity among social scientists since the 1970s, becoming the mainstream in the 1990s. New, convenient statistical programs dealing with time-series analysis, latent growth curve models, hierarchical linear models, event history analysis, and structural equation models have greatly aided researchers using panel studies in clarifying relations among psychological and behavioral variables. Most likely, the scientific benefits of longitudinal data will make them the dominant data form.

SEE ALSO *Data; Data, Pseudopanel; Deviance; Methods, Quantitative; Methods, Survey; National Education Longitudinal Study; National Longitudinal Study of Adolescent Health; National Longitudinal Survey of Youth; Panel Studies; Panel Study of Income Dynamics; Research, Cross-Sectional; Research, Longitudinal; Survey; Surveys, Sample*

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DATA, PSEUDOPANEL

Among all sociological research designs, longitudinal studies are the best choice if the purpose of research is to examine changes over time. Cross-sectional studies observe a phenomenon at only one point in time, and

causal relationships between independent and dependent variables in cross-sectional studies are unclear because the time sequences cannot be established. There are three special types of longitudinal studies usually adopted by researchers: trend studies, cohort studies, and panel studies. Of them, panel studies are the most difficult for researchers who are collecting data because they have to interview the same sample of subjects repeatedly. Trend studies and cohort studies can provide changes of attitudes or behaviors of a population, but they cannot detect changes in a subject, only overall changes of the studied samples.

Panel studies can eliminate such a problem by examining the same subjects over time; typically researchers find that overall changes remain stable (the number of subjects who change their responses from A to B is balanced by those who change their responses from B to A). Although this is a great advantage of panel studies, it has its shortcomings. Panel studies are costly in both time and money (due to the high number of interviewers and the expenses associated with interviews and traveling), especially in a large-scale survey across several regions or states. Moreover panel studies often have a common problem: sample attrition. Researchers must revisit these subjects for a long-term research project, and subjects may fall out of contact. In order to retain most of the advantages and avoid the disadvantages of panel studies as well as the limitations researchers sometimes encounter in obtaining sufficient supports for panel studies, pseudopanel studies may be the second-best choice.

Pseudopanel studies may take different formats. In one a researcher asks respondents about past and current attitudes or behaviors and then treats the data as if they represented different time points. Another format uses simple logic to infer the time order of two or more variables. For example, it is more likely that people have tried cigarettes before cocaine because smoking is more socially acceptable than using cocaine; criminological studies have supported this conclusion. Researchers use established causal relationships from prior studies to assume similar relationships in their current studies when adopting cross-sectional study design.

Although the pseudopanel study avoids some of the problems or difficulties of the panel study, it is not recommended unless a panel study design is not accessible. Pseudopanel study is vulnerable to its own problems. For one, people's faulty memories are hard to detect and not uncommon for many reasons. Subjects may sincerely forget things that occurred in their pasts due to poor memory, or they may lie about their pasts for various reasons. In addition the use of logical inferences depends on the researchers' knowledge of the research topic. An expert might have a strong knowledgeable background to make robust inferences, but still that might not rule out the potential errors of pseudopanel study design.

SEE ALSO *Census; Data, Longitudinal; Integrated Public Use Microdata Series; Methodology; Methods, Quantitative; Panel Studies; Research, Longitudinal*

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Cheng-Hsien Lin

DATA ENVELOPMENT ANALYSIS

Data Envelopment Analysis (DEA) is a technique relying on mathematical programming methods for estimating various types of efficiency in production. First applied by Michael Farrell in 1957, the technique was popularized and named by Abraham Charnes, William W. Cooper, and Eduardo Rhodes in the late 1970s. As of 2004, more than 1,800 articles using DEA had been published (see Gattoufi et al. 2004).

Standard microeconomic theory of the firm describes a production set containing all feasible combinations of input quantities and output quantities for a given industry. Firms operating on the upper boundary of this set are technically efficient, while firms operating below the upper boundary are technically inefficient. Technically efficient firms may be allocatively inefficient if they do not use the optimal mix of inputs (determined by input prices) to produce the optimal mix of outputs (determined by output prices). Technically inefficient firms can feasibly reduce the quantities of inputs used without reducing output quantities, increase output quantities without increasing input quantities, or simultaneously reduce input quantities while increasing output quantities.

Various measures of efficiency have been defined, and, in each case, efficiency depends on the firm's location within the production set. Given observations on pairs of input and output quantities, DEA estimates the unknown production set using a convex set determined by the data. As a practical matter, DEA efficiency estimates are usually computed by solving a linear program.

The usefulness of DEA lies in its ability to estimate efficiency when multiple inputs are used to produce multiple outputs, without the need to specify distributions or

functional forms. DEA is a fully nonparametric estimation method. For estimating technical efficiency, DEA does not require information about prices, making it especially useful in many public-policy applications, where economically meaningful prices often do not exist. These features contrast with parametric approaches, where distributions for random variables reflecting noise and inefficiency, as well as a functional form (e.g., translog) for the response function, must be specified. The nonparametric nature of DEA means that it is very flexible and can potentially be used to describe a wide variety of situations.

Unlike parametric approaches, however, DEA makes no allowance for noise or measurement error, which can severely distort DEA efficiency estimates. A number of outlier-detection techniques have been developed for use with DEA estimators (e.g., Wilson 1993; Simar 2003; Porembski et al. 2005). In addition, researchers have recently introduced new estimators that retain the nonparametric feature of DEA but are resistant to the effects of outliers and related problems.

Until recently, the statistical properties of DEA estimators remained unknown, and methods for making inferences about efficiency using DEA estimators were unavailable. In 2000, Léopold Simar and Paul Wilson provided a survey of new developments. In particular, the convergence rates of DEA estimators depend on the numbers of inputs and outputs, or the dimensionality of the production set. These rates worsen with increasing dimensionality. Consequently, to retain the same order of magnitude in estimation error, sample sizes must increase exponentially as dimensionality increases. Computationally intensive bootstrap methods provide the only practical approach to inference with DEA estimators. Due to the boundary of the production set, standard bootstrap methods must be modified by smoothing procedures to yield consistent inference.

SEE ALSO *Bootstrap Method; Production Frontier; Productivity*

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Paul W. Wilson

DAUGHTERS OF THE AMERICAN REVOLUTION

The Daughters of the American Revolution (DAR) is generally known as the oldest and largest women's lineal descent-based patriotic organization in the United States. Although the DAR, often regarded as an innocuous social club, has not attracted much attention from scholars until recently, it played a significant role in the formation of modern U.S. nationalism and national identity, particularly during the first half of the twentieth century.

The DAR was established in October 1890 by a group of upper- and middle-class women in Washington, D.C., after their failed bid to join in the founding of a similar ancestral organization, the Sons of the American Revolution (SAR), in the previous year. Although the DAR's membership was originally restricted to adult female (and white) descendents of those who had served in one capacity or another for the cause of American Independence, the group was quick to seek nationwide recognition and membership. The origins of this ancestral, patriotic organization are multifarious. During the late nineteenth century, increased immigration from South and East Europe, labor and agrarian conflicts, and American expansion overseas caused many people in the United States to question who they were. More broadly, the United States was at the time emerging as a modern nation state whose people were beginning to share a sense of American identity. The formation of national identity was

facilitated by improvements in mass communication and transportation, the growth of a national market and public schooling, and the increasing power of the state over people's daily lives. It was against this backdrop that the DAR, despite its traditional hereditary exclusiveness, was simultaneously able to promote among the general public a rather modern, abstract vision of loyalty to the nation.

The constitution of the DAR mentioned three main objectives of the society: (1) to perpetuate the memory and spirit of the men and women who achieved American Independence; (2) to promote institutions of learning so that the young and old can develop the largest capacity for performing the duties of American Citizens; and (3) to cherish, maintain, and extend the institutions of American freedom and to foster true patriotism and love of country. Based on these ideals, the DAR engaged in various activities such as sponsoring historical restoration projects, distributing pamphlets to immigrants on how to become good American citizens, and publishing patriotic materials for schoolchildren.

The organizational motto of the DAR, "God, Home, and Country," represented its proven political conservatism on issues like Christianity, gender and family relations, and communism. Yet a closer analysis of the DAR and its activities reveals some seeming contradictions, such as tolerance toward immigrants (who were seen as objects of Americanization) coupled with (until recently) exclusivist policies on many racial matters. Thus the DAR is best seen not just as a typical conservative organization but as a mirror reflecting the differentiating and hierarchical nature of modern nationalism.

SEE ALSO *American Revolution; Americanism; Conservatism; Immigration; Inequality, Gender; Nationalism and Nationality; Nation-State; Patriotism; Racism; Symbols*

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Ken Chujo

DAVIS, ANGELA

1944–

Angela Davis established an early reputation as a scholar who linked race, class, and gender with activism. She became nationally known in 1970 when, after she was indicted for owning guns used in a courtroom shootout in California, she went underground. After a two-month search, the FBI arrested her in New York City. In those politically turbulent years, Davis became a highly visible prisoner, a symbol as an African American woman fighting for justice in prisons, and her imprisonment was protested across the nation and elsewhere in the world. She was acquitted of all charges in 1972.

Angela Davis was born in Birmingham, Alabama, on January 24, 1944; her father was a gas station owner, her mother a schoolteacher. Birmingham was a deeply racist city, referred to as Bombingham in the 1960s because of the many bombings of African American homes, businesses, and churches, but nevertheless even in the 1950s her mother and grandmother took her to protests. She attended segregated schools until high school, when she received a scholarship that allowed her to attend a private school in New York City. That experience provided further support for her developing political views, as she joined a socialist club and interacted with teachers with radical views. After high school she went to Brandeis University and attended the Sorbonne in Paris, where she developed a deeper understanding of political oppression in Algeria, which was under French control at the time, and began a political dialogue with Algerian students protesting French colonialism. While at Brandeis she studied with Herbert Marcuse, a radical philosopher. She graduated with honors from Brandeis with a major in French and then went to West Germany to study philosophy with Theodor Adorno, another radical intellectual. She went to Los Angeles in 1967 and began working with the Student Nonviolent Coordinating Committee, the Black Panther Party, and the Communist Party of the United States. She earned her master's degree in philosophy in 1969 after completing all requirements for her doctorate except the dissertation and began teaching philosophy at the University of California at Los Angeles (UCLA).

In 1970, UCLA fired Davis because of her membership in the Communist Party, but she succeeded in convincing the courts to reinstate her. Soon thereafter she began work on the "Soledad Brothers" cause on behalf of inmates at California's Soledad prison, which led to her indictment for gun ownership, her decision to go underground, and the FBI labeling her as a most wanted criminal. She returned to Germany to earn her doctorate at the Humboldt University of Berlin, and she taught at Stanford University, the Claremont Colleges, the

California College of Arts and Crafts, the San Francisco Art Institute, and eventually at San Francisco State University from 1979 to 1991. In 1980 and 1984 she ran for vice president for the Communist Party USA. In 1991 she became a faculty member at the University of California at Santa Cruz, and from 1995 to 1997, she held the prestigious appointment of University of California Presidential Chair. She continues to be a tenured full professor in the History of Consciousness program at the university.

Her contributions to political philosophy result from her persistent identification of resistance among groups too commonly assumed to be compliant with authority, such as African American women. She uses the work of Michel Foucault to analyze the intricacies of race and punishment in the United States and how incarceration has colonized many groups such as Native Americans forced onto reservations, acts that reaffirm white norms of not only behavior but also such apparent ideals as freedom. She argues that we should imagine and act toward a social order without prisons and de-incarceration, rather than having a social order that forces large numbers of people, including groups suffering from racism, to spend time in prison. She also argues that privatization of prisons is directly linked to racial, gender, and class oppression, providing profit for corporations while reifying the identity of people of color and the lower classes as problematic.

In her work both as a professor and as a political activist, Angela Davis has articulated the complex relationships among race, class, and gender that result in what she sees as pervasive elements of oppression. Her experience as a political prisoner, which captured international attention, combines with her scholarly work to create an intersection of personal commitment and scholarship, evidencing forms of feminism intertwined with race, ethnicity, and class in an international context. She continues her deep interest in the prison system and the difficult lives of inmates in increasingly privatized prisons in the United States.

SEE ALSO *Black Panthers; Communism; Imprisonment; Marcuse, Herbert; Marxism, Black; Philosophy, Political; Prisons; Protest; Radicalism; Revolution; Student Nonviolent Coordinating Committee*

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Philo A. Hutcheson

DAVIS, JEFFERSON
1808–1889

Jefferson Davis will always be associated with the Confederate States of America. There is a certain irony in this association. Although he was president of the Confederacy, Davis was not the "fire-eater" that South Carolina secessionist Rhett Barnwell Butler was. He did not favor immediate secession upon Abraham Lincoln's election to the presidency and in fact served on the Committee of Thirteen that fashioned the Crittenden Compromise select committee that attempted to compromise the Union back together again during the lame-duck congressional session of 1860–1861. He was not known for his public defenses of slavery or states rights, as another reluctant secessionist, James Henry Hammond, was. Davis's major contribution to those debates was post hoc. He wrote *The Rise and Fall of the Confederate Government* (1881) well after the Civil War ended. As a prominent Mississippi planter, Davis had always supported slavery and states rights, but his association with those causes was forged during the war, not prior to it.

Prior to the war, Davis had a notable military and political career. He graduated from West Point in 1828 at the age of twenty. He served as an army officer until 1835, when he resigned his commission to marry his first wife and develop a plantation on land that his older brother had provided him. He also became active in Democratic politics. By the time he was elected to the House of Representatives in 1845, Davis was a wealthy cotton grower and slaveholder. At the outbreak of the Mexican War, he left Congress to serve as an officer in the Mississippi militia. Davis and his unit served with distinction at the Battle of Buena Vista. Upon his return to Mississippi in 1847, he was appointed and then elected to the United States Senate. In 1851 he resigned to unsuccessfully run for governor of Mississippi but he soon returned to Washington, D.C., as Franklin Pierce's secretary of war. After the Pierce administration left office, Davis was again elected to the Senate. His final Senate term ended in January 1861, when Mississippi seceded from the union.

Davis was the first and only president of the Confederate States of America. As president of the Confederacy, Davis faced a number of military and political crises. The opinions of historians vary as to how successfully he met those crises but they almost invariably compare him unfavorably to his Union counterpart. Yet there are a number of parallels. Both Lincoln and Davis oversaw the creation of strong states that heavily taxed and conscripted their male citizens to pursue their war efforts. Both Lincoln and Davis involved themselves in day-to-day military decisions and seemed plagued by inept generals. Both Lincoln and Davis ultimately decided to

recruit African-American soldiers, though, in Davis's case, the war ended before the policy could be implemented.

At the conclusion of the war, Davis was among a number of Confederate leaders and generals who were imprisoned for treason. President Andrew Johnson eventually ordered all of them released except for Davis, whose case became entangled in impeachment politics. After Davis had been in military custody for two years, he finally appeared in civil court and was granted bail. The federal government eventually decided not to prosecute him. During the last twenty years of his life, Davis experienced financial difficulties and continuing ill health but his popularity in the former Confederate states never waned. By the time of his death, he had come to personify the South's "lost cause."

SEE ALSO *Confederate States of America; Cotton Industry; Lee, Robert E.; Lincoln, Abraham; Mexican-American War; Plantation; Selective Service; Slavery; Slavery Industry; U.S. Civil War*

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David F. Ericson

DAVIS, KINGSLEY

SEE *Demographic Transition.*

DAWES, ROBYN

1936–

Robyn Mason Dawes is the Charles J. Queenan Professor and former chair at the department of Social and Decision Sciences at Carnegie Mellon University. He received his PhD in mathematical psychology from the University of Michigan in 1963. Dawes's work on human judgment and decision-making has influenced theory, research, and practice in diverse areas of psychology, including cognition, social behavior, and clinical assessment.

Inspired by Paul Meehl's demonstration that simple statistical models outperform clinical judgment, Dawes showed that improper (i.e., unit-weight or even random-weight) regression models perform better than individual clinicians do as long as each predictor variable has some validity. Application of a linear combination formula yields reliable predictions, assuming the model's user "knows how to add." In contrast, intuitive judgments remain vulnerable to random errors and systematic biases. Although statistical prediction models promise to make judgments about people easy, efficient, and accountable, many practitioners continue to reject them, a resistance that has led Dawes to explore human irrationality more broadly.

Dawes's analysis of human (ir)rationality is informed by Daniel Kahneman and Amos Tversky's work on heuristics and biases. Although judgmental heuristics often yield correct predictions, they guarantee that some contradictions will also occur. One such contradiction involves a structural availability bias that seduces people to make frequency judgments about events they could not have observed. For example, clinical psychologists sometimes claim that certain problem behaviors never stop on their own without therapy, when they have no information about behavior outside of the therapeutic context.

Dawes's focus on internal consistency as a criterion of rationality is narrower, but also more precise than competing definitions of rationality in terms of evolutionary or ecological adaptiveness. Dawes identifies the failure to make appropriate comparative judgments as a hallmark of irrationality. Often, people seek to understand surprising or distressing events retrospectively. For example, an airplane crash tends to stimulate reviews of other crashes in hopes that a cause can be found. To reach a valid conclusion, however, flights ending in crashes need to be compared with successful flights. The former analysis can only reveal what the flights of interest have in common, but it obscures crucial information about whether the rate of these common features is actually higher (or perhaps lower) than their rate in uneventful flights.

In Bayesian statistics, comparisons are expressed as likelihood ratios. For example, the probability of a plane crash given fog in the landing area is divided by the probability of a crash given the absence of fog. When multiplied with an event's base rate, the likelihood ratio yields coherent predictions. Although base rate neglect is also a facet of irrationality, Dawes is mainly concerned with the human tendency to neglect the ratio's denominator.

Nonetheless, Dawes is optimistic about people's capacity to think rationally. His analogy is learning how to swim. Novices try to keep their heads above water at all times, which makes drowning more likely. Once they learn to keep their faces in the water, and to come up for air only intermittently, they "get it."

Coherent judgments reduce the number of prediction errors, but they do not guarantee that outcomes will be desirable. Evil can be rational and banal, as a reading of the autobiography of Rudolf Höss, commandant at Auschwitz, suggests. If the premises are loathsome,

rational deductions are sure to be loathsome too. After rejecting the classic view that irrationality stems necessarily from the intrusion of emotions, Dawes concludes, like Bertrand Russell had done before him, that sensitivity to affect can benefit social judgment.

The inability of pure rationality to provide socially desirable outcomes is most evident in social dilemmas. Here, freedom-from-contradiction rationality dictates that each individual defect from the group (e.g., by choosing to pollute) because no matter what others do, the individual is better off. Garrett Hardin famously derided appeals to conscience as a way of increasing social cooperation. Dawes and colleagues, however, showed that allowing people to form a sense of a shared group identity makes them more likely to exchange and honor promises of cooperation. However, identity-based cooperation is still irrational. In a group of promise-makers, an individual who believes that others will be true to their word may be even more tempted to defect.

Dawes's rigorous analyses have some surprising implications. He argues, for example, that when proper comparisons cannot be made, the only rational conclusion is to conclude nothing. In research, randomized trials provide the only rational basis for causal conclusions, which means that causal inferences from post-hoc statistical controls have no defensible basis, and that it would therefore be better not to conduct such studies. Like researchers, ordinary individuals must find out when to give up. People who fail to acknowledge uncertainties that cannot be overcome, end up overpredicting their future and persisting in costly behaviors that have no demonstrable benefits.

The impact of Dawes's work within psychology and across disciplinary boundaries is noteworthy because Dawes did not establish an academic school of thought. His legacy is a firm rejection of academic tribalism and grand theorizing. Instead, he champions rigorous research, careful analysis, and acceptance of the limits of that which can be known.

SEE ALSO *Bayesian Statistics; Cognition; Rationality; Social Cognition; Social Cognitive Map; Social Psychology*

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Joachim I. Krueger

DAY CARE

Day care is a term that is commonly used in English-speaking North America. It refers to the care of young children by persons other than parents, guardians, or other close relatives (grandparents, for example) during a period when the children's parents are not able to provide care. Typically, day care is associated with care for a child while the parent(s) are employed or participating in an educational program away from the home. (Programs such as preschools, nurseries, and kindergartens are typically part-time and less commonly associated with employment-related care.)

Day care takes a wide variety of forms, from what are termed "informal" arrangements (such as care in the home of a neighbor or friend, with no regulation by government), to more "formal" arrangements (such as care in a purpose-built facility with licensing by one or more levels of government). In most parts of North America informal care is more common than formal care. The numbers of children in care settings, the ages of those children, the number of adults present, the nature of activities provided in these settings, and the training of care providers vary significantly.

The care of children while their parents are employed outside the home has a lengthy history in Europe and North America. One of the very first programs to develop as a specific response to parental employment was the Infant Schools established in New Lanark, Scotland, in 1816. Robert Owen's "Institution for the Formation of Character" was envisioned as much more than caregiving—it was an experiment in individual and broader societal development (Owen 1816). Infant schools moved beyond Scotland, and by the late 1820s similar programs could be found in North America, from Prince Edward Island to the Carolinas. However, by the late 1830s the infant school movement had died out in North America, an early victim of a complex interplay of ideologies, labor-force dynamics, class structures, immigration, social movements, and political positions that persist to the present. The public face of this dynamic was that "the mother's place is in the home with her children"—an argument heard from the pulpit in the 1830s and a continuing force in day care debates today (Pence 1989).

As the labor force expanded in the late twentieth century to include an ever higher proportion of women,

including mothers, pressure mounted for governments, at both federal and state or provincial levels, to address the very significant and growing need for day care services through the establishment of funded and regulated systems of care. Adding to pressure felt by a changing labor force has been the strategic use of research on early childhood, including research on early brain development (Carnegie Task Force 1994; Shonkoff and Phillips 2000), to make a case for "high quality" care. These forces, augmented most recently by comparative studies of child care in other industrialized countries (OECD 2001, 2004), tipped the scales in Canada in early 2005, and the Liberal-led federal government committed $5 billion over five years toward the development of "high-quality developmental early learning and child care in collaboration with provinces and territories" (Governments of Canada and Manitoba 2005). When the Liberal government was defeated later that year, the new Conservative-led government withdrew support for the program. The sociopolitical dynamics of day care that arose in the early nineteenth century are still evident in the twenty-first century.

SEE ALSO *Child Development; Children*

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Alan R. Pence

DEALIGNMENT

The term *party dealignment* refers to the erosion of party loyalties in an electorate. In theory, dealignment can occur in any electoral system, but the term is applied mostly to American politics. As used, here, it refers to the decrease in the percentage of American adults that identify either as Democrats or Republicans, and the corresponding increase in the percentage that identify as independents.

PARTY IDENTIFICATION AND ITS MEASUREMENT

Party identification is an individual's psychological attachment to one or another of the major political parties. Those who identify as Democrats or Republicans are referred to as *party identifiers*, while those who decline to declare themselves either Democrats or Republicans are referred to as *independents*. Pollsters generally use a seven-point scale to measure party identification. The American National Election Studies (ANES) asks survey respondents, "Generally speaking, do you think of yourself as a Republican, Democrat, an independent, or what?" Next, Republican or Democratic identifiers are asked whether they identify strongly or not so strongly with their party, while independents are asked whether they lean toward one party or the other. Based on responses, pollsters then place respondents along a 7-point scale (1: Strong Democrat; 2: Weak Democrat; 3: Independent Democrat; 4: Independent Independent; 5: Independent Republican 6: Weak Republican; 7: Strong Republican).

DEALIGNMENT AND ITS CONSEQUENCES

In the American electorate, dealignment occurred primarily between the 1960s and 1990s. The political scientist Marjorie R. Hershey describes the process as follows:

> In the 1950s and early 1960s, many more Americans called themselves Democrats than independents or Republicans. The Democratic edge began to erode after 1964, but Republicans were not immediately able to capitalize on the Democrats' losses. In fact, the proportion of Republican identifiers declined from 1964 through the 1970s, even when a Republican president, Richard Nixon, was elected in 1968 and re-elected by a landslide in 1972. Democrats retained control of Congress, split-ticket voting was fairly common, the proportion of "pure independent" identifiers increased, and there was a steady stream of independent and third-party candidates. These changes in partisanship struck many scholars as resembling a *dealignment*, or decline in party loyalties. (2006, p. 133)

Party identification data indicate the trend well. The share of Americans identifying as either pure independents or independent "leaners" increased from 23 percent in 1952 to around 33 percent during the 1980s, to 40 percent in 2000, and remained nearly steady at 39 percent

in 2004 (Hershey 2006, p. 325). However, further examination of the data also suggests that the share of Americans identifying as "pure" independents has decreased since the 1990s, while the share identifying as strong partisans, independent Democrats, and independent Republicans has also increased. Some political scientists argue that this indicates a renewed partisan polarization in the American electorate.

The consequences of dealignment include an increase in split-ticket voting (voting for different parties' candidates for different offices) and lower voter turnout. Party identification is the single most important influence on voting, and as fewer Americans identify with a major party, straight-ticket voting (for candidates of only one party) becomes less attractive and Americans are more likely to support different parties' candidates for different offices. Similarly, party identification simplifies voting decisions. But as more Americans identify as independents, they lose the easy voting cues that identification with a major party provides. Thus, more Americans must invest time and energy in researching and forming impressions of individual candidates, office by office. For some, the costs of this are too high, and voter turnout is likely to decline as a result.

DEALIGNMENT VERSUS REALIGNMENT

Party dealignment is a distinct concept from realignment. While *dealignment* means an erosion of party loyalties, *realignment* refers to an enduring shift in loyalty from one major party to the other among large numbers of voters. Further, this usually occurs in large enough numbers to create a new and lasting partisan majority. Thus, the 1896 election marked a partisan realignment that created a Republican majority in American politics that lasted until 1932. That year, perceived Republican inadequacies in addressing the Great Depression forged a Democratic majority in national politics that lasted until 1968.

In 1968, controversies over race relations, the Vietnam War, and the increasing importance of cultural issues contributed to partisan dealignment. During the 1970s and 1980s, that dealignment eroded Democratic dominance, but the number of independents increased much more than the number of Republicans did. More recently, other factors, including the realignment of white southerners toward the Republican Party and the renewed focus on national security issues after the September 11, 2001, attacks, contributed to Republican gains in party identification. In 2004 the share of Americans identifying as Democrats and Republicans was identical (at 33 percent) for the first time since the advent of modern polling.

SEE ALSO *Dixiecrats; Elections; New Deal, The; Party Systems, Competitive; Political Parties; Voting; Voting Patterns*

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Fred Slocum

DEATH AND DYING

Death is as much a cultural reality as it is a biological one. The only creature known to be aware of its inevitable demise, humans have dealt with their unique insight with considerable creative ritual and belief. Many have argued that religion, philosophy, consumerism, and even civilization itself were all created as antidotes to this terrifying insight (Becker 1973). Mythologist Joseph Campbell (1904–1987) hypothesized that mythmaking began with the first awareness of mortality, forcing early humans to seek purpose, to rationalize the irrational, and to deny death's finality. Perhaps it should thus be of no surprise that much of what we know of past cultures is based on funerary artifacts—their attempts at death transcendence.

A culture's death system, or death ethos, determines such widely ranging phenomena as a people's militancy and suicide rate; their preferences for bullfights, gladiator battles, or horror movies; their fears of or hopes for reincarnation and resurrection; their willingness to perform organ transplants or purchase life insurance; their decisions to bury, cremate, or eat their dead; and their attitudes toward capital punishment, abortion, and what constitutes a "good death."

Cultures have been classified in terms of their death systems, shedding light on the meanings they give to life. Historian Arnold Toynbee (1889–1975), for example, categorized cultures by whether they are death-accepting or death-denying, hold a hedonistic or pessimistic view

toward life, perceive death to be the end of existence or a transition to some personal or collective form of immortality, view corpses as sacred or profane objects, and whether or not the dead are believed to play an active role in the affairs of the living (and whether in a positive or negative way). In the death-defying West, for instance, strategies for salvation have historically featured activism and asceticism, whereas in the East they have often been more contemplative and mystical. In the West, postdeath conceptions typically involve the integrity and continuity of one's personal self; in the East, the ultimate goal is often an undifferentiated and impersonal oneness with the universe.

Changes in social solidarities (i.e., urbanization, religious pluralism), in selfhood (i.e., the shift from collectivist to individualistic identities), and in who dies and why, have historically produced several recognized epochs in the West, each featuring distinctive conceptions of death and funerary ritual. For most of human history, when life was short and "death in the midst of life" was a literal and not a figurative notion, cultural rituals and social systems were oriented to this fact. People were constantly reminded about time's invariable passage and their inevitable mortal fate. Ancient Egyptians would have skeletons brought to their feasts; colonial Americans would daily walk past their church cemeteries, whose tombstones were adorned with skulls and crossbones. Death was "tame," according to social historian Philippe Ariès (1914–1984). Deathbeds were community gathering places; public meeting spaces were often adjacent to mass graves whose contents were often partially visible. In early colonial America, realizing that two or three of their children would not survive until age ten, Puritan parents would send their offspring to family and friends as apprentices to avoid excessive attachments with them and the grief their deaths would cause (Stannard 1977).

According to Ariès, the contemporary era in the West features death denials and "invisible death," fueling the illusion of immortality with institutions that conceal the dying (over 70 percent of Americans currently die within institutionalized settings) and that make the dead appear lifelike for funerary services. Those most likely to die are the old (nearly eight in ten deaths in the United States are those sixty and older), who are largely disengaged from many of their roles and physically segregated from other age groups in retirement communities and long-term care facilities. Gerontophobia, or fear of aging, has become interwoven with cultural thanatophobia, the fear of death.

So great is the power of an ethos, this construction of meaning thrown up against the terror of death, that social agencies invariably seek to harness its energy as a means of social control—and to enhance the social status of their members. For instance, consider religion's traditional threats of agonizing hells or bad reincarnations as a means for keeping the living in line. The power and status of the medical establishment increased dramatically during the last century with its growing ability to postpone death. Because of scientific breakthroughs, modern medicine has largely eliminated many traditional causes of premature death, especially infectious disease, and the medical establishment competes with religion's traditional control over the dying process. Accordingly, death is shifting from being a moral rite of passage to a technological one. Traditional fears of postmortem judgment are morphing into fears of dying; those most likely to die, the old, fear being institutionalized within nursing homes more than they fear death.

With most premature death now the result of man-made and hence theoretically avoidable causes (e.g., accidents, homicides, and suicides), its occurrence has become increasingly tragic and highly politicized. Political rulers have long enforced their control through death squads, pogroms, war, capital punishment, and campaigns of fear. Disdaining such strategies, modern regimes instead establish legitimacy and citizen loyalty by thwarting (or at least predicting) the death threats of enemies with the country's military forces, of lethal microbes with health care systems, of violent storms with weather satellites, of possible earthquakes or volcanic eruptions with seismic monitoring stations, and of potential asteroid or meteor collisions with telescope arrays.

Some of the most contentious moral debates in the contemporary United States center on the right to end life (e.g., capital punishment, physician-assisted suicide, and civilian casualties in military campaigns) and precisely where the line between life and death occurs, as in the controversies over abortion and euthanasia.

Materialism, individualism, secularism, and the distractions of consumer and popular cultures have not eliminated individuals' fears of death nor their desires to transcend it. The proportion of Americans believing in an afterlife has generally increased over recent decades, with more than seven in ten confident that their existence does not conclude with death. At a minimum, cultural death systems promise at least symbolic immortality (Lifton 1979), such as being remembered through one's progeny or works of art, or surviving through the preservation of political or natural orders. Thus we witness the proliferation of such projects as halls of fame, the Social Security Administration's online database of deceased Americans, and *Forbes* magazine's annual ranking of top-earning deceased celebrities.

SEE ALSO *Euthanasia and Assisted Suicide; Funerals; Suicide*

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DE BEAUVOIR, SIMONE

SEE *Feminism.*

DEBREU, GERARD

1921–2005

Gerard Debreu, a French-born American mathematical economist and 1983 Nobel laureate, was a major force in the advancement of the theory of general equilibrium. His early influence came from the 1988 French Nobel laureate, Maurice Allais, who introduced him to the writings of Leon Walras (1834–1910), the founder of the mathematical theory of general equilibrium analysis.

In 1949 Debreu visited several premier universities, including Harvard and the University of California, Berkeley, on a Rockefeller fellowship. Following the fellowship, he spent a decade with the Cowles Commission, then attached to the University of Chicago, working on Pareto optima, the existence of a general economics equilibrium, and utility theory. Subsequently, after one year at Stanford, he moved to Berkeley in 1962 where he remained until his retirement in 1991. Besides mathematics, Debreu was so taken by the U.S. rule of law during the Watergate scandal that he became an American citizen in 1975.

Debreu's research interest was general equilibrium analysis, in line with Walras, whose method was to equate equations and unknowns. The essential idea is to show how prices gravitate from disequilibrium to their natural or equilibrium levels. Debreu liberated the analysis by opting for fixed-point and convex tools for general equilibrium analysis.

Convexity requires that the production and consumption sets be bowl-shaped. Debreu would "slip a hyperplane," as he would say, through the tangent of those convex sets. He first revealed a proof at the 1950 meeting of the Econometric Society at Harvard that did not use the convexity solution. Many optimal solutions of the Pareto type and some possible competitive solutions resulted where prices are given and agents maximize their affairs. In 1954, in collaboration with Kenneth Arrow and using topological methods, which Debreu had used previously, he proved the existence of general equilibrium in an "epoch-making" paper, "Existence of an Equilibrium for a Competitive Economy."

Debreu's early book, *The Theory of Value* (1959), produced the hard-core ideas of his lifetime research program. He expressed the economy as $\xi_i\left(p,\left(p\cdot\omega_i+\sum_{j=1}^{n}\theta_{ij}\pi\, j(p)\right)\right)$, where each consumer, $i = 1....m$, has an initial endowment, ω_i, a share of j^{th} producer's profit, $\theta_{i,j}$, and an underlying utility function for his or her preferences. Each producer, $j = 1....n$, takes the prices that are announced, and maximizes profits, π_j. The inner-bracketed terms represent the consumer budget from the initial endowment and shares of profits. Consumers will maximize their utility subject to their budget constraints, yielding demand functions. Excess demand functions are now possible by summing all the demand functions less endowment. Thus we can derive the equilibrium prices from the excess demand functions, which in two dimensions are usually the zeros or solutions of a quadratic equation.

Debreu built his theories on axioms, where a primitive such as a commodity becomes a mathematical object with spatiotemporal and physical characteristics. He urged his students to be concise, mentioning that John Nash demonstrated the equilibrium for finite games on only one page. During his lectures his eyes would light up when he demonstrated the superiority of mathematical reasoning. He used to say that mathematical economists have the best of two worlds—mathematical discoveries when they are young and economic discoveries when they are old.

SEE ALSO *Arrow-Debreu Model; General Equilibrium; Pareto Optimum; Tatonnement*

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DEBT CRISIS

SEE *Herd Behavior; Loan Pushing.*

DEBT PEONAGE

SEE *Servitude.*

DECENTRALIZATION

Decentralization is the transfer or sharing of decision-making power from a central authority toward lower-level units or the end users. Decentralization signifies the disbursement of power from the top down within any type of organizational hierarchy, such as political, educational, or economic systems. The literature on political economy suggests that a greater degree of decentralization leads to higher levels of efficiency in the distribution of public resources and is associated with the use of locals' own resources to address local needs and issues.

There are various types of governmental decentralization, depending on the constitutionality granted to lower-level units of government. Federalism is an arrangement in which different levels of the government enjoy constitutionally designated power and functions. The central authority in a federal system exists when lower-level units decide to enable the national government to have overseeing powers. In the United States, authority at the national government does not preclude the political rights that reside at the state level. The fifty states exercise their own taxing and spending authority and maintain primary control over their own affairs (such as public education). The national government does play an important role in federalism. It can allocate its centrally collected resources to address regional disparity and to provide services that benefit several subnational units, such as environmental protection.

Unitary governments, whose lower-level units may not enjoy constitutional guarantees of autonomy, can reallocate their power within the administrative and territorial system. In Great Britain, for example, regional autonomy exists in Northern Ireland, Wales, and Scotland, and the national government grants municipal autonomy to London. Although it can be repealed by the British Parliament and the monarchy, the complex system of elected local governments constitutes an integral part of the British political system. In other unitary systems, territorial decentralization is constitutionally provided for, and the powers of locally chosen officials are prescribed. The Japanese constitution, for example, specifies certain autonomous functions to be carried out by local administrative authorities.

Another governance arrangement may involve a hybrid of central supervision and local control. A good example is France. Until March 1982, when a law on decentralization was enacted, the French administrative system was constructed around departments, each directed by a prefect, and subdivided departments, each directed by an underprefect. The prefects and the underprefects were appointed by the national government in Paris to act as agents of the central government and also as the directors of the regional governments, which included locally elected officials. That system combined central supervision of local affairs through appointed officials with territorial representation through locally elected governmental bodies.

The degree of decentralization, to be sure, involves trade-offs in governmental functions and political power. A decentralized system of governance is likely to implement fiscal policy based on the "benefits-received" principle, where local taxpayers receive locally funded services. This practice may lead to intercommunity competition for private capital and productive workers, as they form the basis of a sound local economy.

A race to the bottom can occur as power is decentralized to municipalities. To enhance their competitiveness, local governmental units tend to reduce locally funded social welfare services and to relax labor and environmental regulations as much as possible to lure economic investment. In developing economies, for example, communities that offer the least costly workforce tend to attract foreign capital. In putting into practice the notion

of cost-reducing scale economies, companies prefer lower overhead costs with lower local taxes and greater discretion over wages.

At the same time, a centralized system may make allocative decisions that do not necessarily reflect local and regional needs to the extent that the system functions at a suboptimal level. In other words, a mix of decentralized decision-making and centralized coordination is necessary to promote efficiency and fairness.

SEE ALSO *Authority; Autonomy; Bureaucracy; Constitutions; Decision-making; Federalism; Government; Government, Federal; Government, Unitary; Organizations; Policy, Fiscal*

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DECEPTION

SEE *Lying.*

DECISION-MAKING

Standard models of decision-making hold that rational agents maximize expected utility. These models presuppose a notion of rationality that is substantive (i.e., that involves making choices that have certain substantive outcomes, such as maximizing expected utility) and forward-looking (i.e., that is solely a function of future costs and benefits). Despite the fact that this notion of "utility" is notoriously vague, utility maximization theories have a formal clarity and precision. Unfortunately, they also make highly idealized assumptions about decision-makers—namely that they are superhuman probability calculators whose preferences are precisely and stably ordered.

Since the 1950s, economists and psychologists have moved away from forward-looking, substantive theories of rationality, and toward procedural theories of rationality. Procedural theories take rationality to involve making choices in accordance with certain rules or processes, and these rules or processes are typically grounded in psychologically realistic accounts of decision-making. This focus has led to an explosion of research into decision-making in business, government, and the marketplace. Much of the groundbreaking work in this area was done by Amos Tversky and Daniel Kahneman (Kahneman won the Nobel Prize for Economics in 2002 for his research on the economics of choice).

AUTOMATIC VS. DELIBERATIVE PROCESSES

While the paradigm case of decision-making is voluntary and deliberative (e.g., selecting a new car or a retirement plan), many cognitive processes are involuntary and automatic. Some automatic decision-making seems to occur in a perception-like system. These "System 1" processes are fast, automatic, parallel, effortless, associative, and emotional. "System 2" processes, on the other hand, are slow (in the deliberative sense), serial, controlled, effortful, rule-governed, flexible and emotionally neutral. Reasoning is a characteristic System 2 process. Which system is being used can be determined by an effort diagnostic: System 2 processes are easily interfered with by a simultaneous activity.

System 1 processes include impression formation, one-on-one communication, and much group behavior. John Bargh's work shows that much of our social behavior (e.g., nose-scratching) is imitative, triggered automatically by an activation of the motor cortex. Consumer choice, memory for events, mathematical skills, and hostility for others are regulated by automatic processes that people are largely unaware of, and which can be triggered by environmental features to which people pay no explicit attention. For example, music in a store can reduce the shopper's blink rate from the normal average of thirty-two times a minute to a hypnotic (and suggestible) fourteen blinks a minute (Smith and Curnow 1966).

FRAMING EFFECTS

Framing effects occur when messages carrying the same statistical information cast in different ways prompt different behavior. If someone who tests positive for HIV or

breast cancer has a 70 percent chance of living beyond seven years, then that person has a 30 percent chance of dying within seven years. But these messages have different impacts. In 2001, Tamera Schneider and colleagues created gain-framed videos that explained the positive effects of healthful behavior and regular breast exams, as well as loss-framed videos that attempted to frighten viewers with the potential negative consequences of not seeing a doctor. Subjects in the gain-framed message condition were significantly more likely to arrange mammograms. In a 2003 paper, Anne Marie Apanovitch, Danielle McCarthy, and Peter Salovey showed that message framing also motivates subjects to get tested for HIV.

THE FUNDAMENTAL ATTRIBUTION ERROR

When observing the behavior of others, people tend to overattribute behavior to dispositional factors, such as motives, capacities, and personality traits. They also tend to underestimate the causal influence of situational factors, such as whether the subject is pressed for time or is in an uncomfortably warm room. This "fundamental attribution error" (FAE) has proved both stable and resistant to correction. Interestingly, however, Incheol Choi and Richard Nisbett found in 1998 that Koreans are significantly less susceptible to the FAE than Americans.

The FAE leads to the actor-observer effect, where people tend to explain their own behavior in terms of situational factors, while other people's behavior is explained in terms of dispositional factors. A noteworthy consequence of the actor-observer effect is that people tend to explain other people's economic successes or difficulties in terms of behavioral and dispositional factors. They tend to explain wealth in terms of hard work and wise decisions, but rather than explain poverty in terms of the situations of those suffering, it is often explained with derogatory attributions. In other words, it is often believed that people are poor because they are lazy, stupid or ignorant. Situational factors are, however, thought to exert a potent influence on social behavior.

AFFECTIVE FORECASTING

A number of studies that allow subjects to predict how some event will affect their life or the lives of others have confirmed that people are not good at tracking the impact and duration that events will have on our lives. There is a wide gulf between what people believe makes them happy and what actually does make them happy. Events that are predicted to be devastating, such as getting denied tenure, and those thought to make one happy, such as gaining tenure or winning the lottery, often have no lasting impact on human happiness (see Gilbert, et al. 1998; Brickman et al. 1978). It may be difficult for people to admit, but affective forecasting—the psychological process of predicting how one will react to life events—cannot be trusted (see Wilson and Gilbert 2003). As Kahneman et al. put it, "People are unable to produce an accurate and unbiased evaluation of experiences that extend over time" (2004, p. 430). When it comes to what makes one happy, people have a mixture of true beliefs (having a satisfying occupation; having a number of caring, emotionally intimate relationships; sound health; or the feeling of security from personal threat) and false beliefs (having more money [if they are middle class or above], a fast car, or a vacation home).

DISCOUNTING THE FUTURE

People tend to discount the future. If given a choice between taking ten dollars now or in ten years, it is undoubtedly more rational to take the money now. Certainly inflation will make it less valuable in ten years, and the future is uncertain. But the problem is that people tend to discount the future far too steeply. This is evident in the very low contribution rates many people make to their retirement plans. People take their money now, even when the payoff at retirement is high and the probability of an interfering event is low. In so doing, people end up making choices that are inconsistent with their life plans.

But perhaps the impulse for immediate satisfaction should be forgiven. When people lying in a magnetic resonance imaging (MRI) machine are asked to choose between two options—an item now and a more valuable one in the future—the prefrontal cortex busily calculates the various payoffs over time, lighting up the image with blood flow activity (McClure et al. 2004). But when a person chooses the present pleasure, the limbic system—which governs the emotions and spontaneous responses—also flashes brilliantly. Thus, people are biologically programmed to respond more strongly to present pleasures, and while they might find it difficult to eliminate their biases, some biases can be used to cancel out others. Richard Thaler and Shlomo Benartzi's Save More Tomorrow Plan (SMT) is a fine example of this sort of psychological ju jitsu.

SMT uses one set of biases (the tendency toward decision-making inertia and procrastination) to counteract another bias (the failure to properly discount the future). The plan application asks prospective participants if they would like to start saving three months from now, and it commits them to doing so at the time of enrollment. The time lag allows people to experience whatever they find attractive about procrastination, but once enrolled in the plan, inertia takes over and people tend not to opt out. Thaler and Benartzi also curb a powerful psychological factor—loss aversion—that would lead people to decline to participate in the plan. People tend to weigh

losses far more heavily than gains, and so tend to work hard to avoid sure losses. Loss aversion tends to prevent people from enrolling in a program in which they will witness a decrease in their paycheck. So SMT takes the increased contribution out of the employee's pay raise, so that it is not experienced as a loss. For those involved in this plan, saving rates more than tripled, from 3.5 percent to 11.6 percent, over 28 months.

Contemporary research into decision-making focuses on describing the processes employed by decision-makers. By discovering processes that consistently lead to decisions that are in some sense non-optimal, researchers can offer psychologically tractable proposals for improving decision-making. This research has produced, and will continue to produce, important practical and theoretical results for economics, organizational behavior, investment performance, organ donation planning, insurance, traffic theory, criminal corrections, medical diagnosis, and many other areas that are significant to people's lives.

SEE ALSO *Choice in Economics; Choice in Psychology*

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DECISIVE EVENTS

An event with persistent consequences that influences the economic activity in significant regions of the world, and that marks a shift in structural conditions for investment, trade, relative prices, or central state policy, is termed a *decisive event*. Because economic reasoning is concerned with an explanatory-factor approach to empirical regularities, decisive events often appear as abrupt and depth breaks of these regularities. For this reason, the initial occurrence that unleashes the full sequence of changes is perceived as the fundamental turning-point moment, and is often used like a marker to outline time periods and differentiate chronologies. The idea that once a turning point is reached, a cascade of irreversible consequences will follow, is akin to the representation of thermodynamic systems that are no longer in a state of equilibrium. In reality, decisive events in economic terms are equated in the short run as moments of system disequilibrium.

Within this framework, what matters is not so much the intensity, breadth, and pace of the turning-point event, but rather how the system responds to changes in the environment. In historical terms, this entails the distinction between train and explosion, between the narrative of singular occurrences and the mechanisms that generate one particular outcome: When the stock market fell almost exactly the same amount on almost exactly the

same dates in 1929 and in 1987, why did the first collapse lead to a world crisis, but the second have only limited consequences? The answer is that a stock-market crash is not enough to trigger a depression. There must be some causal mechanisms at work that contribute to spreading a single initial occurrence in a sequence of events across sectors of activity and across nations. The primary propagation channel of the 1929 crash could have been the banking panics, the postwar system of the gold standard that spread the shock by indicating that deflation policies were the appropriate remedy for the ills of the 1930s, or both. The important point to note is that decisive events join together a turning-point occurrence and a powerful propagation mechanism.

World Wars I (1914–1918) and II (1939–1945), the stock-market crash of 1929, the oil shock of 1974, and the fall of the Berlin Wall in 1989 constituted the most decisive events of the twentieth century, from an economic point of view. Each of these episodes was meaningful to historical actors before they became meaningful as objects of research. Narrative memory and intrinsic plot formation therefore established preliminary grounds and agendas in which the analysts developed their work. To most contemporary observers, the abrupt shifts were felt with some uncertainty and distress, provoked by the dense concentration of facts in short periods, and by the need for personal adjustment to a changing world. Hence, the thick time of decisive events appears cognitively and emotionally as an overload of data and occurrences that disturbs the degrees of rational belief. Under these conditions, it becomes increasingly difficult to estimate some hypotheses, given the evidence, or to forecast possible tendencies of the future.

SEE ALSO *Berlin Wall; Deflation; Depression, Economic; Economic Crises; Inflation; Organization of Petroleum Exporting Countries (OPEC); Stock Exchanges; Uncertainty; World War I; World War II*

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DECLARATION OF INDEPENDENCE, U.S.

The Declaration of Independence, written in 1776, marked the birth of a new nation, the United States of America. Drafted mainly by Thomas Jefferson, edited by a committee consisting of Jefferson, John Adams, Benjamin Franklin, Roger Sherman, and Robert R. Livingston, and then by the Second Continental Congress that had appointed the committee, the Declaration set forth not only the causes that led Americans to sever their political ties with England but also a moral and political vision that speaks to the ages. In a few brief lines, penned at the beginning of America's struggle for independence, the founders distilled their philosophy of government: individual liberty, defined by rights to life, liberty, and the pursuit of happiness, secured by a government instituted for that purpose, its powers grounded in the consent of the governed.

At the time, these were revolutionary ideas, because no people had instituted them as Americans would eventually do, first with the Constitution of 1787, then with the Bill of Rights, ratified in 1791, and finally with the amendments that followed the Civil War (1861–1865). Yet the ideas themselves grew from a history stretching back to antiquity. Two influences were seminal, however: the five-hundred-year evolution of judge-made common law in England, which fleshed out the rights individuals had against one another and, in time, against government itself; and John Locke's *Second Treatise of Government* (1690), which drew upon that tradition to fashion a theory of legitimate government, grounded in natural rights. Thus, by the time Jefferson sat down to draft the Declaration, these ideas were commonplace in the colonies, even if it remained to institute them securely.

The document itself has three main parts. Invoking "the Laws of Nature and of Nature's God," it begins by stating the need, out of "a decent Respect to the Opinions of Mankind," to declare the causes of the separation, then sets forth the famous lines about liberty and limited government—the moral foundation that justifies those causes. There follow next the causes themselves, the "long Train of Abuses and Usurpations" the king of England had visited upon the colonies. Finally, appealing "to the Supreme Judge of the World for the Rectitude of [their] Intentions," the founders declare "That these United Colonies are, and of Right ought to be, Free and Independent States."

So important are the Declaration's famous lines setting forth the founders' moral and political vision that they bear statement and closer examination: "WE hold these Truths to be self-evident, that all Men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the Pursuit of Happiness—That to secure these Rights, Governments are instituted among Men, deriving their just Powers from the Consent of the Governed." Note first that these truths are said to be "self-evident"—truths of reason. To be sure, the founders were men of faith, and of

various faiths; but they were mindful also that they were setting forth universal truths, truths for all people, whatever their beliefs. Thus, they appeal to reason, not to faith or mere will. Second, notice that they set forth the moral order first, then the political and legal order it entails. Following Locke, they begin the business of justification by determining first, through reason, what rights and obligations individuals have respecting one another. They can then determine how legitimate government might arise through the exercise of those rights.

Turning to the truths themselves, the founders begin with a simple premise, that all men are created equal, then define that equality as a matter of rights to life, liberty, and the pursuit of happiness. Three fundamental points emerge here. First, men are all equal only in having equal natural rights, not in any other sense. But that point is crucial because it means that no one has natural rights superior to those of anyone else; and yet it allows for the inequality that invariably arises when people exercise their liberties as they wish and may. Second, by grounding their vision in rights rather than values, virtues, or other moral notions, the founders paved the way for liberty through law. Rights define the acts that are permitted, prohibited, or required, whether or not those acts are valuable or virtuous. Finally, as a corollary, people are free to pursue happiness as they wish, by their own lights, provided only that they respect the equal rights of others in the process. Others are free to criticize these pursuits, but not to restrict them. People are free to be virtuous, however defined, but not compelled to be. That is the very essence of a free society.

To secure that freedom, however, government is the natural instrument. But one must be careful, because government itself can be tyrannical. Thus, when the founders turn at last in this passage to government, it is twice limited: by its ends—securing individual rights; and by its means—to be just, the governed must consent to its powers. Reason and consent, the two traditional sources of political legitimacy, are there joined for "a candid World" to see.

The Declaration's principles have never been fully realized, of course. When the Constitution was drafted eleven years later it drew heavily on these principles; to ensure the union, however, it recognized slavery, albeit obliquely. The framers wrestled with the issue, hoping the institution would wither away over time. It did not. It took a civil war to end slavery, and the passage of the Civil War amendments to incorporate in the Constitution at last the grand principles of the Declaration. And in other ways too—not least, the growth of modern government—Americans have strayed from the Declaration's vision of liberty through limited government. Nevertheless, that vision—the right of every individual to chart a course through life, free from the interference of others or of government—continues to inspire millions around the world who see in the Declaration of Independence the principles under which they themselves aspire to live.

SEE ALSO *American Revolution; Congress, U.S.; Franklin, Benjamin; Jefferson, Thomas; Locke, John; Natural Rights*

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Roger Pilon

DECOLONIZATION

Decolonization has shaped modern world history, and continues to do so. In the eighteenth century the American Revolution (1776–1783) laid the foundations for the United States' regional, then world influence. In the early nineteenth century Latin and Central American territories freed themselves from Spanish and Portuguese control (e.g., Paraguay in 1811 and Brazil in 1822). The European settler populations there, and in Canada, Australia, and other areas, used European styles of organization and, if necessary, warfare, to pressure imperial powers, and the result was full independence or more limited self-government, depending on the flexibility of the imperial power. But the most dramatic wave of decolonization was concentrated in the period from 1918 to the 1960s, when more than fifty countries and more than 800 million people gained independence from European rule. More recently, since the 1990s, the breakup of the Soviet Union's "empire" of satellite states has dramatically changed European and wider international relations, leaving the United States as the only global superpower.

As late as 1914, however, it seemed likely that most Asian and African countries would have to wait generations for internal self-government, let alone full indepen-

dence. Their populations were limited to traditional forms of resistance, often involving royal elites and their retainers and levies, or to localized peasant revolts against harsh rule, high taxes, and alien customs. For Asians and Africans, decolonization's roots lay with the development of new local elites trained in modern disciplines—law, medicine, civil service—and their establishment of national-level political and, later, military organizations. These organizations had a dual significance: They could bridge tribal and regional differences to provide a "nation" in whose name sovereignty could be demanded, and they could organize state-wide resistance, ranging from peaceful civil disobedience to sustained guerilla warfare.

In analyzing these trends, scholars have identified three types of cause of decolonization: metrocentric, peripheral, and international. In short, these involve causes in the imperial power, in the colonized territory, and in the wider world. Some argue that one or another cause has the greatest influence: for example, that the cold war (an international cause) made postwar European empires expensive, as communist ideology blamed western capitalism and imperialism for indigenous poverty, and communist countries encouraged and aided revolts. In truth, such world or systemic tensions are not deterministic. They do exert pressure, but ultimately imperial powers may choose to maintain their empires if they are willing to accept increased costs.

The influence of metrocentric agency becomes obvious when we examine cases of empires that persisted during the cold war. One such case is the informal empire of the Soviet Union, which dominated satellite states in eastern and central Europe. When any of these states attempted to relax adherence to Soviet military and ideological norms, as Hungary did in 1956, they quickly discovered that Soviet tanks blocked their way. When Soviet "decolonization" did gather pace in the 1980s to 1990s it was not so much a result of pressures from the periphery as from Soviet President Mikhail Gorbachev's decision that openness and reform were necessary for central economic rejuvenation. Likewise, Portugal, which by the time of the cold war had one of the smallest European empires, tolerated guerilla warfare until the fall of its dictatorship in 1975 brought to power a left-wing government averse to the cost, and authoritarianism, of empire. After 1975 Portugal more or less scuttled its empire, leaving Angola, Mozambique, Guinea-Bissau, and East Timor to their own devices. Portugal's empire thus proved more durable than Britain's and France's, most of which was gone by 1971. In short, just as metrocentric concerns—centered in a metropolis or dominating central state—sometimes drive expansion, they sometimes accelerate or delay decolonization too.

Even in the case of Portugal, however, where metrocentric changes triggered the end of an overall imperial system, peripheral pressures did exist, with rebellion having started in Angola as early as 1961. Peripheral approaches also help explain individual examples of decolonization, and details such as the timing and nature of events. The demonstration effect of success in one colony can also create a domino effect, as in the Spanish colonies in the early nineteenth century, and in Soviet satellites in the 1990s, thus helping to explain the end of entire empires. In addition, in some cases only the peripheral explanation can explain how imperial powers were forced to disgorge territories they desperately clung on to. Key examples include Indochina (Vietnam), where the determination of first France (1946–1954) and then the United States (1965–1975) was ground down by Marxist-inspired nationalist guerilla forces. Likewise, in Algeria, France reluctantly ceded independence in 1961 despite initially claiming the territory as an overseas department and integral part of the French state.

Although peripheral causes can help to explain the pressures on an imperial power, and metrocentric approaches can help explain how each empire responds, neither is adequate to explain the pulses or waves of decolonization outlined above, when several empires simultaneously decolonized. International pressures and events are also indispensable in explaining how some imperial powers crashed from glory to dissolution in the space of just a few short years.

Portugal's grip on Brazil and Spain's on its colonies, for example, were at first loosened by the Napoleonic Wars, which brought virtual autonomy to Brazil. Britain's inability to quell revolt in its American colonies was as much due to France broadening the conflict as the colonists' determination. More dramatically, defeats in war allowed enemies to quickly deconstruct the Austro-Hungarian Empire after 1918, and the Japanese Empire after 1945. Clearly, changes in the international environment, for example Woodrow Wilson's championing of "self-determination" as a fundamental principle in international affairs in 1917, and the United Nations' support for decolonization after 1945, also raised the costs and lowered the benefits of empire.

The above discussion adheres to a classic idea of decolonization as constitutional and legal liberation. This is decolonization as the formal handover of sovereignty, the lowering of the old flag and the raising of the new. Some people argue that decolonization is precisely that, others that it is much more, and does not always end at the point where formal independence starts. At one level, formal independence does not preclude metropolitan companies' controlling much of the economy, and metropolitan scheming in local politics, even up to encouraging

the removal of elected local rulers. After 1961 French culture continued to have an effect on elites in formally independent French-speaking Africa, and military and economic agreements ensured ongoing influence. This raises the question of how far decolonization goes to remove the ongoing political and economic hegemony of a former colonial power.

If decolonization is the removal of domination by nonindigenous forces, this could include the colonizer's legacies in other areas, such as race and culture. One might think of full decolonization in terms of three Ms: the mass, the mind, and the metropole. Traditional approaches concentrate only on the mass, or the colonial territory itself and its main political, security, and financial institutions. Newer approaches also emphasize decolonizing the mind (i.e., freeing postcolonial culture and thought from tutelage to western ideas) and the metropole (i.e., freeing the metropole from its own tendency to inferiorize and dominate other peoples and territories). In this latter sense, postcolonialism (as a process of contesting the impact of colonialism after formal independence) and decolonization (as a process of removing control of indigenous peoples by other groups) overlap. The object of decolonization is not just government, but also other areas such as economics and its effect on the culture, ideas, and institutions of imperial domination.

The two approaches can be seen operating together through individuals such as Martinique's Frantz Fanon (1925–1961), for whom imperialism was not so much a formal process as a mental hegemony, a domination of how people think. French imperialism aimed to absorb indigenous elites as francophone, and Fanon came from a family in Martinique—a French overseas department—which initially thought in these terms. But his experiences of discrimination in the Free French Forces, as a doctor in France, and of imperial violence in Algeria, where as a psychiatrist he treated victims of torture, convinced him that domination was exercised by a social system and experienced as a mental state not dissimilar to a mental illness. He later concluded that violent struggle was a powerful antidote to the condition. For him the violence was in itself empowering and liberating. He later supported the Algerian resistance, and his books *Black Skin, White Masks* (1952) and *The Wretched of the Earth* (1961)—the latter calling for peasant revolution to ensure real transfer of economic power, rather than mere accommodation—influenced other revolutionary leaders such as Che Guevara (1928–1967) and Steve Biko (1946–1977). Fanon's own ideas, such as his conception of imperialism as an affliction affecting both the colonized and the colonizer, are important as an example of a general trend toward highlighting the cultural and aspects of decolonization and postcolonialism.

Decolonization remains a very real issue. It is an issue in terms of whether existing groups under outside domination, such as Tibet and Muslim Xinjiang under China's hand, will one day assert nationhood, perhaps using force to demand independence. It is an issue in terms of whether the United States has inherited Britain's mantle as an "informal empire," asserting supposedly universal liberal and democratic values by "gunboat imperialism." It is an issue in terms of how far "first peoples" such as Canada's Inuit and Australia's Aborginals will demand, and receive, further compensation and assistance to counter past repression and past appropriation of their lands. And finally it is an issue in terms of ex-imperial powers reexamining the domestic vestiges of imperialism in their populations, their prejudices, and their cultures.

SEE ALSO *Colonialism; Nkrumah, Kwame; Third World; Williams, Eric*

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Karl A. Hack

DECONSTRUCTION

SEE *Derrida, Jacques; Postmodernism.*

DEFECTIVES

SEE *Sterilization, Human.*

DEFENSE

Defense, in the social sciences, traditionally focuses on how states jockey for premier position in the global system. Periodically, it also examines preparations by different societies for countering internal and external threats.

Self-defense, in the dominant realist school of international relations, stands alone as the raison d'être of the

state. Other functions proposed by liberal philosophers, including providing the laws and infrastructure for commerce or protecting individual freedom of citizens, presumptively come second to survival. This does not mean, however, that the demands of defense, even for the realist, are met at any price. In fact, defense policy may be understood as the art of balancing the combined risks of destruction from war or dissolution from rebellion against the benefits of preserving cherished principles of the state.

ORIGINS OF DEFENSE

These founding principles reside in the provisions of a so-called social contract between citizens and their governing institutions. Beyond the explicit articles of written constitutions, the social contract as a concept captures the pattern of expectations concerning rights and obligations for individuals living under protection of the state. When states are under extreme circumstances, when internal or external disintegrating forces are high, Thomas Hobbes in his classic work *Leviathan* ([1651] 1985) argued people would and should accept sharp curtailment of their liberty to fortify the state.

As a counterweight to this prescription for centralization of power in the state, most Enlightenment liberals stressed the importance of preserving individual freedoms and maintaining ultimate accountability of the government to its people, even in the face of grave security threats. Historically, through the evolution of the international system of states during the nineteenth century, the advent of nuclear weapons in the twentieth century, and the rise of nonstate security actors in the twenty-first century, states have had to reconcile the imperatives of self-preservation with the implicit call of their social contract to provide for a better life at home.

DEFENSE POLICY PROCESS

The responsibility for striking this balance lies primarily with the executive and legislative powers of the state, though in cases where there is an independent judiciary defense decisions may be countermanded according to legal codes. In keeping with Hobbes's line of argument, the more defense measures hinge on emergency maneuvers and closely held intelligence, the more power tends to be concentrated in the executive, even in otherwise liberal societies. Defense, however, involves a mixture of long-term reflective planning and time-critical choices. In practice, there is often feedback between various stages of defense policy, but as a point of departure Peter L. Hays, Brenda J. Vallance, and Alan R. Van Tassel (1997) provide a linear guide to the process as follows.

Responsible officials assess the threat environment. Of common concern to all states are challenges to territorial integrity. Assessing these challenges involves geopolitical calculations based on resource capacity and the geographical position of potential rivals. In addition, national defense must account for intentions, essentially the risk that foreign capability will actually be organized and directed against the state. For most states in the international system, high-probability threats to existence are rare. Consequently, political leaders usually have the luxury of determining many of their defense priorities not just according to the necessity for survival but also through the lens of national values. The ethnic composition of a foreign state, its respect for human rights, or the quality of its democracy may affect the level of cooperation it enjoys from external actors in its own defense.

Grand strategy is the art of matching finite national capabilities against interests so as to reduce vulnerabilities and maximize opportunities in the international environment. The means for grand strategy are conventionally categorized according to economic, military, and diplomatic instruments of power. While national security depends on all the available instruments, defense analysis normally focuses on the role of the military instrument in the development and implementation of grand strategy.

States trade off between expanding their total resources for defense through alliances and increasing their autonomy through arms buildup. During the cold war, U.S. diplomatic efforts to nurture the North Atlantic Treaty Organization (NATO) were part of a grand strategy of containment, which relied on external balancing to prevent a Soviet invasion of Western Europe. The U.S.-Soviet rivalry also featured internal balancing as both sides spent vast sums to greatly expand the number and variety of nuclear weapons under their control.

Both external and internal balancing during the cold war supported containment, largely based on deterrence, or defense through the credible threat of imposing unacceptable costs on an enemy to dissuade it from attack. Still, even in the era of the superpower nuclear standoff, defense strategists in some cases lowered the threshold for taking the military offensive. Israel famously ordered a preemptive strike on massed Egyptian air power to clear the way to victory in the Six-Day War of 1967. Both the United States and the Soviet Union employed preventive uses of force in buffer zones such as Eastern Europe and the Caribbean to cover vulnerabilities in their respective spheres of influence. With the relaxation of tensions between the largest nuclear powers and the rise of terrorist organizations demonstrating their potential to make strategic use of weapons of mass destruction, the defense pendulum swung farther from deterrence toward preemptive and preventive grand strategies.

DEFENSE CHALLENGES

In *Taming the Sovereigns: Institutional Change in International Politics* (2004), Kalevi J. Holsti marks a turning point as well in the relationship between defense policy and the normal workings of the international system. Through the nineteenth and most of the twentieth century, states—as opposed to feudal structures, tribal groups, or warlords—reigned as the supreme institutions for harnessing people and technology in defense of their interests. Especially after the Industrial Revolution and the rise of nationalism, highly capitalized technology came to dominate the equation for national capability. So much so, that during the nuclear arms race there arose the question of whether or not the most powerful states, with no recourse to international governing authority, possessed the political acumen to save themselves from arsenals that promised "mutual assured destruction."

While the likelihood of a great power launching thousands of nuclear warheads in the name of defense declined after the end of the cold war, the September 11, 2001, terrorist attacks demonstrated in dramatic fashion a shift in the nature of the deadliest challenges confronting civilization among nations. Though military technologies for both mass destruction and precision strike continue to evolve, the greater danger may now lie with the rise of new types of organizations that defy the state monopoly on force.

Above the state, international organizations such as the United Nations confer legitimacy and broker burden-sharing agreements as modern great powers wheel about to secure globalized interests. With the value of their security functions rising, international organizations gain voice and impose new constraints on defense calculations for even the most powerful sovereigns.

Constrained states, as John Arquilla and David Ronfeldt discuss in *In Athena's Camp: Preparing for Conflict in the Information Age* (1997), also perceive growing threats from below. Ethnic paramilitaries, warlords, criminal gangs, and Al-Qaeda–inspired terrorist cells, all draw sustenance from hard-to-kill transnational networks and exploit vulnerabilities in economically developed, highly interdependent societies. In the post–September 11 environment, violent nonstate actors challenge weak or failing states for control of territory and population seemingly without need of supplies from governments bound by an ultimate interest in continuation of the interstate system. Faced with a millennial challenge not simply against particular regimes but also to the primacy of the nation-state in international governance, both developed and developing countries have adapted by delegating more of their core function—providing national defense—to intergovernmental organizations such as NATO or to substate actors such as private security companies.

SEE ALSO *Arms Race; Cold War; Defense, National; Preemptive Strike; Weaponry, Nuclear; Weapons of Mass Destruction*

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This academic work does not represent official policy of the United States Air Force or the United States Government.

DEFENSE, NATIONAL

National security would seem to be a simple concept to define. Joseph Nye Jr., who served as assistant secretary of defense for international security affairs (1994–1995) during President Bill Clinton's first term, observed that security is like oxygen—it is essential to all other governmental activity. Without it, a government is likely to become paralyzed and incapable of action, and may ultimately risk collapse. Not surprisingly, states generally regard national security as their primary responsibility. In common American parlance, the term *national security* has almost become a cliché and refers to the government's efforts to defend the state from threats, mainly military threats but perhaps internal subversion as well. In other words, "security" seemingly equates to "defense." However, while defense is an integral aspect of security, military defense does not exhaust the range of functions that governments must perform to ensure security, nor does it reflect the institutional affiliations of the people who work to provide security.

The term *national defense* evokes an era when the nation and the state, especially in northwest Europe and the United States, were thought to be one and the same—hence the term *nation-state*. Defense of the state meant defense of the nation, and security was largely defined in ways that reinforced this equation. In fact, virtually every modern state is multinational or multiethnic, even multiconfessional. Frequently, this diversity of religion directly

relates to diversity of nationalities in the state, and many states are driven by conflicts among these diverse religions and nationalities. Therefore, a state, to be secure, must act in ways that forestall the emergence of crippling interethnic or interreligious confrontations. Such internal divisions frequently invite foreign intervention. In these contexts, security extends beyond defense against external invaders to include the prevention of civil war. Such a situation developed, for example, in Iraq, where contending Islamic groups became divided on the basis of religion and ethnicity (Shia and Sunni) and nationality (Sunni, Shia, and Kurd), and where foreigners intervened on every side.

Such internal divisions also developed in conflicts in Africa and the former Yugoslavia in the late twentieth and early twenty-first centuries. Many such conflicts, particularly in the third world, exemplify the fact that security pertains as much to the assurance of continuing internal order as it does to defense of the realm. Many third world countries simultaneously face the exigencies of state-building—that is, assuring internal security and defense against external threats—without sufficient time or resources to compete successfully with other more established states. Not surprisingly, the primary concern of the government becomes internal security and its continuation in power, leading to a proliferation of military, intelligence, and police forces. Indeed, for these states, and arguably even for transitional states like Russia during the 1990s and early 2000s, internal police forces are granted greater state resources than regular armies, this being a key indicator of the primacy of internal security as part of national security. Nevertheless, if states cannot defend themselves militarily against threats that have arisen due to a previous failure to provide security, the states themselves may fail.

Because of the breadth of domestic or foreign threats to the security of a society or a state in the modern world, national security can no longer be limited to defense against military attacks or internal unrest. Governments in the twenty-first century must defend against a multitude of threats to the health, viability, and integrity of society. Such threats extend beyond the canonical threat of war with another state or domestic unrest that culminates in revolution or civil war. The potential threats to state security include terrorism, large-scale criminality, narcotics trafficking, uncontrolled immigration, natural disasters, epidemics, and chemical and biological warfare. The threats facing states may also include major international economic crises, such as the Asian financial crisis of 1997 to 1998. These threats also tend increasingly to spill over national borders, often uniting the transnational purveyors of the threat (e.g., terrorist movements, crime syndicates). The range of potential threats blurs the distinction between military and police missions. Often, both institutions act together to promote security, as exemplified by the participation of the U.S. military in antidrug activities, homeland security, and the response to natural disasters. Thus, in the wake of hurricanes Katrina and Rita in 2005, calls multiplied in the United States for revising legal codes to permit greater scope for domestic military action during natural disasters.

Homeland security was proclaimed as the U.S. military's main mission after the terrorist attacks of September 11, 2001, leading to a dramatic expansion of its domestic role. This change has reopened the debate over the legitimate role of the armed forces in domestic security, and has stimulated the Department of Defense, the armed services, and intelligence agencies such as the FBI and CIA to advocate substantial enhancement of their domestic powers. Thus the erosion of distinctions between security and defense, or between power projection abroad and homeland defense, creates difficult and persisting issues of possible encroachments on the domestic civil rights of Americans. These matters ultimately must be decided by the courts and legislatures. But their reemergence indicates that a fundamental component of national security remains the internal balance of power between civilian and democratic authorities and the armed forces that are supposed to be subordinate to them. These issues also raise the equally perennial question of the legal limits of state power in wartime, when it becomes too easy to argue that defense of the state overrides previously granted rights that are enjoyed without question (or seemingly so) in peacetime.

The same issues have arisen in other countries. The war that began in 1991 in the republic of Chechnya in southeastern Russia served as the primary justification for the curtailment of Russian federalism and of innumerable civil rights for the population and the media. In Great Britain, the government's reaction to the terrorist bombings in July 2005 occasioned a lively debate over the civil rights of Muslim immigrants to Great Britain and of British citizens in general. Thus the contemporary threat environment, punctuated by the global fear of and war against terrorism, is a manifestation of global trends and issues. This overall similarity of trends and agendas relates in important ways to the universal and transnational nature of twenty-first-century threats. And because contemporary threats to security are transnational, they must often be dealt with in international forums or through multilateral cooperation. The erosion of distinctions between security and defense, along with the globalization of threats, has generated global counterresponses.

Nonetheless, if states cannot defend against any or some combination, let alone all, of these threats, their security immediately becomes at risk as societal cohesion comes under threat. Indonesia's regime collapsed in 1998 for failing to cope with the Asian financial crisis. The gov-

ernments of China, Russia, and the countries of Central Asia also believe that their internal cohesion and thus security are under threat from the ideologies of democracy, allegedly supported by foreign nongovernmental organizations and by states who use these organizations, as well as the tools of the media and information technology, to undermine their regimes. These regimes' leaders frequently charge that the United States is orchestrating a campaign to promote democracy, and even that democracy threatens their security and sovereignty.

Thus the term *national security* must encompass societal or state security against the entire range of threats described above, including traditional war, insurgency, and revolution. National security reaches beyond the defense of the state to encompass the goal of achieving and sustaining a broader societal cohesion, resilience, and integrity that can withstand numerous shocks or threats. Since the contemporary environment makes ensuring state security in this broad sense government's most fundamental responsibility, with defense being the main component of the provision of security, the burden of state spending on security and defense is huge. Similarly, many state organizations beyond defense ministries are involved in providing security, and their missions are steadily expanding.

Strategic threats to a society or state, threats that can overwhelm a state's ability to overcome or even effectively respond to them, have become multidimensional, and may originate from and be targeted at the land, the seas and other bodies of water, the air, space, and the ether (cyberspace). Consequently, threats, as well as the response to them, are no longer exclusively determined by geography. Any actor anywhere in the world, be it an individual or an institution, with the means to carry out an attack, can target anyone or any object in any of these dimensions. Moreover, the originator of these threats need not launch an attack from his or her point of origin. All an enemy need do is set an attack in motion, as the Saudi-born terrorist Osama bin Laden did in 2001 when he initiated attacks on New York City and the Washington, D.C., area from Afghanistan. Those actually carrying out the mission can identify the appropriate medium and locales wherein they can launch an attack. This backdrop also greatly multiplies the possibilities for shadowy relationships between sponsoring states and transnational terrorist organizations like Al-Qaeda. In America's "war on terror," for example, the enemy has no geographical center.

As a result, the number of possible strategic targets is greatly expanded. Any place on earth can become a target or a launching site for major attacks. Since no state can preplan sufficiently to ensure global and multidimensional readiness, governments everywhere face so variegated a repertoire of threats that they must devise new methods of responding or they must greatly transform existing institutions to meet the variety of threats. Many more issues than before now come under the rubric of national security, as do many more state organs and policies. Since providing for security has become even more of a challenge to a state's capability and resources, often stretching the state beyond the breaking point, expanded multilateral forms of security cooperation among states have developed. This cooperation may involve agencies responsible for the military, police, intelligence, public health, the treasury, immigration, and so on. This expanded burden upon states adds substantially to the pressures upon states who face major challenges of state building (e.g., Afghanistan, and Pakistan) and helps explain why so many regimes are on the verge of failure.

The centrality of security as the state's preeminent responsibility emerges clearly from comparisons of different states' approaches to the task of providing security. This is not just because of the priority accorded in the United States to homeland defense since 2001. In the war on terrorism, security is no longer the sole province of the regular armed forces, whereas in the United States as well as in other nations, defense remains very much a military prerogative. Security, on the other hand, can be provided by the police forces, intelligence agencies, bank inspectors, public health services, and airport security personnel. Indeed, it is universally agreed that all providers of security, wherever they may function, ideally should be coordinated so that efforts and information flow freely between different agencies, and that effective responses to threats may be coordinated either among the various components of national bureaucracies or among transnational institutions.

In Afghanistan since 2001, for example, the North Atlantic Treaty Organization (NATO) provides defense in support of the U.S. military mission there. In fact, both NATO and the U.S. armed forces became engaged in the overall reconstruction of the state after the deposing of the Taliban government in late 2001. The situation was similar in Iraq after U.S. forces invaded the country in 2003. Such international cooperation is necessary, given the nature of the contemporary threat environment and the rise of what scholars discern as new paradigms of war. In one new paradigm, warfare takes place among the people and entails more than just providing defense. In such a war, it becomes necessary to provide security and to enable the revival of a functioning state.

This is by no means an exclusively American view. French defense minister Michèle Alliot-Marie wrote that "to respond to such testing situations, solutions must be developed which if not purely military, must be military above all" (2005, p. 15). In other words, the expanded threat environment of the twenty-first century imposes

security and defense missions on the armed forces that extend far beyond previous concepts of security and defense, or the simple notion of operational victory over opposing armed forces. This environment necessarily brings into the picture both greater transnational threats and greater cooperation against them, as well as expanded roles in the provision of security for a much broader range of state agencies.

At the same time, it is not the case that all states view the expanded range of threats in the same light. Whereas the U.S. government sees terrorism primarily in terms of a military threat, Germany (at least under the administration [1998–2005] of Chancellor Gerhard Schroeder) sees terrorism mainly as a criminal phenomenon that must be confronted by police and nonmilitary measures. Italy, on the other hand, provides for a much greater range of military involvement under the rubric of national and civil defense. However, many states and analysts of international security affairs warn that despite the enlistment of the armed forces in antiterrorist operations, antiterrorism must not supplant the traditional defense missions of the regular armed forces.

Security, therefore, is broader than defense and encompasses efforts to maintain the well-being and integrity of society as a whole. Defense, in contrast, relates to ensuring that the state itself and its citizens, armed forces, and vital interests are not attacked, or if they are attacked, that the attacker is defeated. Undoubtedly, security encompasses defense, but not vice versa. Moreover, there is no universal agreement on the nature of the threat posed by terrorists, as the German example illustrates. Neither is it possible to assume that the provision of security in this broad comprehensive sense will eclipse the need for armies to defend against major attacks on a state's vital interests and resources, human or material. The September 11, 2001, attacks were an act of war carried out against the United States on a global scale and should be seen as such, even if the entire range of instruments of power available to the U.S. government must be brought into play across a broad agenda that encompasses such realms as financial monitoring, antiproliferation, public health, and emergency management.

National security does not refer merely to national defense, as it did during the cold war. But, at the same time, it cannot mean less than national defense. War remains the ultimate argument of states, and defense, even more than security in the broad sense, remains their primary responsibility. While it is true that failure to provide adequate security, in the comprehensive definition of the term given here, places a state's future at risk, failure to defend the state against violent threats transforms that risk into the certainty of defeat. While security encompasses defense, defense is the most critical aspect of security and is likely to remain so.

SEE ALSO *Arms Control and Arms Race; Arms Race; Deterrence; Military*

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The views expressed here do not represent those of the U.S. Army, the U.S. Department of Defense, or the U.S. government.

DEFENSE MECHANISMS

SEE *Psychoanalytic Theory.*

DEFLATION

SEE *Inflation.*

DEFORESTATION

Deforestation can be defined as the conversion of forested areas to something that is different. Net deforestation accounts for afforestation (the establishment of forests on land that has not been recently forested), reforestation (the reestablishment of forests on land that was recently forested), and the natural expansion of forests. While the calculation of net deforestation is comparatively easy on a small scale, it is difficult on a global scale, despite modern technology such as extensive satellite surveillance. There are several reasons for this difficulty.

First, there is no universally agreed-upon definition of *forest*. The first *Global Biodiversity Outlook* (2001) defines forests as "ecosystems in which trees are the predominant life forms" but it also notes that a more precise definition is "surprisingly elusive" (p. 91). The Food and Agricultural Organization of the United Nations (FAO) has a more liberal definition, classing forests as "ecosystems dominated by trees (defined as perennial woody

plants taller than 5 meters at maturity), where the tree crown cover exceeds 10% and the area is larger than 0.5 hectares" (a half of a hectare is about 1.2 acres) (FAO 2001, p. 365). This definition thus embraces areas that some investigators think too lightly wooded to be considered a forest.

The FAO definition of *forest* also includes tree plantations established for the production of timber or pulpwood (used for paper) while excluding orchards. Critics point out that the inclusion of biodiversity-poor plantations in the definition of forests understates the loss of qualities that many people associate with the word "forest." These qualities are found in woodland areas that retain a significant "natural" element and provide habitat for varied species, including trees of different species and ages. More controversially, the FAO includes in its definition forests that are "temporarily unstocked," such as areas that have been cleared and burned. Because the duration of clearance and the certainty of restocking are unclear, inclusion of such temporarily cleared land complicates estimates of the extent and trend of current deforestation.

Other problems arise in determining the extent and trend of global deforestation. The aggregate data on which the FAO relies is supplied by its member states (as is the case with all global data used by the UN). The survey and statistical resources in many poor countries are weak, and often declining. The greatest disagreement over the extent of deforestation concerns the biodiversity-rich tropical forests. Yet such areas are disproportionately concentrated in countries where statistical resources are weak. Remote sensing methods have been increasingly used to try to compensate for these deficiencies. However, data obtained by these methods are also imperfect, for reasons such as persistent cloud cover and the problem of ground-truthing on a global basis (comparing satellite data with data observed on the ground).

THE EXTENT OF DEFORESTATION

About 8,000 years ago, forests are estimated to have covered about 15 billion acres, almost half of the earth's land surface. Since then human populations and fire have had a significant impact on these forests. This impact is roughly proportional to the increase in human population and its environmental impact. In the near future there is a risk that these effects may be multiplied by climate change.

A review by the Millennium Ecosystem Assessment—the most authoritative assessment of the causes, composition, and consequences of global deforestation—concluded that the world's global forest area has shrunk by over 40 percent in recent centuries. The area of global forest in 2000 is thought to include from 9.6 to 10.9 billion acres.

The pattern of current deforestation shows two trends. At higher latitudes the boreal and temperate forest areas have either stabilized or are now expanding in size (by about 7.4 million acres per annum, of which about 2.5 million acres are plantations). However, in tropical regions, forests continue to decline in both area and quality (by about 30 million acres per annum).

Compared to the decade 1980–1990, net deforestation slowed in the following decade, from minus 30 million acres to minus 20 million acres per year. According to the *Global Biodiversity Outlook 2* (2006), this trend in reduction in forest clearance has continued since 2000, with a loss of about 18 million acres per year in the five years to 2005. This decrease is mostly the result of expansion in plantations (including almost 5 million acres per annum in tropical regions). Thus, despite this slowing, the rate of loss of natural ("primary") forests in the last two decades is thought to have remained about the same. Many forests are also declining in quality. Forest fragmentation, most commonly by the incursion of roads and agricultural settlements, leaves forests vulnerable to further disturbance, including drying, fires, and the invasion of exotic species.

TROPICAL DEFORESTATION

Tropical rainforest is the most extensive forest type in the world, constituting 26 percent of global forest area. Almost 60 percent of existing tropical forests are rain forest; the remainder are mostly sparse forests in dryland areas and degraded forests. In tropical forests, biodiversity, including of trees, is very high, with often more than 100 tree species per hectare. Tropical forests (both moist and dry) harbor from 50 percent to 90 percent of the earth's terrestrial species.

Most tropical forests are mainly in South America (1.4 billion acres), Africa (670 million acres), and Asia (490 million acres). From 1980 to 1990 about 25 million acres of tropical forest was cleared, of which about 15 million acres were of moist forests. In the following decade, total tropical forest clearance is thought to have increased to about 37 million acres per annum (about 1.2 percent of the global tropical forest total). While some of this loss is compensated for by tropical forest plantations, plantations are much lower in biodiversity.

CONTROLLING DEFORESTATION

Deforestation has largely occurred because of the expansion of agricultural land. Increasing populations and increasing demand for products that can be grown on land that is currently forested land (such as palm oil, a source of biofuel) will drive ongoing tropical deforestation. Climate change may worsen this, though it may also allow the expansion of some high-latitude forests, even if warmer winters allow increased populations of insect pests.

While there is considerable discussion of sustainable forest management, this is not yet having a significant mitigative effect. Until population growth substantially abates, the loss of quantity and especially of quality of forests in the tropics is likely to continue. And, because of climate change, tropical deforestation could continue even after population peaks.

SEE ALSO *Agricultural Industry; Boserup, Ester; Fertility, Human; Human Ecology; Population Growth; Resource Economics; Resources*

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Colin Butler

DE GAULLE, CHARLES
1890–1970

Charles de Gaulle was the leading French statesman of the twentieth century. His military career spanned both world wars and his political career, interrupted by a temporary retreat from public affairs in the 1950s, occurred during the hardships of the 1940s and then a number of serious challenges to political stability in the 1960s. As a military commander, he advocated an aggressive, tactical approach to warfare; as a politician, he was often careful in internal matters but more outspoken in international affairs.

De Gaulle was raised in a Roman Catholic family, and at an early age he showed an interest in military affairs. He entered the Military Academy of Saint-Cyr at the age of nineteen and then joined the military in 1913, commissioned as a lieutenant. He fought in World War I (1914–1918), including at the famous 1916 battle at Verdun, and he spent almost three years as a prisoner of war. After the war, he taught at his alma mater and also attended the École Supérieure de Guerre (a war college). In 1925 Marshal Philippe Pétain (1856–1951) promoted him to the staff of the Supreme Defense Council. Two years later de Gaulle began serving as a major in the occupation army for the Rhineland, an experience that illustrated the German potential for military action. Although the French prided themselves on what they saw as the impenetrable Maginot Line, in 1933 de Gaulle wrote an article arguing for a professionalized and armored French army.

When World War II (1939–1945) began, de Gaulle was commander of a tank brigade. In 1940 he was promoted to brigadier general, a position he held until his death. In the same year, he became the French undersecretary of state for defense and war, but he left the government almost immediately when Pétain became head of the government and indicated that he wanted an armistice with the Germans. De Gaulle went to England, where he began to encourage the French to continue fighting the Germans. In August 1940 he was sentenced to death by a French military court for treason. Although de Gaulle had no political base, he was deeply committed to a free France. He formed a shadow government, eventually known as the Free French Forces, although his military background was not attractive to French liberals and his condemnation of the Pétain government meant that French conservatives held little regard for him. He also had problems with the Allies, often because of his strong commitment to a free France. De Gaulle maintained contact with French resistance groups, and he broadcast radio appeals to his fellow citizens, creating increased national recognition of his leadership.

In 1943 he moved to Algiers, Algeria, where he formed the French Committee of National Liberation. He served as co-president of the committee with Henri Giraud (1879–1949), but successfully moved Giraud out of the role, signaling his political abilities. In August 1944 de Gaulle returned to Paris with the victorious Allied armed forces; he refused to meet with the envoy Pétain sent to establish peace, and de Gaulle became head of the new French government.

De Gaulle resigned, however, in 1946 because of his dissatisfaction with the power of the various political parties that formed a new Fourth French Republic. For twelve years de Gaulle argued against the republic because he saw it as too similar to the Third French Republic,

which he thought had been unable to govern effectively. He organized a loose party, the Rally of the French People, which became powerful enough to win a sizable number of seats in the French National Assembly, but he left the group in 1953. His political activity ended temporarily in 1955, when he began to work on his memoirs, but in 1958 he returned to public life.

By the end of the 1950s, France was embroiled in a military and political conflict in one of its colonies, Algeria. De Gaulle presented himself as a candidate for prime minister in 1958, and the National Assembly authorized him to change the French constitution; in December 1958 de Gaulle was elected president of France. His changes to the nation's constitution strengthened the position of the presidency, including giving the president ruling powers during emergencies. Despite that centralization of power, de Gaulle supported the democratic principles of the government; he also made sure he was a highly visible and even personable president, spending a great deal of time giving addresses and speaking with individual citizens. De Gaulle's ministers were often friends from World War II, and they assisted him in maintaining a strong presidency.

Algeria presented a very difficult set of problems when de Gaulle became president, a situation that deeply split French liberals and conservatives. The former argued for Algerian independence, while the latter advocated that Algeria ought to remain a colony. The Algerian insurrectionists wanted only freedom, and de Gaulle recognized that he had to free the country. French military leaders in Algeria, however, moved against de Gaulle, forming the Secret Army Organization and taking control of Algeria in 1961. This organization indicated that it was ready to actually attack France, but de Gaulle used his presidential powers to thwart them; French citizens and the French military sided with de Gaulle. Although the Secret Army Organization continued to fight de Gaulle, using bombings and assassinations, de Gaulle's broad support resulted in his ability to establish Algeria's independence in 1962.

Once the Algerian situation was settled, de Gaulle moved to other national issues, including reinvigorating the economy, developing France's own atomic bomb, and instituting constitutional changes to establish independence for France's other colonies. Nevertheless, the position that he held upon his election in 1958 was no longer as secure because he had solved the Algerian problem. He again turned to constitutional changes as a means to strengthen his position. Previously, an electoral college consisting of local politicians elected the president; in 1962 French citizens chose between de Gaulle's resignation and a constitutional amendment that allowed direct election of the president. The referendum was a decisive victory for de Gaulle, and his party gained control of the National Assembly later that year. As a result, de Gaulle was able to further his plans to develop France into an international power, focusing on independent actions. For example, the year after his reelection as president in 1965, he withdrew France from the military branch of the North Atlantic Treaty Organization (NATO), although France remained part of the Atlantic Alliance, a political association.

In international affairs, de Gaulle sought to convince nations that neutrality was preferable to aggression, but that approach meant he was seen as opposing the United States because he wanted the United States to withdraw from Vietnam. He also encouraged stronger relations with the Soviet Union, Eastern European countries under Soviet rule, and the People's Republic of China. De Gaulle argued that Europe had the potential to disengage from the influence of the United States. Internal strife, however, resulted in a serious weakening of de Gaulle's position; in May 1968 university students and left-wing unionists in France nearly toppled the government, and de Gaulle had to return from an international trip to initiate a state of emergency. Although the coalition of leftist resistance quickly fragmented because the French Communist Party did not view the students as genuine radicals, de Gaulle did not emerge as a victor. French citizens opposed the rebellion and supported de Gaulle, but when in 1969 he again proposed a constitutional change, this time to reorganize the Senate, the voters rejected the proposal. De Gaulle resigned from the presidency, and Georges Pompidou (1911–1974), who had served as France's prime minister from 1962 to 1968, became president. De Gaulle retired, planning to finish his memoirs; he died of a heart attack in 1970.

Charles de Gaulle's stature, in France and internationally, seems to be readily apparent and yet resists interpretation. He was able to form a liberation army and government during World War II, and he brought France through the bloody war for independence in Algeria. Although he was at the center of so much military and political activity, he resisted personification of his work, asking his supporters not to use his name as a party identification; nevertheless, they were indeed known as Gaullists. His attempts to create an internationally independent France attracted a great deal of attention, but did not necessarily result in political influence.

SEE ALSO *Battle of Algiers, The; Decolonization; Liberation; Nazism; Neutral States; Vietnam War; Weaponry, Nuclear; World War I; World War II*

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DEGREES OF FREEDOM

There are several ways to talk about degrees of freedom, usually shortened to *df* in text. A one-sentence definition for a set of data is: *The number of degrees of freedom of a set of data is the dimension of the smallest space in which the data lie*. From this (perhaps rather puzzling) sentence, all other descriptions of *df* emerge after suitable connections are established.

Consider the following set of data: $(y_1, y_2, y_3, y_4, y_5, y_6, y_7) = (26, 32, 35, 41, 43, 51, 52)$ are 7 values of the output variable of a simple process that has been set to 7 different sets of conditions, not obtained in the indicated order but rearranged for convenience. If all these responses were separately and independently generated, we would say that these numbers have (or possess, or carry) seven degrees of freedom. If plotted in a seven-dimensional space, they would define a single, unambiguous point. (If the entire experiment were repeated, another single point, elsewhere in this space, would be defined, and so on.)

Suppose we want to estimate the true mean μ of the distribution of possible *y*-values using this sample of values. The mean (or average) of the data is $\bar{y} = 40$. The deviations from this average are of the form $y_i - \bar{y} = -14, -8, -5, 1, 3, 11, 12$, respectively. These seven numbers also define the coordinates of a point in the seven-dimensional space, but *the point cannot lie anywhere in the space*. It is constrained by the fact that these seven numbers are now *deviations from the mean* and so must sum to zero. Thus the point defined by deviations from this estimated mean lies in a subspace of 6 dimensions defined by $\Sigma(y_i - \bar{y}) = 0$ and contained within the original 7-dimensional space. We can talk about this in the following manner: We have used the original seven data values to estimate one parameter, the mean μ. This estimated mean "carries" or "has" or "uses up" or "takes up" one degree of freedom. Consequently the 7 deviations *from* that mean, the so-called residuals, $y_i - \bar{y}$ for $i = 1, 2, \ldots, 7$, must carry the remaining 6*df*. Suppose now that obtaining data from our simple process above required the setting and resetting of an input variable *x* and that the *x*s associated with the *y*-data above were, in the same respective order, $(x_1, x_2, \ldots, x_7) = (8, 9, 10, 11, 12, 13, 14)$. We might wish to check if there were a linear relationship between the *y*s and the *x*s. This could be done by fitting a straight line, namely a *first order linear regression equation* of the form

$$y_i = \beta_0 + \beta_1 x_i + \epsilon_i, \qquad (1)$$

where β_0 and β_1 are parameters (to be estimated by the method of least squares) and ε_i, $i = 1, 2, \ldots, n$ (where $n = 7$ for our example) represent random errors. The *least squares estimates*, b_0 and b_1 of β_0 and β_1 respectively, are given by $b_0 = -8.714$, $b_1 = 4.429$ so that the *fitted equation* (or *fitted model)* is

$$\hat{y} = -8.714 + 4.429x \qquad (2)$$

The residuals from this regression calculation, namely the $y_i - \hat{y}_i$ values using predictions obtained by substituting the 7 values of *x* individually into (2), are, in order, –0.714, 0.857, –0.571, 1.000, –1.429, 2.143, –1.286. These residuals, like the ones above, also sum to zero. However, because of the mathematical calculations involved in the least squares process, the sum of the cross products $\Sigma x_i(y_i - \hat{y}_i) = 8(-0.714) + 9(0.857) + \ldots + 14(-1.286) = 0$ also. So the estimation of the 2 parameters β_0 and β_1 has now "taken up" 2 of the original 7*df*, leaving the 7 residuals carrying only $7 - 2 = 5$*df*.

Suppose at this stage we wish to estimate the variance σ^2 of the *y*-distribution. The appropriate estimate would be $s^2 = \Sigma(y_i - \hat{y}_i)^2/(n-2)$ using the $\hat{y}_i$ values of equation (2) and where *n* is the original total number of *df*s. The numerical value of this estimate is $\{(-0.714)^2 + (0.857)^2 + (-0.571)^2 + (1.000)^2 + (-1.429)^2 + (2.143)^2 + (-1.286)^2\}/(7 - 2) = 10.8586/5 = 2.172$. Notice that the divisor $7 - 2 = 5$ is the appropriate residual df left over after fitting the 2-parameter straight line model. If additional parameters were added to the model, the reduction in *df* would have to be adjusted suitably. For more examples and details, see Norman R. Draper and Harry Smith's *Applied Regression Analysis* (1998).

More generally, all sums of squares involving response values in statistical work can be written in the form $y'My$, where $y' = (y_1, y_2, \ldots, y_n)$ and its transpose *y* are, respectively, a row and a column vector of observations and where *M* is a specific $n \times n$ symmetric matrix whose diagonal elements are the coefficients of y_i^2 and whose off-diagonal entries are one-half the coefficients of the y_iy_j in the sum of squares. The *df* attached to such a sum of squares is always the rank of the matrix *M*. This rank can best be discovered numerically by asking a computer to produce the eigenvalues of *M* and counting how many of these eigenvalues are nonzero.

We can carry out various statistical tests on data like the above. These tests are not discussed here. However, all such tests involve a test statistic, which is compared to a selected percentage point of an appropriate statistical distribution. When the n statistical errors ε_i can be assumed to be normally distributed, tests on regression parameters typically involve either a $t(\upsilon)$ distribution or an $F(\upsilon_1, \upsilon_2)$ distribution, where the υs represent appropriate numbers of degrees of freedom determined by the *df* of quantities occurring in the tests. Tables of the percentage points of t and F distributions appear in most statistical textbooks, tabulated by their degrees of freedom.

Another area where degrees of freedom need to be calculated is *contingency tables*, in which discrete (noncontinuous) data arise in categories such as the number of piston-ring failures in four compressors, each of which has three sections, the North, the Center, and the South. This particular example leads to a 4×3 2-way table with 12 entries. The test statistic in this type of problem is distributed approximately as a $\chi^2(\upsilon)$ variable where, for our example, $\upsilon = (4 - 1)(3 - 1) = 6$. Again, percentage points of χ^2 distributions appear in most statistical textbooks. A lucid account of this and similar examples is in Owen L. Davies and Peter L. Goldsmith's *Statistical Methods in Research and Production* (1986, pp. 317–334).

There exists, in the area of nonparametric regression, the similar concept of *equivalent degrees of freedom*. For this, see P. J. Green and B. W. Silverman's *Nonparametric Regression and Generalized Linear Models* (1994, p. 37).

SEE ALSO *Econometric Decomposition; Eigen-Values and Eigen-Vectors, Perron-Frobenius Theorem: Economic Applications; Frequency Distributions; Hypothesis and Hypothesis Testing; Least Squares, Ordinary; Nonparametric Estimation; Nonparametric Regression; Regression; Regression Analysis; Statistics*

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DEINDUSTRIALIZATION

SEE *Neighborhood Effects.*

DEININGER AND SQUIRE WORLD BANK INEQUALITY DATABASE

Measurements of income distribution are widely used in studies of social and economic inequality. Although the distribution of income is not the only factor that determines social stratification in a particular country or region, it is one of the most important factors. Economists have been especially interested in the presumed link between income distribution and economic growth. Some researchers have used income distribution as a dependent variable (i.e., a variable influenced by economic growth), whereas others have treated income inequality as an independent variable that affects the prospects for economic growth. Researchers who posit that income distribution and economic growth are reciprocally connected have tested this hypothesis by conducting least-squares regressions of simultaneous equations models.

Despite the frequent use of income distribution as a variable in econometric studies, researchers have long encountered problems in finding reliable statistics. The database entries for a time series of income distribution are fully valid only if they are derived from nationally representative household surveys. Moreover, the entries must be uniform in three respects: First, they must refer to the same type of income (wages, wages plus non-wage income, etc.); second, they must measure income at the same stage (before or after taxes); and third, they must designate the same unit as a recipient of income (households, families, individuals, wage-earners, etc.). A time series that does not include uniform data will not yield meaningful results when analyzed. The collection of uniform data, however, is difficult and expensive, especially for international comparisons of income distribution over many years. Statistical agencies in different countries vary in the way they measure income distribution (if they measure it at all), and many of them fail to provide adequate information about their measurement techniques. In some cases they have altered their methods without announcing it and without adjusting earlier data, thus causing temporal inconsistencies. Some international organizations that compile income distribution data for countries in specific regions, such as the European Bank for Reconstruction and Development and the Asian Development Bank, also have not disclosed enough information about their means of tabulation. Hence, panel datasets with long time series of income distribution covering dozens of countries around the world are rare.

The greatest success in producing comprehensive panel datasets of income distribution has been achieved by the World Bank and by the United Nations World Institute for Development Economics Research (WIDER). The first major advance along these lines was

the effort in the mid-1990s by two World Bank economists, Klaus Deininger and Lyn Squire, to put together what they described in a 1996 article as a "new data set on inequality" that would "represent a significant expansion in coverage and a substantial improvement in quality" as "compared with earlier data sets" (Deininger and Squire 1996, p. 566). They noted that "although a large number of earlier studies on inequality have amassed substantial data on inequality, the information included is often of dubious quality," and they indicated that their own compilation was "based on household surveys, on comprehensive coverage of the population, and on comprehensive coverage of income sources" (p. 567). Deininger and Squire explained why they used two types of distributional indicators—the Gini coefficient (an aggregate measure covering the full population) and the population-quintile shares (a disaggregated index permitting comparisons of population groups)—and highlighted the advantages and limitations of the new dataset. In particular, they explained how to distinguish "high-quality data" from entries that are less reliable and emphasized the advantages of using the new dataset for time-series analysis. The full Deininger-Squire dataset was made available to other researchers and became a standard resource for social scientists.

The Deininger-Squire dataset covers 138 countries in total, though the density of the coverage varies a good deal. For some countries dozens of observations are available, whereas for other countries the number of observations is much smaller. The coverage extends from 1890 to 1996, though the bulk of the information is from the 1960s to the early 1990s, after which the coverage is spotty despite periodic updates. As a result, researchers interested in studying patterns of income distribution since the early 1990s, particularly those who want to examine how income distribution has been affected by the economic and political transformations of the former communist countries in East-Central Europe, have relied on other sources of data that in some cases are of lower quality.

After Deininger and Squire presented their initial dataset, a few other large research institutes sought to compile new panel datasets that would fill in some of the gaps and bolster the quality of the data. Most of these undertakings were designed to build on the Deininger-Squire dataset, though a few were intended to supplant the Deininger-Squire project by relying on different distributional indicators and alternative sources of information. The most successful effort to put together a new dataset—one that built on but went well beyond the Deininger-Squire project—was WIDER's compilation of its World Income Inequality Database (WIID), which increased the coverage to 152 countries, extended the timeframe to 2003, augmented the number of distributional indicators (including decile as well as quintile shares and the use of an *adjusted* Gini coefficient to supplement the *reported* Gini numbers), and expanded the number of data observations to provide for higher quality. The first version of WIID was compiled from 1997 to 1999 and made available in September 2000, and a second, substantially improved version was released in June 2005. WIDER has continued to update the WIID since 2005, allowing further improvements in the quality of data, the extent of international coverage, and the length of the time series.

Despite these advances, the Deininger-Squire project will remain important as the first systematic attempt to compile high-quality data for comparisons of income distribution in dozens of countries over several decades. The Deininger-Squire effort provided a crucial foundation for subsequent compilations of high-quality data on income distribution.

SEE ALSO *Gini Coefficient; Income Distribution; Inequality, Income; Inequality, Wealth; Kuznets Hypothesis; Theil Index; University of Texas Inequality Project*

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DELAYED GRATIFICATION

SEE *Time Orientation.*

DEMAND

In economics, demand theory examines the purchasing behavior of an individual, or of a group of individuals, in terms of its responses to changes in purchasing constraints

or other institutional factors. In the most basic setting, an individual chooses a bundle of commodities, considering both their prices and a maximum income that he or she can spend. It is assumed that the individual compares bundles of commodities according to his or her own preferences, and that he or she chooses to purchase the best bundle that is affordable; in economics, this type of behavior is called "rational" or "preference maximizing." The first systematic analysis of this problem was done by Leon Walras in 1874. In 1886 Giovanni Antonelli studied the problem of constructing preferences that can explain a given demand function, and in 1915 Eugene Slutsky obtained a full set of implications of preference maximization on demand behavior. In the mid-twentieth century, the economist Paul Samuelson called for a revision of the theory, whereby observable behavior, rather than unobservable preferences, would constitute the foundation of demand theory. This proposal led to the development of *revealed-preference analysis*, an exhaustive series of conditions that must be satisfied by demand behavior, if it is consistent with preference maximization.

The standard problem of demand theory is that of an individual who chooses a bundle of L commodities, ranking different bundles according to his or her preferences. The individual faces prices $p = (p_1, \ldots, p_L)$ and can spend up to a nominal income of m. Consumption bundles are denoted by $x = (x_1, \ldots, x_L)$. A rational individual chooses a bundle $\hat{x}$ that is:

1. feasible: $p \cdot \hat{x} = p_1\hat{x}_1 + \ldots + p_L\hat{x}_L \leq m$; and
2. optimal: there does not exist an alternative bundle that the consumer can afford and prefers to $\hat{x}$.

Under well-known assumptions on the preferences of the individual, one such $\hat{x}$ is guaranteed to exist, and is uniquely defined. Then, $x(p, m) = \hat{x}$ is known as the *Marshallian demand* of the individual, and constitutes the central element of demand theory: It says how much of each commodity the consumer demands, as a function of the prices he or she encounters in the market and of the income he or she has.

Function x is homogeneous of degree zero: multiplying all prices and income by the same positive number does not change demand. When a consumer prefers more to less consumption of at least one commodity, Marshallian demand satisfies Walras's law: the consumer will spend all his or her income, so $p \cdot x(p, m) = m$. When Marshallian demand is differentiable, these properties impose restrictions on the derivatives of the demand with respect to prices and income, which can be used to restrict empirical estimations of demand. More importantly, the substitution matrix, S, defined by $S(p, m) = D_p x(p, m) + D_m x(p, m)x(p, m)'$, and which isolates the effects of changes in relative prices, is a symmetric, negative-semi-definite matrix of rank $L - 1$. Suppose that the preferences of the consumer are represented by a utility function u. Then, the indirect utility function, v, defined by $v(p, m) = u(x(p, m))$, and which measures the utility that the consumer obtains when he or she faces income m and prices p, is homogeneous of degree zero and, remarkably, satisfies Roy's identity: the negative of the ratio of the derivative of the indirect utility with respect to the price of a commodity to the marginal utility of income equals the Marshallian demand for that commodity; formally, $-(D_m v(p, m))^{-1} D_p v(p, m) = x(p, m)'$.

Representability of preferences—via utility functions that assigned higher utility levels to more preferred bundles than to less preferred bundles—allows for an auxiliary problem: fixing a benchmark utility level $\bar{u}$, and given prices p, determine a bundle $\hat{x}$ that:

1. gives at least that level of utility: $u(\hat{x}) \geq \bar{u}$; and
2. minimizes expenditure: every other bundle that gives utility of at least $\bar{u}$ costs at least $p \cdot \hat{x}$.

The solution to this problem defines the Hicksian demand function, $h(p, \bar{u}) = \hat{x}$, whose cost defines the expenditure function, $e(p, \bar{u}) = p \cdot h(p, \bar{u})$. Functions $h(p, \bar{u})$ and $e(p, \bar{u})$ are, respectively, homogeneous of degrees zero and one in prices. When small changes of consumption only induce small changes of utility (a condition known as "continuity of preferences"), the utility level given by the expenditure-minimizing bundle is exactly the required level: $u(h(p, \bar{u})) = \bar{u}$. Function e is strictly increasing in $\bar{u}$ and nondecreasing and concave in p, while Hicksian demand satisfies the "compensated law of demand" (this is not true for Marshallian demand), in a sense that Hicksian demands are nonincreasing in prices: $(p - p') \cdot (h(p, \bar{u}) - h(p', \bar{u}))$. Under differentiability, Hicksian demand satisfies Shephard's lemma: the derivative of the expenditure function with respect to the price of a commodity equals the Hicksian demand for that commodity, $D_p e(p, \bar{u}) = h(p, \bar{u})$.

Duality theory establishes, with minor qualifications, that Marshallian and Hicksian demands mirror each other: (1) the solution of the expenditure minimization problem also solves the preference maximization problem at income equal to the minimized expenditure: $x(p, e(p, \bar{u})) = h(p, \bar{u})$; (2) the solution of the utility maximization problem also solves the expenditure minimization problem at benchmark utility equal to the maximized utility: $h(p, v(p, m)) = x(p, m)$; (3) the maximal utility achievable with income equal to the minimized expenditure is the benchmark utility, $v(p, e(p, \bar{u})) = \bar{u}$; and (4) with lower income, it is impossible to obtain at least the maximized utility level, $e(p, v(p, m)) = m$. Shephard's lemma shows that the first equality yields the Slutsky decomposition: $D_p h(p, \bar{u}) = S(p, e(p, \bar{u}))$, which allows for empirical esti-

mations of Hicksian demand. A commodity is said to be inferior if its demand decreases when the consumer has more income, and "Giffen" if it increases when the price of the commodity increases. It follows from Slutsky decomposition and the compensated law of demand (for Hicksian demands) that Giffen commodities are inferior.

Samuelson's program looked for conditions on demand data that were equivalent to the existence of the unobservable preferences: Given a series $(p_t, m_t, x_t)_{t=1}^{T}$ of observations of prices, incomes, and demanded bundles, do there exist preferences such that, at every observation, the observed demand is rational according to those preferences ($x(p_t, m_t) = x_t$)? A necessary condition for the existence of such preferences is the *Weak Axiom of Revealed Preference*, or WARP: If $p_t \cdot x_t \leq m_t$ and $x_t \neq x_{t'}$, then $p_{t'} \cdot x_t > m_{t'}$; that is, if the bundle purchased at observation t', $x_{t'}$, could have been purchased at t (since it was affordable) but bundle x_t was purchased instead, then it must be that the consumer prefers bundle x_t to bundle $x_{t'}$. Then, at observation t', when the consumer actually purchased bundle $x_{t'}$, it must be that the more preferred bundle, x_t, was not affordable. WARP is not, however, a sufficient condition. It compares only pairs of bundles, whereas rationality requires comparisons of sequences of bundles, since it implies that preference is a transitive relation. A transitive chain of reasonings—like the ones posed by WARP, known as the *Strong Axiom of Revealed Preference*—is a necessary and sufficient condition for rationality.

Antonelli's "integrability" result shows that homogeneity of degree zero, symmetry and negative semi-definiteness of the substitution matrix, and Walras's law exhaust the necessary conditions of a rational Marshallian demand. Using the solution to the system of differential equations implied by S, one can construct an expenditure function whose variation with respect to prices can be used to preferences that, when maximized, would yield the observed demand behavior.

The separability problem, first considered by John Hicks, studies how a group of commodities whose prices are kept in fixed proportions can be treated as a single, composite commodity whose price is constructed through the aggregation of the individual prices. This analysis provides the basis for the construction of price indices. A related problem assumes that preferences satisfy the following separability property: a group of commodities exists whose variation is ranked by the individual independently of the level of consumption of all other commodities. In this case, there is a "subutility" function, defined for the group in question, and the overall utility depends on the consumption of the group only via the subutility level. When preferences satisfy this separability condition, demand can be determined in a two-stage process: first, the individual decides how much to spend in the group, and then the individual decides how to allocate expenditures across commodities in the group.

Suppose that there is a set of consumers $\{1, \ldots, i, \ldots, I\}$, with individual variables indexed by i. The aggregate demand function is $x(p, m^1, \ldots, m^I) = x^1(p, m^1) + \ldots + x^I(p, m^I)$. The aggregation (or representative consumer) problem asks whether one can find an individual demand function $\bar{x}$ such that $x(p, m^1, \ldots, m^I) = \bar{x}(p, m^1 + \ldots + m^I)$. The answer to this question is, in general, no, for it requires that all individuals have parallel wealth-expansion paths (the trajectories defined by changing individual incomes at given prices). Also, even under aggregation, individual satisfaction of WARP does not imply its satisfaction in the aggregate. WARP, in the aggregate, is obtained whenever individual Marshallian demands satisfy the law of demand, a condition that does not generally occur. (The definition of aggregate demand given here should not be confused with Hicks's aggregate demand, which is used in macroeconomic models and in national accounts.)

In the standard setting, commodities can be interpreted to accommodate intertemporal problems. If there is only one commodity in each time period, relative prices represent interest rates, and an impatient consumer will anticipate consumption unless interest rates compensate for his or her impatience. In general, if intertemporal preferences are convex, an individual prefers a consumption plan that smooths consumption, in the sense that it avoids high levels of consumption in some periods and low levels in other periods. A canonical case for consumption smoothing is the life-cycle model originally proposed by Franco Modigliani, who divided life into three periods: (1) youth, when income is low; (2) adulthood, when income is high; and (3) retirement, when income is once again low. A consumer without restrictions will choose a smooth consumption plan that includes accruing debt during youth, repaying this debt and saving during adulthood, and spending savings during retirement. Consumption is determined by lifetime (discounted) income, while temporary deviations from this "permanent" income are accommodated by savings. A more general version of this model, involving different individuals at different stages in life, is known as the *overlapping generations model*. This model constitutes the basic tool for the economics of Social Security.

When the interpretation of commodities includes different states of nature, the model permits the study of uncertainty. In this case, convexity of preferences means that the individual dislikes risk and will avoid large consumption in some states if it implies low consumption in other states, unless prices compensate for this effect. This effect means that, if available, the individual will use

insurance opportunities, or, alternatively, that groups of individuals will prefer risk-sharing schemes that disseminate risks.

Applied work usually imposes particular functional forms useful for estimation. An important, flexible functional form is the *Almost Ideal Demand System* (AIDS), which imposes an expenditure function of the form $e(p, \bar{u}) = \alpha(p) + \beta(p)\bar{u}$, where $\alpha(p) = \alpha_0 + \sum_l \alpha_l \log(p_l) + \sum_{l,j} \alpha_{l,j} \log(p_l)\log(p_j)$, $\beta(p) = \beta_0 \Pi_t p_t^{\beta_t}$, and some conditions on the parameters of these two functions are imposed. Applied work also uses "hedonic" models to impose additional structure on demand systems. It is assumed that individuals do not directly care about the commodities, but only about their attributes (physical features), which are, normally, objectively observable.

SEE ALSO *Aggregate Demand; Aggregate Supply; Equilibrium in Economics; Excess Demand; Hedonic Prices; Markets; Rationality; Samuelson, Paul A.; Supply; Utility Function*

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DEMENTIA

Although there is growing understanding of dementia, it remains a poorly understood condition that continues to be associated with negative attitudes and stigmas. *Dementia* is not a disease but a clinical syndrome, meaning a set of symptoms relating to the breakdown of intellectual (cognitive) functions. Operational diagnostic criteria for dementia stipulate (1) an impairment in memory; (2) an impairment in at least one other cognitive domain (e.g., language, visuospatial, knowledge and understanding, executive functions, control over social and emotional behaviors); (3) that the impairment represents a decline from the person's previous levels of ability; and (4) that the impairments are severe enough to interfere with the person's everyday life.

The main risk factor for the development of dementia is age. Prevalence rises from 1 in 1,000 for those aged 45 to 65; to 1 in 5 for those aged 80 to 90; to 1 in 3 among those over age 90. Until the late twentieth century, dementia in an elderly person (defined to be someone over 65 years of age) was commonly diagnosed as "senility" or "senile dementia." These terms, however, are no longer recommended because they have been used with a lack of diagnostic rigor and there is a lack of scientific evidence to justify the diagnostic distinction between "presenile dementia" (dementia in someone under age 65) and "senile dementia" (identical symptoms in someone age 65 or more). Furthermore, the term senility carries negative connotations and implies that the dementia syndrome is an inevitability of old age. This implication is not supported by the evidence and leads to poor recognition of dementia syndrome. The symptoms of dementia in elderly people often get dismissed on the basis that these are just signs of old age, although dementia in middle-aged people is commonly misdiagnosed as a functional psychiatric disorder.

Most causes of dementia are slowly progressing neurodegenerative diseases with Alzheimer's disease being the most common cause, accounting for 50 to 60 percent of all cases. Dementia is typically thought of as progressing from a mild stage, characterized by slips of the memory and confusion in complex situations, through a moderate stage, during which the degree of cognitive impairment intensifies to affect an increasing number of activities of daily living (e.g., use of language, ability to recognize friends and relatives, ability to make sense of the visual world, ability to use household objects or appliances effectively and safely, ability to dress and attend to personal hygiene). The severe stage of dementia is characterized by serious disability in which the person is likely to have limited language and understanding and to be totally dependent upon others for all their physical needs (eating, drinking, toileting).

However, typical schemes of dementia symptoms and progression need to be treated with extreme caution. The precise symptoms a person experiences will depend upon the particular cause of that person's dementia and the parts of the brain that were damaged. Also, the symptoms of dementia must be understood as complex interplay between neurological damage and psychological and social variables, such as the person's life history, personality, and quality of the care environment. These considerations are particularly important when assessing the non-cognitive symptoms of dementia, such as apathy, anxiety, wandering, or aggression. Such behaviors may reflect the individual's personality or coping style, or they

may be a valid response to an environment in which the person's needs and personhood are being overlooked or neglected.

With over two hundred possible causes of dementia there is still a lot to be learned about how specific causes manifest. The stages of dementia outlined are strongly influenced by the specific characteristics of Alzheimer's disease. Other forms of dementia are known to have different characteristics and growing knowledge of these differences is stimulating a move away from the generic criteria for dementia toward operational criteria for specific diagnoses (e.g., dementia of the Alzheimer type, vascular dementia). In particular, early memory loss is often cited as the key feature of dementia but this symptom has a specific link with Alzheimer's disease and there are forms of dementia in which memory loss is not a central feature (e.g., frontotemporal and Lewy body dementia).

After Alzheimer's disease, vascular dementia is the next most common form of primary dementia, accounting for 20 percent of all dementias. The blood supply to the brain can become fragile in old age and the term vascular dementia covers all forms of dementia that result from cerebrovascular pathologies. Lewy body disease, frontotemporal atrophy, alcohol abuse, and the AIDS complex are also significant causes of dementia. Some dementias are due to reversible causes (e.g., depression, hypothyroidism, vitamin B deficiency) and are called "secondary dementias." It is important that the diagnostic procedure fully investigates secondary causes for dementia before diagnosing a primary (irreversible) cause.

Pharmacological treatments for primary dementias are limited. A number of anti-cholinesterases are available that aim to alleviate some of the cognitive and functional symptoms of dementia by boosting levels of the neurotransmitter acetylcholine. These drugs were designed to specifically target the Alzheimer's disease process, although there is evidence that they may be beneficial in other forms of dementia, particularly vascular dementia and Lewy body dementia. Memantine is an alternative drug that aims to protect undamaged nerve cells from the toxic effects of high levels of the neurotransmitter glutamate, which is released in excessive amounts when cells are damaged. Both types of drug are aimed at damage limitation; neither can stop the underlying disease processes themselves. The evidence suggests anti-cholinesterases and memantine provide some benefit, but it is modest.

It is also important to support drug interventions with non-pharmacological interventions (e.g., reminiscence therapies, sensory therapies, support and discussion groups). These interventions will also not cure the problem but will protect well-being and ensure that the symptoms of dementia are not exacerbated through poor care, inappropriate expectations, and lack of support. The person with dementia's well-being is critically dependent upon that of their care giver. When care givers are not properly supported there is a high risk that their own mental and physical health will be affected, leading to a poor outcome for both the care giver and patient.

In terms of prevention, control of vascular risk, particularly cholesterol levels and hypertension, is emerging as the main preventative strategy for both vascular dementia and Alzheimer's disease. People can control their vascular risk either through diet or pharmaceuticals. An increased risk for dementia has also been associated with low education or intelligence, socioeconomic disadvantage, stress, and dietary factors (particularly the B vitamins) but untangling the direction of causation among this complex set of factors remains a significant challenge. For example, the well-established correlation between low intelligence and risk for dementia has been interpreted in terms of compensation, such that the effects of pathology are masked by higher ability, but some recent prospective studies, most notably the nun studies organized by David Snowden, suggest that low intelligence in early life may be directly involved in the pathogenesis of Alzheimer's disease. Similarly, low intake of vitamin B12 and folate are associated with elevated levels of homocysteine, another vascular risk factor which has been associated with risk for Alzheimer's disease. However, it is less clear whether increasing the dietary intake of vitamin B12 and folate has any protective effect.

SEE ALSO *Alzheimer's Disease; Gerontology; Madness; Medicine; Memory in Psychology; Mental Illness; Neuroscience; Psychopathology; Psychotherapy; Stigma*

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Elizabeth J. Anderson

DEMOCRACY

Democracy is a concept that means different things to different people. For some it is a political system that ensures political equality and self-rule. To others, it is a system that allows the presence of equal opportunities and rights. The two different conceptualizations of democracy are

based on the experiences of the two major democratic experiments that the world has seen so far: democracies in classical Greece and modern nation-states. The classical model of democracy draws its inspiration from the democratic experiments of ancient Greek city-states. In such an arrangement, citizens were both the rulers and the ruled; political sovereignty and power rested with the people. Each individual citizen had a right and an obligation to serve in administrative duties. Citizens were politically active. Women, slaves, and immigrants were, however, excluded from political participation. The small size of the cities allowed citizens to meet face to face and make direct deliberations and decisions on various issues.

There are at least two problems with the classical democratic arrangement: first, it is applicable more to small city-states than to modern nation-states. Face-to-face political participation and deliberations are easier to conduct in small communities. Modern democracies are established in much larger nation-states, making a representative form of government a necessity. Second, the conditions under which political equality is possible are not spelled out; it is simply asserted as a self-evident truth. There is no strong consensus among citizens and scholars in such an assertion. Indeed, some argue that individual liberty, which is promoted in modern democracies, makes some form of inequality inevitable.

Although there is no consensus, many scholars would agree that democracy in modern nation-states means the presence of political rights and civil liberties. Political rights include the right to vote, the right to run for office, and the presence of fair and free electoral competition; civil liberties include the presence of due process, freedom of speech and assembly, and equality before the law. Democracy, however, even as a procedural concept, is much more than the mere occurrence of elections and liberties. For instance, the presence of a majoritarian decision-making or voting mechanism, often overlooked and taken for granted, is an essential procedure in the democratic process. Elected and, in some cases, appointed representatives and officials utilize the simple majority rule as a minimum requirement for the passage of laws, judicial decisions, and administrative policies; a majority voting system is commonly used to resolve major issues, including difficult and divisive ones, by legislation or judicial interpretation. Thus, democracy may be defined as the presence of fair and free elections, civil liberties, and a majoritarian decision-making procedure. Nevertheless, not all scholars would agree with such a procedural definition. For instance, it does not fully account for the variation in the distribution of political power or influence among citizens. In other words, why is it that some citizens can exert more influence on political leaders than do others? Why do some individuals have a better chance of becoming a president or a member of parliament than others do?

TRANSITION TO DEMOCRACY

Compared to other older forms of political systems, such as autocracy, modern democracy is a relatively new phenomenon. James Bryce (1921) noted that in the early nineteenth century only Switzerland had a working democracy in Europe. Great Britain had greater freedom than any other nation on the European continent, but its government was still oligarchic. By 1921, however, Bryce observed that almost all the monarchies of Europe had become democracies. He counted twenty new democratic countries in the Western Hemisphere, and five more among the British colonies. The political evolution toward a free society heralded "the universal acceptance of democracy as the normal and natural form of government" (p. 4). Outside Europe, the United States, which is considered as the oldest democracy, had ratified its constitution in 1789. Thus, it is fair to assume that modern democracy is perhaps a consequence of the modern period, mainly of the Industrial Revolution and the Enlightenment.

The initial quality of democracy in countries such as Great Britain, Sweden, and the United States was, however, low by today's standards. More often than not, those who had property voted. Mass democracy was possible only after the spread of mass literacy and the spread of wealth to a significant number of individuals. In other words, the conditions under which democracy has arisen would, among other things, seem to be an increased level of education and economic development. Seymour M. Lipset (1959), following Aristotle, argues that socioeconomic development leads to educated citizenry and a large middle class. An educated citizenry and a large middle class seem to be the social foundations of modern democracy. Despite the presence of counterfindings, empirical studies support Lipset's argument. Socioeconomic development, however, may not be the only factor that accounts for the presence of democracy. The political process, particularly political leadership, and external factors are two other possible variables.

In the latter part of the eighteenth century the United States was not, for instance, a developed country. In the absence of a developed economy the framers of the U.S. Constitution were able to establish a political system that would become one of the most stable democracies in the world. To be sure, the architects of the U.S. Constitution, such as James Madison, were themselves influenced by the evolution of European political thought and by the level of education they had received. Still, not all leaders in all countries attempted to establish a freer system of governance at the time. This was a choice made by the framers. Thus, it is fair to contend that the framers of the U.S. Constitution have contributed to the emergence and development of democracy in the United States.

Democracy, once emerged in countries such as the United States, has found its way to other parts of the world. For instance, one of the legacies of European colonialism was the spread of modern democratic institutions in some of the former colonies. Former British colonies like India, Botswana, Mauritius, and Trinidad and Tobago have maintained democratic rule since independence. Given that not all former British colonies have maintained democracy, however, it was perhaps a mixture of this legacy and a democratically predisposed indigenous leadership that have helped maintain democratic rule in these countries. Leaders like Seretse Khama (1921–1980) of Botswana and Jawaharlal Nehru (1889–1964) of India were predisposed to democracy.

ALTERNATIVES TO AND VARIANTS OF DEMOCRACY

Democracy is a complex political system. It requires give-and-take compromises when issues are debated and decisions are made. Political leaders and their constituents must consistently, and often painfully, compromise their political and economic interests with others. A decision by one branch of government is often checked and balanced by the others. Officials' private and public lives are often scrutinized by the media. Despite the foregoing inconveniences, democracy is perhaps the only known political system that can provide individuals with the right to be treated equally before the law, the right to vote, and the right to own personal property. Other autocratic systems, such as monarchy, theocracy, and communism, have not adequately done so in the past and are not logically expected to do so in the future.

Democracy has, however, its variants, the most important ones being liberal democracy and social democracy. Although these variants adhere to the fundamental principles of democracy, including the presence of fair and free elections and civil liberties, they seem to have distinct socioeconomic principles. While liberal democracy stresses the importance of individuals as the deciding force of their own economic opportunities, social democracy seems to emphasize the role of the public in promoting social equity. More specifically, liberal democracy is grounded on the principle that individuals must, with little or no societal and government encroachments, be free to possess personal property and pursue their own economic interests. While such a system may bring affluence to most of the people, some individuals will probably become less successful or remain poor. By contrast, social democracy assumes that the market economic system cannot by itself evenly promote the economic interests of every individual; hence, society and government are expected to contribute to the socioeconomic well-being and advancement of the poor. The United States and Sweden may be considered as examples of the former and the latter, respectively. Such differences in economic policy cannot be exaggerated, however. In practice, even liberal democracies attempt to support the poorer segment of society and the variation in the level of such a support between the two variants seems to be only a matter of degree. Indeed, global economic competition and electoral politics seem to have tempered the different approach that the two variants of democracy have followed. Relatively higher taxation policies, as seen in social democracies, will quite likely hamper the competitiveness of corporations. Similarly, liberal democracies may have to increase their support to the poor because not doing so will probably not be favored by most people. A convergence of the two variants is apt to be inevitable.

DEMOCRATIC DEVELOPMENT AFTER TRANSITION

Once countries transition to democratic rule, the next logical step is to stabilize such a system. Again, the stability of the new democracies seems to rest, among other things, on continuous socioeconomic development. The case of African countries right after independence suggests that poor or "immature" democracies are likely to be unstable and will probably revert to authoritarian systems. Nevertheless, the cases of India and Botswana suggest that poor democracies can become stable if they have good leadership and promote socioeconomic development. While continuous socioeconomic development may promote social mobility and affluence, good leadership tends to serve as an arbitrator for the presence of fair distribution of societal interests. By far, the most important role of democratic governments for promoting democracy has been public expenditures and investments in education, particularly in the education of impoverished children. Thus, the political process, including good political leadership and interest group politics, and continuous economic development continue to be two of the most important factors for the consolidation of democracy. But is the democratic process static or dynamic?

One can consider the cases of Sweden and Mali, for instance. While the former has been democratic since the early twentieth century, the latter has been so only since the 1990s. Can one logically assume that these two countries have an equal level of democracy? According to major democracy indices such as the Freedom House and Polity IV, the answer is, more or less, yes. Still, older democracies, particularly those in industrial countries, tend to have a higher quality of democracy than younger ones. While the basic attributes of democracy, such as fair and free electoral competition, civil liberties, and a majoritarian decision-making procedure, may be more or less present in both cases, the distribution of power among citizens

in the two societies is quite different. Citizens in the older industrial democracies are more affluent and highly educated; as a result, they may have a greater chance of running for and winning elections for public offices and influencing public policies. Income and education resources would lead to political influence. If the income among citizens is unequal, how can they be politically equal? And because higher levels of affluence and educational achievement are a function of time, it follows that the diffusion of power or a higher level of democracy is likely to be dynamic.

Thus, the effect of socioeconomic development (and good leadership) after the transition to democracy may not merely be to maintain democracy but also to keep it evolving. Nevertheless, some scholars consider political systems as autonomous and static; that is, political systems are either autocracies or democracies. Others contend that political systems may be defined as trichotomous. These latter scholars can see at least a classification of political systems as autocracies, semi- or transitional democracies, and established democracies. A third group of scholars posit that democracy is a continuous concept. When scholars argue that democracy is continuous, they usually and mainly refer to the political process that occurs between autocratic rule and democratic transition. Dahl (1971) suggests that democratic development could go beyond the autocracy-democratic transition continuum and argues that current democracies or polyarchies are only an approximation of the ideal democracy. The main reason that no perfect democracy exists, according to Dahl, is the presence of income inequality. Thus, to speed up the establishment of a more equal democratic system, Dahl (1985) prescribes for the replacement of the current private enterprise economy by a system that allows employee-ownership of firms. He seems to imply that some form of political agreement and action would bring about political equality. Dahl's position, however, seems to clash with individuals' right to own private property. Indeed, the failures of ancient Greek democracies and twentieth-century communism can be partly explained by the absence of, or impediment to, economic liberty in these systems. The two forms of political systems maintained that "true democracy" could be achieved by forceful redistribution of property. What followed in these systems was political instability and economic inefficiency, leading to the demise of both political experiments. If democracy ensures economic and political freedoms and if such a process is also dynamic, it follows that the concept of democracy has to be defined accordingly.

Gizachew Tiruneh (2004) posits that the distribution of power among individuals must be considered when one rates or defines democracies. He contends that the procedural attributes of democracy, such as electoral competition, civil liberties, and a majoritarian decision-making procedure, are fundamental but once achieved they cannot be adequately used to differentiate the level of democracy among democracies. Power differences, according to Tiruneh, stem from differences in the level of income and rationality among individuals. And because individual achievement and competition are protected rights in democracies, some individuals are likely to become more successful than others. The more income an individual has, the more influence or political power he or she will possess. Assuming that the distribution of income itself is dynamic (being propelled by socioeconomic development), the diffusion of power or the level of democracy will quite likely increase over time. However, because not all individuals will have the same level of income and rationality, perfect political equality may not necessarily be achieved.

Thus, perfect political equality may, similar to the perfect competition argument in economics, be considered as a political ideal on which modern democracies may be judged. Rather than considering democracy as two separate phenomena, a political ideal and a political system, one may consider it as a single, open-ended (perhaps an infinite) process. A more achievable and optimal level of democracy, according to Tiruneh, occurs when the distribution of power, including income and rationality, among citizens takes the shape of a normal or bell curve. Modern industrial democracies have, in contrast, a skewed distribution of power (and income and rationality), where the mean or average citizen lies to right of center. In other words, the distribution of power, income, and rationality in modern democracies are skewed toward the upper classes. As the level of democracy increases over time, however, the mean citizen would gravitate to the center of the normal curve (where the preponderant majority or the middle class is located), and it would have the most decisive voice and power in democratic politics. Whereas those individuals to the right of the mean will in theory have more power than those to the left of the mean, and it is likely that most leaders may come out of the former group, the political agendas and policies of leaders will probably be dictated by the preferences of the mean citizen. The normal or bell-curve distribution of power would represent a democratic system the quality or degree of which is apt to be optimal. In sum, Tiruneh defines democracy as "a political procedure that allows the presence of political rights, civil liberties, and a majoritarian decision-making or voting mechanism, and which permits the continuous achievement of a more equal distribution of political power" (2004, p. 473). He terms such a state of political evolution as *normal democracy*.

However, some scholars disagree with some aspects of Tiruneh's theory of democracy. For instance, they may contend that democracies, after transition, will remain stabilized; that is, democracies after transition will not continuously evolve. Others may, on philosophical or moral

grounds, contend that, regardless of levels of income and rationality, citizens ought to possess an equal distribution of power. It is not clear, however, whether such possible contentions will successfully undermine Tiruneh's thesis. What is clear is that until most or all scholars agree on a more acceptable definition of democracy, an understanding of the concept will remain incomplete.

SEE ALSO *Authority; Citizenship; Democracy, Christian; Democracy, Consociational; Democracy, Indices of; Democracy, Racial; Democracy, Representative and Participatory; Elections; Parties, Political; Voting Patterns*

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Gizachew Tiruneh

DEMOCRACY, CHRISTIAN

Christian Democracy can be described as a political ideology that has largely been shaped by the social teaching of the Roman Catholic Church, which has given rise to political parties representing the middle of the political spectrum, between liberalism and socialism. Although many Christian Democratic political parties became less associated with the Catholic Church over time, such parties have had the greatest electoral success in European and Latin American countries that have significant Catholic populations, such as Austria, Belgium, the Netherlands, Italy, Germany, Chile, Costa Rica, El Salvador, and Venezuela. While Christian Democratic ideology and political parties had a significant impact on state and society during the second half of the twentieth century, the end of the cold war and the demise of left-oriented social movements and political parties significantly weakened Christian Democratic parties by the end of the twentieth century. The rise of the Left during the first decade of the twenty-first century in certain Latin American countries raises interesting questions about the possibility of a rebirth of Christian Democracy and a reinvigoration of Christian Democratic parties.

As a political ideology, Christian Democracy originated in response to the rise of liberalism in Europe and Latin America during the nineteenth century. It was subsequently shaped by the spread of socialism in these regions during the twentieth century. Although there is evidence that many Europeans and Latin Americans sympathized with liberals, who argued for an end to monarchies and to the privileges enjoyed by the church vis-à-vis the state, it also became clear that, unlike the radical liberals, most Europeans and Latin Americans believed that religious faith and values deserved a privileged place in society. In European countries such as Austria, Belgium, Italy, Germany, and Prussia, liberals suffered stunning electoral defeats during the late nineteenth century, largely thanks to the mobilizing power of religion.

After it became clear that religion was capable of mobilizing voters, what came to be called or categorized as Christian Democratic political parties were founded by laypersons and some clergy. Contrary to what one might assume, Catholic bishops and the Catholic Church's hierarchy tried to prevent the formation of these political parties. During the middle of the nineteenth century, Catholic bishops feared that the formation of Catholic political parties would imply that the Catholic Church endorsed democratic political systems that might not give rise to governments respectful of what the bishops considered to be the rightful place of the church in society. By the late nineteenth century and early twentieth century, the Catholic hierarchy refused to fully endorse what came to be called Christian Democratic parties, fearing that if these parties lost elections the church would forfeit the few privileges it might otherwise manage to maintain under democratic systems.

Although they officially kept their distance from Christian Democratic parties, church leaders came to recognize the value of, and to provide ideological guidance to, organized Catholic political activity. In 1891, Pope Leo XIII issued an encyclical letter titled *Rerum Novarum*, which criticized liberalism and socialism. It reaffirmed the right to private property (subject to the good of society), promoted a living wage, defended the rights of workers to organize in order to achieve a living wage, and encouraged the formation of civil society. Essentially, *Rerum Novarum* reflected and reinforced the principles already promoted by Catholic political parties in Belgium, the Netherlands, Germany, and Austria. After *Rerum Novarum*, Pope Pius XI's encyclical *Quadregesimo Anno* (1931) had the greatest impact on the development of Christian Democratic ideology. *Quadregesimo Anno* reaffirmed the teachings of *Rerum Novarum*, but it placed an even greater emphasis on the importance of subsidiarity and the rightful role of civil society. According to the principle of subsidiarity, decisions should be made, to the extent possible, by the people whose lives would be affected by the decisions. Thus, while rejecting unfettered free-market systems, it rejected the idea of an all-powerful state and centralized economic planning. *Quadregesimo Anno* promoted a corporatist framework, according to which there would be institutionalized collaboration between labor and capital within the state in order to prevent class conflict and promote the common good.

The official recognition and guidance offered by Leo XIII and Pius XI spawned further development of the Christian Democratic ideological orientation by Catholic intellectuals. Foremost among them was the French philosopher Jacques Maritain, who, in his book *Integral Humanism* (1936), argued that a society in which there is political democracy, social pluralism, and religious freedom is the most Christian society.

While Christian Democratic parties have varied greatly in terms of ideological emphasis, they had a significant impact in several European and some Latin American countries during the second half of the twentieth century, particularly Italy, Germany, and Chile. However, most of these parties had become very weak by the close of the twentieth century. In large part, the decline of Christian Democratic political parties may be the result of the end of the cold war and the demise of the radical Left. Christian Democrats have typically attracted people who were wary of polar ideological extremes. With the demise of radical socialism at the end of the twentieth century, Christian Democrats found themselves searching for new ideological positions and new ways to distinguish themselves from political conservatives and social liberals.

The rise of left-oriented and centralizing political leaders during the first decade of the twenty-first century in certain Latin American countries, especially Bolivia and Venezuela, raises interesting questions about the rebirth of Christian Democracy. It is possible that Christian Democratic movements will be born or reinvigorated wherever and whenever the extreme Left or extreme Right gains popularity and power. However, there are many other factors that may affect the feasibility of Christian Democracy, such as poverty, inequality, the vitality of the Catholic Church, the extent to which the church cuts across class, and the extent to which it has been involved in education and the development of intellectuals and politicians. Of course, it is also possible that a new version of Christian Democracy will develop that will be influenced less by Catholic Christianity than by Evangelical Christianity, which has been growing in much of Latin America. For those interested in religion and politics, and more specifically in the feasibility of Christian Democracy, the twenty-first century promises to be an interesting period.

SEE ALSO *Decentralization; Socialism, Christian; Vatican, The*

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Robert A. Dowd C.S.C.

DEMOCRACY, CONSOCIATIONAL

The etymology of *consociation* derives from the Latin for "with" and "society": *Consociatio* translates as "union" or "connection." Today, consociation describes a "society of

societies." The concept has some similarities with federation, but is not a synonym; consociations can exist in nonfederal states.

Consociation was first developed in political theory by the Protestant jurist and philosopher Johannes Althusius (1557–1638). In the twentieth century the Dutch political scientist Arend Lijphart revived the term to describe political systems in which parallel communities, differentiated by ethnicity, language, religion, or culture, share political power while retaining autonomy (Lijphart 1968, 1977). He recognized his ideas had antecedents in the writings of the Austro-Marxists, Karl Renner, and Otto Bauer, and the Nobel laureate Sir Arthur Lewis. Lijphart argued that consociation is frequently invented by politicians negotiating political settlements. Contemporary examples of functioning or attempted consociations exist in Belgium, Bosnia and Herzegovina, Canada, the Netherlands, Switzerland, Northern Ireland, Lebanon, and Macedonia.

Consociations have three necessary features: executive power sharing among representatives of specific communities; proportional representation and allocation in governmental posts and resources; and community self-government, especially in cultural domains, for example in schools with different languages of instruction (O'Leary 2005). Fully fledged consociations empower representatives with veto rights over constitutional or legal changes.

Consociations are promoted to prevent, manage, or resolve conflicts, especially between communities divided by nationality, ethnicity, race, religion, or language. Consociationalists and their critics differ radically over their merits, and also over how consociations are established, maintained, or break down (McGarry and O'Leary 2004).

CRITICISMS OF CONSOCIATIONS

Some critics condemn consociational ideas as futile, and claim that consociational institutions have no (or no long-run) impact on deeply rooted, identity-based conflicts. Others attack consociations as perverse, claiming that they achieve the opposite of their ostensible purposes by institutionalizing the sources of conflict: By allegedly freezing the relevant collective identities, they encourage a politics of gridlock. Critics suggest that consociationalists are primordial pessimists who take people as they are, and not as they might be. These opponents prefer integration, the creation of a common citizenship and public sphere, and the nonrecognition of cultural differences in the public domain. They also claim that consociation jeopardizes important liberal values, and that it leads to the irreversible formation of ethnic, communal, or sectarian parties. The use of quotas, affirmative action programs, and preferential policies weaken the merit principle, creating new injustices and inefficiencies. Others claim that consociation is undemocratic because it allegedly excludes opposition and inhibits alternations in power. Some claim it is elitist (Brass 1991, p. 339; Jung and Shapiro 1995, p. 273). Another argument denies the existence of consociations, claiming that there is no place that fits the criteria.

DEFENSES OF CONSOCIATIONS

Proponents argue that consociations cannot simultaneously be perverse—that is, reinforce and re-entrench ethnic antagonisms—and jeopardize all key liberal, democratic, and international values, and, all the while, be futile. The futility thesis is evidently the weakest criticism. It scarcely explains the passionate (and logical) criticisms of consociational theory and practice in the last three decades.

Consociationalists understand themselves as realists and counselors of necessary political triage. They believe that certain collective identities, especially those based on nationality, ethnicity, language, and religion, are generally fairly durable once formed. That does not mean that they are primordial or immutable, or that they are intrinsically desirable. But such durable identities are often mobilized in a politics of antagonism, especially during the democratization of political systems, and cannot be easily transcended. Politicians, parties, and communities certainly interpret their histories and futures through narratives, myths, and symbols, but they may have realistic rather than merely prejudiced appraisals of past group antagonisms. Consociationalists maintain that it is their critics—"social constructionists" and certain liberals and socialists—who are too optimistic about the capacities of political regimes to dissolve, transform, or transcend inherited collective identities. Consociationalists question the cosmopolitan protestations of many anticonsociationalists, who may cloak a partisan endorsement of one community's identity and interests (into which others are to be encouraged to integrate or assimilate, in their own best interests).

The case for power sharing is advanced on grounds of necessity. Consociation provides good incentives for cooperation—a share in power. Consociationalists do not embrace cultural pluralism for its own sake. Sometimes the effective choice is between consociation and much worse alternatives: armed conflict, genocide and ethnic expulsion, imposed partition, or control by one group or coalition. The real choice in many deeply divided regions is therefore between consociational democracy and no (worthwhile) democracy—or breakup. The target of consociational criticism is integrationism and majoritarian democracy, which only work well, consociationalists argue, as political recipes in societies that are already homogeneous, or in immigrant states where immigrants are expected to integrate.

Consociationalists are skeptical about the current celebration of civil society as the (or even a) vehicle of transformation, peace making, and peace building. In divided places there is often more than one society, and their relations may be far from civil. Those who embrace a politics of deliberative democracy are reminded that deliberation takes place in languages, dialects, accents, and ethnically toned voices. Consociationalists respond to left-wing critics by observing that consociational ideas are present in the more thoughtful socialist traditions (Bauer 2000; Nimni 2004), and by observing how working-class and popular unity have been rendered hopeless by national, ethnic, religious, and communal divisions. Within consociational arrangements, trust may develop that may enable wider working-class or popular unity behind the welfare state or other forms of distributive politics.

Consociationalists therefore are friends of democracy, but critics of its palpably inappropriate versions in deeply divided places. They want majorities rather than the majority, or the plurality, to control government. Elite bargaining and adjustment should be designed to achieve widespread consensus—to prevent the possibility that democracy will degenerate into a war of communities. They endorse a politics of accommodation, of leaving each group to its own affairs where that is possible and widely sought—"good fences make good neighbors" (Esman 2000; Noel 1993, pp. 55–56). Consociations protect the basic natural rights of individuals and communities—especially the right to exist.

Consociationalists argue positively for consociation, not just by pointing to the horrors of the alternatives. Consociation provides autonomy for communities, and enables sensible shared intercommunity cooperation. It offers a more inclusive model of democracy—more than a plurality or a majority influence or control of the executive. More than a majority get effective "voice." Consociation does not eliminate democratic opposition, but enables such divisions and oppositions as exist to flourish in conditions of generalized security. Nothing need preclude democratic competition within communities, and turnover of political elites, and shifts of support between parties. In a liberal consociation nothing blocks the voluntary dissolution of historic identities if that is what voters want.

TYPES OF CONSOCIATIONS

It is a fallacy to suppose that consociation mandates that governments be wholly encompassing, grand coalitions of all communities (O'Leary 2005). One should distinguish among complete, concurrent, and "pluralitarian" consociational executives. In a complete consociation, all parties and all groups are included in the executive and enjoy popular support within their blocs. This is the rare case of the grand coalition, which may indeed preclude effective opposition, and may be made necessary by wartime conditions or postconflict state-building. In concurrent executives, by contrast, the major parties, which enjoy majority support within their blocs, are included within the executive, but opposition groups exist in parliament and elsewhere. In "pluralitarian" executives, the major communities may be represented by their strongest parties in the executive, but one or more of these parties may enjoy just plurality support within its respective bloc. What matters, therefore, is not the wholesale inclusion of all, but meaningful, cross-community or joint decision making within the executive. This clarification resolves a recurrent misunderstanding that all consociational practices preclude opposition.

Consociational arrangements may facilitate greater justice. Groups govern themselves in agreed domains of autonomy. Distributions that follow proportional allocations may be very fair: to each according to their numbers. There is a correlation between numbers and potential power that makes such distributive justice likely to be stable and legitimate. Consociationalists need not endorse the view that justice is "each according to their threat-advantage," but in some cases proportional allocations of public posts and resources are regarded as fair distributions, and will be robust as a result.

Consociationalists observe that consociations occur without their urgings. They are reinvented by politicians as "natural" creative political responses to a politics of antagonism. Politicians, Lijphart observes, invented consociational institutions in the Netherlands in 1917, in Lebanon in 1943, in Malaysia in 1958, and in Northern Ireland in 1972 (Lijphart 1990, p. viii) and again in 1998 (McGarry and O'Leary 2004, 2007). They were reinvented by American diplomats to end the war in Bosnia and Herzegovina at Dayton in 1995; by Lebanese politicians with external promptings in 1989; and by European Union diplomats in promoting the Ohrid agreement between Macedonian Slavs and Macedonian Albanians. The United Nations and the European Union have been trying to mediate a consociational and federal settlement in Cyprus. Within academic political theory, many contemporary multiculturalists advance consociational agendas, including inclusivity (cross-community power sharing), quotas (proportionality), and group rights (autonomy and veto) (Kymlicka and Norman 2000).

The rival evaluations of consociation are unlikely to be resolved. They probably are not amenable to decisive falsification or verification. Anticonsociationalists fear consociation will bring back racism, fundamentalism, and patriarchy. Consociationalists fear integrationists will provoke avoidable wars and are biased toward dominant communities (McGarry and O'Leary 2004). The intensity

with which this debate rages attests to the influence of consociational thought.

Exponents of consociation, when their case is put carefully, successfully rebut the wilder charges made against their positions. Consociations are difficult to love and celebrate—even if their makers often merit intellectual, moral, and political admiration. They are usually the product of cold bargains, even if they may be tempered by political imagination. As for the explanation of consociations, although significant preliminary work has been done, a comprehensive comparative historical analysis of consociational settlements and their outcomes remains to be completed.

SEE ALSO *Affirmative Action; Ethnic Conflict; Ethnic Fractionalization; Ethnicity; Majoritarianism; Majority Rule; Political Instability, Indices of; Politics, Identity; Quotas; Tyranny of the Majority; Vote, Alternative; Voting Schemes*

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Brendan O'Leary

DEMOCRACY, DIRECT

SEE *Democracy, Representative and Participatory.*

DEMOCRACY, INDICES OF

In order to document democratic development, a number of indices of democracy have been developed. These indices are formulated in a variety of ways, yet most are basically oriented to political, liberal democracy—what the political scientist Robert Dahl has called "participation and contestation" (Dahl 1971). Relatively high statistical correlations on the aggregated level also point to a far-reaching unity of viewpoint among those designing the different indices. The correlation coefficient (r) tends to lie at the 0.75–0.95 level (0.00 representing no concordance; 1.00 complete concordance). At the same time, there are differences—both conceptual and methodological—that make it significant which index is chosen. Experience has shown, namely, that in certain cases the choice of index can influence the results (Elkins 2000; Casper and Tufis 2003).

As a rule, extreme differences among countries (e.g., between Australia and Saudi Arabia) will register in much the same way no matter what index is used. Where more modest differences are concerned, however, the coding becomes more arbitrary, especially at lower or medium levels of democracy. It is likely, therefore, that changes over time will be registered differently by different indices. When studying gradual changes in the level of democracy,

the results could, to a substantial degree, reflect which index is used (Hadenius and Teorell 2005).

The choice of index, in other words, is not trivial. Hence, it is important to account for the way they are constructed. One difference concerns what prime aspects of democracy are actually measured. Some indices are based on a broad range of criteria, which are aggregated into a scale. Freedom House (FH), which is a frequently used index, is a typical example. It includes an extensive checklist of political rights (related to elections) and civil liberties, which are certainly relevant. However, it also includes certain criteria that could be seen as less relevant, such as free enterprise, property rights, and lack of corruption. The other leading index, Polity, has a more limited focus. It accounts for a number of electoral requisites, but pays no heed to political freedoms.

A few other indices deserve to be mentioned. Reich applies criteria that relate both to elections and political freedoms, whereas Vanhanen and Alvarez et al. are more constrained. Vanhanen looks at electoral participation (which is a strongly contested indicator) and the share of parliamentary seats for the governing party, while Alvarez et al. is concentrated on a fairly narrow set of electoral criteria.

One question that has occasioned controversy has to do with dichotomous versus continuous measures of democracy. The main argument in favor of the dichotomous approach (which distinguishes only between democracies and nondemocracies) is that this divide is the most essential one. The main counterargument is that this is too rough an assessment, and that it therefore misses more graded differences. Among the indices mentioned, only Alvarez et al. is dichotomous in character.

Indices also differ with respect to methodological qualities, such as how the operational measures have been chosen and what rules of coding and aggregation have been applied. It is important that the transformation of the data be openly displayed, so that the process can be replicated and made the subject of both testing and alternative coding and aggregation.

Polity, Vanhanen, and Alvarez et al. are generally held to meet high methodological standards, especially with respect to transparency. The construction of the Freedom House scale is a more concealed process, while Reich is even more problematic in this respect, for it provides almost no information about the operationalizations and the coding rules applied.

On balance—considering both conceptual and methodological aspects—Polity and Freedom House are the most useful indices. Comparing these indices for possible biases (which have been argued to exist), it turns out that they do not differ with respect to region, religion, or colonial background. But the type of regime does matter, at least in some respects. Freedom House treats traditional monarchies more favorably, while Polity is generally more "dichotomous" in character (most cases are located at the top or the bottom of the scale). Polity therefore applies greater rewards to democratic improvements. In addition, Freedom House is more concerned about political violence and repression, while Polity puts stronger emphasis on electoral performance.

It seems that in most instances in the 1970s and 1980s, Freedom House tended to overestimate the level of democracy, whereas Polity underestimated it. During the 1990s, however, it was the other way around: Freedom House made relatively strict assessments, to the effect that democracy tended to be underrated. The opposite held for Polity. An average score, therefore, based on the two indices, seems to give the most accurate assessment.

SEE ALSO *Democracy; Democratization*

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Axel Hadenius

DEMOCRACY, PARTICIPATORY

SEE *Democracy, Representative and Participatory.*

DEMOCRACY, RACIAL

The ideological construct referred to as the "Myth of Racial Democracy" continues to constitute the central framework for understanding the "racial commonsense" in Brazil, as well as in much of Latin America. The essence of this myth is contained within a traditional allegory addressing the origins of Brazil's population, the "fable of the three races" (Da Matta 1997, p. 71). This fable holds that the Brazilian nation originated from three formerly discrete racial entities, Europeans, Africans, and Indians. These "races" subsequently mixed, each contributing to the formation of a uniquely Brazilian population, culturally and biologically fused.

The scholar Gilberto Freyre is credited with popularizing the notion of racial democracy in Brazil in the 1930s in his work *New World in the Tropics: The Culture of Modern Brazil* (1959). Confronted with scientific racism beliefs in the superiority of a white "race" and that mixed blood created degeneracy, Freyre proposed instead that "cross-breeding" produced hybrid vigor in humans, thereby enabling a bright future for the otherwise condemned dark Brazilian nation. He emphasized, for example, an uncommon flexibility on the part of Portuguese colonizers that made possible extensive miscegenation and claimed that mixed Brazilians were giving birth to a new meta-race, constituting a new world in the tropics.

The result of the Brazilian racial fusion, according to Freyre, was an "ethnic democracy, the almost perfect equality for all men [sic] regardless of race or color" (p. 7). In reality, Brazil is stratified along color lines, and Freyre's academic musings reflect a romanticized view. His vision suggests a serious disjuncture between "ideal" versus "real" culture, between what Brazil is supposed to, or even said to, look like and how it actually is. Color or racial characteristics clearly correlate with lower socioeconomic status and disadvantaged life chances in general in Brazil. Individuals of varying degrees of African descent historically and in modern times occupy the lower rungs of the color hierarchy. The disparities along racial lines are produced and perpetuated by both historic and contemporary factors. Among the former is the early uneven industrialization among Brazilian states coupled with the concentration of non-whites in underdeveloped regions. Prominent among the contemporary factors is the continuation of negative black stereotyping that reverberates in countless areas, resulting in poorer educational experiences, police profiling and abuse, and discrimination in the labor market.

In this context marked by racial inequality, a majority of researchers view the racial democracy or miscegenation imagery as fostering a false conception of the reality of Brazilian racial dynamics, leading to the denial of racial discrimination. The myth has been described, for example, as an ideology of nondiscrimination and the prejudice of not having prejudice. This denial of racial discrimination on the part of both white and non-whites, then, is generally understood as the defining element of the myth.

In addition to masking racism, the Brazilianist literature further faults this construct for discouraging positive black racial identification and for neutralizing support for antiracism strategies. These two latter elements are believed to be highly correlated, as robust racial identities are generally considered a sine qua non of antiracist mobilization. In Brazil, racial subjectivity is diffuse, diluted in part by a traditional focus on ambiguous classification schemas. Furthermore, there has also been little history of the type of mass mobilizations against racial inequality that one might expect in such a context. Hence, participants in Brazil's modest but growing black movement struggle to foster black racial identity formation among the masses at the service of antiracism.

Some researchers, however, question this wholly negative stance towards the myth of racial democracy. Rather than viewed primarily as an empirical description of racial dynamics characterized as "colorblind," as elites have traditionally argued, the myth may instead constitute a moral high ground common to non-elite Brazilians that both recognizes and repudiates discrimination based on "race." In fact, some newer research demonstrates that not only is there a keen awareness of racial discrimination in Brazil on the part of whites and non-whites alike, but there is also substantial support for antiracism measures. Hence, researchers argue that this racial fusion myth may be harnessed in ways that promote subordinate populations; the myth endorses the utopian dream of a less discriminatory society and thus can act as a charter for social action. Viewed as a positive cultural value, Roberto Da Matta wrote that we should "… elevate the myth of racial democracy as a patrimony that is capable of helping Brazil in … honoring its commitment to equalitarianism" (1997, p. 74).

In the end, myths are not necessarily untruths or statements of truth; rather, they are part of belief systems justifying specific cultural values and social rules. They can have a powerful impact on individuals because they communicate and reinforce particular commonsense understandings. The myth of racial democracy will continue to be scrutinized as long as Brazil is characterized by a disjuncture between "ideal" and "real" culture, between

racial democracy and racial inequality. It is clear that higher rates of racial intermarriage do not in and of themselves ensure a society beyond the reach of racial discrimination.

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Stanley R. Bailey

DEMOCRACY, REPRESENTATIVE AND PARTICIPATORY

Democracy was born in the Western world in the form of participatory democracy, making the term *participatory democracy* redundant. The word *participatory* discloses the core meaning of popular sovereignty as self-government. In the original ancient Greek meaning, *demo-kratia* ("rule of the demes," or "tribes" into which the Athenian people were divided) entailed engaged citizenship and regular participation. In modern times, however, when democracy has become associated more closely with representation, accountability, and a form of indirect government in which the people select the rulers rather than ruling themselves, participatory democracy has come to be seen as an alternative form of democracy. Consequently participatory, or direct or "strong," democracy and representative democracy have evolved into conceptual antonyms: two fundamentally distinctive forms of democracy rooted in contrary understandings of popular sovereignty as direct self-rule by the people and indirect rule by circulating elites chosen by the people, who otherwise remain outside government.

PARTICIPATORY DEMOCRACY AND REPRESENTATIVE DEMOCRACY

In principle all democracy is to a certain extent participatory. Every democratic system is rooted in an act of original consent through a popularly ratified social contract or constitution as well as ongoing popular input in the form of periodic elections. To this extent, to say that democracy is consensual is to say that it is participatory. In the modern era, however, participatory democracy implies much more than original consent or periodic elections. It denotes extensive and active engagement of citizens in the governing process, often through participatory devices such as initiatives and referenda, and emphasizes the role of the citizen as an active agent in self-legislation and a real stakeholder in governance.

This is in stark contrast to representative democracy, in which the citizen becomes a passive client of government, a watchdog to whom the government remains accountable but otherwise ignores, and a periodic elector responsible for selecting those who actually govern. Philosophers of participatory democracy such as Jean-Jacques Rousseau (1762) and Robert Michels (1911) have understood this "thin" representative construction of democracy as contrary to the core meaning of democracy. When there is representation, the democratic principle is nullified. In Michels's terms, under representative democracy liberty can be said to disappear along with the ballot when it is dropped into the box.

HISTORICAL GROWTH OF POLITIES

The transition from direct democracy to representative democracy was dictated at least in part by historical changes in the nature and scale of society. Democracy was born in and designed for small-scale societies: towns, poleis, principalities, and city-states of the kind found in ancient Greece, early modern Europe, and pre-Revolutionary America. In such settings active participation by citizens in governance could be seen as synonymous with democracy, both desirable and practicable. However, the transformation of city republics into larger states and empires (Rome, for example, as it moved from a town-based republic to a continental empire) created novel constraints and revealed how early direct democracy was bound by limiting conditions, such as simplicity of manners and interests, relative homogeneity of culture and religion, and a small demographic and geographic scale that allowed the citizenry to meet in common in a public place. The ideal population was perhaps five hundred to five thousand, and the maximum size was approximately twenty thousand citizens: the number of active residents engaged in politics in Athens during the Periclean Age in the mid-fifth century BCE. Aristotle had

suggested that democracy could exist only on a territory a man could traverse on his way to join a democratic assembly in a single day.

The increase in scale that came with the evolution of towns into cities, then city-dominated provinces, and finally nation-states consisting of cities and provinces bound by nationalism mandated a reconsideration of democratic principles. If democracy entailed participation by all citizens in basic lawmaking, as Rousseau had insisted in the *Social Contract* (1762), the scale of capital cities such as Paris, Lisbon, and London ruled out effective participatory democratic rule and thus, for Rousseau, legitimate democracy. The American founders implicitly recognized that critique by arguing that a republic of potentially continental extent could be ruled only by a popular sovereign willing to be represented in the actual governing process. To Rousseau and his allies, that was an impossible compromise, for as Immanuel Kant had argued, autonomy demands self-legislation, and hence only those who govern themselves directly can be said to be free.

AMERICAN REPRESENTATIVE DEMOCRACY

In American representative democracy the tensions between direct popular government and indirect rule by chosen surrogates became evident, for the American representative principle was not merely a pragmatic way to preserve democracy in large-scale societies but also implied a critique of direct democracy. Direct popular rule risked enthroning not merely the popular sovereign but an incompetent and impassioned mass: a mob or, in French, a *foule*.

Representation had the virtue not only of facilitating popular sovereignty in large-scale settings but also of placing a filter between the masses and prudent or "good" government. Representatives had the obligation not only to represent the people's will but also, in Edmund Burke's terms, to filter it through and subordinate it to their own prudent judgment. Elected representatives could act in the name of the interests of the people as they understood those interests rather than being bound by the people's "mandate" based on their own often faulty understanding. Even the popular right to choose representatives might be delegated prudently to other wise electors, as was meant to happen with the Electoral College, through which, in the first years of the American Republic, both senators and a president were to be chosen.

Behind the Madisonian distrust of direct democracy lies distrust of all popular power. Even the ancients worried that, just as aristocracy could deteriorate into oligarchy, democracy could morph into ochlocracy, Aristotle's term for a people's tyranny. Although the spirit of modern representative democracy is not antidemocratic, its spirit is cautionary and skeptical about majority rule, mirroring the skepticism about representation that is inherent in direct democracy. If power is dangerous, popular power is more dangerous because it has a righteous legitimacy. Indirect rule thus becomes a check on popular power consistent with the rule of law and constitutional limits on absolute power, especially when that power is popular.

CIVIC EDUCATION

Participatory democrats are cognizant of the critique of popular government as a euphemism for the rule of the passions—the sovereignty of the mob over cool reason as embodied in laws—and for that reason have focused on citizen (civic) education. Historical arguments about direct democracy have been conducted as arguments about education. Plato's *Republic* is an argument on behalf of aristocratic education that denies that the majority has the capacity to govern. Rousseau's philosophical educational novel *Émile* is an essay on democratic education.

Later democrats from Thomas Jefferson to John Dewey rested their case for democratic participation on the efficacy of democratic education. Dewey's primary work on democracy is titled *Democracy and Education* (1954), and Jefferson was persuaded that in the absence of universal education for citizens, democracy could not work. Hence he deemed his work in establishing the University of Virginia (featured on the inscription he prepared for his tombstone) as more important in the long term than his presidency. The logic behind the Declaration of Independence and the Bill of Rights was tied closely to the logic of civic education. Rights belonged to everyone but could be exercised only by those schooled in citizenship. In 1840 Alexis de Tocqueville spoke of the "apprenticeship of liberty," the "most arduous" of all apprenticeships, as a precondition of prudent democratic government.

Classical participatory democrats agreed that popular passions had to be filtered if popular government was to succeed, but they believed that the filter should be within the heads of citizens, and that entailed intensive citizen education. For the participatory or strong democrat, democracy means the government of citizens rather than merely the government of the people. In this formulation citizens are as far from ordinary people as public-thinking and civic-minded communitarians are from self-absorbed, narcissistic consumers of government services.

It is here that participatory democracy can be associated closely with deliberative democracy. To act as a citizen is not merely to voice private interests; it is to interact and deliberate with others in search of common ground and public goods. The aim of participation is not merely

to express interests but to foster deliberation and public-mindedness about interests. When Jefferson suggested that the remedy for the ills of democracy was more democracy, he intimated that democracy was deliberative and involved learning. Modern experiments in deliberative democracy such as those of James Fishkin (1991) have demonstrated that citizens can change their minds and become more open to public goods when exposed to deliberative procedures.

THE ROLE OF TECHNOLOGY

Fishkin's deliberative poll experiments utilized the new electronic technologies in ways that suggest that those technologies may help create conditions conducive to direct democracy, affording large-scale societies some of the democratic possibilities of small-scale townships. On the World Wide Web the world becomes a village, and physical communities that are ruled out by size or distance can be reestablished as digitally convened virtual communities. If democracy depends on association and communication, digital technologies that facilitate them become obvious tools of democracy. Presidential elections in the United States have offered opportunities for interaction among citizens, such as "meet-ups," that give a participatory dimension to classical representative electoral campaigns.

The history of democracy began with forms of engagement and participation that were dependent on small-scale township government. Over time systems of representation were tailored to changes in social scale and an increasing distrust of popular rule. As the scale of potential governance becomes global, new technologies have the potential to relegitimize forms of local self-rule that have been deemed outmoded, completing the paradoxical circle of the history of democracy.

SEE ALSO *Aristotle; Campaigning; Decentralization; Democracy; Direct Action; Elections; Federalism; Internet, Impact on Politics; Jefferson, Thomas; Madison, James; Party Systems, Competitive; Political Parties; Rousseau, Jean-Jacques; Self-Determination; Voting Patterns; Voting Schemes*

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Benjamin R. Barber

DEMOCRATIC CENTRALISM

In the Marxist literature, *democratic centralism* refers to the organization of a Leninist party that allows members participation and voice, but compels them to follow the party line once a decision has been made. A more contemporary (and liberal) meaning of the term, which is the one discussed in this entry, refers to democratic countries that are organized along unitary lines or that are characterized by a high degree of fiscal, political, or administrative centralization.

Centralization is one of the distinguishing features of the modern state. While some European proto-states before the sixteenth century and the great empires of Asia successfully extended their rule over large territories, those political organizations were decentralized arrangements, characterized by a great deal of local autonomy in, for example, the financing of the state through tax farming or the exercise of political authority through satrapies, tributary provinces, and other accommodations of local rule. A fundamental shift occurred in Europe in the modern era, particularly during the eighteenth century, as nation-states were pressed to centralize authority in order to collect sufficient revenues to wage increasingly expensive wars. Alexis de Tocqueville (1805–1859) can be credited as the earliest theorist of democratic centralism. Perhaps the most important aspect of his analysis was to note that government capacity is endogenous to centralization: to the extent that administration becomes more centralized, local authorities become less empowered and more ineffective.

Early democratic experiences were both centralized, as in France and England, or highly decentralized, as in the United States and Switzerland. Hence there is no necessary link between centralization and democracy. Democratic centralism is often equated with a unitary, as opposed to a federal, form of government. However, William Riker (1964) noted that the survival of the United States as a political unit required the creation of a centralized federalism, which could enhance the territorial scope of the country while allowing it to confront external military threats. Thus, a link between centralization and the threat of war was present in the early history of the United States, as well as in the histories of the other federations in Europe and Latin America.

In both democratic and authoritarian countries, centralization (measured through the share of fiscal resources controlled by the national government, as compared to provincial or state and local governments) increased in the course of the nineteenth and twentieth centuries. However, between the 1930s and the peak of fiscal centralization observed around the world in the 1970s, local and intermediate levels of government in democratic regimes retained a larger share of revenue and expenditure authority than their authoritarian counterparts.

After the 1970s, a trend toward decentralization swept both advanced industrial democracies and developing countries. Decentralization has often been accompanied by the introduction of elections at the subnational levels of government, and the timing of decentralization has often coincided with democratization. This has led many observers to believe that centralism is incompatible with democratization. However, democratic countries show variations in fiscal, political, and administrative centralization through time, depending on the demands placed by citizens on various levels of government. Thus, there is no necessary link between decentralization and democracy.

SEE ALSO *Democracy; Leninism; Totalitarianism*

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DEMOCRATIC PARTY, U.S.

The Democratic Party is the oldest, continuously existing political party in the world. It is one of the two major political parties in the two-party system of the United States of America, and has nominated and helped to elect such internationally famous presidents as Thomas Jefferson, Woodrow Wilson, Franklin D. Roosevelt, and John F. Kennedy.

ORIGINS

The Democratic Party, previously named the Democratic-Republican Party, traces its origins to the Anti-Federalists. The Anti-Federalists initially opposed the ratification of the U.S. Constitution during the 1780s because of their concern that it would create an excessively powerful national government dominated by bankers and threaten states' rights. After the Constitution was ratified, the Anti-Federalists emphasized a strict interpretation of the Constitution so that states' rights and civil liberties would be protected from the new national government. Led by Thomas Jefferson and James Madison, the Anti-Federalists formally named and organized the Democratic-Republican Party in 1798. The Democratic-Republican Party often opposed the Federalist Party. Founded by Alexander Hamilton and John Adams, the Federalist Party favored a stronger national government, limited states' rights, a national bank, a pro-British foreign policy, a tight money supply, and high tariffs to encourage the development of American manufacturing. These Federalist policies dominated the presidencies of George Washington (1789–1797) and John Adams (1797–1801).

From the election of Jefferson as president in 1800 until the election of Abraham Lincoln, a Republican, in 1860, most presidents during this era were Democrats. The Democratic-Republican Party officially renamed itself the Democratic Party in 1844. The Democratic Party experienced a sharp increase in membership and electoral strength during and shortly after the presidency of Andrew Jackson (1829–1837). The so-called Jacksonian Democrats claimed that the Democratic Party was "the party of the common man." They asserted that their policies and ideas, such as less federal regulation of the economy, lower tariffs, stronger states' rights, opposition to the national bank, and stronger voting rights for poor white men, benefited the common man by increasing his political and economic power against the Whig Party and northern business interests.

Although the Democratic Party succeeded in attracting more voters who were Irish or German immigrants, urban laborers, and frontier settlers from 1828 until 1860, most of its voting strength remained in the South.

Consequently, the Democratic Party became severely divided and weakened by the issues of slavery and the South's secession from the United States in 1861. While most Southern Democrats favored secession and the creation of the Confederacy, most Northern Democrats either favored accommodation and compromise with the Confederacy or supported the Union war effort led by President Lincoln (1861–1865).

REPUBLICAN DOMINANCE: 1860–1932

Established during the late 1850s from remnants of the Federalist and Whig parties, the Republican Party emerged as the new, second major party in the United States. It elected all but two presidents, usually controlled Congress, and dominated American national politics and domestic and foreign policies from 1860 until 1932 when Franklin D. Roosevelt, a Democrat, was elected president. Even during brief periods when the Democratic Party elected presidents Grover Cleveland (1885–1889, 1893–1897) and Woodrow Wilson (1913–1921) and occasionally controlled Congress, it was often divided between its multiethnic, urban northern wing and its mostly rural, white, Protestant, southern wing. The party's southern wing dominated Democratic membership in Congress and decisions at Democratic national conventions.

In an effort to co-opt the anti–big business, agrarian economic protest movement known as Populism, the Democratic Party nominated William Jennings Bryan for president in 1896. Bryan was the Populist Party's presidential nominee in 1892. However, many conservative Democrats and northern laborers perceived Bryan as a dangerous rural, economic radical. Many of them voted Republican in 1896 resulting in a long-term Republican realignment within the two-party system.

THE WILSON PRESIDENCY AND THE 1920s

Although Woodrow Wilson was elected with only 45 percent of the popular vote in 1912, Wilson managed to unite most Democrats in Congress concerning his foreign policy in World War I and his domestic policies of improving child welfare and labor conditions, reforming the banking system, and supporting women's suffrage. During the 1920s, however, the Democratic Party became more divided over such cultural issues as the national prohibition of alcohol, restrictive immigration laws, the Ku Klux Klan, and the Catholic faith of Al Smith, the Democratic presidential nominee in 1928. Consequently, the Republicans easily won the presidential elections of 1920, 1924, and 1928.

The Great Depression, which began with the stock market crash of 1929, resulted in high unemployment, deflation, bank failures, and widespread economic suffering. The Democrats became more united on economic issues and blamed Republican policies for causing or worsening the Great Depression. Attracting the votes of many alienated Republicans and independents, the Democratic Party easily won control of the presidency and Congress with Franklin D. Roosevelt as its presidential nominee in 1932. Collectively known as the New Deal, Roosevelt's most popular economic and social welfare policies included the Works Progress Administration (WPA), the Social Security Act of 1935, legal rights for labor unions, agricultural price supports, rural electrification, and stricter federal regulations on banks and the stock market.

THE 1932–1936 DEMOCRATIC REALIGNMENT TO THE CIVIL RIGHTS ERA

In the 1936 federal elections, Roosevelt was reelected with 62 percent of the popular vote, carried all but two states in the Electoral College, and helped the Democratic Party to increase its majorities in Congress. For the first time since 1856, most voters were Democrats. The 1932 and 1936 elections were a realignment of the two-party system establishing a long-term Democratic majority among voters. This enabled the Democratic Party to win most presidential elections, usually control Congress, and dominate foreign and domestic policymaking until 1968.

President Harry S. Truman, Roosevelt's Democratic successor, won the 1948 presidential election despite the defection of some anti–civil rights southern Democrats led by Governor J. Strom Thurmond of South Carolina. Commonly known as the Dixiecrats, the States Rights Democratic Party nominated Thurmond for president in 1948. The Dixiecrats opposed Truman's civil rights bill, his desegregation of the military, and the increasing support of northern Democrats for federal civil rights policies that would protect African Americans from racial discrimination and end racial segregation.

For the next twenty years, the Democratic Party was increasingly divided over the issue of federal civil rights for African Americans. The narrowness of Democrat John F. Kennedy's victory in the 1960 presidential election was partially caused by the unpopularity of his pro–civil rights positions among southern Democrats. Likewise, despite his landslide victory in the 1964 election, Lyndon B. Johnson, Kennedy's successor and a southern Democrat, failed to carry most states in the Deep South because of his support for civil rights.

By the late 1960s, the Democratic Party was bitterly divided over civil rights, the anti-poverty programs of the Great Society, the Vietnam War, and the selection of its presidential nominee for the 1968 election. In 1968,

events such as the assassination of presidential candidate Robert F. Kennedy, the violence and disunity of the Democratic National Convention in Chicago, and the unpopularity of Johnson and Vice President Hubert H. Humphrey among antiwar Democrats plagued the Democratic Party. Humphrey, the Democratic nominee, narrowly lost the 1968 presidential election to Republican nominee Richard M. Nixon as most white voters supported either Nixon or George C. Wallace, an anti–civil rights southern Democrat.

REPUBLICAN DOMINANCE: 1968–1992

From 1968 until 1992, the Republican Party won five of the six presidential elections and controlled the Senate from 1981 until 1987. Historians attribute the narrow Democratic victory of James E. Carter in the 1976 presidential election to economic problems and the damaging effects of the Watergate scandals on the Republican Party. During this period, many middle-class white voters negatively perceived the Democratic Party, especially in presidential elections, as favoring excessive welfare spending and high taxes, weak on crime control, and ineffective in cold war foreign and defense policies.

THE CLINTON ERA AND POST-2000

In 1992 William J. Clinton, a Democrat, was elected president with 43 percent of the popular vote after defeating Republican president George H. W. Bush and Ross Perot, an independent candidate. Clinton portrayed himself as a moderate who was tough on crime and welfare dependency and would reduce the high budget deficit. The end of the cold war and the Persian Gulf War in 1991 had reduced the Republican advantage on foreign and defense policy issues. In 1996 Clinton became the first Democratic president since Roosevelt to be reelected to a second term. With a Republican Congress, Clinton achieved moderate, compromised results in welfare reform and deficit reduction but unsuccessfully opposed his impeachment.

Al Gore, Clinton's vice president, received approximately 550,000 more votes than George W. Bush, his Republican opponent, in the 2000 presidential election. But Bush won this election when the Supreme Court ruled that he had legitimately received all of Florida's Electoral College votes. Despite growing public criticism of his policies in the Iraq War, Bush was reelected in 2004 after defeating John F. Kerry, the Democratic presidential nominee. Confronting a two-term Republican president and a Republican Congress, the Democratic Party began to discuss how to improve its voter appeal and reconsider its ideas and policy positions in order to win future presidential and congressional elections. In 2006 Democrats regained control of Congress.

SEE ALSO *Civil Rights; Clinton, Bill; Dixiecrats; Great Society, The; Johnson, Lyndon B.; Kennedy, John F.; Populism; Roosevelt, Franklin D.*

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Sean J. Savage

DEMOCRATIZATION

Democracy has widely become the norm within the international community. To promote democracy around the world is not only a key goal of international organizations such as the World Bank, but it is also on the foreign policy agenda of many European and North American countries. Nevertheless, democracy is a notoriously vague and encompassing term. It is often used as a synonym of whatever is desirable in a state, such as good governance and democratic values of elites and citizens. Illustrative of the lack of consensus about its meaning are the results of a survey finding that 150 different studies used more than 550 subtypes of democracy (Collier and Levitsky 1997).

CONCEPTS

Despite this lack of consensus, most political scientists and policy makers use the minimalist definition of democracy described in Robert A. Dahl's 1971 book, *Polyarchy*. According to this definition, democracy is a system of government in which citizens choose their political leaders during periodic free and fair elections, thereby giving those leaders the right to rule after the elections. There are two main theoretical dimensions of democratization: competition among political parties for the people's vote on the one hand, and inclusive suffrage and political participation on the other hand. South Africa's apartheid government (1948–1994) was competitive but not inclusive, because the vast (black) majority was excluded from the right to vote. Regimes in the People's Republic of China and North Korea are inclusive but not competitive, because one political party dominates political life completely. Only regimes with both competition and inclusive suffrage can be classified as a (minimal) democracy.

Democratization is the process whereby a country adopts a democratic regime. Dankwart A. Rustow (1970) distinguished four different phases. During the first phase national borders, national unity, and a coherent national identity must emerge, before democratization can occur. The second "preparatory" phase is characterized by political conflicts between old and new elites in which the new ones demand more influence in national politics. During the "decision phase," key actors, such as the political parties, must accept a fundamental set of democratic rules and practices. Finally, basic democratic institutions and the rules of the game are established in the "habituation phase." Each phase is the result of different causal processes. Given their different causes, it is useful to separate them.

Moreover, scholars often distinguish the phases of "transition" to and "consolidation" of democracy from each other. Transitions are defined as the interval between the dissolution of the old regime and the installation of a new regime, while the essence of consolidation is in defining and fixing the core rules of democratic competition. It should be noted, however, that there is a huge debate about the exact meaning of both terms in the democratization literature (Schedler 1998).

TRENDS OF DEMOCRATIZATION

Democratization is a relatively recent phenomenon. Although some Greek city-states had democratic characteristics, modern—or minimal—democracy dates only from the late nineteenth century. Since the publication of Samuel P. Huntington's influential 1991 study of democratization, *The Third Wave*, scholars have come to take for granted the notion that the spread of democracy has come in waves. A wave of democratization is defined as a group of transitions from nondemocratic to democratic regimes that occurs within a specified period and that significantly outnumbers transitions in the opposite direction.

During the so-called first wave of democratization between 1893 and 1924, New Zealand, Australia, the United States, and many countries in western Europe made a transition to democracy. The regime changes to authoritarianism during the second reverse wave after 1924 reflected the rise of the ideologies of communism and fascism. A second short wave began after World War II (1939–1945) and continued until approximately 1960. Allied occupation promoted the installation of democratic institutions in West Germany, Japan, and Finland. Costa Rica, Chile, and Uruguay were the Latin American states that adopted a democratic system during this period. There is no clear second reverse wave, but the 1960s and 1970s can better be described as an intermezzo, in which transitions to both nondemocratic and democratic regimes occurred (Doorenspleet 2000). In this period, for example, Colombia and Venezuela became democratic. By contrast, the polarized Chilean democracy was overthrown by a military coup led in 1973 by General Augusto Pinochet (1915–2006). Military coups in Uruguay and Argentina ended democracy in these countries as well.

The third wave began in southern Europe in the 1970s in Portugal, Greece, and Spain. Then it spread to Latin America—to Ecuador, Peru, Bolivia, Argentina, El Salvador, Uruguay, Honduras, and Brazil. This wave of democratization also affected some Asian countries in the late 1980s, such as the Philippines and South Korea. The so-called fourth wave since 1989 was overwhelming and global. At the end of the 1980s, the wave swept through Eastern Europe. The 1990s saw widespread rapid collapse of nondemocratic regimes in Africa, and more than a dozen democracies emerged. The decade after the cold war was a fruitful period for democratization around the world.

EXPLANATIONS OF DEMOCRATIZATION

Nevertheless, many countries remained authoritarian. So, why do some countries democratize whereas others do not? According to modernization theories, which became dominant in the late 1950s, democratization is less likely in poor countries. If less-developed countries are not able to undergo this political modernization process, it is caused by a low level of socioeconomic development in the country. Each less-developed country would have to follow the same path already traversed by the now developed and democratic countries. After the publication of Seymour Martin Lipset's 1959 article, "Some Social Requisites of Democracy," many statistical studies showed that there was indeed a positive correlation between development and democracy. India, with its democratic regime and low economic development, is always brought up as an important exception to this general pattern, though. Moreover, studies of the 1990s show that modernization theory can explain democratic consolidation, but not transitions to democracy (Przeworski and Limongi 1997).

As a reaction and alternative to the modernization approach, the dependency and world-system theories emerged in the early 1970s in Latin America (Bollen 1983). The underdevelopment of Latin America was attributable to its reliance on the export of primary products to the industrial states of the capitalist system, and it was argued that Latin America had been turned into a satellite of the capitalist metropolises of Europe and North America. This approach states that a country's position in the world system, located in either the dominant rich core or impoverished subordinate periphery, is an important determinant of democracy. According to this approach, if

a country is not able to become democratic, this is due to external factors—rather than internal domestic factors.

In addition to economic development and international dependency, cultural influences, ethnic divisions, the type of religion, and historical institutional arrangements have been mentioned by researchers as important structural explanations of democratization. According to actor-oriented theorists, however, regime transitions are not determined by structural factors, but are shaped by what principal political actors do as well as by when and how they do so. In their 1986 study *Transitions from Authoritarian Rule*, Guillermo O'Donnell, Philippe C. Schmitter, and Laurence Whitehead abandoned their earlier structuralist perspective and began to focus on the role of elites. They emphasized that elite dispositions, calculations, and pacts largely determine whether or not an opening to democracy will occur at all. Strategic interaction between elites from the state (political parties, the military, and political leaders) and elites from the society (social movements, civil society groups, and intellectuals) establishes the mode of transition and the type of regime that emerges afterward. In "transitions from below" mounting popular pressures and mass mobilization eventually lead to regime change, while in "transitions from above" political and military rulers respond to crises by introducing democratic reforms whose timing and substance they hope to control.

Since the early 1990s, democratization scholars emphasize that the described approaches complement rather than contradict each other, and suggest that a comprehensive theory of democratization should include not only structural but also actor-oriented factors.

DEMOCRATIZATION AND WAR

Democratization processes seldom follow an easy, smooth path. On the contrary, violent conflicts and wars often occur in democratizing states. Conflict can be prevented more easily in very nondemocratic regimes on the one end (because these regimes are willing and able to suppress dissent) and in democratic regimes on the other end (because these regimes recognize minority rights and try to conciliate, thereby reducing dissatisfaction and conflict). Democratizing countries, however, are situated in a dangerous phase in which conflict is very likely.

Not all democratic transitions are dangerous, but the chance of war rises especially in those transitional states that lack the strong political institutions that are needed to make democracy work, such as an effective state and organized political parties (Mansfield and Snyder 2005). The most important reason for this is that political leaders try to use nationalism or ethnic identity as an ideological motivator of collective action in the absence of effective political institutions. Then politicians have the incentives to resort to violent nationalist or ethnic appeals, tarring their opponents as enemies of the nation or the ethnic group, in order to prevail in electoral competition. When political institutions are strong, though, war can be prevented. This is particularly crucial in ethnically divided countries. A stable democracy is impossible in a country without strong political institutions.

SEE ALSO *Democracy; Democracy, Indices of; Dependency; Elite Theory; Ethnocentrism; Huntington, Samuel P.; Nationalism and Nationality; War; World Bank, The; World-System*

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DEMOGRAPHIC TRANSITION

The term *demographic transition* originally described the major social shift that occurred in Western societies from the late nineteenth century to the 1930s. At that time,

European societies, and their settler offshoots overseas, moved with considerable speed from a high-mortality, high-fertility population regime to low fertility and low mortality, with major social consequences. This historic shift saw the decline of family size from approximately six children per family to fewer than two. The transition also provided the preconditions for women to move from the private sphere and constant childbearing to the public domain and the expanding industrial work force.

Explanations for this world-shaping change abounded, and a field known as *demographic transition theory* developed, which, while hotly contested, remains influential. Population trends, such as the post–World War II (1939–1945) "baby boom," have shaken the theory of continuing fertility decline, yet it has remained remarkably resilient. It is clear now that demographic transition is a global phenomenon, not just a Western trend, and that since 1960 much of the world is exhibiting declining fertility, with sub-Saharan Africa probably the last to change. Most now accept that a second demographic transition is occurring (van de Kaa 1987), dating from the 1960s, as even lower birthrates, well below replacement level, prevail in several European and Asian countries. While many demographers expected that birthrates would reach the replacement level, and then plateau, now there is concern that some countries' birthrates are so low that their societies will eventually shrink, possibly disappear.

The concern with demographic change has considerable implications for political and social decision making in relation to the family, the labor market, and immigration policy. Fertility decline has moved from being a preoccupation of demographers to a central concern for politicians and social commentators. It takes on a new urgency as low fertility leads to inevitable population ageing.

In the 1960s exponents of demographic transition theory in the West, fearful of a "population explosion," particularly in the developing world, and eager to gain political advantage in a cold war climate, sought to apply the theory, with varying results, in developing countries through agencies such as the World Bank and the United Nations Fund for Population Activities. The birth control pill, adopted so centrally in the West, was originally funded to provide contraception in the developing world on the understanding that knowledge of birth control was all that was needed for fertility decline. Later, more considered approaches are based on the broader finding of demographic transition theory—that socioeconomic change is more likely to lead to reduced fertility.

HISTORY OF THE THEORY

Demographic transition theory is curiously paradoxical. While there is no general agreement as to its explanatory frameworks, it is constantly invoked as if there were. This is due in part to demography's post–World War II desire to be a science and to establish a "grand theory" of population and fertility decline. Yet even in this quantitatively based discipline, wider intellectual currents have intruded: postmodernism and cultural and anthropological explanations have recently entered the field. Short-term theory is now the order of the day.

In 1937 Kingsley Davis (1908–1997), an early exponent of the theory, suggested that ultimately the reproduction of the species is incompatible with advanced industrial society. Thus he established the major framework of the theory, which held that socioeconomic development and modernization are major causal forces. It is this element of the theory that remains robust. In a 2006 volume titled *Demographic Transition Theory*, one of the most influential twentieth-century exponents, John C. Caldwell, argued that in industrial society the old values essential to agricultural societies—strong family, virginity, loyalty, legitimate births—are no longer necessary except as "social pacifiers." Industrial society and, even more, postindustrial knowledge economies, need mobile, educated individuals unencumbered with babies and family ties.

Within the overarching model of socioeconomic change, there is no common acceptance of particular determinants of transformation, as different societies take varying paths to declining birthrates. The onset and tempo of mortality and fertility decline vary widely. Must a falling off in mortality precede a fertility decline? Are modern technologies of birth control essential or indeed sufficient? Is decline more likely in conjugal families (those based on husband, wife, and children) rather than the joint (extended) families of much of Asia and Africa? How critical are gender regimes? It is now overwhelmingly clear that women's education is inversely related to fertility. The more highly educated women are, the fewer children they produce, with few exceptions. How critical is institutional change, such as government policy in relation to education, to welfare provision, and to legal frameworks (McDonald 2006)? What role does ideational change play—the decline of religious belief, the centrality of individuals and their entitlements, the significance of planning modern lives, women's reproductive rights, and notions of consumption and leisure? All of these elements have played a significant part in variants of demographic transition theory.

Some countries (Japan, Singapore, Taiwan, as well as much of central Europe and southern Europe) now exhibit very low fertility, defined as continuing fertility under 1.5 births per woman on average, sometimes referred to as a *birth strike*. Most commentators agree that this is largely due to women working and to the inability of states to make women's work and childbearing compatible. Does this low fertility foretell the future or is the

experience of the United States, which since the late 1970s has exhibited a rise to replacement-level fertility, an opposing model? How significant is mode of production versus changing ideas and attitudes? Dirk van de Kaa, an influential demographer from the Netherlands, maintains that cohorts of young people with common, postmodern, individualistic ideas are implicated, whereas Caldwell insists that mode of production is primary and that neoliberalism and the accompanying insecurity it produces in the workplace play a significant role in inhibiting births.

Some theorists have predicted that the creation of a world economic system where children are of no immediate economic value to their parents will inevitably lead to lower world population—a goal much desired by environmentalists. Others point out that in much of Asia and Africa, patriarchy, a regime that puts children and lineage before women's rights, is still dominant and that fertility decline may not be inevitable. Prediction is always fraught, and an element that has been overlooked in much twentieth-century demography may well come back to haunt us. Secularization, the decline of traditional religious belief, is a key to changing Western fertility patterns. Yet any assumption that secularization will inevitably increase is risky in the light of resurgent fundamentalisms across all religious belief systems. Anthropological demography reminds us that we are not all rational actors, and that myth, superstition, and culture are all pervasive.

Between 1965 and 2000, the fertility (as measured by the total fertility rate) of both the developing world and the whole world nearly halved (Caldwell et al. 2006, p. 13). On the basis of the United Nations World Population Prospects (2004) and other findings, demographers have predicted that global population growth will almost come to a halt by 2050, "with the Earth having around 9 billion or fewer inhabitants" (Caldwell et al. 2006, p. 316). Higher and lower projections have been offered, the latter demonstrating population halving every two hundred years—surely an unacceptable outcome. With the rate of world population growth slowing, some are turning to issues of the composition of the population.

A third demographic transition has been proposed for Europe and the United States, one that sees the ancestry of some national populations being radically and permanently altered through high levels of immigration of people with distinctively different ethnic ancestry into countries with low fertility (Coleman 2006, p. 401). This is a radical departure from previous demographic transition theory in its focus on immigration. It demonstrates, however, the resilience of the theory. The demographic transition may well continue to surprise us.

SEE ALSO *Anthropology; Birth Control; Club of Rome; Demography; Development Economics; Development, Rural; Fertility, Human; Gender Gap; Health in Developing Countries; Immigration; Inequality, Gender; Malthusian Trap; Modernization; Overpopulation; Population Growth; Population Studies*

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DEMOGRAPHY

Demography is the scientific study of the size, composition, and distribution of human populations, and their changes resulting from fertility, mortality, and migration. Demography is concerned with how large (or small) populations are, that is, their size; how the populations are composed according to age, sex, race, marital status, and other characteristics, that is, their composition; and how populations are distributed in physical space (e.g., how urban and rural they are), that is, their spatial distribution (Bogue 1969). Demography is also interested in the changes over time in the size, composition, and distribution of human populations, and how these result from the processes of fertility, mortality, and migration.

The term *demography* is from the Greek *demos* (population) and *graphia* (writing). It is believed to have first appeared in print in 1855 in the book *Elements of Human Statistics or Comparative Demography* by the Belgian statistician Achille Guillard (1799–1876) (Borrie 1973, p. 75; Rowland 2003, p. 16).

Some demographers argue that demography is best treated as a subdiscipline or specialization of sociology owing to its organizational relationship with sociology (Moore 1959, p. 833). However, the organizational affinity in universities between demography and sociology is not universal. In some Eastern European universities, demography is organizationally linked with economics, and in some Western European universities, with geography. In many countries (e.g., China), demography is taught in a separate university department.

The American sociologist Kingsley Davis (1908–1997), who served at different times as president of both the Population Association of America and the American Sociological Association, wrote in 1948 in his classic sociology textbook, *Human Society*, that "the science of population, sometimes called demography, represents a fundamental approach to the understanding of human society" (1948, p. 551). The relationship between sociology and demography is hence a fundamental one: "Society is both a necessary and sufficient cause of population trends" (1948, pp. 553–554).

There are only two ways to enter a population, by birth and by in-migration. There are two ways to leave a population, by death and by out-migration. Thus, a population is often defined by demographers according to the specific needs of the research and researcher. Samuel Preston and his colleagues have written that the "term 'population' refers to a collection of items, for example, balls in an urn. Demographers use the term in a similar way to denote a collection of persons alive at a specified point in time who meet certain criteria" (2001, p 1). For example, the population of interest may be that of students attending a specific university during a specific year. In this situation, the students are born (i.e., enter) into the population when they enroll, and they die (i.e., leave) when they graduate.

Generally, demographers use vital registration (birth and death) records to count births and deaths in a population to determine fertility and mortality rates. The more difficult demographic process to measure is migration because in most countries registration records are not maintained when persons migrate into or out of the population. Data gathered around the world from decennial census and sample surveys are also used by demographers to examine demographic and sociodemographic issues.

Demographic techniques allow for the calculation of population projections, which specify the future size of the population by utilizing specific assumptions about the parameters driving the future fertility, mortality, and migration of the population. Population projections for all the countries around the world are periodically calculated by demographers at the United Nations and other international organizations and are made publicly available. Such projections are often used by government agencies and private firms to plan the infrastructure of cities, such as the number of schools, hospitals, airports, and parks that would be needed in the future in order for the cities to be able to function properly.

Demography is concerned not only with the observation and description of the size, composition, and spatial distribution of human populations and the changes resulting from fertility, mortality, and migration. Demography is also concerned with developing explanations for why the demographic variables operate and change in the ways they do: That is, why do some populations increase in size and others decrease? Why do some become older and others become younger? Why are some more urban and others more rural?

One paradigm in demography, known as *formal demography*, uses only demographic variables, such as age and sex, as independent variables to answer the above questions. Another paradigm, known as *social demography*, uses such nondemographic variables as marital status, race, education, socioeconomic status, occupation, household size, and type of place of residence—variables drawn mainly from sociology, economics, psychology, geography, anthropology, biology, and other disciplines—to answer the questions.

To illustrate, formal demographers might address differences in populations in their birth rates and death rates by considering their differences in age composition or in sex composition. Younger populations typically have higher birth rates than older populations; and populations with more females than males will usually have lower death rates than populations with more males than females (Poston 2005). Social demographers might address the above differences in populations in their birth rates and death rates by examining differences among them in, say, their socioeconomic status. Usually, populations with high socioeconomic status will have lower birth rates and death rates than populations with low socioeconomic status.

Demographic data may be introduced to provide some perspective for distinguishing between these two approaches. Human populations have different levels of fertility. Countries thus differ with respect to their total fertility rates (roughly defined as the average number of children born to a woman during her childbearing years). In 2004 Poland and Romania had very low fertility rates of 1.2, among the lowest in the world. Conversely, Niger,

Guinea-Bissau, and Yemen had very high fertility rates of 8.0, 7.1, and 7.0, respectively—the highest in the world (Population Reference Bureau, 2004). Why do these fertility differences exist? Why do Niger, Guinea-Bissau, and Yemen have fertility rates that are so much higher than those of Poland and Romania? To answer this question, the social demographer would go beyond purely demographic issues of age and sex composition and would focus on the processes of industrialization and modernization.

Another example focuses on what demographers refer to as the percentage rate of natural increase/decrease, that is, the difference between the birth rate and the death rate. In 2004 both Russia and Bulgaria had a rate of -0.6 percent: that is, the difference between their crude birth and death rates was about -6/1000 or -0.6/100. In contrast, the rate in both Madagascar and Saudi Arabia was 3.0 percent. In these countries, the difference between their birth and death rates was 30/1000 or 3/100.

Why are these four countries growing at such drastically different rates? Why do Russia and Bulgaria have negative growth rates, and why do Madagascar and Saudi Arabia have positive rates? The formal demographer might develop an answer by considering the birth rates of these countries. The numbers of babies born per 1,000 population in 2004 in Russia, Bulgaria, Madagascar, and Saudi Arabia were 10, 10, 43, and 32, respectively. The latter two countries have higher rates of growth than the former two countries because their birth rates are so much higher. The social demographer would first consider the birth rate differentials, but would then go beyond this demographic consideration to an answer involving nondemographic factors that may be influencing the birth rates. Perhaps the economy has something to do with it (poorer countries have higher birth rates). Perhaps the level of industrialization of the country has an impact (the more industrialized countries generally have lower birth rates). Perhaps the role of women compared to men is having an effect (countries with more gender equity tend to have lower birth rates).

Whatever the reasons, the social demographer extends the answer beyond demographic reasons. Social demography is broader in scope and orientation than formal demography. Preston has noted, for example, that demography includes "research of any disciplinary stripe on the causes and consequences of population change" (1993, p. 593).

Given the impact of industrialization in the reduction of fertility and mortality and the international migration flows from less developed to more developed countries around the world, it is a common practice among demographers to observe separately the demographic processes in less developed countries from those in more developed countries. The issues that concern demographers often vary depending on the level of industrialization of each country. In less developed countries, high levels of fertility, high levels of infant mortality, a high prevalence of HIV/AIDS, and high levels of out-migration to more developed countries tend to be some of the main demographic concerns. In more developed countries, low fertility patterns, women having babies at later ages, populations with below replacement levels of fertility, and large numbers of migrants from less developed countries are some of the main issues being examined by demographers.

A frequent concern in demography is the extent to which changes in individual-level behavior have an effect on aggregate processes (Preston et al. 2001). For example, if it suddenly became normative for individuals in a population to become smokers once they reach a certain age, then the demographer would want to find out to what extent the life expectancy at age x would be affected, as well as the death rate for that population. Similarly, regarding fertility, if women in a certain country decided to have children at older ages, then the concern becomes to what extent such behavior can have an effect on the total fertility rate, on the growth rate, and on whether the population will be maintained at a replacement level of fertility (which in populations with low levels of mortality is around 2.1 children per woman).

Demographers also are often concerned with how social policy could impact the aggregate population processes. In China, for example, demographers have identified a relationship between the enforcement of fertility policies and increasing levels of social and economic development and the sex ratio at birth (Poston et al. 1997; Poston and Glover 2005). The sex ratio at birth is the number of males born per 100 females born and is around 105 in most societies. Since the 1980s in China it has been significantly above 105. In 2000 China's sex ratio at birth was near 120. The rapid reduction of fertility in China, along with the long-standing preference for sons, has led to the selective abortion of female fetuses, and a sex ratio at birth above normal levels. As a consequence, in China there will not be enough women in the population for the next few decades for Chinese men to marry. This is a major effect of societal modernization and fertility-control policies (Poston and Morrison 2005).

Demographers do not always agree about the boundaries and restrictions of their field. John Caldwell stated the problem succinctly: "What demography is and what demographers should be confined to doing remains a difficult area in terms not only of the scope of professional interests, but also of the coverage aimed at in the syllabuses for students and in what is acceptable for journals in the field" (1996, p. 305).

Other demographers argue for a broader approach, noting that demography is not a specialization of sociol-

ogy, or of any discipline, but a discipline in its own right. Consider the definition of demography in the popular demography textbook *Population: An Introduction to Concepts and Issues* by John Weeks: Demography is "concerned with virtually everything that influences, or can be influenced by" population size, distribution, processes, structures, or characteristics (2005, p. 5).

It is no wonder that J. Mayone Stycos observed that "as a field with its own body of interrelated concepts, techniques, journals and professional associations, demography is clearly a discipline" (1987, p. 616). Caldwell also reached this conclusion, but more for methodological reasons: "Demography will remain a distinct discipline because of its approach: its demand that conclusions be in keeping with observable and testable data in the real world, that these data be used as shrewdly as possible to elicit their real meanings, and that the study should be representative of sizable or significant and definable populations" (1996, p. 333).

SEE ALSO *Fertility, Human; Malthus, Thomas Robert; Population Growth*

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DEMOGRAPHY, SOCIAL

The field of social demography uses demographic data and methods to describe, explain, and predict social phenomena. It also measures the effect of social forces on population distribution. Distinct from formal demography, which focuses more generally on population composition and distribution, social demography investigates the social-status composition and distribution of a population.

DEVELOPMENT OF SOCIAL DEMOGRAPHY

Social demography emerged as an academic discipline in the United States over the course of the last half of the twentieth century. Kingsley Davis coined the term *social demography* in a 1963 paper (Heer 2005). Previously, the term *population studies* was used to denote the study of social status using demographic techniques. In 1970, Thomas Ford and Gordon DeJong published a textbook titled *Social Demography*, which included research exemplars in the field. In 1975 the first conference on social demography was held at the University of Wisconsin.

Social demography developed in the United States as an outgrowth of regular census data, the development of demographic techniques, an interest in scientific investigation, and a general curiosity concerning social issues. Institutionalized by the U.S. Constitution, the U.S. Census has received increased funding and been accompanied by increased research activity and scientific rigor with each succeeding decennium. This continuous expansion has offered rich datasets to researchers. Thus, the application of modern statistical methods to demographic data collection and analysis has increased the validity and reliability of demography in general.

Corollary to the development of demographic techniques was a glorification of scientific solutions to modern problems. Social issues came to be viewed as problems that could be solved scientifically. Social demography emerged as a prime tool to isolate, explain, and predict factors influencing social issues such as residential segregation, unemployment, and income gaps between status groups.

Sociology and social demography developed in tandem over the course of the twentieth century. Early social theorists utilized demographic data as empirical evidence of their claims. W. E. B. Du Bois, for example, chronicled the experience of the African American population at the end of the nineteenth century through the use of census enumeration data, independent surveys, and cartography. Robert Park and Ernest Burgess, along with many others within the Chicago school of sociology, later extended the use of demographic data to support sociological claims of urban growth and population distribution by socioeconomic status. In the late 1950s, Philip Hauser and Otis Duncan codified the connection of sociology and demography in their work *Population Studies*.

Beginning in the 1960s, training in social demography became formalized into academia. Research and training in the discipline developed at university centers such as Chicago, Wisconsin, North Carolina, and Michigan. Also, population research centers at Princeton, Brown, and the University of Texas contributed scholars and research to social demography.

CURRENT TRENDS IN SOCIAL DEMOGRAPHY

Charles Hirschman and Stewart Tolnay (2005) identify three distinct areas within the current state of social demography: (1) data collection and descriptive interpretation; (2) theory development and model testing; and (3) contextual analysis.

Data collection is a staple of social demography. Modern democracies and consumer economies rely heavily on reliable data and descriptive analyses to fit policies and services to their respective constituents and consumers. Indeed, demographic data and interpretation are ubiquitous in modern society. Politicians, business leaders, historians, and the media offer many, and often contradictory, interpretive reports based on social demographic data each day. Social indicators for income, labor, occupation, housing, immigration and migration, and family status are regularly collected, analyzed, and released to the public.

In addition to data collection and descriptive analysis, social demographers contribute to cumulative knowledge through theory development. Researchers use statistical models to isolate and compare the effects of variables on social phenomena. For example, the sociologist Otis Dudley Duncan was able to test and ultimately refute the "culture of poverty" hypothesis, which was a common theory of the economic disparity between African Americans and whites (1970). Using the demographic method of direct standardization, Duncan held constant the effects of occupation, education, parental status, mental ability, and many other factors affecting income. By varying only the race of the respondent, Duncan showed that black men earned 83 cents to every dollar earned by white men, even though no other significant differences between the groups existed. Race alone was responsible for the seventeen-cent differential, not culture-of-poverty variables such as "father's education" or "family type."

Finally, contextual analysis may be a promising area of development in the near future. Contextual analysis investigates the interaction of the individual and the demographic environment in which that individual is situated. The role of structural context on individual behavior is commonly accepted in sociology. For instance, research on "school effects" attempts to show the role of schools in the educational attainment of individual students. However, contextual-analysis reports in education reveal relatively small school effects once the individual's variables are controlled. Until recently, contextual analysis has been hindered by conceptual and methodological constraints. However, recent developments in statistical methods and software may yield much future research in this area.

LIMITATIONS FACING SOCIAL DEMOGRAPHY

Although social demography enjoys a high status within the social sciences, there are limitations to its applicability. Not all changes that occur within a society are a function of population composition. For example, the mid-twentieth century baby boom occurred across all educational, age, and racial groups. Therefore, the common approaches social demographers use cannot isolate the source of the variation in fertility. The source of the variation in the case

of the baby boom was contextual: political and economic circumstances had changed greatly after World War II. The source of the variation in fertility did not, therefore, come from various segments of the U.S. population.

Another limitation for much social demographic research is that it is oriented towards disproving false hypotheses. False hypotheses are uncovered by statistically revealing the amount of variation caused in a dependent variable by exposure to an independent variable. But this technique cannot prove a hypothesis to be true, for there is always the possibility that the true causes of social change are not included in the model.

SEE ALSO *Demography*

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DEONTOLOGY

SEE *Philosophy, Moral.*

DEPENDENCY

The term *dependency* is most commonly used to describe a situation wherein one person relies upon another for help, guidance, reassurance, protection, or emotional support. However, it is also possible for an individual to be dependent upon a substance rather than a person, as in chemical dependency. Other uses of the dependency concept in social science include economic dependency (i.e., one person's reliance on another for financial support), and functional dependency (i.e., one person's reliance on another for physical help, or for assistance in carrying out activities of daily living).

PERSONALITY TRAITS

Although different forms of dependency are of interest to economists, sociologists, gerontologists, and others, the dependency concept is most widely used in psychology. In addition to studying chemical dependency, psychologists have devoted considerable effort to understanding the causes and consequences of dependent personality traits. In this context, researchers distinguish interpersonal dependency from pathological dependency. Interpersonal dependency describes the normal help- and reassurance-seeking that most people exhibit in everyday life; individuals with high levels of interpersonal dependency show above-average rates of help- and reassurance-seeking. Pathological dependency—which when pronounced may warrant a diagnosis of dependent personality disorder—describes an extreme form of maladaptive, inflexible dependency characterized by fear of abandonment, feelings of powerlessness and ineffectiveness, and an inability to initiate tasks or make decisions without excessive advice and reassurance from others.

High levels of interpersonal dependency are associated with a predictable array of personality traits including conformity, compliance, suggestibility, introversion, insecurity, interpersonal yielding, and low self-esteem. Among the psychological disorders most commonly found in people with pathological dependency are depression, anxiety disorders (especially social phobia and agoraphobia), and eating disorders (i.e., anorexia and bulimia). Contrary to clinical lore, high levels of pathological dependency do not predispose people to chemical dependency. In fact, studies show that in most cases increases in dependent attitudes and behaviors follow, rather than precede, the onset of addiction.

Although about 30 percent of the variance in level of both interpersonal and pathological dependency is attributable to genetic factors (presumably inherited differences in infantile temperament), parenting plays a key role in the etiology of dependent personality traits. Two parenting styles are particularly important in this context. First, overprotective parenting is associated with high levels of dependency in offspring. In addition, authoritarian (i.e., rigid, inflexible) parenting leads to high levels of dependency later in life. Both parenting styles lead to increased dependency because overprotective and authoritarian parents inadvertently teach children to look to others for guidance, protection, and support, and accede to others' demands without question.

Most psychologists conceptualize dependent personality traits as consisting of four major components: (1) cognitive (a perception of oneself as vulnerable and weak, coupled with the belief that other people are comparatively powerful and potent); (2) motivational (a strong desire to obtain and maintain nurturant, supportive rela-

tionships); (3) emotional (fear of abandonment and fear of negative evaluation by others); and (4) behavioral (use of various self-presentation strategies to strengthen interpersonal ties). Among the self-presentation strategies most commonly associated with dependency in adults are supplication (appearing weak to elicit caregiving responses from others), and ingratiation (performing favors to create a sense of indebtedness in others). However, when these more common interpersonal strategies prove ineffective, people with pathological dependency may resort to intimidation (e.g., breakdown threats, suicide gestures) in a desperate attempt to preclude abandonment.

Although the cognitive, motivational, emotional, and behavioral features of dependency are relatively stable over time and across situation, dependency is expressed in different ways at different ages. During childhood dependency needs are directed primarily toward parents and other authority figures (e.g., teachers, coaches), but in adolescence the target of dependency strivings often shifts to the peer group. During early and middle adulthood dependency strivings are expressed most commonly around romantic partners, friends, supervisors, and colleagues at work; later in life dependency needs tend to be directed toward caregivers as well as romantic partners and peers.

CONSEQUENCES, FACTORS

Despite the fact that dependency in adults is usually regarded as a sign of weakness, dysfunction, and immaturity, dependent personality traits are actually associated with both positive and negative consequences. On the negative side, dependent people tend to overuse health and mental health services, react strongly to even minor relationship conflict, and have difficulty assuming leadership positions. On the positive side, however, dependent people delay less long than nondependent people in seeking medical help following symptom onset, are skilled at deciphering subtle verbal and nonverbal cues, and perform well in collaborative tasks when provided with adequate structure.

On questionnaire and interview measures of interpersonal and pathological dependency women tend to obtain higher scores than men do. These gender differences in self-reported dependency begin by mid-childhood and persist through late adulthood. A very different pattern is obtained when projective measures (e.g., the Rorschach Inkblot Test) are used to assess dependency: When these more subtle measures are administered women and men obtain comparable dependency scores. It appears that women and men have similar levels of underlying dependency needs (as reflected in comparable scores on projective dependency tests). However, men are less willing than women to acknowledge these needs in interviews and on questionnaires.

Like gender, culture affects the expression of interpersonal dependency, with individuals raised in sociocentric cultures (i.e., cultures that emphasize interrelatedness over individual achievement) showing higher self-reported dependency than individuals raised in individualistic cultures (which typically emphasize individuation and achievement over interpersonal connectedness). Studies further suggest that when individuals immigrate and gradually become acculturated to a new society, dependency levels tend to increase or decrease in accordance with the norms and values of that society.

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DEPENDENCY THEORY

In the early 1950s, a group of economists stationed at the United Nations Economic Commission for Latin America (ECLA) in Santiago, Chile, launched a rigorous research program around one pressing question: What accounts for the growing divergence in living standards and gross domestic product (GDP) between the wealthy countries of the industrialized North and the poorer developing countries of the South? In 1850, for example, Argentina was among the richest nations of the world and GDP per capita in Latin America was $245, compared to $239 in North America. A century later, Argentina was mired in debt and poverty, and GDP per capita in Canada and the United States had quickly outpaced that of Latin America as both had firmly joined the ranks of the developed-country bloc.

According to neoclassical economic theory, strong trade and investment linkages between North and South should lead to a positive-sum outcome for all participants. However, by the 1950s it was difficult to ignore the widening global cleavages between North and South, as well as the growing gap between rich and poor within the

developing countries. This latter trend, characterized by an uneasy coexistence between a modern urbanized sector of the economy with strong global ties and a largely rural traditional sector where production modes sorely lagged, was increasingly referred to as *dualism*. Both dualism and the North-South divide became the focus of conceptual debates and practical policy prescriptions for a new generation of dependency school theorists that emerged during the 1960s and 1970s.

At heart, most dependency theorists saw the problem of underdevelopment as the inherently exploitive and contradictory nature of the capitalist system, which pitted capitalists and workers against each other as both sought to maximize their respective economic well-being. The North, with its capital abundance and accumulation of wealth, was the oppressor, while the South, with its ready supply of cheap labor and vastly rich land and natural resources, was the oppressed. It was the external sector that perpetuated underdevelopment, as well as the various private (multinational corporations) and public entities (the World Bank, the International Monetary Fund, and industrial-bloc governments) that represented it.

Whereas the earlier diagnoses of ECLA had generated proposals for restructuring the developing world's economic relationship with the northern industrial bloc, the dependency school advocated assertive state intervention to promote the economic and political independence of the developing world vis-à-vis the North. Along with endorsing ambitious programs of import-substitution industrialization, the dependency school expanded the ECLA critique to include the urgent need for the underdeveloped South to overcome its dependence on the developed North through any variety of means, state intervention being one of these.

A RICH DEBATE

An initial wave of dependency thinking was triggered by the work of the Argentine economist Raúl Prebisch (1901–1986), director of his country's first central bank from 1935 to 1943 and subsequently the executive secretary of ECLA between 1949 and 1963. In Prebisch's classic 1949 treatise, *The Economic Development of Latin America and Its Principal Problems*, he introduced the idea of an industrial, hegemonic center and an agrarian, dependent periphery as a framework for understanding the emerging international division of labor between North and South. Prebisch argued that the wealth of poor nations tended to decrease when that of rich nations increased due to an unequal exchange of industrial versus agricultural goods in the North-South trading relationship. For the early structuralists, industrialization was considered a necessary step toward rectifying this pattern of unequal exchange and thus the most important objective in a development program.

From here, dependency theory quickly divided into diverse strands. Most notably, André Gunder Frank (1929–2005) adapted it to Marxism, as did Paul Baran (1910–1964), arguing that imperialism and the colonial legacy had left Asia, Africa, and Latin America in a highly disadvantageous position. Like Karl Marx (1818–1883), these theorists argued that economics was the main determinant of politics, and that social class should be the prime unit of analysis. Frank identified a "comprador class" of local southern elites whose interests and profits from this system of exploitation had become closely intertwined with their counterparts in the developed or metropolitan countries. For both Baran and Frank, this third world bourgeoisie was parasitic in nature, leaving it to workers and peasants to break with imperialism and move a given nation toward progress. While acknowledging the debilitating nature of these dual economies, others such as Ernesto Laclau criticized the Marxists for overlooking important distinctions between capitalist and precapitalist modes of production in the South. Given the tenacity of the latter, Laclau argued, it made no sense for dependency analysts to focus solely on capitalist modes of production as the linchpin for change.

Another key debate within the dependency school concerned the weight that should be given to domestic or international factors. In contrast to the hard-line Marxian viewpoint, which held that southern development could only be grasped by placing this process within its proper global historical context, Fernando Henrique Cardoso and Enzo Faletto (1935–2003) argued that it is the internal dynamics of the nation-state and not its structural location in the international division of labor that determines a country's fate. Cardoso and Faletto emphasized that external factors had different impacts across the developing world due to the diverse internal conditions (history, factors of endowment, social structures) inherent in each country. In contrast to Frank or Baran, they regarded the national bourgeoisie within dependent peripheral societies as a potentially powerful force for social change and economic progress.

There were other points of consensus among dependency theorists. First, most saw the problem of underdevelopment as deeply rooted in the colonial experience and subsequently perpetuated by a sophisticated set of transnational class linkages composed of political and military elites, powerful economic interests, multinational corporations, and multilateral institutions like the International Monetary Fund. Second, and in light of this cumulative historical legacy, dependency theorists saw the world economy as a functionally integrated whole in which a huge underdeveloped periphery of poor states,

and a semiperipheral group of partially industrialized developing countries, are dominated by the industrial-bloc countries that form the core. Third, the nature of economic interaction between these segmented markets is such that the peripheral and semiperipheral countries are stuck in a zero-sum game characterized by diminishing returns from trade and investment with the North.

Dependency theorists were most likely to part ways when it came to the practical political and economic policy prescriptions that flowed from this worldview. One main difference arose between those advocating that the development of the periphery could still be achieved by working within the confines of the capitalist system and those who saw the need for a complete rupture with the advanced capitalist powers and the pursuit of a state-planned socialist model. The former stance embraced a more dynamic and evolutionary view of economic development and the possibilities to achieve upward mobility within the capitalist framework; the latter saw the future of the underdeveloped periphery as locked into a static world economic system that had determined its fate since the sixteenth century and could only be rectified via outright revolution and the installation of a socialist economy.

EMPIRICAL CHALLENGES

Even as dependency theory flourished in Africa, Asia, and Latin America, the empirical validity for many of its presumptions was shaky at best. The more revolutionary brand of dependency thinking had been fueled by evidence of the region's robust growth during the first and second world wars, as demand boomed for the region's commodities. Although a unique set of historical circumstances, this wartime boom prompted some to call for a complete de-linking of North and South, the nationalization of major industries, and levels of protectionism akin to autarky. Chile and Peru proceeded along such lines in the early 1970s, but with fairly dismal results.

State planners and economic policymakers in Argentina, Brazil, and Mexico also subscribed to dependency thinking, but chose to work within the capitalist system. It was the track record in such countries that informed some of the main empirical hypotheses that underpinned the dependency model, for example the Prebisch-Singer hypothesis about the secular deterioration of the terms of trade and the Lewis-Nurkse hypothesis. These hypotheses refer to an international pattern of specialization that has the northern countries exporting manufactures among themselves while the southern countries send their primary products to the North, and thus suggest that a balanced growth strategy would be the ideal strategy for less-developed countries.

The dependency era was replete with ambitious state-led policies geared toward industrial modernization and the full exploitation of those endogenous endowment factors (land, labor, and rich natural resources) with which the developing countries had been blessed. Yet, by the end of this period, the international division of labor between North and South remained basically the same, as did the pattern of "unequal exchange" that that ECLA and dependency theorists alike had originally decried. That is, the South was still largely dependent on the import of increasingly expensive manufactured and technology-intensive goods from the North and the export of primary commodities plagued by volatile price trends in return.

Perhaps the biggest empirical challenge to dependency theory was the takeoff of the newly industrializing countries of East Asia in the 1970s. While Latin America seemed to be running in place with rising inflation, poverty, and debt, countries like Japan, Taiwan, and South Korea were proving that the seemingly hierarchical structure of the world economy was not structurally determined. Under a more pragmatic set of economic policies that combined state and market approaches, this smaller and much less-endowed group of Asian countries showed that it was possible to produce high growth with better income distribution and to do so by integrating more strategically into international markets for trade and investment. Strong leadership and sound economic institutions could, in fact, mitigate the external challenges inherent in the North-South divide.

A LASTING LEGACY

While few of the dependency school's theoretical assertions have stood the test of time, this perspective continues to offer a powerful description of the political and economic plight of the majority of countries that remain on the periphery of the world economy. A full understanding of the causal mechanisms and policy solutions for remedying underdevelopment may still be a long way off; however, the dependency school's specification of concrete problems like dualism, inequality, diminishing returns to trade, and the North-South divide have enriched debates about development and helped them to move forward.

SEE ALSO *Dual Economy; Harris-Todaro Model; North-South Models; Underdevelopment; Unequal Exchange*

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DEPOPULATION

Depopulation, or population decline, has become an especially relevant topic given that depopulation is projected to occur in most countries of the world during the twenty-first century. Despite the vast amount of attention paid to the phenomenon of overpopulation since the late 1960s (see Ehrlich 1968; Meadows, Randers, and Meadows 2004; Friedman 2005), declines in population are expected to occur in around fifty or more countries by the year 2050, according to the Population Reference Bureau, and in even more countries thereafter. Although the overall population of the world is projected to continue to grow, reaching around 9.1 billion by 2050 (according to the United Nation's medium-variant projection), a slowing of the rate of population growth is already under way, and a decline in the size of the population of the world could begin as early the middle of the twenty-first century. The region of the world most significantly impacted by depopulation is Europe. Between 2000 and 2005 at least sixteen countries in Europe had already experienced a decline in population. The largest net loss in population has occurred in Russia, with a decline of almost 3.4 million persons in the five years between 2000 and 2005.

For most of the world's countries, the reason for the net loss in population is sustained low fertility. In order for a population to be stationary (neither grow nor decline), the total fertility rates (TFRs) need to be at replacement level (2.1 children per woman) for an extended period of time, and the cohorts in the childbearing ages cannot be larger than those in other age groups. If there are large numbers of people in the parental ages, replacement level fertility alone will not result in depopulation. This is due to the phenomenon of what demographers refer to as "population momentum," which is the lag between the decline in total fertility rates and the decline in crude birth rates. This occurs when there are large numbers of women still in their childbearing years because of past high fertility. The United Nations reports that in the 2000–2005 period there were sixty-five countries with fertility rates below replacement levels. Fifteen of these had rates that were at extremely low levels (a TFR below 1.3). In 2006 the Population Reference Bureau reported that as many as seventy-three countries were experiencing total fertility rates below the replacement level (Population Reference Bureau 2006).

Many countries with relatively high TFRs experienced declines in their fertility in the late twentieth century. For example, the United Nations reports that of the thirty-five countries with a TFR of five or higher, twenty-two experienced declines in fertility between 1990 and 2005. These rates of fertility, which are lower than they were previously, coupled with low rates of mortality and immigration are responsible for population declines in the majority of countries projected to lose population. For a few countries, population decline is expected to occur even though their fertility rate is above replacement level. These countries, namely, Botswana, Lesotho, and Swaziland, are significantly impacted by the HIV/AIDS epidemic, leading to a net loss in population.

The depopulation of most of the countries in the developed world has significant economic impacts and implications. Major impacts will most likely be felt through population aging. As fertility declines, birth cohorts become progressively smaller. These smaller birth cohorts, coupled with increases in life expectancy, lead to an increasingly larger proportion of the population over the age of sixty-five and a smaller proportion of the population in the working age range. The United Nations reports that the period between 2005 and 2050 will see a doubling of the old-age dependency ratio (the ratio of the population aged 65 and over to the population aged 15 to 64, times 100) in developed countries, with this ratio growing from 22.6 to 44.4 (United Nations 2005). For many countries, health care and pension programs are ill-equipped to handle large increases in the numbers of elderly persons, who themselves will live longer than their predecessors.

The long-term effects of depopulation have prompted some countries to enact policies to encourage increases in fertility. These include financial remittances for each child born, liberal parental leave policies, and guaranteed child care and schooling for children. According to Michael Balter, writing in 2006, one of the most expansive and generous fertility policies has been enacted in Australia, where remittances per child have exceeded US$3,000. However, the effectiveness of these fertility incentives is hotly debated. Some argue that incentives are beneficial in easing the financial burdens caused by additional children, making families more willing to increase their childbearing. Others emphasize that

any increases due to these policies will be small. While financial resources may make it easier for families to pay for the children they already want to have, they are unlikely to raise fertility to the level necessary to stave off population decline.

As an alternative to policies that encourage fertility increases, some demographers suggest that imbalances in population age structure can be corrected through increases in immigration. Ben Wattenberg notes in *Fewer: How the New Demography of Depopulation Will Shape Our Future* (2004) that since most developing countries are still experiencing high birthrates and population growth, immigration originating from these countries can supplement small working age cohorts in other countries. While international migration may be beneficial in the redistribution of national populations, immigration policies encouraging immigration from developing countries remain the least favored policies of countries experiencing population declines.

SEE ALSO *Demography; Fertility, Human; Migration; Morbidity and Mortality; Overpopulation; Population Control*

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DEPRECIATION, CURRENCY

SEE *Currency Appreciation and Depreciation.*

DEPRESSION, ECONOMIC

There is an accepted statistical definition of a *recession*, developed by the National Bureau of Economic Research, as the period from the peak to the trough of a range of cyclical economic data including "real GDP, real income, employment, industrial production, and wholesale-retail sales" (Hall et al. 2003). On this formal definition, the United States experienced thirty-two recessions in the one and a half centuries from 1854 till 2001, or roughly one recession of about one and a half year's duration every five years. No such accepted statistical definition exists for the much more severe and infrequent phenomenon of a *depression*. At the minimum, depressions are recessions extended in either severity or duration; symptomatically, they are marked by financial crises and falling prices.

Figure 1 allows us to identify four periods since 1870 in which the United States has experienced the statistical symptoms of a depression: 1873–1878 (though real GDP rose slightly), 1892–1896, 1919–1921, and 1929–1938. In all four periods, output stagnated (and fell in per capita terms), prices fell, and money supply growth either ceased or became negative.

Similar events occurred roughly every two decades in the nineteenth century, with notable "financial panics" occurring in 1819, 1837, and 1857. A more recent instance of a depression in an advanced economy was Japan in the period from 1990 till 2005. The Great Depression was by far the most extreme such event, and most academic debate about the causes of depressions focuses upon it. However, debate about whether capitalism had an innate tendency toward either full employment or depression began at the dawn of economics.

The chief proponent of the full employment belief was Jean-Baptiste Say (1767–1832), whose proposition, which John Maynard Keynes (1883–1946) later paraphrased as "supply creates its own demand" (Keynes 1936, p. 18), became known as *Say's law*. Say argued that "every producer asks for money in exchange for his products, only for the purpose of employing that money again immediately in the purchase of another product" (Say [1821] 1967, p. 105). A supply of one good was thus simultaneously a demand for others of an equivalent total value, and in the aggregate, demand was identical to supply—though individual markets, including the labor market, could have deficient or excess demand, due to disequilibrium pricing. Where any individual market had more supply than demand, the solution was for the suppliers to lower their asking price. The solution to widespread unemployment was thus to reduce wages.

Despite the fact that Say's analysis proceeded from a subjective, utility-based theory of value, his macroeconomic arguments were accepted by David Ricardo

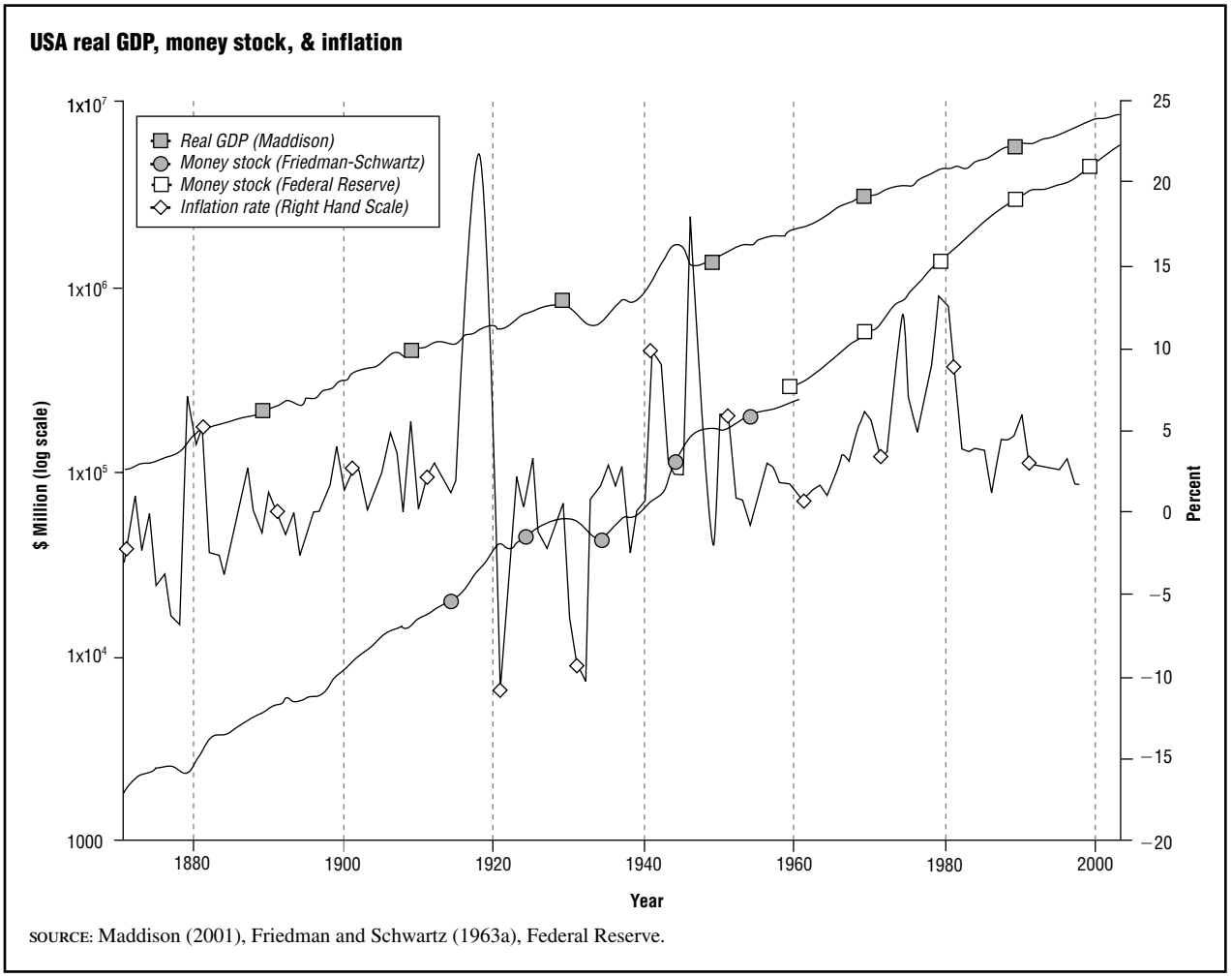

SOURCE: Maddison (2001), Friedman and Schwartz (1963a), Federal Reserve.

Figure 1

(1772–1823), who followed a classical theory of value. In contrast, Thomas Malthus (1766–1834) rejected Say's analysis, and, in modern terms, argued that either excessive investment due to overoptimistic expectations, or hoarding, could lead to a general slump.

The most systematic nineteenth-century argument for the possibility of a general slump was given by Karl Marx (1818–1883), who divided demand into two "circuits": the circuit of commodities *C-M-C'* and the circuit of capital *M-C-M+*. In the former, Say's law in general applied; but in the latter, the capitalist's aim "is not to equalize his supply and demand, but to make the inequality between them … as great as possible" (Marx 1885, pp. 120–121). Since aggregate demand was the sum of the two circuits, it was entirely possible for a "general glut"—or depression—to occur, if capitalist expectations of profit were depressed.

During the Great Depression itself, Keynes put forward an argument similar to Marx's (and in a 1933 draft of his 1936 *General Theory*, Keynes cited Marx directly [Dillard 1984, p. 424]). Dividing effective demand into consumption demand D_1 and investment demand D_2, he argued that the sum could be insufficient to employ "the supply of labour potentially available at the existing real wage" (Keynes 1936, p. 30).

Irving Fisher (1867–1947) introduced a financial interpretation of the tendency to depression in 1933. Though Fisher had earlier developed the equilibrium model of finance, the rejection of equilibrium analysis was pivotal to his "debt deflation theory of great depressions." It was, he argued, as absurd to assume that key economic variables were always at their equilibrium values as it was "to assume that the Atlantic Ocean can ever be without a wave" (Fisher 1933, p. 339).

Fisher argued that the Great Depression was caused by the confluence of two disequilibria: "over-indebtedness to start with and deflation following soon after" (Fisher 1933, p. 341). Excessive debt forced businesses to liquidate stock at distressed prices, leading to a fall in the price level that actually reduced the capacity to repay debt. This caused a "chain reaction" of further disturbances, including a decline in bank deposits, a fall in the velocity of circulation, unemployment, increased pessimism, an evaporation of investment, and "complicated disturbances in the rates of interest, in particular, a fall in the nominal, or money, rates and a rise in the real, or commodity, rates of interest" (Fisher 1933, p. 342).

The end product was *Fisher's paradox* that "the more the debtors pay, the more they owe" (Fisher 1933, p. 344): the real debt burden rose because of deflation, even though nominal debt had been reduced by debt repayment. Fisher asserted that private debt fell by 20 percent between 1929 and 1933, but real debt rose 40 percent because of the impact of four years of steeply falling prices. He argued that the only policy that could engineer an escape from a depression was reflation, and for that reason he strongly supported Franklin D. Roosevelt's New Deal.

The position that capitalism was innately stable, and that the Great Depression had been caused by government policy, was first put by Milton Friedman (1912–2006) and Anna Jacobson Schwartz. They claimed that the depression occurred because of deflationary policies pursued by the Federal Reserve that reduced the stock of money, and asserted that "the Federal Reserve at all times had power to prevent the decline in the money stock or to increase it to any desired degree, by providing enough high-powered money to satisfy the banks' desire for liquidity" (Friedman and Schwartz 1963a, p. 52).

Today, neoclassical analysis of depressions is dominated by real business cycle theory, which argues that any economic outcome is the result of the actions of rational agents in a stochastically uncertain environment. In this view, the Great Depression was either the result of optimal responses by rational agents to less-than-optimal government policies, or it was the product of a monetary or productivity shock (Prescott 1999). However, since real business cycle models presume that a market economy rapidly returns to equilibrium after a shock, the slow speed of recovery from the Great Depression needs an explanation. Most theorists argue that the downward inflexibility of money wages, combined with deflation, kept real wages above equilibrium for a substantial period.

The modern representative of the "innate tendency to depression" argument is the *financial instability hypothesis* (FIH) developed by Hyman Minsky (1919–1996). Fisher's debt-deflation hypothesis is one of its two pillars, the other being Joseph Schumpeter's (1883–1950) vision of capitalism as innately cyclical. The FIH argues that capitalist economies have a cyclical tendency to accumulate excessive debt, and depressions are a runaway process in which interest on existing debt overwhelms the economy's capacity to service debt.

There are thus two modern perspectives on the causes of depressions—neoclassical real business theory and the FIH—with fundamentally opposed analyses and policy prescriptions. Deciding which is right is therefore important, given that what one says will cure a depression, the other says will make it worse.

An essential premise of the neoclassical perspective is that the government controls the money supply. This not only makes the government a cause of depressions, but also gives it an easy means to overcome one. In the words of Federal Reserve Chairman Ben Bernanke, "If we do fall into deflation, however, we can take comfort that … sufficient injections of money will ultimately always reverse a deflation" (Bernanke 2002).

The FIH, on the other hand, argues that money is largely endogenous, so that attempting to increase liquidity by "the logic of the printing press" (Bernanke 2002) is, in effect, "pushing on a string." Strictly, monetary attempts to reflate out of a depression will, in this theory's view, probably fail. However, this model concurs that the government should attempt to maintain liquidity during a depression.

Since the neoclassical model sees sticky wages as part of the problem, its solution is to remove labor market institutions that prevent wages from falling sufficiently quickly. The debt-deflation model puts the contrary position that falling money wages will only lead to further falls in prices, which will exacerbate the problem of deflation. It recommends the opposite policy: that money wages should be increased to cause inflation and thus reduce the real debt burden.

Though neoclassical real business cycle theory dominates academic economics today, many papers in this tradition are candid about the empirical weakness of their models, with implausibly large productivity shocks or monetary reaction functions being required to fit the data. The Japanese depression of 1990 until 2005 also challenges the belief that deflation can be easily reversed by increasing base money. Very large changes in M1—at rates of up to 32 percent per annum—had little discernible impact on either the overall money supply (M2) or price levels (see Figure 2).

On this measure at least, the evidence appears to support the FIH perspective. However, given the dominant position of neoclassical analysis within economics, there is little doubt that, should a depression recur, the policies followed in the first instance will be neoclassical in nature.

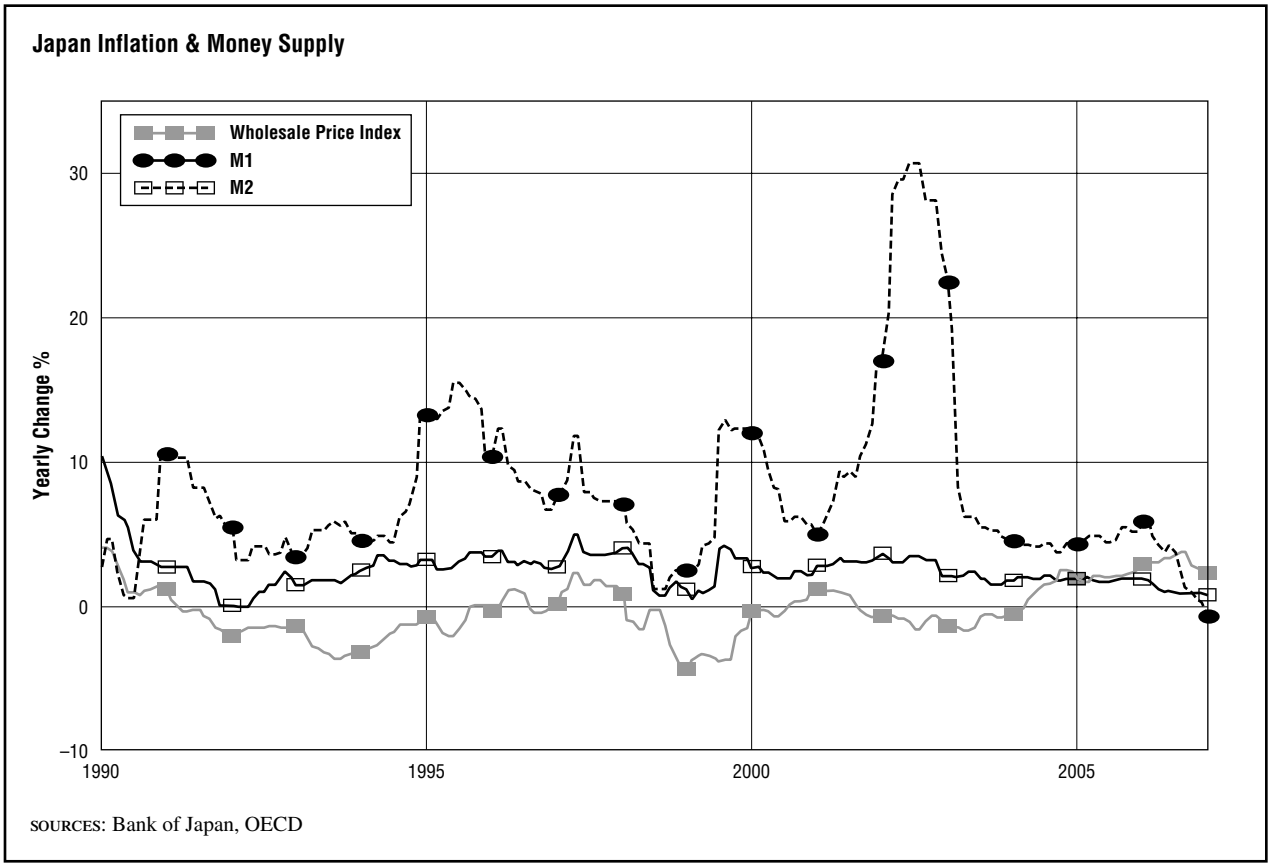

Figure 2

SEE ALSO *Business Cycles, Real; Business Cycles, Theories; Great Depression; Natural Rate of Unemployment; Recession; Say's Law; Stagflation; Stagnation*

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Steve Keen

DEPRESSION, PSYCHOLOGICAL

Depression is a common psychiatric disorder that places a great burden on society. Major depressive disorder (MDD) is defined by the American Psychiatric Association as characterized by dysphoric mood and/or loss of interest or pleasure in all or nearly all activities, plus at least four other symptoms (i.e., sleep problems, appetite disturbance, fatigue, psychomotor agitation or retardation, feelings of worthlessness or guilt, difficulty concentrating or making decisions, recurrent thoughts of death or suicide), that occur during most of the day, nearly every day, for at least two weeks and with significant impairment in social or occupational functioning. Dysthymic disorder (DD) lasts at least two years in adults (and at least one year in children and adolescents). It is defined by similar, although fewer, symptoms (i.e., depressed mood and at least two of the following: appetite problems, sleep disturbance, fatigue, low self-esteem, concentration difficulties, hopelessness).

Subtypes of MDD include atypical depression (characterized by weight gain and an increase in sleep and appetite), melancholic depression (characterized by pervasive loss of interest or pleasure, or lack of mood reactivity, and at least three of the following: distinct quality of mood, mood worse in the morning, terminal insomnia, psychomotor disturbance, significant appetite decrease or weight loss, excessive guilt) and cyclical depression (e.g., seasonal affective disorder).

Bipolar disorder is characterized by dramatic swings from depressive to manic episodes (e.g., elevated, expansive, or irritable mood) that last at least one week (four days for hypomania), or any duration if hospitalized, during which individuals experience at least three of the following symptoms (four, if mood is only irritable): inflated self-esteem, decreased need for sleep, pressured speech, racing thoughts, distractibility, increased goal-directed activity, or risky behaviors. These symptoms occur most of the day, nearly every day, with clinically significant impairment.

Depression also falls on a continuum of severity from sad mood to diagnosed depressive disorders. The subjective state of sadness by itself is not necessarily pathological, but when it occurs simultaneously with other symptoms it is referred to as a symptom complex or syndrome. A clinical syndrome is considered a distinct disorder when it has a specific course, outcome, etiology, and treatment response.

EPIDEMIOLOGY

In the United States, lifetime prevalence rates are 20.8 percent for any mood disorder; 16.6 percent for MDD; 2.5 percent for DD; and 3.9 percent for Bipolar. Lifetime prevalence rates of MDD differ by gender, with 21.3 percent reported for women and 12.7 percent for men; by age, with 0.3–2.5 percent reported for children, 15–20 percent for adolescents, and 10.6 percent for older adults; and by nation, with 1.5 percent reported in Nagasaki, Japan, and 27.3 percent in Santiago, Chile. In a given year in the United States, the incidence of MDD is 3.0 per 1,000 and the incidence of any mood disorder is 9.5 percent.

Depression is recurrent and often chronic. Median MDD durations range from 19 to 22 weeks in adults across multiple episodes, and mean durations range from 26 to 36 weeks in children and adolescents. Remission is defined as no longer meeting full criteria for a depressive episode. If another "episode" develops before two months pass with only minimal symptoms, it is considered a relapse (for predictors of relapse see Keller et al. 1983); if more than two months have elapsed, it is considered a recurrence (for predictors of recurrence see Keller and Bolland 1998).

ETIOLOGY

The etiology of depression involves the complex interplay of genetic, biological, personality, cognitive, interpersonal, and environmental factors. Kenneth Kendler's developmental model of MDD in women has identified an internalizing pathway (including neuroticism and early-onset anxiety disorders), an externalizing pathway (focusing on the role of conduct disorder and substance misuse), and an adversity pathway (e.g., disturbed family environment, childhood sexual abuse, parental loss), all of which might be anchored in genetic risk.

There is extensive evidence showing a link between stressful life events and the onset and maintenance of depression in both children and adults, although there is considerable variability in how different individuals respond to the same stressful event. Diathesis-stress theories focus on interactions among individual vulnerabilities and life stressors. Stress "activates a diathesis, transforming the potential of predisposition into the presence of psychopathology" (Monroe and Simons 1991, p. 406). A

wide range of genetic and psychosocial vulnerability factors have been identified with regard to depression. Avshalom Caspi and colleagues (2003), and others, have shown one such gene-environment interaction: a functional polymorphism in the promoter region of the serotonin transporter gene that moderates the influence of stressful life events on depression.

It is not clear how much variance in depression can be attributed to genetic factors. Twin studies conducted by Patrick Sullivan, Michael Neale, and Kenneth Kendler in 2000 found that 31 to 42 percent of the variance in liability to depression was explained by additive genetic effects, 58 to 67 percent by individual specific environmental effects, and a negligible 0 to 5 percent by shared environmental effects. In contrast, adoption studies have typically reported negligible genetic effects and evidence of small but significant shared environment effects.

A number of biological processes have been implicated in depressive disorders. As outlined by Michael Thase, Ripu Jindal, and Robert Howland in 2002, depressed individuals show neuroendocrine dysregulation in the form of abnormal hypothalamic-pituitary-adrenal (HPA) axis response to stress, hyposecretion of growth hormone (GH) in response to pharmacologic challenge, and neurochemical dysregulation, particularly in the serotoninergic and dopaminergic systems. Studies have also found that abnormal functioning of the prefrontal cortex-limbic-striatal regions, reduced prefrontal volume, and hippocampal abnormalities are associated with depression (see Davidson et al. 2002).

Personality, defined as an individual's characteristic pattern of thinking, feeling, behaving, and relating to others, has long been linked with depression, and it may moderate the effect of stress on depression. The personality trait of negative emotionality (NE), defined as the propensity to experience negative emotions (e.g., anxiety, fear, sadness, anger), has been particularly associated with depression. Related constructs include negative affectivity and neuroticism.

Cognitive models of depression assert that individuals who have negative beliefs about themselves, the world, and their future, and who have a tendency to make global, stable, and internal attributions for negative events, are more likely to become depressed when confronted with stressors than are individuals without such negative beliefs. Evidence consistent with the cognitive-stress interaction has not been found prior to late childhood or early adolescence around the time when children are developing abstract reasoning and formal operational thought.

Interpersonal vulnerability to depression is characterized by impaired social skills, interpersonal dependency, and social inhibition. The relation between interpersonal difficulties and depression is most likely reciprocal and transactional. Some depressed individuals engage in excessive reassurance-seeking from others concerning their worth and lovability. This behavior may provoke frustration and irritation in others, thereby eroding social support and generating increased stress. The centrality of social ties in relation to depression has received considerable empirical support, and such ties may play a role in gender differences in the rates of depression that begin to emerge during adolescence.

INTERVENTION

Pharmacotherapy is the most common approach to the treatment of depressive disorders. Meta-analyses of randomized controlled studies indicate that serotonin and noradrenaline re-uptake inhibitors (SNRIs) demonstrate superior efficacy over selective serotonin re-uptake inhibitors (SSRIs), which in turn present with different side-effect profiles and superior general tolerability compared to tricyclic antidepressants (TCAs). In depressed youth, fluoxetine, an SSRI, has been found to perform significantly better than a placebo. Patients with bipolar disorder are frequently treated with mood stabilizers such as lithium, valproate (Depakote), or lamotrigine (Lamictal).

Cognitive-behavioral therapy (CBT) is one of the most effective psychosocial treatments for depression. In CBT, individuals are taught to modify negative thought patterns, realistically evaluate the accuracy of their beliefs, and develop problem-solving and coping skills (see Beck et al. 1979). In a 1999 mega-analysis of data from several treatment studies, Robert DeRubeis and colleagues found that cognitive therapy was as effective as medications in the treatment of more severely depressed adult patients. Although medications can be quite effective in reducing acute symptoms of depression, they do not reduce the risk of subsequent depressive episodes once their use is discontinued. In contrast, cognitive therapy has been shown to have an enduring effect following successful treatment. In adolescents, a large clinical trial yielded favorable results for CBT compared to supportive or family therapy (see Brent et al. 1997). The Treatment for Adolescents with Depression Study (TADS 2004) found that at the 12-week assessment CBT alone did not fare as well as medications (fluoxetine) alone or medications in combination with CBT. However, the difference between CBT and medications alone was no longer present by the 18-week assessment.

Interpersonal psychotherapy (IPT) for depression addresses problems associated with role transitions, grief, interpersonal deficits, and interpersonal disputes. In studies with depressed adults, IPT has performed better than treatment as usually provided in the clinic, or placebo, although not better than cognitive therapy or tricyclic

antidepressant medications with and without IPT (see Shulberg et al. 1996). An adaptation of IPT for use with depressed adolescents has been found to be efficacious (see Mufson et al. 1999).

Studies aimed at preventing depression have shown positive, albeit modest, effects. Universal prevention programs, which target all members of a population, have not been found to be as effective as selective programs targeting individuals at risk or indicated programs targeting individuals who are already showing symptoms but do not have the full disorder. Although evidence is growing that depression can be prevented, the effects have tended to be relatively short-lived. Future research needs to develop and test interventions that have more enduring preventive effects. It is also important to identify who is most likely to benefit from which type of intervention, as well as the mechanisms through which such programs work.

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Matthew C. Morris

DEREGULATION

Throughout most of the twentieth century, advanced industrialized nations embraced a notion of the state as being an agency of the "common good," as overarching and mediating the sectional and competing interests of civil society. The material underpinning of this discourse was the failure of private corporations to maintain an adequate provision of public goods through the market as well as the general belief that firms, if left unfettered, might conduct their business at the expense of the "public interest." In order to protect citizens and consumers, therefore, the state undertook the direct administration and provision of certain public goods—such as defense, the rule of law, various aspects of education, health, water supply, and electricity—through the planning of investment and the allocation of resources. Markets for private goods, in turn, were subjected to regulations with regard to product quality, safety, and other attributes.

During the last two decades of the century, however, it became clear that the state was embedded in a global capitalist system, and that its autonomy to engage in regulation and provision had become constrained by the logic and dynamics of that system. State regulation and planning ultimately resulted in an increasingly severe fiscal crisis, with rising public expenditures and debts, persistently high levels of inflation, and weak balances of payment. Governments were forced to reassess their approach, and they started to embrace the emerging doctrine of neoliberal economic and social theory.

NEOLIBERAL THEORY

Neoliberal economics is premised upon a conception of the individual as a rational utility-maximizing consumer. Neoliberal proponents argue that when consumers spontaneously and impersonally interact in the market, the result is both individual liberty and economic efficiency. The market, which has no ends or purposes, allows individuals to incorporate their consumption into a personal

plan that spontaneously produces the optimum allocation of social resources.

The resultant neoliberal restructuring of the state was an attempt to realign both the state and international capital by depoliticizing decisions about the allocation and provision of services. This has involved the privatization of some sectors of the economy, a redefinition of the concept of public services, and the gradual removal of restrictions on businesses. The stated rationale was that fewer regulations would lead to greater competitiveness, and therefore to higher productivity and efficiency, and to lower prices for consumers.

MARKET FAILURES AND RE-REGULATION

However, various high-profile failures of deregulation—such as the savings and loans crisis in the United States in the 1980s and the California electricity crisis at the end of the 1990s—brought home the point that consumers and citizens require protection from various forms of market failure, such as:

1. negative externalities, which occur when the socially optimal output diverges from the private optimum, as is the case with environmental pollution;
2. monopolies, which occur when an entity's market power prevents competition, and therefore allows higher prices to be charged at lower output than is feasible in a competitive market, producing a net economic welfare loss, allocative inefficiency, and a Pareto suboptimal equilibrium;
3. instances in which some public goods may not be provided by the free market at all because of their characteristics of nonexcludability and nonrivalry;
4. inequality, which occurs when differences in income and wealth restrict some members of society from accessing vital goods and services.

Strengthened regimes of re-regulation were developed as a result of these concerns. If regulation can reduce prices below monopoly levels and provide a remedy for other market failures without compromising new entry, competition, choice, innovation, and other long-term attributes of a competitive market, then the case for it is compelling, at least during the transition to a competitive market. Examples include pollution taxes to correct for externalities; taxation of monopoly profits (the "windfall tax"); regulation of oligopolies and cartel behavior; continued and direct provision of some public goods (e.g., defense; law and order); subsidies; product and safety regulations; the specification of output levels and quality; and price controls.

CRITICISMS

Regulation creates questions about the extent to which it actually works in the public interest. The specification of what the optimum regulatory solution should be is insufficient if not supplemented by a theory of the behavioral motivations underlying both regulators and those regulated. The "capture model," for example, argues that actors' respective self-interests will produce a regulation policy that maximizes their joint interest in stable and predictable outcomes, but that may also be skewed toward the monopoly solution that regulatory policy is seeking to prevent in the first place.

In addition, regulators may not have sufficiently precise information about the cost structure and consumer responsiveness to price changes to be able to properly set output and prices in a given industry. Regulators are therefore dependent upon those regulated to provide them with basic information, a situation that may create opportunistic behavior in the resultant interaction process. The challenge, then, is well known from other areas of the social sciences and is generally referred to as the principal-agent problem, namely how best to design a system of contracts that motivates the regulatees to act in the interest of the regulators—within the constraints of imprecision, lack of observability, bounded rationality, and asymmetric strategic moves.

SEE ALSO *Antitrust; Antitrust Regulation; Equality; Pareto Optimum; Privatization; Public Goods; Taxation*

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Dirk Haubrich

DERRIDA, JACQUES
1931–2004

Jacques Derrida was one of the most original and influential French philosophers in the contemporary world. He was born in Algeria on July 15, 1931, to a Sephardic Jewish family. He moved to France in 1949 and studied in Paris at the École Normale Supérieure, where he wrote his dissertation on Edmund Husserl's genetic phenomenology (*Le Problème de la genèse dans la philosophie de Husserl*

[The Problem of Genesis in Husserl's Philosophy], 1953–1954). In the 1960s Derrida published major works concerned with the limitations of phenomenological and structuralist thought in the human sciences. Prior to his death, he was the director of studies at the École des Hautes Études en Sciences Socialies in Paris and professor of humanities at the University of California, Irvine. Derrida died on October 8, 2004.

Derrida is today universally recognized as the leading figure in the field of poststructuralist thought designated by the term *deconstruction*. He is typically referred to as the most prominent critic of Western metaphysics (understood as a universal discourse that is foundational, subject-oriented, and logocentric); he is also frequently described as an antihumanist, a postphenomenologist, and the founding father of the discipline of grammatology. His early writings are best represented by three key texts: *La Voix et le phénoméne* (Speech and Phenomena), *De la Grammatologie* (Of Grammatology), and *L'Écriture et la différence* (Writing and Difference), all published in 1967. These works were the first to circulate the poststructuralist themes of the role of *différance*, textuality, and writing in all systems of meaning (and thereby to set into play wider currents of research in disciplines concerned with the dynamic characteristics of texts, writing, and cultural dissemination).

Derrida is particularly noted for questioning the unity, direction, and stability of traditional philosophical discourse. Yet thematically his major writings have all been concerned to advance careful readings and interpretations of the texts of major figures in both ancient and modern philosophy, including Plato (427–347 BCE), Immanuel Kant (1724–1804), Jean-Jacques Rousseau (1712–1778), G. W. F. Hegel (1770–1831), Edmund Husserl (1859–1938), Martin Heidegger (1889–1976), and Sigmund Freud (1856–1939). These writings are supplemented by analyses of such "nonphilosophers" as Samuel Beckett (1906–1989), Maurice Blanchot (1907–2003), George Bataille (1897–1962), and Jean Genet (1910–1986), among other important literary figures. Derrida reads all of these texts as complex intertextual "objects" saturated with indeterminate meanings, ambivalent oppositions, and "undecideable" interpretations.

For many readers in the analytic or Anglophone tradition of philosophical thought, Derrida is a subversive relativist, a nihilist word-player who has largely abandoned the pursuit of rational criticism to embrace a form of negative and playful experiment with words and their indefinite allusions and meanings. Derrida's pantextualism was notoriously symbolized by his claim "*Il n'y a pas de hors-texte*," usually translated as "There is nothing outside of the text," but perhaps more literally expressed as "There is nothing outside of text" (a declaration that Derrida later reformulated to "*Il n'y a pas de hors contexte*," or "There is nothing outside of context"). On this reading, Derrida is frequently grouped with other "enemies of reason" as an irrationalist or even a nihilist. In this interpretation, the terms *deconstruction* and *deconstructionist* have been used as derogatory expressions designed to define deconstruction as a method of literary criticism rather than serious philosophy (an approach that remains oblivious to the fact that Derrida spent a lifetime of painstaking reading and commentary with the objective of questioning and deconstructing this type of binary opposition).

Despite such one-sided interpretations, what has come to be called *deconstructive studies* has had a major impact upon contemporary philosophy, literary theory and criticism, sociology, educational practices, media, and cultural studies. One of the first intellectual traditions to assimilate Derrida's work was the Yale school of literary criticism, struggling to elaborate forms of reading and interpretation richer than the available models of new criticism. In this context, we can mention the work of Paul de Man (1919–1983), Harold Bloom, Geoffrey Hartman, and J. Hillis Miller. Following Derrida's lead, these critics have radically questioned the nature of literary "meaning," "authorship," and "authorial intentionality" by uncovering the metaphysical presuppositions and binary oppositions that have structured the methods of traditional textual analysis and interpretation. In generalizing deconstruction from texts narrowly conceived in literary-critical terms to the "general text" of social life, we have come to see that all theory and research in the human sciences is inextricably involved in complex questions of language and interpretation.

In his later work, Derrida turned to a range of problems linked with contemporary social and political life. His writings became increasingly preoccupied with urgent ethical and political problems of European integration, immigration and the treatment of "asylum seekers," and questions of friendship and otherness in an increasingly borderless, cosmopolitan world order. His books *Of Hospitality* (2000), *On Cosmopolitanism and Forgiveness* (2001), and *The Work of Mourning* (2001) are indicative of these themes.

While Derrida's work has profoundly changed the practice of philosophical analysis, literary theory, and other textual sciences, perhaps his most long-lasting impact lies in the turn toward ethical and political issues that has transformed the intellectual landscape of what passes for the theory and practice of the human sciences, the arts, and philosophy.

SEE ALSO *Critical Theory; Ethics; Literature; Narratives; Philosophy; Postmodernism; Poststructuralism*

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Barry Sandywell

DE SAUSSURE, FERDINAND

SEE *Anthropology, Linguistic; Semiotics.*

DESCRIPTIVE STATISTICS

Descriptive statistics, which are widely used in empirical research in the social sciences, summarize certain features of the data set in a study. The data set nearly always consists of lists of numbers that describe a population. Descriptive statistics are used to summarize the information in the data using simple measures. Thus, descriptive statistics can help to represent large data sets in a simple manner. However, an incautious use of descriptive statistics can lead to a distorted picture of the data by leaving out potentially important details.

THE HISTOGRAM

Descriptive statistics take as a starting point observations from a population. So suppose we have observed $n > 1$ draws from a population, and let $[x_1, \ldots, x_n]$ denote these observations. These observations could, for example, be a survey of income levels in n individual households, in which case x_1 would be the income level of the first household and so forth. One way of doing this is through the distribution of the data that gives a summary of the frequency of individual observations. The distribution is calculated by grouping the raw observations into categories according to ranges of values. As a simple example, Table 1 reports the distribution of a data set of income levels for 1,654 households in the United Kingdom. The data set has been grouped into five income categories. These categories represent income in U.S. dollars within the following ranges: \$0–\$700; \$701–\$1,400; \$1,401–\$2,100; \$2,101–\$2,800; and \$2,801–\$3,500. The second row in Table 1 shows the number of households in each income

Distribution of weekly salaries

Weekly salary ($)	0–700	701–1400	1401–2100	2101–2800	2801–3500
Number of households	1160	429	41	17	7
Percentage of households (%)	70.13	25.94	2.48	1.03	0.42

SOURCE: UK Family Expenditure Survey, 1995.

Table 1

range. The corresponding frequencies are found by dividing each cell with the number of observations; these are given in the third row.

One can also present the frequencies as a graph. This type of graph is normally referred to as a *histogram*. The frequencies in Table 1 are depicted as a histogram in Figure 1.

SUMMARY STATISTICS

An even more parsimonious representation of the data set can be done through summary statistics. The most typical ones are measures of the center and dispersion of the data. Other standard summary statistics are *kurtosis* and *skewness*.

The three most popular measures of the center of the distribution are the *mean*, *median*, and *mode*. The mean, or average, is calculated by adding up all the observed values and dividing by the number of observations:

$$\bar{x} = \frac{x_1 + \ldots + x_n}{n} = \frac{1}{n}\sum_{i=1}^{n} x_i .$$

The median represents the middle of the set of observations when these are ordered by value. Thus, 50 percent of the observations are smaller and 50 percent are greater than the median. Finally, the mode is calculated as the most frequently occurring value in the data set.

The dispersion of the data set tells how much the observations are spread around the central tendency. Three frequently used measures of this are the *variance* (and its associated standard deviation), *mean deviation*, and *range*. The variance (VAR) is calculated as the sum of squared deviations from the mean, divided by the number of observations:

$$VAR = \frac{1}{n}\sum_{i=1}^{n} (x_i - \bar{x})^2$$

The standard deviation (SD) is the square-root of the variance: $\sqrt{VAR}$. The mean deviation (MD) measures the average absolute deviation from the mean:

$$MD = \frac{1}{n}\sum_{i=1}^{n} |x_i - \bar{x}|$$

The range is calculated as the highest minus the lowest observed value. The range is very sensitive to extremely large or extremely small values, (or outliers), and it may, therefore, not always give an accurate picture of the data.

Skewness is a measure of the degree of asymmetry of the distribution relative to the center. Roughly speaking, a distribution has positive skew if most of the observations are situated to the right of the center, and a negative skew if most of the observations are situated to the left of the center. Skewness is calculated as:

$$SKEW = \frac{m_3}{SD^3},\ m_3 = \frac{1}{n}\sum_{i=1}^{n} (x_i - \bar{x})^3$$

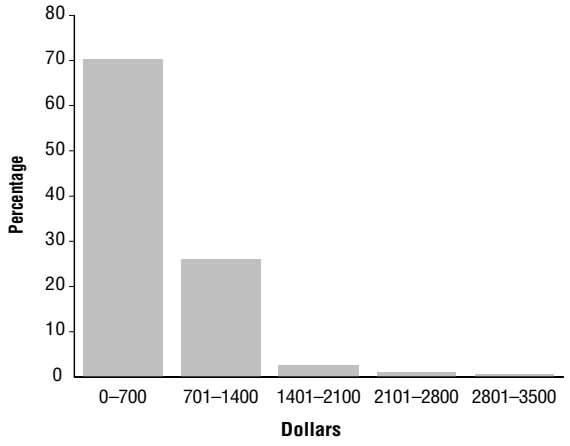

SOURCE: UK Family Expenditure Survey, 1995.

Figure 1

Kurtosis measures the "peakedness" of the distribution. Higher kurtosis means more of the variance is due to infrequent extreme deviations. The kurtosis is calculated as:

$$KURT = \frac{m_4}{SD^4},\ m_3 = \frac{1}{n}\sum_{i=1}^{n}(x_i - \bar{x})^4$$

SEE ALSO *Mean, The; Mode, The; Moment Generating Function; Random Samples; Standard Deviation*

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DESEGREGATION

Segregation can be both voluntary and involuntary, forced and by mutual agreement. When segregation results in exclusion from public goods, rewards, and privileges, or when segregation results in stigmas, then a violation of the basic conditions of democracy is evident. When such segregation occurs along racial lines, it becomes racial segregation. When racial segregation is operant across major social institutions, it is considered institutional racism.

Efforts in the United States since the mid-twentieth century have been aimed at reversing racial segregation. These efforts, labeled *desegregation*, are political processes that make use of civil protest, litigation, and economic sanctions to eliminate racial segregation. Racial segregation, both de jure and de facto, has historically served to restrict access to education and training, economic and political institutions, occupational and social mobility, religious and social institutions, and neighborhoods and transportation facilities. Within the United States, most desegregation activity has focused on educational institutions, public accommodation, and the military.

While many cite the 1954 Supreme Court decision in *Brown v. Board of Education of Topeka* as the beginning of desegregation, in actuality desegregation reflects a process that continues into the twenty-first century. The *Brown* decision, by striking down legal segregation on the basis of race in public schools, reversed the Supreme Court's 1896 decision in *Plessy v. Ferguson*.

DESEGREGATION IN EDUCATIONAL INSTITUTIONS

Throughout history, one of the primary tactics of exploitative systems was control of access to education. Some of the first laws aimed at controlling Africans during the slavery era prohibited or restricted educational access. These laws, which carried harsh sanctions, denied educational access not only to slaves but to freed Africans as well. The same method was used to keep European women, Native Americans, Chinese, and others in subordinate positions. It is no wonder that one of the major features of the various civil rights movements has been directed at dismantling segregated or restricted access to educational institutions.

Although many thought the Civil War (1861–1865) and the associated constitutional amendments would resolve the issue of segregation in the United States, the *Plessy v. Ferguson* ruling actually mandated it. Within months after this historic ruling, seventeen southern states began to implement sets of laws—known as *Jim Crow* or *de jure segregation*—that formalized and legitimized racial segregation in most institutional spaces. Among these were laws that established "separate but equal" educational facilities. While often lacking specific legislation, the North accomplished the same effect through what has been termed *de facto segregation*.

The 1954 *Brown v. Board of Education* ruling, with its aim to end school segregation, struck at the heart of the system of racial entitlements in the United States. Nothing less then a revolution was envisioned. As pointed out by Gary Orfield and Susan Eaton (1996), integration did not represent a magical process in which simply situating whites and blacks in the same room would end centuries of discrimination. Rather, it recognized that white dominance had been engineered through exclusive control of select schools. Ending this dominance and making such schools available to all would serve to remove the racial stigma and victimization of blacks, provide black Americans access to other major institutions, and level the playing field, thereby assuring equality and freedom. The Supreme Court ruled that racially segregated schools did indeed perpetuate racial stigmas among blacks, and that such schools were therefore inherently unequal. Yet, in striking down *Plessy*, the Supreme Court decided ambiguously that integration should take place "with all deliberate speed."

"All deliberate speed" has been described as simultaneously placing the country's feet on both the accelerator and the brake. Throughout the South, a multitude of strategies were instituted to delay, divert, or otherwise circumvent the *Brown* ruling. In 1956 advocates of segregation were successful in convincing Virginia's governor and state assembly to pass laws blocking the funding of school

integration. One of the most striking anti-integration efforts occurred in 1957 when Arkansas governor Orval Faubus (1910–1994) ordered the state's national guard to block the doors to Little Rock's Central High School, preventing nine black teenagers from entering. Only after President Dwight Eisenhower (1890–1969) sent federal troops to the site were the nine students allowed to attend the school. Other states were equally creative. Prince Edward County in Virginia decided to close all of its public schools rather than integrate them. Lawsuits filed on behalf of blacks throughout the South filled the courts. More definitive court rulings ensued, but the road to integration was fraught with many obstacles.

A decade after the *Brown* decision, southern schools remained 98 percent segregated. Continual agitation on the part of blacks led to the 1964 Civil Rights Act. Thereafter, courts prescribed more immediate and encompassing integration efforts. Starting in 1966 with *United States v. Jefferson County Board of Education*, the Fifth Circuit Court not only ordered integration but also remedies to redress historical segregation. In *Green v. County School Board of New Kent County* (1968), the U.S. Supreme Court ordered schools to provide immediate integration. Similar court rulings, aggressive enforcement by the federal government, and the vigilance of southern blacks eventually led to the racial transformation of schools in the South. By 1970, slightly more than 45 percent of black youths in the South attended integrated schools. Frustrated, however, with the slow pace of integration, in 1971 the Supreme Court ordered a massive urban desegregation plan in *Swann v. Charlotte-Meklenburg Board of Education*. In this plan, with the aid of busing, the first district-wide school desegregation order was provided. Busing, as it came to be known, became a very controversial tool to achieve integration.

Busing and forced integration generated considerable fear among many white Americans. This fear resulted in "white flight" (i.e., when whites leave typically urban areas to avoid living in proximity to blacks), and it fueled a conservative backlash against desegregation efforts. During the 1970s, some Republican politicians, such as Richard Nixon (1913–1994), would ride the waves of this backlash all the way to the White House and control of both houses of Congress. These conservative forces also oversaw the first set of reversals. By 1974 in *Milliken v. Bradley*, the Supreme Court blocked a Detroit area busing plan. In this and subsequent cases, the courts ruled that local decisions regarding school integration should be respected.

As segregation was challenged in the North, the Supreme Court would institute even more radical moves, inaugurating the era of busing, teacher integration, gradual integration, and magnet schools. Although partial success may be claimed, more than fifty years after *Brown*, little progress has been made toward the racial integration of America's school system. White flight, private schools, and the more recent voucher movement have all served to preserve racial segregation in schools.

DESEGREGATION IN PUBLIC ACCOMMODATIONS

Access to public space and private dwellings has long been disputed terrain in the United States. Property and the access to property has been the determinant not only of status, but also of political and social rights and privilege. In the United States, the rights to vote, hold political office, and seek legal recourse were all initially reserved for those who owned property. Thus, the first sets of laws aimed at controlling blacks included laws that not only declared them property but also restricted their ownership rights.

The battle to gain access to the totality of American liberties would be incomplete without access to public accommodations. Black Americans pinned their hopes of total freedom on the Thirteenth, Fourteenth, and Fifteenth Amendments to the U.S. Constitution, which together granted them full citizenship. In *Plessy v. Ferguson*, the Supreme Court declared that black Americans would retain the stigma of race and second-class citizenship, and be denied even basic access to public accommodations. This ruling, more than any other single action, led to the dissolution of good will, the dismantling of postwar Reconstruction, and the wholesale creation of the extensive apparatus of Jim Crow segregation under the misbegotten rubric of "separate but equal." It would take almost a half-century, several hundred lynchings, and countless court cases before *Plessy* would be overturned.

The 1964 Civil Rights Act put an end to segregated lunch counters, hotels, trains, buses, and theaters. This legislation owes its enactment to the courage and determination of many who became heroes of the modern civil rights movement. One such hero was Rosa Parks (1913–2005), who on December 1, 1955, challenged the whites-only Jim Crow laws of Montgomery, Alabama, by refusing to give her seat on a bus to a white patron. Her courageous action launched the modern civil rights movement.

On February 27, 1960, four black college students in Greensboro, North Carolina, defied the laws of segregation by sitting down at a whites-only Woolworth's lunch counter and requesting service. Although they were not served, their defiance sparked similar acts in over one hundred American cities throughout the 1960s. In 1961 civil rights activists known as "Freedom Riders" began to protest the whites-only policies in public bathrooms and buses. In May 1961 thirteen Freedom Riders, white and black, left Washington, D.C., in two buses heading south.

Riders on the first bus were attacked by pipe-toting men in Anniston and Birmingham, Alabama. The second bus was fire-bombed just outside of Anniston. Undaunted, sit-ins, freedom rides, and other forms of protests compelled a reluctant Congress and president to pass and sign into law the 1964 Civil Rights Act.

DESEGREGATION IN MILITARY INSTITUTIONS

Black Americans have consistently put their lives on the line in defense of their country. However, their service was for many years dismissed, isolated, and segregated. Notwithstanding the valor of such revolutionary-era heroes as Crispus Attucks, a patriot killed by British soldiers in Boston in 1770, General George Washington in 1775 officially barred blacks from serving in the Continental Army. This order, reflecting the legal view of many in the colonies, was followed by the 1792 Congressional Act, which barred blacks from serving in state militias. Congress also prohibited the Marine Corps from its inception in 1798 from recruiting blacks.

Ironically, the First Rhode Island Regiment, formed in 1778, was composed almost entirely of former black slaves. Furthermore, unlike the Continental Army, the Continental Navy recruited heavily among blacks, both free and slave. These sailors, sought for both their skills and to fill major gaps, served with distinction throughout the revolutionary period. Late in the Revolutionary War (1775–1783), in response to British recruitment among slaves, Washington reluctantly eased the ban on the recruitment of slaves. These blacks, however, served in segregated regiments under white officers.

Although blacks have served with distinction and honor throughout American history, their service was typically ignored and downplayed. The U.S. military remained segregated until shortly after World War II (1939–1945), when President Harry S Truman's (1884–1972) Executive Order 9981 (1948) called for the end of racial segregation in the armed forces. It was not until war broke out in Korea in 1950, however, and the United States faced heavy casualties that the military decided to act upon this order and create the first racially integrated units.

By 2006, with African Americans filling over seven thousand officer posts and composing 20 percent of all service personnel, the military represents the most desegregated institution in the United States. Finally, while blacks do serve in significant numbers at all levels in the military, their service tends to be restricted to noncombat and communications roles. For example, black service members make up less then 3 percent of the pilots, tank commanders, and special forces personnel. Thus, although the U.S. military is formally integrated, nominal segregation by training, specialty, and duty remains the rule.

DESEGREGATION OUTSIDE OF THE UNITED STATES

Segregation has developed wherever there have been racially based societies. What makes these societal situations different has to do with the relative permeability (perceived or real) of segregation. Thus, countries such as France and England exhibit relatively more racial flexibility than such countries as Australia or South Africa. In both France and England, with the decline in their colonial empires, there were deliberate attempts to integrate a greater number of nonwhite citizens into the cultural, political, and social life. In both France and England, noncolonial persons of color experienced a greater degree of social mobility than former colonial subjects. And while much progress has been made, racial unrest in both countries in the first decade of the twenty-first century indicates that more progress needs to be made.

In contrast, extremely rigid castelike structures of racial segregation have only fallen in the last few decades in such countries as Australia and South Africa. In both of these countries, indigenous persons of color experienced decades of exclusion from power, economic advancement, and education, and they were forced to live in enclaves, reservations, or specially designated communities. While these formal walls of racial discrimination have fallen, informal walls remain as "Coloreds" in South Africa and Aboriginals in Australia continue to seek an expansion of their political, economic, educational, and societal power.

SEE ALSO Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Civil Rights Movement, U.S.; Desegregation, School; Resegregation of Schools; Segregation; Segregation, Residential; Segregation, School*

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DESEGREGATION, SCHOOL

In *Brown v. Board of Education of Topeka* (1954), the U.S. Supreme Court issued a rare unanimous opinion ruling that racially segregated public schools were inherently unequal and therefore in violation of the Fourteenth Amendment to the U.S. Constitution. As Peter Irons wrote of the *Brown* case and the opinion of newly appointed Chief Justice Earl Warren (1891–1974) in particular, "it was a promise to America's black children of an education 'available to all on equal terms' with that given to whites" (2002, p. xi). However, within a year of *Brown*, southern legislatures and school officials had already begun to defy the Court's firm but vague ruling that schools be desegregated with "all deliberate speed."

In 1956 this resistance to integration was epitomized by the state of Arkansas when the state legislature passed an amendment to the state constitution commanding the Arkansas General Assembly to oppose "in every Constitutional manner the Un-constitutional desegregation decisions" in *Brown*. In 1957, when the first nine black students attempted to enter Little Rock's Central High School in accordance with the court ordered desegregation plan, they were turned away by armed Arkansas National Guardsmen dispatched by Governor Orval Faubus (1910–1994). This defiance of federal law by state and local officials ultimately culminated in *Cooper v. Aaron* (1958), a Supreme Court case where the court reaffirmed the nation's commitment to racial equality articulated in *Brown*. In a rare opinion bearing the signature of all nine justices, the Court wrote, "The principles announced in [the *Brown*] decision and the obedience of the States to them, according to the command of the Constitution, are indispensable for the protection of the freedoms guaranteed by our fundamental charter for all of us. Our constitutional ideal of equal justice under the law is thus made a living truth."

The ruling in *Cooper* marked the end of the Court's patience with attempts to delay the integration of public schools. While southern states and school districts continued to challenge court-ordered school integration, the justices handed down decisions ordering schools to continue along the path toward racial equality under the law.

Some scholars argue that the federal government's shift from a prosegregation position to one in support of racial equality in the 1950s and 1960s stemmed more from foreign policy interests and a desire to reshape the cold war world in the image of the United States than from any earnest desire to bring an end to racial discrimination (Dudziak 1988–1989). This may explain why, beginning in the late 1970s and more rapidly since the early 1990s, school segregation is increasing rather than decreasing, yet the federal courts, legislature, and executive branch appear reluctant to intercede on behalf of integration efforts. Nonetheless, for nearly thirty-five years following the *Brown* decision, the law of the land was that race needed to be taken into consideration when assessing the quality and fairness of public education in the United States.

In the decades following *Brown*, federal support for desegregation appeared to be working, albeit slowly. For example, the percentage of black students attending majority white schools nationwide rose from slightly over 23 percent in the 1968–1969 school year to slightly more than 37 percent in the 1980–1981 school year. Similarly, over 64 percent of black children attended schools that were 90 percent or more minority in the 1968–1969 school year. However, this percentage decreased to fewer than 39 percent by the start of the 1974 school year, and was 32 percent by 1988 (Brown 2005).

THE POSTDESEGREGATION ERA

After decades of court orders and state and local laws mandating school integration efforts, as well as resistance to these efforts by primarily white citizens and citizen groups, by the middle of the 1980s, progress toward integration had been made. Yet, American schools in many areas remained starkly segregated, and those that had made strides toward greater integration were rapidly become resegregated by the end of the Ronald Reagan (1911–2004) era in 1989 (Frankenberg and Lee 2002). After touring schools across the nation in 1988, Jonathan Kozol observed in his classic *Savage Inequalities*, "What startled me the most . . . was the remarkable degree of racial segregation that persisted. . . . In no school that I saw anywhere in the United States were nonwhite children in large numbers truly intermingled with white children" (1991, pp. 2–3). The reasons observed by Kozol for this continued segregation include: white flight to suburbs, the establishment of private and parochial education for white children, continued housing discrimination against racial and ethnic minorities, some self-segregation by racial and ethnic minorities, and significant shifts in judicial interpretations of desegregation and antidiscrimination law.

WHITE FLIGHT, AND PAROCHIAL AND PRIVATE SCHOOLS

Throughout many parts of the United States, white children are conspicuously underrepresented in public education. According to the 2000 census, slightly over 68 percent of the under-eighteen U.S. population was non-Hispanic white. However, in the 2001–2002 school year, only about 60 percent of public school children were non-Hispanic white (Brown 2005). Los Angeles, California, provides an even more stark example of this dearth of

white children. While approximately 47 percent of the city's population is white, fewer than 9 percent of students enrolled in Los Angeles Unified schools in the 2005–2006 school year were white. Among the reasons for this disparity are the exodus of white people from areas that are becoming increasingly minority and the proliferation of private and parochial schools as an alternative to desegregated public schools.

In the 1960s and 1970s, cities across the country saw radical changes in the demographic makeup and location of their populations. For example, in the 1960s, the white population of Detroit declined by 350,000 people, while the white population of the surrounding suburbs increased by 350,000. At the same time, Detroit's black population grew by approximately 170,000 people (Irons 2002). As Irons writes, "The phenomenon of 'white flight' had already begun in Detroit, as white families with school-age children either moved to the suburbs or sent their children to private or parochial schools" (2002, p. 237). In *The Agony of Education* (1996), Joe Feagin, Hernán Vera, and Nikitah Imani note that in U.S. society, whites are more likely to self-segregate even when opportunities exist to interact with minorities, blacks in particular. This separationist behavior is due, in part, to negative stereotypes that whites harbor about blacks.

The private school movement for whites was particularly evident in the South, where the rigid social customs prohibiting intermingling of the races allowed for blacks and whites to live closer to one another than in other parts of the country where de facto and de jure housing segregation kept the races apart. Thus, when desegregation of public schools was ordered, white people in the South found their children in precisely the same school district as black children. As a 2002 study at Duke University found, private schools have grown in the South since 1960 as a response to school desegregation and the region's rising affluence.

STEERING, REDLINING, AND OTHER FORMS OF HOUSING DISCRIMINATION

School districts are often based on "neighborhood" boundaries. Accordingly, de facto school segregation is often the result of segregation in housing. Prior to *Brown*, whites were protected from living among minorities through laws restricting where minorities could live. In places where these laws did not exist, white homeowners often banded together and agreed to racially restrictive housing covenants—private agreements that prevented minorities from owning property in particular neighborhoods. These covenants were effectively deemed illegal by the Supreme Court in 1948, however their intentions were kept intact by other social and business practices such as discriminatory mortgage lending; intimidation of blacks and other minorities who sought housing in white areas; steering—the funneling of home buyers by realtors to racially specific areas; and redlining—the practice of a lending institution denying loans, manipulating loan terms, or restricting loans for certain areas of a community. In *The Ethnic Experience*, Grace Pena Delgado and Troy Johnson sum up these processes well: "In the United States, Blacks have been forced into segregated suburbs and channeled into segregated cities through institutionalized discrimination in the real estate and banking industries, racially biased public policies, and persistent White prejudice" (2005, p. 258).

While most of these discriminatory practices were outlawed in 1968 when Congress passed the Fair Housing Act, studies show that they are still practiced and their effects clearly linger. For example, as of 2000, on average in U.S. metropolitan areas nearly 65 percent of all African Americans would have to change residence in order for neighborhoods in these areas to achieve residential desegregation (Iceland et al. 2002).

To a lesser, but still significant extent, minority segregation in education can be attributed to self-segregation in housing by minorities. This is particularly true for recent immigrants who often find it easier to adjust to life in the United States when surrounded by people who are culturally similar. There is also some evidence that affluent black families often choose to live in expensive "all-black" suburbs rather than deal with potential prejudice in predominantly white suburbs.

CHANGES IN THE COURT

In *Milliken v. Bradley* (1974), the Supreme Court ruled against city-suburban desegregation and made real desegregation in education impossible in a growing number of cities experiencing an increase in their minority populations. In *UC Regents v. Bakke* (1978), a blow was struck to policies designed to increase minority representation in public higher education. However, it was not until the late 1980s and early 1990s that significant doctrinal shifts altered the way the Court would evaluate school desegregation. Between 1990 and 1995, the Supreme Court decided three cases in which the desegregation orders of lower-court judges were "terminated" and school officials were subsequently free to adopt "race neutral" school assignment policies and maintain segregated schools without fear of future judicial intervention (Irons 2002). The last of these cases involved a primarily black school district in Missouri in which the conditions were so deplorable that one school official "stated that he would not send his own child to that facility" (Irons 2002, p. ix). Over the 1990s as a whole, the Supreme Court increasingly looked unfavorably upon school desegregation decrees—court

requirements that school districts aggressively pursue desegregation. As Kevin Brown writes, "Since school assignment policies are no longer motivated by a desire to maintain racial and ethnic integration, segregation inevitably increases" (Brown 2005, p. 7).

SCHOOL SEGREGATION IN THE TWENTY-FIRST CENTURY

One of the most striking developments in school segregation at the national level has resulted from a transformation in race and ethnicity in U.S. society. At the time of the *Brown* decision, the racial debate was most often cast in terms of black and white. This was the case, in significant part, because the legacy of slavery in the South and racial intolerance in the North had long been a biracial issue dealing primarily with the interactions between former slaves and white Americans of European ancestry. Also, throughout the twentieth century, black people comprised the largest racial minority in the country.

However, in the closing decades of the twentieth century, educational discrimination against Latinos began to draw more attention as two things happened. First, Latinos began migrating in greater numbers from the western United States, where they had always been a significant presence, to the Midwest, South, and East. Secondly, Latinos in the United States continued to grow in numbers over these decades, ultimately surpassing African Americans as the single largest minority group in the United States. While issues of school segregation had been of significance in western state courts long before *Brown* ever made its way to the Supreme Court (see *Alvarez v. Lemon Grove* [1931] and *Mendez v. Westminster* [1946]), because of the growing number of Latinos in the United States, the school desegregation debate has become black, white, and brown.

In the first decade of the twenty-first century, schools across the United States continue to be separated along racial, ethnic, and economic lines that are drawn primarily to the advantage of white Americans and to the disadvantage of African and Latino Americans. As Nanette Asimov writes, "Even though no board of education still has the power to exclude students based on ethnicity, the schools' racial barrier lives on in the segregated lives of the rich and the poor" (2004). In states like California, where changes in state policy have eroded the property tax base, one of the traditional mainstays of educational funding for all public schools, affluent communities have used their economic and political resources to ensure that the schools serving their children have adequate learning materials, technological resources, less overcrowding, and qualified teachers. In comparison, poor and minority school districts without these resources have found themselves left behind. Asimov continues, "Today's Linda Browns [the lead petitioner in *Brown v. Board of Education*] are students whose parents cannot afford to supplement schools with computers, books, art classes and equipment as parents in wealthier communities do" (2004).

Even in situations where white and minority children attend the same school, studies have shown that they do not necessarily receive the same quality of education. For example, educational tracking—the placement of students into courses based on their performance in standardized achievement tests—has been criticized for effectively segregating white students, who are more commonly placed on high-achievement tracks, from students of color. Further, there is evidence of teachers being more helpful toward white students and of differential grading of students favoring white students over their minority peers (Feagin et al. 1996)

In the early twenty-first century, most African American and Latino children attended predominantly minority schools, and nearly 40 percent of these children attended schools that are at least 90 percent minority (Brown 2005). These resegregated schools exist in the former Jim Crow South as well as the "liberal" North and the progressive West. The end result of resegregated education in America is an "opportunity gap" that has significant consequences for the educational and life chances of poor students and students of color. As Judith Blau notes in *Race in the Schools* (2003), public schools operate to the detriment of all students because they are racial settings that reproduce white advantage, rather than equalizing forces in U.S. society.

A 2006 report from the the Civil Rights Project at Harvard University indicates the gap between whites and minorities in education only seems to be widening, and doing so with the tacit support of government officials and the courts (Orfield and Lee 2006). Kozol writes, "the dual society, at least in public education, seems in general to be unquestioned" (1991, p. 4). UCLA's Institute for Democracy, Education, and Access (2004) adds that this widespread resegregation not only fails the promise for equality made in *Brown*; these schools do not even live up to the pre-*Brown* doctrine of "separate but equal" set forth by the Court in *Plessy v. Ferguson* (1896).

SEE ALSO Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Desegregation; Segregation*

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A. Rafik Mohamed

DESIGN, MECHANISM

SEE *Mechanism Design.*

DESIGNER BABIES

SEE *Infertility Drugs, Psychosocial Issues; Mendel's Law; Eugenics.*

DESIS, THE

SEE *East Indian Diaspora.*

DE SOTO, HERNANDO

1941–

The Peruvian economist, Hernando de Soto, best known for his work on the informal economy and its negative effect on poverty amelioration, was born in 1941 in Arequipa. After his father left Peru in 1948 following a military coup, de Soto was educated in Switzerland and did not return to Peru until 1979. He founded the Institute for Liberty and Democracy (ILD) in Lima the next year and serves as it president.

De Soto has written two major books expounding his ideas: *The Other Path: The Economic Answer to Terrorism* (1986) and *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* (2000). For both, the subtitles are as significant as the titles. Terrorism is a topic with which de Soto is familiar. He and the ILD have been attacked (physically, not just intellectually) by the Shining Path, a leftist revolutionary Peruvian movement.

De Soto discusses five mysteries of capital in *The Mystery of Capital*. The three most significant are missing capital, the lessons of U.S. history, and legal failure. The basic argument is that the problems of the poor—whether in Peru, Egypt, Haiti, the Philippines, or elsewhere—are not due to lack of possessions or assets but to lack of legally recognized property rights. His researchers have documented the problems that the poor face in major cities, where it takes too long for them to get a license for a legitimate business and their capital is *dead capital*, preventing them from benefiting from standardization, legal transferability of property, and the use of property as collateral. De Soto claims that over half the grievances of the poor in Peru concern difficulties of getting legal title to real estate: houses, offices, factories, and agricultural land. He claims that the changes in the developing world since the 1960s rival those of the Industrial Revolution since they have involved a massive migration of four billion people leaving their traditional way of life.

De Soto and the ILD have been involved in designing and implementing programs to empower the poor in many areas of the world: Africa, Asia, Hispanic America, the Middle East, and the former USSR. *The Other Path* (a title chosen as a deliberate antithesis to the Shining Path) argues that the real enemy of the poor is not capitalism or "feudalism" but mercantilism: the predominant system in Europe in the early modern pre–Adam Smith (1723–1790) era and a continuing socioeconomic system in post-

colonial Hispanic America. It was in *The Other Path* that de Soto first developed the ideas behind the informal economy: "informal" because it is not formally recognized by the law but functions outside it. It includes informal housing, informal trade, and informal transport.

De Soto points out the hidden costs of informality and the significance of the law as a determinant of development, and he critiques the redistributive tradition, which he associates with the early mercantilist system. He contrasts the relatively peaceful resolution of socioeconomic problems in England (and the United States) with the much more violent revolutions in France, Spain, and Russia. The unlearned lesson of U.S. history was its implementation of widespread property rights in the late nineteenth century.

Numerous criticisms have been made of de Soto's theories and of attempts to implement them to empower the poor. He has been accused of favoring a "single bullet" approach, and the statistical basis of his data has been questioned. Some critics argue that it is difficult to establish who owns what in an informal economy and that some ILD reforms (such as those in Bogotá) have not improved conditions for the poor. Critics also argue that de Soto ignores the importance of culture and that, while he may be correct in his vision of property rights, the sequencing of reforms is just as important as the need to pay attention to local social context.

In response de Soto (as well as a prominent colleague of his, Madeleine Albright, former U.S. secretary of state) have countered that arguments for the importance of legally recognized property rights do not imply "a silver bullet" but a "missing link." De Soto argues that heads of state want his help in quantifying the informal sector and that ILD is the only organization doing such detailed research. Perhaps the best summary of de Soto's views would be that he has the correct diagnosis but an as yet imperfect prognosis; nevertheless, he has started the important process of documenting the (legally) unrecognized assets of the poor.

SEE ALSO *Capital; Development Economics; Informal Economy; Land Claims; Poverty; Property; Property Rights*

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Calvin Hayes

DESTABILIZATION

The concept of destabilization implies that there is something that is destabilized. What, then, is this "something"? It should reasonably be an "order" of some kind. But what kind of "order"? The Polish sociologist Zygmunt Bauman argues that the current age is one of "floating modernity," meaning that flexibility and mobility now permeate societal and private life. Employment contracts are becoming increasingly short-term; uncertainty—in both positive and negative meanings—has become epidemic; and the belief of permanent happiness is being replaced by the belief of episodic enjoyment. Changing jobs, once looked down upon, is now seen as something positive and good for personal development. Temporary relationships have gained an increased legitimacy, with divorce becoming a part of everyday life. During early modernity, workers started their careers at one company and often ended them at the same place. In an era of floating modernity, however, where one starts one's career is no longer a guide to where it will end.

From a societal standpoint, destabilization thus means that power elites become less and less permanent, and that power becomes more difficult to define. This change in power relations means that individuals' identities vary more and more over time, and that the dominant norms place the temporary, not the permanent, in a primary position.

What are the causes of destabilization? The communications revolution has affected destabilization and individualization in a number of ways—by changing the

significance of the territory, by improving the possibilities for network cooperation both within and outside of nation-state borders, and by increasing the significance of innovation and flexibility as a means of productivity and competition. The place of the individual in social, political, and economic networks determines the extent of power that the individual possesses or might exercise. Since the networks are dynamic (or instable), and since individuals can move in and out of these networks, there are no longer any stable power elites. Characteristics belonging to the individual, such as knowledge and education, thus become decisive for corporations and for the economy. Whether a specific individual fits into one of these networks is determined by the individual's personal characteristics, knowledge profile, originality, creativity, and entrepreneurial skills. Because innovation, creativity, and specialized knowledge form the basis of productivity, every supplier of knowledge becomes a unique carrier of surplus generating competencies. This creates power positions and self-interests, and it helps the information producers become global actors. In addition, shortsighted profits from the stock and currency markets become more important than long-term direct investments. Essentially, cultures are no longer created and shaped by people who share the same time and space, but by individuals who construct their own values on the basis of their own experiences in a world that is constantly being rearranged. In modern parlance, one "is" one's experiences, and these experiences give rise to the self.

It is fruitful to analyze destabilization in terms of three concepts: power, identity, and norms. Power elites have become changeable and difficult to define, and nation-states are being challenged by different groups of actors who create temporary alliances to further specific issues. Within nation-states, traditional power elites are being challenged by loosely organized networks, which also create temporary alliances.

In addition, the identities of individuals vary more and more over time. This is especially true for those groups of people who actively use the possibilities that the communicational revolution and network society creates. The norms emphasize the short term instead of the long term, impressions instead of experiences, and freedom of action instead of predictability or safety.

As with the concept of individualization, "power," "identity," and "norms" are not at the same analytical level. Changes in identity and norms must be considered as part of the destabilitzation process implying that power relations have become more diffuse and varying. Identity changes in pace with changes in power relations, and the modern emphasis on the short term, happenings, and freedom of action in societal norms is connected with the modern transience of power.

SEE ALSO *Civil War; Creativity; Elites; Identity; Norms; Political Instability, Indices of; Uncertainty*

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Ulf Bjereld

DESTRUCTIVE OBEDIENCE

SEE *Obedience, Destructive.*

DETERMINANTS

As used in mathematics, the word *determinant* refers to a number associated with a square matrix, that is, an array of numerical quantities arranged in, say, n rows and n columns. Matrices of this sort typically arise as a means for representing the coefficients in a system of n linear equations in n unknowns.

Suppose the system of equations is

$$\begin{aligned} a_{11}x_1 + a_{12}x_2 + \cdots + a_{1n}x_n &= b_1 \\ a_{21}x_1 + a_{22}x_2 + \cdots + a_{2n}x_n &= b_2 \\ &\vdots \\ a_{n1}x_1 + a_{n2}x_2 + \cdots + a_{nn}x_n &= b_n \end{aligned}$$

Then the matrix of detached coefficients

$$A = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ a_{21} & a_{22} & \cdots & a_{2n} \\ \vdots & \vdots & & \vdots \\ a_{n1} & a_{n2} & \cdots & a_{nn} \end{bmatrix}$$

is said to be *nonsingular* if and only if its *determinant* is nonzero. The existence and uniqueness of a solution to the system of equations are determined by the nonsingularity of A. If A lacks this property, it is said to be *singular*, and when this is the case, the system might have no solution (nonexistence) or infinitely many solutions (nonuniqueness).

The determinant of a square matrix A is the number

$$\det(A) = \sum_{j=1}^{n} (-1)^{i+j} a_{ij} \det(A(i|j))$$

where $A(i|j)$ denotes the submatrix obtained from A by deleting its ith row and jth column. This definition of the determinant uses what is called *expansion by a row*, in this case by row i. There is an analogous definition of $\det(A)$ in terms of *expansion by a column*, say j, which says

$$\det(A) = \sum_{i=1}^{n} (-1)^{i+j} a_{ij} \det(A(i|j)).$$

These formulas are associated with the name of the French mathematician Pierre-Simon Laplace (1749–1827). From either of them it is evident that the determinant of the identity matrix I is 1, and hence it is nonsingular.

The determinant of a square matrix A and that of its transpose A^{T} are always equal. Moreover, the determinant of the product of two square matrices is the product of their determinants. In symbols, if A and B are two $n \times n$ matrices, then

$$\det(AB) = \det(A)\ det(B).$$

From this and the fact that the determinant of the identity matrix I is 1, it follows that when A is nonsingular,

$$\det(A^{-1}) = \frac{1}{\det(A)}.$$

Thus, the determinant of a nonsingular matrix and that of its inverse are reciprocals of each other.

As can readily be appreciated, the calculation of the determinant of a large matrix by means of a row or column expansion can entail a significant amount of work. Fortunately, there are matrices whose determinants are not difficult to compute. Among these are diagonal matrices (the identity matrix being an example) and, more generally, lower triangular matrices. The determinant of any such matrix is the product of its diagonal elements. (The same is true for all upper triangular matrices.) Finding a determinant is aided by procedures (such as Gaussian elimination) that transform the matrix to another whose structure permits relatively easy calculation of its determinant.

Cramer's Rule for solving the system $Ax = b$ proceeds from the assumption that A is nonsingular. In that case, the system has a unique solution: $x = A^{-1}b$. Cramer's rule gives formulae for the values for the components of this vector in terms of the data, specifically as ratios of determinants. The expression of these ratios requires the introduction of a notation for the matrix obtained from A and b by replacing the jth column of A by the vector b. Let this notation be $A_{-j}(b)$. Then Cramer's Rule says that for each $j = 1, \ldots, n$

$$x_j = \frac{\det(A_{-j}(b))}{\det(A)}$$

In the system

$$\begin{bmatrix} 4 & -1 & 3 \\ 2 & 0 & 1 \\ -3 & 1 & 5 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix} = \begin{bmatrix} 2 \\ -1 \\ 0 \end{bmatrix}$$

the determinant of A is 15. The matrices $A_{-1}(b)$, $A_{-2}(b)$, $A_{-3}(b)$ are, respectively,

$$\begin{bmatrix} 2 & -1 & 3 \\ -1 & 0 & 1 \\ 0 & 1 & 5 \end{bmatrix}, \begin{bmatrix} 4 & 2 & 3 \\ 2 & -1 & 1 \\ -3 & 0 & 5 \end{bmatrix}, \text{ and } \begin{bmatrix} 4 & -1 & 2 \\ 2 & 0 & -1 \\ -3 & 1 & 0 \end{bmatrix}$$

To use Cramer's Rule in this case, one would compute

$$\det(A_1(b)) = -10,\ \det(A_2(b)) = -55, \text{ and } \det(A_3(b)) = 5.$$

Cramer's Rule then yields

$$x_1 = -\frac{10}{15},\quad x_2 = -\frac{55}{15},\quad \text{and}\quad x_3 = -\frac{5}{15}.$$

Although Cramer's Rule is useful in numerically solving small systems of equations (those consisting of two equations in two unknowns, or three equations in three unknowns), it is not recommended for solving larger systems due to the difficulty in computing determinants of order larger than 3. This caution does not apply to situations in which the calculation is entirely symbolic. An example of the latter sort can be found in P. A. Samuelson's *Foundations of Economic Analysis* (Harvard University Press, Cambridge, 1963; see equation 7, p. 14).

The task of solving square systems of linear equations arises from least-squares problems which in turn arise in linear regression analysis. The square system is typically of the form $A^TAx = A^Tb$. These are called the normal equations. The problem is to find x. The first question one faces is whether the matrix A^TA is nonsingular. If it is not—that is, $\det(A^TA) = 0$—then Cramer's Rule is not applicable. If it is nonsingular, then in principle, the solution is $x = (A^TA)^{-1}A^Tb$. When n, the number of variables $x_1, \ldots, x_n$, is quite small (and $\det[A^TA] \neq 0$), the use of Cramer's Rule for solving equations can be considered. But most practical problems of this nature are not small and need to be solved with computers. Since exact arithmetic is then lost, several numerical issues come to the fore. The extensive use of determinants is not advisable simply on computational efficiency grounds. Another consideration, the condition number of A^TA, enters the

picture here. As stated by Gilbert Strang, "Forming A^TA can turn a healthy problem into a sick one, and it is much better (except for very small problems) to use either Gram-Schmidt or the singular value decomposition" (Strang 1976, p. 272).

SEE ALSO *Inverse Matrix; Matrix Algebra; Simultaneous Equation Bias*

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Richard W. Cottle

DETERMINISM

Any doctrine positing that one kind or order of phenomena is the necessary and sufficient condition of another kind or order of phenomena is a strongly deterministic doctrine. On the other hand, if a doctrine posits that some order of phenomena is only a necessary or a sufficient condition of another, it is considered to be only weakly deterministic. Since their inception, the social sciences have been home to many such doctrines.

From Arthur de Gobineau (1816–1882) in the nineteenth century to J. Philippe Rushton's work in the 1990s, racist accounts of variations in character or intelligence are among the least credible and most enduring of deterministic doctrines. Psychobiological accounts of the roots of war and violence have had nearly as long a hearing. Somewhat more credibly, contemporary evolutionary psychologists of diverse disciplinary provenance are reviving the pursuit of accounts of humanly universal behavior, as well as of racially marked or ethnically distinctive behavior, as positive adaptations to or resolutions of existential or situational problems (Buss 1999).

The environmental determinism of Johannes Gottfried von Herder (1744–1803), who treated variations of climate and physical environment as the chief source of variations of human character, was popular in the eighteenth and early nineteenth centuries. Herder's latter-day successors are more circumspect, typically treating particular conditions of climate and geography as imposing on the human populations who live with and under them a cap on the upward bounds of politico-economic complexity. A noteworthy case in point is the historian Fernand Braudel's 1949 thesis that the preindustrial societies occupying the borders of the Mediterranean Sea were effectively ecologically precluded from sustaining political organization beyond the level of the city-state.

Technology, however, changes everything, or such at least has been the opinion of a long line of determinists since the heyday of the Industrial Revolution. In the 1930s Braudel's elder colleague Marc Bloch traced the pivotal source of the social organization of French agriculture to the invention of the double-bladed plow. A half-century before, the cultural materialist Henry Louis Morgan had appealed more generally to technological innovation as the essential index of broader civilizational progress. The Victorian biologist and philosopher Herbert Spencer (1820–1903) saw in technological development—first military, then economic—the lynchpin of the advance of utilitarian happiness. Though not quite a utilitarian, Talcott Parsons (1902–1979) is among Spencer's recognizable evolutionist heirs. Less sanguine is the anthropologist Leslie White (1900–1975), who made the post–Hiroshima assessment that the increasing efficiency of the technologies of harvesting energy is the causal underpinning of collective evolution—for better and for worse. White's ambivalence grew darker in such seminal assessments of the harmful environmental consequences of industrial and atomic technologies as Rachel Carson's *Silent Spring* (1962) and Mark Harwell's *Nuclear Winter* (1984). In *The Condition of Postmodernity* (1990), David Harvey argues that the far-flung reach and unprecedented speed of communicative technologies is effecting a global compression of space and time that tends to unmoor human experience from its typically local bearings. Harvey articulates (with a dark ambivalence) a specifically digital determinism.

Cultural determinism of a less material and materialist sort has two prominent installments, both traceable to the early students of Franz Boas. Ruth Benedict (1887–1948) and Margaret Mead (1901–1978) were the early champions of the cultural determination of personality. Encouraging now-discredited distillations of "national character," their work also gave rise to sustained research into child rearing and other practices that remain the focus of the anthropology and sociology of childhood and education (Whiting and Child 1953; Christie 1999; Jones 1995). Edward Sapir (1884–1939) and Benjamin Whorf (1897–1941) were the eponymous champions of the speculative thesis—erroneously deemed a "hypothesis"—of the linguistic determination of what is presumed to be reality itself. The Sapir-Whorf hypothesis may have had its roots in the thought of such Romantic philosophers as Wilhelm von Humboldt. As an assertion of linguistic relativism or linguistic mediationism, it has many counterparts in semiotics and semiotically grounded theories of knowledge, past and present.

Émile Durkheim began *The Elementary Forms of the Religious Life* (1912) with the bold claim that social structure and organization determine the structure and organization of the basic categories of thought. His influence remains most obvious in the work of Mary Douglas. Institutionally more specific, and by far the most influential social determinist, was Karl Marx, especially when writing in collaboration with Friedrich Engels. Marx and Engels's transference of the presumptive human primacy of a finite set of material needs to that of the institution best disposed to satisfy them—the economy—was the initial step in their theorization of the means and mode of economic production as determinative of the form and content of every other institutional order. Marx's *Capital* (1867) and his and Engels's *German Ideology* (1932) were the benchmarks of leftist social and political thought from the turn of the twentieth century until the 1970s. The analysis of the commodity (and its fetishization) in the former treatise stimulated Georg Lukács's inquiries in the 1920s into the broader capitalist habit of "reification," the process of construing the related parts of systemic wholes as independent entities in their own right. It would later inspire Max Horkheimer and Theodor Adorno's critique of the mass-produced debasement of what they called "the culture industry." The problem of the relation between class interest and truth inherent in *The German Ideology* (1932) gave rise to a Marxist sociology of knowledge from Lenin through Antonio Gramsci and Karl Mannheim to Jürgen Habermas. Especially in its stronger expressions, Marxist determinism brings to an account of human action the same logical assets and liabilities as any other determinism. It is an attractively powerful device of intellectual focus and direction, but it runs two risks: (1) circularity, or taking for granted the very hypotheses that it is obliged to prove; and (2) a drift into the metaphysical, leaving behind any possibility of putting its hypotheses to the test at all.

SEE ALSO *Benedict, Ruth; Boas, Franz; Freud, Sigmund; Gobineau, Comte de; Gramsci, Antonio; Marx, Karl; Mead, Margaret; Parsons, Talcott; Racism*

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James D. Faubion

DETERMINISM, BIOLOGICAL

Biological determinism refers to the idea that all human behavior is innate, determined by genes, brain size, or other biological attributes. This theory stands in contrast to the notion that human behavior is determined by culture or other social forces. Inherent to biological determinism is the denial of free will: individuals have no internal control over their behavior and dispositions, and thus are devoid of responsibility for their actions. Often implicit in this line of reasoning is the idea that because humans lack responsibility for determining their own lives, they are rightfully subject to the control of persons biologically determined in more socially acceptable ways. While few biologists fully believe in the idea of biological determinism, the theory has had cultural and political currency both in the shaping of human racial history and in current debates over the relative importance of our genetic qualities (i.e., nature) versus our socialization process (i.e., nurture) in determining our individual physical and behavioral characteristics.

Although the first traces of biological determinism are suggested in Aristotle's (384–322 BCE) proclamation in *Politics* that "there are species in which a distinction is already marked, immediately at birth, between those of its members who are intended for being ruled and those who are intended to rule," (Baker, 1950, p. 14) it was Enlightenment thinking that ushered in the most robust and politically salient strains of this line of thinking. Using what would consistently prove to be a faulty scientific approach among racial determinists, Carolus Linnaeus (1707–1778) was the first to divide the human race into four categories (red, yellow, white, and black) in 1735. He also began what was to be a trend: racial determinism has never been a project of merely answering questions based in curiosity about human variety; it has always carried a belief in the characteristics associated with these racial categorizations. These beliefs, without fail, served to justify white supremacy in a political context.

Every method of determining a racial hierarchy within the human race has failed to stand up to scientific scrutiny. Nonetheless, such supposed justifications have included measurements of brain size, stature, hair texture, genetic analysis of heredity, and many other measurable attributes. Perhaps the most well-known analysis of this type was Samuel Morton's (1799–1851) *Crania Americana* (1839), a selective study of more than eight hundred skulls undertaken to try to prove the innate superiority of Caucasians. A similarly popular work, *Essay on the Inequality of Human Races* (1853) by Joseph-Arthur de Gobineau (1816–1882), makes an argument in regard to the inherent superiority of the same group, whom he identified as *Aryans*: "Everything great, noble, and fruitful in the works of man on this earth, in science, art and civilization, derives from a single starting-point, is the development of a single germ and the result of a single thought; it belongs to one family alone, the different branches of which have reigned in all the civilized countries of the universe" (Gobineau [1853] 1970, p. 113). In each examination of racial determinism undertaken by nineteenth-century and early twentieth-century scientists, it has been established that a racist bias at the outset had an impact on the scientist's findings. Indeed, the history of biological determinism is a prime example of how science is a deeply political practice, despite its claims to universal knowledge.

At the same time, some scientists' findings have been manipulated by interested parties in order to justify power relations. For example, even though Charles Darwin

(1809–1882) refers to "civilized" and "savage" races as different from one another in *On the Origin of Species* (1859), he does so as an aside to his major argument that a long process of natural selection has differentiated humans from animals. This claim, however, did not alter the racial determinism of his contemporaries. In fact, his theory became something of a metaphor for those who practiced racial determinism. Darwin's notion of struggle was generational, and depended on species' interrelationships rather than isolation. However, social Darwinist thinking developed in order to argue that this struggle was actually among races. Herbert Spencer (1820–1903), in particular, jumped on the idea of the "survival of the fittest" to argue not only for white racial superiority, but also for justification of segregationist policies and a lack of social support for nonwhites. For social Darwinists, science had provided a basis on which moral arguments could be made; to create any form of social support (be it charity or state support) for nonwhites would be to contradict the laws of nature. Many social Darwinists felt comfortable with the idea that the inequality of races was a pity, but something that would inevitably lead to the decline and disappearance of nonwhite, and implicitly inferior, races.

Eugenics policies were also based on the ideas of racial determinism. However, unlike the social Darwinists who wanted to allow nature to take its course, eugenicists were more active in their belief in white supremacy. Belief in certain human stock as superior to other human stock (in terms of intelligence, creativity, capacity for self rule, and many other areas) almost always took a racial or ethnic form. While the fascist policy of Nazi Germany is an obvious example of eugenicist thinking, the United States and many other nations have also enacted policies based on eugenics. In the United States, this has meant everything from sterilization of Jewish women upon immigration to the United States, antimiscegenation policies whose selective enforcement prevented white women from bearing children with black and Asian men, and sterilization policies affecting Puerto Rican women after Operation Bootstrap, among many other examples. Many race and gender scholars argue that current policies affecting reproductive rights for poor nonwhite women, while not overtly racist, carry implicit strains of eugenicist thinking.

Biological determinism, while proven to be scientifically invalid in terms of racial categorization and racial meaning, is still present in contemporary debates concerning sexual orientation, genetic research as part of the Human Genome Project, and various overt international policies, such as China's Maternal and Infant Health Care Law. In fact, an unexpected resurgence of biological determinism has taken place since the mid-1980s, most noticeably with the controversial publication of Richard J. Herrnstein (1930–1994) and Charles Murray's *The Bell Curve* (1994). In their book, Herrnstein and Murray argue not only that intelligence is genetically heritable, but also that there are racial and ethnic differences that account for why whites are better off socioeconomically compared to blacks. More recently, Stephen J. Dubner and Steven D. Levitt argue in *Freakonomics* (2005) that there is a correlation between crime rates and access to abortion. More specifically, the authors argue that greater access to abortion has led to a decrease in the criminally predisposed population. Although a number of scholars, including a few economists, have disputed Dubner and Levitt's claims, the controversial argument has received national attention and even political notoriety. One example of such political incongruity, based on Dubner and Levitt's claims, can be witnessed by former Secretary of Education William Bennett's comment in 2005 on his radio show *Morning in America* that "if you wanted to reduce crime, you could—if that were your sole purpose, you could abort every black baby in this country, and your crime rate would go down."

While scientific research about hormones, genes, and other human biological characteristics warrants continuation, social scientists largely accept the idea that social rather than biological or genetic forces drive human choices, human diversity, and the various ways in which difference is both perceived and translates into issues of equality. Of the scholars whose work has stood in opposition to biological determinism, most notable are Ashley Montagu (1905–1999), a distinguished British anthropologist whose early writings in the 1940s and 1950s questioned the validity of race as a biological concept; Stephen Jay Gould (1941–2002), an American evolutionary biologist who refuted many of *The Bell Curve*'s claims in his 1996 book *The Mismeasure of Man*; and Joseph L. Graves Jr., an American biologist who argues that "the traditional concept of race as a biological fact is a myth" (Graves 2005, p. xxv).

SEE ALSO *Darwinism, Social; Determinism, Cultural; Determinism, Environmental; Determinism, Genetic; Eugenics; Nature vs. Nurture*

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DETERMINISM, ENVIRONMENTAL

Environmental determinism proposes that physical environmental features alone cause human social and cultural behaviors. These features and their changes over time include: climate and temperature; land and soil conditions; rainfall and other water resources; harvestable wildlife and other natural resources; and levels of competition and predation among species.

HISTORICAL OVERVIEW

Dating to the writings of the Greek philosopher and geographer Strabo (c. 64 BCE–23 CE), environmental determinism became prominent during the late 1800s of the Enlightenment period, when many scholars searched for explanations for and methods to study human behavior and societal organization. Its physical nature premise, which was one among many competing for theoretical hegemony, was based on the evolutionary biology of Jean-Baptiste de Lamarck (1790–1869) and Charles Darwin (1809–1882). Lamarck believed that characteristics acquired by habits and other behavioral adaptations to changes in the environment could be genetically transmitted to offspring. (This idea was the precursor of biological or genetic determinism.) Darwin was strongly influenced by Lamarckism, as well as by the population dynamics described in *An Essay on the Principle of Population* by Thomas Malthus (1766–1834), and by ideas regarding natural selection introduced by Alfred Russell Wallace (1823–1913). Darwin explained in his 1859 book *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* how biological evolution of a species occurred as a result of its population's environmental adaptation. In this adaptation process, traits that contribute to a species' competitive struggle for survival are naturally selected and reproductively transmitted to future generations.

These ideas and the development of scientific positivism had a profound impact on Enlightenment thinking. According to Richard Hofstadter, "Darwinism established a new approach to nature and gave fresh impetus to the conception of development; it impelled men to try to exploit its findings and methods through schemes of evolutionary development and organic analogies" (1955, p. 5). Among the social philosophers who saw immediate opportunities to apply Darwinian principles and scientific empiricism, Herbert Spencer (1820–1903) led the way to conceptualize society as an evolving social organism whose change from one stage to the next was the basis of social progress. Within this perspective, known as social Darwinism, Spencer reconciled the dualistic problem of natural and human processes by placing humankind within nature and subjecting it to the same natural laws of competition and survival of the fittest. Meanwhile, other scholars counter-argued for the distinctiveness of social phenomena, which they considered to be sui generis. They believed phenomena such as social behaviors, beliefs, norms, society, and culture are socially constructed products based on human rational choices and collective interaction.

During and after the 1880s, however, European naturalists and social scientists struggled to explain the causes of different levels of societal and cultural variation within and across different geographical spaces. Carl Ritter (1779–1859) incorporated social Darwinism to argue in his nineteen-volume *Die Erdkunde im Verhältniss zur Natur und zur Geschichte des Menschen* (The Science of the Earth in Relation to Nature and the History of Mankind) written from 1817 to 1859, that these differences were attributable to a nation's pursuit of *lebensraum* (living space) as a biological necessity for its growth. Frederick Ratzel (1844–1904) later expanded the concept's meaning to propose the idea of the "organic state," which included human cultural evolution and the diffusion of ideas that occurs as a growing nation acquires more territory and natural resources, greater societal complexity, and higher levels of culture and civilization to meet its needs. The imperialist histories of Great Britain and Germany were often the benchmarks in comparative historical studies. Environmental determinists justified national expansionism by suggesting that primitive societies culturally benefited from contact with more civilized nations. The racist implication of this hierarchical reasoning was that primitive societies, especially those located in the equatorial latitudes, were inferior and culturally lethargic compared to the Nordic races of highly industrialized Northern Europe.

Environmental determinism still had a following, albeit minority, during the early 1900s. Ellen Churchill Semple (1863–1932), a former student of Ratzel and a reluctant social Darwinist, introduced his theory into the mainstream of American geography, though she rejected his idea of the organic state and established her own course. Her most prominent books, *American History and Its Geographic Conditions* (1903) and *Influences of Geographic Environment* (1911), were widely acclaimed (Colby 1933). Throughout her work, which was best known for studies of rural Kentucky, she applied scientific methods to demonstrate that geographic factors worked directly to influence the expression of racial characteristics and indirectly to define a people's psychological, social, political, and cultural characteristics (Peet 1985, p. 319). This racial theme, or "scientific racism," was promoted during the next three decades particularly in the climatic determinism of Ellsworth Huntington (1876–1947) and in ethnographic studies conducted by Griffith Taylor (1880–1963) on Australia, Canada, and Antarctica. It even provided the Nazi regime with a convenient but distorted justification for its geopolitical and eugenic policies during the late 1930s and early 1940s. Although racist overtones were discarded in later decades, environmental determinism appears in a few contemporary studies by American geographers and other scholars (e.g., Frenkel 1992; Diamond 1999).

COUNTERARGUMENTS

Many geographers and social scientists either eschewed or eventually divorced themselves from both social Darwinism and environmental determinism. Others eased into less apologetic possibilistic and probabilistic perspectives that viewed environmental factors as one among many influences on human choices and on the probable development of particular cultural patterns, dependent on specific social and economic conditions (Lewthwaite 1966). They charged that such a singular deterministic explanation (environmental or otherwise) is insensitive to epistemic differences among cultural, social, and psychological phenomena and the variations in ecological conditions. The anthropologist Franz Boas (1858–1942) argued, for example, that all humans have the same intellectual capacity, all cultures are based on the same basic mental principles, and phenomena have meaning only in terms of their human perception or experience. He distinguished between the physical sciences, which seek to discover natural laws, and the historical sciences, which seek to achieve a comprehensive understanding of phenomena in their own contextual terms. For him and many other scholars, environmental determinism failed to offer a theory of human consciousness and purpose, as well as explanations of differences in and histories of societal organization and processes (Peet 1985, pp. 328–329).

SEE ALSO *Determinism; Determinism, Biological; Determinism, Cultural; Determinism, Technological*

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DETERMINISM, GENETIC

Genetic determinism is the notion that an individual's genetic makeup equates to behavioral destiny. This definition is slightly different from one stating that all human beings have the same genetic blueprint. The classic textbook *Gray's Anatomy* illustrates and, indeed, medical scientists rely for treatment upon, a genetically determined, universal description of the human body. All normally developed humans have eyes for seeing, hearts for pumping blood, and so on, as specified by this genetic blueprint.

Behavioral genetic determinism is an extreme form of nativism that emphasizes the innateness of knowledge. Historically, nativism has been contrasted with empiricism, which emphasizes the environment as the source of knowledge, learning, and behavior. A modern doctrine of empiricism is found in British philosophy of the 1700s and 1800s, which argued that humans are born with no innate mental content, equating the mind to a blank slate for experience to write upon. Modern nativism did not emerge until Charles Darwin (1809–1882) proposed in 1859 that, through natural selection, humans are descended from other life forms. In the social sciences, initial support for nativism was provided by William James (1842–1910), who argued that humans have more instincts than animals, thus shattering the dichotomy between instinct and reason. At that time it was believed that animals were instinctive and unintelligent, whereas humans were rational and intelligent. The pendulum swung back to empiricism when behaviorism, a new paradigm in psychology, emerged and endorsed domain-general learning through simple conditioning procedures as the source of all knowledge. Psychology, anthropology, and sociology endorsed this position for much of the twentieth century.

Contrasting genetically determined versus environmentally determined explanations of behavior is analogous to the long-standing debate that incorrectly pits nature (genes, instincts, adaptations, biology) against nurture (environment, experience, general learning mechanisms, culture). Anthropologist Edward Hagen (2005) argues, however, that nature is a product of nurture, and that nurture is a product of nature. To illustrate this statement, one must examine evolution through natural selection. Hagen compares natural selection to a learning algorithm that uses information from the environment to select gene combinations that aid in reproduction. These gene combinations are stored in the genome as this learned information forms the basis of an adaptation. Because adaptations are the product of environmental influences, and are designed by natural selection over evolutionary history, it would be uninformed to discuss genes or adaptations without knowledge of the context in which they evolved. In this way, nature is a product of nurture.

At the same time, nurture is a product of nature. It is unlikely that a truly blank-slate version of the mind would be able to learn anything from the environment. This was the nativist argument advanced by anthropologist John Tooby and psychologist Leda Cosmides (1992) regarding the functional design of the mind. Tooby and Cosmides argued that learning and behavior depend on content-dependent information processing mechanisms and that once a specialized psychological architecture is in place, adaptive challenges can be met with ease. All humans have a universal, species-typical mind, in the same way that all humans have a universal, species-typical physical anatomy.

One way to illustrate this universal architecture is to examine fear. In an experiment designed by psychologist Susan Mineka and colleagues (1980), infant rhesus monkeys were exposed to one of two videotaped scenarios, one depicting a monkey reacting in terror to a snake, the other depicting a monkey reacting in terror to flowers. Monkeys that viewed the tape showing the reaction to a snake quickly acquired a fear of snakes, but monkeys that viewed the tape showing the same reaction to flowers did not acquire a fear of flowers. It appears that humans also are prepared to learn quickly which features in the environment are threatening and ignore those features that are not. Common phobias in humans include spiders, darkness, and snakes, all of which were adaptive threats in ancestral environments. Learning is not an explanation of behavior, but behavior requiring explanation. The explanation lies in an evolved psychology and the specific problems this psychology has been designed to solve.

Disgust also provides an example of the nature/nurture interaction. Psychologist Paul Ekman (1980) demonstrated that disgust is an emotion that is experienced universally, and the facial expression showing disgust is a reaction that is recognized universally by others. Paul Rozin and April Fallon (1987) hypothesized that disgust is a human adaptation designed to prevent parasites and disease from entering the body. Rotten meat is disgusting to all humans because if consumed it would probably lead to illness. Many species of flies, however, find rotten meat appealing because flies have different evolved mechanisms. Not all cues are as obvious to the human senses as rotten meat, however. With thousands of potentially edible fruits and plants, it would have been beneficial to use the reactions of others when deciding what to eat, rather than relying on a trial-and-error learning system. If a harmful substance is sensed, the body will expel and withdraw from the substance and the disgust face will be made. Other individuals will benefit from this disgust reaction only if they are equipped to pair the disgust face

to the disgusting substance, and learn to avoid it. Again, learning is guided by a universal psychological architecture and explained according to the adaptive challenges it has been designed to solve.

If all humans have the same design of the mind, does that mean human behavior is genetically determined? Adaptations have a genetic basis. However, Hagen argues that because the mind contains many adaptations, all of which respond to cues in the environment, the mind could encompass an enormous number of states with an enormous number of behavioral outcomes. Because humans have an evolved fear of snakes does not mean that everyone is destined to fear all snakes in all situations. Many people have an affinity for snakes, even allowing them into their home as pets. Adaptations do not limit behavior, but instead enable behavior and create behavioral flexibility because a larger set of adaptations can respond with a greater array of behavioral outcomes. Insights from biology, cognitive science, ecology, anthropology, and psychology have been combined to examine genes from an adaptationist perspective in the emerging discipline of evolutionary psychology. Strict genetic determinism is rejected in favor of an account of human behavior that includes both genetic and environmental influences.

SEE ALSO *Determinism; Determinism, Reciprocal; Evolutionary Psychology; Nature vs. Nurture; Phenotype*

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DETERMINISM, NONADDITIVE

The principle of *nonadditive determinism* derives from the literature on integrative, multilevel analyses, which extend across levels of organization (e.g., psychological, physiological, cellular) and analysis (e.g., behavioral, neurophysiological, molecular). The principle of nonadditive determinism specifies that properties of the whole are not always readily predictable from the properties of the parts (see Cacioppo and Berntson 1992). Some properties of crystals (e.g., table salt) cannot be predicted from the characteristics of the individual elements (sodium and chloride) in isolation. Those properties become known only when the elements are found in association or interaction with others. A behavioral example comes from the considerable individual differences that are apparent in the effects of drugs. Some individuals are more affected by, and at greater risk for addiction to, cocaine or other drugs of abuse. Similarly, studies with primates have shown that some monkeys work harder and self-administer more cocaine than others (Morgan et al. 2002). This is not mere random variation, but relates to the animal's social status—submissive animals show higher levels of cocaine self-administration than dominant animals. This is now understood to be attributable to reciprocal interactions between social dominance, brain dopamine function, and drug reward processes. The important point is that social status, which serves as the informative and organizing construct in this literature, could not be determined in the absence of behavioral measures in a social context.

Even if the properties of, for example, Beethoven's Ninth Symphony can be fully specified through reference to lower-level physical characteristics (i.e., time-varying frequencies), the composition's aesthetic features may be more readily apparent or appreciated through higher-level auditory perception. This presence of higher-level aesthetic processes defines a functional quality of the acoustic signals that might otherwise escape recognition. It also serves to focus attention on the important interactions among levels of organization and analysis that may ultimately contribute to the development of a science of aesthetics.

Reciprocal determinism is a related construct. Reciprocal determinism is the mutual back-and-forth interaction among distinct levels of organization (e.g., behavioral and cellular) that requires consideration of both levels for a comprehensive understanding of either. Hormones, for example, can have notable psychological effects, but it is also the case that psychological variables can powerfully impact hormone levels. It is this reciprocal back-and-forth interaction among levels that often under-

lies nonadditive determinism, in which the whole can seem to be more than the sum of its parts.

Nonadditive determinism is not inconsistent with genetic determinism. Drug administration is subject to potent *genetic determinants*, related to dopamine functions as well as a range of other heritable characteristics, including behavioral variables that contribute to dominance status. Rather, nonadditive determinism is orthogonal to genetic determinism—that is, the two operate independently but simultaneously, emphasizing the multiple levels of organization that interact in the manifestations of genetic (as well as environmental) determinants. Genetic determinism focuses on the gene and gene products, whereas nonadditive determinism emphasizes the structural and functional architectures through which genetic and environmental factors determine outcomes and behaviors.

SEE ALSO *Neuroscience, Social*

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DETERMINISM, RECIPROCAL

In 1986 the psychologist Albert Bandura put forth a social cognitive theory of human behavior in which human functioning is viewed as the product of a dynamic interplay between personal, behavioral, and environmental influences. This interplay is the foundation of reciprocal determinism, the view that (a) personal factors, such as habits of thinking, emotions, and biological characteristics, (b) human behavior, and (c) environmental forces influence each other reciprocally.

This reciprocal nature of the causes of human functioning makes it possible to direct attention at people's personal, environmental, or behavioral factors. In school, for example, teachers can foster the competence and confidence of the students in their care by improving their students' emotional states and by correcting their faulty self-beliefs and habits of thinking (personal factors), enhancing students' academic skills and self-regulatory practices (behavior), and altering the school and classroom structures that may work to undermine student success (the environment).

Social cognitive theory stands in contrast to views of human functioning that overemphasize the role that environmental factors play in the development of human behavior. Behaviorist theories, for example, show little interest in self-processes because theorists assume that human behavior is caused by external forces. Inner processes, which are viewed as transmitting rather than causing behavior, are dismissed as a redundant factor in the cause and effect workings of behavior. For Bandura, people make sense of their psychological processes by looking into their own conscious mind.

Similarly, social cognitive theory differs from views of human functioning that overemphasize the influence of biological factors. Although it acknowledges the influence of evolutionary factors in human adaptation, the theory rejects the type of evolutionism that views human behavior as the product of evolved biology. Instead, reciprocal determinism posits a bidirectional influence between evolutionary pressures and human development such that individuals create increasingly complex social and technological innovations that in turn create new selection pressures for adaptiveness. These new selection pressures result in the evolution of specialized biological systems for functional consciousness, thought, language, and symbolic communication. It is this bidirectional influence that is responsible for the remarkable intercultural and intracultural diversity evident on the planet.

Rooted within Bandura's conception of reciprocal determinism is the understanding that individuals are imbued with the personal factors that define what it is to be human. Primary among these are the capabilities to symbolize, plan alternative strategies (forethought), learn through vicarious experience, self-regulate, and self-reflect. These capabilities provide human beings with the cognitive means by which they are influential in determining their own destiny. The capability that is most distinctly human is that of self-reflection, for it is through self-reflection that people make sense of their experiences, explore their own cognitions and self-beliefs, engage in self-evaluation, and alter their thinking and behavior accordingly. Through self-reflection people also assess their own capabilities. These self-efficacy beliefs provide

the foundation for human motivation, well-being, and personal accomplishment because unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or to persevere in the face of difficulties.

SEE ALSO *Bandura, Albert; Self-Efficacy*

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DETERMINISM, TECHNOLOGICAL

From a social-science perspective, technological determinism can be an exasperating concept. Its underlying premise—that technological invention and development are independent causal factors driving change in human history—reduces individuals, society, and culture to mere epiphenomena of a basic, autonomous force. Although the concept suggests that history is overdetermined, at least in its extreme form, the simplicity, tangibility, and rhetorical power of the central argument explains its popular impact. Yet the academic debate also remains lively, as the concept addresses fundamental questions about modern society.

In *Does Technology Drive History?* (1994), a key text tackling the concept, Merritt Smith and Leo Marx place the various approaches to technological determinism along a spectrum between the extremes of hard and soft determinism. Hard determinists assign agency—the power to effect change autonomously—to technology itself, and to the institutions and structures built to facilitate it. Soft determinists still treat technology as a locus of historical agency—operating within a complex economic, political, and sociocultural matrix—but, crucially, not as an *autonomous* locus.

Merritt Smith also focuses on three individuals whose work, he argues, is central to the debate: Lewis Mumford, Jacques Ellul, and Langdon Winner. Of the three, Ellul's position is perhaps the "hardest." His characterization of "technological society" is almost as totalizing as it is pessimistic. It sees individual personal liberty as nearly impossible in the face of a fundamentally organized, rationalized, and autonomous world of machines, technological devices, and interlocking institutions and organizations created around them. Mumford and Winner both map out broadly similar scenarios for the emerging technological order, though both take "softer" approaches, finding arguments for some sort of human or cultural agency (albeit limited) within the dominant structure provided by technology. Add in Robert Heilbroner's classic essay on technology's central role in society's historical development, "Do Machines Make History?" (1994), and Raymond Williams's more humanistic call for technology to be treated as a symptom, rather than a cause, of social change, *Television: Technology and Cultural Form* (1989), and the stage for the debate was set. And if participants rarely pushed their arguments to the extremes, they nevertheless have slugged it out over the extent to which technology determines, or is determined by, societal change.

The debate has flourished through works examining the role of technologies as varied as weaponry, agricultural implements, and industrial automation in effecting social change. A particularly fruitful topic of debate has been over the role of new information and communication technologies in society, which is closely related to economic studies of how post-Fordism and postindustrial changes have affected Western economies, particularly since the 1970s. The trend since the 1990s has been toward a harder approach to technological determinism under the guise of information theory. The rise of the Internet and satellite communication as a global force has brought back into vogue, both at the academic level and in the popular imagination, the writings of Marshall McLuhan, perhaps one of the most deterministic of all scholars. More recent academic expositions by Manuel Castells and others on the power of the Internet-driven, global network society have built on the ground laid by McLuhan, Daniel Bell, Alvin Toffler, Howard Rheingold, and even Jean Baudrillard, all of whom have enjoyed a significant popular following, as well as scholarly fame.

SEE ALSO *Change, Technological; Forces of Production*

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Douglas Bicket

DETERRENCE

Deterrence is a military strategy in which one actor attempts to prevent an action by another actor by means of threatening punishment if the action is undertaken. Deterrence is, in essence, a threat to use force in response to a specific behavior. While deterrence is an inherently defensive strategy, it does not involve defense; that is, the deterring party does not actively protect its assets or try to prevent its opponent from taking the action, but rather threatens the use of violence to convince the opponent not to act in the first place.

THEORETICAL UNDERPINNINGS

Deterrence can best be understood with reference to the "3 Cs": capability, communication, and credibility. Any deterrent threat must meet all three criteria to succeed. Capability refers to whether the actor issuing the deterrent threat is capable of carrying out the threat. Thus, the ability to successfully deter depends to some degree on the power of the deterring actor. Capability is, generally, the most straightforward category, as states typically match deterrent threats to their extant military capabilities. States can, however, dissemble by threatening actions requiring capabilities that they do not have, or by claiming capabilities that they do not possess, though subterfuge and secrecy tend to undermine the efficacy of a deterrent threat.

In order for deterrence to work, a state must communicate its threats. If a state does not know that an action is proscribed, it cannot be deterred from taking that action. Communication is therefore essential if states are to know what actions they are not supposed to take, as well as what will happen if the action is taken. Thus, good lines of communication are crucial. The "hot line" between the Soviet Union and the United States during the cold war served this function well. With deterrence, the goal is to avoid armed conflict and communication is vital to create boundaries and reveal expectations.

The final C, credibility, is perhaps the most difficult criterion to meet. Deterrence is, in a sense, a fundamentally irrational action, because the threat is carried out after the violation occurs. Once the forbidden action is taken, it does not necessarily make sense to carry out the threat that was intended to deter that action in the first place. This is similar to the economic theory of "sunk costs," in which costs that have already been incurred should not be included in decisions about future behaviors. States have to work very hard at establishing their credibility, especially in situations of extended deterrence (explained below), and they often try to "tie their hands" meaning the decision to carry out the deterrent threat is made automatically. During the cold war, the U.S. soldiers stationed in West Germany had no chance of repelling a Soviet invasion of Western Europe. Instead, the troops served as a "tripwire," ensuring Americans would be killed in any Soviet invasion and increasing the odds that the U.S. would come to the defense of Western Europe, making more credible the American deterrent threat.

TYPES OF DETERRENCE

There are two fundamental types of deterrence: central and extended. Central deterrence occurs when a state attempts to deter attacks against itself, its nationals, or other intrinsic assets. In extended deterrence, a state attempts to prevent attacks against an ally or another third party. Credibility is usually easier to establish with central deterrence, because the need to develop a reputation for protecting one's own assets is vital to the strength of a state. Credibility is much more difficult to build in extended deterrence, because it is harder for the deterring state to risk war to protect an ally.

Deterrence can also be broken down into two strategic categories: denial and punishment. In a denial strategy, also known as counterforce deterrence, the military deterrence is targeted at the enemy's military and political assets, such as military bases, command and control assets, and governmental facilities. The purpose of the deterrent is, therefore, to prevent the enemy from achieving whatever goal it seeks with the use of force. If the opponent correctly reads the deterrent threat as sufficiently reducing the likelihood of obtaining the desired outcome, then the action will not be taken and deterrence will succeed. Flexible response, discussed below, is an example of denial strategy.

In punishment, or countervalue, deterrence, the deterrent threat is targeted at the enemy's "soft" targets, such as population centers or industrial capabilities. The aim of punishment deterrence is to threaten such a high cost to the fabric of the opponent's society that the action in question will no longer be worth the cost. Both massive retaliation and mutual assured destruction are illustrations of punishment strategies.

DETERRENCE STRATEGIES

While deterrence can be based on both nuclear and conventional forces, deterrence strategy can best be demonstrated by examining the evolution of U.S. nuclear strategy over

time. The first formulation of nuclear deterrence was "massive retaliation," a punishment strategy created by John Foster Dulles, the U.S. secretary of state under President Dwight Eisenhower. Here, the United States reserved the right to respond to any military provocation with nuclear weapons, and particularly with much greater force than the original attack. The United States was thus relying on its superior nuclear forces to deter the numerically superior Soviet Union from invading Western Europe. The main problem was the inability to deal with minor threats. As the Soviet nuclear arsenal became more capable of matching that of the United States, massive retaliation was replaced, under the Kennedy Administration, with "flexible response," a denial strategy that created a menu of responses that could be tailored to a specific action. The intent was to make the threatened use of nuclear weapons more credible. However, it was determined that any use of nuclear weapons could escalate into large-scale nuclear exchanges, and flexible response was discarded and replaced with "mutual assured destruction" or MAD. This was a punishment strategy that relied on the ability of both nations to completely destroy each other.

Deterrence is a critical part of the strategic arsenal of countries because all nations usually seek to avoid armed conflict and war. The need to maintain a strong deterrent posture can also inhibit states from achieving other political goals. For example, there was great resistance to the Israeli withdrawals from Lebanon in 2000 and from Gaza in 2005 because of fears that these actions would undermine Israeli deterrence capabilities. However, the years since 1950 have been something of a triumph for deterrence theory, and for nuclear deterrence in particular, as a conflict between the major powers has been avoided.

SEE ALSO *Deterrence, Mutual; Military; Violence*

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DETERRENCE, MUTUAL

The concept of deterrence implies that, through threats of raising potential costs through means such as attack or retaliation, a party to a dispute can dissuade an opponent from undertaking an undesired action, such as starting a war. It is difficult to know when an opponent is "deterred," since one must determine whether the party in question ever actually intended to act and also whether the adversary's threat dissuaded them. Under *mutual deterrence*, two or more parties simultaneously deter each other, a process even more complicated to verify.

Mutuality implies that both parties' threats raise such negative consequences that neither party takes action. Each party must possess both sufficient resolve and capabilities to make threats credible; costs must outweigh any advantages gained by aggressive action.

Deterrence theory stems from the longstanding international relations theory of the *balance of power*, a much-debated notion that nations try to negate each other's power advantages by strengthening their own forces and joining offsetting alliances. War supposedly can be averted through a balance of forces, though World War I (1914–1918) and other wars have broken out between powers supposedly engaged in such balances.

The post-1945 advent of mass destructive weapons and the cold war raised the possibility of a "balance of terror" between nuclear-armed alliances. Implicit was the threat that if one side struck with nuclear weapons, the other side would retaliate. Thus both sides would refrain from attack out of mutual fear of destruction. It is debatable whether nuclear standoff or more conventional power and interest calculations preserved the tense thirty-five-year peace between the United States and the Soviet Union.

Mutual deterrence thus took the form of a cold war doctrine of *mutually assured destruction*. In this remarkable and costly initiative, both Washington, D.C., and Moscow agreed to "harden" their retaliatory nuclear missile forces in impregnable underground silos and submarines at sea to assure that if one side launched a nuclear "first strike," the other side would surely be able and willing to respond, inflicting unacceptable damage on the initiator. *Stable deterrence* implied that neither side should do anything—for example, defend its cities—to upset the psychological assurance of effective retaliation.

Game theory became an integral part of the strategic thought accompanying these policies. Scenarios such as the prisoner's dilemma and chicken games denoted costs and benefits of either collaborating or "defecting" from peaceful strategies. Temptations to build up arms and attack would inspire similar behavior in the opponent; in seeking security through armament, both sides might become less rather than more secure (the so-called security dilemma).

Deterrence in today's post-cold war world is still premised on assumptions that nuclear-armed adversaries, such as India and Pakistan, are restrained from attack by the possibility of unacceptable damage in return. No such

restraint supposedly applies where only one side is heavily armed. The logic or illogic of unilateral or mutual deterrence remains puzzling, for example, as big powers attempt to dissuade smaller powers and nonstate or "terrorist" organizations from initiating violence. As actors adopt unorthodox forms of violence (e.g., personnel bombings and sabotage), it is not clear when political and social costs inflicted by military reprisals or other means are sufficient to deter further violence.

SEE ALSO *Cold War; Deterrence; Weaponry, Nuclear; World War II*

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Frederic Pearson

DEVALUATION, CURRENCY

SEE *Currency Devaluation and Revaluation.*

DEVELOPING COUNTRIES

Developing countries—generally referring to the countries of Africa, Asia, and Latin America—is a term that was inspired by Walt Whitman Rostow's classic work, *The Stages of Economic Growth: A Non-Communist Manifesto* (1960). Rostow argued that all countries go through a series of stages of economic development from "underdeveloped" to "developed"; that the United States, Western Europe, and Japan had reached the "highest stage" or "developed-country" status; and that those countries that were not mature, developed capitalist countries were in the process of "developing" and moving through the required stages.

A variety of terms have been used to refer to these "developing" countries. These include *less-developed countries*, *underdeveloped countries*, *undeveloped countries*, *backward countries*, *Third World countries,* and *newly industrializing countries*. Except for *Third World*, which was advanced in the late 1960s and early 1970s to refer affirmatively to countries that were politically independent of the United States and the Soviet Union, these terms are more-or-less pejorative. *Newly industrializing* is more specific than the other terms, in that it refers to a limited number of countries that have begun industrializing since the 1970s.

Implicit in the term *developing countries* is the suggestion that things will improve over (some unforeseeable period of) time. However, this terminology has been used to hide the exploitation and oppression of people in the so-called developing countries—exploitation by corporations headquartered in the developed countries, by dictators installed or supported by the U.S. government or its allies, or by the governments and militaries of the developing countries themselves.

As hinted at by its subtitle, Rostow's work was designed to support the U.S. imperial project and aimed not only to bypass but to supersede the Communist concept of *imperialism*. To Rostow—and to the U.S. government, for which he later worked—the Communist challenge in Southeast Asia was a serious one, especially because the region was deemed of strategic importance. Rostow argued that the lot of poor, exploited, and mistreated peasants in the developing countries would get better over time, whereas the Communists maintained that things could not improve under capitalism—that is, that revolution, not acquiescence based on "hope," was the only path to a better life.

The upper echelon of the U.S. government saw its post–World War II (1939–1945) project to achieve political, economic, military, and cultural hegemony over the countries of the world—at least those outside of the Soviet Empire—as being threatened by various revolutionary struggles in the developing countries. In response, the United States designed a global strategy of counterinsurgency to undercut indigenous struggles to gain independence (Post 1990, pp. 1–41). Along with this went various forms of ideology and propaganda, a key component of which was the theory of *modernization*, of which Rostow was the primary proponent.

CRITICAL APPROACHES

One of the first critical thinkers to analyze the true situation of the developing countries was Raúl Prebisch of the Economic Commission for Latin America, who argued that the relationship between developed and developing countries was exploitive. This perspective was further developed by Andre Gunder Frank, who introduced the concept of *dependent development*. According to Frank, development strategies promoted by the wealthy countries

were designed to ensure that the "developing" countries remained in a subordinate position.

A more systemic and historical perspective was proposed by Immanuel Wallerstein (1974, 1980, 1989). Wallerstein's *world-system theory* holds that beginning in the sixteenth century, capitalists backed by "strong states" spread outward from Western Europe to control the world, obtaining cheap labor and raw materials through trade relationships that benefited those in the European—and later U.S.—"core" countries. Wallerstein posits three levels of economic development represented by concentric "rings," moving from the advanced "core" countries to peripheral countries, with the "semi-periphery" located in between.

Despite having generated extensive research, Wallerstein's conceptualization has a critical weakness: While it is quite perceptive, it is a static model. Once a country gets "located" in one of the three "rings," world-system theory cannot explain how it can move from one ring to another. The case of South Korea is perhaps the most obvious example of a transition world-system theory cannot explain. Wallerstein's model has other problems as well. Historical evidence does not support the existence of a singular world-system—at least before 1989. In addition, Wallerstein's conception is overly economistic.

A much more interesting approach is that of Jan Nederveen Pieterse (1989). Nederveen Pieterse, who unfortunately did not have the "marketing" acumen of Wallerstein, never named his conceptualization. Yet his book *Empire and Emancipation: Power and Liberation on a World Scale* (1989) is the best explanation to date of relations between the European and, later, American nation-states and those referred to as *developing countries*. Nederveen Pieterse argues that to understand European global domination, one must begin by returning to the Crusades, out of which, he maintains, modern "Europe" developed. He carefully considers the processes of European development, taking a poststructural, processural approach instead of a static one. Nederveen Pieterse sees the domination of Europe and the United States as being imperialistic, but unlike Marxists, he does not give primacy to economics: He recognizes imperialism as (1) being a process of domination; (2) being characterized by interaction between economics and politics; and (3) always harming the people in the dominated countries. Interestingly, Nederveen Pieterse does not confine his understanding of imperialism to the nation-state level. Instead, he argues that imperialism is the domination of one political community over another, encompassing not only states, but also supra-states (e.g., the United Nations), subnational communities, and even organizations, such as the AFL-CIO.

Nederveen Pieterse is not satisfied, however, with focusing his analysis on domination alone; he argues that one must also analyze and theorize historical resistance to domination. Thus, he recognizes the Haitian Revolution and its key role in world history, the struggles of Native Americans against Euro-American settlers, and other efforts to resist domination.

NEOCOLONIALISM AND POSTCOLONIALISM

With only a few exceptions, such as Ethiopia, Iran, and Thailand (formerly Siam), most of the world's developing countries were formerly colonies. While formal colonization has largely ended, either through the granting of independence or through wars of liberation, many formerly colonized countries have continued their earlier political-economic relationships with their former colonial master. The reason for this is easy to understand: Colonization involved structuring the economy of the colonized country to serve the needs of the colonizing country and its corporations. Local administrators trained during the colonial period know little else, and therefore the old relationships have continued, only under new leadership (the color of the faces is usually all that has been apparently changed, but usually violence against formerly colonized peoples has been drastically reduced, if not ended). This continuation of earlier colonial political-economic relations is generally referred to as *neocolonialism*. Neocolonial relationships have been encouraged by both the International Monetary Fund (IMF) and the World Bank. Both have promoted neoliberal development programs. This neoliberal economic model has resulted in what Kim Scipes's study of the Philippines from 1962 to 1999 calls "detrimental development" (Scipes 1999).

Perhaps the most interesting phenomena of the late 1990s and early 2000s is the development of *postcolonial* states. These are states that have decided to develop their respective economies in ways that challenge the hegemony of the U.S.-controlled IMF and World Bank. Great progress has been made by several postcolonial countries, including South Korea, which went from the periphery to the core (using Wallerstein's terminology) in less than thirty years. Venezuela, a major oil-producer, is also currently showing success at developing its economy independently.

Postcolonial development models differ widely. South Korea's rapid industrialization, as impressive as it was, was in large part achieved through extreme exploitation of young women. Venezuela, on the other hand, has set a slower pace of development, and the government of President Hugo Chavez is trying to find ways to improve the lives of Venezuela's people through diverting some of the country's oil profits into social programs. How far

Venezuela can go in meeting the needs of the people, especially in light of U.S. intervention in its domestic affairs, remains to be seen. However, Venezuela's mobilization of large masses of the population to address their own problems—that is, development from "below," as opposed to the imposition of state "plans" from above—is an exciting process that holds out the promise of development without oppression.

SEE ALSO *Chavez, Hugo; Colonialism; Decolonization; Dependency; Development; Development Economics; Development in Sociology; Development, Institutional; Development, Rural; Economic Growth; Exploitation; Frank, Andre Gunder; Gender and Development; Globalization, Social and Economic Aspects of; Haitian Revolution; Health in Developing Countries; Imperialism; Industrialization; Inequality, Income; Inequality, Political; Inequality, Wealth; Labor Law; Migration, Rural to Urban; Modernization; North and South, The (Global); Poverty; Prebisch, Raúl; Privatization; Stages of Economic Growth; Third World; Wallerstein, Immanuel; Washington Consensus; World-System*

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Kim Scipes

DEVELOPMENT

Development theory is largely a product of post–World War II (1939–1945) thinking in the social sciences and international policy studies. The key intellectual challenges for development theory are these: What are the causes of economic transformation in human societies? What are some of the policies through which governments can stimulate the processes of economic growth? These questions have been the subject of inquiry within classical political economy for several centuries, and interest in the determinants of growth and modernization has been part of economic theory since its beginnings. But modern development theory took its impulse from global developments following World War II—the needs of reconstruction of Europe and Japan following World War II; the creation of international monetary and trading regimes to facilitate international economic interaction; the circumstances that followed from the dissolution of European colonies in Asia, Africa, and Latin America; growing attention to the persistence of poverty in the developing world; and focus in the 1990s on the phenomena of globalization.

The concept of development has encompassed several separate ideas in the past sixty years: the idea of modernization of economic and social institutions, the idea of sustained economic growth within a national economy, the idea of the continuing improvement of the material well-being of the earth's human population, the idea of more extensive utilization of the world's resources, and the idea of the replacement of "traditional" institutions and values with "modern" successors. Some of the large questions that have guided development theory include these: What are the features of society that can be characterized as "modern"? What causes a society to undergo sustained "modernization" and sustained economic growth? What institutional features are important causes in economic development? What steps can governments or other major institutions take to stimulate development? What is the significance of the specific features of western European economic development since 1600? Are there alternative pathways through which "modernization," growth, and improvement of human well-being can occur? Are there cultural assumptions that are made in valorizing development, growth, and modernization over tradition, moderate consumption, and stable cultural practices? How can one best define the goals of development in terms of human well-being? How should considerations having to do with equality, equity, and justice be incorporated into analysis and policy of development?

Development theory has taken shape through efforts in several areas of the social sciences: economics (theories of efficient markets, trade, and income distribution); sociology (research on concrete processes of social change in different parts of the world); anthropology (research on the values and practices of a range of non-Western cultures); political science (research on the institutions and interests that drive international economic policy); history (research on the dynamic circumstances that created modern national and international economic institutions); and critical social science (focus on features of inequality, power, and exploitation that have often characterized international economic institutions). Each of these strands captures something important about the historical experience of parts of the modern world, and yet they fall short of a full and general approach to the topic of devel-

opment. Development theory is an expansive, eclectic, and interdisciplinary field defined by a diverse set of questions and methods—not an exact subdiscipline within economics.

Decolonization and the aftermath of World War II stimulated a wave of academic and policy interest in the dynamics of economic growth and development. President Harry Truman highlighted the crucial importance of addressing global issues of poverty and hunger in his 1949 State of the Union address, an emphasis that stimulated new United States and international commitments in support of economic development in the decolonized world. The 1950s witnessed a surge of early development theory, in the hands of such authors as Simon Kuznets, W. Arthur Lewis, and Ben Hoflitz. A central thrust of these efforts was the formulation of economic theories of growth that, it was hoped, could help to guide policy in the economic transformations associated with decolonization. Postwar development theory also provided some of the intellectual foundations for the establishment of postwar international economic institutions such as the World Bank and the International Monetary Fund. Much of this work presupposed the idea that there were distinct stages of economic development, and it focused on the relationship between economic growth and savings as the basis for capital formation. The role of trade in economic development also played a central role in these theories. W. Arthur Lewis's theory of the "dual economy" was particularly prominent as a basis for attempting to understand the economies of the previously colonial world. This model postulates an economy consisting of a "traditional" sector (labor) and a "modern" sector (capital). Lewis postulated that firm owners in the modern sector were profit-maximizing, whereas those in the traditional sector were not, and that there was surplus labor in the traditional sector. So a strategy for growth is to induce a shift of economic activity from the traditional to the modern sector. This approach would increase savings and capital formation, leading to growth and rising incomes. Other economists such as Irma Adelman and Hollis Chenery cast doubt on the stage theory and further broadened the perspective by bringing distribution and welfare into the discussions.

There has been emphasis since the 1960s—sometimes waxing, sometimes waning—on the crucial importance of alleviating poverty in the developing world. Throughout much of its history the World Bank has expressed its adherence to the priority of poverty alleviation. The United Nations Millennium Goals for 2005 place poverty alleviation at the center of the development agenda for the coming fifty years. But even placing a sincere priority on poverty alleviation, there is a wide range of disagreement over the steps that should be taken to achieve this goal.

Several important frameworks of thought have been important in development theory thinking. Neoliberal development theory reflects the folk wisdom of neoclassical economic and political theory. Described as the "Washington Consensus," this approach to development postulates that modern economic development requires free markets, effective systems of law, and highly limited powers of government. The slogan of "Getting the Prices Right" was a rule of thumb for economic institutional reform in countries receiving advice and assistance from international institutions. This school of thought places great importance on free trade within the international economic system. Neoliberal structural adjustment reforms in the 1980s, enforced through International Monetary Fund and World Bank policies, pushed third-world governments toward harsh domestic reforms (currency devaluation, reduction of programs aimed at the poor, elimination of subsidies for rural development, liberalization of trade practices). Critics have argued that these structural adjustment policies have had the effect of further impoverishing the poorest of many developing societies.

Critical of the neoliberal consensus is an influential group of development theorists who emphasize the centrality of human well-being in development theorizing and the crucial role that public policies and expenditures play in successful efforts to improve the well-being of the poor in developing societies. Amartya Sen, Martha Nussbaum, and others argue for placing a nuanced theory of human development grounded in capabilities and functionings at the center of development policy. And they argue for the crucial role that public policy has in creating the human welfare infrastructure that is essential for the successful alleviation of destitution: public health, nutrition, free education, and democratic freedoms. On this view, the narrow conception of the role of the state associated with the neoliberal approach almost inevitably implies further degradation of the conditions of life of the least-well-off in the developing world. A concrete achievement of this approach is the creation and maintenance of the Human Development Index by the United Nations Development Program. This index is designed to provide a measure of economic development that goes beyond measuring growth of per-capita income, and instead focuses on measures that are correlated with quality of life: health, longevity, and educational attainment, for example. Another such measure is the Physical Quality of Life Index.

There have been critical voices within development theory throughout its history. Postwar theories of colonialism emphasize the extractive role that the system of colonial control represented, with a flow of natural resources from periphery to metropole. Dependency theory is the view that the world economy since 1945 has been con-

structed around a set of institutions that systematically disadvantage the South for the benefit of the North, by structuring production and trade in such a way as to limit economic growth in the third world. The South is integrated into the "modern world system," but on terms that systemically work to the disadvantage of the countries and peoples of the periphery. The Brandt Report (Independent Commission on International Development Issues, 1980) focused attention on the relations between the wealthy North and the impoverished South. This approach emphasizes structural inequalities, systemic institutional disadvantages, patterns of unequal exchange, and resulting uneven development. A different line of critical thought emerges from cultural critics of modernization. Arturo Escobar is a central voice in this body of criticism. This perspective offers a critique of the discourse and presuppositions of development thinking in the West: the presumed primacy of Western values, the unquestioned importance of consumerism, the teleology associated with the concept of "modernization," and other ways in which the values and assumptions of development theory reflect unquestioned ethnocentrism and universalism.

The concept of development incorporates several debatable assumptions. First, it has a tendency towards Eurocentricism. The paradigm of development incorporated in much development theorizing is the experience of western Europe during the Industrial Revolution. Non-European societies that undergo "development" (Japan, Taiwan, and Argentina) are frequently categorized in terms of a baseline comparison to the western European experience. Historical research conducted since the mid-1980s casts doubt on this single-track theory. Asian economic development in the seventeenth century and the twentieth century gives substantial evidence of the availability of alternative pathways of development, and there is considerable institutional variation within regions of western Europe itself.

Second, the concept of development is burdened with an implicit teleology. The word implies a progressive transformation from "less developed" to "more developed"; it implies the creation of more complex, sophisticated, and humanly adequate systems out of simpler and less adequate systems. (Rostow's concept of "stages of growth" captures this assumption precisely.) Historians have long since abandoned the idea that history has directionality, and have demonstrated the many false starts, wrong turns, reversals, and stalls that all societies have experienced.

Third, the concept of development brings with it an idealized set of assumptions in the background about what a "developed" society ought to include: consumerism, democracy, markets for everything, individualism, impersonal legal systems, large complex societies, and a high material standard of living. This is a social ideal that is deeply embedded in development theory and that can be legitimately questioned. The values that are associated with western consumer culture represent one possible framework of human values—but only one such framework. In fact, it may be that the constraints of long-term environmental sustainability make this complex of values doubly questionable.

Finally, development theory has been forced to confront the contradictions between economic growth and environmental sustainability. Resource depletion, destruction of forests and wetlands, urban sprawl, air and water pollution, and global climate change resulting from carbon dioxide emissions all call into doubt the feasibility of permanent economic growth. Prudent multigenerational planning for the future of the planet will require more consistency between the needs of consumption and the needs of environmental sustainability.

SEE ALSO *Civilization; Colonialism; Third World*

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Daniel Little

DEVELOPMENT, GENDER AND

SEE *Gender and Development.*

DEVELOPMENT, INSTITUTIONAL

In the social sciences, organizational theory, and politics, the term *institutional development* is often used as a synonym for institutional and organizational change, implying that social transformation occurs in an organizational framework. Institutional development aims at establishing and improving an institutional structural unit and its capabilities, as well as the impact and effectiveness of organizations. This effort is understood as a long-term multiple-stakeholder process in which numerous factors and power relations influence the final outcomes and their everyday relevance. Institutional changes may also be influenced by previous policy practices, and development is shaped by a wide range of stakeholders, including staff capacity and capability, as well as equipment and infrastructure. It is thus increasingly recognized that institutional development must be seen in terms of a longer trajectory. By and large, the long-term process of institutional development must be established in the form of carefully designed projects. Institutional development projects hence address issues as organizational and technological management.

Development issues in the field of education include the setting up, upgrading, and enhancement of course design and curricula and of equipment infrastructure, the establishment of new policies, and the improvement of existing regulations within professional organizations. This process is often supported or even devised by consulting partners. In the field of development aid or, in more general terms, philanthropy, the process of institutional development as practiced, for example, by nongovernmental organizations can be seen as the improvement of an organization's responsiveness to the needs of its intended beneficiaries, the finer discrimination between different needs, and a quicker response to these needs.

The danger in both fields is that institutions meant to be intermediaries, and thereby a means to an end, are treated as ends in themselves. In the domain of education, this can easily lead to an over-decentralization of education due to different stakeholder interests, and consequently to a loss of societal control over contents or standards. In the case of institutional development in philanthropy, those whose welfare is of ultimate concern may recede into the background.

In evaluating institutions and their impact on outcomes in the field of development aid, high-quality standards have been identified as an important aspect. But institutions do not stand alone. They are embedded in local settings and are influenced by history and culture. So the impact of institutions on developmental progress is framed by particularities of local settings, stakeholder perspectives, time horizons, informal rules, social norms, customs, policies, and so forth, apart from the intention and will to reach a certain development goal. To incorporate these different factors into a specific institutional development project poses a considerable challenge that demands drawing on knowledge gained in the field of cross-cultural psychology and related disciplines.

The designs of institutional development projects vary considerably. Tools and approaches for institutional development include the process approach, total quality management, knowledge management, change manage-

ment, monitoring and evaluation, and formative or summative approaches. Institutional development projects often lead to the conclusion that there are no "recipes" for changing institutions. In some cases, projects may develop guidelines describing tools to be used in practice. A large number of such guides can be found, written, and used by those who are involved in institutional development. All of these have strengths and weaknesses, and need to be adapted in the specific context of application. They reflect different theoretical backgrounds and are usually based on the practical experiences of those who used them while they were adopted. As exemplified in numerous project descriptions and evaluations, the first step to institutional development is always a serious analysis and diagnosis of the organization in its institutional context. Different stakeholder interests must be identified, goals of change or development have to be determined, and the process of change needs to be planned, implemented, and evaluated.

Nevertheless, measuring the success or effectiveness of institutional development remains difficult. Certain pitfalls that tend to occur in the process can be explained by the low standards of institutions initiating the change processes or by the conflicting interests of stakeholders. There are also cases of institutional "stickiness," where actors fail to respond to changes in the environment. Identifying factors driving institutional development is still a challenging research question. There is a need for a generalization of specific success factors in institutional development based on case studies and best-practice examples. Scientific literature on institutional development is quite dispersed, and no overall state-of-the-art volume is available.

SEE ALSO *Developing Countries; Economics, Institutional; Education, USA; Institutionalism; Neoinstitutionalism; Norms; Organizations; Stakeholders; Third World*

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DEVELOPMENT, RURAL

Rural development is the process by which sparsely populated areas improve their standing on socioeconomic measures. Political leaders try to hasten the pace of rural development through a wide array of policies. Concern about rural development arises because most rural areas lag behind metropolitan areas on basic indicators such as income, employment rates, and health outcomes. Rural development includes infrastructure, economic capacities, and the ability of local institutions to adapt to change in positive ways.

In the United States prior to the 1860s, action to foster rural development was focused on facilitating the westward movement of people. The emphasis shifted in 1862, when the Morrill Act granted land to states to create colleges with a mission to promote the liberal and practical education of the industrial classes. In 1887 the Hatch Act bolstered the capacities of these colleges, known as "land grants," to conduct research on improving agricultural practices. In 1914 the Smith-Lever Act established cooperative extension. The cooperative extension system is managed jointly by the land grants and the U.S. Department of Agriculture (USDA), and its mission is to teach the public how to apply land-grant research to improve their lives. Cooperative extension initially focused on agriculture and home economics, but evolved with the changing times and broadened its scope to include rural development functions such as leadership development, small-town development, management of human and natural resources, education of youth, and improving the competitiveness of rural manufacturing. The land grants and the USDA partner in supporting four regional rural development centers, based at land-grant institutions, each focusing on rural development issues in multistate regions.

President Franklin D. Roosevelt's New Deal policies established the Rural Electrification Administration (REA) in 1935, which brought electricity to most farms within fifteen years of its inception. Electrification greatly improved the quality of rural life and accelerated the industrialization of agriculture. As farming became more industrialized, rural labor was released, creating demands to create other kinds of rural enterprises to occupy the workforce. The New Deal also created the Farmer's Home Administration (FmHA) to provide loans for farms and rural infrastructure projects. In the mid-1990s the FmHA changed its name to USDA Rural Development to better reflect the full portfolio of its activities.

Although various rural development programs enjoyed some success in developing nonfarm jobs, they could not produce enough jobs to employ all the people leaving agriculture, and rural people began to move to cities. From the 1950s onward, major rural issues have been how to adjust to population decline in rural areas located far from metropolitan areas, and how to mitigate sprawl and the accompanying loss of the land base in metro-adjacent areas. These issues sparked activism and

generated grants from organizations such as the W. K. Kellogg Foundation, the Farm Foundation, the Rural School and Community Trust, the American Farmland Trust, and the National Association of Towns and Townships. State and local governments also responded by supporting creation of local economic-development authorities and land-use planning authorities.

Although some concerns about the rural areas of the United States remain, the rural quality of life is far better in the United States than in many other areas of the world. Since the late 1940s there have been attempts to apply the lessons learned in the United States to less-developed countries. The movement began after World War II (1939–1945), when the successful reconstruction of war zones through the Marshall Plan convinced U.S. policy makers and others that foreign development assistance could be effective. At the same time, policy makers began to notice the impact that Norman Borlaug (with support from the Rockefeller Foundation) was having in reducing famine in Latin America and Asia through improved varieties of cereals, in what came to be known as the "Green Revolution." (Borlaug was awarded the Nobel Peace Prize in 1970 for his work.) The internationally funded World Bank, the United States Agency for International Development, and similar agencies from other wealthy countries began to fund agricultural and rural development projects in many low-income countries. The projects included long-term support for internationally distributed basic agricultural research through the fifteen centers of the Consultative Group on International Agricultural Research, and associated projects to mitigate the negative impacts of increased technology in agriculture, such as increased dependence on purchased inputs, a higher rate of social inequality due to faster adoption rates among wealthier households, and the environmental consequences of increased cropping areas and pesticide use.

The decolonization of countries in sub-Saharan Africa between 1960 and 1980 made many of them more open to multilateral trade and assistance, so international aid agencies, along with foundations such as the Ford Foundation, the Rockefeller Foundation, the W. K. Kellogg Foundation, and the Bill and Melinda Gates Foundation, responded with substantial investments. Rural development programs in Africa have not had the same level of success enjoyed in other parts of the world. The reasons for this are the focus of scholarly debate.

SEE ALSO *Agricultural Industry; Decolonization; Development Economics; Foundations, Charitable; Gender and Development; Green Revolution; Inequality, Wealth; Microfinance; Migration, Rural to Urban; New Deal, The; Peasantry; Poverty; Roosevelt, Franklin D.; Urbanization; World Bank, The*

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Scott Loveridge

DEVELOPMENT AND ETHNIC DIVERSITY

Societies that are developed afford their members a higher level of economic prosperity and political security. A key issue is whether ethnic diversity promotes or undermines the capacity to develop.

An ethnic group is a collectivity whose members believe they share a common ancestry. Many such groups speak a common language and come from a common place of origin. They tend to share a common history. The members of ethnic groups therefore often regard each other as kin, even when they cannot precisely trace the links that define their relationship. When a political entity, be it a nation or city, contains many such groups, it can be described as ethnically diverse.

In the process of development, the foundations of the economy shift from agriculture to industry. To become prosperous, individuals in developing societies therefore need to acquire new skills and to shift their place of employment. While still an active subject of investigation, research thus far suggests that ethnic groups contribute to the private welfare of individuals by assisting them in this transformation. It also suggests that at the onset of development, ethnic diversity may impede the development process, while at a later stage, it may promote it.

PRIVATE INVESTMENT

To improve the welfare of their people, ethnic groups fund schools and promote literacy. They also promote migration from country to town within a given nation and from poor countries to rich, and thus enable their members to get better jobs and to earn higher incomes. Some ethnic groups specialize in particular forms of economic activity, and therefore master skills that they then impart to kin.

By thus enhancing the prosperity of their members, ethnic groups contribute to the process of development.

ETHNIC DIVERSITY

There is some evidence that ethnic diversity enhances the impact of ethnic groups. People who live in culturally diverse cities in the United States pay higher rents, for example, suggesting that in such settings people can be more productive and thus both more willing and better able to dwell in such settings. One reason that diversity may enhance productivity may be competition among ethnic groups, which would lead to higher levels of investment in education and job skills; another may be that the special skills of one group enhance the productivity of the special skills of another. Because researchers, including Alberta Alesina and Eliana La Ferrara in 2005, report that the relationship between diversity and productivity is more pronounced in richer cities, the latter seems the more likely account.

Late-twentieth-century research has also focused on the impact of ethnic diversity on public policies, such as education, transportation, and health care. Some of these studies (Alesina et al. 1999) are based upon comparisons between urban centers in the United States; others (Miguel and Gugerty 2002), on small-scale communities in Africa. In both areas, scholars tend to find that the more ethnically diverse the political setting, the lower the quality of public services.

LEVELS OF DEVELOPMENT

That ethnic diversity inhibits the formation of public services may help to explain a major finding in this field: the negative relationship between ethnic diversity and economic growth in poor societies. First reported in William Easterly and Ross Levine's 1997 article for the *Quarterly Journal of Economics*, the finding has been replicated using cross-national data and data for urban areas in the United States. Since that time, however, researchers have noted that the relationship between ethnic diversity and growth is not straightforward. While negative in poor societies, it turns positive at higher levels of income, according to research by Alesina and La Ferrara (2005).

In the underdeveloped nations, economic growth may require better roads, schools, and other services, and ethnic diversity appears to make it difficult for people to cooperate in their provision. In richer economies, economic growth may be driven by the private sector, and ethnic diversity appears to enhance economic productivity.

VIOLENCE

Many argue that ethnic diversity threatens development by rendering violence more likely. This claim derives from studies of political conflicts, which often focus on the ethnic tensions that underlie them.

The claim can be challenged on several grounds. As stressed by James Fearon and David Latin (1996), the evidence is improperly drawn; societies at peace are often ethnically diverse as well. Moreover, ethnic diversity is related to poverty and poverty to political conflict; it is therefore difficult to isolate the independent contribution of ethnic diversity to political disorder. Students of Africa—the most ethnically diverse region in the world—report that it is not the diversity that promotes violence but rather concentration: when one group is big enough to capture the state, then others fear the possibility of political exclusion and political tensions therefore rise.

Ethnic groups thus energize the transformation of economies from agrarian to industrial and of societies from rural to urban; by so doing, they promote development. At low levels of income, ethnic diversity may impede development; at higher levels, it may promote it. The political dangers of ethnic diversity appear overdrawn.

SEE ALSO *Development Economics; Economic Growth; Ethnic Conflict; Ethnic Fractionalization; Ethnicity*

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Robert H. Bates

DEVELOPMENT ECONOMICS

Development economics is the field of study devoted to understanding the economic experience of less-developed countries. Development economics arose during the period of European decolonization that took place immediately before and after World War II (1939–1945), as national independence movements gave rise to a large number of newly independent countries in Asia, Africa, and Latin America. While highly diverse in terms of their history, culture, climate, population size, and natural resource endowments, these countries shared a common set of economic goals, including the desire to rapidly increase their per capita incomes and reduce often widespread poverty. These desires were often linked to the related goals of rapid urbanization and industrialization that were seen as part of a larger project of modernization, and thought to be integral to national political goals including economic independence and political power on the world stage. Development economics arose as an attempt to address the economic priorities and challenges faced by these countries.

To at least some degree, the advent of development economics was a response to the perceived inadequacies of traditional economic theory as a framework for addressing the challenges posed by economic development. Traditional economics was mostly concerned with the static issue of market efficiency. In contrast, in less-developed countries, the central question was a dynamic one: how to radically transform the economy through the interlocking processes of economic growth, industrialization, and urbanization. Moreover, traditional economic analysis presumed the existence of a system of relatively well-functioning markets that simply did not exist in many developing countries. A new set of theories would be needed to understand the causes of persistent underdevelopment and suggest ways in which government policy could overcome existing market failures to speed and direct the development process.

STRUCTURALISM, DUALISM, AND DEVELOPMENT

To early development economists, the flaws in traditional economics were obvious. Less-developed countries were poorly characterized by the highly flexible national markets that typified traditional economic theory. Markets were often local and fragmentary, and individuals appeared to be more concerned with tradition and family ties than efficiency or profit. A prominent alternative was structuralism, which argued that underdeveloped markets were highly inflexible. Prices were fixed or adjusted slowly, and economic agents responded slowly to changing prices. With markets functioning poorly, the government should play an active role in directing labor and capital to their best uses.

Developing economies often appear to be "dualistic," comprised of a modern industrial sector and a more traditional agricultural sector. The most influential model of dualistic development is due to Sir W. Arthur Lewis (1915–1991), who suggested that the traditional sector had a supply of underutilized workers who earned a *subsistence wage*. This *surplus labor* constituted a free resource that could be used for industrialization. Workers could be withdrawn from the traditional sector without reducing the total agricultural output. The main constraint on the rate of development was a country's ability to accumulate capital to expand the modern industrial sector.

Until it was exhausted, the surplus of labor would hold wages at a subsistence level. The gains from industrialization would go entirely to the owners of capital. Eventually, however, the expanding modern sector would exhaust the supply of surplus labor, and wages would begin to rise. Rising wages would cut into profits, slowing the rate of industrialization but also spreading its benefits to the population at large. At least initially, however, rising inequality might be an unavoidable byproduct of rapid development.

INDUSTRIALIZATION AND MARKET FAILURE

Lewis's thinking placed industrialization at the heart of economic development. Further analysis suggested that poorly functioning markets could undermine the two processes on which industrialization relied, capital accumulation and the transfer of labor from agriculture to industry. In practice, industrial development often was accompanied by unusually high and persistent urban unemployment. John Harris and Michael Todaro (1970) suggested that this was the result of inflexible labor markets that set the modern-sector wage too high. In its simplest formulation, the Harris-Todaro model suggests that if the modern-sector wage is two times the rural wage, then each new modern-sector job will attract two rural migrants. As a result, job creation programs will actually increase urban unemployment since each new job attracts more than one rural migrant.

Markets may also fail to induce the investments in physical capital—factories, tools, and machinery—at the heart of industrialization. Many investments are profitable only if other projects are undertaken at the same time, but no one investor has the resources to finance all the relevant investments. Unless the actions of many different investors can be coordinated, none of the investments will take place. This may be the case when different investment projects are closely linked—like factories that make car bodies, tires, and glass—but the link between invest-

ments may not be so obvious. If workers at the shoe factory use their wages to purchase bicycles, and vice versa, then the profitability of investing in bicycle and shoe production will be linked.

A second problem is that financial markets and institutions may function poorly. When functioning well, banks collect savings from those with extra income and make loans to households and firms with profitable investment opportunities. In less-developed countries, this may not occur because households are geographically isolated or because it is too costly to make or collect on small loans to the poor, who often have the best investment opportunities. State-run banks may waste scarce investment resources by favoring politically powerful borrowers. Finally, some countries limit the interest rate a bank may charge. If the inflation rate is higher than the allowable interest rate, banks automatically lose money on every loan they make, resulting in financial repression.

In spite of these problems, once industrialization begins it is often self-sustaining, with the profits from initial investments providing the savings to finance additional investment. Instead of experiencing this virtuous cycle, however, many less-developed countries appeared to be caught in a poverty trap with low levels of income, profit, investment, and savings. To get the virtuous cycle started, many development economists advocated a "big push" in which the government coordinated and funded a large number of investment projects. If an underdeveloped banking system resulted in low levels of private savings, the government could finance investment through tax revenues. International aid could be used to close the *financing gap* if a country was too poor to finance the necessary investments on its own.

INTERNATIONAL TRADE AND ECONOMIC DEVELOPMENT

Skepticism regarding the role of markets in economic development was most pronounced in attitudes toward international trade. During the colonial era, many developing countries had become specialized in the production of food, minerals, and other primary products, relying on international trade for many manufactured goods. Many development economists believed this pattern of trade would make industrialization more difficult. Furthermore, the technological advantages of developed industrial countries would make it impossible for less-developed countries to compete as exporters of manufactured goods.

A highly influential version of this idea was formulated by development economists Raúl Prebisch (1901–1986) and Hans Singer (1910–2006), who argued that the price of primary products tends to fall over time relative to the price of manufactured goods. According to the Prebisch-Singer hypothesis, a developing country's ability to industrialize would be limited by that fact that, year after year, each ton of sugar or copper or coffee exported would purchase fewer machines. These ideas led to the development of North-South trade models that examined the conditions under which trade between an industrial "North" specialized in manufactured goods and a developing "South" specialized in primary goods could lead to uneven development in which southern income is stagnant or lags northern income indefinitely. More generally, the Prebisch-Singer hypothesis furthered the argument that markets were not up to the task of guiding a country's development.

The idea that guided developing countries' trade policy was import-substitution industrialization. A country would industrialize by gradually replacing manufactured imports with domestically produced counterparts. Led by the infant industry argument, many developing countries adopted import quotas and import tariffs to protect domestic manufacturers until they had matured enough to compete in international markets. In the early 1960s, a few East Asian countries rejected the inward-looking policies of import substitution in favor of export promotion. Successful exporters were rewarded with subsidies, easy credit, and other forms of support.

RADICAL PERSPECTIVES

Market skepticism also gave rise to more radical perspectives. According to André Gunder Frank (1929–2005), the father of dependency theory, the existence of a traditional sector was evidence not of capitalism's absence but of its fundamentally predatory nature. This is seen primarily in the tendency of capital to flow from underdeveloped rural regions to developed urban regions of a country. Center-periphery models addressed this dynamic in the international arena. Unequal exchange in international markets and the repatriation of profits by multinational firms would lead to the permanent concentration of capital in the hands of global economic elites, guaranteeing a persistent state of economic dependence for developing countries. The political domination of colonialism had been replaced by a neocolonial economic domination.

Radical economists believed that standard policy interventions were not enough to foster development. Successful development would require a fundamental restructuring of the international economic order and, often, the overthrow of the local political elite, who were viewed as the local representatives of global capital.

THE CONTINUING DEVELOPMENT OF DEVELOPMENT ECONOMICS

Development economics has continued to evolve since the mid-twentieth century. Development economics has

re-embraced economic theory as it has become more adept at addressing the particularities of the markets of developing countries. More importantly, economists have learned from their accumulated experience with economic development. In practice, the emphasis on industrialization often led to an "urban bias" in development, resulting in tax and trade policies that reduced incomes in rural areas where poverty was already the most severe. Early theories may also have overemphasized the role of developing-country governments, which are themselves developing and limited in their capacity for administration and oversight. Many economists point to the development success of relatively market-oriented East Asian countries and recent work emphasizing the role of corruption in continued underdevelopment. While both governments and markets are prone to fail, in developing countries the perils of government failure may well be more important.

SEE ALSO *Demographic Transition; Economics; Export Promotion; Harris-Todaro Model; Import Substitution; Input-Output Matrix; Kuznets Hypothesis; Labor, Surplus: Marxist and Radical Economics; Lewis, W. Arthur; Structural Transformation*

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Lewis S. Davis

DEVELOPMENT IN SOCIOLOGY

Development was a post–World War II concept used to describe and explain economic and social change throughout Africa, Asia, Latin America, and southeastern Europe. President Harry Truman (1884–1972) launched "the era of development" in 1949 when he committed the United States to making scientific and industrial advances available to underdeveloped areas. Four major theoretical and policy perspectives regarding development have been proposed: modernity (roughly 1940s–1950s), dependency (1960s–1970s), world systems (1980s–2000s), and market reform (1980s–2000s). Institutional, feminist, and capability perspectives also have informed development discourse. In various contexts, development has signified economic growth, income disparity, or class conflict within and between nation-states and regions of the world, and it has incorporated economic, political, and social change as well as enhanced individual freedom.

MODERNITY

Modernity theorists focused on economic growth accompanied by political stability, not on social transformation itself. They assessed economic development primarily by gross domestic product, per capita income, or extent of poverty. Political stability implied preferable but not exclusive emphasis on the development of democratic institutions. Informing the modernity school were classical evolutionary theorists, including Auguste Comte (1798–1857), Émile Durkheim (1859–1917), Herbert Spencer (1820–1903), and Ferdinand Tönnies (1855–1936), and functionalist theorists such as Talcott Parsons (1902–1979) and Edward Shils (1911–1995).

The modernity school included economists, such as Walt W. Rostow, who stressed the importance of speeding up productive investments; political scientists, including Samuel Eisenstadt and Gabriel Almond, who highlighted the need to enhance the capacity of political systems; and sociologists, such as Marion Levy and Neil Smelser, who focused on changes in Parsons's pattern variables (a way of characterizing interactions between people) and social differentiation. Reflecting evolutionary theory, modernization was viewed as a phased process, exemplified by Rostow in *The Stages of Economic Growth* (1960), and as a lengthy homogenizing process, tending toward irreversible and progressive convergence among societies over long periods of time. Some have argued that modern societies had better capacity to handle national identity, legitimacy, participation, and distribution than those with traditional political systems. Reflecting functionalist theory, modernity was also treated as a systematic and pervasive process.

Early modernization theorists such as James Coleman, Rostow, and Parsons constructed ahistorical abstract typologies, viewed tradition as an obstacle to development, and neglected external factors and conflict as sources of change. In the 1980s modernity theorists such as Siu-Lun Wong, Winston Davis, and Samuel

Huntington treated tradition as an additive factor of development, conducted case studies, used historical analyses, posited multidirectional paths of development, and identified external factors and conflict as sources of development.

DEPENDENCY

Dependency theory arose in Latin America in the early 1960s, in part due to the economic stagnation associated with the United Nations Economic Commission for Latin America's policy of import substitution (producing food and raw materials for industrialized centers and, in return, receiving processed goods from these centers). Classical dependency theorists, such as Andre Gunder Frank (1929–2005), Theotonio Dos Santos (b. 1936), and Samir Amin (b. 1931), posited the bipolar theoretical construct of core (industrialized nations) versus periphery (underdeveloped nations) as an alternative to the modernists' modernity versus tradition. The historical heritage of colonialism and the perpetuation of an unequal division of international labor precluded the development of the periphery. The flow of economic surplus to European and North American developed countries kept countries in the Third World underdeveloped.

New dependency theorists and researchers of the 1970s and 1980s, such as Fernando H. Cardoso, Thomas B. Gold, Guillermo O'Donnell, and Peter Evans, viewed the nature of dependency in sociopolitical terms and as coexisting with development, rather than as mutually exclusive of it—that is, leading only to underdevelopment. They focused on historical-structural aspects of dependency, emphasizing internal aspects, class conflict, and the role of the state.

WORLD SYSTEMS

World-systems theorists, such as Andre Gunder Frank, Christopher Chase-Dunn, and Immanuel Wallerstein, made the unit of analysis the world system or, more generally, the "historical social system." They used historical explanations from the viewpoint of the world system—the functions and interactions of all societies—and examined large-scale changes over long periods of time. As the world system expanded or contracted in its totality, that is, in terms of overall economic growth, regions and countries changed at different rates and in different directions. To account for uneven development, Wallerstein characterized capitalist world economy as exhibiting a trimodal structure of core, semi-periphery, and periphery. The addition of the semi-periphery component enabled the examination of upward mobility (a peripheral region or country moving into the semi-periphery or a semi-peripheral region or country moving into the core) as well as downward mobility (a core region or country moving into the semi-periphery or a semi-peripheral regional or country moving into the periphery).

Alejandro Portes (1997) contends that postulating a single worldwide unit of analysis and the long-term view are major flaws of the world-systems theory. This is because most development problems, dilemmas, and decisions occur in the intermediary level of nations and communities seeking to cope with constraints in their immediate, particular situations. As a result, world-systems theorists remain outside policy debates, and their influence with sociology has been mitigated somewhat, although as So (1990) and Peet (1999) note, greater attention to microregions has much promise theoretically and practically.

MARKET REFORM

According to Portes (1997), market reform consists of seven basic steps:

1. unilateral opening to foreign trade;
2. extensive privatization of state enterprises;
3. deregulation of goods, services, and labor markets;
4. liberalization of the capital market with extensive privatization of pension funds;
5. fiscal adjustment based on a sharp reduction in public outlays;
6. downscaling state-supported social programs; and
7. an end to industrial policies and a concentration on macroeconomic management or monetary policy.

According to this model, development means success in the marketplace, with little or no attention paid to the distributive effects of aggregate economic gains either between or within countries.

Access to and integration in worldwide markets, however, is assessed by criteria that go well beyond the economic sphere. For example, the A.T. Kearney *Foreign Policy* globalization index, which measures the impact of globalization in sixty-two countries, comprises four dimensions of nation-state development:

1. economic integration (trade and foreign direct investment);
2. personal contact (telephone, travel, remittances, and personal transfers);
3. technological connectivity (Internet users, Internet hosts, secure servers); and
4. political engagement (international organizations, UN peacekeeping, treaties, and government transfers).

INSTITUTIONAL PERSPECTIVES

Institutional theorists, such as Nicole Woolsey Biggart and Mauro F. Guillén, propose that "development depends on successfully linking a country's historical patterns of social organization with opportunities made available by global markets" (Biggart and Guillén 1999, p. 723). In the *World Development Report 2002: Building Institutions for Markets*, published in 2001, the World Bank acknowledges the importance of institutions' mainstream approaches to development policy. The framework of Andrew Dorward et al. (2005) incorporates bottom-up, nonmarket organizations such as microfinance groups and community-property resource-management groups. Institutional change is explained in terms of the responses of powerful groups to changes in relative prices, transaction costs, and technologies. In addition to a government's regulatory capacity, much depends on how such actors perceive possible opportunities and threats posed to their interests by alternative paths of institutional change or stagnation and their political effectiveness in influencing the paths and pace of institutional change. Change can therefore be anti-development or pro-development, with much variation within and across nations and regions throughout the world.

The approach of Dorward et al. is consistent with that of Portes (1997), who argues for a sustained systematic analysis of differing outcomes. Specifically, the analysis should require a conceptual apparatus that goes beyond the assumptions of rational self-interest and unrestricted pursuit of gain that underlie neoliberal adjustment policies. The conceptual apparatus of economic sociology, which emphasizes the embeddedness of economic action in social structures, including political and demographic factors and the roles of class and networks in guiding collective strategies, is most suited for this task.

FEMINIST PERSPECTIVES

Women in development (WID) theorists (1970s–1990s) accepted prevailing modernity theory, stressing development as a linear process of economic growth. Confined to the noneconomic domestic sphere of society, women in developing nations had been left out of the development process, according to the WID theorists. Drawing from the dependency school, women and development (WAD) theorists (1980s–1990s) argued that women have always been part of the development process and that it was this link to modernization that had impoverished them. Women were used as cheap labor for multinational corporations in export-processing zones. Gender and development (GAD) theorists (1990s) rejected the sexual division of labor as the main ordering principle of social hierarchy. Instead, race, gender, and class mattered. Unlike WID and WAD theorists, GAD theorists (1990s–2000s) treated the state as an important actor promoting women's emancipation.

Women, environment, and development (WED) theorists (1970s) made sustainable development a central issue: They linked ideas of equity between generations, the maintenance of a balance between environmental and economic needs to conserve nonrenewable resources, and the reduction of industrialization's waste and pollution. Postmodernism and development (PAD) theorists (1980s–2000s) did not reject theories of economic development per se, but rather favored an approach to development that accepted difference, incorporated power discourse, and fostered consultative dialogue to empower women to articulate their own needs and agenda.

CAPABILITIES

In *Development as Freedom* (1999), Amartya Sen conceptualizes development as a process of expanding freedoms that people enjoy. People's capabilities underlie valuable goals of development of which measures such as gross domestic product, per capita income, industrialization, and technological advances are only indirect indicators. The notion of capabilities suggests that quality-of-life conditions must enhance the substantive freedoms that people enjoy if they are to lead the kinds of lives they have reason to value.

In *Women and Human Development* (2000), Martha C. Nussbaum shows how the combination of gender inequality and poverty clarifies the need for attention to capabilities. Questions about how satisfied people are with their lives or about the resources they have at hand are less important than what they are actually able to do and to be. Capabilities include being able to have good health, including reproductive health; being able to form a conception of what is good and engage in critical reflection about planning one's life; being able to work; exercising practical reason; and entering into meaningful relationships of mutual recognition with other workers. A foremost goal of the capabilities approach is to maximize individual choice. Individuals should not be denied choice by cultures, religions, or families of which they are members, although these institutions might well provide the conditions under which individuals flourish. No institution, however, is sacred, and it is the responsibility of governments to protect individuals from any community that prohibits them from developing and exercising the basic human capacities.

SEE ALSO *Almond, Gabriel A.; Amin, Samir; Comte, Auguste; Decolonization; Dependency Theory; Developing Countries; Development and Ethnic Diversity; Development Economics; Durkheim, Émile; Feminism; Frank, Andre Gunder; Gender and Development; Globalization, Social and Economic*

Aspects of; Huntington, Samuel P.; Inequality, Gender; Institutionalism; Liberalization, Trade; Modernization; Neocolonialism; Neoimperialism; Parsons, Talcott; Postcolonialism; Sen, Amartya Kumar; Spencer, Herbert; Stages of Economic Growth; Wallerstein, Immanuel; World-System

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DEVELOPMENTAL PSYCHOLOGY

Developmental psychology is the branch of psychology dedicated to identifying and explaining the continuities and changes that individuals display over their lifetimes. In particular developmental psychologists seek to understand the mechanisms or factors that are deemed responsible for the immense changes that occur in human thought, behavior, biology, and emotion from the very beginning of life through to the end—from "womb to tomb" (Shaffer, Wood, and Willoughby 2002).

Historically, early theories of development focused on trying to explain the development that occurs primarily during the first decade of life, with a focus on infancy and early child development. Scant attention was paid to the development that occurs during adolescence and on into adulthood. Societal changes that occurred during the 1950s and 1960s, however, led to a critical shift in theories and research in the field of developmental psychology. With respect to adolescence, for instance, the youth movements of the 1960s brought a new interest in understanding the teenage years and led to a marked theoretical alteration in the understanding of adolescence. Before then little attention had been paid to the empirical investigation of adolescents, and the extant theories of adolescence, primarily based on clinical experiences and anecdotal reports, portrayed the teen years as a time of "storm and stress"—a time during which individuals experience severe emotional turmoil and disturbance (e.g., Hall 1904). But data collected from adolescents themselves revealed that the teen years were not as tumultuous as previously assumed and that in fact the majority of adolescents (80%) reported traversing the teen years with little turmoil, relating well to their families and peers, and being comfortable with their social and cultural values (Offer and Schonert-Reichl 1992).

THEORETICAL FRAMEWORKS

Early twenty-first century views of development examine development across the life span: the prenatal period, infancy and toddlerhood, the preschool period, middle childhood, adolescence, young adulthood, middle adulthood, and late adulthood. A life span approach to development encompasses the scientific study of human growth, change, and stability (Feldman 2006). Researchers with this perspective seek to unravel universal principles of development, characteristics, and traits that differentiate people from one another, with a focus on physical, cognitive, personality, and social development. Demographic changes since the 1980s have spurred a new conception of development for the period identified as "emerging adulthood," which spans the ages eighteen to twenty-five (Arnett 2000).

In contrast to the life span development approach, another theoretical framework for understanding development over time is the life course perspective. Life course theory emerged in the 1960s from the need to understand how individual lives are socially patterned over time and to examine the processes by which lives are changed by changing environments in which time, context, and process are an explicit part of the analysis. More specifically, life course researchers take into account both stability and change in lives as they unfold across time and generations and in historical, social, and cultural contexts.

The life course approach is an increasingly influential paradigm in social scientific thinking. In the words of Anne Colby, this theoretical approach represents "one of the most important achievements of social science in the second half of the 20th century" (Colby 1998, p. viii). One of the pioneers in this field is Glen Elder Jr., who studied children of the Great Depression, emphasizing how individual lives are socially patterned over time and the processes by which lives are changed by changing environments (Elder and Shanahan 2006).

The science of developmental psychology lacks a comprehensive and widely accepted developmental theory that unifies the field (Cole, Cole, and Lightfoot 2005). Instead, many different theories have been proposed in the study of development, demonstrating how different theories lead to different explanations of behavior across the life span. The most influential and enduring theoretical frameworks have included the psychoanalytic, learning, cognitive-developmental, and ecological systems viewpoints. Sigmund Freud was among the first to emphasize the centrality of emotional life to the formation and function of personality development (Cole, Cole, and Lightfoot 2005). His psychoanalytic theory was rooted in the idea that development moves through a series of stages in which individuals confront conflicts between their biological drives and their social expectations. Freud envisioned the immense power of the unconscious as a determinant of behavior and argued that development is largely molded by experiences in the first years of life. Although psychoanalytic theory has profoundly influenced psychology, among other fields, it is subject to criticism. Even among his own circle of disciples, Freud's theories did not go unchallenged (Passer, Smith, Atkinson, et al. 2005). Although neoanalytic contemporaries of Freud, such as Alfred Adler, Karen Horney, Erik Erikson, and Carl Jung, agreed on the importance of both the unconscious and of childhood experiences, most argued that Freud did not give social and cultural factors sufficient importance in the role of development. Indeed because of the many criticisms leveled at Freud's theories in terms of generalizabilty and testability, few present-day developmentalists are strong supporters of Freud's theories (Shaffer, Wood, and Willoughby 2002).

In contrast to psychoanalytic theories, learning theories emphasize that development occurs as a result of behaviors learned through associations with different kinds of consequences. The most influential proponents of this perspective, John B. Watson and B. F. Skinner, argued that individuals tend to repeat behaviors that have resulted in rewards or that have allowed them to avoid unpleasant consequences. Social learning theorists such as Albert Bandura expanded upon traditional learning views to consider that a great deal of learning develops through the observation of others in the social context. Through a process known as modeling, children come to imitate behaviors they have seen others do, especially if they observe such behaviors to have positive consequences (DeHart, Sroufe, and Cooper 2004). Perhaps the greatest contribution of the learning viewpoint to understanding development has been the wealth of information gleaned through tightly controlled experiments. Learning theories are precise and testable and have helped developmentalists begin to understand why and how people form emotional attachments, adopt gender roles, make friends, and learn to abide by laws and rules (Shaffer, Wood, and Willoughby 2002). Nonetheless, the learning approach is a grossly oversimplified account of human development; it tends to overlook the contexts in which development occurs and often fails to recognize the cognitively active role that individuals play in their own development.

The cognitive-developmental perspective addresses some of these criticisms by focusing on the view that individuals actively construct a system for understanding the world rather than passively acquiring new information through simple learning mechanisms. Cognitive developmentalists seek to understand and explain the normative development of reasoning and thinking skills and argue that such skills progress through a universal sequence of invariant and qualitatively different stages. Jean Piaget is the most prominent developmental psychologist of the twentieth century, having contributed more to our understanding of cognitive development than any other scholar (Shaffer, Wood, and Willoughby 2002). Piaget's theories legitimized the study of children's thinking, linked moral development to cognitive development, and contributed to developmental research in social cognition—the kind of thinking that people display about the thoughts, feelings, motives, and behaviors of themselves and other people (Shaffer, Wood, and Willoughby 2002). Although critics have challenged the sequence of Piaget's stages and recognize that he underestimated the ages at which cognitive skills develop, it is almost impossible to exaggerate the impact that Piaget's thinking has had on developmental psychology (Beilin 1994).

A final theoretical framework is ecological systems theory, posited by Urie Bronfrennbrenner (1979). This perspective begins by assuming that natural environments

are the major source of influence on developing persons (Shaffer, Wood, and Willoughby 2002). The ecological framework views individuals in the context of all the various settings they inhabit on a daily bases (microsystems). These settings are related to one another in a variety of ways (mesosystems), which are in turn linked to settings and social institutions where an individual is not immediately present but which have an important influence on his or her development (exosystems). All of these systems are organized in terms of the culture's dominant beliefs and ideologies (the macrosystem). Although the ecological systems perspective has gifted developmental psychology with an understanding of the complexities of the natural environment, the theory fails to explain how individuals process and learn from environmental information and is therefore not a complete account of how humans develop (Shaffer, Wood, and Willoughby 2002).

INVESTIGATIVE METHODS

Without a unified theory, how do developmental psychologists know anything about human development? Since the 1990s a variety of methods has been refined for gathering information about how development occurs (Cole, Cole, and Lightfoot 2005). Among the most widely used are naturalistic observations, survey research, and research experiments. However, no single method can answer every question about human development; each approach has its own strengths and limitations. Various approaches have a strategic role to play, dependent upon the topic under investigation and the answers being sought.

The most direct way to gather information about how development occurs is through naturalistic observation. By definition, naturalistic observation involves observing and recording behavior in naturally occurring situations without trying to manipulate the environment. Naturalistic observations allow developmentalists to observe how individuals behave in everyday life. However, such an approach is not without its limitations. For example, when people know they are being watched, they often behave differently than they normally would. In addition researchers often enter observational settings with expectations about what they are going to see and inevitably observe selectively in accordance with those expectations. Nonetheless, observational methods are a keystone of developmental research and a critical source of data about development (Cole, Cole, and Lightfoot 2005).

Researchers who opt for survey methods utilize structured questionnaire or interview techniques to ask participants questions related to such aspects of development as perceptions, feelings, or beliefs. Despite obvious shortcomings, such as attempts by respondents to present themselves in socially desirable ways, survey research is an excellent method for obtaining large amounts of information, often from a large number of participants, in relatively short periods of time.

A final investigative approach is the psychology experiment. In a true experiment the researcher controls conditions and systematically manipulates one or more variables so as to rule out all other influences on development except the one being investigated. The clear strength of the experimental method is its unique ability to isolate causal factors. That is, by controlling extraneous variables that may be influencing development, researchers can be confident that the variable of interest does indeed have an effect. A major drawback to experimental research is that the findings are not always generalizable to everyday settings, given that people do not always respond in the laboratory the way they do in the natural environment. Thus, as with the myriad of theories utilized to explain development, there are numerous approaches for investigation in the field of developmental psychology.

SEE ALSO *Adolescent Psychology; Behaviorism; Child Development; Cognition; Erikson, Erik; Experiments; Freud, Sigmund; Gerontology; Jung, Carl; Maturation; Methodology; Piaget, Jean; Psychology; Skinner, B. F.; Stages of Development; Survey*

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DEVIANCE

In *Deviant Behavior*, Erich Goode defined deviance as "behavior or characteristics that some people in a society find offensive or reprehensible and that generates—or would generate if discovered—in these people disapproval, punishment, condemnation of, or hostility toward, the actor or possessor" (1997, p. 26). While this definition of deviance is acceptable to much of the academic community, there is no consensus among academics or in the general public over what should and should not be considered deviant. Certainly, large groups of people may be able to agree on very general precepts of acceptable behavior. For example, most people in the world may agree that the killing of another person is unacceptable and therefore deviant. However, the heated debates that exist over capital punishment, abortion, stem cell research, or the permissibility of one country engaging in military action against another all highlight the difficulties in identifying something like the killing of another person as deviant. Beyond these sweeping generalities, a closer look at what is and is not permitted reveals that deviance is truly relative; what is considered deviant changes from society to society and over time within any given society, and often changes based on who carries out the particular behaviors. In academia, definitions of deviance tend to fall under one of four major categories: natural law definitions, normative definitions, labeling definitions, and critical definitions.

Perhaps the oldest conceptions of deviance, natural law or absolutist definitions, suggest that some norms, prohibitions, and codes of conduct are appropriate for all people in any social context at all times. These include taboos like incest and cannibalism, thought to be so morally repugnant that they are universally prohibited. But they also include codes of conduct governing other, less extreme, behaviors that are seen as necessary for a society to function properly. Contemporary sociologists tend to be critical of these definitions because they assume some degree of global consensus over what is right and wrong. These sociologists also criticize natural law approaches for denying the role that power inequalities play in shaping definitions of deviant behavior.

Prior to the 1960s, normative definitions of deviance were those to which most sociologists adhered. Proponents of these definitions suggest that deviance is rule-breaking behavior. All social groups have norms—authoritative standards of behavior—by which all group members are expected to abide. These norms range from less serious rules of social etiquette, such as not chewing food with your mouth open, to legal norms that prohibit behaviors like murder and terrorism that threaten the values that society holds up to be most important. Similar to the criticisms of natural law definitions of deviance, normative definitions are often criticized for their presumption of societal consensus over which rules will bind people together. Further, normative definitions are also criticized for not examining the role that power inequalities play in classifying behavior as deviant. Finally, these conceptions of deviance are criticized for the disjunctions that exist between what sociologists refer to as ideal culture (norms and values that a society holds up as paramount) and real culture (the behaviors that members of a society actually practice). For example, possession of marijuana is strictly prohibited by federal law in the United States, and thousands of people are incarcerated each year for violating these laws. However, over 40 percent of all adult Americans surveyed admit to using marijuana at least once in their lifetime (USDHHS 2005).

Often referred to as "social reaction" definitions, labeling definitions of deviance begin with the assumption that no act is inherently deviant. Every society has people who engage in norm-violating behavior. In fact, at some point in their lives, most people engage in deviant or criminal behavior. However, many of these rule breakers are able to avoid being formally labeled or identified as deviant because of their power or prestige, and other attributes like race or social class. Therefore, it is not the act itself that is deviant, it is how society reacts to the act that determines whether something or someone will be viewed as deviant. As Howard Becker wrote in *Outsiders*, "Deviance is not a quality of the act the person commits, but rather a consequence of the application by others of rules and sanctions to an 'offender.' The deviant is one to whom that label has successfully been applied; deviant behavior is behavior that people so label" (1973, p. 9).

Becker and other labeling theorists have been criticized for overstating the relativity of deviance and for failing to explain why some groups tend to be involved in more criminal and deviant behavior than others. Nonetheless, the labeling approach continues to be the dominant perspective in studies of deviance.

Many of the tenets of the labeling approach to deviance were adopted and built upon by supporters of the critical approach. Critical theorists argue that definitions of deviance intentionally favor those in positions of economic and political privilege. The political and economic elite use the law and other agencies of socialization under their control, such as the mass media, to simultaneously play up the threat of the deviant and criminal underclass while neutralizing their own law-violating and otherwise deviant behaviors. This neutralization allows the elite to profit and conduct themselves in ways that go against the best interests of society at the expense of the less powerful. Most criticisms of critical theories of deviance suggest that these theories are too vague and broad to have any practical import.

THE RELATIVITY OF DEVIANCE

The dominant belief among sociologists today is that, to a great extent, deviance is relative; what is acceptable in one place and at one time is not acceptable in a different place and time. Consistent with the labeling and critical theories, deviance is a matter of power relationships and personal and collective perspective. For example, in many contemporary societies, women who attempt to access political institutions are regarded as deviant and socially unacceptable. In all of these cases, it is men who control these institutions and therefore have the most to lose if women were to gain a political foothold. As was the case with the Taliban in Afghanistan, these men embrace norms and make rules designed to relegate women to inferior social-status positions. In contrast, formal barriers to female participation in politics are scoffed at by most people in the Western world. However, it was not until 1920 that women were guaranteed the right to vote in the United States. Only recently have surveys indicated support for a female president of the United States, and the United States still lags well behind many other nations when it comes to the number of women who hold elected government positions (Duggan 2005). Thus, while people in the United States may rightfully view Afghanistan under the Taliban as a sexist and deviant society, people in other nations where women are routinely elected to the highest political offices might think similarly of the United States.

Also, with regard to the relativity of deviance, formal distinctions between deviant and acceptable behaviors often have little to do with an objective analysis of harm or societal consensus. Rather, because of their appeal, perceived legitimacy as authorities, or control over political institutions and important resources like money and power, certain groups have a disproportionate influence over which behaviors are acceptable in a society. As sociologist John Curra writes, "Deviance, like beauty, is in the eye of the beholder, and it exists because some groups decide that other groups ought not to be doing what they are" (2000, p. 16).

Michel Foucault (1926–1984) was among the pioneers of this relativity perspective insisting that defining deviance requires the proper social perspective and an analysis of power relationships in society. In 1961 Foucault published *Madness and Civilization*, the results of his doctoral research—and his first major published work. In this book, Foucault examines the different ways that "madness" was perceived and addressed by those in power during the classical age (the late sixteenth century through the eighteenth century). Madness begins the era as an "undifferentiated experience," but over the course of the classical age, due to moral and economic factors, the mad are labeled as deviant, alienated from society, and subjected to various forms of confinement by those in positions of power.

Often, certain types of behaviors are defined as deviant, not because of the will of the majority or the interests of the power elite, but because of interest groups who wish to define these behaviors as deviant because they do not fit within their value systems. In many respects, the thirteen-year prohibition of alcohol in the early twentieth-century United States resulted from the pressure exerted upon lawmakers by these "moral entrepreneurs"—people on a personal or social crusade to change attitudes toward particular behaviors. While these "reformers" were successful in formally labeling alcohol consumption as deviant behavior, large numbers of people refused to accept this label. Subsequently, a black market for alcohol emerged, leading to deaths caused by the ingestion of toxic "bootlegged" alcohol. Of even greater social consequence, Prohibition created what many historians have pinpointed as the genesis of organized crime in the United States as crime syndicates were established to meet the public demand for illegal alcohol.

In the United States, there is an ongoing crusade by moral entrepreneurs to deny gay and lesbian couples many of the basic rights and privileges that heterosexual couples take for granted. Such issues as same-sex marriage, gay couples adopting orphaned children, rights of inheritance, and coverage for domestic partners under private insurance plans are all examples of these contested issues. There have been some symbolic victories for gay couples. For example, in *Lawrence v. Texas* (2003), the U.S. Supreme Court declared unconstitutional laws that singled out gay couples for criminal prosecution under state sodomy laws. However, the moral entrepreneurs have gained significant ground in their efforts; many states have adopted laws prohibiting same-sex marriages and banning adoption by gay couples. As with prohibition,

only time will tell of any unintended consequences of these changes in formal conceptions of deviance.

THE DEVIANT OTHER

Traditionally, studies and theories of deviance and crime research have been primarily based on segments of the population without political and economic power, particularly racial and ethnic minorities and immigrants. Much of this research has reinforced the idea that deviance and criminality remain problems of the lower classes and people of color. Perhaps nowhere is this more evident than in deviance and drug research. While the sociological literature on drug use is extensive, the vast majority of this research explores the drug using and dealing habits of urban minorities, particularly African Americans. This is in spite of the fact that the data indicate that rates of drug use are fairly evenly distributed across race and social class, and that white people are more likely than either black people or Latinos to have used illegal drugs in their lifetime (USDHHS 2005).

A study by A. Rafik Mohamed and Erik D. Fritsvold (2006) exploring drug dealing among predominantly white college students uncovered a profitable drug network in which both the patrons and providers did not fit the stereotype of drug users and dealers. But, because of their relative affluence, race, access to costly legal counsel, and other factors related to their social status, when the illegal behaviors in this market were exposed, the dealers and users were not labeled as deviants. This study made clear that both researchers and the engineers of U.S. drug policy still do not gear drug research or drug law strategies toward people whom they resemble in social class and status. Instead, the war on drugs, like much of the research on deviant behavior in general, ignores the illicit enterprises of the affluent and continues to operate as a furtive attack against the poor and people of color.

SEE ALSO *Crime and Criminology; Justice, Social; Labeling Theory; Power*

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A. Rafik Mohamed

DEVIANCY TRAINING

SEE *Deviance; Peer Effects.*

DIALECTICAL MATERIALISM

SEE *Communism, Primitive.*

DIAMOND INDUSTRY

The modern economic origin of the diamond industry is the outgrowth of the two depressions in 1893 and in 1929. In the aftermath of the 1893 market collapse, Cecil Rhodes succeeded in consolidating the majority of the South African diamond mines within DeBeers Mines and formed the London Diamond Syndicate.

The present-day successor to the original syndicate and the Central Selling Organization (CSO), which was reorganized by Ernest Oppenheimer in 1929, is the Diamond Trading Company (DTC). The DTC still has a substantial position in the distribution of the rough, controlling about 50 percent of the world output, down from 80 percent in the 1980s, through the exploitation of its own mines (these account for over 40 percent of world output) or through purchasing contracts with independent diamond producers. As new discoveries of diamond

deposits and sales independent of CSO are expected, the monopoly power of DTC will continue to decline.

Stabilization of the supply of rough and thus of prices by the CSO is accomplished in three ways: allocation of production quotas for the mines with a guaranteed minimum quota sufficient to secure continuity of production, regardless of the state of the world market; 10 yearly offerings of rough, known as "sights" to about 150 cutters and dealers in the various diamond centers; and accumulation of stocks when demand cannot sustain the prices until the market improves. The sorted and graded diamonds are placed in boxes marked with the name of the purchaser and the price. For diamonds under 14.8 carats, prices set are not negotiable. Irregular purchases may lead to exclusion from the list.

To obtain 1 carat (200 milligrams) of rough, 20 tons of rock and gravel need to be mined. Industrial diamonds, used in cutting and grinding tools, which until General Electric's (GE) 1951 synthesis were mined as a by-product of gemstones, are no longer tied to the production of the latter. In the early twenty-first century GE and DeBeers each produced about 40 percent of industrial synthetic diamonds. Still, in some industrial cases, a preference exists for use of natural diamonds. Furthermore GE succeeded in developing synthetic gem diamonds, produced in the early twenty-first century by two companies, Gemesis and Apollo, in the United States. The industry insists that synthetic diamonds used in jewelry be promoted as such.

Diamonds show an enormous variety of shape, size, quality, and color; thus there are no set prices for diamonds, in contrast to precious metals. The industry operates then in an uninformed market in that buyers lack the knowledge of the nature of the goods they wish to purchase and therefore rely mainly on advertising as a guide, despite the existence of gemological associations that certify diamonds. DeBeers's advertising strategy with its "a diamond is forever" ad, romanticizing and glorifying the diamond as a cultural imperative, is considered the most successful marketing campaign in history to date.

In 2000 DeBeers decided to loosen its supply control model and increase retail demand by pressuring its sight holders to engage in creative marketing. Companies began branding and patenting designer diamonds. Also vertical integration of the diamond pipeline spread in that DeBeers and independent mines sold directly to polishers and partnered with luxury retail establishments, thereby excluding middlemen.

In 2004 over 50, 25, and 15 percent of rough of 162 million carats were mined in sub-Saharan Africa, Russia, and Canada, respectively. Twenty countries produced diamonds whose value reached over $12 billion, of which Africa's share was 60 percent. About 20 percent of the total volume was gems, and 45 percent were near gem quality. In terms of retail activity, the United States, Japan, and Europe accounted for 53, 13, and 12 percent, respectively.

The polishing of diamonds, which involves a 50 percent weight loss, constitutes an appreciable industry in several countries, of which India, with its 700,000 workers, dominates, followed by Russia, Israel, Belgium, China, and Thailand, each with thousands of employees only. The structure of the industry is highly competitive at both the polishing and the distribution levels. Concentration is much lower at the polishing end due to the prevalence of subcontracting and the absence of substantial economics of scale.

Maintenance of a distributive outlet for diamonds represents a substantial investment and requires the ability to offer a wide line of processed diamonds to potential customers. In general the greater the variety and range offered, the greater the chance of securing high margins, since the seller is able to follow changes in demand. Such higher profits can be accomplished only by large fabricators or large wholesalers who have the financial resources to stock gems whenever market conditions warrant. There is also a tendency to dispatch the polished diamonds on consignment—a practice requiring a substantial amount of working capital.

For the solely polishing centers, the volume of diamond exports should not, however, be taken as the measure of the industry's role in the earning of foreign exchange. The value of imported rough amounts to nearly 80 percent of the value of exports, and the industry in such countries is completely dependent upon imports for its rough. The foreign currency earning rate, defined as

(Export Value – Value Import Content)/Export Value

ranges between 12.1 and 24.1 percent.

Ironically, while officials of DeBeers inveighed against the brutality of the South African apartheid system and even supported the emergence of black labor unions in the 1970s, the miners, separated from their families, were housed in crowded compounds with little privacy. Following legislation enacted in 2004 of the "Broad Based Black Economic Empowerment Act" passed by the South African parliament, DeBeers is to transfer for "fair market value" 26 percent of its South African diamond interests to enhance black ownership within five to ten years. Also, the company must sell a portion of its rough to a government agency, which will help expand the polishing centers in the country.

The ease with which diamonds can be transported and laundered has fueled the most vicious civil wars in Africa and has heightened Al-Qaeda's terrorist strategies. As a result in 1998 the United Nations Security Council,

governments, and the industry enacted, with a modicum of success, anti-laundering legislation and the Kimberly Process certification system, which certifies the legitimate shipment of rough. The 2006 movie *Blood Diamond* is generally a correct manifestation of the cruelty pervading the diamond trade in several African countries. It illustrates the factional greed of the leaders who usurp the wealth of resources of African countries.

Of special concern to human rights groups is the employment in some countries, such as the Republic of Congo and India, of children in the mining and polishing plants despite legislation prohibiting it. Of special concern to environmental groups is the impact that open pits diamond mining has on the environment because the population is displaced to facilitate mining exploration and chemicals leach into ground water.

SEE ALSO *Apartheid; Child Labor; Corruption; Industry; Mining Industry*

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DIASPORA

Diaspora takes its name from the ancient Greek *dispersion*, meaning "to scatter," and, in the past, has been most closely associated with "the settling of scattered colonies of Jews outside Palestine after the Babylonian exile" (*Merriam-Webster* 2004, p. 345). For historians and social scientists, the concept embodies an assumption of forced dispersal, but also a shared identity organized around a mythic homeland, and the belief in a massive return (Akenson 1995, pp. 378–379). The creation of Israel, a real nation, did little to diminish this association, and the conflicts surrounding Israel's expansion in the region still generate much discussion about the ongoing victimization of the Jewish people (Morehouse, pp. 7–8; Cohen 1997).

EXPANDING THE DIASPORA CONCEPT

The next significant groups associated with the diaspora concept are those that form the "African diaspora." Similar to ancient and modern-day Jews, the scattering of African-descended people owes its origins to the coercive systems of colonialism, slavery, and imperialism that resulted in the forced migration of thousands of Africans to the New World, and later involuntary migration. For newly Christianized African slaves and their descendants, the story of Jewish displacement held special appeal, especially the belief in the return home. Marcus Garvey (1887–1940), founder in 1917 of the United Negro Improvement Association and African Communities League (UNIA-ACL), seized upon the diaspora desire to return home. He spearheaded a "Back-to-Africa" movement that had strong financial support, although the Black Star Line he built was intended to promote commerce between African Americans and Africa rather than return people to the land of their origins.

With such a strong symbolic connection among Christian blacks to the injustices that Jews had endured across time and space and their belief in a mythic homeland, it is not surprising that black scholars would seize upon the diaspora concept in their work. According to Brent Hayes Edwards, this concept of "*diaspora* is taken up at a particular conjuncture in black scholarly discourse to do a particular kind of epistemological work" (2001, p. 46). That "work," as described by W. E. B. Du Bois (1868–1963), was an activist-scholarly agenda aimed at bringing "intellectual understanding and co-operation among all groups of Negro descent in order to bring about at the earliest possible time the industrial and spiritual emancipation of the Negro people" (1933, p. 247).

An interest in linking the scattered population of New World people to their African homeland is central to the ideas and planning that produced the 1900 Pan-

African Congress, organized by Henry Sylvester Williams (1869–1911), and the subsequent Pan-African congresses in 1919, 1921, 1923, 1927, 1945, and 1974 organized by Du Bois and others. But most scholars studying the history of the African diaspora credit George Shepperson with joining *African* to *diaspora* (Alpers 2001, p. 4) in his 1965 paper, "The African Abroad or the African Diaspora," for the International Congress of African Historians: Diaspora versus Migration. Seventeen years later, the organizer of the panel on which Shepperson presented his paper, Joseph Harris, would go on to edit one of the seminal texts on the topic, *Global Dimensions of the African Diaspora*. His classic definition would shape how generations of scholars interpreted the concept:

> The African diaspora concept subsumes the following: the global dispersion (voluntary and involuntary) of Africans throughout history; the emergence of a cultural identity abroad based on origin and social condition; and the psychological or physical return to the homeland, Africa. Thus viewed, the African diaspora assumes the character of a dynamic, continuous, and complex phenomenon stretching across time, geography, class and gender. (Harris [1982] 1993, pp. 3–4)

TO BE OR NOT TO BE A DIASPORA

While the use of *diaspora* "as social form," "as type of consciousness," "as mode of cultural production" (Vertovec 1997, p. 277–278), as paradigm (Hamilton 1990), or as interpretive framework (Drake 1991; Gilroy 1993; Hall 1990) has grown in popularity in cultural studies, history, and the social sciences, it has also generated much controversy. Some scholars, such as Donald Akenson, argue for "a degree of skepticism" when employing the concept. He asserts that its most pristine application is to modern Jews, and anything else leads to imprecision: "That is why, were we to be master of our vocabulary, 'diaspora' would be a term limited only to the ancient Hebrews and their descendents, the modern Jews. To use the word 'diaspora' even as a metaphor for other groups is to replace a precise connotation with a fuzzy one" (Akenson 1995, p. 379). Steven Vertovec agrees, and argues that "the current overuse and under-theorization of the notion of 'diaspora' among academics, transnational intellectuals and 'community leaders' alike—which sees the term become a loose reference conflating categories such as immigrants, guest-workers, ethnic and 'racial' minorities, refugees, expatriates and travelers—threatens the term's descriptive usefulness" (Vertovec 1997, p. 277).

Östen Wahlbeck counters by asserting that it is the new application of an old concept that produces new understandings of globalization and transnationalism:

> In the 1990s, migration researchers have used this old concept for a variety of new purposes. Instead of studying international migration, the focus is often on transnational diasporas.… I propose that the concept of diaspora, understood as transnational social organization relating both to the country of origin and the country of exile, can give a deeper understanding of the social reality in which refugees live. (Wahlbeck 2002, pp. 221–222)

Stuart Hall offers another notion of diaspora that challenges traditional views:

> Diaspora does not refer to those scattered tribes whose identity can only be secured in relation to some sacred homeland to which they must at all costs return.… The diaspora experience as I intend it here is defined, not by essence or purity, but by the recognition of a necessary heterogeneity, diversity; by a conception of 'identity' which lives with and through, not despite, difference; by hybridity. (Hall 1990, p. 235)

Despite these new ways of conceptualizing diaspora and the debates over the use of *diaspora* to account for so many diverse forms of movement by groups of people across time and space and for varied reasons, it remains a powerful and useful concept for history and the social sciences.

SEE ALSO *African Diaspora; Chinese Diaspora; Du Bois, W. E. B.; East Indian Diaspora; Ethnicity; Hall, Stuart; Jewish Diaspora; Migration; Nationalism and Nationality; Palestinian Diaspora; Pan-African Congresses; Pan-Africanism*

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DIASPORIC CITIZENSHIP

SEE *Immigrants, Latin American.*

DIATHESIS-STRESS MODEL

The premise underlying the "diathesis-stress" model is that a person is more likely to suffer an illness if he or she has a particular *diathesis* (i.e., vulnerability or susceptibility) and is under a high level of stress. Diathesis factors that have been studied include family history of substance abuse or mental illness; individual psychological characteristics such as hostility or impulsivity; biological characteristics (e.g., cardiovascular reactivity, hypothalamic-pituitary-adrenal responsivity); and environmental characteristics such as childhood maltreatment or low socioeconomic status. Diathesis factors are generally assumed to be relatively stable but not necessarily permanent.

The term *stress* refers to events and experiences that may cause psychological distress. Stress can influence mechanisms that help to maintain the stability of an individual's cognition, physiology, and emotion. Although the notion that stress can influence the development of illness has been held since the mid-nineteenth century, it was not until theories of schizophrenia proposed during the 1960s that the concepts of stress and diathesis were combined. In studies of depression that found empirical support for the model, stress has most commonly been operationalized as having experienced major negative events within the past year.

An implication of the diathesis-stress model is that the greater the vulnerability an individual has, the less stress is required for that individual to become ill. It is necessary to consider both the presence of a diathesis and a person's level of stress in order to determine the degree of risk for the onset or reoccurrence of an illness. For example, a study of depression showed that among subjects with a diathesis in the form of genetic risk, 10 percent developed depression at low stress levels but 33 percent developed depression at high levels. For those without the diathesis, the figures were 10 percent and 17 percent, respectively.

Other health problems to which the diathesis-stress model has been widely applied include substance use, schizophrenia, and heart disease. Studies have investigated a broad range of both environmental and psychological vulnerabilities, as well as biological vulnerabilities, some of which involve genetic expression. Interest in the role of genetics in disease onset has also led to studies on gene-environment interaction, which suggest that elevation of disease risk by an environmental factor occurs primarily for individuals with a susceptible genotype.

Empirical support for the applicability of the diathesis-stress model is robust and has warranted preventive interventions targeting those at highest risk of developing negative health outcomes. For example, psychological interventions address the way a person with high vulnerability appraises and responds to stressful life events. Researchers seek to refine measures of vulnerability, provide suggestions for preventive strategies, and gather empirical evidence for the effectiveness of preventive interventions. Overall, the diathesis-stress model has provided researchers and clinicians with a framework in which knowledge about biological, environmental, and psychological processes can be used to decrease the likelihood that an illness will develop or reoccur.

SEE ALSO *Coping; Stress-Buffering Model*

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DICTATORSHIP

The concept of dictatorship originated in Rome; it was defined as rule by a leader who was selected by the Consul to govern during periods of emergency brought on by external war or internal rebellion. While legally endowed with broad powers to resolve crises, the dictator was required to step down within six months or before the end of the term of the Consul that appointed him. In addition, such exceptional power was to be used to restore the previous political order. Although dictatorial power was faithfully applied in most cases, Mark Antony (82 or 81–30 BCE) abolished the institution after both Lucius Cornelius Sulla (138–78 BCE) and Julius Caesar (100–44 BCE) used force to rule beyond their mandated terms.

The temporary nature of dictatorship was central to its conception, leading writers such as Niccolò Machiavelli (1469–1527) and Jean-Jacques Rousseau to defend its powers in responding to crises. Even rulers acknowledged the specific meaning of the term. After Napoleon Bonaparte (1769–1821) seized power extralegally, for example, he was known as "emperor," not as "dictator." The one exception seems to have been José Gaspar Rodríguez de Francia (1766–1840) in Paraguay, who labeled himself "the perpetual dictator"—an oxymoron by the standards of original meaning.

CONTEMPORARY UNDERSTANDING

The term *dictatorship* did not gain prominence again until the early twentieth century, when it reappeared in the guises of the self-proclaimed "dictatorship of the proletariat" in Russia and the fascist dictatorship in Italy. Both uses of the term were deviations from the original Roman conception. The fascists were never committed to any temporary notion of power. The dictatorship of the proletariat was to be temporary in nature; but as a fundamental step in the transformation from bourgeois to communist democracy, it would obviously not aim for restoration of the old order.

Attempting to retrieve the concept from communists, Carl Schmitt (1921) distinguished between commissarial and sovereign dictatorship. Commissarial dictatorship conforms to the Roman usage of the term, but is likely to give way to sovereign dictatorship that, in contrast, is unlimited and likely will establish a new order. In making such a distinction Schmitt sought to justify the extensive use of emergency powers to address social and economic crises in Weimar Germany. Still, his conception of sovereign dictatorship is important because it cements an important shift in the understanding of the term: Dictatorships need not be temporary nor restorative of the prior constitutional order.

As a consequence, the post–World War II conception of dictatorship is necessarily a broader one in which dictatorship encompasses all regimes that are not democratic. Dictatorships may be distinguished from democracies as regimes in which rulers are not governed by law (Kelsen 1945) or selected by elections (Schumpeter 1942). Still, such minimalist criteria mean that dictatorships demonstrate wide heterogeneity in their organization and bases for rule.

TYPES OF CONTEMPORARY DICTATORSHIPS

Dictatorships include both totalitarian and authoritarian regimes: The former deeply pervades society through ideological fervor, mobilization efforts, and intolerance of autonomous organization, while the latter is more pluralistic and predictable in nature (Friedrich and Brzezinski 1961, Linz 1970). Besides Nazi Germany and Joseph Stalin's Soviet Union, however, relatively few totalitarian regimes exist. As a result, most dictatorships are authoritarian regimes, and the two terms often are used synonymously.

The most prominent distinction among contemporary dictatorships is in the location of decision-making power, which determines their bases of institutional support and their constraints. While debates abound over the exact criteria for classification, the main categories consist of military, party, monarchical, and personalist regimes.

Military dictatorships emerge by coup d'état, an extralegal seizure of power. Paul Brooker (2000) notes that the military intervention in politics may stem from "national interest" in times of crises or corporate and self-interests in the quest for greater resources. Once in power, the military consolidates both executive and legislative powers within a junta, a small collective that typically is composed of high-ranking officers. The junta is responsible for major decisions, including those governing succession. In decision making the degree of power sharing

among service branches varies and is a common source of friction among junta members. The tension between governing and maintaining military cohesion has often led to the demise of these regimes.

In party dictatorships, power is concentrated within a single regime party that dominates political life (Huntington and Moore 1970). Other political parties may exist, but they do not pose any serious competition. Major policy decisions and issues of succession are determined by an inner sanctum of the party. Still, the party's organizational reach is broad, pervading the armed forces and local institutions, down to the level of villages, firms, and schools. Because the party is a vehicle through which individuals may advance their careers and earn patronage, it serves as an important tool for the dictatorship in mobilizing support, collecting information, and supervising the behaviors of others. The party's infiltration of the military also ensures civilian control over the armed forces.

Monarchies are typically treated as distinct from other forms of tyrannical rule. However, the minimalist criteria distinguishing democratic and nondemocratic regimes clearly require classifying these regimes as dictatorships. In monarchies the institution at the center of power is the dynastic family that claims historical rights to rule and monopolizes succession. The king is the effective head of government, yet as Michael Herb (1999) observes, major policy decisions and the choice of successor from within the family is determined only with the consent of other family members. Kin networks are also used to maintain control over the military and to staff government positions, ensuring the dominance of the ruling family.

Personalist regimes are those in which dictators do not overtly rely on the armed forces, a regime party, or a dynastic family to maintain their rule. As a consequence, they seemingly monopolize decision-making and conform to stereotypical notions of dictatorships as "one-man rule." Personalist dictators may come to power via a coup or legitimate elections and are able to consolidate power by the skillful use of patronage and "charismatic authority" (following Max Weber's notion in *The Theory of Social and Economic Organization* [1947]) such that they are able to avoid dependence on a single institution and hence constraints on their decision-making power.

SEE ALSO *Authoritarianism; Autocracy; Totalitarianism*

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DIET, THE

A legislature, which is the most essential political institution in modern democracies, is denoted by different terms in different countries. One such term, Diet, is the name of the national legislature of Japan. The Imperial Diet, established in 1890 by virtue of the Meiji Constitution, was the first legislature in Japan. Under the Meiji Constitution, the emperor's prerogative was extensive, whereas the Imperial Diet functioned simply as an advisory organ to the emperor in his conduct of state affairs. The Imperial Diet consisted of two houses, the House of Peers and the House of Representatives. The former was composed of members of the imperial family, individuals who paid high taxes, and others appointed by the emperor. Members of the House of Representatives were elected by a limited franchise.

After World War II, the Imperial Diet was replaced by the National Diet under a new constitution. The Diet is now the highest organ of state power and the sole lawmaking entity of the state. Under the new constitution, Japan has a parliamentary system, in which the prime minister is chosen from among the Diet members by a resolution of the Diet. The Cabinet is collectively responsible to the Diet in the exercise of executive power.

The National Diet is bicameral, composed of the House of Representatives and the House of Councillors. Similar to the U.S. Congress, but different from many European legislatures, members of both houses are elected by universal adult suffrage. The electoral system in the House of Representatives is a combination of single-member districts (300 in total) and proportional representation systems (180 in total). This system was adopted in 1994, replacing the multiple-member district system. Ninety-six members of the House of Councillors are elected on the

basis of a proportional representation system, while the remaining 146 are elected by a multiple-member prefectural district system.

The constitution proclaims the superiority of the House of Representatives with respect to budget legislation, approval of treaties, nominations for prime minister, and other matters. If a bill is passed by the House of Representatives but rejected by the House of Councillors, the bill can still become law if two-thirds or more of members support the bill in the second deliberation in the House of Representatives.

One feature of the legislative process in the Diet is the committee system, which is similar to that of the U.S. Congress. When a bill is introduced in the House of Representatives, the speaker refers it to the committee under whose jurisdiction it falls. The deliberation in the committee is more detailed and likely to take more time than that in the plenary session.

Secondly, the method of interparty negotiation regarding the management of Diet affairs is peculiar to Japan. Each party represented in the Diet has its own Diet Affairs Committee or similarly named party apparatus, and the committee chairpersons of ruling and opposition parties hold a conference to find a negotiated solution to an interparty confrontation. These conferences, which are typically held behind closed doors, significantly influence the business of the Diet, although the Diet Affairs Committees are not formal organs of the Diet. This system for managing Diet affairs is considered to be one factor that makes deliberations in the Diet difficult to understand.

SEE ALSO *Bicameralism; Congress, U.S.; Democracy; Government; Knesset, The; Parliament, United Kingdom*

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DIFFERENCE EQUATIONS

Difference equations or, rather, systems of these are mathematical models of some systems in the real world that are believed to change their states at discrete and equidistant points of time. An example of such a system is a university that accepts students twice a year. The state of such a university would be described in terms of student numbers—which are constant for half a year and change at two discrete points in the course of a year (based on the number of students that pass their exams and the number of students accepted). Continuous systems, on the other hand, change their states at any time. Systems in the real world can usually be described in terms of both continuous and discrete time. When, however, the most important state changes occur only within a very small part of a time span (such as within just a week per semester in a university), difference equations are the method of choice. The same preference applies when processes are modeled that are only measured at regular time intervals (once a year, once a month)—as is common, since most statistics are only published at discrete times (even though individual events such as births, deaths, or unemployment occur more or less continuously).

Difference equation models connect the future state of a system to the current state or even past states of the same system, in a way comparable to the manner in which differential equations allow the calculation of future states of a system from its current state. The application of difference equations supposes, however, that the processes within the modeled system are discrete in time, whereas in the case of differential equations processes are continuous in time.

For a number of real systems, the use of difference equations seems appropriate—for instance, in the case of populations of animals with non-overlapping generations. Here, one is only (or at least mainly) interested in the size x_{t+1} of a given population next year when x_t, the size of the population in a given year t, is known; x_{t+1} is then expected to be some function of x_t. More generally speaking, t is the parameter of a process $\{x_t, t \in T\}$ where T is an enumerable set, and the general form of a (first-order) difference equation is

$$x_{t+1} = f(x_t).$$

Difference equations of higher order are also possible; a second-order difference equation has the general form

$$x_{t+1} = f(x_t, x_{t-1})$$

and is often transformed into a system of difference equations, such that

$$x_{t+1} = f(x_t, y_t); y_{t+1} = x_t.$$

LOGISTIC GROWTH

One of the simplest cases of a difference equation in one variable—which also displays some interesting behavior—is the so-called logistic or Verhulst equation, which in its time-discrete version has the form

$$x_{t+1} = rx_t(1 - x_t/K).$$

One of the interpretations of this equation is that it describes a population in a habitat with carrying capacity K, whose size in the next generation is proportional to a growth constant (sometimes called the Malthusian parameter) r, to the current population size x_t and to the proportion of the habitat that, in some way, is so far unused $(1 - x_t/K)$. The equation has two stationary solutions, namely $x_{st0} = 0$ and $x_{st1} = K(r - 1)/r$. For $r \leq 1$, only $x_{st0} = 0$ is stable, and the population dies out, whereas for $1 < r < 3$, $x_{st1} = K(r - 1)/r$ is stable, and the population will stabilize at this size, and for $r \geq 3$, x_{st1} is again unstable, and the system displays some interesting chaotic or fractal behavior (Schuster 1984, pp. 31–46).

AGE STRUCTURE OF A POPULATION

Another example also comes from mathematical demography, and here a system of difference equations is used to project the age distribution in a given population characterized by age-dependent death rates (which may differ between males and females) and birth rates that depend on the age of the mother. If one writes, for instance, $m_a(t)$ and $f_a(t)$ for the number of males and females, respectively, in the a-th year of age, and δ^m_a and δ^f_a for the age-dependent death rates of males and females, then the death part of the system of difference equations is easily formulated:

$$m_a(t + 1) = m_a(t)(1 - \delta^m_a) \text{ and } f_a(t + 1) = f_a(t)(1 - \delta^f_a)$$

for all $a > 1$

and for $a = 1$ the difference equation is

$$m_1(t + 1) = \gamma \Sigma_{a=15}^{45} \beta_a f_a(t) \text{ and } f_1(t + 1) = (1 - \gamma) \Sigma_{a=15}^{45} \beta_a f_a(t)$$

where γ is the proportion of male births and β_a the age-dependent fertility rate. This system of difference equations yields a series of age pyramids.

ARMA MODEL OF TIME SERIES

Time series are also often modeled with the help of difference equations. The so-called ARMA model (Box and Jenkins 1970) is of this type, where the current value of a time series is modeled as a sum of autoregressive (AR) terms and a (weighted) moving average (MA) of random shocks:

$$x_t = \alpha_1 x_{t-1} + \alpha_2 x_{t-2} + \ldots + \alpha_p x_{t-p} + \varepsilon_t + \beta_1 \varepsilon_{t-1} + \beta_2 \varepsilon_{t-2} + \ldots + \beta_q \varepsilon_{t-q}.$$

BUSINESS CYCLES

Finally, differential equations with delay are a mixture of difference and differential equations. One major example is Michał Kalecki's model of business cycles, which can be formulated as follows:

$$\dot{K}(t) = \alpha/\tau K(t) - (\alpha/\tau + \delta) K(t - \tau)$$

where K and $\dot{K}$ represent capital and capital growth respectively, and τ is the delay between the decision to invest and the realization of this decision, while α and δ are two parameters that weight the influence of profit and of capital on the decision. Generally speaking, this model shows oscillating behavior for a wide range of values of α, δ, and τ, where these oscillations can be of constant amplitude, damped or negatively damped.

As in other cases, the Kalecki equation can be rewritten into a system of difference and differential equations:

$$\dot{K}(t) = \alpha/\tau K(t) - (\alpha/\tau + \delta) L(t)$$
$$L(t) = K(t - \tau)$$

where the first is a differential equation and the second is a difference equation. Kalecki's approach shows that with relatively simple assumptions about the investment behavior in an economy, business cycles can be modeled. The idea is that there is always a delay between an investment decision and the realization of the capital investment, and Kalecki's model relates business cycles to just this delay. K and $\dot{K}$ are aggregated variables that in principle can be measured at very short time intervals and thus can be modeled in terms of differential equations, whereas τ is a considerably longer period of time.

SEE ALSO *Comparative Dynamics; Differential Equations; Kalecki, Michał; System Analysis*

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Klaus G. Troitzsch

DIFFERENCE PRINCIPLE

The difference principle is the second part of the second principle of John Rawls's theory of justice. The first principle requires that citizens enjoy equal basic liberties. The first part of the second principle requires fair equality of opportunity. These rules have priority over the difference

principle; the difference principle cannot justify policies or institutions that abrogate them. The difference principle governs the distribution of income and wealth, positions of responsibility and power, and the social bases of self-respect. It holds that inequalities in the distribution of these goods are permissible only if they benefit the least well-off positions of society.

Rawls's argument for the principle is based on the premise that citizens have, as their highest interest, two moral powers. The first power is the ability to propose and act on principles of justice all can accept. The second power is the ability to hold, revise, and pursue a conception of the good. It follows that any principle of justice, including those that regulate social and economic inequalities, must be acceptable to all and help each citizen pursue his or her conception of the good.

Rawls argues that citizens concerned to protect and exercise their moral powers would agree on principles that guarantee equal basic liberties (his first principle of justice) and the resources to pursue their good. This rules out libertarianism, perfectionism, theocracy, and utilitarianism. Citizens would not choose a rule requiring absolute equality, for everyone could do better by allowing inequalities that spur economic production. Rules that allow more inequality than the difference principle ask the worst off to accept inequalities that do not benefit them; this violates reciprocity. Moreover, citizens must have self-respect if they are to pursue their good. Self-respect depends both on having the resources to pursue one's good and others' recognition of one's worth. The difference principle supports the self-respect of the worst off more than alternative principles because it maximizes their resources and expresses the commitment of the better off to share their fate. Last, Rawls argues that a principle allowing some citizens advantages that do not benefit the worst off implies that the latter are not equally worthy members of society. This endangers social stability by causing them to withdraw in sullen resentment from the public world.

Critics have charged that Rawls's argument ignores the principle that people with greater talents deserve greater rewards than others. Rawls responds that the point of any system of cooperation citizens construct is to enable them to exercise their moral powers and pursue their good. Because citizens are equal in their moral features, they have an equal claim to the benefits from the system of cooperation. The principle of desert implies the cooperative scheme ought to reward talent rather than to respond to the essential moral features of citizens. Rawls also argues that people do not deserve their talent or the character that allows them to develop it, for they have willed neither. Last, citizens have a variety of moral, religious, and philosophical views about what constitutes desert and so could not agree on what to reward.

SEE ALSO *Equality; Justice, Distributive; Political Economy; Rawls, John; Wealth*

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Alexander Moon

DIFFERENTIAL EQUATIONS

Differential equations are models of real systems that are believed to change their states continuously, or, to put it more precisely, at infinitesimally short intervals in time. Differential equations, or rather systems of differential equations, connect a change in the state of a system to its current state, or even the change in a change of the state of the same system, in a way that is comparable to the way *difference equations* allow the calculation of future states of a system from its current state. But unlike difference equations, the application of differential equations supposes that the processes within the system modeled by these equations are continuous in time, whereas with difference equations, processes are discrete in time.

For a number of real systems, the approach of differential equations seems appropriate, for instance in the case of the movement of an arrow through the air or of the local concentration of some pollutant in a lake. Here, one is only (or at least mainly) interested in the current value of some continuously measurable variable that is seen as varying continuously over time. More generally speaking, t is the parameter of a process $\{x_t, t \in T\}$ where T is a continuous set with the same cardinality as that of the set of real numbers; the general form of a (first-order ordinary) difference equation is

$$dx / dt = \dot{x} = f(x)$$

Here, in a more symbolic way, dx is the change that occurs to the state variable x of the system in question dur-

ing the infinitesimally short time interval dt at any time t. Differential equations of higher order are also possible; a second-order differential equation has the general form

$$d^2x/dt^2 = \ddot{x} = f(x)$$

and is often transformed into a system of differential equations

$$\dot{y} = \ddot{x} = f(x) = g(y)$$
$$y = \dot{x} = h(x)$$

Strictly speaking, in the realm of the social and economic sciences, applications of differential equations and systems of them are only approximations, because the state variables of social and economic systems cannot undergo continuous changes. In demography, for example, we can only talk about the birth and death of an integer number of people, and in economics we can only calculate with a fixed number of products sold to the customer (not even with the exception of fluid, gaseous goods, or energy, which can be physically split down to molecules and energy quanta). In social psychology, it is still an open question whether attitudes change continuously (they are usually measured on four- or seven-point scales). And even if all these variables were continuous, the question remains whether these changes occur in a continuous manner: Children are born at a certain point in time, prices are paid at a certain point in time, and until the next payment arrives in one's bank account, the balance is constant.

On the other hand, with a large number of demographic events or financial transactions, one could argue that a differential equation is a sufficiently good approximation that is, in most cases, more easily treatable than the discrete event formalization of the real process (this even applies when the alternative is a deterministic difference equation). Differential equations can also treat probabilistic problems (then we have stochastic differential equations) and can describe processes in time and space, for instance in diffusion processes where the distribution of local concentrations or frequencies changes over time.

UNRESTRICTED GROWTH

Linear differential equations of the type $\dot{x} = \lambda x$ and systems of such equations can always be solved, that is, it is always possible to write down the time-dependent function that obeys the differential equation (which is the exponential function $x(t) = Ae^{\lambda t}$, where A and λ are two constants that depend on the initial condition and the proportionality constant between $\dot{x}$ and x, respectively). If the proportionality constant is positive, this results in an infinite growth, whereas with a negative proportionality ("the higher the value of x, the higher its decrease") the value of x approaches 0, though only in infinite time. This differential equation was first used in Thomas Malthus's (1766–1834) theories of demographic and economic growth.

ARMS RACE

A system of linear differential equations has a vector-valued exponential function as its solution. One of the earlier applications of a very simple system of linear differential equations was Lewis Fry Richardson's (1960) model of an arms race between two powers. The idea behind this model is that each block increases the armament budget both proportional to the current armament expenses of the other block and the budget available for other purposes. Thus, the change in the armament budget of block 1 is

$$\dot{x} = m(x_{max} - x) + ay = g + mx + ay \text{ with } g = mx_{max}$$

The same holds for the other block:

$$\dot{y} = bx + n(y_{max} - y) = h + bx + ny \text{ with } h = ny_{max}$$

The analytical solution for this system of two linear differential equations has the general form

$$q(t) = \theta_1 q_1 \exp(\lambda_1 t) + \theta_2 q_2 \exp(\lambda_2 t) + q_3$$

where q and $\dot{q}$ are vectors with elements x and y and elements $\dot{x}$ and $\dot{y}$ respectively, while θ_1, θ_2, λ_1, λ_2, q_1, q_2 and q_3 are constants that depend on a, b, g, h, m, and n. In a way, only λ_1 and λ_2 are of special interest, because they are—as multipliers in the arguments to the exponential functions in the analytical solution—responsible for the overall behavior of the system. They can be shown to be the eigen-values of the matrix formed of $-m, a, b$, and $-n$, and these eigen-values can be complex, which means that besides stationary solutions, periodic solutions are also possible, at least in principle (although not in this case, where m, a, b, and n are all positive). If both λ_1 and λ_2 are negative, $q(t)$ approaches q_3 as times goes by; if at least one of them is positive, $q(t)$ grows beyond all limits (which of course is impossible in the real world).

LOGISTIC GROWTH

One of the simplest cases of a differential equation in one variable—which also displays some interesting behavior—is the so-called logistic or Verhulst equation, which in its time-continuous version has the form

$$\dot{x} = rx(K - x)$$

One of the interpretations of this equation is that it describes a population in a habitat with carrying capacity K whose size changes continuously in such a way that the relative change $(\dot{x}/x)$ is proportional both to the current size x and to the difference between the current size and the carrying capacity ($K - x$, this difference is the proportion of the habitat that, in a way, is so far unused).

The equation has two stationary solutions, namely, $x_{st0} = 0$ and $x_{st1} = K$. The former is unstable: Even from the tiniest initial state, the population will grow until the carrying capacity is exactly exhausted. The time-dependent function $x(t)$, which obeys the differential equation, is a monotonically growing function whose graph is an S-

shaped curve. This time-dependent function can be written as

$$x(t) = Kx(0) \exp(rt)/\{K - x(0)\,[1 - \exp(rt)]\}$$

This differential equation is one of the simplest nonlinear ordinary differential equations.

THE LOTKA-VOLTERRA EQUATION

Another well-known system of nonlinear differential equations is the so-called Lotka-Volterra equation, which describes the interaction between predators and prey. It can also be applied to the interaction between a human population (predator) and its natural resources (prey). Here, the relative growth of the prey is a sum of a (positive) constant and a negative term that is proportional to the size of the predator population, whereas the relative growth of the predator population is a sum of a (negative) constant and a positive term that is proportional to the size of the prey population. In other words, in the absence of the predator population the prey would grow infinitely, whereas in the absence of the prey, the predator population would die out.

$$\dot{x} = x(a - by)$$

$$\dot{y} = y(-c + dx)$$

This system of differential equations does not have a closed solution, but it has a number of interesting features that show up no matter how detailed the model is for the interaction between predators and prey: The solution for this system of differential equations is a periodic function with constant amplitude that depends on the initial condition. There is only one stationary state of the system, which is defined by $y = a/b$ (this leads to $\dot{x} = 0$) and $x = c/d$ (this leads to $\dot{y} = 0$); thus if both hold, then no change will happen to the state of the system. Otherwise the populations increase and decrease periodically without ever dying out.

PARTIAL DIFFERENTIAL EQUATIONS

In most applications of differential equations and their systems, the parameter variable will be time, as in the examples above. But it is also possible to treat changes both in time and space with the help of a special type of differential equation, namely, *partial differential equations*. They define the change of the value of some attribute at some point in space and time—for instance, the expected change K of the continuously modeled and measured attitude X of a person that has the value x at time t, where this change will be different for different x and perhaps also for different t—in terms of this point in time and space. Thus,

$$K(x, t) = dx/dt = \partial V(x, t)/\partial x$$

For an application, see the next paragraph. Partial differential equations are seldom used in the social sciences because, typically, continuous properties of individual human beings—if they exist at all in the focus of interest of social scientists and economists—are difficult to measure, and even more difficult to measure within time intervals that are short enough to estimate any parameters of functions such as K and V in the above equation.

STOCHASTIC DIFFERENTIAL EQUATIONS

Stochastic influences can also be inserted into the formulation of differential equations. The simplest case is the so-called Langevin equation, which describes the motion of a system in its state space when there is both a potential whose gradient it follows and some stochastic influence that prevents the system from following the gradient of this potential in a precise manner. This type of description can, for instance, be used to describe the attitudes of voters during an election campaign. Each voter's attitude can be defined (and measured) in a continuous attitude space. Their motions through this attitude space (say, from left to right; see, e.g., Downs 1957, p. 117) are determined by a "potential" that is determined either by some parties that "attract" voters toward their own positions in the same attitude space or by the "political climate" defined by the frequency distribution over the attitude space. In the latter case, voters would give up their attitude if it is shared by only a few and change it into an attitude that is more frequent. Thus they follow a gradient toward more frequent attitudes; but while moving through the attitude space, they would also perform random changes in their attitudes, thus not obeying exactly the overall political climate. And by changing individual attitudes, the overall "climate" or potential is changed. The movement could be described as follows:

$$\dot{q}(t) = -\gamma \partial V(q, t)/\partial q + \varepsilon_t$$

where

$$V(q, t) = -\ln f(q, t)$$

and $f(q, t)$ is the frequency distributions of voters over the attitude space at time t (V would be a polynomial up to some even order in q). One would typically find voters more or less normally distributed at the beginning of an election campaign, but the process described here would explain why and how polarization—a bimodal or multimodal frequency distribution—could occur toward the election date (Troitzsch 1990).

SEE ALSO *Comparative Dynamics; Cumulative Causation; Difference Equations; Phase Diagrams; System Analysis; Taylor, Lance*

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Klaus G. Troitzsch

DIGITAL DIVIDE

The *digital divide* has been conceived as the lack of access to information and communication technologies among underrepresented ethnic minorities, those of lower socioeconomic levels, and people living in rural locales. Several studies have characterized these disparities along dimensions of gender (Kvasny 2003), age (Loges and Jung 2001), race (Hoffman 1999, Kvasny 2003, Payton 2001), geographical location (Sipior et al. 2004), and educational resource characteristics (NTIA 2000, Payton 2001, Kvasny and Payton 2005). Karen Mossberger and Caroline Tolbert (2003) have found that African Americans are less likely to have access to information and communication technologies and the skills to use such technologies, even when controlling for other factors, such as income and education. Similar findings have been documented for Hispanic and Native Americans. Despite these foundations of physical access, the digital divide concept is not limited to a binary taxonomy of access versus nonaccess, or the typical classification of "have" and "have not." In fact, the digital divide warrants a broader definition—one that is inclusive of social, economic, and technology-use attributes—which can capture the notion of digital equity. This concept rests on critical issues of how individuals can use information provided by these technologies and what strategic skills are desirable to prosper in the competitive environment of today's global information age.

WHAT IS DIGITAL EQUITY?

Digital equity raises issues of social justice and can be defined as a trend toward equal access to information and communication technologies among society's citizens. Even more, digital equity enables individuals to gain knowledge and skills to use technological tools, computers, and the Internet (i.e., behavioral outcomes). The National Institute for Community Innovations reports that:

> According to recent research by the National Center for Educational Statistics, 98% of schools and 77% of instructional rooms have computers and are connected to the Internet. But many classrooms and important educational projects are not connected, and these educators are deprived of excellent Internet-based resources. Most important, even though a school or classroom may be connected, the technology may not [be] used by students—leaving many young people technology-illiterate, without key skills they need to succeed in today's job market. (National Institute for Community Innovations 2005)

Similarly, Austan Goolsbee and Jonathan Guryan reported that California's public schools were funded by nearly $937 million for a program known as E-Rate (education rate) during the 1998 to 2000 school years, of which a substantial portion provided Internet access and technologies. This program noticeably closed the digital divide for Internet access between wealthy and poor California schools. If one assesses effectiveness in terms of access, the California E-Rate initiative has been successful. Goolsbee and Guryan note, however, that despite this accomplishment, Internet access did little in the way of improving student performance; they conclude that "the Internet itself … seems unlikely to be a silver bullet for solving the problems of America's public schools" (2006, p. 65).

OTHER CONSIDERATIONS

In its 2003 fiscal budget, the administration of President George W. Bush reduced funding for community-based technology-related programs and training initiatives by $100 million, as shown in Figure 1.

Much of this funding previously supported underrepresented minorities, children, and rural programs. While the digital divide is an immediate and direct effect of the eradication of these training initiatives, the more dire consequences rest in the lack of social justice produced by such digital inequities. Evidence of these outcomes has been documented by the National Telecommunications and Information Administration (NTIA) report "A Nation Online: How Americans Are Expanding Their Use of the Internet" (2002). The NTIA reports that individuals benefit from being prepared with technology skills, and 57 percent of employed Americans over the age of twenty-five use a computer in the workplace. By 2010 jobs in science, technology, engineering, and mathematics

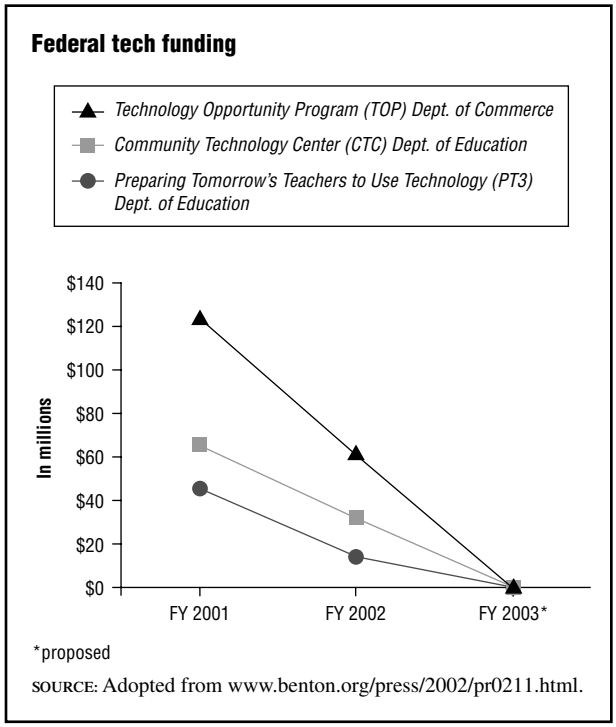

Figure 1

are expected to increase by 67 percent according to the U.S. Department of Labor as reported in the 2002 CyberEducation Report by the American Electronics Association. In addition, the costs associated with broadband access to the Internet heighten digital exclusion and often preclude minority, low-income, rural, and undereducated populations from access to the social justice associated with social, community, economic, and education capital foundations.

Unlike other forms of communication media (e.g., radio, television, and printed materials), the Internet is distinctive because of its integration among diverse communication modalities, such as broadcasting, reciprocal interaction, group discussion, person-machine interaction, and reference research (DiMaggio et al. 2001). The digital equity principle examines how Internet access is used, and evidence supports the argument that parity is achievable when all populations gain the knowledge and skills to impact social inclusion—thereby stimulating social justice. The most noteworthy form of inclusion would necessitate equalities (therefore reducing or eliminating disparities) in education, health care, and economic and financial systems.

The digital divide or inequity issue is not limited to the United States. According to statistics from the World Summit on the Information Society, a comparison of Internet access and use in eight industrialized nations (Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States) compared to the rest of the world indicates that: (1) In 2004 fewer than three out of every one hundred Africans used the Internet, compared with an average of one out of every two inhabitants of the industrialized countries; (2) the eight industrialized countries are home to just 15 percent of the world's population but almost 50 percent of the world's total Internet users; and (3) there are more than eight times as many Internet users in the United States than on the entire African continent. Sundeep Sahay and Chrisanthi Avgerou concluded that information and communication technologies are key to the development of poorer nations and offer the "potential for turning around uncompetitive industries and dysfunctional public administration, and for providing unprecedented opportunities for the information-intensive social services, such as health and education" (2002, p. 73).

SEE ALSO *Cyberspace; Inequality, Political; Internet; Property Rights; Property Rights, Intellectual*

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Fay Cobb Payton

DILEMMA, PRISONER'S

SEE *Prisoner's Dilemma.*

DIOP, CHEIKH ANTA

1923–1986

Cheikh Anta Diop was the most daring African cultural-nationalist historian, scientist, and nonapologetic Egyptologist of the twentieth century. His scholarship on the reclaiming of black civilization produced an immense body of knowledge on ancient Egyptian civilization. His argument that ancient Egypt was essentially Negroid and that the origins of Hellenic civilization were to be found in black Africa challenged the prevailing Eurocentric view of the world.

The implications of Diop's thought should be contextualized within the European imperialist dictum and black resistance movements of the time. He grew up in Senegal when France was consolidating its colonial rule in Africa, and he lived through the consequences of increasing neocolonialism, economic reforms, and militarization in Africa. Born in a Muslim family on December 29, 1923, in Caytu, a small village near the town of Diourbel, Senegal, Diop attended the local Koranic school before enrolling in a French colonial school. In 1945 his interest in science and philosophy was consolidated when he earned his baccalaureate in mathematics and philosophy in Dakar, Senegal. Diop left Senegal for France in 1946. He pursued graduate studies in France, and elected courses in science while studying philosophy under Gaston Bachelard (1884–1962) at the Sorbonne in Paris, where he earned a degree in philosophy in 1948. In 1950 Diop was awarded a certificate in general chemistry and another in applied chemistry. He studied nuclear physics at the nuclear chemistry laboratory of the Collège de France under the supervision of Frédéric Joliot-Curie (1900–1958) and at the Institut Pierre and Marie Curie. On January 9, 1960, Diop successfully defended his doctoral dissertation: "L'Afrique noire précoloniale et l'unité culturelle de l'Afrique noire" (Precolonial Black Africa and the Cultural Unity of Black Africa).

Back in Senegal, Diop continued his studies on culture, history, and linguistics. He also became involved in politics and established an opposition party, the Rassemblement National Démocratique (National Democratic Rally), having earlier served as secretary-general of the students' unit of the Rassemblement Démocratique Africain. Appointed assistant with teaching duties at the Institut Fondamental d'Afrique Noire of the University of Dakar, he became director of the university's radiocarbon laboratory. In 1981 Abdou Diouf, president of Senegal from 1981 to 2000, appointed Diop professor in the department of history. Diop passed away in Dakar on February 7, 1986. The university and the street in front of it were later named after him.

Diop received a number of awards, including the prestigious African World Festival of Arts and Culture Prize for scholars who had "exerted the greatest influence on African peoples in the 20th century," which he won jointly with W. E. B. Du Bois (1868–1963) in 1966 (a posthumous award for Du Bois). Diop was also awarded the Gold Medal for African scientific research and the African Grand Prize of Merit from the National University of Zaire in 1980.

The journal and publishing house *Présence Africaine*, founded by Alioune Diop (1910–1980) in 1947 in Paris, published most of Cheikh Anta Diop's classic works. These two were not related, but they were both from the Lebu ethnic group that speaks the Wolof language. Diop's important publications include: *Nations nègres et culture* (Negro Nations and Culture, 1955); *L'unité culturelle de l'Afrique noire* (The Cultural Unity of Black Africa, 1959); *Antériorité des civilisations nègres: Mythe ou realité* (The African Origin of Civilization: Myth or Reality, 1967); *Physique nucléaire et chronologie absolue* (Nuclear Physics and Absolute Chronology, 1974); and *Les fondements économiques et culturels d'un état fédéral d'Afrique noire* (The Economic and Cultural Foundations of a Federated State of Black Africa, 1974). In 1981, he pub-

lished *Civilisation ou barbarie: Anthropologie sans complaisance* (Civilization or Barbarism: Anthropology without Complacency), a masterpiece on ancient Kemet (Egypt) and its influence on the Greek and Roman worlds. In 1991 this title was translated and published as *Civilization or Barbarism: An Authentic Anthropology*.

Diop took Africa seriously, and set it against the artificiality of colonialism. He was never a Marxist or a Pan-Africanist like Ghanaian statesman Kwame Nkrumah (1909–1972), but a nationalist who emphasized the value of historical consciousness as an ideological foundation for building black federalism. His views on development included Africa's acquisition of nuclear capabilities, industrialization, self-determination, and self-reliance.

Married to a white French woman (Marie-Louise) who was an important supporter of his scholarship, Diop abhorred racism. He was also critical of sexism, which he considered a product of foreign influences in Africa. He was, however, accused of being reductionist or essentialist because he insisted on a corrective scholarship. He never argued that black Africans were monolithic and genetically superior to other races. But based on his research on the Nile Valley region and West Africa, he concluded that the ancient Egyptians were bioculturally black. Diop was convinced that the history of Africa would remain in suspension and could not be written correctly until African historians connected it to the history of ancient Egypt. However, despite cultural similarities and historical connections between various layers of African civilizations from the ancient period to the present, Diop did not prove how the study of Kemet semantics could be effectively used to examine the importance of the orality of African traditions. It is unclear how the particularities of other African civilizations fit into Diop's grand paradigm.

Diop's views have been revisited in various forms through the rise of Pan-African discourse in institutions of research and higher learning in Africa and among the African diaspora, especially in Brazil, the United States, and France. Furthermore, the promotion of scholarship on the African renaissance, both as a political concept articulated by well-known African political figures and the African Union and as an analytical and intellectual tool used by scholars to understand Africa, has also contributed to the revisitation of Diop. Because of the serious and degrading socioeconomic and political conditions that paralyzed most African institutions and societies and demotivated researchers during and after the cold war, there has been an intellectual movement to investigate Diop's sources, hypotheses, and arguments as part of a broader search for African solutions to global malaise. For instance, the promotion of indigenous knowledge systems as a new area of study in some African universities and research centers was inspired by Diop's claims concerning the role of culture, history, linguistics, and science in socioeconomic and political progress. In some parts of the African diaspora, this movement has led, contrary to Diop's intellectual convictions, to the development of a cult of personality. Some have also begun to view as religious or mystical Diop's teachings on the role of science in finding truth and the utilization of these truths as the basis for social progress. Diop himself, however, attempted in his works to separate sentiment and emotion from scientific logic, principles, and objectivity.

In his final book, *Civilisation ou barbarie*, which is considered his magnum opus, Diop expanded on, clarified, and synthesized his arguments from *L'Afrique noire pré-coloniale* (Precolonial Black Africa, 1960) and *Antériorité des civilisations nègres: Mythe ou realité* (The African Origin of Civilization: Myth or Reality, 1967). He emphasized the primacy of African culture by proving that ancient Egypt was a black society both in its historicity and in its cultural achievements, later claimed by Indo-Aryan cultures. He strongly denounced the falsification of modern history as a major part of an agenda that has slowed world progress. Furthermore, he argued (more like an ethicist than a scientist) that humanity must break definitively from racism, genocide, and slavery and that such efforts should form the ultimate mission of the world in order to build a global civilization and avoid falling into barbarism. Diop believed in the need for a new ethics that could take into account scientific knowledge, which uniquely differentiates "modern" humans from "primitive" people. For Diop, science is a liberating, moralizing, and progress-oriented force; scientific studies on the centrality of the historicity of Africa and its contributions could humanize the world.

There are disagreements among scholars about how specifically Diop's thought has inspired generations of African Americans, both academics and community leaders, and their institutions. Certainly his intellectual impact on them cannot be denied. For Diop, learning the true history of Africa, and of the world for that matter, is essentially a scientific endeavor. In most of his works, he insisted that such a science requires first the utilization of objective methods through which empirical facts can be tested. This position may not distinguish him from other scientists, but the establishment of Africa as the birthplace of the human family is a unique knowledge that has been used differently by various cultures and peoples. For instance, one of the epistemological bases of his disagreement with Senegalese president Léopold Sédar Senghor (1906–2001), a cofounder of the Négritude movement and a member of the French Academy, was Diop's view that Senghor was making historical claims about black cultures on the basis of speculation, imagination, and sentiment and not on scientific grounds. Diop tried to make clear distinctions between science and belief systems or

ideology. For Diop, ideology played an important role only in instrumentalizing science. He believed that the use of truth could make the world better. Diop's science can be used to actualize a worldview, an ideological position of humanizing the world. His perspectives tended to privilege social applications of science.

Diop's thought inspired two main groups of American Afrocentrists: those who used Afrocentricity as an interdisciplinary research method with a focus on African history and culture in the academia, and those who used Diop's racial centrality as an ideology of social reconstruction in the struggle for change in society at large. In the academia, Diop's work was consolidated with the expansion of black, Afro American, or Africana studies in the United States, where African Americans had been searching for an African cultural identity. However, with the rise of neo-integrationism in the United States and its tendency, with the support of opportunistic black scholars, to weaken "ethnicity" or "race," Diop's quest for *Negroism* has been marginalized and even trivialized in some institutions. In major American research universities, for instance, as they attempt to meet the rising demand for multiculturalism and diversity, his scholarship is perceived as advancing particularism and separatism. Clearly, these new perspectives are ideological, rather than scientific, constructs. Thus they are strongly supported and promoted by neoconservative university and college administrators with the collaboration of some African American and African academics. Diop's scholarship embodies a defensive epistemology, rejects a myopic determinism, and emphasizes the black cultural renaissance.

Based on Diop's impressive multidisciplinary training, his research, and his philosophical claims on pluralistic methodologies, he is known as an anthropologist, Egyptologist, historian, linguist, mathematician, and physicist. However, his all-embracing disciplinary approach produced, at best, eclectic and binary analytical and intellectual perspectives (black-based paradigms versus white-based paradigms). These perspectives are difficult to assess clearly in terms of their effective collective quality and their impact on the study of specific African cultures and histories, especially those that developed independently of or parallel to the ancient Egyptian civilization. Diop has been much criticized for being a jack-of-all-trades and a master of none. His generalizations about African languages and their connection to ancient Egyptian languages through Wolof, a Senegalese language, were essentially deductive, imaginative, and ahistorical. However, despite controversial hypotheses and conclusions associated with his interdisciplinary methodologies, Diop produced an important and unified referential body of knowledge on Egypto-centrism. His thought is philosophically complex and intellectually challenging, and it embodies an interactive methodological inquiry. Diop's work cannot be fully translated into a single mode of thinking and doing, as reflected in certain affirmative dimensions of much-simplified American Afrocentricity.

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Tukumbi Lumumba-Kasongo

DIPLOMACY

Diplomacy is often simply referred to as the dialogue among nations, but it is more precisely a dialogue among agents of nations, or diplomats. The word *diplomacy* originated from *diploma*, which in early modern Europe was the letter of credence that certified an ambassador's power to negotiate and serve as the direct representative or plenipotentiary of the sovereign.

DEFINING DIPLOMACY

Diplomacy is a central concept in the study of international relations, although scholars often disagree about its function. There is a general distinction in the social science literature between diplomacy as foreign policy, and diplomacy as the process of negotiation and deliberation that promotes peace and cooperation among nations. Diplomacy as foreign policy is the expressed desire of nations to use words before force. It is the default mode of operation for liberal states, and it is often the aim among nonliberal states to engage in diplomacy if they seek acceptance in international politics. Among early political scientists, the word *diplomacy* was used interchangeably with *international relations*. In the twenty-first century diplomacy often takes the form of membership in international organizations such as the United Nations (UN), the North Atlantic Treaty Organization (NATO), and the World Trade Organization (WTO).

However, diplomacy as simply foreign policy captures only a superficial element of the workings of international relations. Diplomacy encompasses a great number of international activities that do not include processes of cooperation. As José Calvet de Magalhães points out in *The Pure Concept of Diplomacy* (1988), states can engage in unilateral contact such as propaganda, espionage, and

political or economic intervention. They can also engage in violent contact such as threat, deterrence, and economic war. Thus, the definition of diplomacy as a dialogue among nations is very broad.

Diplomacy as a process of negotiation and deliberation highlights the fact that the "art of diplomacy" is a skill that certain individuals, called diplomats, possess. Thus, diplomacy is defined specifically as an act of negotiation among accredited persons, not nations as a whole. Social scientific approaches that regard nations as unitary actors ignore the important subtleties of the art of negotiation that can often make or break efforts to reach compromise. Diplomats are people with individual and collective agency who interact over time and who are the products of a rich historical tradition of norms, negotiation, and representation. In political science there are two main approaches to understanding the work of diplomats or the process of diplomacy. One is that negotiations are conducted as hard-bargaining scenarios, and the second is that shared norms among diplomats can result in persuasion and informal methods of compromise.

THE STUDY OF DIPLOMACY

The first approach, bargaining theory, predicts that diplomats are important to outcomes of international cooperation because they reduce "transaction costs" in negotiations among nations. Transaction costs consist of the expense and inefficiency that would be involved in international cooperation if statespeople, as nonexpert negotiators, were to conduct all foreign policy on their own. Robert Putnam (1988) is well known for his argument about two-level games among diplomats. In his model level 1 is the negotiation phase, where diplomats bargain at the international table. Level 2 consists of the ratification stage in which there are separate discussions within each group of constituents about whether to ratify the agreement. For Putnam, there is a "win-set" that represents all the possible level 1 agreements that would "satisfy" level 2 constituencies. The size of the win-set depends on the distribution of power, preferences, and possible coalitions among level 1 constituents.

Many scholars argue that bargaining theory tends to be overdeterministic and advances a snapshot view. The methodology of comparing initial state preferences to final outcomes misses the critical processes that occur in-between. By ignoring factors such as relationships among negotiators, professional background, expertise, and shared normative frameworks, bargaining theorists pass up explanatory power.

The second approach argues that persuasion and informal methods of reaching compromise occur because diplomats come to share norms as they interact over time. For example, who the diplomats are, whether they have interacted on prior occasions, what kind of training they have received, how they were selected, their skill level, and so on are all important. In effect, diplomats cultivate relationships with one another throughout their careers, giving them a fundamental basis of interaction or shared understandings about the way international relations should work. Naturally, relationship building is often strongest among diplomats who work in international organizations. Thus, they are more likely to reach cooperative outcomes through persuasion and informal means than hard-bargaining approaches would anticipate. Of course, the power and resources of each state have some bearing on the leverage diplomats have in negotiation, but outcomes still rest on the abilities of individual diplomats and on their dynamic as a collective. Robert Jervis argues in *Perception and Misperception in International Politics* (1976) that perceptions of power, not actual power, are the key to any form of international relations whether in war or peace. Diplomats may often contribute to such perceptions.

Relative power among nations may play a role in determining whether or not state leaders decide to try to cooperate, but persuasion is to a significant extent out of the grasp of power. The ability to persuade is often in the hands of the diplomats. This was evident in the mammoth efforts of Secretary of State Colin Powell in 2002–2003 to sell the policies of the Bush administration—often relying more on the perception of his own independence and public respect to bring some credibility to a policy that was otherwise resisted. This occurred perhaps most notably in the UN Security Council debates over the possibility of going to war in Iraq, where some distancing by Powell made him more credible in the assurances he gave.

Despite the many ways in which diplomacy may smooth the interaction among nations, either through hard bargaining or persuasion, diplomacy does not always pay off. A compromise solution may seem continuously out of reach, such as in the relationships between Israel and the Palestinians, India and Pakistan, and nations such as Iran and North Korea with the rest of the world. Sometimes historical, religious, cultural, and political differences within nations may be so strong that even diplomacy may have a hard time providing a solution.

SEE ALSO *Cooperation; International Relations; North Atlantic Treaty Organization; Putnam, Robert; United Nations*

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Mai'a K. Davis Cross

DIRECT ACTION

Direct action is a method and a theory of confronting objectionable practices and/or effecting social change using readily available means. Such action is usually contrasted with indirect forms of social and political participation such as voting. Protest demonstrations, mass rallies, strikes, boycotts, workplace occupations, and riots constitute examples of such action.

The first mention of the term is in the realm of labor struggles. In his book *Direct Action* (1920), William Mellor defined direct action as "the use of some form of economic power for the securing of ends desired by those who possess that power" (p. 15). Mellor considered direct action a tool of both employers and workers. Accordingly, he included within his definition lockouts as well as strikes. Since the late twentieth century, however, direct action has come to be increasingly associated with challenges to established societal practices and institutions by marginalized groups.

The power of direct action depends largely on its contentiousness, or the extent to which it bypasses or violates the routine conflict resolution procedures of a political system. Whereas such action can be used by recognized actors employing well-established means of claim making, substantial short-term political and social change more often emerges from the congruence of newly self-identified political actors with innovative forms of claim making. Most campaigns for social change—notably those seeking to expand the suffrage, protect civil rights, and improve working and living conditions—employ direct action repertoires.

Direct action outside of the political process is usually juxtaposed to institutionalized, routine, and/or regularized forms of social and political participation. Accordingly, one of the most commonly drawn distinctions is whether such action is carried out in a peaceful or forceful manner. Violent direct action, it is often assumed, is more contentious than nonviolent direct action because the former exhibits a high threshold of social transaction costs. Nonviolent direct action, on the other hand, has proved effective in highly repressive settings due to its unpredictability and transformative power.

Nonviolent direct action has been developed into a theory of civil disobedience by civil movements around the world. Pioneered by the American author Henry David Thoreau in his 1849 essay *Civil Disobedience*, it encompasses the active refusal to obey the laws of a government or an occupying power without resorting to physical violence. It has been used effectively by nonviolent resistance movements in the fight for independence in India, in South Africa in the fight against apartheid, and by the civil rights movement in the United States.

The mechanisms that make direct action contentious are then complex. First, there are social actors who are limited in the forms of action that are available to them, and expressions of discontent that are strictly bound to specific social or economic groups. Secondly, the political opportunities that countries make available and the resources that citizens bring to bear on this form of politics vary greatly around the world.

As of 2005, more than half of the world's nations held regular multiparty elections, more than at any time in history. As societies democratize, political opportunities increase, making direct action more routine. With the spread of democratization, some have argued, the protest demonstration has become a modular form of direct action available to multiple groups.

SEE ALSO *Civil Disobedience*

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José A. Alemán

DIRIGISTE

The counterpart to the economic doctrine of laissez-faire, *dirigisme* refers to an economic system dominated by state control of the market economy. Technically, the concept

does not refer to the centrally planned economies of the former Soviet bloc, but to basically capitalistic economies that have extensive regulations and controls throughout that impact production and consumption. Many of the controls are justified because they curb productive inefficiencies, others because they correct market inequities, and still others because they protect consumers from faulty products or their own faulty decisions. In short, dirigisme describes an economic system in which the government is omnipresent and assumed to be omnipotent.

Most modern economies operate to some degree dirigistically. Government regulation and control are a significant part of most economies throughout the world today. But a significant amount of evidence has been amassed that demonstrates that economic freedom rather than government control is positively correlated with economic growth (Gwartney and Lawson 2006). In this work motivated by Milton Friedman's *Capitalism and Freedom* (1962) and *Free to Choose* (1980), economic freedom in a country is determined on the basis of an analysis of the security of private property and the freedom of contract, the tax burden, the inflation rate, the extent of regulation, and the prevailing policies toward foreign trade. When property rights are weak, taxes are high, inflation is ramped, regulation is extensive, and protectionism rather than free trade defines the policy space, the economic freedom score will be low. See Figure 1.

A key issue to remember in debating the role of government in an economic system is to distinguish between scale and scope. Much of the debate over "big government" focuses on the issue of scale—government spending as a percentage of gross domestic product. But in debating the impact of dirigisme, it may be more appropriate to focus on the issue of scope—the extent of activities the public sector attempts to control in economic decision making. A "big government" that permits a wide range of economic freedom would be less cumbersome on economic life than a "small government" that tries to control prices in every sector. The lack of economic freedom, not the size of government, causes the decline in economic growth in nations. See Figure 2.

In many ways, these various indices of economic freedom and the empirical relationship to the economic performance of countries is capturing Adam Smith's wisdom with the modern tools of economic analysis. As Smith put it in the notebooks that were the basis of *An Inquiry into the Nature and Causes of the Wealth of Nations*:

> Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice; all the rest being brought about by the natural course of things. All governments which thwart this natural course, which force things into another channel or which endeavor to arrest this progress of society at a particular point, are unnatural, and to support themselves are obliged to be oppressive and tyrannical. (Smith 1776, p. xliii)

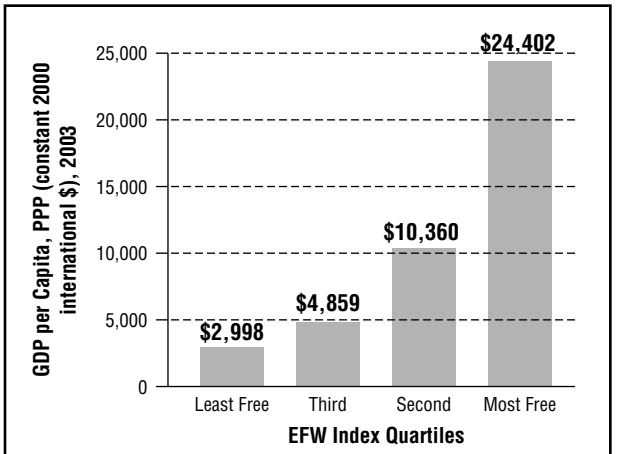

SOURCE: Gwartney and Lawson (2006, 22)

Figure 1

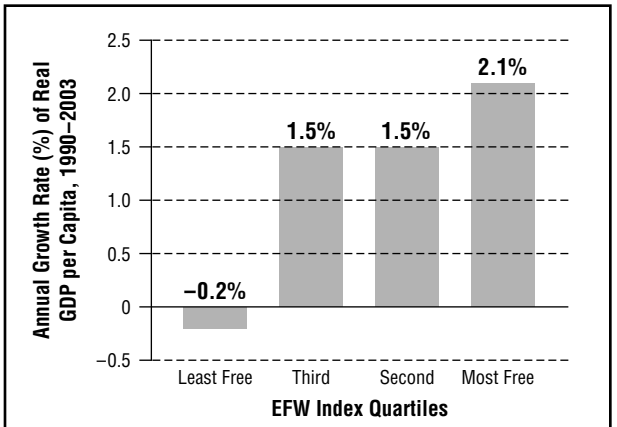

SOURCE: Gwartney and Lawson (2006, 23).

Figure 2

Thus, the proper scope of government in relationship to the economy is a vital question to address in assessing *dirigisme* as an economic policy regime.

This is not to say that questions of scale do not matter—they clearly do. James Buchanan, who was awarded the Nobel Prize in 1986, would often ask his students whether a fly that grew to nine times its current size could

still fly. He was raising the question of "dimensions" to get to the question of "fiscal dimension"—could a government grow to nine times its current size and still function? But Buchanan also raised questions concerning the scope of government.

In *The Limits of Liberty* (1975) he put the puzzle of political economy in the following manner. He first divided the activities of the state by functions: the protective state, the productive state, and the redistributive state. The protective state refers to the government provision of law and order domestically and defense against international aggression. The productive state refers to either the production or provision of certain public goods that are essential to the development of a prosperous social order. The redistributive state refers to those set of government activities that attempt to reallocate resources from unfavored groups to those groups that are more in favor. Buchanan's puzzle is in how to empower the protective and productive state without unleashing the redistributive state. This is a question of constitutionally curbing the scope of governmental activities so that the positive-sum games of economic processes are not undermined by the zero-sum and negative-sum games of redistributive politics.

Dirigisme, in contrast, rejects as old-fashioned any concern among economists with questions of either the scale or scope of government. Instead of curbing government, the social philosophic mindset is to enlist the state to curb the excesses of the profit motive and individual myopia. In French political and economic history dirigisme is associated with Charles de Gaulle and was represented as an alternative to the Soviet model of a command economy and the U.S. model of a laissez-faire economy. When François Mitterrand came to power in 1981 he promised to move the French economy further in the socialist direction by nationalizing firms and banks, but by the mid-1980s he was forced to reverse this policy path due to declining economic performance of the French economy, and dirigisme was rejected (though the remnants of the past policies were certainly not eliminated).

The doctrine of state control of the economy runs into problems of a theoretical and empirical nature. First, empirically, as mentioned above, economic freedom is positively correlated with economic growth, whereas economic control is correlated with economic stagnation. Economic controls thwart innovation, distort the pattern of resource use, and frustrate consumers by offering them a choice of expensive but low-quality products and altogether eliminating from the market the goods they want to secure. Second, the empirical reality of productive inefficiency and consumer frustration follows directly from the persistent and consistent application of the economic way of thinking to questions of the operation of dirigisme. There are five problems with government attempts to control a market economy:

1. incentive incompatibility—where government controls ask individuals to act in ways that violate their self-interest;
2. distortions in the structure of prices—where government controls result in price signals that lead to malcoordination of economic activities;
3. time inconsistency—where government action at time T1 is inconsistent with the government action required at T2;
4. dynamic instability—where government action results in consequences that are unacceptable from the point of view of the policy maker and thus require adjustment to either more extensive controls or abandonment of the policy altogether; and
5. rent seeking and capture by special interests—where the very existence of government action sets in motion a zero-sum game of privilege-seeking by special interests to cause the government to rule in their favor.

According to arguments 1 through 4, government controls result in unintended consequences; according to argument 5, the undesirable consequences are the result of the logic of concentrated benefits and dispersed costs. These unintended consequences are undesirable because they are wealth-destroying rather than wealth-creating. Dirigisme is an unworkable public policy philosophy.

SEE ALSO *Economics of Control; Laissez-faire; Liberalization, Trade; Market Economy; Markets; Planning; Privatization; Regulation; State Enterprise; Statism*

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Peter Boettke

DIRTY FLOAT

Dirty float is a term used in international economics to describe a specific policy of a country's monetary authority with respect to control over movements in the value of the nation's currency within the foreign-exchange market. Specifically, a dirty float, also known as a managed float, is a type of exchange-rate regime, or policy, in which the government or the central bank of the country occasionally intervenes in the foreign-exchange market in order to affect the exchange rate. The term is coined as a counterpart to the clean, or free, float, under which the government never intervenes in the foreign-exchange market. Both clean and dirty floats represent the floating exchange-rate regime, under which the government does not commit to maintain a specific level of the exchange rate, as is the case with a fixed exchange-rate regime.

Under dirty float, a country maintains an independent monetary policy that allows its central bank to achieve a balance between inflation and growth. At the same time, occasional interventions in the foreign-exchange market allow the government or the central bank to avoid large swings in the exchange rates that might destabilize the economy. Countries that have a floating exchange-rate regime have to decide on the goals of their monetary policy and whether they want to engage in inflation targeting, as opposed to exchange-rate targeting, which is the case with a fixed exchange-rate regime.

Most economists consider the dirty float to be inferior to the clean float and believe that the exchange rate should be determined by the markets, while other tools of monetary policy, such as interest rates, should be used to assure the price stability.

Empirical and theoretical work suggests that when clean float is not an option, then dirty float is preferable for the developing countries, as compared to a fixed exchange-rate regime. Theoretical reasons for the superiority of a dirty float over a fixed exhange-rate regime include independence of monetary policy and freedom from currency crises. Empirical analysis also shows that countries that have more flexible exchange-rate regimes experience better economic growth on average.

International organizations such as the International Monetary Fund recommend that developing countries adopt a floating exchange-rate regime in combination with inflation targeting. As a result, the dirty float has been a dominant exchange-rate regime in the world since the beginning of the century.

Most of the countries that claim that their exchange-rate regime is floating, rather than fixed, actually engage in dirty float. For this reason, economic researchers do not simply rely on the official statement of the exchange-rate policy, or de jure classification, but rather use de facto classifications they construct based on actual volatility of the exchange rates. Most commonly used classification is constructed by Carmen Reinhart and Kenneth Rogoff in their 2004 article "The Modern History of Exchange Rate Arrangements: A Reinterpretation," based on their study of official and black market exchange rates.

The United States has had a floating exchange-rate regime since the collapse of the Bretton-Woods system in August 1971. Until 2000, the United States has had to maintain a dirty float regime. Nevertheless, the U.S. Treasury, which is in charge of the exchange-rate policy in the United States, has not intervened in the foreign-exchange market since September 2000. Thus, since 2000, the exchange-rate policy in the United States has been a clean, or free, float.

SEE ALSO *Exchange Rates; Policy, Monetary*

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Galina Hale

DISABILITY

Disability, and what it means to be a disabled person, is socially, culturally, and historically created. Disability studies, and associated disability research, is a relatively recent and burgeoning arena within the social sciences. This entry shall first summarize the shift in understandings by contrasting the individual and social models of disability—a model being a set of assumptions about how an event or process operates. The entry then explores the implications of this shift in disability research and policy. Finally, the entry looks toward future possibilities in establishing the full participatory citizenship of disabled people.

DISABILITY MODELS

Within every society there are competing models of disability, with some being more dominant than others at different times. The most dominant model of disability is the *individual model*, which is based upon the assumption that the difficulties disabled people experience are a direct result of their individual physical, sensory, or intellectual impairments (Oliver and Sapey 2006). Thus, the blind person who falls down a hole in the pavement does so

because he or she cannot see it, and the person with a motor impairment fails to get into a building because of his or her inability to walk. Problems are thus viewed as residing *within* the individual. The individual model of disability is deeply ingrained and "taken as given" in the medical, psychological, and sociological literature. Even in the literature on the sociology of health and illness, disability, as disabled people define it, is basically ignored (Barnes and Mercer 1996).

The *medical model* can be regarded as a subcategory of the overarching individual model of disability, where disability is conceived as part of the disease process, as abnormality, and as individual tragedy—something that happens to unfortunate individuals on a more or less random basis. Treatment, in turn, is based upon the idea that the problem resides within the individual and must be overcome by the individual's own efforts (French 2004). Disabled people have, for example, been critical of the countless hours they have spent attempting to learn to walk or talk at the expense of their education and leisure (Oliver 1996).

None of these arguments implies that considering the medical or individual needs of disabled individuals is wrong; the argument is that the individual model of disability has tended to view disability *only* in those terms, focusing almost exclusively on attempts to modify people's impairments and return them or approximate them to "normal." The effect of the physical, attitudinal, and social environment on disabled people has been ignored or regarded as relatively fixed, which has maintained the status quo and kept disabled people in their disadvantaged state within society (Oliver and Sapey 2006).

The *social model* of disability is often referred to as the "barriers approach," where disability is viewed not in terms of the individual's impairment, but in terms of environmental, structural, and attitudinal barriers that impinge upon the lives of disabled people and that have the potential to impede their inclusion and progress in many areas of life, including employment, education, and leisure, unless the barriers are minimized or removed (Oliver 1996). These barriers include inaccessible education or lack of education, inaccessible information and communication systems, inaccessible working environments, inadequate or lacking disability benefits, discriminatory health and social-care services, and inaccessible transport, housing, public buildings, and amenities (Swain et al. 2004). The social model of disability also encompasses the *tragedy model* in all its manifestations, such as the devaluation of disabled people through negative images in the media, including films, television, and newspapers (Darke 2004).

The social model of disability locates disability not within the individual disabled person, but within society. Thus the person who uses a wheelchair is not disabled by paralysis but by building design, lack of lifts, rigid work practices, and the attitudes and behavior of others. Similarly, the visually impaired person is not disabled by lack of sight, but by lack of reading materials in Braille, cluttered pavements, and stereotypical ideas about blindness. The social model takes a holistic approach in that specific problems experienced by disabled people are explained in terms of the totality of disabling environments and cultures (Oliver 2004).

The social model of disability has arisen from the thinking and writings of disabled people themselves, and particularly from the disabled people's movement. The disabled people's movement comprises organizations of disabled people in which disabled people are in positions of control.

GLOBAL ATTITUDES TOWARD DISABILITY

The experiences of disabled people in the Western world gave birth to the social model of disability. It is an expression of commonality and resistance to the dominant individual, medical, and tragedy models. To look globally, however, raises a possibly more complex and controversial picture. On one hand is the social and historical construction of disability. To be impaired and disabled in China, in Afghanistan, in Zambia, or in the United States—in the high-income "developed" or minority world and the low-income "developing" or majority world—addresses widely differing experiences and encompasses different meanings. Perhaps not surprisingly, the picture is complex, including both cultural diversity and commonalities (Flood 2005; Sheldon 2005). Provision for disabled people also varies greatly from country to country. Most countries in the majority world, for instance, do not have a welfare state.

Though attitudes toward disability are generally universally negative, there are cultural differences (Ingstad and Reynolds Whyte 1995). First are the ways in which the body and physical characteristics are given value and meaning. Western biomedical definitions of impairment are not universal, and perceptions of the body and mind vary across cultures and also change over time (Hughes 2002). Religion and the messages various religious doctrines convey about disability are also significant (Ingstad and Reynolds Whyte 1995), as is language and the notion that key concepts may not easily translate into other languages and cultures (Stone 1999b).

Notwithstanding the importance of cultural differences, subtle and not so subtle, it can be argued that commonality is an overriding picture. Commonality is engendered particularly by multideprivation, predominantly through common experiences of poverty. Disabled

people are the poorest of the poor in all countries, in terms of relative poverty in the developed world and in terms of absolute poverty in the developing world (Stone 1999a).

The establishment and growth of an international disabled people's movement, particularly through the Disabled Peoples' International (DPI), is in part at least an expression and realization of such commonality. As of 2007 DPI represented approximately 130 national assemblies, many of which, in turn, represent thousands of disabled individuals with all manner of impairments, including people with intellectual impairment. In 1992 DPI acknowledged that it was a human rights organization and that its membership was individually and collectively committed to global justice for disabled people. DPI is also committed to ensuring that the voice of disabled people is heard in the development of all policies and programs that directly affect them, a commitment expressed in the DPI slogan, Nothing About Us Without Us. As a result, DPI has had considerable influence in formulating the United Nations World Programme of Action Concerning Disabled Persons (1983) and the United Nations Standard Rules on Equalization of Opportunities for Persons with Disabilities (1993).

In 1992 DPI joined other international disability organizations to set up an international information network on disability and human rights with the objective of supporting disabled people's actions at the grassroots to implement those rights. This network, Disability Awareness in Action, published a monthly newsletter, the *Disability Tribune*, from 1992 to 2005 and produces numerous resource kits on issues of particular concern, such as organization building, consultation and influence, campaigning, and working with the media (Hurst 2005).

DISABILITY RESEARCH AND SOCIAL POLICY

Turning to research, estimates of the number of disabled people are problematic given the variations in definitions of *disability*, both nationally and internationally, and the wide variety of associated impairments (Swain and French 2004). Estimates suggest that there are around 500 million disabled people in the world population. The majority, around 80 percent, of disabled people live in the developing world, the main causes of impairment being poverty, inadequate sanitation, malnutrition and a poor water supply, and more recently AIDS. Furthermore, statistics from European countries suggest that the percentage of the population that is disabled increases with age, particularly for certain disabilities such as visual impairment and hearing loss. Figures concerning comparative numbers of people in employment and education show that people with impairments are among the most disadvantaged groups around the world (Giddens 2006).

Such statistics are clearly important for disabled people, their supporters, service providers, and policymakers in establishing mandates for change. The development of the social model, however, has underpinned critiques of research, challenging who controls and produces research, priorities in funding, and ultimately the establishment of full citizenship for disabled people (Barnes 2004). Again, the central argument is that the individual model has dominated research. Negative impacts have also come from global genetic advances and assessments of disabled people's quality of life, as well as multinational pharmaceutical companies' hold over research, patenting, and genetic advances; the invisibility of disabled people from mainstream activity and information; and the silence of disabled people's voices in the corridors of power and change (Hurst 2003). Statistics, whether valid or reliable, relating to the numbers of disabled people provide no information about the availability of accessible houses, transport, or so-called public buildings. Such counting of heads can carry the connotation that it is disabled individuals who create the "problem," rather than the disabling society. The social model has fueled arguments for a different methodological approach to researching disability issues, an approach that is informed by the social model and in which the production of research is controlled by disabled people. Associated developments in social science research are generally subsumed under the umbrella term *emancipatory research* (Barnes 2004).

In terms of social policy, the international shift driven by the social model is evident in the establishment of rights-based policy, both civil and human. By 2007 antidiscriminatory legislation had been enacted in at least forty UN member states. There are, however, significant differences in these legislative frameworks, and general critiques focus on the lack of clear and effective enforcement mechanisms, with terms such as *reasonable adjustment* providing broad grounds for noncompliance—that is, antidiscriminatory legislation that allows for and legalizes discrimination against disabled people. Furthermore, the social model should not be simplistically equated with what has come to be referred to as the rights-based model. The social model encompasses and informs broader mandates for social change in realizing social justice for disabled people.

One broader front for social change has been developed under the banner of *independent living* (Barnes and Mercer 2006). This concept, as defined by disabled people themselves, is founded on four basic assumptions:

1. All human beings are of equal worth, regardless of the nature, complexity, or severity of their impairments.
2. Everyone, regardless of the nature, complexity, or severity of their impairments, has the capacity to

make choices in controlling their lifestyles and should be supported in making such choices.

3. Disabled people have the right to exercise control over their lives.
4. Disabled people have the right to participate fully in all areas—economic, political, and cultural—of mainstream community living on an equal basis with their nondisabled peers.

The independent-living movement began through the establishment of *centers for independent living* (CILs), which are self-help organizations for disabled people that are run and controlled by disabled people themselves. There are now CILs or similar organizations providing support for disabled people and their families in many countries around the world. Furthermore, the idea of independent living, as conceived by disabled people, has had a notable impact on disability policy globally. Disabled people and organizations of disabled people have increasingly become involved in policymaking at local, regional, national, and international levels (Barnes and Mercer 2006).

Turning finally to the possible directions for disability policy and social science research, the goal remains essentially the same: the creation of a society in which all disabled people are able to participate as equal citizens. Under the umbrella of independent living, this includes equal access to mainstream education, paid employment, transport, "public" buildings, housing, leisure, and health- and social-care services. *Mainstreaming* is a key concept. The mainstreaming of disability issues within policy agendas addresses the marginalization of the needs and rights of disabled people and their treatment as "special" cases. This presents fundamental challenges to policymaking in realizing the prerogatives of flexibility, the expertise of disabled people, and the recognition that "one size does not fit all." Mainstreaming also requires the breaking down of the physical, social, communicative, and economic barriers that prevent disabled people from exercising their rights and participating in policymaking.

The creation of participative citizenship will involve the strengthening and enforcement of legislation and procedures to ensure that disability and independent-living issues are fully integrated into policymaking at all levels: international, national, regional, and local. This includes the enactment of binding and intractable antidiscrimination legislation with effective enforcement and compliance requirements. The economic and management implications include the financing of organizations of disabled people, including CILs, and research controlled by disabled people, particularly organizations of disabled people and their representatives.

There are, furthermore, democratic and participatory possibilities afforded by the Internet and other technological developments. These technologies have opened up opportunities for dialogic, or participative rather than representative, democracy. The Internet allows a greater diversity of voices to be heard and has the potential to be profoundly democratizing. The danger is the possibility of the further marginalization of the "unconnected," the disabled people who are the poorest of the poor, for whom survival is the political perspective and for whom sophisticated technology is not available. It is also the case that new technologies are developed within disabling societies and are not available to many disabled people unless adaptations are made that are often expensive (Goggin and Newell 2003).

Overall, paramount to the evolving direction is the emerging voices of disabled people in controlling decision-making processes across policy and research that shapes day-to-day lifestyles, opportunities, and choices. It is an ongoing struggle for a truly equitable and inclusive society with justice and full participative citizenship for all.

SEE ALSO *Civil Rights; Human Rights; Social Exclusion*

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John Swain
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DISARMAMENT

The *Oxford English Dictionary* defines *disarmament* as the action of disarming: "the reduction of an army or navy to the customary peace footing." Encompassing the meaning inherent in its root, *disarm*, "to deprive of arms, to take the arms or weapons from, to deprive of munitions of war or means of defense, to dismantle (a city, a ship, etc.)," disarmament refers to armaments and includes any measure by which their existence is reduced or eliminated.

TYPOLOGY

Extending far back in history, the experience of disarmament presents a varied typology. Often a unilateral obligation imposed on the loser by the winner of a conflict (e.g., on Prussia by Napoleon Bonaparte, on France in 1814 by the United Kingdom, or Germany by the Versailles Treaty in 1919), disarmament has also been a reciprocal obligation (e.g., the naval agreement between France and the United Kingdom on October 27, 1787, or the Anglo-American treaty of April 28, 1817, limiting armaments on the Great Lakes and Lake Champlain). Moreover, disarmament phenomena encompass unilateral disarmaments undertaken by states for philosophical, budgetary, strategic, or other reasons (e.g., Costa Rica, the U.S. unilateral destruction of biological stockpiles in 1969, or the Soviet Union's unilateral reduction of forces decided on in 1988).

Disarmament in the context of a peace process following internal or international conflict has specific features. It is part of peace agreements between governments and guerillas in Africa and Latin America (e.g., between the government of El Salvador and the Farabundo Marti National Liberation) and in the Northern Ireland peace process (Irish Republican Army disarmament ended in September 2005), leading to the disarmament of nongovernmental armed groups. Finally, disarmament within the framework of peace enforcement operations (e.g., Security Council Resolution 687 of April 3, 1991, concerning Iraq) is distinct from disarmament through negotiations, even if there is some overlap in the mechanics of weapons inspection and disposal.

Compliance verification is a common challenge in all cases. The main instruments of verification are United Nations (UN) inspectors (in peace enforcement), international or bilateral commissions (in peace agreements), and verification procedures set up by international treaties. Regrettably, some disarmament treaties do not include any supervisory mechanisms.

HISTORICAL AND LEGAL DEVELOPMENT

Disarmament as a general goal came into focus with the Hague Peace Conferences in 1899 and 1907. The resulting rules for hostilities and the means and methods of land warfare included prohibitions against the use of certain kinds of weapons. Although a resolution adopted in 1907 agreed on the desirability of studying a reduction of military charges, the conferences failed to agree on any limitation or reduction of possession of armaments.

General aspirations for disarmament returned after World War I as part of plans for international peace and security. The Versailles Treaty limited Germany, but it was also seen as a first measure toward general disarmament. The fourth point of President Woodrow Wilson's message

(January 8, 1918) proposed a reduction of national armaments to limits compatible with national security and the implementation of international obligations imposed by joint action. The main organs of the League of Nations were charged with drafting plans for the general reduction of national armaments, which was to be the main instrument for the realization of peace and security. "Qualitative disarmament" was to make universal the prohibition of armaments forbidden to the vanquished powers while leaving defensive power untouched (McKnight 1983, pp. 17–20). By 1930 a draft disarmament treaty was circulated to governments for consideration, but most of the politicians at the World Disarmament Conference, which opened on February 2, 1932, believed disarmament impossible and accepted the use of force as an instrument for settling international controversies.

In the twenty-first century disarmament is linked to the principle, established in article 2 of the Charter of the United Nations, denying states the threat or the use of force. Many authors argue that the UN Charter puts less emphasis on disarmament than did the League of Nations. Under the Charter the maintenance of international peace and security is based on collective security and the right of self-defense recognized in article 51, both of which require armed forces (Kalshoven 1985, pp. 198–199). In addition, there is no general rule denying or limiting the right of states to have armed forces and hence acquire and develop armaments (International Court of Justice 1996). By contrast, the Charter charges the General Assembly to consider the general principles governing disarmament and the regulation of armaments (article 11), while the Security Council is responsible for formulating plans for the establishment of a system for the regulation of armaments (article 26).

Cold war tensions prevented any progress toward those goals, although agreement seemed near in 1954, with the Anglo-French Memorandum based on a previous U.S. document titled "Essential Principles for a Disarmament Program," and in 1961, after the U.S.-Soviet Joint Statement of Agreed Principles—the McCloy-Zorin Principles—on general and complete disarmament. Those major failures and growing impatience with the lack of progress on disarmament gave impetus to a new concept: arms control.

In the post–cold war 1990s the world witnessed a new impetus for disarmament, with the approval of the Chemical Weapons Convention, the indefinite prorogation of the Treaty on the Nonproliferation of Nuclear Weapons (NPT), and the beginning of negotiations for new treaties (the Comprehensive Nuclear Test Ban Treaty [CTBT] or the Fissile Material Cutoff Treaty). Nevertheless, the trend of world military expenditures has been rising since 1998, accelerating to an annual average increase of around 6 percent in real terms from 2002 through 2004 (the United States accounts for 47 percent of world military expenditures and is the main representative of this trend). Additionally, no new disarmament measure has been approved and some older ones have been abandoned (e.g., the Treaty on the Limitation of Antiballistic Missile Systems [ABM]).

CONCEPTUAL DELIMITATION

Conceptually, the distinction between disarmament and arms control is troublesome. Some authors use the terms *disarmament* (Myrdal 1976; Kalshoven 1985; Lysén 1990) or *arms control* (Brennan 1961; Schelling and Halperin 1985) to cover all the rules and measures related to the development, production, and deployment of armaments. Nonetheless, most writers recognize a distinction, but disagree on where to draw the line on the continuum from complete reductions to measures restraining the testing, manufacture, possession, or deployment of specific types of weapon. Broad consensus assigns to the term *disarmament* the elimination or reduction of one or more categories of weapons and other measures limiting the acquisition, possession, or deployment of one or more categories of weapons. The Biological Weapons Convention, the Chemical Weapons Convention, and some of the U.S.-Soviet bilateral treaties (e.g., ABM and Strategic Arms Limitation Talks I and II) fall into the category, as does the Treaty on Conventional Armed Forces in Europe, which stands out as the major example of an international treaty reducing conventional armament. As well, the Outer Space Treaty, the Sea-Bed Treaty, the Antarctic Treaty, the Tlatelolco Treaty (for Latin America), and the Rarotonga Treaty (for the South Pacific Ocean) protect specific areas from deployment of certain weapons, while the NPT recognizes only five states as legal nuclear powers and prevents nuclear proliferation. Additionally, measures that prevent or hinder weapons development (e.g., the Partial Test Ban Treaty, the Comprehensive Test Ban Treaty, which is not in force, or the Cutoff Treaty, which is under negotiations in the Conference of Disarmament in Geneva) are more often considered a form of arms control.

SEE ALSO *Arms Control and Arms Race; Weaponry, Nuclear*

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DISASTER MANAGEMENT

Throughout human history, lives have been cut short by disasters. This term refers to a broad range of events that vary in speed of onset, duration, magnitude, cause, and other characteristics. But always there is both human suffering and disruption of normal community functioning. Placement of the term *management* next to this category of extreme events implies a belief that some measure of control, maybe prevention, is possible. This is a relatively new idea that remains poorly understood and highly controversial. Understanding this concept requires exploration of four subtopics: (1) types of disasters, (2) social vulnerability trends, (3) social system consequences, and (4) planning and management policy.

TYPES OF DISASTERS

In August 2005 many throughout the world watched on television as thousands of American citizens suffered for days following the destruction caused by Hurricane Katrina. Despite evacuation orders from local and state officials, more than 1,300 people perished. Most deaths resulted from flooding in the New Orleans area after portions of the levee system failed. Not since the terrorist attacks of September 11, 2001, had the world witnessed such disaster-caused suffering within the United States. Elsewhere, of course, the scope of disasters has been far worse. Examples include the earthquakes in Indonesia on May 27, 2006, that killed over five thousand people and the massive tsunami on December 26, 2004, that struck coastal areas along the Indian Ocean in such far-apart places as Thailand, Sri Lanka, and India. The 2004 tsunami alone killed at least 280,000 people. These contrasts hint at the many types of disasters, commonly divided into three categories: (1) natural, (2) technological, and (3) conflict-related.

Natural Disasters Natural disasters include both a wide range of extreme weather-related events and those resulting from geophysical forces, such as earthquakes (Mileti 1999). Extreme weather events include hurricanes like Katrina, which are known as "typhoons in the western North Pacific and cyclonic storms or tropical cyclones in other areas" (World Meteorological Organization 2005, p. 1). The most deadly hurricane to hit the United States struck Galveston, Texas, on September 8, 1900. Estimates of the death toll from this hurricane vary, but at least six thousand people died. In 1992 Hurricane Andrew caused property damage in Florida and Louisiana that totaled about $30 billion. Andrew held the record until Katrina, which had loss estimates as high as $200 billion (Select Bipartisan Committee 2006).

Tornadoes, another type of extreme weather event, occur throughout the United States, especially in the Midwest. The Great Tri-State Tornado of 1925 left 695 people dead in Missouri, Illinois, and Indiana; it was the largest tornado-related death toll as of 2006. Although less deadly, flood disasters cause more property damage than any other type of weather-related event (Mileti 1999, pp. 72–82). The deadliest flood within the United States

occurred in Johnstown, Pennsylvania, in 1889 when over two thousand people died. Other weather-related disasters result from drought, extreme heat or cold, fog, hail, blizzards, avalanches, lightning, and wildfires.

Geophysical disasters, such as earthquakes and volcanoes, have also occurred in the United States. For example, the 1906 earthquake in San Francisco left 503 people dead. While only 61 people died in the Northridge quake that shook the Los Angeles area in 1994, a new record in earthquake-related property loss was reached: $30 billion. These losses pale, however, when compared to earthquake-related losses experienced worldwide in such places as China in 1927 (200,000 killed); Armenia in 1998 (25,000 killed); and India in 2001 (20,000 killed).

In 1868 Hilo, Hawaii, was devastated by massive ocean waves originating from earthquakes in Peru and Chile. Similarly, the 1964 Anchorage earthquake produced tsunamis that struck Valdez, Alaska, and Crescent City, California. Records of volcano-related deaths have been kept since the time of the eruption of Mount Vesuvius in Italy in 79 CE, when approximately twenty thousand people died in Pompeii. In 1902, for example, on the island of Martinique in the Caribbean, approximately forty thousand people died when the city of Saint Pierre was destroyed after Mount Pelée erupted. Less deadly volcano disasters have occurred with regularity, including the 1980 eruption of Mount Saint Helens in Washington state, which killed sixty people.

Finally, epidemics of disease constitute a major risk. Although mass immunization programs have curtailed diseases such as diphtheria from which many died before the early twentieth century, a future pandemic could kill thousands, maybe millions. The 1918 influenza outbreak probably started in Haskill County, Kansas, and rapidly spread worldwide, in part because of troop movements during World War I (1914–1918). Approximately 100,000,000 people died from the flu during this pandemic, far more even than died from the infamous Black Death plague of the Middle Ages (Barry 2005).

Technological Disasters Technological disasters reflect a wide range of events stemming from transportation, building, and energy-production failures. For example, airplane and ship failures are illustrated by such disasters as the 1999 Egypt Air crash near Nantucket Island, Massachusetts (217 killed), and the sinking of the *Titanic* in 1912 (1,503 killed). Structural fires, like that which broke out in the Iroquois Theater in Chicago in 1903 (602 dead), and building collapses are another dimension of this category. Energy-production disasters include such events as the explosion and fire that occurred in Texas City, Texas, in 1947, which killed 516 people and injured more than three thousand. Such events pale, however, next to the thousands killed when a gas leak caused a massive explosion at the Union Carbide plant in Bhopal, India, in 1984, or the Chernobyl nuclear plant disaster in Ukraine in 1986. Experts have estimated that the Chernobyl disaster caused some ten thousand cancer cases within nearby communities and approximately five thousand deaths (Segerståhl 1991).

Conflict Disasters Conflict disasters include wars both among and within nations. The American Civil War (1861–1865), for example, resulted in the deaths of over 500,000 troops. American military casualties during World War II (1939–1945) are estimated at just over 400,000. And these numbers do not include civilian losses, or in the case of World War II, losses of both types from other countries.

Increasingly, however, violence by nonstate militants has become a concern. Using violence toward noncombatants as a political strategy, terrorists have precipitated increased efforts at civil protection. The use of commercial airliners as weapons on September 11, 2001, resulted in over three thousand deaths at the World Trade Center in New York, the Pentagon near Washington, D.C., and a field near Shanksville, Pennsylvania. Increased attacks on "soft targets" such as subways, as occurred in London in July 2005, and hotels, as in Amman, Jordan, in November 2005, illustrate another form of increased vulnerability. Should weapons of mass destruction, such as nuclear bombs, become available to terrorist groups, the destructive potential increases greatly. Finally, civil disorder may erupt within a society when heightened feelings of deprivation and disenfranchisement are ignited by critical incidents, as occurred in Paris and London in 2006 when students and young workers protested new laws regulating employment termination.

SOCIAL VULNERABILITY TRENDS

Human populations are becoming more vulnerable to disasters, especially those of catastrophic scope, for many reasons. In past centuries, people believed disasters were caused by forces outside of human control. Floods, volcanoes, and other natural disasters were labeled "acts of God" and were interpreted as punishment or disfavor. Russell Dynes (2000) has proposed that a naturalistic or "modern" interpretation of disaster events first occurred in 1755 following a major earthquake in Lisbon, Portugal. This earthquake killed at least ten thousand people, although some estimates place the toll as high as seventy thousand. Civil authorities led efforts to rebuild the city and gradually increased their authority over the church in political matters. This shift led to alternative thinking about attribution for disasters. Although not universally accepted even today, "naturalistic" interpretations reflect-

ing Enlightenment philosophy paved the way for new approaches to disaster management. Unfortunately, numerous trends are acting in concert to place more and more humans at risk despite accelerated efforts at management. Among these are population changes, increased reliance on technology, and climate change.

As the world population increases, there are more potential disaster victims. Beyond larger numbers, however, more people are moving into areas of high risk. For example, the coasts of Florida and Texas have witnessed explosive growth since the mid-1970s. In addition, increases in the numbers of elderly and poor, of homes led by single mothers, and of people living in mobile homes add a further dimension to America's social vulnerability. Mobile homes, for example, provide affordable housing to millions, but offer minimal protection during violent storms, especially tornadoes. Not only are more people living in areas that are wind, flood, or avalanche prone, the structures within which many dwell offer inadequate protection. In poorer countries, the use of stone and tile building materials that collapse during earthquakes is a parallel problem.

Climate change, which has been documented in numerous ways, will be reflected in future disasters. For example, increased heat retention by miles of pavement and high-rise structures is related to new storm patterns, and residential and commercial construction is expanding into geographic areas already known to be flood or tornado prone. Moreover, while annual rainfall has remained stable, there is an increased frequency of intense downpours, which cause localized flooding and traffic accidents. Forecasts for a rising sea level and warmer ocean temperatures imply similar pattern change for hurricanes.

These vulnerability trends are exacerbated by shifts in social, economic, and political patterns, such as the globalization of the economy and an increase in feelings of deprivation that reflect long-standing patterns of inequality and social injustice. There is no single trend that contributes to increased vulnerability; rather, it is the cumulative effects of a series of both social and physical forces that result in higher risk levels. These risks are not distributed uniformly, but are skewed, with the poor, elderly, and ethnic minorities at higher risk.

SOCIAL SYSTEM CONSEQUENCES

Disasters have important consequences for social systems. Smaller systems, such as families, may experience short-term oscillations. For example, divorce rates and marriage rates generally drop in the first few months following a disaster (Cohn and Cole 2002). However, after a six-month spike downward and then upward, trend lines smooth out; that is, some put off marriage for a few months, and then join others who were planning to marry at a later date—hence, a drop, then an increase, followed by a continuation of the prior trend line. Some studies have documented that there is a longer delay in the divorce pattern. Disasters appear to cause some to remain married, at least temporarily, and to drop their plans for divorce. Within these microsystems, however, some changes are permanent. For example, studies have documented that many disaster victims, especially those helped by kin during recovery, report closer kin ties years later. After a disaster, relatives may interact more frequently, and people maintain closer links to both kin and friendship groups, although participation in voluntary associations decreases somewhat. The sole exception is religious organizations, which show slight increases. Hence, after disasters, microsystems reflect tighter links to kin, friends, and religious organizations (Drabek 1986).

Macrosystems, such as communities and societies, experience disaster consequences of at least four types. First, there is an acceleration of preexisting trends. Following the 1964 Anchorage earthquake, for example, William Anderson (1970) documented that numerous changes planned within organizations prior to the earthquake were implemented more rapidly. In another case, social stratification was widening in the Miami area prior to Hurricane Andrew. After the hurricane, Walter Peacock and colleagues (1997) documented acceleration of this trend.

A second consequence of disasters for macrosystems is that disaster preparedness and prevention efforts are increased. Newer, enhanced warning systems may be implemented, as are flood protection measures, for example. Unfortunately, as noted above, these actions rarely take into account the forces that are placing more people at risk, so the net gain may be minimal.

Third, various scholars, including Pitirim Sorokin (1889–1968) and Karl Marx (1818–1883), have proposed that some disasters deflect social, economic, and political developments. For example, the conflicts that developed between business interests, government programs, and upper-class elites during the reconstruction following the 1972 earthquake in Managua, Nicaragua, may have led to the collapse of the Somoza regime in 1979. Other scholars, including Jared Diamond (2005), reject such single-factor explanations and include disasters within a multifactor framework that more convincingly accounts for such changes as total societal collapse. Such collapses occurred on Easter Island around the mid-1800s and among the Anasazi in southwestern Colorado and northern New Mexico about 1300 (Diamond 2005, pp. 112, 154).

The fourth consequence of disasters for macrosystems is policy change. Consistent with Anderson's findings, however, these often reflect policy initiatives that were in process prior to the event. For example, T. Joseph Scanlon and John Handmer (2001) documented the

impact on gun-law reform in Australia of a 1996 massacre in Port Arthur in which a lone gunman killed thirty-five people. Reform proposals had been advanced in Australia earlier, but had never been adopted. One year after the massacre, however, reform legislation was implemented. Similarly, in the United States in the years before 2001, several commissions had recommended the establishment of a department of homeland security and other terrorist prevention policy changes. Following the attacks of September 11, 2001, some of these proposals were adopted. Despite serious failures in the official response to the attacks, including a lack of multiagency communication, additional reform proposals remained controversial years later (National Commission on Terrorist Attacks 2004).

PLANNING AND MANAGEMENT POLICY

Following numerous large-scale disasters during the 1960s, state and local governments exerted pressure on the U.S. Congress for reorganization. As various types of disaster events occurred, different federal agencies created event-specific programs for recovery and mitigation in response to floods, earthquakes, hurricanes, and other disasters. These programs evolved over time and paralleled the coterminous development of programs designed to protect civilian populations in the event of an enemy attack. In 1979 President Jimmy Carter established the Federal Emergency Management Agency (FEMA). This agency was to provide a single point of federal contact for state and local governments and other entities, including nongovernmental agencies like the American Red Cross. FEMA also was to be the lead agency within the federal bureaucracy for coordination of all disaster activities, regardless of the type. This all-hazard agency was to be operative across the entire life cycle of all disaster events, with responsibility for coordinating mitigation and preventive actions (e.g., flood-zone mapping), preparedness, response, and recovery. The first line of response remained with local and state governments, but when events created demands that overran their resources, they could request FEMA assistance. A regularized process, as opposed to the ad hoc arrangements of the past, was established through a presidential declaration when conditions warranted (Drabek and Hoetmer 1991).

During the response to Hurricane Andrew in 1992, President George H. W. Bush was severely criticized for FEMA's slow and inadequate response. His successor, President Bill Clinton, placed a priority on strengthening FEMA, and eventually elevated the agency directorship to cabinet-level status. Recruitment and training promoted professionalism within FEMA and within state and local emergency management agencies. FEMA staff facilitated these enhanced state and local capabilities by emphasizing researched-based principles, including the view that disaster planning is a process, not a product, and that disaster plans must be prepared by representatives from the agencies that will implement them. In addition, colleges across the United States established new degree programs in emergency management (Drabek 2004).

Following the 9/11 attacks, FEMA was transferred into the newly created Department of Homeland Security. Despite continuity in name, many FEMA programs experienced reduced funding as terrorist-related program priorities were implemented. During and following the response to Hurricane Katrina, FEMA was criticized severely. While various congressional investigations pointed out failures within state and local government agencies, FEMA was hit hardest, especially in the public perception, and numerous difficult policy issues were raised by the post-Katrina reviews. Among these was whether or not FEMA should be abolished and its functions reassigned within various units of the Department of Homeland Security. Others proposed that FEMA should be upgraded and made into a stand-alone agency independent of the Department of Homeland Security. Many who testified before congressional committees voiced concerns about intergovernmental partnerships, specifically the degree of autonomy and flexibility of state and local emergency management agencies. The degree to which the emergency management function should be conceptualized within a common standardized system became the operative policy question. Many expressed concern that terrorism preparedness had been pushed into high priority, while focus diminished on other types of disasters. Finally, the role of the military in disaster response was revisited.

Consideration of all of these policy matters will be deflected by future disaster events, whatever they may be. When they occur, policymakers will be pressed to demonstrate why they did not do more to prepare. Thus, disaster policy will continue to evolve and reflect both specific events and public perception of the threats believed to be the most harmful.

SEE ALSO *Natural Disasters; September 11, 2001; Shocks*

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DISASTERS

SEE *Disaster Management; Natural Disasters.*

DISCIPLINE

SEE *Corporal Punishment.*

DISCONTINUITY THEORIES

SEE *Stages of Development.*

DISCOUNTED PRESENT VALUE

Discounted present value is a concept in economics and finance that refers to a method of measuring the value of payments or utility that will be received in the future. Most people would agree that receiving $1,000 today is better than receiving $1,000 in a year, because $1,000 today can be used for consumption or investment. This feature is referred to as time value of money—a given amount of money today is better than the same amount of money in the future. Discounted present value allows one to calculate exactly how much better, most commonly using the interest rate as an input in a discount factor, the amount by which future payments are reduced in order to be comparable to current payments.

There are two ways to think about discounted present value—transferring money from the future to the present via borrowing or transferring money from the present to the future via lending. In both cases the interest rate at which one can borrow or lend is a crucial part of the formula.

Suppose a firm is scheduled to receive a payment of $1,000 in a year. To understand how much this payment is worth to the firm today, we can calculate how much the firm can borrow today against that payment:

$$x \cdot (1 + i) = 1000,$$

where i is the interest rate. Then, $x = 1000/(1 + i)$. The factor $1/(1 + i)$ by which we multiply the future payment is called a discount factor.

If the payment is scheduled to arrive in two years instead, we can use a two-step approach. Assuming the interest rate is the same for two years, a year from today the value of the payment will be $1000/(1 + i)$, which today is worth

$$(1000/(1 + i)) \cdot 1/(1 + i) = 1000/(1 + i)^2.$$

Thus, for discounting the payments far in the future the compound interest rate is used.

To calculate the discounted present value (DPV) of a stream of future payments, one has to discount each payment appropriately and then add them up. If we denote the payment in each future year by y_t, where t is the year, then:

$$\text{DPV} = y_1/(1 + i) + y_2/(1 + i)^2 + y_3/(1 + i)^3 + \ldots + y_T/(1 + i)^T = \Sigma_t^T \, y_t/(1 + i)^t$$

The formula above makes a set of assumptions that are important for the result: (1) interest accrues and is compounded annually; (2) the interest rate is constant over time; (3) the payments occur for T years, starting one year from today. Altering each of these assumptions would lead to different results. To properly calculate the dis-

counted present value of future payments, one also has to use the most appropriate interest rate in calculations.

In addition, individuals might be simply impatient and prefer to receive their utility today instead of waiting for the future payment, even if interest will accrue. This impatience is measured with the individual discount factor, which can be multiplied by the market discount factor described above to measure the discounted present value of future utility in terms of today's utility.

The concept of discounted present value is commonly used in all areas of finance, including decisions individuals commonly make—taking a mortgage credit for purchase of a house, financing the purchase of the car, and the like. Every firm uses the discounted present value of their future cash flow to assess the value of their projects. Investors use discounted present value to estimate the return on their investment. Lawyers use discounted present value in lawsuits to calculate the value of settlement in cases when damage to a client's health deprives him or her of future income.

SEE ALSO *Finance; Interest Rates; Loans; Time Orientation; Time Preference; Utility Function*

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Galina Hale

DISCOUNTING

SEE *Time Preference.*

DISCOURAGED UNEMPLOYMENT

SEE *Discouraged Workers.*

DISCOURAGED WORKERS

Discouraged workers are persons who, discouraged about their prospects of finding work, have given up their job searches and are therefore no longer officially counted as unemployed.

The Bureau of Labor Statistics (BLS) of the U.S. Department of Labor defines discouraged workers as those who report that they want a job but did not look for work in the past four weeks because they believe that no work is available in their line of work or area; they have previously not been able to find work; or they lack the necessary education, skills, or experience, or employers consider them too young or too old, and so on.

In 1994 the BLS added two further criteria to the definition. To be counted as a discouraged worker, persons must have looked for a job within the past year (or since their last job, if they worked during the year) and must indicate that they were available to start work during the prior week if a job had been offered. These changes were an outgrowth of suggestions made in the 1979 report of the National Commission on Employment and Unemployment Statistics (the Levitan Commission), which criticized the definition then in use as too subjective and too arbitrary. The commission recommended a measure based on clear evidence of prior job search and of availability for work. The tightened definition cut the number of discouraged workers from a range of 1.1 to 1.2 million throughout 1993 to 541,000 in the first quarter of 1994 (the latter figure is available only on a not-seasonally-adjusted basis).

Discouraged workers are excluded from the ranks of the unemployed because the BLS counts as unemployed only those jobless workers who have actively looked for work within the past four weeks or who have been laid off from a job to which they expect to be recalled. Recognizing, however, that an argument can be made for counting discouraged workers as unemployed, the BLS publishes as an alternative to the official unemployment rate each month a rate that includes discouraged workers. Thus, when the BLS reported that that the official unemployment rate was 4.8 percent in July 2006, it also noted that adding the 428,000 discouraged workers to both the unemployed and the labor force raised the rate to 5.0 percent.

The number of discouraged workers rises when the economy weakens and falls when the economy improves. For example, the number rose from 1,109,000 to 1,793,000 during the recession that lasted from the third quarter of 1981 to the fourth quarter of 1982, and it then dropped to 813,000 by the next economic peak, in the third quarter of 1990. As a result, the changes that occur in the official unemployment rate, which excludes discouraged workers, understate the worsening of the labor market that occurs in bad times and the improvement that occurs in good times.

The definition of discouraged workers differs among countries. In Canada, for example, discouraged workers must have looked for work within the past six months, rather than within the past year. A BLS study warns that international comparisons of the number of discouraged workers "should be viewed with caution because the

methods and the questions asked vary from country to country" (Sorrentino 1993, p. 15).

SEE ALSO *Labor Force Participation; Underemployment; Unemployment*

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DISCOURSE

A sentence is a systematic arrangement of words. A discourse is a systematic arrangement of sentences. The domain of discourse includes various genres—such as narrative, epic, journalistic, or poetic—and thematic fields, from the actuarial to the zoological. It includes register—high and low, technical and vernacular, polite, allegorical and literal, and so on—and modes, from the written to the oral, and from monological to conversational. It also includes the dimension of style, as well as diverse functional orders, including referential, heuristic, imperative, and connotative.

So encompassing a category might seem to be of dubious analytical rigor. But perhaps precisely because it is such a hodgepodge, discourse confronts the analyst not merely with the formal dimensions of language, but also with the diverse conditions of its production and use. It serves as a sociocultural tool kit, whose astonishing multiplicity of instruments can be deployed to characterize the world, from one context to another, and to realize a great variety of other ends. An analytical engagement with discourse has come to define sociolinguistics (see Goffman 1981; Romaine 2000; Trudgill 1974), the ethnography of communication (Gumperz and Hymes 1986; Saville-Troike 1982) and more specialized pursuits such as ethnopoetics (Sammons and Sherzer 2000) and metapragmatics (Lucy 1993). The chief philosophical predecessors of this engagement were Ludwig Wittgenstein's treatment of "language games" in his *Philosophical Investigations* (1953) and John Austin's treatment of speech acts, or "performatives," such as promising or pronouncing a couple to be wed in *How to Do Things with Words* (1962).

Since the later 1960s, however, the analysis of discourse has ceased to be the province of linguists and linguistic anthropologists alone. It has instead emerged as one of the leading preoccupations of social thought, and of cultural studies more broadly (see Howarth 2000; Mills 2004). That it has done so is closely related to the increasing contemporary saliency of two other topics that are often regarded as hallmarks of the post-structuralist turn in social and cultural critique. One of these centers on the variable historicity of the many collective systems in which human beings take part, or of which they are a part (Attridge, Bennington, and Young 1987). The other centers on the ways in which, and the extent to which, such systems are implicated in the reproduction of economic and political domination. Well before the post-structuralist turn, however, the Marxist political theorist Antonio Gramsci (1891–1937) set an influential, if partial, precedent in conceiving of the trajectory of the dynamics of language, history, and power as unfolding in the contest between the prevailing or "hegemonic" ideologies of a ruling class and the counterhegemonic ideologies of the class destined to succeed them. Several decades later, the structuralist Marxist Louis Althusser (1918–1990) supplemented Gramsci's schema with the still-current postulate that bourgeois ideology is, at base, a discursive apparatus through which persons of authority "interpellate" and, in so doing, subject other persons to authority (Althusser 1971, p. 170–178).

At once post-structuralist and post-Marxist, Michel Foucault's (1926–1984) oeuvre is the source of the conception of discourse most widespread today. For Foucault, discourse is always contestable, always "tactically polyvalent," though by no means is it always the tactical weapon of one or another economically defined class. Discourse bears authority by definition. Its domain is not equivalent to that of opinion in general. Nor does its authority necessarily rest on the hegemony of the material interests that it may serve. The proper measure of discursive authority is, for Foucault, the always somewhat conventional measure of what constitutes knowledge. Knowledge is not, per se, a kind of power. Discourse approached without reference to the material practices it serves and informs can yield no more than a purely speculative analysis of domination. Just so, Foucault's research into the establishment of the mental asylum, the prison, and sexology reveals that those discourses of life, labor, and language that, since the early nineteenth century, have been recognized as "human sciences" have provided the rationale for the imposition of entirely material apparatuses of anthropological classification, compartmentalization, and confinement. Yet Foucault's diagnosis of such discourses of "subjectivation" affords no hope of radical liberation (Foucault 1998, pp. 459–460). As Althusser seems also to have believed, human beings have nothing else to be but discursively articulated and discursively "interpellated" subjects. They might still strive to render the terms of their subjectivation more accommodating and less absolute.

SEE ALSO *Althusser, Louis; Foucault, Michel*

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DISCRIMINANT VALIDITY

SEE *Validity, Statistical.*

DISCRIMINATION

The online version of the *American Heritage Dictionary of the English Language* (2000) defines *discrimination* as, "Treatment or consideration based on class or category rather than individual merit; partiality or prejudice." Discrimination is a broad and multidimensional concept that covers all acts of preferring one thing, person, or situation over another (Block and Walker 1982, p. 6). In this broad sense, discriminatory behavior can occur within many economic or social activities of daily life. For example, the preference of a high school basketball coach for a taller player over a shorter one in selecting a team or an employer paying an African American worker less than a white worker for the same work would both fall under the heading of discrimination. While the latter act carries an unambiguously negative connotation, few people would consider the former act to be malevolent. Thus, discriminatory behavior does not always imply injustice or prejudice. While understanding this distinction is important, a more relevant discussion of discrimination should emphasize the types of discriminatory acts that are socially and economically unjust, the type of acts that have caused the word *discrimination* to gain an unambiguously negative meaning. Denying or restricting equal opportunity in housing, education, and employment to members of a certain demographic group, such as African Americans, women, or other minority groups, constitutes an act of discrimination that violates common notions of social and economic justice and points to a need for policy intervention.

LABOR-MARKET DISCRIMINATION

One of the most common forms of discrimination, *labor-market discrimination* refers to differential treatment of workers within the labor market. It occurs when individual workers with identical productivity characteristics are treated differently with respect to hiring, occupational access, promotion, wage rate, or working conditions because of the demographic groups to which they belong.

Taste for Discrimination Gary Becker, the 1992 Nobel Prize recipient in economics, laid the groundwork for the mainstream economic approach to the analysis of discrimination in *The Economics of Discrimination* (1957). Becker's theory of discrimination represents an example of the neoclassical economics approach. He introduces the

concept of *taste for discrimination* to translate the notion of discrimination into the language of economics. According to Becker:

> If an individual has a "taste for discrimination," he must act as if he were willing to pay something, either directly or in the form of reduced income, to be associated with some persons instead of others. When actual discrimination occurs, he must, in fact, either pay or forfeit income for this privilege. This simple way of looking at the matter gets at the essence of prejudice and discrimination. (Becker 1957, p. 14)

Employer Discrimination In cases of employer discrimination, employers with a taste for discrimination act as if employing, for example, African American workers imposes psychological costs that they are willing to pay. The measure of their willingness to pay can be translated into monetary terms by the *discrimination coefficient*. To illustrate, suppose that the costs to an employer of employing an African American worker and a white worker are W_{aa} and W_w, respectively. If the employer possesses a taste for discrimination against the African American worker, he will act as if the actual cost were $W_{aa}(1 + d)$, where *d*, a positive number, is the discrimination coefficient. The prejudiced employer will be indifferent when choosing between a white worker and an African American worker when the cost of hiring each worker is, to him, equal—that is, $W_w = W_{aa}(1 + d)$. A clear implication is that the African American worker will be hired by the discriminating employer only if his wage rate is below that of a white worker. More precisely, the African American worker will only be hired if his wage rate is less than that of a white worker by at least the amount of the discrimination coefficient.

Employee Discrimination The source of discrimination may also be the prejudice of fellow employees. For instance, white workers may possess discriminatory preferences against African American workers and avoid situations where they have to work alongside them. The extent of employee prejudice can be monetized by the discrimination coefficient, using an analogy parallel to employer discrimination. A white worker who is offered a wage W_w for a job will act as if this wage rate is only $W_w(1 - d)$, where *d* is the white worker's discrimination coefficient. The white worker will agree to work with African Americans only if he or she is paid a premium equal to $W_w d$.

Customer Discrimination Another source of discrimination in the labor market results from the prejudice of customers. For example, white customers may prefer to be served by white workers, which would reduce the demand for goods and services sold or served by African American workers. More formally, suppose the actual price of a good or a service is *p*. Then a white customer would act as if the price of this good or service were $p(1 + d)$ when faced with an African American worker. One of the implications of customer discrimination is that it would result in a segregated workforce within a firm, with white workers being placed in positions with high customer contact and African Americans working in positions with minimal customer interaction.

Predictions of Becker's Theory One of the predictions of Becker's theory is that the labor market will become completely segregated over time. This prediction can be illustrated using employee discrimination. In the presence of employee discrimination, nondiscriminating and profit-maximizing employers would never choose to hire both white and African American workers because employers want to avoid paying a premium to white workers. Instead, they would hire only African American workers who offer the same productivity as whites at a lower wage.

Another prediction of Becker's theory is that discrimination cannot persist in the long run in a competitive market where firms can enter and exit freely. This is because free entry by nondiscriminating employers will force discriminating employers out of the market. For example, nondiscriminating employers will hire equally productive African American workers at a wage that is lower than that offered to white workers. Nondiscriminating firms thus have a cost advantage over discriminating firms, and the forces of competition would drive the discriminating firms out of business. As more nondiscriminating firms enter the market, the demand for minority workers will rise, which will gradually erode the wage differentials between different groups of workers. Therefore, Becker's theory suggests that policies aimed at lessening or eliminating barriers to competition in the market place should help reduce discrimination and wage differentials.

Economists have widely tested the predictions made by Becker's model. For example, Orley Ashenfelter and Timothy Hannan (1986), using data from the banking sector, showed that the share of women employed in a firm is negatively related to the extent of competition in a geographical area. Another study by Judith Hellerstein, David Neumark, and Kenneth Troske (2002) found that, among plants with high levels of market power, those that employ more women are more profitable than those employing fewer women; no such relationship was found for plants with low levels of market power. These findings are consistent with Becker's prediction that discrimination can exist in situations where firms possess market power.

Although Becker's analysis of discrimination has found wide support among economists, criticism has been raised about the predictions of the theory. For example, it has been pointed out that, despite the model's predictions, competitive market forces have not eliminated discrimination, and wage disparities between different demographic groups have not completely disappeared (Darity and Mason 1998). Others have shown that the prediction of a segregated market does not accord with today's real world; furthermore, more segregated workforces tend to generate more wage inequality, not less (Mason 1999). There is also evidence of skin-tone differences in wages among underrepresented minorities (Mason 2004). Finally, several studies find that market competition does not decrease the degree of discrimination practiced within a sector, as predicted by Becker (Coleman 2004; Agesa and Hamilton 2004). Alternative theories of discrimination have been proposed to provide explanations for these issues.

Statistical Discrimination Discriminatory behavior can also occur because employers have limited information about the productivity characteristics of potential employees. Therefore, employers' hiring decisions may rely on average group characteristics based on factors such as race and gender. As a result, individuals with identical productivity characteristics will have different labor-market outcomes because of the average quality of the group to which they belong. Judging individuals on the basis of their average group characteristics is referred to as *statistical discrimination*.

For example, suppose an employer has to choose between a male and female job applicant. Assume further that the observable personal characteristics of these two applicants, such as age, years of education, previous work experience, test scores, and recommendation letters, are identical and that both of them performed equally well at the job interview. An employer, having to make a hiring decision between the two applicants, may decide to offer the job to the male applicant based on the employer's belief that female workers are more likely to quit their jobs than their male counterparts because women are likely to engage in childrearing. The employer makes a decision using statistics about the average group characteristics of the applicants. It is important to note that the statistical information used by the employer may or may not be accurate. In this example, whether or not women *actually* have higher quit rates than men is not relevant to the hiring outcome. While the behavior of some employers engaging in statistical discrimination could be rooted in prejudice, it is also possible that these actions are based purely on nonmalicious grounds. Statistical discrimination can result from decisions that may be correct, profitable, and rational on average.

Statistical discrimination helps explain how racial and gender differences between workers of equal productivity can exist in the labor market. It also explains how discrimination can persist over time. Unlike Becker's taste-for-discrimination model, the employer does not suffer monetarily from practicing statistical discrimination. On the contrary, the discriminating employer can benefit from this behavior by minimizing hiring costs. Therefore, there is no compelling reason for discrimination, and wage differentials between males and females or African Americans and whites tend to disappear in the long run in the presence of statistical discrimination.

While much of the focus on statistical discrimination concerns the labor market, such practices can be observed in different sectors of society as well. One nonmarket example of statistical discrimination is the observed racial differentials in policing patterns. John Knowles, Nicola Persico, and Petra Todd (2001) found that police search vehicles driven by African American motorists for illegal drugs and other contraband far more frequently than those of white motorists. If the motive behind this police behavior is the belief that African Americans are more likely to commit the types of traffic violations that police use as pretexts for vehicle searches, this type of behavior is an example of statistical discrimination.

However, William Darity and Patrick Mason (1998, p. 83) argue that statistical discrimination cannot be a plausible explanation for long-lasting discrimination. They assert that employers should realize that their beliefs are incorrect if average group differences are perceived but not real. If, on the other hand, these differences are real, then employers should develop methods to measure future performance accurately rather than engaging in discriminatory behavior, especially in a world with strict antidiscrimination laws.

NONCOMPETITIVE MODELS OF LABOR-MARKET DISCRIMINATION

The models of discrimination discussed above assume that firms operate in competitive markets. However, discriminatory motives can also be drawn from circumstances in which employers possess some degree of market power in wage determination. Alternative explanations of discrimination have been offered for these circumstances.

One of these alternative explanations is *occupational crowding*. The occupational crowding model of discrimination, advanced by Barbara Bergmann (1971), hypothesizes that labor-market disparities between African American workers and white workers (or males and females) are not due to a "taste for discrimination" by employers, but rather to a deliberate policy of segregating African American workers (or females) into lower-paid occupations. Crowding these groups into low-paying

occupations and limiting their access to other occupations reduces their marginal productivity in comparison with that of white (or male) workers. At the same time, the exclusion of minorities from high-paying jobs pushes up the wages of whites, including those who might earn lower wages in the absence of discrimination.

However, profit-maximizing motives should induce some firms to start replacing higher-paid white (or male) workers with equally productive but cheaper African American (or female) workers. This process would eventually eliminate wage disparities between the two groups. In this case, the observed wage disparities can be explained by the presence of noncompetitive forces, such as barriers to worker mobility between occupations.

An alternative explanation of discrimination in the context of a noncompetitive market was developed by the British economist Joan Robinson (1933). Robinson argued that in a monopsonistic market (a labor market with a single employer), profits can be increased by discriminating against some workers if the labor supply elasticity (responsiveness to wages) of African American (or female) workers is less than that of white (or male) workers. Although this model offers a plausible explanation for monopsonistic markets, its applicability is limited because these types of markets are relatively rare.

Another explanation for discrimination was put forth by radical economist Michael Reich (1981). Reich criticized the neoclassical approach to discrimination on several grounds and offered an alternative explanation based on *class conflict*. According to Reich, a firm's output and profitability depend not only on the amount of labor hired, but also on the level of collective action or bargaining power among workers within the firm. He further argued that bargaining power is a function of the wage and employment disparities between African Americans and other workers in the firm. Therefore, discriminatory practices, such as paying equally productive African American workers less than white workers or denying employment to African Americans, generates animosity in the work force, which reduces the bargaining power of workers. As a result of the workers' weakened bargaining power, employers are able earn more profits. Unlike Becker's model, a competitive employer is a direct beneficiary of discrimination in Reich's model.

Another economist, William Darity (1989), criticized Reich's emphasis on the employer in the creation of class conflict and argued that racism among the white working class was not necessarily due to collusive behavior by capitalists, but rather to collective racist action by white workers. According to Darity, in a hierarchical society where occupations are stratified so that some occupations are preferred over others, discrimination occurs as members of different ethnic cultures fight over preferred occupations. One prediction of this explanation is that discrimination cannot be eliminated through government interventions like affirmative action that redistribute occupational positions; it can only be rooted out by eliminating the social hierarchy, because it is the main source of ethnic conflict that results in discrimination.

Patrick Mason (1999) showed that if workers face differential conditions of labor supply, if employers are able to limit the power of labor coalitions, and if racial identity is an important factor in job competition among workers, then competitive profit-maximizing firms may persistently discriminate in their labor-market decisions.

MEASURING LABOR-MARKET DISCRIMINATION

Although it is relatively easy to detect discrimination, it is much more difficult to measure it. The difficulty arises from the fact that not all the disparity between, say, the wages of African Americans and whites is due to labor-market discrimination. These two groups may also differ in their productive characteristics because of pre–labor market discrimination (for example, African Americans receiving less and lower-quality education due to educational discrimination). Then, the disparity must be due in part to differences in the productivity characteristics between the groups. It is important to account for all of these productivity characteristics in order to obtain an unbiased estimate of the true measure of discrimination. After accounting for productivity characteristics, the residual in disparity would then represent a measure of discrimination.

CONCLUSION

Discrimination, whether it occurs in the form of denying employment, housing, or education to members of a particular group, places countless burdens on its victims and on society as a whole. These burdens are both economical and social. By provoking hostility between different groups, discrimination may undermine social harmony, leading to such undesirable social consequences as increased rates of crime. Discrimination also has adverse economic consequences because the earnings of those who face discrimination will be depressed and their career paths will suffer. As a result, the rate of poverty will increase among these groups. The negative consequences of poverty on education, health, crime, and the overall economy will further increase the costs of discrimination for society. Furthermore, many of these negative effects are likely to persist over generations. Thus, discrimination will not only place a cost on its current victims, it will also punish future generations, even if these future generations live in a society without discrimination.

Although the discussion above focuses on discrimination based on race or gender, discriminatory behaviors can and do target all minority groups, including the elderly, teenagers, the disabled, homosexuals, ethnic groups such as Hispanics, and members of certain religions such as Jews and Muslims.

SEE ALSO *Discrimination, Racial; Discrimination, Statistical; Discrimination, Taste for; Discrimination, Wage; Discrimination, Wage, by Age; Discrimination, Wage, by Gender; Discrimination, Wage, by Occupation; Discrimination, Wage, by Race*

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Erdal Tekin

DISCRIMINATION, PRICE

Price discrimination is a widely used marketing tactic. It is present when two or more identical units of the same products or services are sold at different prices, either to the same buyer or to different buyers. It is more often observed in sales to end-use buyers (consumers) than in intermediate-goods markets (where the buyer is a manufacturer, wholesaler, or retailer); this is because in many countries price discrimination in intermediate-goods markets is considered to be an "unfair" practice by antitrust authorities. Price discrimination is also known as "flexible pricing" or "targeted pricing." Since they sound neutral, these alternative names are often used by the business community. Whatever it is called, however, price discrimination is nothing but a marketing technique used by a seller to generate higher profits by taking advantage of differences in consumers' "willingness to pay" (i.e., a maximum amount that each buyer is ready to pay).

Typical examples of price discrimination include student discounts for motion pictures and quantity discounts in shopping malls. Other than these obvious examples, however, judgment is often required in deciding whether or not a particular pricing practice should be classified as price discrimination. For instance, a difference in the total price of a delivery is usually not considered to be price discrimination if it simply reflects a difference in transportation costs. Goods sold at different places at different dates give different utility, and they are therefore considered to be, to some extent, different goods. A less trivial example is a pricing practice for tiered classes in airplanes. This may be seen as product differentiation if one emphasizes that passengers in different classes actually enjoy differentiated goods (e.g., spacing, meals). In this case, however, the main part of the good is the flight itself, and it may be that the carrier simply wants to engage in price discrimination. The apparent product differentiation might therefore be of secondary importance. A similar practice is found in the way publishers sell a book. Many books are initially sold in hardcover editions, with a less expensive paperback edition being published at a later time.

To discriminate in pricing, firms must obviously have some control over the price that buyers face. This situation occurs when market competition does not drive the

price down to a level at which a firm (i.e., a seller) considers exiting from the market because buyers are somehow "stuck" with particular sellers, either because it is too costly to look into all of the other alternatives, or because the number of firms in the market is so small that competition is not fierce. In addition, the cost of immediate resale among consumers must be impossible; otherwise some consumers will be better off buying the good at a lower price from other consumers (this behavior is called arbitrage).

A common taxonomy of price discrimination, contrived by Arthur C. Pigou in 1920, is based on how a firm sorts buyers, each of whom potentially has a different value of willingness to pay (i.e., a different maximum amount that each buyer is ready to pay). In first-degree price discrimination (also known as perfect price discrimination), a firm captures the entire amount of each buyer's willingness to pay. In reality, however, this type of price discrimination is rarely observed, because the firm needs to know exactly what each buyer's willingness to pay is, and this requirement is difficult to meet. Yet sellers may still have some idea of how many buyers there are for each particular level of willingness to pay. In second-degree price discrimination, a firm, by utilizing information on buyer preference, offers various pricing options, letting each consumer self-select into a different pricing schedule (e.g., quantity discounts or the aforementioned bookselling options). In third-degree price discrimination, the seller uses observable signals (e.g., age, occupation, location, time of use) to categorize buyers into different segments, and each segment is given a constant price per unit.

However, the boundary between second- and third-degree price discrimination is not absolute. For example, with price skimming (or behavior-based price discrimination), in which a firm offers different prices depending on a buyer's history of past purchases and other behaviors (e.g., how often he or she has visited the firm's Web site), a buyer usually faces a constant price for each product, while a different buyer may pay a higher or lower price depending on his or her behavioral history. Thus, price skimming does not fall within the three main types of price discrimination. Advances in information processing technology, such as the widespread use of the Internet, have made this type of price discrimination possible.

Firms are usually happy with discriminatory pricing as long as it does not make price competition too fierce. Since firms extract more of a buyer's willingness to pay by price discrimination, a question arises as to whether buyers are always worse off than they would be with uniform pricing (when a seller offers an identical price to every buyer). Economists do not have a definite answer to this question. One instance of third-degree price discrimination that could benefit buyers as a whole, or in which every buyer could be better off, is when firms sell a good to consumers who would not purchase it under uniform pricing. In addition, as Takanori Adachi (2005) points out, with goods such as information or communications, where "network effects" are prevalent (that is, as more people buy the good, their willingness-to-pay increases), price discrimination has greater potential to improve consumer welfare. This is because a firm utilizes price discrimination to create more gains from the network effects, which can also benefit the buyers more than the amount a firm extracts from consumers' willingness to pay. In studies combining formal modeling and data analysis, Eugenio J. Miravete (2002), Phillip Leslie (2004), and others have scrutinized the welfare effects of price discrimination. Miravete studied optional calling plans (a variant of quantity discounts) in the telephone service industry, and he concluded that the experimental introduction of optional calling plans might have harmed not only consumers, but also the telephone service company. Leslie investigated the welfare effects of both second- and third-degree price discrimination in the world of musical theater. He found that price discrimination increased a producer's profits by 5 percent, while the loss in consumer welfare was negligible. As these studies show, there seems to be no general answer as to whether discriminatory pricing per se harms the buyer, and the question must therefore be considered on a case-by-case basis.

SEE ALSO *Competition, Imperfect; Discrimination; Discrimination, Wage; Monopoly; Price Setting and Price Taking*

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Takanori Adachi

DISCRIMINATION, RACIAL

The word *discrimination* is derived from the word Latin "discriminare" translated as to "distinguish between." Racial discrimination, as a commonly accepted construct,

is conceptualized as distinguishing in an unequal or less favorable manner an individual or institution by another individual, institution, or other entity with power to influence outcomes based on the perceived race, nationality, ethnicity, or national origin of the victim. It can occur as an overt action or in a subtler, covert manner.

OVERT AND INDIRECT DISCRIMINATION

Overt racial discrimination occurs when there is an illegal and direct link between an individual's perceived race, nationality, ethnicity, or national origin, or an organization's perceived characteristics and composition, and a particular negative outcome or pervasive disadvantage. Notably, the conceptualization of overt racial discrimination emphasizes the inappropriate reliance on fallible perceptions of another person's race or ethnicity as an estimate of their more general characteristics, skills, abilities, or worth. Consistent with the historical use of the word *race*, contemporary racial discrimination occurs when external characteristics such as skin tone are used as a mechanism for negative appraisal or social or political classification (Goodman 2000). Appropriately or not, race is commonly used to distinguish groups of people according to their ancestry and a more or less distinctive combination of physical characteristics. *Ethnicity*, a term that includes biological, behavioral, and cultural characteristics, is commonly used to describe groups of people with a common history, ancestry, and belief system. Because terms of categorization such as *race* and *ethnicity* are used to quickly appraise and then give meaning to individuals in our environments, they are also principle agents for overt overestimates of knowledge about an individual, group, or organization, and may facilitate inappropriate judgments and social outcomes.

Indirect racial discrimination has existed throughout the history of mankind but has only recently come to the attention of social and medical researchers. The essence of indirect racial discrimination is that a structure or policy that was designed without specific attention to race or ethnicity results in disadvantage and or detriment to a particular group of people based on race or ethnicity. One example is a policy that for security purposes prohibits a particular type of uniform, dress, or head dressing that is the normal uniform, dress, or head dressing of a particular group of individuals of similar racial composition or ethnic heritage. Other examples include the forced participation of school-aged children in a particular celebratory custom or ritual that is incongruent with the religious beliefs or customs of a particular racial or ethnic group of people.

These examples highlight several important factors about overt and indirect racism. The first is that in the context of the multifactoral dimensions of humanity and the multiple characteristics that unite and distinguish individuals (e.g., age, gender, socioeconomic status, etc.), it is sometimes difficult to prove that a single characteristic such as race is the basis of a negative appraisal or outcome. Secondly, inherent in the construct of racial discrimination is the presence of a power differential such that benefits or gains are withheld from deserving or entitled individuals or entities. In the absence of a power differential or a negative consequence, racial discrimination cannot exist.

Based on the complex definitions of race and ethnicity, racial discrimination is sometimes difficult to identify. For example, the existence of racial discrimination is not dependent on the volition of the perpetrator; it can exist even when the (accidental) perpetrator's intentions were honorable. Additionally, in some cases the negative impact on or consequences to a victim may be difficult to identify.

Racial discrimination can occur as a single event or as a more systemic and engrained intentional or unintentional policy. In cases where there is an established pattern of inequity based on race, ethnicity, or culture perpetrated by a definable individual, overt racial discrimination is usually easier to prove, but when it is a single occurrence at issue, or the perpetrator is a system or institution, discrimination may be difficult to document and prove.

CONSEQUENCES OF DISCRIMINATION

Recent evidence presented in the *American Journal of Public Health* indicated that people who experience daily discrimination may be more susceptible to a variety of health problems, including cardiovascular and pulmonary disease and chronic pains (2006). This study was notable because it was the first to explore such issues in a sample of 2,100 Asian Americans, a population traditionally thought to be insulated from negative discriminatory experiences. Similar evidence predicted poor mental health outcomes in black and Latino immigrants who were subject to racial discrimination (Gee et al. 2006). Gary Bennett and colleagues (2005) found that minorities who perceived greater amounts of racial or ethnic harassment were more likely to use tobacco daily, and ultimately may manifest greater risk of tobacco-related morbidity and mortality.

Title VII of the Civil Rights Act of 1964 was passed to protect an individual's right to employment without negative consequence or discrimination as a function of his or her race, color, national origin, sex, or religion. Title VII applies only to employers with more than fifteen employees. Current laws and regulations prohibit racial discrimination that results in differences in recruiting, hir-

ing, determination of salary and fringe benefits, training, work assignments, promotions, transfers, disciplinary actions, firings, and retaliation. Yet, the workplace remains one of the most fertile settings for claims of racial discrimination. Each year from 1997 to 2006, more than 26,000 race-based discrimination charges were filed in the United States (U.S. Equal Employment Opportunity Commission 2007).

SOCIAL AND ECONOMIC EXPLANATIONS

Beyond individual level explanations, economic models have been posited for many years to explain inequity and racial discrimination. For example, Milton Friedman, a Nobel laureate and professor who was often referred to as the "economist's economist," was a strong advocate of personal liberty and freedom. Among his many lifetime achievements and controversial theories were ending mandatory licensing of doctors as well as ending social security as an unfair and unsustainable system exemplary of governmental intervention in a free market economy.

In a manner consistent with his previous writings, Friedman also indicated that market racial discrimination and market competition were antithetical. More specifically, that social and political freedom was maximized and racial equality was best achieved by minimizing the interventional and regulatory role of the government, and that free markets and their associated economic forces would facilitate a state of equilibrium and fairness to all who participated (Friedman and Rose 1962).

Certainly, not all social scientists and economists agreed with Friedman. From a sociological and spatial perspective, many argued that there was a positive relationship between the size of a racial minority and discrimination. More specifically, that market competition encouraged racial discrimination. As the relative size of a racial or ethnic minority group increases, motives for the majority racial population to discriminate against the minority population may also increase toward the reduction of market racial competition and reducing threats to the loss of jobs and other essential scarce resources (Blalock 1967).

The relationship between the size of the minority population and the magnitude of discrimination is imperfect, at best. For example, the more effective the discriminatory economic practices against minorities, the less threat there is to perceived or real resources and, consequentially, the less the need for discriminatory practices. In contrast, ineffective discriminatory practices promote the use of additional or more potent attempts to regulate racial competition and preserve resources of the majority. Adjustments to the marketplace mobility and economic growth of minority and majority populations is designed to preserve majority resources, particularly in the upper echelons of status, while maintaining incentives for the minority racial populations to remain engaged in such a limited and punitive system (Reich 1981).

The compelling logic of this socioeconomic model of discrimination is that the more prominent minorities are in a labor force equally accessible to majority and minority populations, the worse their ultimate economic position at the hands of the majority. Secondly, that a ceiling of economic achievement and mobility will be imposed and maintained by the majority population to preserve economic status and resources as a function of the degree to which minority racial populations are perceived as threatening. Lastly and particularly, for example, in the U.S. market, discriminatory practices against minorities will most likely persist due to the increasingly large number of minorities in the workplace and their perceived threat to the economic existence and stability of the majority unless there are regulatory and other governmental remedies.

OTHER FORMS OF RACIAL DISCRIMINATION

There are several marketplace and non-marketplace forms of racial discrimination. For example, statistical discrimination is unfair or unequal treatment of a racial group because of stereotypes or generalized estimates of group behavior or assumptions about an individual within a group based on the "average" estimated behavior for that group (i.e., greater interest rates for home mortgages for African Americans due to perceptions of greater risk of loan default). Customer discrimination refers to the process by which the racial composition of customers of a direct-public-contact business influences the race of who is hired as an employee. Although customer discrimination occurs in businesses that serve white and black customers, this practice appears to result in some reduction in overall labor demand and wages for blacks (Holzer and Ihlanfeldt 1998).

Social discrimination is the process by which nonmeritorious judgments are made and differential treatment is given based on estimates of lower social status or lower social class of an individual secondary to their race or ethnicity. Governmental discrimination, like any other form of racial discrimination, is committed by governmental personnel or in a government setting against an individual based on their race or ethnicity. This can be manifest as direct actions against an individual or as policies that negatively effect groups of individuals. The difficulty of defining and then distinguishing racial discrimination from other concepts such as "preference" or "choice" is highlighted by non-market forms of private discrimination. An individual, based on previous experi-

ences, social norms, or preferences can decide to exclusively pursue or exclude members of a group for mate selection. When is preference for a race elevated to the level of racial discrimination? Is this form of private discrimination harmful? Who gains and, if anyone, who is disadvantaged by such actions? Answers to these types of questions are as varied as the individuals who attempt to answer them.

CONCLUSION

In the context of a growing list of psychological and physical morbidities associated with racial discrimination, and what appears to be consistent numbers of claims of discriminatory acts each year, there remains a robust interest in factors that influence equity of processes and outcomes. Some theories suggest that racial discrimination is pathological and is to be remedied with policies and regulations. Others suggest that marketplace factors should produce a form of equality and that there is no role for government in facilitating equality of process or outcomes. Independent of theoretical orientations for resolving racial discrimination, its economic, social, interpersonal, psychological, and physiological consequences are not in question nor is the degree to which it demoralizes its victims.

SEE ALSO *African Americans; Civil Rights; Civil Rights Movement, U.S.; Colorism; Discrimination; Discrimination, Statistical; Discrimination, Taste for; Discrimination, Wage; Discrimination, Wage, by Age; Discrimination, Wage, by Gender; Discrimination, Wage, by Occupation; Discrimination, Wage, by Race; Disease; Ethnicity; Inequality, Racial; Latinos; Mental Health; Mental Illness; Prejudice; Race; Race-Blind Policies; Race-Conscious Policies; Racism; Stereotypes*

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Christopher L. Edwards

DISCRIMINATION, STATISTICAL

Received economic theory of the firm admits only one motive: profit maximization. The received theory of the market is that it is most efficient when operating unconstrained. If this is so, hiring policies should seek to assemble the most efficient workforce, disregarding irrelevant factors, which cause loss due to the failure to employ the most competent available workers. (This assumes choice between candidates; namely, some unemployment. But the minimal level, often called *friction unemployment*, should suffice.) Despite the received theory, discrimination is rampant in recruitment against women and members of minority groups (Bertrand and Mullainathan 2004). By the theory of the firm, entrepreneurs should prefer the more productive workers over the better qualified ones, but they do not. (Even ignorance suffices to insure this; see Altonji and Plerret 1997.) This is amenable to statistical tests that may be viewed as empirical tests of the received theory. Also, it signifies discrimination being a burden on the economy. It looks as if data easily refute the received theory. It is possible to save it from refutation by two different claims. First, the perpetrator of discrimination is not the employers but, say, the employee orga-

nizations (the incumbent hypothesis). If so, then the theory is not refuted because it is inapplicable, as the (employment) market is not quite free. Advocates of received theory will not admit this defense; they will not suggest that the theory is inapplicable, at least not in the West. If the theory is applicable and is correct, then discrimination is profitable after all, even if it is disguised (Sattinger 1998). If one does not take the theory on faith, it is necessary to learn how discrimination can be profitable.

This problem concerns both the theory of the firm and the theory of the market. First, how does employment discrimination raise profits? Second, does the market mechanism operate optimally without the aid of antidiscrimination legislation? Since, admittedly, employment discrimination is clearly detrimental to the economy, the question is: Will it disappear faster with or without the aid of legislation? By the received market-mechanism theory, legislation against employment discrimination is harmful. Evidence suggests that at times this is so and at times not (Loury 1981; Neumark and Stock 1999). Hence the received theory of the market needs adjustment to allow for some government intervention. (This is scarcely news, since even the most ardent defenders of received theory do not oppose systematic monetary interventions, not to mention fiscal ones.) Does the same hold for the received theory of the firm?

Possibly, discrimination has a cost, and it should be considered a part of entrepreneurs' preference. Their preferences thus become a part of the theory of consumers' preference (Swinton 1977). This is a serious deviation from received theory that takes the theory of consumers' preferences as no more than a theoretical nicety, since the market tends to aggregate demand only (Agassi 1992). The option left for the effort to rescue the received theory of the firm, then, is to explain how discrimination incurs no loss.

One explanation holds that discrimination is economically advantageous because it pleases community leaders, especially in underdeveloped countries where it is socially obligatory. This explanation interests students of business public relations and voluntary organizations such as the United Nations Volunteers and others who attempt to improve matters. Economists tend to ignore this view, since obviously not all countries maintain free markets. This is regrettable, since market freedom is a matter of degree. Economists tend to declare deviations of the market from received economic theory insignificant, praise the market for the advantages of modern liberal society, and blame deviations from it for the disadvantages. According to a second explanation, discrimination is due to employers who cling to refuted views as prejudices. This explanation does not help received economic theory that deems the market mechanism the best means for eliminating inefficient entrepreneurs through competition. A third explanation holds that the advantage of discrimination is in its reduction of the cost of hiring, since members of the preferred groups keep their jobs for longer periods. Such advantages are called *statistical discrimination*. Not surprisingly, this view of discrimination is pivotal (Collinson et al. 1990), and so it deserves attention. Is the hypothesis true that discrimination is advantageous?

Before examining the hypothesis we should ask the following questions: (1) Does it rescue the theory? (2) Does it suggest that the market mechanism still is the best way to overcome discrimination through recruitment? (3) Does it suggest leaving matters to the market mechanism anyway?

The theory allows for statistical discrimination only if it is cost effective. If so, then reducing the influence of discrimination on workers' turnover should reduce it. Even then, allowing for statistical discrimination cannot be the best strategy, because reducing it by legislation is an improvement, even from the strictly economic viewpoint. Defenders of the received theory are familiar with such criticism, and do not deny it: certain legislations may outdo the market mechanism, but these are too costly and their advantages are temporary at best. In the long run, the market mechanism is the most efficient means for tackling social evils. This response is a reading of received theory as promising social benefits only in the long run.

To this view, John Maynard Keynes (1883–1946) responded with his memorable adage: in the long run we are all dead. This means that we cannot test this version in a lifetime. Moreover, the evils we are facing are pressing, and the promises of received theory are postponed and doubtful. This is still under debate, however, especially since statistical discrimination is less pressing than the massive unemployment that troubled Keynes. The central question then is: Is the statistical discrimination hypothesis true? We do not know. Is it at least testable? If not, should we give the market mechanism the benefit of the doubt or should we fight discrimination or wait for the market to do it? Waiting is questionable, since pockets of poverty and related ills are stagnant, and, notoriously, many social factors hardly benefit from the economy, which adds to the stagnation. Instances for this are understandable but intolerably self-reinforcing: the disposition of the police to seek criminals within the groups in which crime prevails, persistent poor education, underage pregnancy, and the absence of intergenerational mobility where it is needed most. The self-reinforcing of socioeconomic patterns ensures social stability at the cost of retaining various social evils, employment discrimination included.

The opinion that the market mechanism is the best means for the eradication of social ills is questionable.

Opposing laws against discrimination requires particularly strong arguments. Arguing that such legislation is ineffective will not do: many laws are ineffective yet we still want them on the books. The paradigm case is the proscription of statutory rape by minors. The argument against the proscription of discrimination is therefore understandably philosophical. In principle, advocates of the market mechanism theory approve only of laws that are essential for the maintenance of the market. Thus, they approve of imposing the honoring of contracts, but not truth in advertising: the market can live with false advertisements and the market mechanism will eliminate them, they say. Even if we accept this kind of argument, advocates of the market mechanism theory cannot show that the market tolerates no social ills that are too objectionable. As discrimination is both objectionable and a burden on the market, and since laws against it are no burden on any social group, the theory of statistical discrimination is *a priori* too feeble—apart from its dependence on many questionable assumptions. Which is not to say that we need not test these assumptions: they may be interesting for other ends, especially as means of insight into the costs—economic and other—of social stability. As Karl Popper (1902–1994) suggested more than half a century ago, however advisable it is to rely on the market mechanism when it works, the view that it always works well is a metaphysical dogma. This squares with his proposal to replace the demand for social stability with the demand for democratic controls.

SEE ALSO *Discrimination; Discrimination, Racial; Discrimination, Taste for; Discrimination, Wage; Discrimination, Wage, by Age; Discrimination, Wage, by Gender; Discrimination, Wage, by Occupation; Discrimination, Wage, by Race; Distribution, Normal; Expectations; Information, Asymmetric; Probability Distributions; Risk; Uncertainty*

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Joseph Agassi

DISCRIMINATION, TASTE FOR

A person (an employer, coworker, or consumer) is said to have a *taste for discrimination* if he or she would pay to maintain social or psychological distance from members of a particular group. A related concept, *nepotism*, is used to describe a sacrifice of income to maintain proximity to members of a particular group. A taste for discrimination is, in this analysis, no different from having a taste (preference) or distaste for any market commodity. This approach to discrimination was first articulated in *The Economics of Discrimination* by economist Gary Becker. Since publication of this pioneering work in 1957, Becker's analysis has become the dominant theory of discrimination within mainstream economics.

Becker claimed that the motivations behind discriminatory tastes were the province of sociologists and psychologists. His stated objective was to focus solely on the economic consequences of discriminatory preferences translated into economic behavior. He explicitly considered, however, the motivations to be nonpecuniary. According to Becker, one actually discriminates, as opposed to merely having a taste for discrimination, when one forfeits income in order to indulge this preference. The employer who hires desirable workers pays relatively higher wages and is content to do so. Costs of production increase and therefore diminish profits. Conversely, a nondiscriminating employer—should one exist—will hire the workers with the lowest market wages if they are no less productive than members of the desired group.

According to Becker, uninhibited market forces should punish discriminators whose businesses are less profitable. If the industry is not competitive, however, employer discrimination may be able to persist for a longer time.

Customer discrimination, in contrast, is not subject to the same market discipline. So long as the customer is satisfied with paying to indulge his or her taste, the status quo can continue. Employees' taste for discrimination manifests as a desire for higher wages to compensate for working alongside the undesired group. To avoid such costs, employers can segregate jobs.

The assumption that discrimination is not profitable has important policy implications. Mainstream economists have utilized Becker's model to argue that market competition undermines discriminatory practices, and therefore antidiscrimination regulations are unnecessary. Persistent wage differentials are deemed to be due to productivity differences alone, rather than discrimination. In a 1998 review of empirical research in the *Journal of Economic Perspectives*, however, William Darity Jr. and Patrick Mason note that multiple methodologies have revealed ongoing discrimination. Similarly, Francine Blau and Lawrence Kahn (2000), in the same journal, summarize a range of studies on the gender pay gap and find ongoing evidence of discrimination despite women's increased acquisition of human capital.

Theories that blur the boundaries between in-market and premarket discrimination, as well as those in which market power is viewed as a normal result of competitive processes, better explain why wage differentials can persist and be profitable, according to Darity and Mason. The core assumption of Becker's model is that the preference to associate (or not associate) with people with specific ascriptive characteristics is exogenously given. Nonpecuniary motivations imply a lack of economic incentives to discriminate. This assumption has long troubled political economists focusing on institutionalized discrimination (D'Amico 1987). For political economists, discrimination is endogenous to economic processes (Mason 1995; Shulman 1996). First, employers benefit from discrimination via *class struggle effects*: by perpetuating divisions among social groups, discrimination "divides and conquers" the workforce by limiting worker organization. Second, *exclusion effects* or *job competition effects* imply that members of dominant groups who get preferential access to labor market queues have economic incentives to maintain these hierarchies.

Research by anthropologists, psychologists, and other social scientists indicates that race-ethnicity, sex-gender, and other social categories do not have intrinsic meaning apart from specific social contexts. The process of forming such identities is therefore complex. Treating discrimination as a "taste" presumes that the meanings of such ascriptive characteristics are generated outside of economic processes rather than examining how racial (or gender) identities become "productive property" (Darity et al. 2006, p. 302). Members of privileged groups develop property rights in their racial and gender identities, according to a game-theoretic model developed by Darity, Mason, and James Stewart (2006). In their model, as well as in the historical examples they cite, taking on a racialized identity, as opposed to an individualist mindset, garners concrete benefits. Such identities provide access to income and wealth for group members, making them intransigent over time. Their conception of identity contrasts with the primarily ideological and cultural depiction of identity in George Akerlof and Rachel Kranton (2000); their model discounts the prevalence of discrimination by emphasizing the voluntary choices made by women and others to eschew occupations and economic activities associated with dominant groups.

According to Deborah Figart and Ellen Mutari (2005), Becker's focus on preferences for social distance draws upon the prevailing discourse about racial segregation in the 1950s United States, but it is not a universal theory of discrimination. Impersonal entities such as corporations, for example, do not have a desire for distance. Other forms of discrimination defined out of the scope of Becker's analysis, including *wage discrimination* and *statistical discrimination*, have complex but different dynamics. In fact, forms of discrimination may evolve in response to changes in the political economy (see Darity and Mason 1998; Blau and Kahn 2000). Taste for discrimination, therefore, is at best a partial explanation of labor market practices.

SEE ALSO *Discrimination; Discrimination, Racial; Discrimination, Statistical; Discrimination, Wage; Discrimination, Wage, by Age; Discrimination, Wage, by Gender; Discrimination, Wage, by Occupation; Discrimination, Wage, by Race*

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Ellen Mutari
Deborah M. Figart

DISCRIMINATION, WAGE

Wage discrimination occurs when, due to the operation of the labor market, similar workers receive different wages on the basis of race, sex, ethnicity, age, sexual orientation, or other ascribed characteristic not directly related to productivity. Workers subject to wage discrimination may earn lower wages in a given job, be assigned to low-wage jobs within firms, or employed in low-wage firms.

Not all wage differentials are discriminatory. If more group A than group B workers are willing to work in dangerous but highly paid jobs, on average, As may earn more than Bs do. But provided that wages are based on the nature of the job and not group membership, the wage differential need not reflect wage discrimination. Similarly, if As are paid less because they are less skilled, there is no wage discrimination unless their lower skills reflect their expectation that their skills will not be rewarded.

MEASURING WAGE DISCRIMINATION

We rarely measure worker productivity directly and, therefore, we cannot test whether equally productive workers earn different wages based on their group membership. Instead, we ask whether apparently similar workers of different races, sex, etc., receive different wages. The difficulty with this approach is determining the dimensions along which workers should be similar. For example, suppose we compared men and women with undergraduate degrees in biology and found that women have lower wages. Suppose we also found that for those of this group that are teachers, wages are similar for such men and women. We might conclude that many women choose to be teachers, perhaps in order to be with their children after school and during vacations. Women (and men) with these preferences accept lower wages, so there is no wage discrimination. However, perhaps women face significant wage discrimination in jobs outside teaching, so that those who do not teach are the very talented or lucky few who find high-wage jobs outside teaching. In this case, we miss the wage discrimination by comparing men and women in the same occupation.

Moreover, if firms discriminate by offering low wages to, for example, African Americans, individuals offered these low wages may respond by not working, and we will only observe wages for those African Americans employed at good wages by nondiscriminating firms. Ignoring individuals who are not working underestimates the black-white wage differential and thus the extent of wage discrimination.

Estimates of the degree of wage discrimination, and even its existence, depend critically on the factors for which we control. There are large earnings differentials between men and women, blacks and whites, and non-Hispanic whites and Hispanics if we take no other factors into account. Skin-shade studies have found that darker Hispanics and African Americans are paid less than Hispanics and Africans with lighter complexions. Controlling for cognitive test scores in high school eliminates much of the difference between black and white men, but a significant difference reappears if we also control for years of education. Differences in the earnings of black and white (employed) women are modest, but are much larger if we take account of the potential earnings of nonworkers. Much of the Hispanic–non-Hispanic wage differential can be "accounted for" by education and by knowledge of English. Career interruptions are important in "explaining" female-male wage differentials.

THEORY

In his pioneering work *The Economics of Discrimination* (1971), Gary Becker argued that labor market competition will eliminate wage discrimination. If, for example, blacks are paid less than are equally productive whites, unprejudiced employers will hire blacks and make more profit than do employers who hire whites. Nondiscriminating firms will expand, hire more blacks, and drive some discriminating firms out of business. The process continues until black and white wages are equalized. Some discriminating firms that hire only white workers may survive, but there will be no wage discrimination. Similarly, if workers discriminate by requiring a premium to work with blacks, they will be employed in segregated firms, but wages will not depend on group membership.

This conclusion must be tempered somewhat if customers are prejudiced. In this case, blacks will work in jobs where race is invisible and, if there are enough such jobs, receive the same wages as comparable whites.

However, in areas such as professional sports, where workers have highly specialized skills and race is clearly visible, wage discrimination may persist.

If labor markets operate less smoothly than the competitive model implies, through a variety of mechanisms they can exacerbate, not eliminate, the effect of prejudice. For example, firms that announce high wages to attract many applicants may deter black applicants who anticipate losing out to white applicants. Instead, blacks may apply to low-wage jobs in order to avoid competition with whites. Wage discrimination may also persist if workers and firms act collectively and wages are governed by bargaining. Workers may coalesce to exclude those who are "different," and firms may pay lower wages to those with less bargaining power.

Other models also permit persistent wage discrimination. In social distance models, interactions between heterogeneous groups are costly. The market minimizes such interactions and thus encourages segregation, but complete segregation is impossible. Members of subordinate groups must either adopt the dominant group's norms of behavior and social interaction or accept lower wages.

Social distance and the absence of shared networks may also reduce the ability of employers to evaluate potential employees from other groups. In this case, employers may engage in statistical discrimination, whereby they rely more on group membership and less on information about the particular individual. Such workers have less incentive to make unobservable investments in themselves (e.g., work hard in school) and thus will earn less than do observably similar workers whom employers evaluate individually. However, they may also have an incentive to make more observable investments (e.g., years of schooling). Similar mechanisms apply when statistical discrimination reflects self-confirming stereotypes rather than social distance.

POLICY

In the United States the Equal Pay Act of 1963 outlawed payment of different wages for the same job on the basis of race, but this had little effect because most wage discrimination probably arises through workers holding different jobs and working in different firms. The 1964 Civil Rights Act forbade employment discrimination based on race, ethnicity, sex, or religion, and Executive Order 11246 required federal contractors to take affirmative action to ensure that they did not discriminate on the basis of race. Over time, the scope of civil rights legislation in the United States has been extended so that it covers, in various degrees, age, disability, and sexual orientation, as well as race, ethnicity, sex, and religion. Many countries have similar laws. Although most analysts believe that these policies reduced wage discrimination against African Americans, women, and other groups, the extent of the effect is hotly debated.

SEE ALSO *Discrimination; Discrimination, Racial; Discrimination, Statistical; Discrimination, Taste for; Discrimination, Wage, by Age; Discrimination, Wage, by Gender; Discrimination, Wage, by Occupation; Discrimination, Wage, by Race*

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DISCRIMINATION, WAGE, BY AGE

The differential treatment of a group based solely on the grounds of chronological age is known as *age discrimination*. Unlike race and gender, age is immediately and strongly tied to experience and future job tenure. In addition, a worker can age while still in the same job, whereas changing one's group is unlikely for women and racial and ethnic minorities. Problems of age discrimination are important from a policy standpoint because many older people are able to work longer than was the case with previous generations. Many also wish to work longer, while some may not have saved adequately for retirement. A number of plans to fix Social Security budgetary problems require continued work at older ages.

Employers can discriminate by age across several areas: wages, promotions, hiring, firing and layoffs, and forced retirement. On average, older workers make more money than younger workers because age is highly correlated with both general labor-market work experience and tenure (or longevity of employment) at a particular employer, and experienced workers generally make more money than inexperienced workers. It is difficult to disentangle the effects of age from experience. Older workers may be less likely than younger workers to accept employment at lower wages because they are used to being paid higher wages based on their experience. Promotion probability is also related to experience. Older workers are less

likely to be hired or fired than younger workers, but they are often removed through retirement packages.

Not much is known about group differences in age discrimination. Some studies have found that women are affected by age discrimination at an earlier age than men, but others have found no difference between genders in this regard. Even less is known about differences in age discrimination by race. Group characteristics of the person doing the potential discrimination, such as age, race, and gender, among others, also determine the presence and extent of discrimination.

There are a number of reasons that employers could discriminate against older workers. Employers may irrationally dislike older workers, employees may dislike working with older workers, or consumers may dislike buying products and services provided by older workers. This irrational dislike is also known as *animus* or *taste-based* discrimination. Although Gary Becker's models of taste-based discrimination in a competitive market for race and gender can be used to model age discrimination, they are limited by the correlation of age and returns to experience in most jobs in the real world, and by the fact that workers age while employed. No evidence has been found for taste-based discrimination against older workers.

Employers could also discriminate against older workers because of incorrect stereotypes, and because, on average, older workers may be less productive or more expensive than younger workers, causing employers to be reluctant to hire them when there are screening costs. This type of differential treatment is termed *statistical discrimination*. When asked why other companies may be reluctant to employ older workers, human resources managers cite shorter career potential; lack of energy, flexibility, or adaptability; higher costs for benefits and salary; more health problems, leading to more absences; knowledge and skills obsolescence; a need to promote younger workers; suspicions that an older worker might leave his or her current job to retire; and fear of discrimination lawsuits. Many of these reasons support either the incorrect stereotypes hypothesis or the statistical discrimination hypothesis.

Age discrimination against workers over the age of forty is prohibited by the Age Discrimination in Employment Act (ADEA) of 1967/68, which prohibits discrimination in advertisement, hiring, promotions, and firing, except in cases where there is a Bona Fide Occupational Qualification (BFOQ). A BFOQ is allowed if the job requires a member of a certain group to perform it. For example, in a movie, the studio would be allowed to advertise for and hire a young white woman to fill the part of a young white woman. With age, BFOQs are sometimes allowed for safety reasons even if a percentage of older workers would be able to safely perform the job tasks. Examples of BFOQ for safety reasons include mandatory retirement for airline pilots and minimum hiring age for bus drivers and air traffic controllers.

SEE ALSO *Discrimination; Discrimination, Racial; Discrimination, Statistical; Discrimination, Taste for; Discrimination, Wage; Discrimination, Wage, by Gender; Discrimination, Wage, by Occupation; Discrimination, Wage, by Race*

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DISCRIMINATION, WAGE, BY GENDER

Gender wage discrimination occurs when employers pay women lower wages than identically qualified male workers. Whether such employers are acting on their own preferences or those of their firm's owners, managers, employees, or customers, the unequal treatment of women violates norms of equity and considerations of market efficiency and is the subject of policy research and debate in most industrial countries.

Theorists populate the demand side of labor markets with employers who must choose whom to hire and how much to pay them relative to the value of their productivity. Assuming that firm owners and their agents are eco-

nomically rational and that they must accommodate the wishes of all firm constituents, paying qualified women a wage that is less than their productivity's worth while paying men the value of their productivity must optimize profits. Thus Gary Becker (1971) argues that an employer's choice to discriminate against a particular group can be economically rational but can persist only under noncompetitive product market conditions.

The larger the number of firms competing with a discriminatory employer for male workers, the higher the premium in pay men can garner. However, the larger the number of firms competing with an employer for customers in its product market, the more difficult it is for an individual employer to maintain its discriminatory behavior: competitors who are more willing to hire women (and pay them better than the discriminatory firm) will have lower labor costs and the ability to charge lower prices in the product market. Though the theory is compelling to many, the notion that product market competition (as opposed to antidiscrimination labor market policy) reduces wage discrimination has not been proven empirically and fails to explain the persistence of wage discrimination by gender.

As pointed out by Becker (1998), economists view the supply side of labor markets as populated by workers who choose to equip themselves in specific ways for the jobs available to them. Because average worker characteristics differ by gender, women's choices about education, training, working hours, and number and length of job interruptions (along with socialization by teachers and parents) are often blamed in part for women's overrepresentation in some fields and scarcity in others. The larger the share of women among the unemployed in a particular market, the greater the need for women to compete for scarcer opportunities—offering their services for lower wages and benefits than would otherwise be necessary.

Barbara Bergmann (1986) has shown that if the discriminatory barriers were removed, women's wages would rise relative to the wages of men. Scholars debate the extent to which discriminatory employer practices versus women's own choices bar women's access to jobs in some markets and crowd them into others. This is not a particularly productive policy debate, however. It sidesteps the most relevant policy questions: How do we reduce the ability of gender norms, employers, and markets individually and collectively to limit women's participation in specific occupations? How do we prevent employers from paying qualified women less than their male counterparts when they do choose the same industries, occupations, hours, and other labor market characteristics (a problem convincingly documented in Blau et al. 2001).

Gender wage discrimination persists as women are systematically denied access to jobs in particular markets. Scholars such as Kenneth Arrow (1973) attribute persistent labor market discrimination to statistical discrimination—employers ranking and paying individual applicants according to average gender group attributes rather than individual ability and productivity. Statistical discrimination is sometimes deemed economically rational because information about individual worker productivity is costly and difficult to attain. Such discrimination persists because gender norms and stereotypes are powerful and because firms' discriminatory practices are difficult to detect and prove. As explained by Lisa Saunders and William Darity Jr. (2003), wage discrimination by gender is further complicated by the fact that the degree of gender wage gaps differs according to the race, age, sexual orientation, and other identity markers of the female or male groups under consideration. The maintenance of social stratification on the basis of multiple identities insures lower wages for a significant share of workers than would otherwise attain more (see Darity et al. 2006). This is especially problematic for workers in competitive firms and more onerous under conditions of globalization. It is also problematic for families that increasingly depend upon women's earnings for their immediate and intergenerational economic security. It could be argued that a more effective policy approach to wage discrimination by gender would assert a definition of discrimination that acknowledges the complex ways it actually manifests in labor markets, a perspective on the roles played by structural changes in the global economy, and a rigorous analysis of wage inequality's effects on inequality in wealth.

SEE ALSO *Arrow, Kenneth J.; Becker, Gary; Crowding Hypothesis; Discrimination; Discrimination, Racial; Discrimination, Statistical; Discrimination, Taste for; Discrimination, Wage; Discrimination, Wage, by Age; Discrimination, Wage, by Occupation; Discrimination, Wage, by Race; Economics, Stratification; Gender Gap; Inequality, Gender; Labor Market; Stratification*

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Lisa Saunders

DISCRIMINATION, WAGE, BY OCCUPATION

Wage discrimination refers to paying women, minorities, or other culturally subordinate individuals lower wages than comparably skilled men, whites, or other privileged groups. This can happen when women or minorities are hired or promoted into lower-paying jobs, or when they are paid less for performing the same work in the same workplace.

In general, past research has found that wage discrimination increases with the rank of the job. Thus, the term *rank segregation* is sometimes used to indicate that job segregation by status is associated with job desirability. Most common have been analyses that demonstrate race and sex wage gaps after controlling for legitimate measures of individual productivity, such as education, experience, or job skills. These studies typically find that most wage inequality is produced by job segregation, though in some contexts there may be additional discrimination in wage setting within jobs. The more desirable the job, the more likely it has within-job wage discrimination and the more likely that women and minorities are excluded from the job.

Employment discrimination and job segregation are the product of a series of well-recognized selection and evaluation mechanisms, such as prejudice, cognitive bias, statistical discrimination, social closure around desirable employment opportunities, and network-based recruitment. These mechanisms tend to be mutually reinforcing and lead to status expectations about the appropriateness of different types of people for different jobs, as well as to expectations as to the value of those jobs to the employer. Bias in evaluation processes, which in turn may lead to between- or within-job wage inequalities, can result from self-conscious prejudice, but it is often produced by subtle social psychological processes of cognitive bias, stereotyping, and in-group preferences. Employers, like everyone else, tend to use preexisting cultural categories such as sex or race to organize and interpret information. These cognitive processes can lead to more favorable evaluations and outcomes for high status individuals (males, majority race) and lower evaluations for others (women, minorities). The theory of statistical discrimination points out that employers are more likely to discriminate when jobs have more responsibility, longer periods of training, or simply pay more, because the cost of hiring an unqualified worker rises in these situations. Economists tend to describe this process in terms of explicit cost-benefit calculations. Sociologists and psychologists see this as a more subtle social psychological process of cognitive bias and stereotyping.

The term *social closure* refers to discrimination around the preservation of group privilege. Social closure processes are consistent with the discriminatory mechanisms already outlined—prejudice, cognitive bias, and statistical discrimination. They are not merely conditioned by individual psychology or the profit motive, however, but also by both social accountability to one's status group and the elaboration of cultural stories that explain and justify status-based inequalities. Because social networks tend to be formed around friendship and family ties, employee recruitment procedures that rely on professional or current workforces will also tend to produce social closure-based opportunity hoarding.

Discrimination and job segregation can be moderated by organizational practices that reduce the influence of personal biases or social expectations. Recent research suggests that control systems that hold managers accountable for equal opportunity outcomes are more effective than those that target unconscious bias processes.

SEE ALSO *Discrimination; Discrimination, Racial; Discrimination, Statistical; Discrimination, Taste for; Discrimination, Wage; Discrimination, Wage, by Age; Discrimination, Wage, by Gender; Discrimination, Wage, by Race*

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Donald Tomaskovic-Devey

DISCRIMINATION, WAGE, BY RACE

Wage discrimination involves differential market wage payments for otherwise identical persons. Wage discrimination may occur because of prejudice (statistical discrimination), bigotry and nepotism (animus toward other-group persons and favoritism toward on-group persons), or because it enhances profitability (racism). An early work by Francis Y. Edgeworth in 1922 considered equal work for equal pay by sex, matching the marginal utility of the employer with the marginal disutility of the employee. This concept was accepted with some reservations and adjustments. Equal work means that the worker is indifferent between two tasks, and equal pay means that wage is equal to the marginal product of labor.

Gunnar Myrdal discussed animosity of whites against blacks in the United States from the point of view of the cumulative methodology where increased prejudices caused more discrimination and less employment, worsening both standards of living and health conditions for blacks. Discrimination causes a cumulative degradation of blacks' standard of living, education, health, morals, and social conditions.

Gary Becker's preference theory of discrimination advanced a coefficient of discrimination, d_i, measured under free competition. Assuming away differences in capital, the employer's utility function depends on profits, and the types of workers—whites and blacks. If workers are equally productive, then discrimination enters through the tastes and preferences of the employer. An employer is willing to pay a higher wage, $\pi(1 + d_i)$ to exclude someone from employment. An employee is willing to accept a lower wage, $\pi_j^*(1 - d_j)$, to avoid working near to someone. A consumer is willing to pay a higher price, $p(1 + d_k)$ not to be served by someone. The result is a kinked demand curve for labor if we plot the ratio of the wages of blacks to whites, women to men, young to old, or unskilled to skilled against the person discriminated against. When the ratio is unity, no discrimination happens, $d_i = 0$, and the demand curve is flat. The kink occurs where the wage ratio starts to fall from unity, indicating that the discrimination coefficient, d_i, is becoming larger. At equilibrium, the downward sloping part of the demand curve cuts a normal supply curve that measures more labor offered as the wage ratio increases. One implication of equilibrium is that since minority workers offer the same productivity at lower wages, a discriminating employer will have to pay higher wages to others.

Phelps advanced a statistical discrimination model to explain why, for instance, insurance companies price auto insurance higher for teenage males than females. Companies use the average behavior of the group and not individual characteristics in pricing their policies. Another popular model is Barbara Bergmann's expansion and articulation of the crowding hypothesis. The productivity of minorities who are crowded into certain occupations may depend on group effort and having minorities in a group can be perceived as a hindrance to social interaction, lowering productivity and causing wages to fall. An index of occupational segregation showing by how much mobility between occupations is necessary to equalize wages has been declining over time. Other models consider different market structures.

William A. Darity Jr. and Rhonda Williams argue that governmental actions that allow free occupational choice is not sufficient to eliminate discrimination due to cultural barriers that create imperfect markets. Darity found that research studies on discrimination lack a unified methodology and that some studies that subscribe to the positive methodology find discrimination antithetical to perfect markets. However, Patrick L. Mason has presented a theoretical model and empirical analysis showing that racial wage and occupational discrimination may enhance the profitability of firms and protect dominant group workers from competition in the more desirable occupations. The theoretical analysis by Darity and Williams and Mason is constructed on the notion that racial discrimination is sustained by racism among employers and racial animus among workers. Moreover, in their discussion of the economics of identity, Darity, Mason, and Stewart show that the persistence of racial group identities, that is, the origins of the tastes for discrimination, may be found in the material incentives associated with inter-group antagonism and intra-group altruism.

Since the mid-1970s, government statistics for the United States have indicated that the wage ratio for blacks to whites has been stable indicating a large earning gap. The unemployment rate for blacks is about twice that of whites, but results are similar when comparing unemployment rates for white and black males against the rates for white and black women. For the same timeframe, the index of gender segregation (male vs. female) fell by approximately 16 percent from a high of approximately 68 percent in 1973, indicating that women have made considerable entry into professional occupations. The

index for previous age discrimination confirming racial segregation (black vs. white) shows the same trend, falling from 37 to 24 percent for women and from 37 to 26 percent for men.

SEE ALSO *Discrimination; Discrimination, Racial; Discrimination, Statistical; Discrimination, Taste for; Discrimination, Wage; Discrimination, Wage, by Age; Discrimination, Wage, by Gender; Discrimination, Wage, by Occupation*

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DISEASE

Stedman's Online Medical Dictionary defines disease as an interruption, cessation, or disorder of body function, system, or organ; or a morbid entity characterized usually by at least two of these criteria: recognized etiologic agent(s), identifiable group of signs and symptoms, or consistent anatomic alterations. The *International Classification of Disease, 9th Revision, Clinical Modification* (ICD-9-CM) is one of the main texts used in the United States to identify, categorize, and diagnose disease. The *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (DSM-IV), is used to define and diagnosis mental disorders. While these sources are used in common medical practice, it is not completely clear in the philosophy of science what truly defines the diseases and disorders that these texts classify. Some have argued that there is not a simple definition of disease. Within the philosophy of medicine and bioethics, there is not only disagreement about what a disease is but whether or not *disease* can be defined or whether it is necessary to have a fixed definition in order to provide care.

NATURALISM AND NOMINILISM

A simplistic yet prevailing conception of what disease is can be viewed from the lens of "naturalism" or "nominilism." Viewed from a naturalistic point of view, disease is a real thing that can be quantified, observed, or described using the language of natural science. To the naturalist, a disease can be discovered in nature, is not invented by social convention, and is not dependent on contextual circumstance. The true naturalist views disease as value free and objective. Disease from a naturalist point of view, according to the philosopher Christopher Boorse, causes interruptions in the ability to "perform typical physiological functioning with at least typical efficiency" (Kovacs 1998, p. 31). This point of view, however, has been critiqued because "typical physiology" and "typical efficiency" cannot be objectively described, nor are they value-free terms (i.e., what is meant by "typical"?).

The nominalist point, on the other hand, views disease not as something essential in nature but rather as a

description of socially constructed conditions. As stated by Lester King in 1954, the point of view that "disease is the aggregate of those conditions, which, judged by the prevailing culture, are deemed painful, or disabling, and which, at the same time, deviate from either the statistical norm or from some idealized status" would fit within this nominalist point of view (King 1954, p. 197). Historically a purely naturalistic view of disease as a germ or lesion has given way to a view of disease that appeals more to a nominilist point of view. Ailments that fall within modern medical health care, such as depression or hypertension, challenge a naturalistic point of view because these conditions appeal to socially defined criteria by which one would be in need of professional care or qualify for some sort of intervention.

DISEASE, ILLNESS, SICKNESS, AND HEALTH

In discussing the concept of disease, attention has been brought to how terms such as disease, illness, or sickness relate. Oftentimes these concepts have been used interchangeably. However, philosophers argue that separating the concepts may be useful. Disease is distinguished from illness in that disease is the subject matter of the medical practitioner and scientific medicine. Illness, on the other hand, explains what the person is experiencing. Sickness is what is attributed by society to individuals who conceive of themselves as ill and whom medical professions identify as having a disease. Each of these concepts justifies action. Medical professionals are charged with identifying disease, discovering diseases, and treating persons with such conditions. Persons who are ill are charged with describing the subjective experience of their condition to others who may be able to help. Society is responsible for determining the rights and duties of a person who is ill and/or diseased. Thus conceptualizing disease as separate from illness and sickness can be useful in bringing into perspective the varying roles of the medical practitioner, the individual, and society when negative bodily conditions or states occur.

The concept of disease is also often discussed as it relates to health. That is, to understand what disease is, one must know what health is. The common language conception of health is simply the absence of disease or the negation of being at ease (i.e., dis-ease). A person who is healthy does not have a disease, and a person with a disease is not healthy. However, this simplistic model may not be applicable in all circumstances. For example, a person diagnosed with hypochondriasis certainly is suffering, but the individual does not have any general medical condition that can account for his or her feeling of illness. There are also instances when one feels healthy but may have a serious condition that places the individual at risk for a disease (e.g., a person with hypercholesterolemia or obesity may develop coronary artery disease).

The holistic approach extends the more simple approach to defining health not just as the absence of disease but as a state of complete physical, mental, and social well-being. The holistic model has been adopted and promoted by the World Health Organization. The holistic model would imply that one could meet the condition of not having a specific disease but still may not be healthy. Within the holistic model, eliminating disease from the body is not primary, but rather, health is primary. However, some have argued that a holistic program of health care with the goal of insuring complete physical, mental, and social well-being is not feasible; especially in developing countries, where there are limited resources available for the provision of care.

The model most familiar to Western medicine is the medical model of disease. The medical model suggests that disease is not just absence of health (as defined by the simplified model), but disease can be identified by some set of standard methods, such as a medical examination, laboratory tests, or correspondence with a set of symptoms. Thus within the medical model a person could potentially not have an identified pathophysiological disease but could still be labeled as having a disease as a result of having a set of symptoms and being deemed not healthy through the process of a medical examination.

CONTROVERSIES IN DEFINING CONDITIONS AS DISEASE

Within modern medicine there are many controversies over what conditions can be properly defined as diseases. One such debate in the general medicine and public health has to do with whether or not obesity can be labeled a disease. George A. Bray, an internationally recognized researcher in the area of obesity and diabetes, has argued that obesity meets the criteria to be labeled a disease. However, other researchers have argued that caution should be taken when labeling obesity as a disease as it may not be appropriate to put it on par with other more serious life-threatening conditions. Those that argue obesity should not be considered a disease suggest that there are no real signs or symptoms of obesity apart from excess adiposity. However, this is circular because excess adiposity is the definition of obesity. Also, while obesity does cause impairment in functioning for some people, there are many people who are obese who have no diminished impairment in functioning. Those who argue that obesity is a disease equate it with other diseases, such as depression. Bray states that obesity involves "deranged neural circuitry responding inappropriately to a toxic environment" (Bray 2004, p. 34).

Another long-standing debate in the medical discipline of psychiatry is whether or not certain psychological conditions can be labeled a disease. A mainstream view of modern practice in psychiatry is that certain psychological conditions rise to the level of an illness when there is a clinically relevant disruption in functioning and distress. The DMS-IV distinguishes a mental pathological condition from a milder form by establishing clinically significant criterion. As stated in the DSM-IV, the condition must cause "clinically significant distress or impairment in social, occupational, or other important areas of functioning" (DSM-IV 1994, p. 7). The determination of significance is a clinical judgment made through the process of a clinical interview with the patient and sometimes with third parties, such as a patient's family. Further, a mental disorder is often distinguished from a condition that arises as a direct physiological consequence of a general medical condition. For example, disorientation or hallucinations due to a brain tumor or stroke would not be considered a psychiatric condition.

Notably the explanation of aberrant behaviors or mental conditions has changed over the centuries. In past centuries aberrant behaviors and mental disorders were explained as the result of "spirits" or "sins." With the birth of psychoanalysis, mental conditions were explained as primarily resulting from poor child rearing or the inability of an individual to meet developmental milestones marking social and moral development. However, early twenty-first-century psychiatric practice tends to explain many psychiatric conditions as the result of disruptions in neural circuitry in the brain resulting from a combination of genetic and environmental determinates.

This change in perception of psychiatric conditions is argued to be due to an increasing scientific knowledge about potential causes and treatments. However, the psychiatrist Thomas Szasz has been a prominent critic of this traditional point of view. Szasz argues that mental disorders, as mainstream psychiatry has conceptualized, are not diseases of the brain and that it is inappropriate to call abnormal behaviors and psychological states "diseases." A crux of difference between these two points of view has to do with the way disease is defined—that is, as a "lesion" of the body or as a social construction or metaphor.

SOCIAL DYNAMICS OF DISEASE AND HEALTH INEQUALITIES

Regardless of how disease is defined, it is widely recognized that the spread of disease and the preponderance of health are linked to social factors. For instance, density and frequency of contact among individuals can influence disease outbreak. Dense social contact in urban environments may lead to a rapid spread of certain infectious diseases. Understanding the social networks and dynamics of these environments is a key strategy for developing targeted vaccinations and treatments.

Disease and health are also influenced by social and economic conditions in society. For example, in the early twenty-first century in the United States, Type 2 diabetes mellitus is more common among African American men than their Caucasian counterparts. However, a 2007 study by Margaret Humphreys and colleagues found rates of diabetes among African American men living circa 1900 to be much lower than Caucasian men at that time. Studies looking at coronary heart disease patterns have also reported prevalence shifts whereby the risk of the disease was historically more prevalent in higher socioeconomic classes and now is more prevalent in lower socioeconomic classes (Kunst et al., 1999; Marmot, Adelstein, Robinson, and Rose, 1978; Rose and Marmot, 1981). These studies highlight the fact that disease patterns as well as the social distribution of risk factors for disease can vary by type of disease, time period, and geographic region.

As disease and health are viewed as socially determined, the search for social conditions that gives rise to diseases has become a growing part of medical and public health science. Medical practice in the past centuries was focused primarily on identifying pathophysiological and biological roots for disease and had largely ignored the social contributions to disease. Correspondingly treatments and interventions for disease management have been one-to-one efforts. However, a growing awareness that societal-level phenomena play a large role in health and disease has prompted the medical community to explore some of the broader social and economic forces that influence disease and risk. As such the approach to disease management is also shifting from primarily individual-level one-to-one efforts to include environmental and policy-level interventions designed to address health.

Finding a clear definition of disease and health is not purely a philosophical matter. Conditions that carry the label of disease have practical and political implications. Society responds by directing resources, and individuals with a certain disease are relinquished from certain social responsibilities. However, what counts as disease is often difficult to determine. In some cases it might appear that a certain condition has pathophysiological roots and causes (e.g., germ or lesion) that can be discovered and treated. However, it may be discovered that there are broader social and economic conditions that allow for certain pathophysiological conditions to arise. What then is the disease? Is it the germ or the social condition? The answer that society provides becomes one of the defining features by which health care resources are allocated.

SEE ALSO *Alzheimer's Disease; Dementia; Depression, Psychological; Ethno-epidemiological Methodology;*

Functionings; Human Rights; Hypertension; Madness; Malnutrition; Medicine; Mental Illness; Obesity; Poverty; Psychoanalytic Theory; Public Health; World Health Organization

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DISEQUILIBRIUM ECONOMICS

SEE *Barro-Grossman Model; Economics, New Keynesian; Patinkin, Don.*

DISGUST

SEE *Sanitation.*

DISNEY, WALT

1901–1966

Walter Elias Disney and his brother Roy established the Walt Disney Company in the late 1920s to produce short animations. The company's first synchronized-sound cartoon, *Steamboat Willie* (1928), featured Mickey Mouse, a character that became one of the best-known icons in the world. In the wake of the nineteenth-century transformation of the oral tradition of fairy tales into a literary tradition by the Brothers Grimm, Hans Christian Andersen, and others, Disney, in the early decades of the twentieth century, employed technological advances to turn literary fairy tales into animations. The first feature-length animation, *Snow White and the Seven Dwarfs* (1937), paved the way for the Disney brand of family-oriented celluloid fantasies targeting children as their primary audience.

A 1941 strike by Disney animators seeking more recognition, along with economic hard times, crippled the company, but World War II (1939–1945) reenergized the Disney Company through government commissions. *The Three Caballeros* (1944) was made at the behest of Nelson Rockefeller's Office of the Coordinator of Inter-American

Affairs to promote "Good Neighborliness" between North America and Latin America. The conservative Disney also served as a Federal Bureau of Investigation (FBI) agent from 1940 to his death in 1966. The public image of "Uncle Walt" with a gentle smile and with roots in rural small-town America is the result of mythmaking, which masks Walt Disney's traumatic childhood and distrustful personality. Disney's vendetta against striking employees of his studio in the 1940s betrays not only a suspicious and controlling character but an anticommunist obsession. His hidden career as a secret informant in the last two decades of his life gives a perverse twist to the family entertainment Disney has come to symbolize.

The Disney television show went on the air in 1954. Theme parks proved to be far more successful than animations and live-action films and television. Disneyland in Anaheim, California, opened in 1955, followed by Disney World in Orlando, Florida, in 1971. Tokyo saw the Japanese version of Disneyland in 1983, France in 1992, and Hong Kong in 2005. Having languished after Walt Disney's death, the Disney Company resurged under Michael Eisner in the 1980s. Disney has now grown into a global business conglomerate of film studio, television network, cable company, magazine, merchandise bearing various Disney logos, theme parks and resorts, and other ventures, with revenues totaling over $25 billion around the turn of the century. Disney also works through the Touchstone label, Miramax Films, Buena Vista International, and other business entities to produce and distribute less family-oriented shows.

With its increasing monopoly of media and entertainment, Disney has given rise to the phenomenon of *Disneyfication*, that is, trivialization and sanitization. The key to the success of the "Magic Kingdom" is indeed carefully controlled, heavily edited images of childhood innocence and fun. Yet what appears to the child to be happy tunes and carefree joy often veils sexist, racist, ageist, and neo-imperialist reality. From Sleeping Beauty to the Little Mermaid to Mulan, every Disney female lead embodies idealized Euro-American beauty in facial features, balletic physique, and youth-culture obsessions. These Disney females, including the sword-wielding Mulan, ultimately derive their meaning in life through male characters. The blatant racism in the happy plantation African Americans in *The Song of the South* (1946) and the slant-eyed, buck-toothed, pidgin-speaking Siamese cats in *Lady and the Tramp* (1955) and *The Aristocats* (1970) has gone underground, occasionally resurfacing in, for example, the cruel, hand-chopping Arabs in *Aladdin* (1992) and the stereotypical, "multicultural" duo of "kung fu" Mulan and her familiar, the blabbering Mushu dubbed by Eddie Murphy.

Theme parks best exemplify the Disney culture of control. The enclosed environment of these sites separates visitors from the outside world, encouraging consumption in the guise of family fun. Main Street U.S.A. at Disneyland is, of course, a shopping mall. Various adventures at Disneyland are centrally themed to formulate a narrative and to shape consumer perception. Even Disney employees with smiling faces are trained in "performative labor": they are not so much working as role-playing; they are cast members in the Disney discourse of happiness.

Any critique of Disneyfication faces the challenge that animated fantasy is customarily regarded as devoid of ideology, notwithstanding the fact that the racial, gender, national, and capitalist undertones of Disney have repeatedly been the subject of study. Adults' nostalgia for childlike simplicity and pleasure further leads to an acquiescence to Disney's ahistorical and apolitical universe. Assuredly, growing up anywhere in the world, one is invariably nurtured on Disney's breast milk of superior quality in terms of ingenuity and craftsmanship. To contend that consumers have been fed with something aesthetically refined but culturally suspect is likely to provoke vigorous opposition. Yet the 1995 defeat of the proposed 3,000-acre Disney theme park in Virginia's Civil War battlegrounds signals the potential of grassroots resistance to corporate greed and expansionism. With the shadows of the omnivorous, lawsuit-happy Disney Company looming over the twenty-first century, new battles will be fought far away from Virginia. Globalization has brought Disney to every corner of the world. In the company of giants such as McDonald's, Nike, Coca-Cola, and Microsoft, Disney's transnational operations will continue to perpetuate Americanization globally, but it remains a severely constricted vision of America, one enjoyed principally by middle-class visitors to Disney World and passive consumers of Disney culture.

SEE ALSO *Children; Culture; Racism; Sexism*

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Sheng-mei Ma

DISPERSION

SEE *Variation.*

DISPROPORTIONALITY THEORY

SEE *Accumulation of Capital.*

DISSIDENTS

Dissidents are people who work to alter the established social, political, economic, or cultural system. Because they threaten the established order, dissidents are often subjected to official repression and punishment. Still, dissidents have been major contributors to social, political, economic, and cultural change.

Although dissidents have varied foci, the term most commonly refers to political dissidents. Political dissidents do not simply oppose a particular political leader or group of leaders; rather, political dissidents seek to change the existing political *system*. Political dissidents have been most prominent in authoritarian polities. In particular, the term has been applied to public opponents of communist rule. In this context, the earliest clear official use of the term was in the 1965 trial of writers Andrei Sinyavsky (1925–1997) and Yuri Daniel (1925–1988) in the former Soviet Union; in this case, the ruling authorities used the English word *dissident* to suggest that the defendants were under foreign influence (and therefore treasonous).

Political dissidents in communist polities have employed primarily nonviolent methods of dissent. Most commonly, dissidents in communist polities have used pseudonyms to write critical political tracts that circulate underground domestically and are smuggled abroad to be published for a wider readership. Noted examples include Andrei Sakharov (1921–1989) and Alexander Solzhenitsyn (in the former Soviet Union), Václav Havel (in Czechoslovakia, now the Czech Republic), and Wei Jingsheng (in China). Dissidents in communist polities also have formed informal discussion groups and formal dissident organizations. For instance, from 1980 to 1981 labor activist Lech Walesa led Poland's dissident Solidarity Free Trade Union, and in 1998 Chinese dissidents Wang Youcai and Xu Wenli founded a domestic opposition political party, the China Democracy Party. In addition, dissidents in communist polities have engaged in public protest actions, such as hunger strikes and street marches. Some of the most well-known protests occurred in 1989; in Eastern Europe that year, massive public demonstrations, such as those in the former Czechoslovakia, ultimately led to the fall of communism, while in China, widespread popular demonstrations were crushed ruthlessly.

Political dissidents have been prominent in noncommunist authoritarian polities as well, especially in Central and South America, Africa, and Southeast Asia. These dissidents employ many of the same nonviolent forms of dissent found in communist polities. Noted individuals of this sort include Aung San Suu Kyi of Myanmar (formerly Burma) and Francis Seow of Singapore. In addition, dissidents in noncommunist authoritarian polities sometimes have led military struggles seeking to overturn the ruling order. Because dissidents typically lack military resources comparable to those of the ruling authorities, dissident groups that use violent means to pursue their goals commonly employ guerilla war tactics. A prominent example is the South African guerilla insurgency against the apartheid system from the 1940s to early 1990s. Another notable case is the Sendero Luminoso (Shining Path) Maoist guerilla movement in Peru, which was most active from the 1960s to 1980s.

In democracies, criticism of leading politicians and policies is commonplace, but opposition to the democratic *system* is more rare. Still, even in democratic polities, critics of politicians and policies at times have been labeled dissidents and punished for treason against the established order. The most noted instances have occurred in the United States against individuals and groups who publicly opposed existing policies toward the working class and racial minorities. For example, in 1919 and 1920 roughly ten thousand members of labor organizations and socialist-communist groups were arrested in the Palmer Raids, directed by Alexander Mitchell Palmer (1872–1936), the U.S. attorney general. Similarly, in the late 1940s to mid-1950s, hundreds of left-leaning individuals were investigated or blacklisted from certain types of employment. Further, during the civil rights movement of the 1950s and 1960s, many prominent opponents of race-based segregation and political exclusion were arrested and physically harmed by ruling authorities.

Because dissidents challenge established authorities, they often receive harsh treatment. The most common form of official repression is imprisonment, often for extremely lengthy periods. South African antiapartheid leader Nelson Mandela, for example, was jailed for twenty-seven years. Still, many imprisoned dissidents continue to write critical tracts even while behind bars; further, many succeed in smuggling out their texts, or preserve them for later publication. Other typical forms of punishment include blacklisting from employment opportunities, placement under house arrest, continual official surveillance, tax investigations, and forced exile. On occasion, ruling authorities also tacitly encourage paramilitary groups to physically harm or even kill dissidents.

Given these risks, few dare to engage in dissent. Those who do often exhibit an unusual psychological profile, characterized by an unrelenting commitment to ideals and a profound stoicism toward the loss of personal secu-

rity. At the same time, many turn to dissent only after experiencing what they feel are undeserved limitations on their own social, economic, or political status.

Indeed, despite the harsh punishment meted out to most dissidents, some ultimately succeed in transforming the established order, and even rise to prominent positions in the newly established system. For example, oft-harassed American civil rights activist Thurgood Marshall (1908–1993) later served on the U.S. Supreme Court. Similarly, once-imprisoned political dissidents Lech Walesa, Václav Havel, and Nelson Mandela were elected to their nation's highest political office after democratic political rule was achieved.

SEE ALSO *Passive Resistance; Protest*

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Teresa Wright

DISTINCTIONS, SOCIAL AND CULTURAL

Over the past forty years, there has been a surge of academic inquiry into the relationship between cultural practices and social stratification. In particular, scholars have explored how distinctions drawn between members of varying social strata with respect to lifestyle, preferences, habits, and consumption practices contribute to unequal access to economic and social rewards. This article reviews key works addressing the role of cultural demarcations in the persistence of class inequality, highlights major debates within the field, and suggests potentially fruitful directions for future research.

DISTINCTIONS AND CLASS CLOSURE

Through his concept of *social closure*, classical social theorist Max Weber (1958) described how social distinctions play a crucial role in the production of systems of power. According to Weber, advantaged groups within societies establish and retain social dominance through monopolizing, or "closing," access to valued resources and opportunities at the expense of other members of the community. In order to facilitate such exclusion, privileged groups tend to adopt one or more "badges" of social standing so that group membership is readily perceptible, and the distribution of resources can be restricted within group lines.

Building upon Weber's work, Thorstein Veblen and Norbert Elias explored techniques used specifically by economic classes to distinguish themselves from the less affluent masses. In *Theory of the Leisure Class* (1899), Veblen described how the wealthy use material boundaries—specifically, the *conspicuous consumption* of costly consumer goods and services—to outwardly demonstrate their superior standing. Conversely, Elias's *The Civilizing Process* (1978) documents the development of elaborate behavioral codes and etiquette rituals established by elites in premodern Europe to signal membership in the more cultivated classes.

CULTURE AS CAPITAL: THE WORK OF PIERRE BOURDIEU

However, it is the work of French theorist Pierre Bourdieu that has been the most influential in shaping contemporary sociological understandings of the relationship between cultural practices and social stratification. Expanding upon Weber's, Veblen's, and Elias's earlier insights, Bourdieu argues in *Distinction* (1984) that cultural boundaries play a vital role in the reproduction of class inequalities.

According to Bourdieu, differences in material conditions result in different modes of interpreting and experiencing the social world. In particular, the institutions of family and schooling transmit class-specific values to younger generations. As a result of their upbringings, individuals develop goals, attitudes, knowledge, preferences, tastes, codes of appropriate conduct, and consumption practices consistent with their class position, the constellation of which Bourdieu refers to as *cultural capital*. Due to their restricted standard of living, for example, the lower classes develop cultural preferences and practices consistent with their subsistence and survival needs; members of these classes emphasize functionality and usefulness over more ethereal qualities such as aesthetic or intellectual value. Upper-class values, on the other hand, are characterized by their *distance from necessity*, or their removal from the immediate concerns of present-day life. In contrast to the "base" or "vulgar" tastes of the working classes, they emphasize complexity and form over use-value. An important component of upper-class cultural capital is that it is difficult to acquire and exclusive in nature; because the pursuit of these cultural practices and forms of understanding tend to require dedication of significant economic, mental, educational, and/or temporal resources, they are a luxury available only to those who have risen to a certain level of economic comfort. To illus-

trate the divide between low and high cultural tastes, Bourdieu uses the example of food preferences. Specifically, he argues that lower classes gravitate toward foods that economically satisfy basic nutritional requirements, whereas higher classes cultivate more sophisticated palettes and value features such as presentation and distinctiveness of flavor. Using survey data from his native France, Bourdieu documents similar patterns in preferences for artistic genres, tastes in fashion, and participation in leisure activities.

According to Bourdieu, such seemingly benign differences in culture serve to reproduce existing class relations in two ways. First, shared norms and values foster common aspirations among members of a social class. Consequently, individuals gravitate toward class-appropriate social relations and occupations. Second, culture is used to actively exclude members of lower classes from positions of prestige. Although all social groups possess cultural resources, only the cultural capital of the dominant classes is rewarded in society at large. Key gate-keeping institutions, most notably the educational system, privilege upper-class, or "dominant" styles of thought and behavior, channeling their possessors into positions of power and economic success, while barring lower-class individuals from avenues of mobility. Through such processes of exclusion, elites consolidate their own power and pass on economic privilege to their kin. Consequently, in Bourdieu's model, culture serves to reproduce and even mask systems of economic domination.

CRITIQUES OF BOURDIEU

Throughout the 1980s, Bourdieu's writings, and in particular his concept of cultural capital, sparked a tremendous volume of empirical work in cultural sociology, the sociology of education, and cultural studies. Yet, after an initial surge of scholarship, researchers began in the early 1990s to highlight potential shortcomings of Bourdieu's theory of class reproduction. Specifically, Bourdieu came under fire for (1) overemphasizing the role of early childhood experiences in determining class outcomes (Aschaffenburg and Mass 1997); (2) overestimating the importance of high culture to members of privileged strata, while underestimating the importance of moral, socioeconomic, and racial boundaries (Erickson 1996; Lamont 1992; Peterson and Kern 1996); and (3) failing to account for national and other contextual variations in the content of class boundaries (Lamont 1992). Moreover, the utility of the term cultural capital has been criticized for grouping together too many conceptually distinct variables (Lamont and Lareau 1988) as well as for its inability to reliably predict academic success (Kingston 2001). Finally, given the increasingly fragmented nature of social class and reported declines in class identification in postindustrial societies, a few more controversial scholars have questioned the very existence of class, let alone class cultures (Kingston 2000; Grusky and Weeden 2002).

SYMBOLIC BOUNDARIES: CURRENT AND FUTURE DIRECTIONS

In light of such critiques, many scholars shifted away from discussions of cultural capital and focused instead on *symbolic boundaries*, or conceptual distinctions made by actors to make sense of their social world. Drawing heavily on the work of classical theorists such as Émile Durkheim and more recently the work of cultural sociologist Michèle Lamont, this burgeoning literature explores the lines people draw between "us" and "them," particularly when evaluating the worth of others (Lamont and Molnar 2002). Although current studies tend to focus on investigating the context of symbolic boundaries and how they vary by context, the field of culture and inequality could benefit from future research examining how people actively *draw upon* these conceptual categories of worth in their educational, occupational, and social lives, particularly in the context of microsocial interaction.

SEE ALSO *Aesthetics; Bourdieu, Pierre; Class; Cultural Studies; Culture*

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DISTORTIONS

A central precept in economics is that prices set in perfectly competitive markets provide clear signals of the value the economy places on items. In a competitive market, the value to a consumer of the last pizza sold should equal the value of the resources used in its production. An economic distortion occurs when some market intervention creates a wedge between the value of resources used in the production of that pizza and the value to consumers of consuming it. In the presence of distortions, opportunities exist to make someone better off without making anyone else worse off. This is known as a *Pareto improvement*.

Distortions arise for several reasons. First, companies may erect entry barriers, thereby creating market power. A monopoly is an extreme example of such market power. Firms with market power can sell goods at a price exceeding their marginal cost of production.

Second, the production or consumption of some commodity may have some positive or negative impact on other parts of the economy not transmitted through market prices. Such impacts are called *externalities*. A coal-fired electric utility emitting sulfur dioxide as a by-product of electricity generation creates a negative externality. In general, an unregulated economy produces too many goods with negative externalities and too few goods with positive externalities.

Third, buyers and sellers in a market may have asymmetric information about the good in question. Used-car markets are a good example. Sellers have better information about the quality of their car than do buyers. Since buyers will logically assume that owners of high-quality cars will tend to hold on to them while owners of low-quality cars will tend to sell them, a large share of the cars in the used-car market will be low-quality. Thus buyers will lower their bid for a used car. This will lead to fewer high-quality cars being sold. In the limit, this can lead to a collapse of the market, leaving both buyers and sellers worse off. This is an example of adverse selection, where the pool of items offered in a market are not representative of the typical items in existence.

Finally, government policies, intentionally or unintentionally, may create distortions. Most governments rely on income or consumption taxes to raise revenue for important government programs. Income taxes distort labor supply and savings decisions, while consumption taxes distort labor supply and consumption decisions.

Whether governments should intervene to correct distortions depends on a number of factors. Taxes on pollution set equal to the social marginal damages of pollution, for example, are generally viewed by economists as welfare enhancing. Many countries regulate monopolies or actively intervene in markets to promote competition. It may be, however, that in some cases interventions create more harm than good, in which case it may be preferable to live with the distortion. In other cases, distortions may be a necessary by-product of a desired social aim. Any redistribution through the tax system, for example, will create some degree of distortion, thereby illustrating the classic trade-off between efficiency and equity.

When facing multiple distortions, no clear prescription exists for the optimal ordering of eliminating distortions. Moreover, the first-best prescription for a given distortion may no longer hold in the presence of distortions elsewhere in the economy. This is the classic problem of the second best identified by Richard G. Lipsey and Kelvin Lancaster (1956–1957). Environmental policy provides an example of this phenomenon. In the absence of any other distortions, a first-best solution to the presence of pollution is to set a tax on pollution equal to social marginal damages. When taxes create distortions in capital and labor markets, however, this first-best prescription no longer holds. Instead, the optimal tax on pollution in most circumstances falls short of social marginal damages.

SEE ALSO *Dirigiste; Externality; Frictions; Information, Asymmetric; Liberalization, Trade; Monopoly; Monopsony; Neoliberalism; Pareto Optimum; Price vs. Quantity Adjustment; Prices; Theory of Second Best; Washington Consensus*

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Gilbert E. Metcalf

DISTRIBUTED LAGS

SEE *Lags, Distributed.*

DISTRIBUTION, BETA

SEE *Probability Distributions.*

DISTRIBUTION, CAUCHY

SEE *Probability Distributions.*

DISTRIBUTION, EXPONENTIAL

SEE *Probability Distributions.*

DISTRIBUTION, GAMMA

SEE *Probability Distributions.*

DISTRIBUTION, GAUSSIAN

SEE *Distribution, Normal.*

DISTRIBUTION, LAPLACE

SEE *Probability Distributions.*

DISTRIBUTION, LOGISTIC

SEE *Probability Distributions.*

DISTRIBUTION, LOGNORMAL

SEE *Probability Distributions.*

DISTRIBUTION, NORMAL

The normal distribution is the single most important distribution in the social sciences. It is described by the bell-shaped curve defined by the probability density function

$$f(X) = \frac{1}{\sigma\sqrt{2\pi}} \exp\left(-\frac{(X-\mu)^2}{2\sigma^2}\right)$$

where exp is the exponential function, μ the *mean* of the distribution, σ the *standard deviation*, and σ^2 the *variance*. As a matter of convenience, this distribution is often expressed as $X \sim N(\mu, \sigma^2)$. If $X \sim N(0, 1)$ so that $\mu = 0$ and $\sigma^2 = 1$, the outcome is the *standard normal distribution*. The resulting curve is shown in Figure 1, where the horizontal axis indicates values of X in terms of positive and negative integer values of the standard deviation. The curve's shape is typical of normally distributed variables, even when they have different means and variances.

The normal distribution has two significant features. First, the curve is perfectly symmetrical about the mean of the distribution. As a result, the distribution mean is identical to the two alternative measures of *central tendency*, namely, the *mode* (the most frequent value of X) and the *median* (the middle value of X). Second, the mathematical function provides the basis for specifying the number of observations that should fall within select portions of the curve. In particular, approximately 68.3 percent of the

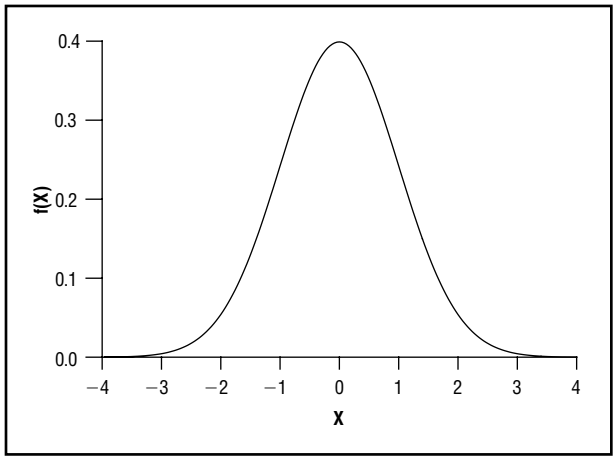

Figure 1. The Standard Normal Distribution.

observations will likely fall within one standard deviation of the mean. In the case of the standard normal deviation, this would indicate that more than two-thirds of the observations would have a value between –1 and +1. Moreover, about 95.4 percent of the observations would fall within two standard deviations above and below the mean, and about 99.7 percent would fall within three standard deviations below and above the mean. Hence, relatively fewer observations are expected in the upper and lower tails of the distribution; the more extreme the departure from the mean the lower the score's probability of occurrence.

HISTORY

The normal distribution was first associated with errors of measurement. In the latter half of the seventeenth century Galileo Galilei (1564–1642) noticed that the errors in astronomical observations were not totally random. Instead, not only did small errors outnumber large errors, but also the errors tended to be symmetrically distributed around a central value. In the first decade of the nineteenth century the mathematicians Adrien-Marie Legendre (1752–1833) and Carl Friedrich Gauss (1777–1855) worked out the precise mathematical formula, and Gauss demonstrated that this curve provided a close fit to the empirical distribution of observational errors. Gauss also derived the statistical method of *least squares* from the assumption that errors were normally distributed.

However, the normal distribution also appeared in other mathematical contexts. In the early eighteenth century Abraham de Moivre (1667–1754) showed that certain *binomial distributions* could be approximated by the same general curve. In fact, the normal curve is the limiting case for a binomial when events have a fifty-fifty chance of occurring and when the number of trials goes to infinity. A commonplace illustration is the distribution of coin tosses. In the early nineteenth century Pierre-Simon Laplace (1749–1827), when working on the *central limit theorem*, showed that the distribution of sample means tends to be normally distributed: The larger the number of samples, the closer is the fit to normality—a result that holds regardless of whatever the population distribution might be. Even if the scores in the population are highly skewed, the distribution of sample means will tend toward the normal curve.

Despite the fact that many mathematicians contributed to the emergence of the concept, it is Gauss whose name became most strongly linked with the discovery. As a consequence, the eponymic term *Gaussian* is often used instead of "normal" or "bell-shaped."

APPLICATIONS

Although the normal distribution was first applied to the description of measurement errors, scientists later began to realize that it also described variation in human phenomena independent of errors of measurement. In 1835 Adolphe Quetelet (1796–1874) applied the normal distribution to many physical attributes, such as height, and in 1869 Francis Galton (1822–1911) extended the same distribution to cover individual differences in ability. The latter application is seen in those psychometric instruments in which test scores are actually defined according to the normal distribution. For instance, the IQ scores on most intelligence tests are assigned in terms of a person's position in the distribution. Thus, under the assumption that IQ has a mean of 100 and a standard deviation of 15, a score of 130 would place the individual in the upper 2 percent of the population in intellectual ability.

Indeed, the concept of the normal distribution has become so universal that it now provides the basis of almost all parametric statistical methods. For example, multiple regression analysis and the analysis of variance both assume that the errors of prediction, or residuals, are normally distributed with a mean of zero and a uniform variance. More sophisticated methods such as canonical correlation, discriminant analysis, and multivariate analysis of variance all require a more complex assumption, namely, *multivariate normality*. This means that the joint distribution of the variables is normally distributed. In the special case of *bivariate normality*, this assumption signifies that the joint distribution will approximate the shape of a three-dimensional bell. To the extent that the normality assumption is violated, the population inferences associated with these statistical methods will become approximate rather than exact.

Given the prominent place of the normal distribution in the social sciences, it is essential to recognize that not all human attributes or behavioral events are normally distributed. For example, many phenomena display extremely skewed distributions with long upper tails. Examples include the distributions of annual income across households, the box-office performance of feature films, the output of journal articles by scientists, and the number of violent acts committed by male teenagers. Sometimes these departures from normality can be rectified using an appropriate data transformation. For instance, a *lognormal* distribution becomes normal after a logarithmic transformation. Yet many important variables cannot be normalized in this way. In such cases, researchers may use statistics based on the specific nonnormal distribution or else employ various nonparametric or distribution-free methods. Furthermore, it is likely that the causal processes that generate normal distributions are intrinsically different from those that generate nonnormal distributions. As an example, the former tend to emerge when multiple causal processes are additive, whereas the latter tend to appear when those processes are multiplicative.

SEE ALSO *Central Limit Theorem; Central Tendencies, Measures of; Distribution, Poisson; Distribution, Uniform; General Linear Model; Mean, The; Mode, The; Regression; Regression Analysis; Social Science; Standard Deviation; Variables, Random; Variance*

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Dean Keith Simonton

DISTRIBUTION, PARETO

SEE *Probability Distributions.*

DISTRIBUTION, POISSON

The Poisson distribution (named after Siméon Denis Poisson, 1781–1840) is used to describe certain events in time or in space. It is derived from the binomial distribution with the extension that time (or space) is thought to be continuous instead of discrete. In the case of discrete time (binomial distribution), let the probability that a certain event occurs during one period of length 1 be a constant p; then the number of events $Z \in \{0, 1, 2, \ldots\}$ happening during a certain number n of such periods is binomially distributed with parameters n and p. No event influences any other event—that is, the events are mutually independent. If the length of the period is decreased to Δt, and if we are still interested in the number of events happening during a time span of length n, then this time span consists of $n/\Delta t$ periods within each of which the event probability is $p\Delta t$. For $\Delta t \to 0$ and $np = \lambda$, the formula for the binomial distribution

$$P(Z = k) = f_Z(k) = \binom{n}{k} p^k (1-p)^{n-k}$$

is transformed into the formula of the Poisson distribution

$$P(Z = k) = f_Z(k) = \exp(-\lambda) = \frac{\lambda^k}{k!}.$$

The difference between the two distributions is shown in two graphs drawn from a sample of 25,000 simulated random events:

Random variables X_t form a Poisson process if the following conditions hold: The probability that exactly one event occurs during a time span of length Δt is proportional to the length of the time span; the probability that more than one event occurs during this time span is negligible; and the number of events occurring in disjoint time intervals are mutually independent. X_s is the number of events that occurred from $t = 0$ until $t = s$. The increments $(X_t - X_s)$ follow the Poisson distribution.

The Poisson distribution is also called a "distribution of rare events," because for a fixed λ and a large n the probability of the individual event occurring per time unit is, of course, small. An important application of the

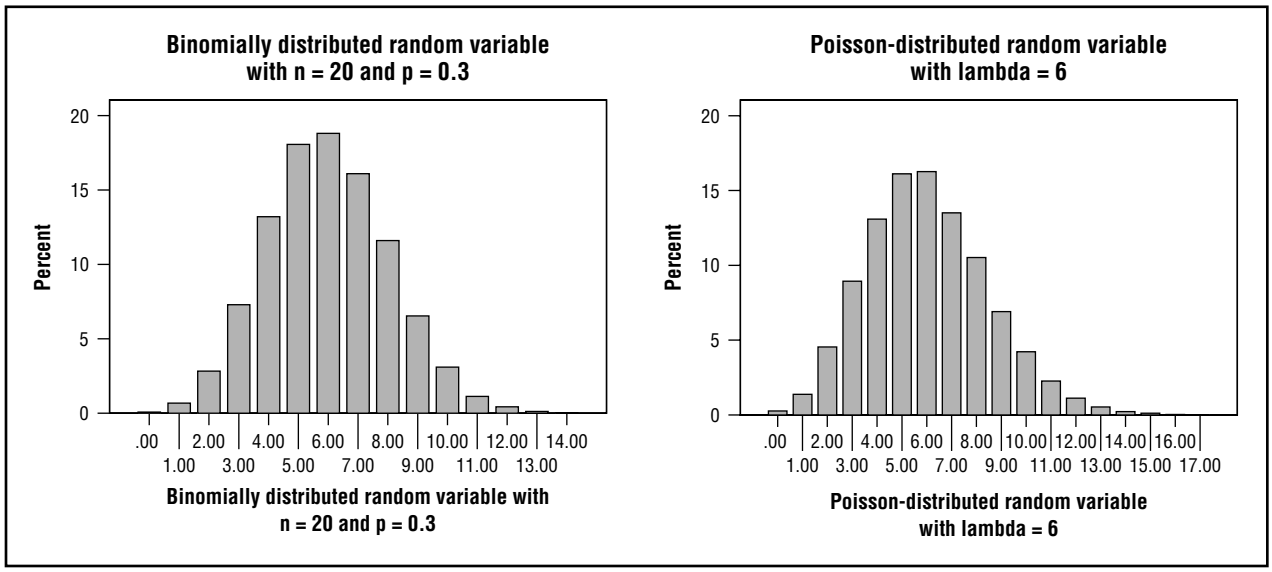

Poisson distribution and of the Poisson process (a stochastic process whose random increments are Poisson distributed) is queuing theory; in this case, the number of new customers arriving during a fixed period is the random increment. The parameter λ of the Poisson distribution is called "intensity" and yields the expected value of customers arriving per time unit in this example.

Another example is the number of accidents that occur in a certain area during a given period. The distribution of this number will also follow the Poisson distribution. If one compares the number of car accidents with passengers killed with and without a seat belt, one has to compare the parameters of the two Poisson distributions and would find out whether using seat belts had a significant influence on the number of deadly accidents.

Given the conditions under which events are Poisson distributed, one could argue that customers arriving at an airport often arrive in pairs or even larger groups—which would violate the applicability of the model to real-world scenarios. Another obvious violation is due to the fact that the arrival intensities at airports (or in emergency units) are not the same over the entire day or the week, such that the model can be applied only to selected times spans during which the arrival intensities are more or less constant over a considerable period of time. Physical processes such as the decay of radioactive material are less prone to violations of this kind than processes where humans are involved; but even here—at least with the help of computer simulation—intensities that vary over time can be successfully modelled.

SEE ALSO *Central Tendencies, Measures of; Distribution, Normal; Distribution, Uniform; Variables, Random*

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Klaus G. Troitzsch

DISTRIBUTION, UNIFORM

Uniform distribution is the probability distribution in which the probability is uniform for all intervals of the same length. The definition of the continuous uniform distribution function contains two parameters, a and b, which are the minimum and maximum values, respectively, that can occur in the set of numbers characterized by the distribution. The probability of any number in the interval (a, b) is $1/(b - a)$, and 0 outside that interval, as illustrated in Figure 1. Whether a and b are included in the interval does not matter to the integral, and in practice are sometimes included and sometimes not. The distribution is also known as rectangular distribution, because of its rectangular shape. As in all probability density functions, the area under the curve is 1. The standard uniform distribution is the special case where a is 0 and b is 1, so that the distribution takes the form of a square of height 1. In a probability distribution, the area of the curve under any interval represents the probability that a number described by the distribution occurs in that interval. For the standard uniform distribution, the probability of seeing a number in the interval (0, 0.5) would be the same as the probability of seeing a number in the interval (0.5, 1), and both would be 50 percent. In the discrete form of the uniform distribution, the probability of occurrence of all values in a finite set is equal. For example, if the set of possible values were 0 and 1, then there would be a 50 percent chance for 0 and a 50 percent chance for 1; or a 50 percent chance for getting heads and a 50 percent chance of getting tails on a fair coin.

Uniformly distributed phenomena are rare in the social world, because uniform probability implies randomness, and the social world is characterized by pattern, or the lack of randomness. However, social scientists still find use for the uniform distribution; in fact, it is the second-most used distribution after the normal distribution. The most popular use of the uniform distribution is to find the random variates of other probability distributions, such as the normal distribution. A random variate of a distribution is a number chosen randomly out of the set of numbers with likelihoods characterized by the distribution. A uniform normal variate input to an inverse cumulative probability function of any distribution will generate a random variate of that distribution. Random variates are important in Monte Carlo simulation studies, where the distribution of an outcome is estimated by taking many samples in many simulation runs. Ironically,

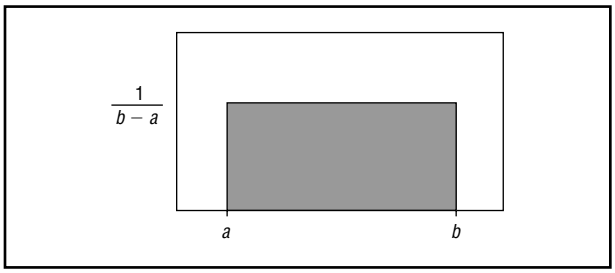

Figure 1. The Continuous Uniform Distribution

truly random variates of any distribution cannot be computed, because truly random numbers cannot be expressed in an equation by definition. Therefore, pseudorandom numbers are accepted, usually created by modulo arithmetic, which have many of the statistical properties of random numbers but repeat themselves at some point. True random numbers are normal in the sense that, for each k, all subsequences of the binary (or decimal, or other) expansion of length k have equal probability, but pseudorandom numbers fail on this requirement for some k.

$$P(x) = \begin{cases} 0 & \text{for } x < a \\ \frac{1}{b-a} & \text{for } a \le x \le b \\ 0 & \text{for } x > b \end{cases}$$

Social scientists also use the uniform distribution to represent lack of knowledge. For example, in a simulation where a distribution is not known, uniform random variates are often used. Naturally, the uniform random variate will incorrectly represent the underlying distribution. However, the uniform distribution also represents independence. The random variates of any distribution incorrectly represent dependencies on the random variates of other modeled distributions. A random variate is only a good model when the measure represents phenomena that are independent of the other phenomena being represented. True independence is as rare as true randomness in the social world. A simple illustration of the problem with using the uniform distribution to represent the lack of knowledge is Bertrand's paradox. In Bertrand's paradox, a cube is hidden in a box with a side that has an unknown length, say between 3 and 5 centimeters. Using modulo arithmetic can then generate random numbers between 3 and 5 centimeters, and take their average in multiple runs of 4 centimeters to estimate the side length. Random numbers could also be generated for all the possible surface areas, between 54 and 150 square centimeters, and all the possible volumes, between 27 and 125 cubic centimeters. However, if those possible measures are averaged as well, then an impossible cube emerges with a length of 4 centimeters, a surface area of 102 square centimeters, and a volume of 76 cubic centimeters.

SEE ALSO *Distribution, Normal; Distribution, Poisson; Frequency Distributions; Monte Carlo Experiments; Probability; Variables, Random*

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Deborah Vakas Duong

DISTRIBUTION, WEIBULL

SEE *Probability Distributions.*

DIVERSITY

Diversity, one of the buzzwords of the early twenty-first century, has become a concept that has multiple meanings to different groups of people. Although dictionaries usually define diversity by using terms like "variety," "difference," or "dissimilarity," social scientists usually talk about diversity in at least four different ways.

1. *Counting diversity* refers to empirically enumerating differences within a given population. Using this definition, social scientists take a particular population and simply count the members according to specific criteria, often including race, gender, and ethnicity. In addition, it is possible to take a particular unit within a society like a school, workplace, or government and compare its race, ethnic, or gender distribution to that of the general population. Often, suspicious questions are raised the farther the diversity of a subunit differs from that of the larger population.

2. *Culture diversity* refers to the importance of understanding and appreciating the cultural differences between race, ethnic, and gender groups. Since members of one culture often view others in relationship to their own standards, social scientists using the culture diversity definition would argue that it is important to show that differences do not have to be evaluated along a good-bad or moral-immoral scale. With greater tolerance and understanding, the argument goes, different cultural groups can coexist with one another in the same society.

3. *Good-for-business diversity* refers to the belief that businesses will be more profitable and government agencies and not-for-profit corporations will be more efficient with diverse labor forces. According to this approach, members of particular cultural groups are more effective than non-group members in dealing with their own groups so it is in the interests of organizations to diversify workers and managers.

4. *Conflict diversity* refers to understanding how different groups exist in a hierarchy of inequality in terms of power, privilege, and wealth. According to this definition,

dominant groups oppress subordinate groups in many societies and it is important for social scientists to understand the nature of this oppression in order to help attain a more egalitarian society.

In the real world, these four approaches often overlap. However, people using different approaches often ask different types of questions. One can see how this works by examining a hypothetical city in the United States that is having difficulty between the local police department and the black and Hispanic population.

A social scientist with a counting diversity perspective might compare the black and Hispanic distribution in the police department with the distribution in the city. Typically, blacks and Hispanics would be underrepresented in the police department and even more highly underrepresented at the upper levels of the department.

A culture diversity scholar, on the other hand, would be more concerned with how the police understand the black and Hispanic communities since this also affects their actions. Do the predominantly white police interpret certain types of speech and clothing as threatening when it is simply part of the black and Hispanic subculture? Do they act in ways that inadvertently disrespect members of the community, thus causing even more tension? Being more sensitive to black and Hispanic cultural values might make the job of the police easier.

The good-for-business perspective would argue that the police would be more effective if they had more black and Hispanic officers who would be more likely to be familiar with the culture of those communities. In addition, members of the community might not be so hostile if the police were seen as some of their own.

Finally, culture conflict social scientists would argue that the police represent the interests of the dominant group: wealthy, white men in business and politics. The police represent the property rights of the dominant group and enforce the laws that they have enacted. Black and Hispanic police officers enforce the same unfair laws as their white colleagues, although they may do it more humanely. The goal is not just to have a more representative and culturally sensitive police force. The goal is to change the laws in order to have a more equitable society.

Concerns about diversity, however it is defined, also intersect with policies like affirmative action. Employment-based affirmative action is based on comparing the racial distribution of employees in a given workplace with the racial distribution of the pool of workers who are qualified for a specific job. This is counting diversity. In the United States, employers with $50,000 in federal contracts and fifty or more employees are required to make a "good faith effort" to achieve a representative labor force; that is, they must try. Formal hiring quotas, where employers are legally obligated to hire a certain percentage of underrepresented workers, are more difficult to justify. In India, on the other hand, these hiring quotas are used much more extensively.

In higher education, both counting diversity and a version of culture diversity are involved. According to the 2003 *Grutter* and *Gratz* decisions of the U.S. Supreme Court, affirmative action in college admissions is constitutional because it is in the educational interests of all students to be exposed to a diversity of views on campus. Racial diversity is one way to enhance the diversity of views. However, strict numerical comparisons and formulas cannot be used. Instead, "holistic" assessments of each candidate must take place in order to achieve an undefined "critical mass" of each student group. Since white and Asian students are overrepresented in American higher education, these critical mass guidelines refer mainly to underrepresented minorities like blacks, Hispanics, and Native Americans. A good-for-business perspective is also involved since the court noted that law schools and, to a lesser extent, all of higher education train future leaders who should be selected from all racial groups.

Neither affirmative action in employment nor in higher education reflects the conflict diversity perspective since the role and structure of higher education and the economy is not questioned. The relative power of workers and their bosses/managers is not addressed. The purpose of higher education is not addressed. All that is addressed is the racial characteristics of those who occupy various positions. When reading an article about diversity, it is critical to understand which approach the author is using.

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Fred L. Pincus

DIVESTITURE

Countries that employ economic sanctions have a number of economic instruments with which they may induce compliance by their targets. Among these is disinvestment

or divestiture, in which they shed their capital holdings within the target state. When sanctioning states divest, they effectively seek to reverse the benefits of foreign direct investment (FDI) flows into the target state. Whereas FDI increases states' productive capital stock by funding factories and infrastructure, disinvestment seeks a liquidation of this capital stock. Although divestiture has rarely been used (because, to be effective, the sanctioning state must have previously invested heavily in the target country), when the conditions favor this policy tool, it can be particularly effective.

Perhaps ironically, the short-term effects of divestiture may actually benefit the target country. Because factories and infrastructure are typically immobile, they must be sold in-place, generally to entrepreneurs within the target state and often at fire-sale prices. Thus, in the short term divestiture does little to reduce target states' capital stock; it simply transfers ownership of immobile capital assets from foreign to target state stakeholders.

While the short-term effects of disinvestment may be negative, its long-term effects can prove especially damaging to the target country. This is not only because disinvestment chills future FDI inflows but also because foreign management and technology are mobile and these are generally withdrawn after divestiture. Without access to foreign technology, spare parts, and management skills, in the long run the divested capital stock will eventually run down and become far less productive, becoming a drain on target-state entrepreneurs and increasing their calls for an end to the policies deemed offensive by the divesting state(s).

A notable past case of divestment was undertaken against apartheid South Africa under the context of the Reverend Leon Sullivan's voluntary code of conduct that pressured (mostly U.S.) businesses to liquidate their South African holdings during the 1980s. In the short term South African entrepreneurs were able to acquire a set of highly productive assets at low prices and the black employees of these enterprises often suffered under their new management (Barber 1982). In the long term, however, the lack of foreign capital, technology, and management expertise began to tell on the divested industries, increasing South African entrepreneurs' calls for an end to apartheid. Their pressure was one of the keys to the eventual demise of apartheid (Major and McGann 2005).

More recently, a number of universities and religious organizations, such as the Presbyterian Church (USA), have called for a similar disinvestment campaign against Israel for its continued occupation of Gaza and the West Bank. If U.S. companies could be pressured into disinvesting, it could prove damaging to the Israeli economy: in 2003, the United States' FDI position in Israel equaled 5.62 percent of Israeli gross domestic product. Although Israeli entrepreneurs could be expected to reap a bonanza in the short term, should disinvestment proceed, cutting this crucial link between Israel and U.S. technology, managerial skills, and best practices, it could seriously hobble the Israeli economy in the long run.

In cases in which a sanctioning state has substantial FDI holdings in the target state, and where it is patient enough to ride out the negative, short-term effects of disinvestment, divestiture can be an effective nonviolent policy tool to persuade another nation against engaging in unsavory activities.

SEE ALSO *Apartheid*

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Solomon Major

DIVINE RIGHT

The belief that a community's earthly protector has a unique, authority-conferring relationship with the divine has existed in virtually all forms of one-person rule throughout human history. The concept of the "divine right of kings" was developed as a formal theory of legitimacy in the period following the Middle Ages in Europe. It states that God directly authorized the rule of a Christian monarch for life by creating him (or her) as the hereditary heir to the throne. This not only sanctifies and clarifies the often disruptive process of succession, but it also puts the monarch beyond human accountability and enjoins all believers to obey unhesitatingly, thereby ending the recurring instability in Europe caused by divided loyalties between the people's political and spiritual leaders. It was initially propounded against rival claims of authority by feudal lords as much as the pope, thereby serving to strengthen the burgeoning nationalism of the fifteenth and sixteenth centuries. In the seventeenth century, the French bishop Jacques-Bénigne Bossuet (and various English theorists before him) argued for divine right in the face of emerging theories of legitimacy based on the consent of the ruled. In the midst of the reign of Louis

XIV (the "Sun King"), France's greatest exemplar and proponent of divine right, the Glorious Revolution of 1688 put the doctrine largely to rest in England, where it was replaced with a democratically based, limited constitutionalism that revolutionized the practice and acceptance of authority.

Whereas the implied infallibility of God's deputy in the European model tended to have distinctly absolutist implications, the conditionality in the Chinese conception of a "Mandate of Heaven" served to preserve as well as destroy dynasties of various lengths after it was first formulated during the Zhou dynasty (1050–256 BCE). This Chinese variation of divine right is based on the idea that heaven protects human welfare by establishing rulers whose mandate is to be wise and just. If they fail in this, the mandate is passed on as evidenced by their physical overthrow. Originally an outgrowth of pagan ethics and cosmology, it was blended with Confucian principles and Buddhism in such a way as to emphasize the virtues of moderation and reserve on the Emperor's part, rather than power and splendor. By the late sixth century, Buddhism, Confucianism, and other key elements of Chinese culture began to take hold in Japan. A century later, using terms such as "Mandate of Heaven," Emperor Temmu and his consort and successor Jitô established the image of the emperor (*Tenno*) as a descendant of the sun goddess Amaterasu and ruler of "all under heaven." Since then, the *Tenno* has been seen as a bridge between heaven and earth, with duties to Heaven as well as to the people. To this distinction was soon added that of "Servant of the Buddha," and the *Tenno* served in this leading religious role until the end of the nineteenth century. For much of Japanese history, the *Tenno* has served as the religious and cultural leader, lending official sanction to the policies and authority of a largely independent and better-armed political ruler. Throughout history, the prevalence of tenets comparable to divine right around the world suggests that the belief that worldly authority and divine providence coincide is more than simply a convenient premise for establishing authority, but instead speaks to a fundamental human longing.

SEE ALSO *Monarchy*

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William J. G. Bewick

DIVISIA MONETARY INDEX

Aggregation theory and index-number theory have been used to generate official governmental data since the 1920s. One exception still exists. The monetary quantity aggregates and interest rate aggregates supplied by many central banks are not based on index-number or aggregation theory, but rather are the simple unweighted sums of the component quantities and averages of interest rates. The predictable consequence has been induced instability of money demand and supply functions, and a series of "puzzles" in the resulting applied literature. Without coherence between data aggregation formulas and the models within which aggregates are embedded, stable structure can appear to be unstable. This phenomenon has been called the *Barnett critique* by Alec Chrystal and Ronald MacDonald (1994). In contrast, the Divisia monetary aggregates, originated by William A. Barnett (1980), are derived directly from economic index-number theory and are now available from some central banks.

Statistical index-number theory provides indexes that are computable directly from quantity and price data, without estimation of unknown parameters. For decades, the link between statistical index number theory and microeconomic aggregation theory was weaker for aggregating over monetary assets than for aggregating over other goods and asset quantities. Once monetary assets began yielding interest, monetary assets became imperfect substitutes for each other, and the "price" of monetary-asset services was no longer clearly defined. That problem was solved by Barnett, who derived the formula for the user cost of demanded monetary services. Barnett's results on that user cost set the stage for introducing index number theory into monetary economics.

Let $m_t = (m_{1t}, m_{2t}, \ldots, m_{nt})'$ be the vector of real balances of monetary assets during period t, let $r_t = (r_{1t}, r_{2t}, \ldots, r_{nt})'$ be the vector of nominal holding-period yields for monetary assets during period t, and let R_t be the yield on the benchmark asset during period t. The benchmark asset is defined to be a pure investment that provides no services other than its yield, so that the asset is held solely to accumulate wealth. Let $\pi_t = (\pi_{1t}, \pi_{2t}, \ldots, \pi_{nt})'$ be the vector of monetary-asset real user costs, with $\pi_{it} = \dfrac{R_t - r_{it}}{1 + R_t}$.

The user cost formula measures the foregone interest, which is the opportunity cost, of holding a unit of monetary asset i.

In economic aggregation theory, there exists an exact aggregator function over quantities. Let that aggregator function over monetary assets be u, so that the exact monetary aggregate, M_t, is $M_t = u(m_t^*)$. Statistical index-number theory enables us to track M_t exactly, without estimating the unknown function, u.

In continuous time, the exact monetary aggregate, $M_t = u(m_t^*)$, can be tracked exactly by the Divisia index, which solves the differential equation $\frac{d \log M_t}{dt} = \sum_i s_{it} \frac{d \log m_{it}^*}{dt}$, where $s_{it} = \frac{\pi_{it} m_{it}^*}{y_t}$ is the ith asset's share in expenditure on the total portfolio's service flow. The dual user cost price aggregate, $\Pi_t = \Pi(\pi_t)$, can be tracked exactly by the Divisia price index, which solves the differential equation $\frac{d \log \Pi_t}{dt} = \sum_i s_{it} \frac{d \log \pi_{it}}{dt}$.

In continuous time, the Divisia index, under conventional neoclassical assumptions, is exact. In discrete time, the Törnqvist approximation is: $\log M_t - \log M_{t-1} = \sum_i \bar{s}_{it} (\log m_{it}^* - \log m_{i,t-1}^*)$, where $\bar{s}_{it} = \frac{1}{2}(s_{it} + s_{i,t-1})$.

The user cost aggregate, Π_t, then can be computed directly from Fisher's factor reversal formula, $\Pi_t M_t = \pi_t' m_t$.

The formula for Divisia monetary aggregation has been extended to risk aversion and to multilateral (international) aggregation within a common currency area, with particular reference to the concerns of the European Central Bank. Many of those extensions have been collected together in Barnett and Apostolos Serletis (2000).

SEE ALSO *Monetary Theory; Money*

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William A. Barnett

DIVISION OF LABOR

The phrase *division of labor* can justifiably be used to indicate any form of work specialization, such as the division of labor between men and women; and yet, ever since Adam Smith's *The Wealth of Nations* (1776), it has come to refer to the division of tasks within an industrial process. Smith saw the division of labor within the industrial process as enormously efficient and illustrated his argument by the now hallowed example of the pin factory. A competent pinmaker, we are told, could not make more than twenty pins a day, whereas, upon dividing the tasks into eighteen operations, such as drawing, cutting, grinding, and so on, ten men can make over 48,000 pins in a day. On an average, therefore, each individual's productivity is increased 240-fold. The example is especially interesting because the productivity increase involves *no* change in technique—it is purely a case of applying existing knowledge more efficiently. The only limit to such productivity lies in the ability to sell the additional output, hence Smith also tells us "That the division of labour is limited by the extent of the market" (1776).

We are emphatically told in chapter 1, Book I, of the *Wealth of Nations* that the division of labor is the most important reason for greater production and is the primary force leading to prosperity:

> The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity and judgement with which it is anywhere directed, or applied, seems to have been the effects of the division of labour. (p. 13)

> It is the great multiplication of the production of all the different arts, in consequence of the division of labour, which occasions, in a well-governed society, that universal opulence which extends itself to the lowest ranks of the people. (p. 22)

Three reasons are given why a concentration of effort upon a single task increases efficiency. First, the skill of individual workers is much improved by specialization; secondly, workers save time and effort involved in having to switch from one operation to another; and finally, the division of labor facilitates the invention of machinery. The three reasons are most applicable only in manufacturing and Smith notes that agriculture is not suited to the division of labor, with the implication that one is not to expect much growth in that sector.

The rhetorical force of Adam Smith's presentation has to be separated from its economic analysis. All individuals have identical capacities in Smith's presentation and he ignored the traditional view of the division of labor as permitting individuals to perform those tasks that were most suitable to them. Dugald Stewart, Smith's successor at Edinburgh, criticized each of Smith's three reasons. Stewart grants that a workman gains in dexterity by concentrating on one task, but the efficiency gains thus obtained he considers to be quite limited (Stewart 1855, vol. 8, p. 315). Secondly, while it was perfectly true that a worker saves time by not having to change jobs, such gains are of small magnitude. If, then, the division of labor is to explain the productivity of labor, it must be by its influence upon the invention of machinery (p. 319).

Stewart now made two very significant innovations. First, his analysis of production focused on breaking production processes down into a series of simple tasks, as simple tasks are the ones that are most easily mechanically duplicated; gains in time and dexterity followed as a corollary of this attempt at simplification. Secondly, the entrepreneur and not the worker is put at the center of the stage. Stewart doubted that workers themselves would engage in the invention of labor-saving machinery, as Smith had conjectured they would, because the effect of such improvements indeed might even lead to his being unemployed. It is the capitalist who is driven by the lure of profits to continually improve his machinery. E. G. Wakefield later elaborated upon this far-reaching criticism by insisting that every successful division of labor must be accompanied by a plan for its subsequent combination. Coordination was prior to, and critical for, the successful division of labor. Smith's one-sided emphasis Wakefield found to be "not only very deficient but also full of error" (Smith [1776] 1840, p. 33).

Later generations have made the division of labor the paramount principle underlying profitable international trade. The international division of labor is a feature that Smith himself laid little stress upon and the argument about its centrality is based on a misinterpretation. The phrase *division of labor* can be used for any activity where there is some element of specialization. When used in the context of international trade, to suggest that trade between two countries is beneficial in allowing two countries to specialize, what is being referred to is, however, not at all the same phenomenon that occurs in the pin factory. The gains here typically arise from the *different endowments* of the two countries, not from the subdivision of tasks within a unified process.

From the scholarly point of view it must be regretted that Smith (1) neglected the fairly extensive British tradition—Petty, Maxwell, and Harris, to name a few—of viewing the division of labor as *a* factor in productivity, and (2) failed to acknowledge his debt to the *Encyclopedie* (see Kindleberger 1976, p. 1). Not only does the example of pinmaking appear to have been taken from the French *Encyclopedie*, the three advantages of the division of labor are also distinctly stated there as well. (This point is distinctly noted by Edwin Cannan, editor of the fifth edition of the *Wealth of Nations*, and subsequently by Roy Campbell and Andrew Skinner, editors of the 1976 edition.) When Adam Smith and Adam Ferguson fell out in the 1760s and 1770s, Smith appears to have accused Ferguson of plagiarism—to which charge Ferguson justifiably replied that he had only dipped into the same French source as Smith (Hamowy 1968).

Charles Babbage (1791–1871) and, independently, the Italian economist Melchiorre Gioja (1767–1829) elaborated on Stewart's insight that work could be matched to individual abilities: "The master manufacturer, by dividing the work to be performed into different processes each requiring different degrees of skill and force, can purchase exactly that precise quantity necessary for each process" (Babbage 1832, pp. 137–138). (Babbage also claims that needlemaking is more illustrative of the division of labor than pinmaking.) Andrew Ure considered the same issue through the employer's eyes and noted how important subdivision is to the social control of industry. The function of science is to mechanize every "difficult" process so as to reduce the bargaining power of skilled workers (Ure 1835, p. 19). Wherever a process requires particular dexterity and steadiness of hand, it should be withdrawn as soon as possible from the "cunning" workman, who is prone to many kinds of irregularities, and entrusted to a specific mechanism, so self-regulating that a child could supervise it. Babbage, Gioja, and Ure foreshadow the twentieth century views of F. W. Taylor and Henry Ford, who wanted to replace worker initiative with rules and assembly lines. With Ford and Taylor, and their associated production philosophies *Taylorism* and *Fordism*, the view of the worker as robot was virtually complete. It appeared that efficiency requires a dehumanized work environment. Yet labor disputes and poor production quality, quite apparent to all by the 1980s, suggest to many that traditional Taylorism and Fordism are at an end. The latest step has been to globalize the division of labor by shipping out unskilled work to low-wage countries, a process that has the added advantage of removing the alienated worker from view.

Ensconced within the *Wealth of Nations*, however, was a potent message about alienation. After having extolled the division of labor in Book I, in Book V Smith emphasized the way in which the division of labor turned human beings into mechanical morons: "The man whose whole life is spent in performing a few simple operations … has no occasion to exert his understanding, or to exercise his invention.… He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human creature to become" (p. 781). This acquired stupidity makes the ordinary worker an indifferent family man and a poor citizen. Because of this considerable danger to civil society, Smith went against his usual principles and urged the state to become involved in providing primary education. The suggestion that primary education would suffice to save the worker from an alienated, almost disembodied, existence drew Karl Marx's acid remark that Smith had sought to cure the major ill of industrialism with a "homeopathic dose." It is rumored that Smith was indebted to Rousseau for the "alienating insight," but, be that as it may, Smith is properly considered parent of the major stem of modern labor relations and stepfather to the opposition. The

dominance of Taylorism as the ideology of work in the 1930s caused a reaction that is exemplified by Elton Mayo's insistence that human relations in the workplace are crucial to maintaining productivity.

The casual treatment of the worker's welfare in the American workplace is to be contrasted with the considerable care taken in the molding of engineers. William Wickendon wrote that educational leaders of the 1920s saw the college as being like a factory and urged that colleges must take raw material and "turn out a product which is saleable," with the significant implication that "the type of curriculum is in the last analysis not set by the college but by the employer of the college graduate" (as quoted in Noble 1984, p. 46). The most effective spokesman for engineering education, William Wickenden emphasized teamwork, rather than individualism. The new "engineer for industry" was urged to be a good subordinate. One notes that these are the very complex of attitudes that America had to "relearn" from Japan in the 1970s and 1980s!

The social approach to technology looks at Fordism as the primary source of misleading insights. In turn, Fordism arose from glorifying the productivity of the pin factory. In order for large capital expenditures to take place, both corporation and state need to be socially stable. Yet such social stability is difficult to arrange under modern conditions, unless one pays attention to the worker's welfare. The full message of the division of labor is a complex one and far too much has been lost by focusing upon the making of pins.

In addition, the effect of the division of labor was to fix attention on one simple operation, whereas the improvement of machinery required knowledge of a great variety of operations. The "popular" view of technological progress sees it as occurring outside the control or guidance of the worker, who has the challenge of adjusting himself to the technology at hand. And yet, one has to remember that perhaps as much as 40 percent of the technological improvements that occurred in the textile industry during the Industrial Revolution have no assigned source. These were all improvements that occurred as workers made small, "invisible" improvements whose aggregate effect was quite noticeable. Of course, there are no rules for obtaining such invisible changes, but we can be sure they will happen if we possess a literate, inquisitive, and enterprising labor force. The creation and sustenance of such a labor force is a social process and it makes the successful implementation of any technology policy the result of investment in building up the requisite social foundations. The modern history of labor use has scarcely proceeded along these lines, however (see Rashid 1997 for a historical review).

The appropriateness of the Fordist model has also been called into question by new alternatives to mass production, such as the Just In Time (JIT) production (also called "flexible specialization") adopted in Japan. The smallness of readily available markets in Japan meant that firms needed to adapt their production strategies. Instead of mass-producing at low costs, they now had to produce relatively small quantities of high quality goods at affordable prices. This was a considerable challenge, requiring product innovation as well as cost minimization.

JIT manufacturing also required further changes in the philosophy of production, best exemplified by the automobile industry. Automobiles are discrete products—as opposed to dimensional products, which are sold by volume or weight. Resetting machinery for discrete products takes time; to reduce the costs associated with machine resetting, workers needed to have several skills. Because quality control became essential to every step of the production process, and because even research and development needed to be discussed factory-wide, unskilled workers with minimal initiative or independence, so appropriate to Fordism, became a liability. While JIT manufacturing requires intelligent, cooperative employees, there is, of course—just as in any other system—nothing to prevent these employees from being overworked.

SEE ALSO *Change, Technological; Productivity; Smith, Adam; Taylorism*

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Salim Rashid

DIVORCE AND SEPARATION

Divorce and separation are legal actions that affect the civil marriage contract. In the United States, marriage, separation, annulment, and divorce are regulated individually by the states, although some federal benefits are available only to those who are legally married. In most cases, the person filing for the divorce or separation must be a resident for at least ninety days in the jurisdiction where the legal action is filed. Divorce is the formal dissolution of a marriage. Separation formalizes an agreement between a married couple who live apart. Some states and countries require some period of legal separation before divorce. For divorce and separation, the legal agreement may decide child custody, support, and visitation, division of assets and marital property, debt, marital home possession, and in cases of abuse, a protection order.

Separation does not end the marriage. People may choose separation over divorce for a variety of reasons, including religious or financial grounds; for the sake of the children; to retain health care, military, or tax benefits; or to live apart to assess if divorce is the best option. A separation agreement can be converted to a divorce decree.

Marriage annulment is a legal procedure declaring that the marriage never existed. The grounds for an annulment vary by state, but may apply to marriages involving underage partners (with the age varying by state), blood relatives with relationships closer than first cousins, or the absence of mental or physical capacity to consent to marriage. Other grounds for marriage annulment include intoxication, duress, refusal of intercourse, impotence, and bigamy. Most annulled marriages are brief. In the case of longer marriages the court divides the property of the parties and can determine rights and obligations related to the marital children. Children from an annulled marriage are legitimate. The history of marriage annulment dates back to Henry VIII (1491–1547), who had four of his six marriages annulled.

In the Catholic Church a member who wants to remarry after a divorce or to marry a divorced non-Catholic must have the prior marriage nullified. This is a religious rather than a legal process.

In the United States the trend since the 1960s has been toward no-fault divorces with joint legal custody of children. This contrasts with the former, adversarial process in which one person must prove a "fault" such as adultery, cruelty, desertion, habitual drunkenness, or insanity. Under no-fault laws the court must find irreconcilable differences or that the couple lived apart for a designated period of time. Critics blame no-fault divorce for the increasing divorce rate. In 1997, Louisiana was the first state to adopt "covenant marriages," by which couples must enter into premarital counseling, and in the event that they eventually separate, undergo mandatory marital counseling, then wait two years after separation or provide proof of fault before divorcing.

In Canada the federal government sets divorce law that applies equally across provinces. No-fault divorce was adopted in 1986, allowing divorce for couples who have been separated for one year. In England marriage can be terminated by a "dissolution of marriage" or a "nullification," the equivalent of an annulment in the United States.

In the United States only Massachusetts currently allows same-sex marriages. Canada has also recognized civil marriage between same sex partners. Many same-sex couples from other states travel to marry in Massachusetts, and the legal systems in their home states must determine how to deal with those relationships if the couples want to dissolve them, and what rights and responsibilities couples have upon dissolution, including custody and visitation rights for children born or adopted during the relationships. Similar challenges face states that grant to same-sex couples domestic partnerships, which outline the legal rights and responsibilities of those relationships but do not recognize them as marriages. In 1986 Congress adopted the Defense of Marriage Act (DOMA), which stated that no state has to recognize a marriage between persons of the same sex, even if the marriage was concluded or recognized in another state. In addition, the federal government may not recognize same-sex or polygamous marriages for any purpose, even if concluded or recognized by one of the states.

In the United States the divorce laws of the state the couple resides in, not the state they were married in, govern the dissolution; this is similar in many other countries. International divorces, in which the couple married in one country and then moved to another, face special difficulties. In addition, some countries that have religiously based governments, including Islamic and Jewish states, require religious divorces; others, including Japan and Taiwan, require only a registry office divorce, and only one spouse needs to file the paper. There are also "quickie" divorces in places such as the Dominican Republic, where there is little or no residence requirement.

DEMOGRAPHICS

Divorce rates have been rising in the United States, South Korea, and the nations of the European Union; Japan has the lowest rate. Divorce rates rose slowly from the 1860s to about 1919. There were more dramatic increases after both world wars, followed by a decrease and then a relatively stable divorce rate from 1950 to the mid-1960s. After a dramatic increase between the late 1960s through the mid-1970s, partially due to the introduction of no-fault divorces and economic prosperity, divorce rates in the United States declined, and this decline continues today. The divorce rate was 4.7 per thousand married women fifteen and older from 1990 to 1993, decreasing to 4.0 in 2001. In 2005 in the United States there were 7.5 new marriages for every 3.6 divorces per 1,000 people (Baca Zinn and Eitzen 2005).

In the United States, between 40 and 52 percent of all first marriages end in divorce, whereas in Europe the rate is one in three or four. Approximately 17 percent of married couples are separated at some time. In any given year, between 2 and 4 percent of marriages are granted legal separations. One in five marriages ends in divorce or separation in the first five years, one in three in the first ten years, and more than two-fifths within fifteen years. In the United States divorce rate is higher for remarried white women, whereas for African American women the rate is the same for once-wed or remarried women. In general, the divorce rate is lowest for white and Latino couples, and more than twice as high for African Americans.

A curvilinear relationship exists between income and divorce. Women in very low- and very high-income marriages have higher rates of divorce. Wives with higher education and husbands with higher income are less likely to divorce. Black and white couples who attend religious services together are less likely to divorce (Park 2004).

Age at first marriage is a strong predictor of marital stability. Almost 60 percent of those who marry at or before the age of eighteen dissolve their marriages within fifteen years. A factor accounting for both younger marriages and higher divorce rates is premarital pregnancy and birth. The presence of children also affects the likelihood of divorce. Childless couples divorce at a higher rate than those with children. And there is a curvilinear relationship between number of children and divorce: Divorce rates decrease as families have more children, up to four; those with more than four children are more likely to divorce than those without children. Families with children under three years old are less likely to divorce than those with children over fifteen.

Divorce is more common among those who lived together before marriage. About 40 percent of couples who lived together premaritally divorced after ten years of marriage, compared to 31 percent of those who did not live together.

Religion influences divorce. Twenty-four percent of all adults will experience a divorce over the course of their lifetime. The highest rate is for Jews (30%). Baptists have the highest rate among Christians (29%)—even those who identify themselves as "born again" have a higher than average divorce rate (27%). Protestants and Mormons have a rate of 25 percent, whereas Catholics have a rate of 21 percent (Baca Zinn and Eitzen 2005).

IMPLICATIONS OF DIVORCE AND SEPARATION FOR FAMILIES

Ex-husbands generally experience an increased standard of living after divorce. They are most often the primary wage earners in the family, and after divorce more of their income stays with them. They have more money and leisure time available to them. About 85 percent of men do not seek primary physical custody of their children, so they have greater freedom for dating, furthering their education, travel, hobbies, and sexual relationships. After divorce, males often have difficulty maintaining a routine for eating, sleeping, shopping, cooking, and cleaning. They see their children relatively rarely, and thus experience isolation. The difficulty of adjusting to divorce results in higher rates of illness and death for men.

Typically, women experience a dramatic decline in their standard of living after a divorce—to about half what their living standard had been before divorce, or about half that of divorced men. To improve their situations, divorced women often rely on several sources of wealth, including alimony, which is awarded to 15 percent of divorced women. Equitable division of marital property assumes that men and women are equal at the time of divorce, but awarding primary residences to women assumes that they are able to pay the mortgages, an assumption that disadvantages women who work in the home or those who make low wages. Two-thirds of divorced mothers are awarded child support, but in at least 60 percent of the cases fathers are late with payments

or do not pay at all. Women may also experience isolation and over-extension due to their child care, household, and wage-earning responsibilities.

Women also may benefit from divorce. Like men, they experience an increase in freedom, albeit freedom mediated by child and household responsibilities. Domestic violence lessens, and as the divorce rate rises there is a decrease in both suicide and murder rates of women. However, women in separated couples are the group at the greatest risk of assault and murder by intimates.

At various times in history conservative social critics have argued that divorce contributes to a negative decline in the American family, and that the lack of a male role model for children of divorce has a negative effect, and can lead to crime and delinquency. But research indicates that children are resilient in coping with a divorce, and that three out of four kids become healthy and competent adults. The large majority of children in divorced families do not experience severe or long-term problems. For those children in abusive families, the quality of family life may increase.

Girls seem to fare better than boys (Seltzer 1994). Antisocial behavior on the part of children in divorced families is related to lack of parental control rather than the divorce itself. Family size, too, influences children's well-being after divorce—the larger the family, the greater the stress on single parents, which may negatively affect children. Race also affects children's experience of divorce. African American children are more likely to be economically disadvantaged in society and may experience more detrimental effects of divorce.

Parental contact also affects children. Parents with higher socioeconomic status are more likely to have joint legal custody of their children, and so those fathers are more likely to spend time with their children. Contact with both parents helps children adjust favorably to divorce. Children fare better when parents live in the same geographic region, which facilitates visitation.

The economic status of the family importantly predicts the problems families and children face. Children in fatherless families are more likely to drop out of school, use drugs, and engage in delinquent behavior, but the underlying cause is not divorce, but poverty (Kimmel 2004).

Economic security needs to compensate for the drop in the standard of living for divorced families. This could include policies such as a living wage for all workers to counter the low wages that divorced women find themselves confined in. There should also be a safety net providing job training and societal assistance to women and children after a divorce. This assistance could take the form of job training, public employment, quality day care assistance, adequate diet support and medical care. All would reduce the stress on children and families experiencing divorce.

SEE ALSO *Children; Family Functioning; Family Structure; Marriage; Marriage, Same-Sex; Mental Illness; Poverty; Religion; Stress*

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Pat Murphy

DIXIECRATS

Dixiecrats (a combination of "Dixie," referring to the Old South of the Confederacy, and "Democrats"), formally known as the States' Rights Democratic Party, were a splinter party formed by Southern Democrats in 1948 to oppose President Harry S. Truman's civil rights program. The term has also been used to refer to racially conservative Southern Democrats since then. With South Carolina

Governor J. Strom Thurmond leading the ticket, Dixiecrats carried four states but failed to stop Truman's reelection. The core Dixiecrat ideologies of "states' rights" and white supremacy have their roots in the antebellum South and still reverberate in the partisan alignment in the United States in the early twenty-first century.

The Democratic National Convention in 1948 approved a strong civil rights plank despite firm opposition from Southern delegates:

> We again state our belief that the racial and religious minorities must have the right to live, the right to work, the right to vote, the full and equal protection of the laws, on the basis of equality with all citizens guaranteed by the Constitution.…We call upon Congress to [act] in guaranteeing these basic and fundamental rights: (1) the right of full and equal political participation, (2) the right of equal opportunity in employment, (3) the right of security of person, (4) and the right of equal treatment in the service and defense of our nation. (Key 1984, p. 335)

In his fiery convention speech supporting this language, then-Minneapolis Mayor and Senate candidate (and future vice president and Democratic presidential nominee) Hubert H. Humphrey (1911–1978) did not mince words:

> To those who say … that we are rushing this issue of civil rights, I say to them we are 172 years late! To those who say … that this civil-rights program is an infringement on states' rights, I say this: the time has arrived in America for the Democratic Party to get out of the shadow of state's rights and walk forthrightly into the bright sunshine of human rights! (History News Network 2002)

In apparent response, thirty-five delegates from Mississippi and Alabama walked out of the convention, but the walkout had actually been planned for months.

On July 17, just days after the walkout, party leaders from Mississippi, Alabama, and South Carolina met in Birmingham, Alabama. They formed the States' Rights Democratic Party, nominated Thurmond for president and Governor Fielding Wright (1895–1956) of Mississippi for vice president, and issued a "declaration of principles" stating their opposition to "the elimination of segregation, the repeal of miscegenation statutes, the control of private employment by federal bureaucrats called for by the misnamed civil rights program" (Frederickson 2001, p. 240).

In an effort to reach out to the non-Southern Republican members of the Conservative Coalition forged in the 1930s to oppose President Franklin D. Roosevelt's more ambitious New Deal programs, Thurmond's campaign rhetoric focused largely on states' rights and limited government, leading some conservatives more than fifty years later to claim that these were the true bases of the Dixiecrat movement. This view, however, is naive at best: white supremacy was the party's raison d'être and driving force. As Thurmond thundered to the Birmingham meeting, "There's not enough troops in the Army to force the southern people to break down segregation and admit the Negro race into our theaters, into our swimming pools, into schools and into our homes" (Frederickson 2001, p. 242). The party's platform explicitly supported racial segregation and opposed all efforts to end it as "utterly destructive of the social, economic and political life of the Southern people." Local appeals for votes were also perfectly clear in their intentions—an official sample ballot from the Mississippi State Democratic Party declared:

> A vote for the Truman electors is a direct order to our Congressmen and Senators from Mississippi to vote for passage of Truman's so-called civil-rights program in the next Congress. This means the vicious FEPC [Fair Employment Practices Committee]—anti-poll tax—anti-lynching and anti-segregation proposals will become the law of the land and our way of life in the South will be gone forever. (Mississippi Historical Society, undated)

In the end, the Dixiecrats carried the four states in which they were the official Democratic ticket and received one electoral vote from a "faithless" Tennessee elector. The ticket received 1,169,134 votes in total, 55 percent of which were from the four states they carried, and 99 percent of which were from Southern or border states. Even in the South, they received only 20 percent of the vote, while nationwide, they received only 2.4 percent. Thurmond and Wright received thirty-nine electoral votes, but that was not nearly sufficient to deny Truman his majority. Despite the loss, Dixiecrats remained strong enough in the Congress to block meaningful civil rights laws until the 1960s.

ORIGIN OF THE DIXIECRAT MOVEMENT

The historical roots of the Dixiecrat movement go deep into U.S. history—the Dixiecrat core ideologies of "states' rights" and white supremacy have their roots in the antebellum South and the political philosophy of John Calhoun (1782–1850). The Civil War and Reconstruction cemented these philosophies in the South with the region becoming the one-party "Solid South" after Reconstruction. From 1880 through 1924, with very few exceptions, Southern and border states voted reliably Democratic for president; local and state offices were sim-

ilarly dominated by Democrats. Meanwhile, African Americans, where they could vote, were loyal Republicans, based on the same Civil War alignment. Through the 1930s, both parties kept racial issues out of electoral politics, although cases on segregation and voting rights were playing out in the courts.

The first major break in the Solid South occurred in 1928 when several southern states (excluding the four later carried by Thurmond) went for Herbert Hoover, because of the Democratic nomination of New York Governor Al Smith—a big city Northern Catholic and a "wet" to boot. In *Southern Politics* (1984), however, V. O. Key showed that voting patterns of "Hoovercrats" in 1928 were the precise opposite of Dixiecrats in 1948. These states all returned to the fold throughout the New Deal era.

Issues of racial justice returned to the political stage in the 1940s, beginning with A. Philip Randolph's (1889–1979) March on Washington movement (1941), which resulted in Roosevelt's 1941 Executive Order 8802 establishing the Fair Employment Practices Committee (FEPC) and banning employment discrimination by defense contractors. The publication of Gunnar Myrdal's *An American Dilemma* in 1944 made American racism an international embarrassment and forced mainstream political and intellectual leaders to reluctantly reexamine racial issues. During the Roosevelt era, African Americans shifted to the Democratic Party as well because of Roosevelt's progressive social policies, becoming key components of the party's electoral coalition by the 1940s.

World War II (1939–1945) created the bitter irony of African American troops fighting and dying overseas to fight Adolf Hitler's racist ideology only to return home to Jim Crow. (The importance of this as a grassroots catalyst of the civil rights movement of the 1950s and 1960s is often overlooked.) The irony was not lost on Truman, who in 1947 began moving toward a civil rights program. This included a strongly worded speech to the National Association for the Advancement of Colored People in June, the publication of the report of his Committee on Civil Rights in October (which recommended the steps that were later included in the 1948 Democratic Party platform), and Truman's strong endorsement of the report in his January 1948 State of the Union speech. With fair warning, the Southern Democratic maneuvering to fight Truman and his policies thus began several months before the convention.

After Truman, with Republicans beginning to make incursions into Southern electoral politics, Democrats played down racial issues to avoid another revolt. Meanwhile, Republicans became publicly associated with civil rights, with *Brown v. Board of Education* (1954), President Dwight D. Eisenhower's forced integration of Little Rock public schools (1957), and the civil rights acts of 1957 and 1960, passed despite Senate filibusters by the conservative "boll weevil" Southern Democrats. Thus, issues other than race dominated the elections of 1952, 1956, and 1960. In contrast to 1928, the Solid South provided Democratic nominee Adlai Stevenson's only electoral votes, including all four Dixiecrat states in 1952.

With the 1964 election, the Democratic Party decisively donned the mantle of civil rights party, while the Republicans backed off. Democrats passed the stronger Civil Rights Act of 1964 (over another filibuster) and President Lyndon Johnson advocated passionately for a new voting rights act with federal enforcement; Republican candidate Barry Goldwater opposed these measures on the grounds of states' rights and limited government. While Goldwater himself was not overtly segregationist, he was not unaware of what a states' rights agenda meant in the South of the 1960s. Thus, it was no coincidence that in Johnson's landslide election the only states Goldwater carried, other than his home state of Arizona, were the four Dixiecrat states plus Georgia. Thurmond (now a senator) switched parties, leading a gradual movement of Dixiecrats to the Republican Party, and bringing their issues with them.

The shift in the parties' platforms was clearly perceived by the voters as well. The 1960 National Election Study survey showed that roughly equal percentages of Americans believed that either Democrats or Republicans were the party most likely to follow civil rights policies, with 70 percent of respondents perceiving "no difference" on school segregation and 62 percent finding no difference on policies of the FEPC. In the 1964 study, most respondents chose the Democrats as the party most likely to follow civil rights policies (50.2% on school segregation and 54.3% on employment practices), while only a small minority (6.1% on school segregation and 6.5% on employment practices) picked the Republicans.

In 1968, with Democratic Party support for civil rights now personified by nominee Humphrey, Alabama Governor George Wallace (1919–1998) attempted to revive the Dixiecrat movement through his American Independent Party. Simultaneously, Republican candidate Richard Nixon's (1913–1994) campaign adopted a "Southern Strategy" designed to split apart once and for all the New Deal coalition that had included African Americans, urban ethnic Catholics and other blue-collar workers, and white Southerners. Both Nixon and Wallace campaigned on "law and order," benefiting from a white backlash against recent race riots, while Wallace added the familiar focus on states' rights and integration. Wallace carried five Southern states, including three of the Dixiecrat states, and won forty-six electoral votes—not enough to deny Nixon the election, despite the very close popular vote. Wallace's national appeal was far stronger

than Thurmond's; he received 13.5 percent of the vote nationally, including at least 10 percent in a number of states outside the South.

INFLUENCE OF DIXIECRATS CONTINUES

The Southern Strategy contributed to a period of sustained Republican success at the presidential level, with Republicans winning seven of ten elections through 2004. Nevertheless, the long-awaited Republican realignment failed to materialize; Democrats controlled the House of Representatives until 1994 and the Senate for all but six of those years, due in part to the presence in both the House and the Senate of substantial numbers of Southern Democrats. Conservative white Southern voters split their tickets between conservative Democrats at the local and state level, while voting Republican at the national level, creating a "split-level realignment." While overtly racist rhetoric was not a factor during this period, many social scientists found new forms of "symbolic racism," or "coded racism" in such issues as welfare, crime, cities, and immigration that appealed to white voters' underlying racial resentments. Others have noted the finding that most white voters express a belief in broad principles of racial equality, but oppose specific policies designed to address them.

In the early 1990s many conservative Southern Democrats retired, while others were defeated, leading to the Republican takeover of the Congress in 1994, with Southerners holding all of the top leadership posts in both houses. Ironically, a number of white Democratic incumbents were defeated because the creation of "majority-minority" districts removed loyal Democratic African American voters from their districts.

The electoral sea change of 1994 concluded the process begun with the convention walkout forty-six years earlier—the switch of southern conservative white Democrats to the Republican Party. From the 1950s when there were essentially no Southern Republicans in Congress to the 1980s when the Democrats led slightly, to the 1990s when Southern Democrats became an endangered species—Republicans began to hold the vast majority of Southern congressional seats. It is a testament to the power of party identification as a lifetime psychological attachment that it took the death or retirement of the pre–civil rights generation—both in government and in the electorate—to accomplish this.

Along with the shift of Dixiecrats to the Republican Party, this period also saw the death of the boll weevils' opposites, Northern liberal "gypsy moth" Republicans. While this species was never as important as its Southern counterpart, they combined to require bipartisan coalitions for all major legislation as recently as the early 1990s. Also because of a combination of retirements and electoral losses (the 2006 elections left Christopher Shays the sole Republican House member in all of the twenty-two seats of New England), the North in 2007 was even more dominated by Democrats than the South was by Republicans, with party loyalty (and party polarization) in congressional voting at historical highs in both parties. This state of affairs, with its intense ideological and regional polarizations, may be the Dixiecrats' most enduring legacy of all.

In an odd footnote to Dixiecrat history, in December 2002, incoming Senate Majority Leader Trent Lott, a Republican from Mississippi, was forced to step down from his leadership post after making a statement at Thurmond's 100th birthday party that seemed to endorse the Dixiecrat platform of 1948: "I want to say this about my state: When Strom Thurmond ran for president we voted for him. We're proud of it. And if the rest of the country had followed our lead we wouldn't have had all these problems over all these years, either" (Edsall 2002, p. A06). Following Lott's reelection in 2006 and the Democratic takeovers, Lott was voted minority whip, making him the number-two Republican leader in the Senate.

SEE ALSO *Civil Rights Movement, U.S.; Democratic Party, U.S.; Desegregation; Jim Crow; Johnson, Lyndon B.; Key, V. O., Jr.; Minorities; New Deal, The; Nixon, Richard M.; Republican Party; Roosevelt, Franklin D.; Segregation; Southern Strategy; Thurmond, Strom; Truman, Harry S.*

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Joel David Bloom

DJILAS, MILOVAN

SEE *New Class, The.*

DNA

SEE *Genomics.*

DOBZHANSKY, THEODOSIUS

1900–1975

Theodosius Dobzhansky, born in the town of Nemirov in the Ukraine on January 25, 1900, was one of the most influential biologists of the twentieth century. He is generally regarded as the pioneer of evolutionary genetics, a field established in the 1930s that sought to integrate Darwinian selection theory with Mendelian genetics. Much of this work was summarized in Dobzhansky's magnum opus, *Genetics and the Origin of Species*, published in 1937. It was so influential and widely read that it is regarded as the first "textbook" of evolutionary biology in the twentieth century.

The only child of Sophia Voinarsky and Grigory Dobrzhansky, a high-school mathematics teacher, Dobzhansky early on manifested an interest in natural history and collected insects and especially butterflies in the area of Kiev. He attended the University of Kiev and graduated in 1921 with a major in biology. He subsequently accepted a position on the faculty of agriculture at the Polytechnic Institute of Kiev, where, through the influence of plant geneticist Gregory Levitsky, Dobzhansky's interests shifted from the systematics of insects like the ladybird beetle (the *Coccinelidae*) to the newer areas of genetics. Levitsky was part of a wider scientific movement in the Soviet Union that included such individuals as Nikolai Ivanovich Vavilov (1887–1943) and Sergei Chetverikov (1880–1959). These scientists were following efforts in American genetics to understand the mechanism of Mendelian heredity through model organisms, such as the fruit fly (*Drosophila sp.*). In 1924 Dobzhansky moved to Leningrad (Saint Petersburg), where he became a lecturer in genetics under the wing of Yuri Filipchenko and where he continued to study genetics by turning to basic laboratory studies of *Drosophila melanogaster*. At this time, he married a coworker in genetics, Natalie (or "Natasha") Sivertsev, who was to be his lifelong companion and coworker; they had one daughter, Sophie.

In 1927 Dobzhansky accepted a fellowship from the Rockefeller Foundation to study genetics with the American leader in the area, Thomas Hunt Morgan (1866–1945), and his group of fly geneticists at Columbia University, a group that included A. H. Sturtevant (1891–1970), Calvin Bridges (1889–1938), and H. J. Muller (1890–1967). While working as an assistant to Morgan, Dobzhansky learned of the latest techniques and insights into understanding the cytogenetics of the fruit fly. In 1928 Dobzhansky moved to the California Institute of Technology with Morgan and subsequently became assistant professor of genetics in 1929.

Dobzhansky's most notable breakthrough was made in 1933 when he started working with the geographically diverse *Drosophila pseudoobscura*. He also began to combine the laboratory methods common to the Morgan group with his interests in systematics and biogeography, which reflected his earlier Russian training. His research into the evolutionary history of this complex group of flies was aided by his novel use of the giant salivary or *polytene* chromosome, which permitted the reconstruction of the phylogenetic history of the model organism. This research formed the backbone of what became known as the genetics of natural populations (GNP) series, a set of studies published as papers and monographs that explored the range of species, races, and varieties of this group of flies and that sought to understand the process of speciation in genetic terms. It also informed Dobzhansky's 1937 book, his increasing independence from Morgan's fly group, and his interaction with American mathematical theorist Sewall Wright (1889–1988).

By the late 1930s Dobzhansky was recognized as one of the central figures in the "new" or "modern" synthesis of evolution that integrated Darwinian selection theory and natural history with laboratory methods and insights gleaned from Mendelian genetics. Dobzhansky increasingly drew younger workers to him, and developed an international reputation for being a "charismatic" mentor.

In 1940 he accepted a position at Columbia University, where he continued his research on *Drosophila*. In the 1950s his interests took a more global direction when he traveled to South America to study the speciation patterns in tropical *Drosophila*. In 1962 he moved yet again to Rockefeller University, where he remained until his retirement in 1970.

Dobzhansky's interests were broad and included the application of genetics to evolution and to the understanding of human beings. He wrote extensively, especially in his later years, on subjects with anthropological and philosophical themes. His synthesis of evolution and cultural anthropology appeared in 1962 under the title *Mankind Evolving*. In 1967 he revealed his lifelong interest in the existential aspects of evolution and in traditional religious concerns in *The Biology of Ultimate Concern*.

Becoming one of the most famous Soviet émigrés in the United States, Dobzhansky closely monitored the

progress of science in the Soviet Union and was especially active in campaigning against biologist Trofim Lysenko (1898–1976) and his destructive policies against Soviet genetics. Despite his feeling a strong connection to his first home, Dobzhansky was never allowed to return there.

Following his retirement, Dobzhansky moved to the University of California in Davis, where he continued to supervise an active group of geneticists. He died there on December 18, 1975, after a long battle with leukemia. Although he was closely associated with the newer evolutionary biology of the twentieth century, he remained fundamentally religious and was an active member of the Russian Orthodox Church.

SEE ALSO *Racial Classification*

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DOCUMENTARY STUDIES

Documentary studies constitute an important approach in social science research. Because institutions are keen on keeping a record on their actions, documentary sources form the basis for understanding institutional behaviors. In using documentary sources, researchers are able to develop classification schemes or taxonomies to clarify societal actions and individual choices. Documentary sources are often used in conjunction with other data collection methods, such as interviews, surveys, and site observations.

Documentary studies are well suited to examine the functions and operation of how government works. In the United States the separation of powers creates a functional division of responsibilities among the three branches of government. Constitutional studies clearly rely on court decisions, judicial reviews, and lower court opinions. Students of legislative decisions can focus on congressional debate, hearings, and actions. Presidential scholars can review volumes of White House papers and archival records (such as tapes of conversations between the president and his staff).

Governmental documents enable social scientists to understand decisions made at critical stages of the policy process. Documents from governmental sources provide policy objectives, options, and the rationale behind the chosen policy options. Analysis on the content of legislative proposals from initiation through committee hearings and the final votes on the floor have yielded theoretically rich perspectives. Theodore Lowi's (1972) comparative analysis on the content of and actions on several federal legislations led to his argument that the nature of the legislation or policy determines political interrelationship among key actors. Policies that allocate jobs and contracts to congressional districts tend to receive broad political support, whereas legislations that aim at redistributing resources to the needy population are politically polarized.

Federalism in the United States tends to complicate documentary analysis, because many governmental decisions are dispersed across states and cities, and contextual variations tend to challenge research efforts to generalize the findings from a few study sites. At the same time, local variations offer an opportunity for experimentation. Researchers of urban reform are keen on analyzing mayors' state-of-the-city speeches as well as city council minutes and voting outcomes. In public education, there are fifty state systems that define their own academic standards, and more than 14,000 locally elected school boards that govern their schools. Studies on school governance have drawn on school board minutes, collective-bargaining agreements, administrative guidelines, financial audits, and evaluation reports. In the context of intergovernmental relations, the literature on policy implementation pays particular attention to the goals of legislation, the definition of eligibility, and the extent to which the intended services and benefits are delivered to the targeted populations (Pressman and Wildavsky 1973). Studies of the federal implementation of education policy have relied on audit findings to identify if state and local agencies are meeting the federal program expectations (Wong 1990).

As the boundary between government and civil society changes, researchers are likely to pay more attention to a broader range of documentary sources. A study of congressional hearings suggests the rise of citizen-based action groups in shaping the direction of the government's role in social welfare since the postmaterialist era of the 1960s (Berry 1999). Using local newspapers as an information

source, one study analyzed two major newspapers in one large city to examine editorial support for mayoral control of public schools (Wong and Jain 1999). Further, human conditions can be depicted through the making of, the study of, and the use of documentary films. This type of documentary work is carried out at the Center for Documentary Studies at Duke University and at the Southern Oral History Project at the University of North Carolina at Chapel Hill.

Documentary studies are likely to continue to play a prominent role in social science research. There has been a rapid proliferation and democratization of documentary sources as the World Wide Web has become more accessible to the public. Public-opinion polls, news articles, congressional hearings, and state audits of agencies, schools' performance, and for-profit organizations' performance, just to name a few, are now easily accessible through the World Wide Web. Archaeological sites and artifacts are often scanned into digitalized format for research purposes. The Internet search engine Google and some of the world's major university libraries formed a partnership to convert their entire collections into electronic formats that will be widely accessible. Traditional barriers to access, such as transportation cost, will no longer impede documentary research, both domestically and globally.

Finally, the politics of documentary analysis must be taken into consideration. Documents come from many sources, including public-regarding and interest-based organizations. More often than not, documentary sources, especially secondary analyses conducted by think tanks, reflect a certain bias. Too often, students overlook the need to cross-validate the content of the documents. Furthermore, for students who are interested in in-depth research, there is still a need to navigate the labor-intensive process of obtaining permission to use certain documentary sources from governmental agencies.

SEE ALSO *Film Industry; Narratives*

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Kenneth K. Wong

DOLL STUDY

SEE *Clark, Kenneth B.*

DOMESDAY BOOK

SEE *Census.*

DOMINANT STRATEGY

SEE *Zero-sum Game.*

DOMINO THEORY

The domino theory was articulated by President Dwight D. Eisenhower in an April 7, 1954, news conference in which he worried that if communism remained unchecked, the free world might endure "the 'falling domino' principle. [In that case] you have a row of dominoes set up, you knock over the first one, and what will happen to the last one is the certainty that it will go over very quickly. So you have the beginning of a disintegration [of democratic countries] that would have profound influences" (Eisenhower 1954, p. 382). According to that principle, a change in one country will "spill over," setting in motion the political transformation of an entire region.

GEORGRAPHIC AND POLITICAL ORIGINS

Of particular concern to American leaders at that time was the ongoing crisis in southeastern Asia, where the loss of Vietnam could be expected to lead to eventual Communist domination of Thailand, Indonesia, and perhaps New Zealand and Australia (Gaddis 1982). The application of the domino theory, however, was not limited to southeastern Asia. The growing momentum of communism and the falling of dominoes animated national security debates over American policies toward Western Europe and Latin America as well. After the Eisenhower administration, the Democratic administrations of John F. Kennedy and Lyndon Johnson continued to believe that setbacks in southeastern Asia in general and Vietnam in particular would have dire consequences.

Fears of dominoes falling were based primarily on two mutually reinforcing concerns. The first was that if the United States failed to support an ally against Communist agitation, Communist movements in neighboring countries and their Soviet and Chinese sponsors would be emboldened. Communist success would breed success, and failure to stem the tide early would push

countries out of the American orbit, with disastrous long-term consequences. Second, that perception of threat was amplified by concerns that the inability of an American-sponsored government to suppress domestic insurgents or outside provocateurs would signal that the United States could not be counted on as a reliable alliance partner. In that case the insecurities of allied countries and the demonstrated inability or unwillingness of the United States to help overcome them would lead countries to pull away from the United States. On both counts American decision makers feared that seemingly small reverses in peripheral countries ultimately would lead to a massive redistribution of cold war power as country after country fell to Communist pressure.

Although the rhetoric of falling dominoes most often was used to articulate the dangers from the unchecked spread of Soviet expansion, some noted that dominoes might be induced to fall the other way as well. Soon after the end of the World War II (1939–1945) conservatives in the Truman administration advocated "rolling back" Soviet advances in Europe. Although the lexicon of falling dominoes had not been coined yet, the basic logic was the same: It was hoped that American successes would demonstrate the power of the West and the poverty of the Soviet alternative. If that policy was successful, it was hoped that it might set into motion a counterdomino effect in which European Soviet-styled authoritarian regimes were felled by a mix of domestic and Western pressure. The Soviets' continued de facto and then de jure domination of Central and Eastern Europe frustrated those early reactionary impulses to roll back the postwar status quo. Thereafter, the world's dominoes were seen as leaning against the United States from the 1950s through the 1970s.

THE REAGAN AND SECOND BUSH ADMINISTRATIONS

Despite the absence of a positive theory of a Communist rollback for much of the cold war, the idea did not die. After the collapse of détente in the late 1970s, many conservatives called for the Reagan administration to roll back communism in Europe and especially in Latin America. The intellectual basis for American overt and covert involvement in a number of military conflicts in the region, notably the 1983 invasion of Communist-held Grenada, indicated continued support for the concepts found in domino theory. Specifically, it was believed that American weakness in Latin America would lead to further Communist advances, whereas American successes not only would reverse that process but perhaps would lead to conditions in which established Communist regimes might be rolled back and ultimately expelled from Latin America. Again, the key point was the belief that success breeds success and that small and even tangential victories early can have a snowball effect: Communist successes would increase the support for and allure of that centrally planned and authoritarian model, whereas American successes would reverse the trend and create conditions under which free markets and democracy could flourish.

The end of the cold war did not spell the end of the domino theory. In the first decade of the twenty-first century the Bush administration used the domino theory to motivate and justify its policies in the Middle East and the war on terror. The Bush White House feared that successes by Islamist groups such as Al-Qaeda threatened Western-friendly states and provided a recruiting tool for those opposed to American interests in that region. On the one hand, American and Western successes in routing those elements and spreading democracy throughout the Middle East would set in motion a liberalizing and democratizing dynamic that would bring peace and stability to an unsettled region. On the other hand, if the Islamisists' attacks on friendly governments and Western interests went unchecked, it would catalyze a counter-Western and counterdemocratic movement. According to the logic of the domino theory, the early victors in that struggle would prove their worthiness to be emulated and draw further recruits and converts to their cause; the losers would see their losses compounded as the struggle continued.

Again, the key assumption was that success creates a self-sustaining momentum that will lead to the domination of the region by one side or the other. Implicitly or explicitly that logic was given scholarly support by many "offensive" realists, such as William Wohlforth, who argued in 1999 that American willingness to serve as a leader and a supporter of democracy and free markets will lead to a pax Americana: a new era of American dominance and peace and cooperation.

CRITICISMS

The fact that the logic of domino theory has proved enduring does not mean that it is without critics. "Defensive" realists such as Kenneth Waltz (1998) and Christopher Layne (1993) argue that the success of a country holds within it the seeds of failure. They claim that as a country becomes more powerful, it threatens the sovereignty and autonomy of its neighbors, increasing their willingness to resist further expansion. Rather than going from strength to strength, aggressive countries encourage others to unite against them, and thus early successes make future expansion less rather than more likely.

According to the logic of balancing, early Communist success in southeastern Asia made countries such as Thailand and Japan more likely to support the

United States and pushed them farther from the Communist camp. Likewise, successes by Islamists are likely to drive states into closer cooperation with the United States out of fear that they could be next. At the same time, American activities in the region, such as the invasion and occupation of Afghanistan and Iraq, are likely to drive those governments away as they become increasingly wary of American power and influence. The defensive realist analysis thus turns the domino theory on its head. If it is correct, it should serve as both a comfort to American decision makers combating Islamists in the Middle East and a warning to those who would use American hegemony to launch a program of liberalization and democratization abroad.

SEE ALSO *Al-Qaeda; Cold War; Communism; Democratization; Eisenhower, Dwight D.; Fundamentalism, Islamic; Iraq-U.S. War; Johnson, Lyndon B.; Kennedy, John F.; Strategic Behavior; Vietnam War; Waltz, Kenneth*

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Solomon Major

DOPAMINE

Dopamine is a neurotransmitter that serves as a chemical messenger in the nervous system and permits individual nerve fibers (neurons) to communicate with each other. The dopamine neurotransmitter belongs to the class of compounds known as monoamines, and more specifically to a subclass of chemicals called catecholamines. Dopamine can act either as an inhibitory mechanism or an excitatory mechanism in the nervous system, depending on the location of dopamine neurons, and the receiving characteristics of the next neuron in the chain.

Dopamine activation has long been associated with increased motor output (i.e., increased physical activity) (Wise 2004). Hence, it is not surprising that dopamine depletion is associated with a variety of movement disorders, such as Parkinson's disease. Characterized by tremors, muscle rigidity, and lack of fine motor skills, Parkinson's is caused by a degeneration of dopamine projection fibers originating in a brain region called the substantia nigra. The fact that the administration of a substance (L-DOPA) that increases dopamine synthesis in this brain region is the primary approach to treating Parkinsonism underscores the importance of dopamine in the regulation of motor control and movement.

Changes in dopamine activity also are linked to the expression of certain psychological disorders, such as schizophrenia. Schizophrenia is characterized by shifting, illogical thought patterns, delusional thought processes, and hallucinations. The dopamine hypothesis of schizophrenia suggests that higher than normal levels of dopamine in the midbrain region of patients suffering from schizophrenia produce a biochemical imperative to engage in disordered behavior. Consistent with this position, the most commonly prescribed, and arguably the most effective, drug therapies for schizophrenia are dopamine receptor blockers. A compound labeled chlorpromazine (trade name Thorazine) is especially effective in reducing the symptoms of schizophrenia, and such dopamine antagonists when continued after treatment substantially lessen the chances for relapse compared to cases in which patients stop taking the drug.

There is evidence that blockade of dopamine transmission is associated with the devaluation of incentive systems, perhaps by affecting memory consolidation (Robbins and Everitt 2006). For instance, it is known that stamping-in of stimulus-response associations is blunted under conditions of reduced dopamine activity. Even once a behavior is learned, evidence shows that the ability to retrieve previously acquired information is reduced. Although the precise mechanisms responsible for these challenges to associative processes is not clear, it is clear that reward-seeking is diminished when dopamine systems are compromised.

There is a large literature that shows that a variety of rewarding events elevate the levels of dopamine in pleasure pathways of the brain. There are three major systems that are rich in dopamine fibers: the nigrostriatal system, the mesolimbic system, and the mesocortical system. Of the three, the pathway that has received the most attention from investigators of reward systems is the mesolimbic pathway. The dopamine projection neurons of the mesolimbic system originate in the ventral tegmental area of the midbrain and terminate in several forebrain regions, most importantly the nucleus accumbens. At one time it was believed that the nucleus accumbens constituted "reward central" and any events or substances that increased dopamine activity in this region served as rewards (Wise and Bozarth 1987). It is now known that

other pathways and neurotransmitters are involved in defining reward properties, but the scientific community still maintains that elevated levels of dopamine in the nucleus accumbens contribute prominently to the rewarding effects associated with a variety of motivational processes, including the sex drive and hunger (Berridge and Robinson 1998).

Although dopamine plays a role in mediating a broad array of reinforcing (reward) activities, the topic that has been studied most is the modulatory role played by dopamine in determining the rewarding effects of psychoactive drugs. While dopamine is important for drugs such as heroin, marijuana, and alcohol, it does not appear to be crucial with respect to determining the reward value of these types of drugs. It is certain, however, that dopamine is the major neurotransmitter involved in defining the potency and addiction potential of psycho-stimulants such as cocaine and amphetamine. With respect to cocaine, the drug blocks the action of the dopamine transporter (DAT) in the nucleus accumbens. DAT is the reuptake chemical in the synaptic cleft (space between neurons where neurotransmitters are released) that moves dopamine back inside the releasing neuron and restores dopamine levels. When DAT is blocked by cocaine, dopamine remains in the cleft and continues to stimulate the postsynaptic neuron, thus producing euphoria. Amphetamine operates similarly to block dopamine reuptake, but also increases the frequency and amount of dopamine release.

SEE ALSO *Happiness; Needs; Neuroscience; Psychology; Schizophrenia; Wants*

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Jack Nation

DORNBUSCH-FISCHER-SAMUELSON MODEL

The Dornbusch-Fischer-Samuelson (DFS) model of international trade was introduced into the economics literature by three Massachusetts Institute of Technology (MIT) professors in 1977. The model extends the widely accepted theory of comparative advantage of classical economist David Ricardo (1772–1823) to a conceptually infinite number of commodities, and the model integrates money and payments into what essentially had been a barter model. From DFS, greater understanding can be gleaned of the determinants of international trade patterns.

The model assumes the traditional classical framework of two trading countries and of labor being the sole factor of production. Suppose the countries are *A* and *B*. Country *A* exports any good where the wage rate for *A*'s workers (WA) multiplied by the labor time needed to produce a unit of the good (LA) is less than the wage rate for *B*'s workers (WB) multiplied by the labor time needed to produce a unit of that good in *B* (LB); that is, *A* exports any good where $WA \cdot LA < WB \cdot LB$. Country *A* imports goods where $WA \cdot LA > WB \cdot LB$. Expressed alternatively, country *A* will export goods where (WA/WB) < (LB/LA) and import goods for which (WA/WB) > (LB/LA), and, in DFS, a continuum of goods is specified in descending order of (LB/LA). (It is assumed for simplicity in this discussion that there are no transport costs and that the exchange rate is fixed at one unit of *A*'s currency = one unit of *B*'s currency.) Thus, if the wage ratio (WA/WB) is given, an examination of labor times can determine which goods in the continuum will be exported from *A* to *B* and which from *B* to *A*.

But what determines the wage ratio? As noted above, (WA/WB) would, when compared with the (LB/LA) ratios, determine the trade pattern; however, the trade pattern itself would also determine (WA/WB). For example, if the trade pattern is such that most of the different goods are exported from *A* to *B* and few goods are exported from *B* to *A*, then, in essence, there is strong demand for *A*'s goods (and therefore for *A*'s labor) and a trade surplus for country *A*. This demand for *A*'s labor will bid up WA relative to WB. As WA rises, some goods previously exported from *A* to *B* [because (WA/WB) < (LB/LA) for those goods] will no longer be exported but will be imported by *A* because (WA/WB) has increased.

With this interaction of the trade pattern and wage rates, an equilibrium trading pattern is established. Equilibrium occurs with balanced trade (exports = imports for each country) and, for the borderline good in the continuum between the goods exported by *A* and those exported by *B*, (WA/WB) = (LB/LA). All goods where (WA/WB) < (LB/LA)—the goods with higher (LB/LA) ratios—will be *A*'s exports. All goods for which (WA/WB) > (LB/LA)—the goods with the lower (LB/LA) ratios—will be *B*'s exports. The original DFS article then introduced transportation costs, nontraded goods, and exchange rate and other considerations, but the major

contribution was this simultaneous determination of relative wage rates and the trading pattern.

From this equilibrium position, the impact of changes in various economic elements can be analyzed. For example, suppose that all consumers turn their tastes relatively away from *A*'s goods and toward *B*'s goods. The new demand for *B*'s goods will increase the wage rate in *B* relative to the wage rate in *A*, a change that will cause some of *B*'s export goods to become *A*'s export goods. At the new equilibrium, balanced trade will be restored, country *B* will be exporting fewer different goods than originally, and *B*'s wages will have risen relative to *A*'s.

Consider next the perhaps surprising consequences of a uniform productivity increase in all of country *A*'s industries. With this productivity increase, LA (labor time needed for one unit of output) falls in each of *A*'s industries, and there will be a greater number of different goods exported from *A* to *B* than previously [because (LB/LA) will now be greater than (WA/WB) for some goods for which (LB/LA) was formerly less than (WA/WB)]. However, with more demand for *A*'s goods, (WA/WB) will rise and some of the new exports from *A* will revert back to being imports from *B*. In the model, though, the end result is that, on net, the number of different goods exported from *A* has increased and (WA/WB) has risen. Real income has increased in *A*, as its wages have gone up while the cost of producing its goods has gone down. Importantly, though, real income in country *B* also has risen. Even though *B*'s wage has declined relative to *A*'s wage, *B*'s absolute income has risen because the productivity increase has made *B*'s imports from *A* less expensive. Hence, a significant lesson from DFS is that productivity improvements under competition get transmitted across country borders—there is no absolute gain by one country and corresponding absolute loss for the other country.

The original DFS model has formed the basis for a number of extensions. Rudiger Dornbusch, Stanley Fischer, and Paul Samuelson themselves (1980) later incorporated a second factor (capital) into the model in a Heckscher-Ohlin framework and produced further conclusions. (*Heckscher-Ohlin* [or alternatively, *Heckscher-Ohlin-Samuelson*] refers to a standard trade model based on relative factor endowments of countries and relative factor intensities in the production of commodities.) The DFS model also has been extended, among much other research, in its Ricardian formulation to more than two countries in growth and customs union contexts (Wilson 1980; Appleyard at al. 1989) and into a multicountry framework, combined with monopolistic competition and econometric work, in its Heckscher-Ohlin formulation (Romalis 2004). A considerable amount of empirical work over the years has supported the relationship between labor productivity/costs and trade patterns predicted by the classical economists and DFS, a comprehensive example being Wendy Carlyn, Andrew Glyn, and John Van Reenen (2001). Criticisms of the model can be directed toward the realism of its assumptions of perfect competition and of smooth adjustment to technological change and other disturbances.

SEE ALSO *Absolute and Comparative Advantage; Heckscher-Ohlin-Samuelson Model; Rybczynski Theorem; Stolper-Samuelson Theorem; Trade*

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Dennis R. Appleyard

DOUBLE CONSCIOUSNESS

SEE *Veil, in African-American Culture.*

DOUGLAS, MARY

SEE *Sanitation.*

DOUGLASS, FREDERICK

1818–1895

Born into chattel slavery on February 14, 1818, in Tuckahoe on the eastern shores of Maryland, Frederick Augustus Washington Bailey, later known as Frederick

Douglass, created in his time and for future generations one of the most remarkable personalities in American history. As a public figure, Douglass rose through the brutalities of slavery to become at the time of his death on February 20, 1895, the most famous black American in the world and black America's foremost intellectual voice.

Douglass's preeminence in American history is gleaned from his direct contacts with the antebellum abolitionist leadership of William Lloyd Garrison (1805–1879), the suffragist leadership of Susan B. Anthony (1820–1906) and Elizabeth Cady Stanton (1815–1902), the militancy of John Brown (1800–1859) and Martin Delany (1812–1885), his meetings with U.S. presidents from Abraham Lincoln (1809–1865) to James Garfield (1831–1881), and his government assignments as U.S. representative to the Dominican Republic and Haiti. However, there is a private side, of which too little is made, to Douglass's determination to engage the forces of evil, as he saw them, and to form alliances only when it was necessary for him to be heard by more people, read by more citizens, or at times, to present himself to another country, as he did on several occasions on his visits to the British Isles.

Douglass escaped from slavery in 1838. As his biographers have noted, in 1841 the former slave joined the Massachusetts Anti-Slavery Society under the leadership of Garrison, then leader of the radical wing of abolitionism and editor of the successful abolitionist newspaper, the *Liberator*. Douglass clearly modeled some of his behavior on Garrison. Both recognized the fiery spirit in each other, and both were orators connected by a passion to eliminate slavery. Through Garrison's group, Douglass earned money as a speaker, widened his circle of abolitionist acquaintances, and traveled to new places. The most compelling event in 1845 from an abolitionist's perspective was the publication of Douglass's first autobiography, *Narrative of the Life of Frederick Douglass, an American Slave, Written by Himself.* Garrison, in fact, wrote the preface. Douglass later wrote *My Bondage and My Freedom* (1855), and in 1881 he published *Life and Times of Frederick Douglass*, his final autobiography.

The *Narrative* made Douglass famous and started a long and distinguished career for this brave man, prolific writer, and articulate democratic voice. In page after page, he details the painful and violent experiences slaves faced as they were raped, murdered, bought, and sold away from their families. Douglass not only named the murdered, he named the murderers who went unpunished as well, thus providing graphic proof that no law protected slaves against these crimes. Furthermore, his writing critiqued the structure of authority by slicing through the rhetoric of the state to expose slaveholders, especially those professing religious faith, in their role as personal agents in a system of slavery allowed to exist simultaneously with the ideals of a free republic. The *Narrative* established him as a reliable and serious source for presenting any of the issues of his day requiring instruction and correction, most of them related to slavery.

By 1847, as the editor of the second black-owned newspaper in the United States, the *North Star*, Douglass had found that the uses of history enabled him to move back and forth between his private and public worlds. Douglass's use of history permitted him to speak about the signs of the times; it served, furthermore, to help him to judge civilization's behaviors for failing to subject the nation's moral faults to critical reflection. In this way, Douglass used history to critique reason. For him, the realities of slavery placed the present and the future of the United States in an untenable position: The country could not survive if it remained both slave and free. The purpose of Douglass's legacy to America and to the world is to uphold the principle of freedom as an inalienable human right.

Although supportive of each other, Douglass and Garrison split over the issue of the Constitution as a document that supported the institution of slavery. As early as 1851, the relationship between the two became strained as Douglass, having studied the debate over the Constitution, rejected Garrison's position that the Constitution was proslavery, whereas Douglass gradually saw the document as having the potential to eradicate slavery. Biographers have portrayed the breakup in Freudian terms as Douglass's rejection of Garrison as a father figure and his search for his own identity. It is also important to note that freedom for Douglass encompassed a deep, multilayered view of the self that had more to do with being "self-made" than with being a collaborator. His understanding of the Constitution, ultimately, had less to do with what Garrison asserted than with what Douglass realized through his own complex social and historical understanding of the place of all humankind, black and white, male and female, in a democratic social order.

Having been a slave, Douglass instinctively understood the political rights of women. Their demand for equal citizenship and the right to vote found him using his considerable oratorical gifts and intellect on their behalf. As one of the few men to attend the 1848 convention on the rights of women in Seneca Falls, New York, the editor of the *North Star* added to the masthead of the paper his now-famous conviction, formed at this political gathering: Right is of no sex; truth is of no color; God is the father of us all and we are all brethren. He understood that the criticisms leveled against women in their pursuit of freedom against male supremacy were the very same arguments used against the freeing of slaves. While his dedication to women's political rights never wavered,

Douglass did not always support the feminist leadership of Anthony and Stanton. They all supported civil war, but differed on other questions; for example, Douglass supported the Fifteenth Amendment giving black men the right to vote. Anthony and Stanton did not support this amendment because it did not offer the same rights to women.

In 1882 Frederick Douglass, now sixty-four-years old and known as the "sage of Anacostia" after the Washington, D.C., neighborhood where he lived, buried Anna Murray Douglass, his wife of forty-five years, who had long suffered from rheumatism. It was a considerable shock to the world when in 1884 he married Helen Pitts, forty-six, a white woman from a New York abolitionist family with deep roots in radical politics. The interracial marriage eliminated any distinction between private and public worlds: It clashed with social norms. Most whites and blacks, particularly members of the couple's own families, looked upon the marriage as a violation, and neither family fully embraced them. Nevertheless, Douglass and Pitts lived happily and traveled to the great cities of Europe and to Egypt. After his death, and in the face of opposition from his children, she lectured and secured donations to preserve Cedar Hill, their home in Anacostia. The couple is buried in the family plot in Mount Hope Cemetery in Rochester, New York.

SEE ALSO *Slavery*

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DOWN SYNDROME

SEE *Race and Psychology.*

DOWNS, ANTHONY

SEE *Spatial Theory.*

DOWRY AND BRIDE PRICE

Bride price and *dowry* are terms that refer to payments made at the time of marriage in many cultures, primarily in Asia and Africa. Bride price is typically paid by the groom or the groom's family to the bride's family. Dowry is typically paid by the bride's family to the bride or to the wedded couple. Thus bride price and dowry are not necessarily the converse of each other. However, in the twentieth century, dowry payments in South Asia have increasingly been demanded by and paid to the groom's family (and not just to the bride or the wedded couple). This suggests a usage of the term dowry to mean a *groom price*, the reverse of a bride price. Bride price and dowry need not be mutually exclusive, and marriage transfers in both directions can occur simultaneously. A complex set of norms may then govern the nature and the magnitude of payments in either direction.

PREVALENCE

Historically, the payment of bride price has been a more common occurrence than that of dowry. Only 3 percent of the cultures listed in Murdock's *Ethnographic Atlas* (1967) demonstrate the practice of dowry payments, whereas 66 percent follow a norm of bride price. Dowries were common in the Near East, Europe, East Asia, South Asia, and some parts of the Americas. Although the custom of dowry payment has disappeared in most regions in the West, it remains widespread in South Asia. Bride prices were known to have prevailed extensively in Africa and also in areas of mainland, South, and East Asia, and North and South America.

Both dowry and bride price regimes were present in South Asia in the early part of the twentieth century; in the second half of the century, dowry amounts were inflated, including a switch from bride price to dowry in many areas where the former practice was dominant.

CHARACTERISTICS OF MARRIAGE PAYMENTS

The payment of bride price can take several forms. *Bride price* or *bride wealth* is typically a transfer in the form of livestock, goods, or money from the groom (or his family) to the bride's kinsmen. *Bride service* refers to a transfer in the form of labor or other services rendered by the groom to the bride's family. Both these forms of payment can be substantial in magnitude. In contrast, a *token bride price* is usually a small symbolic payment made by the groom's family to the bride's. Finally, *woman exchange* refers to the transfer of a sister or other female relative of the groom to the bride's family in exchange for the bride.

A *dowry* or *groom price* is a payment made from the bride's family to the bride, the groom, the wedded couple, or the groom's family. It may consist of movable property such as money, ornaments, clothing, household goods, or cattle. In some cases land is also provided as a part of the payment.

The norms associated with marriage payments can be complex and vary largely across societies. These norms govern issues such as when the marriage payment is to be made and to whom, to what use the marriage payment may be put, and who inherits the payment in case of death or dissolution of the marriage. In some regions of South India, for example, a bride price is paid by the groom's parents to the bride's but must then be spent on the bride's dowry. The payment may subsequently be claimed by the bride's family, but only upon the death of the bride. In some African societies, on the other hand, the bride price received for a woman may be used to obtain a wife for her brother. But such a transaction is often regarded as a debt owed to the sister, and to repay it the brother must offer his daughter in marriage to her son.

FACTORS BEHIND MARRIAGE PAYMENTS

Many hypotheses have been put forward to explain the occurrence of bride price and dowry. One theory links marriage payments to the rights of inheritance held by women and explains dowry as a premortem bequest made to daughters. Another hypothesis links marriage payments to the economic value of women. Brides command a positive worth—a bride price—in areas where women make valuable contributions to agricultural work or other economic activity. In regions where women do not make an economic contribution, they constitute an economic liability and hence bring a dowry. A third hypothesis argues that marriage payments are "prices" that clear the marriage market—that is, these prices equate the demand for and supply of brides and grooms. Therefore, when grooms are relatively scarce brides pay dowries, and when brides are scarce grooms offer a bride price.

Other theories link the existence of different types of marriage payments to the laws governing marital and social ties (kinship structures). For example, bride price has been observed very often in societies with general polygyny (polygyny practiced by the general populace and not just the rich), whereas dowry almost always occurs in monogamous societies. Marriage payments have also been linked to norms of hypergamy—whereby brides are expected to marry into a higher caste or social group—and hypogamy—whereby brides are expected to marry into a lower caste or social group.

These and other explanations of marriage payments proposed by social scientists are not mutually exclusive, and more than one factor could contribute to the determination of marriage payments in any society. Moreover, because the combination of factors leading to dowry or bride price may be very different, the disappearance of one type of payment over time does not necessitate the appearance of the other.

DOWRY INFLATION AND THE MARRIAGE SQUEEZE IN INDIA

India witnessed a real inflation in dowries in the latter half of the twentieth century. Incidents of violence against brides who were unable to pay the dowries demanded of them (bride burning and dowry deaths) also became increasingly commonplace during this time, despite the passage of the Dowry Prohibition Act (1961), which made the payment of dowries illegal.

The phenomenon of the Indian dowry inflation appears especially perplexing given that the widespread practices of female infanticide and female feticide contributed to a highly masculine sex ratio in India throughout the twentieth century. It seems puzzling, therefore, that scarce women in India should have to pay increasingly higher prices for grooms. However, the nature of marriage payments is determined not by the overall sex ratio of the population, but the ratio of "marriageable" men and women. It is possible that this ratio is skewed in favor of women—leading to a positive price of grooms (i.e., dowry)—even when the overall sex ratio is skewed in favor of men.

The *marriage squeeze hypothesis* uses the idea of differential marriageable age of men and women to argue that population growth (which occurred in India in the 1930s) explains dowry inflation. The argument runs as follows: High rates of population growth lead to younger cohorts outnumbering older cohorts in the population. When older men marry younger women, this leads to an excess supply of marriageable women—or a marriage squeeze against women—causing the price of grooms to be bid up.

The norm of *caste hypergamy*, practiced in some regions of India, has also been invoked to explain the Indian dowry inflation. According to this norm, women must marry into a higher social class and hence pay a higher price for the more "desirable" groom. Alternative explanations of the dowry inflation point to *Sanskritization* (emulation, by lower castes, of the higher-caste practice of paying dowry), the changing economic value of women, and changing social structures in India during this time.

SEE ALSO *Caste; Caste, Anthropology of; Family; Marriage*

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Sudeshna Maitra

DRAFT

SEE *Selective Service.*

DRAKE, ST. CLAIR
1911–1990

John Gibbs St. Clair Drake was a University of Chicago–trained social anthropologist. He was born on January 2, 1911, in Suffolk, Virginia, to an African American schoolteacher mother and a Barbadian-born father who was a Baptist preacher and an international organizer for Marcus Garvey's Universal Negro Improvement Association.

After spending much of his youth in Pittsburgh, Pennsylvania, and Staunton, Virginia, Drake attended Hampton Institute (now Hampton University), graduating with a BS in biology in 1931. After graduation he spent a year in an experimental, nondegree program at Pendle Hill Quaker Graduate Center in Wallingford, Pennyslvania. The next three years he taught biology and English at Christiansburg Normal and Industrial Institute, a Quaker boarding school for blacks in western Virginia. In 1935 his former mentor at Hampton, Allison Davis, invited him to join his interracial team of anthropologists investigating racial caste and social class in Natchez, Mississippi. That project resulted in *Deep South: A Social Anthropological Study of Caste and Class* (Davis, Gardner, and Gardner 1941).

In 1937 Drake began graduate studies at the University of Chicago, where he worked with Lloyd Warner, Robert Redfield, and Fred Eggan. Drake's participation in a Works Projects Administration project in Chicago led to his collaboration with Horace Cayton, a sociology graduate student. Together they wrote the classic *Black Metropolis: A Study of Negro Life in a Northern City* (1945). The Chicago research project was also the basis for "Churches and Voluntary Associations Among Negroes in Chicago" (1940), a memorandum prepared for Gunnar Myrdal, commissioned by the Carnegie Foundation to produce *An American Dilemma: The Negro Problem and Modern Democracy* (1944).

In 1947 he conducted his dissertation research in Cardiff, Wales, where he studied a community made up of African seamen and their Welsh families. Drake examined the forms of social action that arose in response to British racial and colonial domination (Drake 1954). While in Britain he befriended Kwame Nkrumah (1909–1972) and other leaders of the African independence movement.

In 1946 Drake began a twenty-three-year tenure at Roosevelt University. Between 1954 and 1965 he pursued applied research interests during summers and two leaves. In 1954 and 1955 he collaborated with his wife, the sociologist Elizabeth Johns Drake (1915–1996), in a Ford Foundation–funded study of mass media in Ghana. From 1958 to 1961 he served as head of the Department of Sociology at the University of Ghana. He also directed research on the tensions between the postcolonial elite and traditional authorities, and on Tema, a modern port city built to stimulate Ghana's economic development. The new city was populated by resettling villagers from traditional lands, and Drake's analysis of that contested process was both critical and understanding of the government's policy. During his Africa years, he advised Nkrumah and helped train Peace Corps volunteers, sensitizing them to the cultural and political factors likely to affect their work.

After Ghana's 1966 military coup, Drake's scholarly focus shifted to problems in the African diaspora: urban unrest and race relations in the United States; cultural retention, reinterpretation, and syncretism in the Caribbean; patterns of coping and resistance in the African diaspora; and the intellectual history of blacks in anthropology and in black studies. In 1969 he moved to Stanford University to direct its African and Afro-American Studies Program. After retiring in 1976, he produced the two-volume *Black Folk Here and There: An Essay in History and Anthropology* (1987, 1990), in the tradition of W. E. B. Du Bois's *Black Folk Then and Now* (1939). In this his last major work, Drake examined the cultural and intellectual history of antiblack prejudice in the precolonial Old World diaspora and the colonial diaspora that formed within the plantation societies of the New World. He presented a symbolic and textual analysis along with an intellectual history and sociology of the knowledge on the status of sub-Saharan Africans in ancient Egypt and the wider Nile River Valley, the Islamic and Judaic Middle East, Mediterranean Europe, and northern European Christendom. He explained the major shifts during the sixteenth century that led to the emergence of racial slavery. In this book, along with a series of seminal essays, he presented a paradigm for studying the African diaspora.

Influenced by black vindicationism, pan-Africanism, the Quakers, and Depression-era socialists and communists, Drake was an activist intellectual. He organized sharecroppers and tenant farmers in Mississippi and unemployed workers in Chicago. He campaigned against the University of Chicago's urban renewal policy in the 1950s, and advised members of the Student Nonviolent Coordinating Committee (SNCC) in the 1960s. He was also a founder of the American Society for African Culture and the American Negro Leadership Conference on Africa. He died on June 14, 1990.

SEE ALSO *African American Studies; Metropolis; Park School, The; Park, Robert E.; Politics, Urban; Race*

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Faye V. Harrison

DRAVIDIANS

The Dravidians were the majority population across the Indian subcontinent before the second millennium. The evidence of early Dravidians comes from studying the Indo-Aryan culture, languages, and findings at many mounds, the preeminent of which are Mohenjodaro in Punjab and Harappa in Larkana District in Sind. The sources indicate an early Indian civilization with developments parallel to those of Mesopotamia and Sumeria. Excavations from the 1920s found craftsmanship that defines the Indus (or Harappa) culture of 5,000 years ago. The presence of spears, bows, and cattle suggests society's transition from a matriarchate to a patriarchate state. For transactions they used seals as coins, some of which depict a prototype of the god Shiva.

Dravidians had an advanced city culture more ancient than the Aryans, who, as Indian legends tell and some dispute, invaded India from central Asia in several waves around 1500 BCE. The *Rig Veda*, an ancient Hindu scripture, records the destruction of Harappa, then called *Hariyopiyah* (5.27.5). In particular, the Aryan invaders targeted for extinction the Dasyus tribe, who were dark-skinned—a Dravidian feature. Yet another view indicates that the Harappa culture was already disintegrating when the Aryans arrived, perhaps due to natural causes such as a flood.

Among the jungle tribes in the Indus Valley were the Bhils, Kols, Santals, Kukis, Todas, and Oraos, some of which were Dravidians. One theory is that the Dravidians escaped into the hills after the first Aryan invasion, making the hills the safe ground for the Dravidians. The Aryans, being familiar with farming and cattle breeding, had the incentive to clear the lowlands in cooperation with the Dravidians. Thus, savannas and fens were transformed into rice fields. In this civilization building, the Aryans contributed knowledge of horse-power, iron, and the distinct Sanskrit language to the Harappan oxen-force, copper, and the difficult to define Dravidian language.

The link between the Harappan language and the Dravidians is controversial. One theory holds that the Harappans used a sign language that is not alphabet-based, as in Sanskrit, whereas others maintain that the Harappan language is close to the Dravidian language. The proto-Dravidian language was placed at the scene of the Harappan culture. The prominent language groups of the Dravidians today are Brahue in the north, Gonds in north and central India, Kannadigan in Karnataka and Maharastra, Malayali in Kerala, Tamil in the South, and Telugu in Andhra Pradesh. Inscriptions at Harappan sites suggest a resemblance to the old Tamil that is spoken by Dravidians in southern India today. Geneticists are now

exploring relatedness among speakers of over 20 different language groups associated with the Dravidians.

SEE ALSO *Anthropology; Anthropology, Linguistic; Archaeology; Aryans; Caste, Anthropology of*

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Lall Ramrattan
Michael Szenberg

DREAMING

Dreaming is an episodic activity of the sleeping mind during which spontaneous sensory experiences occur that are perceived at the time as if real. Although dreaming is common, occurring in all humans, the dreams themselves are unique, based on each person's own memory bank of images, a residue of their particular life experiences. The meaning and purpose of dreaming has been a source of speculation over the course of history. It was not until 1900, when Sigmund Freud (1856–1939) published *The Interpretation of Dreams*, that there was a comprehensive theory that placed dreams as centrally important for the understanding of waking behavior. This theory formed the basis of the psychoanalytic treatment method, which relied on patients' recall of and associations to their dreams.

Dream interpretation dominated the practice of psychiatry for the next fifty years. The key to their understanding rested on Freud's model of the mind as operating on three different levels—the conscious, preconscious, and unconscious—with all three influencing waking behavior. The conscious mind is what is in awareness in the moment; the preconscious consists of mental representations that, although not in immediate awareness, can be brought to consciousness voluntarily; the unconscious material, while not accessible by an act of will, is a major source of dream scenarios. The unconscious contains the remains of early childhood experiences related to learning to control basic impulses (particularly those of sex and aggression) and to express these only in a socially appropriate fashion. These powerful instinctual drives remain active throughout life and cause anxiety if they threaten to become conscious. They are controlled during waking by defenses, the learned ways of keeping them out of consciousness. These defenses are weakened during sleep, when the danger of a breakthrough into action, which would cause internal guilt or external punishment, is reduced due to our inability to act while sleeping.

Freud believed that dreams allow the mind to hallucinate the fulfillment of these prohibited impulses safely, without the risk of consequences. Because the risk, though lowered, is not completely absent during sleep, and to ensure that the sleeper is not shocked into wakefulness, dreams express these wishes in disguised forms. Thus, dreams require some expert interpretation to decode their true meaning. Freud distinguished the dream story, called the *manifest* dream, from its underlying or *latent* meaning, which refers to the unfulfilled instinctual wishes. The latent meanings can only be expressed symbolically to allow their safe gratification. The interpretation of dreams thus became the basis for understanding patients who came for help with emotional problems of overcontrol or undercontrol of their impulse-related behavior.

A challenge to this view followed the discovery in the 1950s of the close association of rapid eye movement (REM) sleep and the experience of dreaming. By monitoring the brain waves, eye movements, and muscle tone of persons observed while sleeping in a laboratory, three to five episodes of REM sleep could be identified each night. If the sleeper were then awakened at these times and asked to report what he or she had just been experiencing, 85 percent of the time the sleeper would describe a dream. The regularity of REM sleep, occurring approximately every ninety minutes, allowed a more complete sampling of dreaming than had ever before been available. Many people have no recall of their dreams, and even those with good recall rarely remember more than one per night. The sleep laboratory technique opened the door to studies of the continuity of a theme from first dream to last, and of the relation of the dream content to some waking, emotion-arousing stimuli, such as a frightening or sexually arousing movie, or an experimentally induced change in a basic need, such as thirst by depriving sleepers of water beforehand. For the most part, these studies showed that dreams are difficult to influence and more often follow their own agenda.

The finding that REM sleep is turned on periodically, starting at the primitive brain structure called the *pons*, further challenged Freud's view. Dreams could not have any inherent meaning if they spring from the nonthinking pons. The activation-synthesis hypothesis of dreaming, proposed in 1977 by J. Allan Hobson and Robert McCarley, explained the apparent (manifest) meaning of a dream as an afterthought, most likely resulting from associations to the sensory images, which are accidental, triggered by the activation of a brain pathway that flows upward from the pons to the visual association areas of the cortex. These images are then linked into a dream story under the influence of the ongoing emotional concerns of the dreamer. In this way dreams are given meaning in the same way as are waking stimuli, when what we see is colored by the present state of our needs and interests. This theory robbed dreams of any special meaning and had a generally dampening effect on dream research for the next twenty years.

The resurgence of interest in dreaming is partly due to the development of sleep disorder centers, which attract patients with dream disorders, such as the repetitive nightmares of those suffering from posttraumatic stress disorder. The resurgence of interest is also partly a result of the development of more sophisticated technology. Brain imaging methods allow a closer look into the areas of the brain activated when REM sleep is ongoing. Using this technology, differences between those areas that are more active in REM sleep than in non-REM sleep or waking confirm that during REM the brain is more intensely active in areas related to instinctual behaviors (hypothalamus and basal forebrain), the emotional areas (limbic and paralimbic), and the visual association areas of the cortex. Activity is lessened during REM in the areas associated with the executive functions: thinking and judgment (the prefrontal cortex).

Brain imaging studies are looking into differences between REM sleep in normal persons and in those with various psychiatric diagnoses. This method has illuminated the abnormality of REM sleep of those suffering from major depression. These patients, when most symptomatic, have increased REM sleep but greatly reduced recall of any dreaming. Their imaging studies show more activity in the emotional areas (limbic and paralimbic) than do nondepressed persons, and heightened activity in the executive cortex. Perhaps these patients are flooded with negative emotion but are overcontrolled in its expression. In Freud's terms, the dream function has failed to allow gratification of unconscious wishes. Without dreams these patients would be difficult to treat psychoanalytically and require another approach.

SEE ALSO *Psychoanalytic Theory; Psychotherapy*

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Rosalind D. Cartwright

DRED SCOTT V. SANFORD

Dred Scott v. Sanford (1857) was a major U.S. Supreme Court case dealing with the status of slaves in the United States. In trying to understand the *Dred Scott* decision today, it is important to point out that African Americans and white Americans see the society in which they live very differently. Contemporary studies by sociologists of race and ethnicity, using public opinion data, continue to show significant racial gaps in the perceptions of racism as an issue. For example, a 2005 Gallup pole indicated that 57 percent of African Americans believed that "black-white relations will always be a problem," but only 45 percent of whites agreed. Furthermore, this racial gap has increased rather than decreased since the 1960s. These data are important in relation to the *Dred Scott* decision and its legacy because they suggest that white Americans and African Americans view this continuing legacy differently. Though the case was decided in the mid-nineteenth century, the *Dred Scott* decision is not irrelevant in contemporary race relations in the United States.

Dred Scott (d. 1858) was a slave who sued his owner for freedom in 1847 based on the fact that during the period in which she owned him she had moved him from state to state, passing through the "free states" of Illinois and Wisconsin. The case was in the court system for a decade before it finally reached the U.S. Supreme Court in 1857. Five of the justices who decided this case were from slave-holding families. Chief Justice Roger B. Taney (1777–1864), speaking for the Court in 1857, wrote that:

> They [slaves] had for more than a century before been regarded as beings of an inferior order, and altogether unfit to associate with the white race, either in social or political relations; and so far inferior that they had no rights which the white man was bound to respect; and that the negro might justly and lawfully be reduced to slavery for his benefit. He was bought and sold, and treated as an ordinary article of merchandise and traffic whenever a profit could be made by it.

There were four main judicial outcomes from this case. First, this ruling established that slaves were to be enslaved for life: They could not purchase or sue for their freedom, even if they had lived for periods of time in "free states." Second, this case codified a long-standing belief that slavery was solidly grounded on the "fact" that people of African descent were not fully human. In fact, in another part of this case, the Supreme Court ruled that for taxation and voting purposes slaves constituted only three-fifths of a human life. Though the intent of this ruling was to deny slaveholders power (by devaluing their human property), the ideological outcome was twofold: (1) It served to reinforce the devaluing of people of African descent (slaves) as a fraction of a person; and (2) it reinforced the practice in which people of African descent were held as chattel, no different from cattle—that is, slaves could legally be held as property and their value could be debated and assigned. Third, people of African ancestry, slave or free, could not become citizens of the United States and could not sue in federal court. Fourth, the denial of citizenship prohibited slaves from entering into legal contracts. The implications of this decision set in place barriers that included prohibitions on purchasing land (which is critical to the establishment of wealth), as well as prohibitions against family formation based on civil contracts, namely marriage and adoption, and finally voting.

Interpreted sociologically, *Dred Scott* is a negative legal decision that had continuing legacies for African American civil society. The *Dred Scott* decision was wrong in 1857, and in response to the pounding of the abolitionist movement, the decision was effectively overturned through the implementation of the "Reconstruction Amendments," the Thirteenth, Fourteenth, and Fifteenth Amendments to the U.S. Constitution. These historic developments eventually opened the opportunity structure for African Americans, even if only slightly.

The impact of the *Dred Scott* decision is twofold. First, the section of the decision that ruled that African Americans are less than fully human set the ideological tone for 150 years of discrimination, from Jim Crow–style segregation to the continued and documented discrimination that African Americans face in education, employment, and housing (Bajaj and Nixon 2006; Bonilla-Silva 2006). The systematic and brutal segregation and discrimination by whites of African Americans would not have been so widespread and long-lasting if white Americans believed African Americans were fully human and similar to themselves.

Second, the *Dred Scott* ruling concluded that African Americans had no rights worthy of recognition by whites, specifically the rights associated with citizenship and accorded to all other Americans. This set off a series of voter disenfranchisement laws in the decades following the decision, especially in the South, that were designed to deny African Americans the right to vote. Florida, for example, enacted such a law in 1868 (Earls and Mukamal 2006; Shofner 2001).

Debates about the long-term effects of the *Dred Scott* decision are contentious. Bruce Sacerdote (2005) argues that the descendants of slaves "caught up" to those of free blacks within two generations, at least in terms of schooling and literacy. In contrast, William Darity, Jason Dietrich, and David Guilkey (2001) document the direct economic effects of Jim Crow segregation into the 1980s and 1990s. This debate is similar to another contentious issue in the United States: affirmative action. Some scholars argue that affirmative action policies have leveled the playing field between whites and African Americans, whereas others suggest it will be many years before affirmative action will have accomplished its goal.

Such empirical evidence indicates that the *Dred Scott* decision (1) provided support for long-standing beliefs in the racial inferiority of African Americans that were commonly held by white Americans, and (2) laid the foundation for a series of disenfranchisement laws that prohibited African Americans from taking advantage of one of their citizenship rights—the right to vote.

SEE ALSO *Jim Crow; Racism; Separate-but-Equal; Slavery; Supreme Court, U.S.; White Supremacy*

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Angela Hattery
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DROUGHT

Drought is a feature of climate that is defined as a period of below-average rainfall sufficiently long and intense to result in serious environmental and socioeconomic stresses, such as crop failures and water shortages, in the affected area. Droughts can occur in any climatic region, but their characteristics vary considerably among regions. What droughts in all climatic regions have in common is their gradual onset, which—in contrast to other natural hazards—makes their beginning and end difficult to identify. Defined primarily as natural phenomena, droughts have not received much attention in the social sciences. Only since the 1990s, with the increasing appreciation of the linkages between the environment and society, have droughts begun to be viewed as an issue of interest also for the social sciences.

Drought is caused by the sinking motion of air in a high-pressure cell, which results in decreasing relative humidity of the air and little or no precipitation. Most climatic regions are temporarily under the influence of high pressure; droughts occur only when atmospheric circulation patterns that cause the high pressure persist or recur persistently over an unusually long period of time. Because of the global nature of atmospheric circulation, explanations for anomalous circulation patterns extend far beyond the drought-affected area. Thus global patterns of atmospheric pressure systems and sea surface temperatures have been invoked to explain the occurrence of periodically recurring drought events in some parts of the globe. Most prominent among those global patterns is the El Niño Southern Oscillation (ENSO), a coupled ocean-atmosphere anomaly that originates in the Pacific basin but has repercussions on the climatic conditions in areas as far apart as southern Africa, India, and Brazil. Anthropogenic processes that lead to changes in land cover, such as deforestation and overgrazing, affect local-scale moisture recycling and can induce local reductions in rainfall. Although simulation models have shown the possibility of substantial reductions in rainfall resulting from land-cover change, anthropogenic disturbances large enough to explain more than local-scale reductions in rainfall have not been observed.

TYPES OF DROUGHT

The effects of drought on environment, economy, and society are manifold. In order of the increasing severity and scope of their impacts, four types of drought are commonly distinguished: A *meteorological drought* manifests itself in a shortfall of precipitation or changes in precipitation intensity and timing, possibly aggravated by other climatic factors, such as high temperatures and winds. Risks associated with this type of drought include wildfire hazard and reduced water infiltration into the soil. If the drought persists long enough to result in significant soil water deficits and plant water stress, it crosses the threshold into an *agricultural drought*. Lower crop yields and quality, as well as increased soil erosion and dust emission, are possible impacts expected from this type of drought.

Because various crops differ in their water demand, a farmer's choice of crop type can either buffer or exacerbate the effects of an agricultural drought. A drought is classified as a *hydrological drought* once the precipitation shortfall affects surface and subsurface water supplies. Hydrological droughts usually lag behind the occurrence of meteorological droughts because of the time needed for precipitation deficits to reach the surface and groundwater levels of the water cycle. Their impacts, which consequently are also out of phase with those of a meteorological and agricultural drought, include reduced stream flow, below-normal reservoir and lake levels, loss of wetlands, and declining water quality. Although climate is the primary factor of a hydrological drought, humans contribute to its effects by changes in land and water use, such as urbanization and the construction of dams. Finally, a *socioeconomic drought* occurs when the supply of economic goods and services, including water, forage, food, and hydroelectric power, can no longer be met for drought-related causes. Farmers and ranchers, who depend on agricultural and pasture productivity, are the first to suffer losses. Then follow industries depending on agricultural production. As a result, consumers may have to pay more for their food and other weather-sensitive products and services.

The socioeconomic effects of a drought vary not only in proportion to the severity of the climatological event but also depending on the vulnerability of the affected

population. Monetary costs arise for any economy hit by drought, such as to cover for lost crops, crop insurance payouts, and fire damage; but only in the most vulnerable populations of the developing world are drought effects—food insecurity, famine, health problems, and loss of life and livelihoods—often paired with economic, social, and political difficulties. Subsistence farmers and pastoralists in particular suffer from crop and livestock losses, as well as from increased food prices. Droughts force many of them to migrate from rural to urban areas, increasing pressure on resources there.

COPING WITH DROUGHT

Scientists and decision-makers have devised a number of ways to deal with drought, which can be grouped into drought monitoring, forecasting, and mitigation. Meteorologists around the world carefully monitor meteorological and hydrological variables (precipitation patterns, soil moisture, stream flow) over time to determine the onset and end of a drought. Satellite remote sensing technology has contributed immensely to quantitative monitoring over large geographic areas. Understanding the complex physical aspects leading to droughts is a prerequisite for making increasingly reliable and credible drought predictions. Empirical studies have shown that drought results from a complex interplay of different climatological factors, which makes forecasting difficult. In the tropics, where scientists have made significant advances in understanding the climate system, the potential for seasonal drought predictions is promising, particularly with respect to droughts related to ENSO. Multiyear droughts as well as droughts outside the tropics still cannot be predicted with a level of accuracy that is without risk for the users of those predictions. Knowing the frequency, duration, and spatial extent of past droughts, however, helps in determining the likelihood and potential severity of future droughts.

In addition to the assessment of meteorological processes, drought mitigation also requires an understanding of the vulnerabilities of different population groups to drought. Mitigation tools range from early warning systems, which monitor both meteorological conditions and vulnerable populations (e.g., the Famine Early Warning Systems Network, operating in Africa, Central America, and Afghanistan), to various forms of weather-related crop insurance schemes (e.g., in the United States and Australia among others), emergency water supply augmentation (e.g., tapping new water resources), and water demand reduction (e.g., by means of economic incentives for water conservation, improvement of water use efficiencies, breeding for drought tolerance, diversification to less weather-dependent economic activities, and public water conservation awareness programs). As droughts are expected to become more frequent and more extreme with global warming, it is imperative to improve drought mitigation efforts and increase future drought preparedness.

MAJOR DROUGHT EVENTS

Major drought events in modern history include:

- China, 1877–1878: Provinces across northern China were depopulated as grain stocks ran out as a result of severe droughts. Millions of people perished from starvation.
- Soviet Union, 1921–1922: A fierce drought hit the Ukraine and Volga regions. The death toll reached almost five million people, more than the total number of casualties in World War I (1914–1918).
- United States, 1930s: The Dust Bowl drought, which ravaged the American and Canadian Great Plains in the 1930s, is considered one of the major droughts of the twentieth century. Coinciding with the Great Depression, it had major impacts on the United States and Canada, including a mass migration from the Great Plains to the western coast in search of better living conditions.
- West Africa, 1970s: The West African Sahel region experienced droughts of unprecedented spatial extent and duration, which created a famine that killed a million people and affected the livelihoods of more than fifty million. The great Sahelian droughts were also blamed for widespread environmental degradation of this dryland region.
- Ethiopia, 1984–1985: A severe drought, exacerbated by the government's censorship of news of the emerging crisis, brought about famine and forced millions to leave their homes, triggering the world's worst refugee crisis to date.

In 2005 Australia experienced a major drought coupled with above-average temperatures, with the southern agricultural areas particularly hard hit. In 2006 drought conditions prevailed across much of Europe—for Spain the most serious drought in more than a century—and caused water shortages for agricultural and tourism sectors. At the same time, China faced its worst drought in fifty years, with crop failures and deaths of cattle causing huge economic losses.

SEE ALSO *Agricultural Industry; Disaster Management; Famine; Food; Human Ecology; Irrigation; Natural Disasters; Water Resources*

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Stefanie M. Herrmann

DRUCKER, PETER
1909–2005

Peter F. Drucker was a writer, management consultant, and university professor. He was born in Vienna, Austria, on November 19, 1909. After receiving his doctorate in public and international law from Frankfurt University in Germany, he worked as an economist and journalist in London. He moved to the United States in 1937.

Drucker published his first book, *The End of Economic Man*, in 1939. In it, he describes the causes for the rise of fascism, including the failure of established institutions that led to its emergence. He joined the faculty of New York University's Graduate Business School as a professor of management in 1950. From 1971 until his death, he was Clarke Professor of Social Science and Management at Claremont Graduate University in Claremont, California.

Drucker authored thirty-six major books during his lifetime. Eighteen of these deal primarily with management, including the landmark books *Concept of the Corporation* (1946), *The Practice of Management* (1954), *The Effective Executive* (1967), *Management: Tasks, Responsibilities, Practices* (1974), *Innovation and Entrepreneurship* (1985), and *Managing the Non-Profit Organization* (1990). Fifteen of his books are devoted primarily to society, economics, and politics; two are novels; and one is a collection of quasi-autobiographical essays. His last two books were *The Daily Drucker* (2004) and *The Effective Executive in Action* (2005). He also authored numerous articles that appeared in a vast array of publications, including the *Harvard Business Review*, the *Wall Street Journal*, and the *Economist*.

Drucker consulted with dozens of organizations and executives around the world, ranging from the world's largest corporations, such as General Motors and the General Electric Company, to entrepreneurial startups and various government and nonprofit agencies, such as the American Red Cross, Girl Scouts of the USA, and the Salvation Army. He devoted extensive time during the last two decades of his life to helping professionalize the management of large and small social-sector and nonprofit organizations. He wrote and spoke frequently of the need to revitalize and transform governmental organizations, and he advocated privatizing the delivery of government goods and services as much as possible.

Drucker's most significant contribution was to codify management as both a discipline and a practice—he is widely recognized as the "father of modern management." His second major accomplishment was to develop "innovation and entrepreneurship" as a systematic discipline and practice for the purpose of managing change in all of the institutions of society. This accomplishment was a continuation of his work in support of what he called "a functioning society."

Drucker referred to himself as a "social ecologist." Social ecology, he wrote, requires a "rigorous method of looking, identifying, and testing" for changes that are in the process of emerging in society (Drucker 1992, p. 62). Thus, a social ecologist tries to identify and define new developments that are occurring or that have already occurred. These developments, or discontinuities, appear gradually and may not be noticeable until they cause major impacts on society and its institutions. Drucker's ability to identify and define new developments in the twentieth century was legendary, and it can be seen in almost all of his works.

Drucker first identified the emergence of knowledge work, the knowledge worker, and the knowledge society in his 1959 book *Landmarks of Tomorrow*. He identified an event that was very important to society—the shift from manual work to knowledge work in developed economies. He believed that organizations and executives needed to prepare themselves to manage and exploit this shift for the good of society and its citizens. He tracked the emergence of knowledge work for a half-century, tracking its emergence from a trickle to a major force in developed societies. He described this major force in his 1993 work *Post-Capitalist Society*.

A fair amount of the methodology Drucker used as a social ecologist is contained in *Innovation and Entrepreneurship*. This book "shows how one systematically looks to the changes in society, in demographics, in

meaning, in science and technology, as opportunities to make the future" (Drucker and Maciariello 2004, p. 4).

Valid criticisms of Drucker's work have to do with his frequent use (or abuse) of data. With the exception of demographic data, Drucker often used data to make a larger point, for which the precision he specified was unnecessary. In addition, throughout his work, he generally under-referenced the works of other authors.

Critics have also argued that Drucker's management is "utopian," that it relies on an unrealistically positive view of human nature, human potentialities, and organizational potential. While Drucker knew of the human proclivity toward corruption—perhaps better than his critics, having seen firsthand the rise of Hitler and the rise of German anti-Semitism (see *The End of Economic Man*)—he chose to focus primarily on the more noble aspirations of human beings. Peter Drucker died of natural causes on November 11, 2005, in Claremont, California.

SEE ALSO *Entrepreneurship; Information, Economics of; Knowledge Society; Management; Management Science*

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Joseph A. Maciariello

DRUG TRAFFIC

Drug trafficking (or distribution) refers to the production, selling, transportation, and illegal import of unlawful controlled substances such as marijuana, cocaine, heroin, methamphetamine, MDMA (ecstasy), LSD, and a variety of other "club drugs," such as GHB and Rohypnol typically associated with the young adult "rave" dance-party scene. Trafficking laws, and punishments for their violation, vary according to drug type, the quantity seized, the location of the distribution (e.g., drug-free school zones), and whether minors were sold to or targeted. Drug trafficking laws can implicate a single individual or syndicates involving broad rings of people participating in organized illegal drug activity.

Drug trafficking and trafficking networks take many different forms that are specific to the type of drug involved, the geographic origin of the drug, the risk of detection by law enforcement, the level of competition for consumers in the marketplace, and the people to whom the drugs are being sold or distributed. In addition, recent studies have shown that the nature of drug trafficking and drug markets is affected by society's perception of the particular drug and the types of people trafficking in the drug, often independent of how serious the drug is deemed by lawmakers (Mohamed and Fritsvold 2006).

Trafficking is the direct result of a political decision to criminalize particular substances that are in demand among members of a society. The illegal drug market in the United States has established itself as one of the most profitable in the world. Americans are the world's largest consumers of cocaine, and they rank among the top consumers of other drugs, such as heroin, marijuana, and methamphetamine (CIA 2006). According to the U.S. Department of Health and Human Services (HHS), nearly 20 million Americans aged twelve or older were current illicit drug users in 2004, meaning they had used an illegal drug at least once in the previous last month. The HHS also reports that marijuana is the most commonly used illicit drug among Americans. In 2002, for example, the drug was used either alone or in combination with another illegal drug by 75 percent of current illicit drug users.

This high demand for drugs (in spite of their illegality) and the lure of profits are two of the primary reasons people knowingly enter into the drug trade. In the upper echelons of the international drug trade, political ambitions and influence are also motivating factors. However, for many people, particularly those at the cultivation and harvesting end of drug trafficking pipelines, the drug trade is merely a means of survival. For example, peasant farmers in Peru, Colombia, Bolivia, and Ecuador have been driven from traditional crops like coffee to coca cultivation, the plant from which cocaine is manufactured. For many of these peasants, coca is the only marketable crop they can produce to sustain their already meager lifestyles—a sustenance that amounts to about $750 to the grower for every 500 kilograms of coca leaves produced (Inciardi 2002).

DRUG TRAFFICKING: A MULTINATIONAL PHENOMENON

Most of the illicit street drugs consumed in the United States come from plants that are cultivated in the less developed nations of Latin America, Southwest Asia, and

Southeast Asia. Usually, when the plants reach maturity, they are harvested and go through a local refinement process that prepares them for trafficking to U.S. street drug markets. For example, most of the marijuana consumed in the United States originates in Mexico. As already discussed, the coca leaf from which cocaine is derived is primarily grown in the South American nations of Colombia, Bolivia, and Peru. The opium poppy, from which heroin originates, is grown in the Southwestern Asian nations of Afghanistan and Pakistan, the Southeastern nations of Myanmar and Laos, increasingly in Columbia and Mexico, and in a handful of other nations around the globe.

It is no coincidence that these less developed countries are the primary sources of the raw materials used to supply America's illicit drug habits. Aside from being geographically conducive to opium poppy, coca, or marijuana cultivation, most of these nations have been overlooked by the global economy and resort to or tolerate drug trafficking as a means to gain an economic foothold through the estimated $400 billion a year international drug market. "As a consequence, whole nation-states—Bolivia, Colombia, Laos, Malaysia, Mexico, Pakistan, Peru, Puerto Rico, Thailand, and Turkey—depend upon opium, coca, and hemp production for their agricultural base, and the manufacture of heroin, cocaine, and marijuana is a significant productive sector of the economy" (Chambliss 2001, p. 101). In the relatively small-player South American nation of Guyana, cocaine traffickers earn an estimated $150 million every year, the equivalent of 20 percent of the country's gross domestic product (Hutchinson-Jafar 2006).

For other participants in international drug trafficking, contempt for what they perceive to be a heavy-handed American foreign policy also plays a role in the funneling of drugs into the United States. The anti-Western Taliban regime in Afghanistan was believed to be largely funded by opium poppy cultivation. In the 1970s, Carlos Lehder Rivas emerged as a power broker in the notorious Medellin Cartel in Colombia. Lehder was known for being intensely anti-American, and he saw cocaine smuggling into the United States as a move toward political independence for his native Colombia (Inciardi 2002). In 2005, Evo Morales, the head of a federation of Bolivian coca leaf *campesinos* (simple farmers) who banded together to oppose U.S.-backed coca eradication programs, was elected president of the country. While Morales insists "I am not a drug trafficker" (BBC 2005), the vast majority of coca harvested in Bolivia and other Andean nations is not used for traditional cultural practices. Rather, the bulk of this coca is refined into cocaine for sale on the black market in the United States and elsewhere, and cocaine exports have historically provided Bolivia with more income than all of its other exports combined (Chambliss 2001).

Currently, the U.S.-Mexico border is the primary point of entry for cocaine shipments being smuggled into the United States, and approximately 65 percent of the cocaine smuggled into the nation crosses its southwestern border. But, before this cocaine reaches Mexico, it has typically made stops in several other countries whose drug traffickers play key roles in bringing cocaine to market. After the coca leaf is refined into coca paste, typically in remote locations somewhat close to where the coca is harvested, it works its way through Amazonia (the river valley and rain forest region covering 2.5 million square miles of South America) to Colombia, where it is refined into powder cocaine. From Colombia, the cocaine travels by air and sea through the Caribbean, Central America, Cuba, and Mexico on to the United States (Inciardi 2002).

DRUG TRAFFICKING AND CRIME

On the international level, drug production, largely fueled by U.S. demand, has brought about the establishment of criminal syndicates that organize their law-breaking activities around drugs and jeopardize political stability in drug-producing nations. "The concentration of economic and paramilitary resources in the hands of outlaw trafficking 'cartels' has presented a serious challenge to governmental authority" (Smith 1992, p. 1). In many cases, drug traffickers resort to violence and other criminal activities to intimidate opponents, including law enforcement, and to protect and expand their market share. However, according to some experts, the claims of the strong-arm cartels have been somewhat overstated. With regard to Colombian cocaine cartels, Guy Gugliotta notes that the murder and intimidation of small drug traffickers and other dissenters by large traffickers in the late 1970s and early 1980s was largely mythological. While there was undoubtably a great deal of violence perpetrated by these cartels, proprietary leverage was their greatest asset. "The large traffickers' success as a cartel was probably due to a more mundane factor—the members controlled cocaine's infrastructure . . . [and] had established vertically integrated processing networks that could move cocaine by the hundred-weight" (Gugliotta 1992, p. 112).

Nonetheless, for a variety of reasons, most of which stem from the illegality of illicit drugs, crime and violence are mainstays of the drug economy. Increased pressure by U.S. drug enforcement agencies and increased cooperation from international governments in the fight against drug distribution have driven traffickers to search for new smuggling routes into the United States. Many of these new routes, particularly those used to smuggle cocaine and marijuana, are in the Caribbean and contribute to increases in crime, violence, and political corruption in the region. In 2005, for example, drug-fueled violence

drove Jamaica's murder rate to a record high. However, as smuggling routes become more stabilized and drug territory becomes more clearly distributed among those controlling the Caribbean drug trade, levels of crime and violence may level off and decline in the region.

In efforts to avoid the violence, vice, and property crimes associated with drug trafficking, several nations (and a few U.S. cities) have adopted formal or informal drug decriminalization policies, with some success. Chambliss found that a de facto drug decriminalization policy in Seattle, Washington, reduced crimes associated with drugs, particularly murder and other crimes of violence. One of the primary reasons for this reduction was decreased competition among black-market sellers, who typically employ violent measures to protect their drug dealing territory. The Netherlands, Spain, Denmark, Switzerland, Austria, and Italy have also experimented with formal or de facto drug decriminalization policies. These nations have found that crimes committed by addicts attempting to support their drug habits have declined, while other public health problems, such as HIV transmission, have decreased as well (Chambliss 2001). However, because of the enormous profits to be gained by high-level distributors from the supply of drugs, and because of the lack of viable economic opportunities for participants at the lower levels of the drug trade, illegal drug trafficking and the ills that come with it are likely to remain mainstays of modern society.

SEE ALSO *Borders; Crime and Criminology; Drugs of Abuse*

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A. Rafik Mohamed

DRUGS

SEE *Drugs of Abuse.*

DRUGS OF ABUSE

Drugs of abuse are commonly classified by their pharmacological and behavioral effects into six categories: (1) opiate analgesics, (2) stimulants, (3) depressants, (4) hallucinogens, (5) inhalants, and (6) anabolic steroids. Most of these drugs mimic endogenous neurotransmitters that are naturally present in the human body and regulate certain processes within the central and peripheral nervous systems. Because the quantity of drugs consumed by abusers typically far exceeds the level that naturally occurs in the body, the effects on neurons can range from subtle changes associated with tolerance (i.e., reduced sensitivity) to cell damage or cell death.

Dependence liability refers to the risk that repetitive use of a drug will lead to physical or psychological dependence, also known as addiction. Alcohol and tobacco have by far the highest rates of documented physical dependence in the United States (see table 1). Moreover they have high dependence liabilities: Roughly one-third of individuals who repeatedly smoke tobacco will develop nicotine dependence, and approximately 15 percent of those who repeatedly drink alcohol will become alcoholic. These dependence liabilities are comparable to or exceed those of cocaine, stimulants, and heroin. Although it has been asserted that cannabis is not addictive, Alan Budney and John Hughes pointed out in a 2006 article that nearly one in ten people who smoke marijuana will come to satisfy diagnostic criteria for dependence, including compulsive usage and withdrawal symptoms of mild to moderate severity.

Dependence Liability of Drugs of Abuse in the United States

Drug	Proportion of U.S. population with a history of dependence	Proportion of abusers who became dependent
Tobacco	24%	32%
Alcohol	14%	15%
Cannabis	4%	9%
Cocaine	3%	17%
Stimulants	2%	11%
Heroin	<1%	23%
Other opiates	<1%	8%
Hallucinogens	<1%	5%
Benzodiazepines	1%	9%
Inhalants	<1%	4%

SOURCE: Anthony, Warner, and Kessler 1994 (figures rounded to the nearest whole-number percent).

OPIATE ANALGESICS

Opiates are drugs derived from the opium poppy plant that have analgesic and sedative qualities commonly used to treat pain. Examples include opium, heroin, and morphine. Synthetic analogs of these drugs, which are called opioids, have been created in the laboratory. Examples include methadone, hydrocodone, and oxycodone. The short-term psychoactive effects of opioids involve euphoria, drowsiness, and impaired motor and cognitive functioning. Because opiates and opioids also inhibit activity in brain regions that regulate basic functions such as respiration, they can precipitate death by suffocation. The risks increase dramatically when these drugs are combined with alcohol or other depressants. All opiates and opioids have a high potential for abuse and dependence, which increase with higher potency of the drug and more efficient routes of administration, such as injection or smoking. Injection practices also carry additional health risks from communicable diseases such as HIV/AIDS and hepatitis.

STIMULANTS

Stimulants such as amphetamines increase the activity of one or more of the monoamine neurotransmitters (dopamine, norepinephrine, and serotonin). Activation of the dopamine system is primarily responsible for the euphoric effects, or "rush," of stimulants. Stimulants also enhance mood, promote wakefulness, increase respiration and blood pressure, and decrease appetite. Chronic abuse of stimulants can severely damage nerve cells and cause an array of psychiatric disturbances, including psychosis and paranoia, as well as motor disturbances, including tics.

Methamphetamine, sometimes known as "ice" or "crank," is the product of a "street" modification of amphetamine using over-the-counter decongestants. It has an even greater stimulant effect on the dopamine system. In addition some of the precursor chemicals and solvents used to manufacture methamphetamine can be highly toxic and flammable, leading to serious safety risks from inhalation and potential explosions or fires. Methamphetamine can be taken orally, intranasally, intravenously, or by smoking. Abuse of methamphetamine has been associated with serious physical dependence and severe health consequences, including nervousness and agitation, tactile hallucinations, and paranoid psychosis, of which hallucinations and delusions may be refractory to treatment.

"Designer" stimulants such as "ecstasy" (methylenedioxymethamphetamine, or MDMA) have potent effects on norepinephrine and serotonin in addition to dopamine. This elicits psychedelic or hallucinogenic reactions in addition to euphoria. Because norepinephrine affects the autonomic system, it can also precipitate rapid heart rate, increased blood pressure, and an elevated risk of cardiovascular events. MDMA intoxication enhances the pleasure of tactility, and users often seek physical contact with others. This may be observed at MDMA parties, or "raves," where users may dance closely or aggressively with each other. Withdrawal from MDMA can precipitate disturbances in mood, insomnia, fatigue, and depression. Similar to methamphetamine, MDMA abuse can cause chronic damage to the brain.

Cocaine is a potent and highly addictive stimulant that can be snorted or injected. Cooking sodium bicarbonate (i.e., baking soda) with cocaine enables it to be smoked in the crystallized form of "crack," which delivers a more potent yet shorter-lived high that may last only a few minutes. This rapid cycle of acute intoxication and withdrawal (or "crash") has the potential to elicit sustained binge patterns and severe addiction to the drug. In addition to the health risks typically associated with stimulant abuse, the chemical properties of cocaine—such as its

acidity and its typical intranasal method of delivery—can cause damage to nasal and sinus tissue.

DEPRESSANTS

Depressants represent a broad class of drugs that include anxiolytics, hypnotics, and sedatives. The most commonly abused depressant is alcohol. Benzodiazepines, which act on the inhibitory neurotransmitter GABA, are the second most commonly abused depressant and among the most commonly prescribed medications. Benzodiazepines prescribed for anxiety are called anxiolytics, while those prescribed for insomnia are called hypnotics. They have a wide therapeutic profile, covering the spectrum of sedation from minor tranquilizers to preoperative anesthetics. Acute side effects can range from mild memory loss to anterograde amnesia for new events occurring while intoxicated. The anterograde amnesia may be worsened when the drug is combined with alcohol. Few deaths have been attributed to benzodiazepine ingestion alone. It has been suggested that long-term use might cause permanent impairment of motor and cognitive functioning. But despite being in use for over forty years, its long-term effects are still uncertain.

Barbiturates are an older class of depressants that were prescribed similarly for anxiety and sedation. They were associated with serious side effects and had a relatively narrow therapeutic profile. Any mixture of barbiturates with alcohol has the potential to precipitate seizures, a severe withdrawal syndrome, or death. As a result their use has been almost totally usurped by benzodiazepines, and they are now prescribed only rarely for the treatment of convulsions or refractory migraine headaches.

HALLUCINOGENS

Most hallucinogens exist naturally in certain plants (e.g., mescaline and peyote). Others, such as LSD (lysergic acid diethylamide), are synthesized from ergot, a mold that grows on rye and other grains. Hallucinogens cause sensory or perceptual alterations that can be visual, auditory, tactile, olfactory (smell), or gustatory (taste). They can also cause thought disturbances, such as grandiose or paranoid thinking, and can lead to feelings of irrational pleasure or panic. Intense panic can lead to bizarre or dangerous behavior and have long-lasting psychiatric repercussions similar to those of post-traumatic stress disorder (PTSD). Hallucinogens act primarily on the serotonin system, which, like MDMA, can elicit psychotic-like experiences.

Cannabis, or marijuana, is the most widely used illegal drug in the United States. Cannabis contains delta-9-tetrahydrolcannabinol (THC), a psychoactive chemical that binds to naturally occurring cannabinoid receptors in several brain regions, including the hippocampus. The precise mechanism of action of THC is unclear. According to the FDA, cannabis has no legitimate medical usage; however, a synthetic analog of THC called dronabinol may be used medicinally as an appetite stimulant, to reduce nausea and pain, or to reduce intraocular pressure in glaucoma patients. Cannabis is typically smoked, but it can also be cooked and eaten with high-fat foods. Many users report feelings of euphoria, relaxation, and perceptions of heightened awareness, whereas others report mild to moderate levels of anxiety and paranoia. Long-term side effects of chronic use of cannabis may include reductions in sperm motility, increased estrogen levels, and decreased high-density ("good") cholesterol. Although an "amotivational syndrome" characterized by impaired ambition and substandard productivity has been anecdotally attributed to long-term cannabis use, the existence of this syndrome has not been scientifically established. No deaths have been reliably attributed to cannabis ingestion, apart from vehicular or other accidents stemming from impaired judgment or motor coordination.

ANABOLIC STEROIDS

Anabolic-androgenic steroids (AAS) are synthetic forms of the primary male sex hormone, testosterone. The major consumers of illegally obtained AAS are bodybuilders and athletes, who seek their anabolic properties for athletic or aesthetic gains while also attempting to minimize their androgenic properties, which elicit most of the unwanted side effects. The dangers of AAS are clearly documented, even when they are used according to prescription standards. Documented adverse physical risks include permanent liver injury, increased blood pressure and risk of stroke, acne, hair loss, and sudden cardiac death. Males may experience testicular atrophy and the development of female sex characteristics such as breast enlargement. Female users may develop masculine characteristics such as facial hair and voice deepening as well as menstrual irregularities and clitoral enlargement. The psychiatric effects of AAS abuse can be unpredictable and range from elevated mood to sudden and irrational aggressiveness. Upon cessation of AAS, particularly after sustained high doses, users may experience depression and withdrawal, lowered energy, decreased libido, and a precipitous loss of muscle mass. All AAS carry a risk of physical and psychological dependence.

INHALANTS

Inhalant abuse, or "huffing," involves the deliberate intake of fumes from solvents (e.g., paint thinner) or aerosol gases used as propellants (called "whippets"). Inhalant intoxication may appear similar to alcohol intoxication, but the subjective effects are reported to be more anesthetic than those of alcohol. Solvent inhalants are cor-

U.S. Drug Enforcement Administration Schedule of Controlled Substances

Schedule	Examples	Abuse potential and prescription practices
I	Heroin, cannabis, LSD.	Illicit.
II	High-potency opioid analgesics (e.g., oxycodone),high-potency stimulants (e.g., methylphenidate or Ritalin).	High abuse potential.Rx must be handwritten, no refills permitted.
III	Low-potency opioid preparations (e.g., codeine cough suppressant), anabolic steroids.	Moderate abuse potential.Verbal Rx's permitted, 5 refills permitted up to 6 months.
IV	Most prescription sedatives and sleep aids (e.g., benzodiazepines, Ambien).	Low to moderate abuse potential. Verbal Rx's permitted, 5 refills permitted up to 6 months.

SOURCE: United States Controlled Substances Act, 21 U.S.C. § 802 *et seq*.

Table 2: U.S. Drug Enforcement Administration Schedule of Controlled Substances

rosive to tissue and extremely dangerous to inhale in concentrated forms. All huffing temporarily deprives the brain of oxygen, and anoxia is a risk to all inhalant abusers. Inhalant abuse can cause severe adverse health effects, including damage to the heart, lungs, liver, and kidneys. Inhalant abuse can also lead to acute amnesia, stroke, coma, and death.

LAW ENFORCEMENT EFFORTS

In the United States the Drug Enforcement Administration (DEA) "schedules" drugs according to whether they have (1) a legitimate medical usage and (2) a potential liability for abuse or dependence. Similar scheduling mechanisms are employed by many other countries as well. If the U.S. Food and Drug Administration (FDA) determines that a drug of abuse has no legitimate medical usage, then it is classified as Schedule I by the DEA. Drugs with legitimate medical uses are classified into Schedules II through IV, depending on their abuse potential (see table 2). The schedule has important implications for prescription practices, including permissible refills and the need for handwritten, as opposed to verbal, prescription orders. Issues of toxicity and side-effect profiles do not influence scheduling by the DEA, but they do influence the FDA's approval of medications for specific conditions, based upon a balancing of each medication's risks versus benefits.

Tobacco and alcohol each have a moderate to high abuse potential and no legitimate medical usage (not to mention high mortality and morbidity risks), yet they are neither regulated by the FDA nor scheduled by the DEA. Instead, largely for policy reasons, they are regulated by the U.S. Bureau of Alcohol, Tobacco, and Firearms (ATF) with regard to such matters as licensing and regulation of sales.

DEMOGRAPHIC USE PATTERNS

In 2005 rates of substance abuse or dependence in the United States varied to some degree by racial or ethnic group. However, they did not vary across the most populous demographics of Caucasians, African Americans, and Hispanics (see table below).

Despite similar use-prevalence patterns, Hispanics in the United States are imprisoned at more than twice the rate of Caucasians for drug-related offenses, while African

Rates of Substance Abuse and Dependence in the U.S. by Racial and Ethnic Census Category

Racial/Ethnic Group	Percentage
American Indians/Alaskan Natives	21.0%
Pacific Islanders	11.0%
Caucasians	9.4%
Hispanics	9.3%
African-Americans	8.5%
Two or more races	10.9%

SOURCE: Office of Applied Studies 2006.

Americans are imprisoned at nearly four times the rate of Caucasians (Bureau of Justice Statistics 2006). These apparent discrepancies might be attributable to differential law enforcement practices. For instance, police might focus greater attention on minority communities, or prosecutors might offer minority defendants fewer opportunities for plea bargains or diversionary programs. In addition sentencing guidelines could contribute to unintended disparate impacts on minority groups. For example, there is some indication that crack-cocaine may be used relatively more frequently among African American individuals in urban environments, whereas methamphetamine may be used more frequently among Caucasians in rural environments. Higher penalties can attach in the United States to the crack form of cocaine, as compared to its powder form, and this might account in part for higher incarceration rates among African Americans. With newer laws being enacted to stem the rising tide of methamphetamine abuse, changes might also be seen in demographic patterns among arrestees and inmates. More research is required to gain a better understanding of this important issue and to plan for effective corrective actions.

SEE ALSO *Hallucinogens; Psychotropic Drugs*

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DUAL ECONOMY

In the mid-twentieth century, theoretical modeling of economic growth was dominated by single-sector models, such as that of the Nobel Prize winner Robert Solow. Other analysts, however, felt that economies should be characterized as having multiple sectors, which they stylized into dual-economy models. Foremost among the early dual-economy modelers were two other Nobel Prize winners, W. Arthur Lewis and Simon Kuznets. The dual economy models posited an economically "advanced" sector and an economically "backward" sector. These have alternatively been called capitalist and subsistence, formal and informal, modern and traditional, industry and agriculture, urban and rural, primary and secondary, and good-jobs and bad-jobs sectors.

For both Lewis and Kuznets, the two sectors differed in terms of the goods produced, the nature of the growth process, and conditions in labor markets. Lewis specified a capitalist sector that produced industrial goods and a subsistence sector that produced agricultural goods, services, and commercial activities. Kuznets distinguished an agricultural sector from all others, primarily the industrial sector. For Lewis, capital accumulation took place in the capitalist sector only, and he viewed this sector as the engine of growth. For Kuznets, the essence of modern economic growth was the gradual shift of production from lower-income to higher-income sectors. For both Lewis and Kuznets, the advanced sector offered higher real wages than the backward sector did.

This coexistence of high-wage and low-wage sectors is the defining feature of labor-market dualism, the generalization of which is labor market segmentation. Besides real wages being higher in the good–jobs sector, dualism and segmentation require that access to this sector be restricted, in the sense that not all who want to work there are able to do so. As summarized by Michael Wachter, the dual labor-market model advances four hypotheses:

> First, it is useful to dichotomize the economy into a primary and a secondary sector. Second, the wage and employment mechanisms in the secondary sector are distinct from those in the primary sector. Third, economic mobility between these two sectors is sharply limited, and hence workers in the secondary sector are essentially trapped there. Finally, the secondary sector is marked by pervasive underemployment because workers who could be trained for skilled jobs at no more than the usual cost are confined to unskilled jobs. (1974, p. 639)

Some of the subsequent writings on labor-market dualism adopted human capital theory, as developed in the Nobel Prize–winning work of T. W. Schultz and Gary Becker and the work of Jacob Mincer. Human capital the-

ory maintains that workers with more education and training have higher skills, which the labor market rewards. Thus, it is not enough for labor-market dualism that workers in one sector earn systematically more than those in another; it must also be true that workers with the same skills do better in one sector than in another. Ample research has demonstrated empirical evidence that wages are systematically higher for observationally equivalent workers in some economic sectors than in others: non-agriculture versus agriculture, urban versus rural, formal versus informal, and so on. Many observers take this as evidence of labor-market dualism, though some dismiss it as merely indicating the existence of unmeasured skills and abilities.

What the works reviewed thus far have in common is that all available workers are employed either in the advanced sector or in the backward sector. Thus, unemployment is absent in these models. Later models, such as that of John Harris and Michael Todaro, specified two types of employment (industrial and agricultural) plus unemployment.

One feature that could not be ignored by labor market modelers was the duality within the urban economy, with some jobs being desirable and others being deemed quite miserable to have. This observation led to the development of a model with three types of employment: an urban formal sector, an urban informal sector, and a rural agricultural sector—plus unemployment (Fields 1975).

More recently, one more need has become apparent. This is to give due recognition to the fundamental duality to be found within the informal sector. On the one hand, the informal sector has free-entry activities such as street vending and small-scale services that enable those who do such work to eke out a meager existence. Individuals who engage in such enterprises do so because it is better for them than being unemployed. On the other hand, the informal sector also has restricted-entry activities that people who could be working formally choose to take up instead, such as leaving a formal sector auto repair shop to set up one's own backyard operation or moving from a formal sector restaurant to operate one's own noodle stand. Some current segmented labor-market models include both the "free entry" part of the informal sector and the "upper tier" of the informal sector.

In the 2000s, dual-economy and multisector models dominate both academic research and applied policy work. Analysts routinely utilize models with many economic sectors and many labor markets. The sectors, at a minimum, include industry and agriculture, while other sectors, such as commerce and services, may also play a role. As for the labor market, workers might be employed (be it in wage employment or self-employment) in one of four sectors: the formal sector, the free-entry part of the urban informal sector, the upper tier of the urban informal sector, and rural agriculture. They might also be unemployed. Models assuming that the economy has only a single sector or that all employed workers earn the same amount seem hopelessly unrealistic.

SEE ALSO *Harris-Todaro Model; Labor Market Segmentation*

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Gary S. Fields

DUALISM

SEE *Functionalism.*

DU BOIS, W. E. B.
1868–1963

William Edward Burghardt Du Bois was a leading public intellectual whose extensive body of research, social analysis, and cultural critique helped to establish the foundations for the social sciences, the study of race relations, and Africana studies in the United States. Widely recognized as a historian and sociologist, he also engaged anthropological discourse on race during the era of Franz Boas (1858–1942) (Baker 1998; Harrison 1992). His influence on African American anthropologists W. Allison Davis (1902–1983), St. Clair Drake (1911–1990), and Irene Diggs (1906–1998), who studied with both him

and Fernando Ortiz (1881–1969), is particularly significant. Beyond his work in the social sciences, his immense interdisciplinary breadth encompassed autobiography, philosophy, journalism, and creative writing. In his two earliest novels, *The Quest of the Silver Fleece* (1911) and *Dark Princess: A Romance* (1928), he explored important political and economic themes, situating them in the context of romance and dramatic psychosocial plots featuring female protagonists in complex settings. Novels represented one of the many genres in which Du Bois expressed his evolving vision of the possibilities of antiracist and anticolonial agency.

Du Bois was born on February 23, 1868, in Great Barrington, Massachusetts. In 1884 he graduated as the valedictorian of his high school class. In 1885 he went to Nashville, Tennessee, to attend the historically black Fisk College (now University). During his summers in Tennessee, he taught in segregated rural schools. That experience gave him a close look at the poverty and racial discrimination that African Americans faced in the South. It also exposed him to their dynamically expressive cultural life. Memories from that period inspired some of his later writings, namely, *The Souls of Black Folk* (1903). After three years, he graduated from Fisk with a BA. With a scholarship, he continued his studies at Harvard, where he was classified as a junior because of the presumed inferiority of his education at Fisk. He studied with philosophers William James (1842–1910) and George Santayana (1863–1952), and with economist Frank William Taussig (1859–1940), completing his bachelor's degree in philosophy cum laude in 1890. He remained at Harvard for graduate training in history and political science, earning his MA and PhD in 1891 and 1895, respectively. Historian Albert Bushnell Hart (1854–1943) encouraged his research on the transatlantic slave trade.

Financed by a Slater Fund Fellowship, Du Bois spent 1892 to 1894 at the Friedrich-Wilhelm III Universität at Berlin, known also as the University of Berlin, where he concentrated in history and political economy, and developed a scientific approach to the study of social problems. He took courses from political theorist Rudolph von Gneist (1816–1895) and economist Adolph Wagner (1835–1917). He also attended lectures by Max Weber (1864–1920), whose temporary lectureship at Berlin coincided with Du Bois's second year there. The most significant aspect of his graduate studies in Germany was his training in economics and sociology under the tutelage of Gustav von Schmoller (1838–1917), the leader of the "younger German historical school" that revealed economics' interrelations with the other social sciences. This school of thought also questioned theories of universal laws, emphasizing that economic behaviors were contingent upon historical, social, and cultural contexts. Schmoller's methodology valorized the use of induction to accumulate historical and descriptive facts. In his view, "the goal of social science was the systematic, causal explanation of social phenomena" (Green and Driver 1978, p. 6). He also believed that methodologically rigorous social scientific research "could be used as a guide to formulate social policy" (p. 6). This empirical approach strongly influenced Du Bois's early career as a social scientist who applied sociological techniques to study the problems presented by "the color line."

Du Bois's experiences in Europe expanded his thinking considerably. He realized that the racial discrimination he had encountered in the United States was not universal and that racism's scope was larger than the problems in the United States. American racism, colonial oppression in Africa and Asia, and Europe's political-economic development were all components of the same set of interrelated problems. Du Bois also gained greater exposure to Marxism and socialist analysis from attending meetings of the Social Democratic Party. The maturation of thinking that began to emerge in Germany was reflected many years later in *Color and Democracy: Colonies and Peace* (1945) and, even before that, in *Black Reconstruction* (1935). In the latter book, he innovatively used Marxist categories and "anticipated" Gramscian and poststructural approaches to hegemony and discourse in his analysis of the socioeconomic, political, and ideological conditions that prevailed in the U.S. South after the Civil War (1861–1865) (Nonini 1992). Contrary to the Dunning school's notion that freed blacks were incapable of exercising the rights of citizenship, Du Bois posited that African Americans played a major role in building democracy after emancipation. He further argued that the racism and ambivalent allegiance of poor whites to the white elite could be attributed to a public psychological wage. These ideas were controversial but seminal in influencing later generations of scholars, such as those who study the social construction of whiteness (e.g., Roediger 1991).

Although he intended to complete his doctorate in economics in Germany, Du Bois had to return to the United States. Despite Schmoller's and Wagner's strong support for his exemption from the doctoral program's four-semester rule, a professor of chemistry was adamant against it. However, even more of an obstacle was the paternalistic Slater Fund. It refused to renew his fellowship for only one more semester because of the higher priority it gave to channeling African Americans into elementary and industrial education. Du Bois was urged to "devote [his] talent and learning to the good of the colored race" (Lewis 1993, p. 146). A comparative study of the household economies and quality of life among German peasants and rural African Americans in Tennessee was not viewed as a suitable goal for an educated black person.

The following year, while teaching at the African Methodist Episcopal Church–affiliated Wilberforce University in Ohio, he earned his PhD from Harvard's Department of History and Government, becoming the first African American to earn a doctorate from that university. His dissertation, *The Suppression of the African Slave Trade to the United States of America, 1638–1870*, was published as the first volume in the Harvard Historical Studies series (1896). Representing a "new historiography of interpretation," the dissertation provided thorough documentation for the argument that due to "an interregional bargain [between the North and South] sealed by profits," the United States continued to participate in the slave trade after it was internationally abolished in 1807 to 1808 (Lewis 1993, pp. 156, 160). Despite federal and state laws codifying suppression, a clandestine nonenforcement persisted for half a century.

In 1896 Du Bois assumed a temporary position as "assistant instructor" at the University of Pennsylvania, which created a position beneath its lowest rank to accommodate hiring a Negro. Du Bois's charge was to conduct research on the cause of urban problems in the predominantly African American seventh ward of Philadelphia. The city's "reforming elites" had commissioned the research, which Du Bois conducted over fifteen months, collecting survey and demographic data, and conducting interviews with five thousand people (Lewis 1993, p. 180). The result was *The Philadelphia Negro: A Social Study* (1899), an exemplary treatise that was the first large-scale empirical study in U.S. sociology and the first scientific investigation of African Americans (Green and Driver 1978, p. 113; Lester 1971, p. 26). Given many of the project's substantive concerns as well as the centrality of participant observation, *The Philadelphia Negro* may also be placed in the context of the history of urban anthropology (Harrison 1992). In a social and intellectual climate dominated by social Darwinism, Du Bois's analysis demonstrated that the problems of poverty and crime were not caused by innate black inferiority. They were instead symptoms of institutionalized racial inequality. Although his empirical results challenged conventional thinking, his elitist disposition, nonetheless, led him to play into the moralizing judgments of his patrons. Despite the intellectual and public policy significance of this research, Du Bois was not retained in either a temporary or permanent position at the University of Pennsylvania, where white classmates of lower rank became full professors (Du Bois 1968, p. 199).

After Philadelphia, Atlanta University appointed Du Bois professor of economics and history with the responsibility of directing the Sociological Laboratory and the Atlanta University Conference. The latter was a series of annual conferences to report the results of the laboratory's research on the impact of urban problems on black Americans. The emphasis, especially during the earlier years, was on the collection of factual evidence on social conditions rather than on social reform, which was believed to be possible only after ignorance was countered by knowledge. The goal of the research was the "careful search for truth" that would offer an empirical alternative to the speculative theories and "vindictive ignorance" of much of the social science of that time (Green and Driver 1978, p. 14). Du Bois published the results of this research program in the monograph series that made up the Atlanta University Publications (1896–1914). The studies addressed a wide range of issues: health and physique, housing, black businesses, education, artisans, the black church, crime, economic cooperation, the family, morals, and manners. In *Health and Physique of the Negro American* (1906), for example, Du Bois offered a critique of early physical anthropology's biological determinism and scientific racism. Using craniometric and public health data, he documented the adverse effects of social conditions on the black body.

Du Bois's tenure at Atlanta University ended in 1910 when he shifted his focus from that of a detached social scientist to an activist, following "the path of sociology as an inseparable part of social reform" (Green and Driver 1978, p. 20). Convinced at this point that knowledge and truth were insufficient for promoting social change, he became editor of the newly established NAACP's magazine, *The Crisis*. This transition into the life of an activist intellectual followed his antiracist activism of three years earlier in cofounding the Niagara Movement, which had a short life. Du Bois served as *Crisis* editor until 1934, when friction over his editorial independence from the NAACP's executive secretary, Walter F. White (1893–1955), and board led him to resign. During the twenty-four years of his editorship, he became the most influential black public intellectual in the United States, educating the public on the plight of African Americans and others in the African world, articulating a vision for civil and human rights and black empowerment (one that was often more radical than that of the NAACP), and providing an outlet for talented young writers and scholars.

A prolific scholar, Du Bois published across a wide interdisciplinary terrain. His most widely read book was *The Souls of Black Folk*, a collection of essays, some autobiographical, written in a compellingly lyrical, poetic style. Positing that the color line was the problem of the twentieth century, the book redefined the meanings of black identity and lived experience, illuminating the dilemmas of double consciousness as well as the enhanced social vision that could potentially emerge from it. The book also offered a poignant view of the South, including an examination of everyday life in the Black Belt and the limits of Booker T. Washington's (1856–1915) accommodationist stance. *Souls* is also invaluable for its "pioneering

excursion into the sociology of music" (Lewis 1993, p. 286), religion, education, and politics.

In 1934 Du Bois began his second tenure at Atlanta University, serving as head of the Department of Economics and Sociology. During this phase, he focused his scholarship on comparison and synthesis informed by his commitment to social action and politicization within an international context. Among his publications were *Black Reconstruction* (1935) and *Black Folk Then and Now: An Essay in the History and Sociology of the Negro Race* (1939)—an expansion of *The Negro* (1915). He also started to work on the *Encyclopedia Africana*, which he had initially envisioned early in the century. He established *Phylon*, a journal devoted to critical studies of race and culture, and in the early 1940s he worked to revive the Atlanta University Conference. The conference held in 1943 featured a number of prominent black and white sociologists, including E. Franklin Frazier (1894–1962), Charles S. Johnson (1893–1956), Howard W. Odum (1884–1954), and Edgar T. Thompson (1900–1989).

Despite his success, the university administration, wary of his radicalism, forced Du Bois to retire. He accepted an offer from the NAACP to serve as its director of special research, a position he held for only four years. He sought to revitalize the Pan-Africanist movement, help define international human rights standards for the newly established United Nations, and examine the global scope of racism. His radical anticolonial views, however, were not consistent with the NAACP's policies. After his second tenure with the NAACP, Du Bois went on to leadership positions with the Council on African Affairs and the Peace Information Center, which led him to become involved in controversial international affairs related to the cold war. His participation in the leftist peace movement and his travels to the Soviet Union and China during the 1940s and 1950s were viewed as "un-American" as McCarthyist anticommunism held sway. In 1951 Du Bois was indicted on charges of being an unregistered agent of a foreign principal. Although acquitted of the crime, the prosecution stigmatized Du Bois, alienating him even further from the mainstream civil rights leadership.

Du Bois devoted much of his life to building international networks and deepening anticolonial convictions among activist intellectuals from Africa and the African diaspora. He organized a series of Pan-African Congresses over the first half of the twentieth century. In the last years of his life, he accepted an invitation from Prime Minister Kwame Nkrumah (1909–1972) to work on the *Encyclopedia Africana* with support from the government of postcolonial Ghana. Du Bois moved to Accra and became a Ghanaian citizen. His encyclopedia unfinished, he died on August 27, 1963, the day before the historic March on Washington.

SEE ALSO *African American Studies; Anticolonial Movements; Boas, Franz; Drake, St. Clair; Frazier, E. Franklin; Garvey, Marcus; Gramsci, Antonio; Hurston, Zora Neale; James, William; Marxism; Marxism, Black; National Association for the Advancement of Colored People (NAACP); Nkrumah, Kwame; Ortiz, Fernando; Pan-African Congresses; Pan-Africanism; Poststructuralism; Reconstruction Era (U.S.); Slave Trade; Slavery Industry; Social Science; Veil, in African American Culture; White, Walter*

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Faye V. Harrison

DUE PROCESS

The term *due process* refers to the guaranteed rights that ensure that an individual cannot be deprived of "life, liberty, or property, without due process of law." This provision, as it applies to the U.S. federal government, is found in the Fifth Amendment to the U.S. Constitution. It is also found in the Fourteenth Amendment, where it constrains the actions of the states. The notion of due process arises from the premise that law should be fair, predictable, and transparent. Perhaps more importantly, a guarantee of due process ensures that whenever the sovereign or government interacts with an individual, it is bound by the law from both a substantive and procedural perspective.

The Bill of Rights (the first ten amendments to the U.S. Constitution) initially only acted as a constraint on the actions of the federal or national government. Once the Fourteenth Amendment was enacted after the Civil War, the U.S. Supreme Court utilized the due process clause to incrementally apply those constraints to the state governments. Through the process known as "incorporation," the due process clause served as the conduit to apply the Bill of Rights to the relationship between individuals and the state governments.

The Court did not apply all the governmental restrictions of the Bill of Rights at once, however. Rather, over time, the Court incorporated more discreet rights using a progressively broader configuration of the due process clause. For instance, in *Mapp v. Ohio* (1961), the Court ruled that the Fourth Amendment prohibited states from introducing illegally obtained evidence during criminal prosecutions. This "exclusionary rule"—which holds that improperly obtained evidence must be excluded from the prosecution's case—supported and gave weight to a line of previous cases that prohibited unreasonable searches and dictated the need for "probable cause" before a search warrant could be issued. The Fifth Amendment prohibitions on double jeopardy or compelled self-incriminating testimony were also held to apply to state actions. In *Miranda v. Arizona* (1966), the Court determined that the right to an attorney contained in the Sixth Amendment and the right against self-incrimination contained in the Fifth Amendment were so important that the police must affirmatively advise suspects of those rights before questioning a detained suspect.

The notion of due process is not limited by the text of the Bill of Rights. Although the Court has incorporated many specific provisions of the rights contained in the Constitution, it has embraced a broader notion of due process that suggests an independent constraint on governmental procedures that are not particularly derived from constitutional text apart from the due process clauses. For instance, in *Rochin v. California* (1952) the Court held that shocking behavior can violate procedural due process even if no specific text of the Constitution is at issue (in this case, the police forcibly pumped out a suspect's stomach to recover drugs he had swallowed upon their entry). Fundamental notions of decency and fair process are thus intrinsic aspects of due process.

Although most questions about due process are concerned with procedural due process—the process or procedure at issue—on occasion the Court has considered substantive aspects of due process. In *Skinner v. Oklahoma* (1942), the Court used a substantive due process analysis as the basis for overturning a criminal statute in Oklahoma that provided for the sterilization of some three-time felony offenders but not others. There is a debate as to whether the right to privacy found in the emanations and penumbras of the Bill of Rights, as found in *Griswold v. Connecticut* (1965) and *Roe v. Wade* (1973) is grounded in substantive due process. In *Griswold* the Court found that a right to privacy prohibited Connecticut from outlawing birth control for married couples, and in *Roe* the Court recognized the right of women to obtain an abortion before the third trimester of pregnancy.

The foundational expectation of due process means that government bodies, agencies, and actors must provide some set review before depriving an individual of life, liberty, or property, broadly defined. The required process may take the form of administrative hearings, appellate procedures, or some other forum to hear and oppose the prospective governmental action. Since the time of the Magna Carta in England, due process has meant a fundamental demand that the government follow the appropriate law. The concept, as well as the fundamental transparency and fairness it implies, holds in both international legal regimes and any constitutionally grounded government.

SEE ALSO *Civil Liberties; Civil Rights; Constitution, U.S.; Supreme Court, U.S.*

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Charles Anthony Smith

DUMMY VARIABLE TRAP

SEE *Econometrics.*

DUMPING, PRODUCT

Product dumping is selling exports at a price that is less than "normal value." The traditional definition of *dumping* is selling exports to buyers in a foreign country at a price that is less than the price that is charged to comparable domestic buyers (or to buyers in other foreign-country markets). A second, alternative definition, adopted starting in the 1970s, is selling exports to buyers in a foreign country at a price that is less than the average cost of producing the product (including allocation of fixed costs and profit).

Why would an exporting firm be dumping (according to one or the other of these definitions)? There are different reasons. A firm may be engaged in predatory dumping, planning to drive out other competitors and then raise its price once it has achieved monopoly power. A decline in market demand can drive the market price to a level that is below full average cost. A firm with substantial production or inventory of a product that is perishable or going out of fashion may optimally set a price that is below its full average cost. A firm may be introducing its product into a new foreign market, and to encourage initial sales it may set a low price. A firm with market power may be using geographic price discrimination, charging a higher price in its home market (where the price elasticity of demand is lower) and a lower price in the foreign market (where the demand elasticity is higher).

The rules of the World Trade Organization permit the importing country's government to impose an antidumping duty if the government follows a process that finds that dumping is occurring and that the dumping is causing injury to domestic import-competing firms. The antidumping duty is intended to force the price of the imported product back up to its normal value.

For the well-being of the importing country (and the world overall), the process of imposing antidumping duties has two major shortcomings. First, the process does not require the government to consider possible benefits to other groups in the country (for instance, domestic consumers of low-priced imports). Second, the process is subject to political manipulation and bias. Import-competing producers can exert substantial pressure for favorable rulings. There is leeway in how a government body makes comparisons of prices in different national markets or measures full average costs of foreign producers. For instance, the U.S. Department of Commerce finds that dumping has occurred in more than 90 percent of the cases that it examines. But Brink Lindsey and Dan Ikenson (2002) examined a sample of cases in depth and concluded that in over half of them there was no dumping or much less than the Department of Commerce had determined. It appears that antidumping policy often is used not to combat unfair exporting policies that harm the importing country, but rather to provide new protection for domestic firms against competitive imports, with the typical inefficiency losses to national (and world) well-being.

Up to the late 1980s, only three countries (the United States, Canada, and Australia) and the European Union actively used antidumping policies. Since then, more countries have adopted antidumping laws (at least ninety-five countries as of 2005). According to data compiled by the World Trade Organization, the importing countries that initiated the most cases during the 2000–2006 period are India, the United States, China, Argentina, and Turkey, as well as the European Union. During this period, China is the exporting country whose firms were most often found to be dumping. Other exporting countries whose firms were often found to be dumping include Korea, Taiwan, Japan, and the United States.

SEE ALSO *Beggar-Thy-Neighbor; Competition; Exports; Imports; Predatory Pricing; Trade; World Trade Organization*

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Thomas A. Pugel

DUNCAN, OTIS DUDLEY

1921–2004

One of sociology's most influential practitioners, Otis Dudley Duncan was instrumental in transforming mainstream American sociology into a quantitatively based empirical social science in the second half of the twentieth

century. His key scholarly contributions include the introduction of path analysis to sociology, the measurement of occupational socioeconomic standing with an index (Duncan Socioeconomic Index), the study of intergenerational occupational mobility, the spatial analysis of residential patterns, the application and advancement of loglinear models and Rasch models for categorical social science data, and a landmark treatise on social measurement (Duncan 1984).

Duncan's best-known work is a 1967 book coauthored with the late Peter Blau, *The American Occupational Structure*. Based on quantitative analyses of the first large national survey of social mobility in the United States, the book elegantly depicts the process by which parents transmit their social standing to their children, particularly through affecting the children's education. The book's impact went far beyond its analyses of occupational mobility. Using survey data and statistical techniques, it showed how an important sociological topic could be analyzed effectively and rigorously with appropriate quantitative methods. The work helped inspire a new generation of sociologists to follow suit and pursue quantitative sociology. Today, a worldwide community of sociologists studying the transmission of social standing from one generation to the next still works on elaborating the Blau-Duncan model to include such additional factors as cognitive ability, race, and social context.

Duncan introduced path analysis to social science. A path diagram and a corresponding path model describe a set of equations summarizing complex scientific ideas in terms of statistical relationships. Path analysis was first invented by Sewell Wright, a biologist and evolutionary theorist. Duncan discovered Wright's method of path analysis by chance and then applied it to sociology. Together with Arthur Goldberger, an econometrician, he showed that path analysis models were closely related to the simultaneous equation models of economics and the confirmatory factor analysis of psychology. These three different ways of analyzing certain kinds of data can be viewed within a single general framework called *structural equation models*. Later in his career, Duncan concentrated his methodological interests on loglinear models and Rasch models for categorical data.

In his last book, *Notes on Social Measurement, Historical and Critical* (1984), Duncan shifted his attention to social measurement and presented his general philosophy of social science. Tracing the historical development of social measurement from Ancient Greece to the present, Duncan identified the difficulties of quantitative analyses in the social sciences, in which variability is the norm rather than the exception. Partly in response to his own critics, Duncan also presented himself as a fierce critic of aspects of the quantitative approach—something that he had helped launch as a new standard for social science. This change in Duncan's methodological thinking can be traced to his realization that population heterogeneity renders statistical analyses of social science data essentially descriptive rather than causal. Indeed, avoidance of drawing law-like causal statements from statistical analyses became the hallmark of the intellectual tradition in quantitative sociology that is associated with Duncan. He was openly disdainful of the search for supposedly universal laws of society that would mimic those of physical science. The central tenet in Duncan's new paradigm for quantitative sociology is the primacy of empirical reality.

Duncan was born on December 2, 1921, in Nocona, Texas, and grew up in Stillwater, Oklahoma. He completed a BA at Louisiana State University in 1941, and an MA at the University of Minnesota in 1942. He then served three years in the U.S. Army during World War II (1939–1945) before completing his PhD in sociology at the University of Chicago in 1949. He was on the faculty in the departments of sociology at Pennsylvania State University, the University of Wisconsin, the University of Chicago, the University of Michigan, the University of Arizona, and the University of California, Santa Barbara, from which he retired in 1987.

Duncan was elected to membership in the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Society. He was also awarded honorary degrees by the University of Chicago, the University of Wisconsin, and the University of Arizona. He was president of the Population Association of America from 1968 to 1969.

SEE ALSO *Blau, Peter M.; Demography; Occupational Status; Social Status*

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Yu Xie

DURATION MODELS

Duration models are used to describe the amount of time that elapses until a given event, or the length of time spent in a given state. Duration models have been used to examine many phenomena, including labor-market outcomes,

by modeling the length of time spent in unemployment; industry consolidation, by modeling time elapsed until a firm is acquired by another firm; criminal recidivism, by modeling time elapsed until conviction for a criminal offense for persons released from prison; and the viability of medical procedures, by modeling time until death, relapse, or recurrence after surgery.

Duration models share a duality relationship with count-data models. In count-data models, one models the number of occurrences of some event within a specified interval of time. If, for example, counts of some event are distributed Poisson, then the intervals between events can be shown to have an exponential distribution. One can model either counts over a time interval, or the intervals between the events comprising the counts. Duration models are often used in situations where only one interval is observed for each agent, as in the case of unemployment spells or the lives of firms.

In many cases, data on durations are censored. Suppose one collects data on durations in a given state by conducting surveys at calendar times t_A and t_B. Figure 1 illustrates four possibilities. At time t_A, agent 1 has not yet entered the state of interest, but by time t_B, he has entered and exited the state at times between t_A and t_B. Hence if the survey at time t_B asks the right questions, it will be possible for the researcher to observe this agent's time in the spell completely. Agent 2 enters the state of interest prior to the time of the first survey, and exits prior to the time of the second survey; again, if the right questions are asked, it will be possible for the researcher to observe this agent's complete duration as well. In some cases, however, depending on how the first survey is conducted, agent 2's time of entry into the state may be unobserved, in which case this agent's duration will be left-censored; all the researcher would know in this case is that the agent was already in the state of interest at time t_A, and the time of exit before time t_B. Agents 3 and 4 remain in the given state until after the time of the second survey; for these agents, the researcher can know only that they remained in the state of interest at time t_B and were still waiting to exit. Observations for these agents are right-censored; in addition, if the entry time for agent 3 is unknown, the observation for this agent will be both left- and right-censored.

The *maximum likelihood method* is often used to estimate duration models after specifying a distribution function

$$F(t) = \Pr(T \leq t)$$

for the random variable T describing the length of time spent in a state. Because durations are necessarily nonnegative, one must specify a one-sided distribution for T; examples include the exponential, Weibull, Gompertz, and log-normal distributions. The distribution function

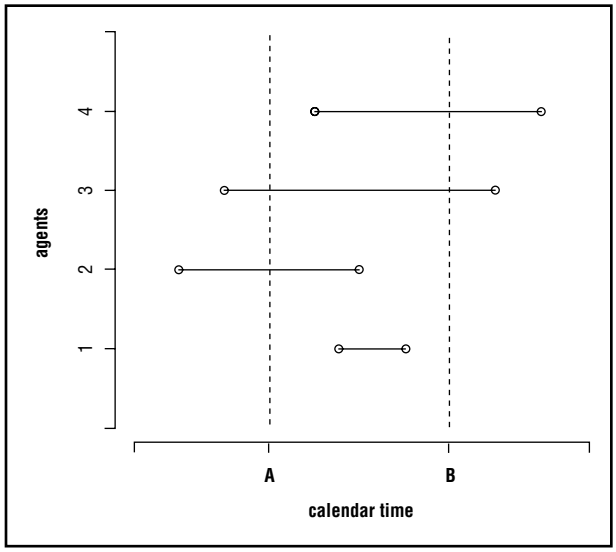

Figure 1

$F(t)$ implies a density function $f(t) = dF(t)$, a survivor function $S(t) = 1 - F(t)$ which gives the probability of remaining in the state up to time t, and a hazard function

$$\lambda(t) = f(t)/S(t) = \lim_{h \to 0} \frac{\Pr(t \leq T < t + h \,|\, T \geq t)}{h}$$

giving the *rate* at which exits occur at time t. The goal of researchers is often to estimate the marginal effects of various covariates on the hazard rate.

John Kalbfleisch and Ross Prentice (2002), Tony Lancaster (1990), and Colin Cameron and Pravin Trivedi (2005) give extensive details on specification, censoring in, and estimation of duration models, as well as examples of applications.

SEE ALSO *Censoring, Left and Right; Maximum Likelihood Regression; Regression Analysis; Variables, Random*

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Paul W. Wilson

DURKHEIM, ÉMILE

1858–1917

Émile Durkheim, the son of a rabbi from Eastern France, has long been recognized as a founding figure in modern sociology following his attempt to establish the subject as a respected scientific discipline in the academic world. Durkheim defined the subject matter of sociology as separate not only from that of natural sciences such as biology but also from other social sciences such as psychology and economics, which also studied the activities of the individual as a member of a group. Durkheim's seminal contribution to the establishment of sociology centered upon his founding of the journal *L'Année sociologique* in 1896, which addressed a whole range of issues including the economy, crime, law, and punishment. Journal entries on these and other topics allowed Durkheim to have an important influence in sociology and other social science disciplines.

Durkheim also advanced knowledge of the ideas of society, morality, and religion. One claim open to debate is that Durkheim was a social realist. This led him to challenge the assumption made by earlier Enlightenment philosophers that society was only a subjective and artificial entity because it was not part of nature. Instead, Durkheim argued that one should see society as an objective or observable reality that could be studied scientifically using empirical methods. To become scientific, sociology must study *social facts.* In *Rules of Sociological Method* (1895) Durkheim defined social facts as those emergent properties and realities of a collectivity which could not be reduced to the actions and motives of individuals, and that individuals were shaped and constrained by their external social environments. It was because social facts existed in their own right independently of individuals that Durkheim viewed society as a *sui generis* reality, which was subject to processes that could be understood only with reference to other social forces. Examples of social facts include language, religion, the economy, and law. These facts were real and should be studied as things. This meant that social phenomena could be known through observation which in turn made them capable of being analyzed as rigorously as objects or events in nature. Durkheim's conceptualization of society was nevertheless criticized for being ambiguous. In *Émile Durkheim: His Life and Work* (1973) Steven Lukes noted that Durkheim used the term *society* in various senses to mean the association of individuals, cultural transmission, socially prescribed obligations, system of rules, symbolic representations, or a national entity such as "French society." In 1894 Gabriel Tarde challenged Durkheim's notion of social facts, suggesting that they could not exist in their own right independently of individuals because social phenomena were transmitted from individual to individual.

Closely linked to the idea of society was Durkheim's original theory of morality. Here the obligation to act in accordance with moral rules came from society not nature, as earlier Enlightenment philosophers had supposed. Durkheim consequently saw morality as a collective social fact. Rules of moral conduct existed outside individuals and transcended personal likes and dislikes by being directed towards others in line with society's ideals and values concerning the common good. Observable laws and sanctions were imposed by society to prevent deviations from its moral rules. The scholar J. M. A. Darlu nevertheless objected, arguing in 1906 that Durkheim's interpretation of morality prevented him from addressing the individual's capacity for reason and their scope for rebellion against an existing set of collectively agreed moral rules. Furthermore, other scholars often allege that Durkheim's theory of morality—and indeed his sociology more generally—led him to ignore the phenomenon of social conflict. Marxist critics such as Tom Bottomore build upon this point when arguing that Durkheim placed an exaggerated emphasis on social order at the expense of paying adequate attention to social change. Anthony Giddens challenged the validity of this criticism when noting Durkheim's deep concern with the turmoil affecting European societies in his own day. This concern was expressed through Durkheim's conceptualization of the interests of the individual in conflict with those of society as a whole.

Durkheim's understanding of society and morality were inextricably bound up with his sociological theory of religion, which advanced knowledge by challenging the ideas of traditional theology. In *The Elementary Forms of Religious Life* (1912), Durkheim saw religion as the source of everything social. Central to Durkheim's definition of religion was the idea of the *sacred.* Sacred objects included symbolic things as diverse as a cross, flags, owls, or stones, all of which could be seen as extraordinary and set apart from the ordinary or *profane* things in everyday life. Beliefs and practices such as religious rituals also existed in relation to sacred things. Beliefs and practices generated the idea of moral community which in turn brought us back to the idea of sacred things. The sacred, beliefs and practices, and moral community, as the three basic elements of religion, were important because they bound individuals to the social group. Theological ideas about God and the supernatural were, however, missing from Durkheim's definition of religion. Religion was not simply an individual's communion with God. It was above all a form of collective life, and a way for the faithful, in their relationships with the sacred, to understand their connections with one another in society.

Durkheim's theory of religion has been criticized on a number of grounds. W. D. Wallis argued that religion was not essentially social and that the sociological viewpoint

was only one among many. Contrary to Durkheim's own view, it was necessary to include the concept of the supernatural into a definition of religion. In the 1990s critics such as Fernando Uricoechea claimed that Durkheim took the idea of the sacred for granted and did not account for its genesis or source. Stjepan Meštrović further suggested that there has been a failure in contemporary Western societies to renew shared moral values. This has led agreement about what is sacred to become splintered into a myriad of competing meanings. This last criticism nevertheless overstates the diminution of the sacred. Meštrović's criticism, argued Jonathan Fish, was weakened through its failure to engage with Durkheim's important insights on the recurrent nature of sacralizing and resacralizing tendencies as an enduring feature of social life.

Durkheim's status as a founder of modern sociology was also linked up with his original theories of the division of labor, collective consciousness, and anomie in modern Western society. As societies industrialized, urbanized, and became more complex, specialized institutions concerned with government, industry, business, and education arose each with their own particular functions. A complex *division of labor* based on occupational specialization, diversification, and cooperation accompanied the emergence of these specialized institutions where people performed different work activities or occupational roles in society in line with their respective talents. Durkheim advanced sociological knowledge by rejecting the French philosopher Auguste Comte's earlier view of the division of labor. Instead of seeing this division as a negative force which eroded the sense of community between people, Durkheim viewed it in more positive terms as a potential source of social cohesion capable of binding individuals together through the performance of their specialized and yet interdependent work roles.

It was through the performance of these interconnected work roles that human beings could express their individuality. Individuality here referred to a person's singular capacity for thinking and acting. Individuality was part of modern society's *collective consciousness.* Collective consciousness referred to a body of ideas, attitudes, beliefs, and practices shared by all members of a society and which determined the relations of individuals to one another and society. A cult of the individual, which promoted the dignity and sacredness of the human person, emerged in support of this common belief in individuality. The problem in Durkheim's own day was that the division of labor and shared belief in individuality were unable to establish strong social bonds between people because they were centered upon maximizing self-interest. The pursuit of selfish interests and desires also did much to produce the problem of *anomie.* In *The Division of Labor* (1893) and *Suicide* (1897), Durkheim referred to anomie as a situation of normlessness in which the norms or rules that regulated people's lives did not function properly. When the norms and rules which kept people's goals, expectations, and desires within achievable limits broke down, people began to pursue unattainable levels of pleasure and excitement which led them to feel uncertain about goals and values. The feelings of persistent unhappiness and disillusionment caused by such uncertainty also led to a rise in the suicide rate.

Durkheim's conception of the social origins of morality also provided a useful backdrop for introducing moral individualism as a solution to the problem of anomie. Durkheim's writings on this subject were of sociological importance because they challenged the nineteenth-century ideas of Jean-Marie Guyau who positively supported the idea of anomie, and a future society where fixed moral frameworks, norms, and rules would not exist. The concept of moral individualism, which was fully developed in Durkheim's work *Individualism and the Intellectuals* (1898), remained the direct opposite of egoistic individualism. Whereas egoistic individualism was concerned with purely private, selfish interests, moral individualism, by contrast, stressed the importance of individual rights as a basis for creating genuinely new social bonds and common or shared identities across Western industrial societies. This transcendence of selfish interests would allow the moral ideal of individualism to attach individuals to society as never before by inspiring strong feelings of collective devotion. These feelings would in turn allow the common belief in individuality to generate strong social bonds which relieved individual uncertainties about values thereby solving the problem of anomie.

Durkheim's proposed solution to anomie in the form of moral individualism also challenged the rise of orthodox or economistic forms of socialism, which attempted to solve this and other social problems in nineteenth-century Western societies by advocating a redistribution of wealth through centralized state control of the economy. Durkheim believed that these forms of socialism did not provide an adequate program for social reconstruction as the problem of anomie was neither class based nor did it have economic roots and therefore could not be solved by economic measures. The social problems facing modern society, which arose because industrialization, commercialization, and urbanization occurred too rapidly, were perceived by Durkheim as moral issues which required forms of moral authority capable of uniting individuals irrespective of their class position. Durkheim's belief that socialism was primarily concerned with economic regulation has been challenged by Giddens when suggesting that this view merely forced socialist theories into a conceptual niche which he had prepared for them.

Problems in democracy were also highlighted in Durkheim's writings. One major problem identified by

Durkheim concerned isolated individuals who made electoral choices on purely selfish grounds rather than through informed and considered opinions about current political issues. In the 1902 preface to *The Division of Labor*, Durkheim argued that this problem could be overcome through the reemergence of occupational groups or associations comprised of people who performed the same specialized work roles. These small and yet diverse functional groups would be bound together through modern society's wider collective belief in individuality. Occupational groups would stand between the individual and the democratic state through their internal election of delegates to an elected chamber. Local representatives of the occupational group would then democratically elect other delegates to national government. This procedure removed the problem of unreflective and selfish patterns of voting by only requiring average citizens to vote on internal matters within their occupational experience. Durkheim believed that this two-tier electoral system would facilitate the Western democratic state's reflection and effective promotion of informed opinion on the need for moral individualism in the future. Yet, as editor Robert Bellah pointed out in *Émile Durkheim on Morality and Society* (1973), this subordination of particular interests to the general interest has not occurred. Western society has not seen the revival of associational life that Durkheim originally hoped for.

Durkheim also addressed problems in education throughout his work. In *Moral Education* (1898–1899), Durkheim labeled as outdated traditional theological teachings of key elements in moral education such as the need for discipline and group attachment, following Catholicism's failure to adjust to the growth of individuality through occupational specialization in modern society. Durkheim's solution to this problem was to support a purely secular education for school children based upon the principles of science and reason. Secular education was needed if the historical link between moral education and mythical, transcendent forces was to be broken and the social reality behind moral rules brought to the fore. Durkheim hoped that the secular teaching of discipline and group attachment would over time enable moral individualism, and its pursuit of a genuine type of collective self-understanding, to replace traditional religion at the center of collective consciousness in modern Western society. Durkheim's belief in the ascendancy of secular education over traditional theological teachings has not, however, been realized in Western societies at the end of the twentieth-century. Ernest Wallwork noted that theologians have not only responded in a creative way to the intellectual challenges posed by sociology, they have found new ways of using traditional language to speak meaningfully of the human condition in this world. Although Durkheim's prediction has not yet been realized it may be premature, argued Fish, to rule out the possibility that his secular vision might come to fruition sometime in the future.

SEE ALSO *Morality; Suicide*

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Jonathan S. Fish

DUTCH DISEASE

The term *Dutch disease* refers to the adverse effects on manufacturing industries that took place in the Netherlands with the natural gas discoveries of the 1970s

and the process of real currency appreciation that followed. Similar "illnesses" affected several oil-exporting countries following the oil price shocks of the 1970s, providing further motivation to a growing literature on the subject. In this literature a natural resource boom comes close to being a curse because specialization in natural resource intensive goods can be harmful to long-term growth.

Indeed, the development of a natural resource intensive export sector can crowd out the manufacturing sector through a number of mechanisms. First, the expansion of the natural resource sector raises labor demand in this sector, thus increasing the wage in manufacturing and reducing its profitability. The profitability squeeze in manufacturing slows down capital accumulation and growth. Second, the increase in natural resource rents generates a higher demand for nontradable goods (the spending effect in Corden 1984), which leads to a higher relative price of nontradables and thus to real currency appreciation. The higher demand for and prices of nontradables leads to a reallocation of labor away from manufacturing and into services. Third, the fall in profitability in manufacturing (especially if the nontradable sector produces inputs for manufacturing) will cause capital to move into the nontradable goods sector and the resource intensive sector. This is indirect deindustrialization because it results from the real currency appreciation caused by the spending effect and depends on its strength (see Corden 1984; Corden and Neary 1982). Finally, the increase in land endowment or in the prices of the natural resource will create an increase in the profitability of capital invested in the resource intensive sector, causing capital to move away from manufacturing and into the resource intensive sector. This resource movement is labeled "direct deindustrialization" because it is independent of real currency appreciation.

The contraction of manufacturing through each of these mechanisms may make a country worse off in the long run because manufacturing industries are those with the most externalities and rapid technical progress (Matsuyama 1992). This may happen even if the resource boom is temporary. Temporary resource booms can lead to a long-term loss of competitiveness and a lower level of per capita income than would have been the case in the absence of the resource boom (Krugman 1987).

SEE ALSO *Imports; Inflation; Stagflation*

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Jaime Ros

DUVALIERS, THE

The rule of François "Papa Doc" Duvalier (1907–1971), president of Haiti from 1957 to 1971, was marked by autocracy and violence. He passed on his position to his son, Jean-Claude "Baby Doc" Duvalier (b. 1951), who moderated the violence of the regime but tolerated gross corruption. Jean-Claude was overthrown by a popular uprising in 1986.

When François Duvalier was born, Haiti was dominated by an elite of mixed racial origins, called in Haitian Creole *mulat*. The black majority suffered under discrimination and was often excluded from education, jobs, and public places. Duvalier was black, the child of one of Haiti's very small black middle class. He managed to go to college and became a physician, and was the director of a successful program to eradicate yaws, a dangerous communicable disease that was common in Haiti's countryside. From the country people he worked with, he came to appreciate Haiti's traditional folktales and religion, and he became a practitioner of Haitian *vaudou*. He also was a leading member of Haiti's Ethnographic Society, where he came in contact with Jean Price-Mars, one of the most important figures in the philosophical movement of *noirisme*, or black consciousness. François and Simone Duvalier married in 1939 and had three children, two daughters and a son, Jean-Claude.

Duvalier became involved in politics, supporting the *noiriste* political leader Dumarsais Estimé (1900–1953). When Estimé became president in 1946, Duvalier became minister of health. When Estimé was overthrown in 1950, Duvalier went into hiding. During this period, he became friendly with junior officers in the military. When the military permitted elections in 1956, Duvalier ran, and was successful thanks to his military allies. After a chaotic election process that saw three heads of state inaugurated in less than a year, Duvalier finally took office in 1957. At first he governed with the support of the military, but he formed a private militia, the Volunteers for National Security (VSN), also known as the *tontons macoutes*. With

the support of the VSN, Duvalier dismissed the military high command and brought the Haitian armed forces under civilian control. He used his militia to extend his control over all aspects of Haitian society, ruthlessly killing or exiling political opponents. Many of the Haitian ruling class, both *mulat* commercial elites and darker-skinned military men, were his victims. Duvalier also had opponents outside the country, most notably the Kennedy administration in the United States, but in the end the United States gave him grudging support in response to his unwavering opposition to communism. In 1964 he declared himself president for life. Duvalier did open up opportunities for some blacks to rise in Haitian society, but he brooked no dissent, and there was no semblance of democracy in Haiti.

When Duvalier died in 1971 his son, Jean-Claude, then just nineteen years old, succeeded him. At first, Jean-Claude was happy to be a figurehead while his mother and his father's old advisers ran the country for him. But in 1974 he married Michele Bennet, a light-skinned divorcée several years his senior, whose father had been in prison for financial irregularities under François Duvalier. Michele enjoyed the privileges of rank, including a lavish wedding and regular shopping trips to Paris, but she also craved power for her husband and for her own family. There was a power struggle between the old Duvalierists and the supporters of Jean-Claude and Michele that ended with the retirement of Simone and many of the old hard-liners. Jean-Claude made some ineffective political reforms, and stole huge amounts of money from the Haitian state and foreign development programs. In 1983 Pope John Paul II visited the country and told the president and the Haitian people that "something needs to change here." Priests and Catholic lay workers, motivated by liberation theology, began to work against the government. A street protest in Gonaives in 1985 turned violent, and VSN gunmen killed a dozen students. Protests broke out across the country, reacting to news carried on the Catholic Church radio station, Radio Soleil. Under pressure from the U.S. government and his own military, Duvalier agreed to step down, and he fled the country on February 7, 1986. He took with him billions of dollars of stolen money.

A transitional military government took power and promised to hold elections, but instead Haiti plunged into political chaos from which it is now only beginning to emerge. Jean-Claude and Michele lived together in exile in France for some time, plotting his return to power and fomenting disorder, but they divorced in 2000. She got most of the remaining money and remains active in Haitian politics, while he lives in modest circumstances.

SEE ALSO *Coup d'Etat; Dictatorship; Vodou*

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Stewart R. King

DUVERGER'S LAW

SEE *Political Parties.*

E

EAST INDIA COMPANY

SEE *Opium Wars.*

EAST INDIAN DIASPORA

Indian indentured migration was a distinctively mid-nineteenth-century British labor-reallocation policy. It was predicated on and institutionalized a racial division of labor across the globe. While men and women from throughout British India were recruited during the scheme's seven decades of operation (1836–1917), the majority were came from what are now the states of Bihar, Bengal, Uttar Pradesh, and Tamil Nadu. This policy played a significant, if under-appreciated, role in the emergence and crystallization of nationalist, nativist, and anticolonial discourses and movements, not only in India from the turn of the twentieth century on, but also in the other colonies to which men and women from the Indian subcontinent (whether under indentures or not) migrated and settled. The discursive contexts in which government-supervised indentured migration emerged was criticized, regulated, defended, and finally abolished also frame subsequent migration streams. Further, they continue to haunt the relations among the descendents of these various migrants, the Indian government, and those proliferating and polarizing transnational cultural and political economies characteristic of the early twenty-first century.

Migration around, to, through, and from the Indian subcontinent has been a characteristic and defining feature of the region's recorded pasts. It was augmented and expanded in the colonial period by the migration and settlement of laborers, soldiers, and bureaucrats from British India to British enterprises in Burma, the Malay peninsula, and Ceylon. However, the streams currently referred to as the "Indian diaspora" are commonly understood as those that began with the mid-nineteenth-century policy of assisted indentured labor migration; that proliferated in the migrations of traders and merchants, missionaries, and teachers to serve communities of settled indentured migrants (in Uganda, for example); and that expanded in separate, but not unrelated, individual and voluntary emigrations to north America, Australia and New Zealand, and Britain and Europe. One such migration in the late nineteenth and early twentieth centuries was that of Punjabi men to the west coast of Canada and the United States (peaking from the 1890s through World War I [1914–1918]). Some of these migrants married and started families and farms with Mexican women, who were themselves participants in yet another labor emigration stream.

Another, more extended and extensively studied stream of the Indian diaspora comprises the skilled and unskilled workers and students that since the 1960s have migrated to jobs and schools in primarily Anglophone countries in the "Global North." A further subset of the diaspora includes relocations (voluntary or under duress) of earlier migrants' descendents. These individuals have moved from newly independent nations and former British colonies like Kenya, Tanzania, Uganda (from which they were expelled in 1972), Fiji, or the Caribbean to the United Kingdom, Canada, Australia, and the United States. Another substantial overseas migration stream from India during the last thirty years has been

that of both skilled and unskilled wage workers on short-term contracts to the oil-rich Gulf States.

Insofar as they do not result in permanent settlement or communities, the short-term migration of skilled and unskilled workers are not considered part of the Indian diaspora, either in the vocabulary of the Indian government (wherein they are designated "Non-Resident Indians," or NRIs), or in the scholarly and popular literature on diaspora—their financial contributions to families in India notwithstanding. To distinguish these and other temporary migrants from those permanently settled overseas (sometimes for a generation or more), the government of India has coined the term "Persons of Indian Origin," or "PIOs."

Indentured migration from British India was a strategy (variously successful) to preserve the individual, industrial, and imperial wealth and power flowing from the highly protectionist plantation mode of sugar production in the British West Indies. While never uncontested by critics in the West Indies, Britain, or India, Indian indentured migration and the sugar plantation economy it sustained were deemed sufficiently successful to be introduced to Fiji in 1879. Indeed, in the decades before its abolition by the Indian government in 1917, indentured migration was extended to new industrial enterprises, most notably the construction and operation of railroads in the British colonies in eastern and southern Africa, where migrant and sojourning merchant communities with kinship and business ties in western India had flourished for several centuries.

Almost from its inception, the system of indentured migration was cast by detractors in India, in the labor-importing colonies and in metropolitan Britain as a "new system of slavery" (as Colonial Secretary Russell put it in a communication to Governor Henry Light on February 15, 1840). It was distinguished only nominally from the hereditary servitude it replaced. Charges of deception and coercion in recruitment in India, and of highly exploitative conditions at colonial work sites generated innumerable exposés in the antislavery press, scores of government inquiries and investigations, and ongoing efforts to devise protocols to govern the recruitment, transportation, employment, living conditions, and repatriation (or permanent residence) of indentured workers and their descendents.

Of particular concern to critics and apologists alike was the status of women among the indentured migrants, of whom a stipulated proportion (40%) was mandated by the government of India in each importing colony's annual recruitment and allotment, despite the varied objections of employers, recruiters, and critics throughout the empire. Contemporaries and subsequent generations of observers have generally agreed that, whether indentured migration unconscionably exploited or positively benefited those who migrated under its aegis, the system helped to further institutionalize and reify categories of race, nation and division of labor, not only in broad strokes across the British Empire (and, indeed, the globe, since French and Dutch colonies also imported Indian indentured labor), but also among the various and varied populations of individual importing colonies.

Indentured migrants from British India, together with their descendents, were identified and categorized as "Indian." Thus, men and women who may have been accustomed to identifying themselves and others according to locally significant affiliations—such as clan, lineage, village, religious practice, or language—found themselves cast as "Indian" en route to plantations (and other work sites) in the Caribbean, Africa, or the Indian and Pacific Oceans, where they would be distinguished from others encountered and cast as "African," "Fijian," "European," "Chinese." In the Caribbean colonies, for example, Indian migrants and their descendents were cast as docile, industrious, and thrifty wage laborers, in stark contrast to emancipated creole populations and their descendents, whose alleged inability or refusal to engage in plantation labor for wages provoked employers' turn to India. That this strategy was subsidized by the colonial and imperial states did not go unnoticed by workers and critics in the sugar colonies, India, or the metropole, who charged, variously, that imported Indian labor was depressing plantation wages and forcing African-creole people out of that sector, or that it amounted to a deliberate policy of racial-national "divide and rule" on the part of employers and the state alike.

In the Fiji islands, which were brought under British protection in 1874, the bureaucratized system of Indian indentured labor recruitment and administration enabled the British government to assure Fijian chiefs that native Fijians' exclusive rights, privileges, and identity as owners and custodians of the land would not be compromised by the introduction of plantation agriculture. The land to be brought under cultivation would be leased (and never sold) to sugar companies, and the labor would be imported (the skilled from Britain, and the unskilled—nearly 61,000 men and women between 1879 and 1917—from India).

In the Caribbean, Fiji, and indeed everywhere Indian indentured migration proceeded, large and complex bodies of legislation regulating indentured workers and Indian migrants' personal mobility (pass laws), personal relations (stipulations recognizing as legal only those marriages performed before a magistrate or a Christian clergyman) and community organizations proliferated, further institutionalizing and normalizing indentured migrants and their communities, and separating them from others.

In addition, from the 1880s on, missionaries representing various reformist strains of Hindu and Muslim practice in India began to circulate and proselytize among the growing Indian indentured and immigrant communities in Fiji, the Caribbean and the Indian Ocean colonies, facilitating the spread of news of India to dispersed migrants, and news of the migrants to India. Together with the emergence of a specifically nationalist critique of British rule in India, this further contributed to the ongoing production and consolidation of an "Indian" identity among indentured migrants and their growing communities.

However, particularities and differences among indentured migrants (religious and linguistic ones, for example, based on where, when and how they were recruited) did not disappear en route to the importing colonies, where Hindu and Muslim immigrants pursued their separate faiths and practices in their articulated but distinctive communities. In addition, caste—and assumptions about the significance of caste and religion (as well as region of birth) to recruits' value as plantation laborers—exercised the imagination of critics, supporters, and administrators of the system, whose observations and assessments comprise the definitive official archive on Indian indentured migration. Some employers instructed their recruitment agents in India to avoid or pursue recruits of particular castes. In 1919, an observer writing in the *Journal of the Royal Agricultural and Commercial Society of British Guiana* observed that "Excepting ex-policemen, ex-soldiers, Brahmins, Chatris, Rajputs, Barbers, Dhobis, Nats, Banias, Fakirs, Punjabis, and coolies of any of the non-agricultural castes, all other castes are recruited and have been sent to the Colonies" (Rodway, 1919).

The data generated in the recruitment process (and preserved in the records of Indian government agencies mandated to regulate indentured emigration, which was restricted to the ports of Calcutta and Madras) have similarly attracted considerable scholarly and popular attention. These data, about which even some contemporaries were skeptical, along with data from importing colonies, indicate that the majority of indentured emigrants who left from Madras (the major port for migration to colonial Ceylon, Fiji, Malaya, Natal and Burma) were from the Tamil-speaking, eastern districts of the Presidency, while the majority of emigrants embarking from Calcutta were from what are now Bihar, Uttar Pradesh, and eastern Bengal (with some recruits from Punjab and farther east also recruited and embarked from Calcutta). The most exhaustive and critical study of these data was conducted by Sir George Grierson in 1883. His "Report on Colonial Emigration from the Bengal Presidency" suggests strongly that throughout the Bengal Presidency there was considerable awareness of what indentured migration would entail. He noted, "About caste, the people have invented a curious theory regarding ship-board life, which shows the adaptability of native customs," in which they likened the pollutions (dietary and other) encountered on the passage from India to those encountered en route to the temple of Jagannath, a popular destination for Hindu pilgrims. He was told that "a man can eat anything on board-ship. A ship is like the temple of Jagannath, where there are not caste restrictions."

The legal, social, and political discriminations faced by indentured migrants in other British colonies, along with the real and perceived extension of handicaps and prejudice to non-indentured overseas Indian communities, provoked intense and sustained outrage and political organization both in these colonies and in India. In South Africa, for example, members of Indian merchant communities who had settled in Natal hired Mohandas K. Gandhi to represent them in their ongoing disputes with the government between 1893 and 1914. Gandhi continued to play a role here—working on the Colour Bar and Class Areas Reservation bills of 1925 and 1926, for example—long after his return to India, despite lukewarm support from Indian nationalists focused on the struggle for self-determination at home. Those Indians in the subcontinent denied access to employment in the highest echelons of the Indian civil service and army because they were not European found it galling that, through indentured migration, "Indian" came to be associated throughout the world with unskilled and low-wage labor.

In 1912, Gopal Krishna Gokhale, an Indian nationalist leader and member of the Legislative Council (for Bombay), proposed legislation abolishing indentured emigration from India. He argued, "Wherever the system exists, there the Indians are only known as coolies, no matter what their position might be.… [T]here are disabilities enough in all conscience attaching to our position in this country, … why must this additional brand be put upon our brow before the rest of the civilised world?" (Government of India, Legislative Proceedings, March 4, 1912). The association was an important factor in the strategies and rhetoric leading to abolition of the migration scheme.

The equation of Indians with cheap labor continued to frame intra-imperial resistance to extending to India the self-rule and sovereignty accorded all the white settler colonies, even after abolition of indentureship in 1917. At the 1923 Imperial Conference held in London, for example, Prime Minister Mackenzie King of Canada argued that for his government "the problem is not a racial one; it is purely … economic." He attributed Indians' limited citizenship rights to the electoral clout of organized labor, which was fearful of Indians' perceived willingness to work for wages lower than those acceptable to European-descended Canadians, and to the politics of constitutional

federalism. Referring to the legal disabilities faced by Indians in South Africa, Prime Minister Jan Smuts explained that they were merely means toward ensuring that the culture and values brought to southern Africa by European settlers in the nineteenth century continue to flourish in his country. In his comments at the Imperial Conference, he explained that white South Africans "are not there to foster Indian civilisation, they are there to foster Western civilization" (Smuts, 1988).

The implications of indentured migration's role in the racialization or nationalization of labor through the empire extended through anticolonial struggles, independence, and beyond. In Trinidad, for example, a racialized division of labor and residential segregation (with Indian-Trinidadians predominating in rural areas and agricultural occupations, and African-Trinidadians in urban and manufacturing ones) led to political divisions between the two most numerous population groups that persisted well past independence in 1962. In British Guiana in 1957, divisions in the People's Progressive Party (PPP) between African and Indo-Guyanese members and interests (each constituting nearly 40% of the population) led Linden Forbes Sampson Burnham to establish the predominantly African Guyanese People's National Party (PNC). This left the PPP, led by Cheddi Jagan, primarily Indo-Guyanese. Exacerbated by Anglo-American antipathy toward Jagan's unapologetically socialist sympathies, the racially charged political divisions were accompanied by ongoing civil unrest and violence that well lasted past independence in 1966, when a government headed by Burnham and his party took office. Indeed, these divisions were still in play after Jagan was elected president in 1992.

The pattern is evident in Fiji, as well, where a military coup in 1987, led by Colonel Sitiveni Rabuka (the army is almost exclusively ethnic Fijian), produced a new constitution (in 1992) that banned Indo-Fijians from holding the post of prime minister and ensured that more than half of all Parliamentary seats were held by native Fijians. These provisions were revised in 1997, however, and Mahendra Chaudhry of the Fiji Labour Party was swept into office as the first Indo-Fijian prime minister in 1999. But a second coup, under the leadership of ethnic Fijian George Speight, toppled the newly-elected government in May 2000. Speight explained that for ethnic Fijians like himself, "it's not so much a hate of the Indians but a fear of our host culture and everything unique about ourselves being eroded to the extent that it could be lost" (Mercer, 2000).

The 2000 coup precipitated a wave of anti-Indian violence and accelerated Indo-Fijian emigration to Australia, New Zealand, Canada, the United States, and the United Kingdom, where (together with emigrants and refugees from Trinidad, Guyana, Tanzania, Uganda, the nations of South Asia, and elsewhere) they contribute to growing and increasingly heterogeneous Indian, Caribbean, African, and other minority communities. As "Paki-bashing" in Britain in the 1970s and 1980s, the "dot-busting" (attacks on women with *bindis* on their foreheads) in the United States in the 1990s, and the targeted violence following the 9/11 attacks in 2001 all testify, these migrants—along with those directly from the subcontinent—often encounter hostility from already-settled citizenries and populations, whether native-born or immigrant.

The impact of these multiple and varied migrations is evident in every aspect of the economies, politics, and social and cultural histories and productions of the nations in which migrants from India have settled, as well as in the subcontinent itself. The Vishwa Hindu Parishad (VHP, or World Hindu Council, founded in 1964) has successfully tapped resources in the diaspora (through such media as the VHP of America) for funds and political lobbying to advance the aim of establishing India as a Hindu state. The VHP is closely linked historically and organizationally to the Hindu nationalist Rashtriya Swayamsevak Sangh (RSS, or National Volunteers' Union), founded in 1925, and to the Bharatiya Janata Party (BJP, or Indian People's Party), formed in 1980. This alliance led a coalition government (the National Democratic Alliance) from 1998 to 2004. The VHP has also been associated with the 1992 destruction of a sixteenth-century Muslim mosque in Ayodhya (allegedly built on the site of the birthplace of Rama, an important aspect of the Hindu god Vishnu), and with the spiral of anti-Muslim violence and political unrest this act precipitated, both at that time and in Gujarat in 2002.

On the cultural front, the post-independence Indian film industry, based in Bombay, has emerged as an important and dynamic common ground for Indians both in India and abroad. The popular cultures projected through cinema (and ancillary industries like television, music, and dance) have been increasingly inflected by and attentive to diasporic viewers. Judging from the sheer volume of sites devoted to a vast array of aspects of South Asian, Indian, and diasporic identities and interests, the Internet has proved a generative space for forging community and delineating differences among those with ancestral and affective ties to India.

In the United States, passage of the 1965 Immigration Act facilitated the immigration from South Asia of professional and technical workers (as well as students seeking professional and advanced postgraduate degrees). Many of these individuals became naturalized citizens of the United States, where they and their children have been cast as "model minorities" who demonstrate the promise of American citizenship. Since the mid-1970s, patterns have shifted again, with family reunification rather than employer preference accounting for a

growing proportion of immigrants from South Asian countries. This has also led to a decline in the proportion of highly skilled and professional and technical workers among those emigrating.

In India, in the meantime, the Citizenship Act of 1955 conclusively precluded the possibility that emigrants settled overseas, whether born in India themselves or born overseas to Indian citizens, could be citizens both of their countries of domicile and of India. Instead, the act reserved to the Indian government the right to extend Indian citizenship to citizens of Commonwealth countries and the Republic of Ireland on "a basis of reciprocity" and agreement between itself and the governments in question. However, in 2004, after decades of lobbying, some PIOs who may have forfeited Indian citizenship when they became naturalized citizens (or second-generation PIOs, born overseas) were permitted to pursue a partial restitution of Indian citizenship. While it withholds the right to vote, the amendment permitting "dual citizenship" promulgated in 2004 substantially facilitates financial investments and property ownership in India by eligible PIOs, in part through the Ministry of Overseas Indian Affairs (MOIA), which was formed expressly to administer to the PIO population. While the government of India estimates that emigrants from "territories that are currently within the borders of the Republic of India" numbers over 20 million people, only emigrants to sixteen countries—none of which was involved in Indian indentured migration—are eligible for dual citizenship.

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Madhavi Kale

EAST INDIES

The East Indies cover a wide geographical expanse in South and Southeast Asia ranging from the Indian subcontinent to the Malay Archipelago, described as the world's largest island group. Initially referring to India, these colonial demarcations of territory later comprised more than thirteen thousand islands located across the Indian and Pacific Oceans between mainland Southeast Asia and Australia. Coveted for their rich natural resources, including rubber, spices, cotton, and indigo, and their strategic location as important trading centers along the spice routes, the East Indies were colonized by Europe in the seventeenth century after the initial exploratory missions of the Portuguese and Spanish, and especially after the founding of various European trading companies. These companies carved out zones of influence named after the particular colonizing power they represented, such as the British East Indies (India and Malaysia), the Dutch East Indies (Indonesia), and the Spanish East Indies (Philippines).

Christopher Columbus's (1451–1506) miscalculation of westward navigation routes from Spain to Asia brought him to the New World instead of India. To avoid confusion with the "original" Indies (i.e., India), the terms *East Indies* and *West Indies* were applied by Europeans to highlight territorial distinctions between Indians from the East (Asia) and the West (the Americas). These territorial designations became racial designations to distinguish East Indians from their West Indian counterparts, thereby authenticating the centrality of Europe and its power to arbitrarily classify and homogenize entire populations from the non-Western world.

East Indian also became a marker of diasporic identity in North America to designate Indians from India and to avoid further confusion with indigenous Native American or First Nation peoples also known as *Indians* due to Columbus's navigational errors. Consequently, East Indians had to be distinguished from American Indians even though the former did not necessarily identify with the appellation East Indian on account of its specific ethnic connotations in India and the political realities of decolonization. In the postcolonial period, the blanket characterization of East Indians as colonized subjects inhabiting the East Indies became invalid with the establishment of sovereign states. The term consequently misrepresented diasporic Indians who preferred to self-identify as South Asians instead.

In India, the term *East Indian* refers to a specific ethnic minority from the western Konkan coast that settled in and around the area of Bombay (Mumbai) during the period of Portuguese rule in India. They were Christianized by the Portuguese and called *Bombay Portuguese* to distinguish them from Goans migrating to Bombay from the former Portuguese territory Goa. They may have adopted the name *East Indian* under British rule to show their allegiance to the British. It is therefore misleading to label all Indians from India as East Indians because of this constituency's historical and cultural specificity in India.

In addition, the label *East Indian* added another polemic in the West Indies, where it designated people of South Asian origin in the Caribbean. These East Indian-West Indians further exemplified the ruptures created by colonial history and its random demarcation of boundaries through misleading nomenclature.

SEE ALSO *Caribbean, The*

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Brinda J. Mehta

EASTERLIN PARADOX

SEE *Happiness.*

EASTERN BAND OF THE CHEROKEES

SEE *Cherokees.*

EASTON, DAVID

1917–

David Easton has been one of the most prominent and influential political scientists in the post–World War II (1939–1945) period. He was one of the leading scholars at the heart of the behavioral revolution that sought to develop a unified empirical theory of political science to replace the traditional study of politics. Easton has also been the leading proponent of the application of systems theory to the study of politics.

Easton received his B.A. and M.A. from the University of Toronto, and his PhD from Harvard University in 1947. From 1947 to 1984, he taught at the University of Chicago, being named the Andrew MacLeish

distinguished service professor in 1955. In 1984 he moved to the University of California at Irvine, where he is distinguished research professor of political science. He has served as vice president of the American Academy of Arts and Sciences (1985–1986) and as president of the American Political Science Association (APSA) from 1968 to 1969. His 1969 presidential address is perhaps the single most influential such address delivered by an APSA president. He has also been a fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford University (1957–1958), and from 1971 to 1980 Easton was the Sir Edward Peacock professor of political science at Queen's University in Kingston, Ontario.

Easton's first major work was *The Political System: An Inquiry into the State of Political Science* (1953). There he analyzed the state of political science, which he argued had become dominated by a combination of constitutional legalism and the history of ideas that tended to lapse into antiquarian historicism. As such, in comparison to other sciences, political science was theoretically moribund. Easton argued that in order for political science to become scientifically mature, it needed to internalize scientific principles and methods and focus on the empirically observable behavior of political actors. Toward that end he proposed the adoption of systems theory as the foundation for the behavioral paradigm, and much of his subsequent work (Easton 1965a, 1965b) was directed at developing systems theory in detail. By the late 1960s, the behavioral paradigm, if not systems theory per se, had become the hegemonic paradigm in American political science. Easton went on to develop a version of structural theory to augment the framework provided by systems analysis. During that same period, another dimension of his work, one that too often goes unnoticed, is his extensive empirical research on the political socialization of children (Easton and Dennis 1969).

In his 1969 APSA presidential address, Easton called for a "post-behavioral revolution," a term misunderstood by some critics and proponents of behavioralism alike. Easton's vision was that the scientific procedures of social science should be brought to bear on the social and political problems facing the United States, problems whose severity could not be ignored. More recently, Easton (1997) has argued that political science has become increasingly fragmented, in part because of misunderstandings surrounding postbehavioralism that have led to an abandonment of scientific principles. Despite this fragmentation, Easton claims that the resilience of the scientific foundations of political science can provide the basis for what he calls neobehavioralism, a union of behavioralism and rational choice theory. Neobehavioralism would provide the unified science of politics to which both empiricists and rational choice theorists aspire.

Whether David Easton's recent neobehavioralist vision will have the same impact on political science as his earlier work is yet to be determined. But his contributions to and impact on the discipline of political science since the mid-twentieth century continue to be substantial and widely recognized.

SEE ALSO *American Political Science Association; Democracy; Political Science*

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Michael T. Gibbons

ECLA/ECLAC

SEE *Economic Commission for Latin America and the Caribbean.*

ECOLOGICAL SYSTEMS THEORY

SEE *Developmental Psychology.*

ECONOMETRIC DECOMPOSITION

Ronald Oaxaca (1973) and Alan Blinder (1973) introduced a statistical tool that enables social scientists to identify the ability of a particular observable characteristic to explain the difference in the outcomes of two groups (e.g., the black-white wage gap). The tool, known as a *decomposition*, provides an estimate of the contribution of discrimination to the difference in the outcomes of the two groups. Prior to Oaxaca and Blinder's innovation, researchers were only able to identify collective contribution of all observable differences in the characteristics of two groups. The decomposition has become a required tool in many social science disciplines. It is used to explain pay differences between men and women, public and private sector workers, union and nonunion workers. Most recently, the decomposition has been applied to explaining pay differences between older and younger workers, people with disabilities and those without disabilities, and the pay disadvantage that gays, lesbians, and bisexuals experience (see, for example, Rodgers 2005, Badgett 2006, Baldwin and Johnson 2006, and Adams and Neumark 2006).

Since Oaxaca and Blinder's seminal work, numerous extensions have been developed. Using the white-black wage gap as the example, this entry summarizes the technique's major extensions and limitations.

THE BASIC DECOMPOSITION

Oaxaca (1973) combines log-earnings function estimates for blacks and whites and standardizes the error term to construct the following expression:

$$D_t = \overline{y}_{wt} - \overline{y}_{bt} = \Delta X_t \beta_t + X_{bt}(\beta_{wt} - \beta_{bt}) + \sigma_t \Delta\theta_t + (\sigma_{wt} - \sigma_{bt})\theta_{bt} \qquad (1),$$

where the D_t denotes the total log earnings differential. On the right-hand side, the first term is the explained gap (the portion explained by differences in measured characteristics). The second term is the residual gap (the portion attributed to differences in rates of compensation to the characteristics). The remaining two terms are generally ignored, as the decomposition is usually done at the means; otherwise, the sum of the last three terms is considered the residual gap. The residual gap is interpreted as the contribution of discrimination and characteristics that have been excluded from the model. These characteristics both predict wages and are correlated with race.

Interpreting the residual gap as discrimination requires that the model contain all of the factors that predict wages. Otherwise, discrimination's estimated contribution is biased. Little theoretical guidance exists on the selection of the characteristics that should be included. For example, some researchers control for racial differences in occupational outcomes. Yet these outcomes are influenced by discrimination. Another major issue is that the choice of weights is arbitrary. This is a problem when the weights differ across groups, generating a range of decompositions. Some efforts have attempted to utilize economic theory to provide guidance on the weight's choice (see, for example, Cotton 1988 and Neumark 1988). In practice, researchers either present results assuming different weighting structures, or present their preferred specification and say in a note that the results are not sensitive to choice of weights.

DECOMPOSING CHANGES OVER TIME AND ACROSS GROUPS

An extension developed by Chinhui Juhn, Kevin Murphy, and Brooks Pierce (1991) is to decompose time series changes in the wage gap into four components. For example, a narrowing or widening in the white-black wage gap from year t to t', can be written as

$$D_{t'} - D_t = (\Delta X_{t'} - \Delta X_t)\beta_t + \Delta X_{t'}(\beta_{t'} - \beta_t) + (\Delta\theta_{t'} - \Delta\theta_t)\sigma_t + \Delta\theta_{t'}(\sigma_{t'} - \sigma_t) \qquad (2).$$

The change in the actual wage gap is decomposed into (1) changes in measured characteristics holding the coefficients or prices fixed; (2) changes in prices holding characteristics fixed; (3) the contribution of shifts in central tendency or the movement of the average black in the white distribution; and (4) the contribution of shifts in spread, or changes in the variance of wages (see Juhn, Murphy, and Pierce 1991 for a detailed description of how these components are constructed). Term 3 measures changes in the position of blacks in the white residual wage distribution due to changes in unmeasured racial-specific factors (e.g., discrimination). Term 4 measures changes in residual white inequality, the wage disadvantage for having a position below the mean in the white residual wage distribution. Even this decomposition contains the index number problem. Similar decompositions can be constructed using different base years or by substituting the estimated white prices with the black prices. In practice, researchers use the average across all years as the base to avoid possible extremes within any given year.

Wing Seun (1997) identifies another potential limitation to this decomposition. The procedure generates biased results if wage inequality (Term 3) and the percentile ranks (Term 4) are not independent of one another. As wage inequality expands, the term that measures the contribution of unobservable prices increases while the term capturing movements in the position of blacks falls. This problem is greatest at the tails of the distribution. As inequality rises, the tails become fatter, artificially moving blacks up in the white distribution. The bias will be larger at the lowest percentiles because of the

skewed shape of wage distributions, but bias could be present at segments of the distribution where mass points exist. Mass points are wages that are common to a significant portion of the population.

William Rodgers III (2005) constructs distribution-specific approaches to address this potential bias. His extension of the Juhn, Murphy, and Pierce residual wage procedure (1991) starts with estimating a log wage equation for year t using only whites. He then uses the estimated coefficients to construct white and black residual distributions. With these distributions, Rodgers finds the white residual wage that equals the median black wage. This location is denoted as the *qth* quantile. Now using the year t' white residual distribution, Rodgers finds the white residual that corresponds to the *qth* quantile. This residual is interpreted as the predicted year t' black wage residual, assuming that the median black's initial year t position is preserved. The actual change, predicted change, and the ratio of the two are then constructed. This local approach can be performed at any quantile of the wage distribution, breaking the correlation between wage inequality and percentile rank.

DECOMPOSING OUTCOMES WITHIN SPECIFIC GROUPS

At first glance, decomposing within group differences seems like a trivial exercise, but Oaxaca and Michael Ransom (1999) show that applying the typical wage decomposition techniques within groups leads to unidentified estimates. Lack of identification occurs because one cannot identify the separate contributions of the dummy variables that are included in the model. It is only possible to identify the relative effects of the dummy variable on the gap. The size of the residual wage gap depends on the omitted reference group chosen by the researcher (see Oaxaca and Ransom 1999 for a detailed description of this econometric problem).

For example, a decomposition of the racial wage gap in the *jth* occupation can be written as:

$$\bar{y}_j^b - \bar{y}_j^w = (\hat{\beta}_j^b - \hat{\beta}_j^w) + (\hat{\alpha}^b - \hat{\alpha}^w) + \bar{X}_j^b(\hat{\theta}^b - \hat{\theta}^w) + (\bar{X}_j^b - \bar{X}_j^w)\hat{\theta}^w \quad (3),$$

where the first three terms on the right-hand side measure occupation j's unexplained racial gap. The last term is the predicted racial gap due to observable racial differences in characteristics.

The typical approach defines the unexplained portion of the wage gap as:

$$\hat{g}_j = (\hat{\beta}_j^b - \hat{\beta}_j^w) + (\hat{\alpha}^b - \hat{\alpha}^w) \quad (4).$$

The expression represents for occupation j racial differences in the coefficients after removing the adjusted wage difference between the average black and white in the excluded occupation (the difference in each regression's constants). The $\hat{\beta}_j$s denote race-specific coefficients on the *jth* occupation dummy variables in each black and white log wage equation. The $\hat{\alpha}$s are the constants from each black and white log wage equation.

The black-white wage gap for the *jth* occupation is not identified because it depends on the selection of the omitted reference group of any dummy variable contained in the regression. The estimates of the $\hat{\beta}$s, the coefficients on the predictor variables (e.g., education, potential experience, industry), and the $\hat{\alpha}$s, the intercepts are not robust to choice of the omitted reference group. The $\hat{\alpha}$s will change when different omitted groups are specified.

To achieve identification, William Horrace and Oaxaca (2001) construct three estimators. One of the estimators is written as follows:

$$\hat{\Phi}_j = (\hat{\beta}_j^b - \hat{\beta}_j^w) + (\hat{\alpha}^b - \hat{\alpha}^w) + \bar{X}_j^b(\hat{\theta}^b - \hat{\theta}^w) \quad (5),$$

where the $\hat{\beta}$s and $\hat{\alpha}$s are defined as earlier. The term x_j^{-b} denotes the average characteristics of African Americans in occupation j and $(\hat{\theta}^b - \hat{\theta}^w)$ denotes the difference between the black and white coefficients on the characteristics of blacks and whites. This estimator avoids the identification problem because the changes in the coefficients $(\hat{\theta}^b - \hat{\theta}^w)$ offset any changes in the intercepts $(\hat{\alpha}^b - \hat{\alpha}^w)$. One potential drawback to this estimator is that the predicated racial wage gap varies with the average characteristics of black workers in each occupation (x_j^{-b}). In order to deal with this potential problem, Horrace and Oaxaca use the means of blacks across all occupations.

Horrace and Oaxaca's third estimator provides information about the significance of the ordered occupation wage gaps. The relative wage gap in the *jth* occupation can be written as:

$$\hat{\gamma}_j = \max_{n=1,\ldots,J} \hat{g}_n - \hat{g}_j = \max_{n=1,\ldots,J} \hat{\delta}_n - \hat{\delta}_j \quad (6).$$

Horrace and Oaxaca take advantage of the fact that $\hat{\gamma}_j \geq 0$ and create the normalization $e_{\hat{\gamma}} \in [0,1]$. This normalization expresses the wage gaps as a percentage of the largest normalized wage gap (1.0). The estimator removes racial differences for all the excluded reference groups for all dummy variables $(\hat{\alpha}^b - \hat{\alpha}^w)$ and the omitted occupation. The standard errors on the differences between the wage gaps are used to determine whether these differences are statistically significant and whether or not the order statistic has any statistical meaning.

SEE ALSO *Discrimination*

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William M. Rodgers III

ECONOMETRIC SOCIETY

SEE *Schumpeter, Joseph Alois.*

ECONOMETRICS

Econometrics is a branch of economics that confronts economic models with data. The "metrics" in "econometrics" suggests measurements. As Lawrence Klein (1974, p. 1) pointed out, measurement alone describes only the theoretical side of econometrics. Its empirical side deals with data and the estimation of relationships. Econometricians construct models, gather data, consider alternative specifications, and make forecasts or decisions based on econometric models (Granger 1999, p. 62). Many textbooks do econometrics rather than define it, mainly because it is not all science, for it requires a "set of assumptions which are both sufficiently specific and sufficiently realistic" (Malinvaud 1966, p. 514). As with any empirical discipline, econometric model building may not precede data analysis. One may be amused to find that econometrics can be used to answer the question "Which came first: the chicken or the egg?" by the use of causality testing (Thurman and Fisher 1988). Sometimes econometricians use "a minimum of assistance from theoretical conceptions or hypotheses regarding the nature of the economic process by which the variables studied are generated" (Koopmans 1970, p. 113). Other times, econometric models such as in time-series analysis use clearly defined approaches such as identification, estimation, and diagnostics.

The tradition for introductory econometrics is to start with a single equation emanating from economic theory and knowledge of how to fit the theory to a sample of data. For example, on the economic side, econometricians have some a priori notions of the demand schedule such as the law of demand, implying that more will be bought as the price falls. This is enough of a hypothesis to allow statistical testing. The econometrician needs to confront this demand hypothesis with a sample of data, which is either time-series or cross-section.

The econometrician's best friend is randomness. One way to appreciate randomness is to assume that the econometrician wants to explain how prices vary with the quantity sold in the form of a linear single equation model $P_t = a + bQ_t + \varepsilon_t$, where P is price, Q is quantity, a, b are coefficients to be estimated, t is time, and ε is an error term. The error term is the main random mechanism in this model. It is normally distributed with a zero mean and a constant variance, independence of the independent variables, and uncorrelated for different sets of observations. Besides the assumptions, the error term makes the

dependent variable probabilistic, clarifying that a statistical test may not be based on the independent variables, which are not stochastic. Another requirement of randomness is that the observations should be kept sequentially in time in order to detect whether the errors are related serially, which is called "serial" or "autocorrelation" of the error terms. This is measured by the Durbin-Watson statistic, ideally equal to 2. Other preliminary diagnostic tests would require the t-statistics of the coefficients to be approximately 2 or greater, and the adjusted R-square should be in the 90 percent range. The test of a good econometric model "… should emphasize the quality of the output of the model rather than merely the apparent quality of the model" (Granger 1999, p. 62).

Besides single equations, econometricians study systems of equations models. A system of equations is necessary to capture interrelations or feedbacks among economic variables. In microeconomics, the demand and supply curves and their equality are thought of as a model to study market conditions such as equilibrium, excess demand, or excess supply. In macroeconomics, the Keynesian consumption and investment functions and a national income identity are required to study full employment and full production. A system of equations is usually solved or reduced to a single equation for forecasting purposes, which requires variables to be classified either as given (exogenous), such as the money supply and tax rates, or as variables determined by structural equations within the system (endogenous), such as prices and quantities. When the value of a variable is not in doubt at the current time, perhaps because we are relying on its previous values, then the variable is classified as predetermined. Structural equations are required in order to estimate the coefficients, whereas identity equations are required to sum up definitional terms such as that gross national product is the sum of consumption and investments. The Keynesian system of equations requires that planned savings must be equal to planned investment, which is referred to as an *ex ante* condition, as opposed to an *ex post* condition, where the variables are equal from an accounting perspective. The reduced form of the model can be used for policy purposes as instrument-versus-target models as suggested by Jan Tinbergen (1952) for the attainment of social welfare goals as suggested by Henri Theil (1961), or to simulate probable outcomes.

A system of equation models has peculiarities on both the model and the estimation sides. On the modeling side, the main difficulties reside with identification and reflection problems. Briefly stated, the identification problem requires that enough information be present in the model to make each equation represent a definite economic relation such as supply or demand. The reflection problem is concerned with getting a unique group data in order to explain individual behavior. Depending on the results of the identification problem, appropriate techniques for establishing a system of equations are available, such as ordinary least square (OLS), and three-stage least squares (3SLQ).

Some pitfalls are common to both single and systems of equations. Multicollinearity occurs when the independent variables are related, such as when one variable measures activity for a day and another variable measures the same activity for a week, requiring that one is seven times the other. A dummy variable trap occurs when binary variables such as for the treatment of sex, seasonality, or shocks all add up to a column of ones.

Expectations can be treated in both single and systems of equations. An expected variable may be present in the model, which requires one to specify, before estimation, how expectations are formed. One method calls for an adaptive mechanism to correct for past errors. The most recent method of rational expectation models requires the econometrician to adjust the expected value of the variable for all the information that is available. For instance, if one's average commuting distance to work is 10 minutes, and one hears on the news that a traffic jam has occurred, an adjustment must be made to the average time for the forecast of the arrival time to be rational. Econometricians are trying to build large-scale rational expectation models to rival standard models such as the Wharton Econometric model, the Data Resource model, or the Federal Reserve Board U.S. model, but such achievements are not in sight as yet.

SEE ALSO *Bayesian Econometrics; Causality; Classical Statistical Analysis; Expectations; Heteroskedasticity; Klein, Lawrence; Koopmans, Tjalling; Least Squares, Ordinary; Matrix Algebra; Models and Modeling; Multicollinearity; Random Samples; Regression; Regression Analysis; Residuals; Statistics; Structural Equation Models; Tinbergen, Jan*

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Lall Ramrattan
Michael Szenberg

ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN (ECLAC)

The Economic Commission for Latin America (ECLA) was founded in 1948 by the United Nations Economic and Social Council. It was given the task of facilitating development and strengthening economic ties within the region and between the Latin American countries and the rest of the world. The main venues for promoting these goals have been seminars, the funding and broad dissemination of developmental research and policy options, and the compilation of an ongoing and comprehensive database on region-wide and individual-country economic performance.

The name of the commission was officially changed to the Economic Commission for Latin America and the Caribbean (ECLAC) in 1984, when the Caribbean subregion was added to its mandate. One of the United Nations' five regional commissions, ECLAC is also frequently referred to by its Spanish acronym, CEPAL (Comisión Económica para América Latina). Headquartered in Santiago, Chile, it also maintains subregional offices in Bogotá, Brasilia, Buenos Aires, Mexico City, Montevideo, and Port-of-Spain.

THE STRUCTURALIST PARADIGM

During its first fifteen years of existence, ECLA was directed by the Argentine economist Raúl Prebisch, who had authored a highly influential work titled *The Economic Development of Latin America and its Principal Problems* (published in English by ECLA in 1950). Frequently referred to as the "structuralist manifesto," Prebisch's work addressed the growing gap between the core of wealthy industrialized countries that dominated the world economy and the much larger group of poor, underdeveloped countries that sat on the global periphery. For Prebisch, this asymmetrical relationship between rich and poor countries in the global economy was due to the very structures of trade and technological adaptation that distinguished these two groups of countries, as well as to the self-perpetuating nature of the relationship between North and South.

Prebisch and his ECLA colleagues argued that the phenomenon of chronic underdevelopment within Latin America was due to the predominant reliance of countries within the region on exporting primary commodities to the United States and western Europe. In turn, Latin America was highly dependent on these northern industrial trading partners for the import of manufactured and technology-intensive goods. Over the first half of the twentieth century, commodity-exporting countries in the South were plagued by price volatility, demand fluctuation, and periodic natural disasters that adversely affected their ability to export. At the same time, the northern industrial countries were experiencing a steady upward price for the manufacturing goods they were exporting to Latin America, as technological innovation and labor productivity rendered this group of countries ever more competitive.

Throughout the 1960s, ECLA analysts defined this tendency for Latin America to pay increasingly more for imports from industrial countries and to earn less for primary exports as a problem of unequal exchange. Although subsequent economic analyses have shown these particular ECLA claims concerning unequal exchange between North and South to be exaggerated, this diagnosis stands as the overriding theoretical contribution made by ECLA. Given the heavy weight afforded by ECLA to these structural bottlenecks, a major policy prescription was to restructure the region's terms of trade with the North by laying down a viable and competitive industrial base.

The heyday of Latin American import substitution industrialization, whereby countries such as Argentina, Brazil, Chile, Mexico, and Peru raised tariffs on industrial imports and offered generous state subsidies to spur domestic manufacturing production, coincided with the ECLA paradigm up through the 1970s. However, ECLA's main contribution was more the diagnosis of the underlying causes of underdevelopment and less the actual policies for rectifying it. In its early years, for example, ECLA was quite prescient in identifying such causal factors as the pattern of oligopolistic ownership within industrial-country markets and an adverse shift in the international division of labor, both of which worked against the ability of the developing countries to catch up with the North. But, in the end, the kinds of industrial policies that were pursued to counter these barriers and the specific sectors targeted for success were more a matter of domestic politics and policy choices within countries in the region.

ECLAC: A RESPONSE TO CHANGING THE TIMES

By the 1980s it would have been difficult for even the most sympathetic ECLAC analyst to put a positive spin

on Latin America's efforts to industrialize via import substitution during the post–World War II era. With the advent of the 1982 Latin debt crisis and the plummeting of growth across the region, the shortcomings of this model were all too apparent. Over time, government-sponsored subsidies and high industrial tariffs had spawned powerful urban coalitions across sectors that succeeded in sustaining the import-substitution model despite its obvious failure to promote productivity, growth, and higher living standards across Latin America. As fiscal and exchange-rate policies favored urban manufacturers over rural producers, the agricultural sector languished, and resource-rich countries like Argentina, Mexico, and Peru could only meet domestic needs by importing food.

As import substitution collapsed under the weight of the debt crisis, ECLAC's emphasis shifted in the 1980s. The agency concerned itself with macroeconomic recovery and the kinds of social policies that would do the most to cushion Latin America's poor from the impacts of a decade-long recession. With the widespread structural reforms and restoration of growth that finally occurred in the early 1990s, ECLAC became an important advocate for greater technological adaptation and the need for enhancing competitiveness in the region. Interestingly, ECLAC's earlier misgivings concerning the role of free trade and comparative advantage in the development process were eclipsed as the agency became a tripartite partner, along with the Inter-American Development Bank and the Organization of American States (OAS), in promoting the negotiation of a Free Trade Area of the Americas that would include all thirty-four democratically elected countries in the region.

ECLAC'S INTERNATIONAL SWAY

While the original analyses conducted by ECLAC at its inception were specific to Latin America, the academic literature on other developing countries in Asia and Africa has clearly borrowed and been enriched by the ECLAC paradigm. From the application of theories of unequal exchange to the structuralist critique of industrial-bloc dominance of international commodity and labor markets, ECLAC has left an indelible print on the fields of development economics and area studies.

SEE ALSO *Import Substitution; Macroeconomics, Structuralist; Prebisch, Raúl; Prebisch-Singer Hypothesis; Taylor, Lance*

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Carol Wise

ECONOMIC CRISES

An economic crisis is typically defined as "a turning point for the worst." It refers to a period when "good times" turn quickly into "bad times," when economic agents panic, leading to economic dislocation. The dislocation is the crisis—for instance, from the upper turning point of the business cycle to its immediate aftermath, until people's expectations improve.

The history of crisis theory has a long and distinguished pedigree, ranging from Marxist economics, business-cycle analysis, and social and political analysis (Clarke 1994). There are various types of economic crises, ranging from cyclical crises to structural crises of the long wave and financial crises. These crises are interrelated with other types of crises, such as legitimization crises and, indeed, personal crises.

This entry will begin by discussing economic crises associated with business cycles. Cycles undergo upswing when economic growth, investment, and consumption are growing at respectable rates. Such cycles take various forms, as Joseph Schumpeter (1883–1950) pointed out, but if we take the typical eight-to-eleven year (Juglar) cycle as an example, factors start to negatively impact on growth as the upswing slows down. These factors variously include speculative bubbles, which eventually bust; higher costs of production, such as real wages, materials and oil, interest rates, and rent; and inadequate demand impinging on the process.

These myriad factors reduce the rate of profit before the upper turning point of the cycle. Eventually, this declining profit rate impacts on investment as businesses realize that underlying profitability has declined, and they react by reducing the rate of accumulation. Consumers, in turn, usually reduce the rate of consumption expenditure. This decline in demand then transmits into an economic crisis at the upper turning point of the cycle, leading to declining confidence, a deteriorating business environment, lower consumer confidence, and a degree of overreaction in the markets. This overreaction is a critical

element of the crisis, as people often panic, selling their stock and reducing business activity. Such overreaction occurred, for instance, in the early phases of the (Juglar) recessions of 1974 to 1975, 1982 to 1983, 1990 to 1993 (1997 to 1998 in Asia), and 2000 to 2002 throughout much of the world.

Typically, the economic crisis also leads to or is associated with a financial crisis (especially during long-wave downswings). Martin Wolfson (1994) has shown that during the early phases of recession, the (U.S.) economy undergoes a financial crisis as the declining profitability, confidence, and animal spirits lead to a massive devaluation of capital and banking assets, causing consumers and businesses to withdraw such assets from financial institutions (and sell them off) and effectively engaging in a run on the banking and financial systems. Financial crises tend to moderate as lender-of-last-resort facilities are utilized to rescue the system from negative chains of bankruptcy, as Hyman Minsky (1919–1996) recognized. The crisis thus encompasses the early months of a recession, including financial crisis.

Crises are usually reserved for the most protracted periods of uncertainty, instability, and panic. Some analysts may extend the short-cycle crisis to the remaining months or years of recession, but this view may be problematic because, after a while, expectations tend to improve, leading to a recovery in the cycle. Slowly, investment and consumption demand pick up as bubble crashes moderate along with costs of production and perceptions.

Karl Marx (1861–1863) differentiated between the potential for crises and the necessity of crises. The potential for crises emanates from money and credit, which enable buying and selling to be separated, leading to realization problems. The goods may be "exchanged" before the payment of "money," due to the existence of trade credit, promissory notes, IOUs, credit cards, and so forth. The market enables potential circulation crises to emerge through supply-demand coordination failures as the final payment of money fails to materialize due to insufficient demand and over-indebtedness.

The necessity for crises, according to Marx, lay in "the very nature of capital." The clash between competition and monopoly, for instance, leads to innovation, which starts rounds of productive investment, imitation, and gradually excess competition and low profits, leading to crisis. The conflict between capital and labor during cycle upswings may variously lead to a diminished reserve army of labor, high wages, and low productivity, and thus low profits and economic crisis. The conflict between industry and finance will periodically lead to speculative bubbles rising and crashing, and thus to economic crisis. Marx saw these contradictions of capitalism as necessarily leading to crises, which *may* perform the useful functions of flushing out unproductive capitals and providing the basis for renewed accumulation after a period of crisis (Mattick 1981), except in the severest types of crisis.

The possibility of severe crises is associated with problems of: (1) debt deflation, (2) insufficient demand, and (3) structural crises of capitalism. Debt deflation, according to Irving Fisher (1867–1947), is endogenously generated through a series of interrelated processes. Innovation that is financed largely by debt in an environment of endogenous money often leads to speculative excess and euphoria, resulting in the liquidation of debt, greater uncertainty, declining velocity of money, falling prices, depression, and disarray. The psychology of business is important to this process; debt deflation occurred, for instance, during crises and panics in the United States in 1837, 1873, 1893, and circa 1929, in Japan from 1990 to 2003, and so forth. Fisher saw debt deflation as counter to laissez-faire and caused by the paradox of "over-indebtedness [being] so great as to depress prices faster than liquidation, [while] the mass effort to get out of debt sinks us more deeply into debt" (Fisher 1933, p. 350). He saw policy efforts toward reflation, consistent with the New Deal in the United States, as being potentially able to tackle such problems.

This is linked to the crisis theories of John Maynard Keynes (1883–1946) and Michal Kalecki (1899–1970), both of whom saw deficiency of demand as the principal momentum underlying the trend toward economic crises. For Keynes (1936), capitalism is inherently unstable because uncertainty emanates from investment in capital assets with a prospective yield linked to future prospects, knowledge of which is close to zero. In such an environment, investment is usually determined by the prevailing business climate, which generates waves of upward and downward accumulation through history. These cycles and waves of investment variously generate overproduction as the euphoria of upswing expands prospective yield (minus supply price) beyond fundamentals, with downswings manifesting in insufficient aggregate demand linked to stock market crashes, deep recessions, and depressions. Such instability leads to periods of moderate economic crises during the short cycles and more intense crises during the longer-wave downswings.

Kalecki (1971) was able to demonstrate technically how insufficient demand generates such crises from the investment-consumption dynamics of capitalism. For instance, in a simple model, "capitals get what they spend" and "workers spend what they get." Profit, the critical variable affecting growth, depends upon the propensity to invest, which is affected by uncertainty. Uncertainty, however, is endemic in the system as a result of deep capital projects and speculative tendencies. The severity of crises, therefore, ultimately depends upon the intensity of

this uncertainty, and the extent to which overproduction leads eventually to insufficient aggregate demand and instability.

Structural crises, the deepest and most prolonged form of crisis, are linked to long waves of development and relative demise (O'Hara 2006). Long-wave upswing typically occurs when institutions and technology are developed, leading to twenty or thirty years of higher than average growth without major financial crises or deep recessions. This approximates the era of the bourgeois revolutions in France and the United States; the Industrial Revolution of the late 1700s and early 1800s; the American and Australian gold rushes along with the "age of capital" of the 1850s to early 1870s; the period of industrial consolidation and business expansion of the late 1890s to 1910s; the postwar boom of the 1950s to early 1970s (O'Connor 1984); and possibly the age of the Internet, biotechnology, and sustainable energy during the second and third decades (at least) of the twenty-first century.

However, as institutions undergo demise and technologies mature, long-wave downswings occur for twenty or thirty years. These are the structural crises of capitalism, when profit rates, growth, investment, and (usually) standards of living for the masses have stalled. Hence the long periods when cyclical recessions and financial crises are deeper than usual: 1820 to 1850, 1875 to 1895, 1920 to 1945, and 1973 to the early 2000s. These structural, accumulation crises are long periods of above-average uncertainty, when the business outlook is generally negative (although short-cycle booms can be quite buoyant before the periodic crash). They also tend to lead to legitimization problems for many vested interests, including governments, businesses, institutions, and individuals. Personal crises tend to escalate during these times, along with social dislocation. Lender-of-last-resort facilities and big *productive* governments are quite likely needed to moderate such crises through raising the floor of cycles and reducing instability.

There is room for a better understanding of economic crises. More studies are needed to comprehend the early stages of recession; the linkages between economic and financial crises; and the relationship between business-cycle crises, debt deflation, insufficient demand, and structural crises of capitalism. There is also a need for further research on ways of moderating these crises and how the crises themselves may (in certain circumstances) be useful to clear the way for change and development.

SEE ALSO *Bubbles; Business Cycles, Empirical Literature; Capitalism; Depression, Economic; Economics, Keynesian; Economics, Post Keynesian; Financial Instability Hypothesis; Great Depression; Long Waves; Marx, Karl; Panics; Recession; Schumpeter, Joseph Alois; Underconsumption; Wage and Price Controls*

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Phillip Anthony O'Hara

ECONOMIC FORECASTING

SEE *Autoregressive Models.*

ECONOMIC GROWTH

The improvement of a society's living conditions is a complex process whose study has been at the very origins of economics. This process is called *economic growth*. In Western civilization, the first attempts to comprehend the mechanism of growth are recent, dating back to the end of the Renaissance only. We owe them to Giovanni Botero (1540–1617), Maximilien de Béthune, Duc de Sully (1560–1641), and Josiah Child (1630–1699). Why not earlier? Because the Middle Ages were doomed by endless conflicts and plagues; in the fourteenth century alone,

more than one-third of the European population was wiped out by the great plague. It would have taken a bold thinker to even entertain the idea of development. As the French historian Pierre Gaxotte (1895–1982) wrote: "The man of the Middle Ages does not know of time and numbers" (1951, p. 237).

It is not surprising therefore that we owe to Arab civilization the first known comprehensive explanation of the fundamental causes of economic growth. They were given in a masterly way by Ibn Khaldūn (1332–1406) in his *Muqaddimah: An Introduction to History* (1377). Ibn Khaldūn's objectives went beyond explaining economic growth; he gave himself the formidable task to unveil the causes of the rise and decline of civilizations. The British historian Arnold Toynbee (1889–1975) commented about Ibn Khaldūn's magnum opus that "in the Prolegomena to his *Universal History* he has conceived and formulated a philosophy of history which is undoubtedly the greatest work of its kind that has even been created by any mind in any time or place" (Toynbee 1935, Vol. III, p. 322).

Western civilization would have to wait four centuries to see the independent blossoming of very similar ideas in Adam Smith's (1723–1790) *Inquiry into the Nature and Causes of the Wealth of Nations* (1776). Today, economic theory has vindicated the conjectures made by these major thinkers, as will be discussed in the last section of this entry. Before that, the entry will explain how growth is measured, what the process of economic growth is, and how optimal growth can be achieved.

MEASURING ECONOMIC GROWTH

The standard, international measure of economic growth is the increase in *real income per person* (the increase is a percentage rate per year). By *income* is meant *national income*; this concept is derived from the gross domestic product (GDP), which is closely related to the measure of economic activity.

There are three conceivable approaches to measuring society's economic activity. The result of this activity can be considered in terms of the amount of goods and services that society manages to put at its disposal within a given time span (e.g., one year). Broadly speaking, it is customary to distinguish *consumption* goods and services (produced for their own sake, these will not be transformed at a later stage, and are not used for manufacturing other goods or services) from *investment* goods. Examples of the latter are equipment, factories, and transportation infrastructure, which will be used for production in coming years. The investment goods will be added to the capital stock in existence; along with technological progress, they will play a major role in the growth process. *Exports* are added to consumption and investment, since they also reflect society's activity. Naturally, consumption, investment, and even some exports include various amounts of imports; these are finally deducted in order to achieve a first measure of GDP from an expenditure point of view.

A second, equivalent, way to measure economic activity is to count the contribution of each sector of the economy (e.g., agriculture, industry, and services). Since the production of one sector (e.g., aluminum) may be used in another sector (automobiles), double counting must be avoided. For that purpose, only the net production of each sector is taken into consideration, in the form of its added value, equal to its total production less all purchases to other sectors. The sum of the added values of all sectors is then equal to GDP viewed from the production perspective.

Finally, it is clear that the only source that can be used to remunerate the production factors (labor and capital) is the value-added of each sector. In the third approach to measuring GDP, all categories of income are counted: labor income, capital income (interest and rentals paid by firms), and profits. Income used in measuring the growth of an economy is real net national income, determined as follows. First, the yearly depreciation of capital is deducted from the gross domestic product to obtain the *net domestic product*. We then add all capital and labor income received from abroad by residents, and deduce payments of capital and labor income made abroad to nonresidents. We thus obtain the *net national product*.

Two further corrections are needed to obtain the income distributed to society: First, we deduct all indirect taxes (paid by firms) and add subsidies (received by individuals and firms). The result is called *national income*. Finally, we are less interested in national income than in its purchasing power. To that effect, statisticians attempt to measure the average relative price increase of the various pieces of GDP from the expenditure side, and they deflate the yearly national income by that amount. For instance, supposing they estimate that prices have increased from year t to $t + 1$ by 10 percent; they will divide the year's $(t + 1)$ national income by 1.1 to obtain real national income with reference to year t as a base.

THE SIGNIFICANCE OF INCOME PER PERSON AS A MEASURE OF WELFARE

How much can we rely on income per person to gauge a society's standard of living and its progress? This type of measure shows defects that may be detrimental to its significance. Indeed, many expenses are counted in GDP (as well as in national income), although they should not be if we are interested in measuring society's welfare. For example, all expenditures forced upon individuals should be excluded

from the measure. These include all public expenses made by authoritarian regimes that would not have received the population's approval through parliamentarian representation. Also included in this category are public expenditures made in countries where democracy is weak. In such countries, for example, the level of military expenditure is often far above what the country would require for pure defense purposes. These unwanted public expenses replace those that the population would have chosen, namely, expenditure for health and education.

We also count in GDP and national income a number of expenses that individuals may choose of their own free will, but which are also sometimes forced upon them by unwanted circumstances. Security expenses—*security* taken in its largest meaning—is an example. Those expenses are considerably higher today than they were decades ago, and of course have nothing to do with well-being. Think also of expenses resulting from accidents, disease, or epidemics. Each of the above has two negative effects upon society's welfare. First, society suffers directly from these circumstances and events. Second, those expenditures replace the goods and services that society could have enjoyed instead. No account is taken of working conditions in the measurement of national income. In particular, no account is taken of forced labor, particularly the labor forced upon women and children.

Furthermore, no equity measure appears in national accounts. This entry defines *equity* as the ability for society to reward each individual according to his or her own qualities and effort, and at the same time protect those hurt by fate.

Finally, national income does not account for damage done to the environment, and more generally to the biosphere. Inasmuch as depreciation of capital is deducted from GDP to obtain, after other adjustments, national income, we should also deduct the cost of the damage to the biosphere due to economic activity.

Despite these reservations, income per person remains a reliable gauge of society's welfare. If not an absolute measure, it is an adequate relative measure, since one can still make international comparisons based upon it. The fundamental reason is that the level of income in any country is intimately linked to its level of democracy. If one establishes a list of countries ranked according to their level of democracy, and set it beside another list on the basis of real income per person, there would be a great similarity in both lists. Economic growth has steadily accompanied societies that have—however slowly—managed to protect the individual and have abided by the principle of equality of opportunity. A third ranking of countries according to their welfare would be very similar because democracy is highly correlated to welfare. This is the reason why it is reasonable to measure welfare by income per person, imperfect as that index may be.

THE GROWTH PROCESS

The growth process has been well understood for at least two centuries, and can be described as follows. At the beginning of some time period—for instance, year t—any given country has a capital stock K_t at its disposal, and a workforce L_t, which may be proportional to the population. This workforce enjoys a degree of technological knowledge inherited from the past, just as the stock of capital has been accumulated in the past. During year t, society makes use of those resources to turn out a product referred to earlier as the GDP. Part of the GDP is used to replace the capital stock K_t, inherited at time t, which has depreciated during that year. Subtracting depreciation gives the net domestic product, which can be divided into two parts: By far the largest is consumption (perhaps 85%); the rest is net investment, which is equipment that will be added to increase the capital stock at the beginning of year $t + 1$. In the same time span, the labor force may have increased from L_t to L_{t+1}, and technological advances may have been made, carrying the technological capabilities to a new level. This enables society to acquire a higher net domestic product in period $t + 1$.

It is clear that the resulting increase in income will depend both on the size of net investment made in year t and on the possible technological advances that the labor force may have made. Two fundamental questions now may be asked. Under what conditions will income per person increase? In other words, under what conditions will the economy grow? And if growth is to be observed, can we expect growth to continue indefinitely? The answers to these questions require a quantitative description of the economy and the building of a model of the growth process. This requires making hypotheses on the functioning of the economy, on society's behavior, and on population growth.

First, the functioning is described by a *production function* linking capital K_t, labor L_t, and technological progress to production Y_t (which is considered equal to income) at any time t. This relationship can be written as the three-variable production function $Y = F(K, L, t)$, where F is homogeneous of degree one in K and L. This hypothesis means that if at any point in time t, K and L are multiplied by λ, then Y is also multiplied by λ: We have $\lambda Y = F(\lambda K, \lambda L, t)$. For instance, if $\lambda = 1.1$, it means that if K and L both increase by 10 percent, then Y also increases by 10 percent. A common, simple example of such a function is the Wicksell-Cobb-Douglas function proposed by the Swedish economist Knut Wicksell (1851–1926) at the turn of the nineteenth century: $Y = K^{\alpha}L^{1-\alpha}e^{gt}$. The function is homogenous of degree one,

and technological progress is taken into account in the exponential term e^{gt}, where g is $(1/Y)\partial Y/\partial t$, the rate of growth of income when K and L are constant (e.g., $g = 1.5$ percent per year).

A second hypothesis reflects the behavior of society with regard to saving and investment; one possibility is to posit that society saves and invests a fraction s of its income (e.g., $s = 0.1$ or 10 percent). Investment I being the rate of increase of capital, we then have $I = dK/dt = sY = sF(K, L, t)$.

Finally, the last hypothesis is about the growth of the population (considered as the labor force). The growth rate of the population is supposed to be constant and equal to n (e.g., $n = 1\%$ per year). Equivalently, it means that $L_t = L_0 e^{nt}$.

With these three hypotheses, we have a complete, albeit simple, model of the growth process. Observe that the rate of increase of capital, $I = dK/dt$, is a linear function of income, $Y_t = F(K_t, L_t, t)$, and the stock of capital K_t is driven by the differential equation,

$$I = \frac{dK}{dt} = sF(K_t, L_t, t). \qquad (1)$$

In the example above, we would have

$$\frac{dK}{dt} = sK^{\alpha}(L_0 e^{nt})^{\alpha} e^{gt}. \qquad (2)$$

Equation (2) is a Bernoulli equation that can be easily solved, leading to a trajectory of capital $K(K_0, t)$ which depends on the initial value of capital K_0 at some point of time $t = t_0$. In turn, this capital time path can be plugged into the production function $Y = F(K, L, t)$ to yield the time path of Y, as well as the evolution of income per person, $y = Y/L$, our variable of foremost importance.

In fact, a general, qualitative picture of the evolution of the economy can be drawn by making clever use of a fundamental property of the production function, as Robert Solow did in "A Contribution to the Theory of Economic Growth" (1956). Observe that if λ is replaced by $1/L$ in $\lambda Y = F(\lambda K, \lambda L, t)$, then $y = Y/L = F(K/L, 1, t)$, which depends now solely upon the capital-labor ratio r and time. Suppose for the time being that there is no technological progress; then $y = f(r)$, and income per person is simply a function of r. This function is always increasing, if $Y = F(K,L)$ and $Y/L = f(r)$, $Y = Lf(r) = Lf(K/L)$, $\partial Y/\partial K = Lf'(r)(1/L) = f'(r)$. Assuming that the marginal productivity of capital $\partial Y/\partial K$ is positive leads to $f'(r) > 0$. This result is of central importance, because it means that the evolution of income per person is driven by the evolution of the capital labor ratio. Thus, the qualitative evolution of $r = K/L$ will enable us to reach conclusions as to the evolution of income per person, and to answer the second question we asked at the beginning of this section. This can be achieved for very broad families of the production functions, without resolving the differential equation (1), nor knowing the exact mathematical specification of $F(K,L, t)$.

Consider the rate of increase of $r(t)$. Denoting $\dot{K} = dK/dt$ and $\dot{L} = dL/dt$, it is

$$\dot{r} = \frac{dr}{dt} = \frac{d}{dt}\frac{K_t}{L_t} = \frac{\dot{K}L - K\dot{L}}{L^2} = \frac{\dot{K}}{L} - \frac{K}{L}\frac{\dot{L}}{L} = \frac{\dot{K}}{L} - nr.$$

Since $\dot{K} = I = sY$, we have finally,

$$\dot{r} = sy - nr \qquad (3)$$

which is the fundamental equation of positive economic growth. It has an immediate economic interpretation: The rate of increase of the capital-labor ratio is the difference between investment per person ($sY/L = sy$) and the investment per person that is necessary to maintain the capital-labor ratio constant (nr); indeed, if L grows at rate n, and if K is to grow at the same rate ($\dot{K}/K = n$), then $\dot{K}$ ($= I$) must be nK, and investment per person $\dot{K}/L$ must be $nK/L = nr$. It is obvious that r will increase ($\dot{r} > 0$) if and only if investment per person (sy) is higher than the investment per person necessary to maintain r constant (nr). Now equation (3) is a differential equation in r, but it does not need to be solved in order to infer the evolution of the economy and its ultimate outcome. Only a picture—a phase diagram—is required. We can simply draw the curve $sy = sf(r)$ and the ray nr, and consider the difference, $\dot{r} = sy - nr$, which will be the rate of increase of $\dot{r}$. This is done in Figure 1.

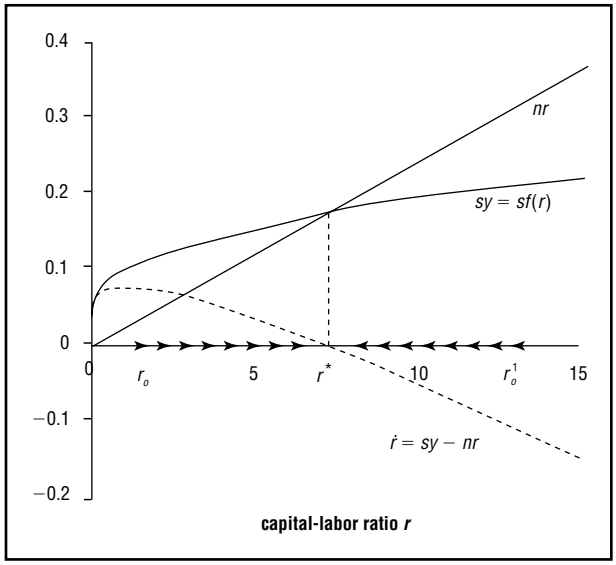

Figure 1: The phase diagram of the growth process.

Suppose that, initially, the capital-labor ratio is r_0. We can immediately see that $\dot{r}$ is positive at that point; therefore r will increase, and income per person will increase as well. This process will drive r toward its equilibrium value r^*, where $\dot{r} = 0$, and therefore r stays constant. (Whether r^* will be reached or not cannot be inferred from the simple reading of the phase diagram. Solving the corresponding differential equation is required; it can then be shown that r^* is reached asymptotically only—that is, when t tends to infinity.) On the other hand, if the initial value r_0 is above r^*, then $\dot{r} < 0$; r will decrease toward r^*. If the marginal productivity of capital $\partial F/\partial F = f'(r)$ diminishes in such a way that the curve $sf(r)$ intersects the ray nr, then the economy will tend toward a fixed, equilibrium point $(r^*, f(r^*)) = (r^*, y^*)$. Therefore, income per person is bound to tend toward the limit y^*.

Two circumstances, however, may arise in which this phenomenon will not occur and income per person is not bounded. The first possibility is that the curve $sf(r)$, concave as it may be, will not intersect the ray nr. Such a possibility may arise if the elasticity of substitution between capital and labor is sufficiently high (the elasticity of substitution measures the ease by which capital may be substituted with labor to achieve a given level of output when the price of labor increases relative to the rental rate of capital (on this concept, see La Grandville 2007b). Then, the curve $sf(r)$ tends asymptotically toward a ray with a slope equal to or larger than n. If that is so, there will be no intersection between $sf(r)$ and nr; $\dot{r}$ will always be positive, and r will always grow.

The second circumstance that may lead to permanent growth is the very existence of technological progress. Indeed, suppose that $f(r)$ is multiplied, as in our previous example, by e^{gt}. It means that in Figure 1 the curve $f(r)$ is constantly shifted upward by the mere force of technological progress. It implies that even if, in a first phase, capital labor is decreasing, it will ultimately increase, carrying with it an increase in income per person.

From a methodological point of view, economic growth is first described by a dynamic model that captures the motion of the economy; such models typically generate one, or a set, of differential equation(s). The next fundamental questions are: If we are confident in the validity of such models, can we determine a trajectory of the economy that would be optimal compared to other possible time paths? And how is optimality to be defined?

OPTIMAL GROWTH

Suppose that we are able to infer the future trajectory of an economy from the solution of the model described above. An infinity of choices are offered to society, in the sense that society can choose an infinitely large number of savings investment ratios s, and to each of those corresponds a given future time path for the economy. Which is to be chosen? What would be an optimality criterion for society? A natural answer could come from what was discussed above: Society does not accumulate capital for its own sake, but it does care for the consumption goods and services that capital can provide in the future. So a logical aim for society would be to determine a time path K_t that would maximize the sum of consumption flows to be received in the future, with an important proviso: A consumption flow received in thirty years is to be valued less than the same flow received much sooner. Accordingly, such future consumption flows have to be discounted, and a discount rate that would reflect society's rate of preference for the present must be defined. Furthermore, following Frank Ramsey's (1903–1930) opening treatment of the subject in 1928, it was proposed that consumption flows C_t should be transformed into utility flows through some concave, increasing, utility function $U(C_t)$. Thus, for about three-quarters of a century, the problem of optimal growth was defined as follows: find a trajectory K_t that would maximize the integral

$$\int_0^\infty U(C_t)e^{-it}dt$$

subject to the constraint

$$C_t = F(K_t, L_t, t) - \dot{K}_t$$

which is equivalent to maximize

$$I = \int_0^\infty U\left[F(K_t, L_t, t) - \dot{K}_t\right]e^{-it}\,dt. \qquad (4)$$

This fundamental problem of optimal growth belongs to the calculus of variations, an extension of differential and integral calculus. Differential calculus deals, among many other things, with the optimization of functions, that is, relations between one or several variables and a number. The integral in (4) does not have that characteristic; rather, (4) is a relation between a whole function (K_t, for t between 0 and ∞) and a number (I). Such a relationship has been given a special name: a *functional.* The calculus dealing with functionals is the *calculus of variations* because the increase of a variable in differential calculus is now replaced by the variation of a whole function. This branch of mathematics was born when Johan Bernoulli (1667–1748) submitted in 1698 to his fellow mathematicians the problem of finding the curve joining points A to B such that a bead sliding along the curve would reach B in minimum time. The problem was solved by Bernoulli himself, his brother Jacob (1654–1705), and also by Gottfried Wilhelm Leibniz (1646–1716), Isaac Newton (1642–1727), and Guillaume de l'Hôspital (1661–1704), each using different methods. A general method of solving variational problems however had to wait for the genius of Leonhard Euler (1707–1783), who in 1744 showed that if a functional $\int_a^b G(K_t, \dot{K}_t, t)\,dt$ is to

be maximized, a first-order condition is that it satisfies the differential equation

$$\frac{\partial G}{\partial K_t}(K_t, \dot{K}, t) - \frac{d}{dt}\frac{\partial G}{\partial \dot{K}}(K_t, \dot{K}_t, t) = 0 \qquad (5)$$

Equation (5) is generally a second-order, nonlinear differential equation. Its second-order character comes from the fact that the second term on the left-hand side of (5) is the total derivative of $G_{\dot{K}}(K, \dot{K}, t)$ with respect to t, which will generate a term depending on K, $\dot{K}$, and t, $G_{\dot{K}\dot{K}}$, multiplying $\dot{K}_t$.

Applied to the problem of optimal growth, the Euler equation yields,

$$i(t) = F'_{K_t}(K_t, L_t, t) + \dot{U}'_c / U'_c. \qquad (6)$$

The Euler equation (6) unfortunately is seldom solvable analytically, and this is precisely the case here. Only numerical analysis is available to determine the optimal trajectory K^*_t, from which optimal investment $I^*_t = \dot{K}^*_t$, income $Y^* = F(K^*_t, L_t, t)$, and finally savings rate $s^*_t = I^*_t / Y^*_t$ can be deduced. The difficulty of solving the problem numerically led economists to keep it in the realm of theory. The problem with this situation is that short shrift was given to the fact that each time some numbers were obtained, the strangest results appeared in the form of an exceedingly high "optimal" initial savings rate, often on the order of 40 percent.

With the invention of efficient computing software, it became possible to undertake a much more systematic examination of the problem of optimal growth. It was found that the culprit was the introduction of an arbitrary utility function, $U(C)$ (La Grandville 2007a). When the objective functional is more simply the sum (the integral) of the discounted consumption flows, then two remarkable consequences emerge: First, the Euler equation is no longer a differential equation solvable only by numerical methods, but an algebraic equation from which the optimal trajectories K^*_t, I^*_t, and s^*_t can be derived in analytic form. Second—and more importantly—the optimal savings rate now has reasonable, reachable values.

THE FUNDAMENTAL FACTORS OF ECONOMIC GROWTH

As mentioned above, Ibn Khaldūn provided the fundamental factors of economic growth. These are not set at random, but follow a logical order, one implying the other.

Demographic Growth and Technological Progress Ibn Khaldūn's idea is that a larger population enhances the division of labor. This view of demographic growth was rediscovered four centuries later by Adam Smith in his *Wealth of Nations*. In addition, the enhancement of division of labor that accompanies technological progress improves the chances that an individual, by concentrating on a specific task, will find ways to innovate.

The Search for Individual Profit The search for individual profit is a factor of growth that is far from obvious. According to Ibn Khaldūn: "Civilization and its well-being as well as business prosperity depend on productivity and people's efforts in all direction in their own interest and profit" (Ibn Khaldūn [1377] 1958, p. 104). Those words were later echoed by Smith:

> Every individual is continually exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, indeed, and not that of the society, which he has in view. But the study of his own advantage naturally, or rather necessarily, leads him to prefer that employment which is most advantageous to the society.… He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it.… He intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. (Smith [1776] 1977, pp. 398–400)

It is of fundamental importance that neither Ibn Khaldūn nor Smith defended the idea of using any means to make a profit. Quite on the contrary, both sternly condemned the abuse of dominant positions and monopoly power. But if profits can be made by inventing new processes or new products, how is it possible that such profits might be to the advantage of society as a whole? In addition, a further step was taken by Smith, for whom the optimum employment of capital by an individual would result in a maximum advantage for society.

Ibn Khaldūn's and Smith's conjecture can be illustrated and formally demonstrated. A first illustration is based upon the outcome of introducing technological progress. It can be shown that if innovations reduce marginal production costs, society's surplus will always increase, although ultimately some firms may see their profit diminish. Enhanced productivity (to quote Ibn Khaldūn) will induce firms to produce more, thereby increasing competition among them and forcing prices down. The lower prices and increased quantity will benefit consumers. Consumer surplus will increase in such a way that it will always more than compensate for any reduction in surplus suffered by producers. A striking example is the spectacular growth of China since the late 1970s, a growth process never witnessed at any other place or time. Its origin can be pinpointed to the suppression of the popular communes by Deng Xiaoping (1904–1997)

in 1978. When farmers were allowed to increase production on private lots beyond the quota they were required to remit to cooperatives, they generated enormous surpluses for consumers and for themselves alike. Savings and investments increased on a large scale, setting in motion the growth process described in the beginning of this article. Clearly, the aim of farmers was to make a profit, but this benefited the entire Chinese economy, even though such a result had not been their intention (on this and for a formal proof of Smith's conjecture, see La Grandville 2007b).

Private Property The fourth factor of economic growth enunciated by Ibn Khaldūn is the principle of private property. Ibn Khaldūn lists three major transgressions to that principle. The first is slavery, condemned by Ibn Khaldūn who, to the best of our knowledge, was the first thinker to denounce what he considered "one of the greatest injustices and one which contributes most to the destruction of civilization" (Ibn Khaldūn [1377] 1958, pp. 108–109).

The second transgression against private property is private and public monopolies and, more generally, the infringement of competitive markets. (It is striking that Ibn Khaldūn also described the very system that would be implemented in many countries in the coming centuries, whereby farmers would be compelled to sell their product to a central authority that would market it at monopoly prices.)

The third transgression is excessive taxation, which destroys the desire to set up firms, and ultimately the very income that is supposed to be taxed.

The Soundness of Political and Legal Institutions In his *Introduction to History*, Ibn Khaldūn stressed the fundamental, necessary role that institutions play in the growth process. One of his aims was to warn his contemporaries of the dangers that lurked for their civilization if they did not manage to maintain a political system that would protect the individual. He tells us that he was not able to elaborate a better system of government than that embodied in a famous letter sent in 822 by Tahir, one of the generals of the king of Egypt, to his son Abdallah, which Ibn Khaldūn quotes in full. Here is one of its most significant messages:

> Consider it your most important task to take personal charge of the affairs of [your] officials and to protect your subjects by looking after their needs and providing for their requirements.… Do not be greedy. Let the treasures and riches you gather and hoard up be piety, the fear of God, justice, the improvement of your subjects, the cultivation of their country, the supervision of their affairs, the protection of the mass of them, and support of the unfortunates. You should know that property, once it is gathered and stored in treasuries, does not bear fruit, but if it is invested in the welfare of the subjects and used for giving them what is due to them and to prevent them from need, then it grows and thrives. The common people prosper.… Devote yourself to looking after the affairs of the poor and indigent, those who are not able to bring before you complaints about injustices they have suffered, and other lowly persons who do not know that they may ask for their rights. Inquire about these people in all secrecy, and put good men from among your subjects in charge of them. Command them to report to you their needs and conditions, so that you will be able to look into the measures through which God might improve their affairs. Have regard also for people who have suffered accidents, and for their widows and orphans. Give them stipends from the treasury, following the example of the Commander of the Faithful.… Set up houses for muslims who are ill, shelter them, [appoint] attendants in these houses who will handle them kindly, and [appoint] physicians who will treat their diseases. Comply with their desires so long as it does not lead to waste in the treasury. (Ibn Khaldūn [1377] 1958, pp. 143–153)

Prosperity, for Ibn Khaldūn, thus implies as a necessary condition the protection of the individual and at the same time a social policy that corresponds very closely to the equity principle defined above.

CONCLUSION

William Letwin, in his introduction to the *Wealth of Nations*, described Adam Smith's message thus: "Far from being a hymn in praise of anarchic greed, the *Wealth of Nations* is a reasoned argument for justice, order, liberty and prudent plenty" (Smith [1776] 1977, p. xxii). One could not better characterize the *Muqaddimah* by Ibn Khaldūn. The similarity of those two messages, from different civilizations and four centuries apart, prompts us to beg the question of the convergence of ideas and values among civilizations. Economic growth does require the factors enunciated by Ibn Khaldūn; it also requires peace. Ibn Khaldūn spent a good part of his life trying to negotiate peace treaties on all shores of the Mediterranean. For his part, Smith denounced wars and the financing of wars as the greatest deterrent of economic growth. In Western civilization, one of the most fundamental values is the principle of defensive war, which probably originated in the writings of Augustine of Hippo (354–430 CE). Shared by Ibn Khaldūn and Smith, did this idea appear elsewhere? Indeed, they were preceded by the Chinese philosopher Mo-Tzu (c. 470–391 BCE) (Watson 1967).

Mo-Tzu tried—in vain—to advocate this idea, which he based upon another fundamental principle: that of equality of individuals and states. This latter principle would take more than two thousand years to be slowly implemented in state constitutions, and even longer in social behavior.

Nevertheless, the last millennia definitely witnessed a convergence of ideas and values among civilizations, and such is the reason why we may hope that societies will ultimately achieve economic growth for all.

SEE ALSO *Business Cycles, Real; Business Cycles, Theories; Democratization; Development; Development Economics; Golden Rule in Growth Models; Ibn Khaldūn; Immiserizing Growth; Neoclassical Growth Model; Optimal Growth; Productivity; Property, Private; Saving Rate; Slavery; Smith, Adam; Solow Residual, The; Solow, Robert M.*

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Olivier de La Grandville

ECONOMIC HISTORY

SEE *Cliometrics.*

ECONOMIC METHODOLOGY

Economic methodology is concerned with how economic knowledge is pursued. It covers a range of issues: Can we establish rules for good economic analysis, and if so what are they? If we cannot establish rules, are there principles for guidance? What principles do economists use in practice? How are we to understand the evolution of the discipline? How separate is economics from other social sciences, and to what extent should economic methodology be discussed independently of the methodology of other social sciences?

The term *methodology* is often used incorrectly, to refer to methods. Methodologists use the term to refer to the approach taken to building knowledge (and the status of that knowledge), which provides among other things the basis for choosing methods. Some also draw the distinction between *Methodology* and *methodology*, the former being prescriptive (setting rules) and the latter descriptive (providing an account of methodology in practice). We will see that the balance has shifted over the last few decades from Methodology to methodology (see further Sheila Dow's introductory *Economic Methodology* [2002], and D. Wade Hands's more specialized *Reflection without Rules* [2001]).

Economic methodology is now a large specialist field in its own right. Before the 1980s, it was examined from a philosophical perspective only by a limited number of texts, drawing directly from the philosophy of science, or was discussed in the context of historical discussions of past methodological disputes. When it was discussed, as in the introductions to textbooks, it tended to be associated with a positivist philosophy of science, with an emphasis on testing theory against objective facts, and a distinction of positive from normative statements. Indeed, this was the approach taken by Milton Friedman (1953) in what for a long time was the most famous piece of methodological writing in economics. Friedman argued that the purpose of theory was to predict, regardless of the realism or otherwise of assumptions; theory was thus simply "instrumental." This sparked heated debates with those (ranging from Samuelson to Kaldor) who saw the primary purpose of theory to be explanation, and thus considered the realism of assumptions to be important. Indeed, Friedman had drawn distinctions too sharply: In order to predict, there has to be some understanding of causal mechanisms, along with the capacity this provides to adapt theories to changing economic structures. Thus theory content is still

important. Nonetheless, the boldness of Friedman's challenge forced dissenters to formulate their methodological positions more explicitly.

Beginning with the publication in 1980 of Mark Blaug's authoritative *The Methodology of Economics*, there has been a tremendous increase in interest in economic methodology, which led to the setting up of the International Network for Economic Methodology, with its *Journal of Economic Methodology* and Web site www.econmethodology.org—which in turn have generated even more interest and activity, among both specialist methodologists and practitioners. The growth in the field also no doubt reflects a need to understand debates in economics at a deeper, foundational, level. The wide range of topics now covered by economic methodology is evident from the *Handbook of Economic Methodology* (1998).

Blaug's text appeared at a time when new developments in the philosophy of science had challenged the whole idea of establishing a single set of independent rules for good practice (monism). Blaug called on economics to build on Karl Popper's idea that, even if we cannot be certain that we have identified a true explanation, we can at least be certain of identifying a false explanation, if the evidence contradicts the theory (falsificationism). While Popper had advocated exposing all elements of theory to empirical testing, he made an exception for the axioms of rational individual behavior from which mainstream economic theory was built. These axioms specified the basis for individual choice, which in turn was the basis for the optimal allocation of scarce resources. They were necessary for setting economic theory up as a deductive logical structure, generating hypotheses that could be tested against empirical evidence (the methodology presented for many decades in introductory economics textbooks).

In the tradition of seeing methodology as prescribing good practice, Blaug drew attention to how economists' practice fell short of Popper's principles, due to a reliance (if at all) on evidence that confirmed theory—namely, verificationism. Indeed, such an approach was supported by the priority given by many to explanation over prediction. But in the meantime a divide had grown between pure theory, which was not generally tested, and applied economics, which had little impact on theory. Other methodologists shifted attention to understanding why this was so, drawing on the philosophy of science of Thomas Kuhn. In the absence of any absolute rules for good scientific practice, Kuhn had analyzed science in terms of activity within scientific communities, each of which has its own methodology and understanding of reality. Because of the latter state of affairs, we cannot think in terms of an independent set of "facts" against which theory is tested in any absolute sense.

Kuhn's ideas encouraged the development of what came to be known as *constructivism*, based on the idea of knowledge being "constructed," rather than established by facts. This development encompassed postmodernism (the denial of any general knowledge), rhetoric (the focus on techniques of persuasion other than methodological principle), and the sociology of scientific knowledge (the sociological study of scientific communities). Within constructivism, "Methodology" has no role, only "methodology" as a descriptive device. A high proportion of methodological work now falls into this category.

Kuhn had also encouraged the legitimation of a range of heterodox schools of thought, which proceeded to define themselves in terms of methodological differences from the mainstream. The differences started from a rejection of the whole idea of founding theory on axioms of rational choice (or indeed any deterministic account of behavior), as such axioms did not mesh with heterodox understandings of reality. Methodological awareness is thus wider spread in heterodox economics, playing a more central role in debate. Current leading topics focus at the levels of reality and of mode of thought, that is, below the methodological level: Is reality an open system (and what does that mean), and does such a system require an open system of knowledge, and what does that imply for methodology? Should there be a plurality of methodologies, and should methodology be pluralist (employing many methods)? How far does realism allow us to specify methodological principles after all? The realism debates have moved well beyond the old debates about the extent to which assumptions should be realistic.

In the meantime, there have been new developments in mainstream economics that require methodological discussion. Experimental and survey evidence contradicting the rationality assumptions, for example, is now encouraging theoretical change. Nevertheless the change is in the direction of a more complex account of rational individual choice, maintaining the traditional logical structure of mainstream theory, with its methodology of deducing arguments by logic from axioms, to be tested against facts. Within the mainstream, economics continues to be defined by this methodology, which requires fully specified individual behavior.

Current methodological discussion is thus both diverse and wide-ranging. Much of it is "micro" in the sense of examining particular developments in economics in methodological terms. At the "macro" level, it is concerned much less with principles to guide practice and much more with principles by which to understand the discipline.

SEE ALSO *Economics; Methodology*

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Sheila C. Dow

ECONOMIC MODEL

Economic models may be seen as intermediate between theories and the world, and are accordingly differently understood depending on how one sees their relationships to each. Models are specifically economic models when they address forms of social interaction involving prices and other money magnitudes. Daniel Hausman (1992) takes models to be either trivially true or neither true nor false, and thus to constitute conceptual explorations of theories. His emphasis is on theoretical models, not on empirical models, and thus on how models enable us to investigate theoretical concepts. In contrast, Ronald Giere (1988) sees science as a cognitive process, and is concerned with how models help us learn about the world. He sees the relationship between models and the world as one of similarity (though not of isomorphism). This allows models to be both somehow "true" of the world and yet at the same time not be expected to fully reflect the structure of the world.

Models may be defined, then, as instruments of investigation that allow us to concentrate on relationships of special interest, whether in theory or in the world or in combination of the two (see Morgan and Morrison 1999). That they focus attention on aspects of the world implies that they should not be taken as complete explanations, but as particular ways of examining those aspects. Within this framework, several different approaches to Giere's similarity idea have been suggested. Models have been taken to be idealizations or approximations that provide "realistic" though partial representations of the world. Models can also be seen to be like analogies and metaphors in that they exhibit similarities between different domains or systems. Another view is that models are like stories told to explain how theories may be interpreted or how theories relate to the world.

There are a number of misconceptions about the nature of economic models. While economic models are often seen to be sets of highly formal statements, there is nothing in the concept of an economic model that requires formal representation. Indeed, whether formal models or qualitative ones are preferred depends on the subject matter being modeled. Another widespread belief is that models are essentially instruments for making predictions about the future. But models have many different uses. There are theoretical models, simulation models, policy models, econometric models, measurement models, experiment models, formal models, accounting models, and so forth, all of which are constructed for different, often highly specific, purposes. Further, even good models designed expressly for making predictions can fail to produce reliable predictions in changing environments. Thus, because economic models have both limited and usually quite specific purposes, it is important to avoid uncritical use of the information they generate. Models are instruments for all kinds of investigation, and our investigations of the world are fallible, partial, and subject to revision.

SEE ALSO *Macrofoundations; Maximization; Microfoundations; Minimization; Models and Modeling; Multisector Models; Optimizing Behavior; Two-Sector Models*

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John B. Davis

ECONOMIC PSYCHOLOGY

The field of economic psychology explores how economics impinges on the psychology of both individuals and groups, as well as how people both individually and collectively affect the economy. This transactional interplay between society at both the micro level and the more macro level of sociocultural institutions suggests that traffic between the two is not just possible but should be welcomed as a new field of study. The study of economic psychology originated in the late nineteenth century, with

contributions from the French social scientist Gabriel Tarde and the American sociologist Thorstein Veblen.

The early ambitions of individuals like Tarde and Veblen to challenge the very foundations of economics have become more modest, and one of the legacies of their critique of economics has been the establishment of psychological considerations as important in economic theory and research. The field of economic psychology is populated by a small but vigorous intellectual community in its own right. The assumptions of rationality that underpin "homo economicus" have been effectively challenged, and the cognitive biases that influence decision-making and are part of human nature are now well known in all branches of social science.

Today, marketing students are taught about the social-emotional meaning of brands and how consumption practices are driven by considerations of social identity. The economist Richard Thaler points out that money, which is said by economists to be "fungible" (i.e., one sort of money is equivalent to any other), is in fact subject to mental accounting, meaning that money is viewed differently in different contexts. For example, money received as regular income is put in a different category than money from a windfall. Fungibility is not just a simplifying assumption. It does not do justice to the ways people manage their economic affairs in the real world. People have a concept of money that is situated and context-dependent.

Economic psychology is also interested in economic behavior in different cultural and historical contexts. So economic socialization, or how children learn the ways of their own economic world, has become a thriving part of economic psychology. The developmental changes that occur as children grow up mean that any theory of their economic decision-making is inevitably dependent on their level of psychological development. In household economics, economic psychologists have been exploring money management within the family. The psychologist Carole Burgoyne has argued that the styles that families and couples adopt to negotiate their finances can reflect deep-rooted tensions and reveal significant aspects of their relationships that would be otherwise difficult to access.

There are other areas of research and scholarship apart from economics and psychology that impinge on and influence economic psychology. Behavioral economics, for example, attempts to blend together economics and psychology, though in the main it is limited to the examination of psychological aspects of decision-making and the improvement of economics by placing it on a more realistic psychological foundation. Economic sociology, on the other hand, is firmly rooted in the sociological approach to the study of society. Here, the concepts and epistemology of sociological enquiry are applied to economic institutions. The field of economic psychology will remain valid and important as long as the cross-fertilization between economic and psychological theories and practices is mutually respected, and as long as there is a will to synthesize from debates and disputes.

SEE ALSO *Child Development; Choice in Economics; Choice in Psychology; Conspicuous Consumption; Economics, Behavioral; Happiness; Money; Permanent Income Hypothesis; Relative Income Hypothesis; Sociology; Sociology, Economic*

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Brian Young

ECONOMIC RHETORIC

The expression *economic rhetoric* refers to the practice and study of the communication process of economic ideas, both in oral and written form. It conveys the notion of economics as a particular type of social discourse, one that uses analogies, appeals to authority, arguments by transitivity, and other rhetorical devices to persuade its audience.

The rhetorical nature of economics is the focus of a research program that began in the early 1980s, generating a significant amount of research, still ongoing, and eliciting much controversy. The pioneer authors were D. N. McCloskey and Arjo Klamer, who, moved by their dissatisfaction with conventional economic methodology, decided to investigate the scientific culture of economics.

Klamer conducted a series of interviews with eleven prominent economists from different schools of thought, asking them about their intellectual trajectory and the circumstances in which they came to elaborate their well-known models. He claims that theoretical disputes within economics are not settled by the accumulation of empirical evidence. Instead, Klamer suggests that a more promising interpretation of these disagreements should focus on their rhetorical aspects, the ongoing conversation through which economists everywhere try to persuade their audiences.

McCloskey also criticizes traditional epistemology. Under the influence of postmodernism and neopragmatism, she holds that the prevailing methodological approach is rooted in modernism, which views science as axiomatic and mathematical. Although the progressive mathematiza-

tion of contemporary economics allowed certain questions to be formulated with greater clarity, it involved major costs, one of them being a widespread tendency to confuse statistical significance with economic significance. McCloskey acknowledges that the change in language brought some transparency to economic arguments, but she claims that it hindered the dialogue with other humanistic disciplines and led economists to subscribe to a positivist methodology. She argues that economists should pay attention to their rhetoric, in order to gain a new self-consciousness of their conversation practices.

At the heart of the debate raised by the rhetorical turn in the history of economics lies a tension that has existed since the ancient Greeks and is not yet settled. It stems from the two potentially conflicting meanings that the word *rhetoric* acquires, as form and as substance, as mere ornament to speech and as a set of arguments directed at an audience. While some Sophist philosophers stressed the ornamental aspect of rhetoric, thus helping to give the concept the pejorative meaning of "mere rhetoric," Aristotle legitimated it as a rational procedure, intimately connected to logic and dialectic. During the twentieth century, the rehabilitation of the Aristotelian tradition expressed the need for a better understanding of how a persuasive discourse works to influence its intended readers.

Still, the pejorative and dismissive meaning of rhetoric as empty speech persists. The rhetorical turn in economics was unable to give a satisfactory answer to its critics, who accused it of neglecting the truth-seeking nature of scientific inquiry. Yet it drew attention to the argumentative aspect of economics, highlighting the importance of rhetorical analysis as a research tool, to be used to show how texts conceived in a given social context create meaning, construct knowledge, and elicit action. By paying attention to their rhetoric, economists can improve the quality of their discourse.

SEE ALSO *Aristotle; Economics; Epistemology; Mathematical Economics; Persuasion; Philosophy; Rhetoric*

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Ana Maria Bianchi

ECONOMIC SOCIOLOGY

SEE *Sociology, Economic.*

ECONOMICS

The theory of the division of labor is at least two and a half millennia old. The practice of the division of labor undoubtedly has a much longer history. Both the theory and the practice stress that joint activity is more productive compared with individual or isolated activity, and both apply to different spheres of work: work within a factory or group and work among firms (e.g., between factories). The division of labor is therefore a principal mode of coordination for all such disparate but connected activity.

The theory of the division of labor has different facets to it, in that it applies to both physical labor and intellectual labor. As an object of study and a tool of analysis, it is at the foundation of substantially all of economics. Moreover, the practice of economics itself makes use of, and thus reflects, the division of labor. This, perhaps more than any other factor, explains the importance of economics.

The combination of human psychology and the division of labor also help explain two major features of human behavior: selective perception and status emulation. Each of the major skill groups (or crafts or trades) that work more or less together to produce a pin, a truck, or a house tends to think that its contribution is the most valuable. Individuals acquire their status based on how they perform in their own domain of work, and they seek to emulate those already successful in that domain. The same is true in economics insofar as it too is erected upon the principle of the division of labor. It is no accident that the division of labor, selective perception, and status emulation were also among the major themes of Adam Smith's *Wealth of Nations* (1776).

DIVISION OF LABOR IN ECONOMICS

The division of labor within economics takes place along a number of axes, with their respective spheres interacting in a recursive manner. The existence of a multiplicity of practices on each axis is due both to the multifaceted nature of the economy and its study (economics) and to the different positions or standpoints that economists can take. Each such standpoint, and its correlative body of practice, is accompanied by selective perception and status emulation, for the practitioner of each type laud its attributes and pursues success defined in its terms.

One axis is that of the criteria by which economists produce knowledge. One of these criteria is deduction, which, when correctly practiced, produces conclusions that are valid, given the premises and the system of logic, but necessarily true. Another is induction, which produces conclusions that may or may not be true, depending on the entirety of practice. This is the field of epistemology, or methodology, which is also practiced along twin axes in another respect. Given the variety of

credentials that a proposition may have, two uses of those credentials may be made: The prescriptive use postulates that one and only one set of credentials produces acceptable knowledge, while the credentialist use affirms that every proposition has its own set of credentials and that the individual is free to accept or reject it. These modes of use tend to be at the heart of competing practices, each yielding status emulation.

A second axis has to do with the fundamental substantive paradigms that tend to govern all work in economics. This axis constitutes the ontology of economics. Among the different paradigmatic possibilities are the fundamental theories of a surplus; constrained maximization (maximization subject to constraints, such as cost or legal prohibitions or requirements); productivity or exploitation; culture; and the attainment of a level of welfare and the structure of its distribution. Paradigms are among the most important elements in the social construction of economics.

A third axis concerns the fundamental problem of economics. Among the multiplicity of contenders for this designation are: the organization and control of the economic system, the efficient (or optimum) allocation of resources, economic growth, maximization of welfare, distribution of income (and wealth), and the ordinary business of life in terms of earning a living.

A fourth axis, somewhat related to the third, concerns the organization and control of the economic system itself. A central focus here is the institution of private property, while institutions such as the market, the development of the division of labor itself, and the system of social control are also relevant. One composite approach is that of the "market plus framework," in which markets exist on the basis of the framework of social controls. The identity of the framework tends to be reduced to legal and moral rules, inclusive of custom, education, religion, and various forms or sources of law. In this model, markets are not given, they are socially constructed by the interactions of the institutions that form and operate through them. At the very least, markets—and indeed the economic system itself—depend upon the legal foundations of those in control of the state (or those who create the laws of property, contract, tort, etc.) and the strategic behavior of firms and other economic agents.

ECONOMIC THEORY

The conventional assumptions of economic theory, in its static form, have tended to include (1) perfect competition and perfect knowledge (and therefore perfect foresight); (2) given and unchanging technology, resources, tastes, population, and structure of rights; and (3) individual agents that operate independent of each other, that are mobile, and that calculate rationally in order to maximize the satisfaction (or utility) derivable from their real incomes. One or more of these assumptions can be modified, thereby engendering an array of further possibilities, such as a variety of noncompetitive conditions, imperfect information, asymmetrical information, interdependent tastes, changes in the distribution and content of rights, behavior that is less than maximizing, and changes in technology, resources, tastes, and population. Such modifications may or may not add realism, but they do tend to introduce dynamic elements.

The conduct of economics, like that of any intellectual discipline, inevitably involves some type of abstraction, such as the reduction of the number of variables in a model down to the ones deemed most important. This makes the enterprise more manageable. That being the case, economics involves both the study of actual economies and the analysis of conceptual, abstract economies. Closely related is the research protocol stipulating epistemological credentials. At one end of a spectrum is the capacity to produce unique determinate optimal equilibrium results; at the other, to produce an array of possibilities at the conditions governing their realization.

APPROACHES TO ECONOMICS

The history of economics is very much a story of schools of thought. There have been multiple schools of thought, together constituting a heterogeneous discipline, and each school has itself been heterogeneous. This heterogeneity is the result of a combination of a multifaceted economy and different positions or standpoints from which the economy can be studied. There is nothing about the economy or the training of economists that requires that one and only one variable, point of entry, or perspective be used. Accordingly, in every period in the history of the field there has been more than one school of economic thought. A particular school may endeavor to cover the entirety of economics, or it may examine only one or more parts thereof. Economics as a whole is itself further heterogeneous, and because each school typically can be formulated differently, each school is itself heterogeneous. All of this comes under the heading of "theoretical pluralism," which differs from the ontological or paradigmatic pluralism and the epistemological or methodological pluralism described above. And all of these approaches can be rendered further complex and heterogenous by introducing normative premises of one kind or another, such as accepting existing institutions or the status quo distributions of income and wealth.

Theoretical pluralism also takes another form. Every topic in economics is characterized by particular theories. Consider the following: competition, equilibrium, business cycles, income distribution, consumption, supply of

money, commodity demand, capital, investment, the entrepreneur, optimization, money, interest rates, imperialism, economic growth, supply of labor, technology, externalities, incidence of taxation, the origin of the division of labor, and the economic role of government. Each has multiple theories, even multiple groups of theories, that attempt to describe or explain the object of their respective author's attention.

FROM CLASSICALISM TO MARGINALISM

Several questions come to mind when considering why a school of economic thought arises and flowers. The rise of marginal utility economics in the 1870s is a suggestive case in point. "Marginal utility" is the change in utility associated with a change in consumption level. The term also refers to a utilitarian-calculus approach to economic analysis and decision-making. "Classical economics" refers to a group of economic thinkers who wrote after Adam Smith. The school commences with Thomas Robert Malthus, and David Ricardo and also consists of John R. McCoulloch, William Nassau Senior, and James Bill. The approach was largely finished with the work of John Stuart Mill and John Elliott Cairnes.

Among the factors that explain its existence are the following: (1) the deficiencies of classical economics, including its neglect of psychological valuation as an important demand-side aspect of value theory, its focus on economic classes and labor theory (including cost-of-production theory), and its perceived weaknesses as a defense of capitalism; (2) the logical continuation of earlier writings on utility analysis; (3) the growth of static and positivistic theory (laws of the coexistence of variables) challenging Hegelian and other historical theory (the laws of the succession of variables)—or of the study of being rather than becoming; (4) a reaction to Marxism's emphasis on exploitation and the transient character of capitalism as part of an attack on socialist theory in general; and (5) the emergence of academic economics and its tendency to deal with trivia unsuitable for reformers. Academic economics included the use of mathematics, which was attractive insofar as it enabled economics to resemble physics, and because it effectuated a reduction of variables to the neoclassical model of demand and supply.

Among these varied explanations for the rise of the marginal utility approach, one finds ironic incongruities, such as positivism's emphasis on the objective analysis of confirmable materials rather than metaphysical, unconfirmable general theories of history, and the marginal utility school's criticism that classicism's broad conclusions were based on a small structure of knowledge wrapped up in a few theorems. Both of these positions were in conflict with key features of the marginal utility school's subjectivism.

MAINSTREAM ECONOMICS

There has also been a more or less amorphous mainstream of economics, yielding a combination of schools, some more or less orthodox and others more or less heterodox. The mainstream has run from the classical economics of Adam Smith (1723–1790), David Ricardo (1772–1823) and Thomas Robert Malthus (1766–1834), through the early versions of neoclassical economics formulated by Carl Menger (1840–1921) and Alfred Marshall (1842–1924), to the modern formulation by a group led by Paul A. Samuelson (b. 1915). Differences within each school (and between schools) arose along the different axes identified above. These differences were often identified in terms of a school's central problem or focus. The mainstream changed from a grand macroeconomic story of production, growth, and distribution to an equally imposing story of subjectively acting individual economic units and their interaction in markets, along with the resultant allocation of resources. Under the name of "neoclassical economics," the mainstream developed a variety of technical identifications of its central problem, many of them mutually reinforcing, such as the mechanics of utility, the operation of the price system, the working of the free enterprise system, the operation of pure markets, the mechanics of the pure theory of choice, constrained maximization decision making, the allocation of resources, and the mechanics of welfare. Schools of economic thought have tended to define themselves in terms of a central problem; the two most common have been explaining how people make their living and explaining how the economy is organized and controlled. Because the assumptions that characterized the core of mainstream neoclassicism could be changed, a further variety of subschools emerged within general neoclassicism. Varieties of theories of noncompetitive conditions, uncertainty, changing tastes, rights, institutions, ideology, technology, and population developed, each offering a more or less distinctively different picture of the economy.

Among the alternatives to the mainstream has been "institutional economics." The central problem here is literally the organization and control of the economy, though with several different foci. One focus was the legal foundations of the economic system; another was the system of cultural beliefs by which people organized and instituted their economic relations, and with which they explained those relations to themselves. Common to both foci was power. The key figures of institutional economics have been Thorstein Veblen (1857–1929), Walton Hamilton (1881–1958), John R. Commons (1862–1945), and John Kenneth Galbraith (1908–2006).

KEYNESIAN ECONOMICS

In the middle third of the twentieth century, nurtured in part by reactions to the Great Depression, the focus of macroeconomics changed from growth in classical terms and the allocation of resources to the determination of the level of income. The key figure of the new macroeconomics was John Maynard Keynes (1883–1946), who argued that classical doctrines to the contrary notwithstanding, the level of income, resulting from factors governing the level of aggregate spending, was not necessarily at the full employment level. This was important not just because variations in spending were involved in the business cycle and in unemployment, but also because so many people depended on employment for their livelihood. In time, Samuelson combined neoclassical microeconomic price and resource-allocation theory with Keynesian macroeconomic income-determination theory to produce the "neoclassical synthesis."

Thus, in combination with the further differentiating sources outlined above, one could practice economics in numerous different ways. Indeed, it could be argued that neoclassicism, or the neoclassical synthesis, was no longer the undifferentiated hegemon atop the mainstream, and today there are countless variations and combinations of treatments of topics that make up economics. This is true of all of the numerous topics that have had different but useful approaches formulated for them. Macroeconomics, for example, has had a variety of interpretations of what Keynes said and what he intended to say, plus a variety of post-Keynesian theories, not to mention new classical, real, new Keynesian, and other business-cycle theories. Microeconomics has a variety of treatments of how prices and resource allocation are determined; macroeconomics has a variety of treatments of the causes of instability; and both have in common a variety of treatments of uncertainty.

The foregoing does not exhaust the variety of ways in which economists do economics. Some economists study the performance of economic agents as if the agents were engaged in some type of cooperative or noncooperative game. That form of economics was instrumental in developing the strategy of mutual assured destruction (MAD) by the United States and the Soviet Union during the cold war, a strategy which worked to prevent World War III despite its seeming barbarous quality, mainly because the two sides thought more alike than not. Economists who do game theory are among the hordes who practice mathematical economics, a research language and mode of analysis that has been increasingly dominant since the 1960s. Other economists (and psychologists working on economic problems), have enriched the meaning of "rationality" and its attendant motivational attributes. Much of the work of economists is devoted to the description, explanation, and interpretation of what the economy is all about—as should be evident from what has been written above. Many economists self-consciously work at constructing or applying the normative, subjective, and ideological justification for market economies; many others work at its critique. Indeed, it has been said that much of the history of economics has been driven by attempts to influence the distributions of income, wealth, and opportunity in society, as well as by the control and use of government as a political means to economic ends. Which brings this discussion to such combined fields as economic sociology, law and economics, economic anthropology, economic psychology, economic history, and the history of economic thought—fields that are rich in and of themselves.

SEE ALSO *Austrian Economics; Austro-Marxism; Capitalism; Capitalism, Managerial; Chicago School; Competition; Economics, Classical; Economics, Institutional; Economics, Islamic; Economics, Keynesian; Economics, Neoclassical; Economics, Neo-Ricardian; Economics, New Classical; Economics, New Keynesian; Economics, Post Keynesian; Institutionalism; Libertarianism; Macroeconomics; Marginalism; Market Economy; Marx, Karl; Microeconomics; Smith, Adam; Stockholm School*

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Warren J. Samuels

ECONOMICS, BEHAVIORAL

Underlying behavioral economics and distinguishing it from contemporary (neoclassical) economics is the presumption that the realism of behavioral and institutional

assumptions matter substantively to the modeling of the economic agent (Simon 1959, 1978, 1987). In contemporary economic theory (e.g., Friedman 1953), assumptions are of little analytical consequence as long as the model's predictions are correct. In behavioral economics, the realism of assumptions affects the accuracy of models' predictions. It also helps distinguish between spurious correlations and actual cause-and-effect relationships between independent and dependant variables. Even when "as if" neoclassical behavioral assumptions yield correct predictions, if alternative, more realistic assumptions also generate accurate predictions, abiding by the former spawns false and therefore unscientific causal results. However, behavioral economics does not dispute the notion of abstraction and simplicity in model building; it questions models built upon unrealistic simplifying assumptions. When theory and evidence conflict, one includes in one's search for modeling deficiencies misspecified assumptions, unlike in conventional analysis that focuses largely on missing variables and questioning the validity of the evidence itself (Reder 1982).

Unlike behavioral economics, economic theory typically plays a marginal role in economic psychology. The latter focuses upon applying psychological tools to economic questions and generating evidence that might underlie behavioral assumption of economic agency. It also examines the psychological motivation for economic behavior (Lewis, Webley, and Furnham 1995).

Contemporary behavioral economics is often associated with the contributions of Hebert Simon and, more recently, Daniel Kahneman and Amos Tversky (Kahneman and Tversky 1979; Tversky and Kahneman 1981), all of whom are Nobel Prize Laureates. Thus far, George Katona's earlier pioneering contributions (1951, 1975) revising the psychological assumptions of consumer behavior in economic theory have gone largely unnoticed. Connected with Simon, Kahneman, Tversky, and their colleagues and associates are the presentation of new theories that either supplement or revise neoclassical micro and macro theories (Altman 2006; Camerer, Lowenstein, and Rabin 2003; Cyert and March 1963; Frank 1988; Shiller 1993; Thaler 1992; Williamson 1975).

Simon introduced the concepts of *bounded rationality* and *satisficing*, integrating into economic theory the reality of the cognitive limitations of individuals in terms of computational ability and knowledge acquisition that can only be realized at a cost. Rational individuals adopt behavioral procedures designed to limit such costs that differ descriptively and normatively from the conventional economic standard. Satisficing is the rational alternative to optimizing in a world of bounded rationality. In this case, it is possible for the firm's output and profit and the individual's utility to be less than they would be in a world with no limits to human cognitive abilities. Neoclassical norms are no longer optimal or descriptively accurate. Simon also emphasized the importance of recognizing the importance of power relationships, conflicts, fairness, altruism, and institutions for modeling economic agency—variables that are given little space in conventional theory. Individuals might be maximizing their own well-being at the expense of others or society at large; utililty might be enhanced at the expense of material wealth (Kahneman, Knetsch, Thaler 1986). Kahneman and Tversky developed prospect theory based on their experiments as an alternative to expected subjective utility theory, where individuals weigh losses more than gains and evaluate their utility in terms of relative positioning. Wealth maximization is not the end game in their descriptive modeling framework. Perspectives developed here have given rise to the revealing ultimatum and dictator game experiments wherein individuals make material sacrifices in the name of fairness (Güth 1995).

Independent of the work of Simon and more contemporary behavioral economists, Harvey Leibenstein (1957, 1966, 1979) developed the concepts of efficiency wages and x-efficiency theory (see Frantz 1997, for details). Based on the evidence, he assumes that effort inputs into the process of production are variable, not fixed at some maximum, as is assumed in conventional theory. Therefore, costs need not be minimized nor output maximized. Effort maximizing remains the ideal for wealth maximization or x-efficiency to be achieved. However, for this to transpire, appropriate market conditions and in-firm incentive environments (often far removed from neoclassical norms) must be developed. The efficiency wage and x-efficiency literature have been extended, for example in Akerlof (2002), Akerlof and Yellen (1986), Altman (1996), Darity and Goldsmith (1996), Stiglitz (1987), and Tomer (1997).

There are roughly two major perspectives within behavioral economics. The one that follows and extends the work of the psychologists Kahneman and Tversky is especially focused on, demonstrating through experiments the extent to which human behavior deviates from neoclassical norms, where the latter are used as the benchmark for economic rationality. By such standards individuals are found to be largely irrational, but such behavior might possibly be corrected through education or government intervention. Irrationality in behavior as the norm is completely inconsistent with conventional theory, and would be regarded as suboptimal in the realm of production and consumption. Such findings are therefore thought to undermine the legitimacy of much contemporary economic modeling. Conventional theory is assumed to provide an adequate description of how individuals behave, and holds that this behavior is also normatively optimal. Many behavioral economists argue that

conventional theory fails as an accurate descriptor of even average human behavior, although it might very well be normatively correct. Vernon Smith (2003, 2005) has challenged many of the empirical findings of such behavioral economists, arguing that the incentive environment of many of their experiments are far removed from what is typically found in the real world of economic life. But Smith and his colleagues have also challenged the modeling assumptions (especially their institutional parameters) of contemporary theory, also using experimental data. Smith finds that human behavior is largely economically rational.

Compatible with Smith's view on behavioral economics is a perspective that builds on the contributions of Simon. Individuals are assumed to be largely rational and intelligent, developing procedures and institutions that best suit their individual needs given the constraints that they face (March 1978; Smith 2003; Todd and Gigerenzer 2003). This approach to human behavior is sometimes referred to as "ecological rationality." Deviations from neoclassical norms are therefore not regarded as expressions of irrationality yielding suboptimal socioeconomic outcomes. Neoclassical procedures might very well yield suboptimal outcomes, but errors in decision making can be corrected through evolutionary processes such as learning.

Behavioral economics enriches conventional theory by introducing modeling variables and parameters that make for more scientific causal and predictive analysis. It does not reject the importance of incentives and opportunity costs in decision making, but it does question wealth maximization as dominating the decision-making process, economic efficiency as the end product of individual decision making, and the extent to which neoclassical behavioral norms should serve as appropriate benchmarks for economic analysis (Altman 2005). This in turn opens the door wide open for reconstructing economic theory, engaging institutional analysis as a partner in model building and inviting public policy analysis to help better understand the constraints and incentive environments under which economic agents make boundedly rational choices.

SEE ALSO *Akerlof, George A.; Behaviorism; Economic Psychology; Economics, Experimental; Economics, Institutional; Economics, Neoclassical; Galbraith, John Kenneth; Maximization; Rationality; Satisficing Behavior; Smith, Vernon L.; Social Psychology; Sociology, Economic; Wages*

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Morris Altman

ECONOMICS, CLASSICAL

The term "classical economics" was coined by the German political philosopher and economist Karl Marx, who stated "that by classical Political Economy, I understand that economy which, since the time of W. Petty, has investigated the real relations in bourgeois society" (Marx 1954, p. 85n.). Classical economics included, for example, the physiocrats, the English economist David Ricardo, and partly the Scottish economist Adam Smith; it excluded such authors as Thomas Robert Malthus and Jean-Baptiste Say, whom Marx considered "vulgar economists" dealing with "appearances" only.

Generally, economists and scholars have not adopted Marx's definition of classical economics. According to other interpreters there was no deep cleavage between earlier and later economists. The continuity thesis was expressed most forcefully by Alfred Marshall around the turn of the eighteenth century and in contemporary times by John R. Hicks and Paul A. Samuelson. Marshall perceived the classical economists as essentially early and somewhat crude demand and supply theorists, with the demand side in its infancy. The received Marshallian interpretation was challenged by Piero Sraffa, first in his introduction to volume I of his edition of Ricardo's works and correspondence (1951), and secondly in his *Production of Commodities by Means of Commodities: Prelude to a Critique of Economic Theory* (1960), in which he reformulated the classical approach to the theory of value and distribution and showed that its analytical structure is fundamentally different from later marginalist (or neoclassical) analysis.

METHOD, SCOPE, AND CONTENT

The classical economists were concerned with the laws governing the emerging capitalist economy, characterized by the stratification of society into three classes of workers, landowners, and the rising capitalists; wage labor as the dominant form of the appropriation of other people's capacity to work; an increasingly sophisticated division of labor within and between firms; the coordination of economic activity via a system of interdependent markets in which transactions are mediated through money; and significant technical, organizational, and institutional change. In short, they were concerned with the production, distribution, and use of wealth of an economic system that was incessantly in motion. How should one analyze such a system? The ingenious device of the classical authors for seeing through the complexities of the modern economy consisted of distinguishing between the "actual" or "market" values of the relevant variables—the distributive rates and prices—and their "normal" or "natural" values. The former were taken to reflect all kinds of influences, many of an accidental or temporary nature, about which no general propositions were possible, whereas the latter were seen to express the persistent, nonaccidental, and nontemporary factors governing the economy, which could be systematically studied.

The method of analysis the classical economists adopted is known as the method of long-period positions of the economy. Any such position is one toward which the system is taken to gravitate as the result of the self-seeking actions of agents, thereby putting into sharp relief the fundamental forces at work. In conditions of free competition, that is, the absence of significant barriers to entry or exit from all markets, the resulting long-period position is characterized by a uniform rate of profits (subject, perhaps, to persistent inter-industry differentials reflecting different levels of risk) and uniform rates of

remuneration for each particular kind of primary input. Competitive conditions were taken to engender cost-minimizing behavior of profit-seeking producers.

The determination of the general rate of profits, the rents of land, and the corresponding system of relative prices constitute the analytical core of classical political economy. It was meant to lay the foundation of all other economic analysis, including the investigation of capital accumulation and technical progress; of development and growth; of social transformation and structural change; and of taxation and public debt. The pivotal role of the theory of value and distribution can be inferred from the fact that the latter is typically developed right at the beginning of major classical works.

VALUE AND DISTRIBUTION

The classical concept of production starts from the following interrelated premises. First, human beings cannot create matter, they can only decompose or recompose and move it. Production involves productive consumption, and the real cost of a commodity consists in the commodities necessarily destroyed in the course of its production. This concept of physical real cost, according to Sraffa, differs markedly from later marginalist concepts, with their emphasis on "psychic cost." Second, production consists essentially of a circular flow: Commodities are produced by means of commodities. This idea was advocated by William Petty and Richard Cantillon and was most effectively expressed in François Quesnay's *Tableau économique* (Aspromourgos, 1996). It is in stark contrast with the "Austrian" view of production as a one-way avenue leading from the services of original factors of production to consumption goods. Third, all property incomes—profits and rents—are explained in terms of the social surplus; that is, those quantities of the different commodities that are left over after the necessary means of production used up and the means of subsistence in the support of workers have been deducted from the gross outputs produced during a year. In this conceptualization, the necessary real wages of labor are considered no less indispensable as inputs and thus "agents of production" (James Mill 1826, p. 165) than raw materials, tools, or machines. Fourth, profits, rents, and relative prices are explained essentially in terms of magnitudes that can, in principle, be observed, measured, or calculated. The objectivist orientation of classical economics has received its perhaps strongest articulation in a famous proclamation by William Petty, who, in his *Political Arithmetick*, published in 1690, stressed that he was to express himself exclusively "in Terms of Number, Weight, or Measure" (Petty 1986, p. 244).

The classical economists proceeded essentially in two steps. In a first step they isolated the main factors that were seen to determine income distribution and the prices supporting that distribution in specified conditions; that is, in a given place and time. The theory of value and distribution was designed to identify in abstracto the dominant factors at work and to analyze their interaction. In a second step, the classical authors turned to an investigation of the causes that, over time, systematically affected the factors at work from within the economic system. This was the realm of the classical analysis of capital accumulation, technical change, economic growth, and socioeconomic development.

The rate of profits is the ratio of two bundles of heterogeneous commodities, the social surplus (exclusive of rent), and the social capital. In order to be able to compare these bundles, a theory of value was needed. With a circular flow the values of commodities can only be determined by means of simultaneous equations, a tool not available to the classical economists. They therefore approached the problem of value and distribution in a roundabout way, typically by first identifying an "ultimate measure of value" by means of which heterogeneous commodities were meant to be rendered commensurable. Several authors, including Smith, Ricardo, and Marx, had reached the conclusion that labor was the sought standard and thus arrived at some version of the labor theory of value. This was understandable in view of the unresolved tension between concepts and tools. However, it is far from clear how these labor values could be ascertained in a circular framework except by solving a system of simultaneous equations. In fact, with the benefit of hindsight, contemporary economists know that the labor theory of value landed the classical approach in an impasse and was one of the reasons for its premature abandonment and the rise to dominance of marginalist theory.

Yet, as Sraffa (1960, p. 6) showed, the classical economists were correct in assuming that a coherent determination of the general rate of profits and prices was possible in terms of the two sets of data on which they based their theory of value:

(1) the system of production in use, described in terms of the methods of production and productive consumption actually employed; and

(2) the real wage rate (or, alternatively, the share of wages).

This can be shown as follows: Let T_i, M_i and F_i designate the inputs of three commodities—tools (t), raw materials (m), and the food of workers (f)—employed as means of production and means of subsistence in industry i ($i = t, m, f$), and T, M and F the total outputs in the three industries. Denoting the value of one unit of commodity i by p_i ($i = t, m, f$), one has the following system of price equations:

$$(T_t p_t + M_t p_m + F_t p_f)(1 + r) = Tp_t$$
$$(T_m p_t + M_m p_m + F_m p_f)(1 + r) = Mp_m$$
$$(T_f p_t + M_f p_m + F_f p_f)(1 + r) = Fp_f$$

Flukes apart, these equations are independent of one another. Fixing a standard of value, for example, $p_f = 1$, provides a fourth equation and no additional unknown, so that the system of equations can be solved for the dependent variables: the general rate of profits and prices. The distribution of the surplus must be determined at the same time and in the same way as are the prices of commodities.

CAPITAL ACCUMULATION AND ECONOMIC DEVELOPMENT

With the rate of profits determined on the basis of data (1) and (2), the classical authors turned to the problem of the accumulation of capital and thus of the growth of the system. They typically assumed that the process of economic expansion was not constrained by an insufficient supply of labor, because the workforce needed was seen to be created endogenously, either via some population mechanism, as in the case of Malthus, or via the labor-displacing effects of machinery, as in the case of Marx's "industrial reserve army of the unemployed" (Marx 1977, p. 600). Ricardo discussed both mechanisms and also analyzed the case in which capital accumulates and the population grows, but there is no technical progress. Due to diminishing returns in agriculture, a rise in differential rents paid on intramarginal lands will, for a given real wage rate, entail a falling rate of profit. (The theory of intensive diminishing returns was later taken up by the marginalist economists who thought that the underlying principle could be generalized from agriculture to all industries and to all factors of production [labor, land, and capital] alike and a theory be elaborated in terms of a single principle only: that of relative scarcity.)

The classical authors also discussed different forms of technical progress. In Adam Smith capital accumulation increases the extent of the market and thus allows for an ever deeper division of labor. This increases labor productivity due to gains of specialization and induced inventions of machinery and thus engenders growing levels of income per capita. Smith's endogenous growth mechanism is a virtuous circle. Other classical authors were somewhat less optimistic. Ricardo, in the chapter on machinery in the *Principles* (1821) contemplated the case of a kind of mechanization that is gross output reducing: While labor productivity rises, total employment and the output-capital ratio (or maximum rate of profits) fall. This case reappears in Marx's discussion of the rising organic composition of capital and, given the share of wages, falling tendency of profitability. In 1967 Richard Goodwin formalized some of the classical ideas on accumulation and distribution in terms of an adaptation of the predator-prey model developed in the theory of animal populations.

TRADE AND MONEY

The classical economists advocated trade liberalization. According to Smith the specialization pattern of an economy would follow its absolute cost advantages. Via an opening of domestic and foreign markets trade would allow a deeper division of labor and thus enhance productivity growth. Ricardo showed, contrary to Smith, that what really mattered were comparative advantages and not absolute ones. Assume that one of two economies is able to produce all commodities at lower unit costs. Only this economy would export and the other one import. This would, however, engender a specie-flow mechanism with prices in the former economy rising and in the latter one falling. Ricardo's theory of money, a version of the quantity theory, was an integral part of his trade theory. Sooner or later some prices in the latter economy would have fallen below the levels in the first one and thereby reverse the competitive situation. This would relate precisely to those commodities in the production of which the second economy has a comparative advantage.

Since the publication of Sraffa's *Production of Commodities by Means of Commodities* there has been a revival of the classical approach. For a summary account of what has been achieved, see, for example, the work of Heinz D. Kurz and Neri Salvadori.

SEE ALSO *Capitalism; Capitalism, Managerial; Chicago School; Competition; Competition, Marxist; Economics, Institutional; Economics, Islamic; Economics, Keynesian; Economics, Neoclassical; Economics, Neo-Ricardian; Economics, New Classical; Economics, New Keynesian; Economics, Post Keynesian; Institutionalism; Libertarianism; Marginalism; Market Economy; Marx, Karl; Mill, John Stuart; Ricardo, David; Smith, Adam; Stockholm School*

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Heinz D. Kurz

ECONOMICS, DEVELOPMENT

SEE *Development Economics.*

ECONOMICS, EVOLUTIONARY

SEE *Schumpeter, Joseph Alois.*

ECONOMICS, EXPERIMENTAL

For generations economics was a nonlaboratory science. Economists could construct theories and analyze naturally occurring data, but the luxuries of control and replication were elusive. The discipline of experimental economics has challenged and changed this perception. Experimental economics provides for a variety of modes of scientific inquiry through the creation of small-scale but real laboratory economic systems. Most experimental economics research has dealt with microeconomic problems, but there is a growing body of work with a more macroeconomic flavor.

Experimental economics got its start in the 1950s and was fully credentialed when Vernon L. Smith was awarded half of the 2002 Nobel Prize in Economic Science. In the Nobel citation Smith is recognized as the father of experimental economics, in the sense that he "made the most important early contributions, but he also remains a key figure in the field to date." However, as with any scientific advance, there are other pioneering streams that feed into the final river. One universally recognized starting point for experimental economics was the effort by Harvard economist Edward H. Chamberlin (1866–1967) to demonstrate to his students the poor predictive theory of perfectly competitive market models. Chamberlin assigned each student a hypothetical "cost" or "value" and encouraged them to make profitable trades through a random meeting process. Chamberlin's major insight was to argue that if the hypothetical costs and values were valid representations, then supply and demand curves could be computed for the minieconomy. Chamberlin's result was that the markets failed to converge to the perfectly competitive predictions.

A few years later Smith, a young Harvard Ph.D. then on the faculty at Purdue, decided to try an exercise similar to Chamberlin's, but with some critical changes. First, Smith conducted the markets with an institution, the double oral auction, which is an analog of the trading process on the New York Stock Exchange. The double auction has information and price progression features different from the Chamberlin exercise. Second, the markets were repeated. Third (and somewhat later), the individual costs and values were made salient by making real payments to the market participants. Under these conditions the markets converged robustly to the competitive outcomes. The *Journal of Political Economy* published Smith's results in 1962, and experimental economics as it is most widely known today was born. Smith published his major methodology treatise on experimental economics in 1982. As delineated by Smith, the elements of an induced economic environment (essentially the conditions of supply and demand) and of a carefully defined economic institution are the core of any economics experiment. This holds true even when the institutions look less like regular markets and more like voting rules or bargaining processes (Fiorina and Plott 1978). Paired with this, the 1982 article also discussed experimental design conditions sufficient to produce a valid, controlled economics experiment.

Meanwhile, at about the same time as Smith's earliest work, others were making seminal contributions. James W. Friedman (1967), Lawrence E. Fouraker and Sidney Siegel (1963), and Heinz Sauermann and Reinhard Selten (1959) were similarly pioneering, although all were more oriented toward oligopoly and bargaining. Selten in particular continued to pursue experimental research and was a Nobel laureate for his theoretical contributions in the first game theory year of 1994.

When Smith visited the California Institute of Technology (Caltech) in the late 1970s, he met a former Purdue colleague on the Caltech faculty, Charles R. Plott, who had also become a fan of experimental methodology. Smith and Plott began a highly productive collaboration, and Plott also staked out crucial methodological advances for using experimental economics in regulatory and public policy analyses. For example, when the government proposed altering the way that the pricing of inland barge transportation was regulated, Plott and James T. Hong (1982) used experimental markets to evaluate the change. Experimental economics has been used as an evaluative public policy tool in areas as disparate as airport "slot" auctions, markets for pollution permits, water auctions, and antitrust issues. Another 1970s' stream of experimental economics was the work at Texas A&M of Raymond C. Battalio and John H. Kagel (often with Leonard Green 1981) in designing small experimental economics environments for animal economies.

The growth in the number of experimental researchers naturally led to the organization of professional societies; for example, in Germany there is the Society for Experimental Economics Research, and in the United States there is the Economic Science Association. Both sponsor activities with a worldwide audience. A basic undergraduate textbook in the area is available from Douglas D. Davis and Charles A. Holt (1993).

SEE ALSO *Arrow-Debreu Model; Economics; Knowledge, Diffusion of; Microeconomics; Natural Experiments; Nonparametric Regression; Positive Social Science*

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Robert Mark Isaac

ECONOMICS, INSTITUTIONAL

Institutional economists are the leading American heterodox school of economics. They differ from the orthodox neoclassical mainstream in their emphasis on the man-made institutions that help form and operate through the markets created by the institutions. They study individual institutions, culture, actual economies and their institutional foundations, and the mutual impacts of private and public sectors, the domain sometimes called the legal-economic nexus. Neoclassicists tend to emphasize an abstract, idealized economic system and the play of market forces. Institutionalists treat government as important and ubiquitous, like it or not—as part of, rather than exogenous to, the economic system.

Institutionalists seek to develop a body of empirical and theoretical knowledge of the organization, control, operation, and evolution of the economic system, particularly the institutions that produce, together with individual choices, the allocation of resources and the distribution of income. Institutionalists have produced a critique of capitalism and of neoclassicism as its expression and rationalization. Relatively few institutionalists oppose capitalism, but most distinguish between capitalism and a market economy. Many are sympathetic to the evolution of the economic system along lines giving increased effect to the interests of workers. Some call for conscious, activist government planning of varying types, but most seek a truly more competitive economy, a government not dominated by business interests, and laws not catering to the interests of business and upper-income classes.

The principal early institutionalists included the American economists Thorstein Veblen (1857–1929), John R. Commons (1862–1945), Walton Hamilton (1881–1958), Wesley Clair Mitchell (1874–1948),

John Maurice Clark (1884–1963), Robert Lee Hale (1884–1969), and Richard Ely (1854–1943). Veblen's satiric critique of business and consumerism under capitalism—not least his emphasis on status emulation and conspicuous consumption—influenced both the other institutionalists and most economists. All members of the school stressed the allocative and distributional importance of actual institutions. Some, like Mitchell, pioneered the empirical and theoretical study of business cycles in an economy dominated by high finance and a pecuniary culture. Most if not all institutionalists pursued the analysis of the economy as both a cultural system and a system of power. Some followed Commons's complex analysis of the legal foundations of capitalism and studied empirically and theoretically the legal-economic nexus.

Differences of emphasis and interpretation have rendered institutionalism as heterogeneous as any other school of economics. Some institutionalists have been conservative, most quite liberal. In addition to planning versus competition, other conflicts have developed between the followers of Clarence Edwin Ayres (1891–1972) and of John R. Commons over the theory of value appropriate for institutional economics, and the relative importance of deliberative and nondeliberative decision making. All agree, however, that the principal determinant of resource allocation is institutions and not the pure abstract market. Other topics commonly agreed upon as important are evolution, behavior, power, stratification, agency, the creation and structuring of markets, the legal-economic nexus, the role of culture and belief systems, and the corporate system.

The Canadian-born American economist John Kenneth Galbraith (1908–2006) has been for some time the most prominent institutionalist. Institutionalism as a whole has a complex existence: Institutionalists contribute to most fields in economics but tend to be marginalized by the mainstream. Most institutionalists accept, however reluctantly, their heterodox status, and they work hard to improve their position in the world. Several journals are institutionalist in orientation. Institutionalism has developed strongly in Europe.

SEE ALSO *Galbraith, John Kenneth; Veblen, Thorstein*

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Warren J. Samuels

ECONOMICS, INTERNATIONAL

International economics is a standard, and perhaps the oldest, field discipline within economics. This discipline involves an analysis of all economic aspects of an international nature, aspects that coincide with the existence of multiple countries and to some extent separated economies. In a historical coincidence, parts of international economics that developed prior to general micro- or macroeconomics deal in a peculiar way with essentially the same phenomena as general economic theory.

International economics addresses such issues as international trade, movements of factors of production between countries, exchange rates, open-economy macroeconomic policy, international monetary institutions, and globalization. All these issues relate to the so-called open economy, a term economists use for an economy of a country that is to some extent separated from the rest of the world (politically, monetarily, or otherwise) but at the same time has economic ties to it. These ties manifest themselves on one hand as flows of physical goods or factors of production and their services, or on the other as flows of money or its substitutes. For broad classification, then, it is possible to divide international economics into two areas of study: international trade and international finance.

INTERNATIONAL TRADE THEORY

Probably the most prominent position within international economics is enjoyed by international trade theory, which seeks to identify the gains from trade between countries; the factors that determine the pattern of specialization; the volume of trade and the terms of trade (i.e., prices); the impact of trade on income distribution; and the impact of the barriers to trade on all of the above. From a practical point of view, however, its goal has always been, as the international economist Edward Leamer remarked, to answer one single question of paramount importance: when, if ever, is it beneficial to put obstacles to the flow of goods between countries?

It is precisely this question that gave rise to early economic speculations and philosophizing, and in that sense international trade theory was an indispensable part of political economy (and later economics) from the very beginning. All the scholars who can be considered among the founding fathers of economics—Richard Cantillon (1680–1734), David Hume (1711–1776), Adam Smith (1723–1790), and David Ricardo (1772–1823)—explicitly addressed this question, and for the most part their answer was negative. The work of these early economists formed the basis of what would be known as the free-trade doctrine and provided the intellectual foundation for the free-trade movement in the nineteenth century. These

authors showed that many of the apprehensions surrounding foreign trade (trade deficits and crises) were based on myth.

The theory of comparative advantage made a major contribution to the theory of international trade (and later to general microeconomics). This theory, attributable to Robert Torrens (1780–1864), James Mill (1773–1836), and Ricardo, demonstrated that two countries can engage in trade even when one of the countries can produce all goods more cheaply (because of greater productivity or lower nominal cost).

Although the theory of comparative advantage understood trade to be based on differences in productivity, later theories enriched the perspective by pointing to two other sources of trade. First, trade can also result from differences in resource endowments; in other words, countries can specialize in, and export, products made from resources that are plentiful in that country. This has come to be known as the Heckscher-Ohlin theorem (which became the basis of the Heckscher-Ohlin-Samuelson model, after its authors, Eli Heckscher, Bertil Ohlin, and Paul Samuelson). Second, the source of trade can be the consumers themselves: the difference in their preference. Before this model was developed, much of the trade flows between countries seemed puzzling, as they consist of similar types of products (so-called intra-industry trade), rather than dissimilar products as the theory based on differences in productivity or resource endowment would predict.

Besides sources of trade, international trade theory focuses on the consequences of trade for prices of factors of production, and explains the tendency of trade to bring about their equalization across countries (which became known as the Factor Price Equalization Theorem, developed, independently, by Abba Lerner and Samuelson). Further development of international trade theory incorporated the effects of the economies of scale and market structure (imperfect competition) on all aspects of trade. A special part of the theory is concerned with the alternative to international movements of goods: the movement of labor and capital across borders.

During the twentieth century, the answers offered by international trade theory developed greater precision. Although the theory, as it became increasingly refined, made some theoretical qualifications of the conditions under which free trade is the first best policy, the practical presumption in favor of free-trade policy remains largely unchallenged. Indeed, in opinion surveys of economists the statement "trade barriers reduce general economic welfare" typically draws the greatest consensus.

INTERNATIONAL FINANCE

A corollary to flows of tangible goods, services, and factors of production are financial flows. The openness of an economy, and the existence of "the rest of the world," adds several new dimensions to the discussion of such macroeconomic topics as national product, price level, interest rates, and their interrelations, and government policies aimed at their management. Only the international context gives rise to such frequently discussed issues as balance of payments, exchange rates, international monetary institutions, international aid, borrowing, and indebtedness.

Balance of Payments *Balance of payments* refers to the financial flows between the given economy on one hand and the rest of the world on the other. Understanding the logic of the balance of payments and knowing the determinants and consequences of its various subcomponents, although not a policy goal in itself, is helpful in setting policy goals and formulating policy measures.

Exchange Rate The *exchange rate*, the value of domestic currency with respect to foreign currencies, has a major influence on the balance of payments. The theory of how the exchange rate is determined is therefore central to this part of international economics, which examines the role of export and import demands, differences in interest rates, and expected inflation across countries. One theory, the interest rate parity, points out certain necessary relations between the expected changes in the exchange rate and countries' interest rate differentials. As the rate of return on assets in each country must be equal, lower interest rates in one country as compared to the other will be seen as justifiable only if the currency of this country is expected to gain in value with respect to the currency of the other country. If this were not so, one of the currencies would be seen as more attractive by investors, and their attempt to exploit this opportunity would bring the real rates of return ultimately to equality.

Another theory of exchange rate determination, the theory of Purchasing Power Parity (PPP), stipulates that the exchange rate tends to correspond to the ratio of price levels in the two respective countries (or, in its modern version, that changes in exchange rate correspond to changes in the price level ratios, i.e., inflation rates). If this were not so, prices in the one country would be generally lower than in the other, which would make buying in the first more attractive than in the second. Greater demand for currency of the first country compared to that of the second would cause its value (i.e., its exchange rate) to appreciate, which would tend to eliminate the difference in the attractiveness of buying in the two countries. Only when the exchange rate will equal the ratio of the price levels will there be no difference between the countries, and no tendency for change.

Exchange rates, in their relation to the balance of payments, are also linked to the open-economy output deter-

mination. They are related to the national product through two channels. First, the exchange rate is decisive in determining the amount of production demanded by, and thus produced for, buyers in foreign countries. The less valuable the domestic currency vis-à-vis the foreign one, the higher the output the country tends to generate. Second, through the asset market, any level of product corresponds to a particular interest rate, and the interest rate in turn is important in determining the exchange rate. The higher the output, the higher the interest rate and the more valuable the domestic currency. Thus there is likely to be one particular level of exchange rate compatible with a given level of output.

Given the importance of exchange rates as a factor in open-economy macroeconomics, it is no wonder that exchange rates are subject to different degrees of government attention. A country's policy may vary from nonintervention (a "floating" currency) to a fixed exchange rate (a currency "peg"). In the latter case, a government, typically through its central bank, attempts to keep the exchange rate within certain limits. Besides the standard tools of monetary policy (influencing domestic money supply), this is generally achieved through foreign exchange interventions. These are purchases or sales of foreign exchange currency for domestic currency through which the value of domestic currency is decreased (if foreign currency is purchased) or increased (if foreign currency is sold). The feasibility of such management is limited, on one hand by the danger of inflation (if too much domestic currency is swapped for foreign currency), and on the other by limited supplies of foreign currency (a central bank can boost the value of its currency only as long as it has foreign currency at its disposal). Special fixed-rate monetary and exchange rate regimes would include two somewhat similar arrangements: the gold standard and a currency board. The former—historically prevalent internationally but now abandoned for not entirely economic reasons—consists of defining the monetary units of currencies in terms of gold. The currency board, a relatively recent though still not very common phenomenon, replaces gold metal in a currency definition with a foreign exchange. If domestic currency becomes defined as a particular amount of gold or a particular number of units of foreign currency, both money supply and the exchange rate are determined.

If market forces are suppressed altogether and domestic currency cannot be freely exchanged for the foreign one (as assumed so far), the domestic currency is considered nonconvertible. In such cases, the official exchange rate becomes a matter of government fiat and decree, although it is likely to coexist with a much different exchange rate that is likely to develop on a black market.

The policy choice regarding the exchange rate regime has important repercussions for macroeconomic policy. Floating exchange rates allow for greater autonomy in monetary policy and provide insulation from outside monetary shocks and an automatic mechanism for maintaining external balance. This comes, however, at a cost of greater uncertainty about its level and the lack of any disciplining factor for domestic monetary authority. Yet, at the beginning of the twenty-first century, floating exchange rates seem to have prevailed. In an open economy, it is generally considered unfeasible to maintain fixed exchange rates while insisting on autonomous policy.

In some sense, the heritage of fixed exchange rates survives in the theory of optimum currency areas (developed by Robert Mundell). For the countries involved, fixed exchange rates have the same effect on (in)dependence of monetary policy as would the common currency. And just as fixed exchange rates are not always feasible, neither can common currency always be thought of as an improvement. The theory of optimum currency areas recognizes both benefits (lower transaction cost) and costs (loss of policy autonomy and openness to shocks) of monetary integration, and thus makes clear under what conditions such integration is beneficial.

In today's globalized world economy, international economics stands only to gain in importance. However, as borders between countries become increasingly irrelevant and their policies harmonized, international economics may become indistinguishable from conventional economics. After all, if the world were one country, the difference between international and domestic would disappear altogether.

SEE ALSO *Absolute and Comparative Advantage; Cantillon, Richard; Central Banks; Customs Union; Dornbusch-Fischer-Samuelson Model; Economics; Exchange Rates; Free Trade; Heckscher-Ohlin-Samuelson Model; Hume, David; Mundell-Fleming Model; Policy, Monetary; Protectionism; Quotas, Trade; Ricardo, David; Samuelson, Paul A.; Smith, Adam; Tariffs; Trade*

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Dan Stastny

ECONOMICS, ISLAMIC

As part of the Islamization of Knowledge agenda, Islamic economics as a discipline was formally laid down in the First International Conference on Islamic Economics in 1976. The objective was to present the case of Islamic economics (IE) in a language common to financiers, politicians, and economists. Deriving its inspiration from the ideals of Islam, IE studies the interaction of the spiritual and material paradigm, with the ultimate aim of establishing a just and fair socioeconomic system.

The biggest challenge faced by IE has been, and still is, to reconcile the material self-interest with the "ethoreligious" or moral self-interest of agents and the welfare of society as a whole, and to replace interest-based financial institutions with interest-free institutions guided by Shariah, Islamic law, and moral standards. The compatibility between Islam and capitalism is studied by Maxime Rodinson in his book *Islam and Capitalism* (1966). In his work on the textual analysis of Qur'an and other Islamic knowledge sources and the economic history of the Islamic world, Rodinson demonstrates that Muslims never had any trouble reconciling the money-making mechanism under the Islamic framework. In contrast, Bryan S. Turner in *Weber and Islam: A Critical Study* (1974) argues that, for Max Weber, "it was the patrimonial nature of Muslim political institutions which precluded the emergence of capitalist preconditions, namely rational law, a free labor market, autonomous cities, a money economy and a bourgeois class" (Turner [1974] 1998, p. 2). Thus, Turner does not ultimately subscribe to Weber's view of Islam. While posing a different critique from Rodinson's, Turner ascribes a combination of Puritanism and orientalism to Weber that skews the latter's view of the relationship between Islam and capitalistic development. However, the process of reconciliation between IE and other economic systems needs to emerge by implementing just socioeconomic paradigm (Chapra 2003).

IE seeks to devise ways in which economic agents and markets can be directed by moral and social values based on Shariah. Its supporters believe that all economic and business activities should be based on an ethoreligious paradigm, with the sole aim being the welfare of individuals and society as a whole. In many ways, it pursues the same objective as conventional economics, but within religious-based moral codes of Islam.

According to IE, moral codes and principles should regulate economic activities to ensure the elimination of poverty and glaring inequalities in the distribution of wealth and resources. The state should take responsibility for those objectives and utilize Islamic fiscal tools such as *zakat* (the annual 2.5% voluntary tithe to the needy), taxation, equity, loss-profit, and risk sharing to achieve them. Factors of production should be treated on an equity basis, and no predetermined return on capital is allowed. These are the core features of Islamic economics, and are what make it different from its conventional counterpart.

IE provides the means for the material and spiritual growth and welfare of the human race. It reflects the physical and spiritual aspects of life, holding them in a balance so that they supplement and reinforce each other, and if any clash does occur, moral and ethical values reign supreme. Religiously based moral checks on economic and market activities are set up to ensure the true success of both individuals and society. Activities that are in conflict with Islamic spiritual, social, and moral values are prohibited in Islamic economics.

Both the literature on IE and the number of financial institutions based on Islamic principles have increased rapidly in recent years. Many economics journals are allocating space for Islamic economics and finance, and there are some that are dedicated especially to the publication of articles related to Islamic economics and finance, including the *International Journal of Islamic Economics* (London), the *Journal of Islamic Economics* (Jeddah), and the *Islamic Development Bank Journal*. Islamic economics, especially Islamic banking and finance, is taught at universities around the world, including International Islamic University (Malaysia), International Islamic University (Pakistan), the International Centre for Education in Islamic Finance (Malaysia), the London School of Economics, Harvard University, University of Cairo, Monash University, University of Tehran, and numerous universities in Kuwait, United Arab Emirates, Sudan, Malaysia, Indonesia, and Saudi Arabia. Nevertheless, Islamic economics is still a nascent discipline, and a lot of work is being done to put theoretical, empirical, and applied proofs to its claims.

SEE ALSO *Banking; Banking Industry; Development Economics; Ibn Khaldūn; Interest Rates; Islam, Shia and Sunni; Muhammad; Orientalism; Weber, Max*

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M. Ishaq Bhatti

ECONOMICS, KEYNESIAN

Keynesian economics is the approach to macroeconomics that grew out of John Maynard Keynes's work, especially his *The General Theory of Employment, Interest and Money* (1936) written during the Great Depression. Since Keynes's work has been interpreted in different ways and inspired various formulations of macroeconomics, it is defined in a number of different ways, including the approach to macroeconomics in which: aggregate demand plays a major role in determining output and employment; involuntary unemployment can persist; and fiscal and monetary policy can affect the level of output and employment. Keynes himself recognized that he had a number of predecessors, and it has been suggested that major elements of his approach were anticipated by others (most notably, Michal Kalecki).

In *The General Theory* Keynes argued that employment is determined by the aggregate demand for goods, which is in turn determined (in a closed economy) by consumption demand and investment demand. Consumption depends mainly on the level of real income while investment demand depends on the interest rate, which is determined by money supply and the demand for money, and by business expectations. Given expectations and monetary conditions, employment is determined so that output produced is equal to aggregate demand. The level of employment thus determined may be less than the full employment level at which the supply and demand for labor (which depend on the real wage) become equal. He also examined the aggregate supply side of the economy with a given money wage, and a production function relating output to employment, which determined the average price level. Keynes argued that the wages are likely to be rigid downward when unemployment exists because of the concern of workers with their wage relative to that of others: however, even if wages (and hence the price level) fall, it is unlikely to increase the level of aggregate demand in the face of uncertainty and the negative effect of falling prices on the demand for goods by debtors. Keynes therefore recommended expansionary monetary and especially fiscal policy to increase the level of aggregate demand, employment, and output to reduce unemployment.

Keynes's analysis is most simply depicted with the income-expenditure model of Figure 1, in which the axes

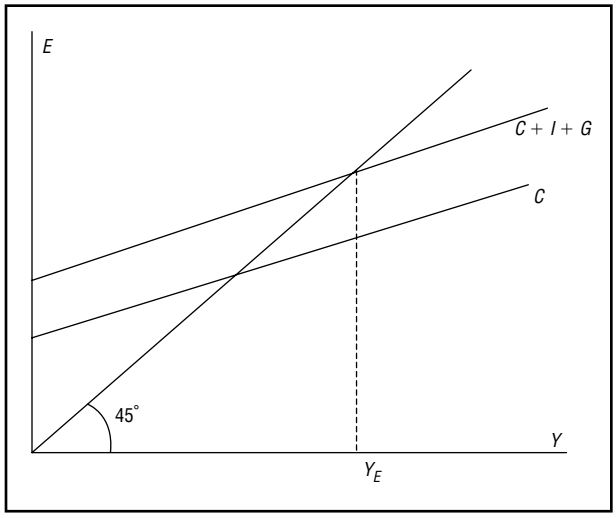

Figure 1

measure income and output, Y, and expenditures or demand, E. The line marked C is the consumption function that shows the relation between consumption and real income, and the line marked $C + I + G$ is aggregate demand that adds (planned) investment, I, and government expenditure, G, both assumed to be exogenously given, to it. Equilibrium output, Y_E, is determined where the aggregate expenditure line intersects the 45° line so that output equals expenditure. The level of output determines employment, which may imply unemployment. Fiscal and monetary expansion, by increasing G or I, can increase output and reduce employment.

Economists such as John Hicks and Franco Modigliani, who were persuaded by Keynes's theory, tried to relate it to pre-Keynesian neoclassical macroeconomic theory in which the economy was generally thought to be at full employment. A series of models, including the IS-LM and later the aggregate demand–aggregate supply (AD-AS) models, were developed to produce what has come to be called the neoclassical synthesis approach to Keynesian economics. This approach, which uses different types of demand and supply curves and equilibrium condition as in neoclassical theory, implies that unemployment can exist, due to wage rigidity, in the short run, but in the medium and long runs, in which the wage is flexible, the economy is at full employment. When unemployment exists, over the medium and longer runs the money wage falls, which reduces the costs of firms and hence the price level, which reduces the nominal demand for money. The resulting excess supply of money is used to increase spending on goods (by what is called the real balance effect), or is lent out, implying a fall in the interest rate and a rise in investment (and possibly consumption) demand. This increase in aggregate demand increases out-

put and employment and takes the economy to full employment. With rigid wages in the short run, however, this mechanism does not work itself out, and unemployment can exist. Expansionary fiscal and monetary policy can increase output in the short run, but only increases the price level in the medium and long runs when the economy is at full employment.

In the 1960s, after most advanced countries experienced low unemployment for long periods (arguably due to the success of Keynesian macroeconomic policies), and inflationary pressures began to mount, alternative approaches to macroeconomics began to emerge. Three of them adopted positions opposed to Keynesian economics and can be briefly discussed to show what it is not. The first, monetarist, approach developed by Milton Friedman in 1968 and others returned to the pre-Keynesian idea of flexible wages in the short run, so that full employment always prevails, but allows changes in aggregate demand to affect the level of output and employment, because of misperceptions about the effects of aggregate demand changes, to make it consistent with the facts regarding business cycles. For instance, when money supply increases, workers find their money wage to be higher, but by not taking into account that the price of goods is higher too, they supply more labor, which leads to an increase in output. In the longer run, as workers revise their price expectation, this expansionary effect disappears. According to this approach, although full employment always prevails due to the flexibility of wages, macro policy has a temporary effect on real variables due to the misperceptions of the workers. The second also maintains the assumption of flexible, labor-market clearing wages, but assumes that economic agents do not make systematic expectational errors as they do in the earlier monetarist approach, and assumes rational expectations. This new classical approach developed by Robert Lucas in 1983 and others points out that with agents having rational expectations in the sense that they use all relevant information about the economy to calculate price expectations, fiscal and monetary policy (apart from tax policy changes that affect the supply of labor) are not effective even in the short run, unless the policies' changes are random and hence unanticipated. The third approach, called the real business cycle approach, continues in this tradition, but explains business cycle fluctuations in terms of technology shocks that affect investment demand and the interest rate and bring about the intertemporal substitution of labor to explain changes in employment.

In addition to real-world phenomena mentioned earlier, Keynesian economics lost ground to these new classical approaches because of its alleged problem in providing proper microfoundations to macroeconomics. The neoclassical synthesis Keynesian approach explained unemployment in terms of wage rigidity, but did not relate the analysis to optimizing microfoundations. The new Keynesian approach tries to develop Keynesian economics to address this problem. An early branch of this approach merely introduced fixed prices and wages into the standard micro-founded general equilibrium model, examining disequilibrium situations in which actual transactions occurred at the "short" side of the market and the effects of such deviations from market clearing in one market spilled over into other markets. Another branch of the approach responded directly to the monetarist and rational expectations approaches, introducing wage price stickiness (such as staggered or sticky wage adjustment) into models with rational expectations to show that it is complete wage flexibility, rather than the assumption about expectations, that produced the policy ineffectiveness result. A final, and most popular new Keynesian branch, provided optimizing microfoundations to wage, price, and interest rate rigidity. Efficiency wages (which prevent the wage from falling when unemployment exists because of its adverse effect on labor efficiency) and wage bargaining, imperfect competition and the "menu" costs of price changes, and asymmetric information in credit markets have been used to explain these rigidities. Some models, such as those that distinguish the role of insiders and outsiders in the wage determination process, imply that aggregate demand changes can have long-term effects on output due to what are called hysteresis effects. While some new Keynesian models imply involuntary unemployment in equilibrium, others do not, but imply only that aggregate demand policies can have effects on output.

The central feature of both the neoclassical synthesis and new Keynesian approach is the rigidity of wages and prices. While wage rigidity is an important element of Keynes's theory, we have seen that according to Keynes the wage flexibility is no guarantee for full employment. The fact that flexible wages may exacerbate rather than solve unemployment problems has been stressed by another approach to Keynesian economics, called the post-Keynesian approach, which emphasizes the implications of decision-making under uncertainty, monetary institutions, and the effect of income distribution on aggregate demand. According to this approach when the wage and price falls due to the existence of unemployment, the interest rate and real balance effects need not work to increase aggregate demand because an excess supply of money may just lead to a fall in money supply as loans are repaid in a credit money economy with no further effects on the interest rate, because even if the interest rate falls asset holders may wish to hold more money and firms unwilling to increase investment in an uncertain environment, and because falling real wages redistribute income from workers to profit recipients who save a larger proportion of their income. Greater wage flexibility also tends to increase uncertainty in the economy given the importance of wages

for both firm costs and profits and household income. These ideas add to Keynes's own discussion on the implications of wage flexibility, and are also corroborated by some optimizing models with a new Keynesian flavor.

Keynesian economics has generally been thought to be valid for short-run macroeconomics, but ignored in the analysis of long-run growth analysis. However, if wage flexibility does not automatically take the economy to full employment or at least the natural level of output consistent with price stability, and governments are unwilling or unable to do the same over the medium run, and if technology responds to aggregate demand and output, Keynesian economics may be relevant for the longer run as well. Post-Keynesians and other heterodox economists have, in fact, followed Joan Robinson and others in applying Keynesian economics to the study of long-run growth.

SEE ALSO *Economics, New Keynesian; Economics, Post Keynesian; Kalecki, Michal; Keynes, John Maynard*

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ECONOMICS, LABOR

The field of labor economics is involved with the study of the labor market, including the determinants of employment, unemployment, and wages. The labor market developed as societies moved from feudal to capitalist processes. The development of capitalism in turn led to powerful capitalist owners and an industrial workforce that was concentrated in factories. Conditions of work became, by present Western standards, dirty, demanding, and dangerous. As a result, workers organized unions and began to demand better pay and working conditions, and they set up political organizations like the Labour Party in the United Kingdom. Over the years, organized labor managed to achieve many of their goals, as legislation was introduced in many countries to provide minimum wages, poverty relief, unemployment benefits, and pensions, and to ensure safe working conditions.

The labor market consists of employers, workers, and a government that provides an institutional and legal framework. The distinctive features of labor as a commodity are: (1) except for a slave society, people can only buy and sell labor services; (2) the quality of the labor services provided depends not only on the innate ability of the workers but also on their attitudes to work, to their fellow workers, and to their employers; (3) most employment contracts last for a fairly long time, so there are not frequent repeat purchases of this "commodity"; (4) there is asymmetric information in the labor market about the "quality" of labor services; and, (5) there is an unequal power relationship in the labor market.

Labor markets are different from other markets. As Arthur Okun points out in *Prices and Quantities* (1981), they are not auction markets that clear instantaneously, but are influenced by "custom and practice." For example, firing is usually based on last in, first out, and seniority is often given special privileges. There are many interrelated labor markets, differentiated by geography, occupation, industry, and often by gender and race. Analyses of segmented labor markets (primary and secondary markets) provide an interesting window into the role of "power" in labor markets, as demonstrated in the work of Peter Doeringer and Michael Piore (1971). Robert Solow, meanwhile, has emphasized the idea that the labor market is a social institution, and that it is therefore important to consider issues of equity and fairness in labor markets (1990). The labor market is different from other markets because the commodity being traded (labor) is capable of reasoned thought. Hence, the way employers treat workers, and the way other workers treat each other, influences their behavior and productivity, as well as wages.

Labor economics was once an interdisciplinary (institutionalist) study that included historical analysis, industrial relations, sociology, and political science. In the early literature, Adam Smith, David Ricardo, and Karl Marx employed versions of the labor theory of value, which states that the determinant of the value of a commodity is

the amount of labor embodied in it. Marx pointed to the "exploitation" of labor, believing that workers produced "surplus value." Subsequently, at some point in the post-World War II era, labor economics became a narrow economics subdiscipline in terms of methodology that used neoclassical economic theory (assumptions of maximizing behavior in atomistic, mainly, competitive markets) to analyze various aspects of the labor market, including aspects of employment, unemployment, wages, gender and race discrimination, and immigration. It expanded its boundaries in terms of subject matter, exploring areas of demography, crime, health, marriage, and social relationships ("economics imperialism") under the guidance of the Nobel Prize-winning economist Gary Becker.

Econometric methods have been used on time-series, cross-section, and panel or longitudinal data to study labor economics and the evaluation of government policies on the labor market. Thus, under the influence of another Nobel Prize-winning economist, George Akerlof, modern labor economics has moved full circle—it now studies labor markets in an interdisciplinary framework (although with formal economic models) that includes concepts of psychology, anthropology, industrial relations, and management theory. Modern labor economics has developed new econometric methods to analyze social safety policies by using controlled experiments, "matching" techniques, and panel estimation techniques with fixed and random effects. Since the mid-1990s, labor economics has embraced "experimental economics" methods devised by innovative economists such as Ernst Fehr and Simon Gächter (2000). In these studies, the concepts of fairness, reciprocity, and equity in the labor market are investigated.

The Great Depression of the 1930s led to studies of unemployment, including long-term unemployment, the impact of unemployment on society, and human degradation caused by unemployment. Much work was done to explain the massive rise of unemployment in terms of "rigid wages" (classical economics), and of inadequate aggregate demand (Keynesian economics). The big increase in unemployment following the "oil shocks" of the 1970s led to theories of "stagflation." Subsequently, explanations of unemployment pointed to imperfectly functioning markets, with regulated labor market institutions being blamed. Theories then moved on to using concepts of search in a labor market with imperfect information, as described by Edmund Phelps (1970) and Dale Mortenson and Christopher Pissarides (1999). In these models workers are looking for a job when they receive wage offers which follow a normal distribution; some are good and some are bad. They have to decide whether to accept the offer or reject it. If they reject the offer, they are unable to return to it if the subsequent offers are worse.

The rise of rational expectations led to the concept of the "natural rate of unemployment" (Friedman 1968), and to a Keynesian variant, the non-accelerating inflation rate of unemployment (NAIRU), which was supposed to be constant and immutable. However, econometric work has found this concept to be ill-defined and poorly estimated. More important, it was found that there is "hysteresis" in the behavior of unemployment and in the so-called natural rate. The current rate of unemployment depends on the past evolution of the unemployment rate. Hence the "natural rate" is not a constant to which the unemployment rate will gravitate.

Much has been made about the role of "monopolistic" unions in raising wages above market-clearing wages and causing unemployment. Several studies have compared the differences between the wages of union and nonunion members. In an important book published in 1984, Richard Freeman and James Medoff argued that unions have a positive impact on the functioning of labor markets.

The post-1960s literature on labor economics moved from macroeconomic analyses of labor markets and industry-level studies to the study of microeconomics (on a firm and individual/household level) of the demand and supply of labor. The development of the human capital approach to analyzing the investments of rational maximizing individuals in education and skills, as outlined by Gary Becker in *Human Capital* (1964), led to a better understanding of labor supply. Given that investment in human capital is irreversible, work done in the 1990s treated the acquisition of skills as an "investment option" under uncertainty.

The growth of computer usage, and the subsequent development of large data sets, has led to an explosion of econometric analyses. Most of the research to explain wage rates (or earnings) has used earnings functions. Thus, the logarithm of wages (earnings) was explained by human capital, work experience, and various other control variables. Although most studies have found human capital variables to be significant, the explanatory power of these equations is very low. Yet the role of human capital in explaining economic growth has had important policy implications. Minimum wage policies have been analyzed to see if they have helped the poor and led to a fall in employment. David Card and Alan Kreuger's 1995 critical analysis of the data for the United States suggested that minimum wages had little impact on unemployment. This conclusion led to a huge controversy that has continued into the early twenty-first century. The re-introduction of minimum wages in the United Kingdom in 1998 was found by Alan Manning (using monopsonistic models in 2003) to have had no significant impact on employment.

There have been significant advances in the study of the determinants of labor supply and demand using modern econometric techniques and panel data. In studies of labor supply, individuals are assumed to maximize lifetime utility, subject to given budget and time constraints, where they choose an optimal amount of education, work, and leisure. Tax and welfare policies are studied in this framework and have important implications for the policy analysis of negative income taxes and social security benefits. Labor demand is studied for firms that maximize present values of profits by choosing optimal amounts of labor. Labor is treated by firms as a "quasi-fixed" input, according to Walter Oi (1962), and it is analogous to investing in physical capital goods. Advanced studies suggest that firms choose wages to maximize the efficiency of labor (Akerlof and Yellen 1986), or else choose an appropriate sequence of wages to maximize present values (Lazear 1995).

Labor economics has made significant theoretical and empirical strides in understanding the workings of labor markets. Econometric analyses of various tax, welfare, and active labor-market policies have helped to develop new policies for improving the functioning of the labor market and helping the unemployed and the poorer segments of society. However, there is still much work to be done to truly understand the nature of unemployment and poverty.

SEE ALSO *Demography; Economics, Neoclassical; Employment; Human Capital; Information, Asymmetric; Labor; Labor Demand; Labor Force Participation; Labor Market; Labor Market Segmentation; Labor Supply; Labor Union; Labor, Marginal Product of; Labour Party (Britain); Marginal Productivity; Marx, Karl; Minimum Wage; Ricardo, David; Slavery; Smith, Adam; Solow, Robert M.; Surplus Value; Unemployable; Unemployment; Unemployment Rate; Unions; Wages; Wages, Compensating*

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P. N. Junankar

ECONOMICS, MARXIAN

The term *Marxian economics* refers to economic theory inspired by the work of Karl Marx (1818–1883). The salient feature of this research program is the idea that all societies in order to reproduce themselves require labor that will be used to produce the material requirements of reproduction. In all societies, a particular social class performs more work than that required for its own reproduction and the excess labor is appropriated by the dominant classes through property relations, traditions, the legal sys-

tem, and also force. Such exploitative relations are quite transparent in precapitalist modes of production (e.g., slavery and feudalism), whereas in capitalism they are embedded in monetary transactions that give the impression of equal and therefore fair exchanges. Marx was the first to argue that in capitalism workers are exploited not because they are not paid their full wage, but because with the full wage they receive workers are able to pay only for the basket of goods required for the reproduction of their capacity to work (their labor power), which is acquired through what is only a portion of their total labor time. The difference between total labor time and that required to reproduce the workers' capacity to work is called *surplus labor time* and its monetary expression, the *surplus value*, is appropriated by the propertied classes (capitalists and landlords) and the state. The wealth accumulated in a society is directly related to the amount of surplus labor time, which is inversely related to the necessary labor time. Furthermore, Marx argued that labor time also regulates the surface phenomena of capitalism, such as the price of commodities. Hence, the law of value—according to which the socially necessary labor time is directly and indirectly embodied in a commodity—is the regulator of the movement of market prices. Prices are the means through which capitalists realize their profits and losses and regulate their behavior accordingly. In Marx, the role of the law of value is analogous to Adam Smith's "invisible hand," for it provides an explanation of how capitalist society reproduces itself and the various scales of its reproduction.

There are many different interpretations of Marx, and this often gives the impression that his work is vague. A careful examination of the history of the socialist movement, the origins of which were inspired to a great extent by Marx himself, shows, however, that those engaged in this movement often ignored Marx's major work, that is, the three volumes of *Capital*. More specifically, during the period of the First International (1864–1876), Marxists paid particular attention to the political or philosophical writings of Marx and Engels (e.g., the *Communist Manifesto* (1848), the *German Ideology* (1845–1846/1932), etc.). Volume I of *Capital* (1867) was not read as much as one would expect, except for the "historical" chapters that refer to the exploitation of workers and their struggles for the reduction of the length of the working day. The other chapters were difficult to comprehend, let alone to use in any direct way for the needs of the workers movement. The Marxists of the Second International (1889–1916) began using volume I of *Capital* and to some extent volume II (published in 1885), which was focused on the mechanisms of reproduction. Their discussions focused on whether Marx's purpose was to demonstrate the possibility of the balanced growth of capitalism, or to reveal capitalism's instability and predict its inevitable collapse, unless it expanded to incorporate the noncapitalist economies as an additional source of cheap raw materials and a market to dispose of the products. Hence, the foundation for an economic theory of imperialism was developed by a number of radicals. Volume III of *Capital* was published in 1894, but was considered "too scientific," as Rosa Luxemburg (1870–1919) once remarked, and only a few Marxists during the 1930s, notably Henryk Grossmann (1881–1950) and Maurice Dobb (1900–1976), read it attentively. The subsequent Keynesian revolution in economics led many Marxists to "keynesify" the economic theory of *Capital* and "marxify" the economic policy conclusions of Keynesian economics. The idea is that many Marxists of the time abandoned partly or completely the analysis of *Capital* and adopted the Keynesian analysis, and from that they tried to derive radical policy conclusions with regard to the treatment of monopolies and income distribution. More specifically, Paul Sweezy (1910–2004) and also Paul Baran (1910–1964) claimed that Marx's analysis was more appropriate for the conditions of nineteenth-century capitalism, where there were neither monopolies nor a powerful state, than for the current economic situation in which powerful monopolies dominate and together with the state influence economic outcomes. Naturally, many radical economists claimed that once the workers' party seized power it could use the state for its own purposes. In this context, it has been argued that the law of value no longer holds in conditions of monopoly capitalism and also that Marx's laws of motion should be revised because the economy is under the control of monopolies and the state. Notable exceptions to this stream of thought were Paul Mattick (1904–1981) and Ernest Mandel (1923–1995), who in the 1970s and 1980s were what Grossmann and Dobb were in the 1920s and 1930s. That is to say, they were from the very few Marxists who consistently used and expanded the analysis of *Capital* in the conditions of their time.

One might have expected that Marxian economics would flourish during the Soviet era, and it is true that the first decade after the revolution saw the development of theories of medium- and long-term cyclical fluctuations—on the basis of which the technique of material balances was developed. The latter became a tool of national planning and also the starting point for input-output analysis and mathematical economics. Soon, however, Marxism and Marxian economics became dogmatic in the Soviet Union and other East European countries. On the other hand, developments in China, together with student unrest in Europe and the antiwar movement in the United States, sparked a renewed interest in Marxian economics. This time there were systematic efforts to comprehend the totality of Marx's work and in this context volume III of *Capital* was integrated into a single eco-

nomic theory that seeks "to lay bare the economic law of motion of modern society" (Marx 1867–1894, Vol. I, p. 10). There were a number of efforts, on the one hand, to clarify and expand Marx's theoretical scheme and, on the other, to give it empirical content. Thus we find many studies that test the validity of the law of value with input-output data. Similarly, inter-industry data is used to test the law of the tendential equalization of rates of profit across industries, as well as the long-run fall of the general rate of profit and its connection to long-term fluctuations in the level of economic activity. Other topics of interest include extensions of Marx's work into the areas of international trade, exchange rate determination, the theory of effective demand, the state's redistributive role, and so on. There is no doubt that in recent decades significant progress has been achieved within Marxian economics, creating a theoretical foundation for further, fertile developments.

Even though the renewed interest in Marxian economics started in non-Soviet countries, the demise of the Soviet Union as well as the dissolution of most Communist parties and the weakening of the labor movement in Western countries during the past few decades have all certainly had a negative effect on the development of Marxian economics. On the positive side, though, one may count the demise of doctrinaire Marxism and the emergence of more pluralistic approaches that have brought to the fore important issues such as gender, race, and the environment. In this sense, the rise to preeminence of China (with its strong Marxist tradition), together with the movement against globalization may give new impetus to the Marxian research program worldwide. This research program has always been under attack and, despite its undeniable progress over recent decades, has never really found much support among Western academic economists. In fact, Marxian economics has always been misunderstood and its importance downplayed by mainstream economics; because of its ideological connotations, it has been relegated, at best, to being a mere chapter in the history of economic thought.

In conclusion, Marx's most important contribution to political economy was the distinction between labor and labor power, on the basis of which he was able to present a consistent theory of exploitation as a source of profits. Furthermore, he argued that the pursuit of profit as an end in itself has created the laws of motion of capitalist society that operate independently of people's will. These laws create the objective conditions within which the class struggle and wider political intervention take place. Moreover, Marxian economics integrates macroeconomics (falling rate of profit, reserve army of unemployed) and microeconomics (prices of commodities) through the law of value. Because of this integration, Marxian economics will continue to provide a great deal of fertile ground for further research, at least as long as current orthodox economic theory maintains the dichotomy of micro- and macroeconomics. Only in the last few decades has there been a systematic effort to base macroeconomic analysis and conclusions on solid microeconomic foundations.

SEE ALSO *Marx, Karl; Marx, Karl: Impact on Economics; Marxism*

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Lefteris Tsoulfidis

ECONOMICS, NEOCLASSICAL

Mainstream economics is often characterized as neoclassical economics, usually to distinguish it from classical economics which had its origin in the rationalist era of the eighteenth century and in particular the work of the patriarch of economics, Adam Smith. The early-twentieth-century critic of economics, Thorstein Veblen, is usually credited with creating the term *neoclassical*. The obvious reason for the "neo" was that the economics being taught after 1890 somehow went beyond the economics of Smith. While classical economics was concerned with the broad questions facing nations such as growth and development, neoclassical economics instead focused on the decisions of independent and autonomous individuals who participate in the economy.

There are two fundamental ideas that characterize neoclassical economics: A metaphysical one about what motivates individuals to choose one option rather than another and a methodological one about the essential elements of any neoclassical explanation.

THE METAPHYSICS OF NEOCLASSICAL ECONOMICS

The primary and only behavioral assumption of neoclassical economics is that an individual is motivated to do what is best for him or her. To keep in touch with its eighteenth-century roots, this is commonly stated as: People are rational. While many economists mistakenly see this as

a proposition about psychology, in reality it has nothing to do with psychology. A choice (or decision) is rational only if one can state a rational argument that entails the choice at issue. As such, rationality is always an attribute of the argument, not the mind.

Usually, an argument consists of several statements identifying explicit assumptions or reasons that are asserted to be true. These are connected by means of ordinary logic to form a logical structure defined by logical connective words (*and, or, if*) and words formed from the verb "to be." Usual arguments include quantitative relational words (*some, all*, and *at least one*). To be a rational argument, two conditions must be met. Everyone who accepts the truth of all of the assumptions of a logically valid argument must accept the truth of all statements entailed (or predicted) by the argument. The first essential condition involves the term *anyone*. That is, rationality is universal and it is its universality that makes it useful as an explanation of a choice made by an individual. The second essential condition is that each statement entailed by the argument is unique. When the entailed statement represents the one choice an individual makes as in the case of every neoclassical explanation, that choice must be unique. That is, anyone who accepts the truth status of all of the assumptions of the economic theorist's explanation will reach exactly the same conclusion concerning the individual's choice made.

While these conditions of universality and uniqueness likely were taken for granted in the eighteenth-century conception of rationality, neoclassical economics of the late nineteenth century chose to express rationality as maximization (which historians of economic thought call marginalism). The idea of a maximizing choice captures the necessary ingredients of any rational argument. For example, it says that whenever choosing how much to consume of some good, individuals are motivated to maximize their level of satisfaction subject to three things: the limitations of the budget, the going price of the good, and the personal "utility function" (which is the mathematical relation that indicates the quantitative level of satisfaction obtained when consuming each possible total amount of that good). While everyone faces the same price, each individual has a personally specific utility function as well as a specific budget. Thus, a maximizing individual will be said to choose that singular quantity of the good that yields the maximum level of satisfaction. Moreover, the explanation also implies that any individual who has specifically the same utility function, facing the same budget and price will make exactly the same choice. As such then, the maximization explanation fulfills the conditions of a rational explanation as it is both universal and unique. And one can always construct an analogous explanation of the choices made by the producers of the product where their motivation may be assumed to be profit maximization.

THE METHODOLOGY OF INDIVIDUALISM

In neoclassical economics things do not decide, only individuals do. This is called methodological individualism. It means that in neoclassical economics any social event must be explained as being the unintended aggregative consequence of the maximizing decisions and choices made by the independent and autonomous individuals participating in the economy or society. Of course, individuals are constrained by existing institutions and laws but this does not invalidate the neoclassical conception of individualism. Instead, it just says that whatever constrains individuals other than nature-given constraints such as weather and resource endowments must be explained. All institutions and laws are the consequence of decisions made by other individuals and thus can and must be explained in any complete neoclassical explanation.

It is the explicit mathematical analysis of the individual decision maker that primarily distinguishes neoclassical from classical economics and the latter's focus on the nation as a whole. But in principle the end result cannot be different, only the emphasis is different. Whatever the nation is, it is the result of decisions made by all of its constituents both past and present. So, when one explains how each and every individual makes or made their choices, one has explained the whole economy.

The two writers credited with promoting this individualist economics were the Cambridge economist Alfred Marshall and the French economist Léon Walras. Marshall focused on the method of partial equilibrium analysis which recognizes that individuals must take things like prices and product availability as given and do the best they can with the few things they can decide or choose; Walras was instead concerned with general equilibrium analysis for the whole economy and in particular the logical requirements for the determination of a system of prices that would allow all individuals to be maximizing simultaneously. Specifying the necessary mathematical requirements for such a general equilibrium is not trivial and remains a puzzle even in the twenty-first century. While it is always possible to specify assumptions that are sufficient to produce such equilibria, it is another thing to specify assumptions that are necessary.

It is important to note that going beyond the narrow confines of equilibrium analysis, the maximizing individual is still a useful concept even when explaining change or disequilibrium. Specifically, individuals are motivated to change whenever they think they are not maximizing. If the amount of a good an individual would want to buy is not available, that individual could offer to pay a higher price.

Thus change, too, is compatible with methodological individualism. So, with this in mind, even a changing world could be seen to be amenable to neoclassical analysis.

THE POSSIBLE LIMITATIONS OF NEOCLASSICAL ECONOMICS

It is easy to see why anyone would think neoclassical economics could be used to explain every social fact or event. Examples are marriage decisions, career decisions, voting patterns, and so on. A generalized form of neoclassical economics can be found in other social sciences under the name of rational choice theory. The philosopher Karl Popper called it "situational analysis." But critics of neoclassical economics still find it reasonable to doubt the usefulness of such explanations. The primary criticism is based on asking the troublesome question: What must a rational decision maker know in order to make a successful maximizing choice? As Friedrich Hayek in 1937 argued, at minimum, the theorist must identify how the decision makers come to know their choice is the maximizing one. For the most part neoclassical economists have been slow in taking-up Hayek's suggestion. Instead, neoclassical economists have continued by knowingly making conceivably false assumptions about the economy, usually assuming that all participants in the economy are successfully maximizing with all decisions and choices, and on that basis construct social policies concerning tax rates, interest rates, trade policies, and the like. And critics of such policies continue claiming it is unrealistic to assume everyone is capable of such successful behavior.

Such criticism is not new, however. In the early 1940s, critics such as Richard Lester claimed that empirical evidence did not support the assumption that decision makers in manufacturing firms consciously did the intricate calculations needed to maximize profit as required by the calculus of maximization. In response to such criticism, Armen Alchian in a social-Darwinian fashion argued in 1950 that conscious maximization (and hence deliberate calculation) is unnecessary for success. His argument was based on the notion that if the economy is in a long-run equilibrium—that is, not only are all markets cleared but there has been sufficient time for every producer to have made the optimum decision concerning which markets to enter—then every firm is making what neoclassical economists call zero excess profit. Zero excess profit merely means that the price charged for the product just covers all costs including the normal rate of return expected by owners and investors. In such a world, Alchian notes, the only survivors are those firms maximizing profit—whether or not they deliberately set about applying calculus. That is, in a state of long-run equilibrium, the maximum (excess) profit is zero and thus any firm not maximizing cannot cover all costs and hence cannot survive.

The question of the acceptability of knowingly employing false assumptions when forming economic policy has been a continuing object of dispute since 1953 when Milton Friedman made his argument in favor of an instrumentalist methodology in his famous essay. His argument simply said that as long as the theory works when put to practical use as a tool, the truth status of the constituent assumptions does not matter. Since 1953 economists can be divided into two groups: those that agree with Friedman's essay and those that do not. While most methodologists are critical of Friedman's essay or instrumentalism in general, economists who are engaged in practical policy issues are often willing to accept false assumptions as approximations and thus push on with their practical efforts. And as long as the practical uses of such assumptions are seen to yield successful policies, methodologists who demand realism will likely find an audience only among the many critics of neoclassical economics who object to its emphasis of individual maximization as the sole motivation for decision making.

SEE ALSO *Economic Methodology; Economics*

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ECONOMICS, NEO-RICARDIAN

Neo-Ricardian economics is a school of thought that aims to revive classical economics, which flourished during the

eighteenth and nineteenth centuries, by reformulating it analytically and extending its approach to economic theorizing. As discussed below, neo-Ricardians focus on the classical theory of value and distribution originally elaborated by Adam Smith and subsequently amended, reformulated, and systematized by David Ricardo.

The earliest use of the term *neo-Ricardian* can be traced to the eminent neoclassical economist Dennis Holme Robertson. Bob Rowthorn (1974) was the first to identify a school with this term. The contributions of Piero Sraffa—in particular, the editing of and the introduction to Volume I of *The Collected Works and Correspondence of David Ricardo* (1951) and the short but dense book *Production of Commodities by Means of Commodities* (1960)—played a crucial role in the development of the neo-Ricardian or (after him) *Sraffian* approach. Sraffa's objectives, as revealed in a small number of published works and an enormous archive of unpublished manuscripts, were: (1) to revive and clarify the tradition of the classical economists from Adam Smith to David Ricardo, including Karl Marx; (2) to expose the weaknesses besetting the neoclassical theory of value and distribution; (3) to construct a coherent approach to economic theorizing that maintains the classical methodology and perspective.

Neo-Ricardian economics had a prominent position in the literature in the 1960s and early 1970s, during the "Cambridge capital controversy" between neoclassical economists centered mainly at MIT (the "Cambridge" of America) and neo-Ricardian economists at Cambridge University in England (for a detailed account see Harcourt 1972). The central theme of the debates was the questioning of the very notion of aggregate capital as a physical, measurable quantity and of the validity of the neoclassical theory of distribution based on such a concept. Even though the neo-Ricardian critique was correct, following the early 1970s the interest of the profession drifted away from the "paradoxes" of capital theory. By the 1980s, there was little attention to the difficulties inherent in the aggregation of capital in the formulation of economic models. As suggested by Luigi Pasinetti (2000), the suppression of the contradictions in the neoclassical theory of capital is evidence of the Kuhnian mechanism by which a dominant paradigm is defended against apparent anomalies.

In the following years, neo-Ricardian scholars applied increasing effort to building up their approach. A short list of journals that publish their contributions includes *The Cambridge Journal of Economics*, *The Review of Political Economy*, *Metroeconomica,* and *Contributions to Political Economy*. Today, neo-Ricardian economics is well grounded, yet still much in need of theoretical development.

The core of the neo-Ricardian approach to value and distribution is the determination of the size of the *social surplus* (Garegnani 1984), that is, what is left of the social product after subtracting the inputs necessary to restart the production cycle (the used-up means of production and subsistence wages). Analysis involves the following independent variables:

1. the set of techniques available to producers;
2. the size and composition of the social product;
3. one of the distributive variables—either the wage rate or the rate of profit;
4. the existing stock of natural resources.

These givens are sufficient to identify the "normal" or "long-period" position of an economy, which corresponds to a set of values for the relevant variables: relative prices (derived by using the cost-minimizing technique, which minimizes the cost of production), the social surplus, and—excluding, for simplicity, land rentals—the other distributive variable, the rate of profit or the wage rate. Under conditions of free competition, the long-period position is characterized by the equalization of the profit rate throughout the economy. The economy does not necessarily settle into a long-run position, due to changing economic circumstances that cause shifts. However, there is a presumption that "current" or "market" values continuously gravitate toward the corresponding natural or normal values. The underlying dynamic process is based on the idea that capital-owners move capital between sectors in search of the highest remuneration (for a review of modern analytical formulations of the gravitational process, see Kubin 1991).

The important features of the above analysis are: (1) deductive reasoning; (2) *objectivism*, that is, the use of data that are directly observable, measurable, or calculable; and (3) the asymmetric treatment of the distributive variables—that is, the treatment of one as an independent variable.

DIFFERENCES BETWEEN NEO-RICARDIAN AND NEOCLASSICAL APPROACHES

The objectivism of neo-Ricardian economics contrasts with neoclassical subjectivism, which allows for variables that are not directly observable within the initial set of data. The neoclassical data set consists of: (1) the set of techniques available to producers; (2) the preferences of consumers; and (3) the initial endowments of individual agents, including all the means of production, both produced (i.e., capital) and non-produced (i.e., land and labor). In neoclassical theory, all factors of production are treated symmetrically in terms of their scarcity. For each

of them there are analogous demand and supply functions for their productive services. Equilibrium quantities and prices correspond to the intersection of these functions. This approach requires quantities of labor and capital that are unambiguously measurable and independent of their remunerations.

However, as the Cambridge controversies highlighted, capital cannot be treated in the same way as the other factors of production. In fact, though we may envisage a long-run equilibrium (the neoclassical equivalent of a long-period position) involving different types of labor with different remunerations, an equilibrium with heterogeneous capital goods and many rates of profit cannot exist. The existence of a tendency toward a uniform rate of profit, enforced by free competition, makes the determination of a unique equilibrium impossible if capital is treated in kind. Only after capital is expressed in "value" terms is it possible to construct a coherent aggregate production function (the basic tool of neoclassical macroeconomic analyses) in which all factors of production play the same role and from which demand functions for factor services can be derived through differentiation.

However, a measure of capital in value terms is affected by changes in the rate of profit (and in relative prices) giving rise to the possible occurrence of the phenomena known as reverse capital deepening and reswitching of techniques. The latter can be described taking the simplest case of only two techniques of production α and β with different capital intensities. Suppose that α, which is more profitable at lower rates of profit, is the technique in use. As the profit rate increases, producers may find β more profitable and switch from α to β. However, as the profit rate increases further, α could become the more profitable technique, so producers are induced to switch back to it. Reswitching is a sufficient but not necessary condition for capital reversing (Garegnani 1970). The latter phenomenon is a change in direction (from negative to positive) of the relationship between the capital/labor ratio (or the capital/output ratio) and the profit rate.

The occurrence of capital reversing (and *a fortiori* of reswitching of techniques), which excludes smooth production functions (both at the industry and the economy levels), does not rule out the possibility of constructing more "irregular" but logically coherent technological relationships between capital and the rate of profit (for an application, see Kurz and Salvadori 1995).

NEW LINES OF RESEARCH FOR NEO-RICARDIANISM

A clear weakness of neo-Ricardian economics is the lack of a comprehensive perspective on all the relevant aspects of economic enquiry; much remains to be investigated outside the core theory of value and distribution. Indeed, some suggest that as yet no well-defined neo-Ricardian school can be identified (see Roncaglia 1991). Tony Aspromourgos (2004) provides a detailed review of current neo-Ricardian developments and research projects, some of which include:

1. The identification of a "Classical" theory of endogenous growth in which different types of technology are taken into account (Kurz and Salvadori 1998)
2. The Sraffa-Keynes synthesis, whereby the social product (or, in its long-period version, its growth rate) is determined by the autonomous components of demand (or their growth rates). This synthesis requires some form of harmonization between effective demand and the notions of normal prices (corresponding to the uniform rate of profit) and normal productive-capacity utilization (Garegnani 1978, 1979, and 1992)
3. An explanation of changes in the composition of demand with a Classical flavor, but employing modern analytical tools (Schefold 1985)
4. A monetary theory of distribution—elaborated by Panico (1988) and Pivetti (1991) following Sraffa's suggestion (*Production of Commodities*, p. 33)—according to which the rate of profit can be determined by the monetary rate of interest, fixed exogenously by the monetary authority
5. The incorporation of renewable and exhaustible resources (Bidard 2004)

SEE ALSO *Cambridge Capital Controversy; Capital; Competition; Economics, Classical; Income Distribution; Kuhn, Thomas; Lakatos, Imre; Long Period; Pasinetti, Luigi; Ricardo, David; Sraffa, Piero; Surplus; Value; Value, Objective*

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Pasquale Commendatore

ECONOMICS, NEW CLASSICAL

New classical economics takes the view that short-run fluctuations in the aggregate economy—the business cycle—can be understood within an equilibrium framework of rational, forward-looking agents, without relying on the presumption that market rigidities or imperfections (such as *sticky prices*), and the consequent disequilibrium adjustment as articulated in John Maynard Keynes's (1883–1946) *General Theory of Employment, Interest, and Money* (1936), are necessary to explain the cyclical behavior of the macroeconomy. New classical economics assumes universal market clearing, rational expectations, an equilibrium or "natural" rate of employment and output, and labor suppliers who respond rationally to intertemporal relative prices. At the same time, it assumes that information about relative prices is costly to obtain and therefore imperfect, which can provide a means for aggregate demand to act as a determinant of real economic activity.

This school of thought is known as the *new* classical economics because it builds on the general equilibrium principles of classical economics to give aggregate demand a causal role in explaining observed correlations among prices, income, employment, and money. Such a role is difficult to find in the writings of the pre-Keynesian classical economists, who tended to view the overall market economy as self-adjusting and aggregate demand as being neutral in its effects on the economy.

New classical economics has its genesis in the work of Nobel laureate Robert E. Lucas Jr. Lucas summarizes the new classical approach and justifies its insistence on explaining business cycles using *equilibrium* models of economic behavior, that is, models that "account for the observed movements in *quantities* … as an optimizing response to observed movements in prices" (1977, p. 14). Elsewhere, Lucas (1980) discusses the new classical view in the historical context of business cycle theory.

Lucas and Leonard Rapping (1969) made the first attempt to explain aggregate employment and wage behavior based on a dynamic theory of competitive labor market equilibrium. The Lucas-Rapping model relies on a precise formulation of households' optimal choices of labor and leisure over time. This approach has since become the foundation for dynamic macroeconomic models.

Because the Lucas-Rapping model rules out disequilibrium adjustment in the labor market, it must account for short-run fluctuations in employment owing to real wage changes, while remaining consistent with the accepted fact that employment is independent of real wages in the long-run. It does so through appeal to the *intertemporal substitution of labor and leisure*—the response of workers to incentives to alter their supply of labor across different periods of time. Suppose that labor suppliers face wages temporarily below their expected normal or long-run levels. Dynamic utility maximization implies that these workers will respond by reducing hours

of work today (that is, by increasing the consumption of leisure today), and increasing work in the future, at the expense of future leisure. The response of rational, forward-looking agents to changes in intertemporal relative prices is a cornerstone of new classical economics, and indeed of modern macroeconomics.

Drawing further inspiration from Edmund Phelps et al. (1970), Lucas (1972, 1973) goes on to develop a general equilibrium extension to the Lucas-Rapping partial equilibrium model of the labor market. His primary motivation is to explain the positive empirical correlation of money and output while retaining the "classical" assumptions that consumers and producers respond rationally to relative prices, that all markets clear, and that expectations are *rational*—agents' forecasts of unknown variables relevant for decisions are, on average, unbiased conditional on available information. Taken alone, the classical assumptions suggest a world in which money and nominal aggregate demand are *neutral*, affecting all nominal prices proportionately and therefore leaving relative prices and real activity unaltered. The challenge Lucas faced is therefore one of accounting for monetary nonneutralities while avoiding appeal to nonclassical (Keynesian) frictions.

Lucas meets this challenge by assuming, as suggested by Phelps, that information does not flow freely across markets, so that rational (Lucas-Rapping) producers mistake common money supply shocks with market-specific supply and demand shocks. Ideally, producers base supply decisions on their going market price *relative* to prices in all other markets (as summarized by the price level). However, a lack of current information concerning other prices prevents local producers from knowing with certainty what the overall price level is. An unperceived economy-wide increase in the money stock, which tends to raise demand and prices in all markets, will therefore be perceived by the individual producer as an increase in his or her product's relative price. The producer's rational response in this case is to increase production. Because all producers are similarly confused, the nominal money shock will increase overall output, which would not be the case if information flowed freely.

Lucas's "imperfect-information" model further implies that the extent of producers' confusion regarding the sources of movements in market prices depends on the volatility of economy-wide shocks relative to market-specific shocks. In particular, in economies with high aggregate demand variance, producers are reasonably sure that a change in their market price is caused by an aggregate shock (thus leading the price level, not relative prices, to change) since these shocks are typically large relative to market-specific shocks. In this case, producers will have little incentive to respond to any given aggregate shock by altering production, because they are less likely to be "fooled." Lucas (1973) explicitly tests this implication using cross-country data and finds that countries with relatively high aggregate demand variability respond less to aggregate demand shocks than countries with relatively low aggregate demand variability, a finding consistent with his theory.

The so-called Lucas supply curve, which makes explicit the dependence of output on the difference between the realized and expected price level, is the new classical reformulation of the expectations-augmented Phillips curve of Milton Friedman (1968) and Phelps (1968). The new classical approach is consistent with the *natural rate* hypothesis of Friedman and Phelps—that deviations in output from its natural or full-employment level cannot be sustained without a sustained deviation of actual from expected inflation.

The rational expectations hypothesis, conceived by John Muth (1961) and formalized by Lucas and Edward Prescott (1971), is an essential (though not unique) feature of new classical economics and an important innovation in the study of macroeconomics. It applies the basic principles of rational, economic behavior to forecasting, requiring economic agents to equate their "subjective" probabilities with those "objective" probabilities implied by the model itself. Lucas justifies rational expectations based on the implausibility of systematic forecast errors in the face of the "recurrent character of the [business] cycle" (1977, p. 15). Indeed, rational expectations are now assumed in most macroeconomic models, including ones that do not take market-clearing prices for granted and therefore fall outside the boundaries of new classical economics.

Lucas's work and the new classical economics it has fostered have had a lasting influence on our understanding of the effects of aggregate demand policies, in particular monetary policy, on the economy. One of the most important implications, further developed by Thomas Sargent and Neil Wallace (1975), is the *policy ineffectiveness* proposition. Lucas's canonical new classical model implies that only *unanticipated* shocks to money or aggregate demand can alter incentives; anticipated shocks will be quickly incorporated into all nominal magnitudes, so that relative prices will remain unaltered. Therefore, systematic monetary policies—those manipulations of money and interest rates by the central bank that are anticipated by market participants—can have no hope of influencing income or employment. This implication provides theoretical backbone to Friedman's earlier proposal for a constant money growth rule, while condemning the "fine-tuning" polices of the 1960s and 1970s.

A corollary to the ineffectiveness proposition is that *credible* changes in policy rules can have immediate effects on inflation without much effect on output. Sargent

(1982) shows convincingly that some historical episodes of "big inflations" ended quickly without severe recessions when people fully understood and anticipated permanent anti-inflation reforms.

The consensus view of macroeconomists today is that the imperfect-information theory of new classical economics is not satisfactorily borne out by the data, and is therefore inadequate for understanding business cycles or providing a framework for policy analysis (see, for example, Woodford 2003, p. 6). Nonetheless, its influence continues beyond the now common use of the assumption of rational expectations. *Real business cycle* theories, first formulated by Finn Kydland and Prescott (1982), take up the mantle of equilibrium economics from the new classical paradigm, but emphasize the role of "real" shocks—shocks to preferences and technology—as the sources of aggregate fluctuations as opposed to nominal or monetary shocks. On the other hand, and somewhat ironically, the new classical critique of Keynesian models that they lack theoretical foundations for market and price rigidities has led to a resurgence of such models. The reaction to this critique, *new Keynesian economics*, attempts to explain such rigidities as the outcome of optimizing behavior on the part of rational agents. The papers in N. Gregory Mankiw and David Romer (1991) provide a good summary of some of the early work in this vein.

SEE ALSO *Economics, Classical*

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ECONOMICS, NEW KEYNESIAN

The macroeconomic debates on the effectiveness of fiscal and monetary policy have raged for many decades on both sides of the Atlantic. Up to the 1970s many economists and policymakers believed in a short-run Keynesian tradeoff between inflation and unemployment (termed a Phillips Curve), so that an expansionary fiscal or monetary policy would at least boost employment and lower unemployment for some time. The accelerator hypothesis popular in the 1970s insisted that extra jobs could only be achieved at the expense of ever-increasing inflation. The critique of econometric policy evaluation put forward by Robert Lucas in 1976 insisted that people cannot be fooled all the time. The subsequent outburst of new classical economics led by Lucas and Thomas Sargent and Neil Wallace killed the popularity of Keynesian economics.

By the end of the 1970s policymakers and economists became skeptical about the possibility of expansionary demand management lowering unemployment. The new classical economists rejected Keynesian theories of aggregate demand with sluggish price and wage formation and insisted on modelling dynamic, competitive general equilibrium models with rigorous micro foundations, rational expectations, and prices and wages adjusting instantaneously to clear all goods and labor markets. Fluctuations thus arise from technology shocks rather than changes in economic policy. This generation of economists works in the spirit of classical economists like Adam Smith, David Hume, David Ricardo, John Stuart Mill, Knut Wicksell,

Irving Fisher, and John Maynard Keynes of *The Treatise of Money* (1930) who all insisted that output is primarily determined by productive capacity.

However, in 1980 Robert Solow (1980) in his Presidential Address to the American Economic Association criticized the new classical school and its Panglossian policy prescriptions for being unrealistic and irrelevant. He missed returns to scale and oligopolistic interdependence, and was unable to accept that all unemployed households are voluntarily unemployed. Involuntary unemployment and non-clearing labor markets needed to be addressed, which, according to Solow, would require an analysis of real and nominal wage and price rigidities, which may well follow from optimizing behavior of agents in the economy during their normal activities. Solow gave a host of reasons why labor markets do not clear immediately (varying from Keynes's idea of case-by-case resistance to wage reductions to trade unions and efficiency wages).

Soon afterward, Oliver Hart, Oliver Blanchard, and Nobu Kiyotaki, and others in Gregory Mankiw and David Romer's *New Keynesian Economics* (1991) explained that aggregate demand externalities in economies with monopolistic competition produces Keynesian multipliers. With small menu costs prices can be rigid and monetary policy has real effects on the economy. In the 2000s Michael Woodford (2003) and Jordi Galí (2003) continued the New Keynesian counter-attack on the new classical orthodoxy. Their objective is to develop dynamic, noncompetitive general equilibrium models with rigorous microfoundations, but where it is costly to adjust prices instantaneously. They obtain a micro-founded, forward-looking New Keynesian Phillips Curve with a short-run trade-off between inflation and unemployment. The main advantage of this approach is that a second-order approximation to a proper micro-founded welfare loss function can be obtained. This leads to the advice that central bankers should not target the actual output gap, but should target the economy as close as possible to the level of output that would prevail under flexible wages and prices.

An important implication is that inflation is forward rather than backward looking. The reason is that prices stay fixed for a while and thus depend on expected future marginal costs and demand conditions. A big difference with the accelerator version of the Phillips Curve is that inflation leads output rather than the other way round. A monetary expansion always expands output, but only generates a lower interest rate if risk aversion is sufficiently high and money growth is not too autocorrelated. The Keynesian liquidity effect is thus not necessarily operative in the New Neoclassical Synthesis. Another insight is that policy makers should target deviations of actual output from the first-best level of output that would prevail in the absence of price and wage rigidity rather than from the de-trended level of output.

The New Keynesian approach cannot explain the quintessential Keynesian features that inflation displays inertia and monetary disinflations are contractionary. Other challenges for the New Keynesian approach are to explain pro-cyclical real wages in the face of demand shocks, allow for inventories, credit constraints, and bankruptcies in explaining the business cycle, model unemployment as a catastrophic event, and allow for psychological features such as downward rigidity of wages and not taking account of the full effects of changes in inflation at low rates of inflation.

Keynesian economics was not popular in the 1970s and 1980s. However, with the advent of New Keynesian economics, Keynes has become a source of inspiration again. Apart from giving more rigorous micro foundations, an important factor is undoubtedly that Keynesian economics is better able to explain the events of the 1970s and the 1980s as well as the recessions of the late twentieth century than the new classical economics. The New Keynesian approach must be able to explain periods of persistent, widespread involuntary unemployment, since otherwise it does not capture quintessential Keynesian features. One cannot rely on people's misperceptions about relative prices or technology shocks alone to explain such periods. Keynes stressed the importance of animal spirits, coordination failures, and the possibility of multiple equilibrium outcomes. Coordination failures and bootstrap equilibria are important, since economies can get stuck in situations of deficient demand and widespread unemployment. Policymakers must then react by boosting confidence in the economy again. Investment by firms is financed by retained profits rather than borrowing, and this together with changes in the functional distribution of income is an important source of macroeconomic fluctuations. However, neither traditional nor New Keynesian Phillips Curves capture real world features that affect firm and bank behavior such as credit constraints, equity constraints, bankruptcies, and other market failures arising from imperfect information as discussed in Joseph Stiglitz and Bruce Greenwald's *Towards a New Paradigm in Monetary Economics* (2003). If allowance is made for these features and the role of financial intermediaries, it follows that the nominal interest rate as well as the real interest rate affects the aggregate demand for goods. Monetary policy is associated with big distortions in allocation and is as much about supervision and regulation as the interest rate.

SEE ALSO *Economics, Keynesian; Economics, New Classical; Economics, Post Keynesian*

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Frederick van der Ploeg

ECONOMICS, NOBEL PRIZE IN

The Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel, the founder of the Nobel Prize, was instituted by the Bank of Sweden (the world's oldest central bank) for its three-hundredth anniversary in 1968, sixty-seven years after the first Nobel Prizes were awarded for other fields. Known also as the Nobel Memorial Prize in Economics, and less formally as the Nobel Prize in Economics, it is the only prize granted that was not specified in Alfred Nobel's will. Its addition was justified as a recognition that the use of quantitative methods had made economics a science like physics and chemistry.

The Nobel Prize in Economics is awarded each year for outstanding intellectual contributions to the field of economics. The laureates are chosen by the Royal Swedish Academy of Sciences, from nominations of about one hundred living persons made by qualified nominators each year. Prizewinners receive their award during a ceremony in Stockholm, together with the laureates in the other fields. No more than three people can share the prize for a given year. The names of the nominees can only be published after fifty years.

From 1969, when the first prize was awarded, up to 2006, fifty-eight people have received the Nobel in economics. Economics is the only discipline in which no woman has ever been awarded a Nobel. The United States has dominated the award, with forty laureates, followed by nine laureates from the United Kingdom. The University of Chicago has employed the highest number of laureates in economics, nine up to 2006, followed by Harvard University and U.C. Berkeley, with four laureates each. Out of the thirty-eight prizes awarded up to 2006, seventeen were shared. With an average age of sixty-six at the time of the award, laureates in economics are the oldest to receive the prize—the youngest are in physics, with an average age of fifty-four. The youngest person to receive the prize in economics was Kenneth Arrow, in 1972, at the age of fifty-one; the oldest was Thomas Schelling, in 2005, at the age of eighty-four.

The prize has been awarded to work ranging from theory to empirical application, from macroeconomics to microeconomics, from economic policy to economic history, and from mathematical modeling to psychology. The early awards were focused on acknowledging the past contributions of "giants" such as Paul Samuelson (1970), the father of the modern economic theory; Simon Kuznets (1971), the father of the empirical analysis of economic growth; John Hicks and Kenneth Arrow (1972), pioneering contributors to general economic equilibrium theory and welfare theory; Wassily Leontief (1973), who developed the input-output method and a number of applications to economic problems; and Milton Friedman (1976), whose long list of contributions include consumption analysis, monetary history and theory, and stabilization policy.

The scope of the award has been broadened over the decades, while the work awarded has become more specialized. One could already see these trends in the 1980s, with prizes given for work on the theory of economic growth (Robert Solow, 1987), financial economics (James Tobin, 1981; Franco Modigliani, 1985; Harry Markowitz, Merton Miller, and William Sharpe, 1990), empirical work and econometrics (Lawrence Klein, 1980; Richard Stone, 1984; Trygve Haavelmo, 1989), and eco-

Nobel Laureates in Economics, 1969–2006

Ragnar Frisch, Jan Tinbergen	1969
Paul A. Samuelson	1970
Simon Kuznets	1971
John R. Hicks, Kenneth J. Arrow	1972
Wassily Leontief	1973
Gunnar Myrdal, Friedrich August von Hayek	1974
Leonid Vitaliyevich Kantorovich, Tjalling C. Koopmans	1975
Milton Friedman	1976
Bertil Ohlin, James E. Meade	1977
Herbert A. Simon	1978
Theodore W. Schultz, Sir Arthur Lewis	1979
Lawrence R. Klein	1980
James Tobin	1981
George J. Stigler	1982
Gerard Debreu	1983
Richard Stone	1984
Franco Modigliani	1985
James M. Buchanan Jr.	1986
Robert M. Solow	1987
Maurice Allais	1988
Trygve Haavelmo	1989
Harry M. Markowitz, Merton H. Miller, William F. Sharpe	1990
Ronald H. Coase	1991
Gary S. Becker	1992
Robert W. Fogel, Douglass C. North	1993
John C. Harsanyi, John F. Nash Jr., Reinhard Selten	1994
Robert E. Lucas Jr.	1995
James A. Mirrlees, William Vickrey	1996
Robert C. Merton, Myron S. Scholes	1997
Amartya Sen	1998
Robert A. Mundell	1999
James J. Heckman, Daniel L. McFadden	2000
George A. Akerlof, A. Michael Spence, Joseph E. Stiglitz	2001
Daniel Kahneman, Vernon L. Smith	2002
Robert F. Engle III, Clive W. J. Granger	2003
Finn E. Kydland, Edward C. Prescott	2004
Robert J. Aumann, Thomas C. Schelling	2005
Edmund S. Phelps	2006

nomic theory (George Stigler, 1982; Gerard Debreu, 1983; James Buchanan, 1986; Maurice Allais, 1988).

These trends have become even more apparent in recent years. Since 1990, the prize has been awarded for contributions that address economic problems with tools and results from fields outside economics, such as mathematics and game theory (John Harsanyi, John Nash and Reinhard Selten, 1994; Robert J. Aumann and Thomas Schelling, 2005), psychology (Daniel Kahneman and Vernon Smith, 2002), and philosophy (Amartya Sen, 1998). It has also been given for contributions that apply economic tools to other fields, such as work that uses microeconomic analysis to explain a wide range of human behavior and interaction (Gary Becker, 1992), and work using economic theory and quantitative methods to explain economic and institutional change in history (Robert Fogel and Douglass North, 1993). It has been awarded for econometrics (James Heckman and Daniel McFadden, 2000; Robert Engle and Clive Granger, 2003), and for broadening and deepening economic theory by incorporating transaction costs and property rights (Ronald Coase, 1991), rational expectations (Robert Lucas, 1995), and asymmetric information (George Akerlof, Michael Spence, and Joseph Stiglitz, 2001). It has also been given for work with direct policy implications, such as that addressing monetary and fiscal policy under different exchange rate regimes (Robert Mundell, 1999) and the intertemporal trade-offs in macroeconomic policy (Phelps 2006), and for contributions that were first criticized as too specialized and limited in scope, but later proved more influential and applicable than most had expected, such as the pricing formula for financial derivatives (Robert Merton and Myron Scholes, 1997).

The Nobel Prize in Economics has been a source of controversy since its introduction. Some have even suggested that the award should be discontinued. Its very name has been questioned, as it was not part of Alfred Nobel's bequest. It has also been argued that the criteria for an award for a social science cannot be as objective as for the other fields, although similar concerns have been raised for the prizes for peace and literature. Indeed, this may explain why it takes much longer to receive the Nobel in Economics after a contribution is made than in any other field—an average of thirty-three years, compared with an average of twelve years for prizes in the hard sciences—which has also been a source of controversy. Finally, some of the recent selections have been criticized for honoring contributions that are too narrowly focused.

The prize has affected both the field of economics itself and the field's impact. It has been argued that the prospect of receiving a Nobel Prize motivates economists to pursue original research ideas. Although there has been no empirical study documenting such an effect, it is consistent with one of the most basic laws in economics that people respond to incentives. The impact that an economist can have on the literature, on economic policy, and on public opinion is substantially enhanced if they can add the title *Nobel Laureate* after their name. Elite universities lose no opportunity to advertise the laureates on their faculty to attract new faculty members and graduate students. Even Hollywood has been inspired by the prestige of the prize, as reflected in the Oscar-winning movie *A Beautiful Mind*, about the life of John Nash.

SEE ALSO *Economics*

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Athanasios Vamvakidis

ECONOMICS, NON-WALRASIAN

SEE *Barro-Grossman Model; Patinkin, Don.*

ECONOMICS, POST KEYNESIAN

John Maynard Keynes's 1936 book *The General Theory of Employment, Interest, and Money* attempted to overthrow classical theory and revolutionize how economists think about the economy. Economists who build upon Keynes's *General Theory* to analyze the economic problems of the twenty-first-century global economy are called Post Keynesians. Keynes's "principle of effective demand" (1936, chap. 2) declared that the axioms underlying classical theory were not applicable to a money-using, entrepreneurial economic system. Consequently, the mainstream theory's "teaching is misleading and disastrous if we attempt to apply it to the facts of experience" (Keynes 1936, p. 3). To develop an economic theory applicable to a monetary economy, Keynes suggested rejecting three basic axioms of classical economics (1936, p. 16).

Unfortunately, the axioms that Keynes suggested for rejection are still part of the foundation of twenty-first-century mainstream economic theory. Post Keynesians have thrown out the three axioms that Keynes suggested rejecting in *The General Theory*. The rejected axioms are the ergodic axiom, the gross-substitution axiom, and the neutral-money axiom, which are explained below. Only if these axioms are rejected can a model be developed that has the following characteristics:

- Money matters in the long and short run, that is, changes in the money supply can affect decisions that determine the level of employment and real economic output.
- As the economic system moves from an irrevocable past to an uncertain future, decision makers recognize that they make important, costly decisions in uncertain conditions where reliable, rational calculations regarding the future are impossible.
- People and organizations enter into monetary contracts. These money contracts are a human institution developed to efficiently organize time-consuming production and exchange processes. The money-wage contract is the most ubiquitous of these contracts.
- Unemployment, rather than full employment, is a common laissez-faire situation in a market-oriented, monetary production economy.

The ergodic axiom postulates that all future events are actuarially certain, that is, that the future can be accurately forecasted from an analysis of existing market data. Consequently, this axiom implies that income earned at any employment level is entirely spent either on produced goods for today's consumption or on buying investment goods that will be used to produce goods for the (known) future consumption of today's savers. In other words, orthodox theory assumes that all income is always immediately spent on producibles, so there is never a lack of effective demand for things that industry can produce at full employment. The proportion of income that households save does not affect total (aggregate) demand for producibles; it affects only the composition of demand (and production) between consumption and investment goods. Thus, saving creates jobs in the capital-goods-producing industries just as much as consumption spending creates jobs in the consumer-goods-producing industries. Post Keynesian theory rejects the ergodic axiom.

In Post Keynesian theory, however, people recognize that the future is uncertain (nonergodic) and cannot be reliably predicted. Consequently, people decide on how

much of current income is spent on consumer goods and how much is not spent on consumption goods but is instead saved by purchasing various liquid assets.

Liquid assets are time-machine vehicles that savers use to store and transport savings to an indefinite future date or dates. Unlike savers in the classical system who can reliably predict their economic future, real-world savers do not know exactly what they will buy, and what contractual obligations they will incur, at any specific future date. As long as money discharges all contractual obligations and monetary contracts are used to organize production and exchange activities, the possession of money (and liquid assets that have small carrying costs and can be easily resold for money) means that holding one savings in the form of liquid assets gives savers the ability to demand products whenever they desire in the uncertain future and/or to meet a future unforeseen contractual commitment. Liquid assets are savers' security blankets, protecting them from possible hard times. As Nobel Price winner John Hicks has stated, income recipients know that they "do not know just what will happen in the future" (1977, p. vii).

Keynes (1936, chap. 17) argued that money (and all liquid assets) have two essential properties. First, money does not grow on trees, and hence labor cannot be hired to harvest money trees when income earners reduce consumption to save more in the form of money or liquid assets. Accordingly, the decision to consume rather than to save is a choice between an employment-inducing demand and a non-employment-inducing demand. When savings increase at the expense of the demand for producibles, sales and employment decline. Second, liquid asset prices will increase as new savings increase the demand for such assets. Because of high carrying and high resale costs, producible durables are not gross substitutes for liquid assets, contrary to the classical gross-substitution axiom where the latter assumes anything is a good substitute for anything else. Post Keynesians reject the gross substitution axiom as applicable to assets that savers use to store their savings. Consequently, higher liquid-asset prices do not divert this savings demand for liquid assets to a demand for producibles whose relative price has declined. (If producibles were gross substitutes for liquid assets and if savings increase the relative price of liquid nonproducible assets, then the gross substitution axiom implies that savers would be induced to substitute the lower relative priced producibles as a place for their savings. Thus savings would create a simultaneous demand for the durable producibles and there would never be a lack of effective demand for the products of industry.)

In the real world, investment spending on producible durables is constrained solely by entrepreneurs' expectations of profits. If the future is uncertain, these expectations depend on "animal spirits" rather than on a reliable calculation of future profit income (Keynes 1936, p. 161). In an economy where money is created by banks, if entrepreneurs borrow from banks to finance the production of working capital goods, the resulting increases in the quantity of money will be associated with increasing employment and output. In contrast, the classical neutral-money axiom implies that, for example, if the money supply increases as people borrow more from banks, this change in the money quantity cannot affect the level of employment or output.

Post Keynesians reject the classical neutral-money axiom when they argue that changes in the money supply due to borrowing from banks to finance the production of investment goods affect the level of employment and output in both the short run and the long run.

SEE ALSO *Economics, Neoclassical; Economics, New Classical*

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Paul Davidson

ECONOMICS, PUBLIC

Public economics is often defined as the economic study of the public sector. Contemporary public economics draws from two traditions, public finance and public choice. The older public finance tradition of economists such as Arthur Pigou and Richard Musgrave views government as essentially benevolent. The roles of government are, first, to raise funds and provide basic public goods, such as national defense; second, to correct market failure, namely the failure of markets to achieve efficiency in the presence of externalities, public goods, and imperfect information; and third, to improve equity. Equity is viewed primarily in terms of income distribution, and so more equity is generally associated with less inequality in the distribution of income.

Unlike many other areas of mainstream economics, much of the public finance literature is explicitly normative. For example, optimal tax theory prescribes how governments should raise revenue so as to achieve both equity and efficiency. The American Economic Association's

Journal of Economic Literature classification system reflects the public finance tradition, categorizing the subfields of public economics as "structure and scope of government; taxation, subsidies and revenues; fiscal policies and behaviour of economic agents; publicly provided goods; national government expenditures and related policies; national budget, deficit and debt; state and local government; intergovernmental relations" (American Economics Association 2006, pp. 1157–1158).

The public choice tradition, associated with the economist James Buchanan, sees government as a collection of rational, self-interested agents. These agents trade and exchange in the public sector, just as firms and consumers do in private markets. Central concerns of public choice include the behavior of bureaucracies and the design of political institutions, including constitutional rules. Although public choice is an avowedly positive research program, it has normative implications. For example, a positive statement that bureaucrats attempt to maximize the size of their budgets thereby extracting all benefits from government activity has implications for how large governments should be. Public choice has had a major influence on current political science research, and this intersection between economics and politics is frequently referred to as political economy.

In the twenty-first century the borders between public economics and other areas of economics have blurred, as has the division between the public finance and public choice traditions. Since government impacts all aspects of the economy, economists in other fields also study the public sector. For example, labor economists study the effects of taxation and income support programs on labor supply, environmental economists study the problem of externalities, and so on. In the later part of the twentieth century the size of government in industrialized countries stabilized or shrank, while economists became aware that governments, like markets, could fail. Public economists began to study nongovernmental forms of collective action, for example, the private provision of public goods. The central insight of public choice, that politicians and bureaucrats are rational—and not necessarily benevolent—agents, became widely accepted. The *Journal of Public Economic Theory* describes the scope of contemporary public economic research in its mission statement: "public goods, local public goods, club economies, externalities, taxation, growth, public choice, social and public decision making, voting, market failure, regulation, project evaluation, equity, and political systems" ("Aims and Scope"). Public economics is no longer simply the economics of the public sector.

SEE ALSO *Decision-making; Externality; Government; Political System; Public Choice Theory; Public Goods; Public Sector; Public Utilities; Regulation; State Enterprise; Taxation; Voting*

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Frances Woolley

ECONOMICS, SRAFFIAN

SEE *Economics, Neo-Ricardian.*

ECONOMICS, STRATIFICATION

Stratification economics is an emergent subfield of economics that uses the concept of social stratification as a point of departure for examining structural and intentional processes that generate hierarchy and economic inequality among groups whose members are defined by one or more characteristic or attribute. *Social stratification* typically refers to the hierarchical arrangement of social classes, castes, and strata within a society. Stratification economics analyzes the social processes influencing the nature and reproduction of stratification not only within, but also across, different societies. Within stratification economics, special attention is directed to the role of racial and caste distinctions and similar group affiliations in producing and perpetuating income and wealth inequality.

Stratification economics treats group identities as produced forms of individual and collective property with both income and wealth-generating characteristics. In addition, these groups' supply and demand are responsive to changes in production costs and budget constraints. Cooperative economic and noneconomic behaviors are treated as normal outcomes of individuals' propensity to engage in own-group altruism and other-group antagonism. Theoretical stratification-economics models predict that a person's reward for cooperative behavior increases with the mean wealth of the person's group, so that income and wealth inequality strengthen incentives to engage in cooperative behavior.

Within stratification economics, an individual has constrained choices among various identities, such as racial classification and nationality, which establish the foundations for intergroup conflict. For example, powerful groups often attempt to create property rights that facilitate the exclusion and exploitation of nonmembers and provide privileged access to private and public goods for members of the dominant group. Such rights are maintained by social custom, history, law, and other means. Ascriptive markers such as skin color serve as signals to dominant interests to vary the intensity of discrimination targeted at particular subordinate individuals and groups. For example, during the era of slavery in the United States, lighter-skinned blacks were often afforded more privileges than their darker-skinned counterparts, while still encountering discrimination.

Theoretical stratification economics challenge conventional wisdom about the dynamics of intergroup inequality. Stratification economists argue, for example, that intergroup conflict in both economic and noneconomic settings is an endogenous characteristic of the social space, rather than an exogenous contaminant of market allocation processes and individual decision-making. Reductions in intergroup equality and income will not automatically lead to the erosion of traditional patterns of collective identification if the expected returns to additional investments in group identity are unequal across groups. Movement toward more egalitarian intergroup distributions of wealth must therefore be a major element in any earnest attempt to reduce intergroup conflict, because inequities are institutionalized through processes that enable the transfer of material resources across generations.

Stratification economics is supported by studies of mechanisms perpetuating domination in various countries including white privilege in the United States and throughout the Americas, high-caste Hindu privilege in India, and Protestant privilege in Northern Ireland. Studies of economic discrimination targeting particular subgroups in various market societies, including African Americans in the United States, the Buraku in Japan, East and West Indians in Britain, and blacks in Canada, also provide useful insights for stratification economists.

As stratification economics evolves, it is likely to pose increasingly robust challenges to schools of thought that emphasize group-based deficits in personal responsibility and cultural practices as the primary sources of persisting intergroup economic inequality.

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James B. Stewart

ECONOMICS, WELFARE

SEE *Welfare Economics.*

ECONOMICS OF CONTROL

The *economics of control*, perhaps best represented by Abba Lerner's (1903–1982) 1944 book of that title, based on his 1943 doctoral dissertation for the London School of Economics, is a halfway-house policy approach to capitalist economies between laissez-faire on the one side and socialist economic planning on the other. The economics of control accepts the basic institutional framework of capitalist markets as the organizing principle but recognizes market imperfections, macroeconomic deficiencies, and other problems that require government intervention to improve market outcomes. It was an attempt, in the

words of Sidney Ratner (1908–1996), at a "reconciliation of liberalism and socialism in welfare economics" (Ratner 1949, p. 133).

John Maynard Keynes (1883–1946), in a letter written at sea on a voyage to the United States during which he read *The Economics of Control*, wrote to Lerner that the latter had "written two books largely distinct … which you have placed within one cover" (Colander and Landreth 1996, p. 116). The first was dedicated to microeconomic problems analyzed through the neoclassical marginalist approach but infused with a spirit of market socialism that Lerner described as "socialist free enterprise." This work was part of the debate on socialist planning that has often been viewed as dealing with the question of the viability of a socialist economy but really concerned a more specific, technical issue: whether or not neoclassical theory, in particular general equilibrium analysis, was applicable to a planned economy. Friedrich August von Hayek (1899–1992) and the Austrians said no; Lerner, Oskar Lange (1904–1965), and others claimed that it was (Kirzner 1988).

The second "book" covered macroeconomics and Keynesian theory, which included demonstrating the theoretical justifications for employing Lerner's *functional finance* approach. This approach implied strong fiscal and monetary policies for promoting macro goals, such as full employment, price stability, and stable economic growth, not only for their own sake, but also because full employment was seen as a precondition for the relatively smooth workings of the microeconomy. Keynes called this "second of the two books which you have placed within one cover … very original and grand stuff," adding:

> I shall have to try when I get back [to England, from his trip to the United States] to hold a seminar for the heads of the Treasury on Functional Finance. It will be hard going—I think I shall ask them to let me hold a seminar for their sons instead, agreeing beforehand that, if I can convince the boys, they will take it from me that it is so! (Colander and Landreth 1996, pp. 116–117)

Keynes does not trust that the heads of the Treasury can understand, because, as Lerner often noted, "Functional Finance is seen to run counter to economic principles" (Lerner 1951, p. 142). Functional finance, or Keynesian economics taken to its furthest logical conclusions (causing David Colander to ask, "Was Keynes a Keynesian or a Lernerian?" [1984]), was, in its application to unemployment, Lerner admitted, "topsy-turvy economics": "But this is no objection at all. Topsy-turvy economics is just what is appropriate for an economy that is suffering from unemployment. An economy suffering from unemployment is an upside-down economy for which *only* a topsy-turvy economic theory is of any use" (Lerner 1951, pp. 142–143).

By an "upside-down economy," Lerner means an economy in which strongly held traditional economic principles, such as those regarding thrift and the economical use of scarce resources, do not hold. Lerner noted that when there is unemployment, efficiency becomes inefficient: "an increase in efficiency in any particular productive process does not result in any increase in efficiency in the economy as a whole. … The savings due to greater technical efficiency merely go to waste in more unemployment" (Lerner 1951, pp. 143–144). Likewise when there is unemployment, a country has to suffer over its trade balance, because it must worry about rising unemployment stemming from an increase in the value of its imports over the value of exports. Since "the input of the foreign trade industry consists of the effort involved in the manufacture of our exports" and "the output of our foreign trade industry consists of the imports which it yields to us for our use," exports are a cost and imports are a benefit (Lerner 1951, p. 321). Thus when a nation attempts to cure its unemployment problems by reducing its trade deficit, it is promoting costs and restricting benefits.

Other supporters of the economics of control went beyond what they viewed as Lerner's approach, made up as it was between neoclassical welfare economics on the one side and traditional Keynesian fiscal and monetary policies on the other. Adolph Lowe (1893–1995) made the distinction between *primary* and *secondary* controls (Lowe [1965] 1977). Primary controls, or conventional economic policies, take the behavior of the microunits as given, whereas secondary controls, or what Lowe sometimes called *instrumental* controls, seek to shape the behavioral patterns of the microunits themselves, either directly or through creating the structural or environmental contexts that can influence motivations and behaviors (Lowe 1969, p. 33). Examples of the former include a variety of fiscal and monetary policies. The latter would be exemplified by policies that shape expectations (e.g., reducing uncertainty). The line between the two is not always clear, because fiscal and monetary policies can also influence expectations. If business investors know that the state is committed to maintaining a high, stable rate of growth of demand, they will have less uncertainty about future conditions that affect investment and thus output and employment. As Lerner noted, the purpose of taxation is its "effect on the *public* of influencing their economic behavior" (Lerner 1951, p. 131).

SEE ALSO *Economics, Keynesian; Exports; Full Employment; Imports; Keynes, John Maynard; Laissez-faire; Marginalism; Microeconomics; Planning; Policy, Fiscal; Policy, Monetary; Socialism; Socialism, Market; Taxation; Unemployment*

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Mathew Forstater

ECONOMIES, TRANSITIONAL

The breakdown of centralized socialism in the Union of Soviet Socialist Republics (USSR), Central and Eastern Europe, and Asia at the end of the twentieth century resulted in the adoption of the market process as a means of organizing the economy. The movement from a centralized socialist economy to an economy based on market relations has been termed *transition* and thus the economies that have adopted this process are called *transitional economies*. In particular, the transition process was associated with an explicit end-state, namely the establishment of a capitalist economic system. Hence, the transition involved, in essence, the introduction of private ownership and restructuring through the privatization of state enterprises; the establishment of market equilibrium through the abolishment of centrally administered commands; the liberalization of economic activity through institutional reform; a change in economic behavior as a result of economic actors adjusting their behavior in line with self-interest and the rules of market exchange; and the reduction of the state to the role of legislator and facilitator of economic activity.

The term *transition* has been criticized as being inadequate, however, because it does not capture all the complications involved during the process. The term implies a linear movement from point A (centralized socialism and disequilibrium) to point B (capitalism and equilibrium). Specifically, because transition implies an end-state, the achievement of that end-state completes the whole process. It can thus be argued that the process is already complete, for the transition economies have in fact established a capitalist economic system and most of the countries of Central and Eastern Europe are members of the European Union. In this view, the term *transitional economy* is obsolete.

It can also be argued, however, that the "transition" process is continuous, and that equilibrium can never be achieved. This has led to the use of terms such as *transformational economy* and *developing economy*. In addition, capitalism comes in many varieties, so the question of what type of capitalism should be the goal complicates the process (Marangos 2004). Some commentators have also questioned the goal of achieving a capitalist economic system, with alternatives such as market socialism being proposed as the most appropriate economic system. China and Vietnam are examples of this type of system. Lastly, an alternative term, "integration-assisted transition," has been introduced by Aristidis Bitzenis and John Marangos (2007), who argued that the goal of transitional economies was the participation in the globalization process and attempting to integrate their economies into the globalized system by opening their borders, liberalizing their markets, and attracting foreign direct investments with the assistance of international financial institutions and multinationals.

The economic program of transition involved four elements. The first was macroeconomic stabilization, which reduced inflation and decreased the debt burden. The second was the liberalization of economic activity, including prices, trade, currency, and convertibility. The third was the reduction of the size of the public sector through privatization and the restructuring of state-owned enterprises. The last element was the establishment of new laws and regulations in areas such as property rights, corporate law, accounting practices, and tax regulation. It is clear, then, that the decision to move to a market-based economy required a total transformation of the economy. Meanwhile, the citizens of these countries were unprepared to face the economic adversity and uncertainty resulting from the free-market process, mainly because they had been protected for so long by the Socialist State.

Although all the countries in transition had more or less the same final goal, the results of their efforts are diverse. This is because different strategies, policies, paths, and conditions ensured a variety of *transition* processes and outcomes (Bitzenis 2007).

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Aristidis Bitzenis
John Marangos

EDGEWORTH, FRANCIS YSIDRO

SEE *Probability Theory; Crowding Hypothesis.*

EDGEWORTH-BOWLEY BOX

SEE *Welfare Economics.*

EDUCATION, INFORMAL

Informal education refers to intentional educational encounters occurring beyond the classroom. Many learning experiences are random and accidental; however, informal education, although it may flow from chance encounters or fortuitous events, embodies an element of premeditation. Certainly informal educators, like their compatriots operating in schools and colleges, consciously set out to promote learning and impart skills. They are teachers and like all teachers will plan, evaluate, and reflect upon their teaching. Clearly some overlap exists with *experiential learning*, since informal educators may also create opportunities for learning. However, the key difference between the two is that informal educators predominately work via the conversation that emerges from reflection on the daily experiences of the individuals and groups rather than the analysis of experiences initiated by the facilitator and educator (see Warner Weil and McGill 1989).

The first text to deliberately employ the term was *Informal Education* (1946) by Josephine Macalister Brew (1904–1957). However, such essentially unstructured education, characterized by spontaneity and built upon the interplay inherent in dialogue and conversation, clearly has a long history. Possibly predating the formal variety, unstructured education flourished in ancient Athenian society (Jeffs 2001). There it stood apart from rote learning and instruction as the accepted way whereby individuals acquired social skills, an understanding of the arts, and appreciation of matters philosophical and spiritual.

Although it is important to avoid minimizing the commonalties between teaching in the formal and informal sectors, crucial differences do exist. First, informal educators predominately operate via the mediums of conversation and dialogue. Unlike the formal sector, where the curriculum and syllabus mold the educational encounter, here content emerges from conversational encounters. Informal educators consciously engage in conversation with the purpose of fostering learning, intentionally encouraging others to clarify their thinking, formulate their ideas, and articulate learning needs. The objective is to cultivate dialogue that will enable both parties to learn from and better understand each other (Jeffs and Smith 2005).

Second, informal education is based upon a voluntary relationship. Even within such institutions as prisons or schools, where attendance for one party is compulsory, informal educators strive to ensure those engaging with them do so freely.

Third, informal education requires the practitioner to operate where people are. They need to be "around" and "accessible." Therefore they must either work in settings they do not control, such as schools and the "street," or establish sites, such as settlement houses, youth clubs, and community centers, that provide services, programs, or activities that individuals and groups will seek out. For example, those operating in schools work the public spaces, such as hallways and canteens, in ways that enable students and staff to engage them in conversation (see Hazler 1998). In the clubs, community centers, and settlements, informal educators make time between and in activities for users to engage with them (see Hirsch 2005). They also create social spaces in these buildings where conversation will naturally occur. Those operating on the "street" usually target "hot spots" where, for example, young people or the homeless gather. Irrespective of the environment, informal educators draw upon a repertoire of skills to enable them to make contact and develop relationships. This means they must improvise and think for themselves. To be successful, practitioners must, as Brew (1946) stressed, be interesting and trustworthy people with whom others will freely spend time. Also they must be sensitive to the social and cultural environment they operate within if those they work for are to respect their judgment and opinions. Simply being "around" is never enough.

Overall, what distinguishes informal education is not its role and purpose, as generally these approximate those encountered elsewhere. Rather, it is the location and modus operandi of the educator. Although largely associated with youth work, settlement houses, and community work, informal education has noticeably been adopted as a means of intervention by a wide range of agencies since the 1980s (Smith 1988; Jeffs and Smith 1999). Notably health and criminal justice agencies have looked to informal education as a means of reaching groups and individuals resistant to their message. Sadly, the repertoire of skills developed by informal educators is often employed merely to deliver a packaged message, and the underlying commitment to dialogue and shared learning is set aside. This incorporation of elements of formal practice, notably in the United Kingdom and United States, has led to attempts to create an informal education curriculum and undertake the assessment of learning outcomes from "informal education" encounters (see Ord 2004). Unfortunately such accreditation is based on a profound misunderstanding of the informal education process: a naive assumption that because curriculum-led learning is taking place in clubs and centers, it is not formal education. This view overlooks the reality that formal and informal education can operate side by side yet remain discrete entities. Venue is not the defining characteristic; rather, it is whether or not the intervention is curriculum or dialogically led.

In parts of Europe aspects of informal education are frequently designated *social pedagogy*. The two are not synonymous but share many characteristics and historical antecedents.

SEE ALSO *Education, USA; Knowledge*

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Tony Jeffs

EDUCATION, RETURNS TO

There is a strong consensus among economists that education is one of the key determinants of people's earnings. According to the human capital theory, education is an investment that increases the market skills and productivity of individuals who undertake it. Consequently, these individuals earn higher wages in the labor market for their higher skills and productivity. While monetary returns to education take the form of higher earnings that people command in the labor market, there may also be nonmonetary returns since higher education is often associated with psychic gains, such as increased respect from others.

Like any other investment decision, investing in human capital through education entails costs that are borne in the short term with the expectation that benefits will be captured in the long term. Since the returns to education will not accrue for some time, the theory predicts that present-oriented individuals are less likely to invest in education than forward-looking individuals and that younger individuals will be more likely to invest than older individuals.

The question of whether returns to education are high enough to justify the costs of additional education is an important question, not only for individuals but also for policymakers. It is often argued that government policies can improve the economic well-being of the poor by subsidizing their education, offering loans for college students, and imposing minimum education requirements.

It is important to make the distinction between the private and social rate of returns to education. The private rate of returns to education is the increase in the earnings from an additional year of education for an individual who makes the investment decision on education, while the

social rate of returns to education measures the increase in national income resulting from the same year of education (Borjas 2004). It is often the social rate of returns to education that provides a basis for government programs, such as scholarships and education loans that are aimed at increasing the levels of education of individuals.

Numerous studies suggest that the rate of returns to education in the United States was around 9 percent in the 1990s (Borjas 2004). The rate of returns to education varies from individual to individual due to differences in age, ability, quality and quantity of education, and socioeconomic status. For example, it is often assumed that more able individuals benefit more from an additional year of education. Also, better-quality education is likely to enhance the productivity of individuals by improving cognitive skills, thereby increasing the rate of returns to education. It is also assumed that the rate of returns to education is a decreasing function of the quantity of education. In other words, the additional earnings generated from an extra year of education are likely to be higher for people with low levels of education than for those with high levels of education.

The rate of returns to education may also vary between individuals from different races, ethnicity, or gender due to discrimination. However, the empirical evidence on this is mixed. On the one hand, studies by Pedro Carneiro, James Heckman, and Edward Vytlacil (2003) and Christopher Taber (2001) show that the return to education is greater for more able individuals. On the other hand, Orley Ashenfelter and Cecelia Rouse (1998) find some evidence that the rate of return may be even higher for individuals coming from more disadvantaged backgrounds, and Lisa Barrow and Cecelia Rouse (2005) find that returns are similar for African Americans, Hispanics, and whites. The large disparity in education levels between different racial and ethnic demographic groups is considered to be a major reason for the observed inequality in the distribution of income and wealth in the United States. While increased educational opportunities for minority groups will certainly help narrow these inequalities, they are likely to be most effective only if coupled with policies that are aimed at eliminating the barriers to equal access to education for these groups.

The typical method for estimating the rate of returns to education requires data on the earnings and levels of education of different individuals, along with estimations of the percentage change in earnings associated with an additional year of education. This formulation is often called the *Mincer earning function*, named after Jacob Mincer (1922–2006), one of the pioneers of modern labor economics.

When estimating the rate of returns to education, it is important to adjust for all other differences in individual characteristics in the data, such as ability, race, ethnicity, gender, and age. A failure to adjust for all these differences will result in bias in the estimated rate of returns to education. However, the empirical difficulty of appropriately accounting for these differences constitutes an important challenge for researchers studying the returns to education. While characteristics such as age, gender, and race are readily available in most data sets, the ability levels of individuals are seldom observed in these data. It may be true that more able individuals are likely to obtain more years of education than others because it is easier for them to do so. Therefore, these individuals are likely to have higher earnings. However, such individuals may also earn more than others simply because they are more productive regardless of their levels of education. In other words, higher-ability individuals may earn higher wages than lower-ability individuals with equal levels of education. Therefore, a study not taking into account the differences in ability across individuals will result in a biased estimate of the rate of returns to education.

The discussion above assumes that education increases individuals' earnings by raising their productivity. An alternative argument is that education can increase earnings even if it does not make individuals more productive. According to this view, education mainly serves as a signal about the qualifications of the workers to potential employers (Arrow 1973; Spence 1973; Stiglitz 1975). Employers, especially in situations where they cannot easily observe the abilities or productivity of workers, may rely on education as a signaling device in their hiring decisions. As far as the private rate of returns to education is considered, it may not matter whether it is the productivity or the signaling model that represents a correct picture of the education and earnings relationship because education is positively linked to earnings under either scenario. However, if the signaling model is the correct link between education and earnings, society will not benefit from increased education. In this case, the social rate of return to education will be zero.

SEE ALSO *Educational Quality; Human Capital*

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Erdal Tekin

EDUCATION, UNEQUAL

In the social sciences, education is recognized as playing a central role in maintaining and reproducing modern systems of inequality. Hierarchies of race, class, and gender are understood to be reflected in both the content of educational offerings and in the context in which schooling is provided. As such, attempts to address patterns of social inequality have focused on improving educational access and conditions for various populations. In the case of the twentieth-century United States, efforts to equalize access to schooling along lines of race and class have drawn heavily upon the insights of American social scientists, while responding to the demands of both liberal and conservative political constituencies.

Despite residing in communities where they often represented significant parts of the population, blacks and other racialized minorities often possessed little or no ability to control their educational destinies—not in choice of curricula, the hiring and firing of teachers, nor the availability of school facilities or the length of the school term. Long practiced by custom in many localities and written into state constitutions in the decades following the American Civil War, racial segregation in schools was given legal mandate in the U.S. Supreme Court's ruling in *Plessy v. Ferguson* (1896), out of which came the doctrine "separate but equal," which allowed states effectively to separate access to educational resources on the basis of race as long as those provided to each racial group were equal. After some sixty years of state-mandated racial segregation in education, during which blacks and other minority populations lagged behind whites on most indicators of educational progress, the U.S. Supreme Court, heavily influenced by the findings of social scientists, decided unanimously in *Brown v. Board of Education of Topeka, Kansas* (1954) that the practice of segregated schooling was not only unconstitutional but also inherently damaging to children, with dire effects for society as a whole. While the *Brown* decision has generally been viewed as a landmark development in the struggle to dismantle racial inequality in American education and society at large, it was in many ways limited. The court's rulings were unendorsed, loosely defined, and, by some accounts, underfunded as a federal mandate for public schools. Institutionalized resistance by southern states prevented full implementation of the court's rulings until 1968, when schools in the rural South were given a mandate that they must desegregate in order to be in compliance with federal law. Additionally, because of the Court's focus on de jure segregation common in the South, the de facto segregation that had been practiced in the northeastern and midwestern states remained largely intact until the 1970s, when concerns were expressed about the education of minority schoolchildren in such cities as Pasadena, Chicago, San Francisco, and Boston.

The *Brown* ruling and the subsequent reexaminations of the American educational system it inspired called attention to the complex intersections of race and class in American education and their effects on academic achievement. The Elementary and Secondary Education Act of 1965, which provided additional federal monies to schools with a significant proportion of poor or disadvantaged students, grew out of the concerns expressed in *Brown*. Perhaps one of the most influential works of social science research in the immediate post-*Brown* era was James Coleman's *Equality of Educational Opportunity* (1966), sponsored by the U.S. Department of Health, Education, and Welfare and commonly referred to as the Coleman Report. The study's specific purpose was to evaluate indicators of educational opportunity among white and minority students (blacks, Puerto Ricans, Mexican Americans, Asian Americans, and Native Americans) by assessing educational quality in terms of the availability of curricula, school facilities, academic practices, and the academic characteristics of teachers and student bodies in schools. Among Coleman's chief findings were that while persistent and unequal separation by race was found to be detrimental as per the Supreme Court's ruling in *Brown*, it was the combination of the socioeconomic composition of the school, the familial and socioeconomic background of the students, and the nature of their peer groups that accounted for the majority of the differences observed in academic achievement between white and minority schoolchildren. Racial integration alone, Coleman and his associates concluded, could not improve the academic performance of poor minority children.

In a context where explanations for patterns of social inequality favored concepts of "cultural deprivation" among poor and minority communities, the report's widely cited findings proved to be controversial. Commentators recognized that schools in and of themselves were limited in their power to change society at

large. Conservative critics of educational reform argued that social science research had justified their resistance to increased educational spending for underachieving populations. They argued that this underachievement was the result of a "cultural mismatch" between schools and targeted populations. Others, such as Jencks et al. (1972), noted that only by addressing the underlying economic causes of race and class inequality could patterns in education be remedied. Ultimately, federal educational policies continued to favor funding compensatory programs such as Head Start and remedies such as busing under the assumption that they would address the twin problems of differentials in academic performance and differential access to educational resources among minority and poor schoolchildren. In addition to encountering resistance from various segments of the population, these programs received mixed reviews of their long-term effectiveness, and the persistence of the gap in educational achievement for much of the 1970s continued to trouble reformers and policymakers. This period witnessed a resurgence of Marxian analyses of education, which focused on the role of schools in maintaining the class structure of capitalist societies. Neo-Marxist works contend that educational systems not only expand in response to economic shifts but also chiefly serve to reproduce a large class of workers by stressing obedience to authority and contentment with one's place in the system. Critiquing this view as a "black box" perspective in which class is assumed to be reproduced through schooling, cultural sociologists such as Willis, Bourdieu, McLeod, and Oakes further elaborated on this work by examining strategies of social reproduction as they take place in everyday school interactions. These include academic sorting, interactions between students and school personnel, interactions among peers, and the general culture of the school.

The 1980s marked what some consider the end of "liberal hegemony" in American education and ushered in the neoconservative turn in educational reform. The publication of *A Nation at Risk*, which cited generally lower rates of performance among American schoolchildren and a persistent achievement gap by race and class as proof the failure of liberal reform, served as a manifesto for conservative reformers. Influenced by the findings of the Coleman Report and other studies that took a dim view of compensatory education, neoconservative reformers sought to remedy race and class achievement gaps through what they described as a focus on "standards and accountability" and an application of market forces to education. Under the administrations of Ronald Reagan and George H. W. Bush, federal support for compensatory educational reforms diminished drastically and school districts were released from court-imposed plans for achieving racial balance without, as Orfield notes, having done so. Rather than continuing to search for solutions for failing schools through expensive government programs, the parents of poor and minority schoolchildren were encouraged to exercise their rights as consumers of public education and to improve their educational prospects by leaving failing schools and choosing those schools (whether public, private, or charter) with demonstrated levels of achievement.

The neoconservative influence in educational reform continued under the Clinton administration, during which the Improving America's Schools Act (Public Law 89-10) was passed. While reauthorizing the Elementary and Secondary Schools Act of 1965, the 1994 act also endorsed the establishment of charter schools as a means of improving teaching and student performance. This pattern of reform greatly expanded under the presidency of George W. Bush in the form of the No Child Left Behind Act (Public Law 107-110). Signed into law by the Bush administration in 2002, NCLB's expressed goal was to close the persistent race and class gap in educational achievement. While supporters of the act pointed to the implementation of much needed standards and timelines for schools to measure progress and make improvements and the ability of parents to choose better schools for their children, critics maintained that the act severely limited the means by which schools can effect those improvements. Rather than increasing the amount of federal support for public education, the act applies strict legislative guidelines for the use of Title I funds that limit curricular innovation in favor of an emphasis on "basic" subjects such as reading and mathematics, a mandate that schools meet state-determined measures of annual yearly progress, and, as a means of assessing student performance, the use of high-stakes standardized testing on which poor and minority students typically score lower. Many schools argue that by imposing a rigid framework and encouraging poor and minority parents to abandon neighborhood schools for better equipped, higher-scoring schools in affluent neighborhoods, the achievement gap will persist by encouraging individual rather than group mobility.

The American educational system's foundations as an unequal system rooted in hierarchies of race and class have both inspired and limited attempts at reform that seek to remedy the long-term effects of these inequalities. Over the course of the twentieth century, social scientific considerations of educational inequality have shifted from a belief that schools are the sources of social difference with the capacity to fundamentally change society to the more critical understanding that schools have powerful effects in society but are limited in their ability to effect change through social engineering. The current body of social science literature on education focuses on the role that schools played in reinforcing and legitimizing hierarchies of race and class through a variety of means, including, but not limited to, curricular choices, school cultures, pat-

terns of organization, and policies governing school funding.

SEE ALSO Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Class; Cultural Capital; Desegregation, School; Education, USA; Equal Opportunity; Equality; Hierarchy; Inequality, Racial; Jencks, Christopher; Neoconservatism; Racism; Schooling in the USA; Segregation, School; Stratification*

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Joseph O. Jewell

EDUCATION, USA

The most universally recognized function of schools is to impart knowledge and skills that will enable the learner to participate successfully in a society's institution (Epps 1995). As early as the 1920s, social policy became directed toward using elementary education to further children's social and emotional adjustment outside of the home. Recognizing that educational training in the early years of human development was essential for enhancing cognitive skills, reinforcing social norms, and preparing youth for participation in the labor market as adults, educational policy in general, and the public school system in particular, aimed to train youth to become productive citizens.

During the early part of the twentieth century, various administrative progressives, philanthropic associations, and civil rights organizations (to a lesser degree) played an integral role in shaping educational opportunities. The chief architects of educational policy were an elite group of white men that consisted of city superintendents, education professors, state and federal officers, leaders in professional organizations (i.e., the National Education Association), and foundation officials (Tyack and Cuban 1995). These men provided the blueprint for an educational institution mandating criteria for schooling, differentiating curricula according to students' career paths, standardizing the structure of schools in order to provide uniform staffing and social and health services, and overseeing the regulation of educational practices. Moreover, the Carnegie and Rockefeller foundations, the General Education Board (which helped to develop black education in the Jim Crow South), and various civil rights organizations (i.e., the National Association for the Advancement of Colored People) provided financial support, developed curriculum, and trained educators with the hopes of creating an equitable educational system. Although the institution of education aimed to provide youth with a solid foundation for the future, the separation of blacks and whites into different and inherently unequal educational institutions created a system that reflected economic and social inequalities.

To the creators of these institutions, educational attainment was considered the panacea for social inequality. However, due to the racial order and quality of schools, blacks lagged behind whites on all indicators of performance. Research providing explanations for these differences was biologically deterministic. Critical studies that addressed educational inequalities and the problem of race/ethnicity coincided with the racial order; variations in performance were attributed to innate differences in cognitive ability.

From the 1920s to the 1950s, the educational opportunities of blacks were shaped by popular discourse characterizing blacks as intellectually inferior. The genetic interpretation of race and research on the inheritability of intelligence influenced the types of learning materials afforded to segregated schools and shaped conclusions about black youth (Anderson 1988). Moreover, Jim Crow education was designed, implemented, and upheld by the state. As a result, for over thirty years, the majority of blacks attended substandard schools, primarily in rural areas or in the South, which often lacked the most basic

aids for learning such as textbooks, slates and chalk, desks, had relatively small classes, and were taught by instructors without postsecondary training (Tyack and Cuban 1995).

Some early sociological studies argued that the various components of the educational system were disconnected and that the system could not cure the social ills of society as originally believed. Willard Waller (1932) conceptualized schools as unstable social systems in which different components—administrators, teachers, parents, students, and community groups—all with competing interests, vie for power and authority. Scholars did not address the question of how the convoluted structures of segregated schools further increased social inequality for black students or attempted to understand why a significant proportion of this population remained poor and socially immobile. The first sociologist to conceptualize a theoretical framework that attempted to solve the "race problem" was Robert Park (1950), who examined how ethnic groups acculturate into American society through contact, competition, accommodation, and eventual assimilation. Park's work, however, focused solely on white ethnic groups (i.e., Irish or German immigrants), and the assimilation of blacks and the racial problems that thwarted their progress were not addressed. At the same time, various contemporary empirical studies of educational achievement and motivation reinforced the notion that better performers had higher drives, and implied that racial variations in performance resulted from a lack of motivation on the part of black students.

Not until school segregation was challenged by the landmark case *Brown vs. Board of Education* (1954) was attention given to the detrimental effects of separate and unequal educational institutions on the academic achievement of black students. This case, which desegregated K–12 education, forced empirical studies to look toward structural inequalities as the culprit for disparities in performance, as opposed to lack of motivation or biologically deterministic explanations. Empirical studies provided evidence that racial/ethnic differences in achievement were associated with differences in socioeconomic status (Rosen 1959).

During the 1960s civil unrest, government emphasis on alleviating poverty, and black political mobilization brought new attention to the ways in which inequality undermined educational attainment for blacks. As part of national efforts to alleviate poverty, President Lyndon B. Johnson created Title I programs targeting funds to students from low-income families to prevent poverty from restricting school opportunities and academic achievement. Also, the 1965 civil rights act, executive order 11246, called for vigorous, proactive steps, later termed *affirmative action*, to broaden and increase access to higher education for previously excluded and underrepresented groups (Allen et al. 2002).

In addition to policies mandated to improve educational access and quality, research studies examining racial differences in academic performance received much funding. Among several empirical studies investigating the relationship between inequality and educational attainment, a 1966 report by James S. Coleman was the most influential. It demonstrated that family background had a significant effect on academic achievement and that schools played a role in creating and sustaining student differences in achievement. Moreover, the Moynahan Report (1965) presented a cultural argument for educational inequality that did not rest on IQ differences but on the attitudes, time perspectives, family patterns, and values of the poor. Samuel Bowles and Herbert Gintis (1976) provided further evidence that poor school quality was a predictor of limited economic success and viewed schools as an instrument used by the dominant class to maintain the status quo.

Contrary to earlier studies of educational attainment that emphasized biologically deterministic explanations for performance, educational research in the 1970s and 1980s took a more holistic and liberal approach. Scholars consistently showed that race and ethnicity, along with socioeconomic status, were significant determinants of educational and occupational success; that stratification processes worked differently for students from various backgrounds; and that schools could depress the relationship between background and occupational attainment by providing more equal access to educational resources and training (Hallinan 2000). Much educational research since the 1980s has sought to identify the problems associated with educational inequality and outcomes and has focused on implementing strategies to decrease racial gaps in academic achievement. However, some argue that the approaches employed have actually increased educational disparities rather than alleviating them.

PRESENT-DAY PROBLEMS AND PROSPECTS

Despite various policies aimed at reducing educational inequality, such as the *Brown* decision of 1954, educational opportunity programs created in 1965, and Affirmative Action of 1964, the educational system at the start of the twenty-first century—more than forty years after the civil rights movement began—still remains segregated by socioeconomic status (SES) and race/ethnicity. For students that come from more affluent families with high levels of social capital, the educational system serves to adequately prepare them for competitive jobs in the labor market. Conversely, for students with low SES and limited resources, the educational system has failed to pro-

Percent distribution of students across NAEP mathematics achievement levels, by race/ethnicity and grade: 2003

Level	White, non-Hispanic	Black, non-Hispanic	Hispanic	Asian/Pacific Islander	American Indian/ Alaska Native
4th grade					
Below basic	13	46	38	13	36
At or above basic	87	54	62	87	64
At or above proficient	43	10	16	48	17
8th grade					
Below basic	20	61	52	22	48
At or above basic	80	39	48	78	52
At or above proficient	37	7	12	43	15

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Mathematics Assessments.

Table 1

vide the needed foundation and skills to sustain an adequate lifestyle. Most importantly, minority students—namely, blacks and Hispanics—are overwhelmingly overrepresented in the lower SES category and attending schools that are substandard in terms of instruction, curricula, socialization practices, preparation for the job market, and providing equal access to higher education opportunities.

Disparities in educational achievement are evident in the early years of primary school, where blacks and Hispanics lag behind whites and Asians on several indicators of educational achievement. Table 1 illustrates the percent distribution by race and ethnicity of mathematics achievement levels for a representative sample of students taking the National Assessment of Educational Progress (NAEP) exam in 2003. As can be seen, 46 percent of black and 38 percent of Hispanics performed below the basic levels of achievement for fourth graders. Moreover, differences in achievement levels worsen as students advance to higher grades (as measured by the performance of eighth graders).

Table 2 illustrates the percent distribution by race and ethnicity of achievement levels on reading comprehension tests for a representative sample of students taking the NAEP in 2003. Results show that 60 percent of blacks and 56 percent of Hispanics are below basic fourth-grade reading levels compared to 25 percent of whites. Although performance in reading improves for blacks and Hispanics by the eighth grade, disparities in performance between racial groups remain constant. Contemporary research examining racial differences in educational achievement in primary and secondary education indicates that the gap continues to widen as students advance to higher educational levels (Steele 1997).

Percent distribution of students across NAEP reading achievement levels, by race/ethnicity and grade: 2003

Level	White, non-Hispanic	Black, non-Hispanic	Hispanic	Asian/Pacific Islander	American Indian/ Alaska Native
4th grade					
Below basic	25	60	56	30	53
At or above basic	75	40	44	70	47
At or above proficient	41	13	15	38	16
8th grade					
Below basic	17	46	44	21	43
At or above basic	83	54	56	79	57
At or above proficient	41	13	15	40	17

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Reading Assessment.

Table 2

The next section examines some of the structural obstacles that limit educational attainment for minority students (i.e., blacks and Hispanics) and may account for racial/ethnic variations in academic performance.

RESIDENTIAL SEGREGATION, INSTITUTIONAL INEQUALITY, AND EDUCATIONAL OPPORTUNITIES

Due to the history of racial stratification in the United States, blacks and whites reside in neighborhoods that are economically, socially, and racially distinct from one another (Jargowsky 1996; Massey and Denton 1996; Massey 2004). Although structural barriers that prohibited residential mobility for minorities have been removed in the post–civil rights era, the historical vestiges of exclusionary practices that were and continue to be pervasive have implications for the racial formation of more recent residential patterns. As a result, minority integration into diverse neighborhoods has been slow to non-existent. Research has shown that blacks remain the most segregated racial group (Massey and Denton 1992), even when factors such as neighborhood preferences (Farley et al 1978; Zubrinsky and Bobo 1996), racial attitudes and stereotyping, and preferred educational level of neighbors (Benabou 1992; Cutler and Glaeser 1997) are taken into account. Residential patterns for Hispanic families are very similar to those of blacks.

Residential segregation is a mechanism that has historically perpetuated systemic inequality and is mainly responsible for inequality in primary and secondary education. Two-thirds of urban blacks live under conditions of high segregation and two-thirds attend minority-dominant public schools (Massey 2006). Considerable research documents the disadvantaged conditions experienced by blacks in segregated schools, such as limited spending on students and curricula, and a lack of qualified teachers (Anderson and Byrne 2004). Since American schools are funded by local property taxes, the wealthiest districts spend as much as three times per-pupil compared to the most economically disadvantaged districts (Condron and Roscigno 2003). Although schools that are located in lower-SES communities may receive additional funds from federal Title I programs, these schools normally spend a sizeable majority of their budgets on repairs, maintenance, and structural improvement of school buildings. Compared to low-SES segregated schools that primarily educate black and Hispanic students, high-SES schools that are predominantly white spend more on instructional materials and provide higher pay for teachers. As a result, low performing students are less likely to get placed into vocational tracks, are better prepared for postsecondary education, and receive the skills necessary to acquire competitive jobs. Consequently, for minority students that attend public schools in residentially segregated neighborhoods, institutional quality has negative implications for educational outcomes. Teachers' expectations are lower, and minority students are more likely to be placed in lower tracks (vocational vs. honors/college preparatory) by their instructors, more likely to have lower reading and math scores compared to the national average, and are less likely to attend four-year colleges and universities (Oaks and Guiton 1995; Allen et al. 2001; Dinwiddie and Allen 2003). Recent sociological research has shown that improved education (as a result of money spent on curricula, the hiring of qualified teachers, and providing access to resources) is a strong predictor of academic achievement, which contradicts culturally deterministic theories that claim minorities do not value education (e.g., the popular "acting white assumption").

School districts and the federal government have recognized that public schools provide different levels of educational preparation for their students. Therefore, in an effort to provide options, various voucher systems and school-choice policies have given parents the opportunity to take advantage of schools that are known to better educate children (i.e., magnet and charter schools). Magnet-school programs allow public school students to leave their neighborhood schools to attend specialized institutions that offer unique curriculums. Thirty-four percent of the nation's school districts have magnet-school programs, making magnet-school choice one of the most widely used forms of school choice in the country (Saporito 2003). However, students must qualify based on test scores, grades, behavior, and other criteria that are evaluated by teachers from their neighborhood schools. A problem with magnet schools and the voucher system is that there are many more applicants than openings and school districts are prohibited from taking race or ethnicity into account when deciding which students to admit.

CURRENT POLICY ADDRESSING EDUCATIONAL INEQUALITY

Educational reforms have been the preferred methods of addressing educational inequalities (Tyack and Cuban 1995). One contemporary approach that has received much criticism is No Child Left Behind (NCLB), President George W. Bush's effort to renew the Elementary and Secondary Education Act of 1965. The NCLB law requires yearly standardized testing of students from kindergarten to eighth grade in reading, language, and math and holds schools accountable for meeting state and district goals. It also requires schools that have historically underperformed and receive federal Title I funds to submit progress reports yearly. In addition, NCLB provides students who attend low-performing schools the choice of transferring to a different public school in their

district or a charter school if their public school fails to meet district or federal educational mandates.

Although the main objective of NCLB is to improve educational quality through test-based accountability and to provide students flexibility in terms of educational choice, it has presented more problems than solutions. For example, NCLB does not address the issue of institutional inequality that contributes to student underperformance. Moreover, as a result of the pressure to improve student test scores, curricula have become centered around enhancing test-taking skills instead of learning acquisition. Another problem with a system of accountability based on test score performance is that questions asked on standardized tests are racially and culturally biased. This places an already vulnerable student population at risk of underperforming, because the educational experiences of black and Hispanic students vastly differ from those of white and Asian students from more affluent schools (Steele 1992; Horn 2005). Standardized tests are good measures of the skills obtained from schooling, so if lower-SES students are less likely to receive adequate levels of instruction compared to their more privileged peers, it should come as no surprise that the majority of low-SES students have trouble meeting federal, state, and district expectations.

Achievement on standardized tests is used to determine advancement to the next grade, high school graduation, and admission to college. In most states, students attending public schools are required to take high school exit exams in order to receive their diplomas. For example, the California High School Exit Examination, enacted as state law in 2006, was designed to ensure that all high school graduates have received an adequate foundation in English-language arts and mathematics, based on state standards. According to the California Department of Education (2006), by the end of eleventh grade white students had the highest pass rate on the English-language arts portion of the exam at 96 percent, and Hispanic and black students had the lowest at 83 percent. Also, by the end of eleventh grade Asian students had the highest passing rate in mathematics at 97 percent and African American students had the lowest at 76 percent. Test outcomes from this diverse state suggest that exit exams can increase the drop-out rate and limit degree attainment for minority students. Results also provide an indication of how marginalized students will perform nationally once other states implement exit exams as a main criteria for graduation.

Preparation for high school exit exams and earned grades are directly associated with performance on the Scholastic Aptitude Test (SAT) used for postsecondary admission. National mean SAT scores disaggregated by race and ethnicity show disparities in verbal and math scores. Most recent data from 2002 show that white and Asian students had the top scores at 1060 and 1070, respectively, whereas Hispanics averaged 903 and blacks were at the bottom at 857 (College Board 2002). Racial and ethnic variation in grades parallels that of test scores. Most recent national data reporting mean grade-point averages (GPA) for high school twelfth graders indicates that blacks are the lowest at 2.63 compared to 2.80 for Hispanics, 3.01 for whites, and 3.20 for Asian/Pacific Islanders (U.S. Department of Education 2000). Many contend the underrepresentation of minorities in colleges and universities is a direct result of low GPA and SAT scores, poor preparation for college-level work, and limited access to postsecondary education.

Percent of people aged 18 to 24 who completed four or more years of high school in 1993–2004, by race

	White			Black			Hispanic		
Year	Both	M	F	Both	M	F	Both	M	F
2004	82.0	81.0	85.4	77.4	72.4	81.8	65.6	60.3	71.8
2003	83.3	80.5	86.1	76.8	73.9	79.5	65.1	60.9	69.9
2002	82.0	79.4	84.7	77.5	73.5	81.0	62.6	57.7	68.6
2001	81.2	78.5	83.9	77.0	70.8	82.4	62.0	56.1	68.6
2000	82.4	80.1	84.7	77.0	73.7	79.9	59.6	54.0	65.7
1999	81.7	79.6	83.9	76.1	73.9	77.9	58.8	54.9	63.0
1998	81.6	78.8	84.5	73.4	67.5	78.4	59.8	54.3	66.0
1997	82.7	80.6	84.8	74.7	71.4	77.5	62.0	58.9	65.7
1996	82.3	80.8	83.9	75.3	71.3	78.7	57.5	54.8	60.6
1995	81.9	80.2	83.7	76.9	75.1	78.4	58.6	58.0	59.6
1994	82.6	80.7	84.6	77.0	73.7	80.0	56.6	53.8	59.8
1993	83.4	81.5	85.2	74.8	72.8	76.7	65.6	60.3	71.8

SOURCE: U.S. Census Bureau 2006.

Table 3

THE SPILL-OVER EFFECT: DISPARITIES IN HIGHER EDUCATION AND LABOR MARKET PARTICIPATION

The differing school environments that condition disparities in educational attainment for minorities have implications for the persistence of inequality that has consequential and enduring effects on higher education and labor market participation. Individuals with higher education degrees are more likely to have better paying positions, job security, and wealth compared to individuals with low levels of schooling (Mare 1995). Table 3 shows the percent distribution of white, black, and Hispanic students between the ages of eighteen and twenty-four who completed high school between 1993 and 2004. As can be seen, the distribution of high school diplomas varies: Whites had the highest graduation rate at 82 percent, Hispanics had substantially the lowest at 71

Percent of people aged 18–24 who enrolled in college in 1993–2004, by race

	White			Black			Hispanic		
Year	Both	M	F	Both	M	F	Both	M	F
2004	41.7	38.4	—	31.8	26.5	36.6	24.7	21.7	29.4
2003	41.6	38.5	44.5	32.3	28.2	36.0	23.5	18.3	24.4
2002	40.9	38.9	42.8	31.9	26.3	36.9	19.9	16.2	25.5
2001	39.3	37.1	41.4	31.2	26.4	35.4	21.1	17.3	25.4
2000	38.7	36.2	41.3	30.5	25.1	35.2	21.7	18.5	21.8
1999	39.4	38.3	40.6	30.4	28.9	31.6	18.7	15.8	24.9
1998	40.6	39.4	41.9	29.8	26.1	32.9	20.4	16.4	26.1
1997	40.6	39.3	41.9	29.8	25.4	33.7	22.4	19.2	24.0
1996	39.5	38.3	40.6	27.4	25.7	28.8	20.1	16.5	22.9
1995	37.9	37.0	38.8	27.5	26.0	28.7	20.7	18.7	21.5
1994	38.1	37.0	39.2	27.7	25.6	29.5	18.8	16.5	23.6
1993	36.8	36.6	37.1	24.5	22.8	26.1	21.6	19.8	—

SOURCE: U.S. Census Bureau 2006.

Table 4

percent, and blacks were in between at 81 percent. Although the data is not disaggregated by geographic region, gross disparities in high school degree attainment are apparent. To show the negative effects of differentials in high school completion for postsecondary education, Table 4 illustrates the percent distribution by race of high school graduates between the ages of eighteen and twenty-four who enrolled in colleges and universities between 1993 and 2004. Comparing enrollment rates for 2004, for example, the table illustrates that 41 percent of whites, 31 percent of blacks, and 24 percent of Hispanics were enrolled at postsecondary institutions. What is most astonishing about these results is that the majority of blacks (69 percent) and Hispanics (76 percent) did not persist to college directly after high school. This finding is significant considering that blacks are 12.3 and Hispanics are 12.5 percent of the U.S. population, respectively (U.S. Census 2002).

For minority students who do pursue university degrees, their educational experiences, grades and graduation rates are much lower compared to white and Asian students. In fact, once in college minority students receive grades that are on average half a letter below those of their white classmates (Steele 1992). Racism, financial constraints, lack of preparation for college-level work, few opportunity programs on campus that would help facilitate the adjustment to rigorous academic work for minority students, and slower time to degree rates are among the factors that explain college outcomes for minority students. Research has shown that minority students experience additional constraints that can negatively affect academic achievement.

For example, in a study of college students attending selective colleges and universities, Camille Charles, Gniesha Dinwiddie, and Douglas Massey (2004) found that for high-achieving black and Hispanic students from residentially segregated neighborhoods, college-related, economic and family social stress negatively produced a drop in academic performance and levels of satisfaction with college. Although minority students work hard academically to attend and succeed in college, there are additional stressors and constraints that substantially and negatively impede their educational progression.

Failure to obtain a high school diploma or college degree has direct implications on earning potential for minority youth who go directly into the labor market. Table 5 illustrates mean yearly earnings of workers eighteen years and older between the years of 1993 and 2003,

Mean earnings of workers 18 years or older, by level of educational attainment

	White			African American/Black			Hispanic		
Year	None	H.S.	B.A.	None	H.S.	B.A.	None	H.S.	B.A.
2003	19,110	28,708	52,259	16,201	23,777	42,968	18,349	23,472	43,676
2002	19,264	28,145	52,479	16,516	22,823	42,285	18,981	24,163	40,949
2001	19,120	27,700	51,631	17,248	21,743	40,165	18,334	22,866	40,586
2000	18,285	26,444	50,969	15,201	21,789	41,513	17,156	22,009	44,661
1999	16,623	25,270	46,894	13,569	20,991	37,422	16,106	20,704	36,212
1998	16,474	24,409	44,852	13,672	19,236	36,373	15,832	20,978	35,014
1997	16,596	23,618	41,439	13,185	18,980	32,062	15,069	19,558	33,465
1996	15,358	22,782	38,936	13,110	18,722	31,955	13,287	18,528	32,955
1995	14,234	22,154	37,711	12,956	17,072	29,666	13,068	18,333	30,602
1994	13,941	20,911	37,996	12,705	16,446	30,938	13,733	17,323	29,165
1993	13,171	19,918	35,846	11,065	16,122	29,953	11,852	16,591	30,359

SOURCE: U.S. Census Bureau, Current Population Survey.

Table 5

differentiated by level of educational attainment. The data illustrate that in 1993 mean earnings for blacks and Hispanics were similar for individuals without a high school diploma. It is not until 2003 that blacks without a high school diploma have the lowest mean earnings per year, compared to Hispanics and whites without a diploma. If we look at earnings for individuals with high school diplomas in 1993, blacks and Hispanics have similar earnings; blacks and Hispanics, however, made roughly $3,000 less than whites with the same level of educational attainment. On the other side, for those with college degrees, whites made $5,000 more on average compared to minorities in 1993. Moreover, in 2003 disparities in mean earnings by level of educational attainment are more pervasive. Whites with bachelor degrees, on average, made $10,000 more than minorities with bachelor degrees. Although minorities on average earn less than whites with similar working experience and degree attainment, having a college degree substantially increases earning potential for everyone, particularly blacks and Hispanics.

CONCLUSION

The adverse effects of inequality have long-term implications for educational opportunities and earning potential, particularly for racial/ethnic minorities. Returning to the original question of whether education improves life chances or reinforces social inequality, from the evidence provided it is apparent that educational disadvantages experienced by racial/ethnic groups have snowball effects. Most importantly, laws such as NCLB, school voucher policies, the increase in the use of standardized testing as indictors of determinants for persistence, and various school accountability mechanisms are very limited in scope. For example, NCLB is not intended to produce equal segregated schools, but to fix a macro problem with micro methodologies. Moreover, the impact of residential segregation on primary, secondary, and postsecondary educational outcomes speaks volumes about the strong negative influence of systemic racism, which has effects that endure long after minority students have left the educational system.

As the demographics of the United States change, educational policy will need to take a more progressive approach to alleviating racial/ethnic disparities in educational outcomes. At the present time, the Hispanic population is growing and is fast becoming more segregated compared to blacks. Moreover, due to the failure of social policy in taking an active role in desegregating the public educational system, public schools are becoming "resegregated" (Orfield 1999), where gaps in achievement are once again widening, and classrooms are still overwhelmingly racially homogenous. Overall, the institutional inequalities that condition racial/ethnic variations in educational outcomes must first receive more attention if the federal government and policymakers are to deliver what they promise.

SEE ALSO *Education, Unequal; Educational Quality; Honor Rolls; Mobility; Schooling in the USA; Tracking in Schools*

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EDUCATION FOR ALL HANDICAPPED CHILDREN ACT (1968)

SEE *Mental Retardation.*

EDUCATIONAL QUALITY

Education often yields higher earnings, opens career opportunities, improves health, widens social circles, and increases political activity. Although education can play a central role in the economic development of a society, there is no consensus about measuring quality, nor even assurance that more effort will necessarily yield positive results.

Counts of inputs like teachers and classrooms or, more broadly, spending per student, have been used to challenge school segregation and unequal school financing. Measures of outputs, however, are necessary for judging effectiveness. More years of schooling is a simple measure of output that is effective as long as the skills developed have value. When time spent in school builds pointless skills, years of schooling is a poor measure of educational quality. Indeed, there comes a point at which further schooling is not worth its cost, and that point differs among students, reflects the character of the schooling, and depends on the opportunities for people with different kinds of schooling.

A better measure of output, then, is the gain in earnings over a lifetime due to education. Because each person can have only one level of education and lifetime earnings, estimating the gains from added education involves comparing averages for otherwise similar people with different levels of education well after graduation.

The average gain in earnings from a baseline level of education to a higher level can be summarized as a financial flow. Consider an amount in a mutual fund before the education begins (earning interest at market rates) that would pay out the gain in earnings due to better education each year over a lifetime with the balance in the fund dropping to zero when the person retires. The initial

amount needed in such a fund is called the *present value* of the gain in earnings from the added education. The student's cost of the schooling is the present value of any tuition, transportation, and, for older students, earnings foregone to attend school. When the present value of the added earnings exceeds the present value of the cost of the schooling, the expenditure on education increases wealth. This is a benchmark for educational quality. The higher the present value net of cost, the higher the quality of education. Just as financial capital yields future payoffs, education creates human capital with its own future payoff.

Measuring quality as the gain in earnings often means that, compared to white males, women and underrepresented minorities have higher returns. Education can narrow the gap in earnings from wide differentials with low education to smaller gaps with more education. A larger gain often means a higher financial return for women and minorities than for white males.

Since 1980, the return to education has been high in the United States, about a 10 percent increase in earnings for each added year of schooling with the implication that the schooling is of good quality. The gains arose primarily because the earnings of workers with only a high school education or less have fallen remarkably.

Looking beyond gains in earnings, many students add the value of improved health, more effective participation in politics, and personal fulfillment as additional dimensions of benefit. In addition to developing skills, education identifies talents that allow a better match of individuals to opportunities. A better match may yield both higher earnings and more personal fulfillment. It is difficult to distinguish the degree to which measured gains in earnings from education reflect learning versus simply identifying talent.

Educational gains extend beyond the individual student. Less-educated workers are more productive when working with more-educated workers. For this reason, each of us is affected by the educational achievement of other people's children. Voters and taxpayers, even those without children, often support expenditures on education to promote the general welfare.

Education may, however, be wasteful when the goal is only to gain relative position. When a second-rank student applies more effort to top the first, the first responds with more effort to retain place. The result can be that every student down the hierarchy gets more education to gain place, but when all do so, the rank order and pattern of earnings are unchanged. An educational system that promotes hierarchy to the exclusion of other goals will be enervating for all.

Measuring quality as the financial value of education involves using information from many people observed years after the completion of their education. Such measures are of limited value in judging the details of educational services. Analysts turn to tests to measure educational performance that is specific to school and class size, teacher characteristics, peer students in the classroom, and attendance. Each affects test scores. The increase in test score this year over last year measures a student's gain in knowledge during a school year. The difference in test score is a measure of the value added during the school year, an indicator of educational quality. The analysis, however, must account statistically for other influences like native talent and family background to isolate the effect of the school. Because some attributes of schools are not subject to management's control, an analyst may seek to isolate features of the school that the school can control from those it cannot. For example, a school may have little influence on student turnover as families migrate.

Moreover, test scores are limited measures of educational quality. Standardized tests ask the same questions (or questions calibrated to have the same expected pattern of results) each time they are given. Many such tests have a limited scope, often aimed at judging the performance of average students. Some tests do a poor job of measuring gains among students who learned this year's material the previous year. They also do a poor job of measuring gains among students who are far below average. Test scores support insightful analysis of educational quality in carefully devised statistical studies, but they are not foolproof.

Standardized tests are particularly problematic when used as the basis of incentive systems for schools. Such systems rarely attempt to control for sources of differences in test scores that are beyond the control of the school. Schools may systematically game the tests. Drilling students on the specific items on the test may cause test scores to rise as learning falls. Rewarding schools on the basis of average test scores will focus a school's attention on the middle students, with less attention given to others. A focus on tests also diminishes educational outcomes that are not monitored by tests.

Standardized tests play a pivotal role in efforts to privatize the provision of elementary and secondary education. Private operators might have sharper incentives to provide more quality for a given expenditure per student through contracts, charters, or by scholarship and vouchers. The performance of independent operators receiving public funds may be judged unevenly, however, when other factors that influence test scores are not taken into account. Whether private operators yield consistently better performance when other attributes of students are accounted for remains controversial.

Clever teachers and effective principals turn their students' curiosity into discovery. Quality schools engage students, promote community, develop abstract thinking

skills, and raise aspirations. Students develop talents they did not know they had and acquire valued skills. Physical, social, and visual skills grow with mathematical, language, and problem-solving skills. Quality schools are grounded in the lives of their students and challenge them on many levels. Social science can inform judgments about quality but cannot provide formulae that substitute for insightful leadership.

SEE ALSO *Cultural Capital; Human Capital; Skill; Social Capital*

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EFFICIENCY VS. EQUITY

SEE *Distortions.*

EFFICIENT BARGAINING HYPOTHESIS

SEE *Labor Union.*

EFFICIENT MARKET HYPOTHESIS

The efficient market hypothesis (EMH) holds that financial markets make efficient use of available information so that traders cannot base profitable trading strategies on available information. Such information will already be incorporated in asset prices, because when traders take advantage of profitable arbitrage opportunities, their trading changes the prices of assets, and thus public information cannot be used to outperform the market. The weak form of EMH holds that all past prices of an asset are fully reflected in its current market prices, so that charting and technical analysis of stock price movements cannot provide an abnormal profit. The semistrong form of EMH views asset prices as incorporating all publicly available information, so that fundamental analysis of a company's business prospects, based on its reports and on published news and analysis, will not yield an excess return. According to the strong form of EMH, prices of securities fully reflect all public and private information, so that even insider trading does not achieve excess profits (see Fama 1970).

Although some earlier observers had the concept of market efficiency due to arbitrage (at least in the weak form of EMH and arguably in the semistrong form), notably Jules Regnault (d. 1866) (see Franck Jovanovic in Poitras 2006–2007, vol. 1), the mathematical implications were first set out with regard to the prices of options on French government bonds by the probability theorist Louis Bachelier (1870–1946) in his 1900 dissertation *Théorie de la spéculation* (translated in Cootner 1964). By analogy to fair bets in games of chance, Bachelier showed that the absence of unexploited arbitrage opportunities implies that changes in asset prices are unpredictable, so that in efficient markets asset prices follow a random walk (in discrete time) or Brownian motion (in continuous time), stochastic processes that Bachelier characterized five years before Albert Einstein (1879–1955) independently formalized Brownian motion for gas particles.

Although Bachelier's thesis was published sixty years before John Muth proposed the rational expectations hypothesis, Bachelier assumed that speculators had what Muth would call rational expectations: Their expectations of prices were correct except for completely unpredictable, random errors. Disillusioned with the failure of stock market forecasting services to predict the crash of 1929, Alfred Cowles III (1891–1984) compiled evidence (1933) that the forecasters did no better than random portfolios would have done, so that the fees paid by their subscribers were wasted—although Cowles (1944) later changed his mind, accepting that one unnamed forecaster (apparently William Peter Hamilton's [1867–1929] version of the Dow theory) had outperformed the market more often than could be attributed to chance. Cowles questioned why anyone who could actually predict the movement of stock prices would sell the prediction for a fee instead of making a fortune by trading on his or her own account. In 1934 Holbrook Working (1895–1985) showed that, for there to be no unexploited possibilities for profitable arbitrage, commodity prices must follow a random walk. Despite Cowles's role as founder of the Cowles Commission for Research in Economics and Working's influence on the Food Research Institute at Stanford University, the early research on efficient markets had lit-

tle influence until the late 1950s (see Cootner 1964; Fama 1970; Poitras 2006–2007, vol. 2).

In 1958 Franco Modigliani (1918–2003) and Merton Miller (1923–2000) used the no-arbitrage principle to argue that firms cannot increase their market value by altering how their financial structure is divided between debt and equity, because if a firm could do so, then individual investors could make arbitrage profits by analogous portfolio changes between shares and bonds (see Miller et al. 1988). The Modigliani-Miller proposition abstracted from any differences in tax treatment of different financial structures and from the asymmetry that corporations have limited liability but individual investors do not.

As influentially expounded by Eugene Fama (1970) and Burton Malkiel ([1973] 1999), the weak form of EMH implies that the only way to profit from charting and technical analysis of stock price movements is by selling worthless forecasts to the gullible, and the semistrong form implies that investors should just invest in broad market averages, avoiding the costs of active portfolio management and security analysis. These ideas were anathema to the forecasters and managers whose livelihood they threatened, to successful investors who were told their above-average risk-adjusted returns were due to luck rather than skill, and to the widely held hope that there is some expert or formula that, for a thousand dollars, will tell one how to make a million. Nonetheless, the weak and semistrong forms of EMH became increasingly accepted and contributed to the growth of index funds.

The strong form of EMH, implying the failure of laws against insider trading, was advanced more tentatively even by firm believers in the weak and semistrong forms. However, the current status of the efficient market hypothesis is unsettled (see the debate between Malkiel and Shiller 2003). Financial markets cannot be more than approximately efficient, because perfect information efficiency would leave no incentive for professionals to discover the information that is incorporated in prices. Andrew Lo and Craig MacKinlay (1999) find evidence of serial correlation in stock price movements, contrary to the weak form of EMH. Robert Shiller (1989, 2005) presents evidence of excess volatility of asset prices, which move not just because of random shocks and rational expectations of underlying fundamentals but also because of what John Maynard Keynes (1883–1946) called "animal spirits" and Alan Greenspan termed "irrational exuberance," as during the Internet bubble of the late 1990s. Defending the EMH against advocates of behavioral finance, Burton Malkiel argues that speculative bubbles can be identified only in retrospect and that "whatever patterns or irrationalities in the pricing of individual stocks that have been discovered in a search of historical experience are unlikely to persist and will not provide investors with a method to obtain extraordinary returns. If any $100 bills are lying around the stock exchanges of the world, they will not be there for long" (Malkiel and Shiller 2003, p. 80).

SEE ALSO *Arbitrage and Arbitrageurs; Bubbles; Equity Markets; Expectations, Implicit; Expectations, Rational; Finance; Financial Markets; Gambling; Information, Economics of; Interest Rates; Modigliani-Miller Theorem; Random Walk; Risk; Speculation; Stationary Process; Stock Exchanges; Stock Exchanges in Developing Countries*

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EFFORT-SHAPE NOTATION

SEE *Dance.*

EGALITARIANISM

Egalitarianism is a political ideology centered on the belief in human equality. As a basic concept, equality by itself refers only to a relation, such as "less than" or "greater than," rather than a quality or essence. To judge two things equal, we must also specify the relevant qualities they have in common. Therefore, egalitarianism is the belief that all humans share an essence or quality that makes them equal. Although all egalitarians believe in equality, they often differ in their understanding of the qualities all humans share.

Every form of egalitarianism is cosmopolitan and inclusive. Those who see only the members of their own group as equal are not egalitarian. Because egalitarianism is always based on a theory of *universal* human commonality and because such universal human qualities are difficult to define, their essence is often unspecified by egalitarian thinkers. Nonetheless, anyone who believes all humans are equal must also believe all humans have some kind of essence or quality in common, because without commonality there can be no equality.

All theories of universal human commonality fall into one of two categories. Either the essentially human qualities come from the laws of nature, or those qualities are transcendent or spiritual. Theories of a universal human nature belong to the first category, whereas the belief in a transcendent spark of essential human dignity belongs to the second. In European and North American thought, the egalitarianism of nature is descended from ancient Greek ideas about the invariable, underlying patterns that govern all things. These patterns are understood as scientific laws, and human nature in this view is universal and relatively invariable. Transcendent or supernatural ideas of human equality developed from the traditions of monotheism, according to which a supernatural creator gave to all humans a spark of the divine essence. According to this view, all humans share the power of self-creativity, the ability to define their own nature.

Hence these two kinds of egalitarianism are at odds with each other on the question of human malleability. In the egalitarianism of human nature, the natural qualities shared by everyone vary only within a limited range, whereas in the egalitarianism of self-creativity, all humans share the power to define their own essence. Therefore the egalitarianism of nature tends to be more conservative, and the egalitarianism of self-creativity is usually more liberal or progressive.

Although the egalitarianism of human nature is seen as too limited by those in the tradition of self-creativity, historically it led to ideas of natural rights that inspired revolutions. The U.S. Declaration of Independence begins by asserting the natural rights of life, liberty, and the pursuit of happiness, which in turn were based on John Locke's ideas of human nature. In this view, the forces of nature provide humans with fixed wants and the power of labor to fulfill them. Equality is the common freedom to pursue our given wants with our natural powers. All humans have the same nature and therefore the same rights.

In the nineteenth century the egalitarianism of human nature increasingly came to be seen as inauthentic by those who saw freedom as the ability to transcend such limits. The equality of natural powers led to inequalities of social outcomes, which economic theories of human nature seemed to excuse. In the alternative view, to achieve true equality we must first eliminate the inherited constraints of the past. According to the newer egalitarianism of self-creativity, the Lockean theory of human nature is a mere social construct used by the rich to justify their privileges. True equality instead requires the ability to make society anew. For egalitarians such as Karl Marx, labor is not just a natural force but also, more importantly, the power of human self-existence, which the rich had alienated from the poor in a way that robbed them of their essential humanity. Only when the workers of the world were reunited in the self-creative circle of production and consumption would true equality be achieved.

In the early twenty-first century the two dominant versions of egalitarianism continue to compete in the politics of Western societies. Almost everyone is an egalitarian of some sort, but equality continues to be understood in different ways. In the egalitarianism of human nature, governments should provide fairness of competition and opportunity, but success depends on natural talent and effort. In the egalitarianism of self-creativity, politics is itself a mode of social self-definition, and equal participation in self-government is both a means and an end of equality. The politics of all democracies contain some mixture of these competing beliefs.

SEE ALSO *Alienation; Creativity; Democracy; Equal Opportunity; Equality; Happiness; Humanism; Labor; Liberty; Locke, John; Meritocracy; Naturalism; Philosophy*

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EGO

SEE *Psychoanalytic Theory.*

EGO-INVOLVEMENT

SEE *Social Judgment Theory.*

EHRENREICH, BARBARA

SEE *Managerial Class; New Class, The.*

EHRENREICH, JOHN

SEE *Managerial Class; New Class, The.*

EIGENVALUE

SEE *Eigen-Values and Eigen-Vectors, Perron-Frobenius Theorem: Economic Applications.*

EIGEN-VALUES AND EIGEN-VECTORS, PERRON-FROBENIUS THEOREM: ECONOMIC APPLICATIONS

Production prices, proportionate growth, maximum rate of profit and growth, and Italian economist Piero Sraffa's standard commodity can be easily presented and analyzed by referring to the Perron-Frobenius theorem, which needs mathematical definitions concerning eigen-values and eigen-vectors.

EIGEN-VALUES, EIGEN-VECTORS OF A SQUARE MATRIX

Given a square matrix A composed of real numbers α_{ij}, consider the vector x such that $Ax = \alpha x$. Obviously the vector $x = 0$ satisfies the equality $Ax = \alpha x$ for any real number α. The aim is to determine the non-zero vectors x and the real numbers α such that $Ax = \alpha x$.

Consider a square matrix of order k. If there exists a real number α and a non-zero vector x such that $Ax = \alpha x$, α is said to be an eigen-value of A and x is an eigen-vector corresponding to α.

Determination of the Eigen-Values of *A* Any eigen-value α of A is such that there exists a non-zero vector x which satisfies $Ax = \alpha x = \alpha Ix$ where I is the identity matrix of the same order k as the square matrix A. Thus any eigen-value α of A satisfies $(A - \alpha I)x = 0$. Since $A - \alpha I$ is a non-zero matrix and since x is a non-zero vector, we must have $|A - \alpha I| = 0$, (recalling that $|A - \alpha I|$ is the determinant of the square matrix $[A - \alpha I]$), i.e., α is a solution of the equation of the k^{th} degree $|A - \alpha I| = 0$, since the square matrix $[A - \alpha I]$ is of order k.

The equation $|A - \alpha I| = 0$ is called the *characteristic equation* of matrix A and has at most k real solutions. If the characteristic equation has no real solution, matrix A has neither real eigen-values nor eigen-vectors with real components.

Determination of the Eigen Vectors of *A* If the real number $\bar{\alpha}$ is a solution of the characteristic equation $|A - \alpha I| = 0$ of the square matrix A, $\bar{\alpha}$ is an eigen-value of A. Any non-zero eigen-vector x of A associated with $\bar{\alpha}$ satisfies the matrix equation $Ax = \bar{\alpha}x = \bar{\alpha}Ix$ or $(A - \bar{\alpha}I)x = 0$. This equation represents in fact a system of k homogeneous linear equations with k unknowns, i.e., the components $x_1, x_2, \ldots, x_k$ of the eigen-vector x. Since $|A - \bar{\alpha}I| = 0$, the rank of matrix $A - \bar{\alpha}I$ is at most equal to $k - 1$. One can then distinguish the following cases:

- Rank $(A - \bar{\alpha}I) = k - 1$: one of the components, say x_1, can be arbitrarily chosen and the $k - 1$ others are uniquely determined by the value chosen for x_1. The eigen-vector x is thus *uniquely determined up to the multiplication by scalars.*
- Rank $(A - \bar{\alpha}I) \leq k - 2$: p components ($p \geq 2$), say $x_1, x_2, \ldots, x_p$, can be arbitrarily chosen and the $k - p$ others are determined by $x_1, x_2, \ldots, x_p$. One can then have p linearly *independent* eigen-vectors corresponding to the *same* eigen-value $\bar{\alpha}$.

Only one eigen-vector x (up to the multiplication by scalars) corresponds to the real eigen-value $\bar{\alpha}$ when $\bar{\alpha}$ is a simple root of the characteristic equation. But when the eigen-value $\bar{\alpha}$ is a multiple root of order p of the characteristic equation, then:

- either *one* eigen-vector x (up to the multiplication by scalars) is associated with $\bar{\alpha}$; in this case $\bar{\alpha}$ is said to be a *semi-simple* eigen-value;
- or *several linearly independent* eigen-vectors correspond to $\bar{\alpha}$.

One can also determine a vector y such that $yA = \alpha y$. Call *y the eigen-vector on the left* of A associated with the eigen-value α. The vector x such that $Ax = \alpha x$ is then *the eigen-vector on the right* of A associated with α.

One can determine the eigen-values and the eigen-vectors of the matrix:

$$A = \begin{bmatrix} \frac{1}{2} & \frac{4}{15} & \frac{1}{8} \\ \frac{5}{18} & \frac{5}{18} & \frac{5}{16} \\ \frac{2}{9} & \frac{4}{45} & \frac{5}{12} \end{bmatrix}.$$

The eigen-values α of matrix A are the solutions of a third degree equation $|A - \alpha I| = 0$ which can be written $-\alpha^3 + (43/36)\alpha^2 - \frac{1}{3}\alpha + (35/1296) = -(\alpha - \frac{5}{6})(\alpha - 7/36)(\alpha - \frac{1}{6}) = 0$. Thus A has three eigen-values $\frac{5}{6}$, 7/36 and $\frac{1}{6}$, which are the simple roots of the characteristic equation.

One can determine an eigen-vector on the right p and an eigen-vector on left q of matrix A associated with the highest eigen-value α.

An eigen-value on the right $p = \begin{bmatrix} p_1 \\ p_2 \\ p_3 \end{bmatrix}$ of A associated with the eigen-value $\alpha = \frac{5}{6}$ satisfies the matrix equation $(A - \frac{5}{6}I)p = 0$, and its components p_1, p_2, and p_3 are solutions of a system of homogeneous equations which is an undetermined system of rank 2. If one gives to p_1, the value 11, one has $p_2 = 10$ and $p_3 = 8$; i.e. $p = \begin{bmatrix} 11 \\ 10 \\ 8 \end{bmatrix}$ is an eigen-vector on the right of A associated with $\alpha = \frac{5}{6}$ and any vector $\begin{bmatrix} 11\mu \\ 10\mu \\ 8\mu \end{bmatrix}$ where μ is any scalar, is also an eigen-vector on the right associated with $\alpha = \frac{5}{6}$.

Similarly, an eigen-vector on the left $q = (q_1, q_2, q_3)$ of A associated with the eigen-value $\alpha = \frac{5}{6}$ satisfies the matrix equation $q(A - \frac{5}{6}I) = 0$ and its components q_1, q_2, and q_3 are solutions of a system of homogeneous equations which is an undetermined system of rank 2. If one assumes $q_1 = 1$, we have $q_2 = \frac{3}{5}$ and $q_3 = \frac{3}{4}$, so $q = (1, \frac{3}{5}, \frac{3}{4})$ is an eigen-vector on the left of A associated with $\alpha = \frac{5}{6}$ and any vector $q = (\mu, \frac{3}{5}\mu, \frac{3}{4}\mu)$, where μ is any scalar, is also an eigen-vector on the left associated with $\alpha = \frac{5}{6}$.

PERRON-FROBENIUS THEOREM FOR INDECOMPOSABLE SEMI-POSITIVE MATRIX

Different kinds of matrices can be distinguished by using permutation. A permutation of a square matrix A is the square matrix $\bar{A}$ obtained by the permutation of the rows of A combined with the same permutation of the columns.

Indecomposable Matrix A square matrix is said to be *decomposable* or *reducible* if there exists a permutation $\bar{A}$ of A: $\bar{A} = \begin{bmatrix} A_1^1 & 0 \\ A_2^1 & A_2^2 \end{bmatrix}$ where A_1^1 and A_2^2 are square matrices.

$\bar{A}$ is said to be a *quasi-triangular* matrix, i.e, containing only zeros at the intersection of the first rows and its last columns.

When a square matrix is not decomposable, it is said to be *indecomposable* or *irreducible*.

Matrices with Nonnegative Elements A is said to be *non-negative* when $\alpha_{ij} \geq 0$ for any i and any j.

A is said to be *semi-positive* when $\alpha_{ij} \geq 0$ for any i and any j and $A \neq 0$.

A is said to be *positive* when $\alpha_{ij} > 0$ for any i and any j.

Perron-Frobenius Theorem Any indecomposable semi-positive square matrix A possesses a positive eigen-value αA and a positive eigen-vector x corresponding to $\alpha(A)$. The positive number $\alpha(A)$ is a simple root of the characteristic equation $|A - \alpha I| = 0$ and is the only eigen-value of matrix A with a positive eigen-vector. The absolute values of the $k - 1$ other eigen-values of matrix A are not greater than $\alpha(A)$.

The positive eigen-value $\alpha(A)$ (or equivalently α^*) of the indecomposable non-negative square matrix with an associated eigen-vector $x > 0$ is called the dominant eigen-value of matrix A.

PERRON-FROBENIUS THEOREM AND ITS ECONOMIC APPLICATIONS

Profit Rate and Production Prices with "Advanced Wage" Assumption Consider a square input-output system with quite standard assumptions except one: one shall assume that "wages are consisting of the necessary subsistence of the workers and thus entering the system on the same footing as the fuel for the engines or the feed for the cattle" (such is the assumption made by Sraffa in *Production of Commodities by Means of Commodities* [1960, p. 9]). In such a simplified case, which corresponds to classical ecomomists' and the German political philosopher Karl Marx's assumption of "advanced wage," one can interpret the preceding matrix equation $Ap = \alpha p$ in the following way. When $\alpha < 1$ (which appears in all productive systems generally considered), one can write $\alpha = 1/(1 + R)$ with $R > 0$ and one gets: $p = (1 + R)Ap$. There

appears, with uniform positive profit rate R, a vector positive system p; each element of vector p, say p_i, represents the "cost of production" of each commodity, since it takes into account not only materials used in the production of the commodity considered but also wages paid to workers. However, since we consider here an indecomposable production it is better to resort to the denomination of "production prices" and not "costs."

In matrix notation:

$$Ap(1+R) = p \Leftrightarrow Ap = \frac{1}{1+R}\,p = \alpha p$$

which means that p is the eigen-vector corresponding to the eigen-value $1/(1 + R)$. In this way, one determines simultaneously the dominant eigen-value α of A (i.e., the rate of profit R) and the corresponding eigen-vector p (i.e., the $[k-1]$ relative prices) are necessarily positive from the Perron-Frobenius theorem.

Note that in the preceding example, one gets $\alpha = \frac{1}{8}$ and consequently $R = 20\%$ with $p = \begin{bmatrix} 1\,1\mu \\ 1\,0\mu \\ 8\mu \end{bmatrix}$ which means that one determines in such a case the uniform rate of profit and the whole *structure* of prices, or exchange rates. One must note that this allows determination of price structure, not exact level, since μ is any scalar. (Money quantitative theory may be used to find price level but this is quite another problem and there exist many other possibilities.)

Profit Rate, Production Prices with Wages Paid "Post Factum" Whereas classics assumed wages to be advanced by the capitalist, another assumption is that wages are paid as a share of the annual product, *post factum* according to Sraffa's terminology. In such a case, quantities of commodities necessary for workers' subsistence no longer appear in the technology matrix. The quantity of labor employed in each industry (with labor of uniform quality) must now be entered explicitly. In such a case, and getting back to the preceding example, the production price system must now be written $(1 + r)Ap + wL = p$, with w as a scalar for wages paid to workers and L a column vector representing labor needs for production of each commodity. In the particular limit case of $w = 0$, one comes back to the preceding case so $R = \frac{1-\alpha}{\alpha}$ represents the "maximum rate of profit" determined by the dominant eigen-value of matrix A.

Price-Movements and Sraffa's "Standard Commodity" Consider the preceding system $(1 + r)Ap + wL = p$. Obviously, prices cannot stay unchanged when distribution varies. But, the study of the price-movements that accompany a change in distribution is complicated by the necessity of having to express the price of one commodity in terms of another that is arbitrarily chosen as standard. For instance, when one studies the variations of price p_j when distribution changes, and one has already chosen (implicitly or explicitly) a peculiar commodity price p_i for "numeraire" or "standard," it is impossible to determine if the change in p_j/p_i arises from the variation of the commodity which is measured or from those of the measuring standard.

This problem of an "invariable standard" has already been considered by the English economist David Ricardo who imagined, in a rather abrupt way and without any justification, that "gold" could be such an invariable standard. The presentation of the modern solution, given by Sraffa, can be given using preceding developments concerning eigen-vectors and eigen-values.

Remember that a particular commodity (i) is produced by using a row vector of intermediate consumption a_i and a quantity l_i of labor. Its price is given, with preceding notations, by equation $p_i = (1 + r)a_ip + l_i$. When distribution changes, p_i will change because of modifications of the value of the different "layers" composing the means of production of the commodity considered; such heterogeneity implies that if we consider the ratio of the value of such a commodity to its means of production, this ratio cannot remain unchanged when distribution changes; this is obvious since $\frac{p_i}{a_ip} = 1 + r + \frac{wl_i}{a_ip}$.

So, such ratio cannot, in general, be invariant to changes in distribution. But does there exist a particular commodity, or a "basket" of commodities, a "composite commodity" $u = (u_1, u_2, \ldots u_k)$ satisfying this condition? If such is the case, the condition should be written $\frac{up}{uAp} = Cste$, where up is the price, or value, of the "composite commodity" and uAp price, or value, of means of production uA is used in the production process of u. And one knows from preceding developments that in the case of semi-positive indecomposable matrix A there exists a unique positive vector q which satisfies this condition since $qA = \alpha q$ with $\alpha = 1/(1 + R)$.

In the preceding example, the "composite commodity" is vector $q = (\mu, \frac{3}{8}\mu, \frac{3}{4}\mu)$ where μ is any scalar.

Such "balanced" commodity would have the same proportions in all its layers. As noted by Sraffa, "It is true that, as wages fall, such a commodity would be no less susceptible than any other to rise or fall in price relative to other individual commodities; but we should know for certain that any such fluctuation would originate exclusively in the peculiarities of production of the commodity which was being compared with it, and not in its own." Such commodity is the standard capable of isolating the

price-movements on any other product "so that they could be observed in a vacuum" (1960, p. 18).

PROPORTIONAL GROWTH: DUALITY

Consider a square indecomposable semi-positive matrix, as for instance the preceding example. In such a case, where the dominant eigen-value is α = %, one can get:

- uniform rate of profit R = 20% = $\frac{1-\alpha}{\alpha}$ and prices of production structure p determined by *right eigen-vector*: $p = (1 + R)Ap$
- uniform growth rate R = 20% = $\frac{1-\alpha}{\alpha}$ and levels of activities structure q determined by *left eigen-vector*: $q = (1 + G)qA$.

Both uniform growth rate and uniform profit rate are determined by maximum matrix eigen-value. Of course, there is no final consumption, since constituents of matrix A take into account labor subsistence needs and all profits are re-invested. Note that, in such case of "proportional growth," Marx's analysis concerning rate of profit is validated: rate of profit R is equal to the ratio of total surplus-value to the value of total advanced capital.

Such model of "proportionate growth" implies some similarity with Hungarian-born mathematician John von Neumann's model. However, the von Neumann model is much more complicated. Among the main differences:

- In the von Neumann model, there is a difference between free goods and economic goods, when in the preceding simplified model all goods considered are economic goods; free goods (such as industrial wastes, superabundant commodities) are explicitly taken into account in the von Neumann model.
- In the von Neumann model, all production processes (activities) are not necessarily used (there occurs a problem of "choice of techniques") when here all processes are used (input-output matrix is square but rectangular in von Neumann).
- In the von Neumann approach there occurs a possibility of joint production: the "cattle breeding" process produces simultaneously meat and wool. Traditional input-output systems are single production processes: one process produces meat, another wool.
- In the von Neumann approach, the uniform growth rate and profit rate are no longer determined by referring to the Perron-Frobenius theorem.

SEE ALSO *Inverse Matrix; Linear Systems; Marx, Karl; Matrix Algebra; Sraffa, Piero; Vectors*

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Gilbert Abraham-Frois

EIGENVECTOR

SEE *Eigen-Values and Eigen-Vectors, Perron-Frobenius Theorem: Economic Applications.*

EISENHOWER, DWIGHT D.

1890–1969

Dwight David "Ike" Eisenhower, a five-star general and the thirty-fourth president of the United States, was born in Texas and raised in Abilene, Kansas. He entered the United States Military Academy as a member of the class of 1915, later known as "The Class the Stars Fell On" for the record number of general officers it produced. As a West Point cadet, he was best known for his football skills and disregard for military discipline.

His first assignment was at Fort Sam Houston, Texas, where he met and married Mamie Doud. When the United States entered World War I (1914–1918), Eisenhower expected orders to Europe; instead, he commanded a training base near Gettysburg, Pennsylvania. Certain his lack of combat duty meant the end of his career, his fears were compounded by the rejection of his proposals for the role of tanks in future warfare. Those concerns diminished under the mentorship of Brigadier General Fox Conner, who arranged to have Eisenhower assigned to his staff in Panama. He encouraged and inspired Eisenhower, and ensured his selection to attend the Army's staff college, where Eisenhower graduated first in his class. In the 1930s Eisenhower held key political-military posts under Army Chief of Staff Douglas MacArthur. He chafed at MacArthur's control, and frequently requested reassignment. In 1939 MacArthur finally released Eisenhower for duty with troops.

Two weeks after the Japanese attack on Pearl Harbor, Army Chief of Staff General George Marshall summoned Eisenhower to serve as an Army war planner. Six months later, Eisenhower was selected to command all Allied forces in Europe. At the war's end, Eisenhower was a five-star general, chief of staff of the Army, and an international hero touted as a possible Democratic candidate for president. In 1949 Eisenhower was named president of Columbia University. Despite his lack of academic credentials, he initiated important curriculum changes and established new academic programs. Eisenhower was recalled to active duty in 1950 to serve as Supreme Allied Commander–Europe.

Eisenhower was again urged to run for president in 1952, this time as a Republican challenging isolationist Senator Robert Taft for the GOP nomination. Taft was a strong candidate, but a compromise between those urging fiscal restraint and those promoting internationalist foreign policy resulted in Eisenhower's nomination. The Korean War stalemate, and Eisenhower's campaign promise to "go to Korea," contributed significantly to his victory over Democrat Adlai Stevenson.

The cold war was President Eisenhower's dominant foreign policy challenge. His efforts built a cohesive Allied defense capability in Europe, and his 1954 refusal to commit U.S. troops to support the French in Indochina is still considered one of his wisest decisions. His handling of the Hungarian uprising in 1956 and his use of the Central Intelligence Agency in covert operations were among his less successful policies. Eisenhower's domestic successes included the interstate highway system. Following the Soviet launch of Sputnik, Eisenhower refocused the space program and increased support for math and science education. He used federal troops in Little Rock, Arkansas, to enforce court-ordered school desegregation. Eisenhower would not, however, support a broader, proactive civil rights agenda.

Eisenhower was reelected in 1956 despite concerns about a heart attack suffered a year earlier. His second term was marked by foreign policy disappointments in Cuba, heightened Soviet–U.S. tensions, and charges of corruption against his chief of staff. In his final address as president, he warned against the influence "sought or unsought" by the "military-industrial complex"—an imperative of the cold war with "grave implications." Eisenhower died in 1969 and is buried in Abilene, Kansas, near the small home where he was raised.

SEE ALSO *Cold War; Cuban Revolution; Desegregation; Foreign Policy; Military-Industrial Complex; Nixon, Richard M.; Presidency, The; World War II*

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Jay M. Parker

ELASTICITY

In economics, *elasticity* measures a response of one variable to changes in the other variable. The concept of elasticity can be applied to any two variables, but the most commonly used are price elasticity of demand and elasticity of substitution between factors of production, consumer goods, or bundles of consumption in different periods of time (elasticity of intertemporal substitution).

Elasticity measures the percentage change in variable Y in response to a 1 percent change in variable X. Formally, the elasticity of Y with respect to X is defined as

$$E_{Y,X} = \frac{\text{percentage change in } Y}{\text{percentage change in } X}$$
$$= \frac{\text{change in } Y}{Y} \bullet \frac{X}{\text{change in } X}$$

or, for continuous changes,

$$E_{Y,X} = \frac{dY}{dX} \bullet \frac{X}{Y} = \frac{d \ln Y}{d \ln X}$$

The concept of the price elasticity of demand, which was introduced in 1890 by Alfred Marshall, measures the percentage change in the quantity of a good demanded when the price of this good changes by 1 percent. The demand is elastic if price changes lead to large changes in quantity demanded. The demand is inelastic if the quantity demanded does not respond much to changes in price. If demand is perfectly elastic, even a small increase in price will send the quantity demanded to zero. If demand is perfectly inelastic, the quantity demanded will be constant regardless of the price.

Price elasticity of demand for goods depends on the characteristics of the goods—that is, whether or not they are necessities and whether or not there are close substitutes for these goods. Price elasticity of demand also varies with the time horizon in consideration. For example, demand for gasoline is very inelastic in the short run, because people have to fill up their gas tanks, but in the long run, if prices remain high, people will switch to more gasoline-efficient cars and will demand less gasoline. By the estimates of the Mackinac Center for Public Policy, a 10 percent increase in the price of gasoline will lower the demand for it by 2 percent in the short run (elasticity of –0.2), and by 7 percent in the long run (elasticity of –0.7).

Price elasticity of demand also depends on how narrowly a good is defined. For example, demand for milk in general is quite inelastic, because there are no close substitutes. However, demand for milk of a specific brand is very elastic because there are many close substitutes (i.e., other brands of milk).

The concept of the elasticity of substitution was introduced independently by John Hicks and Joan Robinson in 1932 and 1933, respectively. It is used to measure how easily factors of production can be substituted for one another. For example, how much will the ratio of capital input to labor input in production increase if the ratio of capital cost to labor cost falls by 1 percent? Samuel de Abreu Pessoa, Silvia Matos Pessoa, and Rafael Rob (2005) estimate this elasticity to be 0.7, on average.

The concept of the elasticity of substitution can also be applied to consumption of goods, to measure how relative consumption of two goods is affected by their relative price. Most frequently, the concept of the elasticity of substitution in consumption is used to construct the baskets of consumer goods in economic models and to measure the substitutability of consumption across different time periods—"elasticity of intertemporal substitution." This measures how the ratio of future to current consumption reacts to the change in relative price of consumption tomorrow and consumption today, commonly measured by the interest rate. Elasticity of intertemporal substitution is estimated to be close to zero, indicating that consumers are not sensitive in their intertemporal consumption decisions to the changes in the interest rate.

SEE ALSO *Demand; Hicks, John R.; Marshall, Alfred; Production Function; Robinson, Joan; Substitutability; Time*

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Galina Hale

ELASTICITY OF SUBSTITUTION

SEE *Elasticity; Separability; Production Function; Utility Function.*

ELECTIONS

The Austrian economist Joseph Schumpeter (1883–1950) is well known for portraying competitive elections as the crux of democracy. Since Schumpeter, competitive elections have been depicted as catalysts that spur other aspects of democracy—public participation, governmental transparency, and public debates about policy. Adam Przeworski, in particular, argues that "once political rights

are sufficiently extensive to admit conflicting interests, everything else follows, even if effective participation is far from universal" (1991, p. 10). Yet, political scientists and policymakers must be mindful not to equate elections—even free and fair ones—with democracy. Terry Lynn Karl (1986) emphasizes that focusing solely on elections could lead one to overlook where real political power lies. If an external actor—for example, the military or a foreign power—promotes competitive elections only when the results advance that actor's self-interest and rescinds them when they do not, then one could hardly call the polity in question a democracy. Likewise, elections alone are not likely to constrain the temptations of corruption and graft. Rather, elections must operate alongside other democratic institutions—independent media, developed parties, the rule of law, and an active civil society—if they are to yield the codes of conduct associated with representative democracy. Despite these caveats, however, even critics of minimalist definitions of democracy view free and fair elections as necessary, though not sufficient, for democracy.

Although scholars generally agree that elections are necessary democratic institutions, little consensus exists as to what the rules governing elections should look like. For example, majority rule may seem like a logical option because the winner under such a voting system is the candidate or party that enjoys the support of over half of the voters participating in the election. However, Kenneth Arrow (1951) demonstrates that, when three or more candidates or parties compete in an election, it is possible for none of the candidates to enjoy the support of a majority. Just as social choice theorists, like Arrow and Amartya Sen (1970), have considered the normative implications of specific voting rules, other scholars have considered the advantages and disadvantages of different electoral systems.

One of the most important decisions for a new democracy is the selection of the parliamentary electoral system: the rules governing how popular votes are translated into parliamentary seats. Perhaps the most important feature of a parliamentary electoral system is its district magnitude—the number of legislators representing each electoral district. District magnitude is a fundamental feature for differentiating among parliamentary electoral systems. Single-member district systems, like the system used to elect members of the U.S. House of Representatives, are systems where each legislator represents a different district. Since only one seat is allocated from each district, the system's average district magnitude equals one. At the extreme opposing a single-member district system is a proportional representation system where all representatives are elected in a single, nationwide district on the basis of party lists. In these cases, the average district magnitude equals the number of seats in parliament. A system's average district magnitude is important because it directly influences the degree to which the number of seats that a political party receives is proportional to its share of the popular vote. The higher the district magnitude and the larger the assembly size, the better the fit between the percentage of votes cast for a party and the percentage of seats allocated to it.

Not all proportional representation systems have district magnitudes equal to the number of seats in their parliament, however. Some electoral systems divide the country into several multimember districts—districts that elect two or more legislators—even varying the number of representatives per district. Theoretically, then, the number of possible electoral systems is infinite. Indeed, electoral systems vary in many ways besides their district magnitudes. For example, they differ with regard to the mathematical formula used to allocate district seats. Single-member district systems can distribute each seat on the basis of plurality rule (i.e., the candidate with the most votes wins), majority rule, or preference voting (i.e., allowing voters to rank candidates and then distributing the vote according to those rankings). Likewise, different mathematical formulas are used for allocating parliamentary seats in multimember districts. In addition, some electoral systems require political parties to win a minimum level of support (e.g., a percentage of the vote or a number of district elections) to gain representation in parliament.

Although electoral systems take many forms, the consequences of electoral systems are commonly discussed in terms of their levels of proportionality (Duverger 1954; Rae 1967; Taagepera and Shugart 1989; and Cox 1997). Systems that are more proportional allow smaller parties representing specific societal interests a better chance of representation. However, since more-proportional systems grant more parties seats in parliament, they decrease the likelihood that one party will enjoy a parliamentary majority. Thus, a common criticism leveled against proportional representation systems is that they are more likely to produce coalition governments. Accordingly, proportional representation systems can produce unstable governments, governments in which coalition partners blame one another for policy shortcomings to shirk public accountability, and even governments where the policy influence of small parties outstrips their popular support simply because they emerge as critical to coalition formation. Under proportional representation systems, then, the process of government formation—as opposed to the actual election—can be decisive in determining whether voter preferences are fulfilled or denied.

Less-proportional systems, meanwhile, limit party fragmentation. They undermine the incentives that elites have to form new parties, as well as the incentives that vot-

ers have to support new parties. Under single-member district plurality, in particular, one party is more likely to win a majority of seats in parliament. As a result, these systems can prove more responsive to changes in public attitudes: Where candidates need just a plurality of the vote to win elections, a small shift in the distribution of votes can create a significant shift in the distribution of parliamentary seats. Yet majoritarian systems can also frustrate public accountability. In New Zealand, for example, popular dissatisfaction with the two major parties that dominated politics spurred notable third-party voting in the 1970s and 1980s. However, New Zealand's single-member district plurality system also kept third parties out of parliament while overrepresenting the two major parties. As a result, growing distrust of the system fueled a reform movement that ultimately led to a change in the electoral system itself (Denemark 2001).

Electoral systems, then, influence the degree to which elections fulfill different visions of democracy (Powell 2000). Less-proportional systems limit party proliferation while underrepresenting smaller groups in society. While these systems may make it easier for voters to hold policymakers accountable, the range of policymakers is more constrained than under more-proportional systems. More-proportional systems, meanwhile, permit the representation of a broader cross section of the public. However, these systems can make it more difficult for voters to hold policymakers accountable, since policies result from a complex bargaining process among a larger number of political parties in parliament.

Implicit in much of this literature, then, are the consequences that electoral systems have on attitudes toward government and on voter behavior during elections. Of course, extensive research exists on how and why people vote, and much of this literature goes beyond institutional impediments or incentives. For example, Anthony Downs (1957) argues that voters assess the expected costs and benefits associated with different options and choose the one whose policies are likely to net them the greatest gain. While this contention seems straightforward, its underlying logic also makes the act of voting seem paradoxical. If voters make decisions by simply weighing costs and benefits, why do they vote at all? The probability of one vote determining an election's outcome is so small that any expected benefit associated with voting will not outweigh the costs of collecting information, or even going to the polls. Numerous scholars have sought to resolve this paradox within the framework of rational choice (Riker and Ordeshook 1968, Aldrich 1993), while others have chosen to understand voter turnout using social-psychological explanations (Teixeira 1987, Franklin 1996). Of course, when one compares voter turnout across countries, institutional explanations (i.e., the rules of the game) once again prove significant (Jackman 1987, Blais and Carty 1990).

SEE ALSO *Authority; Campaigning; Democracy; Democracy, Indices of; First-past-the-post; Gerrymandering; Ideology; Political Parties; Voting Patterns; Winner-Take-All Society*

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ELECTORAL COLLEGE

Electoral college is the popular name for the system used to elect the president and vice president of the United States. Voters in the United States choose among candidates for these offices in November every four years, but the votes they cast are actually for another office, that of elector. In most states the names of the candidates for elector are not even on the ballot. Those chosen as electors collectively constitute the electoral college, a body that never meets as a group. State delegations of electors meet in early December in their respective state capitols to cast their "electoral votes" for president and vice president. These votes are then counted in early January at a session of Congress. If a majority of the electoral votes for president (at least 270 of a total of 538) is cast for the same person, that person wins the presidency. Likewise, if a majority of the electoral votes for vice president is cast for the same person, that person wins that office.

If no person receives a majority of the electoral votes for president, the selection of the president is placed with the U.S. House of Representatives. If no person receives a majority of votes for vice president, selection for that office is placed with the U.S. Senate. When this "contingent election" procedure is used to select a president, every state delegation in the House has one vote, which may only be cast for one of the top three recipients of electoral votes for that office. The winner must receive the vote from a majority of the states. When the contingent procedure is used to select the vice president, each senator has one vote, and only the top two recipients of electoral votes for that office may be considered. The winner must receive a vote from a majority of the senators.

This framework for electing a president and a vice president is specified in Article II, section 1, of the U.S. Constitution, ratified in 1789. This provision awards each state a number of electors equal to the number of members the state has in Congress, with one elector assigned for each of the state's representatives and senators. Representatives are allotted to the states based on population, with the caveat that every state must receive at least one. Larger states therefore have more electors than smaller states. Every state, however, is allotted the same number of senators, two, regardless of population. This allocation, along with the minimum of one representative for every state, results in smaller states receiving proportionately more electoral votes, per population, than larger states.

Two amendments to the Constitution have directly altered the electoral college system. The Twelfth Amendment, adopted in 1804, separated electoral voting for the president and the vice president. Prior to this amendment each elector had two votes to cast and the person receiving the highest number of votes, provided that number constituted a vote from a majority of the electors, won the presidency. The vice presidency went to the person receiving the second highest number of votes. In the election of 1800 this resulted in the presidential and vice presidential candidates of one party receiving the same number of votes from a majority of the electors, pushing the selection of the president into the House. The Twelfth Amendment was added to preclude this type of result. The other amendment altering the electoral college was the Twenty-Third, adopted in 1961, which allowed voters in the District of Columbia, which is not a state, to choose as many electors as the least populous state, currently three. These electoral votes are cast in Washington, D.C.

Article II, Section 1, leaves the method of choosing electors to the states themselves, through their respective legislatures. Since 1836 all states but one have let the voters make this choice; the exception, South Carolina, switched to popular elections in 1860. Another important change made by states has been the adoption, by all but two states, of the "unit rule" for allocating electors to the candidates. Candidates for elector are vetted by the political parties and pledged to vote for that party's candidates. This unit rule is a winner-take-all provision under which all of a state's electors are awarded to the slate of presidential and vice presidential candidates that received the most votes in that state in November. Congress has specified that the unit rule applies to electors for the District of Columbia as well. Maine and Nebraska award two electoral votes to the slate of candidates winning a statewide plurality of votes, and another electoral vote to the slates winning a plurality within each of their U.S. House districts.

Commentators have described the electoral college as everything from "a brilliant constitutional device" (Ross 2004, p. 9) to "an anti-democratic relic of the eighteenth century" (Edwards 2004, p. 158). Those who defend the electoral college typically assert that it is a fundamental part of the American federal system of government that needs to be maintained, and that it provides more diverse interests, especially those of smaller states, with a voice in the election of the president. Those who find the system

antidemocratic argue that the people, not the electors, should determine who is elected. The votes cast in November for president and vice president, which only determine how electoral votes are distributed among sets of candidates, do show which slate of candidates was preferred by the people. With rare exception, the people's choice and the electors' choice are the same. But when the popular vote is close, the unit rule and the fact that electors are not allocated based strictly on population make it possible for the winners of the two votes to be different.

This happened in the 2000 election, when George W. Bush finished second in the popular vote with 47.8 percent, but first in the electoral vote with 50.5 percent. He was labeled by many as the "wrong winner." Presidents and vice presidents chosen under the contingent election procedure likewise need not be the public's choice.

The American public has demonstrated numerous times, in surveys and polls, that they prefer their president and vice president to be their choices, not those of intermediaries. A variety of reforms have been proposed that would accomplish this (see Edwards 2004, pp. 153–157; Bennett 2006, pp. 49–58, 161–178; and Koza et al. 2006).

SEE ALSO *Congress, U.S.; Constitution, U.S.; Democracy, Representative and Participatory; Democratic Party, U.S.; Elections; Presidency, The; Republican Party; Voting*

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Richard L. Engstrom

ELECTORAL SYSTEMS

An electoral system is a set of institutional formulas producing a collective choice through voting. The main elements of an electoral system are: assembly size or total number of seats; district magnitude or number of seats to be elected in a district; the electoral rule to allocate seats from votes; and the ballot permitting the voter different choices. Different rules and procedures have combined these elements in many ways to produce a variety of electoral systems in the real world.

In late medieval and early modern assembly elections in local communities with homogeneous electorates, relatively simple electoral systems prevailed. A typical system until the nineteenth century was composed of: (1) multimember districts; (2) plurality or majority rule; and (3) an open ballot. Essentially, voters could vote for their preferred individual candidates, and those with the higher numbers of votes were elected. This type of electoral system can produce a consensual individual representation of the community, especially in contexts of high economic and ethnic homogeneity in which it is relatively easy to identify common interests and select collective goods. Such systems have survived at the local level in some countries, and they are still typically used in meetings and assemblies of modern housing condominiums, neighborhood associations, school and university boards, professional organizations, corporation boards, and students' and workers' unions.

However, in contexts of relatively complex and heterogeneous electorates, simple electoral rules create incentives for the coordination of candidacies and voting. Forming a list of candidates, a faction, or, in more modern terms, a *party*, may move voters to vote *en bloc* rather than for individuals weighed separately. In multimember districts using plurality rule, voting en bloc (or the *general ticket*) may produce a party *sweep* or overrepresentation by a single party. Once partisan candidacies and partisan voting emerged in a number of countries by the mid-nineteenth century, some political leaders, activists, and politically motivated scholars began to search for new electoral rules and procedures that could reduce single-party sweeps and exclusionary victories. The two main options were either retaining plurality or majority rule but in smaller *single-member districts*, or retaining multimember districts but using new *proportional representation* rules.

RULES AND PROCEDURES

In a small single-member district, a candidate that would have been defeated by a party sweep in a larger multimember district may be elected. Thus, this type of system tends to produce more varied representation than the old system with voting en bloc. Several *majoritarian* rules can be applied. With simple plurality, the winner is the candidate supported by only a *relative majority*, that is, by a higher number of voters than any other candidate but not requiring any particular number, proportion, or threshold of votes. In practice, this makes it possible for generally binding decisions presumably decided by "majority" to actually be won by only a minority of voters. Plurality rule has traditionally been used in England and the United

Kingdom and in modern times in former British colonies, including the United States, Canada, and India. Plurality-based electoral systems are also called *first-past-the-post* and *winner-takes-all* systems.

With other rules based on the majority principle, if no alternative receives an absolute majority (more than half) of the votes, further rounds of voting are implemented, these rounds either requiring a simple plurality or reducing the choice to the two candidates with the highest numbers of votes in the first round. Such *majority-runoff* systems have traditionally been used in France, among other countries. A variant requires voters to rank all candidates, and includes several counts of votes (instead of several rounds of voting), until a candidate obtains the most preferences, as in the *majority-preferential* electoral system used in Australia (also called *alternative vote* or *instant runoff*).

Proportional representation in multimember districts allocates seats to multiple parties competing in an election on the basis of the votes received. The basic mathematical formulas that make this principle operable were invented in late eighteenth century for apportioning seats in the U.S. House of Representatives among differently populated states. These formulas were reinvented in Europe in late nineteenth century for the allocation of parliamentary seats to political parties with different numbers of votes. A proportional representation formula defines a quota of inhabitants or votes worth a seat. The "simple" quota (as devised by both Alexander Hamilton [1755/57–1804] and Thomas Hare [1806–1891]) is the divisor between the total number of inhabitants or votes and the total number of seats. But it usually requires an additional criterion to allocate some of the seats, most commonly to the *largest remainders* after the quota is used. In contrast, the smaller *highest average* or *distributive number* (as devised by both Thomas Jefferson [1743–1826] and Victor d'Hondt [1841–1901]) is sufficient to allocate all seats. This quota can be calculated after the election by several procedures, including trial and error, a series of divisors, or by lowering the simple quota until it fits.

Different forms of ballots may either force a categorical vote or permit some choice of individual candidates. *Categorical ballots* are used in single-member districts where voters can vote for only one candidate, as well as in multimember districts where voters can vote for only a closed list of candidates or en bloc. In contrast, *open lists* permit voters to select one or several candidates from a party list. With the *double vote*, voters choose both a closed party list and one individual candidate. The *open ballot* permits voters to vote for individual candidates from different parties. The *majority-preferential vote* and the *single-transferable vote* require voters to rank individual candidates.

ELECTORAL SYSTEM CONSEQUENCES

Elections in single-member districts by plurality or majority rule always produce a single absolute winner, who may have the support of only a minority of voters as a first preference. A winner by plurality or by second-round majority might be defeated by a losing candidate by absolute majority if a choice between the two were available. Majoritarian rules may thus induce nonsincere or "strategic" voting that favors the voter's second-best or less-rejected candidate, so as to prevent the victory of a least-preferred one. In contrast, proportional representation electoral systems are more inclusive of several groups. Since most votes count to elect seats, they promote a more sincere revelation of preferences by voters.

In parliamentary elections with multiple single-member districts, plurality rule typically gives overrepresentation to one or two parties at the expense of others and fabricates a single party's absolute majority of seats, thus permitting the formation of a single-party cabinet. In contrast, multiparty parliaments based on proportional representation tend to produce multiparty coalition governments based on a majority of seats and popular votes. In practice, there is a paradox: "majoritarian" electoral systems often create governments with minority electoral support, while proportional representation rules, which were initially devised to include minorities, tend to produce governments with majority electoral support. In plurality-rule electoral systems, a small change in the total number of popular votes can provoke a complete alternation of the party in government. Proportional representation systems, where parties may have opportunities to share power with different partners, produce more policy stability in the long term.

THE CHOICE OF ELECTORAL SYSTEMS

In general, the *Micro-mega rule* applies: the large prefer the small and the small prefer the large. Specifically, dominant and large parties prefer small assemblies and single-member districts that are able to exclude others from competition. In contrast, multiple small parties prefer large assemblies and large districts with proportional representation that can include them. Existing parties tend, thus, to choose electoral systems that are able to crystallize or consolidate the previously existing party configurations and systems.

However, the size of the assembly is a structural variable positively correlated to the country's population and difficult to change dramatically. In large countries, such as Australia, Canada, France, India, the United Kingdom, and the United States, a large assembly can be sufficiently inclusive, even if it is elected in small, single-member dis-

tricts, due to the territorial variety of the representatives. In small countries, by contrast, the size of the assembly is small and, as a consequence, the development of multiple parties favors more strongly the adoption of inclusive, large multimember districts with proportional representation rules. Proportional representation was first adopted for parliamentary elections in relatively small countries such as Belgium, Denmark, Finland, Netherlands, Norway, Switzerland, and other western European democracies in early twentieth century. In the long term, both the number of countries and the number of democracies in the world increase, while large countries decentralize, leading to an overall decrease in the size of democratic assemblies. This induces the adoption of more inclusive, proportional representation electoral rules.

In addition, the number of parties tends to increase under any electoral system as a consequence of the broadening of suffrage rights, as well as initiatives to politicize new issues and change the public agenda by groups seeking power or new policy decisions. Indeed, plurality rule provides incentives to form only a few viable large candidacies or parties. But coordination fails with relative frequency, due to the costs of information transmission, bargaining, and the implementation of agreements among previously separate organizations. Lack of coordination may produce defeats and no representation for candidates, groups, and parties that have significant support among voters. Parties unable to coordinate themselves into a small number of candidacies to compete successfully under plurality rule tend to choose electoral systems that can reduce the risks of competing, giving all participants greater opportunities to obtain or share power.

There is, thus, a general trend toward proportional representation over time. Nowadays, most democratic countries in the world use electoral systems with proportional representation rules. Likewise, for presidential elections, plurality rule tends to be replaced with second-round majority rules permitting multiparty competition in the first round. Many countries have also introduced a greater element of individual candidate voting. In fact, none of the new democracies established in countries with more than one million inhabitants in the "third wave" of democratization (since 1974) has adopted the old British model of a parliamentary regime with elections in single-member districts by plurality rule.

SEE ALSO *Cleavages; Democracy; Franchise*

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ELECTRA COMPLEX

SEE *Oedipus Complex; Stages of Development.*

ELITE THEORY

"Classic" elite theories were formulated at the end of the nineteenth century and in the first decades of the twentieth century by Vilfredo Pareto (1848–1923), Gaetano Mosca (1858–1941), and Robert Michels (1876–1936). Subsequent renditions of these theories also carried a strong imprint of Max Weber's ideas, especially concerning the centrality of political power and charismatic leadership.

The classic theorists focused on the inevitability of a group of powerful "elites" in all large-scale societies, offering a radical critique of two competing theoretical-ideological streams of thought: the democratic theory ("government of the people, by the people, for the people" in Lincoln's Gettysburg Address), and the Marxist vision of class conflict leading to revolution and egalitarian socialism. In contrast with both of these ideologies, the elite theories suggested an inescapable division between dominant minorities (variously called "elites," "ruling classes," "political classes," "oligarchies," "aristocracies," etc.) and the dominated majority, or the "masses" (Bottomore, 1993).

Mosca saw this inevitable polarization of power as reflecting a "material, intellectual, or even moral superiority" (1939, p. 50) of ruling minorities, with their small size and organizational skills helping to maintain this position; Pareto anchored elite domination in the talent and psychological dispositions of such groups, combined with the skilled use of force and persuasion; and Michels saw the domination of "oligarchies" as the necessary outcome of large-scale organization. All three agreed that political power, and not property, forms the foundation of social-political hierarchies, and that these hierarchies can neither be reduced to nor deduced from economic class relations. Most importantly, elite theorists insisted that there could be no escape from elite power: revolutions merely mark elite circulation and, as illustrated by the Russian Revolution, do not narrow the power gap between the elites and the masses. Egalitarian political order and participatory democracy are, therefore, ideological dreams. History, observed Pareto, is a graveyard of successive elites or "aristocracies" ([1915] 1963, p. 1430).

Elite theories can also be seen as an intellectual response to the "modern trends" that strengthened the state and have led to the rapid expansion of government bureaucracies, the emergence of bureaucratized mass parties, the concentration of corporate power, the growth of powerful and centralized mass media, and the rise of fascist and communist movements and regimes—all of which have weakened liberal capitalism and dented the hopes for participatory democratization. Mosca, Pareto, Michels, and Weber all saw these trends as a consequence of bureaucratic industrialism. In their view, the increasing complexity of modern society implied progressive bureaucratic organization of all activities and power concentration in the hands of elites, who can effectively manage democratic institutions, accumulate the privileges that power brings, orchestrate mass support, and protect their positions by controlling access to the top. This view of power stratification, combined with the insistence on the universality of elites and treatment of elite characteristics as key explanatory variables, constitutes the most distinctive tenet of classic elite theory.

The second theoretical tenet concerns the capacity of power holders to organize themselves and form cohesive groups. Strong cohesion does not preclude the possibility of temporary intra-elite conflicts and divisions on specific policy questions. However, when it comes to defending common power interests, members of the elite act in unison, and this makes their power irresistible.

The third tenet concerns the linkages between elites and various "social forces," such as social movements, classes, and ethno-racial groups. The classic elite theorists insist that such linkages are an essential condition of elite power, but they are less than clear on precise meaning of such linkages.

The fourth tenet is about access and succession. Entry to the elite ranks depends on acquiring certain rare attributes (e.g., wealth, prestige, education), and it is carefully controlled—directly and indirectly—by elite incumbents. Elites control recruitment of their successors through institutional "gatekeepers" (e.g., corporate hierarchies, political party machines) as well as through elite "selectorates" operating at each level of hierarchical promotion. One outcome of these selective practices is a biased social composition; another is a persistence of elite outlooks, even at times of rapid social mobility and elite circulation, that is, replacement of elite members.

The final tenet highlights the way in which elites typically exercise their power. All elite theorists converge on a view of "engineered" elite domination through persuasion and manipulation, occasionally backed by force. Democratic elections have a symbolic character and are an important tool for the orderly circulation of elite personnel, but they seldom alter elite structure.

The post–World War II (1939–1945) students of elites played down the cohesion of elites and questioned the classic theorists' skepticism as to the prospects for democratization. In the seminal formulation of Joseph Schumpeter (1954), elites are an essential ingredient of modern democracy, which implies a regular electoral competition for political leadership. This idea was followed up by Robert Dahl (1971), Giovanni Sartori (1981) and many other "plural," "demo-," and "neo-" elite theorists. It was backed by empirical studies of modern elites (summarized by Robert Putnam in 1976), especially in advanced democracies, that revealed complex networks of competing and collaborating elite groups, rather than cohesive minorities. The key question was whether elites (mainly in the United States) formed a cohesive and unassailable "power elite" or more open, competitive, and responsive "plural" or "strategic" elite groups. The results of these studies, however, were inconclusive, largely because any picture of power distribution depends on the way power is defined and measured. Those who identified power holders by their reputation and incumbency in top organizational positions produced a picture of cohesive "establishments" and "power elites." In contrast, those who defined elites as key decision makers produced a picture of "plural" elites, that is, competing elite groups.

Contemporary elite theorists, especially those studying postcommunist transformations, transcend these debates, incorporate elites into broader power and stratification schemes, acknowledge the complexity of power sources and structures, and analyze elites as important "crafters" and "sustainers" of democratic regimes. Perhaps the best-known theoretical syntheses of the class and elite

visions of the power structure were undertaken by Wlodzimierz Wesolowski and Eva Etzioni-Halevi, who both saw elites and classes as being linked. In this view, elites enter into alliances (via "coupling") with major classes and other "social forces." As mentioned above, elites are defined in political terms as the most powerful minorities, while classes are defined in economic terms as owners or workers. The relations between elite and regime types of power (including postcommunist regimes and established liberal democracies) have been explored by John Higley and his collaborators (e.g., Field and Higley 1980; Higley and Pakulski 1995; Higley and Burton 2006), who have focused on two elite characteristics—structural integration and value/normative consensus—as key determinants of political stability and democratic character of regimes. Only consensually united elites—that is, elites characterized by inclusiveness and open access (wide integration), as well as strong and widely shared agreement about the norms of political behavior ("rules of the game")—can sustain stable liberal democracies. Elites united by ideological formulas (e.g., the Chinese) operate stable but undemocratic regimes, while disunited elites accompany—and perpetuate—unstable regimes.

SEE ALSO *Class; Class Conflict; Communism; Democracy; Marx, Karl; Michels, Robert; Mills, C. Wright; Power, Political*

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ELITES

The term *elites* refers to a small number of actors who are situated atop key social structures and exercise significant influence over social and political change. Much of the power of elites stems from their economic resources, their privileged access to institutions of power, and their ability to exercise moral or intellectual persuasion. At the same time, however, elites embody the values and represent the interests of particular groups in society. This can limit their autonomy, complicate efforts to cooperate with each other, and narrow the support they elicit from the public. It is this contradictory aspect of elites—simultaneously empowered and constrained by their positions as leaders in society—that defines their role in the political system.

While traditional notions of elites have typically focused on members of an aristocracy (or oligarchy), whose positions were based on claims to hereditary title and wealth, elites today comprise key figures across various sectors of society. In and around government, they include political leaders within the executive and legislative branches of government, those in command of the bureaucracy and military, and leading representatives of organized interests in society (such as labor unions or corporate lobbying groups). Within the economy, elites reside at the pinnacle of finance, banking, and production. In the cultural sphere, elites include major patrons of the arts, cultural icons (including pop culture), writers, academics, religious leaders, and prominent figures within the mass media. Most recently, transnational elites have arisen within emergent supranational institutions, such as corporate actors in the World Economic Forum, technocrats working in the United Nations system, and the heads of international nongovernmental organizations.

EVOLUTION OF THE TERM

Although the idea of elites can be traced back to the writings of Aristotle and Plato, the term *elites* was first used in modern social science by the Italian economists Vilfredo

Pareto (1902–1903) and Gaetano Mosca (1939) in the early twentieth century. In contrast to class theories, in which the sources of societal power inhered in institutions of property and class relations in society, early elite theories saw power concentrated among a minority of the population who were able to rule over the rest of the population with little accountability to them. As a result, elites were often conceptualized as "ruling elites," by virtue of their authority over the masses. As critics noted, however, the origins of elite power were underspecified. It was not clear, for example, if elites were inevitable products of modern organization, or if their position was contingent on their ability to control vital resources in society and mobilize the public.

In 1915, in his book *Political Parties*, the German sociologist Robert Michels introduced the "iron law of oligarchy." Michels contended that the existence of elites sprang from an inherent tendency of all complex organizations to delegate authority to a ruling clique of leaders (who often take on interests of their own). Accordingly, even the most radical organizations will develop a self-interested elite. In a prominent 1956 study of the United States, C. Wright Mills proposed that elite power was defined by its institutional origins. Mills argued that the place of a "power elite" was maintained by their positions in government, the military, and major corporations, which enabled them to command the organized hierarchies of modern society. While these and other works of the time, including Joseph Schumpeter's 1954 "competitive elitist" account of democracy, demonstrated the importance of the organizational bases of elite power, the origins of elites are more socially contingent on factors such as patronage and factionalism, leadership, and social structure than on institutional structure. Nonetheless, this classic work has heavily influenced elite studies, particularly scholars studying intra-elite political struggles within East bloc countries (through work termed "Kremlinology").

Distinguishing themselves from these classical theorists, scholars since the 1960s have begun to differentiate elites and recognize their diverse roles. Major works, such as Suzanne Keller's *Beyond the Ruling Class* (1963), have traced elites' sociological origins, examined their varied social functions, and engaged in empirical studies of a range of actors at the apex of almost any area of human activity. In contrast to classical approaches, these authors have highlighted ways in which elites conveyed societal claims upon the state. While this opened new avenues of research, their tendency to rely on the social profile of elites (such as age, education and occupation, and region or country of birth) at times produced inaccurate predictions of elite behavior. Though influential in shaping latent political attitudes, empirical research has shown that background characteristics are mediated by personal beliefs and values. As scholars such as Robert D. Putnam (1976) have concluded, the attitudes and political styles of elites do affect political outcomes, but behavioral patterns must be placed in a context of elite linkages to different social strata.

There has also been considerable cross-national variation in the openness of elites. In many societies, the elite manipulation of political patronage and the organization of political parties have perpetuated elites' positions. In some countries, however, government programs have been designed to desegregate elites (though the success of these programs has been limited). As Richard L. Zweigenhaft and G. William Domhoff demonstrated in *Diversity in the Power Elite* (1998), affirmative action initiatives within the United States have led to some openness along racial, gender, and class lines. However, they also showed that minorities and women absorbed into the elite often minimize their differences and, paradoxically, strengthen the existing system. Thus, government reforms (in the United States and elsewhere) seeking to enhance the diversity of elites have not produced the expected or hoped for results.

ELITES AND THE POLITICAL SYSTEM

As suggested in foundational studies of elites, the importance of elites to the political system is heavily affected by struggles within ruling cliques and by elites' relationships to social structures. Although elites influence the political system in numerous ways, the focus here will be on their effects on political regimes and democracy, the politics of state development, and incidences of violent conflict.

The nature of competition and compromise among ruling elites carry major implications for democracy. Although pluralist theory suggests that the dispersion of power in democratic systems across interest groups and institutions leaves elites in charge of different sectors of democratic politics, elites have a coordinated effect in mobilizing public opinion and ushering in political change. In *The Nature and Origins of Mass Opinion* (1992), John Zaller describes how, even in established democracies, elites attempt to construct a political world through messages delivered via media outlets to the mass public. In nondemocratic regimes, concentrations of power within ruling circles means that stability and prospects for political change hinge on the skill and engineering of elites, who can negotiate compromises between competing factions. Indeed, it has been long held that elite failures to rise above societal divisions can contribute to the rise of extremist politics, as typified by the rise of Nazism in interwar Germany. As Dankwart A. Rustow (1970) and more recently John Higley and Michael Burton (1989) have argued, democratic elites must not only establish a language of compromise across factions, but also accept the boundaries of political competition,

and become habituated to the rules of the game. Recent studies, however, have shown that extremist popular mobilization can coexist with elite negotiations, and that the success of democratic transition depends not on moderation per se, but on elite calculations and projections of whether the forces of political change—moderate or extremist—will threaten their interests after they cede power (Bermeo 1997).

In addition to power struggles within ruling circles, the struggle between rulers and local elites has been crucial in centuries-long efforts to complement states' juridical sovereignty with empirical statehood. As much of western European history attests, nobles, magnates, and landlords (among others), supported by property holdings and large armies, posed substantial challenges to the centralization of state power. Initially, future sovereign rulers were little more than members of the elite, as illustrated by Perry Anderson's reprint of the famous oath of allegiance among Spanish nobility: "We who are as good as you swear to you who are no better than we to accept you as our king and sovereign lord, provided you observe all our liberties and laws; but if not, not." (Anderson 1974, p. 65) Such diffuse systems of authority under local societal elites are also found in many "weak states" in contemporary Asia, Africa, and post-Communist Eurasia. Both historically and today, therefore, the emergence of effective state infrastructures depends on whether mixtures of coercion and patronage dispensed by rulers convince entrenched elites to cede political authority.

A final realm of politics in which elites play a critical role is violent conflict within society. In particular, intra-elite politics and elite-mass linkages reside at the center of civil wars, and elite power-sharing models have been applied across a diversity of contexts. Among the most well-known is Arend Lijphart's "consociational" model (1977), which claims that a coalition of elites, drawn from the conflicting sides, can mitigate violence through a system of elite consensus built on mutual veto power, proportional allocation of offices, and granting each group partial autonomy. The success of such negotiated pacts has been variable, deterring violence in the Netherlands and in post-apartheid South Africa but failing to prevent an explosion of intra-state conflicts in the immediate post–cold war period. Ultimately, the prevention or cessation of violence is causally related to how elites interact with one another and how effectively they channel societal claims through political institutions.

SEE ALSO *Aristocracy; Campaigning; Elections; Elitism; Power; Power Elite; Public Opinion*

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ELITISM

Elitism refers to the belief that leadership positions within a society, or in government more specifically, should be held by those possessing the highest levels of education, wealth, and social status. According to elitism, a select subgroup should make or influence decisions for the whole society. Overall, elitism as an ideology advocates that select citizens are best fit to govern.

First noted in Western philosophy by Socrates (c. 470–399 BCE), who described the good society as one headed by philosopher kings, elitism is distrustful of the masses and is in clear opposition to egalitarian or pluralis-

tic principles. Contradicting democratic theory, elitism contends that the capacity to effectively control a dynamic and multifaceted political arena is absent in the average citizen and should be reserved only for a limited few. Thus elitism defers to those individuals whose backgrounds and experiences are believed to make them superior. Depending on the society in question, superiority can be based on perceived intellectual aptitude, skin color, or other factors. Most commonly, characteristics of the elite include educational achievement, family background, and economic affluence. In some societies ethnic heritage, religious affiliation, or gender are the basis of a classification system that distinguishes the elite from the nonelite. In sum, elitism can be defined as an asymmetrical relationship in which a select few, who are considered superior, exercise control over the many, who are considered inferior.

In practice, elites pervade most societal institutions in industrialized Western democratic nations, according to Jack C. Plano and Milton Greenberg (1997). Elites may wield significant influence in such specific arenas as commerce, the military, and government operations. Sociology and political science scholarship has analyzed the role of elites in decision-making processes in various institutional settings. A seminal work by the sociologist C. Wright Mills (1916–1962), *The Power Elite* (1956), argues that a single elite, rather than a variety of competing groups, makes key decisions for the nation as a whole. The governing elite includes political leaders, corporate leaders, and military leaders.

Due to its advocacy of the virtues of the select over the "commoners," elitism as a normative theory often comes under fire for its antidemocratic tendencies. Critics argue that elitism leads to corruption, greed, intolerance, racism, and other undesirable social outcomes. Many political reform movements have been defined by their desires to eliminate elitist political structures. The historian Richard Hofstadter (1916–1970), in his book *The Age of Reform*, gives as an example of antielitism the late nineteenth-century populist movement in the United States. The populists, he argues, believed in the "people versus the interest, the public versus the plutocrats, the toiling multitude versus the money power—in various phases this central antagonism was expressed" (1955, p. 65).

SEE ALSO *Aristocracy; Corporatism; Elites; Hierarchy; Inequality, Wealth; Leadership; Meritocracy; Mills, C. Wright; Populism; Power Elite; Stratification*

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ELLIS, ALBERT

SEE *Psychotherapy.*

ELLIS ISLAND

When people today refer to Ellis Island, they generally invoke its legacy in the national saga of immigration to America, standing with the Statue of Liberty in New York Harbor as a beacon of opportunity for the world's dispossessed. However, the building of a federal facility at the site of an old naval arsenal on Ellis Island in 1892 grew out of the newly established federal authority to regulate and restrict immigration.

Before federal processing was institutionalized at Ellis Island, states had the right to set the criteria for the suitability of immigrants, with an interest in recruiting labor and excluding potential wards of the state. Two-thirds of the migrants to the United States between 1786 and 1892 came through New York City, and after 1855 immigration processing, including medical exams, customs inspection, and name registration, took place at Castle Garden in lower Manhattan, where social reformers set up voluntary services to help immigrants find work and housing. Similar immigration stations were located in Boston, Baltimore, and Galveston.

With the emergence of a national economy and a national transportation system in the years following the Civil War (1861–1865), immigration fell increasingly under federal scrutiny, and the federal government passed laws to restrict the entry of immigrants thought to be undesirable. Early efforts restricted the entry of prostitutes, convicts, incapacitated people, and contract labor. The most important exception to general practices of open immigration was Chinese exclusion, codified in federal law as the Chinese Exclusion Act of 1882, establishing the prerogative of the federal government to raise restrictive barriers against specific national groups and to mark them as permanently foreign, aliens without rights. Between 1880 and 1900, the pace of immigration to the United States increased dramatically, with nine million immigrants arriving in these years. Laborers from England, Ireland, Germany, and the Scandinavian countries were now joined by new arrivals from Italy, Austria-Hungary, Russia, Canada, Greece, Syria, the West Indies,

Mexico, and Japan. Nativist concerns about the new immigrants led to escalating pressures for a federal immigration policy.

The new federal immigration station that opened in 1892 on Ellis Island was a key component of the new federal immigration policy, which set standards for minimum health and competency, regulated the process of inspection and deportation for overseas immigration, and delegated enforcement to a superintendent of immigration and an Office of Immigration, located within the Department of the Treasury, later Commerce, and then Labor, until 1940, when the Immigration Service was transferred to the Department of Justice. Ellis Island was the entry point for twelve million people, about three-fourths of the migrants who entered the United States between 1892 and 1924. On its busiest day, April 17, 1907, Ellis Island officials processed 11,747 immigrants. Other federal immigrant processing stations were established at Boston, Philadelphia, Baltimore, and at Angel Island in San Francisco Bay.

Many European immigrant accounts of their experience at Ellis Island emphasized the hopefulness of arrival and the often confusing and sometimes frightening aspects of inspection. Steerage passengers entering New York Harbor boarded ferries for Ellis Island (American-born passengers and those travelling first and second class were examined on board ship). After being tagged with their number from the ship's official listing, immigrants walked into the baggage room where they were encouraged to check their belongings. Then they moved up the steps to the second-floor registry room in the Great Hall, where they were evaluated by medical inspectors looking for contagious diseases and physical disabilities, and by legal inspectors checking that names, birthplaces, ages, and occupations matched ship registries and ascertaining that immigrants were not likely to become wards of the state. Stories from prior travelers helped immigrants rehearse answers for the inspectors, and provided strategies for passing through successfully, for example, discretely passing the same twenty-five dollars from immigrant to immigrant to preempt the requirement for proving self-support. A literacy test for immigrants over fourteen was administered after 1917.

The shipping lines had to bear the cost of returning "excluded aliens" to their point of departure. Most newcomers, 80 percent or more, passed through the process successfully; detention for the remaining 20 percent, for legal or medical reasons, lasted in most cases less than two weeks. Although most of the patients held in medical detention recovered and were able to complete the immigration process, between 1900 and 1954, over 3,500 people, including 1,400 children, died on Ellis Island. Historians have calculated that despite a growing number of excludable categories, only about 2 percent of Ellis Island migrants failed to gain entry. In comparison, Chinese immigrants trying to gain entry through Angel Island by making use of the very few exceptions provided by the Chinese exclusion laws faced much more rigorous interrogation and isolation, and much lengthier detentions.

Ellis Island's functions changed dramatically with the passage of immigration restriction in the 1920s, ending the era of open European immigration. Combined pressures for exclusion proposed by white Anglo-Saxon Protestant restrictionist groups, reinforced by theories of scientific racism spurred by World War I (1914–1918) rhetoric of "100 percent Americanism," the Red Scare's linking of foreigners with radicalism, and the labor movement's fears of rising unemployment, resulted in the passage of the Quota Act in 1921 and the Johnson-Reed Act in 1924. The Quota Act limited the total number of immigrants who could enter the United States and required that immigrants bring passports. The Johnson-Reed Act did not limit immigration from the Western Hemisphere, but it reduced the total number of entering immigrants, and most significantly, established national-origins quotas to favor northern and western European immigrants, who received 82 percent of the annual total quota allotted. The Johnson-Reed Act also expanded the category of illegal aliens, reaffirming the principle of Chinese exclusion and barring Japanese and other immigrants from the "Asiatic Zone," defined in 1917 as stretching from Afghanistan to the Pacific, on the legal grounds of their exclusion from citizenship.

By the 1920s, Ellis Island officials were processing far fewer arrivals and were no longer providing medical or mental exams or housing immigrants who were ill, since the passport and visa requirements relocated many aspects of verification and inspection from Ellis Island back to the country of origin. During the 1930s, nearly as many people left as entered the United States, and Ellis Island officials processed some immigrants returning to Europe. During World War I, Ellis Island became a temporary detention center for "enemy aliens," and in 1919 radicals rounded up by Attorney General A. Mitchell Palmer (1872–1936) and housed incommunicado prior to deportation included the Russian anarchist activists Emma Goldman (1869–1940) and Alexander Berkman (1870–1936). Ellis Island was increasingly used for detention and deportation of "aliens." By the 1930s, the people detained on the island were undocumented immigrants without passports or visas, foreign-born criminals awaiting deportation, and sick merchant mariners receiving treatment at the hospital.

During World War II (1939–1945), "enemy aliens" were again held on the island. After 1950, immigrants sus-

pected of being communists were denied entry or detained awaiting deportation, including the West Indian Marxist writer C. L. R. James (1901–1989) in 1952. Despite the needs of the many refugees created during World War II, the restrictive immigration laws kept the numbers of European immigrants very small. Ellis Island was finally abandoned by the Immigration and Naturalization Service in 1954 and classified as surplus property. President Dwight D. Eisenhower's (1890–1969) General Services Administration tried unsuccessfully to sell Ellis Island and its buildings to the highest bidder in 1956. President Lyndon B. Johnson (1908–1973), who traveled to the Statue of Liberty to sign immigration reform in 1965, granted landmark status to Ellis Island as part of the Statue of Liberty National Monument within the jurisdiction of the National Park Service. New interest in historic preservation and in European-heritage ethnicity generated popular and public support for the restoration and reopening of Ellis Island as an immigration museum in 1990.

SEE ALSO *Immigrants, European; Immigrants, New York City*

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Judith E. Smith

EMOTION

Over the last three decades, the sociology of emotions has developed a number of distinct theoretical and research programs (for recent reviews, see: Turner and Stets 2005, 2007; Stets and Turner 2006). While there is considerable overlap among some perspectives on emotions in sociology, they can be roughly grouped into six basic approaches: (1) dramaturgical and cultural, (2) ritual, (3) symbolic interactionist, (4) exchange, (5) structural, and (6) evolutionary.

Dramaturgical and cultural approaches all draw upon the early insights of Goffman (1967), who argued that human interaction is very much like a performance on a stage. Like all stage performances, there is a script—in this case written by cultural ideologies and norms of a society—with actors engaging in strategic performances as they interpret the script and use props to make a dramatic presentation of self to an audience. Hochschild (1983) was the first to adopt elements of this metaphor by analyzing how the cultural script, social structure, and audience expectations force individuals to manage emotions that they do not feel. As a consequence, individuals must engage in "emotion work" that is inherently alienating. Other researchers have stressed how individuals use cultural scripts as a cover for more strategic performances in games of micropolitics and microeconomics (Clark 1997).

Ritual approaches draw from Durkheim's analysis of "collective effervescence" and emphasize that when individuals are co-present, the dynamics that ensue can build up positive and negative emotional energy that, ultimately, is the energy driving the formation, reproduction, and change of social structures and culture (Collins 2004). When initial greeting rituals arouse mild positive sentiments, subsequent talk and body language become rhythmically synchronized, leading to emotional entrainment and heightened emotions that increase social solidarity, which, in turn, is represented with group symbols. When these processes fail, negative emotional energy is aroused, thereby lowering solidarity.

Symbolic interactionist approaches all emphasize the central place of self in arousing emotions (Stryker 2004; Burke 1991). When self is verified by others, positive emotions ensue, whereas when self is not confirmed, negative emotions are aroused. Self is seen as a cybernetic control system in which individuals seek to maintain consistency among cognitions about self, behavior, situation, and other; discrepancies between any of these cognitions lead to negative emotional arousal that serves as the motivation to change the self presented, behaviors, definitions of the situation, or assessments of others (Heise 1979). Psychoanalytic variants of symbolic interactionism emphasize that individuals often protect self through the activation of defense mechanisms, which push the negative emotions, such as shame, below the level of consciousness (Scheff 1988). Once repressed, the emotions are transmuted into new kinds of more intense negative emotions (Turner 2002).

Exchange approaches view social interaction as the reciprocal flow of resources. Individuals seek to gain a profit in all exchanges by assessing whether or not their rewards exceed costs and investments. When individuals see that their and others' shares of resources are proportionate to respective costs and investments, they experi-

ence positive emotions; and when they do not, negative emotions are aroused (Lawler 2001). People always compare their receipt of resources to cultural standards of justice. When actual shares of resources meet standards of what constitutes a "just share," positive emotions are experienced; when shares do not correspond to perceptions of a "just" share, negative emotions are aroused (Homans 1974; Jasso 1980). The positive emotions in profitable exchanges become yet another resource to be exchanged and lead individuals to make suboptimal commitments (or less than maximum payoffs) to social relations that increase solidarity (Lawler and Yoon, 1996).

Structural approaches see interaction as revolving around the distribution of power and prestige, with individuals having expectations for how much power or prestige they can claim in a situation (Kemper 1978; Ridgeway and Johnson 1990). When these expectations are realized, positive emotions ensue, but when there is competition for status and/or prestige or when a person does not receive anticipated prestige or power, negative emotional arousal among some actors will ensue. Moreover, once the distribution of power and prestige is established, expectations operate to sustain this distribution, and the emotions generated become yet another expectation state.

Evolutionary approaches seek to outline the selection pressures that operated on humans' hominid ancestors to produce the neurological structures responsible for emotional arousal (Wentworth and Yardly 1994; Turner 2000; Hammond 2004). Although these approaches vary in terms of how much they see biology as determining specific emotional responses, they all emphasize that the human brain was rewired under intense selection pressures to produce a wider palate of emotions, which enhanced the fitness of humans' ancestors by increasing bonds of social solidarity.

As is evident, then, the sociology of emotions has grown enormously from its tentative beginnings in the 1970s. There is a broad set of approaches, each with a coherent body of theory and most with active research programs testing and extending these theories. The sociology of emotions is now the leading edge of sociological social psychology and microsociology in general.

SEE ALSO *Emotion and Affect; Psychosomatics, Social*

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Jonathan H. Turner

EMOTION AND AFFECT

Emotions are central to one's personal and social life, and they have been an important topic in psychology throughout history. The terms *mood* and *emotion* are often used interchangeably to refer to certain aspects of affect. But while there are similarities, mood and emotion are fundamentally different. For example, emotions appear to have a particular cause and are short-lived. They are psychological experiences that involve the interplay of cognitive, physiological, and expressive behavior. In contrast, psychologists define *affect* as an individual's externally displayed mood. Typically people feel some level of positive affect and some level of negative affect in their daily life.

CATEGORIES AND TYPES OF EMOTION

Although psychologists and philosophers have discussed emotions for years, debates continue about what constitutes an emotion and how different emotional experiences should be classified. In 1990 Andrew Otrony and Terence Turner summarized a list of the basic emotions that had been compiled by a wide variety of researchers. In general nearly everybody who postulates basic emotions includes anger, happiness, sadness, and fear. In addition there are two main approaches in proposing basic emotions. The biological view suggests that emotions can be understood in terms of their evolutionary origin and significance and that this knowledge can contribute to understanding the function of emotions. The psychological view suggests that there might be some small, basic set of emotions on which all others are built. Basic emotion classification has been useful in explaining how emotions evolve and exist in all cultures.

Another way to classify emotions involves whether they are discrete categories or continuous dimensions. Categorical models focus on a number of discrete emotions (e.g., basic emotions). In contrast, dimensional models typically focus on varying levels of self-reported feelings on a particular dimension varying from positive to negative. Categorical and dimensional models are often discussed separately, but they are not necessarily incompatible. For example, the discrete emotion of happiness corresponds with high activation and pleasantness (positive valence), whereas the discrete emotion of sadness corresponds to low activation and low pleasantness (negative valence). Researchers can employ both models of categorizations, or they can advantage one over the other.

THEORIES ON EMOTION AND AFFECT

Historically the James-Lange theory was independently proposed by William James and Carl Lange in the 1880s. Together they argued that emotion is the perception of physiological changes in the body. For example, a person experiences fear because he or she perceives physiological changes, such as an increase in heart rate and breathing, muscle tension, and sweat gland activity. In 1927 Walter Cannon and Philip Bard criticized this theory, suggesting that an individual experiences an emotional event first, after which more information is collected through one's senses. This additional information is sent through the nervous system to the brain, where a message is sent to the cortex, thereby producing a specific emotion, and to the hypothalamus, which controls the body's responses, such as crying or laughing.

In 1962 Stanley Schachter and Jerome Singer proposed that there were two factors that determine different emotions: the physical changes in a person's body in response to an event or stimulus and the interpretation that the person gives to those changes. An important assumption in the Schachter-Singer view is that once an emotional feeling has been produced, that particular feeling can cause specific actions. There has also been considerable theoretical and empirical work attempting to identify specific cognitive dimensions that shape the emotional response. In 1990 Richard Lazarus and Craig Smith described a specific appraisal model detailing the specific cognitive evaluations that are associated with (and hypothesized to be causally antecedent to) the experience of a number of distinct emotions.

Although these and many other emotion theorists have postulated and tested their ideas, there are many aspects of emotion that are still untested and undiscovered. New advances in neuroscience will allow researchers to observe physiological characteristics that are more objective compared to cognitive appraisals. A number of noninvasive techniques have been developed to measure physiological responses, such as heart rate reactivity, skin conductance, and cortisol levels with greater accuracy. Researchers can also study an individual's response to emotional stimuli and record the individual's expression of emotion. Concurrent measures of physiological, cognitive, and expressive behaviors of emotion allow researchers to study emotions in a more complete and dynamic way.

RELATIONS TO DEVELOPMENTAL OUTCOMES

The experience of emotions has significant psychological and physiological effects. How people interpret their experience motivates and guides their actions and specific behaviors. Emotions convey to others what the individual is feeling, and they may also help regulate social interactions. Several studies have demonstrated that children's understanding of emotions, awareness of emotional states, and emotion regulation are associated with children's

socio-emotional competence and coping skills. Social competence in turn is associated with positive development in areas such as peer acceptance, school achievement, and emotional well-being. Nancy Eisenberg has suggested that sympathy (concern for others based on the apprehension of another's state) and empathy (an emotional reaction elicited by and congruent with another's state) stimulate the development of internalized moral principles reflecting concern for other people's welfare. Indeed in a 1999 study Eisenberg and colleagues found a relation between sympathy and empathy and prosocial behavior.

Some research indicates that an inability to express and interpret emotions in socially appropriate ways may lead to maladaptive behaviors, such as aggression and social withdrawal. For example, even though anger can serve to regulate interpersonal behavior, it comes to be regulated in an interpersonal context through socialization. The individual has to learn when and how to express anger in culturally acceptable ways. Problems in emotion regulation and the expression of anger are implicated with failures in social interaction (see Lemerise and Dodge 1993), while difficulty in the regulation of anger is further reflected in psychopathology (see Dodge and Garber 1991). Thus the ability to modulate and express emotions is associated with a variety of maladaptive and adaptive developmental outcomes.

SEE ALSO *Behavior, Self-Constrained; Emotion; Emotion Regulation; Empathy; James, William; Schachter, Stanley*

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Pa Her

EMOTION REGULATION

The study of emotion regulation is a burgeoning subfield within the modern social sciences. It explores how individuals influence the emotions they have, as well as when and how they experience and express their emotions. Whereas an *emotion* refers to a brief response to an internal or external event, *emotion regulation* is the process by which individuals influence the intensity, duration, valence, or manifestation of that response. Some researchers argue that all emotions are inherently regulated, so that emotion need not be distinguished from emotion regulation.

Emotion regulation is distinct from *coping*, insofar as coping focuses primarily on decreasing a negative emotional experience. Emotion regulation, in contrast, can include increasing or decreasing both positive and negative emotions. Emotion regulation may be conscious or unconscious, it may reflect controlled or automatic cognitive processes, it may occur at multiple time points in the course of an emotional response, and it may exert a multiprong effect on numerous facets of emotion (i.e., subjective experience, behavioral expression, physiological response).

Early interest in the field of emotion regulation can be traced back to Freudian psychoanalytic perspectives on unconscious anxiety regulation, as well as to the early stress and coping literature. Contemporary perspectives now rely heavily on James Gross's process model of emotion regulation (1998), in which he distinguishes between *antecedent-focused* strategies, which occur before an emotion is generated, and *response-focused* strategies, which are aimed at altering an already existing emotion by increasing or decreasing the experience, outward behavior (such as by suppressing), or physiological response. Antecedent-focused strategies include situation selection, situation modification, attentional deployment, and cognitive change (i.e., reappraisal). Situation selection refers to

either approaching or avoiding specific places, people, or objects in order to alter their emotional impact. Attentional deployment is used to alter a specific aspect of a situation by focusing one's attention toward it. Cognitive change has gained increasing attention in cognitive therapies as a means to alter a person's emotional response upstream by changing the way one thinks about a given situation. Response-focused strategies include any act that influences one's ongoing experience of behavioral or physiological emotion response. An example includes behavioral suppression, or the dampening of one's outward displays of emotion (such as trying to constrain facial expressions of happiness).

ADAPTIVE AND MALADAPTIVE EMOTION REGULATION STRATEGIES

Researchers have begun to examine whether some types of emotion regulation strategies are more adaptive than others. Initial evidence demonstrates that reappraisal is an adaptive strategy associated with improved social functioning, positive emotion, and well-being. Suppression, by contrast, is a maladaptive strategy associated with elevated levels of negative affect and decreased positive affect. The chronic use of maladaptive strategies is thought to represent a core mechanism underlying numerous clinical disorders, ranging from binge eating and schizophrenia to bipolar disorder and generalized anxiety. In a 2004 paper, Ann Kring and Kelly Werner highlight two ways in which clinical disorders might represent difficulties regulating strong feelings; namely, through either *emotion dysregulation*, which involves the inappropriate use of otherwise intact regulatory processes, and *problems in emotion regulation*, involving an absence or deficit of basic regulatory processes. Whereas emotion dysregulation might involve an individual who is able to reappraise but simply does not implement his or her skills in the appropriate context, problems in emotion regulation refers to profound deficit in the requisite skills of reappraisal. Additional research is needed to examine the ways different clinical disorders represent such impairments, and whether such difficulties are transdiagnostic.

EMOTION REGULATION AND DEVELOPMENT

Developmental psychologists have given extensive treatment to the study of emotion regulation in infancy. Temperamental differences in emotion regulation have suggested that children have innate differences in the threshold to elicit positive or negative emotions as well as differences in the capacity to self-soothe, an important regulatory strategy. Emotion regulation is learned early in life largely by external agents such as caregivers. Joseph Campos, Carl Frankel, and Linda Camras argue that the infant and caregiver represent a "coregulatory system," and that early in development the parents' expressive behaviors serve as powerful regulators of a child's current emotional state. Children often synchronize and coordinate the expressions of their caregivers as a means to learn how to appropriately express feelings in given contexts. However, as the infant develops, he or she becomes increasingly less reliant on the caregiver and more independent in the initiation and control over regulating his or her feelings. With further age advancement, research across the lifespan suggests people also become more effective in regulating their own feelings as they age.

SEE ALSO *Behavior, Self-Constrained; Coping; Emotion and Affect; Freud, Sigmund*

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June Gruber

EMOTIONAL INTELLIGENCE

SEE *Intelligence, Social; Multiple Intelligences Theory.*

EMOTIONS, PSYCHOLOGY OF

SEE *Emotion and Affect.*

EMPATHY

Although definitions of empathy vary, the word is frequently defined as a vicarious emotional reaction based on the apprehension or comprehension of another's emotional state or condition. Inherent in this definition is that this reaction is identical or very similar to what the other person is feeling or would be expected to feel in the situa-

tion. Indeed, empathy may often be the origin of other related emotional reactions. In many situations, for example, empathy is likely to turn into either sympathy or personal distress. Sympathy is an emotional reaction based on the apprehension of another's emotional state or condition that involves feelings of compassion, sorrow, or concern for another person, rather than feeling merely the same emotion as the other individual. Sympathy is believed to involve an "other" orientation and the motivation to assist the other person, whereas empathy by itself does not. However, empathy may also turn into personal distress—an aversive, self-focused emotional reaction (such as anxiety or discomfort) to another's emotional state or condition. Personal distress is associated with a focus on "self," with a desire to make the self, not the other person, feel better. Sympathy, on the other hand, tends to be related to other-oriented altruistic behavior, particularly when it is not easy to escape from the need or distress of the other person, or from social sanctions for not helping. Moreover, inducing adults to feel sympathy for a stigmatized group improves attitudes toward the group as a whole.

Empathy and sympathy appear to increase with age in childhood, but they may stabilize by mid- to late adolescence. Sympathy is not only related to engaging in prosocial behaviors such as helping and sharing, it is also correlated with high levels of social competence, low aggression in children, and measures of psychological adjustment. Females tend to score higher in sympathy and empathy than males, especially if the measure is self-reported or other-reported. Girls tend to display more concerned behaviors than boys, but there is no gender difference in males' and females' physiological reactions to empathy-inducing stimuli. Thus, males and females may respond similarly to empathy-inducing stimuli but interpret or react differently to them (Eisenberg and Fabes, 1998).

Empathy appears to have a biological basis. Identical twins, for example, tend to be more alike in empathy and sympathy than are fraternal twins. However, the familial and larger social environment appears to affect individual differences in empathy and sympathy. People tend to be more empathic or sympathetic if they are securely attached to their mother and if their parents are sympathetic, supportive, and warm in their parenting. In addition, parental expression of positive emotion in the family, parental discussion of emotion, and parental use of reasoning that emphasizes the effects of children's behavior on others (and helps them to take the perspective of another) have been associated with the development of sympathy (and often empathy) in children. The expression of hostile negative emotions (e.g., anger) in the home has been associated with low levels of sympathy in children, but this association may not hold by adolescence. Finally, because self-regulation is associated with being sympathetic, parenting practices that foster the regulation of emotion and behavior appear to promote the development of sympathy.

SEE ALSO *Altruism and Prosocial Behavior; Emotion; Perspective-taking; Role Theory*

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Nancy Eisenberg

EMPIRE

Empire, *imperial*, and *imperialism* are terms with complex and contested histories: one is even tempted to think of them as *essentially* contested concepts in the philosophers' sense. In the political discourse of the twentieth century's second half, they were well-nigh always used pejoratively. Almost nobody, and no state, was willing to adopt them as self-descriptions. The idea of empire has often been associated, sometimes in emotive or polemical style, with particularly aggressive, coercive, expansionist, hierarchical, and indeed racist forms of power. Such associations have been yet more widely perceived in relation to *imperialism*, a term whose uses have tended to be more monolithically pejorative than have those of *empire.*

THEORIES AND POLEMICS

The concept of empire has also tended, at least until recently, to be far more widely employed and debated among humanities scholars—especially, and naturally enough, historians—than by social scientists. Few among the latter have explicitly or elaborately theorized the concept of empire. In the early twenty-first century, however, there were some signs of a change in these patterns, especially amidst widespread and often heated debate over the idea of a new American "empire."

The relative dearth of theoretical elaboration thus coexisted with a remarkable effervescence of controversy and (especially, perhaps, since the 1980s) with influences coming from numerous academic disciplines, milieus, and indeed theoretical traditions. Empire, its aftermaths, and

its enduring significance have not only been the concerns of historians and political or international relations analysts. In recent years, they have become major preoccupations among cultural and literary critics and theorists. In some other fields too—political theory, economics and development studies, anthropology, human geography, and more—they have generated a rapidly growing and often highly contentious literature. There has, however, been a relative lack, still, of interaction between political, economic, and strategic studies of global power on the one hand, and work by literary and cultural studies scholars interested in the cultures and discourses of imperialism on the other. These spheres of research have operated largely in an atmosphere of mutual indifference or even antagonism, and although here too a growing body of recent work seeks to close the gaps, they remain wide.

Diversity, imprecision, and ideological inflection have inevitably followed from that background. The terms *empire* and *imperialism* have at times been used to refer to all forms of relation between more powerful states or societies and less powerful ones. They have also, even beyond these loose boundaries, often been employed in academic discourse in a great range of vaguely allusive, metaphorical, or polemical ways. They have additionally been intertwined with several other, mostly newer but equally contentious words: especially *colonialism*, and latterly *neocolonialism*, *globalization*, and others. A great range of compound terms has also been thrown into the stew at different times and places: *informal empire*, *subimperialism*, *cultural imperialism*, *internal colonialism*, *postcolonialism*, and many more.

DEFINITIONS

More substantive attempts at definition have centered around the notion of an empire as a large political body that rules over territories outside its original borders. It has a central power or core territory—whose inhabitants usually continue to form the dominant ethnic or national group in the entire system—and an extensive periphery of dominated areas. In most cases, the periphery has been acquired by conquest. But in earlier imperial systems, expansion sometimes came about by such means as the intermarriage of ruling families from previously separate states. And in some modern instances, the ruling elites of the peripheral territory may have chosen willingly to be brought under the control of the imperial center. Some scholars have argued that empire necessarily involves political sovereignty or direct control by core over peripheries; but others, probably more, have used the term also for informal control, influence, or hegemony. A world, or parts of it, dominated by empires is often explicitly or implicitly contrasted to one of nation-states; especially in terms of a (usually implied) narrative of twentieth-century global history in which the former is seen as having been replaced by the latter, involving the extension of an originally European nation-state model across the globe. However, whilst some analysts have seen the concept of empire as distinct from or even the antithesis to that of the state, others identify it rather as a particular *form* of state.

Empires, then, are composite entities, formed out of previously separate units. Diversity—ethnic, national, cultural, often religious—is thus of their essence. But that cannot be a diversity of equals. If there is no relation of inequality and domination between *core* and *periphery,* then the system is not truly an empire but a federation or perhaps a *commonwealth.* Both the British Empire in its last stages and the post-Soviet Russian federation used the latter term for themselves, indicating the claim that they were no longer imperial systems but free associations of equals.

The relationship between the concepts of empire and imperialism on the one hand, and colony and colonialism on the other, have been particularly fraught with ambiguity. Early usages of the latter mainly associated it with the physical transfer of large settler populations to new places: often, but not always, associated with the political conquest of such places and with the settlers attaining a position of dominance over (or even exterminating) indigenous peoples. More recently, some scholars have distinguished between imperialism and colonialism by way of seeing the former as an attitude or policy advocating territorial expansion, whilst the latter is the practice of domination or overrule. Most often, however, the distinction drawn (albeit not always explicitly) is that colonialism is used to mean situations of direct control or the exercise of sovereignty by one people or country over another, whilst the concepts of empire and imperialism are more encompassing and embrace also less direct or formal forms of domination.

ETYMOLOGIES AND HISTORIES

The word *empire* comes from the Latin *imperium*, for which the closest modern English equivalent would perhaps be *sovereignty,* or simply *rule.* For the Romans, an *emperor* was originally a victorious general, later a supreme magistrate—though the military overtones of the title never disappeared. *Imperium* also came, both in the Roman era and later in Christian Europe—which derived so much of its political language and thought from Roman precedents—to have three further connotations. All these have continued to shape thinking about empire. First was size. Empire came to mean rule over extensive, far-flung territories, far beyond the original "homeland" of the rulers. Although some quite small entities have, historically, described themselves as empires, in most modern usages the term is reserved for very large political units.

Second was the notion of *absolute* sovereignty, acknowledging no overlord or rival claimant to power. When Henry VIII (1491–1547) of England had his realm proclaimed an "empire" in the 1530s, the aim was to assert that he owed no allegiance to, and would tolerate no interference from, either the papacy or any secular power. Third was an aspiration to universality. Christian (and, in a distinct but related idiom, Islamic) empire was in principle boundless, as the Roman imperium to which it was partial heir had claimed to be.

An empire is therefore, by a minimalist or semiconsensual definition, a large, composite, multiethnic or multinational political unit, usually created by conquest, and divided between a dominant center and subordinate, sometimes far distant, peripheries. Core and periphery are usually geographically separate, clearly bounded places. In modern seaborne empires, they might indeed be thousands of miles apart. In other cases, though, the geographical lines between them might be blurred. They might even inhabit the same physical spaces: ideas like *internal colonialism* were developed to try and explain such situations.

Imperialism is generally used to mean the actions and attitudes that create or uphold such big political units—but also, often, less direct kinds of control or domination by one people or country over others. Terms like *cultural* or *economic imperialism* are often used to describe some of these less formal sorts of domination: but such labels are invariably contentious. So too is the concept of *informal empire,* which has nonetheless been very influential and widely used to describe varied forms of dominance without formal sovereignty or direct political control, as with Britain's nineteenth-century hegemony in Chile and Iran, or the more recent role of the United States in much of Central America.

Even formal empire, however, typically involved some combination of direct and indirect rule. The central power has ultimate sovereignty, and exercises some direct control, especially over military force and money-raising powers, in all parts of its domain. But there has usually been some kind of "colonial" or "provincial" government in each of the empire's major parts, with subordinate but not insignificant devolved powers of its own. These authorities may be headed by men sent out from the dominant center. But their leaders, and certainly their more junior administrators or enforcers, may also be drawn from the ranks (usually from the preconquest ruling orders) of the dominated people. In many empires, ancient and modern, there was a general tendency over time for imperial rulers to devolve ever more power to such groups. In the long run, of course, this might lead to the gradual breakup of the empire itself. But many historians argue that the key to understanding empire lies in the bargains struck between the imperial center and local "collaborators." No empire could last for long if it depended entirely on naked power exerted from the center outward. Local intermediaries might enjoy much autonomy within their own spheres, and command considerable wealth, power, and status, in return for delivering their people's obedience, financial tribute, and military services to the center. This is so also in a different sense where (unlike the British or indeed any modern European-imperial case) the ruling elites of empires were themselves ethnically diverse, as with the later Roman Empire or the Ottoman Empire.

The emphasis on intermediaries, collaborators, bargains, and decentralization should not be pushed too far. Empire was also often, indeed perhaps typically, established and maintained by violence. Sometimes extreme violence: some historians say that most episodes of genocide and mass murder in world history have been associated with empire building. This includes the Nazi Holocaust, which is increasingly analyzed as part of an "empire-building" project. More generally, the idea of empire in modern history has also usually been associated with European, white rule over non-Europeans, with "racial" hierarchies and racist beliefs. Some analysts, again, build this association into their very definitions of empire.

One other aspect of debates over the historical salience and transformative force of European (especially British) expansion has been especially vigorous. Should colonial rule be viewed primarily in terms of modernization or of archaism? The notion of *colonial modernity*—even colonialism *as* modernity—has been widely invoked, especially among recent cultural historians of empire. The idea of colonialism as a modernizing, state-building, centralizing, developmentalist, and secularizing force has been deployed too by those urging a positive appraisal both of the British imperial record and of American "empire" today. Yet on the other hand, some historians stress instead the traditionalist and even archaizing features of British imperial ideology.

VARIATIONS AND SIMILARITIES

Empires have, rather obviously, taken a wide variety of forms across history. Even where empires, especially imperial ideologies, display close family resemblances, this has sometimes reflected conscious imitation more than structural congruity. Some scholars, indeed, urge a definitive abandonment of the singular term *empire*—which tends, even when its users are stressing and tracing differences, to imply that these are variations on a single essence—and propose a mandatory pluralization of the terms *empires* and *imperialisms.* Yet most see, at least, broad similarities as well as some fundamental subcategories among empires. Perhaps the most basic and important of the lat-

ter is the division between those that grew by expansion overland, extending directly outward from original frontiers, and those that were created by sea power, spanning the oceans and even the entire globe. The first, land-based form of empire is by far the older and the more historically ubiquitous. Land empires were created by Asians, Africans, and pre-Columbian Americans as well as Europeans. The second, mainly European form, however, has been the most powerful and dynamic in the modern world—roughly the last five hundred years. It in turn is often analyzed as having two main forms: settlement and nonsettlement colonies. The former category includes those places where large numbers of Europeans moved and remained. In some—notably, most of the Americas and Australasia—they became the vast majority. In others, like Algeria, South Africa, and more precariously in Kenya or Zimbabwe, European settlers became dominant minorities. The nonsettler colonies, embracing most of Africa and South and Southeast Asia, were considerably more numerous and far more disparate in nature.

The character and continuing consequences of empire thus remain intensely contentious. At the peak of their strength in the first half of the twentieth century, European colonial powers, plus their offshoot the United States, ruled well over 80 percent of the world's land and effectively controlled all the oceans too. That direct physical dominance mainly came to an end, with remarkable rapidity, between the end of World War II (1939–1945) and the 1960s. But its effects remain indubitably important, both for formerly colonized and for ex-imperial peoples. And a wide range of critics—especially socialists and third world nationalists, but also such disparate currents as contemporary antiglobalization protesters and militant Islamists—argue that the twenty-first-century world witnesses not just the continuing consequences of old-style European colonialism, but a new kind of global empire headed by the United States and its allies. For some such critics, indeed, *empire* is now effectively a simple synonym for American foreign policy. In a slightly less polemical vein, scholarly argument has proliferated over the existence, character, and importance of continuities or parallels between the formal colonialism of the nineteenth and twentieth centuries and the global politics of the twenty-first.

SEE ALSO *Colonialism; Decolonization; Holy Roman Empire; Imperialism; Ottoman Empire*

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Stephen Howe

EMPIRICISM

Empiricism can be traced back to Aristotle's dictum, "there is nothing in the intellect that is not first in the senses," although Aristotle himself is not usually regarded as an empiricist in the modern sense. The theoretical foundations of modern philosophical empiricism are found in the works of John Locke, George Berkeley, and David Hume, and in the nineteenth-century philosopher William James. These philosophers inquired about the limits and scope of the human mind, and argued that experience itself is the primary source of all knowledge. Empiricism is thus a theory of knowledge that highlights the importance of experience. The term *experience* can be defined minimally, as in terms of the senses, or expanded to include all forms of consciousness.

Locke's project in his *Essay Concerning Human Understanding* (1690) was to set out "to enquire into the origin, certainty, and extent of human knowledge" (Locke 1975, p. 43). Locke argued that knowledge is restricted to ideas generated by objects that one experiences through the senses (ideas of sensation) or by reflection upon our mental operations on those ideas (ideas of reflection). In this complex sense, knowledge and human understanding

in general (including unscientific beliefs such as justice) originate in experience, as the origin of all ideas is in experience, which involves two logical levels, sensation and reflection. Each person's mind can be thought of as initially a blank tablet (tabula rasa) first written upon by the sensations of experience (ideas of sensation), which can then be manipulated in various ways, the ideas of which—the ideas of reflection—being the second level of experience.

Berkeley argued in both *Principles* (1710) and *Dialogues* (1713) against the actual existence of matter, and claimed in his dictum "to be is to be perceived" (or to perceive). This means that objects can never be understood independently of their ideas since, for Berkeley, the object and sensation are the same thing. Berkeley maintained that there are only ideas and minds, or the location where ideas occur. Thus a thing is understood as the sum of perceived qualities. Although for Berkeley it is impossible to think of anything except as it related to the mind, both Berkeley and Locke believed that all knowledge about the existence of things and the reality of matter depends on visual and sensory experience.

In his work *Enquiry Concerning Human Understanding* (1784), Hume claimed that human senses allow people to perceive, and these perceptions (made up of impressions and ideas) are the contents of the mind. The original thought itself, according to Hume, is an impression, and an idea is only a copy of an impression. The difference between the two is their vividness, for when one reflects upon these impressions one has ideas of them. Hume's work does not ground impressions to a material world, and argues instead that impressions are internal subjective states that do not provide evidence of an external reality.

In his metaphysics, James wrote in a tradition that focuses on the process of consciousness based in experience—a "process metaphysics." For James, humans have a continuous development of thought that is based in interpretations of the experiences themselves. In this way, human consciousness consists of experienced relations (a "stream of thought"), which are themselves experienced (affectively and effectively), as one both transforms and is transformed by these experiences. Indeed, James's radical empiricism is pluralistic in that it allows for different points of view—different "givennesses"—of reality. Because James allowed for individual perspectives of experience, it follows that one's epistemologies themselves are informed by one's experiences. Absolute unity of reality, for James, is "ever not quite," as "fact" is based on experience, and the multiple experiences of experience itself. Thus there is no objective truth, as Jamesian truth is experientially cognized at the level of subjective/individual perception.

The empirical tradition runs counter to rationalist philosophy, which poses that knowledge can be derived through the exercise of reason alone, and in terms of a person's rational power. All of the aforementioned philosophers wrote in a tradition that opposes the rationalist view, represented most notably by the French mathematician and philosopher René Descartes, that humans enter the world with innate ideas built into the mind itself. Instead, these philosophers argue that persons must rely on experience itself to inform knowledge claims.

RESEARCH AND EMPIRICAL METHODS

Within the social sciences, empiricism describes research methods that depend on the collection of facts and observations, some of which require verification, counting, and measuring. Although a researcher may use empirical methods, it does not follow that he or she is a philosophical empiricist, and does not make one an empiricist per se. There are thus many forms of empirical research methods.

Auguste Comte, a sociologist and philosopher, held that knowledge of the world arises from observation, and conceived of positivism as a method of study based on the strict use of the scientific method. He asserted that authentic knowledge (or all true knowledge) is scientific knowledge that is objective, predictable, and has logical structures. Logical positivism (or logical/rational empiricism) combines positivism with a verifiability criterion for meaningfulness. For logical positivists, all knowledge should be based on logical inference, justification, and verifiability through experience or observation. Meaningful statements fall into two categories for the logical positivist, a priori analytic knowledge (necessary truths that are knowable prior to experience; for example, all circles are round) and a posteriori synthetic knowledge (or contingent knowledge that is verified by sensory experience; for example, it is raining outside). Quantitative methodology is a kind of scientific empiricism and refers to the compilation and analysis of numerical data, which for the social scientist is empirical in nature since it can be tested and verified (validated or falsified) by empirical observation. Moreover, quantitative methodology is positivistic since it relies on scientific and systematic observation and experiment, and can be thought of as the scientific approach to the study of sociocultural life.

Nonetheless, although social scientists do not ask underlying metaphysical questions about the actual existence of objects, they are indeed concerned with the experience of social objects and phenomena. For example, the first professor of sociology, Émile Durkheim, in his book *The Rules of Sociological Method* (1938), enshrined this

idea with his conceptualization of a "social fact," which is as objective as facts are in the natural sciences.

For Thomas Kuhn, empirical methods are capable of elucidating and eradicating problems within paradigms during periods of "normal science." Interestingly, Kuhn shows how this "science" is reflective of one's theoretical connectedness to a specific paradigm itself, and is not the reflection of any truth-claims to knowledge.

Social constructivism is a philosophical theory of knowledge that states that knowledge itself is contingent upon social experience, context, convention, and human perception. Some examples of socially constructed knowledge are gender (feminine and masculine), sexuality, and racial categories. This theory of knowledge does not necessarily reflect any external "transcendent" metaphysical reality, and is instead based on a socially constructed reality as opposed to an ontological reality. However, the notion of experience is still important for a constructivist, as experiences between and among individuals differs within and outside of varying contexts, thereby allowing for different "realities," some of which are based in oppression (for example, women, minorities, and homosexuals).

Empirical methods have been used to study race, gender, sexuality, and religion, among a plethora of other social phenomena such as crime, deviance, attitudes, and beliefs.

Considering race, there has been much research done in social science regarding migration, connections with class, connections to skin color, social surveys of self-image and self-regard among ethnic minorities, and measuring prejudice in terms of scales of social and ethnic "distance." Additional quantitative studies concerning race have focused on social inequality, institutional racism, patterns of interaction and segregation, genocide, social standing, poverty, and assimilation of dominant culture patterns.

Gender has been studied in the social sciences through the analysis of images of women in media and culture. These empirical studies of symbols and images range from studies of archaeological statues of goddesses to contemporary studies of how women are portrayed in film or advertisements. Discrepancies in gender stratification and sexism can be analyzed from a quantitative approach, as can the important issue of violence against women. Additionally, empirical studies of gender also inform analyses of family relations, employment patterns, and distribution of wealth, education trends, and politics.

Using empirical methods to study sexuality, social scientists focus on topics such as sexual orientation, contraception, prostitution, gender identity, and attraction. Additional research can also be found on teen pregnancy, fertility, pornography, activist movements, sexual violence, sex education, and queer studies. One of the most important works in this area is *The Archaeology of Knowledge* (1972) by Michel Foucault.

Religion has also been analyzed empirically in terms of socioeconomic status, the family, marriage patterns, social class, family violence, cohabitation, political affiliation, church attendance, opinions about religious matters, as well as feelings, beliefs, and behaviors pertaining to religion as measured by social surveys. This is especially evident in the work of Rodney Stark, but began as early as 1904 in Max Weber's seminal work *The Protestant Ethic and the Spirit of Capitalism.*

Louis Althusser critiqued empiricism as a methodological stance and argued against the empirical process of knowledge, claiming that theoretical discourse is a "production," making empiricism itself ideological and dogmatic, and therefore not scientific. According to Althusser, "facts" of theoretical discourse are tied to theoretical practice, making knowledge itself a form of discourse.

SEE ALSO *Kuhn, Thomas; Methodology; Methods, Research; Positivism; Revolutions, Scientific*

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EMPLOYMENT

Employment measures the number of employees in a country, region, or sector. Employees are generally defined as persons on payrolls, that is people who are compensated for the work they perform. Depending on the particular definition, this may or may not include self-employed people, also called proprietors, who work for themselves. Along with unemployment, employment (including proprietors) constitutes the labor force. Including people working without pay, for example housewives, volunteers, and sometimes armed forces, one obtains the workforce. Finally, all the population capable of working constitutes the manpower.

MEASUREMENT

Measurement of employment is quite diverse across countries, which makes cross-country comparisons difficult. There can be variations in definitions, coverage, data collection methods, information sources, and estimation methods. For example, the United States publishes employment data from two different sources. The National Current Employment Statistics (the so-called establishment survey) from the Bureau of Labor Statistics does not cover agriculture, hunting, forestry, fishing, the armed forces, and private household services. Sick leaves, paid holidays, and employees on strike (but not the whole period) are counted. The Current Population survey (the so-called household survey), also from the Bureau of Labor Statistics, covers the civilian population sixteen years of age and older in all sectors, except armed forces. It counts as employees those who "(1) did any work at all as paid employees, worked in their own business or profession or on their own farm, or worked fifteen hours or more as unpaid workers in a family-operated enterprise; and (2) all those who did not work but had jobs or businesses from which they were temporarily absent due to illness, bad weather, vacation, childcare problems, labor dispute, maternity or paternity leave, or other family or personal obligations, whether or not they were paid by their employers for the time off and whether or not they were seeking other jobs."

Intertemporal comparisons of employment are more reliable, although they can also be subject to changes in definition or coverage. For example, the introduction of child labor laws and mandatory schooling has increased the minimum age considered for employment statistics.

Most frequently, employment data is based on surveys, sometimes complemented by various techniques to increase precision or interpolate between data points. Employment may also be inferred from data provided by trade unions, trade associations, social security administration, or other government agencies.

LONG-TERM TRENDS

The sectoral composition of employment has changed considerably in human history. Because under a strict definition of employment self-employment is not considered, a labor market with an explicit exchange of work for payment evolved sometime during the last millennium, after both the introduction of money and the existence of surplus labor in agriculture. This surplus labor made the specialization of tasks possible, in particular for various manufacturing trades. Once production expands beyond the abilities of a family, external labor needs to be hired and a labor market is born. The extent of this labor market has been very limited, however, for a long time, in particular as slavery and servitude are not considered to be employment. It is the Industrial Revolution that allowed a significant take-off of employment, through the creation of factories where proprietors constituted a very small minority of workers and the preceding second agricultural revolution that created significant excess labor on farms. Even in the twenty-first century, employment measures typically exclude agriculture, as the latter is still considered to be largely the domain of proprietors.

In all industrialized economies, employment has thereafter gradually shifted toward services, which now typically constitute a larger share of employment than manufacturing. Employment also requires better skilled workers and has an ever-increasing share of female employees. Better skills are required to operate or monitor more sophisticated machinery, to provide more elaborate services, or to use computers. The increased female involvement in employment can be traced back to two main factors: (1) the emancipation of women breaking the traditional role of the housewife, along the decline of the wage gap with men; and (2) significant improvements in technology used in housekeeping (such as washing machines and vacuum cleaners) that made it possible to pursue paid work outside of the house.

One source of considerable controversy is whether technological progress has a positive impact on employment or not. As was the case with the Industrial Revolution, rapid technological progress can lead to a massive sectoral reallocation of employment, which does not necessarily mean a reduction in employment. For example, while the introduction of the steam engine rendered horses obsolete for most of their original tasks, such obsolescence is more difficult to reach for humans, given

their versatility and their ability to adapt. But this still happens, in particular for workers close to retirement. On a more microeconomic level, technological progress simultaneously destroys and creates jobs. In this context, several kinds of technological progress can be identified, depending on how they alter the aggregate capital/labor ratio in the production progress; it is labor augmenting if progress reduces this ratio, labor saving otherwise, or nonbiased if it leaves the ratio unchanged. Over the long term, the capital/labor ratio has increased steadily, both through capital accumulation and through a reduction in the work hours. The labor income share, however, does not exhibit any particular trend and there is no conclusive relationship between the unemployment rate and various measures of the growth rate.

The last two decades of the twentieth century witnessed another important development: globalization. The wage pressure from developing or emerging countries influenced employment, in particular for low skill jobs in manufacturing, but also increasingly for higher skilled positions in services. There is, however, no agreement among scholars whether this impact has been significant at the macroeconomic level (it certainly was in some sectors of the economy), and whether it has been negative at all. Indeed, while some jobs were "exported," the availability of intermediate goods at lower prices increased the productivity of some sectors that then expanded. It is, however, clear that lower skilled workers face reduced employment opportunities, a phenomenon that started even before globalization accelerated.

INFORMAL EMPLOYMENT

One important distinction in the labor market is between formal and informal employment. There are many definitions of informal employment, the most common being employment that escapes taxation and regulation, and thus is not protected by the government: Various social programs do not apply to informal workers, such as unemployment insurance, social security, some labor laws (in particular the enforcement of contracts), or invalidity and accident coverage by the government. Informal employment is much more widespread in developing economies, where social programs are less common and tax authorities have less control. Yet informal employment is still present in developing economies; for instance in 2000 Friedrich Schneider and Dominik H. Enste estimated informal employment to reach around 10 percent of employment in the United States, higher in other countries, typically those with higher labor income tax rates or inefficient taxation.

As the informal sector escapes regulation, it is generally viewed that it should be limited. In many cases, however, it is a response to overregulation or corruption. Workers may migrate between formal and informal sectors as opportunities arise, the informal sector often being regarded as a stepping-stone in which skills are learned before being hired in the formal sector. Accordingly, wages are lower in the informal sector. Informal firms are typically family based and small, have low productivity, and have very low capital intensity. Workers are hired on a casual basis on arrangements of short duration.

CHILD LABOR

One aspect of labor markets, especially in developing economies, is child labor. One commonly defines child labor as the participation of school-aged children on a regular basis in the labor force in order to earn a living for themselves (street children) or to supplement household income. The International Labour Organization (ILO) divides child labor into three categories: (1) labor that is performed by a child who is under the minimum age specified for that kind of work defined by national legislation, and that is likely to impede the child's education and full development; (2) labor that jeopardizes the physical, mental, or moral well-being of a child, either because of its nature or because of the conditions in which it is carried out, known as hazardous work; (3) the unconditional worst forms of child labor, which are internationally defined as slavery, trafficking, debt bondage and other forms of forced labor, forced recruitment of children for use in armed conflict, prostitution and pornography, and illicit activities.

The national laws of most industrialized countries abolished child labor by the end of the nineteenth century. However, in 2000 Douglas Kruse and Douglas Mahony estimated that several hundred thousand children work illegally in the United States. Worldwide, the ILO estimated (with considerable uncertainty) that 218 million, or 16 percent of children aged five to eleven were working in 2004, 126 million in hazardous work.

The ILO pushes very hard to eliminate child labor where it is the most prevalent, in developing countries. While the strategy is generally to have governments ratify conventions and implement child labor laws, those methods are often insufficient. As long as schools are sufficiently effective in providing education (not a given), parents are very aware of the high returns to education. Yet they often send their children to work because their contribution is needed to sustain household income. As the children do not get an education, their income as adults will be too low to allow their offspring to go to school. Breaking these vicious circles is the key to eliminating child labor, as the implementation of child labor laws in North America or Europe has shown.

BUSINESS CYCLES

All economies are subject to fluctuations and one important aspect of business cycles is the systematic changes in employment. Indeed, in most cycles and most economies, employment and gross domestic product (GDP) evolve in tune: GDP and the total number of hours worked typically reach their peaks or troughs at the same time and fluctuate about as much. Employment, however, tends to fluctuate (in percentage terms) less than GDP and tends to lag the movements of GDP by a few months. While these regularities can be observed across all economies, there are some striking differences. For example, fluctuations in total hours worked in some economies tend to happen on the intensive margin (hours per worker) rather than on the extensive margin (employment). In other words, there are more changes in overtime or undertime than hiring and firing. This is true for several European economies, but not for the United States, primarily because of the influence of labor laws, labor market traditions, and unions.

There are also clear patterns through the business cycles in terms of hiring and firing. Plant level studies have revealed that most of the fluctuations in employment can be explained by job destructions: These are high in a recession and low in booms. Job creations are, however, much more stable through the business cycle. It is also generally observed that employment fluctuates significantly more for less educated workers.

POLICY

Many government policies affect employment, and it is impossible to review them all. One can distinguish between those that have an impact on the average level of employment, and those that try to mitigate employment fluctuations. Whenever policy is involved, some welfare criterion needs to be established if one is to determine whether policies are good or bad. In this respect, psychologists consider that it is good for people to be employed, as this improves their self-esteem. Sociologists would consider the negative impact on one's standing in society due to unemployment. Employment of women is considered to be a necessary part of their empowerment. Economists consider the fact that people would not necessarily want to work: They appreciate leisure more than work, and one symptom of this is that they are paid to work, instead of paying for this privilege. However, employment is a way to obtain the income necessary for consumption and savings. There are also various frictions on the labor market, such as the transaction costs and the difficult matching process between vacancies and unemployed workers, which make full employment unattainable. Thus, high employment is preferable, but not at any cost. However, child employment should be reduced to a minimum. Also, given that households generally do not like fluctuations in income, as they imply fluctuations in consumption, policies that stabilize employment are considered preferable, as long as they do not reduce average employment too much.

Employment is influenced indirectly but sometimes significantly by various policies, such as provisions of the tax code. For example, high or increasing marginal tax rates are known to discourage the participation of spouses on the labor market. The so-called marriage penalty in some tax codes—whereby the incomes of two spouses are added to determine the tax rate instead of considering the incomes separately—has the same effect.

Employment policy is enacted to improve working conditions or facilitate the employment opportunities of some workers. Those categorized as active employment policies include job placement agencies, labor market training, and subsidized employment. Passive policies include unemployment insurance and early retirement programs. Scholars, including David Grubb and John Martin, debate the effectiveness of these policies, in particular in light of their costs, which lead to an indirect discouragement of employment through higher tax rates. Or a generous unemployment insurance system may also encourage unemployed workers to reject job offers in the search of better matches, thereby lowering employment and increasing the costs to fill vacancies.

Labor laws are put in place to prevent abuses and to organize the labor market. They may also have perverse effects on employment. For example, laws putting restrictions or making it more difficult to lay off workers may prevent them from being hired in the first place, especially in sectors where employment would exhibit stronger fluctuations or where workers may have private information about their qualifications. Finally, generous minimum wage laws are generally thought to have adverse effects on employment, as some employers would not open vacancies if wages have to be higher. While there is controversy in the literature about this, the employment effects of minimum wages may simply be small.

This discussion may give the impression that any intervention in the labor market has harmful effects. Labor markets have particular characteristics that make government intervention necessary, but without excess as negative indirect effects may outweigh positive direct effects. The right to unionize is enforced to counter the monopoly power that employers have in a very fragmented labor market. But too much union power leads to excessive negotiation power for employees, and then to high wages that prevent the hiring of additional workers.

Stabilization of employment through the business cycle is generally viewed through the lens of avoiding fluctuations in unemployment. Monetary policy has a long

tradition of playing with the trade-off between (expected) inflation and the unemployment rate, the so-called Phillips curve. Monetary policy has, however, shifted from an active stance in the Keynesian tradition to a more passive stance seeking to stabilize inflation at rather low levels. It has been recognized that monetary policy can do little about (un)employment due to large delays and uncertainty about the impacts.

Fiscal policy has and is still being used for stabilization purposes in some countries, but again the tendency is toward a hands-off approach. Where it is applied, it is through public works programs, temporary tax breaks directed to firms to encourage hiring or to prevent layoffs, or income tax breaks to encourage consumption and economic activity in general. Again, such policies are not generally viewed to be advisable as delays in implementation or effectiveness are typically longer than a recession. However, they have a certain political appeal.

SEE ALSO *Beveridge Curve; Blue Collar and White Collar; Business Cycles, Empirical Literature; Business Cycles, Political; Business Cycles, Real; Business Cycles, Theories; Child Labor; Economics; Economics, Keynesian; Economics, Labor; Employment, White Collar; Informal Economy; Labor; Labor, Marginal Product of; Labor, Surplus: Conventional Economics; Labor, Surplus: Marxist and Radical Economics; Labor Demand; Labor Force Participation; Labor Law; Labor Market; Labor Supply; Labor Union; Leisure; Macroeconomics; Misery Index; Monetarism; Okun's Law; Phillips Curve; Self-Employment; Skill; Sociology; Unemployable; Unemployment; Unemployment Rate; Unions; Wages; Work; Work Day; Work Week; Working Class; Working Day, Length of; Workplace Relations*

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EMPLOYMENT, WHITE COLLAR

The concept of "white-collar" employment has been deeply embedded in ordinary language since the early twentieth century, denoting those who work in offices and apart from the dirtier "blue-collar" world of manual or physical labor. Historically, when the large majority of work was of the latter type and large corporations were just beginning to expand the ranks of office workers, the "white collar" symbolized new opportunities for upward mobility. Over time, however, an increasing economic complexity has created new categories and blurred the original lines, so that the term has gradually lost usefulness as an analytic concept. In 2006, the U.S. Bureau of Labor Statistics declared that "the white collar and blue collar series are no longer useful categories and will be discontinued in 2007" in compiling its Employment Cost Index data.

For most of the twentieth century, white-collar employees were united by some perquisites that distinguished them in practice from blue-collar workers. For one thing, they were treated as nonproduction overhead and were, therefore, protected to a considerable extent from efforts to control production costs. White-collar workers were also paid salaries, rather than wages, and they generally enjoyed a high degree of job security. When layoffs were needed in production downturns, it was generally those on the factory floor who were let go.

White-collar employment grew substantially during the twentieth century, primarily at the expense of farm and manual workers. According to the Bureau of the Census data, white-collar workers increased from 17.6 percent of total employment in 1900 to 59.9 percent in

2002 (analyzed and reported by the Department for Professional Employees 2003, p. 5). But this general statement obscures many crucial distinctions.

CONCEPTUAL AND DEFINITIONAL INCONSISTENCIES

Even in its early usage, "white-collar" was less than coherent conceptually, covering at least three radically different types of workers. Clerical occupations were largely female, low-status, and low-wage; managers and professionals, on the other hand, were largely male and high in status and pay. A third piece of the white-collar picture was comprised of professionals, who themselves changed dramatically in status from largely independent workers in the early part of the twentieth century to primarily working for corporations at the end. There was practically no mobility among these three categories, and their wages varied widely. As unionization advanced in mid-century, for example, clerical workers were paid less than blue-collar workers, but managers and professionals were paid more.

This conceptual inconsistency has grown even more marked and complex with the growth of services and knowledge work. Beneath the seemingly precise counts in various surveys lie important dissimilarities in definitions. For example, most analysts believe there has been a significant growth in service work since the early 1900s, though they disagree on how to define it. Service work is, in some sense, different from the production of "things," which defines blue-collar work, but service workers are not necessarily white-collar. Building maintenance, for example, is certainly "manual" in nature, but it is not considered "office work."

The Census data calculate that about 14 percent of the U.S. workforce is in services, though an independent analysis by Marc Uri Porat in 1977 put the percentage at 30 percent, without counting "information workers." This is just one indication of the inconsistencies in the field.

Many analysts argue that a large economic discontinuity has occurred with the growth of "knowledge work" as a key part of the economy. There have been many attempts to count knowledge workers, starting with Fritz Machlup's pioneering 1962 study. The estimates continue to vary rather widely, depending on what assumptions are made, but it is clear that adding this category produces a radically different view from that based on "collar." For instance, a recent study by Edward Wolff estimates that 15 percent of the workforce in 2000 were knowledge workers (producing new knowledge), 44 percent were data workers, 14 percent were service workers, and 24 percent were goods producers.

Percentages of workforce by "Collar" categories

	White-collar	Blue-collar	Other
Management occupations	4.6		
Business and financial operations occupations	4.2		
Computer and mathematical occupations	2.3		
Architecture and engineering occupations	1.8		
Life, physical, and social science occupations	0.9		
Community and social services occupations			1.3
Legal occupations	0.8		
Education, training, and library occupations	6.2		
Arts, design, entertainment, sports, and media occupations	1.3		
Health-care practitioners and technical occupations	5.0		
Health-care support occupations			2.6
Protective service occupations			2.3
Personal care and service occupations			2.4
Sales and related occupations	10.7		
Office and administrative support occupations	17.5		
Farming, fishing, and forestry occupations			0.3
Food preparation and serving-related occupations		8.3	
Building and grounds cleaning and maintenance occupations		3.3	
Construction and extraction occupations		4.9	
Installation, maintenance, and repair occupations		4.1	
Production occupations		7.9	
Transportation and material moving occupations		7.4	
Total	55.3%	35.9%	8.9%

SOURCE: Analysis based on May 2005 estimates from Occupational Employment Statistics (OES) Survey of the U.S. Bureau of Labor Statistics. http:/stat.bls.gov/oes/home.htm.

Table 1

KEY THEORETICAL TREATMENTS

Theoretical treatments of white-collar work have struggled to identify consistent patterns, hampered in part by the diversity of definitions. One of the most famous, C. Wright Mills's *White Collar*, focused on administrative staff in large corporations in the late 1940s. Mills found that these workers were caught in a psychology of "pres-

tige striving," with no independent basis of identity, and he predicted they would remain a weak and confused force socially and politically. Marxist treatments, such as that of Nicos Poulantzas, have also often suggested that white-collar workers lack a clear class identity and can potentially be drawn to either side of the primary class divide. Some, however, have identified distinct and independent forms of white-collar consciousness: Barbara and John Ehrenreich sketched a new "professional-managerial class"; Robert Merton sketched a "bureaucratic personality" based on "strong sentiments which entail devotion to one's duties, a keen sense of the limitations of one's authority and competence, and methodical performance of routine activities"; and Olivier Zunz suggests that middle managers and professionals in America have adopted a distinctive "rational" ethic. Scholars of Nazi Germany, meanwhile, have suggested that white-collar workers provided a reactionary base for Hitler's rise (Kocka 1980).

RECENT DEVELOPMENTS: PRODUCTIVITY, UNIONIZATION, AND SECURITY

The growth of white-collar occupations has posed a new problem for economic analysts: The productivity of these workers is very hard to measure. There was deep concern in the 1980s about the slowdown of productivity growth, especially in the white-collar and technical ranks. However, this concern was accompanied by a debate about whether the slowdown was real or merely an artifact of measurement failure. Steven Roach, the chief economist at the investment bank Morgan Stanley, suggests that "it may well be that white-collar productivity improvements are simply much harder to come by than blue-collar ones" (Roach 1998).

A good deal of attention has been paid to the potential for unionization of this sector. Many scholars and practitioners have assumed that white-collar workers are resistant to unionism because of their identification with management, and for the first half of the twentieth century their unionization rate was apparently very low. In some countries, such as Sweden, however, white-collar employees (including managers) have formed strong unions of their own; and since the 1950s there has been a substantial growth of white-collar unionism in the United States as well—especially among professionals such as teachers and nurses.

Among the most dramatic and important developments since the 1970s has been the breaking of the widely recognized "psychological contract" of loyalty and job security between corporations and their white-collar forces. Beginning with the 1974 recession, and accelerating greatly in the 1980s, corporate managers began to explicitly consider middle managers as a focus of potential cost saving. This was in part a rational response to the growing weight of white-collar labor costs, but it was also linked to a broader ideological shift that downplayed the value of stability and security and emphasized instead values of entrepreneurship and individual risk taking. Though economists have found only modest evidence of real changes in white-collar employment tenures, there has been strong documentation (e.g., Leinberger & Tucker 1991, Heckscher 1995, Cappelli 1999, and Newman 1998) of a sharp shift in "mindset" among managers and technical staffs. There is now a mix of fear and anger at the loss of security and enthusiasm for new opportunities, though this mindset has not yet settled into a consistent attitude toward the widespread changes these workers are facing.

SEE ALSO *Blue Collar and White Collar; Employment; Management; Mills, C. Wright; Occupational Status; Self-Employment*

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ENCLOSURE MOVEMENT

SEE *Primitive Accumulation.*

ENDOGENOUS PREFERENCES

Preferences are endogenous when they are determined by, and may change as a result of, other factors. Preference endogeneity appears as an issue, for example, in explaining behavior driven by altruistic, reciprocal, or envious preferences, conformity to social norms, and the effect of persuasive advertising. Although it may appear obvious to noneconomists that preferences change and that economists should account for them, standard neoclassical economic theory takes preferences as exogenous. There is no doubt that apparent evidence for unstable preferences can be explained by suitable ad hoc assumptions embedded into stable, and exogenous, utility functions. Nevertheless, it is questionable whether ad hoc assumptions can be held as serious competitors to more psychologically realistic views of preferences as subject to change.

But endogenous preferences are unattractive to many economists for understandable reasons: (1) neoclassical economic theory assumes utility maximization of a stable utility function, and the risk of allowing the utility function to change is to be able to explain everything by suitable tinkering, and thus explain nothing; (2) endogenous preferences typically imply a loss of parsimony in the economic model, a loss accepted as essential by some (e.g., Bowles 1998) but not by most; and (3) endogenous preferences also make welfare analysis more difficult since normally welfare is measured in terms of utility, and if the utility function changes as a result of a policy change, the metric on the basis of which welfare is measured also changes. A partial solution to problem three is to show that a policy change is better, or worse, according to the preferences held both before and after the policy change. Problems one and two might be answered by good theory and evidence combined.

There is clear evidence for the instability and endogeneity of preferences in specific setups. For example, when decision makers repeatedly face a new situation, such as a market in the experimental laboratory, a learning process takes place where agents shape their preferences in interaction with the market setup. Gary Becker and Kevin Murphy (1993) reviewed the ten U.S. companies with the largest ratio of advertising expenditures to sales, and noted that many of the products the companies produced—such as chewing gum, beer, or cola—conveyed no or very little information. Among others, Samuel Bowles (1998) and Daniel Zizzo (2003) reviewed a variety of evidence on the endogeneity of altruistic, reciprocal, and envious preferences.

The status of theories of endogenous preferences is, however, less satisfactory. Institutional economics accounts, such as Wilfred Dolfsma (2002), are interesting but generic. Behavioral economics models do little more than arbitrarily postulate certain endogenous relationships. Evolutionary game-theoretical models of altruistic, reciprocal, and envious preferences abound (e.g., Bowles 1998), but they typically involve zero-rational agents (where a modicum of rationality could make a difference) and are liable to criticism as evolutionary just-so stories. Artificial-intelligence approaches (based on neural network or hybrid modeling) may help and may be testable against data, but have so far been mostly neglected.

SEE ALSO *Lexicographic Preferences; Preferences; Preferences, Interdependent*

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ENDOGENOUS VARIABLES

SEE *Variables, Predetermined.*

ENERGY

The broadest definition of energy is the ability to do work. Human societies tap into various forms of energy, including chemical energy in biomass, natural gas, coal, and petroleum; nuclear energy in uranium; gravitational energy captured in hydroelectric plants; wind energy; and solar energy. Energy is usually measured in British thermal units (BTUs). A BTU is defined as the amount of heat energy that will raise the temperature of one pound of water by one degree Fahrenheit. In 2005 the world economy obtained about 40 percent of its nonsolar energy from petroleum, about 23 percent each from natural gas and coal, 8 percent total from hydroelectric, wind, and thermal sources, and about 6 percent from nuclear. Most of this energy is used in the industrialized world, although the most rapid growth in energy use is occurring in the industrializing world, especially China. The largest use of energy by far is for industrial production and transportation.

Energy has been a crucial factor in human cultural evolution. The evolution of increasingly complex human societies was driven by the capacity to harness energy. Harnessing energy may have also played a key role in our biological evolution. The large human brain, unique even among primates, has enormous energy requirements. The human brain represents about 2.5 percent of body weight and accounts for about 22 percent of resting metabolic needs. This large energy requirement was met by a much higher proportion of protein in the diet of early humans and the use of fire to predigest meat. The use of fire played a role in the anatomical development of our species—larger brains and shorter guts—and paved the way for further advances in technological and cultural evolution.

Beginning about 10,000 years ago, early agricultural technology harnessed flows of solar energy in the forms of animal-muscle power, water, and wind. With the widespread use of wood for fuel, humans began to tap into stocks of solar energy rather than flows. The use of stocks of energy made it possible to capture ever larger amounts of energy per capita with smaller amounts of effort. Wood, wind, and water power fueled the industrial revolution, which began in the early eighteenth century. In the nineteenth century, ancient solar energy, fossil hydrocarbons in the form of coal, rapidly became the fuel of choice. During the twentieth century, petroleum and natural gas replaced coal as the dominant fuel. Each step in the history of energy use has been characterized by a dominant fuel type that is increasingly flexible and substitutable.

Since our industrial economy depends so heavily on fossil fuels, an obvious question is, "Are we running out of it?" Most economists answer this question with an emphatic "No!" As energy becomes scarce, its price will increase, calling forth substitutes, increasing conservation efforts, and encouraging more exploration for new supplies. Economists point out that past warnings of impending shortages have proved to be greatly exaggerated. Critics of the economic argument counter that the inverse relationship between energy supply and energy demand may be trivially true, but this does not mean that the increasing scarcity of an essential resource like petroleum can be easily accommodated. The economic argument also ignores the geopolitical consequences of the waning of the petroleum age.

A useful supplement to the price-based analysis of economists is the concept of energy return on investment (EROI). This is a measure of how many units of energy can be obtained from a unit of energy invested. If the EROI is less than one, it makes no sense to tap that energy source, no matter how high the price.

Although the world uses many types of energy, none of them have the flexibility and high EROI of petroleum. Of paramount concern is when world petroleum production will peak and start to decline. Most predictions of when worldwide oil production will peak are based on variations of a model developed by the geophysicist M. King Hubbert in the 1950s. He created a mathematical model of the pattern of petroleum exhaustion assuming that the total amount of petroleum extracted over time would follow a bell-shaped pattern called a logistic curve. Past experience for individual oil fields shows that once peak production is reached, production tends to fall quite rapidly. A number of petroleum experts argue that technological advances in the past decade or so have extended the peak of the Hubbert curve for specific oil fields, but this has made exhaustion more rapid after the peak occurs. Since oil is limited, policies promoting technology to make more energy available today mean that less will be there in the future.

Estimates of when world oil production will peak run from 2005 (production has already peaked) to 2030, with most predictions clustering around the years 2010–2012. Predicted consequences of declining oil production range from catastrophic scenarios as agricultural and industrial outputs plummet, to relatively mild scenarios as the world's economies endure inflation and temporary economic hardships to adjust, to the rosy scenarios of free-market fundamentalists who claim that markets will quickly call forth substitutes and conservation that overcome the scarcity of any particular fuel type.

It is impossible to predict how the world's economies will adjust to the end of the fossil-fuel age. So far energy policies in the developed and developing worlds have shown little concern for the limited amount of fossil fuels. What happens in the future depends on how much developing economies (especially China) grow and how energy-dependent they become. Also of concern is how the rest of the world will react to the growing concentration of petroleum reserves in politically volatile areas and to the increasingly ominous effects of global climate change.

SEE ALSO *Energy Sector; Solar Energy*

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ENERGY INDUSTRY

The *energy industry* has evolved with the industrialization of the world economy and rising consumer incomes. Many sources of energy have been important in human history, including dung, timber, and whale oil. The modern energy industry, however, is focused primarily on coal, crude oil, natural gas, and electricity.

COMPOSITION OF GLOBAL ENERGY CONSUMPTION

As reported in the *BP Statistical Review of World Energy*, in 2005 oil accounted for 36.4 percent of total world energy consumption, followed by coal at 27.8 percent, natural gas at 23.5 percent, hydroelectricity at 6.4 percent, and nuclear energy at 5.9 percent. The composition of energy consumption differs remarkably across regions due to the relative costs of consuming differing energy sources, as determined by the relative abundance of domestic energy supplies and the stringency of environmental regulation. In North America oil accounts for 40.4 percent of total energy consumption, followed by natural gas at 24.9 percent, coal at 21.9 percent, nuclear energy at 7.5 percent, and hydroelectricity at 5.3 percent. This differs substantially from the composition of total energy consumption in the Asia-Pacific region, for example, where coal is the major energy source accounting for 48.1 percent, followed by oil at 32.6 percent, natural gas at 10.7 percent, hydroelectricity at 4.9 percent, and nuclear energy at 3.6 percent. China and India account for 79 percent of all coal consumption in the Asia-Pacific region and 44 percent of total world coal consumption.

CRUDE OIL MARKETS

Crude oil has evolved from an industry controlled by a small number of vertically integrated companies in which there were few market-based transactions to an industry in which crude oil is a commodity traded on organized exchanges—such as the New York Mercantile Exchange futures contract, which began trading in 1983—as well as on over-the-counter spot markets (Verleger 1982). The distinguishing feature of the crude oil market since 1973 is the resource cartel known as OPEC, the Organization of Petroleum Exporting Countries. The large oil price increases of 1973 and 1979 are generally attributed to the exercise of market power by OPEC, though there are several alternative hypotheses about OPEC's behavior (Gately 1984). James M. Griffin (1985) and Clifton T. Jones (1990) provide direct empirical evidence on OPEC behavior. Their empirical analyses suggest that OPEC engaged in cartel behavior during periods of rising as well as falling prices. The empirical evidence is also consistent with competitive behavior on the part of non-OPEC producers of crude oil.

OPEN ACCESS ENERGY TRANSMISSION

The recent restructuring of natural gas and electricity industries around the world is based on the separation of the energy commodity from its transmission. These energy industries had been organized as natural monopolies in which a single regulated firm provided service to all customers. Under this organization, merchant transporters purchased energy upstream and resold it downstream. The move toward a system based on a property right in transportation has allowed for multiple owners and promoted a more competitive organization of these energy markets. Through use of transportation rights and

contracts nearly any organizational structure can be created for pipelines and electricity transmission, including all the historical forms of merchant carriage, common carriage, contract carriage, and vertical integration.

When a property right in transportation is issued, for example by a pipeline, the pipeline becomes a supplier of transportation rights rather than a supplier of transportation. The holders of the rights are the ones who supply transportation and this supply is allocated through the market (De Vany and Walls 1994c; Smith et al. 1988). Property rights in transportation capacity have decentralized control, permitting users to acquire transportation interests through purchase or by contract.

NATURAL GAS

Before open access gas transmission there was no competitive market for natural gas (Smith et al. 1988; Teece 1990; De Vany and Walls 1994a; Michaels 1993). Regulators organized the industry as separated monopolies. Transportation and gas were bundled together and buyers and sellers did not have direct access to one another. As a result, gas purchases were made under long-term contract (Mulherin 1986a; Mulherin 1986b). These regulatory policies balkanized the natural gas industry and disconnected the pipeline grid. Even though, over time, a vast grid of pipelines developed to serve users, its competitive power was nullified because the grid was disconnected and gas flows were fixed.

As a result of open access transmission, much pipeline capacity has been reallocated from the pipelines to their customers. In the U.S. interstate gas market, control of transportation has been decentralized, with 1,400 local distributors holding transportation rights on twenty-one major interstate pipelines (Bradley 1991). Open access transmission brought forth new markets where none had existed; over fifty gas spot markets now exist at scattered points throughout the pipeline grid (De Vany and Walls 1994c) and they have been extremely successful in disciplining prices and allocating natural gas (De Vany and Walls 1994b; De Vany and Walls 1996).

ELECTRIC POWER INDUSTRY RESTRUCTURING

The electricity industry in the United States—and in many other countries around the world—is in the midst of fundamental change as a result of regulatory reform aimed at restructuring the industry, in order to introduce and increase the intensity of competition in wholesale and retail markets. Contrary to the situation in a number of other countries, in the United States restructuring efforts have been hampered by divided regulatory jurisdictions. (See, for example, the discussion in Brennan [2003] for legal and economic perspectives on the roles of different levels of government in a federation.) The federal government has jurisdiction over wholesale electricity sales and movement because electricity at the wholesale level crosses state borders and therefore qualifies as interstate commerce. (In addition to interstate trade, there is substantial Canada–U.S. trade in electricity that adds another level of institutional complexity. See Feldberg and Jenkins [2003] for a brief legal and institutional analysis of this issue.) Retail markets, on the other hand, are under individual states' jurisdiction. This historical fact has led to a patchwork of different rules and regulations governing electricity markets.

Currently, according to a 2002 U.S. General Accounting Office report, twenty-four states and the District of Columbia have enacted legislation or issued regulatory orders to open their retail markets to competition. However, of these, seven states have either delayed or suspended implementation of restructuring and the remaining twenty-six states have not yet taken any steps to introduce competition at the retail level. The result of this divided jurisdiction and diverse approaches to restructuring has been the introduction of a great deal of regulatory uncertainty into the market. This uncertainty is having an impact on the development of new generation facilities.

POWER PLANT INVESTMENT

One key feature of restructuring has been a move away from centralized planning of new generating capacity and transmission upgrades by unities and state-level public utilities commissions. Instead, a decentralized process of development and investment decisions—largely by non-utility companies—is evolving. The development plans of these companies are not subject to approval by public utilities commissions nor are they coordinated by a central body. Because the development process can be long, regulatory and market conditions may change considerably, causing developers to reassess the relative merits of each of their projects during development, in response to both volatile energy prices and long and uncertain state and federal approval processes.

Power plant investment is higher in states that have restructured electricity markets than in states that have taken no restructuring actions (Walls, Rusco, and Ludwigson, in press). Development is also more prevalent in areas of the country with a robust wholesale market infrastructure. Ownership of new power plants also differs across states, with non-utility companies accounting for the bulk of new power plants in states taking restructuring actions, while utilities still have a strong or dominant role in new development in states that have not restructured at all. States' decisions to implement retail competition result in more investment in new power plants.

NUCLEAR POWER

In 2005 there were 440 operating nuclear power plants in thirty-one countries and these accounted for 16 percent of the world's electricity supply (World Nuclear Association 2005). However, with few exceptions, there has been no new construction of nuclear power plants in the restructured electricity markets. Nuclear power plants have been plagued by problems of public acceptance and waste disposal. There are also important regulatory and financial issues that act as disincentives to the development of nuclear generating plants in liberalized power markets. Nuclear power plants are unattractive to for-profit electricity generation companies due to the extremely large up-front cost associated with nuclear construction and the large correlation between electricity prices and fossil fuel prices. Merchant power producers are interested in locking in the spread between input and output prices. When power prices fall, fuel input prices also fall for conventional fossil-fueled power plants. However, nuclear plants are extremely unprofitable under this scenario, leading to the decision of most private investors to not choose nuclear power units (Roques et al. 2006).

ENERGY AND THE MACROECONOMY

James Hamilton (1983) presented the first systematic analysis of the effects of oil price shocks on the macroeconomy. His research suggested that the two large price increases in crude oil in the 1970s had a significant real economic impact, lowering economic growth in the United States. However, subsequent empirical analysis has found that this relationship may in fact be asymmetric; Knut Anton Mork (1989) found that shocks increasing oil prices were associated with lower economic growth, but that oil price reductions has no impact on real economic activity. More recent analysis that includes the oil price shocks associated with the Iraqi invasion of Kuwait find that the relationship between energy and macroeconomic activity is very weak, even allowing for asymmetries (Hooker 2002; Barsky and Kilian 2004).

ENERGY AND LABOR

Working conditions and salaries in the energy industries largely reflect the overall labor market conditions for any particular time period and geographic location under consideration. However, one notable difference between the energy industry and most manufacturing or service industries is the requirement that a combination of technical and blue-collar workers be physically present at the specific location where energy resources are extracted from the earth. In the United States—home to most of the world's multinational energy companies and to a large pool of skilled and unskilled labor—this historically led to the formation of communities in the locations where energy supplies were discovered. In other countries where large multinational energy companies operate—such as Nigeria and Russia—a combination of domestic blue-collar migrant workers and expatriate technical workers are employed in energy extraction.

SEE ALSO *Energy; Industry; Petroleum Industry; Solar Energy*

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W. David Walls

ENERGY SECTOR

Twentieth-century affluence in the industrialized countries relied on the highly concentrated energy found in fossil fuels, especially easily accessible oil. Steep increases in the productivity of workers resulted in economic growth and rising household incomes, which transformed the experience of everyday life. In particular, automobile-dependent suburbs spread, and increasingly larger living spaces became filled with electrified appliances of all descriptions.

The industrialized countries, with less than 20 percent of the world's population, still use more than 60 percent of all primary energy. However, most future growth in production and consumption will take place in developing countries with huge populations eager to emulate lifestyles of the affluent. A pressing question is how future demand for energy can be accommodated.

With most commercial energy long provided by fossil fuels, networks of facilities for prospecting, extracting, refining, and distributing are well established. But the richest oil reserves are being depleted, and alternatives to fossil fuels—nuclear power and various forms of renewable energy—pose a variety of challenges requiring substantial investments in research and infrastructure. Such investments will be forthcoming only when alternatives such as nuclear power have long-term prospects for social acceptability, which is necessary for profitability.

Since energy is required for all aspects of production and consumption, a sharp increase in its price can have a substantial dampening effect on the entire economy. The experience of the oil embargo by the Organization of Petroleum Exporting Countries (OPEC) and sharp increases in oil prices in the 1970s demonstrated the vulnerability of even the most powerful oil-importing countries and their susceptibility to panic, inflation, and recession. Some of the incremental wealth amassed by oil exporters ended up as loans to developing countries (in part to pay for oil) that they were unable to reimburse. Such a sequence of events could easily be repeated.

The history of human use of fuels and minerals has been a race between the exhaustion of the richest deposits, which bids up the price, and the development of powerful new technologies that lower the costs by exploiting lower-quality resources or obtaining more work per unit of raw-energy input. Temporarily higher prices for oil could stimulate massive investments in research and infrastructure to expand the long-term supply of energy from unconventional sources. However, the costs and risks, including those associated with the inevitable environmental impacts, may be extremely high. In parallel with the search for new sources of supply, the effective demand for energy services needs to be substantially reduced by changes in the energy-intensive lifestyles made possible by cheap oil.

Lifestyle decisions about housing, mobility, and diet have the most impact on household demand for energy. The affluent have come to require diets rich in animal products, foods transported long distances, large housing spaces with year-round temperature controls, personal cars for trips to work and shopping, and air travel for recreation. It remains to be seen if a marked shift in

lifestyles can be achieved voluntarily, either as a response to crisis or in search of what has been called a "new American dream." One hopes that the race to build consumer societies in developing countries can be based on more sustainable lifestyles. While engineering research and corporate research and development focus on new technologies for enhancing energy supply and improving efficiency, social scientists face the double challenge of developing credible scenarios involving sustainable lifestyles and evaluating possible ways to achieve those scenarios.

SEE ALSO *Energy; Energy Industry; Natural Resources, Nonrenewable; Petroleum Industry; Solar Energy*

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Faye Duchin

ENGELS, FREDERICK

SEE *Poverty, Urban.*

ENGERMAN, STANLEY
1936–

Stanley L. Engerman, the John H. Munroe Professor of Economics and History at the University of Rochester, was born in New York City on March 14, 1936. Engerman, who received BS and MBA degrees from New York University and a PhD in economics from Johns Hopkins University, is a pioneer and major figure in the branch of economic history called "new economic history" or "cliometrics." *Cliometrics*, a term that marries the muse of history—Clio—to the statistical analysis of data, emerged in the 1960s to become a central approach in addressing historical questions.

Engerman is best known for his work on slavery, especially his research with Robert Fogel on the U.S. South. Their two-volume book *Time on the Cross*, published in 1974, revolutionized the historical interpretation of the slave system. By combining the wealth of information that they collected from slave plantations and other sources and employing the techniques of the new economic history, Fogel and Engerman overturned accepted views.

Engerman and Fogel argued that economic incentives of owners and slaves were central to the way slavery functioned. They found that by the approach of the Civil War in 1860, the system had never been stronger economically. Slaves were selling at record high prices, and slave owners enjoyed substantial profits, especially on the larger plantations. Engerman and Fogel showed that, although violence or the threat of violence was part of the life of a slave, positive incentives in the form of better material conditions and even cash payments led to a slave labor force that was highly motivated. Through the statistical analysis of farm data, they also showed that productivity levels were higher than on free farms, especially so on plantations, where cotton was produced using gang labor. Their main conclusions were criticized at first but are now widely accepted.

Engerman's study of slavery has extended to the Caribbean and other parts of the world, where his emphasis has been on the process by which the slaves ultimately gained their freedom. Engerman has often been at the epicenter of the debates about slavery and emancipation; in his presidential address to the Economic History Association in 1985, he summarized some of these debates. Engerman points out that whereas the colonies of mainland North America were settled largely by Europeans, the rest of the Americas received many more immigrants from Africa, who were forced there by an active slave trade. Engerman has helped describe the slave economies, which by the middle of the nineteenth century were producing much of the world's sugar, cotton, coffee, and tobacco. He has also explored the transition of these economies to free labor. Unlike in the United States, which ended slavery through a bloody Civil War, slave emancipation in the rest of the Americas was largely peaceful. Engerman again highlights the importance of economic incentives, showing that, in contrast to what happened in the United States, slave owners in the British colonies received cash compensation for their emancipated slaves. As well, former slaves were required to work for a period of time under regulated conditions, further reducing the cost of emancipation to the owners and easing the transition to free labor.

In the late twentieth century Engerman's work helped get to the heart of economic growth. During the nineteenth and twentieth centuries the economies of the United States and Canada were among the most successful in terms of total output and output per person, whereas other parts of the Americas fell far behind. Yet in 1800 the Caribbean and other regions based on slavery had been among the world's wealthiest, indeed much wealthier than the free Americas that later did so well. Working mainly with Kenneth Sokoloff, Engerman has argued that although the slave system could generate high levels of output and large profits for slave owners, the

extreme levels of inequality led to institutions that could not sustain growth once slavery was abolished. Most importantly, inequality discouraged the flowering of democracy and the establishment of an effective schooling system.

The archetypal inductive scholar, Engerman has been adviser to generations of students and colleagues. In *Slavery in the Development of the Americas* (2004), an edited volume based on the papers of a conference held in Engerman's honor, David Eltis wrote that "his office (with its triple layer of books lining the walls) and home have functioned as a crossroads and clearing house for nearly four decades, not just for new ideas, but also for scholars seeking intellectual assistance and commentary" (Eltis, Lewis, and Sokoloff 2004, p. viii). Engerman has served on numerous editorial boards and edited more than fifteen books, many of which have been highly influential, particularly *The Reinterpretation of American Economic History* (1971), coedited with Robert Fogel; *Long-Term Factors in American Economic Growth* (1986), with Robert Gallman; *A Historical Guide to World Slavery* (1998), with Seymour Drescher; and the three-volume *Cambridge Economic History of the United States* (1996, 2000), coedited with Robert Gallman.

Engerman also has published more than one hundred articles in leading academic journals and edited volumes. Most of these deal with issues associated with slavery, but his work has spanned areas as diverse as fiscal policy, education, international trade, population and migration, industrial development, and the long-run process of economic growth. In addition to being a former president of the Economic History Association, Engerman is a Distinguished Fellow of the American Economic Association.

SEE ALSO *Caribbean, The; Cliometrics; Economic Growth; Fogel, Robert; Inequality, Political; Inequality, Racial; Plantation; Slavery;* Time on the Cross; *U.S. Civil War*

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Frank D. Lewis

ENGINEERING

Engineering is a body of complex knowledge and a sophisticated art. Because it incorporates mathematical and physical sciences in its applications and designs, it is often mentioned together with science. Engineers, however, deal with the operation of things and apply scientific methods to understand and solve problems, whereas scientists focus on the discovery of knowledge. The traditional role of engineering is to apply natural laws in order to meet the practical needs of society. The scope of engineering is broad, ranging from designing a paper clip, to building space shuttles for space missions, to inspecting the Eiffel Tower.

Engineering is of great importance to modern societies. Participation in engineering, however, is closely linked to gender and race. Historically, engineering, like other intellectual endeavors, was considered a white male domain. Women and racial minorities were virtually absent from the development of engineering as a profession, but not because there were no females or minorities with technical knowledge and expertise. Many female and black inventors remained unrecognized because of economic, legal, and political barriers. Cultural assumptions about the "proper" roles of women and minorities and discriminatory practices, both individual and institutional, discouraged and restricted creative activities among women and minorities. This traditional negating of the intellectual achievements and abilities of women and minorities had a long-term adverse impact on female and minority participation in and contribution to engineering.

Engineering education and employment has become more inclusive, due to a variety of progressive reforms, such as the Civil Rights Act (1964), Title IX of the Education Amendments (1972), and affirmative action programs. Furthermore, industrialization and development in defense and information technology industries have created a rising demand for technical workers. As a result, employers turn to nontraditional workers—women, minorities, and immigrants—as an additional source of skilled labor.

The notion that there is a male culture of engineering has been invoked to account for existing gender disparities in the engineering profession. Due to gender role socialization, women tend to lack "tinkering" experience in childhood. This deficit in technical skills presents challenges for female college students in predominantly male fields such as engineering. It has been suggested that the masculine nature of technological work and male dominance in the workplace have made it difficult for female engineers to fit in. The dearth of women in engineering fields in turn helps perpetuate the male culture of engineering.

Prior to 1880, engineering practice in the United States was primarily a private, independent endeavor, but since then it has become institutionalized and professionalized. By contrast, in Britain engineering is still considered a craft-based occupation rather than an elite profession. A traditional emphasis on apprenticeship as the means to obtain practical skills and experience sets British engineers apart from their American counterparts, who undergo formal training in engineering science. In Britain, neither the government nor the private sector has a significant role in the development and expansion of engineering education. It has been argued that the focus on training through apprenticeship limits the development of science-based high-tech industry, and that the "craft" model is responsible for Britain's economic decline. The British engineering population can be categorized into three groups: chartered engineers, technical engineers, and technicians. Unlike autonomous managers, British engineers who perform non-manual technical work enjoy a marginal status in the organizational structure. They organize themselves by unions instead of opting for professional structuring. As a result, engineers in Britain occupy a relatively low social status compared to their European and American counterparts.

Unlike the British, the French rely on elite engineering schools to produce their technical experts. French engineers put a premium on theoretical knowledge. They tend to identify themselves more with high-status management than with low-status technical staff and, as with their American counterparts, they are expected to join the ranks of management. Having formal training in mathematics and science prepares them for their managerial careers. The French engineering workforce is highly stratified, based on divisions among academic institutions and among employers. The same can be said about the German engineering community. However, instead of concentrating on abstract knowledge and basic research, the training of engineers in Germany has incorporated practical training into engineering science. German engineers have played a key role in the nation's industrialization. The vast majority of them are employed by the state and industry.

Engineering in the United States is not a homegrown product. The American engineering profession began to take shape after European engineering practices were introduced into the United States. The government, industry, and academic institutions have collectively shaped the professionalization and internationalization of engineering. Professional engineering in the United States evolved as a synthesis of the British "craft" system, with its focus on the practical and empirical; the French "school" system, with its emphasis on formal and theoretical training; and, later, the German "estate" model, with its orientation toward research. During the nineteenth century, most American engineers were trained on-the-job or through apprenticeship in a machine shop. The British "craft" method became the training system for many American civil and mechanical engineers. Others received formal training at military academies, such as the United States Military Academy at West Point. Gradually, civilian engineering schools replaced military academies as the principal training ground for engineers. After the passage of the Morrill Act by Congress in 1862, civilian engineering schools became the principal producers of engineers. Under this act, the federal government offered land grants to states for the establishment of schools or college programs in engineering. Many academic institutions took advantage of these land grants and began to offer courses in engineering. As the professionalization of engineering took shape, new engineering fields began emerging in the late nineteenth century. Meanwhile, the influence of business and industry on formal engineering training became increasingly stronger. Besides land, a lot of resources are required to set up an engineering school, including expensive laboratory equipment. Through their financial backing of engineering schools and to a lesser extent the training of engineers at their own company schools, business and industry have exerted direct, strong, and enduring influence over engineering curricula as well as the supply of engineers. As a result, the private sector has become a major sponsor and beneficiary of university engineering schools. Although universities have assumed the role of educating engineers, the private sector has maintained its control over engineering education by

offering critical financial backing to engineering programs across the country, new and old.

Economic integration and expanding free trade have made engineering a complex global endeavor transcending national boundaries. With the advent of information technology and advanced telecommunications, transnational projects involving engineers from different cultures are not uncommon. Collaborations in research and development between engineers and scientists from diverse backgrounds are also routine. Engineers can be found in both public and private sectors, and enjoy enormous influence in business and industry.

Engineering is manifested in many facets of our lives. At the end of the twentieth century, the integration of engineering with disciplines such as mathematics, cognitive science, and artificial intelligence resulted in the creation of computer science and information science programs at universities. Many medical applications—such as robotics, artificial organs, radiology, and ultrasound—are the culmination of research pairing engineering and other disciplines.

Because technical competence is so critical for business and industry, engineers have become very much part of the modern system of *technocracy*, or rule by experts. "Engineer-inventors" believe that they can offer technical, logical, and practical solutions to social problems and, eventually, facilitate social progress. Indeed, no one can deny that technological developments have transformed the structure of society and changed our work and lifestyles. Very few people have any real knowledge of the planning, design, and evaluation associated with the creation and maintenance of utilities, buildings and other structures, machines and equipment, and a host of commercial products. But for many people, a world without automobiles, computers, and mobile phones would be unthinkable. Like managers, engineers are trusted by employers to perform sophisticated tasks with little or no supervision. For these reasons, engineers, who enjoy relatively high prestige in many countries, have been called the "production arm," "trusted workers," and "symbolic analysts."

Technological inventions and innovations have served diverse economic, cultural, and political purposes. On the one hand, in democratic societies technology can be a constructive tool used to foster positive social change. On the other hand, it can also be a destructive force, used by a ruling class to preserve domination and control over the masses. Thus, despite the universal applications of engineering designs, engineering is never truly value-neutral.

SEE ALSO *Division of Labor; Machinery; Smith, Adam; Technocracy; Technocrat; Technological Progress, Economic Growth; Technological Progress, Skill Bias; Veblen, Thorstein*

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Joyce Tang

ENLIGHTENMENT

"It was the common presupposition of all thinkers of the Enlightenment that the being of man is implied in and subordinated to the being of nature and that it must accordingly be explained by the same universal laws" (vol. 5, p. 548). So wrote Ernst Cassirer (1874–1945) in the entry on "Enlightenment" in the original *Encyclopedia of the Social Sciences* (1931). To the Dutch philosopher

Baruch Spinoza (1632–1677), Cassirer attributed the idea that the "stirrings and movements of the will on which the world of man is founded are subject to rules just as universal as the movements within the world of physical bodies. There is a mechanics of human inclinations and urges…. This analogy was emphasized so severely by the philosophy of the Enlightenment that it became finally a complete logical identity" (vol. 5, p. 548).

A generation later Hayden White wrote, "It follows that the Enlightenment was altogether misguided in its attempt to construct a science of human nature on the basis of a study of physical nature: understanding cultural phenomena, which are creations of man alone, in terms of incompletely understood natural principles is doomed from the start" (White 1968, vol. 16, p. 314). This passage appeared in the entry on "Giambattista Vico" in the first edition of the *International Encyclopedia of the Social Sciences* (1968), published in an age in which the Enlightenment had fallen on such hard times that it did not even rate a separate entry in that *Encyclopedia*. The inclusion of the present entry in this second edition is indicative of the rising fortune of the Enlightenment not only in its own right but also with respect to the social sciences specifically.

From the 1970s to the 1990s, there were several attempts to place the origins of the social sciences in the eighteenth century. Yet, although the term *la science sociale* was first used around the time of the French Revolution (1789–1799), a consensus has emerged that, whatever was invented by eighteenth-century social theorists, it was not modern social science. When the editor of *History of the Human Sciences* devoted an issue (6 [1] 1993) of that journal to the Enlightenment origins of the social sciences, he received a set of articles that called that very premise into question. Christopher Fox wrote that "we cannot visit the eighteenth century with a modern campus map" (Fox et al. 1995, pp. 3–4). Claude Blanckaert asserted that to name the Comte de Buffon (1707–1788) as the founder of modern anthropology is really to say that Buffon is the earliest author read by modern anthropologists. Roger Smith contended that it is no longer tenable to trace modern disciplines like sociology, psychology, anthropology, and economics back to Enlightenment precursors, as was the practice in many histories of the disciplines throughout the twentieth century. With the expansion of the eighteenth-century canon since the 1970s, historians of the social sciences have found that the configurations of eighteenth-century science, politics, and social theory were much more complicated than indicated by the tidy narratives of Enlightenment and revolution that characterized much of twentieth-century scholarship.

It was against those narratives of individual liberty, limited government, and toleration of religious practice that continental historians in the mid-twentieth century set up an alternative narrative of Enlightenment social science: one that emphasized efficiency in government, technical bureaucracy, and the assimilation of populations into a centrally administered territorial nation-state, all of which converged for one purpose—domination.

Max Horkheimer (1895–1973) wondered how the liberal project of the Enlightenment could have culminated in the authoritarian regimes, death camps, and armed conflict of the twentieth century. Where Vico saw the project of a mathematical, laws-based social science as doomed from the start, Horkheimer found that, in historical terms, that project was only too successful. As enlightened science played out in the nineteenth and twentieth centuries, all particulars came to be understood as mere representatives of universals. All qualities were reduced to quantities, and all things ultimately became identical, including people. The Enlightenment, wrote Horkheimer, represented the triumph of oppressive equality. Quantitative methods became so pervasive that the human and natural sciences, initially intended to eradicate irrational appeals to myth, magic, and religion, became mythic in their own right.

Under the old regime, domination was clearly visible in political and ecclesiastical hierarchies and in the dogmas by which they were legitimized. The Enlightenment produced new forms of domination that were even more insidious because they were not only vindicated by critical reason but were also applied by reason itself. Michel Foucault (1926–1984) characterized every victory of enlightenment as a step further into the darkness of domination. Biology and medicine exposed to light the hidden recesses of the body in search of life, but found only disease and death. Psychology penetrated the rational mind only to discover irrationality and insanity. Prisoners were freed from dungeons only to be captured all the more securely in the light that flooded Jeremy Bentham's (1748–1832) Panopticon prison, and, not only for criminals, the entire world became a prison that subjected the individual to every form of manipulation and control. Language itself was appropriated by reason (and later by positivism), so that every attempt to resist enlightenment only served the cause of enlightenment. Theory was rendered irrelevant. Critique, once the hallmark of the Enlightenment, came to be dismissed as mere belief or ideology, or worse, as art. In place of the human spirit and critical inquiry was the commodification of all things—science and language as well as material culture—and Horkheimer proposed a theorem that the pliability of the masses increased as the quantity of commodities offered to them increased. Even the individual's own self became alienated and objectified through technologies of psychology.

Against the poststructuralist attack on the Enlightenment, several studies have highlighted the intellectual and social network of the international republic of letters that enabled individuals and texts to cross national boundaries and find common ground in ideologies of republicanism, universal human rights, toleration of beliefs and practices, and freedom of thought, all of which went under the heading of "cosmopolitanism."

Despite the reservations of Europeans regarding the legacy of their own supposed Enlightenment, the traditional narrative of Enlightenment liberalism has been appropriated by social theorists in regions briefly (although brutally) colonized and dominated by the European states in the nineteenth and twentieth century. "Post-colonial scholarship is committed, almost by definition," wrote Dipesh Chakrabarty, "to engaging the universals—such as the abstract figure of the human or that of Reason—that were forged in eighteenth-century Europe and that underlie the human sciences" (2000, p. 5). He finds that although it is inadequate, the European narrative of Enlightenment and technological advancement is indispensable to understanding the history and future of "developing" nations. But this was precisely the point made by the poststructuralists: that cosmopolitanism, like all universal systems, was artificially homogenizing. Responding to Immanuel Kant's (1724–1804) "history of pure reason" at the end of the *Critique of Pure Reason* (1781), Johann Gottfried Herder (1744–1803) wrote a *Metacritique* (1798) that argued that there was no such thing as "pure" reason. There was only particular reason. That is, there were no universal ideas or truths, no world soul into which all particular souls were tapped. There were only particular, unique, historical communities, and these were easily extinguished by totalizing systems like universal reason and imperialism of all sorts, whether ancient Roman or modern European. Universal reason was a chimera, perpetual peace a pipe dream.

It was not merely the case that the party of humanity, as Peter Gay called the two dozen or so philosophes who comprised the twentieth-century canon of eighteenth-century thought, was shouted down by counter-enlightened conservatives and reactionaries. The tendency toward mass democracy and domination, both physical and psychological, was never a sinister plot of imposters. It was built into the very Enlightenment itself—built, that is, into cosmopolitanism, universal reason, and the instrumental reason aimed at reforming the inefficiencies and abuses of old regime society.

Writing on the twentieth-century culture industry, Theodor Adorno (1903–1969) augmented Horkheimer's penetrating critique of the technological society by showing that even the objects of individual choice were instruments of homogenizing conformity. Production technology, hailed in the eighteenth and nineteenth century as the means by which Europe could finally cultivate the land and meet its needs efficiently so that the individual could cultivate himself or herself, was transformed into the economic logic of standardization and mass consumption. One city, with its gleaming skyscrapers, was essentially the same as the next. Older houses outside the city center decayed into slums, while new suburban houses were thrown up quickly and cheaply, as if designed to be discarded in a short while like empty food cans. Suburban housing projects were intended to perpetuate the rational-critical individual as an independent unit in a small hygienic dwelling, but in fact they made the individual all the more subservient to the absolute power of capitalism. Adorno took the development from telephone to radio as indicative. The telephone was liberal: it allowed the person to play the role of subject. The radio was democratic: it turned all participants into listeners, authoritatively subjecting them to broadcast programs that were all exactly the same. Other mass spectacles performed the same function, including popular music, cinema, and sports, to say nothing of television. Focus groups and market research, employing the techniques of propaganda, ensured that something was provided for all so that none might escape. Even improvisational jazz was a perfected technique that homogenized all particulars into a universal jargon of style, a style that, in Friedrich Nietzsche's (1844–1900) terms, was "a system of non-culture, to which one might even concede a certain 'unity of style' if it really made any sense to speak of stylized barbarity" (Nietzsche 1917, p. 187; Horkheimer and Adorno 1972, p. 128).

Deeply implicated in the movement from liberal Enlightenment to mass deception were the social sciences. Adorno characterized that movement as an inexorable trend built into the Enlightenment itself. But social scientists themselves worried about their own role in social engineering and manipulation.

Both the modernist view of Enlightenment liberalism as an alternative to twentieth-century totalitarianism and the postmodernist view of the Enlightenment as the source of that same totalitarianism depended on selective readings of eighteenth-century social theorists. In fact, few in the eighteenth century were as sanguine about the power of light and reason as they were made out to be in the twentieth century. Edmund Burke (1729–1797) worried about a world in which power became gentle, obedience became liberal, and all shades of life were harmonized, blandly assimilated, and dissolved. Justus Möser (1720–1794) asserted that the civil administrator who hoped to reduce everything to an academic theory or a few rules paved the road to despotism and lost the wealth of variety. Whether in local administration or global ethnology, particularist sentiments like these were echoed across the continent by

social theorists such as Louis François Jauffret (1770–1840), Aubin Louis Millin (1759–1818), Joseph-Marie Degérando (1772–1842), Johann Jakob Moser (1701–1785), Ludwig Timotheus Spittler (1752–1810), Christoph Meiners (1747–1810), Johann Georg Hamann (1730–1788), and of course Herder. Historical scholarship since the mid-1970s has also celebrated the variety of eighteenth-century social thought in counter-Enlightenment, radical Enlightenment, Enlightenment in national context, and so forth. Just as social science cannot be taken as monolithic, neither can the Enlightenment.

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Michael C. Carhart

ENTERPRISE

An enterprise is a business venture initiated by an entrepreneur, the person who assumes the organization, management, and risks of a business enterprise. Entrepreneurship is considered a factor of production that involves human resources, most commonly performing the functions of raising capital; organizing, managing, and assembling other factors of production; and undertaking business decisions. It involves a combination of initiative, foresight, and willingness to take the risks and undertake the new ventures required to establish a successful business.

The term *entrepreneur* (and consequently *enterprise*) appears to have been introduced by the Irish banker and economist Richard Cantillon (c. 1680–1734). The term was popularized as a result of John Stuart Mill's classic work, *Principles of Political Economy* (1848). To the classical economist of the late eighteenth century, the term described an employer, in the character of one person, who assumed the risk and management of an enterprise. In practice, entrepreneurs were not differentiated from capitalists until the nineteenth century, when their function developed into that of coordinators of processes necessary to large-scale industry and trade. At that point, much like today, the entrepreneur was involved in the management of the enterprise, in contrast to the ordinary capitalist, who merely owned an enterprise and might choose not to take any part in the day-to-day operation. Henry Ford is an example of the rising class of entrepreneurial manufacturers in the twentieth century in the United States of America. However, the entrepreneur's functions and importance have declined with the growth of the corporation.

Nevertheless, the term *entrepreneur* had disappeared from the economics literature by the end of the nineteenth century. This was due to the fact that economists began to use the simplifying assumption that all individuals in an economy have perfect information. Under this assumption, there is no reason for an entrepreneur, or an enterprise, to exist. If individuals have perfect information, they will all make the same assessments of alternative economic activities. More recently, however, economists have increasingly removed this unrealistic assumption of perfect information, allowing once again for the presence of entrepreneurship in the literature. In addition, entrepreneurship has been added as the fourth production factor, after labor, capital, and natural resources.

Almost any business or organization can be called an enterprise, and an enterprise can be either private or public in nature. A private enterprise is a business organization especially directed toward profit and generating personal wealth for the owners. In other words, the owners and operators of a private business have as their main objective the generation of a financial return in exchange for their expense in time, energy, innovation, skills, and money. The private enterprise is the main institution of market capitalism, and as the price mechanism is a co-

coordinating instrument, the entrepreneur performs a coordinating function. *Free enterprise*, which is the result of free markets, is another term used to denote market capitalism. Indeed, the terms *enterprise*, *company*, *corporation*, and *organization* are often used synonymously.

A firm is a unit that employs factors of production to produce goods and services. A firm is a commercial partnership comprising a collection of individuals grouped together for economic gain, especially when unincorporated. It is represented by the name or designation under which a company transacts business. The term became popularized in Ronald Coase's 1937 article, "The Nature of the Firm." Operating within a market involves some costs, but by establishing a firm and the authority to direct resources, certain costs are reduced. As Coase states, "When the direction of resources (within the limits of a contract) becomes dependent on the buyer in this way, that relationship which I term a 'firm' may be obtained" (Coase 1937, p. 392).

In an article published in 1972 in *American Economic Review,* Armen Alchian and Harold Demsetz defined a firm as a contractual structure subject to continuous renegotiation with the central agent, or the firm's owner and employer. Thus, a firm is a hierarchical organization attempting to make profits. There are various types of firms, such as: (1) a sole trader or sole proprietorship, in which there is only one owner of the firm with unlimited liability; (2) a partnership, in which there are two or more partners who own, control, and finance the firm and have unlimited liability; (3) a private limited company (Ltd.) or corporation, in which a limited number of shares are issued and the firm is owned by shareholders who have limited liability. In the latter case, these corporations are legal entities, and the firms or corporations owned by the shareholders are treated by law as an artificial person.

By the latter half of the nineteenth century, corporations increased substantially, displacing other forms of enterprises. The control of industrial production thus became the responsibility of corporate finance, resulting in what the Norwegian-American economist Thorstein Veblen (1857–1929) called "absentee ownership." Often, however, shareholding ownership is so widely dispersed that the majority of shareholders reluctantly experience the separation of ownership from control. That is, control can be maintained by a minority interest with access to corporate finance: "ownership continually becomes more dispersed; the power formerly joined to it becomes increasingly concentrated; and the corporate system is thereby more securely established" (Berle and Means 1933, p. 9). According to Veblen, absentee ownership has grave consequences for the structure of the society, because "law and politics … serve the needs of the absentee owners at the cost of the underlying population" (Veblen 1923, p. 6).

When an enterprise has operations in more than one country, this enterprise is named a *multinational enterprise* (MNE), a *multinational corporation* (MNC), or a *transnational corporation* (TNC). Such a firm engages in foreign direct investment (FDI) and owns or controls income-generating assets or value-adding activities in more than one country. A multinational enterprise can participate in the economic activities of a foreign country through five general means of involvement: (1) trading (importing or exporting, and incorporate transfers); (2) foreign direct investment (such as joint ventures, wholly owned subsidiaries, green-field FDI, brown-field FDI, acquisition [the firm can have a "majority" or "stake" interest], merger and acquisition, or privatization); (3) indirect (portfolio) investment; (4) agreements that do not involve money transfer from the part of the foreign partner (e.g. licensing agreement, franchising, turnkey projects, or management contracts), and (5) collaboration or strategic alliance with another enterprise in order to cope with pressures of intense global competition and increasingly complex and rapid technological development.

The United Nations and the governments of most developing nations use the term *transnational*, rather than *multinational*, to describe an enterprise that has operations in more than one country. The United Nations' specialized agency, the United Nations Conference on Trade and Development (UNCTAD), for example, employs the following definition: "Transnational corporations comprise parent enterprises and their foreign affiliates: a parent enterprise is defined as one that controls assets of another entity or entities in a country or countries other than its home country, usually by owning a capital stake. An equity capital stake of at least 10 percent is normally considered as a threshold for the control of assets in this context." Actually, this 10 percent rule has been accepted by the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD), thus identifying this to be the minimum equity stake for an investment to qualify as foreign direct investment and not a portfolio investment.

SEE ALSO *Business; Capitalism, State; Corporations; Entrepreneurship; Mill, John Stuart; State Enterprise; Veblen, Thorstein*

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ENTERTAINMENT INDUSTRY

Entertainment as an industry—in the United States alone—is responsible each year for $150 billion in expenditures and some 120 billion hours of consumed time (Vogel 1998, p. xvii). Entertainment as an economic sector consists of diverse products and services including motion pictures, television, music, broadcasting, print media, toys, gaming, gambling, sports, and fine arts.

ECONOMIC DEVELOPMENT AND THE DEMAND FOR LEISURE

Leisure time has been a determining factor in the development of recreation and entertainment as an industry. Entertainment has grown as an industry in step with increased income and time available for leisure and recreation. Economic development, often quantified in terms of productivity or output per person-hour, has enabled goods and services to be produced with fewer labor inputs. The growth of the entertainment industries has been directly related to the development of a modern economy and rising economic productivity, though precise estimation of the demand for leisure is a thorny task (Owen 1971). An important issue in the development of entertainment as an industry is the rising productivity of workers, and in particular the ways in which technical progress has increased worker productivity. Progress in technology, in addition to creating the demand for entertainment products and services, has also led to the creation of much of the dominant forms of contemporary entertainment.

INDUSTRY OVERVIEW

Substantial production in the creative industries takes place within the U.S. economy and creative products are a major U.S. export. Motion pictures, home video and television programming, music and sound recordings, books, video games, and software are collectively one of the largest and fastest-growing economic sectors, responsible for about 6 percent of total U.S. gross domestic product per annum (Motion Picture Association of America 2006a). Multinational entertainment/media conglomerates such as Vivendi, Sony, and AOL/Time Warner are increasingly becoming dominant in this sector, with operations that permit substantial economies across the line of entertainment products. The process often begins with a literary work of fiction, which is then made into a movie exhibited in cinemas and later on syndicated and network television domestically and abroad, and finally released on home video. Characters and other elements from the movie can be developed into a line of toys cross-promoted with fast food, and further developed into a video game or board game, and perhaps even featured in a line of clothing.

In the motion-picture industry, the sector of entertainment with the highest profile, domestic (U.S. and Canadian) box-office receipts accounted for about $9 billion, while worldwide box-office revenue was over $23 billion for 2005 (Motion Picture Association of America 2006b). The international market now yields more revenue than the North American market and it is also the source of revenue growth for the motion-picture industry, though success in the international market is largely conditional on success in the North American market. The dominance of Hollywood films in worldwide box-office revenue gives rise to claims of cultural imperialism, though major Hollywood studios in fact design films for distribution in the worldwide market even though the films are screened in North America first. While international box-office revenues have been rising, the major sources of new revenues for the motion-picture industry have been from home video and digital versatile disc (DVD) sales, and from merchandising arrangements such as toys, video games, clothing lines, and other products that are tied to successful motion pictures.

While Hollywood films dominate worldwide box-office revenue, the American film industry does not dominate worldwide production. The Mumbai-based Indian film industry—commonly known as Bollywood because it is the "Hollywood of Bombay" (the former name of present-day Mumbai)—produces more motion pictures each year than any other country. Throughout the 1980s about 250 individual film production companies completed an annual average of about 700 feature films per year with the encouragement of official government policy requiring commercial movie theaters to screen at least one Indian film per show (Gomery 1996). In 2003 the Indian film industry produced 877 feature-length films and 1,177 short films (Central Board of Film

Certification 2006); this contrasts with the 459 new films released in the United States during 2003 (Motion Picture Association of America 2006b).

The music industry consists primarily of the sales of prerecorded music—albums distributed on compact disc and audiocassettes, and singles distributed on compact disc. Music videos are also sold as product in traditional formats. Music is also available in alternate digital formats—including MP3, OGG, and WAV—through Internet retailers. The authorized digital distribution of music content has been overshadowed by unauthorized distribution, both free and for profit, though academic research on this issue is much less clear than one would glean from journalistic reports (as is discussed in more detail below).

Gambling in the United States is popularly associated with the cities of Atlantic City, New Jersey, and Las Vegas, Nevada, which are responsible for 9 and 21 percent, respectively, of the 2005 U.S. annual gambling revenues of about $53 billion (PricewaterhouseCoopers 2005). Native American casino-operators account for over 40 percent of gambling revenues. While the United States is a large gambling market, accounting for over 60 percent of worldwide gambling revenues, substantial new growth in gambling revenues is occurring in international markets, especially in the former Portuguese colony of Macao, which began granting licenses to new casinos a few years after being returned to Chinese sovereignty in 1999. While gambling revenues in aggregate make the United States the largest market, the character of North American gambling is quite different from Asian gambling markets. For example, in horse track gambling the average total amount bet on a race day at a North American track is on the order of $100,000, whereas at Hong Kong tracks and Japanese tracks a day's bets are on the order of $200 million to $300 million, respectively (Busche and Walls 2000).

Expansion of casino gambling opportunities in Asia, with new casinos in Macao and proposed casinos in Japan, Thailand, Singapore, and Taiwan, together with recent changes in British gambling taxation and online gambling opportunities, make prospects favorable for the expansion of international gambling markets (Paton et al. 2002).

IMPORTANT CHARACTERISTICS OF ENTERTAINMENT MARKETS

The entertainment industries differ in important ways from traditional manufacturing and service industries. Richard Caves (2000) enumerates seven ways in which the creative industries—including fine arts, music, and motion pictures—differ distinctly from what he terms the humdrum industries:

1. Neither producers nor consumers know the demand for product until after it is revealed. Creative products and services are "experience goods" and there is symmetric ignorance of information, not an informational asymmetry.
2. The creative talents producing the product care about the creative output explicitly, in addition to their pecuniary compensation in production.
3. The creators engage in joint multiplicative production with an array of diverse inputs in which all inputs are essential, because there is less substitutability than in other production processes.
4. Entertainment products are horizontally differentiated products. Each product is unique and must be experienced before demand is known.
5. Products are vertically differentiated by the quality of the inputs used in production. Furthermore, inputs of different quality levels may be combined—for example, a B-list screenplay and an A-list actor.
6. Profitability depends on temporal coordination and prompt realization of revenues once assets are sunk. Delays may occur once assets have been committed to production.
7. Creative products are durable and this leads to issues regarding rents, collection and monitoring of royalties, warehousing, and retrieval.

The seven features identified by Richard Caves are essential in understanding the markets for entertainment products both qualitatively and quantitatively (Walls 2005). Additionally, the demand for entertainment has two properties that are deserving of our particular attention. The first is that consumption of entertainment requires the time of the consumer. The second is that the demand for entertainment is not fixed in advance of the product being produced; instead, it is discovered by the consumers after the product has been consumed. We will discuss these properties of entertainment demand briefly.

The time-cost element is important in understanding the demand for entertainment, because consumption of entertainment necessarily implies customer-supplied inputs; recognizing this explicitly is essential if we are to understand the functioning of demand and supply in this market. Perhaps the best illustration of this point, in a more general context, is the seminal paper by Arthur De Vany and Thomas Saving (1983). De Vany and Saving demonstrate that when all else is equal, consumption cost is lower for a product that requires less time to consume. Of course, price can be adjusted and this implies a trade-off between time-cost and the monetary price. In the entertainment industry, this may also involve substitution

across alternative media for a similar product. For example, reading an 800-page book may involve a substantial element of time, but a consumer may substitute a videocassette or DVD film version of the book to be viewed on a computer or television monitor, or a compact disc or audiocassette version of the book to be listened to while at home, at work, or while commuting. All of these alternative means of consumption involve tradeoffs in which the time-cost of consumption varies greatly and may be of primary importance in consumption decisions.

The demand for entertainment products is not fixed in advance, but is discovered by consumers as they consume many entertainment products. Understanding this aspect of demand is essential if one is to make sense of many of the entertainment industry's unique business practices. When movie audiences see a movie they like, they make a discovery and tell their friends about it. This and other information is transmitted to other consumers and demand develops dynamically as the audience sequentially discovers which movies it likes. Supply adapts to revealed demand through flexible exhibition contracts and other business practices that permit the increasing returns in film demand to be realized. For example, early viewers of a motion picture may substantially affect the choices of other potential viewers. This type of behavior is known in the social sciences as, variously, *herding*, *contagion*, *network effects*, *bandwagons*, *path-dependence*, *momentum*, and *information cascades* (Arthur 1994; Banerjee 1992; Bikhchandani et al. 1992). The particular algebraic models of this behavior differ in the mathematical details, but they are all dynamical processes: Demand depends on revealed demand. As a result of this sequential demand process, initial advantages in movie attendance can lead to extreme differences in outcomes when demand has recursive feedback. De Vany and Walls (1996) showed that box-office revenues have a contagion-like property where the week-to-week change in demand is stochastically dependent on previous demand. A big opening of a bad movie can cause consumption to evaporate. But a big opening of a good movie can lead to an avalanche of attendance. Demand for movies, music, fashion, and other entertainment products and services are characterized by extreme uncertainty due to the nature of dynamical demand.

THE CHALLENGE OF PIRACY

The most substantial challenge facing the entertainment industry is intellectual property piracy, largely due to the easily copyable digital format of many entertainment products. Infringement of copyrights and other forms of intellectual property is a large and growing problem around the world and it is of particular importance for the entertainment industry. The Motion Picture Association of America estimates that losses due to piracy exceed $3 billion annually in potential worldwide revenue (Motion Picture Association of America 2005). The intellectual capital of the S&P 500 companies is worth 3.4 trillion U.S. dollars (Bowers 2001), so it follows that even a small percentage infringement on such a large base generates enormous absolute losses to property rights holders. Peggy E. Chaudhry and Michael G. Walsh (1996) provide an overview of trends in counterfeiting in the international marketplace, including a consideration of the legal framework that governs the protection against piracy and a review of different anticounterfeiting strategies.

Piracy of entertainment products can take many forms. These range from illegal copying and distribution of videocassettes and optical media (CD-ROM, VCD, and DVD) to Internet piracy, which can involve commerce and the sharing of digital content. Unauthorized signal transmission and theatrical performances are other types of movie and music piracy. Music and movie piracy are either commercial sale of physical media or the sharing of videocassettes, optical media, and digital content over the Internet.

For most entertainment products the pirate good is identical to the authentic article, except for the packaging and after-sale support. For example, music CDs will be an exact digital copy of the authentic product, but liner notes and lyrics will either be missing or will contain numerous, and often humorous, typographical errors. Many entertainment companies use copy-protection technologies, including the Content Scrambling System for DVDs, dedicated DSL set-top boxes, digital encryption encoding of satellite signals, and Macrovision for videocassettes. The use of antipiracy technologies raises the cost of engaging in piracy, as Sougata Poddar (2003) had modeled analytically. Despite efforts to increase the cost of piracy, however, in practice it is not too difficult even for a computer hobbyist to work around the latest antipiracy technologies (Perry 2005). Even the copy-protection technologies employed in computer software—including online authentication—are quickly rendered obsolete by digital pirates (Harvey and Walls 2006).

Copy-protection technologies, whether effective or not, are aimed primarily at preventing retail products from becoming a source of pirate supply. But the source of pirate movies is often not a retail copy but instead is an insider copy, such as the advance copies used for screening and marketing purposes (Byers et al. 2003). Other copies are made from handheld video camera recordings of motion picture films off of a theater screen. While the quality may be low, the latest movies are also readily available over internet-based file-sharing networks, such as BitTorrent (Kwok 2004). This contrasts with music piracy, in which high-quality copies of songs and entire

albums are available either freely through file-sharing networks, such as those available with the Kazaa program, or available for purchase through for-profit retailers such as allofmp3.com.

Many factors are associated with piracy (Limayem et al. 1999), and according to Seung Kyoon Shin et al. (2004) sociological factors may in fact be more important than some economic factors. Most studies suggest that the level of piracy is systematically related to the level of income. Income reflects a person's average cost of time and the demand for quality. Patrick J. Harvey and W. David Walls (2003) examined the demand for pirate software in a laboratory study and found that the demand for counterfeit goods decreased as the expected penalty for consuming the illicit goods increased. Income may be correlated with other infrastructure that provides alternative means of consuming the product. All of these factors would be expected to decrease the demand for pirate products as income rises. As average income rises, the supply of pirate products would also be expected to decrease due to the availability of more attractive opportunities for employment than pirating. There is, however, no unambiguous prediction of the equilibrium effect of income changes on piracy.

In a forthcoming article, the present author empirically examines the rate of motion-picture piracy across a sample of twenty-six countries and finds that the level of piracy is explained by the level of income, the cost of enforcing property rights, the level of collectivism present in a country's social institutions, and the level of Internet usage. Conclusions about the behavioral aspects of piracy are more certain than piracy's actual impact on the entertainment industry revenues, however: Felix Oberholzer-Gee and Koleman Strumpf (2004) found that Internet music piracy had no negative effect on legitimate music sales; on the contrary, their study found that piracy may even boost sales of some types of music, contradicting the music industry's assertion that the illegal downloading of music online is causing revenues to fall. In contrast, Rafael Rob and Joel Waldfogel (2006) found that the U.S. music industry lost one fifth of a sale for each album downloaded from the Internet. There is no definitive answer to the question of whether or not piracy has a net negative effect on consumer demand in the entertainment industry.

SEE ALSO *Film Industry; Gambling; Industry; Music; Recording Industry; Sports Industry; Television*

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W. D. Walls

ENTREPRENEURSHIP

The concept of entrepreneurship and the portrayal of the entrepreneur as leading economic figure, even cultural hero, derive from both the evident nature of the market system and the projected self-image of middle-class business leaders. As with any such concept, its meaning depends on the larger model of which it is a part and its more or less precise relationships to other key figures. Defining the entrepreneur or entrepreneurship deals with a term whose meaning is highly variable in use, and generates serious questions.

The term *capitalist* could refer to all business people, or to only the suppliers of capital, with the others as managers—the promotional, organizational, and operational decision makers—and with the entrepreneur performing a particular function or role, transcending the others. Even that array of possibilities is rendered further complicated by formulations that treat the entrepreneur as either (1) an active promoter or agent of change; or (2) a passive responder to market signals and to change; and either (1) a creator or (2) finder of opportunities.

A troublesome question is whether entrepreneurship refers (1) to a particular function(s) or (2) to persons. If the answer is persons and not function(s) per se, then the correlative question is whether it refers to a particular group of persons or to an aspect of the behavior of all persons. Some individuals may well undertake more and/or more specialized entrepreneurship. But all individuals undertake one or more of the functions of entrepreneurship that can enter the definition of the term—even if it is a matter of reacting to price and other signals in a creative way.

Further difficulties arise when one tries to distinguish the certain behavior(s) or qualities that constitute entrepreneurship, requiring that one identify what makes any activity or quality "entrepreneurial." But that effort is a part of the larger and vexing question of the definition of entrepreneur(ship), say, one that does not equate entrepreneurs with business managers as organizers and decision makers.

Two further, interrelated questions are, first, whether the meaning and defense of capitalism involves a system dominated by capitalists and/or entrepreneurs, or a market system of economic agents without such domination, that is, whether capitalism or market economy is the more systemic term; and, second, whether some kind of entrepreneur(ship) has the critical role in all economic systems, i.e., whether only one generic economic system exists and therefore actual economies differ principally in the identity and institutional setting of entrepreneurship.

Several considerations almost invariably enter discussions of entrepreneurship. One consideration is that the entrepreneur is achievement oriented, manifesting the type A personality and always seeking success. The second consideration is that the substantive meaning of achievement is a matter of culture. In market economies, especially capitalist ones, success is achieved through rising in large, important organizational structures, acquisition of wealth, and similar iconic honors. The third consideration concerns the entrepreneur serving as a driving force in the economy, whatever the specifics of its organization and structure. One consideration that often but by no means always enters discussion is the relation of business and governmental entrepreneurs. This relation may take the form of a competition over the use of resources; movement among key leadership positions in private and public sectors; another involves the tendency of entrepreneurs to act up to, if not even beyond, the limits imposed by law.

Definitions typically turn on the incorporation of functions. One definition, centering on coordination, can be close to that of manager or decision maker within the firm; alternatively the usage may turn on the contribution that individual entrepreneurship makes to coordination

that is systemic, that is, going beyond the firm to the economic system. In either case, the key element is capability in participating in institutionalized decision making processes specializing in the making of policy.

A second function often ensconced within a definition is that of adventurer, the role of formulating a vision and acting upon it. At its most dramatic, this definition tends to make capitalism a civilized game of power in monetary form. This entrepreneur is not content with finding niches or paths not seen by others, and therefore goes beyond finding to creating them themselves. One definition centers on the heroic role itself. This definition recognizes entrepreneurship as a system-specific honorific channel of achievement motivation and/or a designation of such achievement.

Other definitions that incorporate functions are the management of risk or, more properly, uncertainty; the marshalling, management or analysis, and application of information; serving as the adjudicator of conflicting interests within and between firms; and the identification if not creation of opportunities. Some definitions may combine functions, such as innovation under uncertainty and asymmetrical information. Not all definitions apply equally well to both entrepreneurial function and their application to specific individuals.

The concept of the entrepreneur, whether it be understood to pertain to a class of person or an aspect of all agents' activity or one function or another, is related to other concepts as well. Innovation can result from entrepreneurial activities in in-house or external research and development generating new technology. Both market structure and the form of competition are both influenced by entrepreneurial activity along technological, strategic, and political lines, and influence the form, direction, and mode of entrepreneurial activity. Although much economic theorizing is static, the introduction of entrepreneurship both opens up a wider range of efficient results and multiple paths of economic growth, and the possibility of multiple efficient results and economic-growth paths amenable to entrepreneurial activity. The realm of entrepreneurship is, moreover, transformed by Canadian-American economist John Kenneth Galbraith's concept of a new industrial state in which corporate and general economic decision making are expanded from the top levels of corporate managements and a mix of government-business antagonism and quid pro quo relationships to decision making lower down in the corporation, in technological and educational elements, and to a system of more or less joint planning for economic stability. In Galbraith's conception, the entrepreneur is less heroic but no less important a figure.

Finally, attention should be given to Italian economist Vilfredo Pareto's theory of the circulation of elites and what may or may not be its modern formulation, the market for corporate control and therein competition between entrepreneurs. An alternative formulation juxtaposes individuals with power to competitive forces.

SEE ALSO *Capitalism, State; Enterprise; Socialism; State, The*

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Warren J. Samuels

ENVIRONMENTAL ECONOMICS

SEE *Resource Economics.*

ENVIRONMENTAL IMPACT ASSESSMENT

An environmental impact assessment (EIA) is a planning tool that provides decision makers with an understanding of the potential effects that human actions, especially technological ones, may have on the environment. By understanding the potential environmental effects of an action, policymakers can choose which should proceed and which should not. Governments from around the world perform environmental impact assessments at the national, state or provincial, and local levels. The underlying assumption of all environmental impact assessments is

that all human activity has the potential to affect the environment, and that knowledge concerning the environmental impact of a major decision will improve that decision. As part of an EIA, planners try to find the ways and the means to reduce the adverse impacts of the project and to shape projects to suit the local environment. EIAs can produce both environmental and economic benefits, such as reducing the costs and time needed for project implementation and design, avoiding treatment and clean-up costs, and alerting planners to any potential clashes with laws and regulations.

The original and probably best-known form of the EIA is the environmental impact statement (EIS) used by the U.S. government. The National Environmental Policy Act of 1969 (NEPA) mandates that an EIS must accompany every major federal action or nonfederal action with significant federal involvement within the United States. The precise definition of "major" and "significant" has been very contentious and has resulted in considerable litigation. The NEPA ensures that U.S. agencies give environmental factors the same consideration as any other factors in decision making.

Since 1970 dozens of other nations have established their own versions of an EIA, partly on their own and partly in response to the call of a number of international meetings. In particular, the seventeenth principle of the Rio Declaration on Environment and Development (1992) is devoted to the creation of processes for environmental impact assessments by governments around the world.

THE ENVIRONMENTAL IMPACT STATEMENT PROCESS

Most environmental impact assessments follow a process similar to the one mandated for the EIS, in which a lead agency collects and assimilates all the environmental information required for the EIS (Sullivan 2003). The first step in the process is to determine whether a complete EIS is required. When there is likely to be little impact, the lead agency can write an environmental assessment (EA), which is much simpler. In the late 1980s agencies annually prepared only 450 complete environmental impact statements, compared to an average of 15,000 environmental assessments (Gilpin 1995).

The first element of the actual EIS is scoping, where the lead agency identifies key issues and concerns of interested parties. A notice of the intent to conduct an EIS is published in the Federal Register and is sent to all potentially interested parties. Usually, the agency releases a draft environmental impact statement (DEIS) for comment. After interested parties and the general public have had the opportunity to comment on the draft, the agency releases the final environmental impact statement (FEIS). In some instances, usually as the result of litigation or the availability of new information, the agency later releases a supplemental environmental impact statement (SEIS). Once all the protests are resolved the agency issues a record of decision, which is its final action prior to implementation.

The Council on Environmental Quality (CEQ), also mandated by the NEPA, sets the regulations that outline the format for the actual EIS. They mandate that an EIS should contain the impact of the proposed action, any adverse environmental effects that cannot be avoided, any possible alternatives to the proposed action, and any irreversible commitments of resources that the action would require if it were implemented. All mitigation measures to address identified harms must also be included in the EIS. Throughout the EIS process, the public must have opportunities for participation (Sullivan 2003). In 1994 President Bill Clinton issued an executive order adding environmental justice issues to the EIS process.

PROBLEMS WITH ENVIRONMENTAL IMPACT ASSESSMENTS

One of the problems with environmental impact assessments is that in many cases, after the factors have been analyzed, there is little to force the actors to change their decisions. Once the EIA is complete, the action can go forward regardless of any negative environmental consequences. In the case of the EIS, the NEPA provides no enforcement provisions, though various court decisions have held that an EIS must be done and that it should be used to inform decision makers of potential environmental problems. However, at present nothing requires planners to change their decisions based on an EIS's findings, nor is there any penalty for ignoring an EIS. In the early 1970s groups trying to stop an action used EISes to initiate numerous lawsuits. At the end of the 1970s the U.S. Supreme Court in *Vermont Yankee v. NRDC* (1978) reversed two district court decisions remanding the NRC for not addressing environmental issues adequately in their EIS. This decision limited the ability of district courts to reverse agency decisions (Vig and Kraft 2000). By the end of the 1980s the federal courts consistently declined to hear lawsuits on environmental issues if the EISes were properly done. According to the courts, planners may elect to include or exclude EIS findings from their projects, and if they choose to ignore it, others have a right to bring pressure on them. The CEQ cannot stop an action, but it can delay it by requesting further reassessment.

Another problem with the creation of EIAs springs from the uncertainty surrounding some situations. Uncertainty may come from a lack of scientific under-

standing of an issue or from the nature of the information required. The issues may be extremely complex, or may deal with timescales that create potential problems for understanding the issue. For example, the proposed nuclear waste facility at Yucca Mountain, Nevada requires the consideration of environmental changes at the site over a 10,000-year period. The Yucca Mountain case also provides an example of another problem—the quality of the information used in creating an EIS. It was discovered that the researchers doing the assessment at Yucca Mountain manufactured some of the information they used for the EIS; a subsequent government study ruled that even though the data was suspect, the overall decision based on it was sound (Department of Energy 2006). For some governments around the world, the lack of resources and skilled personnel create problems for producing a quality EIA.

This is not to say that identifying environmental issues has no effect on the decision-making process. A number of studies have shown that EISes force greater environmental awareness and more careful planning by federal agencies (Vig and Kraft 2000). The very fact that the information exists means it plays a role. The EIS is circulated among state, local, and federal agencies and the public. Because of this circulation, the EIS can become an early warning system for environmental groups, alerting them of potential issues for their consideration (Rosenbaum 2005). The identification of potential problems has motivated public support against actions and led to rethinking of initial plans. Having the information is better than not having information, even though it may not be used.

SEE ALSO *Decision-making; Disaster Management; Love Canal; Planning; Pollution; Resource Economics; Resources; Uncertainty*

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Franz Foltz

ENVIRONMENTAL KUZNETS CURVES

Casual observation suggests that cities in newly industrialized countries such as Bangkok, Beijing, Calcutta, and Mexico City are more polluted today than they were twenty to thirty years ago, while cities in older industrial countries such as New York, Tokyo, and London are cleaner than they were twenty to thirty years ago. This apparent paradox raises the question of whether higher income levels result in a better or worse environment. The environmental Kuznets curve (EKC) hypothesis proposes that there is an inverted U-shaped relationship between various indicators of environmental degradation and income per capita. This became known as the environmental Kuznets curve because of its similarity with the shape of the income-inequality relationship discovered earlier by Russian-American economist Simon Kuznets.

THE EKC AND ENVIRONMENTAL DEGRADATION

This relationship was discovered by Gene Grossman and Alan Kreuger in the early 1990s. They found that at low levels of per-capita income, concentrations of sulphur-dioxide, suspended particulate matter, and water pollutants increase as income increases. However, once per-capita income reaches a particular threshold, concentrations of these pollutants decrease as income continues to rise.

The emissions studied by Grossman and Kreuger have local or own-country pollution effects and relatively low abatement costs. Global pollutants such as greenhouse gases represent a second important type of environmental degradation. A 1995 study by Douglas Holtz-Eakin and Thomas Selden examined emissions of carbon dioxide, which is a global pollutant. Their analysis reveals that the emissions continue to rise with income, a finding that is not consistent with the EKC.

Deforestation is a third important type of environmental degradation. Economic development is generally expected to reduce a nation's agricultural sector and increase its industrial sector. Such development is also associated with the use of modern agricultural technology, which reduces land requirements. Logging and the demand for wood as an energy source is likely to grow as a country develops, but this demand may wane as industrialization takes over.

In their 1994 study, Maureen Cropper and Charles Griffiths examined the EKC shape for deforestation. The overall result was a hump-shaped relation between per-capita income and deforestation. The income at which the rates of deforestation peak is very high. Although it is reassuring that the rates of deforestation level off at suffi-

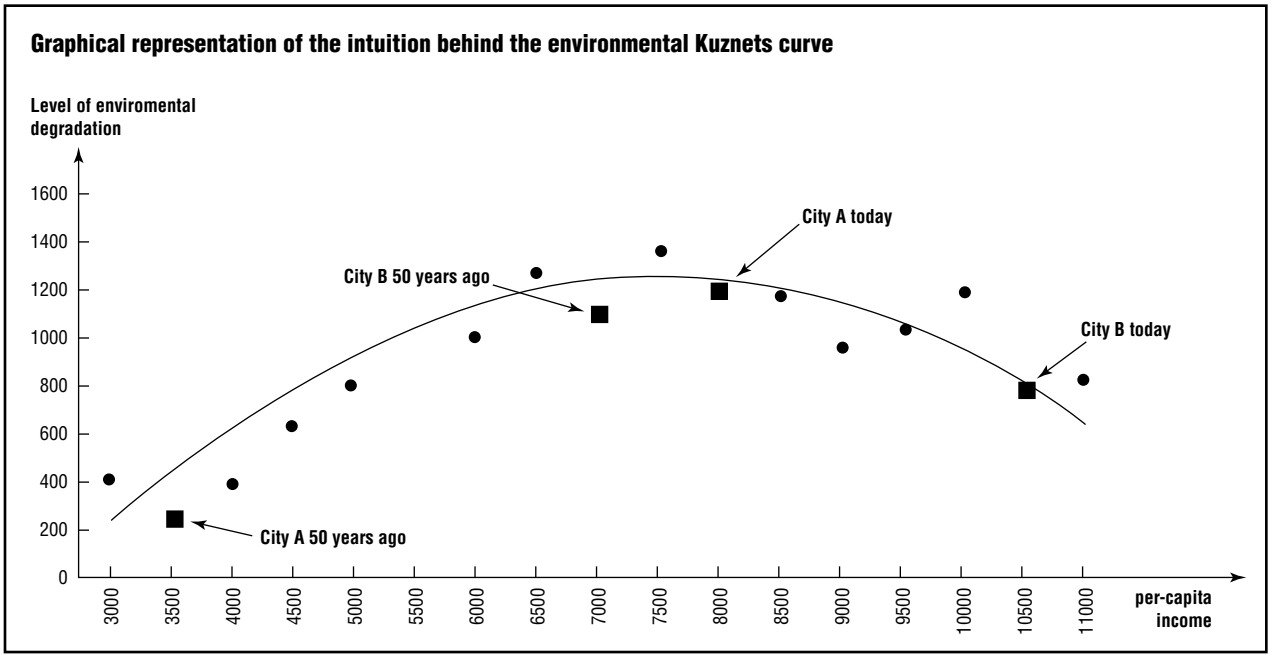

Figure 1

ciently high per-capita income levels, the major damage to the environment occurs before these income levels are reached.

FACTORS AFFECTING THE INCOME-ENVIRONMENT RELATIONSHIP

Having looked at three varieties of environmental degradation, it is necessary to recognize that the environmental quality is the outcome of the interplay of emissions and abatement (or depletion and regeneration in the case of renewable resources). The income-environment relationship captured by simple regression exercises cannot distinguish between the demand side and supply side forces that drive this relation. Income acts as a surrogate for a variety of underlying influences. Grossman and Kreuger provide an intuitive explanation of these influences, as outlined below.

The Scale of the Economic Activity A larger scale of economic activity per unit of area, all else being equal, results in increased levels of resource use and waste generation. Here, income acts as an indicator of economic activity, encouraging a positive relation between environmental degradation and income.

The Composition of the Economic Activity Different sectors of the economy have differential pollution and resource use intensities. Industry, especially manufacturing, tends to be more pollution intensive than either agriculture or services. The share of industry in a nation's gross domestic product (GDP) first rises with economic growth and then declines as the country moves from the preindustrial to the postindustrial stage of development. This influence encourages an inverted U-shaped relationship between environmental pollution and income level.

The Technique Effect At low income levels, people are more concerned with their food and other material needs and less concerned with environmental quality. At higher income levels, people begin to demand higher levels of environmental quality to go with their increased prosperity. On the supply side, low incomes mean that countries and individuals cannot afford much expenditure on pollution abatement, even if the demand were there. Economic growth not only creates the demand for improved environmental quality, it also makes resources available to supply it, resulting in cleaner technologies. Stripped of the scale and composition effects, the technique effect predicts that environmental degradation would decline as per capita income increases.

The sum of all these effects defines the observed income-environment relationship. For example, in the case of global pollutants, the technique effect is weak because a disciplining of domestic production would not benefit domestic consumers, who therefore do not demand cleaner techniques of production. For economies that experience growth later than the developed

economies, it is possible that they will continue to produce industrial goods not only for their own use, but also for their trading partners. In these economies, the composition effect that is relevant for developed nations that have moved beyond the industrial phase does not apply. This reduces the possibility of a decrease in environmental degradation at higher incomes. Hence, more than the actual shape of the EKC, it is the lessons learned from analyzing it that are important in understanding the relation between per capita income and environmental degradation.

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Bidisha Lahiri

EPIDEMICS

SEE *Morbidity and Mortality.*

EPIDEMIOLOGICAL TRANSITION THEORY

SEE *Morbidity and Mortality.*

EPIDEMIOLOGY

SEE *Ethno-epidemiological Methodology.*

EPISTEMOLOGY

Any systematic exposition of the grounds of and means to knowledge constitutes an epistemology. Standard epistemologies of mathematics find such grounds in axiomatic self-evidence and means in methods of proof. Epistemologies of the natural sciences additionally underscore methods of experimental verification. Emerging in the shadow of the natural sciences, the social sciences have since their inception been the province of a stubborn epistemological divide. On the one side are those who insist that the natural sciences offer the only valid model of the attainment of knowledge about the empirical world and that the social sciences should thus strive to emulate their methodological precedent. On the other side are those who insist that human actions and creations are different in kind from the events and objects to which natural scientists attend and require methods of approach and comprehension entirely their own. Strictly speaking, these alternatives are incompatible; no perfect compromise is possible.

Emerging clearly in the middle of the nineteenth century, the divide at issue rests in distinct philosophical precedents and traditions of scholarship. On the side of a unified science is Auguste Comte's "positivism," which casts society as the final and most complex object to become available to the senses in the course of the evolution of human cognition and amenable, if not precisely to experimental manipulation, then to controlled comparative inquiry rigorous enough to yield knowledge in its wake. Comte's *Course of Positive Philosophy* (1830–1842) inaugurates what he coined "sociology" as a science every bit as natural as its predecessors, but clearly reflects both the rationalism of René Descartes and the empiricism of Etienne Bonnot de Condillac. Comte's most influential epistemological heir is Émile Durkheim, who takes particular pains to distinguish the empirical domain of psychology from that of sociology in his late nineteenth-century work. The former encompasses at once what is common to all human beings and what is idiosyncratic to one or another of them. The latter, encompassing what marks human beings as members of specific collectivities, is the proper domain of "social facts" available to the senses first of all as the experience of externally imposed obligation or coercion. It yields the classic definition of society as a "normative order." It permits two basic modes of inquiry, both of which might be put into the service of controlled comparison. One of these pursues a sampling of particular cases substantial enough to reveal patterning variables and their statistical co-variations. Another seeks to extract from perhaps only a single case a model of the system of which it is representative or expresses the limit. The first is the mode of statistical and quantitative inquiry not only in sociology but across all the social sciences. The second is the mode of model-theoretic inquiry—whether rigorously algebraic, as in much of contemporary economics, or largely qualitative, as in Durkheim's own *Elementary Forms of the Religious Life* (1912).

On the side of the divide itself is Wilhelm Dilthey's programmatic distinction between the natural sciences and what he termed the *Geisteswissenschaften,* sciences of "spirit" or "mind" or "human sciences." The latter cate-

gory includes all of the disciplines that make up the social sciences, but its cardinal focus is the discipline of historical inquiry and what would come by the late nineteenth century to be known as cultural anthropology. The human sciences do not in Dilthey's typology produce "knowledge" but instead produce "understanding." The latter is a mode of knowing grounded of necessity in self-reflection because the objectifications of spirit or mind—human actions and artifacts—that constitute its investigative terrain are precisely the objectifications of such psychic states as intentions, beliefs, values and sentiments. The human scientist understands any such objectification not in determining its efficient cause but in interpreting its always particular "meaning" or "significance" in light of the broader historical or cultural context in which it is embedded. Dilthey's work follows the founder of biblical hermeneutics, Friedrich Schleiermacher, in presuming that the process of interpretation rests essentially in the interpreter's capacity imaginatively and empathetically to enter into the lives of others. He derived his thoroughgoing separation of the physical from the experiential world from Immanuel Kant's similarly thorough separation of the objective from the subjective in his three *Critiques*, published in 1781, 1788, and 1790. In his appropriation of Kant at least, Dilthey is at one with his only slightly later contemporary, Max Weber.

Weber is well known for his address of the "problem of objectivity" in the human sciences. He recognized that particular evaluative commitments do and even should influence the content of the questions that the human scientist poses. He insisted that the scientist's research, properly conducted, should and can produce nothing else but facts. His resolution still has its adherents, but the problem of objectivity itself long predates him and lasts beyond him. In its general form, it is the result of the reflective recognition that beliefs and evaluative orientations are generally conditioned by or contingent upon their historical, cultural and social context; hence, for example, Thorstein Veblen's observation that distinct fractions of the dominant classes are drawn to those intellectual pursuits that are most intimately concerned with the practical bases of their dominance. Prima facie, the same should broadly be true of beliefs about and evaluative orientations toward the historical, the cultural and the social themselves. This does not entail that the latter beliefs and orientations are wrong-headed, but it does point to the need for an account of how and when and why a researcher is right to suppose that they are enduringly true or valid. Thus construed, the problem of objectivity has inspired three general responses. One is Comte's own: a progressivist rendering of cognitive and moral evolution positing that modern society has become disburdened of the sources of the errors and confusions that clouded the mental and moral landscapes of societies less developed. Though no longer with a positivist inflection, a similar evolutionism has a central place in Jürgen Habermas' much more recent efforts to reestablish the foundations of a critical social theory. A second response emerges in the later Marxist tradition, in which the problem of objectivity gains intensity with the presumption that the prevailing ideas of every class-divided society are ideological distortions that serve not truth but the reproduction of the dominant class.

Though with many variations, it seeks in social institutions or psychosocial circumstances those factors that permit certain individuals to become detached from their classes of origin and so think outside of the boundaries that would otherwise constrict their judgment. In a classic contribution to what is thus a "sociology of knowledge," Karl Mannheim's work sees such factors in the coalescence of the secular, liberal university in late eighteenth- and early nineteenth-century Europe. Louis Althusser's work focuses instead on the conjunctures of politico-economic structure and personal circumstance in which an investigator's exercise of experiment and critique effect an "epistemic break" from the ideology in which his thinking had previously been mired. Though once again with many variations, a third response might be called pragmatic. The philosophical resources it taps include Kant and Ludwig Wittgenstein. From Weber to anthropologist Clifford Geertz and social theorist Niklas Luhmann, its proponents regard proper intellectual labor in the human sciences as having its end in heuristic and diagnostic constructions and interventions that, whatever their contingencies or motivations, facilitate clarity, communication and translation. Hardly a return to positivism, this response nevertheless highlights the analytical service of an intellectual device of steadily increasing saliency in the epistemological toolkit of the natural sciences themselves: the model.

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James D. Faubion

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

SEE *Integration.*

EQUAL OPPORTUNITY

The term *equal opportunity* refers to the absence of discrimination based on involuntary personal attributes, such as sex, racial or ethnic origin, religion or belief, disability, age, or sexual orientation. The concept of equality of opportunity identifies equality with open and fair competition for scarce resources but does not challenge an inequalitarian distribution of resources within society. This has sparked disagreement in political and theoretical struggles over what constitutes a "just society."

FORMAL EQUALITY OF OPPORTUNITY

The notion of formal equality of opportunity requires that positions, offices, and admissions in society are open to all applicants and that formal procedures are used to select candidates based on qualifications deemed relevant to successful performance in a position or program. Individual abilities and ambition are valued as criteria while factors derived from group identities assigned by birth or social class, such as race, family, caste, religion, are excluded. Equality of opportunity carries with it the promise of upward social and economic mobility due to the removal of legally protected rights and privileges for particular classes or groups. Equality of opportunity emphasizes procedural and legal means of providing equal access to social goods, in contrast to alternative approaches to equality; for example, equality of outcomes, equality of resources, and democratic equality.

Equality of opportunity assumes that it is unfair if factors beyond the control of an individual significantly shape a person's chances in life. Formal equality of opportunity can be justified as an enhancement of individual life chances as well as a means for maximizing the well-being of society. Proponents of equality of opportunity associate it with a meritocratic system in which the most talented and ambitious are the most rewarded regardless of socioeconomic background.

LIMITATIONS OF FORMAL EQUALITY OF OPPORTUNITY

A central challenge to the very concept of formal equality of opportunity is that it does not take into consideration how circumstances beyond the control of an individual influence the ability to compete for scarce resources. In the case of standardized tests to evaluate a student's educational and professional potential, such as the Scholastic Aptitude Test (SAT) in the United States, formal equality of opportunity requires students to take the test under the same conditions and use the final test score as a measure to evaluate students' performance. It thereby disregards the access some students have to more economic and edu-

cational resources to prepare for these test than others. By asserting neutrality toward all students, the test indirectly reinforces preexisting social inequalities.

A narrow perception of equality of opportunity is not inherently incompatible with profiling or statistical discrimination, which uses group characteristics such as gender, ethnicity, or age as a proxy for productivity in hiring and promotion. Profiling occurs when statistical trends are used to justify associating negative attributes with members of a group, such as a high crime rate, or risks associated with a particular phase in the life course like having children. These group characteristics are used as indicators for current and future productivity, thereby compromising the notion of equality that calls for an evaluation of each applicant on its own merits.

Equality of opportunity has historically been confined to the public sphere, neglecting the sources of inequality identified with areas traditionally held as private, such as family, marriage, and religion. Opening up all sectors of employment to women, for example, does not offer them equal opportunity for advancement when employers deny them (paid) pregnancy leave. While all workers may be subject to identical rules, women are disproportionately adversely affected. Formal equality of opportunity does not seek to change the social, economic, and cultural forces that structure the division of labor along gender, race, and class lines. Rather than resolving the question of equality, a larger degree of formal equality often reveals the impact of socioeconomic inequality within society.

SUBSTANTIVE EQUALITY OF OPPORTUNITY

Substantive equality of opportunity takes the broader social situation into consideration in determining criteria for qualification and performance. The appropriate means for achieving substantive equality of opportunity are often controversial. One possibility for achieving substantive equality of opportunity is affirmative action. The challenges of affirmative action in theory and practice are illustrated in the reform of the admissions system of the Indian Institutes of Technologies (IITs), French elite universities, and higher education in the United States.

Indian Institutes of Technology were founded in 1951 and became a leading institution in professional training in India. Entrance is based on a standardized test without consideration of socioeconomic status and is granted to approximately 2 percent of the applicants. Despite the formal neutrality of the test, the vast majority of students admitted come from the urban middle class with access to good schools and the resources to attend costly preparatory courses. To further substantive equality of opportunity IITs were required to reserve 22.5 percent of seats for students of historically disadvantaged schedule castes and tribes in 1973. Reserved seats were awarded to candidates scoring at least 66 percent of the score of the lowest admitted applicant in the general test or to candidates successfully completing a one-year preparatory course. Despite these lower admission standards not all reserved seats are filled pointing to the challenge of opening elite educational institutions to low-income students without further counterbalancing vast power and wealth disparities in Indian society (Murali 2003).

France's elite universities also use highly competitive standardized exams for admission. The vast majority of students performing well on these tests have attended very selective preparatory schools that rarely admit working class or immigrant students. In 2001 Sciences Po, one of these universities, began a special entrance program that admits a limited number of students from designated zones in impoverished suburbs. Relying on geographic criteria rather than socioeconomic status or ethnicity, the program does not directly challenge "republican values" that hold the French republic to be indivisible and all citizens to share equally in a common civic culture. While in practice the program admits many first- and second-generation immigrants from Morocco and Algeria their ethnicity is not officially taken into consideration, thereby avoiding discrimination between citizens or delineating the separate communities within France.

In the United States President Lyndon Johnson introduced affirmative action as a method of redressing the legacy of racial discrimination in 1965. Affirmative action programs in education and training were brought before the Supreme Court in the 1970s. In *Bakke v. Regents of the University of California* (1978) the Supreme Court struck down a medical school's affirmative action program that set aside sixteen seats for consideration by a separate admissions committee but the court upheld the legality of affirmative action per se. In 2003 the Supreme Court upheld affirmative action in higher education ruling that race can be one of many factors considered for college admission (*Gratz v. Bollinger* and *Grutter v. Bollinger* [2003]). Affirmative is no longer justified on the basis of redressing past oppressions and injustice but in terms of a "compelling state interest" in diversity at all levels of society.

These three examples show that substantive equality can be furthered through very different affirmative action programs posing different kinds of challenges. India relies on reserved seats while the United States dismissed such quotas as unconstitutional. The United States uses race as one of many factors in evaluating an application while France dismisses affirmative action based on socioeconomic and ethnic status as running counter to its republican values. France, while not having a formal affirmative

action policy in higher education, is currently experimenting with geographically based programs. The political struggle over substantive equality of opportunity is inseparable from the normative question, what makes institutions legitimate? As Xavier Brunschvicg, the Science Po's director of communication explains: "We believe, here, that we are creating the elite of French society. But in order for these elites to be accepted, they have to be legitimate. Reproduction is not legitimate. We need to diversify to be legitimate, to help the egalité des chances [equality of opportunity] along" (Conley 2003). Pursuing substantive equality of opportunity redresses many of the limitations of formal equality, but it cannot resolve the question of why so many must compete for so little.

JUSTICE AND EQUALITY OF OPPORTUNITY

Is equality of opportunity the most basic formulation of equality, or merely one type of equality among others? In his theory of justice as "fairness," John Rawls argues that equality of opportunity must be combined with a redistribution of social goods. Rawls incorporates both formal and substantive forms of equality of opportunity into his theory of a just society through his second principle of justice, which holds that "Social and economic inequalities are to be arranged so that they are both (a) to the greatest benefit of the least advantaged [the "difference principle"] and (b) attached to offices and positions open to all under conditions of fair equality of opportunity" (Rawls 1971, p. 83). Rawls argues that even without formal barriers to equality, those with greater social and natural advantages, for example intelligence and strength, will get a disproportionate percentage of social goods like income and positions. These advantages are beyond an individual's control and thus the unequal outcomes are unjust.

Rawls's theory of fair equality of opportunity requires that resources be redistributed across social classes. In order to give every individual the same opportunity to cultivate his or her abilities and pursue his or her ambitions, the state must provide additional resources, for example bilingual education or health care, when individual families are unable to provide them. No amount of substantive equality of opportunity, however, will eliminate all socioeconomic and natural inequality. Consequently, Rawls argues that equal opportunity requires the addition of the "difference principle." By restricting the unequal distribution of goods to the benefit of the least advantaged, the difference principle requires that the rewards gained from individual talents benefit society as a whole and not solely the individual who possesses them.

In contrast to Rawls, there are many who question whether equality of opportunity is compatible with alternative conceptions of equality. John Schaar criticizes the idea that equality of opportunity is a basic definition of equality because it "really only defends the equal right to become unequal by competing against one's fellows" (Schaar 1967, p. 241). He rejects the supposed neutrality of equality of opportunity and emphasizes its underlying individualistic competitive ethic. As Schaar contends, equality of opportunity reinforces particular social values to the exclusion of others and rewards only those with talents that conform to these values.

Robert Nozick (1974) embraces this individualistic competitive ethic in his libertarian approach and argues that the equality of opportunity Rawls endorses is undermined by the difference principle. Nozick's "entitlement theory" insists that only the process by which goods are acquired is relevant for a just distribution. He thus rules out redistributive approaches to equality like Rawls's that consider equality of outcome as well as procedures.

Michael Walzer (1983) concurs with Schaar as well as many communitarians that there is no single, universal standard for what constitutes an egalitarian society. Equality of opportunity is one principle of just distribution among others, each of which expresses a particular set of social values. These alternative conceptions are not necessarily compatible and compete for priority within a particular society. Walzer argues for a "complex equality" approach that maintains a plurality of distributive principles in light of the diverse range of social goods and actors in any society.

Feminist theorists question Rawls's basic assumption, shared by many in equality of opportunity debates, that equality must be based on qualities that are shared by all and that certain kinds of difference (such as sex, race, sexual orientation, and religion) should not be taken into consideration. Universal standards like Rawls's theory of justice often assume values and characteristics that are drawn from more privileged members of society. Susan Okin (1989) shows how Rawls's theory of justice depends on the family, but does not sufficiently address whether relationships within the family are equal. Iris Young (1990) argues that forms of inequality are not limited to material resources, such as wealth, income, and positions that can be redistributed among members of society. Evaluating equality of opportunity also requires an analysis of the particular social structures (i.e., decision-making procedures, the division of labor, and culture) in which opportunities can be realized.

The debate over equality of opportunity opens onto core political and theoretical questions, including the delineation of public and private domains, individual versus group identity, and the possibility of impartial standards. At stake in this debate are shared concerns with legitimating and transforming political institutions, nego-

tiating competing social values, and cultivating practices of social justice.

SEE ALSO *Egalitarianism; Equality*

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Torrey Shanks

EQUAL PROTECTION

Equal protection as a legal concept is the idea that individuals should be treated in the same manner as other individuals in similar circumstances. The Equal Protection Clause of the Fourteenth Amendment to the U.S. Constitution provides that "no state shall … deny to any person within its jurisdiction the equal protection of the laws." According to the U.S. Supreme Court, the Due Process Clause of the Fifth Amendment also has an "equal protection component," protecting against arbitrary or unreasonable discrimination by the federal government.

Adopted during the five years following the Civil War, the Thirteenth, Fourteenth, and Fifteenth Amendments abolished slavery, extended U.S. citizenship to slaves and descendants of former slaves, ensured the right to vote regardless of race, and gave Congress the power to enforce these guarantees through legislation. In that context, the Fourteenth Amendment's Equal Protection Clause was intended to provide equal rights for blacks, and that was the view taken by the U.S. Supreme Court in the first case in which the clause was invoked. According to the Court in the *Slaughterhouse Cases* (1873), the purpose of the Equal Protection Clause was to protect "Negroes as a class" from discrimination "on account of their race."

In subsequent decisions, however, the U.S. Supreme Court limited both the scope and the substance of the Constitution's equal protection guarantee. In the *Civil Rights Cases* (1883), the Court ruled that Congress's authority to enforce the Fourteenth Amendment applied only to government actors, not private individuals. Thus, Congress could not use its enforcement power to prohibit racial discrimination in places such as hotels, restaurants, and theaters. And in *Plessy v. Ferguson* (1897), the Court

held that state laws requiring "equal but separate" facilities for blacks and whites did not violate the Equal Protection Clause, because the Fourteenth Amendment guaranteed political equality but not social equality. According to the *Plessy* Court, denying blacks the right to serve on juries deprived them of equal protection of the laws, but maintaining dual school systems for black and white students did not. With these decisions, the Supreme Court gave constitutional sanction to racial segregation in education, transportation, public accommodations, employment, and housing.

The *Plessy* Court cited the maintenance of dual school systems as an example of a policy that was consistent with the separate but equal doctrine. It is noteworthy, then, that it was in a case involving segregated schools that the Court later overturned *Plessy v. Ferguson* and its approach to equal protection. The Supreme Court's decision in *Brown v. Board of Education* (1954) was the culmination of a twenty-year litigation campaign led by the National Association for the Advancement of Colored People to eradicate the separate but equal doctrine in public education. Throughout the 1930s and 1940s the NAACP had brought cases to the Court, seeking to enforce equality between schools for black and white students. By 1954, in the cases that comprised *Brown v. Board of Education*, the organization was poised to challenge segregated education itself, and the Supreme Court was prepared to agree. In *Brown*, the Court ruled that "in the field of public education, the doctrine of separate but equal has no place. Separate educational facilities are inherently unequal."

The *Brown* Court explicitly limited its rejection of segregation to public education, but the decision gave momentum to the nascent civil rights movement that would highlight racial inequality in the United States and motivate political change. One of the early events of the movement was the Montgomery bus boycott of 1955 and 1956. The boycott ended when, in *Gayle v. Browder* (1956), the U.S. Supreme Court struck down the ordinance requiring segregated seating on city buses as a violation of equal protection of the laws. In other decisions, the Court rejected segregation in public facilities such as courthouses, parks, beaches, and golf courses.

Because the Fifth and Fourteenth Amendments did not prohibit discrimination by private actors, segregation persisted in interstate transportation, public accommodations, employment, and housing. But in *Boynton v. Virginia* (1960), the Supreme Court ruled that Congress could use its power to regulate interstate commerce to bar discrimination in interstate transportation, and with the Civil Rights Act of 1964, Congress used the commerce power to prohibit discrimination in public accommodations and employment as well. Spurred by the sit-ins of the early 1960s, in which nearly 75,000 demonstrators were involved, the passage of Title II of the Civil Rights Act guaranteed equal access to restaurants, hotels, and places of entertainment that operated in or affected interstate commerce. Title VII, as the Supreme Court interpreted it in *Griggs v. Duke Power Company* (1971), proscribed "not only overt discrimination" in employment, but also employment policies that were "fair in form but discriminatory in practice." Four years later, Congress passed Title VIII of the Civil Rights Act of 1968. Known as the Fair Housing Act, the law forbade discrimination in the sale, rental, and financing of housing.

Although the Supreme Court initially ruled that the Equal Protection Clause of the Fourteenth Amendment was intended to guarantee equal rights for blacks, the Court later adopted an expansive interpretation of the "persons" to whom equal protection was guaranteed by the clause, even recognizing corporations as persons. But after 1938, discriminatory treatment by the government based on race would be more difficult to justify than other types of discrimination. Following on Justice Harlan Stone's famous footnote in *United States v. Carolene Products* (1938) in which he suggested that "prejudice against discrete and insular minorities" called for "more searching judicial inquiry," the Supreme Court developed a three-tier approach to equal protection claims. In this approach, government classifications based on race are "suspect" classifications to which "strict scrutiny" must be applied. Strict scrutiny requires government to prove that making distinctions based on race is the least restrictive means available to achieve a compelling interest. Since 1976, sex-based classifications have been identified as "quasi-suspect" and entitled to intermediate or heightened judicial scrutiny. Under "intermediate scrutiny," a policy that categorizes individuals based on sex must be substantially related to an important government interest. Regarding all other bases for discrimination, the Court requires that the discrimination be reasonably related to a legitimate governmental objective.

SEE ALSO *Affirmative Action;* Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Civil Rights; Civil Rights Movement, U.S.; Constitution, U.S.; Desegregation; Reconstruction Era (U.S.); Segregation; Separate-but-Equal; Supreme Court, U.S.*

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Malia Reddick

EQUAL RIGHTS AMENDMENT

SEE *National Organization for Women.*

EQUALITY

Equality is a highly complex concept, there being as many forms of equality as there are ways of comparing the conditions of human existence. Equality can refer to numerous features of human life, which is why the term is usually preceded by an adjective that specifies which one is captured, such as social equality, legal equality, political equality, formal equality, or racial equality, to mention but a few. This entry will focus on the more important variants.

THE STRUGGLE FOR EQUALITY

There is, firstly, political or legal equality, which is concerned with the right to vote, to stand for office, and to be treated equally before the law, irrespective of gender, race, religion, age, disability, social background, or other such features. In medieval times, rulers took it for granted that hierarchy is natural or inevitable and that a few are entitled to privileges denied to the many. One of the achievements of the Enlightenment in the eighteenth century was the acknowledgement that all human beings have equal moral worth by virtue of a shared human essence. The Declaration of Independence ("All men are created equal") and the Declaration of the Rights of Man and Citizen ("Men are born and remain free and equal in rights") enshrined this principle in the national constitutions of the United States and France, respectively.

Numerous privileges of rank and order that had survived from feudal times were abolished in the following centuries: Slavery was done away with, universal suffrage was introduced, public offices were opened up to competition, and racial segregation was replaced with racial integration. Not everyone has been content with these achievements, however, and many today demand further changes, particularly with regard to race relations, gender equality in the workplace, and the rights of the disabled.

While the struggles over legal and political equality continue, the academic discourse in the social sciences has been concerned more with another type of equality, namely, that of substantive equality.

SUBSTANTIVE EQUALITY

Political thinkers started to question the worth of the principle of political or legal equality, given that, if left on its own, it merely grants each person an equal right to eat in an expensive restaurant—in the sense that no one is excluded on the grounds of race, gender, or religion—but entirely fails to address individuals' capacity to exercise that right, that is, their money. If wealth or some other measure of welfare is a prerequisite for exercising rights to equal treatment in other spheres, the question arises as to how social goods should be distributed. Once this normative issue is settled within political philosophy, the related practical question in public policy becomes imminent as to whether, how, and to what extent liberal democracies should ensure a level of substantive equality.

While many issues surrounding this question remain contentious, others are now regarded as relatively uncontroversial. Figure 1 depicts some of the more important debates carried out in political philosophy in recent decades. Once substantive equality is agreed upon as an aim worth pursuing, it is necessary to specify if equality is seen as an instrumental or intrinsic ideal. A wide consensus in favor of the latter has emerged, which states that equality is a good thing because of its implications for values other than equality itself, such as greater individual choice, personal autonomy, or the capacity to exercise rights. Hence, the desirability of a more equal distribution is due, not to the fact that it is more equal but that it is expected to promote that other value. Inequality can therefore be acceptable, provided a so-called Pareto improvement is achieved so that at least one person has been made better off without making anyone else worse off.

On the next level, the concept of equality requires a further distinction between individual features that result from voluntary choices and those that are a product of social and natural circumstances. The majority of egalitarian philosophers claim that it is unfair if, to employ a term coined by John Rawls (1921–2002), "morally arbitrary factors" differentially influence the course of people's lives, and that redistribution is justified as a way of neutralizing them (1971). The fundamental aim of equality should be to compensate people for undeserved bad luck, for aspects of their situations for which they are not responsible. As Ronald Dworkin states (2000), there is a moral warrant to level the inequalities in the distribution of social goods that are generated by differing endowments, while leaving intact those inequalities generated by differential effort,

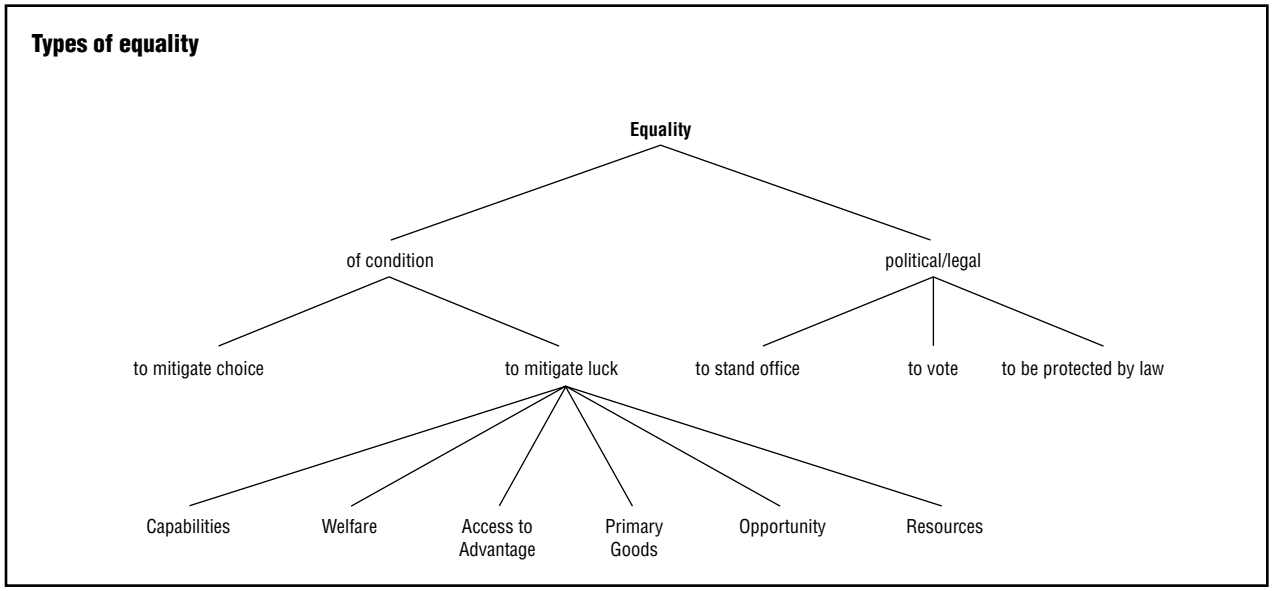

Figure 1

planning, and risk taking. No one deserves their genetic endowments or other accidents of birth, such as who their parents are and where they were born. The advantages that flow from those blessed with such fortunes must not be retained exclusively by them.

This is the stage where the traces of consensus in political philosophy end, as much work in the discipline has been dedicated unsuccessfully to the subsequent question as to what it is that is to be equalized. The aim has been to establish the appropriate standard of interpersonal comparison, or "currency" of egalitarian justice. Several suggestions have been made. Rawls proposes what he calls "primary goods": income, wealth, opportunity, and the bases of self respect. Nobel laureate Armatya Sen concentrates on "capabilities" to choose between various "functionings" that a person is able to realize in his or her life. Further accounts are G. A. Cohen's "access to advantage" and Dworkin's "resources."

The diversity of these proposals shows how difficult it is to assess the features of an individual's conditions that are to be rendered equal: They all have different causes and require compensation in a different way. Should we follow proposals that ensure an equal end-state outcome? Or should we guarantee equality achieved at some initial point in time, irrespective of what level of equality is achieved thereafter?

While the debate in political philosophy is ongoing, substantive equality is a more imminent concern for political practice, where policymakers in liberal democracies face pressures from their electorates if they fail to take measures that ensure equal life prospects to some degree. Historically, the welfare state has been the vehicle through which governments have sought to address the problem. Social and economic security has been provided to the state's population by means of pensions, social security benefits, free health care, and so forth. However, increasing pressures of globalization toward the end of the twentieth century compelled welfare states to subject their public expenditures to much more stringent economic scrutiny. Public spending and taxes were cut and responsibility for welfare was reassigned from the state to the individual. States have done so to varying degrees, however, and the measurable levels of equality today differ markedly as a result.

MEASURING EQUALITY

When complex social phenomena are condensed into a single measure, criticism is bound to arise. Even so, the most common statistical index in the social sciences to measure substantive equality within a society is the so-called Gini-coefficient, named after the Italian statistician Corrado Gini (1884–1965). The Gini-coefficient (Figure 2) varies between the limits of 0 (perfect equality) and 1 (perfect inequality) and is best captured visually with the help of a diagram that measures the percentage share of the population on the x axis and the percentage income distribution on the y axis. The coefficient represents the geometrical divergence of the so-called Lorenz curve, which measures the *actual* percentage income distribution, from a line with a 45-degree angle, which represents perfect equality, in the sense that everyone is equally

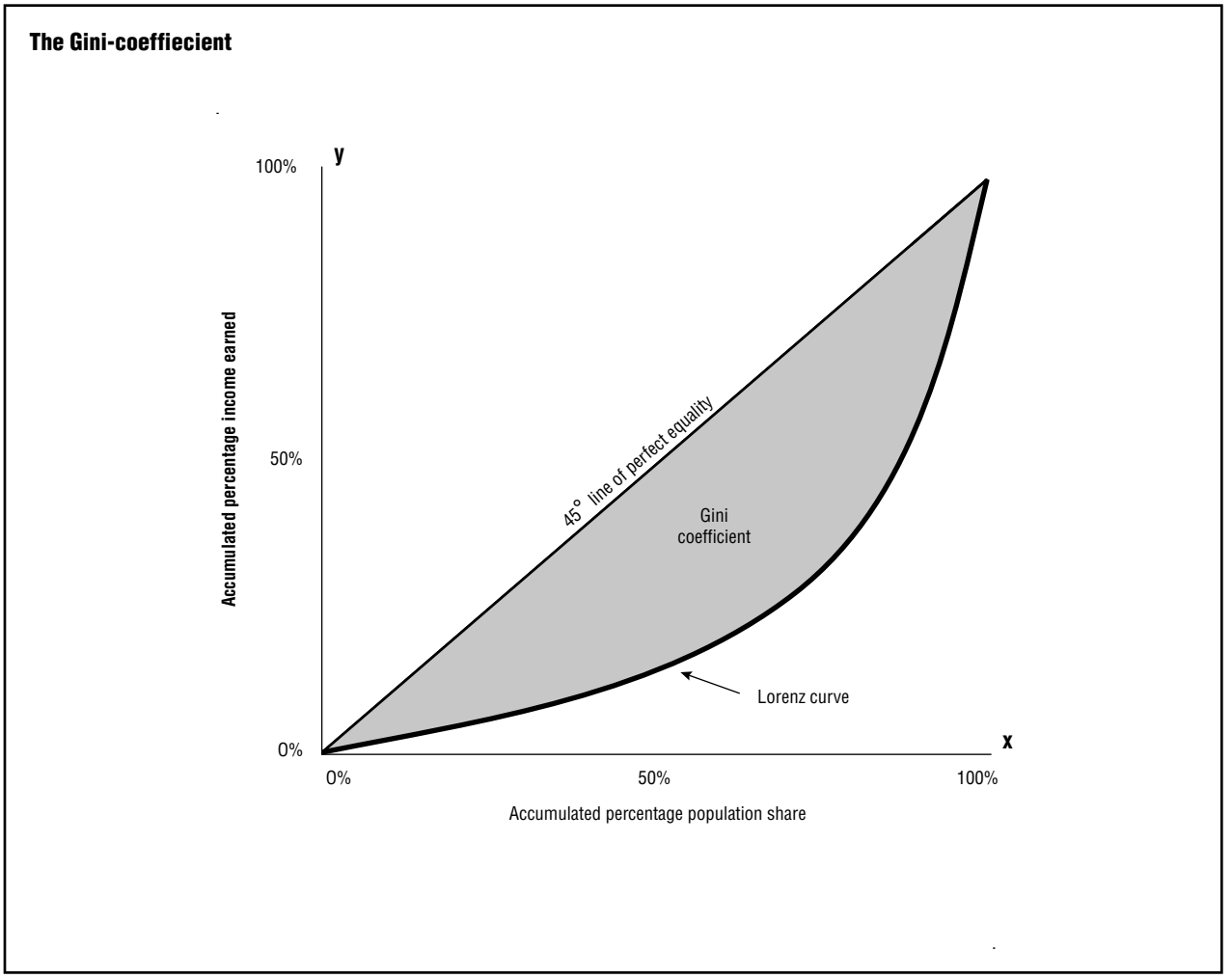

Figure 2

wealthy. The closer the Lorenz curve is to the diagonal line, the smaller the shaded area beneath that line, and the smaller the resultant Gini-coefficient, the more equal is the society's income distribution.

During the 1980s and 1990s, some advanced industrial nations experienced significant shifts in this coefficient, most notably the United Kingdom and the United States, where the neoliberal economic policies introduced by the governments of the day brought about notable increases in income inequality. As statistics produced by the United Nations show (UNDP 2005), in the United Kingdom the Gini-coefficient rose from 0.25 in 1979 to 0.35 in 2000, while the United States saw an increase from 0.36 to 0.43 over the same period. By comparison, countries with more extensive welfare state arrangements, such as most Scandinavian countries, have experienced only minor changes and continue to record Gini-coefficients of between 0.24 and 0.26. On the other end of the spectrum, states such as Brazil, Mexico, and, increasingly, China report the highest income inequality, with coefficients of between 0.47 and 0.60.

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EQUALITY OF EDUCATIONAL OPPORTUNITY

SEE *Education, Unequal.*

EQUALITY OF OPPORTUNITY

SEE *Equal Opportunity.*

EQUI-FINALITY

SEE *Multifinality.*

EQUILIBRIUM, GENERAL

SEE *General Equilibrium.*

EQUILIBRIUM, PARTIAL

SEE *Partial Equilibrium.*

EQUILIBRIUM, PUNCTUATED

SEE *Punctuated Equilibrium.*

EQUILIBRIUM IN ECONOMICS

The concept of an economy in equilibrium is pervasive in modern economics. The modern neoclassical concept has been a central tenet of economics since the late nineteenth century when economists began importing notions from physics and mechanics. The idea imported from physics is that claiming an economy is in a state of equilibrium implies forces exist that would correct any accidental deviation from that state of equilibrium. As such, equilibrium is a dynamic concept as it involves constant corrective movement, movement that is always in the direction of restoring an equilibrium state whenever perturbed by frequent, possibly random, deviations. An equilibrium can be dynamic in another sense, such as when it represents a persistent pattern even though the objects that form the pattern may be in constant movement. The obvious physics example is the solar system with the planets in constant movement but in predictable and stable patterns. Similarly, one can think of an entire economy in a "stationary state" with constant flows of goods and services that year by year maintain a stationary equilibrium pattern (i.e., no growth or decay).

The classical school of the early nineteenth century advanced a notion of an equilibrium that was invested mostly in the static outcome of exhausting all possibilities of improvement. Typical examples were the improvements realized by an individual firm's progressive division of labor or by a firm's choice to switch industries to one where the rate of return on investment capital is higher. The individual firm was said to be in equilibrium only when its production process cannot be further divided. Industries in an economy were said to be in equilibrium only when all firms in all industries are earning exactly the same rate of return and hence there would be no possibility of gain by switching industries. In both cases, the state of equilibrium depends on whether the firm knows of any possibility of improvement. It is always possible that the necessary condition for equilibrium—such as the uniform rate of return—is not actually fulfilled because firms are either unaware of any possibility of improvement or are in some way constrained from moving to a more profitable industry (as would have been the case in the eighteenth century when the king granted a profitable monopoly to one producer).

For the most part, given the diverse history of the concept, economists and economics textbooks seem confused about just what equilibrium means. Is it a static balance such as when a market's supply equals demand? Or is it a singular state of affairs in a dynamic system that explains how the balance was obtained? A balance can be static but an equilibrium is always a dynamical concept. When modern economists say that an economy is in equilibrium they seem to be saying only that the operative forces in the economy are in balance as there is rarely anything said about the explicit dynamics needed to restore or obtain the equilibrium.

In the case of a market where supply and demand are in balance, what is most important is that there can be only one going price: the one price that clears the market and thus the one price at which it is possible for every participant to be maximizing. And while the classical economists were interested in a state of affairs where there would no longer be a reason to change as there is no possibility of gain, the primary purpose for the neoclassicals' assumption of a state of equilibrium is to obtain the state of affairs where everyone is knowingly maximizing. It is primarily the mathematics of universal maximization that characterizes modern economic theory since the late 1930s.

EQUILIBRIUM AS A PROBLEM FOR MATHEMATICAL ANALYSIS

The beginning of neoclassical attempts to incorporate explicit equilibrium concepts in economics in the late nineteenth century was coupled with the attempts to make economics a mathematical science like physics. The main methodological question was whether one could build a mathematical model of a whole economy consisting of many independent decision makers guided by prices determined in various markets such that the model would imply the existence of a unique set of prices (one price for each good or service transacted in the economy). One of the first economists to attempt this in the nineteenth century was the French economist Léon Walras. His approach was to represent all participants in the economy (producers or consumers of goods and services) with their objective functions (i.e., their respective utility or production functions), which represent what they wish to maximize. Each individual was simply assumed to be a maximizer such that Walras could deduce the necessary calculus conditions for each individual to be maximizing. For each individual, these conditions are in the form of equations, one for each and every good or service. Obviously this involves a huge number of equations in a real economy but this is a mathematics problem so the number does not matter. Together these conditions amount to a system of simultaneous equations and the task is to find a means of specifying the objective functions to assure the logical existence of the unique set of prices that would allow all individuals to be maximizing. Walras thought that the existence of such a set of equilibrium prices was assured whenever the number of equations equaled the number of unknowns (the prices and the quantities of all good and services transacted). He was in error about this and for many decades mathematical economists would try to create more mathematically sophisticated models that would assuredly entail equilibrium prices and quantities. The first success was not obtained until the 1930s.

It was also realized that proving the existence of a set of equilibrium prices is not enough. Model builders always face two methodological problems. First, if the equilibrium model is to explain why prices are what they are, it must also explain why they are not what they are not. If the model entailed more than one set of possible equilibrium prices, one of those sets may fit the observable prices but since the other sets are also entailed, the question is begged as to why the observed set existed and not one of the other sets. In other words, a model with multiple equilibria is an incomplete explanation of observable prices. Second, even if the model entails a unique set of equilibrium prices, not only must that set be unique but it must be stable. That is, if for any reason the equilibrium is upset (i.e., one or more of the prices deviate from the equilibrium values) will the system return to a state of equilibrium? Any possibility of multiple equilibria aggravates this problem, too. Much of the mathematical work of the 1950s and 1960s was devoted to solving both the existence problem and the stability problem. From a mathematical point of view, many models were provided that were indeed logically sufficient to solve these two problems. But critics would be quick to point out that too often the assumptions made to construct these models were unrealistic.

EQUILIBRIUM MODELS AS A MODE OF EXPLANATION

Leaving aside the mathematical economist who is more interested in the mathematics of equilibrium models than the economy those models are designed to explain, the problems of stability and existence must be dealt with if those models are ever to be a satisfactory explanation or even a useful guide for economic policy. This is particularly so if the equilibrium model is to be used to explain prices. While claiming that the observed price of a good or service is what it is because it is an equilibrium price—that is, it is at a value that allows its market to clear (i.e., allows demand to equal supply)—the explanation is not complete unless one can also explain the how or why the price was adjusted to that equilibrium value.

Any adjustment or change in the price is a decision made by an individual who is not maximizing at the current price. So, if one assumes all demand curves are negatively sloped and supply curves are positively sloped, then for someone to be motivated to change the price it must not be at the one value necessary for market equilibrium. In particular, either the price is above the value necessary for equilibrium and thus some supplier is unable to sell the amount necessary for profit maximization or it is below that equilibrium value and at least one demander is unable to buy enough to maximize utility. Kenneth Arrow raised this issue in a 1959 article "Towards a Theory of

Price Adjustment," where he recognized that textbook theory presumes that all decision makers are in effect small fish in a big pond. That is, all textbook decision makers are price takers because they are too small to have an effect on the going price. But, if the market is in disequilibrium and everyone is a price taker, who changes the price and why? Since textbook economics has maximization as the only behavioral assumption, Arrow said that how much someone changes the price is a decision that must be explained as a maximizing choice. Interestingly, textbooks have an explanation for someone who chooses the price but it is in the chapter about the monopoly producer. While this might be seen as a means of completing the explanation of the price, it creates a contradictory situation. One would have one theory for when the market clears (everyone is a price-taking maximizer) and a different theory for the disequilibrium price adjustment. As every equilibrium model must deal with the dynamics needed to assure stability, it means that both theories must be true at the same time but they are contradictory. This is a very unsatisfactory situation for anyone wishing to use an equilibrium model to explain the one going price, one that clears the market so all participants can be maximizing.

EQUILIBRIUM ATTAINMENT VERSUS THE EQUILIBRIUM PROCESS

Critics of equilibrium model building complain that devoting so much effort to mathematically proving the existence of a possible equilibrium misses the policy point of market equilibrium theory. The primary virtue of a market system as the basis of social organization is not the mathematical properties of a state of equilibrium but the fact that a stable market will always give the correct information to would-be market participants whenever the equilibrium has not yet been reached. A rising price indicates to producers to supply more and to consumers to demand less. But critics also claim the time required to make adjustments to achieve an equilibrium may exceed the time allowed before consumer tastes or technology changes.

In order to recognize an equilibrium process, a model must include an explanation of how the equilibrium is achieved and how long it would take to reach it. Without such recognition, the notion of a market being in a state of equilibrium adds nothing beyond the behavioral assumption of universal maximization. This is so because the assumption of utility maximization is used to explain the individual consumer's demand decision at any given price and the assumption of profit maximization for the individual producer's supply decision at that price. Thus if everyone is maximizing at the going price, that price must be the one that clears the market (i.e., the one where demand equals supply)—no other price is logically possible.

SEE ALSO *General Equilibrium; Nash Equilibrium; Partial Equilibrium*

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EQUILIBRIUM IN PSYCHOLOGY

The concept of equilibrium plays an important role in diverse domains of psychology. At a basic physiological level, an organism strives to regulate drives and to maintain homeostasis—that is, physiological equilibrium. On an emotional level, people work to balance the dictates of competing desires and instincts. At a more cognitive and social level, people strive to reconcile discrepancies among different types of thought, behavior, and attitude. The existence of competing drives, conflicts, and inconsistencies leads to the need to restore equilibrium when a system is out of balance.

Because of the diversity of meanings of *equilibrium*, psychologists use the term in ways and in contexts that may vary substantially. For instance, the regulatory drives associated with hunger and thirst bear little resemblance to the experience of holding two mutually inconsistent attitudes that must be reconciled. The glue that binds them is the need to maintain a balance. It is this basic need that gives the construct of equilibrium its central role in explaining human and nonhuman behavior at multiple levels.

EQUILIBRIUM IN PSYCHODYNAMIC THEORY

Beginning with Sigmund Freud's psychodynamic theory, and continuing with that theory's intellectual descendants, equilibrium has played a central role in descriptions of the emotional landscape. At a basic level, Freud postulated that the three components that underlie personality—the id, ego, and superego—exist in dynamic tension, requiring a constant attempt to achieve or retain equilibrium.

The id reflects an unconscious set of instinctive drives solely oriented toward self-gratification. When a need is unmet, the individual is driven to reduce the tension it causes. According to Freud, the id has no contact with reality; its primary process is to form merely an image of the object that will satisfy its drive. At some point, the person needs a reality-based reduction of the drive, not simply an image. The ego was seen to develop from the id to provide an actual reality-based drive-reduction, the so-called secondary process. Freud theorized that this id-ego combination dominates a person's behavior until social awareness leads to emergence of the superego, which recognizes that some behaviors are inappropriate. At that point, the superego needs to be factored into the equation for equilibrium.

The individual must develop equilibrium by maintaining a balance between the need to reduce drives and the need to recognize the realities of behavior within a societal or familial context. When people achieve equilibrium, the forces of the id, ego, and superego are in balance. With disequilibrium, anxiety arises. With realistic anxiety, the rationality of the ego can help resolve the anxiety. With neurotic or moral anxiety, however, the tension caused by the imbalance can lead to the emergence of defense mechanisms that help relieve the anxiety. Freud also speculated that dreaming can help a person resolve anxieties caused by tension between id, ego, and superego.

Subsequent psychodynamic theorists (e.g., Loevinger 1976) have responded to some of the limitations of Freud's theory by shifting the emphasis from id to ego. The goal, however, remains largely the same: to characterize the way people balance basic desires and realities as they adjust to the world around them. Another shift in psychodynamic theories moved from largely internal sources of potential disequilibrium to social sources (Adler 1964; Erikson 1974).

A further psychodynamic theory that features some overlap with Freudian ideas is Carl Jung's analytical psychology. It specifies that one of two attitudes, introversion or extraversion, dominates a person. Two additional sets of dichotomies are important as well: thinking versus feeling—both rational processes—and sensing versus intuiting, which are not rational. People are predisposed, according to the theory, toward one element of each dichotomous pair. The commonly used, but controversial, Myers-Briggs Type Inventory is based on Jung's theory.

The details of these psychodynamic theories differ, sometimes greatly, but each theory, at its base, postulates that people must resolve a series of conflicts as they progress through life. Most of the theories posit that normal sexual or social development requires that people successfully navigate through stages of development, bringing their underlying instincts and motivations into equilibrium.

EQUILIBRIUM IN HUMANISTIC THEORY

The humanistic psychologists took a very different approach to understanding people, their motivations, and their behaviors. Whereas the psychodynamic theories rely greatly on unconscious drives and instincts and have a negative cast (i.e., people are always working to resolve crises in order to restore equilibrium), the humanists suggest that people are aware of their motives and are predisposed to full functioning or self-actualization, and that problems arise only when the normal state of equilibrium is breached.

Carl Rogers (1961) speculated that if people are accepted unconditionally, they will develop positive self-regard. On the other hand, if acceptance by oneself or by others is dependent on particular behaviors, people will have difficulty accepting themselves unconditionally. Consequently, their path to self-actualization will be interrupted. According to this framework, disequilibrium occurs when there is a mismatch between people's views of their real self and their ideal self. Such a mismatch prevents self-actualization.

Therapies to remedy such disequilibrium focus on one's own insight into the problem. Rogers's client-centered therapy relies on the therapist's acceptance of and empathy with the clients, who are responsible for resolving their problems. Another humanistic approach, Gestalt therapy, also relies on insight, but the therapist is more directive and may confront the client in order to resolve important issues, so the client can regain equilibrium.

EQUILIBRIUM IN SOCIAL AND COGNITIVE THEORY

The developmental theory of Jean Piaget relies on the concept of equilibrium in that it maintains that as children become more cognitively sophisticated, they recognize the inconsistency between what they already know and new information they encounter.

Piaget developed the notion of *equilibration*, which relates to a person's attempt to balance psychological schemas with the new information that he or she

processes. During the process of equilibration, children assimilate new information and new ways of thinking, and then accommodate that new information by changing their psychological schema.

An alternate developmental viewpoint conceived by Lev Vygotsky (1978) postulates that the source of disequilibrium is external. In this view, the disequilibrium that moves children from one stage of development to another is based on social interaction. Vygotsky suggested that differences across cultures affect what children learn and how they learn it. That is, a teacher or parent can elevate children's cognitive complexity beyond the level the children have attained on their own by appropriate help during a learning session. In contrast, Piagetian theories of how children move to new levels of cognitive sophistication are focused on internal processes.

Outside the realm of developmental psychology, social and cognitive psychologists have described the role of equilibrium in social interaction. For instance, Fritz Heider speculated that people embrace new information that is consistent with what they already know and reject incompatible information because of the need to retain balanced cognitive schemas. For example, research has shown that when people engage in a behavior that is inconsistent with a stated attitude, they experience what is known as *cognitive dissonance* and will often change the attitude to be consistent with the behavior. There are, however, circumstances in which people are able to maintain inconsistent attitudes and behaviors.

EQUILIBRIUM IN PHYSIOLOGICAL THEORY

The body regulates itself in many dimensions simultaneously, each achieving its own balance. Such regulation involves drives such as hunger, thirst, sex, sleep, and others. An early behavioral psychologist, Clark Hull, developed a drive theory that used regulatory mechanisms to predict and explain the emergence of behavior.

According to Hull, an organism rests when in a state of equilibrium. When a drive, like hunger or thirst, develops, the organism is motivated to alleviate this disequilibrium by engaging in appropriate behavior regarding that drive. The act of eating to reduce hunger or drinking to reduce thirst is known as *drive-satisfying behavior*. Hull developed a complex mathematical theory to characterize the emergence of behavior. The theoretical shortcomings of his concepts led to modifications of the model, however. Contemporary psychologists now employ theories based on the concept of *optimum-level*. In this framework, the body is viewed as having an optimal level of arousal that differs from one person or animal to another and that differs in varied settings. When arousal is either too high or too low for comfort, the organism engages in behaviors to return the arousal level to the optimal level.

EQUILIBRIUM IN SENSATION AND PERCEPTION

Animals are quite proficient at maintaining appropriate posture, or equilibrium, due to structures in the inner ear that very rapidly provide information to the eyes and to the muscles that regulate balance. The structures responsible for appropriate posture include the three semicircular canals in the inner ear that provide feedback regarding rotational movement of the head and two otolith organs that register linear movement. The canals contain fluids that move when the head moves, creating neural signals about the movement. The otoliths contain calcium carbonate crystals that stimulate neurons when an organism moves.

These five structures send information to the muscles, allowing maintenance of balance even during complex movement. When the structures send information to the eyes, accurate visual tracking of the environment during even rapid head movements is made possible.

SEE ALSO *Child Development; Chomsky, Noam; Cognitive Dissonance; Developmental Psychology; Festinger, Leon; Freud, Sigmund; Gestalt Psychology; Hull, Clark; Jung, Carl; Neuroscience; Piaget, Jean; Psychology; Self-Actualization; Self-Esteem; Social Statics*

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EQUIPOSSIBILITY

SEE *Probability Theory.*

EQUITY MARKETS

Firms that want to raise capital have a choice between attracting debt or equity. The main difference between

these financing forms is that debt holders have a contract that states that their claims must be paid in full before the firm can make payments to equity holders. Equity holders are entitled to the rest of the company after the debt holders are paid off. Therefore equity is often referred to as a residual claim. Equity markets, also known as stock markets, are markets where different types of equity are traded. The most common forms of equity are common stocks and preferred stocks. The term *common stock* is reserved for stock that does not have a special preference in either dividend payments or in bankruptcy. Preferred stock has preference over common stock in dividends and/or bankruptcy.

Equity markets are generally divided into primary and secondary markets. The primary market is where the securities are first offered to the general public. This takes place in the form of a so-called Initial Public Offering (IPO). There is abundant evidence that IPOs are underpriced. This means that the offer price of the shares is, on average, lower than the market price at the end of the first trading day. In 2003 Jay Ritter overviewed evidence on underpricing for thirty-eight countries and found that the average first day returns vary between 5.4 percent for Denmark and 256.9 percent for China. The average first day returns for the United States were 18.4 percent. After the initial public offering, shares can be traded in public secondary markets. These markets can either be organized as an exchange or as an over-the-counter market. An exchange is a physical location where buyers and sellers come together to buy and sell securities. In an over-the-counter (OTC) market buyers and sellers can transact without meeting at a physical place.

The first trading in shares started in 1602 with the formation of the Dutch East Indies Company in Amsterdam. According to Geoffrey Poitras's *Security Analysis and Investment Strategy* (2005), the trading of stocks in the United States goes back to 1792 when twenty-one individual brokers and three firms signed the so-called Buttonwood Agreement. In the end this arrangement evolved into the New York Stock Exchange (NYSE), a title that was introduced in 1863. Over time equity markets have expanded enormously. In 1974 the market capitalization of the combined world equity markets was less than $1 trillion. According to *Focus*, the monthly overview of the World Federation of Exchanges, this total grew to $43.9 trillion at the end of June 2006. At that time, the largest stock exchange in the world, the earlier mentioned NYSE, had a market capitalization of $13.9 trillion and counted 2,205 listed companies. The second-largest exchange, the Tokyo Stock Exchange, had a market capitalization of $4.5 trillion that was accounted for by 2,377 companies. The third-largest exchange in terms of market capitalization is the National Association of Securities Dealers Automated Quotation system (NASDAQ) with a market capitalization of $3.5 trillion. This is an automated quotation system that operates in the United States. Even though its market capitalization is much smaller than that of the NYSE, it has a larger number of listed companies (3,161) than the NYSE. This also illustrates the move from traditional exchanges to automated quotation systems.

Another source of equity is private equity. This is equity that is not traded in public markets. Categories of private equity include venture capital and equity for companies that are in a restructuring process. Private equity funds offer opportunities to invest large sums of money into this type of equity.

In the context of the internationalization of equity markets, firms are often cross-listed on different stock exchanges. Since the United States is the world largest capital market, a large number of firms want to list their equities there. However, this also means that the firms have to submit themselves to the very strict U.S. financial disclosure requirements. In order to avoid these requirements many firms use American Depositary Receipts (ADRs). With an ADR the firm deposits a number of its own shares with a bank in the United States. The bank then issues an ADR; this is a security with a claim on the dividends and other cash flows of the shares that are deposited with the bank. Another internationalization trend that deserves mentioning is the fact that stock markets in emerging economies have become more important. There is a large growth in equity markets in Asia (e.g., Korea and Hong Kong) as well as in Eastern Europe (e.g., Poland and Slovenia). In a number of emerging markets stocks are divided into A and B shares. In such cases the B shares have no or less voting rights than the A shares. Foreigners are then restricted to holding the B shares in order to prevent them from taking control over the firm.

SEE ALSO *Capital; Expectations; Financial Instability Hypothesis; Financial Markets; Hedging; Initial Public Offering (IPO); Liquidity Premium; Stock Exchanges; Stock Exchanges in Developing Countries; Wealth*

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Chris Veld

ERIKSON, ERIK

1902–1994

Erik Homburger Erikson was born on June 15, 1902, in Frankfurt, Germany. He died on May 12, 1994, in Massachusetts. As a young man, he restlessly traveled through Europe, attending art schools and subsequently teaching art and history in Vienna. Beginning in the late 1920s, while teaching children, he was trained by Anna Freud (1895–1982) as a child psychoanalyst at the Vienna Psychoanalytic Institute. There he met his future wife Joan Serson. In 1933 they immigrated to the United States, where he was offered a teaching position at Harvard Medical School. While teaching, Erikson maintained a private practice in child psychoanalysis. He later held teaching positions at the University of California at Berkeley, Yale University, the San Francisco Psychoanalytic Institute, the Austen Riggs Center in Stockbridge, Massachusetts, and the Center for Advanced Studies of the Behavioral Sciences in Stanford, California, finally returning to Harvard, where he completed his career (Coles 1970).

Erikson invigorated and expanded psychoanalytic theory with concepts he drew from Freud, biology, observations of children from several cultures, and self-observations that emerged from his psychoanalysis. As a clinician and theorist, his central contributions to human development research were to understand and illuminate, not to collect data, regarding both psychopathology and normal growth and development in varied cultural and historical contexts. Among his most important contributions was his *eight-stage lifespan* approach to personality development, elaborated in *Childhood and Society* (1950). Another was his introduction of the concept of *identity crisis*, described in *Identity: Youth and Crisis* (1968) and exemplified in *Young Man Luther* (1958). His focus on adolescence and identity crises may have been shaped in part by his own early life stressors, youthful wanderings, and lack of direction (Friedman 1999). His Danish appearance (tall, blond, blue-eyed), inherited from his unknown biological father, contrasted sharply with that of his Jewish mother and his stepfather. His Jewish peers often taunted him at school. He terminated his formal education at the age of eighteen and began his lifetime of travel and questioning. One of his best-known books that exemplifies the individual struggle with justice and reconciliation in a social and historical context is *Gandhi's Truth* (1969), for which Erikson won a Pulitzer Prize in 1970.

The underpinning for Erikson's theory of eight stages of psychosocial (ego) personality development is the biological epigenetic principle. With the proper sequence and rate of development, each stage reaches its time of greatest salience as a healthy individual becomes ready to benefit from experiences provided by significant others relevant to the particular stage crisis. The ego, the central focus of Erikson's theory, regulates and resolves the tensions between the individual's psyche and society's expectations with the goal of a predominance of the syntonic end of the continuum, such as more trust than mistrust. Each stage builds on the preceding stages and prepares one for subsequent stages. The society is initially defined as the mother figure and expands at each stage until it encompasses humankind. Providing an optimistic view of human growth and development, Erikson described the outcome of each stage as modifiable, thus affording the opportunity for growth but also weakness, based on later life experiences. The positive resolution of each stage resulted in a virtue—for trust, for example, the corresponding virtue would be hope. The eight psychosocial stages with their virtues are:

Stage 1: Trust versus mistrust (first year) virtue: hope.

Stage 2: Autonomy versus doubt/shame (one to two years) virtue: will.

Stage 3: Initiative versus guilt (two to four years) virtue: purpose.

Stage 4: Industry/mastery versus inferiority (five years to puberty) virtue: confidence.

Stage 5: Identity versus role confusion/identity diffusion (adolescence) virtue: fidelity.

Stage 6: Intimacy versus isolation (early adulthood) virtue: love.

Stage 7: Generativity versus self-absorption (young and middle adulthood) virtue: care.

Stage 8: Integrity versus despair (later adulthood) virtue: wisdom.

After her husband's death, Joan Serson Erikson proposed a ninth stage, old age, focused on the effort not to lose one's "indomitable core" (Davidson Films 1995).

Because Erikson's writings were at times complex and evocative, interpretation of his theory for application to research has resulted in vigorous debate. Nevertheless, all of the personality components have been studied. Identity, a major task of adolescence, has been empirically investigated the most extensively (Kroger 2007; Marcia, Waterman, Matteson, et al. 1993). The concepts of identity and identity crisis have had a major impact on the fields of psychology, sociology, literature, and history, being applied to career, ethnicity, race, sexuality, ideologies, diasporas, and so forth.

Erikson's lifework continues to be described as one of the most important contributions to the understanding of normal personality development across the lifespan. He is identified as a major factor in the framework and expansion of ego psychology. Erikson was among the first great

theorists to place extensive responsibilities on the widening circle of significant others in the context of culture and history for the healthy growth of the individual.

SEE ALSO *Adolescent Psychology; Freud, Sigmund; Identity Crisis; Justice; Maturation; Personality; Psychoanalytic Theory; Psychology; Stages of Development*

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EROTICISM

Although there is no accepted definition of *eroticism*, it is understood in this entry to describe the focus of an individual's sexual arousal pattern. It differs from *erotica* (the story, picture, or other media), which depicts and appeals to someone's eroticism. A different perspective defines eroticism as a component of sexuality involving a focus on pleasure and the heightening of arousal for its own sake (Kleinplatz 1996).

It is said that anything can be and everything has been eroticized. The subject of an eroticism can be specific or general, stable or fluid over time, and necessary, preferred, or irrelevant for a satisfactory sexual response. The intensity and importance of an eroticism can and does change over time. Sometimes those changes are substantive, sometimes minimal. Eroticisms are idiosyncratic; what one person finds extremely erotic is only somewhat arousing to the next, neutral to another, boring to someone else, and disgusting to the last person. Having an eroticism does not imply necessarily an interest in acting it out; fantasy can be sufficient. Sexual interests may affect each other; an interest in feet, for example, can lead to an interest in shoes. Additionally, a shoe eroticism may be expressed differently depending on sexual orientation (e.g., work boots for a homosexual man and high heels for a heterosexual man).

Every society attempts to restrict the sexual behavior of its members, even though they are usually unsuccessful. The control methods include making the act (or even a depiction of the act) a crime, immoral, a violation of religious teachings, or pathognomonic of an illness. Individuals who flout the societal mores are subject to imprisonment, shunning, eternal damnation, medical or surgical interventions, involuntary hospitalization, and civil penalties. Individuals have been imprisoned or disowned and have lost jobs, inheritances, security clearances, custody of their children, their standing in the community, and their marriages for violating these mores. This can involve admitting an interest in, promoting acceptance of, distributing or creating depictions of, or engaging in the proscribed acts.

Societal attempts to control an eroticism often include trying to censor the erotica, now labeled as indecent or obscene, that depict that eroticism. What legally constitutes obscenity continues to be debated extensively; it varies from society to society, within each society, and changes over time. What was once accepted can become proscribed and what was proscribed can become accepted.

A basic and unanswered question is how specific eroticisms develop and how many different developmental mechanisms exist. Other important social science questions include: What is the importance of having eroticisms? Why does every society try to control eroticisms and fail? How can eroticisms be changed or influenced? What is the relationship between sexual orientation and eroticism? How do the eroticisms of men and women differ?

There is great debate among both professionals and the public concerning the effect of exposure to sexually explicit material on one's eroticism or sexual behavior. We know eroticisms can evolve or change over time, but psychotherapy has been ineffective in directing those changes purposefully. Although controversial, it is improbable that exposure to erotica has any significant or lasting effect on one's sexual interests, or they would be easy to change. It is more probable that exposure allows individuals to recognize the nature of their own eroticism. Additionally, there is great concern about the effects of erotica on minors. Some believe that the material will provoke the minor to engage in the depicted sexual activity or incorporate it into a new eroticism; others suggest that lack of exposure stymies sex rehearsal play, which eventuates in adult sexual dysfunction or other sexual concerns.

Although rare, there are people who have no eroticism. These individuals often present with inhibited sexual desire, arousal difficulties, indifference to, or avoidance of sex. Nevertheless, on further evaluation they are quite capable of a "normal" sexual response; they just have nothing upon which to focus sexually.

Recognition of one's eroticisms enhances an individual's sex life, can enrich a couple's sex interactions, helps individuals connect with others who share their eroticisms, and promotes a feeling of completeness as a person.

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Charles Moser

ERROR, SPECIFICATION

SEE *Specification Error.*

ERROR-CORRECTION MECHANISMS

Consider an econometric model of a dynamic relationship between a variable y_t and explanatory variables $x_{1t}, \ldots, x_{kt}$, taking the form

$$\begin{aligned} y_t = {} & \beta_0 \\ & + \beta_{11}x_{1t} + \cdots + \beta_{1k}x_{kt} \\ & + \beta_{21}x_{1,\,t-1} + \cdots + \beta_{2k}x_{k,\,t-1} \\ & + \beta_3 y_{t-1} + u_t \end{aligned} \tag{1}$$

where u_t is a random error term. An alternative representation of this model is

$$\begin{aligned} \Delta y_t = {} & \gamma_0 \\ & + \Delta\gamma_{11}\Delta x_{1t} + \cdots + \gamma_{1k}\Delta x_{kt} \\ & + \gamma_2 (y_{t-1} - \delta_1 x_{1,\,t-1} - \cdots - \delta_k x_{k,\,t-1}) + u_t \end{aligned} \tag{2}$$

where $\Delta y_t = y_t - y_{t-1}$ and $\Delta x_{it} = x_{it} - x_{i,\,t-1}$ for $i = 1, \ldots, k$, and the relationships between the coefficients are $\gamma_0 = \beta_0$, $\gamma_{1i} = \beta_{1i}$, $\gamma_2 = \beta_3 - 1$, and $\delta_i = (\beta_{1i} + \beta_{2i})/(1 - \beta_3)$. Equation (1) is sometimes called the autoregressive distributed lag (ARDL) representation, while (2) is the error correction mechanism (ECM) representation. Generalizations to higher orders of lag are easily obtained. The ECM representation has the attractive features of representing an economic agent's decision in terms of a rule-of-thumb response to current changes, according to parameters γ_{1i}, and corrections to deviations from a desired long-run equilibrium relation with parameters δ_i. For this reason the acronym ECM is sometimes taken to stand for equilibrium correction mechanism. Equation has the disadvantage of being nonlinear in parameters, so that estimation and inference are less straightforward than in the case of equation.

The ECM form was first proposed by Denis Sargan (1924–1996) for a model of wages and prices (Sargan 1964). It was subsequently popularized by the work of David Hendry and others in the context of modeling applications in macroeconomics, such as the consumption function and the demand for money. The seminal contribution is J. E. H. Davidson, D. F. Hendry, F. Srba, and J. S. Yeo (1978), commonly referred to in the literature as DHSY.

The approach later acquired special prominence due to the work of Clive W. J. Granger, who independently explored the implications of modeling economic time series as integrated (I(1)) processes; in other words, processes generated as the partial sums of stationary, weakly dependent increments. (A random walk is a simple example.) This type of model, also called a stochastic trend model, describes many series observed in economics and finance. If in the driving processes $x_{1t}, \ldots, x_{kt}$ are I(1), and $\gamma_2 < 0$, then $y_t \sim$ I(1) also, but

$$z_t = y_t - \delta_1 x_{1t} - \cdots - \delta_k x_{kt} \tag{3}$$

is I(0) (i.e., a stationary, weakly dependent process). The variables are then said to be cointegrated and z_t is called the cointegrating residual. Cointegration (i.e., combining the twin modeling concepts of stochastic trend representations for economic series and cointegrated relations characterizing long-run interactions over the economic cycle) has been a profoundly influential idea in macroeconomics, earning Robert F. Engle and Granger (1987) the Nobel Prize for economics in 2003.

In practice, such models are often generalized to a system of dynamic equations, explaining several variables in terms of a common set of cointegrating relations. In reduced form the resulting models are called vector error correction models (VECMs) or reduced rank vector autoregressions (VARs). Following the work of Søren Johansen, a closed VECM for an m-vector of variables x_t is commonly represented in matrix notation as

$$\begin{aligned} & \Delta \mathbf{x}_t = \\ & \Gamma_0 + \Gamma_1 \Delta \mathbf{x}_{t-1} + \cdots + \Gamma_k \Delta \mathbf{x}_{t-k} + \alpha\beta' \mathbf{x}_{t-1} + \mathbf{u}_t \\ & (m \times 1) \end{aligned} \tag{4}$$

where $\boldsymbol{z}_t = \boldsymbol{\beta}' \boldsymbol{x}_t$ $(s \times 1)$ is the vector of cointegrating residuals. The rank of the $m \times s$ matrices $\boldsymbol{\beta}$ and $\boldsymbol{\alpha}$ is called the cointegrating rank of the system. In a cointegrated system the inequalities $0 < s < m$ must hold. The Granger representation theorem states that a linear dynamic model generates cointegrating relations if and only if it has a VECM representation.

SEE ALSO *Cointegration; Lags, Distributed; Least Squares, Two-Stage*

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James Davidson

ERROR TERM, IN REGRESSION

SEE *Generalized Least Squares.*

ERROR TERMS

SEE *Residuals.*

ERRORS, STANDARD

Reports of the values of sample statistics (e.g., means, or regression coefficients) are often accompanied by reports of the "estimated standard error." A statistic is simply an index or description of some characteristic of the distribution of scores on a variable in a sample. The "standard error" associated with the statistic is an index of how much one might expect the value of the statistic to vary from one sample to another. The estimated standard error of a sample statistic is used to provide information about the reliability or likely accuracy of the sample statistic as an estimate of the population parameter.

For example, the 1,514 adults responding to the *General Social Survey* (National Opinion Research Center 2006) for 1991 reported that their average age was 45.63 years. Along with this statistic, a "standard error" of .458 was reported. This suggests that if we were to draw another sample (of the same size, using the same methods) and to calculate the mean age again, we might expect the result to differ by about .458 years from that in our first sample.

DEFINITION

Formally, the *standard error* of a statistic is the standard deviation of the sampling distribution of that statistic. Most texts in estimation theory in statistics contain detailed elaborations (e.g., Kmenta 1986, chapter 6). Some elaboration in less formal terms, however, may be helpful.

When we select a probability sample of cases from a population, collect data, and calculate the value of some statistic (e.g., the mean score on the variable age), we are using the sample statistic to estimate the mean of the whole population (the population parameter). If we were to draw additional samples and calculate the mean each time, we would expect the values of these sample means to vary because different cases will be included in each sample. The random variation of the value of a statistic from one sample to another is termed the *sampling variability* of the statistic.

Imagine that we collected the values of a statistic from a very large number of independent samples from the same population, and arrayed these values in a distribution. This distribution of the values of a statistic from repeated samples is termed the *sampling distribution* of that statistic. The statistic (e.g., average age) will sometimes be somewhat lower than the average of all samples, and sometimes higher. We can summarize how much any one sample is likely to differ from the average of all samples by calculating the standard deviation of sampling distribution. This value is the standard error; it is the average amount by which the value of the statistic in any one sample differs from the average value of the statistic across all possible samples.

USES OF THE STANDARD ERROR

The estimated standard error of a statistic has two primary uses. First, the standard error is used to construct confidence intervals; second, the standard error is used to conduct hypothesis tests for "statistical significance."

In the example above, the mean age of persons in the sample was 45.63 years. The estimated standard error of this statistic was .458 years. Most observers would conclude that our estimate of the population age is fairly accurate—that is, if we drew another sample, it would be expected to differ very little from the current one. On

average, the differences between samples will be less than one-half year of age (.458 years).

It has been proven that the sampling distribution of sample means has a normal or Gaussian shape. Because this is true, we can describe the reliability of the sample estimate with a confidence interval. In the case of our example, the "95 percent confidence interval" is equal to the value of the sample statistic (45.63) plus or minus 1.96*.458 (the standard error). That is: 95 percent of all possible samples will report a value of the mean age between 44.73 years and 46.52 years. Confidence intervals are a common way of summarizing the reliability of inferences about population parameters on the basis of sample statistics. Large standard errors indicate low reliability (wide confidence intervals); small standard errors indicate high reliability (narrow confidence intervals).

Standard errors are also used in the process of "hypothesis testing" to determine "statistical significance." In hypothesis testing, we propose a "null" hypothesis about the true value of a population parameter (e.g., a mean). We then calculate a "test statistic" that is used to determine how likely the sample result actually observed is, if the null hypothesis is true. Test statistics usually take the general form of: ((value observed in sample – value proposed by the null hypothesis) / standard error). Our decision about whether a sample result is likely, assuming that the null hypothesis is true, is based on the size of the observed difference of the sample from the hypothesis relative to sampling variability—summarized by the standard error.

ESTIMATING STANDARD ERRORS

Most reports will show the "standard error" as "estimated" (even if they do not use this terminology, the values reported for the standard errors are probably estimates). When we conduct a study, we usually collect information from only one sample. To directly calculate the sampling distribution and standard error, we would need to collect all possible samples. Hence, we rarely know the actual value of the standard error—it is itself an estimate.

Statistical theory and research has provided a number of standard formulae for estimates of standard errors for many commonly used statistics (e.g., means, proportions, many measures of association). These formulae use the information from a single sample to estimate the standard error. For example, the common estimator of the standard error of a sample mean is the sample standard deviation divided by the square root of the sample size. When computer programs calculate and print standard errors, calculate confidence intervals, and perform hypothesis tests, they are usually relying on these standard formulae.

The standard formulae, however, assume that the observed sample is a simple random one. If this is not the case, the estimates may be wrong. If the actual sampling methodology used involves clustering, estimated standard errors by the standard formulae may be too small. Consequently, we may reach incorrect conclusions that our estimates are more reliable than they actually are, or that null hypotheses may be rejected when they should not be. If the sampling methodology actually used involves stratification, estimated standard errors by the standard formulae may be too small. Consequently, we may think our point estimates of population parameters are less reliable than they actually are; we may fail to reject null hypotheses that are, in fact, false.

Where probability sampling designs are not simple random, there are several alternative approaches to estimating standard errors. For some complex survey designs, more complex formulae are available, as, for example, in the statistical packages Stata (Stata Corporation 2006) and Sudaan (Research Triangle Institute 2006). In other cases, "bootstrap" and "jackknife" methods may be used (Efron and Tibshirani 1993).

Bootstrap methods draw large numbers of samples of size N from the current sample, but with replacement. Bootstrap samples are the same size as the original sample, but contain "duplicate" observations. For each of a very large number of samples (1,000 to 10,000), the statistic of interest is calculated. These estimates are then used to construct the sampling distribution, from which the standard error is estimated. Large sample sizes are required for bootstrap methods.

Jackknife estimators divide the current sample into many random samples that are smaller than the full sample, but are drawn without replacement. Large numbers of samples are selected, and the statistic of interest is calculated for each sample. This then allows the calculation of the sampling distribution and the estimated standard error.

SEE ALSO *Logistic Regression; Methods, Quantitative*

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Robert Hanneman

ERRORS IN VARIABLES

SEE *Measurement Error.*

ESKIMOS

SEE *Inuit.*

ESSENTIALISM

Essentialism is the idea that members of certain categories have an underlying, unchanging property or attribute (essence) that determines identity and causes outward behavior and appearance. An essentialist account of gender, for example, holds that differences between males and females are determined by fixed, inherent features of those individuals. The doctrine of essentialism is widespread in practice, underlying many approaches (both historical and current) in the biological sciences, the social sciences, and cultural studies. Essentialist ideas underlie much lay skepticism toward biological evolution; such ideas saturate discussions of race and gender as well as of ethnicity and nationality. In gender studies, essentialism has been important as a focus of criticism and, less often, as an explanatory strategy (e.g., the notion of a "gay gene").

TYPES OF ESSENTIALISM

Essentialism may be divided into three types: sortal, causal, and ideal. The *sortal essence* is the set of defining characteristics that all and only members of a category share. This notion of essence is captured in Aristotle's distinction between essential and accidental properties. For example, on this view the essence of a mother would be the property of having given birth to a person (rather than an accidental property, such as baking cookies). In effect, this characterization is a restatement of the classical view of concepts: Meaning (or identity) is supplied by a set of necessary and sufficient features that determine whether an entity does or does not belong in a category. However, the viability of this account has been called into question by psychological research on human concepts. The *causal essence* is the entity or quality that causes other category-typical properties to emerge and be sustained, and that confers identity. The causal essence is used to explain the observable properties of category members. Whereas the sortal essence could apply to any entity, the causal essence applies only to entities for which inherent, hidden properties determine observable qualities. For example, the causal essence of water may be something like H_2O, which is responsible for various observable properties that water has. Thus, the cluster of properties "odorless, tasteless, and colorless" is not a causal essence of water, despite being true of all members of the category, because the properties have no direct causal force on other properties.

The *ideal essence* has no actual instantiation in the world. For example, on this view the essence of "justice" is some abstract quality that is imperfectly realized in real-world instances of people performing just deeds. None of these just deeds perfectly embodies "justice," but each reflects some aspect of it. Plato's cave allegory (in *The Republic*), in which what we see of the world are mere shadows of what is real and true, exemplifies this view. The ideal essence thus contrasts with both the sortal and the causal essences. There are relatively little empirical data available on ideal essences in human reasoning.

CRITICISMS OF ESSENTIALISM

Essentialism is often implicit. Theorists rarely self-identify as essentialist; more often, a position is characterized as "essentialist" by others, typically as a form of criticism. Essentialist indications include a cluster of separable ideas—for example, treating properties as genetically rather than socially determined, assuming that properties are immutable, or assuming that a category captures a wealth of nonobvious properties, thereby having the potential to generate many novel inferences (e.g., Arthur R. Jensen's arguments in his 1969 article regarding racial differences in IQ). Any of these assumptions could be considered evidence for an essentialist framework.

In the social sciences, essentialist accounts are highly controversial. Essentialist accounts of race, ethnicity, or gender have been criticized for reducing complex, historically contingent effects to fixed and inherent properties of individuals. Anti-essentialist accounts emphasize the importance of social context, environmental factors, and structural factors (including economics and class). Such accounts are often grouped together under the heading *social* (or *cultural* or *discursive*) *constructionism*; as Laura Lee Downs noted in her 1993 article, at their best they provide detailed accounts of the social reproduction of gender, ethnic, and racial categories, and at their worst slide into voluntarism. An important analytic strategy, put forward by Fredrik Barth in 1969 and Judith Irvine and Susan Gal in 2000, has been to eschew an account of the categories of social groups in favor of examining the social and cultural conditions by which they are differentiated.

Racial categories illustrate the perils and shortcomings of essentialism. Although race is often essentialized, anthropologists and biologists widely agree that race has no essence. The superficial physical dimensions along which people vary (such as skin color or hair texture) do

not map neatly onto racial groupings. Observable human differences also do not form correlated feature clusters. Skin color is not predictive of "deep" causal features (such as gene frequencies for anything other than skin color). There is no gene for race as it is commonly understood.

Culture frequently serves as a stand-in for *race* in sortal essentialist frameworks, as it did in South Africa under the apartheid regime. The doctrine of ethnic primordialism (that ethnicities are ancient and natural) was a popular explanatory device in the 1950s and 1960s to account for apparent ethnic and regional fissures in the developing world. It returned after the fall of the Berlin wall to account for the instability of former socialist republics, most dramatically in Yugoslavia, and remains a powerful force in international relations despite the availability of nuanced, nonessentialist explanatory accounts.

Essentialism is also criticized for its political and social costs, in particular for encouraging and justifying stereotyping of social categories (including race, gender, and sexual orientation), and perpetuating the assumption that artificial distinctions (such as caste or class) are natural, inevitable, and fixed. Nonetheless, some feminists and minorities appropriate essentialism for their own group(s)—at least temporarily—for political purposes. *Strategic essentialism*, Gayatri Spivak's term from her 1985 study, can devolve into an embrace of essentialism, with the argument that essential differences are deserving of celebration. Other theorists, while recognizing many of the problems of essentialism characterized above, have proposed that at least some tenets of essentialism (e.g., that categories may have an underlying basis) are rooted in real-world structure.

However, criticisms of essentialism extend to biological species as well. In the case of biological species, essentialism implies that each species is fixed and immutable, thus leading Ernst Mayr to note, "It took more than two thousand years for biology, under the influence of Darwin, to escape the paralyzing grip of essentialism" (1982, p. 87). An additional concern, for biological as well as social categories, is that essentialism assumes that the essence is a property of each individual organism. In contrast, according to evolutionary theory, species cannot be characterized in terms of properties of individual members but rather in terms of properties of the population. Elliott Sober (1994) distinguishes between "constituent definitions" (in which groups are defined in terms of characteristics of the individual organisms that make up the group) and "population thinking" (in which groups need to be understood in terms of characteristics of the larger group; e.g., interbreeding populations, in the case of species). Sober suggests there is no essence for biological species—let alone groupings of people, such as races—at a surface level or even at a genetic level.

PSYCHOLOGICAL ESSENTIALISM

Some psychologists, such as Susan A. Gelman in her 2003 book and Douglas Medin in his 1989 article, have proposed that (causal) essentialism is a cognitive bias (*psychological essentialism*) found cross-culturally and even in early childhood, with important implications for a range of human behaviors and judgments: category-based inductive inferences, judgments of constancy over time, and stereotyping. Psychological essentialism requires no specialized knowledge, as people may possess what Medin calls an "essence placeholder" for a category, without knowing what the essence is. Preschool children expect category members to share nonobvious similarities, even in the face of obvious dissimilarities. For example, on learning that an atypical exemplar is a member of a category (e.g., that a penguin is a bird), children and adults draw inferences from typical instances that they apply to the atypical member (e.g., they infer that penguins build nests, like other birds). Young children judge nonvisible internal parts to be especially crucial to the identity and functioning of an item. Children also treat category membership as stable and unchanging over transformations such as costumes, growth, metamorphosis, or changing environmental conditions. Therefore, essentialism as a theoretical construct may emerge from fundamental psychological predispositions.

SEE ALSO *Blackness; Cultural Studies; Darwin, Charles; Gender; Groups; Identity; Intergroup Relations; Meaning; Race; Sexual Orientation, Determinants of; Sexual Orientation, Social and Economic Consequences; Social Science; Stereotypes; Whiteness*

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Susan A. Gelman
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ETHICS

Ethics in the social sciences can be best understood by distinguishing normative ethics from metaethics. Normative ethics derives from the practical purpose of guiding how we ought to live and inquires into the proper guidelines of conduct for a responsible human being. Metaethics asks what ethics is, how it can be distinguished from other forms of human practice, and where it finds its proper place. Twentieth-century social science was dominated by normative ethical questions: questions about what ethical guidelines a professional social scientist should adopt. Normative ethics dominated the discussion because social scientists generally took the model of professional ethics—institutionalized in the codes of conduct and peer review committees of associations of (among others) legal or medical practitioners—for granted. This preoccupation with professionalist models reduced social scientists' interest in metaethics and thus their capacity to understand what ethics is. Since the 1970s, however, processes of "deprofessionalization" or "horizontalization" have reduced the independence of professional practitioners, giving rise to new forms of institutionalizing ethics and increasing the demand and opportunity for metaethical reflection.

In the context of the rise of the welfare state's demand for expertise, sociologists, in particular, propounded a folk ideology of professionalism, and its model of ethics—of safeguarding the quality of professional service by codes of conduct administered, in the case of conflict, by a committee of peers—was adopted by social scientists from the 1950s onward. Two famous cases in social psychology—one in which religious informants seemed misinformed about researchers' own beliefs (Smith 1957), and another where experimental subjects appeared to be put under intolerable stress (Milgram 1964)—became paradigmatic in sensitizing many social scientists to the possible abuse of people researched. In addition, anthropologists and sociologists were worried by the use of research for U.S. counterinsurgency operations in Latin America and Southeast Asia, and made the interests of people researched paramount in their first ethical codes. This resulted in guidelines of conduct that focused predominantly on the responsibility to avoid doing unnecessary harm to research subjects—by the experimental situation itself, by secret or clandestine research, or by insufficiently protecting the research subjects' privacy. When institutionalized by social scientific associations around 1970, such codes and committees were primarily seen as a prerogative of professionals, whose expertise allowed them to speak for or interpret the interests of "clients." This assumption of professional autonomy remains dominant today in many ways. Most social scientists think that an ethical code is a necessary and self-evident element of their profession, despite the fact that they managed without codes for half a century or more.

In society at large, however, professional autonomy decreased by changing practices of professional control. In the field of ethics, this was particularly manifested by the increasing insistence on the right to "informed consent" of people researched, adopted from the medical profession since the mid-1960s. If "informed consent" already "horizontalized" the professional expert's relationship to some of his audiences, the increasing employment of social scientists outside the university system since the late 1970s forced them to be more explicitly responsible to private employers and sponsors as well. While some protested this dual loss of professional autonomy, others embraced the new ethics of accountability to sponsors and people researched—although neither group always knew how "accountability" was tied to the spread of neoliberal market models and auditing techniques throughout the academic world.

These developments implied new institutionalizations of ethical practice: From the 1980s onward, codes of conduct and "good practice" mushroomed, but now increasingly produced by universities or funding agencies rather than professional associations. These institutions' internal review boards introduced ethical audits, for example, at the level of the grant application, thus increasing the possibility of external control of practitioners by ethical codification (while previously, codes were aimed at safeguarding the practitioners' professional autonomy). Meanwhile, professional social science associations reduced their involvement in ethical arbitration (partly because, unlike the medical or legal professions, they could not effectively sanction violations of their codes) and fell back more insistently on the role of the ethical code in professional public relations and education. Surprisingly, such pleas for an education in ethics often focus on teaching by codes rather than by the more appro-

priate—because more practice-oriented—casebook method.

This crisis of the professional model exacerbated existing problems with normative ethics, and especially with ethical codification. In the professional model, the ethical code presupposes a community of scholars who hold each other accountable to its guidelines, but this Enlightenment conception of social contract breaks down once infractions of these guidelines cannot be sanctioned. Moreover, when the membership of such communities is not exclusive, practitioners may find themselves subject to the rules of a multiplicity of organizations (including, of course, ordinary citizens' duties)—a situation in which most members of social scientific associations find themselves. The adoption of codes of conduct by universities and funding bodies is criticized for merely increasing the means of such institutions' internal control, while falling short of achieving its actual goal: improving academic practice. This gives rise to the metaethical question of whether one can speak of an administrative fetishization of ethical codes, and whether this distracts from academic ethical awareness, so that ethical codes reduce rather than promote ethical practice (Bauman 1993). The answer to this question is not unequivocal: the codification of good practice may be a necessary instrument to sensitize practitioners to the possibility of doing harm (there is, for example, surprisingly little agreement on the ethics of research into human genetics). Once a code is in place, however, it can perform some of the less desirable functions mentioned above.

Other recent metaethical reflections radically broaden social scientific ethics, if only because they do not restrict themselves to normative ethics and the do's and don'ts of the research relationship. Inspired by philosophers such as Michel Foucault (1926–1984) or Charles Taylor, social scientists increasingly discuss ethics as the way in which people constitute themselves—and others—as subjects, by not just considering what it is "right to do" but, more broadly, striving after "what it is good to be" (Taylor 1989, p. 3). In this way, ethics is recognized as part of the everyday technologies of the self, and therefore as a topic of social scientific study in its own right, claiming a place next to and in comparison with law, politics, or economics (among other things) in understanding human behavior. Thus, sociologists of culture can be seen to study ethics when discussing, for example, the Protestant or the romantic ethic.

The comparative study of ethics, started by the Finnish anthropologist and philosopher Edward Westermarck (1862–1939) around 1900 and only feebly followed up by anthropologists in the 1950s and 1960s, may be revived. Such studies also open up spaces for alternative models of ethics: sociocultural anthropologists and archaeologists, for example, have explored a model of open-ended ethical negotiation (Meskell and Pels 2005)—an ethics as necessary for the research relationship as it is for human behavior in general. Such explorations can also question the implicit distinction between fact and value that still often keeps the teaching of research methodology apart from the teaching of research ethics, impoverishing social science education in the process. It seems obvious that only the latter move—toward a full integration of ethics and methodology—can lead to a truly ethical social scientific practice, in which students are made aware of the situational, case-bound ethics of research from the moment they start their first training.

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Peter Pels

ETHICS, BUSINESS

When discussing the subject of business ethics, points of view range from those who believe that ethics in business is one of the most pressing issues if companies are to ensure creditability and trust to the cynic who is of the view that the term *business ethics* is an oxymoron, a contradiction in terms, and that the concepts of *ethics* and *business* are inherently incompatible. In the early twenty-first century, the general public, fueled by the general media, is quick to seize upon ethical wrongdoing by both small and large companies and is anxious to spotlight ethical violations. In doing so, demands are also increasing for greater levels of accountability in business. The reality, therefore, is that the term *ethics*—the expectation of appropriate behavior—and *business*—the current mercantile environment—cannot be separated as one experiences increasing expectation of higher standards of ethical behavior in organizations.

FACTORS PROMOTING ETHICAL AWARENESS

The factors promoting ethical awareness in both business organizations and business education programs are varied. Societal expectations and tolerance of what constitutes appropriate business conduct have also broadened. For example, companies such as Nike and Reebok have had to fend off criticisms of sweatshop practices in their off-shore contract manufacturing facilities by posting their factory labor audits on the Fair Labor Association (FLA) Web site. Both consumer and shareholder attitudes toward an organization and its ethical profile are increasingly impacting on purchasing decisions and investment strategy. Examples are the consumer boycotts, as historically experienced by Nestlé, and also the growing popularity of ethical investment funds. Undoubtedly, media attention has been instrumental in highlighting ethical misdemeanors. The popular press has been littered with high-profile cases such as Enron, WorldCom, Parmalat, and Adelphi Communications, as well as the audit companies who appear to have been complicit in their oversight of the financial practices of those organizations. The potential cost of ethical violations is also a motivating factor for organizations to reassess their stance. Companies such as Ford, for example, have been subject to significant compensation claims in relation to endangering consumer welfare as a result of faulty tires used on the Ford Explorer.

Ethical violations, when made public, can have a damning effect on publicly listed companies, as supported by the efficient market hypothesis, which maintains that markets are very efficient in interpreting data and arriving at equilibrium prices. Share prices reflect publicly available information, and it appears that any unethical conduct that is discovered and publicized impacts the corporation and shareholders by ultimately lowering the value of a company's shares for an appreciable period of time. Similarly, for unlisted companies it is assumed that when an ethical violation is made known it will erode the trust of consumers and will ultimately be reflected in diminished sales.

The relationship between ethical behavior and company performance is intriguing. More than ninety-five empirical studies have examined the effect of the relationship between ethics and corporate social responsibility on financial performance, with the outcomes being both positive and negative. Positive relationships prevailed but it is not entirely clear whether increased ethical activity leads to increased performance or, alternatively, whether higher performance provided firms with additional resources that they could devote to social and ethical activities. Furthermore, there are varying levels of ethical engagement by organizations. The first level is one of self-protection; that is, ethical behavior is promoted in order to avoid criminal liability or additional costs. The next level is reputational awareness and the associated benefits that accrue to the organization. The final level is when an organization has an interest in being ethical because it believes it is, in fact, the right thing to do; it is the way the company does business.

MORALITY AND ETHICS

While it is tempting to think of business entities as the primary moral agent, business organizations are, in fact, commonly comprised of a number of individuals making decisions that may have an ethical dimension. These ethical dimensions could relate to environmental and social considerations, such as pollution; stakeholder interactions, for example, product liability; competitive dealings, for example, price collusion; employer obligations, for example, employee safety; or personal behavior, for example, conflict of interest, so it is important to realize that the ethical performance of an organization is a reflection of the individual behavior of its employees. What guides this behavior? Essentially, morality relates to principles of right and wrong and is comprised of numerous moral norms or standards. These moral expectations have a number of sources such as family, society, church, education, training, and even one's organization or employment. This is the intellectual base one frequently refers to when faced with an ethical dilemma (the head part). Ethics is the discipline of dealing with moral duty and obligation and might be described as the practice of morality (the actual behavior part). Business ethics is, therefore, the practice of morality as it applies to business behavior.

There is extensive scholarly debate on whether moral principles apply universally, or whether ethical judgments are relative to their context. The ethical relativists assert that there is no consistency of beliefs because moral principles are relative to individual persons and cultures, so moral standards will differ between individuals, groups, circumstances, and across time. The absolutists, however, contend that there are common moral standards upon which ethical reasoning rests and that, despite variations in ethical behavior, individuals are rooted in common moral standards. In support of the absolutists, it has been suggested that because the purpose of morality is to help make social cooperation possible, moral principles are universally necessary for that to occur.

As one witnesses the differing ethical behavior being exhibited in companies it has been suggested that there are varying levels of moral development. According to Lawrence Kohlberg's well-established stages of moral development, there are six stages of moral development that can be summarized into three levels: the preconventional level is one at which individuals are motivated by a

childlike avoidance of punishment, obedience to authority, fear, and self-interest. At the conventional level, individuals are motivated by loyalty to a group or professional norms. At the highest level, postconventional, individuals have a wide view of what is right and wrong and of those who might be affected by their decisions. An individual operating at this level has broad ethical principles in place and his or her decisions are based not on the current norms of the group or standards of society, but on personal conscience grounded in these principles.

THE RESEARCH LITERATURE

Historically the literature on business ethics has been anchored in normative philosophy and can be seen to be broadly delineated into three areas: prescriptive/hortatory literature, which attempts to sermonize and instruct the business community and education in raising ethical standards; descriptive/positive literature, which is characterized by extensive empirical research into, for example, ethical attitudes of students and business personnel; and meta ethical/analytical literature, which investigates meaning and justification relating to the corporate and individual decision-making process. Naturally, the field of business ethics is readily evolving. The colloquy on business ethics is being extended with the lexicon broadening and being claimed by related terminologies such as corporate social responsibility, stakeholder management, corporate governance, sustainability, and corporate citizenship.

SEE ALSO *Corruption; Efficient Market Hypothesis; Hypothesis and Hypothesis Testing; Information, Economics of; Lying; Morality*

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ETHICS IN EXPERIMENTATION

Experimentation in the social sciences, by its very nature, requires researchers to manipulate and control key aspects of the social setting so as to determine what effect, if any, these manipulations have on the people in that setting. Such studies, although unmatched in terms of their scientific yield, nonetheless raise questions of ethics: Do researchers have the moral right to conduct experiments on their fellow human beings? What practices are unacceptable and what procedures are allowable? Can standards be established to safeguard the rights of participants?

ETHICAL CONTROVERSIES AND HUMAN RESEARCH

Historically, ethical concern for the rights and well-being of participants in social science research emerged in the context of a heightened public scrutiny of all forms of research with human participants. This scrutiny resulted from the public debate surrounding a series of research projects dating back to the mid-1930s. As early as 1932, physicians in the United States, with sponsorship by the Public Health Service, began a study on the effects of untreated syphilis. This project, commonly known as the Tuskegee syphilis study, continued until 1973, even though penicillin was accepted as an effective cure for this disease in the 1940s. During World War II (1939–1945), German physicians conducted a series of appalling medical experiments in concentration camps, in which prisoners were routinely used to test the effectiveness of various procedures, with fatal results. From 1944 to 1974, U.S. researchers studied the effects of radiation poisoning by injecting people with plutonium without their consent. In the late 1950s, a drug manufacturer paid physicians to administer the drug thalidomide to patients, who were not warned that the drug was an experimental one not yet approved for general use. The drug caused birth defects when taken by pregnant women (Dunn and Chadwick 2002).

These studies raised fundamental questions about the rights of individuals and the ethical responsibilities of investigators. Physicians have long been bound by the oath of "do no harm," yet all these projects violated this principle of beneficence. Investigators denied participants basic freedoms of choice and self-determination, and they acted unjustly when they selected subjects based on prejudice and antipathy. The horrific German medical studies singled out for study Jews held illegally in Nazi concentration camps, and the Tuskegee syphilis study used disadvantaged, rural black men. These studies exploited people who society is duty-bound to protect.

Although social science research was considered relatively risk-free in comparison to these biomedical studies, Yale psychologist Stanley Milgram's 1963 study of obedience suggested that behavioral studies could also harm participants in significant ways. Milgram recruited volunteers from the local community to take part in what they

thought was a study of learning. The volunteers were ordered by the experimenter to give increasingly powerful and painful electric shocks to another participant whenever he made mistakes. The other participant was, in reality, a member of the research staff who deliberately made errors during the procedure. He did not actually receive any shocks, but he feigned pain and eventually begged to be released. Milgram, by using this elaborate procedure, discovered that the majority of the people he studied obeyed the experimenter's orders, and many experienced extreme distress during the procedure. He reported that fourteen of the forty original participants were seized by fits of nervous laughter, and three displayed "full-blown, uncontrollable seizures" (Milgram 1963, p. 375).

STANDARDS AND SAFEGUARDS

Public inquiry into these cases of scientific malfeasance resulted in the promulgation of codes of conduct for experimentation with human participants. The tribunal that judged the German doctors developed the Nuremberg Code, which stresses the importance of voluntary consent, the scientific value of the procedure, and the minimization of physical and mental suffering. In 1964 the World Medical Association issued the Declaration of Helsinki to clarify the ethical boundaries between therapeutic and nontherapeutic research. The U.S. Congress, in 1974, mandated the formation of the National Commission for the Protection of Human Subjects, and this commission crafted a set of guidelines commonly called the Belmont Report. This report stresses the need for consent, the protection of vulnerable populations, and the fair treatment of all participants. Professional associations, including the American Medical Association and the American Psychological Association, have also promulgated standards of ethics for investigators, and censure those members who violate their standards.

These standards of conduct for experimental research with human participants all recognize the substantial benefits of scientific research, but require that these benefits be weighed against the risk the research creates for participants. Possible risks include invasion of participants' right to privacy, physically or psychologically harming participants, subjecting participants to public embarrassment or legal sanction, and wasting their time and money. Ethicists also suggest that the use of deception by researchers, although necessary in order to gain valid data about their spontaneous reactions to social stimuli, may engender distrust and contribute to the dehumanization of research participants. Although these risks are offset, in part, by specific benefits for participants (such as monetary payment, educational gains, increased self-understanding, and self-approbation for having helped further scientific research), the key benefits are the contribution of the work to society and scientific knowledge. When risks to subjects are too great, researchers must use low-risk alternatives, such as nonexperimental procedures or simulations.

Ethical guidelines also require that participants be fully informed about the procedures and their risks, and that their understanding of these risks be documented in some way. In most laboratory experiments, the researcher provides participants with a brief but accurate description of their duties in the research and then gives them a choice to participate or not. This practice is known as *informed consent*, and it serves to remind subjects that they can terminate their participation in the study at any time if they choose to do so. In cases where the possibility of harm is negligible, then the requirement for consent can be waived, as it also would be when documentation of consent will harm participants by making them identifiable. If individuals are unable to provide full consent, because their autonomy as individuals is limited, then they must be afforded special protections. Children, for example, cannot fully understand or provide consent, and their parents' consent is required. Similarly, institutionalized individuals, such as prisoners, can only take part in research if they are completely uncoerced and if the risks posed by the study are minimal.

Most researchers also fully clarify the hypotheses once the study is over. This phase of the research process is typically known as *debriefing*, and it involves reviewing the hypotheses with participants, answering any questions, and removing any harmful effects of the experience. Such a debriefing phase is particularly critical when the investigator did not provide the participants with a full disclosure of the purposes of the study during the consent process—as is often the case when participants are deceived about the study's actual hypotheses or when research is conducted in a naturalistic field setting. Researchers are also enjoined to establish and follow data and safety monitoring procedures. The well-being of their participants must be monitored at all times, and if any unforeseen negative consequences of the study arise, the researcher must intervene and minimize those risks. The data generated by the research process must also be safeguarded, particularly when the research deals with sensitive, personal topics or the disclosure of the participants' responses would subject them to legal prosecution or social harm.

In many research settings, investigators must also submit their research plans to impartial reviewers before they carry out their research. Often referred to as *institutional review boards* (IRBs), these panels ensure that researchers are complying with required standards for research involving human participants, including the required elements of informed consent, protection of pri-

vacy, and minimization of all risks. Such panels would be responsible for reviewing, for example, deception studies: those research projects in which the participants are not informed of the actual purposes of the study in advance. Researchers request a waiver of the usual requirement for complete and accurate informed consent only in rare cases when they feel that participants would respond differently if they were fully informed of the study's purposes, and when they can provide clear evidence that the study will not harm participants in any way.

ETHICS AND SCIENCE

Social scientists, as members of the scientific community, strive to expand the knowledge of human behavior and apply that understanding for the enrichment of society and its members. But social scientists, as members of the larger social community, are also bound by norms that define what actions are considered moral and what actions are considered immoral. Researchers, in their quest for knowledge, cannot sacrifice the welfare of their participants in the name of maximizing the power of their research designs. The ethics guidelines that have emerged ensure that researchers' studies will be both scientifically valid and ethically acceptable.

SEE ALSO *Bioethics; Experiments, Human; Institutional Review Board; Milgram, Stanley; Tuskegee Syphilis Study*

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VOLUME 3

ETHNIC CONFLICT–INEQUALITY, GENDER

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ETHNIC CONFLICT

Ethnicity culturally differentiates groups from one another based on each group's prominent characteristics, including a common history, ancestry, language, as well as other kinds of symbols, dress, religion, and traditions. Ethnic affiliations do not necessarily fragment ethnically diverse societies but the context tends to influence how individuals organize and define themselves as well as how others regard them. Ethnic differences can generate ethnic conflict when these differences are used to promote prejudice and discrimination against a group that has been marked or stigmatized. Stigmatization of groups can occur within and between countries. It may manifest itself in various forms and to different degrees. But the pertinent literature diverges on the root causes of ethnic conflict, from riots to genocide. Broadly speaking there are two contending perspectives, the cultural and structural paradigm. Both perspectives implicitly or explicitly implicate the role of social institutions.

The cultural paradigm regards ethnic conflict as a social identity issue prompted by real or perceived threat to group boundaries and a familiar way of life. In this case resorting to group identity represents a fallback position for the frightened, alienated, and the angry as the ethnic group becomes the magna mater. Structural changes, for example, rapid, often imposed modernization or dramatic regime change, both accompanied by institutional failures, may evoke reactions expressed in cultural terms in triggering the closing of ethnic group boundaries.

The structural paradigm postulates that ethnic conflict is not about ethnicity at all but rather involves economic and political factors, including territory. Ethnicity may be manipulated to gain economic and political power, and for stratifying societies or nation-states within the world system. Stratification usually involves exploitation of the less powerful groups.

When diverse ethnic groups share a common territory they may resort to segregation as one type of ethnic conflict. Segregation inhibits a group's contact with other groups, as was practiced in Europe, beginning in Venice, Italy, in 1516 with the confinement of Jews to areas of towns or ghettos. Other examples include blacks in the United States between the end of slavery and desegregation, and blacks in South Africa under apartheid. During World War II (1939–1945) the U.S. government confined Japanese Americans to internment camps. Generally, forced segregation renders the ghettoized group vulnerable to individual and institutionalized harassment by the other group and sexual relations between groups as well as intermarriage are punishable by law. One of the unintended consequences of segregation is for the forcibly isolated group to further accentuate its distinctive cultural characteristics. This is one area where race and ethnicity intersect. Segregation may avert ethnic riots, a type of ethnic conflict, which involves sudden, often brutal violence inflicted on members of one ethnic group by members of another ethnic group.

Expulsion is another strategy of ethnic conflict, when the dominant group forces a less powerful group to relocate. One historical example is that of European colonists in the Americas, who conquered territories inhabited by Native Americans, displacing the indigenous population from its ancestral lands. Another example is the case of the Palestinians, who were expelled from Israel to make room for the Jewish State in 1948. An additional case, rarely dis-

cussed although it constitutes the largest forced migration of modern times, is the expulsion of 14.5 million Germans from East Central Europe between 1944 and 1950. Expulsion is a type of ethnic cleansing. Usually the perpetrators want to achieve simultaneous goals: wipe the region clean of the expelled ethnic groups and decimate it in the process.

Ethnic conflict in the former Yugoslavia attracted world attention and international intervention largely because it involved ethnic cleansing. Yugoslavia had been under the iron fist of communism. With the demise of communism latent ethnic tensions erupted into open ethnic conflict in a civil war in 1991. Yugoslavia disintegrated as a nation-state, splintering into smaller states with populations of numeric majority and minority ethnic groups, some of which vied for political power. Croatia asserted state autonomy by forcibly expelling a substantial number of Serbs that formerly coexisted with Croats. The Bosnian conflict between Serbs, Croats, and Muslims erupted into a war in 1992. Serbs attempted to ethnically cleanse Bosnia of the Muslim population. Serbs' strategies of ethnic cleansing involved the internment in concentration camps of large numbers of Muslim men, as well as their torture and murder, and the systematic mass rapes of their women. In addition to harassment, these are widely used practices of ethnic cleansers toward survivors of the targeted group, regularly accompanying expulsion. The former Yugoslavia also generated the 1999 Kosovo War, in which Serbs attempted to ethnically cleanse the province of Kosovar Albanian Muslims. Following NATO's military intervention, the process of ethnic cleansing reversed itself; Kosovar Albanian Muslims turned on Serbs. The region has remained volatile despite new borders representing ethnic nationalism and the presence of a United Nations contingent.

The most extreme form of ethnic cleansing is genocide, the intent to systematically destroy an entire national or ethnic group. The term *genocide* was first applied to the attempted extermination of Jews by the National Socialists or Nazis in Germany. Millions of Jews and others deemed unfit or dangerous to Adolf Hitler's regime were murdered in concentration camps during World War II, in the context of a well-orchestrated campaign of virulent anti-Semitic propaganda. History witnessed additional instances of attempted genocide, including the Turkish Ottoman Empire's massacre of more than 1 million Armenians between 1915 and 1923, the killing fields of the Khmer Rouge in the 1970s where 2 million Cambodians perished, and the Hutu's slaughter of the Tutsis during the 1990s in Rwanda, Africa. The structural school of thought views the Rwandan case as a class war instead of ethnic cleansing. Some regard the forced migration of 14.5 million Germans from East Central Europe, resulting in more than 2 million civilian deaths, and the fire bombing of Dresden at the close of World War II, additionally killing several hundred thousand civilians, as attempted genocide. Scholars disagree, however, on which cases besides the Jewish case constitute genocide.

If one applies the structural lens to the ethnic conflict in Iraq that erupted since the U.S. war on that country and the removal of Saddam Hussein's dictatorial regime, one can explain the conflict between Shi'is, Sunnis, and Kurds as an attempt by elites to gain political and economic power by appealing to the respective ethnic group. The absence of strong institutions able to mediate exacerbates this conflict. Similar to the former Yugoslavia, each power broker tries to capitalize from long-standing tensions between the groups. The international context and external powers are implicated as well.

SEE ALSO *Ethnic Fractionalization; Ethnocentrism; Genocide*

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ETHNIC ENCLAVE

The term *ethnic enclave* first emerged in the contemporary sociological literature in 1967 (Hanna and Hanna 1967). However, Alejandro Portes and his colleagues (Portes and Bach 1985; Portes and Manning 1985; and Portes and Stepick 1985; but see also Model 1985) are credited with developing the concept theoretically and bringing it to the forefront in our understanding of the labor market experiences of marginalized workers, particularly immigrants. A review of the literature shows that while the ethnic enclave concept gained popularity during the 1985–1994 period, it continued to receive attention in the 1995–2005 period.

THEORETICAL ORIGINS OF THE ETHNIC ENCLAVE CONCEPT

The origins of the ethnic enclave concept can be traced to the segmented labor market perspective (Sanders and Nee 1987), which is an extension of dual economy theory (Averitt 1968; Galbraith 1971). According to this perspective, the labor market is segmented in advanced capitalistic societies into at least two labor markets (Edwards 1975; Gordon 1972). Primary labor markets are characterized by stable working conditions, high wages, scarce skill specifications, internal labor markets, and high returns to human capital investments for workers. In contrast, secondary labor markets are characterized by high turnover rates, low wages, low skills, lack of opportunities for promotion, and lower returns to human capital. Given that advanced capitalism requires the continual flow of low-wage and relatively unskilled labor to fill undesirable jobs (Burawoy 1976; Piore 1979; Sassen-Koob 1978), minorities, women, and immigrants are disproportionately clustered in secondary labor markets (Light and Gold 2000; Sanders and Nee 1987; Tolbert et al. 1980).

However, Kenneth Wilson and Portes (1980) shifted the focus from "ethnic" to "immigrant" enclaves in one of the earliest recalibrations of the ethnic enclave concept. Subsequently, Portes defined the enclave economy as involving "immigrant groups which concentrate in a distinct spatial location and organize a variety of enterprises serving their own ethnic market and/or the general population. Their basic characteristic is that a significant proportion of the immigrant workforce is employed in enterprises owned by other immigrants" (1981, p. 291).

Hence, Portes's (1981) "immigrant enclave" concept has two characteristics: (1) a critical mass of immigrant-owned business firms that employ a critical mass of co-ethnic workers; and (2) spatial clustering of enterprises. Although Portes and his associates (Portes and Jensen 1992; Portes and Bach 1985) have altered the definition, it has basically followed the general conceptualization of immigrant enclaves.

The term *ethnic enclave economy* has come to stand for the economic advantage of location clustering (Light and Gold 2000). Some argue that one of the benefits of ethnic enclaves is protection from discrimination (Portes and Bach 1985; Zhou 1992). Accordingly, ethnic enclaves allow workers from discriminated groups to overcome the barriers for which they are punished in mainstream labor markets. As such, the process of ethnic enclave formation compensates for background deficits and discrimination that ethnic groups encounter in the general labor market. Examples of successful groups in ethnic enclaves include Japanese Americans in the early twentieth century (Bonacich and Modell 1980) and Cubans in contemporary Miami (Portes and Jensen 1992).

In contrast, some argue that ethnic enclaves are used to maintain and enforce sweatshop conditions, including low-wages and restrictions against union organizing (Sanders and Nee 1987). Additionally, ethnic enclaves may fuel paternalistic ethnic assistantship in which immigrants who depend on kinship or ethnic-group assistance in the initial stage of adaptation to a host society may become caught in a web of obligations that interfere with rational pursuits of economic opportunities (Li 1977). Furthermore, as long as immigrant and minority workers are restricted to ethnic enclaves, entrepreneurs can profit from the surplus of cheap labor (Schrover 2001) and impede upward mobility by restricting the accumulation of skills (e.g., proficiency in English) to compete in general labor markets (Sanders and Nee 1987). Indeed, in a study of Cuban and Chinese immigrants, Jimmy Sanders and Victor Nee (1987) observed that the positive economic rewards of the ethnic enclave apply only to entrepreneurs but not to their workers.

In sum, immigrants, and their native-born counterparts to a lesser extent, participate in ethnic enclaves because of their limited human capital, their exclusion from mainstream labor markets, and as a protective mechanism from discrimination. However, there is no agreement about the benefits of these ethnic enclaves, particularly in light of the characteristics often associated with them—unsafe working conditions, low-wages particularly for rank-and-file laborers, workers being overburdened with obligations, and the entrapment of workers that impedes their acquisition of the human-capital resources needed to gain greater economic rewards.

SEE ALSO *Assimilation; Ethnic Enterprises; Immigrants to North America; Networks*

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ETHNIC ENTERPRISES

Ethnic enterprises, which often result from voluntary or involuntary segregation or segmented economic systems, are economic entities tied to specific cultural groups. They provide goods and services both within and external to the specific group. Ethnic enterprises that are associated with ethnic communities provide avenues for social mobility, socialization, and acculturation for group members. There are several factors, occurring both internal and external to the specific community, that account for the viability of ethnic enterprises. For example, among some immigrant communities (such as Koreans), ethnic enterprises appear to be more vibrant and produce significantly higher rates of self-employment than in the rest of the United States. Alternatively, some racialized groups, such as blacks, appear to have markedly lower rates of enterprise viability and self-employment.

The success or failure of ethnic enterprises cannot be viewed in a vacuum. The road to success has much to do not only with entrepreneurial skill and motivation, but also with the business climate in which the enterprise operates. The relative success of Koreans in the United States, for example, had a lot to do with the U.S. government's influence in creating cheap labor in South Korea, the economic interests of the South Korean government, the decline of U.S. labor standards, and the positive response of U.S. corporations to Korean small business development. As pointed out by Ivan Light and Edna Bonacich, in *Immigrant Entrepreneurs* (1988), business enterprises among Korean immigrants were positively influenced by a decades-long international process that was stimulated by U.S. governmental policies encouraging the development of capital, technology, and military power in Korea. The ability of Korean businesses to take advantage of these external stimuli was greatly influenced by their use of kin labor networks and the traditional Korean revolving credit association, or "kye." Thus, external and internal factors produced a situation that enhanced the viability of Korean ethnic enterprises. With time and success, the Korean economic sphere grew beyond their enclave economy. However, other ethnic and racial groups have at times responded to the Koreans' success with antagonism. Consequently—as exemplified by the 1992 Los Angeles riots, in which several Korean businesses were targeted—such success is not without its costs.

Similar positive results have also been witnessed among Japanese and Chinese immigrant enterprises. One should not, however, assume that their immigration experience has not been fraught with significant loss, nor should one look upon these success stories as indicative of the failure of other groups. The experiences of some groups, such as blacks, have been drastically different, suggesting alternative (and often negative) development. The

involuntary migration of blacks, followed by centuries of oppressive slavery, racial segregation, and an economic system hostile to black economic development, has severely restricted the development of African American enterprise.

Nonetheless, a continual record of black enterprise development can be identified in the United States from as far back as 1736. Significant developments have always been associated with external and internal factors. For example, in both the Revolutionary War and the Civil War, black business flourished as a direct result of blacks taking advantage of enhanced business climates in the U.S. The 1920s, for example, is often described as the golden era for black business development. Over 100,000 black business enterprises were observed by 1932. Another period of black economic success followed World War II, and a final boom in black enterprise development was associated with the 1960s civil rights and affirmative action initiatives. Thus, by 1969, approximately 1,603,000 black enterprises, generating annual receipts of 4.5 billion dollars, were concentrated in five states (California, Illinois, New York, Ohio, and Texas). The leading businesses, in terms of revenue, were automotive dealers, service stations, and food retailers. These successes belie the hardships, setbacks, and failures along the way.

As pointed out by Manning Marable, both dominant corporations and the public in the United States have met each period of black business success with significant retrenchment, racial hostility, and racially exclusionary practices. Vandalism targeting black enterprises occurred during and immediately after each of the above periods, leading to a significant decline in black businesses in each instance. In 1919 alone, twenty-six race riots were identified. In cities like Tulsa, Oklahoma, and Cincinnati, Ohio, blacks were uprooted and forced to leave.

Another example occurred in California in association with the gold rush of the mid-1800s. Originally, blacks were encouraged to develop a wide range of businesses. But with the eventual decline of opportunities, white racial preferences began to restrict black business operations to the service trades, such as tonsorial, bootblack, livery, restaurant and catering, and drayage businesses. Blacks restricted to the tonsorial trade developed a monopoly. This monopoly however was short-lived, as white patrons began expressing a preference for white barbers. Restrictive ordinances, city covenants, real estate and business redlining, and racially exclusionary business and labor practices served to curtail black enterprise development from 1910 to the mid-1960s. The 1960s civil rights movement, and its associated affirmative action programs, marshaled in what many thought would be a new day for black business development. This fifteen-year period, unprecedented in U.S. history, witnessed the development of a large, diverse middle class working in the public sector. Accompanying this was the growth of a new black elite in such areas as media, politics, sports, and entertainment.

Conservative backlashes to the civil rights movement, starting in the mid-1980s, served to stymie black economic enterprise development in the black community. These conservative backlashes took the form of (1) conservative attacks against affirmative action, (2) continual bias in banking and lending programs, and (3) a reluctance on the part of corporate America to fully encourage or utilize products and services.

Contrary to popular belief (or mythology), white ethnicity is alive and well in America. While the illusion of a monolithic white world serves specific political and cultural purposes, the reality of specific white enclaves serves very real and continuous economic needs. Thus, white ethnic enterprises associated with Italians, Irish, Germans, Poles, Jews, and others are easily identifiable throughout the United States. Throughout much of America, major white ethnic holidays not only celebrate white ethnicity but also tend to feature white ethnic enterprises. Such ethnic celebrations include Oktoberfest (German), St. Patrick's Day (Irish), and Columbus Day (Italian), though the fact that these celebrations take on a national character does much to hide the fact that they are indeed ethnic in nature. Since the 1960s, a tremendous amount of scholarship has been produced documenting the emergence and the continuance of ethnic communities and identity—as well as the resultant white ethnic enterprises.

White ethnic communities persist because they continue to provide for the special needs of specific communities. The principal ways in which these needs are satisfied are through the perpetuation and creation of ethnic enterprises. While these enterprises and communities were once located mainly in urban areas, they are now also associated with suburban growth. What this suggests is that as these white ethnic communities gave way to urban migrants, they were able to continue their existence in suburbia.

The economic viability, diversity, and independence an ethnic enterprise enjoys is dependent upon such things as the perceived status of the immigrant community in the host society, the availability and types of financial resources, and the size, longevity, and history of the ethnic group (and other ethnic groups) in the host society. Larger and more financially secure ethnic enterprises are typically able to operate more independently of a particular ethnic community. Alternatively, smaller and less financially secure enterprises are more likely to be dependent upon constituent ethnic communities for survival. For these latter types, growth and development of ethnic enterprises

are more likely to be dependent upon the capacity of the ethnic entrepreneur to accumulate start up capital.

Postcolonial situations may provide the most fertile environments in which unique hybrid ethnic enterprises can develop. Richard Werbner documented this hybridism in Botswana in the early years of the twenty-first century. He calls it a "cosmopolitan ethnicity" that "builds inter-ethnic alliances from intra-ethnic ones and constructs differences while transcending it" (Werbner 2002, pp. 731–732). This approach maintains traditional intra-ethnic identity while also seeking to identify with a national ethnic elite identity. Such transcendence is most appropriate in those situations in which an ethnic elite is able to promote a set of national economic and political agendas through its various enterprises. Thus, the Kalanga elites, originating in the borderland of Botswana and Zimbabwe, are able to utilize a form of super-tribalism to foster nation-building in Botswana.

Although ethnic enterprises facilitate the economic stability of ethnic elites in specific host countries, they may also facilitate the economic stability of the countries of origin. By tracking remittance and capital flow data to developing countries, researchers have demonstrated that these transfers can mean the difference between economic stability and financial crisis. Billions of dollars go from primarily Western host countries to developing countries in the form of remittances. (Remittances to developing countries were estimated by the World Bank to be US$72 billion in 2001 and US$93 billion in 2003, which was significantly higher then the global foreign aid in those years of US$52 billion and US$69 billion, respectively.) Between 2001 and 2006, such remittances doubled, as countries became more aggressive in documenting and encouraging the transfer of funds. Unfortunately, activities that may account for even more transfers—illegal drugs and organized crime—often still go under the radar. Regardless, such remittances provide the basis of considerable reinvestment, capital transfer, and economic investment in third world countries. While Latin America (specifically Mexico) accounts for the largest share of such remittances, the amount going to Asia, the Middle East, Israel, and Africa cannot be discounted.

SEE ALSO *Ethnic Enclave; Immigrants to North America*

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Rodney D. Coates

ETHNIC FRACTIONALIZATION

Ethnic fractionalization (EF) deals with the number, sizes, socioeconomic distribution, and geographical location of distinct cultural groups, usually in a state or some otherwise delineated territory. The specific cultural features might refer to language, skin color, religion, ethnicity, customs and tradition, history, or another distinctive criterion, alone or in combination. Frequently these features are used for social exclusion and the monopolization of power.

A crucial distinction is whether there is a commonly accepted value order above each distinct subculture (as in the "melting pot" idea) or each culture stands for itself (the "salad bowl" image). In addition one culture may be dominant in a relatively benign way (as in the British and Roman Empires, which had second-class citizens but with access to some public goods) or in a harmful way (the Tutsis and Hutus reciprocally, the Germans and Poles or Czechs, the Russians and the peoples in Caucasia and the Baltic States).

The distinction between majorities and minorities is important, though frequently some minorities are better off socioeconomically (Basques, Jews, the Indians in East Africa, the Chinese in Southeast Asia) or even rule over majorities. The conflict potential due to EF increases if disputed borders are involved (as in irredenta) or if the state collapses (as in sub-Saharan African examples) or does not exist at all (Palestine, the Kurdish state). Then there is a temptation either to exit into the other bordering state or to attack from there (Carment and James 2004).

Because ethnic or other cultural minorities often have suffered from other (majoritarian) groups in the past, they have vivid memories of their tragedies and fears for the future. Structurally they cannot trust the state as a benevolent mediator because there is always the possibility that it might command private information (information withheld from the opponent) to be used against the subgroup, thus wiping out any consociational arrangements. Such arrangements (as in Switzerland, the Netherlands, the European Union) usually follow the proportional rule of representation and engage in broad-based collective decision making. In cultural matters (e.g., language use, schooling, cultural symbols) there is even allowance for veto rights by cultural subgroups. Yet few of these arrangements have survived (Lijphart 1977).

All variations in numbers and sizes of EF seem possible. In theory two large groups equal in size could balance each other perfectly (consider the Israelis and Palestinians) or could provide ground for perennial self-reinforcing conflict. Likewise a small number of groups of equal size could balance each other but also provide sources of intergroup conflict, particularly if coalitions are considered (the *tertius gaudens* phenomenon, that is, the third party that is winning from a conflict of the other two parties). "Measures of polarization are more appropriate to capture the intensity of disagreements across groups" (Alesina et al. 2003, p. 164), reaching their maximum when two equally sized groups confront each other.

Three basic arguments explain how and in part why ethnic heterogeneity creates a potential for social cleavage and conflict. First, following Georg Simmel (1908), the "stranger" is considered untrustworthy and in possession of hidden knowledge. He or she can compare his or her past knowledge and experiences with his or her present ones. He or she comes from unknown places and may leave for unknown ones. In knowing less about the local rules and values, he or she intensifies *we* and *they* feelings, which carry mostly negative and threatening stereotypes. Second, group experiments show that these distinctions arise even when characteristics differ minimally (see minimal group theory, Tajfel 1981). Third, cultural groups reduce social costs within groups in daily interactions (with lower rates of misunderstanding and conflict), they give protection, and they produce a public good of shared norms. On this basis, EF will persist. Thus Michael Hechter (2000) recommends granting autonomy to distinct cultural groups and shunning centralism. Cultural autonomy and decentralization can buy off conflict. The paradigm at the macro and micro levels is the Roman Empire or the Islamic millet system.

When identities become politically salient in an ethnically diverse area can be explained (partially) by a number of theories, the most prominent being resource mobilization theory, which stresses entrepreneurism on the part of leaders and resource accumulation and collective action on the part of followers (Tilly and Tarrow 2006); relative deprivation theory; and more directly to the timely circumstances, the theory of political opportunity structure, which, for example, involves the collapse of a repressive multicultural empire such as the Soviet Union with ethnic strife in the Caucasus and the Baltics, external warfare, and shelter with groups beyond the national border (Carment and James 2004).

Karl Deutsch (1966) adds an important macro perspective, emphasizing that modernization of one ethnocultural group usually leads to more integration via social mobilization. In case of different ethnocultural groups, however, massive conflict results, paradoxically at higher levels of overall economic development. In each subgroup, social movement entrepreneurs employ the forces of communication and indigenous integration for the benefit of cultural distinction (e.g., in Northern Ireland, Palestine, and Iraq). Forms of conflict resulting from EF include coups d'état, interethnic rioting and war, and even external warfare (Hibbs 1973; Carment and James 2004). States that have suffered from violent ethnocultural fractionalization and conflict usually exhibit lower overall levels of socioeconomic development and attract little foreign investment (Collier and Hoeffler 2004). The breakdown of the state monopoly of violence and territorial borders looms large, contributing to and ending in state failure (Rotberg 2004).

EF usually is measured as 1 minus the Herfindahl concentration index of ethnolinguistic group shares, which reproduces the probability that two randomly drawn individuals from the population belong to different groups. The theoretical maximum of EF at 1 means that each person belongs to a different group. Alberto Alesina and colleagues (2003) employ this measure separately for ethnic, linguistic, and religious fractionalization (with data mainly from the *Encyclopedia Britannica*). EF correlates negatively with economic growth and government quality (from 1960s onward, n=190 countries), although its effects decline with intermediating channels, such as schooling, financial depth, fiscal surplus, and the use of telephones controlled (Easterly and Levine 1997). According to Alesina: "The thirteen most ethnically diverse countries are all in Sub-Saharan Africa, followed by Yugoslavia and seven more Sub-Saharan African countries. The least ethnically fractionalized countries are South Korea, Japan, and North Korea" (Alesina et al. 2003, p. 163).

EF may, however, be endogenously affected, for example by changes in different group fertilities, by the definition of groups, and by individual self-definitions. James Fearon and David Laitin (1999) point to reverse causalities (e.g., cases of rebellion leading to the inclusion

of groups in the dataset or large-scale ethnic violence causing low gross domestic product [GDP]) in suggesting improvements in the minorities at risk data (Gurr 1993), another of the major datasets on EF. Groups included in countries with more than one million inhabitants and comprising at least 1 percent of the population had to meet at least one of four "risks":

> the group suffers "discrimination";
>
> it is "disadvantaged from past discrimination";
>
> it is an "advantaged minority being challenged"; or
>
> the group is "mobilized," meaning that "the group (in whole or part) supports one or more political organizations that advocates greater group rights, privileges, or autonomy." (Gurr 1993, pp. 7, 65)

Fearon and Laitin provide numerous examples of dubious classifications on the basis of language or culture alone. The third and oldest measure is the ethnolinguistic classification from the Soviet *Atlas Narodov Mira* (Atlas of peoples of the world, 1964), which relies on linguistic distinctions and thus obscures other aspects of ethnicity, such as racial origin, skin color, and cultural traits (see Fearon 2003 for a further dataset).

Fearon and Laitin also report results on geographic concentration, "with widely dispersed and mainly urban groups being unlikely to be involved in ethnic violence"; on relative group size, "with a weak tendency for larger groups to be more disposed to violence"; and "degree of ethnic heterogeneity of the country, with greater heterogeneity associated with less violence once we control for GDP and other factors" (Fearon and Laitin 1999). Intermixing as such, and thus the alleged "security dilemma" (Posen, in Cederman 2002), is not enough to dispose ethnic groups to violent conflict.

The question remains why are some minorities engaged in large-scale separatist or autonomy-related violence while others are not? "Ecological" data must be supplemented by perceptual data on the deepness and unbargainability of conflict to go further in explaining the virulence of EF and participant groups and to avoid the logical pitfalls of sampling on the dependent variable.

SEE ALSO *Coalition; Contact Hypothesis; Democracy, Consociational; Development and Ethnic Diversity; Ethnic Conflict; Ethnicity; Ethnocentrism; Identities, Deadly; Identity; Majorities; Minorities; Quotas; Secession; Separatism; Violence; Violence, Frantz Fanon on*

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ETHNICITY

Ethnicity refers to the differentiation of groups of people who have shared cultural meanings, memories, and

descent produced through social interaction. In classical Greek, the terms *ethnos* and *ethnikos* were used in a number of ways to refer to a collectivity that shares similar cultural or biological characteristics—for example, a tribe of people or a band of friends—and who were not Greek, came from outside the nation, were foreign and different, and were also considered inferior, barbarian, and less civilized. This distinction between ethnically marked "others" and nonethnically marked "us" persists in modern popular usage with references to ethnic fashion or food.

Sociological accounts of ethnicity are highly varied but tend to break the classical linkage between ethnicity and "other" in asserting that all people are ethnically located in that their subjectivity and identity are contextualized by history, language, descent, and culture. Ethnicity usually refers to the differentiation of social groups on the basis of the following distinct criteria. First, a notion of a "homeland" or place of common origin is a key element. It is often linked to the idea of a diaspora, where an ethnic group has migrated from the homeland to form communities elsewhere whose members identify with their place of origin. Second, a common language, either distinctive in itself or a distinct dialect of a language shared with others, may be central to the construction of shared memories and affective belonging. Identification with a distinct religion—for example, Sikhism—or a religion shared with others can be a central feature of many ethnic groups. A common culture with distinctive social institutions and behavior, diet, and dress, as well as a common tradition or shared history of one's own "people" or nation are other criteria used in specifying ethnic groups.

Ethnicities may be highly durable over millennia and space, and they can also be formed from new conjunctions of social contexts. This occurs, for example, when migrants shape a new backward-looking sense of ethnic belonging with the construction of national context to produce hyphenated forms, such as British-Asian or Hispanic-American. Ethnic solidarity can provide a deep sense of physical and psychological security, allowing individuals to identify and find a sense of common purpose with a great and long-lasting tradition of people. But if fictive shared beliefs underlie ethnic differentiation, then the boundaries of ethnic groups are inevitably unclear and caution is required in assessing the extent to which external categories accurately reflect social meanings, social roles, and wider social inequalities. There may often be a poor fit between the state and bureaucratic constructions of ethnic categories and dynamic forms of intersubjective ethnic identities.

Scholars have made various attempts to develop global typologies of ethnicity, including those by Thomas Eriksen (1993) and Stephen Castles (2000). These typologies include indigenous peoples dispossessed and overwhelmed by colonizers. The United States, Canada, Australia, and New Zealand have similar histories in this respect and contain indigenous minorities—Aborigines, Maoris, Native Americans, and Native Canadians—who remain in unequal marginalized positions. Indigenous groups are also found in Latin America, where there have been massacres, for example, in Guatemala in the 1980s, and in most Asian countries, where native groups may be categorized as "tribal peoples" or "hill tribes" (Castles 2000). Other categories and contexts include: migrant workers and their descendants forming strong ethnic communities—for example, Turks in Germany or Pakistanis in the United Kingdom; ethno-nations—for example, the Quebecois in Canada or the Basques in Spain—with regional ethnic groups contesting national control; postslavery groups in, for example, Brazil, the United States, and the Caribbean; and people living in postcolonial and postcommunist contexts, as in, for example, Uganda, Zimbabwe, Chechnya, or the former Yugoslavia, where ethnic loyalties have had grave consequences in terms of conflict and violence.

UNDERSTANDING ETHNICITY

Ethnic hostility, discrimination, and exclusion take many forms, but three broad categories can be identified. The first category includes the most severe acts involving mass societal aggression, such as the annihilation of native peoples in North America, South Africa, and Australia from the seventeenth to the twentieth centuries; the Nazi Holocaust during World War II (1939–1945); plantation slavery from the late seventeenth to the mid-nineteenth centuries; or the massacres of Tutsi by Hutu in Rwanda in 1994 and ethnic cleansing of Kosovar Albanians by Serbs in the 1990s. The second category of ethnic exclusion and discrimination involves denial of access to societal opportunities and rewards in such areas as employment, education, housing, health care, and justice. Many instances of such discrimination have been documented in Europe by the European Monitoring Centre on Racism and Xenophobia, mostly affecting Roma, Sinti, Gypsy, and Traveller groups. Poor mental and physical health, lower levels of educational attainment, restricted access to work, and lower income levels have been linked to poor housing conditions for many of these groups. The lack of social rights has also constrained their opportunities for political participation. A third category of ethnic discrimination includes the use of derogatory or abusive language or forms of representation that are felt to be offensive (e.g., the anti-Muslim Danish cartoons that circulated in 2005 and 2006). Such derogatory expressions, together with racist jokes, the use of Nazi insignia, and unwitting stereotyping and pejorative phrases, may constitute lesser forms of ethnic hostility. Explanations for ethnic conflict must

encompass micropsychological processes, individual and group experiences, and competition and socialization, together with structural power relations and aspects of globalization.

Sociological approaches to conceptualizing ethnicity fall into two camps. *Primordial* approaches, first suggested by Edward Shils in 1957, regard ties of blood, race, language, region, and custom as exterior, coercive, and given. This approach has been criticized as static and naturalistic, and as failing to account for the impact of immigration and intermarriage. In contrast, *instrumentalist* approaches, represented, for example, by Michael Banton's work on ethnic competition (1993), view ethnicity as a social, political, and cultural resource that can be used in competition for resources or as a motivation for conflict. This approach has been criticized for underplaying durable, affective, and persisting constructions of ethnic identity. The *transactionalist* mode of enquiry advocated by Fredrik Barth is seen as making a vital contribution to the instrumentalist approach in arguing that "the critical focus of investigation from this point of view becomes the ethnic boundary that defines the group, not the cultural stuff which it encloses" (Barth 1969, p.15). The conceptual separation of culture and ethnicity and the focus on processes of interaction and boundary-maintenance have been highly influential.

As with culture, the concepts of race and nation crosscut the specification of ethnicity. As Steve Fenton (2003) has argued, the word *nation* also refers to groups of people with common descent, culture, and a shared sense of territory. But what differentiates a *nation* from an ethnic group is its members' construction as a state or a state-like political form. Also, ethnic groups are more frequently conceived as a subset of the nation-state, particularly where states do not have a pure monoethnic form. The word *race* also refers to groups with a common descent and culture, but race carries an explicit reference to physical or visible difference. Race may operate as a subset of ethnicity, being one of the many markers used to differentiate a particular ethnic group. On the other hand, ethnicity may operate as a subset of a race, where one racial group is seen as encompassing many ethnic groups—for example, the community of black British within which Caribbean ethnicities have been erased.

Competing sociological accounts of ethnicity have been classified and critically differentiated by Siniša Malešević (2004). Classical sociology, neo-Marxism, functionalism, symbolic interactionism, sociobiology, rational-choice theory, elite theory, neo-Weberian approaches, and antifoundationalist positions have all been used to theorize ethnicity. Malešević illustrates how each position can be used to provide an explanation of the 1994 Rwandan genocide, and he highlights key epistemological tensions. Differing approaches prioritize different determining factors, ranging from the legacy of German and Belgian colonial divide-and-rule policies in the region; the downfall of the Rwandan economy; the lack of a common cultural system; the primordial ethnic differentiation between shorter, darker Hutus and taller, light-skinned Tutsi; the individual self-interest of those involved; the motives and behavior of Hutu power holders; status differentiation between Tutsi aristocracy and Hutu farmers; and the rationalist urge to impose order on difference using modernist methods. Central factors in such cases also include, as Helen Fein (1993) has argued in relation to Armenian genocide during World War I (1914–1918) and the Nazi Holocaust, the rise of new elites in declining states who see their idealized political vision as exclusive and who position minorities as outside moral obligation, and where extermination is less visible and operates with little fear of sanction.

ETHNIC RELATIONS

Ethnic relations encompass highly varied, complex forms of social relations where attachment to cultural difference is paramount. Milton Esman (2004) has identified differing categories of ethnic relations. *Exclusionary domination* involves enforcing an ethnically stratified system of unequal rights, status, and opportunities. This was common in European colonial societies on all continents, in apartheid-era South Africa, and in many of the more extreme cases previously noted. *Inclusionary domination* or *assimilation* involves dismantling ethnic cultures, languages, and attachments by facilitating acculturation to the nation. The classic French republican model of aggressive assimilation, the Thai government's approach to its Chinese minority, and the Turkish government's approach to Turkey's large Kurdish minority are all examples of this form of ethnic relations.

Granting rights to minority groups can also ensure their domination. Limited rights have been granted to Arab Palestinian citizens in Israel, but these rights serve to confirm their second-class status, and there remains entrenched opposition to equal rights with Jewish Israelis. In Malaysia, domination with significant but unequal rights for Chinese and Indian citizens is well established. Power-sharing solutions have been developed in many national contexts where ethnic divisions have not produced conflict or separation. Belgium, India, and Switzerland provide examples where forms of federalism and consociationalism have enabled the establishment of multiethnic states. This approach supports ethnic pluralism, while the final position, integration, foresees its decline with the gradual building of social and cultural cohesion. This position is strongly advocated in the United Kingdom, where multiculturalism was officially

abandoned in 2004 due to its perceived effect as ethnically divisive, in favor of policies concerned with community cohesion ad integration. Here, integration is seen as encompassing the goals of ethnic equality and ethnic interaction, with strong concern over ethnic groups that lead parallel and separated lives.

The strength of ethnic loyalties and their practical adequacy for many people in making sense of their position in the world in premodern, modern, and contemporary times indicates the likelihood that ethnic conflict will continue, despite international declarations and interventions, creative national policies, and interethnic mixing. Ethnic conflict is "a world-wide phenomenon that has become the leading source of lethal violence in international affairs" (Esman 2004, p. 26). In the context of insecure national states and global inequalities, population mobility and international migration will lead to greater cultural diversification of national populations. New technologies and changing patterns of consumption are driving the construction of larger regional and global cultures. These globalizing, cosmopolitan forces are also stimulating new forms of ethnic defensiveness and hostility toward new migrants, as is occurring in the United States, as well as toward long-established minorities, as evident in the development of anti-Semitic movements and anti-minority hate speech in Russia. Nevertheless, social science failed to predict the demise of apartheid in South Africa in the 1990s, as John Stone and Rutledge Dennis (2003) remind us, and this one example indicates the importance of theorizing and understanding the potential for constructive conflict resolution.

SEE ALSO *Assimilation; Immigrants to North America; Multiculturalism; Race*

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Ian Law

ETHNOCENTRISM

Ethnocentrism is a basic attitude expressing the belief that one's own ethnic group or one's own culture is superior to other ethnic groups or cultures, and that one's cultural standards can be applied in a universal manner. The term was first used by the American sociologist William Graham Sumner (1840–1910) to describe the view that one's own culture can be considered central, while other cultures or religious traditions are reduced to a less prominent role. Ethnocentrism is closely related to other attitudinal indicators for racism, xenophobia, prejudice, mental closure, and, more generally, an authoritarian personality structure. Ethnocentrism is widely used in research on social and political attitudes because it proves to be a very powerful and easily identifiable attitude that can be measured in a valid manner with a limited number of variables. Although ethnocentric prejudice can be directed toward one specific outsider group, empirical research reveals that usually ethnocentrism is generalized toward all outsider groups.

Although ethnocentrism is closely related to racism, it can be distinguished from racism because it does not involve necessarily a negative vision toward other races. Any culturally distinct outsider group (whether the distinction involves language, religion, color, or descent) can be targeted by ethnocentric attitudes. In practice, European researchers often tend to avoid using the term *racism* because they are reluctant to apply the concept of race to human beings. In a U.S. context, the use of the term *racism* is not considered a problem. Given the fact that ethnocentrism is such a powerful attitude and is associated strongly with various behavioral patterns, ethnocentrism measurements are routinely included in almost all major survey projects. Ethnocentrism leads to in-group favoritism with regard to contact and cooperation, and accompanies outsider-group hostility, sometimes even leading to intergroup conflict, violence, or support for discriminatory behavior. There is also an abundant research literature on consumer ethnocentrism, that is, the tendency of consumers to prefer goods and services produced in one's own society.

CAUSES OF ETHNOCENTRISM

Various explanations have been suggested for ethnocentrism. Social identity approaches assume that ethnocentrism is the result of a strong identification with the in-group of the actor, which almost automatically leads to negative feelings toward and stereotyping of members of the out-group. Because some personality types are more clearly dependent on this strong form of group identification, these personality types are also more vulnerable to adopting ethnocentric prejudice. Experimental research has demonstrated that even if groups are assigned on a purely random basis, processes of in-group identification and polarization with outsider-group members still occur. Social scientists also have speculated that a lack of real-life contact with members of outsider groups might enhance stereotyping, as the outsider group can be seen as homogeneous, but the empirical evidence about the allegedly beneficial effects of contact tends to be mixed.

Realistic conflict theory, in contrast, assumes that ethnocentrism is triggered by a real or perceived conflict between various ethnic groups competing for scarce resources in society. The originally dominant groups in a territory will develop antagonistic feelings toward newly arriving outsiders when they perceive these outsiders as a threat to their own social position (e.g., in the labor or housing markets). In practice, however, empirical research has demonstrated quite convincingly that even groups whose positions are not threatened by ethnic competition still develop ethnocentric prejudice.

Survey research routinely reveals strong individual-level determinants of ethnocentrism: for example, high education levels effectively reduce ethnocentrism, and in general, men are more willing to express ethnocentrism than women. It is believed that actors with fewer individual resources (e.g., lower socioeconomic status, cognitive ability, or self-esteem) are more dependent on in-group confirmation of their identity, thus strengthening prejudice toward members of outsider groups. There is no consensus, however, on the impact of religion on ethnocentrism. Several authors have argued that this relation can be considered as curvilinear, with the highest ethnocentrism levels among believers that are only marginally connected to organized religion. Ethnocentrism is also clearly associated with distrust and with authoritarian and right-wing ideologies, and is the single most powerful determinant of extreme-right voting behavior.

ELEMENTS OF ETHNOCENTRISM

Research distinguishes two major components of ethnocentrism that are closely related but still can be empirically distinguished. Cultural ethnocentrism finds its origin in the belief that one's own cultural norms and attitudes are superior to the cultures of other societies or groups. Furthermore, cultural ethnocentrists believe that this cultural order is threatened by the arrival of new groups (with their own cultural norms) to the territory that is claimed as their own. Cultural ethnocentrism often expresses itself in a symbolic manner, for instance, in disagreements about the public presence of cultural markers of identity such as clothing, religious symbols, or other visible elements of minority cultures. Economic ethnocentrism is tied more closely to the perception that other groups can be seen as economic competitors and therefore should be limited in their capacity as economic actors. Economic ethnocentrism can express itself in discriminatory measures on the labor market, and in boycotts or other consumer actions expressing a clear preference for goods and services associated with one's own culture.

Some researchers have also distinguished between explicit and implicit ethnocentrism. In the explicit condition, respondents are willing to express negative stereotypes toward outsider groups; the implicit condition is characterized by an inhibition to express these sentiments despite the fact that other responses clearly indicate that the respondent is unwilling to grant the same rights and legal protections to members of outsider groups. Implicit ethnocentrism can lead to calls for segregation with regard to education, housing, or cultural participation, or to a negative attitude toward affirmative action.

Although throughout the world, various government agencies and education systems have developed social and legal strategies to reduce ethnocentrism, thus far no universally successful strategies have been documented. Avoiding stereotyping seems to be a necessary prerequisite, and mass media and other socialization agents clearly play an important role in this respect.

SEE ALSO *Ethnic Conflict; Ethnic Fractionalization; Ethnicity; Jingoism; Nationalism and Nationality; Prejudice*

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Marc Hooghe

ETHNO-EPIDEMIOLOGICAL METHODOLOGY

The term *ethno-epidemiology* has acquired two different but intertwined meanings in the social sciences. On the one hand, it refers to an emergent cross-disciplinary health research methodology that combines the strengths of direct participant observation and other qualitative methods for understanding social meanings and contexts as practiced in medical anthropology with the design, sampling, data collection, and analytical strategies focusing on risk factors and disease outcomes developed in epidemiology. This use is referred to here as *ethno-epidemiological methodology*. On the other hand, as Michael Agar notes in "Recasting the 'Ethno' in 'Epidemiology'" (1996), the term is also used in the literature to refer to *emic* (i.e., insider) or folk systems of disease understanding and response. This usage is referred to as the *ethno-epidemiological explanatory model*. Together, these constitute important tools for conducting and targeting public health research.

ETHNO-EPIDEMIOLOGICAL METHODOLOGY

When *medical anthropology* emerged as a field, it was concerned primarily with folk illness conceptions and related indigenous healing behaviors. On this foundation, it has evolved into a robust subdiscipline focused on studying the immediate cultural and broader social factors involved in the experience, understanding, and behavior of illness. Medical anthropologists use this information to contribute to empirically grounded public health development. *Epidemiology* developed as the scientific arm of public health centered on emergent disease causation, trends in disease occurrence, and assessment of the effectiveness of intervention. Since the mid-1970s, the boundary between medical anthropology and epidemiology has witnessed a growing number of conceptual and programmatic exchanges. Some contacts have been fraught with tensions, as occurred in the medical anthropological critique of epidemiological construction of "risk groups" in the HIV/AIDS epidemic, or when epidemiologists express wariness about small, nonrepresentative anthropological studies. Other points of contact have been highly collaborative and productive, such as various successful oral rehydration projects internationally. Although both disciplines bring a distinct approach to the study of the intersection of disease and behavior, epidemiology traditionally has taken the formal road of statistical and quantitative methods, whereas medical anthropology has favored qualitative strategies that allow access to on-the-ground behaviors and insider understandings. Ethno-epidemiological methodology is a direct product of efforts to build collaborative approaches between these two health-related research disciplines.

The development of ethno-epidemiological methodology reflects several trends in public health and medical anthropology, including: (1) a growing reliance on mixed-method research designs and multidisciplinary research teams in the investigation of health risks; (2) an increasing emphasis in medical anthropology on systematic data collection and analytic strategies and a corresponding decline among quantitative researchers in criticism of ethnography as being unscientific; and (3) a growing understanding of strategies for the triangulation or integration of different types of data. All of these changes are seen, for example, in the study of drug-related risks for the spread of HIV disease. Research in this arena now typically involves teams of experts from diverse disciplines; the integration of ethnographical, epidemiological, and other approaches to data collection; and achievement of enhanced outcomes based on the comparison of qualitative and quantitative findings.

More recently, there has been a push for an even greater integration of medical anthropology and epidemiology through the creation of *cultural epidemiology*. According to Jim Trostle (2005), cultural epidemiology promotes the study of diseases and their causes in terms of the contribution to health trends made by culture. Modeled after social epidemiology, which examines the health-related effects of social inequalities, cultural epidemiology would extend the variables under consideration to include folk systems of disease classification, meaning systems, culturally constituted risk patterns and conceptions, and other behaviors commonly analyzed as cultural in origin by medical anthropologists. These factors, Trostle maintains, should be critically important to epidemiology because people's conceptions and behaviors impact their health. Raymond Massé (2001) introduced the term *critical ethnoepidemiology* to refer to the linking of an interpretativist analysis of local illness meaning and a critical analysis of asymmetric social and economic relationships.

ETHNO-EPIDEMIOLOGICAL EXPLANATORY MODEL

Arthur Kleinman (1980) introduced the term *explanatory model* to label the ideas activated during an episode of sickness and treatment by all those involved in the clinical process. Explanatory models provide culturally meaningful explanations of sickness (e.g., its nature and causes) and treatment (e.g., best practices) that are used in health decision-making. For example, in *The Spirit Catches You and You Fall Down* (1997), Anne Fadiman recounts the story of Lia Lee, a Hmong child who began having intense seizures,

which were interpreted as signs of "soul loss" by her parents and a Hmong shaman, but diagnosed by physicians as epilepsy. Convinced that Lia's parents were not administering the medicines they prescribed because of their faith in Hmong ethnomedicine, Lia's doctors launched a successful effort to have her removed to foster care.

As Kleinman recognized, different parties active in a sickness incident—including professional healers, folk healers, and the wider social group of the patient—can embrace differing conceptions or models of illness, treatment, and recovery. Of interest to Kleinman, and many medical anthropologists ever since, are the relationship of explanatory models to the wider cultural systems of which they are a part and the nature of the interactions that unfold when alternative explanatory models meet (and perhaps clash) during sickness episodes in diverse sociogeographic settings.

Ethno-epidemiology in this sense, as an indigenous explanatory model of disease causation, spread, prevention, and treatment, reflects the growing medical and public-health understanding of the significant influence of patient attitude, experience, and behavior in sickness and recovery. D. Lee and coworkers (2004), for example, demonstrated that the Chinese cultural practice of *peiyue*—a postpartum custom of mandated family support—is associated with a lower risk of postnatal depression.

The two meanings of the term *ethno-epidemiology* described above are unified in their recognition of the fundamental importance of culture in health, with ethno-epidemiological methodology referring to approaches for its in-depth and systematic study, and ethno-epidemiological explanatory models labeling the local cultural conceptions of disease now recognized as a significant influence on disease expression and response.

SEE ALSO *Anthropology, Medical; Disease; Public Health*

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Merrill Singer

ETHNOGRAPHY

The Greek etymology of the term *ethnography* is deceptively simple: writing about a people, where both writing and cultural difference are, respectively, explicit or strongly implied. Ethnography has had a long and complex relationship with its parent discipline, anthropology, and has come to mean more than writing alone, because the written record had to be based on knowledge of another culture acquired by the writer. *Ethnography* is thus a term that is used both as reference to the written product of the research process, usually assumed to be descriptive, and the research process itself. Ethnography, as a research process, is based on fieldwork. Since at least the time of Bronislaw Malinowski (1884–1942), fieldwork has meant living with a people for an extended period of time, learning their language, becoming immersed in their everyday life, understanding their whole cultural system and how the parts interrelate, and trying to understand the native point of view. The process of sharing in the daily life of one's hosts while making a detailed record of their lives in the form of field notes is known as "participant observation." Not all fieldwork is ethnographic—it becomes ethnographic based on the relationship one has with hosts or collaborators, and the intimate immersion in their way of life, with a keen concern for understanding how they act in the world and see the world in their terms.

Although fieldwork is often qualitative, it can and has included quantitative research as well (Bernard 2000, 2005). In the classic and standard works of the anthropological discipline, ethnographies were holistic accounts in that they strove to present comprehensive accounts of another society and its culture, showing the interrelation of elements such as political organization, religion, law, kinship, mythology, and subsistence practices. Often the unit of analysis was as small as a single village, and the society in question was a tribal one. Ethnographies contained little or nothing in the way of a historical perspective. Today, ethnographies written by anthropologists take a much sharper focus, addressing a specific research question rather than cataloging another way of life, and they tend to do so in a reflexive and often very theoretical manner as well. They also engage in research across multiple sites, including the anthropologist's home society. Yet, ethnographers still do not deal with large samples of peo-

ple, focusing on smaller environments and more intimate interactions.

Given the unique nature of ethnographic research, which distinguishes it from impersonal archival work, mass-administered questionnaires and number crunching, public surveillance, and more remote ways of interpreting people's behaviors and their meanings, many fields and diverse interests have become attracted to ethnography, from corporations and market research firms to other disciplines in the social sciences and the humanities. Although ethnography is associated with anthropology primarily, there is an important tradition of ethnography in sociology, particularly in the Chicago school of sociology, which produced prominent ethnographies by distinguished sociologists such as William Foote Whyte (1994). However, unlike in anthropology, ethnographic fieldwork is not a requirement for a doctorate in sociology.

PROBLEMS OF EXPRESSION

Ethnography presents special challenges to the anthropologist and collaborators, and to the discipline's status in the academy and wider society. Intimate, face-to-face research can be politically sensitive and can heighten the self-consciousness of all parties involved. The experiential and subjective nature of this mode of research opens anthropological reflections to the humanities and to ways of becoming involved in social issues. Anthropological self-questioning concerning the conditions and outcomes of knowledge production are especially acute where ethnography is concerned.

In the introduction to a controversial collection edited with George Marcus, James Clifford argued that ethnographic accounts are at best incomplete and partial truths, much like fictional works (Clifford and Marcus 1986, pp. 6–7). Clifford Geertz (1988) also interpreted anthropology as a kind of writing, a literary creation. Interest in the writing of ethnography focused attention on the rhetoric, metaphors, and tropes used by anthropologists to assert their expertise, authority, and credibility, especially when objectivist science had once held such sway in the discipline. A growing concern with narrative styles, acts of interpretation, and issues of cultural translation in ethnography began to turn the discipline in on itself, and led to the erosion of confidence in realist approaches. Expression seemed to overtake explanation as the focus of these critiques of realism that have been labeled "postmodernist." The attention to how ethnographic texts are constructed was accompanied by an interest in the subjective and personal conditions of knowledge production, by critically examining the ways the anthropologist becomes part of and shapes the situation that is being studied. *Reflexivity* became a key term, prompting many anthropologists to reflect on how their personal biographies led them to certain subjects and to ways of understanding those subjects. Ethnographic filmmakers such as Jean Rouch (1917–2004) deepened and extended discussions of reflexivity, of anthropology as a humanistic art, and of ethnography as fiction, well before it became popularized as "postmodern" in the late 1980s. The question that remains open is a philosophical one: Is the mission of the ethnographer primarily to uncover truth, or to explain reality?

ETHICAL AND POLITICAL CONSIDERATIONS

The act of writing about persons is based on actual interactions, and anthropologists have been keen to elaborate ethical guidelines for fair and proper relationships with their collaborators. The basics of most anthropological guidelines stress the principles of seeking informed consent, not causing harm to individuals, leaving the field situation in the way one found it, and safeguarding confidentiality (e.g., American Anthropological Association 1998), and much wider debates have raged since the 1970s (Rynkiewich and Spradley 1976). Revelations that some anthropologists had spied for the U.S. government during counterinsurgency campaigns in the 1960s in Asia and Latin America shook the discipline. Intellectuals, media, and political leaders in recently decolonized countries, as well as indigenous peoples, charged that anthropology functioned as an imperial discipline of surveillance, and researchers became concerned with how to decolonize anthropology. New ethical guidelines have stressed the need for collaboration, coproduction, and multiple authorship, and for ongoing negotiation of the terms of access to research data. Much controversy has emerged over the status of "practicing" anthropology—anthropology done outside of the academy, in the service of governments and private firms—especially as ethical guidelines produced in the 1970s have been tempered by a concern of "practicing anthropologists" for the rights of those funding their research, such as commercial stakeholders.

Politics have been intimately tied up with issues of research, ethics, and writing. Since the 1970s more attention has been devoted to the politics of ethnography as a dominating knowledge that posits a different "other." The rise of indigenous anthropology (Medicine 2001), feminist anthropology, and anthropology "at home" have all sought to confront and contest the colonial origins of anthropology (Biolsi and Zimmerman 1997; Brettell 1993; Deloria 1988; Harrison 1991). New approaches to ethnography call into question the older scientific "gaze" of anthropology as a kind of imperial vision that manifested itself in imperious writing—that is, writing in the "voice of god" as an unseen, authoritative, and trustwor-

thy observer. More attention has been paid to how gender, class, ethnicity, and nationality condition one's rapport with hosts, delimit access to spheres of life, and determine what kind of data can be recorded. Reinterpreting ethnography as premised on humanistic, face-to-face, intimate relationships; delving into intersubjective understandings; and not placing oneself outside of the research context as a remote analyst or, worse, as a spectator of zoological phenomena, have worked to produce more self-conscious and politically sensitive ethnographies (Rabinow 1977). Dialogic exchanges (Crapanzano 1980) challenged the previous, sportscaster-like narrations of what people were doing.

NEW TRENDS

Self-reflection has been acute in anthropology, at times bordering on paralyzing angst. The prolonged immersion in other cultures, the everyday and intimate interactions with one's hosts, arriving as an outsider and becoming an insider, the questions of one's own identity and the status of one's involvements with others almost inevitably heighten self-consciousness. Hortense Powdermaker was aware of how involvement and detachment, art and science, worked in tension with one another in ethnography (Powdermaker 1967). Currently, the relationship between theory and ethnography is tense, too, and there is a greater tendency to produce theoretically heavy accounts that seemingly render ethnographic description as secondary in importance, or as ornamentation in predetermined exercises. Debates about writing styles in anthropology were conducted largely in private, among and for other professional anthropologists, with little or no impact on the social standing and public engagement of the discipline. Some have noted the limits to discussions of reflexivity, arguing that the result has bordered on narcissism and a failure to reflect on broader-than-personal conditions of knowledge production (Bourdieu 2000). Although ethnography still addresses the impacts of postmodern and postcolonial critiques, there are new trends emerging: fieldwork in one's home society; feminist and indigenous anthropology; autoethnography; experimental writing, including fiction in the regular sense (Bowen 1954); and militant advocate approaches. In terms of the politics of writing, there are more dialogic and multivocal texts rather than authoritative, univocal accounts. Some scholars are questioning how anthropologists conceptually constitute "the field" at the heart of their ethnographies, with increased sensitivity to the realization that there is no definite beginning and end to fieldwork, no clear "home" and "away" (Amit 2000). Revised ethnographic realism—understanding the differences between experience and reality—has led some to admit that what ethnography can capture is limited, with the resulting admission of multimethod approaches involving research in archives, media analysis, and use of statistics. Understanding how cultures are delinked from territories, with greater concern for globalization and transnational movements, has led some anthropologists to elaborate frameworks for multisited ethnography (Marcus 1995) premised on traveling cultures, on the movements of money, persons, metaphors, narratives, and biographies. As much as anthropology has been riven by debate about its ethnographic core, very few anthropologists have argued for abandoning ethnography. As Nancy Scheper-Hughes put it: "Not to look, not to touch, not to record can be the hostile act, an act of indifference and of turning away" (1995, p. 418).

SEE ALSO *Anthropology; Bourdieu, Pierre; Culture; Ethnology and Folklore; Gaze, Colonial; Gaze, The; Geertz, Clifford; Methods, Qualitative; Narratives; Observation; Observation, Participant; Social Science; Sociology; Sociology, Urban; Street Culture*

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ETHNOLOGY AND FOLKLORE

Ethnology and folklore emerged as the "science of tradition" during the nineteenth century and during the twentieth as a discipline concerned with "expressive culture" and cultural identities, particularly within modernizing societies. Professionals in these fields may call themselves *folklorists* or *ethnologists*. Whereas anthropologists frequently sought out homogeneous societies separated from the modern world, folklorists and ethnologists theorized about the persistence, adaptation, and function of tradition within complex societies.

Folklore and ethnology are related, sometimes linked, concepts for the way that individuals and groups use tradition to express values, beliefs, and ideas in a number of forms, including art, architecture, story, song, speech, and custom. Both terms refer to the process of tradition that results from informal learning: word of mouth, imitation and demonstration, and custom. The concept of folklore, however, has roots in the literary appreciation of oral and customary tradition (especially in Great Britain and America), whereas ethnology has a legacy of anthropological attention to the social and material basis of tradition, particularly in rural and peasant societies (especially in Scandinavia and Germany where holistic terms *folkiv* and *Volkskunde*, respectively, circulated).

As the fields developed, however, they came together into a broad inquiry of tradition, usually spanning categories of oral, social, and material culture. Into the twenty-first century, the term *ethnology* is still generally used in continental Europe, broadened to include urban and emergent traditions, and *folklore* in Great Britain and America. *Ethnology*, when used in the Americas, frequently refers to the social study of native tribal groups rather than to the cultural traditions of ethnic, occupational, and other groups, as in Europe. One learned society bridging the transatlantic tendencies is the International Society for Ethnology and Folklore, based in the Netherlands.

Related terms vying for wider usage include *folklife* and *folk culture*, representing concerns for the social and material life of tradition-centered groups. In addition to The Folklore Society, Great Britain has a Society for Folklife Studies, whose journal is *Folklife: Journal of Ethnological Studies*. Likewise the Archive of Folk Culture in the American Folklife Center of the Library of Congress in the United States has been a national repository for field-collected materials since 1928, and national centers for "folk culture" were established in the twentieth century in India, Lithuania, Estonia, Flanders, and the Netherlands, among others. Also vying for wider usage is the term *folkloristics* (*folkloristik* in German), often implying, like its cognate of *linguistics*, a distinction between the material under study—language and folklore—and the scientific branch of study. Use of folkloristics often implies an analytical emphasis on structure, communication, and performance of traditional behavior.

The scholarly inquiry into tradition, often traced to the field research of German intellectuals Jacob Grimm (1785–1863) and his brother Wilhelm Grimm (1786–1859), who published a collection of folktales with comparative notes as *Kinder-und Hausmärchen* (Children's and Household Tales) in 1812, signaled significant international intellectual movements that influenced the social

sciences (e.g., romantic nationalism, comparative anthropology, "etic" narrative analysis). The Grimms celebrated the verbal artistry of German peasantry, or *Volk*, as the soul of the culture. This usage inspired British antiquarian W. J. Thoms (1803–1885) in 1846 to suggest the name "folk-lore" as a replacement for popular literature and antiquities. The implication was that *folk* was a noun for a level or class of culture that retained superstition and storytelling while the surrounding society modernized. The Victorian folklorists produced comparative studies on a global scale, applying Darwinistic ideas of evolution to culture to explain the survival of beliefs and customs in modern society. A "Finnish School" was promoted in the United States by Stith Thompson, who revised the Finnish typologies of Annti Aarne and methodology of Kaarle Krohn. This "Finnish School" developed "historic-geographic" approaches to explain the universality (codified as "tale types") and localization (called "oikotypes") of narratives by identifying global distributions of tales and reconstructing their origins and diffusion. A lasting result of this approach was the creation of standard reference works of tale-type and motif indices.

In the twentieth century, the influential American anthropologist Franz Boas (1858–1942), as editor of the *Journal of American Folklore* from 1908 to 1925, emphasized folklore as essential cultural evidence of an individual society. This approach signaled a shift away from global Darwinian models to a cultural relativism and historical particularism driven by a field-based ethnography of cultural distinctions and settings. Several of Boas's students took over the editorship of *Journal of American Folklore* through the mid-twentieth century. The work of Boas and students such as Ruth Benedict, A. L. Kroeber, Melville Herskovits, and Martha Beckwith (who has the historical distinction of holding the first chair in folklore at Vassar College in the 1920s) in recording and interpreting texts among diverse groups including Native Americans, African Americans, and college women emphasized the idea of folklore as a reflection, or symbolic autobiography, of a culture, and the analysis of folklore's functions within a particular society and setting.

As folklore and ethnological studies developed with a social focus, more attention was given to *folk* as an adjective for traditional learning that everyone participates in. Alan Dundes (1934–2005) in *The Study of Folklore* presented an influential definition of *folk group* that applied to "any group of people whatsoever who share at least one common factor" (1965, pp. 1-2). In this modern perspective, folklore, the logical, functional outcome of such a common grouping, becomes a popular, necessary expression instead of a rare find or survival. It need not even be old. As a special kind of knowledge (e.g., jokes, gestures, dress, nicknames, slang) serving the purposes of the group (expanded beyond ethnic and occupational categories to include, for example, family, deaf, gay, children's, organizational, corporate, and Internet communities), folklore is ever changing and, indeed, can be created anew. The expressions can be analyzed functionally not only to bond the group, but also to provide psychological outlets to deal with disturbing issues and adaptive strategies to conflicts and human development. Generations of professionals with doctorates in folklore developed its study as a separate discipline with distinctive approaches. American folklorists such as Michael Owen Jones, Roger Abrahams, Dan Ben-Amos, Richard Bauman, David Hufford, and Barbara Kirshenblatt-Gimblett were instrumental in developing behavioral or performance-centered theories of folklore as "artistic communication in small groups," while others such as Alan Dundes, Jay Mechling, Gary Alan Fine, Simon Bronner, Elliott Oring, and Henry Glassie explored the social structural and cognitive dimensions of human expressiveness.

In the twenty-first century, folklore is viewed as a dynamic process of cultural communication by which individuals discover or establish their identities. Individuals in contemporary society are understood as having multiple, often overlapping, identities that are recognized by different folkloric repertoires. Social-scientific research in folklore emphasizes field work and ethnography—the observation of "cultural scenes" in which symbolic communication and behavior occur. No longer content to collect folkloric "texts" like natural history specimens, folklorists and ethnologists interpret for the social sciences the relation of folklore to cultural "contexts." To be sure, historical perspectives are still evident in the analysis of precedents and variations of tradition, and there is often a social-psychological consideration of the function and enactment of cultural expression in the formation of identity, both group and individual. Folklore and ethnology contribute to the social sciences by theorizing the roles of expressions in binding and differentiating groups and their identities, sustaining values and beliefs from one generation to another, and understanding the artistic components of everyday life. The folkloristic purview of groups and genres has greatly expanded since the nineteenth century, but the inquiry into tradition's role in mind, society, and behavior remains.

SEE ALSO *Boas, Franz*

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ETHNOMETHODOLOGY

Ethnomethodology is an approach to the study of everyday life with a particular emphasis on the construction of cultural meanings amongst minority groups. The term incorporates the prefix *ethno-* to refer to cultural context, including language and jargon, myths, symbols, and codes of behavior, and the word *methodology*, which refers to the means, rationale, and philosophical assumptions involved in the approach to investigating such phenomena.

Developed by Harold Garfinkel in 1967, ethnomethodology was initially dismissed by prominent social theorists of the time, such as Alvin W. Gouldner (1920–1981), who described Garfinkel's work as "mere Californian sociology" (cited in Garfinkel 2002, p. 3). In spite of this early disinterest, ethnomethodology continues to influence empirical social science research in a diverse range of fields, most notably in the areas of education, health, gender, media, and criminal justice.

Specifically, ethnomethodology investigates the functioning of common sense within cultural contexts, stressing the active, reasoned, and informed character of human social behavior. Put simply, ethnomethodology is the study of how individuals maintain a sense of reality in a given social situation through the means of social interaction with other individuals. That is, a conversation is a social process of interaction that has certain requirements in order for individual participants to identify it as a conversation and keep it going as such. For example, people will look at one another, nod, murmur, take turns in speaking, and in asking and responding to questions. If these requirements are not met, or are employed in ways that deviate from the expectations attached to the perceived reality of a conversation, then the interaction breaks down to be replaced by an alternative social process.

Garfinkel's work was thus a development of the phenomenological insights of Alfred Schutz (1899–1959), who had argued that commonsense knowledge is patchy and incomplete and that shared understandings between individuals are contingent achievements based upon this revisable and approximate knowledge. Garfinkel conducted a series of quasi-experimental procedures that exposed the tacit assumptions and presuppositions that underpin shared understandings during social interaction, which he argued had to be understood as an "event-in-context." That is, linkages are assembled between a process of social interaction and the cultural context within which the interaction takes place.

Crucially, therefore, changes in the understanding of an event's context will evoke some shift or elaboration in an individual's ability to grasp the meaning and reality of the interaction itself. Put simply, to make sense of social interaction between individuals it is necessary to grasp the cultural context in which it takes place. Individuals frequently design their interaction so as to make use of localized contexts in order to elaborate and particularize the sense of their talk and actions. A useful example here is how the cultural products of the poor and minority groups, such as rap lyrics, can be misunderstood if the cultural context in which they are produced is not fully grasped.

Ethnomethodology remains a highly influential approach in the international social sciences, continuing to open up innovative areas of analysis in sociology, social psychology, and linguistics in particular.

SEE ALSO *Communication; Conversational Analysis; Cultural Relativism; Culture; Culture of Poverty; Ethnicity; Minorities; Nonverbal Communication*

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Mark Davis

ETHNOMUSICOLOGY

Although there is no universally accepted definition of *ethnomusicology*, a few words stand out in most defini-

tions: "sound," "music," "performance," "context," and "culture." Ethnomusicology is "humanly organized sound" (John Blacking, in Byron 1995), "the study of music in culture" (Merriam 1964, p. 7), or more broadly, sound in context. Ethnomusicology also touches on other disciplines, such as linguistics, history, sociology, and the study of dance.

Bruno Nettl nicely skims over the befuddlement of defining *ethnomusicology* in *The Study of Ethnomusicology* (2005). By about 1950, ethnomusicologists studied what was then called "primitive," "folk," or "ancient" music. The first term was used to describe "unschooled" music, especially music from indigenous, colonial peoples. The second term referred to the music of nonliterate or semiliterate people in Europe or the European diaspora, the so-called peasants or the remnants of peasant populations of earlier eras. The third term referred to the focus for European musicologists who studied the roots of European classical music, especially in the Middle Ages, before modern musical transcription was as full as it has become.

Traditionally, ethnomusicology may involve learning to play what a North American novice might think of as "exotic" music, or it may focus on any music or sound whatsoever in a cultural context. An ethnomusicologist may view music sui generis. She may use music as a metaphor for something outside the music, or focus on an event of which music is a small part. As one moves from the study of music as such to music in context, one tends to move from scholars who are musicians and have training in transcription, toward ethnographers. Most scholars who study music in the field have musical training, but today they also have knowledge of local languages and/or linguistic theory, as well as participant observation skills. All these academic attributes combine in the groundbreaking work of Steven Feld, who examined sound in a cultural context, especially birdsongs that formed a springboard of meaning for the songs of the Kaluli people of Papua New Guinea (1990).

In the nineteenth century and early in the twentieth century some European composers and musicologists began to look at peasant music of their own countries, as well as the "primitive" music of the people in European colonies. They documented that music, either to enhance their own compositions or just to extend the range of musical styles with which they were familiar. At about the same time, other scholars in folklore and anthropology were beginning to document festivals, rituals, and other customs, many of which had musical or dance components. Working independently from one another, for the most part, these disparate scholars developed the roots of what later (around 1950) came to be called "ethnomusicology" in the United States.

In the 1890s aural recordings, first on cylinder records and then on discs, were made "in the field" or in recording studios such as at the Library of Congress. Early recordings supplemented written transcriptions of "exotic" music. Together with filmed musical events, aural and visual documents opened up the study of music in cultural context to a wider group of researchers. This led to a broad division in the field, between early ethnomusicologists who recorded in many different cultures in many parts of the world (Alan Lomax is a good example—see Cohen 2003) and more recent scholars who record in a few places throughout their careers and then write in depth on those few areas (Stone 2002). In keeping with a humanistic bent, which has challenged social science approaches to the field, most ethnomusicologists have become self-reflective and have subjectively inserted themselves into the musical and cultural context they study. However, whether or not ethnomusicology remains a social science, most ethnomusicologists hold a humanistic value that the music of ordinary people in their own cultural settings—as opposed to music by and for elites only—should be the focus of the discipline.

SEE ALSO *Anthropology; Anthropology, Linguistic; Culture; Ethnography; Ethnology and Folklore; Ethnomethodology; Exoticism; Music; Performance; Rituals; Vinyl Recordings*

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ETHNONATIONALISM

SEE *Ethnocentrism; Liberation Movements; Nationalism and Nationality.*

ETHOLOGICAL ATTACHMENT THEORY

SEE *Attachment Theory; Separation Anxiety.*

EUGENICS

Although ideas concerning the mutability of so-called natural human traits have been a part of Western civilization since antiquity, the science of eugenics emerged out of a particular nineteenth-century discourse that had its roots in social Darwinism and scientific racism. Throughout the second half of the nineteenth century, the English scientist Sir Francis Galton used statistical studies of British families to argue that heredity governed physical ability, talent, and character, and that "reputable" families were much more likely than ordinary families to produce superior offspring. He argued, moreover, that humans possessed the ability—through a system of selective breeding—to guide the course of human evolution and ultimately improve the race. In 1883, Galton named his new science *eugenics*, which he derived from the Greek word *eugenes*, meaning "good in birth" or "noble in heredity."

Following the publication of his famous cousin Charles Darwin's *On the Origin of Species* in 1859, Sir Francis Galton began his inquiry into human heredity and the use of science to improve the human race. His first attempt to articulate his thoughts concerning the power of nature in determining human ability came in the form of a two-part article entitled "Hereditary Talent and Character," which was published in a popular English magazine in 1865. In another article entitled, "Hereditary Improvement," published in 1873, Galton established his method for improving the quality of the human race. He declared that his goal was to "improve the race of man by a system which shall be perfectly in accordance with the moral sense of the present time" (Gillham 2001, pp. 195–197). To implement his plan, Galton envisioned the creation of a state agency that would gather, analyze, and distribute important pedigree data, accompanied by photographs and physical measurements, to all Englishmen interested in improving the race. This information would then be used to encourage the reproduction of those families perceived to have talent, and to discourage the reproduction of the masses of individuals perceived to be of inferior quality. Programs designed to encourage "fit" individuals to reproduce came to be known as positive or productive eugenics, and those programs designed to prohibit "unfit" individuals from reproducing came to be known as negative or selectionist eugenics.

By the beginning of the twentieth century, eugenics had become very popular among a broad array of Americans eager to remedy the social, cultural, and political upheaval caused by decades of massive industrialization, urbanization, and immigration. Men such as Charles B. Davenport and Harry Laughlin of the Eugenics Record Office at Cold Spring Harbor, New York, embraced the new science. Women reformers such as Margaret Sanger also extolled the benefits of controlled breeding. In the 1920s, eugenicists created the American Eugenics Society, and the Eugenics Research Association. American eugenicists played a critical role in the passage of a 1924 immigration law known as the National Origins Act (or the Johnson-Reed Act), which greatly reduced the number of southern and eastern Europeans entering the United States. Harry Laughlin and other eugenicists wrote the Virginia sterilization law that became the focus of a 1927 Supreme Court decision in *Buck v. Bell*. The court voted to uphold forced sterilization, ultimately resulting in the sterilization of over 65,000 individuals throughout the United States. Eugenic ideology also made possible studies such as the controversial Tuskegee syphilis study, which focused on African American males and lasted forty years, from 1932 to 1972.

Eugenics was not limited to England and the United States. Societies across the globe embraced the new scientific thinking. In Germany, Alfred Ploetz and other scientists applied American eugenics to the new science of race hygiene, resulting in the creation of the Society for Racial Hygiene and the eventual Nazi extermination of millions of Jews, Gypsies, persons with disabilities, and other "unfit" individuals during World War II. Throughout the twentieth century, Scandinavian countries coerced large populations, consisting mostly of women welfare recipients, to be sterilized in an effort to reduce the number of genetic "flaws" among their offspring. In places such as Argentina, Brazil, and Mexico, eugenics greatly influenced biological and cultural definitions of race and gender, as well as popular notions of national "fitness." In Latin America, the state regulated reproduction through different legal restrictions imposed on marriage.

Eugenic thought has loomed large in the public discourse and social policy of numerous countries throughout the world since the late nineteenth century. It has assumed many forms; it has spanned the geopolitical spectrum; and although it fell into disfavor after World War II, it has experienced a resurgence in the late-twentieth and early twenty-first centuries. The advent of the Human Genome Project and other advances in genetic science has ushered in new concerns about the moral, ethical, and racial implications of selective breeding. In his recent best-selling book *Freakonomics*, the University of Chicago economist Steven D. Levitt caused a tremendous stir when he argued that abortion has been the most dominant factor in declining crime rates in the United States. Put simply, Levitt argued that unwanted children are

more likely to become criminals, and that since the 1973 *Roe v. Wade* decision fewer unwanted children have been born, resulting in a reduction in American crime rates. Critics have since charged Levitt with being a eugenicist who advocates the selective extermination of "at-risk" offspring. Although this was not his intent, Levitt has subsequently been forced to defend his abortion hypothesis in a number of popular media outlets. Clearly, and understandably, anything that even remotely smacks of eugenics continues to create a firestorm of controversy.

SEE ALSO *Genocide; Nazism; Population Control; Racism*

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EURO, THE

The euro regime is an epochal economic paradigm of supranational macroeconomics, based on a common continental economy with a common currency. On January 1, 1999, eleven of the original fifteen European Union (EU) members (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, and Spain) elected to voluntarily surrender their monetary sovereignty and adopt the euro as a common currency, which would be managed by a common central bank, The European Central Bank (ECB). Greece joined the following year. This group of nations, known as the EU12, became the euro regime. Denmark, Sweden, and the United Kingdom have thus far not adopted the euro and each continue to use its own currency. Ten new members were admitted to EU membership in May 2004, and they will join the euro regime when they meet the guidelines of the Maastricht Treaty adopted by the ECB.

The euro began as an accounting unit and came to be a medium of exchange on January 1, 2002. For another twelve months, each member economy was allowed to have joint circulation of their national currency along with the euro. Thereafter, the euro became the exclusive medium of exchange of the euro regime. The new currency soon became the store of value not only for the euro regime, but also for the rest of the world. Holding a part of the GDP (gross domestic product) of an economic unit in money, the most liquid form of asset, is a familiar practice. Because the nation-state economies of the world at the present time hold their international reserves in dollar and euro, each of the two currencies represents overwhelming shares of world output and trade. The competitive shares of official holdings of euros and dollars merit attention. In 1999, the dollar had a 71 percent share of official world holdings of foreign exchange, while the euro began with a nearly 18 percent share. By 2004, reserve values of dollars and euros had been climbing steadily. However, the world share of dollar holdings had fallen by 6.5 percent by 2004, while that of euro shot up by more than 39 percent.

On January 1, 1999, the euro was launched at a 17 percent premium over the dollar, based on the market quotation of the day. Within a year, the euro depreciated to converge with the dollar, and it continued to fluctuate below the value of the dollar until 2002. A psychological attachment to national currencies, as well as their joint circulation with the euro, prevented a significant strengthening of the euro. Soon after the euro became the exclusive medium of exchange of the EU12, it appreciated over the dollar. International uncertainty and terrorism, as well as the mounting national debt and budget and trade deficits of the United States, compromised the competitive value of the dollar vis-à-vis the euro. In addition, fluctuations in the price of both petroleum and gold in the world market (based on and quoted in dollars) have had an impact on the relative strength of the euro. Meanwhile, successive interest rate increases by the U.S. Federal Reserve Bank beginning in 2004 contributed to an increasing demand for the dollar. The ECB responded by raising its core interest rate at the end of 2005. In December 2004, the dollar reached a record low against the euro, falling some 36 percent from its high against the euro in June 2001.

As the EU share of world output and trade has become competitively large, the euro has progressively become a global currency. In 2004, the gross domestic product of the EU12 stood at US$8.2 trillion, compared with US$11.0 trillion in the United States (OECD 2005). In shares of world trade (exports and imports), the euro regime leads the United States by substantive margins. The comparative strength of a currency must relate directly to its shares of world output and trade. Given this criteria, the euro will continue to be a dominant currency. It has been suggested that Denmark, Sweden, and Great Britain will eventually join the euro regime, as will the ten new members of the EU. Then these twenty-five members of the EU (the EU25) will have more competitive shares of world output and trade than the EU12 now has, which

will have a significant impact on the euro-dollar exchange rate. In the 1960s, the U.S. dollar, based on a fixed gold value, was king, and its acceptance was global, at least within the free-market economies. Today, the euro and the dollar are the only two competitive global currencies.

The concept of geo-economics has replaced the cold-war concept of geopolitics. Based on the principle of competition, the euro and dollar currency regimes will contribute to the global optimization of economic gains for all micro units (households as units of consumption and businesses as units for investment). The European Union will be a learning model for other continents, and the Asian Economic Community, the African Economic Union, the American Hemispheric Economic Union, and the Free Trade Area of the Americas (FTAA) will increasingly command attention (Dutta 2005, 2007). The African Union has been formally instituted and others are in advanced preparatory stages.

To fully appreciate the role of the euro, one must have a comprehensive understanding of Jean Monnet's vision of Europe as one common European family (1978). An integrated economy in a continental geographic unit, with well-specified intraregional micro- and macroeconomic parameters, both transparent and judicially enforceable, is now in place. The Free Trade Area of the EU, with one common membership and one vote in the World Trade Organization (WTO), is unique. The euro is common currency for the euro regime, and it will therefore eventually lead to one Europe, to one political union (Issing 1996; Vanthoor 2002).

SEE ALSO *Common Market, The; Exchange Rates; Policy, Monetary*

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Manoranjan Dutta

EURO BAROMETER

SEE *Pollsters.*

EUROPEAN CONVENTION OF HUMAN RIGHTS

SEE *Civil Liberties.*

EUROPEAN UNION

The European Union (EU) is a cooperative entity that has qualities of both a federal nation-state and an international organization. It is neither, but falls somewhere in between. The EU is comprised of twenty-five member-states with around 460 million citizens. All member-states are democratic countries, which have agreed to cede some of their sovereignty to the institutions of the EU by participating in the common market, making their domestic laws conform to EU laws, adopting the Euro as a common currency, and allowing free movement of goods, capital, and persons, among other things. Social scientists attempt to explain why the EU came about, the role of its institutions in promoting cooperation, and its future trajectory. Will it continue to become more federal or will it reach policy gridlock? Will it continue to enlarge or will it reach its absorption capacity?

FORMATION OF THE EU

The earliest precursor to the EU was the European Coal and Steel Community (ECSC), formed in the wake of World War II as European countries sought a way to prevent such destruction from happening again. They believed if they became economically interdependent, they would be less likely to repeat the mistakes of the past. In addition, ECSC would make economic recovery and industrial modernization possible. For West Germany in particular, Chancellor Konrad Adenauer saw it as an opportunity for rapprochement with France and new ties with the West.

It was the 1950 Schuman Declaration that unveiled Jean Monnet's idea of the ECSC. Six member-states (Italy, France, Belgium, Luxembourg, The Netherlands, and West Germany) signed it into being with the 1951 Treaty of Paris. The ECSC was so successful in the early 1950s that it led to the 1957 Treaties of Rome, establishing the European Economic Community (EEC), which was a customs union, and the European Atomic Energy Community (Euratom). The 1967 Merger Treaty merged the executive bodies of the three treaties, thereby creating

the institutions that continue to exist in the twenty-first century. In addition, ECSC, EEC (later EC), and Euratom became known together as the European Communities. The 1987 Single European Act replaced the Treaty of Paris and the Treaties of Rome as the EC's policy domain grew into new areas not encompassed by the original treaties. It remained the European Communities until member-states signed and ratified the 1992 Maastricht Treaty, officially creating the European Union, which established the economic, monetary, and political union.

The basic evolution of these treaties embodies not only structural and institutional changes, but an increasing recognition of Europeans' common values, goals, and even identity, as well as a willingness to vest more authority in EU institutions. Besides economic integration—the largest area of common jurisdiction—there are common policies on agriculture, culture, energy, the environment, transportation, crime, and defense, among other things. Moreover, the EU has become increasingly political over time. In addition to increasing areas of jurisdiction, the EU has experienced successive enlargements, and the treaties have also attempted to accommodate its growing size. Membership in the EU has been so attractive that many European countries have voluntarily undergone extensive measures to democratize and develop economically so that they meet the criteria to begin accession negotiations.

EU INSTITUTIONS

At the core of the EU are its institutions, which are located in Brussels, Strasbourg, and Luxembourg. The European Parliament is the only representative institution as its members are directly elected, and belong to European political parties of which there are seven. It shares some decision-making authority with the Council of the European Union, which is an intergovernmental institution comprised of ministers and ambassadors from the member-states. The Council presidency, which sets the agenda for the EU, rotates every six months. Through the co-decision procedure, the Parliament and Council together take policy decisions, pass laws, and approve the EU's €100 billion annual budget. However, it is only the European Commission that can initiate new laws. The Commission, unlike the Council, represents EU interests as a whole, rather than the interests of individual member-states. Commissioners are required to swear an oath of loyalty to this effect. There is one Commissioner from every member-state, chosen by their national governments, and only the European Parliament has the ability to approve the College of Commissioners or dissolve it. Still, the parliament is rather weak compared to the Council and Commission, and this is problematic given that it is the only directly elected body.

Besides these three major EU institutions, the European Court of Justice (ECJ) has played a significant role in the operations of the EU, and in pushing integration forward. The ECJ is comprised of one judge from each member-state, and its primary role is to ensure that national law is compatible with EU law. In their 1993 article "Europe before the Court: A Political Theory of Legal Integration" Anne-Marie Burley and Walter Mattli argue that the judicial legitimacy of the ECJ has enabled it to take on more jurisdiction than had been intended, and to create precedents that assert the primacy of EU law over domestic law. Consequently, many individuals and local judges bring cases directly to the ECJ instead of to their national courts. Other important institutions are the European Central Bank, Court of Auditors, the European Economic and Social Committee, and the Committee of the Regions.

HOW IT WORKS

Besides the business of initiating and approving new laws, the EU has undergone major changes to its treaties. Member-states have willingly ceded increasing levels of sovereignty in numerous policy areas, but their control of the treaties is fundamentally intergovernmental. In order to change the jurisdiction of the EU fundamentally, statesmen must negotiate a new treaty at an Intergovernmental Conference (IGC). However, as argued in Mai'a K. Davis Cross's *The European Diplomatic Corps* (2007), the process of negotiation is much more complex than just the IGC summit, which is typically a highly publicized two-day event. Personal representatives of the statesmen, who are usually ambassadors based in Brussels, take years to prepare a draft treaty in advance of the IGC. Ultimately, agreement must be unanimous, and member-states can choose their own method of ratification, either through a parliamentary vote or popular referendum.

The last extensive revision to the EU was the 1992 Maastricht Treaty, which created the so-called "pillar system." All of the policy areas that used to fall under the EC became the first pillar, which is governed by the "community method." That is, in these policy areas the EU has full control at the supranational level, above the level of national governments. The second two pillars are intergovernmental, with the Common Foreign and Security Policy as the second pillar, and Justice and Home Affairs as the third.

A major part of the first pillar is the Single Market, which removed trade barriers among member-states, as well as establishing free movement of goods and a common tariff for imports from outside of the EU. The Single Market was part of the Treaty of Rome, but it was not fully completed until 1993. The Maastricht Treaty introduced the single currency, the Euro, which went into circulation

on January 1, 2002. The benefits of a single currency are that it makes economic transactions easier, encourages investment, and completely eliminates exchange rate fluctuations. All member-states, including the ten new ones, have adopted the Euro, with the exception of the United Kingdom, Denmark, and Sweden. The European Central Bank, established in 1993, is completely independent of member-states and interests groups, and is charged with managing the Euro and Single Market, setting the EU's external exchange rate policy, and ensuring price stability and low inflation within the EU.

In addition to free movement of goods, the Maastricht Treaty also established free movement of persons, capital, and services, although certain restrictions still apply. Free labor mobility is of particular importance as it clearly distinguishes the EU from other free trade areas like the North American Free Trade Agreement (NAFTA). Europeans actually have citizenship in the EU, and can move, study, travel, and work within an internally borderless EU.

The Treaty Establishing a Constitution for Europe—negotiated between June and October 2004 and signed by all EU governments on October 29—was an attempt to revise the EU Treaty. But the ongoing national ratification process resulted in failure when the French and Dutch referenda in May and June 2005 rejected it. Nevertheless, the ratification process continued in 2006 even as efforts were underway to devise a new version.

THE FUTURE OF THE EU

There are numerous scholarly debates over why the EU has continued to deepen its policies, and what its future holds. Functionalists have argued that the process of EU integration has proceeded based on functional need, and on an ad-hoc basis. Neo-functionalists have argued that once the six member-states founded the ECSC a spillover effect ensued, in which one policy area necessitated integration in other, related policy areas. For example, economic cooperation spilled over into political cooperation.

Since the 1990s the major debate has typically been between rationalists and constructivists. Rationalists argue that integration proceeded based on cost-benefit calculations. At each juncture, leaders only agreed to more integration if it directly benefited their own states' economic and power interests. Rationalists deny that any significant political integration can ever take place. On the other hand, the constructivist approach argues that the EU is a product of shared norms, which grow over time through deliberation, persuasion, and socialization. There is a certain idea of Europe that many Europeans believe is a worthwhile goal, and they comply with EU rules because they know it is in the long-term benefit of everyone. Depending on the approach, predictions about the future of the EU vary.

The question of how far enlargement can continue is also an area of attention. With the addition of ten new member-states in 2004, many scholars and politicians argue that the EU has reached its absorption capacity in the near term, and will have to wait many years before it is ready to undergo further enlargement. If the EU enlarges too quickly, it may be impossible for Europeans to continue to deepen integration, or deal with problems of democratic accountability at the supranational level.

Finally, scholars and policy practitioners debate the future role of the EU as an international actor. The strength and cohesion of the EU internally has a direct impact on its relations with the United States, its growing global security role, and its ability to be economically competitive. The EU has played a strong role in facilitating the ongoing Middle East peace process. Its policy is to favor the creation of two states to resolve the Israel-Palestinian conflict, and to find a solution to the Palestinian refugee crisis. The EU participates in numerous diplomatic and humanitarian assistance efforts to ensure the success of the roadmap to peace. The EU is the largest trading, scientific, and research partner with Israel, and provides the greatest amount of aid to the Palestinians and United Nations Relief and Works Agency. The EU responded to the 2006 crisis in Lebanon with numerous high-level diplomatic meetings with both Lebanese and Israel governments, the international community, and the United States. It also devised evacuation and humanitarian corridors to assist victims in escaping the violence, or to get supplies into the region.

Besides extensive aid to the Middle East, EU member-states as a whole give about $30 billion per year in development cooperation or aid to the third world more generally. Recipient countries include seventy-seven African, Caribbean, and Pacific countries. The EU seeks to reduce poverty in the third world by slowing the spread of HIV/AIDS, increasing education, providing debt relief, and improving the coherence between development and trade policies. To that end, the EU supports a number of associated territories, giving them preferential treatment and access to the European Development Fund for financing projects.

Overall, the EU leads the world in environmental protection and humanitarian aid, its economy is roughly the same size as that of the United States, and it has a high level of soft power or influence. While there are many areas of controversy and hurdles to cooperation in the foreseeable future, the EU has repeatedly proven itself to be a viable world player with much potential.

SEE ALSO *Euro, The*

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Mai'a K. Davis Cross

EUTHANASIA AND ASSISTED SUICIDE

The twentieth century has seen great strides in the advancement of medicine and life-sustaining technology, resulting in improved life expectancy and quality of life for people around the world. Improvements in medicine, however, raise questions about the appropriateness of life-sustaining treatments in the case of people who are terminally ill and experiencing acute pain and suffering. In the late twentieth century, end-of-life issues came to the forefront of public attention, resulting in an ongoing discussion about ethical, legal, and political implications of physician-assisted suicide (PAS) and euthanasia.

ISSUES SURROUNDING CONTROVERSIAL END-OF-LIFE DECISIONS

Part of the controversy surrounding end-of-life decisions such as PAS and euthanasia results from a lack of clear communication as to what these actions entail. *Euthanasia* refers to someone (often a physician) intentionally taking an action that ends another person's life with the stated intent of alleviating or preventing perceived suffering. Euthanasia involves the direct administration of lethal medication by a person other than the terminally ill patient. "Assisted suicide is the deliberate and knowing provisions of information, the means, and/or help to another person for the act of suicide" (American Association of Suicidology 1996, p. 6). In PAS, the assister is a medical doctor. Such assistance is typically in the form of a prescription for a lethal dose of medication that the terminally ill patient may use as a means to end his or her life. The critical distinction between these practices is that in euthanasia the physician (or somebody else) actively administers the lethal medication, while in PAS the patient is given the means to bring about his or her own death.

There are various types of euthanasia, including voluntary, nonvoluntary, and involuntary. *Voluntary euthanasia* refers to deliberate termination of a patient's life upon that person's explicit and direct request. Nonvoluntary euthanasia occurs when the patient is unconscious or incompetent and is thus unable to make a decision. Involuntary euthanasia takes place when the patient is competent and aware but his or her consent is not obtained. It should be noted that involuntary euthanasia is not an acceptable practice even in countries where voluntary euthanasia is currently legalized. The involuntary termination of a patient's life is not supported by legislation and is considered homicide around the world. This distinction has led several authors to argue that euthanasia is by definition voluntary and that terms such as *nonvoluntary* and *involuntary euthanasia* are contradictory and misleading (Materstvedt Clark, Ellershaw, et al., 2003).

In addition, distinction has been made between active and passive euthanasia. *Active euthanasia* is the procedure whereby a physician (or someone else) shortens a person's life, usually through the administration of a lethal dose of medication. *Passive euthanasia* refers to the practice of withholding or withdrawing a futile or ineffective treatment upon the patient's request (American Association of Suicidology 1996). Several researchers have argued against the use of this latter term by pointing out that practices such as withholding and withdrawing treatment are ethically and legally distinct from active euthanasia (Materstvedt, Clark, Ellershaw, et al. 2003). This view is consistent with practices in countries such as the United States and Israel where euthanasia is illegal, but withholding and withdrawing treatment are acceptable medical practices (Ganz, Benbenishty, Hersch, et al. 2006). However, in other countries the term *passive euthanasia* is still used. Similarly, providing high doses of pain-relieving medication, even if this may shorten a patient's life, is seen as distinct from euthanasia (Materstvedt, Clark, Ellershaw, et al. 2003). This is also the case with terminal sedation, a practice whereby pain medication is used to bring about unconsciousness, after which life-support equipment is withdrawn (Parpa, Mystajudou, Tsilika, et al. 2006).

ARGUMENTS REGARDING PAS AND EUTHANASIA

A firm grasp on the definitions of *PAS* and *euthanasia* as well as on the alternatives that exist to these practices is essential for an informed understanding of the debate sur-

rounding end-of-life decision-making. As of the early twenty-first century, more empirical data are necessary in order to evaluate the accuracy of arguments in favor of and against PAS and euthanasia.

Proponents of assisted suicide and euthanasia claim the practices exist but are hidden, and legalizing such acts would allow for stricter government regulation and control (Quill and Battin 2004). In addition, involving medical practitioners in the decision-making process would allow for professional and expert judgment to be made regarding the validity of end-of-life decisions. Another fundamental argument in favor of legalizing PAS and euthanasia is maximizing personal autonomy and self-determination. According to this view, a terminally ill patient who is enduring unbearable pain or suffering is entitled to the right of choosing death with dignity and peace. Alleviation of unnecessary suffering and maintaining the quality of life of terminally ill patients are the paramount goals behind PAS and euthanasia. Some proponents of PAS claim that this practice is ethically different from euthanasia, as in PAS the patient is the one who performs the act of ending his or her life.

Opponents of euthanasia and PAS point out the potential for abuse if these practices are granted legal recognition (Foley and Hendin 2002). Critics of PAS and euthanasia often refer to the threat of a slippery slope. They fear that once voluntary euthanasia or PAS for terminally ill patients becomes legally permissible, other forms of medicalized killing, such as involuntary euthanasia for mentally incompetent and/or disabled individuals would increase. Many medical professionals state that euthanasia and PAS are prohibited under the Hippocratic Oath and violate the fundamental ethical principles of nonmaleficence and beneficence. Furthermore, these professionals argue that the need for such end-of-life decisions can be eliminated with the provision of appropriate palliative care and the effective use of pain control medication.

Questions have also been raised about the stability and rationality of end-of-life requests (Foley and Hendin, 2002). In addition, patients may request PAS or euthanasia as a result of experiencing hopelessness and depression rather than acute physical pain or suffering. Alternatively, the patients may feel obligated to alleviate their families from unnecessary burden and thus feel pressured to end their lives. Finally, many opponents claim that the sanctity of human life overrules concerns of personal autonomy and that the protection of human life should be of paramount importance in end-of-life medical cares.

INTERNATIONAL VIEWS OF PAS AND EUTHANASIA

Both euthanasia and PAS were legalized in the Netherlands in 2002 after they had been tolerated for more than 30 years (Materstvedt, Clark, Ellershaw, et al. 2003). Belgium legalized euthanasia in September 2002, and did not legalize PAS (Adams and Nys 2003). Physician-assisted suicide, but not euthanasia, was legalized in Oregon in 1994 with the Death with Dignity Act, and began to be in use in 1997 (Materstvedt, Clark, Ellershaw, et al. 2003). In 2006, the Oregon Department of Human Services announced that it will no longer use the term "physician-assisted suicide" to describe deaths under the Death with Dignity Act (Colburn 2006) because the act itself specifies that deaths that occur following the provisions of the law are not to be considered suicide. Although active euthanasia is illegal in Switzerland, assisting in the suicide of a terminally ill patient is considered a crime only if the death, and therefore the motive behind the assistance, benefits the person who assists the suicide (Schildmann, Herrmann, Burchardi, et al. 2006). Although Australia's Northern Territory was the first jurisdiction to legalize euthanasia in 1995, the Rights of the Terminally Ill Act was repealed nine months later by an act of the Commonwealth (Materstvedt, Clark, Ellershaw, et al. 2003).

The legalization of PAS and euthanasia in several nations signals changes in public awareness of end-of-life issues. However, countries with legal endorsement of these interventions are the exception rather than the rule. A 2001 survey conducted by the Council of Europe (2003) revealed that a majority of European nations do not have laws concerning assisted suicide and euthanasia. Of those nations that do have laws, the overwhelming majority oppose the practices. A 1999 study by Luigi Grassi, Katia Magnani, and Mauro Ercolani, published in the *Journal of Pain & Symptom Management*, found that only 15 percent of Italian physicians favored euthanasia and assisted suicide. In Ireland, where suicide was considered a crime until 1993, discussions of euthanasia and assisted suicide have been taboo (Phillips 1997).

Euthanasia is not a legal option in Germany and physicians are obligated to prevent harm, which may also include cases of attempted suicide. However, suicide and assisted suicide are not considered criminal acts because of an artifact of German law (Schildmann, Herrmann, Burchardi, et al. 2006). This creates a precarious situation in which assisted suicide is theoretically an option for German physicians but may lead to legal sanctions if an argument is made that there was a duty to protect the patient's life. As of 2003, open discussion on PAS and euthanasia does not exist in Bosnia-Herzegovina (Haračić 2003), and Estonia has not engaged in a public debate surrounding end-of-life issues (Koorits 2003). In Greece, only 8.1 percent of the general public and 2.1 percent of physicians favor PAS, although 56.7 percent of the surveyed medical doctors had administered terminal sedation (Parpa, Mystajudou, Tsilika, et al. 2006). In Russia,

euthanasia is seen as contrary to the physician's duty to preserve and promote human life and is therefore considered unethical and illegal (Leenaars and Connolly 2001). In contrast, a large percentage of physicians in China may approve of euthanasia, although such acts are not officially legalized (Leenaars and Connolly 2001). In India, 50 percent of medical students favor euthanasia (Leenaars and Connolly 2001). Israeli medical doctors view euthanasia, PAS, and withdrawing of treatment as being forbidden by Jewish ethics and law; however, withholding of treatment is an accepted practice (Ganz, Benbenishty, Hersch, et al. 2006).

Issues of culture, religion, and national history are critical when attempting to explain the observed differences in beliefs about end-of-life decision-making. Several authors have hypothesized that positive attitudes toward PAS and euthanasia are the product of highly industrialized, individualistic societies (Kemmelmeier, Wieczorkowska, Erb, and Burnstein 2002). For example, an increase in positive attitudes regarding autonomy in the United States beginning in the late twentieth century has been correlated with a shift toward more positive attitudes regarding assisted suicide (Kemmelmeier, Wieczorkowska, Erb, and Burnstein 2002). In collectivistic societies such as Japan, arguments about the right to self-determination hold less appeal and end-of-life decisions are seen as prerogatives of the family as well as of the individual patient (Konishi and Davis 2001).

This picture is complicated by differences in religion. Most religions of the world uphold the sanctity of human life and prohibit actions that intentionally hasten death. Catholicism officially disapproves of euthanasia and PAS, as does the Christian Eastern Orthodox Church (Parpa, Mystajudou, Tsilika, et al. 2006). There are a variety of branches of Judaism, some of which oppose the active shortening of human life but deem interventions that artificially extend the agony of terminally ill patients unnecessary, therefore allowing withholding and withdrawing treatment (Gesundheit, Steinberg, Glick, et al. 2006). Islam does not recognize a patient's right to die but allows for non-treatment decisions such as withholding and withdrawal of treatment to be made by the patient's family and community (Sachedina 2005). Islamic law also condones the use of pain-reducing medication at the risk of shortening the life of a terminally ill patient (Sachedina 2005).

Views about euthanasia and PAS are further affected by national history. The term *euthanasia*, for example, evokes negative memories in many German-speaking countries where the term was used during the Nazi regime to refer to the systematic extermination of six million Jews and more than 200,000 mentally ill and physically disadvantaged people, as well as the Roma (Schildmann, Herrmann, Burchardi, et al. 2006) and other groups. Such historical experiences have prohibited public discussions of euthanasia in Germany (Schildmann, Herrmann, Burchardi, et al. 2006).

CONCLUSION

Given the advances in life-sustaining technology and medical treatments, the controversy surrounding end-of-life decision-making is likely to continue, at least in technologically advanced countries. Open discussion of PAS and euthanasia is complicated by a constantly evolving terminology and differing cultural, religious, and national ideals. People need to stay informed of current developments and research on these issues in order to be prepared to face the end-of-life dilemmas of the future.

SEE ALSO *Death and Dying; Morbidity and Mortality; Suicide*

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EVALUATION RESEARCH

SEE *Methods, Research (in Sociology).*

EVANS-PRITCHARD, E. E.

1902–1973

E. E. Evans-Pritchard was one of the world's leading social anthropologists from the 1940s to the 1960s, his work marking a transition from structural-functionalism to cultural interpretation and history. His theoretical statements on the aims of anthropology and his ethnographic writings on African societies were equally influential.

As an undergraduate, Evans-Pritchard studied history at Oxford University. For his postgraduate studies in anthropology, he moved to the London School of Economics (LSE) to work with the English ethnologist Charles G. Seligman (1873–1940). Another strong influence on Evans-Pritchard during his LSE years was the British anthropologist Bronislaw Malinowski, despite an intense mutual dislike between them. Evans-Pritchard received his Ph.D. in 1927 for a thesis on the Azande. Along with Raymond Firth, Isaac Schapera, Audrey Richards, Siegfried Frederick Nadel, and others, Evans-Pritchard was part of a group of students trained by Malinowski who came to occupy key positions in social anthropology from the mid-1940s to the 1970s. Evans-Pritchard did extensive ethnographic fieldwork among several African societies, most notably among the Azande and Nuer (both in the southern Sudan). He stayed in Africa during World War II to fight for Britain against Italian troops. He converted to Roman Catholicism in 1944, and his religiosity subtly colored his writings on belief systems. After World War II, Evans-Pritchard settled down as professor at Oxford University (1946–1970) where he attracted a large number of students from around the world. He was president of the Royal Anthropological Institute (1949–1951), co-founder of the Association of Social Anthropologists (ASA), and was knighted in 1971.

Evans-Pritchard was a prolific writer, with more than 400 publications to his credit. In *Witchcraft, Oracles and Magic among the Azande* (1937), he developed an ethnographic perspective on apparently irrational modes of thought. This work on the internal coherence of witchcraft beliefs fascinated philosophers such as Robin George Collingwood and Michael Polanyi, and remains one of anthropology's most acclaimed monographs. In *The Nuer* (1940), the first of several books on this cattle-farming society, Evans-Pritchard pioneered an approach to social ecology. His analysis of how the Nuer derive their modes of time-reckoning from kinship relations and economic activities is a classic reading in the anthropology of time. The edited volume *African Political Systems* (1940) develops a comparative perspective on African political traditions, with a view to facilitating British colonial governance. Evans-Pritchard often acknowledged Alfred Reginald Radcliffe-Brown as his main inspiration, but his BBC lectures on *Social Anthropology* (1951) make a noticeable shift from structural-functionalism to ethnohistorical interpretation. Placing anthropology among the humanities, he argued that "social anthropology is best regarded as an art and not as a natural science" (1951, p. 84) and that the "translation" of cultural concepts is at the core of the discipline. A fruitful combination of anthropology and history informs many of his works. In *The Sanusi of Cyrenaica* (1949), he retraced the history of this North African Sufi order from 1837 to 1942 and provided a grim assessment of Italian colonialism in the region. Later works, such as *The Azande: History and Political Institutions* (1971), further confirm his rejection of synchronic perspectives (typical of both structural-functionalism and structuralism) toward interpreting historical change.

Evans-Pritchard's early works were always widely acclaimed. His later turn to history and interpretation initially received hostile reactions, but laid the groundwork for many developments in anthropology since the 1980s. In the early twenty-first century Evans-Pritchard's status as a classic of social anthropology is undisputed.

SEE ALSO *Anthropology; Malinowski, Bronislaw*

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Stefan Ecks

EVENT STUDIES

In the social sciences, there are instances where it is necessary to statistically assess the impact of an event on the value of the firm. In this instance, event studies are a viable tool to quantitatively assess the effectiveness of an "announced event" on the stock returns of firms. The announced event is an unanticipated event, which may have political, economic, legal, or historical implications for select firms. The stock returns of the firm are often referred to as *shareholder wealth* or the *welfare of the firm*; and assuming efficient markets, the market reaction to an announced event will be immediately reflected in the security prices (or share returns) of the firm.

DESCRIPTION OF AN EVENT STUDY

To construct an event study, a specific event and the date of the announced event, called the *event date*, must be identified. The event date may be found in prominent media outlets such as the *New York Times*, *Wall Street Journal*, the Associated Press, or other media outlets. Thereafter, the event window must be constructed, which is typically the event date. The event window may be extended to include the day before and the day after the actual announcement, as some announcements may occur when the stock market has closed and/or the information was leaked the day before. Alternatively, an anticipatory window may be constructed that includes days before the actual announcement to account for potential leakages prior to the actual announcement.

After the event window is constructed, the stock returns of the firm must be collected to construct an estimation window, which represents the stock returns under "normal" conditions (no confounding events have occurred such as annual report announcements, restructuring announcements, etc.). The estimation window is typically before the event window, and therefore does not include days in the event window to avoid influencing the estimation of returns under normal conditions. A selection criterion must also be determined for the inclusion of firms in the event study such as industry membership and/or data availability. Further, any potential biases during the firm selection must be disclosed.

To determine the market reaction to a specific event, the abnormal returns are constructed, which determines, on average, if the firm observed above or below average returns in response to an announced event. Specifically, assuming efficient markets, abnormal returns represent the market's valuation of the change in the firm's current and future expected profitability due to an announced event.

APPLICATIONS OF EVENT STUDIES IN THE SOCIAL SCIENCES

There have been many applications of event studies in the social sciences. Event studies have been used to determine the impact of presidential elections on the stock market. Srinivas Nippani and Bobby Medlin examined the impact of the delay in the declaration of a winner in the 2000 U.S. presidential election on the performance of the stock market and found a negative reaction to the delay in election results. Nippani and Augustine Arize also found evidence that the delay in the U.S. election results impacted the stock markets in other countries like Mexico and Canada. Sara Ellison and Wallace Mullin analyzed President Bill Clinton's 1990s health care reform proposal on pharmaceutical stock prices and found that investors reacted negatively to health care reform, estimating that shareholder wealth fell by approximately 52 percent.

Event studies are also used to determine the impact of trade policy announcements on the value of the firm. John Hughes, Stefanie Lenway, and Judy Rayburn exam-

ined the stock price reactions for the semiconductor producers and downstream consumers (electronic and computer firms) affected by a subset of events starting with the filing of a Section 301 petition by the U.S. semiconductor industry alleging unfair practices by the Japanese and culminating in the 1986 Trade Agreement. Empirical evidence suggests that U.S. semiconductor producers and consumers benefited from the trade agreement. In previous trade studies, statistical results have shown that U.S. firms observed positive abnormal returns in response to the announcement of U.S. trade protection. Bruce Blonigen, Wesley Wilson, and Kasaundra Tomlin note that the studies of trade policy on the welfare of the firm ignore the possibility that foreign firms can use foreign direct investment to mitigate the positive gains to domestic producers, also known as "tariff-jumping." Using event study methodology, the statistical results suggest that affirmative U.S. antidumping decisions yield positive abnormal returns; moreover tariff-jumping in the form of new plants or plant expansions by foreign firms has a negative impact on the welfare of U.S. domestic firms that previously received trade protection.

Issues related to human resources and human rights have also been evaluated using event study methodology. Michelle Arthur and Alison Cook examined the share price reactions to 231 work-family human resource policies adopted by Fortune 500 companies, which were announced in the *Wall Street Journal* from 1971 to 1996. The results suggest that firm announcements of work-family initiatives positively affected the shareholder wealth of firms that implemented them. With respect to human rights issues, Judith Posnikoff analyzed the effects of announcing disinvestment or withdrawal of U.S. firms from South Africa during the 1980s on those firms' shareholder wealth and found a significant positive announcement effect.

STRENGTHS AND LIMITATIONS

Event studies are a valuable tool, in that across many disciplines in the social sciences one can assess the effects of new information on the shareholder wealth of specific firms; and in some cases perform industry-level analysis. There are some limitations in the methodology. For example, it is difficult to identify the exact date of a specific event. In addition, there are some estimation issues, which Craig MacKinlay discussed in a 1997 survey article on event studies that outlines the issues and remedies. In sum, assuming efficient markets, event study methodology is a valuable statistical tool to evaluate issues in the social sciences.

SEE ALSO *Efficient Market Hypothesis; Expectations, Rational; Information, Economics of; Random Samples; Speculation; Stock Exchanges; Stock Exchanges in Developing Countries*

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Kasaundra M. Tomlin

EVOLUTIONARY GAMES

The modeling of evolutionary games has established itself as an important theoretical tool in the social sciences. Evolutionary games have proven useful in deriving descriptively accurate models of human behavior in an economic context, and they have provided important insights regarding the origins of conventions and other social behavior. Indeed, it is a testament to the power of evolutionary games that they have been used productively not only in the social sciences but in biological and philosophical research as well.

The best way to understand the general idea of evolutionary games is by contrasting them with the rational choice methodology in game theory. In a rational choice model, one assumes that people are perfectly rational and self-interested, acting only to increase their own payoffs. These payoffs may be understood as financial rewards or any other positive outcomes.

Although rational choice models are powerful, and often appropriate, it is now known that humans often do not behave in a perfectly rational and self-interested manner. Instead, they often lack the cognitive sophistication

required to compute their optimal behavior, while at other times they are motivated by emotional or other "irrational" factors. In such cases, it often turns out that the correct explanation of a particular behavior is etiological—that is, the behavior is the result of short-sighted evolutionary processes or trial-and-error learning, rather than a deliberate rational calculation. Thus, in the context of discussing evolutionary games, the term "evolution" refers generally to any process by which a group of individuals change their behavior in a strategic context.

Accordingly, evolutionary games typically dispense with the assumption that people are rational. Instead, the typical evolutionary game-theoretic model assumes that the agents being examined are myopic, cognitively simple, and not motivated by any self-interest at all. In the most common type of evolutionary game, the agents are simply "hard-wired" to behave in a particular way. The model generates predictions by imposing a dynamic in which the most successful strategies are reproduced according to how successful they are.

The evolutionary game that is undoubtedly the most well known is Robert Axelrod's famous Prisoner's Dilemma tournament, in which people were invited to submit strategies for playing the Iterated Prisoner's Dilemma (1984). This is a game of tremendous importance in the social sciences because it is the simplest nontrivial model of situations in which there is a conflict between self-interested behavior and cooperation with another person. At the conclusion of the tournament, Axelrod considered what would happen in a population containing many copies of the submitted strategies if he introduced a dynamic in which the individuals in the population reproduced, with the most successful individuals having the most offspring, and where each offspring displayed the same behavior as their parent. There is now a large body of formal literature that has extended this idea, of which the best known is the "replicator dynamics" of Peter Taylor and Leo Jonker (1978).

In the replicator dynamics, one mathematically models the evolution of strategies by considering a population that is initially populated, in some arbitrary proportion, by at least two different strategies. In this model, it is assumed that any arbitrary pair of individuals is equally likely to interact. When they do, each will receive a payoff that is defined by the underlying game. Thus, if both the proportion of strategies in the population and the structure of the game are known, then the expected payoff that each strategy will receive in an interaction can be calculated. In the replicator dynamics, it is assumed that if a particular strategy has an expected payoff that is less than the average payoff in the population, the number of individuals using that strategy will gradually diminish. Conversely, if a particular strategy has a higher than average expected payoff, then the number of individuals using that strategy will gradually increase. This behavior is usually represented by a system of differential equations, which is solved to yield a description of the state of the population at any time in its evolution.

In the replicator dynamics, it is often the case that there is some proportion of strategies at which each strategy has the same expected payoff in the population. If this is the case, then the replicator-dynamics model implies that the representation of each strategy in the population will not change. Similarly, it is possible that one strategy will come to predominate in the population, while the other strategies gradually disappear.

Evolutionary games are most explanatory when such stable configurations of strategies exist. Typically, the explanatory strategy is to note that, unless there are powerful external influences on the population, one is most likely to observe a real-world population in a stable state, or approaching a stable state. In this way, an evolutionary model is capable of yielding specific predictions, without the use of the rationality assumptions of rational choice theory.

It is possible, of course, to derive different dynamical models that are best interpreted as models of learning processes, or that employ different assumptions. The best known of these is the "aspiration-imitation" model, which specifically represents the dynamic as a learning process that has various parameters that can be adjusted for the specific model.

Although the term *evolutionary game* is often used in a way that makes it synonymous with the replicator dynamics, it is more accurate to think of evolutionary game theory as a general framework that contains a large variety of different models. These models vary, not only in the specific parameters that define their behavior, but in more dramatic ways as well. The learning process, the cognitive sophistication of the agents, the size of the population, and the speed with which the population evolves are just some of the variables that may be taken into account in an evolutionary game (see Samuelson 1997 for an excellent survey). Evolutionary game theory is thus a flexible tool, and its study is rewarded by the large number of applications to which it can be put.

SEE ALSO *Dynamic Games; Game Theory; Noncooperative Games; Prisoner's Dilemma (Economics); Rationality; Replicator Dynamics*

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Zachary Ernst

EVOLUTIONARY PSYCHOLOGY

Evolutionary psychology proposes a set of evolved psychological mechanisms to account for much, if not all, human behavior. The research program is one among many in the social sciences that argues for the relevance of evolutionary biology in understanding human behavior. Evolutionary psychologists argue that explanations in psychology, and social science in general, are inadequate to the extent that they ignore human evolution. Evolutionary psychologists aim to unify psychology and other social sciences and improve their explanatory capabilities. Evolutionary psychology is related to human sociobiology but evolutionary psychologists present an important criticism of human sociobiology: sociobiologists ignore the psychological mechanisms that produce human behavior. To this extent, evolutionary psychology is seen as an advance over human sociobiology because it is consistent with cognitivism in psychology. Evolutionary psychologists share cognitive psychologists' view that humans' internal psychological mechanisms are contentful representational states, sometimes referring to these mechanisms as "Darwinian algorithms." Behavioral psychologists argue that humans have no content internal representational states, which is in stark contrast to the cognitive perspective.

Evolutionary psychologists' key contribution to the social sciences is the idea that the human mind consists of many separate psychological mechanisms, each of which was formed by natural selection. An analogy with organs illustrates this key insight: Many human organs are adaptations—direct descendents of organs that helped our ancestors survive and reproduce. Keeping with the analogy, these researchers point out that although all psychological mechanisms are adaptations, they need not all be currently adaptive, just as humans' appendices are adaptations but are not currently adaptive. Similar to human organs, the relevant adapted mental mechanisms are distinct and evolved independently of one another; they are modular.

A large number of experimental projects gave weight to evolutionary psychologists' theoretical claims. Psychologist David Buss's 1990 study of human mate selection found large numbers of cross-cultural commonalities in mate choices. These commonalities were attributed to various underlying psychological adaptations that drive human mate choices. Leda Cosmides's work during the 1980s in the psychology of reasoning presented a new way of dealing with a type of reasoning puzzle called Wason selection task results. Wason selection tasks are presented in the context of psychological experimentation on human reasoning. In the earliest of these, test subjects were presented with abstract tasks that could be solved correctly by use of deductive logic. Most subjects fail to deal with such tasks correctly and subsequent researchers introduced versions of the tasks with the same logical structure but presented in a context that subjects understood. These versions of the task produced a huge improvement in performance. Much of the psychology of reasoning has focused on explaining this performance difference. Cosmides proposed that performance goes up on Wason selection tasks when they are construed in terms of social exchange because humans are deploying an evolved psychological mechanism for social exchange to carry out the selection task.

Other experimental results reported by evolutionary psychologists include controversial work on rape and murder, as well as work on many aspects of reasoning, moral judgment, sexual attractiveness, parenting, taste, aggression, cooperation, and mental health. *The Handbook of Evolutionary Psychology* details the theoretical underpinnings of the field and introduces many of the key results from empirical work. This book develops and advances upon the program announced in an earlier work, *The Adapted Mind*.

Evolutionary psychology is an extremely productive research program. Evolutionary psychologists produce a large body of both academic and popular work. This work simultaneously advances a research program and provides responses to the various critics of the program. The first broad type of criticism is mounted by social scientists who view evolutionary psychology as a kind of biological determinism. Evolutionary psychologists reply that neither biological determinism nor cultural determinism is a viable explanatory strategy in the social sciences if pursued exclusively. Critics respond that the reductionist goals of evolutionary psychology imply that they are not as ecumenical as their response would indicate.

There are two other types of criticism of evolutionary psychology. One critique comes from researchers in other biologically based social sciences, such as evolutionary anthropology, who argue that evolutionary psychologists' presuppositions about human evolution are mistaken and that their hypotheses are not subjected to the testing procedure that analogous hypotheses undergo in evolutionary biology. This debate is about how to develop and test hypotheses about adaptation. Much of this discussion has centered on the issue of whether to test for adaptive behavior or to attempt to ascertain whether a certain

behavior is the result of a particular adaptation. Evolutionary anthropologists adopt their methodology from behavioral ecologists. This approach emphasizes producing models to test the extent that animal or human behavior is adaptive. Evolutionary psychologists argue that ascertaining whether or not a trait is currently adaptive for the animal or human is not the same as ascertaining whether the trait is an adaptation or whether the behavior results from an adaptation. Evolutionary anthropologists counter the hypotheses that the extent to which behavior is adaptive can be rigorously tested and is relevant with the question of whether or not behavior is an adaptation or results from an adaptation.

The other type of criticism comes from philosophers of science, who place almost every aspect of the research program under critical scrutiny. Such critics reject both the theoretical tenets of the program, such as the modularity assumption, and the viability of experimental results.

Many philosophers of science, including philosopher of biology David Buller, have argued that evolutionary psychologists are mistaken in claiming that human minds are massively modular. Such arguments are derived from work in biology and from alternate views about human mental architecture defended in the cognitive sciences and neurosciences. Philosophers also argue that evolutionary psychologists are committed to an untenable version of adaptationism. Buller's version of this latter criticism is developed along similar lines to the criticisms presented by evolutionary anthropologists. One idea here is that not all adaptationist hypotheses should be considered equal and only those that are susceptible to rigorous empirical test should be pursued. Philosophers present another version of this point arguing that evolutionary psychologists' version of adaptationism is not consistent with evolutionary biologists' adaptationism and is therefore suspect. It is important to emphasize that critics from evolutionary anthropology and philosophy of science share evolutionary psychologists' view that evolutionary biology is crucial in the overall project of understanding human behavior. The critics disagree with evolutionary psychologists about the way in which biology should be brought to bear in the study of human behavior.

There is broad agreement among some social scientists that much of human behavior will only satisfactorily be accounted for by using biological based explanatory models. Such agreement does not commit these researchers to the view that evolutionary psychologists have isolated the one correct way in which biology should be brought into social science. There is still a great deal of theoretical and experimental work to be done at the intersection of biology and the social sciences. This is an exciting growth area to which evolutionary psychology makes one prominent contribution.

SEE ALSO *Anthropology, Biological; Darwin, Charles; Natural Selection; Philosophy; Psychology; Social Science; Sociobiology*

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Stephen M. Downes

EXCESS DEMAND

Intuitively speaking, *excess demand* (ED) refers to a condition where, in a neoclassical framework without externalities, demand and supply do not match. In particular, there is ED when, in a certain market and for a given demand-and-supply curve, a certain price level p' generates insufficient domestic production to offset the corresponding domestic demand. Analytically speaking, excess demand can be considered from both a microeconomic and macroeconomic point of view. In microeconomics, ED can be analyzed in a partial or in a general equilibrium framework.

The easiest way to illustrate ED is to start from a partial equilibrium analysis. Let's assume that in a certain market the (inverse) demand-and-supply curves are represented by the following linear functions:

Demand (D): $p = a - bq$

Supply (S): $p = c + dq$

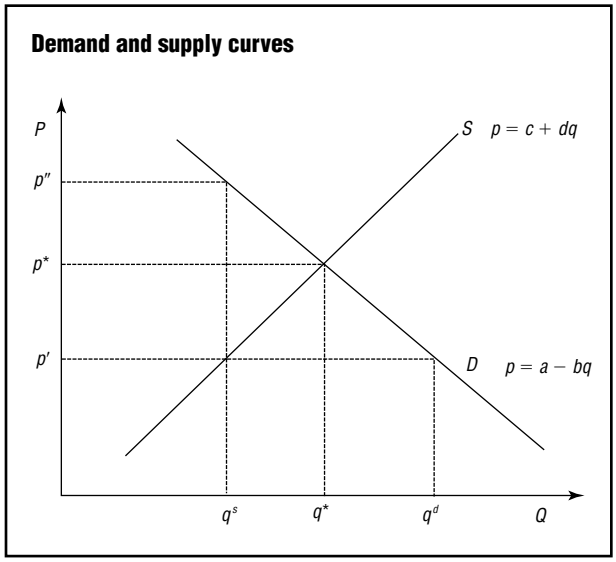

Figure 1

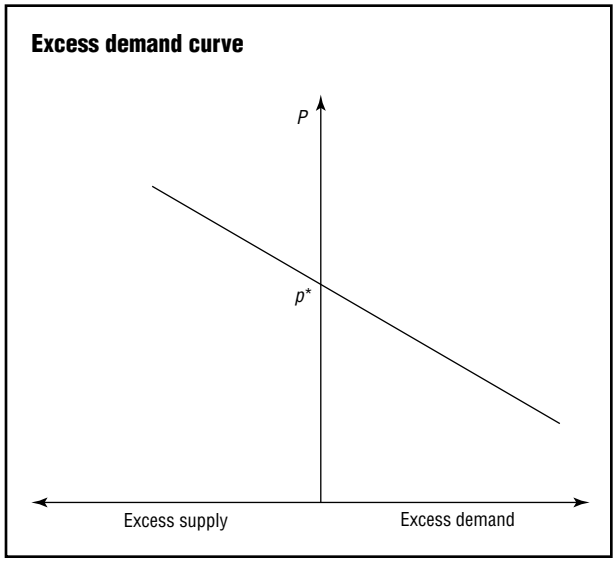

Figure 2

where p and q represent price and quantity respectively, and a, b, c, and d are real positive numbers. Clearly, the equilibrium occurs when the two schedules intersect. Therefore, we get:

$$\begin{cases} q^* = \dfrac{a-c}{b+d} \\ p^* = \dfrac{ad+bc}{b+d} \end{cases}$$

In practice, when the price level is exactly p^*, consumers demand the precise quantity that producers want to supply—that is, q^*. Hence, ED is zero.

Let's now suppose that for whatever reason the price is below its optimal value, that is, $p' < p^*$. When this happens, as seen in Figure 1, consumers demand q^d, but producers want to supply q^s only, with $q^s < q^d$. Consequently, ED may be defined as:

$$ED \equiv q^d - q^s = \frac{ad-bc}{b+d} + \frac{b-c}{bc}\,p'$$

Note that for a given value of a, b, c, and d, ED is increasing when p' is getting smaller, while, needless to say, when $p' \equiv p^*$, ED is zero.

In a closed competitive economy, ED is an unstable equilibrium. In fact, since consumers cannot buy the precise amount they desire at p', some of them are willing to offer a higher price. (Note that if producers supply q_s only, consumers might be willing to pay up to p'', with $p'' > p'$; see Figure 1.) However, when consumers start offering a higher price, producers have an incentive to increase their supply. In this way, the lack of balance is reduced; when the price is p^*, demand equals supply, and eventually ED becomes zero.

In terms of social welfare—that is, in terms of consumer and producer surplus—when there is ED, one cannot draw any definitive conclusions for the economy as a whole, or for consumers and producers. If international commerce is allowed, if the goods are tradable, if there are no trade barriers, and if the economy is small—that is, domestic demand for foreign production does not affect international prices—consumers could fill up ED with imports. In this case, consumers would gain, while producers would be worse off. However, the economy as a whole would be better off, because gains would overcome losses.

In a general equilibrium framework, ED in a single market would imply that there must be a symmetric excess supply in other market(s). The simplest way to demonstrate this is to use the Edgeworth box. Let's assume that in the economy there are only two goods, x and y, with p_x and p_y the price of x and y respectively. If the optimal consumption bundle—x^d and y^d—does not coincide with the production/endowment of the economy—x^s and y^s—then the value of the ED of x, $p_x(x^d - x^s)$, must be equal to the value of excess supply of y, $p_y(y^s - y^d)$, or vice versa.

Finally, in macroeconomics, ED indicates a condition where the aggregate demand (AD) exceeds the aggregate supply (AS). That is a condition that potentially stimulates both output and prices to rise. However, once full employment is reached, excess AD will only result in rising prices. In this case in fact, the increase of the price level P, implies that the real demand shifts back, and the economy returns to full employment equilibrium again.

SEE ALSO *Excess Supply; Welfare Analysis*

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Alberto Rigoni

EXCESS SUPPLY

In simple terms, *excess supply* means that there is a surplus of unsold goods in a market. Technically speaking, excess supply refers to a situation in which the quantity supplied of a good or service exceeds the quantity demanded for that good or service.

A graph may be helpful in understanding this concept. In the figure below, price (P) is plotted on the vertical axis and quantity (Q) is plotted on the horizontal axis. The curve labeled "supply" shows a positive relationship between the price and the quantity supplied. In other words, if the price goes up, firms are willing and able to produce more of the good. The curve labeled "demand" shows a negative or inverse relationship between price and the quantity demanded: If the price goes down, consumers are willing and able to buy more. The price labeled "P_e" equates the quantity supplied and the quantity demanded; there is no excess supply in this market. At the price labeled "P_f" the quantity supplied (Q_s) exceeds the quantity demanded (Q_d), and thus there is a surplus or excess supply in amount $Q_s - Q_d$.

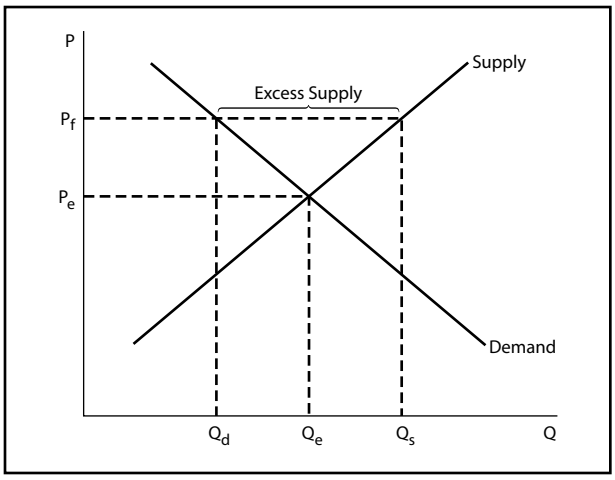

According to economic theory, if prices are sufficiently flexible, then excess supply should not persist in the long run. Faced with excess supply, firms will simply cut their prices in order to sell any unwanted inventory. However, government price controls can result in persistent excess supply. According to standard economic theory, a minimum wage may result in excess supply. If the minimum wage is set above the equilibrium wage (labeled "P_e" in the figure), the result is excess supply in the labor market or unemployment. If, however, the minimum wage is set below P_e, the minimum wage will have no effect on employment. To be effective, a minimum wage must be set above the equilibrium price.

Of course, governments can and do impose price controls in all sorts of markets. For example, governments often establish minimum prices for crops such as wheat, corn, and so on. To the extent that these price floors are effective, the result is excess supply, and governments find themselves storing large quantities of crops as a result. The European Union and the United States are often accused by developing countries of dumping the resulting surpluses on world markets, depressing the prices of such commodities and, as a result, lowering the incomes of farmers in developing countries.

Do minimum wages cause unemployment? In a seminal paper on the effect of the minimum wage, David Card and Alan B. Krueger (1994) use evidence from the fast-food industry and changes in the federal minimum wage in the United States to gauge the effect of the minimum wage on employment. In contrast to the predictions of the standard model that a minimum wage results in unemployment, they find no evidence that the minimum wages create unemployment. This paper has spawned a substantial literature attempting to replicate these results. Although the evidence is mixed, the general consensus appears to be that modest changes in the minimum wage do not appear to result in dramatic changes in employment, as perhaps economic theory may lead some to conclude.

SEE ALSO *Barro-Grossman Model; Excess Demand; Flexibility; Market Clearing; Minimum Wage; Price vs. Quantity Adjustment; Supply;* Tâtonnement

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Mark Rider

EXCHANGE, UNEQUAL

SEE *Unequal Exchange.*

EXCHANGE RATES

An *exchange rate* represents the price of a national currency valued as a foreign currency. The exchange rate plays a significant role in the economy. Because exchange rate fluctuations influence the whole economy, the exchange rate is a major economic factor for growth, stability, and economic development. In addition, the exchange rate directly influences the unemployment rate and the inflation level, and it is an indicator of external competitiveness (Madura 2003). The exchange rate also affects trade flows and investments, which in turn influence the balance of payments. Generally, the exchange rate is considered the most important price in the economy.

The exchange rate has direct practical importance to those engaged in foreign transactions, whether for trade or investment. It affects the price of imports when expressed in domestic currency, as well as the price of exports when converted into a foreign currency. The exchange rate therefore has a link to inflation. Consequently, the exchange rate is above all a monetary indicator and occupies a central position in monetary policy, where it may serve as a target or an instrument as well as simply an indicator.

The exchange rate system used by a country is called its *exchange rate regime.* Countries can choose which exchange rate regime to follow, depending on their goals. Countries may either fix or float their exchange rate, but there are a number of other exchange rate systems between these two extremes. There are four main types of exchange rate regimes: *freely floating, fixed, pegged* (also known as *adjustable peg, crawling peg, basket peg,* or *target zone* or *bands*), and *managed float.* Within these four systems there are modified or intermediate regimes, such as *currency board, dollarization,* and *monetary union* regimes. The following entry analyzes each type of exchange rate regime, highlighting advantages and disadvantages.

FREELY FLOATING EXCHANGE RATE

A freely (clean) floating (or flexible) exchange rate regime, where the monetary authorities refuse any intervention in the exchange rate market, is the simplest type of system. The rate is then freely determined by market forces and can fluctuate by any amount at any moment. More precisely, a *pure float* is an exchange rate that is determined in the market without any intervention. Flexible exchange rates are determined daily in the markets for foreign exchange by the forces of demand and supply, without restrictions imposed by governmental policy on the extent to which rates can change. Supporters of free floating argue that the foreign exchange market is a highly transparent and efficient market because market forces are left unimpeded. Monetary policy is set autonomously, as deemed appropriate in the domestic context, and the exchange rate is allowed to follow whatever path transpires, consistent with monetary policy.

The advantages of a freely floating exchange rate regime are: (1) markets efficiently allocate resources (including financial capital) since there are no capital flow restrictions; (2) changes in the nominal exchange rate carry the bulk of adjustments to foreign and domestic shocks; (3) there are no opportunities for speculators to profit at the expense of the country's central bank; (4) demand and supply for domestic currency will be balanced in the market; (5) there is no obligation on the part of the central bank to intervene; and (6) the requirement for a country to hold large reserves is eliminated. Moreover, the monetary authority sets monetary policy, but it has no exchange rate policy since the exchange rate is determined by market forces. Thus, the monetary base is determined and in the control of the monetary authority of the country in question. This implies another advantage, which is that no conflicts can arise between monetary policy and the exchange rate; thus, a crisis in the balance of payments cannot occur because market forces automatically rebalance financial flows and avert balance-of-payment crises. In the absence of balance-of-payment reasons for interfering in international trade and payments, and given the autonomy of domestic policy, another benefit of a freely floating exchange rate regime is the exploitation of the economies of international specialization and labor.

Following a freely floating exchange rate system also brings disadvantages. High nominal and real exchange rate volatility may distort resource allocation, as many resources will be devoted to hedging the exposure of exchange rate fluctuations. Furthermore, the future path of the exchange rate will be uncertain, which may create difficulties for businesses in planning and pricing, and the freedom to operate an independent domestic monetary policy may be abused when, for instance, the government, not being compelled to prevent exchange rate depreciation, may be tempted into inflationary budgetary and monetary policies. In addition, there is a chance of overshooting, which will result in the exchange rate settling at a level not warranted by the country's financial position, perhaps for a considerable period (Aziz and Caramazza 1998; Kenen 2000).

FIXED EXCHANGE RATE

In a fixed exchange rate regime, exchange rates are held constant or allowed to fluctuate within very narrow boundaries, perhaps 1 percent above or below the initial set of rates. When a country chooses to fix its exchange rate, local currency is assigned a par value in terms of gold, another currency, or a basket of currencies. When the exchange rate begins to move too much, the government intervenes with the devaluation or revaluation of its own currency against other currencies in order to maintain the exchange rate within the specified boundaries. In this case, the monetary authority has to defend the fixed parity: Such government intervention can be direct or indirect. Direct intervention requires a change in international reserves. Indirect intervention, in contrast, is affected by influencing the factors that determine exchange rates through increasing or decreasing interest rates or other economic indicators (income, inflation, etc.), a move that does not involve a change in reserves. There are two types of direct intervention. *Sterilized direct intervention* occurs when the central bank intervenes in the foreign exchange market while making adjustments to avoid a change in money supply; in other words, the central bank transacts simultaneously in foreign exchange markets and treasury securities markets. In *nonsterilized direct intervention*, the central bank changes the money supply by selling or buying foreign reserves in the foreign exchange markets.

Examples of fixed exchange regimes include the systems established by the Bretton Woods Agreement from 1944 to 1971 and the Euro zone between 1999 and 2002. Fixed but adjustable exchange rate regimes are similar, with the difference that they allow more fluctuation in the exchange rate. In such a regime, the exchange rate is fixed for extended periods or within very narrow margins, but adjustable if there is disequilibrium.

The advantages of a fixed exchange rate regime include: (1) the fixed exchange provides a stable basis for planning and pricing, and helps to increase investment and international trade; (2) it imposes discipline for monetary policy, restraining inflation; (3) it restrains competitive devaluation of the domestic currency, thus contributing to the stability of the world trade system; and (4) it reduces the risk of price fluctuations and lowers the risk premiums imposed on interest rates. The disadvantages of such a regime include the following: (1) governments cannot definitely determine if the chosen fixed exchange rate is optimal or sustainable; (2) a fixed exchange rate regime could be vulnerable to speculative attacks that may damage the monetary stability of the economy or the exchange rate reserves; (3) maintaining a fixed nominal exchange rate carries the risk of an excessive appreciation of the real exchange rate, which results in a loss of competitiveness and, ultimately, to a speculative run on an overvalued currency; (4) economies suffering from real shocks and having adopted a fixed exchange rate face the risk of a further deepening of the downturn; and (5) a fixed exchange rate regime requires the monetary authority to hold more foreign exchange reserves than other exchange rate regimes (Aziz and Caramazza 1998; Kenen 2000).

PEGGED EXCHANGE RATE

Countries operating under a pegged exchange rate regime "peg" their currency's value to a foreign currency or some unit of account (e.g., gold, the European currency unit, etc.). Hence, while bilateral parity is maintained, the home currency's value fluctuates against other currencies in line with the anchor country's currency (Madura 2003, p. 174). There are a variety of different types of pegged regimes defined by Jeffrey Frankel (1999) as intermediate arrangements or "soft pegs." These include the adjustable peg, crawling peg, basket peg, and target zone or bands. Under adjustable peg systems, the bands are narrow (up to ± 2.25%) and the target rate is adjusted less frequently and by large amounts. Under a crawling peg, the bands are wider and the peg is regularly reset, sometimes weekly, in a series of minidevaluations. Under a basket peg arrangement, the exchange rate is fixed to a weighted basket of currencies that usually reflects the country's major trade partners. The target zone or band involves setting wide prescribed margins (bands) within which the government intervenes to maintain the exchange rate. Under this type of regime, a country or a group of countries hold their currencies within a predetermined range, and government intervention occurs only when the exchange rate exceeds this range. In this system, market forces determine the exchange rate. If the exchange rate moves above or below the predetermined limits, the government will intervene to move the price of the currency back within the tolerable zone. If the range is sufficiently narrow, the target zone approaches a fixed rate; if it is sufficiently wide, it approaches a freely floating regime.

Some countries favor a pegged exchange rate because it enhances the credibility of the government's commitment to low inflation. There is a tradeoff between credibility and flexibility. Other advantages of a pegged exchange rate system are: (1) the country can mitigate pressures for domestic price fluctuations and indicate a signal of responsible monetary policy; (2) the country can reduce inflationary expectations and (3) stabilize the prices of imports and exports; (4) the government can devaluate its home currency in response to large shocks; and (5) inflation is limited because such an exchange rate regime limits the government's ability to issue money when there are no foreign exchange reserves. The disadvantages of a pegged exchange rate are: (1) when a nation links its monetary policy to some other nation, monetary

policy and fluctuations in that other nation will create fluctuations in the home nation's monetary condition; (2) the country's central bank loses its monetary independence; (3) a peg system may lead to persistent misalignments if inflation is higher compared to the pegged country, causing a situation in which the home currency could be overvalued and uncompetitive; (4) in order for this policy to be credible, additional institutional measures are required; (5) pegged systems are often targets for speculative attacks; (6) such a regime is not sustainable in small countries with huge capital flows leading to a balance-of-payment crisis; and (7) a pegged system is unlikely to be sustainable when there is full capital mobility.

MANAGED FLOAT EXCHANGE RATE

In a managed float (or dirty float) exchange rate regime, the monetary authority influences the movements of the exchange rate through active intervention in the foreign market without specifying, or recommitting to, a preannounced path for the exchange rate. Although market conditions determine the exchange rate, this type of exchange rate regime also involves certain less-specified central bank interventions with various objectives. A managed float exchange rate regime belongs with the so-called intermediate methods because it stands between the extremes of perfectly flexible and fixed regimes. It resembles the freely floating exchange rate in the sense that exchange rates can fluctuate on a daily basis and official boundaries do not exist. The difference is that the government can intervene in order to prevent the currency rate from fluctuating too much in a certain direction. Under a managed float, the goal of intervention is to prevent sharp fluctuations in the short run, but intervention does not target any particular rate over the long run. Generally, the central bank intervenes only to smooth fluctuations. Some governments impose bands within which the exchange rate can fluctuate, which is one of the reasons for calling this approach "dirty."

Unlike the free float approach, the dirty float protects investors against rapid exchange rate fluctuations. It also provides a more stable investment environment, protects the country from the risk of large exchange rate movements, and mixes market-determined exchange rates with a non-rule-based stabilizing intervention by the central bank, which helps avoid potential crises. The dirty float approach has disadvantages in that the government may manipulate the exchange rate for the benefit of its own country at the expense of another currency merely because this exchange rate regime does not offer transparency. In addition, the dirty float system requires cooperation between exchange rate policy and monetary policy that may lead to conflict; the country's central bank often cannot determine whether a movement in the rate is short term or long term, thus whether an intervention is warranted; there are no definite rules giving credibility to the monetary authorities to intervene; and such a system may not place constraints on monetary and fiscal policy, resulting in a clash with the exchange rate policy.

OTHER EXCHANGE RATE SYSTEMS

The *currency board* is a type of fixed regime, but it is more restrictive and also includes a requirement for minimum domestic reserves in foreign currency and a monetary institution that issues notes and coins fully backed by a foreign reserve currency and convertible into the reserve currency at a fixed exchange rate. This institution cannot act as a lender of last resort, does not regulate reserve requirements for commercial banks, only earns seignorage from interest on reserves, and does not engage in forward exchange operations (Hanke 1999, p. 341). The advantage of a currency board system is that it reduces the real exchange rate volatility. There are drawbacks, however, in the country's loss of an independent monetary policy, and such a system is often a target of speculative attacks and requires very high reserves of foreign currency (Bell 2001).

A country with a *dollarization* regime replaces its own currency with another foreign currency, usually the U.S. dollar. Such an approach may reduce exchange rate volatility, but it poses the drawback that the home monetary policy is dependent on a foreign country's policy. This approach amounts to a complete replacement of a local currency with a foreign one, which is a step beyond a currency board. Dollarization, a type of unified currency regime, is no guarantee for growth but can provide macroeconomic stability.

Monetary union or a *currency union* occurs when a group of countries use a common currency issued by a common central bank, as do the twelve European countries in the Euro zone. This type of system reduces real exchange rate volatility, but the member countries lose the stabilization tool of an independent monetary policy. Jeffrey Frankel and Andrew Rose (2002, p. 11), analyzing data for more than two hundred countries, determined that by belonging to a currency union a country triples its trade with other union members. Furthermore, the results suggest that for every percentage of increase in a country's trade relative to its gross domestic product, membership in a currency union raises income per capita by at least 0.33 percent.

In conclusion, different types of exchange rate regimes have various advantages and disadvantages. Governments must determine which system is the most appropriate for a particular country and for the specified time period. No one system exploits all the advantages without any disadvantages, and no system can be applica-

ble for all countries, which have different goals and political structures in different periods (Frankel 1999).

SEE ALSO *Banking Industry; Currency; Currency Appreciation and Depreciation; Currency Devaluation and Revaluation; Dirty Float; Money; Mundell-Fleming Model; Policy, Monetary; Purchasing Power Parity; Trade*

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EXCHANGE VALUE

Exchange value refers to "the power of purchasing other goods which the possession of [an] object conveys" (Smith [1776] 1960, p. 32); in other words, it expresses the relative price of a good in terms of other goods. Although the concept of exchange value has always played an important role in economic thought, the analysis of how it is determined has been the subject of much controversy.

For Adam Smith, David Ricardo, and Karl Marx it was important to distinguish *exchange value* from *use value*. Use value was the utility or the value in the use of a commodity, and was seen as necessary but not sufficient for a commodity to have exchange value. This is illustrated by the paradox of value, whereby things that had the greatest use value, such as air and water, had the lowest exchange value compared to (for example) diamonds, which had a low use value but high exchange value.

According to David Ricardo, commodities derive their exchange value from two sources. First, "from their scarcity," where commodities cannot be reproduced (e.g., rare paintings, coins, pictures, etc.). These commodities are, by their very nature, a very minor part of what is exchanged in any economy. Second, the majority of commodities are produced by "the exertion of human industry: and these commodities have their exchangeable value determined by the quantity of labour embodied in their production" (Ricardo [1817] 1951, p. 12). This labor theory of value, which was present in a more ambiguous form in Adam Smith's writings, played an important role in the works of both Ricardo and Karl Marx. The relationship between labor values and prices has been a source of much controversy.

In discussing these three economists, it is also important to distinguish between values that are determined in this way, that is, natural values or prices and market prices. Market prices may diverge from their natural values owing to "accidental" or "temporary deviations" (Ricardo [1817] 1951, p. 89). However, competition in the form of capital seeking the most profitable activity will ensure that the deviation is temporary and will establish a long-run tendency toward uniform profit rates through the economy. "The natural price, therefore, is, as it were, the central price, to which the prices of all commodities are continually gravitating" (Smith [1776] 1960, p. 65).

It is important to note that the factors that determine the natural price are different from the factors that bring market price toward natural prices. This is important because it means that the natural prices will not be influenced by the path taken by market prices as they adjust to their natural levels (Kriesler 2003).

For Marx, the essence of a commodity is that it is produced for its exchange value; in other words, it is produced specifically in order to be sold. It is the generalization of commodity production into all spheres of society that he saw as one of the important results of capitalism. According to Marx, exchange value reflects the underlying social relations and "is in reality only an outward form of the *social* relation between the … producers themselves" (Sweezy 1968, p. 27, emphasis in original). So the market expression of exchange values reflected deeper social relations. This view should be compared with that of John Stuart Mill, for whom exchange value did not arise "from the nature of things," but was "created by social arrangements" (Mill [1848] 1994, p. 54).

From the 1870s a new version of economics, sometimes referred to as "neoclassical theory," came into favor,

and has since become the dominant orthodoxy. The essence of this new theory was a subjective theory of value, where exchange value is determined by utility at the margin. In neoclassical economics, the distinction between use value and exchange value is abolished, as exchange value is now determined by use value at the margins, and the distinction between market and natural prices also disappears. In place of the latter is a distinction between short-run and long-run price determination, with both involving the determination of equilibrium values by the same forces—supply and demand. However, as the forces of supply and demand both determine the equilibrium position of prices in the short and long runs, and push the economy to those equilibria if it deviates, the problem of path determinacy arises. As a result, equilibrium exchange values cannot be determined, in neoclassical theory, independent of the adjustment path of the economy.

SEE ALSO *Economics, Classical; Economics, Neoclassical; Equilibrium in Economics; Labor Theory of Value; Marx, Karl; Prices; Ricardo, David; Scarcity; Smith, Adam; Utility Function; Value*

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Peter Kriesler

EXCHANGE VALUE COMMODITY

SEE *Exchange Value.*

EXCHANGEABILITY

In constructing statistical models, social scientists are nearly universally required to incorporate residual terms to capture those aspects of a phenomenon that the model under analysis cannot explain. Linear models are a leading case, where a dependent variable y_i is assumed to be explained by a vector of observables x_i as well as an unobservable residual ϵ_i via the equation $y_i = x_i\beta + \epsilon_i$, $i = 1, \ldots, I$. Estimation and inference concerning the model parameters comprised by the vector β, in turn, requires a researcher to make assumptions about ϵ_i. Examples of assumptions include independence of the residuals across I, and homoskedasticity (constant variance) of the residuals. Such assumptions are employed because they allow one to construct precise inferential statements such as asymptotic distributions under a null hypothesis, but not because they correspond to any substantive social-scientific ideas.

From the social-scientific perspective, one way to think about what it means to specify a model is to place enough structure on the variable of interest, say y_i, so that, from the perspective of the modeler, the residuals are indistinguishable. In other words, a modeler should have no reason to believe that the probability description of ϵ_i differs from that of ϵ_j. If the modeler does believe that these residuals differ, then it would seem that the model needs to be reassessed to see whether these differences call into question the purpose of the model.

To understand the import of this claim, suppose that one is attempting to explain the differences in economic growth between Japan and the United States since World War II and is using a model that does not account for differences in the savings rates between the two countries. For the researcher using the model to find it interpretable as reflecting a causal relation, he presumably must believe that Japan's much higher average rate of saving versus the United States has no bearing on the residuals associated with the two countries. If he believes that this difference in savings rates induces a difference in the probability descriptions of the two residuals, then he needs to determine how the model may be interpreted in this light.

Exchangeability is a mathematical formalization of the idea that random variables are, from the perspective of their probability description, indistinguishable. A sequence of I random variables ϵ_i is exchangeable if $\mu(\epsilon_1, \ldots, \epsilon_I) = \mu(\epsilon_{\rho(1)}, \ldots, \epsilon_{\rho(I)})$, where $\rho()$ is an operator that permutes the I indices. Note that I may be infinite. The concept of exchangeability originated in the writings of the Italian probabilist Bruno DeFinetti (see DeFinetti 1972 for a wide-ranging statement of his views in English).

Infinite exchangeable sequences have the important property that they may be interpreted as independent and identically distributed (i.i.d.) sequences. This is known as DeFinetti's theorem. Formally, the theorem says that the probability measure describing any infinite exchangeable

sequence can be written as a mixture of i.i.d. probability measures. Each sample path realization will obey one of the probability measures, so each sample path will behave as an i.i.d. sequence. DeFinetti's theorem thus provides a basis for the i.i.d. assumption: the interchangeability of errors. A proof of DeFinetti's theorem along with many related results may be found in Olav Kallenberg's work *Probabilistic Symmetries and Invariance Principles* (2005). DeFinetti's theorem does not apply to finite exchangeable sequences.

To be clear, exchangeability is not necessary for a statistical model to be interpretable as a behavioral structure. Heteroskedastic regression errors (regression errors of varying variance) violate exchangeability, but do not affect the interpretability of a regression per se. Rather, exchangeability represents a criterion by which a researcher can evaluate his modeling choices. If a researcher believes that the errors in his model are not exchangeable, then good empirical practice requires that he consider whether the violations invalidate the substantive claims for which the model will be used. This inevitably requires judgment, but judgments are part of any substantive empirical exercise. Draper et al. (1993) place judgments of exchangeability at the heart of empirical analysis and discuss how data may be used to assess these judgments. Brock and Durlauf (2001) place exchangeability judgments at the center of a general critique of empirical research on growth. This emphasis on judgment helps explain why exchangeability notions are more common in Bayesian contexts than in frequentist contexts; exchangeability captures the notion of what is meant by a researcher's subjective beliefs that a sequence is a random sample from a population (see Lindley and Novick 1981 for elaboration and links to DeFinetti's original thinking).

Exchangeability has recently been shown to have important uses in econometric theory. Donald Andrews (2005) developed a theory for asymptotic inference in cross-sections that addresses the long-standing problem of cross-sectional residual correlations. Unlike the time-series case, a cross-sectional index does not provide a natural ordering across random terms, so there is no reason to think that dependence across residuals diminishes as the difference between their respective indices grows. Andrews shows that if this dependence is generated by a set of common shocks so that, conditional on the shocks, the errors are independent, one can develop a range of asymptotic results. This independence is motivated in turn by exchangeability arguments. This mode of analysis suggests that exchangeability may play an increasingly prominent role in econometric theory.

SEE ALSO *Bayes' Theorem; Bayesian Econometrics; Probability Theory*

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William A. Brock
Steven N. Durlauf

EXCLUSION, SOCIAL

SEE *Social Exclusion.*

EXCLUSION ACTS

SEE *Immigrants, Asian.*

EXHILARATION

SEE *Stagnation.*

EXISTENTIALISM

"Existentialism" refers to a loosely knit movement holding, in the words of Jean-Paul Sartre, that "existence comes before essence." This proposition should be understood in opposition to both rationalism and empiricism. Both philosophies, existentialism argues, overlook the unique character of being human, of being an "existent" thrown into a world without pregiven meaning or significance. Moreover, the human condition is such that it does not fit into even the most exhaustive system of objective concepts. Instead, it calls for a new language of analysis that finds its expression in the works of not only Sartre but also Simone de Beauvoir, Albert Camus, Maurice Merleau-Ponty, Jean Wahl, Karl Jaspers, Martin Buber, Gabriel Marcel, Miguel de Unamuno, José Ortega y Gasset, Nicholai Berdyaev, and Lev Shestov.

These thinkers—some of whom rejected the label "existentialist"—found inspiration in the philosophies of a long list of forerunners. The most important ones are Søren Kierkegaard's anti-Hegelian philosophy and Martin Heidegger's phenomenological ontology. Common to both philosophies is the idea that being human is an "issue" for itself, that is, that the specter of death (finitude) makes it all-important how we interpret the primal nature of our own being—what Heidegger refers to as *Dasein*. The condition of *Dasein* is an ecstatic and angst-inducing one. To begin with, it discloses the historicity of our beliefs and habits, which in turn points to the openness of Being itself. But it also reveals the absence of a shared anchor—an infinite void or fundamental nothingness—challenging philosophy's pretense to know the nature of our moral obligations and political responsibilities. Kierkegaard enacts the fear that follows from this challenge through an analysis of cases such as Abraham's sacrifice of his son, a case in which God's commandment is comprehensible, not as a universal law pertaining to all, but as an injunction addressed to Abraham in his singularity.

The tension between the ecstatic and the fearful is important to the way in which existentialism approaches its main themes: intentionality, intersubjectivity, meaning, and human freedom. One line of research—associated with theologians such as Karl Barth and Paul Tillich—interprets these themes from a theistic perspective according to which the affirmation of God, although itself an act of madness, is the proper answer to the meaninglessness of contemporary existence. Another line—perhaps better known—entails a turn to atheistic humanism. Sartre dramatizes this turn in his 1944 play *Huis Clos* (No Exit). At issue in this play is the way in which individuals take responsibility for their own lives. The play revolves around three strangers who confront the singularity of their deaths in a room that has no significance, no signs of some higher Being. The result is not only a sense of absurdity—one that reveals the inauthenticity of everyday life (whether lived in a bourgeoisie manner or not)—but also a need for turning this absurdity into a cause for engaging one's own life head on. We must transcend the contingency of our surroundings in order to become authentic beings. As Inez, one of the three main characters in the play, says, "You are—your life, and nothing else."

Although significant, it is important not to overstate the differences between the atheistic and theistic brands of existentialism. Both brands criticize the church's appropriation of God; and both brands emphasize living an authentic existence through an encounter with a transcendent of some sort. The political implications that impinge on existentialism's analysis of the human condition, then, are first and foremost related to the concepts of freedom and free will. Humans are free in the sense that (1) neither God nor any value or command binds their choices, (2) their concept of selfhood hinges on the intentional activity directed toward things in the world, and (3) reality proper is what follows from this kind of activity. While this may give the impression that existentialism is committed to an individualistic ideology, it is important not to mistake the affirmation of freedom (and free will) for a lack of interest in criticizing the liberal state. Because humans are free, and because they constitute reality through their own undertakings, they must also take active responsibility for society as a whole. The existentialist movement translates this responsibility into an often Marxist-inspired critique of male domination, technology, and capitalism.

SEE ALSO *Empiricism; Epistemology; Essentialism; Freedom; Phenomenology; Philosophy; Sartre, Jean-Paul; Supreme Being*

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Lars Tønder

EXIT, VOICE, AND LOYALTY

To extend the analysis of his fellow economists beyond their traditional focus on simple market exchanges, Albert O. Hirschman wrote *Exit, Voice, and Loyalty* (1970), a seminal work that examines how several different kinds of human behavior might be invoked when consumers confront a decline in firms, organizations, and states.

EVL MODEL

In Hirschman's exit, voice, and loyalty (EVL) model, consumers dissatisfied with a product in the marketplace, for example, might complain to the producer about declining quality (voice) or patiently wait for the product to improve (loyalty) instead of purchasing a rival good or service (exit). In politics, voters dissatisfied with their party's policies may vote for another (exit), work in party

caucuses to change those policies (voice), or hope that the party platform will be revised (loyalty). And in an abusive interpersonal situation, one can leave (exit), complain (voice), or avoid confrontation in the hope that the storm will pass (loyalty). Indeed, Hirschman's analysis of the interrelations among various behaviors an individual might engage in when confronting declining quality in one's personal, political, economic, and social relationships was significant to all of the social sciences precisely because of its comprehensiveness.

If very different types of behaviors can effectively substitute for each other, one cannot study each independently without missing something vital. Voice behaviors like consumer complaints or writing letters to the city council, for example, cannot be understood without accounting for opportunities to exit through purchasing a substitute product or moving to another city. Hirschman further demonstrated that opportunities to exercise one type of behavior often influence—in sometimes very surprising ways—the effectiveness of other behaviors. The threat of exit, for example, may encourage declining firms, organizations, and states to be more or less attentive to voice depending on who is exiting, when the exiting occurs, and how it bears on the interests of those making decisions about their goods, services, or policies.

WEAKNESSES

Despite its sweeping and immediately recognized import, Hirschman's analysis is nonetheless incomplete. First, the EVL model does not give equal attention to the three types of behaviors; loyalty only makes an appearance two-thirds of the way through the analysis. In addition, loyalty is discussed almost exclusively as a brake on the exercise of exit and voice rather than as an independent mode of response to dissatisfaction. Second, exit, voice, and loyalty fail to encompass all of the possible behaviors that one might observe when consumers, voters, or family members confront a decline in the quality of their relationships. They may well do nothing. Indeed, Hirschman discussed how consumers might neither exit nor engage in voice behaviors when institutions do not provide producers with incentives to respond to consumer demand. However, he essentially treated such situations as pathologies rather than incorporating them into the model in a systematic manner, recognizing thereby that not responding to decline is potentially as interesting as exit, voice, or loyalty. Third, Hirschman did not develop a general model that communicated how consumers, voters, employees, or family members select among exit, voice, or loyalty behaviors.

CONTEMPORARY SCHOLARSHIP

In the early 1980s scholars addressed these weaknesses in extensions of Hirschman's EVL model. First, in their 1983 analysis, Caryl Rusbult and I. M. Zembrodt recast Hirschman's threefold typology as a two-dimensional space. The first distinguishes active and passive responses to dissatisfaction while the second distinguishes constructive and destructive responses. Thus, voice includes all active responses to dissatisfaction that are constructive with respect to the relationship giving rise to that dissatisfaction. In contrast, exit behaviors, while also active, are destructive to the relationship. Loyalty behaviors are passive, constructive responses to dissatisfaction. A fourth type of response not addressed by Hirschman except as pathological behavior is neglect; that is, passively responding to dissatisfaction by allowing the relationship to further deteriorate. In another significant extension of Hirschman's analysis, in 1981 Daniel Farrell and Rusbult developed a parsimonious, three-variable model explaining how individuals select among the responses to dissatisfaction. When one has many alternatives to a current job, a product or service, or a romantic partner, one is more likely to respond to dissatisfaction in an active manner through voice or exit rather than through the passive behaviors associated with loyalty or neglect. But when one is highly invested in and/or has had a high level of prior satisfaction with the relationship, one will more likely respond to dissatisfaction with constructive voice or loyalty behaviors and suppress negative behaviors characteristic of exit and neglect responses.

A number of social scientists continue to employ Hirschman's original threefold typology. By the mid-1980s, however, many others were employing its descendent, the exit, voice, loyalty, and neglect (EVLN) model. This extension of the original highlighted two dimensions defining four distinct responses to dissatisfaction, including the previously neglected category of neglect. Selection among the four responses was further hypothesized to be function of alternatives, prior satisfaction, and investments. The EVLN model was strongly supported in empirical work on private and public sector employment behaviors, romantic relationships, and political behavior in metropolitan settings. All of these studies examine a wide range of responses to dissatisfaction within a common theoretical framework linking what had been previously understood as disparate and distinct behaviors.

There have been fewer applications of either the original version of Hirschman's model or its EVLN extension in studies of traditional market economics, which was the main focus of *Exit, Voice, and Loyalty*. To some extent, this reflects some long recognized normative biases in the disciplines. In the same way that some political scientists might regard exiting a political jurisdiction as illegitimate to the point of constituting treason, some economists view voice, loyalty, or neglect as a failure on the part of consumers to exercise due diligence or as evidence of imprudence. But perhaps a more telling explanation, and

one applicable to all social sciences, is that simultaneously accounting for exit, voice, loyalty, and neglect behaviors is very hard to do.

SEE ALSO *Economics; Political Science; Sociology*

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David Lowery

EXIT POLL

Exit polls are surveys based upon voter interviews immediately after they have finished voting. The exit polls play a significant part in media projecting election winners and their margin of victory. The polls are used mainly in major elections, usually concerning national or state candidates. Exit polls are part of the pervasive status of surveys and polls in American and other societies. Exit polls have been used in elections throughout the world, such as in 2005 in the Belarus and Ukraine and 2006 in Mexico. Media organizations purposely utilize exit polls to understand voters' choices and explain issue, partisan, and demographic differences in electoral outcomes. This information serves as a means of validating elections.

Exit polls are highly accurate because they remove main elements of potential survey research error problems by accounting for who actually votes and avoiding undecided voters. Problems for exit polls include a sample estimate of voter turnout, which may be incorrect for one or more candidates. Further, these polls do not consider absentee voting and other forms of early voting that do not require individuals to be at a polling place.

HOW CONDUCTED

An exit poll is conducted by selecting sample precincts in a state or other electoral area based upon historical voting data to judge outcomes of voting data. In each of the selected precincts, an interviewer requests a voluntary interview from a systematically selected voter; for example, every third or every tenth voter. Each voter completes a thirty- to forty-item questionnaire, which is placed in a box.

In each election cycle new questions are developed. The information is collected, tabulated, and transmitted to a central facility that tabulates a state or other electoral area total. In the 2004 U.S. presidential election nearly 150,000 people in nearly 1,500 precincts were interviewed in every state except Oregon. In 2004 the National Election Pool (NEP) also conducted a national sample of polling places to supplement exit poll data.

Prior to the 1990 U.S. midterm elections, each major network—ABC, CBS, NBC, CNN, and the Associated Press—conducted separate exit polls. For financial reasons, they created a consortium (also joined by Fox News) to conduct a single national exit poll, called News Election Service, and later called Voter News Service. After problems encountered with the 2000 presidential election, the 2004 presidential election exit poll was conducted through NEP by Edison Media Research/Mitofsky International. Exit polling results are delivered in three different times during election day, including mid-afternoon on that day. Multiple national exit polls can have different results based upon different sampling frames and different polling places. In other nations, major media organizations sponsor similar survey organizations to conduct exit polls. Media networks use exit poll data and actual vote returns from some exit poll sample precincts to project electoral victors. To project the outcome, exit poll findings must exceed the margin of sampling error in the sample design, generally plus or minus 4 percent at a 95 percent confidence level for state polls, and plus or minus 3 percent at the same confidence level for the national exit poll. Data within the sample design parameters is "too close to call."

PROBLEMS WITH U.S. PRESIDENTIAL ELECTIONS

High profile exit polls in U.S. presidential elections have encountered difficulties in analysis and reporting of information, especially in the 1980, 2000, and 2004 elections.

In 1980 television networks correctly predicted Ronald Reagan's victory over President Jimmy Carter prior to many election polls remaining open in the midwestern, mountain, and western states. Individuals argued that this projection diminished those individual's willingness to vote. In 1985 Congressional hearings—U.S. House Task Force on Elections—were held and resulted in network executives voluntarily promising to not release exit poll or election projections for a state prior to its poll closing time.

In 2000 the winner of Florida's twenty-five electoral votes would obtain the majority of national electoral votes and be the victor. On several occasions networks changed their exit poll projection for this state. First, they projected Democratic vice president Al Gore, then retracted their projection as actual vote return data arrived. At approximately 2:00 a.m. Eastern Standard Time (EST) they projected Florida for Republican George Bush, and about an hour later retracted it. Bush won Florida by 527 votes after a U.S. Supreme Court decision. The Florida vote was "too close to call" through exit polls, and individuals incorrectly reported their vote based upon the "butterfly ballot" or other difficulties, such as hanging chads.

In the 2004 Presidential election, there was confusion and controversy concerning reliance upon exit polls. As late as 9:15 p.m. EST, NEP indicated that Senator John Kerry was leading President Bush, 51 percent to 48 percent. The final outcome was President Bush 51 percent and Kerry 48 percent. It has not been clearly determined why the exit polls overstated the Kerry vote in several states.

SEE ALSO *Elections; Polling; Survey; Voting*

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Steven Puro

EXOGENOUS AND ENDOGENOUS VARIABLES

SEE *Variables, Predetermined.*

EXOTICISM

The term *exoticism* describes a cultural phenomenon that projects Western fantasies about profound cultural differences. It adopts a cultural perspective that is firmly entrenched in the conventions and belief systems of Western civilization and therefore constructs the East as the archetypical location of otherness.

Exoticism demonstrates itself in colorful spectacles of otherness purporting to be an unmediated expression of natural drives and instincts. Although exoticism is associated with notions of animality, it carefully distances itself from the violence and exploitation that characterize the related concept of barbarism.

Notions of the exotic are associated with the lush vegetation of the tropics, geographically positioned between the Tropics of Capricorn and Cancer. They conjure up ideas of a bountiful nature, fertility, and uninhibited sexuality. An abundance of colors, sounds, smells, and tactile experiences promise to gratify the senses within an economy that gives free rein to consumption, unrestrained by political responsibility and ethical commitment to the real actors of exotic fantasies: that is, it disregards the role of disadvantaged people, coming mainly from third-world nations, who make a meager living from appearing in the dramatized fantasies staged in tropical holiday resorts and nightclubs.

The exotic first emerged as a concept in Western history when European nations began to explore and appropriate far-flung parts of the world. It experienced its first boom during the age of Enlightenment, when the establishment of trade routes began to supply Europe with such vast quantities of exotic goods that the purchase of luxury goods, including china, silk, perfumes, and precious stones, became affordable by the increasingly wealthy middle classes. This period also engendered a taste for the rich costumes of the Orient, the main geographic location of Enlightenment fantasies about the exotic. The fashionable Lady Mary Wortley Montagu, for example, had her portrait painted in a Turkish costume; the dissemination of stereotypes about the supposedly effeminate Orientals allowed her to appropriate the male garment of the turban without this being viewed as an act of cross-dressing.

The attempt by the age of Enlightenment to study and describe the vast number of different peoples of this earth was thus soon reduced to a mere interest in costume and other extrinsic markers of otherness, which were eagerly displayed in the European homelands. The demand of the nineteenth century for information about non-European peoples gave rise to numerous cheap reproductions of ethnographic drawings. Such easily affordable, popular publications, in their turn, further reduced cultural otherness to a matter of costume, which, among other things, suggested that supposedly primitive natives of, for example, Australia could be forced to abjure their traditional identity merely by donning the clothes of a European gentleman. The fact that nineteenth-century

photographs of indigenous people wearing the clothes of their colonial masters now strike us as more exotic than early photographs of nonwesternized, indigenous communities reminds us that exotic fantasies entail a contrast of, and hierarchy between, two different cultures, controlled by the Western point of view.

For the twenty-first century, the experience of the exotic frequently thrives on an imitation of a ritual presumed to be authentic, involving an act of mimicry whose comic potential is easily glazed over. Performances of corroborees and other cultural practices can therefore be staged for tourists while the traditional rituals are on the brink of extinction.

The exotic also notably unleashes the sexual desires of repressed Westerners. Prostitution and the exploitation of countless women, children, and some men are side effects of exoticism's tendency toward aesthetic abstraction and voyeuristic commodification of its participating actors.

Spaces set aside for expatriate consumption in international four- and five-star hotel chains (such as the Safari Bar in the Hyatt in Muscat, Oman) promise a sanitized encounter with a non-European subject that guarantees the absence of emotional involvement. Westerners, along with a westernized global elite, interact with one another against the background of scenery that refrains from challenging their privileges and supposed superiority.

Exoticism, as a cultural phenomenon, has mainly been examined via related critical concepts. Of special importance is Edward Said's description of Orientalism as a discursive construction of European fantasies. Said's study of Europe's most enduring exotic fantasies about the Middle East set the beginning for other postcolonial interrogations of romanticized projections of the cultural other by which the West continues to assert its superiority. Homi Bhabha and subsequent scholars of hybridity and the encounters between subaltern and dominant cultures, therefore, make every effort to draw attention to exoticism's parodic dimension in order to empower and render eloquent its latent subversion of oppressive and exploitative fantasies.

SEE ALSO *Cannibalism; Enlightenment; Gaze, Colonial; Gaze, The; Orientalism; Other, The; Prostitution; Sexuality; Stare, The; Stereotypes; Tourism; Travel and Travel Writing; White Supremacy*

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Christa Knellwolf

EXPECTATIONS

Economics is concerned in large part with expectations. Consumers planning to smooth their spending over a lifetime form expectations about future income, prices, interest, and other factors in their decision-making processes. Producers spreading investment expenditures over future time periods form expectations of future costs and returns. Government policy makers aiming to stabilize the economy use monetary and fiscal policies to achieve their expected targets. In the global economy, gains from free trade occur because traders expect a country to produce at the lowest opportunity cost. Economists try to measure expectation, to analyze their effects on the economy, and to study how they are formed.

In a competitive economy, expectations are realized at the equilibrium state. A Keynesian view of expectation equilibrium is that planned savings should equal planned investments. One reason that expectations may not be correct in a competitive economy is that prices and output vary, creating problems for producers who incur costs now and are uncertain about future prices. One can analyze uncertain outcomes in order to assign a probability or likelihood to their occurrences. If uncertainty is too risky, one may choose to be risk averse, as in the case of oligopolistic firms that are unable to guess their rival's conduct. To understand and coordinate expectation, one can collect anticipation data on business plans, ask people about their expectation and attitude, or survey experts to learn about their consensus.

One forms expectations with the aid of logic, psychology, and probability. Cognitive psychologists, for instance, found that agents make future decisions based on the similarity of present evidence, playing down probabilities and even the quality of the evidence. An expected outcome may follow from conscious behavior or habits, which may be self-fulfilling, nonmaterial, and altruistic.

Agents may be content with little achievements, not necessarily looking for maximum outcomes.

An individual may be certain of his or her expectations. Certainty means one assigns a high probability or likelihood to the occurrence of the event. Besides high and low probability events, one finds some uncertain events to which one cannot possibly attach a probability. One distinguishes between measurable and unmeasurable uncertainty, assigning the term *risk* when uncertainty can be measured.

A workhorse in expectation analysis is the expected utility hypothesis (EUH). The EUH is a function that captures all of an individual's expectations about an outcome, assigns a numeric value for one's choices among alternatives, and allows one to maximize the expected outcome. But its results can be paradoxical. The St. Petersburg paradox, a "let's make a deal" situation, offers the player a fixed amount of money (say $20), or an uncertain outcome that pays one dollar if heads turn up when a fair coin is tossed N times. The outcome is 2^n, each with a probability of one half, so that the expected value of the game is infinite, the limit of $\Sigma_{n=1}^{\infty}(1/2^n)(2^n)$. The paradox is that no one is willing to pay a large sum to play the game. The probabilist Daniel Bernoulli (1700–1782) thought that the problem was that as a person wins more and more money in the game, one experiences diminishing returns for money. To capture diminishing utility, Bernoulli used a log utility function on the outcome, showing that the payoff becomes a small sum: $\Sigma_{n=1}^{\infty}(1/2^n)(\log 2^n) = \log 4$. The solution was not definitive in the sense that one can choose a utility sequence that would still yield an infinite payoff. What is needed is a bounded utility function.

From a microeconomic perspective, the economist Milton Friedman presented a lucid explanation of the utility concept that has telescoped further development. With a stream of income, I_i, and associated probabilities, P_i, the expected value is the sum of their products. Utility enters when one forms a function of income, $F(I)$, whose products with their respective probabilities give a special function, $G = \Sigma_{i=1}^{\infty} P_i F(I_i)$. In the special instance where income is expected with certainty, $P_i = 1$, both the G and F functions have the same value or utility. A plot of $F(I)$, against, income, I, highlights a concave or convex utility function, indicating risk aversion, and risk lover (plunger), respectively. A risk averse person prefers the expected value over the EUH outcome. A risk lover prefers the EUH to the expected value. If one eliminates scale and origin from the utility function by the restrictions $I = 0$, $F(I) = 0$, and $I = 1$, $F(I) = 1$ $F(I)I = 0$, then one can determine utility values for any amount of income. Without such restrictions, however, the utility function can take on a recurrent concave shape, explaining why someone will not pay a large sum to play the St. Petersburg game.

From the macroeconomic perspective, one starts with the English economist John Maynard Keynes' equation where national income, $\varphi(N)$, equal to investment demand, D_2, plus consumption $\chi(N)$, could be solved for full employment, N. Given the state of employment, consumers, investors, and employers expect to consume, invest, and earn a prospective amount, respectively, which fluctuates with the state of long-term expectation. Keynes' concept of long-term expectation can be clothed in modern notations. Long-term expectation takes the form of a random variable, y, within a time frame of three months to a year, t, in a mass psychology "atmosphere", ω_{it}, given state of the news, Ω_{it}. Investors, i, calculate the average expectation, E, such as in a beauty contest where competitors must pick out the prettiest face among photographs that are published in a newspaper. In this competition, the average is an intersubjective representation, which may be expressed as $y_{it} = \lambda_i E(y_{it}|\Omega_{it}) + \omega_{it}$, and the competitor whose choice comes nearest to this average will win the competition.

Keynes' work created several research programs in expectations. John Hicks used a day-to-day model for up to a week to develop his elasticity of expectation hypothesis. Following Hicks in dating commodities, the Arrow-Debreu model of competitive equilibrium found current and expected prices that jointly clear supply and demand equations in present and future markets, and Jean-Michael Grandmonth formulated an intertemporal model, that extended the Arrow-Debreu model for sequences of time periods. On the other hand, G. L. S. Shackle steered expectation analysis away from a probability base. One makes several nonprobabilistic statements about the next period output, x, such as that it is impossible, possible, surprising if it would reach a specified high or low level, or very surprised it occurs. One can attach a corresponding number, y, to represent the degree of potential surprise those outcomes mean. One can further place a corresponding value on the surprise value when it reaches a maximum potential surprise, $\bar{y}$. The result is a function $y = f(x)$ that is bowl shaped, and centered at a neutral output level where $x = 0$. Further, one can assign numbers to the degree of surprise numbers to measure the degree of stimuli, $A(x, y(x))$, from the surprise function associated with the potential outcome.

Since the 1950s, economists have been using an adaptive expectation model to show how expectation is formed over time. The adaptive version follows the dictum that an individual learns from his or her mistakes. A rifleman calibrates his weapon by observing how far off his previous shot deviated from the target.

In macroeconomic forecasts, the adaptive model was employed to study the effect of expected prices and unemployment on present wages and inflation rates. In the Phillips Curve, the coefficient of the expected price variable was zero. A coefficient of the expected price variable equal to one would mean that expectations are fully adjusted into inflation and wage rates. For instance, if the expected rate of inflation, $\hat{\pi}$, is set by some proportion, γ, between the actual inflation, π, and the expected inflation, then one can use the equation: $\hat{\pi} - \hat{\pi}_{-1} = \gamma(\pi_{-1} - \hat{\pi}_{-1})$ $0 < \gamma < 1$ to represent the formation of expectations. Full adjustment means $\gamma = 1$, but empirically it was mostly less than unity, implying that the Phillips Curve was downward sloping.

The adaptive expectation model was integrated into the MPS model of the Federal Reserve Board, one of the first large-scale econometric models that were built in the 1960s. Expectation was captured in the form of lag structure both to parameters and error terms. The model, however, failed to capture drifts in the parameters of structural equations. The Rational Expectation Hypothesis (REH) has explained some of those problems and added other novelties to the formation and measurement of expectations.

The concept of REH is based on equilibrium analysis as opposed to Keynesian disequilibrium analysis. Under ideal conditions of competition, one expects economic agents to have perfect information or knowledge of the relevant market variables. Absent complete information, one settles for all the information that is available before making a forecast.

Robert Lucas is credited with making the REH practical. One incorporates information into REH models by replacing the expected variable with an equation or variable that measures the expectation. For instance, Thomas J. Sargent and Neil Wallace wrote equations for Aggregate Supply, IS, LM, and monetary policy. Some of the equations require that the expected price level prevailing at time t be set at time $t-1$. In other words, one replaces the expression of the form $E(p_{it}|\Omega_{it})$ with values resulting from applying the mathematical expectation operator, E, on them, conditioned by the information one has at the time $t-1$.

Faith in the RE hypothesis is still being determined. Edmund Phelps advocated dropping the equilibrium framework, for a more non-Walrasian framework in which economic agents are not price takers, which yields results more in line with Paul A. Samuelson's views that oppose the REH. Large-scale econometric models for the REH are still not within reach. To improve predictions, Finn Kydland and Edward Prescott have used time-consistent computational experiments in econometric models, subsequent to the REH revolution. These models allow policy makers such as the Federal Reserve Board, to have no concern about wrong models or wrong goals, or even histories and reputation, because they need only choose sequentially.

SEE ALSO *Adaptive Expectations; Beauty Contest Metaphor; Expectations, Implicit; Expectations, Rational; Expectations, Static; Expected Utility Theory; Friedman, Milton; Game Theory; Keynes, John Maynard; Lucas, Robert E., Jr.; Macroeconomics; Phillips Curve; Risk; Sargent, Thomas; Uncertainty; Utility, Von Neumann-Morgenstern*

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EXPECTATIONS, ADAPTIVE

SEE *Natural Rate of Unemployment.*

EXPECTATIONS, IMPLICIT

The concept of implicit expectations, which was pioneered in 1954–1955 by Edwin S. Mills, circumvents a problem encountered by economists who study the behavior of business enterprises: Although production and pricing decisions are made on the basis of expectations about future economic conditions, economic researchers must cope with a shortage of observations on actual sales anticipations. One research strategy is to work with explicit assumptions about the way expectations are formed. Thus, in 1953 Robert Ferber concluded on the basis of his examination of empirical evidence in the Railroad Shippers' Forecasts that expected sales are equal to actual sales of the same period of the preceding year adjusted for recent trend. In contrast, Mills did not attempt to model the process by which expectations are generated. His implicit expectations approach substitutes the actual realized sales—what sales turn out to be—for the unobserved expected sales under the assumption that the forecast error is random. That is to say,

$$E_t - X_t = \varepsilon_t,$$

where E_t is expected sales, X_t is what sales actually turn out to be, and ε_t is a random error with zero expected value (it averages out to zero). Mills used his implicit expectations concept in a number of theoretical and empirical articles, including a 1957 study in which he was able to estimate the magnitude of undesired inventories generated by sales forecast errors made by American corporations.

Mills's implicit expectations approach is closely related to John F. Muth's (1961) concept of rational expectations that Robert Lucas invoked in 1972 in spearheading a revolution in the field of macroeconomics. Muth, like Mills, assumed that forecast errors are random. This is an example of independent discovery, as often is encountered in scientific research (Merton 1973), but a rather subtle difference may distinguish the two concepts. Expectations are implicit if the random forecast error ε_t is distributed independently of E_t but rational if they are distributed independently of X_t. If a firm's sales anticipations are based on a random survey of customers about their expected demand, the error in forecasting total sales that results from sampling error will be distributed independently of what sales actually turn out to be; this means that the sample survey has generated an implicit forecast of sales. If instead a forecast is generated with data from prior years with a multiple regression of actual sales on

observable variables, such as the unemployment rate, price, and sales in prior periods, the forecast will be rational because the errors of a correctly formulated regression forecast, as a mathematical necessity, are distributed independently of the prediction. Implicit forecasts can be converted into rational forecasts with the equation obtained from historical data by regressing the realization on the forecast.

In a paper published in 1985 Muth reported that his empirical investigations indicated that expectations are not rational: The forecast errors were correlated with the forecasts, and the variance of the forecasts was often larger than the variance of the variable that was being predicted. However, Muth found that the errors also were correlated with the actual realizations; that meant that they were not implicit expectations. He advanced as a synthesis an "errors in the variables" model that allowed the forecast error to be correlated with both the variable being forecast and the actual outcome but cautioned that this model was not fully in accord with the facts. Although Muth became skeptical about his own theory, it provides the foundation for macroeconomic studies of inflation and business cycle fluctuations.

SEE ALSO *Adaptive Expectations; Expectations; Expectations, Rational; Expectations, Static; Mills, Edwin; Rationality*

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EXPECTATIONS, RATIONAL

A basic postulate of economics is that people "do the best with what they have" (Maddock and Carter 1982). Applied to the formation of expectations (or economic beliefs), the theory of rational expectations, first proposed by John Muth in 1961, assumes that agents acquire and process information rationally. Since the 1970s, this theory has been used to model phenomena as diverse as aggregate supply, exchange rates, consumption, and economic cycles. A number of important empirical predictions—about exchange rates (Frankel and Rose 1995) and the term structure of interest rates (Mankiw and Miron 1986), for example—employ rational expectations as a key assumption.

RATIONAL EXPECTATIONS: DEFINITIONS AND DEFENSES

Definitionally, a rational expectation is the best guess about an unknown variable, using all available information. Where the unknown variable is random (such as the exchange rate in k periods time represented in equations by (y_{t+k}) the rational expectation is the mean of the variable (i.e., the mathematical expectation $E(y_{t+k})$ equal to the integral of all possible values of y_{t+k}, weighted by their probabilities). The rational expectation is calculated using information up to the current period t, and so it is sometimes written as $E_t(y_{t+k})$ $(k > 0)$. Obtaining the mathematical expectation within a model context requires knowing the full structure of the model. If information is costly to collect, then rational expectations cannot strictly be rational, as was recognized soon after rational expectations was proposed. In other words, assuming a positive marginal cost to information and a decreasing marginal benefit, the information collected will fall short of the information required to understand the full system.

The economics literature either ignores this problem for simplicity, or it acknowledges that expectations are formed on the basis of sample information. In the latter case, the rational expectation can be defined as an estimator of an unknown variable with desirable statistical properties, such as minimum forecast error (in the case of a random variable) or unbiasedness and efficiency (in the case of an unknown parameter). Alternatively, mirroring the use of estimators in classical inference, changes in beliefs about unknown parameters can be modeled by statistical hypothesis testing (Menzies and Zizzo 2005).

It is assumed that people do not make systematic errors when predicting the future, so the rational expectation of a random variable is the mean represented by $E_t(y_{t+k})$. In other words, departures from perfect foresight (that is, from $E_t(y_{t+k}) = y_{t+k}$) are a random process with

a zero mean. Mathematically, rational expectations are modeled by making the outcome y_{t+k} equal to the rational expectation, plus a random error u_{t+k} representing ignorance, mistakes, and other influence only revealed in k periods time: $y_{t+k} = E_t(y_{t+k}) + u_{t+k}$.

As an example of rational expectations at work, if all agents hold rational expectations, if transactions costs are small, and if agents are unconcerned about risk, then the so-called efficient market hypothesis holds. If a security's price does not reflect all the information available about it, then someone can buy (or sell) the security to make a profit, thus driving the price toward the rational expectation. If all profit opportunities are eliminated, prices in financial markets fully reflect fundamentals (e.g., future interest rates, profits, or dividends).

Rational expectations have a number of advantages as a modeling tool. First, they are conceptually simple. Second, they prevent economic theorists from introducing ad hoc influences via arbitrary expectations mechanisms. Third, they create simple model solutions. Fourth, there is a close correspondence between the properties of random errors arising from the rational expectations (u above) and the random errors assumed in empirical work.

There are many ways of defending the notion that agents have rational expectations, based on *rationality* (rational agents should use all the available information in the most efficient way), *macro-aggregation* (rational expectations allow for mistakes, as long as they are not systematic mistakes), and *evolutionary dynamics* arguments (agents without rational expectations would be driven out of the market by more rational agents, who would be able to bankrupt them on the basis of their superior use of information). Even if these arguments are not accepted, however, mainstream economists could also claim that the parsimony and tractability of rational expectations justifies their use. While this is unlikely on its own to be sufficient to accept rational expectations as scientifically valid, it may be more palatable if one can claim that a lack of realism is an acceptable price when parsimony and tractability are matched by significant predictive power. The argument has also been made that it would not be safe to make policy on the basis of the assumption that policymakers have superior knowledge about how the economy works, and that macroeconomic models should therefore employ rational expectations (Sorensen and Whitta-Jacobsen 2005).

ARGUMENTS AGAINST RATIONAL EXPECTATIONS

There are a number of contrary views on rational expectations, however. First, rational expectations are rational only if collecting and processing information is costless in money and time, let alone cognitive effort. If agents are only boundedly rational, information collection and processing costs will be larger and will induce shortcuts in the use of information. Second, the theory of rational expectations assumes that agents not only hold a model of the economy, but that this model of the economy is correct. This is in stark contrast with the fact that disagreement exists within the economics profession on how the economy works. Further multiple models are normally used in practical policymaking. Interesting variations of rational expectations build on the assumption that agents do not know exactly how the economy works, so that they need to make hypotheses on models (or parameters of models) of how the economy works (Goldberg and Frydman 1996; Menzies and Zizzo 2005).

Third, there has been no general proof of the evolutionary dynamics argument. Indeed, there are models showing how less-than-rational agents may survive when mixed up with rational agents (e.g., noise trader models in finance; Shleifer 2000). Fourth, the usefulness argument is virtually unfalsifiable. This is because tests of rational expectations are also joint tests of the models they are embedded in, and because of the difficulty in identifying rational expectations relative to alternatives in regression analysis. Therefore, failures of rational expectations can be, and often are, blamed on other hypotheses (see, for example, Gerlach and Smets 1997 in relation to the term structure of interest rates), though the problem may ultimately lie in the model of expectation formation.

Fifth, in experimental settings, rational expectations predictions are not rejected as null hypotheses in some contexts, but the most common outcome is that individuals do not hold rational expectations. In addition, experimental research often finds either underutilization or overutilization of prior beliefs (Camerer 1995). These systematic empirical failures cannot be reconciled with the macro-aggregation argument.

Finally, if conservativeness in policymaking is considered desirable in the face of an uncertain economy, then it should be modeled explicitly (e.g., in the objective function), rather than by postulating an incorrect model of expectation formation. Doing otherwise may be counterproductive, and it may make it more difficult to provide an accurate account of the economy. Notwithstanding these points, however, the notion of rational expectations remains the mainstream conceptualization of expectations formation in economic modeling.

SEE ALSO *Efficient Market Hypothesis; Least Squares Regression*

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EXPECTATIONS, STATIC

In economics, the concept of static expectations describes an assumption that economists make about the way people form their predictions regarding the future values of economic variables. Specifically, the static expectations assumption states that people expect the value of an economic variable next period to be equal to the current value of this variable.

The concept of static expectations has been widely used in the early economics literature, such as in the cobweb model of price determinations. In the cobweb model, the static expectations assumption states that sellers expect the price of a good next period to be the same as it is today and adjust their production accordingly. The early literature did not focus much on unexpected shocks.

The concept of static expectations and its more advanced variation, the concept of adaptive expectations, play an important role in the monetary economics, the branch of economics that addresses the design and the impact of monetary policy. This concept was formalized in 1968 simultaneously by Milton Friedman (1912–2006) in his article "The Role of Monetary Policy" and by Edmund Phelps (b. 1933) in his article "Money-Wage Dynamics and Labor Market Equilibrium." Because only unexpected inflation, or inflation rate in excess of the expected inflation rate, can increase the aggregate output of the economy, it is important for policymakers to know what inflation rate economic agents expect in the future. For economists this means that they have to make an assumption about how economic agents form their predictions of future inflation.

The most simple-minded assumption about expectations one can make is that of static, or naïve, expectations: Agents are assumed to expect the inflation rate next year to be the same as it was this year. Adaptive expectations assumption merely extrapolates the concept of static expectations—it suggests that economic agents expect the inflation rate to be equal to the weighted average of the inflation rate in the past few periods. Economists used the assumptions of static and adaptive expectations until the concept of rational expectations was developed.

The main criticism of the concept of static expectations is that it assumes that people ignore the information about possible shifts in policy variables. In case of monetary policy, if policymakers announce credibly that they will adopt an anti-inflationary stance, it would not be rational for economic agents to believe that the inflation rate will remain the same. Thus, rational expectations assumption incorporates all possible information available at the time the expectations are formulated, not just the past values of the variable being forecasted, as is the case with static or with adaptive expectations.

In modern economic theory most models that incorporate uncertainty about the future assume rational expectations, not static expectations. Nevertheless, some economic variables and many financial variables follow a specific stochastic process, called *martingale*, for which the best prediction of the future value is today's value. For these variables static expectations turn out to be rational expectations.

SEE ALSO *Expectations; Expectations, Implicit*

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Galina Hale

EXPECTATIONS, TEACHER

SEE *Teacher Expectations.*

EXPECTED UTILITY THEORY

Expected utility theory is a model that represents preference over risky objects, by weighted average of utility assigned to each possible outcome, where the weights are the probability of each outcome.

The primary motivation for introducing expected utility, instead of taking the expected value of outcomes, is to explain attitudes toward risk. Consider for example a lottery, which gives \$100 and \$0 with even chances, and a sure receipt of \$50. Here typically one chooses the sure receipt, whereas the two alternatives yield the same expected return. Another example is the Saint Petersburg paradox. Consider a game of flipping a fair coin until one has a tail. When the number of flips obtained is k, one receives 2^k, which happens with probability $(1/2)^k$.The expected return of this game is $\sum_{k=1}^{\infty} 2^k (1/2)^k = \sum_{k=1}^{\infty} 1$, which is infinity. However, a typical decision maker is willing to pay only a finite amount for playing this game.

The theory resolves this problem by taking risk attitude into account. Here a risky object is a probability distribution over outcomes, denoted by p. Then the expected utility representation takes the form $U(p) = \sum u(x_k)p_k$, where p_k is the probability that outcome x_k is realized, and function u expresses the utility assigned to each outcome. Notice that $u(x)$ may not be x as it is, and the curvature of u explains the decision maker's risk attitude. When the graph of u is convex to the top, one has the formula $0.5u(100) + 0.5u(0) < u(50)$, which explains the first example (similarly for the second). When this is the case, the decision maker is said to be risk averse. Expected utility theory enables empirical analysis of choice under uncertainty such as financial decision, by quantifying the degree of curvature of u.

The theory originates from Daniel Bernoulli (1700–1782), an eighteenth-century mathematician, and was given an axiomatic foundation by John von Neumann and Oskar Morgenstern in the 1940s. They started from a preference ranking of probability distributions over outcomes, and provided the condition for its expected utility representability. The condition consists of three axioms: weak order, continuity, and independence. The most prominent axiom is independence: when the decision maker prefers distribution p to distribution q, then he or she prefers the distribution made by mixing p and any another distribution r with proportion λ: $1 - \lambda$, that is $\lambda p + (1 - \lambda)r$, to the distribution made by mixing q and r with the same proportion, that is $\lambda q + (1 - \lambda)r$. Here $\lambda p + (1 - \lambda)r$ refers to the distribution that assigns probability $\lambda p_k + (1 - \lambda)r_k$ on each outcome x_k respectively. Informally speaking, when p is preferred to q then having "p with probability λ and r with probability $1 - \lambda$" will be preferred to having "q with probability λ and r with probability $1 - \lambda$," since the difference lies only in p and q.

The theory is extended to subjective expected utility theory, where the probabilities are not given objectively, but the decision maker is to hold a subjective belief over relevant events.

Various criticisms to the expected utility theory motivate further developments, two of which are explained in this entry. The first criticism is that the independence axiom may be violated systematically, which is referred to as the Allais paradox. Consider for example a bet, which gives \$120.00 with probability 0.9 and \$0 with 0.1, and a sure receipt of \$100.00. The typical choice here is to take the sure receipt. Now consider two bets, one gives \$120.00 with probability 0.45 and \$0 with 0.55, the other gives \$100.00 with probability 0.5 and \$0 with 0.5. Here the typical choice is to take the first bet. This violates independence since the second two bets are made by mixing the first two with the lottery that gives \$0 for sure, with even proportion. One explanation of this is called certainty effect, that an outcome is overweighed when it is sure than when uncertain.

The second criticism is that risk attitudes may depend on status quo points, whereas the theory assumes that only the distributions over final outcomes matter. Suppose for example that the decision maker is given \$1,000 initially and faces two alternatives, one gives \$200 more and \$0 (no change) with even chances, the other gives \$100 more for sure. The typical choice here is to take the sure gain, which exhibits risk aversion. On the other hand, suppose one is given \$1,200 initially and faces two alternatives, one yields a \$200 loss and \$0 with even chances, the other yields a \$100 loss for sure. Now the typical choice is to take the risk, which exhibits risk loving, while the distributions over final outcomes are identical across the two comparisons.

These anomalies, together with other ones, motivate various models of nonexpected utility.

SEE ALSO *Expected Utility, Subjective*

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Takashi Hayashi

EXPERIMENT, SOCIAL

SEE *Social Experiment.*

EXPERIMENTAL ECONOMICS

SEE *Economics, Experimental.*

EXPERIMENTS

At the most basic level, social science is the process of developing and testing scientific explanations for various aspects of behavior and experience. Of the possible types of explanations, causal explanations are generally preferred in science because they specify *why* some phenomenon occurs rather than simply indicating *that* or *when* it occurred. This focus on causation allows scientists to predict and, in some cases, control phenomena. Other types of explanations, although important, are far less adept in this regard. A preference for causal explanations has led researchers to develop special procedures for testing putative cause-and-effect relationships, collectively known as *experimental methodology*.

RATIONALE AND STRUCTURE OF EXPERIMENTAL METHODOLOGY

Experimental methodology affords an inference of causality through a collection of specific procedures. First, the researcher creates two or more groups of research participants that are equivalent at the outset of the study. Second, the researcher introduces different levels (e.g., doses, versions, intensities) of an independent variable to each group of participants. An *independent variable* is the entity, experience, or situation, for example, that the researcher proposes as the "cause" in a cause-and-effect relationship. It is referred to as "independent" because the experimenter has independent control over the specific group of participants that gets one level or another, and as a "variable" because it has more than one level (e.g., more than one dose, version, intensity, etc.). After introducing a different level of the independent variable to each group of participants, the researcher then measures or records at least one *dependent variable*—that is, the behavior, experience, or event that the researcher proposes as the "effect" in a cause-and-effect relationship. It is referred to as "dependent" because its outcome depends upon the effects of the independent variable and as a "variable" because it has more than one value.

The logic of this arrangement and the ability to infer a causal relationship from an experiment are straightforward. If the groups of research participants were equivalent at the beginning of the study and the level of the independent variable was the only thing that differed systematically among the groups, then any difference found on the dependent variable must be attributed to the causal influence of the independent variable on the dependent variable. Beyond the logic of experimental methodology, a number of issues may arise when constructing experiments that complicate matters considerably.

Creating Equivalent Groups An important aspect of conducting an experiment is creating groups of participants that are equivalent prior to the introduction of the independent variable. There are two general strategies for accomplishing this equivalence—random assignment and blocking. *Random assignment* refers to the placement of each participant into one group or another on the basis of chance alone. This can be done by flipping a coin, consulting a random number table, or by using some other randomization technique to determine the specific group to which a participant is assigned. Random assignment has been called the "great equalizer" because any differences among participants prior to the introduction of the independent variable tend to be distributed equally across experimental groups.

The second strategy for creating equivalent groups is *blocking*, which refers to the practice of creating equivalent groups of participants by controlling for participants' characteristics that could potentially have a systematic effect on the dependent variable. Such control can be accomplished in a number of ways, but the two most common strategies are matching and statistical elimination. With *matching*, the researcher assesses participant characteristics that may influence the dependent variable, purposely creates pairs of participants that share those characteristics, and then assigns one member of the pair to one group and the other member to another group. With *statistical elimination*, the researcher measures participant characteristics that may influence the dependent variable, and uses statistical techniques to mathematically remove the effects of those characteristics from the dependent variable. Of the two techniques, matching is better suited to research designs with only two groups, whereas statistical elimination can be used in research designs with two or more groups.

Operational Definitions The independent and dependent variables are hypothetical constructs that carry with them conceptual definitions that researchers use to communicate information about the variables to other researchers. In order to conduct an experiment, however, the hypothetical construct must be made "real" by developing a strategy that will allow the independent variable

to be manipulated and the dependent variable to be measured or recorded within the experimental context. The process of making hypothetical constructs real is called *operationalization*. To operationalize a hypothetical construct, a researcher must select or create a concrete, real-world manifestation of the construct and define it with enough precision so that other researchers can identify it within the context of the experiment and, should they so choose, use the same operationalizations in other research projects.

A researcher can select from a number of options in order to operationalize the independent variable. Among these options are manipulations of participants' *physiological states* (influencing the natural biological states of participants), *environmental context* (altering the situation or context in which participants are engaged), and *blocking* (dividing participants into groups or categories on the basis of certain characteristics such as age, gender, income, education level, etc.). Blocking is not a manipulation in the strict sense of the term, but naturally occurring differences among individuals can be used as a quasi-independent variable. Although many options for operationalizing independent variables are available, some may be more appropriate than others to the phenomenon at issue, and the final choice of operational definition is typically determined by the phenomenon in question, resources available to the researcher, and ethical considerations.

The researcher also has many options from which to choose when operationalizing the dependent variable. The research may measure the presence, frequency/intensity, or latency/duration of participants' thoughts, beliefs, attitudes, behaviors, or behavioral intentions. Again, although many operational definitions are available, the final choice is typically determined by the phenomenon in question, resources available to the researcher, and ethical considerations.

Replication The operational definitions used in an experiment are important not only for communicating how variables are manipulated and measured in the context of a study, but also for the purpose of replication. *Replication* refers to the ability of other researchers to repeat a study and produce results similar to those found in the original. There are two types of replication—direct and conceptual. *Direct replication* occurs when a researcher repeats an existing study exactly as it was conducted originally. *Conceptual replication* occurs when a researcher repeats an existing study using different operationalizations of the same independent and/or dependent variables, or other modifications of the original procedures. Both forms of replication are important, but conceptual replication provides stronger support for a hypothetical cause-and-effect relationship among variables because consistent results across many conceptual replications reduces the likelihood that the results are simply a consequence of a single operational definition.

Research Design The strategy used to create equivalent groups and the ability of the researcher to manipulate an independent variable restricts the type of research design that can be employed. Specifically, experimental methodology can be divided into two categories, true experiments and quasi experiments. *True experiments* are characterized by (1) random assignment and (2) manipulation of the independent variable. In contrast, *quasi experiments* possess only one of these characteristics, which in most cases is manipulation of the independent variable. Three distinct true experimental designs and at least ten quasi-experimental designs have been identified. These basic designs can be combined or modified to produce a large number of possible research designs that can be used to test a broad range of cause-and-effect explanations.

Research Setting In addition to design issues, researchers must also select a research setting. There are two settings for research—laboratory and field. A *laboratory setting* refers to research conducted in a dedicated scientific laboratory; a *field setting* refers to any location other than the laboratory. Field settings are typically less controlled than laboratory settings, but they make up for this deficit by affording researchers an opportunity to study phenomena in a context that is similar to, if not the same as, the environments in which the phenomena occur naturally.

Realism and Impact Another consideration when designing and conducting an experiment is realism. *Realism* is the extent to which an experiment stimulates or reflects various aspects of the phenomenon under investigation. There are two types of realism—mundane and experimental. *Mundane realism* is the extent to which a phenomenon is studied in an environment similar to the one in which it occurs naturally. In contrast, *experimental realism* is the extent to which real psychological processes occur within the context of the study, regardless of the artificiality of the experimental setting or procedures. As a general rule, researchers tend to maximize experimental realism even if doing so minimizes mundane realism, because the presence of extraneous variables that may accompany mundane realism reduces the capacity of researchers to derive a causal inference from the study. Although the distinction between mundane and experimental realism does map onto the distinction between laboratory and field settings, these issues are distinct and should be treated as such.

Related to the issue of realism is impact. *Impact* refers to the intensity of the process or phenomenon elicited in

a study. High-impact studies typically involve situations designed to maximize the experience or expression of the phenomenon. Low-impact studies, which are sometimes called *judgment studies*, typically involve assessing or recording simulations of a process or phenomenon in an "as if" manner. Low-impact studies are typically less desirable than high-impact studies because participants asked to simulate a process may respond in a manner that is unrepresentative of how they would respond if the process or phenomenon in question were actually occurring. The choice of impact level is often determined by the phenomenon under investigation, resources available to the researcher, and ethical considerations.

Validity Of major concern to scientists is the validity of different research designs. In this connection, *validity* refers to the extent to which a design is free of confounds (i.e., flaws) that serve as alternative explanations for the proposed causal effects of the independent variable on the dependent variable. Confounds can be divided into two types—threats to internal validity and threats to external validity. *Internal validity* refers to the absence of alternative explanations for the causal relationship between the independent and dependent variables. *External validity* refers to the extent to which the results of an experiment can be generalized to other operationalizations of the independent or dependent variable, other populations, or other settings. Both types of validity are important, but researchers tend to focus on internal validity because a study with low internal validity is not interpretable. When research results are not interpretable, the generalizability of the results is irrelevant.

Eight threats to internal validity and four threats to external validity have been identified. The eight threats to internal validity are:

history (changes on the dependent variable due to events other than the independent variable),

maturation (changes on the dependent variable due to time-dependent changes in characteristics of the participants during a study),

testing (changes on the dependent variable due to the effects of measuring the dependent variable at an earlier point in time),

instrumentation (changes on the dependent variable due to changes in the calibration or accuracy of measurement instruments),

statistical regression (changes on the dependent variable due to the assignment of participants to different groups based on extreme characteristics or abilities),

selection (changes on the dependent variable due to differential selection of participants for possessing certain characteristics or abilities),

mortality (changes on the dependent variable due to differential loss of participants from different groups in a study), and

interactions between two or more threats to internal validity.

The four threats to external validity are: (1) interaction of testing and the independent variable (pretesting can alter participants' sensitivity or responsiveness to the independent variable, which can render responses from pretested participants unrepresentative of non-pretested participants); (2) interaction of selection and the independent variable (participants selected for a study because they possess certain characteristics may respond to different levels of the independent variable in a manner that is unrepresentative of participants who do not possess those characteristics); (3) reactive arrangement (the arrangement of the experimental context may produce effects that do not generalize to nonexperimental situations, particularly when participants' responses have been altered during a study because they know they are being observed); and (4) multiple-treatment interference (multiple levels of the independent variable applied to the same participant may produce interference among the different levels and produce effects that would not occur if each level were used independently).

ETHICS IN EXPERIMENTAL METHODS

Following a series of unethical studies in the first half of the twentieth century, the scientific community along with the Nuremberg war tribunal developed a code of ethics for scientific research. Succinctly, this code requires that research participants freely consent to participate, be fully informed of the purpose and potential risks associated with participation, and be afforded the right to discontinue participation for any reason at any time. Similarly, the researcher must strive to minimize risks to participants, protect them from harm insofar as possible, and be fully qualified to conduct the research with honesty and integrity. This code and other more stringent ethical principles developed by individual branches of social science are enforced by Internal Review Boards (IRBs). IRBs are institutional panels of experts and community volunteers that review the potential risks to participants of studies proposed by researchers. IRBs carefully examine the procedure and materials that are to be used in a study to ensure that the researcher is doing everything possible to protect participants from undue harm. Consequently, the goal of IRBs is to balance the benefits of acquiring scientific knowledge with protecting the rights of research participants.

One point of concern for IRBs is *informed consent*, which typically entails a document that outlines the rights of research participants as well as the potential risks and benefits associated with the study for which they have volunteered. It is necessary for participants to freely consent and fully understand these benefits and risks in order for a study to meet the ethical requirements set forth by the scientific community. However, informed consent is somewhat problematic in research that involves some form of deception. In such cases, it may be unclear whether enough information has been supplied at the outset for participants to fully understand the risks of participation. Similarly, informed consent is problematic when working with vulnerable populations such as young children or individuals with poor mental health who cannot understand or communicate informed consent, prisoners who may feel compelled to participate in research, individuals who do not speak the language in which the informed consent document is written, and people with poor physical health. Also, research on nonhuman animals poses problems with consent and raises additional ethical responsibilities. In such research, it is important to provide humane and ethical treatment, and to take steps to minimize discomfort, illness, stress, and privation.

The culmination of a study, and the resolution of a researcher's ethical obligations, is the *debriefing*—the full disclosure to participants by the researcher of the purpose and procedures of a study, including any deceptive elements. In addition to disclosure, another purpose of a debriefing is to assess and rectify any adverse effects that may have occurred during the study. Adverse effects include stress, pain, threats to self-esteem or identity, and the like. It is the researcher's responsibility to provide affected participants with appropriate remedies or treatment options, or to otherwise undo any harm done.

SEE ALSO *Ethics in Experimentation; Experiments, Human; Experiments, Shock; Regression; Scientific Method*

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EXPERIMENTS, CONTROLLED

In the social sciences, a controlled experiment is any study in which at least one variable—a presumed cause—is manipulated, the units of observation (individuals, groups, or organizations) are randomly assigned to levels of the manipulated variable, and there is at least one control condition. Experiments can be contrasted with quasi-experiments, in which the putative cause is manipulated but there is either no randomization or no control condition, and with nonexperiments, in which there is no manipulation, randomization, or control condition. Although quasi- and nonexperimental studies are useful, and sometimes necessary, in social science research, the information they provide is of limited value when the goal of the research is to detect causal relations. Controlled experiments, by virtue of manipulation, randomization, and control conditions, are the social scientist's best option for detecting causal relations.

The power of controlled experiments lies in their capacity for achieving control and isolation of the causal variable in a presumed cause-effect relation. When variability in the presumed cause is controlled by the experimenter through manipulation, the only plausible direction of influence between the variables is from cause to effect. The context within which the putative cause varies also must be controlled. Control in this sense involves attending to other variables that covary with the presumed cause or are present in the research context that might contribute to variability in the outcome. Isolation concerns the potential co-occurrence of a causal variable and other variables. To the extent that the presumed cause is confounded with other variables, inferences about its influence will be ambiguous or even incorrect. Control over variability in the presumed cause and isolation of it from other potential causes are necessary for unequivocal inferences of causal influence.

Although random assignment to levels of the manipulated variables also figures into control over the putative cause, its primary role in causal inference is isolation. If the units of observation are randomly assigned to conditions then, apart from the manipulation, the conditions are presumed to be probabilistically equivalent. Their equivalence is only probabilistic because there is some likelihood that, apart from the manipulation, the conditions differ. This probability is accounted for in the construction of statistical tests allowing for apparent difference between levels of the putative cause to be attributed either to the manipulation or to nonequivalence. By convention, these tests ensure that an apparent difference attributable to nonequivalence is attributed to the manipulation no more than 5 percent of the time. Social scientists often report the precise probability, or *p*-value, of the

statistical test comparing conditions in an experiment, with values less than .05 indicating statistical significance.

Although random assignment is essential for isolating a presumed cause from other causal influences, it does not rule out alternative explanations for differences on the presumed effect attributable to the manipulation itself. Strategically designed control conditions address this type of alternative explanation. The prototypical control condition is the placebo condition in experiments on the causal effects of medications. The goal of these experiments is to isolate the effects of active ingredients in the medication from other effects, such as those that accrue from simply receiving medication or attention from a physician. By comparing outcomes for individuals who take a medication with those for individuals who believe they are taking the medication but in fact receive none of the active ingredients, researchers can distinguish effects attributable to the active ingredients from the effects of receiving any medication or seeing a physician. Because a control condition of this sort keeps research participants "blind" to condition, it also rules out the possibility that participants' assumptions about the effects of the manipulation explain differences in the outcome.

Controlled experiments often include more than one causal variable, with each having two or more levels. In the typical experiment with multiple causal variables, the variables are "fully crossed" to create a factorial design. In factorial designs, units of observation are randomly assigned to all combinations of levels of the causal variables, with the total number of conditions equal to the product of the number of levels of the causal variables. Such designs often are referred to in terms of the number of levels of each causal variable. The simplest factorial design is the 2 x 2 ("two-by-two"), which comprises two causal variables, each with two levels. Such designs allow for the detection of causal effects of the individual variables as well as interaction effects, in which the causal effect of one of the variables varies across levels of the other.

Despite their appeal as a means of detecting causal relations, controlled experiments are not always appropriate in social science research. In some instances, particularly in the early stages of a program of research, social scientists are interested in simply capturing the natural co-occurrence of variables without concern for causality. Controlled experiments are unsuitable for such purposes. In other instances, social scientists are interested in causal relations but cannot, for practical or ethical reasons, design controlled experiments to study them. These limitations might preclude manipulation, random assignment, or the assignment of some individuals or groups to a control condition. For example, some characteristics of individuals, groups, and organizations either cannot be manipulated at all, or cannot be manipulated ethically in a manner that creates variability on the causal variable of interest. Furthermore, it is not always possible to randomly assign units of observation to condition, as, for instance, in the case of an intervention administered by teachers to students who are in a condition because they were assigned to that teacher's class according to school or district policy. Finally, in the case of studies of treatments that have the potential to save lives that otherwise could not be saved, it is unethical to withhold the treatment from research participants, thereby precluding inclusion of a no-treatment or placebo control condition. Thus, although controlled experiments are ideal for detecting causal relations, they are not always appropriate or feasible. Because of this, social scientists typically view controlled experiments as only one of numerous approaches to studying associations between variables.

SEE ALSO *Causality; Ethics in Experimentation; Experiments; Experiments, Human; Inference, Statistical; Random Samples; Social Science*

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EXPERIMENTS, HUMAN

In the social sciences, human experimentation involves the study of human behavior under controlled conditions using scientific methods. The practice of using human beings as experimental subjects was borrowed from the medical sciences in the late nineteenth century by those who later were credited with helping to lay the foundation for modern psychology. Separately, William James (1842–1910) in the United States and Wilhelm Wundt (1832–1920) in Germany established the first experimental psychology laboratories in 1875. These pioneers conducted simple experiments involving human perception,

memory, and cognition. Their success with the experimental approach revolutionized the study of human behavior and significantly influenced the development of all of the social sciences throughout the twentieth century. Today human experiments are widely accepted as an important research tool not only in psychology, but also in sociology, economics, and other specialized fields.

Experiments using human subjects can assume a wide variety of designs and employ simple to complex procedures. The most basic form of a human experiment involves two sets of subjects—a treatment group and a control group. Subjects in the treatment group are exposed to some form of stimulus (experience) that is under controlled manipulation by the experimenter. Subjects in the control group do not receive the stimulus, but are like the treatment group in all other respects. The resulting effect of the stimulus on the treatment group is then measured and compared to the control group. For example, a researcher interested in the effect of background noise on students' reading comprehension may design an experiment where students in a treatment group are asked to read a passage from a book while a radio is played nearby; meanwhile, students in a control group are asked to read the same passage, but in a noiseless environment. Both the treatment group and control group students then take a test on the assigned reading and the test results are quantitatively compared and contrasted. Researchers can manipulate various elements of an experiment to test a variety of hypotheses. In this example, the researcher could examine how the *type* of noise independently affects reading comprehension by alternating music with talk, or even white noise, while holding all of the other elements the same. Likewise, the effects of *age* or *gender* could be explored by selecting human subjects from differing populations. Thus, even a simply designed experiment can be a powerful research tool. Beginning with this basic approach, social scientists over the past century developed sophisticated techniques and procedures to study a vast array of human behavior. However, the widespread practice of human experimentation also caused social scientists to carefully examine their own motives and ethics.

ETHICAL CONSIDERATIONS

Just as the modern history of using human beings as experimental subjects in biomedical research is littered with controversy and scandal, the same is true in the social sciences. In the decades following World War II a number of human experiments made headline news due to the ethical questions that they raised. The most noteworthy of these include Stanley Milgram's "obedience to authority" study in 1963 and the Philip Zimbardo's "imprisonment" study in 1973.

In Milgram's study an experimenter instructed human subjects to administer increasingly severe electrical shocks to another, unseen person. Unknown to the subjects, the shocks were fictitious and the other person was collaborating with the experimenter. In response to the "shocks" the collaborator would scream, leading the subject to believe that the shocks were real. Milgram conducted the study to explore how people respond to authority figures when directed to perform harmful acts against other human beings. Likewise, Zimbardo too was interested in studying the human reaction to authority, but did so in a simulated prison context. Zimbardo assigned "guard" and "prisoner" roles to subjects and then proceeded to observe their behavior as subjects were instructed to undertake various activities common to life inside a U.S. prison. The experiment took place in a college laboratory especially redesigned, complete with cells, to simulate a prison environment. During the course of the experiment the confrontations between the guards and the prisoners became so intense that a prisoner rebellion ensued and a breakout was attempted. Given these events, concern for the physical and mental safety of the subjects caused the experiment to be terminated prior to its planned conclusion.

Although no one was seriously harmed in either study, the Milgram and Zimbardo experiments are often cited along with notorious cases in biomedical research, such as the decades-long "Tuskeegee syphilis study" in which, to serve as a control group, poor African Americans infected with syphilis were denied medical treatment; the fallout from this experiment led to regulatory oversight of human subjects research in the United States and in other nations. In 1974 the U.S. Congress passed the National Research Act, which established a National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. This body's 1979 "Belmont Report" (named after the conference center where the commission met) set forth the three basic ethical and moral principles that serve as the foundation for the regulatory rules that now govern all human experiments conducted at institutions receiving funds from the U.S. federal government. These three principles are respect, beneficence, and justice.

The principle of respect includes the tenet that experimental researchers should honor all human subjects' right to personal dignity, freedom of choice, and privacy. The beneficence principle stipulates that researchers conducting human experiments have a societal obligation to maximize the benefits and minimize the costs associated with their work. Finally, the principle of justice concerns the obligation of researchers to treat all human subjects with fairness.

The Belmont Report proposed that each of the three basic principles have equal moral weight and recognized that in some situations they may conflict with each other. Therefore, the commission recommended that experiments using human subjects should be objectively evaluated and judged based on their own merits relative to all three principles. This perspective is clearly reflected in the prevailing federal regulations that shape the way human experiments are conducted today.

REGULATORY ISSUES

The primary regulations that govern the practice of human experiments in the United States are included in the Federal Policy for the Protection of Human Subjects (*Code of Federal Regulations* Title 45–Part 46). This policy is often referred to as the "Common Rule" because it has been adopted by sixteen federal departments and agencies that conduct or financially support research using human subjects. The Common Rule is explicitly based on the Belmont Report's three ethical and moral principles.

Under the principle of respect, the Common Rule regulations require researchers to explicitly obtain each human subject's informed consent before proceeding with any experiment. All potential benefits and harms to the human subject must be clearly explained and each subject must have the option of quitting the experiment at any time. The regulations also require researchers to maintain the privacy of their human subjects by not divulging the names or any personally identifying information collected during the course of an experiment.

To uphold the principle of beneficence, the Common Rule regulations require researchers to ensure that all human experiments possess a favorable ratio of potential benefits to potential risks. Furthermore, researchers must demonstrate that they are capable of properly conducting human experiments and that they have procedures in place to handle the apparent risks.

Federal regulations derived from the principle of justice include the requirement that human subjects be selected in a manner such that the risks and benefits of participation are equitably shared across participants. The justice principle is also the foundation for a variety of rules that ensure that vulnerable populations are not exploited by researchers conducting human experiments. Thus, numerous regulations safeguard prisoners, children, the mentally impaired, and other special groups.

Enforcement of the Common Rule regulations is a decentralized process, and primary oversight is at the local level. The policy mandates the establishment of institutional review boards (IRBs, also known as internal review boards) at all institutions, including universities and research centers, that conduct human experiments and receive federal dollars. An IRB is composed of professional researchers and administrators who screen proposals for research involving human subjects. Researchers wishing to conduct human experiments, or any other research activity that includes the observation of human behavior or the collection of data from human beings, must receive approval from their institution's IRB before proceeding. Local IRBs are charged with enforcing the federal policies and protecting the rights of human subjects. Institutions have a powerful incentive to maintain a diligent IRB because the code allows for the withdrawal of all federal funding from institutions found in violation of the Common Rule.

The influence of the Common Rule and the institutionalization of local IRBs is a topic of debate among many American social scientists. Most agree that enforcement of the Common Rule does protect human subjects from overtly risky experimental practices, but some argue that the federal code stifles research activities that inherently carry low levels of risk. For example, researchers proposing to conduct a marketing survey or an oral history project must receive either approval or an exemption from their local IRB, even though the personal risk of participating in either of these practices is negligible. An IRB review requires paperwork and time commitments that may discourage some researchers from pursuing a project. Additionally, the decentralized approach of enforcing the Common Rule results in an uneven application of the regulations. Projects that receive approval from one local IRB may not be approved by another IRB, causing difficulties for research teams composed of members from different institutions. Even though these hurdles exist, the number of empirical research studies using human subjects, as recorded in the academic literature, continues to increase each year with little evidence to suggest that the regulations have significantly affected the quantity of research conducted.

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EXPERIMENTS, MONTE CARLO

SEE *Monte Carlo Experiments.*

EXPERIMENTS, NATURAL

SEE *Natural Experiments.*

EXPERIMENTS, PRISON

SEE *Zimbardo, Philip.*

EXPERIMENTS, SHOCK

The term *shock experiment* brings to mind ghastly images. Most of these experiments use animal participants and a level of shock that often is more startling than painful (like the shock we sometimes receive when exiting a car). Some shock experiments use human participants, but rather than shocking them, these experiments usually only lead people to believe they will receive a shock or will be delivering shocks to others. Even though these experiments carry a negative connotation, the conclusions drawn from some of them have had a significant impact on psychology and other disciplines. The three main areas in which shock experiments have been used are learning, emotion, and obedience.

LEARNING

Shock experiments are used to study learning (i.e., a change in behavior due to experience). Classical conditioning is a form of learning involving associations. Most humans and animals learn a behavior after being exposed to sequentially presented stimuli. For example, a researcher might expose a rat to a light and then deliver an electrical shock to its feet. Eventually, the rat will learn that the light is a signal for the shock; turning it on will cause the rat to behave in the same way it would if shocked. The rat has learned to associate shock with the light. Although this example is relevant, most shock experiments investigate the more complex aspects of learning.

EMOTION

Shock experiments are used to investigate emotions such as anger and moods such as depression. In a well-known set of experiments in the 1960s and 1970s, Martin Seligman (b. 1942) and colleagues used electrical shocks to study personal control and depression. In one experiment, Seligman delivered inescapable shocks to a group of dogs. Later, these dogs (and a control group of dogs not exposed to the inescapable shocks) were placed in a cage split in half by a barrier that could be jumped to reach the other side. When Seligman electrified one side of the floor, the dogs previously exposed to inescapable shocks were less likely than the control-group dogs to jump to the safe side of the cage. The dogs that failed to jump to safety had learned to be helpless and exhibited depressive-like symptoms.

This phenomenon was labeled *learned helplessness*. Experiments revealed that some humans also exhibit depressive-like symptoms when in uncontrollable situations (e.g., inescapable noise). The identification of learned helplessness was important in revealing the thought processes involved in depression. Researchers continue to study learned helplessness in humans and animals, and electrical shocks are routinely used in these experiments with animals (most often rats).

OBEDIENCE

Stanley Milgram (1933–1984) made shock experiments infamous in the 1960s, leading people to equate psychology with shocking people. Milgram was interested in the conditions that foster obedience and disobedience. Obedience is the carrying out of a command given by a person of authority. Milgram's interest in obedience was sparked partly by the Nazi atrocities, which spurred him to investigate to what extent ordinary people would harm an innocent person when ordered to.

Milgram studied 1,000 participants in several experiments. His basic experiment involved the use of a shock machine, an authority figure, and forty male participants who believed that the experiment was investigating punishment and memory. Participants were told that they would be required to deliver electrical shocks to a person in another room whenever he answered a question incorrectly, and they received sample shocks of 45 volts to convince them that the shock machine was real. The participant was told to increase the intensity of the shocks by 15 volts with each incorrect answer by flipping a switch on the machine, which had settings from 15 to 450 volts and ominous labels below the voltage readings (e.g., "slight shock," "moderate shock," "strong shock," "very strong shock"). Although the participants were convinced that they were delivering painful shocks, in fact, the person in the other room was a confederate (i.e., an accomplice) who did not actually receive shocks. The authority figure, a stern man in a lab coat, ordered the participants to shock the confederate whenever an incorrect answer

was given. At several points, the confederate complained of pain and asked to be released, eventually shouting "My heart's starting to bother me now. Get me out of here, please. My heart's starting to bother me. I refuse to go on. Let me out."

Milgram was interested in determining the level at which participants would discontinue their obedience by refusing to deliver shocks. Of the participants in the experiment described here, 65 percent obeyed the order to deliver shocks up to 450 volts. These individuals obeyed even after the confederate stopped answering (presumably because he was incapacitated). This high level of obedience stunned Milgram and the world.

Milgram's experiments are classics in psychology. His findings are provocative because they revealed the capacity ordinary people have for obeying destructive orders. Milgram's use of deception, however, was considered unethical by many people. The participants believed they were inflicting harm, and many exhibited signs of extreme stress (e.g., trembling, sweating, biting of the lips, and stuttering). Critics contended that permanent harm was imposed on participants. Milgram countered critics by contacting many former participants; only 1 percent reported regret at having been in the experiment. Furthermore, a psychiatrist interviewed forty participants and found that none of them had suffered permanent harm.

The ethics of Milgram's experiments are debatable. Nonetheless, his and other controversial experiments (e.g., the Tuskegee study) prompted changes in research standards. In 1974 the National Research Act became law. This act, along with guidelines written by the American Psychological Association, required that human and animal research be reviewed by Institutional Review Boards (IRBs), which ensure that no undue harm is done to humans or animals, and that humans voluntarily consent to participate. Although deception is allowed, the deception permitted by IRBs does not typically involve physical harm, but rather the mental discomfort that comes from being deceived.

Although it is certainly doubtful that an IRB would approve an experiment such as Milgram's, shock experiments are routinely conducted on animals (and to a lesser extent on humans), but the level of shock typically used in these experiments is far from debilitating. In questioning the ethics of any experiment, one should consider the amount of pain inflicted and the knowledge to be gained before making definitive conclusions about the value of shock experiments.

SEE ALSO *Ethics in Experimentation; Experiments; Experiments, Human; Milgram, Stanley*

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Brian P. Meier

EXPLOITATION

In *Keywords* (1976), his foundational book on historical semantics, Raymond Williams includes discussion of the word *exploitation* because it illustrates the general problem of how important historical and social processes occur within language. On the one hand, *exploitation* is a key word in the English language because it is tightly bound up with the problems to which it refers; and on the other, it is an exemplar of what Williams calls "transfer"—that is, how new kinds of relationships and new ways of seeing relationships appear in languages, in this case by transferring a word from one semantic usage or historical context to another.

There are three broad senses in which exploitation is currently deployed. The first is as a modern form of industrial or commercial land use (or mineral extraction) derived probably from its Latin root meaning an "arrangement" or "explanation." This particular use came into English in the nineteenth century, often in regard to the commercial exploitation of the colonies, building upon the fourteenth- and fifteenth-century meanings of *exploit* as "successful progress" or "taking advantage." The meaning of *exploitation* as making use of resource opportunities for social advancement—the exploration of oil resources in Nigeria, for example—remains commonplace.

A second meaning is a generic sense of unjustness or oppression, referring to a potentially wide range of social relations across time and space (e.g., exploitation of men by women, workers by capitalists, slaves by slave owners, low castes by high castes, serfs by feudal overlords). The range of opinion as to what constitutes exploitation is substantial, ranging from the instrumental treatment of humans (Buchanan 1985)—a Kantian view—to coerced activity (Moore 1973) to psychological harm (Hill 1994). The analytical content is of less concern than its moral standing and the moral force of the reasoning (i.e., whether and how the state should prohibit exploitative transactions or refuse to enforce such agreements).

The third meaning, which is the focus of this entry, is explicitly analytical in the sense that it purports to provide a theoretical and conceptual ground on which the claim—A exploits B when A takes unfair advantage of B—can be assessed. In Old French, the feudal meaning of the word *exploitation*—a seizure of products from the land for which a tenant had failed to pay homage—provides a foretaste of its modern use in the mid-nineteenth century, as its reference is increasing the industrial capitalist system. In philosophical terms, one can say that social science seeks to understand the truth conditions under which such a claim can be made of a particular social setting. It is in this sense a term of social critique—exploitation refers to people, not resources—and it is very much rooted in classical political economy. Whether drawing from Adam Smith, David Ricardo, or Karl Marx, exploitation is inseparable from class structure and the operations of class-based power. Each of this trio has a moral core to his argument, but the forms of measurement differ radically among them. Although exploitation can also be accommodated within neoclassical economics or Weberian social theory, it is within the Marxist tradition that the analysis and theorization has received its fullest elaboration.

The notion of an unjust benefit from the labor of others that emerged by physiocratic thinking was formalized by Smith and Ricardo in the distinction between productive and unproductive labor and the question of the shares in the distribution of wealth. Neither Smith nor Ricardo was especially concerned with the moral class atlas of income distribution unless it concerned the landlord class. Conversely, the English anticapitalist and socialist writers of the 1830s (e.g., Thomas Hodgskin, Robert Owen) formulated the first Ricardo-inspired theory of exploitation that turned on the appropriation of wealth by the owners of capital and employers as an unjust deduction from the product of labor. In France, the Saint-Simonians and Pierre-Joseph Proudhon came to similar conclusions through an analysis of property ownership. Few of these public intellectuals agreed on the justness of the rewards due to property (rent, interest, profit), but they held in common the idea that, *contra* Simonde de Sismondi, exploitation was less a regrettable accident than central to the operations of the modern economic system.

From these tentative beginnings, the theorization of exploitation matured in the work of Marx and the notion of surplus appropriation and the labor theory of value. Marx's account identifies a fundamental contradiction at the heart of capitalism—a contradiction between two great classes (workers and owners of capital) that is fundamentally an exploitative relation shaped by the appropriation of surplus. Unlike feudalism, in which surplus appropriation is transparent (in the forms of taxes and levies made by landowners and lords backed by the power of the Church and Crown), surplus value is obscured in the capitalist labor process. Marx argued that labor is the only source of value, and value is the embodiment of a quantum of socially necessary labor. It is the difference between the sale of a worker's labor power and the amount of labor necessary to reproduce it that is the source of surplus value. The means by which capital extracts this surplus value under capitalism—through the working day, labor intensification, enhancing labor productivity—coupled to the changing relations between variable and constant capital determine, in Marx's view, the extent, degree, and forms of exploitation. In the first volume of *Capital* Marx identifies the origins of surplus value in the organization of production (the so-called "social relations of production"). In volume 2 Marx explains how exploitation affects the circulation of capital, and in volume 3 he traces the division of the total product of exploitation among its beneficiaries and the contradiction so created. In Marxist theory, two kinds of material interests—interests securing material welfare and interests enhancing economic power—are linked through exploitation (exploiters simultaneously obtain greater economic welfare and greater economic power by retaining control over the social allocation of surplus through investments). Members of a class, in short, hold a common set of interests and therefore have common interests with respect to the process of exploitation.

In the wake of Marx's work, the central debates over exploitation has turned on (1) whether the labor theory of value is a necessary condition for any truth claim about exploitation, (2) whether exploitation can be made congruent with complex forms of class differentiation associated with modern industrial society, and (3) whether there are non-Marxist accounts of exploitation. In neoclassical economics, for example, exploitation is a type of market failure due to the existence of monopoly or monopsony. In more developed versions of this organizational view, exploitation can be rooted in extramarket forces, for example free riding or asymmetric information (the so-called "principal agent problem"). There is a heterodox side to conventional marginalist approaches to economics—most readily seen in the work of Joan Robinson (1933) and the Cambridge school—in which exploitation is understood as wage payments less than the marginal product of labor (see also Brewer 1987).

More structural accounts of exploitation from a liberal vantage point are found in the ideas of Henry George (2006) and John Maynard Keynes (1936), for whom landowners or rentier classes (nonworking owners of financial wealth) produce not exploitation in the Marxist sense, but exploitation as waste and inefficiency due to "special interests."

In the Marxist tradition there has been in general an abandonment of the labor theory of value—away from the view of Jon Elster that "workers are exploited if they work longer hours than the number of hours employed in the goods they consume" (Elster 1986, p. 121)—toward John Roemer's notion that a group is exploited if it has "some conditionally feasible alternative under which its members would be better off" (Roemer 1986, p. 136). Perhaps the central figure in developing these arguments is Erik Olin Wright (1985, 1989), who developed a theory to account for the contradictory class location of the "middle classes"—that they are simultaneously exploiters and exploited. Building on the work of Roemer, Wright distinguishes four types of assets, the unequal control or ownership of which constitute four distinct forms of exploitation: labor power assets (feudal exploitation), capital assets (capitalist exploitation), organization assets (statist exploitation), and skill assets (socialist exploitation). While pure modes of production can be identified with single forms of exploitation, "actually existing capitalism" all consist of all four, opening up the possibility of the simultaneous operation of exploiter/exploitee relations (for example, managers are capitalistically exploited but organizational exploiters).

A long line of Marx-inspired theorizing has, of course, attempted to grasp exploitative relations between countries. This is the heart of theories of imperialism (Lenin 1916) as the coercive extraction of surplus through colonial states (Fanon 1967), through unequal exchange (Arrighi and Pearce 1972), or through the imperial operation of transnational banks and multilateral development institutions (the World Bank and the International Monetary Fund). The so-called "antiglobalization movement" (focusing especially on institutions such as the World Trade Organization) and "sweatshop movements" (focusing on transnational firms such as Nike) are contemporary exemplars of a politics of exploitation linking advanced capitalist state and transnational companies with the poverty and immiseration of the global south against a backdrop of neoliberalism and free trade (Harvey 2005; Starr 2005).

SEE ALSO *Bureaucracy; Class, Rentier; Colonialism; Economics, Neoclassical; Fanon, Frantz; Globalization, Social and Economic Aspects of; Imperialism; Inequality, Income; Keynes, John Maynard; Labor Theory of Value; Labor, Marginal Product of; Labor, Surplus: Marxist and Radical Economics; Landlords; Latifundia; Marginal Productivity; Marx, Karl; Marxism; Middle Class; Mode of Production; Poverty; Rate of Exploitation; Rate of Profit; Ricardo, David; Robinson, Joan; Slavery; Smith, Adam; Surplus; Surplus Value; Wages; World Trade Organization*

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Michael Watts

EXPLOITATION, RATE OF

SEE *Rate of Exploitation.*

EXPORT PENETRATION

In a world of increased international interdependence, the entry and capture of an increasing share of export markets (or expansion of export market share) plays an important role in a nation's industrial and overall economic growth. The expansion of export market share by a single product

or a group of products is generally referred to in the literature as *export penetration*. The success or failure in export penetration depends on a host of domestic factors, such as production costs where the product is produced, and foreign factors, such as the degree of competition in foreign markets where the product is sold.

Export-oriented industries or countries can use their level of success in export penetration as a performance indicator. Researchers calculate export penetration ratio(s) to measure the degree of export penetration of industries or countries. In this way they can evaluate their export market performance over time and across industries and countries. Depending on the availability of data, export penetration ratios are measured in many ways. The most commonly used method measures the market share captured by the product(s) in the trading partner's import market. For example, if in a given year the value of U.S. agricultural exports to Canada is $100 billion (in U.S. dollars) and the value of Canada's total agricultural imports from all its trading partners is $200 billion, the export penetration ratio for U.S. agricultural exports to Canada is 0.5 (or 50%). This ratio indicates that U.S. agricultural exports to Canada accounted for half of the Canadian market for agricultural imports. Some researchers use other measures such as the proportion (or percentage) of the output exported as a measure of export penetration ratio. An increase in the ratio indicates a successful capture of a larger market share by the exporter, and hence indicates satisfactory market performance.

Export penetration has helped increase both internationalization of economic activity and international integration of economies that contribute to the process of globalization. Export promotion has become a popular development strategy among several developed and developing countries in the recent past. As a result, many countries have carried out economic liberalization and deregulation policies in support of export promotion. Export penetration is of vital importance for the growth of export-oriented industries and the success of these strategies. However, economic liberalization and deregulation policies in developed and developing countries have generated both positive and negative effects on export penetration. On the one hand, they have made export penetration easier by removing barriers to international trade. On the other hand, the removal of barriers has opened up markets for increased competition among exporters in external markets, making it difficult (or easy) for exporters to compete depending on their comparative advantages in international trade. Researchers have linked the level of productivity directly to the degree of export penetration.

SEE ALSO *Absolute and Comparative Advantage; Competition; Exchange Rates; Exports; Globalization, Social and Economic Aspects of; Import Penetration; Imports; Productivity; Trade; Trade Deficit; Trade Surplus; Trade, Bilateral*

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EXPORT PROMOTION

Export promotion policies reflect the interest of national governments to stimulate exports. Subsidies, tax exceptions, and special credit lines are the main instruments used to promote exports. The regulatory aspects of export promotion changed significantly in the late twentieth century. In the past export promotion activities were not substantially regulated, but increasingly since the creation of the World Trade Organization (WTO) in 1995 some export promotion activities have been identified as trade-distorting practices. The WTO has devised rules that allow countries that have been affected by the export promotion practices of their trading partners to use the WTO's dispute-settlement procedure and in some cases retaliate.

Export promotion is sometimes seen as a complementary development strategy to import protection. While import protection usually allows infant industry to develop, export promotion allows access to external markets. Foreign demand is often required by the limited size of domestic markets and the need to achieve economies of scale, essential in many productive activities. In a 1984 article Paul Krugman argued that, under increasing returns to scale, import protection may act as a form of export promotion, because in this case protection would allow considerable gains in terms of productivity that would enhance the possibilities of exporting. However, in policy circles export promotion or export oriented industrialization (EOI) is seen more often as an alternative development strategy to import substitution industrialization (ISI).

There are two main interpretations about the advantages of export promotion. One has a laissez-faire bias,

while the other emphasizes the role of state intervention in promoting exports. Conventional wisdom suggests that an emphasis on exports forces integration into world markets and a more efficient allocation of resources, because external markets impose discipline by eliminating uncompetitive firms. In other words, exports affect positively the supply side of the economy. This view, exposed by Ian Little, Tibor Scitovsky, and Maurice Scott in 1970 and by Bela Balassa in 1971, was influential within the World Bank and the International Monetary Fund (IMF), and it shaped the Structural Adjustment Programs (SAPs) of the 1980s and influenced the liberalization strategy of the Washington Consensus. The studies by Anne O. Krueger and Jagdish Bhagwati, both in 1978, and by Demetris Papageorgiou, Michael Michaely, and Armeane M. Choksi in 1991 suggested that ISI policies generally did not produce sustainable increases in income per capita and that export promotion policies were more appropriate for achieving that goal. Export promotion, in this view, is associated with liberalization and market reforms.

Defenders of outward orientation tended to argue that EOI was behind the successful experience of the Asian countries. The World Bank's 1993 report *The East Asian Miracle* supported the view that East Asian economies' successful export performance resulted from the implementation of market-friendly policies. Several authors have shown the limitations of the World Bank position. Ajit Singh, in his 1995 paper "The Causes of Fast Economic Growth in East Asia," argued that despite the strong export orientation, the East Asian economies were not fully integrated with the world economy and that ISI was an integral part of the East Asian strategy in the 1950s and the 1960s. The equalization of export orientation with free trade is also misleading. In her 2001 *The Rise of "the Rest,"* Alice H. Amsden argued that the state intervened heavily in the economy of successful least developed countries (LDCs). In the East Asian economies, protection, conditional on export promotion, allowed import-substituting infant industries to become internationally competitive export-oriented industries. More generally Francisco Rodríguez and Dani Rodrik, in an influential 2000 article published in the *National Bureau of Economic Research (NBER) Macroeconomics Annual*, showed that the evidence for a negative relationship between trade barriers and economic growth is weak at best.

The alternative view emphasizes the role of exports in expanding demand, in contrast with the conventional view that emphasizes supply effects associated with improved resource allocation. Higher demand provides an outlet for producers in economies with relatively limited domestic markets. The foreign trade multiplier, developed by Roy Harrod, indicates that net exports have a positive effect on the level of activity. Nicholas Kaldor argued that higher levels of exports lead to strengthening productivity, lowering unit costs, which would then positively impact exports. This positive effect of exports on productivity, known as the Verdoorn effect, reduced unit costs and led to further increases in export in a cumulative process of economic development formalized by Robert Dixon and Anthony Thirlwall in their 1975 paper. The notion of a circular and cumulative process of growth led by exports harks back to Adam Smith's vent for surplus principle.

The alternative view also differs from conventional wisdom in that it does not equate export promotion with free market policies. Raúl Prebisch, in a United Nations 1964 report, emphasized the importance of export promotion and access to the markets of developed countries to promote industrialization in LDCs. More importantly, to avoid recurrent balance of payments crises, LDCs should diversify their exports rather than rely on commodity exports. Prebisch argued that LDCs should replace traditional commodity exports with manufactures or semi-manufactures exports. Industrial policy would have a central role in promoting export diversification. State selective intervention, by providing support for research and development (R&D), imposing restrictions on licensing and royalties, and coordinating with and among private sector agents, is central to increase and diversify exports.

Several authors have also emphasized the limitations of the EOI strategy. Robert A. Blecker, in his 1999 essay "The Diminishing Returns to Export-Led Growth," noted that export-led growth is a strategy that cannot be pursued by all countries at the same time. Export promotion requires that at the other end there is an importer of last resort, in other words, a country with the international reserve currency and an incredible appetite for imports. Also the integration of China into the world economy and its relatively low labor costs suggest that countries with higher labor costs would find it increasingly difficult to pursue export oriented development strategies. The global imbalances that result from simultaneous export promotion efforts around the globe are a threat to the stability of the global economy.

SEE ALSO *Balance of Trade; Developing Countries; Economic Growth; Import Substitution; Industrialization; Infant Industry; International Monetary Fund; Mercantilism; Prebisch-Singer Hypothesis; Protectionism; Structural Adjustment; Surplus; Terms of Trade; Trade; Trade Deficit; Trade Surplus*

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EXPORTS

Exports are goods and services produced within one country (or territory) and sold by economic agents (individuals or firms) of that country to economic agents of another country. Exports are an important part of international trade, the counterpart being imports, which allow countries to participate in the global economy by expanding their markets for goods and services.

Exports originated with the start of communication and have been present since prehistoric times. According to the historian Peter Watson, people begun bartering goods and services 150,000 years ago, as part of long-distance commerce. There is also evidence of exchange of obsidian and flint during the Stone Age, while materials used for making jewelry were exported to Egypt since 3,000 BCE. Long-range export routes first appeared in the third millennium BCE, when Sumerians in Mesopotamia traded with the Harappan civilization, and continued with the Phoenicians, who traveled across the Mediterranean Sea and established trade colonies. From the beginning of the Greek civilization until the fall of the Roman Empire in the fifth century, exports from the Far East to Europe flourished. However, the fall of the Roman Empire and the Dark Ages led to a disruption of the main export networks. Subsequently, noteworthy landmarks included the contribution of Vasco da Gama to the trade of spices and the dominance of Holland, Portugal, and Britain in the sixteenth, seventeenth, and eighteenth centuries, respectively. Exports continued to expand in the nineteenth and twentieth centuries, particularly after World War II with the creation of international institutions, and in the twenty-first century with the telecommunications revolution.

The reduction of barriers to international trade has been crucial for exports. With technology improvements—container ships, telecommunication networks, and the Internet—it is easy for producers in one country to reach consumers in another and to export their products quickly. Governments have also recognized the importance of free trade and have reduced export (and import) quotas and tariffs, including in the context of multilateral agreements (the European Union and the North American Free Trade Agreement). Moreover, the World Trade Organization was created to facilitate free trade by mandating mutual most favored nation trading status between all members. Finally, to help exporters find markets for their products, countries have set up export promotion agencies as an integral part of their export strategies.

The payments and receipts associated with exports take place in major international currencies (U.S. dollar, euro, and yen) and are recorded in the current account of the balance of payments. The latter is usually kept in terms of the international currency in which the country's majority of trade transactions are conducted. The current account balance is calculated as the difference between exports and imports of goods and services. When the value of receipts from external transactions exceeds (falls short of) the one of payments, the country runs a current account surplus (deficit). Several different models have been developed to study export developments and analyze the effects of export policies. The Ricardian model—

developed during the first quarter of the nineteenth century by economists David Ricardo, James Mill, and Robert Torrens—postulates that countries specialize in producing and exporting what they produce best. The Heckscher-Ohlin-Samuelson (H-O-S) model incorporates the neoclassical price mechanism and argues that the pattern of exports (and trade) is determined by differences in factor endowments (labor, capital, and know-how). It predicts that countries will export (or import) goods that make intensive use of locally abundant (or scarce) factors. Finally, the gravity model postulates that exports and imports are determined by the distance between countries and the interaction of the countries' economic sizes.

Macroeconomic policy could have significant influence on export developments, since the demand for a country's exports is a function of each good's price in foreign currency. Thus, macroeconomic policies that affect the exchange rate weigh on exports. For example, tight monetary and expansionary fiscal policy both lead to a higher real interest rate, which makes domestic assets attractive to foreign investors; as foreigners demand domestic assets, the real value of the domestic currency rises sharply. Because the domestic currency is strong, exports become more expensive and thus could fall sharply.

One measure to gauge the importance of exports is their ratio to gross domestic product, known as the index of openness. Countries with high value of the index are considered relatively open, while the opposite is the case for relatively closed economies. In line with globalization trends, the average (worldwide) index of openness increased from 30 percent in 1980–1990 to 40 percent in the beginning of the twenty-first century. The most open economies have values of the index over 100 percent: Hong Kong (190% in 2004), followed by Luxemburg (146%), and Malaysia (121%). On the other hand, relatively closed economies are characterized by low openness indexes: Burkina Faso (8.6%), Burundi (8.9%), and Rwanda (10.3%).

According to the World Trade Organization, in 2005 total exports reached $12.6 trillion, comprising $10.2 trillion of merchandise exports and $2.4 trillion exports of commercial services. Exports of goods and services each increased by an annual average of 10 percent over the 2000–2005 period. Europe dominates world exports, accounting for 43 percent of the total in 2005; Asia follows with 28 percent, and North America with 15 percent. At the individual country level, in 2005 the five largest exporters of merchandise goods were: Germany (9.3% of world exports), the United States (8.7%), China (7.3%), Japan (5.7%), and France (4.4%). The leading exporters of services were: the United States (14.7% of world exports), United Kingdom (7.8%), Germany (6.2%), France (4.8%), and Japan (4.5%).

Turning to the commodity composition, manufacturing exports have led overall growth, increasing by an average of 6.5 percent annually during 1990–2005 compared with 3.5 percent for agricultural products and 3.5 percent for fuels and mining products. In 2005 merchandise exports comprised: $7,312 billion manufacturing, $1,748 billion fuels and mining products, and $852 billion agricultural products. As for services, transportation accounted for $570 billion, travel for $685 billion, and other services for $1,160 billion.

Globalization trends and improvements in telecommunications will support strong export dynamics over the medium and long term. However, due attention needs to be paid to maximize the benefits for economic growth of all countries. In this connection, although recent efforts on trade liberalization are encouraging, some calls for protectionist policies raise concerns. There is no doubt that continued trade liberalization will create more opportunities and raise the potential for faster global growth.

SEE ALSO *Absolute and Comparative Advantage; Balance of Payments; Balance of Trade; Exchange Rates; Heckscher-Ohlin-Samuelson Model; Imports; Liberalization, Trade; Macroeconomics; Mill, James; Ricardo, David; Samuelson, Paul A.; Trade; Trade Deficit; Trade Surplus; World Trade Organization*

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Costas Christou

EXPOSURE THERAPY

SEE *Psychotherapy.*

EXPROPRIATION

SEE *Confiscation.*

EXTERNALITY

The term *externality* originated in economics, but it is now widely used in the social sciences and the popular press. In economics it is defined as: (1) benefits or costs of an economic activity that spill over to a third party (e.g., pollution is a negative spillover, while a positive spillover would occur when neighborhood property values are enhanced by the restoration of a rundown house; (2) an incidental effect produced by economic activities, but that does not enter the cost or benefit decisions of either buyer or seller; (3) uncompensated benefits (costs) to others as a result of an action taken by an economic unit; (4) any cost or benefit generated by one agent in either production or consumption activities that also affects another agent in the economy.

The economist Ronald Coase (1960) suggests that externalities are reciprocal, and that it is a case of selective perception to say that A harms B rather than B harms A. Hence, the idea that pollution is a spillover and an incidental outcome seems misplaced. Take the production of steel for example. The recipe for steel includes iron ore, coke, labor, and blast furnaces. Also necessary is a place to put the waste, either on the land or in the atmosphere as a pollutant, as well as a warehouse to store the steel until it is to be used. One of these items is no more incidental than another, and any industrial engineer would know all the ingredients. Is the cost of the waste storage accounted for by the market? How is the cost of labor accounted for? The steel producer would not pay for labor if there were not a prohibition against slavery—that is, if people did not own their labor power. If a producer does not own a necessary ingredient to its production, it must be bought in the market. If it is already owned, the owner will consider its *opportunity cost*, or what it could be sold to others for. This is true of iron ore and labor as much as for a place to put the waste. An owner of the atmosphere, whether it be a steel company or the general public, may submit a bid to the company, and if the bid does not exceed its value in use for producing steel, the company will use it. This is how any resource input is accounted for.

Does the action to use an owned resource taken by the steel company produce an uncompensated cost (or benefit) for others? None could be expected if the resource is owned by the steel company. Thus, if the steel company uses its land for a blast furnace, farmers could not expect to be compensated for the land not being used for agriculture. If a farmer has a better use for the land, then a bid can be made for the resource. The issue then boils down to who owns the resource. To own is to deny opportunities to others who need the resource; to own is to coerce and visit uncompensated lost opportunities on non-owners; and to own is be the recipient of bids, not the payer of compensation to others. The ability of an owner to withhold what others need is the source of all income.

In a world of scarcity, any production or consumption activity affects another agent in the economy. The policy issue concerns who is the buyer and who is the seller of any contested economic opportunity. In the words of Coase, externalities are reciprocal. If A owns, it harms B, but if B owns, it harms A. Externalities are ubiquitous. They are the stuff of human interdependence. The term *externality* might be usefully replaced by *interdependence*, with nothing inherent in the term implying who should own or who should do without if they cannot make an attractive bid to the owner.

What about transaction costs? Given resource ownership, there may be buyers who are willing to meet the reservation price of seller-owners. Their potential bids may nevertheless be overcome by transaction costs and therefore rejected by the owners. The opportunity for a mutually beneficial trade may be lost. The most common example of transaction costs defeating a potential bid occurs in the case of high exclusion cost goods—those goods which if they exist for one person are available to all. This is sometimes called a "market failure," and the inefficiency is often used to justify public taxation (or regulation), perhaps to buy out owners now using the atmosphere as a place to put waste. Those opposed to a role for government in such goods argue that governments may also fail to do the right thing (if that can be agreed on).

New interconnections in the economy are constantly being brought to people's attention through new technology. No one worries whether a person has a particular opportunity to use or exchange an opportunity when that person does not have the ability to affect others. For example, no one worried about air rights before the Wright brothers. But then the issue arose as to who owned the air above the land. The interdependence between landowners and airlines became evident, and the question of ownership arose. Each wanted to be declared the owner, and to be entitled to compensation for any lost opportunity. The effect of each person's use on the other is not incidental. Who should compensate whom is the issue. There is nothing in nature or economics that dictates the outcome of this contest. Cost is not independent of rights when the willingness to pay and the willingness to sell differ. Nations gave ownership to the airlines, and the landowners could not enjoin their use. If this had not been the case, the airline industry would have followed a different growth path. Later, as noise became as issue, regulations set a maximum for noise near airports. These regulations in effect gave ownership of some aspects of the atmosphere to those living near airports. Public choice of ownership, whether implemented by taxes, fees, or liability rules, determines what kind of world we live in.

Externality just points to the interconnections in any economy that might be better understood by referring to the connections as interdependencies, without any presumed policy conclusion. The interdependencies are sorted out by formal and informal institutions serving as property rights (ownership) and determining use or exchange opportunities (who has to buy what from whom). Changing ownership can change what is efficient.

SEE ALSO *Overfishing; Tragedy of the Commons; Transaction Cost*

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F

FABIANISM

In January 1884, in London, about two dozen intellectuals created the Fabian Society. It has never had more than 80,000 members. Still, it has a universal significance in the history of social sciences that has been recognized even by its most outspoken critics.

The immediate antecedent of the creation of the society was a London visit of the New York philosopher Thomas Davidson. His twenty to thirty followers created the Fellowship of the New Life, which wanted to create a community of modest, unselfish people who with their way of life based on mutual love, tolerance, and wisdom would set an example for society. They hoped that the perfection of the individual would in turn lead to a perfection of the society. Some of the members, however, were also interested in direct political action. They created the Fabian Society, aimed at the gradual, democratic socialist transformation of British society. Being convinced of the inevitability of gradual change versus revolutionary turmoil, they adopted the name of the Roman general Fabius Cunctator (c. 280–203 BCE), who successfully delayed battles against the Carthagians in order to gain strength. In its 2004–2005 program the society defined itself as "Britain's leading left of centre think tank and political society committed to creating the political ideas and policy debates which can shape the future of progressive politics."

The founders and early members included some of the wittiest and brightest British minds of the time such as George Bernard Shaw, Beatrice and Sydney Webb, Edward Pease, Sydney Olivier, and Graham Wallas. The first Fabians were trying to pave the way toward the implementation of their ideas via the liberal and the conservative parties. In 1900 they participated in setting up the Labour Representation Committee, which was to become the Labour Party in 1906. They wanted to permeate society with their ideas; this aim was served by the publication of various small sized clearly worded tracts. Their first major publication, the *Fabian Essays in Socialism* of December 1889, gave them fame. In a year and a half the circulation reached 27,000, a number that previous socialist publications had never reached.

FABIAN POLITICAL VIEWS

The Fabians defined their political profile as socialist but clearly distanced themselves from Marxist socialism and socialists. They denied the necessity of a revolution for the transition from capitalism to socialism. The full realization of social and economic reforms (such as factory acts, housing acts, education acts) and legislation about the improvement of working conditions, together with a progressive taxation of capitalists' income, would—they argued—smoothly lead to socialism. As pointed out by G. D. H. Cole in his 1932 essay on Fabianism in the *Encyclopedia of the Social Sciences*: "The economic problem was … presented as a question of the socialisation of monopoly incomes through social ownership of the monopolies.… [There] was no fundamental difference between land and capital or in the incomes derived from them. Both were mainly the results of differential monopoly" (i.e., the extra profit due to variety of land qualities and the potentiality of industrial production). According to the Fabian argument, the social control and fair distribution of income could guarantee the greatest happiness

for the greatest number of people. Fabians assumed that all classes of society could be convinced of the efficiency and utility of their reform proposals. Even after the shocking experiences of various forms of labor unrest they did not adopt any class point of view.

Fabians were keen on the scientific approach to practical political problems. The Webbs initiated such large-scale empirical social studies as *Life and Labour of the People in London* (by Charles Booth, 17 volumes, 1902–1903) or *The History of English Local Government* (9 volumes, 1906–1929).

It was also four Fabians—the two Webbs, Graham Wallas, and George Bernard Shaw—who decided to create the London School of Economics on August 4, 1894. They believed that the systematic scholarly investigations of the functioning of their society needed a new, independent institution that also offered evening classes to workers who wanted to understand the limits and possibilities of political action.

Their impact was not limited to Britain. Eduard Bernstein in Germany wrote the introduction to the German edition of the Webbs' *Industrial Democracy*. The same book was translated into Russian by Vladimir Lenin. What appealed to both Bernstein and Lenin was the Fabian call for the professional leadership of workers. Fabianism was echoed in Asia as well. Independent India's first prime minister, Jawaharlal Nehru, developed an economic policy along Fabian lines. The founder of Pakistan, its first governor Muhammad Ali Jinnah, was a devoted member of the Fabian Society in the early 1930s. The first prime minister of Singapore, Lee Kuan Yew, also admits to having been influenced by Fabianism during his formative years.

INFLUENCE OF FABIAN IDEAS

A great number of people learned of Fabian ideas of social criticism from George Bernard Shaw's plays, such as *Pygmalion*, *Mrs. Warren's Profession*, and *Major Barbara*. When presenting examples of shocking dishonesty and hypocrisy of capitalist exploiters in his works before World War I, with his sharp, witty style, Shaw called for reforms along Fabian lines. In and after 1917 Shaw celebrated the program of the Bolshevik revolution as the incarnation of his ideas. Together with some other Fabians, such as H. G. Wells or later in the early 1930s, the Webbs, he believed in the Soviet model of the forceful implementation of a society without exploitation. This led to a split among the Fabians, as during the interwar period the majority of the members of the society were highly critical of the Soviet agenda. The splits were further aggravated by the conflicts over the evaluation of British imperialism. The Fabian founders hoped that the empire could create resources for easing social tensions: The imperial destiny would call for public expenditure to rear the imperial race. A number of second-generation Fabians were critical of British imperial policy.

Since 1918 when Sydney Webb drafted the Labour Party's first major policy statement (*New Social Order*), Fabian policy has been adopted by the Labour Party and the Society has been affiliated with the party. Leading figures of the party, such as Ramsay MacDonald, Clement Attlee, Tony Benn, Harold Wilson, and even Tony Blair and Gordon Brown have been members of the Society.

In the first decade of the twenty-first century the Fabian Society had about 7,000 members. The Society continues to be affiliated with the Labour Party and its main focus is on fighting inequality and child poverty.

An overall evaluation of the Fabian achievement must recognize that Fabians contributed to reshaping the British party landscape, made socialism an acceptable option in British politics, and have substantially shaped the development of empirical social sciences. In the history of political thought they are perhaps the last to follow the enlightened tradition of believing in the possibility of, and acting for, the reasonable reconstruction of government and society on what they perceive as a scientific basis.

SEE ALSO *Blair, Tony; Bolshevism; Class, Rentier; Communism; Imperialism; Income Distribution; Jinnah, Mohammed Ali; Labour Party (Britain); Lenin, Vladimir Ilitch; Monopoly; Nehru, Jawaharlal; Socialism; Syndicalism*

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FACTOR ANALYSIS

Factor analysis is usually adopted in social scientific studies for the purposes of: (1) reducing the number of variables; and (2) detecting structure in the relationships between variables. The first is often referred to as *common factor analysis*, whereas the second is known as *component analysis* when both variables are operated as statistical techniques. While factor analysis expresses the underlying common factors for an entire group of variables, it also helps researchers differentiate these factors by grouping variables into different dimensions or factors, each of which is ideally uncorrelated with the others.

A major breakthrough in attitude measurement came with the development of factor analysis (1931) by psychologist L. L. Thurstone (1887–1955). Thurstone introduced *multiple-factors theory*, which identified seven distinct and primary mental abilities consisting of: verbal comprehension, word fluency, number facility, spatial visualization, associative memory, perceptual speed, and reasoning. This theory differed from the more general, less separated theories of intelligence that were prevalent at the time and was among the first to show that human beings can be intelligent in different areas. The concept of multiple factors slowly received validation from empirical studies and gradually replaced the unidimensional factor in social research.

In social science studies, researchers often face a large number of variables. Although it is a good idea for scientists to exhaust all the relevant variables in their research to provide thorough responses to research questions, such an approach makes a theory too complex to generalize to empirical applications. For example, a researcher may want to explain delinquent behaviors by exploring all relevant independent variables, such as illegal drug use, harsh parenting, school dropout, school failure, single-parent household, gang affiliation, parent-child bonding, smoking, alcohol use, and many other variables. With so many independent variables, it is difficult to provide a simplified model for a parsimonious explanation of delinquent behavior. A good theoretical explanation should achieve both consideration of completion and parsimony in its coverage of variables. Factor analysis reduces the number of variables to a smaller set of factors that facilitates our understanding of the social problem. It provides such functions to determine the "common factors" of these independent variables. Each of these common factors should be the best representative of certain independent variables, and every factor should be, theoretically, independent from the other factors. Researchers substitute these factors for the variables because the factors can explain a similar degree of variance on the dependent variable but are simpler in terms of the number of independent variables. In most cases, factors found in an analysis may not provide a complete description of the relevant independent variables, but these factors should be the most important factors, the best way of summarizing a body of data.

Factor analysis may use either *correlations* or *covariances*. The covariance cov_{ab} between two variables, a and b, is their correlation times their two *standard deviations*: $cov_{ab} = r_{ab}\, s_a\, s_b$, where r_{ab} is their correlation and s_a and s_b are their standard deviations. Any variable's covariance with itself is its variance—the square of its standard deviation. A correlation matrix can be thought of as a matrix of variances and covariances of a set of variables that have already been adjusted to a standard deviation of 1. Since a correlation or covariance matrix can be translated to one another easily, in many statistical books, authors may use either a correlation or covariance matrix or both to illustrate how *factor scores* are obtained.

The central theorem of factor analysis, in mathematical terms, is that we can partition a covariance matrix M into a common portion C that is explained by a set of factors, and a unique portion R that is unexplained by those factors. In matrix language, $M = C + R$, which means that each entry in matrix M is the sum of the corresponding entries in matrices C and R. The explained C can be further broken down into component matrices $C1$, $C2$, $C3$, … and Cx, explained by individual factors. Each of these one-factor components Cx equals the "outer product" of a column of *factor loading*. A statistical program may rank several matrices Cx if it finds that there is more than one matrix with *eigenvalues* greater than 1. An eigenvalue is defined as the amount of variance explained by one more factor. Since a component analysis is adopted to summarize a set of data, it would not be meaningful to find another factor that explains less variance than is contained in one variable (eigenvalues of less than 1). Therefore, statistical programs often default this rule selecting factors.

Principal component analysis is commonly used in statistics for factor analysis and was introduced to achieve representation or summarization. It attempts to reduce p variables to a set of m linear functions of those variables that best describe and summarize the original p. Some conditions need to be satisfied to have a set of m factors for the purpose of factor analysis. First, the m factors must be mutually uncorrelated. Second, any set of m factors should include the functions of a smaller set. Third, the squared weights defining each linear function must sum to 1, denoting the total variance explained. By using all p, we get a perfect reconstruction of the original X-scores, while by using the first m (with the greatest eigenvalues), we get the best reconstruction possible for that value of m and the most simplified model for interpretation.

Statistical programs allow researchers to select how many factors will be chosen. Ideally, we want to identify a certain number of factors that would explain or represent all the relevant variables. However, the use of factor analysis is not just to find all the statistically "significant" factors; rather, those factors identified should be meaningful to the researchers and interpreted subjectively by them. If the factors generated are meaningless in terms of the compositions of variables, such a factor analysis is not useful. In general, researchers may use exploratory factor analysis to find statistically significant factors (eigenvalues > 1) if they do not have prior knowledge of what factors may be generated from a number of variables. Therefore, it is very common that two different researchers would have two sets of factors even though they used an identical dataset. It is not about who is right or wrong, but whether researchers can adopt a group of factors that lead to better interpretation of the data. If researchers have prior knowledge (e.g., theories) of those factors, they can limit the number of factors to be generated in statistical programs rather than allowing statistical programs to generate them. In other words, researchers determine if the proposed variables are grouped into factors as suggested by the theory.

Researchers may use the rotation of a *factor-loading* matrix to simplify structure in factor analysis. Consider a set of p multiple regressions from p observed variables, wherein each regression predicts one of the variables from all m factors. The *standardized coefficients* in this set of regressions form a $p \times m$ matrix called the factor-loading matrix. We may replace the original factors with a set of linear functions of those factors for the same predictions as before, but with a different factor-loading matrix. In practice, this rotated matrix is expected to be used with simpler structures to better serve researchers' subjective interpretations.

SEE ALSO *Covariance; Eigen-Values and Eigen-Vectors, Perron-Frobenius Theorem: Economic Applications; Methods, Quantitative; Models and Modeling; Regression Analysis; Statistics*

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FACTORIES

The word *factory* refers to a building that has the primary function of housing physical production activities, often referred to as *manufacturing*. Although the origins of the word lie in *manufactory*, implying *making by hand*, the term *factory* can also refer to fully automated production systems. Locating manual craft production within a single building allows it to be changed in a number of ways. Firstly, factories allow production to expand a *division of labor*, splitting a single task into its components. Secondly, factories allow automation of production processes by creating opportunities for *economies of scale*. Thirdly, factories allow greater management control over production, enabling the emergence of a new social system, the *factory system*. The geography of the world economy has been shaped by three profound revolutions through which the contemporary factory system has evolved.

THE PRECONDITIONS FOR THE RISE OF A FACTORY SYSTEM

The idea of the factory emerged as a growing demand for mass-produced goods stimulated the growth of manufacturing industry. International trade in Europe began to take off from the fourteenth century; in the course of the fifteenth and sixteenth centuries, the Dutch economy grew rapidly and the Netherlands became a world power due to Amsterdam's centrality to world trade. Trade provided a number of key preconditions for manufacturing's growth. The linking of farmers to large-scale markets rewarded land-rich farmers able to increase agricultural productivity, releasing surplus labor power. Trade allowed particular localities to specialize in nonagricultural production for international markets while generating competitive pressures on craft producers, who had hitherto operated in local markets protected by town charters and guild systems. At the same time land-poor peasants sought alternative livelihoods and began to undertake small-scale production of domestic goods, such as textiles and pottery. Although some production was undertaken independently, merchants began to control this trade and soon effectively allocated output, in what is known as a *putting-out* system. Trade brought putting-out systems into competition with other producers, stimulating the coordinators—the merchants—to invest in more effective production methods.

THE EARLY FACTORY SYSTEM

These various factors created a situation ripe for attempts at significant productivity improvements through changes in the organization of production. An initial cost-reduction strategy brought formerly dispersed and contracted producers together in a single location, where merchants could more easily coordinate production with sales; this system is known as *putting in*. Moreover *putting in* allowed production to be organized into a series of mechanical tasks undertaken at a much lower cost, which, notes Adam Smith in *The Wealth of Nations* (1776),

allowed for innovation, notably the development of machinery to simplify and accelerate particular tasks.

Toward the end of the eighteenth century, Britain, which was protected by a patent system, underwent a huge mechanization of its craft industries. What can be regarded as the first modern factory was opened in 1769 by Richard Arkwright at Cromford, near Derby. This factory exploited a recently granted patent for a spinning frame, an invention that allowed one unskilled laborer to do the work formerly performed by twenty skilled weavers. Britain became the first world economy to harness external power sources through mechanization, thus providing the basis for the first factory revolution. The numbers of factories increased massively in this period, and the nature of British society evolved in response. On the basis of its improved productive capacity, Britain became a leading world power, supplanting the Netherlands.

In this period the negative features of the division of labor became most evident. The textiles industry experienced massive growth, creating rising demands for labor power. However, the demands for profits also drove the exploitation and immiseration of the labor force, and population pressures created by large-scale migration to industrialized regions led to a slum-based urbanization characterized by *working poverty*. Friedrich Engels cataloged the case of Manchester in great detail and at firsthand in *The Condition of the Working Class in England* (1845).

Factories provided a location in which workers had contact with others experiencing the same conditions as them, and this led to the realization that they could exercise power over capitalists through the collective withdrawal of their labor power. The early British factory system therefore drove the emergence of a politically mobilized and cohesive working class as well as the subsequent emergence of labor representation—namely, the trade union movement. Moreover through its impact on the thought of Engels and Karl Marx, the British factory system ultimately spawned the politics of communism.

THE SECOND FACTORY REVOLUTION: SCIENTIFIC MANUFACTURING

This first factory system depended on a particular contemporaneous British characteristic: a labor surplus resulting from workers having been driven out of agriculture by overseas competition and enclosure. This labor surplus drove down wage costs, which in turn encouraged minimal consideration for the human cost of production: child labor, long working days, and an absence of days off were all common features of the working environment. The labor surplus also reduced the incentive for ongoing investment in capital goods; it allowed for productivity to be raised by worsening employment conditions rather than through further mechanization.

However, this situation was specific to the British context. Other countries lacked a labor surplus; when Germany (after 1870) and the United States (during Reconstruction) began their own domestic industrialization, they faced a different calculus. An American labor power shortage and the ideological commitment of Kaiser Wilhelm to investing in the latest production techniques produced different factory arrangements in these newly industrializing economies. While British factories were limited in size by their surrounding communities and sunk investments into machinery and real estate, there were no such limits on the size of newly built American and German factories. Massive factories required massive investments and coordinated management, leading to the development of "trust" arrangements in America and Wilhelminian capitalism in Germany, in which profits were retained for future investment in large-scale mechanization.

This allowed a radical reconfiguration of the factory away from being the productive arm of a merchant capitalist to being a single element of a vertically integrated production process contained within a single firm. The potential for realizing further profits through resource efficiency achieved from more effectively managing vertical integration was recognized for the first time by Frederick Taylor in his 1911 opus *The Principles of Scientific Management*. Taylor's system was perfected by Henry Ford for the production of the Model T car, the first truly mass-produced automobile, by ensuring that the Ford Company controlled the entire manufacturing process, down to owning fields of cattle from which interior leather was derived. In this system conflict with workers was avoided by paying a high wage, famously five dollars a day; at the same time workers were required to eschew alcohol, gambling, and immorality, prohibitions enforced by company inspection officers. Despite the high wages, this system further reduced the worker to being merely the instrument of the capitalist, a dehumanization process brought to its ultimate conclusion by the scientific automation underpinning the (Jewish) Holocaust.

POST-FORDIST FLEXIBLE PRODUCTION

The Fordist organizational system became increasingly important in Europe during the post–World War II (1939–1945) reconstruction period, although with checks and balances to guard against the dehumanizing effects of capitalist control. Social peace was provided through agreements between corporations, states, and unions representing the interests of workers. In Europe and North

America a great number of large, vertically integrated corporations emerged and came to dominate their national markets.

Scientific management was also introduced in Asia during the postwar period, most notably in Japan, but its principles were based on voluntary teamwork rather than top-down managerial control, enabling individual employees to exercise creativity. This system, termed *Toyota-ism* by some, had a number of advantages over Fordism. Geared to continuous product, process, and technique improvement, it allowed firms to serve increasingly sophisticated consumer markets. The social coordination it required led to a third revolution in the factory system from large vertically integrated factories to the "just-in-time" (JIT) production process, in which networks of factories owned by related corporations deliver goods to each other as they are required in their customers' manufacturing processes. This innovation was complemented by novel developments in manufacturing, such as computer-controlled technologies allowing highly automated, flexible production systems with limited labor inputs.

Although the social contract underpinning JIT was not frequently adopted outside Asia, the competitive success of Japan in the 1980s encouraged many European and American corporations to reorient their production processes toward what has been called *lean manufacturing*. Falling labor costs in emerging economies alongside extreme specialization in the labor process has led many multinational companies to actively pursue separation of research, development, and design activities from manufacturing. This revolution of the factory system saw a change from the production line to more networked production organizations involving more extensive spatial and technical divisions of labor. Although individuals in the factory system exercised more creativity in tightly defined roles, the third revolution was characterized by increasing interdependence between corporate locations and a simultaneous separation of factories from their physical locations because of their involvement in global production networks, enabling increasing offshore manufacturing activities.

SEE ALSO *Automobile Industry; Clock Time; Division of Labor; Factory System; Labor; Management; Production; Productivity; Smith, Adam; Taylorism; Work; Work Day; Work Week*

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FACTORY SYSTEM

The factory system is a mode of capitalist production that emerged in the late eighteenth century as a result of England's Industrial Revolution. Preindustrial England was largely organized around localized forms of production. Goods were produced on family-centered farms, and items such as yarn and other textiles were contracted for larger distribution or produced independently to be sold at a market. After technological innovations created the ability to produce textiles using waterpower, production became centralized in a single place: a factory owned in many cases by members of the former aristocratic class and staffed by workers who were paid a wage (see E. P. Thompson's 1963 book, *The Making of the English Working Class*). While this mode of production began with the cotton and textile industries, it was the development of the steam engine that fully established the shift from craftspeople and localized production into production under the factory system.

There are several interconnected factors beyond technological innovation that created the factory system in England in its particular moment in history. One was the development of banking institutions, which were able to channel investments into the establishment of factories, and which were also able to facilitate economic exchange. Similarly, landowners were able to take advantage of the banking industry's low interest rates to facilitate and finance the development of transit systems, created to move goods produced under this new system. At the same time, a rise in the British population not only increased demand for goods, but also created a large pool of laborers who would eventually work for a wage after the development of the factory system. Finally, social changes in Britain at the time both facilitated the training of upper-middle-class men who would administrate the factory system and also the development of British persons as free workers, as opposed to serfs, who could sell their labor power in exchange for a wage.

As such, the development of the factory system was central to the eventual entrenchment of capitalism on a world scale. It was this very shift in production and landownership, combined with the legal backing of free individuals who may enter into a state-sanctioned contractual relationship, that created what Karl Marx (1818–1883) would identify as the two classes in capitalist society: those who own the means of productions and those who own labor power, which they exchange for a wage in the marketplace. Although both workers and owners share the distinction of equality under the law, it was the old aristocrats who were able to develop the infrastructure and purchase the land to develop factories, and the old serfs who had nothing to sell and exchange but their capacity for labor. This system, whereby the owners of the factories could, through the labor process, transfer the value of the worker's productivity into the value of a commodity, established the efficient yet exploitative mode of capitalist production that is still with us today.

The factory system was not only the foundation for the development of capitalism; it also radically shifted many aspects of social organization and daily life. Agricultural families were largely disenfranchised by this process, and in many cases were required to move to industrial centers in order to survive. They were thrust into the system of wage labor, fundamentally changing relationships between men and women. Whereas in preindustrial societies, all members of the family were involved in production work, the advent of the factory system created a gendered division of labor for middle- and working-class families, whereby men went to work for a wage and women were relegated to household work. In poor and nonwhite families, women worked for a wage outside the home in both formal and informal settings. Men were nearly always wageworkers, while women were either relegated to unpaid work to support the work of the men in their families or themselves worked for wages as a means of survival.

The link of the wage system to factory production created not only a different work process and a gendered division of labor, but also a new form of work. Whereas work under preindustrial forms of organization was often exploitative, particularly under systems of slavery and feudalism, the development of the factory system as a defining feature of capitalism created *alienated* work for the first time. Work is said to be alienated when the worker is in a relationship of production whereby he or she has no autonomy or control over what he or she is producing, where the goods being produced belong exclusively to the owner of the factory, and whereby this process makes the worker alien to himself or herself and his or her community. Marx, in his book *Capital: A Critique of Political Economy* (1867) argued that workers are alienated to the same extent that they are subject to livelihood exclusively through the wage labor market. This same process has created a social life whereby workers are more fundamentally tied to the workplace than to their homes in terms of livelihood and dependence. This process has also created levels of bureaucracy that divide labor into segmented, deskilled tasks.

There has been tremendous resistance to the organization of work and social life under the factory system of production. Historically, that resistance has resulted in the abolition of child labor, the creation of the eight-hour workday, and various other labor laws regulating the extent to which owners of the means of production may exploit their workers. Moral arguments about whose labor is fair to exploit, and under which conditions that labor power may be extracted, have resulted in change. Many of the first nations to develop the factory system are now seeing a decline in factory production, as its mode of efficiency under capitalism seeks ever-cheaper ways to produce goods outside the limits of environmental and labor laws. These same nations have seen a shift from factory production to a service economy. However, the fundamental form of factory production, and the inherent link to exploitative relationships under capitalism, is as yet unaltered.

SEE ALSO *Factories*

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FAHRENHEIT 9/11

Fahrenheit 9/11 is a documentary-style film that explores both alleged causes and consequences of the terrorist attacks of September 11, 2001. The film is highly critical of Republican president George W. Bush and his administration, the U.S. Congress, and the mainstream media. It suggests that the Bush administration did not effectively pursue the perpetrators of the terrorist attacks because of close personal and financial ties to Saudi Arabia, and that Bush exploited the country's unity in the wake of the attacks to promote a predetermined agenda to invade

Iraq. Among other things, the film highlights the differential costs of the Iraq war for rich and poor Americans, and it addresses the extent to which U.S. corporations have profited from the war, juxtaposing this with images of insolvent American communities, where young men and women are heavily recruited to fight the war. *Fahrenheit 9/11* and its creator, Michael Moore, received lavish praise and harsh criticism, and both the film and filmmaker remain controversial subjects.

Michael Francis Moore, born April 23, 1954 in Michigan, is a filmmaker, author, and social commentator. Although most of his films are classified as documentaries, Moore's style deviates from the neutral, observational style that typifies this genre. He refers to his films as "op-ed pieces," and approaches his subject matter with a decidedly opinionated tone. He narrates his own films and employs humor, archival footage, movie clips, and sometimes strained, impromptu interviews to mock his adversaries and persuade audiences to adopt his liberal/left-wing perspective. Moore received an Academy Award for *Bowling for Columbine* (2002) and twice broke records for the highest-grossing documentary film (for *Bowling for Columbine* and *Fahrenheit 9/11*). His 2001 book *Stupid White Men* was a *New York Times* best-seller.

From a financial perspective, *Fahrenheit 9/11* was a huge success. It was the top-rated U.S. film on its opening weekend (despite a limited theater release) and eventually became the highest grossing documentary in history. It was also a critical success, earning Moore the prestigious Palme d'Or at the Cannes Film Festival. The political success of the film, however, is much less clear. A Pew Research Center poll suggested that Moore was "preaching to the choir." Seventy-six percent of those who reported seeing the film disapproved of President Bush, and those who stated that they did not plan to see it were much more likely to be politically conservative (47%) than liberal (13%).

Given Moore's confrontational style, it is not surprising that *Fahrenheit 9/11* was met with strong opposition from conservatives, including attempts to prevent cinemas from showing the film and to block advertising for it. Many conservatives have attacked the ideas presented in the film as well as the filmmaker's credibility. Perhaps more surprising was the opposition that Moore encountered from other liberals, such as *Boston Globe* columnist Ellen Goodman, journalism professor Robert Jensen, and former New York City mayor Ed Koch. Some observers have suggested that by provoking a backlash *Fahrenheit 9/11* may have actually helped conservatives in the 2004 elections, although such claims are difficult to evaluate given the available data. What is clear is that Michael Moore has brought ideologically explicit messages to commercially successful documentary filmmaking, thereby inspiring other liberal documentaries including *The Yes Men* (2003) and *The Corporation* (2003), as well as numerous conservative parodies.

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Jaime L. Napier
John T. Jost

FAIR HOUSING ACT OF 1968

SEE *Integration.*

FAIRY TALES

SEE *Storytelling.*

FALKLAND ISLANDS WAR

The Falkland Islands conflict took place between April 2 and June 20, 1982, and is of interest as an episode of non-superpower military crisis and war. The dispute centered upon the sovereignty of the South Atlantic archipelago, with both Britain and Argentina claiming first discovery and possession. The competing claims were bolstered on the British side by the islanders' wish to remain a crown colony, and on the Argentinean side by the geographic proximity of the islands to the Argentinean mainland.

Prior to the conflict, successive British governments were prepared to reach a negotiated settlement of the sovereignty issue, but the islanders' protests as to their Britishness and their opposition to living under Argentinean rule made a resolution difficult. British policy had therefore assumed a status quo character, involving slow-moving negotiations with Argentina in order to avoid matters coming to a head and to keep the issue off the British domestic political agenda. Little attempt was made to effectively defend the islands. A token garrison on land was supplemented by the lightly armed patrol vessel, HMS *Endurance*, at sea.

Two developments disturbed the status quo and led to fighting. First, a military junta headed by General Leopoldo Galtieri (1926–2003) came to power in Argentina. The junta recognized that capturing the islands would represent a huge domestic political coup. Secondly, cuts in the British defense budget meant that the *Endurance* was publicly slated for withdrawal from Falklands duty, seemingly indicating that British commitment to the islands had waned even further.

Consequently, when an adventurous scrap-metal merchant, Constantino Davidoff, landed on the island of South Georgia and raised the Argentinean flag on March 19, the junta took note of the desultory British response and launched a full-scale invasion. To the junta's surprise, British Prime Minister Margaret Thatcher was not prepared to accept the fait accompli. A naval task force was quickly constituted to recapture the islands.

Given the 8,000-mile distance of the islands from the United Kingdom, the task force would take three weeks to reach its destination. The delay gave ample opportunity for diplomatic maneuvers, although the evidence is that Thatcher personally did not believe the matter could be resolved without the use of force. The United States, alarmed at the prospect of fighting between its European and Latin American allies, attempted to broker a compromise through the good offices of Secretary of State Alexander Haig. Haig, a protégé of Henry Kissinger, sought to repeat the latter's "shuttle diplomacy," but succeeded only in irritating Thatcher and misunderstanding the confusing signals emanating from the junta. His efforts came to naught.

When the fighting began it was episodic but fierce. The Argentinean air force, equipped with a limited number of French Super Etendard fighters and the dangerous Exocet missile, succeeded in sinking the British destroyer *Sheffield* on May 4, and HMS *Coventry* and the supply ship *Atlantic Conveyor* on May 25. The heaviest losses sustained by the British came on June 8, when the landing ships *Sir Galahad* and *Sir Tristram* were hit with the loss of two hundred men. However, the Argentineans failed in their primary mission of damaging the task force's two aircraft carriers, *Hermes* and *Invincible*, upon which the success of the British effort depended. The losses the Argentinean forces sustained in trying were heavy. The single costliest action was the sinking by the British submarine *Conqueror* of the Argentinean heavy cruiser *General Belgrano* on May 4, with the loss of over three hundred men. This episode would later become controversial, as it emerged that a peace plan, sponsored by the government of Peru, was in the process of consideration by the junta when the decision to sink the *Belgrano*, which was sailing away from the British fleet and outside of its declared "exclusion zone," was taken. Participants on the British side have always maintained that they were unaware of the plan and could not have accepted its terms in any case.

The fighting on land, beginning on May 21, pitted the British landing force against numerically superior but demoralized and poorly trained Argentinean defenders. The prospects for Argentinean military success had rested upon establishing superiority over the British naval force, and when this could not be achieved the Argentinean surrender, which came after several sharp engagements including the May 28 Battle of Goose Green, was inevitable.

In the years following the war, the British reinforced the islands through the so-called Fortress Falklands policy. Having failed to achieve the coup of recapturing the islands, the Argentinean junta fell shortly after the end of the conflict. The investment involved in the Fortress Falklands policy, including the influx of a sizable contingent of British troops, revitalized the islands' economy and, ironically, led to greater trade with the Argentinean mainland. Diplomatic relations between Argentina and the United Kingdom were restored in 1990, and in August 2001 Prime Minister Tony Blair became the first British leader to visit Argentina since the war.

SEE ALSO *Diplomacy; Thatcher, Margaret*

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Stephen Dyson

FALSE CONSCIOUSNESS

The concept of "false consciousness" is derived from the Marxist theory of social class. The concept refers to the systematic misrepresentation of dominant social relations in the consciousness of subordinate classes. Marx himself did not use the phrase "false consciousness," but he paid extensive attention to the related concepts of ideology and commodity fetishism. Members of a subordinate class (e.g., workers, peasants, serfs) suffer from false consciousness in that their mental representations of the social relations around them systematically conceal or obscure the realities of subordination, exploitation, and domination those relations embody. Related concepts include mystification, ideology, and fetishism.

Marx offered an objective theory of class, based on an analysis of the objective features of the system of economic relations that form the social order. A person's social class is determined by his or her position within the system of property relations in a given economic society. People also have subjective characteristics, such as thoughts, mental frameworks, and identities. These mental constructs give a person a cognitive framework through which to understand his or her role in the world and the forces that govern his or her life. One's mental constructs, however, may not accurately reflect social reality. In a class-based society, there is an inherent conflict of material interests between privileged and subordinate groups. In such a society, Marx asserted, social mechanisms emerge that systematically create distortions, errors, and blind spots in the consciousness of the underclass. If these consciousness-shaping mechanisms did not exist, then the underclass, which is always a majority of the population, would quickly overthrow the system of their domination. So the institutions that shape the individual's thoughts, ideas, and frameworks develop in such a way as to generate false consciousness and ideology.

Marx's theory of ideology is presented in *The German Ideology* (1845), cowritten with Friedrich Engels. The term *ideology* refers to a system of ideas through which people understand their world. A central theoretical assertion in Marx's writings is the view that ideology and thought are dependent on the material circumstances in which a person lives. Material circumstances determine consciousness, rather than consciousness determining material reality: "The hand-mill gives you society with the feudal lord; the steam-mill society with the industrial capitalist" (Marx 1847). A system of ideology supports the advantage of the dominant class, according to Marxist theory. The concept of commodity fetishism is discussed in *Capital* (Marx 1867). Marx used this concept to refer to the pervasive and defining illusion that exists in a commodity society. A commodity is perceived solely in terms of its money equivalent (its price), rather than being understood as standing within a set of social relations of production. Thus, the labor of the operator of a shoe-sewing machine disappears, and only the money value of the shoes is visible. Marx believed that this is a socially important form of mystification. In other words, the market society obscures the relations of domination and exploitation on which it depends.

Twentieth-century Marxist thinkers have given more systematic attention to a Marxist theory of consciousness and ideology than Marx provided. Georg Lukács (1885–1971) was one of the first European philosophers to reflect seriously on Marx's philosophical ideas. Lukács introduced the concept of false consciousness into Marxist discourse (based on a brief reference by Engels) in relation to a dialectical theory of knowledge. A more sociological treatment of class consciousness was provided by Karl Mannheim (1893–1947) in his effort to formulate a "sociology of knowledge" in the 1930s. The sociology of knowledge attempts to provide a theoretical account of the relationship between knowledge systems and the social conditions within which they emerge; this provides a theoretical framework with which to understand the workings of a system of ideology. Mannheim supported the idea that the social position of the bourgeoisie and the proletariat deeply influence the forms of knowledge that they embody, and he argued that these forms of material bias lead to a systematic falsification of social reality.

Antonio Gramsci (1891–1937) significantly extended Marxist thinking about ideology and consciousness in the 1930s, giving ideology a more active role in politics and history than classical historical materialism. He argued that the proletariat has the ability to influence the terms of its consciousness, so that there is an extended struggle between the bourgeoisie and the proletariat over representations of the existing social reality. The bourgeoisie generally exercises "hegemony" over the terms of ideology through its control of the instruments of consciousness. The proletariat, however, can exert influence through its own cultural institutions. This perspective introduces a major change into the classical theory of ideology, in that it denies that the subordinate class is simply the passive tool of the dominant ideology. The French philosopher Louis Althusser (1918–1990) provided an influential perspective on the role of ideology in a class-based society in *Lenin and Philosophy* (1971). Generally characterized as offering a structuralist interpretation of Marxism, Althusser's writings on the role of ideology in the social system diverge from the interpretation offered in *The German Ideology*. Althusser took issue with the notion that ideology is a feature of consciousness. Instead, he referred to the set of institutions that produce and reproduce social states of knowledge as an "ideological state apparatus." He also disputed the assumption that there is an external social reality independent from ideology, believing instead that all features of reality are expressed in language and are inseparable from the features of consciousness singled out as "ideological."

SEE ALSO *Alienation; Factories; Ideology*

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Daniel Little

FAMILIES, FEMALE-HEADED

SEE *Female-Headed Families.*

FAMILY

It is said that families have always existed and that people have always formed families. However, conceptions of *family* can vary considerably. Until the 1970s, it was believed that the *extended family* had been a social institution since medieval times throughout the Western world. This family form consists of a married couple and the parents of one of them plus the couple's children. However, Peter Laslett (1915–2001) and his Cambridge colleagues showed that although the extended family existed, it was not a social institution. This belief in the long history of the extended family can be understood to be a myth if one considers the high mortality rate during previous centuries, when many mothers and fathers died before their children became adults.

The term *nuclear family* refers to a family formed by a socially accepted marriage between a man and a woman who live together with their minor children. The anthropologist George Peter Murdock (1897–1985) coined the term in his book *Social Structure* (1949). Murdock assumed that almost all cultures have had this nucleus as their basic and preferred family form. Some cultures build upon the nuclear family, while others combine nuclear families. One type of nuclear family is an extended family that consists of at least three generations under the same roof. Another type of combined nuclear family is the polygamous family that, when polyandrous, consists of one woman married (socially) to at least two men. Polygyny is one man married (socially) to at least two women. Another variation would be group marriages consisting of at least two women married to at least two men, but this phenomenon has never been found anywhere as a social institution. Group marriages have certainly existed but only for short periods of a decade or so, and they have never been a society's preferred living arrangement.

The issue of what can be considered a *social marriage* is complicated and unclear. As long as marriages have been known to exist in one form or another, they have mainly been the base upon which new generations grow up. Historically marriage seems also to have been the preferred arrangement for living together. A prerequisite for marriage has been that the couple should be able to afford a home, which means somewhere to live with a bed, a table, and necessary utensils. Situations in which couples have cohabited without marrying have also been common. In some cultures this arrangement, when lasting, is called *common-law marriage;* after some years, the two come to be counted as married (see Trost 1980).

The term *family formation* is still sometimes used as a synonym for marriage. The background is that over the centuries marriage has been linked to four normatively connected elements: holding a marriage ceremony, moving in together, having sex together, and bearing a child within about a year.

WHAT IS A FAMILY?

The term *family* is often presented in definite form, *the* family, a phrasing that indicates that there is only one kind of family. In Western culture at least, this might mean the nuclear family. However, this concept carries a kind of ideological code, which implies that the nuclear family is supposed to be the best and that the concept is reproduced over generations (see Smith 1993). The term *family* can also be connected to the entire range of relatives, especially close relatives.

Family can be considered from various levels. On a societal level, the law might define what a family is; this often means at least one parent and at least one minor child, where the parent is supposed to take care of the child. Another example is family responsibility, where an adult child is supposed to take care of elderly parents. Other persons can also be included—as in, for example, the Sami culture (previously known as Lapps) in Scandinavia, where many, but not all, relatives are counted as family members.

Another level on which family can be considered has to do with companies and other organizations. Some companies differentiate between who can be counted as family, depending upon the situation. For example, an employee may be granted an entire day of leave to attend a funeral for a close family member or relative, while the funeral of a more distant relative will not warrant any time off. Some organizations are considered "family friendly," which may mean that they offer various benefits or discounts to families. *Family* in such cases usually includes only the nuclear family or a simple variation of it.

If ordinary people are asked to name the members of their family, they will give a variety of answers, even when the person asked believes that the meaning of the term *family* is culturally determined. The number of family members can vary from none up to several hundred. Included as family members can be spouses, children, parents, uncles and aunts, grandparents, cousins, and so forth but also lovers, friends, and pets. Family members counted in this way can also include deceased persons. This way of looking at the meaning of family is dependent upon who is asked as well as the situation. For example, someone included in one person's family might not include that person as a member of his or her own family. There are no clear and objective boundaries of what constitutes family when it comes to the individual's definition of her or his family and who its members are.

If people are asked whom they consider to be included in possible constellations of families, they give a variety of answers. Some believe that a one-parent household is not a family, whereas others think it is a family. Some think that the parents have to be married, while others think that cohabiting couples can also be families. Some believe that same-gender couples cannot be counted as a family, while others have a different opinion. This variety of answers means that some individuals and some cultures are very inclusive when it comes to what to include as a family and some are very exclusive.

Sometimes the unit for the concept of family is limited to the *household*. That use occurs primarily in censuses and other demographic studies, but it also occurs among lay people. However, many households include members that no one else in the household would classify as members of their family. At the same time, there are many persons who fall outside the family when using household as equivalent to family. This was and still is the case in some parts of the world where households include servants and other employed persons (see Levin and Trost 1992).

FAMILY-RELATED MATTERS

There are a number of issues related to the term *family* and the concept of family. As mentioned above, marriage can be one of them. Poverty can cause couples to not marry, since societally it is costly to marry. In people's minds, one should have a home when marrying; informal norms in many cultures say that without a roof, a bed, and some kitchen utensils, one cannot marry. Social surroundings are also important, since people often normatively expect a marriage ceremony to be combined with a party for relatives and also for friends and neighbors. Therefore nonmarital cohabitation based on poverty has been common in many parts of the world and remains common in some (Rodman 1966).

A new type of nonmarital cohabitation has developed as a social institution in most of the Western world. With the liberalization that came after World War II (1939–1945), the normative structure of "family formation" was reduced. Now nonmarital cohabitation has made marriage less common, to the point of disappearing in some countries. This movement has made nonmarital cohabitation a social institution in many cultures; it is a kind of cohabitation that is not at all connected to poverty. In many countries, particularly the Scandinavian countries, all or almost all couples live together in a nonmarital cohabitation relationship for years before marrying. The trend toward more nonmarital cohabitation has decreased the number of marriages, and both brides and grooms are on average much older now than in the past.

Another change in the way couples live together is referred to as *living apart together* (LAT). Such relationships consist of a married or nonmarried couple, with or without children, who each have a home and who visit each other, perceive themselves to be an intimate couple, and are so perceived by those in their social surroundings. These relationships have always existed in the Western world among, for example, writers and other artists. The difference between these earlier relationships and those of the early twenty-first century lies in part in the number and in part by the fact that LAT relationships constitute a new social institution. For example, in Sweden about 5 percent of the adult population lives in an LAT relationship (Trost and Levin 2000).

Such relationships could not have developed as a social institution had not nonmarital cohabitation become a social institution with the dissolution of the normative structure of the four elements of traditional social structure listed above. Had not the normative connection disappeared between the acts of marrying, moving in together, having sexual intercourse together, and the expectation of a child within about a year, LAT relationships would not have been possible. The social institution of nonmarital cohabitation is thus a prerequisite for the existence of LAT relationships.

Another issue connected to family is changes in divorce laws and divorce practice. Divorce has for many centuries been a social institution permitted in many cultures but prohibited in others. In the Western world, where the changes have been obvious, claims for more liberal divorce laws came at the end of the nineteenth century as a result of rapidly decreasing mortality rates. With such decreases, the idea of lifelong marriages slowly became obsolete, and divorce laws changed slowly in a more liberal direction. (The number of remarriages in many countries is now the same as in the middle of the nineteenth century. Previously the high mortality rate widowed many married women and men; many of these

widows and widowers remarried, while now most remarriages occur after one or both partners has divorced.)

During the nineteenth century the *total fertility rate* (TFR) was at a global level of above five (children per woman during her fertile lifespan). Partly as a result of improvements of contraceptive techniques and methods (better condoms and diaphragms, preventive pills, intrauterine devices) and propaganda, the TFR has decreased all over the world and even reached the low level of less than 1.5 (average number of children per woman) in many Western countries. These changes have caused few women to have more children than they want, but some will not have as many as they want. In the mid-twentieth century the average age of both parents at the birth of their children was much lower than now, which is one reason for the lower birthrates.

FAMILY FUNCTIONS

From a *functionalist* perspective, family has been seen as fulfilling a set of functions for the individual as well as for society. These functions, which have more and more come to be of historical interest, include the following.

The *reproductive* function means that women customarily give birth to children within a family union, and this makes society able to last in the long run. The early twenty-first century fertility rates in many less-developed countries will cause the population to increase, while in many developed countries the opposite will happen.

The *socialization* function refers to the upbringing of children into adulthood, a process that transfers habits and norms from one generation to another. Historically most socialization occurred within the family, but in the early twenty-first century much socialization is generated via school systems, mass media, and other sources.

The *protective* function gives the members of families protection against bad weather, keeps children in a safe environment, and leads family members to take care of the elderly and the sick. In most parts of the world this function has partly been taken over by society via social security and other social programs.

The *sexual* function means that sexual intercourse would occur within the marital union as part of family. In many parts of the world premarital and extramarital sex is taken care of through the use of prostitutes. Elsewhere the prohibition on premarital sex is no longer an issue with the liberalization of sex norms.

The *religious* function has to do with the exercise of religious activities, which are supposed to occur mainly within a family unit. In many parts of the world secularization has made this function less important.

The *leisure time* function is supposed to support family members during times when no work is needed. This function has in many parts of the world been subsumed by organizations outside the family.

Finally, the *emotional* or *primary group* function ideally takes care of the family members' emotional needs. The term *primary group* was coined by the American sociologist Charles Horton Cooley (1864–1929) in 1909. The idea is that in small groups, of which family is one, the members can feel safe and secure not only physically but also emotionally. Reality, however, can be the opposite, with physical as well as emotional abuse and cruelty sometimes occurring in primary groups. Furthermore family as a primary group depends highly upon the definition one has of family. As mentioned above, membership in a family can vary greatly when considered from an individual perspective. In any case, many studies show that when a disaster strikes, the most important aid givers are family members and other relatives, who tend to be more helpful toward one another than any organization can be. This occurs in part because organizational helpers can seldom give the same emotional support that close relatives can.

For society to work, social order is needed; otherwise chaos will occur, and society will fall apart. When these family functions are in accordance with social norms and when family members, however defined, follow the informal norms, social order will remain relatively stable, assuming no opposing changes occur.

SEE ALSO *Childlessness; Children; Cohabitation; Divorce and Separation; Family, Extended; Family, Nuclear; Family Functioning; Family Structure; Family Values; Fatherhood; Marriage; Motherhood; Parent-Child Relationships*

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Jan Trost

FAMILY, EXTENDED

Families are vitally important for patterning interpersonal behavior, roles, privileges, and obligations within society. These guidelines define how family relations are organized—how mates are selected; who marries whom; who lives together; who is the head of the family; which relatives are most important; and how children are to be reared and by whom. Throughout history, in most of the world, the extended family has been the most common household arrangement. Extended family refers to blood or kin connections that link successive generations through paternal or maternal lines of descent.

Definitions of the extended family incorporate other kin beyond the domestic group who do not belong to the nuclear family. When, for example, a married couple lives with the husband's parents, or a grandparent shares a household, the family changes from a nuclear to an extended one. In his 1995 article "Patterns of Kinship and Residence," Max E. Stanton offers clarity in defining an extended family as "an ongoing body with a geographical base and it transcends the lifetime of its members. The composition of the extended family with its nuclear families and independent single adults changes constantly, but the extended family itself continues with new leaders and new members as individuals depart or as the generations pass away" (p. 100).

An extended family can include a wide array of relationships. There can be genealogical connections between affinal relations (e.g., in-laws, adoptive or foster families, aunts/uncles), consanguineous relations (e.g., cousins, half-siblings), "fictive kin" (those perceived as extended family members, though they are not related by blood or law, e.g., godparents, best friends), or sundry other relations (e.g., stepparents or stepsiblings in blended/reconstituted families). To be succinct, Bernard Farber (2000) and Maria Schmeeckle and Susan Sprecher (2004) support a definition of extended family as a vertical extension of a core nuclear family to include a third (e.g., grandparents) or even fourth generation.

An extended family is composed of one or more of four variants. First, the compound family is formed through the combination of nuclear families or parts of them, such as a polygynous household consisting of one man, his three wives, and their respective children. A second variant is a joint family and includes the parental couple, all unmarried children, and married sons with their wives and children in the same household. The head of household, in which authority is vested, is usually the eldest male. Third, a stem family exists when unmarried children and one married sibling, along with spouse and children, reside in the parental household (i.e., stem family) to ensure the continuity, while the other siblings establish their own households upon marriage. Typically, the eldest son is responsible for caring for his parents until they die, at which time he inherits the estate. This inheritance rule is called primogeniture; whereas inheritance by the youngest son is referred to as ultimogeniture. Finally, the modified extended family is one in which children marry out or migrate from the parental household upon marriage, but engage in common activities with parents and other kin on a regular basis.

Colleen Leahy Johnson (1998), Riley and Riley (1993), and Judith Stacey (1990) observe that extended family occurs in various, voluntary, and malleable contexts, making membership changeable and somewhat ambiguous. It is composed of three interlocking nuclear families: family of origin, family of procreation, and family of affinal relations (e.g., in-laws). The family of origin (or family of orientation) is the group into which a person is born. Most early childhood experiences and learning occur here. By contrast, the family of procreation is a group created when adults adhere to a socially recognized bond, such as marriage, and raise children. The affinal family derives from social connections acquired through family of procreation. Most people retain stable, though changing, status in one or more extended families throughout their lives.

SEE ALSO *Family; Family, Nuclear; Family Structure; Kinship; Marriage*

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FAMILY, NUCLEAR

When people speak of "family," they usually assume that what they mean is clear, yet the composition and structure of families around the world differ tremendously. Some equate family with a household, but this term is also ambiguous because it has been used to variously include all permanent members such as servants or to exclude unrelated relatives. Historically and cross-culturally, families are culturally determined interpretations of genetically and sexually grounded relationships. Further confusion, however, results for individuals involved in stable intimate relationships who consider themselves "family" but are either not willing (e.g., long term cohabiters), or unable (e.g., gay/lesbian relationships) to secure formal social recognition. Despite the complexities and challenges, however, two essential family structures have been posited; namely, nuclear family and extended family.

The basic family from which more complex forms arise is a nuclear family. At first glance, the definition of nuclear family appears to be straightforward. It is composed of parents and their children. A common, more nuanced definition specifies a nuclear family as two or more individuals affiliated by blood, marriage, or adoption. Regardless, a nuclear family is based on either consanguineous or blood relations, affinal relations (those related by marriage), or some combination thereof.

Genetic connections define consanguineous bonds (e.g., parent and child, or brother and sister), while relationships formed as a result of social convention (e.g., husband and wife, or in-laws) are affinally bonded. Affines also include all of a spouse's own genetic relations. Thus, a woman's brother is an affinal relation of her husband. Finally, the spouses of a person's own consanguinal relatives are his or her affines.

A nuclear family is usually, but not necessarily, coresidential. The affinal tie between husband and wife forms the core of a nuclear family. Although spouses may enjoy relative autonomy and mobility in a nuclear structure, the dynamism intrinsic to such an arrangement can threaten conjugal bonds. Yet Martine Segalen (1986) and Azubike Uzoka (1979) illustrate in their works that the notion of an isolated nuclear family fragmented from other kin is a myth. The myth is embedded within and receives recognition from kin or the social group, as Marvin Sussman notes in his 1959 article "The Isolated Nuclear Family: Fact or Fiction."

As comprehensive as definitions of family try to be, most focus on structural rather than functional aspects of the nuclear family. Whether a nuclear family is universal and necessary is debatable, as Arlene Skolnick (2003) and R. Smith (1968) have examined. Luis Lenero-Otero noted in his 1977 work *Beyond the Nuclear Family Model* that cross-cultural comparisons illuminate the ethnocentric problem of using structure as a basis for defining family. Thus, caution must be exercised in looking only at family structure—that is, the number of its members and their roles.

Families are ubiquitous in global society despite remarkable variability in form. The recognition of family heterogeneity is critical to understanding family from an international perspective. When a family includes other relatives beyond the nuclear core—consanguineous (e.g. grandparents) or affinal (e.g., aunts or uncles)—then an extended family exists.

SEE ALSO *Family; Family, Extended; Family Functioning; Family Structure; Kinship; Marriage*

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FAMILY FUNCTIONING

Recognizing the complicated mosaic of family patterns is important for fostering tolerance in light of global diversity. Yet, more attention is given to family structure than to the functions that families are expected to fulfill. Although what constitutes a family is cross-culturally variable, family functions are remarkably similar from culture to culture. Family life typically provides an environment

for ensuring the vital needs of food and shelter, the generation and maintenance of wealth, and the provision of care and other nonmaterial resources. Family functions, regardless of family structure, elicit similar behaviors and practices worldwide (Georgas et al. 2001).

Societies around the world rely on the family to perform certain functions. The basic functions of the family are to: (1) regulate sexual access and activity; (2) provide an orderly context for procreation; (3) nurture and socialize children; (4) ensure economic stability; and (5) ascribe social status. Families further impart affection, care, and adaptive functions. In short, family is considered the supporter of coupling, the source of nurturance and the elemental education of children, the link to the market place, the place of remediation that takes the wayward back, and the hospice where infirm and dependent members seek solace.

Family functions are accomplished in a number of different ways. Typically, marriage or some variant is socially approved as the appropriate outlet for sexual behavior. Families teach and reiterate that certain persons and conditions are more apt for sexual intimacy and affection than others. For example, there are taboos against incest and at certain times against intercourse, such as during menstruation or pregnancy. The regulation of sexual behavior is concerned with more than coitus, and covers such behaviors as hugging, kissing, and touching, as well as attitudes and values. These attitudes and values influence family reactions and cultural prescriptions to such practices as premarital and extramarital relationships (Widmer et al. 1998).

Families are the most widely approved context for bearing and rearing children. Procreation within a family garners social approval for parenthood, and delineates legitimate progeny. Children born outside a conjugal family are often stigmatized. Socialization is perhaps the most important function because it teaches the rules and expectations for behavior both within the family as well as in the society outside. In this respect the family is a miniature social system, with parents as the chief promoters and enforcers of social order. The outcome of the socialization process within the family is critically important for the larger society, which is based on regulation and the shared willingness of citizens to conform to social norms. Typically, family provides the security and support best suited for teaching children life skills, cultural values, and social responsibility. It is doubtful whether children could develop into mentally, physically, and socially healthy human beings without family.

The provision and management of sufficient financial resources is an essential function in order to facilitate the efficacy of other family functions. Families influence the social placement and life chances of individuals. Children generally assume the legal, religious, and political status of their family, whereas other roles are achieved through marriage, occupation, and education.

While some people prefer doing things alone, most need others who care for them, show affection, share joys and sorrows, and give support in times of need. Affection and emotional support are extremely important. A family can recognize changes and reorganize to adapt to its environment more rapidly than other groups. This adaptive function enables families to adjust to new demands and cope with change. Family life can exhibit openness to novel ways of living and thinking that have not developed in other spheres (Boulding 1981; Vincent 1966). While other institutions—religious, educational, political, and economic—may assist with these functions, the primary responsibility is relegated to family.

SEE ALSO *Children; Family; Family, Extended; Family, Nuclear; Family Structure; Family Values; Kinship; Marriage; Parent-Child Relationships; Parenting Styles; Sibling Relationships*

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FAMILY PLANNING

Family planning is a term created in the mid-twentieth century to refer to the ability to control reproduction through access to contraception, abortion, and sterilization, in addition to access to information and education. Reproductive control allows a woman to determine when and whether she will have children. A woman's ability to control the birth and spacing of her children has a direct impact on her educational, economic, and social opportunities. A woman's enjoyment of heterosexual activity can be affected by the fear of becoming pregnant if she lacks information about, or access to, contraception and abortion.

Women have found ways to control their reproduction since the earliest days of recorded history. However,

these methods have not always been safe or effective. By 1900, every method of contraception (chemical, barrier, and natural means) had been invented, except for the anovulant method (the contraceptive pill and related methods of hormone regulation developed in the mid-twentieth century). Access to contraception was limited by law or by technological inferiority. In the United States, contraception and abortion were available through midwives, with a variety of contraceptive methods also available in the open market and through the advice of friends and family. With industrialization, urbanization, and the advent of new reproductive technologies, there was a shift away from women's ability to control their reproductive lives. By 1900, every state had criminalized abortion in most circumstances. In 1873 Congress passed the Act of the Suppression of Trade in and Circulation of, Obscene Literature and Articles of Immoral Use. The Comstock Law, as it was known, was named for the U.S. Postal agent, Anthony Comstock (1844–1915), who lobbied for the bill's passage. The law criminalized, among other things, the distribution of information and materials related to contraception and abortion through the U.S. mail. Legal or not, women often found means of controlling their reproduction, utilizing methods which were sometimes ineffective, dangerous, or in some cases deadly.

In the first decades of the twentieth century, social activists such as Margaret Sanger (1879–1966) and some members of the medical profession initiated a campaign for legalized contraception. Sanger was born into a large working-class family. She attended nursing school and later served as an obstetrical nurse in the Lower East Side of New York City. From her experiences as a nurse and as a child among eleven in her family of origin (her mother died at a young age as a result of multiple pregnancies within a short span of years), Sanger recognized the connection between the inability to regulate fertility and families' economic struggles as well as women's health. Later in life, Sanger would recall stories of women who begged her for information on how to avoid having more children or who fell ill and in some cases died as a result of a botched, illegal abortion.

Sanger's efforts to find information on safe, legal, and effective means to regulate women's fertility merged easily with her socialist perspective. In her socialist-feminist periodical, *The Woman Rebel*, Sanger first coined the term *birth control* in 1914. In the same year, she authored and published a pamphlet on methods of contraception, *Family Limitation*, based on her research on techniques and technologies of contraception available around the world. With her international research in hand, Sanger opened the first birth control clinic in the United States in 1916. One year later, she began to publish the periodical *Birth Control Review*. For more than a decade, the *Birth Control Review* provided readers with news and information on the fight for the legalization of contraception in the United States and overseas. In addition, Sanger traveled widely, organizing speaking tours and international conferences in an effort to coordinate the efforts of medical and social advocates for birth control. Thanks to the work of Sanger and others like her, by the mid-1930s various court rulings allowed contraception to be more widely available in the United States. Sanger's American Birth Control League (founded in 1921) merged with other advocacy groups to become the Planned Parenthood Federation of America in 1942.

Sanger's socialist roots in the birth control movement later evolved into a mainstream call for "planned parenthood"—the appropriate spacing of pregnancies to protect the health of mothers and children. The advent of the contraceptive pill in the United States in the 1960s led to a philosophical shift from birth control as a means of spacing pregnancies to a connection with the women's liberation movement—freeing women from a fear of pregnancy, allowing them to focus on their careers and shape their own destiny.

Sanger remains a controversial figure in American history. Because she founded Planned Parenthood, critics of abortion connect her work with the abortion services offered at Planned Parenthood clinics across the country. In vilifying its founder, they attempt to discredit her organization. However, Sanger repeatedly separated the provision of abortion from contraception. She believed that contraception was the best way to prevent abortion. A second controversy attached to Sanger is the assertion that she was racist. This is the result of her reliance on eugenics discourse in her speeches and articles in the 1920s and 1930s. Her support for the provision of contraception in the African American community and overseas (in China, for example) has fueled this argument. Eugenics, the science of selective breeding, has a long history. Before World War II (1939–1945), it was a term invoked by many in mainstream society, including politicians, physicians, and professors. Eugenicists often called for the use (sometimes compulsory) of birth control (sterilization or contraception) to create a more stable, wealthier society by eliminating society's weakest elements. While some in the eugenics movement focused on health concerns (mental and physical problems), others concentrated on moral concerns (alcoholism and criminal behavior). At its most extreme, racial prejudice led Caucasian middle- and upper-class eugenicists to blame the burgeoning African American and immigrant communities for the nation's problems. An examination of Sanger's perspective on eugenics reveals that her focus was on health and economic improvement (smaller families have a higher standard of living) and was not specifically connected with race.

Contraception was still illegal in many states in the mid-twentieth century until the U.S. Supreme Court, in *Griswold v. Connecticut*, overturned a Connecticut law banning contraceptive use in 1965. The Court ruling legalized contraceptive access for all married persons, based on the right to privacy. In 1972, in *Eisenstadt v. Baird*, the Court expanded the right to access to contraceptives to include unmarried people—again, based on the right to privacy. The same right was invoked in the *Roe v. Wade* decision in 1973, when the U.S. Supreme Court legalized abortion in the first two trimesters of a pregnancy.

Within years of the *Roe v. Wade* ruling, reproductive rights were again limited by law. Between 1996 and 2004, 335 new state laws were created to restrict access to abortion services. Access to abortion was limited by income (the prohibition on Medicaid funding for abortions) and age (parental consent laws instituted at the state level). Other obstacles to access were also created in many states, such as waiting periods mandated between the time of the consultation and the procedure. By 2004 just 13 percent of U.S. counties had an abortion provider. This was the result of both restrictive state legislative action and violence (and the threat of violence) against clinics and clinic personnel.

In 1999 the U.S. Food and Drug Administration approved emergency contraceptives (the "morning-after pill") for distribution with a prescription. Emergency contraception is a stronger dose of the standard contraceptive (anovulant) pill and is effective within seventy-two hours of unprotected intercourse. It prevents the implantation of a zygote (if there is one) on the uterine wall. As its name suggests, it is intended to prevent pregnancy if contraception fails or in the case of sexual assault. In 2006, following years of politically charged debate, the FDA approved emergency contraception for over-the-counter sales (without a prescription) for women over age eighteen.

A chemical abortifacient, RU-486 (named for the French pharmaceutical company Roussel-Uclaf, which patented it), was approved by the FDA in 2000. Women in Europe had used the drug since 1988. In U.S. tests, RU-486 was shown to be 92 percent effective in terminating pregnancies before the seventh week of gestation. The abortion pill was heralded as an alternative to surgical abortion, providing a more private experience—away from the clinics that are the focal point for abortion protesters.

Immediately following the *Roe v. Wade* decision, the religious and conservative right organized opposition to abortion. However, legislative lobbying and clinic protests against abortion have widened in scope to attacks on certain contraceptive methods. Those who believe life begins at conception see some methods—the contraceptive pill, the "morning-after pill," and intrauterine devices—as abortifacients because they act to prevent pregnancy after a zygote has been created. Physicians and pharmacists opposed to abortion may refuse to prescribe, or fill prescriptions for, these forms of contraception. Pro-choice forces, on the other hand, hope to prevent abortion through increased access to contraception and comprehensive sex education. Because abortion is a debate of absolutes, pro-life and pro-choice forces will continue to be engaged in this issue.

SEE ALSO *Abortion; Birth Control; Contraception; Eugenics; Family Structure; Fertility, Human; Population Control; Population Growth; Pro-Choice/Pro-Life;* Roe v. Wade; *Supreme Court, U.S.*

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FAMILY RESEMBLANCE MODEL

SEE *Psychiatric Disorders.*

FAMILY STRUCTURE

Among the most significant social changes that have occurred in recent decades are profound transformations in the structure of the American family. Prior to the last third of the twentieth century, most Americans lived in a family consisting of a husband and wife and their biological children. Both divorce and nonmarital childbearing were relatively rare (Popenoe 1996). Consequently, during the 1950s, over 80 percent of American children under

Family structure changes 1970–2003

Characteristic	Year					
	1970	1980	1990	1995	2000	2003
Household by Type (Percent)	100.00	100.00	100.00	100.00	100.00	100.00
Family Households (TOTAL)	81.2	73.7	70.9	70.0	68.8	67.9
Married Couple (TOTAL)	70.6	60.8	56.1	54.4	52.8	51.5
Married Couple with Children	40.3	30.9	26.3	25.5	24.1	23.3
Married Couple without Children	30.3	29.9	29.8	28.9	28.7	28.2
Other Family Households (TOTAL)	10.6	12.9	14.8	15.6	16.0	16.4
Nonfamily Households (TOTAL)	18.8	26.2	29.2	29.9	31.2	32.0
Women Living Alone	11.5	14.0	14.9	14.7	14.8	15.2
Men Living Alone	5.6	8.6	9.7	10.2	10.7	11.2
Other Nonfamily Households	1.7	3.6	4.6	5.0	5.7	5.6
Median Age at First Marriage						
Men	23.2	24.7	26.1	26.9	26.8	27.1
Women	20.8	22.0	23.9	24.5	25.1	25.3

SOURCE: Fields 2004

Table 1

age eighteen were living with both biological parents, who were married to one another (Bumpass and Sweet 1989), and a large majority of adult men and women were married (Saluter and Lugaila 1998). Beginning in the 1960s, the structure of American families changed rapidly and dramatically (Wu and Wolfe 2001). The more prominent of these changes include much higher divorce rates (Cherlin 1992), more nonmarital births (Wu et al. 2001), the postponement of first marriage (Fields 2004), and an increase in nonmarital cohabitation (Bianchi and Casper 2000; Bumpass and Lu 2000). Understanding the factors leading to this dramatic transformation and the consequences of these changes is among the most significant issues faced by American society. In this entry, we explore recent data and research on family-structure issues and changes. Primary emphasis will be on the American family, but some international comparisons are provided.

FAMILY-STRUCTURE CHANGES SINCE 1970

For purposes of this entry, we use the definitions of *household* and *family* utilized by the U.S. Census Bureau. A *household* contains one or more people—everyone living in a *housing unit* makes up a household. There are two types of households: *family households* and *nonfamily households.* A family household has at least two members related by birth, marriage, or adoption. A family household is maintained by a married couple or by a man or women living with other relatives. A nonfamily household can be either a person living alone or a householder sharing a housing unit with nonrelatives, such as borders or roommates.

The data in Table 1 shows some of the major family-structure changes that occurred from 1970 to 2003. Most apparent are significant declines in the proportion of family households, especially married-couple families, and a corresponding increase in other family households (generally single parent) and nonfamily households. In 1970, 81.2 percent of all households in the United States were family households, and 86.9 percent of the family households included a married couple. By 2003, only 67.9 percent of all households were family households, and 75.8 percent of the family households included a married couple.

Table 1 also shows a significant increase in the median age at first marriage. For men, this increase was from 23.2 in 1970 to 27.1 in 2003, while for women, the increase was from 20.8 in 1970 to 25.3 in 2003. Further indication of the postponement of first marriage is apparent in looking at different age cohorts (data not shown). Of the cohort of individuals born from 1940 to 1944, 70 percent of the men and 79 percent of the women had been married before their twenty-fifth birthday. In comparison, of the cohort of individuals born from 1965 to 1969, only 40.6 percent of the men and 54.8 percent of the women had been married before their twenty-fifth birthday (Kreider 2005).

Other critical family-structure changes not shown in Table 1 that have occurred since 1970 include a substantial increase in both the proportion of births that occur

outside of marriage and the number of cohabitating couples. About one-third of all births in the United States now occur out of marriage (McLanahan et al. 2001), while there has been a sevenfold increase in the number of cohabitating couples (to 5.5 million) since 1970 (Casper and Cohen 2000). The majority of these unmarried-partner households had partners of the opposite sex (4.9 million), but about one in nine (594,000) had partners of the same sex. Of these same-sex unmarried-partner households, 301,000 had male partners and 293,000 had female partners (Simmons and O'Connell 2003).

Tables 2 through 4 present information on current measures of family structure for the United States. Table 2 presents data on the marital history of American adults. The increased divorce rate is apparent by comparing those individuals who were in the fifty to fifty-nine age cohort with those who were seventy or more in 2001. About 40 percent of all persons aged fifty to fifty-nine had been divorced at least once, and about 30 percent had been married two or more times. In comparison, for persons seventy years old and older, only about 18 percent had been divorced and about 20 percent had been married two or more times.

Marital history for people 15 years and over, by age and sex, 2001

		Age								
Characteristic	Total 15 and Over	15-19	20-24	25-29	30-34	35-39	40-49	50-59	60-69	70 or more
Men										
Never married	30.9	99.1	83.9	50.8	29.5	21.5	14.2	6.3	4.3	3.3
Married once	53.4	0.9	16.0	46.3	60.8	66.2	65.1	62.6	67.5	75.5
Married twice	12.5	–	0.1	2.8	8.7	10.9	17.1	23.2	21.3	16.5
Married 3 or more times	3.2	–	–	0.1	1.1	1.4	3.6	8.0	6.8	4.7
Ever divorced	21.0	0.1	1.0	7.5	15.4	22.9	29.5	40.8	30.9	18.6
Ever widowed	3.6	–	–	0.1	0.3	0.5	1.3	2.9	7.6	23.1
Women										
Never married	24.6	96.3	72.4	37.3	21.7	15.6	10.5	6.4	4.1	3.3
Married once	58.7	3.6	26.5	57.3	67.3	66.8	65.1	65.2	72.9	77.8
Married twice	13.6	0.1	1.1	5.1	10.0	15.7	19.8	22.1	17.4	15.5
Married 3 or more times	3.1	–	–	0.3	1.0	1.8	4.6	6.3	5.6	3.5
Ever divorced	23.1	0.2	2.6	11.9	18.6	28.1	35.4	38.9	28.4	17.7
Ever widowed	11.6	–	0.3	0.5	0.6	1.1	3.5	9.5	23.3	56.3

SOURCE: Kreider 2005

Table 2

Family and living arrangements and poverty status of Children from birth to 18, 2001–2002

			Age			
Characteristic	Total Children[a]	Percent	Under 6	6–11	12–18	Percent in poverty[b]
TOTAL	72,501	100.0	100.0	100.0	100.0	17.6
Two parent (TOTAL)	51,112	70.5	70.0	68.7	67.4	10.1
Both biological—married	44,363	61.2	–	–	–	–
Both biological—unmarried	1,845	2.5	–	–	–	27.4
Blended	4,904	6.8	–	–	–	–
Single parent (TOTAL)	18,472	25.5	26.9	27.5	27.6	–
Mother	16,297	22.5	22.0	23.4	22.9	36.4
Father	2,175	3.0	4.9	4.1	4.7	14.7
Neither parent	2,917	4.0	3.1	3.8	5.0	31.0

[a] SOURCE: Kreider and Fields 2005 (Based on 2001 data)
[b] SOURCE: Fields 2003 (Based on 2002 data)

Table 3

Family structure by race/ethnicity and poverty status, 2003

Characteristics	Race/Ethnicity[a]			Percent in poverty[b]
	Nonhispanic white	Black alone	Hispanic (any race)	
Family households (TOTAL)	66.3	66.3	80.2	10.0
Married couple	54.3	30.9	54.6	5.4
Other family	8.7	29.8	17.9	28.0
Female householder	3.3	5.6	7.7	13.5
Male householder				
Nonfamily households (TOTAL)	33.7	33.7	19.8	–
Female householder	18.9	18.5	9.0	–
Male householder	14.8	15.2	10.8	–

[a] SOURCE: Fields 2004
[b] SOURCE: DeNavas–Walt et al. 2004

Table 4

Table 3 presents data on the family and living arrangements of children. In 2001, 61.2 percent of children in the United States from birth to age eighteen were living with both biological parents, who were married to one another. Another 9 percent were living with cohabitating parents or in a blended family. About one-fourth of the children were living with a single parent (usually the mother), and 4 percent were not living with either of their parents.

Finally, Table 4 shows extensive differences in family structure by race and ethnicity. Most significantly, only 30.9 percent of black households in the United States consist of a married-couple family, a proportion much smaller than for either whites or Hispanics. Hispanics, in contrast, have a much higher proportion of family households and a much lower proportion of nonfamily households than whites or blacks.

Patterns of U.S. family-structure change show some similarities to changes occurring in other economically advanced societies, but there are important differences. For example, the percentage of births occurring out of marriage is greater in Scandinavia, the United Kingdom, and France than in the United States. However, these countries have lower child-poverty rates and fewer children living in single-parent households because most unwed mothers are in long-term cohabitating partnerships (Kiernan 2001). In less developed countries, family structures tend to be more traditional.

CAUSES OF FAMILY-STRUCTURE CHANGES IN THE UNITED STATES

Discussions of the causes of these major family structure transformations can be grouped into two categories. The first category includes significant cultural transformations in the United States, where norms and values regarding marriage, divorce, sexuality, and so on have changed extensively. Opinion polls during the 1950s indicated that most Americans considered divorce, sex outside of marriage, and remaining single while in adulthood as somewhat deviant. These same behaviors are much more acceptable today, and the stigma associated with an adult not being in a traditional married-couple family has mostly disappeared (Giele 2003; Hackstaff 2003).

The second category of factors affecting the American family structure includes economic changes, such as the increased employment of women and economic-restructuring processes that result in fewer men with jobs that pay enough to support a family. Women have entered the job force in increasing numbers since the 1960s, making American women much more economically independent. The result is that divorce and remaining single have become more attractive alternatives, especially when compared to an unfavorable marriage (Giele 2003).

Additionally, beginning in the 1970s, an economic-restructuring process in the United States and other advanced societies has resulted in a significant decline in the number of manufacturing jobs and a corresponding increase in the number of jobs in the service sector (Morris and Western 1999; Sassen 1990). This economic-structure transformation has family-structure implications for two major reasons. First, a majority of the employees in the declining manufacturing sector are male, while female employees predominate in the expanding service sector. Consequently, there are increased employment opportunities for females and reduced employment opportunities for males. Second, most of the manufacturing jobs that have been lost were middle-income, while the new service jobs vary extensively in quality. While

some service jobs are high quality, many others are low-pay, low-skill, temporary, and seasonal (Albrecht 2004). In the past, even minimally skilled workers could often get a middle-income job in the manufacturing sector. This is no longer the case as workers who lack the skills to attain high-quality jobs are often forced to take low-quality jobs because many of the middle-income jobs no longer exist. The result is higher rates of unemployment and underemployment among males and shrinkage in the pool of male household heads financially able to support a family. Marriage thus becomes less attractive to women, the rate of unwed childbearing increases, and female-headed households proliferate (Albrecht et al. 2000; Wilson 1987, 1996).

CONSEQUENCES OF FAMILY-STRUCTURE CHANGES

In some sectors of society, the emergence of socially acceptable alternatives to the traditional family was met with euphoria because it was felt that the family had been an institution that generally suppressed women and limited individuality (Albrecht and Albrecht 2004). However, social science research is finding that many problems are emerging from changes in the American family (Haveman et al. 2001; Manning 2002; Waite and Gallagher 2000). A brief overview of the research on this topic indicates that men, women, and children in single-adult families all experience extensive disadvantages relative to their counterparts in married-couple families (Popenoe 1996). Of the long list of disadvantages, only a few will be highlighted here. Single-adult families experience much higher levels of poverty, especially for females, with all of its attendant problems (Albrecht et al. 2000; Corcoran et al. 1992; McLanahan 1985). Children who grow up with only one biological parent have significantly lower educational achievements. These young people are much less likely to graduate from high school and to attend and complete college (Amato and Keith 1991; Downey 1995; McLanahan and Sandefur 1994; Raley et al. 2005; Zill 1996). Girls from one-parent families are much more likely to become pregnant as teenagers than girls from married-couple families, while boys are much more likely to become delinquent (McLanahan and Sandefur 1994; Wells and Rankin 1991). These differences remain even when economic conditions are considered. The advantages of being part of a married-couple family are apparent for adults as well as children. In a variety of ways, both men and women are healthier, happier, and more economically prosperous when married (Lichter and Graefe 2001; Nock 1998; Haveman et al. 2001).

SEE ALSO *Family; Family, Extended; Family, Nuclear; Female-Headed Families*

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FAMILY SUPPORT ACT OF 1988

SEE *Fatherhood.*

FAMILY VALUES

Family values refers to those norms that emerge from our experiences within the family structure and that inform our understanding of that social construction we call the family. Just as family structures have changed over time and vary across cultures, so too have attitudes about the family, its relationship to society, and its relative value in the social order. These changes within the family and society often have occasioned fierce debate and have led to contested claims about the nature and definition of *fam-*

ily and those values that represent the many and varied forms of family life.

In the late-twentieth-century United States, political conservatives and liberals battled for culturally accepted definitions of the family and family values. According to sociologist James Davison Hunter, "the family is the most conspicuous field of conflict in the culture war" (1991, p. 176). This battle was an extension of a campaign by the Moral Majority, an organization formed in 1979 and composed of conservative, evangelical Christian activists. Among its stated tenets was opposition to feminism, gay rights, abortion, and pornography. The Moral Majority championed the patriarchal nuclear family as a biblical ideal and warned that the failure of the family would lead to the demise of American culture.

Family values as an ideological battleground came to prominence in U.S. political debate during the 1992 presidential campaign, when particular values were espoused by the "New Right," a movement that brought together religious and political conservatives who emphasized individual responsibility and the primacy of Christian moral values coupled with traditional gender roles. One powerful New Right group, Focus on the Family, claims, for example, that the church, the family, and the government are the three basic institutions ordained by God for the benefit of humanity. The traditional family as described by such conservatives presumes heterosexual marriage, patriarchal authority within the family, and the production and care of children. The term "family values" was adopted by the New Right and functions in public debate as shorthand for this conservative ideology of family. "Family values" proponents often carve out their position over and against social forces which they believe threaten the traditional family; they are antichoice (in regards to abortion), antigay, against sex education other than promotion of strict abstinence, against hate-crime legislation, against the separation of church and state, and against a host of other issues that they believe threaten the traditional family structure.

History tells us that rather than privileging the nuclear family, definitions of the family have changed with time and culture, as have the values attributed to family. In classical Greek culture, for example, the *paterfamilias* (the male head of a household) was responsible not only for his immediate family but also for his current slaves, former slaves who were now clients, hired laborers, and sometimes business associates or tenants. And even in the ancient world there were disagreements about the value of the family: The philosopher Aristotle thought that family life was an obligation one fulfilled for the good of society, whereas Plato argued in *The Republic* that private, individual families detracted from the social good.

Historian Stephanie Coontz notes in *The Social Origins of Private Life* (1988) that the model of the nuclear family idealized in contemporary conservative politics emerged in the United States after the Revolutionary War as a response to changing economic and political realities. The Industrial Revolution provided new sources of income, facilitating the growth of a middle class. The wives of this emergent class were expected to devote themselves to the domestic sphere; their most important political contribution was to raise patriotic children while men worked outside the home to support the family and society. This was, of course, a privileged ideal that was not realized in, for example, slave families. Even today, poor and working-class families continue to find it difficult to thrive outside of extended kinship networks that provide both financial and emotional support. With an increasingly diverse U.S. population, traditional "family values" fail to account for the variety of family structures that emerge from different ethnic and cultural backgrounds.

Despite conservative claims that traditional "family values" are divinely ordained and hold the key to the ideal society, recent social science research indicates that values are of secondary importance when it comes to social mobility as an indicator of success. In a longitudinal study Patrick L. Mason assessed the importance of family values and class status on interracial inequality and intergenerational mobility (1999). Mason found that although family values do have some effect on economic mobility from one generation to the next, class considerations (and the intersection of these with race) are more significant in predicting inequality. Put another way, although values may shape our perception of our place in society, material considerations have a greater influence on our ability to actually change that place.

Any contemporary attempt to define "family values" must take into account the multiple and varying forms in which family life takes place in diverse communities, including single-parent families, unmarried heterosexual couples with or without children, gay men and lesbians with or without children, and other nontraditional groupings who form "families of choice." The family is a cultural construction that has undergone multiple transformations throughout history without being destroyed. Despite "family values" rhetoric to the contrary, the family will survive future transformations, opening new horizons of human affiliation and identity.

SEE ALSO *Family; Family, Extended; Family, Nuclear; Religion*

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Elizabeth A. Say

FAMILY WAGE

SEE *Gender and Development; Marriage.*

FAMINE

Drought is the proximate cause of most peacetime famines in peasant societies, but excessive rain can have the same effect. The best example of this is the Irish famine from 1845 to 1850. Three phrases guide analysis in this entry: peasant societies, proximate cause, and ultimate cause.

PEASANT SOCIETIES

The peasant concept of the good life is the minimum expenditure of physical labor. Minimum labor expenditures equate to subsistence labor norms in food production. In normal crop years, subsistence labor norms lead peasants to grow enough food to last until the next harvest on the assumption that every crop year will be normal. Peasants know that every crop year will not be normal, but they prefer the marginal food safety of normal crop years if they can minimize the labor of cultivation. A minimal expenditure of agricultural labor to grow subsistence amounts of food is known as the *subsistence compromise*. The practice of the subsistence compromise defines who are peasants.

The practice of the subsistence compromise is clearly seen in most photographs of peasant cultivation practices that reach the media. These photographs show women planting rice sprouts in ponded fields, or dibbling maize or sorghum seeds into poorly prepared ground, or hoeing a patch of maize or sorghum overgrown with weeds, or harvesting grain with a child strapped on their backs. Where are the men for this sustained labor? The only labor that is gender specific to men is plowing and digging potatoes, yams, and cassava. Almost all of the rest of the labor of cultivation is done by women and children. This is why high birthrates are desirable in peasant societies. Children can do much of the agricultural labor that is gender specific to women.

PROXIMATE CAUSE

In order to live by subsistence labor norms, peasants willingly endure seasonal hunger in poor crop years and risk famines in consecutive poor crop years. Before the mid-twentieth century, there were few roads or vehicle tracks into peasant villages. Starving peasants fled their villages in search of food (as Irish peasants did) or watched their children starve so that some adults would survive. During the second half of the twentieth century, roads or vehicle tracks were built into most peasant villages. When there was severe hunger, food donations arrived from central governments (to prevent mass migrations to cities that governments could not control) or food was donated by nongovernmental agencies. Donated food was essential to prevent starvation because peasants produced few commodities to sell for money to purchase food.

ULTIMATE CAUSE

The marginal food safety of peasant households in normal crop years is due to deficient labor applied to cultivation. The subsistence compromise produces no food surplus for consumption in consecutive poor crop years, and peasants experience privation. The cumulative effect of consecutive poor crop years is famine conditions.

Subsistence Social Values This is an unfamiliar concept for most people in commercial cultures. They find it difficult to believe that cultivators voluntarily produce subsistence amounts of food when increased labor expenditures, especially by males, could produce abundant harvests.

Peasants use four strategies to minimize agricultural labor and, at the same time, produce sufficient food in normal crop years to last until the next harvest. They practice cultivation techniques requiring minimal labor expenditures; they control land use with some variety of communal tenure so that a village's arable land can be continually divided to accommodate additional households; they have many children to whom they can transfer labor at young ages; and they mitigate the worst effects of deficient harvests by sharing food among village households.

Analysis The welfare of peasant households does not depend on the acquisition of money. It depends on con-

trol of land use. When peasants control land use they can control labor expenditures and this means performing subsistence labor norms in cultivation. Peasant households can and do reject the earning of money incomes because earning money incomes requires continuous labor. As long as they control land use they have little interest in performing continuous wage labor (commercial labor norms). The reciprocal of subsistence labor norms is accepting privation in poor crop years.

Most economists do not recognize the distinction between subsistence labor norms (subsistence social values) and commercial labor norms (commercial social values). They assume that all persons want to earn money incomes and willingly perform commercial labor norms to acquire sufficient money to constitute an income. This is a false assumption. Economists make this assumption because they confuse monetization with commercial social values. Almost all peasant societies are monetized.

Peasants, however, want to acquire sufficient money to purchase a limited number of manufactured items. The most commonly purchased items are textiles, edged steel tools, steel cooking pots, plastic buckets, and sandals. After they have acquired enough money to purchase these items they cease laboring to produce additional products for market sale. Anthropologists call the money acquired to make these purchases a *target sum*.

Peasant households can subsist without the use of money as many do in the highlands of Papua, Indonesia, and Indian villages where the Hindu caste system operates. Households subsist without the use of money because the items they purchase can be made by resident artisans (pottery cooking pots, hand-loom textiles), as they were in the past. These items have a customary barter value, usually measured by handfuls or pots of grain.

It is, however, advantageous to purchase manufactured items because they have greater utility and durability. It is also advantageous to purchase them because the labor expended to produce products for market sale is less than that required to make artisan products, and much of this labor can be done by children. If households grow a small amount of food for sale, this is their exchange commodity. In poor crop years, however, it is eaten and no purchases are made of manufactured items. Households subsist without the use of money.

Most economists do not understand that money incomes do not exist in peasant villages. Economists, however, create them by assigning a money value to the harvest of peasants or to the number of hours of labor they assume were expended to grow a household's annual food supply. In reality, the food grown by peasants has no money value. If it were sold, peasant households would starve. Likewise, the labor that is expended to grow a subsistence food supply has no market value because no money is received.

Economists create fictitious money incomes for peasant households in order to compare the welfare of peasant households with the welfare of households in commercial cultures. Fictitious incomes are created for peasant households by applying the techniques of financial analysis to subsistence cultures. Fictitious incomes created by economists make peasants poor in relation to the money incomes earned by households in commercial cultures. Peasant households, however, are not poor. They are subsistent. Sometimes economists use terms like *subsistence income*, *nonwage income*, *implicit income*, *leisure income*, or *income concept* to indicate that they know the incomes they have created are fictitious; however, they continue to compare real and fictitious incomes. The result is confusion.

The fictitious incomes created by economists cannot be used to compare the welfare of households in subsistence and commercial cultures because incomes in commercial cultures are real money. Real money incomes measure household welfare in commercial cultures because households require money to purchase their food, clothing, and housing needs. Financial analysis operates with reasonable efficiency in commercial cultures but has universally failed to measure household welfare when applied to subsistence cultures.

Creating fictitious incomes for peasant households creates huge distortions in policies recommended by economists to increase food production in peasant nations. The failure of economists to recognize the fundamental difference between subsistence and commercial labor norms has largely contributed to the continual failure of policies that economists recommend to initiate economic development. Economic development must begin with producing assured food surpluses in all crop years in order to feed full-time wage laborers living in cities. The failure of their policies is most obvious in sub-Saharan Africa and in many Latin American nations.

Increasing food production requires different policies from those recommended by economists. As the term *political economy* indicates, political policies precede economic policies. Unfortunately, most economists are poorly prepared to recommend political policies because their training is financial and they are indoctrinated to believe that money incomes are the universal way of measuring household welfare.

SUMMARY

The famines that occurred in the last twenty years of the twentieth century were due to war. Peacetime famines have been avoided by food gifts to households in affected peasant societies. Peacetime famine conditions will continue to recur in peasant societies until central govern-

ments enforce a change in land tenure from communal to freehold so that money taxes can be collected on agricultural land. In freehold tenure, households that practice the subsistence compromise and fail to pay money taxes can be evicted and forced to become supervised, paid agricultural laborers who can produce assured food surpluses.

SEE ALSO *Food Crisis; Peasantry; Subsistence Agriculture*

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Ronald E. Seavoy

FANON, FRANTZ
1925–1961

A psychiatrist, a revolutionary, and a leading theorist of the Algerian national liberation struggle, Frantz Fanon was born on June 20, 1925, on the island of Martinique. He studied medicine in France and specialized in psychiatry. In 1953 Fanon began working as a psychiatrist at the Blida Psychiatric Hospital in Algiers, Algeria, where he supported the Algerian struggle against French colonialism. Fanon's dedication to this cause led to his expulsion from Algeria by the French authorities at the end of 1956. To continue his fight, Fanon moved to Tunis, Tunisia. In 1961 he fell ill with leukemia, and received treatment in the Soviet Union and later in Bethesda, Maryland, where he died on December 6, 1961.

Fanon played an instrumental role in the theorization of colonial desire, the dynamics of oppression, and the consequences of blackness. Among the sociohistorical and political issues that influenced his work and intellectual quest are the colonial history of Martinique, the manifestations of racism in France and in French colonial medicine, and the intricacies of the Algerian struggle. His work also shows, among other things, the influence of existentialist philosophy and the *négritude* movement. Fanon's thought, in turn, inspired a number of liberation movements and civil rights struggles.

Fanon's concerns are intimately linked to the history of Martinique, and more specifically to its experience of slavery and colonialism. Such concerns are reflected in his exploration of the power dynamics in the colonial world and the characteristics of two mutually constitutive "types": the colonizer and the colonized. Not only does Fanon probe the nature of these two categories in *The Wretched of the Earth* (*Les damnés de la terre*, 1961), but he also examines the elements and associations that contribute to, and result from, the establishment of this binary. In his analysis of the effects of colonialism on both colonizers and colonized, Fanon presents this institution as a system of exploitative oppression based on forms of psychological conditioning leading to the production of resentment and to the propagation of violence. This violence originates in the colonial movement and results from the colonizers' attempts to destroy "native social forms … and systems of reference of … [native] economy, the customs of dress and external life" (Fanon [1961] 1963, p. 40). This issue is important to note since many critics who claim that Fanon advocated the use of violence forget that violence is inherent to the colonizers' strategies of oppression.

Throughout his analysis of the psychology of the Negro in *Black Skin, White Masks* (*Peau noire, masques blancs*, 1952), Fanon insists on the necessity of perceiving blackness as a "lived experience," shaped not only by the gaze of whiteness but also by a state of alienation resulting from economic injustices and the "epidermalization" of the condition of inferiority (Fanon [1952] 1967, p. 11). In this book based on his observation of the condition of the Negro in the Antilles, Fanon also underlines the role that language plays in shaping the interactions within the black community on the one hand and between black people and their fellow white people on the other. Such a role is highlighted by Fanon's affirmation that "to speak is to exist absolutely for the other" (Fanon [1952] 1967, p. 17). In this context, language reflects and shapes the self through the transmission of a specific worldview. Advocating the need of black people to achieve liberation from their psychoexistential complex, *Black Skin, White Masks* also probes how gender interacts with "color" to produce specific power-based structures informing the interaction between women of color and white men, as well as men of color and white women.

Among Fanon's other significant contributions is the theorization of the role of the "native intellectual" in addressing the specific needs of struggles for justice in his or her country. Fanon also highlighted the role of the native intellectual in negotiating the problems pertaining to the conceptualization of national consciousness and resulting from the gap between the educated classes and the underprivileged masses. This negotiation is crucial in shaping ways of "acting back" and strategies of resistance described in *The Wretched of the Earth*.

Continuing his examination of the struggle against colonialism, Fanon analyzed the specific case of the Algerian liberation struggle, detailing its contexts and

components in *A Dying Colonialism* (*L'An V de la révolution algérienne*, 1959). This book, which explores the conflict between old values, transitional identifications, and the new Algerian nationalism, details the elements contributing to the formation of an alternative sense of national identity in Algerian society. *A Dying Colonialism* examines such issues through the discussion of the shifting symbolism of the Algerian women's veil; the relationship between resistance to the radio and the Algerians' desire to preserve social stability and traditional sociability; and the trauma resulting from changes in traditional family structure and the forced separation of family members. In this book, Fanon also shows how medical knowledge functions as a tool of power; more specifically, he argues that medicine can be seen, in certain situations, as an extension of the colonizer's control over the colonized society.

An equal concern with unmasking the mechanisms and networks of power in its various forms and local as well as global dimensions permeates Fanon's *Toward the African Revolution* (*Pour la révolution africaine*, 1964). This book is a collection of essays, notes, and articles, most of which were published in *El Moudjahid* (roughly translated as "the militant"), the underground newspaper of the Algerian National Liberation Front. A number of these writings probe the connection between French strategies in the Algerian War and the international scene in the United States and Europe. These works also examine the interdependence of individual liberation, anticolonial struggles, and the birth of national consciousness; the Algerian revolution and other liberation struggles in Africa and the Caribbean; and the end of colonialism and the resulting racism among the proletariat in the colonizing countries.

Throughout his life and career, Fanon probed the complexity of the colonial encounter and its aftermath. To account for its multilayered nature, he drew on a number of disciplines, including medicine, sociology, psychiatry, and literature, in a humanistic gesture reflecting his uncompromising dedication to the cause of the oppressed.

SEE ALSO *Blackness; Caribbean, The; Colonialism; Empire; Imperialism; Liberation; Neocolonialism; Psychology; Racism; Slavery; Violence, Frantz Fanon on; Whiteness*

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Sirène Harb

FARM QUOTA SYSTEM

SEE *Quota System, Farm.*

FARSIGHTEDNESS

Our religions, mythologies, and fables admonish us to overcome temptation, exercise self-discipline, and heed the future—consider Adam and Eve, Odysseus, and the Ant and the Grasshopper. Social scientists too offer helpful strategies for increasing willpower and avoiding indulgence (e.g., Ainslie 1975; Trope and Fishbach 2000; Wertenbroch 1998). The seemingly universal espousal of prudence and farsightedness as noble goals is reflected in the voluminous literature in the social sciences on self-control. This body of research is premised on the notion that people are shortsighted (myopic) and easily tempted by hedonic "sins," such as overbuying (oniomania), splurging on tasty but unhealthy food, and indulging in luxuries (see, e.g., Prelec and Herrnstein 1992; Thaler 1980).

An alternative research paradigm challenges the universality of myopia and proposes that people often suffer from a reverse self-control problem, namely excessive farsightedness ("hyperopia") and overcontrol (Kivetz and

Simonson 2002b; Kivetz and Keinan 2006; Keinan and Kivetz 2007). Such hyperopia leads people to deprive themselves of indulgence and instead overly focus on acting responsibly, delaying gratification, and doing "the right thing." Research on farsightedness examines the underlying processes (e.g., guilt, justification), the way people cope with hyperopia (e.g., by precommitting to indulgence), and the consequences of overcontrol (e.g., long-term regret).

Ran Kivetz and Yuhuang Zheng (2006) shed light on the antecedents of hyperopia by highlighting the role of justification and guilt in self-control decisions (see also Kivetz and Simonson 2002a). Building on prior analyses in the social sciences, they propose two complementary routes to justifying self-gratification: the first through hard work or excellent performance (an entitlement justification) and the second through the attainment of indulgence without depleting income or monetary resources. Consistent with the two routes to justification, it is demonstrated that (1) higher required effort enhances preference for indulgence rewards over more prudent necessities, but a reverse effect is observed when the interchangeability of effort and income is implied; (2) providing (bogus) excellence feedback on an effort task enhances choices of indulgence, unless the interchangeability of effort and income is suggested; and (3) sensitivity to effort and excellence (i.e., justification) cues is greater for individuals who experience stronger (chronic or manipulated) guilt.

EVIDENCE AND REMEDIES OF HYPEROPIA

Kivetz and Itamar Simonson (2002b) provide a more direct examination of the notion of excessive farsightedness and the strategies that people use to overcome this (reverse) self-control problem. They found that a large segment of people perceive themselves as having insufficient indulgence and seek ways to correct this imbalance in their lives. Such people force themselves to indulge in an attempt to avoid default forms of spending on utilitarian necessities and/or savings. In particular people who have difficulty choosing items that are perceived as indulgences or luxuries (e.g., a cruise) over necessities (e.g., saving for college education) and cash in everyday decisions use precommitments to future hedonic experiences. For example, a substantial segment of people choose hedonic luxury awards over cash of equal or greater value (the choices and incentives are real). People explain such choices based on the need to precommit to indulgence, to make sure that the award does not end up in the pool of money used for necessities.

Kivetz (2007) provides additional direct evidence for the concept of hyperopia (excessive farsightedness). It is shown that people select pleasurable vices when the consequences of their decisions are psychologically distal (e.g., temporally delayed, hypothetical, improbable, abstract, or self-irrelevant) but reverse their decisions when the consequences are psychologically proximal (e.g., temporally imminent, real, vivid, or self-relevant). These reversals are more pronounced among people with a chronic tendency to experience guilt.

CONSEQUENCES OF HYPEROPIA

Kivetz and Anat Keinan (2006) investigate the consequences of hyperopia for people's well-being and long-term feelings. The extant literature on self-control suggests that people not only yield to temptations they had originally planned to resist but also subsequently reverse their preferences and regret their myopic behaviors (e.g., Schelling 1992). Although yielding to temptation certainly can be harmful, Kivetz and Keinan argue that excessive farsightedness can also have negative long-term consequences. In particular they propose that with the passage of time, choices of virtue over vice (e.g., work over pleasure) increasingly evoke regret. Accordingly they demonstrate that increasing the temporal separation between the actual decision and its assessment enhances the regret (or anticipatory regret) of righteous choices. Building on research on self-control and on affect (e.g., Kivetz and Simonson 2002b; Kahneman 1995; Metcalfe and Mischel 1999), Kivetz and Keinan show that greater temporal perspective allows people to escape the influence of indulgence guilt and causes them to experience a wistful feeling of missing out on the pleasures of life.

A great deal of research in psychology, economics, marketing, and other social sciences has examined self-control and time inconsistency. Such research has relied on a myopic premise. Late-twentieth-century and early twenty-first-century research advances an alternative perspective, namely that of excessive farsightedness and overcontrol. By exploring what is essentially a reverse form of self-control, this research contributes to a fuller understanding of self-regulation as a dynamic and general process. Some key discoveries that are diametrically opposed to the myopic premise include:

- the finding that people require special entitlement justifications (hard work, excellence) to indulge;
- the finding that people are motivated to work harder for hedonic luxuries than cash equivalents but are willing to spend more money on the latter;
- the finding that people perceive themselves as suffering from excessive farsightedness and consequently correct this imbalance in their lives by precommitting to future hedonic experiences;

the finding that people are more likely to precommit to indulgence and to select vice when the consequences of their decisions are psychologically distal (e.g., temporally delayed, hypothetical, or abstract);

the detrimental impact of excessive farsightedness on well-being in the long run; that is, righteous choices of virtue over vice give rise to increasing regret over time, and considering long-term regret motivates people to select indulgence and luxury; and

the fact that the preceding findings are more pronounced among people who experience stronger (chronic or manipulated) indulgence guilt.

SEE ALSO *Behavior, Self-Constrained; Saving Rate; Self-Control*

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Ran Kivetz

FASCISM

Fascism is a reactionary and revolutionary ideology that emerged across Europe after World War I. Fascism was partially developed in Italy and became fully developed in Germany as a reaction against the unrestrained liberal capitalism of the nineteenth and early twentieth centuries, which promoted individualism over communal organization. Fascism as an ideology is anti-Marxist in its militarization of culture, society, and the economy and its rejection of social reforms as a means to create community. As in communism, fascism emphasizes the primacy of the collective unit; however, fascists reject communism's internationalism and instead define the community as a racial group whose passionate, heroic sacrifice for the nation will fulfill its historical destiny.

Fascism also promotes the adulation of a dictatorial figure to act as a strong representative of the *Volk* (the "people") in this process. Fascists argue that true democracy exists only under these specific conditions, thereby creating a myth of *volkish* communal heroism that relies on militarism for its success. Since fascists think in terms of absolute enemies of the people, they view imperialistic war as an inevitability of the rise of fascism. The goals of war are twofold: first, to resolve "land hunger" by expanding the nation's access to land, natural resources, and labor of native populations and, second, to solve domestic economic and political crisis (usually due to economic depression that causes high unemployment and challenges to the new one-party state). They therefore stress the virtues of a warlike culture: authoritarianism, unity of methods and goals, discipline, and an abhorrence of political dissent. The creation of an active, warlike citizenry is what distinguishes fascist regimes from authoritarian or dictatorial ones.

CHARACTERISTICS OF FASCIST SOCIETIES

Fascists solidified their power by stripping citizens of their individual rights and subordinating them to the will of the

collective. A single-party political system that used terror, a secret police, and a strong military established a dictatorship controlled by a new social elite representative of the party. The hierarchy differed from that of other social systems in that it was not defined in class terms, but rather in terms of service to the nation. Because of this distinction, fascist states introduced a new form of social mobility that appealed to many citizens. The fascist government also succeeded in co-opting the economic system into the national sphere. Capitalist economics continued in the preservation of private property, though high party officials ensured the alliance between industrial and agricultural sectors and the state. The exploitation of workers in the form of low wages and high production quotas created economic growth, thereby fulfilling the promises of fascist governments to solve the problems of high unemployment caused by economic depression. In these ways, fascists ensured the loyalty of worker, peasant, industrialist, and businessman.

The heavy use of propaganda was another hallmark of fascist politics through its creation of the myth of the volkish leader whose destiny was to resurrect the greatness of the Volk. Films, books, signs, leaflets, and artistic productions attempted to present fascism as a new form of spirituality by espousing the "eternal truths" of the state through the repetition of slogans and symbols. Organizations such as clubs and youth groups and public displays of nationalism (in the form of parades or rallies) attempted to destroy private and individual identities by exalting a communal one. Censorship stripped intellectuals of their creative freedom and demanded that they produce warrior-peasant art that reflected the racial superiority of the Volk. Additionally, state-sponsored architectural projects embraced themes of sacrifice and national greatness through the construction of its war monuments and government buildings. Because fascism proclaimed to be the mouthpiece of a lost moral system, psychological conversion of the masses was essential to its success.

HISTORICAL EXPLANATION FOR THE RISE OF FASCISM

The roots of fascism can be traced to the political climate of European society before the outbreak of World War I in 1914. At the turn of the twentieth century, the international tensions that would soon lead to war in Europe were already apparent. Most members of the rising bourgeoisie supported their European governments because they greatly benefited from successful nationalist industrial and colonial expansion in the late nineteenth century. The working classes, however, were not benefactors of industrial and colonial growth, and socialist politics were strong across Europe. The rise of minorities' middle classes—Slavs in the Habsburg Empire and Jews everywhere in Europe—also threatened traditional ethnic majorities. Nationalists at this point rejected their liberal roots and became more conservative as nationalism developed into an ideology that protected the rights of the ethnic community over those of the individual. Rightist parties at the turn of the century appealed mostly to the traditional middle and upper classes, those that stood to lose the most through the rise of workers' movements and new privileged ethnic groups. Persuading the working classes into rejecting the internationalist foundation of Marxist politics and accepting the nation as a protective body soon became the primary goal of rightist parties in the decades preceding the outbreak of World War I. This development led conservatives to define the nation in ethnic terms. The rise of nationalism as a condemnation of "others" allowed for the emergence of fascist politics across Europe in the 1920s and 1930s.

Fascism developed into mature political movements in European societies whose citizens experienced a recent, rapid, and intense possibility of social mobility as a result of concentrated industrial growth that threatened to destroy traditional hierarchy in the interwar period. Social anxiety over recent processes of modernity heightened when the United States stock market crashed in 1929 and the Great Depression paralyzed European economies. Fascism became a viable political response for millions of Europeans when their parliamentary systems failed to provide adequate economic relief in the 1930s. The success of fascist politics additionally depended upon the existence of a substantial volkish population, one whose identity could be interpreted as being representative of a greater national entity and used by fascist leaders as a symbol of past, organic national greatness. Therefore, the states that supported fascist politics on a national level in the 1920s and 1930s, mostly in Central and Eastern Europe, sustained substantial agricultural economies at that time. It is also notable that World War I left an unresolved national question, irredentist, colonial, or a high percentage of "outsiders" within national boundaries, in the countries that became fascist in the interwar period—Italy, Germany, Romania, Hungary, Austria, Croatia, and France. Fascist promises of a return to national greatness resonated with the masses who viewed their economic suffering as a social injustice. France is the exception to this pattern in that its fascist government—the Vichy regime—enjoyed very little popular support and was a puppet of the Nazis rather than a legitimate state. Fascism in all of its manifestations can be seen as one response to the social, economic, and political crisis that accompanied the process of modernity in Europe.

The emergence of Italian fascism deserves special attention because of Benito Mussolini's role in fascist ideological development. Mussolini, fascist dictator of Italy from 1922 to 1943, first used the term *fascism* in 1919 to describe this new political ideology of individual subordi-

nation to the ethnic community as a method of attaining national greatness. Mussolini developed this belief in the strength of the community as an active and politically prominent socialist during his youth. Like many socialists, Mussolini was critical of the politics and economics of European liberal capitalism. In Italy's case, the last quarter of the nineteenth century and the first decades of the twentieth century were years of grave economic crisis, primarily due to its ineffectiveness in industrializing and the weakness and inefficiency of its governments. Italy's lack of natural resources perpetuated a largely agricultural economy that was unable to support imperialist expansion, causing international embarrassment in a time when national greatness on the continent was largely defined by the building of empires abroad.

After World War I, Mussolini came to believe that socialist internationalism would only serve to subordinate Italy to more powerful European neighbors who had failed to reward his country adequately for its Allied support during the war and turned to rightist politics. In 1919, Mussolini founded the Fascist Party and defined fascism as a technique for gaining and solidifying power through the use of violent action. Fascism demanded first and foremost the cultivation of military discipline and a fighting spirit in every Italian citizen. Unlike Marxist theory, which believes in an end to the process of history through a democratically based revolution that establishes a communist state, Mussolini's fascism defined history as constant struggle through constant war. The necessity of action required the adulation of a leader who would manage his country's destiny through acts of war and violence. Complete confidence in the decisions of the leader, Il Duce, as Mussolini referred to himself, needed to be blindly obeyed in order for national goals to be met. Mussolini pointed to Italy's weakened economic state after the war as proof that such a leader was necessary for Italian recovery.

In 1922, Mussolini's fascist militia marched on Rome and he became the prime minister of Italy. Between 1922 and 1927, Mussolini concentrated on fascist state-building. The state and the Fascist Party became a single entity that oversaw the alignment of the legislative, executive, and judicial bodies with nationalist goals. Mussolini asked Italians to sacrifice their individual identities in order to establish Italy as the new leader of mankind. He further legitimized his dictatorship by pointing to the rise of fascist parties across Europe as evidence that parliamentarianism and liberal democracy were decadent political and social values and that fascism was indeed the new path of modernity.

What differentiated Italian fascism at this early stage from other young fascist movements across Europe was its rejection of anti-Semitic sentiment. This distinction is mostly due to the lack of a discernable Jewish population in Italy. Instead, Italian exposure to African populations during failed colonial ventures made Africans the targets of Italian racist nationalism during the interwar period. Mussolini integrated this race doctrine into the construction of his dictatorship but never fully developed it. Rather repulsed by the racist program of the National Socialists (Nazis) in Germany, Mussolini instead directed his energies toward imperialist expansion rather than cultivating an ethnically pure Italian state.

Anti-Semitism was the distinguishing feature of mature fascism developed by Adolf Hitler in Germany. Hitler's fusion of race doctrine—the belief in the natural inequality of human races and the superiority of the Teutonic race—with Mussolini's philosophy of power created a particularly virulent and highly destructive form of fascism. The anti-Semitic flavor of Imperial German society laid the foundations for the rise of racist nationalist politics in the interwar period. The increase of Jewish presence in trade, finance, politics, and journalism, particularly in Berlin, around the turn of the twentieth century fueled conspiracy theories about a Jewish "infiltration" of German society. Hitler's fascist National Socialist Party, begun in 1919 as the German Workers' Party, was an anti-Semitic, supra-nationalist political organization whose proclaimed goal was to protect the ethnic German community at all costs. The Nazis succeeded in earning millions of German votes in the late 1920s and early 1930s with its strong repudiation of the Versailles Treaty coupled with messages of moral and economic rebirth through the destruction of "Jewish" market competition, the annihilation of European Jewry, and territorial expansion. Hitler and the Nazi Party attempted to fulfill the promises of his propaganda through the creation of a totalitarian state in Germany. From 1933 to 1945, the Nazis exercised total control over the German population and conquered much of the European continent. The fascist period of German history was additionally responsible for the deaths of approximately six million Jews and three million Slavs, Roma, homosexuals, political dissidents, and other "undesirables" during the Holocaust.

INTERPRETATIONS OF FASCISM

It has been difficult for historians, political scientists, psychologists, and sociologists of fascism to agree on a single explanation for the rise of fascism in some countries but not in others. One leading interpretation supports the notion that fascism was an experience unique to certain countries, pointing to some kind of predestination of radical conservative nationalism. The second prominent interpretation is that fascism was a reaction to the failure of European liberalism to make good on its promises of promoting every individual's right to social mobility. This

interpretation puts the rise of fascism in an international context of the struggles of European modernity.

SEE ALSO *Anti-Semitism; Capitalism; Censorship; Colonialism; Communalism; Great Depression; Hierarchy; Hitler, Adolf; Imperialism; Liberalism; Mussolini, Benito; Nationalism and Nationality; Nazism; Propaganda; Property; Racism; Right Wing*

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FATHERHOOD

Issues of fatherhood have received considerable attention since the 1990s in academic, practice, and policy discussions as well as in the public domain. This focus on fatherhood, which subsequently came to address responsible fathering, reflects an assumption: that the meaning and enactment of responsible parenting are at the heart of social and cultural debates about the individual and combined roles of families and society in ensuring the health and well-being of children. Throughout the 1970s and 1980s most of the cultural debate about mothers highlighted the question: What, if anything, should mothers do outside the family? By the end of 1990s the debate about fathers had refocused the question to: What should fathers do inside the family (see Doherty, Kouneski, and Erickson 1998)? Several related questions were posed: What role should fathers play in the everyday lives of their children, that is, beyond the traditional breadwinner role? How much should they emulate the traditional nurturing activities of mothers, and how much should they represent a masculine sex-role model to their children? Advocacy organizations and those in the public domain asked: Is fatherhood in a unique crisis? The discussion that follows provides an overview of the background and context of these questions, the resulting effort, and the current status of discussions in the field.

BACKGROUND AND CONTEXT OF THE ISSUES

Prior to the 1960s research and policy on family development were dominated by intact or nuclear family models. The role of fathers was framed within a decidedly Euro-American interpretation of family functioning in which fathers provided for the economic well-being of their children and mothers ensured their children's developmental progress (see Coltrane and Parke 1998; Gottman and Katz 1989; Parke 1996; Pruett and Pruett 1998). Much of family research through the 1970s also focused on the degree to which ethnically diverse families, particularly African American families, adhered to this model (see Coleman et al. 1966; Katz 1993; McDaniel 1994; Moynihan 1965, 1987). Not until the resurgence of interest in family studies in the 1990s did research or policy highlight the diversity of family functioning, interactions, and expectations embedded in the cultural and ethnic histories of families and communities in the United States (see Anderson 1990, 1999; McDaniel 1994; Zuberi 1998).

Much of the visibility of fatherhood can be traced to the passage of the 1988 Family Support Act, which called attention to the failure of many nonresidential, noncustodial parents, mostly fathers, to contribute to the financial support of their children. However, the act did not distinguish among different types of fathers and appeared to assume that all fathers shared a common experience in terms of their marital status at the birth of their children, employment and employability, ability to contribute financially, reasons for absence, and the quality of their relationship with their children, families, and communities. Divorced, middle-class, educated, nonresidential fathers were grouped alongside low-income, unemployed, poorly educated fathers. Issues of class, race, and cultural practices were relatively unexamined except in noting the disproportionate numbers of single, African American, low-income mothers raising their children as well as low-income fathers who neither had custody of their children (noncustodial) nor resided with them (nonresidential).

Despite its limitations, the act was effective in generating interest about nonresidential fathers and acknowledging the growing numbers of fathers who lived apart from their children. It also prompted researchers and practitioners to raise critical issues about the failure of policies in general to address the diversity of fathers and the disparities in their circumstances. The complexity of a changing society was evident in the struggles being experienced by large numbers of children and families.

However, it was clear that to understand the causes and effects of father absence, the field also needed to address the causes and effects of father presence, expanding the apparent urgency to examine all types of fathers, irrespective of their coresidence with their children and families, social class, race, and family ties. The discussions that ensued positioned, as a priority, the common problems of father absence; its effects on children, families, communities, and society; and the downward spiraling of two-parent families, father presence, and marriage. They pointed to the need to uncover and understand how men enact their roles as fathers, (re)negotiate gendered and social expectations, and (re)engage with their children and families over the short and long term.

RESPONSIBLE FATHERING

Since the mid-1990s researchers have distinguished various types of father involvement; however, the resulting literature defines and describes father-child *presence* with increased, though still inexact, precision. The use of the concept *responsible fathering* reflects a relatively recent shift among academics and professionals away from value-free language toward a more explicit value-advocacy approach (see Doherty et al. 1998; Gadsden 2002; Gadsden and Hall, 1996). *Responsible* suggests an *ought*, a set of desired norms for evaluating fathers' behavior. The term also conveys a moral meaning (right and wrong), since it suggests that some fathering could be judged *irresponsible* or *nonresponsible*. Michael Lamb and his colleagues (1985) offered the most influential scheme to organize the concept: (1) responsibility, the role that fathers take in ascertaining that their children are cared for and arranging for the availability of resources; (2) availability, fathers' potential for interaction by virtue of being present or being accessible to their children (whether or not direct interaction is occurring); and (3) engagement, fathers' direct interaction or contact with their children through caregiving and shared activities.

Several categorizing frameworks and measurement tools have been created since the mid-1990s, among them Vivian Gadsden and colleagues' (1999) *Fathering Indicators Framework* (National Center on Fathers and Families), Rob Palkovitz's (1997) list of 119 ways to be involved in parenting, Alan Hawkins and colleagues' (2002) *Inventory of Father Involvement*, and the Lewin Group's *Evaluability Assessment of Responsible Fatherhood Programs* (1997).

THE CURRENT STATUS

The study of fatherhood has progressed significantly as a field from the early 1990s to the early twenty-first century. In 1994 the National Center on Fathers and Families (NCOFF) was established at the University of Pennsylvania to create and implement a research agenda that took seriously the issues of practice, including a research database, the Fatherlit Research Database. The center and the resulting activities in the field demonstrated a consistent shift. For example, in fields such as developmental psychology, once characterized by a singular focus on mother–child relationships, the significance of the father in the daily routines of child support and nurturance was increasingly discussed. The implication of this work was that the role of fathers, and the family itself, was seen as contributing to the affective development of children; to the shaping of personality; and eventually to a sense of belonging, meaning, and socioemotional stability.

One might well ask, What has really changed in the field since the 1990s? Any review of data from the field reveals the measured but significant increase in focus and reach to multiple audiences. Through tracking of the FatherLit Database, NCOFF has systematically collected data on the number of refereed research articles and other research publications on fathers, including the creation of a journal, *Fathering*, in 2003. Although much of the discussion still dichotomizes the issues into father presence and absence and their effects, it also addresses specific questions such as fathers' relationships with their children, the effect of father presence on young children, the role of fathers in homes, and the effects of father engagement on mothers.

Outside the United States the focus on fatherhood has been equally compelling. However, a persistent problem centers on the degree to which and the way research, practice, and policy are constructed and implemented across cultural and national borders. As is true in the United States, questions about where and how to situate fatherhood and fathering are a critical focus of discussion. For example, should fathering be aligned with child well-being? Is it more appropriately studied as an issue of family development and family functioning? How should it be examined within economic and legal considerations? What is the role of fathers in children's lives?

In various parts of Africa (most notably South Africa) an increasing body of research and new programs have been initiated. Support for these efforts often began as grassroots initiatives but subsequently have been examined in relationship to family life, economic stressors, and the meaning of father presence and engagement. In *Baba: Men and Fatherhood in South Africa* (2006), edited by Linda Richter and Robert Morrell, chapters take up several of the concerns, questions, and problems that have been examined in the United States but with particular currency for explicating and understanding the cultural contexts in South Africa, such as migrancy, the experience of gold mine workers, Zulu-speaking men and father-

hood, and HIV/AIDS, to name a few (see also Madhaven et al. 2006 for a discussion of father presence in rural South Africa).

A. Bame Namenang (2000), in addressing related issues in Cameroon, similarly calls attention to the construction of father images, cultural practices, kin networks, and the ways fatherhood is situated within these larger familial and community contexts. Efforts throughout Europe, Australia, and the Caribbean reinforce the need to examine critically the cross-cultural and cross-national domains of fatherhood. Among the most well-known research is that of Margaret O'Brien (2004) in England, in which she takes up research and policy questions and the difficult intersections between programs and policies. Drawing upon work from large datasets in the United States, Alison Smith (2007) has used the European Community Household Panel to identify several trends throughout European countries, for example, cross-national differences in fathers' participation in child care, in employment and pay for fathers versus nonfathers, and in the amount of time spent working (see also Jaipaul Roopnarine and Janet Brown's [1997] work on Caribbean families).

At the same time programmatic efforts have increased and become better organized. A range of programs has emerged—from small, grassroots efforts to educational efforts to work affiliated with federally funded organizations. The National Practitioners Network for Fathers and Families; the National Fatherhood Initiative, which houses a federally funded clearinghouse; and the National Center on Fathering represent a few of these efforts, as does a group of experts representing different focuses—research, practice, and advocacy—and the National Fatherhood Leaders Group. Similar work is taking place throughout parts of Africa, Europe, Australia, and the Caribbean, much of it building upon practitioner efforts and cross-collaborations between the United States and groups abroad and supported by a range of foundations and governmental initiatives, including regional meetings in England, Jamaica, South Africa, and Australia. One example from England is Father Direct, the national information center that publishes guides and provides training, conferences, and briefings on fatherhood.

The interest in responsible fatherhood has both heightened and precipitated change. Work on fathers invariably points to the deleterious effects of father absence for children, families, communities, and society, including a focus on "fragile families" (see publications of the Center on Child Wellbeing at Princeton University; Garfinkel and McLanahan 2003; McLanahan 2006; McLanahan and Carlson 2004) and families experiencing hardship absent the supports necessary for optimal healthy development, with children thought to be especially at risk for poor academic achievement, juvenile delinquency and incarceration, victimization by violence and exploitation, and unmarried adolescent parenting (see also Shannon et al. 2002; Cabrera and Garcia-Coll 2004).

Finally, policy efforts have grown at all levels of government, though the question of "what constitutes a good father" persists (see Rosenberg and Wilcox 2006), as do issues related to father absence. For example, in a request for proposals from the U.S. Department of Health and Human Services (2006), the writers noted that in approximately 84 percent of cases where a parent is absent, that parent is the father and that if the trends continue, half of all children born in the early twenty-first century will live apart from one of their parents, usually their father, at some point before they turn eighteen. They also indicate that where families (whether intact or with a parent absent) are living in poverty, a significant factor is the father's lack of job skills. An estimated 19,400,000 children (27 percent) live apart from their biological fathers. Of children under age eighteen not living with their biological fathers, 40 percent had not seen their fathers even once in the last twelve months.

CLOSING THOUGHTS

It is no surprise that the field of fatherhood and the larger field of family studies grapple with an array of difficult questions and uncharted terrain. What is needed in this still growing field are deepened analyses that reflect the ways fathers, children, and families shape and revise their identities within families and respond to the social and cultural expectations of home and society. Several issues are still relatively unexamined, among them the diversity of fathers, both middle-income and low-income men and families; families of color and immigrant families; the cultural and social factors that influence fathering practices and community expectations; children of incarcerated fathers; the engagement of fathers and mothers as parents and in relationship to their children; the effects of racial stratification on fathers' engagement; preparation (through schooling and work) to assume the financial and emotional roles of fathering; issues of men's health; and social vulnerability. In order for change to occur, a conceptual framework is critical—one that reflects a deep understanding of the multifaceted issues and possibilities to effect change in all communities where there are fathers and children.

SEE ALSO *Child Development; Family; Family Structure; Masculinity; Men; Motherhood; Moynihan Report; Parent-Child Relationships; Public Policy; Role Theory; Unemployment*

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Vivian L. Gadsden

FEAGIN, JOSEPH

1938–

Joseph Feagin is a scholar, social justice advocate, professor, and leader in the field of urban sociology. Throughout his career, he has fought against the oppression of people of color within the United States. His passion for equity has essentially held a mirror to the country, reflecting the raw imagery of how the United States has historically oppressed people of color through social, economic, mental, and physical means. This reflection has at times caused those who view the issues of race conservatively to see Feagin's work as unbearable. For example, in his book *The Professors: The 101 Most Dangerous Academics in America* (2006), the conservative author David Horowitz included Feagin on his list of "threats." Horowitz claims that professors like Feagin "push" their liberal agenda onto college students, while at the same time stifling alternative viewpoints within the classroom. Regardless, many admirers of his work and efforts feel that he has spent a rich academic career attempting to answer the endless riddles of racial problems within the United States.

Joe Feagin was born in San Angelo, Texas, and he grew up in Houston during the Great Depression. After high school, he earned a degree in history, philosophy, and social ethics at Baylor University in 1960. He received a PhD in social ethics from Harvard University in 1966. He began his academic career as an assistant professor at the University of California at Riverside from 1966 to 1970. He went on to hold the positions of associate professor and full professor of sociology at the University of Texas, Austin (1970–1974 and 1974–1990, respectively). He has also been a scholar-in-residence at the U.S. Commission on Civil Rights (1974–1975) and a graduate professor at the University of Florida (1990–2004). In 2004 he was appointed the Ella C. McFadden Professor of Liberal Arts at Texas A&M University. Feagin has received countless honors and awards, including the Gustavus Myers Center Outstanding Human Rights Book Award in 1995 and 1996 and the Center for Healing of Racism Ally Award n 2006. He has twice been nominated for the Pulitzer Prize, and he served as the president of the American Sociological Association in 2000.

In his advocacy for social justice through the use of empirical and historical research and data, Feagin has explored the hatred that the white majority has toward people of color, especially blacks. He believes that this hatred is not only at the center of the foundation of the country, but that it is also the rationale for the current treatment of people of color. He has successfully correlated various problems that exist among people of color to the white racial frame that was first used successfully to disempower blacks through the means of social control. In fact, this white racial frame uses a manipulation of stereotypes of blacks and other people of color to galvanize the need for control over this population, who have historically been viewed as sexual and physical threats by white elites.

Feagin's prolific scholarship has spanned over forty-two years and yielded thought-provoking contributions in over 40 published books, 180 journal articles and monographs, and numerous consultations on issues of racism, discrimination, police brutality, gender racism, and other such experiences of people of color. Since 1989, with the help of other colleagues, he has completed field research studies involving approximately 600 black Americans in regard to social problems. In addition, in order to bring forth the voices of the marginalized within his work, he has been involved within dozens of field research studies that use diaries, focus groups, and in-depth interviews. But because the sample respondents used in various segments of his work are not selected from a sampling frame, the "snowball" sampling technique he and other qualitative researchers use cannot always ensure unbiased estimates. Thus, this technique has been called into question by some, particularly by pure quantitative researchers. Many researchers in the field, however, have adapted the technique because of its value in researching groups that are traditionally difficult for researchers to gain access to. Overall, Feagin has helped give a voice to the voiceless and marginalized populations within the United States.

SEE ALSO *Attitudes; Attitudes, Racial; Race; Racism; Sociology*

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Terence D. Fitzgerald

FEAR

SEE *Psychosomatics.*

FECHNER, GUSTAV THEODORE

SEE *Mathematics in the Social Sciences.*

FEDERAL BUREAU OF INVESTIGATION

SEE *Hoover, J. Edgar.*

FEDERAL ELECTION ACT OF 1970

SEE *Campaigning.*

FEDERAL RESERVE SYSTEM, U.S.

Of all the central banks in the world, the Federal Reserve System ("the Fed") has one of the most unusual structures. The historic hostility of the American public to banks and centralized authority (which resulted in the demise in 1811 and 1832 of the first two experiments with central banking, the First and Second Bank of the United States) led the U.S. Congress to write an elaborate system of checks and balances into the Federal Reserve Act of 1913, which created the Federal Reserve System with its twelve regional Federal Reserve banks.

The writers of the Federal Reserve Act wanted to diffuse power along regional lines, between the private sector and the government, and among bankers, business people, and the public. This initial diffusion of power has resulted in the evolution of the Federal Reserve System to include the following entities: the Federal Reserve banks, the Board of Governors of the Federal Reserve System, the Federal Open Market Committee (FOMC), and around 2,800 member commercial banks.

FEDERAL RESERVE BANKS

Each of the twelve Federal Reserve districts has one main Federal Reserve bank, which may have branches in other cities in the district. The three largest Federal Reserve banks in terms of assets are those of New York, Chicago, and San Francisco—combined they hold more than 50 percent of the assets (discount loans, securities, and other holdings) of the Federal Reserve System. The New York bank, with around one-quarter of the assets, is the most important of the Federal Reserve banks because it conducts foreign-exchange interventions on behalf of the Federal Reserve System and the U.S. Treasury and also purchases and sells securities for the Federal Reserve System.

Each of the Federal Reserve banks is a quasi-public (part private, part government) institution owned by the private commercial banks in the district that are members of the Federal Reserve System. These member banks have purchased stock in their district Federal Reserve bank (a requirement of membership), and the dividends paid by that stock are limited by law to 6 percent annually. The member banks elect six directors for each district bank; three more are appointed by the Board of Governors. Together, these nine directors appoint the president of the bank (subject to the approval of the Board of Governors).

The directors of a district bank are classified into three categories: A, B, and C. The three A directors (elected by the member banks) are professional bankers, and the three B directors (also elected by the member banks) are prominent leaders from industry, labor, agriculture, or the consumer sector. The three C directors, who are appointed by the Board of Governors to represent the public interest, are not allowed to be officers, employees, or stockholders of banks. This design for choosing directors was intended by the framers of the Federal Reserve Act to ensure that the directors of each Federal Reserve bank would reflect all constituencies of the American public.

The twelve Federal Reserve banks perform the following functions:

- Clear checks;
- Issue new currency;
- Withdraw damaged currency from circulation;
- Administer and make discount loans to banks in their districts;
- Evaluate proposed mergers and applications for banks to expand their activities;
- Act as liaisons between the business community and the Federal Reserve System;
- Examine bank holding companies and state-chartered member banks;
- Collect data on local business conditions; and
- Use their staffs of professional economists to research topics related to the conduct of monetary policy.

The twelve Federal Reserve banks are involved in monetary policy in several ways. Their directors "establish" the discount rate (although the discount rate in each district is reviewed and determined by the Board of Governors) and decide which banks, member and nonmember alike, can obtain discount loans from the Federal Reserve bank. Their directors select one commercial banker from each bank's district to serve on the Federal Advisory Council, which consults with the Board of Governors and provides information that helps in the conduct of monetary policy. Five of the twelve bank presidents each have a vote in the Federal Open Market

Committee, which directs *open market operations* (the purchase and sale of government securities that affect both interest rates and the amount of reserves in the banking system). The president of the New York Fed always has a vote in the FOMC, another reason why it is the most important of the banks; the other four votes allocated to the district banks rotate annually among the remaining eleven presidents.

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

At the head of the Federal Reserve System is the seven-member Board of Governors, headquartered in Washington, D.C. Each governor is appointed by the president of the United States and confirmed by the Senate. To limit the president's control over the Fed and insulate the Fed from other political pressures, the governors can serve one full nonrenewable fourteen-year term plus part of another term, with one governor's term expiring every other January. The governors (many are professional economists) must come from different Federal Reserve districts to prevent the interests of one region of the country from being over-represented. The chairman of the Board of Governors is chosen from among the seven governors and serves a four-year, renewable term. It is expected that once a new chairman is chosen, the old chairman resigns from the Board of Governors, even if there are many years left to his or her term as a governor. The chairman exercises enormous power because he is the spokesperson for the Fed and negotiates with Congress and the president of the United States. He also exercises control by setting the agenda of Board of Governors and FOMC meetings and by supervising the board's staff of professional economists and advisors.

The Board of Governors is actively involved in decisions concerning the conduct of monetary policy. All seven governors are members of the FOMC and vote on the conduct of open-market operations. Because there are only twelve voting members on this committee (seven governors and five presidents of the district banks), the board has the majority of the votes. The board also sets reserve requirements (within limits imposed by legislation) and effectively controls the discount rate by the "review and determination" process, whereby it approves or disapproves the discount rate "established" by the Federal Reserve banks. The chairman of the board advises the president of the United States on economic policy, testifies in Congress, and speaks for the Federal Reserve System to the media. The chairman and other governors may also represent the United States in negotiations with foreign governments on economic matters. The board has a staff of professional economists (larger than those of individual Federal Reserve banks) which provides economic analysis that the board uses in making its decisions.

Through legislation, the Board of Governors often has been given duties not directly related to the conduct of monetary policy. In the past, for example, the board set the maximum interest rates payable on certain types of deposits under Regulation Q. (After 1986, ceilings on time deposits were eliminated, but there is still a restriction on paying any interest on business demand deposits.) Under the Credit Control Act of 1969 (which expired in 1982) the board had the ability to regulate and control credit once the president of the United States approved. The Board of Governors also sets margin requirements—the fraction of the purchase price of securities that has to be paid for with cash rather than borrowed funds. It also sets the salary of the president and all officers of each Federal Reserve bank and reviews each bank's budget. Finally, the board has substantial bank regulatory functions: It approves bank mergers and applications for new activities, specifies the permissible activities of bank holding companies, and supervises the activities of foreign banks in the United States.

FEDERAL OPEN MARKET COMMITTEE (FOMC)

The FOMC usually meets eight times a year (about every six weeks) and makes decisions regarding the conduct of monetary policy, especially by setting the target for the policy interest rate and the federal funds rate (an overnight rate for loans between banking institutions). In addition, it also makes the decisions about reserve requirements and the discount rate (which play less of a prominent role in the conduct of monetary policy). The FOMC does not actually carry out securities purchases or sales. Instead, it issues directives to the trading desk at the Federal Reserve Bank of New York, where the manager for domestic open-market operations supervises a roomful of people who execute the purchases and sales of the government or agency securities. The manager communicates daily with the FOMC members and their staffs concerning the activities of the trading desk.

SEE ALSO *Central Banks; Greenspan, Alan; Policy, Monetary*

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FEDERAL RESERVE SYSTEM, U.S.: ANALYSIS

A political compromise enabled Congress to find a majority to support the Federal Reserve Act of 1913. New York bankers wanted control vested in bankers, and favored a model based on the Bank of England. Rural and agricultural interests wanted political control to remain with the government. The compromise created twelve semiautonomous Reserve banks controlled by bankers, with a Reserve Board in Washington, D.C., appointed by the president with the consent of Congress. The compromise left open the question of degree of independence: Who would make the decisions, Reserve banks or the Board?

Policy decisions were in fact limited. The authors accepted the international gold standard as a monetary rule and the real bills doctrine as an operating procedure. That limited scope for discretion in decisions about the timing of discount rate changes.

Almost immediately, conflict over decisions began between the Board and the Reserve banks. The banks, led by Benjamin Strong of the New York Reserve bank, dominated decisions until Strong's death in 1928. Strong and his associates soon recognized that the real bills doctrine had a major flaw: It implied that a central bank could control the quantities of money and credit by controlling their quality. Specifically, they concluded that efforts to prevent speculative lending would not succeed. The Board adhered to the real bills doctrine and, until 1933, the gold standard. The result of this policy was to deepen the Great Depression. The Federal Reserve was inactive from 1933 to 1951, under the control of the Treasury. In 1935 Congress approved changes in the Federal Reserve Act that shifted control of decisions from the Reserve banks to the Board of Governors. Once the Federal Reserve resumed active policymaking in 1951, the Board began to change procedures to strengthen its control. At the time, it lacked a clear vision of its proper objectives and how to achieve them.

Congress passed two pieces of legislation at the end of World War II (1939–1945). The Employment Act (1946) made a vague commitment to economic stability. The Bretton Woods Agreement (1944) called for fixed but adjustable exchange rates. Monetary policy could achieve domestic stability or exchange rate stability, but not both. The Federal Reserve and many others interpreted the Employment Act as a commitment to "full employment," and although the Reserve never defined what that meant in practice, it gradually came to mean unemployment rates of about 4 to 5 percent. Federal Reserve Chairman William McChesney Martin Jr. stressed the importance of maintaining low inflation and a fixed exchange rate, but he did not develop procedures to achieve either.

One reason for this failure was the effort to coordinate monetary and fiscal policy actions. A popular belief at the time held that coordination would contribute to stability and prosperity; overlooked was the loss of Federal Reserve independence and the increased political influence on monetary policy actions. The administration of Lyndon Johnson wanted the Federal Reserve to coordinate by keeping interest rates from rising so they could finance their persistent budget deficits at lower cost. The Federal Reserve did just that. Also, when it became concerned enough to act against inflation by reducing money growth in 1966, homebuilding declined sharply. Political pressures increased.

Mistaken beliefs about the conduct of monetary policy added to the problem. Economists developed the Phillips curve, relating inflation and unemployment, and policy makers used this construct to reduce unemployment rates by increasing inflation. They discovered after the fact that the reduction in the unemployment rate did not persist, but inflation persisted. The Federal Reserve tried several times—in 1969, 1973, and 1976—to reduce inflation. When the unemployment rose to 7 percent or more, they abandoned the efforts.

Persistent and rising inflation brought an end to the Bretton Woods System of fixed exchange rates. European nations and Japan became willing to give up the fixed exchange rate system in order to free themselves from the effect of U.S. inflationary policies. By the end of the 1970s it was apparent to all that instead of trading off lower unemployment for higher inflation, U.S. policy resulted in higher inflation and higher unemployment. Public attitudes changed, and the change affected some congressional leaders. President Jimmy Carter appointed Paul Volcker as chairman of the Board of Governors of the Federal Reserve. Volcker made two lasting changes. First, he reestablished Federal Reserve independence of political control. This was a necessary step, but it required an acceptance of responsibility for policy outcomes that Chairmen Martin and Burns had been unwilling to make. Second, he accepted the temporary increase in unemployment needed to convince the public that he would not return to inflationary policy. High real interest rates and falling real balances produced a severe recession, with the unemployment rate reaching 10 percent.

But Volcker succeeded. The Federal Reserve and many others adopted and repeated a new mantra, very different from the Phillips curve, that low inflation was the best way to assure low unemployment. From the 1980s to 2005 the United States experienced the two longest peacetime expansions in its history, with inflation generally modest. Despite large budget deficits in the 1980s and after 2001, variability of output and inflation declined to low levels. The public remained confident that monetary

policy would remain sufficiently independent to prevent a return to the instability of the 1970s, and that helped to build a political consensus and popular support for low inflation.

SEE ALSO *Central Banks; Federal Reserve System, U.S.; Full Employment; Inflation; Interest Rates; Macroeconomics; Phillips Curve; Policy, Monetary; Recession*

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Allan H. Meltzer

FEDERALISM

Federalism is one of the most fundamental principles of the American political system. Federalism can be defined as a principle of government in which political authority is divided between a national government and a collection of state (or regional) governments, acting side by side and sharing a large geographical space. The authority of the national government is exercised supremely over many areas of public policy. For example, the national government carries out the military and diplomatic functions of the country, as well as other important issues of national concern. The state or regional governments are semiautonomous and distinct entities that provide a convenient structure through which officials can administer policies of immediate and direct relevance to citizens. Some of the key services provided at the state level that most directly affect citizens are police and fire protection, criminal justice, and primary and secondary school education.

In a federal system, national and state governments are entities that operate as two mutually exclusive spheres of authority, although their functions often overlap and this can be a source of tension. One commentator on the structure of intergovernmental relations in the American system of government, James Bryce (1838–1922), noted that "the system is like a great factory wherein two sets of machinery are at work, their revolving wheels apparently intermixed, their bands crossing one another, yet each set doing its own work without touching or hampering the other" (Bryce 1916, vol. 1, p. 318). Under a system of federalism, both the federal and state governments have their own constitutions from which they derive the authority to act on behalf, and for the benefit, of the people.

In the United States, the national Constitution is the supreme law of the land. This implies, in part, that the state government must recognize and respect the national Constitution, and that state governments must set up their state constitutions and enact their own laws in such a way that they avoid conflict with the national Constitution. Where such conflict emerges, it is generally understood that the state constitution must give way to the national Constitution. Because the national Constitution as interpreted by the Supreme Court supersedes state or regional constitutions in power and authority, state governments usually operate with less independence than they might like and with less independence than states in a confederacy or a league of nations.

Writing about the meaning of federalism, noted British authority K. C. Wheare (1907–1979) defined federalism as a "method of dividing powers so that the general and regional governments are each, within a sphere, coordinate and independent." He further noted "that each government should be limited to its own sphere and, within that sphere, should be independent of the other" (McClelland 2000, p. 297). Because federalism requires that the national and state governments should each "be limited to its own sphere," it becomes important for there to be a written constitution, which would define the boundaries of authority for each government. A written constitution is therefore one of the key characteristics of federalism. Without such a constitution, the national government can easily encroach upon or usurp the authority of the state governments, possibly leading to chaos.

FEDERALISM AS A HAPPY COMPROMISE

Federalism as practiced in the United States is what people around the world usually refer to when the word *federalism* is uttered or heard. It is based on one of the oldest written constitutions, the U.S. Constitution, which was ratified in 1787 after much eloquent and contentious debate over its content. The framers of the U.S. Constitution worked hard to establish a system of government they and their posterity could be proud of, a government that would "best secure the permanent liberty and happiness of their country" (Madison 1835, quoted in McClelland 2000, p. 293). The framers were not interested in setting up a central government, where political power would be concentrated in the hands of a national government, as was the case in prominent countries at that time, such as France and England. The framers were also not interested in continuing a confederate system because the Articles of Confederacy (the original governing charter of the United States) prevented the establishment of a strong and respected nation since the Articles created a natural inclination within the provinces to satisfy their own territorial interests rather than to secure the interest of the entire nation. The framers were, however, very much interested in a system that would reflect the wishes and preferences of

the citizens, a system that would provide a high degree of independence and autonomy to the states while enhancing the international stature of the nation. Thus federalism as a theory of government was indeed an afterthought in that it emerged after the framers wrote and ratified the Constitution (McClelland 2000, p. 298).

Federalism is the product of a happy compromise in the formation of the nation and in its capacity to present a unified front when conducting foreign policy. That compromise was between Federalists such as George Washington (1732–1799) and John Adams (1735–1826), who wanted greater centralization of authority, and Anti-Federalists such as Thomas Jefferson (1743–1826), who favored placing power in the hands of ordinary individuals so that they can maximally manage their own affairs at the state and local levels.

The issue of individual states or regions protecting their own local territorial interests at the expense of national unity was not overcome with ratification of the Constitution, however. The Supreme Court under Chief Justice John Marshall (1755–1835) did much to establish and legitimate judicial review and to vigorously enforce the Constitution's contract clause toward a vision of centralizing power in order to nourish economic growth through free market capitalism. Had this vision been successfully maintained into the future, prolonged federal dominance over states would have been established sooner rather than later in the course of U.S. national development. But that vision collapsed under Chief Justice Roger Brook Taney (1777–1864). The Taney Court tolerated greater decentralization of the American political system (McCloskey 1994, chap. 4). The Court also wrongly and tragically tolerated slavery as a way of life in the South, as exemplified by its deplorable decision in *Dred Scott v. Sandford* (1857). Conflict over slavery (the placement of people, in this case black people, in bondage as the property of white owners) led to a secessionist push by southerners, culminating in a bloody civil war between armies from northern and southern states from 1861 to 1865. Federal dominance was more clearly established during the 1930s after President Franklin Delano Roosevelt (1882–1945) threatened to "pack" the Supreme Court with loyalists who would support and defend his New Deal policies, and the Court reversed its previous rejections of these policies.

Another characteristic of federalism is that the states provide plenty of opportunities to experiment with responses to public policy. As Justice Louis Brandeis (1856–1941) stated in his dissent in the 1932 case of *New State Ice Co. v. Liebmann*, "It is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country" (Ducat 2004, chap. 5). Those public policies that are chosen and implemented as a result of such experiments are afforded great legitimacy by the people who are most affected by them. But while this is a strong argument in favor of a federalist system, the crux of the argument in favor of federalism boils down to the expressed relationship between the application of governmental power and the preservation of individual freedom.

Under federalism, government power is decentralized and diffused among different levels and across different branches within the same level. Thus a third characteristic of federalism is that the diffusion of power afforded by such a system helps to preserve individual freedom and suppress tyranny, which is the systemic exploitation of the populace by a few self-serving individuals. Diffusion of power helps promote individual freedom because in smaller political units, individuals can participate more directly in a monolithic unitary government, and because individuals dissatisfied with conditions in one state can vote with their feet by moving to another state. But diffusion of power also suppresses tyranny, and it accomplishes this by minimizing the possibility that any one faction can gain enough access to government to push through any kind of policy that will exploit others without being detected. In addition, diffusion of power encourages coalition-building between individuals and groups operating at different levels of government in order to achieve public policy objectives.

But, generally speaking, there are some disadvantages to a federal system as well. Because federalism requires different institutions to approve a policy before it can be adopted, each decision point can unwittingly become a veto point that slows down the process of policymaking, or worse, prevents any action from being taken to resolve an important problem. Also, variation among states in their treatment of citizens, especially with respect to civil rights and liberties, can introduce a tension into the relationship between federalism and justice, which is thought to know no geographical boundaries.

SEE ALSO *Constitution, U.S.; Democracy*

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Isaac Unah

FEDERALIST PAPERS

SEE *Hamilton, Alexander; Madison, James.*

FEMALE-HEADED FAMILIES

Families are constructed from primary social relationships, either by circumstance or choice. Scholars and legal experts have defined families as collections of individuals who are related by birth, adoption, or marriage. The sociologist Talcott Parsons set forth a conception of the family as a unit including a breadwinner husband and a homemaker wife. The economist Gary Becker examined the social and economic exchanges that take place among partners, bringing both benefits and costs. Social science definitions of families have become more inclusive of people unrelated by legal marriage who are closely connected or intimately involved, have mutual responsibilities and common interests, and who care for each other. Popular understandings of family tend to focus on how people feel about each other (love) and what people do for each other (commitment). As definitions of families have changed, family configurations have shifted as well. Families are increasingly headed by women and in such cases are commonly referred to as *female*-headed, *women*-headed, or *mother*-headed families. The terms *lone* mother and *single* mother typically refer to the same family structure in different countries. Women raising children in any of these families may be divorced, separated, single, never married, or in a cohabiting relationship with a male or female partner or if married may be living apart from their partner.

WHY FAMILIES ARE CHANGING

The demographic shift away from the "nuclear" family model consisting of two married heterosexual parents living together with biological children represents a major change in social relationships. Most agree that families look quite different in the early twenty-first century than they did a generation ago. Yet some argue that there was never a single dominant family pattern in Western society. Marriage patterns in the United States have been largely based on the different cultural and economic conditions facing African American and white women (Cherlin 1992). Historical discrimination toward racial and ethnic groups and blocked economic opportunities have depressed marriage rates overall and have contributed to increases in female-headed families. Social historians find that the high marital stability of the mid-twentieth-century United States is best described as an anomaly when compared to earlier decades and to later periods (Coontz 1992, 1997; Stacey 1990). Unmarried cohabitation has become both more prevalent and socially acceptable in all social classes since the 1970s. In Scandinavian countries cohabitation has been a long-standing pattern. Couples live together before marriage, in place of marriage, and in between marriages. Demographers and sociologists point out that cohabitation is an increasingly common context for childbearing and child rearing (Wu and Wolfe 2001).

Separating out the causes and consequences of changes in family structure is a challenge. One of many possible explanations is that shifts in values and norms have affected gender roles and expectations for marriage. Women's sexual independence and the decline in the number of "marriageable" men—those who are employed and stable—is yet another explanation for the decline of marriage. Increases in women's full-time employment, wages, and sustained commitment to the labor force are other hypotheses. Women may be earning enough to be able to choose independence over marriages to men who either cannot contribute economically or are difficult spouses. In such situations, women and men's lives may be less "complementary" (see Burns and Scott 1994). Some also argue that welfare supplanted wives' reliance on husbands for financial support, although welfare policies vary widely by region, country, and historical period.

Poverty scholars see a strong cross-national connection between female-headed families and poverty. In North America and western Europe, there is an increasing trend toward single-parent families. Men and women are marrying later, are increasingly choosing to cohabit rather than marry, and are increasingly likely to divorce. Out-of-wedlock childbearing is also increasing and is especially high among young African Americans and lowest among Latina women (Cherlin 1992; Wong, Garfinkel, and McLanahan 1993). In Central and South America legal marriage is normative, but mothers may leave children in the care of relatives to find work elsewhere temporarily or permanently. Globally, impoverished mothers earn money through legal or illegal (and risky and dangerous) means to support themselves and their children. Barbara Ehrenreich and Arlie Russell Hochschild (2002) point to the sexual and economic exploitation of women around the world.

Sociological research reflects serious concern about the growing numbers of female-headed families. Numerous studies conceptualize single motherhood as a social problem, either because of the social stigma attached to it or because of the feminization of poverty. Worldwide the majority of families headed by women are poor. In the United States female-headed families are three times more likely to be poor than are those in two-parent families. While quantitative research shows that many female-headed families are "at risk," qualitative research focused on the meaning, arrangements, and flexibility of families headed by single women reveals that such arrangements can also bring greater stability compared to the existing alternatives.

COPING STRATEGIES AND FAMILY CHOICES

In the 1970s the anthropologist Carol Stack studied the kinship strategies of single women with children living in an urban housing project in the midwestern United States. She described a complex network of sharing and support among households. Similarly Kathryn Edin and Laura Lein (1997) found that poor single mothers rely on assistance from friends, relatives, and neighbors—both information and money to get through the month—whether they are working or receiving welfare payments.

Research has also explored how middle-class, single-mother families discuss their family circumstances, manage finances, and handle work and family responsibilities. Rosanna Hertz and Faith I. Ferguson (1997) found that the women they studied formed families without men for a number of different reasons, often related to childbearing—unexpected pregnancies, opportunities to adopt, anxiety about "biological clocks." Some single women—heterosexual and lesbian—choose to adopt or become pregnant through donor insemination. These women were not opposed to nuclear family arrangements; they were actively seeking out partners and commitment while not rejecting the possibility of bearing and raising children alone. Margaret K. Nelson (2005) has examined the "social economy" of single motherhood in rural communities. Her emphasis on the combined importance of social networks and financial resources is particularly instructive for understanding the complexity of single mothers' lives.

ECONOMIC CONSEQUENCES

The overall economic prognosis for single-mother families is bleak. Declining rates of marriage, increases in divorce, and the prevalence of out-of-wedlock childbearing means that a growing proportion of families with children are headed by a single parent for some period of time, and these households are much more likely to be poor. When fathers do not live with their children, they are much less likely to share in the financial costs of raising them. Single mothers bear most of the economic expenses and social responsibilities of child rearing. Low wages and high child-care costs contribute to the economic difficulties facing these households. Simply put, it costs more for single mothers to work, and many of the positions women hold do not pay enough to support their households or offer benefits that would help them or their children, like health care, vacations, or sick leave. Improving employment opportunities, strengthening the social welfare system, and increasing child support are all approaches that would contribute to the financial stability of female-headed families (McLanahan and Sandefur 1994; Edin and Lein 1997). The United Nations similarly points out that promoting gender equality and women's empowerment is essential if the position of female-headed families is to be improved.

Involving parents who do not live with their children in their children's lives may also be a way to ease the burdens experienced by one-parent families. Studies find that the overall workload at home of single mothers is much greater than that of married mothers. Single mothers spend more time on household tasks like cleaning and cooking as well as on the hands-on care of children. The work overload experienced by single mothers produces a great deal of stress and may affect parenting practices. It is unclear whether children receive more attention and supervision in two-parent or one-parent households. Nelson's 2005 study shows that rural single mothers sometimes have difficulty arranging for tasks typically performed by men, like landscaping and automobile repairs. Henny M. W. Bos, Frank van Balen, and C. Dymphna van den Boom (2004) find that lesbian-mother families are no more or less disadvantaged than are heterosexual families.

A number of studies have suggested that there is a "wage penalty" for motherhood that does not exist for fatherhood. Losing time from work to raise young children brings a decline in earnings in the United States and western Europe. In many cultures and countries caregiving is exclusively women's domain. The depressed education levels and limited work opportunities that result from this focus have negative economic repercussions for women. Michelle J. Budig and Paula England (2001) analyzed the characteristics of many different jobs—including female-dominated occupations—and found that wage penalties exist for all mothers. Divorced and married mothers experience higher child-related economic penalties than do never-married mothers, as do women with more than one child. However, the penalty for African American and Latina women with more than two children appears to be smaller than for others (Budig and England 2001). Some of the penalty, Budig and England maintain, is explained by work interruptions, changes to

part-time status, lack of seniority, and relatively limited work experience. The wage penalty for women is found across jobs that otherwise have different characteristics. It is for future researchers to determine whether employer discrimination is entirely responsible or whether reduced productivity at work accounts for some of the wage differences. Much research also remains to be done on the relationship between the female-headed family and women and children's poverty levels and on the question of family stability

SEE ALSO *Family; Family Structure; Family Values; Pathology, Social; Poverty; Resiliency*

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Margaret Walsh

FEMININE MYSTIQUE

SEE *Friedan, Betty.*

FEMININITY

Femininity is commonly understood to refer to a collection of qualities or attributes associated with women in distinction from men, whose own qualities are signified by the antonym *masculinity*. Yet precisely what qualities qualify as feminine (or masculine) is subject to discussion and contention, as is whether such qualities should be considered innate essences or cultural norms. Passivity, submissiveness, and compassionate, caring, nurturing behavior toward others, especially infants, are widely considered feminine traits in comparison to masculine assertiveness and competitiveness. Their prevalence has lent credence to the belief that they are rooted in female biology and anatomy, whether by divine design or Darwinian natural selection. In the latter case, theory postulates higher rates of reproduction for passive women, who could most easily be sexually subdued, and higher survival rates for babies born to nurturing women. However, even the most widely shared so-called feminine traits are not universal, whether the comparison considers different cultures, different groups or individuals within a given society, or different periods of history. Since Margaret Mead's (1901–1978) groundbreaking anthropological study in 1936 first demonstrated cultural variability in behavior and temperament for both sexes, thus challenging previous presumptions about a universal feminine (or masculine) essential nature, much scholarly attention has been paid to how norms of gender may be socially and culturally constructed (Tarrant 2006).

Women come to participate in upholding standards culturally deemed feminine for behavior and appearance through mechanisms of socialization that are multiple and not always obvious. Enforcement is the most obvious. Over the last few millennia of known human history, broadly influential cultural systems, such as the religions Judaism, Christianity, Islam, and Hinduism and the Confucian code of conduct, have explicitly directed that women's primary social duty is to be obedient wives and devoted mothers. Legal and paralegal structures derived from such religious and moral traditions have enforced these directives using punishments ranging from mild to extreme in severity depending on specific social and historical circumstances. Under the Taliban regime in Afghanistan at the beginning of the twenty-first century, for example, punishment for noncompliance with brutally extreme restrictions on women's appearance and behavior included public flogging and execution. Compulsion, however, is not the only or even necessarily the most effective means for encouraging women to subscribe to femininity norms. Social rewards and personal satisfaction are also motivators. Piety is its own reward for a woman of any faith who believes she is behaving in accordance with divine will. Depending on how she interprets her faith, a contemporary Muslim woman may thus signal her femininity and her piety by choosing to wear the veil whether she lives under a theocratic or a secular political system. Her choice to veil may be reinforced by additional rewards, such as greater respect and personal autonomy accorded to her by her family and the local Muslim community (Hoodfar 2003).

Marriage, in most cultures, has been the principal reward for successful displays of femininity. Under economic conditions in which family well-being is heavily dependent on women's domestic production, wifely assets tend to reside primarily in a woman's skill in the feminine activities of domestic labor. When a wife's domestic productivity is not essential, whether due to class privilege or to postindustrial economic structures that shift production away from the home, her feminine assets come to be measured instead through her appearance and character. Patriarchal cultural conditions prevalent in most, but not all, societies determine ideal feminine appearance and character traits to be those that make a woman sexually attractive to a man, most suitable to represent his social status, and most trustworthy to mother his children. Thus physical beauty, both natural and artificial, balanced by character traits of sexual modesty, nurturing kindness, and a strong sense of duty to family have become widespread hallmarks of ideal femininity. But although women can derive personal satisfaction in meeting such measures, the accompanying price has often been problematic. Ironically, the sufferings of many upper-class women most palpably illustrate the point. Beauty norms that emerged in stratified societies to simultaneously signal high social status sometimes entailed not just delicacy, refinement, and taste in adornment but actual physical fragility, frailty, even incapacity as symbols of the socioeconomic status of the husband, proving his wealth sufficient to support a wife whose physical labor was not necessary. The former practices of Chinese foot binding and European waist cinching illustrate the debilitating operations of such elite-class norms of feminine beauty. Although they were believed to enhance a woman's erotic appeal (while simultaneously symbolizing her sexual restraint), they also hobbled or otherwise constrained her physical capacity, not to mention causing her discomfort and pain.

Less self-evident forms of harm, whether through conformity to feminine ideals or through disqualification from femininity by social status, sexual orientation, or race, among other factors, as well as more nuanced sociological interpretations of incentives for feminine performances, are topics that have generated considerable theorizing across scholarly disciplines (Brownmiller 1984; Bartky 1990; Martin 1996; Skeggs 1998; Lee 2000; Burns-Ardolino 2003; Taylor 2003; Bathla 2004). The philosopher Simone de Beauvoir (1908–1986) is often quoted for her ideas about how the sense of self that conformity to ideals of femininity creates in women is a sense of self as "Other," existing only in secondary relation to the primary "Self," the fully human self that in patriarchal traditions can only be claimed by men.

Psychologists have explored how the expectation to nurture others has led legions of women to psychologically unhealthy degrees of self-sacrifice, labeled a "negative feminine trait" in the literature. Many scholars have written about how women effectively create themselves as objects, rather than subjects, in their pursuit of feminine beauty norms yet are bound not only to fail in this pursuit but also to be reminded of their failure incessantly and distracted repeatedly by promises for new ways to succeed. Pervasive modern mass media and capitalist commerce promulgate a beauty regime that harshly judges the femininity of women whose age, skin color, hair texture, physique type, or fashion sense do not match the dominant cultural ideal, then exploits feelings of inadequacy to sell beauty products and services from lipstick to skin lightener to liposuction and breast augmentation in order to turn a profit at their expense. This beauty regime thoroughly ensnares as well. Fashion is ever changing, but whatever the fashion, every detail of the body demands proper attention. Each minutiae of how a woman's body looks, feels, and smells, how it is clothed, coiffed, enhanced with makeup and other adornment, even how it speaks and moves or rests combines to express normative femininity successfully or not. Enormous ceaseless efforts of self-surveillance and self-discipline are required from an early age to produce the modern feminine body. A self-

policing gendered identity also develops through this process. This form of feminine subjectivity is interpreted by some theorists as being more completely subjected to modern versions of patriarchal power than is possible under crude enforcement or injurious restraint which, albeit brutal techniques of control, are less thoroughly invasive of the whole being.

Critics of the physical, psychological, economic, and political harms resulting from socialization processes aimed at patriarchal ideals of femininity draw encouragement from the historic appearance of alternate ideals and socialization opportunities available to girls following the women's movements of the modern era. Competitive assertiveness, physical strength, and even muscularity are developed in the characters and bodies of girls and women who engage in amateur and professional sports, for example (Boyle 2005; Koca and Asci 2005; Kindlon 2006). Furthermore the representation of these athletes in mass media amplifies the scope of qualities that femininity is seen to signify culturally, stretching the meaning to incorporate qualities previously considered exclusively masculine (Carty 2005). Some critics of patriarchal femininity see reason to hope that social developments blurring traditional gender roles, such as women in sports, or politics, or the military, will help move common understanding of femininity beyond the still dominant, but demonstrably deleterious, dualistic framework in which femininity and masculinity are conceived as mutually exclusive opposites.

SEE ALSO *Determinism; Determinism, Biological; Essentialism; Feminism; Gender; Gender and Development; Gender, Alternatives to Binary; Marriage; Masculinity; Matriarchy; Motherhood; Natural Selection; Norms; Other, The; Patriarchy; Phenotype; Religion; Role Conflict; Self-Identity; Veil, in African American Culture; Veil, in Middle Eastern and North African Cultures; Women; Work and Women*

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Marymay Downing

FEMINISM

Feminism refers to social theories, economic ideologies, political movements, and moral philosophies aimed at bringing equality to women. Feminism has been identified with different groups and different issues over the course of its history. The first wave gave rise to liberal feminists, who fought for the right to vote, access to education, and marriage law reforms in the 1800s and early 1900s. The second wave witnessed the emergence of radical feminists, who protested for work and reproductive rights in the 1960s and 1970s. The numerous feminist groups concerned with all forms of oppression (e.g., racism, classism) evolved as the third wave in the 1990s.

ORIGINS OF FEMINISM

The desire for equality predates the existence of the term *feminism* or the movement it has come to represent. The term *feminism* comes from the French word *féminisme* and was popularized by Hubertine Auclert in 1882 when she organized the first women's suffragist society in France. However, prior to the advent of the word, there were publications that fell within the purview of feminism. One of the first, by the medieval French poet Christine de Pizan, was *Livre de la cité des dames* (1405; *The Book of the City*

of Ladies, 1999), in which Pizan suggests that women should build their own cities, free of men, so as to avoid men's violence and oppression. Dealing more specifically with rights, John Locke's *Two Treatises of Government* (1690) argued that all individuals have indelible natural rights to life, liberty, and possessions, which no government can deny.

Locke's work inspired Mary Wollstonecraft's *Vindication of the Rights of Women* (1792), one of the first feminist manifestos. Wollstonecraft argued that women were human beings who should not be denied the same individual rights as men because of their sex. She advocated that women be viewed as equal to men under the law, with all the same rights and privileges, including the right to education, earnings, and property ownership. The rights of women were further advocated by John Stuart Mill in his treatise *The Subjection of Women* (1869). Mill contended that women should be granted the same rights and privileges as men under the law. In 1866, during his term as a member of Parliament for Westminster, Mill introduced a motion to enfranchise women on the grounds that taxpayers should have representation. The motion was defeated (196 to 73 votes), but the impetus for women's suffrage was not. The right to vote and the right to a proper education were two primary concerns that propelled the first of the three waves of the feminist movement.

THE FIRST WAVE OF FEMINISM

The period from the mid-nineteenth century to the early twentieth century saw tremendous activity for the women's movement. Key concerns included improvements in education, employment, and marriage laws. In much of North America and Europe, the right to higher education provided the movement's initial spark. In other nations, cultural and religious constrictions such as suttee (self-immolation by Hindu widows), purdah (isolation of women, shielding them from public view), child marriage, and foot binding provided the initial focus for reform. In England and the United States in the 1800s (dates vary by state), marital laws were reformed with the passage of married women's property acts, which enabled wives to own property, enter into contractual agreements, sue, and be sued. However, in many countries it became apparent that the right to vote was instrumental in obtaining other reforms, so voting became the focus of the movement.

In the United States the first women's rights convention was held in Seneca Falls, New York, in 1848. In 1869 Elizabeth Cady Stanton and Susan B. Anthony founded the National Woman Suffrage Association and demanded not just the right to vote but marital reform as well. The exclusion of male members and the request for marital reform, instead of focusing solely on the vote, was frowned upon by some (e.g., Lucy Stone and Henry Blackwell), resulting in the creation of the American Women Suffrage Association. However, the two groups merged in 1890. Women in New Zealand were among the first to obtain the right to vote (1893), and other countries quickly followed. For example, women's suffrage was achieved in Australia in 1902, Finland in 1906, Denmark in 1915, Russia in 1917, Czechoslovakia, England, and Germany in 1918, the Netherlands and Sweden in 1919, and the United States in 1920.

In many countries, after winning the right to vote, women turned their attention to education and employment rights. Upon achieving greater educational and employment access, women entered both of these spheres in record numbers. However, this newfound freedom was quickly tempered by the Great Depression. Although the effects of the Depression were felt at different times in different countries, the 1930s saw immobilization in the feminist movement. During this period, women were discouraged from seeking employment because of the scarcity of jobs. This employment hiatus was quickly reversed with the start of World War II in 1939, as women were encouraged to fill voids in a number of professions previously closed to them (e.g., factory workers, pilots) because so many men were sent to battle. Women proved to be effectual workers, but they were nonetheless displaced by returning soldiers at the war's end.

The tumultuousness of the war years was followed by a period of relative calm, during which the movement waned. However, having tasted independence, career options, and good pay, women were no longer content to be housewives. The publication of Simone de Beauvoir's *Le deuxième sexe* in 1949 (*The Second Sex;* English trans., 1953) reminded women that there was still much work to be done. This period of tranquility soon ended in the 1960s with the start of the second wave of the feminist movement.

THE SECOND WAVE OF FEMINISM

The term *second wave* was coined by Martha Lear and refers to the feminist movement that began in the 1960s. The leading issues were demands for employment and reproductive rights. In the United States the second wave rose out of the civil rights and anti-Vietnam War movements. Even within these "pro-rights" organizations, women were relegated to second-class status. In an effort to gain a voice, two branches of the feminist movement emerged: the women's liberation movement (WLM) and the National Organization for Women (NOW). The WLM evolved out of the New Left and encompassed more loosely organized radical groups that formed following their exclusion from other New Left politics. They gained great notoriety in 1968, when they demonstrated

against the Miss America pageant for its sexist objectification of women. NOW was a more structured, liberal group founded in 1966 by Betty Friedan, Aileen Hernandez, Pauli Murray, and others. Although NOW grew to become more inclusive, in 1968 Ti-Grace Atkinson left it and created her own group, the Feminists, to protest NOW's hierarchical structure. NOW also lost members because of its pro-choice stance; some conservative women, led by Elizabeth Boyer, left the organization and created the Women's Equity Action League. In spite of these early setbacks, NOW grew to become the largest women's organization in the United States and championed the equal rights amendment (ERA) as its primary cause. Despite approval by the U.S. House and Senate, the ERA was not ratified by the requisite thirty-eight states by the 1982 deadline.

This period was marked by a number of historic events, including the 1963 Commission on the Status of Women report that documented discrimination against women in all facets of life. The pervasiveness of discrimination was also the topic of Betty Friedan's best-selling book *The Feminine Mystique* (1963). These two documents invigorated the women's rights movement, and its activities were instrumental in bringing about changes. In 1963 Congress passed the Equal Pay Act, which prohibited unequal pay for equal work. In 1964 Congress passed Title VII of the Civil Rights Act, which prohibited employment discrimination on the basis of sex, race, color, religion, and national origin. Ironically, the inclusion of "sex" was actually a last-minute attempt to kill the bill, but it passed anyway. Prohibitions against sexual discrimination were further extended in 1972 with the passage of Title IX of the Education Amendment, which prohibited discrimination in educational settings. In 1973 the U.S. Supreme Court's decision in *Roe v. Wade* struck down state laws restricting a women's right to an abortion, thereby legalizing it in all fifty states.

In addition to employment and reproduction rights, concerns about pornography and sexuality more generally also came to the fore. However, there was little consensus on these issues, and this disagreement culminated in what is termed the *feminist sex wars*. The sex wars of the 1980s were between antipornography feminists (e.g., Catherine MacKinnon, Andrea Dworkin, and Robin Morgan), who argued that pornography degrades and promotes violence against women, and sex-positive feminists (e.g., Camille Paglia, Ellen Willis, and Gayle Rubin), who opposed limiting sexual expression. This conflict, along with the fact that many feminists felt that other sources of oppression, such as race and class, were being neglected, caused the already multipartite movement to become increasingly fractured, resulting in the birth of third-wave feminism.

THE THIRD WAVE OF FEMINISM

Third-wave feminism evolved out of the disillusionment of many feminists with the overemphasis on the experience of middle-class white women in the mainstream. Feminists of color (e.g., Gloria Anzaldúa, bell hooks, Chela Sandoval, Cherrie Moraga, Audre Lorde, and Maxine Hong Kingston) emphasized the significance of race, class, sexual orientation, and other socially structured forms of bias on women's lives (Kinser 2004). Critical race theorist and law professor Kimberlé W. Crenshaw introduced the term *intersectionalities* to highlight the multiplicative effect of these different sites of oppression. Counter to postfeminist contentions that feminism was obsolete as women had gained equality, third-wavers contended that there was still work to be done, specifically related to the "micropolitics" of gender oppression.

The term *third-wave feminist* was popularized by the 1992 *Ms.* magazine article titled "Becoming the Third Wave" by Rebecca Walker, who stated: "I am not a postfeminism feminist. I am the third wave" (Walker 1992, p. 40). In her article Walker describes her rage over the outcome of the Clarence Thomas hearings (in which Anita Hill testified that Thomas had sexually harassed her; Thomas was confirmed as a Supreme Court justice, while Hill was repudiated) and her subsequent commitment to feminism. Walker's article generated a large response from young women, who indicated that they have not given up the cause but are feminists in their own way. That is, they embrace a more pluralistic definition of feminism; they are concerned with the intersectionalities of oppression and the impact of globalism, technology, and other forces, and they operate on a more grassroots level (Kinser 2004). Although both second- and third-wave feminists are still at work, their divergent concerns spawned different groups, including black feminists, critical feminists, and global feminists.

TYPES OF FEMINISM

Although there are many types of feminism, the four most common are liberal, radical, Marxist, and socialist. What differentiates them is the degree to which they accept that the different social structures in power are responsible for oppression. Liberal feminism, considered the most mainstream, accepts that sex differences exist but contends that social, legal, and economic opportunities should be equal for men and women. Liberal feminists are concerned with individual rights and promoting change through legal and legislative means while still operating within the current patriarchal structure.

Radical feminism emerged from the ideals of the New Left and the women's liberation movement in the late 1960s. Radical feminists argue that men are the

oppressors of women and that the patriarchal social structure must be replaced for women to gain equality. The term *radical feminism* is used to represent many divergent groups, including cultural feminism, lesbian feminism, and revolutionary feminism.

Marxist feminists believe that women's oppression stems largely from economic stratification brought about by the production methods inherent in capitalism. Accordingly, capitalism must be destroyed in order to emancipate women both as workers and as property within the marital sphere.

Drawing from both radical and Marxist ideologies, socialist feminists argue that both class and sexism are sources of women's oppression. They advocate the end of capitalist patriarchy to reduce all forms of exploitation, as they are also concerned with oppression resulting from race, age, religion, and the like. In contrast to liberal feminism's emphasis on individual rights, socialist feminists emphasize the social existence in the broader community.

IMPACT OF FEMINISM

In addition to voting, property, employment, and other rights, the women's movement has also promoted other changes. For instance, not only do women have the right to vote but a number of countries have had female political leaders, including Chile, Finland, Ireland, Israel, Liberia, and Switzerland. In addition access to education has brought about a large increase in the number of women students, such that women now outnumber men in many nations' schools. With regard to language, feminism has been influential in advancing the use of nonsexist terms (e.g., *humankind* in lieu of *mankind*). It has also had a tremendous impact on the institution of marriage, in terms not only of whether women marry but also whom they choose to marry (a man or a woman), as well as the distribution of familial labor within the marital union. Moreover following the lead of the nineteenth-century suffragist Lucy Stone, many women now maintain their maiden names after marriage. The movement has also influenced religion, with many liberal denominations now ordaining women. Feminist thinking has also influenced the social sciences. It is no longer acceptable to collect data solely on men and to apply the findings to women, because there are often important gender differences—for example, personality (Chodorow 1978). Further, feminist researchers advocate increased use of qualitative methods in which participants play a greater role in informing the definition and measurement of the phenomenon under study.

SEE ALSO *Critical Race Theory; Feminism, Second Wave; Friedan, Betty; Gender Gap; Inequality, Gender; Intersectionality; Marxism; National Organization for Women; Patriarchy; Reproductive Rights; Sexism; Sexual Harassment; Sexuality; Socialism; Steinem, Gloria; Suffrage, Women's; Womanism; Women; Women and Politics; Women's Liberation; Women's Movement; Women's Studies; Work and Women*

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FEMINISM, FIRST WAVE

SEE *Suffrage, Women's.*

FEMINISM, SECOND WAVE

Second Wave feminism applies to the women's movement that began at the end of 1963 and extended into the 1980s. First Wave feminism addressed employment, mar-

riage laws, and education and later came to embrace the voting rights movement. Second Wave feminists went further to address the issues of equality of the sexes in the workplace, a woman's right to choose, feminine sexuality, and a furthering of political action to bring women's issues in a patriarchal society to light.

The starting point of the Second Wave is usually considered to be a 1963 report from the Committee on the Status of Women (CSW), which was begun by First Lady Eleanor Roosevelt and which she chaired until her death in 1962. The committee found that women were not being treated equally in the workplace and recommended mandatory fair hiring and pay, maternity leave for mothers, and affordable child care. Based on these recommendations, the Equal Pay Act was passed by Congress on June 10, 1963, making it illegal to pay women less for doing the same jobs as men.

Yet the women's movement at that time was relatively quiet. Most women were locked into traditional roles of wife, mother, nurse, teacher, secretary, and other "feminine" activities without the possibility of individual advancement or achievement. Then Betty Friedan, a New Jersey work-at-home journalist and mother, wrote *The Feminine Mystique* (1963) and her words sparked many more women into realizing that they wanted the freedom to control their own destinies. Friedan wrote about her own life and the frustrations that many other women were feeling about patriarchal attitudes regarding their roles. She equated American women with the inmates of Nazi concentration camps and evoked strong emotions in men and women, both pro and con. The book became a best seller, and the battle for equality of the sexes was reignited.

A major milestone in the women's movement was the passage of Title VII of the Civil Rights Act of 1964, which made gender and racial discrimination in the workplace illegal. At the same time, the Equal Employment Opportunity Commission (EEOC) was established to investigate complaints and impose penalties on those not acting in accordance with the law. Title VII meant that women no longer would have to resign themselves to working as nurses or secretaries because they could not get into medical school or become business executives, though the atmosphere was slow to change.

In 1966, at the Third National Conference of the Commission on the Status of Women, a new organization was formed. Friedan was furious over the government's failure to enforce Title VII, and she invited a few women from the conference to her hotel room. She wanted to discuss stronger options than merely passing a resolution to recommend enforcement, and the women at the meeting decided instead to form their own organization, dedicated to the attainment of full equality for women. Friedan christened it the National Organization of Women (NOW) and the group drafted a statement of purpose.

In March 1969 New York journalist Gloria Steinem realized that the women's movement was not just for unhappy housewives when she attended a rally to "speak out" on abortion. It had been organized by the newly formed radical feminist group the Redstockings, and the meeting was standing room only. As women spoke about their own bad experiences, Steinem realized that she had felt the same anxieties over having had an abortion herself, and she identified with them. She immediately assumed responsibility in the cause of a woman's right to choose.

Steinem traveled around the country with a speaking partner, usually a woman of color, to address those who thought the movement was only for white middle-class women. The pair encouraged all women to understand their rights and to take part in the movement to demand them.

Where Friedan had been considered the founder of the Second Wave movement, Steinem was certainly its messenger. One of her early appearances was in testifying before a Senate subcommittee on the Equal Rights Amendment (ERA), and in 1971 Steinem used her journalistic connections to publish the first edition of *Ms.* magazine as a supplement to *New York Magazine.* In eight days, all 300,000 printed copies were sold. *Ms.* became the premiere forum for feminist issues and Steinem became a feminist icon.

Her testimony and that of other women helped put pressure on Congress to pass the ERA in 1972. The law was to be simple, as written by Alice Paul in 1923: "Equality of rights under the law shall not be denied or abridged by the United States or by any State on account of sex." Yet there was still a long battle, as the ERA had to be sent to all 50 states for ratification, and 38 would have to pass it before it would become law.

Legal wheels did not stop turning. Title XI of the Education Amendments banned sexual discrimination in schools, and the greatest victory was a result of the Supreme Court decision in the case of *Roe v. Wade* in 1973, making abortion in the first trimester of pregnancy legal. The first national convention of the National Women's Political Caucus was also held that year, as women became a force in national politics. Anne Armstrong, the first woman to hold a cabinet-level position, also became the first woman to make the keynote speech at the Republican National Convention.

The end of the Second Wave feminist movement is often seen as occurring sometime in the 1980s up to the 1990s when Third Wave feminism sprouted from an article written by Rebecca Walker, titled "Becoming the Third Wave," in *Ms.* in January 1992. The renewed emphasis of this movement is to expand definitions of gender and

sexuality, race, and class. Many in this group are disappointed that the Second Wave did not fully achieve their ideals, and this was punctuated by the failure of the ERA to be ratified by the required 38 states, though ratification is still being pursued into the twenty-first century.

However, some view feminist advancement as the cause of many societal ills. The concept of women working outside the home has become a necessity for most families, leaving children to be raised by caregivers rather than parents. Many see the decline of the family in America as a result. The openness with which homosexuality and homosexual marriage is approached in today's society seems even more threatening to those with traditional values. However, most men and women working in the area of civil rights maintain that equality—regardless of race, creed, sexual orientation, or mental or physical ability—is a natural right. Feminist movements will undoubtedly continue in various forms until this ideal has been reached.

SEE ALSO *Feminism; Gender; Inequality, Political; Politics, Gay, Lesbian, Transgender, and Bisexual; Steinem, Gloria*

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FENNO, RICHARD F., JR.
1926–

The contributions of Richard F. Fenno Jr. to the political science world are many and varied. His work on Congress and the actions of legislators has pioneered fields of study in political science.

After studying at Amherst and Harvard, Fenno published his doctoral dissertation as his first book in 1959. An article on the House appropriations committee (1962) and a book, *The Power of the Purse: Appropriation Politics in Congress* (1966), soon followed. Although outdated by changes in Congress, Fenno's conceptualization of the power struggles, structures, and behavior of representatives have formed the basic vocabulary used in legislative studies.

In 1973 Fenno published *Congressmen in Committees*, which explores whether committees matter in Congress, and what role they play in fulfilling individual ambitions of congressmen. Fenno's next work, *Home Style: House Members in Their Districts* (1978), studies how representatives behave while at home in their districts. In *Home Style*, Fenno pioneered the "soaking and poking" method of social science research on politicians, in which the researcher follows the subject through the field, observing and documenting behavior. These works demonstrate the researcher's commitment to presenting politicians as necessary elements in the political world, whose actions are worth examination. This stance, which often separates Fenno from others in the field, has led to interesting discoveries about the nature of politicians and the political world. These works have also garnered criticism, as Fenno's research required him to develop friendships with his subjects, raising doubts about his level of objectivity. Other critics have charged that Fenno's observational studies are invalid, because his presence may affect the behavior of the representatives, and because those representatives that consent to be studied may not be an accurate sample of representatives as a whole. Furthermore, the very nature of participant-observer studies requires that only a small number of politicians is studied, thus decreasing the generalizability of any theory arising from the work. Fenno has responded to these criticisms by defending his work as purely exploratory in nature.

After *Home Style*, Fenno turned his eye to the Senate, publishing, among other works, *The Making of a Senator: Dan Quayle* (1988) and *Senators on the Campaign Trail: The Politics of Representation* (1996). In *Senators*, Fenno outlines representation in terms of "durable connections" or relationships that senators build with their constituents over time. Returning to the study of the House of Representatives, Fenno published *Congress at the Grassroots: Representational Change in the South, 1970–1998* (2000), which revisited areas explored in *Home Style*, and *Going Home: Black Representatives and Their Constituents* (2003).

Fenno has been president of the American Political Science Association, is a member of the National Academy of Sciences, and a fellow of the American Academy of Arts and Sciences. He is a distinguished pro-

fessor and William R. Kenan professor of political science at the University of Rochester, where he has taught since 1957.

SEE ALSO *American Political Science Association; Representation*

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FERGUSON, ADAM

SEE *Civil Society.*

FERTILE CRESCENT

The term *Fertile Crescent* refers to part of the ancient Near East that has been considered to be the principal center for the emergence of agriculture, villages, and cities, and hence the "cradle of civilization." The term was coined and popularized by James Henry Breasted (1865–1935), a scholar of ancient Egypt and director of the Oriental Institute at the University of Chicago, in his 1916 textbook for high school students, *Ancient Times: A History of the Early World*. As originally designated by Breasted, the Fertile Crescent is an arc or semicircle that included the relatively well-watered hilly areas of Palestine and Lebanon/western Syria (the Levant) on the west, stretching across northern Syria at the foot of the highland plateau of Anatolia, and then southward, east of the Tigris River to the foot of the Zagros Mountains in Iraq and Iran, ending in the alluvial plain created by the Tigris and Euphrates rivers southeast of contemporary Baghdad. As envisioned by Breasted, the Fertile Crescent's arc surrounded hostile desert and acted as a fertile shore against this "Desert Bay" (the Syrian Desert). The first "ancient civilizations" emerged from this region, including the Sumerians at the head of the Persian Gulf; the Akkadians, Babylonians, and Assyrians in Mesopotamia (Iraq) between the two great rivers; and, at a later period, the Phoenicians on the west. Many of the earliest settlements and cities of the ancient world are found within this arc. The Fertile Crescent is sometimes mentioned in conjunction with ancient Egypt, since it is one of the first civilizations as well. In popular usage, the Fertile Crescent sometimes even incorporates ancient Egypt of the Nile Valley, although scholars have never accepted this wider usage. Many works on the archaeology or the lands of the Bible have also used the term *Fertile Crescent* (e.g., Magnusson 1977).

Besides being designated as the cradle of civilization, the Fertile Crescent has been postulated as the key area for the earlier Neolithic Revolution, the beginnings of agriculture and farming on the more generously rain-fed outer margins of the arc. In fact, whereas Breasted formulated the term mainly for the beginnings of cities and "civilization," its usage for the region of the emergence of agriculture and villages has been much more common. Robert Braidwood's (1907–2003) excavations from 1948 to 1955 at Jarmo, a site in northeastern Iraq in the foothills of the Zagros Mountains, began to provide botanical evidence for the first plant domestication occurring in the "hilly flanks," and subsequent work has shown that the Fertile Crescent was indeed a focus for plant and animal domestication. Within this arc are found some of the earliest examples for the "founder crops" (Zohary 1996), such as the domesticated cereals of barley, emmer wheat, and einkorn wheat; the pulses of peas, chickpeas, lentils, and bitter vetch; and flax used as a fiber. Domesticated animals included goats, sheep, pigs, and cattle. The first evidence of cultivated crops begin to appear about 9000 BCE in the Levant, and by 6000 BCE villages, the farming of plants, and the use of domesticated animals were well established in many parts of the Fertile Crescent (and beyond in a few places). Horticulture began mainly in the Levant during the Chalcolithic period (5000–3500 BCE), which first focused on growing olives, figs, pomegranates, grapes, and dates (the latter perhaps first cultivated in other areas of the Near East). This core area for the Neolithic Revolution is somewhat larger than Breasted's original concept. The argument for the Fertile Crescent's central role has been popularized, for instance, by geographer and physiologist Jared Diamond in *Guns, Germs, and Steel* (1997), where he advocates the significance of the Mediterranean climate (wet winters, dry summers) and that most of the major plants and animals that were genetically and behaviorally predisposed to domestication were found basically together in parts of this arc. Diamond's rather generalized Fertile Crescent extends more northward onto the Anatolian Plateau and includes a tongue that stretches westward to incorporate the significant circa 6000 BCE site of Çatal Hüyük on the Konya Plain in central Anatolia.

The name *Fertile Crescent* has been criticized for not being a proper term or even a relevant concept. In William Hallo and William Simpson's 1998 edition of their textbook, *The Ancient Near East: A History*, they take the term to task, asserting that, in fact, the arc of the Fertile Crescent was not the area for the beginnings of

agriculture (and the Neolithic Revolution), and that evidence now shows the origins to be also in highland areas, such as Anatolia, with greater rainfall and native vegetation. They (and others) also stress that many of the "civilizations" and cities that emerged in Mesopotamia could do so only after developing extensive irrigation systems (and hence these areas were not in a "fertile" region). On the other hand, different terms being proposed by some Near Eastern archaeologists also often refer to a semicircle for origins of agriculture and the emergence of cities, and actually cover a region similar to the Fertile Crescent, using such names as *Near Eastern nuclear arc* (Harlan 1977), *Zagrosian arc* (Maisels 1990), *Zagros-Kurdi-Taurus mountain arc* (Maisels 1990), or the *Near East arc* (Zohary and Hopf 1988). That many sites for early plant and animal domestication lie outside the Fertile Crescent may not necessarily entirely negate the importance of this core region for the beginnings of agriculture and farming, although further discoveries in Anatolia, Iran, and other areas (including India or China) may require significant reinterpretations or refinements in the future.

Following World War II (1939–1945), the use of the term *Fertile Crescent* became particularly popular in other fields besides ancient Near Eastern studies and archaeology. Some historians began to refer to the Arab countries (or previous mandates) of Syria, Iraq, and Lebanon as the Fertile Crescent. For example, in 1966 P. M. Holt published a political history entitled *Egypt and the Fertile Crescent: 1516–1922*, while the economist Charles Issawi (1916–2000), as one of his several books of translated documents, published *The Fertile Crescent, 1800–1914* (1988), in which all the chapters focus on either Iraq or Syria (with Lebanon sometimes included as part of the latter). H. G. Balfour-Paul, writing on "Fertile Crescent Unity Plans" (1996), discusses the various schemes to unite the Arabs of Iraq and Syria (and Lebanon) after World War I (1914–1918), yet the term *Fertile Crescent* was not used by the individuals and groups involved in these discussions; the use of *Fertile Crescent* for these unity plans is entirely artificially imposed.

At the beginning of the twenty-first century, historians, political scientists, and others who deal with the contemporary Arab world and Middle East seldom use the term *Fertile Crescent* for the countries of the Levant. Scholars of the ancient Near East also generally refrain from using the term. Yet, the Fertile Crescent, as a simple explanation for the origins of agriculture, villages, cities, and "civilization," is still used widely in the more popular literature, and with its long use by scholars in the past and its prominence in such works as *Guns, Germs, and Steel*, it is not a concept that will easily disappear from the literature or the imagination.

SEE ALSO *Agricultural Industry; Archaeology; Civilization; Material Culture*

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FERTILITY, HUMAN

The term *fertility* refers to the actual production of children. It may be distinguished from *fecundity*, which is the capability to produce children. Demographers make this important distinction, but not all scientists do. Medical scientists, for instance, use the term fertility to refer to reproductive ability. Also, the meaning of the terms of fertility and fecundity are reversed among French-speaking and Spanish-speaking demographers. They too distin-

guish between the potential and actual production of children. But French-speaking demographers use the term *fertilité*, and Spanish-speaking demographers the term *fertilidad*, to refer to reproductive ability, and *fecundité* and *fecundidad*, respectively, to refer to actual reproductive performance.

One of the most popular and easily understood and interpreted methods for quantifying fertility is the crude birth rate (CBR), that is, the number of births in a population in a given year, per one thousand members of the population, expressed as follows:

$$\text{CBR} = \frac{\text{births in the year}}{\text{population at mid-year}} \text{ *1,000}$$

Using 2005 data for China (Population Reference Bureau 2005), the equation becomes:

$$\text{CBR} = \frac{15{,}637{,}000}{1{,}303{,}700{,}000} \text{ *1,000} = 12$$

This means that in China in 2005, there were twelve babies born for every thousand persons in the population. Crude birth rates among the countries of the world in 2005 ranged from lows of nine in several countries, including Japan, Germany, Bulgaria, Poland, Italy, Hungary, and Greece, to highs of fifty-six in Niger and fifty in Liberia, Mali, Malawi, and Guinea-Bissau (Population Reference Bureau 2005). The range of crude birth rates is much greater than that for crude death rates, which in 2005 extended from a low of one in the United Arab Emirates to a high of twenty-eight in Botswana and Lesotho.

Lay persons employ the CBR more often than any other fertility measure, but it is not the most accurate of the measures. The CBR's denominator does not truly represent the population for which the possibility of giving birth is an issue because it includes males, prepuberty females, and postmenopausal females. Demographers refer to the population in the denominator as the "risk population." Because of this overly inclusive denominator, the CBR should be interpreted with caution.

Demographers use more refined fertility measures, including the general fertility rate (GFR), age-specific fertility rates (ASFR), the total fertility rate (TFR), the gross reproduction rate (GRR), and the net reproduction rate (NRR). The GFR, ASFR, and TFR are increasingly more accurate measures of the childbearing experiences of a population. The GRR and the NRR measure not fertility but reproduction, that is, the production of females (Rowland 2003).

Fecundity can be divided into five categories on the basis of the extent of fecundity impairment and the degree of certainty regarding this impairment. Badenhorst and Higgins (1962, p. 281) note that all couples may be classified as either *fecund* or *sub-fecund*; the latter may be subdivided into the following groups: *definitely sterile*, *probably sterile*, *semi-fecund*, and *fecundity indeterminate*. Badenhorst and Higgins define the *sub-fecund* groups as follows: *definitely sterile* couples are those "for whom conception is impossible because of certain physical or medical conditions, including an operation or other physical impairment or menopause"; *probably sterile* couples are those "for whom a birth is improbable on the basis of specific medical evidence"; *semi-fecund* couples are those who have married or cohabited for a relatively long time without using contraception but have not conceived; *fecundity indeterminate* couples are those who meet the criteria for semi-fecund couples, "except that the wife sometimes reported douching 'for cleanness only' soon after intercourse" (that is, a form of contraception is used). These couples are defined as *fecundity indeterminate* because they could be potentially fecund and some of them are observed to be fecund as well (Badenhorst and Higgins 1962). Demographic research has shown that the majority of sub-fecund couples are impaired according to one of the above definitions.

As for fertility, demographers have conducted extensive studies examining its trends and determinants. It has been found that during the past few decades, fertility in most countries of the world is in a declining pattern, and this is particularly the case in the more industrialized countries. Beginning in the 1990s, fertility below the replacement level of 2.1 children per woman (as measured using the total fertility rate) has emerged in many countries of the world (Kohler et al. 2002, Morgan 2003). Among the 205 countries worldwide (a country is defined here as a territory with at least 150,000 population), 73 had fertility rates at or below the replacement level in 2005. Following Billari (2004), we refer to fertility as being "low" when the TFR is below the replacement level of 2.1, as being "very low" when it is below 1.5, and as being "lowest low" when it is below 1.3. In 2005, eleven countries reported "lowest low" fertility, that is, a fertility rate below 1.3; these countries include South Korea, Taiwan, Poland, the Czech Republic, Slovakia, and Ukraine.

A number of theories have been proposed to explain the dynamics of fertility. Prominent explanations include proximate determinants theory (Bongaarts, 1994), demographic transition theory (Notestein 1945, Thompson 1929, Davis 1963, Hirschman 1994, Knodel and van de Walle 1979, Poston 2000), wealth flows theory (Caldwell 1976), human ecological theory (Browning and Poston 1980, Kasarda 1971, Poston and Frisbie 2005, London 1987, London and Hadden 1989), political economic theory (Greenhalgh 1990, Kertzer and Hogan 1989), and diffusion theory (Coale and Watkins 1986). Many of these theories use proximate determinants of fertility (pro-

portion married, contraception use, induced abortion, and duration of fertility period) and other social, economic, ecological, political, and cultural factors to understand the dynamics of fertility change.

One limitation of the above fertility measures and theories is that they are usually derived from calculations and analyses only of females. The fertility of men and the determinants of male fertility are rarely examined and compared with those of females. Males are a neglected minority in fertility studies. Several reasons have been proposed to justify this exclusion. Some biological reasons are that the fecundity, and the childbearing years of women occur in a more sharply defined and narrower range (fifteen to forty-nine) than they do for men (fifteen to seventy-nine). In addition, "both the spacing and number of children are less subject to variation among women; a woman can have children only at intervals of 1 or 2 years, whereas a man can have hundreds" (Keyfitz 1977, p. 114). Some methodological justifications are that data on parental age at the birth of a child are more frequently collected on birth registration certificates for the mothers than for the fathers. When such data are obtained for mothers and fathers, there are a greater number of instances of unreported age data for fathers, and this is especially the situation for births occurring outside marriage. The sociological reasons include the fact that men have been regarded principally as breadwinners and "as typically uninvolved in fertility except to impregnate women and to stand in the way of their contraceptive use" (Greene and Biddlecom 2000, p. 83).

However, biological and demographic studies provide evidence that men are important to fertility outcomes and related behaviors. Considering mammalian species in general, Coleman indicates that "the male sex as a whole contributes an equivalent amount of genetic information to the next generation as the female, but the variance contributed by that of males to the next generation in many species—especially those which practice polygamy—is considerably greater than that of the female sex" (p. 33). That is, most females reproduce, some males do not reproduce, and other males have a large amount of offspring. In addition, biologists have found there are more childless males than childless females in many species (Coleman 2000).

Demographically, it has been shown that men have different patterns of fertility and fertility-related behavior. For men, age-specific fertility tends to start later, stops much later, and remains higher than that of women (Paget and Timaeus 1994). The total fertility rates (TFRs) for males and females also differ. Results show that in most industrialized countries male TFRs were historically higher than female TFRs. Over time this gap narrowed and eventually a crossover occurred between these rates. This means that men and women who conformed to the sex- and age-specific fertility rates of an area at one point in time and had less than 2.2 children during their childbearing years were more likely to have similar than dissimilar fertility (Zhang 2007; Coleman 2000; also see Smith 1992, and Myers 1941).

The special importance of men is also seen in determinants of fertility and fertility-related behaviors such as cohabitation, marriage, and employment. Whereas the focus has been on women's fertility, in the United States it is men's fertility that is more likely to be influenced by marital and employment status. Being ever married and ever working significantly increases men's number of children ever born (CEB), whereas such factors do not have as strong of an impact on women, despite the frequent emphasis on the relevance of labor force participation for women's fertility (Zhang 2007). Research using various independent variables from several fertility paradigms—namely, human ecology, political economy, and wealth flows—to predict both male and female TFRs for the counties of Taiwan has shown that the variables have consistently performed better in predicting variation in female TFRs than in male TFRs (Zhang 2007).

Men also have different cohabitation and marriage patterns from women. In the United States, for birth cohorts born between 1958 and 1987, it has been shown that living alone, being foreign-born, and living in fragmented families increase the odds of cohabitation for women but not for men. Foreign-born men are more likely to marry than native-born men. But these factors do not have as significant an impact on women's marriage behavior. In Europe, researchers have conducted studies examining male and female transitions to adulthood in twenty-four countries using survey data for the 1980s and 1990s. They find that educational attainment's generally negative effect on fertility is stronger for women than for men. Also, unemployment leads to men's postponement of marriage, whereas it affects women in two distinct ways. It either accelerates or slows down women's timing of marriage. The effect of religion is stronger among women than men. Furthermore, being Catholic and attending church services affect men and women's parenthood timing in different ways in predominantly Catholic countries. Other relevant factors such as parental influence have been shown to have a different impact for males compared to females (Corijn and Klijzing 2001).

Historically, women have been tied to motherhood, and this association is deeply rooted in law and policy, in the ways that jobs are structured, and the ways that family relations are navigated. Many of the studies of fertility and parenthood undertaken by demographers have been shaped by this historical association as well (Riley 2005). Together with the biological and methodological factors

stated above, this has resulted in the decreased attention given to males in fertility research. Yet, as mentioned earlier, biological and demographic analyses have shown that fertility and parenting are not simply female issues—they are issues involving both men and women. The study of fertility should not only focus on females. Critical demography has promoted bringing men into population studies (Horton 1999; Coleman 2000) and Greenhalgh (1990) and others have argued that it is necessary to incorporate gender studies into studies of demography in order to gain a more balanced picture of demographic issues. Together with lowest-low fertility, unbalanced sex ratios at birth, and the demography of gay males and lesbians, male fertility and men's influence on decisions about bearing and rearing children have become emerging issues of population study.

SEE ALSO *Demography; Gender; Population Growth*

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FERTILITY, LAND

The fertility of soil refers to its ability to function in the growing of crop plants. Soil fertility is frequently defined narrowly as the ability of the soil to provide nutrients that are essential for plant growth and the soil having a pH in the range needed for the specific crops grown (most plants do well in the pH range of 6 to 7). If soils are very acidic, below pH 5.5, many crop plants are harmed by the lack of nutrients as well as the presence of soluble aluminum, which can be toxic to plants. On the other hand, some crops such as cassava do well in the acidic and low-nutrient soils of the tropics. Most of the eighteen essential elements for plants come from the soil. Of the nutrients supplied by the soil, nitrogen, phosphorus, and potassium are the ones needed in the largest amounts and are frequently applied in commercial fertilizers. Other nutrients, such as calcium, sulfur, and magnesium, are needed in lesser amounts while the micronutrients, such as iron, manganese, copper, and zinc, are needed in very small amounts and are not as commonly deficient.

A broader view of soil fertility has recently developed that is sometimes referred to as soil health or soil quality. In this more comprehensive view, equal consideration is given to the physical and biological properties of soil that are important to plants, along with the chemical properties. For example, a soil may have excellent nutrient availability but be too wet or compact for crops to grow properly or might have high populations of plant disease organisms or parasitic nematodes. The chemical fertility of the soil is usually determined by laboratory analysis of a composite sample taken from a field. The tests normally included in routine soil analysis are for pH, available nutrients such as phosphorus, potassium, calcium, and magnesium, and lime requirements. Other tests commonly done are salinity and percent saturation with sodium (both in arid regions) and amount of organic matter. In determining the broader health of the soil, the degree of compaction, and root health are usually evaluated in the field, and some laboratories determine water-holding capacity and indicators of biological activity.

Topsoil, usually the top six inches or more, is the most fertile part of the soil. It contains higher amounts of organic matter and nutrients, has more biological activity, retains water more easily, and is usually better aerated than subsoil. Plentiful organic matter is the key to healthy, fertile soils because it has profound and positive effects on almost all soil properties—chemical, biological, and physical. It helps soils store water, resist compaction, make nutrients more available to plants, maintain a thriving and diverse populations of organisms, and so on.

When forests or grasslands are converted to agricultural use, these virgin soils are usually productive for a number of years, even without addition of fertilizers or amendments. The soils usually have good physical, chemical, and biological properties. This is the basis for tropical slash-and-burn agriculture, a twenty- to forty-year cycle in which the trees in a forest plot are first felled and burned. For a few short years, the nutrients stored in the soils and the positive effect of the ash on soils allow reasonable crop productivity. Much of the fertility of these soils is associated with organic matter or elements in the ash that are leached readily into the soil. Thus, in the traditional slash-and-burn system where no fertilizers or organic amendments are applied, after two or three years these soils are allowed to revert to forest.

DEGRADATION OF SOIL FERTILITY

Soil degradation is a worldwide phenomenon that has occurred in many places since the development of agriculture. Soils can be degraded in a number of ways, such as nutrient depletion, organic matter depletion, development of saline or sodic (excess sodium) soils, removal of topsoil by accelerated erosion, and compaction.

In ancient times, crop production decreased in parts of Mesopotamia (in the Tigris and Euphrates valleys), as salts accumulated from irrigation water were not washed out regularly. The hillside agriculture of Greece, Turkey, and the Middle East was first practiced without terraces. Removal of the original forests and repeated plowing and working of these soils left their exposed surfaces smooth or with aggregates that were easily broken under the impact of rainfall. Rainfall, not able to penetrate the soil at the rate it fell, caused runoff and soil erosion. As Homer put it in the *Iliad*, "Many a hillside do the torrents furrow deeply, and down to the dark sea they rush headlong from the mountains with a mighty roar, and the tilled fields of men are wasted" (cited in Hillel 1992, p. 103). The large area of denuded hillsides in the region, with large areas of exposed bedrock or boulders, testify to the magnitude of this problem, which many feel severely stressed these societies to the point of either decline or aggressive adventures to find extra sources of food in other countries.

On highly leached and geologically old landforms such as occur in much of Africa, the loss of soil's ability to provide adequate nutrition to crop plants can happen very rapidly—within two or three years following cutting down the trees and burning them. (In places where the cycle of crops to forest and back to crops is greatly reduced, soils are much decreased in their fertility.) On the other hand, on the deep fertile grassland soils that developed in humid temperate regions, it can take decades of cropping before added nutrients are needed to maintain plant growth. These soils, naturally high in organic matter and able to supply crops with large amounts of nitrogen for years, usually also have large supplies of other plant nutrients. In his classic book *Slavery and Capitalism* (1961), Eric Williams makes the case that in the southeastern United States and the Caribbean it was the institution of slavery that allowed the large-scale exploitation of the land for cash crops (cotton and sugarcane). If free laborers were brought for the purpose of working large estates, as was the case in Australia, they would have abandoned the estates and started their own small farms. These smaller farms, Williams argued, would have not have been so hard on the soil because they would have grown more varied crops and used crop rotation. While this argument makes sense, the soils of the Caribbean and southeastern United States are easily depleted of their nutrients and, when on sloping land, prone to erosion. Thus, small farms applying the practices of the time might also have led to soil degradation, but perhaps not as rapidly as under the institution of slavery.

Between the two extremes of highly leached tropical and subtropical soils and deep grassland soils of the temperate regions are many of the soils of Europe and the eastern United States. These are the regions where modern agriculture first developed and the more intensive nature of cropping required large quantities of external nutrients to maintain plant growth year after year. Modern agriculture developed in a symbiotic relationship with industrial capitalism, and through the break in nutrient cycling capitalism has added new dimensions to the issue of soil degradation. Part of the reason for the need for large quantities of external nutrients is that, with the development of cities and capitalist farmers who sold most or all of what they produced, large amounts of nutrients were being removed from farmland and transported to cities in the form of food products. As Karl Marx wrote in volume 1 of *Capital*:

> Capitalist production … disturbs the metabolic interaction between man and the earth, i.e. it prevents the return to the soil of its constituent elements consumed by man in the form of food and clothing; hence it hinders the operation of the eternal natural condition for the fertility of the soil.… All progress in capitalist agriculture is a progress in the art, not only of robbing the worker, but of robbing the soil; all progress in increasing the fertility of the soil for a given time is a progress towards ruining the more long-lasting sources of that fertility.… Capitalist production, therefore, only develops the techniques and degree of combination of the social process of production by simultaneously undermining the original sources of all wealth—the soil and the worker (1867, pp. 637–638).

USE OF AMENDMENTS TO ENHANCE SOIL FERTILITY

Although various animal manures and green manures were used for thousands of years to enhance the fertility of soils (and still are), in the nineteenth century the application of modern science to agriculture resulted in the knowledge that depletion of a few nutrients—nitrogen, phosphorus, and potassium—were likely to be limiting plant growth on many soils that had been farmed for years. The depleted, "worn-out" soils of Europe and the eastern United States created a strong demand for external nutrient sources. Bones, a source of phosphorus, were imported into Europe, and farmers even raided the graves of the Napoleonic battlefields to obtain them. In the 1840s phosphate became the first industrially produced fertilizer. But industrial production of nitrogen fertilizer would not happen until the after World War I (1914–1918), when the Haber-Bosch process for fixing nitrogen would begin to make this essential element more available. (And it was not until after World War II [1939–1945], when the munitions plants turned to making ammonium nitrate fertilizers, that the low price of nitrogen fertilizer greatly stimulated its use.) In the mid-1800s, in the absence of a ready supply of synthetically produced nitrogen, the use of guano from Peru, high in both nitrogen and phosphorus, came under British control. This caused the United States, in competition with European countries, to search abroad for sources of nutrients to help maintain soil fertility, referred to by the phrase "guano imperialism." During this period, from 1856 (after passage of the Guano Island Act) to the early 1900s, the United States seized close to 100 island sources of guano.

A second major change in the cycling of nutrients took place after World War II. In this period, low-cost nitrogen fertilizers allowed farmers to forgo planting legume forage crops that had been part of an integrated crop farming system that included complex rotations and raising animals as well as crops. Farmers, no longer needing legumes or animal manures to supply their grain crops with nitrogen, began to specialize in one or two crops such as wheat and corn (and later soybeans). Animals, especially poultry, beef cows, and hogs, started to be raised

on large farms that frequently imported feeds, made from mainly corn and soybeans, from other regions. The growth of these large-scale industrial animal facilities was brought about by the location of meat-processing facilities by highly integrated corporations. Many farmers are now raising chickens and hogs under contract, with little control over the actual production process. This separation of a large number of animals from the land that grows their feed has resulted in the necessity for crop farmers to use large quantities of fertilizers (to make up for the nutrients exported in their crops), while at the same time nutrients accumulate on the animal farms and result in significant pollution of groundwater and surface waters.

ECOLOGICAL MANAGEMENT OF SOIL FERTILITY

Although commercial fertilizers still have their place in agriculture, the high cost of nitrogen fertilizer in terms of energy use (and, therefore, price) and the ecological harm caused by phosphate mining mean that in the future more emphasis needs to be placed on more efficient nutrient cycling, the reintegration of animals back into cropping systems, and the return to legumes and manures as major sources of nitrogen and other nutrients for nonleguminous crops. Most soils can be greatly improved by implementation of ecologically sound practices for building healthy soils. One of the best approaches to improving soil health is to use various means to build up soil organic matter levels—such as adding manures and composts or other local sources of organic materials, using cover crops routinely, rotating row crops with hay-type forages, and reducing tillage intensity.

SEE ALSO *Agricultural Industry; Boserup, Ester; Cultural Landscape; Development, Rural; Green Revolution; Productivity; Returns, Diminishing*

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FESTINGER, LEON
1919–1989

Leon Festinger was a prominent American social psychologist. His work in social psychology focused on the impact of the social environment on the formation and change of attitudes, on processes of social comparison by which individuals evaluate their attitudes and abilities, and on the manner in which cognitive inconsistencies cause changes in attitudes and behaviors. He is best known for his work *A Theory of Cognitive Dissonance* (1957), which inspired a great deal of creative research and caused the term *cognitive dissonance* to become a part of public discourse.

Festinger was born on May 8, 1919, in Brooklyn, New York, and died on February 11, 1989. In 1939 he earned a bachelor of science degree in psychology at the City College of New York, where he became attracted to the work of psychologist Kurt Lewin (1890–1947). Festinger went to the University of Iowa to work with Lewin, and earned his PhD there in 1942. In 1945 Festinger joined Lewin in the Research Center for Group Dynamics at the Massachusetts Institute of Technology. When Lewin died unexpectedly in 1947, Festinger became director of the center and focused his attention fully on social psychology.

Festinger's main contributions to social psychology occurred over the next twenty years. There are three landmark publications, each of which inspired research by many investigators. The first was "Informal Social Communication," published in *Psychological Review* in 1950. This article showed how pressures toward uniformity of opinion in small, informal groups could lead to attitude change within the group. The second article, "A Theory of Social Comparison Processes," was published in *Human Relations* in 1954. In this publication, Festinger used a set of formal propositions to explain the antecedent conditions and the consequences of comparing one's own attitudes and abilities to those of others. In so doing, he showed how the pressures to uniformity, hypothesized in the earlier article, arose from the process of social comparison.

In *A Theory of Cognitive Dissonance*, Festinger's third landmark publication, he hypothesized that any two bits of knowledge held by an individual could have three relationships to one another: they could be *irrelevant* to one

another, *consonant* if one follows from the other, or *dissonant* if the obverse of one follows from the other. Festinger hypothesized that cognitive dissonance is an aversive state and that an individual would be motivated to reduce dissonance. Dissonance could be reduced by changing attitudes, altering perceptions and evaluations, or changing one's own behavior. Because the theory was stated in such simple, general terms, it could be applied to a wide variety of situations. Festinger and his students were creative in finding applications for the theory and in devising incisive experiments to test their predictions. A number of these experiments are reported in Festinger's second book on dissonance theory, *Conflict, Decisions, and Dissonance* (1964).

Festinger's work on dissonance theory was the target of a number of critiques in the early 1960s. Critics attacked the structure of the theory as being too broad and not clearly defining the conditions under which dissonance would occur, as well as the complex experimental protocols employed by dissonance theory researchers. Over the ensuing decade, research replicating and extending earlier findings, as well as conceptual clarifications, notably by Elliot Aronson, effectively rebutted these critiques. As dissonance theory gained scientific acceptance, the term *cognitive dissonance* came to be used by columnists and other commentators to describe the psychological discomfort that follows the arrival of unwanted or unexpected information or events. This lay use of the term became popular, even though the conditions necessary for the occurrence of the state defined in the theory may not have been met in the situation to which the term was applied.

Subsequently, Festinger's research interests became focused on different issues. From 1963 to 1979 he studied human visual perception, making unique contributions to the research literature. He then turned his attention to early human history, producing a book, *The Human Legacy* (1983), in which he analyzed human problem solving and adaptation.

Leon Festinger left a legacy of enduring theoretical formulations, a distinctive style of experimentation in social psychology, and a large number of former students who have forged their own distinguished careers in social psychology.

SEE ALSO *Aronson, Elliot; Attitudes; Cognitive Dissonance; Lewin, Kurt; Social Comparison*

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Darwyn E. Linder

FETISHIZATION

SEE *Mystification.*

FEUDAL MODE OF PRODUCTION

The feudal mode of production appears in the theorization of successive socioeconomic formations provided by Karl Marx (1818–1883), where it precedes the capitalist mode of production. Marx developed the concept of the feudal mode of production, in particular, in the section on "Pre-capitalist Economic Formations" of the *Grundrisse* (1857–1858) and in chapter 47 of the first volume of *Capital* (1867). He was not, however, interested in providing an account of the main features of feudal society as much as he was in focusing on the distinctive characteristics of capitalism compared to previous modes of production. In analyzing the feudal mode of production and its decline, he also tried to pinpoint the main factors that historically explain the rise of capitalism. The original formulations provided by Marx, Friedrich Engels (1820–1895), and Vladimir I. Lenin (1870–1924) viewed the feudal mode of production as an essentially economic dynamic of subjugation and exploitation. Subsequently, three main problems have framed twentieth-century Marxist scholarly debates on the feudal mode of production: its relations with serfdom, its interactions with feudalism as a political and juridical concept, and the reasons for its collapse and the transition to capitalism.

THE FEUDAL MODE OF PRODUCTION IN THE ANALYSES OF MARX, ENGELS, AND LENIN

Marx's definition of the feudal mode of production rests largely on the concept of *feudal rent*, which characterizes both relations of production and ways to extract surplus from the direct producers. The feudal rent requires the existence of large agricultural productive units (manors, demesne) owned by a landlord who, through coercive means, is able to force peasants to pay a rent in the form of labor (corvée), produce, or monetary tributes. In exchange, peasants living in villages are allowed to possess small individual landholdings (strips, virgates) and to access forests and pastures as common land. Surplus extracted as feudal rent reveals a relation of personal subordination between the peasant and the landlord, which is confirmed by the fact that the landlord is the supreme political authority over the geographical unit (the fief) that contains the demesne, peasants' plots, and common land.

At the same time, the landlord is also a *vassal*, a personal subordinate of a higher-level noble or of the sover-

eign, who recognizes the landlord's feudal authority in exchange for military services. Traditional customs—a theme touched on in Engels's *Socialism: Utopian and Scientific* (1892)—play a decisive role in sustaining these webs of hierarchies, obligations, and subjection, which appear natural and immutable. Finally, for Marx and Engels, the feudal mode of production reflects a radical opposition between the countryside and the city, which remains economically marginal and undeveloped.

Engels's discussion of feudalism, especially in the *Origins of the Family, Private Property, and the State* (1884), balanced Marx's emphasis on economic causal relations with the significance of communal landownership as a source of peasant resistance to the landlord. Such themes also surfaced in debates on the feudal mode of production in revolutionary Russia. Nikolai Bukharin (1888–1938) and especially Lenin's *The Development of Capitalism in Russia* (1899) describe czarist Russia as a feudal society where the oppressed peasants constitute a serfdom that retains strong connections with communal forms of property. In Lenin, moreover, Russian feudalism is not a single mode of production but rather a "social formation" where other modes, including a rising capitalism, exist alongside feudal landholding under the authority of a strong, centralized absolutist state. As in other parts of eastern Europe, feudal landlords show for Lenin the tendency to evolve and become bourgeois agrarian *Junkers* who, in what Lenin calls the *Prussian road*, start hiring waged laborers to produce for the market.

LATER MARXIST DEBATES AND THE TRANSITION FROM FEUDALISM TO CAPITALISM

The issues raised by Lenin's discussion of feudalism—on the role of serfdom, political absolutism, and the modes of transition to capitalism—resonated in postwar Marxist debates. There, moreover, the geographical focus of the feudal mode of production was broadened beyond the European context as Marxist scholars identified feudal economic and political relations in the shogunate during the Tokugawa age in Japan (1600s to mid-1800s), in imperial Ethiopia (late 1800s to 1970s), and, more controversially, in prerevolutionary China.

A major object of debate concerned the relations between the feudal mode of production and feudalism intended as a broad political, juridical, and ideological construct. Non-Marxist historians (Marc Bloch, Otto Hintze, Robert Boutruche, Georges Duby) have advanced this latter perspective, which, however, also influences the thorough Marxist analysis proposed by Perry Anderson (1974). He sees the construction of the feudal mode of production in Europe, and its local specificities, not just as products of economic causality. They are also a reflection of different forms of "parcellization of sovereignty" and of shifting interactions between juridical concepts of private property in Roman law and village warrior aristocracy in the Germanic tradition. Conversely, he regards the rise of western European absolute monarchies in the 1500s and 1600s—when feudalism was also established in eastern Europe—as a sign of transformation in societies whose feudal economies are increasingly producing for international commodity markets.

Anderson's view markedly contrasts with that of Barry Hindess and Paul Hirst (1975), who argue that the political forms of feudalism are irrelevant to define the feudal mode of production, which was an economic formation based on a *tax-rent* surplus extraction that relied entirely on the aristocracy's control of the land. Consequently, for Hindess and Hirst, serfdom as a juridical condition is of secondary importance in conceptualizing the feudal mode of production. The concept, in fact, includes every rural society where landlords (not the state, as in the Asiatic mode of production) raise rent and taxes from peasants that are not waged laborers, as in capitalism, or slaves, as in antiquity.

Finally, from the 1950s to the 1970s, an important Marxist debate focused on the dynamics of the crisis of feudalism and its transition to capitalism. Economist Paul Sweezy (1910–2004) saw the feudal mode of production as an inefficient, unproductive, socioeconomic structure, which was ultimately destroyed by the growth of commodity markets and the rise of profit-oriented urban entrepreneurs. Robert Brenner opposed to this view an image of the feudal mode of production as a dynamic, differentiated, even market-oriented system, whose crisis is explained by changing forms of property and social relations. Therefore, in England, the state supported large landlords' "enclosures" and the expulsion of peasants in the context of the Industrial Revolution, while in France feudal landownership was undermined by the resilience of small independent peasant agriculture. Other Marxist historians, like Maurice Dobb (1900–1976) and Rodney Hilton (1916–2002), more directly emphasized the role of class struggles between landlords and peasants in explaining the crisis and collapse of the feudal mode of production.

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FEUDALISM

The term *feudalism* is used to describe a variety of social, economic, and political obligations and relationships that were prevalent in medieval Europe, especially from the eleventh through thirteenth centuries, though the feudal system existed before and well after that period in several cases. For instance, serfdom was not abolished officially in czarist Russia until 1861. *Feudalism* also has been used to describe ancient or former social and political systems in Japan, China, India, the Middle East, and North Africa. The term is controversial and has been said to be overapplied or misapplied by historians and social scientists.

Feudalism was never a single monolithic system practiced by all societies in Europe. There was a great deal of variation across societies in the practice and rites of the feudal order in nations such as France, the German states, England, Spain, and Russia. Although feudalism in Japan, India, China, and Africa had a few common elements, those systems differed significantly from the European varieties. Nonetheless, the term *feudalism* has been applied most regularly and commonly to many medieval European systems of social, economic, and political organization.

THE ORIGINS OF FEUDALISM

Feudalism emerged as a form of social, economic, and political organization after the fall of the Roman Empire between 300 and 500 CE and especially after the death of the Holy Roman emperor Charlemagne in 814. The origins of feudalism are numerous and debated but tend to be identified as an intermixture of Germanic and Roman law as well as Catholic doctrine. However, its origins were as practical as they were legal or philosophical. Repeated invasions and attacks from the north and east had made the lands of the former Roman and Holy Roman empires insecure. New patterns of governance and security were required to protect crops, animals, and persons.

The feudal system was one of hierarchy in which nobles, who were sovereign over the most valuable commodity of that time—land—ruled over peasants (serfs) who were tied permanently to the land. The system was social in that it distinguished between classes: nobility and peasantry; economic in that it divided the major means of production—land for agriculture—among the elite nobility; and political in that it created a hierarchical power structure than ran from kings and other high nobles down to middle and lower nobles and finally to peasants, who had limited or no social, economic, and political power.

THE FEUDAL CONSTITUTION

The feudal system was based on what later would be called a contract, or constitution, encompassing the obligations and allegiances that bound king to lord. The feudal contract consisted of *homagium* and investitures, in which a tenant offered his fealty and a commitment of support by paying homage to a lord and the lord would grant the tenant an investiture, or title over the land, for a specific tenure in return for payments. Thus, it was a mutual relationship: The lord extended his protective services to his new vassal and his lands, and the tenant agreed to pay dues of wealth, food, arms, and military service to the lord.

The lowest rung on the feudal ladder was occupied by the peasantry. Before the tenth and eleventh centuries most farmers held tenancy of their own land through contracts with regional lords or nobles. However, as invasion and attack became more significant and the costs of security increased, lords began making higher demands of their tenants. This forced more tenants into direct servitude as serfs: peasants tied to the land and in service to the lord for an extended and perhaps permanent period. Although slavery generally had disappeared from medieval Europe, the economy was dominated by labor-intensive agricultural production, and peasants were needed to perform those tasks.

THE RISE AND FALL OF FEUDALISM

The feudal system expanded and became the dominant form of social, economic, and political organization in Europe because of both its success in providing security and stability and its promotion by the Catholic Church. The feudal order received strong support in the church and among the clergy, who saw its social and political hierarchy as a desirable form of governance and its economic organization as one of potential profit. The sovereignty and legitimacy of kings and nobles were tied closely to the Catholic Church, which thus was able to prosper by supporting and expanding the feudal order in Europe. The ascendancy of the church to great wealth and power coincided with the expansion of feudalism.

Feudalism began to decline in parts of western Europe by the fourteenth century as a result of pressure from a number of interrelated events. The Renaissance (starting in the late fourteenth century), the Reformation (beginning in 1517), and the Industrial Revolution (beginning in the mid-1700s) led to significant philosophical, social, economic, and political transformation across western Europe. The Reformation and the Thirty

Years' War (1618–1648) challenged and upended the Catholic Church's monopoly of spiritual and political authority, and the Industrial Revolution made the feudal agricultural order an anachronism. City-states and other feudal arrangements no longer were capable of providing social, economic, and political order and security in a more individualist and industrialized western Europe. The emergence of the modern state system based on nationality and the conceptions of popular and state sovereignty replaced that of the feudal state. The French Revolution of 1789 often is cited as supplying the death blow to the remnants of the ancient feudal regime. Although feudalism all but disappeared from western Europe between the fourteenth and eighteenth centuries, it survived in eastern Europe and Russia, which were affected far less by the progressive influences of the Renaissance, the Reformation, and the Industrial Revolution.

Feudalism has remained a topic of debate and study in the social sciences. In his early works, Karl Marx (Marx and Engels 2006) argued that feudalism, as a mode of production, was a necessary condition of societies on their way to capitalism and eventually communism. Some elements of feudal thought can be found in modern Catholic political doctrine and the principles of Christian democracy in many European societies and political parties. In addition, the feudal order has had long-standing social implications for class division, hierarchy, and identity in many European societies to the present day.

Beyond Europe, feudalism has been widely used to describe systems of elite-peasant socioeconomic and political arrangements in China, India, Japan, and especially Latin America. In the latter, *latifundia* relationships between landlords and peasants established during Spanish colonization survived the independence of the Latin American states. While resembling the European model imported from Spain, the feudalism of Latin America was also characterized by racial divisions between the white Spanish elite and the Indian or mixed-race peasantry, as well as imported African slaves. This, as well as other differences, have led to these systems being described as "semi-feudal" or "proto-feudal." In conclusion, while feudalism has primarily been used in the European context, there have been numerous comparable systems in Latin America, East Asia, South Asia, and elsewhere, where the concept of feudalism may be applicable.

SEE ALSO *Agricultural Industry; French Revolution; Hierarchy; Landlords; Latifundia; Marx, Karl; Mode of Production; Monarchy; Peasantry; Roman Catholic Church; Sovereignty; Stratification*

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Paul S. Adams

FICTION

Fictions include a variety of things: face-saving untruths that no one believes; devices of convenience in law; and unreal postulates such as the supposed inner planet Vulcan. This entry will address a narrower field: discourse that aims to convey a narrative of events but which is not intended by its maker to be taken as true. Fiction in this sense may appear in any medium, sometimes in language and sometimes not, and in a variety of genres. Historically the most important genres seem to have been epic poetry, the comic and tragic forms of drama, and the novel, which has shown a generally increasing but not uniform tendency to naturalism over time. These genres have been transmuted by the vast and accelerating body of fictions in filmic and televisual media since the beginning of the twentieth century. Yet it is worth noting that nothing is known of most of the history of fictional narrative, since fiction may well be as old as language, and no story older than 5,000 years has survived. It is certainly hard to believe that fiction was absent from human society 30,000 years ago, given the impressive cultural, imaginative, and symbolic achievements of that period, visible in cave paintings and carved objects. Fiction may indeed be ten times older than that.

It is important to see that this definition of fiction is consistent with fiction having any number of purposes over and above the mere telling of a story, including didactic purposes. The definition requires only that the author should not present the events of the narrative as real; he or she may well intend to convince an audience of the truth of a certain ethical or political viewpoint that the narrative serves to suggest.

The idea of fiction generates a number of philosophical problems. One takes the form of puzzlement about why people are interested in fictional stories, given that they generally understand that events have not happened and characters do not exist. The answer is probably that the attraction of fiction is testimony to human delight in

the exercise of imagination and the rich emotional responses that imagining certain events generates. This issue has recently been given an evolutionary formulation: Why, given the pressing need for true information about the world, should humans ever have developed an interest in misrepresentations, which do not tell them how to feed, clothe, or house themselves? Human mental evolution seems likely to have been driven partly by social forces, making it advantageous for people to be able to understand, cooperate with, and sometimes deceive one another. Fiction may have developed as a kind of training ground on which to exercise mind-reading powers: a social assault course where live ammunition is banned. However there is little empirical evidence to support this hypothesis. Alternatively a taste for fiction might be a useless by-product of mental capacities that evolved for other purposes.

A further puzzle, and one with important practical ramifications, concerns the relation of a fiction's *world* to the world of reality. Viewers or readers generally assume that a fiction will be set within a framework of truth, and are sensitive to any indication that the author is exploiting or has misplaced the boundary between this factual background and the events and characters created. The power of socially critical fiction, such as that of English novelist Charles Dickens (1812–1870) depends on this. Readers of espionage fiction will complain about minor mistakes in the description of technology; more seriously, others respond to fictions such as British writer Salman Rushdie's (b. 1947) *Satanic Verses* (1988) with violent protest. While such responses may be deplored, the general idea that that fiction has a capacity to generate and control powerful emotional response, which may then influence behavior and belief, is not implausible. And sensitivity in this area is also testimony to the finely tuned capacity of human beings to grasp an author's unarticulated intentions: One realizes that, while the story itself is fiction, there lies behind it a possibly multilayered set of intentions to persuade and perhaps to manipulate.

The status of fictional characters, who are often spoken of in familiar and even intimate terms, is an interesting facet of the analysis of fictions. Theorists have occasionally argued that fictional characters such as Sherlock Holmes exist in some way that, mysteriously, differs from the manner of existence of normal people. A better interpretation is that while what people think and say gives the impression that they are actually referring to fictional people as real, they in fact understand these characters to be make-believe. However creators of fiction do create entities subtly different from fictional people, namely the roles filled by fictional characters. These roles may be thought of as sets of characteristics that someone would have to possess if he were, for example, Sherlock Holmes (when in fact no one is). One can accept such statements as "Dickens created some very memorable characters" as true, but understand the reference to characters really to be a reference to roles.

The definition proposed at the beginning of this entry might be regarded by some as intolerably restrictive: There is a tendency in early-twenty-first-century thinking, influenced by postmodern ideas, to identify representations of any kind with fiction, on the grounds that representations select, and so distort, reality. In defense of the approach here taken there is a very significant difference between a story that is, and that is honestly presented as being, *made up*, and one that purports, perhaps only partially and perhaps with significant elements of misrepresentation, to relate real events. Categories such as the documentary film certainly need a nuanced approach that recognizes they are not and cannot be mere reflections of the real, but it is not appropriate to lump them into a vastly inflated category of the fictional class.

SEE ALSO *Film Industry; Literature; Lying; Narratives; Postmodernism; Realism; Reality; Representation; Science Fiction*

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Greg Currie

FICTIVE KINSHIP

SEE *Kinship.*

FIELDS' INDEX OF ECONOMIC INEQUALITY

The task of devising proper measures of income inequality is inherently controversial. Individuals have different notions about inequality and cannot always agree on an equity-based ranking of income distributions. Despite theoretical disagreement on proper measurement, applied work frequently adopts measures such as the Gini coefficient. In a series of papers, Gary Fields questioned the use

of conventional inequality measures and proposed an alternative measure.

Fields was specifically interested in measuring how inequality responds to income growth in a two-sector (dual) economy where each individual earns either a "low" or "high" income. Economic growth in this context consists in individuals transitioning from the low-income sector to the high-income sector.

Fields (1993) introduced the concepts of "elitism of the rich" and "isolation of the poor." "Elitism of the rich" captures the idea that when there are few rich people in an economy, these individuals enjoy an elite position that contributes to a high level of inequality in the economy. Conversely, when there are only a few poor individuals, then "isolation of the poor" contributes significantly to disparity.

Fields contended that for most individuals some combination of these two concepts is necessary to properly measure inequality. Consider a six-person dual economy starting at a point where five people are poor and one is rich and moving to a point where four are poor and two are rich. Fields would say that in this example, elitism of the rich has declined dramatically owing to the presence of a second rich individual. Isolation of the poor has increased in this case because the remaining poor are fewer in number. In this case Fields would argue that the drop in elitism overpowers the increase in isolation, thus reducing inequality. Continuing with this progression, one finds that economic growth generates a U-shaped inequality path on Fields' measure, in sharp contrast to the Gini coefficient, which produces an inverted-U for the same scenario.

Fields' controversial analysis has prompted a number of academic responses. Paolo Figini (1998) noted that Fields's measure fails the test for Lorenz consistency (i.e., it violates commonly accepted axioms) when one allows for intrasector income inequality. Fields restricted his analysis to the special case where income is identical for each member of the high-income and low-income sectors.

John Burger (2001) provided a response to Fields' (1987) contention that there is no intuition behind the traditional inverted-U shape generated by the Gini coefficient. Using Fields' example, Burger demonstrated that as a six-person dual economy moves from incomes of (1, 1, 1, 1, 1, 4) to (1, 1, 1, 1, 4, 4), the individual income shares change from (1/9, 1/9, 1/9, 1/9, 1/9, 4/9) to (1/12, 1/12, 1/12, 1/12, 1/3, 1/3). The result is a transfer of income *share* from the four poor and one rich person to the newly wealthy second rich individual. Burger argued that the reduction in income share of several poor individuals impacts inequality more than the reduction in income share of the one wealthy individual, thus resulting in increased income inequality. Continuing with this logic, one finds that growth of the high-income sector generates an inequality path with an inverted-U shape. Burger concludes that the Gini coefficient and the resulting inverted-U shape are consistent with intuition based on income shares.

SEE ALSO *Gini Coefficient; Lewis, W. Arthur; Lorenz Curve*

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John D. Burger

FIELDWORK

SEE *Ethnography.*

FILIBUSTER

Filibustering is behavior intended to delay the legislative process for strategic gain. In modern politics, filibustering is most likely to occur in the U.S. Senate because senators may speak for as long as they wish. As a result, senators have made speeches lasting several hours in order to slow the progress of bills they oppose. The longest single speech in Senate history is Strom Thurmond's speech against the Civil Rights Act of 1957. Thurmond spoke for twenty-four hours and eighteen minutes.

Filibustering is not limited to long speeches, however, nor does it occur only in the U.S. Senate. Legislators also filibuster by making procedural motions to force unnecessary votes. Another popular tactic, known as a "disappearing quorum," occurs when legislators refuse to vote on a bill in the hope that less than a quorum (i.e. the minimum number of legislators who must participate for a legislature to make a decision) of legislators will participate in the vote. During the nineteenth century, members of the U.S. House filibustered often and enthusiastically, a tradition that was suppressed by drastic precedents and rule changes in the 1890s. In 2003 Democrats in the Texas legislature left the state to avoid participating in a vote on altering congressional district boundaries. Since the Texas

Constitution requires two-thirds of each chamber to constitute a quorum, the Texas Democrats were able to stall the redistricting plan for months. Finally, filibustering occurs in non-U.S. legislatures as well. For example, filibustering has occurred in Taiwan's Legislative Yuan during the final days of legislative sessions.

The Senate adopted a "cloture" rule to limit filibustering in 1917. Initially, the rule required a two-thirds majority to limit debate, and if cloture was approved each senator was limited to one additional hour of speaking. After several modifications between 1949 and 1986, the current version of the cloture rule allows a three-fifths majority to limit debate to a total of thirty hours for most issues, with a two-thirds majority necessary for rules changes. Additionally, senators have adopted rules and passed laws exempting a number of key issues, such as trade agreements and key budget legislation, from filibustering.

Despite these limits, filibustering has become increasingly common in the Senate. In the early twentieth century, filibusters were rare and typically occurred at the end of a legislative session. In addition, they were generally directed at budgetary or economic legislation. From the 1930s to the 1960s, filibusters were often used against civil rights legislation, but otherwise they were rare. But since about 1970, filibusters have become commonplace in the Senate. This change coincided with a tactical shift in Senate filibustering. While senators had historically been forced to physically occupy the chamber floor during a filibuster—as depicted in the 1939 film *Mr. Smith Goes to Washington*—during the 1960s and 1970s filibustering became less overt. Instead, senators typically *threaten* to filibuster as a strategic ploy, without ever actively filibustering on the Senate floor. Rather than waste the time of the chamber, Senate leaders typically avoid overt filibusters by compromising over the content of legislation and the terms of debate.

More recently, senators have disputed whether it is appropriate to filibuster judicial appointments. During President George W. Bush's first term, ten out of forty-four nominations for the federal appeals courts were blocked by Democratic senators. Senate Republicans responded by threatening to use the "constitutional" or "nuclear" option of revising Senate precedents to allow majority cloture on judicial nominations. This controversy was defused by a bipartisan agreement in May 2005 to only allow filibusters against judicial nominations in "extreme circumstances." The seven Republicans and seven Democrats who negotiated this agreement, who tended to be moderates within their party, were known as the "Gang of 14."

SEE ALSO *Congress, U.S.; Thurmond, Strom*

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FILM INDUSTRY

Since the last years of the nineteenth century, filmmaking, distribution, and exhibition have been a major cultural activity around the world. The usual disciplines associated with the social sciences—including political science, geography, history, law, psychiatry, psychology, and sociology—have been used to study the influence of the film industry. But at its core, any film industry consists of economic institutions that seek to maximize profits. These corporations produce the first copy of a film, make copies in various forms for distribution, and then rent (as in theaters) or sell copies (as in home videos). There is a small film community independent of Hollywood in the United States, as well as large and small industries in nations around the world.

Yet, since the early 1920s Hollywood has dominated the world's film industry. In 1915 Adolph Zukor combined his production company (Famous Players Lasky) with Paramount distribution, and after World War II he began to acquire a chain of theaters, mostly in major U.S. cities, some outside the United States. Adroit competitors quickly followed: Loew's/MGM, Fox, Warner Bros., and the Radio-Keith-Orpheum (RKO). All owned production, worldwide distribution, and vast chains of theaters. The so-called Big Five permitted minor companies to survive, hoping the U.S. government would not sue them for antitrust violations, but in May 1948 the U.S. Supreme Court forced the production-distribution divisions to sell theater divisions.

From 1965 to 1975, led by agent-turned-mogul Lew Wassermann, the Hollywood industrial system reinvented itself as a series of media conglomerates. Today television production provides a steady base of revenues, and the cinema blockbuster—the first being Wasserman's *Jaws* in 1975—can pay off in billions. Other media business divisions synergize—meaning they cross-promote films with other products—as with Disney's theme parks. Although

film revenues from cinema attendance plunged, Hollywood companies prospered by selling videos in the 1980s and DVDs since the late 1990s. By 2000, theatrical revenues in the United States had fallen to an average of only 15 percent of the profits of an average Hollywood film; the bulk came from revenues associated with watching films on TV (including VHS, DVD, via cable, satellite, and broadcast).

The Hollywood industry still dominates world film revenues while making fewer films than India or Hong Kong. The Hollywood firms of Disney, Fox, Paramount, Sony, Universal, and Warner Bros. represent an exceptional oligopoly; although these six corporations are competitors, they also cooperate on many things, including issuing ratings to inform viewers on the appropriateness of film content for children and keeping open international distribution by working closely with the U.S. Department of State. Indeed, the agency they have fashioned for cooperation—the Motion Picture Association of America—ranks as one of the top lobbyists in Washington, D.C.

By the late twentieth century, although still called a film industry, Hollywood knew it was in the television business. In the United States each of the major studios (except Sony) is allied with a major television network: Disney-ABC, News Corporation's Fox TV network, Viacom's [Paramount] CBS, Warner's CW, and General Electric's Universal-NBC. They thus make television stories and series for their networks on the same lots where they make feature films. Indeed, some films, called "made-for-TV films," premiere on television.

The "Hollywood" film industry has spanned the globe since the 1920s. Only Paramount has a Hollywood address, and it and its rivals distribute their films over the entire world, so although India and Hong Kong produce more movies, more Hollywood films are seen in more places than is any typical film from Asia. Indeed, all developed nations have film industries of their own, but all are limited in their globalization.

In addition, although Hollywood is the center of in-studio production and the final creative steps in film production, feature films are regularly shot away from Hollywood, on location. All states in the United States and most nations around the world are willing to subsidize production in their territories. For example, many Hollywood movies are filmed in Canada, which has fought to draw film production north of the United States. More often than not, a film set in New York City is really shot in Toronto or Vancouver, where it is cheaper to make. And although films are typically finally cut in studios in and around Los Angeles, the final decisions about which films will be made, which will be distributed, and in what forms they will be seen are made inside offices located in and around New York City.

Hollywood is also the most unionized industry in the United States today, because with a six-member oligopoly, unions face a common foe. Their members—from directors to the men and women who push sets and equipment—all are represented by guilds, or unions. Regularly, Hollywood's six members sign a basic agreement with each union, and occasionally a guild will go on strike. This most often happens with the Writer's Guild of America. These Hollywood-based unions are growing, bucking a trend of falling union membership in the United States.

Hollywood certainly has the most far reaching and profitable film industry in the world, but two other centers need to be singled out. India's film industry is mostly concentrated in Mumbai (formerly Bombay), and is commonly referred to as "Bollywood," an amalgamation of *Bombay* and *Hollywood*. The Indian film industry is multilingual and the largest in the world, producing more than 1,000 films per year as compared to Hollywood's 200. The industry is supported mainly by a vast film-going Indian public (the largest in the world in terms of annual ticket sales), and Indian films have been gaining increasing popularity in the rest of the world—particularly in countries with large numbers of expatriate Indians.

Hong Kong is a filmmaking hub for the Chinese-speaking world (including the worldwide diaspora) and East Asia in general. For decades it was the third-largest motion picture industry in the world (after India and Hollywood) and the second-largest exporter (after Hollywood), principally with kung-fu action films dubbed into English and other languages. Despite an industry crisis starting in the mid-1990s, and Hong Kong's return to Chinese sovereignty in July 1997, Hong Kong film has retained much of its distinctive identity and continues to play a prominent part on the world cinema stage. Unlike many other film industries, Hong Kong has enjoyed little to no direct government support, through either subsidies or import quotas. It has always been a thoroughly commercial cinema, concentrating on crowd-pleasing genres such as comedy and action, and heavily reliant on formulas, sequels, and remakes. As is typical of commercial cinemas, its heart is a highly developed star system, which in this case also features substantial overlap with the pop music industry.

The dominance of the industries in Hollywood, Bollywood, and Hong Kong has made it hard for the film industry to include independent filmmaking and documentaries. Yet these genres—truly independent filmmaking and filmed documentaries—turned to video in the late twentieth century; they were not shot on film, but on Beta video, then were premiered on TV networks, both privately owned and state-owned. Indeed, in most small nations of the world the few films made are subsidized by the government, and more and more often shot on video

to lower costs. This is where the TV industry meets the film industry.

The much-anticipated coming of high-definition television (HDTV) at the beginning of the twenty-first century seemed to signal the end of the film industry. Yet, as HDTV standards develop, so does the quality of film. Thus, film remains easily the highest resolution of all "movie making." HDTV may "look like film," but engineers agree that the film image offers more information than any as yet developed or standardized high-definition image. As the twenty-first century began, if one wanted to see the highest definition, one still should attend a well-run cinema.

SEE ALSO Bamboozled; Birth of a Nation; *Entertainment Industry;* Gone with the Wind; Stepford Wives; Wizard of Oz

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Douglas Gomery

FILTER THEORY

SEE *Marriage.*

FINAL SOLUTION

SEE *Holocaust, The.*

FINANCE

Finance refers to the study of the management of the assets of firms and households over time, given the calculated risks and expected returns. Also known as *financial economics*, it is one of the more recent fields in economics, with most of the key papers published after the middle of the twentieth century. The field of finance primarily includes: *portfolio theory*, which deals with how to achieve the maximum investment return for a given level of risk by diversifying between a risk-free asset and a portfolio of risky assets; *asset pricing*, which deals with the pricing of risky assets; and *corporate finance*, which explains corporate financial and investment decisions.

Modern finance started with the publication in 1952 of an article by Harry Markowitz (a 1990 Nobel laureate in economics) on portfolio selection. Markowitz introduced the notion of the mean-variance efficient portfolio, defined as the portfolio that provides either minimum variance for a given expected return, or maximum expected return for a given variance. Assuming a risk-averse investor, Markowitz proved that any other portfolio would not be optimal.

The next key contribution came more than a decade later in the area of asset pricing by William Sharpe (1964), John Lintner (1965), and Jan Mossin (1966) with the capital asset pricing model (CAPM). The model provides an equilibrium relationship between the risk of an asset and its expected return above the return of the risk-free asset. According to this relationship, the expected return of a risky asset in excess of the return of a risk-free asset, the so-called risk premium, is proportional to the risk premium of a portfolio holding the whole market and the extent to which the risky asset and the market move together, which is called the beta coefficient. The model implies that any other specific risk (nonmarket risk) can be diversified away and therefore does dot justify any risk premium. A decade later, Stephen Ross's (1976) arbitrage pricing theory (APT) proved that a similar relationship holds when one assumes no arbitrage opportunities (an arbitrage opportunity exists when a zero investment portfolio can yield a positive profit with certainty). The APT is less restrictive than the CAPM, since it only needs a few investors taking advantage of any existing arbitrage opportunities, eventually eliminating mispriced securities, while the CAPM assumes that all investors are mean-variance optimizers. Furthermore, the APT extends the CAPM by including other factors in addition to the market (multifactor models), such as macroeconomic variables.

Modern corporate finance theory, which studies a firm's financing decisions and its evaluation of investment projects based on expected returns, has been primarily built on two theorems: the Modigliani-Miller theorem of capital structure (1958) and the Modigliani-Miller dividend policy theorem (1961), which are also known as the MM theorems. The first theorem states that the financing decision of a firm between debt and equity does not affect its value, while the second states that the dividend policy of a firm also does affect its value. The MM theorems gave their two authors the Nobel Prize in Economics (in 1985 for Franco Modigliani and in 1990 for Merton Miller) and led to a huge literature to explain why the theorems

may not hold. The practice of corporate finance is much broader. A typical corporate finance department in an investment bank deals primarily with initial public offerings (IPOs) and other underwriting services, as well as mergers and acquisitions.

The main financial assets include stocks (also called equity or shares) and fixed-income securities (also called bonds). Stocks are securities issued by private-owned firms to raise capital and are traded in the capital (or stock) markets (or exchanges). The investor's return is determined by the dividend paid by the issuing firm and the change in the stock price (capital gain or loss). The equity holders of the company are its residual claimants, meaning that in the case that the company goes bankrupt, their compensation equals whatever is left (if anything) after all debt holders have been paid. Fixed-income securities are issued either by private or state-owned firms or by governments (central and local) to raise debt and are claims on a stream of income over a predetermined period. Their interest rate (also called the coupon rate) determines the stream of income during the life of the bond, in addition to the payment of the face value at maturity. Although the investor's return is certain if the bond is held to maturity, and assuming the company does not go bankrupt, the return is uncertain if the investor decides to sell the bond before maturity, since the price of the bond fluctuates as the bond is traded in the market.

Since the mid-1970s, the study of more "exotic" financial instruments has gained popularity, and the trading of derivative securities has spread widely in the capital markets. Derivative securities (or contingent claims, or simply derivatives) are securities whose value depends on other securities. They include options, forward contracts, futures, swaps, and many other securities that give the right to its holder to buy, sell, or exchange the underlined security or securities under prespecified conditions. A call (put) option provides the option to its holder to buy (sell) a security by a prespecified date, at a prespecified price, called the exercise or strike price—the call (put) option will be exercised only if the market price is higher (lower) that the exercise price. A forward contract is an agreement to buy or sell a security at a prespecified date, at a prespecified price. A future contract is a forward contract that is traded in the market. In contrast to options, forward and future contracts are always exercised. Swaps are agreements to exchange cash flows during a prespecified period and based on a predetermined formula. The popularity of derivative securities increased rapidly in the years that followed the publication of the Black and Scholes option pricing formula (Black and Scholes 1973; Merton 1973), which gave Myron Scholes and Robert Merton the 1997 Nobel Prize in Economics—Fischer Black died two years before the award. The beauty of the formula is that it includes only known variables, as it depends on the volatility of the price of the underlined stock rather than its expected return.

The main function of derivative securities is risk insurance (hedging), although derivatives are also used for speculation. To use some examples, a put option insures a stockholder from a fall in the stock price below the exercise price, a forward contract provides a fixed payment to a farmer for his or her future production regardless of weather conditions, and a swap agreement allows a firm to exchange a floating stream of revenue with a fixed stream in order to pay its fixed obligations. On the other hand, derivatives allow speculators to take large bets with relatively small initial capital, since instead of paying for the whole price of the underlined security they only have to pay the much lower price of the derivative. Speculators can take very large exposures using derivatives that can lead to huge gains or losses. Recent examples of such speculation going bad include the collapse of Britain's Barings Bank in 1995 from speculation from a single trader in its Singapore office, and the collapse of the U.S. hedge fund Long-Term Capital Management, which after an annual return of more than 40 percent in the 1994–1997 period, lost $4.6 billion in just four months in 1998 and had to be rescued by a package from leading U.S. investment and commercial banks orchestrated by the Federal Reserve (ironically, Scholes and Merton were on the board of the fund).

The trading of the financial instruments takes place in financial markets, while the financial transactions are performed by financial institutions and investors. The financial markets include the money market (trading of very short-term debt securities), the bond market, the stock market, and various derivative markets. A stock is first sold in a stock market through an IPO and is then traded in secondary markets. Some stocks are traded in informal exchanges, called over-the-counter markets (or OTC). The financial institutions can be separated into banks and nonbanks, although this distinction is not always clear and today's large and often multinational, or even global, financial conglomerates offer the whole range of financial services. The first includes primarily commercial banks, savings institutions, and credit unions, while the second includes investment banks, insurance companies, leasing companies, and investment funds.

Finance is linked with other fields in economics and is increasingly relevant for economic policy. Macroeconomists study finance to understand how capital markets affect the impact of economic policies on the economy. Effective monetary policy requires the knowledge of its potential impact on capital markets but also on the way capital markets allow the transmission of monetary policy itself. International economics includes the study of international finance (also called open-economy

macroeconomics), which studies, among other issues, the interaction of international capital markets and the movement of capital across borders. The field of finance also uses concepts and tools from other fields to extend its understanding of capital markets and investment decisions. It uses microeconomic theory to explain the decisions of rational investors based on utility maximization, econometrics to study the behavior (trends and patterns) of financial variables, and mathematics to model the behavior of financial markets and of investors and to price financial assets.

It should be emphasized that finance is not what most noneconomists believe it is, which is the study of "how to make money." In such a case, all financial economists, quite smart people indeed, would have been rich. If anything, the field argues that markets are efficient and that one cannot consistently outperform the market—those who sometimes do are just lucky. There is a huge literature attempting to find evidence against the so-called efficient market hypothesis (EMH). Although some studies have discovered some patterns against the hypothesis, either there is no money to make once transaction costs are taken into account or the patterns disappear soon after being discovered as investors take advantage of them. The EMH suggests that in order to outperform the market one would need to have superior information from the other investors, which is impossible, except in the case of inside information. However, trading based on inside information, although not rare, is illegal in most countries.

The ongoing globalization process and the tremendous advances in information technology in recent decades are having a profound impact on the field of finance. Investors diversify by choosing from investment opportunities provided by a global market, firms can issue stocks at stock markets abroad, governments can sell their bonds to foreign investors, and speculators can bet against more or less any foreign currency they choose. The large size of international capital movements allows emerging markets to finance their development using foreign capital. However, when the investors' appetite for risk changes, either because of bad economic policies in the recipient countries or due to negative spillover effects from policies or shocks in other countries, the result can be a serious economic slowdown, or even a banking and a broader financial crisis, as shown by the crises in Mexico (1994), East Asia (1997–1998), Russia (1998), and Argentina (2001).

Optimists argue that the best is yet to come in the field of finance. Their belief is based on the argument that the use of advanced financial instruments and information technology has just started. Robert Shiller (2003) proposes a new financial order in which it will be possible to insure against more or less any nonfinancial risk. Individuals will be able to insure against their uncertain income from the profession of their choice or against unexpected negative shocks to their economic well-being, countries will be able to sell debt with a repayment plan that depends on their economic growth, and different generations will be able to share the cost of social security. According to pure financial theory, one should be able to sell any kind of risk to someone willing to buy it for the right price and diversify it away. Indeed, this is increasingly seen in today's global financial markets.

SEE ALSO *Corporations; Equity Markets; Financial Instability Hypothesis; Financial Markets; Investment; Merton, Robert K.; Modigliani, Franco; Modigliani-Miller Theorem; Shocks; Stock Exchanges*

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FINANCE, PUBLIC

Public finance is the study of the economic activities of governments. These activities are expressed mostly through budgets, so it is the taxes and expenditures that comprise those budgets that are the primary objects of fis-

cal theorizing. It should also be noted, however, that nearly anything that can be accomplished through a budget can also be accomplished through regulation. For instance, a government could simply require parents to send their children to approved schools; this would bypass the budget without eliminating government-directed schooling. Recognition that regulations can substitute for budgets calls into question the common use of budgetary magnitudes to measure the size of government within an economy.

TWO APPROACHES TO PUBLIC FINANCE

The history of fiscal scholarship reveals two distinct approaches to public finance, as set forth in chapter 1 of Richard Wagner's *Fiscal Sociology and the Theory of Public Finance* (2007). These contrasting approaches can be described as "systems design" and "social theorizing." In the second half of the twentieth century the most prominent expositors of these distinct approaches were Richard Musgrave and James Buchanan. Musgrave's *Theory of Public Finance* (1959) represents the modern-classic statement of public finance as an exercise in systems design. Buchanan's *Public Finance in Democratic Process* (1967) presents public finance as an element of social theorizing, and it set forth an orientation that subsequently blossomed into the field of study now known as public choice.

Systems design and social theorizing represent distinct orientations toward their subject matter. These orientations are not incompatible, but they do pose different analytical questions. The systems design orientation treats public finance as a practical discipline in the service of statecraft: The purpose of public finance is to supply guidance for the conduct of statecraft. Following Musgrave (1959), governments would act to correct market failures by providing public goods that would otherwise not be supplied through ordinary market transactions.

In contrast, public finance approached as an element of social theorizing seeks to provide understanding about the actual conduct of government within society. Following Buchanan (1967), governments are arenas of human interaction and are populated by the same types of people with the same types of interests and concerns as populate other arenas in society. If we start from the universal principle that people seek to replace circumstances they value less highly with circumstances they value more highly, public finance as social theorizing seeks to explore how this principle plays out within governments. Governments and markets are both treated as complex processes of human interaction, and the primary analytical challenge for this approach to public finance is to develop better understanding of the actual conduct of statecraft, as distinct from seeking to participate in statecraft.

ILLUSTRATING THE TWO APPROACHES

The systems design approach to public finance dichotomizes the world of goods into private goods and public goods, and assigns public goods to the domain of public finance. The central analytical question revolves around efficiency in the allocation of resources between public and private goods. It is commonly presumed that market arrangements operate well to organize the supply of private goods, but not of public goods. State action is thus conceptualized as providing what market-based organization cannot provide.

In contrast, the social theory orientation starts from recognition that the theoretical distinction between public and private goods does not provide a good frame of reference for understanding the world of practice. A person cannot take the theoretical distinction between public and private goods and apply it directly to the world of experience: Many public goods are provided through markets and governments provide many private goods. For instance, governments provide security services, but security is also organized through markets; educational services and recreational services are provided by governments as well as through markets; governments sometimes regulate product quality, but market arrangements likewise regulate product quality. This will be the same nearly everywhere one wanders throughout the world of goods.

For the social theory approach to public finance, the analytical focal point is the organization of human activity, not some notion of optimal resource allocation. After all, resources cannot allocate themselves. Only people can do this, and they do so within various societal configurations. The social theory approach seeks to locate fiscal activity as occurring on the same plane as market activity: Both types of activity reflect the same underlying economic principles of preference and cost, and fiscal theorizing seeks to explore how those simple principles generate complex patterns of societal organization through interactions among the members of society.

Vincent Ostrom's *The Intellectual Crisis in American Public Administration* (1973) is a splendid and seminal treatment of the distinction between the two approaches. Public finance has a presence throughout the world of goods, but in no case do state and market represent distinct domains of human activity. The domains are tightly intertwined, and in both complementary and competitive manners. If we ask whether water, airports, or anything else are better supplied by governments or through market-based commerce, we are asking a question that has little to do with understanding how societal processes actually operate.

Governments are typically involved at numerous places in the provision of water, airports, and numerous

other activities. But so are market-based businesses. A reservoir might be owned by a city, whereas the facilities testing and purifying water are provided by market-based vendors. The city might send you a monthly bill for water, but the meter was produced by a market-based company, as was the paper on which the bill was printed.

The analytical challenge for a social theoretic approach to public finance, as illustrated by Wagner (2007), is to explain the emergence and evolution of observed patterns of social organization, recognizing that those patterns entail a mix of fiscal and market activity. The fiscal and the market denote two intertwined realms of organized activity within society, and both stem from the same source: the varied desires of the inhabitants of a society, as these are mediated through the various institutionalized relationships and modes of conduct that characterize that society.

SEE ALSO *Government; Policy, Fiscal; Taxes*

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Richard E. Wagner

FINANCIAL CRISES

SEE *Economic Crises.*

FINANCIAL INSTABILITY HYPOTHESIS

The American economist Hyman P. Minsky (1919–1996) set the realist criteria that, for a macroeconomic theory to be taken seriously, it had to make a depression "one of the possible states in which our type of capitalist economy can find itself" (1982, p. 5), and also explain why no such event had happened since the 1930s. Neoclassical theories failed that test, and Minsky devised the *financial instability hypothesis* (FIH) as an alternative. The hypothesis was based on an interpretation of chapter 12 of John Maynard Keynes's (1883–1946) *General Theory of Employment, Interest, and Money* (1936).

The FIH sees finance as both essential to the market economy and the source of debt-financed boom-bust cycles. This cyclical process has a secular consequence, as money borrowed during booms generates repayment obligations that have to be fulfilled during slumps. As a result, debt levels ratchet up over a sequence of cycles, culminating in a debt-deflation. This regularity of the nineteenth century has not occurred since the Great Depression of the 1930s because of the development of "big government" and Federal Reserve intervention.

Unlike most economic models, the FIH is grounded in historical time, with an uncertain future. It commences with the economy having just stabilized after a previous debt-induced crisis, and with investors and lenders that are consequently conservative in project valuation. As a result, given the stable economic conditions, most projects succeed. This surprises investors and financiers alike, leading both to revise their expectations upward. Stable economic times thus cause rising expectations—"stability is destabilizing," in one of Minsky's most apt aphorisms—and these expectations are shared. Information asymmetry, a popular neoclassical explanation for credit problems, is of little importance.

Rising expectations increase investment, the finance for which is forthcoming from equally optimistic banks, so that growing investment and endogenously expanding credit push the economy into a boom. Asset prices rise, causing them to diverge significantly from commodity prices. Expectations eventually become *euphoric*, setting the scene for the boom to unravel as the shift in expectations changes the economy's investment profile.

A *hedge* climate, where investments are expected to meet all repayment obligations out of cash flow, gives way to a *speculative* one, where principal must be rolled over. Ultimately, *Ponzi* finance becomes prominent: investments that can only succeed if the assets can be sold on a rising market.

The economy's fragility thus rises, and even a small knock can bring it down. Expectations collapse, investment ceases, endogenous credit creation ends, and the economy enters a slump. What happens next depends on the institutional structure of the economy. In a pure market economy with a high debt to output level or commodity price deflation, the economy will enter a depression. In a modern mixed economy, cash flow from countercyclical government spending enables firms to repay debts during a slump, while Reserve Bank lender-of-last-resort actions prevent runs on financial institutions. The cycle continues, and a prolonged slump is avoided.

Minsky's theory so suits the U.S. economic record that it sounds like a description, rather than a theory.

However, a theory it is, amenable to mathematical expression in differential equation models, and consonant with empirical findings on the U.S. trade cycle.

SEE ALSO *Business Cycles, Political; Business Cycles, Real; Business Cycles, Theories; Depression, Economic; Economic Crises; Economics, Neoclassical; Expectations; Long Waves; Lucas Critique; Panics; Ponzi Scheme; Recession; Say's Law; Shocks*

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Stephen Keen

FINANCIAL MARKETS

Financial markets are markets where financial transactions are conducted. Financial transactions generally refer to creation or transfer of financial assets, also known as financial instruments or securities. Financial transactions channel funds from investors who have an excess of available funds to issuers or borrowers who must borrow funds to finance their spending.

Since the early 1970s, financial markets in various countries have experienced significant development. As a result, world financial markets are larger, are highly integrated, and have a wide range of financial instruments available for investing and financing.

THE STRUCTURE OF FINANCIAL MARKETS

Financial markets comprise five key components: the debt market, the equity market, the foreign-exchange market, the mortgage market, and the derivative market. From the 1980s, each component market has been expanding in size, and an extensive array of new financial instruments have been initiated, especially in the mortgage market and the derivative market.

Debt instruments are traded in the debt market, also often referred to as the bond market. The debt market is important to economic activities because it provides an important channel for corporations and governments to finance their operations. Interactions between investors and borrowers in the bond market determine interest rates. The size of the world bond market was estimated at around $37 trillion at the start of 2002 (all currency figures are in U.S. dollars). Bonds denominated in dollars currently represent roughly half the value of all outstanding bonds in the world.

Equity instruments are traded in the equity market, also known as the stock market. The stock market is the most widely followed financial market in the United States. It is important because fluctuations in stock prices effect investors' wealth and hence their saving and consumption behavior, as well as the amount of funds that can be raised by selling newly issued stocks to finance investment spending. The size of world developed equity markets expanded from $892 billion in 1974 to $25,276 billion at the end of 2001, with the U.S. market accounting for 57 percent of the world developed equity market in 2001.

Foreign-exchange markets are where currencies are converted so that funds can be moved from one country to another. Activities in the foreign-exchange market determine the foreign-exchange rate, the price of one currency in terms of another. The volume of foreign-exchange transactions worldwide averages over $1 trillion daily.

A mortgage is a long-term loan secured by a pledge of real estate. Mortgage-backed securities (also called securitized mortgages) are securities issued to sell mortgages directly to investors. The securities are secured by a large number of mortgages packaged into a mortgage pool. The most common type of mortgage-backed security is a mortgage pass-through, a security that promises to distribute to investors the cash flows from mortgage payments made by borrowers in the underlying mortgage pool. A 1980s innovation in the mortgage-backed security market has been the collateralized-mortgage obligation (CMO), a security created by redistributing the cash flows of the underlying mortgage pool into different bond classes. Mortgage-backed securities have been a very important development in financial markets in the 1980s and 1990s. The value of mortgage principal held in mortgage pools increased from $350 billion in 1984 to nearly $2,500 billion in 1999.

Financial derivatives are contracts that derive their values from the underlying financial assets. Derivative instruments include options contracts, futures contracts, forward contracts, swap agreements, and cap and floor agreements. These instruments allow market players to achieve financial goals and manage financial risks more efficiently. Since the introduction of financial derivatives in the 1970s, markets for them have been developing rapidly. In 2001 global exchange-traded futures and options contract volume reached 4.28 billion contracts, and the top three types of contracts—equity indices, interest rates,

and individual equities—are all financial derivatives. Together they accounted for 88.7 percent of total contract volume.

CLASSIFICATION OF FINANCIAL MARKETS

Financial markets can be categorized in different several ways, revealing features of various market segments. One popular way to classify financial markets is by the maturity of the financial assets traded. The money market is a financial market in which only short-term debt instruments (original maturity of less than one year) are traded. The capital market is a market in which longer-term debt (original maturity of one year or greater) and equity instruments are traded. In general, money-market securities are more widely traded and tend to be more liquid.

Another way to classify financial markets is by whether the financial instruments are newly issued. A primary market is a financial market in which a borrower issues new securities in exchange for cash from investors. Once securities are sold by the original purchasers, they may be traded in the secondary market. Secondary markets can be organized in two ways. One is as an organized exchange, which brings buyers and sellers of securities together (via their representatives) in one central location to conduct trades. The other is as an over-the-counter (OTC) market, in which over-the-counter dealers located at different sites but connected with each other through computer networks undertake transactions to buy and sell securities "over the counter." Many common stocks are traded over the counter, although shares of the largest corporations are traded at organized stock exchanges, such as the New York Stock Exchange.

THE ROLE OF FINANCIAL MARKETS

By channeling funds from investors to issuers and borrowers, financial markets enhance production and allocation efficiencies in the overall economy. Financial markets also perform the important function of price discovery. The activities of buyers and sellers in a financial market determine the prices of the traded assets, which provide guidance on how funds in the economy should be allocated among financial assets.

Additionally, financial markets provide a mechanism for managing risks. Various financial assets traded in financial markets provide different payment patterns, and this redistributes and reallocates the risk associated with the future cash flows among issuers and investors.

Financial markets also offer liquidity by providing a mechanism for investors to sell or purchase financial assets. The presence of organized financial markets reduces the search and information costs of transactions, such as the money spent to advertise the desire to sell or purchase a financial asset. In an efficient market, the market price reflects the aggregate input of all market participants (Fabozzi and Modigliani 2003).

THE INTERNATIONALIZATION OF FINANCIAL MARKETS

The internationalization of financial markets has become an important trend. The significant growth of foreign financial markets has been driven mainly by deregulation of markets in financial centers worldwide and technological advances enabling more efficient communication, as well as market monitoring and analysis.

The internationalization of financial markets has also been prompted by numerous studies on the benefits of diversification that includes international stocks. Specifically, including securities from different countries in a portfolio may lower the portfolio's risk without reducing its expected return. The benefits of diversification arise from the fact that asset prices across international financial markets are not highly correlated.

The nature and extent of the internationalization of financial markets are well reflected by developments in international bond markets and world stock markets. Eurobonds are long-term debt securities sold outside the borrower's country to raise long-term capital in a currency other than that of the country where they are sold. Eurobonds are relatively new instruments in the international bond market, yet the volume of new issues of Eurobonds grew nearly four times from $167 billion in 1990 to $642 billion in 2001, and the market capitalization of Eurobonds stood at $7 trillion at the start of 2002. As for stock markets, while the U.S. stock market remains the largest in the world, foreign stock markets are becoming increasingly important. Japan and the United Kingdom have the largest markets outside of the United States. As of the end of 2001, the size of Japanese market was $2,528 billion, and that of British market was $2,275 billion. Stock markets in many developing economies, also known as emerging markets, picked up their pace of development in the 1980s. In 2001 the combined market value of emerging markets was around $2,400 billion, accounting for 8.7 percent of total world market capitalization that year.

Because financial markets are internationalized, issuers and investors in any country need not be limited to their domestic financial markets. The internationalization of financial markets is having a profound effect by leading the way to a more integrated world economy in which flows of goods and technology between countries are more commonplace (Mishkin and Eakins 2000).

SEE ALSO *Capital; Equity Markets; Hedging; Liquidity Premium*

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FIRM

In 1937, Ronald Coase, who would win a Nobel Prize in 1991, wrote a seminal paper titled "The Nature of the Firm." This paper is now traditionally considered to be the origin of the development of an economic theory of the firm. Coase argued that the firm was more than the purely technical vision of incorporating inputs and generating outputs, that it had a concrete existence in the business world, and that its internal modes of organization (especially the coordination of individuals by hierarchies) were different from simple market transactions (which are coordinated by prices). He encouraged economists to elaborate realistic hypotheses on what a firm is and what a firm does.

Today, the research agenda opened up by Coase (1937) is far from complete. More recent works on the economics of the firm show how difficult it is to fully grasp and qualify this subject. Thus, the economics of the firm is a combination of different subjects, and no single model or theory captures all elements of the puzzle.

MANAGERIAL FIRMS

The focus of economists on large managerial firms reflects the impact that this type of firm played in the early stages of the capitalist economist system (1900–1970s), when large, vertically integrated corporations were the dominant form of organization. Joseph Schumpeter (1942) qualified them as the major engines of production, while Alfred Chandler (1977) described the emergence of a "visible hand" era driven by these firms. These organizations represent an important field of investigation because they have significant power in the market, they are able to affect the social and economic environment, and they can elaborate complex strategies based on an appropriate organizational structure. Further, these firms have two distinctive features: (1) There is a separation between ownership and control, so the professional manager is able to define the objectives of the firm, and (2) There is a united, rather than a multidivisional, form of internal organization. These characteristics became one of the privileged fields of exploration of agency theory and the transaction costs approach, which were interpreted in terms of private information and opportunism. In the first case, the manager benefits from private information that the investor cannot access, leaving room for opportunistic behaviors. In the second case, the united organization of the firm favors the development of suboptimal levels of effort that only become observable when competition is introduced among the different divisions of the firm.

There is surprisingly little agreement on what the objectives of the firm are. William Baumol (1959), for example, supports the maximization of sales or the growth rate of sales as the main objective. Oliver Williamson (1964), however, advocates the maximization of the managers' discretionary power through opportunistic behaviors. Herbert Simon (1947) has criticized both alternatives, arguing that firms that have only a "limited rationality" due to the uncertainty of the environment will only pursue limited objectives, a process he calls "satisficing." In this perspective, the search for profit will not be made on the basis of achieving maximum profit. In fact, it is impossible to estimate maximum profit because knowledge is not perfect. The objective can only be to maintain a satisfying profit level in order to keep the firm afloat in an uncertain world.

ENTREPRENEURIAL FIRMS

The discovery that the capitalist system underwent a second period of transition during the latter half of the twentieth century, especially from the late 1970s (a period Richard Langlois [2003] labeled the "vanishing hand" era), marks the beginning of a specific focus by economists on a novel sort of firm. Small, vertically disintegrated firms have generally performed as well as large firms. This view is supported by the remarkable persistence of the skewed size distribution of firms in industrial dynamics (i.e., a large number of small firms and a small number of large firms), and by the extremely important contribution of small firms to global economic development (Geroski 1995; Audretsch 1995). In the late 1990s, the critical resource theory was developed by Rajuram Rajan and Luigi Zingales (1998) to explain the performance of knowledge-intensive companies in which an entrepreneur plays a central role in knowledge creation. The point of departure of the analysis is that the nature of

the firm has effectively been changing. In the modern firm, the entrepreneur has a critical resource due to specific skills, talents, and ideas, which are the most important source of potential value creation for the firm. The effective value created by the firm is ultimately dependent on how the entrepreneur develops complementarities between his or her own specific resource and the resources of collaborators.

DECISION MAKING, OWNERSHIP, AND POWER

One of the important issues in the economics of the firm is related to who has the power to make decisions. The concept of ownership has traditionally been perceived of as the ownership of physical assets and power and authority have traditionally been based on this vision of ownership. Today, however, firms are also composed of a range of other resources, such as creative knowledge, ideas, and unique skills; professional control; and corporate reputation, which sometimes generate a higher value than physical assets.

Within small firms the founder/entrepreneur generally has the decision-making power, while in large firms the CEO and the board of directors make the major decisions. In small firms, however, the founder, who often has a technical skill, is often replaced, or at least assisted, by a professional manager or a venture capitalist, whose task is to transform this technical knowledge into a commercial opportunity. In large firms, the board of directors can be composed of shareholders, who may significantly influence the decision-making process.

These observations have stimulated a large number of analytical and empirical investigations. First, the respective tasks and scopes of experience of the entrepreneur, the manager, and the venture capitalist within small firms engendered a specific field of research. Different arrangements among the entrepreneur, the manager, and the venture capitalist can be envisaged, including a sharing of power where each contributes in a complementary manner to the development of the company, or exclusive power held by the fund provider in less risky businesses, where the entrepreneur or manager may have less incentive in terms of investment and effort (Blair 1995; Becht et al. 2005).

Second, the question of how large corporations should be owned and managed has been a recurrent theme. The emergence of the shareholder-value ideology has meant that corporate governance is often oriented toward the interests of investors. Uniformity in modes of governance, however, is now widely debated. The predominant thesis that there should be a unique and universal set of managerial rules neglects the diversity of national experiences and the heterogeneity of firms. Moreover, evidence and analytical results show that such a unique model tends to generate major failures and turbulences. Thus, different types of rules have been proposed to govern firms that differ in size, type, industry of origins, and stages of development (Krafft and Ravix 2005; Lazonick and O'Sullivan 2002).

SEE ALSO *Business; Consumer; Cooperatives; Economics; Venture Capital*

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Jackie Krafft

FIRST-PAST-THE-POST

The "first-past-the-post" (FPTP) electoral system, or "plurality system," produces a one-party government as a result of nationwide elections in single electoral districts to

form a national parliament. In existence since the twelfth century, FPTP is the oldest electoral system in political history. It can be found worldwide in thirteen countries, including the United Kingdom, the United States, Canada, India, Bangladesh, Jamaica, Malawi, Mongolia, Nepal, Pakistan, Papua New Guinea, Thailand, and Zambia. The ideal type of FPTP is the British electoral system, the so-called "Westminster model."

One important advantage of FPTP is its simplicity. First, FPTP divides the whole territory in single-member districts with candidate ballots. Within each constituency, voters cast a single ballot for one candidate rather than for a party. Another advantage of FPTP is constituency representation: Every voter knows the local member of parliament and has direct access to political representation, which is evenly distributed over the country. The candidate with the highest number of valid votes in a given district is elected. He or she is the "first past the post" in the race between candidates on election day in a specific constituency.

Candidates for a seat in the national parliament need neither a minimum threshold of votes nor an absolute majority within their constituency; instead, the candidate with the plurality of the vote wins the seat in question. He or she needs just one vote more than the candidate in second place in the FPTP race. One main disadvantage of FPTP is poor party system representation. For example, in the U.K. model, FPTP has the tendency to favor major parties such as Labour and Conservative and to weaken small parties such as the Liberal and Green parties.

Within the framework of the FPTP electoral system, the translation of votes at general elections to seats in Parliament and the formation of a national government are not based on the share of the national vote, but on the share of parliamentary seats. Since 1935, every British government has been formed on the basis of a minority of the vote, with less than 50 percent of electoral support. Hence, the FPTP electoral system has been described as a "plurality system," in contrast to a majority system; in fact, it is sometimes called a "single member plurality system" (SMP). The party with the highest number of winners of parliamentary seats forms a one-party government.

Another advantage of FPTP is the stability of the newly elected national government in particular, and of the political system in general, in contrast to coalition governments that might fall apart before the end of the parliamentary term. A further advantage is the speed of the political process: FPTP encourages a quick formation of a new government, avoiding lengthy interparty negotiations necessary to form a coalition government, and the single party in government with a clear majority of seats in parliament is able to decide and implement laws more quickly. A political system that uses FPTP as electoral law is normally stable, fast, and efficient, and displays a high degree of accountability for its actions and public policy.

SEE ALSO *Elections; Electoral Systems; Parliaments and Parliamentary Systems; Plurality; Voting Schemes*

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Christian W. Haerpfer

FISCAL POLICY

SEE *Policy, Fiscal.*

FISHER, IRVING

1867–1947

Irving Fisher, the outstanding American neoclassical economist of the first half of the twentieth century, was born in Saugerties, New York, on February 27, 1867, and was living in New Haven, Connecticut, when he died on April 29, 1947. Fisher graduated with an A.B. in 1888 and a Ph.D. in economics and mathematics in 1891 from Yale University (from which his father, a Congregational clergyman, had also graduated). He taught at Yale until his retirement in 1937, initially in mathematics and then, from 1895, in political economy, and was promoted to full professor in 1898. A student of both the mathematical physicist Josiah Willard Gibbs and the political economist, sociologist, and social Darwinist William Graham Sumner, Fisher combined his interests in mathematics and economics in his dissertation and his first book, *Mathematical Investigations in the Theory of Value and Prices* (1892; Fisher 1997, vol. 1). This remarkable work made Fisher, along with John Bates Clark and Stuart Wood, a pioneer in introducing marginal utility and marginal product analysis into U.S. economics. Fisher's (re)discovery of both general equilibrium analysis and indifference curves (requiring only a preference ordering, not cardinally measurable utility) was an independent breakthrough because he did not read either Léon Walras or F. Y. Edgeworth until his thesis was almost finished. But modern opinion is consequently divided between Paul Samuelson's modest description of Fisher's thesis as

the greatest doctoral dissertation by an American economist, and Robert Dorfman's belief that it should have been rejected for unnecessary reinvention of existing theory. The unique contribution of Fisher's thesis was his construction, in an age before electronic computers, of a hydraulic model simulating the determination of equilibrium prices and quantities (William Brainard and Herbert Scarf in Dimand and Geanakoplos 2005). In an article in 1896 Fisher used a simplified hydraulic model to analyze the bimetallic controversy in monetary economics (Fisher 1997, vol. 1).

Fisher's 1896 American Economic Association monograph *Appreciation and Interest* (Fisher 1997, vol. 1) attributed the difference between interest rates expressed in two standards (gold, silver, paper currencies, or commodities) to the expected rate of appreciation of one standard against the other. The Fisher equation, now expressed as equating nominal interest to the sum of real interest and expected inflation, formalized an insight briefly remarked upon by John Stuart Mill and Alfred Marshall. Fisher's monograph introduced uncovered interest parity for exchange rates and the expectations theory of the term structure of interest rates—that is, differences in interest rates for different lending periods reflect expected changes in the purchasing power of money. In *The Theory of Interest* (1930; Fisher 1997, vol. 9), Fisher tested his equation empirically by correlating nominal interest with a distributed lag of past price level changes (adaptive expectations), finding considerably less than perfect correlation.

Having shown in *Appreciation and Interest* that correctly anticipated inflation would affect only nominal interest, leaving real interest unaltered, Fisher and Harry G. Brown argued in *The Purchasing Power of Money* (1911; Fisher 1997, vol. 4) that, in the long run, a change in the quantity of money would change the price level in the same proportion, with no lasting effect on real variables. Fisher thus defended the quantity theory of money against both bimetallists who held that monetizing silver would have lasting real benefits and some of their hard-money opponents, notably J. Laurence Laughlin of the University of Chicago, who denied that changes in the quantity of money could explain observed changes in prices. While insisting on the long-run neutrality of money, Fisher viewed monetary shocks as the force driving short-run fluctuations in real output and unemployment: his 1926 *International Labour Review* article, "A Statistical Relation Between Unemployment and Price Changes," was reprinted in the *Journal of Political Economy* in 1973 as "Lost and Found: I Discovered the Phillips Curve—Irving Fisher" (also in Fisher 1997, vol. 8). Fisher's monetary theory of economic fluctuations depended on the slow adjustment of expected inflation, and hence of nominal interest, to monetary shocks.

If changes in the purchasing power of money were correctly perceived and expected, there would be no booms or depressions, so Fisher campaigned to educate the public against the "money illusion," which provided the title of his 1928 book (Fisher 1997, vol. 8). He also wished to neutralize price changes through indexation, and persuaded Rand Kardex to issue an indexed bond in 1925. Alternatively, fluctuations could be eliminated by avoiding changes in the purchasing power of money, so Fisher proposed a monetary policy rule (the compensated dollar) to peg the price level by varying the exchange rate (the dollar price of gold) to counteract any change in a price index. This monetary policy rule, eradication of money illusion, and statistical verification of the quantity theory of money and of the monetary theory of fluctuations all required an appropriate price index. When prices rise, a Laspeyres index with base-year quantity weights overestimates the price increase, which a Paasche index with current-year weights underestimates. In *The Making of Index Numbers* (1922; Fisher 1997, vol. 7) Fisher advocated, as an "ideal index" suitable for all purposes, the geometric mean of the Laspeyres and Paasche indexes, the formula that came closest to satisfying a list of seven criteria he proposed as desirable for an index number. (Ragnar Frisch and Subramanian Swamy later determined that no formula could satisfy all seven of Fisher's criteria.) In the 1990s several governments including the United States adopted Fisher's ideal index and issued some indexed bonds.

In *The Rate of Interest* (1907; Fisher 1997, vol. 3) and *The Theory of Interest*, Fisher systematized the neoclassical theory of how the equilibrium real rate of interest is determined by the interaction of impatience (time preference) and opportunity to invest (the expected rate of return over costs on new investments). The Fisher diagram, showing utility-maximizing consumption-smoothing over two periods, illustrated the Fisher separation theorem between the time-pattern of income and that of consumption: given perfect credit markets, consumption in any period depends only on the present discounted value of expected lifetime income, not on income in that period. Not only was this insight the basis for the later permanent-income and life-cycle theories of consumption and saving, but the Fisher diagram also proved useful in applications ranging from international trade to insurance (allocation across possible states of the world). Ironically, Fisher's 1907 numerical example of the possibility of multiple solutions for Bőhm-Bawerk's average period of production prefigured criticisms of neoclassical capital and interest theory advanced in the Cambridge capital controversies of the 1960s (and Fisher's own concept of rate of return over costs was subject to the same possibility of multiple solutions).

From 1898 to 1904 Fisher battled successfully to recover from tuberculosis, which had killed his father. His heightened sensitivity to the value of health and longevity

led him to advocate health insurance, a federal department of health, and prohibition of alcohol; to coauthor the best-seller *How To Live*; and to estimate the nation's human capital at five times the value of its physical capital. It also motivated Fisher's involvement with the dietary reforms proposed by Dr. Kellogg of Battle Creek and with the "race betterment" schemes of the eugenics movement, including support for the Immigration Restriction Act of 1924 (Fisher 1997, vol. 13). Fisher invented and patented a tent for tuberculosis patients.

Among Fisher's many subsequent inventions, the Index Visible (precursor of the rolodex) made him wealthy, temporarily, when it was absorbed by Rand Kardex. An enthusiastic "new economy" advocate of the permanence of the 1920s stock boom based on technological breakthroughs, Fisher had a net worth of ten million dollars before losing all of it, and more, in the Wall Street crash that began in October 1929. Fisher's memorable statement that month that "stock prices appear to have reached a permanently high plateau" continues to haunt his reputation with the general public. Among economists, however, after a period of eclipse by the rise of Keynesian macroeconomics, Fisher is now once again celebrated as America's outstanding scientific economist of the first half of the twentieth century, and perhaps of any time.

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Robert W. Dimand

FISHING INDUSTRY

The modern fishing industry, with fleets of large capital-intensive vessels, can be traced back to the introduction of the trawler early in the twentieth century. Those ships enabled fishers to reach distant fishing grounds more quickly, stay out fishing longer, and catch more fish per trip. Subsequent growth in the number, size, and technological sophistication of trawlers steadily increased harvesting capacity and corresponding pressures on fish stocks. The introduction of "factory" trawlers in the early 1960s allowed even longer and more distant fishing trips and intensified fishing pressure on previously neglected fish stocks.

A little over 130 million metric tons of fish was harvested worldwide in 2003, almost 80 percent of which was for human consumption (United Nations Food and Agricultural Organization 2004). Reversing earlier trends, the output from ocean harvesting remained fairly constant in the early years of the twenty-first century, accounting for almost 60 percent of consumption. Around 7 percent of the harvest comes from inland waters, and the rest comes from aquaculture, most of which is conducted in fresh waters.

Developing countries provide around 70 percent of the total world supply of fish for human consumption, much of which is harvested using traditional small-scale and labor-intensive technologies. The top countries in 2002 were China, Peru, the United States, Indonesia, and Japan in that order, with China harvesting over twice the amount taken by Peru. One-third of global ocean harvesting occurs in the northwestern Pacific, roughly 20 percent in the southeastern Pacific, 16 percent in the northeastern Atlantic, and 15 percent in the western central Pacific. The major ocean stocks, which are harvested largely by factory fleets, are anchovies (a relatively low-value product), pollock, tuna, herring, and mackerel.

In contrast to the marine fishery, aquaculture production grew at an average annual rate of 6 percent per year after 2000, with China accounting for almost 70 percent of world aquaculture production in 2002, followed by India, Indonesia, Japan, and Bangladesh. The most important aquaculture species is carp, followed by various types of higher-value shellfish, such as oysters and clams.

Trade in fisheries products grew 45 percent from 1992 to 2002, and the value of fisheries exports reached $58.2 billion in 2002. Around 90 percent of this trade involves processed (frozen, salted, dried, and canned) fish products. China is the major exporter of fish, followed closely by Thailand and then the United States, Canada, Denmark, and Vietnam. Developed countries purchase over 80 percent of the total dollar value of traded fish products, with Japan accounting for 22 percent of world imports in 2002, followed by the United States (16%), Spain (6%), and France (5%).

DUAL ECONOMIC STRUCTURE

Although it is difficult to generalize about the structure of the fishing industry worldwide, the large-vessel fleet is aging and there has been a decline in the number of very

large vessels being added to fleets (United Nations Food and Agricultural Organization 2004). Large factory vessels and distant-water fleets account for the majority of the harvest, but around 90 percent of all fishers, most of whom are in Asia, work on small vessels (International Labour Organization 2004). Although much of the small-scale fishing sector uses traditional technologies that limit harvesting to heavily fished near-shore waters, there is a growing group of small to midsize vessels with advanced technologies that can access more abundant offshore stocks that can be brought to market quickly enough to command premium prices for fresh fish.

COMMON PROPERTY ISSUES

The fishing industry represents a classic example of the common property problem. Unlike land-based agriculture, ocean fish stocks are a resource for which individuals traditionally do not hold property rights. There is a substantial literature documenting how, in the absence of ownership or regulation of fishing stocks, economic incentives motivate the owners of individual vessels to overfish the resource by harvesting as many fish as possible as quickly as possible (Anderson 1986).

Technological changes that have made harvesting more efficient, coupled with the growth of large-scale fleets and international fish markets, made this common property problem a global concern beginning in the mid-twentieth century. As fisheries stocks become depleted, the scarcity of fish drives up prices, and harvesting incentives become even stronger, threatening the sustainability of the resource. As a result, many of the world's fish stocks have been classified as having been fished beyond sustainable levels and concerns are being raised about the possible extinction of overfished species.

One response to depleted stocks has been to shift fishing efforts to previously underutilized species. However, experience has shown that those species soon become threatened and that the shifting species mix can have adverse effects on the ecosystem. A second outcome has been the rapid growth of aquaculture, much of which is conducted in areas where property rights can be established, but that has added to the growing concern about environmental pollution in marine and inland waters and its impact on the safety of fish products for human consumption.

REGULATION OF THE FISHING INDUSTRY

Economists have argued that regulation is the only long-term method to achieve the biological, economic, and environmental sustainability of the fishing industry. They also have advocated a form of regulation that relies heavily on markets and property rights to counter common property problems. In practice, however, fisheries regulation has relied on indirect methods to reduce incentives for overfishing.

Initially, the most widely adopted policy was to reduce the access of large-scale foreign fishing fleets to continental fishing stocks to conserve the stocks for domestic fishers. Many coastal nations imposed limits on distant-water fleets in the 1970s by establishing Exclusive Economic Zones (EEZs) that extended territorial control over ocean resources up to 200 miles from their coastlines. The result in many cases, however, was that domestic fleets with increasingly sophisticated harvesting technologies took the place of foreign fishing vessels, and so the pressures on fish stocks continued to increase.

Thus, the focus of national regulatory policies shifted to fishing pressures within EEZs. The most common policy instruments have involved indirectly limiting harvesting activity through seasonal or permanent closures of fishing grounds, reducing fleet size by limiting entry and offering vessel buyouts, and raising the costs of fishing by constraining harvesting technologies, for example, limiting vessel size and power, increasing the minimum mesh size of nets, and reducing the number of days of fishing allowed. Those policies, however, often have proved costly to monitor and easy to evade, allowing overfishing to continue.

As a consequence, pressures have increased to restrict harvesting further. In the United States the 1996 and 2006 reauthorizations of federal fisheries management legislation were designed to force regulators to set allowable harvesting levels lower than the previous levels. The new levels are below what would be needed to ensure biological sustainability to take into account both the environmental and the economic costs of harvesting fish.

Although most management regulations continue to rely largely on indirect regulation of fishing effort, there has been increasing international interest in individual transferable quotas, one of the policies most often advocated by economists. The individual transferable quota policy involves allocating shares (quotas) of the allowable harvest that can be bought or sold. Ownership of a share gives a fisher a property right to a portion of the allowable harvest that essentially privatizes the resource and eliminates the incentive for fishers to compete for the same common stock of fish. Such market-based regulation can both reduce overfishing pressures and ensure the overall efficiency of the industry.

Regardless of the management methods adopted, there has been movement worldwide toward establishing stricter fisheries management controls that are intended to protect fish stocks more aggressively from the threat of extinction. As fish continue to play a major role in world trade and the food supply, most fisheries biologists and economists believe that continued vigilance is required to

ensure that this resource remains available for future generations by using fishing methods that are economically sound and environmentally sustainable.

SEE ALSO *Developing Countries; Industry; Technological Progress, Economic Growth; Tragedy of the Commons*

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Peter B. Doeringer

FISKE, D.W.

SEE *Campbell, Donald.*

FIXED COEFFICIENTS PRODUCTION FUNCTION

A production function associates the maximum level of output producible with given amounts of inputs. If the inputs must be combined in fixed proportions, like the ingredients of a recipe in a cookbook, the function is a fixed coefficients production function. It is also called a Leontief function, after its inventor, the economist and Nobel Prize winner, Wassily Leontif. Call centers require a one-to-one proportion between workers and telecommunication equipment. Denoting the input quantities by L and K, the isoquants are L-shaped (with the kink on the 45 degree line).

To introduce the formal definition, denote the quantities of inputs required per unit of some output by $a_1, \ldots, a_n$, where n is the number of inputs. These so-called input coefficients constitute the recipe or technique for the production of the output considered. Denote the available amounts of inputs by $x_1, \ldots, x_n$, respectively. Then the attainable level of output is given by $y = \min \{x_1/a_1, \ldots, x_n/a_n\}$. This is the defining formula of the fixed coefficients production function. The inputs for which the minimum value is assumed are called the bottlenecks.

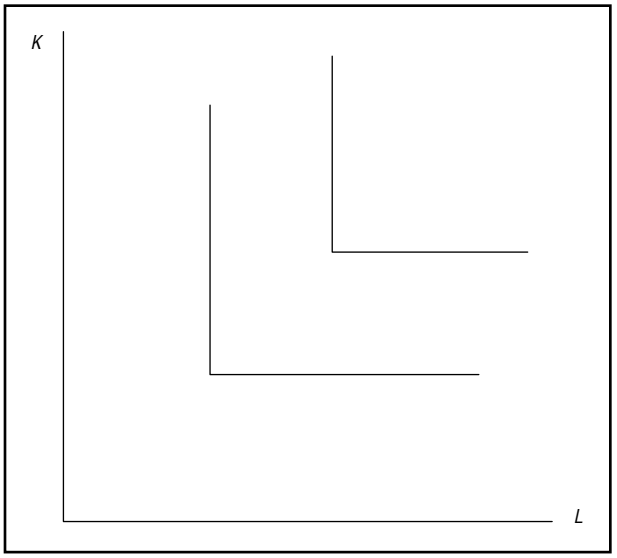

Figure 1

The fixed coefficients production function is the cornerstone of input-output analysis, the quantitative economic tool developed in 1936 by Leontief, who traced the origin to Francois Quesnay's *Tableau Économique* of 1758. Scholars Heinz Kurz and Neri Salvadori described the roots of input-output analysis in detail in their 2000 work, and the theory is exposited in Thijs ten Raa's *Economics of Input-Output Analysis* (2005). The fixed coefficients function is popular, because only a single observation is needed to calculate it, making use of the input coefficients $a_i = x_i/y$. The connection between fixed coefficients and input-output analysis is as follows.

Since inputs are produced (such as electricity) or nonproduced (such as labor services), we may label them $1, \ldots, m, m + 1, \ldots, n$, where the last $n - m$ inputs are the nonproduced or so-called factor inputs. Denote the input coefficients of output j by a_{ij}. The matrix of intermediate input coefficients is $A = (a_{ij})_{i,j = 1, \ldots, m}$ and the matrix of factor input coefficients is $B = (a_{ij})_{i = m + 1, \ldots, n, j = 1, \ldots, m}$. The matrix of factor input coefficients gives the direct factor requirements of products. Post-multiplication of B with the so-called Leontief inverse, $(1 - A)^{-1} = 1 + A + A^2 + \ldots$, yields the matrix of total factor requirements or factor contents of products. The total requirements include the factor requirements of the produced inputs, BA, the factor requirements of the produced inputs of those inputs, BA^2, etcetera.

An important application is the Marxian theory of labor values, in which all commodities are produced, directly or indirectly, by labor. Then the factor input coefficients matrix B reduces to a row vector of direct labor coefficients and the total requirements becomes a row vector of labor contents, one for each product. Another application is energy economics. Here the direct coefficients measure the energy used per unit of output and the total coefficients measure the total amount of energy embodied in products. The inclusion of the indirect effects may cause reversals in the energy intensity of products, when the production of an output requires little energy, but much intermediate input of which the production is energy intensive. The inclination of politicians to subsidize goods of which the direct energy requirements are low may therefore be ill conceived.

Input coefficients tend to be fixed at the level of the firm. Indeed, managers know how many workers are needed to operate the machines. Input coefficients vary between firms though and, therefore, the fixed coefficients production function is less appropriate for industries or economies. For example, if the wage rate increases relative to the rate of interest, labor-intensive firms may shut down and capital-intensive firms may expand to full capacity. As a result, the economy will be more capital intensive. Though derived from micro fixed coefficients production functions, the macro production function will thus feature input substitutability, much like the Cobb-Douglas function. In fact, the latter can be derived mathematically if the production capacity across firms follows a Pareto distribution, which is defined by the same formula as the Cobb-Douglas function. Most applied general equilibrium models feature production functions with a mixture of fixed and variable coefficients, but even when all the production functions are of the fixed coefficients variety, the response to price shocks may be the same as in a model with variable coefficients production functions.

SEE ALSO *Input-Output Matrix; Leontief, Wassily; Production Function*

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Thijs ten Raa

FIXED EFFECTS

SEE *Generalized Least Squares.*

FIXED EFFECTS REGRESSION

A fixed effects regression is an estimation technique employed in a panel data setting that allows one to control for time-invariant unobserved individual characteristics that can be correlated with the observed independent variables.

Let us assume we are interested in the causal relationship between a vector of observable random variables $x = (1, x_1, x_2, \ldots, x_K)'$ and a dependent random variable y where the true linear model is of the following form:

$$y_i = \beta' x_i + \mu_i + \varepsilon_i \text{ with } i = 1, \ldots, N$$

with μ being an unobserved random variable characterizing each unit of observation i and ε the stochastic error uncorrelated with x.

When μ is correlated with x we cannot consistently estimate the vector of parameters of interest β using Ordinary Least Squares because the standard assumption of no correlation between the error term and the regressors is violated. In a cross-sectional setting, typical strategies to solve this omitted variable problem are instrumental variables or the inclusion of proxies for μ. However, when the available data is longitudinal, that is, when it contains a cross-sectional as well as a time series dimension, it is possible to adopt alternative estimation methods known in the literature as "panel data" techniques.

Assuming we repeatedly observe N units for T periods of time, and that the unobservable variable μ is time invariant, we can write our model as:

$$y_{it} = \beta' x_{it} + \mu_i + \varepsilon_{it} \text{ with } i = 1, \ldots, N \text{ and } t = 1, \ldots, T$$

Depending on the correlation between the omitted variable μ and the regressors x, alternative estimation techniques are available to the researcher. A fixed effects regression allows for arbitrary correlation between μ and x, that is, $E(x_{jit}\mu_i) \neq 0$, whereas random effects regression techniques do not allow for such correlation, that is, the condition $E(x_{jit}\mu_i) = 0$ must be respected. This terminology is somehow misleading because in both cases the unobservable variable is to be considered random. However, the terminology is so widespread in the literature that it has been accepted as standard.

A fixed effects regression consists in subtracting the time mean from each variable in the model and then estimating the resulting transformed model by Ordinary Least Squares. This procedure, known as "within" transformation, allows one to drop the unobserved component

and consistently estimate β. Analytically, the above model becomes

$$\tilde{y}_{it} = \beta' \tilde{x}_{it} + \tilde{\varepsilon}_{it}$$

where $\tilde{y}_{it} = y_{it} - \bar{y}_i$, with $\bar{y}_i = T^{-1}\Sigma_{t=1}^{T} y_{it}$ (and the same for x, μ, and ε). Because μ_i is fixed over time, we have $\mu_i - \bar{\mu}_i = 0$.

This procedure is numerically identical to including $N - 1$ dummies in the regression, suggesting intuitively that a fixed effects regression accounts for unobserved individual heterogeneity by means of individual specific intercepts. In other words, the slopes of the regression are common across units (the coefficients of $x_1, x_2, \ldots, x_K$) whereas the intercept is allowed to vary.

One drawback of the fixed effects procedure is that the within transformation does not allow one to include time-invariant independent variables in the regression, because they get eliminated similarly to the fixed unobserved component. In addition, parameter estimates are likely to be imprecise if the time series dimension is limited.

Under classical assumptions, the fixed effects estimator is consistent (with $N \to \infty$ and T fixed) in the cases of both $E(x_{jit}\mu_i) = 0$ and $E(x_{jit}\mu_i) \neq 0$, where $j = 1, \ldots, K$. It is efficient when all the explanatory variables are correlated with μ_i. However, it is less efficient than the random effect estimator when $E(x_{jit}\mu_i) = 0$.

The consistency property requires the strict exogeneity of x. However, this property is not satisfied when the estimated model includes a lagged dependent variable, as in $y_{it} = \alpha y_{it-1} + \beta' x_{it} + \mu_i + \varepsilon_{it}$.

This suggests the adoption of instrumental variables or Generalized Method of Moments techniques in order to obtain consistent estimates. However, a large time dimension T assures consistency even in the case of the dynamic specification above.

Sometimes the true model includes unobserved shocks common to all units i, but time-varying. In this case, the model includes an additional error component δ_t that can be controlled for by simply including time dummies in the equation.

A typical application of a fixed effects regression is in the context of wage equations. Let us assume that we are interested in assessing the impact of years of education in logs e on wages in logs w when the ability of individuals a is not observed. The true model is then

$$w_i = \beta_0 + \beta_1 e_i + v_i$$

where $v_i = a_i + \varepsilon_i$. Given that unobserved ability is likely to be correlated with education, then the composite stochastic error v is also correlated with the regressor and the estimate of β_1 will be biased. However, since innate ability does not change over time, if our data set is longitudinal we can use a fixed effect estimator to obtain a consistent estimate of β_1. Applying the within transformation to the preceding equation we end up with $\tilde{w}_{it} = \beta_1 \tilde{e}_{it} + \tilde{\varepsilon}_{it}$ where we have eliminated the time invariant unobserved component a_i. Being $E(\tilde{e}_{it}\tilde{\varepsilon}_{it}) = 0$, the model now satisfies the classical assumptions and we can estimate it by Ordinary Least Squares.

SEE ALSO *Bayesian Econometrics; Random Effects Regression; Regression; Regression Analysis*

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Luca Nunziata

FIXED EXCHANGE RATES

SEE *Exchange Rates.*

FLAGS

SEE *Symbols.*

FLEXIBILITY

The concept of flexibility generically indicates the capacity of adapting to changes in circumstances. In economics it is typically used to characterize price and quantity adjustments as responses to variations in market forces and organizational and regulatory patterns.

In a perfect competitive market with no transaction costs or attritions, any imbalance between supply and demand triggers an adjustment in prices that clears the market. However, in reality, prices are characterized by a certain degree of rigidity—that is, they do not fully or immediately adjust to changes in supply and demand. These rigidities are typically the result of market imperfections, asymmetric information, cognitive time lags, menu and transaction costs, or departure from a competitive framework. For example, macroeconomists make a distinction between the degree of price flexibility (or rigidity) in the short and the long run. The price of output is generally rigid in the short run because agents need time to adjust to changes in market conditions. As a consequence,

an increase in money growth in the presence of rigid prices may have real effects on the economy. However, in the long run, prices are flexible and an increase in money growth translates into an identical increase in the rate of inflation, with no effects on unemployment and output.

Prices are characterized by different degrees of flexibility, even in the short run. For instance, stock prices adjust very quickly to changes in market conditions, whereas wages—that is, the price of labor—adjust much more slowly. Wage rigidity can be explained by the staggering of wage contracts, by the role of unions in the wage bargaining process, or by the firms' willingness to pay real wages above the equilibrium level in order to attract and maintain the best workers or to reduce shirking (efficiency wage theory).

Economists often use the notion of flexibility when describing labor markets in which firms are free to vary the amount of labor they use in production, for example through dismissals when they are hit by a negative shock. A broader definition of labor market flexibility involves the institutional features that may induce a deviation of labor market outcomes from the perfect competitive equilibrium. A flexible labor market is then characterized by minimal regulations in terms of dismissal costs (or employment protection legislation) and labor standards, limited unemployment benefits, no minimum wages, low taxation, and a marginal role for trade unions. But the dichotomous concept of flexibility (versus rigidity) applied to labor markets can be misleading. Indeed, it does not help in distinguishing the continuum of potential social models, each characterized by a certain degree of flexibility and/or rigidity in certain institutional dimensions.

Each labor market regulation may be rationalized on the basis of political economy considerations. It may also have desirable social and economic purposes. For example, a reasonable degree of employment protection may induce higher productivity if workers decide to invest more in firm-specific skills; a reasonable level of unemployment benefits contingent on effective job search may help smooth consumption patterns in the presence of negative idiosyncratic shocks and financial markets imperfections. However, if employment protection is too strict, firms may be reluctant to hire new workers during economic expansions because it would be more costly to dismiss them during contractions. The negative burden of the rigidity would then fall on new labor market entrants, who would find it harder to be hired in the first place (insider-outsider theory). A flexible labor market, in contrast, would adapt more easily to positive as well as negative shocks. This might result in a larger variance of employment along the business cycle, with ambiguous effects on average employment, but possibly a more efficient allocation of labor in the long run.

SEE ALSO *Barro-Grossman Model; Competition; Shocks; Sticky Prices; Transaction Cost*

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FLOATING EXCHANGE RATES

SEE *Exchange Rates.*

FLOW

Embedded within and critical to the burgeoning field of positive psychology, the concept of flow represents an optimal state of consciousness, a positive psychological state. The American psychologist Mihaly Csikszentmihalyi (1990), who devised the concept of flow, describes how this experience helps promote creativity and psychosocial complexity. The study of flow began following interviews Csikszentmihalyi (1975) conducted with artists, mountain climbers, athletes, chess players, and surgeons, where a high level of consistency was found in descriptions of how things felt when their activity was going really well. Flow occurs when one is engaged in activities one enjoys and that extend one's capabilities.

Flow is an optimal state because it involves a fully focused mind. When in flow, nothing disturbs or detracts from this concentrated state. Neither external nor internal distractions take up mental space. This total focus on the task at hand is a defining feature of flow. It is one of the several dimensions comprising flow, as described below:

1. *Challenge-skill balance.* In flow, there is a perception of capability for the demands of the task one is engaged in. Described by Susan Jackson and Csikszentmihalyi (1999) as the *golden rule of flow*, this perceived balance between challenges and skills is the necessary precondition for flow to occur.
2. *Action-awareness merging.* When in flow, action follows action easily, sometimes providing a sense of automaticity of movements. This sense of oneness, or merging of the self with the activity, results from the total task focus of flow.

3. *Clear goals*. The person in flow knows clearly what it is he or she wants to do, and this clarity of purpose guides the person from moment to moment.
4. *Unambiguous feedback*. Flow provides clear feedback regarding task performance in relation to goal accomplishment. Immediate and clear feedback allows for adjustments to be made as required to ensure that one's performance matches one's goals.
5. *Concentration on the task at hand*. A defining feature of flow, a centered mind, provides the internal environment for the other flow dimensions.
6. *Sense of control*. When in flow, there is no worry about potential loss of control. This freedom from worry over control is a liberating state.
7. *Loss of self-consciousness*. In flow, there is freedom from self-consciousness. Instead of worrying about how one appears to other people, one is absorbed with processing information about the task at hand.
8. *Time transformation*. Often, but not always in flow, time drops from awareness. This results in perceptions of altered time. Generally, the sense is that time speeds up, akin to the adage that time flies when one is having fun.
9. *Autotelic experience*. The term *autotelic*, from the Greek words *auto* (self) and *telos* (goal), has been defined by Csikszentmihalyi as an experience that is intrinsically rewarding. This dimension is the end result of the other flow dimensions. Being in flow is an enjoyable experience, and once attained, the motivation is high to return to a flow state.

These flow dimensions work together synergistically to create an optimal psychological experience. In lay terms, flow can be described as enjoyment, and it provides highlights in one's experience of life. Enjoyment is distinguishable from pleasure according to Csikszentmihalyi (1990). While the latter is associated with satisfaction from having needs met, it is only enjoyment that leads to growth, since enjoyable experiences move one forward and in doing so, require investment of mental energy. There are also positive developmental implications of the flow model. Flow experiences lead to growth in competence and in psychological complexity, through the continually evolving process of matching challenges with skills in an activity. Flow is not an easy state to achieve, with the matching of challenges and skills not a straightforward process in many situations. Both external and internal obstacles can keep flow experiences from occurring. It may be by one's own choosing that negative psychological states are experienced, or the environment one is operating in may foster negative mindsets. While it may be possible to focus through the energy of negativity, flow is a much more conducive state to clear and unfettered attention toward a task, and the enjoyment arising from flow experiences generates continuing motivation toward attainment of goals.

SEE ALSO *Optimism/Pessimism; Positive Psychology*

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Susan A. Jackson

FLOWER INDUSTRY

Since the 1980s, there has been a consistent increase in the global demand for fresh cut flowers. While such flowers were previously purchased only by upper-income households, they have become a regular decorative feature in households with lower incomes. Although a variety of flowers are grown, roses are the main traded product, followed by carnations and chrysanthemums. The feminization of labor is deeply entrenched in the flower industry, which is characterized by high levels of young female employment. Women tend to occupy 60 to 90 percent of the jobs in the labor-intensive stages of flower production.

The commercialization of flowers began in Western Europe when the demand for tulips reached an all-time high in the middle of the seventeenth century. This triggered a massive speculation for tulips called *the Great Tulip Mania*. However, evolution of the flower industry into a global modern economic sector can be traced back to the 1970s. Prior to that, flower production was almost exclusively for consumption in the regions where it was produced. Production was also concentrated in the developed countries, and flowers were almost exclusively produced in the Netherlands, Japan, and the United States, which accounted for nearly 75 percent of production. While flowers produced in the United States and Japan were largely consumed locally, the Netherlands' production served the European regional market. By the 1980s, however, developing countries, particularly in Africa and Latin America, had began producing cut flowers for the global export market. The Netherlands, however, still remains the largest flower consumer, exporter, and producer globally. Virtually no fresh flowers were imported to

the United States before 1960, but the U.S. demand is now increasingly being met by imports from Latin America. California is the largest flower producing state, accounting for about 66 percent of U.S. production.

At the beginning of the new millennium, total global acreage allocated to flower production was 200,000 hectares, with the three main producing countries being the Netherlands, United States, and Japan. Germany is the largest of the six importing countries, followed by the United States, the United Kingdom, France, the Netherlands, and Switzerland, which account for nearly 80 percent of global imports. The expansion of commercial production of flowers in developing countries has catapulted the African, Caribbean, and Pacific regions into the global market as key players.

The changing nature of product varieties, production techniques, markets, and retailing arrangements also characterize the flower industry as a highly dynamic sector. The traditional point of sale for flowers has historically been florist shops, but these retailers are increasingly losing their customers to supermarkets and discount stores. Simultaneously, the Netherlands' flower auctions, where the majority of flowers exported to and from Europe are traded, are being bypassed by supermarkets that buy large volumes of flowers directly from producers. With so many new sources of supply, intense competition has set in, leading to a downward spiraling of prices, particularly for roses. At the same time, the quality imperatives of the market have increased costs of production. Typically, costs of production tend to be pushed down to workers, most of whom work in precarious conditions—many are hired on a casual, low-paid basis, with no employment contracts and frequent exposure to pesticides.

The shift of flower production to the developing countries has increased worker exploitation and pesticide poisoning. In addition to the health hazards that the pesticides pose, the runoff of pesticides and fertilizers into streams and aquifers threatens already fragile water resources. As the industry becomes increasingly globalized, concerns are being raised about its social and environmental impacts. Having been the target of civil-society campaigns and media exposés for poor labor practices and environmentally damaging production processes, however, the industry appears poised to operate in a more socially and environmentally responsible manner. Flower producers now have to comply with a number of codes of conduct developed by their major market brokers, international organizations, and national industry associations.

SEE ALSO *Developing Countries; Great Tulip Mania, The; Imports*

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FLYNN EFFECT

The term *Flynn effect* refers to the worldwide phenomenon of markedly increasing mean performance on standardized IQ tests over time. Most current IQ tests are designed to have a population mean of 100 and a standard deviation of 15 at the time they are developed. The mean and standard deviation are set by administering the test to a large group of individuals designed to be representative of the population as a whole (a process referred to as "standardization" or "norming"). However, a growing body of evidence suggests that the mean population performance on IQ tests has improved markedly over the decades since they were first introduced in 1905. Over a period of several years after an IQ test is introduced, the test's mean of 100 becomes obsolete and IQ scores become elevated overall. Periodic renorming of IQ tests (typically at twelve- to twenty-five-year intervals) have helped mask the magnitude of this IQ increase. To compensate for improvements in performance over time and to ensure that the mean score is 100, individuals in the standardization group for a newer IQ test typically have to answer more (or harder) questions to obtain the same score on the new test as on an older test.

The degree and scope of the phenomenon of improved IQ test performance was not broadly known until James Flynn (b. 1934), a political scientist at the University of Otago in New Zealand, wrote two seminal articles on the topic that appeared in *Psychological Bulletin* in 1984 and 1987. Flynn reviewed dozens of studies in which groups were administered two or more IQ tests that were standardized at different times. Flynn noted that in these studies the groups' mean performance on a test with newer standardization samples was nearly always lower than their performance on a test with older standardization samples.

Flynn has estimated the size of the Flynn effect on the Wechsler and Stanford-Binet series of IQ tests (the most

widely used IQ tests in the United States) as being at about 3 points per decade or about .3 points per year (Flynn 1984, 2006). This rate of improvement has been remarkably consistent across different time periods and tests within these series. However, the rate of improvement is not uniform across all varieties of IQ tests, or even on subtests within a particular IQ test. The largest gains (.5 points per year or more) have been found on Ravens Progressive Matrices, a nonverbal pattern recognition IQ test. Lowest gains (near 0 points per year) have been on Wechsler Verbal IQ subtests such as vocabulary, information, and arithmetic.

Because of the time and cost involved in administering standardized IQ tests, they are typically administered only to students who are being considered for special education or gifted and talented programs. The Flynn effect has been found to particularly affect the educational classifications of students who are being tested for eligibility for these services shortly before and after a revised IQ test comes out.

The impact of the Flynn effect on children being tested for mental retardation services in the early 1990s was quite substantial. The IQ criterion for mental retardation is typically an IQ of 70 or below, which is two standard deviations below the mean of 100 on current IQ tests (allowances for measurement error typically permit a score of up to 75). When the Wechsler Intelligence Scale for Children–Third Edition (WISC–III) supplanted the Wechsler Intelligence Scale for Children–Revised (WISC–R) in 1991, the test norms for the WISC–R were nineteen years old. Tomoe Kanaya, Matthew Scullin, and Stephen Ceci (2003) found that children in the mild mental retardation and borderline IQ ranges scored more than five points lower on the WISC–III than on the WISC–R, which is similar to what was found with children in the average range of intelligence. This five-point difference in scores more than doubled the number of children who were eligible for mental retardation services on the basis of their IQ scores. This is because about 2.27 percent of children would be expected to obtain an IQ score of 70 or below on the WISC–III at the time of its standardization, whereas the obsolete WISC–R was only capturing the bottom 0.87 percent of children by 1991. Scullin (2006) found that in forty-three states and in the United States as a whole, a long and steady decline in the percentage of schoolchildren receiving mental retardation services during the 1980s and early 1990s ended and indeed reversed around the time of the introduction of the WISC–III.

As the norms of an IQ test grow older, the Flynn effect increases the number of children eligible for learning disability services in areas in which the criterion for eligibility is a significant discrepancy between children's IQ scores and their performance on an achievement test. Higher IQ test scores relative to achievement result in an increased likelihood of finding a significant discrepancy. Similarly, more children become eligible for gifted and talented programs over time as it becomes easier to meet the criterion. Once a newly standardized test is introduced, these trends reverse themselves and it becomes harder to meet the IQ–achievement discrepancy criterion for learning disability and the IQ threshold for gifted and talented services.

As documented by Ulric Neisser (in *The Rising Curve*, 1998), the Flynn effect raises some important nature vs. nurture questions about the relative strength of genes and environment in determining intelligence, and about IQ as an estimate of intelligence. *The Rising Curve* was written in response to Richard Herrnstein and Charles Murray's best-selling book *The Bell Curve* (1994), in which the authors argued that intelligence is assessed well by IQ tests and that low IQ is related to a wide range of negative life outcomes, from criminality to risk for divorce. Herrnstein and Murray used behavioral genetics data to make a case for a strong genetic influence on IQ, including ethnic differences in mean IQ scores. Neisser counter-argued that IQ scores have been increasing at too rapid a rate to be explained by genetics alone, which suggests that there are strong environmental influences affecting IQ scores. Neisser's book noted that possible non-genetic explanations for the Flynn effect include increasing environmental complexity, new schooling techniques, and improvements in nutrition.

Just as there is no consensus about the origins of the Flynn effect, there is conflicting evidence about whether the Flynn effect is continuing unabated. In the United States, comparison study data for the Wechsler Adult Intelligence Scale–Third Edition (standardized in 1995) suggested that perhaps the rate of IQ increases in the United States was diminishing. Longitudinal data from IQ-test–like draft-board examinations of all draft-eligible males in some European countries also documented a leveling-off of IQ score gains during the 1990s. However, data from comparison studies for the Stanford-Binet Intelligence Scale–Fifth Edition and Wechsler Intelligence Scale for Children–Fourth Edition (both normed around 2001) suggest that the best estimate of the rate of IQ test improvement in the United States is currently still around .3 points per year (Flynn 2006).

SEE ALSO *Intelligence; IQ Controversy; Psychometrics; Scales*

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Matthew H. Scullin

FOGEL, ROBERT
1926–

Robert Fogel is an economist and economic historian who has been a pioneer in the application of quantitative methods and economic theory to the measurement of long-term economic change. His work has stimulated and provoked historians, and he has argued for the value of mathematical and quantitative tools in the study of demographic, political, and social history as well as economic history.

Robert William Fogel was born in New York City on July 1, 1926. His parents were refugees from the Russian Revolution. After attending public school in New York, he began his undergraduate studies at Cornell University in electrical engineering. However, his awareness of the problems of unemployment in capitalist economies led him to switch his major to history with a minor in economics. He graduated in 1948, and in the early 1950s he worked as a Communist Party organizer.

In 1956 Fogel began graduate work in economic history at Columbia University, with a particular interest in the great Marxian questions concerning the nature of long-term economic change. He moved to Johns Hopkins University for doctoral research in order to pursue a quantitative approach to the study of economic growth under the direction of Simon Kuznets. He began his teaching career at Johns Hopkins as an instructor in 1958, before taking an appointment as assistant professor at the University of Rochester in 1960. In 1963 he moved to the University of Chicago, and between 1975 and 1981 he taught in Harvard's Economics Department. He was instrumental in the late 1970s in establishing the Development of the American Economy (DAE) program associated with the National Bureau of Economic Research. In 1981 he returned to the University of Chicago to become the Walgreen Professor of American Institutions and the director of the Center for Population Economics. Fogel's radical political activity as a young adult presents a striking contrast with the anti-Communist origins of the Walgreen chair. His occupancy of the chair can be interpreted as reflecting both his own movement toward the political center and the latitude the Walgreen family gave the University when the chair was offered to him. In 1993 he was awarded the Nobel Memorial Prize in Economic Sciences (shared with Douglass North) for the development of quantitative and theoretical tools for the study of economic history.

Fogel's early work focused on the determinants of American economic growth. His doctoral dissertation, and the subsequent book *Railroads and American Economic Growth: Essays in Econometric History* (1964), challenged the prevailing view that the railroad had a decisive influence on the growth of the American economy. He calculated how much higher the costs would have been to the U.S. economy in 1890 of providing the same level of transportation services with alternative modes of water and land transportation. Fogel's counterfactual methodology proposed a hypothetical canal system that would have been built in the absence of railroads. His estimated "social saving" of the railroad was less than 5 percent of 1890 U.S. gross national product. Fogel's findings spawned numerous challenges by other scholars. Fogel responded by arguing that, for the case of the United States, any plausible allowance for factors raised by critics (such as scale effects and problems of measuring freight rates on rail versus water traffic) would still imply a modest rather than indispensable contribution to economic growth. However, Fogel also acknowledged that for other economies—such as Mexico, with its more limited access to water transport—the impact of the railroad on growth may well have been substantially larger. His counterfactual methodology generated considerable controversy among historians, with some stating that it was fundamentally ahistorical and fictive. Fogel replied that an analytical and causal approach to economic history inevitably requires the posing of counterfactual questions.

Fogel's next major project was a collaborative effort with Stanley Engerman on the economics of U.S. slavery. In the two-volume *Time on the Cross* (1974), they came to the surprising conclusion that Southern slave plantations were more efficient than Northern free farms. Critics argued that this finding was due to inadequate allowance for differences in crop mix, land quality, scale, and eco-

nomic aims. Fogel and Engerman maintained that their result held, even with due allowance for these other factors, and they attributed it to the extra work effort that could be coerced from slave gangs. They also argued that slave owners had incentives to protect the capital investments their slaves represented. They supported this conclusion with evidence that slaves tended to be well fed and housed, that they were in fact only relatively infrequently subjected to abusive physical punishment or the breakup of their families through sale, and that female slaves did not engage in unusually high rates of premarital sexual intercourse. Fogel has continued to defend these specific findings against an extensive body of scholarly criticism. However, he has conceded that an appropriate moral indictment of slavery requires going beyond a narrow quantitative economic framework. His later writings on slavery have used a more traditional narrative approach along with the examination of quantitative evidence. Moreover, Fogel employed a mix of quantitative and qualitative approaches to address moral issues in *The Fourth Great Reawakening and the Future of Egalitarianism* (2000).

Since the mid-1970s, Fogel has undertaken the use of large-scale databases, such as Union Army pension records, to study trends, determinants, and the consequences of improvements in nutrition, health, and mortality and morbidity rates. His work (with collaborators) employing evidence on human heights to measure trends in nutrition spawned the burgeoning field of anthropometrics. He has shown how poor nutrition and health in early childhood can have enduring consequences for health later in life.

The Royal Swedish Academy of Sciences awarded the Nobel Prize jointly to Fogel and North in 1993, recognizing that both scholars have shown how economic history can provide fundamental insights into processes of economic and institutional change. The academy noted that North's contributions have been primarily conceptual, while Fogel is an empiricist. North has been circumspect about prospects for human progress after making allowance for the contingencies of political processes and mistakes in human judgement. Fogel, however, is an unabashed optimist about the prospects for human material progress, though he acknowledges the ongoing presence of spiritual and ethical challenges. He has coined the term *technophysio evolution* to point to the interaction between technological and human physiological advances.

SEE ALSO *Cliometrics; Economics, Nobel Prize in; Railway Industry; Slavery; Transportation Industry*

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David Mitch

FOLKLORE

SEE *Ethnology and Folklore.*

FOOD

Food is a biological necessity. Like sex, it has implications for the perpetuation of the species, but unlike sex, it also has implications for the survival of each individual. Social anthropologists point out that food is further implicated in the social and cultural survival of human groups. Acquiring and eating food is thus extended into the realms of the economic, political, and psychological.

Human beings are omnivorous, capable of safely eating a particularly wide variety of plant and animal sources of nutrients—a characteristic that has enabled the worldwide distribution of the species. Major, very broad transitions in human modes of living can be traced. Some 10,000 years ago the protracted shift began from foraging—continually on the move, hunting and gathering—to farming—settling, domesticating plants, and tending livestock. Then there is the comparatively recent 500-year increase in the movement of both people and foodstuffs around the globe: for example, new people to the Americas, turkeys to Europe. Most recently is the approximately 200 years' industrialization of both food production—agriculture, preservation, and processing—and food consumption—wholesale and "ready-made" retail distribution—that has been coupled with and supported by the increasingly intense application of physical, chemical, and biological sciences. The role of food in this long history of human groups is shrewdly summarized by Raymond Firth, who observed

that in industrial society, getting food occurs in breaks between work, whereas in nonindustrial society, getting food is the day's work (1973).

The contemporary supply and distribution of food worldwide is notoriously unequal and inequitable. Particular attention has been devoted to international policies for the relief of severe and devastating food shortages. A major theme of this work is to note serious disjunctions that have profound consequences for those whose plight is meant to be alleviated. On the one hand are the media images of famine conjured in more-developed countries, typically of children in profound distress—images that then get dovetailed with assumptions embedded in international agencies' debates on world food security as to the relief required. On the other hand are what Johan Pottier describes as the everyday realities food-insecure people face (1999). In *The Anthropology of Food* he includes a simple, but compelling example. Official agricultural programs had no space in their information-gathering exercises in Kenya for the testimony of an elderly woman farmer, reputed in her community to be the most knowledgeable about growing yams. The program was, "top down," informed by research scientists' knowledge, not local expertise.

Even desperately hungry people need "their own" food, because, despite being omnivores, people do not eat everything available that is nontoxic and nutritious. This observation is only partly explainable in biological terms. Human groups the world over are observed to be selective in what, culturally speaking, counts as food. Such social definitions of food vary from society to society and they change over time. Familiarly, horse meat is food in Belgium but not in the United States; dog is a delicacy in parts of China but not in France. And on their first introduction to England, tomatoes were regarded as attractive but poisonous, whereas potatoes were initially grown in Sweden only as a garden ornament.

The social definition of food extends to encompass whole cuisines—distinctive combinations of ingredients and modes of their transformation into dishes—and what has been called *culinary culture*, a shorthand term for the ensemble of attitudes and tastes (both literal and metaphorical) members of a social group bring to cooking and eating food they have selected. Certain cuisines and culinary cultures have a long and persistent history. The beginnings of a Japanese rice-based cuisine, for instance, can be dated from the introduction of wet-rice agriculture over 2,000 years ago. Rice features strongly in eighth-century myths seeking to establish a national identity distinguishing Japan from its neighbors. These stories entailed notions of abundance, a land of good rice harvests. Divine power was incorporated into every grain of rice, symbolizing not only the relation between deities and people, but also of those among human beings themselves. Thus rice became central to commensality, the act of eating together, and thereby cemented and symbolized social relationships—and a meal without rice could not count as a meal.

The case of rice illustrates the manner in which some have stressed the prime significance of symbols in understanding culinary cultures. By contrast, others have argued that emphasizing the material and practical rather than the symbolic offers superior intellectual interpretations of the variability in social definitions of food. But in a study of the global reach of sugar over four centuries, Sidney Mintz presented a powerful case for a combined approach that recognizes the symbolic significance of a foodstuff while arguing that meaning thus attributed is a *consequence* of practical human activity (1985). That the meaning of sugar could change from medicine in late-medieval Europe to luxury (like a spice, available only to the exceptionally wealthy) in the early modern period, then to a commonplace necessity to the laboring classes of nineteenth-century Britain, occurred, Mintz argues, as a *result* of usage—and of supplier-induced demand.

The case of rice also introduces the idea of a proper meal—one that is culturally appropriately composed, prepared, and served on socially prescribed occasions—a version of which appears to be found in most human groups. A British version—the caricatured "meat and two vegetables"—continues to be readily detectable not only in Britain, but also in its erstwhile colonies in North America, southern Africa, and Australia. Scholars specializing in the study of late twentieth- and early twenty-first-century consumption have claimed, however, that allegiance to such "traditional" modes of eating are disappearing, as part of broader changes of postindustrial society. One element of such changes, they argue, is the proposal that social differentiation is diminishing: No longer are education, income, gender, or age systematically evident in preferred dishes, locales for eating (e.g., expensive restaurants or fast-food diners), or the household division of food-preparation tasks. Another is that the predominant mode of food provision in both household and public settings has become commercial rather than domestic: Coupled with an increase in the rate of eating away from home in cafés, restaurants, and diners is the use at home of ready-made complete meals rather than dishes prepared from raw ingredients. And a third element—finding frequent expression in popular and journalistic commentaries claiming that families no longer gather round the table to share a meal—is that institutional rhythms are subject to erosion. Substantiating these claims adequately is difficult, however, and determining the extent to which they apply remains incomplete.

What is clear, though, is that the twenty-first-century food supply is global, providing populations in more

developed countries with year-round fresh produce from less developed countries and an apparently ever widening range of products on supermarket shelves, with consumer choice as a watchword. Critics point to the environmental as well as social costs, for example in the diversion of comparatively limited local supplies of water to agricultural production for export markets, or the additional carbon emissions of air freight. Trends such as this are paralleled by a strikingly rapid increase in rates of obesity in a growing number of countries. Some commentators are even predicting that a generation of children will suffer fatal diseases associated with obesity—for example, diabetes and heart disease—to such an extent that they may even predecease their parents. This kind of public concern looks set to supplant the food-safety scares that dominated the last two decades of the twentieth century, the most dramatic and most costly example of which was bovine spongiform encephalopathy (BSE), commonly called mad cow disease, responsible for an invariably fatal disease if eaten by human beings. Public health policies, especially those geared to limiting the rates of obesity, are not readily aligned with economic policies supporting industrialized food production and the associated provision of employment. This essential, but in its current incarnation highly contested, sphere of human existence represents a considerable intellectual challenge to the still comparatively small number of social scientists seeking to understand its myriad facets.

SEE ALSO *Food Crisis; Malnutrition*

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Anne Murcott

FOOD CRISIS

The understanding of the causes of food crises, in the history of the social sciences, has evolved, from those stressing "natural" or lawlike causes, to those emphasizing the social nature of such crises. When Thomas Malthus, the English cleric and economist, first wrote his *Esssay on the Principle of Population* (1798), he understood the occurrence of food crises as the effect of lawlike processes, saying that food production grows "arithmetically," while population grows "geometrically." This Malthusian view of food crises as basically caused by insufficient production has in modern social science been replaced by an understanding stressing the social causation, both of the occurrence of food crises and of their causes. Seminal in this change of view is the economist Amartya Sen's *Poverty and Famines* (1981).

With the development of the division of labor, with food markets extending the local village-town nexus to national and global scale, the occurrence of famine and hunger in principle gets disconnected from the local production conditions and their annual fluctuations. Thus, Sen showed that the Bengal Famine in 1943 was not primarily caused by harvest failures in Bengal, but by wider economic, social, and political conditions pertaining to the colonial economy, the nature of Bengali society, and political conditions during World War II (1939–1945).

When Malthus wrote his *Essay*, British agriculture was undergoing a major transformation in farming systems, usually referred to as high farming, allowing a much larger nonagricultural population to be fed by a diminishing work force in agriculture. Although this development is reflected in later editions of the *Essay*, the transformation was not foreseen, nor adequately conceptualized by Malthus.

THE GREEN REVOLUTION

A similar mismatch between the development of food production systems and social scientists' understanding of them occurred during the Green Revolution. This term refers to the state-driven efforts from the late 1960s forward to increase national self-sufficiency in food grains in a number of Asian countries based on stepped-up investments in agricultural production and research in new crop technologies. For example, the economist Gunnar Myrdal published his *Asian Drama* in 1968. Typically for its time, the work was pessimistic about the future of an Asia with its high population growth rates. About a year earlier, the Green Revolution was launched, and over a generation, the threat of famine was almost entirely averted in the continent. While Myrdal was unable to foresee this development, younger generations of social scientists have emphasized and often exaggerated the negative distribution and environmental effects of the Green Revolution at the same time as its basic achievements of averting the threat of famine have been downplayed.

Never before and, as far as one can foresee, never again, have the challenges to the world food system been as great as during the second half of the twentieth century. During that period, global production of food grains grew

at rates outstripping those of world population, thus defying Malthusian predictions. This is an obvious background to the shift in scholarly understanding of food crises, from stressing natural or lawlike tendencies to stressing the social dimension.

During the early years of the twenty-first century and despite record levels of world production of grain, approximately 15 percent of the world population was starving or suffering chronic undernutrition. This lack in food security affects the life chances of people, their longevity, and the chances of infants and mothers to survive childbirth. Also health conditions are affected and, in serious conditions of undernutrition, learning capabilities, thus impairing the overall life chances of the individual.

THE GEOGRAPHY OF HUNGER

In the early twenty-first century, the highest incidence of undernutrition (over 35%) was in sub-Saharan Africa, with somewhat lower rates (between 20 and 35%) in the Sahel region of Africa, in parts of South and Central America, and parts of South, Southeast, and Central Asia. In a country like India, widespread undernutrition coexisted with a huge surplus of grain in government stocks, emphasizing the social causation of hunger.

Since decolonization in the 1960s, food production in sub-Saharan Africa grew steadily, but did not keep pace with the growth of population. As a consequence, the dependence of the subcontinent on imported food likewise grew. Again, stressing the complicated causation of food crises, many scholars argued that the import of cheap grain damaged African food production systems. Surplus stocks were dumped on world markets by the United States and the European Union and contributed to the insufficient growth of domestic production and thus to the food crisis in Africa.

There is an easily traceable influence from the world community of social scientists on the definition of food crisis and thus on the general evolvement of agricultural policies. The support to the political project of a Green Revolution in the West, at the time, was inspired by a Malthusian view of the population-food nexus and by a fear, during the cold war, that widespread hunger would lead to the spread of communism in Asia. Not only the Malthusian assumption, but also the assumption that hunger breeds radicalism, has been largely discredited by social science. Victims of food crisis are seldom radical and more often meek, apathetic, and subservient.

FROM FOOD CRISIS TO FOOD SECURITY

In tandem with the shift of focus from production to distribution, and from food crisis to food security, the political emphasis shifted both in national governments as well as in global organizations like the United Nations' Food and Agriculture Organization (FAO), its World Food Program (WFP), and the International Fund for Agricultural Development (IFAD). During the late 1990s, this shift in attention may have partly caused and at least legitimated the declining levels of aid going to the agricultural sector. In the early years of the twenty-first century this trend appeared to be broken, partly as a result of increased focus on world hunger in connection with the millennium shift, but perhaps partly due to a realization among policymakers and social scientists that the focus on issues of distribution should not be permitted to lead to the neglect of production. Without production there is obviously nothing to distribute.

SEE ALSO *Food; Malnutrition; Malthusian Trap*

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Göran Djurfeldt

FOOD DIPLOMACY

Food has been a factor in diplomacy since the very inception of the institution of diplomacy and the modern nation-state in the seventeenth century. Throughout history states have competed (and at times fought) for control of and access to food and other natural resources, such as water and energy, because they are essential to human survival and inextricably tied to political and economic development. Food and "food security" have always been important concerns of governments, especially for developing countries that have chronic food problems, such as malnutrition, low agricultural productivity, instability of

supply, and food scarcity. Food security is a complicated and increasingly difficult goal to achieve. Although world food output has significantly increased since the end of World War II, poverty, agricultural mismanagement, and population growth in many developing countries undermine prospects for solving the world's food problems. Indeed food insecurity in developing countries, particularly in Africa, appears to have worsened, highlighting the uneven availability of and access to food and the politicized nature of both food production and distribution and the food aid system.

In general the term *food diplomacy* refers to the use of a country's food resources to influence global food markets and to influence international political and economic relations beyond the food market. Using food resources to influence food markets involves goals associated with the functional and structural aspects of the world food economy and the international trade in food, such as increasing the efficiency of food production, meeting minimum levels of food consumption, stabilizing food prices, and managing the disposal and distribution of surpluses. It is this dimension of food diplomacy that deals most explicitly with questions of food security and the policy differences between the major "food exporters" (i.e., the United States, Canada, Australia, the European Union, and Argentina for wheat and coarse grains; China, Pakistan, Thailand, the United States, and Vietnam for rice) and food importers, particularly the poor "food-deficit" countries in the developing world. Using food resources to influence international relationships beyond international food markets involves other foreign policy goals, such as advancing geostrategic interests abroad, increasing economic cooperation or strengthening political relations with another country, and punishing or sanctioning adversaries. This dimension of food diplomacy is much more controversial because it can be at odds with international humanitarian principles and the goal of world food security.

As a practical matter, it is impossible to separate the two dimensions of food diplomacy. There are political and economic consequences of food transfers, as there are for other commodities, such as oil. Even food aid (e.g., the U.S. Food for Peace program) is politicized and is one of the more sensitive points in agricultural trade negotiations between the United States and the European Union in the World Trade Organization's Doha Round. While the number of instances in which food has been employed as a political instrument of a country's foreign policy is relatively small, there have been some prominent cases. During the cold war, for example, the United States cancelled 17 million tons of grain sales to the Soviet Union as a form of punishment for the Soviet invasion of Afghanistan and temporarily halted food shipments to Bangladesh because it had traded jute with Cuba. Food has been a key element of efforts by the United States, China, Russia, Japan, and South Korea to convince North Korea to abandon its nuclear weapons program.

SEE ALSO *Agricultural Industry; Cold War; Diplomacy; European Union; Food; Foreign Policy; Human Rights; International Relations; Union of Soviet Socialist Republics; War; Weaponry, Nuclear; World Trade Organization*

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FORCES OF PRODUCTION

Forces of production is a term used in political economy that refers to the physical means and techniques of production to which laborers add value and transform capital into products for sale. Forces of production include instruments of production and raw materials, as well as the productive faculties of producing agents manifested by strength, skill, and knowledge. G. A. Cohen (2000, p. 37) argues that instruments of production and raw materials *have* productive forces, whereas labor power *is* a productive force.

Distinction must be made between forces of production and the ways they are utilized. Karl Marx wrote: "Powder remains the same whether it is used to wound a man or to dress his wounds" ([1847] 1982, p. 185). It can be argued that in Marx's view, forces of production are the driving factor in historical development. A new mode of production evolves when there is a conflict between the emerging production forces and the existing social relations. Thus, at a certain stage of development, modern industry becomes incompatible with the social production relations of handicraft (Marx [1867] 1977).

The "correspondence" between forces of production and relations need not be interpreted only as symmetrical, but can be interpreted as implying a priority of one over the other. This is the case made by Cohen (2000), who argues that the distinction between relations of produc-

tion and forces of production is a special case of Marx's opposition of social to material features of society.

Irrespective of the primacy of forces of production or of social relations, some have insisted that different modes of production may exist simultaneously, which implicitly questions the rigid correspondence of production forces to given social relations. In various ways, feminists have utilized the notion of feudal relations to describe serf-like relations within households in capitalist economies with regards to unpaid domestic work (Benston 1969; Fraad, Resnick, and Wolff 1994).

In Marx's formulation, people enter into historically and geographically specific social relations that correspond to a given stage in the development of the material forces of production. As Marx puts it, the hand-mill gives society with a feudal lord; the steam-mill—industrial capitalism (Marx [1847] 1982, p. 109). The pairing of forms of technology to forms of social relations implies certain inertia and warranted predictability of historical development, which Lary Hickman calls "future-technological stage determinism" (1990, pp. 142–144). Thorstein Veblen (1906) and most of his followers in the tradition of American institutionalism (evolutionary economics) critique this teleological notion of social change and the idea that there is a final known end to which production process converges.

A notion of forces of production that drive historical development in a teleological manner has ramifications with regards to our understanding of "progress" and "development." Marx argues: "The country that is more developed industrially only shows, to the less developed, the image of its own future" ([1867] 1977, p. 90). Hickman (1990, pp. 143–144) offers two readings of this statement. First these "iron laws" operate only as long as a society adopts specific forces of production, and this is not necessarily inevitable ("limited technological-stage determinism"). Thus, while there is pairing between forces of production and social forces, there is place for variation. Alternatively, a given society inevitably passes through a given technological stage ("unlimited technological-stage determinism"). Thus, there is a notion of an ideal that ought to be achieved if a society is to master "modern" forces of production and social relations. Such a notion of forces of production brings questions about the opposition between "traditional" and "modern" that is contested by postcolonial critique (Zein-Elabdin 2004).

SEE ALSO *Asiatic Mode of Production; Capitalist Mode of Production; Exchange Value; Feudal Mode of Production; Marx, Karl; Marxism; Power; Productivity; Slave Mode of Production; Social Relations; Value; Veblen, Thorstein*

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Zdravka Todorova

FORD MOTOR COMPANY

The Ford Motor Company established a system of modern mass production, labor relations, and wage policies that made it one of the most influential corporations of the twentieth century.

While the Ford Motor Company is the enterprise most closely associated with its namesake, Henry Ford, its incorporation in 1903 marked Ford's third attempt to build an automobile company. Ford began his automotive career with the short-lived Detroit Automobile Company (1898–1900), which was followed by the Henry Ford Company (1901–1902).

Ford manufactured for both domestic and foreign markets. In its first year of operation, it contracted with an overseas distributor to sell cars in Canada and Europe. In 1905 a Canadian plant began producing Ford vehicles for the British Empire.

Ford, unlike its chief rival General Motors, did not adopt a multidivisional structure. Ford and Lincoln (later Lincoln-Mercury), purchased in 1922, remain the only divisions within the auto company. A similarly atavistic quality characterizes Ford's ownership and management. The Ford family has consistently played a dominant role in ownership or direct managerial control throughout the company's history. This structure of centralized control is

at odds with the historical trajectory toward managerial capitalism typical of most large-scale twentieth-century American corporations.

Ford engineers did not invent the modern assembly line. The basic concept was adapted from the meatpacking industry, in which animals were transported along a system of overhead pulleys and systematically butchered. Over the years 1910 to 1914 the assembly line evolved from the system of conveyors and gravity slides on which the Model T car was assembled in tightly sequenced stages. Production at the Highland Park plant relied on work rhythms that matched the pace of machines. Rather than using general-purpose tools and machinery, Ford manufactured machines to achieve specific tasks. Individual parts were made to be interchangeable, in order to speed production and reduce the need for skilled craftsmen. Investment in expensive, specialized machinery allowed for the introduction of economies of scale whereby unit costs fall as output rises. Ford produced half a million cars in 1915 and two million cars and trucks in 1923. It diversified into shipbuilding during World War I and aircraft manufacture in 1926. In addition to Europe and the British Empire, the newly industrializing Soviet Union was an important market; by 1927 the majority of tractors in the Soviet Union were Ford-built Fordsons. That same year Ford announced plans to acquire a 3,900-square-mile tract of land in Brazil to use as a rubber plantation to be named Fordlandia.

Integrated mass production was taken even further with the construction of the sprawling Rouge River plant in Dearborn, Michigan, during the 1920s. The Rouge plant inspired the photographer Charles Sheeler, whose pictures of it appeared in the pages of *Vanity Fair* magazine, and the painter Diego Rivera, who included it in the *Detroit Industry* murals; both depicted the factory as an icon of modern capitalism.

Along with time studies, Ford used various other strategies to organize work to meet the efficiency standards of plant machinery. In this sense the Ford system represents a refinement and extension of F. W. Taylor's scientific management approach. The resulting work environment was fast-paced and continuous, and workers were hard-pressed to keep up. Turnover rates reached 370 percent in 1913. In 1914, to overcome workers' resistance to machine-paced industrial work, the company inaugurated a radical plan to double hourly wages to five dollars a day. The extra money took the form of profit-sharing. To qualify for the higher wage, workers needed to demonstrate proper behavior at work and at home. Ford Sociological Department investigators inquired about workers' drinking habits, marital strife, criminal records, church-going activities, and other evidence of moral character. In this way Ford Motor exerted social control over its employees off the job, as well as technical control of work efforts on the job.

Ford paid black workers the same wages as similarly qualified white workers. While blacks comprised between 10 and 20 percent of the workforce at Ford, they were overwhelmingly assigned the most dangerous, difficult, and unpleasant jobs, such as those in the foundry. Because their wages were far superior to those obtainable from any alternative sources of employment, black workers, especially young married men, were much less likely to quit these jobs and less willing to embrace unionization.

To expand sales, Ford needed to encourage new segments of the population to buy cars. Higher wages allowed workers to acquire mass-produced goods. The interdependence of mass production and mass consumption came to be characterized as *Fordism*. The Italian political theorist Antonio Gramsci used the term to describe the combination of social, technological, and political control over workers' lives. It has since been extended to cover all institutions (factories, unions, families, and the state) that help to regulate the accumulation of profit in advanced capitalist economies.

Workers at Ford Motor unionized in 1941, four years after the United Auto Workers gained recognition at General Motors and Chrysler. Unionization at Ford was preceded by a strike at the Rouge plant that resulted in Ford's recruitment of African American strikebreakers, thereby exacerbating racial divisions within the ranks of the working class at Ford. During this same year U.S. manufacturers, following directives from the government's Office of Production Management, shifted to wartime production. Ford announced plans to mass-produce bombers at a new plant in Willow Run, Michigan. The Rouge plant was turned over to the production of aircraft engines and jeeps.

After the death of Henry Ford in 1947 and, earlier, that of his son and heir apparent, Edsel, in 1943, Henry's grandson Henry II headed the company. He transformed the organization by bringing in modern management experts (nicknamed the "Whiz Kids") with little or no experience at Ford. Among these new Ford executives was Robert McNamara, who later served as secretary of defense in the Kennedy and Johnson administrations during the Vietnam War.

The U.S. automobile market after World War II was marked by both consolidation—leading to the dominance of the "Big Three" (GM, Ford, and Chrysler)—and the increasing presence of foreign models. In 1955 Toyota Motors built its first modern Japanese mass-production plant, modeled on Ford's Rouge factory. In 1957 foreign automobile imports to the United States exceeded exports for the first time in over half a century. Ford began to reassert control of its foreign subsidiaries in Canada and

Britain. In 1957 the European Common Market was formed. This spurred Ford to try to build cars for regional rather than national markets (Europe instead of Germany, for instance). In 1967 Ford of Europe was established and in the 1970s it introduced an ultra-subcompact car. From the 1980s through the mid-1990s Ford was the leading car company in Europe. Nevertheless, more aggressive plans to build a world car that would integrate North American and European markets failed to produce success.

As part of this strategy of global integration, Ford completed a series of acquisitions in the 1980s and 1990s that included producers from Japan (Mazda), Europe (Volvo), and Britain (Jaguar, Land Rover, and Aston Martin). Ford recovered from the OPEC oil crisis of the 1970s and the product quality problems of the 1980s by designing the best-selling Taurus along with the increasingly popular Explorer sport utility vehicle. By 1995 Ford's share of the U.S. automobile market stood at 25.6 percent. However, well into the first years of the twenty-first century the company continued to rely on sales of trucks and sport utility vehicles at a time when environmental concerns and dependence on foreign oil were emerging as major concerns for U.S. consumers. Ford CEO William Ford Jr. sought to reorient production toward environmentally friendly hybrid vehicles while continuing to offer traditional gas-powered cars. The Rouge plant was reengineered to incorporate green building technology. As Ford's share of the U.S. market fell below 20 percent during the 2000s, the company embarked on a strategy of planned shrinkage of facilities and workforce in the United States. This mirrored the trend toward shrinking market share and falling sales for each of the Big Three U.S. auto companies.

SEE ALSO *Automobile Industry*

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Bruce Pietrykowski

FORDHAM, SIGNITHIA

SEE *Acting White; Oppositionality.*

FOREIGN POLICY

Foreign policy, conceptualized most broadly and simply, is the totality of a state's external behavior toward other states and nonstate actors (e.g., international organizations and terrorist organizations). Foreign policy involves everything from the most consequential decisions about war and peace to more seemingly mundane issues of tariff levels on imports. Foreign policy encompasses long-term goals and objectives (e.g., the U.S. policy of containing the expansion of Soviet influence during the cold war) as well as discrete decisions and actions (e.g., the Soviet Union's decision to deploy nuclear weapons in Cuba in 1961).

In the social sciences, *foreign policy analysis* emerged in the 1960s as a subfield of international relations. Foreign policy analysis represented a conscious attempt to move beyond what were seen as predominantly descriptive, unsystematic, and atheoretical accounts of foreign policy often found in diplomatic histories and policy analyses in opinion journals. The goal was to study the determinants of foreign policy behavior in a more theoretically oriented and empirically rigorous manner. This rigor was reflected in greater attention to data gathering and analysis, the development and testing of theory, and a move away from single country studies to more comparative analyses designed to assess the relative importance of various determinants of foreign policy. In this sense, foreign policy analysis reflected the broader trend of behavioralism in political science and the social sciences more generally in the 1950s and 1960s.

One of the first manifestations of the move to greater rigor in foreign policy analysis was the development of frameworks to help organize both empirical research and theory development. The frameworks that eventually

exerted the greatest impact on how scholars thought about foreign policy and conducted their research involved some version of what came to be known as the *levels of analysis*. The hope was that the use of such common frameworks would encourage scholars to think more systematically about the sources of foreign policy while making empirical research more cumulative.

LEVELS OF ANALYSIS

As with all social sciences, the study of foreign policy is ultimately about understanding human behavior, whether people are acting alone as individuals or in groups as social collectives. As Valerie Hudson notes, "Understanding how humans perceive and react to the world around them, and how humans shape and are shaped by the world around them, is central to the inquiry of all social scientists, including those in IR [i.e., international relations]" (Hudson 2005, p. 1). Though foreign policy analysis can be differentiated from other social sciences in terms of the actor and behavior in question, many of the basic insights for understanding any type of human behavior are relevant and have been adapted for the study of foreign policy.

Generally speaking, there are two types of explanations for the behavior of any social actor. We can loosely refer to these as *dispositional* and *situational*. Dispositional explanations portray an actor's behavior as the result of some feature or characteristic of the actor itself: An actor behaves in a certain way because something about the actor predisposed it to behave in a particular fashion. Situational explanations focus on external forces that shape an actor's behavior regardless of its unique characteristics: Something in the actor's environment led it to behave in a certain way. In all but the most extreme instances of course, social scientists recognize that any actor's behavior results from some combination of dispositional and situational forces. Thus the goal of most social scientific inquiry is to determine the relative importance of dispositional/internal and situational/external forces in shaping an actor's behavior.

Kenneth Waltz (1959) was among the first to introduce a similar scheme into international relations. Focusing on theories of war, not foreign policy per se, he drew a distinction between individual-, national-, and international-level explanations of state behavior. Numerous versions of the basic scheme incorporating further refinements and distinctions within the different levels have been developed and applied since its first appearance. The most influential of these was presented in 1966 by James Rosenau in his call for the development of "theories and pre-theories" of foreign policy.

Several levels of analysis highlighted by Rosenau are common to virtually all such frameworks. The *individual* or *idiosyncratic level* focuses on the decision makers themselves and draws heavily on research and theory from social and cognitive psychology. Research at this level has examined the impact of personality traits, beliefs/perceptions, and cognitive processes. The *societal level* deals with the impact of general national attributes, such as a state's economic system, regime type, level of development, public opinion, or political culture. The *governmental level* emphasizes the institutions and dynamics of decision-making processes, particularly bureaucratic competition and organizational dynamics. The *international level* stresses the general impact of the anarchic and competitive nature of an anarchic international system, a state's position in the overall distribution of power, and factors such as geography. Two things are apparent from the levels-of-analysis frameworks and determinants of foreign policy specified within each level: First, any explanation of a state's foreign policy will certainly incorporate elements from multiple, if not all, levels; second, the study of foreign policy is by its very nature multidisciplinary, drawing on insights from a wide array of social sciences. In this respect, once again, foreign policy is probably no different than most other social phenomena.

MODELS OF FOREIGN POLICY

Graham Allison (1969, 1971), in his seminal article and book on decision-making during the Cuban missile crisis, claimed that observers often analyze and explain foreign policy through the lens of a *rational actor model*. Either implicitly or explicitly, analysts portray states as unitary actors possessing a coherent set of ranked national goals and objectives. According to this model, states confronted with international circumstances that require action will craft, evaluate, select, and implement policy options that maximize these goals and objectives. This rational actor model is often applied in reverse to understand a state's foreign policy and determine what its goals and objectives might be. If a nation deploys a certain weapons system or decides to use force, for example, observers assume that this policy was chosen in order to maximize its goals and objectives. As Allison explains, "This paradigm leads analysts to rely on the following pattern of inference: if a nation performed a particular action, the nation must have ends toward which the action constituted an optimal means" (Allison 1969, p. 694). A rational actor model views foreign policy as an intellectual or analytical, as opposed to political, process. Though a rational model is often applied implicitly, some international relations adopt it explicitly, even though they realize that it is usually not an empirically accurate portrait of how foreign policy decisions are made. In their view, such unrealistic simplifications of reality are theoretically useful and necessary even if they are descriptively inaccurate. Allison, among others, argued that the routine application of the

rational actor obscures a genuine understanding of foreign policy: The "black box" of the state needs to be opened and unrealistic assumptions abandoned or modified if we want to understand and explain state behavior. In fact one of the underlying goals of levels-of-analysis frameworks and their inclusion of domestic and individual variables is to direct attention to the internal workings of the state and decision-making processes.

With the goal of better understanding foreign policy, Allison presented two other models that offered better pictures of how foreign policy is actually made: the *bureaucratic politics model* and the *organizational process model*. In the bureaucratic model, the state is not seen as a unitary rational actor but rather as a collection of actors representing governmental organizations with different perspectives, goals, and objectives. There is no single, coherent, and ranked set of national goals and objectives. Policy is the result of a political process, not an analytical process. In this model, "the decisions and actions of governments are essentially intra-national political outcomes" (Allison 1969, p. 708). Decision makers are seen as reflecting the interests and perspectives of the government bureaucracies they represent, a tendency embodied in the cliché that where one stands (on any given issues) depends on where one sits (within the government). A state's behavior should be seen as reflecting the relative power of the players in the process, not as something designed to maximize a well-defined national interest. Under other circumstances, it might make more sense to understand foreign policy through the lens of an organizational process model. This model assumes that states are large organizations that seldom reevaluate policy from scratch and consider the full range of options when action is required. The crafting, evaluation, choice, and implementation of policy options are often determined by such factors as precedent and the standard operating procedures and routines usually found in any large organization.

Allison did not claim that the bureaucratic and organizational models were always more accurate than the rational actor model. Nor did he suggest a complete rejection of the rational actor model. In laying out the models and applying them to the Cuban missile crisis, Allison was attempting to make two points. First, there are some, perhaps many, circumstances in which foreign policy decisions may be the result of different decision-making processes and dynamics. Second, the alternative models are useful for highlighting and illustrating the real world constraints and forces that limit the applicability of rational models to understand foreign policy (or policy in any area for that matter).

EXPLAINING FOREIGN POLICY

One problem with levels-of-analysis frameworks is that they often result in a seemingly endless laundry list of variables that influence foreign policy. Those seeking to explain a state's behavior can easily become overwhelmed by the proliferation of determinants at each level. It is easy for the analyst to drown in a sea of details and determinants. Analysts need to find some way to include more without becoming overwhelmed. To deal with this problem, it is useful to emphasize that foreign policy can encompass everything from general policy orientations that persist over long periods to discrete decisions. There is a need for some precision about exactly what one wants to explain. If an analyst wants to explain why Great Britain pursued a policy of naval supremacy throughout most of the eighteenth and nineteenth centuries, this is very different from trying to explain a particular decision about the use of force. In thinking about the determinants of broad policy orientations such as Britain's policy of naval supremacy, it would make little sense to look to the personality traits of British prime ministers. Behaviors and policies pursued over long periods are more likely to be the result of similarly enduring determinants such as geography and culture. On the other hand, if one is trying to explain a specific decision, such as Britain's military response to the Argentinean seizure of the Falkland Islands in 1983, it might very well make sense to focus on leader traits (Prime Minister Margaret Thatcher in this case). Foreign policy analysis requires clarity not only in terms of the determinants of policy but also what is to be explained. In this way, one thinks about which determinants are likely to "match up" with the level of policy one is seeking to explain.

Similarly analysts sometimes worry about the proliferation of models. The critical point is to remember that there is no reason to assume that any one model is generally applicable. The description of various decision-making models merely highlights the fact that not all decisions are the result of the same process. The process itself is likely to vary with the nature and importance of the issue at hand, the amount of time decision makers have to act, and whether the problem is new or familiar. Critical issues of war and peace and the use of force, for example, are almost always decided at the highest levels, not within the confines of bureaucracies and organizations. As a result these decisions may more closely resemble the rational actor model. If the problem requiring a decision is novel or unfamiliar, there are unlikely to be preexisting, organizational, standard operation procedures that can be applied. If decision makers have little time to make a decision, they may be unable to craft and evaluate a wide range of new policy options and may thus choose to implement preexisting plans or routines. If the policy has important consequences for the allocation of resources, the influence of bureaucratic politics may be greater. Analysts need to think about the issues and conditions that are most conducive to different decision-making processes.

The development of levels-of-analysis frameworks and alternative decision-making models were both attempts to move analysts away from the tendency to view foreign policy as a rational and strategic response to external events. As Waltz, frequently criticized for treating states as unitary, rational actors, admits, "foreign-policy behavior can be explained only by a conjunction of external and internal conditions" (Waltz 1993, p. 79). In most political science departments, foreign policy is treated as a subfield of international relations. There are good reasons for this, given that the focus is on the external behavior of states. But one could make an equally compelling case that it should be viewed as a subfield of public policy, since there is no compelling reason to believe that foreign policy is free of all the same influences that shape policy in other areas. Foreign policy is, after all, foreign *policy*.

SEE ALSO *Alliances; Bureaucracy; Cold War; Cuban Missile Crisis; Decision-making; Deterrence; Deterrence, Mutual; Falkland Islands War; International Relations; Leadership; Neutral States; Non-alignment; Peace; Rationality; Strategic Behavior; Strategic Games; Thatcher, Margaret; Waltz, Kenneth; War*

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Keith Shimko

FORESIGHT, PERFECT

A term of everyday use, *foresight,* when qualified by *perfect,* is elevated to a concept of signal importance, certainly for modern economic theory with its proclivity to fixed points, but perhaps also for social sciences more generally. This entry attempts a brief overview.

In his analysis of investment decisions in chapter 12 of *The General Theory of Employment, Interest, and Money* (1936), John Maynard Keynes (1883–1946) draws attention partly to "existing facts, known more or less for certain" and partly to "future events, forecasted with more or less confidence" (Keynes 1936, p. 147).

> The state of long-term expectation does not solely depend on the most probable forecast that we can make. It also depends on the *confidence* with which we make this forecast—on how highly we rate the likelihood of our best forecast turning out quite wrong.… The *state of confidence* … is a matter to which practical men always pay the closest and most anxious attention. (p. 148)

Keynes (p. 152) emphasizes that our projections into the future, as well as our assumption that the "existing market valuation, however arrived at, is uniquely *correct* in relation to our existing knowledge of the facts" are based on a convention whose essence lies in the assumption of stationarity.

> In practice we have tacitly agreed, as a rule, to fall back on what is, in truth, a convention. The conventional method of calculation will be compatible with a considerable measure of continuity and stability in our affairs, *so long as we can rely on the maintenance of the convention.* But it is not surprising that a convention, in an absolute view of things so arbitrary, should have its weak points. (p. 152)

These points are collected under four headings, but with the proviso that "philosophically speaking, [market evaluations] cannot be uniquely correct since our existing knowledge does not provide a sufficient basis for a calculated mathematical expectation" (p. 152).

Undoubtedly familiar with the writings of French mathematician and economist Antoine Augustin Cournot (1801–1877), Keynes does not formulate or work with the notions of *rational expectations equilibrium* or *self-fulfilling expectations.* (See Merton [1936, 1948] for his historical take on the idea encapsulated in these phrases.) In a Cournot-Nash equilibrium, each individual action, taken on the basis of a judgment about the facts of the situation, a judgment that not only takes the actions and judgments of others into account in ascertaining the facts of the situation as they find and judge it, but also allows their judgments, and consequent potential actions, to

incorporate all that it itself takes into account, ends up by generating precisely the shape of the situation it initially took into account. In Keynes's *General Theory*, the word *foresight* is used nine times, *perfect* appears four times, and *imperfect* five times, but the two adjectives are never used to qualify the noun. Keynes refers to a correct state of expectation and correct foresight, the latter twice, but in as much a negative, possibly ironic, light as in a positive one. *Hindsight*, perfect or imperfect, is never employed to subdue and discipline history, as the assumption of perfect foresight is now sometimes used to discipline data and neutralize the future in theoretical thinking current in macroeconomics and associated with Brock (1972, 1974), Lucas, Lucas and Prescott (1971) and their followers. (For issues relating to *perception* and *individual observability*, see Chakrabarti and Khan, 1991.)

Nevertheless, Keynes's chapter 12 is impressive in how it draws on and anticipates the vernacular of modern game theory and finance. (For epistemological concerns stemming from Nash (1951), see Aumann and Brandenburger (1995) and Khan (1990, section 2.)) Referring to investment as a "battle of wits," and using metaphors for games that are played with "zest and enjoyment" even though the players know what they entail and their sorry end, Keynes introduces game-players and player-types: uninformed versus informed investors "as gulls among the public to feed the maws of the professionals" (Keynes 1936, p. 155), and speculators versus enterprisers. He emphasizes "animal spirits—a spontaneous urge to action rather than inaction [as opposed to an] outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities" (p. 161), a maximization of von Neumann-Morgenstern expected utilities, and flatly denies that the "basis for making such calculations" exists. Anticipating David Lewis (1969) and Robert Aumann (1976), but stopping short of them and of infinite regress (see Parikh and Krasucki (1990) and their references to the work of Geanakoplos-Polemarchakis, Cave and Bacaharach), Keynes writes:

> We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be. And there are some I believe who practice the fourth, fifth and higher degrees. (1936, p. 156)

Once the investment decision is reviewed as part of an anonymous multiplicity of decentralized decisions taken by producers and consumers, independent of each other except for their dependence on the price system, as in the Arrow-Debreu-McKenzie theory, the facts of the situation refer only to the price system. (Debreu (1959), Nikaido (1968), Arrow and Hahn (1971) and McKenzie (2002) represent the *loci classicus* of a theory to which many others have made fundamental contributions. See Khan (2004) for a reading of Debreu through the eyes of Keynes and his Cambridge predecessors and successors, including Frank Hahn.) If however, there are facts that are not, perhaps cannot be, "priced out," and agents have differential informational access to these facts but not to each other, then the price system can be used by each to gauge the information and beliefs of the others, and to refine their decisions accordingly. (Hayek (1948) is now a classic reference on differential information.) Such a context is particularly amenable to attempts at equilibrium theorizing. James Jordan and Roy Radner refer to agents' individual models, endow these models with a measure of rationality, and introduce the 1982 *Journal of Economic Theory* symposium with these words:

> In a market for commodities whose future utility is uncertain, the equilibrium prices will reflect the information and beliefs that the traders bring to the market, as well as their tastes and endowments. The term rational expectations equilibrium is applied to a model of market equilibrium that takes account of this potential informational feedback. (Jordan and Radner 1982, p. 201)

A situation in which agents have identical information regarding an uncertain environment, Keynes's *convention* becomes the theoretical reality, and an equilibrium that features a "correct" *price-expectation function* can be formulated. Under the heading of a *perfect foresight approach*, Radner (1982) refers to this as Muth's (1961) idea of rational expectations, and distinguishes it from the one originally formulated, in 1967 and subsequently, to deal with differential information (see also Jordan and Radner 1982, para. 6, and Sent 1998).

Margaret Bray (1987) focuses on the perfect foresight hypothesis in what Radner describes as Muth's sense. In addition to following Radner in designating John Hicks (1939) as another precursor, Bray also discusses the early work of Nicholas Kaldor (1934). Her conclusion that "there is little to be gained in realism by exchanging the myth of complete markets for the fantasy of perfect foresight" (Bray 1987, p. 834) surely stands twenty years later; I leave it to the reader, and to a more detailed subsequent investigation, to determine how much the hypothesis has gained for the theory and for the understanding of competitive markets, themselves nothing if not intertemporal. (See Aumann (1998) and his references for issues centered on temporality.)

SEE ALSO *Arrow-Debreu Model; Beauty Contest Metaphor; Competition, Perfect; Expectations; Expectations, Implicit; Expectations, Rational; Game Theory; Hicks, John R.; Nash Equilibrium*

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M. Ali Khan

FORMAN, JAMES
1928–2005

In his "Letter to My Sisters and Brothers," which opens his book *The Making of Black Revolutionaries*, James Forman writes, "We are not born revolutionary. Revolutionaries are forged through constant struggle and the study of revolutionary ideas and experiences." This statement captures a central aspect of the social and political thought of the civil rights leader. Throughout his life, Forman constantly emphasized the essential relationship between thought and action in the struggle for social and political change. In so doing, he left an indelible mark on the history of African American political thought and protest movements.

Born on October 4, 1928, in Chicago, Illinois, James Forman spent the first years of his life on his grandmother's farm in Benton County, Mississippi. At the age of six he went to live with his mother and stepfather in a four-room apartment on the South Side of Chicago. He attended grammar school at St. Anselm's Catholic School

and then transferred to Betsy Ross Grammar School. During his grammar school years Forman sold the *Chicago Defender*, an influential African American newspaper that proved to be a catalyst in developing his political conscience. Graduating with honors from Englewood High School in 1947, James spent one semester at Wilson Junior College before volunteering for service in the United States Air Force. While stationed in California, he took classes at the University of Southern California. Upon returning to Chicago in 1954, Forman enrolled in Roosevelt University, where he took an active role in student politics. He graduated with honors in 1957 and, with the assistance of a professor, St. Clair Drake, began graduate school in the Government Department and the African Research and Studies Program at Boston University.

With the advent of a burgeoning civil rights movement, Forman decided to leave graduate school and take an active role in the struggle for racial justice. He covered the integration of the Little Rock public schools for the *Chicago Defender*, and while teaching at Paul Cornell Elementary School in Chicago, he took an active role in the protest struggles of African American sharecroppers in Tennessee. But it was through his work with the Student Nonviolent Coordinating Committee (SNCC)—as executive secretary and director of international affairs—that Forman was able to make a significant contribution to the civil rights revolution. Forman's organizational prowess, along with his deep commitment to forging effective ideological positions for SNCC, contributed to the organization's political effectiveness. Although he often disagreed with the strategies, tactics, and philosophies of other SNCC leaders, such as Bob Moses, as well as other civil rights organizations, Forman was a central figure in transforming SNCC into one of the "Big Five" civil rights organizations—the others being the Congress of Racial Equality (CORE), the National Association for the Advancement of Colored People (NAACP), the NAACP Legal Defense Fund (LDF), and the Southern Christian Leadership Conference (SCLC).

As SNCC experienced tremendous ideological tensions and fractures, Forman withdrew from active participation in the organization in 1968. He briefly affiliated with the League of Revolutionary Black Workers, a labor organization that worked with African American autoworkers in Michigan. In 1969, Forman formulated his "Black Manifesto" at the National Black Economic Development Conference. The Manifesto became widely known after he interrupted the May 4, 1969, service at New York's Riverside Church to read his formal call for reparations for African Americans. Over time, Forman's political thought evolved to more fully take into account thinkers and movements from the Third World. He also developed a more pointed critique of capitalist political economy. Forman eventually earned his Master's degree in African and African American history from Cornell University and his PhD in political history from the Union of Experimental Colleges and Universities. In 1984, he published a revised version of his graduate school research as *Self-Determination and the African American People*. He continued to be active in a number of national and international political movements, including running an unsuccessful campaign in 1990 to become the "shadow" U.S. senator from Washington, D.C. (The two "shadow senators" are nonvoting representatives who lobby Congress on behalf of the District of Columbia.) James Forman died on January 10, 2005, after a battle with colon cancer.

SEE ALSO *Civil Rights Movement, U.S.; Student Nonviolent Coordinating Committee*

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Corey D. B. Walker

FORMATION, RACIAL

Introduced in 1986 by Howard Winant and Michael Omi, the theory of *racial formation* has extensively influenced the field of racial and ethnic relations. Racial formation theory extends the general sociological principle of race being a socially constructed concept that is contested and undergoes changes over time. Primarily an analysis of how U.S. society has been re-racializing since the 1960s through a number of *racial projects*, the theory discusses the transformation of racial categories largely by efforts in the political arena and the ways in which racial meanings affect this process.

Omi and Winant define racial formation as "the sociohistorical process by which racial categories are created, inhabited, transformed, and destroyed" (1994, p. 55). They argue that this process of *racialization* is situated between structure and representation, whereby, at certain points in history, racial meaning is extended to a racial relationship, social practice, or group. Racial ideology is constructed and reconstructed from preexisting conceptual elements and emerges from the struggles of competing political projects and ideas seeking to articulate

similar elements differently. Additionally, Omi and Winant argue that race is an organizing principle not just at the societal (macro) level, but also at the individual (micro) level, shaping the identities of individuals and affecting all areas of social life. However, they do give substantial emphasis in their analysis to the macro level, arguing that racial conflict occurs primarily at the level of the state. In their estimation, the process of racial formation takes place in two steps: through racial projects and the evolution of hegemony.

RACIAL PROJECTS

Omi and Winant (1994) argue that society is suffused with racial projects, which form the "heart" of the racial formation process. They define a racial project as "simultaneously an interpretation, representation, or explanation of racial dynamics, and an effort to reorganize and redistribute resources along particular racial lines" (1994, p. 56). Racial projects are the link between structure and ideology, in that they mediate between the discursive ways race is identified and signified on one hand, and the institutional forms in which it is routinized on the other. Racial projects give us new ways of reasoning about race, new plans for action, and often new language and discourse with which to talk about race and possibly even mask racist ideas.

Through historical analysis, Omi and Winant assert that the most successful racial projects since the 1960s (largely carried out by neoconservative members of the ruling class) have furthered the notion that liberal racial policies gone wrong are to blame for many of society's problems. For example, affirmative action programs created by whites to modestly address some extreme racial inequities have been effectively reframed as "reverse discrimination," harmful to white Americans' life chances, and even detrimental to beneficiaries of color on a psychological level. This racial project was one of several competing projects, but eventually prevailed in the political and social arenas.

CONTRIBUTION AND CRITICISM

The theory of racial formation had a major impact on the study of racial and ethnic relations and is incorporated into most critical race scholarship. Little prior theory, in addition to much current mainstream research, gives attention to the role of government in creating racial-ethnic groups and, instead, a great deal of scholarship attempts to subsume contemporary racial issues underneath matters of ethnicity, nationality, or class (e.g., Wilson 1980). However, while Omi and Winant's theory gives important insight into racial formation as a free-standing social process, critical race scholars give some noteworthy critique.

Some race theorists argue that Omi and Winant give ideological processes excessive emphasis, and little attention is devoted to how racial orders are structured (Bonilla-Silva 2001; Feagin 2006). Specifically, the racial formation theory does not aid understanding of the ways in which the ideological formation of race has been buttressed by extensive generation of wealth and assets for white Americans (Feagin 2006). Thus, Omi and Winant attend well to the symbolic and less well to the structural.

Similarly, because Omi and Winant do not present racial groups as collectivities who contest their positioning in the racial hierarchy, their analysis casts little light on why people fight over racial matters and either accept or challenge racial projects (Bonilla-Silva 2001). Omi and Winant also claim that the most recent rearticulation of the racial ideology has been carried out by certain right-wing members of the dominant class, but this analysis neglects a systemic understanding of the process (Bonilla-Silva 2001). Nevertheless, racial formation theory provides subsequent scholars with a solid reference point for the racial theories of the future.

SEE ALSO *Affirmative Action; Ethnic Conflict; Ethnic Fractionalization; Feagin, Joseph; Hierarchy; Inequality, Wealth; Poststructuralism; Race; Racial Classification; Racialization; Racism*

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Kristen Lavelle

FORMATION, SOCIAL

Social formation is a Marxist concept referring to the concrete, historical articulation between the capitalist mode of production, persisting precapitalist modes of production, and the institutional context of the economy. The theory of the capitalist mode of production—its elements, functioning at the enterprise level and the level of market relations among enterprises (e.g., processes of competition, concentration, and centralization), and its contradictions, tendencies, and laws of motion—can be found in

Karl Marx's *Capital* ([1867] 1967). The capitalist mode of production as such is an abstraction, accessible to research only through social formations; that is, through its concrete, historically specific manifestations in nation states, regions within nations (e.g., the South), or regions encompassing nations (e.g., the European Union). Though Marx (1818–1883) did not define this concept, its meaning and significance can be inferred from his work, particularly from this statement:

> The specific economic form, in which unpaid surplus-labor is pumped out of direct producers, determines the relationship of rulers and ruled … and, in turn, reacts upon it as a determining element. Upon this, however, is founded the entire foundation of the economic community which grows out of the production relations themselves, thereby simultaneously its specific political form. It is always the direct relationship between the owners of the conditions of production to the direct producers.… which reveals the innermost secret, the hidden basis of the entire social structure, and … the corresponding specific form of the state. This does not prevent the same economic basis—the same from the standpoint of its main conditions—due to innumerable different empirical circumstances, natural environment, racial relations, external historical influences, etc., from showing infinite variations and gradations in appearance, which can be ascertained only by analysis of the empirically given circumstances. (Marx [1867] 1967, vol. 3, pp. 791–792)

Marx postulates here a necessary, dialectical interrelation between relations of exploitation and political relations, between economic and social systems, a point previously made as follows: "The totality of these relations of production constitutes the economic structure of society, the real foundation, on which arises a legal and political superstructure and to which correspond definite forms of social consciousness" (Marx [1859] 1970, p. 20). The historical specificity of the relations of production is crucial for understanding the social formation in its universality (i.e., as a capitalist social formation) and in its particularity because, empirically, "the same economic basis" (i.e., the capitalist mode of production) will show "infinite variations" due to a social formation's unique characteristics among which, the presence and persistence of precapitalist modes of production are of key importance. This is why the study of social formations entails the investigation of the articulation of modes of production; that is, the specific ways in which the capitalist mode of production affects precapitalist modes of production, altering them, modifying them, and even destroying them (Wolpe 1980, p. 2).

RECENT INTERPRETATIONS

The relationship between the capitalist mode of production, social formations, and social change has been interpreted in determinist and dialectical ways. Literal, atheoretical readings of the work of Marx and Friedrich Engels (1820–1895) reduce their views to technological and economic determinism, a result produced also by sophisticated but undialectical readings (e.g., Cohen 1978) that ignore the dialectical nature of Marx's thought. Marxist concepts are essentially material and social; for example, a machine, in itself, is a physical object that becomes a means of production or a productive force when it enters the production process in the context of historically specific relations of production. Changes in the forces of production occur, it follows, always in the context of political struggles. Cohen, on the other hand, attributes to the productive forces a primary, determinant role in historical change, and he radically divides the social (e.g., relations of production) from the material or extrasocial (i.e., nature, humans, forces of production). Cohen's undialectical materialism and determinism has to rely, unavoidably, upon transhistorical sources of change: a universal tendency of the productive forces to develop and a "somewhat rational" human nature capable of coping with scarcity (Cohen 1978, pp. 132–160). From this standpoint, then, historical changes are the effect of changes in the forces of production, undialectically understood as mere technological change. Class struggles play no role in historical change for political actors are reduced to rationally adapting to the effects of changing circumstances.

A determinist understanding of Marx would lead social scientists to expect that the penetration of the capitalist mode of production in social formations where precapitalist modes of production are widespread would soon produce qualitative changes in their economic system (e.g., modification or destruction of the precapitalist modes of production) and their superstructure (e.g., culture, legal, and political institutions). Determinist perspectives, however, underestimate the resilience of the noneconomic characteristics of social formations and the extent to which production is a thoroughly social activity that requires social and cultural conditions of possibility that cannot be instituted by decree. Despite appearances, for example, the drastic economic changes introduced in Russia after 1917 and in Eastern Europe after World War II (1939–1945) were, to some extent, superficial, for those countries quickly reverted to capitalism. There are many complex economic and political reasons why revolutionary change did not produce deep and qualitative superstructural changes, but reliance on the determinant and automatic effects of changing the mode of production must have contributed in important ways.

The literature on social formations subject to the penetration of the capitalist mode of production through gradual, nonrevolutionary processes indicates that forms of articulation between the capitalist mode of production and precapitalist modes of production cannot be logically deduced from Marx's theory of the capitalist mode of production. The notion of articulation refers to "the relationship between the reproduction of the capitalist economy on the one hand and the reproduction of productive units organized according to pre-capitalist relations and forces of production on the other" (Wolpe 1980, p. 41). How these processes actually interact varies a great deal from one social formation to another, thus leading to the construction of conflicting perspectives about the nature of social formations: (1) Social formations lack a necessary structure; one mode of production may dominate or several modes of production may be articulated with or without one dominant mode; (2) A social formation's necessary structure may be formed by a dominant mode of production and its conditions of existence, which might include elements of precapitalist modes of production, or it may simply be the effect of the articulation of any number of modes and their respective conditions of existence; (3) Given a dominant mode (e.g., the capitalist mode of production) in any social formation, all other modes will be subordinate to its structures and processes so that they are reduced to mere "forms of existence" of the dominant mode (Wolpe 1980, p. 34).

These and other perspectives entail different implications depending on whether the mode of production is defined in a restricted sense, as a combination of relations and forces of production, or in an extended sense, encompassing linkages among enterprises as well as other economic and political/cultural elements constitutive of the mode of production and conducive to its reproduction over time (e.g., distribution, circulation, exchange, the state) (Wolpe 1980, p. 40; Marx [1859] 1970, pp. 188–199). Because modes of articulation are unique to specific social formations (e.g., in South Africa, racial ideology reproduced and sustained capitalist relations of production [Wolpe 1980, p. 317]; in Peru, agrarian reform contributed to the proletarianization of Indian communities [Bradby 1980, p. 120]), it could be erroneously concluded that social formation and articulation are useless concepts, for their use in research is unlikely to yield testable empirical generalizations.

These concepts are exceedingly important, for they contribute to the adjudication of an important issue in Marxist theory: the extent to which Marx is or is not an economic determinist. The historical and empirical variability in the conditions of reproduction of the capitalist mode of production that is documented through research in social formations and modes of articulation demonstrates the nondeterminist nature of Marx's theories. While the structure, processes, contradictions, and tendencies of the capitalist mode of production remain the same, thus constituting the "innermost secret" of the economic and political structures in social formations where the capitalist mode of production is dominant, the historical conditions for the reproduction of the capitalist mode of production vary historically and cross-culturally in the terrain of social formations, where political struggles carried under a variety of banners (class, race, religion, and nationalism) shape the different and spacialized outcomes of capitalism's never-ending expansionary tendencies.

Dialectically considered, social formations are the unity between the universal (the capitalist mode of production) and the particular, the concrete conditions within which the capitalist mode of production operates. The concept of social formation, unlike the abstract non-Marxist concept of "society," opens up the possibility of a realistic and historical understanding of social reality, based not on inferences from transhistorical tendencies, functional prerequisites, or concepts of human nature, but upon the historical specificity of the social formations within which capitalism operates.

SEE ALSO *Marx, Karl*

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FORMULAS

Although most social science research concerns characteristics of people, groups, organizations, and situations for which there is no inherent metric or measure, virtually all such research involves quantifying these characteristics. The

data that result from this quantification are manipulated, analyzed, and interpreted using mathematical formulas. Formulas also are used by social scientists to describe or model behavior, particularly interpersonal behavior, using mathematical operations and principles. In some social science research literatures, such formulas are the principle means by which behavior is described and predicted.

William James, in his *Principles of Psychology* (1890), offered one of the earliest examples of a description of an aspect of human social experience in mathematical terms. James suggested that self-esteem is a function of the ratio of people's successes to their "pretensions":

$$\text{Self-Esteem} = \frac{successes}{pretensions}$$

In other words, a person's self-esteem depends on the degree to which they are meeting their own expectations. Inspired by James's work, psychologists a century later posited more complex formulas in which self-esteem is a measure of the sum of people's performances in various domains, weighted by the importance they ascribe to those domains.

An area of social science in which mathematical formulas have been particularly influential is interpersonal relations. Virtually all of these formulas derive in part from social exchange models of interpersonal behavior. The seminal social exchange account of interpersonal relations was proffered by J. Stacy Adams in 1963. Adams's specific concern was the degree to which individuals feel as if they are treated in a just and fair manner by their employers. According to Adams, perceptions of just and fair treatment stem from perceptions of equity, which can be modeled using the following formula:

$$\text{Equity} = \frac{inputs}{outputs}$$

Inputs are what the employee puts into the job (e.g., effort, loyalty), and outputs are what the employee gets in return (e.g., salary, job security). As this ratio departs from 1.0, particularly in the direction of inputs exceeding outputs, perceptions of fairness, as well as motivation, decline.

An important addition to this simple model is an accounting for the role of comparisons in such judgments. For instance, the equity ratio might be expanded to:

$$\text{Equity} = \frac{inputs_{own}}{outputs_{own}} - \frac{inputs_{other}}{outputs_{other}}$$

In this case, "other" could denote another person (e.g., a coworker) or another opportunity (e.g., a position with another employer). The addition of comparisons yields a model that can account for the fact that individuals sometimes remain in relationships despite inputs that exceed outputs, or that they leave relationships that are providing outputs in excess of inputs.

Other models inspired by the social exchange perspective use formulas as a basis for defining and predicting relationship outcomes. For instance, Caryl Rusbult's investment model defines relationship satisfaction using the following formula:

$$\text{Satisfaction} = (rewards - costs) - comparison\ level$$

This formula specifies that people experience satisfaction in relationships when the difference between rewards and costs in the relationship exceeds expectations. Satisfaction, defined in this way, is a term in the formula for defining commitment to the relationship:

$$\text{Commitment} = satisfaction - alternatives + investments$$

"Alternatives" corresponds to the perceived degree of satisfaction the individual could expect to experience in other relationships, and "investments" correspond to the accrued costs of staying in the relationship (e.g., opportunities not pursued in order to preserve the relationship). These formulas define relationship outcomes and suggest means by which they can be predicted and influenced, illustrating the strategic use of formulas in social science research.

Other theoretical models in the social sciences specify formulas for which specific values of terms are predicted. An instance of such a use of mathematical formulas is Bibb Latané's social impact theory. According to this theory, the influence of other people on an individual can be specified in terms of three factors: (1) *strength*, or how important the individuals are; (2) *immediacy*, or how close in space and time the individuals are; (3) *number*, or how many people there are. Social influence, or impact, is a product of these factors, so that:

$$\text{Impact} = strength^{i} \times immediacy^{j} \times number^{k}$$

For example, the model predicts that performance anxiety will increase as the number of individuals watching, their importance to the performer, and their proximity to the performer increases. An important feature of this model is the assumption that the influence of these factors is not linear (i.e., the exponents fall between 0 and 1). Take for instance, the number factor. The model specifies that, holding strength and immediacy constant, the addition of one more person in the situation has less influence if a large number of people are already present. Likewise, the addition of one more person in the situation has more influence if a small number of people are already present. Thus, associated with each factor is an exponent that describes in mathematical terms the relation between that factor and its impact.

Even in social science research for which concepts are not framed in mathematical terms, mathematical formulas are important, because the data generated by social science research is virtually always subjected to statistical analysis. The most prevalent use of formulas in this context is for the construction of test statistics. Test statistics,

such as t, F, and χ^2, are used in hypothesis testing as a means of evaluating the likelihood that an observed pattern of results is attributable to chance. This likelihood is reflected in the p-values that accompany observed values of test statistics, with values lower than .05 indicating, by convention, statistical significance.

A related use of formulas is for the computation of effect sizes, which are means of indexing the practical, as opposed to statistical, significance of a research finding. A frequently used effect size, d, is attributable to the American psychological researcher Jacob Cohen. The formula for computing d is:

$$\frac{M_1 - M_2}{\sigma}.$$

Here, M_1 and M_2 are means on some outcome for two groups and σ is a standard deviation, either for one of the groups or for a "pooled" standard deviation. The resultant value is the difference between the two groups in standard deviation units, which is interpreted with reference to criteria for small, medium, and large effects, as described by Cohen. Other effect sizes can be generated using formulas specific to the statistical model used to analyze the data.

Mathematical reasoning is a routine activity in quantitative social science research. At the most fundamental level, mathematical formulas are, in some instances, used to define and predict variables. In all cases, mathematical formulas are used to construct test statistics required for hypothesis testing. Increasingly, these test statistics are accompanied by effect sizes, which make use of output from statistical analyses to construct indexes of practical significance. For these reasons, social scientists routinely use mathematical reasoning in their work.

SEE ALSO *Methods, Quantitative; Models and Modeling; Quantification; Social Science; Statistics; Statistics in the Social Sciences*

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FORWARD AND FUTURES MARKETS

Futures markets and forward markets trade contracts that determine a current price for a commodity transaction designated to take place at a later date. Despite being fundamental to financial and commodity trading, there is some confusion over the precise definition of futures and forward contracts. While common usage sometimes defines *futures* and *forwards* as synonyms, a futures contract is a specialized form of forward contract that is standardized and traded on a futures exchange. As such, a technical distinction is required between futures markets and forwards markets. Some forward contracts, such as those traded on the London Metals Exchange, have many features of futures contracts. Other types of forward contracts are more complicated, such as the forward contracting provisions embedded in long-term oil delivery contracts. While it is tempting to claim that futures contracts represent an evolution of forward trading, much twenty-first-century progress in contract design has come in over-the-counter (OTC) trading, the primary venue for many types of forward contracting.

HISTORY OF FORWARD AND FUTURES CONTRACTS

The history of forward contracts can be traced back to ancient times. Due to the difficulties of transport and communication, trading based on samples was common and some form of forward contracting was essential. The contracting process usually involved only the producers and consumers of the goods being traded. During the sixteenth century, liquidity of forward markets was substantially increased by the emergence of the Antwerp bourse. By the mid-seventeenth century, forward markets had developed to where the Amsterdam bourse featured both forward and option contracts for commodities, such as wheat and herring, and for foreign stocks and shares. The beginning of trade in futures contracts is usually traced to mid-nineteenth-century Chicago, where the Board of Trade—founded in 1848—transacted the first "time contract" in 1851. The grain trade of that era typically involved merchants at various points along major waterways purchasing grain from farmers which was then held in storage, often from fall or winter into spring. In order to avoid the risk of price fluctuation and to satisfy bankers, merchants started going to Chicago to transact contracts for future, spring delivery of grain. The contracts set a price for delivery of a standardized grade at a later delivery date. While these early contracts were similar to modern futures contracts, some terms and conditions of these time contracts were specific to the original parties to the transaction, as with a forward contract.

THE FUTURES CONTRACT AND THE FUTURES EXCHANGE

A significant difference between futures and forward contracts arises because futures contracts are legally required to be traded on futures exchanges while forwards are usually created by individual parties operating in the decentralized OTC markets. Because a futures contract is transacted on an exchange, the traders originating the contract use the exchange clearinghouse as the counterparty to their trade. While both a short trader (seller) and long trader (buyer) are required to create a futures contract, both traders execute the trade with the clearinghouse as the direct counter-party. This allows a futures contract to be created without the problems associated with forward contracting, which typically depends on the creditworthiness of the counter-party. By design, futures contracts are readily transferable via the trading mechanisms provided by the exchange. Because forward contracts depend on the performance of the two original parties to the contract, these contracts are often difficult to transfer. One practical implication of this difference is that if a futures trader wants to close out a position, an equal number of offsetting contracts for that commodity month is transacted and the original position is cancelled. Forward contracts are usually offset by establishing another forward contract position with terms as close as possible to those in the original contract. Unless the forward contract provides a method for cash settlement at delivery, this will potentially involve two deliveries having to be matched in the cash market on the delivery date.

To facilitate exchange trading, futures contracts possess a number of key features, especially standardization and marking to market. The elements of standardization provided by the futures contract and by the rules and regulations of the exchange governing such contracts involve: the deliverable grade of the commodity; the quantity deliverable per contract; the range of quality within which delivery is permissible; the delivery months; and, the options associated with the specific grade and date of delivery that is permissible. Standardization is achieved by making each futures contract for a given commodity identical to all other contracts except for price and the delivery month. In addition to standardization, forwards and futures also differ in how changes in the value of the contract over time are handled. For futures, daily settlement, also known as marking to market, is required. In effect, a new futures contract is written at the start of every trading day with all gains or losses settled through a margin account at the end of trading for that day. This method of accounting requires the posting of a "good faith" initial margin deposit combined with an understanding that, if the value in the margin account falls below a maintenance margin amount, funds will be transferred into the account to prevent the contract from being closed out. On the other hand, settlement on forward contracts usually occurs by delivery of the commodity at the maturity of the contract. Hence, futures contracts have cash flow implications during the life of the contract while forwards usually do not.

MODERN USAGE OF FORWARD AND FUTURES CONTRACTS

In modern markets, considerable variation is observed in the relative use of forward or futures contracting across commodity markets. For example, in currency markets, the large value and volume of many individual trades has the bulk of transactions for future delivery conducted in the currency forward market. Exchange traded currency futures contracts are an insignificant fraction of total trading volume in the global currency market. As trading in forwards is closely integrated with cash market transactions, direct trading in forward contracts is restricted to the significant spot market participants, effectively the largest banks and financial institutions. Because currency forward contracts do not have regular marking to market, restricted participation is needed to control default risk. As such, differences in the functioning of futures and forward markets impacts the specific method of contracting selected for conducting commodity transactions. For example, in contrast to forward trading, futures markets are designed to encourage participation by large and small speculative traders. The increased participation of speculators not directly involved in the spot market provides an important source of additional liquidity to futures markets not available in forward markets. In order to achieve this liquidity certain restrictions are imposed on trading, such as limits on position sizes and the imposition of filing requirements. By restricting participation to large players in the commodity market, many of the restrictions required for the functioning of futures markets are not present in forward markets.

SEE ALSO *Bubbles; Bull and Bear Markets; Contango; Discounted Present Value; Equity Markets; Expectations; Financial Instability Hypothesis; Financial Markets; Future Prices; Hedging; Interest Rates; Liquidity; Policy, Monetary; Selling Long and Selling Short; Selling Short; Speculation; Spot Market; Spreads; Yield Curve*

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FOSSILS

SEE *Archaeology.*

FOUCAULT, MICHEL

1926–1984

Michel Foucault was a French philosopher who wrote widely on the history of thought. His influences include philosophers of science, such as his mentor Georges Canguilhem, but also Maurice Blanchot and Friedrich Nietzsche, from whom he derived his influential methodological notion of genealogy. Though Foucault's oeuvre treats seemingly disparate historical topics ranging from psychiatry to structuralism and on from sexuality to liberalism, a concern with the issues of knowledge and power as they constellate around the formation of subjectivities forms a constant, discernible thread.

Foucault's first major works are studies of psychiatry and mental illness. In *Madness and Civilization* (1961), Foucault examined how madness, the classical age inverse of reason, was systematized into the modern psychological category of mental illness. *The Birth of the Clinic* (1963) marks the beginning of Foucault's archaeological period, and examines the development of the perceptive apparatus of modern medicine. His attention to clinical confinement is demonstrative of his concern with dividing practices that progressively split certain individuals off from the social body.

The subsequent *Archaeology of Knowledge* (1969), Foucault's only methodological treatise, draws on the broad-sweep historiographical innovations of the Annales School to elaborate discursive formations as an analytical frame. In his archaeology of structuralism, *The Order of Things* (1966), Foucault historicized these discursive structures into distinct epistemes, which serve as the "condition of possibility" for knowledge. Tracing epistemic transformations in thought from the classical to the modern age, Foucault scrutinized the rise of man as the subject of the human sciences.

In his later work, Foucault shifted his approach to a process he called genealogy, which explicitly linked his analyses of knowledge to social structures of power. He argued against a purely repressive notion of power, elaborating instead on his oft-quoted maxim that "power is productive." In *Discipline and Punish* (1975), Foucault developed an explicit relationship between forms of knowledge of the body and the evolution of the modern prison system; disciplinary power, Foucault argued, arrays and organizes bodies into "analytical space," producing a logic that generalized itself from its application in concrete technologies such as the nineteenth-century Panopticon penitentiary to the level of society. In the first volume of his three-part *History of Sexuality* (1976), Foucault characterized disciplinary power as an anatomo-politics that operates on the level of the body, and juxtaposed it to its complement, bio-politics, which functions on the level of a population whose life forces it seeks to optimize. These populations, Foucault argued, are constituted in part via discourses about sexuality. In the second two volumes of his *History*, *The Use of Pleasure* (1984), and *The Care of the Self* (1984), Foucault turned to the processes of self-constitution in Greek and Roman sexual practices. The planned fourth and fifth volumes of the series remained unwritten upon Foucault's premature death at the age of fifty-eight.

Foucault's activism often related to the themes of his work. He advocated for penal reform and gay rights, and was associated with the anti-psychiatry movement. In his interviews and lectures, particularly those delivered at the Collège de France from the 1970s to 1984, Foucault reformulated many of the themes of his books into analyses applicable to the contemporary political situation. He responded to the ascendance of neoliberalism in the 1970s by refining his concept of bio-politics into that of governmentality, a governmental rationality operating in the realm of political economy.

Several scholars argued with Foucault over issues of historical accuracy, while others have contended that his attempts to transcend reason as the grounds of the subject's constitution remain methodologically fettered because they presuppose the existence of that self-same subject. Nevertheless, Foucault's many anglophone interpreters have ensured the profound methodological and theoretical impact of his work in many disciplines, including anthropology, gender studies, history, literature, postcolonial studies, and sociology.

SEE ALSO *Critical Theory; Habermas, Jürgen*

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FOUNDATIONS, CHARITABLE

Charitable foundations are endowments that are devoted to the pursuit of public purposes. Foundations are typically set up to exist, in principle, in perpetuity—spending parts of their annual income on public purposes, while retaining the remainder to preserve and grow their endowment assets. On occasion, however, donors limit the life span of a charitable foundation, requiring the foundation to spend out all assets over a given number of years, as was the case with the Julian Rosenwald Fund (1917–1948) and more recently the Bradley Foundation, established in 1985. Foundations have existed in one form or another for many centuries, and some observers have pointed to the Library of Alexandria and Plato's Academy (bequeathed with income-producing lands to his nephew) as early examples in antiquity. Historically, foundations were closely linked to religious charity in the Judeo-Christian tradition, but similar concepts are found in other religious traditions as well, such as the *al-wakif* in Islam.

In the course of the twentieth century, however, much foundation activity has been linked to the concept of philanthropy. Literally "the love of humankind," philanthropy can be most poignantly defined as the use of resources to examine and address the causes of social ills or problems. As such, philanthropy contrasts with traditional charity, understood as the eleemosynary, ameliorative use of resources. Although many charitable trusts existed for various purposes in early American history, and the "foundations" of Benjamin Franklin (1706–1790), James Smithson (1765–1829), and George Peabody (1795–1869) were of great significance, the birth of the U.S. foundation sector, and with it the rise of the concept of philanthropy, is typically located around the beginning of the twentieth century.

In an influential series of articles published in the 1880s titled *Wealth*, the industrialist Andrew Carnegie (1835–1919) began to argue in favor of an obligation on the part of the rich to devote excess wealth to public purposes and to help provide opportunities for the less fortunate to better themselves. Over the following decades, the traditional focus of charitable trusts on providing relief and amelioration was gradually supplanted by a new orientation toward analyzing and addressing the causes of social problems rather than just addressing their effects. Using the emerging sciences to tackle the "root causes of social ills" set the ambitions and operations of the early twentieth-century foundations apart from earlier foundation activities in the United States and launched what historians Barry Karl and Stan Katz (1987) have termed the *modern philanthropic foundation*.

The earliest of these new foundations included the Russell Sage Foundation (1907), the Carnegie Corporation (1911), and the Rockefeller Foundation (1913), which popularized the foundation idea and provided a blueprint that other wealthy donors began to follow in the 1920s and 1930s. High marginal tax rates that originated during World War II (1939–1945) and continued into the postwar period, in combination with lax regulation, further propelled foundation growth in the 1940s and 1950s. By the 1960s, however, perceived economic misuses of foundations led to a political backlash culminating in the introduction of the new and relatively stringent regulation of foundations through the Tax Reform Act of 1969. This law instituted, among other provisions, a payout requirement for grant-making foundations that currently requires the annual payout in grants and other qualifying contributions to be the equivalent of 5 percent of the foundation's asset value. As such, the sum of foundation grants is closely tied to endowment value, and the run-up of the stock market in the 1990s—as well as the

emergence of large-scale postindustrial philanthropists such as William Hewlett, David Packard, Bill Gates, Ted Turner, George Soros, and Warren Buffett—significantly increased the level of resources at the disposal of the foundation community at the beginning of the twenty-first century.

According to data provided by the New York–based Foundation Center, there were close to 68,000 grant-making foundations in the United States in 2005, holding aggregate total assets of close to $510 billion and spending $33.6 billion in grant and other expenditures. While the number of foundations had only doubled since the late 1980s (there were about 30,000 foundations in 1988), there was a dramatic acceleration of the financial means of the foundation sector in the space of only a few years. More specifically, total assets in nominal terms more than doubled between 1995 ($227 billion) and 2005, and grant dollars almost tripled between 1995 ($12.3 billion) and 2005. Despite this growth, funding patterns have remained stable: Education receives about 25 percent of all foundation support, followed by health with about 20 percent and human services with 15 percent. The other major funding areas are arts and culture and public affairs, with slightly more than 10 percent. The remainder is distributed between environmental causes, science, religion, and international affairs.

Although not insignificant, foundation resources remain overall rather limited. For example, the roughly $8 billion in annual educational spending by foundations equals no more than four times the 2005 operating budget of Harvard University or any large urban school district. As such, foundations are seldom the most appropriate vehicle to provide basic financing of educational ventures or scientific institutions or to serve as guarantors of sustainability over the long run. Rather, foundations have traditionally sought a different function. Faced with a scarcity of resources on the one hand, and flexibility and freedom from external constraints on the other, foundations are usually at their best when pursuing the development of new ideas and concepts. During the twentieth century, foundations had their greatest impact in fostering innovation and pioneering novel approaches and then moving on to different areas once the innovations took root.

This pioneering function of foundations is well reflected in the development of the social sciences in the twentieth century. The Russell Sage Foundation, founded in 1907 as the first of the great modern philanthropies with the mission to pursue "the improvement of social and living conditions in the United States," adopted early on a focus on a scientific understanding of the causes of poverty. This led to the development of the social work profession, and eventually turned the foundation into the mainstay of social science inquiry that it remains today. Similar to the Russell Sage Foundation, but with more of an economics focus, was the Twentieth Century Fund (now the Century Foundation) founded in 1919.

Other foundations focused on improving education, including the Julius Rosenwald Fund in the American South, but the larger foundations, particularly the Rockefeller and Carnegie philanthropies, soon devoted growing shares of their resources toward the development of the social sciences. These foundations were instrumental in helping to establish new independent institutions that would shape social science discourse for decades, including the National Bureau of Economic Research (1920), the Social Science Research Council (1923), and the Brookings Institution (1927). Beyond building an institutional infrastructure, foundations also sponsored a range of important research studies, such as Gunnar Myrdal's (1898–1987) seminal work on race in the 1940s, that gave prominence and helped validate emerging disciplines. All this work became crucial in consolidating the role of social science in the academy. After the Ford Foundation came to national prominence in 1949, fostering the social sciences was among its main programmatic objectives. Ford heavily supported social science development in European universities in the aftermath of World War II, and is widely credited with introducing area studies in the United States. Although federal funding has come to overshadow private foundation support for research, foundations have long shaped the development of the social sciences and remain important supporters of innovative work.

SEE ALSO *Philanthropy*

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Stefan Toepler

FRAME OF REFERENCE

SEE *Sherif, Muzafer.*

FRAMES

SEE *Goffman, Erving; Performance.*

FRAMING

SEE *Rituals.*

FRANCHISE

The franchise, or the privilege or right to vote to elect public representatives or enact legislation, originated with the ancient Greek city-states of the fifth century BCE. As a political right, the franchise constitutes one of the core elements in modern citizenship, along with other political, civil, and social rights. In modern times the extension of franchise across European and North American nation-states marked the passage from a paternalistic form of government in the eighteenth century to the acceptance of the concept of citizenship, which is the foundation of democracy.

There has been wide variation across countries in the timing and regulation of the franchise. In most countries the franchise was extended gradually, as occurred in Great Britain, France, and the United States. In Finland, by contrast, it was extended all at once in the reform of 1906. The franchise may also be exercised at only certain levels of representation. In 1896, for example, women in Idaho were permitted to vote in school elections but not in state or federal elections, while women in Brazil were enfranchised in 1927 in the state of Rio Grande do Norte but not at the federal level. Since 2004 noncitizens in Belgium may vote in local elections only.

Where the franchise was extended gradually, voters entered the electorate in social groups. For instance, in Norway the franchise was extended to property holders in 1814, to manual workers and others in 1900, and to women in two stages in 1907 and 1913. Retractions of the franchise have also taken place. In France, for example, the franchise was granted to a large number of citizens in the late 1700s but was then severely contracted in 1815. Various qualifications have been used to regulate the franchise, including church membership, religious denomination, property ownership, taxpaying, literacy, a poll tax, residency, gender, and age. All such requirements have been aimed at disenfranchising different social groups at different times.

Franchise rules come about as a result of political conflict or as a by-product of conflicts over other issues. As E. E. Schattschneider points out in *The Semisovereign People* (1960), political conflicts that may produce franchise changes include political party competition, that is, from a conflict among governing elites for electoral advantage. In such cases extending the franchise to certain social groups may decide the outcome of elections to the advantage of the party or parties that appeal to the new voters. Franchise extensions may also be the product of conflict between governing elites and groups excluded from the electoral process, such as women or workers and their organizational representatives. Pressure from excluded groups may lead to franchise extensions by governing elites in an attempt to maintain the legitimacy of their governance (Freeman and Snidal 1982), especially when economic conditions or foreign policy objectives threaten the stability of the current political regime.

Conflicts over other issues, including economic conflict, may produce franchise changes as a by-product. For instance, international trade in nineteenth-century Europe and the United States, particularly the conflict between protectionists and free traders, is cited by Dietrich Rueschemeyer, Evelyne Huber Stephens, and John D. Stephens, the authors of *Capitalist Development and Democracy* (1992), as underlying the coalitions supporting or opposing franchise extensions. Opponents in the conflict devised franchise rules to change the balance of power in legislatures. Since about the mid-1900s democratic expectations have rendered the franchise a political right basic to democratic citizenship, so universal franchise with an age requirement has been generally granted automatically.

SEE ALSO *Citizenship; Democracy; Democracy, Representative and Participatory; Elections; Elite Theory; Free Trade; Protectionism; Schattschneider, E. E.; Suffrage, Women's; Voting; Voting Patterns*

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Barbara Sgouraki Kinsey

FRANCO, FRANCISCO
1892–1975

The Spanish general and head of state Francisco Franco may have been the weakest of the fascist dictators to take over a European power during the troubled peace that followed World War I (1914–1918), but once in office, he survived the longest. To be sure, the *generalísimo* gained control of his country only after a bloody civil war that prefigured the weapons technology, indiscriminant destruction, and mass executions of the world war to come. Yet, Franco's survival instinct—for himself and for Spain—trumped whatever desire there was for vengeance or glory. During his sometimes violent forty-year reign as head of state, Franco nevertheless demonstrated sufficient tactical flexibility to keep his enemies divided and his country at peace.

Few incidents from Franco's early career set him apart as a revolutionary. In fact, his rapid ascent in the Spanish army came largely from his willingness and ability to quell dissent. After graduating from the Infantry Academy (Toledo) in 1910, Franco sought action and advancement fighting rebels from 1912 to 1916 in Spanish Morocco, where he was seriously wounded. He recovered in time to lead Spanish Foreign Legion (Legión Extranjera) troops against Abd el-Krim (c. 1882–1963) in the Rif War (1921–1926). Back in Spain—as a young officer in 1917 and later as a fast-rising general in 1934—Franco led army efforts to repress striking workers. Shortly after the latter disturbance in Asturias, the center-right government in Madrid selected Franco as chief of the general staff.

However, as Franco rose in rank, his career tracked with the vicissitudes of the fragile Second Republic. In February 1936, a popular front on the left won close national elections, and Franco soon found himself reassigned outside mainland Spain to the Canary Islands. As violence and political assassinations on the left and right escalated in the summer of 1936, several generals plotted a coup to save Spain from communist and anarchist influences in the government. Within forty-eight hours after the coup was declared on July 17, Franco rejoined his colonials and legionnaires in Morocco and became one of the leading figures in a conservative rebellion. By October 1936, Franco, invading from Morocco, captured the symbolic capital of Toledo. He was selected generalissimo of the Nationalist Army and shortly thereafter head of state for the new Spain.

Between July 1936 and April 1, 1939, the Spanish Civil War was hotly contested with neither side able to dominate militarily. Franco gradually pushed Republican forces into eastern Spain and managed to split them along a corridor to the Mediterranean in 1938, but the great cities of Madrid, Barcelona, and Valencia did not begin to fall until the end of January 1939. In the war, Franco stood out not so much for classic generalship but for his capacity to appreciate the mutual dependence of political and military strategy.

While his enemies suffered ideological divisions, Franco was able to unite Monarchists, Falange (Phalanx) elements, rural conservatives, and Catholics behind a single cause: keeping a united Spain out of the hands of leftist Republicans. He justified ruthless tactics, including siege warfare, aerial bombing of civilians, and summary execution, in the name of a holy crusade to save the state. He invited substantial foreign troops and equipment from Nazi Germany and Fascist Italy to crush democracy while preserving French and British neutrality. Even when they could not be subdued on the ground, Franco's enemies were outflanked politically.

Pragmatism for the purpose of maintaining stability continued under Franco's rule. Despite his pro-Axis leanings during World War II (1939–1945), Franco orchestrated a rapprochement with the United States, concluding economic and defense agreements with the Dwight D. Eisenhower (1890–1969) administration. Franco subsequently accepted innovations expanding tourism and joint production with foreign companies, which probably contributed to the Spanish Miracle, a long run of robust growth in the 1960s. Late in life, the dictator could not adjust to global waves of democracy and export-led expansion, both of which challenged conventions of state control, but his handpicked successor, Juan Carlos de Borbón y Borbón, would have more success after transitioning Spain back to constitutional monarchy.

The contrast between Franco's leading biographer in English, Paul Preston, and revisionist historians such as Pío Moa demonstrates how Franco's legacy depends on whether Nationalist tactics during and after the civil war are accepted as necessary evils. The generalissimo still rests with honors at the Valley of the Fallen, an enormous

shroud of gray stone that covers twenty thousand dead on each side. It stands as a symbol of unbending unity, but it also underscores for both Republican and Nationalist descendants the consequences of abandoning peaceful compromise. Such wide recognition has, in turn, underwritten a democratic constitution that celebrated twenty-five years in 2003 and set the political conditions for transforming economic growth in Spain, which from 1986 routinely outpaced fellow members of the European Union.

SEE ALSO *Dictatorship; Spanish Civil War*

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FRANK, ANDRE GUNDER
1929–2005

Andre Gunder Frank was born in Berlin on February 24, 1929. His parents first took refuge from the Nazis in Switzerland (1933), then later in the United States (1941). Frank obtained his undergraduate degree from Swarthmore (1950), and his PhD in economics from the University of Chicago (1957) under the supervision of Milton Friedman, whose neoclassical and monetarist development theory he would criticize throughout his academic life.

Initially a specialist in the economics of Soviet agriculture at Michigan State University (1957–1961), he soon left the United States for Latin America. While in Brazil, he influenced many economists, such as Theotonio dos Santos and Fernando Henrique Cardoso. After the coup d'état there in 1964, he went to Chile, where he joined the Center for Socioeconomic Studies at the University of Chile's School of Economics. It was in Chile that Frank met his wife, Marta Fuentes—with whom he coauthored numerous publications—and where he developed his first series of books on socioeconomic conditions in Latin America.

In studies such as *Capitalism and Underdevelopment in Latin America* (1967), Frank argued both against the widely influential orthodox Marxist theory—which characterized Latin America as being in a semifeudal stage—and the Western-centric modernization theory, which considered the lack of development in the so-called "Third World" as a consequence of incomplete "modernization" and insufficient or backward capitalist institutions. Frank's thesis of "development of under-development" essentially argued that since its very origins, Latin America had been exploited as a periphery by major colonial powers within the context of capitalist development across the Atlantic. By the early 1970s, Frank had become one of the predominant intellectuals articulating *dependency theory*, which claimed that external influences (e.g., political, economic, and cultural) on national development policies could explain why the third world, and Latin America in particular, had been and remained subordinate to Western interests (see, for example, Frank's *World Accumulation, 1492–1789*, 1978).

Frank and others used the historical condition of dependency to explain why economic growth in the West does not translate into economic growth in the periphery: Even after colonies had gained nominal independence, colonial policies still linked the periphery to the world market by commodity chains, often through the export of single commodities with a low added value (raw materials). The metropolitan/satellite relationship between colonizer and colonized was an aspect of world-scale capitalist dynamics, not simply precapitalist imperialist history, and this relationship continues to impoverish the third world long after formal independence due to the existence of a local *lumpenbourgeoisie*, making it impossible for former colonies to catch up with the West. The latter then reinforces this neocolonization through its use of debt.

The military coup against President Allende's socialist government (1973) drove Frank out of Chile. After returning to his native Germany to work at the Max Planck Institute (1973–1978), Frank subsequently accepted a position as professor of Development Studies in Social Change at the University of East Anglia (1978–1983), and then became professor of Development Economics and Social Sciences at the University of Amsterdam (1983–1994). It was during this period that he became affiliated with the world-system school and coauthored several studies with Immanuel Wallerstein, Samir Amin, and others on the dynamics of social crisis and social movements in the world system.

From the 1990s onward Frank adopted a revisionist approach to world history, rejecting world-system theory as well as most mainstream historical and theoretical interpretations as profoundly Eurocentric. Drawing on his previous studies of long-term economic cycles, Frank analyzed a 5,000-year-old trading system and argued, most notably in his influential *ReOrient* (1998), that the world

economy had been Asia-centered for thousands of years and was now moving back in that direction. In the last years of his life, Frank claimed that the recent rise of the West was a short-lived phenomenon due to a temporary decline of the East and that the analytical concept of capitalism had become meaningless.

When Frank died in Luxembourg on April 23, 2005, he had published over thirty-five books and hundreds of articles in dozens of languages. His contributions to the field of dependency theory and world-system theory influenced many in anthropology, sociology, political economy, and to a certain degree even liberation theology. His last interdisciplinary research agenda, cut short by his death, was an ambitious attempt to undermine Eurocentrism in both the field of history and in contemporary social theory. As much a social activist as an academic iconoclast, Frank was an intellectual who never quite received the recognition he deserved—yet his studies will continue to inspire many debates in the social sciences for decades to come.

SEE ALSO *Accumulation of Capital; Allende, Salvador; Central Intelligence Agency, U.S.; Chicago School; Colonialism; Dependency Theory; Friedman, Milton; Imperialism; Luxemburg, Rosa; Modernization; North and South, The (Global); North-South Models; Third World; World-System*

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Eric Mielants

FRANKFURT SCHOOL

The Frankfurt school refers to the members and associates of the Institut für Sozialforschung (Institute of Social Research) in Frankfurt am Main, Germany. The institute was established at the instigation of Felix Weil (1898–1975) as a privately endowed research foundation for the study of socialism within the University of Frankfurt in 1923. Prominent members of the institute included Max Horkheimer (1895–1973), Theodor W. Adorno (1903–1969), Herbert Marcuse (1898–1979), Leo Löwenthal (1900–1993), Friedrich Pollock (1894–1970), and Erich Fromm (1900–1980), and those associated with it included Walter Benjamin (1892–1940) and Siegfried Kracauer (1889–1966). During the period of the National Socialist (Nazi) regime in Germany, the institute, and its predominantly German-Jewish membership, was forced into exile, first in Geneva and subsequently in New York, where its members became affiliated with Columbia University. After World War II (1939–1945), the institute returned to Germany and reopened in Frankfurt in 1951, though some members, such as Marcuse and Löwenthal, chose to remain in the United States.

Between 1924 and 1930, the institute had close relations with the Moscow-based Marx-Engels Institute and was committed to the socioeconomic analysis of capitalism and such political issues as the crisis of the European labor movement. From 1931, under Horkheimer's directorship, the school began to develop a distinctive theoretical framework, known as *critical theory*, that underpinned the diverse research programs to follow. At the epistemological level, the members shared the idealist tradition of continental philosophy, following in particular Immanuel Kant (1724–1804) and G. W. F. Hegel (1770–1831). In his inaugural lecture, however, Horkheimer urged the employment of critical theory in order to overcome the fundamental divergence between philosophical thinking and empirical inquiry. In contrast to *traditional theory*, typified in the positivist understanding of science, critical theory seeks to grasp the totality of society through interdisciplinary research and to provide an uncompromising critique of ideology.

At the level of social theory, the Frankfurt school was inspired by Marxism, in particular Georg Lukács's (1885–1971) theory of reification, but the school was always highly critical of orthodox Soviet Marxism. The members of the institute rejected the simplistic doctrine of dialectical materialism, the mechanical application of a base-superstructure framework, and the role of the working class as the lone agent for social change. They strived instead to combine Marxist critique with Max Weber's (1864–1920) understanding of rationalization and Sigmund Freud's (1856–1939) psychoanalytic analysis of the individual.

Drawing upon this neo-Marxist perspective, the institute undertook research in three topical areas envisaged by Horkheimer and published them in their own journals, *Zeitschrift für Sozialforschung* (Journal of Social Research) from 1932 to 1939 and *Studies in Philosophy and Social Science* from 1939 to 1941. First, institute members

searched for a comprehensive theory of contemporary postliberal capitalist society in terms of "state-capitalism." Second, drawing on Fromm and Wilhelm Reich's (1897–1957) social-psychological study of fascism and character, the institute investigated how individuals were integrated with so little resistance into a dominant system. This study became further developed in exile with the extensive research series Studies in Prejudice, which culminated in the collaborated work, *The Authoritarian Personality* (Adorno et al. 1950). Third, the institute saw the mass culture as central to a new configuration of the capitalist system, one that induced compliance with dominant social relations through culture and media, which Horkheimer and Adorno dubbed the *culture industry*.

Ultimately, the failure of the Weimar Republic, the emergence of totalitarian regimes in Europe, the Holocaust, and the self-destruction of Western "civilization" compelled the Frankfurt school to ask "why mankind, instead of entering into a truly human condition, is sinking into a new kind of barbarism" (Horkheimer and Adorno, [1947] 1997, p. xi). Horkheimer and Adorno found the answer lodged within a set of contradictions posed by an "instrumental reason" at the center of the Enlightenment project itself, providing a profoundly bleak and pessimistic diagnosis of modernity in the seminal collection of philosophical fragments, *Dialectic of Enlightenment* (1947).

After the institute's return to Frankfurt, Adorno served as director from 1958 until his sudden death in 1969. During this period, the institute continued to elaborate the systematic social theory, particularly through the positivism dispute. As shown in Horkheimer's *Eclipse of Reason* (1947) and Adorno's *Negative Dialectic* (1966), however, their pessimistic perspective became more pronounced. In a continuing turn from the empirical-analytical sciences, Adorno increasingly focused on aesthetics and, in particular, the philosophy of music. His *Aesthetic Theory* (1970), published posthumously, clearly illuminates how the utopian dimension of critical theory rests upon aesthetic motifs—a dimension that also preoccupied Marcuse. The equivocal relation of the institute to radical social movements during the 1960s came to an end in January 1969 when Adorno called the police to eject student protesters occupying the institute's Frankfurt premises. By contrast, in the United States, Marcuse's distinctive social theory of liberation, greatly influenced by Martin Heidegger (1889–1976) and Freud, appealed to the New Left throughout the 1960s and early 1970s.

There have been significant—yet often marginalized—contributions to the development of the Frankfurt school and critical theory made by intellectuals more loosely associated with the institute: Walter Benjamin's unique analysis of art and media; Franz Neumann (1900–1954) and Otto Kirchheimer's (1905–1965) profound inquiry of political forms of integration in advanced capitalism; and Kracauer's theory of film and propaganda. Jürgen Habermas, the most important representative of the second generation of the school, extensively criticized his predecessors' oversimplification of modernity and developed a different analysis of capitalist society that appreciates the normative dimension of rationality rooted in communicative interaction. The Frankfurt school has also been criticized for its overly negative view of mass culture and its overestimation of the autonomous character of high art. More recently, Axel Honneth, who became director of the institute in 2001, has elaborated critical theory with a new focus on the social theory of recognition.

SEE ALSO *Critical Theory; Fromm, Erich; Habermas, Jürgen; Marcuse, Herbert*

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Jae Ho Kang

FRANKLIN, BENJAMIN

1706–1790

Benjamin Franklin was not only one of the best-known founding fathers of the United States, he was a leading politician, diplomat, writer, publisher, librarian, and philosopher. He was also a scientist renowned for his experiments with electricity and lightning, as well as an inventor credited with inventing the lightning rod, the heat-efficient Franklin stove, bifocals, swim fins, and numerous useful gadgets. His famous scientific experiment with a kite in a thunderstorm proved the presence of electricity in lightning.

Born into the family of a Boston soap maker and having received almost no formal education, in 1723 Franklin ran away to Philadelphia where he made his fortune first as a printer and later as the publisher and editor of the widely read *Pennsylvania Gazette* newspaper. He wrote numerous editorials, opinion pieces (usually under aliases), essays, and pamphlets about politics, economics, science, ethics, and civic self-improvement. He attracted attention for his wit and commonsense philosophy, especially as reflected in his proverbs in *Poor Richard's Almanack*, a popular yearbook on science and technology, which he published between 1733 and 1757 under the pseudonym Richard Saunders.

In 1731 Franklin helped launch the Library Company, the first subscription library in the United States. Twelve years later he helped found the American Philosophical Society, the nation's first learned society (a society that exists to promote an academic discipline or group of disciplines). While serving as a Pennsylvania assemblyman, he helped establish a local academy in 1751 that became the present-day University of Pennsylvania. He was a member of the Continental Congress, which appointed him to serve as deputy postmaster-general in 1753. At the 1754 Congress of Commissioners from the several American colonies held in Albany, New York, Franklin, though a loyalist, proposed a plan for the union of all the colonies under one government for the purpose of common defense and other general purposes.

In 1757 Franklin became a diplomatic agent in London representing Pennsylvania, Georgia, New Jersey, and Massachusetts, but he returned home in 1775 because of the revolutionary unrest in America and the so-called "Hutchinson affair." Thomas Hutchinson (1711–1780) was the British-appointed governor of Massachusetts, who wrote to his friends in London to recommend curtailing the liberties of the American colonists. When Franklin obtained Governor Hutchinson's letters, he leaked them to the press, causing public uproar in America. The British government angrily denounced Franklin in public and in 1774 removed him from the office of deputy postmaster-general and agent for the colonies, resulting in his final break with Britain (which he otherwise deeply admired). He served as a member of the Committee of Five, which had been instructed by the Second Continental Congress to draw up a document declaring independence from Britain. He helped Thomas Jefferson and John Adams, two other members of the committee, to draft the Declaration of Independence, which Congress unanimously adopted in 1776.

During the War of Independence (1775–1783) Franklin was the most popular foreign diplomat in the court of Louis XVI (1754–1793) in Paris, signing the 1778 Treaty of Alliance, which secured a close military-political alliance with France as well as substantial French military and financial help that made American victory possible. In 1783 he signed the Treaty of Paris, a peace treaty ending the war with Britain. Franklin came home in 1785 to serve as the appointed president of the Commonwealth of Pennsylvania. He was a delegate to the federal Constitutional Convention and signed the Constitution in 1787. His last great public service was authoring a major abolitionist pamphlet in 1789. His autobiography, first published in 1791, is acclaimed today as the greatest autobiographical work produced in colonial America.

Franklin was the most illustrious American of his time. As a philosopher of the Enlightenment, an eighteenth-century philosophical movement that rejected traditional ideas held at the time, he cast off all religious dogma but saw order and harmony in the universe. Rationalism, materialism, and belief in progress and social evolution mark all his publications. Prior to the revolution he believed that progress could be achieved under an enlightened monarch—especially through the inspiration and guidance provided by his own teachings, maxims, and aphorisms. Later he abandoned his doubts about democratic politics, rejecting the British monarchy and aristocracy in favor of the egalitarian view that all men are equal. In order to achieve progress and social harmony, he advocated the cultivation of practical virtues such as temperance, frugality, resolve, industry, sincerity, moderation, chastity, humility, and cleanliness. After the revolution he argued against the rule of the wealthy, taxation without representation, and slavery. He championed universal male suffrage, which he believed would encourage loyalty and respect for the law, as well as a unicameral federal legislature (without a Senate), which could prevent the rich from dominating political life and provide for a united, more efficient government. Scholars have also suggested that Franklin's philosophy embodies the moral and political pragmatism of the American business class.

SEE ALSO *American Revolution; Constitution, U.S.; Democracy; Enlightenment; Jefferson, Thomas; Liberalism; Loyalists; Pragmatism*

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Rossen Vassilev

FRAZIER, E. FRANKLIN
1894–1962

E. Franklin Frazier, one of the most prominent African American sociologists of the early twentieth century, studied at Howard University (BA 1916), Clark University (MA 1920), and the University of Chicago (PhD 1931). After completing his studies he spent most of his career at Howard University, where he became the chairperson of the Department of Sociology in 1934. He remained at Howard until his death. His central contribution to sociology was the formalizing of a research tradition on the African American family, which he first began to pursue seriously in his dissertation, "The Negro Family in Chicago." That study resulted in a book of the same title, published in 1932. Frazier expanded his contributions on the topic by publishing *The Negro Family in the United States* (1939) and *Negro Youth at the Crossways* (1940). He also contributed to the field of race relations and race theory more generally, perhaps best exemplified by his publications "Sociological Theory and Race Relations" (1947) and *Race and Culture Contacts in the Modern World* (1957).

Frazier's primary data sources were case histories and census statistics. Rather than employing micro-level analyses, however, he utilized this material to construct social organizational portraits of the African American family and, more generally, African American social life. As he conducted most of his research in the midst of the twentieth-century rural-to-urban migration of African Americans, Frazier's social organizational perspective allowed him to offer robust and penetrating commentaries about the means of mechanisms of their adjustment to the hyper-industrializing urban sphere—the manner by which African Americans adjusted to industrialized urban societies after leaving the largely rural South. In doing so, he emphasized the social organizational shortcomings of the African American community as it transferred to a mostly northern and urban milieu.

Frazier essentially regarded African American migration to the city as an adaptational challenge for the black American family, and he argued that a history of social disorganization in the South, followed by turbulent efforts at reorganization in the nonsouthern, urban sphere, encapsulated the situation of the black American family's confrontation with modern urban America. Frazier believed that the hardships of social and economic adjustment were the causal factors of crime, vice, illegitimacy, and delinquency. Because he asserted that social disorganization and pathology were a result of the African American community's adjustment to new geographic terrain, Frazier was regarded by many later readers of his work as a pioneering conservative voice on the cultural dimensions of African American life. In fact, Frazier's work has been regarded as the precursor to later works such as Daniel Patrick Moynihan's highly controversial 1960s-era study "The Negro Family: A Case for National Action," which argued that the pathology extant in lower-income African American families was largely due to the absence of an adult male figure.

Frazier was not a cultural theorist to the same extent as certain other scholars of African American life in the early twentieth century (e.g., Allison Davis, St. Claire Drake, W. E. B. Du Bois, and Zora Neale Hurston). However, his emphases in cultural analysis centered on what he perceived to be pathological and maladaptive dimensions of African American family and social life. His assertion that disorganization and pathology were prominent features of African American urban life was partly based on his embracing of the idea that African Americans did not retain any firm cultural roots in Africa. Thus, they were left without a rich, historically grounded cultural foundation in the United States, other than that produced in response to slavery. Accordingly, he regarded African Americans as consistently hampered by racism and social marginalization such that many developed cultural traits that were, if not fatalistic, at least certainly not conducive to social advancement in modern American society.

Quite early in his career, Frazier stressed the impossibility of African culture having endured the middle passage from Africa to slavery in the Western Hemisphere. He maintained this argument through investigations (albeit preliminary) of African American religious expression, social thoughts and ideologies, and social practices. Accordingly, he emphasized that the objective of formal education for black Americans should be to bind them to the American experience rather than aim to identify and proliferate some notion of cultural distinctiveness. Frazier's logic in arguing that black Americans were, foremost, products of the American experience was grounded

in his consideration of the history of black Americans as a series of critical social shocks. The order of shocks was (1) the enslavement of blacks on the coast of Africa, (2) the middle passage, (3) the slave experience itself, and (4) a profound state of social disorganization following emancipation.

To Frazier, the product of this pattern of shock was a folk culture, largely exemplified by a southern-based, lower-income, black American constituency that was struggling to reconcile their awkward status in the American social landscape. In his doctoral dissertation and some early research, Frazier pointed out that the African American folk culture emanating from slavery and the postemancipation period was an expression of "surrender" to white America in terms of attitude and acceptance of life. He believed that this resulted in the black community's durable designation as a subaltern caste in American social structure.

Frazier's remedy for this condition was the cultivation of a form of race consciousness that could help fuel African Americans' motivation for social advancement. However, Frazier maintained that an appropriate race consciousness was not grounded in a shared cognizance of primordially derived cultural characteristics; instead, he argued that it should take the form of a sociopolitical orientation that could motivate a downtrodden constituency in American society to improve its social status. Hence, for Frazier the significance of fostering race consciousness was not what it did to reify any notion of a distinct African American culture, but rather its use as a basis for asserting the growth and proliferation of pragmatic strategies for social uplift.

Despite what may appear to be an extremely critical perspective on the social and psychological dynamics of African American life, Frazier maintained that the conditions affecting the African American community were structural in nature and not in any way derived from inherent racial traits. Accordingly, despite the problems that African Americans encountered in adjusting to the urban sphere, Frazier asserted that this migration created opportunities for the social and cultural renewal of black Americans (especially as the urban terrain encouraged black Americans to break with the fatalistic folk culture proliferating throughout their southern, more rural, social experience). He also believed that a more constructive and positive race consciousness would develop due to the narrowing of social distance between African Americans in the urban domain. Finally, Frazier also believed that urbanization would destroy any retention of mythical notions of blackness that had been cultivated throughout history.

Frazier's carefully nuanced approach to race consciousness was an indication of the nascent nationalist tendencies that underlay both his scholarship and his civic commitments. These tendencies emerged more directly in some of Frazier's later work, especially his classic *Black Bourgeoisie* (1957), in which he argued that the African American middle and upper classes were engaged in forms of socialization and consumption parallel to those pursued by the mainstream American middle and upper classes. While Frazier did ascribe to the idea that black Americans had to assimilate into the cultural and social fabric of mainstream American society, he also maintained that such assimilation had to take shape in a critical rather than a mimical fashion. By that he meant that black Americans should not simply adopt the full range of cultural and social practices engaged by white Americans, but instead selectively appropriate those that would reap some clear benefits for black Americans in garnering firm and secure status in mainstream culture. Although it was widely read, *Black Bourgeoisie* was a highly polemic and, in comparison to Frazier's other works, lightly researched commentary.

Because Franklin's methodological tools were specifically suited for macro-level analysis, he was not well equipped to consider the personal situation of the black American. His objectives, however, did not necessarily concern that perspective. He viewed the black community as a caste constituency in American society. Therefore, his research emphasis was on the black American community as a whole, not its individual members. Moreover, his agenda for social change did not consist of strategies for individual adjustment to mainstream social and cultural patterns in American society; instead, he attempted to articulate a vision of racial advancement that could evaluate the entire population of black Americans.

To a large extent, under the auspices of Frazier and others of his era (e.g., Charles S. Johnson, St. Claire Drake, Horace Cayton, and Allison Davis) black American social thought moved from polemically oriented, philosophically grounded defenses of the humanity of African Americans to more formal scientific investigations, analyses, and model constructions of the state of the black American condition in a rapidly modernizing American society. Frazier's assertions about African Americans' loss of African cultural traits helped him to view the black American condition in terms of future possibilities—the most immediate being its complete and permanent stake in American society. Frazier's commitment to this perspective was evident in both his scholarly pursuits and his political worldview.

SEE ALSO *Assimilation; Cox, Oliver C.; Drake, St. Clair; Park School, The; Sociology, Urban*

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FREE ASSOCIATION

SEE *Psychoanalytic Theory.*

FREE LUNCH

SEE *Scarcity.*

FREE RIDER

The datum for any discussion on free riding and collective action is economist Mancur Olson's (1932–1998) *The Logic of Collective Action* (1965). Olson's thesis was a reaction to the pluralist view that when a political, social, or economic problem impinges significantly on the life of a citizen, he or she instinctively acts collectively on the basis of shared concern. Olson's counterargument was that: (1) mobilization was not a natural or spontaneous process; (2) not all potential groups would materialize; and (3) membership would be lower than pluralists envisaged. Olson proposed that large numbers of rational potential members of groups seeking collective (nonexcludable) goods free ride these organizations because any benefits gained will be freely available to them without incurring the costs of membership. Indeed, as Russell Hardin (2003) notes "free riding [in large groups] is often clearly in the interest of most and perhaps all members." Thus, for Olson, rational participators are special cases: they are either coerced to participate (e.g., compulsory membership as in trade union "closed shops") or they are attracted by selective incentives only available to members. In small groups, free riding can be assuaged by the imposition of sanctions while free riders remain group members, or by excluding free riders (Page et al. 2005). As Page et al. highlight, "under favourable conditions, where the opportunities of entry and exit are symmetrically balanced, a process of voluntary association can mitigate the free-rider problem" (2005, p. 1032). Accordingly, "people are often observed to cooperate effectively in work groups, in local public goods provision, and in other settings" (Page et al 2005, p. 1050).

Many scholars have argued that Olson's work has been discredited (i.e., the collective action paradox has been negotiated) by several developments: (1) the advocacy explosion (that began in the mid-1960s) witnessed the emergence of large numbers of (public interest) groups that Olson said should not exist; (2) large numbers of citizens joined these organizations; and (3) numerous surveys demonstrate that members join for collective, not economically self-interested, ends. However, Olson's rebuttal to these critiques was pointed and persuasive. He argued that many of these groups offered selective incentives to stimulate membership and that membership—and political lobbying—were in fact the by-product (i.e., not the primary reason for membership). He also maintained that membership levels in these groups were suboptimal—these entities mobilized only a small fraction of the latent membership—and many potential members choose to free ride. Accordingly, some interests would be underresourced in comparison with the public support they reflected, and other interests would be easier to mobilize (e.g., business).

Olson and supporters such as Hardin also argue that surveys of joiners reveal little about the larger group of those who refuse to join. Olson accepted that (trivial) numbers of members would join (in addition to those seeking selective benefits), but he argued that the number joining for collective goods would be dwarfed by those failing to participate. He cited two examples in support of this argument. First, he argued that "tens of millions of Americans" believed the population should not grow, but only a "miniscule minority of 12,000" were members of the group Zero Population Growth (Olson 1979, p. 149). Secondly, he (conservatively) estimated that more than fifty million Americans valued "a wholesome environment, but in a typical year probably fewer than one in a hundred pays dues to any organization whose main activity is lobbying for a better environment" (Olson 1982, pp. 34–35). For Olson, all these nonmembers are free riders.

Finally, it is worth highlighting that in his arguments Olson makes the loose assumption that those who in some general way support a cause, and do not join, are free riding. Critics argue that such ubiquitous labeling of nonparticipation stretches the free-riding concept too far. It does not necessarily follow, for example, that those who share a concern about the environment with members of environmental groups also agree with the goals or strate-

gies of environmental organizations, or believe that the groups' activities will produce desirable outcomes, or consider the groups to be efficient (see Jordan and Maloney [2006] for a fuller exposition of this argument). Nonparticipation can emerge from noneconomically rational reasons.

SEE ALSO *Collective Action; Tragedy of the Commons; Transaction Cost*

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William A. Maloney

FREE TRADE

Free trade refers to the unregulated exchange of raw materials, commodities, and services among people and nations. One of the foundational propositions of economic theory since the seminal work of Adam Smith (1723–1790) is that free trade is ultimately superior to protectionism if the principal economic objective is the greatest possible quantity of aggregate wealth or national income, and, indeed, the greatest good for all people. This proposition has widely and regularly been subjected to theoretical and political critique, and, despite the contemporary resurgence in free trade economics, free trade remains far more a theoretical ideal than an actual mode of economic practice and organization.

Before Adam Smith published his exhaustive study, *The Wealth of Nations*, in 1776, the mercantilist argument for the protection of markets largely dominated economic literature and practice. The mercantilists composed their tracts during the seventeenth and eighteenth centuries, a period of tremendous colonial activity, trade growth, and, not coincidentally, nation-state formation. Mercantilists predictably celebrated foreign trade but also believed strongly in the need to protect national industries and markets. They supported a wide range of protectionist measures, including tariffs on imports and subsidies for exports.

While few, if any, of the central ideas in Smith's *Wealth of Nations* are original—many were asserted and developed by French physiocrats and British moral philosophers—he made a case for free trade that was and to a considerable degree remains incomparable in its rhetorical persuasiveness, thoroughness, and analytic precision.

Among Smith's contributions was the theoretical refutation of the mercantilist argument for the promotion of exports and discouragement of imports, especially manufactured imports. Smith argued that the *economy-wide* impact of trade policies and regulations had to be examined. For instance, high duties on imports that were produced more cheaply elsewhere tended to diminish domestic competition and promote expansion of an inefficient industry. For example, protecting the British textile industry from cheaper colonial imports would lead to more investment of labor and resources in a demonstrably inefficient sector of the economy. Without protections, resources could be allocated to industries that were more competitive on the world market and which would thus realize greater economic aggregate growth, also known as *static gains from trade*.

Full analyses of the economic benefits of the division of labor and the public benefits of private self-interest were among Smith's foremost contributions to free trade economics. The rewards from the division of labor are implicit in his argument for static gains: Nations that specialize in industries in which they are most competitive in unregulated conditions make the most efficient use of their labor and productive resources; thus both the specializing nations and the nations with which they trade will benefit. In the long term, these specialization-based static gains lead to dynamic gains; though dynamic gains are less clearly defined and more difficult to measure, they potentially accrue through the general economic impact of the more efficient use of resources.

The powerful case for free trade submitted by Smith was made into prescriptive economic doctrine by the next generation of economists, who further developed what came to be labeled *classical economics*. The most well-known figure is David Ricardo (1772–1823), who is generally credited with the theory of *comparative advantage*—in short, the idea that even nations that lacked *absolute advantage* (producing goods at the least possible cost) could still realize gains by concentrating on production of goods of

the greatest market competitiveness relative to other goods. Though Ricardo's name is most frequently associated with this theory, scholars are now more prone to give credit to James Mill (1773–1836)—father of another great and influential economist, John Stuart Mill (1806–1873)—for developing the most comprehensive explanation of comparative advantage among the classical economists.

In response to a vigorous public debate regarding Britain's protectionist Corn Laws, Mill explained that protectionist tariffs led to an absolute economic loss. Taxes on imported corn led to increases in the price of corn in Britain, which in turn led to an increase in the cultivation of less-productive land, which in turn increased the value and rent costs of land, which finally led to necessary wage increases. Thus, in protecting an inefficient product, a widespread set of increased costs ensued, netting a general or absolute loss. Resources would have been far better and more naturally invested in sectors of the economy that did not need to be protected because they were already competitive, or, in other words, sectors in which national comparative advantage already existed.

The doctrine of comparative advantage did much to establish free trade as the ruling economic orthodoxy for several succeeding generations of economists and, until the arrival of the Great Depression and the British economist John Maynard Keynes (1883–1946), it ruled economic theory (if not quite practice) with little exception. Two exceptions that received the most vigorous debate were related to "infant industries" and national defense. The infant industries argument proposed that new industries deserved some form of government protection until they had the chance to establish themselves as competitors in the global market. While his assertion was vigorously disputed, the idea was effectively made practice (to no small success) by Alexander Hamilton (1755/57–1804) in the early years of American national economic development. Also, in times of national emergency (e.g., war), interference in the workings of the free market was widely accepted as advisable. How, for instance, was supplying your enemy with goods for war to be justified? While wars may well be fought in the interests of the free market, the conditions and implications of war merit exception.

Whatever the sideline debates among economists regarding the particular cases for suspending the rules of free trade, it took the work of Keynes to establish a rigorous and widely accepted critique of free trade doctrine. Keynes, with considerable theoretical sophistication, faced the facts of the catastrophic market failure that goes by the name of the Great Depression and demonstrated the need to pursue protectionist measures. His *General Theory of Employment, Interest, and Money* (1936) included arguments for government spending on public works and promoting public investment and consumption during periods of high unemployment. Keynes did not believe that free market conditions realized, or "settled" at, full employment and that unemployment was a principal indicator of economic inefficiency. Government interventions in the market, including protective tariffs and subsidies, were, he asserted, sometimes necessary to restore employment and general economic health.

Keynes was enormously influential, not least in the United States, where his theories informed Franklin D. Roosevelt's (1882–1945) massive government market intervention known as the New Deal. Toward the end of World War II (1939–1945), Keynes was a key figure at the meeting in Bretton Woods, New Hampshire, where two institutions were created that would come to dominate international economic relations in the later decades of the twentieth century: the International Monetary Fund (IMF) and the World Bank. However, these organizations, chartered under the banner of free trade principles, did not become important institutions of global economic management until after the cold war ended. Until the end of the cold war, the global free market was effectively compromised by the maneuverings of the superpowers as they intervened in the economic affairs of nations according to their particular national and ideological interests.

Since the cold war, the IMF and the World Bank, along with the World Trade Organization (WTO, established in 1995), have come to dominate the vigorous global articulation of free trade principles and practices. Throughout the cold war, developing nations were generally able to secure loans at very favorable terms, and banks were willing to lend freely under the assumption that bad loans would be covered by superpowers unwilling to see regimes fall to a competing ideology. When the cold war ended, the insecurity of these assumptions was revealed, and when bailouts were no longer forthcoming, debt crises struck developing nations hard. The World Bank and the IMF suddenly achieved a new relevance as they worked to negotiate debts no longer mediated by interested superpowers.

The terms demanded by the IMF and the World Bank for the renegotiations of loans were based firmly on free trade principles. These terms, which have been called *structural adjustments*, *austerity measures*, or *conditionalities*, have sparked spirited and sometimes violent debate. Nations, particularly the heavily indebted nations of Africa, Central and South America, and eastern Europe, in order to secure solvency loans, have been required to enact a host of free trade measures, including the devaluation of their currencies, removal of protective tariffs, reductions in public spending, and the privatization of key industries and services, including health care and education.

Those who dispute the effectiveness of these free trade conditions imposed on poorer countries argue that

the "conditionalities" have never been fully practiced by the wealthy nations whose representatives dominate the IMF and World Bank. They point out that at no time during the critical years when the United States or Britain were developing their economies were their currencies devalued or key social support programs privatized. These critics can also point to the vivid and devastating consequences of reductions in public spending, particularly in the area of health care in Africa. For their part, the supporters of free trade doctrines can point to the indisputable economic growth of such major nations as India and China. In the early years of the twenty-first century, it was reliably estimated that one million people a month were being pulled out of poverty by China's embrace of the free market.

Though the neoliberal globalization of the free market increased rapidly after the fall of the Soviet Union and the opening of China to trade, the intellectual roots for the reemergence of free trade were established decades earlier in Europe and the United States. Important figures include the Austrian economist Friedrich von Hayek (1899–1992), who argued, in works such as *The Road to Serfdom* (1944), that any centralized control over social and economic matters would inevitably lead to totalitarianism. Even more influential was the University of Chicago economist Milton Friedman (1912–2006). Friedman was largely responsible for the shift in academic economics away from Keynesian ideas and toward monetarism, or the idea that money supply rather then employment should be the focus of economic policies. While Friedman's monetarist theories have proved of dubious value, his attacks on virtually all forms of government regulation or even involvement in social and economic life have been very influential indeed. Throughout the years of the Margaret Thatcher and Ronald Reagan (1911–2004) administrations in the 1980s, the deregulations advocated by Friedman and his followers were aggressively implemented, and they established the political basis for the free market orthodoxy that dominates national and international economic affairs even to this day.

In the first decade of the twenty-first century, the principles of free market globalization almost exclusively govern the economic practices of nations and the institutions that administer the world's economy, most notably the IMF, the World Bank, and the WTO. However, there are movements of national exception in countries such as Venezuela and Bolivia and activist assertions of dissent such as that expressed in the 1999 WTO protests in Seattle. A strong body of evidence now exists that the current free market orthodoxy has been implemented in ways that violate its core principles of economic freedom. This is especially evident in the removal of barriers to capital flows on the one hand but the increasing restrictions on the movement of labor on the other hand. Thus the North American Free Trade Agreement (NAFTA), negotiated among Mexico, Canada, and the United States and implemented in 1994, greatly increased the ability of goods and capital to move across borders even as the increasing militarization of the U.S.–Mexico border has made it more difficult for workers to pursue preferred employments. It remains to be seen if the current expansion of free trade ideas and practices will help or hinder the aspiration for the greatest common good that runs as a consistent theme in the writings of the movement's best thinkers.

SEE ALSO *Absolute and Comparative Advantage; Capital Controls; Cold War; Corn Laws; Customs Union; Economics, International; Friedman, Milton; Globalization, Social and Economic Aspects of; Great Depression; Industrialization; Infant Industry; International Monetary Fund; Keynes, John Maynard; Liberalization, Trade; Mercantilism; Mill, James; Mill, John Stuart; Monetarism; Neoliberalism; New Deal, The; North American Free Trade Agreement; Philosophy, Moral; Physiocracy; Protectionism; Quotas, Trade; Ricardo, David; Roosevelt, Franklin D.; Scottish Moralists; Smith, Adam; Tariffs; Trade; Washington Consensus; World Bank, The; World Trade Organization*

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FREE WILL

SEE *Existentialism.*

FREEDOM

Freedom, the capacity for self-directed thought and action, and the choice of one's own goals, is one of the central values of western thought. Often closely tied to questions of free will, freedom is also seen as central to questions of moral responsibility, personality, and identity, and to democratic political life. Rule by others, such as

political domination as well as social oppression, through established forms of authority or psychological restrictions, are all opposed by forms of freedom. The idea of liberation from the limits of nature of entrenched authorities or despotic rulers is a central theme of both literature and politics.

Freedom does not have a simple or single essence. It has developed sometimes haltingly in the history of thought. For the ancients, freedom was not equated with worldly accomplishment or goal-directed action; it was primarily an inner state of being. The free person was one who rules his desires (freedom applied mostly to males) rather than being ruled by them. For Plato, freedom meant to be liberated from base desires. Rather than a life of self-chosen ends, however, the ancients saw the highest form of life as contemplation of the order of the universe. The free man was released from desires that impeded this goal.

The Greeks originated the political idea of self-rule (*koinonia*), but generally applied it only to a limited group of male, property-owning citizens. In Aristotle's political philosophy, freedom requires active participation by citizens in the life of the polis. This, too, is not a form of goal-directed action, but of acting in concert: The citizen alternates with others in holding office and engages in deliberation about laws and public affairs. Although there were examples of wider democracy in ancient Greece, political theorists such as Aristotle supported a limited republican form. Only propertied male heads of household had the requisite self-control over their own desires to be capable of self-rule, they believed; the rest were only fit to be ruled by others. The Stoics living under the Roman imperium reemphasized a purely inner freedom based on deliberate self-mastery. Still, the Stoics also had early notions of a cosmopolitan humanity in which all were naturally equal.

The roots of the modern notion of freedom can be traced back to the late Middle Ages. The rise of independent city-states in Italy and other parts of Europe was accompanied by a revival of ancient republicanism. These newer forms of republicanism were more disposed to give a role to the people and inclined to stress liberty. The later Middle Ages also provided some sources of the modern notion of individuation. The Renaissance that followed developed a modern idea of the self as a "work of art," and the development of individuality was the essence of freedom. In the seventeenth century there was a further elaboration of republican thought that stressed the relation of a free people to the new ideals of liberty.

LIBERAL THEORY

Modern philosophy rejected the idea that knowledge of the structure of the world could and must be achieved through individual human reason alone. Revealed religion or other idols had to be rejected. Although this philosophical ideal first justified only free scientific inquiry, it proved useful for politics as well. But the most influential notions of freedom in modernity are those associated with liberalism. Whereas the Aristotelian tradition saw humans as naturally political animals who realized their aims in community, the modern liberal view saw individuals as possessing natural liberty, prior to social relationships or attachments. Although this is certainly a fiction, it reflects the idea that the individual—not the social environment, the church, the state, or the family—is the source of social and political freedom. These forms of social and political freedom are now seen as a form of self-determination: the capacity to choose to decide upon and pursue one's own goals or plans of life. The individual is an active agent whose freedom is seen in accomplishments. Freedom is also the ability to act freely to achieve these goals. The republican emphasis on deliberating with others was replaced in the philosophies of Thomas Hobbes and John Locke by notions of self-interest. This conception was often linked to the new scientific consciousness, in which the individual was like all other things: a mechanism driven by material pursuit of interest, not by spiritual causality or teleology.

The liberal notion of freedom made a strong distinction between the public and the private that was quite different from what the ancients had conceived. Whereas Aristotle thought that freedom required public participation, liberals saw freedom first of all as applying to the private individual, who is free to act. Here freedom is the absence of constraint, or freedom *from* something. The idea of the social contract expressed the fact that legitimate political order is based on the freely given consent of the governed. This premise, emphasizing the equality and freedom of all, is the foundation of most modern democracies, where individuals are natural bearers of rights and freedoms that cannot be taken away by governments. In some respects, the liberal model of freedom as self-determination is restricted when combined with an economic model of human action, where the individual is a consumer rather than a creator, one who chooses between products on the market. As a maximizer of goods, the individual is primarily a possessive individual.

DEVELOPMENTAL THEORY

The theory of Jean-Jacques Rousseau was important in the development of a second conception of modern freedom. Rousseau held that the social contract (rejected by republican theories) was more than a contractual agreement—it created a general will that was the expression of a common moral will. In the romantic period this conception became what has been called a "developmental view of freedom." The Romantics rejected the Enlightenment view of man,

which was overly rationalist and mechanistic, and sought a broader notion of human freedom that stressed aesthetic and relational qualities of freedom. In the developmental view, humans express their freedom through the development of all their human powers. Freedom is self-realization, or positive freedom. Karl Marx's notion of freedom embodied this view when he invoked the all-around development of capacities. Human action is not simply goal-directed, but includes many forms of human expression: artistic, expressive relations to others, and play, to name a few. Although this view draws on the Aristotelian tradition, it differs from it in its stress on individuality and its adoption of the modern view of the open-ended nature of capacities.

Developmental theories reject the atomism of liberal theory. They stress the interdependency of human activity. The development of freedom and capacities is not the result of individual initiative alone, but rather relies on a backdrop of prior social conditions: We are vulnerable, depending on a wide variety of conditions to develop and employ our human capacities.

Developmental theories have been central to radical democratic and socialist and social democratic conceptions of politics. Stressing the role of active citizen participation in politics, they agree with Aristotle that the fully realized individual has to be a participant in his or her own governance. Socialists extend this equal participation to models of economic production and reject liberal emphasis on private property. Socialized production, accordingly, is central to the development of selfhood and individuality.

For socialists and social democrats, political freedom rests on prior social freedoms, including a minimum of economic equality, retirement and unemployment benefits, health and safety, and other measures of human welfare. Conditions of complex human freedoms have become important not only for socialist states, but also for modern social democratic welfare states.

Critics of developmental views often have held that Rousseau's ideal of the general will have inherently totalitarian elements that are contrary to the liberal ideas of individual freedom. They also criticize the idea of inner powers unfolding in a natural manner. Others see expressive freedom as a socially pathological emphasis on pleasure or aesthetics for its own sake. The exclusive stress on aesthetic freedom reduces the influence of the work ethic and moral responsibility on human conduct.

COMMUNICATIVE FREEDOM

A third notion of freedom responds to recent concerns with cultural integrity, identity politics, and recent social movements, and new conflicts over the ability of participants to form their own unique relations to themselves and to social worlds. Influenced by the growing emphasis of language as central to philosophy and social science, ideas of communicative freedom have become an important element in contemporary debates. Communicative models stressing individual self-realization take place in a context of intersubjective community. Extending the liberal idea of free speech and expression, freedom involves the very capacity to communicate in language to formulate and express ideas in discussion, but it also is an element in the formation of the identity of individuals and groups. This capacity can be impeded by forms of authority and power that exclude us from discussion and deliberation, or distort our relations to ourselves and others. Deliberative models of democracy attempt to remedy some of the deficiencies of liberal and republican notions by stressing the centrality of discursive rationality.

In the mid-nineteenth century Alexis de Tocqueville raised an objection that has persisted to the present. Although de Tocqueville generally approved of new democracies, as represented by the young American state, he raised questions about the quality of democratic citizens as conformist and mediocre. Democracy may increase political freedom, but it also leads to impoverished personality. At the end of the century Friedrich Nietzsche provided a more aggressive critique of democracies. Opposing the abstract individual of liberal theory and the Protestantism underlying Immanuel Kant's notion of autonomy, Nietzsche argued that religion (namely Christianity) produced meek unfree subjects who feared authority and lacked the qualities needed for heroic struggle.

A third objection focuses on the distortions of democratic freedoms inherent in the concentration of power in mass democracies. Agreeing with developmental democrats such as John Stuart Mill and John Dewey that democratic citizenship requires an educated and informed public, critics argued that mass democracies are characterized by a manipulated mass culture. This mass culture is a product of the ownership and concentration of media in the hands of powerful economic and political interests that maintain their power positions, restricting political and social freedom, by controlling the production and reception of information. Access to the means to make sense of and deliberate about public issues remains a major concern for the health of democracies.

Max Weber's work on rationalization and bureaucracy raised another concern over the compatibility of large liberal democracies and freedom. Weber saw in social rationalization the increasing centrality of instrumental rationality. Bureaucratic authority became prominent in political regulation for reasons of efficiency or technical expertise, and it has come to displace not just deliberation and citizen participation but also the development of per-

sonality and social freedom. Bureaucracy itself further interprets the needs identified by developmentalists in an instrumental fashion, with resources of money or power rather than freedom or mutual understanding; citizens become subjugated clients and dependents.

In complex modern societies, democracies have grown in territory and population. The possibility of face-to-face democracy—the "town meeting" tradition with its stress on citizen participation—is difficult to maintain. Most modern democracies are representative, but the process of representing the varied subpublics of a democratic public can lead to conflicts. For critics, liberal and pluralist democracies are also thought to be dominated by interest groups and hence incapable of formulating a common good. Individual freedom does not lead to social or political freedom. This objection, which comes from all political outlooks, tends to see liberal democracy as a form driven by self- and group interests. For example, the conservative jurist Carl Schmitt thought that parliamentary systems were unworkable because of the conflict of interest groups, and contemporary communitarians see liberalism as lacking any orientation to a common good or moral core. This objection has some merit. Many proponents of the interest-group position devalued citizenship—already little more than voting. For some proponents, nonparticipation in even a minimum of democratic citizenship is seen as dysfunctional or unnecessary.

Conservative and communitarian objections, however, require a notion of sociocultural unity or homogeneity that is incompatible with the diversity of publics found in multicultural societies. These new challenges to liberal democratic society reflect a conflict between the claims of cultural integrity, which is not generally acknowledged in classical liberalism, and civil and political rights typical of liberal democratic notions of freedom. They also apply to newly important categories such as gender. Other conflicts between a developmental politics of distribution and the newer politics of resignation raise questions of the ways that liberal democracies reconcile the needs for solidarity, which are necessary for communicative freedom, with other freedoms producing a conflict between developmental politics of distribution and the newer politics of recognition. How do liberal democracies reconcile the need for solidarity, which is necessary for communicative freedom, with other freedoms? The renewal and reform of freedom in modern democratic societies rest with the healthy respect for and space for political protest and dissent. Freedom is not a fixed essence; instead, it has to be renewed and transformed in ever-changing social circumstances. Social movements have instituted new regimes, as in revolutions, but also have pressed claims for rights in established democracies, as in labor movements, movements for equal rights for women, racial minorities, and gays and lesbians, and even antiwar movements. The ability of a society to respond to dissent and protest is an important feature of a functioning democracy. In modern societies this often goes beyond mere tolerance to what postmodernists have called "openness to the other." Societies have to recognize that dissent takes place in the context of a broader solidarity: We have to be aware of and open to others who seem different, yet we must also accept the need for discussion that may or may not vindicate their claims.

Cultural movements can also be sources of freedom movements. These can often be generational conflicts, as in the Sturm und Drang movement in Germany in the romantic era, and the counterculture movement in the 1960s. Both of these challenged what they saw as repressive social and cultural practices well before they became forces for political change. It could also be argued that cultural resistance had a decisive if largely unacknowledged role in maintaining subterranean political resistance in Eastern Europe prior to the fall of Soviet Communism.

A deliberative model of democracy employing the insights of communicative freedom seems to propose a different model of democratic freedom. Political order is not constituted by a unified general will, but by a web of symbolic interactions in which solidarity and commonality is established through participation in social and political life, not in a reestablished common good. A healthy democracy requires a well functioning parliamentary or representational system, and significant civil rights and economic and social equality. But it also requires a substantial measure of private and public freedom, supported by extra-governmental publics who are able to discuss and actively challenge existing practices. It has to pay equal attention to the claims of solidarity and cultural integrity. It requires a greater interchange between the knowledge of experts and the judgment of citizens in the formation of policy and the formation of public policy. It also requires a truly democratic educational system open to all and a free system of media that promotes knowledge and discussion of significant issues.

Theories of freedom are associated with different institutional arrangements for the maximization of freedom. Theories of negative freedom have been linked most often to liberal political institutions such as constitutional governments with representative political institutions; elected representatives; free, fair, and frequent elections with a competitive party system; and an independent judiciary; along with extensive freedom of information and communications and a network of voluntary associations.

Developmental theorists argue that the institutional framework associated with negative freedom tends to negate the very conditions of freedom that it intends to facilitate. When combined with market economic institutions, liberal political institutions create large-scale

inequalities of economic and social power that make the exercise of equal liberty impossible. Poverty, powerlessness, and forms of disrespect all combine to make the exercise of freedom difficult. A commitment to freedom requires maintaining a minimum satisfaction of human needs. In market societies, developmentalists have advocated extensive welfare measures to compensate for the effects of power. They contend that rather than restricting freedom, as classical and neoclassical liberals might think, extensive public support in fact enhances freedom, by providing a basis for equal employment to all. However, for developmentalists, such institutions have to include the promotion of civic equality as well. Developmentalists go beyond welfare-state reform to advocate replacing the private-property market system with social production, or radically democratizing areas of work education and communications.

Despite the triumphalism of neoclassical liberals in the post–cold war era, democracy has not increased. Only about half of the world's nations, consisting of less than half its population, can be considered democracies, and all of them do not meet all the criteria discussed above. The dissolution of the Soviet Empire has led to a rise in fundamentalist movements and ethnic conflicts that threaten to undermine democratic institutions in some newer states and to prevent their establishment in others. Some well established democracies have succeeded in accommodating ethnic diversity by forming "consociation democracies," but these require special conditions not achievable in all countries. Attempts to design constitutions or democratic institutions through planning or by "shock therapy" have not led to large-scale democratic movements in these countries—they have simply reinstituted the pathologies already present in advanced societies.

Pathologies of democratic freedom have sometimes resulted from restricted conceptions of representative institutions in the twentieth century. Examples include competitive elitism, which reduces democracy to a form of choosing leaders, and corporatist representation, which limits popular participation and substitutes consultations with large organized groups. Although contemporary democratic societies provide some room for competing groups, they are characterized by deepening asymmetries of power and wealth that limit the effective equal freedom of all. Actual capitalism, unlike the myth of self-equilibrating markets, requires concentration of economic and social power. The growth of corporations beyond nation-states is another important factor in the growth of poverty and income disparity. Many commentators question whether the nation-state and its conception of democratic freedom is a feasible model in light of the increasing global power of corporations. The nation-state, it is argued, no longer has the autonomy from the economic system to direct its own affairs and achieve its own goals.

In the developing world democratic freedom faces these obstacles and others. The subaltern economic status of developing nations has made them vulnerable to forced political and economic restructuring in order to obtain funds for development projects, and for the most part, attempts to create a civil society from above by local leaders or outside groups has led to limited democratization with a limited role for popular democratic initiatives.

SEE ALSO *Aristotle; Bureaucracy; Civil Liberties; Civil Rights; Constitutions; Cosmopolitanism; Democracy; Elitism; Hobbes, Thomas; Individualism; Kant, Immanuel; Liberalism; Liberation; Libertarianism; Liberty; Locke, John; Mill, John Stuart; Nietzsche, Friedrich; Participation, Political; Philosophy; Philosophy, Political; Plato; Political Culture; Political Science; Private Sector; Public Sector; Republicanism; Revolution; Rousseau, Jean-Jacques; Self-Determination; Social Movements; Tocqueville, Alexis de; Weber, Max*

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Brian J. Caterino

FREEDOM OF INFORMATION ACT

Signed into law by President Lyndon B. Johnson in 1966, the U.S. Freedom of Information Act (FOIA) gives the public the right—within certain bounds—to be provided federal government records on request. The FOIA requires every department and agency in the executive branch (except for the president and the president's immediate advisors) to make duly requested government records "promptly available to any person." The law exempts several categories of government records from release, including records relating to classified defense and foreign policy matters, law enforcement records whose release would interfere with investigations and prosecutions, and records considered internal agency memoranda. The FOIA does not apply to Congress or the federal courts.

The key figure in the development and passage of the FOIA was Congressman John E. Moss, a California Democrat. As chair of the House Special Subcommittee on Government Information, Moss spent eleven years presiding over hearings and publishing reports that exhaustively documented the secrecy practices of the executive branch. Remarkably, his work drew little interest or support from members of the Washington press corps, who at that time were accustomed to a collegial, nonadversarial relationship with government officials. Thus, the bill's passage can be largely attributed to the diligent legislative maneuvering of Moss—as well as his party's control of both the presidency and Congress (by large majorities in the House and Senate) in 1966.

Controversy about the FOIA's implementation arose almost immediately after it became law, and the tenor of this debate has remained consistent over time. On the one hand, requestors of information have complained about delays in receipt of records, fees charged for duplication, and improper invoking of exemptions. On the other hand, agency staff and some elected officials have questioned the expenditure of significant resources required to comply with the law. All these concerns have shaped revisions and amendments to the FOIA, which has been significantly modified three times (in 1974, 1986, and 1996).

Records obtained under the FOIA are central to hundreds of news stories about the government that appear in the media each year. The FOIA thus plays an important role in efforts to keep government activity transparent and accountable. However, only a small proportion of FOIA requests are made by news organizations and legitimate researchers. A great number of requests are filed by commercial interests, who hope to repackage and sell the information obtained from their requests, or otherwise use it for business purposes. Access to government records has been dramatically altered by the diffusion of information technology. The vastly reduced cost of indexing, reproducing, and transmitting government records has made it easier for the public to locate and access government information—but it also makes it more conceivable that information of a sensitive or classified nature will fall into the wrong hands.

The FOIA has inspired the passage of similar legislation by U.S. state and local governments. Throughout the world, democracies both new and old adopted freedom of information (FOI) laws in the late twentieth century—many that consciously emulated the U.S. law. But FOI laws by themselves do not lead to greater government accountability. To have much effect, FOI laws require a media that is unhesitant to investigate government activity and is willing to use these laws as a tool to do so.

SEE ALSO *Secrecy; Transparency*

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Patrick J. Egan

FREEDOM RIDERS

SEE *Student Nonviolent Coordinating Committee.*

FREEMAN, WALTER

SEE *Lobotomy.*

FREIRE, PAULO

1921–1997

Until his death from a heart attack on May 2, 1997, Paulo Freire devoted his life and work to a philosophy and practice of education committed to the empowerment and

social transformation of communities marginalized by poverty, colonialism, and political repression. Freire worked extensively in Brazil, Chile, and West Africa, where he developed a method for teaching literacy to poor, working class, and indigenous people. The development of Freire's "pedagogy of the oppressed" cannot be viewed in isolation from his experience of life in Brazil during the first half of the twentieth century. Born in 1921 in Recife, a port town in the northeast province of Pernambuco, Paulo Reglus Neves Freire was raised in a middle class family that experienced severe poverty during the Great Depression. Poverty and hunger during Freire's youth caused several setbacks in his formal schooling, an experience that shaped the later development of his educational philosophy. Freire studied law at the University of Recife, but gave up his career as a lawyer after his first case to teach Portuguese in secondary schools (Gadotti 1994). Freire married Elza Maia Costa de Oliveria, a primary school teacher, in 1944. Throughout their marriage, Elza encouraged and inspired Freire to devote himself to his work in the field of adult education.

Northeast Brazil in the early 1960s was a region of acute social polarization and economic suffering. It was during this time that Freire began to elaborate a model of politically engaged pedagogy against the prevailing "culture of silence" under which the illiterate poor labored. He emphasized the dialectic relationship between theory and practice, which is expressed through three generative themes in his work: *concientization*, *dialogic learning*, and his critique of the *banking approach* to education. Underpinning these three generative themes is a student-centered system of learning that challenges how knowledge is constructed in the formal education system and in society at large. Freire's student-centered approach stands in stark contrast to conventional educational practice, which he referred to as the "banking approach" to education. He argued that conventional learning was the tool of the elite because it treated students as objects upon which knowledge is "deposited." Genuine learning, for Freire, could only be achieved through lived experience, critical reflection, and praxis (Aronowitz 1993, p. 9).

The idea that "experiences are lived and not transplanted" is a central tenet of Freire's philosophy (Gadotti 1994, p. 46). Concientization is the key process by which students develop a critical awareness of the world based on the concrete experience of their everyday lives. The development of critical awareness through concientization alters power relations between students and teachers, the colonized and the colonizer, thereby transforming objects of knowledge into historical subjects (Freire 1997). Freire proposed that a dialogical theory of action based on communication and cooperation was necessary not only for understanding the mediating role of historical, colonial, and class relations (concientization), but also for the active work of changing them. Dialogic action challenges mediating social realities by posing them as problems that can be analyzed critically by those who have direct experience of them. Dialogue becomes a form of collective praxis directly concerned with unveiling inequitable conditions obscured by the ruling classes.

The success of Freire's method for teaching literacy to Brazil's impoverished citizens, coupled with his efforts to affect social and political change among the landless poor, led to his imprisonment after a reactionary military coup in 1964. He spent a total of seventy days in jail. After his imprisonment in Brazil, Freire was exiled to Chile, where he remained for five years before taking up posts at Harvard University and in Switzerland. He did not return to Brazil until 1980. Freire's most famous book is *Pedagogy of the Oppressed*, originally published in 1970. Other key works include *Cultural Action for Freedom* (1972), *Education: The Practice of Freedom* (1976), and *Pedagogy of the Heart* (1997). Thirty years on from his most influential work, the commitment to education as a pathway to liberation that Freire helped inspire remains a vibrant part of the social justice campaigns of grassroots activists, social policymakers, educators, and scholars (see McLaren 2000).

SEE ALSO *Education, USA; Ideology; Liberation; Liberation Movements; Pedagogy; Schooling; Tracking in Schools*

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Donna Houston

FRELIMO

SEE *Machel, Samora.*

FRENCH REVOLUTION

The French Revolution invented modern *revolution*—the idea that humans can transform the world according to a plan—and so has a central place in the study of the social sciences. It ushered in modernity by destroying the foundations of the "Old Regime"—absolutist politics, legal inequality, a "feudal" economy (characterized by guilds, manorialism, and even serfdom), an alliance of church and state, and created a vision for a new moral universe: that sovereignty resides in nations; that a constitution and the rule of law govern politics; that people are equal and enjoy inalienable rights; and that church and state should be separate. That vision is enshrined in the Declaration of the Rights of Man and Citizen of 1789, whose proclamation of "natural, imprescriptible, and inalienable" rights served as the model for the 1948 United Nations Universal Declaration of Human Rights.

Eighteenth-century France experienced overlapping tensions that erupted in revolution in 1789. First, the Enlightenment contributed to an environment in which revolution was possible by its insistence on reforming institutions to comply with standards of reason and utility. Furthermore, it coincided with the rise of public opinion, which undermined the absolutist notion that political decisions required no consultation or tolerated no opposition. Second, the French state faced bankruptcy because of a regressive and inefficient tax system as well as participation in the Seven Years War (1756–1763) and the War of American Independence (1775–1783). Third, France witnessed endemic political strife in the eighteenth century. Technically absolutist monarchs who ruled by divine right and who exercised sovereignty without the interference of representative institutions, French kings in reality met with opposition to their policies from the noble magistrates of the highest law courts (Parlements), who resisted fiscal reforms in the name of protecting traditional rights from arbitrary authority. Finally, while class conflict did not cause revolution, there existed stress zones in French society, as a growing population threatened many people with destitution and as talented commoners chafed at their exclusion from high offices in the church, state, and military. Economic problems intensified after bad weather doubled the price of bread in 1789.

These tensions reached a crisis point in the "prerevolution" from 1787 to 1789. To deal with impending fiscal insolvency, the government convened an Assembly of Notables in 1787 to propose a new tax levied on all land and the convocation of advisory provincial assemblies. Repeated resistance to reform by the notables and Parlements forced Louis XVI (ruled 1774–1792) to convene the Estates-General, a representative body composed of clergy, nobles, and the Third Estate that had not met since 1614. The calling of the Estates-General in 1789 led to a debate over the leadership of reform, and France's struggle against royal despotism soon became a struggle against noble and clerical privilege. In this context, Emmanuel Sieyès's pamphlet "What Is the Third Estate?" galvanized patriot opinion by responding "Everything!" and by portraying the privileged groups as unproductive parasites on the body politic.

During a stalemate over whether the estates should vote by order or head, the Third Estate claimed on June 17 that it formed a National Assembly with the authority to write a constitution. This step transferred sovereignty from the king to the nation and constituted a legal revolution. The legal revolution was protected by a popular revolution on July 14 when the people of Paris stormed the Bastille fortress in search of weapons. Popular participation continued to radicalize the revolution. In the countryside, a peasant insurgency against manorial dues and church tithes prompted the National Assembly to decree the "abolition of feudalism" on August 4.

The revolution had three phases. The liberal phase found France under a constitutional monarchy during the National Assembly (1789–1791) and Legislative Assembly (1791–1792). After the destruction of absolutism and feudalism, legislation in this period guaranteed individual liberty, promoted secularism, and favored educated property owners. The aforementioned Declaration of Rights proclaimed freedom of thought, worship, and assembly as well as freedom from arbitrary arrest; it enshrined the principles of careers open to talent and equality before the law, and it hailed property as a sacred right (similarly, the National Assembly limited the vote to men with property). Other laws, enacted in conformity with reason, contributed to the "new regime." They offered full rights to Protestants and Jews, thereby divorcing religion from citizenship; they abolished guilds and internal tolls and opened trades to all people, thereby creating the conditions for economic individualism; they rationalized France's administration, creating departments in the place of provinces and giving them uniform and reformed institutions. Significantly, the National Assembly restructured the French Catholic Church, expropriating church lands, abolishing most monastic orders, and redrawing diocesan boundaries.

The revolution did not end despite the promulgation of the constitution of 1791. King Louis XVI had never reconciled himself to the revolution and as a devout Catholic was distressed after the pope condemned the restructuring of the church (known as the Civil

Constitution of the Clergy). Ultimately, the king attempted to flee France on June 20, 1791, but was stopped at Varennes. Radicalism constituted another problem for the assembly, for Parisian artisans and shopkeepers (called *sans-culottes*) resented their formal exclusion from politics in the Constitution and demanded legislation to deal with France's economic crisis and the revolution's enemies, particularly nobles and priests. After Varennes, radicals called increasingly for a republic. In addition, revolutionaries' fears of foreign nations and counterrevolutionary émigrés led to a declaration of war against Austria in April 1792. France's crusade against despotism began badly, and Louis XVI's veto of wartime measures appeared treasonous. On August 10, 1792, a revolutionary crowd attacked the royal palace. This "second revolution" overthrew the monarchy and resulted in the convocation of a democratically elected National Convention, which declared France a republic on September 22, 1792, and subsequently tried and executed the king.

The revolution's second, radical phase lasted from August 10, 1792, until the fall of Maximilien Robespierre (1758–1794) on July 27, 1794. The Convention's new declaration of rights and constitution in 1793 captured the regime's egalitarian social and political ideals and distinguished it from the liberal phase by proclaiming universal manhood suffrage, the right to education and subsistence, and the "common good" as the goal of society. The constitution, however, was never implemented amid the emergency situation resulting from civil war in the west (the Vendée), widespread revolts against the Convention, economic chaos, and foreign war against Austrian, Prussia, Britain, Holland, and Spain. Faced with imminent collapse in the summer of 1793, by spring 1794 the government had "saved" the revolution and organized military victories on all fronts.

The stunning change of events stemmed from the revolutionaries' three-pronged strategy under the leadership of Robespierre and the Committee of Public Safety. First, they established a planned economy, including price controls and nationalized workshops, for a total war effort. The planned economy largely provided bread for the poor and matériel for the army. Second, the government forced unity and limited political opposition through a Reign of Terror. Under the Terror, the Revolutionary Tribunal tried "enemies of the nation," some 40,000 of whom were executed—often by guillotine—or died in jail; another 300,000 people languished in prison under a vague "law of suspects." The unleashing of terrorism to silence political opponents imposed order at the cost of freedom. It raised complex moral issues about means and ends and has led to vigorous historical debate: Was the Terror an understandable response to the emergency, one that saved the revolution from a return of the Old Regime, or was it a harbinger of totalitarianism that sacrificed individual life and liberty to an all-powerful state and the abstract goal of regenerating humankind? Finally, the revolutionary government harnessed the explosive force of nationalism. Unified by common institutions and a share of sovereign power, desirous of protecting the gains of revolution, and guided by a national mission to spread the gospel of freedom, patriotic French treated the revolutionary wars as a secular crusade. The combination of a planned economy, the Reign of Terror, and revolutionary nationalism allowed for a full-scale mobilization of resources that drove foreign armies from French soil at the Battle of Fleurus on June 26, 1794.

The revolution's third phase, the Thermidorian and Directory periods, commenced with the overthrow of Robespierre and the dismantling of the Terror on 9 Thermidor (July 27, 1794) and lasted until the coup d'état on November 9, 1799, that brought Napoléon Bonaparte (1769–1821) to power. A new constitution in 1795 rendered France a liberal republic under a five-man executive called the Directory. The reappearance of property qualifications for political office sought to guarantee the supremacy of the middle classes in politics and to avoid the anarchy that stemmed from popular participation. The seesaw politics of the Directory, which steered a middle course between left-wing radicalism and right-wing royalism, witnessed the annulment of electoral victories by royalists in 1797 and by radicals (Jacobins) in 1798 and undermined faith in the new constitution. Similarly, the regime won enemies with its attacks on Catholic worship while failing to rally educated and propertied elites in support of its policies. Initially, continued military victories by French armies (including those by Napoléon in Italy) buttressed the regime. But the reversal of military fortunes in 1799 and ten years of revolutionary upheaval prompted plotters to revise the constitution in a more authoritarian direction. In Napoléon, the plotters found their man as well as nearly continual warfare until 1815. "Citizens," he announced, "the Revolution is established on the principles with which it began. It is over."

The French Revolution is the quintessential revolution in modern history, its radicalism resting on a rejection of the French past and a vision of a new order based on universal rights and legal equality. The slogan "Liberty, Equality, Fraternity, or Death" embodies revolutionaries' vision for a new world and their commitment to die for the cause. Both aspects of the slogan influenced subsequent struggles for freedom throughout the world, but one might look at the French slave colony of Saint-Domingue for an example. On Saint-Domingue the outbreak of revolution received acclaim by the lower classes among the 30,000 whites, while planters opposed talk of liberty and equality and the destruction of privileges. Revolutionary ideals also quickly spread among the

island's 30,000 free people of color (*affranchis*), who, despite owning property and indeed slaves, suffered racial discrimination. Free people of color demanded full civil and political rights after 1789, but the denial of these rights resulted in a rebellion of the *affranchis* that was brutally repressed. In 1791 Saint-Domingue's 450,000 slaves commenced the most successful slave revolt in history. Tensions among whites, mixed-race people, and slaves were exacerbated by British and Spanish actions to weaken their French rival, creating chaos on the island. The Convention's commitment to equality and desire to win the allegiance of rebels resulted in the abolition of slavery in 1794. A later attempt by Napoléon to reinstate bondage on Saint-Domingue failed despite the capture of the ex-slaves' skilled leader, Toussaint Louverture (c. 1743–1803), and the slave uprising culminated in the creation of an independent Haiti in 1804. Revolutionary principles of liberty and equality had led to national liberation and racial equality.

One also sees the revolution's significance in the fact that nineteenth-century ideologies traced their origins to the event. Conservatism rejected the radical change and emphasis on reason of the revolution, while liberalism reveled in the ideals of individual liberty and legal (but not social) equality of 1789. Nationalists treated the concept of national sovereignty as a call to awaken from their slumber in divided states or multiethnic empires. Democratic republicans celebrated the radical phase, finding in its democratic politics and concern for the poor a statement of egalitarianism and incipient social democracy. Socialists perceived in the *sans culotte* phenomenon the rumblings of a working-class movement, while communists considered the Russian Revolution of 1917 the fulfillment of the aborted proletarian revolution of 1792–1794.

For much of the twentieth century Marxist historians understood the revolution as the triumph of a capitalist bourgeoisie and considered it a bloc (in other words, the radical phase of 1792–1794 was necessary to protect the gains of 1789–1791). Revisionists destroyed this view, treating the revolution as the triumph of a new political culture instead of a new social class and whose main outcome was the realization of the absolutist dream of a strong centralized state rather than a complete break with the past. The revisionists' denial of social class as an important factor in the revolution opened the field to cultural studies and a focus on marginalized groups such as women and slaves. But the revisionist interpretation has failed to achieve consensus, and scholars continue to dispute the revolution's legacy. According to the neo-democratic view, the declaration of universal human rights, abolition of slavery, and pattern of modern democratic politics give the revolution a foundational place in the struggle for a better world. For revisionists, the violence of the Terror, the destruction of revolutionary wars, the silencing of dissidents and Catholic worshipers, and the formation of a powerful centralized state render the revolution a source of twentieth-century political horrors ranging from nationalist wars to totalitarian regimes.

Students frequently puzzle over the significance of the revolution when, after all, the Bourbons were restored to the French throne after Napoléon's final exile in 1815. But the restoration never undid the major gains of the revolution, which included the destruction of absolutism, manorialism, legal inequality, and clerical privilege, as well as commitments to representative government, a constitution, and careers open to talent. Once the revolutionary genie announced the principles of national sovereignty, natural rights, freedom, and equality, history has shown that it could not be put back in the bottle.

SEE ALSO *Constitutionalism; Constitutions; Democracy; Jacobinism; Monarchy; Napoléon Bonaparte; Revolution*

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Anthony Crubaugh

FREQUENCY DISTRIBUTIONS

Every day, people are confronted with large amounts of information. Occasionally, the amount of data may be so

large that they cannot interpret it in a meaningful way. When this occurs, people often need to organize and summarize the data in such a way that it allows them to uncover patterns or relationships or to use it as tools for analysis and interpretation.

One way to organize large amounts of data is through frequency distributions. A frequency distribution is a summary of data that shows the frequency or number of times a particular observation occurs. To construct a frequency distribution, it is necessary to arrange the data into categories that "represent value ranges of the variables in question" (Fleming 2000, p. 15).

For example, imagine that you are responsible for creating a range of activities for a group of fifty people, and you want to organize the activities according to age. The following is a list of the ages of the individuals in the group:

4	15	20	18	4
22	36	7	24	11
27	33	13	7	17
18	30	25	9	23
11	16	14	5	31
31	36	22	15	24
13	11	22	9	11
28	21	8	14	18
34	13	17	16	7
23	29	5	16	20

The first step in constructing a frequency distribution is to arrange the data from the smallest to the largest value to determine, as in this case, the age range. Next, the different values need to be listed with the number of times a particular age appears—its frequency.

Arranging the data in this way provides people with a more organized way to understand any trends or patterns in the data. However, even after organizing the data based on the frequency distribution, it can still be very overwhelming. By using what researchers refer to as "interval scores" or "class intervals," frequency distributions become important tools to manage raw data (Hinkley 1982, p. 26). Interval scores or class intervals are intervals that include a range of values. There are several steps to establish class intervals. First, it is necessary to determine the number of non-overlapping classes. Classes need to be mutually exclusive, meaning that a value cannot belong to two different classes at the same time. According to convention, there should be between 5 and 15 classes.

The next step is to decide the width of each class. The size *i* will be the same for all classes, and it is calculated by subtracting the lowest score (4) from the highest score (36) and dividing it by the number of class intervals (e.g., 8). For the previous example, the approximate class width is 5. The larger the width of each class, the smaller the number of classes there will be.

List of values and their frequencies

Value	Frequency
4	1
5	2
7	3
8	1
9	2
11	4
13	3
14	2
15	2
16	3
17	2
18	3
20	2
21	2
22	3
23	2
24	2
25	1
27	1
28	1
29	1
30	1
31	2
33	1
34	1
36	2

Table 1.

Frequency distributions and cumulative frequencies

Class Interval	*f*	*Cumulative f*
1–5	3	3
6–10	6	9
11–15	11	20
16–20	10	30
21–25	9	39
26–30	4	43
31–35	4	47
36–40	2	49

Table 2. Frequency Distributions and Cumulative Frequencies

In addition, one needs to determine the limits of the frequency. The concept of exact limits of a score can be extended to frequency distributions by distinguishing between the exact limits of a given class interval and its score limits. The limits are determined so that each observation belongs to only one class. According to researcher Wiersma Hinkley, "the lower class limit identifies the smallest possible data value assigned to the class. The upper class limit identifies the largest possible data value assigned to the class. The exact limits are 0.5 units below and 0.5 units above the score limits of the class interval"

(1982, p. 27). Consider the age interval 11–15 in Table 2. The interval 11–15 represents the score limits, whereas the interval 10.5–15.5 represents the exact limits. The midpoint will always be the same regardless of what type of limits are used. The midpoint of the interval is defined as "the point on the scale of measurement that is halfway through the interval" (p. 28). There will be scenarios in which some class intervals are empty. When this occurs, researchers suggest that these intervals be eliminated by combining them.

In Table 2, a frequency distribution *f* table is presented as well as the cumulative frequencies *cumulative f*. The cumulative frequency is "the total number of scores in the class interval and all intervals below it" (Abrami 2001, p. 63).

In most cases, frequency distributions allow an individual to understand raw data in a more meaningful way. However, it is sometimes necessary to have a visual display of the data beyond numbers to recognize the patterns that otherwise would be difficult to identify. Graphs, when clearly presented, are two-dimensional representations of data that can help in this endeavor. Graphs typically consist of vertical and horizontal dimensions known as axes. By tradition, the horizontal axis is called the abscissa, or the x-axis, and represents the independent variable. The vertical axis is called ordinate, or y-axis, and represents the dependent variable. Histograms, bar graphs, and frequency polygons are graphs that are used to visually display frequency distributions.

HISTOGRAMS

Histograms are one of the most useful graphical representations of statistical data. Histograms display the frequency of an individual score or scores in class intervals by the length of its bars. The majority of histograms represent a single variable. The variable of interest is placed on the x-axis and the frequency distribution, relative frequency, or percent frequency distribution on the y-axis In histograms, the bars are shown touching one another representing their continuous nature. This means that the variables are interval- (e.g., height or weight) or ratio-scaled. Also, the height of each bar represents its frequency because the class intervals are equal (see Figure 1).

BAR CHARTS

Besides histograms, bar charts are used to visually display frequency distributions. However, contrary to histograms, the variable under study has a nominal and ordinal value, which is represented by the spaces between

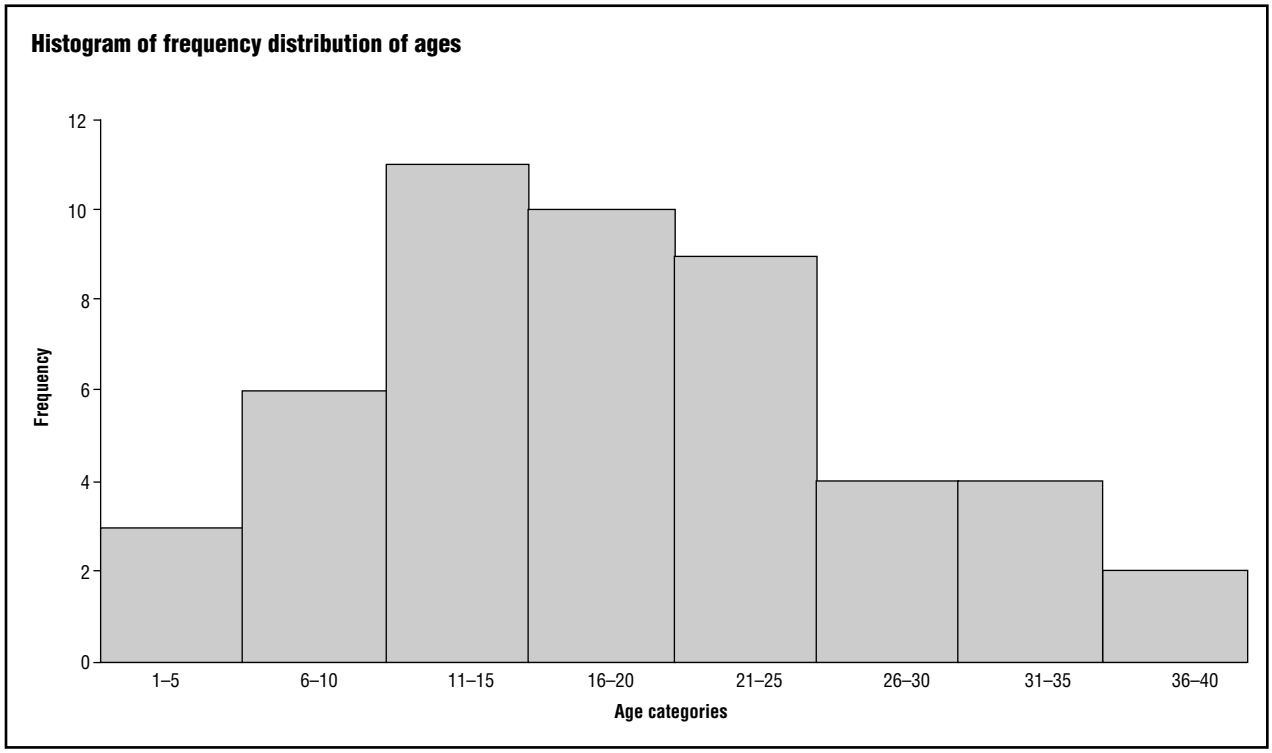

Figure 1.

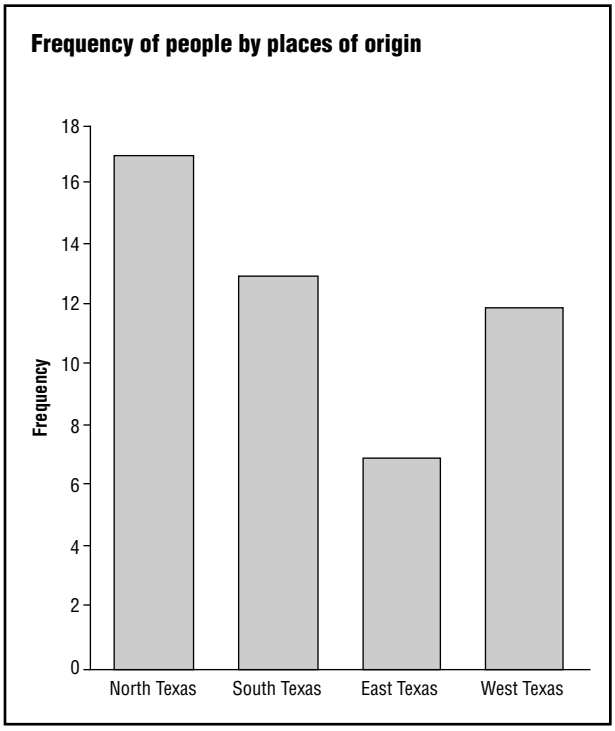

Figure 2.

each bar. In Figure 2, the specific variables (categories and frequencies) that are used for the classes on each axis are presented.

FREQUENCY POLYGON

Another way to display information is through frequency polygons, also known as frequency curves or line graphs. In this type of graph, the scores of the class interval are displayed by using the midpoint of each class interval. Once these points have been marked, they are connected with straight lines. Frequency polygons are useful when trying to compare two different frequencies in one graph or to highlight trends over time.

SEE ALSO *Methods, Quantitative*

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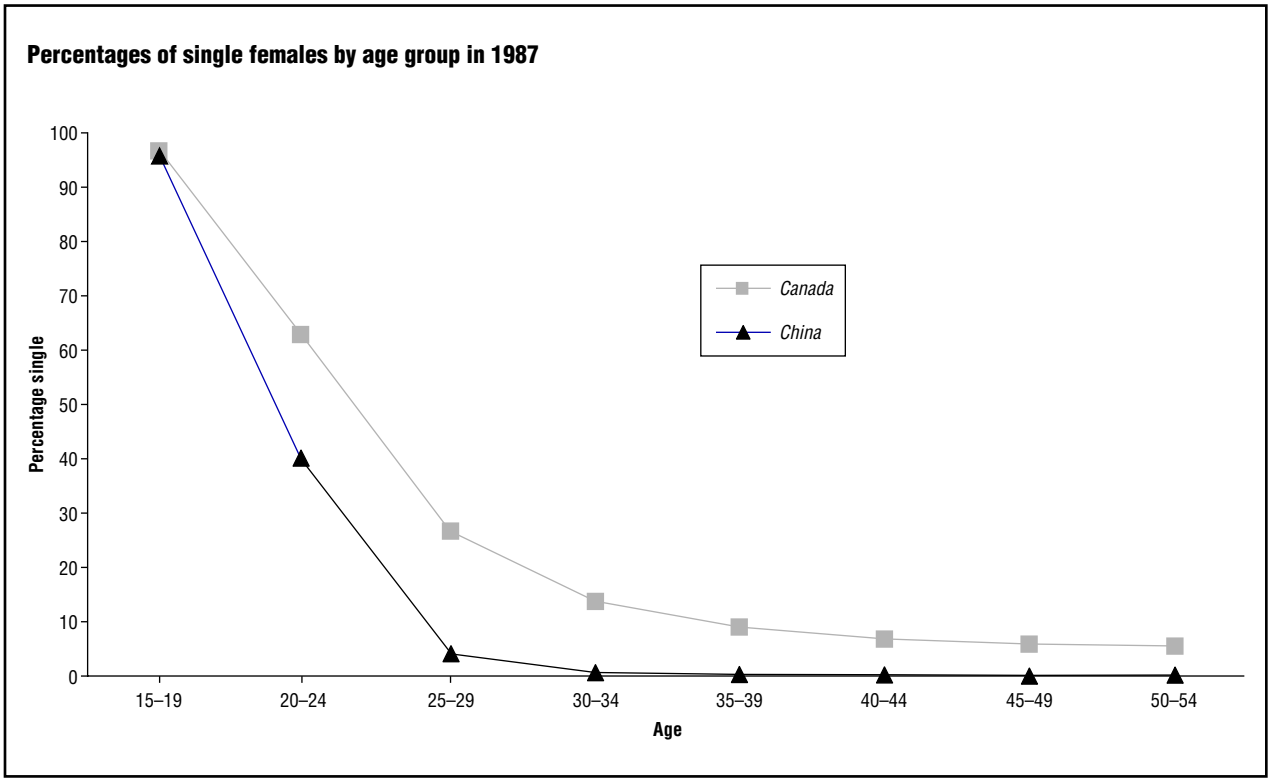

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María Isabel Ayala

FREUDIAN SLIP

SEE *Psychoanalytic Theory.*

FREUD, SIGMUND

1856–1939

The founder of the intellectual discipline and psychotherapeutic method known as psychoanalysis, Sigmund Freud aimed to "throw light upon the unusual, abnormal, or pathological manifestations of the mind" by tracing them to the psychological forces that produced them (1936, p. 447). The odd manifestations he sought to illuminate ranged from the blatantly strange, such as neurotic symptoms, to deviations from strict rationality found in all people, such as those that occur in dreaming, mental lapses of waking life, such as slips of the tongue, or other special experiences, such as the feeling of "uncanniness." His inquiries also included ordinary experiences that defied straightforward explanation, such as the capacity of jokes to evoke laughter, and cultural trends that Freud believed exhibited properties of mental life he had identified in individual psychology, such as humans' susceptibility to religion.

The psychological forces to which Freud traced these phenomena led inevitably, in his view, to childhood. Childhood has the influence it does, Freud maintained, because it affords a unique mode of experience that, on account of its distinctness from later developments of the mind, both produces lasting impressions on people and renders these impressions inaccessible to later consciousness. The most dramatic and best-known consequence of this dynamic is the operation after infancy of unconscious mentation, or ideas and impulses of which people remain unaware that nonetheless influence their behavior. Since the publication in 1900 of *The Interpretation of Dreams*, Freud's first major treatise on psychoanalysis, Freud's ideas have indelibly altered both popular thought and a wide array of professional disciplines.

THE BIRTH OF PSYCHOANALYSIS

Freud was born in Frieberg, Moravia (now the Czech Republic) on May 6, 1856, and his family moved to Vienna three years later. During the 1890s, as a young doctor collaborating with Viennese physician Josef Breuer, he began treating nervous disorders through the use of a "talking cure," as he and Breuer called it. The method initially consisted of patients under hypnosis recalling memories associated with their symptoms. This recall, accompanied by the affect connected with the memories, resulted in the elimination of symptoms. An early patient treated in this way, one Anna O., for example, who presented with paralyses and an inability to drink that lacked any organic base, regained her ability to drink when she recalled with disgust a scene from her childhood in which she had discovered her governess's dog drinking from a (human) cup.

On the basis of observations of this kind—reported with Breuer in *Studies on Hysteria* (1895)—Freud came to believe people are moved in part by mental forces unknown to them. The *unconscious*, as it came to be known, is composed mostly of thoughts and impressions people pushed from consciousness (or "repressed") when they were very young. The thoughts and impressions linger in the mind and, unable to discharge, remain on alert for opportunities for expression. When they reach expression, they usually appear in disguise, so as not to elicit fresh repressions. The resulting manifestations include psychopathological symptoms, dreams, lapses of (conscious) speech or action (which Freud called "parapraxes") such as slips of the tongue, and aspects of character, as well as a variety of ordinary individual and cultural experiences.

BASIC ASSUMPTIONS

Freud's is a general psychological theory that attempts to explain why people think, feel, see, and do as they do. A systematic theory, it contains an integrated body of concepts and propositions from which other concepts and propositions follow. It builds from a small group of first principles, described by Freud as essential constituents of human thought and action that admit of no further reduction and yet account for all conceivable instances of human behavior. Based upon observation and reflection over the course of the forty-plus years spanned by his psychoanalytic writings, Freud eventually changed his ideas about these principles.

Initially, Freud believed all human behavior conforms to what he called the pleasure (or pleasure-unpleasure)

principle. According to the pleasure principle, people always strive to avoid pain and, where possible, attain pleasure. Even behavior that appears inconsistent with this principle, such as the nightmare, must in some way conform to it. Freud theorized in *The Interpretation of Dreams* (1900), for example, that nightmares serve to divert the dreamer from dangerous wishes whose fulfillment would produce frightening consequences. The fearsome content of the nightmare both embodies the dreamer's perception of danger—such that, on occasion, the dreamer might awaken and thereby terminate the dream—and serves to disguise the wish.

Freud originally conceived the state of pleasure as a reduction in excitation, or tension, on the model of the reflex. Our reflexes, such as the eye-blink or knee-jerk reflex, function to rid the body of stimuli. Thus, at bottom, according to this initial conception, the function of the nervous system is to keep the level of stimulation in the body as low as possible, and pleasure is the consequence of the reduction. As happened with the governing principle itself, Freud changed his view of the nature of pleasure over the course of his writings.

Freud believed that early in their development, in order to survive, humans would have to have formed a reality principle subordinate to the pleasure principle. Although the hallucinated satisfaction of one's needs, which would constitute the shortest path to their fulfillment, might produce pleasure in the short term, for example, it would lead to ultimate disappointment. Thus, Freud says in his "Formulations Regarding Two Principles in Mental Functioning" (1911), the mind had to "decide" to form a conception of circumstances in the real outer world, so as to be able to alter them and bring about real satisfaction.

Whereas the pleasure principle operates reflexively from birth, the reality principle develops over time in the individual, according to Freud, and likewise developed in the evolution of the species. The reality principle, in turn, would have prompted further developments of the mind, beyond reflexive, or direct wish-fulfilling, functioning. Attention would have given individuals the ability to search their environment for the results of their actions; memory would have given them a means of notating and storing the results; thought would have arisen as a kind of experimental action, allowing individuals to test the (real) consequences of their behavior.

Within the compass of the pleasure/reality principles, Freud distinguished instinct as the driving force of all action. Instinct, as he details in "Instincts and Their Vicissitudes" (1915), is a stimulus to the mind originating within the body that exerts a constant pressure, or "impetus" toward relief. Because instincts originate within the person and operate at a constant force, rather than originating externally and acting in a single impact, simple reflexive action, such as the withdrawal of the impacted portion of the body, has no effect against the impact. One needs instead to satisfy the instinct. When one's stomach grinds with hunger, for example, one cannot eliminate the pain by withdrawing one's stomach from any impinging force. One must eat or be fed. Because instincts require machinations more complicated than reflexive action to be discharged, Freud viewed them as important to the development of the nervous system beyond the primitive reflex.

Freud originally distinguished two classes of instincts, which he believed admit of no further reduction: the sexual instincts and the ego, or self-preservative, instincts. He defined *sexual* broadly, so that it includes, with respect to its physical quality, excitation to any portion of the body, including the skin, for example, as well as the oral, anal, and genital areas.

Psychologically, the sexual instincts subsume the entire field of erotic relations, including those relations "inhibited" in aim, such as friendships and parent-child relations, which entail positive and even excitatory feelings, but not, in the usual course of conscious life, an aim of genital satisfaction. In their most developed manifestation, the sexual instincts serve reproduction. The ego instincts, meanwhile, serve only the individual and have the individual's safety as their object. In claiming that all human behavior emanates from one or the other of these two classes of instincts, Freud meant that all human impulses and actions remain compatible with one or both fields, not that all human impulses and actions can be reduced to a sex or survival drive. One's labors on a mathematics problem reduce to a sex or survival drive no more than a sheet of paper reduces to the tree from which the paper was milled. Rather, according to Freud, all of our aspirations and behavior must be traceable in some way to the reflexive bundle from which we arose. The reflexive bundle, in turn, seeks, at bottom, to eliminate the tensions created by its needs, and thus to gain pleasure.

Approximately twenty years after he articulated the pleasure principle, Freud identified an apparent exception to the principle and suggested that a still more basic force operates in the mind. In *Beyond the Pleasure Principle* (1920) he argued that, in contrast with numerous other negative experiences that only appear to contradict the pleasure principle, the traumatic, and more specifically war, neuroses genuinely do so. These neuroses manifest in, among other symptoms, recurrent dreams in which dreamers return to the scene of previous near-death experiences and then awake in a terrible fright. For instance, soldiers returning from war relive attacks in the trenches, and survivors of train wrecks return to the wreck. Each then awakens in terror that no amount of repetition of the dream lessens.

Although Freud could detect no long- or short-term gain in the pattern, he conceded it could embody an attempt at a purpose. Extrapolating from his observation that traumatic neuroses tend to afflict those victims of trauma who did not incur a major injury, Freud surmised that, whereas direct physical insult tends to divert masses of energy to the site of the insult, victims who have escaped injury are left with rampant masses of energy released by the shock of the event. Wholly breached, the psychical system attempts to master the onslaught in retrospect, by generating anxiety that, had it been present during the traumatic event, would have reduced the shock of the event. But after the fact, the attempt serves no purpose. The system neither heals nor learns.

Freud extrapolated from these observations to the existence of a tendency more primordial than the pleasure principle and inherent in all organic life: the compulsion to repeat. The tendency can be witnessed, he believed, in behavior as primitive as the thumb sucking of human babies or the return of schools of fish to the site of previous spawning. In the psyche compromised by the war neuroses, the tendency manifests in a mechanical and almost diabolical repetition of a behavior, in total disregard of its impact upon the person.

From his extrapolation to the repetition compulsion, Freud made the admittedly speculative and far-fetched leap to the idea that all living things seek to return not only to previous states, but ultimately to their original state. Given that all living matter began as inorganic substance, all living things seek to return to an inorganic state; they seek to die.

Freud thus arrived at a new category of instinct, the death instinct, or "Thanatos," which he conceived as functioning in opposition to the life instincts, or "Eros." After equivocating briefly on the point, Freud subsumed under the life instincts the two classes of instinct he had originally delineated, the sexual and ego (self-preservative) instincts. Whereas the life instincts, especially as represented by the sexual instincts, seek to unify living matter and create more of it, the death instinct aims to dissolve it.

As Freud originally conceived it, the death instinct denotes the tendency of every living thing to drift toward a state of minimal, and ideally no, excitation. The death instinct of this formulation thus verges on the pleasure principle, according to which pleasure arises with a reduction in stimulation. Freud soon modified his view of the nature of pleasure, however, in a way that lessened this overlap. Although he continued to believe the nervous system functions, at bottom, to rid the organism of tension, and pleasure arises by this means, he acknowledged people's potential to derive pleasure from an increase in stimulation, as occurs in sexual foreplay, for example. Thenceforth, he distinguished between the Nirvāna principle, which expresses organisms' tendency toward quiescence (and hence the death instinct), and the pleasure principle, which expresses the drive toward pleasure in all its forms, including excitatory ones, and which Freud attributed to the influence of the life instincts.

In the course of Freud's later works, the death instinct assumes an increasingly active aspect and becomes almost synonymous with aggression. As early as his discussion in *The Ego and the Id*, published three years after *Beyond the Pleasure Principle*, Freud reasoned that individual organisms live long enough to combine with one another, rather than die off, because the death instinct must be neutralized in some way by the life instincts. It is diverted outward over the musculature, he proposed, in the form of aggression, which is eventually directed against others. However, in the wanton destruction he observed in two world wars, Freud perceived an aggressiveness totally divorced from erotic aims, and hence a sign of the ascendance of something close to a culture of pure death instinct. He concluded the 1931 edition of *Civilization and Its Discontents* with the question of whether Eros would rise again and prevail over humanity.

CONSEQUENCES OF THE ASSUMPTIONS

Many of the remaining portions of Freud's theory follow from the foregoing primitives of mental life and particularly from the pleasure and reality principles, which Freud continued to believe dominate mental life even after he developed the scheme that incorporates the death instinct.

Meaning and Determinism One such result is the idea that all behavior, including the most apparently nonsensical, has a reason, or, as Freud says in his *Introductory Lectures on Psychoanalysis* (1917) with respect to psychopathological symptoms in particular, symptoms have a sense. Anna O.'s refusal to drink resulted from her (unconscious) disgust at her governess's dog, according to Breuer and Freud. Given that people who feel revolted by something normally find it difficult to eat or drink, Anna O.'s behavior followed coherently from its source. Unlike healthy people who refuse food or drink because they feel revolted, however, Anna O. was unaware of both her disgust and its source. Therein lay her pathology. In conceiving dreams as wish fulfillments and parapraxes as products of concealed motives, Freud again followed the assumption that all behavior has a source and a sense. He believed it possible, moreover, for unconsciously motivated behavior, such as dreams, to have not just one source or one meaning, but to be "overdetermined," having multiple sources and meanings. Thus, for instance, the leering monster in a nightmare might embody both a child's

anger at a parent and the child's fear of recriminations from the parent.

Freud admitted that some apparently odd behavior arises without apparent motivation. However, he found the occurrence of such behavior improbable. Freud noted in *Five Lectures on Psychoanalysis* (1909) that although some aberrations, such as slips of the tongue, might occur when people operate under fatigue or other stresses, the mistakes cannot be caused by these limitations, because other similar mistakes occur when people are fully attentive (p. 29). Further, precisely because numerous associative pathways lie open and can cause a person accidentally to utter one word instead of another (in the case of slips of the tongue), one needs to explain why a given pathway is chosen on a given occasion.

Conscious and Unconscious The separation between conscious and unconscious mental processes arises, according to Freud, primarily through the operation of *repression*, a reflexive and hence infantile response driven by the pleasure principle, in which individuals withdraw consciousness from painful or frightening impulses in the manner in which one might withdraw one's hand from a hot stove. The pain can be caused either by the clash between impulse in itself and other motives the person may have, or by the individual's anticipation of the external consequences of acting upon the impulse. The repressed impulse, or idea, remains in unconscious memory, sustained by its struggle for expression and at the same time denied that end by the forces that originally led to its repression. In the final chapter of *Totem and Taboo* (1913), Freud postulates a second, smaller category of *inherited* unconscious ideas. This category includes the most primitive embodiments of the instincts and impulses that, based upon an analysis of modern emotion, he concluded must have been passed along by earlier generations. The latter impulses include guilt for the killing of the primal father and a portion of the hostility that led to the presumed deed.

Freud reserved the term *unconscious* for these two groups of ideas, repressed unconscious ideas created by individual experience and inherited unconscious ideas, both of which are unavailable to consciousness at the moment and inaccessible to consciousness in general (except with extraordinary effort of the sort embodied by psychoanalysis). As detailed in his 1915 essay "The Unconscious," Freud distinguished as "preconscious" a separate category of ideas not apprehended by consciousness that, like one's knowledge of one's street address, one can access easily if prompted. Consciousness, within this scheme, is but a characteristic that can attach to mental processes. Freud likened it to a sensory organ that, in this case, illuminates ideation in progress. He attributed to language a primary role in allowing a mental process to become conscious.

Unconscious and conscious ideation exhibit different characteristics, Freud maintained, paralleling the divide between the pleasure principle, which dominates unconscious processes, and the reality principle, which operates only within conscious thought (for purposes of this discussion, preconscious thought is subsumed by conscious thought). Unconscious ideation observes primary process thought, wherein ideas are interconnected associatively one to the next, with no consideration for the whole. One idea may also replace another ("displacement") and several ideas may converge in a single embodiment ("condensation"). These methods produce dreams, symptoms, and other phenomena, such as jokes, to which Freud ascribed an unconscious contribution. Only conscious ideation incorporates secondary-process thought, which consists of the higher cognitive processes, such as judgment, reasoning, planned action, and the ordering of events in time.

It follows from the properties of the two types of thought that the unconscious admits of blatant contradiction. No feature of unconscious mentation can detect or feel troubled by incoherence. It also knows no denial. Thus, in one's unconscious, one can both love and despise one's mother, or both want freedom from one's parents and want to be constrained and even punished by them. In waking life, normally, one would have difficulty tolerating these ambivalences and would probably repress one pole of the conflict.

Id, Ego, and Superego Freud eventually decided that the division of mental qualities into conscious, preconscious, and unconscious did not entirely capture the dynamics of the mind. In particular, unconsciousness appears to attach to mental formations other than those produced by repression that, nonetheless, arise on the basis of experience. In addition to finding their repressed memories elusive, patients undergoing psychoanalysis resist discovering the memories. Other forces in their mind must act to keep the repressed material from consciousness, Freud inferred, and these forces, too, lie outside awareness. Freud labeled these opposing forces as "resistances."

He developed a new scheme, which he expounds in *The Ego and the Id* (1923), to capture this mental dynamic. He now designated as "id" the portion of the mind containing repressed and inherited unconscious impulses. He defined as "ego" people's efforts to avert danger, whether from internal (i.e., repressed) or external sources, and to maintain their bearings in the environment. The ego includes the resistances and thus has both a conscious and an unconscious portion. Freud designated a third entity, the "superego," which judges the ego. Although the superego resembles the ego in its judging

role, it shares an unconscious and irrational element with the id, from which it derives.

According to Freud, the superego is the precipitate of the Oedipal complex. The Oedipal conflict, according to Freud, is a normal part of the development of every individual. All children desire more from their parents (or parent surrogates) early in life than the parents can give—at bottom, everyone wants total possession of them. Within this dynamic, children may form a preference for the parent of the opposite sex, although they yearn for both parents and experience the Oedipal conflict with respect to each. Thus, children harbor both love and hostility for each parent. Therefore, as Freud illustrates in *Totem and Taboo* (1913), ambivalence exists at the core of our emotional life. Eventually, children's desires are frustrated and, in the interest of survival, subjected to repression, with the conflicts embodied by them left unresolved.

The end of the Oedipal period, at around five years of age, prompts individuation from the parents, and consequently their loss. The loss, in turn, prompts children to internalize the parents, which preserves their relationship with them. The internalization is accompanied by an exaggeration of the parents' power, which results from children's earlier repression of their own hostile feelings toward the parents. Emanating now from the internalized parents, the hostile feelings are turned back upon the subject—the child—on whom they discharge more safely than they would have done if the child had unleashed the feelings against the real parents. In exchange, the now browbeaten ego suffers. The entire dynamic, according to Freud, explains much of both psychopathology and the psychology of healthy people.

The Concept of a Person Freud's view of the person is represented by his three schemes for describing the mind. From the perspective of the motivating forces of our action—the pleasure principle and its derivatives—people universally seek, on some level, to avoid pain. In the interest of long-term gain, they may modify their claim to comfort and pleasure in the short term, as Freud discusses in an exegesis on happiness in *Civilization and Its Discontents*. From the perspective of the division of the mind into conscious (including preconscious) and unconscious, people are ruled by forces both known and unknown to them, and they are thus capable of acts and thoughts both consistent and inconsistent with the traits and values they may (consciously) consider central to their identity. From the perspective of Freud's division of the mind into the dynamic entities of id, ego, and superego, both our behavior and our felt experience are colored by the deeply conflicting forces that confer our humanity upon us: our appetites and our drive for security and survival. In all three views, the person is a compilation of forces, defined by the interaction of dynamic parts. Freud did not distinguish more holistic entities such as the personality or the self.

The Concept of Illness The cause of (neurotic) illness, according to Freud, is unresolved and unconscious conflict, on account of which sufferers retreat into fantasy. Symptoms embody a fulfillment of the fantasies, distorted to escape recognition by the conscious mind. Healthy people struggle with the same conflicts as do neurotic people, and, like neurotic people, they form fantasies to improve upon a sometimes disappointing reality. However, whereas healthy people either find adaptive outlets for their fantasies or indulge them while otherwise going about their business, neurotics' repressed impulses overwhelm their capacity for normal function.

Beginning with his earliest cases, Freud maintained that neurosis is caused specifically by the conflict between sexual and ego drives. Patients' earliest sexual impulses lead to thoughts their self-protective inclinations regard as dangerous, and are thus subject to repression. Although Freud initially believed the forbidden thoughts traced back to actual experiences of seduction, he soon determined, as he noted in his 1909 "Rat Man" case history, that the impression or fantasy of such experiences can alone suffice to initiate pathogenic processes.

Therapy Psychoanalytic therapy presumes that, insofar as repressed complexes (conflicts) cause illness, the path to cure lies in the exposure of the repressed material to consciousness. Repressed complexes have the far-reaching effects they do because the cut-off ideas continue to strive for expression through an increasingly large web of associations. It follows, therefore, that one may recover the instigating ideas by undoing the web of associations. Thus, the "free association" of ideas forms the principal technique of therapy. Beginning with a symptom, dream, or passing thought, patients say whatever comes into their mind in connection with the symptom, and then whatever comes into their mind in connection with the new idea, and so on. Freud believed that all paths lead ultimately to the repressed complex or complexes, so that patients can start with any leading idea to begin to unravel the associative chain or chains.

As their associations veer progressively closer to the material under repression, patients find it increasingly difficult to pursue given lines of thought. Freud believed these experiences of "resistance" form an integral part of the therapeutic process. They provide a window on the forces that are keeping the repressed material hidden and, in becoming manifest, afford patients the means for defeating the forces and allowing the repressed ideas to reach consciousness, where they can be confronted. To

defeat the resistances, patients need to express all associations that occur to them and combat the temptation to block them.

Because of the importance of uncovering and disarming the resistances to the achievement of a lasting cure, Freud abandoned the use of hypnosis in psychoanalysis. Although hypnosis might allow the freeing of repressed content in susceptible patients, in Freud's experience it led mostly to only short-term cures. Patients' resistances, still present, rose again and repressed the forbidden thoughts anew. Hypnosis carries the additional disadvantage that not everyone is susceptible to it, whereas the conscious talking cure via free association is open, in principle, to all.

Development The development of the mind, in Freud's conception, follows three broad pathways. The first, within sexual (or as Freud called it, libidinal) development, consists of a progression from *autoeroticism*, wherein individuals achieve satisfaction diversely from the stimulation of parts of their body, to *narcissism*, during which individuals, now having gained a unifying seat of experience in the form of the ego, take themselves as the love object, and finally to the phase of (external) *object love*. Having initially distinguished only autoeroticism and object love as phases in this development, Freud interpolated the phase of narcissism when he found himself otherwise unable to account for the so-called narcissistic disorders of adulthood, such as schizophrenia, in which the ego seems to lose its boundaries. Another development in sexuality encompasses changes in the focus of sexual sensitivity in people from the oral to the anal and, finally, to the genital areas, respectively.

The second trend in development progresses from impulsive toward reflective thought. It is embodied by the development of secondary-process thought, wherein impulses can be inhibited and action tested and planned, and by the gradual replacement of repression by judgment as a means of dispatching painful impressions. It is expressed by the reality principle.

A third trend proceeds from more transparent to more complexly derived, and thus more obscure, behavior. Whereas the dreams of small children often express the unfulfilled (conscious) wishes of the previous day, for example, adults' dreams contain bizarre and inscrutable ("manifest") imagery that must be painstakingly unpacked to uncover the instigating ("latent") dream thoughts. Whereas the motives of children's sense of humor are clear, adults, who may laugh from similar motives, do not know what they are laughing at. Trends of these kinds arise, Freud believed, from both the separation of conscious and unconscious thought, which makes repression possible, and from the natural "surmounting" (as Freud describes it in his 1919 essay "The Uncanny") of one developmental stage by another. Regarding the latter process, when one stage succeeds another in development, both the mode of experience embodied by the earlier stage and the experiences accrued in it remain in the psyche. They continue to exert an influence there, though reshaped by the superimposition of later stages.

THE SCOPE OF FREUD'S WORK

After incorporating the three previously unlinked fields of dreams, neurotic symptoms, and parapraxes, Freud's theory came to encompass phenomena as diverse as art, creative writing, the appreciation of beauty, the comic, morality, religion, superstition, the fate of social movements such as communism, and people's disparagement of the transience of things. In these and other manifestations of human nature, Freud not only perceived the operation of unconscious thought, the contribution for which he is most widely known, but also speculated provocatively about the nature of phenomena that otherwise elude explanation. His commentary exposes the elusiveness.

Freud's account of the comic in *Jokes and Their Relation to the Unconscious* (1905), for instance, emphasizes the need for investigation to penetrate beyond the necessary and sufficient conditions of what makes something funny to the question of why laughing is what people do when an event meets these conditions. His brief remarks on beauty in *Civilization and Its Discontents* show the need for theory to reach beyond the delineation of the attributes of beautiful things to an account that explains the feeling that accompanies people's perception of beauty. In his extensive, though scattered, treatment of morality, he labors to account for the compulsiveness of morality and the feelings that accompany moral sensibility, such as moral righteousness and moral indignation, as well as the scope and nature of moral rules.

In his short essay "On Transience" (1916), Freud both awakens the reader to the possibility that one could appreciate things more, rather than less, on account of their transience (for instance, they could better appreciate the beauty of spring because it will disappear), and provides an explanation of the common tendency instead toward the disparagement of transience. With respect to communism, which he considers in a longer discussion of the problem of aggression in society in *Civilization and Its Discontents*, Freud, who reserved judgment on the economic claims of the system, suggested its psychological premises are untenable. He believed that when human aggression is deprived of one of its essential tools, namely material property, it will find other outlets. In all of these and in other areas, Freud opened lines of inquiry that remain interesting and novel. Because of its vast reach and systematic base, Freud's theory has profoundly influenced disciplines throughout the social sciences and humanities,

as well as the arts. It has shaped the way human nature is viewed by scholar, practitioner, and layperson.

CRITICISM OF FREUD'S THEORY

Freud's theory has been challenged since its inception, initially for its stipulation of unconscious mentation altogether, and later for its claims regarding the nature and influence of unconscious thought. Many believe Freud overinterpreted behavior. Experimental psychologists such as J. Allan Hobson and Daniel Schacter, for instance, maintain that parapraxes and dreams, respectively, may arise from normal features of cognitive process and brain function, rather than from unconscious motives. Likewise, critics suggest neurotic symptoms may reflect relatively superficial adaptations to faulty wiring or chemical imbalance, rather than deep-seated conflict.

Adolf Grünbaum and other commentators have questioned Freud's characterization of psychoanalysis as a science on the grounds that the theory is not testable. For a theory to be testable, one needs to conceive limiting cases with respect to which the theory could be proved wrong, according to these authors. However, they continue, one cannot refute the claim that neurotic symptoms express repressed complexes or that dreams fulfill wishes (the dreams of traumatic neurosis, which Freud excepted, notwithstanding), because any given symptom might express a repressed complex and any given dream might fulfill a wish. One simply may not have uncovered the hidden material. It goes without saying that Freud's more speculative claims, such as his stipulation of a death instinct, are dismissed by critical and even supportive discourse altogether. Psychoanalysis, as a means of cure, has been variously assailed as ineffective, subject to suggestion by the analyst, and unnecessarily costly to patients. In its standard form it involves multiple sessions per week and a highly trained practitioner.

Theorists who followed Freud, including his own disciples, subsequently modified his theory and the practice of psychoanalysis. Some, such as Carl Jung, reconceived the nature of the unconscious, while others, such as Melanie Klein, replaced drives or instincts with interpersonal ("object") relations as the pivot of the psyche. Others, such as Alfred Adler, placed relatively greater emphasis than Freud did on the ego, while lessening the emphasis on the sexual drives. In Freud's wake, many varieties of talking therapy were created, some ultimately with little connection to the tenets of psychoanalysis, save the notion that people's ways of thinking about their lives, cultivated by their previous experience, may taint their happiness more than do the external events that befall them. Diverse therapies also share the belief that giving expression to one's concerns may both begin to lift the burden they impose and promote self-enlightenment.

Freud died on September 23, 1939, in England, where he lived for the last year of his life. The cause was mouth cancer, which had plagued him for many years. Since then, the controversies over the credibility of his theory and the promise of psychoanalytic treatment have continued. Regarding treatment, Freud established as an ideal the absence of suggestion, as Jonathan Lear notes. Conducted appropriately, psychoanalytic therapy has met with modest success. At the same time, no other type of therapy has proved universally effective. Regarding the credibility of the theory, Freud himself addressed many of the concerns raised by both his contemporary and subsequent critics. In numerous writings, for instance, he reviewed and rejected face-value accounts of the phenomena he addressed, and he made comparative assessments of the plausibility of competing psychoanalytic interpretations of behavior. In these exercises, he extrapolated to the predictions of competing claims and assessed their plausibility, given the data, as would befit any exercise in hypothesis-testing. He also stated, with respect to some claims, that he was following out the logic of an idea, rather than asserting testable claims. He claimed this, for instance, in the often-dismissed *Beyond the Pleasure Principle* (1920), regarding his ideas about the death instinct. Although it remains to be seen whether evidence and logic require hypotheses in the direction of Freud's tenets, it is difficult to identify alternative theories that address, let alone attempt to explain, the quintessentially human phenomena Freud took as his central object.

SEE ALSO *Jung, Carl; Memory in Psychology; Oedipus Complex; Psychoanalytic Theory; Psychology*

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Susan Sugarman

FRIEDAN, BETTY
1921–2006

Betty Friedan was a catalyst in the development of the women's movement in the United States in the 1960s. In 1963 her book *The Feminine Mystique* was published, and it provided a clarion call to women—especially suburban housewives—to move beyond their lives in the home and to actively pursue careers as well as social and political equality. Several decades later, the book had sold more than three million copies.

The daughter of a Russian immigrant who owned a successful jewelry store in Peoria, Illinois, and a mother who gave up a newspaper career to raise her children, Bettye (as she was named at birth) attended Smith College, graduating with honors in 1942. After earning her bachelor's degree, she dropped the "e" in her first name and attended the University of California, Berkeley, to pursue a graduate degree in psychology. She left the university in response to pressure from a boyfriend, eventually moving to New York, where she began writing for labor newspapers. She married Carl Friedan in 1947 (they divorced in 1969), and they moved to the suburbs of New York City, where she raised three children (Daniel, Emily, and Jonathan).

In preparation for her fifteenth college reunion, Friedan surveyed her classmates and discovered a vague but poignant dissatisfaction with their seemingly pleasant suburban lives. She extended her survey to alumna of other women's colleges and also interviewed numerous women; the results of her investigation provided the basis for *The Feminine Mystique*. The book galvanized women across the nation, particularly white women, and Friedan entered the national spotlight as an assertive spokeswoman. In 1966 she was one of the founders of the National Organization for Women (NOW), serving as its first president, a position she held until 1970. NOW provided women with a national platform to discuss their concerns, to advocate for political rights, and to engage in social and political activism. In 1969 Friedan was one of the founders of NARAL Pro-Choice America, an organization that advocates for abortion rights, and in 1971 she helped to found the National Women's Political Caucus.

Friedan authored six subsequent books, the last of which was a memoir. In her later books, she began to advocate for a broad movement for the working class, people of color, and gays and lesbians. She was a visiting professor at Columbia University, Temple University, and the University of Southern California. In the years just before her death, she worked with the Institute for Women and Work at Cornell University.

The Feminine Mystique remains a highly influential book, although much of its argument, focused on conditions in the 1960s, is now the source for more recent forms of feminism, and thus it is ironically both essential reading and dated. While her unflagging efforts on behalf of women focused attention on gender disparities, she

achieved notoriety in the women's movement by calling lesbian feminists "the lavender menace" because they provided an easy target for critics who prophesied the demise of the family. Although *The Feminine Mystique* was focused on the conditions of suburban mothers, one of her cofounders of the National Women's Political Caucus, Fannie Lou Hamer (1917–1977), was a key African American activist in the long and bitter struggle for civil rights in Mississippi and political recognition in the national Democratic Party.

The first extensively organized effort for women's rights occurred in the 1800s and early 1900s when women fought for the right to vote. Betty Friedan was an architect of the second organized effort in the 1960s.

SEE ALSO *Feminism; Feminism, Second Wave; Suburbs; Women and Politics; Women's Liberation; Women's Movement*

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Philo A. Hutcheson

FRIEDMAN, MILTON
1912–2006

Milton Friedman is best known for his influential contributions to monetary macroeconomics and for his strong advocacy of the role of free markets in solving social problems. The son of poor Jewish immigrants in New York City, Friedman was educated under a scholarship at Rutgers University, where his main influences were Arthur F. Burns and Homer Jones. Upon graduation in 1932 with a joint major in economics and mathematics, he was offered a tuition scholarship in economics at the University of Chicago, where he was a student of Frank Knight and Jacob Viner, among others. After an academic year in Chicago, Friedman received a fellowship to move to Columbia University, where he was taught by Harold Hotelling and Wesley C. Mitchell. In his third year as a graduate student he returned to Chicago as research assistant to Henry Schultz. Apart from an academic year as visiting professor at the University of Wisconsin (1940–1941), between 1935 and 1945 Friedman worked in Washington, D.C., and New York for the National Resources Institute (1935–1937), the National Bureau of Economic Research (NBER, 1937–1940), the Treasury Department (1941–1943), and the War Research Division of Columbia University (1943–1945). His Columbia doctoral dissertation was concluded at the NBER by 1940 as part of collaboration with Simon Kuznets on incomes from independent professional practice. However, its publication and Friedman's PhD were delayed until 1945 and 1946, respectively, because of a controversial result about the effect of monopoly powers on physicians' income. After a year as associate professor at the University of Minnesota, Friedman joined the faculty at the University of Chicago in 1946, replacing Viner as professor of economic theory. He became full professor in 1948, the same year he rejoined the NBER to carry out (together with Anna Schwartz) study of monetary factors in business cycles, a project that culminated with the Friedman-Schwartz 1982 volume *Monetary Trends in the United States and the United Kingdom*. Friedman continued to teach at Chicago until 1977, when he took up a position as senior research fellow at the Hoover Institution at Stanford University. In 1951 he received from the American Economic Association the John Bates Clark Medal, and in 1976 was awarded the Nobel Memorial Prize in economics.

CONSUMPTION AND UTILITY

Friedman's early contributions grew out of his statistical research of incomes and consumer expenditures carried out in the 1930s; these include the development in 1937 of a nonparametric significance test for ranked data, and the research that led to his 1945 book with Kuznets. That book introduced the concepts of permanent and transitory income, which would be the focal point of Friedman's 1957 econometric exercise in the *Theory of Consumption Function*. Friedman's hypothesis that permanent aggregate consumption is a function of permanent (in the sense of long-term expected) income was a solution to Kuznets's empirical findings that, contrary to prevailing Keynesian models at the time, the average propensity to consume does not decline with rising income. The permanent income hypothesis has had a profound impact on empirical work on the consumption function and other fields, despite its implicit treatment of lifetime as infinite, which makes it unsuitable to deal with optimization over the expected life of the economic agent. It was a crucial element of Friedman's overall attack on Keynesian economics because it implied (1) strong criticism of the so-called Keynes-Hansen secular stagnation thesis (which depends on the assumption of a rising saving-income ratio); (2) rejection of Keynesian unemployment equilibrium, on the basis of the introduction of wealth into the consumption function and by that of the

positive effect of price reduction on consumers' expenditure; and (3) dismissal of the assumption that consumption is a stable function of current income, which undermined the stability of the Keynesian multiplier. Another important contribution by Friedman to the pure theory of statistics and decision-making was his 1948 essay (with Leonard Savage) on the implications of the von Neumann-Morgenstern cardinal utility function for risky choices, which influenced the development of portfolio selection theory. Friedman and Savage showed that choice under uncertainty could be represented by a process of maximizing expected utility, which allowed them to explain the simultaneous practice of gamble and insurance under some assumptions.

QUANTITY THEORY OF MONEY

Although monetary theory and policy had attracted Friedman's attention since his discussion of the inflationary gap at the Treasury Department in the early 1940s, it was only after the 1950s that money became the main topic of his research agenda, especially with the start of the Chicago Workshop on Money and Banking, set up by him in 1951. The first product of that workshop was the 1956 volume of *Studies in the Quantity Theory of Money*, edited by Friedman. The book opened with his "restatement" of the quantity theory as a proposition about the empirical stability of the demand for real money balances in relation to a few arguments, including income. Friedman's claim that his approach to money demand—as the outcome of the agents' portfolio decision about how to allocate their wealth among alternative assets—was in tune with the Chicago quantity theory tradition was challenged, however, by Don Patinkin and other commentators. In any event, Friedman's point that the velocity of circulation of money is determined mainly by changes in real income represented an alternative to the prevailing Keynesian income-expenditure mechanism based on the stability of the investment multiplier. It led to Friedman's proposition that substantial changes in prices or nominal incomes are the result of changes in the nominal supply of money. The empirical investigation of that claim was the object of Friedman and Schwartz's *Monetary History* (1963), the first of their books for the NBER. That book is the most important contribution to the "monetarist" approach to the business cycle, and it followed the NBER founder Wesley Mitchell's practice of extracting cycles and trends from detailed time series. It is also congruent with Friedman's emphasis on testing the empirical implications of theories, worked out in his influential 1953 essay on the methodology of positive economics. Friedman and Schwartz examined individual episodes in U.S. monetary history to establish the determining causal influence of changes in money stock on prices and economic activity. In particular, they put forward an explanation of the Great Depression (1929–1933), alternative to the Keynesian one, as the consequence of inept policy responses by the Federal Reserve to the contraction in money supply brought about by bank failures and rising currency/deposit and reserve/deposit ratios.

NATURAL RATE OF UNEMPLOYMENT

Apart from the primacy of exogenous monetary impulses, another main element of Friedman's monetary economics is the stress on the role of expectations in the transmission of monetary changes to nominal and real variables. Although the theme of expectations already could be found in his writings in the 1950s and early 1960s, it was only after his 1967 seminal presidential address to the American Economic Association that the distinction between expected and unexpected values of variables became prominent. Friedman argued that the trade-off between inflation and unemployment measured by the traditional Phillips curve is a temporary phenomenon that disappears in the long run, once inflation becomes anticipated by economic agents (1968). Friedman coined the phrase *natural rate of unemployment* to express the notion that monetary authorities are only able to keep the current unemployment rate below its long-term equilibrium level if inflation is accelerating—the "natural rate" is the rate of unemployment (determined by real factors such as labor mobility, etc.) at which inflation is nonaccelerating and agents' expectations about the value of real variables (such as real wages) are fulfilled. In contrast with his other contributions to monetary economics, the natural rate of unemployment hypothesis was not subjected to empirical testing by Friedman, in part because his definition of the concept is not fully operational, as argued by Frank Hahn and others. As it happens, some key elements of Friedman's 1967 address could be found already in David Champernowne's 1936 critical reactions to J. M. Keynes's *General Theory*. The real wage rate that workers would demand if they forecast future prices correctly was called the *basic real wage* by Champernowne, and the corresponding unemployment level was termed the *basic unemployment rate*, just like Friedman's *natural rate*. According to Champernowne, the rate of price change will accelerate if actual unemployment differs from its "basic" value, which will bring it back to its long-run value through the effect of inflation (or deflation) acceleration on the setting of the interest rate by monetary authorities.

MONEY GROWTH RULE

The implications of Friedman's theoretical and empirical monetary studies for the operation of monetary policy were worked out in his 1959 *Program for Monetary*

Stability and in essays collected in 1969. One of his main empirical findings was that monetary changes affect output and prices with a long, variable, and unpredictable lag; this is behind his skepticism of the stabilizing role of discretionary monetary policy. Instead, Friedman argued—coherently with the Chicago tradition of Henry Simons and others—for a fixed rule to expand the money supply by a constant and known annual percentage. As Friedman was aware, such a rule could only be implemented with a system of flexible exchange rates, which had been advocated by him since the early 1950s on the grounds that flexible rates would lead to a more efficient process of adjustment of the balance of payments. At first, Friedman suggested that the rate of growth of money supply should aim at the stabilization of the price level (around 4%), but he later claimed that, from a purely economic-welfare perspective, the optimal money stock should grow at such a rate (around 2%) to bring about a rate of deflation equal to the rate of return of real capital. This would mean, in long-run equilibrium, that the private marginal cost of holding real cash balances (the nominal rate of interest) is the same as its social marginal cost (zero), a Pareto optimum situation. Whereas Friedman's notion of an optimum money supply was primarily of theoretical interest, his more general point—that the main feature of the money growth rule is not the growth rate itself but the adoption of some fixed rate that would produce some known and steady moderate inflation or deflation—has influenced central banks, especially in the monetarist experiments carried out between 1979 and 1982 in the United States and during Margaret Thatcher's premiership in the United Kingdom. Those experiments and their results were highly contended, however, as a result of the instability of the demand for money following financial deregulation and the weak link between money growth and inflation in the 1980s. Moreover, the publication of Friedman's last important work on money at about that time (Friedman and Schwartz 1982) raised strong criticism of their empirical analysis of the relation between money, income, and prices in the United Kingdom (Hendry and Ericsson 1991).

INFLUENCE AND CRITICAL REACTIONS

Despite the intense controversies that surrounded Friedman's monetary economics in the 1960s and 1970s—especially the criticism by James Tobin and others that he had not succeeded in specifying the mechanism of transmission from money to output and prices (Gordon 1974)—it is true that many of his propositions became by the end of the twentieth century part and parcel of macroeconomic theory and policy, even if they are not always explicitly associated with his name. These include the notion that monetary policy should target nominal quantities (such as inflation) instead of output and employment, as well as the view that it is usually a more potent tool for economic stabilization than fiscal policy. It is worth noting that although Friedman's emphasis on the role of the market and limits to state intervention in the economy, plus his rejection of activist macroeconomic policies, are shared with "Austrian economics" (theories espoused by, for example, Friedrich von Hayek, Ludwig von Mises, and Murray Rothbard), his relationship with that group of economists has been difficult. Friedman's restatement of the quantity theory of money approach to monetary economics was partly motivated by his perception that, in contrast with the Chicago tradition of Simons, Viner, and others, Austrian economists (called "London School" by Friedman) are mistaken in their argument that depressions should not be avoided because they are the inevitable result of the prior boom. For their part, the Austrian economists have criticized Friedman's monetary economics for overlooking the role of intertemporal coordination failures and relative price changes in the business-cycle mechanism. They have also rejected Friedman's credential as the leader of free-market economics because, in their view, some of Friedman's proposals—such as the maintenance of government control over the money supply, state support of education by vouchers redeemable at private schools, guaranteed annual income through a negative income tax—indicate that he has intended to make the state more efficient, rather than just to remove it from the economic realm.

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Mauro Boianovsky

FRIENDSHIP

Friendships are enormously important in the lives of most people. Having good, mutually responsive friendships has been associated with better physical and mental health, higher self-esteem, and greater feelings of self-worth.

NATURE OF FRIENDSHIPS

What *are* friendships? Different researchers have emphasized features such as loyalty, trust, voluntary interdependence, proximity-seeking, and idiosyncratically thinking about and responding to one another. All these features are important, but most significant is the fact that friendships are normatively characterized by adherence to a communal norm. That is, friends are expected to be mutually responsive to one another's welfare by providing help, supporting one another's goal strivings, and including one another in enjoyable activities. Importantly, such responsiveness ought to be given voluntarily and it should occur on a noncontingent rather than a tit-for-tat basis. Indeed, research has demonstrated that observers are more likely to infer friendship when people give and accept noncomparable rather than comparable benefits, and when they split restaurant bills evenly rather than according to exactly who has ordered what.

Other relationships besides friendships also are normatively communal—romantic or spousal, parent-child, and sibling relationships. What, then, distinguishes friendships from these other relationships? We contend that friendships are communal relationships that also are nonexclusive, nonfamilial, and normatively nonsexual (although research indicates that some people engage in sexual contact with others whom they consider to be "just friends"). Friendships also are different in that there are no strong social prescriptions, legal obligations, or mutual investments holding them together. Interdependence theory therefore suggests that commitment in friendships is more voluntary than in other types of communal relationships, and that friendships may both form and fade with less fanfare than other communal relationships.

Whom do people choose as friends? Researchers have studied this topic extensively and have found several reliable predictors of friendship. For both children and adults, functional propinquity, or likelihood of mutual contact, is a basic and potent predictor of friendship choice. People

simply have more opportunities to develop friendships with others whom they encounter regularly. According to the similarity-attraction principle, similarity is another powerful predictor of friendship. Indeed, research offers considerable support for the maxim, "birds of a feather flock together." People like others who are similar to them in terms of attitudes, values, race, and socioeconomic status. This may be because it is reinforcing to interact with others who agree with them, and because there is an increased likelihood of contact among those who are similar. Relevant to the former possibility, recent research has shown that people are especially likely to feel close to others with whom they share a negative attitude about another person. Relevant to the latter, research suggests that students in racially diverse schools are more likely to have cross-race friendships than those from more homogenous schools. One additional predictor of friendship is assumed reciprocity of liking. Both children and adults like others whom they think like them.

There is also some evidence for the maxim that "opposites attract." For example, self-evaluation maintenance theory suggests that people feel most comfortable with and find it easiest to be communally responsive to peers who excel in performance domains that are distinct from those domains about which they themselves care, and within which they themselves excel.

DIFFERENCES IN FRIENDSHIPS

Developmental research has emphasized the notion that friendship changes across the lifespan. Young children define friends as people with whom they spend time and engage in joint activities. For them, a primary goal of friendship is spending play time together. Older children begin to define friends based on interpersonally relevant traits and behaviors. To adolescents and adults, intimacy and self-disclosure are defining features of friendship, and a primary goal of friendship is meaningful conversation.

Researchers have long been interested in sex differences in friendship. Many have argued that female-female friendships are more intimate than male-male friendships. This was considered a truism for quite some time, and there is evidence to support this idea. Female friends talk with one another more than do male friends, and male friends perform joint activities with one another more than do female friends. Furthermore, when men do talk in their friendships, there is a greater tendency for their conversational topics to revolve around activities. Women, in contrast, tend to share feelings more directly and to talk more explicitly about their relationships. Several studies indicate that male-female friendships are more similar to female-female than male-male friendships, however. So, men might rely more on female than male friends for self-disclosure and intimacy. The idea that men's friendships are less intimate is no longer uncontroversial, however. Several researchers have pointed out that the very definition of intimacy might be different for men and women. Others have raised the question of whether men are incapable of being more intimate, choose to be less intimate, or achieve intimacy through means other than self-disclosure. No matter whose relationships are most intimate, recent research has suggested that both men and women identify intimacy as a central component of friendship. Some research also suggests that women engage in joint activities and men self-disclose more than earlier evidence indicated. It may be the case that any differences between male and female friendships are matters of degree rather than qualitative differences.

As stated earlier, people are more likely to befriend members of their own racial and ethnic groups. Once friendships are formed between people from different racial or ethnic groups, there is a tendency for these friends to engage in fewer shared activities than same-race or same-ethnicity friends. The types of activities in which people engage are similar regardless of racial composition, however. Like sex differences, race differences in friendship may be more quantitative than qualitative.

Considering the importance of friendships for everyday life, one could argue that the topic is underrepresented in the social scientific literature. This is particularly true of the literature on adult relationships, which tends to emphasize romantic relationships. Research on children and adolescents, however, has placed a comparatively greater emphasis on friendships. Fortunately, the adult literature has begun to catch up in recent years. The future holds a number of exciting possibilities for research on friendship. In addition to continuing to elucidate basic friendship processes, researchers are increasingly investigating issues such as cross-cultural differences in friendships, the nature of long-distance friendships, and the nature of friendships formed in an online context or "e-friendships."

SEE ALSO *Men; Parent-Child Relationships; Romance; Sibling Relationships; Women*

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FRISCH, RAGNAR
1895–1973

The Norwegian economist Ragnar Frisch was a dominant force in the development of economics during the interwar period of the 1920s and 1930s. He pioneered the use of quantitative methods encompassing three fields of analysis: economic theory, mathematics, and statistics. Economists drew on these three areas to develop the specialized field of econometrics. Frisch continued to build this field of study after World War II (1939–1945) until his death in 1973. He was honored in 1969 with the Nobel Prize in Economics, which he received jointly with Jan Tinbergen (1903–1994) of the Netherlands, who was also a European pioneer in the field of econometrics.

Frisch's main contributions were in developing statistical and mathematical analysis of several branches of economics. He estimated production and demand relationships, theoretical mathematical models of economic cycles, and systems of international trade. Together with Joseph Schumpeter (1883–1950) of Harvard, Irving Fisher (1867–1947) of Yale, and many other leading scholars from Europe and the United States, Frisch influenced Alfred Cowles (1891–1984) to help finance the launching in 1930 of the Econometric Society and in 1933 of its journal, *Econometrica*, which was to become a leading scholarly publication. The Econometric Society remains a strong international force in many branches of economics.

Tinbergen's statistical models of the dynamic fluctuations of national or world economies constitute one path of econometric research that flourishes today, and Frisch's theoretical economic models, statistical archives, and estimation methods form a different path for understanding the working of economic systems. Frisch's model was, at an early stage, called an *ecocirc* system. It expanded a line of thinking that grew out of his celebrated article "Propagation Problems and Impulse Problems in Dynamic Economics" (1933), which shows how continuing external random shocks to an economy can propagate regular, maintained cycles that could otherwise fade away.

Students of Frisch became important in Norwegian and international organizations and institutions. Trygve Haavelmo (1911–1999), a favored student of Frisch, became a Nobel laureate in 1989. During the Great Depression, Frisch delivered radio addresses and published articles on economic policies to improve the Norwegian economy. His recommendations anticipated some of the proposals made by John Maynard Keynes (1883–1946) for the United Kingdom, the United States, and other European economies.

During World War II, Frisch was imprisoned in a German-controlled camp, Grini, where many intellectuals and senior Norwegian officials were held. Soon after his release, he visited the Cowles Commission at the University of Chicago, where Haavelmo and others were actively engaged in econometric analysis using many of Frisch's ideas. Frisch turned his attention in the postwar years not only to Norwegian and international economic systems, but also to economic development problems of comparatively poor countries. During this time he visited India, where he interacted with Indian economists and political leaders. Frisch continued to work on his ecocirc system, training Norwegian students and colleagues to deal with expanded subsystems for an enlarged master plan, but he did not complete his overall project—to build a complete economic accounting and planning system. In a larger framework, after World War II, he was inspired by the input-output analysis of Wassily Leontief (1906–1999), the social accounting systems of Richard Stone (1913–1991), and international trade matrices developed at the United Nations, where he consulted on applied economic analysis. Frisch also maintained a deep interest in bee populations and felt that the development of bees and their products was helpful in understanding the economic development of human populations. He was proud of their fine honey output as well.

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Lawrence R. Klein

FROBENIUS-PERRON THEOREM

SEE *Eigen-Values and Eigen-Vectors, Perron-Frobenius Theorem.*

FROMM, ERICH

1900–1980

Born in Frankfurt, Germany, in 1900, Erich Fromm was affiliated with the Institute for Social Research, later known as the "Frankfurt school," from 1928 to 1938. Trained in psychoanalysis, Fromm combined Freudian psychology with Marxian social theory. In his early essays he indicates the common dialectical and materialist elements in Marx and Freud and applies his Marxian social psychology to interpret such phenomena as religion, the sadomasochistic roots of the authoritarian personality, and the dominant bourgeois character types.

Forced to flee from Nazi Germany in 1933, Fromm settled in the United States and lectured at the New School of Social Research, Columbia University, Yale University, and Bennington College. In the late 1930s Fromm broke with the Institute of Social Research, and with *Escape from Freedom* (1941) he began publishing a series of books that won him a large audience in the United States and eventually throughout the world.

Escape from Freedom argued that alienation from soil and community in the transition from feudalism to capitalism increased insecurity and fear. Documenting some of the strains and crises of individualism, Fromm attempted to explain how alienated individuals seek gratification and security from social orders such as fascism. Protestantism, with its emphasis on individual salvation and damnation, increased individuals' fears and made them susceptible, he argued, to manipulation by social forces. Moreover, capitalism, with its emphasis on individual gain and harsh market competition, which mediated success and failure, also contributed to feelings of insecurity. Migrations from country to towns and factories, central to industrial modernity, created a new urban civilization that increased individuals' feelings of rootlessness and alienation.

In the late 1930s Fromm broke with the Frankfurt school, in part over his interpretation of Freud and in part over personality conflicts with key members such as Theodor Adorno (1903–1969) and Herbert Marcuse (1898–1979). Henceforth, Fromm went his own way, often appearing as a prophet in the desert of American affluence and consumerism as he attacked the "marketing orientation," the bourgeois proclivity to privilege having over being, and indeed the entire American system of institutions and values.

His post–World War II books, *Man for Himself* (1947) and *The Sane Society* (1955), applied Fromm's Freudian-Marxian perspectives to sharp critiques of contemporary capitalism. Fromm popularized the neo-Marxian critiques of the media and consumer society, and promoted democratic socialist perspectives during an era when social repression made it difficult and dangerous to advocate radical positions. Although his social critique was similar in many ways to that of his former colleague Marcuse, the two thinkers engaged in sharp polemics from the mid-1950s into the 1970s. Marcuse began the polemic by attacking Fromm as a neo-Freudian revisionist (Marcuse 1955, p. 238), and Fromm retaliated by calling Marcuse a "nihilist" and "utopian" (Fromm 1970, p. 62). Marcuse claimed that Fromm's emphasis on the "productive character" simply reproduced the "productivism" intrinsic to capitalism, and that his celebration of the values of love, in books such as *The Art of Loving* (1957), and religion simply reproduced dominant idealist ideologies (Marcuse 1955, p. 258).

Fromm was a prolific writer up until his death in 1980, publishing a series of books promoting and developing Marxian and Freudian ideas. He was also politically active, helping to organize the National Committee for a Sane Nuclear Policy in 1957 and engaging in early "ban the bomb" campaigns, as well as participating in the U.S. antiwar movement of the 1960s. Fromm continued to argue for a humanistic and democratic socialist position, and claimed that such elements were intrinsic in Marxism. His many books and articles had some influence on the New Left and continue to be read and discussed today.

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Douglas Kellner

F-STATISTIC

SEE *Test Statistics.*

F-TEST

SEE *Test Statistics.*

FULL CAPACITY

Full capacity refers to the potential output that could be produced with installed equipment within a specified period of time. Actual capacity output can vary within two limits: (1) an upper limit that refers to the engineering capacity—that is, the level of output that could be produced when the installed equipment is used to its maximum time of operation and maximum technical efficiency; and (2) a lower limit identified with the scrapping of plant and equipment—that is, the level of output that is no longer profitable to produce. By full (or normal) capacity at the microeconomic level, economists refer to the level of output that corresponds to minimum cost production, usually identified with the minimum point of a usual U-shaped average cost curve. Before this point, we have economies of scale that firms would be willing to take advantage of by expanding their output. Past this point, firms encounter diseconomies of scale that they would like to avoid by cutting down their level of production. The problem with this definition is that such a minimum point is hard to identify empirically. Furthermore, the average cost curves in manufacturing are usually characterized by constant returns to scale for fairly large variations in the output produced, and so full (normal) capacity is identified with the level of output past which the firm considers the installment of a new plant. Consequently, normal output is conceived differently in the various schools of economic thought.

Starting with the classical economists, full or normal capacity is identified with the level of output where the forces of demand and supply are equal and the production technique along with the distributive variables (i.e., the real wage and the rate of profit) are taken as givens. Hence, normal capacity is different from engineering capacity in the sense that it takes into account economic considerations. Consequently, normal or full capacity will equal a certain percentage of maximum engineering capacity simply because it does not pay to use the plant and equipment past this percentage point, even though engineering-wise such a use would be possible. It is important to point out that full capacity in classical economics is restricted to capital. The idea is that the purpose of production is the extraction of profits as an end in itself, so the primary concern of entrepreneurs is the full employment of their capital, while labor simply adjusts to the requirements of capital regardless of the level of unemployment. In short, full capacity may be accompanied by considerable unemployment of labor.

For neoclassical economists, full capacity is identified with both the full employment of capital and the full employment of labor. Full capacity is expected to prevail in the economy in the long run, and any deviations from full capacity are attributed to external economic shocks that may displace the actual output away from the full capacity output. However, neoclassical economics claims that if the price mechanism works freely it is expected that sooner rather than later the actual level of output will be restored back to its optimal level.

A characteristically different view was propounded by John Maynard Keynes (1883–1946), who argued that the unemployment of capital may coexist with the unemployment of labor, precisely because of the failure of the market system to generate effective demand sufficient to fully employ all the factors of production. Keynes further argued that once the economy finds itself in such a situation it stays there, since aggregate demand and aggregate supply are equal to each other. Output and therefore employment of both capital and labor can change through variations in aggregate demand induced by government intervention, and in this way the economy may reach a point that is consistent with the full capacity of both capital and labor. In the Keynesian perspective, prices do not play a role because of the assumption of constant returns to scale.

Modern macroeconomic approaches envisioned a novel concept of full capacity identified with the level of output at which there are no pressures for the acceleration or the deceleration of the inflation rate. Furthermore, the rate of capacity utilization defined as the ratio of actual output to the full capacity output has established, at least for the U.S. and Canadian economies, a benchmark capacity utilization rate that is consistent with a stable inflation rate. This concept came to be known with the acronym NAICU, that is, the nonaccelerating inflation capacity utilization rate, which is supposed to be more general than the currently more popular nonaccelerating inflation rate of unemployment known as the NAIRU, which is restricted to the employment of labor alone. Full capacity output is identified on the basis of survey measures for the U.S. and Canadian economies and is associated with a rate of capacity utilization approximately equal to 82 percent of potential output. The empirical evidence for the years before the mid-1990s has been supportive of this hypothesis for both the U.S. and the Canadian economies, but this hypothesis lost part of its explanatory force in the post-1990 years. These rather negative results raised doubts about the official measurement of potential output based on surveys, and encouraged research in the development of alternative measures of the full capacity output.

There are various methods for the estimation of potential output that can be distinguished between those

based on economic theory and those that are not. Economic measures include those derived from the use of production or cost functions. More recently, there have been measures developed based on the use of econometric techniques such as the cointegration and the structural vector autoregressive models. Noneconomic measures include various statistical methods starting from peak-to-peak measures of capacity output to simple moving averages and sophisticated filtering techniques. Finally, among the atheoretic measures of capacity output, the approach based on surveys is the most popular and is conducted in many countries. The survey measures of capacity output of the U.S. Federal Reserve Board is the oldest one and is based on a nationwide survey where the managers of manufacturing firms are asked to identify "the maximum level of production that their establishment could reasonably expect to attain under normal and realistic operating conditions, fully utilizing the machinery and equipment in place." Despite the subjective content of the responses, surveys are used extensively in economic research and also for economic policy purposes.

Today there are many estimating methods of measurement of capacity output; nevertheless, full capacity output continues to be a slippery concept and, therefore, remains controversial within economic theory, attracting the attention of economists, who in spite of the recognition of its unquestionable theoretical significance and practical importance nevertheless are still far from reaching any agreement as to the adoption of a single estimating method.

SEE ALSO *Capital; Economics, Keynesian; Economics, Neoclassical; Full Employment; Keynes, John Maynard; Machinery*

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Lefteris Tsoulfidis

FULL EMPLOYMENT

In a market economy, a resource is employed when engaged, in exchange for monetary payment, in the production or sale of goods and services. Therefore *full employment* refers most broadly to employing all the available resources—the productive land, labor, and capital—on hand at a certain time and place. More often, however, full employment refers to the full utilization of *labor* inputs. The term *full employment* is closely connected to the concept of unemployment, and achieving a broad appreciation of these intertwined notions requires a historical look at both economic theory and public policy.

ECONOMIC THEORY

Macroeconomics, the study of national economic systems, is the realm of economics devoted to studying full employment and unemployment. Prior to the 1936 publication of John Maynard Keynes's *The General Theory of Employment, Interest, and Money* (written as a response to the mass unemployment of the Great Depression), macroeconomics did not exist apart from the broader discipline of economic theory.

When Keynes published *The General Theory*, most economists believed that market economies were self-adjusting systems that usually operated at full employment and would, on their own, return to full employment after a period of adjustment to external disturbances. Keynes disagreed. "The evidence indicates that full, or even approximately full, employment is of rare and short-lived occurrence" (Keynes 1964, pp. 249–250). Thus *The General Theory* was offered to contrast Keynes's ideas about unemployment with the view of the period's conventional economists, which he called *classical* economic theory.

According to classical economics, there is no reason for the *involuntary* unemployment of workers. In this type of economics, wages adjust to equate workers' supply of labor and employers' demand for labor. The result is a state of "full employment," though this does not mean that all workers will be continuously employed. In fact classical economic theory allows for three forms of "voluntary" unemployment in a full-employment economy. (This discussion of full employment and unemployment in economic theory draws on Galbraith and Darity [1994]. Readers interested in a more detailed discussion of the theoretical perspectives discussed in the present essay should consult that volume; most macroeconomics texts offer similar analyses.)

In classical theory, unemployment can exist when a worker moves between jobs, refuses to accept work at the market wage rate, or is prevented from taking a job because of a social decision that keeps wages above their equilibrium level. The first situation describes what is called *frictional* unemployment and is considered "voluntary" because classical theory assumes that a job is available for that worker at the equilibrium wage rate. (To be more precise, the key wage of interest to classical econo-

mists is the "real" wage, which is the actual or "nominal" wage adjusted for paycheck purchasing power by taking into account the general level of prices.) The second situation is viewed as voluntary because the unemployed person could find work by lowering his or her "reservation" wage and accepting employment at a lower than desired level of pay. The third situation, which exists when a collective-bargaining agreement or minimum-wage law sets a wage above the market rate, is considered voluntary because society as a whole could remove the institutions that interfere with market forces.

In *The General Theory*, Keynes shifts attention from the labor market to the economy as a whole. Since Keynes argued that the total level of employment is a by-product of supply and demand for economic output as a whole, he focused on what determines the economy's equilibrium level of overall output. The key, he concluded, is total or "aggregate" spending by households, firms, and government (excluding considerations of international trade).

According to Keynes, the economy's equilibrium output is achieved when aggregate spending (called aggregate demand) absorbs the income earned (called national income). Since this can occur at any number of levels of income, aggregate demand is the crucial determinant of national output and employment. While classical economists focused on labor-market dynamics and assumed that the labor-market always yields employment equilibrium consistent with equilibrium in the overall economy, Keynes argued there is no reason to assume these equilibriums will be compatible. Thus Keynesian economics maintains that the economy could remain indefinitely at a total level of employment that is far below the full-employment level that labor-market considerations alone would generate. In Keynesian theory, there is *involuntary* unemployment whenever overall economic equilibrium generates a level of employment that falls below the labor market's market-clearing, "full-employment" level.

Here it is worth noting a difference regarding how full employment is described in "Keynesian economics" and in a portion of Keynes's *The General Theory*. In Keynesian economics, although there is no necessary connection between the equilibrium employment level generated by aggregate economic activity and the labor market's "full-employment" level, the labor market can at least be considered a conceptual benchmark, "telling us whether or not we are at full employment" (Galbraith and Darity 1994, p. 147). In a portion of *The General Theory*, however, there is no resort to full employment as this sort of conceptual notion (Keynes 1964, p. 26). Rather, full employment is a much more empirical construct: It exists when an increase in aggregate demand fails to result in more employment. James K. Galbraith and William Darity explain the latter view as follows: "If an expansion of aggregate demand … leads to a higher level of employment, then involuntary unemployment prevailed prior to the expansion. If not, then the economy already was at full employment" (Galbraith and Darity 1994, p. 33).

Keynesian economics (and Keynes's *The General Theory*) suggests that closing the gap between actual and "full" employment involves boosting aggregate demand via fiscal or monetary policy. The problem, however, is that such macroeconomic policy alone often yields inflation, as economists recognized in the 1960s. At first Keynesians explained the "trade-off" between unemployment and inflation with reference to the Phillips curve, which plots inflation against unemployment for various moments in time and showed an inverse relationship between inflation and unemployment. This curve fit less neatly as an account of the 1970s, however, bolstering an emerging anti-Keynesian movement that eventually produced what is now called New Classical macroeconomics.

Edmund Phelps and Milton Friedman, whose work in the late 1960s suggested that there is no long-run trade-off between unemployment and inflation, offered an early challenge to Keynesian theory. The Phelps-Friedman analysis treats the long-run Phillips curve (again, inflation plotted against unemployment) as a vertical line rising upward from the "natural rate of unemployment." Moreover the "long run" here does not require a vast period of time. Rather, government efforts to boost aggregate demand will increase inflation without reducing unemployment *whenever workers correctly (observe or) expect an increase in prices and insist on an offsetting wage increase.*

The doctrine of the natural rate of unemployment is a strong argument against activist macroeconomic management in pursuit of greater employment. In fact the Phelps-Friedman theory indicates that the result of such activism would be higher *and accelerating* inflation. According to their theory, the main way to reduce unemployment is to raise the rate of labor productivity growth, but since productivity growth stalled during the 1970s, economists' estimates of the natural rate rose during that decade—from about 5.4 percent in the late 1960s to just over 7 percent in the late 1970s (Bennett 1997, p. 275).

The natural rate of unemployment (which in the early twenty-first century is often called the "non-accelerating inflation rate of unemployment") is widely believed to have fallen since the 1970s, but the precise rate is not really that important in New Classical macroeconomics. That is because New Classical theory restores the pre-Keynesian belief in an equilibrium alignment of the labor market and the overall economy. As a result of a notion called "rational expectations," New Classical economics assumes that most observed variations in the unemployment rate are simply changes in the natural rate; since the only exceptions are temporary and random employment

fluctuations in response to surprise events (such as a hike in the price of oil), the economy is, in effect, *always* at full employment. New Classical theory restores the laissez-faire viewpoint that dominated pre-Keynesian economics.

Among the contemporary economic theorists who have attempted to revive portions of Keynes's macroeconomic policy insights are New Keynesians and Post-Keynesians. New Keynesians accept much of New Classical theory but introduce a number of reasons why wages—nominal wages in some cases and real wages in others—might nonetheless fail to adjust to ensure full employment. The result is a role for government to raise employment by removing wage rigidities or, at least temporarily, by increasing aggregate demand. While most New Keynesians explain unemployment in terms of sticky wages, some offer an explanation rooted in price inflexibility. See, for example, the discussion of New Keynesian economics in Galbraith and Darity's *Macroeconomics* (1994, pp. 315–319).

Post-Keynesians go further than New Keynesians and reject the notion that wage levels are a significant determinant of employment. Indeed, unlike most New Keynesians, they argue that efforts to make wages more flexible can actually worsen unemployment. Like Keynes, meanwhile, Post-Keynesians emphasize the role of aggregate demand, which they see as liable to sudden fluctuations as a result of volatility in the expectations governing investment. Post-Keynesian theory indicates that the state has an inescapable role to play in stabilizing the economy and maximizing employment by judiciously managing the level and composition of public spending (Pressman 2001, pp. 104–111).

PUBLIC POLICY

In response to the Great Depression, a number of economists in the United States and the United Kingdom offered policy-oriented volumes that presented strategies to achieve full employment. Among the most well known is William H. Beveridge's *Full Employment in a Free Society* (1945). Other early books on full employment include Mordecai Ezekiel, *Jobs for All through Industrial Expansion* (1939), and John H. G. Pierson, *Full Employment* (1941). Beveridge defined full employment as follows: "It means having always more vacant jobs than unemployed [workers]. It means that the jobs are at fair wages, of such a kind, and so located that the unemployed can reasonably be expected to take them; it means, by consequence, that the normal lag between losing one job and finding another will be very short" (Beveridge 1945, p. 18).

Beveridge gave the public sector responsibility for influencing and supplementing private activity so as to achieve and sustain full employment. He outlined a three-pronged policy attack on joblessness: There must be enough jobs; industry must be encouraged to locate facilities with an eye to matching job opportunities to labor force skills; and workers must be provided with job vacancy information, relocation assistance, and perhaps even training or job-placement assistance. An annual public budget with outlays in five categories was identified as the main government tool: (1) funds for roads, schools, and other public goods; (2) investments in rail transit systems and other government-owned industries; (3) loans and other incentives to promote private investment (coordinated by a national investment board); (4) subsidies that reduce prices for essential consumer goods; and (5) income-redistribution programs, such as social security, to ensure robust consumer spending.

In 1946 the U.S. Congress passed the Employment Act, proposed by legislators with a view similar to that of Beveridge. According to the legislation, "It is the continuing policy and responsibility of the Federal Government … to promote maximum employment, production and purchasing power." The Employment Act included provisions establishing the Council of Economic Advisers to the President and requiring an annual Economic Report of the President, designed to track trends in economic performance, review existing economic policies, and recommend policy changes that would better enable the government to achieve its objectives (Bailey 1950, pp. 227–232).

In policy circles, a distinction has long been drawn between three forms of unemployment: frictional, cyclical, and structural. As mentioned above, frictional unemployment exists when workers are between jobs. Cyclical unemployment exists when aggregate demand is insufficient to hire all who are actively searching for work. And structural unemployment exists when there is a skill or geographic mismatch between available workers and unfilled jobs. In the early 1960s the Council of Economic Advisers set an average annual unemployment rate of 4 percent as an "interim target," reflecting their belief that this level was consistent with tackling cyclical unemployment. These and other economic analysts also believed that unemployment could fall further by means of worker training and additional efforts to attack structural and frictional sources of joblessness (Galenson 1966; Gordon and Gordon 1966).

By the mid-1970s, however, the U.S. unemployment rate exceeded 7 percent, leading a frustrated Congress to revise the Employment Act through passage of the Full Employment and Balanced Growth Act in 1978. The new law provided stronger language by substituting "full employment" for "maximum employment" as the nation's employment objective and mandated a 4 percent unemployment rate as the country's primary economic goal. However, in the absence of a requirement that the public sector must serve as "employer of last resort" when citizens are unable to find work, the 1978 change proved to have

little practical impact on economic policy and performance.

Behind the U.S. employment legislation of 1946 and 1978 was a policy debate that continues in the early twenty-first century—a debate over whether citizens should have a publicly guaranteed right to a job. Whether there should be a "right to work" has long received academic and public attention, but President Franklin D. Roosevelt brought the issue to the fore in his 1944 State of the Union Address. In that speech, Roosevelt stated that the nation must be guided by a "second Bill of Rights," including "the right to a useful and remunerative job" (Roosevelt 1944). (For a much earlier argument in favor of the right to employment, see John R. Commons [1899].)

A number of policymakers who worked on the 1946 and 1978 Employment Acts wanted to secure the right to employment by enabling the unemployed to turn to the federal government for some form of "public works" or "public service" employment. Since the Great Depression, such job opportunities have often been made available to the unemployed, usually on a rather limited basis, through various federal programs (such as the Works Progress Administration, created in 1935, and the Comprehensive Employment and Training Act of 1973). The current focus of U.S. employment policy, however, is on helping workers find training for private employment, and even that effort receives limited public funding. Public service employment and institutional mechanisms needed to establish government as the employer of last resort continue to receive attention from academics (Wray and Forstater 2004; Kaboub 2007), but these ideas have little backing from federal lawmakers.

SEE ALSO *Beveridge Curve; Business Cycles, Theories; Economics, Keynesian; Economics, New Classical; Economics, New Keynesian; Economics, Post Keynesian; Employment; Friedman, Milton; Full Capacity; Great Depression; Inflation; Involuntary Unemployment; Job Guarantee; Keynes, John Maynard; Monetarism; Natural Rate of Unemployment; Neutrality of Money; Phillips Curve; Unemployment; Unemployment Rate; Voluntary Unemployment*

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Charles J. Whalen

FULLER, BUCKMINSTER
1895–1983

Richard Buckminster "Bucky" Fuller defined himself as a "random element," and he has been described variously as an American visionary, architect, mathematician, inventor, designer, philosopher, and a "poet of technology" (Cruikshank 1981). He was the son of Richard Buckminster Fuller (who died when he was 12 years old) and Caroline Wolcott Andrews. He grew up in Maine and attended Milton Academy in Massachusetts. Later he was expelled twice from Harvard University. In his youth, he worked as a mechanic in a textile mill and as a laborer in a meatpacking plant. In 1917 he married Anne Hewlitt. After serving in the navy during World War I, Fuller and his father-in-law, the architect James Monroe Hewlitt, developed a company that produced lightweight, weatherproof, fireproof structures, but the company was unsuccessful and by 1927 Fuller was 32, bankrupt, and jobless. Living in substandard housing in Chicago, Fuller's young

daughter, Alexandra, died of a contagious disease. Fuller blamed himself, became suicidal, and contemplated jumping into Lake Michigan, but he was saved by an epiphany that he should devote himself fully to the betterment of all humanity. He spent a year without speaking as a discipline to focus his thoughts.

Fuller published *Shelter* magazine in the 1930s. He was science and technology consultant for *Fortune* magazine from 1938 until 1940, then lectured at numerous universities, including Harvard and the Massachusetts Institute of Technology, and in the late 1950s he became a professor at Southern Illinois University, where he and Anne lived in a geodesic dome. In 1972 he was named "World Fellow in Residence" to a consortium of universities in Philadelphia, including the University of Pennsylvania. He retained his connection with both Southern Illinois University and the University of Pennsylvania until his death.

Fuller is perhaps best known for his invention of the geodesic dome. The dome's design is based on "tensegrity" structures—tetrahedrons (triangular pyramids) and octahedrons (polyhedron with eight faces, resembling two pyramids attached at their bases). The geodesic dome is a perfect symbol to represent Fuller's life-long examination of nature's geometry. While Fuller was at Black Mountain College in 1948, using lightweight plastics he designed a small dome that became the first building that could sustain its own weight with no practical limits. Using his focus on nature, he had conceptualized that the natural analytic geometry of the universe is based on arrays of tetrahedra; independent research indicates that the strongest possible homogeneous truss is cyclically tetrahedral.

Fuller coined the word *Dymaxion* (from DYnamic MAXimum tensION) and used it when conceptualizing many of his works, including the Dymaxion map, which was the first map to depict the entire planet earth on a single flat surface without visible distortion of the relative shapes and sizes of the continents. Another feature of the map is that it can be reconfigured to put different regions at the center; this perspective supported his philosophy that people must consider the world's problems systemically rather than politically or regionally. His conceptualization of "spaceship earth" promoted the idea that the earth provides all that humans need in order to survive, but also that humans need to be wise stewards of these resources. He argued that we are all world citizens and that borders are arbitrary and typically unhelpful constructs. This philosophy led to the creation of his "world game," a simulation and series of workshops that Fuller designed using the Dymaxion map to teach players how best to use the earth's abundance.

Fuller devoted his life's work as to the optimal ways for humanity to survive successfully on earth. He coined the term *ephemeralization*, which refers to the tendency for contemporary technology to be replaced by much smaller, lighter, and more efficient technologies that offer multifunctionality. This was true to Fuller's basic philosophy of learning from nature and doing more with less and producing less waste. Fuller also introduced the concept of *synergetics*, which refers to holistic engineering structures in nature and the blending of complementary factors that result in a product greater than the sum of its parts.

Some of his other key concepts and inventions include:

- Dymaxion house (1928)
- Aerodynamic Dymaxion car (1933)
- Prefabricated compact bathroom cell (1937)
- Tensegrity structures (1949)
- Geodesic dome for Ford Motor Company (1953)
- Patent on octet truss (1961)

Fuller was nominated for several Nobel Prizes, and he received the Medal of Freedom (the highest national award given to a civilian) for his "contributions as a geometrician, educator, and architect-designer" and the Gold Medal award from the American Institute of Architects. He was awarded twenty-five U.S. patents and he received forty-seven honorary degrees. In 1991 *Science* magazine voted the Buckminsterfullerene the "molecule of the year." The Buckminsterfullerene molecule, which consists of 60 carbon atoms and very closely resembles a spherical version of Fuller's geodesic dome, was named in his honor.

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FUNCTIONAL FORM

A mathematical model involves an explicit set of equations that describe the relationships among the variables contained in the model. It is important to know not only which variables to include in the model, but also the proper functional forms of the mathematical equations. In the natural sciences, the functional forms are often known from the laws of nature. If a = acceleration, t = time, and d = displacement, the laws of physics dictate the functional form $d = at^2/2$. The problem of selecting the proper functional form is particularly difficult in the social sciences because the laws of human behavior are not as precise as the laws of nature. Moreover, the social sciences are not like the laboratory sciences, which allow for repeated experiments with the aim of determining the precise mathematical relationships among the variables.

Consider the general functional form for the case of two independent variables x_1 and x_2: $y = f(x_1, x_2, \varepsilon)$, where y is the dependent variable, x_1 and x_2 are the independent variables, and ε is the error term representing the variation in y not explained by x_1 and x_2. Although a particular theory might specify the signs of the partial relationships between y, x_1, and x_2, the form of the function $f()$ is typically unknown. The standard procedure is to posit a linear relationship and to estimate the coefficients a_0, a_1, and a_2 in the regression equation $y = a_0 + a_1x_1 + a_2x_2 + \varepsilon$.

The linear form can be viewed as a first-order approximation of the function $f()$. For many circumstances, such approximations can be quite useful. However, if the continued application of either independent variable has, say, diminishing effects on y, the linear approximation will be invalid when the change in x_1 or x_2 is large. Similarly, the linear approximation might be poor if the effect of x_1 on y depends on the level of the variable x_2.

A popular alternative to the standard linear model is to express some or all of the variables in logarithmic form. Consider (1):

$$\ln(y) = a_0 + a_1\ln(x_1) + a_2\ln(x_2) + \varepsilon_1 \quad (1)$$

This is equivalent to $y = c(x_1)^{a1}(x_2)^{a2}\varepsilon$, where $a_0 = \ln(c)$ and $\varepsilon_1 = \ln(\varepsilon)$

Notice that equation (1) is linear as a result of the logarithms, so the coefficients can be easily estimated using linear regression methods. Also, the coefficients have the straightforward interpretation that a_i (i = 1, 2) is the percentage change in y resulting from a 1 percent change in x_i.

Other popular specifications include those using powers of the variables and their products. In the two-variable case, a second-order approximation is (2):

$$y = a_0 + a_1x_1 + a_2x_2 + a_{11}x_1^2 + a_{22}x_2^2 + a_{12}x_1x_2 + \varepsilon \quad (2)$$

It is important to use the correct functional form to obtain unbiased and consistent coefficient estimates of the effects of the independent variables on the dependent variable y. One way to select the functional form is to use a general-to-specific methodology: Estimate a very general nonlinear form and, through hypothesis testing, determine whether it is possible to pare down the model to a more specific form. In equation (2), if a_{11}, a_{22}, and a_{12} are not significantly different from zero, it can be claimed that the linear form is more appropriate than the second-order approximation. When searching over many different functional forms, the usual t-tests and F-tests of statistical significance, as well as the usual measures of fit, such as R^2, are generally not appropriate, however. As one adds regressors and allows for more general functional forms, the fit of the regression to the data will necessarily improve. Moreover, since every sample has a few unusual observations, there is the danger that a general-specification search will lead to overfitting the data, in the sense of selecting an overly complicated functional form. Hence,

in a specification search of the most appropriate functional form, most researchers use the specific-to-general methodology: Estimate a simple model, and perform a number of diagnostic checks to determine whether the model is adequate. Then estimate a more complicated specification only if there is some sort of diagnostic failure. Some diagnostic tests, such as Ramsey's (1969) RESET, attempt to determine whether the regression's error terms are truly random. Others, such as Brown, Durbin, and Evan's (1975) CUSUM test, attempt to determine whether the regression coefficients are constant over the entire sample. Nonrandom errors and/or nonconstant coefficients indicate that the functional form of the estimating equation is incorrect.

Another method that can be used to select the most appropriate functional form is out-of-sample forecasting (in which the researcher holds back a portion of the observations from the estimation process and estimates the alternative models over the shortened span of data). Forecasts from the alternative models are compared to the actual values of the data held back. The model with the smallest forecast errors is deemed the best.

SEE ALSO *Regression*

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Walter Enders

FUNCTIONALISM

The term *functionalism* has been used in at least three different senses in the social sciences. In the philosophy of mind, functionalism is a view about the nature of mental states. In sociology and anthropology, functionalism is an approach to understanding social processes in terms of their contribution to the operation of a social system. In psychology, functionalism was an approach to mental phenomena that emphasized mental processes as opposed to static mental structures.

FUNCTIONALISM IN THE PHILOSOPHY OF MIND

Functionalism in the philosophy of mind was first systematically developed in the 1960s as a view about the nature of mental states such as sensations, beliefs, desires, and emotions. It arose in response to questions about the relation between mind and body, in the context of a debate between opposed views known as *dualism* and *materialism*. Dualism was defended by the seventeenth-century philosopher René Descartes (1596–1650), who held that minds were nonphysical substances that were not located in space and indeed had no physical properties at all. A major difficulty for dualists has been to explain how mental states, if they have no physical properties, can cause or be caused by physical states of a person's body. Materialists, by contrast, have held that there are no nonphysical substances, and that mental states are nothing more than physical states.

The best-known materialist views in the 1950s were *behaviorism* and the *identity theory*. Behaviorism as a theory of the nature of mental states is sometimes called *logical behaviorism* to distinguish it from behaviorism as a methodological view in psychology. According to behaviorism, mental states were simply tendencies to behave in certain ways under certain circumstances. Behaviorists thus rejected not only dualism, but also the commonsense view that mental states are internal states that are causes of behavior. Identity theorists, on the other hand, held that mental states were identical with states of the central nervous system. The identity theory appeared to rule out by definition the possibility that mental states could be present in any being that did not have a human central nervous system.

Functionalism was intended to be a theory that was compatible with materialism, while avoiding the difficulties of behaviorism and the identity theory. It was motivated in part by the thought that the relation between mind and body is analogous to the relation between software and hardware in a computer. Computational states are defined, not in terms of specific hardware configurations, but in terms of their relations to inputs, outputs, and other computational states. Computational states are *multiply realizable*; that is, they can be realized or implemented by a wide range of different kinds of hardware. Functionalists held that a similar approach could be taken to mental states; that is, mental states could be defined as relations between perceptual inputs, behavioral outputs, and other functional states. For example, the beginnings of a functionalist analysis of pain might point out that it is a state that is produced by potentially harmful sensory inputs, leads to avoidance behaviors, and tends to produce such other mental states as a dislike for whatever caused the pain. According to the functionalist, it is relationships such as these, not a specific physical implementation, that are essential to pain.

Functionalism seems to avoid the difficulties of the other main approaches to the nature of mental states.

Because mental states, like computational states, must be implemented in a physical medium, functionalism seems to make it less mysterious than dualism how mental states can stand in causal relations with physical states of the body. Unlike behaviorism, functionalism is compatible with the view that mental states are internal causes of behavior. And unlike the identity theory, functionalism leaves open the possibility that beings very unlike humans could nevertheless have mental states.

Different versions of functionalism have been developed by different writers. The view described above most closely resembles the *machine functionalism* defended by Hilary Putnam in a number of papers reprinted in his *Mind, Language, and Reality* (1975). Somewhat different versions were defended by other writers; David Braddon-Mitchell and Frank Jackson offer a useful survey in their *Philosophy of Mind and Cognition* (1996), and a number of the original papers are reprinted in *Readings in the Philosophy of Psychology* (1980), edited by Ned Block.

The most serious difficulty for functionalism is the problem of accounting for conscious experiences, which philosophers call *qualia*. One thought experiment that illustrates the problem involves the apparent possibility of *inverted qualia*. It seems possible in principle that two people could be functionally identical even though their experiences were inverted, so that when one person saw something green, that person had an experience that felt to him or her the way an experience of something red felt to the other. If this is a real possibility, it follows that functionalism cannot be a complete account of the nature of all mental states, since if two people with identical functional properties could nevertheless have different qualia, then qualia cannot be functional states.

FUNCTIONALISM IN SOCIOLOGY AND ANTHROPOLOGY

In sociology, functionalism was a theoretical perspective that emphasized that the parts of a social system are interrelated in such a way that none of them can be fully understood except in terms of their effects on the others. The relationships between the parts of a social system constitute the structures of that system, and social structures, social processes, and other social phenomena are to be explained in terms of their functions, which are, for most theorists, their contributions to the continued stable existence of the system. The social systems to which functional analysis was applied ranged from units as small as the family to those as large as international organizations; the phenomena to which functions were imputed included social roles, social norms, devices for social control, and many others.

Functionalism originated in the late nineteenth century in the work of such thinkers as Herbert Spencer (1820–1903) and Émile Durkheim (1858–1917); it was developed in the early twentieth century as an approach to anthropology by A. R. Radcliffe-Brown (1881–1955) and Bronislaw Malinowski (1884–1942); and in the middle decades of the twentieth century, as elaborated by Talcott Parsons (1902–1979) and Robert Merton (1910–2003), it became the dominant perspective in American sociology.

Some functionalist writers were influenced by an analogy between societies and biological organisms, and their concept of social function was explicitly modeled on that of biological function. Radcliffe-Brown, for instance, in "Structure and Function in Primitive Society" (1935, reprinted in Coser and Rosenberg 1976), distinguishes between three sets of sociological problems: *social morphology*, which identifies social structures just as biological morphology identifies organic structures; *social physiology*, which identifies the functions of these structures; and *development*, which studies how new social structures arise, much as evolutionary theory explains the development of new kinds of organisms.

Functionalists have typically thought of the function of a social activity as its contribution to the needs of the society, especially to a social equilibrium, which tends to right itself if disturbed. Durkheim, in the first systematic development of a functionalist approach, distinguished between the cause of an activity such as the punishment of crime, on the one hand, and its function, on the other. The practice of punishment may initially be caused by an intention to deter crime or achieve justice, but its function, according to Durkheim, is to maintain our intense emotional disapproval of crime. Although a particular practice or activity may not initially be caused by a recognition of the function it will serve, Durkheim holds that its serving a useful function is nevertheless part of the explanation of the continued survival of that practice.

Malinowski, who introduced the term *functionalism* into anthropology, identified seven fundamental biological needs: metabolism, reproduction, bodily comforts, safety, movement, growth, and health, as well as *derived needs*, such as the need to produce goods and the need to regulate behavior. He held that the function of social processes was ultimately to satisfy these individual needs. Radcliffe-Brown rejected this view, going so far as to write that "as a consistent opponent of Malinowski's functionalism I may be called an anti-functionalist" ("Functionalism: A Protest" [1949], reprinted in Kuper 1977, p. 49). Although he regarded the concept of function as central to anthropology, in his view the function of social processes was not to satisfy individual needs, but rather to support or preserve social structures. Radcliffe-Brown's view is often called

structural functionalism to distinguish it from Malinowski's.

The sociologists most closely associated with functionalism in the mid-twentieth century were Talcott Parsons and Robert Merton. (The terms *functionalism* and *structural functionalism* are both used to describe their work.) Parsons identified four functions that any social system needs in order to achieve and maintain equilibrium. These were: *adaptation*, or the acquisition and distribution of resources from the environment; *goal attainment*, which involves determining which goals of the system have priority and determining how to achieve them; *integration*, which involves coordinating relationships between various social actors to enable them to function smoothly together; and *latent pattern maintenance-tension management*, which involves transmitting values that will keep actors motivated to act in ways that are necessary for the continued functioning of the system.

Merton's contributions included his distinction between *manifest functions*, which are consequences that agents in the system recognize and intend to produce, and *latent functions*, which are not intended or recognized. Whereas Parsons had tended to emphasize manifest functions, Merton stressed that many important functions are latent. Merton also introduced the concept of *dysfunctions*, which are consequences of an activity that have negative effects on the stability of the system.

By the late 1970s, functionalism was no longer the dominant paradigm in sociology, in part because of the perceived conservatism of its emphasis on equilibrium, and its consequent lack of attention to social conflict and change, and in part because it was seen more as a set of abstract categories than as a testable empirical theory. In the 1980s and 1990s, there was some interest in a *neofunctionalist* sociology that attempted to preserve the insights of functionalism, especially as represented in Parsons's work, while addressing its perceived failings.

FUNCTIONALISM IN PSYCHOLOGY

In psychology, the term *functionalism* refers to an American school of psychology that was influential at the turn of the nineteenth century. Functionalism developed in response to the earlier structuralist view advanced by Wilhelm Wundt (1832–1920) and Edward B. Titchener (1867–1927). Structuralist psychology used an introspectionist methodology to attempt to identify basic elements of conscious experience into which more complex experiences, or structures, could be analyzed. Functionalism, by contrast, emphasized psychological processes rather than static psychological structures. Functionalism also stressed the role of the mind as a mediator between the environment and the needs of the organism; like the pragmatist philosophy that influenced it, functionalism held that psychological processes should be understood in terms of their effects. The most influential contributors to this school were the pragmatist philosophers William James (1842–1910) and John Dewey (1859–1952), and the University of Chicago psychologist James Rowland Angell (1869–1949). Although functionalism influenced later approaches to psychology, as a distinct school it faded from view in the early decades of the twentieth century, as behaviorism rose to prominence.

SEE ALSO *Anthropology; Behaviorism; Durkheim, Émile; Identity; James, William; Malinowski, Bronislaw; Materialism; Merton, Robert K.; Parsons, Talcott; Philosophy; Pragmatism; Psychology; Radcliffe-Brown, A. R.; Sociology; Spencer, Herbert; Structuralism; Theory of Mind*

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Curtis Brown

FUNCTIONINGS

The concept of functionings was introduced by the Indian economist Amartya Sen in *Commodities and Capabilities* (1985), in the context of the "equality of what" debate. This debate involved scholars interested in the definition of social justice after the influential work of the American political philosopher John Rawls (1971). Rawls defined social justice in terms of equality of rights and of priority

given to individuals who receive the smallest quantity of basic resources (which he called *primary goods*). This view represented a striking break with the utilitarian tradition focusing on individuals' subjective well-being and launched a debate about the quantity that should be equalized across individuals in a just society: welfare, resources, opportunities, and so on.

Sen criticized Rawls's choice of a resource metric for the definition of social justice on the grounds that different individuals may have different abilities to transform resources into achievements of various kinds. He called such achievements *functionings*, encompassing all achievements, not only actions (*doings*) but also states of the body and the mind (*beings*), that might be considered relevant. For instance, an individual's level of happiness is a functioning, as well as his marital status, his income, the kind of job he has, and how much he works. Sen, however, did not propose to define social justice as equality of some index of functionings across individuals, or as priority for those who have the smallest level of functionings. He argued that what is important, out of concern for freedom and responsibility, is not that people actually have good levels of functionings, but that they have access to such levels. The set of functioning levels that an individual is able to achieve is called a *capability*, or *capability set*, in his theory, and he favors a definition of social justice in terms of equality of capabilities (or priority for the worst off in terms of capabilities).

One difficulty with the concepts of functionings and capabilities as used in Sen's theory is that they are so large that one must find ways to determine how to weigh the importance of various functionings in the construction of a synthetic index. Whether individuals' personal preferences or expert opinion about prudential values should be relied upon in such an exercise is open to controversy. A list of important functionings has been proposed by Martha Nussbaum. There are also alternative theories of justice that combine the double concern for unequal abilities on the one hand and freedom and responsibility on the other hand in different ways, as in Richard Arneson's equality of opportunity for welfare (which singles out subjective welfare as the only ultimately relevant functioning) or Ronald Dworkin's equality of resources (which includes personal abilities in the definition of resources). Some authors (Elizabeth Anderson, John Baker, and Marc Fleurbaey) have argued that achievements (functionings) and not only opportunities (capabilities) are relevant for the evaluation of individual situations in terms of social justice.

The notion of functionings has been influential in empirical measurements of standards of living, most notably in the United Nations Development Program construction of a "human development index" that adds education and health data to income statistics for the comparison of countries. Many other applications are being pursued. A Human Development and Capabilities Association was created in 2004.

SEE ALSO *Needs; Needs, Basic; Sen, Amartya Kumar; Want Creation; Wants*

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Marc Fleurbaey

FUNDAMENTALISM

Fundamentalism originally referred to an American Protestant movement occurring at the turn of the twentieth century. It emerged from an interdenominational revivalist movement led by the evangelist preacher Dwight Moody (1837–1899). In the early part of the twentieth century, fundamentalism came to stand for opposition to certain trends in modern society, including the rise of liberal theology, science's challenge to religious beliefs, and increasing secularization of society in general.

In the early twenty-first century, scholars have referred to a worldwide fundamentalist movement that includes various faith traditions. This more recent use of the term *fundamentalism* shows its usefulness for capturing the form and functions of a great many religious groups and their agendas. As used by scholars, the term is meant to describe, not evaluate.

At the heart of fundamentalist movements, then, is their revolt against modernism and their call to return to the basic beliefs and practices of their original community

and, most importantly, to the basic beliefs found in sacred texts such as the Bible and the Qur'an. Scholars' composite pictures of fundamentalist groups often represent them as energetic, sometimes aggressive, and, contrary to current stereotypes, only occasionally violent.

Fundamentalists feel that certain developments associated with modernism undermine religious identity and their own religious worldview. They believe these developments undermine the ability to lead a morally pure life and, in some cases, a life that prepares for the afterlife. Their concern is not with developments in technology and science per se but only with those developments that challenge their religious worldview and/or have moral implications—as when Darwinian evolutionary theory spawned social Darwinism with its counter-Christian ethic of survival of the fittest. As this example of social Darwinism indicates, fundamentalists' complaints about modernism are not altogether different from the complaints of many non-fundamentalists.

In North America, the term fundamentalism has often been used interchangeably with the term *evangelical*, although more so at the beginning of the fundamentalist movement than in the twenty-first century. Evangelical refers to the winning or saving of souls. To evangelize, then, means to lead others to becoming saved. North American fundamentalists are all about being saved and saving others: saved by believing in Jesus as the Lord and saved by accepting the Bible as the inerrant word of God.

For fundamentalists, being saved involves more than attending church or trying hard to lead a good life. Being saved, say the fundamentalists and evangelicals, entails no less than a total commitment to Christ and a total belief in the Bible. To be a North American, Protestant fundamentalist is, then, to embrace a biblical perspective that is clear, free from contradiction, and rejecting of alternative, non-fundamentalist worldviews. Being ecumenical is not, then, a part of the fundamentalist agenda. Therefore, North American Protestant fundamentalism, like other forms of fundamentalism around the world, runs counter to the dominant worldview in most societies today, a worldview that values pluralism and accepts there being multiple perspectives on what is true and valuable.

Nor is it a fundamentalist agenda to promote a separation of religion and state, a separation that has been central in North American and European democratic traditions. This is even more evident in Arab regions of the world where Islamic fundamentalism works to unite societies under Islamic law and under Islamic religious leadership.

Worldwide fundamentalism has been, then, both separatist and integrationist in spirit and political life. That is, while fundamentalists speak of the need to separate one's self from the unsaved and from this sinful or corrupt world they also speak of the need for humankind to become a single, religious community.

Fundamentalism is not simply about returning to a distant past or living in the present according to truths and prescriptions revealed in the distant past. It is also about working and waiting for an imagined future. In North American Christian fundamentalism, the imagined future is the Second Coming of Christ or *Parousia*, a time when sinners (non-believers) will be judged and the Kingdom of God will be established.

This theme of there being a cataclysmic future event or time when sinners will be judged and the righteous and true believers will prevail is not just a theme in North American Protestant Christian fundamentalism. It is also a theme in non-Christian, non-Western fundamentalist movements. All fundamentalist movements uphold the general theme that today's secular, pluralistic society will be replaced by a mono-religious society.

Non-fundamentalists often negatively stereotype fundamentalists. For example, fundamentalists are often pictured as being less educated on average, more authoritarian and dogmatic, anti-science, militant, and narrow-mindedly literal in their reading of sacred texts such as the Bible. However, the results of responsible research have shown each of these stereotypes to be distortions of the truth. In fact, fundamentalists make up a diverse group with respect to education, personality traits, and views about science and militancy. Furthermore, fundamentalists generally acknowledge the need to reflect and interpret when reading the sacred text. For fundamentalists, in general, discerning the revealed truth in the sacred text does not require taking each word, phrase, sentence, or portion literally.

Fundamentalism has and will continue to appeal to large segments of societies, especially in troubled times and in times of rapid transition. Its greatest appeal is in its offering clarity where there is doubt, order and continuity where there is disorder and discontinuity, and hope for being good and being saved where there is despair over being sinful and being lost. Fundamentalism appeals to a significant and diverse group for its providing a worldview and way of interpreting life that provides meaning, guidance, and personal satisfaction.

Despite these positive attributes, fundamentalism will likely continue to be rejected by the majority and for several reasons. First, its appeal to return to previous ways runs counter to the majority's desire to develop new ways that reflect new conditions in modern life. Second, its appeal to adopt an uncompromising perspective, one that does not value alternative faith traditions and alternative worldviews, runs counter to the majority's desire to value cultural and religious diversity so as to live harmoniously in a pluralistic society. Third, its appeal to believe in the

inerrant, revealed truth of sacred texts runs counter to the philosophical and scientific ways of thinking that pervade modern academic and political institutions.

SEE ALSO *Christianity; Islam, Shia and Sunni*

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FUNDAMENTALISM, CHRISTIAN

Christian Fundamentalism is a twentieth-century development that originated in American Protestant circles. While most attention to the phenomenon still focuses on the United States, thanks to missionary endeavors, it is now represented around the Christian world.

While many casual observers often speak of fundamentalism as if it were the equivalent of Protestant conservatism, traditionalism, or orthodoxy, scholars point to significant differences. The word *fundamentalism* appears in no encyclopedias or dictionaries before the 1920s, a fact which signals that some new reality was on the scene, one that would evoke new terminology. Fundamentalism in its broadest sense is a defensive reaction against uncongenial and threatening forces that are often code-named *modernism*. The conservatisms that were already on the scene had developed gradually over the centuries. Modern fundamentalism appeared suddenly, when the perceived threats seemed unbearable.

The word first appeared in the name of an association in 1919 and a Baptist magazine in 1920. The editor, perceiving assaults on the faith as he knew it, complained that in the Baptist church most people wanted to be conservative, but no one would do battle for the Lord. He called for reaction—and *reaction* is the key word for understanding fundamentalism—by people who would "do battle for the Lord." The ensuing fundamentalist-modernist controversy led to some schisms in Baptist and Presbyterian denominations, and issued in a proliferation of Bible colleges, missionary societies, charitable agencies, and radio stations and programs that carried the message and work forward.

The main challenges in the 1920s were *evolution*, the teaching that human descent resulted from natural selection and, as the fundamentalists saw it, apart from the work of God or the story of the world's creation in the Bible. Another strand of thought that went into fundamentalist formation was a view that the world would end in a cataclysm, after which through one of a variety of scenarios, Jesus would return to rule for a millennium. Fundamentalists also favored the adjective *literal* as opposed to *symbolic* or *allegorical* when treating biblical miracles or teachings that Jesus was born of a virgin and was physically resurrected. The lynchpin of fundamentalism, however, came to be fiercely defended theories of biblical inerrancy, which held on a kind of philosophical ground that there were and could not have been any errors of historical, geographical, scientific, or any other sorts in the Bible.

Early fundamentalists faced scorn in the culture at large and were opposed by moderates in the Protestant denominations, yet they endured. In 1942 some of them organized as a national association, a move that was countered a year later by more moderate fundamentalists who came to call themselves *evangelical*. Evangelicalism, popularized by figures like Billy Graham, agreed with fundamentalism on most teachings, but evangelicals were culturally more moderate and they came to outnumber the hard-core fundamentalists.

As decades passed, moderate evangelicals came to prosper more than did fundamentalists. Fundamentalists tended to be separatist, reluctant to cooperate with even conservative Protestants who did not share every detail of their doctrines. Evangelicals moved more toward the cultural mainstream, and their leaders often shared platforms and programs with certain kinds of Catholics and mainline Protestants. Evangelicals and fundamentalists, who share so much by way of doctrine, have adopted quite different styles, and the separatism of fundamentalism has held it back in the competition for souls and influence.

For decades, fundamentalists professed to be and ordinarily were disengaged from politics, concentrating as they did on evangelizing, converting, and preparing believers for life in heaven. In the final third of the twentieth century, however, while some stayed back from the frays, most fundamentalists plunged eagerly into politics. The Supreme Court decisions that disallowed prayer in public schools in 1962 and 1963, followed by a decision that allowed for legalized abortion in 1973, galvanized fundamentalists. They did an about-face and developed sophisticated approaches to mass media, originally through radio but later using television and the Internet, and made political alliances with Republicans. In coalition

with conservatives they came to have considerable power in electoral politics and in legislation.

Social scientists observe fundamentalists in various social circumstances and classes. Often typed as rural and lower-class in the early years, many of them became prosperous urbanites and suburbanites, and were known for erecting large churches and producing television programs, supporting colleges such as Jerry Falwell's Liberty University in Virginia, and favoring participation in the affluent society with a zest that would have appalled their grandparents. Christian rock music, Christian films and best-selling books, and Christian self-help programs took on the trappings of their worldly counterparts. In doing so, fundamentalists helped create a culture within the culture, a kind of Jesus-centered replica of their more secular counterparts.

Most fundamentalists inherited and fostered efforts to convert others, as their ancestors in less-threatened nineteenth-century evangelical Protestantism had done. Large numbers of them, particularly in the dominant Southern Baptist tradition, insisted on adult baptism after conversion, and brought a biblical concept of being "born again" into the cultural spotlight. There have been few pacifists among the fundamentalists, most of them being strong supporters of military ventures by the United States and expressing themselves as dedicated patriots. On such grounds, they were suspicious of cultural, social, and political moderates and liberals, and often lumped them together as the "other" who was "secular humanist." Fundamentalists tend to create psychic boundaries and spiritual distance from others, fearing that ecumenical or interreligious ventures would lead to a weakening of the faith that as militants they claim is the only valid form of approach to God.

SEE ALSO *Christianity; Jesus Christ; Religion*

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FUNDAMENTALISM, ISLAMIC

The term *Islamic fundamentalists* commonly refers to groups who seek to promote the role of Islam in political, social, and economic life, and who contend the necessity of establishing an Islamic state based on Islamic *sharia* law. The term *Islamic extremists*, in contrast, refers to fundamentalist groups who operate outside the law and espouse violence to attain political power.

Islamic fundamentalist movements in the Middle East and North Africa claim to represent a periphery whose political recognition and economic interests have been excluded by incompetent, corrupt, and authoritarian pro-Western regimes. The sluggish performance of these states vis-à-vis the demands of civil society for greater political participation and socioeconomic equality has led many disenfranchised young people to support Islamic fundamentalist movements as a mode of protest. The limited ability of modern nation-states to overcome these domestic problems has become increasingly acute as a result of fiscal restrictions on their redistributive capacities in the era of globalization. In addition, Islamic fundamentalist movements view the globalization process as an imperialist plot to pollute their countries with Western businesses and consumption patterns, and to impose painful adjustment reforms arranged by international financial institutions. Moreover, these fundamentalist movements are often motivated by political grievances with what they consider to be inconsistent U.S. foreign policy toward the Islamic world.

Islamic fundamentalist movements often use populist rhetoric laced with anti-Western attitudes, and they rely on previously mobilized Islamic mission-oriented groups who have not benefited from open-door economic policies. Islamic fundamentalists perceive their relationship with the incompetent pro-Western regimes as a zero-sum game. In the majority of cases, these movements occupy part of the political space as important countermovements or sources of opposition to existing authoritarian (and mostly secularist) regimes, and as such they have enjoyed relative legitimacy. The tyrannical states, in turn, have responded with security crackdowns and tougher regimentation measures, and in so doing have pushed moderates toward more radical positions. The polarization between Islamic fundamentalist movements and their countries' incumbent regimes has been growing since the mid-1980s as the globalization process has deepened.

Historically, Muslim responses to the challenge of Western colonialism have affected the current tension between Islamic movements and the regimes under which they operate. The colonial era resulted in the incorporation of the countries of the Middle East and North Africa into the capitalist world system, and in the consolidation of internally bureaucratic and externally territorial states. The colonial legacy also contributed to the deficient nature of state building and capitalist development in the region. The most problematic legacy from the colonial era

is overdeveloped states coupled with underdeveloped social structures. The state apparatus during the colonial period was not created by national bourgeoisie but by foreign colonial administrators who inflated the size of the bureaucratic machine, especially its military and security sectors, to serve the colonialists' own purposes and to confront any possible resistance. The rulers of the postcolonial states produced much the same type of effect via the creation of authoritarian systems with a lopsided size of state to society features but without a hegemonic and independent social class. Furthermore, under the forms of capitalism artificially established, the state role has been even more exaggerated in order to promote delayed capitalist development in the name of national interest. In such circumstances, social classes are excessively dependent on the state, and the absolute primacy of the state resulted in an embryonic class structure in these countries immediately after their independence.

Most governments in the Middle East and North Africa are characterized by a coercive security apparatus, a lack of legitimacy, and inefficient administration. They also tend to be nondemocratic, despite their differing or even contradictory ideological bases. When these states' attempts at capitalist development were undertaken by a small group of crony capitalists operating within a rigid bureaucracy, the military and security sectors resorted to raw coercion, and they repressed Islamic fundamentalist movements in order to preserve their invested interests. Although the state is supreme, the society is primordial and indeterminate in terms of its economic and political functions. The primacy of the state has in fact hindered the development of Islamic fundamentalist movements in the Middle East and North Africa, and most Islamist movements in the region have not developed organizational strength. They have, however, exhibited greater militancy toward the state and less coordination with civil society, which has resulted in greater repression by the state. Although exclusion and repression by the authoritarian states helped forge a sense of solidarity in Islamic society, the fundamentalist movements have exhibited a lack of centralized bargaining power at the national level. Islamist fundamentalist groups tend to push their own agendas regardless of the deleterious consequences for civil society as a whole, which has ultimately caused them to become more marginalized.

SEE ALSO *Jihad; Muslims; Nation of Islam; Secular, Secularism, Secularization; Taliban*

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FUNERALS

Polish anthropologist Bronislaw Malinowski once observed that when persons are actually "faced by death," they turn almost immediately instead "to the promise of life." In other words, "death and its denial—immortality"—coincide (1954, p. 47). In many ways funerals express these dualities and their contrasting, ambivalent feelings and realities. In effect, funerals commonly aim to turn death, which appears to represent an end, into its opposite, a transition to another kind of life. Moreover, they seek to reintegrate the group and especially those most bereaved following the sense of loss that death has eventuated.

The funeral is almost always a social occasion, a ceremony at which those with a relationship to the deceased or the bereaved are assembled in order to mark the change in status that death has occasioned. The function of the funeral is to dispose of the corpse and to recognize the sense of loss among the bereaved. It also seeks to demonstrate to all of the assembled that while a particular person has died, life itself and the group go on. Hence while the disposal of the cadaver, an essential feature of the funeral, expresses dread of the corpse and a desire to be rid of it and its impurities while also confirming the reality and finality of the death, almost everything else about the funeral asserts immortality and continuity: of the soul, the community, a relationship with the deceased, and faith in the future.

The public nature of the funeral as well as the common understanding that attendance at it trumps most other social obligations both reflect the fact that death is never just the concern of the immediately bereaved or only the affliction of those who have died. While ostensi-

bly carried out for the dead person, the funeral rites in fact have important effects and benefits for the living, both as individuals and a group. These rites commonly entail practices that aim to confront death with repeated assertions of life and expressions and ceremonial displays that make the bereaved feel that they are not completely abandoned. Moreover, they aim to show that death may momentarily bring about chaos, but the funeral reinstates order. It does so with ritual.

At a funeral's successful conclusion, the dead body is disposed of and becomes separated from the person who inhabited it and the living are endowed with an enhanced sense of solidarity as they mourn and console one another back to life, while incorporating the deceased as part of a living memory. While this process is largely metaphorical in most funeral ceremonies, in some cases, the process is quite literal. Among the Melanesians of New Guinea, for example, parts of the dead person are ingested by some of the bereaved and later vomited. This practice allows the spirit of the deceased to remain within, and a sense of solidarity both among the mourners and between the mourners and the deceased to be established while the physical remains of the corpse are removed. The Catholic rite of communion, in which the body and spirit of Christ is ingested by those who recall him through the eating of consecrated bread and wine, may be understood as a reiteration of such funereal rites. All this shows that death ends a life but not a relationship.

Funerals may generally be divided into component parts. First comes the preparation of the corpse for disposal and its display. This may include washing, anointing or embalming, dressing, and even some forms of restoring the body. Often this is accompanied by a temporary public placement of the cadaver among the living, although always camouflaging its decay. This might, for example, include placing flowers or perfumes around the body. This use of flowers is as old as Neanderthal man, whose skeletons in the caves of Iraq were found covered with a layer of pollen, suggesting they were enclosed with flora.

In some cultures this public display may last several days—sometimes called "lying in state." In others, this is called "the viewing," and often the body is "improved" or adorned so that the repulsion of death does not overwhelm the living. Public placement includes placement of the body on a catafalque, sometimes in a casket, in shrouds, on a pyre, or some other visible site. In its origins, this public display of the corpse may have served as a means of making certain that the person was truly dead, as the certification of death was historically by no means always as accurate as it is today. The presence of the prepared corpse in public view thus provided both an opportunity to persuade everyone that the person was indeed deceased while also in some way mitigating the dreadful vision of death and its reminder of universal mortality.

When bodies were placed in private homes, particularly in Victorian England, they were often put in the parlor, the room in which people gathered. This led to the parlor taking the name, "living room," as a way of offsetting the stigma and dread associated with the placement of corpses in it. In time, in North America, the placement of the corpse was moved from people's homes and parlors or living rooms to special sites that came to be called "funeral parlors" or "funeral homes." At times, funerals are carried on in places of worship, though in a number of religious traditions the corpse is considered defiling and hence not put in what are considered sacred places.

While a growing corps of professionals handle the preparation of the body, in some religious traditions volunteers from within the community of deceased or the bereaved carry this out. Thus, for example, among traditionally observant Jews, the preparations are carried out by the *Chevra Kaddisha* (holy fellowship) whose ritual washing, grooming, clothing, and preparation of the dead for burial are called *tahara* (purification).

The second part of the funeral consists of the rites and ceremonies of farewell. These include prayers, eulogies, and the marking of the mourners in some visible way. In some cultures, wailing or other forms of mourning are part of the funeral. But the possibilities of rites are as rich and varied as human culture. Thus, for example, among the Hmong of Vietnam, practices used during funeral ceremonies include: sacrificing a live chicken to place at the head of a deceased person in order that the soul of the chicken can lead the soul of the deceased person back to their ancestral home; burning gold paper money for the deceased to take on the journey home; and calling a shaman to communicate with the souls of the deceased to understand their wishes and communicate those wishes to family members. In general, the ceremonies of the funeral act to control the emotional damage that death may otherwise inflict by holding it within the framework of ritual behavior.

Part of the farewells consists of presenting the idea that death is really an alternative form of life, and the funeral initiates the transition from one form of life to another. In this sense, funerals may be seen as liminal or threshold rites, as described by Arnold van Gennep in his *Rites of Passage* (1960). For some groups, Jews for example, this period of transition should be short so as to hasten reintegration. For others, the farewell is extended so as to hold onto to the deceased a bit longer.

To assure the passage from death to a new life, the corpse must in some way be transformed. As Robert Hertz explained, "to make an object or living being pass from this world into the next, to free or create the soul, it must

be destroyed," and then only as the "visible object vanishes," and becomes invisible, can it be "reconstructed in the beyond, transformed to a greater or less degree" (1960, p. 46). The removal or destruction of the dead body and the beginning of mourning marks the third and final part of the funeral. Among Hindus this is accomplished with the burning of the body and in India with floating it along the holy Ganges River. Among the Abrahamic faiths, this ends with the removal of the body for burial, although increasingly in modern society cremation is chosen as an option by many.

The transformation of the corpse is paralleled by a transformation of the bereaved into mourners. This is often marked either by activities they carry on at and after the funeral that publicly demonstrate their sense of loss. In some cases, the bereaved may tear their garments or hair, as if to reflect the tearing down of their own veneer of civility and social order that death itself has initiated. Of course by making this sort of rending ceremonial, funerary practices emotionally rein in the act and thereby assist the mourners in exercising self-control and limit the trauma of loss in public and to the collective life. The bereaved may be sequestered for a period of mourning that parallels the period of the deceased's journey to a new life. The conclusion of mourning marks the true end of the funeral, when the dead have reached their spiritual destination and the bereaved re-enter a full social life. Often this is marked with eating and drinking, activities associated with continuity and life.

SEE ALSO *Burial Grounds; Culture; Death and Dying; Heaven; Hell; Malinowski, Bronislaw; Religion; Rituals*

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FUTURE PRICES

SEE *Forward and Futures Markets.*

FUTURE SHOCK

American author Alvin Toffler first used the term *future shock* in 1965 to refer to the psychological disorientation and physical stress experienced by individuals and societies when radical changes occur within short periods of time. In *Future Shock*, the 1970 book that popularized the term, Toffler argued that human beings have limited abilities to adapt to social and technological transformations. Thus, he argued, it was the rate of alteration in personal and social life, and not just the direction of change, that posed unique psychological challenges to contemporary human beings.

Toffler believed that future shock would become a common psychological and physical state in advanced industrialized nations due to the speed with which technologies were transforming all aspects of society. In 1970 he already saw what he perceived as symptoms of future shock. These included an increasing impermanence in everything from interpersonal relationships to the life of institutions, a rise in individual and collective mobility, an increase in social diversity, and an acceleration in the consumption of goods and novel experiences. Toffler believed that these changes might soon outstrip human abilities to cope with them. For that reason, he argued that societies must actively manage the technological and social changes under way.

Soon after the publication of *Future Shock*, the title concept became a staple of popular writing on technological change. In the scholarly literature, researchers deployed the term within the field of organizational theory to address the possible consequences of technological change in the workplace and the possibility that they could be effectively managed. Education scholars also invoked the concept as they studied how to prepare students for the rapid changes taking place in society. Though it remained popular in the organizational and educational literature, the concept of future shock never developed analytical purchase across the social sciences. As the Internet came on the scene in the mid-1990s, however, the term saw a brief resurgence. By the late 1990s, it was often used by political scientists studying Internet-based political processes and trying to forecast the effects of technological change in that arena.

Within the social sciences, many of the phenomena Toffler pointed to in 1970 have been subsumed under other analytical paradigms. Writing at about the same time as Toffler, sociologists Alain Touraine (1971) and Daniel Bell (1973) pointed to the rise of *postindustrial society*. In the mid-1990s, sociologist Manuel Castells argued that the *network society* has emerged. In the movement from postindustrial to network society, scholars have integrated many of Toffler's concerns with the consequences of technological change, but they have let go of the core features of

future shock: the notion that the pace of change might outstrip human adaptability and the recommendation that change should be managed on that account.

SEE ALSO *Futurology*

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Daniel Kreiss
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FUTURISM

SEE *Futurology.*

FUTUROLOGY

Futurology is the rigorous attempt to anticipate future developments, relying heavily upon social-science methods. Few futurologists actually try to forecast future conditions, but instead prefer to identify alternative possibilities and to critique naive forecasts that others may have proposed. Critical futurology has deep historical roots. For example, in 1872 Edward Jarvis addressed popular concerns that the United States was experiencing too much immigration through careful demographic analysis that showed the country was in little danger of becoming primarily foreign born.

In the 1960s a futurology craze gripped American intellectuals, many of whom wished to serve as advisors to the Kennedy-Johnson administration's New Frontier or Great Society and the competition with the Soviet Union cold war. The RAND corporation sponsored studies that combined the views of many experts into unified forecasts concerning a wide range of possible technological and social developments. Among the sequels were two visionary books, *The Year 2000* (1967), by Herman Kahn and Anthony J. Wiener, and *Towards the Year 2000* edited by Daniel Bell (1967).

In the 2000s conferences such as the annual meetings of the World Future Society offer diverse prospectives. Serious journals, such as *Futures* and *Futures Research Quarterly*, carry projections, scenarios, theory-based extrapolations, and expert judgments about the future.

A projection analyzes recent trends mathematically, then runs the trends forward in time to estimate particular variables, such as population, economic activity, or the diffusion of a new technology. In 1971 Jay Forrester used the simple computers of his day to model the interplay of economic and social variables on a global scale through systems dynamics projections. The approach was famously used in the 1972 Club of Rome report, *Limits to Growth*, predicting that the global economy would soon crash because of resource depletion, but in retrospect the numerous assumptions seem arbitrary, and the crash has not yet occurred. The report remains influential as a cautionary tale but not a prediction.

The point of a scenario is not to predict, but to clarify, presenting a coherent, internally consistent picture of a future possibility so that planners and scholars can think more clearly and creatively. The scenarios in the Kahn-Wiener and Bell books imagined the fall of the Soviet Union and the birth of the World Wide Web. In 2003 British astronomer Royal Sir Martin Rees examined realistic scenarios for many of the ways humankind could become extinct during this century.

A theory sketches the future implied by a particular set of formal ideas. Pitirim Sorokin argued that every great civilization follows a cycle from ideational culture based on a transcendent ideology such as a religion, to sensate culture that is secular, empirical, and destined for collapse, followed by a new ideational phase. While agreeing with Sorokin's general approach, Rodney Stark and William Bainbridge argued that civilization will not secularize in the long run, because religion responds with constant revival and innovation.

Scientific and technical expertise can identify the possible implications of discoveries. In 2000 the U.S. National Science Foundation considered the implications of nanotechnology for industry, medicine, environmental sustainability, space exploration, national security, and scientific understanding of nature. The finding that the societal impact would operate indirectly, led to an examination of the possible future convergence of nanotechnology with biotechnology, information technology, and new cognitive technologies.

Given that futurologists seldom attempt to predict precise outcomes, one may wonder how futurology differs from science fiction (SF), a genre of literature that often concerns speculations about the future and is sometimes praised for insight about the implications of science and technology. Sociological research suggests that SF has pri-

marily four ideological dimensions: (1) "hard-science" stories favorable to technological innovation; (2) "new-wave" stories critical of technological development, emphasizing aesthetics and social science rather than natural science; (3) fantasy stories in which magic or the supernatural are more important than technology or science; and (4) the time dimension anchored in classical SF such as the century-old works of Jules Verne, H. G. Wells, and Edgar Rice Burroughs. Arguably, the first two of these dimensions might qualify as futurology, if the authors built upon a solid basis of knowledge in the natural or social sciences, using narrative fiction as a way of rendering their scenarios more vivid.

SEE ALSO *Technocracy; Technology*

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William Sims Bainbridge

G

G7 COUNTRIES

In the 1970s, declining economies and a worldwide recession sparked a series of informal meetings among leaders of the world's major economies. In April 1973 the finance ministers of France, the United Kingdom, West Germany, and the United States met in Washington, D.C., to discuss ways to stabilize their economies and the failing international economic order. Two years later, in 1975, as the Western nations faced an oil crisis, trade deficits, unstable national currencies, the proliferation of weapons of mass destruction, threats of war, and chronic unemployment, the president of France requested a gathering of leaders from the industrialized nations. The meeting, intended to discuss ways to circumvent the bureaucratic conflict and economic nationalism hindering international economic cooperation, took place in Rambouillet, France, in November 1975. Present were the heads of government of France, Italy, Japan, the United Kingdom, the United States, and West Germany. The group became known as the Group of Six (G6). The following year, Britain, Canada, France, Germany, Italy, Japan, and the United States met as the Group of Seven, commonly referred to as the G7. The subsequent annual meetings of the G7 provided a forum in which leaders of the seven nations could discuss and coordinate actions on economic and commercial matters.

FROM THE G7 TO THE G8

The G7 became the G8 in 1998, when Russia was admitted formally to the group (it had been participating in summit meetings since 1994). Since 1998, G8 summits have extended their agendas beyond discussions of macroeconomic issues to include wider discussions of global economic concern, including microeconomic issues and regional security, transnational issues such as the environment, drug trafficking, and human rights. The G8 was criticized by emerging nations for forming an elite and undemocratic alliance in which policies were formulated by wealthy nations and then imposed upon the rest of the world. Developing nations protested that their interests were not addressed during the G8 meetings. These criticisms resulted in the formation of the Group of 20 (G20) in 1999. The G20 consists of finance ministers and central bank governors from nineteen industrialized and emerging market countries plus the European Union. The International Monetary Fund and the World Bank also participate in G20 meetings on an ex-officio basis. The G20 nations include the G8 plus Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, South Korea, and Turkey. The establishment of the G20 was intended to open up an informal dialogue on international financial affairs among a broader group of countries than the G8 alone.

Despite its noninclusive nature, defenders of the G8 contend it has promoted the global economic good. From this perspective, the G8 is responsible for stabilizing the international monetary system after the collapse of the limited gold standard. Some observers, including the former U.S. president Ronald Reagan, believe the G8 underwrote capitalism's victory in the cold war. The topic upon which the G8 has had the greatest influence is trade. During summit meetings leaders are able to collaborate on political and economic decisions. The influence of the G8 on multilateral trade negotiations resulted in the formation of the General Agreement on Tariffs and Trade 1994

(GATT 1994) and the creation of the World Trade Organization (WTO) in 1995. The G8's primary role is to expand the realm of capitalism, and one of the most enduring legacies of the G8 is the expansion and maintenance of mutual trust among the member nations. The G8's stated goal has shifted over time from a forum dealing essentially with macroeconomic issues to an annual meeting with a broad-based agenda that addresses a wide range of international economic, political, and social issues.

SEE ALSO *Developing Countries; European Union; G8 Countries; General Agreement on Tariffs and Trade; Recession; World Trade Organization*

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Lorna Lueker Zukas

G8 COUNTRIES

The Group of Eight (G8) is an annual meeting of the leaders of the world's major industrial states. The purpose of the G8 is to have world leaders meet informally on economic and political issues facing their individual countries and the international community as a whole. Initially proposed by President Valéry Giscard d'Estaing of France and Chancellor Helmut Schmidt of Germany, the first summit, held at Rambouillet, France, in November 1975, included only six countries: France, the United States, Britain, Germany, Japan, and Italy. The impetus of the meeting was to discuss the oil crisis. In 1976 President Gerald R. Ford called for a second summit, which initiated the annual nature of the meetings and established it as an institution. When Canada joined the group in 1976 it became known as the G7.

From 1976 to 1990 the G7 met annually; sometimes on the eve of the summit it included fifteen developing countries as in the 1989 Paris summit. Russia became part of the post-summit discussions from 1991 to 1994. These meetings are sometimes referred to as the P8 or Political Eight. Russia had partial membership as it was excluded from financial and other economic discussions. Russia obtained full membership in 1998 and in doing so, the G8 was born. There is an additional member of both the G7 and G8: the European Union.

The chair and location of the G8 are selected in a rotating manner starting with France, the United States, the United Kingdom, Russia (as of 2006), Germany, Japan, Italy, and Canada. The position of chair is held for one full calendar year. The host country proposes the summit location and agenda and organizes preparatory meetings.

Despite the lack of formal structure, the G8 has had an effect on the world. A significant change to international organizations resulted from the 1995 Halifax, Canada, summit, where leaders agreed to amend the rules and procedures of the World Bank and the International Monetary Fund (IMF). The agenda for the summits change from year to year and focus on the most pressing economic and social issues. During the Okinawa, Japan, meeting in 2000 the G8 agreed to provide further funding to fight infectious disease. The meeting also focused on issues regarding information and communications technology. The 2001 Geneva, Switzerland, meeting created the Global Fund to fight infectious diseases such as AIDS, tuberculosis, and malaria.

Because of the cooperation and dialogue of the world's leaders accomplished through the G8, it has also attracted the attention of protestors. Probably the largest and most violent meeting was held in Genoa, Italy, in 2001, where an anti-capitalist protestor was shot and killed while hundreds of others were injured during a clash with police. In subsequent years the G8 has tried to open discussions with nongovernmental organizations and include other developing nations.

The G8 meeting hosted by Britain in Perthshire, Scotland, was interrupted by terrorist attacks on London's transit system on July 7, 2005. Tony Blair, the host of the meeting, left for a brief time to visit London while the other leaders remained to continue the discussion and agenda that was set. The issue of global terrorism has been on the agenda most years since 1978.

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Lydia A. Miljan

GABRIEL (PROSSER)
1776–1800

The enslaved revolutionary known only as Gabriel was born near Richmond, Virginia, at Brookfield, the Henrico County plantation of Thomas Prosser. By Virginia standards, Brookfield was a large plantation, with a population

of approximately fifty enslaved laborers. Unfortunately, the identity of Gabriel's parents is lost to history, but he had two older brothers, Martin and Solomon. Most likely, Gabriel's father was a blacksmith, the occupation chosen for Gabriel and Solomon; in Virginia, the offspring of skilled bondpersons frequently inherited their parent's profession.

Status as a craft artisan provided the young blacksmith with considerable standing in the slave community, as did his ability to read and write. In the 1780s, it was not yet illegal to teach Virginia slaves to be literate, and effective artisans needed the rudiments of literacy. According to tradition, his teacher was plantation mistress Ann Prosser. As Gabriel grew to be an unusually tall young man, even older slaves looked to him for leadership, a habit uncommon in African culture. By the mid-1790s, as he approached the age of twenty, Gabriel stood "six feet two or three inches high," and the muscles in his arms and chest betrayed nearly a decade in Brookfield's forge. A long and "bony face, well made," was marred by the loss of two front teeth and "two or three scars on his head" (Egerton 1993, p. 22). In later years, a racist legend arose which held that Gabriel wore his hair long in naïve imitation of Samson, in hopes that his locks would give him extraordinary strength. But contemporary descriptions say only that his hair was cut short and was as dark as his complexion. According to journalist James T. Callender, blacks and whites alike regarded him as "a fellow of courage and intellect above his rank in life" (p. 22).

During his years as an apprentice blacksmith, Gabriel married a young slave named Nanny. Little is known about her, including the identity of her owner. She does not appear in the few extant Brookfield records; most likely she lived on a nearby farm or tobacco plantation. But well into the twentieth century, area blacks believed that Nanny bore him children, who much later went under the surname of Randolph.

In the fall of 1798 Gabriel's old master died, and ownership of Brookfield passed to twenty-two-year-old Thomas Henry Prosser. An ambitious young man with a townhouse in Richmond and a lucrative auction business, Prosser maximized his profits by hiring out his surplus slaves. Even the most efficient planters could not find tasks enough to keep their enslaved artisans occupied year around, and many masters routinely hired out their craftsmen to neighboring farms and urban businesses. Despite all of the work to be done at Brookfield, Gabriel spent a considerable part of each month smithing in Richmond for artisans long on orders and short on labor. Although still a slave under Virginia law, Gabriel enjoyed a rough form of freedom. Indeed, his ties to the plantation became so tenuous that several historians have identified him as a free man.

Emboldened by this quasi liberty, in September 1799 Gabriel moved toward overt rebellion. Caught in the act of stealing a pig, a delicacy slaves used to supply their families with protein, Gabriel refused to endure the verbal abuse of its owner, a white neighbor. Instead, he wrestled his tormentor to the ground and bit off the better "part of his left Ear" (Egerton, p. 31). Under Virginia law, slaves were not tried as whites. They were prosecuted under a colonial statute of 1692 that created special segregated tribunals known as courts of oyer and terminer, composed of five justices of the peace. On October 7 Gabriel was formally charged with attacking a white man, a capital crime. Although found guilty, Gabriel escaped the gallows through an antiquated clause that since the Revolution had been denied to white defendants. Slaves yet possessed the right to "benefit of clergy" (p. 31), which allowed them to avoid hanging in exchange for being branded on the thumb with a small cross if they were able to recite a verse from the Bible.

Gabriel's branding and incarceration served as a brutal reminder that despite his literacy and special status, he remained a slave. By the early spring of 1800, his fury began to turn into a carefully considered plan to bring about his freedom, as well as the end of slavery in Virginia. As a literate man who moved among urban artisans, Gabriel surely knew that several states to the north had recently passed laws for gradual emancipation, and that New York had finally approved such a statute in 1799. As he explained it to his brothers Solomon and Martin, slaves and free blacks from Henrico County would gather at Brookfield on the evening of August 30 to march on Richmond. If Governor James Monroe and the town leaders agreed to Gabriel's demands for black liberty and an equitable distribution of the property, the slave general intended to "hoist a white flag" and drink a toast "with the merchants of the city" (Egerton, p. 51).

The uprising collapsed just before sunset on the appointed day, when a severe thunderstorm hit the Richmond area. The chaos of the storm convinced two Henrico slaves, Tom and Pharoah, that the revolt could not succeed. They informed their owner of the conspiracy, and he hurried word to Governor Monroe. As the state militia closed in, Gabriel escaped south by way of the swampy Chickahominy River. After hiding along the James River for nearly two weeks, Gabriel risked boarding the schooner *Mary*. Captain Richardson Taylor, a former overseer who had recently converted to Methodism, willingly spirited Gabriel downriver to Norfolk. There Gabriel was betrayed by a slave crewman, who had heard of Monroe's $300 reward for Gabriel's capture. Returned to Richmond under heavy guard, Gabriel was quickly tried and found guilty of "conspiracy and insurrection" (Egerton, p. 109). On October 10, 1800, the young revolutionary died with quiet composure at the town gallows

near Fifteenth and Broad Streets. He was twenty-four. In 2002 the Richmond city council formally adopted a resolution proclaiming Gabriel to be "an American patriot and freedom fighter" (*Richmond Times-Dispatch*, October 11, 2002).

SEE ALSO *Freedom; Plantation; Slave Resistance; Slavery*

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Douglas R. Egerton

GAIRY, ERIC

SEE *Grenadian Revolution.*

GALBRAITH, JOHN KENNETH

1908–2006

John Kenneth Galbraith was an institutional economist, Harvard professor, advisor to presidents, bureaucrat, ambassador to India, raconteur, caustic wit, and man of letters. His concepts of countervailing power, the affluent society, conventional wisdom, want creation, and the technostructure of the industrial state have become part of the modern vernacular and the battle for the controlling metaphors of economics and politics. Born on a farm in southern Ontario, Canada, he attended Ontario Agricultural College, graduating in 1931. His family and community background are detailed in his memoir, *The Scotch* (1964). A desire to understand the causes of the Great Depression led him to seek a PhD in agricultural economics at the University of California, Berkeley, graduating in 1934. The influence of Progressive Era economists such as Richard Ely (1854–1943), John R. Commons (1862–1945), and Thorstein Veblen (1857–1929) was in evidence and it created an atmosphere accepting of the New Deal initiatives of President Franklin D. Roosevelt (1882–1945).

Galbraith's first job involved research in agricultural economics under the tutelage of Harvard professor John D. Black (1883–1960), who was well connected in Washington, D.C. Before beginning, Galbraith served as a summer intern in the Agricultural Adjustment Administration. There he learned the role of power in the economy as he witnessed southern congressmen stopping the payment of agricultural subsidies to tenant farmers (mostly blacks). During World War II (1939–1945), Galbraith was placed in charge of price control and rationing in the Office of Price Administration. The political pressure from business was intense, charges of communism flew, and Galbraith was fired in 1943.

Galbraith's writing and analysis led to a stint at *Fortune* magazine from 1943 to 1948. During this time, he also participated in the Strategic Bombing Survey to assess the role of air power in winning the war. The survey concluded that strategic bombing played a minor role and that ground troops were essential in both Germany and Japan. Galbraith later objected to what he called "military Keynesianism"—stimulating the economy via military spending at the expense of social programs.

Upon his controversial return to Harvard, Galbraith wrote *American Capitalism* (1952), in which he argued that a decentralized private economy excelled in production and innovation. He further maintained that concentration and bigness were inevitable. Countervailing the power of buyers, unions, and government would be more effective in controlling the seller's power than traditional antitrust.

In his best-selling *Affluent Society* (1958), Galbraith observed that wealthy economies were no longer typified by scarcity. In fact, corporations maintained themselves by creating demand, rather than merely responding to it, as the "conventional wisdom" had it, producing what he called the "dependence effect." He observed a "social imbalance" between abundant private consumption goods and inadequate publicly provided goods, such as education, clean air and water, and transportation. His description of "the family which takes its mauve and cerise, air-conditioned, power steered, and power-braked car out for a tour passes through cities that are badly paved, made hideous by litter, blighted buildings, billboards and posts" (1958, pp. 199–200) has become legendary and still applies today.

The New Industrial State (1967) describes giant corporations that are run and planned by a hired bureaucratic technostructure rather than owners and that strive for survival and independence rather than profit maximization. Advertising, information management, and access to government are key assets. The economy cannot be under-

stood without attention to the use of power in both politics and business. Robert M. Solow contested Galbraith's argument that giant corporations controlled the economy (1967). But, after subsequent decades of mergers, Galbraith's concerns seem warranted. Solow also objected to Galbraith's "revised sequence" of consumption (want creation rather than only prior want fulfillment) by asserting that advertising only serves to cancel other advertising. Galbraith's concerns drew the label of "sociologist" from Milton Friedman (1912–2006), and along with Galbraith's argument that public planning must balance the private planning of the corporate technostructure, the label of "socialist."

Galbraith questioned the monotheistic worship of gross domestic product as the test of a good society and wondered if the same energy (and the discipline of economics itself) might be better directed toward social harmony, aesthetic enjoyment, and leisure. Galbraith remained a social critic until his death in 2006.

SEE ALSO *Liberalism; Wage and Price Controls*

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A. Allan Schmid

GALLUP POLL

SEE *Pollsters.*

GALTON, FRANCIS
1822–1911

Cousin to Charles Darwin and a talented statistician, Sir Francis Galton had an influence on social science that was profound. His major contributions to mathematical statistics included the initial development of quantiles and linear regression techniques. Along with F. Y. Edgeworth and Karl Pearson, he developed general techniques of multiple regression and correlation analysis, statistical devices that serve as substitutes for experiments in social science. Galton had a major impact on economics, and with W. R. Greg, was instrumental in creating the "science" of eugenics.

Galton was born in Birmingham, England, on February 16, 1822, and died on January 17, 1911, in Haslemere. He spent two years (1836–1838) at King Edward's School in Birmingham, underwent a medical apprenticeship in Birmingham, then studied for a year (1839–1840) at the medical school of King's College, London, before entering Trinity College, Cambridge in 1840. Galton read mathematics at Trinity, from which he graduated without honors.

After inheriting a substantial fortune on the death of his father in 1844, Galton embarked on an African exploration. He published an account of his travels in 1853, and joined the council of the Royal Geographical Society. Galton was elected Fellow of the Royal Society in 1856, and served as Secretary of the British Association from 1863 to 1867.

Galton's focus on heredity was first manifested in the 1869 publication, *Hereditary Genius*, an attempt to marshal evidence in favor of the proposition that mental ability is inherited. In it, Galton, who presumed that mental ability is correlated with reputation in a given profession, examined the scores of two hundred candidates for the Mathematical Tripos at Cambridge as well as those of seventy-two candidates for civil service positions.

In 1883 Galton published *Inquiries into Human Faculty and Its Development*, in which he discussed the ideas now known as *eugenics*. Here, his argument began as an attack on the race-neutral accounts of ability in classical economics (Galton 1907, p. 207). Darwin's endorsement (Darwin 1871, pp. 138–139) gave warrant to Galton's eugenic ideas. Galton's claims for the importance of "race"—that is, characteristics preserved by inheritance in distinction to characteristics acquired by custom—was challenged in his time by the assertion that it was implausible that a child of Quaker parents raised in the North American woods by aboriginal people would show the "gentle altruistic nature of his progenitors" (Reid 1897, p. 945). This challenge would lead to twentieth-century studies of identical twins raised in separate environments.

Galton's study of eugenics illustrates his creativity as a researcher. He was, for example, ingenious in his use of composite photography to help identify inherited characteristics. "The individual faces [of criminals]," he wrote, "are villainous enough, but they are villainous in different ways, and when they are combined, the individual peculiarities disappear, and the common humanity of a low type is all that is left" (1907, p. 11). Because there is no reason to believe that criminality is inherited, Galton is partially correct in his deductions—that is, in his claim that there is no specifically criminal type. Of course, since Galton's time the idea that there is such a thing as a "low type" of humanity has been discounted. Similarly, the argument that ability is inherited by race has been questioned, notably by Tukufu Zuberi (2001), who argues that *race* is a concept devoid of biological meaning and is instead socially constructed.

Despite the fact that many of his conclusions about genetic differences are questioned, if not disproven, today, Galton's work reveals his integrity regarding test results—that is, his willingness to acknowledge cases where the data does not match his presuppositions. An example can be found in his attempt to use his system of fingerprint identification to establish a racial hierarchy, on the basis of his belief that a "higher" race would have less uniform fingerprints. Galton presupposed that the fingerprints of black people would be more uniform than those of white people, but confessed an inability to observe this in the data.

SEE ALSO *Darwin, Charles; Eugenics; Race; Racial Classification; Regression Analysis; Statistics*

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Sandra Peart
David M. Levy

GAMBLING

Gambling and games of chance have been popular throughout history. The globalization of gambling has passed through a number of cycles. More so than in the past, gambling is viewed as a socially acceptable form of entertainment. While gambling activities can take many forms and vary across cultures and jurisdictions, most individuals gamble for enjoyment, for entertainment, to socialize, and to try their luck without experiencing many negative repercussions.

PATHOLOGICAL GAMBLING

Gambling can be viewed on a continuum, ranging from non-gambling to social gambling to pathological gambling. While most adults gamble without experiencing many adverse consequences, a small proportion of adults (0.4–3%) experience significant gambling-related problems, with an even larger proportion of adolescents (4–6%) reporting major gambling-related problems. The essential characteristic associated with pathological gambling is that it is a persistent and recurrent maladaptive gambling behavior that negatively disrupts personal, familial, social, economic, and vocational pursuits. Given the widespread proliferation and expansion of government-regulated and sponsored forms of gambling, gambling is quickly becoming a prominent social policy issue.

Pathological gambling, conceptualized as an impulse-control disorder, results in an individual's inability to stop his or her gambling in spite of multiple negative consequences. While a greater number of males experience pathological gambling compared to females (estimates are that a ratio of 3:1 exists), pathological gamblers frequently experience a preoccupation with gambling, the need to substantially increase the amount and frequency of their wagers, have great difficulty stopping or reducing their gambling, and become extremely irritable when trying to limit their gambling. These individuals often gamble to escape problems or relieve stress, return to gambling in order to recoup losses, frequently lie to family members, peers, and friends in order to conceal their gambling losses, and commit illegal behaviors (both within and outside the home) to finance their gambling. Pathological gamblers jeopardize familial, peer, and vocational relationships in order to continue gambling and help relieve financial difficulties resulting from their gambling behavior.

There is considerable discussion as to whether some forms of gambling may be more problematic than others. Some research suggests that machine gambling (e.g., slot machines, video poker machines, video lottery terminals) and Internet gambling may be more problematic to some individuals because of their relatively low cost and the frequency and speed of playing while simultaneously allowing the player to go into a disassociative state. Other

research suggests that there are definite differential patterns of playing and preferences for different forms of gambling depending upon one's age, accessibility of venues, gender, and ethnic and cultural background.

An emerging body of literature suggests that certain familial factors (high rates of family gambling problems, substance abuse problems, spouse or partners with a gambling problem), biological factors (including brain chemistry and functioning, physiological indicators of arousal and the need for stimulation, genetic considerations), attentional problems, and a wide variety of physical health problems (including cardiovascular and gastrointestinal problems and chronic pain) are associated with pathological gambling disorders. Personality disorders related to impulsivity, sensation seeking, a high degree of risk-taking, antisocial personality disorders, oppositional defiant disorders, compulsivity, psychoticism, and neuroticism, and cognitive distortions (erroneous beliefs including an illusion that one can control the outcome of random events, a lack of recognition of the notion of independence of events, the belief in a system to "beat the odds") have similarly been linked to pathological gambling.

From a psychological perspective, pathological gamblers have been reported to exhibit high anxiety, depression and depressive symptomatology, suicidal ideation and suicide attempts, and a wide range of personality and mental health disorders. There is also a growing body of evidence to suggest that pathological gamblers have a variety of comorbid alcohol and substance abuse problems. While there is no personality profile of a pathological gambler per se, there are indications that an individual's psychological and mental state make certain individuals more susceptible to both gambling and the development of a gambling problem.

In spite of the large number of adverse behavioral traits associated with gambling, it is not unusual for individuals to fail to recognize their problems. They tend not to acknowledge their gambling problem and fail to seek help. Their perceived solution often rests on the "big win."

GAMBLING AMONG CHILDREN AND TEENS

Although problem gambling has been primarily thought of as an adult behavior, considerable research indicates that it remains a very popular activity among both children and adolescents. Whether one is gambling for money on personal games of skill, cards, dice, sporting events, or lottery tickets, a high percentage of children and adolescents worldwide have been found to engage in different forms of gambling.

Studies conducted since the 1990s suggest that gambling activities remain particularly attractive to today's youth and that its popularity is on the rise among both children and adolescents. Prevalence studies conducted in the United States, Canada, New Zealand, Europe, and Australia all confirm the rising prevalence rates of youth involvement in both legal and illegal forms of gambling. While approximately 80 percent of high school students report having gambled for money during the past year, 4 to 6 percent of adolescents exhibit serious gambling problems, with another 10 to 14 percent of adolescents remaining at-risk for developing a serious gambling problem.

Adolescent pathological gamblers, like their adult counterparts and independent of the negative consequences resulting from their excessive gambling, continue to chase their losses, exhibit a preoccupation with gambling, and have an impaired ability to stop gambling in spite of repeated attempts and their desire to do so. The growing body of research with adolescents suggests that gambling and problem gambling is more popular among males than females, adolescent prevalence rates of problem gamblers are higher than those reported by adults, and there is a rapid movement from social gambler to problem gambler. Adolescent problem gamblers report initiating gambling at an early age (approximately ten years of age) as compared with peers who report gambling but have few gambling-related problems. These adolescents are greater risk takers in general and on gambling tasks in particular, exhibit lower self-esteem, exhibit higher depressive symptomatology, remain at heightened risk for suicide ideation and suicide attempts, have poor general coping skills, and report a significant number of major traumatic life events (e.g., parental loss, divorce).

Individuals with gambling problems are also more likely to report school- or work-related problems. Personality traits reveal adolescent pathological gamblers are more excitable, extroverted, and anxious, tend to have difficulty conforming to societal norms, experience difficulties with self-discipline, exhibit more anxiety, exhibit higher levels of impulsivity, and remain at increased risk for the development of multiple addictions.

NEW FORMS OF GAMBLING

New forms of gambling continue to be developed. With more and more governments sanctioning and regulating a multitude of different forms of gambling, its accessibility has never been easier. Problem gambling is not associated with single-trial learning. Very few individuals become addicted to the lure of gambling after their first initiation. Pathological gambling remains a progressive disorder with certain identifiable risk factors developing over time accompanied by periods of euphoria and depression.

The gambling environment today is significantly different from that of past generations. Because of its widespread acceptability, its popularity, and the enormous

revenues generated from gambling, the growth of the gaming industry continues. Gambling is viewed as significantly less harmful than other potentially addictive behaviors including substance abuse, alcohol abuse, and cigarette smoking.

New forms of gambling and games will continue to emerge. Efforts at developing effective empirically sound practices concerning prevention and treatment programs have yet to be realized. Given the widespread accessibility, social acceptance and new technologies bringing gambling into the home, there remains speculation that the prevalence of pathological gambling will likely increase.

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Jeffrey L. Derevensky

GAME THEORY

Game theory is a branch of mathematics used to analyze competitive situations whose outcomes depend not only on one's own choices, and perhaps chance, but also on the choices made by other parties, or *players*. Because the outcome of a game is dependent on what *all* players do, each player tries to anticipate the choices of other players in order to determine his own best choice. How these interdependent strategic calculations are made is the subject of the theory. Game theory was created in practically one stroke with the publication of *Theory of Games and Economic Behavior* in 1944 by mathematician John von Neumann (1903–1957) and economist Oskar Morgenstern (1902–1977). This work was a monumental intellectual achievement and has given rise to hundreds of books and thousands of articles in a variety of disciplines.

The theory has several major divisions, the following being the most important:

Two-person versus n-person. The two-person theory deals with the optimal strategic choices of two players, whereas the n-person theory ($n > 2$) mostly concerns what coalitions, or subsets of players, will form and be stable, and what constitutes reasonable payments to their members.

Zero-sum versus nonzero-sum. The payoffs to all players sum to zero (or some other constant) at each outcome in zero-sum games but not in nonzero-sum games, wherein the sums are variable; zero-sum games are games of total conflict, in which what one player gains the others lose, whereas nonzero-sum games permit the players to gain or lose together.

Cooperative versus noncooperative. Cooperative games are those in which players can make binding and enforceable agreements, whereas noncooperative games may or may not allow for communication among the players but do assume that any agreement reached must be in equilibrium—that is, it is rational for a player not to violate it if other players do not, because the player would be worse off if he did.

Games can be described by several different forms, the three most important being:

1. *Extensive (game tree)*—indicates sequences of choices that players (and possibly chance, according to nature or some random device) can make, with payoffs defined at the end of each sequence of choices.
2. *Normal/strategic (payoff matrix)*—indicates strategies, or complete plans contingent on other players' choices, for each player, with payoffs defined at the intersection of each set of strategies in a matrix.
3. *Characteristic function*—indicates values that all possible coalitions (subsets) of players can ensure for their members, whatever the other players do.

These different game forms, or representations, give less and less detailed information about a game—with the sequences in form l dropped from form 2, and the strategies to implement particular outcomes in form 2 dropped from form 3—to highlight different aspects of a strategic situation.

Common to all areas of game theory is the assumption that players are rational: They have goals, can rank outcomes (or, more stringently, attach utilities, or values, to them), and choose better over worse outcomes. Complications arise from the fact that there is generally no dominant, or unconditionally best, strategy for a player because of the interdependency of player choices. (Games in which there is only one player are sometimes called *games against nature* and are the subject of *decision theory*.)

A game is sometimes defined as the sum-total of its rules. Common parlor games, like chess or poker, have well-specified rules and are generally zero-sum games, making cooperation with the other player(s) unprofitable. Poker differs from chess in being not only an *n*-person game (though two players can also play it) but also a game of *incomplete information*, because the players do not have full knowledge of each other's hands, which depend in part on chance.

The rules of most real-life games are equivocal; indeed, the "game" may be about the rules to be used (or abrogated). In economics, rules are generally better known and followed than in politics, which is why game theory has become the theoretical foundation of economics, especially microeconomics. But game-theoretic models also play a major role in other subfields of economics, including industrial organization, public economics, and international economics. Even in macroeconomics, in which fiscal and monetary policies are studied, questions about setting interest rates and determining the money supply have a strong strategic component, especially with respect to the timing of such actions. It is little wonder that economics, more than any of the other social sciences, uses game theory at all levels.

Game-theoretic modeling has made major headway in political science, including international relations, in the last generation. While international politics is considered to be quite anarchistic, there is certainly some constancy in the way conflicts develop and may, or may not, be resolved. Arms races, for instance, are almost always nonzero-sum games in which two nations can benefit if they reach some agreement on limiting weapons, but such agreements are often hard to verify or enforce and, consequently, may be unstable.

Since the demise of the superpower conflict around 1990, interest has shifted to whether a new "balance of power"—reminiscent of the political juggling acts of European countries in the nineteenth and early twentieth century—may emerge in different regions or even worldwide. For example, will China, as it becomes more and more a superpower in Asia, align itself with other major Asian countries, like India and Japan, or will it side more with Western powers to compete against its Asian rivals? Game theory offers tools for studying the stability of new alignments, including those that might develop on political-economy issues.

Consider, for example, the World Trade Organization (WTO), whose durability is now being tested by regional trading agreements that have sprung up among countries in the Americas, Europe, and Asia. The rationality of supporting the WTO, or joining a regional trading bloc, is very much a strategic question that can be illuminated by game theory. Game theory also provides insight into how the domestic politics of a country impinges on its foreign policy, and vice versa, which has led to a renewed interest in the interconnections between these two levels of politics.

Other applications of game theory in political science have been made to strategic voting in committees and elections, the formation and disintegration of parliamentary coalitions, and the distribution of power in weighted voting bodies. On the normative side, electoral reforms have been proposed to lessen the power of certain parties (e.g., the religious parties in Israel), based on game-theoretic analysis. Similarly, the voting weights of members of the European Union Council of Ministers, and its decision rules for taking action (e.g., simple majority or qualified majority), have been studied with an eye to making the body both representative of individual members' interests and capable of taking collective action.

As game-theoretic models have become more prominent in political science, they have, at the same time, created a good deal of controversy. Some critics charge that they abstract too much from strategic situations, reducing actors to hyperrational players or bloodless automatons that do not reflect the emotions or the social circumstances of people caught up in conflicts. Moreover, critics contend, game-theoretic models are difficult to test empirically, in part because they depend on counterfactuals that are never observed. That is, they assume that players take into account contingencies that are hard to reconstruct, much less model precisely.

But proponents of game theory counter that the theory brings rigor to the study of strategic choices that no other theory can match. Furthermore, they argue that actors *are*, by and large, rational—they choose better over worse means, even if the goals that they seek to advance are not always apparent.

When information is incomplete, so-called Bayesian calculations can be made that take account of this incompleteness. The different possible goals that players may have can also be analyzed and their consequences assessed.

Because such reconstruction is often difficult to do in real-life settings, laboratory experiments—in which conditions can be better controlled—are more and more frequently conducted. In fact, experiments that test theories of bargaining, voting, and other political-economic processes have become commonplace in economics and political science. Although they are less common in the other social sciences, social psychology has long used experiments to investigate the choices of subjects in games like prisoners' dilemma. This infamous game captures a situation in which two players have dominant strategies of not cooperating, as exemplified by an arms race or a price war. But doing so results in an outcome worse for both than had they cooperated. Because mutual cooperation is

not a *Nash equilibrium*, however, each player has an incentive to defect from cooperation.

Equally vexing problems confront the players in another well-known game, chicken. Not only is cooperation unstable, but noncooperation leads to a disastrous outcome. It turns out that each player should defect if and only if the other player cooperates, but anticipating when an opponent will do so is no mean feat.

Since the invention of game theory in the mid-1940s, its development has been remarkable. Two Nobel prizes in economics were awarded to a total of five game theorists in 1994 and 2005 (including John Nash of the film *A Beautiful Mind* fame), but many other recipients of this prize have used game theory extensively. In addition, game-theoretic modeling has progressed rapidly in political science—and, to a lesser extent, in the other social sciences—as well as in a variety of other disciplines, including biology, business, and law.

SEE ALSO *Arms Control and Arms Race; Cold War; Deterrence, Mutual; Nash Equilibrium; Political Economy; Prisoner's Dilemma (Economics)*

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Steven J. Brams

GANDHI, INDIRA
1917–1984

Indira Priyadarshini Gandhi (born November 19, 1917) was twice elected the prime minister of India and was the first woman to hold the position. Daughter of India's first prime minister, Pandit Jawaharlal Nehru (1889–1964), she was introduced to the vagaries of political instability early in life. As someone who participated in the anticolonial national movement in the 1930s and 1940s as a youngster, and saw the carnage that accompanied the partitioning of British India into the independent nations India and Pakistan in 1947, Gandhi experienced firsthand the challenges and uncertainties experienced by a fledgling democracy. In this regard, her formative years introduced her to the political cultures that she would negotiate as one of independent India's most charismatic and controversial figures.

After attending educational institutions in Europe and India, she married an Indian National Congress (INC) activist named Feroze Gandhi (1912–1960) in 1942. Her sons, Rajiv and Sanjay, were born in 1944 and 1946 respectively. Following the deterioration of her marriage, she moved to Delhi to support her father as he prepared to contest India's first national election in 1951. The 1950s and early 1960s were a period of political education and preparation for Gandhi as she rose rapidly in the ranks of the INC, becoming a minister in the government formed by Lal Bahadur Shastri (1904–1966) soon after her father's death on May 24, 1964. In 1965, when war with Pakistan broke out, she emerged as a strong contender for the INC leadership with the backing of a cohort of INC leaders named the Syndicate. Warding off challenges from numerous constituencies within the party, and with the backing of the Syndicate, she became India's fifth prime minister.

From 1971 onward, Gandhi consolidated her dominance. In late 1971, civil war and the secessionist movement of East Pakistan led to the Indian Army's invasion of East Pakistan in the third Indo-Pakistan war since 1947. With the creation of the independent nation-state of Bangladesh in 1971, Gandhi's personality-centered political style became pronounced. Partly to underscore India's growing geopolitical stature in the cold war, she encouraged the development of India's nuclear program, which conducted a successful nuclear test in 1974. Even as India made economic gains in some areas, she undermined India's constitutionally mandated federalism when, unlike her father, she steadily undercut the authority of regional political leaders in order to consolidate power at the center. Her regime witnessed the arrival of a distinctively populist style of government, most apparent from her use of the slogan "Garibi Hatao" ("remove poverty"). While these changes bolstered her authority, they also made her the brunt of popular discontent, which became strident in the 1973–1974 period because of food shortages and inflation. Popular unrest and legal assaults on Gandhi's power precipitated, in June 1975, the declaration of a state of emergency by her government.

The only period of authoritarian rule in post-independence India and a phase denounced as one of the darkest of the postcolonial period, the state of emergency lasted from 1975 to 1977. Controversial constitutional

amendments, censorship, and assaults on civil liberties were accompanied by the arrest of thousands of party workers, and perhaps most notoriously, the forced sterilization campaigns prompted by Gandhi's son Sanjay Gandhi (1946–1980). These policies raised severe discontent, but Prime Minister Gandhi misjudged the popular mood in 1977 and called parliamentary elections in which her party was comprehensively defeated.

The Janata Party government that came to power in 1977 under the prime ministership of Morarji Desai (1896–1995) did not survive for long, but the period after the state of emergency marked a decisive shift in Indian politics with the restoration of India's parliamentary democracy and the reversal of many of the authoritarian policies adopted by Gandhi. The INC itself split in the wake of the election debacle, and Gandhi sought to build a new political base for herself, one drawn largely from ethnic and religious minorities. Her reemergence as a political leader coincided with infighting in the Janata Party government, and in 1980 Gandhi was voted back to power as India's eighth prime minister.

Gandhi's second term in office was weighed down with problems in the Punjab, where the rise of Sikh militancy accompanied Sikh demands for an independent state. Matters escalated in mid-1984 with Operation Bluestar, when she ordered the Indian Army to storm the Golden Temple in Amritsar, one of the holiest Sikh shrines, to remove militants hiding in its premises. This act of desecration, accompanied by the excessive use of military force, has remained a source of enormous controversy. On October 31, 1984, Gandhi was gunned down by her Sikh bodyguards as she was walking out of her residence. The assassination triggered a pogrom against Sikhs in New Delhi and other northern Indian cities.

Gandhi's political career has left a deep imprint on Indian politics, not least through her descendants. Her son Rajiv Gandhi (1944–1991) became prime minister in 1984, and his widow Sonia Gandhi emerged during the late 1990s as the leader of the Congress Party. "Votebank" politics, with which Indira Gandhi is often identified, has remained an enduring facet of Indian political culture long after her death.

SEE ALSO *Anticolonial Movements; Authoritarianism; Civil Liberties; Cold War; Congress Party, India; Democracy; Federalism; Nehru, Jawaharlal; Partition; Pogroms; Populism; Poverty; Weaponry, Nuclear*

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Vivek Bhandari

GANDHI, MOHANDAS K.
1869–1948

Mohandas Karamchand Gandhi was born in Porbandar, Gujarat, India, on October 2, 1869, the youngest son in a family of four children. Due to his father's position as a local politician, the family was subject to transfer within the province, and the Gandhis moved to Rajkot when Gandhi was seven years old. He completed his primary and secondary studies there, and at age thirteen, in keeping with Indian custom at that time, was married (to Kasturba Kapadia).

As a young husband, Gandhi exhibited intense jealousy and sexual voracity. However, his sexual appetite would become the source of great guilt throughout his adult life. This began after his father fell ill and Gandhi became his constant bedside companion. One evening, a trusted uncle arrived to temporarily relieve Gandhi of his responsibility. Gandhi jumped at the chance to be with his wife, and during his absence, his father died. Gandhi never forgave himself, and the vow of celibacy (known as *Brachmacharya*) that he took later in life may have involved atonement for this event.

Gandhi left for college in Bhavnagar, about ninety miles from Rajkot, soon after his father's death, with the intention of replacing his father as provider for the extended family. Though he had always been an exemplary student, his college studies suffered because of his melancholy and his guilt intensified when he ultimately returned home defeated.

Not long after his return from Bhavnagar, a family advisor suggested that he travel to England to study law. Gandhi spent three years in England, and was "called to the Bar," or made an official barrister, in 1891. He then returned to India to begin a legal practice.

However, Gandhi was afraid to speak out in court. In fact, his first trial ended so badly that he refunded his client's money. He did have an aptitude for drawing up legal documents and briefs, however, and was offered a job with a Rajkot merchant who did business in South Africa. After much deliberation, Gandhi decided to accept the post in South Africa for one year.

In South Africa, Gandhi immediately encountered racial discrimination. Though also British subjects, Indians were not permitted first-class accommodations,

always had to give way to British whites, and were treated very poorly in general. Gandhi objected to every indignity, but when his employer stepped in to solve the problem for him, Gandhi backed down and tried to ignore the insult; however, shortly before he was to return to India, the government sought to impose an annual £25 tax on indentured servants who had finished their tenure and continued to work in South Africa. The tax applied to each adult family member, and in many instances would have equaled almost as much as the family's earnings for a full year. It was an obvious ploy to reduce farming competition for white farmers. Gandhi was outraged and met with Indian businessmen to explain the situation. At their behest, Gandhi remained in South Africa to campaign against the tax.

In 1894 Gandhi founded the Natal National Congress, patterned after the National Congress of India, and soon after returned to India to drum up support. *The Green Pamphlet*, Gandhi's first political treatise on the plight of South African Indians, was widely distributed in India and roused greater support for the cause. After returning to South Africa in 1904, Gandhi bought and ran the *Indian Opinion* newspaper to spread the word among Indians living there. At the end of that same year, in order to run the paper more efficiently, Gandhi set up his first commune—the Phoenix Settlement—where he, his wife, and three of his four children lived. Harilal, his oldest son, had stayed in England to study.

Ultimately, the £25 Tax was reduced to a £3 tax, rather than being rescinded, by the South African Parliament, which only served to increase Indian resentment. A new battle arose over a government order to register all Asians, including longtime residents as well as new immigrants, and women and children. This order, commonly known as the "Black Act," also required fingerprinting. The entire community was outraged. This sparked Gandhi's first campaign based on *Satyagraha*, or political struggle through passive resistance and civil disobedience. Many were arrested for their failure to comply with the order, including Gandhi, who was imprisoned for the first time. Eventually, Gandhi reached an agreement with Cabinet Minister Jan Christen Smuts, whereby the amendment would be repealed once most of the Indian population had registered.

Even after a show of Indian compliance, the South African government reneged on the agreement and in 1908 the Indian community met to burn their registration certificates. Once again, many were arrested, including Gandhi, who was sentenced to prison. In 1913, when the Cape Supreme Court ruled that any marriage outside Christianity and/or not recorded by the Registrar of Marriages was invalid, Indian women became involved in the demonstrations.

To goad the British into revoking their harsh requirements, Gandhi organized a "Great March" of 2,000 Indians from Natal into the Transvaal. Indians were bound by law to present registration papers at the point of entry, though Europeans were not so restricted. The march was meant to overcrowd prisons and increase pressure on the government to repeal the law. This situation deteriorated into such harsh conditions for the Indians that even members of the British government began to support Gandhi's movement. Embarrassed, the South African government rescinded its order and the Satyagraha campaign in South Africa ended. Soon after, Gandhi returned to India for the rest of his life.

In 1915 Gandhi established the Satyagraha Ashram near Ahmedabad. At that time, Indian society was divided into a social hierarchy of four castes, with the Dalits or "untouchables" considered the lowest of the four. Those of higher castes were even bound not to touch them. Gandhi, who was adamant that all men were created equal and that the caste system should be abolished, was eager to admit an "untouchable" or Dalit family to his ashram. Despite such efforts, however, his continuing push to end the caste system had little result.

Gandhi practiced law in Bombay for a time, but was drawn into renewed Satyagraha for Indian social causes by people who had learned of his success in South Africa. At Champaran, he campaigned for the indigo workers and at Kheda, he pursued justice for factory workers who were being mistreated. When the British passed the *Rowlett Act* (1919), which gave them full authority to squelch "terrorist" demonstrations, Gandhi launched a series of marches and fasts known as *hartals* ("strikes").

Violence marred the *hartal* in Delhi and an outright massacre took place at Jallianwala Bagh, leading Gandhi to call a halt to the strikes. Many of Gandhi's followers were unhappy with this decision, which some saw as a sign of weakness. Muslims began to pull further away from the predominantly Hindu Indian population and to consider alternatives for themselves, such as an independent Pakistan. Gandhi could not sway them. Even his staunch supporters began to question his ability to lead the people.

But when the activist leader Bal Gangadhar Tilak died in 1920, Gandhi was called on to fill the void in the Home Rule movement, even as his health was failing. He called for a complete boycott of the legislature and proclaimed January 26, 1930, to be Purna Swaraj Day ("Total Independence Day").

On March 2 Gandhi wrote to the viceroy, Lord Irwin, warning him that he intended to lead followers on a civil disobedience march to protest the prohibition against collecting salt naturally. Actions contrary to this law were harshly dealt with, but when Gandhi had no reply to his

ultimatum, the 200-mile march to the sea began on the morning of March 11. As the group traveled along, they stopped in villages and small towns, encouraging residents to burn all European cloth in their possession. Gandhi urged them to spin their own thread and to wear garments made only with Khadi, the homespun Indian material. When the throng reached the salt mines, Gandhi encouraged them to take up salt from the salt beds. Many people were assaulted by police and arrested. Gandhi was among those taken and imprisoned without trial.

In the ensuing months, more than 100,000 were arrested, and the upheaval continued until a pact aimed at ending the civil disobedience was made between Gandhi and Irwin. During the last four months of 1931, Gandhi attended a Round-Table Conference in London to discuss Indian issues with representatives of the British government. At the conference, the British offered to reserve a block of seats in a proposed bicameral legislature for Muslims, Sikhs, and Dalits. Gandhi was vehemently against this proposal because he thought that all Indians should be treated equally, and should not be divided into separate blocks. Though B. R. Ambedkar, the leading Dalit politician, tried to make Gandhi see that this was the Dalits' only chance of representation, Gandhi continued to oppose the proposal and began a "fast to the death" to stop it.

Gandhi would endure several fasts, more imprisonment, and the deaths of his wife and personal secretary before a final agreement—the Indian Independence Act of 1947—was reached, granting full independence to India. This agreement also called for the creation of an independent Pakistan, a provision that upset many Muslims. Not all Muslims lived in northern India, where Pakistan was formed, and many were displeased that relatives would be living in another country. They felt that Gandhi had failed them. While holding a prayer meeting at Birla House in Delhi on January 20, 1948, Gandhi was murdered by an angry Muslim.

Gandhi, know as the "Mahatma" or the "Great Soul," was at various times underestimated by the British and by Indian politicians. Though the latter had set him aside as an incompetent old man, they soon came to realize how much they needed him as a source of inspiration, because only Gandhi had been able to hold sway over the hearts and minds of the Indian people.

SEE ALSO *Caste; Civil Disobedience; Liberation Movements; Passive Resistance; Protest*

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Patricia Cronin Marcello

GANDHI, RAJIV

SEE *Gandhi, Indira.*

GANDHI, SONIA

SEE *Gandhi, Indira.*

GANS, HERBERT J.

1927–

Herbert J. Gans was born in Cologne, Germany, in 1927. He escaped the worst of the Nazi Occupation, moving first to England in 1938 and then to the United States in 1940, becoming an American citizen in 1945. After graduating from the University of Chicago in 1950 with an MA in sociology and social science, Gans worked for three years with public and private agencies as a planner of two new towns. In 1953 he turned to academia, receiving his PhD from the University of Pennsylvania in 1957 and advancing to the position of associate professor of urban studies by 1964. Between 1964 and 1969, Gans worked as a research associate for the Institute for Urban Studies and Planning at the Massachusetts Institute of Technology. In 1971 he became a professor of sociology at Columbia University, and in 1985 he became the Robert S. Lynd Professor at Columbia. In 1989 he served as president of the American Sociological Association, and he received the association's Public Understanding of Sociology Award in 1999.

Gans's research and teaching activities have been largely concentrated in the area of urban sociology. Committed to the social-scientific method of participant observation, his first book, *The Urban Villagers* (1962), was a study of an Italian American neighborhood in Boston. Gans noted how economic terms such as *underclass* had evolved into judgments of moral value attached to the poor in society. From his analysis, Gans concluded that the various forms of social problems associated with poor neighborhoods were not a cultural characteristic of the people who lived there, but rather a direct result of the social and economic circumstances of their poverty. This was to be a recurrent theme in Gans's writings, emerging powerfully in a later work, *The War against the Poor* (1995), in which he analyzed the social, psychological, and political reasons that Americans continue to seek to indict millions of poor citizens as "undeserving."

The Levittowners (1967) focused specifically upon the origin and quality of suburban life, including its effects on human behavior. Gans then moved on to challenge the supposed universality of high cultural standards in *Popular Culture and High Culture* (1974). An outspoken advocate of cultural pluralism, Gans pointed out that the alleged convergence of high culture and popular culture could not be empirically sustained, because the lifestyle choices of middle-class and working-class social groups remained divergent. This concern with how various social groups make decisions informed his next publication, *Deciding What's News* (1979), in which he looked at the impact of news agendas on individual decision-making and the shaping of a nation's self-image. He returned to this theme in *Democracy and the News* (2003), arguing that a news media manipulated by private corporations threatens to undermine the basic foundations of American democracy by failing to properly inform its citizenry.

One of Gans's most influential concepts is "symbolic ethnicity," which refers to a nostalgic allegiance to an ethnic culture, typically of an immigrant generation, that can be felt without having to be frequently incorporated into everyday life practices. Symbolic ethnicity is thus about feeling ethnic, without necessarily being so.

A second influential idea is the "function of poverty," and Gans will be remembered for the controversy that this idea created. Gans argues that poverty satisfies a number of positive functions for many nonpoor groups in American society—such as carrying out the essential low-paid work that others will not undertake. Though he has controversially associated poverty with positive functions in this way, Gans maintains that recognizing this does not mean that poverty should, or must, continue to exist.

SEE ALSO *Democracy; Ethnic Enclave; Ethnicity; Functionalism; Journalism; Poverty; Suburban Sprawl; Suburbs; Urban Studies*

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Mark Davis

GARDNER, HOWARD

SEE *Multiple Intelligences Theory; Talent.*

GARIFUNA

The population of people known as *Garifuna*, Black Carib, Charaib, and—as they refer to themselves in Belize, Central America—as *Garinagu*, is the product of ethnogenesis (a genetic and cultural mixture) resulting from the collision of the Atlantic slave trade, colonial settlement, and the region's aboriginal people. In the 1600s a cargo of slaves was shipwrecked off the coast of either Dominica and/or the Island of St. Vincent located in the Lesser Antilles of the Caribbean. These escapees found refuge among the aboriginal Carib Indians, and, over time, recruited others—mostly men—through raids of local plantations. This pattern of marronage produced a new group that populates Central America, specifically Honduras; Bluefield, Nicaragua; Livingston, Guatemala; and Belize. In 1974 William V. Davidson estimated the Garifuna population at 70,000 to 80,000 with the largest concentrations in the Honduras and Belize. In 1998 Mark Moberg placed the Garinagu population at 120,000. And in 2000, Pamela Conley estimated there were 200,000 people living in Honduras, with 15,000 and 6,000 residing in Belize and Guatemala respectively (Conley 2000). Smaller groups of a few thousand live in Nicaragua and the Windward Islands. Late-twentieth-century migration accounts for the presence of Garinagu in Brooklyn, Chicago, and Los Angeles.

The Garinagu's arrival to the coastal countries of Central America is a testimonial of group survival and what Moberg terms "their extraordinary adaptability" (1998, p. 1014). A hunter gatherer society, who were "fiercely independent" (1998, p. 1014), the British violently exiled them from the Island of St. Vincent in 1797 after intense military engagement that included the First Carib War (1772–1773) and the Second Carib War (1795–1796). Land disputes marred their relationship with the British, in stark contrast to their peaceful relationship with the French. At the end of the second war, the British, says anthropologist Joseph Palacio, "viciously

extricated … [Garinagu] men, women, and children from their hideouts" (Palacio 2000, p. 4). Approximately 4,338 people, who were not among those decimated during the final altercation, were temporarily held on the desolate island of Baliceaux before being exiled to Roatan in Central America. From Roatan, which the British clearly intended as a place for their demise, the Garifuna with Spanish assistance migrated to Honduras. In 1832 a small group left the (Spanish) Honduras for Belize (formerly the British Honduras). What has emerged from this interaction of African and aboriginal Arawak/Carib Indians is an adaptive group with several unique cultural characteristics.

LANGUAGE

Garinagu speak the gendered language of Garifuna with different dialects for men and women, an aspect reflective of the social ecology of the Island of St. Vincent, whereby "Red" Caribs appropriated Arawak women as war prizes and intermarried with them—with women preserving their Arawak dialect. In the early twenty-first century the language retains this distinctive gender feature and reflects both African and aboriginal Arawak/Carib Indian influences. Garinagu are noted in the region for their "linguistic versatility," and are often fluent in multiple languages (Garifuna, Spanish, English [in Belize], and indigenous Maya languages). This multilingualism has translated itself into professional capital, with many becoming educators and teachers, especially in the rural (Maya) areas of Central America.

CULTURE

Palacio describes Garinagu as an anomaly because of the amalgamation of aboriginal cultural traits and African cultural survivals (2000, p. 2). Garifuna myth and folklore reveal strong aboriginal Indian components while diet reflects many West Indian Afro-American food ways. Historically reliant on a subsistence lifestyle, cassava carries symbolic significance as a diet staple, and as the food that enabled Garinagu to survive exile. Cassava is especially important to the *dügü* ceremony, a sacred religious ritual used to appease dead ancestors after a family experiences a difficult period; all relatives are required to attend the dügü, a communal event designed to reestablish spiritual, physical, and social equilibrium. Contemporary Garinagu religious practices reflect the syncretism of African ancestor worship and Roman Catholic beliefs.

GARINAGU TODAY

With the exception of Belize, Garinagu remain politically and economically marginalized in most of the countries where they reside. A reputation for resistance caused British colonial administrators to separate them from other colonized groups of Blacks—a divide and conquer strategy that in the twenty-first century translates into ethnic tensions between Garinagu and other African-descended populations; for example, in Belize, there is very little intermarriage between African-descended Creoles and Garinagu. The group's strong African phenotype caused some to question the validity of their claims of aboriginal ancestry. However, in 1992 they applied for membership within the Ottawa-based World Council for Indigenous Peoples and were accepted. Preservation of the Garinagu cultural heritage, especially language and the dügü ritual, as well as the struggle for land rights, continues to be a priority. The pervasiveness of the *punta,* however, throughout Central America, a dance derived from the dügü, attests to the ways in which even marginalized cultures have an impact on the larger societies.

SEE ALSO *African Diaspora; Discrimination; Indigenismo; Indigenous Rights*

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Irma McClaurin

GARVEY, MARCUS
1887–1940

Marcus Garvey was the founder of the Universal Negro Improvement Association and African Communities League (UNIA). He was a prominent spokesman for the "back to Africa" movement within black nationalism, which urged people of African ancestry to return to the continent. He is revered as a prophet in Rastafarianism.

Garvey was born in Jamaica and traveled to London and the United States before World War I (1914–1918). He started the UNIA in Jamaica in 1914 as a fraternal organization calling for self-improvement for poor Jamaicans. As the movement took on a more political character in the 1920s, it gathered support from earlier movements for black liberation in the colony, such as the nineteenth-century ex-slaves reparations movement. Garvey corresponded with Booker T. Washington, who had called for black economic self-sufficiency in his Atlanta Address of 1895, and in the early days of his movement shared Washington's gradualist approach. When Garvey went to the United States in 1916, his hope was to emulate Booker T. Washington by starting a school in Jamaica to train poor blacks in practical subjects. Once in America, however, he established a branch of the UNIA there, and in the end it was in North America that the movement had its greatest membership and influence in the period after World War I.

The purpose of the UNIA as Garvey expounded it in the period between 1918 and 1922 was to unite blacks around the world and to work for independent economic improvement. He was not a black supremacist, but instead believed that the races would prosper best if they were separate and self-sufficient. Garvey gathered support from veterans of previous black campaigns, especially the movement for pensions for slaves that had been led by Callie House. Garvey provoked controversy when he lent support to President Harding's campaign against miscegenation and met with leaders of the Ku Klux Klan. His argument was that the races should remain separate, not so that one could dominate another, but so that each could work out its own destiny in keeping with its natural virtues. This is a position that more recent black nationalist groups including the Nation of Islam have also held.

In the 1920s Garveyism became a great international civic movement, whose supporters had an almost religious fervor about Garvey himself as well as his principles. Garvey hoped that blacks from the Americas could redeem Africa. He was opposed to colonialism and called on European powers, especially Britain, to leave Africa. He supported Ethiopian resistance to Italian aggression in 1935, but was harshly critical of Emperor Haile Selassie after Ethiopia's surrender in 1936 (a fact often overlooked by Rastafarians, for whom Selassie is a divine figure).

In order to put his philosophy of racial self-sufficiency and self-redemption into practice, Garvey founded a number of businesses. Most famous were the Black Star shipping line and the Negro Factories Corporation. Unfortunately, the realities of the business climate in the 1920s, colonial regulations in Africa, and American racial discrimination meant that his businesses were unsuccessful. After the failure of the Black Star Line, the American Department of Justice, spurred on by the new director of the FBI, J. Edgar Hoover, brought charges of fraud against Garvey. The charges hinged on a technicality—whether the Black Star Line had ever owned a ship depicted in the stock prospectus. It is still unclear to this day whether Garvey actually did anything wrong. Nonetheless, there had certainly been a lot of shaky financial deal-making in the company's history, and Garvey, if not guilty himself of participation, had at least overlooked some misdeeds. In any case, a black nationalist found it difficult to get a fair trial in 1920s America. Garvey was imprisoned for several years, before President Coolidge commuted his sentence. He was deported to Jamaica in 1927.

Garvey had a long dispute with black civil rights leader W. E. B. Du Bois. Du Bois argued in the early part of the twentieth century that American blacks should work to integrate public institutions and call upon the U.S. government to live up to the high standards of equal treatment under law enshrined in the Constitution. He was one of the founders of the National Association for the Advancement of Colored People (NAACP), which played a key role in the struggle for racial integration and civil rights for American blacks. Du Bois's position was, of course, diametrically opposed to Garvey's. To Garvey, racial integration was at best an illusion and at worst a snare to keep blacks subordinate to whites and away from their destiny in Africa. Their dispute took on an unfortunate personal tone, with Du Bois calling Garvey a "lunatic" and Garvey responding that Du Bois was a "white man's nigger" and a "mulatto monstrosity." Ironically, Du Bois later came to a position closer to that of Garvey than to his former integrationist stand, and himself emigrated to Africa, dying a Ghanaian citizen.

After his return to Jamaica, Garvey formed the People's Political Party (PPP), the first modern political party in Jamaica. Up to this time, Garvey had been reluctant to get involved in politics, seeing the political system as irredeemably white-dominated and participation a form of tokenism that could distract blacks from self-sufficient development. Garvey was elected twice to town council seats, but his views annoyed the colonial government and he was arrested. He finally left Jamaica in 1935 and spent the last five years of his life in London, continuing to work toward his vision of black self-sufficiency and African liberation, but with limited results.

Garvey's movement, although manifesting itself under a variety of different names and somewhat different ideological colors in its several homes, can be considered the first international African movement and perhaps the most dynamic force in the struggle for democracy, dignity, and human rights for black people of the first half of the twentieth century. Garvey deserves a place alongside better-known figures such as Martin Luther King Jr., Du Bois, Frederick Douglass, Sojourner Truth, and Toussaint Louverture as a hero in the struggle for black liberation in the Americas.

Garvey's remains were moved from London to Jamaica in 1964 and were buried in the national heroes' cemetery in Kingston. He is venerated today as a founding figure in Jamaica's struggle for national liberation.

Garvey's own religious practices were conventional—he was a Roman Catholic—and he never claimed any religious authority. However, the Rastafarian movement has adopted him as a major prophet, with many Rastas seeing him as the reincarnation of John the Baptist, Moses, or Elijah. Indeed, the modern Rastafarian movement sprang up after the collapse of the UNIA and the PPP and incorporated many members of those organizations. Garvey's project of returning blacks to Africa is a centerpiece of most Rastafarian theology. Of course, for Rastafarians, it is a religious duty to return Jah's people to the promised land, while for Garvey it was a practical necessity.

SEE ALSO *Black Nationalism; Du Bois, W. E. B.; Rastafari*

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Stewart R. King

GATES, WILLIAM

SEE *Microsoft.*

GAUSS, CARL FRIEDRICH

SEE *Distribution, Normal.*

GAUTREAUX RESIDENTIAL MOBILITY PROGRAM

The result of a 1976 Supreme Court decision, the Gautreaux program allowed low-income black public housing residents in Chicago to receive Section 8 housing certificates (vouchers) and move to private-sector apartments either in mostly white suburbs or the city. Between 1976 and 1998 over 7,000 families participated. The Gautreaux program presents an unusual opportunity to examine the outcomes associated with low-income families' moves to more advantaged neighborhoods with better labor markets and schools. Most research on neighborhood effects has focused on statistical analyses of the relationship between neighborhood attributes and many life outcomes. However, even after extensive statistical controls, one cannot be certain about the direction of causality or whether unmeasured factors might influence relationships. Housing mobility programs such as Gautreaux are one way to separate these effects.

Gautreaux participants circumvented the typical barriers to living in suburbs, not by their jobs, finances, or values, but by acceptance into the program and quasi-random assignment to the suburbs. The program provided housing subsidy vouchers, but not employment or transportation assistance. Unlike the usual case of working-class blacks living in working-class suburbs, Gautreaux permitted low-income blacks to live in middle-income white suburbs. Participants moved to more than 115 suburbs throughout the 6 counties surrounding Chicago. Suburbs with a population over 30 percent black were excluded. Few high-rent suburbs were excluded by funding limitations of Section 8 certificates.

Prior research on Gautreaux shows significant relationships between placement neighborhoods and subsequent employment and education. A study of children finds that, as young adults, suburb movers were more likely than city movers to graduate from high school, attend college, attend four-year colleges (versus two-year colleges), and (if they were not in college) to be employed and to have jobs with better pay and with benefits (Rosenbaum 1995). A study of 330 Gautreaux mothers finds that suburban movers had higher employment than city movers, but not higher earnings, and the employment difference was especially large for adults who were unemployed before the program (Rosenbaum 1995). Using

administrative data to locate present addresses for 1,504 out of 1,507 movers, research finds that 65 percent of suburban families remained in the suburbs an average of fourteen years after placement. After premove individual and neighborhood attributes were controlled, program placement strongly predicted racial composition of current neighborhood (DeLuca and Rosenbaum 2003) and public aid receipt many years after moving (DeLuca and Rosenbaum 2003; Keels et al. 2005).

Because researchers had no input into implementation, families were not formally randomly assigned to conditions. However, placements approximate random assignment, because families were assigned to neighborhoods on a first-come, first-placed basis (according to reports of housing counselors and administrators in the 1980s). Few significant differences were evident with individual attributes, but premove neighborhood attributes show statistically significant differences (2 of 9 comparisons). This may indicate selection bias, although even random assignment programs find some substantial differences (Goering and Feins 2003, table 7.1). Other studies have examined multiple neighborhood level indicators, detailed preprogram neighborhood differences, and intergenerational effects (DeLuca 2006).

Based on Gautreaux, the Moving to Opportunity program (MTO) was an experiment with pre- and postmove data and random assignment of low-income families to three groups—one required to move to low-poverty areas, one with open-choice use of housing vouchers, or a control group given no vouchers. Like Gautreaux, MTO found large effects on mothers' and children's feelings of safety and other attitudes. MTO also found large effects on mothers' and daughters' health.

MTO had smaller effects on mothers' employment and children's education than Gautreaux. However, MTO measured outcomes in the late 1990s, during a strong labor market and strong welfare reform, so, although MTO found no difference between groups, it found an astounding 100 percent employment gain for the control group. One possible interpretation is that virtually everyone who could work was doing so, and residential moves had no additional effect for that reason.

Program attributes may explain other findings. While few MTO children attended schools with above-average achievement, nearly all Gautreaux children did. While families made short moves that allowed interaction with prior neighbors (only 16% of moves over 10 miles), Gautreaux's distant moves (90% over 10 miles; average 25 miles) prevented such interaction. While Gautreaux families moved to stronger labor markets, MTO treatment group moves were not necessarily to different labor markets.

The Gautreaux studies suggest the possibility that large changes of environment can have large impact. The MTO results do not contradict that lesson; few MTO moves entail distant moves to above-average schools or much better labor markets. However, MTO research provides strong evidence about modest changes of environment. While both studies indicate enormous effects of residential moves, the differences between the findings indicate the importance of being alert to design features of the program and to historical context influences.

SEE ALSO *Ethics in Experimentation; Experiments, Human; Moving to Opportunity; Social Experiment*

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GAYS

SEE *Politics, Gay, Lesbian, Transgender, and Bisexual; Sexual Orientation, Determinants of.*

GAZA STRIP

SEE *Intifada, The; Palestinians.*

GAZE, COLONIAL

Modern colonial rule relied not only on the military and economic power of conquering nations, but also on domination over forms of cultural representation. The period

of Europe's political expansion, starting in the late fifteenth century, witnessed the development of significant new cultural technologies. From the printing press to photography, film, and sound recording, technical innovations enabled novel ways of documenting and disseminating knowledge about Europe's encounters with the non-Western world. Through newspapers, travelogues, popular magazines, and documentary films, European officials and travelers made images of distant colonial settings available to larger, more diverse metropolitan audiences. While such work rapidly expanded knowledge about hitherto remote regions, it was frequently riddled with stereotypes and assumptions that classified societies according to Eurocentric hierarchies. The power to represent colonized populations played an integral role in their subjugation, as narratives of backwardness and primitivity were essential elements in the justification of colonial rule.

Modern colonialism possessed a particularly ocular character, and based its ruling practices on the development of novel conventions for viewing and representing conquered lands. The earliest encounters of Europeans with Native Americans of the New World, for instance, produced an entirely new popular genre of eyewitness travel writing. In contrast to older speculative geographies, the credibility of such early ethnographic work derived from the firsthand nature of the accounts. Many were sensationalistic survival-adventure narratives that featured voyeuristic descriptions of primitive, foreign societies, with their colorful native costumes and spectacular rituals. Not coincidentally, this was also a period when modern techniques of observation and verification were reshaping claims to scientific authority in other fields. Breakthroughs in the study of optics and new scientific procedures for conducting experiments had emphasized the importance of visual evidence, and the accurate representation of observed phenomena. Valued for their observational insights, colonial travelogues often gained both scientific and commercial success. Many became best-selling publications and were reissued and translated into numerous different European languages.

Travelers' descriptions of colonial encounters helped European readers imagine the rest of the globe, and their place within it. By the early sixteenth century, images and descriptions of faraway places could be enjoyed, as vicarious journeys, directly from one's location in the metropole. Travelogues were frequently valued for their accompanying illustrations, as much as for the narrative descriptions of exotic cultures. For many sixteenth- and seventeenth-century readers, the New World was first made familiar through the engraved illustrations of the Dutch publisher, Theodor de Bry (1528–1598). While some of these representations, including his famous woodcut prints of ritual cannibalism in South America, might today be dismissed as sensationalistic distortions, images of faraway people and places helped to structure the wider social imagination of the early modern European public. By representing the non-European "other" as a definable object of visual scrutiny, such work also helped Europeans establish a sense of cultural and scientific supremacy within an emerging global order. Such a planetary consciousness, as literary theorist Mary Louise Pratt (1992) has argued, helped direct and organize colonial expansion. Just as the iconic images of *National Geographic* helped define American political and social sensibilities in the middle of the twentieth century, early modern Europeans understood their role in the world through the production and consumptions of such images. It helped them imagine both the unity and the fault lines of a globe that was growing ever smaller through trade, discovery, and conquest.

By the eighteenth and nineteenth centuries, images of non-European societies had spilled over from the pages of print media into new forms of visual display. The Great Exhibitions, for instance, attempted to reproduce distant parts of the globe in painstaking detail. European audiences imagined that they were in fact walking through the bazaars and alleyways of Egypt or India, all for the price of an entrance ticket. Putting the world on display served not only to represent cultural differences, but also worked to define them and turn them into objects of modern consumption. Such displays, through world fairs, museums, and travel brochures, determined the way that the non-West was perceived by both casual visitors and colonial officials. The bird's-eye view employed in book illustrations, postcards, and travel guides was frequently reproduced in the work of official colonial cartographers. Such conventions for viewing and representing colonial people and places formed part of a formal repertoire, used by official cartographers and surveyors to demarcate boundaries, to catalog monuments, and to assist ethnologists and criminologists in categorizing racial types in the colonies. Documentary photography later replaced hand-drawn illustrations as a popular method of recording and classifying data on the architectural and social features of the colonies. Such documentation, in attempting to make the colonies legible to metropolitan observers, fixed and naturalized complicated social boundaries, and opened these up as sites of official intervention.

European practices for viewing and representing colonial realities often made social differences more rigid, and exacerbated racial and gender hierarchies. The colonial gaze played a singularly important role in defining gender relations by marking out colonial women as objects of particular interest, either as targets of official sympathy or casual lust. Harems, *zenanas*, and veiled women figured prominently in European accounts. Colonial officials also paid particular attention to social rituals associated with female oppression, such as *sati* (rit-

ual suicide by Hindu widows), the wearing of the veil, and foot binding. While these practices were condemned, they remained subjects of fascination, and frequently found their way into travel accounts and novels set in colonial contexts.

Similarly, racial distinctions are also reproduced and enforced by the colonial gaze. Frantz Fanon (1925–1961), a psychologist and volunteer during the Algerian Revolution (1954–1962), in his semiautobiographical critical work *Black Skin, White Masks* (1952), writes about the psychical trauma of being identified as an object of the white gaze. Robbed of the possibility of being a full-fledged modern subject, a person of color is determined from the outside, as a thing, an object of scrutiny. The colonial gaze, determined by a set of technologies and conventions for viewing colonial realities, underwrote colonial power. It turned people into observed objects, and authorized the official discourses of European viewers, whose representations determined and fixed the status and stature of colonized subjects.

SEE ALSO *Colonialism; Fanon, Frantz; Gaze, Panoptic; Gaze, The; Media; Narratives; National Geographic; Other, The; Postcolonialism; Racism; Representation; Representation in Postcolonial Analysis; Stare, The; Tourism; Travel and Travel Writing*

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Poornima Paidipaty

GAZE, PANOPTIC

The concepts of panopticon and panoptic gaze can be traced to the 1791 publication of Jeremy Bentham's *Panopticon; or, The Inspection House* (Bentham 1962, p. 37). Although he presented it primarily as a prison design, Bentham (1748–1832) believed the panoptic principle was "applicable to any sort of establishment, in which persons of any description are to be kept under inspection," including prisons, workhouses, manufactories, hospitals, and schools (vol. 4, p. 37). Bentham asserted that "gradual adoption and diversified application" of this "simple idea in architecture" would have far-reaching benefits: "morals reformed, health preserved, industry invigorated, instruction diffused, public burdens lightened …" (vol. 4, p. 66).

The ideal panopticon consists of an observation tower within a large circular courtyard ringed by a cell-block several stories high but only one room deep. Each cell should be occupied by only one surveillant who is subject to constant observation from the tower; yet, the design of the panopticon simultaneously prevents communication between inmates. Ideally, the central tower is screened, so the inmates never know who (if anyone) is in the observatory at any particular time.

According to Michel Foucault's analysis of panopticism in *Discipline and Punish* (1979), this design has a number of effects. Because the observer is screened from the gaze of the inmates, the see/being-seen dyad is dissociated, inducing "in the inmates a state of consciousness and permanent visibility that assures the automatic functioning of power" (p. 201). Furthermore, the exercise of power is dispersed, depersonalized, and internalized by the inmates. Who, if anyone, actually occupies the tower is irrelevant to the functioning of the mechanism, so long as the inmates (or patients, students, workers, shoppers) behave as if they were under constant surveillance. "[In short], the inmates should be caught up in a power situation of which they are themselves the bearers" (p. 201). Although the panopticon in its pure and literal form was relatively rare, it was—and remains—an extremely pervasive "political technology that may and must be detached from any specific use" (p. 205).

Investigators in disparate social science fields have noted the importance of panoptic surveillance in both historic and contemporary contexts. For example, Thomas Jefferson was quite familiar with Bentham's work and utilized panoptic principles in the design of Monticello, his hilltop estate. He subsequently drew on French examples of panoptic institutions in his plan (never implemented) for a prison to be constructed in Richmond, Virginia (Epperson 2000; Upton 1990). Similarly, James Delle (1998) has analyzed the importance of the panoptic gaze in the spatial disciplining of enslaved plantation workers in Jamaica, and Mark Leone (1995) has discerned panoptic principles in city plans and public architecture in Annapolis and Baltimore, Maryland. According to urban geographer Edward Soja, "every city is to some degree a panopticon, a collection of surveillant nodes designed to impose and maintain a particular model of conduct and disciplined adherence on its inhabitants" (1996, p. 235). In contemporary Los Angeles the panoptic gaze is manifested architecturally in disciplinary institutions such as the Metropolitan Detention Center and electronically in closed-circuit surveillance cameras (Davis 1992; Soja 1996).

SEE ALSO *Foucault, Michel*

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Terrence W. Epperson

GAZE, THE

Until the nineteenth century, philosophical inquiry into the question of visuality mainly concerned matters of sense perception, the nature of imagination, and the truth-status of representations. A long tradition in western and many nonwestern philosophical discourses gives to vision a particular and relative significance as the medium of both apprehending the world and verifying the truth of predicative statements. Beginning in the seventeenth century, however, scientific inquiries into the mechanics of perception, and post-Cartesian investigations of the relationship between mind and body, led to a split in discourse about visuality. That split was oriented around the opposition between "seeing" and "being seen," and between the "eye" and the "gaze."

There have been a number of efforts to historicize this process, most notably by Michel Foucault, Jonathan Crary, and Martin Jay—the first in the realm of knowledge, the second in the realm of technology, the third in the domain of aesthetics. Despite their different disciplinary locations, these authors all undertake a twofold gesture. First, they trace the impact of optics and the development of associated technologies, noting that efforts to augment and extend the reach of vision (via the microscope, the telescope, and so forth) were associated with the idea that reality is limited to that which can be brought into the field of vision. Second, and simultaneously, they emphasize that these historical and technological developments made palpable the limits of the human eye as an organ for discerning reality.

Martin Heidegger had criticized the simultaneous valorization of technology and the limitation of human faculties to a practice of organizing the world for vision in his essay "The Age of the World Picture" (1952), but his philosophical intuition was not supported by historical research. In the writings of Michel Foucault, however, the historicization of vision is linked to an analysis of emerging forms of governance in the western polities.

Foucault identified a form of governmentality dominated by the logics of surveillance, which, he argues, were sustained by the discourses of institutionalized knowledge, from clinical medicine to geography, education, and psychology. In *Discipline and Punish* (1977), for example, Foucault states that penal architecture and social reform converged in the post-Enlightenment period around a new aim: the cultivation of a political subject who would internalize and anticipate the "gaze" of power. This new structure of subjectification, Foucault argues, was not only marked by a normative demand for self-discipline but was also associated with the depersonalization of power. As a result, power became a force no longer incarnated in the relatively sovereign body of the monarch, but one that was diffused through a vast capillary system of microinstitutions. Taken together, this system worked to generalize the sensation of being seen, precisely in the moment that overt spectacles of power lost their centrality; thus did a theater of power in which sovereignty showed itself as a local and even personal phenomenon give way to an unconscious and invisible dramaturgy that demanded the self-revelation of subjects. In many ways, Foucault's history of power's depersonalization resonates with Max Weber's conception of bureaucratization, but for Foucault the process was dependent on the relative privilege that vision enjoyed in the discourses of power and knowledge.

Foucault's writings entered a field in French philosophy that was equally concerned with the concept of "the gaze" (*le regard*). In the existentialist thought of Jean-Paul Sartre and the structural Marxism of Louis Althusser, the gaze features as a structure of negative identification. In strikingly analogous scenarios, these writers describe moments when a figure of power discovers the subject, often in some illicit act such as peeping through a keyhole or committing a crime. In Sartre's case, this moment of being discovered produces shame; in Althusser's case, it is followed by the subject's being "hailed" by the representa-

tive of power, a process that grants him (or her) a violent kind of recognition. Both cases express a sense of subjectification as that which takes place in and through the experience of being apprehended in the visual domain. Significantly, this "being seen" occurs from a point unseen by the subject.

This concept of the gaze is further developed in Jacques Lacan's famous seminar XI of 1964. However, Lacan revised this notion of the gaze as the condition of "being seen" by positing a prior state of "giving to be seen." Lacan's particular interventions responded to the writings of Maurice Merleau-Ponty, whom Lacan credits with the basic understanding that human subjects apprehend the world from the position of visceral materiality: as objects among other objects. According to Merleau-Ponty, what makes human beings exceptional is that they orient themselves to those other objects, and he calls this orientation *intentionality*. Moreover, in Merleau-Ponty's analysis, intentionality is organized by the perception of form, and by the imagination of an all-seeing being behind the myriad objects that constitute the world.

Lacan insists that this all-seer is merely metaphoric, the name of a principle by which the visible is actually dependent on a structure that places the subject under the gaze of an "other." But this gaze of the other is also a metaphor in Lacan's writing, or rather it designates the process by which the subject covers over the fact of the gaze's invisibility with an image of a seer's eye. This misrecognition is necessary, argues Lacan, if the subject is to feel attracted to or aroused by desire. Here, desire designates a lack in the subject, and this sensation of lack is what compels the subject toward intimate social relationships, but also, as later thinkers such as Judith Butler have reminded us, toward normative forms of identification. This normative dimension of the gaze is not lost on Lacan, and he notes that, in patriarchal contexts, this "giving to be seen" is realized and demanded most especially of women.

Frantz Fanon had, in fact, already discerned the unequal distribution of the effects of the gaze in his reading of the experience of being looked at as a "negro." Fanon emphasizes the nonreciprocity of looks in colonial milieux, noting that only racially dominant subjects can appropriate the power that is located in the gaze, whereas black subjects must constantly give themselves to be seen in a process that renders them vulnerable to catastrophic psychic injury. Although this appropriation is itself born of a misrecognition or conflation of eye with gaze, it is nonetheless one that is withheld from black subjects under colonial conditions, according to Fanon.

It is often assumed that Lacan's theory of the gaze represents the apogee of a tradition that renders the question of the subject a matter only of ontology. By contrast, Foucault's reading of the gaze is said to represent an absolute historicization of the concept, and a repudiation of ontological arguments. To be sure, Foucault's historicist critique of psychoanalysis encouraged the reading of their approaches to the question as mutually exclusive. It is important to recognize that Lacan himself undertook his analysis of the gaze with an explicit invocation of the Cartesian turn in philosophy and with a nod to the representational histories that precede and follow upon it in the plastic arts. It therefore may be more helpful to understand these two thinkers, and the approaches that they inaugurated, as symptoms and diagnoses of a persisting moment lived in thrall of vision's hegemony. Foucault approaches the question of the gaze from the point of view of what he calls "human multiplicities," whereas Lacan treats the subject who, precisely, possesses a "point of view" rather than a gaze.

It is nonetheless notable that this development of theories about the gaze occurred in the space between World War I and the conclusion of the space race toward the end of the 1960s. In other words, the problematization of the gaze occurred in the moment that European modernity seemed to be in ruins thanks to the experience of aerial warfare (in which oversight had made total destruction possible), and, simultaneously, on the brink of a new kind of total visibility made possible by space travel, satellite imaging, and the first experience of earth as apprehended from elsewhere. In France, where most of this work was generated, the exposure of rationalism's apotheosis in the death camps of World War II was followed by the revelation that Soviet socialism had become a totalized penal society, and together these spurred a massive rethinking of both sovereignty and subjectivity. It is in this nexus that the question of the gaze itself becomes visible.

SEE ALSO *Gaze, Colonial*

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GEARING RATIO

SEE *Leverage.*

GEERTZ, CLIFFORD

1926–2006

The American cultural anthropologist Clifford Geertz was known for contending that culture is the enacted and public creation of meaning and that therefore ethnographic inquiry requires interpretation. Drawing on extensive fieldwork in Indonesia and Morocco, Geertz's theory of "interpretive anthropology" was articulated in his 1973 collection, *The Interpretation of Cultures*, in which he stated, "The concept of culture I espouse … is essentially a semiotic one. Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning" (p. 5).

This search, Geertz noted thirty years later, involved "ferreting out the singularities of other peoples' ways of life.…" (2000, p. xi). Geertz emphasized the particularistic nature of cultural experience, highlighting the explanatory priority of symbols and attending to "local knowledge." While sharing the American anthropologist Franz Boas's goal of viewing cultures within their specific contexts, Geertz specifically focused on the cultural creation of symbolic meaning.

Geertz pursued graduate studies in the 1950s in Harvard University's interdisciplinary Department of Social Relations and conducted ethnographic research in Java, receiving his Ph.D. in 1956. After a postdoctorate stint at the Center for Advanced Study in the Behavioral Sciences (1958–1959) and a year teaching at the University of California at Berkeley (1959–1960), Geertz joined the University of Chicago where he taught for a decade (1960–1970) and participated in the Committee for Comparative Studies of New Nations. In 1970 he joined the Institute for Advanced Study at Princeton, retiring as professor emeritus in 2000. A fellow of the National Academy of Sciences, the American Academy of Arts and Sciences, and other academic societies, Geertz penned *Works and Lives: The Anthropologist as Author* (1988) for which he was named the 1989 winner of the National Book Critics Circle Award for literary criticism.

Geertz's writings chart a progressive concern with ethnographic interpretation that built on his fieldwork in Java (1952–1954, 1986), Bali (1957–1958), and Morocco (1965–1966, 1985–1986). His early monographs—*The Religion of Java* (1960), *Agricultural Involution: The Process of Ecological Change in Indonesia* (1963), *Peddlers and Princes: Social Change and Economic Modernization in an Indonesian Town* (1963), and *The Social History of an Indonesian Town* (1965)—variously considered the historical, political, religious, and environmental variables that shaped the cultural contours of an evolving Indonesia.

Geertz's thinking about interpretive ethnography was foreshadowed in the final chapter of *The Social History of an Indonesian Town* in which he outlined, following Harold Garfinkel, "the document approach." In this approach, a specific ethnographic case is analyzed such that "the ineradicable specificity of actual events and the elusive generality of meaningful form render one another intelligible" (p. 154).

Having documented the event, it is the anthropologist's task to decipher and expose its meanings: This requires interpretation. In *The Interpretation of Cultures*, Geertz argued that the ethographer "must contrive to somehow first to grasp and then to render" the multiple conceptual structures that account for the meanings of cultural acts (p. 10). "An acted, public document" culture is "written not in conventionalized graphs of sound but in transient examples of shaped behavior" (p. 10). The anthropologist's goals are to sort through "the structures of signification" that make such behaviors meaning-full, to decipher those connections in an ethnographic text, and to thus enlarge the consultable record of human experience.

Several objections can be raised to Geertz's theory of interpretive anthropology. First, Geertz's position is idealist, contending that culturally mediated concepts shape human behavior rather than, for example, the material conditions of existence. Second, the interpretive approach leads to several problems of method and validation. For example, how is one to think about the "structures of sig-

nification"? Are some structures more central and durable than others, and in what contexts are they deployed? Explicitly focused on the microcosm, how can an interpretive approach address broader connections of history, economy, and power? Third, interpretive approaches are designed "not to generalize across cases but to generalize within them" (Geertz 1973, p. 26), thus precluding cross-cultural comparative studies. Finally, as Geertz acknowledged, interpretive accounts "escape systematic modes of assessment"; how can any interpretation be proven false? (p. 24).

Geertz's interpretive anthropology departed from the paradigm of anthropology as a science in search of law-like generalizations about humanity. From the 1970s to the present, the unbridgeable differences between interpretive versus scientific theoretical positions have crystallized into deep divisions within American anthropology.

SEE ALSO *Anthropology, U.S.; Weber, Max*

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GEMEINSCHAFT AND GESELLSCHAFT

In *Gemeinschaft und Gesellschaft* (community and society) by Ferdinand Toennies (1855–1936), the former refers to "all intimate, private, and exclusive living together," whereas the latter is "public life—it is the world itself" (1955, pp. 37–38). The book contains an elaborate architecture of classifications covering the whole of social reality, from kinship to the modern metropolis. One of the most striking features of this is the way Toennies based his social forms on types of the human will: *Wesenwille* and *Kürwille*, the will that directs thought (natural will) and the will that is subject to it (rational will). The relevance is evident, of calculation of means and ends to articulated purposes, to exchange relations of the *Gesellschaft* type. So, too, is the "natural" basis of the *Wesenwille* in drives, instincts, and emotions. *Wesenwille* is seen predominantly in *Gemeinschaft* forms.

The outward forms of the *Gemeinschaft* are the house, the village, and the country town, its general form the people (*Volk*). *Gesellschaft* is to be found in the larger cities. Its general form is the nation-state. Toennies stressed that his concepts were "types," not classifications of the concrete. Reality always showed a mixture of elements. Nonetheless, Toennies also implied at one stage an evolutionary scheme in which *Gesellschaft* is seen as a temporary phase, *Gemeinschaft* returning on a higher level in an international socialist order of the future. Each type showed gradations of natural will and rational will—for example, in *Gemeinschaft*, kin, neighbor, and friend relations—so that natural will does not equate to emotion, drives, and instinct. Toennies's point was that whereas the first is real and natural, the second is "ideal and artificial," just as *Gemeinschaft* is real and organic life, the essence of community, and *Gesellschaft* is ideal and mechanical structure, the concept of society. *Gemeinschaft* is an original unity of will, *Gesellschaft* its individualized forms. Disintegration is built into *Gesellschaft*. It is checked by convention, agreement, politics, and public debate.

Robert Redfield (1857–1958) in his folk-urban typology (or continuum) spelled out *Gemeinschaft* and *Gesellschaft* in a more direct and usable way than Toennies, enriching and supporting it with current ethnographic evidence (1930). Howard Becker (b. 1928) in his sacred and secular societal types broke down *Gemeinschaft* and *Gesellschaft* into a set of subtypes, again with a view to making them more empirically flexible, and again enriching the basic pairing from evidence not available to Toennies. Robert E. Park (1864–1940) and the Chicago school took the role of place or locality as being central to *Gemeinschaft* and *Gesellschaft*. It was so for Toennies. This was because *Gemeinschaft*-type relations require enduring physical proximity as their condition. They used the the-

ory of ecology, suggesting that all living organisms are shaped in their relations by the physical environment, to study the city as a series of concentric areas or zones, each having their characteristic associational and cultural forms, and succession being visible as groups moved out of a zone and others moved in to replace them. *Gemeinschaft* and *Gesellschaft* can, finally, be treated as types of social relationship. Toennies was used this way by Max Weber (1865–1920), and Talcott Parsons (1902–1979) also read him for clues about the possible orientations of social action. Hermann Schmalenbach (1885–1950) added the important category "communion."

Toennies has fallen into the background since the 1930s. For example, the importance of community as place rather than as social relations was challenged by Herbert Gans in his studies of community ties in suburbia, particulary in *The Levittowners* (1967). Nevertheless, Toennies's place in the canon is secure: *Gemeinschaft* and *Gesellschaft* are basic categories. They may be approached on the level of our own experience.

In a *Gesellschaft* everything is clearly spelled out, so that everyone has clearly defined rights. If anyone asks us to go beyond our duties then they must give a reason, demonstrating why this extra demand is part of our "job description." Only when this is demonstrated are we obligated to take on something further. In a *Gemeinschaft* the opposite is the case. We feel we cannot say "no" to virtually any demand. Indeed, it would not occur to us to assess the demand as a demand. This kind of calculation does not enter the picture. Here the burden of proof is on us to say why we should not respond positively, and if we feel we cannot, there will be a great deal of inner struggle. In a "full" *Gemeinschaft* this inner struggle does not occur at all, and we unreflectingly meet our obligation. Here, then, people make demands that are "total." As today with a close family member, we are bound to them "come what may," "for better or worse," because the love involved is unconditional. No matter what the other person has done, irrespective of whether we feel drawn to them on a personal level—one might not feel "close," or that the parties like and understand one another—the obligation is there. The other person does not have to have earned our trust and affection for the aid and assistance to be forthcoming. Here we have no escape from our duty, for example as a parent or as a child.

In a *Gesellschaft* it is the performance of a contractual obligation that matters. Whether it is done willingly or grudgingly, with affection or calculatingly, makes no difference. All that matters is that the contract is fulfilled to the letter, for example that the goods are delivered. In a *Gemeinschaft how* things are done *is* of interest. It matters, for example, that food is served in the family setting with love (though the food may be burned); it is the care that goes into the act that is at least as important as the act itself. It matters that the gift is carefully wrapped, showing that the giver has taken trouble.

These considerations show that Toennies's original distinction has lost none of its relevance over the years. The problem of what makes us human, under what conditions people and their culture can thrive, and what in our culture threatens, as anomie, the mass society or latterly, "disembedding" and globalization, the nurturing, solidarity-generating, direct, sustained and deep contact between human beings, is a continuing one. It is both a public issue and a sociological question.

SEE ALSO *Sociology*

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Ian Varcoe

GENDER

In *The Second Sex* (first published in 1949), the French feminist Simone de Beauvoir led the way in distinguishing biological anatomy and chemistry from socialized gendered expectations: "One is not born but rather becomes a woman" (de Beauvoir 1953, p. 249). For de Beauvoir, being a female did not constitute being a woman. Rather, one's biological makeup is subscribed with a social-cultural shaping of one's gendered characteristics; for women this is the development of appropriate feminine behaviors. Though the term is highly contested and laden with political implications, at its most basic level *gender* is used to describe socially constructed characteristics of masculinity and femininity, whereas *sex* is used to describe one's biological makeup (chromosomes, hormones, and reproductive/sexual anatomy).

THE SECOND-WAVE FEMINIST MOVEMENT

The distinction between sex and gender was an essential element for many issues addressed during the second-wave feminist movement (1960–1995). Though immensely diverse, many feminist schools of thought did agree that characteristics associated with femininity in the United States created norms and roles that oppressed women by limiting their access to public space and economic opportunities. Discussions of gender during the second-wave feminist movement often attempted to overturn what the scholar Harold Garfinkel described as the "natural attitude" towards gender (1967, p. 122)—the common belief that the gender dichotomy is a natural distinction between the two sexes. This assumption, according to activists, perpetuated inequality for women. In understanding the creation of the natural attitude, many feminists turned to the structure of the family and women's connection to childbearing. Woman's biological ability to give birth, combined with industrial changes, had led to social expectations of woman as nurturer, domestic caretaker, and other roles traditionally associated with the private sphere. Dichotomously, man's inability to give birth and his larger physical makeup had led to social expectations to fulfill the role of protector, provider, and roles traditionally associated with the public sphere.

For feminists, these gendered characteristics, complicated by an array of other factors, had perpetuated a division of labor that empowered men and disempowered women. Men's more active and dominant roles created an unequal relationship between the sexes that gave rise to an oppressive ideology both within the home and, more broadly, within institutionalized sexism. Overall, the most prominent goal of the second-wave feminist movement was to bring about a sense of gender equality. Concerns such as motherhood, beauty regimes, and domestic upkeep were seen as essential components of a public discussion about expectations of femininity that focused on issues of equal access to the workplace, equal pay for equal work, and an overall attempt to allow women to have control over their lives and their bodies. Theories on how to deal with this hierarchal division of labor were vastly varied. For example, Marxist feminists saw the capitalistic economic structure as inherently patriarchal. Thus, attempts at more equal power relations between men and women were reliant upon a restructuring of the economic system. Conversely, more conservative feminists, who constituted the liberal feminist school of thought, looked more closely at ways to reform the current system to allow for more women within the public sphere. These various feminist schools reflect the differences in conceptualization and approach to the concept of gender. Some feminists worked relentlessly to prove that both men and women could be rational, active members of public space, challenging the preconceived notion that masculine gendered characteristics are inherent to men. Others fought to revalorize qualities of femininity, attempting to recognize the power of women's roles as well as the usefulness of feminine approaches in public space. What united many of the perspectives was a desire to engage in a larger public discussion about issues of masculinity and femininity and how they influence the daily lives of women and men.

GENDER AND ELITISM: WHOSE "PERSONAL IS POLITICAL"?

Since the beginning of the second-wave movement, the meaning of the term *gender* has been disputed. Despite some public understanding of the second wave's fight for gender equality for women, the movement was fractured, with discontentment from many sides. For example, although Betty Friedan's *The Feminine Mystique* (1963) was commended for its attack on women's limited role as domestic caretaker, her analysis was criticized for its elitism. Although Friedan called attention to the oppression rooted in gendered expectations and roles, her white, heterosexual, middle-class perspectives were specific to a single group of women. Such criticisms called into question the stability of the category *woman*. Do all women share a similar experience? Questions of race, class, and sexual orientation brought forth recognition that gender expectations and gender identity were not the same for all women, nor were they the same for all men.

Though cross-cultural comparisons were used to draw attention to the socialization of gender roles and expectations, many second-wave feminists still failed to recognize the cultural differences within their own communities. As gender expectations and what it means to be a woman were debated, critics began to question the assumption that all women shared the same experiences. In her 1981 book *Ain't I a Woman*, the literary scholar bell hooks discussed the racism that circulated and continues to circulate in feminist literature. She identified the struggle for black women to find a space of visibility within a movement embedded in racism. Her analysis, and those of other critics, draws attention to both the racial and economic advantage embedded in the positions of many noted feminists of the second wave. Theorizing about "women" when in actuality only discussing the experiences of white women exemplified this privileged perspective. Core issues such as beauty and domestic expectations were far removed from racially oppressed women whose economic and social positions typically demanded out-of-home labor. As hooks pointed out, the racism within the women's movement coupled with the sexism in the civil rights movement left little to no space for a public debate about the experiences and oppression of black women.

Compounding the criticisms of racial and economic privilege were the objections voiced by members of the lesbian feminist school of thought, who pointed out the homophobia inherent in the women's movement. The notion of a shared sisterhood of all women provoked anger from those women who felt their experiences differed and their perspectives were silenced. Often, core discussions of gender focused on social expectations of men and women as they function in heterosexual relationships. Lesbian feminists pointed out the institutionalization of heterosexuality and the unwillingness of many heterosexual feminists to challenge this unequal power dynamic.

Overall, there was a sense from critics that discussions of power within the second-wave feminist movement were oversimplified. Many feminists failed to recognize that they could be both oppressed and oppressor, thus ignoring the intersections of race, class, and sexual orientation in a society that privileges white, male, middle- or upper-class status, and heterosexuality.

COMPLICATING AND DESTABILIZING GENDER

As gender became a more common topic of discussion in both academic institutions and activist forums, its unstable and complex nature was a frequent part of debate. Attempting to move past the charges of elitism and oversimplification, scholars such as Joan Scott defended the usefulness of gender as an analytic category. Scott maintained that gender is not constant, but rather constantly shifting and changing as it operates in multiple fields (1986). She argued that discussions and studies utilizing gender as an analytic category must be carefully understood based on context and history. Her analysis defended its usefulness while simultaneously complicating the power dynamics that intersect with gender construction.

Similarly, the gender scholar Judith Butler significantly contributed to the complication of a theoretical understanding of gender. Her *Gender Trouble* (1990) is foundational in pointing out the intricate connection between gender and sexuality. Butler drew attention to the policing of heterosexuality through gender norms, arguing that a core component of the current gender system, which calls women to be highly feminine and men to be highly masculine, is as much about upholding heterosexuality as it is about policing public space. Additionally, Butler is noted for her theory of gender performativity, which holds that gender is maintained through performative acts that naturalize and create an appearance of an internal essence. Her position can be understood as an extreme social constructionist stand that sees both sexuality and gender as constitutive of our practices, policies, language, and overall daily norms.

Both Scott and Butler echo the reflective position taken by many gender scholars in the last decades of the twentieth century. The desire to complicate gender and illuminate its instability is found in works that addressed the realization that *gender* cannot be equated with *woman*. Masculinity studies became much more common, and indeed expected when addressing issues of gender, and gender literature and courses more frequently recognized the gendered nature of every individual. Most gender literature focused on femininity and oppression; however, a look towards masculinity revealed the limiting role placed upon many men who are primarily defined by success in the public realm. Expectations of aggression, detachment, and control are problematic for both men and women. The antisexist male activist Jackson Katz has since 1993 created high school and college-based educational programs, which include videos and lectures that focus on the construction of masculinity in the United States and the violence inherent in many male-gendered norms. The aim is to liberate not only women but also men from limited roles and expectations; recognizing that all individuals are gendered allows for a more complete understanding of how the patriarchal system is maintained. Privy to earlier criticisms, scholars studying masculinity are acutely aware of the vast differences in norms and expectations across racial and class divides.

Many gender scholars have called for an understanding of gender that moves beyond basic binary discussions of masculinity and femininity to a greater understanding of transgendered issues and the fluidity of gendered identities. The twenty-first century has brought more frequent discussions and practices that illustrate at least a partial public understanding of "gender bending." Public populations are often not familiar with the work of Butler who calls for disruptions of gender expectations. However, cross dressing, transexuality, and overall gendered norm violations are infiltrated in media and other mainstream elements of United States culture. Thus, the public is both exposed and often partially aware of transgendered or gender bending practices. Overall, gender has come to be understood as unstable, allowing for resistance, reinforcement, or recreation of gender identity and expectations in a multitude of ways.

For women who identify with the third wave of feminism, this unstable and complex view of gender is central. Though there still is dispute over whether or not a new wave has indeed emerged, many young women active in gender discussions claim a third wave of feminism whose focus is on creating a solidarity that recognizes difference. In its discussion of difference, coalitions, and popular culture, this third wave, thought to have begun in the mid-1990s, both veered away from and built upon the second-wave movement. Although "third wavers" are as diverse in their positions as the feminists who preceded

them, there is a general sense that the movement needs to be privy to difference and to build coalitions with other activist movements, because many gendered issues entail struggle against racism, homophobia, class privilege, and imperialism simultaneously. Additionally, although earlier movements criticized popular culture and many of the feminine-gendered expectations, some third wavers distinguish their understanding of gender by claiming power in their sexuality and femininity, seeking ways to co-opt patriarchal ideologies for their own empowerment. This is exemplified in debates over wearing high heels and makeup and embracing one's feminine sexuality. Some third wavers argue that the pop star Madonna does not represent female oppression, but rather sexual agency. This position strays from the second wave's desire to free women (typically and critically, mostly white women) from such beauty expectations.

GLOBALIZING GENDER

Twenty-first-century feminism is as diversified as ever, but earlier charges of elitism, both national and international, have produced feminist schools of thought that seek to better understand gendered issues on a global scale. Many postcolonial feminist scholars seek ways to create a feminist solidarity that addresses global concerns while recognizing racial, economic, regional, national, and religious differences. A leader in academic discussions about transnational gender issues is feminist postcolonial theorist Chandra Talpade Mohanty. In *Feminism without Borders: Decolonizing Theory, Practicing Solidarity* (2003) she provides a summary of her feminist position, which argues for economic stability worldwide for all individuals. Her vision is antiracist and anticapitalist and seeks to create democratic participation through a more complex and reflective solidarity.

Also illustrating a global commitment to gender equity are the many transnational feminist networks such as the Women's Environment and Development Organization, which "advocates for women's equality in global policy. It seeks to empower women as decision makers to achieve economic, social, and gender justice, a healthy, peaceful planet, and human rights for all" (2004). This desire to address issues of gender globally comes with a great deal of cultural reflexivity and international collaboration. Global scholars and transnational feminist networks seek to acknowledge and manage issues of difference that arise in multicultural coalitions. Despite these challenges, twenty-first-century gender scholars and activists find it increasingly difficult to ignore globalization and the fact that worldwide gender inequity involves a multiplicity of economic, environmental, ethnic, and many other postcolonial factors.

Although gender research has followed numerous threads, the intellectual compass seems to be pointing toward a focus on global issues. This recent direction is frequently freighted with a complicated theory of power and difference that requires a highly reflective researcher who can represent such issues without colonizing the voices of those they study. Despite shifts in the focus of gender research, the twentieth and twenty-first centuries have proven the importance and longevity of gender as an essential topic of political and social discussion.

SEE ALSO *Feminism; Gender, Alternatives to Binary; Gender Gap; Gender Studies; Glass Ceiling; Inequality, Gender; Patriarchy; Sexuality; Transgender*

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Erin Foley-Reynolds

GENDER, ALTERNATIVES TO BINARY

It is widely taken for granted, especially in Europe and the Americas, that gender is binary: that male and female are sharply different in feelings, anatomy, and behavior, and

all people ought to fit neatly into one of these two categories. Certain realities contradict this assumption, including homosexual orientation, intersex (hermaphrodite) anatomy, and transvestite behavior, and they can appear in every society. A small number of nonwestern societies accommodate alternative genders, including the *hijras* of India, the Native American Half-Man–Half-Woman, and the Navajo *nadle*. From these and other cases, social scientists infer that there can be creative ways for people to be legitimate members of society without necessarily fitting squarely into only-male or only-female categories.

In the case of the *hijras*, teenage boys in India expect to become husbands and fathers, but a few realize that, because they are homosexual or intersex, they will not fulfill traditional male roles. These ones find that some cities harbor a group called the *hijras* who adopt female names, dress, and speech, and who relate to each other as sisters, and as daughters to their leaders. Their place in society is based on the belief that, even if homosexuals and intersex males will not marry women or have children, they still possess male procreative energy that they can transfer by blessing bridegrooms at weddings and baby boys at birth. By giving up normative male identity to become *hijras*, they are thought of as former males who help other males become better men. The *hijras* also constitute a separate caste, made distinct from other castes by their own rituals, taboos, myths, and patron goddess.

A "true" *hijra* eventually undergoes an emasculation ritual to remove the male genitalia. Ideally, they earn livings from the blessing rituals, but many have to supplement that income through prostitution. Others marry male lovers. Sex between a man and a *hijra* is not thought of as homosexual; it is heterosexual in the sense that a *hijra* is not a man, and not a woman either, but a third gender.

During the nineteenth century, Native American societies expected boys to become warriors, but at puberty a small number displayed a female-oriented vision of one's future that permitted them to enter into the status of the Half-Man–Half-Woman. Society valued them as mediators because it was thought that they were especially able to see both sides of a question. They also served as chaperones during courtship, and were believed to possess special magical energy that supported blessings and healing. Sometimes a Half-Man–Half-Woman became an additional wife in a polygamous marriage. As with the *hijras*, a sexual relationship between a man and a Half-Man–Half-Woman was considered to be heterosexual.

The Navajo *nadle* moved between quasi-male and quasi-female identities. The *nadle* began life as an intersex, which eliminated options such as becoming a father, hunter, or warrior. But *nadles* were believed to have a special ability to manage wealth, and it was a blessing to have a *nadle* in the family. The *nadle* was more woman than man: She practiced women's activities such as cooking, had the legal status and sex life of a woman, and was usually (but not always) addressed as a woman. In other circumstances the *nadle* could be manlike, as in presiding over rituals or managing wealth. The *nadle* was appreciated as a wise mediator for the same reasons the Half-Man–Half-Woman was.

Some Navajo transvestites, also called *nadle*, could dress as either male or female, depending on the activity, and could have sex with either men or women. The transvestite had more freedom than the intersex *nadle* to move between male and female roles. Many other Native American societies had gender statuses that enabled a limited number of people to alternate gender roles, but this flexibility became very rare as Native American life was assimilated into the dominant western culture of the United States. The same kind of cultural assimilation also brought an end to other societies' gender alternatives, including the Thai *kathoey* and the Philippine *bakla*.

Alternative gender models are not whimsical lifestyle options. The pressures that steer people into these roles are approximately as powerful as those that require other people in the same societies to conform to male or female models. In most cases, the people who enter these statuses remain in them for the rest of their lives. Very few people in these societies have these statuses, partly because very few are inclined toward them, and partly because these societies have ways to discourage large-scale deviations from normative binary gender.

The alternative models challenge the assumption that binary gender is inevitable. The anatomy of male, female, and intersex can be universal, but gender—the cultural interpretation of sexuality—is highly variable. Yet it is difficult to use an alternative model as a formula for changing the ways westerners experience gender, because each alternative form is intimately situated within a matrix of local beliefs, statuses, and values, and they are not easily adapted from one society to another. Another reason is because reform in the western world is concerned with legal rights. Following in the footsteps of feminist reform, it identifies a portfolio of well-established rights that heterosexuals have (to marry, for example, or to raise children) and then extends those rights to gays, lesbians, bisexuals, intersexes, and transgendered people. This is not an experiment in creating new categories, but rather universal access to existing rights. For those two reasons, nonwestern alternatives to binary gender are unlikely to lead to western versions of *hijras* or *nadles*.

Still, one cannot ignore certain provocative questions that arise in light of these alternative models. If western societies become more tolerant of gay and lesbian people,

along with practices such as same-sex unions, how will gay or lesbian roles coexist with binary gender roles? If some gay men are normatively male in everything except their sex lives, are they not ironically reinforcing the tenets of binary gender, even as conservatives accuse them of subverting it? Aren't female impersonators such as Danny LaRue, Holly Woodlawn, The Lady Chablis and RuPaul reinforcing binary gender by distilling an essence of feminine looks and personalities?

Fiction presents some imaginative insights. Ursula LeGuin's science-fiction novel *The Left Hand of Darkness* (1969) describes a planet where humans are "hermaphroditic neuters" who periodically morph into male or female forms to mate with the opposite form. Each can become male or female, father or mother, then revert back to neutral anatomy. Earthlings are considered perverts because they are stabilized in male or female form, which is taken to mean that they are always sexually aroused. Jeffrey Eugenides's *Middlesex* (2002) is the story of a teenage girl who abruptly learns that she is genetically male, and that puberty has been changing her body from girl to man. At the point in the story where this girl/man becomes a medical curiosity, there is a twenty-seven-page presentation on the anatomy and psychology of the intersex condition, as well as facetious accounts of gender-socialization theories and sociobiology as a backlash against them: "Men and women, tired of being the same, want to be different again" (p. 478).

Alternatives to binary gender reveal that there is much more to gender than just sexuality, and that there is more than one way for a society to understand gender. In the words of Cal, the girl who develops into a man in *Middlesex*, "My family found that, contrary to popular opinion, gender was not all that important" (p. 250).

SEE ALSO *Gender; Sexuality; Transgender*

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Chris Toumey

GENDER AND DEVELOPMENT

Gender and development is an interdisciplinary field focusing on the social relations between women and men in developing and transitional economies. The field has grown rapidly since the 1970s and includes "innovations in research, analysis, and political strategies brought about by diversely located researchers and activists," as well as a set of practices and discourses that are institutionalized within multilateral organizations (such as United Nations agencies and the World Bank) and national governments (Cornwall et al. 2004, p. 2). Many fine collections have been compiled on gender and development (see Cornwall et al. 2007; Jacquette and Summerfield 2006; Benería and Bisnath 2001; Jackson and Pearson 1998; and Visvanathan et al. 1997). There are also several excellent summaries tracing the intellectual and political evolution of this field from the 1970s to the 1990s (see Elson 1999; Bakker 1999).

This entry will concentrate on gender issues in the context of development theories and policies since the late 1990s, focusing on five related but distinct issues that are debated in the literature: gender and poverty, women's empowerment, paid employment and unpaid work, gender and the macroeconomic policy environment, and institutional issues and gender mainstreaming. For the large and growing literature on other topics in gender and development, see: Mark Pitt and Shahidur Khandker (1998), Linda Mayoux (1999), and Naila Kabeer (2001a) on microfinance; UNESCO (2004) and Michael Kevane (2004) on education; Harriet Presser and Gita Sen (2000) on population; Gita Sen, Asha George, and Piroska Ostlin (2002) on health; UNFPA (2005) on the feminization of AIDS; and Claudia Garcia-Moreno et al. (2005) and Sunita Kishor and Kiersten Johnson (2004) on violence against women.

DEFINING GENDER AND DEVELOPMENT

The literature on gender and development originated in opposition to views common in the 1970s and 1980s that women were excluded from the development process and needed to be incorporated into mainstream policies, institutions, and programs. Early gender and development theorists critiqued the prevailing development paradigm

that promoted market-led development and structural adjustment and stabilization packages as a response to debt and balance-of-payments problems, as well as the view that women should be integrated into a process that benefits a few and impoverishes many (Benería and Sen 1982). In contrast to the earlier "women in development" literature, gender and development theorists had an explicit objective of social transformation, both of the ultimate aims and practices of development and of the relations between men and women (Jackson and Pearson 1998).

The feminist academics and activists who chose the language of gender used it in a particular way. Gender is a social construct that refers to the relations between women and men and reflects hierarchies among them, based not only on their biology, but also on their age, life-cycle position, ethnicity, race, income and wealth, and other features (Barker 1999). Gender relations change over time and vary across societies, but in all societies, they structure the division of labor and distribution of work, income, wealth, education, productive inputs, publicly provided goods, and the like.

Kate Young (1997) outlines six issues that characterize approaches used by gender and development scholars. (1) The focus is not on women per se but on gender relations, that is, relations between women and men in a variety of settings interlocked with other social relationships such as income, race, caste, and ethnicity. (2) Women are viewed as active agents, although they may not have perfect knowledge or understanding of the roots of discrimination and subordination. (3) The perspective is holistic, and focuses on the reproductive aspects of social and economic life (caring for dependents), as well as the gendered social relations of production and distribution of goods and services. (4) Development is viewed as a set of complex processes involving economic, political, and cultural transformation over time and space that should aim to produce improvements in capabilities, freedoms, and living standards for individuals and societies. (5) Achieving gender equality and women's empowerment requires multiple approaches and strategies that will necessarily differ by circumstances. (6) The role of organization and collective action by women is central to the achievement of gender equality and women's empowerment.

THE DEVELOPMENT CONTEXT: 1990–2007

Examining the field of gender and development since the 1990s requires an understanding of the global political economy at the turn of the century. Although globalization had accelerated, the patterns were uneven (Stiglitz 2002). Some countries, such as China and India, were growing rapidly while others, such as Ecuador and Bolivia, were growing only slowly. Many countries, especially those in sub-Saharan Africa, were experiencing negative growth (Birdsall 2006; Wade 2004). Although there is debate over whether global poverty has increased or decreased since the 1990s, analysts agree that a billion-plus people were living on less than $1 per day in 2000 (Reddy and Minoiu 2006; Chen and Ravallion 2004; UN Millennium Project 2005). The widening of income inequality both within and between countries, a series of environmental crises from loss of species to global warming, growing religious fundamentalism, and violence and conflict also posed major development challenges (Milanovic 2006 and 2005; Melnick et al. 2005).

The concern over poverty, inequality, and differential economic growth led world leaders from 189 countries in 2000 to adopt the Millennium Development Goals (MDGs), a set of eight goals with related time-bound targets to reduce extreme poverty and its correlates by 2015 (UN Millennium Project 2005; Thorbecke and Nissanke 2006). The MDGs have become the global development policy paradigm for the early part of the twenty-first century and one of the key entry points for advocates of gender and development. Although many development economists and activists agree on the importance of reducing absolute poverty and improving human capabilities, they disagree about whether the MDGs can be achieved in the current era of globalization, and whether growth can be made to be pro-poor.

GENDER AND POVERTY

Reducing gender inequality and empowering women is the third Millennium Development Goal. In setting this goal, governments recognized the contributions that women make to economic development and the costs to societies of the multiple disadvantages that women face in nearly every country (Grown et al. 2005). As noted in the World Bank's *Engendering Development*:

> In no region of the developing world are women equal to men in legal, social, and economic rights. Gender gaps are widespread in access to and control of resources, in economic opportunities, in power, and political voice. Women and girls bear the largest and most direct costs of these inequalities—but the costs cut more broadly across society, ultimately harming everyone. For these reasons, gender equality is a core development issue—a development objective in its own right. (World Bank 2001, p. 1)

Beginning in the 1990s, the concept of poverty broadened beyond a focus on shortfalls in income or consumption to lack of capabilities (e.g., education and health), lack of voice, lack of opportunities, and lack of dignity. When these broader criteria are factored in, females appear to be more vulnerable than males to the

risk of poverty and vulnerability, although data limitations make it difficult to quantify the relative proportion of female poverty (Quisumbing et al. 2001). They also experience poverty differently than men (Razavi 1999; Jackson 1998). Because of their responsibilities for social reproduction, as well as gender inequalities in ownership of assets and access to employment and productive resources, women find it harder than men to transform their capabilities into steady income streams that would allow them to escape poverty (Deere and Doss 2006; Cagatay 1998).

Early work on gender and poverty focused on female-headed households, identifying them as the poorest of the poor (Chant 2003, p. 11). In a meta-analysis of sixty-one empirical studies, Mayra Buvinic and Geeta Rao Gupta (1997) found that in thirty-eight studies, female-headed households were overrepresented among the poor. More recent work has debunked the notion equating female headship and poverty, noting the wide economic diversity of female-headed households in countries around the world and the heterogeneity of intrahousehold sharing rules, which may disadvantage females in male-headed households more than females in female-headed households (Chant 2003).

Since poverty encompasses many dimensions other than earned income, including lack of public provision of goods and services, access to common property resources, and voice in political processes and decision-making, poverty reduction strategies need to be multidimensional. Within the context of the MDGs, Caren Grown and colleagues (2005) recommend seven strategic priorities to achieve gender equality in the context of poverty reduction, including strengthening opportunities for postprimary education for girls, guaranteeing sexual and reproductive health and rights, investing in infrastructure to reduce women's and girls' time burdens, securing women's and girls' property and inheritance rights, eliminating gender inequality in employment by decreasing women's reliance on informal employment and closing gender gaps in earnings, and significantly reducing violence against girls and women.

Although the broader focus on the gender dimensions of poverty is welcome, Cecile Jackson (1998) cautions against seeing gender and development as a variant of poverty problems; poverty is not entirely responsible for the subordination of women, and even antipoverty strategies may not be sufficient on their own to improve the position of women.

WOMEN'S EMPOWERMENT

The concept of women's empowerment features prominently in the gender and development literature, and many development interventions not only aim to increase income and assets but also to empower women. The World Bank's sourcebook on *Empowerment and Poverty Reduction* (Narayan 2002) defines *empowerment* as the expansion of freedom of choice and action. Feminist scholars point out that women's empowerment encompasses unique additional elements. Women are not just one group among several disempowered subsets of society, but are spread throughout all categories of disadvantage, including race, caste, ethnicity, and class. Second, the household and interfamilial relations are a central locus of women's disempowerment in a way that is not true for other disadvantaged groups (Malhotra et al. 2002). At the same time, empowerment requires systemic transformation in household relations, social norms, and market and government institutions (Kabeer 2001b).

PAID EMPLOYMENT AND UNPAID WORK

Access to employment and income are a critical component of poverty reduction and women's empowerment. Women's participation in paid employment has increased everywhere since 1990, but there is still a large gap between female-male activity rates in most regions. Most analysts attribute the increase to opportunities provided by globalization and structural changes, including commercialization of agriculture, industrialization, and the replacement of unpaid provision of services by women in families and communities by the paid provision of services by women employed in both the public sector and private firms (Standing 1999). Controlling for long-term economic development, Cagatay and Ozler (1995) find that structural adjustment policies and export-oriented growth lead to a feminization of the labor force

As the International Labor Organization (ILO 2007) points out, indicators of paid employment (such as labor force participation rates or the female share of paid nonagricultural employment) show little about the likelihood of being employed or having decent work. In almost all regions, the female unemployment rate is higher than the male rate, occupations are sex-segregated, and gender gaps persist in earnings. Women predominate in informal employment—jobs that lack formal contracts, security, benefits, or social protection (ILO 2002). The average earnings from informal employment are too low, in the absence of other sources of income or social protection policies, to raise households out of poverty (Chen et al. 2005). And the conditions of informal employment perpetuate the financial dependency of women wage earners on male relatives and partners because they do not earn enough in informal employment to support themselves and any children they may have (Chen et al. 2006).

Time-use data are necessary for calculating the total amount of work, paid and unpaid, that women and men perform. Although progress has been made in collecting

time-use statistics, data are limited and trend data are lacking (UNDESA 2006). Yet available evidence suggests that women and girls spend more time on unpaid work than men and boys, and when both paid and unpaid work is taken into account, women and girls have a longer working day than men and boys. Jacques Charmes (2006), for instance, finds that females in Benin spent 7.5 hours a day in paid employment compared to 5 hours a day for men in 1998, yet females spent almost 3.5 hours per day on unpaid work, while men spent just over 1 hour. Moreover, a number of studies suggest that women's performance of overlapping activities has intensified with globalization (Floro 1995).

GENDER, MACROECONOMIC POLICIES, AND THE ENABLING ENVIRONMENT FOR POLICY REDUCTION

The development economics literature is divided about the policies that promote growth that is pro-poor, with some arguing for greater liberalization of trade and financial capital markets and others arguing for greater control over markets and attention to policies that create domestic demand for goods and services. Most of the gender and development literature takes a skeptical position toward the view that gender equality can be achieved in a context of export-led growth (Benería 2003; Elson 2002).

In this vein, Stephanie Seguino and Caren Grown (2006) propose shifting economies from profit-led, export-oriented growth to wage-led, full-employment growth. This entails state-level industrial and agricultural development strategies to promote both articulation with the domestic economy and an export product mix that permits rising female wages without a (large) negative effect on exports, as well as policies that stabilize the economy, including limits on physical capital mobility (inward and outward foreign direct investment) and capital controls that act as speed bumps, reducing financial volatility. Elissa Braunstein (2006) notes a number of other policies specifically targeted to foreign direct investment and gender equity simultaneously, including restrictions on entry of foreign direct investment in key strategic industries, support to domestically owned firms for technological and human capital upgrading with priority for women workers, and the enforcement of core labor standards.

DEVELOPMENT INSTITUTIONS AND GENDER MAINSTREAMING

The goal of gender and development—gender equality and women's empowerment—is now institutionalized in policy and organizational mandates. At the Fourth World Conference on Women in 1995, the international community endorsed gender mainstreaming as a key institutional response for promoting gender equality and empowering women. In 1997 the UN Economic and Social Council defined gender mainstreaming as:

> the process of assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality. (UN ECOSOC 1997)

This definition makes clear that gender mainstreaming is a means toward the achievement of gender equality and women's empowerment. It is both a technical and political process requiring shifts in organizational culture and ways of thinking and in the structures and resource allocations of organizations (Oxaal and Baden 1997). As currently understood, gender mainstreaming encompasses all aspects of planning, implementing, and monitoring any social, political, or economic action.

Feminist scholars have pointed out a number of problems with the way that gender mainstreaming has been operationalized in development institutions. Some claim that "doing gender" has reduced a fundamentally political process aimed at social transformation into a technical process reliant on tools, checklists, and training (Mukhopadhyay 2004). Other critiques focus on the gap between governmental policy commitments and actual implementation (Verloo 2001). Within multilateral and bilateral development organizations, the process of gender mainstreaming has stopped short of operations—of the very dimension that impacts development on the ground and can show results in terms of development effectiveness (Hannan 2004; Moser and Moser 2005).

Others point out that gender mainstreaming has not been pursued fully or systematically enough to support definitive conclusions about its success or failure (Woodford-Berger 2004). In most cases, the process is incomplete or not properly implemented. Since it is likely that mainstreaming will continue to be the dominant strategy for incorporating gender equality issues in development policy institutions, more work will be necessary to understand the conditions under which it can successfully achieve its objectives.

CONCLUSION

There are many development challenges to be tackled in the early decades of the twenty-first century. The field of gender and development has much to offer for developing both new analytic paradigms and new institutional practices.

SEE ALSO *Development Economics; Economic Growth; Female-Headed Families; Feminism; Gender; Hierarchy; Inequality, Gender; Poverty; Work and Women*

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Caren Grown

GENDER EMPOWERMENT MEASURE

SEE *Women and Politics.*

GENDER GAP

Gender gap refers to systematic differences in the outcome of men and women on a variety of issues ranging from economic participation and opportunity, political empowerment, and educational attainment to health and well-being. Unlike sex stereotypes that ascribe social roles to men and women based on a traditional distribution of labor within a particular society and thereby reinforce stereotypes, gender gap measures difference in the outcome to gain a better understanding of how these differences can be narrowed. Closing the gender gap is constitutive of

achieving gender equality, which can be defined as "a stage of human social development at which the rights, responsibilities and opportunities of individuals will not be determined by the fact of being born male or female, in other words, a stage where both men and women realize their full potential" (Lopez-Claros and Zahidi 2005, p. 1).

State policies are an important factor in shaping gender relations and, in certain respects, state actions are constitutive of gender. Countries vary significantly in their efforts to close the gender gap through "women-friendly" policies—social policies that seek to mediate social inequalities, particularly those flowing from women's disproportionate responsibilities in caregiving. A 2006 study by the World Economic Forum (WEF) examined fifty-eight countries and their efforts in closing the gender gap. The Nordic countries, particularly Sweden, Norway, and Iceland, had the lowest gender gap. These states are characterized by liberal societies, protection of minorities, and a comprehensive welfare state that actively promotes gender equality through women-friendly policies. The United States was ranked seventeenth. The United States ranks poorly on the specific dimensions of economic opportunity and health and well-being, compromised by meager maternity leave, the lack of maternity leave benefits, and limited government-provided childcare. The overall rating is low, given that many scholars and policymakers consider the antidiscrimination and sexual violence legislation in the United States to be the strongest in the world. Countries with the largest gender gap were four of the seven predominantly Muslim countries, namely Jordan, Pakistan, Egypt, and Turkey. Sweden, in spite of being the country with the lowest gender gap, encounters occupational segregation with women working predominantly in the public sector. Thus no country has yet achieved full gender equality, making gender gap a global phenomenon.

Since 1990 the United Nations Development Program (UNDP) has published an annual report that examines human development based on four indices: the Human Development Index (HDI), the Gender-Related Development Index (GDI), the Gender-Empowerment Measure (GEM), and the Human Poverty Index (HPI). Based on these indices 174 countries are ranked. For the evaluation of gender gaps the GDI and the GEM are important measures. The GDI is composed of an average of three indices that measure gender differences in terms of life expectancy at birth, gross enrollment and literacy rates, and earned income. The GEM is an average of three other variables that reflect the importance of women in society, specifically the participation of women in employment, the male to female ratio among administration, managers and professional and technical workers, and the female to male Gross Domestic Product (GDP) per capita ratio calculated from female and male share of earned income. While the GDI assesses the status of women in society the GEM points to the relative empowerment of women and men in the political and economic spheres.

Based on the GDI and GEM countries are ranked annually, thereby making it possible to evaluate their progress in closing gender gaps as well as the relative status of countries vis-à-vis each other on gender equality. While the indices are important tools for measuring the results of gender discrimination they do not address the underlying causes. Thus, although indices represent an important first step in comparing and monitoring the progress of countries toward closing the gender gap they are not sufficient to actually reduce gender discrimination. To promote policy change these indices need to be accompanied by, for instance, broader strategies for change that address the underlying causes of gender discrimination and best practice examples that enable governments and activists to learn from each other about how to close gender gaps.

GENDER GAPS IN ECONOMY, POLITICS, EDUCATION, AND HEALTH

Economic participation, or a high employment rate of both men and women, is important for lowering household poverty, enabling women to establish and maintain an independent household, and supporting an inclusive society. Access to employment alone is not sufficient to achieve gender equality. Equality within employment requires a closing of the gender pay gap, meaning that women are paid the same as men for the same work or work of equivalent value, and establishing economic opportunities to reduce horizontal and vertical segregation. Horizontal segregation means women and men are concentrated in different sectors and professions, with women working in areas with less opportunity for professional development and low pay. States can promote the opening of a wider range of occupations to women through equal opportunity legislation and affirmative action programs as well as antidiscrimination and sexual harassment legislation. Vertical segregation refers to the blocking of higher positions for women or limited opportunities for women to advance to managerial professions (the proverbial "glass ceiling"). To promote women's upward mobility the state can establish, for instance, social services that provide caregiving for dependents, limit working time, and promote a "work-life balance." (International Labor Organization 2003.)

Political empowerment of women is concerned with equitable representation of women in decision-making structures and their ability to influence the policymaking process. While most countries have de jure equality in political participation, actual participation varies by country. A 2005 United Nations report found that "women

still hold only 16 per cent of parliamentary seats worldwide (only Rwanda and the Nordic countries have come close to parity) … by the end of 2004, 81 countries had adopted some form of affirmative action, such as party quotas or reserving seats for women in parliament to ensure their political participation" (United Nations 2005, p. 16).

Education has gender gaps in a number of areas, such as literacy rates and years of schooling *(* primary, secondary, and tertiary education). While the gender gap in primary and secondary school attendance has narrowed over the past thirty years, the gap is still wide in tertiary education, particularly computer science and mathematics.

Finally, gender gaps can be found in health and well-being. The focus is particularly on access to nutrition, health care, reproductive facilities, and overall security in terms of safety and integrity of a person. A 2005 OECD study pointed to the relationship between birth rates and attitudes toward equality. Countries with "more traditional family structures in modern economies face chronically low birth rates, whereas the birth rate trend is positive and the demographic structure more balanced in countries where gender equality in the workplace is more developed. For these countries, that points to fewer problems with ageing, as well as higher labour activity and a more robust economy" (Mörtvik and Spånt 2005).

Gender gap and gender equality are two sides of the same coin. In order to achieve gender equality gender gaps have to be closed. Looking at gender gaps and monitoring their development can serve as a valuable tool for policymakers and activists to integrate gender equality in economic models for sustainable growth and development and create conditions for inclusive societies.

SEE ALSO *Gender; Glass Ceiling; Inequality, Political*

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Nicole Richardt

GENDER STUDIES

Interdisciplinary gender studies started with the opening call of the new feminist or women's liberation movement in the United States—Betty Friedan's 1963 *The Feminine Mystique*, the sociological critique of Freud's view of women's natural inferiority.

This movement inspired research, mainly sociological and anthropological but also economical, historical, and psychological. During its first two decades the terms *sex roles* and *sexual stratification* were current, until the terms *gender*, *gender roles*, and *gender relations* gained circulation and replaced them. This research shared a conviction and a goal. The conviction is that equal status of women and men is possible today, all the forms and causes of women's inferior status in different societies and in different historical periods notwithstanding. The goal of this research is openly declared: to discover the ways and means to facilitate the achievement of gender equality.

The basic questions/problems/analyses of gender research are the following:

The formal political equality achieved by the old, "classical" women's movement did not result in de facto equal opportunity and participation of women. Why?

The status of American (and other Western) women declined after World War II. Why?

Marx and Engels postulated inevitable stages of development from primitive communism with no private property, no family, and no gender inequality, through stages of different class societies toward socialist revolution leading to communism, where private property (the means of production), the nuclear family, and gender inequality will all disappear. They were in error. Where did they go wrong?

Were/are there any societies where women are equal? What were/are their characteristics? What is the relative importance of economic conditions and religious beliefs for the status of women?

What is the actual and the possible impact of recent innovations on the likelihood of achieving equality for women? In particular, research centers on improved means for birth control, on the electronic and computer revolutions in the economy, and, more generally, on the decline in the importance of physical strength for most kinds of work that traditionally gave men an advantage in occupational work.

Can there be solidarity between women of different social classes and "races"? In particular, researchers differed on the possibility of cooperation between white, educated "middle-class" women and "women of color" belonging to the "working classes."

How serious is the "sex-typing" of occupations? How unequal is the distribution of men and women over the range of occupations and their position in the hierarchies of economic and academic organizations, public service, and the professions? How does the income of employed or self-employed women compare to that of men?

How do the attitudes to work of women and men compare? In particular, research centered on the so-called instrumental attitude toward work as compared to interest in its content and quality, as well as interest in advancement at work.

What are the characteristics and the impact of "genderized" education of boys and girls in families, schools, and religious organizations compared to the impact of their own life experiences?

Does the fact that most babies are nurtured by their mothers during the first year of their life necessarily cause a stronger tendency toward and capacity for attachment in females and a stronger tendency toward and capacity for autonomy in males?

What are the achievements and chances of achieving reforms and real changes in the current inferior status of women and their segregation, preached and maintained by leaders of various religious communities?

Has there been a qualitative impact from the entry of women into local, national, and international politics and into councils, parliaments, governments, the diplomatic corps, the army, the judiciary, and law enforcement?

What was the impact of women's massive entry into the labor market and their demand for equality on the incidence, age, and frequency of marriage and divorce and on the birth rate? How has family law changed? What importance has the availability or absence of civil marriage and divorce and of the recognition of cohabitation (as well as the recognition of same-sex unions) for the status of women?

What custody policies have been tried, and how can their degree of fairness—to mothers as well as to fathers and children—be assessed? How can the degree of practicality of solutions of "shared custody" be assessed? The same goes for policies encouraging equal parenting and their effectiveness as well as for the quantity and quality of men's participation in child care and housework.

What have we learned about fighting violence against women, about the effectiveness of safe houses for battered women, and about police action against violent husbands and other partners and their reeducation? What is the experience of public action against clan murder of women in the name of "family honor"? What is the experience of public action against "bride-price murders"? What success have we had in eliminating the mutilation of girls ("female circumcision")? How successful is the fight against rape? The same goes for the fight against the sexual abuse of children—especially girls.

Does pornography encourage sexual violence and should it be banned, or does it relieve violent sexual urges? Is prostitution mainly "sex work" or "sexual slavery"?

Should women establish separate organizations (such as trade unions or political parties) and institutions (such as health services, banks, or "women's studies" university departments) to gain appropriate services and attention? What are the achievements and defects of such separate organizations and institutions?

What is the impact, actual and potential, of women's international nongovernmental organizations on the United Nations and through them on pressuring the member states to raise their standards of women's participation in politics and the economy?

Since the 1990s some "postmodernist" or "postfeminist" literature discourages the struggle for global gender equality. The writers deny the possibility of a common rationality of women and men, as well as that of common interests and even of a common rationality of different groups of women—those who belong to different classes and races, to Western or Eastern societies, as well as of women with different sexual orientations. They rule out the possibility of gender studies advancing knowledge of the causes and circumstances of and the possible remedies to the ubiquitous sociopolitical problem of gender inequality. Fortunately, the ongoing gender studies are too robust and successful to be obliterated by this unserious trend. The results of these studies, moderate as they may be, are very encouraging.

SEE ALSO *Crowding Hypothesis; Discrimination, Wage, by Gender; Fatherhood; Femininity; Feminism; Feminism, Second Wave; Gender Gap; Gender,*

Alternatives to Binary; Inequality, Gender; Masculinity; Motherhood; Prostitution; Reproductive Rights; Sexual Orientation, Social and Economic Consequences; Work and Women

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GENDERS, MULTIPLE

SEE *Gender, Alternatives to Binary.*

GENDER-TYPING OF JOBS

SEE *Crowding Hypothesis; Discrimination, Wage, by Gender.*

GENERAL AGREEMENT ON TARIFFS AND TRADE

The General Agreement on Tariffs and Trade (GATT) is the predecessor to the World Trade Organization (WTO). From 1947 to 1994, the GATT provided the world's main institutional framework for multilateral trade negotiations. It was created in Geneva in 1947 to remedy the protectionism and economic discrimination that arose during the interwar period and that arguably deepened the Great Depression. It was thus designed to facilitate nondiscriminatory trade liberalization among the world's major trading partners.

GATT members reduce trade barriers through periodic negotiating rounds, each of which produces an agreement that must be ratified by all members before it takes effect. Although these negotiations typically take place in small groups, the resulting concessions are extended to all members through the *most-favored-nation* rule, which grants each member the same treatment as the most-favored trading partner. The most-favored-nation rule ensures that any liberalization achieved during GATT rounds is nondiscriminatory. Eight rounds have been concluded as of 2006: Geneva (1947), Annecy (1949), Torquay (1951), Geneva (1956), Dillon (1960–1961), Kennedy (1964–1967), Tokyo (1973–1979), and Uruguay (1986–1994). A ninth, Doha, began in 2001. These rounds have reduced global tariffs on manufactured goods from nearly 40 percent in 1947 to under 4 percent in 2006. These tariff reductions are considered one of the foremost achievements of the GATT system.

Since its founding, the GATT has evolved in important ways. First, its membership has grown from twenty-three countries in 1947 to 149 in 2006. The GATT system has thus become global in scope. Second, the range of policies covered by GATT strictures has expanded over time. While early rounds focused on tariffs, later ones addressed nontariff barriers such as subsidies, voluntary export restraints, and antidumping duties. The Uruguay Round went further still, tackling policies such as technical barriers to trade, sanitary and phytosanitary standards, trade-related intellectual property rights, and trade-related investment measures. Third, the range of economic sectors covered by GATT rules has also grown over time. Whereas early GATT rounds focused on manufactures, the Uruguay Round produced agreements to liberalize trade in traditionally protected sectors such as agriculture, textiles and clothing, and services. Fourth, in 1995 the GATT was subsumed into the newly created WTO. The GATT continues to govern trade in goods but is now part of the broader WTO framework that also addresses new issues such as trade in services and the enforcement of intellectual property rights. Finally, the Uruguay Round also strengthened GATT dispute-settlement procedures, establishing stricter timetables for settling disputes and making it more difficult for losing parties to block unfavorable rulings from dispute-settlement panels. Notably, however, the Uruguay Round did not create any new enforcement mechanisms: Although panels can authorize retaliatory sanctions from complainant states, panels have

no power to enforce their own decisions. WTO panel decisions, like GATT decisions, must thus be enforced by trade sanctions from member states.

The GATT system has both supporters and critics. Its supporters contend that it is crucial to achieving the benefits of free trade, such as lower prices for consumers and export opportunities for producers. Supporters also note that GATT rules against trade discrimination make it more difficult for governments to use trade preferences and sanctions as diplomatic tools. Critics, however, claim that the GATT system is deficient in several ways. Some critics, particularly from developing countries, feel that the GATT has not gone far enough in liberalizing trade in agriculture and textiles. Others feel that the GATT has gone too far in constraining national policymaking autonomy. For example, WTO panels have ruled against the European Union's ban on hormone-treated beef, stating that scientific evidence does not justify such a ban. Critics contend that such decisions about health, safety, and the environment should be left to national governments. Similarly, some have criticized the WTO's rules on intellectual property rights, which could prevent developing countries from obtaining cheap, generic pharmaceuticals. Finally, some contend that the GATT process is undemocratic because agreements are negotiated by unelected officials.

In light of this controversy, it is worth noting that the GATT is not a supranational policymaking body but rather an institutional forum within which governments negotiate agreements via a consensus decision-making process. Hence, while GATT agreements do constrain policies, no member is constrained without its consent. Moreover, because GATT agreements must be ratified by national governments, the GATT process remains under the control of elected representatives. The GATT is thus not qualitatively different from many other international agreements, all of which constrain national policies. For this reason, the controversy surrounding the GATT probably has less to do with procedural concerns than with disagreements about the substantive content of GATT rules. Finally, it is worth noting that empirical studies have found little evidence that the GATT affects either trade or trade policies. Such research suggests that both supporters and critics of the GATT may have overstated its true importance.

SEE ALSO *Uruguay Round; World Trade Organization*

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GENERAL ELECTRIC

General Electric is one of the largest corporations in the United States. Formed in 1892 from the merger of two U.S. electrical manufacturing companies, Edison General Electric Company and Thomson-Houston Electric Company, by 2006 General Electric had become a $163 billion corporation. General Electric today is a multinational diversified company operating in more than 100 countries in sectors as diverse as aviation and nuclear power, industrial and domestic electrical appliances, personal and industrial finance, and media and entertainment. Despite the level of diversification, its traditional electrical manufacturing activities linked to aviation and energy contributed almost 30 percent of sales in 2006 (General Electric 2006). General Electric continues to be one of the world's largest producers of jet engines, supplying Boeing and Lockheed Martin, among others.

General Electric's rise to dominance derived from the company's ability to restrict market competition through cartelization in the newly expanding consumer markets of the Second Industrial Revolution, and its ability to gain access to large, secure government markets, especially those linked to electricity generation and military equipment. General Electric was at the forefront of the development of international cartels before World War II, instigating market sharing and price-fixing through the creation of "rings" regulated by the International Electrical Association (Barjot 1995). Despite challenges by U.S. antitrust authorities after World War II, international cooperation and market sharing continued (Mirow and Maurer 1982). In the area of military technology, General Electric developed extensive capabilities as a result of high U.S. government defense expenditure during the cold war, and it continues to benefit from the rises in defense expenditure by every government since Ronald Reagan's; in 2005 its defense contracts amounted to $2.2 billion.

Large protected markets provided the backdrop for diversification into the financial and media sectors. Thus, in the areas of media and entertainment General Electric succeeded in creating large organizations capable of developing market power in entertainment and communication sectors, most notably in 2004 with the creation of NBC Universal, which combined NBC and Vivendi Universal to create a $43 billion media empire (CorpWatch 2006).

General Electric, along with other U.S. manufacturing multinationals, has utilized outsourcing and the establishment of maquila production systems along the U.S.–Mexican border as a mechanism for cost reduction. The company's diversification into distribution and logistics through its Trailer Fleet Services division has been used to service U.S. companies in the linking of the maquila production centers to U.S. markets. The resultant low-wage and poor labor conditions within the maquila system of production and redundancies and reductions in living standards for U.S. workers has led to extensive criticism of the company from labor unions.

SEE ALSO *Antitrust; Cold War; Corporate Social Responsibility; Corporate Strategies; Corporations; Defense, National; Maquiladoras; Military-Industrial Complex; Unions*

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GENERAL EQUILIBRIUM

General equilibrium theory deals with the existence of efficient competitive prices in an individual private enterprise economy. This discussion of general equilibrium theory (GET) is divided into four parts: (1) the context and history of GET, (2) comments on the appropriate mathematization and method of proof, (3) the problems with the parsimonious modeling and solution concept used, and (4) what lies beyond the theory.

CONTEXT AND HISTORY

The French economist Léon Walras (1834–1910) was the first to attempt a mathematization of the conditions necessary and sufficient to determine the prices of all goods and services produced and consumed by firms and individuals in a closed economy. He distinguished between services and durable production goods, and he developed the theory of competitive exchange, noting the possibility of multiple solutions to the existence of competitive prices. In particular he did not prove rigorously the existence of an efficient price system, but he did recognize that this would require the simultaneous solution to the set of equations he had utilized to describe the overall system of production and consumption. In writing down his production conditions, he utilized simple fixed coefficients for the structure of production.

Walras sketched the roles of both a rate of interest and a currency in his system, but these were not fully developed. These features, unlike his integration of production and consumption into a consistent whole, may be regarded as more or less undeveloped when compared with the market structure for the production and consumptions of goods and services. Although Walras discussed the important role of government, he left it out as being beyond the more strictly economic problems he was addressing.

The full modeling of an exchange and production economy presented a challenge. The construction of a formal closed mathematical model of the economy called for Draconian simplification, and it was thus a major achievement in abstraction. As is often the case, even in the purest of mathematical economics, the distinction between the verbal treatment and the mathematization offered is often considerable. Words permit a richness of discourse at the cost of precision, while mathematics offers precision and logical tightness at the cost of qualification, nuance, and the recognition of complexity. Mathematics thus facilitates the analysis at the cost of minimizing concern with context.

The work of Walras was accepted relatively slowly. The mathematical problems surrounding the solution of the simultaneous equation structure of the general equilibrium model were posed in a modern mathematical context by Abraham Wald, who considered production with inputs in fixed proportion, and with a single output. He also, however, assumed the existence of demand functions rather than deriving them from utility maximization.

THE MODEL AND PROOF

The key papers presenting the first rigorous proofs of GET were written by Kenneth Arrow and Gerard Debreu (1954) and Lionel McKenzie (1959). The sketch here primarily follows the treatment presented in Debreu's *Theory of Value* (1959).

An economy is considered initially with l commodities (goods or services), m utility maximizing agents, and n profit maximizing multi-product firms. The economy exists over a specific finite period of time sectioned into T time periods. The existence of money is not considered. It is as though there exists some vast smoothly functioning central clearinghouse that balances all accounts at the end

of the trading period after which the economy ceases. A commodity or service is characterized not merely by its physical aspects, but by both a time of availability and a location, providing a considerable simplification of the model structure. It is as though all trade takes place in a single time period, with a vast array of futures markets available that make further trade unnecessary.

All real persons or individuals are assumed to have well-defined preferences that can be represented by utility functions. It is further assumed that individual preferences are such that more goods are always of value.

Production is described by a convex production set, in which each individual producer selects a set of inputs to maximize the profits obtained from the sale of its outputs. In the process of production, free disposal is assumed. The profits are distributed to individuals who hold shares in the firms. It is proved (under reasonably plausible conditions on the utility functions and production sets) that a set of prices exist (not necessarily unique) such that supply equals demand in every market and that the resultant imputation of goods and services is efficient or Pareto optimal, meaning that there is no way that any individual can improve utility without another individual obtaining less utility. The method of proof is highly technical; it utilized fixed-point theory (Kakutani 1941), which has been of considerable use in both subsequent developments in general equilibrium theory and in the application of the theory of games in economics.

PROBLEMS WITH THE ASSUMPTIONS AND DEVELOPMENTS IN *GET*

Since the development of the original models, there have been many modifications of the original stringent assumptions. In particular, the original models deal with a finite sector of time, but in the real world there is a past and a future. There is thus a question as to how one can extend the general equilibrium analysis to infinite horizon models. Furthermore, given an infinite horizon model, an overlapping generations structure to the population appears to be more appropriate than viewing individuals as living forever. The seminal work of Maurice Allais (1946) and Paul Samuelson (1958) opened up a literature extending the investigation of competitive markets (see Geanakoplos 1987 for an extensive summary).

When dealing with a high level of abstraction, the linkage between the assumption and the underlying reality must be considered, for there are empirical exceptions to virtually every assumption made. But, on the whole, the question to be considered is whether the rigor, when confronted with the reality, provides a good enough fit to cast light on the function of a significant part of the economy. The considerable developments in the computation of applied general equilibrium models suggests that it does. The computational methods are based on the work of Herbert Scarf.

A basic assumption in the original proofs is that individual consumers and firms are "price takers." In other words, they are so small that their actions have no influence on market prices. But, as presented, the proofs were based on there being a finite number of agents. This affects the stated basic assumption of price taking. The Debreu proof does not depend on whether there is one agent or a million in any market. If this finite number is taken into account, then the actions of individual agents may influence price. A precise proof is needed to show the conditions under which the individual influence can be ignored. Robert Aumann (1964), using technical results from the mathematics of measure theory, provided a solution reflecting the lack of power of an individual small agent. The strategic market game (SMG) model of Lloyd Shapley and Martin Shubik (1977) provided the basis for non-cooperative game models of a closed economy, while Pradeep Dubey and Shubik (1978) showed the basic inefficiency of the noncooperative equilibria. However, the equilibria approach a competitive price as the number of agents in the economy increases. The noncooperative game models and the general equilibrium models are mathematically distinct, but for a continuum of agents the solutions may coincide.

The original models avoided problems with uncertainty through an ingenious but unsatisfactory enlargement of the number of goods, including a myriad of markets with contingent goods. This is currently being avoided in the development of general equilibrium with incomplete (GEI) markets.

The SMG models of the economy are more institutional than those of GET. They require an explicit specification of the price formation mechanism in the markets and a description of what happens to the traders under all circumstances. The mathematical model is so complete that it could be played as an experimental game, and the role of money and markets appears naturally and explicitly as a way of simplifying trading activity. The game-theoretic formulation has permitted the handling of three important items left out by GET: the influence of oligopolistic markets (i.e., markets with powerful players whose individual action influences price), the role of possible default, and the role of different levels of information.

At a high level of abstraction, there is an important link between work in cooperative game theory and GET. There are two cooperative game theory solutions called the core and value that can be related to the competitive equilibrium. These solutions stress group power and individual equity. The core characterizes outcomes that cannot be effectively challenged by group behavior, while the

value reflects the expected marginal productivity of an individual over all groups he or she could join. It can be shown that in an economy with many individuals the price system has the properties of both the core and the value.

WHAT LIES BEYOND?

One of the major concerns in economic theory is the reconciliation between general equilibrium microeconomic theory and macroeconomics. It has been suggested that a natural extension beyond basic general equilibrium will incorporate both the financial structure and government. The next series of basic micro-macro models will have a continuum of private agents plus government as a large player. Beyond this, the addition of taxation and public goods to the basic micro-macro models of the economy will be difficult but rewarding. Game-theoretic methods that permit the blending of price taking and oligopolistic elements, and that take into account nonsymmetries in information, are currently being developed in the study of macroeconomic control.

SEE ALSO *Arrow, Kenneth J.; Arrow-Debreu Model; Debreu, Gerard; Economic Model; Economics; Equilibrium in Economics; Game Theory; Macroeconomics; Market Economy; Microeconomics; Stability in Economics*

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GENERAL MOTORS

In 2006 Detroit-headquartered auto giant General Motors (GM) was the world's largest automaker and ranked number three on the *Fortune* 500 list of America's largest corporations. The company has been a major player in U.S. labor history, and its vast worldwide expansion has had, and continues to have, many social consequences.

In 1897 Ransom E. Olds (1864–1950) formed the Olds Motor Vehicle Company and created several different automobile models powered by electricity and gasoline. After a fire in its factory, the company was forced to change its marketing and development strategy, which had previously focused on the wealthy, and instead moved to create a mass market for its vehicles, making them competitively priced with horses and buggies. This strategy was effective, and by 1904 the company had sold more than 12,500 vehicles.

Meanwhile, the owner of Buick was developing a complex network of suppliers to lower its costs, and incorporated with its holdings as General Motors. From 1908 to 1910 Oldsmobile, Cadillac, and several other smaller companies joined forces with the new company to create a larger, more powerful automaker. The incorporation included many more suppliers and an expansion to trucks and airplanes, and in the first half of the twentieth century, GM grew rapidly. The company also benefited from many defense contracts during World War I (1914–1918) and World War II (1939–1945).

GM's massive growth led to a need for large numbers of workers to assemble parts and automobiles. To improve their working conditions and increase their pay, workers throughout GM began to unionize in 1935 under the AFL-CIO. Later, a split in this organization led to the development of what would become one of the largest and most powerful unions in U.S. history: the United Auto Workers (UAW). The UAW was one of the first unions in the United States to include black workers.

Shortly after its formation, the UAW demanded contracts for GM autoworkers, but was denied negotiations with the automaker. On December 29, 1936, GM was informed that its largest stamping plant, in Flint, Michigan, was going to strike, and the company quickly made plans to move the machinery from the facility. In order to keep GM from removing the machinery, the workers staged a sit-down strike. Police attacked the strik-

ers with tear gas, but workers remained at the plant for forty-four days until GM signed a document recognizing the UAW as the official representative of its workers for bargaining purposes. This was a significant event in U.S. labor history, as a large corporation conceded to the demands of a union.

The unionization of autoworkers at GM helped the American middle class grow rapidly in the 1950s. Despite their blue-collar jobs, workers had salaries and benefits that allowed them the luxuries of middle-class life. Many scholars believe this change in status allowed embourgeoisement to take place; that is, working-class laborers gained middle-class values and lifestyles because of their increased wages and class position, and their support for radical political movements declined (Abercrombie et al. 2000).

GM has been criticized for corporate practices that are ecologically unsound or that violate human rights. Throughout the 1990s, there was much concern about GM's use of factories in the developing world (especially Mexico) for cheap and less-restricted labor. According to a 1998 Human Rights Watch report, the directors of GM-run *maquiladoras* (foreign-owned plants that are operated by multinational corporations) in Mexico were repeatedly accused by their workers of unfair work termination and sex discrimination, especially pregnancy-related discrimination. Female employees complained that they were forced to undergo pregnancy tests before gaining employment, and some said they were even made to show their sanitary napkins to prove that they were not pregnant to retain employment. Other concerns have been raised over GM's relationship with the environment. For example, its Hummer brand has been repeatedly cited as one of the worse violators in the consumer truck market because of its high emissions and a fuel economy of less than ten miles per gallon. A 2006 documentary, *Who Killed the Electric Car*, attacks GM for the systematic dismantling of its electric-car program and for what the filmmakers imply was a conspiracy between GM and the oil industry.

SEE ALSO *Automobile Industry; Corporations*

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GENERALIZED AUTOREGRESSIVE CONDITIONAL HETEROSKEDASTICITY (GARCH) MODEL

SEE *Autoregressive Models.*

GENERALIZED LEAST SQUARES

Generalized least squares (GLS) is a method for fitting coefficients of explanatory variables that help to predict the outcomes of a dependent random variable. As its name suggests, GLS includes *ordinary least squares* (OLS) as a special case. GLS is also called "Aitken's estimator," after A. C. Aitken (1935). The principal motivation for generalizing OLS is the presence of covariance among the observations of the dependent variable or of different variances across these observations, conditional on the explanatory variables. Both phenomena lead to problems with statistical inference procedures commonly used with OLS. Most critically, the standard methods for estimating sampling variances and testing hypotheses become biased. In addition, the OLS-fitted coefficients are inaccurate relative to the GLS-fitted coefficients.

In its simplest form, the linear model of statistics postulates the existence of a linear conditional expectation for a scalar, dependent random variable y given a set of nonrandom scalar explanatory variables $\{x_1, \ldots, x_K\}$:

$$E[y] = \beta_1 x_1 + \ldots + \beta_K x_K$$

where the β_k, $k = 1, \ldots, K$, are constant parameters for all values of the x_k. Interest focuses on estimating the β_k given a sample of N observations of y, denoted here by $y_1, \ldots, y_N$, and corresponding observations of the x_k, denoted $x_{1k}, \ldots, x_{Nk}$ for each explanatory variable indexed by k. Using matrix notation, the linear conditional expectations for the sample are

$$E[\mathbf{y}] = \mathbf{X}\boldsymbol{\beta},$$

where $\mathbf{y} = [y_1, \ldots, y_N]'$ is an $N \times 1$ column vector, $\mathbf{X} = [x_{nk}; n = 1, \ldots, N, k = 1, \ldots, K]$ is a $N \times K$ matrix, and $\boldsymbol{\beta} = [\beta_1, \ldots, \beta_K]'$ is a $K \times 1$ column vector. It is generally assumed that the explanatory variables in $\mathbf{X}$ are not linearly dependent so that $N \geq K$ and there is no $\alpha \in \mathbb{R}^K$, $\boldsymbol{\alpha} \neq \mathbf{0}$, such that $X\boldsymbol{\alpha} = \mathbf{0}$.

In addition, the linear model assumes that the variances of the y_n are equal to a common, finite positive constant σ^2 and that the covariances among the y_n are equal to zero. In matrix notation, these assumptions assign to $\mathbf{y}$ a scalar variance-covariance matrix:

$$\mathrm{Var}[\mathbf{y}] = \sigma^2 \cdot \mathbf{I} = \begin{bmatrix} \sigma^2 & 0 & \cdots & 0 \\ 0 & \sigma^2 & \ddots & 0 \\ \vdots & \ddots & \ddots & \vdots \\ 0 & 0 & 0 & \sigma^2 \end{bmatrix}$$

where $\mathbf{I}$ denotes an $N \times N$ identity matrix. The fundamental difference between such a linear model and one leading to generalized least squares is that the latter permits an unrestricted variance-covariance matrix, often denoted by

$$\mathrm{Var}[\mathbf{y}] = \boldsymbol{\Sigma}$$

where $\boldsymbol{\Sigma} = [\sigma_{mn}; m, n = 1, \ldots, N]$ is an $N \times N$ positive semidefinite matrix. In this extension of the linear model, the variances along the diagonal of $\boldsymbol{\Sigma}$ may vary across observations, and the covariances in the off-diagonal positions of $\boldsymbol{\Sigma}$ may be nonzero and may also vary across pairs of observations. In this essay, $\boldsymbol{\Sigma}$ is also assumed to be nonsingular.

Many authors refer to the generalized model as the linear model with *nonspherical errors*. This term derives, in part, from viewing $\mathbf{y}$ as the sum of $\mathbf{X}\boldsymbol{\beta}$ and an additional, unobserved variable that is an error term. Rather than making assumptions about the observable $\mathbf{y}$ and $\mathbf{X}$ as above, these writers make equivalent assumptions about the unobserved error term. The term *nonspherical* refers to the type of variance-covariance matrix possessed by the error term. Multivariate distributions with scalar variance-covariance matrices are often called *spherical*. This term can be traced to interpreting the set

$$\{\mathbf{u} \in \mathbb{R}^N \mid \mathbf{u}'(\sigma^2 \cdot \mathbf{I})^{-1}\mathbf{u} = 1\}$$

as an N-dimensional sphere (or spheroid) with radius σ. In the nonscalar case, the set

$$\{\mathbf{u} \in \mathbb{R}^N \mid \mathbf{u}'\boldsymbol{\Sigma}^{-1}\mathbf{u} = 1\}$$

is an N-dimensional ellipsoid and distributions with nonscalar variance-covariance matrices are called *nonspherical*. Hence, a linear regression accompanied by a nonscalar variance-covariance matrix may be called the case with nonspherical errors.

EXAMPLES

Leading examples motivating nonscalar variance-covariance matrices include *heteroskedasticity* and *first-order autoregressive serial correlation*. Under heteroskedasticity, the variances σ_{nn} differ across observations $n = 1, \ldots, N$ but the covariances σ_{mn}, $m \neq n$, all equal zero. This occurs, for example, in the conditional distribution of individual income given years of schooling where high levels of schooling correspond to relatively high levels of the conditional variance of income. This heteroskedasticity is explained in part by the narrower range of job opportunities faced by people with low levels of schooling compared to those with high levels.

Serial correlation arises in time-series data where the observations are ordered sequentially by the time period of each observation; y_n is observed in the nth time period. First-order autoregressive (AR(1)) serial correlation occurs when deviations from means (also called *errors*) satisfy the linear model

$$\mathrm{E}[y_n - x'_n\beta \mid y_1, \ldots, y_{n-1}] = \rho(y_{n-1} - x'_{n-1}\beta),\ n > 1,\ |\rho| < 1,$$

while maintaining the assumption that the marginal variance of y_n equals a constant σ^2. Nonzero covariances of the form

$$\mathrm{Cov}[y_{n-s}, y_n] = \rho^s\sigma^2, \quad s = 0, 1, 2, \ldots, n-1, n > 1, \tag{1}$$

are implied by the recursion

$$\mathrm{Cov}[y_{n-s}, y_n] = \rho\mathrm{Cov}[y_{n-s}, y_{n-1}]. \tag{2}$$

A times series of monthly unemployment rates exhibits such autoregressive serial correlation, reflecting unobserved social, economic, and political influences that change relatively slowly as months pass.

A second leading example of serial correlation occurs in *panel data* models, designed for datasets with two sampling dimensions, typically one cross-sectional and the other time-series. Repetitive testing of a cross-section of subjects in a laboratory gives this structure as do repeated surveys of a cross-section of households. Panel data models are usually expressed in an *error components* form:

$$y_{nt} = \mathbf{x}'_{nt}\boldsymbol{\beta} + \alpha_n + \varepsilon_{nt}$$

where α_n and ε_{nt} are unobserved error terms with $\mathrm{E}[\alpha_n] = \mathrm{E}[\varepsilon_{nt}] = 0$ and $\mathrm{Var}[\alpha_n] = \sigma^2_\alpha$, $\mathrm{Var}[\varepsilon_{nt}] = \sigma^2_\varepsilon$, and $\mathrm{Cov}[\alpha_n, \varepsilon_{mt}] = 0$, $\mathrm{Cov}[\varepsilon_{nt}, \varepsilon_{js}] = 0$ for all $m, n, j = 1, \ldots, N, t, s = 1, \ldots, T$, and $n \neq j$, $s \neq t$. The α_n are individual effects that recur for all observations of a particular individual and they induce serial correlation:

$$\mathrm{Cov}[y_{nt}, y_{ms}] = \sigma^2_\alpha$$

for $m = n$ and $t \neq s$. Unlike the AR(1) case, this covariance does not diminish as the time between observations

increases. Instead, all of the observations for an individual are equally correlated.

Correlation also occurs in cross-sectional data. In the seemingly unrelated regressions (SUR) setting, there are several dependent variables and corresponding mean functions:

$$E[y_{ng}] = \mathbf{x}'_{ng}\boldsymbol{\beta}_g,\ g = 1, \ldots, G.$$

Such dependent variables are typically related as different characteristics of a single experiment or observational unit. For example, the y_{ng} might be test scores for substantively different tests written by the same individual. Even after accounting for observable differences among the tests and test takers with $\mathbf{x}_{ng}$, covariance among the test scores may reflect the influence of unobserved personal abilities that affect all of the tests taken by a particular person. Alternatively, the y_{ng} could be total income in countries during the same time period so that neighboring states possess similar underlying characteristics or face similar environments that induce covariance among their incomes.

STATISTICAL ISSUES

The general linear model motivates two principal issues with statistical inferences about $\boldsymbol{\beta}$ in the simpler linear model. First, hypothesis tests and estimators of sampling variances and confidence intervals developed under the linear model are biased when $\boldsymbol{\Sigma}$ is not scalar. Second, the OLS estimator for $\boldsymbol{\beta}$ generally will not be the minimum-variance linear unbiased estimator. The OLS estimator

$$\begin{aligned}\hat{\boldsymbol{\beta}}_{\mathrm{OLS}} &= \arg\min_{\mathbf{b}\in\mathbb{R}^K} (\mathbf{y} - \mathbf{X}\mathbf{b})'(\mathbf{y} - \mathbf{X}\mathbf{b}) \\ &= (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\mathbf{y}\end{aligned}$$

is a linear (in $\mathbf{y}$) and unbiased estimator when $\boldsymbol{\Sigma}$ is not scalar. However, its sampling variance is

$$\mathrm{Var}\left[\hat{\boldsymbol{\beta}}_{\mathrm{OLS}}\right] = (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\boldsymbol{\Sigma}\mathbf{X}(\mathbf{X}'\mathbf{X})^{-1} \qquad (3)$$

which is generally not proportional to $(\mathbf{X}'\mathbf{X})^{-1}$, an outcome implied by the simple linear model. When $\boldsymbol{\Sigma}$ is nonsingular, the GLS estimator

$$\begin{aligned}\hat{\boldsymbol{\beta}}_{\mathrm{GLS}} &= \arg\min_{\mathbf{b}\in\mathbb{R}^K} (\mathbf{y} - \mathbf{X}\mathbf{b})'\boldsymbol{\Sigma}^{-1}(\mathbf{y} - \mathbf{X}\mathbf{b}) \\ &= (\mathbf{X}'\boldsymbol{\Sigma}^{-1}\mathbf{X})^{-1}\mathbf{X}'\boldsymbol{\Sigma}^{-1}\mathbf{y}\end{aligned}$$

is the minimum-variance linear and unbiased estimator. Its variance-covariance matrix is

$$\mathrm{Var}[\hat{\boldsymbol{\beta}}_{\mathrm{GLS}}] = (\mathbf{X}'\boldsymbol{\Sigma}^{-1}\mathbf{X})^{-1}.$$

GLS can be understood as OLS applied to a linear model transformed to satisfy the scalar variance-covariance restriction. For every $\boldsymbol{\Sigma}$, one can always find a matrix $\mathbf{A}$ such that $\boldsymbol{\Sigma} = \mathbf{A}\mathbf{A}'$. We will give some examples shortly. Given such an $\mathbf{A}$, it follows that

$$\mathrm{Var}[\mathbf{A}^{-1}\mathbf{y}] = \mathbf{A}^{-1}\,\mathrm{Var}[\mathbf{y}]\mathbf{A}^{-1'} = \mathbf{A}^{-1}\boldsymbol{\Sigma}\mathbf{A}^{-1'} = \mathbf{I}$$

or, in words, that $\tilde{\mathbf{y}} = \mathbf{A}^{-1}\mathbf{y}$ has a scalar variance-covariance matrix. At the same time,

$$E[\mathbf{A}^{-1}\mathbf{y}] = \mathbf{A}^{-1}E[\mathbf{y}] = \mathbf{A}^{-1}\mathbf{X}\boldsymbol{\beta}$$

so that the expectation of the transformed $\mathbf{y}$ has corresponding transformed explanatory variables $\tilde{\mathbf{X}} = \mathbf{A}^{-1}\mathbf{X}$. Applying OLS to estimate $\boldsymbol{\beta}$ with the transformed variables yields the GLS estimator:

$$\begin{aligned}\left(\tilde{\mathbf{X}}'\tilde{\mathbf{X}}\right)^{-1}\tilde{\mathbf{X}}'\tilde{\mathbf{y}} &= \left((\mathbf{A}^{-1}\mathbf{X})'\mathbf{A}^{-1}\mathbf{X}\right)^{-1}(\mathbf{A}^{-1}\mathbf{X})'\mathbf{A}^{-1}\mathbf{y} \\ &= \left(\mathbf{X}'(\mathbf{A}^{-1})'\mathbf{A}^{-1}\mathbf{X}\right)^{-1}\mathbf{X}'(\mathbf{A}^{-1})'\mathbf{A}^{-1}\mathbf{y} \\ &= \left(\mathbf{X}'\boldsymbol{\Sigma}^{-1}\mathbf{X}\right)^{-1}\mathbf{X}'\boldsymbol{\Sigma}^{-1}\mathbf{y}\end{aligned}$$

because $\boldsymbol{\Sigma}^{-1} = (\mathbf{A}^{-1})'\,\mathbf{A}^{-1}$. In a similar fashion, one sees that the OLS criterion function is transformed into the GLS criterion function:

$$(\tilde{\mathbf{y}} - \tilde{\mathbf{X}}\mathbf{b})'(\tilde{\mathbf{y}} - \tilde{\mathbf{X}}\mathbf{b}) = (\mathbf{y} - \mathbf{X}\mathbf{b})'\boldsymbol{\Sigma}^{-1}(\mathbf{y} - \mathbf{X}\mathbf{b}).$$

Heteroskedasticity produces a simple example. To produce observations with equal variances, each data point is divided by the standard deviation

$$\sigma_n = \sqrt{\mathrm{Var}[y_n]}:$$

$$\mathrm{Var}\left[\frac{y_n}{\sigma_n}\right] = \frac{1}{\sigma_n^2}\mathrm{Var}[y_n] = \frac{1}{\sigma_n^2}\sigma_n^2 = 1.$$

This corresponds to choosing $\mathbf{A}^{-1}$ equal to a diagonal matrix with the reciprocals of these standard deviations arrayed along its diagonal. The estimation criterion function is

$$\sum_{n=1}^{N}\frac{(y_n - x'_n\mathbf{b})^2}{\sigma_n^2}$$

which is a *weighted* sum of squared residuals. For this reason, in this special case GLS is often called *weighted least squares* (WLS). WLS puts most weight on the observations with the smallest variances, showing how GLS improves upon OLS, which puts equal weight on all observations. Those n for which σ_n is relatively small tend to be closest to the mean of y_n and, hence, more informative about $\boldsymbol{\beta}$.

Faced with AR(1) serial correlation in a time series, the appropriate choice of A transforms each data point (except the first) into differences:

$$\tilde{y}_n = y_n - \rho y_{n-1},$$
$$\tilde{x}_{nk} = x_{nk} - \rho x_{n-1,k},\ k = 1, \ldots, K.$$

This transformed $\tilde{y}_n$ display zero covariances:

$$\begin{aligned}
&\mathrm{Cov}[y_{n-s} - \rho y_{n-s-1},\, y_n - \rho y_{n-1}] \\
&= \mathrm{Cov}[y_{n-s}, y_n] - \rho\mathrm{Cov}[y_{n-s}, y_{n-1}] \\
&- \rho\mathrm{Cov}[y_{n-s}, y_n] + \rho^2\mathrm{Cov}[y_{n-s-1}, y_{n-1}] \\
&= \rho\mathrm{Cov}[y_{n-s}, y_{n-1}] - \rho\mathrm{Cov}[y_{n-s}, y_{n-1}] \\
&- \rho^2\mathrm{Cov}[y_{n-s-1}, y_{n-1}] + \rho^2\mathrm{Cov}[y_{n-s-1}, y_{n-1}] \\
&= 0
\end{aligned}$$

using (2) for the first and third terms on the right-hand side. This transformation uncovers the new or additional information available in each observation, whereas OLS treats highly correlated observations the same way as uncorrelated observations, giving the former relatively too much weight in that estimator.

The panel data model has a simple GLS transformation as well:

$$\begin{aligned}
&\tilde{y}_{nt} = y_{nt} - (1-\omega)\bar{y}_n, \\
&\tilde{x}_{ntk} = x_{ntk} - (1-\omega)\bar{x}_{nk},\ k = 1, \ldots, K
\end{aligned}$$

where $\bar{y}_n$ and $\bar{x}_{nk}$ are the individual averages over time $\sum_{n=1}^{N} y_{nt}/T$ and $\sum_{n=1}^{N} x_{ntk}/T$, respectively, and

$$\omega = \frac{\sigma_\epsilon}{\sqrt{T\sigma_\alpha^2 + \sigma_\epsilon^2}}.$$

If there is no serial correlation, then $\sigma_\alpha = 0$ and $\tilde{y}_{nt} = y_{nt}$. Conversely, the greater σ_α is, the more important the individual average $\bar{y}_n$ becomes. Like the AR(1) case, a weighted difference removes the covariance among the original y_{nt}. In this case, however, a common time-series sample average appears in every difference, reflecting the equal covariance structure.

Note that the GLS estimator is an instrumental variables (IV) estimator,

$$\hat{\boldsymbol{\beta}}_{\mathrm{IV}} = (\mathbf{Z}'\mathbf{X})^{-1}\mathbf{Z}'\mathbf{y},$$

for an $N \times K$ matrix $\mathbf{Z}$ of instrumental variables such that $\mathbf{Z}'\mathbf{X}$ is invertible. For GLS, $\mathbf{Z} = \boldsymbol{\Sigma}^{-1}\mathbf{X}$. Researchers use instrumental variables estimators to overcome omission of explanatory variables in models of the form

$$y = \mathbf{x}'\boldsymbol{\beta} + \varepsilon$$

where ε is an unobserved term. Even though $\mathrm{E}[\varepsilon] = 0$, correlation between the explanatory variables in $\mathbf{x}$ and ε biases $\hat{\boldsymbol{\beta}}_{\mathrm{OLS}}$ and the IV estimator is employed to overcome this bias by using instrumental variables, the variables in $\mathbf{Z}$, that are uncorrelated with ε yet correlated with the explanatory variables. In some cases of the linear model, the GLS estimator provides such instrumental variables. If, for example, $\mathbf{x}_n$ includes the lagged value of y_n in a time-series application, then residual serial correlation usually invalidates the OLS estimator while GLS still produces an estimator for $\boldsymbol{\beta}$.

In the panel data setting, particular concern about the behavior of the unobserved individual effect α_n has led researchers to compare the GLS estimator with another IV estimator. The concern is that the expected value of α_n may vary with some of the observed explanatory variables in x_{nt}. Various observable characteristics of individuals or households are typically correlated so that one would expect the unobserved characteristics captured in α_n to be correlated with the observed characteristics in x_{nt} as well. In this situation, the OLS- and GLS-fitted coefficients are not estimators for $\boldsymbol{\beta}$ because these fitted coefficients pick up the influence of the α_n omitted as explanatory variables. An IV estimator of $\boldsymbol{\beta}$ that is robust to such correlation is the so-called *fixed effects* estimator. This estimator is often described as the OLS fit of $y_{nt} - \bar{y}_n$ to the explanatory variables $x_{ntk} - \bar{x}_{nk}$, $k = 1, \ldots, K$, but an equivalent IV estimator uses the instrumental variables $z_{ntk} = x_{ntk} - \bar{x}_{nk}$. In the special case when $\omega = 0$, the fixed effects and GLS estimators are equal. The GLS estimator is often called the *random effects* estimator in this context, and the difference between the fixed-effects and random-effects estimators is often used as a diagnostic test for the reliability of GLS estimation (Hausman 1978).

The OLS and GLS estimators are equal for a general $\boldsymbol{\Sigma}$ if the GLS instrument matrix $\boldsymbol{\Sigma}^{-1}\mathbf{X}$ produces the same set of fitted values as the explanatory variable matrix $\mathbf{X}$. Formally, $\hat{\boldsymbol{\beta}}_{\mathrm{OLS}} = \hat{\boldsymbol{\beta}}_{\mathrm{GLS}}$ if and only if every vector $\mathbf{X}\boldsymbol{\alpha}$, $\boldsymbol{\alpha} \in \mathbb{R}^K$, equals $\Sigma^{-1}\mathbf{X}\boldsymbol{\gamma}$ for some $\boldsymbol{\gamma} \in \mathbb{R}^K$, and vice versa. A practical situation in which this occurs approximately is when AR(1) serial correlation is accompanied by explanatory variables that are powers of n or trigonometric functions of n. Another example arises when all covariances are equal (and not necessarily zero) and the regression function includes an intercept (or constant term), as it usually does. A third example is the case of SUR where the explanatory variables are identical for all equations, so that $\mathbf{x}_{ng} = \mathbf{x}_n$, $g = 1, \ldots, G$.

FEASIBLE METHODS

Feasible inference for $\boldsymbol{\beta}$ in the general linear model typically must overcome that $\boldsymbol{\Sigma}$ is unknown. There are two popular strategies: (1) to specify $\boldsymbol{\Sigma}$ as a function of a few parameters that can be replaced with estimators, and (2) to use *heteroskedasticity-consistent* variance estimators.

The AR(1) serial correlation model illustrates the first approach. A natural estimator for the autocorrelation parameter ρ is the fitted OLS coefficient $\hat{\boldsymbol{\rho}}$ for predicting the OLS-fitted residual $y_n - \mathbf{x}_n'\hat{\boldsymbol{\beta}}_{\mathrm{OLS}}$ with the single

explanatory variable $y_{n-1} - \mathbf{x}'_{n-1}\hat{\boldsymbol{\beta}}_{\text{OLS}}$, the lagged OLS-fitted residual:

$$\hat{\rho} = \frac{\sum_{n=2}^{N}\left(y_{n-1} - \mathbf{x}'_{n-1}\hat{\boldsymbol{\beta}}_{\text{OLS}}\right)\left(y_n - \mathbf{x}'_n\hat{\boldsymbol{\beta}}_{\text{OLS}}\right)}{\sum_{n=2}^{N}\left(y_{n-1} - \mathbf{x}'_{n-1}\hat{\boldsymbol{\beta}}_{\text{OLS}}\right)^2}.$$

Under certain conditions, this $\hat{\boldsymbol{\rho}}$ can replace $\boldsymbol{\rho}$ in $\boldsymbol{\Sigma}(\boldsymbol{\rho})$ to estimate the variance-covariance matrix of $\hat{\boldsymbol{\beta}}_{\text{OLS}}$, as in

$$(\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\hat{\boldsymbol{\Sigma}}\mathbf{X}(\mathbf{X}'\mathbf{X})^{-1}$$

where $\hat{\boldsymbol{\Sigma}} = \boldsymbol{\Sigma}(\hat{\boldsymbol{\rho}})$, or to compute the feasible GLS (FGLS) estimator

$$\hat{\boldsymbol{\beta}}_{\text{FGLS}} = (\mathbf{X}'\hat{\boldsymbol{\Sigma}}^{-1}\mathbf{X})^{-1}\mathbf{X}'\hat{\boldsymbol{\Sigma}}^{-1}\mathbf{y}.$$

Similarly, one estimates the variance-covariance matrix of $\hat{\boldsymbol{\beta}}_{\text{FGLS}}$ with $(\mathbf{X}'\hat{\boldsymbol{\Sigma}}^{-1}\mathbf{X})^{-1}$. In large samples, the differences between the feasible and infeasible versions are negligible. In small samples, many researchers use an estimator that requires iterative calculations to find a $\hat{\boldsymbol{\rho}}$ and $\hat{\boldsymbol{\beta}}$ that are mutually consistent: The fitted residuals produced by $\hat{\boldsymbol{\beta}}$ yield $\hat{\boldsymbol{\rho}}$ and the variance-covariance matrix produced by $\hat{\boldsymbol{\rho}}$ yields $\hat{\boldsymbol{\beta}}$ as the fitted FGLS coefficients. Maximum likelihood estimators, based on an additional assumption that the y_n possess a joint multivariate normal distribution, are leading examples of such estimators.

We will use the pure heteroskedasticity case to illustrate heteroskedasticity-consistent variance estimators. The unknown term in the $\text{Var}[\hat{\boldsymbol{\beta}}_{\text{OLS}}]$ (shown in (3)) can be written as a sample average:

$$\frac{1}{N}\cdot(\mathbf{X}'\Sigma\mathbf{X}) = \sum_{n=1}^{N}\frac{1}{N}\sigma_n^2\cdot\mathbf{x}_n\mathbf{x}'_n$$

where $\sigma_n^2 = \sigma_{nn}$, the nth diagonal element of $\boldsymbol{\Sigma}$. In a heteroskedasticity-consistent variance estimator this average is replaced by

$$\sum_{n=1}^{N}\frac{1}{N}\left(y_n - \mathbf{x}'_n\boldsymbol{\beta}_{\text{OLS}}\right)^2\cdot\mathbf{x}_n\mathbf{x}'_n$$

so that the unknown variances σ_n^2 are replaced by the squared OLS fitted residuals. Such estimators do not require a parametric model for $\boldsymbol{\Sigma}$ and, hence, are more widely applicable. Their justification rests, in part, on

$$\text{E}[(y_n - \mathbf{x}'_n\boldsymbol{\beta})^2] = \sigma_n^2$$

so that one can show that

$$\sum_{n=1}^{N}\frac{1}{N}\left(y_n - \mathbf{x}'_n\boldsymbol{\beta}\right)^2\cdot\mathbf{x}_n\mathbf{x}'_n$$

is a valid estimator for $\frac{1}{N}\cdot\mathbf{X}'\boldsymbol{\Sigma}\mathbf{X}$. The feasible heteroskedasticity-consistent variance estimator replaces the unknown $\boldsymbol{\beta}$ with its estimator $\hat{\boldsymbol{\beta}}_{\text{OLS}}$. This variance-covariance estimator is often called the "Eicker-White estimator," for Friedjielm Eicker and Halbert White.

The heteroskedasticity-consistent variance estimator does not yield a direct counterpart to $\hat{\boldsymbol{\beta}}_{\text{FGLS}}$. Nevertheless, estimators that dominate OLS are available. The transformed linear model

$$\text{E}[\mathbf{Z}'\mathbf{y}] = \mathbf{Z}'\mathbf{X}\boldsymbol{\beta}$$

has a corresponding variance-covariance matrix

$$\text{Var}[\mathbf{Z}'\mathbf{y}] = \mathbf{Z}'\boldsymbol{\Sigma}\mathbf{Z}$$

which has a heteroskedasticity-consistent counterpart

$$\hat{\boldsymbol{\Omega}} = \sum_{n=1}^{N}\frac{1}{N}\left(y_n - \mathbf{x}'_n\hat{\boldsymbol{\beta}}_{\text{OLS}}\right)^2\cdot\mathbf{z}_n\mathbf{z}'_n$$

and the FGLS analogue

$$\begin{aligned}\hat{\beta}_{\text{C}} &= \left((\mathbf{Z}'\mathbf{X})'\,\hat{\boldsymbol{\Omega}}^{-1}\mathbf{Z}'\mathbf{X}\right)^{-1}(\mathbf{Z}'\mathbf{X})'\,\hat{\boldsymbol{\Omega}}^{-1}\mathbf{Z}'\mathbf{y}\\ &= \left(\mathbf{X}'\mathbf{Z}\hat{\boldsymbol{\Omega}}^{-1}\mathbf{Z}'\mathbf{X}\right)^{-1}\mathbf{X}'\mathbf{Z}\hat{\boldsymbol{\Omega}}^{-1}\mathbf{Z}'\mathbf{y}.\end{aligned}$$

This estimator reduces to OLS if $\mathbf{Z} = \mathbf{X}$ and produces superior estimators to the extent that $\boldsymbol{\Sigma}^{1/2}\mathbf{Z}$ provides a better linear predictor of $\boldsymbol{\Sigma}^{-1/2}\mathbf{X}$ than $\boldsymbol{\Sigma}^{1/2}\mathbf{X}$ does.

The heteroskedasticity-consistent variance estimator has been extended to cover time-series cases with nonzero covariances as well. For example, if only first-order covariances are nonzero then

$$\begin{aligned}\frac{1}{N}\cdot\mathbf{X}'\Sigma\mathbf{X} = &\sum_{n=1}^{N}\frac{1}{N}\sigma_n^2\cdot\mathbf{x}_n\mathbf{x}'_n\\ &+\sum_{n=2}^{N}\frac{1}{N}\sigma_{n,n-1}\left(\mathbf{x}_n\mathbf{x}'_{n-1} + \mathbf{x}_{n-1}\mathbf{x}'_n\right)\end{aligned}$$

because $\sigma_{n,\,n-j} = 0$ for $j > 1$. This term in the OLS variance-covariance matrix can be estimated by

$$\begin{aligned}\hat{\mathbf{V}}_{\text{HAC}} = &\sum_{n=1}^{N}\frac{1}{N}\left(y_n - \mathbf{x}'_n\hat{\boldsymbol{\beta}}_{\text{OLS}}\right)^2\cdot\mathbf{x}_n\mathbf{x}'_n\\ &+\sum_{n=2}^{N}\frac{1}{N}\left(y_n - \mathbf{x}'_n\hat{\boldsymbol{\beta}}_{\text{OLS}}\right)\\ &\left(y_{n-1} - \mathbf{x}'_{n-1}\hat{\boldsymbol{\beta}}_{\text{OLS}}\right)\left(\mathbf{x}_n\mathbf{x}'_{n-1} + \mathbf{x}_{n-1}\mathbf{x}'_n\right),\end{aligned}$$

a heteroskedasticity and autocorrelation consistent (HAC) variance-covariance matrix estimator. This works because the second average behaves much like the first in that

$$\text{E}[(y_n - \mathbf{x}'_n\boldsymbol{\beta})(y_{n-1} - \mathbf{x}'_{n-1}\boldsymbol{\beta})] = \sigma_{n,\,n-1}$$

so that one can show that

$$\begin{aligned}&\sum_{n=1}^{N}\frac{1}{N}\left(y_n - \mathbf{x}'_n\boldsymbol{\beta}\right)\left(y_{n-1} - \mathbf{x}'_{n-1}\boldsymbol{\beta}\right)\\ &\quad\cdot\left(\mathbf{x}_n\mathbf{x}'_{n-1} + \mathbf{x}_{n-1}\mathbf{x}'_n\right)\end{aligned}$$

is an estimator for the second term.

One can extend the HAC approach to cover *m*-dependence in which only *m*th-order covariances are nonzero for a finite *m*. However, in practice *m* should be small relative to the number of observations *N*. To illustrate the difficulties with large *m*, consider setting $m = N - 1$ so that all of the covariances in $\mathbf{\Sigma}$ are replaced by a product of OLS-fitted residuals. Then this approach yields the estimator

$$\frac{1}{N} \cdot \mathbf{X}'\left(\mathbf{y} - \mathbf{X}\hat{\boldsymbol{\beta}}_{\mathrm{OLS}}\right)'\left(\mathbf{y} - \mathbf{X}'\hat{\boldsymbol{\beta}}_{\mathrm{OLS}}\right)\mathbf{X} = \frac{1}{N} \cdot \mathbf{X}'\left(\mathbf{y} - \mathbf{X}\hat{\boldsymbol{\beta}}_{\mathrm{OLS}}\right)\left(\mathbf{X}'\left(\mathbf{y} - \mathbf{X}'\hat{\boldsymbol{\beta}}_{\mathrm{OLS}}\right)\right)'$$

which is the outerproduct of the $K \times 1$ column vector $\mathbf{X'(y - X\hat{\beta}_{OLS})}$. It follows that this matrix has a rank of one, contradicting the property that $\mathbf{X'\Sigma X}$ has a rank of *K*. Nevertheless, the heteroskedasticity-consistent variance-covariance estimator has been generalized to cover situations where all of the covariances may be nonzero. The Newey-West estimator is a popular choice:

$$\hat{\mathbf{\Omega}}_0 + \sum_{j=1}^{m} w(j, m) \cdot \left(\hat{\mathbf{\Omega}}_j + \hat{\mathbf{\Omega}}_j'\right)$$

where

$$\hat{\mathbf{\Omega}}_j = \sum_{n=j+1}^{N} \left(y_n - \mathbf{x}_n'\boldsymbol{\beta}\right)\left(y_{n-j} - \mathbf{x}_{n-j}'\boldsymbol{\beta}\right) \cdot \mathbf{x}_n\mathbf{x}_{n-j}'$$

and

$$w(j, m) = 1 - \frac{j}{m + 1}.$$

The supporting approximate distribution theory requires *m* to depend on the sample size *N* and methods for choosing *m* are available.

Often statistical inference for $\boldsymbol{\beta}$ based upon estimation of $\mathbf{\Sigma}$ or $\mathbf{X'\Sigma X}$ can treat these terms as equal to the objects that they estimate. For example, the statistical distribution theory typically shows that

$Q = \mathbf{(R\hat{\beta}_{GLS} - R\beta)'(R(X'\Sigma^{-1}X)^{-1}R')^{-1}(R\hat{\beta}_{GLS} - R\beta)}$

is approximately (or exactly) distributed as a chi-squared random variable. This pivotal statistic yields a hypothesis test or confidence interval for $\mathbf{R\beta}$. In large samples,

$\hat{Q} = \mathbf{(R\hat{\beta}_{FGLS} - R\beta)'(R(X'\hat{\Sigma}^{-1}X)^{-1}R')^{-1}(R\hat{\beta}_{FGLS} - R\beta)}$

may be treated as an equivalent statistic. Researchers have shown that bootstrap methods, appropriately applied, can provide better probability approximations in situations with small sample sizes.

SEE ALSO *Autoregressive Models; Bootstrap Method; Covariance; Heteroskedasticity; Least Squares, Ordinary; Least Squares, Two-Stage; Residuals; Serial Correlation; Specification; Variance*

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GENERALIZED METHOD OF MOMENTS

SEE *Method of Moments.*

GENERATION X

Throughout U.S. history, social commentators and historians have labeled each succeeding generation in an attempt to capture the defining characteristics of its members as well as to contextualize the generation within the spirit of the times. *Generation X* is the label used to define the more than 79 million people born roughly between 1961 and 1981. Although both social scientists and marketers employ this tag, the U.S. mainstream media gets credit for skyrocketing this label into our popular culture lexicon, particularly throughout the 1990s.

The term, however, was coined decades earlier in a 1964 pop sociology study conducted by two British journalists, Charles Hamblett and Jane Deverson, who used the term to describe their subjects—British teens—whom they interviewed on matters of sex, money, parents, and politics. In 1976 Generation X, a British punk band featuring Billy Idol, hit the London scene. The term eventually worked its way—via the media—into American

popular vernacular after the release of Douglas Coupland's 1991 novel *Generation X: Tales for an Accelerated Culture*, a bleak social commentary by three twenty-somethings who "drop out" from their corporate-world careers to take on no-future "McJobs" that provide little pay, benefits, or dignity. Immediately, Gen Xers—subsequently referred to as "slackers"—were officially characterized as lazy, laconic, and unfocused; however, many took issue with this assessment, describing themselves as diverse, independent, and individualistic.

The members of Generation X are arguably natural products of the intellectual atmosphere in which they grew up, for they are the first generation to be raised in the age of postmodernism—a widespread cultural development of the last quarter of the twentieth century. This paradigm shift marked a generational difference between Generation X and their baby boomer parents. Understanding the transition from modern to postmodern culture is necessary to understanding Gen Xers. Whereas modernism values a single worldview rooted in objective science, postmodernism values multiple worldviews based on subjective experiences and contingencies. Information and knowledge are gathered in a linear fashion by modernists, but Gen Xers seek out information from fragmented and nonlinear sources, such as hypertext, visuals, and audio sampling. Whereas the modernists revere classical art and literature, postmodernists broaden their frame of reference to include pop-culture productions such as music videos and animation. Institutions such as government, education, corporations, and media, which are seen as authoritative by modernists, are viewed with a critical eye by members of Generation X.

The civil unrest of the late 1960s and early1970s, followed by the overconsumption of the 1980s, provided the background to the 1990s—a decade laden with social problems. Violent crime, environmental degradation, widespread homelessness, spikes in both teen pregnancies and suicides, corrupt politics, and the AIDS epidemic, coupled with fundamental changes in the family unit caused by rising divorces rates and dual-working parents, were the realities in which Generation X came of age. Many Xers resented the baby boomers for leaving them to repair or endure a society seemingly gone mad.

Despite the initially dismissive media portrayals and self-proclaimed cynicism about the condition of the world in which they came of age, most members of Generation X—who have reached adulthood—have learned to cope. They, like all preceding generations, are striving to attain or maintain the American Dream, albeit in different ways from the methods of their predecessors.

SEE ALSO *Baby Boomers*

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GENEROSITY/SELFISHNESS

Researchers at the National Institute of Neurological Disorders and Stroke, working on a new collaborative project with the National Institute on Mental Health and the National Institute on Aging (*Cognitive and Emotional Health Project: The Healthy Brain*) have discovered that there is a physiological basis for the warm glow that seems often to accompany altruistic giving. Nineteen subjects were each given $128 and told to donate it anonymously to any of a number of socially controversial causes, ranging from support for abortion rights to opposition to the death penalty. Subjects could accept or reject each charity, some of which would require more of their $128 pots than others. Functional magnetic resonance imaging (fMRI) revealed that making a donation activated the donors' brain reward centers, the mesolimbic pathways responsible for the dopamine-mediated euphoria associated with sex, money, food, and drugs (Moll et al. 2006).

We should not be surprised to learn that people feel good when they do good. Group selection theory in evolution shows that groups that are strong in internal altruism have a selective advantage over other groups (Sober and Wilson 1998). Thus, it makes evolutionary sense that helping behavior within groups would be connected with stimulating feelings of well-being. On the genetic level, it appears that altruism is associated with the dopamine D4 receptor (Bachner-Melman et al. 2005).

The psychological benefits of helping others may have been demonstrated first in the early 1980s. "Well-being" is characterized by feeling hopeful, happy, and good about oneself, as well as energetic and connected to others. In an early study that compared retirees over age 65 who volunteered with those who did not, volunteers scored significantly higher in life satisfaction and will to live, and had fewer symptoms of depression, anxiety, and somatization (Hunter and Lin 1981). More recent studies confirm an association between altruistic activities and well-being and life satisfaction in older adults (Dulin and Hill 2003; Liang et al. 2001; Morrow-Howell et al. 2003). Midlarsky (1991) found five benefits to older adults who engage in altruistic behavior: enhanced social integration;

distraction from the agent's own problems; enhanced meaningfulness; increased perception of self-efficacy and competence; and improved mood and/or more physically active lifestyle. Midlarsky and Kahana (1994) associated adult altruism—that is, voluntary behavior that is "motivated by concern for the welfare of the other, rather than by anticipation of rewards" (p. 11)—with improved morale and self-esteem, positive affect, and well-being. The mental health benefits of giving in the form of volunteerism—a wider form of giving than charitable donation—include fewer depressive symptoms (Musick and Wilson 2003) and greater happiness and well-being (Krueger et al. 2001).

In his book *The Happiness Hypothesis* (2006), Jonathan Haidt, a social psychologist at the University of Virginia, discusses great ancient ideas about human flourishing—that is, what makes for a happy and meaningful human life. Haidt explains how the human system of attachment has evolved and how important it is to our successful development, emphasizing Émile Durkheim's idea that the ties, bonds, and obligations of our lives are actually mentally and physically good for us. Helping others provides more benefits than receiving help, and strong social relationships increase immunity, speed healing, and reduce the risks of depression. It makes sense that volunteering appears to be most beneficial to the elderly—both because of the increased social isolation of this life stage, and because giving back fits particularly well into the end-of-life story (Haidt 2006).

In a literature review on the relationship between volunteering and psychological health, "Doing Well by Doing Good: Benefits for the Benefactor" (2003), Jane Piliavin narrows the review by including only studies of community service, defined as "taking actions, carried out within an institutional framework, that potentially provide some service to one or more other people or to the community at large" (p. 227). The studies are organized by the life-cycle stage of the participants (e.g., youth, adult, and elderly), reflecting the belief that volunteering plays different roles, and therefore has different effects, depending on the age of the volunteer. Most studies have focused on the youth stage, when the first opportunities to volunteer arise, and the elderly stage, when volunteering may replace important family and work roles as a source of identity and self-esteem. After reviewing numerous studies of adolescents and college students, Piliavin concludes that there is "considerable evidence that community service has positive impacts on youth" (p. 235). The studies have shown decreased delinquency and other problem behaviors, as well as positive impacts on social values and academic achievements. Studies on service learning—"academic experiences in which students engage both in social action and in reflection on their experiences in performing that action" (p. 236)—have revealed positive effects on self-esteem, confidence, and self-efficacy, particularly for at-risk students. The comparatively vast literature on volunteering in elderly populations has perhaps contributed the most to the idea that doing good is good for you. Piliavin reviewed studies investigating impacts on mental health, morbidity, and mortality and concluded that "there appears to be a strong and consistent effect, such that the more an elderly person volunteers, the higher is his or her life satisfaction … similarly, some volunteering enhances physical health and even can stave off death" (p. 241).

SEE ALSO *Altruism; Cooperation; Dopamine; Evolutionary Psychology; Happiness; Hope; Neuroscience*

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Stephen G. Post

GENETIC TESTING

The term *genetic testing* refers to the molecular analysis of DNA for genetic markers associated with particular genetic conditions, to tests for enzymes or proteins related to gene function, and to chromosomal analysis. Social science studies of genetic testing practices and their social and cultural implications involve, for example, considerations of community, family, kinship, and health and address issues such as informed consent, intellectual property rights, and privacy. Critical assessments of screening and testing practices and of the interpretations of genetic information illuminate the normative effects and premises, past and present, that occur both in institutional settings and in everyday life and are reflected in policy.

PRENATAL DIAGNOSTIC TESTING

One of the earliest and most enduring areas of social science research on genetic testing concerns the social implications of *prenatal diagnostic testing* (PND). PND involves genetic testing during pregnancy for genetic conditions and chromosomal anomalies in the developing fetus using practices such as *chorionic villus sampling* (testing placental blood cells) and *amniocentesis* (testing fetal cells from amniotic fluid). Studies of prenatal diagnostic testing have illustrated the influence it has on experiences of pregnancy, conceptualizations of disability, mediations of genetic information, and knowledge and performances of parental and civil responsibility. Barbara Katz Rothman's *The Tentative Pregnancy: How Amniocentesis Changes the Experience of Motherhood* (1986) was among the first studies following the introduction of amniocentesis (at that time done between sixteen and twenty weeks) to illustrate the complexity of women's experiences of mediating the possibility of undergoing the test, abortion, and/or results indicating a possible disability during the first four to five months of pregnancy. By the late 1990s, amniocentesis had become a routine testing possibility during pregnancy, concurrent with the emergence of an understanding of the fetus as patient (Casper 1998). Published in 1999, Rayna Rapp's book *Testing Women, Testing the Fetus* speaks to the duality of women and fetuses as the subjects of prenatal testing. Employing a multi-sited approach, including research with lab technicians, genetic counselors, and pregnant women, Rapp explores the meanings of amniocentesis within this shifting context. Critical decisions stemming from the availability of PND involve the interpretation of genetic information and embodied experience by medical practitioners, genetic counselors, lab technicians, and prospective parents.

In 1989 the first child born as a result of the application of *preimplantation genetic diagnosis* (PGD), involving the molecular analysis of one or two cells taken from an embryo created by in vitro fertilization prior to transferring the embryo to a woman's uterus, was reported. In most cases, PGD involves tests for specific genetic mutations, which are offered on the basis of an understanding that one or both potential parents (or egg or sperm donor) is a carrier of a genetically inheritable condition or has a prior history of having a child with a genetic condition. In common parlance and media coverage, children born following PGD have been called *designer babies*, a term referring to the growing potential to influence the genetic make-up of one's child and reflecting concerns over the procedure's implications for social perceptions of normalcy and disability. Aneuploidy screening, generally testing embryos for chromosomal anomalies rather than for specific genetic mutations, is referred to as *preimplantation genetic screening* (PGS), rather than PGD.

In 2000 Adam Nash became the first child reported to be born as a result of the use of PGD not only for the purpose of selecting out embryos with a particular genetic marker, but also for selecting in embryos whose HLA tissue type directly matches that of an already existing sibling, rendering the child-to-be a compatible stem cell donor. In the media, such children have been referred to as *savior siblings*, invoking associations with sacrifice as well as life-saving. The use of PGD, or PID as it is sometimes called, is banned in many countries (for example, Germany) and restricted to use in relation to particular genetic conditions in others (for example, the United Kingdom).

Preimplantation genetic diagnosis is also applied to test embryos for late-onset disorders and genetic susceptibility to particular conditions, including Huntington's disease, breast cancer, and hereditary colon cancer. Debates in this area highlight the perceptions and cultural management of "genetic risk status" in relation to disorders with variable degrees of *penetrance* (or the degree to which the genetic mutation corresponds to the manifestation of the condition) and for which preventative measures or treatment may be available. For example, the genetic mutation associated with Huntington's disease is highly penetrant, corresponding to an expected certainty of developing the disease over the course of a lifetime. In contrast, the mutations on the BRCA 1 and BRCA 2 genes, associated with hereditary forms of breast cancer (accounting for 5 to 10 percent of breast cancer cases), have a penetrance level of approximately 80 percent. This

means that not everyone who carries the BRCA 1 and BRCA 2 gene mutations will develop breast cancer in their lifetime and that the likelihood of developing this form of breast cancer increases with age.

PREDICTIVE GENETIC TESTING

The term *predictive genetic testing* (PGT) refers to testing that occurs prior to the appearance of symptoms. It is used in situations where there is a known history of a perceived genetic condition among genetically related individuals. While issues involving the individual are often the focus of studies of genetic testing—for example, the autonomy of the individual to make an informed decision regarding a test and follow-up actions or the specificity and uniqueness of an individual's "genetic code"—social science research on PGT provides critical data and insight into the construction and experience of hereditary risk and the familial and social context of genetic testing. In the case of testing for genetically inherited mutations, testing may require the prior or parallel testing of a family member and the communication of their potential genetic risk status. Results of genetic tests for one family member may implicate the "risk" status of other genetically related family members, who may or may not choose to undergo genetic testing.

The Human Genome Project, which ran from 1991 to 2003, resulted in the identification of increasing numbers of specific genes and genetic mutations implicated in genetic conditions, as well as the function of enzymes and proteins. There is increasing emphasis placed on the use of predictive genetic testing among a broader population with no prior awareness or familial history of specific genetic conditions. This form of predictive testing is proposed with respect to the implementation of preventative measures and personalized medicine. Routine genetic screening, for example of newborns for cystic fibrosis, raises additional questions regarding the disclosure and use of information about the gene carrier status of individuals, as well as about potential implications for individuals who did not consent to genetic testing. While in many cultural contexts, predictive testing of children is advised against, research demonstrates that testing occurs and, in the name of preventative medicine, is promoted. The availability of genetic tests and their use on a broader scale raises concerns regarding genetic discrimination, specifically in the areas of health insurance and employment.

The field of *pharmocogenomics* (sometimes referred to as *personalized medicine*) focuses on the development of medical and preventative care tailored to an individual's genetic makeup. In 2005 the U.S. Food and Drug Agency approved the use of BiDil, a post-heart-attack drug treatment marketed by NitroMed, for black individuals following a clinical trial exclusively involving self-identifying black patients. Because women of Ashkenazi Jewish descent are seen to have a significantly higher percentage of mutations at particular points along the BRCA 1 and BRCA 2 genes, in some jurisdictions they may be given access to breast cancer gene testing without the involvement of another living family member with breast cancer, which is often otherwise required. This relationship between genetic testing and ethnic identification has manifested differently in Europe, where in 2005 Myriad Genetics won the right to a patent on a particular mutation associated with the Ashkenazi Jewish population, requiring physicians to ask breast cancer gene test candidates whether they are of Ashkenazi Jewish descent. While variations in the manifestation, management, and recognition of various conditions have been recognized in comparative and cross-cultural studies of health, reducing these variations to genetic difference runs the risk of reifying and geneticizing concepts such as race and ethnicity and obscuring social determinants of health.

The turn toward *genomics*, the study of the interaction between genes and the environment, has resulted in the implementation of *biobanks*, or population genetic databases, as genetic research resource centers. Members of communities and nation-states are requested to donate blood (DNA) samples for research purposes. When genetic testing is conducted within the framework and for the purpose of health care, there is a normative expectation that individuals are aware of the tests being carried out and also of how resulting genetic information will be managed. Studies of biobanking reveal, however, that research participants (those who donated DNA samples) do not have a clear idea of what will be done with the sample or the information derived from it and are not aware of whom it could be distributed to or for how long it will be retained (see Hoeyer 2003). Children are also being included as participants in larger genomic studies, enrolled at birth via the donation of umbilical cord blood by consenting parents.

The advent of genetic testing in the form of PND, PGD, predictive testing, and population-based genetic research is captured by the phrase *new genetics*, within which is embedded a distinction from eugenics and other previous uses and abuses of genetics. Whereas eugenics is depicted as the imposition on individuals of decisions made by states or other authorities, the new genetics is associated with choice, information, knowledge, autonomy, and responsibility. Social science research and analysis of the new genetics is needed in order to address, for example, how concepts of normalcy are mobilized in new ways, how new forms of genetic information may lead to present and future discrimination, and how concepts such as reproductive choice and civil responsibility are experienced in the context of increasing emphasis on the signif-

icance of genetic information, genetic health, and genetic research.

SEE ALSO *Bioethics; Eugenics; Genomics*

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Jacquelyne Marie Luce

GENEVA CONVENTION

SEE *War Crimes.*

GENOCIDE

Genocide is one of the foundational moral, legal, and political concepts of modern society. While the terrible suffering named by the term is not new, the meaning of genocide is intimately bound to the creation of the modern human rights movement in the wake of World War II (1939–1945) and the subsequent evolution and expansion of new mechanisms of global governance.

Genocide is a term of profound moral, legal, and political significance. On moral terms, genocide references extreme inhumanity, naming a boundary where the central tenets of civilized behavior are called into question by the most reprehensible acts of political violence. Legally, genocide is understood as a crime whose severity demands immediate and total condemnation. As the special rapporteur to the UN Economic and Social Council Commission on Human Rights stated, "Genocide is the ultimate crime and the gravest violation of human rights it is possible to commit" (1985, part I, para. A14).

Politically, the term helped establish the foundations of modern human rights discourse and practice. The United Nations began discussing genocide in its first year of operation (1946), and the Convention for the Prevention and Punishment of the Crime of Genocide (Genocide Convention), entered into force in 1951, was the first legally binding international human rights convention. In these interconnected ways, genocide represents a major element of an evolving human rights consciousness as well as a growing global commitment to protecting people from harm and preventing the worst excesses of the exercise of power.

Throughout human history, there are records of massacres and violence directed toward the destruction of entire peoples. References of mass violence that might be termed *genocide* can be found in the Bible, the works of the ancient Greeks and Romans, the religious-military campaigns of the Middle Ages, and the mass killing of indigenous peoples in the Americas, Africa, and elsewhere associated with "discovery" and colonization. The modern discussion of the concept is often associated with Turkish atrocities against the Armenians (1915–1923), when as many as 1.5 million may have been killed. However, it was the Nazi atrocities of the Holocaust that led to the evocation of genocide as a distinct crime, in which over 6 million Jews were exterminated in a systematic and calculated manner, along with Roma, Slavs, and other groups viewed to be dangerous or undesirable.

The word *genocide* was invented in 1943 by Polish jurist Raphael Lemkin (1900–1959). Lemkin also wrote *Military Government in Europe*, which was a preliminary version of his more fully developed publication *Axis Rule in Occupied Europe* (1944). In 1943 Lemkin was appointed consultant to the U.S. Board of Economic Warfare and Foreign Economic Administration and later became a special adviser on foreign affairs to the War Department, largely because of his expertise in international law.

The term is based on the Greek word *genos*, referring to race or tribe, and the Latin term *cide*, meaning murder. Lemkin created the term to refer to a new crime committed against group victims and involving, "a coordinated plan of different actions aiming at the destruction of essential foundations of the life of national groups, with the aim of annihilating the groups themselves" (1944).

Lemkin invented the term because he believed that the Nazi's planned eradication of various groups represented an irreparable harm to global society, as well as a special challenge to existing conceptions of criminal law, which tended to focus on crimes committed against individuals.

The text of the UN Genocide Convention was completed in 1948, and in 1951 the Convention became a

legally binding document. By mid-2006, 138 nations had accepted the Convention as legally binding. The Genocide Convention declares genocide a crime under international law whether committed during war or peacetime. It requires all the nations that accept the document to take measures to prevent and punish acts of genocide committed within their jurisdiction and to enact appropriate domestic legislation to criminalize genocide. The treaty also criminalizes attempts to commit genocide, conspiracy or incitement to commit genocide, as well as complicity in the commission of the crime. Nations that sign the Genocide Convention agree to try individuals suspected of having committed genocide in domestic courts or in an appropriate international tribunal (which did not exist at the time the Convention was written, but is now present in the form of the International Criminal Court). The prohibition on genocide is now so widely accepted that it has become a part of international customary law so that it is understood to be binding on all states, regardless of whether or not they have ratified the Genocide Convention.

The legal definition of *genocide* is found in Article II of the Convention. This definition is widely accepted and has been reinforced by its repetition in relevant domestic legislation and in the statutes of the International Criminal Tribunal for Yugoslavia (ICTY), the International Criminal Tribunal for Rwanda (ICTR), and the International Criminal Court (ICC). Article II defines the crime as follows:

> In the present Convention, genocide means any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such:
>
> (a) Killing members of the group;
>
> (b) Causing serious bodily or mental harm to members of the group;
>
> (c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;
>
> (d) Imposing measures intended to prevent births within the group;
>
> (e) Forcibly transferring children of the group to another group. (OHCHR [1948] 1951)

In this way, genocide is composed of three key elements: acts, intent, and victim group. The five enumerated acts are distinct in nature, yet unified as strategies that can either destroy an existing group (killing, causing serious harm, creating destructive conditions) or ruin the possibility of the group's continued existence (preventing reproduction and forcibly removing children). The issue of intent is complex, but is generally understood to limit claims of genocide to those cases where political violence is purposefully directed, either as an officially stated policy to destroy a group or as expressed through an analysis of repressive strategies. The idea of a victim group defines genocide as a unique crime in which individuals are targeted for repression because of their membership in either a national, ethnic, racial, or religious group.

Each element of the legal definition of genocide raises complex questions, many of which run counter to dominant moral and social understandings of the term. That is, genocide is widely understood to be a crime involving mass murder and the idea of destroying "in whole or in part" suggests some numerical threshold. So, while it would trivialize the moral power of the concept to include cases of hate crimes or small-scale racial killing, the Genocide Convention allows a case of genocide to involve few casualties, as with the forced transfer of children. Similarly, the popular understanding of the crime assumes that the mass killing of hundreds of thousands would constitute genocide, yet the Convention's definition only covers acts committed against one or more of the four protected groups and may not, for example, cover the brutal destruction of political opponents (as in the Khmer Rouge's killing of 1.7 million in Cambodia in the 1970s). Equally complex is the question of whether group status is a function of perpetrators' understandings of targeted victims (so that the Nazi's vision of Jewish identity would define the group) or whether the concept seeks to protect a group defined by some inherent, objective, or actual identity, a problem heightened where different groups appear highly similar (as with Rwandan Hutus and Tutsis, who speak the same language, practice the same religions, and commonly intermarried).

In order to address these issues, scholars have expanded the interpretation of the crime to cover many instances of mass violence, or created new terms such as *autogenocide* to deal with mass murder where perpetrators and victims are of the same group, or *democide* to refer to mass killing based on any justification. While these efforts play an important role in evolving understandings of the crime, the Genocide Convention's definition remains the central understanding of the concept.

Despite the widespread acceptance of genocide as a crime, there were few twentieth-century attempts to prosecute individuals. In fact, it was not until 1998 that the first international prosecution and conviction for genocide took place in the Jean-Paul Akayesu case at the ICTR. This historic decision was followed by a number of additional cases in the same court (Jean Kambanda, etc.), as well as other important cases at the ICTY (Milan Kovasevic, Radislav Krstic, Dusko Tadic, etc.), allowing for the evolution of a new jurisprudence of genocide. The decisions of these ad hoc tribunals represented an important expansion

of the international legal commitment to prosecuting genocide. This commitment was further supported by the creation of the ICC in 2002, which provides a permanent body for prosecuting cases of genocide and other severe atrocities. Also in 1998, a Spanish judge brought genocide charges against former Chilean dictator General Augusto Pinochet in a domestic court for crimes committed in South America. This ushered in a new era of using the concept of universal jurisdiction as a means of prosecuting individuals accused of genocide in national courts in countries distinct from where the violations occurred.

The Genocide Convention was also created to prevent genocide, ideally by stopping potential genocides before they occur, or by taking action against severe violations before they reach a genocidal intensity. Yet, since the mid-twentieth century, the world has witnessed many atrocities often described as genocide. These include Cambodia (1975–1979), Rwanda (1994), and mass political violence in the former Yugoslavia (1992–1995) that brought the world a new, nonlegal term, *ethnic cleansing*. In addition, there have been formal claims of genocide associated with atrocities throughout Latin America in the 1970s and 1980s, especially the Guatemalan military regime's attacks on indigenous people. And, there have been claims of genocide against the former Soviet Union for military actions in Afghanistan and elsewhere, as well as state policies such as the use of famine to kill seven to fifteen million Ukrainians. In Africa, there have been numerous genocide claims, most recently in the Sudan.

The case of Rwanda is especially chilling in that an estimated 800,000 people, generally Tutsis, were killed with machetes and small arms by a Hutu-dominated regime in 1994. Before the killing began, UN peacekeepers warned of an upcoming genocide and estimated that an international force of around five thousand could have prevented the violence. During the hundred-day killing, the international community refused to acknowledge that genocide was taking place, in part to avoid the legal responsibility to act. Later, most nations recognized these killings as an example of genocide, but by then the murderous regime had been removed from power by a Rwandan rebel army.

In many respects, genocide defines the twentieth century, representing a harsh warning of the destructive capacity of modernity as well as the open promise of the benefits of international cooperation. Genocide is one of the central, foundational ideas within human rights discourse, which represents the first universal structuring discourse of an emerging global order. Genocide was defined formally through global commitment toward its punishment and prevention. In this sense, the term is almost iconic in its representation of the complexity of modernity, defining both the worst and best of human society, a word that names acts of unforgivable brutality while offering the promise of a world where such acts cannot be tolerated and can only exist within the imaginary, banished from the real through concerted, coordinated, international action.

SEE ALSO *Ethnic Conflict; Ethnic Fractionalization; Ethnocentrism; Racism; Tribalism*

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GENOMICS

The term *genomics* was coined in 1987 by Victor A. McKusick and Frank H. Ruddle as the title for a new journal of that name. McKusick and Ruddle derived it from

genome, a concept that had been circulating in biology since the early 1920s. The roots of *genome* are the Greek *genos* (class, kind, race) and the suffix *-ome* (as used in rhizome and chromosome.). *Genome* is defined as the entire sequence of DNA found in the nucleus of every cell.

In the 1980s and 1990s, *genomics* primarily referred to large-scale projects to map the genes and sequence the DNA of organisms. As it turned out, a bacteriophage called phi-x174 was the first organism whose complete DNA sequence was revealed. The sequencing of its 5,375 nucleotides was accomplished in 1977 by Frederick Sanger and his colleagues at the University of Cambridge. In the ensuing two decades, a series of further viral genome-sequencing projects were undertaken. In July 1995 Robert David Fleischmann reported the completion of the sequencing of the first genome of a nonviral organism (*H. influenzae*).

Encouraged by the chancellor of the University of California, Santa Cruz, Robert Sinsheimer, and the U.S. Office of Health and Environmental Research, biologists began in the mid-1980s to evaluate the possibility of mapping the genes and sequencing the DNA of the human genome. As part of its mission to assess the health effects of radiation, the U.S. Department of Energy established in 1987 three human genome research centers at Los Alamos, New Mexico; Livermore, California; and the Lawrence Berkeley National Laboratory in Berkeley, California. The initiative to first map and then sequence the complete human genome was formally launched in 1990 as a joint program of the Department of Energy and the National Institutes of Health. In France, the Centre d'Étude du Polymorphisme Humain conducted a successful gene-mapping project funded by the Muscular Dystrophy Association. In the United Kingdom, the Wellcome Trust supported human genome research. Germany and Japan soon joined the international efforts in what was called a "race" to map the genes and sequence the 3.1 billion base pairs of the human genome.

In the wake of a successful initial mapping of the human genome, the Human Genome Organization decided by the mid-1990s to decode the DNA of model organisms before sequencing the human genome. In 1997 the complete DNA sequence of the yeast genome was published; a year later the ninety-seven million base pairs of the worm *C. elegans* followed; in early 2000 an advanced draft of the genome of the fruit fly *Drosophila* was announced.

Using different approaches, the Human Genome Sequencing Consortium and a team led by Craig Venter at Celera Genomics separately published in February 2001 their preliminary findings, estimating the number of genes in the human genome at 30,000 to 40,000. A later reanalysis reduced the number to approximately 20,000 to 25,000. The completion of the project in April 2003 has led to the identification of millions of sites on the genome where individuals differ.

The challenges in completing gene-mapping and DNA-sequencing projects were primarily technical, organizational, and financial rather than scientific. The problem scientists face today is how to use genomic information to gain biological understanding. Accordingly, genomics has increasingly given way to postgenomic studies focusing on the functions of genes and the complex interactions between cells, systems of cells, multicellular organisms, populations of organisms, and their environment. The three terms *functional genomics* (the study of genetic function), *proteomics* (the study of the proteins expressed by a genome), and *transcriptomics* (the study of RNA transcripts) indicate that the epistemic status of the genome has shifted from an object of analysis to a tool of research. In the emerging world of postgenomics, sequences are used as giant reference tools.

The social relevance of genomics lies primarily in the agricultural and biomedical utilization of genetic information. Knowledge gained from genetic and genomic research has enabled biomedicine to envision the organism at a molecular scale. New diagnostic tests based on a molecular understanding of life reveal susceptibility to a broadening range of diseases. The concept of genetic risk factors has led to a redrawing of the line between the normal and the pathological. Additionally, various patient groups have formed around specific diseases, inflecting new styles of collective thought, action, and passion that entail a redefinition of both the biological and the social. As a consequence, a new moral landscape has emerged that contrasts with the ethical discourse of the public sphere.

The challenge of contemporary molecular biology is to proceed from the generation of genomic information to the assessment of hypothetical propositions in experimental settings. For social scientists, it will be of paramount importance to continue observing and analyzing the unexpected emergence of objects and the unpredictable reconfiguration of forms as they assemble into an ever-shifting understanding of life.

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GENTILITY

For over five centuries, English-speaking societies have given the terms *genteel* and *gentility* a series of definitions and connotations. To varying degrees in different historical contexts, believers in gentility have made honorable family roots, refined manners, and tasteful elegance signs that distinguish those in the genteel ranks from decadent aristocrats, showy upstarts, vulgar tradesmen, and ordinary hardworking people. Individuals have maintained their elite status through an artful pretense that masks both their true feelings and the effort they exert to make their genteel appearance seem "natural." Throughout the centuries, there has been a tendency for many who were looked down on as "provincial," "frontier," "colonial," "nouveau riche," or simply "common" to seek upward mobility and new privileges by emulating their "betters," often with the guidance of prescriptive literature. Even in periods when gentility no longer required upper-class ancestors, it has never lived comfortably with egalitarian democracy.

THE ROOTS OF GENTILITY

Etymologists have traced the roots of the word *gentility* to Latin, then to French, and finally to *gentilete* in Middle English. In the thirteenth century, English speakers used the word *gentle* to describe the landed gentry, and by the sixteenth century, gentle had evolved into *genteel*. During the Renaissance, some Europeans merged the new humanistic respect for learning with the medieval admiration of military glory to create a new class of gentleman who were neither nobles nor common folk. They displayed their status, in part, through their right to "bear arms," meaning the right to display both a sword and a coat of arms.

In the eighteenth century, English and American pamphlets used *genteel*, in the sense of "being appropriate for gentlemen," as a modifier in their titles for a wide variety of terms and activities, including "genteel places of amusement," "genteel toasts, sentiments, and hobnobs," "genteel feats of action," "genteel designs for parsonages and farm houses," and "genteel ingenious conversation." By the time of the American Revolution, anyone in the broader class of gentlemen—wealthy merchants and planters, court and government officials, some members of the clergy, and other professionals—needed to live by the genteel code, while those in the lower classes could be shunned if they tried to pass themselves off as true gentlemen. Some twentieth-century historians, such as Howard Mumford Jones, Louis B. Wright, and Thomas Wertenbaker, have depicted gentility in eighteenth-century America as a positive force, while others, including Carl and Jessica Bridenbaugh, Jack P. Greene, and Kenneth Lockridge, have asserted that it was an obstacle to the development of a more authentically American culture.

GENTILITY, INDUSTRY, AND COLONIALISM

As gentility continued to evolve in the nineteenth century, definitions for *gentleman* in the *Encyclopaedia Britannica* changed from "one, who without any title, bears a coat of arms, or whose ancestors have been freemen" in 1815 to "all above the rank of yeoman" with "that self-respect and intellectual refinement which manifest themselves in unrestrained yet delicate manners" in 1856. In 1891, America's *Century Dictionary* added the possibility that gentlemen might be "fastidious," demonstrating excessive "pride in refinement and family position." These variations on the basic theme sometimes reflected political tensions, as when the genteel supporters of John Quincy Adams shuddered at the news of rough supporters of Jacksonian democracy celebrating in the White House after the inauguration of their hero, Andrew Jackson. In the decades before the U.S. Civil War, southern planters developed an image of genteel slaveownership characterized by benevolent paternalism, partly as a counter to abolitionist challenges to their moral character.

As industrial capitalism allowed men who had made quick fortunes to gain more power than established gentlemen, a group of authors, including Ralph Waldo Emerson, James Russell Lowell, Oliver Wendell Holmes, Henry Adams, Henry James, and Charles Eliot Norton, sought to cultivate an elite esthetic sense of culture. George Santayana labeled their writings the "genteel tradition." In the twentieth century, Van Wyck Brooks and Vernon Parrington were among the scholars who criticized the genteel tradition for having inhibited realism in American literature and having been indifferent to the needs of ordinary people.

The spread of colonialism stimulated an imperialistic gentility to distinguish colonial authorities from the "less civilized" natives. British consular officials, for example, dressed in formal dinner attire while dining by a tent in an African jungle. Some individuals from the colonized societies emulated such behavior to gain favors from officials. Virginia tobacco planters, for example, built homes according to the standards of the English gentry, and educated natives of India learned to play cricket. Those with dark skin could not, however, expect to gain total approval from their rulers. White supremacists took it for granted that the basic nature of "people of color" was too dishonorable for them to be capable of refined taste and manners. This made those categorized in this demeaning fashion even more determined to display genteel qualities whenever they could afford to do so. Nevertheless, in the Jim Crow South, white southerners were extremely hostile to public genteel behavior by African Americans. Some black families decided not to paint their homes, lest the

local white community discover that they possessed a refined parlor, complete with a piano.

GENTILITY AND THE RISE OF THE MIDDLE CLASS

Even though gentility can never be truly democratic, the rise of the middle classes in the nineteenth century led to an increase in individuals seeking a genteel identity. While those who were born into elite status claimed to notice a marked difference between a person who was "acting like" a lady or gentleman and someone who actually was one, the popularity of advice books indicates that not everyone agreed with such rigid exclusivity. Emily Thornwell, for example, published an especially popular manual in 1856 titled *The Lady's Guide to Perfect Gentility, in Manners, Dress, and Conversation, in the Family, in Company, at the Piano Forte, the Table, in the Street, and in Gentlemen's Society*. While explaining what forks to use when, these etiquette advisers also encouraged their readers to buy everything needed to furnish a genteel home, creating what the historian Richard Bushman has labeled "vernacular gentility." After World War I, according to the historian Stow Persons, distinguishing between gentlemen and common men was no longer socially useful.

GENTILITY, GENDER, AND WORK

Whether in the sixteenth century or the twentieth, certain assumptions have been standard elements of gentility. A firm opposition to any ambiguity in gender roles has led to the dismissal of anyone whose behavior was not up to the standards of genteel femininity and masculinity. In the nineteenth century, some men focused on countering assumptions that refined style might be effeminate by calling for a more "manly" gentry. Courtship rituals reflected an idealization of the medieval code of chivalry, which gave demure belles the most public power they would have in their lives, as they charmed suitors before choosing one to be their husband.

A genteel work ethic has encouraged gentlemen to focus almost exclusively on elite leisure activities, whether studying Greek classics or betting on horse races, rather than on practical survival strategies and tactics. In the fourteenth century, John Ball, the leader of a peasants' revolt against privileges for elites who did no work, summarized this assumption in a couplet referring to the story of Adam and Even in Genesis that lived on as a nursery rhyme: "When Adam delved and Eve span, / Who was then the Gentleman?" (Bartlett, 871). A prejudice against "tradesmen" lasted into the twentieth century on the European continent and inspired a number of New England businessmen in the nineteenth century to seek to become "gentleman farmers" once their fortunes were secure. For much of the twentieth century, upper-class male college students were proud of earning a "gentleman's C."

The genteel work ethic for ladies has required socializing frequently enough to assure their families' elite connections while also avoiding the company of anyone without the proper genteel credentials. Women made time for visiting by engaging in a genteel domesticity that involved overseeing servants rather than undertaking any menial chores themselves. Elite mothers trained their children in genteel behavior, including the art of polite conversation, but servants did much of the childcare. For ladies, ornamental sewing and occasional baking, as well as singing to entertain guests, needed to be obviously optional amateur activities that would showcase a lady's "accomplishments" for the pleasure of others.

When gentlemen who refused to pay attention to business matters lost some of their family's fortune, they could depend on their peers to ascribe their genteel poverty to historical victimization rather than to individual failings. Nevertheless, those without much financial wealth sought to heighten the value of the cultural capital of genteel behavior relative to economic capital, and to avoid social contact with anyone whose "new wealth" made their social status questionable (unless they were quietly seeking a "blood and money marriage" for one of their children). "Shabby gentility" first became a popular topic in English fiction in the eighteenth century. In his novel *The Old Curiosity Shop* (1840-1841), Charles Dickens described "poor streets where faded gentility essayed … to make its last feeble stand" (Dickens, 115).

In recent decades, the status of celebrity has overtaken that of gentility, allowing rock stars to be knighted by the Queen of England for their contributions to the British economy. But the terms *genteel* and *gentility* are not obsolete. At least one American fraternity still instructs its members that each should, "through his gentility," seek to follow the ideals of chivalry, including good manners and respect for women. From another perspective, the newspaper columnist Frank Fitzpatrick, on July 14, 2006, published an article condemning the owners of the Philadelphia Phillies baseball team for their inability to understand the anger of the "real Phillies fans" because their anachronistic "genteel worldview" still considered sports to be "an aristocratic club." Whether future generations will be equally contemptuous of the concept of gentility, or develop a new version to suit their particular social ambitions, remains to be seen.

SEE ALSO *Distinctions, Social and Cultural; Elites; Hierarchy; Middle Class; Mobility; Norms; Upward Mobility*

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GENTRIFICATION

Gentrification marks the revival of urban areas by a set of interrelated demographic, economic, and spatial changes: new investment in housing, an influx of highly educated, culturally aware residents and consumers, and the shift from an industrial to a service economy with jobs in the center city for professionals and artists. First observed in London during the 1950s but gradually spreading through North American, Australian, and European cities, the movement of middle-class households into old working-class neighborhoods took most observers by surprise because it contradicts the much greater flow of people and capital outward to new suburbs and the presumed decline of urban life. But gentrifiers reject the social class and ethnic homogeneity of most suburban housing developments. They are attracted to the social diversity of city life, the aesthetic qualities of old buildings, and the cultural vitality of the streets. The low cost of housing in centrally located but derelict and often crime-ridden neighborhoods also appeals to them. Although they take a risk by investing in and moving to these areas, they benefit from the cultural amenities they help to develop and from steadily rising property values.

Because gentrification raises housing prices and brings a different sort of commercial culture to older neighborhoods, gentrifiers are nearly always suspected of displacing low-income residents. In many cities where high-level business services and high-tech sectors have expanded and redevelopment plans focus on the downtown, rising rents and sale prices do increase the housing burden for a large part of the urban population. Higher rents also threaten the cheap stores and local services that cater to low-income residents; landlords prefer to end their leases and replace them with boutiques, cafés, and bars that will draw middle-class customers. The types of services these consumers want—and the atmosphere they prefer—are often seen as alien by their poorer, older, and less educated neighbors and tend to make these earlier residents feel culturally as well as economically displaced. But precise data on displacement are difficult to find, and some local residents may choose to move either to a cheaper location in the same area or to a different place entirely. Older home owners in particular may take the opportunity to move away if their children do not want to live in their house and they can make a large profit by selling it.

City governments and the media downplay displacement in order to encourage new investment and develop attractions for tourists and residents. Along with new residents, they describe the existing area as a "wilderness" and the gentrifiers as "pioneers." These metaphors thinly veil a continuous pressure to upgrade the city by replacing low-income groups, who often depend on public services, with more affluent taxpayers and to replace low-rent, low-status manufacturers with residential tenants. Because gentrification in the form of loft living became widespread during the 1970s due to the residential conversion of manufacturing space, it is difficult to say whether gentrifiers contribute to or simply follow industrial dislocations and factory shutdowns. By the same token, gentrifiers often move into neighborhoods that have already lost residents because of property owners' disinvestment and abandonment as well as a decline in public services.

The media actively promote the sense of style that gentrification evokes. While loft living is associated with open spaces, high ceilings, and stark modern decor and the rehabilitation of town houses with small rooms and original, Victorian architectural detail, each suggests a cultural transformation of the inner city from physical dilapidation and social disadvantage to an attractive consumers' zone. Because of new residents' higher salaries, dual income households, and cultural capital, gentrified areas of the city soon sprout ambitious restaurants, art galleries,

performance spaces, and unusual designer boutiques. The high degree of self-employment among gentrifiers who work in cultural fields provides them with both a daytime and a nighttime clientele. Moreover new shops and cafés are featured in going-out guides and style magazines, bringing more visitors from other areas of the city as well as from suburbs and overseas. In this way the lifestyle elements of gentrification repair damage to the city's image from post–World War II disinvestment and the flight of many middle-class residents. Together with housing prices, gentrifiers' cultural tastes act as agents of change, reducing the number of working-class, middle-income, and "minority" neighborhoods.

Although gentrification is viewed as a market-based alternative to state-sponsored urban renewal, it cannot succeed without active state intervention. Local government condones years of disinvestment and capital flight from older areas, creating a "rent gap" between the profit to be gained at current housing prices and the likely profit from reinvestment in the future. Zoning laws prohibit the expansion of manufacturing, encourage historic preservation, and create special cultural districts. Vigilant policing makes gentrified neighborhoods safer. In some cases elected officials, business leaders, and old social elites plan the gentrification of a center city neighborhood to stall further decline of property values.

If it raises a neighborhood's profile, gentrification may lead to rezoning for new construction, and successive waves of gentrification replace middle-class home buyers with even richer residents. Over time the character of these neighborhoods changes, although not enough to eliminate social inequality in the city as a whole.

SEE ALSO *Ghetto; Poverty; Racism; Urban Renewal*

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GEOGRAPHY

Geography is the study of the field of knowledge relating to the temporal and spatial dimensions of the processes that shape the Earth's surface. Implicit within geography as a discipline is an emphasis on ways that diverse systems interact over time, producing particular landscapes in particular places. Geography is distinct from other disciplines (such as spatial economics and geology) in that it emphasizes the dual dimensions of time and space as causal, and because it highlights the importance of feedback between these different dimensions. A landscape can be understood as a place-specific configuration of interacting systems (at any scale), whose features influence the geographical processes operating in that particular case (this interaction produces feedback). The term *landscape* is often used to describe systems in which natural processes predominate, while *place* is used to describe systems dominated by human processes, though this distinction is not absolute. Indeed, in human geography the term *landscape* is used by many to describe anthropogenic systems, giving the effect that the phenomenon is distinct from the humans inhabiting it.

There are several ways of subdividing the discipline of geography. A common distinction is often made between physical geography as an environmental science and human geography as a social science. Human geography can further be divided according to the topic of study, creating subfields such as urban, political, economic, social, historical or cultural geography. More abstract dividing lines can also be drawn on the basis of methodologies, so that a distinction can be made between quantitative approaches, which have much in common with orthodox economics and cartography, and qualitative approaches, which can be similar to sociology, planning anthropology, and political science. Since the quantitative revolution of the 1960s, geographers have also distinguished themselves according to their epistemological perspectives on the nature of reality and the possibility of individuals adequately understanding and describing that reality.

THE EMERGENCE OF THE DISCIPLINE OF GEOGRAPHY

Geography as a discipline emerged in Germany in the eighteenth century in the context of attempts associated with Alexander von Humboldt at the University of Berlin to systematically harness the benefits that universities provided to society by creating applied disciplines linked to social needs. The ancient civilizations were interested in geographical topics such as cartography and cultural geography in the context of operating their military and trading empires. These proto-geographical ways of thinking were primarily concerned with describing the form of the earth, often in an attempt to better control a particular activity rather than produce pure knowledge of geographical systems. It is important to note that these applied uses of geography have created a continual stream of wealthy patrons willing to fund exploration to producing spatial

knowledges, which have often served those patrons' own power interests.

According to Richard Hartshorne's *The Nature of Geography*, geography as a discipline emerged from a growing body of practical studies after 1500, but it was from 1750 onward that serious attempts were made to establish the two preconditions for a discipline, namely a distinctive subject area and a rigorous analytic methodology. The renowned philosopher Immanuel Kant (1724–1804) saw a close and necessary connection between understanding the nature of the world, and developing a more general (abstract) philosophical method. Hartshorne relates that Kant's physical geography course became a staple of his philosophy curriculum, being repeated forty-eight times from 1756 to 1796 at the University of Köningsberg (now Kaliningrad). Kant developed the idea of *Länderkunde*, of studying particular distinctive regions in detail to understand their emergence. This approach was extended throughout the early nineteenth century by other early geographers, such as Von Humboldt and Carl Ritter, who viewed the human and physical elements of places as inseparable elements of a unitary whole (*die Ganzheit*), of a region or landscape. Humboldt, in particular, tried to ensure that the focus of study was on classes of places (classified, perhaps by climate, geology, social form) rather than classes of objects (such as species).

Humboldt's efforts to create a science of geography were ultimately responsible for a postmortem split between *systematic* geographers, studying physical processes and landforms, and *regional* geographers, studying societies in particular climatic and geological regions. This cleavage deepened in the course of the nineteenth century, as geographers sought to specialize and establish themselves in the many new and growing universities. However, this tension was never fully resolved, and as geography began to institutionalize, the newly formed learned societies reflected both halves of the discipline: systematic (physical) geography and regional (human) geography.

GEOGRAPHY FROM 1900 ONWARD

The story of geography since 1900 is one of an established discipline advancing rapidly, driven by and responding to the huge social and physical changes accompanying the rise of industrial society, alongside increasing technological opportunities for new forms of research and knowledge production. During the twentieth century, a number of currents of thinking emerged that were driven by ideological considerations. Environmental determinism, for example, provided an intellectual underpinning for the imperialistic "Race for Africa" in the late nineteenth century by arguing that climatic considerations meant that African civilizations were incapable of developing stable social institutions. Likewise, desire for *Lebensraum* (living space) of the National Socialists in Germany drew on geopolitical thinking that originated with the English geographer Halford Mackinder's concept of geopolitics to rationalize these ideological desires within the school of *Geopolitik*. The collapse of both underpinning ideologies carried a collateral cost for their parent disciplines as a whole. It was this tendency for supposedly neutral geographical analyses to favor particular powerful groups that was the stimulus behind the radical turn in human geography that emerged in the 1970s.

In parallel with these changes, two important geographical movements emerged to reshape the discipline in the period from 1900 to 1970. The first of these was the systematization of regional (human) geography, which attempted to move beyond ideographic descriptions of societal phenomenon in particular places to more analytic expressions of places in terms of underlying processes. However, it is important to stress that national geographies remained highly distinctive at this time, and these new regional geographies reflected these national distinctions. British regional geography, particularly in the works of Henry Daysh, H. C. Darby, and Hilda Ormsby reflected national traditions of empiricism and pragmatism while emphasizing the importance of historical development. French writers, led by Paul Vidal de la Blache, produced the *Annales* school, named after its journal, which developed notions of "environmental possibilism," in which social configurations (*genres de vie*) were influenced both by physical environment and social and political decisions. German writers, notably Walter Christaller and Alfred Weber, used mathematical modeling to understand the spatial allocation of human activity such as settlements and industry. This represented a more analytic attempt to understand human activity. Although these diverse national approaches differed in the extent to which they emphasized theory over practical observation, they clearly all represented an attempt to systematize the production of geographical knowledge.

This consensus emphasizing systematization enabled the second great geographical movement of the twentieth century, the quantitative revolution. Early systematic approaches, inspired by the natural sciences, suggested that everything in nature was knowable, given sufficient data and analytic capacity. The increasing "scientization" of society in general, and the rise of computer power after 1947 in particular, seemed to bring this dream of total geographical knowledge within reach. The basis for quantitative geography lay in creating mathematical spatial models to account for the distribution and evolution of particular phenomenon over space. The quantitative revolution became associated in the United States with the Regional Science movement, pioneered by Walter Isard,

then a professor at University of Pennsylvania, and his supporters. By infusing geography with mathematical and statistical tools, Regional Science superficially avoided the charges of selectivity and ideological determination that afflicted more ideographic geographical approaches. In part, the popularity of these quantitative approaches derived from the apparent certainty of knowledge thereby produced, which gave policymakers a robust evidence base for making decisions about land use and economic planning.

However, quantitative approaches often suffered from failing to adequately capture the independent variables, the factors responsible for causing particular phenomena. Quantitative practitioners were making assumptions and using convenient proxy variables rather than capturing complex social and cultural phenomena. The increasing urban segregation and deprivation in the 1960s and 1970s in western Europe and America provided a direct challenge to quantitative geography's capacity to explain away the emergence of ghettos, dereliction, and, frequently, rioting. Faced with the inability to measure causal variables, a number of geographers instead began to form theories to try to understand how large-scale "social structures" created micro- and meso-scale problems.

Arguably the most celebrated of these geographers is David Harvey, whose empiricist manifesto *Explanation in Geography* (1969) was supplanted by a Marxian commitment to understanding spatial process in terms of class struggle, beginning with his 1973 treatise *Social Justice and the City*. Harvey exemplified a "radical geography" in which class theory allowed hidden power relationships to be exposed and unexpected causalities to be identified. This radical approach fitted neatly with, and has since become associated with, a more general postmodern or relativistic turn in the social sciences. Harvey's neo-Marxian writings reached what many regard as an apex of a theoretical research project with the publication of *The Limits to Capital* in 1982. This volume set out a sweeping vision for an ever-deepening form of capitalism that would eventually penetrate into every corner of the world, and it has proven to be an important foundation for radical critiques of globalization and neoliberalism.

Radical geography subsequently proceeded through a number of further "turns," which have critiqued their predecessors in an attempt to better understand what drives the development of human societies. The cultural turn emphasized the importance of noneconomic interaction and transactions; the institutional turn noted the importance of durable organizations and social norms; and the relational turn highlighted the fact that people are influenced by what is close to them, and that proximity is not just physical but can be organizational, cultural, or virtual in nature. These turns were all led by movements comprising both established geographers who recanted or redacted their established positions and emerging geographers who became a new generation of intellectual leaders for geography. The cultural turn was signaled in 1989 by the parallel publications of David Harvey's *The Condition of Postmodernity* and Edward Soja's *Postmodern Geographies*. Both books asked fundamental questions about the economic focus of much Marxian geography, and they laid the foundations for more reflexive understandings of economic activity. These "turns" have been contested by other geographers, who have expressed concerns that the intellectual efforts involved in reflexivity have detached them from geographers' central task of understanding real places and spaces.

At the same time, quantitative approaches have continued to develop. Geographical information systems (GISs) are massive computer databases into which huge quantities of locational data is entered, allowing the performance of additional "fieldwork" capable of identifying regularities that are not immediately obvious. Although they are academic tools, much of the investment in them came from customers seeking to make sense of unknown and uncertain environments, notably the military and oil exploration companies. The continual investments these tools produce have generated a wide range of applications, and GISs are now commonplace across the spatial sciences beyond geography.

Quantitative geographers have also used novel mathematical techniques and increasing computing power to address "traditional" geographical problems of understanding how spatial distribution and irregularities in distribution cause geographical processes to behave in different ways in different places. These approaches are exemplified by the geographically weighted regression (GWR) technique. There has also been an increasing dialogue between physical and human geographers trying to deal with the complex environmental problems that have emerged with the increasing industrialization of society. This neatly emphasizes the ongoing indivisibility of the "natural" and the "anthropogenic" elements of geographical systems, as well as the mutual understanding necessary to understand the development of spatial systems.

SEE ALSO *Cities; Cultural Landscape; Determinism, Environmental; Kant, Immanuel; Metropolis; Peasantry; Planning; Regions; Regions, Metropolitan; Segregation, Residential; Spatial Theory; Suburbs; Topography; Urbanization*

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Paul Benneworth

GERIATRICS

SEE *Gerontology.*

GERM WARFARE

SEE *Bioterrorism.*

GERONTOLOGY

The scientific study of the biological, psychological, and sociological phenomena associated with age and aging, gerontology had its origins in the study of longevity from Francis Bacon (1561–1626) onward. While Jean-Martin Charcot (1825–1893) had explored the relationship between old age and illness, the term *gerontology* was introduced by Élie Metchnikoff (1845–1916), who developed theories of aging based on his work in medicine and biology. Social science perspectives on aging did not emerge until later, when the economic consequences of aging were recognized. Professional associations were created to support research on aging, such as the Gerontological Society of America (1945) and the International Association of Gerontology (1948). In the 1930s the Josiah Macey Jr. Foundation in New York, under the directorship of Ludwig Kast, ran a series of conferences on aging exploring the relationship between degenerative disease and aging. The Foundation encouraged E. V. Cowdry, professor of cytology at Washington University, to organize a book that would explore not only the biomedical aspects of aging but also the psychological, sociological, and environmental aspects. These activities resulted in the Club for Research on Aging, which promoted the study of aging as an aspect of public health. Major figures in the development of the social and psychological study of aging included, in the United States, Matilda White Riley (1911–2004), and in the United Kingdom, Peter Laslett (1915–2001). Riley and her colleagues developed the "aging and society paradigm" in her *Aging and Society* (1968–1972), which examines the interaction between a cohort flow of population and social change, and explains age as an aspect of the social structure. Laslett, the author of *The World We Have Lost* (1965), challenged many conventional, but dubious assumptions in demography and gerontology, such as the idea that the nuclear family is a modern development. He was a founder of the influential Cambridge Group for the History of Population and Social Structure, which pioneered the methodology of using local records in the historical study of population.

Gerontology has become an increasingly important discipline as the governments of the developed world face up to the problem of aging populations. The causes of population aging are either a rising life expectancy or declining fertility, or both. Increasing longevity raises the average age of the population; a decline in fertility increases the average age of the population by changing the balance between the young and old. In the modern world, declining fertility—in precise terms the actual number of live births per thousand women of reproductive age—is the most significant cause of population aging. In terms of the world population, in the year 2000 approximately 30 percent were under the age of fourteen years, but this is expected to fall to around 20 percent by 2050. In the developed world, the median age of the population rose from 29 in 1950 to 37.3 in 2000, and it is predicted to rise to 45.5 by 2050. For the world as a whole, the figure was 23.9 in 1950, 26.8 in 2000, and is predicted to be 37.8 for 2050. One of the fastest-aging populations is modern Japan; in 1950 there were 9.3 people under the age of 20 for every person over 65 in Japan, but by 2002 this ratio was anticipated to be 0.59 people under 20 for every person over 65 years. Worldwide, there are important regional variations. If we define an aging population as one in which at least 10 percent are over 60, then most of sub-Saharan Africa will only see the development of aging populations after 2040, but North Africa will have them before 2030. Most of the Latin American and Caribbean countries will have aging populations after 2010. Many Asian countries, such as China, Singapore, and South Korea, already do.

The United States and Northern Europe face an acute problem of rapid aging. In the United States, the proportion of the population over sixty-five years of age is expected to increase from 12.4 percent in 2000 to 19.6 percent in 2030. In absolute terms, this means an increase from 35 million over sixty-five in 2000 to 71 million in 2030. In Europe the number of people over sixty-five years will increase from 15.5 percent in 2000 to 24.3 percent in 2030.

The aging of the world population is an aspect of an ongoing demographic transition—a switch from high fertility and high mortality rates to low fertility and delayed mortality. This transition also produces an epidemiological transition—a switch from infectious diseases in childhood and acute illness, to chronic disease and degenerative illness. The principal causes of death in the developed world are cardiovascular disease, cancer, respiratory disease, and injuries.

These demographic changes have major implications for health care, the labor force, welfare, insurance, and pensions. In the United States 80 percent of people over sixty-five years have at least one chronic disease and 50 percent have two. Diabetes now affects one in five Americans. The incidence of Alzheimer's disease in the United States doubles every five years after the age of sixty-five. The economic consequences of an aging population are various and significant. There will be major increases in health care, nursing care, and retirement home costs. As the ratio of working to retired persons increases, there will be a decline in taxation and an erosion of funds for public expenditure. There is already a significant pension crisis in the United States and the United Kingdom, where the combination of compulsory retirement and increasing life expectancy means that people do not have sufficient savings for old age. The problem is a major policy issue because labor force participation of people over sixty-five years has declined by more than 40 percent worldwide. In the United States, the growth rate of the working-age population is projected to decline from its current level of 1 percent per year to half a percent by 2030.

Life expectancy has increased significantly in the developed world. More people are surviving into old age, and once they achieve old age, they tend to live longer. Over the next half century, global life expectancy at age 60 will increase from 18.8 years in 2000–2005 to 22.2 years in 2045–2050, from 15.3 to 18.2 years at age 65, and from 7.2 to 8.8 years at age 80. In over thirty countries female life expectancy at birth already exceeds 80 years. Can life expectancy increase indefinitely?

Contemporary gerontology as a field of research is changing rapidly under the impact of advances in the biological sciences. In conventional gerontology, living a long life had meant in practical terms living a full life, according to some agreed upon set of cultural and social criteria, and achieving the average expectation of longevity according to gender and social class. More recently however, there has been considerable speculation as to whether medical science can reverse the aging process. Between the 1960s and 1980s, biologists such as Leonard Hayflick (1982) argued that normal cells had what was known as a *replicative senescence*, that is, normal tissues can only divide a finite number of times before entering a stage of inevitable quiescence. Cells were observed in vitro in a process of natural senescence, but eventually experiments in vivo established an important and far-reaching distinction between normal and pathological cells in terms of their cellular division. It was paradoxical that pathological cells appeared to have no such necessary limitation on replication, and therefore a process of *immortalization* was the defining feature of a pathological cell line. Biologists concluded that finite division at the cellular level meant that the aging of whole organisms was an inevitable process. These scientific findings supported the view, shared by most religious traditions, that human life had a predetermined limit, and that it was only through pathological developments that some cells might outsurvive the otherwise inescapable senescence of cellular life. Aging was regarded as both natural and normal.

This traditional conception of aging was eventually overthrown by the discovery that human embryonic cells were capable of continuous division in laboratory conditions, where they showed no sign of any inevitable "replicative crisis" or natural limitation. Certain nonpathological cells (or stem cells) were capable of indefinite division, and these new developments in the conceptualization of cellular life have consequently challenged existing scientific assumptions about the distinctions between the normal and the pathological. Stem-cell research is beginning to redefine the human body in terms of renewable tissue, and suggests that the limits of biological growth are not immutable or inflexible. The human body has a surplus of stem cells capable of survival beyond the death of the organism. With these developments in micro-bio-gerontology, the capacity of regenerative medicine to expand the limits of life becomes a plausible prospect of medicine, creating new economic opportunities in the application of life sciences.

The controversies that surround modern gerontology are primarily to do with population aging, resource allocation, and equality. First, can prolongevity be increased almost indefinitely? Secondly, will significant increases in life expectancy severely increase the inequality in the distribution of resources worldwide? Finally, can intergenerational justice be maintained?

In contemporary debates about the legitimacy of the life-extension project, faith-oriented beliefs and moral justifications are prominent. It is clearly the aspiration of furthering biomedical science that is the most common supporting argument in the literature. In general, scientific curiosity and potential health-enhancing discoveries are cited as justifications for life-extension research. The ethical principle of beneficence is also included, because the research, it is argued, can help to decelerate the aging process and diminish the onset of chronic illness. Such a

view emerges from a conception of aging as a condition to be cured (that is, as a disease), and it assumes that health and life extension will necessarily evolve together. In these debates on life extension, Gregory Stock, director of the program on Medicine, Technology, and Society at University of California, Los Angeles (UCLA) School of Public Health, argues that we should not accept the natural life span as a fixed state of affairs, because prolonged health is a general good. Because the technological advancements in anti-aging intend to provide more youthfulness to aging people, he contends that life extension is valuable both to individuals and for societies. Similar sentiments are reflected in the *posthumanist* perspective, which strongly advocates the overcoming of biological limitations through technological progress. One public figure promoting life extension in England is the editor in chief of *Rejuvenation Research*, Aubrey de Grey at the University of Cambridge, who has vigorously supported the life-extension project.

The arguments against life extension are that, given a scarcity of resources, it will greatly contribute to the depletion of natural resources and significantly increase environmental degradation. It will increase inequality between the Southern Hemisphere and the affluent Northern Hemisphere. It will have an adverse effect on intergenerational justice by further concentrating wealth in the hands of the elderly rich. Finally, it raises important issues about the psychological and spiritual distress that the elderly but disabled cohort of survivors would confront. The prospect of "living forever" would only be tolerable if medical science could guarantee a reasonable level of mobility and well-being (such as freedom from chronic disease). There would also be the prospect of intergenerational conflict, for example in the form of ageism.

The term *ageism* was first employed by Robert N. Butler, then director of the American Institute of Aging, in 1968. Referring to negative stereotypes of elderly individuals that classify them as senile, dependent, or conservative in their attitudes, ageism has become an important political issue. Against the background of the rapid aging of populations, *new ageism* refers to intergenerational conflicts of interests where the elderly are criticized for being parasitic on society, that is for being "takers" rather than "givers." Some aspects of ageism can be overcome by making more accurate information about aging available, especially to young people. Another change would be to remove a fixed or compulsory retirement age, thereby allowing fit and able elderly to continue in employment. These strategies will come up against the fact that, given high unemployment, housing shortages, and other scarcities, there will be an inevitable conflict of interests between age groups. There are few convincing social policies to resolve the pension crisis, the impact on health care, and the erosion of the tax base that are outcomes of population aging.

This pessimistic conclusion can be challenged by arguing that technological improvements will continue to increase the productivity of those who remain at work, and that flexible retirement regulations will allow people to remain employed on a voluntary basis past sixty-five. We cannot assume that the values and attitudes of old people in the past will be characteristic of future generations. The postwar Baby Boomers who are now close to retirement are socially and culturally very different from their parents and grandparents. The social character of aging and the cultures of the elderly will continue to change and evolve over time, thereby making pessimistic extrapolations from past generations unreliable, and often prejudicial.

SEE ALSO *Baby Boomers; Demographic Transition; Demography; Maturation; Welfare State*

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Bryan S. Turner

GERRYMANDERING

The term *gerrymander* typically refers to the creation of electoral districts that have bizarre shapes in order to condition the outcome of an election. In "Considering the Gerrymander" (1977), Leroy C. Hardy recounts that the term *gerrymander* was coined after the Jeffersonian-controlled legislature of Massachusetts drew contorted senatorial districts in order to ensure the defeat of Federalist candidates in 1812. One particular district located north

of Boston was so contorted that it was said to look like the mythical salamander. Since this all took place during Elbridge Gerry's (1744–1814) term as governor, the district was christened a "Gerrymander," and the term has stuck ever since.

Bizarre district shape is but one manifestation of the real evil of gerrymandering: the conscious attempt by someone to organize voters in a manner will result in the over- or underrepresentation of a particular group or political party. This can be accomplished using very unremarkable district boundaries. In addition, an electoral system can be gerrymandered by other means, such as unfairly altering the rules by which votes are counted and translated into electoral seats or changing the laws governing the qualification of candidates and political parties to appear on ballots.

Gerrymandering takes on benign as well as evil forms. Perhaps the most egregious example of modern gerrymandering in the United States took place in Alabama in 1958. The black population of the city of Tuskegee was about to become a majority of the electorate. White residents petitioned the state legislature to redraw the boundaries of the city to remove the black voters. The state legislature obliged and transformed the city's border from a simple square to what the Supreme Court of the United States described in *Gomillion v. Lightfoot* (1960) as an "uncouth" twenty-three-sided figure. The Supreme Court declared that this transformation of Tuskegee amounted to a denial of the black residents' right to vote.

In 1965 the U.S. Congress passed the Voting Rights Act. When it was amended in 1982, it was read by the Justice Department and the Supreme Court (in *Thornburg v. Gingles*, 1983) to require states to create legislative and congressional districts with voting majorities comprised of minority voters ("majority-minority districts") wherever possible.

With this decision the Supreme Court essentially endorsed a congressional mandate to gerrymander legislative and congressional districts to help minority voters. While the Voting Rights Act was thus regarded as a benevolent attempt to rectify a heinous history of disenfranchisement of minority voters, it nonetheless endorsed a policy of officially mandated manipulation of the electoral system.

Beginning in 1993 with the decision in *Shaw v. Reno*, the Supreme Court retreated from its holding in *Gingles*. In so doing, it placed restrictions on the extent to which the federal government could require states to gerrymander districts on behalf of minority voters. While congressionally mandated gerrymandering was clearly benign in its intent, it was nonetheless a clear perversion of the electoral system.

Gerrymandering is unavoidable because it is impossible to draw electoral district lines or change electoral laws without having a clearly favorable or unfavorable impact on someone. Gerrymandering occurs throughout the world and in many different circumstances. Drawing on examples from the United Kingdom and Ireland, Richard Katz (1998) notes that in countries that use other electoral systems (such as proportional representation systems with multimember electoral districts), the size of districts can be manipulated so that particular parties end up wasting their votes and electing fewer candidates than they would in a district of a different size.

In addition, an electoral system can be gerrymandered by making it harder for minor parties or independent candidates to challenge the established political powers. In Canada, for example, the Supreme Court has heard challenges to laws restricting the access of small political parties to government funds (*Figueroa v. Canada*, 2003), restricting campaign spending (*Harper v. Canada*, 2004), and allowing for great population discrepancies among voting districts (*Reference re Provincial Electoral Boundaries [Sask.]*, 1991). The first two cases embodied claims that laws unfairly favored incumbent political powers by making it harder for minor political actors to garner enough influence to challenge the government. This not only discriminated against minor parties, it also rendered political competition less robust and the electoral system correspondingly unfair. In the Saskatchewan case, challengers claimed that population disparities among electoral districts unfairly favored rural interests at the expense of urban voters.

In conclusion, the term *gerrymander* has transformed since the mid-twentieth century from a reference to bizarrely shaped electoral districts to a broader term addressing myriad ways in which an electoral system can be rendered less competitive in hopes of achieving partisan gain. As a result, around the world, the trend is to place the authority to make changes to the electoral system in the hands of nonpartisan commissions or agencies.

SEE ALSO *Campaigning; Elections*

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Mark Rush

GESTALT PSYCHOLOGY

Gestalt theory, a major school of psychology during the first half of the twentieth century, was an influential counterpoint to the other mostly atomistic psychological systems of the time: structuralism, functionalism, and behaviorism. While its controversies with these other systems during the "age of schools" in psychology have receded into history, its major tenets once again became salient toward the end of the twentieth century in such fields as social psychology, cognition, personality psychology, and visual neuroscience.

Gestalt psychology proposed a radical revision of the atomistic view that had prevailed for centuries in Western science and social science. Natural wholes, according to the Gestalt view, are not simply the sum total of their constituent parts. Rather, characteristics of the whole determine the nature of its parts, prescribing the place, role, and function of each part in the unified whole. The Gestalt principle of *Prägnanz*, furthermore, asserts that the organization of any whole will be as "good" (i.e., balanced, simple, integrated) as the prevailing conditions allow. This insistence on holistic processes applies equally to all integrated wholes, from physical systems such as electrical fields, magnetic fields, and soap films to psychological systems such as cognitive processes, the organization of perception, personality, and social phenomena.

The Gestalt movement is generally viewed (Ash 1995; King and Wertheimer 2005) as having been launched by a series of experiments by Max Wertheimer (1880–1943) on apparent movement published in 1912, although clear indications of a Gestalt perspective were already evident in two earlier publications of Wertheimer on musical structures (1910) and on aboriginal thinking about numerical issues (1912). Two of Wertheimer's colleagues who served as observers in these experiments, Wolfgang Köhler (1887–1967) and Kurt Koffka (1886–1941), became his collaborators during the next decades in promulgating the new Gestalt approach (Köhler 1929; Koffka 1935). A typical experiment in Wertheimer's series involved, for example, exposure of a short vertical line in the visual field, followed after a brief interval by exposure of a second similar vertical line a short distance away from where the first one had been exposed. If the time and distance relations are appropriate, observers see a single line moving from one location to the other. The experience is indistinguishable from watching an actual short vertical line move from one location to the other; in both cases, the perception of motion is immediate and compelling. The prevailing alternate theoretical orientations, maintaining that percepts always correspond with their correlated physical stimuli, could not explain the perceived motion when the actual stimuli are two stationary lines successively exposed. The whole, the experience of motion as a Gestalt, cannot be derived from a combination of the "component sensations" of the two stationary stimuli.

The Gestalt school became prominent in European and American psychology. Its principles of perceptual organization have been summarized in almost every introductory psychology textbook; Wertheimer's book *Productive Thinking* (1945) challenged the computer models of the late twentieth century to try to account for the ubiquitous cognitive processes of insight and understanding.

SEE ALSO *Gestalt Therapy*

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Michael Wertheimer

GESTALT THERAPY

Gestalt therapy is a therapeutic approach in psychology that helped foster the humanistic theories of the 1950s and 1960s and that was, in turn, influenced by them. In Gestalt philosophy, the patient is seen as having better insight into himself or herself than the therapist does. Thus, the therapist guides the person on a self-directed

path to awareness and refrains from interpreting the patient's behaviors. Awareness comprises recognition of one's responsibility for choices, self-knowledge, and ability to solve problems.

Its originators, Frederick S. (Fritz) Perls (1893–1970) and Laura Perls (born Lore Posner, 1905–1990), were born in Germany and studied psychology there. They fled Germany during the Nazi regime, moving to South Africa and then to New York City. They were both initially influenced by Sigmund Freud's psychoanalytic approaches and by Wilhelm Reich's Orgonomic psychotherapy. Their later ideas on Gestalt therapy broke with the psychoanalytic tradition, moving toward existentialism and, ultimately, humanism.

In New York City the Perls founded the Gestalt Therapy Institute in 1952. Their novel technique in therapy was to face the patient, in contrast to the typical Freudian technique of sitting behind a reclining person. The face-to-face positioning permitted the therapist to direct the patient's attention to movements, gestures, and postures so the patient could strive to gain a fuller awareness of his or her immediate behaviors and environment. Another well-known approach introduced in Gestalt therapy is the so-called "empty chair technique," in which a person sits across from and talks to an empty chair, envisioning a significant person (or object) associated with psychological tensions.

By using these techniques, the Perls believed, the patient would be able to gain insight into how thoughts and behaviors are used to deflect attention from important psychological issues and would learn to recognize the presence of issues from the past that affect current behavior. The aim was for the patient to experience feelings, not to gain insight into the reasons for them, as psychoanalysts favored.

In the evolution of their therapy, Laura and Fritz Perls differed in some of their approaches. Laura emphasized more direct, physical contact and movement than Fritz did, and the contact favored by Fritz Perls was more symbolic than physical.

Gestalt therapy took its name from the school of academic psychology called Gestalt psychology. Perls asserted that Gestalt psychology had influenced the development of his ideas, but the Gestaltists claimed that there was no connection between the two. Later scholars suggested a common substrate linking the academic Gestalt psychology of Max Wertheimer (1880–1943), Wolfgang Köhler (1887–1967), and Kurt Koffka (1886–1941) and the Gestalt therapy of the Perls and their collaborators Ralph Hefferline (1910–1974) and Paul Goodman (1911–1972). This commonality involved appreciation of the whole rather than a reductionistic approach to understanding psychological phenomena and behavior.

Gestalt therapy took form in the 1950s and 1960s, when humanism first flourished. The optimistic theory promulgated by the Perls was quite compatible with the ideas of other humanistically oriented psychologists such as Carl Rogers (1902–1987). Its influence has waned since the 1980s, although current therapies have been influenced by the humanistic and optimistic outlook of the theory and by some of the interactive techniques developed by the Perls and their followers.

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Bernard C. Beins

GHETTO

Social scientists have long studied the effects of economic, political, and social inequality on lives, attitudes, and behavior. Central issues in this research include how and why societies tend to treat certain groups negatively, how such groups respond to such conditions, and whether and how society should address the historic and contemporary social problems that result. The history of ghettos provides an exemplar of the effects and implications of differential treatment of minority groups in society.

The term *ghetto* has been historically used to describe legally sanctioned segregated areas occupied by ethnic minorities. Although some writers contend that the first ghettos were created to segregate Jews during the Roman Empire between the first and fourth century CE, the term is most commonly used to describe segregated Jewish sections in Italy, Germany, and Portugal in the 1200s. The translation of the term *ghetto* originally referred to the Venice Ghetto in the 1300s and areas of town that were originally iron foundries or *gettos* before being converted to secluded Jewish sections. The term is also translated "gated" to characterize residentially isolated neighborhoods that existed in Venice and parts of northern Italy until as late as the 1600s. Other derivatives of the term refer to a small neighborhood (Italian, *borghetto*) or a "bill of divorce" (Hebrew, *get*). As suggested by these translations, it was illegal for non-Jews to live in ghettos and Jews

were prohibited from leaving. To impose these sanctions, the gates of this section of the town were locked at night.

Roman ghettos were created in the mid-1500s via a decree by Pope Paul IV (1476–1559) and lasted until the Papal States were overthrown by Italy in 1870. Roman ghettos were used to separate Jews from Christians, but also enabled the Jewish community to maintain its religious and cultural practices and avoid assimilation. Other Jewish ghettos were located in Prague, Frankfurt, and Mainz. Although legal restrictions were no longer imposed in Europe during the 1800s, many ghettos continued to exist based on cultural or religious dictates. Most European ghettos were destroyed in the nineteenth century following the French Revolution. However, the rise of Adolf Hitler (1889–1945) in Nazi Germany in the twentieth century saw the return of Jewish ghettos in eastern European cities. Other international ghettos include the predominately black area of Soweto in Johannesburg, South Africa; KwaMashu in Durban, South Africa; and ghettos in the United States in South Central Los Angeles, sections of Chicago, and rust-belt cities such as Flint, Michigan.

GHETTOS IN THE UNITED STATES

Ghettos in the United States are generally defined as poor inner-city areas where a disproportionate percentage of ethnic minorities reside. Although African Americans are generally associated with ghettos, Hispanics and whites also live in them. Ghetto neighborhoods are also defined as census tracts where 40 percent or more of residents, regardless of their race or ethnicity, are poor. The latter definition is widely used for comparative purposes in quantitative urban sociological research. Although ghetto residents tend to be ethnic minorities, it is important to note that neighborhoods where a large number of ethnic minorities reside are not necessarily ghettos. For example, prior to deindustrialization, many African Americans were segregated in northern communities such as Chicago's Bronzeville. Although the area was predominately African American, it was also the place of residence for relatively affluent African American families and businesses. Furthermore, economically stable ethnic enclaves such as Chinatowns and Germantowns exist in many cities across the United States.

The distinguishing factor that generally constitutes a ghetto is the prevalence of poverty. Ghettos are also often distinguished from other racially or ethnically homogeneous communities (for example, a predominately white or black suburban area) because of the inability of many residents to relocate from ghettos—even if they desire to do so. Poverty among many U.S. ghetto residents makes it difficult to out-migrate. The involuntary nature of ghetto areas often reflects constrained residential choices less evident in non-ghetto locales. Thus, as compared to historic ghettos that were formed due to direct or indirect racial or ethnic coercion and isolation, contemporary U.S. ghettos generally reflect class-based formation and the resulting isolation.

U.S. ghettos developed as a result of dramatic postindustrial economic, political, and social changes. Several urban migrations during the early and mid-twentieth century resulted in the exodus of many African Americans to such northern states as Illinois, New York, Michigan, and Pennsylvania in search of employment and to escape segregation and discrimination in the rural South. During the same period, persons of Hispanic descent migrated from Puerto Rico, Mexico, and Central and South America to New York, Miami, and Chicago for similar reasons. Cities provided industrious, less-educated persons with manufacturing jobs to earn a family wage.

After World War II (1939–1945), globalization and deindustrialization resulted in significant international and national economic restructuring. The United States responded to increased international economic competition by spurring technological advances and relocating industrial enterprises abroad and to the suburbs to increase profits. Increased efficiency and fewer manufacturing positions unduly affected residents in northern cities—especially ethnic minorities. From about 1967 to 1987, cities such as New York, Chicago, and Detroit lost more than 50 percent of their manufacturing jobs. By the late 1900s, many persons who had been gainfully employed in northern industrial cites became unemployed or underemployed or were forced to work in service occupations for substantially lower wages and reduced benefits.

The dramatic decline in manufacturing jobs affected a disproportionate percentage of African Americans and Hispanics. The out-migration of manufacturing firms coupled with an exodus of middle-class families and other businesses from cities to suburbs and abroad left many inner cities economically devastated. Economic restructuring coupled with the effects of poorly underserviced infrastructures, inadequate housing to accommodate a growing urban populace, group conflict and competition over limited jobs and space, the inability for many residents to compete for new technology-based jobs, and tensions between the public and private sectors led to the formation and growth of U.S. ghettos. Furthermore, housing discrimination in the form of redlining by lending institutions, discriminatory practices by realtors, and the development of large housing projects resulted in densely populated urban locales of primarily poor ethnic minorities. Economic challenges were exacerbated by the effects of historic and contemporary classism, segregation, and racism. The cumulative effects of these systemic forces

contributed to the existence and prevalence of concentrated urban poverty in many U.S. ghettos.

CONDITIONS IN GHETTOS

Ghettos were historically developed to physically isolate a group with clearly identifiable physical features and cultural markers. Contemporary U.S. ghettos have had similar effects on many African American and Hispanic residents. Whether the result of legal sanctions or due to societal norms and values, physical isolation in ghettos usually results in social, political, and economic isolation. Such separation also directly or indirectly conveys superior status and privilege on majority group members and, by default, inferior status and privilege on the segregated group.

Although the Venice Ghetto was actually a relatively wealthy section of town where moneylenders and merchants resided, overall, conditions in ghettos were and continue to be negative. Jews could maintain their cultural and religious practices, but a segregated existence meant political and social isolation from the larger society. Because Jews could not purchase land outside the ghetto, population increases resulted in overcrowded conditions and infrastructure problems characterized by narrow streets and tall houses. Jews were allowed to organize and maintain their own political system within the ghetto. However, they often needed official passes to travel outside the ghetto walls.

The Warsaw Ghetto of Nazi Germany housed almost 400,000 Jews and was the largest and possibly most notorious ghetto. These ghettos were walled off, and Jews were shot if they attempted to escape. Other horrific conditions included extreme overcrowding, limited food supplies rationed by the Nazis, poor sanitation, starvation, and disease. Jews who survived these circumstances were forced to contend with the ever-present threat of death or deportation to concentration camps. In 1942 systematic efforts were implemented to deport Jews from ghettos around Europe to eastern ghettos or to concentration camps such as Treblinka in Poland. Historians suggest that various direct and indirect ghetto uprisings broke out, but the majority of residents in the ghettos of Nazi Germany were killed.

Contemporary ghettos are generally characterized by neighborhood and household poverty, social isolation, segregation, discrimination, overcrowding, increased crime, neighborhood disinvestment, and political disempowerment. Ghetto residents are more likely to live in substandard housing, frequent understaffed hospitals and healthcare providers, and have limited access to gainful employment. Businesses such as grocery stores, banks, retailers, and other institutions needed to complete the daily round are also limited and often overpriced or underserviced as compared to their suburban counterparts. Children who reside in ghetto areas tend to attend ill-equipped schools and must often learn at an early age to negotiate potentially crime-ridden neighborhoods. Research also suggests that the life chances of many ghetto residents are constrained largely because their place of residence isolates them from important resources needed to locate gainful employment, establish informational networks, and interact consistently in the larger society. Political disenfranchisement in ghettos is usually a result of isolation by predominately white state-run governments from predominately ethnic minority residents in ghetto spaces. Although studies show that most ghetto residents subscribe to mainstream values and goals, limited opportunities and resources often constrain their chances to realize them.

Urban renewal efforts are underway in many inner-city ghettos—with varied results. In some instances, renewal has resulted in refurbished neighborhoods, increased tax bases, and strengthened infrastructures. Supporters of urban renewal efforts point to the in-migration of young professionals as an important factor in revitalizing ghettos. However, detractors suggest that gentrification benefits persons who in-migrate and are able to use their greater discretionary income to take advantage of depressed housing markets at the expense of existing, poor ethnic minorities who are often forced out of their homes because they cannot afford to live in the newly renovated, higher-taxed neighborhoods.

Research is inconclusive regarding exactly how to characterize experiences in contemporary ghettos. The prevailing economic, political, and social disenfranchisement does not suggest a positive portrait of life. However, studies attest to the adaptive, resilient nature of many residents that belie the harsh reality of their experiences. A comprehensive discourse on the effects and implications of ghetto life and needed interventions should consider the challenges associated with ghetto living, the strengths of persons who live in ghettos, and the role the larger society should play to improve ghetto conditions.

SEE ALSO *Cities; Neighborhoods; Shtetl*

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Sandra L. Barnes

GIBSON, WILLIAM

SEE *Matrix, The.*

GIDDENS, ANTHONY

1938–

Anthony Giddens was educated as a sociologist at Hull University and the London School of Economics (LSE). He held a lectureship at Leicester University before being appointed lecturer and subsequently professor of sociology in the University of Cambridge. In 1996 he left Cambridge to become director of the LSE.

Giddens was certain at the end of the 1970s that nineteenth-century thought, on certain themes of which sociology had tended to remain focused, was an inadequate basis on which to proceed. In particular, Talcott Parsons's (1902–1979) theory of the mid-twentieth century, supposedly resolving the main questions associated with these themes, had degenerated into an objectivistic, teleological framework in which the original "action" element had been lost, whilst his "interpretivist" opponents, while dealing with action and interaction, were unable to conceptualize "structure" in a satisfactory way. For Giddens, readdressing these issues in *The Constitution of Society* (1984), agency and structure are not merely mutually implicated in the sense that "structure" involves agents acting and acting is inconceivable apart from "conditions" and unintended consequences, they are the same. They merge in "practice." Structure is virtual. It exists only in doing, moment by moment. This virtual "rules and resources" is "instantiated" and simultaneously reproduced in the action it "recursively" permits, as actors draw upon it to act, their concrete actions making up "social systems." For critics of this, such as Margaret Archer (1990) and Nicos Mouzelis, there are certain important advantages to be gained from retaining the *dualism* of structure and agency, and not conflating them, and this need not mean returning to a sterile opposition between objectivism on the one hand and subjectivism on the other: Agency and structure should be seen as interrelated, but also as different kinds of things. This is only the most fundamental of the arguments critical of Giddens's work in all its aspects.

"Reflexivity" is at the core of Giddens's structuration theory, appearing in the shape of the self-monitoring actor, taken over and adapted from radical subjectivism. Agents' knowledge of the mechanism of system reproduction, used by them to control this reproduction, influences substantially the causal feedback loops effecting system reproduction. In *The Consequences of Modernity* (1990) this reflexivity moves into a more prominent position in Giddens's thinking than it had previously held; he sees it as being at the heart of what he began to call "late" or "radicalized" modernity. For it was reflexivity, both of the actor and of the social institution, that was becoming stepped up as tradition retreated more than in the "modern" past in the face of social relations that were increasingly "stretched" globally and lifted out of communal and face-to-face settings. ("Distanciation" or "stretching" of social relations in both time and space to form ever more extensive social systems was central to structuration theory.) In this phase of his development Giddens returned to the sociological analysis of modernity, the point from which he professed to have started out, resuming the interpretation of modern society that had been begun with the critique of historical materialism in *A Contemporary Critique of Historical Materialism*, vol. 1 (1981), and continued with his analysis of the nation-state in *The Nation-State and Violence* (1985). The latest phase has seen Giddens turning to politics.

Giddens became convinced in the 1990s that the ideological positions of the "first" modernity had become frozen and increasingly out of touch with the current detraditionalized, increasingly globalized social reality of the emerging "late" or "reflexive" modernity. The Left had become conservative in their clinging to the welfare state (the product of a now passed, post-war class compromise or social settlement) whereas neoliberal celebrants of the market were caught in the growing contradiction of advocating the advance of forces that undermined moral coherence, which they as conservatives also espoused. Giddens urged in *Beyond Left and Right* (1994) a "Third Way" between Left and Right. This was, for some, an imprecise set of recommendations attached to a vague idea. But Giddens did specify the need for negotiation in personal life and for a politics outside of the old structures: a "life politics" and a "generative politics," as he called them, by means of which people could seize hold of their own lives, taking advantage of the opportunities created by globalization and the retreat of the nation-state, recasting them themselves in a social environment located always at some point between "trust" (security) and "risk" (perceived danger). Basic trust is for Giddens an essential part of personality development, but now more than ever it must be "worked for" in intimate relationships; it can no longer be as taken for granted as it once was, and, moreover, exten-

sive locality-transcending social relations simultaneously require and place in jeopardy, through its very integralness, trust—the opposite of which is risk. Giddens's analysis of reflexive modernization was the key to the Third Way in ways spelled out in detail in *The Third Way* (1998)—for example, reflexivity in personal relations could form the basis for democratic renewal from the grassroots "upwards," and reaching beyond the nation-state, and was central to the "life politics" that Giddens saw taking shape around him in a radicalized modernity, where the global and the local interpenetrate, and with new social movements displacing the old institutionalized parties and historic ideologies of an earlier industrial period.

Giddens's action recommendations are locatable in his four institutional orders of modernity (industrialism, capitalism, administration-surveillance, and the military), but their principles could also be related, at least schematically, to the "rules" (signification and legitimation) and allocative and authoritative "resources" (domination) of his 1984 structuration schema. His influence on sociologists worldwide has been enormous, as is attested by the number of citations of his numerous works both scholarly and popular, the latter affecting parties and governments of a Third Way complexion. It is a measure of their author's distinction that the issues they raise continue to be debated around the world.

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Ian Varcoe

GIFT TAX

SEE *In Vivo Transfers.*

GIFTED AND TALENTED

The history of gifted education is filled with controversy and concerns regarding how best to define and assess giftedness, and also how best to serve those who are deemed to be in need of gifted education programs and services. Gifted education programs in public schools have also received national attention as a result of the low percentage of culturally and linguistically diverse students identified as gifted and served in these programs.

IDENTIFYING GIFTED STUDENTS

Federal-level initiatives provide guidance for local and state gifted program policies and practice. The 1993 National Excellence Report provided a foundation upon which advocates of gifted education can be proactive in defining giftedness and identifying and serving gifted students. According to the report:

> Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment. These children and youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields. They require services or activities not ordinarily provided by the schools. Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor. (USDE 1993, p. 27)

This definition may be the most culturally sensitive federal definition to date, with its focus on talent, potential, and comparisons of students of the same age who come from similar backgrounds and experiences. It also boldly states that giftedness exists in all groups, and that no group should have a monopoly on being identified and served.

In addition to developing this new definition of *gifted*, the Jacob K. Javits Gifted and Talented Students Education Program, enacted in 1988, supports demonstration grants, a national research center, and national leadership activities designed to focus attention on the needs of students with demonstrated or potential talent. It is now clear that conventional views of giftedness and traditional ways of identifying giftedness (e.g., using single IQ scores or standardized achievement tests) often create barriers for culturally and linguistically diverse and low-income students to gain access to gifted programs. Thus, the Javits Program is also important because priority funding is given to efforts to serve gifted and talented students who are economically disadvantaged, speak limited English, or have disabilities.

GIFTED PROGRAMS AND RACISM

Gifted education has encountered much criticism due to a legacy of racial inequality in the United States that has

Trends in the representation of minority students in gifted education programs from 1978 to 1992

Student population	1978	1980	1982	1984	1992
Hispanic American	6.8	9.0	8.6	13.2	13.7
	5.15	5.4	4.0	7.2	7.9
	(u = 25%)	(u = 40%)	(u = 53%)	(u = 45%)	(u = 42%)
American Indian	.8	.7	.5	.8	1.0
	.3	.3	.3	.3	.5
	(u = 62%)	(u = 57%)	(u = 40%)	(u = 62%)	(u = 50%)
Asian American	1.4	2.2	2.6	3.7	4.0
	3.4	4.4	4.7	6.8	7.0
	(o = 59%)	(o = 50%)	(o = 45%)	(o = 46%)	(o = 43%)
African American	15.7	20.1	25.8	24.5	21.1
	10.3	11.1	11.0	12.9	12.0
	(u = 33%)	(u = 45%)	(u = 57%)	(u = 47%)	(u = 41%)

Notes: Percentages are rounded; top number indicates percentage of student population and middle number represents percentage of gifted education. "o" indicates overrepresentation; "u" indicates underrepresentation. Percentage of underrepresentation was calculated using the following formula: 1− (percentage of gifted education program divided by percentage of school district). Source for 1978 to 1984 data: Chinn & Hughes (1987). Source for 1992 data; OCR Elementary and Secondary School Civil Rights Compliance Report (1992).

SOURCE: From "The underrepresentation of minority students in gifted education: Problems and promises in recruitment and retention" by Donna Y. Ford, 1998, *The Journal of Special Education*, 32, p. 7. Copyright date by PRO-ED, Inc. Reprinted with permission.

Table 1

often been tantamount to de facto segregation. Throughout its history, gifted education has not been truly desegregated. Rather, Hispanic American, American Indian, and African American students remain underrepresented by large percentages (see Table 1).

This historical problem is rooted in the deficit views of culturally diverse groups, as well as in the overreliance on intelligence tests as the single or primary means of selection. For example, in the early 1900s, many researchers who examined intelligence among students held the belief that culturally diverse children, particularly African American children, were innately inferior to white children (see Figure 1). In addition, many scholars maintained that poor children, regardless of race, were also intellectually inferior to white students from middle- and upper-income families. While scholars vehemently refuted the biased views that resulted from the use (or abuse) of intelligence tests, intelligence quotient (IQ) scores on standardized tests were used to reinforce and distort beliefs about the intellectual capacity of white children, and to perpetuate their superiority and worth within society.

The emergence of gifted education coincided with the end of the "separate but equal" doctrine, which was validated by the U.S. Supreme Court in *Plessy v. Ferguson* in 1856. This decision made it legal for white and black children to be educated in separate schools. As a result, white children generally went to schools of higher quality than black and other culturally diverse children. White children were believed to be innately higher in their capacity for academic achievement and educational attainment. They were also perceived to be smarter, more motivated, and more creative, and therefore more deserving of instructional services and facilities than black children, who, "by nature," required less access to or need for quality educational opportunity or instruction. Genes were considered to be the main determinant of destiny, while the environment—including education—was deemed to be of little significance for blacks (see Herrnstein and Murray 1994).

Today, some scholars continue to criticize gifted education because it is viewed as serving a racist or elitist

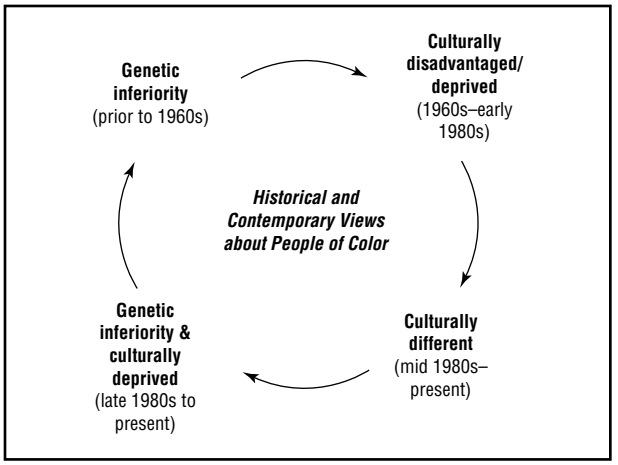

Figure 1

agenda seeped in educational politics (see Sapon-Shevin 1993; Wells and Serna 1996). More than any other educational program in public schools, gifted education faces the ongoing struggle to desegregate its programs. As of 2002, for example, black students were underrepresented by 60 percent in gifted programs nationally. Essentially, segregation, as it existed almost two centuries ago, seems to still be evident in gifted education.

Essentially, while the *Brown v. Board of Education* court decision in 1954 ended legalized segregation in public schools, the politics of education made way for a new form of segregation through gifted education. Cloaked behind the guise of valiant goals—such as meeting the needs of talented youth and preparing the next generation to be competitive in global markets—gifted education programs have primarily provided services to white students from middle- and upper-income families. Indeed, the concept of the "gifted child" remains synonymous with white middle-class children in the minds of too many public school educators and parents. In many ways, the advent of gifted education pleased white parents who were angry at the social and political changes occurring in the educational landscape that mandated schools to integrate, and not only were white parents infuriated by their children being forced to learn with "inferior" and "disadvantaged" black children, they also opposed white children being educated by black teachers.

Gifted education is based on the general premise that students with a high level of intellectual ability, or who excel in specific academic areas, need special instructional services to achieve their full potential. In essence, special instructional services (e.g., accelerated classes, enrichment programs, advanced academic experiences) for students with outstanding talent are essential to meet the gifted student's needs, just as special education services (e.g., remedial reading or tutoring) are essential for meeting the needs of students with learning disabilities. However, because of the historical racial inequity in programs for gifted students, gifted education still lacks essential support because it is seen as a modern form of promoting separate and unequal education. For example, the field of gifted education is plagued by the reality that standardized IQ testing, which was the primary tool that researchers used to perpetuate the inferiority of blacks and the superiority of whites, is still the primary method by which black and other diverse students are kept out of gifted programs.

Why do some want to keep gifted education segregated? Gifted students often receive the best instructional resources, the most effective or qualified teachers, and the lowest student-teacher ratios, all of which are critical to a quality education. Therefore, some parents may not want their children to remain in general education; they may aggressively push to have their children in gifted programs, even if they do not meet criteria. Further, some administrators may resist admitting more diverse students into gifted education classes if parents and community members are resistant to diversifying gifted (and advanced placement) classes, as has been found in several court cases investigated by the Office for Civil Rights.

To address the historical inequality in the representation of ethnic minorities in gifted education, the National Association for Gifted Children (NAGC) is being proactive by building upon the legacy of Dr. Mary M. Frasier, an early pioneer for underrepresented groups in gifted education. The primary purpose of NAGC's Mary Frasier Teacher Scholarship Fund for Diverse Talent Development is to increase culturally and linguistically diverse students' access to talent development opportunities through teacher training and support related to equity and excellence in gifted education. In addition, several scholars continue their efforts to eliminate identification criteria that adversely affect the representation of diverse students in gifted education.

SEE ALSO *Education, Unequal; Education, USA; Tracking in Schools*

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Donna Y. Ford
Tarek Grantham

GIFTEDNESS

SEE *Talent.*

GILDED AGE

Mark Twain and Charles Dudley Warner's *The Gilded Age* (1873), a satire of Americans' rush for material gain and political corruption in the years immediately following the Civil War, provided succeeding generations with a ready frame of reference for this period. Many historians' examinations of this era emphasized the political parties' keen competition and how the ruthless, if innovative, industrialists that Matthew Josephson dubbed "the robber barons" used a complaisant federal government to build vast fortunes from the United States's abundant natural resources. For several generations the Gilded Age (1866–1900) received far less attention from students of history than other eras in American history. But in recent years historians have argued that, together with the decades known as the Progressive Era (roughly 1900–1919), it represents a central chapter in the history of the United States. Examining aspects of American life beyond the robber barons and party politics, these accounts have shown how in these years Americans built a modern nation and grappled with its consequences.

The Gilded Age marked a major watershed in the history of American race relations. Historians have shown how in the period between the Civil War and the turn of the twentieth century white Americans decisively rejected the Civil War and Reconstruction's seeming promise of racial equality, and subjected African Americans, Chinese Americans, and other racial minorities to new systems of segregation, discrimination, and domination, as well as elaborate cultural rationales for their development.

In an industrial economy marked by severe depressions, a growing number of wage laborers found themselves seemingly consigned to lives of bitter toil with little hope for advancement. Many responded by struggling to build trade unions to represent their interests in dealings with employers, but faced judges and other public officials eager to promote business interests as representing the common good. In this context, employers and workers engaged in a series of violent clashes. These episodes led many intellectuals and members of the well-to-do and middle classes to perceive a fundamental crisis in American public life, a sentiment that informed both government officials' vigorous repression of strike activities and the rise of movements seeking reform through legislation and voluntary action.

An urban-industrial society characterized by increased wage labor and salaried professional work also manifested major changes in gender relations. Earlier in the nineteenth century many women had identified themselves as occupants of a "separate sphere" quite removed from public life and characterized by child-rearing and moral insight. But in the Gilded Age, growing numbers of women used their imputed status as moral arbiters to assert themselves in public life, even if they could not vote. While some continued to seek the ballot, others constructed reform organizations such as the Women's Christian Temperance Union to influence individual behavior and public policy through persuasion.

A new synthesis of scholarship on the Gilded Age has identified this period's nation-building dynamic as a multifaceted process of "incorporation." In addition to establishing effective control over many of their wage workers, managers of many large corporations also used their size and scope to establish significant advantages over their suppliers and customers in the marketplace. Government officials systematically removed Native Americans from the American West's more attractive locales to a set of reservations in this period. American officials extended this geographic dynamic of incorporation by making the Hawaiian Islands a territory and assuming Spanish colonial possessions, most notably the Philippines, after a one-sided conflict in 1898. In one sense these activities represented a nation-state exerting control over captured territories. But white Americans' development of elaborate theories for the subjugation of members of other races also represented a cultural process of incorporation. Many historians have concluded that these activities represented a desperate attempt to lend some semblance of hierarchy to a modernizing, democratic society increasingly breaking down more familiar sources of order, ranging from

simple geographic isolation to differences in education and literacy to slavery itself. Where many earlier scholars of the period described political corruption largely redeemed by the Progressive Era's reforms, the emerging synthesis has elaborated an alternative view of American national development, highlighting pervasive patterns of exclusion and injustice only partly mitigated by federal regulations and the mass social movements of the mid- to late twentieth century. A significant number of scholars continue to examine the dynamics of political corruption and reform, as well as other aspects of political, economic, and intellectual history. But in the early years of the twenty-first century this new synthesis has placed the Gilded Age firmly at the center of American historical discourse.

SEE ALSO *Beard, Charles and Mary; Cross of Gold; Industrialization; Nast, Thomas; Populism*

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Drew E. VandeCreek

GILLIGAN, CAROL
1936–

Carol Friedman Gilligan was born November 28, 1936, in New York City. Her book *In a Different Voice* ushered in an era of research and theory about gender differences that valued the voices of girls and women.

Gilligan grew up in New York City. She went on to do her undergraduate work at Swarthmore College, where she majored in English and history, graduating summa cum laude in 1958. She earned a master's degree in clinical psychology from Radcliffe College in 1960 and a PhD in social psychology from Harvard in 1964. She began teaching at Harvard with the psychologist Erik Erikson in 1967 and continued teaching at Harvard's School of Education, receiving tenure as a full professor in 1986. During her early years at the School of Education she co-taught a course with Lawrence Kohlberg, whom she considered a friend (although many biographies wrongly describe her as his student). As a teacher in the 1980s at the School of Education, she taught courses on the psychology of moral development and adolescence and was known for lectures integrating literature, mythology, biography, and history. In 1997 Gilligan was appointed to a newly endowed professorship at the Harvard Graduate School of Education, the Patricia Albjerg Graham Chair in Gender Studies, Harvard University's first position in gender studies. In 2002, shortly after the announcement of a 12.5 million dollar grant to the School of Education from Jane Fonda, who stated she was inspired by Carol Gilligan's work, Gilligan joined the faculty of New York University as a full-time professor in the schools of education and law.

In *In a Different Voice: Psychological Theory and Women's Development* (1982), Gilligan identified a kind of moral reasoning that was based on an ethic of care rather than an ethic of justice. Although the ethic of care has been identified as women's moral voice, the "different voice" Gilligan describes is "characterized not by gender but theme. Its association with women is an empirical observation, and it is primarily through women's voice that I trace its development" (p. 2). The voices of women and girls, she claimed, had been neglected by those who studied morality, such as Piaget and Freud. She pointed out first that these men and others based their theories of human development on a male model of separation and individuation, often studying, observing, or speaking only to boys and men and later describing as an afterthought how girls and women did not fit the norm. In this groundbreaking book, Gilligan criticized the work of Lawrence Kohlberg (whose theory was based on a study that included only adolescent boys), because women, in his six stages of moral development, seemed unable to advance beyond Stage 3, also known as the "good boy/nice girl stage." Kohlberg's research showed more men than women advancing to stages in which they preferred to use a morality that was based on contracts, individual rights, justice, and even what he called a universal morality; females were more likely to remain in adulthood in the so-named "conventional" morality stages. Through several studies that included interviews discussing Kohlberg's moral dilemmas as well as what Gilligan called "real-life" dilemmas, she showed girls and women to be responding not only to issues of justice, but issues of care. Although the point was not elaborated in *In a Different Voice*, she later argued that women's association with stage 3 was not structural, but a function of patriarchy. She then further developed the cultural/social side of her argument and the element of resistance so key to her work with girls. Over time Gilligan's work has been inaccurately described as suggesting that women are more caring than men. Rather, she argues that women are more likely to make moral decisions based on issues of care, inclusion, and personal connection, rather than on a more abstract and distant notion of justice.

The methodological shortcomings in others' works that Gilligan critiqued in *In a Different Voice* were the

impetus for new research methods used and developed in Gilligan's later work and in the work of her students. In this work she and those influenced by her continued to fault researchers for using a male perspective as a starting point. She also encouraged the increasing use of open-ended interviews focused on self in relation to a range of issues, an approach that had largely been dismissed as producing suspect "self-report" data. In addition, her work valued qualitative, thematic analysis. The "Listener's Guide," written with Lyn Mikel Brown, describes a voice-sensitive method attuned to a psyche in active dialogue with the sociopolitical realities of everyday life.

Following her publication of *In a Different Voice*, Gilligan herself continued to pursue qualitative research exploring the relational world of girls, resulting in *Meeting at the Crossroads* (1992), coauthored with Brown, and *Between Voice and Silence: Women and Girls, Race and Relationship* (1996), coauthored with students Jill McLean Taylor and Amy M. Sullivan. She has helped guide the work of former students, such as Janie Victoria Ward (*The Skin We're In*, 2000), Dana Jack (*Silencing the Self*, 1991, and *Behind the Mask*, 1999), Deborah Tolman (*Dilemmas of Desire*, 2003), Niobe Way (*Everyday Courage*, 1998), and Lyn Mikel Brown (*Raising Their Voices*, 1998, and *Girlfighting*, 2005). Her work has also been influential in feminist discourse theory, law, medicine, and philosophy. Gilligan was a founder of the Harvard Project on Women's Psychology and Girls' Development, and of Strengthening Healthy Resistance and Courage in Girls, a prevention project that also was expanded to include boys and men as her interests shifted to examine the plight of boys in Western society.

Gilligan's 2002 book *The Birth of Pleasure* summarizes themes of love and caring that were suggested in earlier work. Using the Cupid and Psyche myth as the quintessential Western love story, she discusses familiar themes of the objectification of women, the pitting of woman against woman in patriarchy, men's fear of the intimacy they long for, and "dissociation"—or the process by which women learn to forget or cover over what they know to be true and by which men learn to replace feelings of vulnerability and tenderness with masks of masculinity.

In 1992 Gilligan, the recipient of numerous awards, was given the prestigious Grawemeyer Award in Education. This is given to honor achievements in areas not recognized by the Nobel prizes. She was also named one of *Time Magazine*'s twenty-five most influential people in 1996. In 1997 she received the Heinz Award for knowledge of the human condition and for her challenges to previously held assumptions in the field of human development.

SEE ALSO *Kohlberg, Lawrence*

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Sharon Lamb

GINI COEFFICIENT

The Gini coefficient is the most popular measure of inequality in use today. The measurement is named for its developer, Corrado Gini (1884–1965), and is based on the Lorenz curve (Sen 1997; Xu 2004). Although the Gini was traditionally used to measure income as a measure of welfare, it is now often used to measure other variables such as expenditures, wealth, and even health.

The clearest way to portray the Gini coefficient is diagrammatically. Take a population of ten individuals, as shown in Table 1. If you sort the population from poorest to richest and graph the cumulative share of income against population, what you get is a Lorenz curve, as depicted by the curve in Figure 1. If every individual in the society had equal income, the graph would be the diagonal. But in any society, the poorest will have a share less than their proportion in the population, so the Lorenz curve will always be below the diagonal. The Gini coefficient is measured as the ratio of the area between the diagonal and the Lorenz curve (X) and the area under the

Individual	Share of Population	Individual Income	Cumulative Share of Income
1	0	0	0
2	10	2	2
3	20	3	5
4	30	4	9
5	40	6	15
6	50	8	23
7	60	9	32
8	70	11	43
9	80	15	58
10	90	17	75
	100	25	100
Total Income		*100*	

Table 1

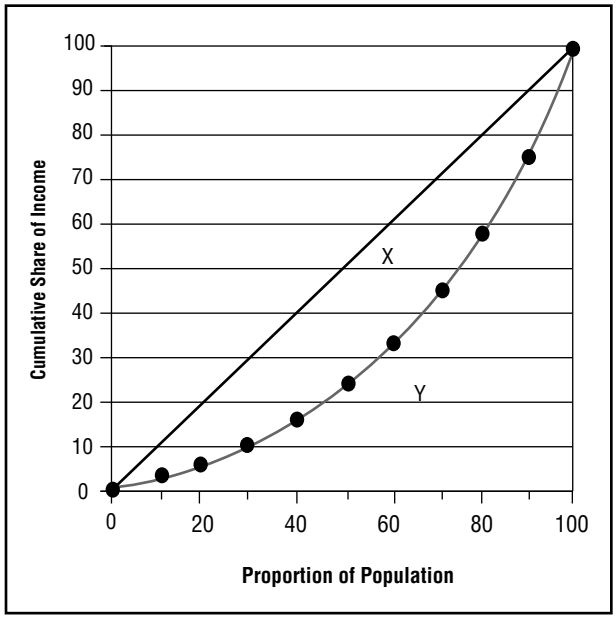

Figure 1

diagonal ($X + Y$). The formula for the coefficient can be stated as

$$G = (1/2n^2\mu)\Sigma_{i=1}^{n}\Sigma_{j=1}^{n}|y_i - y_j|$$

where n is the population, μ is the mean of incomes, y is income, and i and j are individuals in the population. This is effectively a sum of all pair-wise income inequalities in the population. The Gini coefficient is, thus, a measure of the overall inequality in the population (Sen 1997).

In Table 2 and Figure 2, in addition to the original distribution used above (labeled as *B*), we add two other distributions (*A* and *C*). As income inequality increases, the Lorenz curve moves farther away from the diagonal (see distribution *C*), and the opposite occurs as inequality decreases (see distribution *A*). In a society where income is equally shared, the area $X = 0$ because the Lorenz curve would coincide with the diagonal and the Gini coefficient would equal 0. In contrast, if all income is held by the richest individual in society, then $Y = 0$ and the ratio would equal 1. The Gini coefficient thus always lies between 0 and 1. The most common convention nowadays is to multiply the ratio by 100 and then report the Gini coefficient as a number between 0 and 100. One of the great strengths of the Gini is that any redistribution of income from a poorer person to a richer person results in an increase of the coefficient, and thus it captures distribution across the entire population rather than just at the mean.

Despite its popularity, the Gini suffers from the fact that there is no intuitive meaning to any particular magnitude of the coeffecient. Nor does any specific magnitude represent a unique distribution. A Gini of 30, for example, can represent two different distributions, and there is no objective way to differentiate the distributions. This occurs because Lorenz curves may cross. It follows from this that determining distributions that are highly unequal versus those that are not is more an empirical question.

		Individual Income			Cumulative Share of Income		
Individual	**Share of Population**	*A*	*B*	*C*	*A*	*B*	*C*
1	0	0	0	0	0	0	0
2	10	1	2	4	1	2	4
3	20	3	3	5	3	5	9
4	30	4	4	6	5	9	15
5	40	6	6	7	10	15	22
6	50	8	8	10	15	23	32
7	60	9	9	11	21	32	43
8	70	11	11	12	28	43	55
9	80	15	15	13	38	58	68
10	90	17	17	15	53	75	83
	100	47	25	17	100	100	100
Total Income		*100*	*100*	*100*			

Table 2

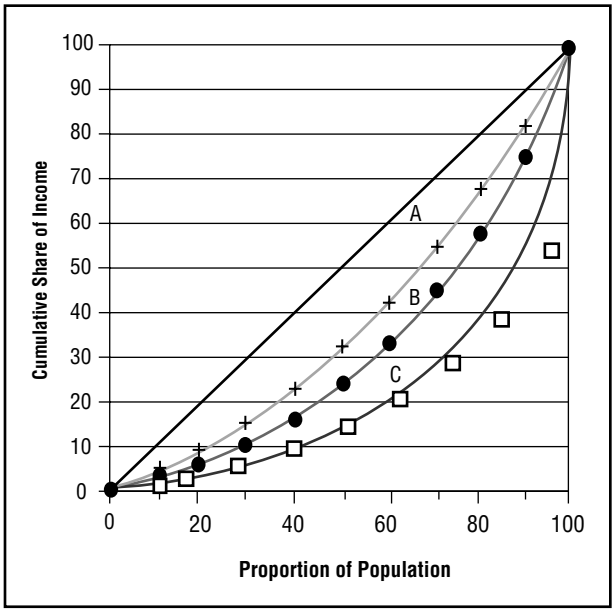

Figure 2

In order to give the reader some sense of what levels of inequality different sizes of Gini represent, Table 3 illustrates the average Gini coeffecients and the average level of income accruing to each quintile of the population for thirty-eight countries, from a dataset compiled by Klaus Deininger and Lyn Squire (1996). The thirty-eight countries were picked because they had a measurement of Gini that Deininger and Squire considered reliable and comparable across countries between 1990 and 1995, as well as information on the quintile distributions of income, which gives us more information on the underlying distribution. If we divide the countries evenly into three groups we find that the group with lowest inequality has Ginis that range from 22 to 30, the middle group from 31 to 34, and the most unequal group from 35 to 62. Because this last group has such high variation we divide the group into two at 45.

Although these observations do not encompass the whole range of measured distributions, they do provide us with some more information. On average, developing countries, particularly in Africa and Latin America, dominate the group of highly unequal countries, whereas the group of low inequality is dominated by European countries, particularly those that formerly belonged to the socialist bloc. For countries with low inequality, the richest 20 percent of the population earned less than 40 percent of national income, whereas for those with high inequality the richest earned over 47 percent, averaging close to 60 percent. In contrast, for the poorest 20 percent in the low-inequality countries earned between 7 and 11 percent of national income, whereas in the highly unequal countries they only earned between 2 and 4 percent of national income.

Since the late 1980s a number of strides have been made in estimating the Gini from functional forms including the diagrammatic methods discussed above, as well as in decomposing it so that one can estimate the impact of different components of income on inequality. For a good summary of this literature, see Xu (2004).

	Gini	Quintile 1	Quintile 1	Quintile 1	Quintile 1	Quintile 1	Number of Observations
Low Inequality	27	0.09	0.14	0.18	0.23	0.36	13
Range for Variable	21-30	0.07-0.11	0.13-0.15	0.17-0.20	0.21-0.25	0.33-0.39	
Average Inequality	33	0.07	0.12	0.17	0.24	0.40	13
Range for Variable	31-34	0.05-0.08	0.11-0.13	0.16-0.19	0.21-0.25	0.37-0.42	
Moderately High Inequality	39	0.05	0.11	0.16	0.24	0.44	7
Range for Variable	35-45	0.05-0.07	0.10-0.12	0.14-0.17	0.21-0.26	0.40-0.49	
High Inequality	54	0.03	0.07	0.12	0.20	0.57	6
Range for Variable	45-62	0.02-0.04	0.05-0.09	0.09-0.18	0.18-0.24	0.47-0.65	

Table 3

SEE ALSO *Development Economics; Inequality, Income; Inequality, Political; Kuznets Hypothesis; Lorenz Curve; Poverty, Indices of*

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Mwangi wa Gīthīnji

GINZBERG, ELI
1911–2002

Eli Ginzberg was born in New York City, the son of prominent rabbi Louis Ginzberg and the former Adele Katzenstein. He was the great-great-grandnephew on his father's side of the "Vilna Gaon," an eighteenth-century rabbi, Talmud scholar, kabbalist, and mathematician. The Vilna Gaon had studied Euclid, caused one of his students to translate Euclid into Hebrew, and was the author of "A Ram in Three Parts," a mathematical analysis of Genesis 15:9. His followers initiated the modern Zionist movement. The family thus belonged to the intellectual, political, and financial elite of the Jewish community.

Ginzberg earned the AB, AM, and PhD from Columbia University in 1931, 1932, and 1935, respectively. Wesley Clair Mitchell and E. R. A. Seligman were his principal mentors, and his graduate schoolmates included Abram L. Harris Jr., Joseph Dorfman, and Robert Dorfman.

Ginzberg's career may perhaps be best categorized as that of an entrepreneurial statesman of economic ideas in academia and government. Upon receiving the doctorate, he joined the economics faculty of Columbia Graduate Business School, remaining until his 1979 retirement. There, Ginzberg uniquely focused his research and teaching on labor, health, and race policy issues in economics. He taught three courses or seminars per semester for more than thirty-three years. He also was given occasional responsibilities in the Graduate Department of Economics, College of General Studies, Barnard College, College of Physicians and Surgeons, and the School of Public Health. In 1938, he and Mitchell offered a seminar titled Economic Change and Economic Theory in the economics department. In the School of Public Health he taught Political Economy of Health Care.

During World War II, Ginzberg served the United Jewish Appeal and many agencies in the federal government, including the White House and the surgeon-general's office. At the Five-Power Conference on Reparations for Non-Repatriable Victims of Germany in June 1946, he served as a U.S. delegate. He was awarded the medal for Exceptional Civilian Service from the War Department in 1946. As a consultant to the U.S. Army from 1946 to 1955, he played a role in the army's desegregation.

Back at Columbia Business School in 1950, Ginzberg was appointed director of the Eisenhower Center for the Conservation of Human Resources, a position he held until 1979. He was promoted to full professor in 1952.

He was involved with the establishment of the National Institutes of Mental Health (NIMH), being appointed a member of the National Mental Health Advisory Board in 1959. NIMH funded the nation's first community-based advocacy planning institute in Brooklyn in 1968, a project that employed black Columbia and Yale graduate students in economics and a White House Fellow. He was involved with the establishment of Medicare and Medicaid in 1965.

Ginzberg published at least 179 books and hundreds of articles, which may be categorized into six major themes: (1) history of economic thought, 2) labor economics, (3) industrial organization, (4) race and economics, (5) autobiography and biography, and (6) health economics.

His writings in the history of economic thought included "Studies in the Economics of the Bible" in the *Jewish Quarterly Review* (1932), the first systematic treatment of biblical economics since Adam Smith; his dissertation, "Adam Smith and the Founding of Market Economics" (1934); *The House of Adam Smith* (1964); *The House of Adam Smith Revisited* (1977); "Economics at Columbia: Recollections of the Early 1930s" (1990); and "Wesley Clair Mitchell" (1997).

In labor economics, Ginzberg's most important contributions were a theory of occupational choice and a general theory of the development and use of human resources. Most of his publications in this area addressed federal labor policy issues. He also served on the National Advisory Committee on Manpower Development and Training from 1962 to 1982.

Ginzberg's works in industrial organization contain his most important theoretical contributions. He developed the concept of a pluralistic economy including private, public, and nonprofit sectors, thus adding an explicit third sector to the private and public sectors of the mixed capitalist-socialist economy. The concept of the coequal third sector was the most striking view of the structure of a modern economy since Marx. It spawned a still growing international literature on the economics of nonprofit organizations (including most notably hospitals and universities) as a macrosector. Many interesting implications for welfare economics flooded the literature, led by Burton A. Weisbrod of the University of Wisconsin. Weisbrod argued that these organizations were substitutes for markets that had "failed," so they assumed the functions of the market. Others argued that participants in such organizations did not seek to optimize objective functions but only "satificed." Despite the empirical reality and growing significance of this sector, however, and the novelty of explanations for its existence, this literature may nevertheless be considered simply a more highly theoretical form of the utopian socialist literature of the early nineteenth century. In 1985 appeared the most interesting of all Ginzberg's works, *Beyond Human Scale: The Large Corporation at Risk*, with George Vojta. It showed the similarity of economic relations among micro-units of a macro-unit among such large-scale, complex organizations as corporations, the military, the Catholic Church, universities, and hospitals. The authors uniquely use the example of not-for-profit institutions whose pricing structures are "hidden," that is, utilize "transfer prices." Although explicit recognition of such prices dated to the 1890s and their naming to the 1950s, this was the first analysis of their implication for nongovernmental nonprofit organizations.

Ginzberg published more on the economics of race than any other nonblack economist of his time. Many of these publications addressed public policy as it affected racial issues.

Ginzberg published six biographies or autobiographies, including one on his father and one about a man from his father's hometown, Emanuel Piore, whose wife, Nora Kahn Piore, was a professor of public health economics with Ginzberg at the Columbia School of Public Health.

Ginzberg wrote more about heath economic policy than any other subject. Among his many associates in medical and health economics were Michael M. Davis, Walton H. Hamilton, George H. H. Soule, Hugh Smythe, Roscoe G. Leland, Algie M. Simons, Frank G. Dickinson, Nora Kahn Piore, Eveline M. Burns, and Michael Grossman. He opposed the Clinton heath plan of the early 1990s, largely because he thought the president was politically inept in its pursuit.

In 1983, Ginzberg's separate focus on labor and the nonprofit sector were joined by the *Monthly Labor Review* in an article containing statistics on the size of the labor force in that sector. This article subsequently was cited by twenty-eight publications.

Because his books and articles generally represented policy and empirical analyses rather than the high mathematical economics favored by most economic journals beginning in the 1950s, he was involved in no professional polemics, and his critics were so few as to be unidentifiable.

SEE ALSO *Capitalism, Black; Desegregation; Economics; Economics, Labor; Entrepreneurship; Harris, Abram L., Jr.; Health Economics; Industry; Jews; Medicaid; Medicare; Mitchell, Wesley Clair; Public Health; Public Policy; Race; Smith, Adam; Welfare; Work*

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Julian Ellison

GLASNOST

Glasnost is the Russian word for publicity, openness, the state of being public. It refers to a policy of openness in private and public discussions about social, economic, and cultural issues that was initiated by Mikhail Gorbachev

after his ascension to the leadership of the Union of Soviet Socialistic Republics (USSR) in 1985. Gorbachev tried to use open public discussions about the state of the country to generate grassroots political support for his policy of economic restructuring (perestroika) and to outmaneuver his political opponents within the Communist Party. It could be argued that Gorbachev envisioned glasnost as a sort of compensation for the temporary economic hardship that his perestroika program of reforms unavoidably involved.

As a result of the glasnost policy, many sensitive historical issues, such as the brutality of the regime of Joseph Stalin (1879–1953), were acknowledged and the Soviet Union's "official" history was rewritten. The policy also brought to public attention the economic stagnation in the country and permitted open criticism of government policies. It was one of the main aims of Gorbachev's glasnost policy to make the state and its entrenched elites accountable to the public by revealing the real economic situation and by allowing the Soviet people to express their wishes. Glasnost destroyed the myth that everyone was happy under the Soviet Union and praised the country's leadership, but the policy exposed many more fundamental problems than Gorbachev had expected.

It is generally believed that Gorbachev had planned to use the Leninist ideology to thoroughly reform the Soviet Union without destroying it. Nikita Khrushchev (1894–1971), an earlier Soviet leader, tried to reform the USSR using soft methods but was not successful, so Gorbachev may have thought that a policy like glasnost was his only chance to push the necessary economic reforms through. However, freedom of expression unleashed forces that Gorbachev could not control: The media started to aggressively criticize long-denied problems, especially the country's poor quality of life; revelations about the horrors of the Stalin era undermined Soviet political elites; and Moscow's grip on the Soviet republics weakened and nationalistic feelings revived. The rapid rise of nationalism and calls for independence in such places as Azerbaijan, Estonia, Georgia, Lithuania, Latvia, and Ukraine were important consequences of glasnost, which allowed and to some degree encouraged people to think about their sovereignty and independence. Thus, glasnost contributed to the eventual demise of the Soviet Union.

Glasnost achieved Gorbachev's aim of giving people freedom of expression, which before then had been strictly prohibited in the Soviet Union, but undermined his other aims and resulted in the collapse of the Soviet Union in 1991. Although Russia remains a relatively poor country, its citizens now have more freedom than at any other time in Russian and Soviet history. Glasnost also resulted in a renaissance in Soviet cultural and artistic life and in a revival of religion. Previously banned writers became widely read by the general public and new writers and artists emerged. *Glasnost* has also become one of the few Russian words commonly used in English, which shows the extent of its international influence.

SEE ALSO *Brezhnev, Leonid; Cold War; Communism; Gorbachev, Mikhail; Gulags; Iron Curtain; Khrushchev, Nikita; Stalin, Joseph; Union of Soviet Socialist Republics*

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Pavel Erochkine

GLASS CEILING

The expression *glass ceiling* has been used to describe artificial barriers based on attitudinal or organizational bias that prevent qualified individuals from advancing to positions of power offering higher salaries and more responsibility and authority. Research has shown that, compared to men and whites, women and racial minorities in professional occupations are concentrated in lower- and middle-level positions and are underrepresented in upper managerial ranks. Positive steps have been taken to promote equality of opportunity, ranging from affirmative action legislation to greater diversity in hiring and promotions on the part of employers. Yet, despite these widely publicized efforts, women and minorities still do not enjoy the same advancement opportunities as men and whites. The continued existence of a glass ceiling can be attributed to an interplay of cultural and structural factors.

There are a number of explanations for the existence of a glass ceiling. The concept of *homosocial reproduction* suggests that when there is imperfect information on the potential of a candidate, employers or managers generally prefer to hire or promote someone who looks and thinks

like them. (The questionable assumption underlying this argument is that people with similar gender, racial, or educational backgrounds tend to think and act alike.) This puts women and minorities are at a competitive disadvantage, because the majority of decisions regarding hiring and promotion are still made by men/whites.

There is much evidence to suggest that "who you know" (network ties) is as important as "what you know" (education, skills) in moving up the organizational hierarchy. Due to their comparatively recent entry into the labor market, women and minorities still have difficulty in setting up and expanding professional connections. Not being able to tap into the "old boy" network is detrimental to their career progress. To crack the glass ceiling, female and minority workers have had to build up their reputation and gain access to resources through relationships with people with status and authority inside and outside their organization, be they acquaintances, mentors, sponsors, or colleagues. Additionally, female and minority workers are especially vulnerable when they are present in only token numbers. Limited representation increases the pressure on them to perform, heightens their differences from the dominant group, and constrains their roles within the organization. This situation will inevitably improve as the presence of women and minorities increases over time.

Much evidence suggests that a range of discriminatory attitudes make women and minorities less likely to get as far as their male/white counterparts with similar backgrounds. Employers may be reluctant to groom women or racial minorities for leadership positions, owing to stereotypes they hold about members of certain groups as well as their concern about potential bias on the part of customers and male/white workers. Employers tend to view women as less dependable and less career-oriented, because of women's marriage and family responsibilities. Because of their marginal status in society, women and minorities may have difficulty in commanding respect or obedience from male/white subordinates or in exercising authority in negotiations or confrontations. Furthermore, management and administration have traditionally been considered masculine activities. The *queuing* theory postulates that discrimination results in a gender/race hierarchy in hiring and promotions. Employers tend to prefer male and white workers to female and minority workers. As a result, men/whites tend to monopolize the most desirable jobs, such as management positions, while women and minorities are relegated to low-paying or less-prestigious positions such as staff or technical work.

The existence of the glass ceiling can result in several outcomes for women and minorities:

1. Title inflation: For window-dressing purposes, firms may promote women and minorities at a relatively high rate to high-profile positions as tokens or glorified managers without conferring any real or additional authority upon them.
2. Job segregation by sex/race: To preserve the existing power structure in an organization and society, employers may place women and minorities in positions or departments that only allow them to supervise female or minority subordinates (e.g., affirmative action or human resource departments).
3. Career changes: The glass ceiling that limits how many women and minorities move up the organizational hierarchy may be a powerful incentive for them to contemplate alternative routes to improved occupational status, such as self-employment or setting up a business where they will be their own boss.

Compounding the cultural and structural factors already discussed, declining opportunities in middle and upper management resulting from corporate downsizing may have intensified competition between and discrimination against women and minorities.

SEE ALSO *Gender; Gender Gap; Inequality, Gender*

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Joyce Tang

GLAZER, NATHAN

1924–

Formerly professor of Education and Social Structure and now professor emeritus in the Graduate School of Education, Harvard University, Nathan Glazer (1924–) is also the coeditor of *The Public Interest*, assistant editor of *Commentary*, and contributing editor to *The New Republic*. He has been an influential and at times controversial figure in American public life due to his analyses of immigration, affirmative action, race relations, and multiculturalism. Closely associated with New York intellectuals such as Daniel Bell, Glazer was a student follower of Leon Trotsky (1879–1940), the Russian revolutionary. With the economic recovery that followed the Great Depression (1929–1932), Glazer, like many Jewish intellectuals, came to see capitalist America as a successful liberal democracy in which each successive wave of immigrants had been eventually incorporated into society and had benefited from growing economic prosperity. Glazer assumed that Americanization was an unproblematic process, but that optimism has been challenged by the fact that black progress appears to have come to an end in the 1970s. His critics have argued that the ethnic integration he described occurred because immigrants took on the mantle of whiteness in a society where anti-black racism was endemic.

Glazer collaborated with David Riesman on *The Lonely Crowd* (1950), and his first academic publication, *The Social Basis of American Communism*, appeared in 1961. However, Glazer first attracted academic attention through his publications on race and ethnicity, such as *American Judaism* (1957) and his collaborations with Daniel Moynihan (1927–2003), *Beyond the Melting Pot* (1963) and *Ethnicity: Theory and Practice* (1975). Various articles on these topics appeared as *Ethnic Dilemmas, 1964–1982* (1983).

An early critic of Great Society programs, Glazer has emerged as an influential figure in American politics, opposing affirmative-action programs in support of black Americans. In *Affirmative Discrimination* (1975)—a collection of essays dating back to the early 1970s—Glazer claimed that the apparent failure of black Americans to achieve assimilation and social mobility in an affluent American society was the result of fragmented families, declining inner-city schools, and disorganized communities. Glazer concluded that the main problem in the United States was not systematic racism, but employment discrimination against blacks. In *Beyond the Melting Pot*, Glazer and Moynihan argued that it is because black Americans have suffered profoundly from the effects of slavery that they have not experienced the upward social mobility enjoyed by many ethnic minorities. Repairing this deep-seated historical problem of black Americans was beyond the capacity of social policies. Glazer has therefore been one of the main proponents of the black dysfunctionality hypothesis that has been embraced by Daniel Moynihan, Edward Banfield, and Richard Herrnstein, and his arguments against affirmative action policies were significant in the growth of neoconservatism in American public life. Critics such as Stephen Steinberg (see Steinberg's *Turning Back: The Retreat from Racial Justice in American Thought and Policy*, 1995) have argued that Glazer's policy prescriptions amount to blaming the victim.

Glazer has also been influential in the movement against liberal policies in multicultural school curricula. In *We Are All Multiculturalists Now* (1997) and *Sovereignty under Challenge* (2002) he claims that a multicultural education compromises historical truth and erodes national unity through the "Balkanization" of the American republic. Glazer himself rejects the neoconservative label and has been critical of small groups whose veto power keeps controversial subjects out of the school curricula, thereby, in his estimation, creating a bland, unreal America.

SEE ALSO *Education, Unequal; Moynihan, Daniel Patrick*

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Bryan S. Turner

GLOBAL WARMING

Understanding the causes of and responses to global warming requires interdisciplinary cooperation between social and natural scientists. The theory behind global warming has been understood by climatologists since at least the 1980s, but only in the new millennium, with an apparent tipping point in 2005, has the mounting empirical evidence convinced most doubters, politicians, and the general public as well as growing sections of business that global warming caused by human action is occurring.

DEFINITION OF GLOBAL WARMING

Global warming is understood to result from an overall, long-term increase in the retention of the sun's heat around Earth due to blanketing by "greenhouse gases," especially CO_2 and methane. Emissions of CO_2 have been rising at a speed unprecedented in human history, due to accelerating fossil fuel burning that began in the Industrial Revolution.

The effects of the resulting "climate change" are uneven and can even produce localized cooling (if warm currents change direction). The climate change may also initiate positive feedback in which the initial impact is further enhanced by its own effects, for example if melting ice reduces the reflective properties of white surfaces (the "albedo" effect) or if melting tundra releases frozen methane, leading to further warming. Debate continues about which manifestations are due to long-term climate change and which to normal climate variability.

SPEEDING UP THE PROCESS

Global warming involves an unprecedented speeding up of the rate of change in natural processes, which now converges with the (previously much faster) rate of change in human societies, leading to a crisis of adaptation. Most authoritative scientific bodies predict that on present trends a point of no return could come within ten years, and that the world needs to cut emissions by 50 percent by mid twenty-first century.

It was natural scientists who first discovered and raised global warming as a political problem. This makes many of the global warming concerns unique. "Science becomes the author of issues that dominate the political agenda and become the sources of political conflict" (Stehr 2001, p. 85). Perhaps for this reason, many social scientists, particularly sociologists, wary of trusting the truth claims of natural science but knowing themselves lacking the expertise to judge their validity, have avoided saying much about global warming and its possible consequences. Even sociologists such as Ulrich Beck and Anthony Giddens, who see "risk" as a key attribute of advanced modernity, have said little about climate change.

For practical purposes, it can no longer be assumed that nature is a stable, well understood, background constant and thus social scientists do not need direct knowledge about its changes. Any discussion of likely social, economic, and political futures will have to heed what natural scientists say about the likely impacts of climate change.

GROWING EVIDENCE OF GLOBAL WARMING

While originally eccentric, global warming was placed firmly on the agenda in 1985, at a conference in Austria of eighty-nine climate researchers participating as individuals from twenty-three countries. The researchers forecast substantial warming, unambiguously attributable to human activities.

Since that conference the researchers' position has guided targeted empirical research, leading to supporting (and increasingly dire) evidence, resolving anomalies and winning near unanimous peer endorsement. Skeptics have been confounded and reduced to a handful, some discredited by revelations of dubious funding from fossil fuel industries.

Just before the end of the twentieth century, American researchers released ice-thickness data, gathered by nuclear submarines. The data showed that over the previous forty years the ice depth in all regions of the Arctic Ocean had declined by approximately 40 percent.

Five yearly aerial photographs show the ice cover on the Arctic Ocean at a record low, with a loss of 50 cubic kilometers annually and glacier retreat doubling to 12 kilometers a year. In September 2005 the National Aeronautics and Space Administration (NASA) doubled its estimates of the volume of melted fresh water flowing into the North Atlantic, reducing salinity and thus potentially threatening the conveyor that drives the Gulf Stream. Temperate mussels have been found in Arctic waters, and news broadcasts in 2005 and 2006 have repeatedly shown scenes of Inuit and polar bears (recently listed as endangered) cut off from their hunting grounds as the ice bridges melt.

In 2001 the Intergovernmental Panel on Climate Change (IPCC), the United Nation's scientific panel on climate change, had predicted that Antarctica would not contribute significantly to sea level rise this century. The massive west Antarctic ice sheet was assumed to be stable. However, in June 2005 a British Antarctic survey reported measurements of the glaciers on this ice sheet shrinking. In October 2005 glaciologists reported that the edges of the Antarctic ice sheets were crumbling at an unprecedented rate and, in one area, glaciers were discharging ice three times faster than a decade earlier.

In 2005 an eight-year European study drilling Antarctic ice cores to measure the past composition of the atmosphere reported that CO_2 levels were at least 30 percent higher than at any time in the last 65,000 years. The speed of the rise in CO_2 was unprecedented, from 280 parts per million (ppm) before the Industrial Revolution to 388 ppm in 2006. Early in 2007 the Norwegian Polar Institute reported acceleration to a new level of 390 ppm. In January 2006 a British Antarctic survey, analyzing CO_2 in crevasse ice in the Antarctic Peninsula, found levels of CO_2 higher than at any time in the previous 800,000 years.

In April 2005 a NASA Goddard Institute oceanic study reported that the earth was holding on to more solar energy than it was emitting into space. The Institute's director said: "This energy imbalance is the 'smoking gun' that we have been looking for" (Columbia 2005).

The second IPCC report in 1996 had predicted a maximum temperature rise of 3.5 degrees Fahrenheit by the end of the twenty-first century. The third report, in 2001, predicted a maximum rise of 5.8 degrees Fahrenheit by the end

of the twenty-first century. In October 2006 Austrian glaciologists reported in *Geophysical Research Letters* (Kaser et al.) that almost all the world's glaciers had been shrinking since the 1940s, and the shrinking rate had increased since 2001. None of the glaciers (contrary to skeptics) was growing. Melting glaciers could pose threats to the water supply of major South American cities and is already manifest in the appearance of many new lakes in Bhutan.

In January 2007 global average land and sea temperatures were the highest ever recorded for this month; in February 2007 the IPCC Fourth Report, expressing greater certainty and worse fears than the previous one, made headlines around the world. In 1995 few scientists believed the effects of global warming were already manifest, but by 2005 few scientists doubted it and in 2007 few politicians were willing to appear skeptical.

Although rising temperatures; melting tundra, ice and glaciers; droughts; extreme storms; stressed coral reefs; changing geographical range of plants, animals, and diseases; and sinking atolls may conceivably all be results of many temporary climate variations, their cumulative impact is hard to refute.

ANOMALIES AND REFUTATIONS

The science of global warming has progressed through tackling anomalies cited by skeptics. Critics of global warming made attempts to discredit the methodology of climatologist Michael Mann's famous "Hockey stick" graph (first published in *Nature* in 1998). Mann's graph showed average global temperatures over the last 1,000 years, with little variation for the first 900 and a sharp rise in the last century. After more than a dozen replication studies, some using different statistical techniques and different combinations of proxy records (indirect measures of past temperatures such as ice cores or tree rings), Mann's results were vindicated. A report in 2006 by the U.S. National Academy of Sciences, National Research Council, supported much of Mann's image of global warming history. "There is sufficient evidence from the tree rings, boreholes, retreating glaciers and other 'proxies' of past surface temperatures to say with a high level of confidence that the last few decades of the twentieth century were warmer than any comparable period for the last 400 years." For periods before 1600, the 2006 report found there was not enough reliable data to be sure but the committee found the "Mann team's conclusion that warming in the last few decades of the twentieth century was unprecedented over the last 1,000 years to be plausible" (National Academy of Science press release 2006).

Measurements from satellites and balloons in the lower troposphere have until recently indicated cooling, which contradicted measurements from the surface and the upper troposphere. In August 2005 a publication in *Science* of the findings of three independent studies described their measurements as "nails in the coffin" of the skeptics' case. These showed that faulty data, which failed to allow for satellite drift, lay behind the apparent anomaly.

Another anomaly was that observed temperature rises were in fact less than the modelling of CO_2 impacts predicted. This is now explained by evidence on the temporary masking properties of aerosols, from rising pollution and a cyclical upward swing of volcanic eruptions since 1960.

Critics of global warming have been disarmed and discredited. Media investigations and social research have increasingly highlighted the industry funding of skeptics and their think tanks, and the political pressures on government scientists to keep silent. Estimates of the catastrophic costs of action on emissions have also been contradicted most dramatically by the British Stern Report in October 2006. Many companies have been abandoning the skeptical business coalitions. The Australian Business Round Table on Climate Change estimated in 2005 that the cost to gross domestic product of strong early action would be minimal and would create jobs.

SCIENTIFIC CONSENSUS

In May 2001 sixteen of the world's national academies of science issued a statement, confirming that the IPCC should be seen as the world's most reliable source of scientific information on climate change, endorsing its conclusions and stating that doubts about the conclusions were not justified.

In July 2005 the heads of eleven influential national science academies (from Brazil, Canada, China, France, Germany, India, Italy, Japan, Russia, the United Kingdom, and the United States) wrote to the G8 leaders warning that global climate change was "a clear and increasing threat" and that they must act immediately. They outlined strong and long-term evidence "from direct measurements of rising surface air temperatures and subsurface ocean temperatures and from phenomena such as increases in average global sea levels, retreating glaciers and changes to many physical and biological systems" (Joint Science Academies Statement 2005).

There are many unknowns regarding global warming, particularly those dependent on human choices; yet the consequences for society of either inadequate action or of any effective responses (through reduced consumption or enforced and subsidized technological change) will be huge. It is, for example, unlikely that the practices and values of free markets, individualism, diversity, and choice will not be significantly modified either by economic and political breakdowns or alternatively by the radical measures needed to preempt them.

INADEQUATE ACTION AND NEEDED TRANSFORMATIONS

Kyoto targets are at best a useful first step. However, even these targets, which seek to peg back emissions to 1990 levels by 2010, are unlikely to be met. World CO_2 emissions in 2004 continued to rise in all regions of the world, by another 4.5 percent, to a level 26 percent higher than in 1990. A rise of over 2 degrees is considered inevitable if CO_2 concentrations pass 400 ppm. At current growing emission rates, the concentration would reach 700 ppm by the end of the twenty-first century. The continuing industrialization of China, recently joined by India, points to the possibility of even faster rises than these projections indicate.

If unpredictable, amplifying feedback loops are triggered, improbable catastrophes become more likely. The Gulf Stream flow could be halted, freezing Britain and Northern Europe. Droughts could wipe out the agriculture of Africa and Australia, as well as Asia, where millions depend on Himalayan melt water and monsoon rains. If the ice caps melt completely over the next centuries, seas could rise by 7 meters, devastating all coastal cities. Will the human response to widespread ecological disasters give rise to solidarity and collective action, such as the aid that came after the 2004 Asian Tsunami or to social breakdowns, as seen in New Orleans after 2005's Hurricane Katrina and in the Rwandan genocide?

Social and technical changes with the scale and speed required are not unprecedented. The displacement of horsepower by automobiles, for example, was meteoric. Production of vehicles in the United States increased from 8,000 in 1900 to nearly a million by 1912. Substantial regulation or differential taxation and subsidies would be indispensable to overcome short term profit motives and free riding dilemmas (where some evade their share of the cost of collective goods from which they benefit). Gains in auto efficiency in the 1980s, for example, were rapidly reversed by a new fashion for sport utility vehicles.

The debates that have emerged in the early twenty-first century have been related to responses, with different winners and losers, costs, benefits, dangers, and time scales for each response. Advocates of reduced energy consumption or increased efficiency, or energy generation by solar, wind, tidal, hydro, biomass, geothermal, nuclear, or clean coal and geo-sequestration, argue often cacophonously. Yet it seems probable that all these options are needed.

It will be essential for social and natural scientists to learn to cooperate in understanding and preempting the potentially catastrophic collision of nature and society. In order to accomplish this, market mechanisms; technological innovation; international, national, and local regulations; and cultural change will all be needed. Agents of change include governments, nongovernmental organizations, and public opinion, but the most likely front-runner might be sectors of capital seeking profit by retooling the energy and transport systems, while able to mobilize political enforcement.

SEE ALSO *Disaster Management; Greenhouse Effects; Science*

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Constance Lever-Tracy

GLOBALIZATION, ANTHROPOLOGICAL ASPECTS OF

In popular and scholarly discourse, the term *globalization* is widely used to put a name to the shape of the contemporary world. In the realms of advertising, policy making,

politics, academia, and everyday talk, *globalization* refers to the sense that we are now living in a deeply and increasingly interconnected, mobile, and sped up world that is unprecedented, fueled by technological innovations and geopolitical and economic transformations. As a way to name our contemporary moment, the term *globalization* entered popular media and advertising in the early 1990s (Tsing 2000). After the fall of the Berlin Wall in 1989 and the breakup of the Soviet Union, enthusiasm accelerated for increasing international trade, deregulating national economies, privatizing the state, structurally adjusting developing-world economies, and increasing the transnationalization of corporations. *Globalization* was the new term that signaled this triumph of the capitalist market. As social science became increasingly focused on globalization, theories of globalization emphasized the transformations in labor, capital, state, and technology that have created a heightened sense of global interconnection or what has been called by the geographer David Harvey "time-space compression" (Harvey 1989).

As globalization has become a dominant narrative of our times, it also has become so for the discipline of anthropology, where it is both a specific object of methodological and theoretical reflection and one of the dominant horizons for a wide variety of scholarship. It became an increasingly central preoccupation at a time when the discipline was in crisis, both methodologically and theoretically. Anthropological attempts to grapple with globalization were crucial for reworking the anthropological concept of culture and for reconfiguring ethnographic methodology. In so doing, the anthropology of globalization has expanded and nuanced dominant theories of globalization while raising questions about its effects, scope, and reach.

Dominant theories of globalization are, more often than not, macrosociological, emphasizing large-scale perspectives on economic, political, and cultural transformations that are understood to either fuel or be the effects of globalization. One of the key contributions of the anthropology of globalization has been to emphasize the interconnection between what is called the "local" and the "global," emphasizing the interplay between large-scale global transformations and the realities of long-standing social and cultural worlds. An attention to this interplay has led to a focus on mapping and naming the large-scale shifts in culture and political economy that constitute globalization—something that characterizes much literature on globalization across the social sciences—but also a focus on people's everyday lived experiences and their transformations under conditions of globalization.

While the local-global framework of analysis shifted the macro, horizontal view of dominant theories of globalization, it also contributed to rethinking the conventional scales of ethnographic analysis. By the late 1980s the highly localized, isolated, and holistic frameworks that characterized ethnographic methodology, which is often divorced from attention to larger power structures and cultural interactions, had come under scrutiny. Whereas the anthropology of globalization emphasized the local in the face of assertions about the dominance and power of large-scale global processes, within the discipline itself contextualizing the local within the global was a key way anthropology began to shift its own frameworks for understanding the productions of culture and meaning within the contemporary world. This has led to new ways of thinking about ethnography beyond a focus on the purely place-based, local context, ones that emphasize multisited ethnography, ethnography across social scales, and ethnographies of networks, among others.

The framework of the local-global goes along with a central focus on the cultural dimensions of globalization. Dominant theories of globalization understand it as a primarily economic and political process. If these theories do pay attention to the cultural dimensions of globalization, it is often to argue that economic and political transformations that underlie globalization lead to cultural homogenization, often understood as "Americanization." This thesis is often rendered in terms of the cultural consequences of dominant U.S. commodity exports such as McDonald's and U.S. television programs. The anthropology of globalization, in particular the work of Arjun Appadurai, has argued that globalization is not a monolithic U.S. export but rather a "disjunctive," heterogeneous process with multiple centers of influence and interaction (Appadurai 1996). Further, culture is not simply derivative of economy and politics. The emphasis on people's experiences, lived realities, and what Appadurai calls the "social imaginary" has led to an emphasis on notions of agency and resistance in the face of large-scale global processes and transformations, ones that create cultural worlds that overlap but are not simply derivative of dominant capital and labor "flows." This has led to an emphasis on heterogeneous, multiple, and varied cultural responses to globalization, ones that emphasize the production of meaning within localized contexts.

An emphasis on the cultural dimensions of globalization has complicated theories of globalization focused on economy and politics, but it also has been central to transforming the anthropological concept of culture. The critique of ethnography in the late 1980s went hand in hand with a rethinking of the culture concept, which was also understood to be overly holistic, consensual, isolated, and divorced from power. Examining the productions of culture within a global framework that emphasizes everyday life as it interacts with the increasing importance of mass media and migration, among other factors, has challenged the ways anthropology has assumed the isomorphism

between place and culture. The anthropology of globalization has paid significant attention to the deterritorialization of culture, which has led to a more mobile and dynamic sense of cultural production.

Anthropological scholarship on globalization is vast and varied. Ethnographies of labor, work, and capital have examined inequality and opportunity within free-trade zones and under new conditions of migration, focusing on issues of gender, generation, and class. A significant body of work has explored the experiences of migrants, particularly on identity formation and nationalism within various diasporic and transnational communities. Another important area of research has explored the impact of new consumer and commodity regimes, and significant attention has been paid to the effects and experiences of new media and other technologies on various axes of identity formation, including gender, youth, class, and nation. Increasing attention is also being paid to the effects of globalization on social movements, politics, and community organizing. Finally, significant work has examined the role of the state and transformations in nation-state formation in the context of globalization.

Although the conceptualization of "local-global" has been instrumental in challenging overly homogenizing and macrosociological views of globalization, it sometimes has produced an overly romanticized and simplistic view of the local as a space of resistance and authenticity. The anthropology of globalization continues to produce dynamic work that refines and complicates our sense of what constitutes the local, with attention to the intersection between history and culture at multiple scales that include the local, regional, and national as they crisscross each other in and through transnational interactions. A key challenge for the anthropology of globalization is in maintaining its assumption of the global as the space of homogeneity while arguing against this homogeneity through locating particularity and difference within the realm of the local. Contemporary work in the anthropology of globalization is complicating our sense of what constitutes the global, emphasizing the productions of locality within global capitalism and demonstrating the ways the global itself is not some abstract set of large-scale social processes; instead, it has its own particularities that can be tracked and named (Tsing 2000). Finally, anthropology continues to debate and explore what has been called the "abjection" of globalization (Ferguson 2002). The question of whether globalization is a good or a bad thing, particularly for the world's poor, has been a subject of popular and political struggles that has fueled a worldwide antiglobalization movement. Anthropology has emphasized both the cultural resilience and creativity of local populations under conditions of globalization while recognizing new conditions and structures of exploitation and vulnerability. Although some argue that there is no singular notion of globalization that can be termed "good" or "bad"—only an altered terrain of struggle and hope in different arenas—others seek to track, in multiple ways, structures of expanding opportunity or greater exploitation under conditions of globalization.

SEE ALSO *Americanism; Culture; Cyberspace; Empire; Geography; Internet; Neoliberalism; Sociology, Macro-; State, The; Technological Progress, Economic Growth; Technological Progress, Skill Bias; Telecommunications Industry*

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Ritty Lukose

GLOBALIZATION, SOCIAL AND ECONOMIC ASPECTS OF

Since the 1970s and 1980s, the increasing intensity of international economic exchange, the rising prominence and influence of international organizations, the diffusion of cultural products across national boundaries, the spanning of social ties across international borders, and global environmental problems have all placed globalization prominently on the agenda of social science. The definition of *globalization* remains contested, but globalization can be conceptualized as a multidimensional process of international network formation. (Globalization could also be understood as an ideology, but this would more accurately be termed *globalism.*) The network metaphor clarifies the concept of globalization by highlighting both the *nodes* (e.g., people, organizations, and states) and the *relations* (e.g., trade, investment, organization membership, consumption, and migration) that are central to the globalization process. Thinking about globalization as multidimensional network formation is also a useful heuristic for understanding the established facts and unresolved debates surrounding the phenomenon. Moreover,

it helps differentiate the multiple levels of analysis inherent in the process: globalization involves local, regional, national, international, and world levels of social life.

Below, this entry employs the network heuristic to discuss the central issues in the social science of globalization. The discussion begins by exploring relatively settled terrain: the multiple dimensions of globalization. From there, the entry moves to rockier ground: the questions of whether globalization is really new, how extensive it is, and precisely what effects it has.

FIVE DIMENSIONS OF GLOBALIZATION

Cross-national connections are created in the economic, political, cultural, social, and environmental domains. Although these dimensions necessarily overlap, it is analytically useful to distinguish them. Economic globalization results when corporations go multinational, either by selling their products in other countries, buying corporations located in foreign countries, or opening branch offices or subsidiaries outside their home country. Multinational corporate expansion, and the consumption of foreign-sourced goods and services, aggregate into exports, imports, and investment relations among national economies. Political globalization, or the formation of international connections among elected officials, bureaucrats, judges, social movement activists, and states, has also generated intense interest. Political globalization results in part through the formation of intergovernmental organizations (IGOs) like the United Nations and the World Trade Organization, and international nongovernmental organizations (INGOs) like the International Committee of the Red Cross. For instance, Anne-Marie Slaughter (2004) shows how political officials, especially regulators and judges, weave a web of global governance and "world order" through international ties formed by these organizations.

In the cultural field, the major world religions, media conglomerates, multinational corporations, and international tourism transmit and translate meaning (embedded in faith traditions, ideas, products, and practices) and symbols across international boundaries. The development of the international communication infrastructure (radio, satellites, intercontinental telecommunication cables) and the rapid expansion of communication technologies (Internet, cell phones, television) foster this process. Closely related is social globalization, or transnational connections formed by mobile individuals as they create social relationships. For instance, the density of international ties across countries grows as migrants maintain connections to their origin countries (e.g., through remitting money back home) while building new relationships in their destination countries (e.g., through work, community, and family).

Many identify the environment as a fifth dimension of globalization. If nations are the nodes in international networks, then environmental problems create connections by crossing borders: global warming, ozone depletion, and acid rain have all been defined by social movement activists and scientists as international problems that require international solutions. Indeed, environmental problems illustrate how the various dimensions of globalization sometimes reinforce one another: social movement activists bind together through international social movement organizations (social globalization) to spread awareness of environmental problems (cultural globalization) caused in part by multinational corporations (economic globalization), and urge the adoption of international agreements like the 1997 Kyoto Protocol on greenhouse gas emissions (political globalization).

WHEN AND WHERE IS GLOBALIZATION?

While the example of the Kyoto Protocol illustrates how the dimensions of globalization can cohere, intense international debate over the protocol raises questions about the pace and periodization of globalization, and, more fundamentally, about how "global" globalization is. Indeed, debate over the timing and extent of globalization animates much research. For instance, world-systems theorists such as Immanuel Wallerstein and Christopher Chase-Dunn trace the millennia-long evolution of international economic and political systems, and world-society theorists such as John Meyer and John Boli view social and cultural globalization through a long historical lens that looks back over a century. Social scientists have not reached consensus on when globalization in its various forms began, but there is an emerging consensus that the world has experienced a renewed and possibly distinct economic globalization since the mid-1970s (i.e., after the oil crises and the collapse of the Bretton Woods system of fixed exchange rates in 1973). Only during this period did the level of international trade surpass its previous peak in the early twentieth century. Thus, economic globalization may follow waves, with crests of integration followed by troughs of separation.

In the political dimension, there is also evidence that globalization substantially intensified in the latter half of the twentieth century. With the establishment of the United Nations and related IGOs (including the International Monetary Fund, World Bank Group, International Labour Organization, and World Health Organization), a global governance framework emerged. It has fostered the creation of thousands of intergovernmental and nongovernmental organizations that generate a network of international association (Boli and Thomas 1999). Key nodes in this network include regional orga-

nizations like the European Union (EU) that liberalize trade and create common policies among nations within negotiated geographical boundaries. The EU has progressed furthest toward the creation of a regional market and government, as it has allowed the free movement of people across borders, eliminated barriers to trade, created a supranational court, and established supranational policies. The EU, established as the European Economic Community in 1957, may have inspired regional integration efforts in other parts of the world, including Southeast Asia—the Association of Southeast Asian Nations (ASEAN, 1967); South America—Mercado Común del Sur (Southern Common Market or Mercosur, 1991); North America—the North American Free Trade Agreement (NAFTA, 1994); Central America—the Central American Common Market (CACM, 1960); and Africa—the Organization of African Unity (OAU, 1963). These organizations may transform world politics by changing how states interact and by generating new layers of policy and politics.

The accelerating economic liberalization and polity construction within geographical regions fuels the debate over where globalization actually happens (indeed, a large literature addresses whether regional integration creates "stepping-stones" or "stumbling blocks" to a fully integrated global system). Here again, the network heuristic helps. Some images of globalization depict a world where national nodes worldwide are increasingly interconnected without regard to place, while others allow for a more fragmented and uneven network where some nodes are linked much more densely than others. These contrasting images manifest in research that has shown, for instance, that Western Europe is much more densely intertwined in both the economic and political dimensions than nations in other world regions.

WHAT DOES GLOBALIZATION DO?

Setting aside controversies of period and place, social scientists blame or credit globalization for a panoply of social ills and goods, from economic inequality to economic growth, from political domination to democratization, from the decline of national sovereignty to the renaissance of the state, from social engagement to xenophobia, and from cultural homogenization to ethnic conflict. Meanwhile, others see a feeble globalization. Here, this entry reviews some of the key arguments for what globalization does.

Globalization, advanced partly by IGOs like the World Trade Organization and the International Monetary Fund that compel economic liberalization, has been the subject of vigorous debate about growing income gaps between rich and poor. The argument is that, in the name of international competitiveness, government revenue and expenditures are cut, and industries are deregulated and privatized. Globalization is also blamed for lowering the wages of less-skilled workers by shifting manufacturing jobs to lower-wage countries, and by enlarging the pool of low-wage labor through immigration. In turn, in low-wage countries of the "Global South," globalization is blamed for proliferating sweatshops owned by multinational corporations, producing an underclass of nonunionized labor, and generating an exploitive transnational capitalist and entrepreneurial class. Moving from individuals to countries, globalization arguably benefits rich countries at the expense of poor countries, by further concentrating wealth in rich countries as profits are repatriated from the Global South to the Global North. On the other hand, much of the literature has been skeptical of the criticisms that have been leveled at globalization. Just to take one example of the potentially salutary effects of globalization, it has been argued that globalization actually reduces disparities among rich and poor countries in their overall levels of economic development, by spreading industrialization to poor countries.

Social scientists also disagree intensely over whether globalization brings about political convergence among states. There is evidence that states adopt increasingly similar policies in areas such as education, welfare, the environment, human rights, and population as they interact more with international organizations. International organizations, it is argued, create and diffuse policy models (or "scripts") to states, and states adopt these models, in part, to appear as legitimate members of a world society. This process may reflect the spread of modern, Western culture (e.g., individualism, universalism, rationalism, science, and progress) around the globe. These claims remain controversial, and some argue that international organizations serve national interests and as such have strictly limited independent influence. It is a major challenge to contemporary social science to bring some resolution to the varied, contradictory, and multivalent picture of globalization that has emerged.

SEE ALSO *International Nongovernmental Organizations (INGOs); Internet; Transfer Pricing; Transnationalism; World Trade Organization*

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GOBINEAU, COMTE DE
1814–1882

Discredited today and largely ignored by his compatriots during his lifetime, Comte Joseph Arthur de Gobineau was nonetheless a key contributor to nineteenth-century race theories. Born in Ville-d'Avray, France, in 1814, he argued that racial difference was not only key to understanding the problems of history, but that it was the precondition of history. Comte de Gobineau posited two broad categories based on the shape of people's heads: *Aryan* or *dolichocephalic* populations, and *Alpine* or *brachycephalic* people. But it was his theory of racial mixing and degeneracy that won him admirers and detractors.

In the *Essai sur l'inégalité des races humaines* (Essay on the Inequality of the Human Races, 1853–1855), Gobineau claims the existence of three original, distinct human races: white, black, and yellow. Of these, white people, or Aryans, occupied the highest rank in a hierarchy of three. However, the "fusion" of these original races in history had, Gobineau argues, resulted in degeneracy and would eventually account for the decline of all civilization. The *Essai* and other writings, such as *La fleur d'or* (The Golden Flower) which was published posthumously in Germany in 1918 and in France in 1923, are thus infused with apocalyptic inferences: despite notable exceptions of "golden" flowering, all human societies face decline, not because of corruption or the abandonment of religious ideals, or even because of bad government. In themselves, these factors—"poisonous blossoms"—cannot undermine a nation unless its people had already degenerated through mixing. The "*degenerate* man properly so called" is racially different from "the heroes of the great ages" who, for example, were to be found in the Roman Empire prior to its greatest successes. Despite his French nationality, Gobineau's Martinican Creole mother took him to Germany and had him educated in the gymnasium system, where he acquired his admiration for things Germanic. He came to believe that the Germanic race was heir to Roman purity, and he dedicated his *Essai* to George V (1819–1878), king of Hanover.

Gobineau's work built on the earlier racial typologies of the French naturalist Baron George de Cuvier (1769–1832), but it incorporated new developments in biology, archeology, and the emerging sciences of ethnology and physiology. It was also inflected by his royalism and Orientalism, the latter inspired by his years as a diplomat in Persia (1855–1858, 1862–1863).

Although a protégé of Alexis de Tocqueville (1805–1859), through whom he received his first diplomatic postings in Persia, Gobineau eschewed Enlightenment notions of intellectual equality or fraternity across different races. Tocqueville labeled Gobineau's views false and pernicious. In turn, Gobineau claimed that intellectual fraternity across races was the deluded product of miscegenation. This was the risk of imperialism. According to Gobineau, a "principle of death" emerges when a stronger people assumes ownership over conquered lands. Although growing into nationhood, such societies faced the danger of "mixing" their blood. Despite producing an initial strength, these newly mixed people would lack the power of their ancestors. Segregation was thus natural and manifested itself in a "spirit of isolation" that persists in peoples despite their mixed origins. In his broad-sweeping claims, he praises Arabs, Persians, Jews, Farsis, and Turks for being "repulsed" by the prospect of "crossing" blood.

Gobineau's elevation of a blond, blue-eyed Aryanism as the racial ideal found acceptance in Imperial Germany, attracting the admiration of Richard Wagner (1813–1883), Ludwig Schemann (1852–1938), and Chancellor Bernhard von Bulow (1849–1929). With von Bulow's support, Schemann founded the Gobineau Society in 1894. Members included Swiss jurist Johann Kaspar Bluntschli (1808–1881) and British-born political philosopher and proponent of the theory of a German master race, Houston Swiss Chamberlain (1855–1927). Under the sway of Gobineau's writings, Chamberlain argued for social practices that reflected the inequality of

the races. Chamberlain, however, adjusted Gobineau's theory of degeneracy and predicted instead a growing "Aryan" strength. Gobineau's influence upon German National Socialism would eventually be incorporated, along with a racialized reading of Charles Darwin (1809–1882), into the pro-Nordic writings of Ludwig Woltmann (1871–1907). In the United States, Gobineau's *Essai* was translated by Swiss immigrant Henry Hotz, with an appendix by the proslavery physician and polygenist, Josiah Nott (1804–1873). Gobineau was not pleased with the American translation of his *Essai sur l'inégalité des races humaines*, which he thought too selective. Where the original edition ran to over one thousand pages, the American translation was cut down to less than four hundred pages.

What Chamberlain, supporter Robert Knox, and others failed to acknowledge was Gobineau's insistence that the Aryan ideal had been overtaken by history. They also overlooked Gobineau's less than flattering condemnation of white Americans as "an assortment of the most degenerate races of olden-day Europe," as well as his resistance to American treatment of slaves and Native Americans, and his argument that racial mixing, and specifically black blood, had produced artistic mastery.

Within fifty years of his death, a systematic challenge to and rejection of Gobineau's work had emerged in the writings of Léopold Senghor (1906–2001), Aimé Césaire, and Léon Damas (1912–1978). Their formulation of the *negritude* movement in Paris in the 1930s to 1940s owed much to Senghor's opposition to Gobineau's pronouncements upon race mixing. Senghor's rethinking of Gobineau's work led to his influential theory of cultural *métissage*, an alternative energized multiplicity that incorporated an African past into a hybridized present in the Americas and Caribbean. Among the African diasporic writers influenced by *negritude* was Martinican essayist Suzanne Roussy Césaire (1915–1966). Her call to "cannibalize" and incorporate white Western culture into African diasporic culture reflected the strong cultural backlash against Gobineau's purist agenda.

SEE ALSO *Anthropology, Biological; Racism; Tocqueville, Alexis de*

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Yvette Christiansë

GOD

SEE *Supreme Being.*

GÖDEL, KURT

SEE *Logic, Symbolic.*

GODWIN, WILLIAM

SEE *Anarchism.*

GOFFMAN, ERVING

1922–1983

Perhaps the most colorful of American sociologists, Erving Goffman, born in Alberta, Canada, led the turn to the micro-sociology of everyday life. He received a PhD in 1953 from the University of Chicago. Goffman's program began as a development of the work of the French sociologist Émile Durkheim, which set out to uncover the moral order that makes society possible. Where his predecessors, the British social anthropologists, analyzed religious rituals in tribal societies, Goffman examined the secular rituals of modern social interaction. He believed that such rituals construct the modern self, which he studied by examining the conditions in which it is threatened or blatantly manipulated. Goffman analyzed abnormal situations and institutions, including mental hospitals, confidence games, gambling, spying, and embarrassment in social encounters, to reveal the social conditions upholding conventional realities.

In *The Presentation of Self in Everyday Life* (1959), Goffman analyzed social life as a theater, divided into frontstage regions, where official definitions of reality are presented, and backstage regions, where dirty work is hidden and performances are prepared. Privileged occupations and social classes dominate frontstages and present idealized images of selves and institutions, whereas subordinated persons do much of their work backstage and are dominated by frontstage performers.

In *Asylums* (1961) and *Stigma* (1963), Goffman analyzed the extreme backstages of society, such as the schizophrenic wards of mental hospitals. Proposing the concept of "total institutions" for places where all aspects of life are subject to all-encompassing authority that allows no private backstages for the individual, Goffman argued that patients and other inmates engage in resistance through bizarre behavior aimed at supporting a sense of self beyond institutional controls. Thus, the official social processing of persons as deviant tends to promote still further deviance.

Mental illness, in Goffman's view, is not a characteristic of the individual so much as a social enactment, a spiral of violations of the ritual proprieties of everyday life. In *Behavior in Public Places* (1963) and *Relations in Public* (1971), Goffman made use of the violations exhibited by mental patients, as well as close ethnographic studies of pedestrian traffic and sociable gatherings, to develop a taxonomy of social situations and their tacit requirements and constraints. Unfocused interaction among persons in each others' physical presence involves tacit monitoring and signals indicating a respect for personal space. Focused interaction carries implications of memberships in groups, however small or temporary, and involves devices for entry and exit into the focus of attention, as well as for guarding boundaries of intimacy and warding off offenses that violate respect for the relationship. In "On Face-Work" (1955) and "The Nature of Deference and Demeanor" (1956), and in *Interaction Ritual* (1967), Goffman applied the theories of Durkheim and Alfred Radcliffe-Brown to the polite ceremonies of greetings, departures, and conversation. The everyday situation is constructed out of efforts at ritual enactment, and the modern individual self is elevated into a Durkheimian sacred object—much as the tribal gods were situationally re-created by the worship of them—through deference given in everyday rituals. There is therefore no essential self, but only an ongoing social construction.

Although Goffman did not contextualize his observations historically, his work casts light on the prestigeful pattern of the self in the late twentieth century. Goffman introduced the concept of "role-distance" (in *Encounters*, 1961), in which the actor claims superior sophistication by displaying signs of detachment from the demands of the social role. Games and entertainment, which take up an increasing portion of "postmodernity," were seen by Goffman as producing a sense of "fun" and excitement by requiring the actor to display engrossment in an activity bracketed from ordinary mundane reality, while also courting risks that allow a display of "coolness."

The ritualism of everyday encounters allows some actors to manipulate situations, engage in face-work contests to subtly embarrass others, or deceive them for criminal, business, or political purposes. These analyses have led some theorists to conclude that Goffman viewed the world as a Machiavellian contest of false reality-constructions. But Goffman argued that the social order is basically accommodative, and that situations involve ritual constraints that must be largely respected if any social reality is to be constructed at all. In *Strategic Interaction* (1969), he analyzed espionage and other self-interested manipulations of impressions, concluding that such behavior is limited by the inherent difficulties of sustaining complex deception. Social conflict and domination are possible only when placed upon the background of ritual solidarity enacted in most social encounters.

Goffman's later works, *Frame Analysis* (1974) and *Forms of Talk* (1981), take up the social construction of multiple social realities. Goffman adopted a moderate position, holding that complex social frames or definitions of reality are built up hierarchically, by bracketing or transforming activity at more basic levels of bodily action, human ecology, and social rituals. Highly laminated social meanings emerge situationally. For example, individuals (1) may make ironic backstage comments (2) during a rehearsal (3) for a commemoration of (4) a historical event, but if a fire breaks out during the rehearsal, all four levels are collapsed to the lowest level of framing, the fire. Language itself is built up through a hierarchy of framing devices. Talk is a move in the interaction ritual through which social membership is negotiated. It is built upon prior enactments and constrained by the framing or stagework necessary to sustain or transform the current situational definition. Social reality, self, and language are all emergent phenomena, built out of the ritual constraints of the interaction order. Goffman died in 1983 in Philadelphia, Pennsylvania.

SEE ALSO *Behavior, Self-Constrained; Ethnography; Role Theory; Self-Concept; Self-Presentation; Stigma; Subject/Self*

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Randall Collins

GOING NATIVE

The phenomenon of *going native* is one of the less commonly known outgrowths of European colonialism. It emerged as a result of the meeting of European and indigenous cultures and drew its strength from the perceived differences between those cultures. The term refers to the desire of non-aboriginals to identify with and immerse themselves in native culture.

In North America, cultural conversions of this type have taken a variety of forms. During the sixteenth and seventeenth centuries, Europeans intent on survival in an unfamiliar terrain were wise to adopt aspects of aboriginal lifestyles in matters ranging from food and clothing to language and transportation. During military conflicts, colonialists taken captive by aboriginal groups frequently recovered from their initial terror and were quite happily absorbed into native societies, following long-standing practice within aboriginal communities.

As an era of exploration gave way to one of permanent white settlement and aboriginal marginalization between the late-eighteenth and early-nineteenth centuries, incidents of going native took different and, generally, more limited forms. Most commonly, the desire to go native now manifested as an interest in "playing Indian." Those who played Indian did not seek the permanent adoption of a new culture, but rather borrowed elements of native cultures to serve specific social, cultural, and sometimes political ends. For instance, during the American Revolutionary War of the 1770s, colonials borrowed aboriginal imagery (and sometimes dress) to help identify themselves with the aboriginal spirit of independence and to fashion a national identity distinct from that of their European cousins. Into the nineteenth century, members of fraternal orders adopted aboriginal dress for their initiation rituals, and native metaphors and imagery for the nationalist literature they crafted. By the early twentieth century, playing Indian was deemed especially appropriate for children. As Boy Scouts, Girl Guides, and summer campers, children were invited to emulate aboriginal lifestyles during afternoons of woodcraft, evenings of Indian council ring, and weeklong canoe trips.

By the twentieth century, only a few took their interest in playing Indian beyond the realm of leisure-time pursuits. Anthropologists, for one, occasionally lost themselves, wittingly or otherwise, in the indigenous cultures they studied. More sensationally, a few rare individuals consciously adopted new identities, attempting, frequently with success, to pass themselves off as aboriginal to white society. Naturalist and early conservationist Grey Owl and journalist and war hero Buffalo Child Long Lance were just two who reinvented themselves as Indians, gaining significant public attention in the 1930s.

As a rule, those who played Indian after the mid-nineteenth century had more limited understandings of the indigenous cultures they sought to embrace than those who went native in earlier centuries. Typically, aboriginal people were understood in simplistic and frequently inaccurate ways. Above all, to white society, native peoples symbolized innocence, connection to nature, and immersion in the simple life that white society had left behind. Those troubled by the pace and direction of modern cultural change found in this invented Indian a comforting symbol of simpler days. Even into the late twentieth cen-

tury, the desire for this comfort shaped aspects of the counterculture of the 1960s and the New Age spirituality of the 1980s.

These modern forms of going native, then, had less to do with understanding or honoring native cultures and more to do with filling the social, cultural, and psychic needs of white society. By playing Indian, white North Americans, whether as revolutionaries, as members of fraternal orders, or as campers, distanced themselves from, and also eased their guilt about, the realities of colonial conquest. At the same time, they bolstered their own sense of national identity and attempted to redeem the racial category of whiteness.

Similar incidents of going native have occurred elsewhere around the world as colonialists interacted with indigenous peoples of other regions, including North Africa, the South Pacific, and the Near and Middle East. While the two cultures interacting may have differed, the fundamental dynamic was similar to the process found in North America. Members of dominant and usually colonizing cultures frequently became enamored with indigenous "others" and desirous of immersing themselves in their indigenous cultures. Ultimately, these colonial intruders moved from the belief that originally justified colonization—namely, that indigenous cultures were inferior—to one that romanticized those same cultures as providing the exotic and intense experience their own societies discouraged.

SEE ALSO *Anthropology; Travel and Travel Writing*

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Sharon Wall

GOLD

Gold is a precious metal. Its several qualities have made it valuable throughout history. It is an attractive color (yellow), bright, malleable, and workable in various forms. It is also long-lasting and tough. All these properties have made it the metal of choice for decoration and art objects. Gold has also been the standard of wealth for seven thousand years, dating from the time of the ancient civilizations of Egypt and Mesopotamia. More recently, gold has become the standard of currencies.

Gold is found across a wide range of the earth's landscape, but its accumulation in large quantities dates from the era of European explorations that began in the middle of the fifteenth century. Ventures to the New World opened new chapters in the history of gold. The first of these new stages was the Spanish conquest of the Americas with the accompanying destruction of the Aztec and Incan civilizations. Within a generation, these expeditions of plunder had produced an outpouring of gold from the New World that astonished the Old and led to endless expeditions of discovery and conquest, all in search of the legendary golden city known as El Dorado. Over the seventeenth and eighteenth centuries, the gold flowing out of the South American mines continued to dominate world production. As the nineteenth century unfolded, Russia became the leading producer. By 1847 Russia was the source of about three-fifths of the gold mined annually in the world.

The second great era of gold production was associated with major discoveries in California and Australia in the middle of the nineteenth century. In addition to the large quantities of gold harvested, these discoveries led to a new departure in the history of gold. Heretofore, gold discoveries and the gold mined from them had been a monopoly of the state. California and Australia represented a dramatic change in the sense that these mid-nineteenth century bonanzas belonged to any individual who could stake a claim. In this fashion, the gold passed directly into the hands of private citizens (or noncitizens, as was frequently the case). California's gold production moved rapidly from $10 million in 1849 to $80 million in 1851, thereafter settling at about $40 million annually. California almost immediately produced half the world's supply. Within the first five years, California produced as much gold as the Roman Empire had taken from the mines in northern Spain in half a century. The yields in Australia were almost as great. The Australian gold rush, like that of California, had a short life. After a dozen years, gold mining became industrialized. Still, the returns were remarkable. In the quarter century from 1850 to 1875, more gold was produced than in all the years since 1492, almost all of it in California and Australia.

The gold discoveries and the availability of these riches to anyone led to a remarkable rise in the numbers of miners. In California, the numbers rose from perhaps 5,000 in 1848 to 125,000 in 1851. This harvesting of gold on such a scale changed California from an isolated pastoral community into the most cosmopolitan place in the world. By 1852 its population had passed 250,000 people. California now became a pioneer in new patterns of rapid and intense migration associated with mining. These would include the astonishing rise of towns (and sometimes cities), the recruitment and use of labor forces, and shifts in capital and labor to remote areas all over the world. Such phenomena appeared first in California and Australia. The arrival of overseas Chinese, Irish, and other

northern European immigrants in the gold fields created a diverse population and led to later racial strife. In both Australia and the mining camps of the American West, the Chinese were a particular target. Everywhere, whatever the racial and ethnic composition, mining camps were intensely male. Only gradually did the emerging towns come to include women and children.

At the same time, the techniques used to harvest the gold changed in decisive ways. Mining in California began with picks, pans, and shovels, as individuals and small companies washed gold from mountain streams. Within a few short years, gold mining had progressed to damming (then mining dry river beds), to hydraulic mining (using water streams to wash away hills), and to underground mining. What had begun as the work of individual miners had within a dozen years become an extension of industrial techniques, with wage laborers deep underground, complex processing machinery and plants above ground, and a stock market that enabled absentee investors to speculate.

These bonanzas of the 1850s enormously increased the world's supply of gold. The gold reserves in the Bank of England almost doubled between 1848 and 1852; the gold inventory of the Bank of France increased seven times. Thus, the impact of the Californian and Australian gold rushes was quickly reflected in the gold reserves of Britain, France, and other powerful European nations. Great wealth also accrued to individuals and companies of various sizes. This increase led to extended debate within financial circles about the role of gold in the currencies of individual nations and the significance of gold as a worldwide standard.

The third great increase in the world's supply was associated with gold discoveries in Alaska at the close of the nineteenth century and in South Africa at the opening of the twentieth century. The Alaskan strikes began as a reprise of the Californian dream of riches for individuals and small groups, then rapidly shifted to production by well-financed companies with the latest equipment, all within the context of a climate that severely limited the mining season. In South Africa, the gold discoveries laid the basis of some of the more remarkable mineral fortunes in the world. They also established a labor system in which thousands of black Africans labored deep in the mines for the benefit of a few white-owned South African companies. The increase in gold production in these years was notably aided by a new chemical process, the use of cyanide to recover gold from low-grade ores.

The flooding of gold into Europe at the opening of the sixteenth century and in the middle of the nineteenth century raised continuing questions about national currencies. Over the course of the nineteenth century, most major Western nations went on the gold standard; that is to say, their national currency acquired a fixed relation to gold and was supposedly freely convertible into gold at that price. England was the first to adopt the gold standard, in 1821. France, Germany, Spain, and the United States followed in the 1870s. The gold standard spread across Europe, but ended with the outbreak of war in 1914. It was reinstituted in 1928. As national economies grew, nations without sufficient gold reserves (the majority of nations) supplemented their currency reserves with U.S. dollars or British pounds, thought to be the most stable of the world's currencies. With the onset of the Great Depression, the gold standard collapsed again. Although it was restored after the war, the dominance of the U.S currency (the dollar) and dwindling gold reserves led to the gold standard's abandonment in 1971.

SEE ALSO *Gold Industry*

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Malcolm Rohrbough

GOLD, GOD, AND GLORY

Historians use a standard shorthand, "Gold, God, and Glory," to describe the motives generating the overseas exploration, expansion, and conquests that allowed various European countries to rise to world power between 1400 and 1750. "Gold" refers to the search for material gain through acquiring and selling Asian spices, African slaves, American metals, and other resources. As merchants gained influence in late-medieval western Europe, they convinced their governments to establish a direct connection to the lucrative Asian trade, leading to the first European voyages of discovery in the 1400s. "God" refers to the militant crusading and missionary traditions of Christianity, characterized in part by rivalry with Islam and hatred of non-Christian religions. "Glory" alludes to

the competition between monarchies. Some kings sought to establish their claims to newly contacted territories so as to strengthen their position in European politics and increase their power at the expense of the landowning nobility. They also embraced the ideology of mercantilism, which held that governments and large private companies should cooperate to increase the state's wealth by increasing the reserves of precious metals. Motivated by these three aims, several western European peoples gained control or influence over widening segments of the globe during the Early Modern Era. By 1914 Europeans dominated much of the world politically and economically.

The Spanish and Portuguese were pioneers in the new era of overseas expeditions because they had a favorable geographic location facing the Atlantic and North Africa, a maritime tradition of deep sea fishing, an aggressive Christian crusading tradition, and possession of the best ships and navigation techniques in Europe by the 1400s. They were also motivated by the desire to circumnavigate the Venetian domination of Afro-Asian trade into Europe. Combining Chinese and Arab technologies with local inventions, the Portuguese, Spanish, and other Europeans built better ships to sail the rough Atlantic and learned how to mount weapons on ships, increasing their advantage at sea. The Spanish and Portuguese, using artillery, naval cannon, and muskets, could now conquer or control large territories in the Americas, Africa, and Asia, whose people lacked guns. The English were building the most maneuverable ships and the best iron cannon by the late 1500s. By the 1700s European land and sea weapons greatly outclassed those of once militarily powerful China, India, Persia, and Ottoman Turkey.

The intense competition between major European powers led to increased exploration, the building of trade networks, and a scramble for colonies—subject territories where Europeans ruled and directly controlled economic production and trade. In the later 1400s the Portuguese began direct encounters with the peoples of coastal West and Central Africa. By 1500 Portuguese explorers had opened a new era of exploration by entering the Indian Ocean, reaching East Africa, and then sailing to India. Soon, they seized several key Asian ports. Meanwhile Spanish fleets led by a Genoese mariner, Christopher Columbus, discovered that a huge landmass to the west, soon to be named America, lay between Europe and East Asia. Columbus had hoped to find the sea route to the silk- and spice-rich lands of China and Southeast Asia, and to introduce Christianity into these distant realms. Both the Portuguese and Spanish promised the pope to evangelize and colonize the "heathen" peoples they encountered.

By the later 1500s the Spanish had explored large regions of the Americas and conquered many of its peoples, including the great Inca and Aztec empires, and the Portuguese had established footholds in Brazil. Diseases brought from the Eastern Hemisphere, especially smallpox, killed off some 90 percent of the American population in the 1500s and 1600s, facilitating colonization. The only practical sea route to Asia via the Americas was finally discovered in 1520, by a Spanish expedition across the Pacific led by Ferdinand Magellan. After sponsoring their own explorations of the Americas, England, France, and Holland also colonized eastern North America and some Caribbean islands, and, like the Portuguese and Spanish, sent emigrants and Christian missionaries to what they called "the New World."

Various European states established colonies or outposts in several African regions and carried increasing numbers of enslaved Africans to the Americas to work on plantations growing cash crops, such as sugar, cotton, and coffee, for European consumption. In the sixteenth and seventeenth centuries the Dutch colonized parts of Indonesia, including Java and the Spice islands, and the Spanish conquered and Christianized the Philippines. The English and French became active in Asia in the 1600s. American minerals supported a great expansion of the European economy and allowed Europeans to buy into the rich Asian trade, especially of goods from China. These conquests and economic activities enabled the transfer of vast resources to Europe, especially silver, gold, sugar, coffee, and spices.

Thanks to exploration and conquest resulting from the quest for "Gold, God, and Glory," Europeans gradually brought various peoples into their economic and political sphere, laying the foundations for Western global dominance. Undergoing a profound economic, intellectual, and political transition, western Europeans left many of their medieval beliefs and institutions behind, and between 1750 and 1914 introduced even more profound changes in the world, including capitalism, industrialization, and the building of great Western empires in Asia and Africa.

SEE ALSO *Gold; Missionaries; Slave Trade*

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GOLD INDUSTRY

The world gold industry is a truly unique industry. It consists of miners, refiners, traders, and hoarders. Understanding the uniqueness of the industry begins with knowing that physical gold is virtually indestructible. That is, it does not rust, corrode, or otherwise break down like other metals. The upshot of this physical quality is that every ounce of gold ever mined in the approximately seven thousand years that humans have sought gold is still around.

Identifiable aboveground gold stocks at the end of 2003 were estimated at 150,500 metric tons or 4.8 billion ounces. A majority of these stocks, 63 percent, are held in the form of fabricated products, primarily jewelry, and 35 percent is held in the form of bullion, which is gold refined to 99.99 percent (24 carat) purity. The largest part of the 52,600 tons of bullion stocks, or 29,200 tons, is held by Western central banks. The balance of bullion stocks is held by private individuals (Klapwijk et al. 2004, p. 54). A cubic foot of gold weighs approximately one-half a (short) ton (Mohide 1981); accordingly, world identifiable aboveground stocks, if brought together, would form a cube approximately 70 feet per side. It is an indication of how scarce gold is that the entire world's supply could be stored in a modestly sized building.

Annual mine production from 1994 to 2003 ranged between 2,300 and 2,600 metric tons (74 to 84 million ounces). Because of the large aboveground stocks, annual mine supply only increases total supply by about 1.7 percent. The largest-producing countries during this period were South Africa, the United States, and Australia. The mine production of these countries declined slightly in the latter years of this period as a result of declining ore grades, higher production costs, and low gold prices. However, their production decline was compensated by rising production out of Latin America and Asia, most notably China and Indonesia.

Gold is mined at thousands of locations on all continents except Antarctica. *Placer* mining involves sifting and washing sands and gravels to isolate visible gold. *Lode* or *hardrock* mining involves crushing rock or soils containing gold and chemically processing the material to extract the gold. The chemical process used prior to the twentieth century was *amalgamation*, which involves applying mercury to the ore. The gold adheres to the mercury and can then be separated by boiling off the mercury. The amalgamation process is not only inefficient, recovering only about one-half to two-thirds of the gold, but it also does serious environmental damage if the mercury is not contained. Mercury is poisonous and does not break down in the environment. Numerous sites around the world where amalgamation is or was used remain seriously contaminated with mercury.

In the late nineteenth century, a more efficient method of processing lode ore was developed using a dilute cyanide solution to dissolve gold from crushed ore. Cyanide is also poisonous but is easier to contain and will break down in the environment over time. Recovery rates for the cyanide process range from around 70 percent for heap-leach processing (rinsing roughly crushed ore on large plastic-lined pads) to 95 percent for milling more finely ground ore in containment vessels. Depending upon the price, these higher recovery rates allow for economic recovery of gold from ores with as little as 0.01 ounces per ton of material processed—gold so fine that it can only be seen under a microscope.

Gold is mined by both "formal" and "informal" sectors. The formal sector involves sometimes large, publicly traded companies operating under the scrutiny of government environmental, financial, and other regulators. The formal sector accounts for the vast majority of world gold production. The five largest producers are Newmont Mining (United States), AngloGold (South Africa), Barrick Gold (Canada), Gold Fields Limited (South Africa), and Placer Dome (Canada). There are, however, thousands of other companies in the formal sector that explore for, mine, and trade in mining properties.

Perhaps the most controversial aspect of the gold industry is the environmental impact of gold mining and processing. Environmental regulation of the mining industry typically involves a permit process in which operators develop and get government approval of a mine and reclamation plan. These plans specify how an operator will extract and process ore, how they will store waste materials, and how they will reclaim disturbed areas. Presumably, government approval is only provided if these plans are in compliance with environmental regulations, but problematic issues include whether these regulations are adequate, whether government oversight and enforcement are adequate, and the fact that, despite the best-laid plans, accidents happen.

The informal mining sector consists of many thousands of individuals who mine gold without formal property rights or mining claims, and without the oversight of government regulators. Perhaps the most famous of the informal or "artisanal" miners are the *garimpeiros* of Brazil, but significant artisanal mining takes place in many other lesser-developed countries. There were an estimated eleven to thirteen million artisanal miners worldwide in 1999 (Viega and Hinton 2002). Artisanal mining involves both placer and lode mining and generally uses amalgamation for processing. The use of mercury in artisanal mining results in significant public health and environmental problems.

Artisanal miners typically sell their gold in local markets, where it is manufactured into jewelry. Operators in

the formal sector produce an intermediate product called *doré* whose gold content will depend upon the metallic composition of the ore. Gold frequently occurs with other metals, such as silver, arsenic, and copper, so the doré must be sent to a refinery, where it will be melted down and the metals separated. Refineries on every continent except Antarctica produce various refined products ranging from bullion bars, which are 24 carat in purity, to lower-carat alloys (18, 14, 10 carat, etc.) used in fabricating jewelry, electronics, dental fillings, and other items. These lower-carat products (as well as some 24-carat items) are sold for fabrication in the form of wire, beads, sheets, powder, and so on. By far the largest fabrication use of gold is jewelry. In 2003 jewelry fabrication accounted for 61 percent of total demand for gold, a total of 2,533 tons out of 4,142 tons sold on organized exchanges (Klapwijk et al. 2004, p. 7).

Labor market conditions in the gold industry vary greatly around the world. In South Africa and other less-developed countries, large mines can employ tens of thousands of laborers working deep underground, sometimes as much as 8,000 feet below the surface, under what most would consider harsh conditions. In contrast, in the United States most gold production comes from open-pit operations where working conditions are much better and far less dangerous. U.S. mine workers are required to undergo safety training before they are employed and periodic refresher courses thereafter, and state and federal governments conduct routine safety inspections. In general, hardrock mining is far safer than coal mining because the latter involves cutting into a combustible material, which results in explosions.

The degree of unionization of mine workforces also varies greatly around the world. South Africa's mine workers are unionized, while in the United States most hardrock mine workers are not unionized. However, some categories of tradespeople who work at U.S. gold mines under contract, such as electricians, pipe fitters, and masons, tend to be unionized.

Labor market conditions in the informal sector are far worse than in the formal sector, primarily because of the widespread use of mercury amalgamation. Artisanal mining is generally unregulated and the use of mercury poses a significant health risk to the miners, to others, and to the environment.

Refiners also play an important role in the functioning of bullion markets by guaranteeing the purity of gold used in transactions. For historic reasons, the world bullion trade primarily involves countries in the Middle East and the Indian subcontinent as importers and European refiners as exporters through the London market. The demand side of the Asian bullion market is historically rooted in a variety of causes, some cultural, such as the giving of dowries in Muslim and Hindu cultures. But other factors, such as the historic political and financial instability of the region, play a role. In these cultures, bullion continues to play the traditional role of a store of wealth and a medium of exchange.

In Western cultures, the bullion trade arose from the historic monetary uses of gold. Most countries minted gold coin, which served as a medium of exchange. However, as fractional reserve banking gained acceptance in the nineteenth century, the use of bullion coin in trade diminished in favor of paper money issued by private banks that held bullion and bullion coin in reserve to back the paper money. At the same time, Western governments started issuing *fiat money*—paper legal tender backed by a fixed quantity of bullion—and maintained bullion reserves, creating the *gold standard* for domestic and international financial transactions. This system proved to be unstable, was modified several times during the twentieth century, and was essentially ended when the United States went off the gold standard in 1971 by refusing to redeem dollars with gold. In 2006 the U.S. central bank held approximately 8,600 tons of gold bullion at various locations but primarily at Fort Knox, Kentucky, and engaged in little if any bullion trading.

In spite of these U.S. actions, European central banks maintained various quantities of bullion stocks for traditional foreign exchange stabilization purposes and continued to be active traders in bullion markets. With the creation of the single European currency in 2000, a significant portion of these bullion stocks was transferred to the newly created European Central Bank, which uses bullion in a similar manner as the individual national banks did when they managed currencies. This changing role of gold in the monetary system has led most European banks to liquidate significant portions of their holdings, primarily shifting bullion stocks into private ownership in Asia.

Even with these significant changes in the gold market, it still works in a traditional and somewhat secretive way. The world price is set twice daily by a committee in London representing major bullion banks, including the Bank of England. In the morning the committee makes its *a.m. fix*, setting a price at which the banks are willing to buy or sell any quantity of gold. The process is repeated in the afternoon to determine the *p.m. fix*. Many contracts use the p.m. fix as the basis for transactions involving both doré and refined products. Prices in various local markets around the world will not vary significantly from the London price because gold bullion can be loaded on an airplane and shipped to or from London for a few pennies on the ounce. Gold is also traded actively in options and futures markets around the world, where a gold market is open twenty-two hours out of the twenty-four-hour day.

SEE ALSO *Colonialism; Gold; Gold, God, and Glory; Imperialism; Industry; Mining Industry; Money; Reserves, Foreign*

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John L. Dobra

GOLD STANDARD

Gold has been a medium of exchange for a very long time. Although until the late nineteenth century gold had to compete with silver as the preferred standard unit of account in international financial transactions, gold has been used to measure wealth since antiquity. In the sixteenth and seventeenth centuries, following the discovery of rich gold mines in the Americas, the prevailing economic theory, mercantilism, recommended the pursuit of restrictive trade policies designed to discourage the importation of foreign goods and to encourage the exportation of domestic goods so as to increase the stock of precious metals, and of gold in particular, in the treasuries of the most important European kingdoms. But the gold standard refers to a more recent and specific phase in monetary history—a phase that is now past, and probably irrevocably so. Most contemporary economics textbooks pay only scant attention to it (Kimball 2005). A few economists, however, still advocate a return to the practices that defined the gold standard for reasons that are discussed further below.

Under the gold standard, as it began to take shape in the 1870s, currencies were backed by gold exclusively. Within a country, paper money could be redeemed for a guaranteed amount of gold and, internationally, fixed exchange rates determined the quantities of gold that central banks could use to clear international balance of payment accounts. In practice, however, this strict principle allowed for a limited degree of flexibility allowing the central banks of the countries that adhered to the gold standard regime to engage in a variety of manipulations (e.g., convertibility was severely limited in many of the less powerful countries). Great Britain was almost continually on a gold standard from the 1750s until 1913, with the exception of about two decades (1798 to 1821) when the Napoleonic wars and their aftermath forced the Bank of England to issue nonconvertible paper currency. Most of the other powers, however, including the United States, based their currencies on both gold and silver until the 1870s. (In fact, the word for silver in French also means money.) But by the 1870s because the price of silver had become too unstable, most European powers and the United States chose to hold only gold in their bank reserves, and to officially establish the convertibility of their currencies in gold only. By the 1890s a process of gold standardization had occurred: Most countries were by then part of an international financial regime based on a fixed exchange rate for gold.

The transition to the gold standard was not entirely smooth. There were political interests that opposed it. In the United States, for example, farmers in the Midwest continued to support a return to bimetallism for about two decades after the United States (unofficially) adopted the gold standard in 1879, in part because they felt that the rules of the gold standard made it more difficult for them to obtain credit and made them more dependent on what they perceived as the whims of the "eastern banks," impersonated as the wicked Witch of the East in L. Frank Baum's fairy tale *The Wizard of Oz*. In fact, the United States did not legally switch to the gold standard until 1900 (Littlefield 1964).

BEFORE WORLD WAR I

The pre–World War I gold standard worked very efficiently as a means to maintain price stability. Gold, and to a lesser extent British pounds, flowed between countries to compensate for trade surpluses and deficits. In theory, the system functioned automatically: If the real exchange rate for a given currency was above the nominal exchange rate in gold, exports suffered and imports increased, creating a balance of payments deficit; external creditors asked to be paid in gold and the resulting outflow of gold had the effect of lowering domestic prices, thereby stimulating exports and discouraging imports and eventually bringing down the real exchange rate nearer to, or even below, the nominal rate, and the pendulum swung in the other direction. The monetary authorities were expected to take appropriate measures to facilitate this process: raising the bank rate, which, in turn, led to rising interest rates, in order to decrease investments and reinforce the deflationary effect of an outflow of gold, while at the same time ensuring that the outflow of gold would not continue indefinitely, or lowering it to reinforce the inflationary effects of an inflow of gold, but also thereby preparing the ground for a reduction in that inflow. That these measures often had a deflationary effect was of little concern at a time when governments were not held responsible for unemployment. The effectiveness of the system was rein-

forced by the fact that investors, often anticipating the measures that monetary authorities were about to adopt, moved their funds from country to country, thereby bringing about the equilibrium that these measures would have reestablished and diminishing at the same time the need for such measures.

Already in the years immediately preceding World War I there were signs of tension in the system. The outbreak of the war led to its collapse. The interwar years were much more troubled as far as the international monetary system is concerned. Although most nations that had suspended convertibility into gold reinstituted it in the 1920s, it never functioned as well as it had before the war and by 1937 it had been abandoned by all countries. (Germany had done so in 1931, Britain in 1933, and the United States in 1933; France and Japan held on until 1936.) There is no complete agreement on the question of whether the demise of the gold standard was brought about by the Great Depression or whether the gold standard was itself a major cause of the severity of the depression. The latter thesis points to the fact that the United States and France, two countries with trade surpluses, together held more than half of the gold while also pursuing deflationary policies, which led to a contraction of the money supplies in much of the rest of the world that made it impossible to initiate expansionary programs in timely fashion to deal with the onset of the depression (Bordo 1993; Eichengreen 1992). But what is certain is that at the end of World War II, the gold standard was widely regarded as having been a failure.

THE BRETTON WOODS AGREEMENT

The participants in the 1944 conference held in Bretton Woods, New Hampshire, were seeking to establish an international system that would retain the stability and predictability of the pre–World War I gold standard but would not cause the rigidities that many then suspected had significantly contributed to the worsening of the worldwide 1930s depression. The agreement they adopted resulted in a system that was still, at least indirectly, based on gold, although by this time only the U.S. dollar was directly convertible into gold, and only among central banks. However, all signatories to the Bretton Woods Agreement were committed to maintain something approximating fixed rates of exchange in relation to the dollar, but with enough flexibility to allow them to manage their economies so as to produce full employment. Hence dollars rather than gold became the main components of the reserves of most central banks. The heyday of that system from the mid-1950s to the mid-1960s coincided with—and to an extent that is difficult to measure, helped to bring about—a period of exceptional economic growth (especially in western Europe and Japan) and expanding international trade. But it also placed severe constraints on the United States. By 1971 the United States had definitely ceased to guarantee the convertibility of the dollar. Since that date gold has been demonetized, even though the central banks of many countries continue to hold more or less significant stocks of gold. Floating rates are now the rule, with the exception of some countries that have more or less permanently pegged their currencies to a stronger one or others, such as the euro zone, that have established a monetary union.

A return to something like the gold standard has been advocated by some economists, notably those associated with the school of thought known as Austrian economics, so named because it can trace its roots to the writings of prominent Austrian economists such as Carl Menger. Adherents of Austrian economics have very little confidence in the ability of governments and central banks to effectively guide the course of economic events. It is, therefore, the self-regulating nature of the old gold standard that leads them to advocate revisiting this concept. They usually recommend the creation of a system in which the central banks would be forced to "play by the rules," if necessary by privatizing these banks. Although this would certainly offer strong guarantees against inflation, the need for such a system appears less compelling in the early twenty-first century than it did in the 1970s and 1980s, when inflation was much more of threat than it has been since then. There is very little political support in the world for such a reform.

SEE ALSO *Balance of Payments; Central Banks; Currency; Exchange Rates; Gold; Gold Industry; Inflation; Interest Rates; Mercantilism; Mining Industry; World War I; World War II*

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GOLDEN RULE IN GROWTH MODELS

The Nobel laureate Robert M. Solow (b. 1924) famously argued that a steady state growth will involve a higher savings and a higher capital-to-labor ratio to achieve a higher per capita income. Higher per capita income, however, does not automatically imply higher per capita consumption. Therefore this is a typical case of optimization in which we have to find the level of capital-to-labor ratio that provides at the same time the maximum possible per capita consumption. This problem was posed initially by Edmond Phelps (1961), and the solution provided was called the *golden rule of accumulation (growth)*. According to this rule, an economy reaches the optimum growth rate at the point where each generation saves and invests at the level that it wishes the previous generation would have invested. That is, each generation saves (on behalf of future generations, as it were) that fraction of income that it would have liked past generations to have saved, subject to the constraint that all generations past and present are to save the same fraction of income. This condition requires that the rate of profit (interest) equals the rate of growth of an economy.

Let us define the per capita consumption (c) as the difference between the per capita income ($f(k)$) and the per capita savings/investment ($sf(k)$), that is: $c = f(k) - sf(k)$. Equilibrium is attained at the point where the per capita saving (investment) is equal to the amount needed to keep the increasing labor force (n) with the same capital equipment (growth rate of capital labor ratio equals zero). Formally, $sf(k) = nk$. If we now revise the previous equation accordingly, we have $c = f(k) - nk$. Because we are not interested in any level of consumption, but rather the maximum possible, we get the first derivative of the above equation and we set it equal to zero: $dc/dk = f'(k) - n = 0$ and $f'(k) = n$. Thus the marginal product of capital (read rate of profit) equals the growth rate of the economy, because at the steady state growth rate, the growth rate of output equals the growth rate of labor force.

It is clear that public policy and private propensities can be designed to achieve this golden rule. That is, for example, even though a relatively low capital-poor economy will pursue optimum growth by steadily increasing its capital-to-labor ratio, it may accomplish this by saving relatively more in the future than in the present. However, major concerns about the existence of the golden rule of growth have been raised that refer mainly to the conditions for its existence. Some economists suggest that the rule exists only in neoclassical models in which capital and labor are continuously substitutable, there is no technical progress, unlimited influence on subsequent generations' choices is present, proper population policies exist, and so on. Phelps showed that the golden rule "always exists in the neoclassical and Harrod-Domar models if the labor force increases at a constant rate, the depreciation rate is constant, technical progress, if any, is purely labor-augmenting, labor augmentation occurs at a constant rate, and positive labor is required for positive output" (Phelps 1965, p. 812). Otherwise, the growth paths are dynamically inefficient and the golden growth rate of accumulation is unattainable.

SEE ALSO *Economic Growth; Neoclassical Growth Model; Optimal Growth; Solow, Robert M.*

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Persefoni Tsaliki

GOLLIWOGS

SEE *Blackface.*

GONE WITH THE WIND

Margaret Mitchell, a descendant of the southern aristocracy of Atlanta, Georgia, and a former writer for the *Atlanta Journal*, was author of the 1,037-page Pulitzer Prize–winning novel *Gone with the Wind*. The novel represented a culmination of her family's southern history, Atlanta's local history, and the South's reconstruction in the aftermath of the Civil War.

SUMMARY

Depicted through the gaze of the novel's protagonist, *Gone with the Wind* features Scarlett O'Hara, one of the most popular southern belles in Clayton County, Georgia. Scarlett is a woman with a determined spirit and uncompromising sensibility, willing to do whatever is necessary to survive and to maintain her home, the Tara plantation. In the turbulence of the Civil War, Scarlett's love life is entangled when Melanie Hamilton marries the object of Scarlett's desire, Ashley Wilkes. Disillusioned, Scarlett marries Melanie's brother, Charles, but their marriage is short-lived due to his untimely death as a Confederate soldier. As the war continues, Melanie and Scarlett find themselves caring for wounded soldiers. Attacked by Yankee forces, both women are compelled to flee, Melanie

with her newborn baby and Scarlett with her surrogate family—her black servant, Prissy—an escape assisted by Rhett Butler, a blockade runner and outcast.

At Tara, Scarlett discovers that her mother died, and the plantation, with only a few faithful slaves, was nearly destroyed. In dire straits for money, Scarlett returns to Atlanta to secure funds from Rhett. Again, in an effort to save the plantation, she marries, this time her sister's fiancé. Exhibiting independence and entrepreneurship, Scarlett purchases and operates a lumber mill; this results in her becoming the victim of an attack and in her husband's death.

Although still maintaining her affection for Ashley, Scarlett reunites with Rhett and is provided with an enormous estate and luxuries. She has Rhett's child, a daughter (her third child, as she had two children in prior marriages), but the daughter is accidentally killed, devastating both Rhett and Scarlett. As the novel ends, Melanie, facing death, entrusts Scarlett with the care of Ashley, but now Scarlett recognizes that her real love is for Rhett. By this time, however, Rhett has lost his affection and respect for Scarlett, demonstrated by his dramatic exit at the novel's end.

In addition to winning the Pulitzer Prize and becoming a Book of the Month selection, *Gone with the Wind* sold over one million copies in its first year of publication. Its popularity as a literary work has been debated by a number of critics who attribute Mitchell's success to her ability to infuse characters with captivating attributes; or to her ability to reconstruct southern history in an emotional and meaningful way from the perspective of a victim who is also a survivor; or to her ability to convey hope and optimism in the face of despair and defeat; or to its interdisciplinary appeal as a literary work to those interested in the military, in geography, anthropology, psychology, sociology, and in other fields.

Mitchell's novel provided a response to the mythical view of the Lost Cause fueled by the defeat of the South in the aftermath of the Civil War and represented by the loss of wealth and power, as Atlanta was reduced to ruins. Despite the wealth formerly achieved from the South's plantation economy and idealized by its glamorized past, Mitchell's work responded to the Lost Cause myth through the assertiveness and aggressiveness of her protagonist, Scarlett—a character who symbolized that the South could emerge from its past degradation and despair.

In 1936, producer David O. Selznick purchased the screen rights to the novel for some $50,000—at that time one of the largest sums ever paid for a screenplay. The film's production was complicated by changes in the director and scriptwriters, searches for appropriate actors, and other problems. Rhett Butler, played by Clark Gable, was reluctant to accept the role, although he was the public's popular choice. Scarlett O'Hara, played by British actress Vivien Leigh, won the role despite consideration of a number of widely known American actresses such as Katharine Hepburn and Bette Davis. The film cost some $4.25 million and ran well over 3 hours and 40 minutes. Appearing in the novel but not in the film were Scarlett's first two children, Rhett's blockade activities and his relationship with Belle Watling, and the Ku Klux Klan.

COMPARISON OF *GONE WITH THE WIND* AND *BIRTH OF A NATION*

Gone with the Wind was widely compared with the film *Birth of a Nation* (1915), based on Thomas Dixon's novel *The Clansman* and produced by D. W. Griffith. Both films were Civil War epics, both were massive productions, both attempted to capitalize on historical facts, and both were regarded as controversial because of their racialized representations. These two films were also similar in sharing a common respect for the dramatization of American history by foregrounding the importance of romance and family. *Birth of a Nation* was nearly an attempt to embrace and resuscitate the past, while *Gone with the Wind* acknowledged the past from which it was fleeing and utilized this past as a means to reconstruct a new future and a new identity.

Both films endured censorship difficulties, with *Birth of a Nation* facing numerous censor boards prior to its exhibition because of its racial politics. *Gone with the Wind* challenged the Production Code's profanity restrictions with Butler's famous line, "Frankly, my dear, I don't give a damn." *Birth of a Nation* spawned riots in some northern cities and invited protests. *Gone with the Wind*, in comparison, elicited protests even prior to its completion and raised the ire of black newspapers.

FILM'S RECEPTION

Carlton Moss, an African American dramatist, submitted a letter to Selznick in 1940 that appeared in the *Daily Worker*. The letter outlined the racial insults committed by *Gone with the Wind* and suggested that it fabricated the myths that blacks were not concerned with freedom and that they lacked the innate ability to govern themselves. These views were echoed by members of the black press. The *New York Amsterdam News* described *Gone with the Wind* as the "pus oozing from beneath the scab of a badly healed wound." The *Chicago Defender* charged that the film glorified slavery and depicted the black male as a "grotesque and ravishing beast." The *Crisis* expressed its objections to the film's racial epithets. These offenses were further compounded when black actress Hattie McDaniel was not invited to attend *Gone with the Wind*'s Atlanta premiere in December 1939. In spite of such derision, McDaniel received an Academy Award as best supporting

actress for her role as "Mammy," becoming the first African American to receive this award.

The mainstream press was much more enamored with the film. The *New York Times* claimed that while the picture may not have been the greatest motion picture ever made, it was "the greatest motion mural … seen and the most ambitious film-making venture in Hollywood's history." Other critics noted that the film was extremely well cast and acted with "costuming … above reproach; the interior sets are first rate; [and] much of the Technicolor photography is beautiful." The film's overwhelming reception, coupled with its movie attendance records, was further testament to its appeal and popularity. When *Gone with the Wind* premiered, some 55 million people reported that they intended to see it. Over one million people traveled to Atlanta for the film's premier, which was accompanied by parades and celebrations. Added to these accolades, the film won ten Academy Awards, including an award for best picture.

FILM IMPACT AND SUBSEQUENT WORKS

Gone with the Wind was a powerful force in garnering sympathy for the South in the postbellum period. One critic suggested that even northerners stood to be influenced by this southern mythology to the extent that though the North and South were once divided, northerners were now willing to join southern forces and "whistle Dixie." The film's impact continues to evolve with subsequent releases. The impact of both the novel and the film is further apparent when the Mitchell estate commissioned Alexandra Ripley to write a sequel to *Gone with the Wind*, titled *Scarlett* and published in 1991. This novel was also transformed into a 1994 television miniseries, but it met with much less success. *Variety* stated that "viewers' best hope, however, is to try to forget that classic book and film, and approach Scarlett for what it is: an eight-hour bodice-ripper."

Interest in the novel was reignited when Alice Randall published *The Wind Done Gone* in 2000, described as a parody of *Gone with the Wind*. Randall's work challenges the views propagated by *Gone with the Wind* by creating characters antithetical to those in the previous work. *The Wind Done Gone* provoked controversy, with many critics claiming that Randall infringed on the copyright of the 1936 novel. In a legal dispute to prevent the publication of Randall's work, the court found it to be distinctly different from *Gone with the Wind* in that it explored the intersection of race and sex and defied the myth of black savagery and primitivism.

Both the novel and the film continue to surface in contemporary discussions and debates, with the film becoming a part of Hollywood legend and the novel becoming an integral part of the American literary canon. *Gone with the Wind* has solidified its place in American history and cinema—capturing and marking historical moments that deserve to be returned to again and again.

SEE ALSO *Birth of a Nation; Confederate States of America; Ku Klux Klan; Plantation; Politics, Southern; Racism; Reconstruction Era (U.S.); Slavery; South, The (USA); U.S. Civil War*

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Charlene Regester

GOOD SAMARITAN

SEE *Sympathy.*

GOODS, NONTRADED

While international trade involves the international shipment of an incredibly diverse range of goods and services—from cars, furniture, and insurance to umbrella knobs, pedestal actuators, holiday ornaments, and tax preparation services—not all products and services are internationally traded. Those products or services that are not exported are called *nontraded goods*.

There are two reasons that goods are not traded. The first reason is obvious: it is impossible to ship certain products from one country to another. A haircut is the prototypical example of a nontraded good. This service cannot be ordered for international shipment; the customer must travel to another country to visit a foreign barber, or the barber must travel to cut the customer's hair in the customer's country.

The second category of nontraded goods involves products that could be transported internationally but remain nontraded because the economic benefits of international trade are offset by the costs of trade. For example, while cement can be exported, it is generally unprofitable to do so because of the high transportation costs of moving such a heavy and bulky product. Thus, some products will be traded between countries that are close to each other and have low trade costs, while the same products will not be traded between countries that have high trade costs due to their distance from each other. In addition to transportation costs, other barriers to trade—such as tariffs or quotas, the inability to ship a product in a timely manner, or the inability to ship a product before it spoils, also cause a number of products to remain nontraded.

Nontraded goods may become traded goods when the original impediments to international trade decline sufficiently to make international trade profitable. In addition, advances in technology reduce the range of products that are nontraded. For example, since optimal patient care requires physicians to rapidly diagnosis an illness or assess the severity of an injury, the reading of X-rays was originally performed by local radiologists in the patient's and doctor's country of residence. As a result, the need for immediate assessment and evaluation of X-ray results caused diagnostic services to be internationally nontraded. However, radiological services became tradable when improvements in communications technologies made it possible for X-ray technicians to quickly send electronic images of X-ray results to radiologists in other countries for immediate analysis.

The prevalence of nontraded goods has implications for national economies. First, as formerly nontraded goods become tradable, a wider range of a country's production is organized according to international comparative advantage. A trading country reaps economic benefits from the efficiency improvements that are made possible by this change. In addition, fundamental differences in the nature of traded and nontraded goods have implications for cross-country differences in economic outcomes. According to the hypothesis known as the Balassa-Samuelson effect, the higher rates of productivity growth in traded goods can help explain the cross-country observation that prices are higher in high-income countries than they are in low-income countries.

SEE ALSO *Balance of Trade; Trade*

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Deborah L. Swenson

GOODWILL

Goodwill is the value placed on the expectation that the clients or customers of an established company will continue to patronize it out of habit or confidence in the conduct of its business. In practice it is simply the amount by which the price of a going concern exceeds the sum of fair values of all of its other net assets. In other words, it is the amount of money that may be paid to the owners of a business over and above the costs of merely buying the assets that the company uses.

The origin of the term lies in developments in accounting that accompanied the rise of the capital market in the second half of the nineteenth century. The easing of the establishment of joint stock companies during this period facilitated the purchase of many retail businesses, whose previous owners were paid for referring their previous customers to the business under new management or ownership. Goodwill came to be used to pay the existing owners of a company's equity a price for their stock inflated above the value of any actual underlying assets by the more active capital markets of the late nineteenth century. The American political economist Thorstein Veblen regarded goodwill as reflecting competitive advantages, which a company may have and which may not be incorporated in the cost of assets. In the course of mergers and acquisitions, the value of a company's stock comes to reflect its increasingly monopolistic market position. However, John Hobson and Alfred Marshall expressed a more common view in the first decades of the twentieth century that goodwill was used to exaggerate a company's business prospects leading to the overcapitalization of that company. In this way financiers

and company promoters profited at the expense of the investing public. Despite the relevance of these views, there was little discussion of them amid the inflated capital markets of the late twentieth century and early twenty-first century.

Goodwill purchased in the course of buying a company has wider implications because the cost of it is treated as a business expense. In the United States and Canada this expense is amortized against company earnings over a period of up to forty years. Because, after a company has been purchased, these amortization payments are purely bookkeeping transactions, it has been argued that the recording of these payments in the income and expenditure statement of a company makes that statement less clearly a reflection of actual business income and expenditure. In the United Kingdom an accounting standard in force since 1984 recommends that goodwill should "normally" be written off immediately after acquisition against the owners' equity or reserves. However, such immediate write-off can lead to extreme shifts in the "leverage" or gearing of a company (the ratio of its debt to equity). It is not unknown for such a write-off to result in negative owners' equity. Even before that arises, the sudden fall in the value of owners' equity may cause difficulty where a company has loan agreements that stipulate a maximum permissible leverage ratio. Such shifts in the value of owners' equity also affect the vulnerability of a company to takeover or even to reporting, as the London Stock Exchange obliges its companies to do, where the payment for a company represents 15 percent or more of the acquiring company's equity.

Because business expenses reduce the tax liability of companies, the accounting treatment of goodwill—that is, whether and how it is amortized—may have significant tax implications for a company. Among service companies with limited scope for capital investments that may be set against tax over a period of years, goodwill may be an important factor in the tax planning of a company.

The significance of goodwill in corporate finance has been inflated by the proliferation of mergers and takeovers in active capital markets. The emergence of such markets in Europe and other parts of the world extends the geographical area where goodwill has fiscal and accounting importance.

SEE ALSO *Bull and Bear Markets; Capital; Equity Markets; Financial Markets; Stock Exchanges; Veblen, Thorstein*

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Jan Toporowski

GORBACHEV, MIKHAIL
1931–

Mikhail Gorbachev, leader of the Soviet Union from 1985 until that country's demise in 1991, has gone down in history for peacefully dismantling the seventy-year-old repressive Communist system and for initiating the cold war's nonviolent end after four decades of international tension. For this, he received the Nobel Peace Prize in 1990 and is regarded by many, particularly outside Russia, as one of the twentieth century's greatest leaders. Inside Russia, Gorbachev is more often blamed for the collapse of the Soviet Union, a breakup most Russians regret. Whether Gorbachev should be held directly responsible for that collapse is contested by many scholars who cite complex reasons for that country's disintegration.

Born into a peasant family, Gorbachev grew up in the important agricultural region of Stavropol, in southern Russia. Highly intelligent and winning awards for both academic achievement and agricultural work, Gorbachev was accepted to the prestigious law faculty of Moscow State University in 1950. There, Gorbachev met educated, urban students from the U.S.S.R. and Eastern Europe, one of whom, the Czech intellectual Zdeněk Mlynář (1930–1997)—later a prominent 1968 Prague Spring reformer—became Gorbachev's lifelong friend.

Returning to Stavropol in 1955, Gorbachev advanced to the top of the regional party hierarchy, and by 1978, he reached Moscow as the secretary of the central committee of the Communist Party of the Soviet Union (CPSU) in charge of agriculture. By 1980 this young, energetic agricultural expert was elected as full member of the fourteen-strong Soviet *Politburo* (the highest Soviet decision-making body, stocked with octogenarians). Once the CPSU general secretary Leonid Brezhnev died in November 1982, Yuri Andropov emerged victorious from the leadership struggle, only to die fifteen months later and be replaced by the ailing Konstantin Chernenko, who survived for only thirteen months. Gorbachev became general secretary, and thus Soviet leader, in March 1985.

With skillful use of his new powers, Gorbachev pushed aside the old guard and reassigned top posts to like-minded anti-Stalinists such as Eduard Shevardnadze (b. 1928) and radical reformers, notably Aleksandr Yakovlev (1923–2005). He then embarked on diplomatic campaigns abroad that, over five years, grew into a foreign policy revolution featuring massive, asymmetrical cuts in Soviet weapons arsenals, acceptance of the peaceful liberation of Eastern Europe, and finally, a radical push to join Europe as a democracy.

At home, Gorbachev managed—despite incessant opposition—to introduce increasingly important political reforms, dubbed *perestroika* (political and economic restructuring) and *glasnost* (openness in media and society). Though always predisposed toward reform, Gorbachev did not stress democratization until 1987, when his powers had grown strong enough and his own views consolidated. In 1988 he established competitive elections and a genuine legislative body. He worked to implement checks and balances, a law-governed state, political and religious freedoms, and genuine federalism. Radical economic reform proved far harder, because liberalizing prices risked social upheaval. The economy stagnated as the command economy unraveled, while market institutions remained unborn. The combination of political freedoms, high expectations, and economic decline exacerbated tensions between the fifteen republics and the Soviet state. Striving to keep the U.S.S.R. together, Gorbachev embarked on a new federal framework; but politics at home undercut him. An attempted coup in August 1991 left him critically weakened. In December Boris Yeltsin (1931–2007), president of the Russian Republic, dealt the final blow to Gorbachev—and to the U.S.S.R.—by withdrawing Russia from the Soviet Union. Gorbachev resigned, leaving a great legacy. He brought freedom to Russia and played the most decisive part in ending the cold war.

SEE ALSO *Cold War; Democracy; Democratization; Economies, Transitional; Glasnost; Russian Federation; Union of Soviet Socialist Republics; Yeltsin, Boris*

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Julie M. Newton

GORDON, MILTON

SEE *Assimilation.*

GOSNELL, HAROLD

1896–1997

Harold F. Gosnell played a major role in the development of the scientific approach to political research. He was among the first political scientists to utilize randomized field experiments, correlation, regression, and factor analysis, which he skillfully blended with archival research, participant observation, elite interviewing, and ethnography to produce seminal studies of elections, voting behavior, party politics, political machines, and African American politics.

Harold Gosnell grew up in Rochester, New York, and received a bachelor's degree from the Univeristy of Rochester in 1918. He matriculated as a graduate student at the University of Chicago, where, under the tutelage of Charles Merriam, he received a PhD in 1922. Gosnell immediately joined the political science faculty at the University of Chicago, where he was part of the nucleus of the Chicago School of Political Science, which endeavored to construct a science of politics on the model of the natural sciences.

Gosnell was deeply concerned with the functioning of elections and the factors that led citizens to participate in them or not. His *Non-Voting: Causes and Methods of Control* (1924), authored with Merriam, examined a random sample of 6,000 nonvoters in the Chicago mayoral election of 1923. It identified the principal causes of nonvoting as non-registration, disbelief in women's voting, disgust or indifference, and physical impairments or difficulties. Merriam and Gosnell argued that efficient party organization and simplification of registration laws would enhance citizen participation in elections. In *Getting Out the Vote* (1927) Gosnell conducted randomized field experiments in the Chicago elections of 1924 and 1925 to determine whether nonpartisan notices could stimulate citizen registration and voting. He found that a nonpartisan appeals could boost registration by about 9 percent but mattered less where party organizations were strong and education levels high; they had a greater marginal effect on women, African Americans, and the less educated.

A fascination with party organizations, especially political machines, permeated almost all of Gosnell's work, starting with the first of his twelve books, *Boss Platt and His New York Machine* (1924), which traced the rise and fall of machine politics in New York. In *Negro Politicians* (1935) he documented changes in Chicago politics brought about by the northward migration of African

Americans, their loyalty to and role in the Republican Party, and the first signs of shifting loyalties to the Democrats after the initiation of the New Deal. He detailed the centrality of black churches and the black press (especially the *Chicago Defender*) in mobilizing opinion and sustaining organization in the community. Gosnell generalized his arguments on party organization in *Machine Politics: Chicago Model* (1937). He demonstrated the success of ward bosses and precinct captains in insulating the parties from broader trends in national politics brought about by the Great Depression. Gosnell saw ballot simplification, proportional representation, civil service laws, and other reforms as ways to wean democracy from the imperatives of patronage and graft.

Gosnell left Chicago in 1941 for Washington, D.C., where he held positions in several federal agencies and then served as professor of political science at Howard University from 1962 to 1970. The American Political Science Association recognizes his achievements by awarding each year the Harold F. Gosnell Prize of Excellence for the best work of political methodology presented at a political science conference.

SEE ALSO *American Political Science Association; Chicago Defender; Democratic Party, U.S.; Elections; New Deal, The; Political Science; Politics, Black; Politics, Urban; Random Samples; Republican Party; Sampling; Science; Statistics; Survey; Voting*

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Michael T. Heaney

GOSPEL, GLORY AND GOLD

SEE *Gold, God, and Glory.*

GOSPELS

SEE *Christianity.*

GOSSIP

SEE *Rumors.*

GOULD, STEPHEN JAY

1941–2002

Stephen Jay Gould was a paleontologist, evolutionary biologist, essayist, and public intellectual. He lived a rich life achieving heights of academic success as a professor at Harvard University as well as attaining public recognition as an erudite, literate scientific essayist. Gould's importance stems from his distinctive and important contributions as an evolutionary biologist and paleontologist, as well as his participation in public debates bringing his humanist and scientific commitments to bear on important social and scientific issues.

As a biologist Gould is best known for the theory of "punctuated equilibria" which he formulated jointly with the American paleontologist Niles Eldredge. The fossil record is an imprint of the past providing researchers with extensive evidence not only for the fact of evolution but a detailed map of the branching pathways connecting the diversity of life. The evolutionary paths emanating from different life forms can be traced through the chronological ordering of this fossil record. In standard Darwinian explanation the pace of evolutionary change is assumed to be slow. Accordingly, small incremental changes are accumulated to amount eventually to the grand differences that scientists associate with distinct species. The fossil record, however, does not show continuous change between life forms; rather there seem to be gaps. These discontinuities in the record could reflect scientists' incomplete knowledge or simply gaps in the fossil record itself. Gould and Eldredge attempted to explain the "gaps" in the fossil record by questioning the assumptions made about the pace of evolutionary change. They argued that for long periods species enjoy stability, giving way to rapid and drastic change over short periods of time. Thus, the so-called gaps in the fossil record actually reflect a fact about the pace of evolutionary change rather than representing missing evidence.

Gould viewed evolutionary biology as a historical science. To him evolution was not a deterministic unfolding of events but a process highly contingent on the vicissitudes of circumstance. His views brought him into conflict with some of his peers who tried to veer evolutionary biology toward a more mechanical paradigm in which the evolutionary process was reduced to natural selection operating at the genetic level. Perhaps his most visible sparring partner in this debate was Richard Dawkins, who had presented arguably the strongest version of the mechanical paradigm. Dawkins envisioned organisms as "lumbering robots" carrying out instructions encoded in the organism's DNA. Dawkins departed from orthodox Darwinism in placing the gene as opposed to the organ-

ism as the unit of selection. Gould's opposition to this view found expression in a number of interesting ways.

First, he argued that natural selection, while an important and perhaps even dominant motor of evolution, was not the only driving force. He derided the panselectionism of his opponents as a "panglossian paradigm" in which every feature of the organism was furnished with an adaptationist "Just So" story—a reference to Rudyard Kipling's humorous children's stories, particularly the ones about the origin of features of animals. Gould considered a multiplicity of mechanisms as important in evolution. These mechanisms included random reproductive success of some features due to the dynamics of finite populations, as well as structurally inevitable correlates of selected features where these correlates provide no reproductive advantage.

Second, Gould opposed reduction of evolution to the level of genes. He accepted as a fact that genes are responsible for the heritability of traits, but argued that selection occurs at the level of the organism per the Darwinian paradigm. Evolution to Gould could not be understood unless one allowed for different hierarchical levels of study; this hierarchy included the genetic level, the organism, and the species—each one important for a different set of evolutionary questions.

Third, Gould argued that the reduction of the organism to its genotype led ineluctably to a whole set of mistaken ideas which he collectively termed *biological determinism*. Biological determinism, as expressed in the ideas of sociobiology and evolutionary psychology, is the belief that complex behavior of organisms can be understood as following from the organism's genetic make up, and are thus permanent features of the organism. As an example, a determinist might argue that a person's genes determine her or his level of intelligence.

Gould went on to understand the questions that biological determinists tried to answer as historically conditioned. He saw in the determinist program a program that justified the stratification of our present-day society along gender, racial, and economic lines by providing these social realities a biological justification.

Gould's scientific interests intersected significantly with his social commitments. He participated in public debates arguing against creationism and the genetic basis for behavioral differences between racial, gender, and class groupings. He wrote prolifically for the lay public on science, history, and society and achieved a considerable amount of fame and influence as a writer of popular science.

SEE ALSO *Darwin, Charles; Punctuated Equilibrium*

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Ansar Fayyazuddin

GOULDNER, ALVIN

SEE *Managerial Class; New Class, The; Reciprocity, Norm of.*

GOVERNMENT

Government is as old as human beings themselves. All human societies are governed by rulers, no matter what their titles and characteristics may be. On the theoretical level, government is intrinsic to human societies. Nevertheless, at a more tangible level, nothing about government is static. Structures and functions of governing are constantly in change.

The word *government* has a Greek origin, *kyvernites*, which means "governor," or "rudder." Government is a body or organization that has the power to make and enforce laws and regulations for a certain territory. *Government* refers to the act of governing, meaning exercising authority over a community or a country. It is a system by which a political unit is governed. The two central features of government are the ability to make collective, binding decisions and the capacity to enforce them. Thus, the core functions of modern government are to make law (legislation), to implement law (execution), and to interpret law (adjudication). On the national level, the basic duty of any government is to ensure a country's survival. Survival involves two basic tasks: defending independence against external threats, and maintaining internal security and preventing civil war or secession. In parliamentary systems, the political executive alone is referred to as "the government."

Each efficient government should have an authority, or a "legitimate power." Power is the ability to influence the behavior of others, whereas authority is the right to exercise that power and to get the people's obedience by using various means, including direct physical coercion, threats, exile, banishment, and so on. Such an authority should be legitimate, that is, as Max Weber noted, the use of force by a government should be recognized as legitimate and justified by both the powerful and the powerless. Legitimacy is considered a basic condition for

governing, and without a minimal amount of legitimacy, a government will deadlock or collapse.

Government differs from other social or private organizations in many ways, as noted by Austin Ranney (1996). It has legitimate monopoly of vast force (the army, the police, etc.), and can use coercion to enforce its rules and to punish rule breakers. Furthermore, government has inclusive and authoritative powers; that is, whereas rules made by nongovernmental organizations apply only to the members of those organizations and often conflict with those set by other organizations, governmental rules apply to all members of the country and usually are considered to be binding upon all members of a society. In any conflict between the decisions of government and the decisions of nongovernmental organizations, government decisions should prevail. Additionally, while membership in most organizations other than government is voluntary, citizenship is largely involuntary; most people become subject to governmental rules and decisions without any intentional choice.

FORMS OF GOVERNMENT

There are several ways to classify governments. One traditional classification is based on who holds political power: one man or woman (autocratic government), a few (oligarchic government), or a majority (democratic government).

An autocratic government is a government in which one individual holds all power, as is the case in absolute monarchies and dictatorships. One feature of most hereditary monarchies is that the monarch usually rules as head of state for life. In absolute monarchies, monarchs hold substantial power over every aspect of the country. Contemporary examples of such a form of government include Brunei, Bhutan, and Saudi Arabia. In other hereditary monarchies, real authority is held by military rulers, as was the case in Japan during the eighteenth and nineteenth centuries. Under the fascists Benito Mussolini (1883–1945) in Italy and Francisco Franco (1892–1975) in Spain, the two countries were officially monarchies. Some current monarchies are established by tradition, thus the monarch has little real authority. Examples of such a form of government include democratic constitutional monarchies in the United Kingdom, Canada, New Zealand, and Spain.

Dictatorships are usually regarded as synonymous with other forms of autocratic governments, such as totalitarianism and authoritarianism, though each of these forms has a different meaning. *Dictatorship* refers to absolute, repressive rule by one leader who is unrestricted by any law or constitution. Many dictators tend to suppress any opinion that disagrees with their own, and often use military and security forces, propaganda, and arbitrary detention to enforce their will. Such dictatorships survive because of the fear of the dictator. Some dictators create single-party regimes, without democratic elections or with rigged ones, in an attempt to acquire popular legitimacy.

Totalitarian government is a term employed by political scientists to describe modern regimes in which a regime regulates nearly all aspects of public and private behavior. Totalitarian rulers mobilize entire populations in support of the state and a political ideology. Such rulers do not tolerate political activities by individuals or groups such as labor unions and political parties. They maintain themselves in power by means of widespread use of terror tactics, secret police, a one-party system, propaganda, and restriction of freedoms and free discussion. Examples of such regimes include the Soviet Union and the Nazi regime of the 1930s and 1940s.

Authoritarianism is a form of government in which rulers are not appointed via free and fair elections. Authoritarian leaders tend to enforce strong and oppressive acts against those in their domain of influence. Examples of such regimes include the People's Republic of China and Cuba.

In contrast, an oligarchic government is a government where political power is held by a small group of individuals such as aristocrats (the upper class) or plutocrats (the wealthy). Another example of an oligarchic rule, one based on race, was in South Africa under the apartheid system, where the white minority held power. Some theorists such as Gaetano Mosca, Vilfredo Pareto, and Robert Michels argue that in a capitalist society, political and economic power is held by a few members of the capitalist class that seek to maintain the capitalist system at the expense of other classes. In his book *Political Parties* (1968), Michels mentions the "iron law of oligarchy," arguing that all forms of organizations, including the political system, will eventually develop into an oligarchy.

A democratic government is one in which the majority of the people hold political power. Democracy could be direct (all citizens exercise power, as was the case with Athenian democracy) or indirect (where power is exercised by elected representatives, as is the case with contemporary representative democracies in the West). The core characteristic of a democratic government, in the contemporary usage, is "the rule of law." This means that a democratic system is a constitutional government in which the law is supreme, and all citizens and classes are equal before the law. According to the nineteenth-century British jurist Albert Venn Dicey, the objective of this principle, the rule of law, was to substitute "a government of laws" for a "government of men." The rule of law is not a new value: The Romans provided the foundations of the rule of law and limited government in the West, and in fact the rule of law in Arabic-Islamic civilization antedated the Western

principle. There is more than a century between the emergence of this principle in the Islamic state in the seventh and eighth centuries and its recent manifestation in the thought of seventeenth- and eighteenth-century liberal thinkers and, later, in the democratic systems in western Europe and North America.

A democratic government is also a government in which all citizens, rather than one autocratic leader or a few people, have the right and opportunity to participate in the decision-making process. In a democratic system, the people are the ultimate source of authority, and the authority of the majority is limited by law (a written or unwritten constitution) as well as institutional means (such as separated and shared powers, checks and balances, and leadership succession through frequent and fairly conducted elections) so that the rights of individuals and minorities are protected. This form of government exists in western Europe, North America, Australia, New Zealand, Japan, and other regions and countries.

STRUCTURE AND FUNCTIONS OF MODERN DEMOCRATIC GOVERNMENT

The constitutions of modern democratic governments are the main mechanisms by which the principles of constitutional democracy can be enacted into specific institutions and procedures. On the practical level, modern democratic governments can be classified according to the basis of the institutional organization of the political executive body and the relationship between executive and legislative bodies into parliamentary, presidential, and semipresidential systems.

The executive power is composed of two organs in parliamentary governments. First is the head of the state, who is often a monarch or a president. Second, the government, which includes the head of government (called the prime minister, or chancellor) and the council of ministers, or the cabinet. The head of state is an inherited or elected figurehead with minor and ceremonial duties. He or she may have reserve authority (either by convention or by constitutional rule) that is usable in a crisis. Such authority, however, is usually exercised upon the advice and endorsement of the prime minister. The prime minister and the ministers of the cabinet are usually members of the parliament. The leader of the leading party (or group of parties) in the parliament is often appointed to be the prime minister. The government depends on the support of the parliament. Either the entire cabinet or single members can be removed by the parliament through a vote of no confidence. In turn, the executive body can dissolve the parliament and call for new elections. Thus, there is no clear-cut separation between the executive and legislative powers. The origins of this system go back to the British political system. The system also exists in many other democratic countries such as Spain, Japan, Sweden, Canada, and Australia.

In a presidential government, the executive organ, the president, is elected independent of the legislative institution. The president is both head of state and head of government, and there is sharp separation between the executive president and the legislature. Thus, the president is not a member, nor can he or she propose bills. Most importantly, the president cannot be removed by a vote of no confidence or any other political procedures. The president is elected for office for a fixed term and heads most of the agencies charged with executive functions such as enforcing and administering acts of the legislature. The president appoints a group of assistants (known as a cabinet) as heads of the executive departments and supervisors of the administrative agencies. This system of governing originated in the United States. Other countries with presidential systems include Indonesia, the Philippines, Mexico, and most countries in South America.

A semipresidential government is a system that has a cabinet and a president who both have substantial executive duties. This system differs from the parliamentary government because it has an elected president who is assigned substantial duties. Moreover, a semipresidential government differs from the presidential one in that it has a prime minister and a cabinet who are dependent on the support of the legislature. As in the parliamentary government, the cabinet, or a single minister, can be removed by a vote of no confidence in the parliament, and the president can dissolve the legislative assembly. France, Finland, Portugal, Romania, Taiwan, and Ukraine have semipresidential systems.

LEVELS OF GOVERNMENT

Modern states may be also classified according to the distribution of power at different levels of government into two main systems: unitary and federal. A unitary state is a state where the ultimate authority lies exclusively with a central government that controls central and local affairs. In such a system, local and regional authorities may make and implement policies, but they must have the permission of the central government. This form of government has emerged in former monarchies and empires such as France, Britain, and Japan. It also exists in countries with no ethnic divisions, such as the Scandinavian states, Egypt, and Turkey. The other form is a federal state, where political power is constitutionally shared between a federal government and local governments of constituent states or provinces. The function of the federal government is to handle foreign affairs, defense relations, and some internal functions such as monetary affairs. The local governments

of the provinces or states usually handle education and law enforcement. The existence and functions of the provinces or states may be changed only by amending the constitution, a process that protects them from the federal power.

SEE ALSO *Administrative Law; Authoritarianism; Authority; Autocracy; Citizenship; Civil Society; Corporatism; Democracy; Dictatorship; Due Process; Fascism; Franco, Francisco; Judicial Review; Judiciary; Michels, Robert; Military Regimes; Monarchy; Mussolini, Benito; Oligarchy; Oligarchy, Iron Law of; Pareto, Vilfredo; Public Administration; Republicanism; Rule of Law; State, The; Totalitarianism*

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Abdel-Fattah Mady

GOVERNMENT, COALITION

A coalition government exists when two or more political parties formally agree to share executive responsibility and cabinet posts. Proportional representation systems common among parliamentary democracies often produce election results in which no single party wins an absolute majority of seats in a legislature. Such situations yield incentives for parties to build alliances in order to form a new government; absent the emergence of a coalition, the country is left either with leadership that does not command majority support or with the necessity of calling new elections. In political systems that encourage government by coalition, votes do not directly determine the composition of a new government; rather, they only determine which political parties will sit in parliament. Once that initial issue is settled, elected representatives and party leaders negotiate from among a potentially huge number of party combinations and permutations in search of a winning majority. Postelection coalition building can take days, weeks, and even months to complete, with the result being capture by one party of the premiership and distribution across coalition members of important posts such as foreign affairs, finance, justice, and the like. Coalition government stands as an alternative model to majoritarian governance, the latter being characterized by winner-take-all "first-past-the-post" electoral systems that favor clear distinctions between winners and losers.

Coalition government is the subject of a voluminous literature within the political science discipline. As a system of governance, the multiparty coalition is studied most frequently in European democracies whose electoral rules provide for even a modicum of proportionality. Italy's penchant for short-lived postwar coalition governments is notorious, as is Belgium's complex process of managing a delicate linguistic divide through coalitions. The reluctance of postwar German electorates to grant power exclusively to a single party has meant that coalition government—sometimes matching the country's two largest parties in the same "grand coalition"—has been the norm there. Beyond Europe, coalition government is a standard expectation of democratic process in such countries as Israel, India, and Japan.

Advocates of coalition government tout the model's ability to forge compromise and cooperation, and they point to greater inclusiveness as an additional virtue. Political parties in coalitional systems are competitive, but the prospect of governing with one's competitors after an election can moderate campaign rhetoric. Granting new or untested parties a share of executive power as junior coalition partners may likewise moderate political extremism. According to supporters of this institutional approach to democratic governance, policies emerging from multiparty coalition governments should have a better chance of societal acceptance and successful implementation because they are the products of compromise rather than the imposition of political will by a lone dominant party.

Detractors claim that coalition governments are prone to weakness and instability, and because they can blur lines of accountability their democratic credentials are sometimes called into question. Opponents also object to the possibility of governments that are little more than "coalitions of losers," marked by parties and adversaries whose electoral scores have just dropped precipitously but who nonetheless join forces to cling to power and forestall their mutual demise.

SEE ALSO *Elections; First-past-the-post; Government; Parliaments and Parliamentary Systems; Plurality; Winner-Take-All Society*

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William M. Downs

GOVERNMENT, FEDERAL

The member states of confederations establish federal governments to concentrate power in a central authority while maintaining the independence of their own govern-

ments. Traditionally, the member states of confederations have established federal governments as a means of combining their military and economic resources in response to regional threats and rivalries at the same time as they faced deep-seated ethnic, linguistic, or religious barriers to further national integration. The precise institutional structure that most skillfully juggled those two different sets of demands was difficult to define in theory, much less establish in practice. Centripetal forces within a federal system could produce political conflict among the member states just as easily as centrifugal forces could. Tudor England and the Holy Roman Empire exemplified those two tendencies.

The United States presents a somewhat unique case because at the time the federal government was established its member states were not divided along deep-seated ethnic, linguistic, or religious lines, nor had they enjoyed an independent existence before the establishment of the confederation. The framers of the U.S. Constitution generally agreed on the need to create a stronger federal government than had existed under the Articles of Confederation, but they differed on how much to strengthen it. Surprisingly, convention debates over specific powers were rare, except when they engaged existing interstate cleavages. In particular, the convention debate over a federal commerce power, including the power to regulate the slave trade, was heated because it engaged a number of interstate cleavages, between northern and southern states, between upper-South and lower-South states, between New England and mid-Atlantic states, and between commercial and agrarian states. However, in general the sense of the convention was to strengthen the federal government so that it was structured less like traditional federal governments and more like the national governments of the western European powers, which the delegates viewed as the future military and commercial rivals to their newly independent nation. At the same time, they sought to retain the state governments as viable parts of a new federal system of government, if for no other reason than that the Constitution would not otherwise have been ratified.

HISTORICAL DEVELOPMENTS

After the formation of this new type of "half federal, half national" system in the United States, some federal systems have been patterned more on this new, U.S. model (Australia) and some have been patterned more on the traditional, confederal model (Nigeria). Other federal systems represent a hybrid of the two models (Germany) or are clearly transitional in character (Russia). The confederal model has tended to be the least stable, though the original reasons for adopting such a model probably explain its instability more than any flaws in the model itself. The interaction between cultural and institutional causes of political instability was apparent in the case of the former Yugoslavia. As the twenty-first century began, there were twenty-five federal nations in the world, ranging in size from India to St. Kitts and Nevis, with a total of approximately 40 percent of the world's population.

In debating how much to strengthen the federal government, the framers of the U.S. Constitution weighed three separate standards of comparison: prior federal governments, including their own; the western European national governments; and the member-state governments. Similarly, social scientists debate how much the federal government has strengthened its administrative, fiscal, and coercive capacities over the last two centuries relative to each of those three standards of comparison. Generally, they conclude that the federal government has strengthened its capacities, dramatically, as measured against its own earlier permutations, the western European national governments, and the member-state governments. Revisionists then present the "glass half-full" case. They argue that the nineteenth-century federal government was not as weak as supposed, pointing to such developments as the Federalists' establishment of a highly elastic fiscal-military, military-fiscal state during the 1790s, the bureaucratization of the post and land offices during the 1820s and 1830s, and the exponential expansion of military pensioners over the course of the whole century.

RECENT RESEARCH AND CONTEMPORARY PROBLEMS

One interesting area of recent research examines the ways that indigenous and slave populations affected, both negatively and positively, the development of the federal government. Another area of research explores the ways that governing authority has constantly shifted back and forth across the relatively porous constitutional boundaries between the federal and state governments to create and re-create Morton Grodzins's (1966) "marble cake" system. A third area of research involves comparative studies of federal systems. The best of these studies not only distinguish federal systems in terms of their different constitutional, legal, and institutional structures but also analyze the fit between those structures and the underlying political culture.

Beginning in the last two decades of the twentieth century Americans have witnessed a reinvigorated debate among their political elites, especially Supreme Court justices, over the constitutional boundaries of their federal system. The significance of this debate, however, pales before the debates over the viability of federal systems as solutions to the deep-seated ethnic, linguistic, and religious divisions in the developing nations of the world as

many of these nations continue to struggle with the artificial national boundaries that were imposed on them by their European colonizers. Power sharing between various ethnic, linguistic, and religious groups has become the rhetoric of success in nations as diverse as Iraq and the Sudan. Still, even the process of adopting a mutually acceptable constitution has proven extremely difficult. The federal solution remains available as a way of attempting to translate the rhetoric of power sharing into reality, but it is hardly sufficient as a solution to the multiple challenges these nations face.

SEE ALSO *Federalism; Government; State, The*

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GOVERNMENT, UNITARY

The term *unitary government* refers to a constitutional arrangement by which ultimate political authority is held by the central government of a state. In this system sovereignty is vested in the central government alone.

A unitary state does not necessarily imply that only one level of government exists. In fact, unitary states often have multiple levels of government, and in those states political authority is divided across different territorial levels. Japan is an example of a unitary state. It has a central government and below that forty-seven prefectures and over three thousand municipal governments. France is another example of a state with a unitary government. What makes a state unitary is that the central government has ultimate power over the other geographic levels of government and determines what those governments do, how much money they may spend, the location of their boundaries, and whether they exist. In unitary states, therefore, local or regional governments exist alongside central governments, but their financial and political autonomy and even their right to exist are determined by the central government.

The United Kingdom traditionally has been a unitary state with power heavily centralized in London. In that system local governments exist but are created and controlled by central government statute. An example of that control occurred in 1986 when the Conservative government passed legislation to abolish the metropolitan level of government in many major cities, including London. Since 1997, under a Labour government, there has been a devolution of political power in the United Kingdom. Part of the process has been the establishment of a Scottish parliament and a Welsh assembly with independent authority over a range of policy decisions in those territories. Constitutionally, however, the United Kingdom remains a unitary state. The devolved administrations in Scotland and Wales were created by acts of Parliament and in theory could be abolished in the same fashion.

Unitary systems stand in direct contrast to federal political systems. A federal system is one in which two or more levels of government exist but those governmental levels have a constitutionally guaranteed right to exist and constitutionally guaranteed powers. Unlike a unitary system, neither level of government can be abolished or reformed without the consent of the other. In the United States, for example, the federal government cannot abolish California or reform its borders without the consent of California. Other examples of federal states are Australia, Canada, India, and Brazil.

Arguments in favor of a unitary system include the fact that it allows for consistency of policymaking and service delivery across the whole state, in contrast to the differences that frequently are found in federal states. This has the potential to create a strong sense of national identity within a state.

SEE ALSO *Conservative Party (Britain); Federalism; Government; Government, Federal; Labour Party (Britain); Nationalism and Nationality; Sovereignty; State, The*

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GOVERNMENT, WORLD

The concept of *world government* refers to the institutional organization and administration of global affairs, including issues of peace and security, economics, the environment, and the potential constitution of a comprehensive international system of law and justice. In today's international system, the United Nations (UN) most closely approximates the idea of an institutionalized world government. However, to the extent that the UN system does indeed represent a world government, it differs from state or domestic governments in that it possesses no centralized authority with the power to enforce its rule. Generally speaking, domestic governments have a clear vertical or hierarchical structure of authority, with clear rules delineating who has the final say concerning executive decision-making, legislation, jurisprudence, and law enforcement. The international system does not operate under such a clear chain of command. To reflect this distinction the term "global governance" is often used in place of the concept of world government.

An alternative tradition also exists that understands world government in darker, more ambiguous terms. From this perspective, the concept of world government evokes the specter of global domination by a single national power, faceless bureaucracy, or conspiratorial group controlling world affairs from behind closed doors. Nationalists and libertarians see the potential evolution of a world government as a potentially totalitarian threat to liberty and national identity. And for centuries, conspiracy theorists have claimed secret societies such as the "Illuminati" or Freemasons are the true powers that orchestrate global politics. Today, some fear that private-sector networks of the international political and business elite—such as the Trilateral Commission or the World Economic Forum—pull the strings of the global economy, representing a pseudo world government beyond the reach of public accountability.

THE UNITED NATIONS AS WORLD GOVERNMENT

While the UN is structured like a typical domestic government with executive, legislative, and judicial branches, it does not function like one. For example, the General Assembly of the UN is not the primary legislative body of international law. Rather, international law has two recognized foundations independent of the UN system: interstate treaties and long-standing customs—and as a result, in comparison to domestic governments, lawmaking at the level of world government is decentralized. Treaties are the most common way in which international rules are made. They involve the mutual agreement by two or more states to regulate behavior according to predetermined limits. The Geneva Conventions represent a series of such treaties. Customary laws, on the other hand—for example, the recognized freedom of the high seas—develop over time as a consequence of accepted long-standing conduct in international relations. Whereas treaty-based laws only regulate signatories, customary laws are held to be universal. To be effective, however, most international rules must be incorporated into domestic law by domestic legislators—thus the common requirement that national legislative bodies ratify international treaties. In the United States this is the responsibility of the Senate.

Considered as a form of world government, the UN also has very little independent enforcement power beyond threats of force issued by the Security Council. As a result, the authority of the UN depends upon either the willful compliance of member states or the force of a few dominant military and economic powers. For example, the International Court of Justice, representing the primary judicial institution of the UN system—and otherwise known as the World Court—was established to settle legal disputes between member states, and to issue advisory opinions if requested by other UN organs, such as the Security Council or the General Assembly. The statute of the International Court of Justice is part of the UN Charter, yet the enforcement of its decisions is generally dependent upon member-states' willingness to comply. No state may be sued before the Court without accepting its jurisdiction over the particular case beforehand. Thus the more powerful a state, the more difficult it is to enforce decisions against it. The record of the United States is particularly poor in this regard. In 1986 the Court ruled against it in a case regarding the mining of Nicaraguan waters. The United States refused to recognize the process, and Nicaragua was powerless to appeal.

THE DEVELOPMENT OF INTERNATIONAL LAW

In fact, rather than referring to the international system as a present-day world government, it is more common to refer to international law as representing only the potential roots of a possible future world government. The modern rise of international law can be traced back to the Peace of Westphalia of 1648, which ended the Thirty Years' War in part by recognizing the right of territorial sovereignty in interstate affairs. What came to be known as the Westphalian order is defined by two principles: state territoriality—the international recognition of well-defined borders—and the right to nonintervention in domestic affairs. The Westphalian order placed the independent nation-state at the center of the international system at the expense of larger supranational authorities such as the Holy Roman Empire or the Roman Catholic Church. Nonetheless, international law constituted only a minimal system of coexistence, and military force remained the pri-

mary mechanism for the settlement of conflict. The early nineteenth century witnessed the formation of the Concert of Europe—a balance of power arrangement with the goal of establishing security on the continent in the wake of the Napoleonic wars. Yet it was not until the end of World War I (1914–1918) and the founding of the League of Nations that the first systemic international organization was formed with the purpose of avoiding war altogether. And it was not until the close of World War II (1939–1945) that the formation of the United Nations, and the establishment of the International Military Tribunal for the Punishment of War Criminals, made aggressive war an internationally recognized crime.

After World War II, international law entered a new stage represented by the ban on the use of force and the elevation of human rights to the status of international law through the Universal Declaration of Human Rights. Historically, the subjects of international law had always been groups or collective actors, principally states. But with the rise of human rights and war crimes legislation more and more international law came to refer directly to the individual person, independent of particular group membership. With this development some understand international law to be following a trajectory that points away from the statist Westphalian model of international relations toward a universalist, cosmopolitan model of world government.

Most international law, however, remained state- or group-based well into the start of the twenty-first century. Many late-twentieth century developments do, however, point toward the coexistence of an alternative cosmopolitan model. For example, the International Criminal Court (ICC) points toward the development of an international system of justice in which individuals could claim to be citizens of the world subject to a single law executed by a single world government. Thus one might imagine a future world government as taking form around such a notion of universal citizenship. The ICC was founded in 1998 to prosecute perpetrators of the most heinous crimes recognized by the entire international community, including "genocide" and "crimes against humanity." However, important obstacles to its success remain: Not all countries immediately recognized its authority, subsequently undermining its claim to universality; most important, the United States disputed its mandate, claimed special exemption from its jurisdiction, and pressured other countries—especially its aid recipients—to do the same. Similarly, other trends suggest that the decentralized structure of the international system could just as easily develop away from the consolidation of a coherent world government. For example, in the early years of the twenty-first century, international regulation was increasingly the product of private-public partnerships, resulting in a pluralization of rule-making structures rather than their institutional concentration.

SEE ALSO *League of Nations; United Nations*

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Adam Lupel

GOVERNMENTALITY

The term *governmentality* was coined by the French philosopher and historian Michel Foucault (1926–1984). Foucault's *gouvernementalité* was derived from the French word *gouvernemental* meaning "concerning government." Foucault introduced the notion in his lectures of 1978 and 1979 at the Collège de France as a guiding principle in his "genealogy of the modern state" (Foucault 2004a, 2004b) illustrating his working hypothesis on the reciprocal constitution of technologies of power and political rationalities. Also, Foucault uses the notion of government in a sense geared strongly to the older meaning of the term, stressing the close link between forms of power and processes of subjectification. He demonstrates that in addition to the management by the state or the administration, *government* in the past also signified problems of self-control, guidance for the family, management of the household, or directing the soul. For this reason, Foucault defines government as "the conduct of conduct" and thus as a term that ranges from "governing the self" to "governing others" (Foucault 1982, pp. 220–221).

Foucault's lectures trace the genealogy of governmentality from classical Greek and Roman days via the notion of state reason and the science of the police in early modernity through to liberal and neoliberal forms of government. While Foucault's analytics of government remained more a fragmentary sketch than an elaborated theory, it has nevertheless inspired many studies in the social sciences and historical investigations. Especially in Great Britain, Australia, Canada, and the United States, scholars have sought to refine and extend Foucault's work for a critical analysis of political technologies and governmental rationalities in contemporary societies.

These "studies of governmentality" have focused on the shift from the Keynesian welfare state toward the so-called free market policies in Western democracies and the rise of neoliberal political programs. The concept of governmentality offers two important theoretical advantages for this line of investigation. First, power relations are not restricted to the government of the state but include all forms of directing and guiding individuals and collectives in civil society and in the economic sphere. According to this theoretical perspective, the differences between state and society, politics and economy, the private and the public sphere do not function as universal foundations or essential borderlines, but as elements and effects of technologies of government that could be studied and critically assessed (see Foucault 1991, p. 103). Secondly, the liberal polarity of subjectivity and power ceases to be plausible. From the perspective of governmentality, government refers to a continuum, which extends from political government right through to forms of self-regulation. This theoretical stance allows for a more complex analysis of neoliberal forms of government that feature not only direct intervention by political authorities and empowered state agencies, but also develop indirect techniques for guiding and controlling individuals.

SEE ALSO *Economics, Keynesian; Foucault, Michel; Government; Liberalism; Welfare State*

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Thomas Lemke

GRAMEEN BANK

The genesis of Grameen Bank (GB) can be traced back to 1974, when Mohammed Yunus, a professor in Chittagong University, loaned the equivalent of $27 to forty-two indebted residents of Jobra, a village in Bangladesh. Witnessing the grinding poverty and famine conditions, Yunus and his students conducted surveys and discovered the critical significance of credit for breaking out of the proverbial poverty trap. The distinctive feature of these loans was the absence of any collateral. The success of the experiment was almost immediate and led to the formal establishment of the GB on October 2, 1983, as a semiprivate institution to help alleviate poverty in rural Bangladesh. The word *Grameen* comes from the Bengali word *gram*, meaning "village." The 2006 Nobel Peace Prize was awarded to Yunus and the GB, and today the bank is among the most famous nongovernmental organizations (NGOs) in the world.

Mohammed Yunus was born on June 28, 1940, in the port city of Chittagong, Bangladesh. His father was a goldsmith and his upbringing was comfortable. He was a successful entrepreneur starting a new family business, which he gave up when he received a Fulbright grant in 1965 to study economics at Vanderbilt University. After completing his PhD he taught briefly at Middle Tennessee State University (MTSU). The 1971 civil war and birth of the newly independent Bangladesh convinced him to return home. He first joined the planning commission in Dhaka, but soon returned to academia as the head of the economics program at Chittagong University. From this campus, he studied the economic lives of the poor and came up with the idea of the GB.

Yunus realized that the skilled poor could substantially raise their incomes and standard of living if they could bypass the middleman or the village moneylender, so he focused on how to make institutional credit available to the poor. Established banks had no interest in poor borrowers because the transaction cost of dealing with low-income customers in villages was high, and lending to them would violate the cardinal rule of banking—to lend only against valuable assets, or "collateral." In his Nobel lecture, Yunus recalled, "I was shocked to discover a woman in the village borrowing less than a dollar from the moneylender on the condition that he would have the exclusive right to buy all she produces at the price he decides. This, to me, was a way of recruiting slave labor" (Yunus 2006).

Gradually, through trial and error and with the help of a dedicated group of students, Yunus developed the concept of a new type of banker who would visit poor rural customers in their homes and workplaces. The small loans are given only to the very poor—mostly women—who are disciplined and ambitious, with ideas for small (micro-) businesses, and successful in joining a team of four. After training, the team member with the best business model receives a micro loan, with the first installment to be paid the following week. Only when the first bor-

rower has substantially returned her loan can the other team members have their projects financed. The average loan is roughly $200 at 16 percent annually. Given the weekly returns, the effective annual interest rates are in the range of 20 to 30 percent, which may sound high, but they are significantly below the rates charged by village moneylenders, which are often around 120 percent annually. The bank offers additional products for its members—home loans, compulsory savings, disaster funds, life insurance, loans to beggars, and so on. The housing loan program has helped construct 640,000 new sturdy homes for its customers. In 1995 the bank stopped accepting donor funds, and today the bank is entirely self-financed and self-sustaining. According to internal studies, 58 percent of its clients have crossed the poverty line.

The Grameen Bank was created by a special presidential proclamation, which makes it a unique institution. At first, the ownership split between government and members was 60:40, but this was later changed to 25:75 in favor of the members or borrowers. The bank has given over $5.7 billion in micro loans since its inception to more than 7 million clients across 73,000 villages in Bangladesh (and with an average of five members in a Bangladeshi household, this amounts to a potential impact on 35 million citizens). A significant percentage of the members (97%) are women, and the loan repayment rate is an impressive 98 percent. As of 2007, the bank has 2,226 branches all over the country. The model with some variations has spread across the world, and can be found in communities in Europe, Latin America, and North America. According to one estimate, today more than 60 million poor worldwide have access to microfinance. The Grameen Bank is a shining instance of the success of idealistic ventures in the struggle against poverty.

SEE ALSO *Development; Development Economics; Loans; Microfinance; Nobel Peace Prize; Nongovernmental Organizations (NGOs); Poverty; Transaction Cost*

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Salim Rashid
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GRAMSCI, ANTONIO
1891–1937

Antonio Gramsci counts among the most influential thinkers of the Left in the twentieth century. Born to a family of modest means in Caligari, Sardinia, Italy, Gramsci's early life was characterized by poverty, and for most of his life he suffered from poor health, which was worsened by his long imprisonment in fascist Italy. He died in 1937 after more than ten years in prison.

LIFE

In addition to poverty and work to support his family, Gramsci's early years in Sardinia introduced him to socialist politics, as well as to the writings of prominent Italian thinkers of his time, including Gaetano Salvemini (1873–1957), Benedetto Croce (1866–1952), Giuseppe Prezzolini (1882–1982), and Pilade Cecchi, in addition to becoming introduced to the writings of Karl Marx (1818–1883). The beginnings of Gramsci's entry into the larger spheres of Italian political and intellectual life can roughly be dated to the years 1911 and 1912, when after obtaining a scholarship to attend the University of Turin, he immersed himself in the study of linguistics, philosophy, and literature, and also met a number of individuals who were to exercise a profound impact on his life, notably the leaders of the future Italian Communist Party (PCI), Palmiro Togliatti (1893–1964) and Angelo Tasca (1892–1960), as well as such intellectuals as Matteo Bartoli (1873–1946) and Umberto Cosmo (1868–1944).

His early academic promise notwithstanding, Gramsci dedicated much of his time after 1915 to journalism, becoming one of the most effective public voices of the Italian Socialist Party, from whose split the PCI was born with Gramsci's active participation in 1921. In those years he wrote regular columns for the Turin edition of the newspaper *Avanti!* (Forward!), and in 1919 he cofounded *L'Ordine Nuovo* (The New Order), which became an influential review. During those years Gramsci was constantly active in workers' militant organizing, and devoted much time to the factory council movement, in addition to giving talks to workers' study groups on historical revolutionary experiences, including the French Revolution and the Paris Commune, as well as on literature and Marxist philosophy.

Following the split that produced the PCI in 1921, Gramsci lived for over a year in Moscow (1922–1923) as an Italian delegate to the Communist International (Comintern), returning to Italy after his election to the Chamber of Deputies in 1924 gave him temporary immunity from arrest. During that period he also became the general secretary of the PCI. His writings at that point show concern about the main issues of the moment,

including the rise of Joseph Stalin (1879–1953) in the Soviet Union and the elimination of the opposition in the Comintern, as well as the "southern question" in Italy—namely the less developed status of southern Italy, its status as a colonial periphery of the north, and the need of the communist party for a distinct strategy to mobilize the agrarian population—and the relationship between workers and intellectuals.

THOUGHT

The bulk of Gramsci's intellectual output, however, is contained in his *Prison Notebooks*, a large compendium of essays, commentaries, and letters written during his internment, which began to be published in piecemeal fashion by the PCI after World War II (1939–1945). It is these writings that reveal Gramsci's distinctive contribution to social theory and Left analysis, even though they are colored by a certain cryptic style designed to maneuver around issues sensitive to prison censors. The most significant innovations in these writings include Gramsci's thesis on hegemony, the role of intellectuals, and the status of the peasantry in Left analysis.

The notion of hegemony, in particular, was developed by Gramsci as a way to account for a deficiency in the revolutionary character of the working class, as well as to amend the economic determinism that had plagued Marxist analysis. In some ways, "hegemony" was Gramsci's way of elaborating the actual working out of Marx's famous dictum, "the ideas of the ruling class are always the ruling ideas." In Gramsci's formulation, hegemony accounts for how domination is exercised apart from coercion and force. The dominated classes or groups have their own reasons for accepting the ideas of a ruling class or elite, and such reasons are the ground for the spontaneous consent given to a dominant ideology by classes that are dominated by it.

This concept has obvious affinities to other terms used in the social sciences, such as unquestioned "common sense." However, contrary to appearances, hegemony, even if taken as "common sense," is not stable. It is liable to break down as the subordinated groups develop alternative ways of seeing the world, and as crises within established systems create room for precisely the emergence of alternative hegemonies. The key to this kind of transformation consists thus of cultural and political work in society, rather than simply revolutionary action. This is precisely what Gramsci meant by "war of position" (the long, patient work in civil society oriented to combating established hegemony), to be distinguished from "war of maneuver" (the revolutionary takeover in a society where domination is not complemented by hegemonic sway over society at large).

It was such an orientation toward questions of culture, consciousness, and active agency that also highlighted for Gramsci the role of intellectuals. He saw that intellectuals are crucial in articulating and disseminating the outlooks of the classes for which they speak, in a way that goes beyond the simple expression of economic interests. For the working class, an intellectual who fulfilled that role was not confined in Gramsci's thought to a stratum of educated, revolutionary elite. Rather, the "organic intellectual" could also be a lay person whose expression of the specific ideology of his class originates out of his actual working life. This conception arises out of Gramsci's argument that all individuals are intellectual in the sense of having and using an intellect, though not all are intellectuals in terms of their formal social role.

Finally, unlike many intellectuals on the left who ignored the peasantry while highlighting the role of the working class, Gramsci emphasized the need to address the "southern question," especially in countries like Italy (and Russia) where the peasantry comprised a large proportion of the population. His cryptic references to the "subaltern" encapsulate this orientation, and suggest the need for the party to assimilate the work of the organic intellectuals of segments of the population that it had ignored.

These various dimensions of Gramsci's outlook have insured him great influence over twentieth-century thought. Those looking for sources of inspiration in Marxist thought beyond economic determinism have turned to his work, as have media scholars who were interested in exploring how certain ideas disseminate more broadly than others.

SEE ALSO *Hegemony; Marxism; Socialism*

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Mohammed A. Bamyeh

GRAND THEFT AUTO

SEE *Video games.*

GRANGER CAUSALITY

SEE *Causality.*

GRANGER-SIMS TEST

SEE *Causality.*

GRANT, ULYSSES S.

1822–1885

Born as Hiram Ulysses Grant on April 27, 1822, at Point Pleasant, Ohio, the son of Jesse Root and Hannah Simpson Grant, Grant grew up in nearby Georgetown. In 1839 he entered the U.S. Military Academy at West Point, graduating in the middle of his class in 1843; it was at this time that he became Ulysses S. Grant, a result of a West Point clerical error. During the Mexican-American War (1846–1848), he saw action in several battles, despite the fact that he served as quartermaster and commissary officer for his regiment. Marrying Julia Dent in 1848, he found peacetime military service frustrating professionally and personally, and resigned his commission as captain in 1854. Over the next seven years, Grant struggled to provide for his family, which eventually included four children. A combination of bad luck, uncertain health, and the impact of the economic panic of 1857 left him impoverished before he took a position at his father's general store in Galena, Illinois, in 1860. With the outbreak of the Civil War (1861–1865) the following year, he offered his services, eventually securing a colonel's commission; before long he found himself a brigadier general, courtesy of the influence of his hometown congressman.

In 1861 Grant led U.S. forces southward into Kentucky and Missouri, securing Paducah in September. The following year, forces under his command, aided by a gunboat flotilla, captured Fort Henry (February 6, 1862) and Fort Donelson (February 16, 1862), along with some twelve thousand Confederate soldiers. Two months later, he fended off a Confederate attack at Shiloh, Tennessee (April 6–7, 1862), although the high losses he suffered and his lack of preparedness brought him under heavy criticism.

Late in the fall of 1862, after fending off several Confederate efforts to retake western Tennessee, Grant began planning to capture Vicksburg, Mississippi, the major remaining Confederate stronghold along the Mississippi River. After several abortive efforts, he took the city on July 4, 1863, following a campaign of marching and fighting that kept superior enemy forces off balance. The victory secured his hold on an important command: In November he scored another triumph at Chattanooga, Tennessee, a victory that paved the way for President Abraham Lincoln (1809–1865) to elevate him to overall command of the armies of the United States in 1864. In less than fourteen months from assuming command, Grant devised the grand strategy and coordinated the campaigns that led to the collapse of the Confederacy. He took charge of the forces opposing the Confederacy's leading general, Robert E. Lee (1807–1870), and in some six weeks of bloody campaigning forced Lee back to defend the Confederate capital at Richmond, Virginia. Holding Lee in check while other Union armies triumphed (as did Lincoln in his reelection bid), Grant pushed Lee out of Richmond at the beginning of April, tracked him down, and forced him to surrender what remained of his army on April 9, 1865.

Immediately after the war, Grant urged reconciliation between North and South, but he quickly came to oppose white supremacist violence and to support recognizing black civil and eventually political rights. His popularity as a war hero made him an ideal presidential candidate for the Republican Party in 1868: His triumph came in the first election in which black Americans voted in large numbers, enough to secure Grant's majority in the popular vote. Having run for the presidency in the belief that only he could stave off a Democratic resurgence and preserve the fruits of military victory, Grant unsuccessfully attempted to balance sectional reconciliation with federal protection of black equality before the law.

During Grant's first term, the former Confederate states completed their return to civil government, while the ratification of the Fifteenth Amendment appeared to safeguard black voting. His efforts to subdue terrorist groups such as the Ku Klux Klan enjoyed initial success, although eventually a combination of white supremacist persistence, eroding public support, adverse court decisions, and inadequate institutional foundations led to the recapture of the former Confederate states by the Democratic Party. Although Grant oversaw the establishment of a stable deflationary monetary policy and a peaceful settlement of outstanding issues with Great Britain, his efforts to build a political base through patronage to help him pass his agenda, especially the attempted annexation of the Dominican Republic, only spurred greater opposition within his own party. Eventually, these opponents formed the short-lived Liberal Republican movement, which unsuccessfully tried to thwart Grant's bid for reelection in 1872.

The onset of economic depression and the revelation of corruption within the administration marred Grant's second term, as did the collapse of his peace policy toward Native Americans. Leaving office in 1877 after playing a critical role in resolving the disputed election of 1876, Grant took a trip around the world, returning to fail in a

bid for the 1880 Republican presidential nomination. Moving to Wall Street, Grant tried his hand at business once more, only to be impoverished when he became the victim of a swindler. Soon thereafter, he learned he had throat cancer. In order to provide for his family, Grant commenced writing his autobiography, completing the manuscript, widely praised as a masterpiece, only days before his death at Mount MacGregor, New York, on July 23, 1885. He was buried in New York City; in 1897 his remains were reinterred in a massive tomb overlooking the Hudson River.

As a general, Grant displayed a doggedness and aggressiveness that sometimes overshadowed his ability to plan and conduct major campaigns and coordinate his forces, skills not evident in his predecessors in high command. Critics claim that he was a blundering bloody butcher, but the indictment does not stand up under examination. He also displayed a shrewd willingness to cooperate with his civil superiors and came to embrace both emancipation and the waging of hard war as keys to victory. As such, he has been cited as a model for military leadership and business management, something of an irony given his failures in business. Assessments of his presidency as a flat failure have given way to a more balanced view that takes into account the difficult problems Grant faced and gives him due credit for his successes and for exhibiting some political skill.

SEE ALSO *Ku Klux Klan; Lee, Robert E.; Lincoln, Abraham; Mexican-American War; Native Americans; Presidency, The; Reconstruction Era (U.S.); Republican Party; Slavery; Terrorism; U.S. Civil War*

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Brooks D. Simpson

GRATZ V. BOLLINGER

SEE *Grutter Decision.*

GRAUNT, JOHN

1620–1674

John Graunt is recognized as the father of demography for his systematic yet critical use of population data to investigate demographic processes. He originated a number of demographic techniques and demonstrated a healthy skepticism of his own data.

Graunt was born in England in 1620. He was the son of a draper and, after completing his apprenticeship, he inherited his father's business. Graunt acquired some degree of wealth and prestige and rose through the ranks of civil service, although he was not among the educated class of his day.

As a pastime, Graunt studied the Bills of Mortality—birth and death registers published weekly and annually in the *London Times* throughout the seventeenth century. Birth data was collected from christenings; mortality data was collected by older women, called *searchers*, who were paid to inquire about cause of death from family and physicians. Graunt's *Natural and Political Observations on the Bills of Mortality*, which appeared around 1662, explored many demographic questions. His empirical investigation revealed that females tended to have a longer lifespan than males, that London was growing through internal migration from the country, and that the population of London was actually much smaller (around 460,000 people) than commonly asserted (estimates ranged up to seven million).

Graunt also formulated a number of methods that continue to be used by demographers today. He expressed the number of male births relative to female births as a ratio, creating what has come to be known as the *sex ratio at birth*. He estimated a *doubling time* for the growth of the city of London. In addition, Graunt observed that mortality varies by age. This insight led him to develop the first *life table*—a table that follows a virtual population of one hundred people through the age-specific mortality rates of the actual population. Edmund Halley (1656–1742) later perfected the life table and gave it its actuarial application.

One of Graunt's most important methodological contributions was a skepticism of his own data. Graunt was concerned with unavailable data, poorly defined categories, misspecification of the cause of death, and underreporting. He discussed at length the possibility of searchers being inaccurate, bribed, or drunk at the time of inquiry.

Graunt's work also made the critical contribution of substantive interpretation. Previously, the Royal Statistical Society's official goal was merely to gather data, not to interpret it. The Society claimed that "threshing out" the implications of data should be left to the court (i.e., politicians), a position that protected the Society from appearing partisan, but discouraged demographic research.

Late in life, Graunt converted to Catholicism. In the politically and religiously charged atmosphere of England at the time, his conversion had tragic consequences. He

was forced to resign from his positions in civil service. The Great Fire of London in 1666 destroyed his home—a setback from which he never recovered. He lived out his last years with the financial help of his friend William Petty (1623–1687). Graunt died in 1674 in such poverty that the Draper Society awarded his widow £4 annually for her upkeep.

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GRAVITATION

SEE *Long Period Analysis;* Tâtonnement.

GRE TEST, THE

SEE *Standardized Tests.*

GREAT CONTRACTION

SEE *Great Depression.*

GREAT CRASH

SEE *Great Depression; Wall Street.*

GREAT DEPRESSION

Between 1929 and 1933 the world economy collapsed. In country after country, although not in all, prices fell, output shrank, and unemployment soared. In the United States the rate of unemployment reached 25 percent of the labor force, in the United Kingdom 16 percent, and in Germany a staggering 30 percent. These rates are only roughly comparable across countries and with twenty-first century unemployment rates because of different definitions of unemployment and methods of collection; nevertheless, they show the extremity of the crisis. The recovery, moreover, was slow and in some countries incomplete. In 1938 the rate of unemployment was still at double-digit levels in the United States and the United Kingdom, although thanks to rearmament it was considerably lower in Germany. A number of previous depressions were extremely painful, but none was as deep or lasted as long. There were many recessions that came after, but none could begin to compare in terms of prolonged industrial stagnation and high unemployment. The consequences stemming from the Great Depression for economies and polities throughout the world were profound. The early appearance of depression in the United States and the crucial role of the United States in world trade make it important to consider the U.S. case in some detail.

THE GREAT DEPRESSION IN THE UNITED STATES

There had been severe depression in the United States before the 1930s. The most similar occurred in the 1890s. Indeed, the sequence of events in the 1890s foreshadowed what was to happen in the 1930s in some detail. Prices of stocks began to decline in January 1893, and a crash came in May and June after the failure of several well-regarded firms. The market continued to decline, and at its low point in 1896 had lost 30 percent of its value. The decline in the stock market was associated with a sharp contraction in economic activity. A banking panic intensified the contraction. There seem to have been two sources for the panic. First, fears that the United States would leave the gold standard prompted by the growing strength of the free silver movement led to withdrawals of gold from New York. In addition, a wave of bank failures in the South and West produced by low agricultural prices also undermined confidence in the banking system. Runs on banks spread throughout the country and the crisis ended with a general restriction of the conversion of bank notes and deposits into gold. The money supply fell, the economy slowed, bank and business failures multiplied, and unemployment rose. Although a recovery began in June 1894, the recovery was slow and uneven. By 1897 one-third of the railroad mileage in the United States was in receivership. It took until 1898 for the stock market to match its 1893 peak, and for annual real gross domestic product (GDP) per capita to match its 1892 level.

During the early 1930s events unfolded in a similar fashion. There were few signs in 1929, however, that a Great Depression was on the horizon. There had been a severe contraction in 1920–1921, but the economy had recovered quickly. There were minor contractions in 1923–1924 and 1926–1927, and the agricultural sector had struggled during the 1920s, but overall the economy prospered after the 1920–1921 recession. In 1929 unemployment in the United States was just 3.2 percent of the labor force; in many ways it was a vintage year.

The stock market boomed in the late 1920s and reached a peak in 1929; prices rose nearly 2.5 times between 1927 and its peak in 1929. Economic historians

have long debated whether there was a bubble in the market in the late 1920s, meaning that prices of shares had risen more rapidly than "fundamentals." Research conducted in 1993 by Peter Rappoport and Eugene White and other late-twentieth-century views have strengthened the case for a bubble. They have shown that many well-informed investors doubted the long-run viability of prevailing prices. There were undoubtedly, however, many other investors who believed that the economy had entered a so-called New Age, as was said at the time, in which scientific and technical research would produce rising real incomes, rising profits, and an eventual end to poverty.

The crash of the stock market in the fall of 1929 was partly a reflection of the state of the economy—a recession was already under way—but the crash also intensified the slowdown by undermining confidence in the economic future. The major impact of the crash, as shown by Christina Romer in her 1990 work, was to slow the sale of consumer durables. The crash may also have influenced markets around the world by forcing investors to reassess their optimistic view of the future. In any case, the stock markets in most other industrial countries after having risen in the 1920s also fell to very low levels in the first half of the 1930s. The U.S. market lost two-thirds of its value by 1933, the German market (which had peaked before the American market) lost one half, and the British market, which did somewhat better, lost one-fifth.

The collapse of the American banking system then intensified the contraction. There were repeated waves of bank failures between 1930 and 1933 produced by the economic contraction, by the decline in prices, especially in the agricultural sector, and perhaps by a contagion of fear. As people withdrew their cash from banks to protect their wealth, and as banks increased their reserves to prepare for runs, the stock of money shrank. The collapse of the American banking system reflected a number of unique circumstances. First, laws that prevented banks based in one state from establishing branches in other states, and sometimes from establishing additional branches within a state, had created a system characterized by thousands of small independent banks. In contrast, most other countries had systems dominated by a few large banks with branches. In Canada where the system consisted of a small number of banks with head offices in Toronto or Montreal and branches throughout the country there were no bank failures. In addition, the young and inexperienced Federal Reserve System (it was established in 1913) proved incapable of taking the bold actions needed to end the crisis.

Many explanations have been put forward for the failure of the Federal Reserve to stem the tide of bank runs and closures. Milton Friedman and Anna J. Schwartz in their classic *Monetary History of the United States* (1963) stressed an internal political conflict between the Federal Reserve Board in Washington and the New York Federal Reserve Bank that paralyzed the system. A 2003 study by Allan Meltzer stresses adherence to economic doctrines that led the Federal Reserve to misinterpret the fall in nominal interest rates during the contraction. The Treasury bill rate fell from about 5 percent in May 1929 to .10 percent in September 1933. The Federal Reserve viewed low rates as proof that it had made liquidity abundant and that there was little more it could do to combat the depression. The bank failures, which were concentrated among smaller banks in rural areas, or in some cases larger banks that had engaged in questionable activities, the Federal Reserve regarded as a benign process that would result in a stronger banking system. From 1930 to 1933 about 9,000 banks in the United States suspended operation and the money supply fell by one-third.

During the interregnum between the election of President Franklin Roosevelt in November 1932 and his taking office in March 1933 the banking system underwent further turmoil. In state after state governors proclaimed "bank holidays" that prohibited or limited withdrawals from banks and brought the banking and economic system to a standstill. The purpose of the holidays was to protect the banks from panicky withdrawals, but the result was to disrupt commerce and increase fears that the system was collapsing. By the time Roosevelt took office virtually all of the banks in the United States were closed and perhaps one-quarter of the labor force was unemployed. Roosevelt addressed the situation boldly. Part of his response was to rally the spirits of the nation. In his famous first inaugural address he told the people that "the only thing we have to fear is fear itself." His address also promised work for the unemployed and reforms of the banking system. The administration soon followed through. Public works programs, which focused on conservation in national parks and building infrastructure, were created to hire the unemployed. In the peak year of 1936 approximately 7 percent of the labor force was working in emergency relief programs.

The banking crisis was addressed in several ways. Banks were inspected and only "sound" banks were allowed to reopen. The process of inspection and phased reopening was largely cosmetic, but it appears to have calmed fears about the safety of the system. Deposit insurance was also instituted. In 1963 Milton Friedman and Ann Jacobson Schwartz argued that deposit insurance was important in ending the banking crisis and preventing a new eruption of bank failures by removing the fears that produced bank runs. Once depositors were insured by a federal agency they had no reason to withdraw their funds in cash when there was a rumor that the bank was in trouble. The number of bank failures in the United States

dropped drastically after the introduction of deposit insurance.

The recovery that began in 1933, although not without setbacks, was vigorous and prolonged. By the middle of 1937 industrial production was close to the 1929 average. Still, there was considerable concern about the pace of recovery and the level of the economy. After all, with normal economic growth the levels of industrial production and real output would have been above their 1929 levels in 1937. Unemployment, moreover, remained stubbornly high. With a few more years of continued growth the economy might well have recovered fully. However, another recession, the "recession within the depression," hit the economy in 1937. By the trough in 1938 industrial production had fallen almost 60 percent and unemployment had risen once more. Mistakes in both fiscal and monetary policy contributed to the severity of the contraction, although the amounts contributed are disputed. The new Social Security system financed by a tax on wages was instituted in 1935, and the taxes were now put in place. The Federal Reserve, moreover, chose at this time to double the required reserve ratios of the banks. The main purpose of the increase was to prevent the reserves from being a factor in the future, to tie them down. The banks, however, were now accustomed to having a large margin of reserves above the required level and they appear to have cut their lending in order to rebuild this margin. The economic expansion that began in the summer of 1938, however, would last throughout the war and pull the economy completely out of the depression. Indeed, even before the United States entered the war as an active participant at the end of 1941, fiscal and monetary stimuli had done much to cure the depression.

THE DEPRESSION WIDENS

Most market-oriented countries, especially those that adhered to the gold standard, were affected by the Great Depression. One reason was the downward spiral of world trade. The economic decline in the United States hit hard at firms throughout the world that produced for the American market. As the depression spread from country to country, imports declined further.

The gold standard, to which most industrial countries adhered, provided another channel for the transmission of the Great Depression. The reputation of the gold standard had reached unchallenged heights during the period of expanding world trade before World War I. Most countries, with the exception of the United States, had abandoned the gold standard during the war to be free to print money to finance wartime expenditures. After the war, the gold standard had been reconstructed, but in a way that left it fragile. Most countries decided not to deflate their price levels back to prewar levels. Hence the nominal value of world trade relative to the amount of gold in reserve was much higher after the war than before. Under the gold standard orthodoxy of the day central banks were supposed to place maintenance of the gold standard above other priorities. If a country was losing gold because its exports had fallen faster than its imports, the central bank was supposed to raise interest rates to protect its gold reserve, even if this policy exacerbated the economic contraction. Countries that gained gold might have lowered their rates, but they were reluctant to do so because lower rates would put their gold reserves at risk.

The global transmission of information and opinion provided a third, hard to measure, but potentially important channel. The severe slide on the U.S. stock market and other stock markets focused attention throughout the rest of the world on factors that might produce a decline in local markets. Waves of bank failures in the United States and central Europe forced depositors throughout the rest of the world to raise questions about the safety of their own funds. Panic, in other words, did not respect international borders.

Although these transmission channels assured that the whole world was affected in some degree by the depression, the experience varied markedly from country to country, as even a few examples will illustrate. In Britain output fell from 1929 to 1932, but the fall was less than 6 percent. The recovery, moreover, seems to have started sooner in Britain than in the United States and the growth of output from 1932 to 1937 was extremely rapid. Unemployment, however, soared in 1929 to 1931 and remained stubbornly high for the remainder of the decade. Although Britain was becoming less dependent on exports, exports were still about 15 percent of national product. The fall in exports produced by the economic decline in the United States and other countries, therefore, probably explains a good deal of the decline in economic activity in Britain. In September 1931 Britain devalued the pound and left the gold standard. The recovery in Britain began soon after. Export growth produced by a cheaper pound does not seem to have played a prominent part in the recovery, but a more expansionary monetary policy permitted by leaving gold does seem to have played a role. On the whole it may be said that the British economy displayed surprising resiliency in the face of the loss of its export markets.

Germany, on the other hand, suffered one of the most catastrophic declines. A severe banking crisis hit Germany in July 1931, punctuated by the failure of the Darmstädter-und Nationalbank on July 13. The German crisis may have been provoked by the failure of the Credit Anstalt bank in Austria in May 1931 and the subsequent run on the Austrian shilling, although economists have debated these factors. Germany soon closed its banks in

an effort to stem the runs, and abandoned the gold standard. Germany, however, did not use the monetary freedom won by abandoning the commitment to gold to introduce expansionary policies. Between June 1930 and June 1933 the stock of money in Germany fell by nearly 40 percent. Prices and industrial production fell, and unemployment soared. Under the Nazis government spending, much of it for rearmament, and monetary expansion produced an extended economic boom that restored industrial production and full employment.

The experience of Japan where the depression was unusually mild has stimulated considerable interest. Unemployment rose mildly by Western standards between 1929 and 1933 and fell to 3.8 percent by 1938. Other indicators, such as the stock market, also rose between 1933 and 1938. Many observers have attributed this performance to the actions of Finance Minister Korekiyo Takahashi. In 1931 Takahashi introduced a stimulus package that included a major devaluation of the yen, interest rate cuts, and increases in government spending. The latter element of his package has led some observers to refer to Takahashi as a "Keynesian before Keynes." Late twentieth-century research has challenged the notion that Takahashi was able to break completely free of the economic orthodoxies of the day, but the strong performance of the Japanese economy remains an important signpost for scholars attempting to understand the factors that determined the course of events in the 1930s.

THEORIES

The factors previously stressed, the collapse of the banking system in the early 1930s, and the policy mistakes by the Federal Reserve and other central banks are of most relevance to what has come to be called the monetarist interpretation of the Great Depression. Some economists writing in the 1930s, such as Jacob Viner and Laughlin Currie, developed this view, concluding that much of the trouble could have been avoided if the Federal Reserve and other central banks had acted wisely.

In the aftermath of the publication of John Maynard Keynes' *General Theory* (1936), however, an alternative interpretation held sway. The Keynesians argued that the breakdown of the banking system, although disturbing, was mainly a consequence of the collapse of aggregate demand. The behavior of the Federal Reserve was at most a secondary problem. The Keynesians blamed the fall in aggregate demand on the failure of one or more categories of autonomous spending. At first, attention focused on investment; later attention shifted to consumption. The answer to the Great Depression was public works financed, if necessary, by borrowing. The New Deal in the United States had spent a great deal of money and run up highly controversial deficits; 1956 calculations by E. Cary Brown, however, showed that a number of factors, including cuts in spending at the state and local level, had offset the effects of New Deal spending. Fiscal policy had failed to return the economy to full employment, according to Brown, "not because it did not work, but because it was not tried" (1956, pp. 863–866).

Friedman and Schwartz's *Monetary History*, which provided an extraordinarily detailed account of the effects of monetary policies during the 1930s and put the Great Depression into the broader context of American monetary history, returned the collapse of the banking system to center stage. Their interpretation was challenged in turn by Peter Temin in *Did Monetary Forces Cause the Great Depression* (1976) who defended the Keynesian interpretation. Subsequent work, however, continued to emphasize the banking crisis. The 1983 research of Ben Bernanke, who later became chair of the U.S. Federal Reserve, was particularly influential. Bernanke argued that the banking and financial crises had disrupted the ability of the banking system to act as an efficient financial intermediary. Even sound businesses found it hard to borrow when their customary lender had closed its doors and the assets they could offer as collateral to another lender had lost value. The Bernanke thesis not only explained why the contraction was severe, but also why it took so long for the economy to recover: It took time for financial markets to rebuild the relationships that had been sundered in the early 1930s.

Research that took a more global view of the Great Depression, such as Peter Temin's 1989 work, reinforced the case for viewing monetary forces as decisive. Barry Eichengreen's *Golden Fetters* (1992), one of the most influential statements of this view, stressed the role of the gold standard in transmitting the Depression and inhibiting recovery. Countries faced with balance of trade deficits because of declining exports should have maintained their stocks of money and aimed for internal price stability. Instead they often adopted contractionary policies aimed at stemming the outflow of gold. Those countries that abandoned the gold standard and undertook expansionary monetary policies recovered more rapidly than those who clung to gold. The examples provided by countries, such as Japan, which avoided trouble because they had never been on gold or quickly abandoned it were particularly telling.

In the twenty-first century economists have turned to formal models, such as dynamic computable general equilibrium models, to address macroeconomic questions, and have used these models to formulate and test ideas about the Great Depression. The 2002 and 2005 work of Harold Cole and Lee Ohanian has received considerable attention in both academic and mainstream circles. It is too early to say, however, whether this work will serve to

reinforce traditional interpretations of the Great Depression reached by other methods or produce entirely new interpretations. It is not too soon to predict, however, that the Great Depression will continue to attract the interest of scholars attempting to understand basic macroeconomic processes.

One cannot say for certain that another Great Depression is impossible, but important lessons have been learned and important changes made in the financial system that make a repetition highly unlikely. For example, it seems improbable that any modern central bank would allow a massive collapse of the banking system and deflation to proceed unabated as happened in a number of countries in the early 1930s.

SEE ALSO *Aggregate Demand; Banking; Bull and Bear Markets; Business Cycles, Real; Central Banks; Depression, Economic; Economic Crises; Economics, Keynesian; Federal Reserve System, U.S.; Finance; Financial Markets; Fisher, Irving; Friedman, Milton; Gold Standard; Interest Rates; Investment; Keynes, John Maynard; Kindleberger, Charles Poor; Long Waves; Monetarism; Policy, Fiscal; Policy, Monetary; Recession; Stagnation; Unemployment*

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Hugh Rockoff

GREAT MIGRATION

SEE *African Americans; Migration; Segregation, Residential.*

GREAT SOCIETY, THE

The term *Great Society*, which refers to the set of domestic programs initiated by Lyndon B. Johnson, who became the U.S. president after the assassination of John F. Kennedy in 1963, was coined by Johnson's speechwriter Richard N. Goodwin early in 1964. In an address during commencement exercises at the University of Michigan at Ann Arbor on May 22, Johnson used the term publicly for the first time. The new chief executive, eager to map out his own legislative agenda, challenged the American people to build a society "where progress is the servant of our needs," a society "where old values and new visions are buried under unbridled growth," a society that "rests on abundance and liberty for all," a society that "demands an end to poverty and racial injustice." Johnson identified the three places to begin the building of the Great Society—in the cities, in the countryside, and in the classrooms. He catalogued the social ills that needed to be corrected—urban decay, inadequate housing, poor transportation, environmental pollution, overburdened seashores, disappearing green fields, a poorly educated adult population, overcrowded classrooms, outdated curricula, unqualified teachers, and inadequate college funding. The far-thinking president envisioned a society where people are more concerned with the "quality of their goals" than the "quantity of their goods," a glorious America where the meaning of people's lives matches the

marvelous products of their labor (*Public Papers of the Presidents of the United States*, pp. 704–707).

Johnson, who came to Washington during the 1930s, modeled his domestic initiatives on Franklin D. Roosevelt's New Deal, the policies implemented to combat the effects of the Great Depression. At the same time, the concept of the Great Society was meant to continue the legislative program begun by President Kennedy, called the New Frontier, and its implementation followed the same path.

The 1960s legislation, in contrast to the New Deal of the 1930s, was begun in a period of economic prosperity. After Johnson's Ann Arbor speech, fourteen separate task forces comprised of government experts and university scholars were assembled to study all major aspects of American society. One task force addressed foreign affairs, and the rest tackled domestic policies concerning agriculture, economic recession, civil rights, education, economic efficiency, health, income maintenance, intergovernmental cooperation, natural resources, environmental pollution, preservation of natural beauty, transportation, and urban problems. During the 1964 presidential campaign, however, the proposed Great Society agenda, other than civil rights, was not widely discussed. Johnson's popular vote majority of 61 percent, combined with the Democrats' winning enough seats to control two-thirds of the House and Senate, set the stage for the subsequent passage of bills submitted to both chambers. Lingering public and congressional sympathy for the slain president's program undoubtedly helped as well.

In late 1964 Johnson reviewed the task force reports submitted to the White House, and a number of recommendations were briefly mentioned in his State of the Union address on January 7, 1965. The president, now elected in his own right, confidently talked about the "beginning of the road to the Great Society" and summit meetings ahead with foreign heads of state, "where freedom from the wants of the body can help fulfill the needs of the spirit." He sought opportunity for all, a just nation that would provide hospital care for the elderly under social security, eliminate poverty in the midst of plenty, assure civil and voting rights for blacks, and provide to immigrants the promise of America based on the work they could do and not where they were born. In 1965 eighty-seven bills were submitted to Congress by the new administration, eighty-four of which were signed by Johnson. With this legislation, in addition to the Civil Rights Act passed in 1964, the core of the Great Society was created.

LEGISLATIVE ACTIONS

It was in the areas of civil rights and economic assistance that the Great Society was most effective. The Civil Rights Act (1964) made employment discrimination and segregation in public accommodations—on the basis of race, color, religion, sex, or national origin—illegal. This legislation was followed by the Voting Rights Act (1965), which guaranteed minority voter registration and voting by restricting the use of literacy tests and poll taxes. The Immigration and Nationality Services Act (1965) did away with the national origin quotas put in place in 1924; this law opened the door to waves of Asian and Latin American immigrants, a pattern still apparent in the early twenty-first century. The 1968 Civil Rights Act outlawed discrimination in housing and granted constitutional protections to Native Americans living on reservations. Johnson's so-called War on Poverty had its roots in the Economic Opportunity Act (1964), which established an Office of Economic Opportunity (OEO) to manage a variety of "community action" programs. The OEO was never meant to deal with poverty by raising welfare payments or guaranteeing wages, but to help the poor help themselves through education, job training, and community development. The Job Corps, Project Head Start, the Model Cities Program, the Neighborhood Youth Corps, Upward Bound, and VISTA were the most important new programs designed to assist poor people.

The Great Society also spawned well-known legislation in the areas of education and healthcare. The Elementary and Secondary Education Act (1965) provided significant federal aid to public education, and secured Head Start, originally a summer program, as a permanent component. Since education was a state and local matter, the federal government previously had refrained from assisting public schools for fear of violating the principle of "separation of powers." The Higher Education Act (1965) raised federal aid to public and private universities, granted scholarships and low-interest loans to students, and set up a National Teachers Corps. The Bilingual Education Act (1968) helped local school districts address the English-language needs of minority children. Medicare and Medicaid, today the bedrock of the U.S. healthcare system, had their origins in the Social Security Act of 1965. Initially bitterly opposed by the American Medical Association, these publicly funded programs that covered hospital costs and doctors' fees have been indispensable to older Americans, welfare recipients, and low-income families.

Legislative actions in the areas of culture, transportation, consumer protection, and the environment are likewise the direct result of President Johnson's vision for a better America. The National Foundation on the Arts and Humanities Act (1965) created two separate federal agencies for the funding of artistic and humanistic pursuits to counterbalance the emphasis given to scientific endeavors. The Urban Mass Transportation Act (1964) provided hundreds of millions of dollars in matching funds to cities

for public and private rail projects, and the Highway Safety Act (1966) was enacted to protect motorists from unsafe roads and vehicles. American consumers benefited from a number of laws such as the Child Safety Act (1966), the Flammable Fabrics Act (1967), the Wholesale Meat Act (1967), and the Truth-in-Lending Act (1968).

More than any of the other sets of laws associated with the Great Society, the civil rights legislation of the 1960s stirred public controversy, which has continued for four decades. Johnson issued in 1965, and later expanded in 1967, Executive Order 11246, which required federal contractors to "take affirmative action" to ensure that people are hired and treated during employment without regard to their race, color, religion, sex, or national origin. By 1972 this presidential mandate, together with the legal ban on discrimination, led to federal pressure on employers (and then schools and housing providers) to take positive steps to correct past wrongs by giving "preferential treatment" to minorities and women. Before long, quotas were introduced, setting "goals" for protected classes of Americans and "timetables" for achieving them. White males responded with cries of "reverse discrimination": Complaints before the Equal Employment Opportunity Commission, state human rights agencies, and federal and state courts numbered in the hundreds of thousands. A few cases reached the Supreme Court.

In a series of split and often very close decisions on both sides of the affirmative action debate, the Supreme Court itself added to the controversy. In *Regents of the University of California v. Bakke* in 1978, the Court in a five-to-four decision prohibited a California medical school from using a quota—reserving a specific number of places—for minorities in admissions. A year later, however, in *United Steelworkers of America v. Weber*, the same court ruled that it was okay for the steelworkers union to select only minorities for a special training program. Two cases two years apart, both involving firefighters, are also contradictory. In 1984, in *Firefighters Local Union No. 1784 v. Stotts*, it was decided that seniority was more important than race, that the City of Memphis could lay off recently hired minorities first in staff reductions. However, in *International Association of Firefighters v. City of Cleveland* (1986), the municipality was permitted to promote minorities over more senior whites. Three recent cases, two concerning the same educational institution, have further confused the issue of affirmative action with decisions that alternately sustained and reversed earlier rulings. In *Texas v. Hopwood* (1996) the high court let stand a lower court decision that race could not be used in college admissions. In *Gratz v. Bollinger* (2003), in a six-to-three decision the University of Michigan's strict formula awarding advantage based on race for admissions was struck down, but in the very same year, in *Grutter v. Bollinger*, by five to four the University of Michigan Law School was permitted to use race as a factor in admissions.

FUNDING PROBLEMS

Funding the Great Society initiatives became difficult beginning in 1968 because of the burden of the Vietnam War, Johnson's reluctance to ask Congress for a tax increase, and the goal of reaching a balanced budget. Many of the programs had no political constituencies, that is, they did not originate from outside lobbying and thus lacked the support necessary for continued financing. Johnson's decision to withdraw from the 1968 presidential race further weakened his advocacy of government intervention on the side of racial justice and economic equality. Under the Republican administration of President Richard M. Nixon, in 1969 the OEO was dismantled and its poverty programs transferred to other federal agencies. Democrat Jimmy Carter's one-term presidency, bogged down with the twin problems of inflation and recession, did little to restore the earlier funding for social causes. Carter offered no new initiatives along the lines of Johnson's program, focusing instead on international affairs.

In the 1980s Ronald Reagan's strong conservative views on the role of government and federal spending, combined with a Republican Congress's disinclination to continue social programs, led to draconian cuts for the Great Society. The huge increase in appropriations for the military during this period further tolled the bell for the two-decades-old set of domestic programs. The administration of George H. W. Bush (1989–1993) essentially held fast to the new conservative agenda in Washington. By the time Bill Clinton took the oath of office in 1993 the Democrats had accepted the hard fact that most of the Great Society goals had not been, nor could they ever be, accomplished, and they did not push for new social legislation. Clinton's failure to get approval for a national health insurance program but success at passing a welfare reform bill only served to scale back the accomplishments of earlier Democratic presidents. Welfare reform now meant that time limits were imposed on the benefits received, able-bodied adult recipients were required to perform public service work, and more rigorous eligibility requirements were imposed, changes all contrary to Johnson's original goals for a better America. Under the administration of George W. Bush, which began in 2001, the Republican Congress did not kill all previous social programs, and it kept up some funding, but Bush's efforts toward the global war on terror and his initiation of the war in Iraq devoured budget surpluses and rendered impossible any meaningful attempt to reinvigorate Great Society spending, just as the war in Southeast Asia had almost four decades earlier.

THE GREAT SOCIETY REVISITED

The Great Society has always been closely identified with Democratic political agendas and the cold war liberalism of the 1960s. It was premised on Johnson's "guns and butter" approach, the idea that the United States can wage wars against communism in far-off places and, at the same time, still provide sufficient funding for domestic social programs. Critics of the Great Society were from the start skeptical of the federal government's ability to bring about the promised social change, and they are credited with paving the way for the conservative backlash of later decades. In the post-Vietnam era, liberal thinking gave way as Americans lost confidence in the effectiveness of military interventions. The cold war liberal Democratic presidents (Truman, Kennedy, Johnson) freely used military might to solve international problems (as in Korea, Cuba, the Dominican Republic, and Vietnam), but later Democratic presidents (Carter, Clinton) were reluctant to use force and turned to diplomacy instead (as in Panama, the Middle East, and the Balkans).

The War on Poverty, perhaps the most ambitious feature of the Kennedy-Johnson proposals, was also the most controversial and it has left a mixed legacy. Billions were spent on dozens of programs, but the poverty rate was just modestly reduced in the late 1960s, only to rise again in the 1970s and 1980s due to changing economic and social conditions. The leftist critique of the Great Society claimed that throwing money at problems will not solve underlying social problems without fundamental changes in the structure of the economy and the reduction of inequality in America. Nevertheless, Johnson's "other war" permanently expanded the U.S. welfare system, gave the federal government important new responsibilities, and provided a "safety net" of programs and benefits that poor people rely on today.

Despite reductions in programs and funding, much of what comprised the Great Society has aided the middle class, not just the poor, and is still with us in some form. Medicare and Medicaid, frequently criticized as wasteful and inefficient, have grown considerably and now enjoy wide political backing. Despite welfare reform, with its "workfare" provisions, the poor have not been thrown out on the street, and public assistance to the non-poor has actually increased. Federal funds for public and higher education are appreciably greater since the Great Society days, probably because they have been supported by both Democrats and Republicans over the years. Importantly, funding for transportation and the environment has continued, and funds earmarked for the arts, humanities, and public broadcasting have survived in the face of many attempts to eliminate them.

All of the civil rights laws, amended many times and continually challenged in the courts, remain on the books, but the Supreme Court, much altered with conservative justices appointed by Republican administrations, has weakened attempts at affirmative action in education, housing, and the workplace. In the face of the recent *Gratz* and *Grutter* decisions, the reconstituted court may now have an anti-affirmative action majority. The 2004 election, however, may have demonstrated that cold war liberalism is not dead. Senator John Edwards, campaigning for the Democratic nomination on a platform of old Great Society ideas and promises, did well in the primaries. The selection of Edwards as the running mate of John Kerry, a more moderate politician and well-known early critic of the Vietnam War, was perhaps a final accession to Johnson's outmoded programs.

Well into the first decade of the twenty-first century, it is apparent that the ideals first proposed by President Kennedy, expanded by President Johnson, and enacted into law by a Congress bent on building a better America, are not forgotten. Perhaps Edward M. Kennedy, in his 1980 speech before the Democratic National Convention, summed it up best. He had just pulled out of the race for his party's nomination, ostensibly ruling out any further attempt to reclaim his martyred brother's presidency. The senator from Massachusetts, in a patent reference to the liberalism of the New Frontier, poignantly expressed the sense of the Great Society for future generations when he exclaimed: "… the work goes on, the cause endures, the hope still lives, and the dream shall never die."

SEE ALSO *Desegregation; Head Start; Johnson, Lyndon B.; War on Poverty*

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GREAT TULIP MANIA, THE

The Great Tulip Mania refers to the spectacular rise and fall in the price of tulip bulbs between the end of 1634 and February of 1637 in what is now the Netherlands. The episode is less significant as an event of great historical importance than as a paradigm of a speculative mania ending in a panic, and it produced a term, *tulipomania*, that often is used as a metaphor for economic bubbles.

References to the Tulip Mania in economics and finance cite Charles MacKay's 1852 account, though, as with the event itself, the value of this account lies more in its portrayal of the emotions and irrational action that typify frenzied speculation than in its veracity as historical record. Such references typically motivate discussions of the dynamic instability in heterogeneous capital goods models and discussions of speculative bubbles in financial markets.

Nicholaas Posthumus (1929) provided English-language readers with the first serious documentation of historical details and an interpretation of the event based on excerpts from contemporaneous pamphlets and notary transcripts. Centered in the tulip-growing region of the municipality of Haarlem, the mania was the result of a speculation in tulips that spread from professional tulip growers and experts to those who had no previous connection to bulb growing, first the wealthy and then the lower-middle and working classes.

As much as historians are able to discern from surviving records, evidence suggests that there was heightened speculation in the trading of contracts on rare, and later common, tulip bulbs. At its peak, the event saw the rarer bulbs commanding prices that exceeded the estimated average annual per capita income by a considerable margin. Yet, whether the prices were "excessive" in relation to the fundamental, nonspeculative elements governing the demand for and supply of the bulbs is as debatable as the possibility that the subsequent crash in the market for tulip bulbs caused any economic crisis. What is apparent is that institutionally, the episode is an early experience with futures and options contracts, although this emerged only after the fact when a group of professional traders, attempting to calm the market, permitted holders of futures contracts the right to decline to buy in exchange for a small fraction of the previously agreed-upon price.

Researchers have examined the records of the seventeenth-century tulip market for evidence of a speculative bubble with prices rising in excess of that which might have been warranted by fundamentals. Peter Garber's 1989 study, for example, suggests that the bulb speculation did not lead to obvious excesses, at least for much of the 1634 to 1637 "mania." As with most attempts to debate the efficiency of a given market wherein prices reflect fundamentals rather than irrational speculative influences, conflicting interpretations typically revolve around the interpretation of econometric signals. There will always exist scope for considerable debate, however, because a speculative bubble in the market price of tulips—or any other object of speculation—is indistinguishable in the data from time-varying expected returns and disappointed but otherwise well-grounded expectations of optimistic outcomes.

SEE ALSO *Economic Crises; Manias; Panic*

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Brenda Spotton Visano

GREAT WAR

SEE *World War I.*

GREEK ORTHODOX CHURCH

The Greek Orthodox Church refers to any number of Eastern Orthodox Church groups whose heritage derives predominantly from Greek language and culture. These churches are organized around three Greek-speaking patriarchs (exalted bishops who historically have co-administered the Orthodox churches): the Ecumenical Patriarch, who resides in Constantinople (Istanbul) and has jurisdiction over present-day Turkey and all Christian

areas beyond those territories that have been explicitly designated to another jurisdiciton; the Patriarch of Jerusalem who presides primarily over Palestine; and the Greek Patriarch of Alexandria, who is responsible for Egypt and all of Africa. For historical reasons, three separate relational patterns have emerged between these Greek Patriarchs and their daughter churches:

1. *Eparchy*: Some Greek Orthodox Churches are Patriarchal eparchies, ecclesiastical provinces that are directly under the auspices of one of the three Greek-speaking Patriarchs. These include the large emigrant churches formed in the West such as the Greek Orthodox Archdiocese of North and South America (formed in 1922, with about 1.5 million members) and the Greek Orthodox Archdiocese of Australia (formed in 1924, with about 400,000 members). The leaders of these churches are usually given the title Eparch, Metropolitan, or Archbishop and are selected by the Holy Synod of the Ecumenical Patriarch with advice of a local synod of bishops.
2. *Autonomous*: Autonomous churches operate with full administrative independence but have leaders who are chosen or affirmed by a Patriarch. Autonomous Greek Orthodox Churches include the small but important Church of Sinai, which is limited to the famous Monastery of Saint Catharine and several dependencies.
3. *Autocephaly*: As self-governing churches, autocephalous churches have hierarchies independent of the Patriarch and operate with complete independence. While maintaining ecclesiastical and theological communion with the Patriarchs, these autocephalous Greek Orthodox Churches are responsible for all church matters affecting the life and administration of the church with the exception of doctrinal and canonical positions. Historically, these churches often emerged as a result of nationalistic movements and are closely identified with the national ethos of the people. The largest Greek Orthodox autocephalous churches are the Church of Greece (formed in 1833, with about 8 million members) and the ancient Church of Cyprus (formed in 431, with about 1 million members).

All of the Greek Orthodox Churches trace their origins to the earliest Christian movements, which were primarily composed of Greek-speaking Christians in the Eastern Roman Empire. While Rome remained an important religious center from Christianity's inception, most of the growth and theological development during the first four centuries of Christianity occurred in the Greek-speaking East. The unity of the Eastern Christians was repeatedly challenged, leading to a major schism in 451 that resulted in the formation of a Coptic Christian Church in Egypt. Because of cultural, political, and theological differences, a gradual estrangement emerged between the remaining Greek-speaking Christians of the East and the predominantly Latin-speaking Christians of the West. This led to the "Great Schism" of 1054, which became entrenched after the Fourth Crusade, during which western Christians sacked the eastern capital of Constantinople. After the fall of Constantinople to Islamic forces in 1453, the theological and liturgical center of Eastern Christianity shifted to Russia until the twentieth century. The Greek churches continue to be out of communion with the Roman Catholic Church, despite repeated attempts for reunification.

Greek Orthodoxy stresses two foundations for the church's beliefs: the Bible, which is believed to be inspired by God, and Holy Traditions that have been passed down through the church. The primary dogmas of the church, including the nature of the Trinity, the person of Jesus, the role of the Virgin Mary, and the veneration of icons, were defined in seven "Ecumenical" councils that the Greek churches share with the Roman Catholic Church. Compared to Western theology, Greek Orthodoxy tends to emphasize a direct mystical encounter with God gained through ascetic and liturgical practices rather than emphasizing discursive reasoning as in the West. The ultimate goal is described as deification of the human person through sanctification by Christ. The sacraments, called mysteries in the East, are seen as transformative vehicles that guide the human person toward deification.

Greek churches are led by celibate bishops who stand in apostolic succession to the original apostles. Local churches are led by priests and deacons who are usually married and always men. Historically, there was no official number of sacraments, though baptism and the Eucharist service are universally recognized as the central pillars of the Greek Christian life. One of the most distinctive aspects of Greek Orthodox worship is the use of icons—paintings of saints, the Virgin Mary, and Jesus—that are seen as "windows into heaven." The most important holiday is Easter, called Pascha (Passover) in Greek churches, which is understood as Jesus' resurrection destroying "death by death," thus offering everlasting life to those who believe.

SEE ALSO *Christianity; Coptic Christian Church; Jesus Christ; Religion; Roman Catholic Church*

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GREEN BOOK, THE (LIBYA)

The Green Book is the Libyan leader Muammar al Qadhafi's codification of his philosophy on how to resolve political, economic, and social problems in society. It is set out in three parts: *The Solution of the Problem of Democracy: The Authority of the People* (1975), *The Solution of the Economic Problem: Socialism* (1977), and *The Social Basis of the Third Universal Theory* (1978).

The driving force behind *The Green Book* was Qadhafi's resolve to nurture and consolidate the revolution set in motion by his ascent to power in 1969. By the time it attained independence on December 24, 1951, Libya was a poor and underdeveloped country. The discovery of oil in 1955 generated significant wealth but no corresponding benefits to the impoverished majority of Libyans because the monarchic government's unchecked corruption, fiscal malfeasance, and nepotistic inclinations encouraged brazen exploitation by some Western powers and their proxies. It was against this backdrop of corrupt administration and international exploitation and popular disillusionment and discontent that Qadhafi emerged. Armed with a vision to unify the Arab world (in the mold of his hero, Egypt's Abdel Gamel Nasser) and the grudges of anticolonialism, Qadhafi led a small group of his fellow military officers known as the Unionist Free Officers and toppled King Idris in a bloodless coup on September 1, 1969, marking the end of the monarchy.

On his ascent to power, Qadhafi embarked on changing Libya from a conservative postcolonial state to a modern progressive one. He launched a "cultural revolution" in 1973 to inspire a major transformation of society through changes in roles, attitudes, perceptions, and behaviors. In *The Green Book* he explicated the philosophy of the revolution as a national guide to the complete eradication of the old order and its replacement with a new order governed by the ideals of liberty, unity, and socialism.

The main thrust of Qadhafi's philosophy is the removal of all vestiges of foreign influence and ideologies and the establishment of a new society based on the basic principles of Islam and homegrown socialism. He condemns parliamentary democracies and their components in preference to socialism and progressive Islam, rejects capitalism and communism as false ideologies, and develops his "third universal theory" in which he envisions the dismantling of the traditional apparatus of government and the establishment of a form of direct democracy through institutionalized use of popular congresses and committees at the local, regional, and national levels to guarantee mass participation in the nation's decision-making process. This form of government has been in place since March 2, 1977, when Qadhafi declared Libya a *jamahiriya* (government of the masses), although critics see a stiflingly rigid structure that provides no mechanism for a democratic change of government. At any rate, Qadhafi believes that adherence to the basic fundamentals of Islam in line with the third universal theory will enable Libyans to lead Muslims everywhere toward economic development and political change. However, Qadhafi's unorthodox approach to Islam and his elevation of *The Green Book* as a guide to the emancipation of the human race has brought him into conflict with Muslims in Libya and beyond. Although *The Green Book* professes universality in its scope and purpose, the peculiar circumstances of the Libyan people and the Islamic Arab heritage underlie its general framework.

SEE ALSO *Islam, Shia and Sunni; Muslims; Nasser, Gamal Abdel; Pan-Arabism; Qadhafi, Muammar al; Socialism, Islamic*

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GREEN REVOLUTION

Green Revolution is the term applied to the introduction of "modern" crop varieties in developing countries beginning in 1964–1965. The Green Revolution was introduced at different rates in different countries. It was produced by more than five hundred National Agricultural Research Systems (NARS) in developing countries and supported by eight International Agricultural Research Centers (IARCs) located in developing countries. IARCs produced roughly 35 percent of Green Revolution Modern Varieties (GRMVs), which included highly productive lines of rice and wheat. NARS produced 60 percent of

GRMVs. Private sector breeders in developing countries produced 5 percent of GRMVs. Developed countries did not produce GRMVs for developing countries.

Twelve countries with populations in 2000 of one million or more did not have a significant Green Revolution (these countries had less than 2 percent GRMV adoption in 2000). Nine of these countries were in sub-Saharan Africa. An additional eighteen countries had less than 10 percent GRMV adoption in 2000 (eleven of these were also in sub-Saharan Africa). Another eighteen countries had less than 20 percent GRMV adoption in 2000 (twelve of these were in sub-Saharan Africa). Forty-five countries had significant Green Revolutions.

The forty-eight countries with low levels of GRMV adoption had low levels of crop value per hectare because crop yields were low. They used very little fertilizer and had low rates of productivity growth. The UNIDO index of industrial competitiveness for these forty-eight countries was low. Most of these countries were small. By contrast, the countries with significant Green Revolutions were larger countries (including India and China).

In 1960 birth rates were similar for all developing countries. By 2000, birth rates in the successful Green Revolution countries had declined to roughly half of the birth rates of 1960. For the unsuccessful countries, birth rates declined by only 15 percent. Food consumption per capita (as measured by calories consumed per capita) increased by 10 percent for the unsuccessful Green Revolution countries and by 25 percent for the successful Green Revolution countries. The unsuccessful countries increased food consumption because the "real" prices of food grains in world markets declined. In 2000 the real prices of food grains in world markets were 40 percent of their 1960 levels. Child mortality rates improved for all countries because of better diets.

The Green Revolution was criticized by two groups. In the 1980s it was criticized because farmers adopting GRMVs used more fertilizer. The first two GRMV crops were wheat and rice, and indeed fertilizer use did increase for these crops. It was also widely perceived in the 1980s that GRMVs were adopted only in "favorable" production environments. The second round of critics, who appeared at the end of the 1980s, emphasized environmental factors and increased use of chemicals.

The Green Revolution is continuing as new generations of GRMVs are being developed, and overall GRMV production is increasing, not declining. For example, by the 1990s two IARCs, ICRISAT in India and ICARDA in Syria, had begun developing GRMVs for unfavorable semi-arid and dryland conditions. The Green Revolution is seen today as having had a major impact in spite of its "uneven" delivery.

SEE ALSO *Food Crisis*

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Robert E. Evenson

GREENHOUSE EFFECTS

The natural greenhouse effect was first described by Joseph Fourier (1768–1830) in 1827. Solar energy reaches the earth in the entire spectrum. The earth reemits this energy as infrared radiation. Greenhouse gases in the atmosphere, such as water vapor and carbon dioxide, absorb outgoing infrared radiation and reemit it in any direction. As a result the earth holds more energy than it would have without the presence of greenhouse gases. The natural greenhouse effect raises the global annual surface air temperature by some 90 degrees Fahrenheit (30 degrees Celsius) and therefore enables life as we know it.

The enhanced or anthropogenic greenhouse effect was first described by Svante August Arrhenius (1859–1927) in 1896. Deforestation and coal burning release carbon dioxide, which accumulates in the atmosphere. As a result the greenhouse effect is strengthened, and temperatures rise.

The enhanced greenhouse effect was long a curiosity in the natural sciences. In the 1970s the first climatologists were more worried about global cooling—as the next ice age was overdue and temperatures were falling, probably because of sulphur emissions (now reduced because of concerns over acid rain). Global warming returned to the scientific agenda in the early 1980s and got on the political agenda a decade later.

The enhanced greenhouse effect is clouded by large uncertainties caused by imperfect data, limited computing power, and the vast complexity of the earth system. There is virtual agreement, however, that temperatures will rise, and more so at the poles, during winter and at night. Rainfall patterns will change and may well intensify—leading to droughts in some places and in some seasons

and floods in others. Storms may become more frequent and intense, but the evidence for this is weak where this matters most, namely in the tropics. Rising temperatures will cause sea levels to rise, mostly through expansion of seawater but perhaps also through ice melt.

The uncertainty about how the climate would respond to greenhouse gas concentrations is compounded by the uncertainty about future emissions, which depend on the number of people, their economic activities, and the types of energy they will use. High future emissions would put the earth into a state it has not been in for millions of years, perhaps with strongly nonlinear consequences.

Impacts of climate change are many. Less heating would be needed in winter, but more cooling would be needed in summer. Heat-related diseases would increase, but cold-related ones would decrease. Tropical diseases may spread or intensify. Lands would drown unless costly dikes are built. Crops would benefit from the higher carbon dioxide concentration but may be hurt by drought. Tourists would seek different holiday destinations. Urban infrastructure, particularly for water discharge, would need to be redesigned. Vegetation patterns would change, probably at the expense of many specialized plants and animals. Aggregate estimates suggest that the initial warming may be positive but that greater warming would bring net damages. Poorer countries would suffer greater damages.

Carbon dioxide is the main anthropogenic greenhouse gas, followed by methane and nitrous oxide. Carbon dioxide is emitted by the burning of fossil fuels and by deforestation. Methane comes from agriculture, waste, and fossil fuel production; nitrous oxide come from agriculture and industry. Chlorofluorocarbons (CFCs) are greenhouse gases too, but they have been phased out to protect the ozone layer. Their replacements, hydrofluorocarbons (HFCs), are even stronger greenhouse gases.

Greenhouse gases can be reduced by slowing or even reversing economic growth. This was shown to be particularly effective when the Soviet Union collapsed, but it is also responsible for the limited emissions growth in western Europe and Japan. Alternatively energy efficiency can be improved, alternative fuels can be used, or emissions can be captured and stored (biologically or geologically). Substantial emission reduction can be achieved with proven technologies. The costs would be small if policies are implemented gradually and implementation allows for flexibility.

Because greenhouse gases stay in the atmosphere for decades and longer, it does not matter where they are emitted. International coordination is needed for an effective solution. The oceans respond only slowly to changes in greenhouse gas concentrations. Energy infrastructure lasts for decades. As a result both the climate change problem and its solutions span many electoral cycles. Climate policy is therefore weak. The United Nations Framework on Climate Change is universally accepted, but it establishes obligations only to report emissions and to negotiate. Its first implementation, the Kyoto Protocol, sets targets for a limited number of countries only; of these, some have abandoned the treaty, while others are likely to meet their targets by coincidence rather than design.

Climate change has become a cultural phenomenon too. The press and television devote considerable attention to climate science and policy. Major motion pictures are devoted to the topic, and climate change regularly features in advertisements for a wide range of products, sometimes without an obvious connection.

SEE ALSO *Change, Technological; Deforestation; Economic Growth; Energy; Energy Industry; Energy Sector; Global Warming; Pollution, Air; Resource Economics; Resources; United Nations*

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Richard S. J. Tol

GREENSPAN, ALAN
1926–

Alan Greenspan spent much of his career at the highest levels of government economics. He served as a top advisor to presidents Ford and Nixon, but is most widely known for his long tenure as chairman of the Federal Reserve, a position he held from 1987 to 2006.

For much of that period, Greenspan was arguably the most influential economist in the world. His early reputation as chairman of the Fed was boosted by his able handling of the 1987 stock market crash, wherein he quickly provided the economy with the liquidity needed to offset the market's falloff. Beginning in the mid-1990s, Greenspan was among the first to recognize the importance of productivity's acceleration. Given this increase in the growth of output per hour, Greenspan believed that the economy's "speed limit"—the rate of growth consistent with stable inflation—had increased. During the latter 1990s, the unemployment rate fell well below the comfort level of most economists, yet inflation decelerated, and broadly shared real wage gains were handily paid for out of rising productivity growth.

Greenspan was widely viewed as favoring conservative economic policy, a view reinforced by his early association with the libertarian, antiregulatory philosophy of the writer Ayn Rand. And while he exhibited throughout his career a strong preference for market-driven outcomes and a diminished role for government, his approach to monetary policy was largely pragmatic and data-driven. Though he avoided true "inflation-targeting"—explicitly stating the range of price growth acceptable to the Fed, a practice he viewed as too restrictive—he focused closely on measures of inflation and resource utilization, urging the Federal Open Market Committee (the group of Fed governors that set interest-rate policy) to adjust rates based on the relationships between these variables.

Though generally highly regarded by the economics and policy community, Greenspan has had his critics. Throughout his term at the Fed, he was sometimes viewed as elevating inflationary concerns above the goal of full employment, despite the Fed's mandate to maintain balance in its simultaneous pursuit of stable prices and low unemployment. Most recently, some have maintained that Greenspan played a decisive role in the swing from fiscal surplus to fiscal deficits. Based on what turned out to be a highly optimistic forecast of government revenues, Greenspan endorsed large tax cuts proposed by the Bush administration. Though the chairperson of the Fed is a political appointee, it is rare for the Fed chief to play such an overtly political role in a policy matter before the Congress. Furthermore, his endorsement was instrumental in the passage of these cuts, which ultimately played an integral role in the move from federal budget surpluses in the latter 1990s to deficits in the 2000s.

The most common criticism of Greenspan, however, is that he presided over damaging investment bubbles that could have been avoided by more aggressive Fed policy. Two major speculative bubbles emerged over Greenspan's tenure: the information technology (IT) bubble of the latter 1990s and the housing bubble of the 2000s. Speculation in IT firms, some of which had little more than a sketchy business plan, was rampant in the 1990s, while at the same time, many firms overinvested in IT-related goods and personnel. When it became clear that returns on these investments could not be sustained, a large sell-off of stocks and IT-related assets ensued. Shortly thereafter—in March 2001—the economy entered an investment-driven recession.

More recently, speculative bubbles formed in housing markets as prices were steeply bid up, particularly in highly populated areas of the country. Though Greenspan observed the sharp rise in home values, he again refrained from criticizing the development of what some observers recognized as a housing bubble. In fact, critics argue that Greenspan and the Fed further inflated the bubble by sharply lowering interest rates in response to the recession of 2001. Moreover, many homeowners took advantage of the rising value of their home equity, and boosted their consumption with cash borrowed against their homes. As this bubble began to burst in the mid-2000s, home prices fell steeply, slowing the economy and hurting key economic sectors, such as construction and real estate.

In both cases, Greenspan and the Fed did nothing to intervene as speculative bubbles formed. During the formation of the IT-bubble in 1996, Greenspan popularized the oft-repeated term "irrational exuberance," suggesting speculation was inflating asset values. Thereafter, however, he refrained from either critical scrutiny of the stock market's run-up, or more concrete policies, such as raising the Fed's margin requirements (i.e., limiting the amount that investors could borrow to purchase stocks "on margin").

Prior to retiring from the Fed, Greenspan defended his lack of action in these cases by claiming the Fed has neither the ability to recognize bubbles, nor the tools to deflate them. Especially given the fact that Greenspan himself clearly recognized the irrational nature of the stock market's climb in the latter 1990s, the first part of this defense seems weak. Whether the Fed could have intervened is another question. Reflecting on the IT bubble, Greenspan reasonably argued that "it was far from obvious [that the bubble] could be pre-empted short of the central bank inducing a substantial contraction in economic activity, the very outcome we were seeking to avoid" (Greenspan 2002).

These criticisms aside, Greenspan will likely be remembered in a positive light, as an excellent crisis manager and an able central banker who presided over two of the longest economic expansions in the country's history. True, his conservative political ideology inappropriately broke through on occasion, and he might have led the Fed to do more to push back against speculative bubbles that formed on his watch. Nonetheless, his economic insights and data-driven approach to monetary policy remain the model for central bankers today. In fact, when nominated by President George W. Bush to succeed Greenspan, current Fed chief Ben Bernanke paid a high compliment to the retiring chairman: "[I]f I am confirmed to this position, my first priority will be to maintain continuity with the policies and policy strategies established during the Greenspan years" (The White House 2005).

SEE ALSO *Bubbles; Bull and Bear Markets; Central Banks; Depression, Economic; Economic Crises; Federal Reserve System, U.S.; Financial Instability Hypothesis; Financial Markets; Interest Rates; Internet Bubble; Macroeconomics; Policy, Monetary; Recession; Speculation; Stock Exchanges*

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Jared Bernstein

GRENADIAN REVOLUTION

Residents on the 121-square-mile tri-island nation of Grenada, Carriacou, and Petit Martinique (population 110,000) awoke on the morning of March 13, 1979, to radio reports that the elected government of Prime Minister Eric Gairy had been replaced in a relatively bloodless coup by the New Jewel Movement (NJM). The NJM set up the People's Revolutionary Government (PRG) with the avowed task of transforming Grenada's society and political culture and creating a socialist state.

REVOLUTIONARY ORIGINS

Seeds of this revolution had been sown during the previous twelve years of Gairy's rule, during which he had alienated many Grenadians through his increasing use of legal and extralegal means to silence his critics. Chief among these techniques was his seizure of the lands and property of his political opponents, intimidation of civil servants, the establishment of a system in which decision-making depended on the Gairy-dominated Cabinet, and the establishment of an extralegal paramilitary body that inflicted bloody beatings on his political opponents.

The emergence and rise of the NJM must be seen within the context of several international movements of the late 1950s and 1960s that had a great impact on the Caribbean. The Cuban Revolution, successful independence struggles in Africa, the growth of Rastafarianism, and the U.S. civil rights movement were all inspirational in the English-speaking Caribbean. By the 1970s, the flourishing of new ideas shaped by these international developments had produced a generation of young people who openly questioned the appropriateness of the inherited British political system. Guyanese-born university lecturer Walter Rodney had also shown the relevance of Black Power to the cultural and political situation in the Caribbean.

In Grenada, Maurice Bishop was among this new generation of Caribbean activists. On returning home from England, where he had studied law and had been politically active, Bishop teamed up with another London-trained lawyer, Kendrick Radix, to form an urban-based study group, the Movement for the Assemblies of the People (MAP). At the same time, Unison Whiteman founded another group to promote rural development, the Joint Endeavour for Welfare, Education, and Liberation (JEWEL). In March 1973 these groups merged into the NJM, which advocated agricultural and educational reform, preventive medicine campaigns, social planning, the nationalization of banks, the phasing out of foreign-owned insurance companies, an end to party politics, and the institution of People's Assemblies as the mechanism to ensure participatory democracy and the permanent involvement of the working people in decision-making. Their model was Tanzania's Ujaama system.

The NJM flourished during a period of pervasive clientelism, political conservatism, and corruption on the part of Grenada's two main political parties. As its influence grew and the number of its sympathizers and followers increased, the NJM was increasingly attacked by Gairy who sought to silence its supporters. As the NJM made increasing inroads into the trade union leadership, Gairy passed laws in early 1978 prohibiting strikes and introducing compulsory arbitration to settle disputes where "essential" services were affected.

Partly because of the terror he had unleashed on his political opponents, particularly NJM members, Gairy's political base was being systematically eroded. A history of dubious electoral practices, including alleged use of rigged electoral lists, caused the NJM to despair of effecting governmental change at the polls despite the fact that by 1978 some of their members had won election to the legislature. By then, most Grenadians were apparently fed up with Gairy's misrule. Thus, when the NJM seized power in 1979, few Grenadians complained.

THE REVOLUTIONARY MOVEMENT

Once in office, the PRG consolidated its power by forming a government that included members of the mercan-

tile community and persons of middle class background. This temporarily allayed the fears of individuals concerned that the country would soon be turned into a Cuban-style socialist state. Though they suspended the 1974 constitution, the PRG retained the office of governor general in an obvious attempt to gain the support of the politically conservative Grenadian and British Caribbean peoples. As prime minister, Bishop signed into effect laws that were passed by the Parliament, of which he was a part, in the name of the PRG.

While pledging to observe fundamental rights and freedoms of Grenadians, the PRG also declared its determination to eradicate all vestiges of Gairyism and to protect the revolution. It established a People's Revolutionary Army (PRA), whose members had the same powers of arrest and search that members of the local police force enjoyed. By using preventive detention without bail, the PRG could detain indefinitely persons suspected of activities aimed at undermining the revolution or deemed prejudicial to public safety or public order. This proved to be a sore point for Grenadians who had expected the PRG to respect their human and civil rights. Although the government had pledged a Consultative Assembly where Grenadians would participate in shaping a new constitution, by 1980 PRG members were openly asserting that elections and a return to parliamentary government were no longer priorities.

The revolution did have positive effects on Grenada, however. The awakening of national spirit on an unprecedented level was evident in the widespread use of voluntary labor for community development. Educational and medical improvements stemmed from the generous assistance provided by Cuban doctors and teachers. Farmer cooperatives expanded agricultural output. Marketing boards regularized the availability of these goods locally and in neighboring Caribbean countries. Agribusiness initiatives transformed surplus fruits into canned nectars and juices. A spice-grinding project brought to the marketplace a range of locally produced and ground packaged spices. The Livestock Production and Genetic Centre set out to enhance the island's livestock industry to remove the need for importing meats. Government promoted "new tourism" aimed at attracting visitors from Latin America, Africa, and the United States. The centerpiece of this tourism initiative was the construction of an international airport to accommodate large jet aircrafts.

Financing these ambitious programs was challenging. The PRG initially sought support from moderate foreign-owned banks operating locally. Later it purchased one of them and enhanced the capitalization of the government-owned Grenada Development Bank. But these resources remained inadequate, forcing the PRG to increase its requests for aid from Cuba and the Soviet Union. Cuba provided technical expertise, heavy equipment, and skilled labor for the construction of the airport. Syria, Libya, Iraq, and Algeria provided more than US$19 million, while Venezuela donated much-needed diesel fuel.

This reliance on aid from leftist countries irked the United States, which, increasingly concerned about the leftward drift of the revolution, feared that Grenada would become a proxy for the Soviets. President Ronald Reagan openly declared that the new airport was for military rather than economic purposes. PRG fears that the United States would destabilize its experiment in socialism forced the revolutionaries to boost the country's military preparedness through a series of secret agreements with Eastern European countries. According to these agreements, Grenada would receive counterintelligence equipment, agent training, and arms and other military materiel. Local preparedness was enhanced through participation in the army, militia, and other neighborhood bodies geared to protecting the revolution at home.

The greatest threat to the revolution eventually came not from the United States or local counterrevolutionaries, but from the revolutionaries' own actions. Long-suspected though rarely publicly articulated ideological differences within the NJM leadership came to light in October 1983. Minutes from Central Committee meetings reflect a sharp divide centering on leadership issues and the direction the revolution should follow. It appears that revolutionary élan was receding partly because the revolutionaries had allowed their rhetoric to exceed the possibilities the situation allowed. An awareness of the revolution's failure to achieve its full potential led to serious self-reflection and evaluation of both the leadership and the governmental structure. In addition, personal differences contributed mightily to the internal crisis that the PRG experienced in the autumn of 1983. Bishop's detractors accused him of being inefficient and middle class, and of lacking political leadership skills and sufficient ideological coherence. After much debate over three days, the party proposed the institution of a joint leadership structure, with power to be shared by Bishop and Bernard Coard. Bishop initially accepted this proposal. Two days later, he left for a visit to Hungary and Czechoslovakia.

On his return via Cuba on October 8, Bishop told Central Committee members that he was no longer willing to go along with the power-sharing proposal the party had approved. Committee members then sought to impose this agreement without the support of Bishop. In response, Bishop, who was for many the personification of the revolution, set out to turn the people against Coard by spreading a rumor that Coard was conspiring to kill him. Confronted at a Central Committee meeting with his security guard's testimony about this plot, Bishop

remained silent. Convinced of his guilt, the Central Committee placed him under house arrest.

Bishop's house arrest failed to neutralize him; instead, it roused the people. After days of unrest, Unison Whiteman and George Louison, two of Bishop's faithful supporters, began organizing protestors for a rescue attempt. By this time, all the ministers, except Bishop, Selwyn Strachan, and Hudson Austin, had resigned their portfolio. Government was in disarray. On October 19, 1983, Whiteman and a group of Bishop loyalists freed Bishop. Bishop then led a crowd to Fort Rupert, the headquarters of the Grenadian armed forces, with the apparent goal of using the military to reassert his authority. Accounts of what transpired there differ. Speaking for the PRA, General Hudson Austin later claimed that Bishop's group disarmed the soldiers guarding the fort and declared their intention to eliminate the entire Central Committee—the senior members of the party—and to smash the revolutionary armed forces. Thus, Austin declared, relief soldiers were sent to reestablish control of Fort Rupert. Bishop and his group fired on the soldiers, prompting them to retaliate. In the crossfire, Bishop, a number of his colleagues, and an unknown number of citizens were killed in what many regard as an execution. The bodies of Bishop and the ministers were reportedly burned beyond recognition and then secretly buried. Some suggest that U.S. forces removed the charred remains from the island.

The killing of these ministers created a leadership vacuum that the PRA under Austin initially sought to fill. Because the army lacked popular support, it declared a twenty-four-hour curfew to both maintain order and impose its will on the people. Fearful of governance by the group that had killed their popular prime minister, Grenadians panicked. At the request of Governor General Sir Paul Scoon, who invoked the doctrine of necessity embedded in the 1974 constitution and assumed plenipotentiary powers, forces from the United States and the Caribbean staged a military intervention that quickly eliminated remaining pockets of resistance from the PRA and Cuban sympathizers. Grenadians viewed the foreign troops as liberators rather than as invaders.

In an attempt to restore a state of political normalcy, Sir Paul appointed a broad-based advisory council to form an interim government that would help in the country's administration. Among its most memorable achievements was paving the way for the elections that took place in December 1984.

By then, Coard and those suspected of involvement in the killings at Fort Rupert had been detained. They were tried and found guilty of murder, but their death sentences were later commuted to life imprisonment by the governor general. A successful appeal to the Privy Council resulted in a 2007 ruling that they should be resentenced because of the unconstitutionality of the original sentences.

SEE ALSO *Anticolonial Movements; Black Power; Caribbean, The; Castro, Fidel; Civil Rights Movement, U.S.; Colonialism; Cuban Revolution; Haitian Revolution; Human Rights; Left and Right; Left Wing; Reagan, Ronald; Revolution; Rodney, Walter; Social Movements; Socialism; Terror; Tourism*

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Edward L. Cox

GRIEF AND LOSS

SEE *Death and Dying.*

GROSS DOMESTIC PRODUCT

As a measure of the aggregate level of economic activity, gross domestic product (GDP) is the main indicator used to monitor the state of an economy. GDP growth, commonly referred to as economic growth, is thus of great interest to policymakers for the conduct of fiscal and monetary policy. It is also widely used to measure productivity of an economy.

GDP is defined as the value-added of all goods and services produced in a given period of time within a country. The measurement of GDP can be approached from three angles: value added by industry, final expenditures, and factor incomes.

- Value added created by industry (output less inputs purchased from other producers);
- Expenditures by consumers, businesses on investment goods, government on goods and services, and foreigners for exports (minus expenditures by domestic residents on imports); and
- Incomes generated in production, operating surplus generated by business and compensation of employees.

GDP is usually expressed in terms of current prices in national currency units, or in real terms (real GDP) after removing the effects of price change to reflect the volume of production in the economy. For international comparisons, GDP is also expressed in a common currency such as U.S. dollars using purchasing power parity exchange rates.

Up to the 1980s, the term gross national product (GNP) was more commonly used than GDP. The former, more correctly called gross national income (GNI), includes incomes of residents of a country earned abroad and excludes incomes from domestic production sent abroad. In contrast, GDP includes only domestically produced incomes. GNI in combination with GDP are often expressed in per capita terms and used as measures of living standards of the nation.

National income accounting (the methodologies to measure GNI and GDP) originated in the 1930s and 1940s with the work of Simon Kuznets in the United States and Richard Stone in the United Kingdom. A detailed history of national accounting is found in Andre Vanoli's work *A History of National Accounting* (2005). Since the 1950s, the United Nations, working with other international organizations such as the International Monetary Fund, World Bank, and Organization for Economic Cooperation and Development, has coordinated the development of international standards for the national accounts. The current international standard was last issued in 1993. These standards evolve over time with the world economies, and a new edition of the standard will be released in 2008. The International Association for Research in Income and Wealth was founded in 1947 for the advancement of knowledge related to national accounting. The publications of this Association, including the journal *Review of Income and Wealth*, document the evolution of the field.

GDP is not a measure of economic welfare. It does not incorporate into its official estimates environmental degradation and resources depletion, nor the value of leisure. Neither does it take into account the influence on income inequality and economic insecurity on well-being.

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Andrew Sharpe

GROSS NATIONAL INCOME

Gross national income (GNI), also known as gross national product (GNP), is an estimate of the value of goods and services produced in an economy. In other words, it is an estimate of the size of an economy. This measure is highly important, having economic, political, and societal implications.

The GNI is defined as the total value of final goods and services produced within a country's borders in a year, thus the country's gross domestic product (GDP), minus its net foreign assets. The net foreign assets are composed of the income received from assets owned by nationals in other countries minus similar payments made to foreigners who own assets in the national economy. For instance, if a Japanese-owned company operates in the United States and sends some of its profits back to Japan, then the Japanese GNI is enhanced. However, the repatriation of profit from a U.S. company operating in Japan increases the U.S. GNI but does not affect the Japanese GNI. Hence, unlike GDP, the GNI counts income produced according to who owns the factors of production rather than where it is earned. The conversion from GNI to GDP can easily be done by subtracting the income received from domestically owned goods and services that have been supplied to the production abroad of foreign goods and services. However, the conversion from GDP to GNI requires that one add to GNI the income payments to foreigners for the use of their goods and services supplied to the domestic economy. Thus:

GNI = GDP + Net Foreign Assets

where Net Foreign assets = Foreign Assets – Foreign Liabilities.

The measure of GNI is of great policy significance. GNI, consisting of a basic measure of national income accounting, has been regarded since World War II as an important indicator of the status of the economy. For instance, in the United States the economy is considered to be in recession if GNI decreases during two consecutive quarters. Moreover GNI, as a measure of economic health, is used for the purpose of cross-country comparisons. For example, one defines the importance of an

economy according to the level of its GNI or according to each country's contribution to the world's income production. In addition GNI per person is often used as a measure of people's welfare. Thus countries with high GNI often score high on other measures of welfare.

As previously mentioned, GNI is a function of the GDP. The latter is more common as a measurement of the size of an economy. In some cases the difference between the two measures is negligible. For instance, in the United States the difference between GDP and GNI is only about 1 percent and can be ignored. However, in some countries where net foreign assets' role is significant, GNI is considered to be the most representative quantitative measure of economic activity. This is the case, for example, in Ireland, where in 2000 GDP was 15 percent higher than GNI. In any case, GNI has important policy implications, both at a national level and at an international level (for example, it defines a country's status in an international organization).

SEE ALSO *Gross Domestic Product; National Income Accounts*

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Eleni Simintzi

GROSS NATIONAL PRODUCT

SEE *Gross Domestic Product.*

GROUPS

A *group* is a collection of individuals with some degree of interdependence and some element of common or shared identity. Most often, membership in a group involves face-to-face interaction with other members, although such interaction is not a necessary component of a group. (For example, Internet "groups," which do not involve face-to-face interaction, are becoming increasingly important in the twenty-first century.) Scholarly interest in groups began with sociology's birth. German sociologist Ferdinand Tönnies (1855–1936) made an early contribution when he developed the influential concepts of *Gemeinschaft* and *Gesellschaft* to depict two different types of groups related to different kinds of economic and social structures. *Gesellschaft* refers to instrumentally-based groups or communities in which social relations are formal and little consensus exists. *Gemeinschaft* refers to small communities in which social interactions are based on friendship or kinship.

The importance of groups and community were also a focus of the French sociologist Émile Durkheim's (1858–1917) writings. For example, in *The Elementary Forms of Religious Life* (1915), Durkheim discussed the significance of religion for one's sense of belonging. Religion might take different forms in different societies, but all religions stress the importance of social control and cohesion of the group. In this way, the rituals associated with religion serve as visible evidence of the power of the community as they are enacted in a group and for the group.

The American social psychologists Charles H. Cooley (1864–1929) and George H. Mead (1863–1931) both frequently addressed the central importance of groups, especially small groups, and made important contributions to the construction of a framework for understanding symbolic interaction. Cooley, for example, developed the idea of primary groups, that is, groups that are important in intimate interaction. Mead's theoretical conceptualizations in *Mind, Self, and Society* (1934), including the centrality of groups and the importance of role-taking, were influential in the development of the field of group dynamics.

The German sociologist Georg Simmel (1858–1918) detailed many concepts and perspectives that have preoccupied group theorists since the early twentieth century. His discussion of conflict and exchange framed issues in terms of a dynamic. Simmel argued that exchange was pervasive and that what might at first appear to be purely individual acts are actually influenced by others. To use one of his examples, a teacher teaches, but this involves an exchange with students in part because the teacher considers the students as an audience. People are not isolated agents, acting on their own; rather they act in response to groups.

The study of groups and their structure is sometimes termed *group dynamics* or *group processes*. While there are many areas of study within group dynamics, some of the most important are group identity, status, cooperation and competition, exchange, justice, and legitimation.

GROUP IDENTITY

The intensity of identity as a group member varies according to the members' common fate. If membership within a particular group seems to predict important outcomes, group identity may be strong. For example, minorities are likely to feel a strong identity as minority group members because it is evident that their categorization both comes from and creates common experiences.

Collectivities can have elements of common fate, but members may not have group identification and as a result are not usually considered groups. For example, Karl Marx (1818–1883) clearly delineated class interests based upon the means of production; membership in a class was fundamental to life chances. The bourgeoisie controlled the means of production, while the proletariat did not. However, at times, members of those groups may not conceive of themselves as sharing commonalities; in fact, as Marx argued, although members of the proletariat had powerful class interests uniting them, they often lacked the critical recognition of membership in this group. This lack of recognition served the purposes of the bourgeoisie and was an important means of control and power.

Group identity can also be created solely through common experiences, even where no categorization preceded the experience. Experiences such as surviving a hurricane or cancer, for example, can create a powerful group identity among the survivors. Research, especially in the social identity tradition, also indicates that, under some conditions, the slightest form of categorization can function as a type of group identity—strong enough to create in-group favoritism. Research in the area of social identity theory, which developed within European social psychology, emphasizes how individual cognition and group identities are related.

STATUS

Status is usually defined as a position in a social network. Importantly, status involves *status beliefs*, beliefs about the social worth of the individuals who occupy positions within a network such that a person who occupies one position is "better than" a person who occupies another position (Sewell 1992). Early status studies examined the concept of leadership and different forms of group rules that corresponded to different political processes (such as democratic rules versus autocratic rules). In the 1950s, attention turned more to the internal dynamics of groups. The social psychologist Robert Bales (1916–2004) and his associates developed *interaction process analysis* (IPA), a categorization technique that, in different forms, shaped much of group analysis. In particular, these researchers were interested in how the behavior of one group member conditioned the behavior of others. This idea that status was relative to the group was a central insight and formed the impetus for thinking about characteristics once viewed as fixed (such as sex or ethnicity) as varying in intensity and salience depending upon context.

One of the most developed research programs in the analysis of status is *expectations state theory*. The theory has several subsets; one of these is *status characteristics theory*, which concerns how status generates and then sustains inequality of power and prestige within groups. It is posited that this process, called the *burden of proof process*, is so strong that unless some event or some information intervenes, it organizes interaction consistent with prior evaluations of the status characteristics. In other words, the cultural stereotyping associated with status characteristics are reproduced in different settings and within different groups. Dissolving status hierarchies is difficult because there are layers of group interactions that support and uphold the status quo. However, under some conditions, hierarchies can be dissolved; particularly noteworthy are a series of applied studies in school settings (Cohen 1993).

LEGITIMATION AND JUSTICE

Related to issues of status are issues of legitimation, the process through which a principle or set of rules is adhered to even in the absence of incentives. There have been studies of differing sources and processes of legitimation, and particularly promising is research concerning how the granting of power within groups is affected by and reinforced by *referential belief structures*, or socially validated beliefs at the cultural level that are imported into the local setting.

Other research has addressed how conflict between different sources of legitimation might affect interactions and the establishment or disruption of norms and routines. There is a large literature that aims to answer how individuals make assessments of justice based on their own and others' benefits. The sociological contribution to justice is the extension of the justice concept beyond the specific individual. Referential belief structures, for example, serve as an external comparison by which to judge the fairness of local settings.

EXCHANGE

The social aspects of exchanges are central to the study of groups. Some of the early sociological formulations were patterned after economic models, while others were patterned after behavioral psychology. Sociologist Richard Emerson (d. 1982), relying on behavioral models as a foundation, developed a conceptual framework that viewed the exchange, rather than individual actors, as the unit of analysis. This formulation took the power-dependency relationship among actors or groups as the determining factor in dictating interaction. For a given relationship, the more powerful the actor (whether that actor is an individual or a group), the less dependent the actor. According to Emerson, this power dependency leads to a continual "balancing," so that the actor who has the most power uses it (because it is to that actor's advantage to do so), but such use of power leads to some loss of power. This shift in power leads to balancing or sets of strategies by which actors try to retain their power. Theories developed after this initial formulation sometimes refuted the

idea that power was lost. This seems to be especially true in settings in which the social network provides some actors with particularly advantageous positions.

Work on coercive power indicates that in small groups (and perhaps in large groups as well), coercive power (in the sense of punishing others) is a risky strategy because it can decrease the possibilities of future exchanges. Of course, the risk to the coercer is related to the alternatives present for the coerced. Relatedly, the *conflict spiral*, a theory about bargaining processes, predicts that unequal power, even without punishment, can produce negative emotion.

COOPERATION AND COMPETITION

One of the longest traditions in the study of groups is the investigation of cooperation and competition. The form and type of incentives that encourage or discourage competition have been extensively examined. These incentives might be material rewards, such as money, or social rewards, such as honor or friendship. Even when the incentives are structured so that all might be better off cooperating, cooperation does not always obtain. This is because even in simple settings, coordination can be problematic.

Social dilemmas, settings in which individual and group incentives conflict in some way, are prominent research areas because they are pervasive in many different aspects of life. Such dilemmas range from the small and intimate (e.g., how to maintain a clean house), to the large and relatively anonymous (e.g., how to maintain biodiversity). Many solutions to social dilemmas involve changing the incentives and thereby changing the structure. These might involve punishments for not cooperating or rewards for cooperating.

Other solutions have focused upon social factors arising from group interaction. Two powerful such factors are group identity and trust. If, for example, one actor trusts another to cooperate and then acts on this basis, the dilemma can sometimes be solved. Group identity, as mentioned, can arise from cooperation. Once born, group identity can also lead to cooperation.

SEE ALSO *Collective Action; Competition; Cooperation; Durkheim, Emile; Ethnicity;* Gemeinschaft and Gesellschaft*; Group; Groupthink; Identity; Marx, Karl; Mead, George Herbert; Nationalism and Nationality; Race; Social Exchange Theory; Social Identification; Sociology*

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Jane Sell

GROUPS, NONCOMPETING

SEE *Noncompeting Groups.*

GROUPTHINK

Irving Janis (1972, 1982) originated the term groupthink to describe a set of definitive beliefs and behaviors found in decision-making groups when their motivation to maintain internal consensus overrides their rational appraisal of information. The model was developed from qualitative case studies of the flawed decision processes that preceded U.S. government fiascoes like the failure to protect Pearl Harbor against Japanese invasion in 1941, the Bay of Pigs invasion of Cuba during the Kennedy Administration, and the burglary of the Watergate complex during the Nixon Administration. The attractiveness of the model rests largely on its explicit attention to seven antecedent conditions and eight associated patterns of in-group cognition and action that can influence the quality of solutions to business and organizational problems. The

principal antecedent condition of groupthink is extreme in-group cohesiveness. Other antecedent conditions linked to in-group cohesion include insulation of the group from outside information and critics, directive leadership, a lack of group norms prescribing methodical problem-solving procedures, homogeneous attitudes or values among members, high stress due to external competition or threat, and a temporary loss of self-esteem produced by recent failure or the complexities of the task at hand. According to the groupthink model, these contextual antecedents lead to specific psychological symptoms shared by decision-makers that result in a detrimental tendency to seek premature concurrence. The symptoms show up as an illusion shared by group members that they are invulnerable to bad outcomes, an unquestioned belief in the moral superiority of the in-group, an inclination to collectively rationalize support for the group's decisions, stereotyping of out-group members as weak and wrong, self-censorship through the withholding of dissenting opinions, a perception that other in-group members are unanimous, direct pressure on dissenters to conform, and the emergence of "mindguards" whose role is to protect the group's preferred position from counterargument. Janis expected this constellation of biased reactions to cause critical flaws in the procedures group members adopt to solve important dilemmas.

The specific errors of group process that are thought to be caused by groupthink include the incomplete review of decision alternatives, inadequate consideration of how proposed actions fit group objectives, failure to examine the negative risks of proceeding with proposed actions, insufficient search for and review of available information, failure to reexamine previously rejected alternatives, and failure to develop backup contingency plans. Researchers generally agree that these procedural shortcomings can reduce decision quality (Baron 2005). However, empirical studies that directly test the effects of Janis's antecedent conditions on the other components of the groupthink model reveal the risks inherent in developing general propositions from narrative case studies.

SUPPORT FOR THE THEORY

Statements made by NASA officials and consulting engineers at Morton Thiokol just prior to the disastrous 1986 decision to launch the Challenger shuttlecraft were content analyzed in one of a handful of quantitative case studies that show some support for a negative association between specific symptoms of poorly functioning groups (e.g., self-censorship and directive leadership) and decision-making (Esser, 1998). However, these studies also fail to verify essential causes of bad decisions that are specific to the groupthink model. Empirical justification for retaining group cohesion as a key variable in groupthink is especially elusive. Controlled studies designed to experimentally test the effects of group cohesion on groupthink symptoms and outcomes show results that are inconsistent and sometimes contrary to the theory's primary predictions (McCauley 1998). One reason is that while Janis defined group cohesion as a high degree of attraction or esprit de corps between group members, premature concurrence can also be attributed to a fear of rejection by in-group members or a fear of losing status, especially when self-censorship and directive leadership are involved. In sum, critics argue that groupthink theory is based on a selective sample of cases. Retrospective case studies are an inadequate means of establishing necessary conditions and sound explanations for behavior.

Despite the vagaries of interpreting tests of the groupthink model, there is little doubt that research in this area has revealed a number of reasons why groups may fail to achieve optimal decisions. Pressure to conform to a seemingly popular group decision can follow from *pluralistic ignorance*, which is a false assumption by individuals that other in-group members are unanimous in their beliefs or knowledge. Likewise, *false uniqueness* is the sense that one is without support for dissenting from what is apparently the group's position. When group members are able to discuss their preferred decisions, *group polarization* can foster confidence that the popular group decision is correct even if all relevant information has not been considered. Finally, extreme group positions may indicate *ethnocentrism*, which reduces consideration of alternative positions, particularly those that would lead to relationships with out-group members.

SEE ALSO *Solidarity*

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Rolf Holtz

GROWTH ACCOUNTING

Growth accounting describes the growth in the total product (output) of an economy or industry by decomposing it into its underlying determinants. This idea is very closely related to productivity growth (or technical change), typically defined as the amount of output growth not accounted for by its identifiable determinants, a residual often called a "measure of our ignorance" (Abramovitz 1962).

The economic building block underlying growth accounting is the production function $Y = f(X,t)$, where Y is output (total production of goods and services), X is a vector (group) of inputs used for production, and t is a time counter. For example, the production function written as $Y = f(K,L,M,t)$ says that the amount of output produced during a particular time period (say, a year) depends on the amount of physical capital (K, such as equipment and buildings) used, labor (L) employed, and primary and intermediate materials (M) purchased.

Based on this production function, and assuming that it represents all factors contributing to production, observed output growth over time can be attributed to (accounted for by) four causes—changes in each of the three inputs ($j = K,L,M$) and the passage of time (t, proxying technical change). Formally, this is written as the total derivative $dY/dt = \Sigma_j\ \partial Y/\partial X_j\ dX_j/dt + \partial Y/\partial t$. Because, mathematically, d refers to the full observed change in a variable and ∂ to a change "holding all else fixed," this equation says that the full output change observed in the data is accounted for by the contribution of each input to output (marginal product of input j, $\partial Y/\partial X_j$) multiplied by the input change observed in the data, plus the remaining time trend (residual).

Usually this expression is written in proportional terms by taking the derivative in logarithmic form, as $d\ln Y/dt = \Sigma_j\ \partial \ln Y/\partial \ln X_j \cdot d\ln X_j/dt + \partial \ln Y/\partial t$, so each term becomes a percentage change. To then measure productivity growth or technical change (the percentage of output growth not accounted for by changes in input use), this expression is inverted to read $\partial \ln Y/\partial t = d\ln Y/dt - \Sigma_j\ \partial \ln Y/\partial \ln X_j \cdot d\ln X_j/dt$, so the left-hand side of the expression, productivity growth, captures growth in output not accounted for by the measured inputs.

Two primary implementation issues immediately arise for measuring these expressions. First, $d\ln Y/dt$ and $d\ln X_j/dt$ are simply data; assuming one has valid measures of real (not nominal) output and inputs, these are just the percentage changes in these measures between two time periods. However, $\partial \ln Y/\partial \ln X_j$ is defined as the change in output from *only* changing X_j, which is not evident from actual data. Second, many other potentially measurable factors that contribute to output growth should not just be lumped into a residual, because that seriously limits its interpretability. For example, research and development (R&D) may be a specific cause of greater production from given input levels, which if distinguished separately would facilitate interpreting or explaining the "drivers" accounting for output growth. Further, even for standard factors of production, their measured changes may not reflect quality variations (say, education of laborers), which one would want to recognize to explain output growth patterns.

The first issue is typically dealt with by the theoretical assumption that firms maximize profits, which implies that inputs are paid the value of their marginal products (for example, a manager is willing to pay a worker up to the amount of money his labor generates). More formally, this means the input revenue share $S_j = p_j X_j / p_y Y$ (where p_j and p_y are the prices of X_j and Y, so $p_j X_j$ is the total amount of money paid to input j and $p_y Y$ is the total value of output) can be substituted for $\partial \ln Y/\partial \ln X_j$. The output growth expression then becomes $d\ln Y/dt = \Sigma_j S_j\ d\ln X_j/dt + \partial \ln Y/\partial t$. Although this substitution is based on restrictive assumptions such as full equilibrium and perfectly competitive markets, it means all the components of the growth accounting expression are measurable directly from data on output and input levels and prices (in contrast to econometric estimation).

The second issue is somewhat more difficult to deal with, because even if factors such as R&D are included in the production function, there is no measurable "value" or "weight" for their productive contribution, such as the share paid to an input (S_j). That is, if the production function is written as $Y = f(X,R,t)$ (where R = R&D), the growth accounting expression becomes $d\ln Y/dt = \Sigma_j S_j\ d\ln X_j/dt + \partial \ln Y/\partial \ln R \cdot d\ln R/dt + \partial \ln Y/\partial t$. This equation states that the percentage total output growth observed in the data is explained by the cost share of each of the j inputs multiplied by its percentage change, the marginal contribution to production of R&D multiplied by its percentage change, and the passage of time (trend). However, there is no measurable weight to substitute for $\partial \ln Y/\partial \ln R$ without econometrically estimating the production function. Similarly, there is no clear way to separately identify changes in the quality or characteristics of the j inputs.

Early research in the growth accounting literature initially adjusted measures of capital and labor inputs by measures of quality or composition changes to put them in "effective" units. For example, Dale Jorgenson and Zvi Griliches (1967) "explained" the large productivity growth residual found by Robert Solow (1957) by direct adjustments of capital measures. The typically ad hoc nature of such adjustments, however, caused disputes among researchers about appropriate adjustment methodologies.

Additional issues arose from the more detailed growth accounting models of researchers such as Edward Denison (1979, 1985) and John Kendrick (1979), who included many additional potential growth drivers such as R&D, scale economies, capital obsolescence, and allocation, environmental, and "irregular" factors (such as weather). The multitude of factors that may affect output growth are, however, virtually impossible to measure and weight reliably and consistently for the growth accounting measure. Methodological problems emerging from the limited theoretical and empirical bases of many of the adjustments thus raised serious questions about their validity.

Due to these measurement and consistency issues, detailed growth accounting models have rarely been implemented recently, although this literature has provided the methodological foundation for growth accounting–based productivity or technical change measures. The focus of such studies has been identifying as carefully as possible the various inputs one can measure and find cost share weights for, so the components of the measure can be calculated without econometric estimation.

SEE ALSO *Change, Technological; Solow Residual, The; Solow, Robert M.*

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Catherine J. Morrison Paul

GROWTH CURVE ANALYSIS

Growth curve analysis, or trajectory analysis, is a specialized set of techniques for modeling change over time. The time frame might be seconds in a psychophysiology study, or years or even decades in a longitudinal panel study. Growth curve analysis is a data reduction technique: it is used to summarize longitudinal data into a smooth curve defined by relatively few parameters for descriptive purposes or further inquiry. It is especially useful in developmental psychology research, measuring intraindividual change over childhood years or life course, but it can also be used to measure change at group levels in sociology or demography. Discussion in this entry will be in terms of intraindividual change, for ease of communication, but the principles apply to other levels of change.

Before the advent of growth curve analysis, longitudinal analysis usually focused on timepoint-to-timepoint relations, or even cross-sectional relations involving different cohorts of participants (and often still does, of course, depending on the nature of the data collection and research question). With only two timepoints of data collection, longitudinal analysis is largely limited to correlation or regression (either predicting an outcome from earlier variables, including the earlier score on the outcome, or predicting a change score). If the researcher has data from at least three measurement occasions, growth-curve analysis becomes a useful tool.

The core idea of growth curve analysis in longitudinal data is that the researcher can estimate a best-fit line or curve to each individual's responses over time. In subsequent analysis steps, the parameters defining those curves can be analyzed. To take an example of the simplest case, consider reading-competency tests administered at ages six, seven, and eight. With three measurement occasions, growth curve analysis involves estimating a best-fit line (and a residual or error component). The line for each respondent is characterized by an intercept or overall level and slope or linear change over time. In this example, the intercept would typically be set at age six, with the slope representing the rate of change through age eight, as shown in Figure 1 and discussed further below. The means of these intercepts and slopes represent a sample-average trajectory, and the variances of those parameters across individuals represent the variability in the growth curve (line). The individual variation in growth curves can then be predicted from respondent-level variables (e.g., gender, socioeconomic status, treatment condition). If the data collection includes at least four measurement occasions, more complex growth curves can be estimated—for example, with a relation with a quadratic component of time (time squared) in order to model curvature, or acceleration.

ESTIMATION TECHNIQUES

There are two primary analysis techniques for growth curve analysis: *multilevel modeling* (MLM) and *structural equation modeling* (SEM). Multilevel models, also known as *hierarchical linear models, mixed models*, and other terms, are based on the disaggregation of the model into

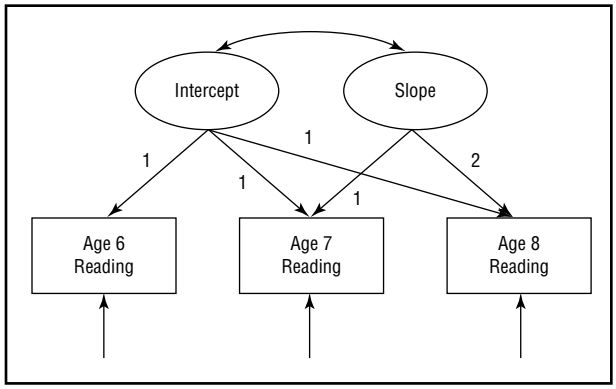

Figure 1

multiple levels of explanation. For growth-curve analysis, this typically involves a within-person level and a between-person level. The outcome is measured at a within-person level, across multiple occasions. The outcome is directly predicted by an intercept and a time variable or variables. It can also be predicted by time-varying covariates (e.g., teacher qualification) that the investigator wishes to separate from the growth curve. The regression coefficients associated with some or all of these variables are, in turn, predicted by variables at the between-person level. In the example above, there is a person-level equation for each child—a best-fit regression line fitted to the three points. The intercept and slope of this line vary between children. This variance can be predicted by child gender or other between-person predictors.

Structural equation models are used in the specific case of growth-curve models known as *latent trajectory analysis*. In this instance, the growth parameters (intercept, slope, etc.) are modeled as latent variables that have the individual measurement occasions as indicators. The loadings of the indicators on the growth variables are typically fixed as functions of time, as shown in Figure 1. Reading ability at age six is a function only of the intercept (the value of the intercept for that child multiplied by the loading of 1). Age-seven reading scores reflect the intercept (again multiplied by 1) plus the slope multiplied by 1; at age eight the slope value is multiplied by 2. Thus the slope is the estimated rate of improvement from one year to the next. Finally, as in multilevel models, the latent growth variables can be predicted by other variables in the model.

It is possible to estimate the same models in SEM (modeling means and intercepts, in addition to variances and covariances) as in MLM. In the most common applications, the only differences are in the handling of the occasion-specific residuals, and those differences can be resolved. MLM has the advantage that certain statistics are commonly output that can be useful, such as the apportionment of variance between the two levels. It is also possible to create elaborate nesting structures (e.g., occasion within person, person within classroom, classroom within school, etc.). SEM approaches have the advantage of greater flexibility in the modeling approach. For example, it is possible to model the slopes as dependent on the intercepts, and it is relatively simple to incorporate a second or even third growth process in the same model. Also, characteristic of SEM, the indicators of the growth curve can themselves be latent variables, measured by observed indicators taken over time.

In either approach, it is not necessary that all respondents have the same occasions of measurement. As the key variables are the growth parameters, it is not critical that the growth parameters be estimated for different respondents in exactly the same way—if a child's reading is measured at age 7.5, the slope value would merely have a loading (multiplier) of 1.5 to characterize the time elapsed since the intercept. As a consequence, even in a fixed-occasion design, the methods easily accommodate missing data collection points, insofar as the missingness is at random (MAR). The consequence of fewer measurement points for an individual is simply that that individual's data contribute less to the solution of the model.

EXTENSIONS

Much can be done on the basis of a growth curve analysis. For example, more sophisticated models of change can be estimated, especially in the SEM latent growth framework. The growth curve, while a longitudinal model, is essentially a time-invariant estimate of a respondent's change over time—the curve parameters are constant. Typically, of course, there will be deviations from that curve, because it is, by necessity, a simplification of the data (three data points can rarely be exactly defined by two parameters). One way to model that deviation is by the autoregressive latent trajectory (ALT) presented by Kenneth Bollen and Patrick Curran (2003). In this model, the time-invariant elements of change (intercept and slope) are modeled by the growth curve, while time-specific deviations from the curve (the extent and direction in which measured values differ from predicted values) are predicted in an autoregressive model, where each timepoint is linearly predicted by previous points, so that deviations propagate through time.

Hypotheses about the interrelations over time between two variables are common in developmental research. Historically, these have been typically studied in an autoregressive cross-lagged path analysis model (i.e., a model in which each variable at each timepoint is affected by the previous measurements of both the same variable and the other variable). This can be extended with growth curve analysis to a bivariate ALT, where the relations among the growth parameters of each process are modeled

according to hypothesis, and the time-specific change in one variable is influenced by the other variable as well.

APPLICATIONS

Two major applications of growth curve analysis beyond the descriptive aspects discussed so far are in analysis of intervention effects and in estimation of predictive models. Continuing the example, in a growth curve in an intervention study to improve reading ability, it is possible to estimate a curve with one intercept and two slopes (or higher-order curves), in which the value of the second slope is constrained to zero for each child in the control condition, and is added to the model for children in the treatment condition beginning with the timepoint after initiation of the intervention. In this case, the first slope represents the baseline growth, and the second slope represents the deviation from the baseline trajectory induced by the intervention.

A second interesting application is the development of predictive models. If the growth curve is well established in observed data, it is possible to project the curve beyond the observed data and make reasonable predictions of future events. Of course, this includes the risk common to any regression model in which prediction is extended beyond the observed range of predictors, but applied with caution, it can be a highly useful tool.

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GRUTTER DECISION

Grutter v. Bollinger (2003) was an attempt by the U.S. Supreme Court to define the acceptable boundaries of university affirmative action programs. While setting limits on the design of such programs, *Grutter*, along with *Gratz v. Bollinger* (decided the same day), upheld the practice generally and answered some existing questions about allowable techniques.

Prior to these cases, affirmative action law followed *California v. Bakke* (1978). *Bakke*, however, confused college admissions officers because six separate opinions were produced, none of which garnered a majority of the Court's nine votes. Many legal commentators supported Justice Lewis F. Powell's (1907–1998) opinion as the precedent around which programs should be formed. His opinion upheld diversity in educational institutions—but not correction of past harms—as an acceptable public goal, while limiting the options available to achieve diversity. In particular, *Bakke* has been interpreted to mean that racial quotas are unconstitutional. However, due to the overlapping opinions, universities and federal circuit courts were unclear about which practices remained acceptable. Some states, therefore, were forced to abandon affirmative action completely, while others encountered a more permissive environment.

Arising in this context, *Grutter* and *Gratz* involved the University of Michigan Law School and undergraduate admissions offices, respectively. *Grutter* left the Law School admissions practice intact, while *Gratz* found the undergraduate process flawed. Together, the cases upheld affirmative action, while imposing limits on its implementation.

Constitutional jurisprudence has applied "strict scrutiny" analysis for state-sponsored activities that treat "suspect classes" (i.e., groups who tend to experience discrimination) differently. Strict scrutiny first requires that the policy in question be used to forward some compelling state interest. *Grutter* affirmed diversity as a worthwhile goal of state-funded educational institutions. Second, to survive strict scrutiny, a policy must be narrowly tailored to meet that interest. Quota systems, therefore, remained unconstitutional, and universities were required to make a good-faith effort towards race-neutral policies to further their goals. At Michigan Law School, "plus factors" granted to underrepresented minorities were deemed sufficiently narrow to avoid racial discrimination. This format was accepted as a means of making admissions decisions about individuals rather than seeing them merely as representatives of their racial group. The undergraduate admissions program was invalidated because of the weighting it gave simply for group membership. Justice Sandra Day O'Connor also expressed hope "that 25 years from now, the use of racial preferences will no longer be necessary to further" the interest of diversity.

Future jurisprudence, particularly in light of Justice O'Connor's retirement in 2006, may revisit the issue and alter the *Grutter* approach. For the time being, in response to *Grutter*, some state universities have resurrected affirmative action programs that were locally banned after

Bakke. In order to comply with *Grutter* and *Gratz*, others have dropped point-based systems in favor of more individualized application review. Michigan, for instance, has moved to a system based on essays about the applicant's diverse experiences. Although such changes are popular, they require additional admissions staff and financial resources.

Some legal confusion persists, leading risk-averse universities to question whether other diversity efforts, such as minority scholarships, may be at risk. In addition to compliance efforts, *Grutter* has had other political consequences. Most notably, opponents have introduced ballot initiatives to block affirmative action programs. Nonetheless, *Grutter* affirmed the constitutionality of racial preferences in university admissions, significantly reducing previous uncertainty.

SEE ALSO *Affirmative Action; Supreme Court, U.S.*

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Mark Axelrod

GUANTÁNAMO BAY

Guantánamo Bay, Cuba, has played a critical role in U.S. foreign policy since the nineteenth century. The U.S. Naval Station there is the oldest American base outside of the continental United States, and the only U.S. base located in a country with which the United States does not have diplomatic relations. Known alternately as GITMO, the 45-square-mile base is located at Cuba's southeastern tip and is approximately four hundred miles from Miami, Florida. In 2006 GITMO was home to approximately 8,500 U.S. service personnel (and their dependents) whose mission includes providing logistical support to the U.S. Navy and Coast Guard, maintaining migrant operations, and hosting the Detainee Mission of the "War on Terror" under the direction of the Joint Task Force Guantánamo.

American presence began when the United States invaded Guantánamo Bay and established a marine base during the Spanish-American War. Cuban independence fighters worked with American forces to expel Spain. At the end of the war in August 1898, the United States controlled Cuba. The 1901 Platt Amendment, adopted by the U.S. Congress and incorporated into Cuba's constitution, defined U.S. involvement in Cuba's affairs. Until such time as Cuba had an independent government, the United States would intervene to preserve Cuban independence or to maintain "a government adequate for the protection of life, property, and individual liberty." The amendment also ceded Guantánamo to the United States.

After Cuba's independence in 1903, the Cuban-American Treaty stipulated that the United States would lease Guantánamo Bay as a coaling and naval station. The lease gave the United States "complete jurisdiction and control" of the territory while recognizing "the continuance of the ultimate sovereignty of the Republic of Cuba." Guantánamo Bay's unique status was born. The Platt Amendment was annulled in 1934, and the Permanent Treaty codified the leasing arrangement, specifying that the United States would pay an annual sum of approximately $4,085. Since the Revolution of 1959, the Cuban government has accepted only one payment for the lease of Guantánamo, in the first year after the Cuban Revolution. By its own terms, the lease can be abrogated only by mutual agreement. The Cuban government maintains that the base constitutes an unlawful military occupation resulting from an agreement forcefully imposed on Cuba.

In 1964 Cuban president Fidel Castro cut water and supplies to the base hoping to compel U.S. withdrawal. Instead, the base became self-sufficient for its own water and energy. American personnel have been evacuated temporarily from Guantánamo on two occasions: during the Cuban Missile Crisis in 1962 and in 1994, as the population exceeded 40,000 when the base became a holding facility for Haitian and Cuban migrants seeking refuge in the United States. The base continues to serve as an ongoing migrant processing facility, capable of accommodating 40 people, or 10,000 in an emergency.

After September 11, 2001, the base's mission expanded to include the Detainee Mission of the War on Terror. Beginning in 2002, more than 600 prisoners from approximately thirty countries were brought by the United States to Guantánamo from Afghanistan. The detainees were suspected of having ties to either the Taliban or Al Qaeda, and they were held indefinitely, without charges, without counsel, and without access to American courts. The detainees' legal status and treatment have been a matter of grave international concern. In 2007 approximately 385 detainees remained imprisoned in Guantánamo.

The U.S. government first posited that the detainees were not subject to the jurisdiction of U.S. courts because Guantánamo was not part of the sovereign territory of the United States. Second, the government consistently held that the detainees in Guantánamo were "enemy combat-

ants" and thus beyond the protections provided to Prisoners of War under the Geneva Conventions.

In summer 2004 the Supreme Court held in *Rasul v. Bush* that the United States exercises "complete jurisdiction and control" over Guantánamo under the 1903 treaty, even though Guantánamo is under the "ultimate sovereignty" of Cuba. Hence, the detainees had the right to be heard in U.S. courts. As a result, the U.S. government instituted military tribunals to determine whether the detainees were enemy combatants. These tribunals lacked fundamental constitutional protections guaranteed in U.S. courts.

In 2006 the Supreme Court heard the case of Salim Ahmed Hamdan, Osama bin Laden's former driver, who had been detained at Guantánamo since 2002. In *Hamdan v. Rumsfeld*, the Supreme Court found, by a vote of 5-3, that the president overstepped his powers by authorizing these military tribunals, which lacked essential legal and constitutional safeguards. Additionally, the Court held that the tribunals violated the Geneva Conventions, rejecting the Bush administration's argument that the Conventions did not apply to the detainees at Guantánamo. However, the Court did not require Congress to apply the Geneva Convention to the war on terror.

Late in 2006, the U.S. Congress passed the Military Commissions Act, eliminating the right of *habeas corpus* for enemy combatants, allowing the admission of coerced evidence, and giving the president the power to define who is an enemy combatant. The Act does, however, give detainees fair notice of the charges against them, counsel paid for by the American government, and considerable discovery of the prosecution's case against them. In March 2007, the military tribunals in Guantánamo recommenced with high profile cases resulting in a number of guilty pleas. At the same time, skepticism from left-wing politicians regarding the proceedings grew with increasing calls for the closing of the Gitmo detention center.

Most notably, Robert Gates, who replaced Donald Rumsfeld as secretary of defense in 2007, reportedly called for the closing of the detention center because of concern that the prosecution of war on terror was burdened by the proceedings and their perception by foreign nations. The U.S. Supreme Court may be compelled to address the constitutionality of the Military Commissions Act.

SEE ALSO *Al-Qaeda; Castro, Fidel; Cuban Missile Crisis; Imprisonment; Interrogation; Iraq-U.S. War; Military*

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GUERRILLA WARFARE

Guerrilla warfare relies on hit-and-run tactics by highly mobile, lightly to moderately armed units that feature deception, speed, and flexibility. Usually conducted by indigenous antigovernment forces, not the regular armed forces of a state, its characteristic attacks include ambushes, raids, sabotage, and blocking of enemy lines of communication. Examples of guerrilla warfare, such as in Iraq and Afghanistan since 2003, increasingly feature the use of road mines and suicide attacks. Guerrilla warfare is classically considered a weapon of the weak to fight a much stronger enemy, such as the state, an occupier, or a colonial power, and is directed not so much at defeating the enemy's regular forces on the battlefield as at eroding the enemy's will and capacity to sustain its control.

The first documented record of this kind of irregular warfare occurs on a Hittite parchment from fifteenth century BCE. Since then it has been used among others by the Gauls against Julius Caesar's (100–44 BCE) Roman army, the Incas against the Spanish conquerors, and the Apache Indians in the U.S. Southwest. Guerrilla warfare became especially prominent during the twentieth century and may be increasingly seen in the twenty-first century, reflecting the great asymmetry in the physical capabilities of the military establishments of modern industrialized states and those of anti-state and revolutionary movements.

Secure bases, internal or external sanctuaries, and good intelligence are important ingredients for the success of guerrilla warfare, as is popular support for the insurgency. It is vital for the success of the guerrillas that the larger population of the area being contested, at minimum, acquiesce to guerrilla activity. In fact, winning the hearts and minds of the people is frequently the goal of both the guerrillas and the anti-guerrilla forces. When guerrillas are able to secure the support of the larger population and are hidden or protected by it, anti-guerrilla forces find it difficult to distinguish between friends, foes, and neutrals and easily slip into punishing the entire population to deter it from supporting the guerrillas. In a

famous case in South Vietnam, a U.S. officer seeking to deprive the Viet Cong of its sanctuary ordered an entire village to be burned, commenting that "we had to destroy the village to save it."

The success of Mao Zedong's "people's war" has served as a model for modern guerrilla warfare for many other guerrilla leaders and counterinsurgency theorists. Mao transformed guerrilla warfare from operations that involved only irregular military tactics to warfare that also featured social, psychological, economic, and—crucially—political components. Mao envisioned insurgency as a protracted social and political revolution, where guerrilla warfare was the means to survive in the initial phases of the struggle before a regular conventional army could be fielded and used to defeat the government.

The process would take place in three phases. The goal of the first phase, strategic defensive, was to expand the communist party organization and establish the infrastructure necessary for further development of the revolution. Party workers were to generate public support and infiltrate the state's political apparatus. The first period was understood to be a long one, with only a limited resort to force to intimidate the population and create a climate of dissent, civil disobedience, and economic unrest. Once sufficient support, or at minimum acquiescence, among the population was achieved, the second phase, strategic stalemate or strategic equilibrium, was to be launched. In this phase the expansion of terrorism into guerrilla warfare would take place and revolutionary administration—more capable than that of the government—would be established. Finally, in the third phase, strategic offensive, the balance would have clearly swung in the direction of the revolutionary movement and regular units would be introduced and engage in near conventional warfare while the incidence of guerrilla warfare would decrease. The marked feature of Mao's concept was the emphasis on political and psychological elements as the key to victory, not simply military factors. Mao's principles have been applied in many guerrilla struggles since, and not only by communist rebels, including in Malaya (1948–1960), the Philippines (1946–1954), Algeria (1954–1962), Angola (1962–1974), Rhodesia (1972–1980), Oman (1965–1975), and Peru (1980–1994).

The *foco* theory of insurgency and revolutionary warfare developed as an alternative rural guerrilla approach, inspired by the success of a relatively small number of revolutionaries toppling the Batista regime in Cuba in 1959 and hoping to compress the protracted struggle envisioned by Mao into a swift victory. Among its most prominent theorists were Ernesto "Che" Guevara (1928–1967) and Jules Régis Debray (1940–). In contrast to Mao, who stressed the importance of political structures and in fact the dominance of the political, Guevara and Debray argued that the guerrillas themselves were a fusion of the military and the political authority. Instead of a protracted struggle, they argued that a minimum level of discontent with the government could be translated into conditions favorable to revolution. By military action alone, an elite group could provide the focus, or *foco*, for the revolution. Inspired by the actions of the elite, progressively greater and greater number of sympathizers, alienated by the corruption and brutality of the state, would attach themselves to the revolutionaries and rebel, thus provoking an even more brutal reaction on the part of the government and alienating even more people. Although *foco* was applied in Colombia, Bolivia, Peru, Guatemala, and Ecuador throughout the 1960s and 1980s, it proved a manifest failure.

The dismal success record of the *foco* guerrilla theory contributed to the development of urban guerrilla warfare. Carlos Marighela (1911–1969) was among its most influential theorists. Like Guevara and Debray, Marighela rejected the need for a prolonged preparation for revolution. However, instead of the countryside, Marighela situated the center of the revolution back to the cities. The urban guerrillas would be a small band of highly dedicated individuals, who through the use of terror, such as parcel bombs and ambushes, would provoke the authorities into overreaction, thus alienating the population and creating the revolutionary situation. Actions were to be spectacular and aimed at not just the government but also foreign multinationals, with the intention of weakening the economy. In practice, urban guerrilla warfare becomes rather difficult to distinguish from terrorism. The urban guerrilla approach has been applied, for example, by Michael Collins (1890–1922) during the Irish Republican Army struggle against the British in the 1920s, in the latter phases of the Sendero Luminoso (Shining Path) insurgency in Peru in the early 1990s, in Iraq since 2003, and may likely be a prominent feature of twenty-first-century conflicts.

SEE ALSO *American Revolution; Vietnam War*

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GUILLOTINE

SEE *French Revolution.*

GUILT

SEE *Farsightedness.*

GULAGS

The term *gulag* refers primarily to the system of forced labor camps existing in the Soviet Union from the 1920s until the mid-1950s, although it is also used in a more generic sense to refer to later labor camps in the Soviet Union and to similar institutions elsewhere. *Gulag* is an acronym from the Russian phrase *Glavnoe upravlenie lagerei* ("main administration of camps"). The gulag played a key role during the dictatorship of Joseph Stalin as both a source of labor for the Soviet Union's industrialization drive, and a means of removing from society those deemed undesirable by the Soviet state.

The gulag incarcerated around twenty million people in total between the late 1920s and the early 1950s. The number of inmates in the gulag was a matter of fierce scholarly debate during the cold war, but with the opening up of Russian archives beginning in the early 1990s, a broad consensus has been reached, although precise figures remain a matter of dispute, depending on which categories of imprisonment are counted as part of the gulag. Twenty million represents the total number of individuals in the gulag during the Stalin era; the highest gulag population at any given time was just over two and half million, in 1952.

A Soviet Politburo decision of June 1929, "On the Use of the Labor of Convicted Criminals," marked the beginning of the widespread use of forced labor to contribute to the national economy, and coincided with Stalin's drive for rapid industrialization of his largely rural country. The growing gulag camp network provided a means of forcing the millions of people thrown off the land during the collectivization of agriculture to be used in the cause of industrialization, chiefly plant and infrastructure construction and the development of remote areas rich in raw materials. Soviet economic plans included targets for gulag production, and the prisoner population grew inexorably, interrupted only by World War II, to its peak in the early 1950s. Judicial procedures were cursory and entirely subject to the Communist Party, dominated by Stalin.

Living conditions for gulag prisoners undermined the view that they were a valuable labor resource. Rations were poor and used as a reward for meeting output targets. In some periods, particularly around World War II, starvation and disease were rife.

Following Stalin's death in 1953, his successor Nikita Khrushchev authorized the rapid winding down of the mass gulag system. At first celebrated as enlightened, "corrective labor" by the Soviet authorities in propagandistic films and books, the gulag system was shrouded in a veil of official secrecy from the late 1930s until the Khrushchev years. In 1962 the publication of Aleksandr Solzhenitsyn's *A Day in the Life of Ivan Denisovich* caused a sensation and marked the height of the relative cultural thaw of that time. A decade later, with the more conservative Leonid Brezhnev in power, Solzhenitsyn's *Gulag Archipelago* (1973) had to be published abroad. Solzhenitsyn (b. 1918) was awarded the Nobel Prize for Literature in 1970; in 1974 he was deported from the Soviet Union and stripped of his citizenship. In the post-Soviet era, the fate of gulag prisoners has been written about widely in Russia and abroad; memorials have been raised, though there is still no single central memorial, and independent groups, often made up of survivors and the relatives of victims, have sought to keep the memory of the gulag alive.

SEE ALSO *Colonialism; Concentration Camps; Imprisonment; Khrushchev, Nikita; Prison Psychology; Prisons; Solzhenitsyn, Aleksandr; Stalin, Joseph; Union of Soviet Socialist Republics*

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GULF STATES

The six nations that formed the Gulf Cooperation Council (GCC) in 1981—Saudi Arabia, Kuwait, Bahrain, Qatar, the United Arab Emirates, and Oman—are all oil-producing monarchies. Until a few decades ago, they were among the poorest countries in the world. Since the discovery of oil and particularly the oil price revolution of the early 1970s, the six have been able to carry out massive programs of socioeconomic development that have dramatically increased the per capita income of their citizens, resulted in a huge immigration of foreign workers, strengthened the control of ruling families over the states, and thrust the members into the international spotlight. Saudi Arabia is by far the largest of the group with a population estimated at 27 million. The other five range in size between 700,000 and 3 million.

Saudi Arabia has emerged as a major actor in Middle Eastern affairs. It has provided aid to and supported various Arab governments, even those with which it is at ideological odds. It has valued its "special relationship" with the United States and has supported U.S. policy aims in various parts of the world, despite fundamental differences over U.S. policy regarding Israel. The smaller five states have also sought to follow a neutral path in regional differences, although they were all alarmed by the Iranian revolution of 1979 and supported Iraq in its 1980–1988 war against Iran. But Iraq also proved to be an aggressor when Saddam Hussein's troops invaded Kuwait in 1990, requiring a U.S.-led international coalition to dislodge him. The GCC states also opened up their military facilities to provide assistance to the U.S.-led coalition attacking Iraq in 2003, although many of their citizens disagreed with the action.

A principal impetus for the creation of the GCC was to assure the security of its members in a volatile region. A small joint force was established near the Iraqi/Kuwaiti border and the six states have engaged in numerous joint exercises. However, the GCC members continue to depend heavily on Western assistance and their national armed forces have not been coordinated either in terms of equipment (purchased from a wide variety of countries) or doctrine and training.

But there were other legitimate purposes for the formation of the GCC as well, in which the GCC has succeeded relatively better than in security. Politically, the GCC has seen considerable coordination between the individual states, and many issues are thrashed out in advance of the six rulers' annual summit. The majority of differences between members have been settled, although some remain. A GCC headquarters and secretariat has been established in Riyadh and the position of secretary-general is rotated between the members.

In the economic sphere, the body has succeeded in standardizing weights and measures, creating a common tariff, assuring the free movement of (indigenous) labor and capital throughout the GCC, and taking steps toward a common currency. The members also have created cultural organizations to exchange information and ideas in such areas as education, professional disciplines, and the arts.

SEE ALSO *Alliances; Customs Union; Developing Countries; Development; Development Economics; Economic Growth; Organization of Petroleum Exporting Countries (OPEC); Petroleum Industry*

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GULF WAR OF 1991

The invasion of Kuwait by neighboring Iraq on August 2, 1990, triggered the first major international crisis of the post–Cold War era. The United States had uneasily supported Iraq during its eight-year war against Iran (1980–1988), a conflict known in the region as the First Gulf War, but Iraqi president Saddam Hussein misinterpreted certain diplomatic signals about whether the Unites States would acquiesce over this latest military action. Kuwait had also sided with Iraq against Iran, but

Kuwait and Iraq had fallen out over war debts, border disputes, and competing oil prices. When Iraq invaded in 1990, Kuwaiti defenses were quickly overrun and its government fled into exile. Because Iraq now threatened the Saudi Arabian oilfields, the United States spent the next six months assembling an international coalition of thirty-four nations, including regional Arab and Muslim states. The United States also secured ten United Nations resolutions to isolate Iraq and prepare for "all necessary means" to expel Iraq from Kuwait by force if it did not withdraw voluntarily. On the night of January 16 to 17, 1991, the U.S.-led "coalition of the willing" launched massive air strikes against Iraq's command-and-control infrastructure and its antiaircraft defenses. This conflict began under the title Operation Desert Storm.

For the next five weeks, coalition aircraft and missiles degraded the occupying Iraqi army's capacity to resist a land-war offensive. Iraq tried to expand the conflict and split the Arab members from the coalition by firing Scud missiles at Israel. The Iraqi air force fled to Iran after the loss of thirty-eight of its planes, giving the coalition air superiority for the rest of the war. Iraq released crude oil into Persian Gulf waters and even, briefly, occupied the Saudi coastal town of Khafji. Coalition "strategic" bombing missions were largely confined to Iraqi military forces and targets, while a new generation of "smart" missiles hit their military targets with unprecedented accuracy. Some "collateral damage" did occur, when some missiles missed their intended targets, causing unintentional damage and casualties and also causing intense media debate in the new age of real-time reporting around the clock by the Cable News Network (CNN). The two most controversial incidents were the bombings of an alleged baby-milk plant and the Al Firdos installation in Baghdad. The coalition insisted the baby-milk plant was really a chemical weapons facility and the Al Firdos installation was a command and control facility rather than a civilian bomb shelter as the Iraqis maintained. Around 400 civilians were killed on the occasion of the latter. The presence of journalists from coalition countries in the enemy capital while Iraq was under fire was unprecedented and made the propaganda war more complex.

The ground war began on February 24 and lasted barely a week, with Iraqi commanders agreeing to a "cessation of hostilities" at Safwan air base in southern Iraq on March 3. Although Saddam Hussein had promised "the mother of all battles," the Gulf War was one of the most one-sided conflicts in military history. An unknown number of Iraqi soldiers and civilians died (estimates vary from 25,000 to 200,000) and almost 70,000 Iraqi soldiers surrendered to the coalition, which suffered fewer than 350 dead, the majority of them Americans. Television images of bombed-out Iraqi convoys fleeing Kuwait may have had an impact on the decision to end the war.

In the long term, the war had disastrous consequences: It marked the arrival of Western military forces into the Muslim holy land of Mecca, which prompted the Saudi-born terrorist Osama bin Laden to turn against the United States, which had sponsored him during the Soviet invasion of Afghanistan.

SEE ALSO *Bush, George H. W.; Diplomacy; Hussein, Saddam; Multilateralism; United Nations*

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GUNDER FRANK, ANDRE

SEE *Frank, Andre Gunder.*

GUNS AND BUTTER

SEE *Trade-offs.*

GUOMINGDANG

SEE *Chinese Revolution.*

GUTTMAN, LOUIS

SEE *Guttman Scale; Likert Scale.*

GUTTMAN SCALE

Guttman scaling is a method of scale construction developed by Louis Guttman (1916–1987) in the 1940s. Widely used in the measurement of attitudes and public opinion, the goal of Guttman scaling is to establish unidimensional measurement instruments. A typical Guttman scale includes a series of items or statements tapping progressively higher levels of a single attribute. For instance, a scale designed to measure attitudes toward immigrants might ask people to indicate whether or not they would

be accepting of immigrants as (a) citizens in the country, (b) coworkers in the same company, (c) neighbors, (d) close friends, and (e) close relatives by marriage. A tolerant individual would probably endorse each one of these statements in the scale. A less tolerant individual might be willing to accept immigrants as citizens in the country but not as neighbors or close family members. Thus, knowing that a person is not willing to accept immigrants as neighbors allows us to infer that this person probably would not want immigrants as close friends either; accepting them as family members would be even less likely for this person. By knowing the last statement endorsed by a respondent, one can easily reproduce his or her pattern of responding to the rest of the statements. In a perfect Guttman scale, the pattern of responding across the scale can be reproduced without any errors.

When the issue is relatively concrete, such as the amount of smoking, or when the construct is hierarchical in nature, such as social distance, Guttman scales work quite well; however, when it comes to measuring relatively more abstract attributes such as attitudes toward immigrants or marriage, it is not always easy to construct such highly reproducible scales.

As in all methods of scale construction, the first step in Guttman scaling is to generate a large set of items representing the construct. Then, a group of judges (80–100) evaluates each of the statements. Depending on the nature of the construct, the evaluations might be to indicate whether or not they agree with each statement, or to indicate whether the statement reflects the absence or presence of the phenomenon. For instance, if the construct in question is attitudes toward gun control, the judges will try to determine whether each item in the scale (e.g., "future manufacture of handguns should be banned") is in favor of or against gun control. In the next step, the responses of each judge are tabulated. In this table, the columns represent items in the scale, and the rows represent each judge. Once all the entries are laid out, the table is sorted so that judges who agree with more statements are listed at the top and those agreeing with fewer are at the bottom; then the number of affirmative responses are summed to create a total score for each judge. If the set of items were to form a cumulative scale, then it should be possible to reproduce the responses of each judge from his or her total score. Errors in reproduction indicate deviation from the optimum form, and suggest a call for revision of the scale, which can be done by changing or dropping existing items or even adding new items. The scale is revised until it becomes possible to reproduce over 90 percent of the responses from the total score. At this point, some statistical analyses can be conducted to examine deviations from a perfectly cumulative scale. These statistics can also be used to estimate a scale score for each item, just as in Thurstone scaling; ultimately, these scale scores are used in the calculation of a respondent's final score. A final set of items emerges after several revisions. Once the final set of items is established, the order of the items is mixed again to derive the final form of the scale to be shared with actual respondents.

The primary area of application has been in attitudes and public opinion—Guttman constructed a number of attitude scales during World War II using these procedures. Currently, however, as a method of constructing attitude scales, Guttman scaling is almost never used. Investigators prefer to use simpler methods of scale construction such as Likert scaling and the semantic differential technique.

SEE ALSO *Attitudes; Likert Scale; Psychology; Psychometrics; Public Opinion; Scales*

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GYPSIES

SEE *Roma, The.*

H

HABERMAS, JÜRGEN

1929–

Jürgen Habermas is a philosopher and a prominent public intellectual in Germany. He is considered the leading representative of the second generation of the Frankfurt School, whose Critical Theory he has sought to reinvigorate in his sustained reflections on social theory. Habermas, however, diverges from his predecessors in his analysis of the emancipatory promise of the Enlightenment, whose political legacy, he maintains, remains unrealized. Drawing on the philosophy of Immanuel Kant, one of the foundational theoreticians of modernity, Habermas perceives a sublated potential in modernity. He posits the realm of communication as a counterweight to the Frankfurt School's disillusionment with a modernity corrupted by the destructive ascendancy of instrumental reason.

In his first book, *The Structural Transformation of the Public Sphere* (1962), Habermas demarcates theoretical concerns with public discourse and reason that would animate much of his later writings. This sociological and historical work examines the emergent bourgeois public sphere in Western Europe in the eighteenth century, tracing its origins as a "sphere of private people come together as a public" (1989, p. 27) and the concomitant transformations in modes of communication that it fostered as the new public deployed reason against the contemporary absolutist political order. As he chronicled the subsequent decline of the public sphere, Geoff Eley notes, Habermas was also criticizing the straitened confines of West Germany's authoritarian postwar political culture of the 1950s and 1960s (Eley 2002, p. 292). Many scholars have engaged Habermas's thesis, extending his analysis to other settings while also arguing for greater attention to the exclusionary mechanisms that hinder participation in the public sphere (Calhoun 1992, Gilroy 1993, Landes 1988).

Habermas's *Knowledge and Human Interests* (1968) is a critique of positivism elaborated through a comparison of social theory and psychoanalysis. *Knowledge and Human Interests* represents an early iteration of Habermas's theory of communication, and prefigures the linguistic turn of his magnum opus, *The Theory of Communicative Action* (1981). Here Habermas argues that the sphere of the everyday, or the *life-world*, has been progressively "colonized" by instrumental reason. Habermas asserts that the counterbalance to this process must be found in an intersubjective reciprocity arising in the sphere of language, arguing for a distinct *communicative rationality* in which language coordinates action among subjects as it socializes them. Habermas's writings on political theory, such as *Legitimation Crisis* (1973), *Between Facts and Norms* (1992), or *The Inclusion of the Other* (1996), anchor a theory of *discursive democracy* in his analyses of communicative practice in the public sphere. Critics counter that Habermas's theory of discourse is totalizing, wrongly assuming that all actors ultimately seek consensus as the outcome of their communicative interventions in the world (Lyotard 1979).

In *The Philosophical Discourse of Modernity* (1985), Habermas turns to the debates about postmodernism, criticizing Theodor Adorno's negative dialectics, Michel Foucault's genealogy, and Jacques Derrida's deconstruction for providing insufficient grounds for breaking free

from the totalizing reason their practitioners' critique. He holds that the predicament of the transcendental subject that "philosophies of consciousness" pose can only be surpassed in the realm of intersubjectivity.

Habermas has often participated in the public sphere he analyzes in his scholarly writings. He was a leading spokesman for the student movement of the 1960s, and in the 1980s, he intervened in the Historians' Debate against the attempts of revisionist West German historians to lay the Nazi past to rest. More recently, Habermas has weighed in on issues of European identity and integration.

SEE ALSO *Critical Theory; Foucault, Michel*

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Krista Hegburg

HABITS

The term *habit* receives broad and varied usage across branches of the social sciences. According to essentially all definitions, habits are learned, recurrent patterns of behavior that are enacted with minimal reliance on conscious resources or effort. They typically are tied to an environment or another action that historically has co-occurred with the habit and thereby has come to serve as a stimulus, or cue, for its automatic performance. When *habit* is defined in purely behavioral terms (e.g., as an action performed almost daily and consistently in response to a specific environment), research suggests that around 45 percent of people's daily life can be deemed *habitual* (Wood, Quinn, and Kashy 2002).

Disciplines differ substantially, though, over the subset of behavior to which the term is applied. In general, psychological usage focuses on relatively simple, low-level behaviors, including those that benefit the individual (e.g., typing, coffee making, seat belt wearing, and condom use) and those that exact costs (e.g., nail biting, smoking, drug use, and overeating). Within sociology and related disciplines, the term is often applied more broadly to describe any stable pattern of action that is spontaneously reproduced via humans' preconscious engagement in the world around them. This broader application can encompass habits of social, linguistic, economic, political, religious, or moral conduct, and may involve the performance of even complex forms of action.

A BRIEF HISTORY OF HABITS

Contemporary conceptions of habit draw from multiple historical traditions, including pragmatism, behaviorism, and phenomenology. Early psychological use of the term can be traced most strongly to the pragmatist and behaviorist schools. For pragmatists, such as William James and John Dewey (1859–1952), habits were acquired reflexes that emerged due to the inherent plasticity of the nervous tissue. As a behavioral sequence is repeatedly enacted, the brain matter underlying the action was thought to become ever more predisposed to reproduce the sequence. Physiologically, this process was thought to be sustained through the development of reflex paths (or "reflex arcs") in the nervous system that linked a sensory cue with a (typically) muscular response. Once established, the habitual response could then be initiated by the sensory cue alone (i.e., without recourse to an idea, will, or volition) and would run off to completion in a ballistic fashion (i.e., each action in the sequence would prompt performance of the next). For William James, this inherent tendency towards the habitual constituted "the enormous fly-wheel of society" ([1890] 1981, p. 121), explaining myriad forms of routine action, from habits of

speech, gesture, and movement to habits of character and even the inertia of social classes.

Behaviorists also viewed habits as learned, stimulus-cued responses, but largely rejected psychological mediators as irrelevant to the explanation and prediction of behavior. Especially for radical behaviorists such as John Watson (1878–1958) and B. F. Skinner (1904–1990), habits were under the direct control of environmental stimuli, and this control was better understood by examining objectively specifiable schedules of reinforcement (e.g., patterns of reward) than by examining mental processes. This stimulus-response model of habit was expanded, albeit unsuccessfully, by Skinner to encompass even verbal behavior.

In contrast to the behaviorists, phenomenologists such as Maurice Merleau-Ponty (1908–1961) and Alfred Schütz (1899–1959) focused on the role habits play in providing a preconscious, taken-for-granted framework that guides people's interactions with the world around them. Habits, in this sense, reflect a set of action possibilities that present to consciousness as natural and given (e.g., a chair appears to lend itself to sitting), but are actually the product of the individual's social and embodied action history. Some phenomenologists (especially Schütz) emphasized the role of social experience in the development of this prereflective framework of habit, and his work went on to influence both ethnomethodologists such as Harold Garfinkel (b. 1917) and social constructivists such as Peter Berger (b. 1929) and Thomas Luckmann (b. 1927). The phenomenologists' emphasis on the embodied dimension of habit (especially Merleau-Ponty's) also resonates with Pierre Bourdieu's articulation of *habitus* as a set of bodily dispositions that strategically but unconsciously reproduce past action sequences in a contextually tuned manner.

Despite these broad and differentiated applications, the habit construct lost popularity around the mid-twentieth century due to its close identification with the behaviorist research agenda and its apparent neglect of people's capacity to plan, deliberate, and reflect upon their actions. As a powerful counterpoint, many social scientists rallied around the idea that human behavior is fundamentally purposive, reflective, and under the control of goals, attitudes, intentions, and conscious rules. Rational choice theorists epitomized this view, and indeed their premise that people act to maximize outcomes in accordance with personal preferences remains a dominant theoretical paradigm in contemporary economics, political science, game theory, and some social theory. Within psychology, the value of the habit construct was also challenged by Martin Fishbein and Icek Ajzen's influential "theory of reasoned action" (1975), which stipulates that performance of behavior is determined directly by intentions (which, in turn, are said to be influenced by one's attitudes and perceived norms). By portraying the human actor as a relatively rational, goal-driven entity whose actions are determined by their intended effects, these perspectives left little room for habit as an explanatory mechanism, and the term entered a state of relative hibernation until the 1980s.

CONTEMPORARY RESEARCH INTO HABIT

Fueled by advances in cognitive science and a zeitgeist more skeptical of wholly rationalist, reflective views of human action, contemporary social science has returned to the active study of habit. One catalyst has been evidence that people draw on relatively independent (but interacting) psychological systems in the control of action. These systems are variously termed *procedural v. declarative*, *implicit v. explicit*, *automatic v. controlled*, or *nonconscious v. conscious*. Habits tend to be associated with the first term in each dichotomy, whereas novel, deliberative actions tend to be associated with the second term. The independent nature of these behavioral control systems is compellingly evident when brain damage affects one, but leaves the other intact (Knowlton, Mangels, and Squire 1996). Patients with Parkinson's disease, for example, are able consciously to remember a complex sequence of cues, but cannot incorporate these cues into routinized habits. Conversely, patients with amnesia will not be able to remember the cues, and yet will successfully acquire habitual responses to them. Such research suggests that habits are grounded in psychological systems that are distinct from those used to guide more deliberative, reflective behavior.

A similar conclusion flows from behavior prediction studies, which identify the psychological states and environmental factors that are associated with performance of a given behavior (Wood, Quinn, and Kashy 2002). Such studies suggest that nonhabits and habits exhibit distinct predictors. Consistent with rationalist perspectives, the performance of novel or newly acquired behaviors (e.g., sticking to a new gym routine) is best predicted by the presence of favorable attitudes and intentions (e.g., a strong positive attitude or intention toward fitness). When a behavior has been repeated sufficiently to become habitual, however, attitudes and intentions become less determinative of continued performance. Instead, habitual behaviors are predicted by the mere presence of contextual cues (e.g., people, places, other actions, time of day) that co-occurred with the behavior in the past. Thus, whereas novel actions are guided largely by people's plans, desires, goals, and intentions, habits are guided largely by the context provided by preceding actions and the external social and physical environment.

Due to their highly automated, contextually cued nature habits are not readily inhibited or overcome by methods that are effective at controlling more deliberative forms of action (e.g., public information campaigns that alter people's beliefs or attitudes). Instead, habits may be more responsive to techniques that mitigate or redirect their underlying automatic associations. These techniques include stimulus control (avoiding environmental cues that trigger habits) and counter-conditioning (identifying environmental cues and substituting desired behaviors). That said, habits are notoriously difficult to overcome, and relapse is the modal outcome following many attempts at habit change (e.g., diet change, smoking cessation).

FUTURE DIRECTIONS

Contrary to both strict rationalist and strict behaviorist positions, contemporary social science acknowledges that the human actor can be driven by reflective, goal-directed mechanisms on some occasions and reflexive, habitual mechanisms on others. As discussed, these forms of behavior are subserved by relatively independent psychological systems and neural substrates. That said, research is beginning to address important interactions between the conscious, deliberative dimension of behavior and the nonconscious, habitual dimension. Notably, some sociologists argue that habits are integral to free will and agency insofar as they provide a framework of action possibilities that can be imaginatively reconfigured to meet a person's current goals and circumstances (see, for example, Emirbayer and Mische 1998). Furthermore, recent work in psychology suggests that habits can be motivated by a very general sense of reward, without necessarily being directed by specific goals (see Neal, Wood, and Quinn 2006). These approaches move away from the earlier sharp distinctions between habitual and deliberative action, and toward a view of human behavior as involving a dynamic interplay of goal-directed, intentional, reflective processes along with automated context-cued habits.

SEE ALSO *Habitus*

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HABITUS

Habitus is a term used by the French sociologist Pierre Bourdieu (1930–2002) to describe a social property of individuals that orients human behavior without strictly determining it. While habitus encompasses a sense of practical expertise, it is not a conscious expertise; rather, it may be seen as common sense. It is constituted of dispositions that are inculcated, structured, durable, generative, and transposable (see Thompson 1991, p. 12). Habitus is a state of the body and of being, a repository of ingrained dispositions that thus seem natural. Bourdieu calls this the *bodily hexis*, where "the body is the site of incorporated history" (Thompson 1991, p. 13; see also Bourdieu 1984, pp. 437, 466–468). Thus, habitus is purposeful without being questionable; it is transmitted but not actively taught.

Bourdieu presents habitus as a conceptual framework in which there are varying degrees of explicitness of, and competition among, norms. Under this framework, there are three ways that people experience the norms of their social existence. They do so through (1) a set of materially predisposed practices that express a belief about the way the world works and that reproduce that worldview. These predisposed practices tend to produce *doxa*, situations in which "the natural and social world appears as self-evident" (Bourdieu 1994, p. 160; 1976, p. 118); this is habitus, the unquestioned order of things. People also experience the norms of their social existence through (2) the contrasting situation of orthodoxy, in which "social classifications become the object and instrument of … struggle" and in which the arbitrariness of the current system becomes evident, and through (3) heterodoxy—a situation of more or less equally "competing possibilities" (1994, pp. 164–165). Bourdieu emphasizes the "complicitous silence" of community members in the continuous reproduction of the "collective rhythms," or habitus, of the community (1994, p. 182).

A tension then exists between the formalized codes that dictate practices and "the generating and unifying principle of practices … constituted by a whole system of predispositions inculcated by the material circumstances of life and by family upbringing" (Bourdieu 1976, p.

118). The habitus is "the end product of structures which practices tend to reproduce in such a way that the individuals involved are bound to reproduce them, either by consciously reinventing or by subconsciously imitating already proven strategies as the accepted, most respectable, or even simplest course to follow. [They] … come to be seen as inherent in the nature of things" (1976, p. 118).

Thus, with this concept Bourdieu seeks to demystify the very concept of "natural" and to emphasize the creation of "a second nature" (1991, p. 123). For example, every day we don clothing. While we may think about what to wear, we do not think about whether we will wear something. The conventions of style in dress themselves are nearly as inculcated as dressing. Only within the field of fashion are these styles and meanings routinely discussed explicitly. There are those who challenge the professional fashionista's (or the everyday women's magazine reader's) habitus of style, while punks are known for their ironic appropriation of military uniforms and their practice of making ugliness into beauty (see LeBlanc 1999). Andrew Martinez (Berkeley's "Naked Guy" from the early 1990s) engaged in a practice of public nudity that sought to challenge the basic habitus of getting dressed at all (see Seligman 1992; Jacobssex 1992; and Jones 2006).

CRITICAL INTERPRETATIONS

Habitus is a process, at once deeply embedded and simultaneously available for analysis; it is often discursively ephemeral, and yet easily accessed and employed. At points in his work, Bourdieu suggests that habitus is quite active, an activity of power of at least some savvy agents:

> The work of inculcation through which the lasting imposition of the arbitrary limit is achieved can seek to naturalize the decisive breaks that constitute an arbitrary cultural limit—those expressed in fundamental oppositions like masculine/feminine, etc.—in the form of a *sense of limits*, which inclines some people to maintain their rank and distance and others to know their place and be happy with what they are, to be what they have to be, thus depriving them of the very sense of deprivation (Bourdieu 1991, p. 123).

For Bourdieu, if one does not understand that what one thinks is natural is actually accreted practice, and practice inculcated from a particular social position, one can never engage in true social change (see Brubaker 1993, p. 217). At the same time, he emphasizes that habitus is subconscious—it is embedded bodily. The question of when habitus does become concerted effort, analysis, or argument (that is, when does the situation of either orthodoxy or heterodoxy arise?) is often inadequately dealt with (see Calhoun 1993, pp. 80–82).

Though habitus is conceived of as deeply embodied and self-evidently nondiscursive, there is a sense that habitus competes across fields—that people can, indeed often must, acquire a particular habitus that they then must apply in particular situations (Calhoun 1993, pp. 77–80). Because Bourdieu uses habitus to deal with the cultural arbitrariness of language and discourse itself (see especially Bourdieu 1991), it is something of a paradox that he asserts its nondiscursive character.

The field of law is a particularly problematic arena when one is considering the place of habitus in social processes. "Predispositions" and the process of naturalization are important in the legal system, but habitus does not easily explain the existence of laws, especially in frontier situations of transition, where there are formative struggles over what the laws should be. This is especially significant in the legal process, where it is explicit that language and discourse are key. Indeed, while social actors may be "subconsciously imitating" and "consciously reinventing" social structures, a struggle is involved. Thus, actors are not necessarily "bound to reproduce" the prevailing images and structures of their community. Formal law has a role to play beyond that of everyday activities and reasoning, although these play a part in forming law. In other words, as Mindie Lazarus-Black argues, "common sense understanding, or … *habitus*, 'is generated not only out of small scale networks of practice but also out of the legitimation project of the state.' One function of [this] project is to define the people under its control (creating the external boundaries of the system) and to differentiate between them (creating internal boundaries within the system)" (1994, p. 6).

In terms of the symbolic power of language, there is a sense that actors in public fields such as law are playing to doxa, with a highly crafted and explicit discourse—the sound bites and metaphors of color blindness and racially neutral language, for example, which expose that race is a habit within a system that also acknowledges a doxa of democracy (see Gatson 1999; Bonilla-Silva 2003, pp. 49, 104, 125).

Thus, instead of suggesting that analyzing formal law is useless by stating that it is "unnecessary to make explicit or … invoke or impose any rules," one should perhaps rather attempt to examine situations in which the struggle to invoke certain rules over others is very explicit (Bourdieu 1976, p. 141). Calhoun argues that Bourdieu's "sociology does not offer much purchase on the transformation of social systems.… His accounts of the general system of social and cultural organization always render it as essentially conservative … imply[ing] dynamism … at the level of the strategic actor.… [Habitus] is at its best as a theory of reproduction, and at its weakest as a theory of transformation" (Calhoun 1993, pp. 70, 72). But that

weakness is perhaps telling, signaling the inertia of systems, and the need for everyday sociology in the citizenry. For each of us, the habitus is cycle and process. There is a simultaneity of habitus—doxa, orthodoxy, and heterodoxy may be clearly delineated when they are used to describe a macrolevel history of a particular field. As to the everyday, and at points of conflict, the cycle of habitus may be far more difficult to tease apart.

SEE ALSO *Bourdieu, Pierre; Cultural Capital; Habits; Social Capital*

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Sarah N. Gatson

HACKING, IAN

SEE *Probability Theory.*

HAGUE CONVENTION

SEE *War Crimes.*

HAITIAN DIASPORA

SEE *Trouillot, Michel-Rolph; Diaspora.*

HAITIAN REVOLUTION

The Haitian Revolution (1790–1804) brought political independence to Haiti, the second nation in the Americas to free itself from colonial rule. It also brought freedom to some 450,000 Afro-Caribbean slaves and served as a potent symbol of liberty to millions of their fellows who remained enslaved throughout the Americas. Other independence movements in the Americas at the time, like the American Revolution (1775–1783) or the independence struggles in Spanish America, pitted colonial elites against metropolitan governments and offered little possibility for immediate change in society. The Haitian Revolution, on the other hand, was a true social revolution, which led to remarkable changes in the lives of ordinary people on the island and the colony's role in the world economy.

THE COLONIAL BACKGROUND

Haiti, known as Saint-Domingue before the revolution, was the richest colony in the Americas in 1789. Almost half a million slaves toiled on its sugar, coffee, indigo, and cotton plantations. More than thirty thousand new

African slaves arrived each year, both to replace the many who died of overwork or disease and also to fuel the rapid economic expansion that the colony experienced in the 1780s. Between a third and a half of all slaves on the island were born in Africa. While the slaves had been evangelized and educated by Jesuit missionaries in the early days of the colony, the Jesuits were expelled from Haiti in 1767. After that, the slaves were left to their own resources, and had developed their own culture, complete with a language, *kweyol*, and a religion, *vaudou*, both strongly influenced by African models. The slaves were owned and supervised by a population of around fifty thousand free persons, about half of whom were Afro-Caribbean free coloreds. The largest plantations on the island were owned by whites, many of whom were absentee landlords living in France. There was a growing class of poorer whites who hoped to become planters. Alongside the poor whites, there were free coloreds, some of whom owned plantations while others competed with the lower-class whites for plantation management or craft jobs.

Saint-Domingue's free people, both whites and blacks, despised French mercantilist economic regulations and dealt with smugglers whenever they could. They undermined the colonial government in other ways as well, rebelling against increased military obligations in the 1760s, for example. There is considerable evidence that the wealthier inhabitants of Saint-Domingue were developing an "American" identity in much the same way that wealthy North Americans had done in the period before the American Revolution and that wealthy Spanish Americans did in the 1800s before the independence struggles there.

But Saint-Domingue society was sharply divided on racial and class lines. Racial distinctions between whites and free coloreds were always significant and became even more marked after the 1760s. Some scholars have suggested that this was a calculated "divide and conquer" strategy by the colonial government to drive a wedge between wealthy white and free colored inhabitants. In any case, the racially divided masters of the colony were vastly outnumbered by their slaves. The need to be eternally vigilant against slave uprisings, and the need for French troops to provide the final element of security, made it less likely that wealthy colonists would think of independence in Saint-Domingue—or that poor people could make common cause across the divide of race and status.

THE OUTBREAK OF THE REVOLUTION

But revolution did come. At first, it came as an echo of the revolution going on in France. Both white and free colored planters appealed to the French revolutionary assemblies in 1789. But the French legislatures avoided the questions of slavery and civil rights for free people of color for two years. During this time, political struggles broke out in the colony between white planters and less-wealthy whites. Each side appealed to free colored allies, and the slaves watched everything that was going on.

Two wealthy free colored men, Vincent Ogé (c. 1750–1791) and Jean-Baptiste Chavannes (c. 1748–1791), rose up in rebellion in 1790, calling for civil rights for free coloreds. Their movement was quickly crushed and they were executed, but the first shots had been fired. Free coloreds continued to fight their own struggle throughout the larger revolution that followed, and indeed went on to play an important role in post-independence Haitian society.

REVOLUTION FROM BELOW

The slaves did not need French political philosophers or wealthy free colored planters to tell them that they ought to be free. There had been slave uprisings and other acts of resistance on the island since the first Africans arrived, brought by the Spanish, in the sixteenth century. But rebellions were always crushed by the superior military force of the colonial government. Even the maroons, or runaway slaves, who had hidden in the mountains and lived as free peasants in the early days of the colony were pretty much eradicated by the 1780s, as plantations spread throughout the island. But when the masters fought among themselves, the slaves saw their opportunity.

Slaves with leadership positions, such as coachmen, foremen of work gangs, technical specialists, and hunters, together with *vaudou* practitioners and some free people of color organized a great uprising among the slaves of the northern plain. This area was the most heavily populated and richest area of the colony. The slaves rose up the fourth week of August 1791, burning hundreds of plantations and killing or driving out the masters. The early leaders of the rebellion were slaves, such as Boukman, the organizer of a famous *vaudou* ceremony at Bois Cayman that may have been the signal for the uprising. But the ultimate leader of the slave army was Toussaint Louverture (c. 1743–1803), a pre-revolutionary free black planter and slave owner.

Toussaint's soldiers fought from 1791 until 1799 against a dizzying variety of enemies: French revolutionary governors, French royalists, English and Spanish invaders, and free colored leaders. In the midst of this struggle, in 1793, the French revolutionary commissioner Léger-Félicité Sonthonax (1763–1813) proclaimed the end of slavery in the colony and Toussaint's forces became officially part of the French army.

But by 1801 the government back in France was beginning to reconsider the abolition of slavery. Napoleón Bonaparte (1769–1821) was first consul. He needed the wealth of Saint-Domingue and he distrusted freedom. Toussaint had succeeded in taking military control of the island but not at restoring sugar production. The slaves were not interested in working on plantations, even for wages. They wanted to own their own farms. As the manpower behind Toussaint's military triumphs, they were in a good position to insist. And anyway, Toussaint had written a new constitution for the island in which he proclaimed his loyalty to France but declared himself governor-general for life. For all these reasons, Napoleón decided to reconquer the island and restore slavery. He sent an army under his brother-in-law Charles Leclerc (1772–1802) in 1801.

THE FINAL STRUGGLE

Toussaint and some of his soldiers put up a stiff resistance, but ultimately the French troops, fresh from victories across Europe, triumphed. Toussaint himself was arrested and imprisoned in France, where he died in 1803. But disease began to take a toll on the French forces. At the same time, those Haitian soldiers who had surrendered when the French came began to realize that slavery was going to be restored. Toussaint's officers rose up in a new rebellion and fought a terrible struggle. More than a year of heavy fighting, marked by many massacres on both sides, resulted in the final defeat of the French forces at Vertières on November 18, 1803. The new commander of the Haitian forces, Jean-Jacques Dessalines (c. 1758–1806), tore the white out of the French flag, expelled or massacred the remaining white inhabitants, and declared Haitian independence on January 1, 1804. The cost of freedom will never be known, but the population of Haiti fell by at least 125,000 between 1789 and 1804.

AFTERMATH AND WIDER IMPLICATIONS

Haiti became independent in 1804, but no nation recognized it until the 1820s. Simón Bolívar (1783–1830) took refuge in Haiti during his struggle against Spain, but even the newly independent nations of the Americas did not want to have anything to do with a nation of freed slaves. Haiti was too potent an example to the blacks in the rest of the hemisphere. Haiti's leaders were demonized in French and American propaganda of the time and since, and Haiti was and to some extent still is held up as an example of how black people cannot rule themselves and need supervision. But black people were not so easily fooled. Haiti became a rallying cry for black liberation movements from Denmark Vesey's (c. 1767–1822) planned uprising in South Carolina in 1822 to Ahmed Sékou Touré's (1922–1984) call for the independence of the Republic of Guinea in Africa in 1957.

Haiti ceased to be a major producer of sugar or coffee after 1804, as most Haitians left the plantations and became peasants. Isolated from the world, Haiti preserved many elements of African culture, including a vibrant spiritual and artistic tradition. The pre-revolutionary free coloreds, many of them of mixed race, and the leaders of the military struggle became an urban commercial ruling class who lorded it over the mostly black peasants and affected a very European culture.

SEE ALSO *Cuban Revolution; Grenadian Revolution*

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Stewart R. King

HALL, STUART

1932–

Stuart Hall, a black Jamaican born in 1932, was schooled—in the English manner—for a future as a member of the colonial elite. As he recounted on many occasions subsequently, he quickly discovered that he was living in two worlds simultaneously: as a black native of the Caribbean and on the other in the imaginative world of the colonizers, well attuned to the finest nuances in the history and the literature of the English. This discrepant sense of his place in the colonial world was at first puzzling and painful, but he learned over many years to make it his own. What once had been a burden came, through an intellectual journey of impressive imaginative power, to

become a resource and indeed a lifeline. This migrant's-eye view of the center from the margins informed every aspect of Hall's intellectual life. It underwrote, if only implicitly, the emergence in Great Britain of cultural studies, with which Hall himself became so closely identified. Later in life, this view explicitly defined his intellectual project.

Hall's early experience as a colonial subject produced a political radicalism that remained with him through his life. In 1951 he arrived in Britain as a student at Oxford University. He experienced England not only in its idealized manifestations, but also in its raw everydayness, in which the dispositions of racial exclusion loomed large. Later in the 1950s he was drawn to the emergent New Left, alongside the slightly older generation of Raymond Williams (1921–1988) and Edward Palmer Thompson (1924–1993). Crucial to the political critique that came from this moment was the realization that culture was not only the preserve of the educated elite, but that it was also properly the inheritance of all. To later generations this may sound a truism, but at the time it served to shift the study of culture away from a restricted meaning, in which culture represented only the most elevated, to a broader, more anthropological reading of the cultural dimensions of the everyday, in which the relations of a society are embedded in their symbolic conditions of existence. It served, too, to highlight the connections between political power and culture. From this point on, the characteristic tenor of Hall's interventions was to highlight his belief that the seemingly arcane practice of politics was in fact rooted in and fought out on the terrain of culture itself. More specifically, any politics of value needed to situate itself within the field of popular life, for it was there that political energies were generated and political causes won and lost.

Many of these ideas came together in the *Universities and Left Review*, with which Hall was associated, and then in its more famous successor, the *New Left Review*, which Hall edited for the first year of its existence, from 1960.

In 1964 Hall moved to the Centre for Contemporary Cultural Studies based at the University of Birmingham under the leadership of Richard Hoggart (b. 1918). Here he was given the space to develop conceptually the ideas that he—and those around him—had pursued in more practical form in early works such as his study *The Popular Arts* (1964), written with Paddy Whannel. Hall became the presiding figure in the emergence of cultural studies in the United Kingdom. His migrant perspective was an essential element in his reading of the culture of the British, and from this position the erstwhile colonial subject could offer his own anthropology of the erstwhile colonizer. The passions and excitement of early cultural studies ran deep. A vast range of previously excluded or derided cultural forms burst into view: popular music, advertising, women's magazines, youth fashion, movies, and television. All were taken as serious subjects for critical analysis and, collectively, as the site where (through many displacements) politics in its expanded sense occurred.

A decisive theoretical influence for Hall was the work of the Italian Marxist Antonio Gramsci (1891–1937). Gramsci's insistence on the place of culture as a constituent element in political struggle offered an analytical framework that served Hall well. The field of cultural studies, in its early incarnations, sought to unravel the many determinations by which political power was exercised. From this period in the 1960s, Hall collaborated with others to produce a mesmerizing stream of work, interpreting the emergent cultures of the time. His readings of youth subcultures and of the media comprehensively recast the field of the social sciences.

As this work evolved it met much resistance, not least because it was perceived as overly theoretical and as prone to an abstract formalism. Hall himself was certainly influenced by the work of the great structuralist theorists of culture—Ferdinand de Saussure (1857–1913), Claude Lévi-Strauss (b. 1908), Roland Barthes (1915–1980), and later Louis Althusser (1918–1990)—and was persuaded of the need to pitch his arguments, when the occasion demanded, at a high level of abstraction. But he also possessed a sharp sense of the movements of historical time. His analytical interpretations began from the chaos of the concrete realities of the everyday, and—although they often involved some theoretical detour—always returned to the concrete. Here especially the influence of Gramsci was profound. Often Hall described his own intellectual practice as one devoted to explaining the shifts and turns in the movement of political conjunctures.

This bid to bend formal structural analysis into a practice more alive to the movements of historical forces and cultural relations generated two classic essays in the early 1970s: his famous rumination on the workings of the mass media, "Encoding and Decoding in the Media Discourse" (1973), which set the conceptual frame of the emerging discipline of media studies for the next 30 years, and his more philosophically inspired (if modestly titled) "Marx's Notes on Method" (1974) in which, in explicating Marx, he outlined the basis of his own commitment to "theorising" the concrete.

It was during this period, too, that Hall and his colleagues embarked upon a comprehensive account of the drift in Britain toward a more authoritarian politics. Crucial to this analysis was his insistence that race—the management of the black population who, like him, had come to settle in Great Britain after the end of World War II (1939–1945), and of their sons and daughters—was a

central, defining feature of an increasingly conservative political reflex, in which recourse to authority dominated. His jointly authored volume, *Policing the Crisis* (1978), represented a landmark text, which in a bravura intellectual act brought into a single analytical frame the workings of high politics in Westminster with the emergent street politics of the new racialized ghettos.

Beginning in the late 1970s, Hall reworked and refined these early insights into a succession of inspirational articles that plotted the makings of Thatcherism, a term Hall employed even before Margaret Thatcher became prime minister in May 1979. Hall argued that Thatcherism represented a new form of authoritarian populism that marked a decisive shift to the right in British politics.

The drama of these writings was driven by a clear sense of political urgency created by the success of the Thatcherite project. At the same time, Hall also delivered broadsides to the political left, insisting that its characteristic inability to modernize or to think in terms of the future rather than the past was contributing to the confidence of the right. Many on the left took exception. At this point, too, Hall—having earlier been condemned for his formalism—found himself under attack for being too historical and not formal enough. His critics believed that the concepts that animated his discussion—authoritarian populism, crisis of hegemony, war of position, and so on (all derived from Gramsci)—were too inconsistent to be of use to social scientists. Hall's response was simply to insist on the necessity of conjunctural analysis. Less contentious, however, was Hall's early prediction that, whatever the fate of Thatcher herself, Thatcherism as a broader political project would define what was politically possible for many years to come, in which respect he provided a prescient perspective on the subsequent years of the New Labour government.

Race was still a major part of Hall's intellectual concern, and beginning in the 1970s it became ever more prominent in his theorizations. From his study of race—of blackness—he became ever more preoccupied with questions of identity and subjectivity, especially of those on the racialized margins of the former colonizing nations.

An important interlocutor for Hall at this time was his student, Paul Gilroy, the author of *There Ain't No Black in the Union Jack* (1987), which delivered a devastating critique of the racial encodings of the English nation. Gilroy learned much from Hall, though there remain significant political and intellectual differences between them, particularly in relation to their respective interpretations of the idea of black Britishness.

In 1997 Hall retired from his appointment as professor of sociology at the United Kingdom's Open University, a position he had held since 1979. As his formal academic career came to an end, Hall moved into a new intellectual field: that of the visual arts. He believed it was here, among young black artists in the United Kingdom, that questions of race and identity were being addressed most fruitfully. As he came to discover, the artists he was interested in were, as he would say, "doing the theory for you."

SEE ALSO *Critical Theory; Cultural Studies; Culture; Foucault, Michel; Gramsci, Antonio; Habermas, Jürgen; Immigration; Left and Right; Marginalization; Popular Culture; Race; Racialization; Radicalism; Thompson, Edward P.; Visual Arts*

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David Morley
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HALLUCINOGENS

The term *hallucinogen* refers to a variety of substances capable of inducing profound altered states of consciousness. Also known as *phantastica*, *psychedelics*, *entheogens*, and *psychointegrators*, these substances have a long history of use in societies throughout the world.

The "major" hallucinogens are LSD, mescaline, psilocybin (found in "magic mushrooms"), and the tryptamine derivatives (found in ayahuasca). These substances alter sensory perception and produce changes in a person's

body image and awareness of space and time, but they do not cloud consciousness and have little impact upon memory. Persons typically remain fully aware of the effects as they are occurring and retain vivid memories afterwards. Although the chemical structures of these substances vary and their mechanisms of action are not yet fully understood, dopamine, serotonin, and norepinephrine receptor sites have been implicated in their activity. While *Cannabis* ("marijuana") is sometimes included in this list, its effects and mechanism of action are distinct and involve other receptor sites.

The "minor" hallucinogens include anticholinergic substances (atropine and scopolamine) that block acetylcholine receptors. These produce relatively mild perceptual and cognitive changes, but they do cloud consciousness and impact memory, so that individuals may be unable to recall their experiences. The "psychedelic anesthetics" (ketamine and phencyclidine or PCP) affect NMDA receptors and induce profound dissociative effects.

The use of hallucinogens in traditional cultural settings has been extensively documented. These substances induce a hypersuggestible state that makes those who ingest them receptive to the messages received during initiation into adulthood and in religious rituals. Because the experiences are explained before they are induced, the effects are understood within a culturally defined and socially sanctioned framework that reassures the initiates and provides emphatic evidence of the "correctness" of the foundational premises of their society's worldview.

Although traditional societies have been using hallucinogens for culturally constructive purposes for millennia, scientific interest in hallucinogens is comparatively recent. In the late 1800s, anthropological studies led to the recognition of the visionary effects of the peyote cactus. Subsequent research led to the isolation (1896) and synthesis (1919) of mescaline, the primary hallucinogenic component of peyote. Mescaline was thus the first hallucinogen to become available as a pharmaceutical preparation. The fantastic descriptions of the effects produced by mescaline attracted the attention of both scientists and artists, a pattern that would be repeated with other hallucinogens.

In 1938, Albert Hofmann, a Swiss chemist working at Sandoz Laboratories, first synthesized LSD (lysergic acid diethylamide) during his research into potential analgesics. During subsequent research in 1943, Hofmann accidentally ingested a miniscule amount of the drug (through the skin) and soon noticed marked perceptual changes and other effects. He then undertook a self-experiment using what he thought was an extremely small dose (250 micrograms) and experienced even more profound effects. Hofmann was later asked to identify the active constituents (psilocybin and psilocin) in samples of "magic mushrooms" (*Psilocybe* spp.) collected in Mexico. Uncertain of their usefulness and desiring to determine if there was a market for these substances, Sandoz made LSD (under the name Delysid) and psilocybin (known as Indocybin) available for psychiatric, therapeutic, and experimental research.

During the 1950s and early 1960s, considerable scientific research was conducted into hallucinogens. In clinical settings, these substances showed promise in treating chronic alcoholism, psychological trauma, pain, and obsessive-compulsive disorders. The U.S. and British governments also investigated the potential of hallucinogens as agents of chemical and psychological warfare. In the 1950s and 1960s, the CIA, in a project known as MKULTRA, gave scopolamine, mescaline, LSD, psilocybin, and other agents to numerous individuals, often without their knowledge. The unpredictability of the effects and the suicide of several subjects led to the termination of this work.

As knowledge about the visionary effects and therapeutic potential of the hallucinogens became more widespread, numerous artists, writers, and scientists had "psychedelic" experiences that profoundly affected their work. One of the first was Aldous Huxley (1894-1963), whose experiences with mescaline led him to write *The Doors of Perception* (1954) and *Heaven and Hell* (1956), two essays that introduced hallucinogens to the public. Another influential figure was the Harvard psychologist Timothy Leary (1920–1996), who first encountered psilocybin mushrooms during a trip to Mexico in 1960. Leary subsequently obtained a large quantity of psilocybin from Sandoz and began to offer it to other Harvard faculty and graduate students. With his team, he also administered psilocybin to violent criminals, with promising results.

Leary and others also investigated the effects of hallucinogens upon artists, musicians, and other creative individuals. As the circle of people who had had an experience with a hallucinogen expanded, increasing numbers of individuals became interested in these substances. Eventually, "acid tests," "be-ins," and other events provided the opportunity for thousands of people to simultaneously experience the effects of a hallucinogen. For many, the inner worlds revealed by these substances offered a stark contrast to consumerism, the push to conform, and the war in Vietnam. "Psychedelic" music, art, and poetry gave expression to these experiences, challenged conventional morality and authority, and led to the emergence of a "counterculture" that maintained that peace, love, and "flower power" could change human consciousness and alter the political landscape. In the late 1960s, governments reacted by enacting laws prohibiting the use, possession, manufacture, and distribution of most

hallucinogens. While this did curtail some illicit use, it also put a stop to legitimate research.

Scientific research with human subjects resumed in the 1990s. In pilot studies, hallucinogens have been administered to terminal patients to help them confront their impending death, and they have been used to treat victims of post-traumatic stress disorder and sufferers of cluster headaches. The ancient tradition of hallucinogen use within a religious context is continued in the Native American Church, which uses peyote, and by several Brazilian churches (including the Santo Daime and União de Vegetal [UDV]) that use ayahuasca. These religious movements have achieved great success in helping their members overcome addictions to alcohol and other drugs, and they are legally allowed to use specific hallucinogens as "sacraments."

In 1999, U.S. Customs agents seized a shipment of ayahuasca that had been shipped to the United States for use by an American chapter of União de Vegetal. The government claimed that the mixture contained substances banned by U.S. and international law. However, a 2006 U.S. Supreme Court decision unanimously affirmed that the government had not demonstrated a compelling interest in prohibiting the UDV from using ayahuacsa in their religious services, thereby allowing them to use it legally in the United States.

Increased recognition that hallucinogens can be used for constructive purposes has led to renewed calls to review and, where appropriate, reduce the legal restrictions on these substances. In the United States, mescaline, LSD, psilocybin, psilocin, and even *Cannabis* are currently categorized as Schedule I substances, which are defined as having a high potential for abuse, a lack of acceptable safety when used under medical supervision, and a lack of currently accepted medical use. Similar restrictions exist internationally. However, these legal classifications are not consistent and are rarely adjusted as new scientific findings and patterns of illegal use become known. In many jurisdictions, drug classification often reflects political and social trends rather than scientific data. For example, in the United States the major hallucinogens are listed in Schedule I along with heroin, a substance that is available to physicians and patients in Europe. In contrast, methamphetamine, one of the most addictive and personally destructive drugs known, is classified as a Schedule II drug with a currently acceptable medical use. Moreover, many experts consider alcohol and tobacco to have a much greater potential for both personal and social harm than any of the hallucinogens (including *Cannabis*).

The 2003 National Survey on Drug Use & Health estimated that 34,363,000 Americans (14.5% of the population) had used a hallucinogen (excluding *Cannabis*) at least once in their lives. The same survey estimated that 96,611,000 persons (40.6%) had used *Cannabis* at least once. Worldwide, the United Nations Office on Drugs and Crime (UNODC) reported in 2006 that approximately 162,400,000 people used *Cannabis* in 2005 (3.9% of the total world population between the ages of 15 and 64). The UNODC did not report on the prevalence of LSD, peyote, or mescaline use.

In contrast to heroin and methamphetamine and the legal drugs ethyl alcohol and nicotine, hallucinogens (including *Cannabis*) are not physically addictive, and such substances as LSD, mescaline, and psilocybin even exhibit cross-tolerance with one another, meaning that daily dosages quickly lose their effectiveness. Both the traditional patterns of use and the increasing scientific evidence that many of the major hallucinogens can be useful in treating various disorders and in personal growth, and that *Cannabis* is an effective remedy for glaucoma, pain, the side effects of chemotherapy, and for many other purposes, demonstrates that a rethinking of drug laws in general, and the potential roles of hallucinogens in particular, is long overdue.

SEE ALSO *Drugs of Abuse; Leary, Timothy; Native Americans; Psychotropic Drugs*

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John R. Baker

HAMAS

SEE *Intifada, The.*

HAMILTON, ALEXANDER
1755–1804

When Alexander Hamilton was born on the small Caribbean island of Nevis, probably in 1755, he seemed destined for obscurity. His parents never married. When Hamilton was ten his father abandoned Hamilton and his mother and brother, and his mother died two years later. Strong natural abilities and the patronage of well-to-do citizens made possible Hamilton's escape. He was sent to North America to receive a college education, which was cut short by the American Revolution. Hamilton took up arms on the American side. His abilities came to the attention of George Washington (1732–1799), who brought him into his personal staff. This began one of the most consequential partnerships in American history. Hamilton was always the junior partner, but the vigor of his character and intellect were critical for Washington's success.

After the Revolution, Hamilton took up law as a profession and became active in local, state, and national politics. He served as member to the Continental Congress, agitated for a constitutional convention, and participated in the 1787 Constitutional Convention in Philadelphia. It was after the convention that Hamilton's primary contributions to the new Republic began. Hamilton organized the writing of *The Federalist Papers* and contributed a little more than half the essays. He contributed mightily in the very difficult struggle to get the Constitution ratified in the critical state of New York. Washington, as the United States' first president, appointed Hamilton his first secretary of the treasury, a role in which Hamilton distinguished himself as an original economic thinker and a model civil servant. He established the Treasury Department, dealt decisively with the nation's financial crisis, put in place a financial system that remains in the early twenty-first century, and sketched out a plan and justification for the encouragement of manufactures. As treasury secretary, Hamilton also made a substantial contribution to the debates regarding the scope of the executive power and the proper way to interpret the Constitution.

Much was of enduring significance in Hamilton's political and economic thought. Hamilton believed the task facing Americans was to show that, despite its historical record of failure, republican government was compatible with liberty and the public interest. In a speech at the Constitutional Convention on June 18, 1787, Hamilton advocated the inclusion of institutions, "as far … as republican principles will admit," that would lend energy and stability to the republican form, which he defined as an equality of political rights—that is, a system without any hereditary political privileges (Hamilton 2001). At the Constitutional Convention, Hamilton proposed an elected president and senate to serve during good behavior. His suggestions about the presidency led to a charge of monarchism that followed him for the rest of his life. Although Hamilton favored a lower house that was democratic, he believed that republicanism's best chance for success lay in establishing institutions that could check the popular spirit and pursue a steady course of administration.

The Constitution of course did not meet Hamilton's expectations, but he threw his prodigious energies into the fight for its ratification. During this debate and while serving as secretary of the treasury, Hamilton elaborated an argument for energetic government in general and energy in the executive in particular. Hamilton may have been the first to employ the term *energy* in a political sense, using it to mean activity, vigor, and decisiveness in government. Energy is, he reasoned, more likely to arise when power is placed in one set or a very few sets of hands. Hamilton argued for a prompt and generally strict execution of the law. He considered it his job as treasury secretary to provide guidance for the legislative branch in its deliberations on economic matters. More generally, Hamilton provided the classic argument for a broad construction of the executive power under the Constitution. During the controversy over Washington's declaration of neutrality between revolutionary France and its enemies, Hamilton argued that Article II granted the president the executive power as a whole, including what the English philosopher and economist John Locke (1632–1704) had termed the "federative power" over foreign affairs, subject to the exceptions explicitly spelled out in the Constitution. Hamilton's position was consistent with his overall view that the Constitution should be construed liberally, or broadly, so that it might meet not just today's needs but "the probable exigencies of ages," as he put it in essay No. 34 of *The Federalist Papers* (Hamilton 2001, p. 311).

Joseph A. Schumpeter described Hamilton's reports as treasury secretary as " 'applied economics' at its best" (Schumpeter 1954, p. 199). The reports contain both sophisticated economic theorizing and an extraordinary attention to the details of administration. To correct the nation's financial crisis, Hamilton proposed a funding system that dedicated revenues to meeting the nation's debts, new taxes, an assumption of the state debts accumulated during the American Revolution, and the establishment of an independently operated national bank that would be both the government's banker and a facilitator of economic development. Believing that a capital shortage was the nation's deepest economic problem, Hamilton attempted to modernize the financial system of the public and private sectors. He also proposed a plan to encourage manufacturing by providing government support for

essential defense industries and for infant industries. In general, Hamilton supported free trade at home and abroad, but he was willing to make exceptions to compensate for the restrictions on trade established by other governments and to overcome the force of habit that attached Americans to agricultural employments. In this regard, Hamilton departed from the free-market prescriptions of the Scottish economist Adam Smith (1723–1790). In addition, unlike Thomas Jefferson (1743–1826) and James Madison (1751–1836), Hamilton did not see anything degrading or corrupting in manufacturing.

Hamilton struggled to find a political role for himself after he resigned from the Treasury in January 1795. His chief achievements of the period were the drafting of Washington's Farewell Address and his argument in the Croswell case. In the 1804 Croswell case Hamilton argued before the New York Supreme Court that truth ought to be a defense in libel cases. Croswell had published claims that while he was vice president, Jefferson had paid for attacks on the characters of Washington and John Adams. Hamilton lost the case, but his position soon became the law in New York and in many other states. Other ventures did not go as well. His interference with the cabinet of the second U.S. president, John Adams (1735–1826), earned him Adams's intense hatred. His affair while treasury secretary with Maria Reynolds became the new Republic's first great sex scandal when it was revealed in 1797. When recalled to serve as second in command of the army during the "quasi-war," the significant but undeclared naval war with France (1798–1800), his ambitions for the army led to suspicions that he harbored imperial ambitions for himself.

Hamilton's remarkable life came to an end in his duel with Aaron Burr (1756–1836) in 1804. Hamilton had been working to thwart Burr's political ambitions for more than a decade, but his work to defeat Burr's gubernatorial hopes that year was probably the last straw. The challenge to a duel was an affair of honor that Hamilton could not, as a man of the world, decline. Hamilton seems to have decided to throw away his shot, but Burr shot to kill, taking the life of one of the most consequential men of the founding generation.

SEE ALSO *American Revolution; Burr, Aaron; Caribbean, The; Central Banks; Constitution, U.S.; Federalism; Law; Liberty; Public Interest; Republicanism; Washington, George*

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Peter McNamara

HAMILTON, WILLIAM D.

SEE *Hamilton's Rule; Kinship, Evolutionary Theory of.*

HAMILTON'S RULE

The dominant paradigm in economics holds that individuals in society seek to maximize their own self-interest. As Adam Smith observed, however, even selfish individuals have something in their nature that makes them altruistic. The British evolutionary biologist William D. Hamilton (1936–2000) attempted to give this altruism a biological basis. Hamilton expressed a rule for the evolution of social behavior as $rb - c > 0$, where r is a measure of genetic relatedness between an actor and a recipient, b is benefits to a recipient, and c is the cost to the actor of altruistic behavior.

The degree of genetic relatedness among kin follows a declining progression—from mother and child, to mother and nephew or niece, and so on. The implication of the progression is that closely related kin have a higher measure of genetic relatedness. Indeed, the probability that two relatives possess the same rare gene is high, because of a phenomenon known as *kin selection*. According to Hamilton, one's willingness to sacrifice for others—whether individuals, a group, or society—can be measured by the degree of kinship involved.

Hamilton's rule has been used to study altruism, aggression, and selfishness in social interaction. Genes that have survived through Darwinian competition can be deemed selfish and are responsible for the selfish behavior in individuals known as individual selection. In Darwin's view of natural selection, the fittest survive. However, individuals evolve to act for the good of the species or society, through a process known as group selection. The argument for group selection is that a person who sacrifices for a group is more likely to survive than one who sacrifices for selfish benefits.

Individual and group selections can be profitably analyzed using the tools of game theory. If a woman is able to

select the sex of a child, she will choose the sex that will maximize the welfare of her grandchildren. Gaming enters the process because the outcome of her decision will depend on the sex ratio in the population, which is a consequence of what other females selected as the sex of their child. Building on Hamilton's and others' works, John Maynard Smith has derived an *evolutionary stable strategy* (ESS) for such games. An ESS can be achieved by each woman tossing a coin to make her selection, yielding a 50:50 chance of selecting a male or a female. With today's technology, a person can know the sex of a child before birth, but if abortion or other changes relating to wars, customs, and politics occur, then no ESS is guaranteed.

Some applications of Hamilton's rule to economics have been successful. In a 2005 study, Samuel Bowles and Dori Posel examined migrant workers who remit income to their families. If a migrant with wage w transfers an amount, t, to his or her family with preremittance income, y, then the marginal cost to the migrant is $1/(w - t)$, and the marginal benefit to the recipient is $r/(y + t/n)$. Optimal transfer occurs when the marginal benefit equals the marginal cost.

Some aspects of the Hamilton rule appear anomalous. Hamilton assumes that parents invest equally in male and female children, whereas economists usually think of parents as investing up to the point where equality of marginal benefits and costs occurs—and thus generally investing more in male children. More generally, the idea that genetic selection guides economic behavior seems somewhat problematic: Genetic changes are slow, whereas changes in prices, advertising, and R&D have an immediate effect.

SEE ALSO *Aggression; Darwin, Charles; Evolutionary Games; Game Theory; Kinship, Evolutionary Theory of; Maximization*

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Lall Ramrattan
Michael Szenberg

HAMMURABI, CODE OF

SEE *Retaliation.*

HAPPINESS

The economics of happiness is an approach to assessing welfare that combines the techniques typically used by economists with those more commonly used by psychologists.

While psychologists have long used surveys of reported well-being to study happiness, economists only recently ventured into this arena. Early economists and philosophers, ranging from Aristotle (384–322 BCE) to Adam Smith (1723–1790), Jeremy Bentham (1748–1832), and John Stuart Mill (1806–1873), incorporated the pursuit of happiness in their work. Yet, as economics grew more rigorous and quantitative, more parsimonious definitions of *welfare* took hold. Utility was taken to depend only on income as mediated by individual choices or preferences within a rational individual's budget constraint.

The study of happiness or subjective well-being is part of a more general move in economics that challenges these narrow assumptions. The introduction of bounded rationality and the establishment of behavioral economics opened new lines of research. *Happiness economics*—which represents one new direction—relies on more expansive notions of utility and welfare, including interdependent utility functions, procedural utility, and the interaction between rational and nonrational influences.

Richard Easterlin was the first modern economist to revisit the concept of happiness, beginning in the early 1970s. More generalized interest took hold in the late 1990s (see, among others, Easterlin 1974, 2003; Blanchflower and Oswald 2004; Clark and Oswald 1994;

Frey and Stutzer 2002a; Graham and Pettinato 2002; and Layard 2005).

The approach does not purport to replace income-based measures of welfare but instead to complement them with broader measures. These measures are based on the results of large-scale surveys, across countries and over time, of hundreds of thousands of individuals. The surveys provide information about the importance of a range of factors that affect well-being, including income but also others, such as health, marital and employment status, and civic trust.

The approach, which relies on expressed preferences rather than on revealed choices, is particularly well suited to answering questions in areas where a revealed-preferences approach provides limited information. Indeed, it often uncovers discrepancies between expressed and revealed preferences. Revealed preferences cannot fully gauge the welfare effects of particular policies or institutional arrangements that individuals are powerless to change. Examples of these include the welfare effects of inequality, environmental degradation, and macroeconomic policies. Amartya Sen's (1995) capabilities-based approach to poverty, for example, highlights the lack of capacity of the poor to make choices or to take certain actions. Another area where a choice approach is limited is the welfare effects of addictive behaviors such as smoking and drug abuse.

Happiness surveys are based on questions in which the individual is asked, "Generally speaking, how happy are you with your life?" or "How satisfied are you with your life?" with possible answers on a four- to seven-point scale. The answers to happiness and life satisfaction questions correlate closely—ranging between .56 and .50 (Blanchflower and Oswald 2004; Graham and Pettinato 2002).

This approach presents several methodological challenges (Bertrand and Mullainathan 2001; Frey and Stutzer 2002b). To minimize order bias, happiness questions must be placed at the beginning of surveys. As with all economic measurements, the answer of any specific individual may be biased by idiosyncratic, unobserved events. Bias in answers to happiness surveys can also result from unobserved personality traits and correlated measurement errors (which can be corrected via individual fixed effects if and when panel data are available).

Despite the potential pitfalls, cross sections of large samples across countries and over time find remarkably consistent patterns in the determinants of happiness. Many errors are uncorrelated with the observed variables, and do not systematically bias the results. Psychologists also find validation in the way that people answer these surveys based in physiological measures of happiness, such as the number of "genuine"—Duchenne—smiles (Diener and Seligman 2004).

Microeconometric happiness equations have the standard form: $W_{it} = \alpha + \beta x_{it} + \varepsilon_{it}$, where W is the reported well-being of individual i at time t, and X is a vector of known variables including sociodemographic and socioeconomic characteristics. Unobserved characteristics and measurement errors are captured in the error term. Because the answers to happiness surveys are ordinal rather than cardinal, they are best analyzed via ordered logit or probit equations. These regressions typically yield lower R-squares than economists are used to, reflecting the extent to which emotions and other components of true well-being are driving the results, as opposed to the variables that we are able to measure, such as income, education, and marital and employment status.

The availability of panel data in some instances, as well as advances in econometric techniques, are increasingly allowing for sounder analysis (van Praag and Ferrer-i-Carbonell 2004). The coefficients produced from ordered probit or logistic regressions are remarkably similar to those from OLS regressions based on the same equations. While it is impossible to measure the precise effects of independent variables on true well-being, happiness researchers have used the OLS coefficients as a basis for assigning relative weights to them. They can estimate how much income a typical individual in the United States or Britain would need to produce the same change in stated happiness that comes from the well-being loss resulting from, for example, divorce ($100,000) or job loss ($60,000) (Blanchflower and Oswald 2004).

THE EASTERLIN PARADOX

In his original study, Richard Easterlin revealed a paradox that sparked interest in the topic but is as yet unresolved. While most happiness studies find that *within* countries wealthier people are, on average, happier than poor ones, studies across countries and over time find very little, if any, relationship between increases in per capita income and average happiness levels. On average, wealthier countries (as a group) are happier than poor ones (as a group); happiness seems to rise with income up to a point, but not beyond it. Yet even among the less happy, poorer countries, there is not a clear relationship between average income and average happiness levels, suggesting that many other factors—including cultural traits—are at play (see Figure 1).

Within countries, income matters to happiness (Oswald 1997; Diener et al. 2003). Deprivation and abject poverty in particular are very bad for happiness. Yet after basic needs are met, other factors such as rising aspirations, relative income differences, and the security of gains become increasingly important in addition to

Happiness and income per capita, 1990s

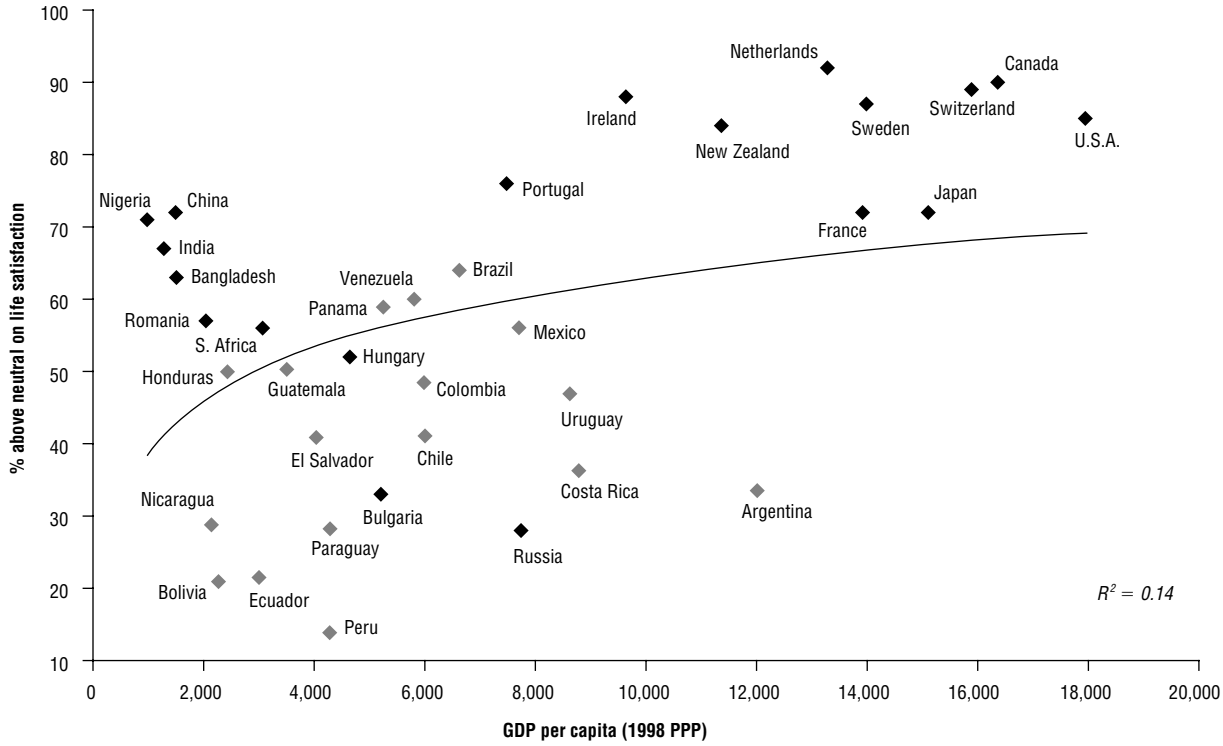

SOURCE: Graham and Pettinato, 2002; Veenhoven, World Happiness Data Set, 2002.

Figure 1

income. James Duesenberry (1949) noted the impact of changing aspirations on income satisfaction and its potential effects on consumption and savings rates. A number of happiness studies have since confirmed the effects of rising aspirations, and their potential role in driving excessive consumption and other perverse economic behaviors (Frank 1999).

A common interpretation of the Easterlin paradox is that humans are on a "hedonic treadmill": aspirations increase along with income and, after basic needs are met, relative levels of income matter to well-being. Psychologists' "set point" theory of happiness, in which every individual is presumed to have a happiness level that he or she goes back to over time, even after major events such as winning the lottery or getting divorced (Easterlin 2003), provides a complementary interpretation.

Individuals are remarkably adaptable and in the end can get used to most things, and in particular to income gains (Kahneman et al. 1999). Easterlin argues that individuals adapt more in the pecuniary arena than in the nonpecuniary arena. Yet, because most policy is based on pecuniary factors, measures of well-being underestimate the effects of non-income factors, such as health, family, and stable employment.

There is no consensus about which interpretation is most accurate. Yet numerous studies demonstrate that happiness levels can change significantly in response to a variety of factors. Even under the rubric of set point theory, happiness levels can fall significantly in the aftermath of events like illness or unemployment. Even if levels eventually adapt upward to a longer-term equilibrium, mitigating or preventing the unhappiness and disruption that individuals experience for months, or even years, in the interim certainly seems a worthwhile objective for policy.

SELECTED APPLICATIONS OF HAPPINESS ECONOMICS

Happiness research has been applied to a range of issues. These include the relationship between income and happiness, the relationship between inequality and poverty, the effects of macropolicies on individual welfare, and the

effects of public policies aimed at controlling addictive substances.

Some studies have attempted to separate the effects of income from those of other endogenous factors, such as satisfaction in the workplace. Studies of unexpected lottery gains find that these isolated gains have positive effects on happiness, although it is not clear that they are of a lasting nature (Gardner and Oswald 2001). Other studies have explored the reverse direction of causality, and find that people with higher happiness levels tend to perform better in the labor market and to earn more income (Diener et al. 2003; Graham, Eggers, and Sukhtankar 2004).

A related question is how income inequality affects individual welfare. Most studies of OECD (Organization for Economic Cooperation and Development) countries find that inequality has modest or insignificant effects on happiness. The mixed results may reflect the fact that inequality can be a signal of future opportunity and mobility as much as it can be a sign of injustice (Alesina et al. 2004). In contrast, recent research on Latin America finds that inequality is negative for the well-being of the poor and positive for the rich. In a region with high inequality and weak public institutions and labor markets, inequality signals persistent disadvantage or advantage rather than future opportunity (Graham and Felton 2005).

Happiness surveys also facilitate the measurement of the effects of non-income components of inequality, such as race, gender, and status, all of which seem to be highly significant (Graham and Felton 2005). Relative social standing, meanwhile, has significant effects on health outcomes (Marmot 2004).

Happiness research can deepen our understanding of poverty. The set point theory suggests that a destitute peasant can be very happy. While this contradicts a standard finding in the literature—namely, that poor people are less happy than wealthier people within countries—it is suggestive of the role that low expectations play in explaining persistent poverty in some cases.

Perceptions of poverty vary. People who are high up the income ladder can identify themselves as poor, while many of those who are below the objective poverty line do not, because of different expectations (Rojas 2004). In addition, the well-being of those who have escaped poverty is often undermined by insecurity, and their reported well-being is often lower than that of the poor (Graham and Pettinato 2002).

Most studies find that inflation and unemployment have negative effects on happiness. The effects of unemployment are stronger than those of inflation, and hold above and beyond those of forgone income (Di Tella et al. 2001). The standard "misery index," which assigns equal weight to inflation and unemployment, may be underestimating the effects of the latter (Frey and Stutzer 2002b).

Political arrangements also matter. Both trust and freedom have positive effects on happiness (Helliwell 2003; Layard 2005). Research based on voting across cantons in Switzerland finds that there are positive effects from *participating* in direct democracy (Frey and Stutzer 2002b). Research in Latin America finds a strong positive correlation between happiness and preference for democracy (Graham and Sukhtankar 2004).

Happiness surveys can also be utilized to gauge the welfare effects of various public policies. How does a tax on addictive substances, such as tobacco and alcohol, for example, affect well-being? A recent study on cigarette taxes suggests that the negative financial effects may be outweighed by positive self-control effects (Gruber and Mullainathan 2002).

POLICY IMPLICATIONS

Richard Layard (2005) makes a bold statement about the potential of happiness research to improve people's lives directly via changes in public policy. He highlights the extent to which people's happiness is affected by status—resulting in a rat race approach to work and to income gains, which in the end reduces well-being. He also notes the strong positive role of security in the workplace and in the home, and of the quality of social relationships and trust. He identifies direct implications for fiscal and labor market policy—in the form of taxation on excessive income gains and via reevaluating the merits of performance-based pay.

While not all agree with Layard's specific recommendations, there is nascent consensus that happiness surveys can serve as an important complementary tool for public policy. Scholars such as Ed Diener and Martin Seligman (2004) and Daniel Kahneman and his colleagues (2004) advocate the creation of national well-being accounts to complement income accounts.

Still, a sound note of caution is necessary in directly applying the findings of happiness research to policy, both because of the potential biases in survey data and because of the difficulties associated with analyzing this kind of data in the absence of controls for unobservable personality traits. In addition, happiness surveys at times yield anomalous results that provide novel insights into human psychology—such as adaptation and coping during economic crises—but do not translate into viable policy recommendations. One example is the finding that unemployed respondents are happier (or less unhappy) in contexts with higher unemployment rates. The positive effect that reduced stigma has on the well-being of the unemployed outweighs the negative effects of a lower probability of future employment (Clark and Oswald

1994; Stutzer and Lalive 2004; and Eggers et al. 2006). One interpretation of these results for policy—raising unemployment rates—would obviously be a mistake. At the same time, the research suggests a new focus on the effects of stigma on the welfare of the unemployed. Happiness economics also opens a field of research questions that still need to be addressed, including the implications of well-being findings for national indicators and economic growth patterns; the effects of happiness on behavior such as work effort, consumption, and investment; and the effects on political behavior.

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Carol Graham

HARASSMENT

Harassment, which exists in many forms with different names, is most basically offensive behavior directed at a person, place, or entity. Most frequently, the target or victim of harassment defines or names the particular form of offensive behavior. Among the more common types of harassment are racial profiling, bullying, sexual harassment, hate crimes, and hazing. Regardless of the demographic or other characteristic of the victim, the goal of the harassment is to intimidate, exert power, or impose control over a victim.

The distinction between harassment and other forms of aggressive communication that are legal is based on societal and community standards. In societies that devalue free speech and open communication—in particular, disagreement with the government or other official personnel—harassment is often very broadly defined as written or verbal communications that are not sanctioned by an official governing body or that express open disagreement with the government.

In contrast, in societies where free speech is encouraged, harassment is typically defined as speech or communication that does not meet normal standards of accuracy or appropriateness, and is directed at a target who perceives the communication as disturbing, disruptive of occupational, educational, or interpersonal functioning, or injurious to reputation, position, or authority. That is to say, when brief and not overly frequent communications express concerns that validly correspond to errors or issues, then harassment is typically not present. Conversely, the greater the duration and frequency of communications and the smaller the validity of the claim, the greater is the likelihood that harassment is present.

These relatively complex definitions highlight the difficulty of identifying what meets the legal definition of harassment. For example, a communication that is perceived as harassment by its receiver may not have been sent for that purpose. Similarly, lengthy, frequent, but accurate communications directed at a person, place, or entity (as with political criticism) may or may not rise to the legal threshold of harassment. Nonetheless, despite these conceptual difficulties, the essential definition of harassment remains valid: It is an unwelcomed and unwanted verbal or nonverbal communication that produces an adverse consequence or negatively affects the emotional, cognitive, or behavioral functioning of one or more victims.

Sexual harassment in the workplace is a form of unwelcomed communication familiar to many individuals in the United States. Victims are frequently expected to accept harassment without complaint in exchange for promotions, raises, or continued employment. The Equal Employment Opportunity Commission defines sexual harassment as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature that explicitly or implicitly affects an individual's employment, unreasonably interferes with an individual's work performance, or creates an intimidating, hostile, or offensive work environment. Victimization by workplace harassment has been correlated with greater inefficiency, lowered productivity, and higher rates of absences.

Racial harassment is also a common form of unwelcome and harmful communication. Victims of ethnic or racial harassment, a specific form of racism, can experience negative health outcomes, including high blood pressure, elevated hostility, and frequent somatic complaints. Researchers have found that individuals experiencing racial or ethnic harassment are twice as likely to be daily tobacco users than those with no reported harassment experiences (Bennett et al 2005). Adjusting for age, harassed individuals are 70 percent more likely to report daily tobacco use in the past thirty days. It is beginning to be recognized that racial and ethnic harassment may be an important factor in explaining tobacco use among young African Americans. Those who perceive greater racial/ethnic harassment may also be at greater risk for affective disturbance and pathological cardiovascular reactivity (Bennett et al 2003; Merritt et al 2006). Continuous harassment can lead to persisting complications, including excessive self-blame, lowered mood, reexperience of the unwelcomed event, and generally increased anxiety.

Some forms of harassment are more socially acceptable than others. Because sexual harassment and hate crimes are illegal, there is an implied social agreement that these behaviors are wrong. In other instances, such as harassment of the obese, guidelines for acceptable behavior are much less clear and the prevalence of unwelcomed communications, both subtle and overt, is thought to be high.

Less recognized forms of harassment are also present. For example, a recent content analysis of prime-time television found that depictions of explicit and implicit sexual harassment of women are frequent (Grauerholz and King 1997). Incidents involving quid-pro-quo harassment were numerous. More than 80 percent of television shows in prime time contained at least one incident of sexual harassment not labeled as such.

Recently, behavioral scientists have begun to examine the effectiveness of training programs used to enhance the listening and helping skills of sexual harassment contact persons in the workplace (see Blaxall, Parsonson, and Robertson 1993). The majority of these studies have found that teaching designated and appropriate individuals in the workplace to respond appropriately to complaints of harassment, to recognize harassment's warning

signs, and to respond empathetically to victims and firmly but fairly to perpetrators can help decrease sexual harassment and reduce its long-term consequences. Despite these encouraging indications, the most important mechanisms for the management of harassment inside and outside of the workplace appear to be laws, rules, regulations, and education.

SEE ALSO *Aggression; Communication; Discrimination; Hypertension; Post-Traumatic Stress; Power; Racism; Sexism; Sexual Harassment; Smoking; Trauma; Violence*

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HARD-CORE UNEMPLOYED

The term *hard-core unemployed* was popularized in the late 1960s to refer to persons facing multiple barriers that appeared to block them from active, consistent participation in the job market. The term has largely fallen out of favor, though the concept—now termed *structural unemployed*—still has utility in today's policy debates, particularly regarding economic disadvantages related to race.

HISTORY

Policymakers, economists, and historians have long been interested in the problem of chronic joblessness. Much of this interest has corresponded to periods of market failures, like the Great Depression of the 1930s, when huge swaths of working-age persons were unable to find gainful work due to the collapse in aggregate demand.

However, policymakers, civil-rights leaders, and social critics noted a different, though related, phenomenon beginning in the 1960s. Significant numbers of persons were experiencing chronic unemployment even in economic "good times," that is, periods of solid overall growth and low national unemployment. Moreover, there was a set of identifiable characteristics among these jobless persons.

First, they were generally disconnected from the labor market. Though some worked intermittently, they experienced long spells of joblessness that lasted anywhere from six months to numerous years. Second, they tended to have lower levels of education, at most a high-school diploma. Third, they were disproportionately, though by no means exclusively, minority. Fourth, in part due to their lack of employment, they were often poor or near-poor urban residents, and typically received some form of government assistance. Finally, some members of this group were alleged to have physical or mental handicaps; more recently, a criminal history has also been associated with long-term joblessness.

In his fifth State of the Union address (1968), President Lyndon Johnson (1908–1973) used the term *hard-core unemployed*, referring to approximately 500,000 Americans with these characteristics. Johnson also dubbed them the "last in line … the hardest to reach."

THEORIES AND EXPLANATIONS FOR THE EXISTENCE OF STRUCTURAL UNEMPLOYMENT

There are three somewhat competing theories for the existence of chronic unemployment: these theories are based on productivity/skills mismatch and cultural explanations.

The first theory maintains that some persons, though willing to sell their labor at the going wage, simply lack the productivity to justify even the lowest wage on offer. Employers thus have no motivation to hire such persons, since their contribution to the firm's output will be less than their pay, making them a net cost to the employer. As discussed below, policymakers motivated by this reasoning created tax credits to lower the labor cost to the employers associated with such hires.

The second theory stresses structural barriers: forces beyond the control of the individual that preclude him or

her from active participation in the job market. These barriers include racism; exclusion from opportunities available to the majority, such as a decent education; and economic changes that have reduced job opportunities to non-college-educated workers and those in particular geographical areas. In this explanation, the chronically unemployed have the necessary skills and attitudes to maintain a lasting connection to the job market. But forces outside their control, such as employers' aversion to hiring minorities or the disappearance of jobs for which they are qualified, leave them without work for extended periods.

The third theory stresses personal shortcomings having more to do with attitudes, habits, and personal preferences than with skill limitations. The argument here is that the chronically unemployed have failed to internalize the dominant work ethic common among the majority. The result is that they devalue work in the paid job market, preferring outside sources of support, such as government assistance or the black market.

Of course, these theories overlap, and subsequent research has revealed that no single theory suitably explains the phenomenon. Relative to the other two theories, attitudinal explanations have less salience, as events and research have revealed that skill enhancement, policy interventions, and periods of strong labor demand have at times proven to diminish long-term joblessness among disadvantaged workers. That said, the problem is still very much with us.

POLICY DEVELOPMENTS AND THEIR IMPACT ON OUR UNDERSTANDING OF THE PROBLEM

The explanations discussed above, particularly the first two, led to various policy interventions designed to break the cycle of chronic joblessness in the United States. Presidents since Johnson have introduced and extended policy sets of training initiatives and tax credits to raise the skills of the hard-core unemployed and to lower their labor costs to employers (under such a credit, the government will pay some portion of the wage of workers who meet certain criteria).

Most of these programs remain in place today. The Targeted Jobs Tax Credit introduced in 1978, an employer-side credit of the type just noted, became the Work Opportunity Tax Credit in 1996. Numerous training programs for the least advantaged also remain in place under the rubric of the 1998 Workforce Investment Act. The welfare reform legislation of the mid-1990s also extended some of these programs.

The evidence of their effectiveness is mixed. The research on employer-side tax credits shows that while these programs sometimes have their intended effect, they are just as often used as an unnecessary windfall to employers who would have hired the same workers in the absence of the subsidy. Worker training programs also have a checkered history in terms of their effectiveness in offsetting the skill mismatch, but more recent, localized initiatives have shown greater success.

To some extent, the full employment period of the latter 1990s proved to be a potent antidote to structural unemployment, suggesting that depressed labor demand has been one factor responsible for chronic joblessness. During this period, the employment rates of many populations that had formerly been left behind grew sharply. Public policy interventions, including a higher minimum wage, an expanded Earned Income Tax Credit (an employee-side wage subsidy for low-wage workers in low-income families), and a set of work supports associated with welfare reform (e.g., subsidized child care or health care for working families), also played a role.

But the pull of the strong labor market, characterized by the lowest overall unemployment rates in three decades, was likely the dominant force in play in these years, and the employment rates (the share of the population at work) increased significantly for many, though not all, disadvantaged groups. Even some of the most disconnected groups benefited. For example, young African American males without a high-school diploma experienced a gain in employment rates from 32 percent in 1995 to 38 percent in 2005. Of course, even with this six point gain, such a low rate of employment is indicative of the problem of structural unemployment, but the positive trend is still notable evidence of the importance of very tight job markets.

CONCLUSION

Though the term *hard-core unemployed* is rarely used in contemporary discussions, compelling evidence reveals that certain groups of persons still face high barriers between them and the employment opportunities they need to raise their living standards. Unemployment rates for African Americans are consistently twice that of whites; the employment rates of young workers with less education, particularly minorities, remain far below overall averages.

Even in 2000, when national unemployment was 4 percent, the employment rate for young, African-American, male, high-school dropouts was 38 percent, far below the national average of 64 percent. Other research has shown that over 70 percent of young men with these characteristics were jobless or incarcerated in the mid-2000s.

Numerous explanations for this damaging phenomenon have been articulated and explored by researchers and policymakers. The findings generally show that these

workers face both skill deficits that hurt their employment prospects and a set of structural barriers, including weak labor demand, discrimination, and the absence of sustainable jobs where they live. Public policy and positive macroeconomic trends have been shown to make a helpful difference in the lives of these workers, but steep barriers remain in place.

For example, as economic inequality has grown and public budgets have become ever more strained, investments in public education have often lagged, particularly in disadvantaged areas where they are needed most. Rising inequality and poverty rates that are less responsive to economic growth have also meant that too many poor and near-poor families are unable to provide the necessary opportunities and advantages for young children, and these early disadvantages have lasting, negative consequences. Correcting these inequities, in tandem with pursuing policies to chip away at the deficits and barriers facing the structurally unemployed will help to diminish their numbers and connect them to the growing economy.

SEE ALSO *Discouraged Workers; Employment; Full Employment; Inequality, Racial; Labor Force Participation; Lumpenproletariat; Unemployment*

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Jared Bernstein
James Lin

HARIJANS

SEE *Dalits.*

HARLEM

"In the history of New York," begins James Weldon Johnson's authoritative 1930s history *Black Manhattan*, "the significance of the name Harlem has changed from Dutch to Irish to Jewish to Negro" (p. 3). Though Johnson's historical vantage was the dawn of the twentieth century, his observation is an ideal start for locating a fluid, rather than fixed, meaning for Harlem. His words pinpoint for his contemporaries, as well as later generations, three aspects of Harlem—its meaning, its transitions, and its multiethnicity—suggesting that it be infinitely defined in a shifting matrix of politics, economy, and culture.

Nieuw Harlem, as it was named by early Dutch settlers, was a farming community in the mid-1600s. Through the seventeenth and eighteenth centuries, Harlem belonged to the descendants of Dutch, French, and English settlers who oversaw its transition from an isolated, poor, and rural village to an upper- and upper-middle-class residential suburb. By the 1840s and 1850s, as the land's productivity declined, many estate owners sold off or abandoned their properties. Irish immigrants arrived in Harlem as squatters, establishing shantytowns as well as a territorial claim to street and neighborhood boundaries.

With the elevated train pushing farther north between 1878 and 1881, fashionable brownstones and exclusive apartments were built to house a genteel class. By the 1890s Harlem's brownstone aristocracy lived alongside Irish and Italian immigrants who populated low-lying spaces, marshland, and peripheral areas filled with tenement housing. German immigrants, including German Jews, joined the wealthy native American and European immigrant population. Economic success in the late 1890s also pulled upwardly mobile Eastern European Jews out of the Lower East Side as they, too, became Harlemites. Harlem was even home to a "little Russia."

In spite of its well-known reputation as the cultural capital of black America, Harlem had few black residents until a wave of white flight produced a remarkable transition at the beginning of the twentieth century. The "great subway proposition" to extend a streetcar line to Manhattan's upper reaches spurred wild real-estate speculation in Harlem. A bust came in 1905, however, as speculators faced an uncertain completion date for the subway. To save themselves from financial ruin, landlords were willing to rent properties to blacks. As middlemen, black real estate agents such as Philip A. Payton Jr., founder of

the Afro American Realty Company, John E. Nail, and Henry C. Parker steered clients to Harlem. Whites at first resisted, though in the end, established (white) tenants and white realtors were unsuccessful against what they called a "negro invasion." As Jervis Anderson, a cultural historian of the Harlem Renaissance era, noted: "As the community became predominantly black, the very word 'Harlem' seemed to lose its old meaning" (1981, p. 60).

From about 1905, then, the formation of black Harlem was located at the spatial intersection of race relations and the demographic transformation of urbanizing America. The community, which covers 3,829 acres, is surrounded on all sides by the East, Harlem, and Hudson Rivers; its official boundaries run south to north from 96th Street to 178th Street in upper Manhattan. From the start of the twentieth century, however, Harlem has existed beyond geography.

From a period that roughly spans 1919 to 1929, the cultural movement defining the neighborhood's heyday took place: the Harlem Renaissance. Black artists and intellectuals participated jointly in the creation of a new urban collective identity. As a center of urban black America, it was home to churches, hospitals, and other important social institutions that served a segregated community in Jim Crow America. The black "city within a city" exerted a magnetic pull as Harlem loomed large as a "symbol of liberty" and a "promised land." As "queen of the blackbelts," Harlem was a mecca for black activists, intellectuals, painters, and musicians. Its prominent writers included Langston Hughes, Claude McKay, Nella Larsen, and Zora Neale Hurston. Harlem was a stage, too, for important political spokespersons such as W. E. B. Du Bois and Marcus Garvey, who used Harlem as a platform from which to challenge racist America.

Those were the years, wrote Langston Hughes, when "Harlem was in vogue" (Hughes 1986, p. 227). For white downtowners a variety of Harlem's clubs offered a glimpse and a thrill beyond the color line. Establishments such as Connie's Inn, the Nest, Small's Paradise, the Capitol, the Cotton Club, the Green Cat, the Sugar Cane Club, Happy Rhones, the Hoofers Club, and the Little Savoy staged music and dance numbers and, skirting the ban of prohibition, offered booze to white "slummers" and curiosity seekers. Ironically, some of the clubs had a Jim Crow policy that allowed black performers but excluded blacks as customers.

No consensus holds about the precise end of the Harlem Renaissance. The 1929 American stock market crash and the onset of the Great Depression, coupled with the end of Prohibition in 1933, loosely mark a transition to post-Renaissance Harlem. By the time of the 1935 Harlem Riot the luster was off. In a 1948 essay titled "Harlem Is Nowhere," Ralph Ellison equated Harlem with madness, and argued that for "over four hundred thousand Americans … overcrowded and exploited politically and economically, Harlem is the scene and symbol of the Negro's perpetual alienation in the land of his birth" (p. 296). From the 1930s to the 1960s, Harlem's declining social conditions gave the neighborhood a sensationalist and decidedly negative reputation.

In the late 1960s and early 1970s urban renewal turned up on Harlem's doorstep promising a turnaround. Within the community these slum clearance policies were derisively tagged "Negro removal." This time Harlem's transition became a struggle over whether redevelopment and reinvestment could coexist alongside preservation of its black cultural heritage. When 1980s noises of gentrification sounded through postindustrial urban America, they could be heard knocking at Harlem's door. With the establishment of the Upper Manhattan Empowerment Zone in the mid-1990s, an era of public and private investment was initiated in Harlem to offset years of decline and disinvestment. By 2000 Starbucks had arrived in Harlem, touching off complicated questions about who belongs in Harlem and to whom Harlem belongs. As far back as 1930, James Weldon Johnson had presciently asked: "Will the Negroes of Harlem be able to hold it?" (p. 158). At the dawn of the twenty-first century, gentrification offers a window into the past, present, and unknown future definition(s) of Harlem.

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HARLEM RENAISSANCE

The Harlem Renaissance (c. 1918–1935) was a blossoming of African American creative arts associated with the larger New Negro movement, a multifaceted phenomenon that helped set the directions African American writers and artists would pursue throughout the twentieth century. The social foundations of the movement

included the Great Migration of African Americans from rural to urban spaces and from South to North, dramatically rising levels of literacy, and the development of national organizations dedicated to pressing African American civil rights (the NAACP), "uplifting" the race and opening up socioeconomic opportunities (the National Urban League), and developing race pride, including Pan-African sensibilities and programs (the United Negro Improvement Association and the Pan-African conferences). Black exiles and expatriates from the Caribbean and Africa crossed paths in metropoles like New York and Paris following World War I (1914–1918) and had an invigorating influence on each other that gave the broader "Negro renaissance" (as it was then known) a profoundly important international cast.

The term *Harlem Renaissance*, which became popular in later years, particularly after the term *Negro* lost currency, derives from the fact that Harlem served as a symbolic capital of the cultural awakening, a dynamic crucible of cultural cross-fertilization, and a highly popular nightlife destination. Harlem was a relatively new black neighborhood becoming virtually a black city just north of Central Park, and it attracted a remarkable concentration of intellect and talent. More "liberal" in matters of race than most American cities (although, of course, racism was rampant), New York had an extraordinarily diverse and decentered black social world in which no one group could monopolize cultural authority, making it a particularly fertile place for cultural experimentation. Moreover, being situated in New York—the publishing capital of the Western Hemisphere, one of the world's great ports, and the financial as well as cultural capital of the United States—put Harlem in a strategic position for developing black arts and sending them out to the world. Few of the well-known black writers or artists were born in Harlem, but almost all of them passed through it, were inspired by it, or achieved their reputations in part because of what happened there.

The Harlem Renaissance took place at a time when European and white American writers and artists were particularly interested in African American artistic production, in part because of their interest in the "primitive." Modernist primitivism was a multifaceted phenomenon partly inspired by Freudian psychology, but it tended to extol so-called "primitive" peoples as enjoying a more direct and authentic relationship to the natural world and to simple human feeling than so-called "overcivilized" whites. They therefore were presumed by some to hold the key to the renovation of the arts. Early in the twentieth century, European avant-garde artists including Pablo Picasso (1881–1974) had been inspired in part by African masks to break from earlier representational styles toward abstraction in painting and sculpture. The prestige of these revolutionary experiments caused African American intellectuals to look on African artistic traditions with new appreciation and to imagine new forms of self-representation, a desire reinforced by rising interest in black history. Black History Week, now Black History Month, was first celebrated in 1928 at the instigation of the historian Carter G. Woodson (1875–1950).

The interest in black heritage coincided with a general interest, among American intellectuals and artists generally, in defining an "American" culture distinct from that of Europe and characterized by ethnic pluralism as well as a democratic ethos. Thus the concept of cultural pluralism inspired notions of the United States as the first "transnational" nation, in which diverse heritages should develop side-by-side in harmony rather than be "melted" together or ranked on a scale of evolving "civilization." W. E. B. Du Bois (1868–1963), the dominant black intellectual of the day, had already advocated something like this position in his famous book, *The Souls of Black Folk* (1903), a defining text of the New Negro movement because of its profound effect on an entire generation that formed the core of the Harlem Renaissance.

According to Du Bois and his colleague at the NAACP, James Weldon Johnson (1871–1938), the only uniquely "American" expressive traditions in the United States had been developed by African Americans because they, more than any other group, had been forced to remake themselves in the New World, while whites continued to look to Europe, or sacrificed artistic values to commercial ones. The very oppression that African Americans had suffered had made them the prophets and artistic vanguard of "American" culture. This judgment was reinforced by the immense popularity of African American music, especially jazz, worldwide. The popularity of jazz among whites was shaped in part by interest in the "primitive and exotic" and helped spark a "Negro Vogue" in cities like New York and Paris in the mid to late 1920s. Simultaneously, European dramatists extolled the body language of African American dance and stage humor (descended from blackface minstrelsy, America's most popular and original form of theatrical comedy). The most well-known white man to bring attention to the "Harlem" Renaissance was undoubtedly Carl Van Vechten (1880–1964), whose music criticism extolled jazz and blues and whose provocatively titled novel *Nigger Heaven* (1926) helped spread the Negro Vogue, serving virtually as a tourist guide to Harlem and capitalizing on the supposed "exotic" aspects of black urban life, even while focusing, primarily, on the frustrations of black urban professionals and aspiring writers. Vilified by many but defended by the likes of Langston Hughes (1902–1967), James Weldon Johnson, and Nella Larsen (1893–1963), Van Vechten became a key contact for several black artists and authors because of his interracial parties and publishing connections.

In addition to primitivism, the tendencies to press for "authentic" American art forms, and to find them in black America, led black writers to "the folk" at a time when American anthropologists led by Franz Boas (1858–1942) were revolutionizing their discipline with arguments against the racist paradigms of the past. The "folk"—people of the rural South particularly, but also the new migrants to northern cities—were presumed to carry the seeds of black artistic development with relative autonomy from "white" traditions. Thus James Weldon Johnson, in *God's Trombones* (1927), set traditional African American sermons in free-verse poetic forms modeled on the techniques of black preachers. Jean Toomer (1894–1967) was inspired by southern folk songs and jazz to lyrical modifications of prose form. Most famously, Langston Hughes turned to the blues for a poetic form derived from and answering to the desires, needs, and aesthetic sensibilities of the black working class. Sterling Brown (1901–1989) followed Hughes in a similar spirit with ballads and other poetic forms, attempting to catch the spirit of the folk heritage without merely imitating "folk" performance.

The Jamaican-born author and radical socialist Claude McKay (1889–1948) produced "proletarian" novels extolling the primitive authenticity and vitality of the black working class in *Home to Harlem* (1928) and *Banjo* (1929), a Pan-Africanist novel set in Marseilles, France. More influentially, Zora Neale Hurston (1891–1960)—an anthropologist and folklorist partly trained by Franz Boas—developed a new language and approach to narrative fiction inspired by black "folk" expressive traditions, most famously and successfully in her novel *Their Eyes Were Watching God* (1937).

In a completely different register, Nella Larsen explored the psychology of urban sophisticates in her novels *Quicksand* (1928) and *Passing* (1929), analyzing the psychological intricacies of race consciousness, and exposing the massive pressures to subordinate women's sexuality to the rules of "race" and class. The daughter of a white immigrant from Denmark and a black West Indian cook, Larsen knew intimately the price that color-line culture exacted of those who transgressed its most fundamental rules, and her fiction remains unequaled for the originality and incisiveness with which it exposes the contradictions of identities founded on the assertion of absolute difference between "black" and "white." Hers was a unique achievement at a time when de facto and de jure segregation were becoming ever more entrenched features of American society.

By the mid-1930s, the optimism of the "renaissance" was wearing thin as the Great Depression clamped down and Marxist orientations (never absent from the renaissance) gained dominance. Black writers—above all, Langston Hughes, who had emerged as one of the stars of the "renaissance" and began working in numerous genres—began defining their new directions in contrast to the renaissance of the 1920s, describing the work of the earlier decade as too "racialist" in orientation (as opposed to Marxist and class-conscious) and as too dependent on wealthy white "patrons." The characterization was reductive, as most such attempts at generational self-definition tend to be. Today it is clear that the Harlem Renaissance marked a turning point in black cultural history and helped establish the authority of black artists over the representation of black culture and experience, while creating a semiautonomous aesthetic field in the realm of "high culture" that has continuously expanded.

SEE ALSO *Du Bois, W. E. B.; Hurston, Zora Neale; Pan-Africanism*

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George Hutchinson

HARRIS, ABRAM L., JR.
1899–1963

Abram Lincoln Harris Jr., an African American scholar and activist, was born in 1899 in Richmond, Virginia, and finished his undergraduate work in 1922 at Virginia State University, a historically black college in Petersburg, Virginia, near his hometown. He completed an MA in economics at the University of Pittsburgh in 1924, and received his PhD in political economy at Columbia University in 1930. Harris served as a faculty member and chair of the Department of Economics at Howard University, the capstone of black higher education, in Washington, D.C., from 1927 to 1945 and subsequently served on the faculty of the University of Chicago until his death in 1963.

Harris was the first African American PhD in economics who pursued a rigorous academic career, publishing fifty works, including two seminal books and important essays in leading economics journals, such as the *Journal of Political Economy* and the *American*

Economic Review. He also wrote extensively for public intellectual and activist journals, including *Opportunity*, the *Crisis*, the *Nation*, and the *New Republic*. His early scholarly books and articles focused on the economic conditions of African Americans and the best strategy to ameliorate these conditions. These studies reflected a decidedly activist and Marxian inclination. His later work retreated from concrete strategies of social reform and focused instead on the doctrines of economic reform in the writings of Karl Marx (1818–1883), Thorstein Veblen (1857–1929), and John Stuart Mill (1806–1873).

During his early professional years in the 1930s, Harris played a pivotal role in the critical and contentious debate over the best strategy for black progress in the United States. He decried the strategy of "black capitalism" as unrealistic (Harris 1936) and advocated instead the formation of a national multiracial working-class party to bring about social reform (Spero and Harris 1931). Leading the "Young Turks" of the Second Amenia Conference in 1933, and with W. E. B. Du Bois (1868–1963) looking on with general favor, he proposed that the U.S. African American leadership change course from its focus on civil rights (i.e., legal and political reform organized around individual cases) and undertake instead a more radical, class-based, mass approach to social reform. The following year, at the request of the NAACP's board chair Joel Spingarn (1875–1939), Harris assembled the Committee on the Future Plan and Program of the NAACP, which proposed a breathtaking reform of the organization that, if implemented, would have transformed it into a politically active workers' university with local chapters serving as branch campuses. This reform would have immersed the NAACP in labor advocacy and education, laying the intellectual basis for black-white labor action on immediate issues, including pensions, unemployment insurance, child and female labor, lynching, public discrimination, and Jim Crow (Holloway 2002, pp. 93–100).

The radical Abram Harris of the 1930s rejected interracial conciliation of the Booker T. Washington (1856–1915) variety, the civil libertarianism of Walter White (1893–1955), and the militant race-consciousness of Marcus Garvey (1887–1940). He opposed the more nuanced version of race consciousness advanced by Du Bois, who argued (Du Bois 1940, chap. 7) for a period of self-segregation by African Americans, during which time they would form consumer and producer collectives to create a strong social foundation that would allow them to ultimately unify with white workers (currently blinded by racial prejudice) in establishing a socialist United States. Du Bois advocated this position as early as May 1933 in his address to the Conference on the Economic Status of the Negro sponsored by the Rosenwald Fund (Lewis 2000, p. 311). Harris rejected this strategy while fully recognizing the extraordinary challenge of bridging the racial chasm in the labor movement (Spero and Harris 1931).

Harris left Howard University and joined the faculty at the University of Chicago in 1945, a transition that marked (but did not initiate) a dramatic change in his worldview and intellectual focus. Leaving behind both his sympathy for Marx and his focus on social reform to achieve black progress, he adopted the moderate socialism of John Stuart Mill. Mill's philosophy accepts the individualist assumptions about human nature and society, assumptions that Harris had earlier skewered in defending the class perspective of Marx (Harris 1935). His rejection of Marxian tenets (Harris 1950) coincided with his withdrawal from engagement in the struggle for black progress. Enhancing human capital through better education and a stronger home life, he came to believe, would allow his black brethren to succeed in the marketplace. This point of view largely accepts the false promise that the market will, in a competitive process, reward firms that recognize talent regardless of race; the problem of racial inequity thus has a labor supply-side solution (Harris 1964). The solution to the race problem lay in improving black character and skills, a familiar theme sounded by today's conservatives who oppose positive legal and economic action that might compensate for the legacy of slavery, sharecropping, Jim Crow laws and practices, and contemporary racial discrimination.

At Chicago, Harris remained close to his lifelong friend Frank Knight (1885–1972), the renowned conservative economist, and even found common ground with archconservative Milton Friedman (1912–2006) (Broder 2006; Darity 1989). Students at the University of Chicago considered Harris one of their best teachers, and he won the Quantrell Prize for Excellence in Undergraduate Teaching in 1961. Chicago posthumously honored Harris's contributions to undergraduate education by naming a series of scholarship awards in his honor in 1976. Harris's work remains seminal in the debate on the strategic way forward for black progress, ironically occupying important positions on dramatically opposite sides of the debate.

SEE ALSO *Capitalism; Du Bois, W. E. B.; Human Capital; Inequality, Racial; Marxism; National Association for the Advancement of Colored People (NAACP); Politics, Black; Socialism*

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HARRIS, JUDITH RICH

SEE *Peer Effects.*

HARRIS-TODARO MODEL

In the 1960s the government of newly independent Kenya faced a difficult situation: Unemployment in Nairobi and other major cities was high and apparently rising. To cope with this problem, Tripartite Agreements were reached in which private-sector and public-sector employers agreed to increase employment in exchange for unions agreeing to hold wages at their current levels. The larger number of jobs was expected to reduce unemployment. However, in the event, urban unemployment appeared to have *increased* following the Tripartite Agreements rather than decreased, as far as anyone could tell.

In light of these events, John Harris and Michael Todaro formulated the Harris-Todaro model to explain the puzzle. At the core of the Harris-Todaro model were the following features. First, real wages (adjusted for cost-of-living differences) are higher in urban formal-sector jobs than in rural traditional-sector jobs. Second, to be hired for a formal-sector job, one has to be physically present in the urban areas where the formal-sector jobs are located. Third, and as a consequence of the first two features, more workers search for formal-sector jobs than are hired, employers hire some of the job seekers but not all of them, and those not hired end up unemployed. Fourth, for equality to be maintained between the expected wage associated with searching for an urban job and the expected wage associated with taking up a lower-paying rural job, the equilibrium arising in such a setting is characterized by urban unemployment. And fifth, any temporary difference in the expected wages between one sector and another is eroded as workers migrate from the low-expected-wage labor market to the high-expected-wage labor market.

The Harris-Todaro model produced two powerful policy results. The first concerns the policy of formal-sector job creation to employ the unemployed (who, in the Harris-Todaro model, are all in urban areas, because that is where the formal-sector jobs are assumed to be located). Such a policy, they concluded, would increase the formal-sector labor force by more than the number of new jobs created, thereby raising the number of urban unemployed. Thus, the solution to urban unemployment is *not* to create urban employment.

The second policy option that Harris and Todaro considered was a policy of rural development. If such a program could increase the rural traditional-sector wage, unemployment would then fall. Thus, in the Harris-Todaro model, the solution to urban unemployment is rural development.

Soon after the model was published, the government of Kenya followed the Harris-Todaro precepts by putting into place an integrated program of rural development. The result was that unemployment in Kenya fell.

Harris and Todaro's fundamental contribution was building a model that fit the stylized facts of the labor market they were analyzing and that was based on sound micro foundations. The fact that the model remains part of the economist's intellectual toolkit today is a tribute to its basic insight and enduring analytic power.

The original model has been both simplified for some purposes and expanded for others by later contributors, including Stiglitz, Bell, Khan, Anand and Joshi, Bourguignon, Corden and Findlay, and others (Fields

2005). Harris and Todaro formulated general processes for determining prices of the products produced by the two sectors and also for determining a rural-sector wage that varies inversely with the number of people in the rural sector. A simplified version of the Harris-Todaro model was developed in which product prices and rural-sector wages are taken as constant. Numerous additional analytic and policy results were derived in the simplified Harris-Todaro model. At the same time, some of the assumptions of the Harris-Todaro model were judged to be too restrictive, and so the model was generalized in the years that followed to nest their specific formulation within a broader framework. The initial Harris-Todaro model has been extended to allow for on-the-job search from a rural agriculture setting, the existence of an urban informal sector, preferential hiring of the better-educated, employment fixity, duality of production conditions and earnings levels within the rural sector, capital mobility, endogenous urban wage setting, risk aversion, and a system of demand for goods, among other factors.

As an early multisector labor-market model, the Harris-Todaro model set forth a principal alternative framework for policy analysis. It showed how employment and wage levels in one labor market reflect supply, demand, and institutional conditions not only in that labor market but also in other labor markets.

In terms of pro-poor economic growth, the Harris-Todaro model and other multisector-labor-market models can help policy makers avoid two mistakes. One is to assume that development efforts should be channeled to the sectors where the poor are. The other is to assume that efforts should always be focused on getting the poor out of the sectors in which they now are. Careful cost-benefit analysis based on well-specified labor-market models is required to decide among such alternatives.

SEE ALSO *Development Economics; Distortions; Dual Economy; Migration*

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Gary S. Fields

HART-CELLAR ACT

SEE *Immigrants, Black.*

HARTZ, LOUIS

1918–1986

Louis Hartz, the distinguished American political philosopher and intellectual historian, was to some degree a one-book celebrity scholar. His notable *The Liberal Tradition in America*, published in 1955, offered an original and influential interpretation of the American liberal paradigm that has remained at the center of debates over liberalism ever since. It was this book alone that defined Hartz's career.

Hartz was born in 1918 in Youngstown, Ohio, to Russian immigrant parents, and grew up in Omaha. He spent most of his professional life at Harvard University. Hartz graduated from Harvard College in 1940 (supported in part by a scholarship from the *Omaha World-Herald*, as well as by a job waiting tables), and earned his PhD from Harvard in 1946. Ten years later he was a professor in Harvard's Department of Government and the celebrated author of *The Liberal Tradition*. His Harvard lectures on eighteenth and nineteenth century European thought, and on American political theory and historiography, were notable and influential.

Hartz's doctoral dissertation on the political and economic doctrines behind constitutional and political thinking in Pennsylvania after the Revolution was published as *Economic Policy and Democratic Thought: Pennsylvania, 1776–1860*, and helped set the agenda for his thinking about American liberalism. His later work included a volume he edited called *The Founding of New Societies* (1964) and his lectures on European thought, edited by Paul Roazen and published in 1990 as *The Necessity of Choice: Nineteenth Century European Political Theory*. The collection of essays published in *The Founding of New Societies* used the American founding experience as a comparative template to examine other new constitutions in Canada, Australia, and elsewhere. It also served to highlight Hartz's own view of American liberalism as a unique manifestation rooted in a special history.

The core work in Hartz's lifelong study of liberalism in its American and European settings, however, was *The Liberal Tradition in America: An Interpretation of American Political Thought since the Revolution* ([1955] 1991); everything he taught and wrote revolved around its arguments. The book won both the Woodrow Wilson Prize in 1956 and the Lippincott Prize (for a significant work still in print fifteen years after its publication) several decades later. Samuel Beer's summary of the book's thesis—"America's democratic capitalism was so powerful that it excluded any ideas of socialism or Toryism"—only touched the surface of Hartz's argument, which focused on what Hartz understood to be America's defining narrative as a centrist society dominated by Locke's liberal con-

sensualism. Locke might have appeared as a revolutionary figure and Enlightenment leader to France in the eighteenth century, as that country was deeply bound by feudalism. But in America, where landed property and feudal jurisdictions had never taken hold, Locke was a benign model of liberal consensus politics.

An historian as well as a theorist, Hartz embedded his argument about America's putative centrist tendencies in the story of an exceptionalist country that, lacking a feudal past, was immune to socialist revolutionary appeals. In Hartz's pithy words, "one of the central characteristics of a nonfeudal society is that it lacks a genuine revolutionary tradition, the tradition which in Europe has been linked with the Puritan and French revolutions.… And this being the case, it also lacks a tradition of reaction: lacking Robespierre it lacks Maistre, lacking Sydney it lacks Charles II" (1991, p. 5). No feudalism, no socialism; no traditionalism, no radicalism, and hence no reaction against radicalism. The result in the United States was a nation that never strayed too far from the center. Those individuals who did stray, whether Southern "feudalists" or modern socialists, exhibited in Hartz's view a similar "fecklessness."

Hartz used his analysis of liberalism in America to examine liberalism and revolution around the world. He worried less about the tyranny of the majority—a "puppy dog forever tethered to a lion's leash"—than about whether people born equal could "ever understand peoples elsewhere that have to become so" (1991, p. 309). There is evidence enough today that they cannot.

Hartz became ill in the early 1970s and resigned from Harvard. His last years were tragic. He withdrew from family and friends and traveled the world with a kind of despondent urgency, stopping in London, Zurich, and New Delhi, and eventually reaching Turkey, where he died in 1986. A few years before his death he assembled extended but wildly uneven notes for a work to be called "A Synthesis of World History" (later privately printed as a typescript by Humanities Press in Zurich). This sprawling essay, an opus of Spenglerian ambitions, concludes with a turgid and frightening chapter on a Manichean "last battle" between Jihadists and pluralists. It envisioned an "explosion of fear" associated with a "drive for a single absolute" on the part of radical Islam and related movements, against which forces of diversity would be compelled to do battle—or witness the eclipse of civilization. Seen by many at the time as an expression of Hartz's psychological problems, this final unfinished work today seems to exhibit a kind of perverse prescience, and reminds us that even after he had ceased to function as a scholar and teacher, Hartz continued to evince an ingenious mind informed by a brilliant if perfervid imagination. It was Hartz's pedagogical and intellectual imagination that may explain why the author of a single great book written over a half century ago can continue to excite philosophers and historians into the new millennium.

SEE ALSO *Civilizations, Clash of; Democracy; Egalitarianism; Fundamentalism; Jihad; Liberalism; Tocqueville, Alexis de*

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HARVEY, DAVID

SEE *Geography.*

HATE CRIMES

Although crimes against individuals based on their race, religion, ethnicity, and sexual orientation have a long and ignoble history throughout the world, the term *hate crime* was first popularized in the United States. In 1985 three members of the U.S. House of Representatives introduced legislation requiring the U.S. government to collect and publish statistical information on the growing number of bias-motivated crimes committed throughout the country. Enacted in April 1990, the Hate Crimes Statistics Act requires the U.S. Department of Justice to acquire and publish data from local law enforcement agencies on crimes that "manifest prejudice based on race, religion, sexual orientation or ethnicity." The coverage was expanded to include disability in 1997. According to the

Federal Bureau of Investigation (FBI), "a hate crime, also known as a bias crime, is a criminal offense committed against a person, property, or society which is motivated, in whole or in part, by the offender's bias against a race, religion, disability, sexual orientation, or ethnicity/national origin."

The first FBI hate crimes report was published in 1993 and covered the calendar year 1991. Although this report, *Hate Crime Statistics*, is the official U.S. government tabulation of these crimes, some ethnic and other advocacy groups—including the National Asian Pacific American Legal Consortium and the National Coalition of Anti-Violence Programs, a gay rights organization—conduct their own annual audits of hate crimes. These groups claim that the FBI statistics underreport the number of hate crimes because victims are often afraid to contact law enforcement officials, fearing either stigmatization or the jeopardizing of their status as recent immigrants.

Prior to the passage of national hate crimes reporting legislation, the Anti-Defamation League (ADL)—the preeminent Jewish civil rights organization in the United States—drafted model hate crimes legislation in the early 1980s to punish criminal actions aimed at racial and other minority groups, including Jews. As of 2006, forty-six states and the District of Columbia have enacted legislation similar to the ADL model. These laws cover a wide variety of criminal activities, including vandalism directed at religious institutions and bias-motivated violence against individuals. Many states have enacted "penalty enhancement" statutes for hate crimes.

Some late twentieth-century bias-motivated crimes have received national attention. When a Hasidic Jewish driver accidentally ran over a seven-year-old African American boy in a Brooklyn, New York, neighborhood in 1991, an anti-Jewish riot ensued and local black youths murdered Yankel Rosenbaum, a visiting Australian scholar. On October 6, 1998, Matthew Shepard, a gay college student in Laramie, Wyoming, was savagely beaten because of his sexual orientation and later died. Earlier that year, James Byrd Jr., a forty-nine-year-old African American man was chained to a pickup truck in Jasper, Texas, and dragged to his death. His attackers were members of a white supremacist group.

Why should a hate crime be treated differently than any other criminal activity directed at individuals or property? What is the legal justification for enhancing the punishment for these crimes? These questions have persisted since the passage of the earliest hate crimes legislation and continue to provoke vigorous debate among legal scholars, legislators, and law enforcement officials. In his scholarly legal and philosophical defense of hate crime statutes, *Punishing Hate*, law professor Frederick M. Lawrence noted that:

> Bias crimes spread fear and intimidation beyond the immediate victims to those who share only racial characteristics with the victims. Members of the target group suffer injuries similar to those felt by the direct victim of the actual crime.… Bias crimes, therefore, cause a greater harm to a society's collective living standard than do parallel crimes … and thus warrant enhanced criminal punishment. (Lawrence 1999, p. 63)

Legal scholars James B. Jacobs and Kimberly Potter, however, suggest that hate crime laws are unnecessary and create new crime categories that "may exacerbate rather than ameliorate social schisms and conflict" (1998, p. 144). Despite the continuing intellectual debate about the merits of hate crime statutes, the constitutional basis for these laws has been affirmed in the 1993 Supreme Court decision *Wisconsin v. Mitchell*. In addition, some state courts have upheld the legality of these laws.

Outside the United States, some European countries have enacted laws to criminalize hate crimes. The Vienna Declaration and Programme of Action, adopted in 1993 by the United Nations World Conference on Human Rights, calls on governments around the world to adopt measures "to counter intolerance and related violence based on religion or belief" and other practices directed against different minority groups. In 2005 Human Rights First—formerly the Lawyers Committee for Human Rights—conducted a study of the fifty-five members of the OSCE (Organization for Security and Cooperation in Europe) and found that nineteen of the fifty-five OSCE member states had enacted legislation declaring that racist motivation in crimes is to be "considered an aggravating circumstance in sentencing" (McClintock 2005, p. vii). Only five surveyed OSCE countries had hate crime statutes for bias-motivated crimes based on sexual orientation. Most third world countries do not have hate crimes legislation comparable to the West; some Muslim countries, in fact, prosecute homosexual behavior and there is occasional government-sanctioned or citizen-sponsored violence directed at gay men and lesbians.

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Donald Altschiller

HAUSMAN TESTS

Hausman tests (Hausman 1978) are tests for econometric model misspecification based on a comparison of two different estimators of the model parameters. The estimators compared should have the properties that (1) under the null hypothesis of correct model specification both estimators are consistent for the "true parameters" of the model (those corresponding to the data generating process), whereas (2) under misspecification (the alternative hypothesis) the estimators should have differing probability limits. The former property ensures that the size of the test can be controlled asymptotically, and the latter property gives the test its power. Heuristically, the key idea is that when the model is correctly specified, the compared estimators will be close to one another, but when the model is misspecified, the compared estimators will be far apart.

A Hausman statistic is constructed as a function of the difference between the two estimators. The sampling distribution of the Hausman statistic determines how big a difference is too big to be compatible with the null hypothesis of correct specification. One performs a Hausman test by comparing the Hausman statistic to a critical value obtained from its sampling distribution, and rejecting the null hypothesis of correct specification if the Hausman statistic exceeds its critical value. The large sample distribution of the Hausman statistic is straightforward to derive; a high-level analysis appears below. This distribution simplifies usefully when one of the compared estimators is efficient under the null, as originally proposed by Jerry Hausman (1978).

Two examples originally considered by Hausman help illustrate the ideas. First, consider estimating the coefficients of a single equation, say the first, of a system of linear simultaneous equations. Provided (among other things) that the system of equations is correctly specified, it is a standard result that both the two-stage least squares (2SLS) and the three-stage least squares (3SLS) estimators of the parameters of this equation are consistent. Further, under standard assumptions, the 3SLS estimator is asymptotically efficient; in particular, it is efficient relative to the 2SLS estimator. The difference between 2SLS and 3SLS will tend to be small in this situation. On the other hand, if one of the equations of the system is misspecified, then 3SLS is generally an inconsistent estimator for the parameters of every equation of the system. If the first equation is not misspecified, then 2SLS remains consistent. The difference between 2SLS and 3SLS may be large in this situation. Thus, by comparing the 2SLS and 3SLS estimators for one or more equations of a system of linear simultaneous equations, one can gain insight into the question of whether some equations of that system may be misspecified.

Another example treated by Hausman involves comparison of two different estimators for the parameters of a panel data regression model. Specifically, it is well known that both the "random effects" and the "fixed effects" panel estimators are consistent under the assumption that the model is correctly specified and that (among other things) the regressors are independent of the "individual-specific effects" (the "random effects" assumption). In this case, the random effects estimator is also asymptotically efficient. The difference between the random effects and the fixed effects estimators will thus tend to be small. On the other hand, if the random effects assumption fails but the model is otherwise correctly specified, then the fixed effects estimator remains consistent, but the random effects estimator is inconsistent. The difference between the random effects and the fixed effects estimators may therefore be large. A comparison of the random and fixed effects estimators can thus shed light on the correctness of the random effects assumption.

The first application of this approach appears to be that of James Durbin (1954), who proposed a test for "errors in variables" in a linear regression, based on a comparison of ordinary least squares (OLS) and instrumental variables (IV) estimators. Under correct specification (no errors in variables), OLS is consistent and efficient, whereas IV is consistent but inefficient. Under misspecification, OLS is inconsistent but IV remains consistent. De-Min Wu (1973) also considered tests based on a comparison of OLS and IV estimators, describing applications to linear simultaneous equations (OLS vs. 2SLS) and dynamic panel models. Alice Nakamura and Masao Nakamura (1981) discuss the relations among the test statistics of Durbin (1954), Wu (1973), and Hausman (1978).

Although Hausman's initial motivation and examples concerned linear models and the orthogonality assumptions (e.g., independence) that are typically central to identification in econometric models, he particularly emphasizes the generality and unifying nature of the estimator comparison approach. Hausman's formal results apply not just to linear models, but to maximum likelihood methods generally. As Halbert White (1994, chap.

10.3) discusses, Hausman's approach further extends to quasi-maximum likelihood methods. This leads to useful specification tests based on two estimators such that (1) under partially correct specification both are consistent, but neither is necessarily efficient; and (2) under misspecification neither is necessarily consistent—it suffices merely that the estimators have differing probability limits.

Hausman's unifying approach extends even more broadly. As a straightforward illustration, we give a result establishing the large-sample properties of the Hausman statistic based on a comparison of two asymptotically linear estimators. A wide variety of econometric estimators, including quasi-maximum likelihood, method of moments, and empirical likelihood estimators are asymptotically linear.

ASSUMPTION A.1 (ASYMPTOTIC LINEARITY)

Suppose each of two estimators, say $\hat{\theta}_{1n}$ and $\hat{\theta}_{2n}$, is a random $q \times 1$ vector such that for finite $q \times 1$ nonstochastic vectors θ_j^*, $\hat{\theta}_{jn} \xrightarrow{p} \theta_j^*$, $j = 1, 2$. Suppose further that for each $j = 1, 2$ there exists a $q \times q$ nonstochastic matrix H_j^*, finite and nonsingular, and a random $q \times 1$ vector $s_{jn}^* = O_p(n^{-1/2})$ such that

$$\sqrt{n}\,(\hat{\theta}_{jn} - \theta_j^*) = H_j^{*-1}\sqrt{n}\; s_{jn}^* + o_p(1).$$

All limits here are taken as the sample size n tends to infinity. Our next assumption ensures the joint asymptotic normality of $\sqrt{n}\; s_{1n}^*$ and $\sqrt{n}\; s_{2n}^*$.

ASSUMPTION A.2 (JOINT ASYMPTOTIC NORMALITY)

For s_{jn}^* as in Assumption A.1, $j = 1, 2$, suppose that

$$\sqrt{n}\,(s_{1n}^{*\prime}, s_{2n}^{*\prime})' \xrightarrow{d} N(0, J^*),$$

where J^* is a finite $2q \times 2q$ nonstochastic matrix having $q \times q$ diagonal blocks J_{11}^*, J_{22}^* and $q \times q$ off-diagonal blocks J_{12}^*, $J_{21}^* = J_{12}^{*\prime}$.

Hausman statistics are based on the difference $\sqrt{n}\left(\hat{\theta}_{1n} - \hat{\theta}_{2n}\right)$. If Assumptions A.1 and A.2 hold and if, as can usually be arranged, the assumption of correct model specification ensures that $\theta_1^* = \theta_2^*$, then it follows straightforwardly that

$$\sqrt{n}\,(\hat{\theta}_{1n} - \theta_{2n}) \xrightarrow{d} N(0, V^*),$$

where

$$V^* \equiv H_1^{*-1} J_{11}^* H_1^{*-1\prime} - H_1^{*-1} J_{12}^* H_2^{*-1\prime} - H_2^{*-1} J_{21}^* H_1^{*-1\prime} + H_2^{*-1} J_{22}^* H_2^{*-1\prime}.$$

Under mild conditions, it is typically straightforward to obtain a covariance matrix estimator consistent for V^*. Let $\hat{V}_n$ be such an estimator. If V^* is nonsingular, then an asymptotic chi-squared statistic is delivered by the analog of the Wald statistic,

$$n\,(\hat{\theta}_{1n} - \hat{\theta}_{2n})'\; \hat{V}_n^{-1}(\hat{\theta}_{1n} - \hat{\theta}_{2n}).$$

Nevertheless, a common occurrence in applications is that V^* fails to be nonsingular, due to the singularity of J^*. A straightforward remedy for this is to consider a subvector of $\sqrt{n}\left(\hat{\theta}_{1n} - \hat{\theta}_{2n}\right)$ or, more generally, a linear combination $\sqrt{n}\; S\left(\hat{\theta}_{1n} - \hat{\theta}_{2n}\right)$, where S is a known finite nonstochastic $k \times q$ matrix, $k \leq q$, such that $S\,V^*\,S'$ is nonsingular. A Hausman statistic can then be computed as the quadratic form

$$H_n \equiv n\,(\hat{\theta}_{1n} - \hat{\theta}_{2n})'\; S'\,[S\,\hat{V}_n\,S']^{-1}\,S\,(\hat{\theta}_{1n} - \hat{\theta}_{2n}).$$

In testing partially correct specification, S can also play a useful role by selecting or combining only those coefficients consistently estimated under partially correct specification.

We can now formally state the large-sample properties of this Hausman statistic.

PROPOSITION 1

Suppose Assumptions A.1 and A.2 hold and that S is a known finite nonstochastic $k \times q$ matrix of full row rank. (i) If the model is correctly specified, and if correct model specification implies that $S(\theta_1^* - \theta_2^*) = 0$ and $\hat{V}_n \xrightarrow{p} V^*$, where $S\,V^*\,S'$ is nonsingular, then $H_n \xrightarrow{d} \chi_k^2$. (ii) If the model is misspecified, and if model misspecification implies that $S(\theta_1^* - \theta_2^*) \neq 0$ and $\hat{V}_n \xrightarrow{p} W^*$, where W^* is a finite, nonstochastic $q \times q$ matrix such that $S\,W^*\,S'$ is nonsingular, then for any sequence $\{c_n\}$, $c_n = o(n^{-1})$, $P[H_n > c_n] \to 1$.

The respective proofs of (i) and (ii) follow those of Theorems 8.6 and 8.16 of White (1994).

Part (i) establishes that under the null hypothesis of correct specification, the Hausman statistic is distributed asymptotically as chi-squared with k degrees of freedom (χ_k^2), delivering convenient asymptotic critical values. Part (ii) describes the behavior of the Hausman statistic under the global alternative of model misspecification. This establishes the consistency of the test (power approaching one) for sequences of critical values going to infinity with n (but more slowly than n), thus driving the probability of Type I error to zero.

An important caveat for part (ii) is the necessity of the requirement that misspecification entails $S(\theta_1^* - \theta_2^*) \neq 0$. As Alberto Holly (1982) has pointed out, this can fail for particular types of misspecification in combination with particular choices of compared estimators. The

Hausman statistic just given is thus not guaranteed to yield a test consistent against arbitrary model misspecification. Nevertheless, a clever modification of the Hausman statistic proposed by Herman Bierens (1988) gives a variant of the Hausman test that does have this consistency property (see also Bierens 1990).

As mentioned above, the asymptotic distribution simplifies usefully when one of the compared estimators is efficient under correct specification. Specifically, the asymptotic covariance matrix of the estimator difference simplifies to the difference of the asymptotic covariance matrices. With asymptotic linearity, this arises because typically when one of the compared estimators (say $\hat{\theta}_{2n}$) is asymptotically efficient, then $J_{22}^{*} = H_{2}^{*}$ and $J_{12}^{*} = H_{1}^{*}$ (see Bates and White 1993). Substitution into the expression for V^{*} above then gives the more convenient expression

$$V^{*} \equiv H_{1}^{*-1} J_{11}^{*} H_{1}^{*-1\prime} - H_{2}^{*-1}.$$

The first term is the asymptotic covariance matrix of $\hat{\theta}_{1n}$; the second term is that of $\hat{\theta}_{2n}$. A direct benefit of this expression is that it suggests simpler forms for the covariance estimator $\hat{V}_{n}$.

The specific form given above for the Hausman statistic is only one of several possible forms. Hausman describes a convenient version for linear regression applications that involves testing whether certain transformations of the original regressors have zero coefficients. Russell Davidson and James MacKinnon (1993) discuss further convenient versions of the Hausman test based on "double-length" regressions. Applying the results of White (1994, chap. 9) yields further variants of the Hausman statistic that have convenient computation properties.

The focus here has been on parametric versions of the Hausman test. The unifying principle of estimator comparison for specification testing also extends to comparing parametric and nonparametric estimators and to comparing nonparametric estimators. White and Yongmiao Hong (1999) give some relevant theory and examples for these cases.

SEE ALSO *Fixed Effects Regression; Random Effects Regression; Specification Error*

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Jerry A. Hausman
Halbert White

HAYEK, FRIEDRICH AUGUST VON

1899–1992

F. A. Hayek, as he is known throughout the English-speaking world, is generally considered to be the leading twentieth-century representative of classical, nineteenth-century liberalism and the foremost scourge of socialism. Hayek was a corecipient, with Gunnar Myrdal (1898–1987), of the Nobel Prize in Economic Science in 1974, awarded "for their pioneering work in the theory of money and economic fluctuations and for their penetrating analysis of the interdependence of economic, social and institutional phenomena" (Nobel Foundation).

Hayek was born in Vienna on May 8, 1899, into a family of academic distinction on both parental sides. Having served in the Austrian army as an artillery officer on the Piave front during the latter stages of World War I (1914–1918), he entered the University of Vienna and earned doctorates in both law (1921) and political science (1923). In 1927 he became director of the newly established Austrian Institute for Business Cycle Research. In January 1931 Hayek delivered a series of lectures at the London School of Economics and Political Science, subsequently published as *Prices and Production*. As a result of these lectures, he was appointed Tooke Professor of

Economic Science and Statistics in the University of London later that year. In 1950 he joined the interdisciplinary Committee on Social Thought at the University of Chicago as professor of social and moral sciences. He returned to Europe in 1962 as professor of economic policy at the University of Freiburg, Germany. In 1969 he accepted a visiting professorship at the University of Salzburg in his native Austria. Hayek died in Freiburg on March 23, 1992.

Hayek was a strong believer in the supreme power of ideas. In 1947 he convened a group of like-minded scholars dedicated to classical liberalism to a meeting in Vevey, Switzerland, and thus the Mont Pelerin Society was born. From the mid-1970s Hayek was a pivotal figure in the renaissance of Austrian economics in the United States, and his ideas have exerted increasing political influence through think tanks such as the Institute of Economic Affairs in London and the Washington-based Cato Institute.

Hayek has made lasting contributions not only to economics but also to legal philosophy, theoretical psychology, social anthropology, political philosophy, the methodology of the social sciences, and the history of ideas. The polymathic range, far from suggesting a lack of focus, is indicative of a magnificent architectonic unity to his work. Steeped in the teachings of the Austrian school of economics derived from Carl Menger (1840–1921), Friedrich von Wieser (1851–1926), and Eugen Böhm von Bawerk (1851–1914), his early work on economic theory focused on marrying monetary theory, trade-cycle theory, and the theory of capital. His policy recommendation of "waiting it out" during the years of the Great Depression brought him into immediate conflict with Keynesian notions of underinvestment and underconsumption. As Sir John Hicks (1904–1989) pointed out in a retrospective assessment, Hayek's model of the maladjusted time structure of production triggered by low interest rates is not so much a theory of fluctuation as a theory of growth. In this sense, Hayek's theory of overinvestment was much more applicable to the situation of the long-lasting Japanese recession of the 1980s and 1990s or to the predicament in the United States in the late 1990s when interest rates were held too low relative to higher expected returns on capital, encouraging excessive investment, reduced savings, and the biggest stock-market bubble in U.S. history. Given Hayek's objections to the possibility of measuring the money supply and of distinguishing sharply between money and other financial assets, it is full of irony to find him frequently dubbed "the father of monetarism."

It was also during his London years that Hayek, elaborating on an argument of his mentor, Ludwig von Mises (1881–1973), attended to the issue of rational economic calculation in planning under centralist socialism. His misgivings about the latter as a viable economic system were closely linked to his views on how knowledge is generated and disseminated in markets and paved the way for his notion of *competition as a discovery procedure* in a world where tastes and production techniques are frequently changing and knowledge about these matters is dispersed. Market transactions draw on the scattered—among market participants—bits of practical, local knowledge, facilitating increasingly complex layers of specialization of labor without relying on any directing agency. The role of market prices, however imperfect as signals they may be, is to enable their users to adapt to events and circumstances about whose existence they may not have any clue whatsoever. The interactions of market participants using their own specific knowledge for their own projects generate a *spontaneous order*. The essential point about such a regular pattern of activities is that (1) it is emphatically not the result of design, neither by a single nor by a group mind, and that (2) its complexity puts insuperable limitations on control and prediction of the overall behavior of the system. In this sense, Hayek's view of the workings of an economy is much more akin to biology than to mechanics.

Following in the footsteps of Scottish Enlightenment philosophers such as David Hume (1711–1776), Adam Smith (1723–1790), and Adam Ferguson (1723–1816), Hayek extended the notion of a spontaneously generated order to the evolution of social institutions such as law, language, and morals. The recognition of complex orders, and the nature of rules conducive to their formation and preservation, was the central enigma fueling Hayek's intellectual ambition. It took him almost fifty years to grasp its full significance and to put it as succinctly as possible. This was a remote, painstaking academic pursuit constituting Hayek's legacy as a scholar. But at the same time, he was a preacher possessed by an urge to save the world from collectivism.

SEE ALSO *Austrian Economics; Great Depression; Hume, David; Individualism; Keynes, John Maynard; Laissez Faire; Libertarianism; Liberty; Markets; Mises, Ludwig Edler von; Mont Pelerin Society; Scottish Moralists; Sraffa, Piero*

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Stephan Boehm

HAYMARKET SQUARE RIOT

The Haymarket Square riot was a bloody confrontation between Chicago police and protesting workers. The state repression that followed in its wake left a permanent mark on U.S. and international politics. On May 4, 1886, a group of workers met in Haymarket Square in Chicago to protest an earlier police attack on workers that had left six people dead. The city had recently been the center of a bitter nationwide fight concerning the right of workers to an eight-hour workday.

Approximately three thousand workers turned out for the Haymarket protest. The mayor of Chicago, Carter Harrison (1825–1893), attended the meeting and informed police officials that the audience and the speakers were peaceful. The mayor and most of the workers left by 10:20 p.m., when a light rain set in. Only 500 workers remained when 180 Chicago policemen arrived to disband the meeting. A police official who had been in political conflict with the mayor ordered the immediate evacuation of the public square.

Just after the evacuation command was shouted, a dynamite bomb was thrown into the midst of the police. Whether the bomb was thrown by an agent provocateur or a worker has never been determined. The police responded with indiscriminate gunfire, killing both police officers and workers in the square. By morning almost all of the deaths in Haymarket Square had been blamed on labor leaders. This was the story reported by major newspapers, both locally and nationally, and it was the conclusion immediately reached by law enforcement officials.

Although there was no evidence linking them to the crime, eight prominent labor leaders and anarchists were arrested and tried for murder. The judge instructed the jury that evidence linking them to the deaths in Haymarket Square was not necessary for conviction. After a blatantly biased trial, seven of the men were found guilty and sentenced to death. Four men—Albert Parsons, August Spies, George Engel, and Adolph Fischer—were hanged on November 11, 1887, a date commemorated long after as Black Friday. The dominant media of the time portrayed the trial, the verdict, and the executions as triumphs of law and order.

The impact of the Haymarket Square riot, both on the labor movement and on American politics, was long-lasting. In the short term the Haymarket incident, after interpretation by the media, sparked America's first red scare. Locally Chicago police banned public meetings and attacked labor leaders, anarchists, and socialists. The fact that four men had been executed for the public expression of controversial ideas had a negative effect on all of these groups. Nationally there was wider coordinated repression of such groups. Haymarket was blamed for destroying the Knights of Labor, then America's largest and most inclusive labor union.

In the long run, however, the impact in the United States and internationally was more positive. The Haymarket narrative dramatized what came to be called "the Chicago idea," which was that large labor unions could take concerted action to change economic, social, and political conditions. In addition the incident directly inspired the careers of future labor leaders, such as Bill Haywood (1869–1928) and Emma Goldman (1869–1940). The execution of the men, who became known as "the martyrs of Chicago," not only inspired labor leaders globally but also led to the designation of May 1 as an international labor holiday. In short, the Haymarket massacre resonated long afterward as an enduring symbol of the heroic age of the labor movement.

SEE ALSO *Anarchism; Labor; Law and Order; Marxism; Riots; Socialism; Unions*

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Richard Bradley

HAZARD FUNCTION

SEE *Duration Models; Probability Distributions.*

HAZARDOUS WASTE

SEE *Toxic Waste.*

HAZING

SEE *Rites of Passage.*

HEAD START

Head Start began as an eight-week summer demonstration program in 1965, a small part of a larger antipoverty effort of the Lyndon B. Johnson (1908–1973) administration. The program was created to promote school readiness by enhancing the cognitive and social development of low-income children through provision, to such children and their families, of health, educational, nutritional, social, and other services that are determined, based on family needs assessment, to be necessary. Low-income children are those who come from families whose annual income falls below official poverty thresholds, although up to 10 percent of Head Start participants in local groups are allowed to come from families who do not meet the low-income criterion. Head Start is one of the few antipoverty measures that has enjoyed continued bipartisan political support in the U.S. Congress, and by 1975 what became known as the National Head Start Association was formally organized as an advocacy group for the program. Head Start operates full-day (six hours per day for four or five days per week year round) in about 50 percent of its local programs, with many service options. Although Head Start has served families with children three years of age and under in some programs since 1967, in 1995 the Early Head Start program awarded the first formal grants for birth-to-age-three services.

By the early 2000s Head Start had served about nineteen million children since its inception. In 1968 Head Start began funding a program that eventually was called *Sesame Street*, a Carnegie Corporation preschool television show. During its 2004 fiscal year Head Start enrolled nearly 906,000 children. Of these, 52 percent were four-year-olds, another 34 percent were three-year-olds, and another 9 percent were under three years of age; 31.2 percent were Hispanic, 31.1 percent were black, and 26.9 percent were white; and 12.7 percent had physical or mental disabilities. The average cost per child was $7,222, for a total cost of nearly $6.1 billion.

Although Head Start is a federal program, it is administered through the states and operated by local public and private for-profit and not-for-profit agencies. Hence, there is a great diversity of programs across the country and within states, thereby making difficult efforts to evaluate how well Head Start "works" in the nation as a whole. A national reporting system was created only in 2002, and the U.S. Department of Health and Human Services issued its first Head Start impact report in 2005. Data based on that reporting system indicate that Head Start children achieve a 38 percent gain in letter recognition and improved prewriting skills, but they still lag behind their more advanced peers at entry into kindergarten and such gains are likely to dissipate over time. One regional study reported in 2000 by Sherri Oden and others found that girls who attended Head Start in Florida in 1970 to 1971 were significantly more likely to graduate high school or earn a GED (95% versus 81%) and significantly less likely to be arrested at age twenty-two (5% versus 15%) than were girls in the non–Head Start comparison group.

Two studies by Janet Currie and Duncan Thomas relied on national-level data to examine the effects of Head Start participants. Their 1995 study showed that Head Start was associated with significant gains in test scores among both whites and African Americans, but that African Americans quickly lost those gains. Head Start also reduced the probability that whites would repeat a grade, but no such effect was found for African Americans. In their 2000 study, Currie and Thomas again reported that test scores "faded out" more quickly for black children than for white children, but they also showed that black children who attended Head Start were more likely to attend schools of worse quality than other black children. No such pattern was found for white children. These results suggested that the "fade out" effects for black Head Start children may be due to the inferior schools they attend.

A long-term study based on national-level survey data reported by Richard Caputo in 2003 indicated that Head Start children had the lowest income to poverty ratios between 1985 and 1998 (2.6 versus 3.3 for nonpreschoolers and 3.8 for other preschoolers). In regard to economic mobility between 1985 and 1998, both Head Starters and other preschoolers had statistically similar and greater upward mobility (0.67 and 0.51 deciles respectively) than did nonpreschoolers (0.16 deciles). These findings, however, should be interpreted cautiously given the lack of experimental controls. More rigorous studies with random assignment into experimental and control groups are

necessary to provide more definitive knowledge about both the short-term and long-term effects of Head Start.

SEE ALSO *Education, USA; Great Society, The*

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Richard K. Caputo

HEAD START EXPERIMENTS

With growing concern about the number of children living in poverty in the United States, the Head Start program was initiated in 1965 as Project Head Start, one component in the "war on poverty." Originally conceived as an eight-week summer pilot program implemented in nearly 2,500 communities across the country, the first trial served 500,000 four- and five-year-old children. From this initial beginning, Head Start programs quickly expanded to nine-month and even full-year programs, either half-day or full-day. As of 2006, the Head Start program served about 900,000 three- and four-year-old children nationally in nearly 19,000 centers for a total annual cost of $6.8 billion. Over time, the reach of the program has been substantial: Between 1965 and 2006, Head Start has enrolled more than twenty-four million children.

CHALLENGES OF PROGRAM EVALUATION

By providing a comprehensive set of education, health, and social services, Head Start aimed to counteract the detrimental influences of poverty and prepare children academically and socially for school entry. From its inception, there has been an interest in understanding whether Head Start indeed achieves this objective. However, a comparison of outcomes for children who participated in Head Start with those who did not would not measure the true effect of Head Start if program participants are systematically different from nonparticipants. For example, Head Start participants are on average from poorer families and they may come from families whose parents are more motivated to see their children succeed. These selectivity factors could confound efforts to measure the true effects of Head Start participation.

Ideally, we want to measure the effects of Head Start on children's outcomes compared to what those outcomes would have been for the same children in the absence of the program. Since it is not possible to observe the same children both participating and not participating in the program, researchers turn to experimental and quasi-experimental methods to assess program effects. Well-designed and implemented randomized control trials—with study participants randomly assigned to participate in the program or remain in the control group—remain the gold standard among social science evaluation methods. Potential selectivity bias is eliminated because program participation is determined at random. A second-best alternative is the use of quasi-experimental methods using data on participants and nonparticipants where statistical methods are employed to minimize any selectivity bias.

The history of Head Start evaluations reveals many of the challenges associated with conducting systematic scientific evaluations of large-scale social programs. First, while a randomized control trial is the gold standard, implementation of such experiments may not be compatible with the objectives of delivering social services. For example, such experiments require resources that could alternatively be used for program delivery, and it is often considered unethical to withhold program services for a control group. Second, while much of the initial focus of Head Start supporters was on the potential short-term gains in IQ, other evidence indicated that the benefits of Head Start may be both broader and longer-lasting. In the context of experimental evaluations, this requires careful measurement of multiple outcomes and the ability to con-

duct a longitudinal evaluation that follows treatment and control-group children years or even decades into the future. Finally, Head Start is not one uniform national program. Rather, there is tremendous variation across program sites in the nature and delivery of program services. This variation means that evaluations of selected Head Start programs may not represent the effects on average for the country as a whole.

EARLY EVALUATION EFFORTS

Until the 1998 congressional reauthorization of Head Start, there was no nationally representative evaluation of the program using a randomized experimental design. Early evaluation efforts sometimes used experimental designs to study local area programs, or quasi-experimental designs to study larger, national samples of children who participated in Head Start and comparison children who did not. Results from this early body of research were potentially compromised by small sample sizes, high rates of attrition, nonrepresentative samples, and the selectivity of program participation. Such potential biases were also present in the seventy-six studies that were the focus of a meta-analysis of the literature known as the Head Start Evaluation, Synthesis, and Utilization Project (McKey et al. 1985).

Despite these limitations, the conclusion that emerged from this meta-analysis in the mid-1980s and the literature that preceded it was that Head Start could generate immediate cognitive benefits (e.g., higher IQ scores or achievement scores) for participating children, but those benefits did not persist after the first few years of elementary school as the gap between Head Start and non-Head Start children narrowed. There was some evidence that Head Start participants showed other improved outcomes over nonparticipants, such as lower rates of grade repetition and special education use, as well as physical health benefits. Similar findings had also been demonstrated for smaller-scale demonstration programs that offer one or two years of high-quality preschool education, although the magnitude of the effects for these smaller-scale and more resource-intensive programs were often larger than those measured for Head Start participants. More recent syntheses of this literature suggest that while the fade-out (relative to nonparticipants) of IQ gains from participation in Head Start or other high-quality early intervention programs may be real, the fade-out of achievement test scores may result from flaws in evaluation designs and follow-up procedures. This explanation can help reconcile the apparent achievement fade-out with the longer-lasting effects measured for such educational outcomes as grade repetition and special education use.

LATER EVALUATION EFFORTS

In the absence of large-scale experimental studies, researchers in the 1990s turned to nationally representative survey samples to estimate the short- and long-term benefits of participating in Head Start. Using rigorous quasi-experimental methods, these studies demonstrated that Head Start had favorable and more sustained effects on test scores and other school outcomes for white children, but the initial cognitive benefits for black children faded with time. For both white and black children, Head Start participation led to higher immunization rates but had no effect on nutritional status. Analysis of longer-term data also showed favorable effects of Head Start on high school completion, college attendance, and criminal activity, but again the benefits differed by race and ethnicity.

In the 1998 reauthorization of Head Start, Congress mandated a national study to measure the effects of Head Start on school readiness, broadly defined to include cognitive development, general knowledge, approaches to learning, social and emotional development, health status, and access to health care. The study also aims to evaluate the effects on parental practices that influence school readiness and the conditions under which the program is most effective and for which children. The evaluation underway randomly assigned about five thousand newly entering three- and four-year-old children applying for Head Start in nearly four hundred randomly selected Head Start centers to either participate in Head Start or be in a non-Head Start group (with access to non-Head Start programs in the community as selected by the parents). Findings from the first-year follow-up released in 2005 showed small to moderate gains for Head Start children in most of the domains listed above for entering three-year-olds, while fewer effects were found for the four-year-olds. The children in the study will continue to be followed through first grade, and possibly beyond, with an effort to identify overall program impacts as well as how the effects of Head Start vary with program characteristics or for different types of children.

Other demonstration projects implemented in the 1990s assessed other aspects of the Head Start program. One such evaluation—the National Head Start/Public School Early Childhood Transition Demonstration Study implemented from 1991 to 1998—was designed to test the effects of providing comprehensive transition supports (e.g., social services to strengthen families and links to school, services to increase parent involvement, and promotion of developmentally appropriate activities in the classroom curriculum) for Head Start children and their families, schools, and communities in kindergarten through third grade. The study design randomly assigned more than 450 schools in thirty-one sites to the treatment

or control conditions, with more than eight thousand former Head Start children studied. While inferences that could be drawn about the effects of the transition supports were limited by the site-to-site variation in the treatment conditions and similar activities implemented in control schools, the study documented consistently large gains among former Head Start children (both treatment and control children) in reading and math achievement in these early grades, as well as substantial parent involvement in school and home activities.

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Lynn A. Karoly

HEALTH ECONOMICS

An enormous expansion in the scope and effectiveness of medical care services to diagnose and treat diseases began in the 1930s with the scientific research and development techniques that produced the first antibiotics. Those advances have been followed by continual changes in the organization of the institutions that constitute the supply and demand sides of the medical service industry, continual changes in pricing and payment mechanisms, and continual growth in the amount of nations' resources that are allocated to medical services.

Theses changes have been universal among countries, even in the presence of substantial heterogeneity in institutional and market structures for health care delivery and financing. The United Kingdom and the United States are examples of nations with very different structures. In 1946 the United Kingdom established universal, government-funded medical insurance, and hospital and medical specialists' services are produced by the government. In the United States, medical insurance is not universal; government expenditure is substantial, but provides coverage for only selected populations; physician practices are privately owned and organized on a for-profit basis; and most hospitals are privately owned but organized as nonprofit-based corporations. Yet, between 1960 and 2004, total health care expenditure as a share of gross domestic profit doubled in the United Kingdom and tripled in the United States (Organisation for Economic Co-operation and Development 2007).

Health economics applies the tools of microeconomics to individual and societal decisions regarding the allocation and distribution of resources to the production of health and health care services. Kenneth Arrow's 1963 article "Uncertainty and the Welfare Economics of Medical Care" established health economics as a field by making the case that virtually all of the special features of the medical care industry stem from the prevalence of risk and uncertainty, arguing that "the failure of the market to insure against uncertainties has created many social institutions in which the usual assumptions of the market are to some extent contradicted" (Arrow 1963, p. 946).

Demand- and supply-side analysis is the primary theoretical tool in health economics. On the demand side, health is characterized as a stock of human capital (Schultz 1961; Becker 1962) that produces both direct utility and investment services—capacity to function—over the life cycle. With aging it depreciates naturally and is increasingly subject to shocks from diseases. Replacement health cannot be purchased—it must be produced by combining personal resources such as time and health-affecting behaviors with purchased health or medical care services (Grossman 1972). On the supply side, purchased health care services are regulated by government and produced in hospitals, physicians' offices, and clinics, and long-term care facilities by physicians, nurses, and other medical care providers using pharmaceutical and other diagnostic and treatment technologies.

The role of third-party payors—predominately employers and governments—constitutes a distinguishing feature of health economics. Given third-party payors, consumers often are not aware of the full range of alternative health care services and do not directly face, or even

know, the resource cost—the full price—of their health care. Most consumers are enrolled in managed care type plans that have contracts with providers. Those contracts influence providers' treatment decisions by specifying which services are covered and what the payment mechanism is between the plan and medical services provider; the consumer does not see the plan-provider contract.

Health economics draws on tools used in several other fields to address this configuration of health and health care institutional characteristics: from public finance, the major government role; from labor economics, the major employer role; from industrial organization, restricted entry and nonprofit organizational form; and from econometrics, quantitative answers to policy-related questions. Variations of cost-effectiveness analysis are more frequently used by health economists in nations such as the United Kingdom, where government-financed third-party coverage is complete.

Much growth in the field of health economics is policy oriented. This can be attributed to the fact that governments are major third-party payors and face the fiscal implications of the costs associated with the expansion in the scope of medical care services. Thus, the research has focused on societal decisions regarding the efficient (cost-containing) allocation of resources to the production of health care services. Research concerning the distributional component of enhancing social welfare (Arrow 1963) has received much less attention in health economics. This has implications for policy because there is substantial evidence of nonrandom heterogeneity in health stock and health outcomes among demographic groups. Racial and ethnic health disparities continue to persist whether health care coverage is universal and provided by government, as in the United Kingdom (Townsend and Davidson 1982), or provided through fragmented systems of imperfect markets that include private and government third parties, as in the United States (U.S. Department of Health and Human Services 2000).

Viewed as human capital, investment in the health of the most vulnerable members of society may be a powerful tool for promoting growth. Public investment in programs that eliminate acquired immunodeficiency syndrome (HIV/AIDS) enhances social welfare and facilitates economic growth in developing African countries. Programs that increase breast-feeding enhance the health of infants and thereby generate positive long-term returns. But John Akin and colleagues reported that in Sri Lanka, highly educated mothers from families in the highest income or asset categories were among the least likely to breast-feed (Akin, Bilsborrow, Guilkey et al. 1981); thus the social rate of return from investment in health may be particularly high for developing countries, but the economic and policy issues are complex. Additional health economics studies can help clarify these issues.

SEE ALSO *Arrow, Kenneth J.; Developing Countries; Development Economics; Disease; Health in Developing Countries; Microeconomics; Modernization; Public Health; Risk; Sanitation; Uncertainty*

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Alvin E. Headen Jr.

HEALTH IN DEVELOPING COUNTRIES

The most commonly accepted definition of *health* was proposed by the World Health Organization (WHO) in its 1948 constitution: "Health is a state of complete physical, social, and mental well-being and not merely the absence of disease or infirmity." Some academics argue that this definition is utopian, and they propose a more narrow definition that considers health to be "the absence of illness" (Alban and Christiansen 1995).

Health is regarded by the WHO as a fundamental human right. The preamble of the WHO constitution states that "the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being." However, people do not enjoy the same

standard of health in all parts of the world. Many factors influence health status and a country's ability to provide quality health services for its people. Researchers on health in developing countries try to make sense of these factors and to understand their complex links in "low- and middle-income countries in which most people have a lower standard of living with access to fewer goods and services" (World Bank 2003).

Research on health in developing countries can include the study of clinical and epidemiological aspects of diseases, such as variations in disease frequency in different populations; the natural processes of biology and their relation to disease; the environmental and social determinants of health; and the development, implementation, and evaluation of health policy, which can include, among other things, how health systems should be organized.

The range of disciplines and professionals represented in the study of health in developing countries is very broad. This group can include epidemiologists, sociologists, physiologists, economists, mathematicians, historians, health policy analysts, nurses, doctors, and pharmacists. In recent years, there has been a move toward establishing research partnerships of interdisciplinary teams from both developed and developing countries in an effort to find solutions to the health challenges facing developing countries in the new millennium. The spectrum of diseases studied is wide, and there are major research groups working on topics that include reproductive health, undernutrition, and infectious disease (e.g., tuberculosis, malaria, diarrheal diseases, HIV/AIDS); noncommunicable disease and injury (e.g., diabetes, mental disorders, interpersonal violence); risk factors (e.g., water supply, sanitation, and hygiene); and the consequences of disease and injury (e.g., learning and developmental disabilities).

The global community acknowledges the need to tackle health-related conditions in order to support aspirations toward development of people living in developing countries. An example of this includes the United Nations Millennium Declaration (2000), signed by 189 countries, which includes eight Millennium Development Goals, three of which are related to health: reducing child mortality; improving maternal health; and combating HIV/AIDS, malaria, and other diseases (Travis et al. 2001). The following sections explore how some of these goals are being addressed.

HIV/AIDS poses a serious health, social, and economic threat worldwide, and both rapid action and drastic initiatives are needed to care for adults and children living with and affected by HIV/AIDS, as well as to prevent further infections from occurring. By 2004 AIDS had killed more than twenty million people, and an estimated thirty-four to forty-six million people were living with HIV/AIDS (WHO 2004). The solutions proposed by most experts include implementing a comprehensive HIV/AIDS strategy that links prevention, treatment, care, and support for people living with the virus. Providing effective antiretroviral treatment and new care strategies to strengthen existing prevention programs can result in the improvement of health, the reduction of HIV/AIDS stigma, and the rebuilding of social capital while restoring economic growth (WHO 2004).

According to the WHO's *World Health Report 2003*, around 530,000 women die each year in pregnancy or childbirth, and 10.6 million children die every year before they reach the age of five. In many countries, universal access to health care for women and children is not assured. Women and children are often excluded from health-care services, which reinforces inequity in health delivery and increases barriers to progress. The WHO report also states that mortality could be reduced through a wider use of key interventions and a continuum of care for mother and child. Some cost-effective interventions include: expanding immunization coverage; treating diarrhea; preventing the transmission of and mortality from malaria; ensuring the widespread distribution of key micronutrients; improving prenatal and delivery care; and expanding the use of measures aimed at preventing mother-to-child transmission of HIV (Jamison et al. 2006). The most pressing task for reducing child mortality, improving maternal health, and treating and preventing HIV/AIDS consists of putting in place the health-care workforce needed to implement these interventions.

The effectiveness of health systems varies dramatically around the globe, even among countries with similar levels of income and health expenditure. In 2000 the WHO carried out the first analysis assessing the performance of health systems worldwide. The report emphasized that failures in health systems had a more severe impact on the poor. According to the report, out-of-pocket payments for health care exacerbate poverty. In light of this finding, governments should pursue policies that expand insurance and prepayment schemes as a way of reducing excessive out-of-pocket expenses for health care (WHO 2000; van Doorslaer et al. 2006).

International involvement in health care remains common in developing countries, largely because the provision of health care is expensive and few countries can afford universal coverage. International involvement includes the work of multilateral organizations such as the United Nations, bilateral or government-to-government organizations, and the global civil society. In addition, a wide range of global partnerships to finance the fight against major diseases in developing and middle-income countries have flourished since the mid-1990s.

Organizations participating in such partnerships include the Global Fund to Fight AIDS, Tuberculosis, and Malaria; the Bill and Melinda Gates Foundation; and the World Bank Multi-country HIV/AIDS Program. It is still too early to assess or predict the effects of these initiatives on health systems. The funds of such initiatives must be managed with caution, and they face daunting problems associated with coordinating their efforts within countries (Brugha 2004; Coovadia and Hadingham 2005).

In general, two approaches to delivering health interventions are prevalent. These approaches date back to a debate that started when the Alma-Ata Declaration was adopted at the International Conference on Primary Health Care in Alma-Ata (Almaty), Kazakhstan, in 1978. At that time, the debate centered on two distinctive views on primary health care (PHC) intervention. The first approach, referred to as *selective PHC*, focuses on diseases with the highest prevalence and morbidity, the highest risk of mortality, and the greatest possibility of control in terms of cost and effectiveness of the intervention (Walsh and Warren 1979). The second approach, named *comprehensive PHC*, considers health to be more than the absence of disease, and defines health in the holistic sense. Comprehensive PHC considers equity, multisectoral approaches, and community involvement as critical components of any health intervention (Rifkin and Walt 1986).

The debate between advocates of these two approaches has not completely faded, but it has been obscured by the fact that many governments and global health partnerships have implemented the selective PHC approach to tackle HIV/AIDS, as well as tuberculosis and malaria. However, the WHO's *World Health Report 2003* stressed that the principles of the Alma-Ata Declaration remain valid, and should be reinterpreted in light of dramatic changes in the health field since 1978.

Health systems in developing countries need to be strengthened in view of the global health challenges facing them, including the health-care workforce crisis, a lack of financial resources, and poorly organized and financed health systems (WHO 2005). *The World Health Report 2003* indicates that despite many reforms, inadequate progress has been made in building health systems that promote collective improvement in health. Solutions could include offering more training for local officials, strengthening health-care infrastructure through restructuring, and developing accountability mechanisms and a larger role for civil society. However, experts agree that context-specific strategies and responses are essential, and goals and priorities should be established and tailored to each country's context (Sepúlveda 2006). Finally, there is a need for greater research on epidemiology and health systems to improve the efficiency and reduce the costs of available interventions, as well as biomedical research to develop new tools for dealing with emerging health problems (Sepúlveda 2006).

SEE ALSO *AIDS/HIV in Developing Countries, Impact of; Developing Countries; Development, Rural; Disease; Ethno-epidemiological Methodology; Health Economics; Human Rights; Public Health; Sanitation; Toilets; World Health Organization*

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Helena Legido-Quigley

HEARSAY

In legal cases where the primary witness is a child, the courts face a dilemma: They must attempt to prosecute alleged criminals while also protecting child eyewitnesses. One way that the courts have attempted to deal with this dilemma has been to have a hearsay witness testify in place of the child eyewitness. In the U.S. legal system, *hearsay* is defined as "a statement, other than one made by the declarant while testifying at the trial or hearing, offered in evidence to prove the truth of the matter asserted" (Federal Rules of Evidence 801[c]). (The *declarant* is the witness of the original event).

Hearsay statements have not traditionally been allowed in the courts for several reasons. Not only is the veracity of hearsay testimony questionable, but hearsay testimony may also violate the defendant's Sixth and Fourteenth Amendment rights to due process and to confront the accuser. However, there are still twenty-nine exceptions to the hearsay rule under the Federal Rules of Evidence, allowing hearsay testimony to be admissible in numerous instances.

The majority of these exceptions to the hearsay rule (twenty-three) are made when the declarant is available to testify. For these exceptions, the statement made by the declarant is seen as so reliable by the courts that the declarant does not have to testify. For example, these statements may relate to official written documents, or a statement may have been made for the purpose of medical treatment and therefore may be admissible under the *medical diagnosis or treatment* exception (Federal Rules of Evidence 803[4]). There are also several exceptions to the hearsay rule that are made only when the declarant is unavailable to testify. For example, if the declarant is not available to testify, then under the *statement against interest* exception (Federal Rules of Evidence 804[3]), a declarant's prior statement may be admissible if it is self-incriminating. However, these statements are viewed by the courts as less reliable than the statements that are admissible when the declarant is present.

To accommodate cases where the declarant is a child who was allegedly abused, most states have special exceptions to the hearsay rule. The goal of such exceptions is to protect the child from the trauma of in-court testimony, while still providing the courts with a means of pursuing legal cases involving child victims. However, there are many problems with the use of hearsay testimony, including the inability of the prosecution to cross-examine the eyewitness and the fact that the declarant would not be under oath while making the original statement. Also, the jury will not be able to use the demeanor of the child as an aid in determining his or her accuracy. Finally, when a hearsay witness testifies in place of a child eyewitness or victim, there is the possibility that the hearsay witness either misunderstood the child or is fabricating the child's statements, allowing further potential distortions in the declarant's original statements.

Research evaluating the accuracy of hearsay testimony suggests that information is indeed lost when hearsay is used in place of the child's testimony. Research indicates that while the interviewers of children tend to give complete and accurate reports of the gist of their interviews, this is not the case when interviewers are asked to report the types and content of the questions they asked children. Interviewers tend to report less than 50 percent of their own utterances made during the interview and 20 percent or less of the types of questions they asked the children. Interviewers consistently report more free-recall prompts and fewer suggestive or leading prompts than were actually used, making the interview of the child appear to be more spontaneous than it really was. Therefore, jurors who are exposed to the testimony of a hearsay witness are likely to think that the child's statements were more spontaneous than they were in reality, possibly leading jurors to be overly confident in the accuracy of the disclosure.

Although research demonstrates that hearsay witnesses leave out a substantial amount of information about how the child's statement was elicited, jurors' reactions to hearsay testimony do not suggest that jurors are sensitive to this lack of information. For example, mock jurors exposed to typical gist hearsay testimony tend to think that children were interviewed in a less suggestive manner than jurors exposed to the actual interview. Therefore, jurors who were only exposed to hearsay testimony did not seem to understand how the interview of the child was really conducted. Also, in research involving child sexual abuse cases, adult hearsay witnesses are generally seen as more accurate, confident, consistent, truthful, in possession of better memory abilities, and less suggestible than child witnesses. And not surprisingly, hearsay testimony tends to be at least as effective as the child's testimony in producing pro-prosecution ratings and more effective than having no witness testify.

Specific characteristics of an individual trial are also likely to influence trial results in cases involving hearsay testimony. For example, the exception under which hearsay is admitted, the child's or the hearsay witness's appearance of credibility, the nature of the abuse, the use of multiple hearsay witnesses, and the child's demeanor when testifying are all likely to affect trial results. However, these case characteristics have yet to be explored through research.

SEE ALSO *Psychology*

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Julie A. Buck

HEAVEN

Heaven is one of the most common names for a positive location or situation for humans in the afterlife. Different religions use different names for such an otherworldly circumstance, but few fail to minister to the human impulse and need to imagine and realize some sort of continuation or transformation of life after physical death. Until recent times life expectancy was very brief. People had to see their parents die young and, healthcare being what it was, they often saw their children die as well. In the face of this sense of loss, it was only natural that human yearning for meaning and reward focused on some sort of heaven. Participants in various faith communities (i.e., "religions") have often borrowed details of heaven envisioned by other faith communities.

At other times, visionaries within one religious tradition might reject the heaven in other traditions, as they vied for supremacy. These competing visions of heaven were both natural and useful; natural because human life took on more value with the promise that it would be extended or transformed, and useful because claims about heaven attracted new adherents and could not be disproved by rival claims. Seers, prophets, revealers, and authors of holy books could claim to have come from or visited other realms, but in normal human experience people did not have neighbors or fellow worshipers who had returned to earth or come back from the dead to report on the place that was their reward and destiny. The absence of certifiable signs did not mean the end of heaven; if anything, it stimulated imaginations. Heaven came to be a major aspect of revelation in most holy books.

Ideas of heaven that can be traced to ancient Egyptian and Mesopotamian civilizations have been highly influential on Western conceptions of the afterlife. These cultures did not leave written descriptions of heaven, but their conceptions of the afterlife can be deduced from temples, tombs, and monuments. Egyptian heaven, judging from representations in art adorning pyramids and tombs, was an attractive stage or place for pharaohs and other exalted humans, who needed sustenance and comfort and were served by slaves in the life to come. In Mesopotamia, evidence suggests, people believed that heaven was "above," and references to a vertical dimension are present in many depictions of ritual found in tombs. "Heaven" was less often found on the horizontal level, though some paradises were pictured as bountiful and blessed utopias established here on earth. "Heaven" was still less frequently "below," and what lay there was usually a shadowy nether existence or a place of eternal misery. Even in the modern world, believers in many faiths picture a literal place "up there"; all but instinctively, people look up or point up to locate heaven.

Among the Semitic peoples, who were most influential in the development of Judaism, Christianity, and Islam, the dominant concepts of the afterlife originated in Israel and in the Hebrew Scriptures. It surprises many whose faith derives from Hebrew scriptures that no very vivid heaven is promised or pictured in them. The abode of the dead was Sheol, a largely featureless and limited place. In later Judaism, as a reaction to captivity, military defeats, and other disasters, many in Israel did begin to make apocalyptic predictions. Many of these predictions were of coming catastrophes, but some foresaw the arrival of the Creator, the God of Israel, and a coming heaven on earth. In this environment, Jesus of Nazareth could take

for granted contemporary pictures of heaven, fostered mainly by the party of the Pharisees, just as he could point to another school, the Sadducees, as being deficient because they did not believe in an afterlife.

The New Testament offers many promises and pictures of paradise or heaven, the reward of those who properly follow Christ, or the gift to those who believe in him. For Christians, Paradise meant being in the presence of God, along with angelic beings and other "saints," amid pleasures revealed in parables or vividly described in the visionary biblical books. During Christianity's first three centuries, many Christians endured persecution, which proved a great stimulus to the paradisiacal imagination. When Christianity began to prosper and become established, Christian images of heaven and its promises took on triumphal and lavish elements.

In the modern world, in the face of new understandings of the physical universe, heaven as a place "above" survived only metaphorically and was regarded by many as an obsolete concept. At the same time, opinion polls continually found clear majorities believing in some sort of heaven. As people became aware of cultures other than their own, they also learned of the vision of heaven in other religions. Muslims and Christians, especially when in conflict, came to be aware of each other's promises. In the Qur'an, poetic language and lavish promises of paradise inspired Muslims to devotion, but also often inspired *jihad* ("holy cause") and even martyrdom. Anti-Muslim propagandists publicized and exaggerated some references in the Qur'an to virgins who would be at the command of martyrs in heaven.

Buddhism teaches the concept of *Nirvana*, a means by which or a place where one is removed from the travails and suffering of this world, though Buddhists do not equate Nirvana with heaven. Hindus in their many texts and religious expressions have imagined many benign and blissful versions of an afterlife, including a kind of heaven, Swarga loka, where one remains only temporarily. In Hinduism, revealed and foreseen heavens tended to be paired, as they are in other faiths, with prescriptions on how to live in order to attain them.

For all the belief in heaven, it must be said that often it has become recessive in religious teaching. Karl Marx thought of religion as the opium of the people, offering a haven in a heartless world and what critics colloquially dismissed as "pie in the sky by and by." Many of the faithful professed that they were not believers in God in order to get such rewards, but for intrinsic reasons. If the belief in heaven as a reward survives, it must be said that for many this belief is casual, minimal, not a primary motivating force. At the same time, as funeral liturgies and sermons in some religions, notably Christianity, suggest, preaching about an angel-filled heaven of bliss serves as a comfort to millions who mourn a departed loved one.

SEE ALSO *Hell; Religion*

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Martin E. Marty

HECKIT

SEE *Tobit.*

HECKMAN SELECTION CORRECTION PROCEDURE

The Heckman selection correction procedure, introduced by American economist James J. Heckman, is a statistical solution to a form of sample selection bias. Sample selection bias can emerge when a population parameter of interest is estimated with a sample obtained from that population by other than random means. Such sampling yields a distorted empirical representation of the population of interest with which to estimate such parameters (Heckman 1990), possibly leading to biased estimates of them. Heckman (1979) was specifically concerned with this possibility in a certain regression context.

Suppose that we are interested in estimating the population regression model

$$y = \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + \varepsilon_1.$$

With a truly random sample from the population of interest, it should be straightforward to estimate β_0, β_1, and β_2 via ordinary least squares. Suppose, however, that we observe y only if the units of observation in that random sample make some decision. For instance, we might observe y only if

$$v^* = \gamma_0 + \gamma_1 \cdot x_1 + \gamma_2 \cdot x_2 + \varepsilon_2 > 0$$

or

$$\varepsilon_2 > -\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2$$

This allows us to characterize the sample selection bias that might emerge from attempting to estimate the regression with only the subsample for whom we observe *y*.

We wish to evaluate the population expectation

$$\begin{aligned} E(y) &= E(\beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + \varepsilon_1) \\ &= \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + E(\varepsilon_1) \\ &= \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 \end{aligned}$$

However, if we observe *y* only when $v^* > 0$, available data allows us to evaluate only the expectation

$$\begin{aligned} E(y) &= (\beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + E(\varepsilon_1 \mid v^* > 0) \\ &= \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + E(\varepsilon_1 \mid \varepsilon_2 > -\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2) \end{aligned}$$

In this setting, it will generally not be possible to separately identify β_0, β_1, and β_2. To see this more clearly, assume that

$$E(\varepsilon_1 \mid \varepsilon_2 > -\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2) \neq 0$$

and consider a linear approximation of $E(\varepsilon_1 \mid \varepsilon_2 > -\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2)$,

$$\bar{\omega}_0 + \bar{\omega}_1 \cdot x_1 + \bar{\omega}_2 \cdot x_2 + \zeta$$

where $E(\zeta) = 0$. Then, the overall expectation that can be gleaned from available data would be

$$\begin{aligned} E(y) &= \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + E(\varepsilon_1 \mid v^* > 0) \\ &= \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + E(\varepsilon_1 \mid \varepsilon_2 > -\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2) \\ &= \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + \bar{\omega}_0 + \bar{\omega}_1 \cdot x_1 + \bar{\omega}_2 \cdot x_2 \\ &\neq \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 \end{aligned}$$

Thus, in general, one would not be able to recover valid estimates of β_0, β_1, and β_2 with the subsample for which we observe *y*. The only exception is when

$$\begin{aligned} &E(\varepsilon_1 \mid \varepsilon_2 > -\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2) \\ &= E(\varepsilon_1) = 0 \end{aligned}$$

In other words, if ε_1 and ε_2 are independent, sample selection bias disappears.

The Heckman selection correction procedure can recover unbiased estimates of β_0, β_1, and β_2 with available data (i.e., where x_1 and x_2 are observed for the full random sample from the population of interest and *y* is observed only for the subsample for which $v^* > 0$). The departure point for this technique is to recognize that the sample selection bias problem really stems from a type of specification error. With the subsample for which *y* is observed we estimate

$$\begin{aligned} E(y) &= \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + E(\varepsilon_1 \mid v^* > 0) \\ &= \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + E(\varepsilon_1 \mid \varepsilon_2 > -\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2) \end{aligned}$$

The problem, from the standpoint of recovering unbiased estimates of β_0, β_1, and β_2, is that we do not observe $E(\varepsilon_1 \mid \varepsilon_2 > \gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2)$ (which is a function of x_1 and x_2) and hence cannot separately identify β_0, β_1, and β_2 from it. However, if one could form an estimate of $E(\varepsilon_1 \mid \varepsilon_2 > \gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2)$ and regress *y* on x_1, x_2, and that estimate, it would be possible to identify separately β_0, β_1, and β_2.

To form an estimate of

$$E(\varepsilon_1 \mid \varepsilon_2 > -\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2)$$

the Heckman procedure begins by assuming that ε_1 and ε_2 follow a bivariate normal distribution with correlation ρ. Then, using well-known properties of the bivariate normal distribution, we have

$$\begin{aligned} &E(\varepsilon_1 \mid \varepsilon_2 > -\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2) \\ &= \rho \cdot \sigma_{\varepsilon_1} \cdot \frac{\phi(-\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2)}{1 - \Phi(-\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot x_2)} = \rho \cdot \sigma_{\varepsilon_1} \cdot \lambda(-\gamma_0 - \gamma_1 \cdot x_1 - \gamma_2 \cdot \end{aligned}$$

where $\psi(\cdot)$ and $\Phi(\cdot)$ are the normal density and cumulative density functions, respectively, $\lambda(\cdot)$ is referred to as the *inverse Mill's ratio.* An estimate of it can be formed from the fitted model emerging from estimation of a probit regression of a dummy variable indicating whether *y* is observed on x_1 and x_2. Once that estimate of $\lambda(\cdot)$ has been formed, a second-stage regression of *y* on x_1, x_2, and that estimate recovers unbiased estimates of β_0, β_1, and β_2. The two steps are: (1) Estimate the probit model under which the binary status of *y* (i.e., missing/not missing) is a function of x_1 and x_2. From the fitted model, form an estimate of the inverse Mill's ratio ($\hat{\lambda}$) for each observation in the subsample for which *y* is observed. (2) Regress *y* on x_1, x_2, and $\hat{\lambda}$ with the subsample for which *y* is observed. Owing to heteroskedasticity concerns it is common practice actually to estimate the equation of interest via a procedure such as weighted least squares.

The estimated coefficient on $\hat{\lambda}$ in the second-stage regression is an estimate of $\rho \cdot \sigma_{\varepsilon 1}$. A test of its significance is thus in practice a test for correlation between ε_1 and ε_2. Since ε_1 and ε_2 are assumed to follow a bivariate normal distribution, this is tantamount to testing whether they are independent. There is a full-information maximum-likelihood version of this model, but this "two-step" procedure has been more widely utilized in applied work.

A few caveats are in order. First, in the decade following its introduction, it became increasingly clear that the model often performs poorly without some source of identification beyond the assumption of joint-normality of the errors ε_1 and ε_2. Technically, it should be identified by the nonlinearity of the inverse Mill's ratio (which arises naturally from the assumption of joint normality). The

underlying reason for the poor performance evident in some applications is that the inverse Mill's ratio is nearly linear over much of its range, introducing potentially severe multicollinearity between x_1 and x_2 and the inverse Mill's ratio during the second-stage regression. The best remedy for this problem is to introduce an instrument z to the first-stage probit estimations that provides some source of variation in the inverse Mill's ratio unrelated to that provided by x_1 and x_2.

Second, there have been growing warnings about misapplication of the model (an excellent example of such a critique is presented by William Dow and Edward Norton [2003]). The basic concern has been with the popularity of the Heckman procedure in applications where a continuous dependent variable y is characterized by significant mass at zero (with the first-stage probit component used to explain whether $y = 0$ or $y > 0$ and the second-stage linear regression component applied to the subsample for which $y > 0$). However, the Heckman procedure is appropriate only in cases where the zeroes emerge from the censoring of some true value for y. In cases where the zeroes are valid values for y, and as such represent a legitimate corner solution for that variable, some other tool (such as the two-part model) might be more appropriate.

Even in the face of variation in common first and second stage regressors sufficient to exploit non-linearity in the inverse Mill's ratio (which might obviate the need for first-stage identifying instruments), the model still relies on an assumed joint normality of errors to achieve identification by non-linearity. If the error terms are not in fact jointly normally distributed, the parameter estimates provided by the Heckman selection correction procedure might be biased (and, depending on the precise nature of the problem at hand, the degree of bias might exceed that which would result from simply ignoring the censoring and estimating the equation of interest over only those for whom the outcome y is observed). A variety of alternatives to the assumption of joint normality have been proposed in response to this. In principle, one tack would be to rely on different parametric joint distributional assumptions. However, since most of the readily obvious alternatives would likely involve no less heroic an assumption than joint-normality, the focus has instead shifted to more semiparametric approaches that rely less on explicit assumptions regarding the joint distribution of the error terms.

SEE ALSO *Regression; Selection Bias*

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Peter M. Lance

HECKSCHER-OHLIN-SAMUELSON MODEL

The Heckscher-Ohlin-Samuelson model attempts to explain the composition of trade between countries and the implications of trade for income distribution within the countries. The seminal work was presented in a 1919 Swedish paper (English translation, 1950) by Eli F. Heckscher (1879–1952) and a 1933 book by his student Bertil Ohlin (1899–1979). In later articles (especially 1949 and 1953–1954), Paul A. Samuelson added substantial rigor to the analysis and expanded the original Heckscher-Ohlin model. The analysis has been subjected to countless empirical tests to determine its applicability to actual trading patterns.

Building upon the earlier classical (David Ricardo [1772–1823]) comparative advantage trade model, the Heckscher-Ohlin-Samuelson model (hereafter H-O-S) goes behind comparative advantage to ask, "What determines comparative advantage in the first place?" The H-O-S answer is found by utilizing Heckscher's observations that (1) countries differ in their relative endowments of the factors of production, and (2) production processes for different goods employ different relative intensities of the factors. Suppose a situation with only two factors of production (e.g., labor and capital, where "capital" refers to plant and equipment used to produce output), two goods (e.g., clothing and automobiles), and two countries (e.g., A and B). If labor is more abundant (in greater supply) relative to capital in country A than in country B, then, other things being equal, labor will be relatively cheaper in A than in B. That is, the wage rate in A (wA) divided by the return to capital in A (rA) will be less than the ratio of the corresponding values in B [(wB/rB)]. If clothing production is specified to use more labor relative to capital than automobile production, then, because labor is cheaper in A than in B, country A will be able to produce clothing at a relatively lower cost than country B. By parallel reasoning, with abundant capital in B and capital-intensive automobile production, autos will be relatively cheaper in B than in A. Hence, the trade pattern is that A exports clothing to B, and B exports automobiles

to A. This is the *Heckscher-Ohlin theorem:* a country exports goods that are produced relatively intensively by the country's relatively abundant factor of production, and imports goods that are produced relatively intensively by the country's relatively scarce factor of production. The formal analysis contains many underlying assumptions, but this trade pattern conclusion is straightforward and accords with common sense.

Besides predicting trade patterns theoretically, H-O-S also yields implications of trade for factor prices and income distribution in the countries. As trade begins in the above example, there will be greater relative demand for A's abundant factor (labor) in order to produce the new clothing exports; there will be less relative demand for the scarce factor (capital) due to the reduced need for domestic auto production because of the auto imports. These changes mean that wA will rise and rA will fall, so (wA/rA) rises. At the same time, wB will fall and rB will rise [so (wB/rB) falls] as country B demands relatively more capital to produce auto exports and relatively less labor to produce clothing. These factor price changes continue until an equilibrium is reached where there is no further upward or downward pressure on any factor return. Before trade, (wA/rA) < (wB/rB) but, with trade, the rise in (wA/rA) and the fall in (wB/rB) cause these ratios to converge. In equilibrium, (wA/rA) = (wB/rB). Given the assumptions of the model, not only relative factor prices but also absolute factor prices across countries are equalized, meaning that wA = wB and rA = rB. If equality is not reached, trade continues to expand until it is. This powerful implication of trade for factor prices is known as the *factor-price equalization theorem.* While such equalization clearly does not happen in practice, it is the convergence or the tendency toward equalization that is important.

Even more powerful in H-O-S is the extension of the factor-price analysis to the result known as the *Stolper-Samuelson theorem*—a country's scarce factor of production loses real income from trade (and gains from restrictions on trade) and the country's abundant factor of production gains from trade (and loses from trade restrictions). These outcomes occur because of the changing demands stated above. Hence, trade policy becomes intertwined with politics—in country A in our example, labor favors trade because labor's real income thereby increases, while owners of capital lose and would oppose trade.

Finally, a fourth major theorem that arises from H-O-S is the *Rybczynski theorem.* This theorem states that an increase in the supply of a factor of production in a country (say, labor) leads to an increase in output of the good that uses that factor intensively (clothing) and to a decrease in production of the other good (autos). Thus, H-O-S has a growth dimension with implications for future output and future trade patterns.

Empirical testing of H-O-S has centered around examining whether actual trade patterns correspond to the model's predicted patterns. An early test (1953) by Wassily Leontief (1906–1999) surprised economists because the results suggested that the relatively capital-abundant United States was exporting labor-intensive goods and importing capital-intensive goods. This "paradox" led to much later testing that included a greater number of factors (e.g., by dividing labor into different skill categories) and different testing techniques. Some studies, such as those by Daniel Trefler (1995) for thirty-three countries and nine factors and by Harry P. Bowen, Edward E. Leamer, and Leo Sveikauskas (1987) for twenty-seven countries and twelve factors, found limited verification of the predicted patterns. When adjustments are made in the literature for elements outside the model, results get better for H-O-S, but much trade still goes "unexplained."

Another aspect of H-O-S that has been empirically investigated concerns the Stolper-Samuelson theorem, in that economists have sought to determine whether, particularly in the United States, relatively unskilled labor (a scarce factor in the United States) has lost real income because of increased trade. This research, done in the context of the observed increased inequality in income distribution in the late twentieth century, is generally regarded as having found some small effect in the expected direction but also as having found that the growing inequality was due more importantly to the nature of technological change. Empirical work as well as other considerations regarding H-O-S have led to a recognition that the theoretical model, while widely employed, can be criticized for lack of attention to "real-world" characteristics such as differing production functions across countries, economies of scale, and product differentiation.

SEE ALSO *Absolute and Comparative Advantage; Rybczynski Theorem; Stolper-Samuelson Theorem; Tariffs*

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HEDGING

Hedging is the process of using derivative financial instruments to reduce the price risks that either arise in the course of normal business operations or are associated with investments. Hedging is one of the most important functions of financial markets. Traders performing hedging transactions are hedgers. Hedgers are often investors, producers, or major users of a given commodity who have preexisting risks associated with the price fluctuation of the specific investment or commodity.

There are many ways that hedging can be carried out through derivative instruments—that is, financial instruments that derive their values from the underlying assets, such as futures contracts, forward contracts, options, and swap agreements. For example, a futures contract allows the holder to carry out a transaction in the future at a price determined in the present. The value of the contract therefore depends upon the asset or commodity underlying the transaction. Hedging with futures contracts is fairly straightforward. Hedgers can hedge by either buying or selling futures contracts as a temporary substitute for a transaction to be made in the spot market. As long as spot and futures prices move together, any loss realized on one market (whether spot or futures) will be offset by a profit on the other market. Using options for hedging purposes is more complicated as it requires an analytical determination of the appropriate number of options contracts to buy or sell.

As an example of hedging with futures contracts, consider a corn farmer who anticipates selling certain bushels of corn three months from now and is concerned that the price of corn might fall in the next three months. The farmer may sell corn futures contracts for hedging. If corn prices in both spot and futures markets fall, the loss on the spot market will be offset by the profit on the futures market. Another example is related to a food-processing company that plans to purchase corn and is concerned that the price of corn might rise. The company can buy corn futures contracts for hedging. If the corn price rises, a loss on the spot market is met with a profit on the futures market, resulting in a reduced price risk.

A hedge is perfect if the gain (or loss) on the futures market matches perfectly with the loss (or gain) on the spot market. In practice, hedging may not be perfect because the difference between the spot price and the futures price (that is, the basis) may not converge to zero at the time the futures position is closed. Hedging effectiveness measures the extent to which the price risk is reduced through hedging. A hedge ratio is the number of derivative contracts transacted to reduce the price risk of a given position in the underlying asset. Hedging strategies are formed to choose the suitable derivative contracts and the amount of such contracts to be used. Traditional views hold that the optimal hedging strategy is one that maximizes the expected utility or minimizes the variance of the value of the hedged portfolio. Recent developments explore alternative approaches. For example, it is argued that a one-sided measure for hedging, such as the downside risk, is more accurate.

With the internationalization of financial markets, currency derivative instruments have increasingly been used to hedge currency risks in an international portfolio, which usually contains multiple risks. Optimal coordinated hedging strategies, which consider the effects of correlation among multiple risk factors in a portfolio, can be applied to hedge multiple risks and to achieve optimal hedging effectiveness.

The recognition of hedging as a purpose of derivatives transactions is important. Accounting rules treat the changes in the fair value of derivatives differently depending on the purpose for which the derivatives positions are entered. New derivatives that have been developed recently are intended to reduce quantity or revenue risks, which may complicate the appropriate accounting treatment.

SEE ALSO *Discounted Present Value; Financial Markets; Forward and Futures Markets; Stock Options*

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HEDONIC PRICES

Hedonic prices reflect the value of differences in the quality of goods. Hedonic price models provide a useful way of comparing the prices of heterogeneous goods of differing quality so long as consumers are not themselves using prices to judge quality (consumers are assumed in these models to compare the quality of goods independently of their prices). In hedonic models, goods are seen as being produced with different characteristics, and the quality of these goods reflects differences in the mixture of these characteristics. In making a purchase, consumers consider both the quantity of the good that they purchase and the quality of the good. The quality of the good is reflected in the price consumers are willing to pay. This tradeoff between quality and quantity is central both to models of hedonic prices and to household production theory.

In hedonic pricing models, both the characteristics and the prices are known. Differences in the prices of heterogeneous goods are viewed as reflecting quality differences resulting from different characteristics. For example, in a 1928 study, Frederick V. Waugh viewed the perceived quality of asparagus as being determined by the greenness of the asparagus and the size of the stalk. Greenness was held to be positively related to perceived quality, while stock size was held to be negatively related to perceived quality.

The price of other heterogeneous goods can be, and has been, similarly modeled as a function of a vector of characteristics of that good. Examples include automobiles, houses, and computers. To model the price of a particular version of a heterogeneous good, let P_i be its price, let C_i be a vector of m characteristics and let e_i be a stochastic error term. If there are n different versions of the good, the price of each version might be written as:

$$P_i = \beta_0 + \beta_1 C_{1i} + \beta_2 C_{2i} + \ldots + \beta_m C_{mi} + e_i$$

A hedonic price index can then be created as the characteristics and prices of the good change through time.

Hedonic price models have been applied to the construction of price indexes of goods such as automobiles, houses, and computers, for which the characteristics (quality) of the good have been changing over time. They have also been applied to estimates of the quality of life in different locations. The quality of regional amenities is assumed to be capitalized into housing prices and what is commonly thought of as the cost of living. Larry Sjaastad, in a 1962 article, argued that the only way that families can purchase the amenities that a location offers is to migrate to that location. Hence, housing prices are, in essence, the hedonic prices of those amenities. In 1979 Sherwin Rosen developed a hedonic method for measuring the quality of life within a region, based on the assumption that differences in regional amenities are capitalized by lower wage rates and higher housing costs for an amenity-rich region. A hedonic index of regional quality can then be estimated as a function of the characteristics of the location.

The hedonic model of regional quality is an extension of a model in public economics created by Charles M. Tiebout in 1956. Tiebout was concerned about the allocation of local public goods, and he developed a model based on the competition between locations for new residents. Cities attract residents by providing local public goods, and consumers are held to be aware of the public goods and the taxes of different regions, and they then move to the region that has the profile of public goods that maximizes their individual utility. Taxes are simply the prices of these public goods. Hedonic migration models extend Tiebout's model by including amenities provided by nature and the private sector alongside publicly provided amenities in determining the quality of life in various locations. Tiebout's model can also be made more general by including housing costs in determining the migration decision.

SEE ALSO *Migration; Neighborhoods; Price Indices; Public Goods; Quality Controls; Regions; Taxes*

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HEDONISM

SEE *Farsightedness.*

HEGEL, GEORG WILHELM FRIEDRICH

1770–1831

Hegel is a difficult thinker. The complexity of the arguments of his major works—the *Phenomenology of Spirit* (1807), the *Science of Logic* (1812–1816), the *Philosophy of Right* (1821), and the lectures on aesthetics and world history, which are, perhaps, the least inaccessible—defies capsule summarization. Yet a characterization of the major concerns that *connect* Hegel's writings can be essayed readily enough.

The recent florescence of interest in Hegel among English-language philosophers is a development no one predicted forty years ago. Yet there are good reasons why it has taken place. First and foremost, Hegel (unlike his contemporary Immanuel Kant) emphasized the historically located character of our thinking. Nothing exists out of history; once nature and religion wane as validations, only history is left. The *Philosophy of Right* characterizes philosophy as "its own time apprehended in thought." The facts of history, which add up to a process, are the raw material to which the philosopher gives form and meaning. Reason is dynamic, kinetic; its content unfolds over time. History, which Hegel painted in broad strokes, is a rational process of development; progress in freedom and progress in thought are linked.

Although Hegel, secondly, is a precursor of Karl Marx (1818–1883) and Marxism, he believed that philosophy has no business "giving instruction to what the world ought to be"; over and above the still-vexed issue of Marx's "materialism" versus Hegel's "idealism," Hegel, for his part, emphasized philosophy's retrospective dimension, not its prospective implications. Philosophy is *Nachdenken* ("thinking after the fact to be thought about"). It interprets the present in light of the past. "The owl of Minerva," as Hegel famously put it in the *Philosophy of Right*, "spreads its wings only with the falling of the dusk." We may advance views only when the time is ripe. It makes sense to see Hegel not only as a post-Enlightenment and post-Kantian thinker, but also as a post–(French) Revolutionary one. He at first welcomed the Revolution, only to recoil from the Terror—deficient principle run riot and eventuating in disaster. Hegel had had no love for the ancien régime, but he was infuriated by the revolutionaries' failure to replace it with anything more substantial or enduring.

But what makes Hegel post-Kantian? After all, his *idée maîtresse*—that we are free only when we act in accordance with our reason—is eminently Kantian. What separates Hegel from Kant is what he does with this conviction. Kant's notions of freedom and morality derive from a categorical imperative figurable by pure reason. This to Hegel—who did not believe in "pure" reason—was formal and skeletal. It lacked the substance that "ethical life" (the customs and mores that situate us in a particular time and place) alone can provide. "Ethical life" is an *historical* category, not an abstractly rational one; "abstract," meaning partial, unsubstantiated, fragmentary—the part standing for the whole as in a synecdoche—is always used pejoratively by Hegel. The battle lines are arrayed from book to book: Particularity, subjectivism, and disruption are on the negative side of the ledger, whereas substance, connectedness, coherence, and unity rest on the positive side. Hegel was relentlessly opposed to every source of disconnection he could identify. Then as now, there was no shortage of contenders: The atomistic individualism that threatened in the early nineteenth century to dominate the German as it had the British economy was but one of them.

Hegel's ledger (with these two sides counterposed) has a political, not to say utopian implication that was not to be lost, either immediately on the Young (left) Hegelians or later among twentieth-century critical theorists. This is that if history, rationality, and "ethical life" could be harmonized, the result would be an ethical community in which we could fulfill our own potentialities as we contribute to the well-being of the whole to which it is ours to belong. *This* ideal, not Kant's arbitrary distinction between noumena and phenomena, is the true legacy of the Enlightenment. Kant had mapped out a no-man's-land by declaring certain issues unknowable. Hegel, by contrast, held that nothing is beyond the scope of human thought—despite (or because of) the false starts, falterings, stumblings, and blind alleys almost gleefully detailed, serially, throughout the *Phenomenology of Spirit.*

Hegel's notion of *Geist*, renderable either as "spirit" or "mind," has seemed amorphous, threatening, or both to English-language commentators, some of whom suppose that *Geist* (along with its corollary, "the cunning of reason") signifies a superhuman *demiurgos* pulling the strings of "its" human puppets. This is not what Hegel meant. *Geist* is both how a community understands itself, gives itself form and content, and the way the individual knows him- or herself through the community of which he or she is a constitutive part. Either way, it forms identity. Hegel distinguishes "objective" from "absolute" spirit. The former, the subject matter of the *Philosophy of Right*, is the institutional framework for the latter, which finds expression in our "spiritual" pursuits: art, religion, and (most importantly) philosophy. "Objective spirit" is anything but its own justification; there is nothing ultimate about it. "Absolute spirit" in its ultimate form, philosophy, can *account for* "objective spirit," its precondition. "Objective" cannot account for "absolute" spirit in anything like the same way.

Hegelianism, as John Toews makes clear, enjoyed some philosophical and even some institutional purchase in Germany, though the latter in particular petered out during the 1840s. Hegelianism remained strong enough to provoke Søren Kierkegaard (1813–1855) through several important books: In Britain, however, where it was introduced (after a fashion) by James Hutchison Stirling's *The Secret of Hegel* (1865), its adoption by Idealists (T. H. Green, F. H. Bradley, Bernard Bosanquet, J. T. E. McTaggart) served mainly to buttress the Idealists' *positions déjà prises* (preconceptions); Hegel influenced Pragmatism in the United States via Josiah Royce and John Dewey; in Italy he influenced Benedetto Croce and Giovanni Gentile. Hegelianism was particularly influential in France: On Hippolyte Taine and Ernest Renan in the nineteenth century, and on Alexandre Kojève (whose lectures in the 1930s attracted the interest of Jean Hyppolite and Jean-Paul Sartre, among many others) in the twentieth.

SEE ALSO *Frankfurt School; Idealism; Marx, Karl; Marxism; Teleology*

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HEGELIANS

In the opening years of the twenty-first century, the enormous influence of Georg Wilhelm Friedrich Hegel (1770–1831) within the social sciences shows no sign of lessening. This influence is strongest and most obvious in historiography, political theory, and sociology, a discipline that is difficult to imagine in the absence of Hegel. Modern philosophy of religion is similarly inconceivable without Hegel. Hegel's analysis, in *The Philosophy of Right*, of capitalist "civil society" and the poverty it inevitably generates is one of the most important early instances of social (as opposed to political) theory, and it decisively shaped Marx's critique of alienated labor and the history of class struggle, as well as the Frankfurt school's analysis of the "Dialectic of Enlightenment" in the 1940s. Through Alexander Kojève's lectures in 1930s Paris, Hegelian themes were absorbed by Jean-Paul Sartre, Jacques Lacan, and Maurice Merleau-Ponty, and they were passed on in their contributions to existentialism,

psychoanalysis, and phenomenology, respectively. Another set of Hegelian concerns was crucial to the "communitarian" critique of Rawlsian liberalism in the 1970s and the "politics of recognition" of Charles Taylor, Axel Honneth, and Nancy Fraser in the 1990s. Even as a bogey to be challenged, Hegel has been crucial. For example, Bertrand Russell and G. E. Moore gave birth to Anglo-American analytic philosophy in rebelling against the Hegelian orthodoxy of late nineteenth-century Britain, and much contemporary post-structuralism and post-modernism continues to take Hegel as its great adversary.

Hegel has played an important role in such varied settings in part because of the extraordinary breadth and depth of his work, and in part because of the immense difficulty this poses for the interpreter. While still alive and lecturing at the University of Berlin, he replaced Immanuel Kant, Johann Fichte, and his former schoolmate Friedrich von Schelling as the dominant philosophical figure of his age in Germany. Even then, the meaning of Hegel's teaching was hotly contested, and Hegel quipped that none of his students understood him—with the exception of one, who misunderstood him. "Old," or "Right," Hegelians emphasized the commitment to the status quo in Hegel's infamous claim that "What is rational is actual (*wirklich*), and what is actual is rational," while "Young," or "Left," Hegelians emphasized the commitment to reason (*Vernunft*).

As with later battles over Hegel, each side in this contest advanced a partial, and hence misleading, account of the matter. Though it still largely determines the popular judgment of Hegel, the Right Hegelian interpretation is most obviously lacking, for Hegel himself took care to distinguish actuality from the "superficial outer rind" of the merely existent; he asked, sarcastically, "Who is not clever enough to see much in his environment that is not in fact as it ought to be?" To argue that the real is rational is in part to define the real as something more than the merely existent, as non-Hegelians do when they castigate a poor teacher for not being a "real" teacher. Just as not all teachers are real teachers in this sense, so not all states are real states for Hegel. In particular, the Prussian and Nazi states, for which he has been wrongly blamed, fail to meet the rational standards of the real in modern times, standards that in Hegel's own account include a constitutional monarch, trials by jury, parliamentary government, freedom of conscience and of the press, and the other prerequisites of individual autonomy.

In all his writings, Hegel struggled to find a way to relate the individual to the greater community that escapes the alienation and "positivity" of an externally imposed law backed only by custom and the threat of force. His initial attempts in this regard center on *love*, *life*, and some form of *Volksreligion* as modes of experience that attain this moment of community without the sacrifice of individuality. In his mature political philosophy, Hegel used the less religious term *freedom* to characterize the state of being at home in another (*Beisichselbstsein in einem Anderen*) in which one is neither opposed by an alien, hostile world nor engulfed in an unmediated totality that is equally inhospitable to the claims of individual fulfillment. Hegel argues that this is attainable only in a modern polity that the individual can recognize as the precondition and expression of its own freedom.

If the Left Hegelians properly appreciated this, Marx (the most famous of them) nonetheless advanced his own profound misunderstandings of Hegel, misunderstandings that persist to this day. The most significant of these concerns his interpretation of Hegel's understanding of the dialectic that shapes both history and reason. Marx has passed on to millions a bowdlerization of Hegel developed by Heinrich Chalybäus, according to which the dialectic can be easily broken down to a cookie-cutter triad of thesis, antithesis, and synthesis. But these were never used as terms of art by Hegel himself, who described "this monotonous formalism" as "a lifeless schema."

For Hegel, the dialectic is a means of conceiving of both history and reason as processes centering upon *negation*. In the case of the former, this reflects the goals of Hegel's theodicy, his attempt to demonstrate that, appearances notwithstanding, the bloody history of the West has a rational structure and outcome. In the case of the latter, it is an attempt to overcome the aporias of Kant's theoretical and practical philosophy, and to give an account of subjectivity that neither rests upon an incoherent conception of a thing-in-itself nor sacrifices human autonomy to heteronomous forces. Only by means of a dialectical philosophy in which what *is* contains its own negation can Hegel argue, as he does in the *Philosophy of Right*, that an understanding of the moral and political structures required by the free will can be generated from out of that will itself. Here, as elsewhere, negation takes the form of *sublation*, an awkward term used to translate Hegel's *Aufhebung*, the simultaneous destruction and preservation—at a higher, more rational (and hence real) level—of what is. If Hegel's account of this process is hardly without problems, it remains one of the most important attempts to develop a conception of reason that does not stand aloof from history and society, but rather engages with the details of their unfolding.

SEE ALSO *Hegel, Georg Wilhelm Friedrich; Idealism; Left and Right; Liberation Movements; Marx, Karl; Philosophy; Philosophy, Political; Poverty; Rationality; Resistance; Social Science*

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HEGEMONY

The concept of *hegemony* has been central and most developed in the work of Antonio Gramsci, the leading Italian Marxist intellectual who spent the last eleven years of his life in Benito Mussolini's prisons between 1927 and 1935. Gramsci defined hegemony as a condition under which a group establishes its supremacy not only by physical force but also through a "consensual submission of the very people who [are] dominated" (Litowitz 2000, p. 518). However this notion of hegemony has a long history and multi layers and it is important to unravel its complete meaning to understand its significance in Gramsci's adoption of the concept.

According to Raymond Williams the word *hegemony* probably comes from the Greek word *egemonia* whose root is *egemon*, meaning "leader, ruler, often in the sense of a state other than his own" (1976, p. 144). From the nineteenth century onward hegemony came to indicate a "political predominance, usually of one state over another" and subsequently described a "policy expressing or aimed at political predominance" (p. 144). In his *Antinomies of Antonio Gramsci* (1976), Perry Anderson points out the concept of *hegemony* or *gegemoniya* that had started to emerge in the writings of Georgi Valentinovich Plekhanov (1856–1918), a Marxist theoretician and founder of the Social Democratic movement in Russia, was subsequently used by the Russian Marxists as a central political slogan during the Russian Social Democratic movement from 1890s through the Bolshevik Revolution in 1917. Russian Marxists used hegemony to refer to the political struggle and leadership by the working class to overthrow the tsarist rule in Russia. This emphasis placed on the primacy of the working class to acquire hegemony in the bourgeois revolution in Russia was further developed by Vladimir Lenin especially in *What Is to Be Done*, written in 1902.

The notion of hegemony so far debated in the works of Russian theorists gained an international valence through the first two World Congresses (1919, 1920) of the Third International (1919) and emphasized the need for the proletariat to exercise hegemony in order to form alliance with other exploited groups to struggle against capitalism in the Soviet Union. However, according to Perry Anderson it was in the Fourth Congress (1922) of the Third International that hegemony for the first time also included the idea of "domination of the bourgeoisie over the proletariat, if the former succeeded in confining the latter to a corporate role by inducing it to accept a division between political and economic struggles in its class practice" (1976–1977, p. 18). It was this notion of hegemony brought forth in the Third International that seemed to have influenced most Gramsci's conceptualization of the term.

In accordance with the principles of the Third International, Gramsci defined hegemony as class alliance of the proletariat with other peasants to forge a common struggle against capitalism. This notion of hegemony included the need for certain "concessions" or "sacrifices" necessary on the part of the proletariat to be able to include the needs and interests of the group over which hegemony is to be exercised without resorting to win them over through violence.

However as Douglas Litowitz pointed out in his 2000 article, "Gramsci, Hegemony, and the Law," Gramsci's view of hegemony changed when he noticed that in Italy under the fascist dictatorship of Mussolini the very people who were exploited by fascism and capitalism willingly consented to their exploitation. Thus Gramsci concluded that domination could be exercised not only through physical force but also through persuasion, when the dominant group is able to disseminate its values through mediums such as church, schools, or popular culture. This consensual hegemony is not only economic but also political and cultural as well. In this conceptualization of hegemony as political and cultural, Gramsci was quite influenced by the Italian philosopher and politician Benedetto Croce's (1866–1952) work on the role of culture and consent in politics.

According to Gramsci hegemony always has its basis in economy and "must necessarily be based on the decisive function exercised by the leading group in the decisive nucleus of economic activity" (Hoare, Quintin, and Smith 1971, p. 161). However his concept of "economic" is different from Karl Marx's distinction between an economic base and a political and cultural superstructure and Marx's assertion that only if the base changes, superstructure will change as well. Gramsci argued that dominance in eco-

nomic relations of production as well as means of production, although necessary, is not a sufficient condition for social dominance. Thus according to Robert Bocock (1986), by opposing the economic determinism of Marx, Gramsci emphasized the political and the cultural by including the state and the civil society as areas in which power is exercised and hegemony established.

Gramsci argued that while hegemony pertains to civil society, which is an ensemble of organizations, force/coercion belongs to the realm of the state. Within capitalism, state thus resorts to coercive domination to conform the popular mass to certain types of production and economy, while civil society exercises hegemony through cultural institutions such as the church, trade union, schools, media or through the print culture. Thus hegemony in this context refers to the cultural control or the "ideological subordination of the working class by the bourgeoisie, which enables it to rule by consent" (Anderson 1976–1977, p. 26). According to Anderson Gramsci has used this model to analyze the difference between Tsarist Russia and western Europe to imply that the tsars ruled by force while the British and French bourgeoisie by deception, flattery, and concessions.

This first model of hegemony by Gramsci underwent further mutations to give rise to a second model when hegemony is seen as being exercised not only by the civil society but by the state as well. Hegemony exercised by the state can be termed as political hegemony and the organs of political hegemony consists of executive, legislature and judiciary.

The third model of Gramsci erases the distinction between state and civil society so that "consent and coercion alike become co-extensive with the State" (p. 125). This was Gramsci's idea of an "integral state," a term he borrowed from the German philosopher Georg Wilhelm Friedrich Hegel (1770–1831). As Jeremy Lester (2000) noted, this concept of "integral state" encompasses a complex set of practices and activities through which the ruling class can not only dominate through force but obtain consensus as well. Thus State embodies not only coercion but cultural and ideological hegemony as well. Gramsci used this model to elucidate how bourgeois capitalism maintains its rule over the working class through consensus as well as coercion. In this third model Gramsci, alludes to Niccolò Machiavelli's conceptualization of "Centaur," which is half beast and half human and a combination of the dual traits of fox and lion that is deception and violence respectively. Gramsci thus argued that in order to dominate, the state must include the dual levels of force and consent, domination and hegemony, violence and civilization.

Thus hegemony—by constituting a synthesis of political, economic, and cultural meanings and values and experienced and internalized by people who are exposed to it—plays a pivotal role in the process of normalization where such values appear to be "common sense" to those who are subordinated and hegemonized by the ruling group.

SEE ALSO *Culture; Fascism; Gramsci, Antonio; Ideology; Machiavelli, Niccolò; Marx, Karl; Marxism; Mussolini, Benito; Propaganda; State, The*

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Srabani Maitra

HEIDER, FRITZ

SEE *Equilibrium in Psychology.*

HEILBRONER, ROBERT

1919–2005

Robert Louis Heilbroner was an economist and public intellectual best known for his popular book *The Worldly Philosophers* (1953). In what became one of the best-selling books in the discipline, Heilbroner outlined the dramatic scenarios of the classical political economists, especially the work of Adam Smith (1723–1790), David Ricardo (1772–1823), Thomas Robert Malthus (1766–1834), Karl Marx (1818–1883), and John Stuart Mill (1806–1873), as well as Joseph Schumpeter (1883–1950), Thorstein Veblen (1857–1929), and John Maynard Keynes (1883–1946), whom he regarded as continuing the classical tradition of viewing the economy as historically and institutionally situated. The classical scenarios depict the almost inexorable movement of the capitalist economic system, with its "laws of motion," its

systematic tendencies leading to some "future immanent in the present" (1992, p. 381). Underlying the system's movements were a variety of factors, both economic and noneconomic. In other words, the trajectory of the system is inseparable from both the wider sociopolitical context within which the economy is situated and the subjective drives and behavioral tendencies of historical agents, which both shape and are shaped by changing socioeconomic and political structures.

Heilbroner's initial fascination with the worldly philosophers' prognoses led to his own analyses of the economic, political, cultural, and sociopsychological drives, motivations, and propensities underlying production, distribution, and exchange. In these investigations, Heilbroner adopted his own versions of Schumpeter's (1954) notions of "vision" and "analysis." Whereas for Schumpeter, analysis had a kind of "cleansing" effect, which prevented the necessarily ideological nature of the "pre-analytical cognitive act" from tainting the scientific endeavor, for Heilbroner, economic theory is inescapably value-laden. Biases are always present, at times lurking just beneath the surface, but often emerging in the form of assumptions that determine the content of analytical categories and the direction of prognostications.

Although Heilbroner's explicit self-identification with a "hermeneutic" approach came relatively late, he had always emphasized that inquiry necessarily has an interpretive dimension. For Heilbroner, this meant that the very object of inquiry cannot be presumed self-evident. The "economy" is an abstraction from the social totality, and thus the defining of the subject matter of economics is a task that influences the nature and direction of analysis. Heilbroner long advocated "material provisioning"—the harnessing of society's material resources to provide for the needs and wants of its members—as the central problematic of the political economist. He thus argued against any notion of universal economic "laws," emphasizing the historical specificity of capitalism in human history. Heilbroner's historical approach, rejection of universal laws, and refusal to "read" markets back into precapitalist societies provide a welcome respite from the "economics imperialism" of modern neoclassical economics.

In later years, Heilbroner questioned whether, under present contemporary circumstances, worldly philosophy is still possible. He believed that scenarios and visions do not lend themselves to formal analytical procedures. More importantly, he held the position that the economic behaviors that set the system on its path have become less dependable, while political intervention has become more strategic. An "instrumental" approach, in his mentor Adolph Lowe's ([1965] 1977) sense, thus becomes more appropriate, with "blueprints depicting possible routes from present realities to desired destinations" replacing "scenarios depicting a future immanent in the present" (Heilbroner 1992, p. 381; Heilbroner and Milberg 1995, pp. 118ff; Forstater 1999).

Despite such skepticism, Heilbroner expressed the hope that the "irrelevant scholasticism" of contemporary neoclassical economics might be replaced with a reinvigorated political economy. Political economy may "perhaps [be] resurrected by a corps of dissenting economists," employing a framework that: "take[s] full cognizance of the sociopolitical realities of our time, whatever the difficulties they may pose for the construction of elegant models.… [A] rekindling of the tradition of political economy is within the realm of possibility. That would indeed be a happy ending to the teachings of the worldly philosophy." (Heilbroner 1996, p. 336).

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Mathew Forstater

HELL

The English word *hell* comes from *hel*, the abode of the dead and the underworld of Norse mythology. In the Bible, the Hebrew word *Sheol* and the Greek word *Hádēs* refer to the netherworld, a shadowy realm of the dead more than a place of torment (though some New Testament texts use *Hádēs* to refer to punishment or the dominion of death; see Luke 16:23, Matt. 16:18, and Rev. 6:8).

The biblical word for the state of postmortem punishment is *Gehenna*, from the Hebrew *ge-hinnōm*, an abbreviation for the "valley of the son of Hinnom," a place south of Jerusalem known for idolatry and human sacrifice (see 2 Kings 23:10 and Jer. 7:31–32). In Jewish apocalyptic and rabbinic literature, Gehenna often refers to a

place of darkness, fire, and punishment for the wicked—a punishment variously conceived as everlasting, temporary, or ending in annihilation. In modern times, many Jews have rejected the concept of eternal damnation.

In the New Testament, Gehenna is used for the state of everlasting punishment and fire (see Matt. 5:22, Mark 9:43, and James 3:6), though the Greek word *Tartarus* does appear (see 2 Pet. 2:4). The concept of eternal punishment is expressed through images of "everlasting fire" (Matt. 18:8 and 25:41), "weeping and gnashing of teeth" (Matt. 8:12), "fire and brimstone" (Rev. 14:10), and a "pool of fire" (Rev. 19:20). People confined to the everlasting fire include those who despise the needy (Matt. 25:41–46), as well as "cowards, the faithless, the polluted, murderers, fornicators, sorcerers, idolaters and liars" (Rev. 21:8). In addition to damned humans, Satan and the fallen angels also receive everlasting punishment (see Jude 6, Matt. 25:41, and Rev. 20:10).

Christian theology developed an understanding of hell as everlasting punishment and exclusion from heaven. In the Middle Ages, temporary purifications after death (purgatory) were distinguished from the everlasting torments of hell, as was the state of *limbo*, in which the souls of unbaptized babies and virtuous non-Christians were deprived of the beatific vision but did not suffer the torments of hell. Dante Alighieri (1265–1321) gave poetic expression to limbo and the levels of hell in his *Inferno*, the first part of his *Divine Comedy*, which continues with *Purgatory* and *Paradise*.

Traditional Christians (whether Catholic, Orthodox, or Protestant) affirm hell as a true possibility, either for those who culpably reject the Christian Gospel or who die in a state of "mortal sin." The everlasting nature of hell, even after the resurrection of the body, was affirmed at various Church councils (e.g., the local synod of Constantinople of 543 and the Fourth Lateran Council of 1215). Some Christians hope for universal salvation, but most Christian denominations still affirm the possibility of eternal damnation. Many Christians today believe that sincere non-Christians, who are outside of the Church "through no fault of their own," might still achieve salvation (see *Catechism of the Catholic Church*, no. 847).

The ancient Greeks and Romans had multiple concepts of the underworld and the fate of the dead. In the mystery religions and fertility cults, *Hádēs* or the underworld played a prominent role in themes of death and rebirth. By the fifth century BCE (perhaps due to Egyptian and Persian influences), the Greeks had developed concepts of rewards and punishments after death, with *Tarturus*, the lower realm of *Hádēs*, as the place of punishment for the wicked. Platonism and Neoplatonism incorporated beliefs in reincarnation and the transmigration of souls, which made purification from wrongdoing achievable over multiple lifetimes.

In the ancient world, the Egyptians and the Zoroastrians from Persia were most pronounced in their affirmations of rewards and punishments after death. Around 1750 BCE, the Egyptian *Book of Going Forth by Day* (or *Book of the Dead*) described how the soul or heart of the deceased person is weighed on a scale balanced by the "feather of truth." Rewards or punishments then follow (with complete destruction being one possibility).

The Persian religion of Zoroastrianism (from the prophet Zoroaster/Zarathustra, circa ninth or tenth century BCE) describes judgment after death as the crossing of the Chinvat Bridge toward Paradise. The souls of the wicked are tossed off the bridge into hell, whereas the righteous souls enter Paradise and other souls go to a state of limbo. At the end of time, the souls of the deceased are reunited with their bodies and experience a final judgment. The souls in limbo (and perhaps those in hell) then enter Paradise after a final purification. The evil spirit Angra Mainyu and other demons are, however, consigned to hell forever.

Islam, like Christianity and Zoroastrianism, affirms judgment after death and a future resurrection of the body, as well as rewards in heaven (paradise) and punishments in hell. Muslims believe that God (Allah) assigns certain angels to keep a record of human deeds, and this record will determine one's fate after death. After death, those who are wicked begin to experience the hellfire—even in the grave prior to the Day of Judgment and the resurrection of the body. The righteous souls, in turn, begin to experience the rewards of Paradise, which continue forever after the reunion with their bodies. Some Muslims, following 2:262 and 5:69 of the Qur'an, believe that followers of other religions can escape hell and enter Paradise. Others, following 4:56, believe severe punishments await those who deny the Qur'an as God's revelation.

Classical Chinese culture recognized some type of life after death, but a clear and consistent concept of hell never developed. Confucius (c. 551–479 BCE) was reluctant to talk about the afterlife, and Taoism tended toward a naturalism that denied personal survival after death.

Jainism, Hinduism, Buddhism, and Sikhism—the main religions originating in India—all affirm reincarnation and the transmigration of souls; moreover, Hindus and Buddhists recognize thousands of hells. Because of reincarnation, however, the possibility of eventual purification and deliverance is maintained, even if this liberation may require countless lifetimes.

The fear of hell remains a living reality among many people today, especially in Christian and Muslim circles. In modern secular societies, however, the word *hell* has

assumed a largely metaphorical meaning. Situations of poverty, violence, and devastation are described frequently as "living hells." Many psychologists and sociologists understand hell as an archetype of the deepest fears of the human imagination, expressing the thoughts of torture, rejection, and abandonment that circulate within the human psyche.

SEE ALSO *Anxiety; Christianity; Heaven; Psychology; Religion*

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HERD BEHAVIOR

The term *herd behavior* derives from the observation that animals that form part of a group sometimes mimic actions of either a leader or each other apparently without thought. In economics and financial markets, this term describes situations in which a large number of agents appear to be making similar decisions. *Spurious* herding results when decisions are similar, but based on independent analysis by agents. *True* herding results when decisions are based only on public information about the behavior of others, and private information is neglected. Herd behavior can have a detrimental effect on economic efficiency. It stands in contradiction to the basic tenets of efficient markets and to the claim of the superiority of the market system; it undermines the reliance on rationality that requires that agents base their decisions on all information. Modeling of herd behavior has only recently begun to shed light on its motivations and consequences.

A form of herd behavior results when *information cascades* develop in markets characterized by the high cost of information collection. When information collection is costly, an agent may make the same decision as previous agents and not seek any private information. The situation is exacerbated by the presence of moral hazards.

Portfolio managers may herd when their performance is evaluated relative to the market, and herding behavior can also be observed in the international lending decisions of banks (see the discussion of international lending below). Agents may be forced to herd in situations where market sentiment will dictate outcome—regardless of the underlying economics. What is an investor to do when the market sentiment is that the stock market will rise? The sentiment itself will cause the market to rise—an individual investor who, perhaps rightly, believes that a bubble is forming cannot expect to gain from this information unless the timing of the collapse of the bubble can be predicted. The rational strategy for this investor would be to herd.

In the public policy arena, public support for or opposition to particular policy measures frequently derives from what are called *availability cascades*: the more available information is, the more it is considered reliable. Public opposition to smoking is often cited as an example of herding caused by availability cascades.

Herding may be rational behavior in the presence of external threats. Wild animals move together when threatened by a predator—in such cases, the optimal behavior for an individual member is to stay with the group. What is observed as herd behavior is really a consequence of individuals acting rationally.

Less rationally, social pressure may cause individuals to conform to what others are doing. Fads, manias, and fashions may be the consequences of herding resulting from social pressure. Individuals may also seek to safeguard their personal reputation by following the crowd rather than risk the consequences of standing out. Adolescents' behavior in high schools and conformity to politically correct language are examples of this latter type of herding.

INTERNATIONAL BANK LOANS AND INFORMATION CASCADES

International bank loans to developing countries from 1973 to 1982 provide a good illustration of how information cascades, managerial incentives, and moral hazard lead to herding. The oil price shocks of the 1970s left commercial banks from industrialized countries with large pools of recycled petrodollars and the developing countries with large current account deficits. Although the loan of excess bank liquidity to the developing countries would solve the imbalances for both groups at least temporarily, banks had limited knowledge regarding the credit risks of such loans. Some of the largest banks invested resources in developing the technology for risk assessment, but the large majority of the banks went along for the ride based

solely on their observation that the larger banks were willing to lend their own funds to developing countries and were lead-managing multibillion-dollar syndicates to provide funds to these borrowers. For the smaller banks, the marginal cost of doing their own analysis was much higher than the cost of gathering public information. The banks also felt pressure from the stock markets, which compared a bank's earnings against those of others that were making what had become highly profitable loans (at least until the middle of 1982). The situation was not helped by the blessings given by the governments of Organisation for Economic Co-Operation and Development member states (who believed that recycled funds would support their exporters) and by international development organizations like the International Monetary Fund (which were unable to finance the developing countries' deficits on their own). Such blessings were taken as an implicit understanding that these governments would help the banks should the banks' lending behavior get them in trouble. Large commercial banks relied on an implicit protection inherent in their market power, believing that governments would not allow major banks to fail. Smaller banks may have herded for two reasons: (1) they could not replicate the information-gathering and analytic capabilities of the larger banks; and (2) they were sure that central banking authorities could not allow smaller banks to fail while saving the larger ones. Indeed all banks, large as well as small, were propped up after the Third World debt crisis began to unfold in August of 1982.

Herd behavior may be at least partly responsible for the Mexican crisis of 1994 and the East Asian crisis of 1997–1998. In both these situations, investment managers may have continued to invest in assets that had become excessively risky under the belief that markets would have penalized them if they failed to earn returns similar to their competitors.

Herd behavior, by encouraging overinvestment when things look good and mass exodus when that impression is reversed, adds to market volatility. It has, however, been difficult to develop tests that can establish either the presence or the impact of herding with some certainty. Future research in this field will have to focus on isolating real herding from mere similarity of outcomes.

SEE ALSO *Banking; Bubbles; Conformity; Developing Countries; Economic Crises; International Monetary Fund; Loan Pushing; Loans; Manias; Moral Hazard; Panics; Rationality; Stock Exchanges*

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HEREDITY

From a historical and biological perspective, heredity is the transfer of traits from a parent organism to its offspring. Traditional conceptualizations of heredity have focused on genes and the expression of genetic code that is transferred during reproduction. More recently and in response to knowledge about the limits of genetics in the human phenotypes and behavior, the conceptualization of heredity has been expanded to include the transfer of characteristics of the parent organism to offspring via a range of mechanisms, to include social institutions.

First described as animalcules and ultimately the basis of the school of scientists known as "spermists," early thinkers such as Anton van Leeuwenhoek recognized that there were microscopic parts of the human existence. Others went further to suggest that sperm contained little men who were small representations of adults. As such, heredity was determined by the male of the species, and the role of women in reproduction was simply to carry the homunculus that had been deposited by the male. As a reflection of societal values and the diminished value of women, this theory of heredity prevailed throughout the seventeenth century.

In a controversial and radical move forward, Gregor Mendel was credited for determining the rules associated with genetic transfer in the 1800s in a series of experiments using garden peas. He established patterns of inheritance by observing frequency of traits such as seed color and based on assumptions that the frequency was a direct function of specified patterns of genetic transmission. It was he who observed patterns and coined subsequent rules of genetics, notably the basis of modern genomic theories.

During this era science recognized that both the male and female contributed to heredity and that the ovum and sperm fused toward the development of a synergistic being. The mechanism of this transmission was later determined to be deoxyribonucleic acid (DNA), which

was carried on chromosomes. From these seminal discoveries emerged the notion of the "central dogma" that indicates that DNA codes for ribonucleic acid (RNA) in transcription and RNA codes for proteins through a translational process. DNA was ultimately recognized as the blueprint in the direction of cellular activities, tissue and organ functions, and organismic activity and reproduction in both plants and animals.

The molecular structure of DNA was deduced in 1953 by James Watson and Francis Crick and has since served as the basis for understanding modern molecular and behavioral genetics. DNA is characterized as a polymeric double helix containing repeating nucleotide bases linked to phosphorylated sugars. These DNA molecules are arranged in linear or circular chromosomes, specific to species. In some organisms, chromosomes are circular and singular, but in most higher order organisms, chromosomes exist in linear and duplicate form. For example, humans have twenty-three pairs of chromosomes, where inheritance is derived from both mother and father. The sequence of repeating units that make up DNA determines the organism's genotype and, ultimately, phenotype. Genetic variation occurs when there is a change in the DNA sequence secondary to biological or environmental provocation.

We have grown to recognize that heredity significantly influences how we look and how we behave in, anticipate, and respond to our environmental context. This includes how and what we contract in terms of disease, how disease susceptibility is manifest in subsequent generations, and how wellness is defined. In a reciprocal fashion, our environmental context modifies the relationship between genotype and phenotype. Genotype influences phenotype but may produce several different phenotypes, depending on the environmental context. One example is phenylketonuria. This disease is caused by a genetic defect that results in a buildup of phenylalanine, which causes brain damage in children. However, if the affected child's diet contains low levels of phenylalanine, mental retardation is prevented. This environmental change prevents disease presentation, even though the genotype would otherwise predict disease and mental retardation.

Inheritance in humans is often difficult to study. First, all study methods outside the laboratory are observational; scientific ethics prevent us from forcing or selectively controlling mating in humans. Secondly, it is very difficult to study human heredity prospectively because we have very long generation times. As a consequence, a number of techniques have been discovered that uniquely and creatively provide insight into the human inheritance. These include the use of pedigree, twin, and adoption studies. Pedigree studies give scientists a long-term picture of the inheritance of a given trait, or of several traits, by several generations of a given family. Specific rules regarding pedigrees allow researchers to determine the pattern of inheritance, such as whether a trait is autosomal dominant, autosomal recessive, X-linked dominant, X-linked recessive, or Y-linked. Dizygotic and monozygotic twins offer insight into the influence of environment on diseases with a significant genetic etiology. Since monozygotic twins share the same genetic makeup, it is expected that the manifestation of a genetic trait would be the same for the pair if they are in the same environment. Low concordance in monozygotic twins signals to investigators that environmental factors play a large role in the characteristic. Similarly, but from an environmental perspective, adoption studies also assist with determining the influence of environment and genetics on human functioning. Persons who are adopted often have few genes in common with their parents. However, they share the same environment for a number of years and often have health characteristics similar to those of their adoptive parents. Comparisons are made between adoptees and their adoptive parents, as well as between adoptees and one or both natural parents.

Inheritance is also of interest to those who study human behavior. For example, because of advances in statistical procedures and the use of twin methodologies in recent years, several researchers have begun evaluating the genetic influence of common psychiatric and personality traits, coping, and other behaviors. For example, using behavioral and molecular genetic analyses, Whitfield et al. (2006) recently reported that up to 35 percent of the variance in coping may be genetically mediated. This study suggests that genetics may provide a baseline for coping that is ultimately malleable and susceptible to learning and environmental influences. Similarly, Whitfield et al (2007) reported that 60 percent of individual smoking behavior was genetically mediated, with very few meaningful differences in the genes that determine or influence smoking behavior between racially classified social groups.

Studies like those reported above have been used by some to promote biological explanations for social phenomena and suggest genetic predispositions for favorable or unfavorable social outcomes. Notably, the prevailing scientific evidence strongly challenges genetic explanations in the etiology of social outcomes and suggests that societal inequities are much more salient than are genetic factors.

The recent growth of genomics as a science has frequently exceeded our planning and thinking on topics such as ethics, morals, and the law. Our physical capacity to disentangle the building blocks of human existence has not always been equaled by our appreciation for the impact of such knowledge. For example, should predispo-

sitions identified by genetic testing be reported to insurance companies as an acceptable factor in the calculation of risk and an influence on the cost of insurance premiums? Should our ability to manipulate phenotypic characteristic in humans (blond hair, blue eyes, tall, etc.) be used in a fashion representative of a modern-day extension of the concept of eugenics put forth by Francis Galton in the mid-1800s? The eugenics movement advocated selective breeding for the purpose of producing desirable human phenotypes. Should parents be able to preselect the characteristics of their children prior to birth? We will likely continue to develop reactive ethics, morals, and laws as the result of advances in the genomic sciences. We view the future of the study of heredity to include a range of social, psychological, biological, and genetic influences. Genetics serves as a necessary but insufficient factor to understand the scope of intergenerational stability and variation.

SEE ALSO *Darwin, Charles; Determinism, Biological; Determinism, Genetic; Disease; Evolutionary Psychology; Genomics; IQ Controversy; Nature vs. Nurture; Psychosomatics; Twin Studies*

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HERESY

SEE *Orthodoxy.*

HERMENEUTICS

Hermeneutics is a German word of Greek origin translated as *interpretation* in English. In the modern period it was originally used to refer to biblical interpretation and later to the general approach to literary and legal studies. In the past fifty years it has described an alternative to positivist approaches to the study of society. Positivist social science subscribes to methodological monism—the idea that there is a single scientific method, modeled after the natural sciences, that is the means for accumulating objective knowledge about the social and political world. As science, it looks to exclude normative and moral claims or evaluations about the social world. While acknowledging the importance of a scientific understanding of some aspects of the social world, hermeneutics rejects the methodological privilege that positivism ascribes to the natural sciences. Hermeneuticists argue that a more fundamental understanding and explanation of social life may be found in the meaning that action has for social and political actors. The emphasis on meaning implies that social behavior be construed as a text or text-analogue to be interpreted, according to Paul Ricoeur in *Hermeneutics and the Human Sciences* (1981), rather than as an object of scientific and technological understanding. In this respect hermeneuticists hold that the study of social life is more closely related to explanation and understanding of literary texts than to the objective study of physical objects or biological processes. Moreover, proponents argue that hermeneutics shows that the explanation of social life has a necessary moral or normative dimension to it.

Two of the earliest proponents of hermeneutics were Friedrich Schleiermacher (1768–1834) and Wilhelm Dilthey (1833–1911). Schleiermacher argued that the understanding of literary texts, legal documents, religious practices, or works of art require that one start with the object of interpretation and work backward to ascertain the intention of the author. Dilthey, building on Schleiermacher's work, argued that historical events as well as works of art are the meaningful embodiment of the subjective intention of social actors and authors. Both thinkers, according to Hans-Georg Gadamer (1900–2000) in *Truth and Method* (1989), strove to develop an approach to interpretation that would uncover the objective meaning of the object of inquiry.

Schleiermacher and Dilthey formed the basis of what became known as the hermeneutics of recovery. The hermeneutics of recovery presupposes that the task of social inquiry is to capture the original intention or meaning that motivates and informs social action. This presupposes that there is an original, intended meaning that is determinate of social behavior and institutions. This version of hermeneutics often presupposes that empathy is a primary requirement for understanding social action and that explanations are to be couched in the subjective beliefs and intentions of actors.

A second approach, the hermeneutics of suspicion, is grounded in the work of Friedrich Nietzsche

(1844–1900), Karl Marx (1818–1883), and Sigmund Freud (1856–1939), according to Ricoeur. It takes what proponents argue is a more critical approach to interpretation than found in the hermeneutics of recovery. The hermeneutics of suspicion maintains that the subjective intentions or conventional understanding of social actors is misleading and a distortion of social reality. Whether it is the conventional accounts of morality (Nietzsche), the ideology of the capitalist political economy (Marx), or the self-misunderstandings of individuals concerning the genuine motivations for their behavior and particularly their neuroses (Freud), the conscious, subjective, and prevailing understandings of society and social relations remain at the level of mere appearances and function to obscure and distort the reality that the social investigator needs to uncover to reveal the true meaning behind the apparent world.

More recently, two thinkers who have had the greatest impact on hermeneutics have been Martin Heidegger (1889–1976) and Ludwig Wittgenstein (1889–1951). Both Heidegger and Wittgenstein emphasize the priority of language for understanding human existence. For both, language is not just a tool that human beings possess. What is distinctive about human beings is that their experience of the world and their social relations are constituted by and expressed in language. Conversely, language gets its sense from the way of life (Wittgenstein) or the historical horizon (Heidegger) within which it evolves. Hence, there is a close connection between language and the social reality it helps to constitute and embody; the two are intertwined. The meaning of social action must be explained in terms of the linguistic tradition within which it is located, and the linguistic tradition in turn is explicated by reference to the meaningful behavior of social actors. This to-and-fro movement of interpretation is what is meant by the hermeneutic circle.

Heidegger and Wittgenstein have influenced a wide range of interpretive social scientists (Hiley, Bohman, and Schusterman eds. 1991). Perhaps the two most important are Hans-Georg Gadamer (1989; see also Malpas, Arnswald, and Kertscher eds. 2002) and Charles Taylor (b. 1931) (1985, 1995), both of whom go beyond the hermeneutics of recovery and of suspicion. Building on Heidegger's accounts of language and historicity, Gadamer argues that because human behavior and human understanding are historically and linguistically situated, a person's understanding of the world is always both enabled and constrained by the person's linguistic-historical tradition. This means that the prejudices or prejudgments of that tradition are an inescapable and necessary part of people's attempts to understand themselves as well as other historical traditions. This does not, however, mean that people are trapped in a prison of language. Rather, Gadamer argues that a dialogue with the other encourages openness to the experience of other historical traditions. The result is a fusion of horizons that transcends previous understandings.

Taylor makes a similar point concerning language. Drawing on both Heidegger and Wittgenstein, he argues that language and the social practices in which it is embedded form a social imaginary that serves to express an understanding of the possibilities for human beings and for social and political life. Because that understanding is often inchoate, tacit, and imperfectly articulated, the goal of the social theorist is to give an expression to that social imaginary. Taylor ties this reformulation of the self-understanding of social life to the possibility of deep forms of moral and political evaluation and reflection on the part of social and political actors (Taylor 1985a, 1985b, 1995). Moreover, building on the work of Gadamer, Taylor argues that Gadamer's account of the fusion of horizons is pertinent not just for the understanding of other historical situations. It is also important in understanding other contemporary cultures and ways of life. The dialogical process that takes place in such efforts makes mutual understanding possible, though not guaranteed. Moreover, it makes greater reflective understanding of ourselves possible as well (Taylor in Malpas, Arnswald, and Kertscher 2002, 277–298)

The most recent significant development in hermeneutics is found in the work of Italian philosopher and social theorist Gianni Vattimo. In *Beyond Interpretation: The Meaning of Hermeneutics for Philosophy* (1997), Vattimo argues that taking the anti-essentialism of Nietzsche more seriously enables a more radical approach to hermeneutics and interpretation. He looks to challenge the distinction between the natural and the human sciences and to encourage a dialogue among science, art, religion, and ethics. Perhaps most important, along with Taylor he sees a more robust role for religion in the public sphere in what some hermeneuticists describe as a post-secular society.

CRITICISM OF HERMENEUTICS

Despite what proponents see as the promise of interpretive approaches to the study of social life, a number of criticisms have been offered of hermeneutics. One criticism continues to be advanced by conventional social scientists. Focusing on earlier forms of hermeneutics, they claim that empathic understanding may be a useful tool in formulating better hypotheses, but it does not exhaust the range of behavior that is of interest to social science. Moreover, it is not a criterion of verification in the research process, according to those committed to scientifically defined social inquiry.

A second criticism originates with critical theory and the work of Jürgen Habermas. In his debate with

Gadamer, Habermas argues that despite its importance for social inquiry, the hermeneutic emphasis on tradition, prejudices, and internal standards of rationality limits its critical leverage on prevailing ideologies that mask the social reality and specifically the exercise of power (Habermas 1987). Critical theorists maintain that this reflects an inherent, politically conservative bias.

A third criticism, from a perspective reminiscent of Michel Foucault (1926–1984), argues that hermeneutic/interpretive theory is still committed to conventional conceptions of truth and the self that are constituted by dominant discursive practices of the self and politics. These, in turn, deploy categories and practices of identity and difference that privilege some forms of human beings and understanding and marginalize or disqualify others. Hermeneutics fails to acknowledge the extent to which it is implicated in prevailing notions of the self and politics.

Needless to say, interpretive theorists have responded to each of these criticisms. To the first they point out that the emphasis on language and its relation to social practice requires explanation that goes beyond empathic understanding. It involves the investigator in what the anthropologist Clifford Geertz (1987) calls depth interpretation. To the second and third criticisms, thinkers such as Gadamer and Taylor acknowledge the limitations of hermeneutics. Consequently, each argues that no historical prejudgments can be allowed to go unchallenged and that one needs to be aware of the ways that prevailing practices of politics and the self influence the possibilities of social explanation. What is perhaps most important, however, is not so much the specific responses of hermeneutics to its critics as the hermeneutic claim that because of the self-interpreting nature of human beings, social science is best understood as a form of practical reason analogous to Aristotle's fourth-century BCE discussion of practical wisdom in Book VI of the *Nicomachean Ethics*. This, according to Gibbons (2006), commits hermeneuticists to a dialogue with social actors and competing perspectives as the most promising response to theoretical contestation and pluralism.

SEE ALSO *Anthropology, Linguistic; Essentialism; Freud, Sigmund; Geertz, Clifford; Literature; Marginalization; Marx, Karl; Nietzsche, Friedrich; Philosophy; Positivism; Social Science*

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Michael T. Gibbons

HERNANDEZ V. TEXAS

Brown v. Board of Education was not, as almost everyone assumes, the first decision in which the U.S. Supreme Court, newly unified under the leadership of Chief Justice Earl Warren, set to dismantling Jim Crow segregation. That distinction belongs to a jury exclusion case decided two weeks earlier, *Hernandez v. Texas*. *Hernandez* is not just the first case in which the Warren Court took on segregation; it is also the greatest early triumph in the Mexican American struggle for civil rights and the first Supreme Court case to extend to Latinos constitutional protection against discrimination, no small matter now that Hispanics constitute the largest minority group in the United States.

After a two-day trial and less than three hours of deliberation, an all-white jury in Jackson County, Texas, in 1951, convicted Pete Hernández of murder and sentenced him to life in prison. The jury's racial composition

was not an aberration for the era. The county stipulated at trial that no person with a Spanish surname had served on a trial or grand jury in more than a quarter century; more than 6,000 jurors had been seated, but in a county over 15 percent Mexican American, none had been from that group. The League of United Latin American Citizens (LULAC), then the most prominent Mexican American civil rights group in the country, agreed to help represent Hernández's case before the Supreme Court.

A JIM CROW CASE

In deciding whether impermissible discrimination occurred, the Court considered a veritable catalog of Jim Crow oppressions. The Court noted that a restaurant in the county seat prominently displayed a sign saying "No Mexicans Served." In addition, Jackson County residents routinely distinguished between "whites" and "Mexicans." Business and civic groups almost entirely excluded Mexican American members. The schools were segregated, at least through the fourth grade, after which almost all Mexican Americans were forced out of school altogether. Finally, the opinion also recorded that on the Jackson County courthouse grounds there were two men's bathrooms. One was unmarked. The other said "Colored Men" and "Hombres Aquí," meaning, "Men Here."

Consider more fully the underlying claim of jury exclusion. All-white juries imperiled Mexican American defendants who, such as Hernández, risked conviction by hostile and biased juries. Moreover, the Mexican American community suffered because white juries rarely and reluctantly convicted whites for depredations against Mexican Americans. Finally, determined opposition to jury exclusion arose because of its symbolism. In the context of Texas race politics, putting Mexican Americans on juries was tantamount to elevating such persons to equal status with whites. The idea that "Mexicans" might judge whites deeply violated Texas's racial caste system. LULAC hoped *Hernandez* would help to topple a key pillar of Jim Crow: the belief that whites should judge all, but be judged by none but themselves.

FRUSTRATING A RACIAL ANALYSIS

Even though it challenged a Jim Crow practice, the Supreme Court did not decide *Hernandez* as a race case. The Court avoided a racial analysis because, strikingly, both parties argued that Mexican Americans were racially white.

As the evidence in *Hernandez* demonstrates, Anglos in Texas in the 1950s considered Mexicans an inferior race. This belief originated during the Anglo expansion into the Southwest in the early to mid-1800s that culminated in the expropriation of the northern half of Mexico. Initially, Mexicans in the United States, or at least the community's leaders, resisted their racial subordination by constructing themselves as Mexican nationals and by envisioning an eventual return to Mexico. In the 1920s and 1930s, however, broad segments of the U.S. Mexican community came to see themselves as Americans. During this epoch Mexican community leaders embraced an assimilationist ideology; indeed, the label "Mexican American" emerges from this period and encapsulates the effort to both retain pride in the community's Mexican cultural origins and to express an American national identity. Inseparable from this new assimilationist identity, however, was an engagement with American racial logic: on this score the community leaders argued that Mexican Americans were white.

These ideas found clear expression in LULAC's arguments in *Hernandez v. Texas*. As in other cases, LULAC followed what it termed its "other white" legal strategy, protesting not segregation itself, but the inappropriate segregation of Mexican Americans as a white racial group. Thus, LULAC objected in its brief to the Supreme Court that, "while legally white," in Jackson County "frequently the term white excludes the Mexicans and is reserved for the rest of the non-Negro population" (Brief of Petitioner at 38, *Hernandez v. Texas*, 347 U.S. 475, No. 406). Hernández's lawyers did not argue principally that segregation was legally wrong, but that Mexican Americans were legally white.

Meanwhile, Texas also adopted the claim that Mexican Americans were white—though to preserve segregation. LULAC and others had brought at least seven challenges to jury exclusion in Texas before *Hernandez*. In the initial cases Texas courts relied on testimony that Mexican Americans were "ignorant" or "not intelligent enough" in ruling that no Mexican Americans were qualified for jury service. By the late 1940s, however, the Texas courts shifted to a new approach. Seeking to turn LULAC's arguments back against them, the courts began to hold that there was no discrimination because, like every jury member, Mexican Americans were white. As the decision under appeal in *Hernandez* reasoned, "Mexicans are white people.… The grand jury that indicted [Hernández] and the petit jury that tried him being composed of members of his race, it cannot be said … that appellant has been discriminated against in the organization of such juries" [*Hernandez v. Texas*, 251 S.W.2d 531, 536 (Tex. Crim. App. 1951)].

PROTECTING SUBORDINATED GROUPS

Confronted with contending parties who nevertheless agreed that Mexican Americans were white, the Supreme Court jettisoned an explicitly racial analysis. The case, Warren said, did not turn on "race or color." However,

Warren did not then attempt to decide the case in terms of some other form of difference, for instance national origin, ancestry, or ethnicity. Rather, the Court approached this case as concerning group subordination generally. "Community prejudices are not static," Warren wrote, "and from time to time other differences from the community norm may define other groups which need [constitutional] protection." For Warren, a group's standing was "a question of fact," something that "might be demonstrated by showing the attitude of the community" (*Hernandez v. Texas*, 347 U.S. at 478, 479).

In considering whether the Fourteenth Amendment commanded the Court's intervention, Warren framed the core question as this: Are social practices based on notions of racial difference being used to subordinate? To answer this question, the Court cataloged the Jim Crow system that defined race relations in Jackson County. *Hernandez* struck down jury discrimination against Mexican Americans not because they were nominally a race, but because in the context of mid-century Texas, Mexicans were a subordinated group.

SEE ALSO Brown v. Board of Education, *1954; Civil Rights; Colonialism; Warren, Earl*

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Ian F. Haney López

HERSKOVITS, MELVILLE J.
1895–1963

The American anthropologist Melville J. Herskovits spent his long academic career at Northwestern University, from 1927 until his death in 1963. There he established the first program in African studies at a major U.S. university. Herskovits has been regarded as a pioneer for advocating the serious and respectful study of Africa and the African diaspora. In *The Myth of the Negro Past* (1941), perhaps his best-known book, he sought to document the strength of an African cultural heritage of which blacks in the United States could be proud; he felt that once this was known and respected, antiblack prejudice would diminish.

Herskovits was born in Ohio to European-Jewish immigrant parents. Briefly a student at Hebrew Union College in Cincinnati, he enlisted in the U.S. army during World War I (1914–1918). He later attended Columbia University, where he studied with Franz Boas (1858–1942), who was seen as the "father" of American anthropology. Herskovits did a library doctoral dissertation on the "cattle complex" of East Africa with a focus on culture areas, tracing the diffusion of cultural traits. (The "cattle complex" referred to the cultural meanings, economic functions, and politics associated with cattle in East African cultures.) He then undertook physical anthropological research among African Americans. With his wife and anthropological partner Frances S. Herskovits (1897–1972), he did ethnographic fieldwork in Africa, in Dahomey (1931), and among Afro-American groups in Suriname (1928 and 1929), Haiti (1934), Trinidad (1939), and Brazil (1941–1942), before turning his attention more fully to African societies and politics.

Beginning with his popular and professional writings in the 1920s, Herskovits sought to combat racism and nativism through the use of anthropology conceived of as a science. He furthered Boas's insistence on the plasticity of "race" by arguing that the "American Negro" was a racially mixed "amalgam" (Herskovits 1928, 1930). When he turned to the cultural anthropology of the African diaspora, Herskovits initially held that African Americans evinced "complete acculturation" to (white) U.S. mainstream culture (Jackson 1986). However, influenced by ethnologists and historians from Latin America and the Caribbean, African American intellectuals, and others, he soon redirected his scholarship to the study of what he called *Africanisms*, viewed as cultural elements of African provenance (Yelvington 2006). For Herskovits, in the acculturative context of African diaspora in the Americas, where culture contact occurred between African, European, Amerindian, and other cultures, Africanisms shaped the behavioral responses of what he called the "Negro in the New World," and were even to be found among whites and other groups (e.g., in cuisine and speech in the U.S. South). Africanisms, which could sometimes be identified by African ethnic origin, were conceived as cultural baselines, and they were thought to vary in intensity across the region and across cultural forms such as kinship, language, dance, and games—indeed, they could be charted on a "scale of intensity"

continuum. They were found in folklore, but they were believed to be especially strong in religion (Baron 1994). In *Suriname Folk-Lore* (1936) the Herskovitses sought to demonstrate "correspondences" between Creole tales and tales of Old World origin; their work in Dahomey (Herskovits 1938a; Herskovits and Herskovits 1958) was concerned with the performance of narratives, creative expression, and the role of proverbs and riddles in enculturation, as well as with religion. In the 1930s Herskovits became interested in *acculturation*, or culture contact and culture change (Herskovits 1938b). In *Life in a Haitian Valley* (Herskovits 1937) he combined this interest with psychology, and introduced the idea of *socialized ambivalence* to describe what he saw as the conflict-ridden personalities that were the result of a dual cultural legacy. *Syncretism*, or the merging of two belief systems that still retain their identities, became important in Herskovits's conceptual lexicon at this time. These concepts were brought together in *The Myth of the Negro Past* (1941). With *Trinidad Village* (Herskovits and Herskovits 1947), the concept of reinterpretation was used to designate how Afro-Americans retained "inner" behavior while giving new meaning to acquired cultural forms (Baron 2003). Herskovits's promotion of cultural relativism and his mature ideas of cultural dynamics were elaborated most fully in *Man and His Works* (1948).

Herskovits was criticized by some such as Gunnar Myrdal (1898–1987), main author of the landmark *An American Dilemma* (1944), and African American sociologist E. Franklin Frazier (1894–1962) who, while joining with Herskovits's goal of eliminating racism, could not agree with his theoretical stance.

Herskovits garnered an international reputation within the disciplines of anthropology and African diaspora studies, holding many positions of influence (Gershenhorn 2004) and publishing more than 400 books and scientific papers (Merriam 1964). Meanwhile, he trained a cadre of doctoral students at Northwestern University. His writings have inspired cultural and identity politics. All of which means that Herskovits's work remains controversially relevant.

SEE ALSO *Anthropology, U.S.; Boas, Franz*

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HESSIAN MATRIX

The Hessian matrix was developed by Ludwig Otto Hesse (1811–1874), a German mathematician, though the term was first used by James Joseph Sylvester (1814–1897), an English mathematician who studied under Karl Gustav Jacob Jacobi (1804–1851). The Hessian is a square (the number of rows equal to the number of columns) and

symmetric (if the rows are written as the columns, the same matrix is produced) matrix whose entries are second-order partial derivatives defined as $\frac{\partial^3 f}{\partial x_i \partial xj}$. Since the Hessian is defined using second-order partial derivatives, the function must be continuous (smooth with no breaks or gaps) and differentiable (the derivative must exist at the point being evaluated).

The Hessian is used to characterize stationary or inflection points of a multivariable function, $f(x_1,x_2)$, as maximums or minimums. The identification as a maximum or minimum requires knowledge about the leading principal minor, $|H_k|$—the determinant of the principal submatrix of order k. For a stationary point to be a maximum, the leading principal minors must alternate in sign with $|H_1|$ being negative. If all the leading principal minors are positive, then the stationary point is a minimum. Failure to satisfy either of these conditions, which includes a leading principal minor of value zero, means characterization of the stationary point is inconclusive. The drawback of the Hessian is that calculating all the leading principal minors becomes laborious for an n-variable function with $n < 2$.

The Hessian, as defined, is used to characterize stationary points of unconstrained optimization problems, which are drawn from the theory of the firm. Goods are produced using capital (K) and labor (L) with the following production function, $f(L,K)$. Firms must decide the optimal combination to maximize profit. Applying the Hessian to such a problem generates a condition for profit maximization. For $|H_1|$ to be negative, the marginal product of labor must be diminishing—additional labor beyond the optimal choice decreases productivity, therefore, decreasing profit. The positive requirement of $|H_2|$ means that the marginal product of capital must also be diminishing. Without knowledge of these conditions, changes to the firm's production policy would result in inefficient use of resources and a decrease in social welfare. Therefore, the Hessian matrix is an important tool in the policy analysis of unconstrained choices.

SEE ALSO *Inverse Matrix; Jacobian Matrix; Matrix Algebra*

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HETERARCHY

Complex systems science is the study of dynamic nonlinear systems that are not in equilibrium and do not act in a predictable manner. Key features (integration, communication, history/initial conditions) in complex biophysical systems correspond with key features of social systems: the holistic nature of culture, knowledge sharing through the senses, and the formative power of traditions, structures and materials, strategies, and habits of mind.

While several areas of complex systems research have potential for the social sciences, one of the most promising is the concept of heterarchy, which treats the diversity of relationships among system elements and offers a way to think about systemic change in spatial, temporal, and cognitive dimensions. Definitions of heterarchy are remarkably consistent across disciplines, while the work they do is extraordinarily diverse. The earliest definition describes the mind's ability to hold conflicting values as a "heterarchy of values determined by the topology of nervous nets" (McCulloch 1945, p. 89). In artificial intelligence and computer design, the organization of computer sub-routines that can call one another is heterarchical (Minsky and Papert 1972, p. 2). A mathematician defines heterarchy as a program in which there is no highest level (Hofstadter 1979, p. 134). A sociologist who studies corporations defines heterarchy as "an emergent organizational form with distinctive network properties … and multiple organizing principles" (Stark 2001, p. 71). A general purpose definition contrasts hierarchies, the elements of which are ranked relative to one another, with heterarchies, the elements of which are unranked, or possess the potential for being ranked in a number of differ-

ent ways, depending on systemic requirements (Crumley 1979, p. 144).

Heterarchy does not stand apart from hierarchy; rather, the two forms are in a dialectical relationship. From a mathematical standpoint heterarchy is the more general category and subsumes hierarchy as a special case. The concept's versatility permits its use as a physical structure, as an abstract model, or in an historical narrative. Heterarchy meets requirements for robust social theory inasmuch as the concept can relate the micro (individual) level to the macro (social) level, the agency of social actors to the social structure in which they operate, and provide an explanation for discontinuous and fundamental changes in the social system as a whole.

Heterarchy is a corrective to the naturalized characterization of power relations, which conflates hierarchy with order (Crumley 1987, 2005; Ehrenreich 1995). Since archaeology's founding as a discipline, most interpretation has assumed a linear progression from small, early, "simple" societies to those that were more populous, later in time, and "complex." Such a definition of complex (having more administrative levels) is in contrast to the definition of complexity in nonlinear systems (more richly networked). Political systems were assumed to have greater stability the more they tended toward tiered hierarchies of power. Yet powerful forces can manifest entirely outside the framework of state hierarchies and beyond their control. In non-linear systems, this is chaos or surprise, and reflects the characteristic brittleness of very hierarchical societies rendered vulnerable by systemic barriers to information transfer and limited recognition of other dimensions of power.

Archaeological and ethnographic evidence indicates that hierarchies and heterarchies of power coexist in all human societies, including states. Thus biological diversity has a correlate in human societies: the toleration of difference in individuals and groups offers a reserve of knowledge for use in problem solving, just as genetic and biological diversity increases ecosystemic resilience. Similarly, organizational flexibility (economic, social, and political) enables societies to adjust to changed circumstances. As in ecology, researchers must remain aware of intensity, periodicity, and duration of relations; in human societies this might be thought of as the range of powers an individual, a group, or an institution has, and the regularity and duration of particular roles. Heterarchy is a fundamental principle of social organization.

SEE ALSO *Archaeology; Chaos Theory; Ethnography; Hierarchy; Networks; Political Economy; Power; Systems Theory*

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Carole L. Crumley

HETEROGENOUS AGENTS

SEE *Principal-Agent Models.*

HETEROGLOSS

SEE *Anthropology, Linguistic.*

HETERONOMY

SEE *Kant, Immanuel.*

HETERONORMATIVITY

Coined in 1991 by Michael Warner, a social critic, the term *heteronormativity* refers to pervasive and invisible norms of heterosexuality (sexual desire exclusively for the opposite sex) embedded as a normative principle in social institutions and theory; those who fall outside this standard are devalued. The concept is useful in attempting to understand the assumptions upon which heterosexuality rests, and in showing how and why deviations from heterosexual norms are subject to social and legal sanctions. For example, heteronormativity assumes a belief in *dimorphic sexual difference* (there are two sexes), *biological essentialism* (male and female functions are essentially different), and *mimetic sex/gender relationship* (psychosocial traits follow anatomy). Those who deviate from these assumptions of the gender binary by openly preferring romantic partners of the same sex, by changing from one sex to another, or by violating heterosexual norms in other ways, are marginalized. They are considered by many societies to be mentally defective and morally inferior, and they are subject to street violence, discrimination in employment, and withdrawal of social acceptance. These sanctions force conformity to sexual norms.

The term *heteronormativity* is itself controversial because it suggests to some a condemnation of those who espouse heterosexuality, or of those who oppose nonheterosexual behavior based on religious or moral beliefs. Some have suggested that it is used to enforce liberal orthodoxy. This is correct to some extent, in that the concept of heteronormativity focuses on the exclusivity of heterosexual norms. Thus, the concept implies criticism of those social conservatives who disapprove of nonheterosexual behavior. This criticism is justified to some degree because it is often difficult for those in the majority, heterosexual culture to realize the extent to which their culture routinely pervades society and constantly creates and enforces norms that marginalize nonheterosexual behavior. Normative heterosexual culture pressures all to conform, or at least to hide their differences, because those outside the norms are perceived as "strange." The normative culture also erases the extent to which it makes heterosexuality an issue. Because heterosexuality is the order of things, it seems as if nonheterosexuals make an issue of their sexuality, but heterosexuals do not. The gay American writer and radio host Michelangelo Signorile writes about the pervasiveness and invisibility of heterosexual norms:

> These heterosexuals don't realize that they routinely discuss aspects of their own sexuality every day: telling coworkers about a vacation they took with a lover; explaining to their bosses that they're going through a rough divorce; bragging to friends about a new romance. Heterosexual reporters have no problem asking heterosexual public figures about their husbands, wives, girlfriends, boyfriends or children—and all these questions confirm and make an issue of heterosexuality. The ultimate example of making an issue of heterosexuality is the announcements in the newspapers every Sunday that heterosexuals are getting married. (Signorile 1993, xvii)

SEE ALSO *Gender; Sexual Orientation, Determinants of*

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Jillian T. Weiss

HETEROSKEDASTICITY

The classical statistical assumptions underlying econometric analysis refer to a set of requirements that need to hold in order for ordinary least squares (OLS) to yield the "best" estimator available for regression models. Heteroskedasticity violates the classical assumption that observations of the error term are drawn from a distribution that has a constant variance. Homoskedasticity, the assumption of constant variance for different observations of the error term, is not always realistic, because the larger an independent variable, the larger the variance of the associated disturbance.

In general heteroskedasticity is more likely to take place in cross-sectional models than in time-series models. However, heteroskedasticity can occur in time-series models with significant changes in the dependent variable. Heteroskedasticity can also occur in any model where the quality of data collection changes dramatically within the sample, or it can be caused by a model specification error.

When the violation of homoskedasticity takes place, ordinary least squares estimation of regression coefficient (β^{OLS}) remains unbiased, but it no longer has minimum variance among all linear unbiased estimators. Heteroskedasticity causes OLS to tend to underestimate the variances (and standard errors) of the coefficients. As a result, tests of statistical significance, such as the t-statistic and the F-statistic, cannot be relied on in face of uncorrected heteroskedasticity. In practice OLS usually turns up with higher t-scores than would be obtained if the error terms were homoskedastic, leading researchers to reject null hypotheses that should not be rejected.

There is no universally agreed-upon method of testing heteroskedasticity; econometric textbooks list as many as eight different methods for such testing. However, the visual inspection of residuals plotted against the suspected independent variable provide the first step for detecting the problem, and many computer packages can produce this graph. Some commonly used detection tests are the Goldfeld-Quandt test, the Glejser test, the Maximum Likelihood technique, the Park test, the White test, and the Bartlett's test. The majority of these tests use the residuals of an equation to test for the possibility of heteroskedasticity in the error terms. Certain disadvantages exist in every detection test, such as the computational cost (Maximum Likelihood technique) or the identification of a proper value for the best possible form of heteroskedasticity (Park test). It is worth mentioning, however, that an extensive Monte Carlo study of these techniques showed that the Maximum Likelihood approach is the most desirable.

The first step in correcting heteroskedasticity is to check for an omitted variable that might be causing impure heteroskedasticity. If the specification is as good as possible, then solutions such as the Weighted Least Squares (WLS) or the Heteroskedasticity-Corrected Standard Errors (HCSE) should be considered. The WLS involves dividing the main equation by whatever will make the error term homoskedastic and then rerunning the regression on the transformed variables; a disadvantage of this method is the identification of this proportionality factor. The HCSE is the most popular remedy for heteroskedasticity, and it takes a completely different approach to the problem. It focuses on improving the standard errors of the coefficients without changing the parameter estimates. One of the disadvantages of this technique is that it works best on large samples, and not all computer regression software packages calculate HCSE.

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Persefoni Tsaliki

HETEROTYPIC STABILITY

SEE *Stability, Psychological.*

HICKS, JOHN R.

1904–1989

Sir John R. Hicks, a British economist and author of twenty books, was knighted in 1964 and received the 1972 Nobel Prize for his contributions to general equilibrium theory and welfare economics. After graduating from Oxford University in 1925, he taught at the London School of Economics (LSE), where he formulated concepts on the elasticity of substitution, relative income shares of labor and capital, and liquidity. At LSE Hicks came under the influence of Lionel Robbins and Friedrich Hayek but broke away from their thinking in his book *The Theory of Wages* (1932), in which he considered unions as monopolies in the sense of rigid wages in a discrimination setting. He joined Cambridge University (1935–1938), where he was swayed by John Maynard Keynes's (1883–1946) writings. Afterward, he was chair of political economy at the University of Manchester. He became a fellow at Nuffield College, Oxford, in 1946 and was the Drummond Professor of Political Economy from 1952 until his retirement in 1965. Hicks continued his work in the areas of fixprice and flexprice markets, liquidity, and inventions.

Hicks's contributions stand out in the areas of applied economics, Keynesian economics, value theory, and technological progress. His method was to modify a theory to fit the facts. Facts are linked to events of the day and have a history that can become dramatic at times. According to Hicks, these dramatic facts are like blinkers waiting to be simplifed, theorized about, and selected to explain topical events. Hicks continually revised his theories because economic facts are less permanent and less repeatable than facts in the natural sciences.

Hicks viewed welfare economics as an application of demand theory, focusing on efficient and optimal cost and use of the social product. An efficiency test for welfare benefits tells us how to acquire more of one thing without having less of another thing. Demand theory makes sure that what we are getting more of is not detrimental. A welfare optimum may not be attained in a market with uniform prices, making room for cost-benefit analysis.

Hicks's IS and LL curves represent Keynes's ideas of equilibrium in the goods and money markets, respectively. Alvin Hansen later suggested the label LM for LL (Hansen 1953, p. 144). Darity and Young (1995, pp. 1–14, 26–27) clarified that Hansen's contribution emphasized one sector, while Hicks's contribution emphasized two sectors. Hicks developed a four-equation system representing liquidity preference, $M = L(r, Y)$; investment, $I = I(r, Y)$; savings, $S = S(r, Y)$; and saving-investment equilibrium, $S = I$, where M is money, I is investment, S is savings, Y is income, and r is the rate of interest. The first equation yields the LM curve. If the

interest rate rises, the alternative cost of holding money relative to other assets becomes higher, lowering the demand for money. A rise in income will increase the demand for money. The other three equations yield the IS curve, which shows how income and interest rates adjust to make savings equal to investments. By making unsold inventories depend on the future, the model accommodates short period expectations. In the short term, such as a day, expectations do not change, so the condition for saving to equal investment in the model is achieved. The IS-LM curves can take on special shapes that would prevent automatic adjustments from occurring. Hicks later thought that the IS curve represents a flow concept, and the LM curve, a stock concept. In his *Capital and Growth* (1965), he proceeded to show that a stock equilibrium over a period would require a flow equilibrium over that period.

Hicks argued against the cardinal view, where utility is added, and for the ordinal view of value, where consumers rank their tastes and preferences. Alfred Marshal and the founders of the marginal revolution examined value with a given utility function. They required a utility surface for consumer maximization. Hicks's value theory examined "what adjustments in the statement of the marginal theory of value are made necessary by Pareto's discovery" (Hicks 1981, p. 7). Vilfredo Pareto postulated a scale of preferences concept, which represented value only by indifference curves. Hicks transformed the cardinal concept of total utility to the marginal rate of substitution between two commodities on an indifference curve. Similarly, he transformed the idea of diminishing marginal utility to diminishing marginal rate of substitution measured by the convex shape of the indifference curve. Following Hicks's work, comparative static analysis that allows prediction from demand analysis can be performed. One of his predictions states that if demand shifts from good 1 to good 2, then the relative price of 2 in terms of 1 would increase, except if 2 is a free good.

On the technology side, Hicks classified inventions as neutral, labor saving, or capital saving. When inventions change the marginal productivity of labor and capital in the same proportion, the invention is called neutral. Hicks predicted that if wages increase, labor's share of output would rise, and that would encourage inventions to replace labor, making them labor saving. In an analogous manner, the same can be argued for capital-saving inventions. In general, when changes in relative prices of factors occur, they induce inventions; otherwise inventions are autonomous. Autonomous inventions are likely to be randomly distributed, while induced inventions are likely to be labor saving.

SEE ALSO *Capital; Economics; Economics, Keynesian; Economics, Nobel Prize in; IS-LM Model; Technological Progress, Economic Growth; Utility, Subjective; Value; Value, Subjective; Welfare Economics*

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HICKS-KALDOR COMPENSATION

SEE *Public Interest; Welfare Economics.*

HIDDEN PERSUADERS

The idea that there are subtle forces within the advertising industry that try to manipulate consumers' subconscious desires in order to sell products emerged in the first decades of the twentieth century. After World War II, debates about legitimate levels of consumer persuasion in advertising returned with a vengeance. In these years, Western societies' material wealth and choice of products increased dramatically, which led to ever more advertising being targeted at consumers, especially through the new medium of television. As the Cold War intensified, anxieties spread that governments could use some of the moti-

vational and subliminal persuasion techniques developed by advertisers for political purposes.

These wide-ranging issues were coherently discussed and brought to a wider, non-academic audience by the journalist Vance Packard in his 1957 best-seller *The Hidden Persuaders*. Packard laid bare how the motivational researcher Ernest Dichter applied psychoanalytic techniques in a way that helped marketers understand and influence consumers' decision-making in the supermarket or automobile showroom. Packard also discussed the subliminal advertising techniques newly developed by the market researcher James Vicary, who in 1957 had designed an experiment in which split-second advertising messages for cola and popcorn were inserted into a movie. The short messages used in Vicary's movie experiment were as invisible to the conscious mind as the psychoanalytic techniques that Dichter developed for his clients, such as the use of subtle sexual imagery to make household products more attractive. Packard argued that motivational research, subliminal advertising, and the method of product placement defied the ideal of open and honest advertising and instead led to forms of "hidden" persuasion that undermined the rational autonomy of consumers and citizens, thus endangering the very basis of liberal democracy.

Similar arguments, though based on a more philosophical analysis of the normative nature of capitalism's political economy, were developed at the same time by the Harvard economist John Kenneth Galbraith. Galbraith's well-known 1958 book on *The Affluent Society* pointed out that advertising was not merely a means of selling products but, by its very ability to form people's anxieties and desires, a form of social power. In the eyes of Galbraith, traditional economic thought had ignored this fact and had therefore failed to acknowledge that market capitalism was anything but a set of institutions governed by rational decision makers.

Packard's much-discussed ideas reemerged in the 1970s when a new generation of critical journalists and social scientists launched attacks on the hidden persuaders in multinational corporations and governments. Most prominently, Wilson Bryan Key's 1973 book *Subliminal Seduction* and Stuart Ewen's 1976 publication *Captains of Consciousness* revived the idea that advertisers willingly applied manipulative and subliminal advertising techniques or images of sexually attractive, youthful, and ever-happy people in order to increase the sale of products. In the 1990s social psychologists approached the issue of consumer persuasion, and of subliminal advertising in particular, with far greater skepticism. While it needs to be acknowledged that advertisers do indeed attempt to influence consumer behavior through all possible means, psychologists have until today found no conclusive evidence that subliminal advertising messages do actually have measurable and reproducible effects on consumers. As a result of this, the discussion of advertising's contested role in capitalist societies has slowly moved away from allegations of hidden psychological seduction or subliminal messages. Rather than looking for evidence of subliminal manipulation of consumers, authors have begun to criticize the often blatant conquest of public spaces and people's private lives by megabrands and the corporate interests behind them. This, in turn, has led to more debates about such things as advertising directed at children, and advertising's relation to potential health risks (associated with products such as cigarettes, alcohol, and fast food). Juliet Schor, for example, has shown how advertising for well-known car, fashion, food, and cosmetic brands determines what many consumers feel they ought to possess and parade in front of neighbors and peer-group members. This type of lifestyle advertising puts pressure on people to spend more time at work—instead of within families or communities—in order to be able to buy more luxury products.

SEE ALSO *Conspicuous Consumption; Subliminal Suggestion*

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Stefan Schwarzkopf

HIERARCHY

A hierarchy is any ranking of objects into grades, orders, or classes of increasing dominance or inclusiveness. As a social phenomenon, hierarchy is a specific type of social organization in which members are divided by status or especially authority. Early use restricted the concept to

sacred rankings of heavenly bodies (e.g., orders of angels) or ecclesiastical and religious rule. Indeed, in his masterwork *Economy and Society*, the German sociologist Max Weber (1864–1920) first distinguished between political and hierocratic organizations, limiting the latter to those entities with a monopoly of psychic coercion in distributing or denying religious benefits. Contemporary usage refers to any status or authority ranking based on traditional or religious beliefs and customs, formal-legal rules, or persistent inequalities.

Although contested, many scholars believe that humans, like other primates, are hierarchical animals who innately create social rankings within groups. Less contested is that humans throughout history have formed many social hierarchies, ranging from family, tribe, and clan groupings to genders, classes, and castes, to city-states, empires, and nation-states, to bureaucratic organizations including corporations, guilds, unions, political parties, and other civic associations.

Although particular forms differ, all hierarchies are comprised of relationships of superiority-inferiority or domination-subordination. On a daily basis, each individual in a modern society is likely to be a member of several distinct hierarchies with multiple and overlapping jurisdictions. One can simultaneously be a dominant member of a family from a "lower" class and a union leader, subject to the laws of the state in all these roles.

As these examples suggest, hierarchy is ubiquitous in social life. No definitive enumeration of types or forms is possible. At the same time, hierarchy is not universal. Many relationships are carried out between more or less equals, including interactions within peer or friendship networks, transactions in the marketplace, and diplomatic exchanges between great powers in international politics.

Hierarchy is not only varied but dynamic, evolving in form and extent. Although the historical trajectory has not been smooth and unidirectional, hierarchy appears to have deepened in scope and expanded in range over time, and especially in the modern era. With the rise of the nation-state as the encompassing form of hierarchy in the twentieth century, and the deepening of the division of labor within and between societies, greater areas of social life are now more clearly organized by rank and authority than in the past. This trend is challenged in the twenty-first century by globalization, the Internet, and various transnational social networks, all of which carry the potential for alternative, nonhierarchical forms of social organization. Whether these developments signal a long-term change in trajectory or merely a short-term oscillation in the degree of hierarchy remains a subject of debate.

Early understandings of the origins and rules of hierarchy were often functionalist, positing that hierarchies form to solve collective problems within societies. Perhaps best known among these early approaches is Robert Michaels's "iron law of oligarchy," which posited that the division of labor within organizations combines with the self-interest of organization elites to produce hierarchy even within bodies that pursue egalitarian goals ([1915] 1958). Subsequent scholars have rendered this "law" a contingent tendency, but the forces first identified by Michaels remain important in our understanding of hierarchy.

Contemporary theories of hierarchy can be grouped into three principal schools. Psychological theories ground the ubiquity of social hierarchy in human nature. Associated with the work of James Sidanius and his colleagues, social dominance theory is, perhaps, the most prominent psychological approach today, largely because its multilevel approach avoids many of the problems of strictly individual-level theories. Like authoritarian personality theory and other individual approaches, social dominance theory posits a social dominance orientation that, although universal, varies across the human population and expresses the value people place on hierarchically structured relationships among social groups. Social dominance orientation, in turn, interacts with context-specific institutions and ideologies to produce age, gender, and "arbitrary-set" hierarchies that take the form of clan, ethnic, caste, class or other socially constructed types of discrimination. Although providing a persuasive synthesis of a tendency towards hierarchy in all nonsubsistence societies, social dominance theory lacks a well-developed mechanism for explaining intra- and intersocietal differences in the degree of group-based hierarchy.

The other two main approaches to hierarchy seek to explain precisely the differences in the forms and extent of hierarchy. The contractual perspective dates most clearly from Oliver Williamson's path-breaking *Markets and Hierarchies* (1975). In a world of costly contracts that fail to specify obligations in all possible future states of the world, Williamson posited, self-seeking actors will tend to form hierarchies when one, but not both, of the parties to a recurring transaction possesses relationally specific assets—or assets that are worth considerably more within that relationship than in their next best use. An example would be a producer of specialized components for a particular brand of automobile. By placing the transactions under unified ownership, and subjecting them to administrative controls (dominance), the incentives of the parties to act opportunistically toward one another are greatly reduced. By internalizing transactions within a hierarchy, actors give up the information and discipline that is otherwise provided by market competition, but reduce the likelihood that they will be exploited by partners. Thus, Williamson and his many followers predict that the producer of specialized components will be subsumed within the automotive firm into a corporate hierarchy. In the

absence of relationally specific assets or frequent exchanges, in contrast, actors will prefer to transact "at arm's length" in a market. When both parties have relationally specific assets, they hold "mutual hostages" and can coexist effectively in long-term, bilateral, and nonhierarchical relationships. This key insight on hierarchies as solutions to the problem of incomplete contracting in the presence of relationally specific assets has been extended from firms and economic exchange to bureaucracies and other managerial hierarchies, as well as to the analysis of empires, alliances, federal states, international organizations, and a variety of other institutions.

The distributional school lacks a single defining work, but generally understands hierarchies as emerging from initial inequalities between individuals or groups and, then, reinforcing those inequalities to produce an even more highly stratified society. Like the contractual approach, this school conceives of hierarchy as largely negotiated, albeit often under duress and possibly under threat of coercion, between actors who accept a subordinate status in exchange for access to the economic surplus possessed by the would-be superior. In the "big man" societies of Melanesia, for example, individuals acquire status and authority by using their comparative advantage in hunting, gardening, ritual knowledge, or violence to accumulate a material surplus, which they then redistribute to needy villagers. Often pressed to appeal to the big man by unexpected downturns in fortune, the supplicants become followers or subordinates in an informal village hierarchy. Over time, or once embedded into some religious or ideological frame, these relations of inequality become accepted or "normalized" into legitimate rule, with big men or perhaps their sons turning into "chiefs" at some later date. Similar hierarchies unfolded in early monarchies and empires, on the one hand, and in modern capitalist societies, on the other.

A contractual approach understands hierarchy as constructed to prevent possible opportunism, whereas the distributional approach posits that hierarchy emerges from actual inequality and exploitation. Despite this apparent tension, the two schools are actually complementary. Within the distributional approach, subordinates are understood to be locked into hierarchies by the material benefits provided by the superior; although perhaps driven by necessity to appeal to the dominant party for assistance, the subordinates are better off than they would be otherwise, absent that aid. In turn, the benefits of reduced opportunism provide the superior with the economic surplus necessary to assist subordinates while making himself better off as well. This exchange of goods for status and authority, what Herbert Spencer (1820–1903) first called "compulsory cooperation," provides the glue that holds social hierarchies together. Yet, to understand hierarchy as a bargain of sorts that leaves the parties to an agreement better off than they would otherwise be in an anarchic state of nature—where life would be, as Thomas Hobbes (1588–1679) famously described it, "short, nasty, and brutish"—is not to accept that inequalities of status or resources are fixed and immutable or cannot be made more equal. The history of social struggle is largely one of subordinates claiming a greater and possibly equal share of the social benefits produced by hierarchy. To the extent that hierarchy is an enduring feature of human life, social struggle will persist as well.

SEE ALSO *Caste; Community Power Studies; Elites; Michels, Robert; Oligarchy, Iron Law of; Power Elite; Psychology; Social Dominance Orientation; Spencer, Herbert; Stratification*

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David A. Lake

HIGH BLOOD PRESSURE

SEE *Hypertension.*

HIGH-POWERED MONEY

SEE *Monetary Base.*

HIGH TECHNOLOGY

SEE *Microelectronics Industry.*

HILFERDING, RUDOLF
1877–1941

The economist Rudolf Hilferding was born in Vienna in 1877 to a liberal Jewish family. While studying medicine at the University of Vienna, Hilferding was influenced by his Marxian teacher Carl Grünberg (1861–1940). He abandoned medicine and, together with other Marxists, founded the *Marx-Studien* journal in 1904. He later moved to Berlin, where he became involved in politics and served twice as Germany's finance minister (1923, 1928–1929). In 1933 Hilferding fled Germany and settled in Paris, but he was later arrested and was murdered by the Gestapo in 1941.

Hilferding became noted for his criticism of the Austrian economist Eugen von Böhm-Bawerk (1851–1914) with the publication in 1904 of his book *Böhm-Bawerk's Criticism of Marx*. For Böhm-Bawerk, the market determines prices, and competition requires the freedom of capital and labor to yield equal profit rates. For Hilferding, in contrast, the market is conditioned by the relationship of surplus value to wages and its distribution among productive agents, while competition is a reciprocal relationship between products (Sweezy [1949] 1966, p. 191). For Böhm-Bawerk, labor is a disutility of work; for Hilferding, "labor is the social bond uniting an atomized society" (Sweezy [1949] 1966, p. 134).

Hilferding used Marxian schemata to criticize Böhm-Bawerk. He found different prices for each sector but the same total price and value for all sectors. To Hilferding, Böhm-Bawerk's position equates price as equal to value. Hilferding underscored that Marx had modified value in a definite way, where the law of value passes to the law of motion through commodities. In the labor theory of value, commodities are exchanged for their values. This is not a condition of exchange in general. Changing historical conditions modify exchanged value, and "all that is necessary is that we should understand the course of prices to be a modification of the pre-existing course of prices. … Böhm-Bawerk's mistake is that he confuses value with price" (Sweezy [1949] 1966, p. 156).

In *Finance Capital* (1910) Hilferding built on Marx's work in the areas of joint stock companies and cartels, crises, and imperialism. Hilferding argued that as capitalist industries develop, they form cartels to avoid competition. At the same time a concentration of banking evolves as banks come to encompass huge financial capacity. Thus, as the banks' capital is invested in industry, it becomes finance capital.

The high profits of cartels find their way into banks. Banks seek to export capital as investment opportunities decline at home and form general cartels. To foster exports, tariffs and protectionism are encouraged. As cartels and banks expand, finance capital becomes increasingly concentrated, creating a Marxian money-to-money circuit, $M - M'$. Hilferding's unique contribution is that shareholders no longer rely on profits. They can be money capitalists relying on interest. He referred to this gain as *promoter's profits*, $P = \frac{100Y}{d} - \frac{100Y}{p}$, where d is dividend, p is average profit, and Y is the yield of the enterprise. The formula shows a positive yield when a corporation transfers productive profit-yielding capital into interest-yielding capital (Hilferding [1910] 1981, pp. 114, 117).

Hilferding presented a crisis theory that is based primarily on proportionality between the capital-goods and the consumption-goods sectors. When a commodity plays the dual role of money (M) and commodity (C), a crisis is possible in the $C_1 - M - C_2$ circuit when money is hoarded. For Hilferding, "a crisis is simply the point at which the rate of profit begins to fall" (Hilferding [1910] 1981, p. 257). Marxian crises result from falling profits and underconsumption. Hilferding emphasized the disproportion in which commodities are produced and deemphasized the underconsumption theory. As the aggregate product is represented by the sum of constant capital, variable capital, and surplus value, the part of constant capital that is used up must be replaced, and if variable capital and surplus are consumed, proportionality is maintained, and production will be sustained.

Hilferding's finance capital is marked by the highest level of concentration of economic and political power. This is due to mergers of corporations, which eliminate trade, create substantial profits that strengthen a firm against downswings, and allow financial capital controlled by banks to enter industries. At this stage capitalism has withered but is not dead, and economic power is transformed into state control. State power breeds international conflicts, while internal conflicts increase with the concentration of capital. The proletariat's response to this imperialism is a demand for socialism. A country can maintain its capital only by increasing military operations. V. I. Lenin (1870–1924) considered this "a very valuable theoretical analysis" (Lenin [1917] 1973, p. 11). While in Lenin's version competition and monopoly are maintained, in Hilferding's version organized capitalism without competition and capitalist control ensues as in the socialist planned economy.

The American economist Paul Sweezy (1910–2004), a major critic of Hilferding (Sweezy [1942] 1970, p. 268), maintained that finance capital is a temporary phase, as many corporations obtain financing from their internal sources of funds, and that banks now have a less powerful role. In addition to pointing out that imperialism is not a necessary state of capitalism, the Austrian economist

Joseph Schumpeter (1883–1950) considered Hilferding's monetary theory to be old-fashioned (Schumpeter 1954, p. 881).

SEE ALSO *Austro-Marxism; Capital; Capitalism; Economics, Marxian; Lenin, Vladimir Ilitch; Marxism; Nazism*

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Lall Ramrattan
Michael Szenberg

HINDUISM

Hinduism embraces a great diversity of beliefs and forms of worship, and it has therefore been called a "family of religions" rather than one religion. Hindus form the majority population of India (approximately 82% of India's 1.25 billion people). About 45 million Hindus live outside of India, mostly in the neighboring countries of Nepal (where Hinduism is the state religion), Bangladesh, and Sri Lanka. About 2.5 million Hindus live in North America, where they have established dozens of temples.

British authors in the early nineteenth century coined the term "Hinduism" by adding "-ism" to the word *Hindu*, which had been used by the Ancient Persians to identify the inhabitants of the land beyond the Indus River. Hindus themselves had called their tradition *Vaidika dharma* (the Vedic Dispensation) or *Sanātana dharma* (the Eternal Law). The Vedic civilization arose in northwestern India around 4000 BCE, and the Indus civilization (c. 2500–1900 BCE) may have been part of it. When the settlements had to be abandoned around 2000 BCE, due to a major climate change, most moved east into the Yamunā-Ganges Doab, which became the new home of Vedic civilization, with Mathurā (on the Yamunā) and Vārāṇasī (on the Ganges) as main cultural centers. Hinduism is closely tied to the land, and the *Mātrī-bhūmī* (Motherland) has a unique emotional appeal for Hindus. The physical features of the country are associated with Hindu gods and goddesses and with Hindu religious practices and eschatological expectations. The great rivers of India are not only important bodies of water; they are also sources of inspiration and ritual purification, as well as divinities to be worshipped. Many towns and cities along their banks are places where pilgrims congregate to obtain supernatural blessings. In addition, mountains such as the Himālayas, the Vindhyas, the Ghats, and the Nilgiri Hills are the abodes of gods. Hundreds of thousands of temples, small and large, embellish India's landscape, visibly transforming the country into the Hindu Holy Land.

SCRIPTURES AND RITUALS

Hindu scriptures have come down through the ages in two major streams: the *Vedas* and the *Āgamas*. The Vedas are the literature of the religious professionals, to be memorized and recited only by Brahmins. They comprise the four *Saṃhitās* (collections of hymns) and a large number of *Brāhmaṇas* (ritual texts), *Āraṇyakas* (forest treatises), and *Upaniṣads* (mystical writings). The Āgamas are the sacred literature of the people at large. The Great Epics, the *Rāmāyaṇa* and the *Mahābhārata,* are also important sources of Hindu religion.

Many Hindus consider the *Bhagavadgītā*, a section of the *Mahābhārata*, an epitome of their religion. The *Purāṇas,* bible-like compendia of Hindu lore, are widely read by Hindus from all classes. Numerous texts are considered to be revealed scriptures by the followers of specific worship traditions. They contain creation narratives, moral teachings, worship rituals, genealogies of kings and patriarchs, myths of gods and goddesses, edifying stories, and eschatological lore. Based on these texts, poets and playwrights such as Kālidāsa and Bāṇa (fifth or sixth century CE) produced dramatic literature of a high order in Sanskrit. Poet-saints such as Tulasīdāsa and Kamban (sixteenth century CE) created popular vernacular versions of the classics that continue to be performed, while countless "Bollywood" films take their stories from these books.

The language of the most ancient literary documents of Hinduism, "Vedic" is an archaic form of Sanskrit, the "refined language," standardized around 600 BCE by Pāṇini. Sanskrit was called *Deva-vāni*, or the "language of the gods." It became the language of Hindu scholarship and classical poetry as well as Hindu religious literature. All modern North Indian vernaculars are largely derived from Sanskrit.

Domestic and public rituals were a prominent feature of early Vedic culture and were considered indispensable for the well-being of individuals and society. In their performance, hundreds of intricate and interrelated rules had

to be observed. The construction of the altars demanded the solution of difficult arithmetic and geometric problems, and the timing of sacrifices was based on precise astronomical observations. The change of seasons was accompanied by rituals, as were the various life stages. Public offerings ensured the fertility of fields and domestic animals, while home rituals accompanied birth, adolescence, marriage, and death. In later centuries *pūjā*, the worship of great gods like Viṣṇu and Śiva, became the predominant form of religion. But the performance of Vedic rituals continues to this very day. For example, Brahmins still recite Vedic hymns at *upanayana* (initiation), *vivāha* (marriage), and *antyeṣṭi* (last rites). Many Hindus participate in daily temple worship and partake of consecrated food (*prasāda*), and the major temple festivals are great public events for every village and town. Domestic rituals, such as offering food to the deity or waving lights before the image of the deity, are also still widespread in India.

SOCIAL ORGANIZATION

Traditional Hindu society functioned on the assumption that humans are not born equal and that their birth in different *varṇas* (classes) defines their specific rights and duties. According to the *Puruṣa Sūkta*, the Vedic creation myth, *Brahmins*, born from the Great Being's mouth, were the custodians of the Veda, the highest in rank. *Kṣatriyas* (or *Kshatriyas*), born from its chest, were rulers and warriors. *Vaiśyas* (Vaisyas), born from its belly—businesspeople, artisans, farmers and clerks—had to provide the necessities of life for society at large. *Śūdras* (Sudras), originating from its feet, were to serve the upper three *varṇas*. The three higher *varṇas* alone were entitled to receive the *saṃskāras* (sacraments) that made them *dvi-jātis* (twice-born). *Ati-śūdras* (Ati-sudras), the people below the *Śūdras* (also called *Asprihyas* or untouchables) were outside the pale of Hindu society proper. They were relegated to doing work that was considered ritually polluting, such as skinning carcasses, cleaning latrines, and disposing of the dead. They were not allowed to dwell in the village proper and were not entitled to using amenities reserved for caste people. Each of the four *varṇas* consists of hundreds of *jātis* (birth lines, or subcastes) that also observe ranking among themselves.

Duties also varied with respect to stages in life. A twice-born male was to spend the first twelve years after initiation with a reputable teacher (*brahmacarya*). He then had to marry and to procreate children. After the children had grown up he was to live as a forest-dweller in a life of simplicity and meditation. Finally he was to enter the stage of renunciation, and as a homeless pilgrim he was to visit holy places until death relieved him of the burden of his body. While this schema was never literally carried out on a large scale, it provided a value orientation that was widely respected.

Early in their history, Hindus developed principles of theory and practice of government (*rajya-dharma*). The *Mahābhārata* devotes long sections to this, and the Kautilīya *Arthaśāstra,* ascribed to the prime minister of Chandragupta Maurya (321–293 BCE), provides a detailed description of a well-ordered professional administration. One of the aims of the Hindu *jāgaran* (awakening) that began in the early twentieth century was to reestablish India as a Hindu nation. The Hindū Mahāsabhā, the first modern Hindu political party, was founded in 1909. It maintained that "Hindus have a right to live in peace as Hindus, to legislate, to rule themselves in accordance with Hindu genius and ideals and establish by all lawful and legal means a Hindu State, based on Hindu culture and tradition, so that Hindu ideology and way of life would have a homeland of its own" (Pattabhiram, p. 217). Vir Savarkar, one of its main ideologues, strove to unify Hindu-India under the banner of "Hindutva," a cultural Hindu identity. In 1926, K. V. Hedgewar founded the Rāṣṭrīya Svayamsevak Sangh (RSS) in order to counteract Muslim influence in Indian politics. The RSS leader M. S. Golwalkar was instrumental in creating the *Viśva Hindū Pariṣad* in 1964, which aims at unifying all Hindus across the different denominations. It vigorously promotes and defends Hindu interests both within India and abroad.

ANCIENT CHALLENGES

In the sixth century BCE, movements arose in India that challenged the necessity of rituals (especially the animal sacrifices) and the mediating function of Brahmins. Among the breakaway factions that survived the centuries are Jainism and Buddhism. Jīna Mahāvīra, the last reformer of a more ancient religion, declared *ahiṃsā* (nonkilling) to be the highest moral principle. Gautama Buddha, the latest of a long series of "Enlightened" ones, taught that ethical perfection, rather than birth, made a person a Brahmin. For several centuries the traditions based on the teachings of these sages, Jainism and Buddhism, respectively, were the majority religions in India. Under the Imperial Guptas (320–540 CE), the Brahmins launched a major campaign to lure people back to Hindu rituals. They built temples and encouraged the composition of popular religious books. After the disintegration of the Gupta Empire, many smaller kingdoms arose in various parts of India. Hindu culture also reached out to Southeast Asia as far as the Philippines, and the languages and arts of Southeast Asia still show a strong Indian influence. From the twelfth century onward, most of India came under the rule of Muslim invaders, who destroyed many Hindu temples and built mosques on

their sites. These actions are still the cause of much friction between Hindus and Muslims today.

THE TRANSMISSION OF HINDUISM

Vedic religion was family based. Specific branches (*śākhas*) of the Veda were preserved in individual families, who held hereditary offices in public rituals. The home was also a center for religious practices, and the sacred hearth-fire was not allowed to die out. Families were responsible for the life-cycle rituals, and husband and wife together had to perform the domestic rituals. Young boys moved into the families of gurus to be taught. The role of the guru reached great prominence when specific worship communities developed under the leadership of charismatic personalities, who often claimed to be the embodiment of a deity. These *ācāryas* (Masters) shaped mainstream Hinduism and still exercise great influence on Hindus at large, regulating the lives of their followers and reinterpreting scriptures and traditional teachings.

Pluralism was a hallmark of Hindu religion from its very beginning. Many gods and goddesses are invoked in Vedic hymns, and Hindus continue to worship a great variety of deities in their temples. There is no common creed to which all Hindus subscribe, nor is there a single doctrine or practice that is followed by all Hindus, except perhaps the nominal acceptance of the Veda as a revealed scripture and the belief in karma and rebirth. It is natural for Hindus with an inquiring mind to analyze and investigate the teachings of their traditions, and professional philosophers with a Hindu background also deal with religious issues in a philosophically meaningful way. Hindu philosophical systems (*darśanas*) are not mere abstract constructs, they are also paths for the realization of the highest purpose of life (*sādhanas*). Among the qualifications required for beginning philosophical study is the earnest desire to find liberation from the sufferings of the cycle of rebirths (*samsāra*), caused by ignorance concerning the true nature of reality.

Education was always a high priority for Hindus: the early life of Brahmins was devoted to study, and continued private study (*svādhayāya*) was one of their lifelong obligations. In addition to the private, tutorial-like teaching from guru to disciple, imparted in the guru's home, schools were attached to ashrams and temples from early on. The well-organized, ancient Indian universities, which were publicly as well as privately sponsored, taught not only the *Veda*, but also the "eighteen sciences," later supplemented by the "sixty-four arts." The basic curriculum included linguistics, arts and crafts, medicine, logic and spirituality. High ethical standards were expected both from students and teachers. The most famous of these universities were Takṣaśīlā in the Punjab, and Nālandā and Mithilā in Bihar.

Hindus believe in a balance of values, expressed in the four aims of life (*puruṣārthas*): the acquisition of wealth (*artha*), the enjoyment of life (*kāma*), the practice of morality (*dharma*), and the search for final emancipation (*mokṣa*).

HINDU SCIENCE

The central ritual of Vedic culture was performed at astronomically fixed times on altars built with specifically produced bricks arranged in a prescribed geometric pattern. The altar was conceived as a symbol of the human body as well as of the universe: the 360 bricks of an altar represented the 360 days of the year and the 360 bones in the human body. The building of altars in different configurations, and their change in shape and volume, involved a sophisticated geometry. The *Śulva-sūtras* provided the rules for constructing a variety of shapes of altars and their permutations. Astronomical knowledge of a fairly high order was required to determine the right time for the performance of Vedic sacrifices. One of the auxiliary Vedic sciences, the *Jyotiṣa*, explains how to determine the positions of the sun and moon at solstices, and of the new and full moon in the circle of the twenty-seven *nakṣatras.* Geometry and other fields of Indian mathematics developed out of the requirements for the Vedic sacrifice. Algebra, in spite of its Arabic name, is an Indian invention, as are the concept of "zero," the decimal system, and "Arabic" numerals.

The *Atharvaveda* contains invocations relating to bodily and mental diseases. Its auxiliary *Āyurveda,* (life-science) was mainly oriented toward preventing diseases and healing through herbal remedies. Good health was not only considered generally desirable, it was viewed as a precondition for reaching spiritual fulfillment. Medicine as a "charity" was widely recommended and supported by Hindu rulers. Two Indian medical handbooks, the *Cāraka-saṃhitā* and the *Suśruta-saṃhitā*, were the result of centuries of development and became famous in the ancient world far beyond India. *Āyurveda* was also applied to animals and plants, and there is an ancient handbook for professional gardeners and a text for cattle veterinarians. Other works deal with veterinary medicine relating to horses and elephants. Ancient India had both hospitals and animal clinics, and *Gośālas*, places in which elderly cattle are provided for, are still popular in some parts of India. *Āyurveda* was the source of much of ancient Greek and Roman, as well as mediaeval Arabic medical knowledge. In modern times, Ayurvedic pharmacology has become recognized by major Western pharmaceutical companies and researchers.

In connection with the building of temples, Hindus developed a great architectural tradition. No village or city was deemed inhabitable without a temple. Professional

handbooks like the *Manasāra* and the *Mayamata* provide artistic and religious canons for the architects and sculptors.

Adhyātma-vidyā, the science relating to *Brahman*, the Supreme Reality, was considered the highest branch of science. It rested on personal experience, a coherent epistemology, and the exegesis of revealed utterances. The ideas of the Upanishads were further developed into the systematic of Vedānta philosophy, mainly laid down in numerous commentaries on the *Brahma-sūtras* ascribed to Bādarāyaṇa (second century BCE). Beginning with Śaṅkara (eighth century CE), through Rāmānuja (eleventh century) to Madhva (thirteenth century), the greatest minds of India have endeavored to cultivate the science of the eternal spirit.

WHO IS A HINDU?

For many centuries, membership in the Hindu community was restricted to those who were born from Hindu parents and who had undergone the various prescribed rituals that made a Hindu a full member of the Hindu community. But even in ancient times, many foreigners who came to India adopted Hindu thought and culture. With the establishment of British rule in India and the advent of Christian missionaries, the interest of Hindus in spreading their religion abroad was awakened. Swami Vivekananda's much celebrated presentations at the World Parliament of Religions in Chicago in 1893, and his subsequent journey through the United States and England, resulted in the establishment of Vedanta Centers. Mahatma Gandhi, who led the Indian independence movement to success on the basis of the Hindu ideal of nonviolence, did much to gain worldwide respect for Hinduism. Sarvepalli Radhakrishnan, the president of India from 1962 to 1967, became the voice of the twentieth-century Hindu intelligentsia, representing Hinduism as the most advanced form of universal spirituality. The numerous Hindu swamis and gurus who came to the West beginning in the 1960s familiarized thousands with sectarian Hinduism and attracted many Westerners to joining Hindu religious communities. In the twenty-first century, many Hindu authorities have given up their reservations and freely accept Western converts to Hinduism.

SEE ALSO *Buddhism; Caste; Caste, Anthropology of; Jainism; Religion; Sikhism*

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Klaus K. Klostermaier

HIP HOP

Hip hop is a bundle of cultural practices that coalesced during the 1970s. It was largely developed by black and Latino youth in the Bronx, a New York City borough particularly affected by urban blight, middle-class flight, and deindustrialization. *Hip hop* is often used interchangeably with the term *rap* to describe the musical dimension of the cultural movement. *Hip hop*, though, is an umbrella term that refers to four distinct cultural forms. *Graffiti* (or *bombing*) is an art form that was typically staged on New York City subway trains before it gained mainstream recognition in the early 1980s. The second cultural practice associated with the emergence of hip hop is *breakdancing* or *breaking* (as performed, for example, by the Rock Steady Crew). Breaking has obvious roots in earlier forms of dance within the United States and provided the inspiration for the term *b-boy*, a male break dancer. The remaining two elements—*deejaying* and *emceeing*—constitute the primary distinguishing characteristics of the musical idiom associated with hip hop culture. The first refers to the role of turntables in the making and mixing of rap music rhythms in the place of live musicians (in the traditional sense). The emergence of the emcee as a dominant figure reflects the role the spoken word plays in hip hop, distinguishing it from the genres of gospel, blues, and rhythm and blues, in which singing features prominently. With time, graffiti and break-dancing became less prominent and commodifiable, as the deejay and especially the emcee emerged as the genre's iconic representatives.

The three individuals most associated with the music's early development were Bronx residents Kool Herc, Afrika Bambaataa, and Grandmaster Flash. Herc is celebrated for his adaptation of the sound-system culture—bass and volume—of his native Jamaica to the parks and community centers of the Bronx. Afrika Bambaataa, the child of Caribbean immigrants, would contribute his eclectic taste and his willingness to use rock, reggae, soul, and jazz musical sources to create rap

music. Grandmaster Flash, an immigrant from the Caribbean island of Barbados, is known as the pioneer in the realm of turntablism and for developing the art of mixing. At this early stage, the primary figures associated with the genre were all deejays. Their work, in the aggregate, provides evidence of the influence of Jamaican popular culture upon rap's emergence (for example, producers such as Lee Perry and King Tubby, and performers such as I-Roy and U-Roy).

Hip hop emerged as a prominent form of black popular culture outside of the New York area with the success of the Sugarhill Gang's "Rapper's Delight" (1979), which was released on an independent label owned by musician and producer Sylvia Robinson. Indeed, most of the music's pioneers did not consider rap to be commercially viable and, as a consequence, did not try to make and distribute recordings. The developing interest in these practices by the culture industries created new stars, such as Kurtis Blow, the Funky Four Plus One, and the Treacherous Three, along with older groups such as Grandmaster Flash and the Furious Five, Afrika Bambaataa and the Soul Sonic Force, and the Cold Crush Brothers. The genre also achieved crossover popularity through the work of pop groups such as Blondie ("Rapture," 1980). Up until this juncture, most observers saw rap as a novelty and most of the records were made for independent labels.

As a recorded medium, the first classic era of rap music was launched with the release in 1982 of Afrika Bambaataa and the Soul Sonic Force's "Planet Rock" and Grandmaster Flash and the Furious Five's "The Message." The former recording revealed a strong influence by the German electronic group Kraftwerk. The latter, with its relatively pointed social message, was recorded and released against the will and without the participation of most of the group's members (including Grandmaster Flash), and would signal the changing balance between deejays and emcees, with the turntablists gradually fading in prominence. Following in the wake of these canonical recordings was the work of New York–area artists such as Run DMC, LL Cool J, Boogie Down Productions, Eric B. & Rakim, and Public Enemy. As the music's influence spread beyond the inner city, suburban youth became involved as artists, including most prominently De La Soul and the Native Tongues movement. Hip hop's audience crossed boundaries with time, and it is suggested that at points as many as three-quarters of the consumers of the music were neither black nor Latino.

The effects of crack cocaine and its associated industries energized (and in some instances subsidized) new forms of rap music. The kinds of rap that emerged from the west coast of the United States (especially Los Angeles and Oakland) were distinguished from their counterparts in the Northeast not only by their linguistic innovations and source preferences (e.g., Parliament/Funkadelic and Zapp versus soul jazz and James Brown), but also, at least initially, by their moral economies. By the middle of the 1990s, these perspectives provided the dominant template for the making of rap music in the South (OutKast, Petey Pablo, and others, in the wake of Miami's 2 Live Crew), the West (N.W.A., Ice T, Ice Cube, Dr. Dre, Snoop Doggy Dogg, and Tupac), and the Northeast (the Notorious B.I.G., Jay-Z, and later 50 Cent).

The musical genre of rap has proved to be diverse in many respects. Nevertheless, throughout its history it has been a space that has privileged masculine perspectives and—in contrast to rhythm and blues, which is often cast as its feminized other—has featured few successful women practitioners (exceptions include Roxanne Shanté, MC Lyte, Queen Latifah, Lauryn Hill, L'il Kim, and Foxy Brown). Indeed, the genre as manifested in its lyrics, its publications, and in film became relatively misogynistic. Its boundaries would also—in contrast to other black music forms, such as house music—discourage the open participation of lesbians and gays with its often ritualistic deployment of homophobic discourse. Its successful practitioners have also been overwhelmingly black with few exceptions (e.g., Eminem). Hip hop music and culture have also had a great impact abroad throughout Europe, Africa, parts of Asia, and the Americas, and have generated new genres in response, including drum and bass, reggaeton, grime, and kwaito.

Hip hop defined the generation coming of age in the 1980s and afterward. Moreover, with its particular sartorial, linguistic, gender, and class inflections, it represents in the eyes of many a rejection of the aesthetics, values, and goals of the civil rights generation. It has also been used to market clothing, running shoes, and subsequently a wide range of consumer goods, as well as politics (most prominently in the form of the Hip Hop Action Network and the Vote or Die voter registration campaigns mounted during the 2004 American national elections).

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Richard Iton

HISPANICS

SEE *Latinos.*

HISTOGRAMS

SEE *Inference, Statistical.*

HISTORY, ECONOMIC

SEE *Cliometrics.*

HISTORY OF CONSCIOUSNESS

SEE *Consciousness.*

HISTORY, SOCIAL

Social history emerged as a discipline over the course of about twenty years at the conjunction of two seemingly contradictory schools of historical writing: English social history and the French Annales school.

Defined by George Macaulay Trevelyan (1876–1962) as "history with the politics left out," English social history sought to examine the "manners, morals and customs" of the English people within a disciplinary rubric that placed social history alongside political, economic, and, in some quarters, labor history as discrete subfields (Trevelyan 1942).

The Annales school, founded in 1929 by Marc Bloch (1886–1944) and Lucien Febvre (1878–1956) and named after the journal *Annales d'histoire economique and social*, sought quite the opposite. Bloch and Febvre intended a new "science of society" that would incorporate all domains of the human and social sciences. The two envisioned their project in diametric opposition both to Durkheimian sociology, which they felt merely rummaged history for support of its theories, as well as historical renderings that purported to render through a catalogue of facts an objective past. They and their colleagues sought at once to investigate the differentia of past presents and to come through these investigations to a fuller sense not only of how a given society came together in all its interrelated elements, but also human society as conceived as an entity in which all historical moments participate and elucidate. What was envisioned was a massive inductive project incorporating myriad local histories that would yield at an endlessly forestalled future time, a "history of society."

The first Annales school was enthusiastically received by what was known as the Communist Party Historian's Group in Britain (1946–1956). Though putatively an organ of the Communist Party, under the de facto leadership of the British journalist Dona Torr (1883–1957), the group enjoyed a free and open discussion. Its members included E. P. Thompson (1924–1993), Dorothy Thompson (1894–1961), Christopher Hill (1912–2003), Rodney Hilton (1916–2002), Eric Hobsbawm (b. 1917), and George Rudé (1910–1993), among other future notables of social history. The group's concerns maintained a tension between two poles that would inform the members' later work: at one end an interest in social transformation, specifically the transition from feudalism to capitalism, and at the other, an interest in the "manners, morals and customs" of the poor in relation to those transformations. The first roughly corresponded to discussion of Maurice Dobb's (1900–1976) *Studies in the Development of Capitalism* (1946) and the second to A. L. Morton's (1903–1987) *People's History of England* (1938).

In 1952, the group founded the journal *Past and Present*, which sought to give voice to these concerns and to engage with non-Marxist historians interested in similar lines of inquiry. In the first issue, Hobsbawm published his groundbreaking analysis of the machine breakers, which demonstrated that Luddite riots were not resistance to the machine as such, as has long been argued, but to the "machine in the hands of the capitalist" (Hobsbawm 1952). He argued that in the absence of organizational and political avenues, such protests should be read as "collective bargaining by riot." The theme was later expanded in a series of similarly pathbreaking studies by Rudé on the crowd. Meanwhile, Hill demonstrated that the "manners, morals and customs" of the poor were themselves a source of political struggle in his important essay "Puritans and the Poor," which examined the disciplinary techniques of the nascent English bourgeoisie (Hill 1952).

The group's twin concerns were on full display in E. P. Thompson's magisterial work *The Making of the English Working Class* ([1963] 1968), which brought to bear his understanding of culture as a "whole way of conflict." Thompson argued that class comes into being as a result of struggle; through this struggle, persons become conscious of their interests and themselves as a class over time. Thompson therefore rejected sociological definitions that sought to define class as distinct from historical struggle and, by extension, context. What resulted was a

notion of class that Mikhail Bakhtin would call "novelistic," in that class designated an open-ended, dialogic "unity" which, through the ceaseless interpenetration of other voices and experiences, undoes and redoes its own provisional unity. From a methodological standpoint, Thompson's work was highly innovative, incorporating literature (from high to very low), folklore, local archives, and spy reports in a way that elucidated the complex moral and symbolic universe in which class struggle was imbricated. In *The Making of the English Working Class* and in later works dealing with grain riots, game laws, and time and its relation to work discipline, Thompson demonstrated a subtle understanding of human agency that did not recognize, for example, time or the law as necessarily instruments of ruling-class power (which they were initially, he allowed). Instead, he suggested that these created circumstances through their own claims to universality that permitted a defense (if only a weak one at first) on those very same grounds against the arbitrary actions of elites. Thompson presented his objects of study as situated in historical processes, the relative meanings of which were constituted through struggle and human agency.

Thompson inaugurated a new version of social history in the late 1960s and into the 1970s with mixed success. On the one hand, authors such as Eugene Genovese (b. 1930) and Herbert Gutman (1928–1985) produced subtle and far-reaching studies in the American context that recovered local knowledges and successfully mapped larger processes through them. On the other, there was a tendency to shrink back from the theoretical engagements of these authors, producing something closer to Trevelyan's "history with the politics left out" even in studies of working-class culture. It was against this trend that Hobsbawm wrote his important essay "From Social History to the History of Society," which appears in his collection *On History* (1997), urging a reconnection of such studies to larger historical processes.

While culturalist "advocacy" readings of the working class turned away from larger issues, the rise of historical sociology—with its use of demography, cliometrics, and other statistical tools inspired by the second and third waves of the Annales school—tended to efface culture and, with it, class conflict entirely. The twin recoil from the interventions of the Communist Party Historian's Group inspired important and often scathing critiques by Tony Judt, Elizabeth Fox-Genovese and Eugene Genovese, and Geoff Eley and Keith Nield.

CRISES

In the late 1970s and early 1980s, the field of social history found itself in another sort of crisis entirely. Feminists began calling into question the primacy of class in historical analysis, arguing that gender complicated and problematized easy assumptions regarding the universality of the class experience, which they argued tended to be gendered male. While the worst of these arguments reproduced the atheoretical "advocacy" histories discussed above in the context of gender, the best of these critically engaged the concept of class and have significantly enriched contemporary understandings of past societies. The scholars Deborah Valenze and Barbara Taylor revisited Methodism (a religion founded by John Wesley in the eighteenth century) and Owenism (a theory developed by utopian socialist Robert Owen, often considered a precursor to Marxism) respectively, demonstrating the egalitarian promises and realities of each for women that E. P. Thompson had overlooked. Similarly, Christine Stansell examined gender and working-class formation in New York City in her delightful *City of Women* (1987). Judith Walkowitz produced an influential social history of Victorian prostitution on which Stansell drew, and she later expanded on these themes, drawing successfully on the work of Gareth Stedman Jones (b. 1942) and the literary scholar Coral Lansbury's (1933–1991) work to elucidate the physical and cultural landscape around the Jack the Ripper murders. The historians Sonya Rose and Anna Clark have sought more frontally to rehabilitate the concept of class while addressing what the latter views as its misogynist articulations and realities. Catherine Hall, first with Lenore Davidoff in *Family Fortunes: Men and Women of the English Middle Class, 1780–1850* (1987), engaged the deep intersections of class and gender in the formation of the English middle class, and later alone demonstrated the ways these were both deeply implicated in colonialism. Most suggestively, the literary scholar Mary Poovey has, like Hall, opened exciting avenues for examining the manner in which class, gender, and race influenced each other, inflecting every aspect of social life in the nineteenth century.

Coeval with the rise of feminist studies in social history arose what has come to be called the linguistic turn, which can be traced to Stedman Jones's 1982 essay "The Language of Chartism" (Chartism being a movement for the franchise on the part of the middle and working class, beginning formally in the late 1820s and continuing through the Reform Act of 1867). Stedman Jones argued that an examination of Chartist language revealed a fundamentally political movement that obscured rather than articulated working-class interests. The historians Patrick Joyce and James Vernon pushed Stedman Jones's observations still further, the former arguing that class should be replaced by what he feels to be a more fluid and soft term, *the people*. Drawing on the French sociologist Jean Baudrillard's (b. 1929) conception of *the mass*, Joyce has argued for a formless corpus whose solidarities are formed and mobilized through political speech, only to form anew in different configurations in different contexts.

Criticisms of Stedman Jones, Joyce, and Vernon have been many and often unhelpful, a situation exacerbated by the posturings of the latter two. Joan Scott has offered a successful critique of Stedman Jones, arguing that his somewhat literal reading of political discourse excises the gendered nature of that language (Scott 1988). Eley and Nield have argued that Joyce's formulations rely upon a straw man of a crudely economic, reductionist Marxism jettisoned from social history nearly from its inception. Joyce and Vernon's most sympathetic and formidable critic, James Epstein, has argued that their formulations fail to take into account the conditions of the production and dissemination of political speech, especially the crowds to whom that speech is addressed.

In some renderings, social history has been in crisis since it began. When it has been successful, it has embraced new ideas and domains of inquiry by holding these in creative tension with the analytical purchase of its past discoveries. It is only through these engagements variously with feminism, postcolonial studies, Marxism, anthropology, and, more recently, literary studies that it has achieved something like its foundational concern of a "history of society" articulated by Bloch and Febvre and reiterated variously by Hobsbawm and, later, Eley and Nield.

SEE ALSO *Marxism*

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Christopher J. Lamping

HITE REPORT

SEE *Hite, Shere.*

HITE, SHERE

1942–

Author Shere Hite ignited nationwide discussion on the roles of gender and culture in sexuality with the publication of her controversial series of books known as the Hite Reports. Hite has been praised by some for advancing theories of human sexuality by incorporating concepts of societal influences on sex and by revealing the previously overlooked sexual experiences of women. However, she has been criticized by many social scientists for her research methods, which have been described as nonscientific and biased.

Hite was born Shirley Diana Gregory in Saint Joseph, Missouri, and was later adopted by her stepfather, Raymond Hite. She earned a bachelor's and a master's degree in history at the University of Florida and subsequently enrolled in a doctoral program at Columbia University from which she ultimately withdrew. The first book in Hite's series, *The Hite Report: A Nationwide Study of Female Sexuality*, was based on replies to a questionnaire distributed by Hite while she served as director of the Feminist Sexuality Project for the National Organization for Women (NOW). This book, consisting primarily of verbatim responses from more than three thousand women, became a best seller when it was published in 1976. Contrary to the theories about female sexuality prevalent at that time, which were centered on vaginal penetration, the testimonies of women quoted in Hite's book demonstrated that almost all women could regularly achieve orgasm through clitoral stimulation. In contrast, only about 30 percent of women sampled reported achieving orgasm regularly through vaginal intercourse. Feminists embraced the book for presenting attitudes and experiences in the women's own words and for reporting findings that suggested that a woman's sexual enjoyment was not dependent on the presence of a male. Ultimately, the first Hite Report called for an expansion of the conceptualization of female sexuality to include desires, emotions, and cultural influences on expectations of sex, rather than the limited focus on biology and reproduction.

The inclusion of emotions and societal influences in sexuality theory was also prevalent in Hite's second publication, *The Hite Report on Male Sexuality* (1981). This work argued that male sexuality extended beyond the accepted model that men are solely interested in penetrative sex. Rather, men desire a diversity of sexual activities and are affected by cultural expectations regarding emotions and behavior. Hite has gone on to publish more than ten books generally focusing on sexuality and relationships.

Despite the commercial success of Hite's publications, her methods drew criticism from the scientific community. Although the sample for Hite's initial study of over three thousand women is seemingly large, it represents only 3 percent of the 100,000 women who were sent Hite's questionnaire. Such small response rates are generally indicative of a self-selecting bias, in that only the women who felt strongly enough about the material would be willing to complete the time-consuming survey, which consisted of about sixty open-ended essay questions. Thus, it is often those with the most extreme views who are willing to participate in these types of studies. Additionally, research methods for studies in which statistics are presented as an estimate of population value require the use of a randomly selected sample. However, Hite's survey was sent to a number of women's groups, many of which were considered to be feminist organizations. Hite continued to use similar methods for each of her studies and has repeatedly drawn criticism for presenting statistics and developing theories using samples that are not representative of the population.

SEE ALSO *Feminism; Gender; Sex and Mating; Sexuality*

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Adrienne A. Williams

HITLER, ADOLF
1889–1945

As the leader of Germany's Third Reich in the 1930s and 1940s, Adolf Hitler developed a totalitarian fascist state dedicated to imperialist expansion of a pure German race. Hitler and his anti-Semitic, supra-nationalistic National Socialist German Workers' Party (Nazi Party) was ultimately responsible for millions of deaths during the Holocaust and a massive refugee crisis in Central and Eastern Europe during World War II (1939–1945).

Hitler was born on April 20, 1889, in Braunau am Inn, Austria, and spent his younger years in Linz, Austria, and in Vienna. Hitler was not a good student; he left the *Gymnasium* without graduating and failed to be accepted as an art student at Vienna's Academy of Fine Arts. This failed career move left Hitler a lonely and distraught young man. While in Vienna in the years leading up to World War I (1914–1918), Hitler developed anti-Semitic tendencies, most likely fed by his envy of affluent Jewish citizens during his years of extreme poverty and destitution as well as the influence of Vienna's Lord Mayor who publicly supported anti-Semitic policies. In 1913 Hitler moved to Munich where he lived until the war broke out and he volunteered to serve in the German Army. During the war, Hitler was injured twice, once in 1916 and again in 1918, the second time as a victim of a gas attack. For his bravery and valor, he earned the Iron Cross twice and was promoted to the rank of corporal. Hitler returned to Munich after the war, dispirited, disillusioned, and angry over the Versailles settlement. Like many young returning soldiers, Hitler believed that Germany's new liberal government should not have signed the Treaty of Versailles. The Treaty forced Germany to accept full responsibility for starting the war, stripped Germany of its colonies, required that it pay heavy reparations to the Allied powers, demilitarized a large portion of its western territory, and reduced its military numbers substantially. Hitler believed that these terms unjustly punished Germany and joined the right-wing, nationalist German Workers' Party in 1919, the forerunner of the National Socialist German Workers' Party, to work toward a reversal of the treaty.

By 1920 Hitler was the leader of propaganda of the growing German Workers' Party, and in 1921 he became the *führer* (leader) of the organization, now called the Nazi Party. The Nazis at this time were still a very small splinter party, but gained notoriety with their failed Munich Hall putsch in 1923, after which Hitler served nine months in prison. During his incarceration, Hitler wrote his famous memoir and political treatise *Mein Kampf* (My Struggle) where he condemned democratic systems and blamed Europe's Jewish population for what he considered to be Germany's crisis of morality and modernity. The issue of race and its intimate connection to political institutions that stood as symbols of a vanishing collective identity became the focal point of Hitler's theory of fascism. In the tradition of other "philosophers of race" such as Comte de Gobineau and H. S. Chamberlain, Hitler believed in the natural inequality of human races. The white race, he argued, was superior to all others, with the Teutonic race as the most civilized and advanced. Because Hitler believed that the demise of the human race begins with an intermingling of races that causes social instability through a crisis of identity, he called for social, political, economic, and cultural policy to protect the purity of German blood first and foremost.

This belief in ethnic community as the foundation of the nation led Hitler to be suspicious of the Jews' lack of a homeland. He referred to them as "parasites on other peoples" and fervently believed that their infiltration into European society needed to be halted immediately. Hitler was equally suspicious of liberal doctrines of "equality" and "liberty" because, he argued, they only allowed Jews to exploit Europe's gullibility about their true intentions to take over European society. Hitler pointed to the Jewish origins of many Soviet revolutionary leaders, their support of trade unionist activities, as well as their overarching presence in business, finance, banking, and stock market sectors as evidence of Jewish infiltration. Therefore, for Hitler and the Nazis, Jews represented the gravest threat to the Aryan race because of their prominent roles in the development of liberal capitalism and socialism, two modern ideologies that threatened Germans' collective identity. In this way, Hitler's brand of fascism was both anti-Marxist and anti-Semitic, for the two were inextricably intertwined in his mind. Hitler's race doctrine was thus used as an instrument of defense against the inescapable degeneration of Aryan civilization. Only through active destruction of racial inferiors, defined by Hitler to be primarily Jews but also included Slavs, Roma, homosexuals, political dissidents, and disabled people of all ethnicities, could Germany be saved. This dedication to action, outlined in *Mein Kampf*, provided the philosophical foundation for the Holocaust and was responsi-

ble for the deaths of approximately 6 million Jews and 3 million other "degenerates" during the Nazi era.

THE RISE OF HITLER'S NAZI PARTY

After his release from prison, Hitler worked throughout the 1920s and 1930s on building a mass political movement. Nazi Party propaganda publicized Hitler's ideas of a Jewish and socialist threat by arguing that both were responsible for Germany's inflationary crisis that was, in fact, due to the Republic's printing of monies to make reparations payments, a number of attempted coups, and the French occupation of the Ruhr. Between 1925 and 1928 alone, Nazi Party membership jumped from 27,000 to 108,000 active supporters. On the eve of the United States stock market crash of 1929, the National Socialists were active in parliamentary politics, earning 810,000 votes in the 1928 election and occupying twelve seats in the Reichstag.

The Nazis gained considerable momentum as economic crisis intensified with the onset of the Great Depression in the early 1930s. The major challenge for Hitler and the Nazis was to prevent unemployed workers from becoming socialist revolutionaries, and so their propaganda vilified trade unionism. Hitler further targeted socialists as enemies of the German nation because the Social Democratic and German Communist parties had voted against war credits during World War I and a revolutionary German socialist government had signed the armistice authorizing Germany's capitulation in 1918. Nazi propaganda became more openly anti-Semitic at this time too, with Hitler firmly blaming Jews for Germany's national crisis through their perpetuation of immoral capitalist practices. At the same time, Hitler pointed to the inability of Weimar's parliamentary system to respond adequately to the Depression. Disagreements between coalition factions and internal divisions in the Social Democratic Party, Germany's largest political party, led to a general paralysis in how to finance unemployment relief. Hitler promised voters the eradication of unemployment, the creation of a welfare state, and a nationalist program of industrial, agricultural and governmental cooperation. With this platform, Hitler succeeded in winning 6.4 million votes and 107 parliamentary seats in the 1930 election. Despite this incredible success, the Nazis still had yet to earn the support of disenchanted industrial workers. Most of their electoral support came from traditional right-wing voters—members of the petty bourgeoisie and agricultural workers—and young, new voters. Hitler successfully converted young Germans to National Socialism through the creation of youth organizations and events such as parades and political rallies that fostered a sense of national community and presented the Nazi Party as one that would unify Germans and resurrect a lost Germanic empire. By 1931 industrialists responded en masse to Hitler's anti-Marxist platform and his assertions that what would be good for the German people would be good for German industry and joined the Nazi crusade. In the 1932 election, the Nazis won 230 Reichstag seats, the most seats ever held by a single political party in German history, though they still did not enjoy an electoral majority.

On January 30, 1933, President Paul von Hindenburg appointed Hitler the chancellor of Germany. The Reichstag fire on February 27, erroneously believed to have been set by representatives of the German Communist Party (KPD), allowed Hitler a further opportunity to warn Germans of an impending socialist revolution that would destroy the German Fatherland. With heavy pressure from Hitler, Hindenburg then issued an emergency decree "for the Protection of People and State" that restricted personal liberties, extended the government's legal ability to obtain warrants for house searches, confiscate private property, and monitor citizens' postal and electronic communications, and allowed all KPD Reichstag members and other leading anti-Nazis to be arrested. In March 1933, the Reichstag approved the implementation of the Enabling Act that granted Hitler dictatorial powers for four years and officially destroyed the Weimar constitution. A plebiscite in late 1933 confirmed the Nazis' control and, with Hindenburg's death in August 1934, Hitler became Germany's new *führer*.

THE DEVELOPMENT OF THE THIRD REICH

Throughout the mid-1930s Hitler successfully established a strong centralized government that exercised unlimited authority to direct the development of the Third Reich, as Hitler titled his new German empire. The state fulfilled its promises to solve Germany's national crisis by guaranteeing universal employment (with the caveat that all citizens must work), extending social welfare programs including old age pensions and economic protection of mothers and children, nationalizing industry, introducing land reform, and institutionalizing the creation of physical fitness programs to promote national health and vigor. The government also solidified its political power by controlling all forms of media, forming a national army, institutionalizing a "social contract" that emphasized the symbiotic dutiful relationship between state and citizen (not of individuals to one another as in the Marxist model) primarily through the heavy use of propaganda, parades, and other public displays of nationalism. In addition, the state re-aligned the education system's philosophical foundation to fuse "German" moral values of obedience and deference to authority with Hitler's race doctrine and

developed a legal system that defended the Nazis' use of terror and coercion to create a totalitarian state.

The Nazi government also worked to expose and eradicate Jews from German society. The 1935 Nuremburg Laws, which included the Reich Citizenship Act and the Act for the Protection of German Blood and German Honor, enacted a number of anti-Semitic laws allowing only ethnically "pure" Germans citizenship rights. These acts categorically excluded Jews from civil and public service and prohibited Germans and Jews from marrying and forming other intimate relationships in order to preserve the Aryan blood line. The Nuremburg Laws were the first step in the eventual ghettoization and murder of millions of European Jews in concentration camps during World War II.

HITLER AND WORLD WAR II

After securing Germans' loyalty through his propaganda of equality and community, Hitler set out to expand Germany's borders through imperialist wars. First he instituted compulsory military service and re-militarized the Rhineland in blatant violation of the terms of the Versailles Treaty. He then began the process of uniting all Germanic peoples into a *Grossdeutschland* ("large Germany") with the annexation of Austria in early 1938. Participants of the Munich Conference in late 1938—Britain, France, and Italy—then allowed Hitler to annex the Sudetenland, the northwestern portion of Czechoslovakia, bringing the large German minority population there under Nazi control. Hitler's imperialist intentions became more apparent in early 1939 when he invaded Bohemia-Moravia and established a Nazi puppet state in Slovakia. Britain and France then realized that their policy of appeasement toward Germany was failing and prepared for war. World War II broke out in September 1939 when Hitler invaded Poland, a move the Western allies viewed as a blatant violation of Poland's right to national self-determination.

Hitler invaded Poland for what he called "*Lebensraum*" ("living space"). His goal was to expand Germany's empire through the annexation of Polish territory, the murder of Polish Jews and political dissenters, and the resettlement of the German *Volk* (the "people") into Poland. This expansion, Hitler argued, was an essential component of German national growth because it would allow the peasant class to maintain its identity as the foundation of the nation through successful cooptation of agricultural land that was untouched by the vagrancies of modernization. This policy of acquiring *Lebensraum* provided the practical justification for the Holocaust. Poland was an easy target for Hitler because it housed the largest Jewish population in Europe and represented a traditional subordinate territory of the two old German empires: the Prussian and the Habsburg.

In the early years of the war, Hitler succeeded in either conquering or establishing Nazi puppet states or allies on most of the European continent including France, Holland, Belgium, Denmark, Norway, Finland, Austria, Poland, Czechoslovakia, Hungary, Romania, Croatia, Yugoslavia, Bulgaria, Albania, and Greece. The United States' entry into the war in December 1941 as an ally of Britain and the Soviet Union turned the tides of battle and they succeeded in defeating Germany in May 1945. Recognizing Germany's imminent defeat, Hitler committed suicide in Berlin on April 30, 1945.

SEE ALSO *Aryans; Dictatorship; Ethnocentrism; Fascism; Genocide; Gobineau, Comte de; Holocaust, The; Jews; Nationalism and Nationality; Nazism; Racism; White Supremacy; World War II*

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Tracey A. Pepper

HIV

The human immunodeficiency virus (HIV) is part of a family of retroviruses that have the capacity of reproduction from RNA in the nucleus of a helping cell of the human immune system. Using enzymes—chemical substances in the human organism that enhance reactions without intervening in them—the virus breaks through the cell membrane to the nucleus, where it is reproduced. Infection with HIV leads to the disease known as AIDS.

The origin of HIV is unknown, but it is widely understood that it is a mutation of a similar retrovirus, such as the simian immunodeficiency virus. It is speculated that the virus developed the capacity to infect human beings through the practice of ingesting raw meat or blood in religious rituals in isolated parts of Africa. Even though the first AIDS cases were reported in Africa in the early 1980s, several known cases were before this date.

THE DISCOVERY OF HIV

At the beginning of the AIDS epidemic, the virus was initially called human T-lymphotropic virus type III (HTLV III) by the U.S. research group under the leadership of Robert Gallo. The virus was also discovered at about the same time by researchers at the Pasteur Institute of France under the leadership of Luc Montagnier, who named it lymphadenopathy-associated virus (LAV). Following an international controversy between the two researchers, who both claimed credit for the discovery, the name HIV was agreed upon.

By 1982 it had been established that HIV had caused the destruction of the immune system of numerous individuals, rendering them susceptible to infections that produced a combination of diseases, such as Kaposi sarcoma and pneumonia. This overall disease process was called acquired immunodeficiency syndrome (AIDS). By this time it had also been established that the virus was transmitted via body fluids, such as blood and semen.

A number of factors—including the migration of infected people to populated zones, overpopulation in certain communities, difficulties in access to medical care, and ignorance of the disease—led to the infection becoming a pandemic by the end of the 1980s. The first AIDS cases in the United States were reported in the summer of 1980, when the Centers for Disease Control and Prevention (CDC) reported several cases of young males with opportunistic infections and a compromised immune system. The number of reported AIDS cases then began to increase in a geometrical way through the entire world. According to the CDC, the cumulative estimated number of diagnoses of AIDS through 2003 in the United States was 929,985. Adult and adolescent AIDS cases totaled 920,566, with 749,887 cases in males and 170,679 cases in females. The remaining 9,419 cases had occurred in children under age 13. At the end of 2003, it was estimated that 1,039,000 to 1,185,000 persons in the United States were living with HIV/AIDS and that between 24 and 27 percent were undiagnosed and unaware of their condition.

TESTING FOR HIV

There is a test to detect the presence of HIV antibodies. A more specialized test, the polymerase chain reaction (PCR) test, can identify the virus, but it is only used for special cases or research due to its high cost. For the general public, the ELISA test is used, which only detects the presence of HIV antibodies. This test is highly sensitive for negatives, which is why it is commonly used for screening possible cases. But because of this sensitivity, ELISA tests that are positive must be confirmed with a more accurate test, called the Western blot. Both tests are readily available through public health services, and many health community-based organizations provide the test at outreach activities in the communities.

TREATMENT AND PREVENTION

As of 2007 there was no available vaccine for HIV. More than 95 percent of all new infections were in developing countries, making HIV/AIDS one of the most serious threats to global health and global development. Many believe that only a vaccine will stop the spread of the infection. Developing a vaccine will thus represent a huge milestone in the AIDS epidemic, and several clinical trials are being developed in different countries. However, the versatility of the virus and other concerns have made this a difficult task.

Due to the nature of HIV infection and the lack of a cure or vaccine, the only way to address the epidemic is by means of prevention. Primary prevention programs target vulnerable populations by means of culturally and competent interventions designed to help people avoid being infected. Because the virus is transmitted by contact with fluids, sharing infected needles for drug use, having sexual intercourse without protection, and mother-to-infant transmission are the main venues for the virus to be introduced to human beings. Important primary prevention interventions have been developed and evaluated in the United States and other industrialized countries, and these are being transferred to other communities around the world. These prevention programs include education about the virus, condom distribution, clean needle distribution for drug addicts, and peer counseling, and they have slowed the spread of HIV. The basic idea is that by learning the ways the virus is transmitted and by developing personal and social skills that protect and empower at-risk minority communities, it is possible to stop the spread of the infection.

Advances in treatment have yielded important new AIDS therapies, but the cost and complexity of their use put them out of reach for most people in the countries where they are needed the most. In industrialized nations, where the drugs are more readily available, side effects and increased rates of viral resistance have raised concerns

about the long-term use of these therapies. Since the mid-1990s, HIV infection has spread most rapidly among women, children, and sexual minorities. Both in the United States and in developing countries, the incidence of HIV infection has had a disproportional impact on communities of color. Efforts at primary prevention must therefore take into consideration the social and cultural context and meanings of what are known as "high-risk behaviors."

It is also important of course to pay attention to those already living with HIV/AIDS, with the goal of providing them access to care and secondary prevention. By engaging people living with HIV/AIDS in appropriate treatment, the quality of life of these individuals can be enhanced. This level of treatment will also reduce the continuing transmission of the infection. For this to happen, the human rights of people living with HIV/AIDS need to be protected. This will encourage them to get tested and receive medical and social care.

THE STIGMA OF AIDS

Jonathan Mann, the founding director of the World Health Organization's Global Programme on AIDS, described the HIV epidemic as more than just a biological disease. It is also a social phenomenon that he identified as potentially explosive because it is an epidemic of social, cultural, economic, and political responses to the disease. This social epidemic is characterized above all by exceptionally high levels of stigma, discrimination, and at times collective denial.

The concept of *stigma* dates to ancient Greece, where it was used to describe persons who had been involved with certain bad deeds, for which they were distinguished from others by the application of bodily marks or tattoos. People so marked were to be avoided by the general populace. The concept has also been associated with an unnatural mark in the bodies of saints, a mark made with a hot iron on the flesh of slaves, a bad reputation, and even a physical dysfunction. Some authors have described stigma as a social construction associated with the recognition of a "difference" based on a specific characteristic, which is used to devalue the person who possesses that characteristic. All of these definitions share the idea that a stigma is the negative evaluation of a particular difference that may be identified in a person. The stigma associated with AIDS has become the biggest obstacle for HIV/AIDS prevention, because it hinders the possibility of dignity and access to care for people living with the infection.

SEE ALSO *AIDS; AIDS/HIV in Developing Countries, Impact of; Disease; Public Health; World Health Organization*

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José Toro-Alfonso

HMONG

Hmong society is based on outmarrying patriclans within which ideals of fraternal hospitality are maintained. Within clans, lineages are clustered around the worship of a common ancestor. Cultural divisions cut across clans to mark different groups of Hmong by dialect, female costume, and architecture. Shamanism, ancestor worship, and a belief in nature spirits form a profound religious complex. There is no traditional form of Hmong writing, but a missionary-invented romanized script is widely used.

Traditionally the Hmong were shifting cultivators of forest at altitudes of 3,000 to 5,000 feet in the mountains of southern China and the neighboring countries of Indochina, with an economy based on the production of dry rice, maize, and opium as a cash crop, some hunting, and animal husbandry. The household was the unit of production, and hamlets were often settled by members of the same local descent group. There was no hereditary position of political authority, nor any political authority higher than the village. Houses were built on the ground out of wood.

The Hmong form perhaps a third of the Miao national minority of China, which numbered 9.6 million in 2002. Although unknown in Chinese records under the *Hmong* ethnonym, under the name of *Miao* it is clear that their history in China is an ancient one, and was characterized by a series of violent clashes against centralized imperial authority.

During the last half of the nineteenth century, Hmong from China migrated into Burma (Myanmar), Thailand, and the northern parts of Laos and Vietnam, after the failure of rebellions in south China and increasing pressures on scarce land resources. In north Vietnam, the Hmong were caught up in the First Indochina War (1946–1954) and were instrumental in the Viet Minh victory against the French at the battle of Dien Bien Phu (1954).

During the civil wars in Laos from 1962 to 1973, Hmong were divided along clan and regional lines between support for the rightist parties and for the socialist Pathet Lao. As porters, guides, spies, and fighters, they were crucial to a war effort fought mostly in sensitive border regions; many became regular or irregular troops under General Vang Pao of the Royal Lao Army. Casualties were heavy.

With the fall of Laos in 1975, more than 100,000 Hmong fled Laos for Thailand, where they were housed in five refugee camps along the border, from which they have mostly been resettled in third countries. A large number refused resettlement because they were led to believe they would be needed to retake Laos, where a small resistance movement continues with variable support from elements of the old counterinsurgency military establishment. Formal recognition of their support for the American war effort in Indochina was won in the Hmong Veterans' Naturalization Act of 2000, which allows special consideration for irregular Hmong ex-soldiers.

A new culture emerged in the refugee camps as farming people with newfound leisure produced new forms of culture for sale to the outside world that told of their history and sufferings, such as embroidered story-cloths and the new music championed by the leader of a messianic movement. The Hmong came under increasing Christian influence in the camps, which has led to serious divisions in the community.

Outside China the Hmong have been estimated at 153,955 in Thailand, 315,000 in Laos, 787,604 in Vietnam, and perhaps 2,000 in Burma. Overseas population figures are estimated at 15,000 for France, 1,800 for Australia, 2,000 for French Guyana, 1,200 for Canada, 250 in Argentina, 92 in Germany, and 186,310 in the United States. Resettled Hmong have sought to regroup in areas of better economic opportunity and to join larger groups of Hmong. In the early 1990s, half the Australian Hmong population moved to North Queensland to farm bananas. By 2003, all 150 Hmong settled in New Zealand had joined the Australian Hmong. From 1981 to 1983, 20,000 Hmong arrived in the Central Valley of California, and some 20,000 moved again in 1998 from California to Minnesota.

American Hmong are concentrated in California, Minnesota, and Wisconsin. Particular cultural problems have been caused by ritual animal sacrifices in cases of illness and at funerals, which traditionally take place at home. Pressing social issues include the changing position of women, underage marriages, and the growing prevalence of youth gangs. Although the majority of Hmong refugees find unskilled work or remain on social welfare, there have been many success stories, with the emergence of Hmong singers and poets, publishers, academics, and politicians. The fragmentation of families between two or more countries remains an issue for most of the older generation. Clan organization has proved a vital adaptation mechanism, with lending pools and mutual help societies formed. Some return visits to Laos and Thailand have taken place, remittances are often sent home, and some brides have been sought from Thailand, Laos, or China. Overall there has been a huge change of consciousness as the Hmong recognize themselves as a global, albeit fragmented, community and adopt new forms of communication, such as the Internet and telephone, with facility.

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Nicholas Tapp

HO CHI MINH
1890–1969

Ho Chi Minh played a pivotal role in the global processes of anticolonialism and decolonization that accompanied World Wars I and II. His leadership has become an enduring symbol of third world resistance to the West during the twentieth century.

Ho Chi Minh was born in on May 19, 1890, in central Vietnam. Biographers have estimated that he used over fifty aliases during his career. He was educated in the Confucian classics, instructed in three languages (Chinese, French, and romanized Vietnamese), exposed to a modern multidisciplinary curriculum, and steeped in Vietnamese history. In 1908 he was expelled from the National Academy for his involvement in a peasant demonstration.

In 1911 Ho Chi Minh resolved to leave Vietnam to experience life in France. He secured employment with a steamship company and traveled widely to ports in Europe, Africa, Asia, and the United States. He claimed to have lived in New York in 1912. In 1913 he moved to London, where he studied English, and in 1917 he returned to France.

In 1919 Ho Chi Minh gained notoriety when he presented to the major powers gathered at the Versailles peace conference a petition arguing that Woodrow Wilson's Fourteen Points should be applied to the colonial peoples in Indochina. This document was signed "Nguyen Ai Quoc," a pseudonym he used for the next quarter century. In 1920 Ho Chi Minh joined a breakaway faction of the French Socialist Party that joined the Communist Third International.

In 1923 Ho Chi Minh moved to Moscow and began a career as an agent of the Communist Third International (or Comintern). He was assigned to China in 1924. In February 1930 he presided over the founding conference of the Vietnam Communist Party. Ho Chi Minh's revolutionary career was interrupted by his arrest and detention by British authorities in Hong Kong (1931–1933). He resumed work with the Comintern in Moscow after his release, and in 1938 he was posted back to China.

In February 1941 Ho Chi Minh returned to Vietnam after an absence of three decades. In May of that year he founded the anti-Japanese Viet Minh Front. He was detained by Nationalist authorities in southern China the following year and released in 1943. While in China, he made his first contacts with U.S. officials. He professed admiration for President Franklin Roosevelt's anticolonial sentiments. In 1944 Ho Chi Minh reached an agreement with the Office of Strategic Services (OSS) in China. He agreed to supply intelligence and assist in the rescue of downed pilots in exchange for OSS assistance to and training of Viet Minh troops.

In August 1945 the Viet Minh seized power, and on September 2 Ho Chi Minh declared Vietnam independent, citing the opening words from the American Declaration of Independence. He used his OSS contacts to convey messages to President Harry Truman requesting support. In 1946 Ho Chi Minh twice offered the United States access to Cam Ranh Bay.

Ho Chi Minh led the Vietnamese people in a successful eight-year war to expel the French (1946–1954). From 1954 until his death on September 2, 1969, he held the twin positions of head of state and chairman of the party in North Vietnam. In reality power over domestic affairs was held by the party general secretary and senior members of the politburo. Increasingly he focused his energies on foreign affairs and national reunification.

Ho Chi Minh was both a Communist and a nationalist. His brand of communism was more pragmatic than doctrinaire, while his patriotism was uncompromising. In Ho Chi Minh's words, "Nothing is more precious than independence and freedom."

SEE ALSO *Anticolonial Movements; Communism; Domino Theory; Freedom; Nationalism and Nationality; Self-Determination; Vietnam War; World War I*

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HOBBES, THOMAS
1588–1679

Thomas Hobbes was the first influential philosopher to apply the methods of Enlightenment science to politics. At the age of twenty, he was hired as a tutor for the son of William Cavendish (1640–1707), the first Earl of Devonshire, and he received support and employment from the Cavendish family throughout his life. In 1628 Hobbes published a translation of Thucydides' (c. 460–c. 401 BCE) *History of the Peloponnesian War*, and in various visits to the Continent he befriended and engaged in discussions about mathematics and science with the luminaries of the day, including Galileo Galilei (1564–1642), Pierre Gassendi (1592–1655), and Marin Mersenne (1588–1648).

He authored his first book, *Elements of Law* (1640), at age fifty-two. Sounding themes that would become familiar throughout his work, he declares that humanity's natural state is a state of war and that only by divesting themselves of their natural rights and transferring those rights to a sovereign can people ensure their physical safety. Shortly thereafter, in anticipation of the English Civil War (1642–1648), Hobbes fled to France, fearing

that a treatise that justified the king's prerogatives would bring retribution from the parliamentarians.

While in France he tutored the future Charles II (1630–1685), critiqued René Descartes (1596–1650), wrote *De Cive* (an expanded version of the second part of *The Elements of Law*), and authored and published his most important work: *Leviathan* (1651).

In *Leviathan*, Hobbes asserts that humanity's natural condition is characterized by two kinds of equality. First, everyone has the ability to kill. Second, everyone is equally prone to believe that they are more wise than everyone else. This leads to competition, mistrust, and a desire for glory, which in turn makes people's natural condition a state of war. The state of war for Hobbes is as much a milieu as it is actual fighting and it is the background condition of all human relations.

The difficulties that attend people's natural condition, in combination with their natural desire for self-preservation, means that they have a natural right to anything and everything. However, reason (and experience) leads one to the conclusion that retaining this right can only lead to a life that is "solitary, poor, nasty, brutish, and short" (Hobbes 1994, p. 76).

The solution to the war of all against all is a social contract. By giving up their natural right to anything and everything, people create a sovereign who commands precisely that right: an absolute sovereign. Creating this sort of sovereign is the most effective way to ward off the state of nature because an absolute sovereign overawes those who might be tempted to reclaim their natural right. Indeed, the leviathan is, citing Job, "King of the Proud." In addition, a single decision maker eliminates the potential for internal disputes and undivided power prevents one sector of society or government from withholding resources from another.

The sovereign power is not itself party to the social contract because a covenant is only valid if it has the power of the public sword behind it. In effect, no subject can bring redress against the sovereign, because the sovereign itself is the only party to which redress can be brought. The sovereign is therefore not obligated to act in a way that is beneficial to the individuals who created it. Instead, having contracted their will to the sovereign, the decisions and punishments of the sovereign amount to decisions and punishments that a subject inflicts on him- or herself. However, the sovereign is obligated to protect the commonwealth from internal and external enemies (by making law and making war) and there are incentives for the sovereign to act in ways that are beneficial to subjects. Hobbes also suggests that the sovereign cannot expect individuals to literally kill themselves on command. The crucial point to keep in mind is that even a bad government is preferable to the state of war or a government prone to dissolution.

In *Leviathan* and in his other works, Hobbes uses the principles of science and mathematics to ascertain the fundamental basis of politics. This approach understands the world as composed of bodies in motion and requires developing and working from careful definitions of key concepts. The result is a mechanistic rendering of human relationships that imagines human bodies and desires in geometric relation to one another. This is not to say his works are gauged only for the scientific reader. Instead, Hobbes combines science and rhetoric in an attempt to affect the politics of his time.

In 1652 he returned to England, having offended Parisian royalists who took exception to his attack on Roman Catholicism. Hobbes envisioned a three-part description of political existence consisting of body, man, and government. *The Elements of Law* and *Leviathan* describe most of the salient features of the second and third parts of this scheme and *De Cive* is devoted exclusively to the third, but he set out to fully develop the first two parts, writing *De Corpore* (Of Body, 1655) and then *De Homine* (Of Man, 1658). He also wrote a history of the English Civil War, *Behemoth* (1668). His work was widely read and debated during his lifetime. Some of his mathematical assertions were successfully rebutted and his stated commitment to Christianity and God was and is a matter of dispute.

By grounding government in a contract between equals, as opposed to divine sanction, Hobbes initiates a discussion about the purposes and character of government that defines much of modern political thought. His most notable and direct influence was on John Locke and Jean-Jacques Rousseau, and his influence on certain forms of conservatism endures.

SEE ALSO *Locke, John; Rousseau, Jean-Jacques; Social Contract; State of Nature*

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Dustin Ells Howes

HOBOS

The term *hobo* was used to describe homeless people who moved around in order to find temporary work in the United States during a cycle of depressions between 1879 and 1939. The term was often conflated with the terms *tramp* and *bum*. Contemporary uses of the word are rare. Similar people are now most often called homeless or migrant workers. The most famous definition of the hobo is said to originate from the Chicago anarchist Ben Reitman who stated that a hobo moves and works, a tramp moves and doesn't work, and a bum stays still and does not work. It is unclear from where the name originates. Some claim that it is derived from the name *hoe boy*—an agricultural worker. Another theory is that *hobo* is a derivation of the Latin *homa bonas* (good man).

Despite such attempts to differentiate hobos from tramps, contemporary observers tended to refer to the mobile homeless as tramps and hobos interchangeably. Most were male, white, and American-born, but there were significant numbers of black and female hobos as well. In 1911 one researcher suggested a population of 350,000 hobos. A 1906 estimate put the population at 500,000.

Hobos and tramps were most likely to travel alone either on freight trains or on foot. Because such train travel was illegal, it was also extremely dangerous. They would travel between, on top of, or underneath carriages. As they often had to get onto the train while it was moving, they were frequently injured or killed in the process. Railroad police were also known to deliberately throw hobos off moving trains. Estimates of annual death and injury to hobos and tramps ran as high as 5,000. Hobos most often worked in construction, agriculture, and mining. Indeed, the newly industrialized agriculture of the American West depended on the ability of migrant laborers to follow harvests from apples in Washington State to beets and grapes in California. Others followed the wheat harvest through the Midwest from Kansas to the Dakotas.

Between jobs hobos would gather on the outskirts of urban areas alongside railroad tracks in places known as hobo jungles. They would also use police stations, lodging houses, "flop houses" (a place offering very cramped, cheap lodging for transients, usually men), and missions. These would normally be located along an area called the Main Stem—a part of town associated with lodging for the homeless as well as employment agencies, cheap cafes, and soup kitchens.

Following the recession of 1879 hobos were subjects of a moral panic known as the tramp scare. They were generally represented as being foreign-born, lazy, and politically subversive. Newspapers called for them to be jailed, forced into work camps, sterilized, or even killed. Eugenicists believed them to be members of an "inferior" racial group who favored a nomadic lifestyle. By World War II (1939–1945) the term *hobo* had been replaced by the term *migrant*, which had been used in the 1930s to refer to those displaced by the Great Depression and the Dust Bowl in the American South and Midwest. Since World War II people who would have been called tramps or hobos in the early part of the twentieth century have been referred to most often simply as the homeless. Indeed, the earlier figures of hobos and tramps became romantic figures. Charlie Chaplin, Jack Kerouac, and others used the hobo figure to question some of the assumptions about "normal" life in the United States.

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Tim Cresswell

HOBSON, JOHN ATKINSON

SEE *Imperialism; Underconsumption.*

HOLISM

SEE *Anthropology.*

HOLLYWOOD

SEE *Culture; Entertainment Industry; Film Industry; Gone with the Wind; Romance.*

HOLOCAUST, THE

"The Holocaust" is the most common name for the systematic destruction of almost 6 million European Jews under German National Socialism between 1933 and 1945. *Holocaust*, from the Greek *holokauston*, means a burnt sacrifice or offering. Because the events of the Holocaust were no such thing, however, many prefer other terms, including the Hebrew Shoah (calamity) or "genocide of the European Jews." The term *genocide* (murder of an entire ethnic group) was coined during World War II (1939–1945) by the Polish exile lawyer Raphael

Lemkin to describe the murderous program Germany was carrying out, particularly in occupied central and eastern Europe; since then *genocide* has been used to refer to numerous other historical programs of mass ethnic-based extermination.

JEWS AND THE NAZI REGIME

The Nazi regime never made a secret of its anti-Semitism, if there is nevertheless substantial debate about how early, public, and explicitly murderous were its intentions to make Europe *Judenrein* (free of Jews). Vilification and scapegoating of Jews was certainly a central feature of Nazi rhetoric throughout the 1920s. Following the Nazi seizure of power in Germany in January 1933, the regime instituted a boycott of Jewish businesses. Soon thereafter Jews were dismissed from the civil service, and strict quotas were placed on Jewish presence in schools. In May 1933 libraries were purged of "decadent" materials, Jewish and otherwise, which were burned in great pyres in public squares.

As discrimination against Jews escalated in the following years, authorities felt the need for a more precise legal definition of "Jew," which they produced in the September 15, 1935, Nuremberg Laws for the Protection of German Blood and German Honor and the Law of the Reich Citizen. The Nuremberg Laws defined Jews as those having at least three Jewish grandparents; those with one or two Jewish grandparents were defined as *Mischlinge* (mixed breeds). The laws prohibited marriage between Jews and "Aryans" and declared civil and political rights only for "Germans." Despite many generations of patriotic commitment and a high degree of social integration, including often enthusiastic participation in the German military during World War I (1914–1918), Jews were no longer considered German.

A more vigorous stage of persecution began on November 9, 1938. Following the murder of a German diplomat in Paris by a Jew, the Nazi regime sponsored an enormous nationwide pogrom against Jews often referred to as *Kristallnacht* (Night of Broken Glass). In two days more than 7,000 Jewish-owned shops and businesses were destroyed, more than 1,500 synagogues (almost every synagogue in the country) were burned, more than 100 Jews were killed, and more than 30,000 other Jews were imprisoned in the so-called concentration camps that had been set up since the first days of the regime for holding political opponents and others.

World War II began on September 1, 1939, when the German army invaded Poland. With the progress of war and the occupation of vast portions of eastern Europe, the Nazis' murderous programs entered a new phase. Chancellor Adolf Hitler explicitly endorsed a large program of "euthanasia" for "undesirables," mainly the mentally and physically handicapped, though the definition of "undesirable" extended to include homosexuals, prostitutes, Jehovah's Witnesses, and Sinti and Roma peoples (Gypsies), among others. In July 1941 Hitler also explicitly discussed the so-called *Einsatzgruppen* (operational forces). These special units engaged in systematic, though cumbersome, mass murder of Jews and partisans in the occupied territories, often by machine-gunning large groups of people gathered to dig their own graves.

Nevertheless, given the stresses and expenses of such a program, Nazi planners sought other, more efficient means for killing large numbers of Jews as well as for disposing of their bodies in a more sanitary way. Experimentation thus continued with various forms of mobile death squads and subsequently with specially designed gas chambers as well as large-scale crematoria. The regime built and expanded camps to carry out these latter innovations. The extent of these practices was systematized and expanded following the Wannsee Conference of January 20, 1942, where Nazi leaders met and empowered such functionaries as Adolf Eichmann to coordinate the vast transport of Jews to the death camps, defining what they euphemistically called "the final solution to the Jewish problem." In July 1942 SS leader Heinrich Himmler ordered the evacuation of the many ghettos the Nazis had set up in eastern European cities to segregate and control Jewish populations. Most of these evacuations—most notoriously of the Warsaw ghetto—involved transport to "extermination camps" (*Vernichtungslager*) in such places as Auschwitz-Birkenau, Treblinka, Belzec, and Majdanek. Best estimates are that approximately three million Jews died in the death camps, in addition to the millions of others who died in concentration camps, by mass killings, and of disease, hunger, desperation, and murder.

SOCIAL SCIENCE AND THE HOLOCAUST

Most accounts from a social sciences perspective emphasize how sociologists, psychologists, and others have sought to explain the Holocaust as well as how social science was necessarily influenced and challenged by the ramifications of the Holocaust. In focusing on the role the Holocaust has played in social science, however, we overlook the role social science played in the Holocaust. For indeed social theory and research of various kinds was an important part of the intellectual milieu from which National Socialism arose. National Socialist ideologues drew explicitly on social Darwinism and eugenics, which were prominent themes across the political spectrum both in Germany and elsewhere in the first decades of the twentieth century. In Germany in particular social theory helped define a climate of "radical conservatism."

Prominent thinkers, such as Oswald Spengler, Werner Sombart, Arnold Gehlen, and others, helped define a mood of cultural discontent and suspicion of liberalism, which contributed to the failure of the Weimer Republic. Indeed many such figures remained in Germany throughout the Nazi years, some—for instance, Hans Freyer—even assuming positions of power in Nazi academe and beyond. Many of these intellectuals, as well as those trained under them during the Nazi period, were rehabilitated after the war and became prominent figures in postwar thought (e.g., Helmut Schelsky).

Given the predominance of both Marxism and Jews in German sociology during the 1920s, moreover, many falsely assume that the Nazis rejected the social sciences. That was not entirely the case. The Nazi regime used the social sciences for a variety of purposes, drawing great power from the advanced state, for instance, of German managerial science. In the early years of the regime, the Swiss psychoanalyst Carl Jung collaborated with Matthias Goering, brother of the Nazi propaganda minister and Hitler confidante Hermann Goering, on the formation of a German Psychoanalytic Society "free of Jewish influence." The sociologist Theodor Geiger's work was part of the discussion of Nazi sterilization and euthanasia programs. Social scientific work on regional planning was useful to the formation of occupation policy in the East, as were area specialists, who drew on and contributed to German *Ostforschung* (research on the East), which incorporated geographical, economic, and sociological approaches. Freyer, director of the German Scientific Institute in Budapest, and his assistant Schelsky contributed to cultural propaganda aimed at the Hungarian intelligentsia. The so-called *Inlandsnachrichtendienst* (Domestic Information Service) employed large numbers of social scientists to gather public opinion and other data. While the regime had chased large numbers of leading scholars into exile, remaining Nazi scholars sought to combine traditional social theory (*Gesellschaftslehre*) with a new racist anthropology (*Volkskundelehre*) into a "unified theory" (*Gesamtheitslehre*). As in law, medicine, literature, and other institutional spheres, then, portions of the social sciences as well as some of their members were associated with, were used by, and supported the Nazi regime, and the contemporary disciplines neglect examination of this legacy at their peril.

EXPLAINING THE HOLOCAUST

Social scientific efforts to explain the Holocaust directly have been few and far between. In the first place, the unprecedented scale of industrial killing the Nazis undertook as well as the unfathomable mass of cruelty they sponsored in some sense defy explanation and are grasped more readily in the philosophical vocabulary of radical evil. Indeed cultural theorists have often described the Holocaust as an event "beyond the limits," which include those of comprehensibility as well as representability. In the second place, sociology and political science, some have argued, are better suited to explaining conditions and structures rather than events, particularly events considered unique in a sense beyond the usual one in which all historical events are unique. But part of the reason is that the contemporary association of National Socialism and World War II with the Holocaust was not always as central as it is in the early twenty-first century. For at least twenty years after 1945, most social scientific and historical accounts saw the Judeocide as a consequence of rather than as the centerpiece of National Socialism.

To be sure, a wide variety of theory has sought to explain the rise of National Socialism in Germany and the extreme violence it produced. Two major axes of argument characterize most of this literature. The first is between theories that see National Socialism as a variety of "fascism," an extreme outgrowth of capitalism, milder versions of which can be found in all capitalist societies, and "totalitarianism," a form of radical authoritarianism characterizing both Nazi Germany and the Soviet Union. The second is between "intentionalists," who see Nazi aggression and the destruction of the Jews as the result of a master plan, and "functionalists," who see it as a sort of "industrial accident," the conditions for which could be found almost anywhere but combined in unusual ways in Germany. Intentionalists emphasize both the evil machinations of leaders as well as unique desires inherent in German culture, while functionalists emphasize Germany's delayed modernization, absent middle class, and polycratic (dis)organization. The social scientific and historical literatures thus range over a variety of causes and characteristics of the Nazi regime, including "massification," secularism, nihilism, consumerism, militarism, imperialism, evolutionism, and modernity itself. In most such accounts, however, the dependent variable is National Socialism, not the Holocaust. Theories associating radical Nazi anti-Semitism and the Holocaust with modernity generally—such as Max Horkheimer and Theodor Adorno's *Dialectic of Enlightenment* (written before the era of extermination camps, though it did not appear until 1944) and Zygmunt Bauman's *Modernity and the Holocaust* (1989)—are perhaps the most successful because they seek to draw meaning rather than determine causation.

Beyond the more macrohistorical efforts to explain National Socialism (which, again, confound the Judeocide with political authoritarianism and militarism), a number of sociological and social-psychological studies have sought to confront the cruelty and evil of National Socialism and the extermination camps as general problems of deviant behavior and social psychology, thus

approaching the question equally as obliquely as the macrohistorical theorists. Adorno and colleagues conducted research into what they called "the Authoritarian Personality." During the war the psychiatrist Richard Brickner diagnosed a collective paranoia, as did Jung after the war, both arguing for an occupation policy modeled on therapy for a neurotic patient. The sociologist Everett Hughes framed Nazi brutality as a matter of "good people and dirty work." Similar to Hannah Arendt, who most famously described Nazi brutality as banal, not in the sense of being trivial but in the sense of being ordinary, the work of desk-chair perpetrators (*Schreibtischtaeter*), Hughes sought to understand the social processes that made ordinary people capable of extraordinary cruelty, just as theories of "differential association" and "socialization" explain other kinds of deviance. In a similar vein Christopher Browning's studies of police officers who served in death squads underscore the universal capacity of every person for brutality in the right circumstances. Most famously the psychologist Stanley Milgram designed a series of experiments in which ordinary people were led, under a variety of conditions, to administer increasingly painful and finally lethal electrical charges to fictional test subjects, illustrating the general tendency for human beings to be "obedient to authority."

Debates about the causes of National Socialism and of the centrality of the murder of the Jews are ongoing and frequently occasion public controversy. For instance, the political scientist Daniel Goldhagen's 1996 book *Hitler's Willing Executioners* attracted a great deal of public attention for its thesis that Germany exhibited a unique form of "eliminationist anti-Semitism" and that as a result ordinary Germans supported the extermination of the Jews. The consensus is that Goldhagen failed to establish the existence and operation of a uniquely "eliminationist" political culture. Goldhagen's charge that macrohistorical and macrosociological accounts have not adequately conceptualized the centrality of Jew hatred has received less attention.

From about the 1980s on a particularly interesting strand of social scientific work focusing directly on the Holocaust developed concepts of "collective memory" and "cultural trauma" to understand the aftereffects of the Holocaust in contemporary culture. In the first place, collective memory scholars have studied how nations have confronted and commemorated both their victimhood and their complicity in the crimes. For Germany, the question has been what kind of an identity a nation held responsible for what many consider to be the worst crime in human history can have after such knowledge.

Elsewhere the questions have centered on the fluid boundaries between complicity and resistance; in Poland and Israel questions of the centrality of victimhood to contemporary identity have been key, and sociologists of memory have sought to understand the complex comparative dynamics of the different national cases. In the second place, theorists of trauma, both individual and cultural, have studied the problems of cultural and social transmission. For both survivors and perpetrators, scholars have identified unique legacies for the second and third generations, identifying both substantive problems from this particular history and general processes of intergenerational transmission. Finally, political sociologists have described the Holocaust as an interesting model for the "globalization" of memory, arguing that the civilizational dimensions of the Holocaust and its implied indictment of modernity are diagnostic of the present condition and serve as a model for commemorative forms elsewhere as well as for the pursuit of redress claims in a variety of cases.

SEE ALSO *Anti-Semitism; Arendt, Hannah; Concentration Camps; Eugenics; Genocide; Hitler, Adolf; Jews; Milgram, Stanley; Nazism; Neumann, Franz; World War II*

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HOLY ROMAN EMPIRE

The foundation of the Holy Roman Empire is usually dated to the decision of Charlemagne (742–814), king of the Franks, to assume an imperial title on Christmas Day, 800. The exact reasons for this remain a matter of dispute, but were clearly related to Charlemagne's personal mission to establish Christian rule in western and central Europe. The original empire was partitioned in 843, with the eastern portion retaining the association with the Christian imperial mission. This assumed greater ideological significance with the coronation of Otto I (r. 936–973) in Rome in 962 as he consciously invoked not only continuity with Charlemagne's empire, but that of ancient Rome. The concept of "imperial translation" claimed that the empire was a direct continuation of that of ancient Rome in its final, Christian configuration, and so was the last of the four "world monarchies" prophesied in the Bible to rule over the earth before the Day of Judgment. Such ideas buttressed the emperor's claim to be the supreme overlord of all other Christian rulers and thus the secular arm of a single, universal Christendom, leading to a prolonged dispute with the papacy.

The Christianizing mission combined with internal population growth to push the empire across the river Elbe early in the twelfth century, making it the largest polity in Europe until the growth of the Russian Empire in the eighteenth century. This expansion was assisted by the relative continuity of three successive imperial dynasties: the Ottonians (919–1024), the Salians (1024–1125), and the Staufers (1138–1254). However, the growth of more distinct kingdoms in western Europe restricted the emperor's practical authority to the lands east of the Rhine and north of the Alps. Moreover, the emperor only ruled a small portion of the vast area directly, relying on a host of secular and spiritual lords, as well as autonomous cities to manage local and regional affairs. These lords (increasingly called "princes") and cities evolved as the "imperial estates" (*Reichsstände*) between the thirteenth and sixteenth centuries, each controlling a distinct territory within the empire, with their own subordinate clergy, nobility, towns, and rural communes.

The absence of a single imperial dynasty after 1254 assisted this process and led to an elective imperial title that became entrenched in Germany and could be assumed without papal participation. Following the demise of the Luxembourg dynasty (1347–1437), the title passed by election to the Habsburgs, who retained it with only a single break (1740–1745) until the end of the empire in 1806. The onset of prolonged warfare with France and the Ottomans coincided with the confessional strife of the Reformation, and social and economic change. These pressures forced constitutional change from the late fifteenth century, creating an elaborate web of written and customary rights intended to preserve the autonomy of the imperial estates and the corporate structure of central European society within a hierarchical political framework under the emperor's overall authority, but not his direct rule. The growth of Austria and Prussia as distinct European great powers undermined this structure from within and led to its collapse during the Napoleonic Wars when the last emperor abdicated in 1806.

SEE ALSO *Church, The*

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HOMELESSNESS

The National Law Center on Homelessness and Poverty indicates that, on any given day, approximately 840,000 people in the United States are homeless or living in temporary shelters. Approximately 3.5 million people in the United States will meet criteria for homelessness within a given year, and 1.35 million of them are children. It is estimated that 7.4 percent of U.S. residents, or as many as 13.5 million people in the United States, have been homeless at one point in their lives.

The majority of the homeless in urban areas are adult men of minority descent. In rural areas, however, the homeless are more likely to be Caucasian, and their genders and ages are less well known. Across both rural and urban settings, approximately 20 to 25 percent of the homeless adult population suffer from some type of severe and persistent mental illness. Although homelessness has been a historically significant phenomenon in the United States, it still remains difficult to cull reliable and comprehensive data about homeless individuals. Indeed given the difficulty of tracking and finding individuals who are homeless because of the variability in their locations,

national data may significantly underestimate the incidence and prevalence of this social condition.

In 1987 the Stewart B. McKinney Homeless Assistance Act marked the first time the U.S. government acknowledged homelessness as a national crisis, despite its prevalence for decades prior to this event. In addition to designating federal money to help research and solve the problem of homelessness, the McKinney Act also provided a clear definition of *homeless*. According to the legislation, a "homeless" individual is one who lacks a fixed, regular, and adequate nighttime residence or has a primary nighttime residence that is a supervised publicly or privately operated shelter, an institution that provides temporary residence for individuals who will be institutionalized, or a public or private place not ordinarily used as regular sleeping accommodations for human beings.

The term *homeless* is inapplicable to individuals who are imprisoned or detained under congressional or state law. The concept as understood in the United States is largely based on an individual's physical living arrangements or accommodations. However, as the literature suggests, this definition may be inadequate and unable to capture the complexity of phenomena internationally. Indeed this U.S. definition of homelessness reduces the concept to an issue of "houselessness," which is a critical caveat to achieving an international understanding of the phenomenon.

The United Nations Centre for Human Settlements (Habitat) has refined homelessness and developed a more globally appropriate and responsive definition. The center also recognizes that definitions of homelessness vary widely and are influenced by geographic and socioeconomic factors. Most of what is known about homelessness, including an accepted definition of the construct, is based on the limited statistics and information available from European and North American countries and from the developing country of India. From this perspective, commonly held conceptualizations of homelessness include a consideration of social and familial relationships and sociodemographic factors.

Globally it is estimated that between 100 million and one billion individuals are homeless. Notably, however, homelessness data from developing countries are particularly sparse and difficult to collect. Across developed and developing countries, homelessness is often understood through both the narrow lens of accommodations, or lack thereof, and broader perspectives in an effort to inform services and interventions for those affected. For example, while some countries employ a typology based on characteristics of housing quality or on the length of time an individual is homeless, other countries may use a typology based on risk or potential of facing houseless conditions.

There are some emerging cross-cultural categories for understanding homelessness in an international arena. For example, *supplementation homelessness*, whereby an individual is homeless in response to migration, is quite different from *survival homelessness*, whereby individuals are homeless because they are searching for improved opportunities. *Crisis homelessness*, a precipitant of homelessness produced by a crisis (such as a storm, earthquake, or war) is quite different from the previous two. These categories focus more on the etiology for homelessness rather than on factors directly associated with the homeless individuals' culture, race, or premorbid socioeconomic status.

From a global perspective, much attention is given to homeless children and adolescents, often referred to as *street children*. It was estimated that there were 100 million street children worldwide in 1992, with 71 million of these children working and living on the streets full-time, 23 million working and living on the streets part-time, and approximately 7 to 8 million abandoned. While street children are considered among the homeless, the literature makes clear distinctions between homeless adults and homeless children. The most accepted definition of a *street child* is "any girl or boy for whom the street (in the widest sense of the word, including unoccupied dwellings, wasteland, etc.) has become his or her habitual abode and/or source of livelihood; and who is inadequately protected, supervised, or directed by responsible adults" (Glasser 1994, p. 54).

Such a definition addresses characteristics in addition to physical living arrangements with a broader consideration of a child's basic needs (that is, need for security and socialization). Similar to the various typologies used to understand global homelessness among adults, a typology has been developed by UNICEF that differentiates street children who live at home and those who do not, which is particularly relevant given that the majority of street children have some contact with their families.

Specifically the literature has found that there are experiential differences between street children who are deemed at high risk of homelessness (that is, the child spends some time in the streets), street children who are in the streets (for example, they spend most of their time in the streets, usually working), and street children who are *of* the streets (that is, the street is the child's home). As with the typologies used with homeless adults, these categories may be useful in determining the level and the type of services needed.

Homelessness is an international crisis. The understanding of who is most affected and under what conditions as well as the ability to programmatically remediate the social ills that promote this condition are further limited by the national definitions that are often internally valid but not well generalized internationally.

SEE ALSO *Children; Children's Rights; Hobos; Poverty; Slums; Vagabonds*

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HOMEOSTASIS

SEE *Social System.*

HOMICIDE

SEE *Murder.*

HOMO ECONOMICUS

SEE *Theory.*

HOMO PSYCHOLOGICUS

SEE *Theory.*

HOMOSEXUALITY

SEE *Sexual Orientation, Determinants of.*

HOMOTYPIC STABILITY

SEE *Stability, Psychological.*

HOODOO

SEE *Vodou.*

HOOVER, J. EDGAR
1895–1972

John Edgar Hoover was born in Washington, D.C., on January 1, 1895, and died there on May 2, 1972. He served as director of the U.S. Bureau of Investigation (BOI)—known after 1935 as the Federal Bureau of Investigation (FBI)—from 1924 until his death. During his long tenure he greatly expanded the bureau, giving to it much of its modern identity, but he was also the focus of a great deal of controversy because of his autocratic leadership style and his frequent abuses of power in the name of fighting subversion.

After earning a law degree from George Washington University in 1917, Hoover joined the Justice Department during World War I (1914–1918), working in (and briefly heading) its Enemy Aliens Registration Section. Two years later he was chosen as head of the newly established General Intelligence Division of the Justice Department. In this capacity, he was involved in the Palmer Raids (1919–1920), during the course of

which U.S. Attorney General A. Mitchell Palmer (1872–1936) ordered the arrest of thousands of radical political figures, violating their civil rights, and deporting hundreds who were not U.S. citizens. Hoover's role in this effort eventually led to his appointment by President Calvin Coolidge as the sixth director of the Bureau of Investigation in May of 1924.

As director of the BOI, Hoover expanded the bureau's staff. He also modernized its methods of conducting criminal investigations by, among other things, establishing what would become the FBI Laboratory and amassing, in the bureau's Identification Division, an enormous collection of criminal's fingerprints. The bureau rose to prominence during what is often referred to as the "lawless decade" of the 1920s, and during the 1930s it engaged in a number of high-profile battles with such famous criminals of the Depression era as John Dillinger, Alvin Karpis, Bonny Parker and Clyde Barrow, and Machine Gun Kelly. After its name change to the Federal Bureau of Investigation in 1935, the bureau became increasingly a part of the American vocabulary.

During World War II (1939–1945) the bureau played an important role in domestic surveillance, and its efforts led to the capture of a number of Nazi agents and saboteurs working undercover in the United States. In the years following the war, however, Hoover's war against subversion took a more controversial turn. During the late 1940s and early 1950s he became deeply involved in the anti-Communist movement known popularly as *McCarthyism*—after the reckless, witch hunt methods of Senator Joseph McCarthy of Wisconsin (1908–1957). In the name of rooting out Communist subversion, Hoover authorized illegal wiretapping and spying on thousands of suspected Communists. In the second half of the 1950s he expanded his area of concern to the emerging civil rights movement, which he also believed to be subversive in character. He sought to discredit the work of the early civil rights leader T. R. M. Howard (1908–1976), and later made similar efforts against Martin Luther King Jr.

Hoover served during the administrations of eight presidents, and while several of these individuals—especially Truman, Kennedy, Johnson, and Nixon—felt that he had grown too powerful, none was able or willing to remove him from office, due in part to his and the FBI's near-iconic status in the mind of the average American. Celebrations of the FBI in American popular culture that contributed to this status included a long-running radio program (*The FBI in Peace and War*, 1944–1958), a popular television series (*The F.B.I.*, 1965–1974), and a 1959 film, *The FBI Story*, starring the well-known Hollywood actor James Stewart. Hoover himself was the author of several books, among them the best-selling *Masters of Deceit: The Story of Communism in America and How to Fight It* (1958).

Hoover's management style at the bureau was highly autocratic, and he was greatly feared by those who worked for him. Following his death in 1972, Clyde Tolson (1900–1975), his longtime friend and associate FBI director, succeeded him as director.

In the years following Hoover's death the controversies surrounding his life and career have continued to grow. Among them, suggestions of homosexuality (in Anthony Summers's *Official and Confidential: The Secret Life of J. Edgar Hoover* [1993]) and possible African American ancestry (in Millie McGhee's *Secrets Uncovered: J. Edgar Hoover—Passing for White?* [2000]) have rendered particularly ironic Hoover's use of information regarding sexual orientation as a means of attacking or intimidating political opponents and his strong opposition to the postwar civil rights movement.

SEE ALSO *Civil Rights Movement, U.S.; Communism; Crime and Criminology; King, Martin Luther, Jr.; McCarthyism*

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HOPE

In an ancient Greek myth, Zeus was irate at humans for having stolen fire from the gods. In the spirit of revenge, he fashioned a young maiden named Pandora and, using reverse psychology, sent her to earth with a dowry chest, with the crucial instruction not to open it. Of course, her curiosity got the best of her, and she opened the lid. Out came a plague of evil forces. Panicked at what she had unleashed, Pandora tried to close the chest, only to find that hope was stuck on the lid. Hope could overcome the evil forces unleashed. Thus hope came into the world.

A young couple stood at the graveside of their two twin daughters, born prematurely, as a circle of family and friends sang the hymn, "Lead, Kindly Light, Amid the Encircling Gloom." Having their precious daughters buried near their great grandparents in a historic cemetery brought them comfort and hope in the face of perinatal loss (Callister 2006). Hopefulness in such situations is a personal, comforting, and life-sustaining belief that even in difficult times, life has meaning. Hope is also a belief that something favorable can happen for oneself or others in the future. P. S. Hinds (1984) defined hope as the human characteristic that allows an individual, irrespective of age, to transcend disappointments, pursue goals, and diminish the sense of the future as unbearable or futile. Hope is a force contributing to a person's will to live (Cousins 1989).

Detractors to hope exist. It is postulated that inside every person there is a spirit of hopefulness that can be influenced negatively or positively by others. Suffering and feeling alone or unappreciated, along with unaddressed spiritual needs, are some of the challenges to being hopeful.

James Averill and his associates (1990) asked people to describe circumstances in which they thought hope would be important. Responders described periods when they perceived some degree of personal control over their lives, and times when their life goals were important, had a reasonable chance of being reached, and were socially and morally acceptable.

Strategies that contribute to the strengthening of hope include believing in oneself, trusting in the good intentions of others, and feeling close to another person. For many people, faith and religious beliefs also contribute to hopefulness. Hope is vital for those who have been diagnosed with a serious, life-threatening, or terminal illness, as well as for their families. Those who lack hope find no meaning in life or find it difficult to persevere in troubling times. They may lack or lose a sense of well-being, and doubt the possibility of favorable outcomes. The components of hope include "positive thinking or optimism, reality-based and future oriented goals, positive future for self or others, and positive support systems" (Hendricks-Ferguson 1997, p. 76). Hope is essential to negotiating difficult life challenges. Knowing that others have hope for positive outcomes can foster hope in individuals.

On the other hand, hope may be perceived by others as evidence that individuals and families are unrealistically positive. Thus, hope may become simply "magic" when one has a wishful expectation that everything will "turn out all right" based on luck, fate, or the intervention of a higher power. Still, hope can be fostered by reflecting on positive outcomes and by formulating potential goals. Hope thus becomes realistic as one recognizes the existence of limitations or conditions.

Multiple tools have been developed to measure hope, including the *adult hope scale* developed by C. R. Snyder and colleagues (1991). Eight items are ranked on an eight-point Likert scale from "definitely false" to "definitely true," with four agency items such as "I energetically pursue my goals." The higher the score, the higher the level of overall hope. A similar children's hope scale has also been developed.

Hope has been studied across the lifespan. Kaye Herth (1998) used interviews and drawings to study sixty homeless children who had lived through multiple losses. Themes included connectedness, internal resources, cognitive strategies, energy, and hope objects. The children used symbols in their drawings, most often trees or rainbows, which for them symbolized hope. As one homeless adolescent wrote, "a young tree is very fragile and in need of just the right amount of water and sunlight to grow; hope at first is very fragile but flourishes with care" (Herth 1998, p. 1057). Many of the children drew pictures of houses, with open doorways and flowers and favorite toys, indicating a longing to have a "real home." One child who drew a sad face explained, "sometimes you have to be sad before you can smile again" (Herth 1998, p. 1058). The adolescents shared stories of significant losses but demonstrated inner strength that sustained their hope. One favorite book at the shelter was *The Little Engine that Could*, with the hopeful refrain, "I think I can, I think I can."

Adela Yarcheski and associates (1994) studied ninety-nine high school students, finding statistically significant positive correlations between perceived hopefulness and social support, as well as hopefulness and general well-being. Hopefulness was fostered through social interaction, mutuality, attachment, intimacy, affirmation, encouragement, and a nurturing environment. Hopefulness in adolescents with cancer has also been studied and has been linked with improved quality of life and better health even in the face of chronic or terminal illnesses (Hendricks-Ferguson 1997).

Hope is experienced differently by those who are chronically ill than by those who are healthy. Dal Sook Kim and associates (2006) studied hope in chronically ill hospitalized patients and identified five life orientations related to hope:

- Externalism orientation—hope based on reliance on family, friends, or God.
- Pragmatic orientation—hope in the ability to accomplish small things in life.
- Reality orientation—hope manifested by realistically enjoying that which can be.

- Future orientation—hope focused on positive possibilities that may exist in the future, which may include a strong reliance on a higher power; for example, a person may say, "I feel hope in my faith in God" or "I feel hope when I realize that I am in God's hands."
- Internal orientation—hope oriented toward the self.

J. M. Morse and B. Doberneck (1995) studied patterns of hope exhibited in a variety of people undergoing different life experiences. Their subjects included breast cancer survivors, individuals waiting for heart transplants, unemployed mothers, and persons with spinal cord injuries. The presence and function of hope has also been studied in people with acute spinal cord injuries (Lohne and Severinsson 2004) and adults undergoing bone marrow transplants for leukemia (Ersek 1992). In Mary Ersek's study, factors associated with hope included "feelings of powerfulness or control, meaning or purpose in life, adequate social support, and positive self esteem" (1992, p. 883). Ersek identified the structure of hopefulness as:

- Appraising the illness in a nonthreatening manner (seeing it as a positive event).
- Cognitively managing the illness experience (including the practice of joking).
- Managing emotional responses to the illness.
- Managing a sense of control (either maintaining or relinquishing control).
- Taking a stance toward illness and treatment (fighting the illness or accepting it).
- Managing the uncertainty (minimizing or maximizing the uncertainty).
- Focusing on the future (living from day to day or focusing on the long term).
- Viewing the self in relation to the illness (minimizing the illness and maximizing personal strengths).

Further research is needed to increase our understanding of hope, including how to mediate the variables and strategies that enhance hope in individuals across the lifespan. Many experts assume that sources of hope include support from family and significant others, as well as spiritual beliefs (Hendricks-Ferguson 1997). How these sources of hope make a difference merits further inquiry.

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Lynn Clark Callister

HOSTILITY

SEE *Personality, Type A/Type B.*

HOTELLING RULE

SEE *Resource Economics.*

HOT MONEY

Hot money may be defined in two ways. Currency traders define it as opportunistic funds seeking the highest short-term return in international markets, moving from one trend to the next—hence, its highly liquid or "hot" character. In more journalistic usage, the adjective refers to money whose ownership is concealed at least from the tax authorities and often from criminal prosecutors as well. This is done by creating corporate shells, and it is done increasingly legally, blurring the boundary between legal and illicit. Rather than countering the activity, European and American governments have promoted it and offered special tax advantages in order to attract this money.

The corrupt associations of "hot money" derive less from the activity itself than from the social status of its practitioners. It is disparaged when the funds come from dope dealing and arms trading or from small-fry falsifying their tax returns. But hot money is blessed and even given special tax subsidy when conducted at the top of the economic pyramid.

Early hot-money centers were Switzerland, Liberia, and Panama. Switzerland long refused to cooperate with foreign criminal prosecutors on the logic that its laws did not recognize tax avoidance as a crime. Liberia and Panama offered "flags of convenience" to the oil industry and refrained from imposing any income or sales taxes in a fiscal "race to the bottom." Oil companies avoided taxes by incorporating shipping affiliates in Panama and Liberia to buy crude oil at low prices from their branches in the producing nations and sell them at a high enough markup to their refineries in the consuming nations, so that neither oil wells nor refineries had reportable income.

By the 1960s these tax-avoidance centers inspired smaller versions throughout the Caribbean and other islands. These "offshore banking centers" specialized in legal "tax avoidance" as distinct from outright tax *evasion*. By far the major quantitative suppliers of funds in such centers are large multinational corporations, global money managers, and post-Soviet kleptocrats. Smaller fry simply have moved in their wake, facilitated by the international banks that have set up branches in these enclaves.

When the U.S. dollar came under pressure in the late 1960s, Congress voted to refrain from imposing the usual 15 percent income-tax withholding on interest paid to holders of Treasury bonds in these centers. Deeming it to be in the U.S. interest to attract tax-evasion money and the soaring sums of overtly criminal wealth to stabilize the balance of payments, the government encouraged U.S. banks to set up branches in these centers. Britain announced a similar rationale to permit its residents to conduct real estate and other transactions via the Channel Islands, along with the British West Indies and a few other imperial dependencies in the Caribbean. For continental Europe, Liechtenstein and more recently Cyprus have played a similar role, with Russian oligarchs and their counterparts in other parts of the former USSR favoring Cyprus.

The prize for banks in these centers is a volume of flight capital, tax-avoidance, and criminal money that took a quantum leap after the breakup of the Soviet Union in 1991. Capital flight from Russia alone is estimated at $25 billion annually since that time. Usually a "veil of tiers" is set up by lawyers using multiple offshore banking centers to make the funds more difficult to trace. The ultimate magnitude is reported regularly by central banks. The Federal Reserve Board reports U.S. deposits from offshore banking centers quarterly, segregating out deposits at U.S. bank branches. The Bank of England and the German Bundesbank publish similar quarterly reports in their central bank bulletins, and U.S. congressional committees periodically hold hearings to assess how the rising flow of hot money can best be tapped to serve U.S. national interests.

These statistics show the major role hot money has come to play in international banking. The United States has become the world's largest hot-money haven, followed by Britain. The Bank of Credit and Commerce International and Riggs Bank in Washington, D.C., and the Bank of New York and Citibank have been singled out for serving kleptocrats, dictators, and smaller crooks, highlighted by the uncovering in 2004 of secret accounts for former Chilean dictator Augusto Pinochet (1915–2006). An eight-year 1998–2006 FBI probe of money laundering focused on operations by Semion Mogilevich and other members of Russia's *mafiya* at the Bank of New York.

In sum, the growth of "legitimate" savings by multinational firms, government officials, and major vested interests makes any estimate of the magnitude of hot money fairly irrelevant. Different observers may draw the line at different points along the line from respected multinationals to small-time tax dodgers and crooks who use these centers to make their money invisible to the tax and police authorities.

SEE ALSO *Capital Flight; Corruption; Crime and Criminology; Drug Traffic; Money Laundering; Offshore Banking; Taxes*

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Michael Hudson

HOUSE UN-AMERICAN ACTIVITIES COMMITTEE

SEE *Civil Rights, Cold War; Cold War; McCarthyism.*

HOUSTON, CHARLES HAMILTON

1895–1950

Charles Hamilton Houston was born in 1895, one year before the U.S. Supreme Court's decision in *Plessy v. Ferguson*. In *Plessy*, the Court upheld laws requiring racially segregated public facilities, known as Jim Crow laws, ruling that "separate but equal" facilities for blacks and whites did not violate the U.S. Constitution. Charles Houston dedicated his life to destroying Jim Crow and ending racial segregation by law in the United States.

Houston believed that the law could be used to bring about social change and that black lawyers should be trained as social engineers. He attended law school at Harvard University, where he was the first black editor of the *Harvard Law Review*. In 1929 Houston was appointed head of the law school at Howard University, a historically black institution. Houston raised admissions standards, improved the faculty, strengthened the curriculum, and achieved accreditation for the school. His mission was to train a cadre of black lawyers that would successfully challenge government-sanctioned discrimination. One of Houston's students, Thurgood Marshall (1908–1993), went on to argue *Brown v. Board of Education* (1954) before the U.S. Supreme Court and later to serve as the Court's first black justice.

In 1935 Houston took a leave of absence from the law school to serve as special counsel to the National Association for the Advancement of Colored People (NAACP). Within a few months of joining the NAACP, Houston initiated a legal campaign to end racial discrimination in public education. The first step in Houston's strategy was to attack *Plessy*'s "separate but equal" doctrine as it applied to graduate and professional schools. Most states offered legal education only to white students, thus failing to meet the "separate" requirement, and Houston brought test cases to challenge these policies. In *Murray v. Maryland* (1936) and *Missouri ex. rel. Gaines v. Canada* (1938), the Maryland Court of Appeals and the U.S. Supreme Court ruled that states must either admit black students to their established institutions or provide blacks with equal facilities for graduate and professional training.

Houston resigned as NAACP special counsel in 1938, but he remained active in civil rights litigation. He turned his attention to racial discrimination in labor and housing. In the *Steele* and *Tunstall* cases of 1944, Houston successfully challenged preferential hiring in the railroad industry, and in *Hurd v. Hodge* (1948), he took on restrictive covenants among homeowners and prevailed.

Houston also continued to advise Thurgood Marshall, who had taken over the education litigation. The next step was to challenge the separate graduate and professional schools created in the wake of *Murray* and *Gaines* and to show that equality was impossible, or at least too expensive, to achieve. In *Sweatt v. Painter* (1950) and *McLaurin v. Oklahoma* (1950), the NAACP argued that the education offered to black law and graduate students was substantially inferior to that available to white students, and the Supreme Court unanimously agreed.

Houston died of heart failure in 1950 and did not live to see the culmination of his strategy to overturn *Plessy v. Ferguson*. In *Brown v. Board of Education* (1954) and its companion cases, the Supreme Court was unanimous in striking down segregation in primary and secondary education, declaring that "in the field of public education the doctrine of 'separate but equal' has no place."

SEE ALSO Brown v. Board of Education, *1954; Marshall, Thurgood; National Association for the Advancement of Colored People (NAACP)*

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Malia Reddick

HULL, CLARK

1884–1952

A leading American psychologist during the middle decades of the twentieth century, Clark Leonard Hull established an early reputation for carefully controlled research and formulated an influential version of neobehaviorist learning theory. His ambitious theoretical system was marked by quantitative precision and systematic exposition in terms of postulates and equations.

Hull was raised on a small farm in Michigan and attended Alma College in preparation for a career in engineering. But while convalescing from polio, he read

William James's *Principles of Psychology* (1890) and transferred to the University of Michigan to study psychology. He then entered graduate school at the University of Wisconsin, receiving a doctorate in 1918 with a thesis on concept formation under the direction of Joseph Jastrow (1863–1944).

Remaining at Wisconsin as an instructor, Hull pursued research in three areas. His study "The Influence of Tobacco Smoking on Mental and Motor Efficiency" (1924) produced mixed results but was noteworthy for implementing a placebo design in which blindfolded subjects smoked pipes that delivered either tobacco or heated, smoke-scented air. He also conducted quantitative studies of aptitude testing and carefully controlled research on hypnosis, eventually publishing well-received books on both topics. His *Hypnosis and Suggestibility* (1933) was a pioneering work in the scientific study of hypnotic phenomena.

In 1929 Hull received an appointment at Yale, where his interests shifted to behaviorist learning theory. Inspired by the works of the Russian physiologist Ivan Pavlov (1849–1936) and the American psychologist Edward Thorndike (1874–1949), he published a series of "miniature systems"—theoretical models of limited scope that applied to circumscribed domains of learned behavior. The systems made ingenious use of the explanatory constructs—such as pure stimulus acts and habit-family hierarchies—that would become standard devices for "Hullians" in the following decades. During the 1930s, Hull also designed and built robotic machines that could exhibit learned behavior, a practice that prefigured later uses of computers to model mental processes.

Meanwhile, Hull assumed a leadership role at Yale's Institute of Human Relations, which attracted talented young psychologists otherwise unemployed during the Great Depression. Hull's weekly seminars at the institute were devoted to applications of behavioral principles to phenomena of social learning, aggression, and psychopathology. His students and associates at Yale included such notables as Neal Miller, John Dollard, Eleanor Gibson, Charles Osgood, Robert Sears, and Kenneth Spence. As Hull's chief disciple, Spence trained scores of students in the Hullian tradition at the University of Iowa.

Elected president of the American Psychological Association in 1936, Hull furthered his standing with the 1943 publication of his masterwork *Principles of Behavior*. Consistent with the logical positivist philosophy of the time, the book adopted a hypothetico-deductive method in which theory was framed as postulates and theorems to be subjected to experimental verification. It quickly became the most cited work in experimental psychology and led to Hull's involvement in celebrated learning-theory debates, notably with Edward Tolman (1886–1959) and Kurt Lewin (1890–1947), during the 1940s.

In *Essentials of Behavior* (1951), Hull revised the postulates of the *Principles* in light of anomalous findings, but his system became mired in the complexities of learned behavior. By the late 1960s, his influence had crested and many psychologists were turning to the simplified neobehaviorism of B. F. Skinner (1904–1990) or to cognitive approaches. Hull's efforts at grand theory are now largely regarded as failures, but his legacy of careful experimentation and domain-limited theoretical models remains influential.

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Laurence D. Smith

HUMAN CAPITAL

According to marginal analysis, each factor of production is paid according to its contribution to production, and the market constitutes a mechanism that establishes a moral rule of distributive justice in the society. This theory of marginal productivity was put forth around the turn of the twentieth century by the American economist John Bates Clark (1847–1938). In the neoclassical analysis of the labor market, the equilibrium wage is set at the point of intersection of the demand and supply curves of labor. The level of the equilibrium wage set by the intersection of the two curves guides the allocation of workers across firms in such a way that an efficient allocation of resources is achieved. The implication is that wages are equal to the value of the marginal product of labor, which is the same for all workers and every firm. To achieve this condition, firms and workers should operate in a perfectly competitive environment, anonymity for both sides should be present, and the allocation of labor to firms should be random. However, wage differentials are present in the labor market, and several attempts have been made to explain the reasons for these wage differentials.

Adam Smith (1723–1790) was the first economist to introduce the idea of wage differentials and attempt to

offer reasons for its existence. According to Smith, one reason for wage differentials is the common idea that wages vary positively, everything else being held constant, with the disutility of labor. This argument was later formalized by William Stanley Jevons (1835–1882) and states that an individual is willing to offer more labor input only if the wage is higher; this is because leisure time gets scarcer and thus becomes more valuable to an individual. Another reason for relative wage differentials put forward by Smith is related to the concept of human capital, which has been introduced only recently into economic analysis. According to Smith, the cost of a person's education or training can be viewed as an investment in the individual's future earnings capacity, analogous to an investment in physical capital. To be economically justified, this investment must be recuperated over the lifetime of the student or trainee. Thus, those with education or training will generally earn more than those without. In recent years, this interpretation of wage differentials has given rise to numerous attempts to measure the rate of return on investment in education and training. In general, these efforts have sought to check whether such investments in education and training do, in fact, earn normal profits for an equally valuable capital.

Neoclassical theory has never abandoned the idea that wages tend to equal the net product of labor; in other words, the marginal productivity of labor rules the determination of wages. However, it has also been recognized that wages tend to retain an intricate, although indirect, relationship with the cost of rearing, training, and sustaining the energy of efficient labor. All these factors cause wage differentials, and they make up what is known as human capital in economic literature. Human capital, in mainstream economics, is similar to the physical means of production—for example, factories and machines—and is defined as the knowledge and skills possessed by the workforce that can be accumulated. Human capital, therefore, is a stock of assets that one owns and that allows one to receive a flow of income, similar to interest earned. In modern times, human capital is largely a product of education, training, and experience. Within this approach, investment in human capital is treated similarly to investment in physical capital and is considered, in many cases, as a principal factor for the observed differences in developmental levels between nations. It is argued that investment in human capital can take various forms, including improvements in health services, formal education, and training of employees, and it can help eliminate blockages in productivity enhancements. It is worth clarifying that the acquisition of more human capital is not related to the number in the workforce but to the improvement of labor services and the concomitant increase in labor productivity.

Today, new growth theorists put a lot of emphasis on human capital: "The main engine of growth is the accumulation of human capital—or knowledge—and the main source of differences in living standards among nations is a difference in human capital. Physical capital plays an essential but decidedly subsidiary role. Human capital takes place in schools, in research organizations, and in the course of producing goods and engaging in trade" (Lucas 1993, p. 270). Within this framework, a lot of emphasis is given to the policies promoting human capital, such as investment in education or health. More than that, according to the economists Theodore W. Schultz (1902–1998) and Anthony P. Thirlwall, it is argued that differences in the quality of human capital are the cause of the different levels of development among nations and that the improvement of human capital might reduce the need for physical capital.

In addition, literature about organizational behavior and human resource management has emphasized the role of human capital in promoting the development and implementation of national and corporate strategies. Hence, human capital is a very important asset and may serve as a useful link in the chain between employee and business performance; moreover, human capital, human-resources practices, and firm performance are areas that need to be explored together to design better corporate strategies.

MINCER'S WAGE EQUATIONS

Modern human capital theory was initiated by the work of Jacob Mincer, in which investment in human resources is considered similarly to other types of investments. In Mincer's first model (1958), individuals are assumed to be identical prior to any training, thereby forcing a differential wage to employment based on the length of the expected training period. The size of the compensating differential is determined by equating the present value of the future net earnings stream (gross earnings minus costs) with the different levels of investment. The formal presentation of Mincer's first simple model is:

$$lnw(s) = lnw(0) + rs$$

where $lnw(s)$ represents the log of the annual earnings of an individual with s years of education, $lnw(0)$ represents the log of the annual earnings of an individual with basic years of education, and r is the internal rate of return to schooling years s. According to the above equation, individuals with more training receive higher earnings. The difference between earning levels of individuals with different years of schooling is determined by the second term of the right-hand side of the equation. If one defines the internal rate of return to schooling as the discount rate that equates the lifetime earnings stream for different educational choices, then the internal rate of return to schooling can be estimated by the coefficient on years of

schooling. This simple framework offers a number of interesting implications. However, the whole analysis relies on some unrealistic assumptions, which can be summarized as follows:

the individuals are all identical prior to making choices;

the age of retirement does not depend on years of schooling;

the only cost of schooling is foregone earnings;

earnings do not vary over the life cycle; and

there is no post-school on-the-job investment.

Mincer's second model (1974) allows for the on-the-job investment and yields an earnings specification that is similar to the first. To establish the relationship between potential earnings and years of labor-market experience, assuming that observed earnings are equal to potential earnings less investment cost, the following relationship for observed earnings is produced:

$$lnw(sx) = a_0 + \rho_s s + \beta_0 x + \beta_1 x^2$$

where $lnw(sx)$ stands for the observed earnings, x is the amount of work experience, ρ_s is the rate of return on formal schooling, and s represents the years of education. The intercept term is the product of the log skill price and the initial ability of the individual. The coefficients β_0 and β_1 stand for the return to experience.

This second expression is called Mincer's standard wage equation, which regresses the log earnings on a constant term, on a linear term of the years of schooling, and on a quadratic term of the labor-market experience. Mincer's standard wage equation transforms a normal distribution of years of schooling into a log-normal distribution of earnings. Under the assumption that post-school investment patterns are identical across individuals and do not depend on the schooling level, Mincer shows that there is an important distinction between age-earnings profiles and experience-earnings profiles, where experience means years since leaving school. More specifically, he shows that the log-earnings-experience profiles are parallel across schooling levels and that log-earnings-age profiles diverge with age across schooling levels.

By the early 1970s, the estimation of the returns on schooling using Mincerian wage regressions had become one of the most widely analyzed topics in applied econometrics. The reason is that the human-capital earning function has several distinct characteristics that make it particularly attractive:

the functional form is not arbitrary, and the identity is based on the optimizing behavior of individuals as captured by the outcome of the labor-market process;

it converts immeasurables (the dollar cost of investment in human capital) into measurables (years of schooling and years of labor-market experience);

it can include instrumental variables to capture a dichotomous variable describing some characteristics such as race or sex; and

the coefficients of the regression equation may be attributed with economic interpretations.

While the human-capital literature has now been generalized to incorporate on-the-job training, it should be noted that the Mincerian wage regression equation is a representation of the statistical relationship between wages and experience (given schooling) for an exogenously determined rate of on-the-job training. The Mincerian wage regression disregards the endogeneity of post-schooling human-capital accumulation and treats schooling and training symmetrically. More precisely, Mincer's approach ignores the possibility that schooling may change the human-capital accumulation process that takes place on the job.

THUROW'S JOB-COMPETITION MODEL

C. Lester Thurow's job-competition model serves as an interesting counterpoint to the traditional models in explaining the distribution of earnings. In his book *Generating Inequality: Mechanisms of Distribution in the U.S. Economy* (1975), Thurow shows that for the period 1950–1970, changes in the educational attainments of white males 25 to 64 years old did not affect their earnings. He finds that educational distribution is equalized through the years while income distribution is not, and he notes that the expected arguments and results from marginal productivity are not fulfilled. To explain the distribution of wage earnings, Thurow rejects market imperfections as a possible explanation of unexpected observations in labor markets. In fact, he argues that individuals compete against one another for job opportunities based on their relative costs of being trained to fill a job position instead of based on wages they are willing to accept. He argues that wages are based on the marginal productivity of the job, not of the worker. Workers who compete for jobs offered at fixed wages determine the labor supply, and workers compete for relative positions based upon their training costs to employers rather than on wages. Hence, job competition prompts people to overinvest in formal education for purely defensive reasons. Moreover, technology, the sociology of wage deter-

mination, and the distribution of training costs determine the distribution of job opportunities.

Even though the advantages of education are frequently exaggerated in terms of their strictly economic results, there is no doubt that education is advantageous in earning a higher income and also teaches general skills that improve the quality of labor and, by extension, human capital. However, recent literature on issues related to human capital stresses the need to consider other dimensions of human identity that contribute to the formation of human capital. In fact, modern labor economics has criticized the simple approach that tries to explain all differences in wages and salaries in terms of human capital as a function of knowledge, skills, and education. The reason is that the concept of human capital can be infinitely elastic, including unmeasurable variables such as culture, personal character, or family ties. Many other factors, therefore, may contribute to wage differentials, such as gender or race. The existence of imperfections in labor markets implies mostly the existence of segmentation in labor that causes the return on human capital to differ between different labor-market segments. Similarly, discrimination against minority or female employees implies different rates of return on human capital. Most of these studies in their wage equations use the technique of instrumental (or dummy) variables to introduce specific characteristics of the labor segmentation that takes place. The statistical significance of these instrumental variables indicates their importance in forming human capital and the concomitant wage differentials. In addition, over the past few decades several writers, including Rhonda Williams (1991) and Howard Botwinick (1993), have begun to develop alternative approaches to the analysis of discrimination and wage differentials that are based on a more classical analysis of capitalist competition and accumulation.

HUMAN CAPITAL AND RELATED FIELDS

The theoretical discussion about the meaning of human capital is vast and extends into the fields of human development and human resource management. For instance, human-development literature often distinguishes between specific and general human capital, where the first refers to specific skills or knowledge that is useful only to a single employer, while the second refers to general skills, such as literacy, that are useful to all employers. Human-development theories also differentiate social trust (social capital), sharable knowledge (instructional capital), and individual leadership and creativity (individual capital) as three distinct forms of human participation in economic activity.

Indisputably, the term *human capital* is used everywhere in economic and business analysis in which labor has to count as an input in the production process. The term has gradually replaced terms such as *laborer*, *labor force*, and *labor power* in the relevant analysis, giving an impression that these traditional terms are socially degraded. Moreover, in the strict sense of the term, human capital is not really capital at all. The term was originally used as an illustrative analogy between, on the one hand, investing resources to increase the stock of ordinary physical capital (such as tools, machines, or buildings) in order to increase the productivity of labor and, on the other hand, investing in educating or training the labor force as an alternative way of accomplishing the same general economic objective. In both sorts of investment, investors incur costs in the present with the expectation of deriving future benefits over time. However, the analogy between human capital and physical capital breaks down in one important and very crucial respect. Property rights over ordinary physical capital are readily transferable by sale, whereas human capital itself cannot be directly bought and sold on the market. Human capital is inseparably embedded in the nervous system of a specific individual and thus it cannot be separately owned. Hence, at least in regimes that ban slavery and indentured servitude, the analogy between human capital and physical capital breaks down.

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Persefoni Tsaliki

HUMAN DEVELOPMENT

SEE *Developmental Psychology.*

HUMAN ECOLOGY

Human ecology, the study of the relationships between humans and their environments, is a field with a large scope and complex history. It arose out of multiple disciplines—animal biology, anthropology, geology, ecology, and sociology—in the early 1900s as scientists struggled to make sense of the impact of humans on the man-made and natural environment and the impact of environments on the social systems of humans. Human ecology is also viewed by many as a methodology or framework for studying human activities and social institutions, often in conjunction with the health and functioning of the natural environment.

HISTORY AND DEVELOPMENT

The earliest mention of human ecology can be found in the early 1900s among animal ecologists, who, as a result of studying population trends among plants and animals, suggested that ecological principles also applied to humans and their relationship to the natural environment. Later, biological ecologists and population scientists used similar concepts—such as ecosystem, environmental niche (the space occupied by an organism in which it can survive and reproduce), feedback loop, stability, and growth—to address issues of population growth and environmental destruction; this line of study became particularly prominent in the 1960s and 1970s, as in the 1973 work of Paul Erhlich, Anne Erhlich, and John Holdren. Also in the 1970s, Urie Bronfenbrenner (1979) developed an ecological model of human development to understand the reciprocal relationships between individuals and the multiple environments in which they live. Gerald Marten (2001) uses human ecology and complex systems theory as a framework to examine economic systems and other social institutions and their impact on the natural environment. In particular, he discusses human ecology as a tool for resolving issues of sustainable development and environmental problems by understanding the complex interrelationship between human social systems and the ecosystem.

Anthropologists used ecological concepts to study the history and culture of human groups and societies to explain their success, failure, or adaptation. The concepts of equilibrium, movement of resources, sustainable development (meeting present needs without compromising the ability of future generations to meet their own needs), and the adaptation of organizational systems have been applied to the study of families, communities, race relations, schools, workplaces, government agencies, and other social institutions. It was in the study of urban environments that the concepts of human ecology achieved prominence. Sociologists working in this area—Park and Burgess (1920s), Frazier and Sutherland (1930s), and Janowitz (1950s)—addressed key issues such as the impact of human settlement on land-use patterns (for example, traffic flow patterns, water and flood management), the intertwined history of industrial development and urban decay, race relations, and white flight to the suburbs—in other words, the components of urban and regional planning. The underlying issue is understanding how demands for space and resources influence the development of community and business organizations across rural and urban landscapes, and how the environment influences the structures and strictures imposed by human social systems.

The sociological approach to human ecology was epitomized by the Chicago School—an approach to research pioneered most famously by the Department of Sociology at the University of Chicago beginning in the 1920s and 1930s—which focused on using theory and field research methods to understand human behavior and organization in the urban environment. Beginning in the early 1920s, scholars such as Ernest Burgess and Robert E. Park employed ecological concepts to explain the development of cities and communities. For example, the POET model—population, organization, environment, and technology—was developed to address the complex relationships between humans, their social organizations, and their environments. One of the architects of sociological human ecology was Amos Hawley (b. 1910), a population specialist and professor at the University of North Carolina, Chapel Hill, who argued that human ecology was "the basic social science" (1944, p. 405). Hawley is known for his work on the conceptual and theoretical foundations of sociological human ecology (see Hawley 1986) and the associations among population, the social-political-economic environment, and change in developing nations.

THE ECOLOGY OF HUMAN DEVELOPMENT

Human development is a subfield within the larger field of human ecology. In the 1970s Bronfenbrenner developed the ecological theory of human development, which made use of the general principles of ecology, general systems theory, and human development to explain individual differences in cognitive, biological, and social-emotional development in context. Bronfenbrenner conceived of context as a series of concentric circles, with the individual at the center and each circle representing increasingly complex environments, from proximal to distal, that might affect the development of the individual. Lines of influence are viewed as reciprocal within and between environments. For example, the most proximal environment for a child is the family, represented by parent-child interactions, child-sibling interactions, and marital interactions, all of which may influence some aspect of the child's development. Just as humans do not live in isolation from nature, a family does not exist in isolation, but operates in a microsystem encompassing those individuals with whom children and parents have regular and ongoing interaction. The third circle represents larger societal institutions, such as schools, businesses, churches, and local government, and the outer circle (the exosystem, or societal institutions that form larger environments of family units) represents larger structural institutions such as state and federal government and international social systems whose polices and laws may affect families and their natural environments. This theoretical framework explicitly recognizes that individuals do not develop in isolation; interactions with families and social groups influence individual development across the lifespan and across generations.

HUMAN ECOLOGY AS A FIELD OF STUDY

As an academic discipline, human ecology has emerged around the world as a field that brings together various aspects of sociology, economics, home economics, anthropology, gender studies, community development, agronomy, and regional planning. The concepts of human ecology fit into the scientific framework of multiple disciplines, all of which examine some aspect of the interactions between humans and their multiple environments. In a 1994 article William Catton suggests that sociologists "must learn to see human social life ineluctably intertwined with other components of ecosystems" if human ecology is to understand and address the problems of human societies (p. 86). Although different, not always overlapping strains of human ecology have evolved in multiple disciplines, the central concepts are strikingly similar, whether pertaining to issues of urban and regional planning, the use of natural resources and sustainable development, or the study of individuals and families. Humans and their social systems, from small to large, must be viewed within their larger environments, including the natural environment, to trace the "chain of effects through ecosystems and human society, and by understanding more generally how people interact with ecosystems" (Marten 2001, p. xv).

Researchers and writers across multiple disciplines agree that human ecology is a valuable framework for studying and understanding the interrelationships between the social systems of humans and the systems of nature. The health of humans, their social systems, and their natural environments may depend on an understanding of this interdependency.

SEE ALSO *Anthropology; Anthropology, Urban; Cities; Development; Development Economics; Planning; Social Science; Sociology; Sociology, Rural; Sociology, Urban; Urban Studies; Urbanization*

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HUMAN EXPERIMENTATION

SEE *Experiments, Human.*

HUMAN GENOME PROJECT

SEE *Genetic Testing; Genomics; Race.*

HUMAN RIGHTS

The core conception underlying human rights rests on the following premises: (1) all humans have equal rights that derive from the dignity and inherent worth of every person; (2) all humans have rights to freedom and development; (3) the advance of human rights is inherent in the pursuit of world peace, social justice, democracy, and the rule of law; (4) vulnerable groups need special protections; (5) cultural diversity and pluralism affirm persons' identities; and (6) human rights must be linked with the promotion of sustainable communities and environments. This conception has formally evolved within the international framework of the United Nations, as well as the United Nations' specialized agencies—the International Labour Organization (ILO) and the United Nations Educational, Scientific, and Cultural Organization (UNESCO). Still, the roots of this conception are everywhere evident, in communities, in peoples' movements, and increasingly in state constitutions (for summaries see Howard 1995; An-Na'im 2002; Orend 2002; Felice 2003).

THE ORIGINS OF HUMAN RIGHTS

The international response to the Holocaust at the end of World War II (1939–1945) was swift and decisive, specifically, the founding of the United Nations in 1945, which in turn paved the way for the formal elaboration of human rights in terms of two distinct but related frameworks (Moore and Pubantz 2006). One framework deals with the most egregious violations, namely, humanitarian law, embodied in the 1949 Geneva Convention on the Prevention and Punishment of the Crime of Genocide, and subsequently in various treaties and statutes, including the 1998 statute that established the International Criminal Court (ICC), which tries individuals who commit crimes against humanity (Robertson 1999).

The second framework deals with fundamental human rights, initially enshrined in the 1948 Universal Declaration of Human Rights (UDHR). This document is extraordinary for many reasons, not the least of which is that it has been affirmed by all of the nearly two hundred member states of the United Nations. (The UDHR does not have treaty status, and therefore is not enforceable.) The philosophical premise, as stated in Article 1, is that "all human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood." The UDHR encompasses three main sorts of rights: (1) political and civil rights that historically evolved in Great Britain, Europe, and the United States; (2) socioeconomic rights and security rights, specifically those rights people have by virtue of being human, such as the right to a job, community and family, food, security, housing, and education; and (3) the rights of vulnerable persons and minority populations.

Subsequently, international treaties have been enacted that are designed to assist nation-states in advancing human rights. These treaties are:

- International Covenant on Civil and Political Rights
- International Covenant on Economic, Social, and Cultural Rights
- Convention on the Elimination of All Forms of Discrimination Against Women
- International Convention on the Elimination of All Forms of Racial Discrimination
- International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families
- Convention on the Rights of the Child
- Convention Against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment

Additionally, the United Nations has promulgated other declarations and charters (without treaty status) dealing with human rights, some of which concern specific groups, such as indigenous peoples, the mentally disabled, and many others. The ILO and UNESCO also have standards for human rights in areas in which they have expertise and authority.

GLOBAL INTERDEPENDENCE AND HUMAN RIGHTS

Human rights take on new significance in an increasingly interconnected world in which the gaps in human welfare are widening and all humans are at increased risk owing to the proliferation of weapons, terrorism, and the deterioration of natural habitats (Singer 2004). Just as multinationals acquired the capacities in the 1980s to move their operations everywhere around the globe to find the cheapest labor (Amin 1997), the policies of the World Bank and

the International Monetary Fund put the populations of many poor countries at risk (UNDP 2004). Aggravating these material inequalities, the world's "haves" are largely white, whereas the world's "have-nots" are largely nonwhite.

Another aspect of global interconnectedness is that declines in some national economies have spurred high rates of migration, while affluent countries have increasingly barred migrants' entry. Furthermore, the rate of decline of the planet's environment, climate, and biodiversity has accelerated. A sustainable habitat is also a basic human right, but environmental degradation, climate change, hazardous wastes, pesticides, and toxic products all threaten sustainability. On the positive side, the advance of communications has expanded peoples' own connectedness, which has fostered remarkable cooperation around shared objectives, such as poverty reduction.

HUMAN RIGHTS AS CONSCIENCE AND SOCIAL VALUES

As already implied, human rights are more than formal agreements. They rest on a set of ideals and values. All religious traditions, from the ancient Hindu Upanishads to contemporary religions, have emphasized the importance of duties and obligations, and continue to play an ongoing role in human rights, as do currents in philosophy and ethics (Lauren 2003). The U.S. civil rights movement and other social movements, such as those for gender equality, have played key roles in shaping peoples' conscience about equality of rights. Liberation struggles against colonial oppressors have also reshaped conscience. The Martinican-born political theorist Frantz Fanon (1925–1961) powerfully captures this in *The Wretched of the Earth*: "Independence is … an indispensable condition for the existence of men and women who are truly liberated, in other words who are truly masters of all the material means which make possible the radical transformation of society" (1963, p. 310).

CURRENT FRONTS FOR THE ADVANCE OF HUMAN RIGHTS

The advance of human rights is a vision that is increasingly shared by advocates for justice as well as by development specialists, and this is possible because people at the grassroots, community level have been increasingly successful in generating the infrastructures for local nongovernmental organizations (NGOs) that, in turn, form coalitions with international NGOs. In important ways, these relationships have fundamentally transformed development projects, from a top-down approach to complex, collaborative approaches. These coalitions are able to leverage governmental reforms, and sometimes can gain major concessions from local private-sector firms. For example, the French NGO, Dignity International, collaborates with the Nairobi Hakijamii Centre for Economic and Social Rights to reduce poverty in Kenya, and this partnership also has developed models for development that it uses in international education.

Many NGOs already have consultative status with the United Nations, and such relationships are growing and intensifying as the United Nations has embarked on a new and expansive agenda to partner with these organizations, as well as local and state governments and private-sector organizations. The objective is to create layers of engagement, including grassroots engagement, to promote development, human rights, and peace and to stem the causes of human and environmental degradation (Annan 2005). A few examples of NGOs are: Global Rights; the Center for Economic and Social Rights (CESR); Choike-Latin America; Third World Network; and Amnesty International. Very often these NGOs function more as the conduits of expansive networks rather than as single-site organizations. The NGOs that work with the United Nations are also involved in the global World Social Forum, which is an amalgam of a peoples' social movement, an NGO, and a network of NGOs.

Recent interest centers on the importance of direct, participatory democracy as both a vehicle for governance and an expression of human rights (Beetham 1999; Green 1999). New electronic technologies make it possible for members of a community to participate in democratic self-governance, and the initial pilot projects have been remarkably successful (MacLean 2004). Another approach is based on the idea that credit is a human right. Bangladeshi economist Muhammad Yunus established the nonprofit Grameen Bank in 1976 to give microloans to the very poor in third world countries (Chowdhury 2001). By 2005 Grameen Bank had given out $4,896 million in loans, primarily to women, to start their own businesses. The repayment rate was a remarkable 98 percent. Microloans are not structural solutions for solving poverty, but nevertheless they help to transform the lives of poor women and indirectly benefit their communities.

THE UNITED STATES AND HUMAN RIGHTS

In spite of the great progress that has been made since the initial formalization of the principles of human rights in 1948, there are serious obstacles. A major one has to do with worldwide inequalities of resources, which can be traced to the long-term effects of colonialism, ongoing exploitation by multinationals, and authoritarian governments. Some states are too poor to implement human rights programs, and, besides, many poor states have not yet attained the kind of stable government structures that give people a voice to make

demands for their rights. Yet, paradoxically, the world's most powerful and richest nation, the United States, has been one of the world's worst partners in the international human rights community.

The United States has remained on the margins of the world's human rights community. For example, it rejects the idea that socioeconomic security and cultural identity are human rights. In part, this grows out of ideological conflicts during the cold war; but it is also pragmatic, consistent with U.S. geopolitical ambitions (Tabb 2002). Another explanation is that human rights are not in synch with American values that stress competitive individualism (Blau and Moncada 2005). Indeed, the U.S. Constitution is one of the few in the world today that does not include provisions for socioeconomic rights (Blau and Moncada 2006). In addition, the world's richest nation does not support various treaties to slow the rate of environmental degradation and climate change (Low 1999; Kaul et al. 2003). The United States is one of only a few countries not party to the ICC and during the Iraq War violated the terms of the Geneva Convention, which it has ratified (Hooks and Mosher 2005).

Still, worldwide, the momentum of the human rights revolution has accelerated, possibly because of developments in communications and because of the increasingly grave conditions threatening humans and their habitats. The goal, as often stressed by UNESCO, is "to build peace in the minds of people," which resonates with the motto of the World Social Forum: "A Better World Is Possible."

Leading international human rights organizations, such as Amnesty International and Human Rights Watch, have been on the front lines defending peoples' rights against brutal oppressors and inhuman acts of violence. The very complex and challenging tasks involving securing positive rights, such as the right to a decent job, housing, food, health care, and the rights to a culture and to identity require social movements, the engagement of activists, and immense efforts by people in their workplaces and communities. People of color in the United States and elsewhere have played leading roles in such challenging tasks, including roles in the Civil Rights Movement, South Africa's anti-Apartheid struggle, the Zapatista Movement, the Brazilian Landless Movement, and the Malawian shaming campaign against neoliberal policies and foreign investors. In the United States it is significant that an African American, Gay McDougall, executive director of a leading human rights organization, Global Rights, was appointed to serve as UN independent expert on minority issues.

SEE ALSO *Civil Rights; Genocide; Natural Rights; Needs, Basic; United Nations*

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HUMAN RIGHTS WATCH

SEE *Civil Liberties.*

HUMAN SACRIFICE

The practice of human sacrifice has been associated with religious beliefs, famine, and national pride. The term is generally approached with reference to the Aztecs and other Meso-American cultures. Yet human sacrifice has been in practice since the Stone Age and refers to ceremonial slaughter that is performed to achieve a benefit for society, albeit through grisly means.

Evidence of human sacrifice has been found in Denmark, Holland, and Germany. During the Iron Age in these areas, people would be ritually killed by hanging, bludgeoning, strangling, or by having their throats slit. The bodies would then be submerged in a peat bog, where their remains were preserved for centuries. Examples have been found that date back to 3500 BCE. "Bog bodies" have also been found in England. Anthropologists have noted that an overwhelming characteristic of the bodies found was physical deformity, such as extra or missing digits or shortened legs, and it has been postulated that these individuals were thought to have been "touched by the gods," making them fitting sacrifices.

Between 3100 BCE and 2890 BCE, there was mass human sacrifice in Egypt, for the pharaohs required servants to follow them to the grave. This was also prevalent in Mesopotamia, where servants, guards, and even musicians and grooms consumed poison to follow their kings into death. In the kingdom of Kerma, in Africa, huge pits have been discovered in which some 500 or more people were buried just outside their ruler's mausoleum. The same rituals occurred in China around the first to second centuries BCE.

Human sacrifice was also practiced in Ancient Greece. Archaeological evidence leading to this assumption has been found on the Isle of Crete. Skeletal remains of several individuals found near Knossos appear to have been put to death in ceremonial ways. One male approximately eighteen years old at the time of death, was trussed tightly, and a decorated dagger was found among his bones. He lay near a trough, which is thought to have been used to collect sacrificial blood, and the body of a woman lay spread-eagled in the southwest corner of the room. Further, what appears to be an altar was festooned with crop-filled vases, alluding to religious ritual.

The Celts also practiced human sacrifice for religious reasons, and their rites were documented in the work of Julius Caesar. According to Caesar, though this point might be contested, the Druids sacrificed murderers, as they believed that only a life offered in atonement for a life taken could appease the gods. Murderers were sometimes sentenced to enclosure in an immense human effigy, which was burned with the criminals inside. Thieves were also sentenced to this fiery death, and when not enough criminals were present to fill the container, innocent people were added to its contents. The Celts also allegedly applied decapitation, throttling, clubbing, or throat slitting, also accompanied by burial in a peat bog. They also killed men by striking them in the back with a sword, and they divined meaning from the ensuing death struggle. In her war against Roman occupation, the warrior queen Boudica impaled vanquished Roman soldiers to honor the gods.

Though the Romans thought these Celtic practices were barbaric, they had in fact carried out their own versions of human sacrifice, though they had ended the practice a century sooner. Yet they still practiced mass execution in the Coliseum during the gladiatorial games, and at a later time Christians would be fed to the lions. Vikings were sometimes buried with slave girls, who were thought to become their wives in Valhalla. Some scholars believe that the women were willing participants who asked for the honor of being ritually stabbed and then burned in the ship with their masters.

The practice of human sacrifice in Meso-America did not begin with the Aztec culture. In fact, evidence has been found that human sacrifice was part of religion as far

back as the first known Meso-American civilization, the Olmecs. The Aztecs are certainly the most well known for their propensity for ritual killings, however. Many of their gods would only be appeased by the flow of human blood. Their most important god was Huitzilopochtli, the Sun God. Aztecs believed that if they did not ritually sacrifice to him regularly, the sun would not rise. In his honor, the high priest would lay a man over the sacrificial stone and cut the beating heart out of his chest, which would then be held up before the attending crowd.

Though this was the most prevalent type of sacrifice, the Aztecs had many gods to satisfy, and they each had prescribed rites. For Xipe Totec, or "Our Lord the Flayed One," victims were first tied to a tree, then shot with arrows. The ritual required that the victim be flayed so that the skin remained intact. The high priest would then don the skin to symbolize the "new skin" of springtime. For Tezcatlipoca, a young man would be selected and treated royally for one year. At the end of that time, he would be sacrificed. Though these practices seem horrific in modern times, Aztec sacrificial victims were honored to be chosen.

This was also true among the Mayas, who might sacrifice entire losing teams in a ritual ballgame. Criminals were weakened by hunger and then forced to play the game with healthy athletes. The criminal team was soundly routed, with decapitation as the end result. Mayans also sacrificed people to the water god, Chaak, over limestone sinkholes, which were believed to be doors to the underworld.

The Incas also practiced human sacrifice. Yet, unlike early European incidents, Incan sacrifices had to be pure and free of blemishes. Often, a child of the king's would be sacrificed to strengthen the bond between king and deity. Earthquakes, droughts, epidemics, or the death of kings were reasons for performing the sacrificial ritual, which entailed taking the child to the top of a mountain, where a stone mausoleum would be built. The boy or girl was given a drug to ease the pain, wrapped tightly in ceremonial garments, and buried with many honorific items surrounding the body. Evidence now points to the children receiving a blow to the head, but it is not certain whether it was simply to knock them unconscious or to kill them because the skull fractures found in all the Incan "mummies" are mild.

Though all of these civilizations found reason in what modern man would find a barbaric practice, each civilization had rules for which human sacrifice was required, as well as rules about who the victims would be. This relates to the work of the Italian philosopher Giorgio Agamben, who defines the role of *homo sacer* or "the citizen," which is an individual who exists in law as an exile without legal rights or identity. Though such persons can be killed, they may not be ritually sacrificed. Only "bare life," or individuals without inalienable rights (which relates to political prisoners stripped of citizenship), could be sacrificed by Roman Law. This was not always true in Meso-American civilization. In most cases, it was an honor to be chosen.

Some modern films, such as Mel Gibson's *Apocalypto* (2006), which is based on the Mayan civilization, can bring the horror and reality of human sacrifice to life. Though the process of the sacrifice is portrayed accurately in Gibson's film, other aspects of the practice are not. As stated above, most sacrificial victims went to their doom willingly, in repayment to their gods for life and abundance. To turn down such an offer, or to escape (as Gibson's character Jaguar Paw does in the film), would have been considered an effrontery to the gods and evoked their wrath upon their entire civilization.

Though the practice of human sacrifice died out after the Conquistadors conquered the New World, it continues in Asia in modern times. In India, a small percentage of followers of the religion Tantrism practice human sacrifice, though this is thoroughly illegal. In one tantric rite, a woman hacked a three-year-old to death to achieve the promise of limitless wealth. In another, a couple who could not have children were directed to murder a child and wash in its blood to assure conception. Though the police have apprehended some of those involved in such cases, it is uncertain whether the practice of human sacrifice will ever end.

SEE ALSO *Archaeology; Civilization; Death and Dying; Incas; Olmecs; Religion; Rituals*

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HUMANISM

In the widest sense, humanism is conceived as referring to an approach to understanding the world and of living in that world focused first and foremost on humans rather than on God or on nature. Although individualistic, never organized in the form of a movement, and highly variegated and including religious and nonreligious forms, humanisms have exhibited various combinations of freedom and responsibility, learning and observation, reason and values. The term itself only dates from the mid-nineteenth century. The descriptive term, *humanist*, however, gained wide currency from the late 1400s, and the advent of humanism in the West is usually associated with the classical revival of what has come to be known since the nineteenth century, now often contentiously, as the Italian Renaissance.

Humanists were particularly scholars of the Greek and Latin *literae humaniores* and engaged in teaching what Cicero (106–43 BCE) had termed *studia humanitatis* based on a liberal education, especially grammar, rhetoric, history, poetry, and philosophy. From early in the fourteenth century, they began to develop a periodization of history that, unlike the continuity experienced in the Middle Ages, was marked by a break with the civilizations of Greece and Rome. Thus in antiquity could be found alternative models for thought and life. Humanist scholars then, with Francesco Petrarca (Petrarch, 1304–1374) and his friend Giovanni Boccaccio (1313–1375) in the lead and establishing a model widely emulated, were engaged in the recovery of classical texts. Using a philological method, humanists further sought to establish the integrity and the original meaning of the classics in the context in which they were written.

Their passion for antiquity and the proclaimed break with the medieval world presented Renaissance humanists with the problem of reconciling Christian and pagan values in a new historical and intellectual climate. Humanists had attacked scholasticism and, instead of in Aristotle (384–322 BCE), eventually found more congenial philosophical bases in Plato (427–347 BCE). An associated question was that of an active versus contemplative life and the role of the scholar in public affairs. Lino Coluccio di Piero Salutati (1331–1406, chancellor of the Florentine Republic 1375–1406) and the generation of the first half of the fifteenth century tipped the balance toward civic virtue, *civic humanism*, and made Florence the center of humanist studies. The life and work of Leon Battista Alberti (1404–1472) epitomized humanism in the arts. Personifying the Renaissance ideal of the "universal man," he shared with many humanists a taste for archaeological studies and campaigned for a return to classical models. He advanced realistic representation, systematized perspective, advocated for principles of harmony and the social function of architecture, and put these into practice himself as an architect. The humanists' interests in perspective, anatomy, and the mathematical bases of proportion and harmony (including that of music) provided material groundwork for the development of the natural sciences as an autonomous domain of knowledge production.

Humanist thought and practice spread widely beyond the original center in Florence to other parts of Italy and, following the invasion of the Italian Peninsula in 1494, extended rapidly to the north as the *new learning*. Education, the key to the discovery of one's *humanitas*, was a fundamental element in the development of "humanism." Although the old universities remained in the grip of scholasticism, existing schools were revitalized and new ones established all over Europe to make available a classical education, at least to an elite, and humanist thought prospered in informal groups, correspondence networks, and academies.

While the violence and dislocations of the Wars of Religion of the late 1500s and the attacks on what was considered the heretical idea of personal freedom of thought in the Reformation and Counter-Reformation shook optimism and faith in fundamental human dignity, a renewed sense of confidence and the possibility of progress; a belief in freedom, including freedom of thought and expression, in reason, and in science; and especially an emphasis on a critical outlook marked the eighteenth-century Enlightenment. The corollary to the accent on emancipation and the individual was secularism, indeed an anticlericalism and atheism—different from the accommodation that had satisfied Renaissance humanists. However, the reaction to the French Revolution (1789–1799) offered a sharp rebuff to the way the Enlightenment *philosophes* had envisioned the world. The ineluctable reality of change brought forth contradictory attitudes toward the meaning of "progress" and was translated into the mutually exclusive politics—based on conflicting value sets—of conservatives and radicals. Nonetheless, a belief in the centrality of the human experience and the value of reason and education continued to color nineteenth-century attitudes.

During the late eighteenth century and early nineteenth century, humanism evolved in the Germanies with an emphasis on the individual (even to the detriment of social concerns), the pursuit of classicism in the arts, education reform, and the assertion of classical roots as a fundamental element in the establishment and development of the German state. In England in the early 1880s, the relative merits of the arts (especially schooling in the classics) and the sciences (and the unbiased "truths" they produced) in education were debated by Matthew Arnold (1822–1888), champion of "culture" and a "liberal of the

future," and T. H. Huxley (1825–1895), Charles Darwin's (1809–1882) apologist. But their positions were not so far apart; both were needed. Indeed after mid-century, *liberal humanism* was characterized by a confidence in a future of incremental material and social progress, supported by the emerging social sciences, whose principle actor or "subject," however, was an autonomous, entrepreneurial, propertied white male. By the end of the century, the new liberalism had co-opted much of both the conservative and radical agendas, and the "common culture" espoused by Arnold was offered as a substitute for equality.

From the late nineteenth century, the European avant-garde contested realist representation (associated with a bourgeois establishment) and the positivist attitude by figuring an internal world, and the twentieth-century wars undermined confidence in an innate human decency and the improvements to be expected from scientific "progress." Furthermore, over the second half of the twentieth century, the humanist tradition was assailed in a series of developments in the production of knowledge itself. In 1946 Jean-Paul Sartre (1905–1980) extolled existentialism as a humanism, not the liberal/bourgeois humanism with its metaphysical assumptions but a humanism grounded in choice and commitment that linked the individual to the community. In 1947 Martin Heidegger (1889–1976) responded, rejecting humanism and existentialism as metaphysical; instead of the thinking subject, he placed the accent on "being."

The scope of critiques of the possibility of any universal humanism widened from the 1950s through the mid-1960s. Léopold Sédar Senghor (1906–2001) pronounced *négritude*, a direct attack on universalizing, Eurocentric culture at the world scale, to be a humanism. Alain Robbe-Grillet, speaking for the *nouveau roman* and in a debate with Sartre, pointed to the double-edged and paralyzing nature of existentialism that underwrote a hegemony of "man," a fundamental ideological pillar of modern thought. For Michel Foucault (1926–1984), conceding the influence of Friedrich Nietzsche (1844–1900), not only had humanism as a philosophy reached an end but "man," a concept of recent invention, would also have to be abandoned (Foucault 1966).

In response to the crisis on the left occasioned by the events of 1956—Hungary, Suez, Nikita Khrushchev's (1894–1971) secret speech—E. P. Thompson (1924–1993) promoted *socialist humanism*, which was "*humanist* because it places once again real men and women at the centre of socialist theory and aspiration … *socialist* because it re-affirms the revolutionary perspectives of Communism … faith in real men and women" (1957, p. 109). The movement, founded on the early Karl Marx (1818–1883), attracted wide support. In 1964 Louis Althusser (1918–1990) took the couplet to task, associating the terms *socialist* with science and *humanism* with ideology by singling out what he called Marx's break with "every theory that based history or politics on an essence of man" ([1965] 1986, p. 227). Althusser argued that Marx's "structural" account of social relations gave rise to *theoretical antihumanism*, which, however, did not rule out ethical commitments. Despite the many valid criticisms, Althusser's work was the primary source for what came to be known as *structuralist Marxism* and rendered "humanist" agendas on the left suspect.

By far the most far-reaching development was that of *structuralism*. Based on the work in linguistics of Ferdinand de Saussure (1857–1913), the structuralisms offered the promise of a new rigor and scientific status, nonreductionist and nonpositivist, for the human sciences. But the emphasis on "constructedness" spelled the end for any humanism founded in essentialist categories, whether human or material. Saussure insisted that languages, systems of signs that express meaning, should be studied not just in terms of their individual parts, diachronically as philologists had, but also in terms of the relationship between those parts, synchronically. The model rehabilitated a version of relational thinking and was appropriated by the social sciences and applied to nonlinguistic phenomena.

The term *secular humanism* is generally applied to those who embrace humanist principles and contend that these lead to secularism and who reject the supernatural, especially religious faith, while maintaining a belief in the inherent dignity of humankind. It has at times acquired a pejorative tonality, especially when used by religious conservatives to describe nonreligious opponents such as some scientists and intellectuals.

Edward Said (1935–2003) reclaimed the term *humanism* in a positive sense to describe a practice for what is in the end a defense against inhumanity: historical, rational, and critical thinking (which includes the philological method) informing responsible, activist social agency.

SEE ALSO *Althusser, Louis; Aristotle; Enlightenment; French Revolution; Hungarian Revolution; Plato; Poststructuralism; Revolution; Said, Edward; Schooling; Social Science; Socialism; Structuralism; Thompson, Edward P.*

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HUMBOLDT, ALEXANDER VON

SEE *Geography.*

HUME, DAVID
1711–1776

David Hume's work was crucial in the development of many important social scientific concepts like "the fact/value distinction," "ideology," and "economic equilibrium." Moreover, in a period when the "social sciences" did not yet exist, he envisioned the transformation of the ancient discipline of "moral philosophy" into a "science of man" through the "application of an experimental philosophy to moral subjects" (Hume 1739–1740, p. 4). Such a methodological transformation was essential for the creation of the social sciences.

Hume was born in Edinburgh on April 26, 1711, and he grew up at his family home in the Scottish Borderlands. He studied at the University of Edinburgh, and after rejecting a career as a merchant or a lawyer, he made his way in life as an intellectual and author. He joined a circle of Scottish Enlightenment thinkers, including Adam Smith and Lords Kames and Monboddo, who made Edinburgh the center of their social life. They kept a careful distance both from the Scottish Highlanders to the North—who were prone to violent rebellion against the "powers that be" in London—and the English establishment figures to the South—who were often hostile to ambitious Scots like themselves. Although his philosophical works did not win him fame and fortune, his multivolume *History of England* (published between 1754 and 1762) did. During his later years, between 1763 and 1768, he broke through the governmental "glass ceiling" for Scots and was appointed to a number of important diplomatic posts, including charge d'affaires in the British Embassy in Paris and under-secretary of state for the Northern Department (which included Scotland). He died in Edinburgh on August 25, 1776.

Hume's writings spanned the genres from intricate philosophical studies to belletristic essays and historical narratives. In these texts, Hume created concepts and attitudes that pointed social investigations away from the formal, contractualist framework that dominated Enlightenment social thought and toward a dynamic, empirical approach to human nature.

Hume acerbically made a sharp distinction in the discourse concerning human affairs between "the usual copulations of propositions, is, and is not" and the propositions connecting subject and predicate with "ought" and "ought not." He insisted that one could not validly deduce "ought" propositions from those stating facts about human behavior alone, and that once "small attention" was paid to this fallacious reasoning, "all the vulgar systems of morality" would be "subverted" (Hume 1739–1740, p. 302). Indeed, the "is/ought" distinction became a starting point for the social sciences in the next century.

Along with this categorical revision of the social world, Hume cultivated in his readers a healthy skepticism for the application of crude causal categories in "the science of man." Just as Newton rejected the primacy of contact (push-pull) forces in natural philosophy and introduced relational forces—such as gravitational attraction, which operates instantaneously across huge distances—he also debunked the primacy of mechanical causation in the social realm and called for a deeper appreciation of tendential, correlational forces expressed in sympathy, convention, and habit.

Hume also rejected an atomistic conception of the self. He argued that the notion of a simple unified self is a fictional product of an ingrained "propensity to confound identity with relation." Hume's "science of man" guards against this propensity and seeks to uncover the complex relations and forces at play in the formation of a self, thus proposing one of the key research themes of the future social sciences. A century later, his recognition of the importance of fictions in social life was to be developed further with the notion of "ideology."

Hume also emphasized the importance of the precontractual basis of contractual societies by refusing to take the rational, contracting individual as the starting point of social thought. He noted that "two men, who pull the oars of a boat, do it by an agreement or convention, tho' they have never given promises to each other" (Hume 1739–1740, p. 315), and his new science gave primacy to this level of social cooperation and convention that makes promises and contracts possible.

Although Hume's work affected the methodology of the social sciences in general, his discourses on commerce, money, and the balance of trade had a major impact on economic thought, both directly and through his influence on Adam Smith.

Hume also recognized that the rules of property ownership and the use of money are "artificial," that they must be constructed both in an individual's life and humanity's history. Consequently, economic "laws," such as the quantity theory of money, do not automatically apply, but instead require the development of a state where money has "a universal diffusion and circulation" (Hume 1742–1752, p. 294). Moreover, in a fully monetarized society, Hume, like Isaac Newton, differentiated between steady states and accelerating changes of a system's basic quantities. Thus, he argued that though, in the long run, the price of commodities will be proportional to the quantity of money, "alterations in the quantity of money … are not immediately attended with proportionable alternations in the prices of commodities" (Hume 1742–1752, p. 288). For example, influxes of money, in some circumstances, can stimulate economic activity.

Hume observed that, in a commercial world, money moves across borders in an autonomous manner that makes mercantilist efforts to prevent a country's loss of specie (e.g., by prohibiting the export of bullion) nugatory and even counterproductive. As long as a nation "preserves its people and industry," its money supply will tend almost naturally toward an appropriate equilibrium level, just as "all water, wherever it communicates, remains always at a level" (Hume 1742–1752, p. 312).

Finally, although Hume was one of the first major European philosophers to oppose slavery, he was also one of the first to develop the rudiments of a modern race theory claiming to be based on science. His observations of plantation life in the British West Indies convinced him that wage labor was much more productive than slave labor, and that the threat of unemployment had much more disciplinary power for the free workers than the threat of the whip had for slaves (Hume 1742–1752, p. 390). However, since he also claimed to know of "no ingenious manufactures amongst [Africans], no arts, no sciences," either in Africa or among the freed African slaves in Europe, he was "apt to suspect the negroes to be naturally inferior to the whites" (Hume 1742–1752, p. 208). Thus, he was an influential founder of a biopolitical racism compatible with a regime of waged labor.

In many ways then, Hume is the most "postmodern" of Enlightenment thinkers. An appreciation for his subversive, paradoxical, and militantly secular attitudes and concepts has therefore grown among historians in search of alternative genealogies for the social sciences.

SEE ALSO *Equilibrium in Economics; Philosophy; Quantity Theory of Money; Smith, Adam*

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C. George Caffentzis

HUME PROCESS

The Scottish philosopher David Hume (1711–1776) made famous the argument that the balance of trade was not worth worrying about because any imbalance would be self-regulating. A trade surplus would lead to higher prices, then to an outflow of gold and silver—and vice versa for a trade deficit. This has come to be known as the *Hume process*. It is described in the following passage from Hume's "Of the Balance of Trade" (1748), which is one of the most frequently quoted and among the most influential essays in the history of economics:

> Suppose, that all the money of Great Britain were multiplied fivefold in a night, must not the contrary effect follow? Must not all labor and commodities rise to such an exorbitant height, that no neighboring nations could afford to buy from us; while their commodities, on the other hand, became comparatively so cheap, that, in spite of all the laws which could be formed, they would be run in upon us, and our money flow out; till we fall to a level with foreigners, and lose that great superiority of riches, which had laid us under such disadvantages? (Hume [1748] 1985, p. 311)

The popularity of the Hume process arose largely because it was seen as a death blow to the mercantilist fetish for accumulating bullion. Two points about the Hume process struck serious contemporaries. First, Hume

assumes a sudden, large inflow of money to make his point. This is a very different thing from the small (relative to the money stock) and steady inflow advocated by the so-called mercantilists. Secondly, Hume assumes that this sudden inflow is met by an instantaneous adjustment in prices. Otherwise, if the change in, say, wages attracts more labor, there is no reason why the increased money supply could not lead to a greater output and thus avoid inflation. Hume's "new" result was obtained by (1) altering the substantive position in question from the effects of a steady inflow of gold to that of a sudden inflow, and (2) denying the standard mercantilist assumption of international labor mobility for skilled workers. Hume and the mercantilists differed in that they asked different questions and answered them under different assumptions. Indeed, two of Hume's correspondents, James Oswald (1715–1769) and the Reverend Josiah Tucker (1712–1799), each provided penetrating critiques and forced Hume to admit, in a later paper, that slow inflation may well help growth.

Hume's argument is simple and powerful; unfortunately, its implicit assumptions are not obvious. Three such assumptions may be noted. First, the use of the simple *quantity theory* by Hume, with metal as the sole medium counting as money, was a step backward since the Irish philosopher George Berkeley (1685–1753) had already emphasized the paramount importance of credit a decade earlier. Secondly, Hume assumed that individuals care only about real values, or what is called the *homogeneity of degree zero* in money and prices. Frank Hahn (1980) clearly points out that even if one grants this assumption for individuals, it does not follow that the economy as a whole will exhibit such homogeneity, unless general equilibrium is unique. Finally, William Darity (1987) showed how the endogeneity of money, which all Hume's contemporaries were aware of, could make the process neutral or even unstable and hence permit a continual adverse balance of trade. If the gold or silver mines provided metal with increasing returns, then the more prices rose in Spain, the more cheaply they could obtain more precious metal, so that it was actually "economical" for Spain to continue an unfavorable balance of trade. While the popular acclaim for Hume's argument is not doubted, it largely reflects the difference between an argument that is readily understood by the educated public and one acceptable to those who devote care to such issues.

SEE ALSO *Balance of Payments; Balance of Trade; Equilibrium in Economics; Hume, David; Quantity Theory of Money; Trade, Bilateral*

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Salim Rashid

HUMILIATION

The field of humiliation studies emerged in the early twenty-first century. In 2001 the Human Dignity and Humiliation Studies (HumanDHS) network (http://www.humiliationstudies.org) was founded as a global consortium of distinguished academics and practitioners with the aim to create a new multidisciplinary field that bridges academia with practice and incorporates scholarship from anthropology, history, philosophy, political science, social psychology, and sociology.

The phenomenon of humiliation is rapidly gaining visibility and significance. Expectations of equal dignity and opportunity rise as people come closer together, both physically and digitally, in a globalizing world. Coupled with the spread of the human rights message, any attempt to lower the expectations of any one group becomes a humiliating offense against all groups and humanity in general. The first sentence in Article 1 of the Universal Declaration of Human Rights reads, "All human beings are born free and equal in dignity and rights."

Few researchers have studied humiliation explicitly. In many cases the term *humiliation* has not been differentiated from other concepts. In the work of HumanDHS, in contrast, humiliation is addressed on its own and is differentiated from other concepts: humiliation is, for example, not regarded simply as a variant of shame. Shame is often accepted as prosocial humbling—human rights

advocates, for instance, frequently use shaming techniques to make people abide by human rights—while humiliation describes a hurtful experience that typically is rejected as an illegitimate violation by the victim. (However, a special type of shame—unacknowledged and bypassed shame—as been described to be emotionally destructive.)

In today's mainstream language, the word humiliation is used threefold. First, the word humiliation signifies an act; second, a feeling; and third, a process: "I humiliate you, you feel humiliated, and the entire process is one of humiliation." This triple meaning of the word humiliation complicates its use; sometimes humiliation indicates the feeling of a victim, sometimes the act of a perpetrator, sometimes the entire process from act to feeling.

The core meaning of humiliation entails a downward push, down to the ground, to earth, as derived from the Latin word *humus*. This push can be perceived as a hurtful violation, or not, depending on the overall societal, cultural, and psychological framework. In human rights–based contexts being pushed down and held down is perceived as a violation that will lead to suffering and rage that may be turned inward or outward. Rage and fury turned inwards render feelings of depression, abandonment, anomie, and alienation. Rage and fury turned outward feed violence, including mass violence.

Yet, prior to the human rights movement, being put down was often embedded into a culture of ranking in which higher beings were expected to show lower beings their due lowly place. In that case being put down is not perceived as a violation and therefore does not elicit the same consequences as previously described. Human rights delegitimize such practices and empower the downtrodden to invoke humiliation.

In other words, the differentiations one uses today are historically recent. According to the Oxford English Dictionary, the earliest recorded use of *to humiliate*, meaning to mortify or to lower or to depress the dignity or self-respect of someone, did not occur until 1757. Up to 1757, the words *to humble* and *to humiliate* were used rather interchangeably. It is in tact with the emergence of human rights ideals of equal dignity for all that these two words move into diametrically opposed directions.

Humiliation is a complicated concept. Not always does a person witness a humiliator and a humiliatee. For example, help may humiliate. In that case there is a benevolent helper on one side and no ill-intentioned perpetrator at all. Or, neither actor nor victim may define a situation as humiliating, only a third party. The social worker wants to rescue the battered wife, but she claims that the beatings are her husband's way of loving her. Then, one may expect that humiliation is always avoided, however, some people seek it, for example in sado-masochism or religious rites. Thus, humiliation is an act, an emotional state, and a social mechanism, with a broad relevance, from anthropology, sociology, philosophy, social and clinical psychology to political science.

Phenomena such as global terror may be explained as an outfall of global clashes due to humiliation rather than of clashes of civilizations. Global and local terror and violence may be linked to humiliation rather than to "unexplainable evil." Conflicts of interest over scarce resources, often identified as a source of violent conflict, may very well lead to cooperation. It may be precisely humiliation that hampers cooperation. Many people profess their love for peace, while being unaware that their fear of humiliation and their wish to resist humiliation may foreclose peace. A Somali proverb makes this point very clear, "A man deserves to be killed and not to be humiliated."

Adolf Hitler imagined future world domination and humiliation from the World Jewry (Weltjudentum), and the Holocaust was his atrocious attempt to "prevent" future humiliation. Also in Rwanda, it was imagined humiliation in the future that was "prevented" by genocide. Nelson Mandela, in contrast, made constructive use of the energy contained in the experience of humiliation brought about by apartheid. After twenty-seven years of humiliation in prison, he could have unleashed genocide on the white South African elite. However, he did not. He refrained from instigating cycles of humiliation and instead promoted constructive social change that included the perpetrators.

The solution is egalization, brought about in a Mandela-like fashion. *Egalization*, a word coined by Evelin Lindner in the context of HumanDHS, has been designed to match the word *globalization* and at the same time differentiate it from words such as *equality*, *equity*, or *egalitarianism*. The main point of egalization is the true implementation, beyond mere rhetoric, of equal dignity for everybody as stipulated in the Human Rights Convention. Only a world that combines globalization with egalization, and thus prevents and heals the violent outfalls from dynamics of humiliation, can be expected to be sustainable and decent.

SEE ALSO *Contempt; Genocide; Globalization, Social and Economic Aspects of; Holocaust, The; Peace; Rape; Recognition; Shame; Terrorism; Violence*

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Evelin G. Lindner

HUNGARIAN REVOLUTION

The events in Hungary in October to November 1956 have been characterized both as an uprising and a revolution. The revolt was spontaneous, and its adherents came from diverse political and social backgrounds with disparate motivations. However, the speed with which the unrest spread across the country evidenced a commonly held and deep-seated bitterness over the nation's political and economic plight. Moreover, most of those involved blamed the crisis squarely on the Soviet-dominated regime that had been in place since 1949, and demanded the removal of Soviet forces from Hungary as well as the reintroduction of a multiparty political structure. The magnitude of popular opposition and the general objective of abolishing the existing system merit classifying the events of 1956 as a revolution.

Despite its failure, the revolution had significant effects. In the short term, it did result in greater consolidation of Soviet control over both Hungary and the region. With Moscow's backing, the newly installed leadership under János Kádár (1912–1989) violently quashed the rebellion, executing hundreds, including the reformist prime minister Imre Nagy (1896–1958), and imprisoning thousands, thus eliminating all overt political dissent. Regionally, the revolution forced Soviet leader Nikita Khrushchev to be more cautious in encouraging East European Communist rulers to pursue reforms. However, the long-term effects of the revolt were more significant. The crisis exposed the ideological bankruptcy of Soviet-led communism and the brutality of Moscow's methods, and served as a permanent symbol for the causes of self-determination and independence in the region.

Half a century later, scholarly debates persist about many aspects of the revolution, although the opening of archival records in recent years has helped to resolve important issues. In Hungary the scale of the revolt, the manner in which it unfolded, the behavior of various groups in different parts of the country, and the methods employed to fight the Soviets are all well known. Of particular interest among the new findings are records describing the actions of Nagy and his colleagues in the temporary government. Nagy emerges as a figure both complex and courageous, if ultimately inadequate to the task, who was thoroughly underestimated by both Moscow and Washington. The circumstances surrounding his fate are more fully understood as well: Kádár, not the Soviets, pressed for his execution, which finally took place in 1958.

The archives further explain a great deal about decision making in Moscow. Handwritten notes of Soviet Presidium meetings by Vladimir Malin, head of the General Department of the party, record key debates over whether to acquiesce to the changes in Hungary or to suppress the revolt. Khrushchev and his more moderate allies clearly hoped to avoid a major intervention, and the Kremlin appeared to be on the verge of ordering a troop withdrawal from Hungary (a public declaration to that effect appeared on October 30) when he suddenly reversed course a day later.

The U.S. role is also clearer. The revolution caught the White House by surprise, and the Eisenhower administration came under criticism from certain quarters for its passive reaction. Yet suspicions have lingered that the United States quietly undertook certain covert operations such as unleashing trained émigré units and providing weapons to the rebels. Recently declassified internal records from the Central Intelligence Agency make clear, however, that no such activities took place, nor did senior White House officials contemplate them. Furthermore, it is well established that President Eisenhower opposed any actions that might provoke a direct conflict with the Soviet Union.

Yet, a number of questions remain unanswered. Kádár is still a controversial figure in Hungary, and his exact motivations in accepting the role of the Kremlin's agent of repression are still in dispute. Scholars also continue to discuss the most contentious aspect of U.S. involvement—Radio Free Europe (RFE). RFE tapes from the period confirm that the organization broadcast statements that at the very least encouraged insurgents to take action. Although recent analyses downplay the impact of those broadcasts, there is some disagreement over whether U.S. officials authorized them and to what degree they were responsible for inciting Hungarians to risk their lives in the revolution.

Regarding the Soviet response, although we now know better which issues concerned Khrushchev—the descent into chaos inside Hungary, the Suez crisis, domestic political considerations and possibly China's views—it remains unclear exactly which of these, or what combination of these, ultimately changed his views. A related difference of opinion exists over whether and how the Suez

crisis affected events in Hungary beyond influencing Khrushchev's thinking. Underlying these questions is the fascinating debate over whether the crushing of the revolt was inevitable or whether different choices by the rebels, Nagy, members of the Soviet leadership, or even the Americans might have averted the tragedy.

SEE ALSO *Berlin Wall; Cold War; Glasnost; Khrushchev, Nikita; Union of Soviet Socialist Republics; Warsaw Pact*

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Malcolm Byrne

HUNTER, FLOYD
1912–1992

Born into a farm family of meager means, Floyd Hunter came of age during the Great Depression and early on displayed populist tendencies. His experiences as a social worker and administrator heightened his wariness of business. Subsequent to receiving his undergraduate degree (1939) and his master's degree in social service administration (1941) from the University of Chicago, Hunter began work with the United Service Organizations. He came to Atlanta, Georgia, in 1943 and headed that organization's southeast office, shifting to work with the Atlanta Community Council from 1946 to 1948. Fired from the latter position as a controversial figure, Hunter had acquired an insider's understanding of how communities deal with social problems.

He next undertook graduate study in sociology at the University of North Carolina and returned to Atlanta for field research, completing his dissertation and then converting it into a reputation-establishing first book, *Community Power Structure: A Study of Decision Makers* (1953). A work about Atlanta, it inspired a surge of community leadership studies. Hunter's later research extended to state and national levels, but subsequent work never matched the pathbreaking impact of *Community Power Structure*. Within political science a pluralist school of thought attacked Hunter's approach, blunting its influence within this area of academia.

Some ambiguity is attached to the term *power structure*. It is often used simply to refer to a group deemed to be top leaders. True to his training in sociology, Hunter, however, coined the phrase to refer to stable relationships through which major policy decisions are made for the community. For Atlanta in the immediate postwar years, Hunter's central finding was that reality deviated sharply from the ideals of representative government, with policy making centered in arrangements around the city's top business leaders.

Critics attributed to Hunter the view that Atlanta was run by forty individuals. This, however, is an oversimplification of both his method and findings. Hunter relied on knowledgeable insiders to compile and refine a list of top leaders, ten from each of four sectors of community life. He then used a sociometric technique to identify patterns of interaction. For good measure, he added an examination of particular issues, and he did a separate analysis of leadership within the black subcommunity and how it related to Atlanta's white leadership. The logic of Hunter's research was not about determining a specific number of top leaders, but about examining the relations among different sectors and how those interrelations affect policy making for the community.

In contrast with Robert S. Lynd and Helen M. Lynd's (1929, 1937) earlier works on Middletown, in which business is accorded a pervasive form of influence based on the domination of business values, Hunter's study of Atlanta was specifically concerned with the ability of business-centered leadership to manage social change through

a structured capacity to set the policy agenda. Atlanta's business leaders led lives quite insulated from the concerns faced by ordinary citizens, especially the poor. Nonetheless, Hunter found that through their control of economic assets, their central role in civic matters, and their ability to use informal channels of interaction among themselves to reach consensus, they formed a relatively closed leadership group.

Later works, including his follow-up study of Atlanta, *Community Power Succession: Atlanta's Policy-Makers Revisited*, were variations on this initial theme. Hunter taught at the University of North Carolina until 1960, then moved to California, mixing social-research consulting with numerous visiting faculty appointments. He died in 1992.

SEE ALSO *Community Power Studies; Pluralism; Power*

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Clarence N. Stone

HUNTINGTON, SAMUEL P.

1928–

Samuel Phillips Huntington, born April 18, 1928, has contributed controversial insights to contemporary political debates. Huntington graduated from Yale University at the age of eighteen. After serving in the military, he graduated from Harvard University with a doctoral degree at twenty-three years of age. Huntington's most notable contribution to the field of political science is the book *The Clash of Civilizations and the Remaking of World Order*, an instantly controversial success. Originally conceived as an article contribution to *Foreign Affairs* magazine in 1993, the author expanded the piece due to popular demand. In this article, Huntington's primary focus is the decline of nation-centered unity. He argues that instead of focusing on nationalistic principles as had been the precedent before the end of the cold war, states have begun cooperating based on cultural orientation. The author predicts that distinct and violently competitive civilizations will emerge. According to Huntington, the countries of Europe and North America should learn to unite. Their cultural foundation is based on moral principles and a commitment to what he calls "Western" values: peace, freedom, and democracy. Should economic warfare divide European and North American countries, the author believes a shift in the geopolitical balance of power will take place. It is Huntington's belief that insofar as these democracies prevailed in the twentieth century, the "Chinese/Sinic/Confucian" and the militant Islamic world will dominate the twenty-first century. The polemical nature of Huntington's theses has opened his arguments to vituperative criticism. His critics label this "civilizations thesis" as single-minded and parochial.

In Huntington's judgment, the Hispanic community in the United States stands accused of a refusal to assimilate and of a wholesale rejection of America's English language, creeds, and values. In *Who Are We? The Challenges to America's National Identity*, published in 2004, the author asserts that Mexican Americans refuse to adopt American identities. To Huntington, this is of particular concern because of their high reproduction rate, which may result in a population that will divide America when it desperately needs cultural unity in the face of mounting

international challenges. Huntington's premise is America's distinctiveness: the perception that the United States has triumphed in the past as a result of the maintenance of the Protestant work ethic and the religious unity originally instilled by the founders of the nation. An erosion of this commonality, he argues, bodes ill for the future.

Huntington also wrote *American Politics: The Promise of Disharmony*, published in 1981. In this monograph he argues that a divide exists between the political ideal and the political reality in American politics. Binding Americans together throughout U.S. history has been their love of freedom and their contempt for totalitarian dictatorships. Huntington believes that Americans revolt socially every third generation in protest of the bitter compromise of promoting freedom while supporting hierarchies of power to maintain national security. Asserting that protests will continue to grow in strength, he once again raises his central theme: In order to perpetuate democratic ideals and the spread of freedom, the United States must assert itself forcefully abroad to reassure the public at home of its morality and greatness.

In 2005 a new edition was published of Huntington's 1957 work, *The Soldier and the State: The Theory and Politics of Civil-Military Relations*. For Huntington, central to the politics of military affairs is the liberal double standard. Political liberals vociferously announce their intent to diminish violence, genocide, and the expansion of destructive armaments, according to his observations, but they contradict these objectives by seeking to restructure the U.S. military and weaken it from within. They seek to apply a civilian control over military matters, thereby reducing the ability to conduct wars effectively and to diminish threats to America. Huntington suggests that national security can only be ensured when conservative frameworks are applied to military affairs. This entails continuously maintaining a state of preparedness.

Huntington is the Albert J. Weatherhead III University Professor at Harvard University.

SEE ALSO *Civilization; Civilizations, Clash of; Communism; Coup d'Etat; Culture; Democratization; Essentialism; Fundamentalism; Fundamentalism, Christian; Fundamentalism, Islamic; Islam, Shia and Sunni; Political Culture; Radicalism; Totalitarianism*

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Jonathan Jacobs

HURRICANE KATRINA

SEE *Disaster Management; Natural Disasters.*

HURSTON, ZORA NEALE

1891–1960

Zora Neale Hurston was born almost a decade earlier than she declared in her autobiography, *Dust Tracks on a Road* (1942); accordingly, to biographer Valerie Boyd, she was a woman "ahead of her time" (Boyd 2003, p. 17). Hurston is noted today for her contributions as a literary author, folklorist, and anthropologist. She stands as a "first" in many arenas, including as the first African American woman to graduate from Barnard College in 1928 at the nontraditional age of 37. As a Barnard student, Hurston was able to take classes at Columbia University, where she flourished. "Under the kind eye of the preeminent Franz Boas, considered the father of American anthropology, Hurston found support for her folklore research," wrote biographer Irma McClaurin (2000, p. 18). It was Boas who encouraged her to use "the clarifying monocle of anthropology" to salvage and analyze the superstitious stories and "down-home 'lies' " she remembered hearing as a child in Eatonville, Florida, an all-black town founded in 1887 near Orlando (Boyd 2003, p. 115). This thriving community of African Americans who supported and respected each other, according to Boyd, became a vital source of inspiration for Hurston, who lived there from the time she was almost two years old. Her father was elected mayor in 1897 and then again in 1912. Hurston eventually studied the rich folk culture of her hometown, recognizing the priceless contribution it could make to the field of cultural anthropology. Memories of the tales she heard on her neighbor Joe Clark's storefront porch influ-

enced Hurston's fiction and are evident in stories like "Sweat" and "Possum or Pig," both published in 1926. That same year she also published *The Eatonville Anthology*, "an engaging amalgam of folklore, fiction, and Eatonville history" (Boyd 2003, p. 139).

A NEW DAY: THE HARLEM RENAISSANCE

There is some debate over when the Harlem Renaissance began. Some list 1919 as the starting date and its demise during the mid-1930s. Also, there is some question as to where it started since Hurston and other Renaissance writers, including Angelina Grimké (1805–1879), Jean Toomer (1894–1967), Sterling Brown (1901–1989), Richard Bruce Nugent (1906–1987), and William Waring Cuney (1906–1976), began meeting in Washington, D.C., in the early 1920s as members of "the Saturday Nighters" at the home of the poet Georgia Douglas Johnson (1886–1966). Into their midst came influential writers and scholars such as W. E. B. Du Bois (1868–1963), Alain Locke (1886–1954), and James Weldon Johnson (1871–1938), all of whom traveled between Washington, D.C., and New York City and had great influence in shaping the Renaissance. As a result of these interactions with "the gifted, the famous, and the wannabe famous," Hurston, who didn't arrive in Harlem until 1925, had no problem settling in and finding her place among the artists and writers who dubbed themselves "the Niggerati" (Boyd 2003, p. 116). It was not an easy time for a single black woman to establish herself as a writer; during the 1920s African American women were most often employed as domestic help or store clerks. "And so, in the 1920s," wrote McClaurin, "we must see Zora as a woman who lived against the grain, … perfect[ing] a hat-wearing, cigarette smoking, gun-toting persona that was tremendously at odds with the ideals and standards of traditional womanhood of the time—for both black and white women" (2003, p. 5).

RESEARCHING THE AFRICAN DIASPORA

From the start of her research, Hurston worked to gather perspectives from the African Diaspora—the scattering of African people throughout the Americas—collecting black folklore in the U.S. South, the Bahamas, Haiti, Jamaica, and the Honduras. Hurston believed that, despite slavery and its resulting social inequality, African-descended people retained and continued to create a rich canon of stories, myths, and "lies," all communicated through evocative language and performance—what she called "the greatest cultural wealth of the continent" (Kaplan 2001, p. xxiii). It was also Hurston who recognized the "logic" of studying the culture of blacks in the South and the Caribbean as part of a continuum. In fact, Hurston had a desire to create a field of study around the American Negro, as she wrote in a letter to the anthropologist Melville Herskovits (1895–1963): "You fully appreciate how much there is to be done when you realize that there is no real curricula for those Anthropologists who wish to study the Am. Negro [sic]. Papa Franz knows the Indian, etc, but there was nothing to help me in my study of the Negro.… Suppose we set out to create the same thing for the Negro at Northwestern as Boas has done for the Indian at Columbia" (Hurston 2002, p. 372). In 1936, Herskovits was not only unsupportive of Hurston's overtures, but he also tried to steer her away from conducting research in Jamaica and Haiti, where she eventually finished the manuscript for *Their Eyes Were Watching God*, published in 1937.

HURSTON AS DRAMATIST, ETHNOGRAPHER, AND WRITER

Funded by a grant from Carter G. Woodson's Association for the Study of Negro Life and History in 1927, and later a contract with white patron, Charlotte Osgood Mason (1854–1946), between 1927 and 1929 Hurston traveled to Florida, Alabama, Georgia, New Orleans, and the Bahamas in search of "authentic" Negro expressive folk culture (Kaplan 2001, p. xxii). She wrote to the author Langston Hughes (1902–1967) of her desire to write at least seven books based upon these ethnographic journeys, but she published only one, *Mules and Men*, in 1935. She also presented her patron, Mason, with a manuscript entitled "Negro Folk-tales from the Gulf States," published posthumously in 2001 as *Every Tongue Got to Confess*. Much of Hurston's folklore material from her 1920s fieldwork seems to have vanished, although some of the rich data surfaced in her collaboration with Hughes on the play *Mule Bone* in 1930.

The 1930s proved a prolific period for Hurston: She published "Hoodoo in America" in the *Journal of American Folklore* in 1931, conducted ethnographic research on West Indian Obeah practices in 1936 in Jamaica and Haiti under a Guggenheim fellowship, and wrote *Their Eyes Were Watching God* in seven weeks and published it in 1937. With her Guggenheim fellowship renewed for 1937, she continued to conduct research in Haiti, recording her field experiences of the previous year in Jamaica and Haiti in her only traditional ethnography, *Tell My Horse*, completed and published in 1938. In 1939 Hurston joined the Federal Writers Project (FWP), where she produced "consummate essays and commentary about Florida and folklore," demonstrating that she was "a serious anthropologist whose career had just hit its stride" (Bordelon 1999, p. x). During this time, according to

biographer Carla Kaplan, she also staged folklore productions.

A TRAGIC ENDING

Numerous tragedies struck Hurston in the 1940s. The FWP project ended, as did her second marriage (1939–1943) to Albert Price III. For a brief time in 1944, Hurston was married to James Howell Pitts, and published "My Most Humiliating Jim Crow Experience." Always intrigued by the Diaspora, Hurston traveled to the British Honduras in 1947 to study black communities. While there she wrote *Seraph on the Suwanee*. Published in 1948, the novel contains excerpts taken from Hurston's "FWP field notes and placed … in the mouths of her novel's characters" (Bordelon 1999, p. x). In 1948, Hurston was accused of molesting a minor. Although the charges were dismissed a year later, the event took its toll.

Between 1950 and 1959, Hurston worked a series of odd jobs—journalist, librarian, maid, and substitute teacher—and published some memorable essays along the way, including the controversial "What White Publishers Won't Print" in the *Negro Digest* and her last published story, "The Conscience of the Court," in the *Saturday Evening Post*, both appearing in 1950. In the early part of 1959, Hurston suffered a stroke. By October she was forced to move into the St. Lucie County Welfare Home.

On January 28, 1960, the once-famous Hurston, noted anthropologist, folklorist, novelist, playwright, and preserver of black folk culture, died penniless. She was buried in an "unmarked grave in the Garden of Heavenly Rest, Fort Pierce" (Gates 1990, p. 311). Interest in Hurston revived in 1975 with the publication of Alice Walker's "In Search of Zora Neale Hurston" in *Ms.* magazine. In 2005 Hurston's novel *Their Eyes Were Watching God* became a television movie starring Academy Award–winning actress Halle Berry. Hurston held a consummate passion for and commitment to the preservation of African American folk culture. What she contributed to anthropology was a body of scholarship that sometimes challenged the literary, social science, and social conventions of her time but illuminated the "figurative capacity of black language" in a manner yet to be replicated (Gates 1990b, p. 212). Hurston's life, her strikes against social conventions, and her love for black language and black folk culture in all its expressive manifestations continue to inspire into the twenty-first century.

SEE ALSO *Anthropology, U.S.; Boas, Franz; Harlem Renaissance; Herskovits, Melville J.*

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Irma McClaurin

HURWICZ, LEONID
1917–

Leonid Hurwicz is among the leading mathematical economists of his generation. He utilized game theory, mathematical programming, dynamical systems, and topology, among many other fields of mathematics, contributing to the development of those fields and to their application to economic theory and policy. Hurwicz was born in Moscow to Polish Jewish parents in the year of the Russian Revolution. His parents therefore moved with him to Warsaw in 1918. Hurwicz shared the educational experience of all Jewish boys in Warsaw, likely attending a gymnasium, or high school, with further education in a yeshiva. He entered the University of Warsaw in 1933, graduating in 1938 with a degree in law, having concentrated in political economy. In 1938 Hurwicz traveled to Britain to study at the London School of Economics and Political Science under neo-Austrian economists Lionel Robbins (1898–1984) and Friedrich Hayek (1899–1992). Importantly for his subsequent career, a recent member of the faculty was Polish socialist refugee Oskar Lange (1904–1965), who had left the University of Krakow in 1935. In 1939 Hurwicz studied at the Postgraduate Institute of International Studies in Geneva, where he attended a seminar conducted by Jewish Austrian economist Ludwig von Mises (1881–1973).

At the suggestion of Lange, Hurwicz migrated to the United States in 1940. He went to Chicago, which had a large Polish immigrant population, and studied for two years at the University of Chicago, where Lange was on the economics faculty. In 1941, while a student at Chicago, Hurwicz also studied at Harvard University under Wassily Leontief (1906–1999), whom he met at the Cowles Commission conference in Colorado Springs in 1940.

In January 1942 Hurwicz was recruited to the staff of the Cowles Commission by research director Theodore O. Yntema (1900–1985). In this position, Hurwicz assisted Lange in statistical testing of business-cycle theories, and worked with Yntema and Joel Dean (1906–1979) as executive director of the project on wartime price controls of the Committee on Price Determination of the Price Conference of the National Bureau of Economic Research (NBER). He would remain on the commission staff until 1961.

In 1941 Hurwicz secured a research and teaching fellowship at the Massachusetts Institute of Technology. The following year, he taught mathematics and statistics to members of the U.S. Army Signal Corps at the Illinois Institute of Technology. Simultaneously, and continuing to 1944, he was hired as a faculty member of the Institute of Meteorology at the University of Chicago and an instructor of statistics in the Economics Department. He was awarded a Guggenheim Fellowship for the 1945–1946 period. From 1946 to 1949 he served as associate professor of economics at Iowa State University in Ames. From 1949 to 1951 Hurwicz served as professor of economics at the University of Illinois. He then became professor of economics and mathematics at the University of Minnesota Graduate School of Business, a position he retained until retiring around 1987.

In the 1940s and early 1950s Hurwicz presented several papers to professional associations in mathematics, statistics, and economics, and he published papers in the journals of these associations and in a book published by the Cowles Commission. Most of these papers were on statistics. His focus shifted to game theory in 1953, then in 1955 he began to focus explicitly on economics, publishing articles on resource allocation, including a review of Leontief's book on input-output analysis. In 1956 Hurwicz and Kenneth Arrow began a long collaboration that would continue beyond the 1970s. In 1958 Hurwicz and Arrow published an article on the stability of equilibrium in a general equilibrium system. Hurwicz's first book was published in 1958, when he was forty-one years old. It was a joint effort with Arrow and Hirofumi Uzawa.

In 1955 Hurwicz published a Cowles Commission discussion paper titled "Decentralized Resource Allocation," in which he initiated his research on economic information theory. In this paper, he was stimulated by Hayek's polemic with the socialists on the feasibility of calculating equilibrium prices and quantities in the absence of a market, due to the absence at the center of decentralized price information. Hurwicz's 1955 paper developed from the argument by Hayek and Mises that only a decentralized (i.e., market) system could manage a modern economy. His subsequent writings in this area represent extensions of this argument in different mathematical directions. Arrow and Hurwicz later observed that the Hayek-Mises position implied that information was not a costless resource, but that a perfectly competitive market minimized this cost.

Because solving a system of linear equations is simpler than solving a system of nonlinear equations, most

macroeconomic models are specified as linear models. Hurwicz was a leader in research on estimating the parameters of the nonlinear model. The parameters were the prices at which demand equaled supply in each of hundreds of industries. His motivation for this research was not only theoretical, but stemmed from his work in the 1940s at the Cowles Commission, where he directed the program to study empirically, as well as theoretically, the wartime price-controls program, the nearest that the United States has ever come to comprehensive central economic planning.

Given a system of differential equations, several questions may be posed: Does a solution to the system exist? Is any given solution, once found, a stable solution? And what mathematical tools can be used to answer the first two questions? Hurwicz did not contribute to the literature on the existence problem. Between 1958 and 1960, he and Arrow published four articles and one book on the stability issue. In these publications, they attempted to extend the stability conditions for a single market to the general equilibrium case of multiple markets. Arrow and Hurwicz developed an analysis that economist Don Patinkin (1922–1995) called "stability in the large," defined as "the conditions that make it possible for the Walrasian *tâtonnement* to bring the economy to an equilibrium from any point whatsoever." They simplified this task by reducing the economy to a two-good economy (Hurwicz and Arrow 1958, p. 522). A recent answer to the third question is phase diagrams, which assist in solving systems of differential equations. Hurwicz did not use this technique in any publications through the 1970s.

Hurwicz's work in linear and nonlinear programming was done largely in the 1950s with Arrow. Most of this research focused on the development of the gradient method of finding a solution to the programming problem of optimizing a function under constraints. The gradient method was intended to solve concave functions, rather than linear functions. The project found that the gradient method was inferior to the simplex method, an algorithm developed by George Dantzig (1914–2005). This was so despite the fact that the simplex method had been developed to solve linear functions.

Hurwicz is considered the father of information theory in economics. He showed clearly that information and its distribution within economic institutions was critical to decision making in resource allocation. This work provided additional theoretical underpinnings for transfer pricing in state enterprises and large complex private corporations.

SEE ALSO *Cumulative Causation; Difference Equations; Differential Equations; Information, Economics of; Nonlinear Regression; Phase Diagrams; Programming, Linear and Nonlinear; Stability in Economics; Transfer Pricing*

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HUSSEIN, KING OF JORDAN
1935–1999

Hussein bin ("son of") Talal, the longest-ruling king of Jordan, was born in November 1935 in Amman, Transjordan. His grandfather, Abdullah (1882–1951), ruled as emir over a sparsely populated, impoverished principality formally under the British administration in neighboring Palestine. Abdullah came from the Hashemite family of Mecca, which led an Arab national-

ist uprising against Ottoman Turkish rule during World War I (1914–1918). After the defeat of the Ottomans, Britain created Transjordan, installing Abdullah as its proxy ruler in the strategically important area. Abdullah later became king upon the country's formal independence in 1946. Significantly, Jordan fought against Israel during the first Arab-Israeli War of 1948. Although the war ended as a disastrous defeat for the Arabs generally, and the Palestinians particularly, Abdullah expanded his kingdom when in 1950 he formally annexed the portion of Palestine that came to be known as the West Bank.

Young Hussein bin Talal was close to his grandfather and became heavily imbued with his family's self-proclaimed legacy as the vanguards of Arab nationalism and protectors of the Palestinians. Educated in Britain, Hussein also adopted Abdullah's pro-Western orientation. Hussein was by Abdullah's side when the monarch was assassinated in Jerusalem by a disgruntled Palestinian in 1951. After the brief rule of his father, Talal (1909–1972), the seventeen-year-old Hussein formally became king in 1952, although he was not enthroned until reaching the age of eighteen in 1953.

Until his death in 1999, King Hussein's long rule was noteworthy both for Jordan's remarkable socioeconomic development and for the tremendous strategic challenges that buffeted the country. These included the powerful surge of anti-Western Arab nationalism in the 1950s and 1960s that nearly led to a military coup in 1957; the ongoing Arab-Israeli conflict, especially the disastrous Arab defeat in 1967 that saw Israel occupy the West Bank; and the subsequent rise of Palestinian nationalism and demands for an independent Palestinian state, free from both Israeli and Jordanian control. With its large Palestinian population, Jordan was particularly affected by the latter. The demands of Palestinian guerrillas for renewed war with Israel after 1967 and for the overthrow of Hussein led to the gravest crisis the king ever faced—open war in his country between the Jordanian army and Palestinian fighters in September 1970 and again in July 1971 that resulted in the Palestinians' defeat.

In this and other trials, King Hussein proved a consummate political survivor. Domestically he survived economic downturns and demands for greater democracy. As a monarch who reigned *and* ruled, Hussein both could clamp down hard on political opposition (as when he banned political parties and declared martial law in 1957) or liberalize the political system (as when he ended martial law and allowed the return of political parties and elections starting in 1989). In terms of foreign policy, he managed to weather threats from powerful neighbors and foes such as Syria, Iraq, the Palestine Liberation Organization (PLO), and Israel by cozying up to one or more of them at the expense of the others. Hussein's maneuvering led him to a rapprochement with the PLO by the 1980s, a renunciation of claims to the West Bank in 1988, support for Iraq during the 1991 Gulf War, and a peace treaty with Israel in 1994.

King Hussein died of cancer in Amman in February 1999, and was succeeded by his eldest son from his first marriage, Abdullah.

SEE ALSO *Arab League, The; Arab-Israeli War of 1967; Arabs; Arafat, Yasir; Black September; Jews; Nationalism and Nationality; Palestine Liberation Organization (PLO); Palestinian Authority; Palestinians; Pan-Arabism; Peace Process; Zionism*

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Michael R. Fischbach

HUSSEIN, SADDAM
1937–2006

Saddam Hussein was born on April 28, 1937, in the northern town of Tikrit, Iraq, to a landless family. His mother was widowed and lost Hussein's older brother while she was pregnant with Saddam. After his mother remarried, the family moved to the tiny village of Uja, a few miles south of Tikrit, where they led an impoverished life. His mother had three more children with her new husband, and Hussein's stepfather preferred them over him. Being fatherless, Hussein was exposed to abuse on the part of the village's children. His parents did not want to send him to school, but when he turned ten he insisted on moving to Tikrit to stay with his maternal uncle, Khayr Allah Tilfah, and attended primary school there. In 1955 he moved with his uncle's family to Baghdad to attend high school, but before graduating he became involved in political activities, having joined the revolutionary underground Baath Party in 1957. Later, as an exile in Cairo, he completed his secondary education and took some classes in law. As vice president of Iraq, he took private lessons in law, but he never completed his formal education.

On July 14, 1958, General Abdul-Karim Qassem (1914–1963) toppled the monarchy in Baghdad and established a semibenevolent dictatorship. Within weeks

it became clear that Qassem's approach to Arab unity was opposed to that of the Baath Arab Socialist Party, Hussein's chosen venue for political action. With the support of Iraqi communists, Qassem objected to unification with Gamal Abdel Nasser's (1918–1970) Egypt, and he placed a heavy emphasis on Iraqi identity and Iraqi interests, rather than on pan-Arab ideology and practice. In October 1959 Hussein participated in a failed assassination attempt on Qassem's life. Hussein and his collaborators managed to wound the Iraqi dictator, but Hussein himself was wounded in his thigh and one of his team was killed, apparently from bullets shot by their own colleagues. Hussein managed to escape to Syria, an odyssey that became the object of a heroic myth weaved by his media after he became president. In Damascus he met the founder and chief ideologue of the Baath Party, the Syrian Christian intellectual Michel Aflaq (1910–1989). Aflaq was impressed by Hussein's audacity and strength of character, and thereafter Hussein's position in the party was assured. Hussein soon left Damascus for Cairo, where he lived a modest life sponsored by Nasser.

BAATH PARTY COMES TO POWER

On February 8, 1963, the Baath Party, in collaboration with a few army officers, staged a coup d'état and killed Qassem. Hussein immediately left Cairo and arrived in Baghdad, where he became a midlevel internal security official. This was also when he married his maternal cousin, Sajidah Khayr Allah Tilfah. Qassem's downfall was apparently not the exclusive result of his mistake of denying the Communists weapons, nor of the Baath Party's talent for staging coups. According to reliable sources, the coup was supported, if not actually engineered, by the U.S. Central Intelligence Agency (CIA). Starting in 1959, the CIA identified Qassem as a sworn enemy of the United States and a staunch ally of the Soviet Union. Over this issue there were deep disagreements between the CIA and the Mossad, the Israeli intelligence agency. The Israeli analysts were convinced that Qassem was not a Communist, nor a Soviet satellite, and they had sufficient evidence that he was not an enemy of Israel. In fact, his rivalry with Nasser served Israel's purpose of separating Iraq from Egypt. In 1963 the CIA, if it was indeed involved, had the upper hand. The Baath regime under General Abdul Salam Arif (1920–1966) as a titular figurehead launched a bloody campaign against Iraqi Communists who, despite deep reservations, had supported Qassem. Within six months the regime managed to slaughter around ten thousand men, real or perceived Communists. This, however, was no victory for the United States, because the Baath regime was still seeking Soviet, not American, support.

During the nine months of Baath rule (February to November 1963), Hussein aligned himself with the centrist faction in the party that was also supported by Aflaq. Hussein found it easy to join this faction because the group's leader, General Ahmad Hasan al-Bakr (1914–1982), the prime minister under General Arif, was his distant relative and a childhood friend of Hussein's uncle. All three were members of the Albu Nasir tribe, al-Beigat section, and all originated from the Tikrit area. This connection to Bakr proved a crucial step in Hussein's rise to power.

In November 1963 Arif and the army, with the help of some Baath officers including Bakr, toppled the civilian Baath regime and took full control of the country. After a few months of collaboration with Arif, the Baath leaders, including Hussein and Bakr, were hunted down and imprisoned. In 1964 Hussein escaped from prison. Other party members were released, which enabled them in July 1968 to stage another coup and topple the Arif regime.

HUSSEIN BECOMES DICTATOR OF IRAQ

There are claims that the second Baath coup was also supported by the CIA, but these claims are less credible than those regarding the 1963 takeover. Whatever the case, the July 1968 "revolution" was almost bloodless, and Arif was sent abroad. Before the coup, Hussein had been deputy secretary-general of the Iraqi "Command" of the (clandestine) Baath Party and in charge of its internal security system. By August 1968 Hussein was already the czar of domestic security. Despite his young age and minimal period of party affiliation, Hussein quickly became the power behind President Bakr. Hussein surrounded the regime's luminaries and the senior command of the armed forces with bodyguards and internal security apparatchiks who hailed from his own town and tribe. Before they realized it, the party leaders and army officers alike, including President Bakr, became prisoners in golden cages.

In November 1969 Hussein became vice president and deputy chairman of the powerful Revolutionary Command Council. At first his internal security apparatuses destroyed the party's real and perceived enemies: Communists, radical Islamists, Nasserists, pro-Western politicians, and pro-Syrian officers; and they even hanged in a public square helpless young Jews to demonstrate their Iraqi and Arab patriotism. The next step, however, was to gradually eliminate Hussein's personal rivals within the party. On July 16, 1979, Hussein replaced Bakr as president. A few days later, he purged all those in the party and armed forces whom he considered a threat. Hundreds were shot by firing squads, and Hussein became an absolute dictator.

Upon taking power in 1968, the Baath Party adopted the most extreme and recalcitrant pan-Arab, anti-Israeli, and anti-imperialist (or anti-American) rhetoric and, to an extent, practice. They launched vitriolic attacks against all the Arab regimes, but mainly those that lost the Six-Day War against Israel in 1967. Animosity with Baathist Syria became a cornerstone in Baghdad's regional policy. Iraq promised to wage war for the liberation of Palestine and the annihilation of Israel within a year. Iraq also kept some twenty thousand soldiers in Jordan and Syria. Their slogan "everything for the [Palestine] battle" reflected their view that Iraq should be ready to sacrifice everything for the pan-Arab cause of liberating Palestine, from the Jordan River to the Mediterranean. This position changed dramatically during "Black September" of 1970. Rather than keeping their promise to help the Palestinian armed organizations to topple the Hashemite regime, Iraq's Baath leaders ordered the Iraqi forces in Jordan to stay put, and by July 1971 the last Iraqi soldier was withdrawn from Jordan and Syria.

PAN-ARABISM, OIL, AND THE POLICE STATE

During the next decade, Hussein was the driving force behind an about-face in the Baghdad-based Baath Party's definition of Pan-Arabism. From expressed readiness to sacrifice Iraq on the altar of the supreme pan-Arab causes, he steered party ideology and politics toward an Iraq-centered approach. He promised that Iraq would still liberate Palestine and unite all the Arabs, but only after it became all-powerful, and this could take a decade or two.

During the early 1970s, Hussein embarked on a secret military nuclear program. Detaching Iraq from the day-to-day struggle against Israel (with the brief exception of the 1973 Arab-Israeli War) did not change the rhetoric of the regime. With some exceptions due to overpowering political constraints, Israel and the United States served Hussein as reliable hate objects, matched only by Iran after 1980. By blaming on these three countries all the travails of the Arabs and Muslims, and by promising to rid the Arab world of U.S. influence and Israeli existence, Hussein's regime sought to gain support and legitimacy among the Shia, as well as in the broader Arab and Islamic worlds.

In the 1970s the concept of Arab unity, too, underwent a metamorphosis. Traditional Ba'thist doctrine was egalitarian in that it perceived all Arab states as equal, and integrative in that it visualized the united Arab world as an amalgam in which all the existing Arab states and peoples would melt together in a huge crucible. Hussein's Pan-Arabism, in contrast, was Iraq-centered and hegemonic. The Iraqi people and state were never to melt and disappear, and Arab unity was conceived as a large brotherly federation of Arab states and peoples, rather than a crucible. Iraq was the elder brother in the Arab family, destined to lead. By late 1978 this approach was fully formulated, and on the eve of the Gulf War of 1991, the party leadership defined the Iraqis as "the pearl of the Arab crown." The Iraqi people were seen as having a glorious future largely because they had a glorious past. History, Hussein and his intellectuals pointed out, began in Sumer some six thousand years ago, and the modern Iraqis are the contemporary cultural heirs and genetic offspring of the glory that was Mesopotamia.

This policy represented a very secular aspect of the Baath regime. At the same time, the party also introduced its version of socialism: They took more land from large landowners and gave it to more peasants than did their predecessors; they created many agricultural cooperatives in the countryside; they nationalized more institutions; and they increased substantially government spending on social projects and development. In the mid- to late 1970s, the country experienced a thrust in the development of infrastructure, industry, social security, and health and education services, and Iraqis saw a general rise in their standard of living. In that respect, Hussein's June 1972 decision to nationalize the property of the Iraq Petroleum (Oil) Company proved a brilliant gamble: When oil prices went up in 1973 as a result of the Arab oil embargo against the West, Iraq did not participate in the embargo and its revenues quadrupled by 1975. This enabled the regime to spend huge resources on its social and economic programs.

At the same time, the regime also allowed the creation of a large stratum of new millionaires, consisting of regime luminaries and private entrepreneurs who thrived as a result of patron-client relations with the ruling elite. This situation bred widespread corruption. Another part of the regime's understanding of socialism was the creation of a huge body of state officialdom. This new middle class, which was dependent on state salaries and thus very docile politically, gradually replaced the original Iraqi middle class of economic entrepreneurs. Another mechanism designed for the same purpose was the encouragement of tribalism, which contradicted every tenet of the Ba'thist faith. Through the promotion of tribal *shaykhs* with gifts of land, money, and weapons, Hussein managed to better control the countryside. This policy was given full exposure only in the 1990s.

Above all, the 1970s and 1980s saw the mushrooming of state security apparatuses that managed to penetrate almost every corner of society. With Hussein as president, Iraq became a harsh police state characterized by severe repression of all political opponents, real and perceived. Between 1969 and 1971 and again between 1978 and 1980, the Communists were repressed, and many were

executed or disappeared in Hussein's prisons. Likewise, between 1977 and 1980, Shi'i religious activists were executed, jailed, or expelled from Iraq, and the religious universities of Najaf and Karbala were reduced to a shadow of what they had been.

WAR WITH IRAN

Indeed, once Ayatollah Ruhollah Khomeini (1900–1989) came to power in Tehran in 1979, the Shi'i religious threat to Hussein's regime explains to a large extent his decision to launch an offensive against Iran on September 22, 1980. Khomeini called upon the Iraqis to rise against Hussein's "infidel" regime, and with slightly more than 50 percent of Iraq's population consisting of Shia, Hussein regarded the Shia as a great threat. Considerations of balance of power and international circumstances also played a role. While Khomeini had destroyed his own armed forces through purges, the Iraqi army was well equipped and well organized. In addition, the United States had abandoned Iran completely after the hostage incident of November 1979, and it was unlikely to stop Iraq. Furthermore, after mid-1979, Iraqi-American relations began slowly to improve. When the Soviet Union invaded Afghanistan in December of that year, Hussein criticized it in no unclear terms, fearing similar Soviet support for Iraqi Communists. This common interest brought Iraq and the United States closer still.

But the straw that broke the camel's back was a slight to Hussein's sense of pride. In April 1980 a Shi'i activist made an attempt on the life of Tariq Aziz, Hussein's closest associate. Hussein considered it an Iranian affront, and decided to go to war. Following a few months of hectic preparations on September 22, 1980, Iraq invaded Iran with eleven out of its twelve army divisions. After six days Hussein declared victory, but the war lasted for eight more years. During that war, when religious fervor proved a source of power to the Iranian regime, many secular Iraqis, Sunni and Shia alike, returned to Islam. At first the regime tried to fight this development, but by the mid- to late 1980s, the Iraqi government started to pay far more rhetorical tribute to religion than before. This rediscovery of religion was accelerated by the regime in the 1990s as it tried to harness Islam to win public support under the harsh conditions of the international embargo. During this period, Hussein initiated a faith campaign involving compulsory Qur'an classes for millions, even party members, and an increase in the number of mosques and Islamic educational institutions. Hussein himself made every effort to portray himself as a pious Muslim. Occasionally he created the impression that he had really became a devout Muslim who expected God to reward him by extricating him from the accumulating disasters in which he had landed himself. In his last meeting with his army's high command before the American invasion of March 2003 he promised them victory because, as he put it, Iraq was the only country that was guided by true Islam.

By the time the Iraq-Iran War ended in a stalemate, the Iraqi economy was devastated. Iraq entered a dangerous period of economic stagnation that Hussein knew could result in serious civil disturbances. Hussein felt that his regime was again under threat, though for different reasons than in 1980, the year Iraq's oil revenues reached an unprecedented peak. In 1980 Hussein's regime was challenged by Khomeini's mesmerizing influence on the Iraqi Shia, but in 1990 Iraq faced a major crisis of socio-economic expectations on the part of the Iraq population, which expected an economic boom after the eight-year war. Here too, there were additional incentives to go to war. Kuwait was weak militarily and the Soviet-American rivalry had ended, so an occupation of a country friendly to the United States could no longer be seen as part of the cold war. Hussein even believed that he could stay in Kuwait if he would guarantee the United States its basic needs: an undisturbed flow of oil from the Gulf at reasonable prices.

WARS WITH THE UNITED STATES

Hussein, however, again allowed his hurt pride to dictate a major strategic step. He saw Kuwait's overproduction of oil, and was offended by Kuwaiti reluctance to continue its financial support of Iraq and to lease to Iraq two strategic islands. Hussein interpreted these actions as expressions of ingratitude after Iraq had protected Kuwait and other Gulf states from Iran.

In this situation, as in 1980, Hussein was the incurable optimist. In 1980 he was certain that he could beat Iran and bring Khomeini down in a short blitzkrieg. In 1990 he was likewise convinced that the international community and the Arab world would, at worst, satisfy themselves with protests. Even with 500,000 American and international troops in Saudi Arabia, he still believed that the United States was bluffing, and that even if war broke out, Iraq's formidable army would stop them.

Following a ceasefire agreement with the Allied forces on February 28, 1991, that sealed Iraq's devastating defeat, a massive Shi'i revolt in the south and a Kurdish revolt in the north almost brought the regime down. The revolts were suppressed with a tremendous effort only because the United States decided to remain aloof. More than one million Kurdish refugees fled their homes for fear of a repeat of the chemical attack ordered by Hussein in 1988. The French, the British, and the United States were forced to establish for them a refuge in Iraqi Kurdistan. Hussein thus lost control over much of the Iraqi north. Iraq thereafter entered into years of weapons

inspections and a devastating phase of international sanctions that lasted until 2003.

Following the terrorist attacks in the United States on September 11, 2001, the U.S. approach to "rogue states" changed radically. Hussein was so oblivious to the change that he allowed his media to gloat over the American tragedy. Again, even with 100,000 U.S. soldiers in Kuwait, he believed that President George W. Bush was bluffing when he threatened to invade Iraq. And again, Hussein was convinced that even if the Americans attacked, his army could stop them on the outskirts of Baghdad. He did not even plan for his own escape, nor did he establish safe houses in the Sunni provinces. Hussein was captured on December 13, 2003, by American soldiers as he hid in a spider hole near the Iraqi city of Adwar, ten miles south of Tikrit, a few hundred yards from the place where he had crossed the Tigris in 1959 in his escape to Syria after the failed attempt on Qassem's life. Following a public trial by an Iraqi court, he was found guilty of ordering the unlawful execution of 148 Shi'i inhabitants of Dujayl, a village north of Baghdad, in retaliation for an attempt on his life there in 1982. Hussein will never be tried for the mass murder of civilians in Kurdistan-Iraq in 1987 and 1988 and in the Shi'i south in 1991 because on December 30, 2006, he was hanged in Baghdad.

SEE ALSO *Arab-Israeli War of 1967; Arabs; Black September; Central Intelligence Agency, U.S.; Dictatorship; Gulf War of 1991; Iranian Revolution; Iran-Iraq War; Iraq-U.S. War; Islam, Shia and Sunni; Khomeini, Ayatollah Ruhollah; Nasser, Gamal Abdel; Pan-Arabism; Personality, Cult of; September 11, 2001; Union of Soviet Socialist Republics*

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Amatzia Baram

HUTCHINSON AFFAIR

SEE *Franklin, Benjamin.*

HYBRIDITY

A basic definition of *hybrid* and its derivative *hybridity*, provided by the *Oxford English Dictionary*, is that it is a noun used to describe "a thing made by combining two different elements; a mixture." *Hybrid* can also be used as an adjective to describe something of "mixed character." The word *hybrid* originated in the early seventeenth century and was first used regularly in the nineteenth century to describe the offspring of two plants or animals of different species (in Latin the word meant the "offspring of a tame sow and wild boar"). The term was taken up in the mid-1800s by the Victorian extreme right to describe the offspring of humans of different races—races assumed to be of different species. *Hybridity* was later deployed by postcolonial theorists to describe cultural forms that emerged from colonial encounters. Its more recent adoption by social scientists—particularly those interested in migration, diaspora, transnationalism, and globalization—is varied and includes debates about its usefulness as a category. These debates stem, in part, from the term's historical usages.

During the nineteenth century, discussions about hybridity were shaped by racist assumptions about the human species. Given that a hybrid was defined as a cross between two species that should not, in theory, be able to reproduce with each other, debates about human hybrids hinged on questions of fertility and sexuality and reflected a widespread anxiety about sexual unions between different races (in particular, between blacks and whites; one early definition of hybrid is "child of a freeman and slave"). Although arguments that relied on evidence of infertility were difficult to sustain in the face of growing mixed-race populations, persistent efforts were made to fine-tune theories of biology that perpetuated ideologies of racial hierarchy and difference. Debates about hybridity took place not only in the natural sciences, but also in social sciences such as anthropology and sociology.

The subsequent use of *hybridity* in postcolonial studies was shaped by linguistic models that analyze culture as a process and a site of contestation. Particularly influential here has been the work of Mikhail Bakhtin, a pioneering

linguist who theorized the political effects of hybridity in language. He used *hybridity* to refer to the way in which language, within a single utterance, can be double-accented—that is, it can contain two styles, belief systems, or social languages. While Bakhtin contends that "organic" hybridity (or ongoing mixing) is an important feature of the evolution of all languages, he is particularly interested in "intentional" hybridity, which he describes as a politicized process whereby one voice is able to unmask another's authorial one through a language that is double-accented.

This conceptual use of hybridity was extended by postcolonial scholars to analyze forms of resistance to colonialism. Homi Bhabha's work has been particularly significant; he uses the term *hybridity* to refer to the ways in which the power that colonial discourses attempt to exercise is disrupted in and through its very attempts to deny other knowledges, the traces of which shape colonial discourse and render it inherently double-voiced. *Hybridization* thus describes "the ambivalence at the source of traditional discourses on authority" (Bhabha 1994, pg. 112). Bhabha's work celebrates hybridity as subversive and as an "active moment of challenge and resistance against a dominant cultural power" (Young 1995, p. 23). By focusing on the production of meaning, postcolonial scholarship such as Bhabha's emphasizes representation and signification, and hence concentrates on analyzing discourse. Bhabha also argues, however, that transgressions can occur in a "third space" that includes forms of interaction and cultural difference that challenge dominant and totalizing norms.

These diverse histories of hybridity in biology, linguistics, and postcolonial studies have shaped its recent adoption by social scientists as well as debates about the term's usefulness. Scholars interested in migration, diaspora, transnationalism, and globalization have used the term to describe the identity of persons of mixed race or cultural origin or influence (such as migrants), the cultural production of "hybrid" persons (i.e., music, language, style), and/or processes of cultural mixing that shape identity formation and cultural production. *Hybridity* thus shares semantic terrain with terms such as *creolization*, *syncretism*, *bricolage*, *borderland*, *fusion*, and *cosmopolitanism*. Although *hybridity* has been used to describe a variety of phenomena, it is often mobilized with a common theoretical intent: That is, hybrid identities, cultural products, and/or practices are often seen as challenging, in novel and creative ways, essentialist norms of culture, race, and nation.

A number of criticisms have been made recently about this politicized usage of *hybridity*. One set of concerns flags the inherent epistemological contradictions of the term itself: For example, one critique is that the term can never be liberatory because it always implies a prior state of purity, even as it attempts to critique this idea; also, because it is shaped by organic and biological conceptions that are also heterosexist, it risks naturalizing essentialisms. Some further argue that it is an imprecise concept if one takes as axiomatic that all cultures are hybrid and that purity is a mythical construct.

A second set of critiques addresses dominant uses of *hybridity*. For example, some argue that it has come to delimit certain objects of inquiry in ways that elide questions of inequality. They contend that the concept is used in facile ways to impute to hybrid persons, products, and processes a politics of resistance solely based on their purported hybrid properties. A related critique is that it has been used in academia as an apoliticized celebration of difference in ways that dovetail with the capitalist project of commodifying diversity. Some also contend that hybridity has been reduced to the experience of the migrant in the metropole at the expense of understanding how broader transnational processes that lead to migrancy also impact populations who cannot travel; these scholars relatedly raise questions about who is or is not considered "hybrid" and thus fashionable to study.

More recently, many scholars are arguing that a useful way to study hybridity is by analyzing empirically how the term *hybridity* is used (who deploys the concept, with which kinds of understandings, from which contexts and locations, and with what effects). By doing so, we contexualize the concept (i.e., historically, geographically) rather than imputing to it an ahistoricized principle of resistance. We can thus understand the various usages to which the concept is put, its diverse modalities, and its effects, all of which can be multiple and not necessarily resistant (for example, scholars are showing how it can be tied to political projects such as nationalism and fascism).

SEE ALSO *Creolization; Culture; Identity*

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Falu Bakrania

HYGIENE

SEE *Sanitation.*

HYPERACTIVITY

The term *activity*, in regards to hyperactivity, generally refers to movement, particularly gross motor movement. Individuals' activity levels are variable and are affected by development, daily cycles, environmental demands, and internal states. After taking into account these factors, an individual may be considered hyperactive if his or her activity level is excessive compared to others. Since activity level, like height or weight, is continuous and can be characterized by a bell curve, *hyperactivity* is a term generally used to indicate those individuals on the high end of this continuum. *Hypoactivity* signifies those individuals on the low end of this continuum. Significant hyperactivity may impair an individual's ability to function across academic, occupational, social, and familial domains.

Multiple medical and psychological disorders are characterized by symptoms of hyperactivity. Perhaps the disorder that is most closely tied to hyperactivity is *attention deficit hyperactivity disorder* (ADHD). Hyperactivity, combined with impulsive symptoms, is one of the core behavioral symptom domains identified by current diagnostic nosology; inattention represents the other behavioral symptom domain. Most pediatric patients diagnosed with ADHD have hyperactive symptoms. Hyperactive symptoms of ADHD include fidgeting or squirming in one's seat, difficulty remaining seated, running about or climbing excessively, difficulty engaging in leisure activities quietly, acting as if "driven by a motor," and talking excessively. As exhibited by the patient with ADHD, these behaviors are purposeless. Patients are judged to have these symptoms if they exhibit these behaviors excessively compared to individuals of the same sex and age under similar circumstances.

The hyperactivity observed in patients with ADHD is generally not episodic. Several other disorders/diseases are defined by hyperactivity that is episodic or appears as discrete behavioral events. For example, Huntington's disease is a neurodegenerative disease that affects cognition, memory, and mood. The hallmark of this disease is hyperactivity consisting of rapid, jerky motions with no clear purpose. Similarly, tic disorders (e.g., Tourette's disorder) are characterized by repeated and involuntary bodily movements or uncontrollable vocal sounds.

Across disorders with hyperactive features, the neurological causes of hyperactivity appear to be related to the brain's motor circuitry or dopaminergic abnormalities. The human brain has numerous functional regions, most of which are interconnected to constitute neural circuits. One neural circuit primarily involved in motor activity begins in the cerebral cortex, connects to basal ganglia, which connect to the thalamus, and finally loops to the motor cortex. Within this circuit, there are minicircuits with substantia nigra and the subthalamic nucleus. Further, there are both direct and indirect pathways that project through this circuitry. Irrespective of subcircuitry and pathways, the basal ganglia (i.e., caudate, putamen, and globus pallidus) exert a modulating effect on this neural circuit and thus affect the behavioral manifestation of movement. The basal ganglia are primarily innervated with dopaminergic neurons. Concordantly, ADHD, tic disorders, and Huntington's disease have all been associated either morphometric abnormalities (i.e., usually reductions) or dopaminergic abnormalities in basal ganglia regions.

Hyperactivity as manifested in disorders with episodic hyperactive symptoms, such as Huntington's or Tourette's, can often be assessed through observation. The mere presence of tics or choreiform movements may be considered pathological. Even at low frequencies, these abnormal episodic movements are usually indicative of disease presence. The hyperactivity associated with ADHD is less well defined. Because ADHD-related hyperactivity occurs along a continuum, the assessment of presence or absence of this hyperactivity relies heavily on clinical judgment of what is a clinically significant level of hyperactive behavior. Using all available information, a clinician must decide whether the hyperactive behavior exhibited by a patient falls outside the realm of normal behavior. Commonly utilized tools for helping to make this determination are parent and teacher rating scales for pediatric patients and self- and other-report rating scales for adult patients. Several rating scales exist for assessing ADHD behaviors, including the Vanderbilt Rating Scales, the DuPaul ADHD Rating Scale, and the Conners's Rating Scales. Ratings are scored according to several empirically derived factors. Most scales have a factor measuring hyperactivity. An individual's scores on the hyperactivity factors can be compared to derived age and sex norms to determine the severity of hyperactive behavior.

Other methods for assessing ADHD-related hyperactivity are the use of actometers and observation.

Actometers are mechanical devices that can be worn on a patient's limb or placed on a patient's chair. The actometer is designed to measure movement. Actometers attached to the patient's body can provide valuable information about cycles of movement throughout the day and night. Patient observation can be performed in a variety of formats. Most simply, a clinician can observe the ADHD patient during interviews or testing on the day of clinical evaluation. An alternative format is to have the patient engage in an analog task (e.g., perform an academic assignment) while an observer codes activity level using an observational coding system. One may increase the ecological validity of the observation procedure by observing the patient in his or her natural environment (e.g., school). Similarly, qualitative or quantitative methods could be utilized to describe the patient's activity level.

Evidence-based treatment of ADHD-related hyperactivity can be classified into either of two treatment strategies: medication or behavioral treatment. The most frequently used class of medications that target hyperactive symptoms among patients with ADHD are the stimulants. Stimulant medications exert their effect by increasing levels of extracellular dopamine in the brain. Stimulants wield their effects quickly and effectively. Other medications, such as atomoxetine, bupropion, and tricyclic antidepressants, have also been shown to decrease hyperactivity levels in patients with ADHD. In addition, behavioral treatment has been shown to be an effective treatment for patients with ADHD. Behavioral treatments primarily consist of consequating a patient's behavior with behavioral contingencies. Common behavioral techniques are token economies, response cost, or daily report cards. Behavioral therapy likely exerts its effect in children by increasing their awareness of their own maladaptive behavior by making environmental contingencies increasingly salient. Both medication and behavioral therapy have been shown to be effective treatments for improving hyperactivity symptoms in children with ADHD. However, medication does appear to have a more robust treatment effect when hyperactive symptomatology is used as the outcome measure.

SEE ALSO *Attention Deficit Hyperactivity Disorder; Psychotherapy; Psychotropic Drugs*

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Jeffery N. Epstein

HYPERGAMY

SEE *Dowry and Bride Price.*

HYPEROPIA

SEE *Farsightedness.*

HYPERTENSION

Hypertension (high blood pressure) is a highly prevalent and largely symptomless chronic medical condition that affects almost one in three adults living in industrialized nations. Hypertension is more prevalent among blacks than whites, with prevalence rates of black Americans among the highest in the world. Among whites, hypertension is more prevalent among males than females until age sixty-five, when females with hypertension begin to outnumber males. Among blacks, hypertension becomes more prevalent among females in comparison to males much earlier, beginning at age forty-five. Although prevalence rates of hypertension typically increase with age in industrialized countries, inhabitants of nonindustrialized countries maintain stable blood pressures across their lifespan, suggesting that lifestyle factors associated with industrialization are associated with an increased propensity for developing hypertension. Prevalence rates for hypertension among Hispanic or Latino, Asian, and Native American populations are much lower than among white and black Americans.

There are two forms of hypertension: primary (or essential) hypertension and secondary hypertension. Essential hypertension represents the vast majority of cases and is characterized by chronically elevated blood pressure of unknown origin. In contrast, secondary hypertension is characterized by elevated blood pressures caused by another physiological abnormality, such as kidney disease, endocrine disturbances, or blockage of blood circulation. Regardless of form, hypertension is associated with increased risk for a number of diseases of the cardiovascular system, including coronary heart disease, stroke, peripheral artery disease, and congestive heart failure. Hypertension is therefore the primary cause of mortality

in more than 10 percent of deaths among whites and more than 20 percent of deaths among blacks.

DIAGNOSING HYPERTENSION

The diagnosis of hypertension is typically made by a physician during a medical evaluation in a clinic setting. As part of this evaluation, measures of blood pressure are obtained by temporarily blocking blood flow in the brachial artery (upper arm) with an occluding cuff and listening to sounds of blood pulsations, called Korotkoff sounds, as arterial flow resumes. The first sound detected is associated with the magnitude of arterial pressure during cardiac contraction and is called systolic blood pressure (SBP). The disappearance of the Korotkoff sounds that occurs when blood flow returns to normal is associated with the magnitude of arterial pressure during cardiac refilling and is called diastolic blood pressure (DBP). Measures of SBP that are less than 120 millimeters of mercury (mm Hg) and DBP that are less than 80 mm Hg are considered within the normal range. SBPs and DBPs higher than these values are associated with increased risks for cardiovascular disease consequences in a linear fashion; a diagnosis of Stage 1 hypertension is assigned for patients with SBPs between 140 and 159 mm Hg or DBPs between 90 and 99 mm Hg, and a diagnosis of Stage 2 hypertension is assigned for patients with SBPs greater than 160 mm Hg or DBPs greater than 100 mm Hg.

It is well established that blood pressures measured by health care professionals in clinic settings often bear little correspondence to blood pressures that occur during daily life, creating diagnostic dilemmas for health care providers. In some cases, patients exhibit high blood pressures in the clinic but normal blood pressures in other settings, a condition called "white coat" hypertension from the presumption that these patients display physiological stress reactions while having their blood pressure measured. Another group of patients exhibits normal blood pressures in the clinic setting accompanied by elevated blood pressures throughout daily life. This condition has been termed "masked" hypertension, as both physician and patient are unaware of the elevated blood pressures unless sophisticated automated blood pressure devices, called ambulatory blood pressure monitors, are used to assess blood-pressure levels throughout a normal day. "White coat" hypertension is typically associated with lesser risk for cardiovascular disease, while "masked" hypertension is associated with risk profiles comparable to patients with untreated hypertension.

STRESS AND HYPERTENSION

It is widely recognized that an exposure to stressful life events, such as enduring natural or human-made disasters, being employed in a highly stressful job, or living in conditions of socioeconomic deprivation, is associated with increased blood pressure. However, not all persons exposed to these types of stressful events or life situations develop hypertension. This suggests that individual difference factors exist that either increase or decrease vulnerability for developing hypertension. Individual difference factors associated with a risk for hypertension can be categorized into three types: demographic and historical developmental factors, modifiable psychological or behavioral factors, and modifiable social factors.

Demographic and historical developmental variables represent risk factors that cannot be modified by the individual. For example, it is well known that hypertension runs in families, suggesting a genetic contribution. A risk for hypertension associated with one's age, gender, or race represents other factors that are not modifiable by the individual. Specific medical conditions such as diabetes mellitus or obesity are also associated with an increased risk for hypertension.

Several modifiable lifestyle behavioral factors are associated with an increased risk for hypertension; foremost among these are physical inactivity and excessive consumption of alcohol or sodium. Three psychological characteristics have also been associated with hypertension. First, hypertensive patients often exhibit higher rates of symptoms of depression, anxiety, and anger than persons with normal blood pressure, leading researchers to hypothesize that a negative affect is associated with an increased risk for hypertension. Second, hypertensive patients have been shown to express anger less effectively than persons with normal blood pressure, either displaying more overt aggression during confrontation or suppressing the expression of anger entirely. Third, hypertensive patients exhibit higher rates of emotional defensiveness than persons with normal blood pressures, indicating that this tendency to be out of touch with their emotions may play a role in their condition.

A few modifiable social environment factors have also been implicated in establishing risk for developing hypertension. Families of hypertensive patients, for example, have been characterized as exhibiting less social skill than those of non-hypertensive patients, particularly when handling conflict. Further, as with many other chronic medical conditions, a lack of social support is strongly associated with an increased incidence of hypertension.

No single demographic, modifiable psychological, or social environmental individual difference variable explains entirely why stress leads to hypertension, suggesting that a combination of factors explains the association between stress and hypertension. For example, several individual difference variables have been hypothesized to explain the high prevalence of hypertension among black Americans. First, increased sodium retention in response

to stress has been observed among black Americans that some social epidemiologists believe results from adaptive physiologies of African ancestors who survived the middle passage from Africa to America. Second, the psychological construct of John Henryism, described as effortful active coping in the face of extreme adversity, has been directly associated with blood-pressure levels in some black American samples, particularly those of low socio-economic status. Finally, an exposure to the racism and discrimination that is frequently experienced by many black Americans represents a social environmental factor that has been linked to higher blood pressure. Although consistent support linking each of these three individual difference variables to hypertension is lacking, there is sufficient evidence to suggest that each affects blood-pressure levels for some black Americans and is partly involved in explaining their increased prevalence of hypertension.

The physiological mechanisms through which psychological, behavioral, and social factors influence the risk for hypertension are unknown, although the autonomic nervous system is thought to be involved. Evidence from animal studies and from prospective trials on humans has revealed that participants who exhibit exaggerated blood-pressure responses to stress are more likely to develop hypertension later in life. According to this reactivity hypothesis, psychological factors, like the experience or inappropriate expression of anger, promote the onset of hypertension only inasmuch as they result in elevated blood-pressure responses to stress, which are presumably driven by the autonomic nervous system. Based upon this hypothesis, a considerable amount of research has linked various risk factors associated with hypertension to the magnitude of blood-pressure reactivity to stress. For example, healthy offspring of hypertensive parents exhibit greater blood-pressure reactions to stress than offspring of non-hypertensive parents. Similarly, both overt aggression and anger suppression are associated with heightened blood-pressure reactions to stress, in contrast to the appropriate expression of anger. Although the exact pathway through which psychosocial risk factors exert their influence on blood pressure–regulating organs is still unknown, the reactivity hypothesis has provided important clues regarding how a psychological construct like suppressed anger could lead to a physiological disturbance of blood-pressure regulation.

TREATMENT OF HYPERTENSION

Because of the high prevalence and lethal consequences of hypertension, a number of interventions have been developed to lower blood pressure. The primary treatment strategy for both lowering blood pressure and reducing the risk of cardiovascular disease associated with hypertension consists of a variety of antihypertensive medications. Although the various classes of medications operate through different physiological pathways, they all are potent blood pressure–lowering agents. Unfortunately, a large number of hypertensive patients do not take their medication as prescribed, partly because the side effects can be more noticeable than the condition of hypertension itself.

Several non-pharmacologic methods are known to lower blood pressure and have served as useful adjunct treatments for hypertensive patients and as primary preventive strategies for persons at risk for developing hypertension. Weight loss, typically achieved through a combination of dietary management and increased physical activity, can result in blood-pressure reductions comparable to antihypertensive medication. Sodium restriction and potassium supplementation also reduce blood pressures, particularly among patients who are sodium sensitive. Eliminating the consumption of alcohol is an effective means of lowering blood pressure among hypertensive patients who consume alcohol regularly.

Because psychological factors are linked to hypertension, the blood pressure–reducing properties of three psychological interventions have been examined: relaxation, biofeedback, and individualized stress-management programs. The magnitude of blood-pressure reductions observed with relaxation and biofeedback interventions is generally much lower than those observed with antihypertensive medication. Because stress-management approaches are individualized based upon the patient's unique psychological profile, larger reductions in blood pressure have been observed.

Hypertension is a chronic medical condition with no single cause. By considering both pharmacologic and non-pharmacologic interventions with respect to each individual patient, effective intervention and prevention programs will help eliminate hypertension as a public health problem.

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Kevin T. Larkin

HYPOGAMY

SEE *Dowry and Bride Price.*

HYPOTHESIS AND HYPOTHESIS TESTING

The scientific method is central to the identity of any self-described social science. Science is distinguished from nonscience not by the content or subject of study. Rather, the distinguishing characteristic of a science is the method of investigation. The scientific method relies on systematic, repeatable testing of expectations against the observed world. In their adoption of the scientific method, social sciences more closely resemble chemistry than its alchemical predecessors, which relied instead on the application of metaphysical rules to guide their work.

The physicist may use complex instruments to observe minute characteristics of subatomic particles. Similarly, the social scientist may use surveys to observe the characteristics of human behavior. The focus on observation as a method for testing expectations unites the physicist and the social scientist in their use of a common tool of the scientific method.

THE PURPOSE OF HYPOTHESES

Hypotheses are the central tool of scientific observation. Because the core method of scientific investigation is the comparison of expectations against observations of the world, scientists need to make clear statements about their expectations. A hypothesis is a concise, falsifiable statement that is subjected to observational testing as part of a scientific investigation.

Scientific research generally starts with a question about the observable world. In the social sciences research questions focus on human behavior—especially behavior related to groups (e.g., communities, countries, or societies). The scientific method says nothing about the origins of these research questions (just as it says nothing about the content of the areas of research). The scientific method simply requires that a scientist state an answer to this question (the hypothesis) that can be tested with observations (hypothesis testing).

There is a bewildering array of potential research questions—and thus hypotheses—in the domain of social science. Hypotheses can focus on expectations about voting behavior, the tendency of nations to go to war, or the factors that contribute to juvenile delinquency or to decisions about where to live (among many, many other hypotheses).

The purpose of the hypothesis is to ease the task of testing an expectation with observations of the world. A good hypothesis, then, is one that is easily tested. The ease of testing contributes to a second key aspect of the scientific method: reproducibility of testing. A clearly worded hypothesis can be tested repeatedly by a scientist and, maybe more important, by other scientists (King, Keohane, and Verba 1994, pp. 28–29).

Consider the following example. A social scientist may hypothesize that smaller class sizes in secondary schools will lead to higher performance on standardized tests. Because it is easy to observe the number of students in a class and the standardized tests scores are also easily observable (though there may be questions of the validity of the test as a measure of "intelligence" or even "academic achievement"), this hypothesis is easy to test. The test itself is also easy to replicate by the original social scientist or by other investigators. The hypothesis is sufficiently clear that any observer would be able to tell whether people in the smaller classes actually performed better on standardized tests. The judgment, then, is not a product of the specific observer but is instead independent of the identity of the scientist (a subject of some controversy that is discussed in a later section).

STRATEGIES OF HYPOTHESIS TESTING—QUANTITATIVE STRATEGIES

One of the major strategies for hypothesis testing is quantitative research. The focus of this approach is on the quantification of social science concepts for purposes of comparison and hypothesis testing. For example, a social scientist might ask whether the U.S. president's approval ratings have gone down over the past year. This could give some sense of the power the president might have in promoting his or her legislative agenda or the chances of the president's party in an upcoming election.

The hypothesis would be the social scientist's guess as to how the candidate will fare against the proposed opponent. A good hypothesis will be one that is well grounded

in the available theory on elections and that is testable against observable data (in this case a survey). The hypothesis would predict whether the approval ratings of the president have gone down over the past year. It would provide a preliminary answer to the stated research question. More ambitious hypotheses that predict specific levels of support (that the president has lost 8 percent of support from the previous year) are possible, but these require highly developed theories. One can take as an example the basic hypothesis that the president's approval rating has gone down in the past year.

Armed with a hypothesis, the scientist will conduct a survey of a sample of potential voters to test the hypothesis. The scientist cannot, or would not want to, survey all citizens of the United States. Instead, the scientist will select a small sample out of the U.S. population. The scientist might send a survey to 1,000 citizens and see whether the hypothesis is correct within this sample of voters. The results of the survey will give the scientist a sense of the president's current approval rating for comparison to previous approval ratings (Babbie 1995, pp. 190–193).

Quantitative hypothesis testing—the comparison of numerically represented measurements for purposes of hypothesis testing—allows for some detailed comparisons. One can say, for the sake of argument, that the survey suggests 43 percent of respondents said they approved of the job the president was doing. The previous year's survey had reported that 47 percent of respondents had said they approved. At first glance, the evidence provides support for the hypothesis.

A number of questions remain about this test of the hypothesis. To what extent is the observed dip in approval indicative of a general trend in the U.S. population? To what extent is the dip indicative of a persistent change in approval? Tools of probability and statistics provide some opportunity to address these questions. Sampling theory provides some sense of how reliable the results are that come from a sample of a larger population (Babbie 1995, pp. 195–203). Such theory helps scientists describe the range of possible values in the population given the size of the sample surveyed. One could describe the probability that the actual approval rating was 47 percent (the previous rating) while the sample happened to be skewed toward lower approval ratings. In general, the larger the sample size, the lower the probability of these sorts of discrepancies. Such theory also provides insight into whether the variation one sees is relatively permanent or just part of the inherent variability in measuring people's approval of a public figure. It is the ability to assess these issues of sampling and fundamental uncertainty that have convinced many of the utility of quantitative hypothesis testing techniques.

STRATEGIES OF HYPOTHESIS TESTING—QUALITATIVE STRATEGIES

Many scholars pursue an alternative style of hypothesis testing. These scholars tend to be unsatisfied with the techniques of measurement for social concepts employed in many quantitative research projects. In lieu of quantitative measurements of large samples of observations, qualitative hypothesis testing involves the careful study of a smaller number of observations with detailed treatment of the context and meaning of the social concepts themselves.

A qualitative hypothesis testing strategy follows the basic procedure of hypothesis testing. The social scientist generates a hypothesis in response to a research question. The social scientist then compares his or her expectation against the observed world. The difference between the qualitative approach and the quantitative approach reviewed earlier is in the strategy for getting reliable observations of the world.

Qualitative hypothesis testing tends to focus on detailed histories and culturally sensitive accounts of the social systems that are being studied. The detail and contextual knowledge provide the qualitative hypothesis testing strategies leverage on the challenges of hypothesis testing in two ways. First, the detailed knowledge of the subjects under study allow for careful selection of cases for study. As opposed to the quantitative strategy of multiplying the number of observations to avoid the possibility of drawing the wrong lessons from a study, qualitative hypothesis testing involves carefully selecting a few observations to achieve the ideal contrast. Second, the detailed knowledge of the subjects also allows for greater attention to the measurement of variables. Proponents of qualitative research focus on the ability to really get to know the subjects as a means to understand the nuances of the proposed effects of policies (e.g., Brady and Collier 2004).

Qualitative research tends to investigate different types of hypotheses than quantitative research, though the barriers between the two have eroded somewhat since the late twentieth century. Whereas quantitative hypotheses tend to involve statements of correlation, qualitative hypotheses have tended to focus on issues of necessary and sufficient conditions. These hypotheses focus on the conditions whose presence guarantees that an effect will be present (a sufficient condition) or whose absence will guarantee that an effect will not be present (a necessary condition) (Goertz and Starr 2003).

Theda Skocpol's (1979) research on social revolutions exemplifies this approach. In *States and Social Revolutions: A Comparative Analysis of France, Russia, and China*, Skocpol studies the factors that are essential to the success of peasant revolutions in a selection of countries. To study

complicated processes such as social revolution and its relation to the political structures of regimes, Skocpol focuses her attention on the contrast between France, Russia, and China. These detailed cases are contrasted with control cases such as England and Prussia. The control cases serve the comparative role of the prior approval ratings in the quantitative example given earlier. This approach allows Skocpol to study each of the cases in great detail and to have confidence in the measurement of such concepts as types of revolution and various aspects of regime structure. The result is a widely praised multidimensional account of the necessary conditions of success for peasant revolutions.

FUNDAMENTAL CONTROVERSIES IN HYPOTHESIS TESTING

While there is debate over the relative merits of qualitative and quantitative hypothesis testing, there are also more fundamental critiques of hypotheses testing. The quantitative and qualitative hypotheses are different strategies to accomplish the same goal. In both approaches observations are compared against hypotheses about the essential nature of the social world. In the qualitative example Skocpol is testing hypotheses about the underlying nature of social revolution. This assumes that there is an underlying nature of social revolutions. Some critics of the hypothesis testing contend that there is no singular underlying social nature. These authors, mostly associated with poststructuralism, argue that there is no singular structure of society about which one can generalize or that one can discover through repeated observation (for a famous statement of this argument, see Derrida 1978).

Other authors focus their criticism not on the absence of a stable world to observe, but instead on the tools that social scientists have to observe the world (assuming that such a stable world exists). These critics allege that social measurement is inherently filled with biases. Observation, these critics allege, is inseparable from the observer. If this is the case, especially given the importance of social values to humans, there is no such thing as neutral observation of the social world. The result is that all hypothesis tests are suspect. Many of these critics recommend exploring the social world through admittedly biased accounts and narratives rather than the "at-a-distance" observation implied by the typical hypothesis testing framework (Shank 2002).

SEE ALSO *Scientific Method; Social Science*

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HYPOTHESIS, NESTED

The term *nested hypothesis* sometimes refers to a group of hypotheses—that is, tentative assumptions or hypothetical factors in an experimental model—and other times to a subordinate hypothesis within a group. A nested hypothesis is the same as its non-nested analogue, except that one or more of the parameters in the non-nested hypothesis is constrained or limited in the nested hypothesis. To be considered nested, then, a hypothesis must meet the following conditions. First, it must be one among a group of related hypotheses. Second, all of the hypotheses must have some ordering pattern to them. This ordering pattern causes some hypotheses to be logical subsets of other hypotheses. It is possible for all but one hypothesis to be a subset of another hypothesis. Any hypothesis that is a subset of another hypothesis is nested. Third, when the hypotheses are ordered, each hypothesis must completely contain all the hypotheses preceding it. This condition of containment or nesting is the source of the nested hypothesis's name.

Research programs sometimes are designed so that there are multiple groups of hypotheses. In these cases, each of the groups may consist of nested hypotheses, but none are nested with respect to any other group. This type of situation is sometimes referred to as *partially nested.* Also some research disciplines reverse the ordering so that the main hypothesis comes first and the nested hypotheses follow it. This situation usually occurs in written material and not when the hypotheses are stated mathematically.

A common situation in which nested hypotheses often occur is traditional hypothesis testing using an alternative null hypothesis. The null hypothesis is an alterna-

tive to the hypothesis being tested where the explanatory factors being researched have no impact on the situation under consideration. When the null hypothesis is simply the testing hypothesis with one of the parameters set at any constant, then nesting exists. If, for example, a researcher was looking for factors influencing voting decisions and one of the factors chosen was birth year, the null hypothesis would be that birth year is unimportant (and that parameter would be set to zero). In this case, the hypotheses are nested because the null hypothesis is completely included within the main hypothesis.

Nested hypotheses have been around as long as scientific research. It is both logical and easy to use a null hypothesis in cases where the factor being examined simply becomes unimportant. Nested hypotheses also frequently occur in the social sciences when researchers are investigating a primary hypothesis. Sometimes researchers will also examine secondary hypotheses (dependant on the primary one) as nested hypotheses. There are, however, conditions under which nested hypotheses should only be used with caution. Nested hypotheses are sometimes used solely for ease of computation, without any underlying research basis. Before using nested hypotheses, researchers should make certain that the question being researched provides a substantive logical reason for using nesting.

A significant problem that nested models have is deviance. As the number of parameters in a model is decreased, model deviance automatically increases. In instances where there is a significant amount of nesting, the deviance can rise substantially. The difference between the deviances of two models is the basis for comparing their reliability. Therefore if there are a significant number of parameter changes, there will automatically be a bias in favor of the more complicated model, irrespective of the real accuracy increase. According to some experts in statistics, when analysis techniques such as the log-likelihood are involved, it is impossible for a nested model to have a larger maximum than the associated non-nested model.

A lesser concern is that there are different ways of nesting hypotheses. Population groupings provide an example of this. These groupings can either be superordinated, such that one group is separated out in each nesting, or divided, in which case some of the constituent groups become one nested hypothesis and the remainder become the other hypothesis. These latter subgroups are both nested with respect to the main hypothesis but not with respect to each other. This is a different situation from the former grouping condition, where each new hypothesis is nested with respect to all preceding hypotheses. In order to compare the models and their results, it is necessary to know which approach was used. In cases where nested hypotheses are not appropriate or desirable, there are a number of Bayesian, categorical, generalized linear model, and likelihood data-analysis techniques that can be used in place of the traditional hypothesis/null hypothesis framework.

SEE ALSO *Hypothesis and Hypothesis Testing; Regression; Regression Analysis*

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I

IBM

SEE *Microelectronics Industry.*

IBN KHALDŪN

1332–1406

Ibn Khaldūn was born in Tunis in 1332 as the child of an influential and politically active family and died 1406 in Cairo. He had a traditional education, studying the Qur'an and Islamic law; later he also studied mathematics and philosophy. He held several official positions for different rulers in North Africa's Maghreb region, but as a consequence of political changes he lost his office in Fez and moved to Andalusia, where the sultan of Granada entrusted him with diplomatic negotiations with Pedro the Cruel, the king of Castile. Eventually Ibn Khaldūn quit the service of the sultan and moved back to the Maghreb, where he held several high political offices and lived with Berber tribes. During a three-year stay with one of these tribes he wrote the *Muqaddimah*, which he continued to edit for the rest of his life. In 1382 he moved to Cairo, where he spent the second part of his life, becoming a close counselor of Sultan Barquq, who appointed him professor and *qadi* (supreme judge)—an office that Ibn Khaldūn lost and regained several times. Aside from his scholarly works, he is known particularly for his encounter with the Mongolian conqueror Timur (Tamerlane) in 1401 during the latter's siege of Damascus. During their meeting Ibn Khaldūn discussed the history of the Arab world with Timur before the Mongolian army razed the city of Damascus, but spared Ibn Khaldūn's life.

Ibn Khaldūn's main work is his world history *Kitāb al-'Ibar* (*Book of Examples*), a several-volume history of the known world incorporating a comprehensive introduction, the *Muqaddimah*, which is considered to be a singular achievement in his time. In the *Muqaddimah* Ibn Khaldūn develops the science of human civilization or culture (*'Ilm al-'Umrān*) to describe and analyze the history of human society. The main concept he uses for this endeavor is the *'aṣabiyya*. This term has been translated as "group feeling," "solidarity," "blood ties," "esprit de corps," and even "national spirit." *'Aṣabiyya* refers mainly to family ties, but Ibn Khaldūn also extends its meaning to alliances and clientships. It is conceived as a vitalizing force of group cohesion enabling its bearers to exert power. The strength of the *'aṣabiyya* plays a determining role in the rise and fall of patrimonial empires, particularly those following the reign of the caliphs (the four kings ruling after Muhammad's death). Rural tribesmen, or bedouins, are characterized as having a strong *'aṣabiyya*, in contrast to sophisticated urban dwellers, who have a weak *'aṣabiyya* but highly developed crafts and sciences. In the *Muqaddimah* Ibn Khaldūn distinguishes rural or tribal life (*badāwa*) from urban or civilized life (*ḥaḍāra*), and a rural economy based on sustenance from an urban economy in which human labor generates value, serving to make profit and accumulate capital. He analyzes urban life, examining in detail how growing cities develop and manage their commerce, law, and education. Cities are the locations of a growing division of labor, producing specialized crafts that require time and resources to be learned. Having specific requirements that can only be met by urban civilizations of sufficient size, the sciences develop in larger, longer-lasting urban civilizations. Ibn Khaldūn discusses sciences such as

reading and interpreting the Qur'an, jurisprudence, mathematics, medicine, natural sciences, and occult sciences. Some sciences are criticized for their lack of religious faith (e.g., Greek philosophy) or for not adhering to historical facts (e.g., astrology and alchemy). Ibn Khaldūn argues that growing sophistication leads to decadence and corruption, weakening the *'aṣabiyya* and making urban civilization prone to attacks and destruction by tribes with a strong *'aṣabiyya*. These tribes in turn will settle down and become urbanized, generating a cycle of fall and decline of civilizations that contrasts starkly with later European conceptions of progressive development.

Ibn Khaldūn's work was repopularized by orientalists in nineteenth-century Europe. He has been regarded as a forefather of history, sociology, and political science, and his economic theory was seen as anticipating the political economic theories of both Adam Smith and Karl Marx, the former in his insistence on the importance of free markets and free trade, and both in his theory of value. In all of these disciplines there is debate about the extent to which Ibn Khaldūn directly or indirectly influenced classic European social scientists. His historical analysis was reapplied in different contexts by proponents of anticolonial movements. Accordingly, his work has been situated in many different contexts, and its interpretations range from carefully applied hermeneutics to political polemics.

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Lars Frers

IBO

SEE *Negro.*

ICEBERG SLIM

SEE *Pimps.*

ID

SEE *Equilibrium in Psychology; Freud, Sigmund.*

IDEAL TYPE

An *ideal type* is a methodological construct developed by German sociologist Max Weber (1864–1920). Key to his formulation of ideal types is a focus on what motivates social action. Weber believed that we can understand human action by discovering the subjective meanings actors attach to their own behavior and to the behavior of others. For Weber, subjective meanings are important in understanding the laws and regularities that create and govern social structures. It is possible to discover these regularities because uniformity of social action is widespread; actions are frequently repeated by the same individual and they correspond to the subjective meaning the actors attach to them.

An ideal type serves as a way to determine similarities as well as deviations found in empirical cases. Ideal types do not refer to moral ideals or to statistical averages; they do not describe an individual course of action, or an ideal case, but a typical one. They are analytical constructs that enable the researcher to develop hypotheses linking the types with the conditions that brought about the event, phenomena, or social structure, or with consequences that follow from its emergence. Because they are composites of all the necessary features of an act or action, these types rarely appear in real life and do not represent the only possibility for a particular course of action. In other words, ideal types do not exhaust or fully reflect concrete reality. Rather they are analytical tools that allow the researcher to find features that are common among all the varied and unique social and historical realities in order to conduct comparative analyses. Classifying types of motivated action allows us to make systematic typological distinctions, such as between types of authority, while also providing a basis for investigating historical developments.

Weber distinguishes four basic ideal types to describe motivated social action: *zweckrational, wertrational, affectual*, and *traditional*. He organizes these types of action in terms of their rationality and irrationality. *Zweckrational* action is social action in which individuals rationally choose both goals and means. *Wertrational* action is characterized by striving for a goal, which in itself may not be rational, but which is nonetheless pursued rationally. Affectual social action is grounded in the emotional state of the actor, rather than in the rational weighing of means and ends. Traditional action is guided by customary habits of thought, by reliance on "the way it's always been done." Weber's concern is with modern European and North American society, where he saw behavior increasingly dominated by goal-oriented rationality, whereas earlier it tended to be motivated by tradition, affect, or value-oriented rationality.

The most understandable type, according to Weber, is *zweckrational* action because it determines rationally

organized and administered structures like bureaucracies. Bureaucratic organizations are characterized by depersonalization, routinization, predictability, and the rational calculation of costs and benefits. Using ideal types, Weber was able to argue that the characteristic form of modern institutional organizations, such as the state, the corporation, the military, and the church, is bureaucratic.

SEE ALSO *Bureaucracy; Weber, Max*

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IDEALISM

In philosophy, *idealism* designates a variety of historical positions since Plato (c. 428–348 or 347 BCE). The general characteristics of idealism derive from its historical examples. In metaphysics, *idealism* stands for a general belief about the nature of reality. In epistemology, it represents the belief that only a certain kind of reality is intelligible to the human mind. In Plato, whose idealism is influenced by the pre-Socratic philosopher Parmenides (born c. 515 BCE), the metaphysical and the epistemological aspects of idealism are combined in such a way that only ideas (or Forms) are fully real and only ideas are fully intelligible (compare Plato, *Phaedo* 65A–67B, and *Republic* 506B–518D). All forms of idealism hold that intelligible structures ("ideas") are part of the world itself rather than merely interpretations or constructs of the mind. As a result, idealist philosophers assume either a partial or a complete identity between intelligible structures and reality itself. In the most extreme case—namely, that of the Irish philosopher George Berkeley (1685–1753)—ideas and minds are said to be the only reality there is.

Furthermore, all forms of idealism hold that intelligible structures rather than matter or physical bodies constitute the foundation of reality. In this sense, idealism is opposed to materialism and physicalism in metaphysics or ontology. Idealists also generally hold that what is known or knowable about the world are ideal entities (e.g., conceptual structures, laws, principles, values) that are either inherent in things as their essence or that function as their normative archetypes. In this sense, idealism is opposed to realism in epistemology.

Among the major idealist philosophies after Plato are the rationalist idealism of Gottfried Wilhelm Leibniz (1646–1716), according to whom reality consists of infinitely many ideal entities called monads ("metaphysical atoms"); Berkeley's empirical or psychological idealism ("to be is to be perceived"); the transcendental or critical idealism of Immanuel Kant (1724–1804), who in the *Critique of Pure Reason* (first edition, 1781) states that "the conditions of the *possibility of experience* in general are likewise conditions of the *possibility of the objects of experience*" (A 158); German idealism represented primarily by Johann Gottlieb Fichte (1762–1814), Friedrich Wilhelm Joseph Schelling (1775–1854), and Georg Wilhelm Friedrich Hegel (1770–1831); the British idealism of Thomas Hill Green (1836–1882), Francis Herbert Bradley (1846–1924), and Bernard Bosanquet (1848–1923); and the American idealism of Josiah Royce (1855–1916).

Idealism achieved its most highly developed form and its most comprehensive and ambitious expression in post-Kantian German idealism and in Hegel's system in particular. Although insisting that he remained perfectly true to the spirit of Kant's philosophy, Fichte made the first decisive step beyond Kant by abandoning the thing-in-itself as well as the dualism of concept and intuition in favor of a unified first principle, the absolute ego. In this way, he very much set the agenda for post-Kantian German idealism's drive toward a holistic system based on a monistic principle. Scholarship since the 1950S has pointed out that a rivaling realist tendency with dualistic aspects continued to be an ingredient in post-Kantian idealism, as can be seen in the philosophies of the later Fichte and Schelling.

Hegel's strict monism conceived of the totality of reality or "the absolute" as a self-determining system exhibiting the structure of a self-referential, self-conscious subject called spirit. Spirit unfolds in human history and achieves complete self-recognition in Hegel's speculative idealism. The conceptual structure of spirit is that of the Concept or the Idea: "The Absolute is the universal and One Idea" (Hegel 1831, §213). At the heart of Hegel's system, for which the *Phenomenology of Spirit* (1807) initially served as an introduction, is the three-part *Science of Logic*. In three books titled *Being* (1812), *Essence* (1813), and *The Concept* (1816), the *Logic* develops the categories ("thought-determinations") that are supposed to provide the intelligible structure of spirit's external existence as nature, subjective, objective, and absolute spirit. These

forms of spirit in externality comprise a philosophy of nature, a philosophy of mind (soul, consciousness, self-consciousness), a moral and political philosophy, and a philosophy of religion, the arts, and philosophy itself. The categories of the *Logic* are derived by means of the dialectical method through which concepts are shown to generate an opposite that is nonetheless also their necessary complement (e.g., no ground without a grounded) and must therefore be combined in a new concept in order to capture the whole of which they are merely a part. The dialectical process continues until an all-inclusive concept (the "absolute Idea") is reached. Hegel claims that the categories are generated autonomously by thought itself and have objective validity. His *Logic* is thus an epistemology just as much as it is an ontology. According to Hegel, it replaces traditional metaphysics.

Idealism is also used to characterize basic approaches in ethics, aesthetics, social ethics, and political science, where it is referred to as *practical idealism*. Idealism has been criticized for being inherently teleological in that it typically focuses on the consummation of the process of cognition in an ideal state of total (self-)knowledge or in the achievement or eschatological projection of an "end of history" (both tendencies are manifest primarily in Fichte, Schelling, and Hegel). This seems to contradict the open-endedness of the process of cognition as well as that of history. The future seems either closed or predetermined. Both assumptions contradict our normal intuitions as well as scientific rationality. Idealism's attempt to overcome dualisms such as appearance and reality, nature and spirit, mind and matter, concept and intuition has also been criticized for making the mind, self, thought, or spirit the only true reality, thus abandoning the realistic element that normally accounts for the content of knowledge. Thus in Hegel the object or "other" turns out to be the self in disguise and genuine otherness seems to have disappeared. All cognition becomes self-cognition and reality a self-manifestation of reason. A charitable reading of idealist philosophies will point out, however, that to the extent that all knowledge is mediated by concepts or acts of interpretation, an ideal element in all cognition remains an irreducible factor. Thus this criticism must be directed primarily at those idealist positions that leave no room for ontological otherness.

SEE ALSO *Epistemology; Hegel, Georg Wilhelm Friedrich; Materialism; Philosophy of Science*

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IDENTIFICATION, RACIAL

Racial identification occurs when individuals consider themselves to be a part of an imagined conglomerate of people who are presumed to share certain physical, cultural, intellectual, and moral traits. This identification can be made for cultural, social, legal, or political purposes, and it involves both self-identification and categorization. *Self-identification* is the choice individuals make when confronted with racial choices. The options usually offered in the U.S. context are white, black, Asian, and Native American. *Categorization* refers to the way that people are racially identified by others. Economic analysis shows that racial-identification norms arise from the simultaneous processes of self-identification, which is achieved via within-group altruism, and categorization, which is achieved via between-group altruism. The relative payoffs to social interactions are influenced by and contribute to intergroup differences in wealth and power. It is of no small import that the categories one may racially identify with or be categorized with today are a colonial invention, created to justify the enslavement of Africans and the genocide of Native Americans (see Allen 1994).

The idea of "race" involves the notion that all of the people in the world can be divided into discrete categories, based on shared physical and cultural traits. A key notion in the idea of race is that not only can inferences be made about people's moral, intellectual, or social value on the basis of physical characteristics such as skin color or hair texture, but also that these same traits are expected to be passed down to offspring. In the United States, as Ashley Montagu points out in *Man's Most Dangerous Myth* (1997), to accept the idea of race is to accept the notion that races are populations of people whose physical differences are innately linked with significant cultural and social differences, and that these innate hierarchical differences can be measured and judged. Thus, when people are asked to identify with one or more racial categories on

survey forms, they are really being asked to report where they fall within this colonial hierarchy. And when one categorizes people in this way, one is, in effect, placing them within this same hierarchy.

Although race is an invented categorization scheme, the idea that race is real and important has become hegemonic in the United States, where people have been trained to identify others by race. If people in the United States see someone and don't know "what they are," they often get inquisitive or begin to feel uncomfortable. As Eduardo Bonilla-Silva points out in "The Essential Social Fact of Race" (1999), race is about "what you are," while ethnicity is about "where you are from." Thus to be unable to racially identify others can create confusion about "what they are."

It may be surprising that, although people seem to view racial categories as fixed and based on fact, these classifications have changed quite a bit over the course of U.S. history. In fact, the racial classifications used by the U.S. Census have changed each time the Census has been carried out. In 1880, the U.S. Census categories were: White, Black, Mulatto, Chinese, and Indian. A decade later, Quadroon, Octoroon, Japanese, Samoan, Other Asian, Other Pacific Islander, and Some Other Race were added, only to be taken out again, along with mulatto, in 1900. Mexican was added temporarily in 1930. After many changes, the Census categories used in 2000 were White; Black, African American, or Negro; American Indian or Alaska Native; Asian Indian; Chinese; Filipino; Japanese; Korean; Vietnamese; Native Hawaiian; Guamanian or Chamorro; Samoan; Other Asian; Other Pacific Islander; and Some Other Race. In addition, in 2000, people were given the option of checking off as many of these options as they wished, thereby greatly increasing the number of racial choices available to people.

Notably, people were given the opportunity to identify themselves multiracially in 2000 because of a political campaign to allow people more than one choice on Census forms. This is just one of many campaigns that have altered the ways racial classifications are used. There is also a strong movement to dissolve the use of race in public policy altogether. This has resulted in the passage of Proposition 209 in California in 1996 and the adoption of Proposition 2 in Michigan in 2006. Both of these propositions prohibit all state and local government entities from using race, ethnicity, color, gender, or national origin to make decisions about public employment, public education, or government contracting. California also witnessed another movement to remove racial and ethnic identifications from data collection efforts, in the form of Proposition 54, the Classification by Race, Ethnicity, Color and National Origin Initiative.

Following the defeat of this proposition in 2003, the American Sociological Association (ASA) issued a statement about the importance of being able to collect data on racial identifications. The ASA also published a statement in 2002 arguing that, although racial categories are socially constructed, it is important to ask people to give their racial self-identification in data collection efforts, insofar as this provides vital information about inequalities in educational, labor market, health care, and other outcomes. In other words, as long as a social meaning is given to race, it is important to know how people identify themselves racially and how this identification affects their prospects for success.

The creation of the Hispanic category was also the result of political campaigns, primarily in the 1960s. Hispanics or Latinos/as are currently the largest and fastest-growing minority group in the United States. However, according to the regulations used by the U.S. Census, Hispanic is an ethnic, not a racial category. Thus, Hispanics, just like non-Hispanics, are asked to choose between the various racial categories on the Census form. Other data collection efforts, such as those used by some educational institutions in the United States, include Hispanic as an option, although these classification schemes are often designated as racial or ethnic self-identification. Hispanic, in many ways, functions as a racialized category in the United States, insofar as people use physical cues to determine whether or not someone is Hispanic. However, the category Hispanic, like the categories Arab or Middle-Eastern, is a result of a different set of historical processes than those through which the categories White, Black, Asian, and Native American were created. European scholars writing in the seventeenth century generally restricted themselves to these latter four categories in their pseudo-scientific work on the characteristics of the human races.

Despite this tainted history, racial identification cannot be seen solely as an act of dominance, for it can also be an act of resistance. By identifying themselves racially, as opposed to ethnically, some Hispanics may be resisting white privilege and expressing solidarity with other people of color. Indeed, there is evidence that Latinos who experience discrimination are more likely to racially identify as Latino than those who have not experienced discrimination.

Racial identifications are thus social, cultural, political, and legal categories that are the result of particular historical processes, and that continue to be subject to changing ideas about the reality of race. As social categories, they are related to various social outcomes such as educational attainment and wages. As cultural categories, they are imbued with meaning and associated with certain cultural characteristics, such as language, dialect, or musi-

cal preferences. As political categories, they can be used to mobilize people behind a common agenda. And as legal categories, they have been used to prevent miscegenation, to enforce segregation, and to maintain racial slavery.

SEE ALSO *Formation, Racial; Hierarchy; Identity; Identity, Social; Latino National Political Survey; Multidimensional Inventory of Black Identity; Politics, Identity; Race; Racial Classification; Racism; Self-Classification; Self-Identity; Stratification*

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IDENTIFICATION PROBLEM

The identification problem is a deductive, logical issue that must be solved before estimating an economic model. In a demand and supply model, the equilibrium point belongs to both curves, and many presumptive curves can be drawn through such a point. We need prior information on the slopes, intercepts, and error terms to identify the true from the presumptive demand and supply curves. Such prior information will give a set of structural equations. If the equations are linear, and the error terms are normally distributed with zero mean and constant variance, then a model is formed for estimation.

A typical identification process may fix the demand curve and shift the supply curve, cutting the demand curve at many points to trace it out. By the zero mean assumption of the error term, half the observations are expected above and half below the demand curve. In the same way, the supply curve can be identified. This method originated with Ragnar Frisch (1938) and Trygve Haavelemo (1944). Tjalling Koopmans evolved the order and rank conditions for identifying linear models (1949). Franklin Fisher's work was the first major textbook on the subject (1966), and Charles Manski extended it to the social sciences (1995).

The order condition is the most used technique for identifying a model. Each equation in the model has a predetermined variable that is either given from outside of the model (exogenous) or determined in the model (endogenous) but fitted with a lag. A standard exogenous variable for the supply curve is technology, T, and for the demand curve it is income, Y. A two-function model with $Q = f(P, Y)$ for the demand and $Q = f(P, T)$ for the supply, where P is price and Q is quantity, meets the order condition for identification by excluding technology from the demand curve, and by excluding income from the supply curve. The number of excluded variables EV is one in each equation. The order condition requires that EV equal the number of exogenous variables M, less one. An equation is exactly identified if $EV = M - 1$, overidentified if $EV > M - 1$, and underidentified otherwise. In the two-function model above, the equations are exactly identified because the exogenous variables P and Q yield $M - 1 = 1$, and each equation has only one excluded variable, Y or T.

The rank condition guarantees that the equations can be solved. Econometric texts often create a spreadsheet to demonstrate the rank condition. For the model above, the column is labeled with the variables Q, P, Y, T, and the rows contain information on the equations. Each cell has either a 0 for an excluded variable or a 1 for an included variable. For the demand function above, the entry for the row vector is [1, 1, 1, 0] and for the supply function [1, 1, 0, 1]. To identify the demand curve for the order condition, first locate the zero in its vector, then pick up the corresponding number in the supply vector. The picked-up number, which is 1, should be equal to $M - 1$, which is also 1. With many equations, the numbers that we pick up will array into many rows and columns. The general rank test requires one to find $M - 1$ rows and $M - 1$ columns in that array whose elements are not all zeros, because such a $(M - 1)(M - 1)$ spreadsheet will make the model solvable.

SEE ALSO *Frisch, Ragnar; Koopmans, Tjalling; Structural Equation Models*

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Lall Ramrattan
Michael Szenberg

IDENTITIES, DEADLY

"Deadly identities" is the literal translation of the title of Amin Maalouf's nonfiction *Les identités meurtrières* (1998), which examines the issues and problems surrounding individuals having multiple social identities. Maalouf (b. 1949) is a Lebanese-born Catholic Arab novelist who has lived in Paris since 1977, writes in French, and is the 1993 winner of the Goncourt Prize, France's most prestigious literary award. For Maalouf, the term *identity* is a "false friend." "It starts by reflecting a perfectly permissible aspiration, then before we know where we are it has become an instrument of war" (Maalouf [1998] 2000, p. 32). The meaning of *identity* here is that of social identity, which results from our identification with others in social groups according to shared religion, ethnicity, nationality, gender, age, occupation, place of residence, and so forth. Social identities generate violence when social groups are in conflict, and their respective members behave antagonistically toward each other, though they may have no animosity toward one another as individuals. Such conflicts have become more common in the age of globalization, Maalouf believes, because of an ever-accelerating intermingling between peoples. For many, then, the dilemma this often creates is a choice between a complete loss or a vigorous assertion of traditional identities—between the disintegration of identity and fundamentalism.

But Maalouf argues that this choice is an illusion, because people do not have just one social identity, which is then their individual identity; rather, they have many social identities, the specific combination of which gives each person a unique individual identity. This is the concept of *complex identity*, and it is not unchanging, but changes over a person's lifetime, as do a person's associations and experiences. Maalouf offers several interpretations of complex identity. One is the idea of a limiting concept: the "more ties" one has, the "rarer and more particular" one's identity becomes (Maalouf 1998 [2000], p. 18). Alternatively, an individual's complex identity develops continuously over a lifetime as new characteristics are acquired "step by step" (p. 25). The meaning, however, that most directly targets the problem of violence is complex identity as that which individuals assemble and arrange for themselves out of their different social identities (p. 16), since this presupposes a capacity for reflection about one's social identities, which Maalouf sees as the best protection against the insanity of murder and butchery in the name of some "tribal" identity.

In this respect, Maalouf is close in his thinking to that of the 1998 Nobel laureate in economics, Amartya Sen (2006), who has also argued that individuals can appraise their identities rather than be captives of them. Both writers, then, closely associate individual identity with this reflective capacity. Their understanding of what it means to be an individual contrasts with the view in much of social science that takes individuals to be unconsciously responsive to a variety of motives, drives, and desires.

SEE ALSO *Ethnic Fractionalization; Ethnicity; Identity; Identity Matrix; Politics, Identity; Religion; Sen, Amartya Kumar; Tribalism; Violence*

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IDENTITY

Identity is a pervasive concept in popular culture. Broadly speaking, *identity* refers to the overall character or personality of an individual or group. For example, a young mother might define her identity as that which reflects the essence of who she is (such as being a woman, spouse, and parent) and how she got to be that way. A business can have its own identity, perhaps defined by its unique corporate culture or its advertising history. Significant historical events like wars, natural disasters, or surges in immigration can play important roles in helping to define a nation's identity.

On the one hand, the defining features of identity frequently entail elements that must be "found" by an

individual or group. For example, a musical group or the cast of a television show might have to work together for a long period of time before its performances flow smoothly and effortlessly and it is able to establish its own voice or overall character. Adolescents as well as adults can pass through *identity crises* that refer to periods of personal uncertainty or confusion. When a sports coach talks about his or her team finding its identity, this may refer to the development or recognition of a consistent way of playing or performing.

On the other hand, individuals or groups can also "lose" their identity through a variety of events or circumstances. For example, when politicians, celebrities, or other public figures engage in controversial behavior, those individuals must frequently work to reclaim or redefine their identities. A company that has made poor business decisions might be referred to as having lost its corporate identity. The modern phenomenon of *identity theft* is another example of identity loss, although it is more accurate to refer to this phenomenon as *identification* or *ID* theft. The popularity of the *identity theft* label suggests that an important part of lay definitions of individual identities are the public, demographic, and commercial means of identification.

As the previous examples illustrate, the popular boundaries of the identity concept are quite broad. This concept is similarly pervasive and broad in the theories and research of the social sciences and humanities. *Self* and *identity* are frequently used interchangeably by such theorists and researchers. In fact, sometimes writers will combine the terms into concepts such as *self-identity* or *ego-identity*. Within the social sciences and humanities, different disciplines emphasize different components of the concept. Thus, it is useful to consider how different fields define and operationalize identity.

Social science theorists and researchers distinguish a large number of different kinds of identity. Examples of identity types include racial, ethnic, group, social, religious, occupational, gender and sex role, cultural, physical and bodily, musical, athletic, academic, and so forth. Among these different identity types, a common distinction is made between *personal* and *social* identities. Personal identity usually refers to the unique characteristics of a person, including personality traits, personal values, opinions and preferences, physical characteristics, and career and lifestyle choices. In other words, these refer to aspects of a person's identity that are distinct and different from other people. Social identity usually refers to one's social roles, such as gender, racial, religious, political, ideological, and national group memberships. Typically, these roles involve ways that a person's identity is similar to others, such as sharing a physical characteristic, speaking a common language, having a similar social class or socioeconomic status, practicing the same religion, or living in a common region.

Regardless of whether one focuses on personal or social facets, identity development involves a sense of sameness, continuity, and unity. Philosophically speaking, personal identity refers to the extent that an individual's characteristics are the same over time. That is, identity establishes the conditions that define a person's stable uniqueness. This can refer to the physical, psychological, and social aspects of the person. Thus, most social scientists agree that identity is something that develops over time and requires organization and integration, often achieved through the resolution of personal or social conflicts or crises. The failure to achieve some degree of identity coherence is thought to be a symptom of psychological, social, or cultural problems.

Identity also entails an individual commitment to a set of values and goals associated with specific characteristics. For example, much of personal identity involves identifying one's unique features and determining the value of those features and how they relate to a person's short-term and long-term goals. Social identity supposes an awareness of one's group memberships, as well as some level of commitment, closeness, or emotional attachment to those groups. People who highly value their social identities are more likely to act in ways that are consistent with those roles than people who do not value their social identities. Identity development is, therefore, tied to how people think about themselves and how they decide which aspects of their experience are most important as they define themselves. In other words, the development of identity involves personal and social processes of definition, construction, and negotiation.

HISTORY OF THE IDENTITY CONCEPT

The pervasiveness of identity-related concerns is a relatively recent cultural and historical phenomenon. The psychologist Roy Baumeister (1986) described several influential social trends in European and American societies running from about 1500 to 1800. During these centuries, a variety of social, cultural, and economic changes corresponded with a shift in how philosophers, artists, writers, and the lay public viewed personhood and identity. Since the Middle Ages, there has been a weakening of the importance of a person's geographical home and of the institutions of marriage and job in defining one's identity. At the same time, the formerly important roles of one's family of ancestry, social rank, gender, and religion have been at least somewhat trivialized. Thus, traditions and institutions that had previously defined people's identity lost importance and influence.

These changes corresponded with new views on what constituted a person's identity. For example, people began to consider the possibility that there is a hidden self; that individuality is important; that there is a separation of their public, social lives from their private lives; and that children develop and have their own potentialities worthy of attention. In other words, the boundaries of identity became increasingly broad and malleable. Baumeister (1986) argued that these trends continued through the twentieth century, reflecting an age of mass consumption, greater occupational choices, dramatic technological changes, and the marketing of both products and people. The net effect of these social, cultural, and economic changes is that people in industrialized societies are now plagued with difficulties in defining their identities. Because of the loss of traditional ways of knowing who one is, the more abstract, elusive sense of identity makes it increasingly difficult to define. Much more than was the case one hundred or two hundred years ago, people must work to find or uncover who they are, in order to resolve the dilemmas of modern personhood.

Contemporary identity requires choice, achievement, and frequent self-redefinitions as opposed to the passive assignment of identity of the past. With the widespread desire for establishing and determining one's individuality and uniqueness comes greater difficulty, choice, and effort in achieving this. For instance, modern identity can be constructed out of one's personality traits, material possessions, personal accomplishments, group memberships, and activities and organizations. For these reasons, various writers have labeled identity as "empty," "saturated," and "overburdened," and as reflecting "an epidemic of role distance" (Hoyle et al. 1999, p. 49). Some writers argue that European and American culture's extreme preoccupation with an inner, independent identity leads to a devaluing or ignoring of the social world and the potential negative effects of contemporary social arrangements. This causes a seeking out of experiences and material possessions in order to avoid feelings of worthlessness or identity confusion.

TREATMENTS OF IDENTITY IN THE SOCIAL SCIENCES

Identity is a topic of extensive theory and research for many of the social sciences. Two disciplines that have devoted a great deal of attention to identity are sociology and psychology. Sociologists generally define the overall self as consisting of multiple identities tied to the different roles a person plays in the social world. Early twentieth-century sociologists such as Charles Horton Cooley (1864–1929) and George Herbert Mead (1863–1931) emphasized how other people provide "reflected appraisals" that encourage the understanding and establishment of a sense of identity. In his 1959 book *The Presentation of Self in Everyday Life*, the sociologist Erving Goffman (1922–1982) brought a dramaturgical approach to social identity. Goffman theorized that people play social roles like actors on a stage, claiming and becoming committed to a particular public or group identity. Part of this identity includes a public "face" that a person claims and then defends in social interaction. In later writings, Goffman presented the idea of a "spoiled" identity, in which a person can be stigmatized as a result of deviant behaviors or personal characteristics.

More recently, the symbolic interactionist perspective has assumed a prominent role in the sociological approach to identity. Contemporary versions of symbolic interactionism examine how a person's identity is affected by the elements of social structure, in particular the social positions or roles that one plays and the meanings and expectations associated with those roles (Stets and Burke 2003). Role identities may differ in number, prominence, salience, and value to an individual, and sociologists have conducted a great deal of research on these aspects of role identity. For example, a greater number of role identities have been associated with greater resistance to stress and more positive mental health, particularly when those identities are voluntary or freely chosen ones rather than when they are conferred or obligatory.

The meaning of a role identity is something that a person must determine and negotiate. As such, it can be affected by the reactions of others. Over time, there can be changes in a role, as well as in the identity associated with that role. For example, when a person takes on a new role of being a spouse in a married couple, specific behaviors associated with that role must be defined and may change over time. In addition, the definition and boundaries of the spouse identity can change. Thus, the taking on, development, internalization, and changing of multiple roles comprise the most important features of identity from a sociological perspective.

Within psychology, the best-known treatment of identity comes from Erik Erikson's (1902–1994) psychosocial stages of development across the lifespan (Erikson 1968). When and how does a coherent sense of identity develop? Research suggests that identity concerns are especially prominent among late adolescents and early adults. This seems to be due to the fact that it is only by this time that young people become physically and sexually mature, are competent in abstract thought, show increased emotional stability, and have a certain amount of freedom from parental and peer constraints. Younger children are typically not assumed to have an identity (at least in the overall coherent and stable sense of the term). However, aspects of identity (e.g., age, sex, and race) have been shown to be important to the self-perceptions and

self-definitions of younger, preadolescent children. Understanding how a person is similar to and different from others is an important part of identity formation. In this regard, significant others can help to define the developing sense of identity.

In Erikson's theory, adolescence is a time of increased power and responsibility and also a time when young adults must determine who they are and where they fit into their culture and society. Thus, the struggle for a sense of identity and the formation of a "philosophy of life" seems to be especially intense during this period. There are several different ways that young adults might deal with their identity struggles (Marcia 1980). For example, a person might show identity *foreclosure*. This can occur when people prematurely commit to and unquestioningly adopt the beliefs, values, or roles prescribed by parents rather than going through the process of developing their own beliefs, values, and career choices. Second, people may delay commitment in order to try out alternative identities, beliefs, roles, or behaviors. In this situation, called an identity *moratorium*, such people are actively caught up in the throes of the identity struggle and are striving to resolve it. However, they have yet to develop a coherent and stable identity.

A third possible outcome of the young adulthood identity crisis is called identity *diffusion*. This refers to an unwillingness to confront the challenge of charting a life course and a failure to achieve a stable and integrated sense of self. Unlike in the moratorium, such people show little concern or effort to resolve their self-doubt, apathy, and passivity. Finally, people can arrive at a sense of self and direction and form an integrated image of themselves as unique persons. This is called identity *achievement*. Such individuals have passed successfully through the identity crisis and are now able to make a commitment to a career objective and a personally meaningful set of beliefs and values. For Erikson and other identity theorists, adequate identity formation is the foundation of sound psychological health in adulthood. Identity confusion can interfere with important developmental transitions during the adult years.

More recent psychological approaches to identity include the idea that self-narratives or life stories serve as central features in the creation of a person's identity. Psychological research also shows that people engage in a wide variety of behaviors to construct, test, and confirm their identities. For example, social psychologists have studied the processes by which people present specific identity aspects to others and manage the impressions that others form of them. What makes particular identity characteristics salient is likely to be tied to the social setting or context. Psychologists are also interested in studying how organized cognitive structures (or schemata) serve to maintain a person's identity. For instance, cognitive structures can filter out competing or inconsistent information or lead to other forms of biased information processing that serves to protect or maintain one's identity.

Whereas sociologically based identity theories focus more on the different roles that constitute a person's identity, psychologically based social identity theory deals with how membership in groups is associated with self-categorization and social identities. For example, those who belong to the same group are seen as *ingroup* members, whereas nonmembers or those who belong to different groups are seen as *outgroup* members. A large amount of research has shown that such ingroup-outgroup categorization (sometimes based on arbitrarily defined group membership) results in ingroup favoritism and outgroup discrimination. Thus, it appears that merely belonging to a group can create meaningful social identities with strong attitudinal (e.g., prejudice) and behavioral (e.g., discrimination) implications.

Other disciplines within the social sciences and humanities also have utilized the identity concept in their theories and research. For example, political scientists are interested in the role of identity as a source of people's political beliefs or political party affiliation. They are also interested in how identity is affected by isolation, alienation, anomie, and social injustices in modern society and how these problems impact social structure, political party affiliation, political action, and international relations. As such, the identity concept is one of many factors that can affect political actions and larger social conflicts.

Political scientists sometimes focus on how membership in particular groups is associated with a specific identity that may have implications for social movements, community mobilization, and other forms of collective behavior. That is, through the identification or construction of a collective identity, groups may be able to increase pride and consciousness, mobilize resources, and bring about societal changes. In other words, groups may strive to expand the range of a particular identity characteristic into a political force with accompanying social and legislative reforms. This process is referred to as *identity politics*. Examples of identities that fall into this category include religion, race, ethnicity, gender, and physical disability. Critics have argued that politicizing an identity component can be counterproductive to the goal of social change. For example, by calling attention to a specific identity, a group may find it more difficult to address the social injustices associated with it. Or there may be broader social or cultural backlashes directed toward a group identity.

Anthropologists and other social scientists have explored the processes of cultural identification and cultural variations in identity construction. A popular dis-

tinction relates to identity differences that are based on independent (or individualistic) and interdependent (or collectivistic) cultural construals. Educational researchers consider the development of academic identity and the relationship of various identity facets to academic achievement. Business and marketing researchers examine the mechanisms and processes associated with developing a corporate or brand identity in consumers. Within the humanities, a great deal of attention has been devoted to cultural and historical trends in the construction and management of identity (e.g., identity politics) and how identity is represented in and affected by works of art, music, theater, and literature.

Some of the current issues related to the identity concept include how to best measure the different kinds of identities and how multiple identities (and conflicts among these) affect behavior in specific situations. In addition, the development of different kinds of identities and how they interrelate from childhood through adulthood has received little research attention. How do multiple identities overlap and affect individual and group behavior? This is a particularly important question when considering broad social, cultural, or nationalistic actions, where several different identities may combine or conflict. For example, adopted or biracial children may experience unique issues as they attempt to develop their racial or cultural identity. More broadly speaking, one of the effects of an increasingly multicultural world is that the establishment of one's identity may become more difficult or complicated. One interesting domain for identity theorists and researchers concerns how technological changes, particularly those associated with the Internet, affect identity processes. For example, the social scientist Sherry Turkle (1995) has shown that exploration of new, alternative, and multiple identities has become significantly easier and more varied through online communities, multiuser domains, role-playing games, and fantasy worlds.

In summary, identity is a very broad and influential concept in the social sciences and humanities. It has proven to be remarkably fluid and malleable, with different disciplines able to define identity in ways that best suit their purposes and emphases. The cultural and historical trends that led to changes in identity over the past several centuries are likely to continue to provide new challenges to identity formation in the future. Increasing globalization, industrial development, scientific advances, and technological innovations will mean that difficulties in defining identity will be a worldwide phenomenon.

SEE ALSO *Adolescent Psychology; Cyberspace; Economics, Behavioral; Economics, Stratification; Erikson, Erik; Ethnicity; Gender; Goffman, Erving; Groups; Hybridity; Identity Crisis; Identity Matrix; Identity, Social; Internet; Nation; Nationalism and Nationality; Performance; Personality; Politics, Gender; Politics, Identity; Popular Culture; Psychology; Race; Representation; Role Theory; Self-Classification; Self-Representation; Social Science; Sociology; Stages of Development; Values*

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IDENTITY, SOCIAL

Social identity is defined as an individual's identification *with* others. In contrast, the concept of personal identity can be understood as an individual's identity *apart* from others. At the same time, social identity and personal identity are clearly related. Furthermore, whereas individuals are usually thought to have a single personal identity, they have many social identities associated with the many different collections of other individuals with whom they identify. These different collections of other individuals are usually thought of as social groups, though there are different ways to understand the idea of a social group, explain its boundaries, and account for the attachment individuals have to social groups. For example, individuals might identify with others by race, gender, nationality, and religion (very large social groups or social categories), with those in their workplaces and communities (intermediate size social groups), and with friends and family members (small social groups). In all cases, social identity provides a social basis for how individuals see themselves—a *sense of self* or *self-image*—that depends on their seeing themselves as being much like a reflection of those others with whom they identify.

There are two broad approaches to understanding social identity: the social identity approach (particularly in

the form of self-categorization theory) and the sociological approach to identity (Hogg, Terry, and White 1995). The social identity approach derives principally from the work of Henri Tajfel and John Turner, who explain social identity in terms of the individual's knowledge that he or she belongs to certain social groups, combined with the emotional and value significance this membership imparts. Self-categorization theory concerns the cognitive processes by which individuals come to identify with others and embrace membership in social groups. In experimental research, individuals exhibit in-group favoritism and out-group biases for arbitrarily constructed social identities. This can be understood as an "accentuation effect" of group membership, whereby once individuals believe a particular social category applies to them, they perceptually "accentuate" both the similarities among stimuli falling within that category and the differences between stimuli from that and other categories (Tajfel 1959). Tajfel argued that the accentuation effect helps explain such phenomena as stereotyping, prejudice, and ethnocentrism.

The sociological approach to identity derives from the symbolic interactionist thinking of George Mead, and assumes there to be a reciprocal relation between the self and society or between the self and individuals' social identities (Stryker 1980). Social groups are seen as being structured in terms of different roles, and individuals accordingly have different types of relationships to social groups depending on the roles they occupy in those groups (Stets and Burke 2000). Roles can be paired with counter-roles (such as parent and child), or in more complicated group and institutional settings (such as in business firms) where roles are more highly differentiated, they can exhibit a variety of interconnections with one another. On the assumption that there is a reciprocal relation between the self and society, roles are subject to interpretation and negotiation, while at the same time individuals generally seek to match their own self-conceptions or self-images with social expectations of their roles. Thus, whereas social identity theory focuses on in-group and out-group relationships with respect to particular social groups, the sociological approach focuses on how individuals' social identity relationships are structured and negotiated within social groups.

Neither the social identity approach nor the sociological approach to identity pays significant attention to the relationship between social identity and personal identity. Yet the meaning of social identity as "identification with others" implies that there is a separate someone who identifies with others, and thus that individuals have an identity apart from or over and above their social identification with others. Also, the idea that an individual has many social identities implies some concept of personal identity, if only because it assumes the existence of a single subject to whom those multiple identities belong. Thus, the concepts of social identity and personal identity are related to one another, and need ultimately to be explained jointly to give a full understanding of either concept. Unfortunately, little has been done to develop this more comprehensive kind of explanation.

SEE ALSO *Collective Wisdom; Communication; Gender; Groups; Groupthink; Identification, Racial; Identity; Identity Matrix; Mead, George Herbert; Prejudice; Race; Role Theory; Self-Classification; Self-Identity; Social Cognitive Map; Social Psychology; Society; Sociology; Symbols*

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IDENTITY CRISIS

"Identity versus Identity Confusion" is the fifth of Erik Erikson's eight psychosocial stages of development, which he developed in the late 1950s. Adolescence is the most salient time for defining identity, the process of determining the meaning, purpose, and direction of one's inner, unique core of self—while also maintaining some sense of sameness and continuity with one's past and of comfort within the context of one's culture. An identity crisis is "a necessary turning point, a crucial moment, when development must move one way or another, marshaling resources of growth, recovery, and further differentiation" (Erikson 1968, p. 16). The most common use of the term *identity crisis* refers to normative psychosocial development during the periods of adolescence and emerging adulthood. This concept of crisis, however, has been applied quite broadly, at times being used to include not only healthy individual growth but also other issues of individual therapy and reconsiderations of what it means to be part of a reconstituted nation in the process of rapid historical change.

Based on Erikson's epigenetic principle, each of the other seven psychosocial stages has implications for the quality of identity resolution. Along a continuum within each stage, a person will express healthier psychosocial development if that stage's crisis is resolved with more positive (syntonic) outcomes. Ideally, for example, one develops reasonable trust in the world, autonomy, initiative, efficacy, identity, interpersonal desire, worth, and finally with stage eight, satisfaction. The results of ego syntonic or dystonic outcomes may include viewing one's self as either protected or vulnerable in the world, self-controlled or disordered and dependent, ambitious or evasive, competent or incapable at tasks, committed or lacking conviction, loving or reclusive, productive and caring or not valued, and a success or a failure. Unsatisfactory aspects of one's identity in these areas (i.e., being more dystonic) may lead to crisis, in which one must rework a previous stage and seek a different outcome.

James Marcia has provided the most influential empirical framework for identity formation. He has focused on a behavioral expression of identity by investigating the processes of exploration of alternatives and commitment to values, beliefs, and goals in various life domains, such as career and ideologies. From the dimensions of exploration and commitment, he derived four identity statuses: Achievement (exploration resulting in commitment), Moratorium (present exploration with the intention of achieving a commitment), Foreclosure (ascribed commitment with no exploration), and Diffusion (no commitment whether exploration has taken place in the past or not). Moratorium is the status of "crisis" or exploration, defined by the need to arrive at a self-definition, which is actively propelled by the individual. In 1990 Alan Waterman described an important goal of identity exploration as the identification of potential talents, the development of which can lead to feelings of personal expressiveness. It is the responsibility of significant others to aid the individual in learning the process of exploration and to provide information that may help the individual to arrive at a commitment that is exemplified by continuity, "goodness of fit" within self, and appropriateness within one's social contexts. While each individual should find unique domains of importance, individuals identified as being in a state of long-term Diffusion, without meaningful self-definition in any domains of significance, may be perceived especially as being in need of counseling. These individuals approach the task of identity with passivity or perhaps apathy, and they have poor resolution of at least some of the other psychosocial stages of development.

Working within Erikson's psychosocial theoretical perspective, decades of research have emerged from Marcia's empirical framework focused on development in numerous and varied contexts (e.g., Marcia 1966; Kroger 2007). Examples of other contemporary approaches to identity and its measurement include the structural stage perspective, which focuses on internal structures that provide meaning making, and the sociocultural perspective, which focuses on the roles and status granted by one's society. These and other frameworks are described and critiqued by Jane Kroger in *Identity Development: Adolescence through Adulthood* (2007).

Mixed societal demands are particularly problematic for identity formation and its refinement at a time when one is seeking continuity or looking to find a sense of one's uniqueness yet still fit within one's societal parameters over time. In those instances in which one is part of a minority (e.g., by race, ethnicity, or sexual orientation), or if one has identifications with multiple groups (e.g., by being biracial), or if one is pulled by conflicting messages (e.g., those coming from the media and the family), an identity crisis is likely to emerge. Respect for diversity of self would go a long way in allowing people to be "uniquely themselves" while belonging to a community. Healthy "crisis" or exploration can afford people the opportunity to knowledgeably investigate choices in which there is positive meaning with regard to where they have come from, where they presently exist, and where they envision their future to be.

SEE ALSO *Ethnicity; Identity; Self-Concept; Self-Identity*

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IDENTITY MATRIX

The identity matrix I_n is an $n \times n$ matrix with 1s along the main diagonal and 0s in the off-diagonal elements. It

can be written as $I_n = diag(1, 1....1)$. For instance, for $n = 3$, the matrix looks like

$$I_3 = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} = diag\,(1,1,1)$$

The columns of the identity matrix are known as the *unit vectors*. For the above example, these are $e_1 = (1\ 0\ 0)'$, $e_2 = (0\ 1\ 0)'$, and $e_3 = (0\ 0\ 1)'$. If the dimension of the matrix is 1×1, the matrix reduces to the scalar 1.

The identity matrix has the following properties:

1. It is square, that is, it has the same number of rows and columns.
2. It is symmetric, that is, transposing rows with columns (or vice versa) we obtain the matrix itself, that is, $I = I'$ where I' is the transpose matrix.
3. It is idempotent, that is, $I^2 = I$; in the scalar case this is equivalent to $I^2 = 1$.
4. For any $n \times n$ matrix A, multiplication by the identity matrix delivers the matrix A itself, that is, $AI = A$; in the scalar case this is equivalent to $a \times 1 = a$.
5. It has the commutative property, that is, for any $n \times n$ matrix A, $AI = IA = A$; in the scalar case, this is equivalent to $a \times 1 = 1 \times a = a$.
6. For any nonsingular $n \times n$ matrix A, there exists a matrix A^{-1} such that $AA^{-1} = A^{-1}A = I$ where A^{-1} is called the inverse matrix of A. In the scalar case, this property is equivalent to the inverse operation of multiplication (or division), that is, $a \times \frac{1}{a} = \frac{1}{a} \times a = 1$.
7. It has full rank; the n columns (or the n rows) of the matrix are linearly independent vectors and consequently the determinant is different from zero. The only symmetric, idempotent, and full rank matrix is the identity matrix.
8. Because I is a diagonal matrix, its determinant is equal to the product of the elements in the main diagonal, which in this case is equal to 1 regardless of the dimension of the matrix. A positive determinant is a necessary and sufficient condition for the identity matrix to be a positive definite matrix. The trace of the identity matrix is $tr\ I_n = n$, which is the sum of the elements in the main diagonal.
9. The n eigenvectors of the identity matrix are the unit vectors, and all the n eigenvalues are equal to 1.

Matrix algebra is a fundamental tool for the econometric analysis of general regression models. Classical estimation methodologies such as Ordinary Least Squares (OLS), Nonlinear Least Squares, Generalized Least Squares, Maximum Likelihood, and the Method of Moments rely on matrix algebra to derive their estimators and their properties in an elegant and compact format. The identity matrix shows up in several technical proofs. For instance, the identity matrix is an integral part of a projection matrix. In the OLS regression of y on X with a sample of size n, the projection matrix is $P \equiv (I_n - X(X'X)^{-1}X')$. It is important because when P is applied to a vector such as y, the result is the fitted values of y through the regression, that is, $\hat{y} = Py$.

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IDEOLOGY

The previous edition of this *Encyclopedia* contains two entries devoted to *Ideology*, one on its concept and function by Edward Shils, the other on "Ideology and the Social System" by Harry M. Johnson, which taken together well illustrate the difficulties involved in achieving a common understanding of the term's meaning. Shils's contribution is quite stipulative and opinionated. After distinguishing ideologies from "outlooks and creeds, systems and movements of thought, and programs" (p. 66), it asserts that "all ideologies—whether progressive or traditional, revolutionary or reactionary—entail an aggressive alienation from the existing society," that "participation in the routine life of the civil political order is alien to the ideological spirit" (p. 68), and that no great ideology has ever considered itself obliged to respect the modern, scientific spirit in its quest for truth (p. 73). Johnson, while apparently agreeing to some extent with this final assertion of Shils's and offering some important observations about the historical role of the concept, is most concerned to explore the role of ideologies within the theoretical framework developed by Talcott Parsons. Nevertheless, however unscientific it may be thought to be, the term *ideology* has come to play a very prominent role in the discourses of virtually all of the social sciences, so that it is essential to attempt to clarify its meaning(s).

ORIGINAL MEANING

The simple original sense of the term, first deployed by Antoine Destutt de Tracy, was, parallel with the Greek-based names of so many academic disciplines, the study of

ideas. Tracy's intention, as a materialist philosopher, was systematically to map the material origins or causes of the ideas in people's heads, and to this end he directed the short-lived Institut de France where such research was undertaken. It briefly enjoyed the favor of Napoleon Bonaparte, who later turned against it. Upon returning from his defeat in Russia in 1812, Napoleon denounced ideology, in an address to the Conseil d'Etat, as a dark metaphysics, dedicated to a subtle search for first causes upon which to base laws. Rather, he urged, laws should be based on a knowledge of the human heart and on the lessons of history. Ideology, he concluded, was responsible for all the misfortunes that had befallen "our beautiful France" ("*notre belle France*"). In other words, for Napoleon the problem with ideology—quite paradoxically, in light of some contemporary conceptions of it—was that it was based on an excessively scientific philosophy. Since that time, the term *ideology* has never entirely escaped the pejorative connotations that Napoleon imposed upon it.

Karl Marx and his lifelong colleague Friedrich Engels wrote a lengthy, highly polemical manuscript entitled *The German Ideology* in which this pejorative sense predominated. Although it was to be the better part of a century before this product of the mid-1840s was published in full, its core notion of ideology was reflected in other works of theirs, such as *The Communist Manifesto* (1848), and thus became a part of the broad Marxist tradition. According to this notion, ideologies are large thought-systems (e.g., metaphysics, morality, and religion) that in reality have their basis in human beings' material life-processes, but that mistakenly come to be regarded as independent of the latter and as having a superior life of their own, as supposedly eternal verities. Just such an assumption had been central to the thinking of Hegel, the most influential philosopher during Marx's early years, who saw history itself as the work and self-realization of a supra-material reality that he called *Absolute Spirit*, and who tried to show in some detail just how this was so. For Marx and Engels, ideologies typically have the conservative effect of justifying existing relationships of dominance and subordination; thus, according to them, it was not surprising to find contemporary "bourgeois ideologists" defending the capitalist system as the highest and best possible, or in Hegel's terms as "the end of history." However, at a time of crisis, which they declared their own era to be, a certain segment of the bourgeois ideologists are able correctly to grasp the movement of history and go over to the side of the subordinate class, the proletariat. In this way, readers might infer, members of this enlightened group (among whom they obviously included themselves) succeed in overcoming and getting beyond ideology.

AMBIGUITIES

But there is sufficient ambiguity in *The German Ideology* to explain why some of Marx's intellectual heirs—especially so-called "orthodox Marxists" of the Soviet era—could employ the word *ideology* in a more positive sense, even referring uncritically to "Marxist ideology" in official textbooks of dialectical materialism. Louis Althusser, a French Marxist theorist who exerted considerable influence during a brief period in the 1960s, regarded ideology as an all-pervasive, inescapable phenomenon, one that is closely connected with Freud's notion of the "Unconscious": Ideology, for Althusser, is the mechanism by which, through their imaginations, individuals relate themselves to human existence in different historical epochs. At the same time, Althusser distinguished ideology from science—the latter being, for him, a set of objective concepts detached from interests, the brilliant discovery of which within the domain of history he located in the later work of Marx. (In a very interesting anticipation of what is essentially the same idea—to wit, that there is a strong conceptual contrast to be drawn between science and what others have called ideology—Thorstein Veblen, when discussing the increasingly dominant role of science in the modern world, had also suggested that the continued coexistence, along with science, of more romantic and dramatic as well as pragmatic ways of thinking may be a human necessity.)

By contrast, in his writings of the 1920s and 1930s the Marxist psychologist and psychoanalyst Wilhelm Reich, at once an admirer and a strong critic of Freud, continued to treat ideologies as predominantly negative, repressive phenomena. At the margins of Marxist thinking later in the twentieth century, the French poststructuralist Michel Foucault rejected Althusser's science/ideology dichotomy and increasingly distanced himself from "ideology critique" in favor of minute, detailed examinations of actual disciplinary and other practices in which there are uneven distributions of power. According to Foucault, relations of dominance and subordination cannot be explained primarily in terms of what neo-Marxist partisans of ideology critique, such as Reich, like to call "false consciousness."

This same basic ambiguity has also pervaded much of the non-Marxist literature on the subject. Max Weber, clearer than most in this respect, identified two senses of *ideology*, the first consisting of a reflection of the dominant thought of a given time, the other being the pejorative sense of a manipulative distortion of reality. Johnson, in his previously mentioned *Encyclopedia* article, makes a small, parenthetical concession to this tradition of ambiguity by explaining that, while from his standpoint the expression *ideological distortion* is strictly speaking redundant (because all ideology is for him distortive), neverthe-

less he would continue to use the full expression, "since this technical meaning of 'ideology' is not universally established" (p. 77).

Among treatments of ideology that have been of greatest importance for the social sciences is that of Karl Mannheim, who, in *Ideology and Utopia* (1929), asserted that, in addition to the "particular" concept of ideology—which equates ideology with a "phenomenon of deception," or what Mannheim's Marxist contemporary Georg Lukács called "the reified mind" or more recent thinkers such as Herbert Marcuse often call "false consciousness"—we must also recognize the rise, in modern times, of a "total," more or less universal concept of it, which sociologists of knowledge can explore across various societies and social groups in an historically "relativizing," value-neutral way. Mannheim's advocacy of this kind of theoretically rigorous, scientific, but very broad inquiry seems ultimately to have had the unintended effect of generalizing and "de-fanging" the notion of ideology to such an extent that its contours have become extremely vague and open-ended in much of the more recent literature.

THE "END OF IDEOLOGY"

This tendency was well illustrated in the controversy, which reached its height in the early 1960s, over the alleged "end of ideology." These words constituted the title of a book by Daniel Bell; other, mainly but not exclusively American, political scientists and sociologists, including Seymour Lipset and Edward Shils, also came to be associated with this idea, which came popularly to be regarded as a literal statement about the then-contemporary historical situation. But, as Shils himself makes quite clear at the end of his *Encyclopedia* article, neither Bell nor Shils nor most other "end of ideology" scholars intended to make a blanket statement about the demise of ideology in general, as distinguished, at best, from the demise of certain types of ideological thought such as Marxism. This point is particularly well expressed by the fiercely anti-Marxist Raymond Aron at the end of his preface to the new edition of his 1955 book *The Opium of the Intellectuals*. Aron admits to having previously evoked the end of the age of ideology, and then adds: "But if I detest ideological fanaticism, I like little better the indifference which sometimes succeeds it. … Ten years ago, I thought it necessary to fight ideological fanaticism. Tomorrow it will perhaps be indifference which seems to me to be feared. The fanatic, animated by hate, seems to me terrifying. A self-satisfied mankind fills me with horror" (pp. xv–xvi).

Thus it would appear that social scientists will be unable to dispense with the highly elusive concept of ideology for the foreseeable future, and that, if they ever come to feel that they can, this will probably signify something historically catastrophic.

SEE ALSO *Althusser, Louis; Mannheim, Karl; Marxism*

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William L. McBride

IGNORANCE, PLURALISTIC

Pluralistic ignorance is a psychological phenomenon in which people think they feel differently from everybody else, even though they are behaving similarly. Consider the following case of pluralistic ignorance: On most college campuses, alcohol use is widespread, and students drink, some to excess, at most social functions. Surveys reveal that most students have misgivings about heavy drinking, particularly when it interferes with schoolwork. Nevertheless, they do not act on these misgivings; instead, they publicly conform to campus norms that prescribe a liberal attitude toward drinking and tolerance for drunkenness. These circumstances give rise to pluralistic ignorance: Students take their peers' behavior at face value, assuming that everybody else is much more comfortable with heavy drinking than they are.

The study of pluralistic ignorance originated with Floyd Allport, who coined the term in 1928 to describe the situation in which virtually all members of a group privately reject the group's norms and yet believe that virtually all members of the group privately accept them. In the intervening eighty years, pluralistic ignorance has been linked empirically to a wide variety of collective phenomena, including the failure of bystanders to intervene in

emergency situations, groupthink, the spiral of silence, and the perpetuation of unpopular and deleterious social norms and practices. Once a behavior achieves a high degree of uniformity within a group, pluralistic ignorance fuels its perpetuation.

Pluralistic ignorance often originates in widespread conformity to social norms, driven by a desire both to gain peers' approval (normatively based conformity) and to do the right thing (informationally based conformity). When this conformity produces consensual behavior that belies private misgivings, pluralistic ignorance is frequently the result. People recognize that their own actions are driven by a desire to be in step with their peers, but assume that everybody else's actions reflect their private convictions. This dynamic has been shown to produce pluralistic ignorance in a wide variety of attitudinal domains, including students' attitudes toward alcohol use on campus, nurses' attitudes toward their jobs, racial attitudes during the civil rights movement, and the opinions of board members about the declining performance of their firm.

Pluralistic ignorance also arises when uniform behavior is driven by other social motives. Consider, for example, the plight of two individuals trying to initiate a romantic relationship. Their interest in each other is mingled with fear of being rejected, and as a consequence, neither is willing to make the first move. Yet, even though both are behaving similarly, they interpret this behavior differently: They see their own inaction as driven by fear of rejection and the other's inaction as driven by lack of interest. In this case, it is not conformity that produces consensual behavior but rather common fears and anxieties. Pluralistic ignorance results from people's failure to recognize just how common their fears and anxieties are. This dynamic has been shown to produce pluralistic ignorance in a variety of interpersonal settings, including interactions between potential romantic partners, interracial contact situations, college classrooms, and public emergencies.

SEE ALSO *Conformity; Genocide; Groupthink; Herd Behavior; Lynchings; Milgram, Stanley; Psychology*

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Deborah A. Prentice

ILLEGITIMACY

SEE *Births, Out-of-Wedlock.*

ILLUMINATI, THE

Although many groups have referred to themselves as "the Illuminati," or "enlightened ones," the term most commonly refers to the Order of Illuminists, an organization founded by Adam Weishaupt (1748–1830), a law professor at the University of Ingolstadt in Bavaria, and four of his friends on May 1, 1776. The Order's stated mission was "to encourage a humane and sociable outlook; to inhibit all vicious impulses; to support Virtue, wherever she is threatened or oppressed by Vice, to further the advance of deserving persons and to spread useful knowledge among the broad mass of people who were at present deprived of all education" (Johnson 1983, p. 45). While these aims appear moderate, they were in fact a proposal for sweeping social change. The Illuminati and their goals so threatened Bavaria's political and religious authorities that Karl Theodor, the prince-elector and duke of Bavaria (r. 1724–1799), banned the group in 1787.

The Illuminati emerged as a reaction to the social and political environment of Bavaria in the late eighteenth century. Its institutions were dominated by the Church, and the Jesuits controlled university education. Weishaupt was frustrated by their interference in the university curriculum, particularly their resistance to the dissemination of ideas of the French Enlightenment (Billington 1980). That frustration moved him to create the Illuminati, which he hoped would spread Enlightenment philosophy and put it into practice.

Weishaupt was convinced that a secret society was the most effective way to accomplish these goals, and he utilized his experience with the Jesuits and Freemasons to create his new organization. Although he viewed the Jesuits as his enemies and the Freemasons as conservative and apolitical, he admired their secrecy, discipline, and organization, as well as their capacity to pursue their own interests even (in his view) at the expense of the interests of society as a whole (Roberts 1972). Weishaupt deliberately recruited Freemasons and used the organization's structure and symbolism as a model for the Illuminati. Members took pseudonyms (Weishaupt became Spartacus) and utilized Zoroastrian symbols to describe themselves and their ceremonies. Initiates read classical political philosophy, and as they moved through the movement's ranks they were gradually exposed to the Illuminati's true purpose: to spread the Enlightenment ideas of rationalism and egalitarianism. Only those within the movement's inner circle, the Areopagus, were told of its related political goals. The Illuminati members were to

infiltrate the social and political institutions of Bavaria and initiate a peaceful revolution. Bavaria would be freed from the tyranny of the Church, and reason and equality would flourish.

Membership in the Illuminati proved tremendously appealing to members of the Bavarian middle and upper classes. From its origins in Ingolstadt, the movement grew rapidly. By 1779, it had members in at least four other Bavarian cities, and by the time it was banned in 1787, its membership numbered between two and four thousand (Roberts 1972).

Although the Order of the Illuminists was short-lived, it had considerable influence. Cloaked in secrecy and symbols, the real substance of the Illuminati was its propagation of Enlightenment ideas. Theodor could declare that anyone caught recruiting new members would be executed and thus ensure the effective end of the organization, but he could not stop the influence of Enlightenment ideas on those who had come into contact with them. The Order's members were scattered across the upper echelons of Bavarian society, and many were well placed to influence others. Its membership included doctors, lawyers, judges, professors, and government officials. Their exposure to Enlightenment philosophy affected the way they approached politics and probably also influenced those with whom they came into contact. Theodor attempted to purge the Illuminati from positions of power, but military force cannot, in the end, stop the spread of ideas. Illuminism became a source of inspiration for revolutionaries on both the left and right of the political spectrum (Billington 1980).

Weishaupt's greatest genius may have been his transformation of the secret-society model into an effective political instrument. In devising the Order's structure and doctrine, he made two important innovations. First, he deliberately created the Order of Illuminists as a political organization. He understood that secrecy could be not only an end in itself but also a political strategy. Second, he used existing secret organizations—namely, the Freemasons—for his own ends. In doing so, he created a network of secret societies that could be used for his own political purposes. While these achievements furthered his immediate goals, they also insured the Illuminati a place of particular importance in the history of conspiracy theories.

Conspiracy theories—expressing the belief that some covert power with malicious intent is directing world affairs—became a popular mode of political explanation in the early twentieth century, and they remained popular into the twenty-first century. Typically, conspiracy theories emerge during times of social change; they provide believers with a sense of certainty in uncertain times. The Illuminati play a pivotal role in many of the most influential modern conspiracy theories; the organization is, for example, believed in league with forces as diverse as aliens, Jewish financial power, and the individuals behind the events of September 11, 2001. Most scholars argue that the Order of Illuminists does not control history in this way. While political conspiracies have certainly existed—secrecy is often an element of political strategy—human beings exist in a contingent world and are limited in their ability to control history.

The Order of Illuminists therefore remains relevant today. It is most effectively understood as an eighteenth-century model of the power of secrecy and the use of allies in executing political strategy.

SEE ALSO *Politics; Secrecy*

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Martha F. Lee

IMITATION

SEE *Social Learning Perspective.*

IMMIGRANTS, ASIAN

Asian migrations to the United States form one aspect of a dynamic, global social process that has seen peoples from Asian nations create new communities in such diverse destinations as the United States, Cuba, Canada, Mexico, Peru, the United Kingdom, East Africa, South Africa, and nation-states in Europe. This demographic movement happened over a long period of time and it continues to this day. The U.S. chapter of this worldwide story is both emblematic of these processes and singular in its own right.

When one speaks of Asian migrations to the United States one must underscore the diversity of these movements. Before World War II (1939–1945), Asian migration flows came from five major streams originating from particular regions in China, Japan, Korea, the Philippines, and India. After World War II, and especially after 1965

and 1975, Asian flows diversified to include South Asia and Southeast Asia. From the former came entrants from Pakistan, India, the Maldives, Nepal, Bhutan, Bangladesh, and Sri Lanka. From the latter came Vietnamese, Hmong, Laotian, Cambodian, and Thai contributors to modern Asian America.

The long roots of Asian migration can be traced as far back as 1763, when shipworkers from the Philippines, "the Manila men," established themselves as a community in what is today Louisiana. Other pioneer Asian arrivals came earlier than the better-known migrations to California in the 1840s, and they showed up on the Atlantic Coast, not the Pacific. In 1785 a ship with a crew of "Chinese, Malays, Japanese, and Moors" arrived in Baltimore, and South Asians worked in Massachusetts and Pennsylvania as indentured servants in the 1790s. By 1856 an estimated 150 Chinese lived in lower Manhattan in New York, working such jobs as sailors, ship workers, cooks, and stewards. These forgotten early Asian settlers on the Atlantic Coast preceded the Asians and Pacific Islanders who were lured to California by the gold rush of the late 1840s.

Chinese settlements produced political and social reactions in the United States, particularly in California after 1850. This agitation continued and grew in force until it culminated in the 1880s with Congress passing the first Chinese laborer suspension act, thus creating the Chinese exclusion system. From 1882 to 1904 the U.S. Congress passed at least seven major amendments that continued and amplified the Chinese exclusion statutory regime. Ostensibly promulgated to suspend Chinese laborer migration for a period of time, the laws had the overall social and legal effect of controlling the movements of Chinese-derived persons, both across the Pacific and across the United States.

Although exclusion was technically limited to the Chinese, the logic of the exclusion laws could be applied to other Asian immigrants and their communities. That logic found its most powerful expression in the legal idea of ineligibility for citizenship. Based on a judicial decision in 1879 that declared Chinese to be ineligible for U.S. naturalization, various federal judges applied the same racially based rule to other Asian groups and individuals. As a result, state governments barred persons ineligible to be citizens from owning property and pursuing a range of occupations. This logic was adopted by the Supreme Court in two decisions in 1922 and 1923 that successively denied U.S. naturalization to those of Japanese descent and those of "Hindu" or South Asian origins.

As exclusion grew, so did the territorial reach of the United States. When the United States made its foray as a world power after defeating Spain in the Spanish American War in 1898, it asserted control over Spain's former Pacific possession, the Philippine Islands, thus precipitating another stream of Asian migration. Filipinos moved to the United States to work in California agriculture in the 1920s and 1930s, or to take up university scholarships provided by the government. At the same time, exclusionary rules were being applied to Chinese living in the Philippines. In addition to the Philippines being included under Chinese exclusion, would-be migrants from other areas of the Pacific, East Asia, and the Near East fell under exclusionary bans inspired by the Chinese exclusion precedent. On February 5, 1917 the U.S. Congress banned the entry of aliens from a large segment of the world marked off as the "Asiatic Barred Zone," an area that included Indochina, India, Burma, Thailand, the Malay States, the East Indian Islands, Asiatic Russia, the Polynesian Islands, and parts of Arabia and Afghanistan. With the exception of teachers, merchants, and students, no one from the zone was eligible for U.S. entry

The U.S. involvement in World War II was a watershed era for all Asian-derived communities in the United States. Chinese exclusion came to a formal end in December 1943 when the U.S. Congress repealed it in an attempt to bolster China as a wartime ally. Korean Americans living in the United States, along with other Asian-derived Americans, joined the U.S. armed forces. Filipinos benefited from an improved public image due to their homeland's resistance to the Imperial Japanese Army. During the war, South Asians were emboldened to seek U.S. citizenship rights, and both Filipinos and South Asians received U.S. naturalization rights in 1946. Although these communities gained from the U.S. involvement in the war, Japanese Americans were forcibly evacuated and interned. From 1942 until the war's end, 110,000 Japanese who resided in Oregon, Washington, and California, most of whom were native-born U.S. citizens, were ousted from their homes and livelihoods on the U.S. west coast and sent to relocation camps in the country's interior. This involuntary removal, unmatched in history in terms of its scale and scope, was in effect a mass incarceration.

After World War II, cold war immigration patterns reshaped both the United States and that of Asian America. Those patterns benefited from the halting yet persistent reform trends set in motion by the repeal of Chinese exclusion in the mid-1940s. Twelve years after the repeal, Congress enacted the 1952 McCarran-Walter Act, which brought forward the reform trends of 1943 to 1946 but also set new limits to Asian migration. The 1952 law allowed U.S. citizenship and naturalization for all Asian-derived individuals, thus removing a key disability, but it also replaced the Asiatic Barred Zone with the "Asia Pacific Triangle," a provision that simultaneously provided new entry quotas for twenty Asian nations and stipulated

an overall low ceiling on how many Asians were eligible to enter. It was not until the civil rights era that the most important immigration law to shape modern Asian Pacific America came to be. In 1965 Congress undid the restrictive immigration laws that had hampered non-Chinese Asian migration since 1917 by passing the Immigration Act of 1965, allowing for greater numbers of Asian immigrants. The act was passed at the juncture of the civil rights movement and the beginning of the U.S. ground war in Vietnam. Ten years later, the U.S. military and political presence in Vietnam ended. In spring 1975 U.S.-backed regimes in Southeast Asia fell, thus inaugurating flows of Vietnamese, Cambodian, and Laotian refugees to the United States. The diversity of Southeast Asian migrations from 1975 to 1980 and thereafter is as striking as any of the pre–World War II migration flows from Asia.

Although the mid-1960s saw civil rights and immigration reforms for Asian-derived communities, the same era also burdened all Asian Pacific American communities with a new stereotype—Asians as the "model minority." On its surface this was an improvement over exclusion-era denigrations, but the "model minority" label actually obscures the lived realities of many Asian American individuals and communities by claiming that Asians have overcome all the barriers faced by exclusion-era Asians. Although the harshest aspects of exclusion have ended, and many Asian American communities and individuals have moved beyond the stereotypic urban niche occupations of laundry work, the model minority claim is really myopic. The label obscures and sidesteps the realities of Asian Pacific American experience: continued poverty; the historical and social conditions that privilege, in some Asian communities, the immigration of already trained professionals who enter more readily into middle-class positions; and the hidden costs of extra work and long hours that enable the middle-class attainments of home ownership and better education for children. Also kept out of view is the glass ceiling that limits and frustrates professional advancement. In the end, the model minority notion is never about actually lived Asian American lives; it is always about the conceit of holding onto beliefs that celebrate ideals about social mobility in the United States.

Asian migrations did not stop with the end of the cold war. The flow of people from every imaginable Asian starting point continues, and the vibrancy of Asian American communities throughout the United States is impressive. These contemporary Asian migrations build upon the legacies of earlier movements. Although separated by different historical experiences, these communities all share the legacy of persistence and survival that characterize the long sweep of Asian American history.

SEE ALSO *Assimilation; Chinese Americans; Chinese Diaspora; East Indian Diaspora; Immigration; Incarceration, Japanese American; Japanese Americans; Model Minority; Politics, Asian-American; World War II*

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Victor Jew

IMMIGRANTS, BLACK

The black population in the United States has always been diverse in terms of national origins. A sizeable influx of black immigrants from the Caribbean, Latin America, and sub-Saharan Africa added to that diversity in the second half of the twentieth century. Significant differences in the factors that stimulated migration, characteristics of the migrants, and the contexts they encountered make it possible to speak of two generations of black immigrants: the pre–World War II wave that arrived primarily between 1900 and 1930, and the post-1965 wave that swelled after the Hart-Celler Act (Immigration Reform Act of 1965) and other immigration-policy changes in the United States and Europe.

THE FIRST GENERATION OF BLACK IMMIGRANTS

Although the number of black immigrants historically has been quite small, their presence in the United States dates back to the turn of the last century. According to Ira A. Reid, at a time when U.S. immigration was at its peak (between 1880 and 1930), foreign-born blacks comprised

only 1 percent of the total black population (Reid 1939). By the end of this era of mass migration, nearly 28 million immigrants had entered the United States; of that number approximately 100,000 persons were socially defined as "Negro immigrants."

The first generation of black immigrants came primarily from the Caribbean region, Canada, and the Cape Verde Islands (a Portuguese colony off the west coast of Africa). The forces that prompted and sustained the migrant flows were fundamentally political and economic. In the British or anglophone Caribbean, oppressive colonial policies, economic distress, and natural disasters, together with opportunities abroad, occasioned mass migration to the Panama Canal zone, to sugar plantations in the Dominican Republic and Cuba, and most notably to the industrializing United States. Similarly, Cape Verdeans fleeing drought, famine, and a lack of rewarding employment migrated to southeastern New England in search of lucrative, short-term employment.

The immigrants were mostly males in their wage-earning years; over 36 percent were between the ages of sixteen and thirty-seven years old; and the majority was not married. Many had been skilled artisans, bankers, merchants, colonial civil servants, and professional persons in their countries of origin. Because immigrant laws selected for literacy, more than 98 percent were literate when they arrived and, with the exception of less than 2 percent, they spoke English. Although the migrants represented a select segment of their home societies, in general they were future male industrial workers and female domestic servants.

These foreign-born blacks tended to settle in urban areas—especially New York, Miami, and Boston, which served as primary ports of entry. Cambridge and New Bedford, Massachusetts, Tampa, and Detroit also had sizeable black immigrant populations. Cigar manufacturing in Florida pulled migrants to Tampa; and black immigrants found work fishing, whaling, and, later, in the cranberry industry in New Bedford. Where certain groups settled had as much to do with the economic opportunities there as how they were located or perceived in the social hierarchies of each city or region. Notably, with the exception of Florida, few black immigrants settled in the U.S. South.

For the black immigrants who arrived at the turn of the last century, their hyperracialization as blacks had the most profound impact on their experiences. For the most part, distinctions of color, language, education, economic status, religious practice, and nationality mattered little in a society with a racial hierarchy held together by an ideology of biological inferiority. Whether or not they lived their lives as Haitians, Jamaicans, Nigerians, West Indians, or Africans, what the historian F. James Davis calls "the one-drop rule" of racial classification consigned black people of all classes to the bottom of the social ladder and was the basis for their exclusion from economic and educational opportunities (Davis 1991). Not only did they suffer from the same rigid segregation and blanket discrimination as native-born black Americans, in addition, they were rarely considered as part of the British or Portuguese immigrant communities. In a seminal essay, Roy S. Bryce-Laporte argued that for black immigrants, incorporation into the larger African American community generated an additional layer of social marginality; they were invisible both as blacks and as immigrants (Bryce-Laporte 1972).

BLACK IMMIGRANTS TODAY

The visibility of black immigrants has dramatically increased since the 1970s. In the ten years following the Hart-Celler Act, the number of black immigrants exceeded the total from the previous seventy years. Black immigration continued to grow in volume after that. Demographer John Logan and his colleagues show that black immigrant groups are growing faster than well-established ethnic minorities such as Cubans and Koreans (Logan 2003).

Unlike the first generation of black immigrants, the post-1965 wave is much more diverse in terms of both country of origin and type. In addition to the 1,393,000 newcomers from the Caribbean (primarily Jamaica, Haiti, and Trinidad and Tobago), in 2000 there were nearly 600,000 African immigrants living in the United States. (Notably, there is no consensus in the scholarship about how to count black immigrants. The U.S. Census and the Immigration and Naturalization Service report the foreign-born by place of birth. Because not all African immigrants are black—consider the case of Egyptians or South Africans—and a considerable number of Latin American immigrants—from Cuba or Puerto Rico, for instance—identify as black, all enumerations of the population of black immigrants are estimates. The estimates reported here are based on sample data from the U. S. Census Bureau for the foreign-born population born in all nations of the Caribbean except Cuba and Dominican Republic, eastern Africa, and western Africa.)

The end of World War II produced significant political changes in many African countries, and in some cases political instability, economic mismanagement, and civil unrest in the wake of independence triggered migration. The main sources of African immigration are Nigeria, Ghana, Cape Verde, and more recently, the Horn of Africa—including Ethiopia, Eritrea, Somalia, and the Sudan.

According to John Arthur's *Invisible Sojourners: African Immigrant Diaspora in the United States* (2000), post-1965 migration created a brain drain from Africa—

an exodus of the educated, the professional class, and civil servants. This perspective mirrors that of earlier scholars who argued that black immigrants were more successful than native-born blacks because migrants represent a select segment of the populations of their countries of origin (Reid 1939). Across racial groups, immigrants tend to be self-selected with respect to human capital characteristics, such as education and occupational status. However, because the immigration reforms facilitated family reunification, those with relatives or contacts abroad could more easily migrate despite having lower skills and levels of education. Further, civil war and famine in northeast Africa have added a large flow of political refugees and asylum seekers to the number of voluntary migrants who come to the United States for educational and economic opportunities. The diversity of languages spoken and reasons for migrating combine to further dilute the selectivity of the contemporary wave of foreign-born blacks.

The level of geographic dispersion among black immigrants today is unique. Destinations such as Miami, New York City, and Boston continue to attract large numbers, but the residential landscape of post-1965 foreign-born blacks is decidedly metropolitan; that is, immigrant ports have expanded beyond the central cities. Rather than settling exclusively in urban areas, black immigrants have also formed communities in suburban and rural areas. African immigrants are concentrated in the Washington, D.C., Atlanta, and Minneapolis–St. Paul metropolitan areas.

SOCIAL AND ECONOMIC EXPERIENCES

Comparison to African Americans has been a constant feature of the social scientific literature on black immigrants. Since the publication of Reid's pioneering work in 1939, scholars have been most concerned with what the experiences of black immigrants tell us about race in the United States. One noteworthy debate concerns the relative importance of race and ethnicity in determining socioeconomic success.

As Table 1 summarizes, contemporary immigrant blacks seem to fare better than native-born blacks on a number of socioeconomic indicators (Logan 2003): They have higher education and income levels, and a substantially lower percentage are unemployed or below the poverty line. Analyses of U.S. Census data also reveal that in the metropolitan areas where they live in largest numbers, black immigrants tend to reside in neighborhoods with higher median incomes, higher education levels, and higher proportions of homeowners than do African Americans. Some researchers have used such indicators to argue that race and discrimination are no longer significant determinants of life chances.

Moreover, recent research shows that the representation of blacks with immigrant-origins at selective colleges and universities is roughly double their share in the population (Massey et al 2007). Whereas only 13 percent of all black Americans between the ages of 18–19 were either foreign-born or the children of migrants, sociologist Douglas Massey and his colleagues found that among the black college freshman entering selective institutions in 1999, 27 percent were first- or second-generation immigrants. Their research, along with previous work which suggests favoritism toward black immigrants by white employers, calls into question, not only the efficacy of affirmative action programs, but also whether black immigrants are the appropriate beneficiaries of such policies in

Table 1. Socioeconomic Characteristics of Major Race and Ethnic Groups by Nativity, 2000

		U.S. Citizen	Speak Only English	Years of Education	Median Household Income	Unemployed	Below Poverty
White	Native	100.0%	96.5%	13.5	$52,000	3.9%	8.5%
	Immigrant	60.8%	43.9%	13.4	$51,000	3.7%	11.4%
Black	Native	100.0%	97.5%	12.5	$33,200	10.0%	24.4%
	Immigrant	46.9%	57.8%	13.2	$42,000	6.5%	15.9%
Hispanic	Native	100.0%	35.3%	12.1	$38,000	8.3%	21.7%
	Immigrant	28.4%	4.3%	9.7	$37,200	5.8%	22.0%
Asian	Native	100.0%	60.2%	14.5	$67,000	5.9%	10.4%
	Immigrant	52.3%	12.7%	13.8	$62,500	4.5%	12.7%

SOURCE: Logan, John. 2003 America's Newcomers.

Table 1

education and employment designed to ameliorate the past exclusion of native-born, African Americans.

However, beneath the apparent differences between the majority of blacks with historical origins in slavery and in the rural South and black immigrants from the Caribbean and Africa is a shared experience of race-based discrimination. The relative success of foreign-born blacks is partly due to the size of the black immigrant population: Even with the current rate of growth, they comprise less than 1 percent of the total population of the United States and only 6 percent of the non-Hispanic black population. For this reason, it is important to note how black immigrants are doing relative to whites and other immigrants. Compared to Asian immigrants, for instance, foreign-born blacks have appreciably lower median household incomes ($42,000 compared to $62,500), higher rates of unemployment (6.5% and 5.8%, respectively), and a larger proportion living in poverty (15.9% compared to 12.7%). Moreover, black immigrants, like African Americans, are highly segregated from whites; and regardless of nativity, non-Hispanic blacks live in worse neighborhoods than do non-Hispanic whites. With respect to academic achievement on college campuses, black students of all backgrounds do not perform as well as whites with similar characteristics. So far, the empirical evidence suggests that institutional and societal processes have a differential effect on black immigrants, compared to native-born blacks, not that there are discernible cultural differences at work. As Mary Waters concluded in *Black Identities: West Indian Immigrant Dreams and American Realities* (1998), race still shapes everyday life for black immigrants and their offspring.

THE FUTURE FOR BLACK IMMIGRANTS

Black immigrant communities will continue to be part of the U.S. ethnic mosaic. Contemporary black immigrants encounter a U.S. context that is more diverse, with considerably more recognition of the diverse national origins of blacks than ever before. According to Philip Kasinitz (1992), the racial structure of the United States prevented cultural self-determination and self-representation among black immigrants for most of the twentieth century. Within the black community, attempts by black immigrants to distinguish themselves from the native-born were considered divisive and ethnocentric. Today, the larger numbers of black immigrants, the uninterrupted flow of newcomers, and the new U.S. context have created a space for the consolidation of distinct black ethnic communities, subjectivities, and social identities.

SEE ALSO *Blackness; Caribbean, The; Discrimination, Racial; Immigrants to North America; Marginalization; Migration; Mobility; Mobility, Lateral; Model Minority; Race; Racism*

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Regine O. Jackson

IMMIGRANTS, EUROPEAN

Humans migrated to European regions from Africa approximately 40,000 years ago and have been moving ever since. Europeans seem to be highly related to the same northeastern Africans who settled much of Asia and the Middle East, or Eurasia. Thus, it is hypothesized that there were numerous movements of tribes and peoples both eastward and westward across Eurasia in the years before the early middle ages. Knowledge of their movements is more accurate around 2000 BCE, once Europeans started keeping track of their history through books and oral traditions. As archaeologists and geneticists complete more studies, more precise details of migration patterns from more than 2,000 years ago may come to light.

EUROPEAN MIGRATION, 1000–1800

Some historians believe that migration movements were common in the early middle ages, but solitary migrations were rare and people tended to move in midsize groups.

Later this reversed, and migrations of solitary individuals or small groups became more common. Still, voluntary immigration movements were rarer in the few centuries after the fall of the Roman Empire than they are today. Travel around Europe was difficult, slow, and dangerous, and mostly restricted to merchants, ambassadors and envoys, and pilgrims. Before 1000 CE, traveling from Italy to Constantinople, for instance, could take at least seven months, although travel times gradually became shorter over the centuries. A few people migrated to parts outside of Europe, but this was rare and involved mostly people engaged in embassy work or associated with religious institutions. A notable exception, however, was the settlement Vikings established in Newfoundland around the year 1000, although it was abandoned after only a few years.

What was more common was involuntary migration in the form of the transportation of slaves. Slaves, with no choice in the matter, could walk long distances and even carry things for their owners. Most individuals became slaves through a slave raid on their community or as a result of military action. In the early middle ages, many slaves came from towns along the Mediterranean coast and in the eastern "Slavic" parts of central Europe. Arab raiders liked to find their potential slaves in southern European coastal villages, and Frankish tribes found many of their slaves first in England and later in the East. Slaves could be sold at many organized markets, most of which were located in the European and Arab parts of the Mediterranean world.

Several main immigrations to places outside of Europe occurred between the tenth and fifteenth centuries. Victorious armies or raiders continued to capture and enslave people, who ended up typically in the Mediterranean area where slaves were extensively used, which included northern Africa and the Ottoman and Arab/Muslim world. Secondly, in the thirteenth and fourteenth centuries, under Mongol protection, some Italian missionaries made it to Asia on the heels of Venetian traders such as Marco Polo. In addition, crusaders from Europe invaded the Holy Land in 1099; some integrated into society or settled in other places such as Constantinople, but many of their descendants moved back to Europe once Turkish and Kurdish rulers claimed Jerusalem in 1187. Thereafter, pilgrims still visited but did not usually settle in the Holy Land.

As in the early middle ages, merchants, traders, sailors, and government and religious officials all were more likely to venture beyond the borders of Europe. Significant group migrations also took place in this time period. In the thirteenth and fourteenth centuries Jews were expelled from many parts of Europe, and some ventured to eastern parts of the continent. Others, including many of the Sephardic Jews of Iberia, left in 1492 for parts of the Ottoman Empire, including Palestine, Syria, Tunis, Egypt, Morocco, and Constantinople. During the same period, the Spanish and Portuguese also placed restrictions on the commercial and religious practices of Muslims, who were eventually completely expelled from the Iberian Peninsula by the mid-seventeenth century. Many of them left for communities in the Ottoman Empire.

By the 1400s Europeans were using better ships and navigational technology and were sailing farther away from their continent. Portuguese explorers made inroads in sailing around Africa and eventually all the way to parts of Asia, while the Italian explorer Christopher Columbus, funded with Spanish money, made it to Central America. Thereafter, it was a race for European nations to settle and claim different parts of North, Central, and South America, Africa, parts of Asia, and Australia and New Zealand. The search for colonial possessions lasted until the twentieth century.

The Portuguese were prodigious in establishing trading stations on the coastlines of Africa and Asia along with the settlements in Brazil, and all of this required a lot of manpower. From the sixteenth until the eighteenth centuries large numbers of Portuguese left their homeland to serve in various roles, as soldiers, settlers, and missionaries. Even though Spain was colonizing large parts of the Americas, during this period more people left Portugal than Spain.

Nations that created settlements or colonies provided destinations for their countrymen who wanted to leave Europe; trading networks that emerged between Europe and new settlements provided the necessary transportation for migrants. Before 1800, for example, Britain at different points in time had claim to Australia, New Zealand, the American colonies, Canada, some Caribbean islands, and British Guyana, among others; later, for periods of time it controlled various African areas including Egypt, Rhodesia, Nigeria, and South Africa. France at one point claimed parts of present-day Canada, various Caribbean islands, French Guiana, Cambodia, Vietnam, and a host of African countries. In addition, Belgium, Denmark, Germany, Italy, the Netherlands, Portugal, and Spain also exercised their imperial ambitions and operated various colonies at some point.

Most of these colonies no longer exist, but their existence influenced the patterns of European settlement from the sixteenth to the twentieth centuries. As British colonies, Australia and New Zealand, for instance, became a major settlement for British and Irish emigrants. In Africa, many British emigrants settled where the British had set up colonies, including South Africa and Rhodesia. French emigrants settled in French colonies such as Quebec; likewise, many Portuguese emigrants settled in

Brazil, and numerous Spaniards in Spanish settlements throughout the Americas. The various Dutch colonies attracted thousands of Dutch emigrants, particularly to the East Indies. Those with ambition but no financial assets could sign on as soldiers or for work with companies such as the Dutch East India Company. Colonies needed laborers and thus provided ways for impoverished individuals to emigrate from Europe. Until the 1830s a very common way to migrate to the British colonies in North America was by way of indentured servant contracts, which provided prepaid passage in exchange for future years of labor services.

1800 TO THE PRESENT

Emigration from Europe increased remarkably in the nineteenth century, partly as a result of increases in population growth along with changes in emigration policies. Before the nineteenth century Europe's population doubled approximately every 1,000 years, but by the nineteenth century population growth had increased tremendously, such that Europe's population doubled in less than 100 years during the nineteenth century. In addition, the Vienna Congress in 1815 extended the right to emigrate to many more Europeans. The period after 1815 thus saw a tremendous increase in the numbers of people who left Europe permanently and voluntarily. Between 1815 and 1930 more than 52 million Europeans left Europe for overseas destinations. About two-thirds went to the United States, and most of the rest to South America: Approximately 12 percent went to Argentina, 8 percent to Brazil, and 7 percent to Australia. Over this period, 11 and 10 million of these European emigrants left from Britain and Italy, respectively. Other countries that lost more than 2 million individuals include (in order of largest to smallest) Austria-Hungary, Germany, Spain, Russia, and Portugal.

Emigration rates—the percent of the population at home that leaves—differed tremendously across different countries. If a country had a small population overall, it could lose a small number of individuals to emigration movements but still have a high emigration rate. This was the case for Ireland: Until 1900, Irish emigration rates were the highest by far of all European nations. During several decades annual Irish emigration rates reached 14 per 1,000 of the home population; the next highest annual rates occurred in the 1880s with Norway losing 10 per 1,000 and Scotland 7 per 1,000. In the years after 1900 emigration rates were still high for Scotland, but also very high for Italy and Spain. Although a high emigration rate often reflected poor economic conditions within certain regions of a country, it also could signify a late or slow demographic transition, or an arduous adjustment from an agricultural economy to an industrial one that left many without viable livings as farmers or craftsmen. Some areas suffered terrible exogenous events such as the potato famine of the 1840s, which occurred throughout much of Europe but hit Ireland especially hard.

In the nineteenth century it was not always the case that European emigrants were the very poorest. The fact that moving overseas was an expensive proposition meant that many potential emigrants without a remittance of some sort did not leave Europe because they could not afford to do so. In many regions both the richest and the poorest stayed home, the former because they had no interest in leaving and the latter because they could not afford to do so. That many emigrants ended up depending on family or friends who had moved before them for financial assistance or advice to achieve their goals meant that many emigrants left from the same European villages or regions; in other regions such chain migration connections did not evolve, and these areas experienced much less emigration.

Improvement of one's standard of living was of primary concern for many European emigrants over the centuries, but many moved for religious or political reasons. Various Christian groups settled in North America, including Pietists, Calvinists, Mennonites, Amish, and others. Jews from various parts of Europe, but especially those who suffered the nineteenth-century pogroms of Russia, sought new homes overseas. Political uprisings in Europe such as the Revolutions of 1848 encouraged at least a few individuals to leave Europe permanently. Colonial powers also found their new territorial possessions convenient as dumping grounds for the convicts they wanted to get rid of in the home country.

Traveling by sailing ship was the norm until the latter half of the 1850s, when steamships were introduced, dramatically changing the nature of migration. Whereas a voyage from England to New York could take six to eight weeks by sailing ship, steamships cut the time down to less than two weeks. This meant less time out of work while en route and a smaller probability of contracting a disease on board. The less arduous traveling conditions and the gradual drop in passage fares (in real terms) over time made both seasonal and return migration more possible. Emigrating from Europe to overseas destinations in the era of the sailing ship had mostly involved permanent moves, but this new technology and lower passage prices changed that.

The years before the 1920s were the golden age for European immigrants as most destination countries granted them access without much reservation. During the 1920s many of the popular destination countries passed legislative measures establishing restrictions on the number of annual immigrants. Today, most countries practice immigration regulations based on national-origin quotas and limits on the total numbers of annual immigrants.

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Simone A. Wegge

IMMIGRANTS, LATIN AMERICAN

Immigration from Latin America closely tracks several factors: U.S. foreign policy, both economic and political; U.S. domestic economic policy; and political and economic crisis in the home countries. In some cases, the arrival of Latin Americans to the U.S. mainland is less "immigration" of foreign nationals than "migration" of U.S. citizens from, for example, Puerto Rico.

U.S. economic pressures play a major role in Latin American migration. Business interests desire the low-cost labor that immigrants represent. Labor leaders, immigration-opponent organizations, and individuals argue that immigrants undercut the wages of U.S. workers and cost taxpayers in the form of public services. Immigration advocates defend their presence and advocate for the humane treatment of immigrants; they argue that without immigrants, U.S. industry would come to a standstill. Virtually voiceless are the immigrants themselves, who are unable to exert political pressure.

From the standpoint of the sending Latin American countries, emigration often represents an escape mechanism, with employment opportunities not available at home. In addition, remittances sent back to home countries through wire transfers allow individual families and communities necessities they would otherwise forego.

In terms of foreign policy, U.S. immigration policy is generally determined by whether the home country is seen as a threat to the U.S. way of life.

THEORETICAL FRAMEWORKS

Social scientists have applied various theoretical frameworks to immigration. The melting pot, or assimilation perspective, in which newcomers to the country blended into one "America," seems to have fallen short of the mark when it came to Latinos in the United States, who maintain their cultural identity even after several generations.

Another theoretical framework that gained favor in the 1970s was the internal colonization model. Subscribers to the internal colonization model noted that the "melting pot" did not apply to people of color. Mario Barrera, for example, noted that internal colonization is especially discernable in particular in areas where the colonized are in the majority, but not in control (1979).

Latino immigrants, like immigrants from other continents, often straddle their home countries and their new countries. In this pattern of settlement, sometimes referred to as "transnationalism," immigrants maintain close ties to their homelands and, in fact, send remittances to sustain family ties. In "diasporic citizenship," immigrants maintain such close ties to their home countries that they are able to effect occurrences there while also exercising some power in their new countries.

MEXICAN MIGRANTS

Mexican migration offers the most salient and large-scale story of U.S. immigration policy, due to the countries' shared history and their common 2,000-mile border. Mexicans made up 30.7 percent of the foreign-born persons living in the United States in 2005, the largest nationality by far. To understand the relationship of Mexican immigrants to the United States, one must consider that in 1848 Mexico lost the U.S.-Mexico War and was forced to sell to the United States for $15 million what is now California, New Mexico, Nevada, and part of Colorado and Arizona.

Mexican immigrants have felt the brunt of U.S. immigration policy changes. For instance, during the Great Depression an estimated 200,000 Mexicans returned voluntarily to Mexico, but between 1931 and 1932, an estimated half-million people were deported to Mexico. Later, when the United States faced a labor shortage during World War II, the U.S. and Mexican governments signed an agreement for the importing of *braceros*, agriculture and railroad workers. The Bracero program was renewed annually, until it was terminated in 1964; in 1965, Operation Wetback deported thousands of Mexicans.

PUERTO RICANS

Spain conquered Puerto Rico in 1493, when Columbus landed there on his second voyage to the New World. Although the Spanish-American War of 1898 was fought over Cuba, the treaty that was signed in Paris in December 1898 also gave the United States control over some of Spain's other possessions, including Puerto Rico, Guam, and the Philippines, which were sold to the United States for $20 million.

The first migration of Puerto Ricans to the U.S. mainland lasted from 1900 until 1945, and the main destination was New York City. By the end of World War II Puerto Ricans numbered 135,000 in New York City. A second large migration lasted from 1946 to 1964. In the mid-1960s Operation Bootstrap lured industry to Puerto Rico with the promise of low wages, tax-free operations, and duty-free exports to the mainland. Although the program was saluted as a success, one negative effect was that rural Puerto Ricans abandoned their homes for the promise of jobs in the cities. When there were not enough jobs, Puerto Ricans left home and arrived in the mainland. By 1980 more than 80 percent of Puerto Ricans lived outside of the island.

Puerto Rico has a nonvoting commissioner representing the island in the U.S. Congress. Puerto Ricans may not vote in national elections, but they are eligible to participate in party primaries. A continuing and persistent debate for Puerto Ricans is whether to continue the status quo as a possession of the United States, or to advocate for statehood, or to demand independence. The writer Juan Gonzalez notes that the Puerto Rican migrant experience is "the contradiction of being at once citizens and foreigners" (Gonzales 2000, p. 82).

CUBAN IMMIGRANTS

The Cuban immigrant population dates back to the late 1880s, and has included waves of people who vary in educational and class backgrounds. The first groups settled in New York City, Philadelphia, Tampa, and Key West. Cuban immigrant cigar makers created Ybor City, outside of Tampa, as early as 1886.

In 1898 an explosion aboard the U.S.S. *Maine* in the port of Havana prompted the United States to step in on the conflict that had raged between Spain and Cuba for thirty years. Spanish forces were quickly squelched in what became known as the "Spanish-American War," and the Treaty of Paris ending the war was signed by the United States and Spain—without the participation of Cubans. The United States governed Cuba until May 20, 1902.

The story of contemporary Cuban immigration begins after 1959, when Fidel Castro (b. 1926) and revolutionaries ousted Fulgencio Batista (1901–1973) from power. Cuba's elite arrived in the United States immediately, expecting that the United States would oust Castro quickly. This first group of exiles supported military intercession. Thousands underwent U.S.-sponsored training in Central America, and on April 17, 1961, armed exiles invaded Cuba at the Bay of Pigs, expecting U.S. air cover, which never materialized. Sixty-eight people were killed and the Castro government took 1,209 exiles prisoner. They were released in December 1962 in exchange for $53 million in medical supplies, food, and money.

The Cuban exodus included more than 14,000 unaccompanied minors who arrived between December 1960 and October 1962. After Castro announced his allegiance to communism, middle-class Cubans, fearful of the future, put their children on U.S.-bound flights to be met by relatives or, sometimes, by strangers participating in what later became known as "Operation Peter Pan."

A third wave of Cuban immigrants came after hundreds of Cubans sought asylum at the Peruvian embassy in April 1980. Castro announced that whoever wanted to leave could do so—provided someone arrived to take them from the port of Mariel. Those émigrés came to be called *Marielitos*. A fourth wave, in the mid-1990s, was prompted by the continuing deterioration of Cuba's economy. These people were known as *balseros*, after the small boats and homemade rafts they used to navigate the 90-mile journey to the Florida Keys. Between August 5 and September 10, 1994, the U.S. Coast Guard picked up 30,305 *balseros*.

The United States, in an attempt to weaken the Cuban regime, has made considerable efforts to help Cuban immigrants, calling them "refugees" fleeing communism and making available various federal programs to smooth their adjustment. Federal funds were allocated for resettlement, monthly relief checks, health services, job training, adult-educational opportunities, and surplus food. The federal government also provided grants to Florida colleges and universities to train Cuban teachers. Other aid included a loan program for Cuban college students.

Cubans have transformed south Florida. María Cristina García (1996), referring to the strong anti-Castro sentiment, notes that residents of Miami joke that Florida is the only state in the union with its own foreign policy. At times, anti-Castro fervor has led to violence against those who want a normalizing of relations with Cuba. As the numbers of Cubans in Florida has grown, a public backlash has occurred. In Dade County in 1980 voters repealed the 1973 Bilingual-Bicultural Ordinance, so county funds can no longer be used for programs supporting any language other than English, or for promoting any culture other than that of the United States.

CENTRAL AMERICAN IMMIGRANTS

Most of the immigrants from Central America have come from three nations: Nicaragua, El Salvador, and Guatemala. The difference in the treatment of refugees from the three countries was particularly stark in the late 1980s, when Nicaraguans were fleeing a Marxist government, and the Salvadorans and Guatemalans were fleeing conservative governments and civil war: The U.S. government granted asylum to only 2.6 percent of Salvadorans and only 1.8 percent of Guatemalans, but 25 percent of the Nicaraguan requests for political asylum were approved.

SEE ALSO *Assimilation; Citizenship; Cold War; Cuban Revolution; Diaspora; Immigrants, New York City; Immigration; Latinos; Mexican Americans; Migrant Labor; Migration; Operation Bootstrap; Prejudice; Racism*

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Maggie Rivas-Rodriguez

IMMIGRANTS, NEW YORK CITY

For most countries, immigration constitutes an engine of transformation. For the United States, New York City serves as a symbol of the many peoples from all over the globe who have arrived in the country. It also serves as a microcosm of the complex cultural, political, and socioeconomic issues that immigration gives rise to.

By the time the first Europeans sailed into what is today New York City in the early sixteenth century, the migration of indigenous people into the region had been occurring for thousands of years. The Lenape—who spoke the Algonquin language—populated the area at the time. The influx of European immigrants was slow at first. It was not until the third decade of the seventeenth century that the first major wave of European immigrants settled in the New York City area. The largest immigrant groups were of northern and western European background. Dutch immigrants were the first to locate in what is now Manhattan, founding a settlement they called New Amsterdam. African populations also made an early appearance in the region. On September 15, 1655, the ship *Witte Paert* brought 300 African slaves to New Amsterdam. By 1664, the black population was estimated at between 20 and 25 percent of the total.

In the summer of 1664, New Amsterdam fell to the British. In 1674, the colony was granted to James, the Duke of York, giving New York its name. The Dutch remained the largest immigrant group throughout the seventeenth and eighteenth centuries, followed by French Huguenots. Over 60,000 people resided in the city in 1800.

Immigration into New York greatly expanded in the period between 1815 and 1880, which became known as the Old Immigration era. The immigrant flow from northern and western Europe continued, but from different countries. Hundreds of thousands of Irish and German immigrants moved into the city, followed by English and Scots. By 1860, New York City had 813,669 residents, out of which 383,717 were foreign-born, including 203,740 Irish and 118,292 Germans.

IRISH AND GERMAN IMMIGRANTS

The Irish migration to the United States in the nineteenth century was motivated by a wide array of forces. The American economy had been expanding rapidly and was an attractive source of jobs. New York City itself was booming as a result of the opening of the Erie Canal, which allowed transportation of goods along the Hudson River all the way to the Great Lakes. At the same time, what is now Ireland had become the most densely populated part of Europe, with hundreds of thousands of young workers desperately looking for employment, some in the United States. Immigration peaked in the 1850s, when close to a million Irish moved to America. This migration surge was a result of sharply deteriorating economic conditions in Ireland. In 1845, a fungal disease viciously attacked Irish potato fields, leaving crops almost entirely destroyed. Famine and disease followed, with more than a million people dying and many others fleeing

to the United States and other countries in the ensuing decade.

Many of the Irish immigrants were poor and unskilled. They lived in tenements, which were large, cramped, multifamily housing units with scant plumbing, heating, or lighting. They were often discriminated against and vilified for taking employment opportunities from U.S.-born Americans. Nativist groups, whose ideology was that the immigrants were hurting the American economy, society, and culture, campaigned against Irish immigrants, often spreading bigoted views of the Irish. Like other immigrant groups, the Irish were initially marginalized from the city's social and political mainstream. Historians such as Noel Ignatiev and David R. Roedinger find that these immigrants were considered racial minorities at the time, not part of the white population of the city. This poverty and social exclusion exploded in the draft riots of 1863. In July, as the names of thousands of Civil War draftees were announced, many poor Irish who could not pay the $300 draft waiver ran into the streets of the city in protest, burning buildings, looting stores, and assaulting and killing thousands of people. Black residents of the city came under savage attacks that were fueled not just by prejudice but also by the rioters seeking a scapegoat, blaming blacks for their many miseries, including the Civil War draft, low wages, and lack of employment opportunities.

Despite the initial barriers, Irish immigrants gradually progressed in the economy and in society. Because of their growing numbers, they were able to exert considerable political influence in New York City's government institutions, especially through the Democratic Party. Indeed, from being considered a disenfranchised racial minority, the Irish eventually became part of the ethnic white majority population of the city.

Although most German immigrants in the nineteenth century moved to America for the same reason as the Irish—economic opportunity—they had very different origins. They tended to be highly skilled and were able to avoid poverty. From piano production and rubber manufacturing to finance, Germans dominated many high-income sectors of the New York City economic structure. Despite its comparative wealth, the German community in New York—called Kleindeutschland—became highly segregated from the rest of the population. This was partly the result of language differences, but it also reflected the reproduction of German institutions within the community.

THE NEW IMMIGRATION

The ethnic composition of immigrants to New York City changed drastically in the period from 1880 to 1920, when it shifted toward immigrants of southern and eastern European background. This immigrant wave, consisting of Italians, Russian Jews, Poles, and Greeks, among others, became known as the New Immigration. Many of these immigrants passed through the immigrant reception center at Ellis Island in the New York City harbor, which opened January 2, 1892.

Like many other mass migration movements, this one followed a chain migration process, by which the initial flow of migrants self-sustains and expands over time. The earlier immigrants sent information about employment opportunities back home, then provided social, economic, and cultural support to later migrants. Between 1880 and 1920, more than 4.1 million Italian immigrants arrived in the United States. Many of these stayed in New York City. Although only 14,000 Italian immigrants resided in New York City in 1880, by 1920 there were almost 400,000. Similarly, the city's Russian Jewish immigrant community grew from 14,000 in 1880 to over half a million in 1920, becoming the largest foreign-born population.

The reasons for this mass migration episode are many. In the early nineteenth century, travel from Europe to the United States could take months. By the late nineteenth century, however, the growth of steamship and railroad travel had made the global movement of people both faster and cheaper. Economic dislocations in southern and eastern Europe, particularly those associated with the decline of agriculture, had generated populations of workers eager to seek opportunities elsewhere. A large share of Italian immigrants, for example, came from southern Italy, especially Sicily and the Mezzogiorno, regions that had stagnated relative to north. Many of these immigrants were unskilled and obtained relatively low-paying jobs in America, including construction (for men) and the garment industry (for women). The mass migration of Russian—and other—Jews to America in the period from 1880 to 1920 was triggered not just by economic forces but also by the resurgence of anti-Semitism, pogroms, and other restrictive laws in many parts of central and eastern Europe. This led them to seek refuge in America. Many of these migrants were skilled workers who became artisans, craftsmen, traders, and financiers.

The late 1920s saw immigration to New York City decline sharply. One reason was the Great Depression, which started in 1929 and lasted through the 1930s. In New York City, unemployment rates reached as high as 25 percent, discouraging potential migrants from moving to America. But economic distress was not the only reason for the drop in immigration. Until the 1920s, the United States had virtually no immigration restrictions. Although border checkpoints had been introduced at twenty-four seaports and popular border crossings such as Ellis Island beginning in the early 1890s, the only restrictions were to exclude sick persons, known criminals, and the like. The

Group	Population In 2000	Income per Capita	Poverty Rate (%)	Unemployment rate (%)	% with less than high school
New York City	8,008,278	$24,010	19.1	6.0	27.7
White	2,801,267	37,391	9.7	3.3	15.3
Black	1,962,154	15,367	23.6	8.9	28.7
Asian	783,058	19,533	18.2	4.3	30.5
Hispanic/Latino	2,160,554	12,500	29.7	9.0	46.6
Immigrants	2,871,032	18,718	19.9	4.9	34.6
Dom. Republic	369,186	10,417	30.3	8.0	56.0
China	261,551	16,228	21.6	3.7	44.6
Jamaica	178,922	18,360	14.6	5.7	30.4
Mexico	145,012	9,790	30.4	5.8	64.8
Guyana	130,647	16,271	13.4	5.4	34.4
Ecuador	114,944	11,964	21.6	6.2	47.7
Haiti	95,580	14,122	18.4	6.1	30.9

SOURCE: 2000 U.S. Census of Population, author's tabulations.

Table 1

one country that faced sharp restrictions was China; the 1882 Chinese Exclusion and Immigration Act effectively barred Chinese immigration until the 1940s. But the Immigration and Naturalization Act of 1924 ended this lax immigration policy. The law imposed the first permanent quotas on immigration, although Western Hemisphere migrants were exempted. It also created a system of immigration preferences that gave an advantage to western and northern Europe. The 1930s saw further restrictive immigration policy initiatives; immigrants were seen as taking jobs from Americans in a period of severe unemployment.

ASSIMILATION

Immigration began to rebound in the 1940s and 1950s, and it surged again after 1965. In that year, legislation that repealed the quota system established in the 1920s was signed into law. The result was a sharp increase in immigration, especially from developing nations. The proportion of New Yorkers born outside the United States had declined from 34 percent in 1924 to a low of 18 percent in 1970, but by 2000 the proportion had risen back to 36 percent. Most of these immigrants were not from Europe but from Latin America, the Caribbean, and Asia. Out of the 2,871,032 immigrants counted by the 2000 U.S. Census of Population, 53 percent were born in Latin America and the Caribbean and 24 percent in Asia. Table 1 shows the population of the largest immigrant groups in 2000. The countries of origin where the largest number of immigrants originated were the Dominican Republic, China, Jamaica, Mexico, and Guyana. Most of these migrants had an economic reason for moving to the city, motivated by huge wage differences between their home countries and a New York City economy that has displayed renewed and resilient strength since the early 1980s. Indeed, recent immigrants have generally been able to raise their families' standard of living, sending billions of dollars back to their home countries in the form of remittances. But their social and economic progress in the United States has not been without challenges.

Assimilation refers to the process of absorption or fusion of immigrant groups and their descendants into American culture or society. Robert E. Park and the Chicago school of sociology were among the first social scientists to study the process of assimilation in Chicago, New York, and other cities, beginning in the 1920s. Their analysis suggested that for the European immigrant groups entering America in the late nineteenth and early twentieth centuries, assimilation did gradually occur over time. From the acquisition of English to a successful accommodation to the labor market, the immigrants and their descendants (second and third generations) were becoming an integral part of American civil society. This became known as the melting pot view of American society.

But concern has been expressed by some social scientists about the process of assimilation of recent immigrants, particularly those from Latin America and the Caribbean. For instance, political scientist Samuel P. Huntington, in his book *Who Are We? The Challenges to American Cultural Identity* (2004), claims that, unlike previous immigration flows, recent immigrants from Latin America and the Caribbean have not assimilated into mainstream American society. Other social scientists have also expressed concerns that recent immigrants may face difficulties assimilating to the American labor market. The evidence on these issues is not clear-cut.

CHALLENGES FOR IMMIGRANTS

Recent New York City immigrants struggle in an economy that is increasingly unequal and that rewards skills and schooling above anything else. For immigrants from Latin America and the Caribbean, whose level of schooling is substantially below the average, this leads to comparatively low income levels and high poverty rates. Table 1 displays basic indicators of socioeconomic status for various New York City populations. The data are from the 2000 U.S. Census of Population. As can be seen, the annual income per person in the average New York City household was $24,010. But for Dominican migrants, the largest immigrant group in the city, the average income per capita of $10,417 was less than half the average for the city and less than one-third the income per capita of the white population. Poverty rates among immigrants also tend to be higher than among the overall city population. For example, according to the 2000 census, about 30 percent of both Dominican and Mexican immigrants in New York had income below the poverty line, much higher than the citywide poverty rate of approximately 20 percent. The struggle of immigrants in and around New York City is poignantly portrayed by Dominican writer Junot Diaz in his novel *Drown* (1996).

Table 1 shows that the lower socioeconomic status of New York immigrants is not linked to high unemployment. The unemployment rates among immigrants are not that different from those of other New Yorkers. But wages are much lower, an outcome connected in part to lower educational attainment. As Table 1 depicts, the percentage of immigrants twenty-five years of age or older who had not completed a high school education in 2000 was much higher than for the rest of the city's population; for Dominicans it was 56 percent, more than twice the average citywide.

Some recent immigrants are also undocumented workers and face even more serious socioeconomic challenges. Estimates for 2005 suggest that as many as 10 million undocumented workers may be residing in the United States, with half a million in the New York City area. Recent immigration policy initiatives have led to more stringent U.S. immigration enforcement efforts, especially after the September 11, 2001, World Trade Center attacks. As a consequence, many undocumented workers—whether from China, Mexico, or Ecuador—are forced further underground, fearing deportation after many years of residence in the country. Entry into the United States from many developing countries has also become much tougher for both documented and undocumented immigrants.

But the social and economic struggles of the new immigrants are not new. Unskilled immigrants have historically struggled in the New York City economy. Even social scientists who proposed the melting pot theory noted that immigrant assimilation took several generations and that immigrants themselves often remained embedded in ethnic enclaves with limited linguistic, political, and economic incorporation into American society, whether in the form of a Kleindeutschland or a barrio. Some find that America, particularly urban America, was not and probably never will be culturally homogenous. For instance, Nathan Glazer and Daniel Patrick Moynihan concluded in *Beyond the Melting Pot* (1963) that in New York City cultural diversity and ethnic identity remain even after many generations, a conclusion shared more recently by sociologists Victor Nee and Richard Alba. At the same time, some immigrant groups have historically been able to make the transition from being marginalized racial and ethnic minorities to being considered as part of the country's majority white population while others have not. Social scientists such as Milton M. Gordon and John Ogbu have argued that discrimination and social exclusion may delay or permanently stall any processes of assimilation of stigmatized immigrant groups. The "racialization" of these immigrants may not, however, run along simple black-white racial lines. As sociologists Jennifer Hochschild, Clara Rodriguez, and Mary Waters have noted recently, racial formation for recent immigrants may evolve complex constructions, involving perhaps multiple racial identities. In addition, the recent waves of migrants to New York City include many who move back and forth between their source countries and the United States. This transnationalization, which makes the new immigration different from the old European immigration waves of the nineteenth and early twentieth centuries, generates new opportunities but also challenges for the migrants. Sociologists Hector Cordero-Guzman, Robert C. Smith, and Ramon Grosfoguel summarize these issues and discuss the work of the authors mentioned above in their edited volume *Migration, Transnationalization, and Race in a Changing New York* (2001).

National opinion surveys suggest that most recent immigrant groups and their children, including those from Latin America and the Caribbean, wish to succeed in American society in a way similar to their earlier cohorts. As in the past, despite serious challenges, many immigrants remain the strongest advocates of the American Dream. Sharply improved standards of living relative to the situation in source countries, as well as positive expectations of future economic progress and social mobility, are behind these opinions. But various populations in the United States—from blacks and Chinese to Puerto Ricans and Mexicans—have faced severe and persistent barriers to their socioeconomic progress. Recent immigrants are not immune from these forces, and they are well aware of the difficulties. For instance, the 2003 Pew Hispanic

Center National Survey of Latinos found that over 90 percent of immigrants from Latin America and the Caribbean believe that it is very important (for most, essential) that their children receive a college education in order to succeed in American society. But the same survey found that these immigrants are also seriously concerned about the quality of the high schools their children attend, the rising cost of college tuition, and similar issues.

Particularly worrisome is the condition of undocumented immigrants. In 2006, tens of millions of undocumented immigrants and other concerned groups peacefully marched in New York City, Los Angeles, and many other cities to encourage policy makers to adopt policies that will allow the immigrants to emerge from the underground labor markets in which they work. As in the past, appropriate economic, social, and immigration policies that facilitate immigrant socioeconomic mobility will be required to ensure that the new immigrants achieve their goals.

SEE ALSO *African Americans; American Dream; Assimilation; Caribbean, The; Citizenship; Diaspora; Disease; Ethnicity; Famine; Great Depression; Huntington, Samuel P.; Immigrants to North America; Immigration; Latinos; Melting Pot; Migration; Mobility, Lateral; Naturalization; Nuyoricans; Ogbu, John U.; Park School, The; Segregation, Residential; U.S. Civil War*

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IMMIGRANTS TO NORTH AMERICA

An immigrant is a migrant who crosses an international boundary in the process of entering a new country and eventually establishing residence there. Immigrants differ from tourists because they eventually settle in the foreign country, whereas tourists eventually return home without establishing any settlement. The individual does not have to enter the country with the intention of settling, nor does the individual have to permanently settle. In some cases the migrant may move back and forth between one or more countries and the home country. Although in this case the migration is not permanent, the individual is considered a migrant. In contrast, an emigrant is a migrant who crosses an international boundary in the process of leaving a country with the intention of establishing residence elsewhere. A person who crosses an international boundary and enters a new country without establishing a new residence is a tourist or a visitor.

In every international migration, a migrant is simultaneously an immigrant and an emigrant. A key element in the definition of an immigrant is the establishment of a permanent residence in the new country. This usually means residence in the country of destination of at least one year, and is referred to as "long-term immigration." The number of long-term immigrants in the world has increased steadily in recent decades, from 75 million in 1965, to 120 million in 1990 (Martin 2001), to 190 million in 2006 (United Nations 2006). Approximately 3 percent of the world's population in 2006 was composed of long-term immigrants.

The motivations for immigration vary, but the most common is economic. Migrating for economic reasons is particularly important for persons moving from less developed countries to more developed countries (defined as all the countries of Europe and North America, plus the countries of Australia, New Zealand, and Japan). Most

immigration is to the more developed countries. Of the 190 million long-term immigrants in the world in 2006, 115 million resided in more developed countries (United Nations 2006).

Regarding the net gain or loss of international migrants, between 1995 and 2000 the United States had a net gain (immigrants minus emigrants) of more than 6.2 million immigrants, far surpassing the nearly 2 million net gain received by Rwanda, the country with the second-largest number. China experienced the largest net loss of immigrants during the period 1995 to 2000, with almost 2 million more emigrants than immigrants. Mexico had the second-highest net loss, more than 1.5 million more emigrants than immigrants (United Nations 2003).

CROSS-NATIONAL PERSPECTIVES

There are push and pull conditions facilitating migration in all countries of the world. In order for an individual or group to decide to migrate there typically needs to be a "push" from the mother country and/or a "pull" to the receiving country. These factors can be occupational, financial, or a variety of personal reasons. Other than these individual factors that encourage immigration, there are also contextual factors that pull migrants to the receiving countries. Once in these countries many migrants are pulled into so-called ethnic enclaves (Borjas and Tienda 1987). Such communities help individuals transition into life as immigrants by providing support and environments much like those in their mother countries.

Migration is most likely to happen between countries that are geographically close together. For the United States this means that most immigration comes from Mexico and Central America, due to proximity. Recently, however, a large number of migrants have come to the United States from China. Even though China is geographically distant from the United States, making migration difficult and expensive, the push and pull factors of China and the United States are strong.

THE AMERICAN IMMIGRANT

More than 98 percent of the residents of the United States are immigrants or the descendants of immigrants. In the United States in 2000, only 4.3 million people, or 1.5 percent, identified themselves as American Indians or Alaska Natives (Ogunwole 2006). Native Americans and Alaska Natives have resided in North America for as many as 40,000 years before the arrival of the first immigrants. They populated areas throughout North and South America, and many coexisted with European settlers until the eighteenth century, when most were eliminated through either disease or war. These conflicts continued through the late 1800s, when only a fraction of Native Americans remained (Purcell 1995).

In 1598 Spanish settlers first came to the United States for the purpose of colonization. They exploited the land and the indigenous peoples, but differed from earlier explorers in that most remained permanently in the United States. They settled mainly in the present-day southwestern United States and throughout Florida (Purcell 1995).

The first major influx of European immigrants to the United States was from England, with settlement mainly along the east coast in the present state of Virginia (Purcell 1995). The first permanent English settlement was Jamestown in Virginia, established in 1607. These early immigrants mainly lived off the profits from tobacco crops. Tobacco proved to be a profitable but labor-intensive pursuit and eventually spearheaded the immigration of British indentured servants and African slaves. Indentured servants usually came voluntarily to escape the economic downturns in England. The landing of the pilgrims on Plymouth Rock in 1620 marked the beginning of a great influx of English migrants who came to settle in the New World for religious freedom (Purcell 1995). These early immigrant groups "of the 1600s and 1700s established the basic context of American society. English was the dominant language in America; English legal and government documents were the norm; and culture was for two centuries copied after English literature, drama, and art" (Purcell 1995, p. 5). This early British model of American society would serve as the basis for future discrimination and exclusion of some immigrants over the next two centuries.

The forced migration of hundreds of thousands of Africans as slaves also occurred during this period. The first African slaves in the United States were purchased in Jamestown in 1619. This initial forced migration of Africans included only twenty persons, and the slavery of Africans was slow to develop in the colonies because of the use of Native Americans and white indentured servants for slave labor. However, by 1690 there were more African slaves in the United States than white indentured servants (Purcell 1995). The exploitation of African slaves in early America enabled the United States to compete in and eventually dominate the world market. The slave trade ended in 1807, but slavery persisted in the United States until the end of the Civil War (1861–1865). However, the system of racism upon which slavery was founded is engrained in the United States and remains a hurdle for African Americans and other racial and ethnic minorities in the United States.

The Dutch came to America in the 1600s and claimed much of present-day New York (Purcell 1995). Swedish immigrants also came to the New World during

this era, but were less successful than the British and Dutch settlers. These early European settlers created a stable life in America, which eased the immigration of others from Europe.

Scotch-Irish immigrants came to America for economic reasons and settled mainly in Pennsylvania. The seventeenth century also saw an influx of German immigrants who were largely motivated by war in Germany. The Germans were the largest non-British and non-English-speaking immigrant group to come to America, and they retained much of their culture. These cultural differences made the Germans one of the first European immigrant groups to experience discrimination from earlier settlers.

Before 1830 the contribution of immigration to population growth in the United States was small. Between 1821 and 1825, for example, the average number of immigrants every year was only about 8,000. This figure increased to almost 21,000 between 1826 and 1830. From 1841 to 1845 immigrants to the United States each year numbered more than 86,000. In the eight years between 1850 and 1857, the total number of immigrants to the United States was 2.2 million. In sum, between 1790 and 1860 the total number of immigrants to the United States was almost 5 million, and most of these were from Europe (Taeuber and Taeuber 1958).

The combination of pro-immigration campaigns and the reduced cost and ease of transcontinental transportation increased immigration drastically during this period. There was a second influx of German and Irish immigrants. German immigrants came to the United States and found work in established industry, aiding in the overall development of U.S. commerce. Irish immigrants, mostly Catholics, suffered severe discrimination that reached a peak in the mid-1850s with the emergence of the Know-Nothings, an anti-Catholic organization dedicated to maintaining the dominance in the United States of Anglo-Saxon Protestants. The end of the nineteenth century also saw immigration from Scandinavian countries. These immigrants sought land for farming and developed the mostly unsettled Midwest.

Chinese first entered the United States shortly after the beginnings of the California Gold Rush in 1849. An estimated 288,000 Chinese entered the United States during this period, although many returned to China before 1882 (Black 1963). Like most immigrants, the Chinese first came to the United States as laborers in search of work and wages. The port of entry for most Chinese immigrants during this first period was San Francisco, and to this day the Chinese name for San Francisco is *Jiu Jin Shan*, or "Old Gold Mountain." The Chinese were subjected to hostile discrimination because many American workers were threatened by the low wages the Chinese were willing to take. With the passing of the Chinese Exclusion Act of 1882, Chinese immigration tapered off, eventually halting by the end of the twentieth century (Pedraza and Rumbaut 1996).

Overlapping with early Chinese immigration was increased immigration from eastern and southern Europe. These immigrants were not as welcome as the previous European immigrants because the "old" immigrants thought these "new" immigrants would take their jobs (Purcell 1995). The "new" immigrants were Italians, Greeks, Poles, and Slavs who spoke different languages and had slightly different physical features than western Europeans. They were subjected to discrimination, but were able to assimilate into white American culture with passing generations.

Currently the largest numbers of immigrants to the United States are from Asia and Mexico. These immigrants come to the United States for many of the same reasons the European immigrants came in earlier years. Population booms and increased industrialization combined with the economic opportunities of the United States created the push and pull factors that increased emigration from Asia. The Asian immigrants are able to move into ethnic enclaves where they find jobs and homes among people from their countries of origin. They are often criticized for not assimilating into "mainstream" white American culture (Portes and Rumbaut 1990).

The end of the twentieth century to the beginning of the twenty-first century has seen the immigration of millions of Mexicans to the United States. Like many newcomers to the United States, Mexicans come to find work and higher wages. Mexican migrants are subjected to the same discrimination as earlier immigrants groups (Hay 2001). Americans of Mexican descent vary in their levels of assimilation, based mostly on how long they or their forebears have been in the United States.

IMMIGRATION POLICY

Immigration was not a concern in early America, and no laws or policies regulated it on a national level, but the new U.S. Constitution did deal with the issue of naturalization, that is, the process by which an individual becomes a citizen (Purcell 1995). The Articles of Confederation allowed aliens to naturalize as American citizens after two years in the United States, something that was not previously allowed under British rule (Gabaccia 2002). These policies, however, did not apply to white indentured servants or to blacks. This was especially reflected in the Aliens Acts of 1798, which required aliens to register and allowed the president to deport any individuals deemed dangerous. The laws expired in 1801 when Thomas Jefferson took office, and the citizenship waiting period increased to five years (Purcell 1995).

Restrictions on certain groups based on race, ethnicity, or national identity continue to influence immigration policy in the United States even today.

One of the most notable laws restricting immigration to the United States was the Chinese Exclusion Act of May 6, 1882, which reflected the public concern about the large numbers of Chinese who had come to the United States to provide inexpensive labor for the construction of the transcontinental railroad. This law suspended the immigration of Chinese laborers for ten years; permitted Chinese who were in the United States as of November 17, 1880, to stay, travel abroad, and return; prohibited the naturalization of Chinese; and created the so-called "Section 6 exempt status" for Chinese teachers, students, merchants, and travelers, who were admitted on the presentation of certificates from the Chinese government.

The next significant exclusionary legislation was the Act to Prohibit the Coming of Chinese Persons into the United States of May 1892, better known as the Geary Act. It allowed Chinese laborers to travel to China and reenter the United States, but its provisions were otherwise more restrictive than preceding immigration laws. The Geary Act required Chinese to register and to secure a certificate as proof of their right to be in the United States; those who failed to do so could be put into prison or deported. Other restrictive immigration acts affecting citizens of Chinese ancestry followed (King and Locke 1980). The Chinese Exclusion Act and later exclusionary laws were the first to use the concept of an "illegal alien" (Pedraza and Rumbaut 1996).

The next major policy relating to immigrants was the Immigration Act passed in 1917 that increased the head tax on immigrants to $8.00 and required incoming immigrants to pass literacy tests. The Immigration Act also "established several new categories for exclusion, including vagrants, alcoholics, and the psychopathically inferior" (Purcell 1995, p. 82). This law required the potential immigrant to be able to read a passage in English or another language. It also extended the exclusion of Chinese and Japanese to all Asians.

In 1921 further restrictions were passed setting quotas based on nation of origin. In 1924 Congress took this one step further by passing the National Origins Act, which restricted the total number of immigrants to 150,000; the division of the quotas reflected the American population enumerated in the 1890 census. This was done in an effort to restrict immigration mainly to those from Great Britain, Scandinavia, and Germany while reducing immigration from all Asian countries and severely restricting the immigration of Italians, Slavs, Jews, Greeks, and other southern and eastern Europeans (Purcell 1995).

From the 1920s to the 1950s immigration in the United States changed. The Great Depression and World War II (1939–1945) ushered in a period of slow, and sometimes negative immigration, resulting in a net loss. The only significant immigration was from Mexico under the Bracero Program, which admitted Mexican male workers while Americans were overseas. In 1952 the Immigration and Naturalization Act was passed, maintaining most of the quotas set forth by the National Origins Act of 1924 (Hay 2001).

The next major law regarding immigration policy was the Immigration and Naturalization Act of 1965, which became law in 1968. This act ended the national origins quota and allowed the immigration of family members of those already living in the United States, as well as individuals in certain occupations. It also ended the restrictions on Asian immigration and limited immigration from the Western Hemisphere as a whole to 120,000 (Hay 2001). The change in law produced an influx of immigrants from previously unrepresented countries such as many in Southeast Asia and the Middle East.

EXPERIENCES OF IMMIGRANTS

Immigrants have been subjected to discrimination from individuals and from institutions in the United States (Feagin and Eckberg 1980) that have limited their access to the means of success in the United States. "Because patterns of discrimination—individual and institutional—served to exclude some groups from full participation in the society, their access to the historical moments of opportunity that presented themselves over time also varied" (Pedraza and Rumbaut 1996, p. 17). The experiences of discrimination that immigrants have endured vary by race, ethnicity, nationality, and time of immigration.

Assimilation is the process by which individuals become a part of the greater American culture. In order to succeed in America, common thought has dictated that individuals must assimilate into the dominant culture, thought to be composed of white, Protestant individuals of European descent. Cultural pluralism, or multiculturalism (Gordon 1964), the accepted notion of assimilation in the United States today, entails that all groups retain their uniqueness but come together to form a diverse and distinct American culture. However, immigrants are not given the same opportunities to assimilate based on their ethnicity, race, or the circumstances surrounding their immigration. In the early centuries of the United States, assimilation into white dominant culture was an easier task because of the racial, ethnic, and national similarities that were shared among immigrants from Europe. Their transitions into the dominant culture were not necessarily effortless or quick, but were less difficult than those of later generations of foreign immigrants.

In many ways, immigration to the Americas introduced the concept of whiteness and what it meant to be

considered white or nonwhite. "[T]he founding fathers drew a boundary around the nation and its citizens" with unequal access to naturalization by race and nationality (Gabaccia 2002, p. 60). The distinction between whites and nonwhites was evident and was even spelled out in government documents. Nonwhites were said to be biologically inferior to whites, and "scientific" arguments were developed to show that whites were smarter, healthier, and altogether stronger. The dominant culture held that Africans, Jews, Italians, and Slavs were inferior to British, German, and Scandinavian immigrants from earlier generations (Gabaccia 2002). Unfortunately, this sentiment was very popular throughout the United States during the end of the 1800s and into the 1900s, and groups such as the Immigration Restriction League in 1894 helped to bring these ideas to the American public. Subsequent laws restricting the immigration of certain groups were not surprising given the racist attitudes of the time.

Some believe that immigrants can have negative impacts on their receiving countries, although a considerable literature shows the opposite (Bean and Stevens, 2003). Immigrant workers sometimes affect the wages of natives (Engerman and Jones 1997): Generally, immigrants are willing, or are forced, to work for lower wages than natives. Accordingly, some lower-prestige occupations disproportionately hire immigrants for lower wages rather than pay natives the higher wages they demand. These issues have the greatest impact in areas of high ethnic concentration (Borjas and Tienda 1987). Immigrants since the 1970s tend to have lower levels of education than previous generations of immigrants, and educational achievement is not likely to increase substantially with time because immigrants typically need to concentrate on earning income rather than education (Martin and Taylor 1998).

From the African slaves working on farms, to the Chinese immigrants building the railroad and working in the gold mines, to the European immigrants participating in the development of American industry, the contribution of immigrants is evident in every aspect of American life. Although their contribution is undisputable, much immigration policy is still founded on the restriction and exclusion of different groups. U.S. immigration has increased steadily over time, with immigration from European countries declining, and immigration from Asian and Latin American countries increasing. Presently, U.S. immigration legislation deals largely with issues of undocumented immigrants and refugees. Efforts to control immigration during the past three decades have included the 1986 Immigration Reform and Control Act, which aimed to control undocumented immigrants, and the second Immigration Reform and Control Act of 1990, which reduced the numbers of family-related admissions and focused on immigration for those in professional occupations, such as doctors, professors, and other highly educated individuals. In 2006 laws were proposed to stop and control undocumented immigration, mostly from Mexico. The study of immigration shows clearly the undeniable role that immigration has had on America and American culture. The contribution of immigrants is a major foundation of the United States and will continue to be important in every aspect of American life.

SEE ALSO *Assimilation; Colonialism; Migration; Xenophobia*

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IMMIGRATION

Immigration studies have yet to reach a consensus on which kinds of human movements constitute immigration. This entry uses the term in its broadest sense, referring to people's temporary or permanent movements and geographic relocation or displacement across political boundaries.

INTERNATIONAL IMMIGRATION

Throughout history, immigration has been an important social force shaped by the world as well as shaping it. In *Global Transformations* (1998), David Held et al. delineate three phases of migration: premodern, modern, and contemporary migration. In the premodern societies, mass migration was instrumental to the formation of states, particularly in Asia but also in other parts of the world. Modern migration started from the fifteenth century and occurred in three major immigrant flows: (1) European settlers, or the first mass migrants, primarily sponsored by the states, to North America; (2) chattel slaves from Africa to North America, the largest forced migration in human history; and (3) indentured Asian laborers, or the coolie system, which replaced chattel slavery in the latter half of the nineteenth century. Contemporary migration is said to have started after World War II (1939–1945). In the contemporary era, major migration flows were not only to North America but also to Europe, Australasia, and the Middle East. Among the immigrant populations of the contemporary era were increasing numbers of refugees as a result of wars, localized poverty, and political persecution.

Many scholars, including Joaquin Arango (2004) and Stephen Castles and Mark J. Miller (2003), also note that immigration since the 1970s has taken on distinct features. First, nation-states have exercised more control over immigration, drawing an increasingly more pronounced line between desired and undesired immigrants. On the one hand, there is state-engineered competition for skilled labor, particularly among traditional destination countries such as Australia, Canada, and the United States. On the other hand, border controls, mainly directed at immigrants deemed illegal, have been intensified. Despite the increased border control, however, human trafficking has become more salient. The second character of the latest immigration movements is the increasing number of actors shaping immigration flows. Attempts to manage international immigration have been coming from different levels of society, ranging from transnational immigrant communities to the United Nations. The third feature of the current migration trends is the changing demography of immigrants. Asians, Africans, and Latin Americans have gradually replaced the Europeans as the major immigrant population. In addition, the gendered composition of immigrants has changed. Women now account for around 50 percent of the total immigrant population. As well, more women than before move as independent immigrants. Whereas this change remains merely a statistical fact to many scholars, it has compelled others to try to bring women back into the history of immigration, which has largely been written in a gender-neutral or genderless tradition. A good example is the book *Women, Gender, and Labour Migration: Historical and Global Perspectives* (2001), edited by Pamela Sharpe, which offers perspectives on immigration that take gender into account.

THEORIZING IMMIGRATION

The complex social phenomenon of human movements has spurred much theorizing about the causes and consequences of immigration. The three major theoretical approaches informing immigrant studies are the economic equilibrium approach, the historical-structural approach, and the migration system theory.

The economic equilibrium approach, also known as the push-and-pull theory, is the dominant perspective in the literature of immigrant studies, according to Castles and Miller. The major tenet of this approach is that immigration is the summation of human agency and an outcome of people's rational cost-and-benefit calculations. Factors pushing immigrants to leave typically include poverty and political repression; factors pulling immigrants away from their origins are often better economic opportunities and political freedom. George Borjas (1989) presents a modern version of the equilibrium approach. He proposes a conception of an immigrant market wherein immigrants, instead of commodities, are exchanged. According to Borjas, individual people are "utility maximizers" responsive to the call of an immigrant market. That is, immigration is regarded as a mechanism through which an optimum distribution of land, labor, capital, and natural resources can be achieved and the social-economic equilibrium of different places can be established.

Whereas the equilibrium approach takes individuals' decisions as its units of analysis, the historical-structural approach locates the reasons and results of immigration in the macroeconomic and political structures of the world. As Castles and Miller point out, this approach is informed by Marxist political economy and the world system theory. It posits that contemporary immigration is a social process that mobilizes cheap labor for capital and thereby helps to sustain the capitalist mode of production in the era of globalization. From the perspective of the world system theory, immigration is considered a new link between developed and developing nations, which were previously connected through colonial occupation or other forms of domination. As the new link, immigration perpetuates the asymmetrical power relationship between the two.

The migration system theory is an attempt to capture all factors affecting the movements of people. A migration system is constituted by two or more countries involved in people's movements. This theory directs researchers' attention to the micro, macro, and meso aspects of migration, as well as historical conditions contributing to migration. Similar to the historical-structural approach, it suggests that prior links between immigrant sending and receiving countries, such as colonial domination, military occupation, trade, and investment, all help to lead to people's migration movements between these countries. At the macro level, international relations, interstate relations, and immigration and other state policies are important incentives or disincentives to migration. At the meso level, the migration system theory is interested in the roles of individuals, groups, or institutions that mediate people's movements. At the micro level, the theory addresses informal networks such as family and community connections that facilitate immigration. In recent years, the new links between transnational communities, in particular, have given rise to a new area of study on transnationalism, according to Castles and Miller.

CRITIQUE OF IMMIGRATION THEORIES AND FUTURE DIRECTIONS OF RESEARCH

While insightful, each of the approaches proposed has significant limitations. A major critique of the equilibrium approach comes from Charles Wood (1982). Wood points out that, first of all, immigration movement has not brought about the anticipated social-economic equilibrium. Rather, recent decades have witnessed increased disparities in regional development. Second, the ahistorical nature of the approach is problematic. The notion of a free market, on which the whole approach is based, is not the empirical truth in all societies at all historical moments. Finally, with a sole focus on micro-level decision making, this approach misses the large social conditions conducive to the movements of people.

In contrast, the historical-structural approach is mainly criticized for failing to explain how the immigration decision comes about for individual actors, as discussed by Wood and also by Castles and Miller. As well, the consequences of immigration as proposed in the historical-structural approach are uni-dimensional and deterministic. Movements of people may not necessarily lead to deprivation in one country and capitalization in the other. Immigrants may bring multiple effects on both the sending and receiving countries. The central problem with this approach is that it reduces people to labor caught up in the capitalization process on a global scale, rather than treating them as human beings with diverse needs and interests.

Epistemologically, the above two approaches are distinct from each other; whereas the former is functionalist in nature, seeing immigration as a means to social harmony, the latter construes immigration as a force adding to social inequalities and conflicts. Despite the differences, there is no doubt that both approaches illuminate some facets of immigration while disregarding others. For instance, neither of them has addressed the facilities and material conditions that contribute to or contain the movements of people. The migration system theory is advantageous to the others in that it focuses on all key dimensions of immigration. However, despite its promise for a holistic understanding of immigration, the migration system theory does not offer a means of interpretation.

In addition to the problems associated with each approach, there are significant issues related to how the phenomenon of immigration is approached in general. First of all, immigration is often considered an aberration that needs to be corrected or a problem that needs to be addressed. The fact that immigration is an integral part of human history has not been registered in the conceptual underpinning of studies on immigration. Second, studies tend to focus on why people move instead of why few people move or why the majority of human populations are not free to move, according to Arango. Posing the alternative questions makes it necessary to critically consider the roles that nation-states play in controlling or restraining people's movements, which have yet to be deeply interrogated. Third, immigration studies mainly center on labor migration. Refugees and the so-called illegal and undesired immigrants remain at the margin of immigrant research. Finally, while immigration studies have started to address the issue of gender, insufficient attention has been paid to how the increasing presence of immigrant women engenders political, economic, and cultural changes in both sending and receiving countries.

SEE ALSO *Immigrants to North America; Immigrants, Asian; Immigrants, Black; Immigrants, European; Immigrants, Latin American; Immigrants, New York City; Migration; Refugees; Settlement; Transnationalism*

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IMMIGRATION AND NATURALIZATION ACT OF 1965

SEE *Chinese Americans.*

IMMIGRATION REFORM ACT, 1965

SEE *Immigrants, Black.*

IMMISERIZING GROWTH

Immiserizing growth occurs if a technological improvement or an increase in the availability of a factor of production makes people more miserable in that it actually decreases the real output of an economy. It is often modeled as occurring because of structural rigidities in a model with international trade. Early exceptions, where immiserizing growth had domestic causes, come from classical and, perhaps, Marxist theories (Marx 1863–1883). David Ricardo (1817) introduced this possibility in a chapter entitled "On Machinery" that he added to his last edition of *The Principles of Political Economy and Taxation*. He provided an example where a technological improvement would reduce equilibrium output in the short run. In the long run, however, real output would rise (see Hicks 1969; Samuelson 1988; Shields 1989). Marx also discussed the possibility of economic crises brought on by a falling rate of profits and a rising rate of exploitation (see Shaikh and Tonak 1994).

In the neoclassical tradition, immiserizing growth is seen as a result of either policy distortions or market failures. The policy distortions might be domestic distortions such as distorted factor prices (Bhagwati 1969) or trade distortions such as tariffs (Johnson 1967). The most discussed possibility of immiserizing growth, both in the short run and in the long run, was developed and discussed by Jagdish Bhagwati (1969). It involves a decrease in the country's terms of trade resulting from this growth, which is of sufficient magnitude to reduce the country's real income. A country will export goods using its abundant factor. If the supply of this factor increases, the country will produce and export more of these export goods and produce less of other goods (the Rybczynski Theorem). Immiserizing growth can occur if this expansion in exports causes the prices for the country's export goods to deteriorate enough to make it worse off with the increase in production. Whether or not a country might be likely to suffer from immiserizing growth depends on three conditions. First, the country must be driven to export. Second, changes in these exports need to have a large impact on the good's price, and the foreign demand for these exports needs to be inelastic so that a rise in exports leads to a decline in export earnings. Third, the country must be highly dependent on exports, and exports must be a high proportion of gross national product.

The export pessimism underlying the concept of immiserizing growth is an extreme form of the pessimism behind the structuralism of Raúl Prebisch (1964) and others. It implies some unlikely behavior of the exporting country. It implies no endogenous reaction to these declining terms of trade (Clarete and Whalley 1994). To see why this type of immiserizing growth is unlikely to occur, consider the situation of the major oil exporters such as Saudi Arabia and Kuwait. They seem to satisfy the conditions for immiserizing growth. They are clearly driven to export oil, as it dominates the economies of these countries. In addition, the countries are sufficiently important as suppliers that an increase in their exports will drive oil prices down. Since the demand for oil is highly inelastic, this increase in supply would dramatically reduce oil revenues. However, long-term immiserizing growth seems unlikely for these countries.

The very reason immiserizing growth may be unlikely for these countries is the very reason it is such a threat. It would be foolish for any supplier to do nothing in the face of dramatically declining terms of trade. The inelasticity of demand provides an incentive for suppliers to exercise monopoly power and to try to organize other suppliers into a cartel. Indeed this is what happened with the formation of the Organization of Petroleum Exporting Countries (OPEC). Far from being competitive suppliers with no power to control prices, the major oil exporters, individually and collectively, have considerable price control. They did not dramatically increase production when prices were low in a desperate but fruitless attempt to increase declining revenues.

Structuralists such as Prebisch and neo-Marxists (see Prebisch 1964; Frank 1967) emphasize that growth for small, less developed countries might harm these countries even if the demand for their country's exports is highly elastic. Collectively, they may be selling into a market with inelastic demand. While it may seem to be in the interest of each country to expand its exports, collectively they may drive the price down to an extent that immiserizing growth occurs.

SEE ALSO *Bhagwati, Jagdish; Distortions; Exports; Heckscher-Ohlin-Samuelson Model; Machinery Question, The; Organization of Petroleum Exporting Countries (OPEC); Prebisch, Raúl; Prebisch-Singer Hypothesis; Ricardo, David; Rybczynski Theorem; Technological Progress, Economic Growth; Terms of Trade; Trade*

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IMPEACHMENT

Shortly before the House Judiciary Committee met in October 1973 to debate proposed articles impeaching President Richard Nixon (1913–1994), a then-unknown Democratic congresswoman from Texas momentarily caught the public's attention. Barbara Jordan (1936–1996) announced that she felt bound to go to the U.S. National Archives to put her fingers on the constitutional text that delegated to the House of Representatives the power to vote articles of impeachment. To many, hearing Jordan's sonorous retelling of her experience, the impression must have been that by reading the constitutional language dealing with the impeachment and removal of "the President, Vice President and all civil Officers of the United States" (Art. I Sec. 2 (5), Sec. 3 (6–7); Art. II Sec. 2 (1), Sec. 4), Jordan would know exactly what the rules were that governed the process. In fact, the Constitution's language on impeachment is as difficult to interpret as pharaoh's dreams.

Impeachment dates to the thirteenth century. Those who would frame and ratify the U.S. Constitution were familiar with the process. In England, it allowed the king's ministers to be punished even though the king himself could do no wrong. By the mid-eighteenth century, however, despite the publicity that attended the impeachment in 1787 of Warren Hastings (1732–1818), the first governor-general of British India, the process had pretty much disappeared. Hastings was charged with corruption during his tenure in India. His trial began in 1788; he was finally acquitted in 1795. It had never been transplanted to the colonies. In England, its decline paralleled the growth of ministerial responsibility to Parliament and the need of a ministry to have "the confidence of Parliament" and not simply the approbation of the monarch.

IMPEACHMENT IN AMERICA

Despite its rarity in contemporary England, both the Virginia and New Jersey plans provided for impeachment, although both gave the power to members of the judiciary. Only as the Constitutional Convention was winding down in 1787 was the power to impeach and remove vested in the House and Senate, with the chief justice of the Supreme Court involved as the presiding officer only at the trial of an impeached president. The Constitution also clearly distinguished how impeachment would be used in the United States as opposed to England by providing that conviction was limited to removal from office and possibly disqualification from holding public office in the future. In contrast, in England, Parliament could vote for criminal punishments, including death for those found guilty of "high crimes and misdemeanors." The U.S. Constitution also explicitly limited the president of

the United States from pardoning those impeached and convicted.

Although generally referred to as *impeachment*, the process has two distinct steps. The first involves impeachment, a task assigned to the House, where a simple majority vote is required to approve articles of impeachment. Persons impeached are then tried before the Senate, with the House designating the prosecutors. A two-thirds vote of the Senate is required for conviction. Two presidents—Andrew Johnson (1808–1875) and William Jefferson Clinton (1946–)—have been impeached. Nixon resigned before the full House voted on the impeachment articles adopted by the Judiciary Committee.

More common have been impeachment proceedings against federal judges. Thirteen have been impeached; seven were convicted, four were acquitted, and two resigned with no further Senate action. One U.S. senator and one cabinet member were also impeached. Senator William Blount (1749–1800) of Tennessee was the first individual impeached. The Senate expelled Blount in 1797 and then voted that it did not have jurisdiction to vote on the impeachment articles. Blount was charged with seeking to incite Indians to assist the British in driving the Spanish from west Florida. U.S. Secretary of War William Belknap (1829–1890) resigned in 1876 after being impeached for receiving bribes; the Senate failed to muster the required two-thirds vote to convict.

DISPUTED LANGUAGE

Despite the number of times impeachment has been initiated there remains much controversy as to its exact parameters. Republican House Minority Leader (later president) Gerald Ford (1913–2006), in leading the effort to impeach Justice William O. Douglas (1898–1980) (Ford and fellow Republicans were concerned both about the Justice's increasingly erratic lifestyle and the possibility that some of his business dealings were illegal), famously quipped that an impeachable offense was "whatever a majority of the House [concludes it] to be …; conviction results from whatever offense or offenses two-thirds of the other body considers to be sufficiently serious." Given the continuing scholarly debate, Ford's statement has much to recommend it. Among the debated issues is the nature of "high crimes and misdemeanors," the famously imprecise language taken from British practice and enshrined by the Framers in the fourth section of Article II: whether Congress members can be impeached and whether judges can be removed for lack of "good behavior;" whether those removed can have recourse to judicial review; and, finally, whether there are other constitutionally permissible means by which officials can be removed from office.

One set of scholars argues that "high crimes" is limited to indictable offenses. This was argued by Richard Nixon's attorney, James St. Clair (1920–2001), and by law professor Raoul Berger (1901–2000). In contrast, Michael Gerhardt (2000) claims this is too narrow a reading of the English precedents and would have meant for much of early American history that there were few if any grounds for impeachment, since there were few if any federal crimes for which an individual could be indicted. His argument is that the term embraces any activity that would threaten the nation or bring the office into grave disrepute.

Others have claimed that offenses must relate to the office the person holds. This view is generally rejected with the frequently cited example being that of a hypothetical public official who commits a murder totally unrelated to his or her public responsibilities.

Supporting the argument that the standard, particularly regarding presidents, should be high is the claim that removing a president should be a very rare occurrence, since in doing so the Congress would be setting aside the will of the people. Critics of the impeachment of President Clinton argue that this action was almost akin to a congressional coup d'état and that the underlying act, a tryst with a White House intern, was a purely private act. Supporters of the impeachment argue that Clinton's grand jury perjury and his sullying of his office were more than sufficient to justify his removal and that his successor, Vice President Al Gore, had also been elected by the people, a situation quite unlike the nineteenth-century case of President Andrew Johnson.

The impeachment of Senator Blount can be used to argue both that members of Congress can be removed and that they cannot. The dominant view is that there is no basis to include members of Congress under the phrase "all civil Officers."

The first official removed from office (Blount was expelled by the Senate, acting under its powers under Article I, section 5), John Pickering (1738–1805), a U.S. district court judge who was impeached in 1803, clearly committed no crime. He was probably mentally ill and frequently drunk. Like many subsequent impeachments, the vote was along party lines. Pickering's impeachment leads some to argue that since judges serve "during good behavior" (referring to Article III, Section 1 of the Constitution, which concerns a judge's life tenure), the fact of bad behavior on the part of judges constitutes additional grounds for removal. The weight of historical evidence is opposed to this position.

Very much in dispute is whether the Constitution allows Congress to fashion other means to remove officials, particularly someone like Pickering who commit no crime and whose behavior would not serve to bring the government into disrepute. The Senate has, since the 1930s, provided that the trial can be conducted by a com-

mittee reporting to the full Senate. Several proposals have been advanced in Congress by which federal judges could be removed short of impeachment. The Twenty-fifth Amendment provides a means by which an incapacitated president can be removed. Whether a similar amendment to remove disabled judges is necessary or whether there can be a statutory solution is not clear.

Finally, impeachment appears to be one of the few issues that might fall within the steadily shrinking orbit of nonjusticiable "political questions." In a case arising from the 1989 impeachment for perjury of Judge Walter Nixon Jr., the Supreme Court, by dismissing his appeal, appeared to indicate that judicial review, after conviction, was not an option. However, like nearly every other aspect of the impeachment process, this statement too is subject to dispute.

SEE ALSO *Clinton, Bill; Nixon, Richard M.; Politics*

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IMPERFECT COMPETITION

SEE *Competition, Imperfect.*

IMPERIALISM

Imperialism as a distinct set of ideas can be traced to the second half of the nineteenth century; it refers primarily to a political system based on colonies governed from an imperial metropolitan center for direct or indirect economic benefit. Commonly associated with the policy of direct extension of sovereignty and dominion over noncontiguous and often distant overseas territories, it also denotes indirect political or economic control of powerful states over weaker peoples. Regarded also as a doctrine based on the use of deliberate force, imperialism has been subject to moral censure by its critics, and thus the term is frequently used in international propaganda as a pejorative for expansionist and aggressive foreign policy.

IMPERIALISM IN THE NINETEENTH CENTURY

Although the term *empire* (Latin: *imperium*), inhering in the idea of supreme command or authority, is regarded as part of a universal human political experience since the rise of polities in antiquity, *imperialism* is more narrowly dated to the era of colonial empires of the eighteenth and nineteenth centuries. During this era the economic and military advantages of mercantile, industrialist, and capitalist countries were translated into a more or less systematic and formal policy of conquest, annexation, and administration of the world outside of Europe and the Americas. Between 1880 and 1914 much of this world was partitioned in territories under the direct rule of European countries, or subjected to their political influence. Led by Great Britain, France, Germany, the Netherlands, Belgium, and the United States, and later followed by Russia and Japan, principal powers of the world divided Asia into informal zones of influence, and carved up the Pacific and Africa into new territorial, and mostly colonial, units. The expectation of asymmetrical and iniquitous distribution of political-economic gains was complemented by the roughly contemporaneous idea that the world was inhabited by advanced and backward races and nations, and that imperial expansion was also in part the preponderance of those who were fit and thus destined to rule. In the 1890s many contemporary observers associated imperial expansionism with a new phase in the development of international capitalism, one that succeeded the era of free competition and economic liberalism of the mid-nineteenth century. This particular

use of the term *imperialism* has often been attributed to V. I. Lenin, the architect of the Russian Revolution. John A. Hobson (1858–1940) noted the heightened currency of the term in the late nineteenth century, both in political discussion and common speech. Whether they were influenced by Karl Marx's theories or not, contemporaries were aware of the economic roots of this new version of imperial expansion, which they identified with the territorial division of the world among major European powers into formal or informal colonies and spheres of influence. Such claims among European military and economic rivals were nowhere more evident than at the Berlin Conference of 1884, hosted by the German chancellor Otto von Bismarck (1815–1898), who had come to the conclusion that an Africa divided along colonial lines by mutual agreement among the European empires would safeguard markets and raw materials. This move led to the proclamation of a number of protectorates and colonies, known as the "scramble for Africa," and the eventual partition of the entire continent.

The ties between mercantile capital, empire-building, and colonial ventures had already been secured by the late eighteenth century. Capital invested in the triangular trade between England, Africa, and the Caribbean had a profound impact on New World Iberian colonies. The African slave trade, for example, provided the labor for Brazilian and Caribbean plantations that produced sugar for much of western Europe and North America. During the early nineteenth century, settler colonies were also becoming important, both commercially and politically, best articulated perhaps in the context of Upper and Lower Canada by John Lambton, Lord Durham (1792–1840) in his *Report on the Affairs of British North America* (1839). While drawing up the report he was ably assisted by Edward Gibbon Wakefield (1796–1862) and Charles Buller (1806–1848), both of whom were well known for their progressive and radical views on social reform. The Durham Report, which effectively safeguarded British influence over a divided Canada, advocated responsible government through graduated constitutional change, while at the same time recognizing the value of commerce and investment. It also delineated imperial trade and foreign policy, and the regulation of colonial settlement through a careful distribution of public lands by the British government.

Already by the 1840s colonies had assumed heightened importance as welcome outlets, not only for criminals and outcasts, but also for increasingly large numbers of migrants who could not secure adequate employment and resources in the mother country. There were many theorists and advocates of settler colonialism, among them the radical Wakefield, who called for a "systematic colonization" of the Australian continent, arguing that a successful transference depended on the compatibility of capital and labor, and economic opportunity to create harmony between the different classes of settlers. The absorption of "redundant people" in the colonies, Wakefield pointed out in his *View of the Art of Colonization* (1849), would result in increased supply of food and raw materials for manufacture for the inhabitants of the empire at home. Wakefield clearly anticipated the importance of empire for the accumulation of capital and investment overseas.

It was Bruno Bauer (1809–1882), the German philosopher, historian, and theologian, and also onetime leader of the left-Hegelians, who advanced the idea of imperialism as a powerful and disruptive global political force. The entry of Russia as a world power, he predicted, would usher in a new era of transnational imperial rivalry. According to Bauer, this was the result of the contradictions that had arisen between the demands of modern mass society and the political absolutism of the state, a symptom of the crisis of the old European liberal order (Bauer 1882). Thus, for example, in Bismarck's model of state-based socialism in Germany, economic production was subjected to close political control, driven by the need to rein in the unruly forces of capitalism. In Benjamin Disraeli's England, in contrast, political leaders sought a mass mandate for imperial policies in order to shore up and bolster a paternalist monarchy whose institutional basis had been eroded by the force of economic change. Bauer's verged on an apocalyptic vision, portending heightened imperial rivalry across the world, resulting in a war among the leading nations.

Imperialism and nationalism had long been regarded as kindred forces. At the turn of the century, among theorists who challenged this commonly accepted idea was the British liberal economist John A. Hobson, who argued in his influential *Imperialism: A Study* (1902) that the drive for imperialist expansion in Europe could not be fully explained by the rise of patriotic nationalism. From the vantage point of an entire nation and its people, the policy of imperial expansion did not result in long-term and tangible economic benefits; the costs of wars of expansion far outweighed the returns, and indeed, necessary social reforms that would have benefited the economically disadvantaged sections of the population were often set aside in favor of imperial adventurism. Such policies, however, served the financial interests of capitalists and their representative political groups, who were, according to Hobson, custodians of the "imperial engine." Periodic congestion of capital in manufacturing, resulting from uneven distribution of income, falling demand, and excess goods and capital inside a given nation-state, urged the search for investment outlets overseas, thus driving the search for new markets and opportunities for investment in foreign markets, including distant colonies and dependencies. This process was further propelled through

the practices of larger firms and financial groups operating in trusts and combines that sought restrictions on output in order to avert loss through overproduction. Hobson's study, which focused on business cycles, behavior of financial groups, and patterns of overseas investment, directly influenced Marxist thinkers in their analysis of imperialism.

IMPERIALISM AND ITS CRITICS: THE TWENTIETH CENTURY AND BEYOND

During the early decades of the twentieth century there were many radical critics on the Left who saw the rise of imperialism as a historical force intimately tied to the worldwide expansion and consolidation of finance capital. As Lenin in his introduction to Nikolai Bukharin's tract *Imperialism and World Economy* (1917 [1972]) noted succinctly: "The typical ruler of the world became finance capital, a power that is peculiarly mobile and flexible, particularly intertwined at home and internationally, peculiarly devoid of individuality and divorced from the immediate process of production, peculiarly easy to concentrate" (p. 11). Much of the debate centered on Marx's prediction about the concentration of capital. Rudolf Hilferding in *Finance Capital* (1910 [1981]) and Otto Bauer in *Die Nationalitätenfrage und die Sozialdemokratie* (The Nationalities Question and the Social Democracy, 1907), extending Marxian ideas of capital accumulation, argued that the sectors of banking and finance had increasingly started to exert pressure on industrial production, leading to the formation of monopolies and cartels, the quest for protection of markets, and ultimately to economic imperialism, international rivalry, and war. Similarly, Rosa Luxemburg, the Polish-born German revolutionary and founder of the Polish Social Democratic Party and the Spartacus League (which later became the German Communist Party), forcefully argued in her 1913 tract *Die Akkumulation des Kapitals* (The Accumulation of Capital) that imperialism was the direct result of the dynamic and aggressive inroad of capitalism into the less economically advanced parts of the world.

Bukharin and Lenin, stalwarts of Bolshevism and veterans of the October Revolution, took these ideas further, advancing that imperialism was not a contest for world domination among rival races such as Slavs and Teutons, but the direct result of a particular form of capitalism marked by the changing structure of financial investment and relations of production. Colonial expansion and imperial wars were indeed signs of a developing global economy. Bukharin saw the global expansion of finance capital as a historic phenomenon tied to new national rivalries, fiscal competition, and imperial conquest.

Lenin penned a small tract, "Imperialism: The Highest Stage of Capitalism" (1917 [1970]), which soon became one of the most influential of all Marxist studies on the subject. Lenin saw imperialism as closely tied to the normal functions of an advanced capitalism that had already undergone profound changes along with the development of modern European nation-states. More importantly, monopoly capitalism had already edged out an earlier form of competitive capitalism marked by the free entry and exit of small and large-scale industries and businesses. Toward the end of the nineteenth century, an advanced stage of capital was already in progress where open economic competition and production of commodities were replaced by predatory monopolies and cartels. For Lenin, a good example of this process was the changed role of banks as financial intermediaries to monopolistic interest groups, merging readily with industry and leading to the domination of finance capital and the unprecedented concentration of production. As a result, a fundamental and historic feature of capitalism had been altered: What was once characterized by the separation of ownership of capital from the process of production was now marked by a separation of finance capital from industrial capital. Lenin held that new finance capital had outpaced commodities in reaching far corners of the world, heightening actual divisions and rivalry between trading groups and nations. New segments of the world market were thus being appropriated by monopoly capital, with the merging of corporations—such as conglomerates in the oil industry—to weed out competition.

Lenin saw the division of the world among colonial and imperial powers as closely associated with the transformative power of finance capital. Thus the scramble among powerful nations for colonial expansion was largely fueled by the drive for raw materials and markets. Lenin famously proclaimed imperialism as the "highest stage" in the development of capitalism. As monopoly interest groups sought to divide the world into arenas of economic exploitation, they unleashed new rivalries over markets and raw materials among both advanced and less advanced capitalist nations. The uneven economic development of nations, including imperial and colonial powers, further intensified economic competition and political conflict.

Lenin was vehement in his opposition to other theorists of imperialism, especially his contemporary Karl Kautsky (1854–1938), one of the most influential voices among German Social Democrats before World War I. Kautsky in "Die Internationalität und der Krieg" (Imperialism and the War, 1914) argued that imperialism was indeed the logical outcome of capitalism, but was beset by its own fatal contradictions. Kautsky predicted that World War II would lead to the demise of imperialism as an international policy along with its global-indus-

trial order, and rather than a worldwide communist revolution, it would create a new and peaceful consortium among advanced nations along with a cosmopolitan global economy free of imperialistic militarism.

This theory—that political, military, and ideological aspects of imperialism during the late nineteenth and early twentieth centuries were essentially manifestations of deep-seated economic causes, especially the rise of monopolistic finance capital fueling the drive for overseas colonies and global markets—is often referred to as the "Lenin-Hobson thesis." Although some of the basic premises of the thesis have been questioned in light of subsequent history—for instance, the relationship between militarism and economic gain and also between colonialism and the expansion of finance capital—aspects of it continue to be influential. Critics of Lenin and Hobson, and of Marxist theories of imperialism in general, question the assertion that wars of colonial expansion or imperial rivalry were fought for solely economic reasons and that capitalism was the primary engine of colonial and imperial expansion. Some have argued that imperialism was an ideology inherently antithetical to the logic of capitalism and market economy, and as such, a relic of the past; others have sought its origins in the rise of mass politics and fascism (Arendt [1951] (1973)).

More recently, historians following Ronald Robinson and John Gallagher (1961) have questioned the very premise that the high tide of imperialist expansion in the late nineteenth century was a new or unprecedented phenomenon, arguing instead for an extended period of free-trade imperialism bridging the era of mercantilist empires that developed during the fifteenth to the eighteenth centuries and the nineteenth-century wars of imperial annexation. In this intermediate stage, European political and commercial interests were extended through indirect means, without the administrative responsibility of direct colonial rule. Relying largely on the history of the British Empire in Asia and Africa and the expansion of British financial interests in Latin America, such critics view imperialism as a long-unfolding process in which imperial occupation and commercial exploitation are the results of long-term, informal economic relationships between European commercial agents and local regimes, which in themselves were active participants in the process of empire building. Such formulations underscore the role of political regimes that eventually succumbed to European empires, and their subjects who resisted or became unequal partners in colonial economic expansion. They also emphasize the vital role played by newly independent Latin American countries such as Argentina, Bolivia, and Chile as substantial markets, and as part of an extended informal empire (Hopkins 1994). These markets were crucial to British industrial production and finance capital in the late nineteenth and early twentieth centuries, and more generally to the global economy dominated by the United States and western Europe, without directly being part of the colonial system.

Despite such revisions, critics of imperialism still ascribe it to the direct or indirect manifestation of the march of global capitalism from the nineteenth century to the present. Sociologists such as Immanuel Wallerstein (1979, 1988) and economists such as Andre Gunder Frank (1966, 1967) consider European imperial expansion as part of a much larger history of the expansion of capitalism as a world-system, in which shifting economic cores and peripheries are mutually constituted through abiding asymmetric economic and political relationships. Others emphasize imperialism not so much as an economic but as a cultural and ideological force associated with European hegemony. In this wider and more general sense, imperialism has been related to post-Darwinian biological theories of race, theories of western industrial and technological superiority, militant nationalism, orientalism, and also modern-day environmentalism. Subject to such wide-ranging usage, imperialism is harder to define in the present context as a specific set of ideas. Rather, it is more accurately described as an all-purposive political orientation, no longer focused on the extension of the sovereignty of the European nation-states beyond their internationally recognized boundaries, but much more on the political condition of a collective present (Hardt and Negri 2000) marked by a post-European global hegemony of displaced and multilocal capitalism.

SEE ALSO *Capital; Capitalism; Colonialism; Decolonization; Determinism, Biological; Empire; Frank, Andre Gunder; Hegelians; Hilferding, Rudolf; Jingoism; Lenin, Vladimir Ilitch; Luxemburg, Rosa; Marx, Karl; Nationalism and Nationality; Neocolonialism; Neoimperialism; Racism; Underconsumption; Wallerstein, Immanuel; World-System*

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IMPORT PENETRATION

The export ratio and import penetration rate are important concepts in considering a country's trade structure. A search of the American Economic Association's EconLit, a leading database of economics literature, resulted in 142 articles (as of April 2006) that have been published since 1969 and use the term *import penetration*. The oldest of these is by James Hughes and A. P. Thirlwall (1977).

The relationship between domestic output, represented by Y, and domestic demand, represented by D, can be expressed as follows: $Y = D + EX - IM$, with EX representing exports, and IM, imports.

The export ratio is the percentage of domestic output that is exported—in other words, EX/Y. The import penetration rate (IP), on the other hand, is the percentage of domestic demand fulfilled by imports (OECD 2003):

$$IP = \frac{IM}{D} = \frac{IM}{Y - EX + IM}$$

To illustrate, if domestic television sales during a year amount to two million units, and the number of televisions imported totals 800,000, the import penetration rate would be calculated as follows:

$$\frac{80}{200} \times 100 = 40(\%)$$

The concept of the import penetration rate is important in relation to particular industries, as well as to the entire macroeconomy, and it has been a focus of much research. Representative studies were performed by Howard Marvel (1980) and Stephen Rhoades (1984), who analyzed the relationship between concentration and the import penetration rate for its potential as a way to integrate industrial organization and international economics, and Avinash Dixit (1989), who researched the relationship between the import penetration rate and exchange rate pass-through.

From a macroeconomic perspective, a country that produces manufactured goods with a high degree of international competitiveness will see increasing exports and decreasing imports. Under these circumstances, the export ratio will rise and the import penetration rate will fall. Conversely, a country that produces manufactured goods with a low degree of international competitiveness will see decreasing exports and increasing imports. In this case, the export ratio will fall and the import penetration will rise. It must be noted, however, that the relationship described here does not always hold. Two factors—import barriers and transaction costs—may interfere with it. If a country has established import barriers, another country's comparatively better manufactured goods will have little impact on its imports, and its import penetration rate will not rise. Likewise, if transportation and other transaction costs are extremely high for traded goods, differences in international competitiveness may not be reflected in the import penetration rate.

At the industry level, the export ratio and import penetration rate reflect a country's industrial structure. In the case of a developing country, for example, there is a

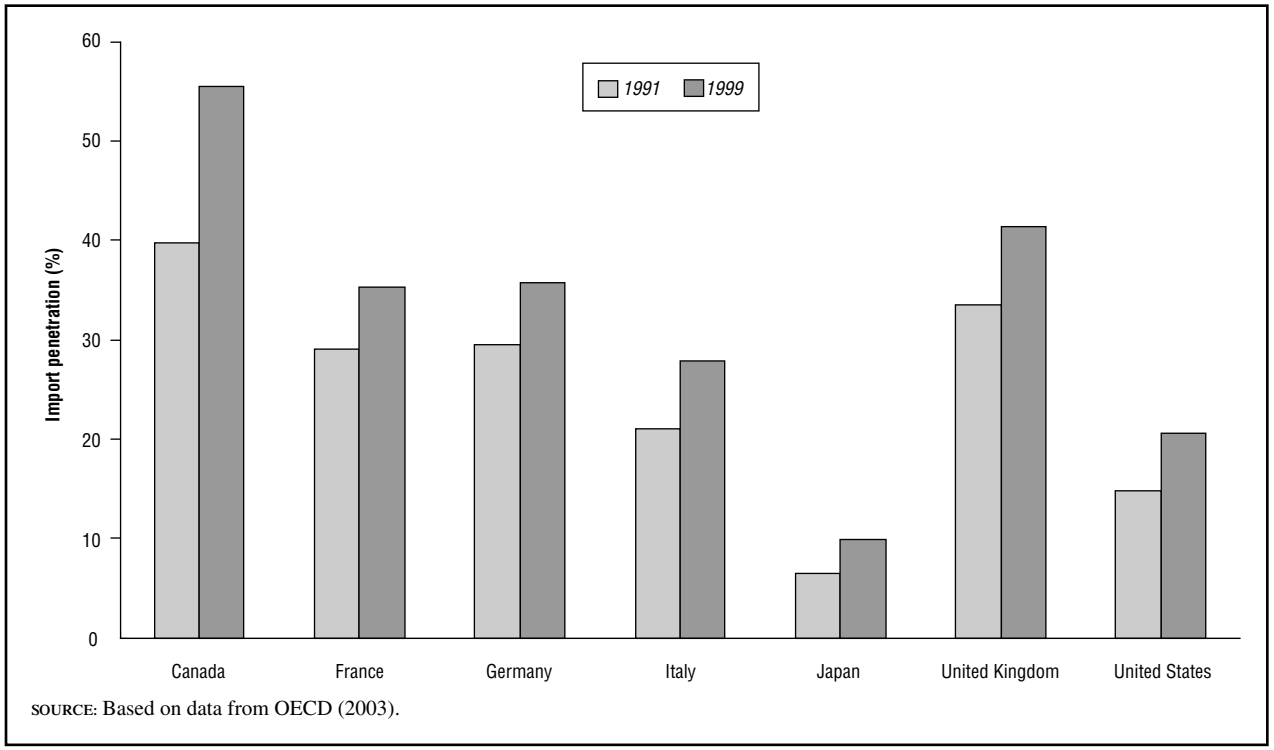

SOURCE: Based on data from OECD (2003).

Figure 1: Import Penetration Rates.

tendency to export a significant volume of primary goods and to import large quantities of industrial goods. As a result, developing countries often have high export ratios for primary goods and high import penetration rates for industrial goods. Industrialized countries, in contrast, export significant volumes of industrial goods and import large quantities of primary goods. Industrialized countries, therefore, often have high export ratios for industrial goods and high import penetration rates for primary goods.

It must be noted that low (high) import penetration rates do not necessarily mean that there are high (low) import barriers. In actuality, a low import penetration rate may reflect a particular set of industrial characteristics that are unfavorable for international trade (e.g., high transportation costs). Furthermore, the combination of a high export ratio and low import penetration rate may be an indicator of the high competitiveness of domestic companies. When the export ratio and import penetration rate are both high for a particular industry, it may very likely be that such factors as intra-industry trade have resulted in a high degree of internationalization.

Figure 1 shows the changes in the import penetration rates of the Group of Seven (G7) countries (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) between 1991 and 1999. As this graph clearly indicates, import penetration rates in all of the G7 countries rose during this period. This may reflect an increasing degree of internationalization over these nine years.

SEE ALSO *Exchange Rates; Export Penetration; Export Promotion; Import Substitution; Imports; Trade*

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IMPORT PROMOTION

Import-promotion policies are measures intended to increase the volume of a country's imports from a particular trading partner or group of trading partners. Such policies may include bilateral agreements, bureaucratic directives, import subsidies, or procedures to improve foreign exporters' information about domestic market opportunities. Many countries have used trade policy to spur development of their own domestic industries, either by restricting competition from imports (import substitution) or by expanding exports (export promotion). Import promotion, which has the effect of *increasing* the foreign competition faced by domestic firms, is much less common.

Among major trading countries, import promotion has been employed to defuse political tensions arising from large bilateral trade imbalances, particularly the record trade surpluses of Japan and other East Asian countries during the 1980s. Voluntary import expansion (VIE) agreements between the United States and Japan set numerical targets for Japanese imports of specific U.S. products including semiconductors, automobiles, and auto parts. The United States later negotiated VIEs for rice and beef with South Korea, another country running a large bilateral surplus on trade with the United States.

VIEs, along with the more common voluntary export restraints (VERs), are results-oriented trading arrangements in which politically acceptable trade *outcomes* are negotiated bilaterally, in contrast to rules-based relationships, in which underlying economic conditions determine trade flows and trade balances given those rules. Results-oriented bilateral agreements, which were negotiated outside the General Agreement on Tariffs and Trade (GATT), failed to satisfy the GATT's most-favored-nation (MFN) principle—that a country should not discriminate among its trading partners. By promoting imports from one specific source, VIEs allowed imports from the favored source to displace lower-cost exports from other countries (trade diversion). VERs likewise diverted trade, with higher-cost goods from other sources replacing exports from the restricted supplier. Bilateral trade commitments also weakened competition among suppliers of affected products, thus raising their profits. Moreover, because compliance with negotiated commitments required coordination of purchases or sales, VIEs facilitated collusion among affected importing firms; VERs likewise facilitated collusion among exporting firms.

More recently, advanced countries have used import-promotion policies to assist potential exporters in developing and transition economies. For example, import-promotion agencies in a number of European countries supply information about market opportunities, organize trade fairs for small and medium-sized firms in developing and transition countries, and offer technical assistance to potential exporters. These efforts complement the Generalized System of Preferences (GSP), which allows manufactured exports of lower-income countries preferential access to the markets of industrialized nations, and broader programs offering duty-free market access to most exports from the least-developed countries. In contrast to negotiated bilateral arrangements, these import-promotion efforts are a form of development assistance that is extended to a large class of countries. The aim is to improve efficiency by overcoming informational gaps that would otherwise prevent smaller firms in poor countries from penetrating export markets. Affected exporters are likely to benefit through increased sales abroad as well as higher prices for their products. However, as with VIEs, these policies discriminate among potential trading partners and thus run the risk that the imports promoted will displace lower-cost products from ineligible exporting nations.

SEE ALSO *Export Promotion; General Agreement on Tariffs and Trade; Import Penetration; Import Substitution; Imports; Trade Surplus*

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IMPORT QUOTA

SEE *Wage and Price Controls.*

IMPORT SUBSTITUTION

Import substitution, also referred to as import substitution industrialization (ISI), is a set of policies that addresses the developmental concerns of structurally deficient economic countries. As the name suggests, the ultimate goal of ISI is to promote a country's economic industrialization by encouraging domestic production and discouraging imports of consumer goods.

The dependency theorists were the first to formally devise import substitution as a viable economic strategy. Inspired by Karl Marx and Friedrich Engels's writings on

imperialism, the dependency theorists characterize the international system as divided between countries of the core and those of the periphery. In contrast to the industrialized nations of the core, the peripheral countries are poor and lag behind technologically. Another trait of the countries of the periphery, according to this school of thought, is their inability to influence economic outcomes in the international realm. The asymmetry in power relations between core and peripheral countries is borne out of the unfavorable economic exchanges that developing countries have with the developed world. This theory asserts that developed nations utilize their economic superiority to influence, and often intervene in, the peripheral countries' economic, diplomatic, and military interests.

The dependency theorists contend that developing nations are bound to experience balance of payments problems due to declining terms of trade; that is, their ability to use earnings from agricultural (or other primary) exports to pay for industrialized (and high value-added) imports from developed nations is likely to diminish (Hirschman 1971). Hence, they argue that developing countries can enhance their international strategic position by reducing, or eliminating, their trade dependence on wealthy nations if they substitute their industrialized imports for goods manufactured domestically.

Besides the theory that inspires ISI policies, past international crises have forged a consensus among developing countries for the need to promote their local industries. The Great Depression and the two world wars were devastating for developing countries, whose industrialized imports from the developed economies were drastically interrupted. The economic success of the Soviet Union during the first half of the twentieth century also inspired policy makers throughout the developing world, including proponents of capitalism, who were persuaded by the apparent efficacy of a centrally planned economy. Indeed, the political and economic elites of peripheral countries were convinced that the state had to lead the crucial task of promoting domestic industry. Policy makers believed that a well-conceived and coordinated state intervention in the economy would eventually enable peripheral countries to catch up economically to the developed nations, which had the historical advantage of being the first ones to achieve industrial development.

In a nutshell, import substitution is a government-led, tightly staged economic strategy aimed at promoting industrialization by offering a package of subsidies to its local industries (which are oftentimes government owned) and by insulating infant industries from foreign competition. Two important tasks of a successful ISI strategy are to persuade domestic consumers to buy locally produced goods and to encourage domestic producers to participate in the country's industrialization project. ISI policy tools include:

1. High import tariffs on consumer goods
2. Low or negative tariffs on imports of machinery and intermediary inputs
3. Cheap credit (frequently at negative real interest rates) to industrial firms
4. Preferential exchange rates for industrial producers
5. Public investment in infrastructure (e.g., transportation and power) and in so-called basic industries, such as steel (Weaver 1980)

One important feature of ISI is the tendency to transfer income from agricultural exports to industrial development. Countries that adopt this economic strategy in effect penalize their agricultural sectors, even though most of these countries enjoy significant comparative advantages in agricultural production. Michael Lipton (1977) denounces this practice as "urban bias," namely, policies that favor urban industrial producers and labor at the expense of farmers and workers in rural areas. Some of the policies that characterize urban bias are overvalued real exchange rates, which penalize the export sector; price controls on domestic sales of locally produced agricultural goods as a means to subsidize food consumption in urban centers; and heavy taxation on agricultural exports. Therefore, one could argue that import substitution results in economic autarky.

ECONOMIC PROBLEMS ATTRIBUTED TO ISI

Despite widespread enthusiasm in the 1940s and 1950s, levels of economic success among governments that pursued ISI policies tend to vary across regions and countries. Nevertheless, a common pattern exists among the ISI countries that achieve material domestic industrialization: They all tend to have large domestic markets. In Latin America, for example, some of the countries with relatively successful ISI experiences include Argentina, Brazil, and Mexico, the three largest countries in the continent. Scholars believe that import substitution cannot succeed as a development strategy without the support of a fairly large domestic market. Such markets are necessary to encourage local production.

Unfortunately, import substitution has left a devastating legacy in Africa, where most ISI economies have experienced stagnant or declining production in their agricultural sectors. Since 70 percent or more of the African population earns its income from agriculture, the urban bias that characterizes import substitution has resulted in a reduction in the real income of those who are among the poorest in the region (World Bank 1981).

Some of the other economic problems attributed to ISI include:

1. An increase in state bureaucracy and in administrative inefficiency, in part because of the government's excessive intervention in the economy;
2. Increased fiscal deficits, which are primarily caused by governmental investments in heavy industry despite the lack of public resources;
3. Chronic real exchange rate misalignments resulting from the maintenance of overvalued exchange rates;
4. A shortage of foreign exchange, mostly due to the countries' poor trade performance;
5. An increase in foreign debt because ISI economies tend to borrow heavily from international capital markets to finance their development strategies;
6. An increase in income inequality, especially between rural and urban workers; and
7. An increase in balance of payments problems due to poor export performance and the rise in the importation of heavy machinery by domestic industry.

Of all the problems associated with import substitution, arguably the latter is the most ironic. A reduction in trade dependency on developed nations is precisely one of the main objectives in the pursuit of ISI strategy. Since the late 1980s there has been little support for import substitution among scholars. However, the economic nationalism that motivated much of this economic strategy has not completely gone out of fashion.

SEE ALSO *Balance of Trade; Economic Growth; Export Promotion; Industrialization; Infant Industry; Protectionism; Trade*

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Monica Arruda de Almeida

IMPORTS

Imports are products or services shipped from producers in one country to users who are located in another country. While many import transactions involve a distinct buyer and seller, not all imports involve a market transaction, since some imports arise when a producer in one country ships its products to an associate or affiliate abroad.

The pattern of import demand—whether a country imports shoes, electronics, and oil, or some other bundle of goods and services, for example—is partially determined by international differences in comparative advantage. Such differences are driven by cross-country differences in the relative endowments of capital, labor, and other resources or by cross-country differences in productivity across products. Import patterns are also influenced by customer desire for variety. Since expanding product varieties generally requires firms to make fixed-cost investments in the development of new varieties as well as the construction of new production facilities, producers in different countries specialize in distinct varieties of a product, and a limited range of varieties are available from each country. Thus, when individuals prefer a particular car, chocolate, or cheese that is not produced at home, they may import their preferred variety from the country that produces their preferred variety or brand.

Multinational firms—firms whose plants, offices, and facilities are located in more than one country—play an important role in the movement of imported goods, since multinational firms' networks of overseas affiliates both

Multinational firms and the composition of U.S. goods trade in 2003: Each cell reports the percentage of trade conveyed by multinational companies (MNCs).

	MNC Trade	Intrafirm MNC Trade
U.S. imports of goods		
U.S.–owned nonbank MNCs	37%	15%
Majority-owned nonbank U.S. affiliates of foreign-owned firms	28%	23%
Total imports conveyed by MNC firms	65%	38%
U.S. exports of goods		
U.S.–owned nonbank MNCs	57%	22%
Majority-owned nonbank U.S. affiliates of foreign-owned firms	21%	10%
Total exports conveyed by MNC firms	78%	32%

SOURCE: U.S. Bureau of Economic Analysis; Zeile 2005, Table 7; Mataloni 2005, Table 2; Nephew et al. 2005, Table A.

create and support international import transactions. To demonstrate the importance of multinational firms in the mediation of trade, Table 1 shows the percentage of U.S. import value in 2003 that involved a multinational firm at the shipping or receiving end of the transaction. For example, of the $1,257 billion in goods imported into the United States in 2003, 65 percent of the transactions involved multinational firms. Similarly, noting that U.S. exports become another country's imports, 78 percent of the $725 billion of U.S. goods exported in 2003 involved multinational firms. In each of these examples, there were two potential avenues for engagement by multinational firms: the first avenue involved American-owned multinational firms, while the second involved foreign-owned affiliates operating in the United States.

The networks and presence of multinational firms were also notable in the conduct of services trade. Data from the U.S. Bureau of Economic Analysis show that other countries imported $769 billion of services from the United States in 2003, 62 percent of which involved the participation of U.S. service affiliates located overseas (Nephew, Koncz, Borga, and Mann 2005). Similarly, 63 percent of U.S. service imports in 2003 were conducted via the U.S.-based affiliates of foreign-owned firms (Nephew, Koncz, Borga, and Mann 2005).

While countries differ in the percentage of their imports handled by multinational firms, a portion of each country's trade is likely to involve multinational firms. At the most basic level, firms often enter into operation as a multinational when they set up an overseas affiliate dedicated to the distribution of their products in foreign countries. Over time, the multinational firm's presence in the foreign country may allow it to expand its foreign sales, and consequently the imports of the foreign country, since affiliate operations help firms to learn which of their products best match local tastes. If the local demand is sufficiently different and the foreign market is sufficiently large, the foreign affiliate may enable the multinational firm to tailor its products or services to the specific nature of foreign customer demands.

While the international networks of multinational firms often stimulate import flows, the operation of foreign affiliates may reduce import volumes. This outcome is especially likely when the multinational firm uses the output of its foreign subsidiary to serve its foreign customers, rather than having the foreign customers import the firm's product. This type of substitution is especially likely when import tariffs are high, or international transportation costs are large, since the multinational firm maximizes its profits by producing in a foreign subsidiary, rather than engaging in international trade in its products. In contrast, when the cost of creating a new plant in a foreign location is large, the profit-maximizing multinational will be more inclined to produce in a more limited number of locations, or even a single location, thus requiring foreign customers to import their products. Since the cost of creating a new production facility does not vary dramatically across countries, this suggests that the displacement of imports by subsidiary production will be greatest for countries with large markets, where the variable cost savings due to lower transportation costs and tariffs more than compensate for the added fixed costs of building a new production plant overseas.

Production by a multinational firm's overseas affiliates stimulates demand for imported intermediate inputs that are used in the foreign affiliate's production. In many instances, these transactions give rise to intrafirm imports, where the multinational firm is both the shipper and recipient in the import transaction. For example, the production of cars in Toyota's U.S. assembly plants generates intrafirm imports when Toyota's U.S. assembly plants import engines from Toyota-owned production facilities in Japan. As Table 1 shows, 38 percent of U.S. imports and 32 percent of foreign imports of U.S. goods represented intrafirm transactions, which placed the same multinational firm as the shipper and receiver of the imported goods.

More broadly, increasing vertical specialization in international trade allows production to be decomposed across countries, as each country contributes to some elements of the production process. The international trade incentives for engaging in vertical specialization are identical to the motives driving the demand for imports of final products. However, in vertical production relationships, comparative advantage determines which stages of production are conducted in each country along the production process. For a broad range of countries, David Hummels, Jun Ishii, and Kei-Mu Yi (2001) estimate that vertical specialization, involving the trade of both affiliated and unaffiliated firms, represented 20 percent of all trade by 1990, and that the growth of vertical specialization was responsible for 30 percent of the growth in trade between 1970 and 1990. As tariff and transportation costs continue to decline, and technologies for international communication and coordination improve, vertical specialization imports should grow further yet.

SEE ALSO *Balance of Payments; Balance of Trade; Exchange Rates; Exports; Trade*

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Deborah L. Swenson

IMPOSSIBILITY THEOREM

SEE *Arrow Possibility Theorem.*

IMPRESSION MANAGEMENT

SEE *Survey.*

IMPRISONMENT

Imprisonment is a political act. Until early-nineteenth-century reforms, lockups most often confined people awaiting trial. Earlier political elites, kings and queens for example, locked away their opposition, critics, or competitors in dungeons or, in the case of enemies of the English Crown, the Tower of London. Common criminals were often executed, were banished, or received corporal punishment. The concept of the European and North American prison as a primary form of punishment was a reform advocated by individuals such as the Italian jurist Cesare Beccaria (1738–1794) and the American reformer Jeremy Bentham. Early American prisons in Pennsylvania and New York were thought to provide a more reasonable alternative than previous practices, which reformers believed were too often cruel and capricious.

Imprisoning offenders provides a rational means of punishment because the length of incarceration can be tied to the severity of the offense or offenses. Which crimes people will be imprisoned for and for how long are decisions that are made in political arenas. In the late twentieth century the Soviet Union, South Africa, and the United States were the nations with the largest portions of their populations in custody. With the collapse of the Soviet Union and the subsequent release of political prisoners, the demise of apartheid and the consequent liberation of democracy advocates and freedom fighters, the United States moved into the lead. Since then, the war on drugs and other "get tough" practices have led to a quadrupling of the number of American inmates. Officials of both major political parties have supported such practices because they want to run for reelection on "get tough on crime" platforms, and they fear being painted as "soft on crime" by the opposition. Thus, the consequences for criminal acts, including length of incarceration, are essentially outcomes of the political process, involving politicians, public interest groups, and advocates.

Decisions have been made against a backdrop of two competing visions of the role of prisons. Is their primary purpose punishment or rehabilitation? Estimates of recidivism rates frequently have surpassed two-thirds when corrections officials were concerned about rehabilitation *and* when punishment was stressed. With such limited success with either philosophy, legislatures often "reform" and alter sentencing and imprisonment policies based on what will garner votes, rather than a rational penology.

PRISON SYSTEMS IN AMERICA AND ABROAD

Evidence of the political and economic underpinnings of imprisonment in the United States can be seen in the history of race and American incarceration. Prior to the Civil War very few blacks were ever confined in prison. Most African Americans lived in southern states and most were slaves. Freedmen found guilty of crimes were frequently re-enslaved. Bondsmen who were thought to violate the law were more likely to be punished by their owners and not imprisoned (even though white offenders might be locked up), because to do so deprived southern elites of workers. After the demise of Reconstruction in the late 1870s the prisoner lease system was instituted in the South. This system of "renting" convicts (which included more blacks, now that they were not enslaved) to work on plantations, in mines, on railroads, and in other laborious or dangerous industries provided cheap labor, but it also buttressed the Jim Crow racial caste structure that emerged. Although Jim Crow laws no longer exist in the United States, an argument among researchers remains: What role does race play in the rates of imprisonment, and what percentage of minority imprisonment can be justly accounted for by minorities' higher levels of involvement in crime?

In societies with heterogeneous populations race and ethnicity are important determinants of imprisonment. Michael Tonry's *Ethnicity, Crime, and Immigration* (1997) presents studies of race, immigration, crime, and criminal justice practices in Europe, Australia, Canada, and the United States. The countries included, with the exception of Australia, do not have the oppressive domestic racial history of the United States or its level of racial disparity in imprisonment. In Australia the treatment of Aboriginal people has been racist. Nevertheless, studies included by Tonry document important shifts in criminal justice practices as the number of people defined as "outsiders" grows. Within the United States, the debate continues to be not about whether racial unfairness results in disproportionate confinement of African Americans and Latinos, but how much of observed racial disparities in imprisonment are due to unwarranted, discriminating treatment. As European nations develop more diverse populations it is likely that they too will have growing disparity in imprisonment and debates that parallel those in the United States. Europeans will have to consider what portion of racial and ethnic imprisonment disparities result from higher criminal involvement among "others"—probably in part a result of their political, economic, and social disadvantages within the society—and what portion are consequences of the politics of imprisonment.

Nations still use prisons to stifle political dissent: Amnesty International regularly publishes lists of nations that use prisons to violate human rights. Litigation resulting from U.S. policies that lock up "criminal combatants" in the "war on terror," with neither constitutionally guaranteed due process nor supposed Geneva Convention protections, is likely to continue for decades in either American or international courts.

EFFECTS ON ECONOMY AND COMMUNITY

There are two additional important aspects of imprisonment: its differential economic effects and its effects on communities. In 2004 Bruce Western and his colleagues showed that racial and class inequalities have been maintained, in part, by U.S. imprisonment patterns. For example, their research shows that the reduced number of unemployed African Americans is a consequence of the increased number of blacks who are held in confinement rather than as a result of any improving economic fortune; they have simply been removed from both the labor market and the unemployment roles. When eventually released, they will then have considerably poorer employment prospects than before their incarceration.

The massive increase in U.S. imprisonment has also been detrimental to communities. In 1998 Dina Rose and Todd Clear demonstrated that when large numbers of people are forcibly removed from communities by incarceration, the social structure is destabilized, opening the door for social problems, including increased crime. Also, released inmates tend to return to the same neighborhoods they lived in prior to imprisonment. They bring back their increased social and economic disadvantage and social stigma. When the released are concentrated in already disadvantaged neighborhoods, they further destabilize those communities.

Few argue that imprisonment is not a better form of punishment than the arbitrary and frequently cruel practices that it replaced, and even fewer will suggest that incarceration is not a necessary practice in complex societies. Too often, however, there is little recognition of the political nature of imprisonment and the social and economic consequences of incarceration.

SEE ALSO *Deterrence; Prisons*

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Robert D. Crutchfield

IN VIVO TRANSFERS

In vivo transfers are gifts living parents give to their adult children. In other words, in vivo transfers can be likened to bequests, the main distinction being that with an in vivo transfer, the transfer occurs between two living persons. According to the life-cycle permanent income hypothesis (Kotlikoff 2001), an individual saves and borrows in order to smooth consumption in the face of income fluctuations. Like bequests, in vivo transfers affect the utility and budget constraints of individuals who are concerned about the future welfare or happiness of their children. This theory of consumption further predicts that changes in tax structure may influence consumption patterns over time.

Any change in fiscal policy, uncertainty, costs, preferences, and the like provides an incentive for individuals

concerned with the future happiness of their children to change their consumption, saving, and wealth-accumulation behavior and provide in vivo transfers. An obvious incentive provided by a tax on transfers of wealth at death is for taxpayers to arrange to transfer wealth before dying by making gifts to their heirs. As such, the gift tax is the government's response to such efforts to avoid inheritance taxes. In short, according to the life-cycle permanent-income hypothesis, tax policy may have important implications for in vivo transfers and bequests.

Joseph Altonji, Fumio Hayashi, and Laurence Kotlikoff (1997) test whether in vivo transfers are motivated by altruistic concern by individuals for their children. They find that parents increase their transfer by a few cents for each extra dollar of current or permanent income they have, which in itself is consistent with altruism. Interestingly, they also find that parents reduce their transfer for every increase in their children's income. Using French data, Luc Arrondel and Anne Laferrere (2001) also report evidence that transfer behavior is responsive to changes in the fiscal system. In contrast to Altonji, Hayashi, and Kotlikoff, Arrondel and Laferrere find no support for altruism. In their view, no legal or fiscal system is so strong and so detailed as to determine family behavior, but some individuals seem to use the tax system to optimize their transfers. They find strong behavioral responses to tax incentives. The empirical tests do not validate a single model of intergenerational transfers. They conclude that altruism seems to be involved at the time in the life-cycle when children are young adults, but the gifts are of comparatively small amounts. Altruism is harder to detect from the study of total in vivo gifts.

Ernesto Villanueva (2005) found some evidence that public help may displace in vivo transfers. Tentative estimates suggest that in West Germany, an extra dollar of public help displaces between 8 and 12 cents of parental transfers. Those results are somewhat smaller than corresponding estimates from the United States reported by Robert Schoeni (2000). That is, following a cut in unemployment benefits, individuals who have access to private help are less likely to see their standard of living affected by the change. Comparing in vivo transfers in size and incidence between ethnic groups, using data from the mid- to late-1980s, Mark Wilhelm (2001) found that annually whites had a higher likelihood of receiving a transfer and that it was on average a larger amount for whites than non-whites. The average amount received was $2,824 for whites and $805 for non-whites. The average incidence of receipt was 20 percent for whites and 17.8 percent for non-whites.

Using U.S. data, David Joulfaian and Kathleen McGarry (2004) examine the responsiveness of in vivo transfers to changes in tax laws. They find that many wealthy individuals do not take full advantage of the ability to make in vivo transfers free of estate and gift taxes, as long as the gift is less than approximately $40,000 per year, and those who do make in vivo transfers do so only on a one-off basis. Further, they find that there are sizable shifts in the timing of giving in response to tax changes, but the wealthy do not make sizable in vivo transfers over time.

In summary, there is considerable evidence that taxes and specifically estate and gift taxes appear to influence decisions to make in vivo transfers.

SEE ALSO *Altruism; Bequests; Family Functioning; Inequality, Wealth; Inheritance; Inheritance Tax; Intergenerational Transmission; Life-Cycle Hypothesis; Permanent Income Hypothesis; Policy, Fiscal; Taxes*

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Mark Rider

INADA CONDITIONS

Economists usually posit that production can be represented by a mathematical function that relates output to input factors. One assumes that aggregate production (Y) depends on the two input factors capital (K) and labor (L). Formally, the process relating output to the inputs is described by the function $F(K, L) = Y$, where

more input raises output. The function $F(\cdot)$ is assumed to be linearly homogenous, so that production can be written as $Y = L \cdot F(K/L, 1)$, stating that raising capital and labor by a certain amount leads to a proportional rise of production. Given this property, production per labor input, $y = Y/L$, can be written as $y = f(k)$, with $k = K/L$ capital per labor. The function $f(\cdot)$ is increasing in k continuously, meaning that jumps are excluded, and it is continuously differentiable, implying that the derivative of the function exists and is itself a continuous function.

In addition, $f(k)$ satisfies the following conditions, called the Inada conditions, which are ideal assumptions about its shape:

The value of the function at 0 is zero, $f(0) = 0$

The function is strictly increasing in k, $f'(k) > 0$, with ' denoting the derivative

The derivative of the function is decreasing so that the function is strictly concave, $f''(k) < 0$

The limit of the derivative approaches plus infinity when k goes to zero, $\lim f'(k) = \infty$, for $k \to 0$

The limit of the derivative approaches zero when k goes to infinity, $\lim f'(k) = 0$, for $k \to \infty$

These conditions were named after the Japanese economist Ken-Ichi Inada (1925–2002), who wrote a number of important papers on welfare economics, economic growth, and international trade.

The Inada conditions guarantee that a unique steady state in the neoclassical growth model exists and is stable. The Inada conditions are purely technical assumptions and are hardly relevant for empirical economics. The neoclassical growth model is described by the differential equation $dk(t)/dt = s \cdot f(k(t)) - (n + \delta) \cdot k(t)$, where s is the constant savings rate, n is the growth rate of labor, δ is the depreciation rate of capital, and t denotes time. This equation states that the change in capital per labor equals savings per labor in the economy, which are equal to investment, minus that part of capital per labor that is used up due to depreciation and due to the growth of the labor force. A steady state is defined as a situation with $dk(t)/dt = 0$ so that capital per labor is constant over time. Total investment, $I(t)$, in the economy then equals $(n + \delta) \cdot K(t)$, so that the total capital stock grows at the same rate as labor. Given the Inada conditions, there exists a unique value $k^* > 0$ solving $dk(t)/dt = 0$, because $s \cdot f(\cdot)$ is larger than $(n + \delta) \cdot k$ for values of $k < k^*$, and it is smaller for values of $k > k^*$. Figure 1 illustrates the situation graphically. In addition, $k < k^*$ is stable because for $k < k^*$ capital per labor rises, $dk(t)/dt > 0$, and for $k > k^*$ capital declines, $dk(t)/dt < 0$.

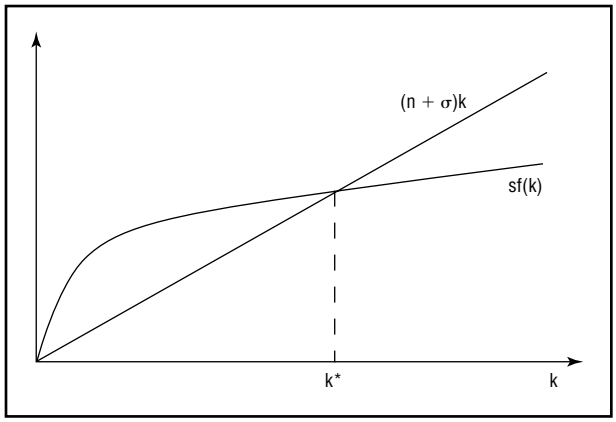

Figure 1

SEE ALSO *Neoclassical Growth Model; Production Function; Returns, Diminishing*

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Alfred Greiner

INCARCERATION

SEE *Imprisonment.*

INCARCERATION, JAPANESE AMERICAN

From 1885 to 1924 approximately 200,000 Japanese immigrated to Hawaii, and 180,000 Japanese immigrated to the mainland United States. This first generation of immigrants (Issei) built a vibrant community, raising families, starting churches, and forming social and business organizations. Their success met with prejudice and an anti-Japanese movement. Discriminatory laws prevented Issei from becoming naturalized U.S. citizens. They were barred from owning land, marrying whites, and sending their children to schools attended by whites. In 1924 Congress passed the Immigration Act, which barred any further immigration from Japan. The second generation (Nisei) also faced discrimination. Even though they were born in the United States, spoke English like other Americans, and often did well in school, these U.S. citizens of Japanese ancestry faced discrimination in employ-

ment, housing, public settings (restaurants, stores, hotels, swimming pools, etc.), and social and civic activities.

ARREST OF COMMUNITY LEADERS

On December 7, 1941, Japan attacked U.S. military bases in Pearl Harbor, Hawaii. More than 3,500 American servicemen and civilians were killed or wounded. In the hours following the attack, the FBI arrested over 1,200 Japanese immigrant men: businessmen, Buddhist priests, Japanese language teachers, and other community leaders.

More than 5,500 Issei men were eventually picked up and held as potential threats to national security. Most of these men were taken first to Immigration and Naturalization Service (INS) detention stations and then to Department of Justice (DOJ) internment camps to undergo hearings. Officially, these internment cases were given individual legal review, but in practice the majority of Issei were imprisoned without evidence that they posed any threat to national security. Internees were not allowed legal representation. Approximately 1,700 were "released" to War Relocation Authority (WRA) concentration camps after these hearings, but most were transferred to U.S. Army internment camps.

MASS REMOVAL OF U.S. CITIZENS

On February 19, 1942, President Franklin D. Roosevelt (1882–1945) signed Executive Order 9066, which authorized military commanders to designate military areas from which any person could be excluded. Congress supported the executive order by authorizing a prison term and fine for a civilian convicted of violating the military order. General John L. DeWitt (1880–1962), Western Defense Command, then issued over one hundred military orders that only applied to civilians of Japanese ancestry living in the West Coast states. Thus the president and Congress authorized the removal and incarceration of over 110,000 people based solely on race without charges, hearings, or evidence of wrongdoing. More than two-thirds of those incarcerated were U.S. citizens—over half were children.

Ironically, over 150,000 people of Japanese ancestry in Hawaii were not removed or incarcerated. General Delos Emmons (1888–1965), who became commanding general in Hawaii shortly after the bombing of Pearl Harbor, treated the Issei and Nisei as loyal to the United States. Although there were many false stories of Japanese American spies, General Emmons repeatedly rejected anti-Japanese pleas for mass removal of Japanese ancestry from Hawaii. He knew there was no evidence of Japanese American espionage or sabotage. In fact during World War II (1939–1945) no Japanese American in the United States, Hawaii, or Alaska—citizen or immigrant—was ever convicted of espionage or sabotage.

DISPERSAL TO DETENTION SITES THROUGHOUT THE UNITED STATES

The general public, through books, movies, and school lessons, is most familiar with the ten WRA concentration camps, such as the Manzanar "relocation center" near Independence, California. The full extent of the imprisonment, however, included approximately sixty other government facilities: temporary "assembly centers," immigration detention stations, federal prisons, and internment camps. Italian and German immigrants, Alaskan natives, Japanese Latin Americans, and Japanese Hawaiians were also sent to live at these sites.

Which detention facility a person entered depended on several factors, including citizenship status, perceived level of threat, geography, degree of cooperation or protest, and sheer chance. For the most part the DOJ and U.S. Army camps interned first-generation men who were arrested by the FBI, while the WRA concentration camps incarcerated both U.S. citizens and immigrants affected by the exclusion order.

SOME LEAVE CAMPS: "DISLOYALS" TRANSFERRED TO TULE LAKE

As early as April 1942, even before inmates were transferred from the temporary "assembly centers" to concentration camps, the WRA recognized that Japanese Americans eventually would have to reenter society. Thus the WRA enacted a policy of granting short-term or indefinite leave for college or work to Japanese Americans who were U.S. citizens and who could find sponsors. Additionally, thousands of Nisei men enlisted in the military and served in combat.

To help administer the military draft and work-release program, the U.S. Army and the WRA produced "loyalty questionnaires" for all WRA inmates seventeen years of age and older. Two questions caused confusion and controversy for inmates. They were asked if they were willing to serve in the armed forces and to forswear loyalty to Japan. Answering "yes" left the Issei stateless, as they could not be U.S. citizens and the wording falsely assumed the American-born Nisei were loyal to Japan. Despite serious problems with the meaning and purpose of the questions, government officials and others considered those who answered "no" to these two questions to be "disloyal" to the United States, and they were transferred to the Tule Lake concentration camp in northern California, which was designated a segregation camp. "Yes" answers to these questions qualified inmates for service in the U.S. Army, and some became eligible for release and resettlement in areas outside of the West Coast exclusion zones.

GOVERNMENT ENDS WEST COAST EXCLUSION

In December 1944 the U.S. Supreme Court ruled in the case brought by Mitsuye Endo, a Nisei contesting her incarceration, that a loyal U.S. citizen could not be held in a WRA concentration camp against his or her will. While the case was being heard, federal officials recognized that the continuing incarceration was not legally defensible and began preparations to close the concentration camps. In addition the exclusion orders were rescinded, and persons of Japanese ancestry were allowed to return to the West Coast. On March 20, 1945, the last WRA concentration camp, Tule Lake, was closed. The DOJ internment camps remained open longer. The last internment camp to close was the DOJ camp in Crystal City, Texas, in January 1948.

Upon release the majority of those who had been incarcerated were given $25 and one-way transportation. Many of the freed Japanese Americans returned to discover that their homes and farms had been vandalized and their belongings stolen. Even Nisei military veterans returning home in their uniforms from combat duty endured racist insults. Starting over was especially hard for the Issei, who were entering their senior years with little to show for a lifetime of work.

ADMISSION OF WRONGDOING: APOLOGY FROM THE GOVERNMENT

In the late 1960s community activists started a movement to petition the government to look into potential wrongdoings. Classified information was uncovered that showed that the exclusion order and incarceration were based on racism and falsehoods. In February 1980 Congress passed an act forming the Commission on Wartime Relocation and Internment of Civilians (CWRIC). This commission conducted hearings in 9 cities, heard testimonies from over 750 witnesses, and examined over 10,000 documents. In 1983 the CWRIC issued its report, which concluded that military necessity was not the cause of the mass imprisonment. Rather, "the broad historical causes which shaped these decisions were race prejudice, war hysteria and a failure of political leadership" (Commission on Wartime Relocation and Internment of Civilians 1983, p. 18).

Acting upon the recommendations of the commission, Congress passed the Civil Liberties Act of 1988, and President Ronald Reagan (1911–2004) signed it into law. This law required payment and apology to survivors of the incarceration caused by Executive Order 9066. Two years later President George H. W. Bush presented the first apologies along with payments of $20,000 to each of the oldest survivors.

SEE ALSO *Civil Liberties; Civil Rights; Discrimination, Racial; Japanese Americans; Reparations; Roosevelt, Franklin D.*

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Tom Ikeda

INCAS

The Inca Empire was the last and greatest of several civilizations that existed in South America prior to the arrival of Europeans in the sixteenth century. The Incas began as one of many small, warring chiefdoms in central Peru. At its height in 1532 CE, the empire stretched from central Ecuador to south central Chile, and encompassed high altitude grasslands, coastal deserts, and tropical forests.

The dates for the Inca Empire are under debate. From study of Spanish documents, the late John Rowe, professor of anthropology at University of California, Berkeley, determined that the Incas began their expansion out of the region of Cuzco, their capital, around 1438 CE. Although archaeological work has suggested that the expansion actually began before that, the fact remains that the Incas created their empire in a remarkably short time, less than two centuries.

The success of the Incas was based on two main factors, a large and well-disciplined army and an effective administrative system. The Inca army was made up of a core of seasoned troops augmented by a large number of part-time soldiers, all led by a group of outstanding generals. The Inca army was successful also because of an effective infrastructure. The Incas built or expanded earlier road systems to make up more than 40,000 kilometers of roads. At regular intervals were major centers where provisions were collected from conquered people.

The Incas required labor, but little else, from their subjects. A conquered group had their land divided into three parts: one part each for the use of the Inca state and Inca religion, the third part remaining for the people's use. One labor obligation was working the Incas' parts first. Every household was also required to provide labor service, called *mit'a*, for a certain period each year. This labor might entail warfare, craft production, carrying messages, or building activities. The Incas provided all the food and materials for the *mit'a* labor. They also moved communities all over the empire to maximize food production and for political reasons. In this way, the Incas created an agricultural base and vast labor pool for both expanding their empire and creating the material and luxury goods that were needed to run it.

The Incas never developed a writing system, but used a knotted cord device called a *quipu* to keep track of goods and labor. Specially trained individuals, called *quipucamayocs*, were in charge of maintaining these records. The Inca administrative system was a hierarchical one, and was based on a decimal system of counting. The empire was ruled by the king, and consisted of four unequal parts, called *suyus*, that originated at Cuzco. Each *suyu* was made up of provinces, which were ideally divided into two or three *sayas*, units of 10,000 families. The *sayas* might correspond to a conquered ethnic group, or be a combination of smaller ones. *Suyus*, provinces, and *sayas* all had separate leaders. Within each *saya*, households were organized into a series of progressively smaller administrative units, led by local *curacas*, or leaders. There were *curacas* in charge of 5,000, 1,000, 500, 100, 50, and 10 families. Their jobs were to organize labor and lead their units' troops in battle. They were rewarded with gifts for jobs well done, and punished for doing poorly. Most of the *curacas* were local leaders who were incorporated into the lower levels of the social hierarchy. At the top of the hierarchy were the Inca nobility, those who could claim ancestry from any of the original kings, and allied ethnicities, called "Inca-by-privilege," who were granted Inca status. These two groups filled the highest administrative posts in the empire.

As with many ancient civilizations, Inca politics were intimately related to their religion. The Incas worshipped a host of deities of the earth and sky. In addition, the Incas revered a line of divine kings and held sacred any place that was considered imbued with supernatural power (*huacas*). Both the Incas and their subjects lived in fear of the displeasure of gods and *huacas*, and so carried out many different rituals. Although most of these involved only offerings of food or llamas, extremely important events, such as the accession of a new ruler, or a major calamity such as an earthquake, could require human sacrifice. Some of the most important Inca gods required human sacrifices as well. These sacrifices were always physically perfect children, from all over the empire. The remains of such sacrifices have been found on many of the highest peaks in the Andes.

The daily work of a person depended on his or her age, gender, and status. Conquered children watched a family's herds of llamas and alpacas. When children of both sexes achieved puberty and married, they took on other roles such as parents, warriors, and craftspeople. A boy would usually take the occupation of his father, and both males and females participated in agricultural work. Inca nobility probably had fewer domestic chores and more duties related to the empire than did their subjects. Some women served special duties in the empire as *acllyacuna*, or "chosen women." They were taken from their homes at an early age and taught domestic arts, and then worked in the empire's service at administrative centers. They made textiles and other crafts and performed many services.

Despite controlling a population estimated to be more than 10 million, the Inca Empire fell to a group of about 170 Spaniards led by Francisco Pizarro (c. 1475–1541). This conquest was achieved as a result of three things: a civil war between two rivals to the throne, European diseases that were introduced from Mexico, and the quick capture of the last Inca king. The latter event allowed the Spaniards to rule through the king for several months before they executed him and marched to Cuzco. A rebellion by the Incas four years later nearly succeeded, but was finally suppressed. The Spaniards introduced many new institutions, foods, and Catholicism to Andean people, yet much of the indigenous way of life still exists in regions remote from major cities.

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Michael A. Malpass

INCENTIVES

SEE *Value, Subjective.*

INCEST TABOO

SEE *Oedipus Complex.*

INCOME

Income is often defined as the amount of money received during a given period of time by a person, household, or other economic unit in return for services provided or goods sold. Although this is certainly a serviceable definition, working economists need a more precise one. Many economists use a comprehensive definition of income attributed to Robert Haig and Henry Simons, that *income* is equal to a person's (household's) consumption plus the increase in his or her net worth (Haig 1921, p. 7; Simons 1938, p. 50). The two definitions differ in several respects; most notably, the informal definition refers to money received, whereas the Haig and Simons concept refers to changes in net worth.

There are important distinctions between money received, as in the informal definition of income, and changes in net worth, as in the Haig and Simons definition. For example, person A may give person B a dozen eggs for performing a service, and suppose person B uses the eggs to make breakfast. Because no money has changed hands in this example, there is no income according to the informal definition of income. In terms of Haig and Simons's definition, however, person B's income has changed his consumption; therefore, his income has increased by the value of the eggs. In other words, barter income is included in Haig and Simons's income. To take another example, suppose a person buys a stock for $100 and its value increases to $150; unless he sells the stock, no money is received and his income from this asset is zero ($0.00). In terms of Haig and Simons's income, however, his or her net worth has increased by $50, and thus there is income of $50 though no money has changed hands. In other words, accrued capital gains are included in Haig and Simons's income.

It is useful for analytical purposes to distinguish between sources of income. Thus, economists, journalists, and policy makers often talk about wage income, dividends and interest income, transfer payments, and so on. Labor income is the income generated from working for a set wage, including tips and fringe benefits. Financial income is the income obtained from financial markets, which includes accrued capital gains, interest income, dividends, and retained earnings. Retirement income refers to pensions and retirement transfers. Government income refers to government transfers such as social insurance payments. Other sources of income include bequests, prizes and awards, and alimony payments received.

EMPIRICAL SIGNIFICANCE

Defining income is important to the analysis of public policy. Using a measure that is not comprehensive could alter the outcome of the policy, and as such may result in poor decision making. For example, if a tax administration such as the U.S. Internal Revenue Service taxes only wage income at a single rate, then the burden of such a tax would take a higher proportion of the total income of low-income households than high-income households, because low-income households obtain a greater share of their income from wages than do high-income households. Another area of research is in the distribution of income and income inequality.

Table 1 shows the distribution of income by source for a variety of countries. The similarities in the shares of income by source among these countries are noteworthy.

2005 Gross Income by Source

	Gross income from employment	Tax and social security contributions	Gross income from investments	Gross income from benefits	Gross income from other sources
Canada	62.75%	18.49%	5.46%	10.87%	2.43%
China	64.52%	14.91%	1.63%	17.78%	1.16%
France	46.86%	25.03%	5.49%	22.26%	0.36%
Germany	47.25%	25.04%	10.51%	14.99%	2.21%
India	75.61%	4.36%	2.67%	3.97%	13.39%
Italy	47.04%	22.03%	13.83%	14.98%	2.12%
Japan	59.82%	22.43%	1.80%	12.48%	3.48%
Mexico	58.97%	6.67%	4.65%	6.20%	23.51%
Russia	67.55%	13.63%	5.69%	11.62%	1.51%
Spain	56.56%	23.52%	6.84%	9.85%	3.22%
United Kingdom	52.52%	22.55%	6.38%	14.94%	3.61%
United States	62.49%	15.29%	12.00%	6.28%	3.94%

SOURCE: http://stacks.gsu.edu:2422/womdas/

Although there appears to be considerable variation in income from employment, which varies from a low of 46.86 percent in France to a high of 75.61 percent in India, income from employment and taxes and social security contributions (payroll taxes) shows much less variation, with the smallest share being 65.64 in Mexico and the highest share being 82.25 percent in Japan. Many economists believe that tax policy may explain the relative shares of gross income from benefits. Because benefits such as contributions to retirement accounts and health insurance are generally not taxable, one would expect that people living in high-tax countries such as France would prefer to receive income in the form of untaxable benefits rather than taxable sources such as wages; in contrast, in low-tax countries such as India, people would prefer to receive income as wages. This pattern is borne out in the table.

SEE ALSO *Inequality, Income; Interest Rates; National Income Accounts; Policy, Fiscal; Profits; Stocks and Flows; Taxes; Wages*

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Mark Rider

INCOME DISTRIBUTION

Income distribution captures the proportion of total income accruing to different individuals that accounts for the total income distributed among them during a certain time period. If the unit of analysis is the country, the income distribution for a certain year would show how much of the country's yearly income went to each person. It may be of interest to capture the country's distribution of income within and across groups of individuals as well. Groups can be formed according to many criteria, depending on the issue under analysis. Criteria can include geographic (cities or states), gender, social, and ethnic considerations, to name a few. When groups of individuals are considered, it is typically of interest to distinguish between the income distribution within and across groups. For example, how much of a country's income goes to the urban and to the rural population corresponds to the across-group distribution of income. How much went to each person living in rural areas and how much went to each person living in urban areas is a measure of the distribution of income within groups.

Income distribution can be represented in different ways. It can be represented by an (income) density function, $f(y)$, where y stands for income; $f(y)dy$ gives the number of individuals earning income in the $[y, y + dy]$ interval. Integrating the income-density function to infinity yields the total population, N, while integrating $yf(y)$ gives total income, Y. Mean income, μ, is given by Y/N.

A plot of the income-density function would be the most comprehensive way of representing income distribution, but this is rarely possible in practice if the unit of analysis is a country. Histograms may provide an approximation, but these representations are not usually used when analyzing the dispersion in the distribution of income. The most widely used graphic representation of income distribution—while by no means the only one possible—is the Lorenz curve. To construct a Lorenz curve, individuals are first ranked by income in ascendant order: $y_i \leq y_{i+1}$, $i = 1, \ldots, N$. Then, the cumulative income up to rank j is computed: $s_j = y_1 + y_2 + y_j$, $j = 1, \ldots, N$. The Lorenz curve corresponds to the plot of $(j/N, s_j/Y)$, $j = 1, \ldots, N$. That is, it shows on the horizontal axis the cumulative population share (from 0 to 1) and on the vertical axis the corresponding income share (also from 0 to 1). It enables the determination of the share of income going to each quartile, quintile, decile, or centile—or any other breakdown of the population.

The Lorenz curve gives a visually compelling idea of the extent of inequality in the distribution of income. The line of perfect equality corresponds to the 45-degree line that goes from the origin to (1,1). That is, the poorest 10 percent of the population have 10 percent of income, then the poorest 20 percent have 20 percent of income, and so forth. The Lorenz curve lies always on or below the line of perfect equality, with "perfect inequality" (all income going to the richest individual) corresponding to the line that makes the lower and right-hand side of the square that encompasses the line of perfect inequality. That is, the shares of income going to all the shares of the population are zero, and 100 percent of income goes to the single individual at the top. Thus, the closer the Lorenz curve is to the line of perfect equality, the more equal the distribution of income; the farther it is, the higher the level of inequality.

Thus, intuitively, the area that lies between the line of perfect equality and the Lorenz curve provides an indication of the extent of inequality. If this area is very small, the Lorenz curve is very close to the area of perfect equality, and inequality is low. If this area is large, then the Lorenz curve is further away from the line of perfect equality, and inequality is high. The ratio of this area to the area of the triangle limited by the lines of perfect equality and perfect inequality is a number that falls always between zero (when the Lorenz curve coincides with the line of perfect equality) and one (when the Lorenz curve coincides with the line of perfect inequality and the area under the Lorenz curve is exactly the same as the area of the triangle). This number is the *Gini coefficient*, one of the most widely used measures of inequality—and one of the many possible summary measures of income distribution, whereby distribution is summarized by a single number.

While intuitively appealing, the Gini coefficient has a major drawback. As noted, in studies of inequality there is often an interest in grouping individuals and determining the shares of inequality that correspond to asymmetries in the distribution of income across and within groups. It is possible to decompose the Gini coefficient into within-group and between-group components, but this decomposition is not "perfect," in the sense that the components do not add up to total inequality—a third term, a *residual*, is typically required to be added to the other two terms to get to total inequality. The only summary measures of inequality that are perfectly decomposable correspond to a class known as *entropy-based* measures of inequality, which were pioneered by the Dutch econometrician Henri Theil (1924–2000). He drew inspiration from the entropy-based analysis of information, and thus the name of this class of measures.

The most widely used entropy-based measure of inequality is the Theil index. It is bound between zero and the natural logarithm of the size of the population (and not by one, like the Gini coefficient). The Theil index is the weighted sum of the natural logarithm of the ratio of the income shares to the population shares, where the weights are income shares. When applied to measure inequality across individuals, the "population share" is merely $1/N$, so the Theil index is the weighted sum of the natural logarithm of the ratio of each individual's income, y_i / Y, to $1/N$, where the weights are y_i / Y. When individuals are grouped, the between-group component of the Theil index is the weighted sum of the natural logarithm of the ratio of each group's income, Y_j / Y, to that group's population share, n_j / N, where the weights are Y_j / Y (n_j and Y_j are, respectively, the group's j population and total income). The within-group component of total inequality is given by the weighted sum of the within-group Theil index for each group, where the weights are the income shares, Y_j / Y. Total inequality measured using the Theil index is the sum of the between-group and within-group components.

SEE ALSO *Economic Growth; Gini Coefficient; Inequality, Income; Inequality, Political; Justice, Distributive; Kuznets Hypothesis; Lorenz Curve; Theil Index; Wealth*

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INCOME MAINTENANCE EXPERIMENTS

The income maintenance experiments in the United States and Canada were tests of a welfare program known as a *negative income tax*, which was designed to assist families in need while preserving their incentives to work. The negative income tax is the most important proposal in the history of welfare reform and has been a major object of study in the social sciences.

ORIGIN OF THE EXPERIMENTS

The idea of the negative income tax is generally associated with the Nobel laureate, conservative economist Milton Friedman (1962, chap. 12), although liberal economists Robert J. Lampman (1920–1997) and James Tobin (1918–2002) were also early developers. Friedman's proposal had both liberal and conservative elements. On the liberal side, he proposed that all families with low incomes receive an unrestricted grant from the government, leading to what some others termed a *guaranteed annual income*. However, Friedman noted that such a grant threatens to reduce work incentives by providing income support to families even if they are not employed. To

counter that disincentive, Friedman proposed that families be given a financial incentive to work by means of a "tax rate" that would result in higher income if they worked. For example, if the tax rate were 50 percent, a nonworking family with a monthly grant of $500 who went to work and earned $100 would experience a grant reduction of $50 (50 percent of earnings) to $450. The family's total income would rise to $550, the sum of $100 of earnings and a grant of $450, providing the desired financial incentive. The lower the tax rate, the smaller the benefit reduction that would occur and hence the greater the work incentives.

In 1967 the federal government decided to conduct a social experiment to determine whether a guaranteed, unrestricted grant for nonworkers would induce working families to quit work and whether a low tax rate would counter that disincentive (Greenberg et al. 2003). To test the negative income tax, the government proposed to select a group of poor families, to randomly assign them to an "experimental" group and a "control" group, to give the experimental group the negative income tax, and then to later observe how many families in each group were working. The difference in the work levels of the two groups would be taken to be the effect of the negative income tax.

Four experiments were designed and implemented in the United States and one in Canada. They were located in New Jersey and Pennsylvania; South Carolina and Iowa; Gary, Indiana; Seattle, Washington, and Denver, Colorado; and in Manitoba, Canada (Greenberg and Shroder 2004). The first began in 1968 and the last ended in 1979. Most were designed as described previously, but with one variation: different families in the experimental groups were given different guaranteed grant amounts and different tax rates, allowing a test of the effect of the levels of the guaranteed income amount and the tax rate on work effort.

RESULTS OF THE EXPERIMENTS

The first question was whether offering families a guaranteed income if they did not work would reduce work effort. The answer from all the experiments was an unequivocal "Yes." The work levels of experimental families were almost always less than those of control families (Burtless 1986; Greenberg et al. 2003; Greenberg and Shroder 2004; SRI International 1983). For example, in the Seattle-Denver experiment, married men in the experimental group were five percentage points less likely to work during the year than those in the control group; the corresponding figures for married women and for single mothers were eleven percentage points and seven percentage points, respectively. Further, the comparisons of work levels across families with different experimental plans revealed that families who were offered more generous grant amounts did, in fact, work less.

The second question was whether Friedman's idea of giving families a financial incentive to work with a reasonably low tax rate countered this disincentive. The answer to this question was much more ambiguous. Overall, the data from the experiments showed a mixed pattern of effects of this kind (e.g., SRI International 1983, Table 3.9). Why a stronger work response to financial incentives was not found generated a great deal of research over the subsequent years, with some arguing that statistical flaws in the experiments' design led to this result. But the leading explanation is that a reduction in the tax rate expands the generosity of the program, relative to the existing welfare program, and tends to bring new families onto welfare who had not received benefits previously. The work reductions of these families partially or wholly offset the positive work effects for those families initially on welfare.

The researchers conducting the experiments also gathered data on other aspects of behavior. For example, families in the experimental group had slightly greater expenditures on housing and increases in homeownership, stayed in school longer, and had greater increases in test scores among children in lower grades (Greenberg et al. 2003; Hanushek 1986). On the other hand, in the Seattle-Denver experiment, there was a surprising increase in the rate of marital dissolution, a controversial result that was not anticipated by policymakers or researchers. The negative income tax had been predicted to increase marital stability because it extended benefits to two-parent families compared to the current welfare system.

The political impact of the results of the income maintenance experiments was modest at best because political events moved too quickly (Moynihan 1973). President Richard Nixon (1913–1994) proposed a negative income tax to the U.S. Congress in 1969, long before the experiments had been completed. The plan passed the House of Representatives but failed in the Senate in 1972. Although the results of the experiments were used by the Jimmy Carter administration in formulating its welfare reform program, no negative income tax plan was ever seriously considered by Congress thereafter. When the results of the experiments were later published, the evidence of significant work reductions reinforced this lack of interest in a pure negative income tax (Greenberg et al. 2003).

LEGACY OF THE EXPERIMENTS

While the negative income tax in its idealized form has never been implemented in the United States or Canada, the idea of providing financial incentives to work has proved to be a powerful one and has led to many welfare reforms having such features. Much subsequent research

has provided stronger evidence that some families, typically those with the lowest levels of earnings, work more if given a financial incentive to do so, thereby giving more support to this idea than did the experiments. In the 1990s, many U.S. states added financial incentives to their welfare programs.

The primary alternative to financial work incentives is the idea of simply requiring work of anyone who receives benefits, a policy often characterized as using a "stick" to encourage work rather than a "carrot" of financial incentives. Such work requirements were introduced in the United States in the 1990s and have been introduced on a more limited scale in Canada in more recent years, and can be seen as directly addressing the work disincentives from unrestricted grants to nonworking families that were shown to occur in the experiments. Critics of work requirements argue that they eliminate benefits for some families who are in need but cannot work. However, a second alternative policy is an "earnings subsidy" that offers little or no grant support to nonworkers but gives a grant to those who work, possibly only those who work full-time, to provide work incentives. The U.S. Earned Income Tax Credit is the major existing policy of this type. Earnings subsidies, while providing incentives to work, also provide no support to nonworking families, who are usually in greater need. The debate on these issues continues.

The income maintenance experiments have also had a major legacy by introducing the idea of randomized trials as a method of social policy evaluation, which was a radically new idea in 1967. Since the 1970s, there have been over 250 subsequent experiments with various social policies (Greenberg and Shroder 2004). Most of these experiments have been less ambitious and of a much smaller scale than those testing the negative income tax, but they nevertheless have used the same core methodology.

SEE ALSO *Negative Income Tax; Welfare*

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INCOME POLICY

SEE *Inflation; Wage and Price Controls.*

INCOME TAX, CORPORATE

The corporate income tax is levied on the profits of incorporated businesses. Taxable income is defined as the gross income of a corporation minus its costs of doing business. Whereas the costs of labor and raw materials as well as interest payments are deducted from taxable income at the time they are incurred, the costs of capital assets are recovered only over time in the form of deductions for depreciation. To assess their tax liability, corporations apply a statutory tax rate to their taxable income and then subtract any deductions and other credits. The corporate income tax is mainly a central (federal) government tax, but subnational governments also apply the tax in many countries, although at a lower rate.

INCIDENCE

The effective tax rate differs from the statutory rate mainly because of the treatment of depreciation and interest payments. The effective tax burden is smaller the shorter the recovery period is and the more accelerated the rate of depreciation is. The effective burden is smaller the greater the use of debt relative to equity in financing investment is because interest payments, unlike dividend payments, are expensed. The extent of the "double taxation" of dividends, first as part of corporate taxable income and then as income received by individual taxpayers, and how to address it is subject to theoretical and empirical debate.

Because labor costs are excluded in calculating taxable income, the corporate income tax generally is viewed as a tax on capital income. However, some of the tax burden

can be shifted from firms to consumers through higher prices or to workers through lower wages, depending on the structure of the product and labor markets. The closer such markets are to competitive conditions, the harder it is for firms to shift the tax burden. The empirical literature is inconclusive about the extent of that shifting.

EFFECTS

The corporate income tax can influence economic growth through its impact on economic behavior, including saving and investment. The effect on saving is ambiguous in both the theoretical and the empirical literature. The tax could affect the level and composition of capital formation by raising the cost of capital and imposing a relatively higher burden on equity versus debt financing. It also may induce firms to organize in unincorporated forms (which are not subject to corporate income tax) that may not be the economically optimal forms of organization apart from tax considerations. Moreover, tax compliance and the tax planning that businesses undertake to minimize tax liabilities, such as transfer pricing, and entail costs. The estimated costs of the distortions associated with the U.S. corporate tax fall in a wide range of one-quarter to nearly two-thirds of revenues. The tax can influence income distribution directly because taxes on capital income tend to be progressive relative to taxes on labor income and indirectly through its impact on the cost of capital.

THE CORPORATE INCOME TAX IN MAJOR INDUSTRIAL COUNTRIES AND DEVELOPING COUNTRIES

In 2003 revenue from the corporate income tax averaged around 3.5 percent of gross domestic product (GDP) among Organisation for Economic Cooperation and Development (OECD) countries. The top statutory tax rate varied substantially from 12.5 percent to 41 percent. Among developing countries that revenue averaged around 3 percent of GDP. Over the last decade or so there has been a general tendency for countries to reduce the statutory tax rate. Some countries offer corporate tax incentives in an effort to attract investment. The effectiveness of those incentives is open to debate, but incentives that provide for faster recovery of investment costs generally are considered preferable to those involving the tax rate.

SEE ALSO *Capital; Corporations; Distortions; Government; Income Distribution; Investment; Savings Rate; Taxes*

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INCONGRUITY EFFECT

SEE *Person Memory.*

INCREMENTALISM

Rejecting the rational, comprehensive model of decision-making that called for careful articulation of all goals and full consideration of all alternatives, Charles Lindblom's essay, "The Science of 'Muddling Through'" (1959), inaugurated a new approach to understanding public policy. While Lindblom used the term *successive limited comparison* rather than *incrementalism*, this new approach argued that: (1) means and ends are decided simultaneous, not sequentially; (2) comparisons are restricted to marginal changes in existing policy, and are not made among all possible alternatives; and (3) the appropriate test of good policy is simply the ability to make a decision. Based on both the cognitive limitations of decision makers and widespread conflicts over values in policymaking, Lindblom argued that it simply was not rational to try to make rational, comprehensive decisions.

Lindblom's insight provided the theoretical foundation of Aaron Wildavsky's (1930–1993) *The Politics of the Budgetary Process* (1964) and his later empirical modeling of U.S. appropriations decisions (Davis et al. 1966). As Wildavsky noted,

> Budgeting is incremental, not comprehensive. The beginning of wisdom about an agency budget is that it is almost never actively reviewed as a whole every year in the sense of reconsidering the value of all existing programs as compared to all alternatives. Instead, it is based on last year's budget with special attention given to a narrow range of increases or decreases. (Wildavsky 1964, p. 15)

Given this understanding of budget decision making, Wildavsky (1978) argued that a succession of budget reforms designed to introduce elements of rational, comprehensive choice into the appropriations process—such as President Lyndon Johnson's (1908–1973) planning-programming-budgeting system or President Jimmy Carter's zero-based budgeting—would inevitably fail.

The Lindblom-Wildavsky model of incrementalism was remarkably successful in inspiring a generation of research on public policymaking in general and budgeting in particular. But it also attracted considerable criticism even in its heyday. John Wanat (1974), for example, argued that the budget results reported by Wildavsky could be adequately accounted for by the prevalence of mandatory budgetary increases without reference to constraints on individual decision making or the need to coordinate decisions among political actors. John Gist (1982) then suggested that the level of competition within the budget process depended very much on the level of the budget examined. At lower levels, budgets change far more than might be expected given incremental decision making. And perhaps most telling of all, the very concept of incrementalism was characterized by considerable drift as various authors operationalized the concept in markedly different ways. Indeed, after identifying at least twelve different meanings of incrementalism used in research on public policy ranging from the "use of simple decision rules" through "smallness of ultimate change" to "absence of competition," William Berry (1990) argued that the concept had become so broad that it should be abandoned. But none of these criticisms really slowed the pace of research on incrementalism, in large part, perhaps, because none really identified an alternative theory that could account as well for the empirical regularities reported by those working within the incremental paradigm.

Such an alternative finally appeared after renewed attention to periods of rapid policy change. Wildavsky and his colleagues (Davis et al. 1974) certainly acknowledged that, at least on occasion, policies and budgets change rapidly. But they were more attentive to the longer periods of stability than to the rarer episodes of change. But John Kingdon's *Agendas, Alternatives, and Public Policies* (1984) drew renewed attention to the importance of episodes of sudden, dramatic change in fundamentally shaping public policy. Kingdon's attention to nonincremental policy change was further developed by Frank Baumgartner and Bryan Jones in *Agendas and Instability in American Politics* (1993). Their punctuated equilibrium model of public policy purported to account for why we observe both short, rapid episodes of policy change and long-term stasis between such periods. Explaining how their model accounts for the former goes beyond the scope of an essay on incrementalism. But while Jones and Baumgartner's (2005) explanation for the periods of relative stasis in policy between periods of sharp change accounts for Wildavsky's findings, it also differs from his understanding of incrementalism. That is, rather than explaining stability by the need of politicians to find consensus in order to make any decision in the face of widespread conflict over values and the ultimate goals of public policy, the punctuated equilibrium model explains episodes of limited policy change by reference to both the government's inability to attend to more than a few major issues at any given time and the stickiness of political institutions that inhibits rapid change. When government attention is drawn to an issue and that stickiness breaks down as veto points are overcome by political momentum, significant policy change is likely.

Has the theory of incrementalism founded on the work of Lindblom and Wildavsky really been surpassed? It is clear that the theoretical analysis used to account for observations of incremental behavior has shifted from attention to the limited cognitive capacities of individuals and the necessity of politicians to make decisions in the face of conflicting values to the stickiness of political institutions and institutional limits on the size of policy agendas. And it is also true that scholars are now more attentive to the importance of periods of rapid change that are observed in most policy areas over time. In these senses, the theory of incrementalism has been surpassed by Baumgartner and Jones's theory of punctuated equilibrium. But in other respects, incrementalism is alive and well. Baumgartner and Jones's attention to periods of punctuation is important largely because most policymaking, most of the time, is incremental in the sense used by Wildavsky in the quotation presented at the beginning of this essay. Most policy decisions are not reexamined every year against all possible alternatives. The backdrop of punctuations is as important as the punctuations themselves. Even more importantly, neither Kingdon's policy

agendas model nor Jones and Baumgartner's punctuated equilibrium model represents a return to the model of rational, comprehensive decision making so strongly rejected by Lindblom and Wildavsky.

SEE ALSO *Decision-making; Economics; Lindblom, Charles; Marginalism; Pluralism; Policy Analysis; Punctuated Equilibrium*

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INDENTURED SERVITUDE

SEE *Servitude.*

INDEPENDENT VOTERS

SEE *Political Parties.*

INDEPENDENTLY AND IDENTICALLY DISTRIBUTED

SEE *Inference, Statistical.*

INDIAN NATIONAL ARMY

The Indian National Army (INA) was formed in 1942 by Indian prisoners of war captured by the Japanese in Singapore. It was created with the aid of Japanese forces. Captain Mohan Singh became the INA's first leader, and Major Iwaichi Fujiwara was the Japanese intelligence officer who brokered the arrangement to create the army, which was to be trained to fight British and other Allied forces in Southeast Asia. The Japanese had sent intelligence agents to Southeast Asia from the late 1930s onward, and they made contact with the considerable population of South Asians resident in Malaya, Singapore, Thailand, Burma, and other parts of the region. The Japanese aim was to use and benefit from the nationalism of Asian peoples in constructing what they called their "Greater East Asia Co-Prosperity Sphere."

With the opening victories in the war, from December 1941 through the early months of 1942, the Japanese captured large numbers of Indian prisoners, particularly in their victory at Singapore in February 1942. Some 40,000 to 50,000 men were recruited for a training corps of South Asian residents in Southeast Asia.

With the help of Rash Behari Bose, an Indian nationalist long resident in Japan, the civilian Indian Independence League (IIL) was formed to support the INA and push for Indian independence. This organization provided vital support for the INA throughout the war period. For example, one member in Burma traded liquor for medical supplies desperately needed by the INA.

Tensions developed in late 1942 between Mohan Singh and the Japanese over terms of cooperation. The Japanese were determined to exercise control over the INA that Mohan Singh was not willing to accept. He was relieved of command and imprisoned. Rash Behari Bose was still in good standing with the Japanese, but he had no popular following. A more charismatic leader was needed. In May 1943 Subhas Chandra Bose, a leading Congress nationalist from Bengal who had been working in Germany, arrived in Southeast Asia via a German and then a Japanese submarine, and he provided the leadership that was needed. He became commanding officer of the INA and also set up a provisional government of free India, which was recognized by the Axis powers. The main training camp of the INA was in Singapore, and young

women from the South Asian community in Southeast Asia were recruited for the women's regiment, called the Rani of Jhansi Regiment. It was headed by a young medical doctor, Lakshmi Swaminathan, who also became minister for women's affairs in the provisional government. Bose worked carefully to get soldiers from all communities—Hindus, Muslims, and Sikhs—to cooperate for the greater good of Indian independence.

In late 1943, Bose persuaded the Japanese to attempt an invasion of India from Burma, with the INA as a small force working alongside the Japanese's main invading force. This effort succeeded in breaking into India near Imphal in 1944. However, the Japanese overextended their supply lines and had no air cover. In their opening victories of the war, the Japanese had good air cover and succeeded in capturing British supplies as they advanced, but now the battles in the Pacific and elsewhere had deprived them of most of their air force. The Allied forces, headed by General William Slim of Great Britain, retreated at first, by design, but then attacked and drove the Japanese and the INA from India and back through Burma. Both the Japanese and the INA suffered greatly from disease and starvation as they retreated. Though the INA fought bravely overall, some men surrendered, and the remaining troops were eventually captured as the British, Indian, and American forces triumphed in Southeast Asia in the spring and summer of 1945.

Subhas Bose attempted to escape to Manchuria and was in a Japanese plane that crashed after take-off in Taiwan in August 1945. The evidence shows that he died of his burns and was cremated there. There was one Indian survivor of the plane crash, Habibur Rahman, and several Japanese survivors, in addition to the doctor who treated him, all of whom testified on several occasions to the story of the crash and his death. However, some Indians chose for decades not to believe the account for personal and political reasons. His ashes were taken to Tokyo and lodged in a Buddhist temple where they remain.

Three officers of the INA, Shah Nawaz Khan (a Muslim), Prem Sahgal (a Hindu), and G. S. Dhillon (a Sikh), were tried for offenses against the King-Emperor in 1945–1946 in the Red Fort in Delhi. The British miscalculated by putting an individual from each religious community on trial, however, and there were massive demonstrations throughout India. As a result, although they were convicted and sentenced to transportation for life, they were soon released. The support the public showed for these rebel military men was one factor in the British government's decision to grant independence to India in 1947.

SEE ALSO *Anticolonial Movements; Bose, Subhas Chandra and Sarat Chandra; Decolonization; Imperialism; Indian National Congress; Liberation Movements; Nazism; Resistance; World War II*

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INDIAN NATIONAL CONGRESS

Founded in 1885, the Indian National Congress (INC) was at the forefront of the nationalist movement in India before 1947. After India's independence in that year, the Congress emerged as the ruling party, and it maintained power uninterrupted for three decades (1947–1977). Since then, the party has been in and out of power.

In the first three decades of its existence the Congress was an elite organization dominated by English-educated, urban middle-class Indians. The organization was much like a debating society, but Mohandas K. Gandhi, who assumed its leadership in 1920 and remained its spiritual leader until his death in 1948, transformed the Congress into a mass movement and a political institution with an organizational structure that paralleled the colonial administration. Gandhi expanded the membership and appeal of the Congress by mobilizing the rural population, especially the lower castes and outcastes of the Hindu social hierarchy—the *sudras*, or "untouchables." The Congress became the sole representative of the national cause, leading three campaigns between 1920 and 1947: the noncooperation movement (1920–1922), the civil disobedience campaign (1931–1932), and the "Quit India" movement (August 1942). The Congress won seven of the eleven provinces in the 1937 elections, which were held under British rule following the provisions of the Government of India Act of 1935, and it formed a government in those provinces.

After independence the Congress, hitherto an all-embracing national movement, was transformed into a political party. Under the leadership of Jawaharlal Nehru, India's first prime minister (1947–1964), it retained the character of an eclectic political organization with a wide

range of positions. The Congress controlled 70 percent of seats in parliament and held power in most states between 1951 and 1967. This period of one-party dominance has been referred to as the Congress "system" in Indian politics. However, the power struggle between Indira Gandhi (Nehru's daughter, who was prime minister from 1966 to 1977 and 1980 to 1984) and the Congress organization led to the party split in 1969. The majority followed Mrs. Gandhi to her "New Congress" or "Congress (R)" (*R* for "ruling"), which was recognized by the election commission as the "real" INC. Mrs. Gandhi's leadership of the Congress led to the deinstitutionalization of the party as she undermined the federal character of the party by stopping party elections and concentrating power in her own hands.

The Congress lost its dominant position for the first time in ninety years with its defeat in the 1977 elections, held after the unpopular Emergency Rule Mrs. Gandhi had imposed in 1975. Faced with criticism of her leadership, Mrs. Gandhi split the party a second time, in 1978, and formed the breakaway Congress (I) (*I* for "Indira"). The Congress (I) returned her to power in 1980, but she was assassinated in 1984. Mrs. Gandhi was succeeded by her older son Rajiv Gandhi (1944–1991), who lost power in the 1989 elections. When Rajiv Gandhi was assassinated in 1991, the party presidency was offered to his widow, Sonia Gandhi (b. 1946), who declined the offer. Although the party held power from 1991 to 1996, the Congress was in decline as a national party due primarily to the lackluster leaderships of P. V. Narasimha Rao (1921–2004) and Sitaram Kesri (1919–2000). In 1998 Sonia Gandhi was elected party president and started rebuilding the party, especially by expanding its support base among Muslims and the poor. Her leadership did not help the party win the 1999 elections, and a small number of Congress (I) leaders led by Sharad Pawar (b. 1940), who questioned the likelihood of foreign-born Gandhi becoming prime minister, formed a breakaway party in 1999 (the Nationalist Congress Party). Nevertheless, Gandhi's leadership energized and revitalized the Congress (I) Party. In the 2004 parliamentary elections the Congress won enough seats to form a coalition government with the support of about a dozen center-left parties. Gandhi, however, declined to become prime minister; instead she remained the party president, and Manmohan Singh (b. 1932) became prime minister. The Congress expects that Rajiv and Sonia's son Rahul Gandhi (b. 1970), who won a parliamentary seat in 2004, will play a significant role in the party in the near future.

SEE ALSO *Anticolonial Movements; Civil Disobedience; Congress Party, India; Democracy; Gandhi, Indira; Gandhi, Mohandas K.; Indian National Army*

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Sunil Sahu

INDICATIVE PLANNING

SEE *Convergence Theory.*

INDICATORS, LAGGING, LEADING, AND COINCIDENT

SEE *Lagging, Leading, and Coincident Indicators.*

INDICES, PRICE

SEE *Price Indices.*

INDICES OF POVERTY

SEE *Poverty, Indices of.*

INDIFFERENCE CURVES

SEE *Ordinality.*

INDIFFERENCE PRINCIPLE

SEE *Ordinality.*

INDIGENISMO

Broadly defined, *indigenismo* (Spanish, "indianism") refers to the representation of indigenous peoples (*indígenas* in

Spanish) in Latin America by outsiders (called *indigenistas*). It is a uniquely American phenomenon, and its origins are inextricably bound together with debates on the question of how colonized indigenous peoples should be treated. Its importance as a philosophical aspect of Latin American thought dates to the beginnings of European attempts to subdue the aboriginal inhabitants of the American continent in the late fifteenth century. It reached its high point in the early twentieth century in countries with high concentrations of indigenous peoples, particularly Mexico and Peru. Although its characteristics changed over time, *indigenismo* always presented a critique of indigenous issues from an elite, educated, urban perspective rather than from that of the indigenous peoples.

The Dominican priest Bartolomé de las Casas (1484–1566) presented the earliest articulate defense of indigenous rights from a European perspective. But he retained loyalty to the Catholic Church and to the Spanish Crown, and ultimately the purpose of his efforts was for the conversion of indigenous peoples to Christianity and their assimilation into the Spanish kingdom.

Modern *indigenismo* first emerged in the nineteenth century and was characterized by romantic and humanitarian impulses. This *indigenista* discourse came to be dominated by intellectuals who were strongly influenced by Spencerian positivist thought meant to assimilate the surviving indigenous peoples in the Americas into a dominant Spanish or Portuguese culture. *Indigenismo* particularly gained strength in Mexico in the aftermath of the 1910 revolution because it embraced the country's glorious indigenous past while assimilating their descendants into a unified *mestizo* nation.

By the 1920s *indigenismo* had become a form of protest against the injustices that Indians faced. Political parties, especially populist ones, began to exploit *indigenista* ideologies for political gain. *Indigenismo* flourished in the 1930s, particularly in Peru and Mexico, and in the 1950s it was institutionalized in the Guatemalan and Bolivian revolutions. With officialization, *indigenismo* lost its revolutionary potential to improve the lives of Indians. Elite *mestizo* intellectuals and leftist political leaders led this movement, which they often used only to advance their own political agendas.

Indigenismo often emerged out of anthropological and archaeological studies. Manuel Gamio (1883–1960) was both a pioneer anthropologist and *indigenista* in Mexico who reconstructed archaeological sites for tourists, including Teotihuacán north of Mexico City. Although *indigenistas* proudly championed the ancient Aztec and Inca civilizations, they often ignored or discounted their present-day descendants.

Peruvian Marxist José Carlos Mariátegui is one of the best-known *indigenista* intellectuals. In *Seven Interpretive Essays on Peruvian Reality* (1928), Mariátegui criticized various strategies that others had employed to improve the lives of indigenous peoples, including humanitarian campaigns, administrative policies, and legal reforms. He argued that their problems were rooted instead in the nature of the land-tenure system, and that only through fundamental economic change and land reform would social improvements be possible. Mariátegui was an *indigenista* in the classical sense in that he was an urban *mestizo* intellectual who had little contact with Peru's indigenous peoples, but he did not portray the worst elements of paternalism and assimilation common to *indigenismo*.

Indigenismo was also represented in literature, particularly in well-known novels such as Jorge Icaza's *Huasipungo* (1934) in Ecuador or Rosario Castellanos's *Balún-Canán* (1957) in Mexico. Typically, such novels focused on the oppression of poor indigenous agricultural workers at the hands of large landholders, depicting *indígenas* as primitive and ignorant people who are unable to improve their lives without outside assistance. The solution, when one is offered, is that through education they might be elevated and assimilated into the dominant culture; rarely are indigenous cultures recognized as valuable and worthy of protection. In art, the paintings by the Mexican artists Frida Kahlo (1907–1954) and Diego Rivera (1886–1957) utilized indigenous themes to advance their leftist political ideologies.

In 1940 the Mexican president Lázaro Cárdenas (1895–1970) organized the First Inter-American Indigenist Congress at Pátzcuaro in the state of Michoacán. Delegates were anthropologists and sociologists as well as religious workers and high government officials such as John Collier, the architect of Franklin D. Roosevelt's Indian policy in the United States. The Pátzcuaro Congress broke from colonialist thought, but its tone was still integrationalist. The Instituto Indigenista Interamericano (III, Inter-American Indigenist Institute) that emerged out of the Pátzcuaro Congress was based in Mexico City, and Gamio served as its first director. The III held congresses about every five years, and *indigenistas* formed national branches in many of the American republics. In addition to publishing the journals *América Indigenista* (later renamed *Anuario Indigenista*) and *Boletín Indigenista*, the III became an official organ of the Organization of American States (OAS).

In 1971 eleven anthropologists gathered in Barbados for the Symposium on Inter-Ethnic Conflict in South America. Their Declaration of Barbados demanded the liberation of indigenous peoples from colonial domination, specifically calling for the defense of indigenous culture and territory, the establishment of economic, social, educational, and health assistance, and support for a native-led pan–Latin American movement for self-government.

As indigenous peoples began to build their own organizations, they presented a sustained critique of *indigenismo* as a construction of the dominant culture, a paternalistic impulse designed to stop liberation movements. Indigenous peoples criticized academics who studied their cultures without returning any political benefits to their communities. Rather than letting outsiders appropriate indigenous cultures and concerns for their own purposes, indigenous leaders insisted that they could represent themselves. Particularly strong indigenous political movements emerged in countries with relatively weak *indigenista* traditions such as Ecuador and Guatemala. By the end of the twentieth century indigenous leaders had created a *neoindigenismo* that advanced their own political agendas.

SEE ALSO *Indigenous Rights; Natives*

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Marc Becker

INDIGENOUS RIGHTS

Indigenous rights are those legal and moral rights claimed by indigenous peoples. But what is meant by "indigenous peoples," and in what sense are their rights peculiar to them? From what source do these rights flow? Are they legal rights granted by the state, or are they moral rights that have yet to be established in law? Or are they human rights, derived from those basic rights ascribed to human beings everywhere? The situation of indigenous peoples also raises further questions about the nature of these rights: Are they individual rights or group rights, social and political rights or cultural rights? And finally, against whom or what are they claimed? The state within which they live, or the international community as a whole—or both?

INDIGENOUS RIGHTS AND THE HISTORY OF COLONIZATION

But first, who counts as an indigenous people? This is a complex and politically loaded question, both in domestic and international contexts. First of all, there are disputes over who or what counts as "indigenous." Secondly, there are disputes over who counts as a "people" in international law, especially when it comes to ascribing and distributing the right to self-determination. There are two basic approaches to the question of indigeneity. First, one can link indigeneity to literal first residency or occupation of a particular territory. Contemporary indigenous peoples in this case would be descendants of the earliest populations living in that area. Second, one can tie indigeneity to those peoples who lived in that territory before settlers arrived and the process of colonization began. This relativizes the definition to prior occupation rather than first occupation. Although there is enormous diversity among the many different indigenous nations in the world, another common dimension to their self-description as indigenous is the connection to land; as James Anaya has put it, they are indigenous in the sense that "their ancestral roots are embedded in the lands in which they live … much more deeply than the roots of more powerful sectors of society living on the same lands" (Anaya 1996, p. 3). Still, the term remains unsettled in international law and domestic practice. Given the diversity of peoples in question and the complexity of circumstances in which the claims are being made (for example, not just in the Americas and Australasia, but also in South and Southeast Asia), many have argued that indigeneity should be interpreted in as flexible and "constructivist" a manner as possible (Kingsbury 1998; 2001).

From the perspective of indigenous peoples at least, it is important to distinguish their claims from the claims of other minority groups, such as migrants or refugees, because they are challenging the extent to which their incorporation into the state (and its subsequent consequences) was just. The question of legitimacy looms much larger with regard to indigenous peoples than it does with other minority groups. Often precisely because their claims are distinct in this way they are controversial. They challenge liberal conceptions of distributive justice and the underlying conceptions of equality and individual rights that tend to presuppose the legitimacy question is moot. Although they challenge these conceptions, it is not clear that the claims of indigenous peoples are fundamentally incompatible with them (Kymlicka 1989, 1995; compare Barry 2001, Alfred 1999). However, the historical experience of indigenous peoples in the course of the development of liberal democracy in the Americas and Australasia suggests that the challenges they face are profound. Hence the ambiguity surrounding the appeal to the language of rights.

The history of European colonization and its impact on the indigenous inhabitants of the Americas and Australasia is by now depressingly familiar. Indigenous populations were displaced and removed from their traditional lands; they were dramatically reduced in size and strength through disease, war, and the consequences of European settlement and forced removals; and their legal and moral rights to exercise self-government over their territories were subsumed under the authority of the newly established states. In the United States, for example, although Justice John Marshall in a series of landmark cases in the nineteenth century recognized the limited sovereignty of the American Indian nations (as "domestic dependent nations"), they still were ultimately subject to the plenipotentiary power of Congress. Thus, although Native American tribes in the twenty-first century are able to exercise various forms of jurisdiction and claim ownership over some of their (much reduced) tribal lands, they remain subject to both state and federal law in significant respects. Similarly, in Canada, Australia, and New Zealand, although within a different jurisprudential framework, indigenous nations are able to exercise only limited forms of self-government (if any), and are able to claim ownership ("aboriginal" or "native" title) over an extremely small proportion of their former territories. In all of these places, indigenous people also tend to suffer from appalling social and economic hardship; they are amongst the poorest, sickest, most unemployed, and most incarcerated members of the population. They tend to have higher infant mortality rates and shorter life spans, and to suffer disproportionately from the effects of alcohol and drug abuse and domestic violence. In many cases, indigenous children were at various times either forcibly removed from their families or enrolled into residential schools, where often they suffered from abuse. And yet, despite this legacy of historical and enduring injustice, indigenous cultures and communities, as well as indigenous political activism, has persisted, in both domestic and international contexts. And indeed, one of the tools they have turned to, not without ambiguity, is the language and practice of rights.

WHAT KIND OF RIGHTS ARE INDIGENOUS RIGHTS?

Legal rights are those rights embedded in and enforced by an established legal framework. Moral rights are those rights that are grounded either in some purportedly valid moral claim, or with reference to some broader moral framework, but which are not necessarily established in law. We often appeal to moral rights in order to criticize existing practices and laws. Indigenous rights are asserted in both senses. Indigenous people argue that their rights are not merely derivative from the state, but rather are justified in relation to their own political theories and practices and more general moral arguments. This is distinct from the claim that in order to become effective, rights must eventually be recognized and enforced by the state, or some other effective set of legal and political institutions.

Rights are not self-justifying. They are used to mark out certain crucial interests or capacities of individuals (and sometimes groups) that it is thought deserves special kinds of moral and legal attention. But claims about the interests or capacities they refer to must be justified, and that means drawing on potentially controversial moral claims, which are often subject to change over time as societies and attitudes change. A challenge facing anyone defending indigenous rights is in making clear what work the modifier "indigenous" is doing. To what interests or capacities do these rights refer? One the one hand, one can appeal to the historical, cultural, and political specificity of the interests at issue—to indigenous difference, in other words. This might also lead one to emphasize the distinctive source of indigenous legal and moral rights—the hundreds of treaties that were signed between the various indigenous nations and European settlers in the Americas, for example, from the fifteenth century onward. The treaties themselves, as well as the normative framework of recognition, negotiation, and consent that they supposedly represent, offer both a legal and moral framework then for justifying and clarifying the rights of indigenous peoples (Tully 1995; Williams 1997). The danger, however, of appealing exclusively to historical agreements as the source of rights is that the agreements themselves might be morally problematic in various ways: The terms of the agreements might be morally unacceptable and the conditions under which they were struck deeply unfair. But it also risks tying the recognition and content of such rights to a sense of their radical otherness from Anglo-European law. This can sometimes work against indigenous claims, at least in law, because often courts will limit the recognition of indigenous rights to those practices or norms that were in place at the time of European settlement, or just before. This can limit the ability of indigenous nations to expand and modernize those activities they see as integral to their ongoing ways of life. It can also serve to depoliticize their claims, as when courts choose to emphasize the recognition of "lifestyle rights" over more explicitly political ones such as self-government.

A second approach, then, is to appeal to more general rights, and especially human rights, and to argue that indigenous rights are a species of these kinds of claims. Thus they refer to interests or capacities that everyone, indigenous or not, deserves to have protected or promoted. Reference to *indigenous* rights here is a pragmatic move; it is intended to extend to indigenous peoples those

rights to which they have always been entitled, but denied for contingent historical and political reasons.

Of course, these two approaches overlap and are often combined. For example, the Canadian Royal Commission on Aboriginal Peoples (1996), charged with outlining a new vision for relations between Canada's "First Nations" and the state, drew on a normative vision they associated with the historical practice of treaty making. According to this argument, indigenous rights draw on a body of intersocietal law and practice based on those rights originally recognized between aboriginal nations and European powers at the time of European settlement, as well as more general moral and political claims to do with equality and freedom.

INDIVIDUAL RIGHTS, GROUP RIGHTS, AND COLLECTIVE RIGHTS

A fundamental question about the nature of indigenous rights is the extent to which they include not only individual rights but also group rights. To be sure, some individual rights enable or promote collective activities and public goods; for example, the right to freedom of association, or to religious freedom, or to a democratic say in government. And some individual rights can be distributed on the basis of group membership; these can be seen as "personal" collective rights, or "membership rights" (Appiah 2005).

Do indigenous peoples have collective rights in this sense, or in terms of a right possessed by the group or nation as a whole, as opposed to the individual members? Part of the concern is that promoting or protecting individual rights might not offer enough protection from the harms indigenous peoples have suffered from over the years, and might not suit the distinctive kinds of interests they seek to protect. Indigenous land rights, for example, are often thought of as a group right because "aboriginal title" inheres in the group as opposed to the individual members, given the distinctive conceptions of land within indigenous worldviews (although the relation between the collective title and individual entitlements under it are complex). The right to self-determination is also sometimes conceived as a group right, just insofar as it can only be exercised jointly by the group as a whole. If indigenous peoples have a moral and legal right to self-determination—as has been proposed in the Draft Declaration of Indigenous Rights (1993)—and the right to self-determination is a basic human right, then arguably there is at least one collective human right. But the right to self-determination is itself a deeply unsettled and contested doctrine in international law and normative political theory (Buchanan 2004). The best justification of the right to self-determination is one that embeds it within the constraints of broader individual human rights, as well as detaching it from any necessary association with statehood. In fact, the political activism of indigenous peoples in international fora has helped to promote new thinking about the nature of self-determination more generally (Kingsbury 2001). It is the creative use of the practice of rights by indigenous peoples that is most striking about the emergence of "indigenous rights." They have used it to gain access to political debates and exert their political agency. And they have managed to turn around a discourse that was once used mainly to discriminate against them into one of the key tools of their struggle against enduring injustice.

SEE ALSO *Cultural Rights; Experiments, Human; Natives; Nativism*

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Duncan Ivison

INDIRECT RULE

Within colonial discourse, *indirect rule* designates a British system of African governance through indigenous chiefs, usually contrasted with French *assimilation*, a more centralized policy of transforming colonial subjects into replicas of European citizens. Historically, indirect rule can be understood in several ways: as an expedient of all modern colonial regimes; as an explicit British doctrine; and as the political dimension of a twentieth-century colonial syndrome that included the social sciences.

Although *indirect rule* might describe any exercise of imperial power through the agency of local authorities, the concept best applies to the colonialism that emerged with the establishment of British and Dutch rule in India and Indonesia during the latter 1700s. In these situations, a relatively small number of European officials took charge of territories with populations consisting of indigenous peoples rather than immigrant settlers or slaves. Most such governments, whether in Asia or Africa, would be "indirect" to some degree, that is, heavily dependent upon local auxiliaries. In no cases (except the very tiny French colonies that survived British conquest before 1815) were efforts made to assimilate the entire population to European culture and political status. In the larger colonial territories (including later-acquired French ones), the only choices were between the proportion and status of native auxiliaries who would either be co-opted from existing structures of authority or created anew via European schooling. Even these distinctions were not always clear: hereditary rulers could be given a European education or assigned a new role (as were provincial landlords in eighteenth-century Bengal and twentieth-century Uganda) based on European precedents. Moreover, all colonial administrations depended heavily upon European-educated clerks and interpreters, who held very low formal positions.

The British doctrine of indirect rule emerged in Africa during the early 1900s when the conqueror of Northern Nigeria, Lord Frederick Lugard (1858–1945), incorporated the local Sokoto caliphate into his new regime. Both Lugard and later historians linked this mode of administration to the already-established practices of upholding princely states in India. However, the major princely states, which remained separate for at least internal administrative purposes from British India, were far larger and more powerful than even the Sokoto caliphate, unique in tropical Africa for its degree of bureaucratic development. Moreover, indirect rule was extended throughout British Africa to much less articulated states and chiefdoms, even including, in the 1920s and 1930s, *joint native authorities* based on village councils. In contrast to the princely states (which might better be compared to protectorates of the short-lived League of Nations mandates established by the French and British throughout the Middle East), indirect rule involved continuous intrusion by European administrators into the internal affairs of local rulers through such standardized and highly transparent institutions as native treasuries and native courts.

Indirect rule rested upon a combination of conservatism and paternalist liberalism. Its overseas political goal—which ultimately failed—was to slow and "traditionalize" movements toward decolonization. Among European administrators and their domestic audience it became the center of a new colonial orthodoxy (even France abandoned assimilation for the more vague *association*). The "native," rather than economic gain, was to be the center of concern and was approached with a degree of cultural relativism. Mid-nineteenth-century India here became an anti-model in which aggressive British policies had produced both the Revolt of 1857 and a more enduring class of European-educated *babus* (actual or would-be native government employees). Reluctance to undermine any more indigenous rulers or landlords was one result of this retreat from direct rule/assimilation, but so was withdrawal of support for indigo planters in Bengal, new ideas about education, and programs of village-based anthropological research. All these concepts extended into newer colonies in Africa and (to a lesser extent) the Pacific and Southeast Asia.

Indirect rule, beliefs in peasant versus plantation economies, adapted education, and anthropology all came together in the International Institute for African Languages and Cultures (IIALC, now the International African Institute), founded in 1926. Lugard and similarly minded French and Belgian colonial administrators served as directors of the IIALC. The other founders were missionaries who joined with colonial officials in blocking white settler ascendancy in British East Africa. The most immediate concern for missionaries, however, was education, which they believed had to be less "literary" and European and undertaken in African languages (the anticlerical French Third Republic balked on the language

issue, producing a key difference between the two colonial heritages).

The rising new school of functionalist social anthropology used the IIALC's journal *Africa* as a platform to publish its research, assert its relevance to indirect rule and related policies, and launch a successful campaign for funding from the U.S. Rockefeller Fund. In reality, most of the ethnography used to implement indirect rule in Africa (as had been the case earlier in India) was done by administrators and missionaries. Indirect rule was thus more important for the development of social science (in France as well as Britain) than academic anthropology proved to be for colonialism.

SEE ALSO *Colonialism; Decolonization; Neocolonialism; Postcolonialism*

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INDIVIDUALISM

The term *individualism* covers a range of ideas, philosophies, and doctrines that emphasize the unlimited freedom of the individual and the individual's right to protect his or her own interests against those of society. The French liberal writer Alexis de Tocqueville (1805–1859) coined the word to characterize individual selfishness—a value system that predisposes human beings to be concerned only with themselves and their small circle of family and friends. Arising in reaction to the collectivist spirit of the Enlightenment and the French Revolution, its original meaning tended to be rather negative and controversial, implying that individualism was a source of social atomism, anarchy, and public disorder. Thus, while praising the individualism of nineteenth-century America, Tocqueville at the same time cautioned against its threat to public life through the weakening of social bonds and obligations.

LIBERAL INDIVIDUALISM

Today the term is often employed to describe a political and social philosophy—sometimes referred to as "liberal individualism" or "laissez-faire individualism"—that stresses the primacy of the individual and the importance attached to individual freedom, self-reliance, privacy rights, and individual choice. In its full-fledged form, it emerged first in Britain with the spread of the laissez-faire ideas of Adam Smith (1723–1790) and the utilitarianism of Jeremy Bentham (1748–1832) in economic and political theory. In the Anglo-Saxon world, liberal individualism became a catchword for free enterprise, free markets, limited government, and unrestricted economic freedom, as well as for the individualistic attitudes, forms of behavior, and aspirations that sustain the idea of "self-made man." One influential version of this usage was U.S. president Herbert Hoover's campaign speeches in 1928 celebrating "rugged individualism" in America. Above all, individualism came to signify a preference for a minimal government role in social, economic, and religious affairs, as exemplified by the slogan "That government that governs least governs best"—though not in matters of public morality or law and order—as opposed to the more collectivist ideals of socialism.

Individualism is frequently contrasted with collectivism, a social philosophy in which the collective or common weal rather than the individual good is considered paramount. Man is seen in the Aristotelian tradition as a social animal, whose very nature, wants, and capacities are to a very large extent the product of society and its institutions—running the gamut from the family through the workplace and all kinds of voluntary associations to the nation-state and the global market. For example, the famous Enlightenment philosopher Jean-Jacques Rousseau (1712–1778) advocated subordinating the individual will to the collective will, a view that is in fundamental opposition to the philosophy of individualism. Rousseau's popular treatise *Social Contract* (1762) maintains that each individual is under an implicit contract to submit his or her will to the "general will" of the entire citizenry (*volonte generale*), although the "general will" need not be the will of absolutely all citizens (*volonte de tous*).

In his major work *Democracy in America* (1835, 1840), Tocqueville himself took a rather ambiguous stand about individualism, at times giving it a distinctly pejorative flavor. He was torn between his admiration for the individualism of American democracy and his anxiety about its political implications, such as the danger of widespread social conformism. He pointed to two major aspects of the individualistic character of American society—on the one hand, a faith in individual reason as the sole basis of public opinion, and, on the other, a self-centered, self-interested preoccupation with private concerns.

This second aspect of American individualism manifested itself in pervasive egoism, a widespread tendency to withdraw from public affairs and to focus on the material welfare of the family as the most important purpose in life. This egoism was evident in unrestrained personal ambition and atomistic competition. In a society where the scramble for power and possession was widely thought to be open to all—and failure could not be ascribed to disadvantages of birth or any other privilege—the contest was bound to be fierce and uncompromising. Tocqueville believed that individualism could pose a threat to liberty, because individualistic attitudes encourage individual subservience to public opinion and conformism. U.S. democracy found its source of intellectual authority in prevailing public opinion based on the idea of the moral equality of all individuals. The conformity to generally held attitudes and social standards was thus the result of the imposition of social sanctions by one's peers. When Tocqueville asked why there were no professed atheists in the United States, his answer was that atheists would not get any jobs or customers. When faced with the opinion of the majority, the individual felt powerless: If the majority of one's equals is always right, then a dissenting opinion must be always wrong. For Tocqueville, this conformist attitude was an assault on individual liberty—a "new kind of despotism" over isolated individuals too afraid of public opinion to object, too absorbed in private concerns to participate in public activity, too aware of the economic value of public order to threaten protest and disorder. Such "tyranny of the majority," the Frenchman warned, would weaken not only liberty but the very will to liberty.

Tocqueville's warnings about the paradoxical contradictions of individualism have been echoed numerous times in modern social and cultural criticism. The philosophy of liberal individualism has been criticized for creating a culture of what Canada's most eminent political theorist, C. B. Macpherson (1911–1987), called "possessive individualism," a theory of human nature that is rooted in the seventeenth century and is based on "a conception of the individual as essentially the proprietor of his own person or capacities, owing nothing to society for them" (Macpherson 1962, p. 3). Such a society, according to Macpherson, where individual skills are a commodity to be bought and sold on the open market, demonstrates a selfish and unrestricted thirst for private consumption that is celebrated as the very essence of human nature. The American sociologist Robert Bellah (1985) has similarly warned that individualism is becoming so pervasive and excessive in the United States that it is destroying the integrity and moral foundations of American society.

During the nineteenth century and the early twentieth century, economic individualism in the form of laissez-faire capitalism came into conflict with political individualism in the form of representative democracy, as the newly enfranchised working-class voters increasingly came to demand government intervention in the marketplace far beyond the mere enforcing of economic contracts. The rise of militant labor unions and the mass socialist parties built upon them made free-market economic policies morally untenable and politically risky, especially after the 1917 Bolshevik Revolution in Russia. The worldwide Great Depression of the 1930s and the governmental response to it based on the interventionist theories of John Maynard Keynes (1883–1946), the preeminent British economist who revolutionized the science of economics by advocating active state involvement in the capitalist economy, ushered in the collectivist-inspired "social-welfare state" and also seemed to sound the death knell for the discredited doctrines of economic individualism. But the waning of western social democracy and the decline and eventual downfall of Soviet-style "state socialism" in the late twentieth century led to the revival of the ideas of laissez-faire capitalism—first during the era of Thatcherism in the United Kingdom and Reaganism in the United States, and later with the neoliberal policies of "globalization capitalism." The anti-Keynesian and anti-statist writings of Ludwig von Mises (1881–1973), Friedrich von Hayek (1899–1992), Milton Friedman (1912–2006), and their followers have also contributed to restoring the previously tattered intellectual reputation of economic individualism.

METHODOLOGICAL INDIVIDUALISM

In another widespread, although thematically separate usage, the so-called "methodological individualism" in the social sciences refers to the position adopted by those who argue that groups (collectivities) are nothing more than their individual members. In this view, there are no properties of groups that are not reducible to individual properties. Not only must scientists study individuals, but also the explanations of the social phenomena they study—phenomena such as social class, power, the political system, and so on—must be formulated as, or be reducible to, the characteristics of individuals. While not denying that groups exist, the individualist does deny that they have any independent status and that they are more than the sum of their parts. As former British prime minister Margaret Thatcher famously declared, "There is no society, only individuals."

This individualistic position stands in marked contrast to the so-called "methodological holism," the theoretical principle that each social entity (group, institution, society) has a totality that is distinct and cannot be understood by studying merely its individual component elements. There are emergent group properties that are not reducible and, therefore, groups (collectivities) are more than the sum of their parts. For example, the famous

French sociologist Émile Durkheim (1858–1917) claimed that collective phenomena are not reducible to the individual actor or psyche; hence, social facts can be investigated and explained independently of the individual. The debate over methodological individualism versus methodological holism in the social sciences reflects an underlying ideological tension about the relationship between the individual and society, recognizing that these two analytical levels are distinct and may have to be explicated separately.

SEE ALSO *Altruism; Bentham, Jeremy; Bolshevism; Choice in Psychology; Collectivism; Competition; Conformity; Constructivism; Durkheim, Émile; Elite Theory; Elites; Enlightenment; Freedom; French Revolution; Friedman, Milton; Great Depression; Hayek, Friedrich August von; Keynes, John Maynard; Laissez-faire; Libertarianism; Liberty; Microanalysis; Microeconomics; Mises, Ludwig Edler von; Party Systems, Competitive; Philosophy; Philosophy, Political; Political Theory; Reductionism; Rousseau, Jean-Jacques; Smith, Adam; Social Contract; Sociology, Micro-; Thatcher, Margaret; Tocqueville, Alexis de; Tyranny of the Majority; Utilitarianism; Welfare State*

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Rossen Vassilev

INDUSTRIAL ORGANIZATION

SEE *Industry.*

INDUSTRIAL SLAVERY

SEE *Slavery Industry.*

INDUSTRIALIZATION

Industrialization refers to a broad process through which industry displaces agriculture and assumes a dominant role in a society's economy. It involves the extension of commodity production on a large scale and the emergence of wage labor as the principle mechanism for the organization of work.

Historically, this shift has often come with a number of concomitant changes, including the formation of a united territory, where the state either created a legal system to protect property rights or directed the industrialization process itself; an increase in agricultural productivity, allowing a surplus population move into industry; the diffusion of scientific knowledge and technological know-how; the creation of a workforce socialized into an ethos of time discipline; and a willingness of investors or the state to commit large funds to industry rather than to speculation, plunder, or military expenditure.

EARLY THEORIES OF INDUSTRIALIZATION

Industrialization began in Britain at the end of the eighteenth century, and it soon spread throughout Europe, North America, and Japan. However the process was profoundly uneven, particularly as countries combined elements copied from the more advanced regions with their own traditional social practices. In his classic 1969 account of the French "paradox," Tom Kemp argued that while the Revolution of 1789 created the most favorable legal conditions for capitalist development, it also, ironically, allowed the peasantry to stay more rooted to the land and gave small-scale preindustrial forms of capitalism new opportunities for commercializing agricultural products. On a more general level, Alexander Gerschenkhron claimed that backwardness (essentially defined as a divergence from the British model) led to a "tension" that was only resolved when larger institutions such as banks intervened to mobilize scarce capital for an industrialization project. In the case of Germany, for example, the banks helped create an "organized capitalism," through which investment was concentrated in coal mining, iron and steel-making, electrical and general engineering, and chemical plants. Earlier industries that had played a key role in Britain's development, such as textiles, were of fringe interest because the banks strategically concentrated on new lead industries.

The pressure to industrialize, when combined with a scarcity of capital and a lack of domestic markets, also led to the intervention of another key player: the state. For Adam Smith and the neoclassical school, the only role assigned to the state was that of the famous "night watchman," who patrolled the perimeter of the economy guar-

anteeing property rights and security. Subsequently, many writers have questioned this minimalist role. For Ernest Gellner, writing in the 1980s, the very social and geographical mobility that industrialization required forced the state to take measures to standardize the cultural outlook of its population through the introduction of national curricula in schools. Gerschenkhron went further, arguing that a stronger state role might be needed to break the barriers of stagnation. Merely providing the promise of rewards for entrepreneurial efforts might not be enough. Writing in a decade when China was still an impoverished rural society, he noted that "capitalist industrialization under the auspices of socialist ideologies may be, after all, less surprising a phenomenon than would appear at first sight" (Gerschenkkhron 1952, p. 25).

In what the American economist Paul Krugman has called the period of "high development theory," in the late 1940s and 1950s, there was a consensus that a "visible hand" was necessary to propel a country towards industrialization. The Polish economist Paul Rosenstein-Rodan noted in 1943 that balanced growth and a "big push" were also required. Balanced growth was needed so that a complementarity of demand would reduce risk in investment. When investment occurred on a wide front, new producers could become each other's customers, thus reducing the risk of not finding a market. In addition, the state had a key role to play in developing infrastructure and training a workforce. While the concept of "balanced growth" was questioned by Albert Hirschman in 1958, the consensus was that industrialization would emerge from increased savings directed by the government to industry.

DEPENDENCY THEORY

Outside the field of conventional economics, a more radical critique of Smith's neoclassical model also developed. Starting with Raul Prebisch, who led the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) from 1948 to 1963, this critique emphasized the wider structural relationships into which poorer countries were inserted. Prebisch and the other dependency theorists claimed that the nations on the periphery were often forced to supply primary produce to metropolitan countries in return for industrial and consumer goods. Far from gaining a comparative advantage by specializing in exporting products where they had natural advantages, however, they had to produce ever more primary goods to obtain the same quantity of manufactured goods. The solution, according to Prebisch, was import substitution, through which tariffs are imposed on goods from industrialized countries so that a space can be created for domestic manufacturers to produce simple consumer goods.

Dependency theory took on a more radical direction in the hands of Paul Baran and Andre Gunder Frank. For Baran, dependency was characterized by a dual economy comprised of a large agriculture sector with extremely low productivity and a small industrial enclave that could not find a domestic market for its goods. Shifting Marx's paradigm, Baran argued that a surplus was extracted from the peasantry and appropriated by landowners, moneylenders, merchants, and a mainly foreign capitalist class. These groupings had little interest in development and often functioned as a "comprador class," siphoning off the surplus to foreign capital and gaining privileges as a result. The only solution was extensive state intervention to promote national development.

Frank agreed that the cause of underdevelopment was the extraction of a surplus by metropolitan countries. This, however, occurred primarily through trade itself, rather than through a dualistic structure of the economy. The trading relationship with the metropolis affected all sectors of society and led to the draining away of resources. There was no original state of underdevelopment from which such countries had to incubate; they were underdeveloped through coming into contact with the metropolitan powers. The route to development lay, therefore, in delinking from the world economy.

Not everyone, however, shared this pessimism about the dual-sector model in underdeveloped countries. For W. Arthur Lewis, who won the Nobel Prize in Economics in 1979, the dual-sector economy meant that the modern capitalist sector could draw on a relatively unlimited supply of labor from the more traditional sectors without having to raise wages significantly. This meant that it could expand until the absorption of surplus labor was complete. Adopting a pragmatic approach to the use of public and private enterprise in the modern sector, he argued that it could give a positive feedback to the traditional sector by, for example, creating markets for its commodities.

EXPORT INDUSTRIALIZATION AND OTHER APPROACHES

The demise of dependency theory coincided with the emergence of a number of newly industrializing countries, particularly the "Asian Tigers" of South Korea, Singapore, Taiwan, and Hong Kong. By seeking a niche in the world economy and opening their economies to foreign investment, these nations appeared to overcome the obstacles to development through adopting an export industrialization program. As a result, contact with the global economy did not intensify underdevelopment, but instead allowed them to rapidly industrialize.

As the process of industrialization has spread, however, some older predictions are also being questioned.

According to Simon Kuznets's famous hypothesis, economic inequality should increase during the early stages of industrialization because an income gap will grow between those in rural and urban areas. Over time, however, this inequality should decrease as mass education opens the possibility of a more meritocratic society. Yet while this may appear to have been the case up to the 1970s, there has been a return to growing levels of inequality since then. As outlined by Robert Pollin in *Contours of Descent* (2003), evidence from the United States indicates that the share of wealth held by the top 10 percent of the population has grown, and that the difference between the pay of the average CEO and that of the average employee has multiplied considerably.

DEINDUSTRIALIZATION

Current debates also focus on deindustrialization. According to Robert Rowthorn and Ramana Ramaswarmy, the share of employment in industry in the twenty-three most advanced countries declined from 28 percent of the workforce in 1970 to 18 percent in 1994. The growth in services and the development of a "knowledge society" has led many to argue that the transition to a postindustrial society has already occurred. However, this ignores the fact that modern societies continue to rely heavily on mass-produced goods, and it fails to explain how most foreign direct investment (FDI) is still going to the advanced industrial economies, rather than to those with an abundance of cheap labor. The rise in employment in services may, in fact, be the result of the relatively slower growth of labor productivity in that sector when compared to manufacturing. The process of industrialization, therefore, appears to still have a long way to go.

SEE ALSO *Dependency Theory; Developing Countries; Development Economics; Economic Growth; Frank, Andre Gunder; Industry; Knowledge Society; Lewis, W. Arthur; Modernization; Prebisch-Singer Hypothesis; Terms of Trade; Unequal Exchange*

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INDUSTRY

Industry refers to the organization of the economy around a particular set of products or related activities. For practical purposes, researchers may wish to compare the structures of different product or country markets either simultaneously or over a defined time period. To meet this need, government statistical agencies have developed standardized systems for classifying the activities of firms into industries. The NACE classification system, which is a French acronym for General Industrial Classification for Economic activities within European Communities, is used in the European Union, while in the United States, Canada, and Mexico, the North American Industry Classification System (NAICS, pronounced "nakes") is used. These systems broadly classify business establishments according to their primary activity.

Unlike standard microeconomic analysis, the study of industrial organization takes as its starting point the view that markets are less than perfect. "Actually existing capitalism" does not operate according to price competition alone, but promotes a variety of business strategies. These are affected by the way that markets for industries are "embedded" in a particular institutional climate. There are also barriers to entry in markets that can result in minimizing the full force of competition.

The study of industrial organization focuses on the link between market structure and business conduct in determining market performance. Market structure can vary from conditions of near full competition to oligopolies with high barriers to entry. A key feature of any particular market is the degree of concentration in a small number of firms. The level of concentration can be measured by a Lorenz curve that plots the cumulative percentage of market output against the cumulative percentage of firms from smallest to largest. The market structure can affect business conduct in terms of pricing, research and development, or branding strategies. Finally, this leads to measures of business performance in terms of dynamic or product efficiency, profitability, or growth. Writers from the early Harvard school placed primary emphasis on market structure, whereas those from the Chicago school have attempted to use traditional price theory in their analysis of industrial performance.

The historical pattern by which particular countries industrialized can also have an important influence on the structure of its industries. In Europe, for example, the reliance of Britain on the markets of its empire inclined firms toward labor-intensive, simple, and cheap products. This led to a weakness in manufacturing after World War II (1939–1945), and today Britain has one of the highest rates of deindustrialization in the world. By contrast, the late industrialization of Germany, combined with a close interaction with the banks, led to an emphasis on technological sophistication and cost containment, which led to greater success for German manufacturing.

Industrial development can also be affected by different modes of regulation, defined as complexes of institutions, norms, and regulating networks that affect the behavior of firms. Among these complexes are the structure of bargaining over the wage-effort contract, the institutional compromises at the level of the state, the relationship between industry and finance, and the international trade regime. The mode of regulation can evolve though sociopolitical conflict, which eventually has an impact on industry.

SEE ALSO *Agricultural Industry; Automobile Industry; Aviation Industry; Banana Industry; Banking Industry; Bauxite Industry; Cattle Industry; Coffee Industry; Copper Industry; Cotton Industry; Diamond Industry; Drug Traffic; Energy Industry; Entertainment Industry; Film Industry; Fishing Industry; Flower Industry; Gold Industry; Industrialization; Infant Industry; Insurance Industry; Microelectronics Industry; Mining Industry; Peanut Industry; Petroleum Industry; Pharmaceutical Industry; Prison Industry; Railway Industry; Recording Industry; Shipping Industry; Silver Industry; Slavery Industry; Sports Industry; Steel Industry; Sugar Industry; Tea Industry; Telecommunications Industry; Textile Industry; Tobacco Industry; Tourism Industry; Transportation Industry; Vanilla Industry; Weapons Industry*

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INDUSTRY, OIL

SEE *Petroleum Industry.*

INEGALITARIANISM

There have been many defenses of inequality, several of which are rooted in moral or religious views (as in Hinduism) or in peculiar views of human nature (as in the teachings of Aristotle). Counter to such views, it is commonly presumed today that equality is preferable to inequality but that it should be balanced against other considerations that may causally trade off with it. Standard micro-level functional arguments in favor of inequality assert that inequality enhances production either because unequal incentives or unequal power (as in a hierarchy) are needed to organize the production of beneficial goods, both personal and collective, or because the productively efficient division of labor entails inequality.

These arguments generalize to macro-level claims about the organization of society. First, equality entails reduced incentives to those who are especially productive and leads to a trade-off between equality and the efficiency of production (Rawls 1971, Okun 1975). Second, hierarchy, and therefore inequality, is virtually necessary for achieving many desirable social goals. Finally, the division of labor is generally necessary in a modern society (Smith [1776] 1976; Durkheim [1893] 1933). At the societal level at least three further trade-offs undercut support for equality. First, the political power to achieve equality entails the power to do much else, including very undesirable things such as suppression of thought and dis-

sent. Second, equality in a single society requires autarky and risks the selective emigration of the especially productive; both of these effects are likely to be economically crippling. Finally, in many areas, those who have greater resources than others can be trailblazers who support innovations that eventually benefit almost everyone (Hayek 1960, p. 44).

Each of these relationships involves a trade-off of equality for something else: productivity, successful organization, lack of suppression, economic viability, or innovation. In each of these cases, although there might be disagreements about the scale of the trade-off of equality that a society should bear, there will probably be little disagreement that some trade-off is desirable or even necessary. Again, inequality in these arguments is functional in that it leads to greater production, prosperity, and liberty.

Gender inequality may have arisen from or been reinforced by the efficiency of a gendered division of labor, with women specialized in childbearing, childrearing, and other home-oriented activities while men specialized in fieldwork. Racial and ethnic inequality seem unlikely to have resulted from their overall efficiency. They must generally follow from normative spurning of an out-group or from taking advantage of the subordinate group by making them do subordinate jobs. The push for equality of these groups and women is commonly from normative claims for the equality of all. But equality for all typically only means that the subordinate groups' members and women should face opportunities comparable to those of the rest of society, as unequal as those may generally be.

Major defenses of general social inequality in our time are functionally based in causal relations and have general significance beyond any idiosyncratic ethnic, gender, moral, or religious view. On these arguments there are reasons to think inequality either good or at least better than its implicit costs in an alternative.

Each of the arguments in favor of inequality in society might have a counterpart at the level of small groups or organizations; indeed, they are all expressed through actions at the micro level. However, relatively little attention has been paid to some of these effects at the micro level. The issues are especially important in macro contexts of developing economies and in micro contexts of differential power of the groups, such as those defined by gender and ethnicity, to which individuals belong and through which they are commonly identified.

Notions of inequality play a significant role in pragmatic political debates about democracy. James Madison (1751–1836), leader of the Constitutional Convention of 1787, and many others writing at the time of the drafting and adoption of the U.S. Constitution were deeply worried that democracy would lead to the expropriation of property. Given the vote, the large majority who were relatively poor in comparison to Madison, Thomas Jefferson (1743–1826), George Washington (1732–1799), and other holders of grand estates might choose to levy heavy taxes on property and block its simple inheritance. Or they might simply seize property. This is what happened in many socialist nations, except that the appropriation was done by dictatorial, not democratic governments. It is perhaps ironic that liberal democracy is now thought to be a safeguard of property and is therefore associated with substantial inequality of wealth. The central difference between the liberal democracies and the socialist autocracies is that the former have relatively weak governments while the latter have very strong governments. While a strong government does not guarantee egalitarian policies, a weak government probably does lead to inegalitarian outcomes. But, again, a potential cost of the strong government that is necessary for egalitarianism is the capacity to intervene in lives in many ways other than merely economically.

SEE ALSO *Capitalism; Division of Labor; Durkheim, Émile; Equality; Hierarchy; Imperialism; Inequality, Gender; Inequality, Racial; Norms; Organizations; Productivity; Property, Private; Rawls, John; Slavery; Smith, Adam; Washington, George*

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Russell Hardin

INEQUALITY, GENDER

In the 1968 *International Encyclopedia of Social Sciences*, there is no entry for gender inequality. In 2006, thirty-eight years later, Carolyn Hannon, director of the United Nations Department of Economic and Social Affairs, Division for the Advancement of Women, stated: "It is difficult to say with certainty what a world truly based on gender equality would look like, since we are still so far from achieving it" (2006, p.1). This statement shows how awareness of gender as an analytical category and gender inequality as a lived phenomenon has grown since the late

1960s. The world is deeply divided and organized by *gender*, defined as a set of socially constructed practices linked to biological sex that shape how individuals understand the categories of woman and man. Gender as a process is historically and culturally specific; manifestations of women's subordination are highly varied yet intricately connected. Not only does the form and extent of women's oppression vary from country to country, but it is also always shaped by relations of power based on race, class, ability and sexual orientation. Gender inequality is recognized as a persistent and detrimental aspect of all human societies.

While there is debate about the origins of gender inequality, the material effects of it are easily identifiable. According to the Women's Environment and Development Organization, "Women work two-thirds of the world's working hours. They also produce half of the world's food. However, women earn only ten percent of the world's income, and own less than one percent of the world's property" (2005, p.1). Poverty itself has been feminized: approximately 70 percent of the people living on less than one dollar a day are women or girls. The differential treatment of men and women is evident in material conditions and supported by ideological practices. Men are numerically dominant in key global and national decision-making positions such as international organizations, governments, and boards of directors of private enterprise. Men, therefore, greatly control access to resources and are the key architects of social, economic, and political policies. Gender inequality requires the daily exercise of power to be maintained. Further, the work of men is more highly paid and is accorded greater status than the work of women, which is often unpaid and not recognized as work. Joni Seager and Ann Olson in *Women in the World: An International Atlas* note, "Everywhere women are worse off than men: women have less power, less autonomy, more work, less money, and more responsibility. Women everywhere have a smaller share of the pie; if the pie is very small (as in poor countries), women's share is smaller still. Women in rich countries have a higher standard of living than do women in poor countries, but nowhere are women equal to men" (1986, p. 7).

In most regions of the world, gender relations were transformed in the twentieth century by the globalization of economies, technological developments, changes in how work is organized, warfare, and organized resistance movements (feminist, anticolonial, and civil rights). In the year 1900, the vast majority of women in the world had no formal legal rights, had extremely limited employment options, and were starting to gain access to higher education. Although the specificity of gender inequality in the global North (the world's wealthier nations, located predominantly in the northern hemisphere) and the South (the world's poorer nations largely of the southern hemisphere) may differ, women across the globe have worked together to effect systemic, lasting changes to improve the material conditions of women's lives. To be able to build an effective feminist movement, Chandra Mohanty has argued that women must work from a framework that highlights "mutuality, accountability and the recognition of common interests as the basis for relationships among diverse communities" (2003, p. 7). The notion of common interests between women of the South and North is important because it disrupts the construction of women of the North as liberated and women of the South as victims in need of rescue.

ISSUES OF GENDER INEQUALITY IN WORK

To understand gender issues and work, it is important to note that work has been largely conceptualized in the social sciences as activities performed for wages outside of the home, in the productive or public sphere. This is the work that men predominantly perform. Work done in the home by women—unwaged reproductive work that provides essential services for the functioning of the public sphere such as producing food for the family and childcare—is not considered to be part of the economy and has been rendered invisible in global accounting systems. According to Marilyn Waring in *Counting for Nothing: What Men Value and What Women are Worth* (1999), economic indicators such as the gross domestic product (GDP) and gross national product (GNP) do not include "activities that lie outside the production boundary—that is, in every notion, the great bulk of labour performed by women in an unpaid capacity" (p. 58). Since GDP and GNP are used to set policy priorities and measure the economic performance of a nation, the omission of women's work has far-reaching consequences. Women's contributions are not included in the calculation of major economic indicators thus rendering women's work invisible and naturalizing the belief that women do not contribute to the economy. Waring argued that the recognition of the unpaid work of women would necessarily lead to changes in social policy.

Women and girls perform the vast majority of work done in the home. This work is unpaid, devalued, and unrecognized as legitimate work and the sharp gendered division of labor is often justified by the argument that the activities of housework are a natural extension of women's biology. In Japan, for example, women reported that they spent twenty-nine hours per week doing housework; the average for men was only four hours. A survey conducted in India in 1999 found that women cooked for fifteen hours a week, had five minutes per day for leisure, slept two hours less per night than men, and spent ten times longer on household work than men. Men indicated that

they cooked for less than one hour per week and had, on average, two hours per day of leisure time (Seager, 2003, p. 70). In households where both partners work outside the home for wages, the division of labor within the home is disproportionately performed by women.

Entry into the waged labor market has been seen as a route to greater autonomy for women and since the 1970s the participation of women in the labor market has increased dramatically. In most countries, women now form at least 40 percent of waged workers. In 1999, 83 percent of women in Burundi, Mozambique, and Rwanda worked for wages. However, it is critical to examine the working conditions, wages, and occupational segregation faced by women. Women form approximately 75 percent of the world's part-time workforce and are often employed on short temporary contracts without health benefits, job security, or protection against job-related health problems.

Women tend to be clustered in occupations in the service sector, in nurturing roles such as teaching and nursing as well as industrial assembly work on the global assembly line. These occupations receive lower levels of pay and social status. Even for identical work performed by women and men, work is valued differently depending on who performs the work. For example, in the United States in 1998, compared to the earnings of white men for the same work, white women earned seventy-three cents on the dollar, African American women earned sixty-three cents, and Hispanic American women earned fifty-three cents. The gender gap in earnings also varies by race. Even when women have the education and experience, they are often not able to break into the highest levels of management. According to Seager, in Canada and the United States in 1999, only thirteen of the largest one thousand corporations had women chief executive officers and only 4 percent of the senior management positions were filled by women.

FORMAL RIGHTS AND POLITICAL POWER

Women have made significant progress with respect to formal legal rights since the mid-nineteenth century. There has been a growing awareness of gender inequality in formal power and legal systems. Across the globe, women have fought for rights to make their status equal to that of men in areas of universal suffrage, property rights, and access to education. As of 2006, there is only one country, Kuwait, in which women do not have the same voting rights as men. Although the struggle for universal suffrage began in the mid-nineteenth century in many countries, the extension of voting rights was unevenly applied over a period of years to different groups of women. For example, in Canada, white women were first granted the right to vote in federal elections in 1918 yet it was not until 1960 that everyone in Canada regardless of gender or race was allowed to vote.

The extension of voting rights to women has not significantly changed the face of political representation and the exercise of political power. As of 2006 there is no country where women comprise 50 percent of elected representatives in government. In 1990 when women held, on average, 12 percent of all seats in national houses of parliament, the United Nations Economic and Social Council recommended that nations should aim to achieve a level of 30 percent representation by women by 1995. As of 2005 women's political participation as a global average increased to 16 percent; only 19 countries met or exceeded the 30 percent target, according to the United Nations Statistical Division. The votes that women fought so hard for do not seem to have translated into direct political power for women as a group. Gender inequality is also prevalent in religious institutions. In all mainstream religious traditions (Christianity, Islam, Judaism, Hinduism, Buddhism) women are either forbidden from participating in leadership roles or sharply limited in what roles they can assume.

Feminists have argued that women and men are born with equal human capacity to learn, develop, and contribute to shaping the world. It is through the social organization of gender and gender roles that limit the potential of women to contribute to their full ability. Since 1960 there have been many positive developments, such as increased participation of women in political leadership roles and increased access for women and girls to education. One significant indicator of the success of feminist organizing is how an awareness of gender inequality as manifested in violence against women and reproductive health issues has been moved to the center of national and global discussions. Gender inequality has become a key focus of the United Nations. In 1975, the first World Conference on Women was held in Mexico with 133 governments participating in the discussions. Since 1975 there have been four additional conferences (Copenhagen, 1980; Nairobi, 1985; Beijing, 1995; New York, 2005) with participation increasing with each meeting. In 1995 more than 47,000 women and men participated in the creation of the Beijing Declaration and the Platform for Action. The Platform clearly stated that the empowerment of women and gender equality were critical to international development, peace, and human rights. One hundred eighty-nine countries endorsed the Platform, giving gender inequality a new profile in the formation of national policies and legislation.

Equality between women and men will not be achieved only by the implementation of legal reforms that position men and women as the same; there remains much work to be done beyond the achievement of formal

legal rights. The elimination of global gender inequality will require a fundamental transformation of social relations between women and men.

SEE ALSO *Discrimination, Wage, by Gender; Female-Headed Families; Feminism; Feminism, Second Wave; Gender; Gender Gap; Gender Studies; Inequality, Income; Inequality, Political; Inequality, Racial; Inequality, Wealth; Matriarchy; Patriarchy; Social Movements; Women's Movement; Work and Women*

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Bonnie Slade

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VOLUME 4

INEQUALITY, INCOME–MARXISM, BLACK

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I

INEQUALITY, INCOME

Income inequality is an important aspect of the economic and social well-being of a nation. The axiom "the rich are getting richer and the poor are getting poorer" is synonymous with rising income and wealth inequality. Both affluent and poor countries experience some degree of income inequality.

Income inequality rose in the United States between the mid-1970s and early-2000s based on several measures. The United States generally exhibited the highest degree of income inequality of the industrialized OECD (Organization for Economic Cooperation and Development) countries, although research by Peter Gottschalk and Timothy Smeeding (2000) did not discern any universal trend. According to opinion polls by Demos, a U.S. public policy organization, American public opinion toward income inequality tends to shift in response to media reports on excessive executive compensation, corporate downsizing, and the state of the U.S. economy.

Opinions are divided on whether society should be concerned about income inequality. Economists Martin Feldstein and Anne Krueger argue that policymakers should focus on reducing poverty, not inequality. This is because an increase in inequality will occur even though all *income-receiving units* (IRUs) are better off in absolute terms if the incomes of richer IRUs rise by higher proportions than those of their poorer counterparts. An alternative view, articulated by Simon Kuznets (1901–1985) and Kenneth Arrow, winners of the 1971 and 1972 Nobel Prize in Economics, respectively, is that income inequality is an important determinant of aggregate savings and growth, and the perception of unfairness it entails may cause political instability and social conflict.

MEASURING INCOME INEQUALITY

One way of analyzing income inequality trends is to examine the income shares accruing to some segment of the population (e.g., the poorest and richest 10 percent). A falling (rising) income share of the poorest (richest) group indicates rising inequality.

A summary inequality measure is a single number computed from the incomes of several IRUs (individuals, households). This number summarizes the degree of income inequality, with higher values indicating greater inequality.

The *Gini index* or *Gini coefficient*—named after Corrado Gini (1884–1965), the Italian statistician who developed it in 1912—is a popular summary measure. It ranges from zero for *perfect equality* (all IRUs receive identical incomes) to one for *perfect inequality* (one IRU receives all the income). For example, the World Bank (2005) reports the 2000 Gini index for the United States and Canada as 0.38 and 0.33, respectively, indicating that the United States had greater inequality. Such international comparisons are strictly valid if they are based on common definitions of IRUs and income (gross income, net income) and similar geographical coverage (national, urban).

Frank Cowell (1995) provides details (including formulas) of the Gini index and other summary measures. Cowell describes the *generalized entropy* (GE) family, which includes the *mean logarithmic deviation* (GE(0)), *Theil's index* (GE(1)), and *half the squared coefficient of variation* (GE(2)) as special cases, and *Atkinson's measure.*

Atkinson's measure ranges from zero to one and GE from zero to infinity.

There is no single best summary inequality measure. The choice among summary measures is influenced by: (1) computational convenience; (2) satisfaction of desirable properties, including *scale independence* (multiplying all incomes by a constant should not affect inequality), the *Pigou-Dalton transfer principle* (an income transfer from a richer to poorer IRU that does not reverse their ranking should reduce inequality), *anonymity/symmetry* (identities of IRUs are irrelevant), *population independence* (doubling population size by replicating every IRU should not affect inequality), and *decomposability* (total inequality should be conveniently broken down by population subgroups or income components); and (3) the portion of the income distribution to emphasize.

The availability of software for computing inequality measures has rendered computational considerations less important. The Gini index, GE, and Atkinson's measure satisfy scale independence, the transfer principle, anonymity/symmetry, and population independence. The Gini index cannot be conveniently decomposed and is more sensitive to income changes in the middle of the distribution. The sensitivity problem is circumvented by computing a *generalized/extended Gini*, whose formula, like that of Atkinson's measure and GE, incorporates an *inequality aversion parameter* that can be changed to stress different portions of the income distribution. The GE is renowned for its *additive decomposability* (total inequality in a population that is partitioned according to race, gender, or other characteristics is the sum of within-group inequality and between-group inequality).

The degree of income inequality can also be deduced graphically from a *Lorenz curve*. When comparing noncrossing Lorenz curves, the one with greater curvature away from the *perfect equality line* indicates greater inequality. The Gini index is twice the area between the Lorenz curve and the perfect equality line, which may be inaccurate if the Lorenz curve is constructed from data that are grouped into income brackets, as statistical agencies often do.

INCOME INEQUALITY WITHIN AMERICAN SOCIETY AND OTHER OECD COUNTRIES

The Gini index for U.S. household income inequality, reported by the U.S. Census Bureau, increased from 0.397 in 1975 to 0.466 in 2001. Both the GE and Atkinson's measure also increased during this period, indicating rising inequality.

Two factors complicate the analysis of the observed inequality trends. First, the trend may depend on whether a narrow definition of income (market income) or a broader definition that takes into account taxes, social transfers (e.g., child benefits), and noncash benefits (e.g., food stamps) is considered. Rising social transfers may offset an increase in earnings inequality. Second, since summary measures are based on household surveys, researchers should test whether observed inequality changes are statistically significant by computing an appropriate *standard error*. Until the mid-1990s, many practitioners eschewed this issue because of the complexities of most standard error formulas. Advances in computing have facilitated significance tests for inequality changes using the *bootstrap standard error*, as Martin Biewen (2002) has demonstrated.

Economic historian Peter Lindert (2000) has summarized the vast literature explaining the rise in U.S. income inequality. The rise is ascribed to a complex mix of economic and social/demographic factors. Since earnings constitute the largest component of income for most IRUs, explanations of rising inequality in the United States have focused mainly on earnings inequality. They include the weakening of unions, technological changes requiring highly skilled workers, outsourcing of jobs, and immigration. Other explanations include import competition from low-cost countries, government tax and income transfer policies, and the rise in single-parent families. Similar factors have been used to explain inequality trends in other industrialized OECD countries, with variations in the relative importance of the factors.

ECONOMIC GROWTH AND INCOME INEQUALITY

Does economic growth lead to rising inequality? In 1955 Kuznets postulated the existence of an *inverted U-curve* relationship between economic growth and income inequality by tracking the historical experiences of England, Germany, and the United States. This *U-curve hypothesis* contends that the intersectoral shifts associated with the early stages of economic growth exacerbate inequality (the rising portion of the inverted U-curve). At some threshold level, inequality peaks and then falls (the falling portion of the inverted U-curve).

The vast literature on the U-curve hypothesis, reviewed by economist Ravi Kanbur (2000), reveals mixed empirical results. Furthermore, government policy is important in influencing the direction of inequality. Regarding the reverse causation from income inequality to economic growth, empirical evidence by Klaus Deininger and Lyn Squire (1998) reveals that inequality in land distribution is a more important determinant of future growth than income inequality.

INCOME INEQUALITY, RACE, ETHNICITY, WEALTH INEQUALITY, AND INTERGENERATIONAL MOBILITY

It is now widely recognized (e.g., World Bank 2005) that the root cause of persistent earnings and income inequality is unequal opportunities. For example, sustained discrimination in employment or education against a particular racial or ethnic minority group could result in persistently low earnings for the group's members, resulting in an *inequality trap*.

The link between ethnicity and income inequality is convoluted. Economists William Darity and Ashwini Deshpande (2000) articulate how overall inequality could drive interethnic inequality and vice versa. Shelly Lundberg and Richard Startz (1998) explain how community influence and loyalty could shape interethnic inequality even without discrimination. Some have argued that ethnically homogeneous societies should have less inequality since assimilation by ethnic groups is easier and support for income redistribution is more likely. Fractionalization indexes, which measure the probabilities that two randomly selected individuals from a population belong to different ethnic, linguistic, or religious groups, have been used in empirical investigations of the ethnic-diversity income inequality nexus, with mixed results.

The causality between wealth inequality and income inequality may potentially run two ways. On the one hand, those with greater wealth accumulation are more likely to invest and generate higher incomes. On the other hand, those with higher incomes have higher potential to accumulate more wealth.

Are the children of poor parents destined to remain poor? This is the issue of *intergenerational mobility*, the relationship between a person's socioeconomic status and that of his or her parents. The rich are capable of providing their offspring with a better education, increasing their chances of earning higher incomes. Also, the offspring of the rich are likely to inherit greater wealth, which aids the wealth accumulation process for the next generation. Thomas Piketty (2000) has surveyed theoretical and empirical literature on intergenerational mobility. Economists and sociologists measure the degree of intergenerational mobility by computing an *intergenerational elasticity* in income and wealth. Unfortunately, intergenerational elasticity estimates are sensitive to the methodology employed. Irrespective of the exact magnitude, there is no doubt that the level of opportunities allowed by society determines intergenerational mobility.

SEE ALSO *Gini Coefficient; Income; Income Distribution; Inequality, Gender; Inequality, Political; Inequality, Racial; Inequality, Wealth; Interest Rates; Poverty, Indices of; Profits; Rent; Wages*

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Tomson Ogwang

INEQUALITY, POLITICAL

Of the disparities among ordinary people in whatever is scarce and valued in a society—economic wherewithal, social respect, public influence, health, freedom—political equality is relevant most especially in democracies. In contrast to authoritarian systems, democracies are based on the expectation that the people are sovereign and that public officials are to be equally accessible and accountable to all. In spite of the egalitarian commitment embodied in the principle of one person, one vote, political equality among ordinary people is not the same thing as equal political power, even in democracies. Those who, by dint of election or appointment, are entrusted with the responsibility for governing—from the prime minister to the city council member—inevitably wield greater political power than others. Instead of equal power, therefore,

political equality among citizens would seem to require that they enjoy equal political rights, equal political voice, and equal political responsiveness.

POLITICAL RIGHTS

There is no possibility of political equality without certain rights. The rights intrinsic to what T. H. Marshall calls "civil citizenship" and "political citizenship" provide an essential foundation for political equality (Marshall 1964, chapter IV). Included within civil citizenship are due process of law, with the concomitant right to assert and defend oneself on terms of equality in the courts, and the right to think, speak, and worship freely. Under the umbrella of political citizenship is the right to share in political power, either by acting as a political decision maker or by influencing the choice of such decision makers by voting and otherwise taking part in the processes by which they are chosen. Such rights are not universally shared even in what can be considered to be functioning democracies. Historically, women were everywhere denied the rights necessary for political equality, as were other groups in particular places—for example, African Americans in the American South during the Jim Crow era or native blacks in South Africa during apartheid. Although there are variations across countries, all contemporary democracies abridge the political rights of children and resident aliens. Some add felons and the mentally incompetent to the list.

POLITICAL VOICE

A second requirement for the achievement of political equality is equality of political voice. Political voice refers to the sum total of political inputs that citizens in a democracy use to control who will hold political office and to influence what public officials do. Through their political voice, citizens raise political issues, communicate information about their political interests and concerns, and generate pressure on policymakers to respond to what they hear. Equal political voice requires not that all individuals are equally active, but that aggregate participatory input is representative across all politically relevant groups and categories.

Although the particular mix will vary from polity to polity, citizens in a democracy have a variety of options for the exercise of political voice. They can seek indirect influence through the electoral system by voting or engaging in other efforts to support favored political parties or candidates, or they can seek direct influence through the messages they send to office holders about their politically relevant preferences and needs. They can act individually or collectively. They can undertake mainstream activities, such as joining organizations or contacting public officials, or challenging ones, such as attending protests or demonstrations.

Achieving equality in political voice is much more difficult than achieving equality of political rights. Individual citizens differ in their capacity and desire to take part in politics, and political activities differ in the extent to which the demanded inputs—time, money, or skills—are conducive to broad and representative participation, on the one hand, or to participation by narrower and less representative publics, on the other. In all systems, political voice is skewed, at least to some degree, in the direction of those with high levels of income, occupational status, and especially education. What this implies is that public officials hear an unrepresentative set of messages: They receive disproportionate information about the interests and opinions of, and feel more constrained to respond to, the affluent and well-educated. The extent to which unequal political voice is structured by occupation, education, and income implies, moreover, that disadvantaged groups defined along axes other than social class are also underrepresented politically. In most democracies, the political voice of women is muted, as is, in many polities, the political voice of racial, ethnic, or linguistic minorities. In many cases—for example, African Americans and Latinos in the United States—the inequality in political voice can be explained entirely in terms of socio-economic disadvantage without reference to a group-specific experience or identity. Nevertheless, whether the explanation for the inequality of political voice derives from socio-economic disparities or another aspect of collective experience, the bottom line is that policymakers hear less about the preferences, concerns, and needs of some individuals and some groups.

Although inequalities of political voice are biased in favor of the privileged in all democracies, many factors shape the extent of that socio-economic structuring. For one thing, the rules that govern politics can exacerbate or ameliorate inequalities of political voice. For example, where registration is difficult and electoral turnout is voluntary, as in the United States, the electorate tends to be less representative of the citizenry as a whole than in polities where registration is less demanding or, as in Belgium and Australia, turnout is compulsory. The rules governing campaign finance are also relevant. Free-for-all methods of financing campaigns and a major presence of corporate campaign contributions predispose a polity to inequalities of political voice. In addition, the nature of the institutions that link citizens to policymakers can have an impact on inequalities of political voice. High levels of membership in voluntary associations and the presence of both strong labor unions and a labor or social democratic party, as in the Nordic countries, tend to mute inequalities of political voice. Furthermore, government policies—ranging from free and compulsory education to progressive taxation to the provision of a social safety net—can reduce the socio-economic inequalities among individuals that are associated with inequalities of political voice.

POLITICAL RESPONSIVENESS

Political equality requires not just that citizens speak but that public officials listen. The most complex aspect of political equality, equality of political responsiveness is nearly impossible to measure and highly contested theoretically. Social scientists of a Marxian inclination, along with those who, like Charles E. Lindblom, posit the "privileged position of business," conclude that formidable political resources and control of employment give the corporate sector—corporations and trade and other business associations—the upper hand in any public controversy (Lindblom 1977, chapter 13). That said, there are substantial obstacles to making a systematic empirical assessment of policymakers' responsiveness to various competing forces. Especially since political influence is often exercised behind the scenes or used to shape the political agenda rather than the content of decisions, in any particular policy controversy it is difficult to discern who is exercising power and to whom decision makers are responding. Besides, in aggregating across issues, it is difficult to specify a universe of political controversies to serve as a baseline.

Furthermore, democratic theorists raise concerns about the universal desirability of equal responsiveness. Equal responsiveness in every political conflict would constitute a form of majoritarian democracy that would grant no space for the exercise of independent judgment by political leaders, who may command special information, experience, or insight. Furthermore, it would entail no deference to intensity of preference. That is, an indifferent majority would inevitably prevail over a minority that cares a lot. If such a political configuration were present over and over, that minority would never achieve its proportionate share of political influence. Moreover, if not coupled with equal voice, a pattern of equal responsiveness would give advantage to the noisy over the silent and produce a circumstance far from political equality.

SEE ALSO *Civil Rights; Civil Society; Compulsory Voting; Crony Capitalism; Democracy; Due Process; Exit, Voice, and Loyalty; Gender Gap; Human Rights; Inequality, Gender; Inequality, Income; Inequality, Racial; Inequality, Wealth; Lindblom, Charles; Majoritarianism; Majority Rule; Poverty; Power; Power Elite; Public Rights; Rule of Law; Schattschneider, E. E.; Social Status; Social Structure; Tyranny of the Majority; Voting Schemes; Welfare State*

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Kay Lehman Schlozman

INEQUALITY, RACIAL

Social inequality refers to "the condition whereby people have unequal access to valued resources, services, and positions in society" (Kerbo 1983, p. 250). *Racial inequality* in turn can be defined as the limited economic and social opportunities that are distributed along racial lines. Societies where racial inequalities are high are characterized by large disparities among different races and ethnicities in such areas as housing, education, employment income, and health care. While some researchers argue that inequalities exist because of the efforts (or lack of efforts) of individuals, most contemporary scholars agree that persistent racial inequalities are a product of what Eduardo Bonilla-Silva (2001) refers to as a *racialized social system*—a system that reproduces and maintains the status of the dominant group socially, economically, politically, and psychologically. That is, racial inequality implies that access to resources and goods are overwhelmingly denied to people of color because of systemic rather than individual notions of racism. The social system upholds racism and maintains a racialized society.

THEORIES OF RACIAL INEQUALITY

Theories on racial inequality range from individual and cultural explanations that tend to lay blame on the victims (nonwhites) for their social and economic status in society to structural and systemic theories that tend to look beyond the individual to explain why most nonwhites, especially those with darker skin, continue to face discrimination in society. For example, *deficiency theory*, an outdated theory of racial inequality, argues that the economic, political, and social situation of some racial groups is due to some deficiency within the groups themselves. Deficiency theorists point to three causes for these deficiencies: biological, structural, and cultural. Regarding the first, scholars, the vast majority of whom were white, attempted to prove that the cause of racial inequalities stemmed from the biological inferiority of minority groups. Other researchers sought to demonstrate that there were basic flaws in the way minority groups struc-

tured their lives that helped to explain racial inequalities. Scholars also argued that racial and ethnic groups' cultural traits and values served as a justification for the inequalities they experienced. The problem with deficiency theories, although still widely espoused by primarily conservative scholars, is their lack of empirical evidence and mostly unsubstantiated claims.

Other theories of racial inequality (e.g., *bias theory*) rely on the assumption that racial inequality is the result of individual prejudice and bias. The main criticism of such theories is that they ignore how societies are often structured along racial lines, which ultimately leads to social, residential, educational, and other forms of segregation. This theoretical framework ignores how racism can continue to operate in a society even when overt prejudices and discriminatory practices are no longer "socially" acceptable.

Structural theories of inequality identify racism within social structures, such as education, institutional policies, laws, and housing and health care practices. Many critical race theorists, such as Derrick Bell, Kimberlé Crenshaw, and Richard Delgado, have written about the importance of understanding why individual prejudices and biases do not fully explain the continuing existence of racism, especially given that many overtly racist policies and laws have long been dismantled. Structural theories tend to focus on how racism is maintained by identifying racist practices in institutions. For example, in the United States such practices as redlining and divestment in poorer neighborhoods result in lower property taxes. Since the quality of public schools is directly tied to property taxes, the schools in socioeconomically disadvantaged neighborhoods tend to have fewer resources compared to schools in more affluent neighborhoods. According to Douglas Massey and Nancy Denton (1993), the United States is a racially and residentially segregated society. African Americans are overrepresented in poor neighborhoods as a result of past and current racist housing practices, such as realtors refusing to sell or rent houses to African Americans in white neighborhoods. As a result African Americans continue to be steered into racially segregated neighborhoods where housing investment is low and social and economic opportunities are few or nonexistent.

Another theoretical framework examines the role of racial hierarchies to explain how different racial and ethnic groups fare compared to whites and to one another. One model, the *black-white model*, has generated major debate among scholars who study race and ethnicity. Joe R. Feagin (2000) and George Yancey (2006) argue that the black-white model is useful because African Americans are the most racially disadvantaged group and have experienced oppression far longer than most minority groups in the United States. Furthermore antiblack racism is one of the most ingrained social institutions in the United States (Feagin 2000). Researchers argue that this model can be applied to other racial and ethnic groups, but they maintain that the bipolar model is still necessary before one can fully understand racial inequality.

Critics of the black-white paradigm argue that it is outdated and does not take into account the demographic changes that have occurred in the United States as a result of increased immigration after the passage of the Immigration and Naturalization Act of 1965, which increased the number of immigrants of color to the United States. Further the black-white model allows only limited understanding of the racialization of nonwhite immigrant groups and their children because the model ignores the different factors associated with the process of racialization (e.g., religion, foreignness, language, citizenship, and gender). Immigrants vary in their experiences in the United States. For example, Asian Americans do not comprise one homogenous group but consist of individuals who come from different countries for a variety of reasons. Their experiences are not uniform but are diverse due to a broad range of factors, such as skin tone, class, reasons for immigrating, and religion, among others. Bonilla-Silva (2006) argues that Chinese Americans, for example, are often considered "honorary" whites, whereas Filipino Americans can be socioeconomically categorized as collective blacks. This is due to a variety of factors, such as skin tone and class status, that are not adequately addressed by the black-white model.

RACIAL INEQUALITY IN SOUTH AFRICA AND BRAZIL

Racial inequality is not an American phenomenon; rather, it is international. South Africa is interesting because of the longevity of the legal system of racial segregation in this industrialized country. Apartheid was a postcolonial system of white supremacy that dominated South Africa. Under this system, all South Africans were racially categorized at birth as *white*, *Asian*, *Colored*, or *black*. Economic, political, and legal resources were distributed according to this racial categorization, with South African blacks receiving the fewest resources. Moreover blacks were not permitted to live where they wanted to, and they were forced to carry identification cards at all times, were prohibited from marrying outside of their race, and were denied citizenship in their own land. According to Gay Seidman (1999), South Africa turned toward apartheid rather than follow the pattern of European decolonization because South African blacks continued to provide a source of cheap labor to South African whites.

While the dismantling of apartheid in 1994 led to a concerted effort to democratize South Africa and produce

radical changes that would result in racial equality, this proved difficult to achieve because of the extent of racism that apartheid ingrained in the economic, social, and political structures. The dismantling of apartheid did not magically improve the situation for South African blacks. High rates of unemployment and substandard housing, education, and health care continue to plague them due to years of racial oppression and exploitation (Winant and Seidman 2001). The racial inequality that an oppressive and violent system like apartheid leaves behind requires a radical restructuring of social structures. While the post-apartheid South African government is committed to creating an equitable society, it has yet to commit to radical plans for change.

Brazil has also seen racial oppression and inequality due to the impact of colonization by Portugal. In the twentieth century Brazil prided itself on being a "racial democracy" with little racial prejudice. This ideological claim has been tested by many scholars, including Edward Telles and Peter Wade. Between 1890 and 1940 the black Brazilian population decreased from 66 percent of the total population to 34 percent (Paixão 2004). During this period, policies promoting the immigration to Brazil of white Europeans, along with the enactment of a strict penal code against black Brazilians, were implemented in order to rid Brazil of its native black population. In spite of (or perhaps as a result of) this whitening agenda, the Brazilian black population grew to 47 percent of the population between 1940 and 1980 (Paixão 2004). Between the late 1930s and the early 1940s a new ideology emerged in Brazil—a Brazilian national identity where mixed blood was encouraged rather than discouraged. Although this new way of thinking seemed to be a radical shift toward racial equality, it inevitably denied blacks their history and culture and ignored the racial inequality they experienced. Studies indicate that blacks in Brazil continue to face racial discrimination and that, compared to whites, they tend to be paid lower wages and experience higher rates of illiteracy and unemployment.

RACIAL INEQUALITY IN THE UNITED STATES

As in Brazil and South Africa, racial inequality in the United States stems from a long and complex history of racial oppression. The history of racism in the United States is similarly tied to economic exploitation achieved through racial violence and justified through the creation and maintenance of racial hierarchies. The colonization of the United States resulted in the genocide of Native Americans who occupied the land prior to European settlement. White capitalists violently forced African slaves to the Americas for the purpose of unwaged labor, resulting in the economic growth of the United States. Theories of the racial inferiority of nonwhites—specifically African slaves, Native Americans, and Mexicans but many others as well—were invented to justify their exploitation and the use of violence against them.

Although overt racist policies and laws (e.g., slavery, legal racial segregation) have been dismantled in the United States, their effects remain embedded in social institutions. Quality education is tied to property value, resulting in greater social, political, and economic opportunities for those who live in affluent neighborhoods. In contrast, the overrepresentation of African Americans in poor neighborhoods results in decreased opportunities for upward mobility. Scholars note that the great health disparities between African Americans and white Americans are due to disparities in access to good health care, medical insurance, and preventative care. Low-wage, low-skilled, part-time jobs that do not provide benefits are predominately filled by people of color in the United States, a situation that results in a class of working poor. Racial profiling, along with stricter sentencing for African Americans convicted of crimes, results in their overrepresentation in American prisons and consequently decreased opportunities upon their reentry into mainstream society. Racial inequality continues to exist in the United States because society has been structured around racial lines that provide advantages to whites. Racial inequality endures because it is at home in a "color-blind" society that is ingrained with racist practices that are mostly ignored.

SEE ALSO *Apartheid; Discrimination; Hierarchy; Income Distribution; Inequality, Political; Inequality, Wealth; Jim Crow; Nonwhites; Race; Racialization; Racism; Segregation; Segregation, Residential; Segregation, School; Stratification; Whiteness*

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INEQUALITY, WEALTH

Wealth represents a stock of accumulated assets; *income* represents a flow of current output. Families not only receive income over the course of a year but also save part of their income in the form of housing, time deposits, stocks, bonds, and the like. Such accumulated savings are referred to as *wealth*. The first part of this entry explains why wealth, like income, has an important bearing on well-being. The second part develops the concept of household wealth and discusses some of the problems inherent in its measurement; the third presents time trends in the inequality of wealth in the United States; and the fourth shows international comparisons of wealth inequality.

WEALTH AND WELL-BEING

Why are we interested in household wealth? Most studies use income as a measure of family well-being. Though certain forms of income are derived from wealth, such as interest from savings accounts and dividends from stocks, income and wealth are by no means identical. Many kinds of income, such as wages and salaries, are not derived from household wealth, and many forms of wealth, such as owner-occupied housing, produce no corresponding income flow.

Moreover family wealth by itself is also a source of well-being, independent of the direct financial income it provides. There are six reasons. First, some assets, such as owner-occupied housing and consumer durables such as automobiles, provide services directly to their owners. Such assets can substitute for money income in satisfying economic needs. Families with the same money income but differing amounts of housing and consumer durables will have different levels of welfare.

Second, wealth is a source of consumption, independent of the direct money income it provides. Many assets can be converted directly into cash and thus provide for immediate consumption needs.

Third, the availability of financial assets can provide liquidity to a family in times of economic stress (such as those occasioned by unemployment, sickness, or family breakup). In this sense wealth is a source of economic security for the family.

Fourth, as the work of Dalton Conley (1999) has shown, wealth is found to affect household behavior over and above income. In particular Conley found that it is necessary to control for wealth in order to understand racial inequality, including differences in school performance and enrollment in the United States.

Fifth, as Seymour Spilerman (2000) argued, wealth-generated income does not require the same trade-offs with leisure as earned income. There is no cost in the form of the foregone alternative use of time in the case of wealth. Moreover, unlike labor earnings, the income flow generated by wealth does not decline with illness or unemployment.

Sixth, large fortunes can be a source of economic and social power that is not directly captured in annual income. Large accumulations of financial and business assets can confer special privileges to their holders. Such large fortunes are often transmitted to succeeding generations, thus creating family "dynasties." In these six ways wealth holdings provide another dimension to household welfare over and above income flows.

WHAT IS HOUSEHOLD WEALTH?

The conventional definition of *household wealth* includes assets and liabilities that have a current market value and that are directly or indirectly marketable. In the Survey of Consumer Finances conducted by the Federal Reserve Board of Washington, D.C., on a triennial basis, marketable wealth (or net worth) is defined as the current value of all marketable assets less the current value of debts. Total assets are the sum of (1) owner-occupied housing; (2) other real estate; (3) cash, demand and time deposits, certificates of deposit (CDs), and money market accounts; (4)

Table 1. Portfolio Composition of U.S. Household Wealth, 2004 (Percentage of gross assets)

Wealth component	
Owner-occupied housing	33.5
Other real estate	11.5
Unincorporated business equity	17.1
Liquid assets	7.3
Pension accounts	11.8
Financial securities	2.1
Corporate stock and mutual funds	11.9
Net equity in personal trusts	2.9
Miscellaneous assets	1.8
Total	100.0
Debt on owner-occupied housing	11.6
All other debt	3.9
Total debt	15.5

SOURCE: Federal Reserve Board, Survey of Consumer Finances, 2004.

financial securities; (5) the cash surrender value of life insurance; (6) pension accounts; (7) corporate stock and mutual funds; (8) unincorporated businesses equity; and (9) trust fund equity. Total liabilities are the sum of (1) mortgage debt and (2) consumer and other debt.

Table 1 presents the portfolio composition for the household sector in the United States in 2004 based on the Survey of Consumer Finances. Owner-occupied housing was the most important household asset, accounting for 33 percent of total assets. Land, rental property, and other real estate held by households made up 12 percent. Unincorporated business equity, which refers to small businesses (such as farms or stores) owned directly by individuals, comprised another 17 percent.

Liquid assets (cash, demand, time and savings deposits, money market funds, CDs, and the cash surrender value of life insurance) comprised 7 percent of total assets. Defined contribution pension accounts, such as individual retirement accounts (IRAs) and Keogh and 401(k) plans, constitute savings like savings accounts but are especially designed to allow workers to save for retirement by providing tax-deferred savings. Pension accounts made up almost 12 percent of household assets. Financial securities, including bonds, notes, and financial securities issued mainly by corporations and the government, are "promissory notes" by which the borrower agrees to pay back the lender a certain amount of money (the principal plus interest) at a certain date. In 2004 they amounted to only 2 percent of total assets.

The next component is corporate stock and mutual funds. A corporate stock certificate issued by a company represents ownership of a certain percentage of the company's assets. A mutual fund is a package provided by a financial entity, such as a bank, that includes a portfolio of stocks and other financial instruments, such as bonds. Its chief advantage is that it helps diversify the risk associated with individual stock (and bond) movements over time. In 2004 stocks and mutual funds amounted to almost 12 percent of total assets. Personal trusts refer to financial instruments held in a special legal arrangement called a *trust fund*. In a typical trust, the assets are managed by a specially named administrator, and the income earned from the assets is remitted to individual beneficiaries. Trust fund equity comprised only 3 percent of total assets.

On the liability side, the major form of household debt is home mortgages. A mortgage is a loan issued usually by a bank for a period of fifteen to thirty years that is used to finance the purchase of real property. In 2004 mortgage debt comprised 75 percent of total household debt. The remaining 25 percent consisted of other household debt, including automobile and other consumer loans and credit card debt. Total household debt amounted to 16 percent of the value of household assets.

A theme that regularly emerges in the literature on household wealth is that there is no unique concept or definition of wealth that is satisfactory for all purposes. One concept that is broader than marketable wealth is the sum of marketable wealth and consumer durables. Consumer durables, such as automobiles, televisions, and furniture, provide consumption services directly to the household and as such function like "annuities." However, since they are not easily marketed and their resale value typically far understates the value of their consumption services, they are often excluded from marketable wealth. A still broader definition of wealth includes the value of future social security benefits the family may receive upon retirement (social security wealth) as well as the value of retirement benefits from private pension plans (pension wealth). However, even though these funds are a source of future income to families, they are not in the family's direct control and cannot be marketed and are also excluded from marketable wealth.

WEALTH INEQUALITY TRENDS IN THE UNITED STATES

The figures in table 2 show that wealth inequality, after rising steeply between 1983 and 1989, remained virtually unchanged from 1989 to 2004. The share of wealth held by the top 5 percent rose by 2.8 percentage points from 1983 to 1989, that of the top quintile by 2.2 percentage points, and the Gini coefficient (an index that ranges from zero to one, where a higher number indicates greater inequality) increased from 0.80 to 0.83. Between 1989 and 2004 the share of the top 5 percent remained largely unchanged, and the share of the top quintile rose from

Table 2. The Size Distribution of Wealth and Income, 1983–2004

Year	Gini Coefficient	Share of Top 5%	Share of Top 20%
A. Net Worth			
1983	0.799	56.1	81.3
1989	0.832	58.9	83.5
2004	0.829	58.9	84.7
B. Income			
1982	0.480	26.1	51.9
1988	0.521	30.0	55.6
2003	0.540	32.0	57.9

SOURCE: Federal Reserve Board, Survey of Consumer Finances, 1983, 1989, 2004.

83.5 to 84.7 percent. Overall the Gini coefficient fell very slightly, from 0.832 in 1989 to 0.829 in 2004.

The top 5 percent of families (as ranked by income) earned 32 percent of total household income in 2003, and the top 20 percent accounted for 58 percent—large figures but lower than the corresponding wealth shares. The time trend for income inequality was similar to that of wealth inequality. Income inequality increased sharply between 1982 and 1988, with the Gini coefficient rising from 0.48 to 0.52 and the share of the top 5 percent from 26.1 to 30.0 percent. There was then a further but smaller increase of the Gini index by 0.019 points from 1988 to 2003 and of the shares of the top 5 and 20 percent (see Wolff 1998, 2002, 2006 for further details).

Table 3. The Size Distribution of Wealth in Selected Organization for Economic Cooperation and Development Countries, 1983–2001

Year	Gini Coefficient	Wealth Share of Top 10%
A. United States: Wolff (2006)		
1983	0.799	68.2
1989	0.832	70.6
1992	0.823	71.8
1995	0.828	71.8
1998	0.822	71.0
2001	0.826	71.5
B. Canada: Morissette et al. (2006)		
1984	0.691	51.8
1999	0.727	55.7
C. Germany: Hauser and Stein (2006)		
1973	0.748	(NA)
1983	0.701	48.8
1988	0.668	45.0
1993	0.622	40.8
1998	0.640	41.9
D. Italy: Brandolini et al. (2006)		
1989	0.553	40.2
1995	0.573	42.1
2000	0.613	48.5
E. Finland: Jäntti (2006)		
1987	0.470	
1994	0.487	
1998	0.523	

INTERNATIONAL COMPARISONS OF WEALTH INEQUALITY

Wealth inequality is also much higher in the United States than in the other four countries shown in table 3. The Gini coefficient for wealth in the United States in 1998 was 0.82, compared to 0.73 in Canada in 1999, 0.64 in Germany in 1998, 0.61 in Italy in 2000, and 0.52 in Finland in 1998. Similar disparities exist with regard to the share of top wealth holders. In the United States the top 10 percent held 71 percent of all wealth in 1998, compared to a share of 56 percent in Canada in 1999, 42 percent in Germany in 1998, and 49 percent in Italy in 2000. By 2000 or so Finland was by far the most equal of the five countries with comparable data, followed by Italy, Germany, Canada, and then the United States (see Wolff 1987, 1996 for earlier comparisons).

It is also of interest that wealth inequality rose in the United States, Canada, Italy, and Finland, while it declined sharply in Germany. The Gini coefficient rose by 0.027 in the United States between 1983 and 2001, by 0.036 in Canada from 1984 to 1999, and by 0.060 in Italy between 1989 and 2000. In Germany, in contrast, it plummeted by 0.108 from 1973 to 1998 (and by 0.061 from 1983 to 1998).

SEE ALSO *Financial Markets; Gini Coefficient; In Vivo Transfers; Inequality, Income; Inheritance; Wealth*

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INFANT INDUSTRY

Governments in both developed and developing nations regularly apply the concept of *infant industry* to justify protective industrial and trade policy measures. The idea is that temporary support for a new branch of industry (for example, electronics, car manufacturing, or biotechnology) might be needed to help industry to grow and flourish, especially when efficient scales of production and technological skills have not yet been developed. If a young industry were exposed to foreign competition at an early stage, it is argued, it would not be able to survive. Temporary government protection in the form of subsidies, tariffs, or important quotas, then, allows an infant industry to "grow up."

Although Alexander Hamilton (1755–1804), the first secretary of the treasury of the United States, followed this line of reasoning in his *Report on the Subject of Manufactures* (1791), the infant-industry argument is usually attributed to the German economist Friedrich List (1789–1846). In *The National System of Political Economy* ([1841] 1856, p. 378), List argued that the transition of a country's economy from the agricultural to the industrial stage would not occur through the "natural course of things." He recommended, therefore, that the government protect nation-specific manufacturing activities if some countries "outdistanced others in manufactures" (List [1841] 1856, p. 394). List stressed that this promotion of infant industries should build on unique national resources. Moreover, the protection should be temporary; it should stop as the infant industry matures.

International and development economists have related List's infant-industry argument to the theory of comparative advantage. According to this view, countries should concentrate on those economic sectors in which they can produce more efficiently and cheaply than their trading partners. In theoretical terms, infant-industry pro-

tection is only legitimized until a potential comparative-advantage sector has become an actual comparative-advantage sector. Thus stated, the infant-industry argument does not conflict with the principle of comparative cost advantage. Economists have also identified other cases in which infant industries might need temporary protection. Countries that lack well-functioning capital-market institutions, such as banks and stock markets, usually have a shortage of venture capital that new industries urgently need to invest and grow. In such a case of market failure, supporting a sector in its early growth phase is justified. Moreover, whenever new industries generate social benefits for which they are not compensated (for example, a biotechnology sector contributing to the improvement of national health care), a government may reward them by offering temporary protection from foreign competition.

In all these cases, an industry should receive public assistance only if it meets two theoretical conditions. The first is that the sector must eventually be able to compete on its own. The second is that the ultimate gains of infant-industry protection for society must be large enough to compensate for the costs incurred during the period of government support. In practice, it is almost impossible to make a proper cost-benefit analysis, which explains why governments generally refer to the infant-industry argument on political rather than theoretical grounds.

MIXED RESULTS

Over the years, the infant-industry argument has persuaded many policymakers all over the globe. Indeed, the argument seems plausible and is theoretically valid under the right set of circumstances. The empirical evidence on the effectiveness of infant-industry protection is inconclusive, however; both developed and developing nations show mixed results. On the one hand, the economic history of some advanced countries suggests that protecting young industries was conducive for industrial development. The United States and Germany, for example, enjoyed high tariffs on manufacturing in the nineteenth century, while Japan benefited from import quotas until the 1970s. On the other hand, there are many examples of industries in North America and Europe (for example, the U.S. computer industry and the Swedish automobile industry) that were infants at one stage but grew and flourished without any government protection. During the 1950s and 1960s, infant-industry promotion in Latin America and Africa often took the form of import substitution, or the replacement of imported goods by products from domestic industries. In countries such as Mexico and Brazil the results of this inward-looking strategy to promote local industrial development were disappointing. In contrast, young industries in East Asian countries such as Taiwan and South Korea benefited from temporary protection, most likely because these sectors were oriented toward exports. The degree to which a country's economic performance is due to such infant-industry strategies, however, is a matter of ongoing academic debate.

Despite its appeal to common sense, the infant-industry argument is often criticized. The crucial problem is how a government can determine in advance which industries have a potential comparative advantage for the country. In assessing opportunities for industrial growth, the state usually is no better informed than the market. In other words, it is hard for policymakers to "pick winners." Moreover, if a government selects the wrong sector to protect, the costs to society are significant: The infant industry will use the support to expand its capacity but will require continued protection for its survival because no real comparative advantage can be developed. Instead of growing up, the industry will keep producing inefficiently and will become dependent on state assistance. In this case, a policy change is difficult since the infant industry has a vested interest and will fight to stay protected. Telling examples of protective strategies that turned out to be policies of "backing losers" are the British policy toward car manufacturing in the 1970s and the promotion of French microelectronics during the 1980s. In both cases sound economic reasons to stop protection were overridden by political desires to keep the "national champions" alive. Another problem with the infant-industry argument as applied by policymakers follows from historical evidence that countries tend to support similar growth industries during a given period of time. Since the end of the 1990s, for example, most advanced economies have treated their domestic information-technology sector as a growth industry. Hamilton and List, the pioneers of the infant-industry concept, already noted that such a bandwagon effect in industrial policy is inefficient from an economic perspective. After all, national comparative advantage comes from being different, not from doing the same as others do.

SEE ALSO *Absolute and Comparative Advantage; Import Substitution; Protected Markets*

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Gert-Jan Hospers

INFANT MORTALITY

SEE *Morbidity and Mortality.*

INFERENCE, BAYESIAN

Bayesian inference is a collection of statistical methods that are based on a formula devised by the English mathematician Thomas Bayes (1702–1761). Statistical inference is the procedure of drawing conclusions about a population or process based on a sample. Characteristics of a population are known as *parameters*. The distinctive aspect of Bayesian inference is that both parameters and sample data are treated as random quantities, while other approaches regard the parameters as nonrandom. An advantage of the Bayesian approach is that all inferences can be based on probability calculations, whereas non-Bayesian inference often involves subtleties and complexities. One disadvantage of the Bayesian approach is that it requires both a *likelihood function* that defines the random process that generates the data, and a *prior probability distribution* for the parameters. The prior distribution is usually based on a subjective choice, which has been a source of criticism of the Bayesian methodology. From the likelihood and the prior, Bayes's formula gives a *posterior distribution* for the parameters, and all inferences are based on this.

BAYES'S FORMULA

There are two interpretations of the probability of an event A, denoted $P(A)$: (1) the long-run proportion of times that the event A occurs upon repeated sampling; and (2) a subjective belief in how likely it is that the event A will occur. If A and B are two events, and $P(B) > 0$, then the *conditional probability of A given B* is $P(A|B) = P(AB)/P(B)$, where AB denotes the event that both A and B occur. The frequency interpretation of $P(A|B)$ is the long-run proportion of times that A occurs when we restrict attention to outcomes where B has occurred. The subjective probability interpretation is that $P(A|B)$ represents the updated belief of how likely it is that A will occur if we know B has occurred. The simplest version of Bayes's formula is $P(B|A) = P(A|B)P(B)/(P(A|B)P(B) + P(A|\sim B)P(\sim B))$, where $\sim B$ denotes the complementary event to B, that is, the event that B does not occur. Thus, starting with the conditional probabilities $P(A|B)$, $P(A|\sim B)$, and the unconditional probability $P(B)$ ($P(\sim B) = 1 - P(B)$ by the laws of probability), we can obtain $P(B|A)$. Most applications require a more advanced version of Bayes's formula.

Consider the "experiment" of flipping a coin. The mathematical model for the coin flip applies to many other problems, such as survey sampling when the subjects are asked to give a "yes" or "no" response. Let θ denote the probability of heads on a single flip, which we assume is the same for all flips. If we also assume that the flips are statistically independent given θ (i.e., the outcome of one flip is not predictable from other flips), then the probability model for the process is determined by θ and the number of flips. Note that θ can be any number between 0 and 1. Let the random variable X be the number of heads in n flips. Then the probability that X takes a value k is given by

$$P(X = k|\theta) = C_{n,k}\theta^k(1-\theta)^{n-k},\ k = 0, 1, \ldots, n.$$

$C_{n,k}$ is a binomial coefficient whose exact form is not needed. This probability distribution is called the *binomial distribution*. We will denote $P(X = k|\theta)$ by $f(k|\theta)$, and when we substitute the observed number of heads for k, it gives the *likelihood function*.

To complete the Bayesian model we specify a prior distribution for the unknown parameter θ. If we have no belief that one value of θ is more likely than another, then a natural choice for the prior is the uniform distribution on the interval of numbers from 0 to 1. This distribution has a probability density function $g(\theta)$ which is 1 for $0 \le \theta \le 1$ and otherwise equals 0, which means that $P(a \le \theta \le b) = b - a$ for $0 \le a < b \le 1$.

The posterior density of θ given $X = x$ is given by a version of Bayes's formula: $h(\theta|x) = K(x)f(x|\theta)g(\theta)$, where $K(x)^{-1} = \int f(x|\theta)g(\theta)d\theta$ is the area under the curve $f(x|\theta)g(\theta)$ when x is fixed at the observed value.

A quarter was flipped $n = 25$ times and $x = 12$ heads were observed. The plot of the posterior density $h(\theta|12)$ is shown in Figure 1. This represents our updated beliefs about θ after observing twelve heads in twenty-five coin flips. For example, there is little chance that $\theta \ge .8$; in fact, $P(\theta \ge .8 \mid X = 12) = 0.000135$, whereas according to the prior distribution, $P(\theta \ge .8) = 0.200000$.

STATISTICAL INFERENCE

There are three general problems in statistical inference. The simplest is *point estimation*: What is our best guess for the true value of the unknown parameter θ? One natural approach is to select the highest point of the posterior density, which is the *posterior mode*. In this example, the posterior mode is $\theta_{Mode} = x/n = 12/25 = 0.48$. The poste-

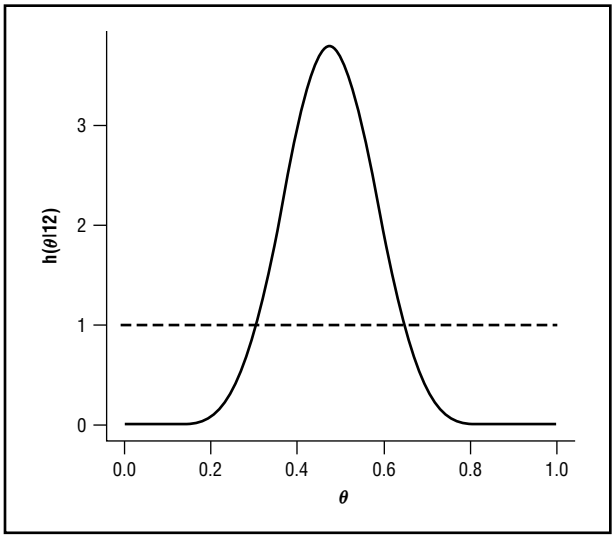

Figure 1: Posterior density for the heads probability ? given 12 heads in 25 coin flips. The dotted line shows the prior density.

rior mode here is also the *maximum likelihood estimate*, which is the estimate most non-Bayesian statisticians would use for this problem. The maximum likelihood estimate would not be the same as the posterior mode if we had used a different prior. The generally preferred Bayesian point estimate is the *posterior mean* : $\theta_{MEAN} = \int \theta\, h(\theta|x)\, d\theta = (x + 1)/(n + 2) = 13/27 = 0.4815$, almost the same as θ_{Mode} here.

The second general problem in statistical inference is interval estimation. We would like to find two numbers $a < b$ such that $P(a < \theta < b\,|X = 12)$ is large, say 0.95. Using a computer package one finds that $P(0.30 < \theta < 0.67|X = 12) = 0.950$. The interval $0.30 < \theta < 0.67$ is known as a *95 percent credibility interval*. A non-Bayesian 95 percent confidence interval is $0.28 < \theta < 0.68$, which is very similar, but the interpretation depends on the subtle notion of "confidence."

The third general statistical inference problem is hypothesis testing: We wish to determine if the observed data support or lend doubt to a statement about the parameter. The Bayesian approach is to calculate the posterior probability that the hypothesis is true. Depending on the value of this posterior probability, we may conclude that the hypothesis is likely to be true, likely to be false, or the result is inconclusive. In our example, we may ask if the coin is biased against heads—that is, is $\theta < 0.50$? We find $P(\theta < 0.50|X = 12) = 0.58$. This probability is not particularly large or small, so we conclude that there is not evidence for a bias for (or against) heads.

Certain problems can arise in Bayesian hypothesis testing. For example, it is natural to ask whether the coin is fair—that is, does $\theta = 0.50$? Because θ is a continuous random variable, $P(\theta = 0.50|X = 12) = 0$. One can perform an analysis using a prior that allows $P(\theta = 0.50) > 0$, but the conclusions will depend on the prior. A non-Bayesian approach would not reject the hypothesis $\theta = 0.50$ since there is no evidence against it (in fact, $\theta = 0.50$ is in the credible interval).

This coin flip example illustrates the fundamental aspects of Bayesian inference, and some of its pros and cons. Leonard J. Savage (1954) posited a simple set of axioms and argued that all statistical inferences should logically be Bayesian. However, most practical applications of statistics tend to be non-Bayesian. There has been more usage of Bayesian statistics since about 1990 because of increasing computing power and the development of algorithms for approximating posterior distributions.

TECHNICAL NOTES

All computations were performed with the R statistical package, which is available from the Comprehensive R Archive Network. The prior and posterior in the example belong to the family of beta distributions, and the R functions dbeta, pbeta, and qbeta were used in the calculations.

SEE ALSO *Bayes' Theorem; Bayesian Econometrics; Bayesian Statistics; Distribution, Uniform; Inference, Statistical; Maximum Likelihood Regression; Probability Distributions; Randomness; Statistics in the Social Sciences*

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INFERENCE, STATISTICAL

To perform inference, in layman's terms, is to make an educated or informed guess of an unknown quantity of interest given what is known. *Statistical inference*, again in layman's terms, goes one step further, by making an informed guess about the error in our informed guess of the unknown quantity. To the layman, this may be difficult to grasp—if I don't know the truth, how could I possibly know the error in my guess? Indeed, the exact error—that is, the difference between the truth and our guess—can never be known when inference is needed. But when our data set, or more generally, quantitative information, is collected through a probabilistic mechanism—or at least can be approximated or perceived as such—probabilistic calculations and statistical methods allow us to compute the probable error, formally known as the "standard error," of our guess, or more generally, of our guessing method, the so-called "estimator." Such calculations also allow us to compare different estimators, that is, different ways of making informed guesses, which sometimes can lead to the best possible guess, or the most efficient estimation, given a set of (often untestable) assumptions and optimality criteria.

Consider the following semihypothetical example. Mary, from a prestigious university in Europe, is being recruited as a statistics professor by a private U.S. university. Knowing that salaries at U.S. universities tend to be significantly higher than at European universities, Mary needs to figure out how much she should ask for without aiming too low or too high; either mistake could prevent her from receiving the best possible salary. This is a decision problem, because it depends on how much risk Mary is willing to take and many other factors that may or may not be quantifiable. The inference part comes in because, in order to make an informed decision, Mary needs to know something about the possible salary ranges at her new university.

FROM SAMPLE TO POPULATION

As with any statistical inference, Mary knows well that the first important step is to collect relevant data or information. There are publicly available data, such as the annual salary surveys conducted by the American Statistical Association. But these results are too broad for Mary's purposes because the salary setup at Mary's new university might be quite different from many of the universities surveyed. In other words, what Mary needs is a conditional inference, conditional on the specific characteristics that are most relevant to her goal. In Mary's case, the most relevant specifics include (1) the salary range at her new university and (2) the salary for someone with experience and credentials similar to hers.

Unlike at public universities, salary figures for senior faculty at many private universities are kept confidential. Therefore, collecting data is not easy, but in this example, through various efforts Mary obtained $140,000, $142,000, and $153,000 as the salary figures for three of the university's professors with statuses similar to Mary's. Mary's interest is not in this particular sample, but in inferring from this sample an underlying population of possible salaries that have been or could be offered to faculty members who can be viewed approximately as exchangeable with Mary in terms of a set of attributes that are (perceived to be) used for deciding salaries (e.g., research achievements, teaching credentials, years since PhD degree, etc.). This population is neither easy to define nor knowable to most individuals, and certainly not to Mary. Nevertheless, the sample Mary has, however small, tells her something about this population. The question is, what does it tell, and how can it be used in the most efficient way? These are among the core questions for statistical inference.

DEFINING ESTIMAND

But the first and foremost question is what quantity Mary wants to estimate. To put it differently, if Mary knew the entire distribution of the salaries, what features would she be interested in? Formulating such an inference objective, or estimand, is a critical step in any statistical inference, and often it is not as easy as it might first appear. Indeed, in Mary's case it would depend on how "aggressive" she would want to be. Let's say that she settles on the 95th percentile of the salary distribution; she believes that her credentials are sufficient for her to be in the top 5 percent of existing salary range, but it probably would not be an effective strategy to ask for a salary that exceeds everyone else's.

Mary then needs to estimate the 95th percentile using the sample she has. The highest salary in the sample is $153,000, so it appears that any estimate for the 95th percentile should not exceed that limit if all we have is the data. This would indeed be the case if we adopt a pure nonparametric inference approach. The central goal of this approach is very laudable: Making as few assumptions as possible, let the data speak. Unfortunately, there is no free lunch—the less you pay, the less you get. The problem with this approach is that unless one has a sufficient amount of data, there is just not enough "volume" in the data to speak loudly enough so that one could hear useful messages. In the current case, without any other knowledge or making any assumptions, Mary would have no base to infer any figure higher than $153,000 to be a possible estimate for the 95th percentile.

MAKING ASSUMPTIONS

But as a professional statistician, Mary knows better. She knows that she needs to make some distributional assumptions before she can extract nontrivial information out of merely three numbers, and that in general, log-normal distribution is not a terrible assumption for salary figures. That is, histograms of the logarithm of salary figures tend to be shaped like a "bell curve," also known as the Gaussian distribution. This is a tremendous amount of information, because it effectively reduces the "infinitely unknowable" distribution of possible salary figures to only two parameters, the mean and the variance of the log of the salary. Mary can estimate these two parameters using the sample size of three if the three log salary figures (11.849, 11.864, 11.938) she obtained can be regarded as a probabilistic sample. This is a big "if," but for now, let us assume this is approximately true. Then the sample mean 11.884 and sample standard deviation 0.048 provide valid estimates of the unknown true mean μ and true standard deviation σ. Because for the normal distribution $N(\mu, \sigma^2)$ the 95th percentile is $z_{95} = \mu + 1.645\sigma$, Mary's estimate for the 95th percentile for the log salary distribution is $11.884 + 1.645 \times 0.048 = 11.963$. Because the log transformation is strictly monotone, this means that Mary's estimate for the 95th percentile for the salary distribution is exp (11.963) = $156,843, about 2.5 percent higher than the observed maximal salary of $153,000!

ASSESSING UNCERTAINTY

With a sample size of three, Mary knows well that there is large uncertainty in estimating the mean μ, as well as in estimating σ. But how do we even measure such error without knowing the true value? This is where the probabilistic calculation comes in, if the sample we have can be regarded as a probabilistic sample. By probabilistic sample, we mean that it is generated by a probabilistic mechanism, such as drawing a lottery. In Mary's case, the sample was clearly not drawn randomly, so we need to make some assumptions. In general, in order for any statistical method to render a meaningful inference conclusion, the sample must be "representative" of the population of interest, or can be perceived as such, or can be corrected as such with the help of additional information. A common assumption to ensure such a "representativeness" is that our data form an independently and identically distributed (i.i.d.) sample of the population of interest. This assumption can be invalidated easily if, for instance, faculty members with higher salaries are less likely to disclose their salaries to Mary. This would be an example of selection bias, or more specifically, a nonresponse bias, a problem typical, rather than exceptional, in opinion polls and other surveys that are the backbone of many social science studies. But if Mary knew how a faculty's response probability is related to the faculty member's salary, then methods do exist for her to correct for such a bias.

Mary does not have such information, nor does she worry too much of the potential bias in her sample. To put it differently, she did her best to collect her data to be "representative," being mindful of the "garbage-in-garbage-out" problem; no statistical analysis method could come to rescue if the data quality is just poor. So she is willing to accept the i.i.d. assumption, or rather, she does not have strong evidence to invalidate it. This is typical with small samples, where model diagnosis, or more generally, assumption checking is not directly feasible using the data alone. But contrary to common belief, just because one does not have enough data to check assumptions, this does not imply one should shy away from making parametric assumptions. Indeed, it is with small samples that the parametric assumptions become most valuable. What one does need to keep in mind when dealing with a small sample is that the inference will be particularly sensitive to the assumptions made, and therefore a sensitivity analysis—that is, checking how the analysis results vary with different assumptions—is particularly necessary.

Under the i.i.d. assumption, we can imagine many possible samples of three drawn randomly from the underlying salary population, and for each of these samples we can calculate the corresponding sample mean and sample standard deviation of the log salary. These sample means and sample standard deviations themselves will have their own distributions. Take the distribution of the sample mean as an example. Under the i.i.d. assumption, standard probability calculations show that the mean of this distribution retains the original mean μ, but its variance is the original variance divided by the sample size n, σ^2/n. This makes good intuitive sense because averaging samples should not alter the mean, but should reduce the variability in approximating the true mean, and the degree of reduction should depend on the sample size: The more we average, the closer we are to the true mean, probabilistically speaking. Furthermore, thanks to the central limit theorem, one of the two most celebrated theorems in probability and statistics (the other is the law of large numbers, which justifies the usefulness of sample mean for estimating population mean, among many other things), often we can approximate the distribution of the sample mean by a normal distribution, even if the underlying distribution for the original data is not normal.

CONSTRUCTING CONFIDENCE INTERVALS

Consequently, we can assess the probable error in the sample mean, as an estimate of the true mean, because we can

use the sample standard deviation to estimate σ, which can then be used to form an obvious estimate of the standard error $\sigma/\sqrt{n}$. For Mary's data, this comes out to be $0.048/\sqrt{3} = 0.028$, which is our estimate of the probable error in our estimate of μ, 11.884. In addition, we can use our distributional knowledge to form an interval estimate for μ. Typically, an interval estimator is in an appealing and convenient form of "sample mean ± 2 × standard error," which is a 95 percent confidence interval when (1) the distribution of the sample mean is approximately normal; and (2) the sample size, n, is large enough (how large is large enough would depend on problems at hand; in some simple cases, $n = 30$ could be adequate, and in others, even $n = 30{,}000$ might not be enough). For Mary's data, the assumption (1) holds under the assumption that the log salary is normal, but the assumption (2) clearly does not hold. However, there is an easy remedy, based on a more refined statistical theory. The convenient form still holds as long as one replaces the multiplier 2 by the 97.5th percentile of the t distribution with degrees of freedom $n - 1$. For Mary's data, $n = 3$, so the multiplier is 4.303. Consequently, a 95 percent confidence interval for μ can be obtained as $11.884 \pm 4.303 \times 0.028 = (11.766, 12.004)$. Translating back to the original salary scale, this implies a 95 percent confidence interval ($128,541, $163,407). This interval for the mean is noticeably wider than the original sample range ($140,000, $153,000); this is not a paradox, but rather a reflection that with sample size of only three, there is a tremendous uncertainty in our estimates, particularly because of the long tail in the log-normal distribution.

So what is the meaning of this 95 percent confidence interval? Clearly it does not mean that (11.766, 12.004) includes the unknown value μ with 95 percent probability; this interval either covers it or it does not. The 95 percent confidence refers to the fact that among all such intervals computed from all possible samples of the same size, 95 percent of them should cover the true unknown μ, if all the assumptions we made to justify our probabilistic calculations are correct. This is much like when a surgeon quotes a 95 percent success chance for a pending operation; he is transferring the overall (past) success rate associated with this type of surgery—either in general, or by him—into confidence of success for the pending operation.

By the same token, we can construct a confidence interval for σ, and indeed for Mary's estimand, a confidence interval for the 95th percentile $z_{95} = \mu + 1.645\sigma$. These constructions are too involved for the current illustration, but if we ignore the error in estimating σ (we shouldn't if this were a real problem), that is, by pretending $\sigma = 0.048$, then constructing a 95 percent confidence interval for $z_{95} = \mu + 1.65\sigma$ would be the same as for $\mu + 1.645 \times 0.048 = \mu + 0.079$, which is $(11.766 + 0.079, 12.004 + 0.079) = (11.845, 12.083)$. Translating back to the original salary scale, this implies that a 95 percent confidence interval for z_{95} would be ($139,385, $176,839). The right end point of this interval is about 15 percent higher than the maximal observed salary figure, $153,000. As Mary's ultimate problem is making a decision, how she should use this knowledge goes beyond the inference analysis. The role of inference, however, is quite clear, because it provides quantitative information that has direct bearing on her decision. For example, Mary's asking salary could be substantially different knowing that the 95th percentile is below $153,000 or could go above $170,000.

LIMITATIONS

One central difficulty with statistical inference, which also makes the statistical profession necessary, is that there simply is no "correct" answer: There are infinitely many incorrect answers, a set of conceivable answers, and a few good answers, depending on how many assumptions one is willing to make. Typically, statistical results are only part of a scientific investigation or of decision making, and they should never be taken as "the answer" without carefully considering the assumptions made and the context to which they would be applied. In our example above, the statistical analysis provides Mary with a range of plausible salary figures, but what she actually asks for will depend on more than this analysis. More importantly, this analysis depends heavily on the assumption that the three salary figures are a random sample from the underlying salary distribution, which is assumed to be log-normal. Furthermore, this analysis completely ignored other information that Mary may have, such as the American Statistical Association's annual salary survey. Such information is too broad to be used directly for Mary's purposes (e.g., taking the 95th percentile from the annual survey), but nevertheless it should provide some ballpark figures for Mary to form a general prior impression of what she is going after. This can be done via Bayesian inference, which directly puts a probabilistic distribution on any unknown quantity that is needed for making inference, and then computes the posterior distribution of whatever we are interested in given the data. In Mary's case, this would lead to a distribution for z_{95}, from which she can directly assess the "aggressiveness" of each asking salary figure by measuring how likely it exceeds the actual 95th percentile. For illustration of this more flexible method, see Gelman et al (2004).

SEE ALSO *Classical Statistical Analysis; Degrees of Freedom; Distribution, Normal; Errors, Standard; Inference, Bayesian; Selection Bias; Standard Deviation; Statistics; Statistics in the Social Sciences*

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Xiao-Li Meng

INFERENCE, TRAIT

SEE *Trait Inference.*

INFERIORITY COMPLEX

Although Sigmund Freud is best known for his influence on the field of psychology, he was also a renowned teacher. Alfred Adler (1870–1937), a student of Freud, broke from Freud's teachings, criticizing his focus on the sexual. Adler established an approach he called *individual psychology*, which focused on the individual's need for fulfillment and power; he is credited with developing concepts such as birth order, quest for significance, mental life, and a variety of complexes including the *inferiority complex*. Adler suggested that the two needs children have to master are inferiority (or the will for power) and the need for social approval. According to Adler, people are constantly striving to be powerful, and feelings of inferiority (or weakness) often pull them into a consuming state of self-interest. It is important to note that, for Adler, inferiority itself is not negative; rather, it is a normal and even motivating force in life. All humans have some feelings of inferiority and are striving to overcome them. It is when one becomes fully consumed in his or her pursuit of power, or by feelings of inferiority to the point of paralysis, that inferiority becomes a burden. It is at this point that one shifts from having feelings of inferiority to having what Adler called the *inferiority complex*.

Adler initially conceptualized inferiority with regard to what he termed *organ inferiority*. In 1907 Adler wrote *Study of Organ Inferiority and Its Physical Compensation*, in which he theorized that organ inferiority occurred when one bodily organ was significantly weaker than another organ, causing the surrounding organs to compensate for the weakness in the inferior organ and make up for the deficiency in another way. Similarly, Adler suggested that individuals have or perceive that they have areas in which they are deficient—whether physical or psychological. Adler thought that, beginning in childhood, a deep feeling of inferiority is instilled in each individual as a result of the child's physical stature. In contrast to an adult, a child sees himself or herself as inferior in both physical and psychological abilities. However, Adler thought that the degree to which the child feels inferior is largely the result of the child's environment and interpretation of that environment. That is, some children perceive that they have more deficiencies or greater weaknesses because of the challenges they face, the way they interact with the adults in their lives, or the negative messages they get about their abilities. These children come to believe that they are inferior based on their perceptions of themselves and their life, not based on measurable or concrete criteria.

As adults, individuals also perceive areas of deficiency or weakness. These perceived weaknesses may result from life experiences (e.g., receiving a low test score) or from critical statements made by important others (e.g., being called stupid). Regardless of how the perceived deficit is brought to the individual's awareness, once the individual identifies an area perceived to be a weakness, he or she tries to compensate for those feelings of inferiority and achieve power. However, if this compensation does not have the desired result, the individual may become fully focused on the inferiority and develop what Adler called the *inferiority complex*.

According to Adler, the inferiority complex is a neurosis; the individual is fully consumed in their focus on the inferiority. It is a magnification of the normal feelings of inferiority, and results when strivings to overcome inferiority are greatly hindered. Individuals who struggle with feelings of inferiority may rate themselves in some area important to them as a 5 on a scale of 1 to 10, when they would aspire to a 6 or 7. In contrast, those with an inferiority complex may rate themselves as a 2 on a scale of 1 to 10 when they aspire to a 9. Those with an inferiority complex may also believe that there is no hope of ever reaching 9. The perception of one's shortcomings is an important aspect of this complex. That is, it matters more where individuals perceive themselves to be than it does where they actually are.

An individual with an inferiority complex is often overwhelmed, and as a result, the inferiority complex can become as consuming as an ailment or disease. Individuals may become manipulative in order to try to get others to give them the affirmation they are looking for, or they may try to use their deficiencies to get special attention or accommodation for circumstances that they are actually capable of handling or overcoming on their own. Those with inferiority complexes may be self-centered, depressed, incapable of development, compliant, shy, insecure, timid,

and cowardly. They may be unable to make decisions for themselves and lack courage to move in any direction unless they are guided by others. Normal feelings of inferiority propel individuals toward solving and overcoming problems. Individuals typically do all they can to improve the situation and rid themselves of the feelings of inferiority. However, individuals with inferiority complexes are prevented from being able to solve or overcome problems. Indeed, Hertha Orgler in *Alfred Adler: The Man and His Work* (1973) wrote that Adler defined the inferiority complex as an "inability to solve life's problems" (p. 56). Adler believed that an inferiority complex, once established in an individual, would be a continued and lasting psychological struggle.

Adler's individual psychology theory is one of the mainstays in psychological thought. However, one controversial aspect of his theory is that it tends to be more conceptual than scientific—that is, it is subjective rather than objective. Further, many of Adler's concepts seem to be based on anecdotal evidence from his own life rather than on evidence integrated as a result of scientific research. There are many other theories that also are difficult to test empirically (e.g., object relations and gestalt), and it is likely that Adler would argue that those were his experiences and that other people could provide anecdotes of their own to corroborate his theories.

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INFERTILITY DRUGS, PSYCHOSOCIAL ISSUES

Throughout American history, sociocultural expectations and norms have been that adults of childbearing age should procreate and become parents. This expectation presumes that every couple is able to have children and that they are broken, defective, or flawed if they are not able to conceive. While infertility is a medical problem, a variety of emotional responses are often associated with one's inability to have children. Individuals may begin to struggle with feelings such as anger, stress, disappointment, depression, anxiety, and low self-esteem. These negative emotions, in addition to the often invasive medical procedures associated with trying to become pregnant, can have a significant impact on individuals as well as on their relationships. Advances in assisted reproductive technologies as well as a variety of adoption and surrogacy arrangements now make it possible for some previously infertile individuals and couples to achieve parenthood. However, the psychological and sociocultural issues with regard to using outside interventions to become a parent can be problematic.

It is estimated that infertility affects approximately 6.1 million women and their partners in the United States, about 10 percent of the reproductive-age population (*National Survey of Family Growth, Cycle IV* 1995). Infertility is defined as the inability of a couple to achieve a pregnancy leading to a live birth after one year of regular, unprotected sexual intercourse. Infertility is experienced equally by males and females. Forty percent of infertility is due to what is termed "male factor," 40 percent is due to "female factor," and the remaining 20 percent is shared between the couple. In nearly 90 percent of cases, a clear medical diagnosis is presented to couples after an infertility evaluation. The remaining group, 10 percent, is diagnosed with "idiopathic" or medically unexplained infertility. Even with a clear medial diagnosis of the etiology of infertility, it is estimated that only 30 percent of all couples who receive medical treatment for infertility successfully attain a live birth.

The medical diagnosis of infertility can lead to profound emotional, relational, and sexual distress and social stigma in addition to challenging financial, legal, and medical treatment decisions. The negative feelings and difficult challenges can be profoundly disruptive to a couple or individual's life. In empirical and anecdotal literature, people experiencing infertility often note heightened emotional disturbance (e.g., anger, anxiety, depression, and helplessness), faltering self-esteem, and preoccupation with thoughts about conception. These thoughts and feelings can lead to a disruption in daily functioning as well as changes in sleeping, eating, and moods. Additionally if a diagnosis of infertility is received, there is often little or no societal, cultural, or religious preparation for the impact that is commonly experienced by those struggling to become parents. The duration and intensity of infertility treatment and its failure can increase or exacerbate preexisting mental health issues, intrapersonal and interpersonal concerns (including domestic violence), alcohol and substance use, and workplace challenges. Issues such as pregnancy loss, miscarriage, stillbirth, chemical pregnancies (pregnancy resulting from in vitro fertilization or other reproductive technology, characterized by low levels of HCG and usually miscarriage prior

to implantation) may also be experienced by those undergoing infertility treatments and clearly can cause undue stress, anxiety, and health problems as well.

During infertility medical treatments, people often experience a variety of extreme emotional responses as they are faced with repeated high hopes of pregnancy crushed by the failure to conceive month after month. Those undergoing infertility treatment might feel overlooked by medical staff, insensitively managed, or overwhelmed by an array of invasive and expensive procedures. Fertility medications rarely are successfully utilized in isolation and accompany the vast majority of common infertility procedures and assisted reproductive technologies (ART), such as intrauterine insemination (IUI), in vitro fertilization (IVF), egg donation, sperm donation, and embryo donation.

The drugs used to treat infertility work by promoting ovulation (ovulation induction) through stimulating hormones in a woman's brain to prompt multiple eggs to release from the ovaries. Most fertility medications have been safely and effectively utilized for more than thirty years. Common fertility drugs include clomiphene, human menopausal gonadotropins, and bromocriptine. Potential side effects of these medications can include weight gain, hot flashes, mood swings, nausea, breast tenderness, cramping, and ovarian hyperstimulation. Drugs for infertility may result in multiple births, which can be challenging because they increase the likelihood of premature births and babies who may be at higher risk for developmental, social, and psychological complications. Further, conflicting empirical research indicates that women who take ovulation-inducing medications in conjunction with ART might be at increased risk of developing breast, ovarian, or uterine cancers.

As infertility medical technology continues to develop, navigating ethical and legal issues becomes important for both medical and legal policy makers as well as individuals and couples. Increased options for those experiencing infertility continue to be developed. Specialty procedures available through medical treatment include sex selection, screening for genetic anomalies, preimplantation genetic diagnosis (a procedure that can assist couples who have serious genetic disorders such as cystic fibrosis and Tay-Sachs disease), and egg and sperm freezing. While the concept of building a "designer baby" (i.e., one with certain physical or genetic characteristics) tends to get a lot of attention from the media, for most people handling infertility this is a misnomer. The vast majority of people who are trying to conceive simply want to begin or continue building a family in a way that most closely mirrors nonmedical assisted conception.

Infertility medical treatments are typically quite expensive and sometimes financially prohibitive for individuals through private pay. Insurance companies often do not cover infertility treatments, and coverage policies vary by state. Due to the cost of fertility medication and accompanying medical procedures, it is often only the more socially and economically mobile individuals or couples who are able to attempt to undergo medical infertility treatment options in their efforts to have children.

SEE ALSO *Anxiety; Childlessness; Depression, Psychological; Determinism, Genetic; Emotion; Fertility, Human; Medicine; Role Conflict; Self-Esteem; Stigma; Stress*

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INFIDELITY

Alfred Kinsey's landmark studies of male and female sexuality, beginning in the late 1940s, were the first empirical examinations of infidelity. Following Kinsey, however, little research was done until the 1970s, and it was not for another decade that the first reliable estimates of the prevalence of infidelity were obtained. Thus, research on infidelity, while growing, is still in its nascent phase.

DEFINITIONS AND PREVALENCE

Infidelity is a broad term that encompasses a variety of behaviors. Because of this, social scientists have used innumerable descriptors to more precisely capture the varieties of infidelity (e.g., nonmonogamy, extradyadic involvement, extramarital coitus). Terms fall broadly into two classes: (1) sexual infidelity, which specifies a degree of

physical intimacy with someone other than a committed partner; and (2) emotional infidelity, which indicates a channeling of resources such as love, time, and attention toward someone other than one's partner. An additional term, *intimate betrayal*, has been suggested to describe the experience of specific relationship standards and expectations being violated. These terms are not mutually exclusive, and any given extradyadic involvement may include one or all of these aspects of infidelity to varying degrees.

Nationally representative surveys of the American population have focused on the prevalence of sexual intercourse outside of marriage. These studies have found that approximately 22 percent to 25 percent of men and 11 percent to 15 percent of women report at least one instance of extramarital sex while married, though up to 34 percent of men and 19 percent of women in older cohorts reported infidelity. Moreover, these figures almost certainly represent the lower bounds of actual acts of infidelity, as some individuals are unlikely to be candid about such intimate details of their lives. Research using procedures with greater anonymity (e.g., computer assisted self-reporting as opposed to face-to-face interviews) support this conclusion.

CORRELATES AND THEORIES OF INFIDELITY

Gender differences have received more attention than any other correlate of infidelity in the empirical literature. Overall, men are more likely to have an affair, though this finding is strongly dependent on the cohort of the individual. Gender differences are greatest in the baby-boom generation (those born just following World War II [1939–1945]) and reduced in younger cohorts; individuals born during the 1960s and later do not show gender differences in the rate of infidelity. The shrinking gender difference may reflect basic demographic changes, particularly the greater number of women in the workforce, a common place to meet affair partners.

While the overall interest remains low, more men express a desire for infidelity and the active pursuit of an affair relationship. Nonetheless, the majority of both sexes expect sexual monogamy in their marriage relationships. In addition, men's affairs tend to be more sexual and less related to the satisfaction of their marriage as compared to women, while women's affairs tend to be more emotional and described as long-term, loving relationships. It remains unclear how these gendered aspects of infidelity may be shifting with the changing rates of infidelity across generations.

Factors related to infidelity can be organized in terms of their source (i.e., involved partner, spouse, marital relationship, and context). A history of divorce, permissive attitudes toward infidelity, lack of religiosity, being African American, and poor interpersonal connections in the marital relationship have consistently shown a positive association with infidelity for involved partners. Factors related to the spouse of an unfaithful partner remain an interesting but little researched area. In terms of the marital relationship, marital distress, sexual dissatisfaction, imbalances of power, cohabitation prior to marriage, and highly autonomous marital relationships have been linked to infidelity, as has marrying at a young age and the length of the marriage. Some contextual factors include opportunity, travel, income, the availability and willingness of partners, and the individual's perceptions of societal frequency and acceptability of infidelity.

A variety of theories have been put forth to account for infidelity, with evolutionary psychology receiving the most attention. This theory posits that men's desire for sexual variety can be explained by natural selection (i.e., men historically have sought reproductive success by gaining access to a variety of women). As such, men are more bothered than women by sexual infidelity because it threatens this goal. Women, on the other hand, find emotional infidelity more disturbing because it threatens the male's commitment to protecting and providing for a woman and her offspring. Cross-cultural research demonstrates that men consistently both have more affairs and show greater distress due to sexual affairs than women do. However, there is tremendous variability across cultures in the rate of infidelity, underscoring the important influence of cultural and societal factors.

RESPONSES TO INFIDELITY AND THERAPY

Although some therapists have suggested that infidelity may at times be helpful for individuals and couples, the empirical literature strongly supports the negative consequences of infidelity. Extramarital affairs are reliably associated with increased marital distress, conflict, and divorce. When an affair is revealed, the spouse of the person who had the affair is often angry, humiliated, and depressed, and symptoms of post-traumatic stress disorder may be present, such as intrusive thoughts, hypervigilance, and real or imagined images of their spouse with the affair partner. In addition, infidelity can indirectly expose the uninvolved partner to sexually transmitted diseases, including HIV/AIDS. This is a significant risk when the affair relationship involved drugs or alcohol, which in turn reduces the likelihood of safe-sex practices. Research focused on the reactions of the involved spouse have been limited, but there is some evidence that after an affair is revealed he or she experiences increased depressive symptoms, a lower sense of well-being, and greater guilt and shame.

Beyond individual reactions to an affair, there are two broad outcomes for the marital relationship: staying together or getting divorced. Relationship dissolution can be influenced by the nature of the infidelity (e.g., degree and type of involvement, how the affair was discovered), cognitive factors (e.g., attitudes toward infidelity, meaning attached to the affair), and aspects of the marital relationship (e.g., length of marriage, level of commitment, quality and satisfaction with the marriage).

Not surprisingly, marital therapists have described infidelity as one of the most difficult problems to treat—and one of the most damaging for a relationship. In spite of this, there is a paucity of empirical research on marital therapy for infidelity. What research does exist is somewhat optimistic, however. Couples that have experienced an affair and then pursue marital therapy show strong improvements during therapy, including greater marital satisfaction, reduced trauma symptoms, and greater forgiveness in the uninvolved partner. However, it is challenging to generalize these findings to the wide prevalence of infidelity, as only a small number of studies have focused on therapy, and because many couples do not seek therapy after an affair has occurred.

SEE ALSO *Evolutionary Psychology; Marital Conflict; Marriage; Sex and Mating*

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INFIDELS

Any society with a more or less coherent cultural boundary tends to have an exclusionary notion of the outside and hence of otherness; the more inclusive the notion of membership, the more intense the notion of an outside. With the collapse of the ancient world, the problem of otherness became closely associated with the development of the monotheistic and prophetic religions of Judaism, Christianity, and Islam. Because Yahweh was a jealous God, there was a sacred covenant between God and the tribes of Israel, which excluded those who worshipped idols and false gods. In Islam, there is a clear division between the household of the faithful (*dar al-islam*) and the sphere of war (*dar al-harb*). The notion of an external world of infidels is captured in *al-Kafirun*, the title of the 109th *sura* (chapter) of the Qur'an, which opens with, "Say, oh infidels." This Meccan chapter expresses the idea that religion should be freely chosen, stressing the devotion of the Prophet Muhammad (c. 570–632). This division between believers and infidels has, if anything, been reinforced by twentieth-century interpretations of a struggle (*jihad*) against unbelievers—an interpretation fully articulated in the writings of Sayyid Qutb (1906–1966), a radical member of the Egyptian Muslim Brotherhood. Qutb called Muslims to struggle against the darkness or barbarism of the West (*jahiliya*) and to reestablish the true Islam of the early community. Islam also has a definite notion of the dangers of apostasy (*Ridda*). When the Prophet died, many tribesmen assumed that their contract with the Prophet was concluded, but the Apostasy War was fought to maintain the coalition of tribes that formed the political basis of early Islam.

In Christianity, a universalistic orientation that recognized the "other" was contained in Paul's letters to the Galatians and Romans, which rejected circumcision as a condition of salvation. Because the uncircumcised were among the righteous, the message of Jesus had, at least in Pauline theology, a universal significance. However, the church developed a body of theology dealing with the problem of infidelity, making a clear division between the faithful who are baptized and follow the teaching of the church and those who are outside the faith. The term *pagan* connotes both the uncivilized and illiterate who live outside the city (the heathens) and those who live outside the church. *Paganus* stood for "civilian" as opposed to *miles*, "soldier," and hence the Christians of Roman times came to call themselves the *milites* or "soldiers of Christ" who struggle against sin and evil. The modern Salvation Army continues this notion of soldiers of Christ. The idea of an infidel is somewhat different, signifying a distinction between somebody who for whatever reason is ignorant of the Christian message and somebody who has actively rejected the promise of salvation in the life and teaching of Jesus. This notion of infidelity did not become well established in English until the early sixteenth century, when it described active opposition to Christianity on the part of Jews or "Mohammedans," as Muslims were mistakenly called. As a result, *infidel* became a term of opprobrium. The infidel in Catholic doctrine is to be

distinguished from *heretic*. While the infidel is somebody who does not believe in the doctrine at all, a heretic is somebody who falls astray from true doctrine by, for example, denying the divinity of Jesus. The problem of the heretic is not one of unbelief so much as rival belief.

Judaism also has a notion of heathens (specifically pagan gentiles) who are called *acum* (an acronym of *Ovdei Cohavim u-Mazzaloth*) or, literally, those who are "star-and-constellation worshippers," or idolaters. Heretical Jews are *minim* or sectarian people, such as the early Christians. The Hebrew term *kofer,* which is cognate with the Arabic *kafir,* is applied to apostate Jews. The various attempts to reform Judaism in the nineteenth and twentieth centuries, such as the Conservative and Orthodox movements, have revived Jewish culture, once more giving greater emphasis to orthodox piety and to the separation of Jews from gentile culture.

The conception of infidelity as a theological condition is therefore peculiar to the Abrahamic religions, which specifically, as a result of strict conformity to monotheism, reject the worship of idols and condemn pagan rites that are designed to placate the gods. Because they claim to be based on a unique revelation and promise of redemption, they have logically and necessarily an exclusive view of the "truth." These religions, especially Christianity and Islam, developed as a result of a strong commitment to evangelism and the conversion of pagans to the true religion. Both Christianity and Islam recognized in their formal teaching that conversion has to be voluntary. In Islam, for example, in verse 256 of *Surat al Baqara,* the Qur'an states, "There is no compulsion in religion." Roman Catholic doctrine similarly recognizes that conversion must be voluntary, and even the baptism of children cannot take place without consent unless they are in imminent danger of death.

The idea of paganism and infidelity is largely absent from the so-called Asian religions of Confucianism, Buddhism, Hinduism, and Shintoism, which either reject the idea of a single "high God" or tolerate various forms of polytheism and animism. A division between the moral and rational faith of Protestant Christianity and the popular rituals of the non-Christian world, which attempt to placate the gods to secure human prosperity, was developed in Western philosophy in Immanuel Kant's (1724–1804) *Religion within the Boundaries of Mere Reason* (1793). The Enlightenment substituted rational/irrational for the original true believer/infidel distinction. However, this distinction also raises the question as to whether monotheistic traditions are inherently more intolerant of diversity than other religious traditions, and hence legitimize violence against infidels. The New Testament sense that the Jews rejected their savior and crucified him has been regarded as the foundation of anti-Semitism in the medieval and (to a lesser extent) the modern world. Christian and Muslim notions of infidelity are assumed to be the cultural context for crusades and holy wars. In the twenty-first century, religious fundamentalism, dividing the world into true believers and the rest, is associated with the growth of religious nationalism, violence, and terrorism.

SEE ALSO *Animism; Anti-Semitism; Buddhism; Christianity; Heaven; Hell; Islam, Shia and Sunni; Judaism; Monotheism; Polytheism; Religion; Rituals; Supreme Being*

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INFLATION

Like many topics in economics, the concept of inflation—defined as an overall increase in the general price level of goods and services measured against a standard level of purchasing power—is subject to considerable disagreements among economists, highlighting the important differences between orthodox and heterodox economics. There are three important areas of disagreements. First, there is no consensus on the possible causes and consequences of inflation, even in a small, open economy. Second, economists disagree on the advantages of fighting inflation; in other words, should inflation-reduction be the primary goal of macroeconomic policy? Finally, economists disagree on the policies to be used to combat inflation. Indeed, in recent years there has been widespread agreement over interest rate–tightening as a way of fighting inflation, but such policies are misplaced, because they produce lower economic activity and higher unemployment.

Inflation is measured by keeping track of the changes in the prices of a number of items within a specific basket

of goods and services over a given period of time, ignoring any improvement in quality. There are a number of ways of calculating inflation. For instance, the consumer price index (CPI) measures the changes in the prices of goods and services generally purchased by consumers. It is by far the most commonly used measurement. Other measurements include the gross domestic product (GDP) deflator, which measures inflation over the entire domestic economy.

THE ORTHODOX APPROACH AND INFLATION

For orthodox economists, inflation carries important costs because there are advantages to lower inflation. Among the costs, orthodox economists claim that inflation erodes the value of money, and economic agents are frustrated in making their consumption and saving decisions; it encourages speculative investment to the detriment of productive investment; and it represents hardship for those on limited incomes or on incomes that are not indexed.

Among the benefits of low inflation, orthodox economists point to the ability of economic agents to make better, more informed, long-term decisions given the relative stability of purchasing power. For instance, because inflation is considered to lower the value of money, low inflation restores confidence in money: By reducing future variations in the price level, households can better plan their consumption and saving plans and regain confidence in the future value of money. Economists also claim that low inflation lowers nominal and real interest rates, and therefore produces overall stability of the economic system, as low inflation is self-reinforcing.

In orthodox economics, the principal cause of inflation is excess demand in the goods and/or labor markets, a direct result of scarcity in both markets. Whenever aggregate demand is greater than aggregate supply at any given price, the overall level of prices of goods and services will tend to increase in order to eliminate the excess demand: Inflation is demand-led. This is the necessary consequence of interpreting macroeconomics through the use of aggregate demand (AD; the total demand for goods and services in a national economy) and aggregate supply (AS; the total supply of goods and services in a national economy) analysis, interacting in price-output space. If there is a positive relationship between prices and output, it is because the AS curve is nonhorizontal. In this sense, both output and the price level are the result of AD-AS interaction. This analysis leads to an understanding of the role of prices in orthodox theory as a mechanism that guarantees market clearing.

In fact, irrespective of the specific neoclassical or orthodox approach, excess demand is always a central focus of inflation. Indeed, for monetarists, the growth of the money supply over and above the growth of output is seen as the principal cause of inflation. In their words, inflation is "always and everywhere a monetary phenomenon" (Friedman 1963). For monetarists, increases in the money supply always precede increases in prices. This results from the belief that the money supply is an exogenously determined quantity, independent of the needs of the economic system. The money supply is simply imposed on the system by the central bank, which can choose at will the growth rate of the money supply. Hence, whenever the central bank is pursuing expansionary policies, it allow the growth rate of the money supply to exceed that of output, resulting in "too much money chasing too few goods," the inevitable result of which is higher price levels. This view is based on the well-known quantity theory of money.

Keynesians, however, although they do not deny the role played by the exogenous money supply, place the emphasis primarily on output, given the relationship between output (unemployment) and inflation as embedded in the Phillips curve, according to which there is a trade-off between unemployment and inflation: Lower unemployment implies higher inflation. In other words, fighting unemployment comes at the cost of higher inflation. As unemployment decreases, wages tend to increase, raising prices in the process.

An obvious question is what then may cause excess demand? The answer lies in expansionary monetary and fiscal policies—in other words, the central bank and the state. In addition to an expansionary monetary policy, inflation arises because governments pursue an expansionary fiscal policy. Inflation arises either because the deficit is financed by printing money, or because an increase in fiscal policy will increase output, spending, and therefore demand for goods and labor.

Given the above discussion, the policy solution to contain inflation is to reduce the pressure on prices by reducing overall demand in the economy. This means limiting the growth of the money supply and reducing fiscal expenditures: Policymakers need to adopt responsible, sound policies. For Keynesians, this implies higher unemployment and lower wages.

THE HETERODOX APPROACH AND INFLATION

For heterodox economists and post-Keynesians in particular, excess demand is not the principal cause of inflation, largely because the economy almost always produces at less than full capacity: There is almost never an excess demand for goods, and similarly, there is but rarely scarcity in the labor market. Post-Keynesians and heterodox economists nonetheless acknowledge that demand

may have some influence on prices, but it is considered to be small and indirect. This statement has direct implications for and stands in stark contrast with neoclassical theory. For instance, one of the main consequences is that fiscal spending or excess growth of the money supply cannot be a causal or direct influence on prices and inflation. Indeed, for heterodox economists, money is never a cause of inflation. This is because the money supply is endogenously determined: Excess money cannot exist (Lavoie 1992; Rochon 1999). In other words, the money supply is not determined by the central bank, but rather by the needs of production.

In contrast to orthodox theory, therefore, the principal cause of changes in the price level is increases in the costs of production. In this sense, heterodox economists adopt a cost-push approach to inflation. That said, orthodox economists do not deny the importance of costs in determining changes in the price level, but there are important differences between the orthodox and heterodox approaches. For the former, changes in cost are usually the result of "supply shocks," which occur only occasionally, such as a sudden increase in the price of oil or some unexpected and unforeseen event abroad. For heterodox economists, however, changes in the costs of production are the primary and dominant cause of inflation, and are part of the normal operations of contemporary economic systems.

For heterodox economists, however, inflation is not merely cost-driven, but it is also the result of conflicting claims over the appropriate division of income. Markets are characterized by dynamic interactions between macrogroups, such as workers, firms, and rentiers, each vying to get a larger share of income: Workers want higher wages, firms want higher profits, and rentiers want higher rents. In this sense, inflation is the result of a struggle over the distribution of income. It can arise largely from either a wage-wage spiral or a wage-price spiral, or from the attempt by firms to impose a given rate of return. In this sense, two important features of the heterodox explanation of inflation are collective bargaining and administered prices.

For instance, in formalized conflicting claim models, such as that described by Louis-Philippe Rochon and Mark Setterfield (2007), workers have a target wage share that they consider fair, equitable, or just. And although workers in general want to increase their overall nominal (or real) wages, they also want to maintain their social standing and their wages relative to other workers. If a specific group of workers negotiates higher wages, other groups may also demand higher wages in order to maintain their relative standing in the social order, fuelling the inflationary spiral. In turn, this wage-wage spiral implies higher costs of production for firms, which may try to pass on these costs to consumers through higher prices, which in turn will reduce real wages and lead to possible demand for higher wages in the future.

Moreover, firms may want to increase their standard rate of return to historical levels (Lavoie 1992). Firms may experience lower than normal returns and may want to increase their mark-up in order to bring their rate of return in line with more traditional levels, raising prices in the process. This in turn will lead to lower real wages, and workers may demand higher nominal wages to compensate.

Firms may be able to raise prices because, unlike in neoclassical theory, prices are administered: Firms set prices according to a mark-up over costs of production, not by competitive forces in the economy. In other words, firms will impose a rate of return over and above the normal costs of production, primarily wages and interest costs on debt, because they target a certain margin of profit.

In the end, whether firms or workers succeed in imposing their wills depends on the relative power of workers vis-à-vis firms in the wage bargain, and the relative power of firms in commodity markets. In turn, these powers vary according to the economic cycle or with the market structure. For instance, during periods of growth when unemployment is low, workers have greater power and may be able to demand higher wages. As for firms, brand loyalty, advertising, and the complexity of products give them greater power over prices (Lavoie 1992).

Finally, conflict also arises between firms and rentiers, who also want to increase their share of income. When the central bank increases interest rates, satisfying rentiers, firms may increase their mark-up and prices, and thus lower real wages. This also highlights an indirect conflict between workers and rentiers. For John Smithin (1994), rentiers are at the heart of the conflict. It is in this sense that heterodox economists see the rate of interest as a distributive variable.

The same analysis can be used to analyze deflation, that is a generalized decrease in the overall price level. In a conflicting claims model, one can assume that during periods of high unemployment, when workers are more desperate for work, they would be willing to work at wages lower (lower target wage) than what firms would be willing to offer in an effort to squeeze themselves into the labor market. With these downward pressures on wages, it remains possible for firms to lower prices, although deflation remains a rare phenomenon in contemporary developed economies since World War II, where the general trend on prices has been upward.

Similarly, the cost-plus approach and conflicting-claims model can be used to explain periods of hyperinflation (Camara and Vernengo 2001). For instance, in the case of inter-war Germany, the most probable cause of

hyperinflation was the extreme costs of war reparations imposed by the Treaty of Versailles, a collapse of German exports, a depreciation of the currency, and higher prices. One may further assume that workers may resist the resulting important decline in real wages, along the same lines as described earlier. In the end, conflicting claims and distribution are key components of the explanation of both inflation and hyperinflation.

Heterodox economists also stand in contrast with orthodox economists in proposing policy remedies for fighting inflation. Three questions arise. First, should inflation always be the primary target of economic policy? Second, should the central bank be solely responsible for pursuing anti-inflationary policies, as has become the case in recent years? Finally, how can inflation be tamed?

Heterodox economists believe that too much emphasis is placed on fighting inflation, to the detriment of fighting unemployment and growth, which are the central focus of heterodox policy. As excess demand is not a direct contributor to inflation, there is no reason to believe that economic growth necessarily accompanies inflation. Moreover, because money is not seen as the principal cause of inflation, and also because there is only an indirect link between interest rates and inflation, heterodox economists do not see the central bank as the primary institution to fight inflation. In fact, central bank policy exacerbates the inflationary process.

Nevertheless, to fight inflation, heterodox economists propose a two-prong policy. First, we need de-emphasize the role of the central bank by setting the real interest rate at a "fair" level (equal to the growth rate of labor productivity), thereby limiting the influence of the rentier class. Second, we should adopt a permanent price and income policy in order to limit the increase in wages and prices.

SEE ALSO *Aggregate Demand; Class, Rentier; Economics, Keynesian; Economics, Post Keynesian; Excess Demand; Expectations; Macroeconomics; Misery Index; Monetarism; Money; Money, Endogenous; Money, Exogenous; Phillips Curve; Policy, Fiscal; Policy, Monetary; Prices; Quantity Theory of Money; Real Income; Stagflation; Wage and Price Controls; Wages*

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Louis-Philippe Rochon

INFLUENCE

SEE *Social Influence.*

INFLUENCE, PEER

SEE *Peer Influence.*

INFORMAL ECONOMY

All modern states regulate the economy; they also establish what goods and services are not, strictly speaking, part of this formal "economy." *Informal economy* can refer to either or both of these residual spheres. It is therefore useful to discuss the term from the perspective of who uses it and with reference to what kind of society. For some economists a sphere such as the household-based family is not an economic sphere because no finite *transactions* can be observed therein. Sociologists, conversely, use the term to expose a broad array of unrecorded *work*. Thus, besides transactions unregulated by government, they include practices, such as housework, domestic consumption, and caregiving, that fall outside "the economy" as measured by gross domestic product.

PERSPECTIVES ON INFORMAL ECONOMY

Emphasizing "the [low] degree of *rationalization* of working conditions," the anthropologist Keith Hart (2004, p. 8) first used the term informal economy in 1971 to describe the casual work of the poor in Accra, Ghana (Hart 1973; see also Geertz 1963). While Clifford Geertz and Hart worked from a Weberian understanding of economic *rationality*, the term *informal sector* was picked up by international agencies and development economists in

terms of quantitative degrees of scale, productivity, and income. Because the term was used to replace earlier understandings of "developing" societies in terms of "dual economies" (Lewis 1955), its initial usage was confused. Thus relatively independent formal and informal *sectors* now replaced the older notion of modern and traditional sectors of a national economy in which market forces at work in the one were distorted by custom in the other. Development in both formulations was seen to occur as the more dynamic sector expanded to absorb ever larger swaths of the more backward one. The theoretical vagueness of the new term led to criticisms (Bromley and Gerry 1979) that, combined with the empirical failure of these prognoses, led to marginalization of the term until the dawn of the twenty-first century.

Twenty-first century analyses stress the crucial interplay between formal and informal economies in especially two ways. Firstly, there has been a general shift throughout market economies from formal institutions with sharply defined boundaries and functions to those with fuzzy boundaries and highly adaptable functions. As a result some writers prefer the notion informalization *process* rather than use of a set of criteria to distinguish two different spheres of a society (Castells and Portes 1989). Secondly, analysts have increasingly focused on the degree to which different components of the informal economy are crucially linked to the so-called formal economy through putting out to homeworkers and subcontracting to informal workshops, while other components remain relatively less directly linked (Chen 2005).

Interest in the informal economy is widespread among development practitioners and international- and national-level policy makers as well as scholars in the various social sciences. Since it is inconceivable that there would be *no* informal practices in an economy or society, the way one understands such practices is likely to result from the kinds of settings on which one focuses. Among these are developing societies, socialist command regimes and their transformation, welfare regimes, and neoliberal regimes.

SETTINGS OF INFORMAL ECONOMY

A primary concern in the literature on "developing" societies is whether or not the informal economy is a benefit or a handicap. Insofar as a low capital to labor ratio is almost a definitional feature, it can be argued that a large informal economy reduces a country's average productivity; by avoiding start-up and running costs, it also effectively competes with firms paying taxes and legal fees. By contrast, insofar as it is, again almost by definition, the way poor people get by, the informal economy maximizes employment opportunities. In 2000 the Peruvian economist Hernando de Soto therefore advocated its encouragement through the introduction of a legal code more appropriate to current informal practices. His views, however, remain controversial.

Some commentators argue that these third world informal economies reflect a "weak state" that is unable to regulate uniformly throughout the polity. Prior to 1989 the reverse was the case for the informal economies that flourished under socialist command regimes, whose pervasive and rigid regulatory practices and intentional use of strategic scarcities provided the seedbed for informal practices. These eventually provided important networks that became the basis for resistance and eventual collapse of these regimes. The informal economy that resulted and now pervades the former Soviet bloc (Russia, Hungary, and so on) must be distinguished from socialist command economies that remain in place but have *intentionally* reduced the non-commodified socialist sphere. Here informal economy results from opening up ever larger areas of social interaction to market transactions that are nonetheless inconsistently regulated—China being the most vivid example.

In the "developed" capitalist economies, interest in the growing size of the informal economy has frequently been attributed to the failures of welfare regimes *either* to be comprehensive in their provision of services *or* to stimulate economic dynamism. For some the state was not providing enough welfare, while for others what it did provide was too costly and too inflexible for the changing needs of capitalism. Thus one argument was that informal practices were taken on by people who were not being properly served by the welfare regime, partly as a result of declining formal jobs and partly as the welfare state failed to provide social citizenship to newly arrived immigrants and established visible minorities. The other argument was that high taxes and pervasive regulation drove both workers and firms into informal, semi-legal channels. Nonetheless, while it is common for economists to correlate an expansion in informal activities with the higher taxes and increased labor legislation of welfare regimes, this makes it hard to explain the striking increases in such practices under neoliberal regimes. In partial explanation, while the former was both ideologically and pragmatically set against *informalization*, the latter has encouraged an ideal of "deregulation" positively endorsing decentralization, flexibility, and a "self-regulating" entrepreneurial worker—all supposedly features of informal economy.

ACHIEVING DYNAMISM AND REGULATION

Neither a deregulated economy nor a self-regulating economic actor is a sustainable notion, however. Rather, economies are made up of the regulation of productivity

and exchange, one way or the other, so a major challenge is to discover the means by which both dynamism and regulation are achieved. By nature decentralized, informal economies provide a wide range of sites for regulation and dynamism. These include employer-employee micro-enterprises, sites of self-employment, domestic enterprises, and homework. They also include networks of interconnection between these (as well as the formal economy and state agencies) and longitudinal means for social reproduction—among them supply, distribution and credit systems, and culturally specific forms for the transmission of property. All of these—and a multitude of others not mentioned—provide sites for possible regulation, facilitation, and invention. This in turn calls into question use of the word *economy*. As "social" factors are used to regulate market exchanges and appeals to cultural (or "family") belonging are used as a means for regulating labor, the question arises as to whether it is any longer appropriate to refer to the overall phenomenon as an economy at all. There is probably much less distinction between the narrower economists' view of informal economy and the broader sociological one. When one realizes the extent to which a wide range of economic practices are regulated through cultures of intimacy and trust combined with ideologies of male authority and female altruism, one sees how the goals of intensifying productivity and even controlling quality expand to embrace a wide range of *social* practices and relationships.

Like other residual terms, the notion of informal economy will continue to be used to sum up what are in fact hugely varied practices. Insofar as these account for as much as one-half to two-thirds of nonagricultural employment in developing countries and one-quarter in the United States (International Labour Organization 2002), social scientists are challenged to cease conceptualizing these practices as pathological versions of a supposedly "normal" formal economy and instead develop concepts appropriate to a world that has always existed and yet has just begun to command the attention it deserves (Davis 2006).

SEE ALSO *Development Economics; Dual Economy; Economic Growth; Gross Domestic Product; Lewis, W. Arthur; Modernization; Rationality; Regulation; Tradition; Weber, Max*

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Gavin Smith

INFORMAL SECTOR

SEE *Informal Economy.*

INFORMATION, ASYMMETRIC

Asymmetric information exists when one participant in trade knows something that the other participant does not know about the quality of the particular good or service they are trading. This violates one assumption of perfect competition—"perfect information" (when market partic-

ipants have all the information relevant to goods' and services' quality and price). The canonical example is the market for used cars (Akerlof 1970): The seller knows her attention to the car's maintenance, but the buyer's evaluation of the car's value is limited to the features he can observe and his knowledge of the average quality of this type of car. In this case, the seller has more information about the product's quality, but there are also markets in which the buyer has more information. When buying health insurance, for example, the buyer knows his own eating, drinking, and smoking habits, and the seller (the insurer) does not have as clear a picture of the buyer's quality of health.

The concern of the economist or policy maker is that this asymmetry can lead to market failure: The asymmetric knowledge causes less trade between buyers and sellers than would be optimal for society; in the extreme case, only low-quality goods or services are traded. In this case of complete market failure, high quality goods are not sold: Used-car buyers assume (correctly) that only owners of "lemons" want to sell their cars, and insurance companies assume (correctly) that only less healthy individuals desire insurance. Like other market failures, asymmetric information corrupts the price mechanism: If the buyer lacks information (used cars), the market price will be too low for higher-quality exchange; if the seller lacks information (health insurance), the market price will be too high for higher-quality exchange.

Consider a numerical example in the case of used cars to make these ideas concrete. There are two types: high quality cars valued at $15,000 and low quality cars valued at $10,000. These values, common to both buyer and seller, indicate the utility gained from owning a car. If 10 percent of the cars are low quality, then the prospective buyer could assume with 90 percent probability that he is buying a high-quality car and will offer to pay (0.90)($15,000) + (0.10)($10,000) = $14,500 or less. But at this price, only the owners of low-quality cars will be willing to sell. As a result, buyers and sellers expect only low-quality cars to be available on the market, and those cars sell for $10,000. Sellers of the low-quality cars know who they are, but the buyers do not. This phenomenon explains why a new car loses so much of its value as soon as it is driven off the dealer's lot.

A similar example illustrating the case of health insurance would show that there is less incentive for the high-quality (healthy) types to buy insurance, which drives up the price of insurance. Only the customers with poor health and higher willingness to pay are served because the insurer cannot sufficiently differentiate between the high- and low-quality types, but the buyers know their own quality of health. Of course, these extreme examples seldom occur because buyers and sellers find ways to mitigate the asymmetric information, as described below.

The similarity between outcomes under imperfect information and some other types of market failure is the existence of a "free rider." The buyers (in the case of health insurance) or sellers (in the case of used cars) of the lower quality goods are "free riding" on the reputation of the higher quality goods. The increased incentive for low quality goods and services to be traded is known as "adverse selection." This is also related to, but different from, the concept of "moral hazard." The distinction between the two is one of timing: Moral hazard describes the incentive, once an individual has health insurance, to behave more recklessly because he no longer faces the full financial impact of addressing medical conditions brought on by his poor health habits.

Asymmetric information is not simply a lack of information. Even though each piece of fruit at the grocery, for example, may hide some information from the buyer, it is hidden from the seller, too, and the market price can reflect this chance of selling and buying poor-quality fruit. We are also not focused directly on some advantage held by the seller of a low-quality car, or an advantage held by an unhealthy purchaser of insurance. The market failure is simply the lack of a market for high-quality goods. If there were perfect information in the market for used cars, for example, then there would be two car markets, one for trading high quality and one for trading low quality.

There are various solutions to this market failure, but they often have their own drawbacks. Experts may provide the inadequately informed party with improved information, but this also increases the transaction cost—and if there is any remaining unknown information, high-quality goods are still difficult to sell. A physical examination may reveal a health insurance buyer's health to potential insurers. Regulations may require a minimum quality (of cars or physicians, for example) or certification exams (for electricians or plumbers, for example), but this barrier to entry may provide the regulated group with market power. Quality regulations may also inhibit the provision of lower-quality goods and services for which a market (with lower prices) would otherwise exist (with perfect information).

Could the high-quality agents simply state that they have the high-quality product or characteristics? If this statement, or "signal," is costly for those with a low-quality product or service, then such a solution is feasible. For example, offering warranties is expensive for those selling low-quality cars, but not for those selling high-quality cars. (This solution may face moral hazard problems, as mentioned above.) Likewise, a college degree need not prepare the student for her intended profession in order to be useful (Spence 1973a; Stiglitz 1975), as long as it is dif-

ficult to obtain for those students valued by potential employers. The degree could simply serve as a signal to employers that this student is bright or a hard worker, qualities that would otherwise be difficult for a potential employer to observe before hiring her. Further, the time and effort involved in courting a prospective spouse may also "signal" the love and commitment that would otherwise be difficult to observe before entering into marriage (Spence 1973b).

Another possible market solution is to provide the low-quality types an incentive to reveal themselves through the available contracts (Rothschild and Stiglitz 1976). In the case of health care, insurers provide contracts with lower deductibles that can be chosen by those less-healthy buyers willing to pay a higher premium. Healthy buyers pay lower premiums but a higher deductible, benefiting from their lower likelihood of illness.

SEE ALSO *Adverse Selection; Collective Action; Free Rider; Market Economy; Markets; Moral Hazard; Regulation; Risk; Signals; Uncertainty*

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Christopher S. Ruebeck

INFORMATION, ECONOMICS OF

The primary sources of the tremendous growth of modern economies are technologies (including sociopolitical ones), and these are applications of systems of information. For entrepreneurs, information is a valuable but often costly commodity. Hence for political and business executives and managers, so-called inside information, that is, information that is known to business managers and public policy executives but not to the general public, presents constant temptation for illegal trading.

The absence of information influences markets, especially through the troublesome use of public ignorance, not to mention ignorance of information about technological innovations. The paradigm case for this is Adolf Von Bayer's discovery of synthetic indigo in 1880, which famously and tragically ruined Indian farmers who grew the indigo plant in ignorance of the innovation. Less drastic but more spectacular was the fall of the price of shares of telephone companies, once deemed gilt-edged, due first to deregulation and then to the advent of Internet telephony; both were made possible by new technologies. The economic value of innovations creates incentives for secrecy regarding them. Patent laws were designed to discourage this secrecy; their success depends on their success as disincentives.

The most important innovation in retail trade was the replacement of haggling with price-fixing, which entails sellers publicizing information about the minimum price they would settle for. Initially motivated by moral considerations, it proved efficient and prevailed in competitive markets. The theoretical basis for it came from Adam Smith (1776), who deemed competition to be the best incentive for efficiency (Smith 1776, bk. 1, chap. 7). He refuted there (Smith 1776, bk. 1, chap. 1) the popular idea of trade as players outguessing one another in a zero-sum game (that is, one player's gain is another's loss). Because free exchange rests on expectation of improvement, all parties to it are partners. Trade is not zero-sum game: Specialization raises productivity and imposes trade. Smith's major recommendation was to cancel protective import duties that protect the inefficient. In contrast, partial equilibrium theory (Marshall 1890), which is the bread and butter of traditional economics, incorporates the assumption that markets are perfectly competitive—that is to say, free of friction. They suffer no constraints, allow free entry, offer perfect knowledge of all relevant information, and incur no transaction costs. As this assumption is obviously false, economic advisers can easily blame friction for the failure of their forecasts. This is an excuse, the right for which is available only to those who begin with informing their clients of it. Lionel Robbins in 1932 stressed that this makes their economic forecasts sheer speculations, unlike the ones based on generalizations about observed regularities. This then resembles the distinction that Frank Knight (1921) and John M. Keynes (1921, chap. 26) made between risk and uncertainty. Unlike uncertainty, risk assessments rest on regularly observed probabilities. What information then can we have on the probabilities that affect markets? This is a vast field, as friction is blamed for so many aspects of the market untreated by the standard models yet given to statistical studies, including changes of tastes, unemployment, market fluctuations, money markets, and even markets for innovations.

The earliest studies of imperfect competition were the models for monopolistic competition (Chamberlain 1933; Robinson 1933). Friction can be viewed as space-time dependent monopoly (and often also vice versa). Kenneth Arrow and Gerard Debreu (1954) offered an economic-equilibrium model that allowed for friction, including information asymmetry, the asymmetry being in one partner to any given transaction having more relevant information than the other. They ascribed to each transaction space-time coordinates and its own characteristics, thus allowing for a diversity of market situations that permit the study of transitions from one market situation to another, including improved information systems and innovations. Particular commodities, such as second-hand cars and risky investments, invite the misuse of information asymmetry, which is troublesome. By contract, ignorance of prices of fairly standard commodities is far less troublesome. Where asymmetry is harmful, as in real estate deals, prospective customers usually examine matters more carefully. The literature shuns the study of the most blatant information asymmetry, namely that of experts. A partial remedy for this is the use of a second opinion, and this is why insurers support it. There is also the matter of conflict of interest, conspicuous in the cases of accountants who examine the books of their clients and of teachers whose grading of their students is inevitably also grading themselves (Flexner 1910). In medicine, informed consent, though legally required, is seldom practiced. To improve matters it should apply not only in treatment of disease but also in diagnosis and from the very first meeting, so that patients will be able to acquire vital information from their physicians (Laor and Agassi 1990).

Information on probabilities helps determine insurance rates. Competition should force the insurance to render premiums fair. Yet all projections are imperfect. Catastrophic deviations from estimates force those who rely on these estimates into bankruptcy. The network of insurance systems that safeguards any subsystem from collapse raises the likelihood of collapse of the whole system, however. For as the saying goes, there is no insurance against epidemics. And the epidemics may be due to some information, misinformation, or even disinformation.

The most valuable information concerns the outcome of tests of theories on valuable matters. Before daring to apply a theory, one must test it to prevent causing too much harm. Information leading to tests of theories is harder to come by in the human sciences than in the natural sciences. It is hard to test even educational theories in experimental classes because conducting tests in classes may be dangerous for the pupils. The same holds true for medical information, and this is why its procurement requires certain precautions guided by the Helsinki Accord and similar constraints. There is nothing to inform the seekers of information regarding education, even though its importance for global politics is all too obvious. Milton Friedman estimated that returns from investment in education are highest and explained the reluctance of entrepreneurs to invest in education as a lack of information (Friedman and Kuznets 1945).

The absence of elementary information forces social researchers to resort to complex theoretical and testing techniques, including systems dynamics. This technique employs systems theory, which is the beneficial suggestion that it is often possible to simplify assumptions about complex systems in diverse ways and obtain different sets of test models. In systems dynamics study is centered on inflow and outflow of certain inventory items in system with feedback loops. These studies are simply too complex to study empirically and often even mathematically. Efforts to apply this to markets are still too hard to evaluate.

In the meantime, entrepreneurs insure themselves as best they can against being pushed out of the market by surprising new technologies. Even marginal investments in small laboratories that function as conduits of new information—habitually useless—have often saved firms from collapse.

This brings a new aspect of information to the fore: How does it flow? This question is basic for the information-transfer technologies that now are growing rapidly. Claude E. Shannon (1949) developed information theory to deal with technical questions, such as how much distortion can a telephone cause without the loss of the ability to identify the voice of a speaker? To be applicable to all sorts of information conduction, Shannon examined signal transfer over channels and distortions as the difference between the message in the source and in the target and asked in the abstract, what characterizes the information that is essential? Unusual information is clearly rare, and Shannon equated information with improbability. (Newer studies improve upon this assumption.) Shannon noted that redundant information helps restore a distorted message. Assuming that no message transfer is perfect, he suggested that with no redundancy a message will be lost with the slightest distortion. Hence the often cited advice to be brief must be qualified. The simplest redundancy is repetition; it helps avoid some distortion. All this holds for signals, not for information proper. Information theory deals with the former and is unable to deal with the latter. The treatment of information as signals was a bold step, and it is central to all computerized systems, including the information highway. Thus a computer spell-checker program spots a rare combination of letters and suggests that it is possibly a misspelled word; if misspelling transforms a word to a common word, then the spell-checker program can only spot it by examining not the word but the sen-

tence. This gets increasingly complicated, and no spell-checker program is perfect.

The rise of information technology is the outcome of a few developments, beginning with the wish to increase mathematical rigor in response to George Berkeley's criticism of the calculus (Wisdom 1953), the wish to develop logic as a formal system, and the wish to combine logic and mathematics. All this informed the transition from calculators to computers. Information theory was the peak of this process. The hope to see the brain as a computer must fail, as computers are blind to meanings, but much insight developed this way, leading to exciting developments in brain science, computer science, and even perception theory, all of which have breathtaking applications. The greatest boon to the economy, however, is the rise of the Internet, as is manifest from the tremendous new knowledge industries and the enormous markets for them.

SEE ALSO *Arrow, Kenneth J.; Competition; Debreu, Gerard; Drucker, Peter; General Equilibrium; Information, Asymmetric; Keynes, John Maynard; Microsoft; Partial Equilibrium; Robinson, Joan; Smith, Adam;* Tâtonnement

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Joseph Agassi

INFORMATION CRITERIA

SEE *Model Selection Tests.*

INFORMATION ECONOMY

SEE *Knowledge Society.*

INFORMATION PROCESSING

SEE *Reinforcement Theories.*

INFORMATION SOCIETY

SEE *Knowledge Society.*

INFORMED CONSENT

The term *research* refers to a systematic investigation designed to develop or contribute to generalizable knowledge by testing and proving or disproving specific hypotheses. The knowledge gained through research may be important as a basis for the formulation of social policy or the improvement of practice in medicine, education, social services, or other areas. Research may produce information as the result of experimentation that involves introducing some new variable (e.g., a test drug or method of treatment) into the situation and seeing what difference, if any, that new variable makes. Alternatively, research may entail gathering data and drawing conclusions by observing

things happening naturally (i.e., a natural experiment). In both the experimental and observational methods, research may involve using human beings as participants who serve as the sources of data from which the generalizable conclusions are drawn. Especially when human participants are involved, research must be conducted in an ethical manner, including assurances that the participants have given *informed consent* for their involvement.

Principles regarding the proper conduct of research involving human participants have been incorporated into over thirty different international guidelines and ethical codes. The first of these was the Nuremberg Code, adopted in 1947 for Nazi war-crime trials in which defendant physicians tried to justify their horrible actions as scientific experiments. Subsequent ones were spurred on by various scandals involving the mistreatment of human subjects, such as the forty-year Tuskegee (Non-Treatment of) Syphilis Study, the deliberate hepatitis infection of residents at Willowbrook (New York) state hospital between 1956 and 1971, and injection of live cancer cells into patients in 1963 at the Jewish Chronic Disease Hospital in Brooklyn, New York. In the United States, Congress in 1974 enacted the National Research Act, establishing the National Commission for the Protection of Human Subjects in Biomedical and Behavioral Research (popularly referred to as the *Belmont Commission*). In 1981 regulations embodying some of the Belmont Commission's recommendations were issued by the federal Department of Health and Human Services (DHHS, but at the time called the Department of Health, Education, and Welfare). These regulations have been adopted by other federal agencies as a *Common Rule* to protect human participants in any research protocol those agencies sponsor. Also, any research concerning the testing of investigational drugs or medical devices is regulated simultaneously by the federal Food and Drug Administration (FDA).

Research to which these regulations apply must be reviewed and approved by an interdisciplinary Institutional Review Board (IRB) and is subject to continuing IRB oversight. Conducting a research protocol without IRB approval or over IRB objection subjects the investigator and sponsoring institution to the loss of any future government funding for the conduct of research.

For any proposed research protocol, the IRB must ensure (among other things) that informed consent will be obtained from each potential participant. Potential participants must be informed of the following:

1. the purposes of the research, its expected duration, and the procedures involved;
2. anticipated risks or discomforts, as well as benefits, of participation and all reasonable alternatives to participation in the research protocol;
3. the extent to which research records will be kept confidential;
4. the availability of any compensation and/or treatment for research-related injuries;
5. the right not to participate and to discontinue participation at any time without penalty.

The IRB also must ensure that participants' informed consent is appropriately documented.

The IRB must police the requirement that no human subject is involved in research unless ethically sufficient informed consent has been obtained and the prospective participant has had the chance, without coercion or undue influence (i.e., voluntarily), to really consider whether or not to participate. The regulatory provisions for informed consent in research are basically a codification and extension of the common law (i.e., the judge-made law that evolves on a case-by-case basis) in the diagnostic and therapeutic setting. Under the common law, valid consent requires that the individual's agreement be voluntary, informed, and given by a person with adequate cognitive and emotional capacity. Individual IRBs are themselves monitored by the Office for Human Research Protections within DHHS.

Some states have enacted their own, additional laws, which vary quite a bit, concerning conditions for protection of research subjects. Moreover, private civil malpractice lawsuits may be brought by an individual participant against researchers and protocol sponsors for violation of common law standards regarding the obtaining of informed consent or other deviations from the acceptable standard of care under the circumstances.

Ethical researchers owe a heightened obligation to make certain that meaningful informed consent has been obtained for research involving especially vulnerable participants, particularly when the research consists of risky experimental interventions. Especially vulnerable persons in this context include persons with mental disabilities that impair decision-making capacity, prisoners, children, and pregnant women. Racial factors must also be taken into account when considering the need for special protections for vulnerable groups, because it has been common historically for researchers to both take undue advantage of members of racial minority groups by including them disproportionately in very risky studies, and to deny them the potential benefits of research participation by unfairly excluding them from certain studies. When a potential research participant is unable to give valid voluntary, informed consent personally, a surrogate acting on behalf of the person's best interests may act as decision-maker.

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Marshall B. Kapp

INGRATIATION

Ingratiation refers to behaviors that one enacts in order to be liked by another person. There are many tactics to accomplish this. First, we can show interest in another person by asking questions, paying attention, and singling out the person to make him or her feel special. Second, we can do favors or help or assist a person. Third, we may show support and loyality. Fourth, we can smile and be friendly, cheerful, and positive. Fifth, we can directly express admiration by flattering people and telling them what we like or admire about them. Sixth, we can create sympathy by talking about things we have in common with someone.

Any behavior that potentially has the effect of enhancing one's likeability and that is enacted for this reason can be seen as an instance of ingratiation. So, the same behavior (e.g., helping a friend to study for an exam) can be an instance of ingratiation (if you want to borrow the friend's car later on) or not (if you are just being helpful), depending on the motive.

Different research paradigms have been used to study how people ingratiate themselves and what the effects are. For instance, when looking at the ingratiator's part, the researcher may instruct participants interacting with someone to make the other person like them, and then examine how they behave. Looking at the target's end, the researcher may expose participants to an ingratiating actor and examine if they like this person or are easily influenced by him or her, compared with control conditions (e.g., a noningratiating actor, or participants observing the same behavioral episode directed at someone else).

In his seminal book on ingratiation, Edward Jones (1964) noted that the goal of ingratiation is typically instrumental: We ingratiate ourselves to people because we want to influence their behavior in some way (e.g., get a date, borrow money, get a raise, get a good grade). Thus, ingratiation is a strategy for social influence, and it is typically used quite a lot by salespeople. Because people generally want something from people who have more power or status, the typical example of ingratiation is a lower-status person flattering a higher-status person. This type of ingratiation is recognized very easily by observers because the dependence of the ingratiator alerts them to the possibility of ulterior motives.

During the era of slavery this instrumental motive for ingratiation occurred among black slaves who acted in a subservient manner, expressing agreement with white authority figures (called *tomming*, after the character Uncle Tom from the book *Uncle Tom's Cabin*) in order to receive more lenient treatment (e.g., less physically demanding duties) in the hope that eventually they might be watched less closely and be able to escape. Similarly, in a work environment an ambitious employee may act very servile and conforming with respect to superiors in order to be liked and perceived as unthreatening by them, so that eventually he or she can usurp a superior's position. In instances like these, as in cases of toadying, the ingratiator is quite aware of his or her goals and the best possible ways to achieve them, and he or she may even have a long-term plan that is carried out with great sophistication.

Often, though, when people ingratiate themselves they are not aware of it. Many instances of ingratiation are unconscious, so people probably ingratiate a lot more than they think. Also, the target of the ingratiation is very often not aware of what is going on; whereas observers tend to quickly notice when ingratiation occurs, targets of ingratiation are less suspicious. So, the effects of ingratiation are generally as intended: The target likes the ingratiator, and is more inclined to do favors for the ingratiator. The ingratiator may not be aware of his own insincerity either, and may get away with the feeling that he and the target get along very well. E. E. Jones called this the "autistic conspiracy": Both ingratiator and target are not fully aware of the hidden agenda in their interaction (the ingratiator who wants something; the target who is happy to be flattered, satisfying his or her self-enhancement motive), and they simply feel good because they both get what they want. Neither of them is very motivated to look more critically at the interaction.

In addition to instrumental motives (i.e., influencing others' behavior), there are other motives for ingratiation as well. It smoothens social interaction, as when we don't tell people everything we think (e.g., a colleague has a terrible new hairdo). Also, if we get along well with people, they will like us and respond favorably to us, which in turn is good for our self-esteem.

SEE ALSO *Hierarchy; Jones, Edward Ellsworth; Patronage; Social Relations; Stratification; Uncle Tom*

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Roos Vonk

INHERITANCE

Pride and Prejudice opens with the proclamation that it is well known that a man with a fortune is in want of a wife (Austen 1991, p. 1). This satirical remark conveys a theme that is illuminated elsewhere in the text: In nineteenth-century Britain, having an inheritance made a man an attractive marriage prospect. While the advantages that inheritances convey to the individuals who receive them may vary across time and across societies, benefits exist. The nature of these benefits and the motives of the givers are two issues that have been discussed extensively in the social sciences literature.

An inheritance can be described as funds or assets that an individual receives from another person at the latter's time of death. Accordingly, they are monies that individuals come to possess not through their effort in the marketplace, but through their relationships to other people, typically older family members and most often parents.

CONTROVERSIES AND CRITICAL ISSUES

One hotly contested debate about inheritances concerns the extent to which differences in the propensity to inherit and in the amounts inherited contribute to the observed differences in the amount of wealth that different individuals have. This is an important question because it has bearing on the validity of a popular economic theory of saving. Economists' life-cycle hypothesis attributes an individual's wealth at any point in time to the process of saving, arguing that individuals compile savings by spending less than they consume early in life so that they will have funds to turn to during retirement. According to this theory, it is an individual's earnings, age, and other demographic variables that determine the amount of wealth that the individual has. The receipt of an inheritance provides another potential source of wealth, however, and empirical research suggests that its effects may be significant. During the 1980s Franco Modigliani (1988) and Laurence Kotlikoff and Lawrence Summers (1981) offered estimates of the magnitude of funds that U.S. adult children received from their parents. Modigliani put the sum at about 20 percent of the total wealth that individuals possess, while Kotlikoff and Summers argued that the amount was much higher (almost 80 percent). These data are illustrative because of the historical significance of the debate between these three authors. The debate laid the foundation for additional research on inheritances. Moreover, studies that have been conducted since this time routinely provide estimates of the magnitude of wealth transfers across the generations that lie within the range laid down in the Modigliani and Kotlikoff-Summers debate.

A second debate focuses on the motivations of those who give money to others. With this shift in focus comes a change in language. The term *bequest* is generally used to describe funds that one leaves to others when one dies, while the term *inheritance* is reserved for characterizing the funds after they have been received. The debate about bequests asks why people leave them. From a theoretical standpoint bequests can be either planned or accidental. Individuals may make deliberate decisions to leave money to their offspring, or bequests may be given simply because individuals who have accumulated substantial wealth that they plan to spend during retirement die before they finish consuming this wealth, thereby unintentionally leaving something for their offspring to inherit.

When a bequest is planned, theory suggests that there are numerous reasons that parents may choose to leave a bequest (Masson and Pestieau 1997). Some scholars argue that they might be used as a device for disciplining children—that parents can use the promise of a bequest and the associated threat of disinheriting their offspring as ways to force members of the younger generation to devote attention to their elders. Other scholars argue that bequests are given for purely altruistic reasons, stating that wealthy parents who have led comfortable lifestyles may leave bequests simply to ensure that their children also can have comfortable lifestyles or to guarantee that the children are protected against misfortune. Because it is hard to test the theories about motives directly, it is not possible to know exactly how many families use bequests as a disciplining device or how many intentionally leave bequests.

A final controversy surrounds the effects that inheritances have on individuals and on society. Because individuals who are wealthy have advantages that individuals who are poor do not, many social scientists argue that inheritances and other intergenerational transfers may have a negative effect of perpetuating inequalities in society. Proponents of this view note that the ability to leave one's wealth to one's children allows children from

wealthy, comfortable backgrounds to be ensured of being fairly wealthy and comfortable themselves, while children in families where parents are too poor to have a pool of savings to leave at their time of death have no choice but to finance all their needs through their own earnings. Sociologists Melvin L. Oliver and Thomas M. Shapiro have been influential in laying out these arguments and in providing qualitative evidence from interviews with individuals who received inheritances that helps researchers understand the processes through which inheritances can perpetuate inequality (Oliver and Shapiro 1995; Shapiro 2004). Studies based on large national data sets containing information from families throughout the United States provide corroborating evidence suggesting that inheritances contribute to racial inequality (Menchik and Jianakoplos 1997).

POLICY IMPLICATIONS

A discussion of inheritance would be remiss without some mention of policy. One question many societies face is whether to tax inheritances. Naysayers often argue that taxing inheritances is inappropriate because it hampers families' ability to transfer family businesses from one generation to the next. Others argue that given the privilege that inherited wealth conveys, limiting the amount of funds that can be transferred is consistent with ideals of equal opportunity and making it on one's own. The theoretical debate about bequest motives also has implications for policy. If most bequests are accidental, taxing inheritances should not substantially alter saving behavior. However, if people are motivated to accumulate wealth for the expressed purpose of being able to leave it to their offspring at death, tax policies that reduce the amount that can be transferred after death might reduce saving. How inheritances affect the incentive to work is another important policy issue. The receipt of an inheritance can reduce individuals' willingness to work (Holtz-Eakin, Joulfaian, and Rosen 1993). This may provide a justification for policies designed to limit inheritances, much in the same way that there was popular support to reform welfare in the United States due to concerns about its effect on work incentives during the 1990s.

SEE ALSO *Inequality, Wealth; Wealth*

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INHERITANCE TAX

An inheritance tax is a tax on funds or assets that an individual receives from someone else when the latter dies. Most European countries levy their taxes on bequests from deceased individuals using this type of tax. This is not the only way that a government can tax transfers made from one generation to the next, however. The United States has an estate tax, meaning that the tax assessed by the government is levied on the entire estate before the estate is subdivided among heirs. The difference is more than semantic. Most countries have marginal tax rates that rise as individual income and wealth rise. With an estate tax, a $50,000 estate left to ten heirs will be taxed at the rate that applies for sums of $50,000. With an inheritance tax, each of the ten individuals receiving a share of the estate would be taxed on the $5,000 that they receive. If their marginal tax rate is low, their after-tax proceeds could be much higher than their share of a $50,000 estate that was taxed at a high rate.

In most European and North American societies, policies toward taxing transfers that elders leave their offspring at death have their roots in a pre-industrial, agricultural form of social and economic organization, where land represented the primary form in which wealth was held and social convention dictated that it was important to make sure that a family's estate remained intact as it was passed from one generation to the next (Delong 2003). As countries modernized, attitudes toward transfers changed, and tax policy evolved simultaneously. For example, the nineteenth century was a period in U.S. history in which the economy was rapidly expanding and land was plentiful.

Accordingly, J. Bradford Delong (2003) notes that Americans began to view inherited wealth with suspicion during this period, asserting instead that to be rich one was supposed to have earned his or her riches through thrift and industry. The shift in attitudes helped to create conditions that allowed for the passage of the first estate tax in 1916, and the tax rates actually have been quite high throughout time, indicating that there have been periods in history in which Americans did not view taxing intergenerational transfers as inappropriate or controversial. For example, during the New Deal era the marginal tax rate on large estates was set at 70 percent (p. 50). However, by the 1990s U.S. attitudes had changed and legislation was passed to phase the estate tax down to zero by 2011.

Why is taxing inheritances or estates so controversial? As with any tax there are trade-offs to contemplate when assessing the likely merits of the tax. Opponents argue that the tax makes it difficult to transfer a family business from one generation to the next, although policymakers presumably can prevent this outcome by setting an exemption for "small" estates. A second potential cause for concern exists because economic theory suggests that taxing estates or inheritances might reduce individuals' propensity to save. If individuals save because of a bequest motive, one expects them to save less during their lifetime if they fear their savings will be taxed by the government rather than being passed on fully to their heirs. However, the ability to receive an inheritance can also distort behavior. Theory suggests that individuals who receive an inheritance have incentives to reduce their work effort. This distortion to a labor-supply decision provides an argument for levying a tax on inheritances or estates.

SEE ALSO *Inequality, Wealth; Inheritance; Wealth*

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Ngina Chiteji

INIKORI, JOSEPH

1941–

Historian Joseph E. Inikori was born in Nigeria's Delta state in 1941. He obtained his undergraduate degree in 1967 from the University of Ibadan, where he embarked on a PhD program in 1968. A special arrangement allowed Inikori to study at the London School of Economics from 1969 to 1971 under the direction of A. H. John (1915–1978), a preeminent scholar of the early modern English economy. Inikori obtained his PhD in history there in 1973.

After a brief stint as an assistant lecturer at the University of Ibadan (1972–1973), Inikori was appointed lecturer at Ahmadu Bello University in Zaria, Nigeria, in 1973. In October 1981 he was promoted to the post of professor of history and subsequently became chair of the History Department. During this period, Inikori received two prestigious fellowships to English universities: he was named a visiting fellow at the London School of Economics (1974–1975) and he won the John Cadbury Fellowship at the University of Birmingham (1980). In 1989 Inikori became a professor of history and associate director of the Frederick Douglass Institute (1989–1998) at the University of Rochester in New York after serving there for a year as a visiting professor. In 2001 Inikori became the University of Rochester's director of graduate studies, in which capacity he was pivotal in the creation of the doctoral program in global history.

Inikori's research has been essential to the growth of scholarship on the Atlantic slave trade. International interest in quantifying the Atlantic slave trade erupted after the appearance of Philip Curtin's *The Atlantic Slave Trade: A Census* (1969), a groundbreaking work presenting a systematic estimate of the trade that was significantly lower than most previous estimates. Using newly discovered evidence in British customs records in a 1976 article, Inikori was one of the first scholars to revise Curtin's estimate upward. Publishing numerous articles and presenting papers at many conferences, Inikori has made an invaluable contribution to the literature on quantifying the slave trade.

Inikori has also examined the economic aspects of the slave trade, particularly its market structure, profit levels, hazards, and financial relationships. All of Inikori's works on this subject revolve around the central factor informing his multifarious research—the preoccupation with placing the Atlantic slave trade in its proper context in the development of the global economy. Inikori's analysis assigns a major role to the slave trade in the development of Africa's economic backwardness before 1850. In addition, Inikori has explored what he sees as the central role of diasporic Africans in the Americas during the Industrial Revolution in England, an argument first articulated in

Eric Williams's *Capitalism and Slavery* (1944). Inikori's various journal articles and conference papers have put forth the thesis that export markets throughout the Atlantic, markets generated through the labor of enslaved Africans, were crucial to the industrialization process in England. More than thirty years of scholarship culminated in the publication of *Africans and the Industrial Revolution in England: A Study in International Trade and Economic Development* (2002), a massive work drawing on classical trade theory and economic development analysis that focuses on the role of diasporic Africans in the Americas in fueling the growth of multilateral Atlantic trade between 1500 and 1850.

SEE ALSO *African Diaspora; Slave Trade*

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Joseph Avitable

INITIAL PUBLIC OFFERING (IPO)

An initial public offering (IPO) is the first ("initial") sale of equity to the public by a private company, usually through investment banks. The private company thereby becomes a public company (it "goes public").

The purpose of an IPO is to raise a substantial amount of equity capital and create a public market for company shares to be traded on stock exchanges. The funds raised can be used to finance various projects, such as the expansion of manufacturing, marketing, and research and development (R&D) activities. If a company needs to raise a large sum that cannot be financed by private investors, such as venture capitalists or banks, then an IPO might be the best, albeit a costly, way to obtain the necessary funds (the *pecking-order theory*). The number of IPOs has fluctuated over time, but in some years, it has exceeded six hundred. According to Jay Ritter and Ivo Welch (2002), there were over six thousand IPOs during the 1980–2001 period, raising (in gross) $488 billion (in 2001 dollars). After the collapse of the dot.com bubble in 2000, the number of IPOs declined, but increased to 179 in 2004.

Once public, firms have direct access to the capital markets, enabling them to raise more capital by issuing additional stock in a secondary offering (a *seasoned equity offering*). Public companies can also more easily raise funds privately.

Some insiders participate in the IPO by selling part of their shareholdings to receive possibly a substantial amount of cash and to diversity their portfolios. This can also be an exit point for many venture capitalists. Insiders can also sell their shares at later dates to convert their equity into cash.

An IPO is an expensive way to finance in three aspects: (1) the fees and expenses; (2) the change in ownership structure; and (3) the disclosure requirements. The underwriting fees (underwriting *discount* or *gross spread*) alone in the United States amounted to 7 percent of the gross proceeds for 90 percent of the IPOs in the late 1990s, although the figures are lower in other countries (Chen and Ritter 2000). By going public, the previous owners (e.g., founders and venture capitalists) sell a slice of their company to dilute their ownership stake, which may reduce their ability to control the enterprise.

Firms must supply detailed information to the potential investors at the time of the IPO (in the registration statement, including a preliminary prospectus—commonly called a *red herring*—and the final prospectus). This requires costly preparation of reports, as well as possible disclosure of strategic and sensitive information to competitors. Subsequently, firms operating in the United States are required as public companies to file quarterly and annual reports with the Securities and Exchange Commission (less frequently in some countries).

Most IPOs are offered to the public through an *underwriting syndicate*, consisting of a number of underwriters who agree to purchase the shares from the issuer to sell to investors (best effort or firm commitment). The lead underwriter usually sets the basic terms and structure of the offering, including the allocation of the shares and the offering price. Syndicate members do not necessarily receive equal allocations of securities for sale to their clients. Most underwriters target institutional or wealthy investors in IPO allocations, since they are able to buy large blocks of IPO shares, assume the financial risk, and hold the investment for the long term. Since "hot" IPOs are in high demand, underwriters usually offer those shares to their most valued clients.

IPO companies tend to be young and small companies that lack a long-established record of profitable operation. The median age (from the year of founding) of IPO firms is seven years (Ritter 2006). Roughly one-third of IPO firms reported losses in their IPO prospectuses before going public, although being profitable used to be standard (Ritter and Welch 2002). Ritter (2006) reports that

34.3 percent of IPOs are technology companies, of which 60.6 percent were backed by venture capitalists (compared to 39.9 percent of all IPO companies) for the 1980–2003 period. Therefore, investors purchasing stock in IPOs generally must be prepared to accept large risks for the possibility of large returns.

It is often observed that IPO shares open at a slightly higher price and close at a substantially higher price than the offering price at the end of the first of day of trading (providing a significant return to the IPO participants with the allocated shares). This phenomenon is referred to as IPO *underpricing* or *leaving money on the table* and is observed not only in the United States, but also in other countries. A price run-up on the first day occurs when the demand exceeds the supply (the IPO is "hot" or the offering is underpriced).

The first-day return averaged 18.8 percent (the average daily market return is 0.05 percent) during the two decades prior to 2001. It decreased with the collapse of the bubble, but is still substantial at 12.1 percent. Although the first-day return is typically positive, IPOs have in general underperformed in the long run both in terms of stock returns and financial accounting results. Ritter and Welch (2002) report that the average three-year buy-and-hold returns (from the closing price of the first day) of IPOs underperformed by 23.4 percent (compared to the CRSP [Center for Research in Security Prices] value-weighted market index) and by 5.1 percent (compared to seasoned companies with the same market capitalization and book-to-market ratio). Smaller firms (in terms of sales prior to an IPO) appear to do much worse. Underpricing and poor long-run performance do not appear to be related in a systematic manner, however. Why do firms leave so much money on the table? Why do so many IPOs underperform? These questions are important subjects of academic inquiry in finance.

The academic accounting literature documents that many IPO firms engage in earnings management through an aggressive use of (discretionary) accruals to inflate reported earnings around the time of the IPO. Long-run underperformance is more pronounced for firms with more aggressive discretionary accruals (Teoh et al. 1998). Some IPO firms in R&D-intensive industries reduce R&D expenditures below the optimal level to increase reported earnings (Darrough and Rangan 2005). These findings suggest that some managers try and sometimes succeed to influence the perception of investors of IPO firms by manipulating accounting numbers.

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INITIATION RITES

SEE *Rites of Passage.*

INITIATIVE

An *initiative* (also known as a *popular initiative*) is a type of direct democracy (along with the *referendum* and the *recall*) in which citizens participate directly in governance, rather than indirectly by voting in elections. Initiatives allow citizens to propose a measure—either a statute or a constitutional amendment—by filing a petition with a specified number of valid signatures from registered voters. The measure is then subject to an up or down vote in the next election. The initiative is available in twenty-four states, about half of all U.S. cities, and in nations such as Ireland and Switzerland.

The initiative has existed in the United States since colonial times. It gained considerable popularity during the Progressive Era, when 83 percent of all states to adopt the initiative (20 of 24) did so between 1898 and 1918. Its emergence was closely tied to western populism, with 71 percent of initiative states (17 of 24) lying west of the Mississippi River.

The initiative was called upon frequently in the 1910s and 1920s, but its use slipped into a period of relative dormancy during the Great Depression. It recaptured the public's imagination again in 1978 with the passage of Proposition 13 in California, a controversial measure that cut the state's property taxes in half. The political success of Proposition 13 spurred conservative interest groups and legislators to pursue tax-slashing measures in numerous other states, such as Oregon, Nevada, and Florida.

Proponents of initiatives argue that they provide a practical means for citizens to get results on issues that

their elected leaders fail to address. They also claim that initiatives help to educate citizens about public policy and the democratic process. Critics point out, however, that the initiative may empower special interests at the expense of the general public. While narrow economic interests rarely have the resources to mount successful initiative campaigns independently, well-organized citizens' groups may be able win passage of new laws at the expense of minorities, the poor, and other disadvantaged populations.

Beyond their direct effects on public policy through the creation of new laws, initiatives have myriad indirect effects on citizens, interest groups, and political parties. For citizens, they help to stimulate voter turnout, cultivate civic engagement, and enhance trust in government. Interest groups may threaten to propose an initiative if the legislature does not do its bidding on a particular subject, thus enhancing the influence of such groups in policy matters. Political parties may invoke ballot initiatives as a means to achieve broader electoral objectives. For example, during the 2004 presidential election, Republican Party officials proposed initiatives banning same-sex marriage in critical swing states as part of an effort to promote voter turnout among conservatives sympathetic to President George W. Bush. Although survey evidence suggests that the marriage initiatives may not have had the effect that Republicans intended in 2004, their continued use in the 2006 midterm elections indicates that political parties now see polarizing ballot initiatives as a staple in their electoral strategies.

The debate over whether the initiative is beneficial or detrimental to democracy is unlikely to abate in the foreseeable future. While it is unclear which specific interests are most advantaged or disadvantaged by the initiative's existence, it is clear that savvy political actors will continue to invent ways to co-opt initiatives to advance their goals.

SEE ALSO *Ballots; Democracy; Democracy, Representative and Participatory; Interest Groups and Interests; Progressives; Referendum; Voting*

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INKBLOT TEST

SEE *Rorschach Test.*

INPUT-OUTPUT MATRIX

An input-output matrix, A, is a square table with elements a_{ij}, representing the amount of input i required per unit of output j. A column of the matrix depicts the inputs needed for the production of a specific output and, therefore, can be considered a technique. The matrix is a constellation of techniques. For example, if $A = \begin{pmatrix} 0 & 1/3 \\ 1/2 & 0 \end{pmatrix}$, then the technique for product 1 is $\begin{pmatrix} 0 \\ 1/2 \end{pmatrix}$ (1/2 a unit of input 2 per unit of output 1), while the technique for product 2 is $\begin{pmatrix} 1/3 \\ 0 \end{pmatrix}$ (1/3 a unit of input 1 per unit of out put 2).

If the list of inputs is complete, including factor inputs, the input-output matrix also contains "techniques" for the production of the factor services. In 1936, in the first input-output study, the Russian-born American economist Wasily Leontief (1906–1999) presented consumption coefficients for the "production" of labor services. This case is the so-called closed input-output model. If only produced inputs enter the input-output matrix, one speaks of the open input-output model.

The basic equation of the open model is the material balance, $x = Ax + y$, where x is the vector of gross outputs, Ax the vector of intermediate inputs, and y is the vector of net outputs. The latter comprises the commodity components of household and government consumption, investment, and net exports. The material balance can be solved to determine the gross outputs, x, that are required to sustain the production of alternative bills of final demands, y. The solution is obtained by applying the so-called Leontief inverse, $(1 - A)^{-1} = 1 + A + A^2 + \ldots$, to the equation: $x = (1 - A)^{-1}y = y + Ay + A^2y + \ldots$. The total output

equals the final demand itself plus the direct input requirements given by the input-output matrix plus the indirect requirements. For $A = \begin{pmatrix} 0 & 1/3 \\ 1/2 & 0 \end{pmatrix}$, we have $(I - A)^{-1} = \begin{pmatrix} 1.2 & 0.4 \\ 0.6 & 1.2 \end{pmatrix}$. The first application was the U.S. World War II (1939–1945) effort.

The second equation of the open model is the financial balance, $p = pA + v$, where p is the row vector of prices, pA the row vector of material unit costs, and v the row vector of value-added coefficients, representing the factor costs per unit of output of each product. The financial balance can be solved to trace the effects of changes in the factor costs (such as wages, rental rates, and taxes) on all the commodity prices. The solution is $p = v + vA + vA^2 + \ldots$. Price equals unit factor costs plus the unit factor costs of the direct input requirements plus the unit factor costs of the indirect input requirements.

A simple but important application is the national income identity. Simple manipulation of the two equations yields the identity $py = vx$. On the left-hand side is the value of the net output of the economy or the national product, and on the right-hand side is the value added generated in the production of the gross outputs or the national income. The identity between the national product and income cannot be disaggregated. For example, business services belong to intermediate demand, and hence do not constitute a component of the national product. Their production, however, contributes to national income. If one neglects that the national product must be based on the net output of the economy, one makes the mistake of double counting.

Roughly speaking, an input-output matrix details the average input requirements for the various products, and reductions in input-output coefficients represent productivity gains. The most important source of such reductions is technical change, but input-output coefficients may also be reduced by eliminating waste or by efficiency change. The third source of productivity growth is a composition effect. If relatively efficient firms gain market share, the input-output coefficients of the industry will fall.

Some confusion surrounds the dimensions of an input-output matrix. Some practitioners (including Leontief) consider these to be products, others consider them industries, and still others think of "sectors," a concept that supposedly integrates products and industries. To clarify, one must consider the statistical roots of an input-output matrix. These are an input matrix or use table $U = (u_{ij})_{i = 1, \ldots, m; j = 1, \ldots, n}$ and an output matrix or make table $V = (v_{ij})_{i = 1, \ldots, m; j = 1, \ldots, n}$. Here m is the number of products and n is the number of activities (firms or industries). The first column of the use table depicts the inputs of the first activity (typically agriculture) and the first column of the make table depicts the outputs of that activity. The question is how to construct an input-output matrix on the basis of an input and an output matrix.

The United Nations (1993) advocates the so-called commodity technology model. In the case of square tables (with an equal number of products and industries), this amounts to taking the product of the input matrix and the inverse of the output matrix. However natural, this construction is troublesome. A complication is that the consequent input-output matrix may have negative cells, due to the presence of secondary products. (The off-diagonal entries in the output table create negative elements in the inverse.) In the case of rectangular tables (with more firms than products), the commodity technology model stipulates that the input-output coefficients are the regression coefficients in the equation where the inputs are regressed on the outputs.

To circumvent the problem of negatives and to distinguish between average requirements and best practices, modern input-output analysis works directly with the input and output matrices, without constructing input-output matrices. The gross output variable, x, is replaced by an activity vector, s. (If the first component is 1.01, this means that agriculture produces an additional 1 percent.) In the material balance, intermediate demand, Ax, is replaced by Us, and gross output x by Vs. In short, by working directly with the input and output matrices one can calculate activity levels that sustain alternative bills of final demands without addressing the complications that surround the construction of an input-output matrix (ten Raa 2005).

The logic of input-output analysis can be extended from production to income distribution. Households consume products (the inputs) and provide factor services (the outputs). Social accounting matrices treat different types of households (e.g., rural and urban) as separate "industries." Just as a product row of a use table depicts the distribution of output across industries, a factor-income row of a social-accounting matrix depicts the distribution of factor incomes across households and other income institutions.

SEE ALSO *Fixed Coefficients Production Function; Leontief, Wassily; Social Accounting Matrix*

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Thijs ten Raa

INQUISITION

SEE *Roman Catholic Church.*

INSTITUTIONAL INVESTORS

SEE *Investors, Institutional.*

INSTITUTIONAL REVIEW BOARD

In the United States, all academic institutions and other entities that receive federal government funding and that conduct research involving human subjects must maintain an institutional review board (also known as an internal review board, or IRB) to oversee the adherence to federal regulations that govern research using human subjects. These boards are committees of professional researchers and administrators who screen research proposals with the intent of enforcing the federal regulations covering research on human subjects. The primary intent of these regulations is to protect human subjects from potential physical or mental harm that may result from participating in a research project.

All research projects that employ human subjects, from medical drug trials to social behavior surveys, must be reviewed by the host institution's IRB to ensure that federal regulations are met within the proposed research design. Before proceeding with a project, researchers must receive approval, or in some special cases an exemption, from their local IRB. All research projects involving human subjects or employing data collected from people are subject to federal regulations, regardless of the source of financial support for the project. Since institutions found violating human subject regulations may be forced to forfeit all federal funding, the IRB is a critical component of any research university's governance structure.

HISTORICAL BACKGROUND

The global movement to safeguard and protect human subjects can be traced back to the aftermath of World War II (1939–1945) and the war trials held in Nuremberg, Germany, when the world learned of the atrocious medical experiments conducted on prisoners interned in Nazi concentration camps. The Allies developed what came to be known as the Nuremberg Code to assist the military tribunal in judging the Nazis' conduct. This code outlined the basic tenets that became the foundation of the ethics that govern research on human subjects. From the subjects' perspective, these tenets include: (1) the ability to voluntarily participate or withdraw from participation; (2) the freedom from coercion to participate; and (3) the right to be informed of all potential risks and benefits of participation. Furthermore, the code's provisions require that researchers be professionally qualified for the specific type of research in question, that they use appropriate research designs, and that they seek to minimize the risk of potential harm to human subjects.

Throughout the 1950s and 1960s, numerous medical associations and national governments around the world passed declarations and endorsements of professional codes of conduct based on the Nuremberg Code. In the United States, this occurred when the National Institutes of Health issued its Policies for the Protection of Human Subjects in 1966. In 1974 the Department of Health, Education, and Welfare raised these policies to regulatory status and introduced IRBs as a mechanism for institutions to ensure the protection of human subjects through regulatory compliance.

The American codification of rules designed to protect human subjects in the 1960s and 1970s was spurred on by two high-profile cases that employed procedures that many considered to be unethical. In 1963 Yale psychologist Stanley Milgram (1933–1984) published the results of a study on obedience to authority in which one human subject was asked to deliver electrical shocks of increasing voltage to another person who was secretly collaborating with the experimenter. Even though the shocks were fictitious, the screams and pleas of the collaborator led the subject to believe that they were real. Ironically, Milgram's motivation for the study was the psychology behind the Nazi atrocities. In 1972 the press revealed that the U.S. Public Health Service was conducting a decades-long clinical study of the effects of syphilis using a sample of several hundred, mostly poor, African Americans living near Tuskegee, Alabama. While some subjects were given proper treatment, others were not informed of their diagnosis and were prevented from receiving treatment from other health-care providers. The primary goal of the Tuskegee study was to determine how, over extended periods of time, syphilis affects the human body and eventually kills. Not only did many human subjects in this experiment die from nontreatment, but the disease was also spread to the spouses and children of the untreated participants. The Tuskegee researchers did not receive the informed consent of the subjects and did not disclose the risks of participation to them and their families. Once it became public, the study was terminated and the remaining subjects were given proper medical care. Eventually, in 1997, President Bill Clinton issued a formal apology on behalf of the U.S. government.

The passage of the National Research Act (1974) established the National Commission for the Protection of Human Subjects of Biomedical and Behavioral

Research. This commission's 1979 report, commonly referred to as the Belmont Report (named after the Smithsonian Institution's Belmont Conference Center, where the commission met) served as the basis for the subsequent revisions to the federal regulations, which eventually evolved into the current Federal Policy for the Protection of Human Subjects (Code of Federal Regulations, Title 45, Part 46). As of 2005, sixteen federal departments and agencies that support or conduct human subjects research had adopted this policy, which is sometimes called the Common Rule.

REGULATORY PRINCIPLES AND PRACTICES

Three general ethical principles outlined in the Belmont Report serve as the basis for the rules outlined in the Common Rule: (1) respect—honor for the personal dignity, autonomy, and the right to privacy of individuals; (2) beneficence—the obligation to minimize the risks of potential harm to human subjects while seeking to maximize the benefits of research to humanity; and (3) justice—ensuring that the benefits and costs of research on human subjects are distributed equitably. These principles guide the regulatory rules overseen by IRBs in the daily practice of academic research. For example, the requirement to obtain informed consent is derived from the principle of respect; the requirement to explicitly weigh potential risks against potential benefits is derived from the principle of beneficence; and the requirement to recruit human subjects fairly is derived from the principle of justice.

For an experimental project involving human subjects to fall under the regulations of the Common Rule, it must be classified as research. Specifically, the Common Rule defines *research* as "a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge." Projects that fail to meet this definition of research are exempt from the regulations. In some cases, local IRBs have exempted whole classes of academic exercises, most notably oral history projects, from their oversight. However, individual researchers are not at liberty to make an exemption determination on their own; only an IRB is allowed to review a proposed project and to determine if it meets the Common Rule's definition of research.

The technological revolution of the late twentieth and early twenty-first centuries spawned a resurgence in advocacy for the protection of privacy and individual rights. This was a contributing factor to what some saw as a tightened enforcement of Common Rule regulations by local IRBs, which were also being forced to respond to several high-profile cases of careless procedures during medical drug trials. As a result, many social scientists and educators discovered that their institutions wanted to make a closer examination of their research practices and procedures. The additional scrutiny and accompanying paperwork resulted in public complaints about the regulatory burdens imposed by the IRB system.

Some social scientists claim that the human subjects regulations are overly burdensome and have a stifling effect on the research climate. They say this is particularly true for survey-based research projects where the potential for personal harm to human subjects is either negligible or nonexistent. To date there is little compelling empirical evidence that the IRB system has significantly reduced the level of research using human subjects. However, most social scientists will agree that the enforcement of Common Rule regulations by IRBs does protect human subjects from highly risky experimental research practices. Given this, it is likely that the IRB system will remain entrenched in the governance of American academic research institutions for the foreseeable future.

SEE ALSO *Experiments, Human; Experiments, Shock; Marriage, Interracial; Milgram, Stanley; Tuskegee Syphilis Study*

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Paul W. Grimes

INSTITUTIONAL REVOLUTIONARY PARTY

SEE *Partido Revolucionario Institucional.*

INSTITUTIONALISM

The institutional approach to the economy had its genesis in the work of Thorstein Veblen, whose *The Theory of the Leisure Class* (1899) introduced the term *conspicuous consumption* into popular lexicon. A defining characteristic of Veblen's approach was the dichotomy between the dynamic forces of technology and the static forces of institutions. This conflict was played out in a modern business economy where the technological potential to produce goods was impeded by the demand of business enterprise that goods be sold profitably.

The terms *institutionalism* and *institutional economics* were coined in 1919 by Walton Hamilton. In an article in the *American Economic Review*, he presented the case that institutional economics was *economic theory*. This was true, Hamilton argued, because only institutional economics provided a unified approach to economic problems. Further, it rejected a laissez-faire view of the world and emphasized the role of institutions and the process of economic change. Finally, institutional economics understood the importance of habit and rejected the "pleasure and pain" of the utilitarian view of human behavior. For the next decade and a half, institutionalism gained important adherents in academia, many of whom subsequently rose to prominent policymaking positions in government.

As Yuval Yonay documented in *The Struggle over the Soul of Economics* (1998), institutional economics was on the rise in the interwar period and appeared poised to be a significant force in American economics. There were the labor studies of John R. Commons and his students at the University of Wisconsin. Veblen's student, Wesley Clair Mitchell, was the first director of the National Bureau of Economic Research. His pioneering work on business cycles was based on Veblen's *The Theory of Business Enterprise* (1904). Mitchell's student, Simon Kuznets, was instrumental in developing national income accounting. Yet another institutionalist, Morris Copeland, a student of J. M. Clark's, developed the flow of funds accounting, which in the 2000s is regularly reported by the Federal Reserve System and links the financial balance sheet with national income accounting.

Idle machines and hungry people in the 1930s were a glaring illustration of the conflict between making money and making goods. Many important institutionalists such as Rexford Guy Tugwell, an original member of Roosevelt's Brain Trust, were involved in the economic policy changes of the New Deal era. Adolf Berle and Gardiner Means, whose *The Modern Corporation and Private Property* (1932) had provided an understanding of the implications of the separation of ownership and control in the modern firm, were also institutionalists in the administration.

THE TEXAS SCHOOL

The most significant concentration of institutional economists in the United States in the post–World War II period, other than Commons' Wisconsin school of institutionalism, was at the University of Texas (UT) at Austin. The leading figure in the Texas School was Clarence Edwin Ayres, a philosopher turned economist who was greatly influenced by Veblen and John Dewey. The department included other figures who shared a common methodological tool (the Veblenian dichotomy) and were in agreement on economic policy; each was a strong personality, and collectively they sought to disseminate their view of the world. Though the institutionalist tradition remained at UT until the 1980s, the peak period of influence was undoubtedly in the 1950s. Another war, this time the U.S. intervention in Vietnam, divided the department and hastened the demise of institutionalism at UT.

OUT WITH THE OLD, IN WITH THE NEW

Some have viewed institutionalism as a story outside the mainstream of economics. However, as Yonay showed, the story of the rise and fall of institutionalism is intricately tied with changes in society and the evolution of the mainstream of economics. Just as the changes of World War I and the Russian Revolution provided a context for the rise of institutionalism, it was the aftermath of the Great Depression and World War II that resulted in its decline. Within the economics profession, institutionalism was swept away by mathematics, econometrics, and Keynesian economics. By 1956 a roundtable at the annual meetings of the American Economic Association pronounced the end of institutionalism. For the next three decades, institutionalism existed in the underworld of economics. Institutionalists were pushed toward, or willingly embraced, the view that they were outside the mainstream. This tended to marginalize the institutional economists that followed Veblen.

In 1985 Martin Bronfenbrenner published an article in the *American Economic Review* (*AER*) in which he stated that institutionalism had been pushed into "minority status although not into complete obscurity" (Bronfenbrenner 1985, p. 20). Attempts to respond to Bronfenbrenner were rebuffed by the editors of the *AER*. It was not until 1998 that there was again an AEA session on institutionalism, but this time it was the "new" institutionalism of Ronald Coase, Douglas North, and Oliver Williamson. This also rekindled an interest in the "original" institutional economics. The editors of the *Journal of Economic Literature* invited a paper on the institutional economics of Veblen and Commons.

The relationship between old and new institutionalism is an uneasy one. On the one hand, many of the new

institutionalists view the Veblen-Commons-Ayres tradition to be one that is anti-theory—meaning anti-neoclassical theory. On the other hand, the old institutionalists view the new institutionalism as still wedded to outmoded views of technological change, human behavior, and the market mechanism. Despite differences that some see as significant, there is little doubt that the new institutionalism represents a recognition of the limitations of textbook economics and the validity of the concerns raised by Veblen and his followers.

THE IMPACT OF INSTITUTIONALISM

If one considers Hamilton's 1919 definition of institutional economics, it seems evident that the mainstream of economics has come a long way toward becoming institutional economics. This evolution has occurred mostly without the direct input of original institutional economists. The mainstream has sought a unified explanation through the microeconomic foundations of macroeconomics. Today neoclassical economics has recognized through the analysis of noncompetitive market structures that perfect competition does not prevail. Even the theory of contestable markets is a move beyond the stale concept of perfect competition. Virtually all economists now accept that institutions matter. Neoclassical economics has developed sophisticated economic dynamics and evolutionary game theory. The work of Herbert Simon on satisficing and bounded rationality is a recognition that the atomistic, hedonistic man of neoclassical economics is not valid, and instead humans, though they may seek their own self-interest, are constrained from doing so precisely because they have limited capacity for rational behavior.

Though there is a basic similarity between the old and the new institutionalism, the essential difference hinges on whether one believes that there is an invisible hand that guides the creation of efficient institutions or whether it is all a matter of habit, technological change, and path dependency. The new institutionalists tend to emphasize the progressive aspects of institutions, while the old institutionalists see institutions as holding back technology. A balance between these views would seem to be the most realistic view of how society evolves over time.

As Ron Stanfield explained, the bottom line is that economics has advanced. It is becoming more realistic in the face of technological and institutional change in society (Stanfield 1999, pp. 252–253). It would seem that there is now a real possibility that Hamilton's claim will be realized in the twenty-first century: institutional economics is economic theory.

SEE ALSO *Economics; Economics, Institutional; Stratification*

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Ronnie J. Phillips

INSTRUMENTAL VARIABLES REGRESSION

In regression analysis social scientists use data to understand relationships among the people, institutions, and conditions represented by the measurements contained in the data's variables. These observations of the variables, along with some assumptions about the relationships, are used to test hypotheses generated by the model. The method of instrumental variables (IV) estimation addresses a particular difficulty encountered in ordinary least squares (OLS) regression: One or more of our explanatory variables may be "endogenous." Consider either the simple regression model with observations $i = 1, \ldots, n$, of variables x and y,

$$y_i = \beta_0 + \beta_1 x_i + \epsilon_i \,, \qquad (1)$$

or the multiple regression model analogue with additional explanatory variables (without loss of generality, one additional variable)

$$y_i = \beta_0 + \beta_1 x_{1,i} + \beta_2 x_{2,i} + \epsilon_i \,. \qquad (2)$$

The goal of regression analysis (using OLS, IV, or other methods) is to estimate the values of the β parameters and thus the relationship between x and y and, in the process, calculate values for each observation's error, ε_i, as well. IV estimation can improve our interpretation of this

relationship as causation rather than simply correlation. IV estimation attempts to address the concern that correlation between x and ε confounds the causation running from x to y. There are several reasons to suspect this "endogeneity," the correlation between the error and an explanatory variable.

First, the explanatory variable(s) and the dependent variable may be determined simultaneously—there may be feedback from the dependent variable to the explanatory variable. For example, when estimating the demand curve, x is a good's price, and y is the quantity of that good purchased. The observed quantity is an equilibrium quantity, which is jointly determined with price. Higher prices are associated with larger error terms. Due to the law of supply, a deviation of price above the demand curve induces a deviation of quantity to the right of the demand curve, which would bias OLS regression to measure a weaker relationship than actually exists. In fact the earliest known application of IV estimation was Philip Wright's (1928) study of the butter and flaxseed markets.

Second, there may be an omitted variable that is correlated with both the explanatory and explained variables. IV methods are often associated with labor economics, where the return to education may be of interest: the effect of another year of education (x) on a person's future earnings (y). Ability is an omitted variable in this regression—either because it is unmeasured or because it is difficult to measure accurately. The estimate of β may be biased if individuals who are more likely to pursue additional education also have more innate ability that is rewarded in the labor market by higher wages. The correlation between education on wages calculated by OLS would be larger than the correlation holding ability constant.

Third, an explanatory variable may be measured with error. Because an explanatory variable's (x's) measurement error is part of the regression's unobserved error (ε), larger errors are associated with larger values of the explanatory variable, and thus x is endogenous. The importance of this bias will be affected by the size of the measurement errors relative to other error components.

Although Wright (1928) is recognized as the first appearance of the method of instrumental variables, there is some controversy as to the actual author of the technique—it may have been Philip Wright's son Sewall. James Stock and Francesco Trebbi (2003) confirm that Philip deserves the credit. Olav Reiersøl (1941) was the first to use the term *instrumental variables* when the method was "rediscovered" decades after the Wrights did their work (Reiersøl 1945; Geary 1949). The Cowles Commission (Christ 1994) and Trygve Haavelmo (1944) pursued issues of model identification, to which IV techniques are linked. The development of two-stage least squares (Theil 1953; Basmann 1957; Theil 1958) was an important step in computational feasibility and statistical efficiency for equations with multiple endogenous variables and instruments. In the early twenty-first century the discussion of instrumental variable estimation's merits and faults continues (Angrist and Krueger 2001; Rosenzweig and Wolpin 2000), even in the popular press (Hilsenrath 2005; Whitehouse 2007).

REGRESSION TECHNIQUES

OLS regression estimates β in equation (1) by calculating the covariance of each side of the equation with x. Taking that covariance on each side of (1) produces the equation

$$\text{cov}(x, y) = \beta \,\text{cov}(x, x) + \text{cov}(x, \epsilon) . \qquad (3)$$

If x and ε are uncorrelated, so that $\text{cov}(x, \varepsilon) = 0$, then we can estimate $\beta = \text{cov}(x, y)/\text{cov}(x, x)$ from (3), and this also produces estimates of each observation's ε_i. Without the population-level assumption of zero correlation between the explanatory variable and the equation errors, we do not have enough information to "identify" both the β and ε_i values.

IV regression addresses the problem of $\text{cov}(x, \varepsilon) \neq 0$ by assuming that the correlation between ε and another variable z, the "instrumental variable," is zero: $\text{cov}(z, \varepsilon) = 0$. Taking the covariance between this instrumental variable and our equation (1) (replacing x in the first terms of equation (3)) produces

$$\text{cov}(z, y) = \beta \text{cov}(z, x) + \text{cov}(z, \varepsilon)$$

which can be solved for $\beta = \text{cov}(z, y)/\text{cov}(z, x)$, as long as $\text{cov}(z, \varepsilon) = 0$. Note that we do not replace x entirely in the equation; we are still investigating the relationship between x and y, not that between z and y. In fact the condition that z and ε be uncorrelated implies that there is no relationship between z and y other than through the relationship between z and x. This solution for β also shows mathematically why it is important that $\text{cov}(z, x) \neq 0$.

The two important assumptions of IV are reflected by the connection between the instrument(s) z and x and the lack of any other connection between the instrument(s) and the dependent variable. The first assumption can be checked: The instrumental variable z must be correlated with the endogenous explanatory variable x. The second assumption relies on our knowledge of the social phenomenon under study. The only effect of the instrument z on the dependent variable y is through the explanatory variable x, so that there is no correlation between the instrument and the error ε in equation (1). Because we do not actually know the true value of the error, we cannot fully test this second assumption. Although we can test the first assumption statistically, it too should be supported by our understanding of the

underlying theory and relationships. Finally, IV estimates are consistent but biased, which indicates that large samples are necessary.

Using multiple regression to estimate equation (2) requires calculation of a column vector β. Each observation can now be expressed as a row vector, resulting in the matrix X containing all observations' explanatory variables and the column vector Y containing all observations' dependent variable, $Y = X\beta + \varepsilon$. OLS calculates β as $(X'X)^{-1}X'Y$, again requiring zero correlation between the error ε and any of the explanatory x variables. The IV method instead calculates β using a row vector of instrumental variables, collected over all estimates in the matrix Z, as $(Z'X)^{-1}Z'Y$.

Returning to the examples, instrumental variables addresses each of them as follows. First, in the estimation of a demand curve, an instrument (z) for price is the cost of production: It is correlated with the price that buyers pay (x), but it is not correlated with quantity demanded (y). Second, a particularly well-known instrument for years of education is Joshua Angrist and Alan Krueger's (1991) quarter of birth, which is explained in more detail below. Quarter of birth is unlikely to have a direct effect on future earnings, but if a child is born close to the cutoff date, he or she will start school either substiantially earlier or substantially later than other children but will still be required to remain in school through age sixteen. Thus some children are required to have up to one year of additional education. Third, if the dependent variable is measured with error, we can use another measure of the dependent variable as an instrument, so long as the two measures' errors are not correlated.

The method most often used to implement IV is two-stage least squares (2SLS); it efficiently takes advantage of multiple instruments in addition to multiple explanatory variables (both endogenous and exogenous), as in equation (2). We can use the relative efficiency of IV and OLS to test for endogeneity with a Hausman (1978) test, and we can use "extra" instrumental variables to test their exogeneity.

SHORTCOMINGS OF THE INSTRUMENTAL VARIABLES METHOD

Before considering the drawbacks to the instrumental variables method, note that we are only concerned with the issue of endogenous variables if causality is an important part of the analysis. If the goal is only to describe statistical relationships in the data, IV estimation is not necessary (Moffitt 2003a).

We could also imagine that the omitted variable bias could be addressed by choosing participants randomly, avoiding the need to use IV methods, yet this is typically difficult in the social sciences. Although there have been some innovative public policy experiments (Moffitt 2003b) and field experiments (Smith 2002), many important questions in the social sciences require natural experiment methods, of which IV is an important part.

An important drawback to the method of instrumental variables is low correlation between the instrument(s) and an endogenous variable. The explanatory power of the regression is limited as a result. Not only are standard errors large, but a lack of variation in the instrument will translate into a limit on the range of behaviors that we can understand from the IV regression. We can return once more to our three categories of endogeneity and their associated examples. First, we learn about the demand curve only to the extent that changes in the supply curve reveal it. The portions of the demand curve that are not explored by changes in supply are no longer part of the estimation. Second, Angrist and Krueger (1991) estimated the return to education by instrumenting for education by quarter of birth. The combination of compulsory starting dates and compulsory schooling through the age of sixteen means that students born in different seasons may have up to a year's difference in compulsory education. Yet when instrumenting years of education by birth date, the regression estimate now has little relevance to those students who continue on to college, for example, because entrance to college is not determined by age but by high school graduation and performance in high school. Compulsory schooling does not affect the education decision of these people. Third, errors in measurement require an alternate measurement technique that covers a range of values similar to the measurement technique of interest.

Various authors also highlight the lack of specific theory in many instrumental variable studies. Mark Rosenzweig and Kenneth Wolpin (2000) carefully review many results from the labor economics literature, describing the theoretical assumptions implied by those studies' use of IV estimation. They argue that implicit assumptions are made whether the practitioners employing IV realize it or not. In either case, what these critiques call for is an improved understanding of the people, institutions, and conditions that are interacting as we study them. With better understanding we can improve our ability to generate relevant testable hypotheses about the actors' decisions and their connections to the conditions and institutions they face.

SEE ALSO *Least Squares, Ordinary; Least Squares, Three-Stage; Least Squares, Two-Stage; Regression; Regression Analysis; Simultaneous Equation Bias*

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INSTRUMENTALISM

SEE *Theory.*

INSULATING FACTORS

SEE *Stress-Buffering Model.*

INSURANCE

Risk is ubiquitous in the world and is generally considered a burden. Risk management, the art of coping with this onus, takes several forms: (1) doing nothing, or bearing the burden; (2) avoiding the risk, which includes reducing or quitting the risky activity; (3) spending resources to reduce the risk's implication or probability, such as self-insurance; (4) hedging; and (5) transferring the burden to someone else, which is insurance. Some risks, like individual and group extinction, are so important that one could study history as the theme of risk management or view culture and social institutions like marriage and state, as evolving in response to the challenge of risks. Risk management is not special to humans—for example, ants spend effort and hoard excessive food, a form of self-insurance that humans parallel by precautionary saving—but insurance is a human invention.

Insurance is a transaction that transfers a specified risk to another party for a fee, called a "premium." In return the insurer provides the insured with a promise of indemnification (insurance company payment for damages) should the specified event occur. The specified events vary widely and comprise the different lines of the insurance industry: marine, property, vehicle, liability, life, and health, but the basic structure is the same. The amount of indemnification may be event-dependent (small or large fire) or fixed (life). In life insurance the event specified is either death or longevity. Insurance is both a consumption good consumed by households and an intermediate input purchased by firms. In property insurance the business is split about equally between households and firms. As can be gleaned from a cross-section as in Table 1, insurance is growing faster than national product, suggesting that it is a luxury good (income elasticity larger than one) and a "super normal" input. It may imply that adequate development of the insurance industry is vital for economic development and growth. By providing assets whose value is contingent on a given random state of nature, insurance helps make the market more complete and therefore more efficient. Without insurance availability some useful transactions and investments would be curtailed or thwarted.

Gross premium as percent of GDP	Total	Life	Non-Life
Japan	13.2	10.0	3.2
US	10.6	5.2	5.4
European Union	9.2	6.0	3.3
Poland	2.9	1.0	1.9
Turkey	1.5	0.3	1.3

SOURCE: OECD Insurance Statistics Yearbook, 2002.

Table 1

The demand for insurance is theoretically explained by risk aversion. A risk-averse person faced with a probability p of loss D, like a house that may burn, is willing to insure against that risk even at a premium higher than the mean damage pD. Firms demand insurance to placate their risk-averse owners and other parties, like customers, suppliers, employees, and lenders, thereby securing better contract terms with them.

Insurance differs from gambling by some of its fundamentals designed to restrain devious incentives. The purchaser must have "insurable interest," that is interest in the well-being of the insured asset (owner, mortgage lender). Other than in the case of life insurance, indemnification must be bounded by the value of the asset, including by double coverage. In return for indemnification, the insured surrenders to the insurer subrogation of all his relevant legal rights to claim from other parties. Still, the insurance market is burdened by fraud and by imperfections like adverse selection, where the firm cannot completely ascertain the risk of each customer thereby charging a premium that attracts the bad risks more than the good, and by moral hazard, where after the insurance transaction the insured may wish to increase his or her risk.

The supply side raises two puzzles. First, what is the relative advantage of the insurer in bearing risks over its clients? Second, if indeed it has some such relative advantage, why does it seek to insure itself by purchasing reinsurance? Reinsurance is a transaction where an insurer buys insurance from another insurer thereby transferring, or ceding, some of its risks and business to others. The remainder is called retention. Reinsurance is a global industry with some large specialized firms.

The production of insurance can be done in two distinct modes: mutual and capital-backed. A mutual is an association of members-customers who barter in insurance and pledge to indemnify each other if damaged. This insurance is backed by members' commitments and capital. It must be a natural and intuitive arrangement since it goes back to antiquity. Second-century CE agreements among boat or donkey owners are legally analyzed in the Talmud.

Even a two-person mutual is advantageous. If each one has total property W and faces an independent risk of losing value D (like a house by fire) with probability p the advantage of such a mutual is:

$$[p^2U(W-D) + 2p(1-p)U(W-D/2) + (1-p)^2U(W)] - pU(W-D) + (1-p)U(W) = p(1-p)\{[U(W-D/2) - U(W-D)] - [U(W) - U(W-D/2)\} > 0 \quad (1)$$

The first line in (1) is the expected utility of each person in the 2-member fire-mutual, while the second line is his expected utility bearing the risk alone. The inequality follows from the concavity of the utility function that is implied by risk aversion.

The agreement improves with any additional member. The attractiveness of an n-member mutual may be explained by the expediency of (risky) portfolio diversification. Instead of holding one risky asset valued D, the agreement affords the member to hold the risk of n small assets, each valued D/n, which is always better for a risk-averse. In (1) the two fire events were assumed independent. Partial positive dependence leaves the inequality intact but reduces the advantage. Most mutuals collect a provisionary premium upfront and reassess members after risks' realization, collecting more or refunding some.

However the main mode of insurance provision nowadays is by a stock company where insurance is backed by equity capital. Such production dates to the fourteenth-century marine transaction that combined banking and insurance. In such maritime loans the lender would finance a trade transaction but waive the loan if the vessel is lost. It appeared in two variants regarding the collateral: bottomry (the vessel) and respondentia (the cargo). While in a mutual the number of owners-partners must vary jointly with that of the insureds, in the stock firm the two are independent.

OPERATION

Assume schematically an insurance firm that sells only one type of policy against the risk of, say, fire, which occurs independently with the same known probability p of total loss D for each customer. Let V be the firm's capital before any insurance transaction, serving as a cushion to enhance the value of its policies-promises. Suppose n such policies are sold at price $s + c$ where cn covers the cost of running the business. Usually s would exceed pD, the expected loss (and indemnification), and the balance is a safety factor that goes to profit and tax. The revenue ns is called unearned reserve because it is designated for probable coming claims. As time elapses the uncertainty regarding the year's fires is gradually cleared, more and more of the reserve becomes earned reserve, owned by the firm and part of its annual profit and of V. The firm's funds $V + ns$ are meanwhile invested and bear a random rate of return

r thereby generating a major part of its profits. The number of fires that occur is a random variable k. If the two random variables happen to have realizations R and K, then the firm's net worth at the year end is $(V + ns)(1 + R) - KD$. If it is negative, the firm's future promises are worthless so it is declared insolvent and ceases operation.

The risk of failure is real and troubling. In the United States during the 1990s approximately 70 firms, or 0.8 percent of all insurance firms, failed within a year. The condition $(V + ns)(1 + r) - KD < 0$ points out the reasons for failure: low V; low premia s; low R; large K. The dependence of the ex-ante probability of failure Prob$((V + ns)(1 + r) - KD < 0)$ on the magnitude of n is less clear-cut. Conventional wisdom attributes the relative advantage of the stock insurance firm in bearing risk to the multitude of clients and the law of large numbers. However, whether the numbers (n) in insurance are large enough to warrant this explanation is an empirical question. According to the 1963 work of Paul A. Samuelson, the advantage of the insurance firm lies in the multitude of its owners. Spreading a given risk over many bearing shoulders (stockholders) tends to evaporate its burden. In 1970 Kenneth J. Arrow and Robert C. Lind analyzed a large risky public project, where the risk was spread over the population, and demonstrated it for a single risk. This result explains the advantage that governments may have in insuring against catastrophic losses. It does not address the issue faced by the insurance industry of insuring against multiple risks. In this light, reinsurance is a handy mechanism to spread risks.

BUSINESS CYCLE

The insurance industry manifests a peculiar business cycle of its own. In times of hard market, prices are high and yet insurance is hard to get as firms offer only constrained extent of coverage and carefully select the clients. The result is high profits and rise in surpluses. That by itself may lead to the opposite, soft market, as the high surplus warrants more business and risk taking so prices go down to attract more and necessarily lower-grade customers. Profits go down, equities are depleted, and the cycle repeats itself.

INNOVATIONS

Since the 1990s a rise in world catastrophes like earthquakes, hurricanes, and terrorist activities drained world insurance surplus and constrained the industry's production capacity. In response financial innovations were introduced as substitutes for equity capital. The simplest is catastrophe bonds. An insurer issues such a bond, and the repayment of the interest and/or the principal is made contingent on a specified event like the catastrophe cost (for the insurer, for the region, or for the world) not exceeding a predetermined number. It shifts some of the risk from shareholders to bond holders and is a modern resurrection of the Middle Ages' maritime loan-cum-insurance. More complicated instruments are call and put options whose strike price is some catastrophe number.

REGULATION

All over the world, insurance industries are regulated. The raison d'etre of regulation is the risk of insurers' insolvency. Such occurrence would disrupt the economy, prevent gains from trade in risk-bearing, and cause personal loss and suffering to consumers. Although insurers themselves would suffer in case of insolvency, they can not be fully counted on to take steps to avoid it because of several market imperfections. First, because of the limited liability of a stock company, stockholders would not have to bear, in case of insolvency, its full cost but lose at most their equity. That weakens stockholders' incentives to avoid excessive risk. Second, moral hazard and agency problems develop. After issuing policies purchased under presentation of a certain risk level, the insurer may wish to assume more risk because part of its cost is borne by the insured policyholders. Regulators issue guidelines regarding the extent of underwriting, prices, and investment policy. They monitor the business and upon detecting signs of trouble intervene by issuing various directives.

SEE ALSO *Adverse Selection; Business Cycles, Real; Gambling; Insurance Industry; Moral Hazard; Regulation*

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INSURANCE INDUSTRY

Contracts transferring risk have been in existence since at least the time of ancient Babylon. The growth of a large-scale insurance industry dedicated to regularizing and facilitating transactions dates, however, from the growth

of transoceanic shipping in the seventeenth century as well as the growth of mathematical and computational sophistication needed to support mass transfers of risk. The industry has grown to one of the world's largest and in the twenty-first century comprises a ubiquitous and central component of life in developed nations, with written premiums surpassing $3.4 trillion in 2005.

Insurance—as a contract that often overcomes impediments to trade created by risk and that, of necessity, often requires significant agglomerations of corporate wealth—has long been an instrument of social success and social disgrace. It has unquestionably permitted the development of modern capitalism by stabilizing large concentrations of property or, in the case of life insurance, the preservation of family wealth with reduced regard for the longevity of particular family members. On the other hand, it was critical to the development of industrial-era slavery by permitting those involved in human trafficking to diversify the significant risks involved. It has often fueled and ameliorated the planet's environmental woes by permitting various industries to thrive notwithstanding the oft-materializing risk of environmental harm they create, though it has also provided a major source of capital from which those injuries can be at least partly redressed. It has increased safety in fields such as fire prevention, building codes, and vehicle safety by providing a relatively centralized repository of information on risk and significant motivation for its reduction. And it has unquestionably transformed the legal system in many jurisdictions by providing otherwise unavailable large sources of wealth to vindicate rights formally created by those jurisdictions.

The modern insurance industry is divided into three parts: (1) a life and health insurance segment; (2) a property/casualty segment; and (3) a financial management segment involving reinsurance and various forms of excess insurance. While many companies engage in all parts of the industry, often through various subsidiaries, others specialize in only segments and subsegments of the market consistent with their skills in marketing, assessing risks, processing claims, and coping with regulatory impediments. The life and health industry generally assesses the health trajectories of prospective insureds. Private health insurance is used in the United States to defray the significant cost of medicine and is often (though decreasingly) offered by employers as a tax-advantaged prerequisite. It also frequently serves there as a buying agent, negotiating in advance for lower prices for medical services on behalf of its insureds. In nations with broader government-provided health care, health insurance nonetheless often functions as a supplemental vehicle for transferring the risk associated with procedures the government plan does not cover or as to which government-provided care is thought inadequate. Life insurance offers payment to reduce the risk of premature death or, in the case of annuities, offers a stream of income to offset the risk of living longer than expected. It also frequently permits a tax-advantaged form of investment.

The property and casualty insurance insures individuals and businesses from direct and indirect losses due to fire, various forms of natural disaster, and other "perils." Casualty insurance transfers the risk of the insured encountering various legal obligations, such as an obligation to pay damages in a lawsuit or to perform on a contract. Major forms of casualty insurance include liability insurance, suretyships, and marine insurance. Large segments of the legal services industry assist casualty insurers in defense of claims against their insureds.

ECONOMIC CHALLENGES

Much of the modern insurance contract represents an effort to address four economic challenges inherent in virtually any attempt to transfer risk. Reducing this process into words often makes many insurance contracts extremely complex and forbidding documents, as insurers use various shorthands and jargon to compress complex concepts. The first challenge, moral hazard, is the proclivity of people with insurance to increase the level of insured risk they encounter beyond what otherwise would be the case. Insurers control moral hazard through such means as making the insurance incomplete through deductibles that reduce by a fixed or formula amount an insurer's otherwise obligation to pay a claim. The insurer likewise controls moral hazard through various exclusions and conditions that limit its obligations unless the insured adheres to various behavioral norms thought to reduce risk. These control mechanisms may make contract administration more costly, however, and can lead to dispute when the provisions involved are ambiguous or surprising to the insured.

The second challenge, adverse selection, is the proclivity of insureds that accurately perceive themselves as having a higher risk of loss than would be imagined by the insurer to purchase insurance disproportionately. Insurers attempt to curb adverse selection through tighter "underwriting," the examination of prospective insureds before contract formation is complete, through insistence on legal systems that condition the insurer's payment obligations on various forms of information transfer from insured to insurer, and through conditions and exclusions that prevent risk transfer in situations where the information needed by the insurer or the proper interpretation of that information would prove too costly for the particular insurer. Adverse selection potentially poses great hazards to the insurance industry, particularly where prospective insureds harbor secret information about their own level of risk. Various insurance systems have entered "death spirals" when they were unable to control adverse selection.

A third issue is that of systematic risk. Insurance works best when the risks are independent of one another and insurers can thus depend on the unbreakable "law of large numbers" to assure their profitability. When insurers encounter correlated risks, such as those posed when insuring a large number of homes in an area of seismic activity or hurricane risk or, potentially, terrorism risk, they thus either enter the market only with great caution or deploy various risk spreading and aggregation mechanisms such as reinsurance or catastrophe bonds that reduce systematic risk. These mechanisms are capable of succeeding because, while the risk that a home in the vicinity of one volcano will be destroyed from an eruption is correlated with destruction to a neighboring home, an insurance system that pooled both of their risks with those of homeowners near other seismically uncorrelated volcanoes would effectively create somewhat larger but still uncorrelated risks as to which the law of large numbers would more closely apply. The increased globalization of the insurance industry, coupled with the growth of institutions such as reinsurance, has greatly assisted with this problem.

Finally, there is simply the matter of insurers keeping their promises. Particularly in cases of life insurance or various "toxic tort" claims such as asbestosis or other environmental harms, the time between payment of premium and an insurer's obligation to pay on a claim may span decades. Moreover, individual policyholders or smaller businesses are often at a severe disadvantage in resolving disputes with large, sophisticated, and experienced insurers and generally have difficulty banding together to attain their common interests. Insurers thus must be forced by governments to be particularly prudent with their investments and to be responsible in the way they handle claims. Doctrines such as "contra proferentem," "reasonable expectations," "good faith," and "intelligibility" often play significant roles in this latter effort, though the greater ability to provide information in the modern age may result in a larger role for regulation via ratings and reputation.

INTERMEDIARIES

Critical to the operation of the insurance industry are various intermediaries who bridge information gaps between consumer and insurer. Agents, who may work for insurers or groups of insurers, attempt to fit existing insurance products to the needs of potential insurance consumers. Brokers, or independents as they are sometimes called, serve as expert shoppers, assisting businesses of varying sophistication in the purchase of complex and often coordinated packages of insurance products. These intermediaries often permit prospective insureds to access insurance products offered by insurers in other states or nations that would otherwise be unavailable. Often, the law imposes on these intermediaries duties of diligence in assessing the fit between the insured's needs and the products offered, the solvency of a proposed insurer, and in accurately transmitting information related to the risk posed by the insured.

REGULATION

Insurance tends to be a highly regulated industry. This is so in part because insurers have tremendous powers over the lives and fortunes of the individuals and businesses they insure (or refuse to insure) and in part because of their close resemblance to other large financial service industry players such as banks, whose ability to fulfill promises in times of need serves a vital social purpose. Because of the ability of insureds to cancel their insurance in most circumstances without severe financial penalty or to decline to renew their policies at relatively frequent intervals, insurance companies, like banks and other financial institutions, can lose capital rapidly. This fact means that even hints of trouble can precipitate a financial collapse with attendant financial and social ripples. Traditional insurance regulation attempts to reduce this risk through various forms of auditing, investment controls, government-sponsored backstop insurance and mechanisms to facilitate quiet recapitalization or merger of troubled insurers. In common law nations such as the United States and Commonwealth nations, courts have also been extremely important and influential in regulating insurers through the development of precedents regarding contract formation and interpretation.

In the United States, insurance regulation is conducted largely at the state level as a result of the 1868 decision of *Paul v. Virginia* and the substantial reconfirmation of that decision through the 1946 McCarran-Ferguson Act. There has, however, been an increasing role for the federal government, particularly in health insurance and, to a perhaps growing extent, in providing a backstop for insurance against terrorism. The McCarran-Ferguson Act generally displaces federal law regulating insurance, at least when a state is vigorously regulating the same subject, and specifically displaces most federal competition (antitrust) laws. The weakened role of competition law is said to foster healthy exchanges of information amongst insurers regarding risk and, on occasion, to regularize pricing in ways different than which would be achieved through competition.

In Europe, insurance is likewise subject to dual control, at the traditional national level and, increasingly since 1973, through directives from the European Community. Integration of these often disparate bodies of law and the various cultures and norms of these markets has been a significant challenge of the recent decades.

FUTURE PROSPECTS

The insurance industry faces new challenges in the years ahead. The industry will need to penetrate developing economic markets and adapt to local risks, regulation, and customs. As technology increases the ability to predict the future, risk pools may become more heterogeneous than they are presently perceived. Thus, unless long range contracting can be accomplished prior to the time prediction proves possible, or unless governments intervene with compulsory pooling mechanisms, insurance may become more difficult and more expensive for some groups to attain. Insurers will likely be called on to take heightened responsibility for the discrimination they foster through various rating practices that depend sometimes on accurate if unflattering information and sometimes on informational proxies that may neither be fair nor particularly accurate. Privacy issues likewise will concern the insurance industry. As large aggregators of data, insurers will come under increasing pressure to develop codes of conduct relating to the assimilation and dissemination of information. Cultural or religious barriers to insurance are likely to come under pressure as various segments of the globe develop more mature forms of capitalism; and, indeed, the growth of "takaful," mutual insurance that complies with Islamic limitations on purchase of commercial insurance, are symptoms of both this adaptation and expansion of the insurance industry. Finally, the industry will likely wish to develop mechanisms for handling new risks. Global climate change potentially poses significant risk to the insurance industry, which may grow in its advocacy for measures designed to reduce the impact of adverse weather conditions.

SEE ALSO *Adverse Selection; Global Warming; Industry; Moral Hazard; Risk; Slavery; Uncertainty*

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INTEGRATED PUBLIC USE MICRODATA SERIES

Integrated Public Use Microdata Series (IPUMS) refers to three distinct collections of individual-level data. IPUMS-USA is a coherent individual-level national database describing the characteristics of 100 million Americans in fifteen decennial census years spanning the period from 1850 through 2000. IPUMS-International includes data from 47 censuses of 13 countries, and new data are being added regularly. IPUMS-CPS provides annual data from the March demographic supplement of the Current Population Survey for the period from 1962 to 2006.

IPUMS contains information about both individuals and households in a hierarchical structure, so researchers can construct new variables based on information from multiple household members. Because it is microdata as opposed to summary aggregate data, IPUMS allows researchers to create tabulations tailored to particular research questions and to carry out individual-level multivariate analyses. Among key research areas that can be studied using the IPUMS are economic development, poverty and inequality, industrial and occupational structure, household and family composition, the household economy, female labor force participation, employment patterns, population growth, urbanization, internal migration, immigration, nuptiality, fertility, and education.

The database includes comprehensive hypertext documentation—the equivalent of over 10,000 pages of text—including detailed analyses of the comparability of every variable across every census year. Both the database and the documentation are distributed through an on-line data access system at http://ipums.org, which provides powerful extraction and search capabilities to allow easy access to both metadata and microdata. The National Science Foundation and the National Institutes of Health fund the project, so all data and documentation are available to researchers without cost.

IPUMS-USA is the oldest and best known of the three data series. It combines nationally representative probability samples produced by the Census Bureau for the period since 1940 with new high-precision historical samples produced at the University of Minnesota and elsewhere. By putting all the samples in a common format, imposing con-

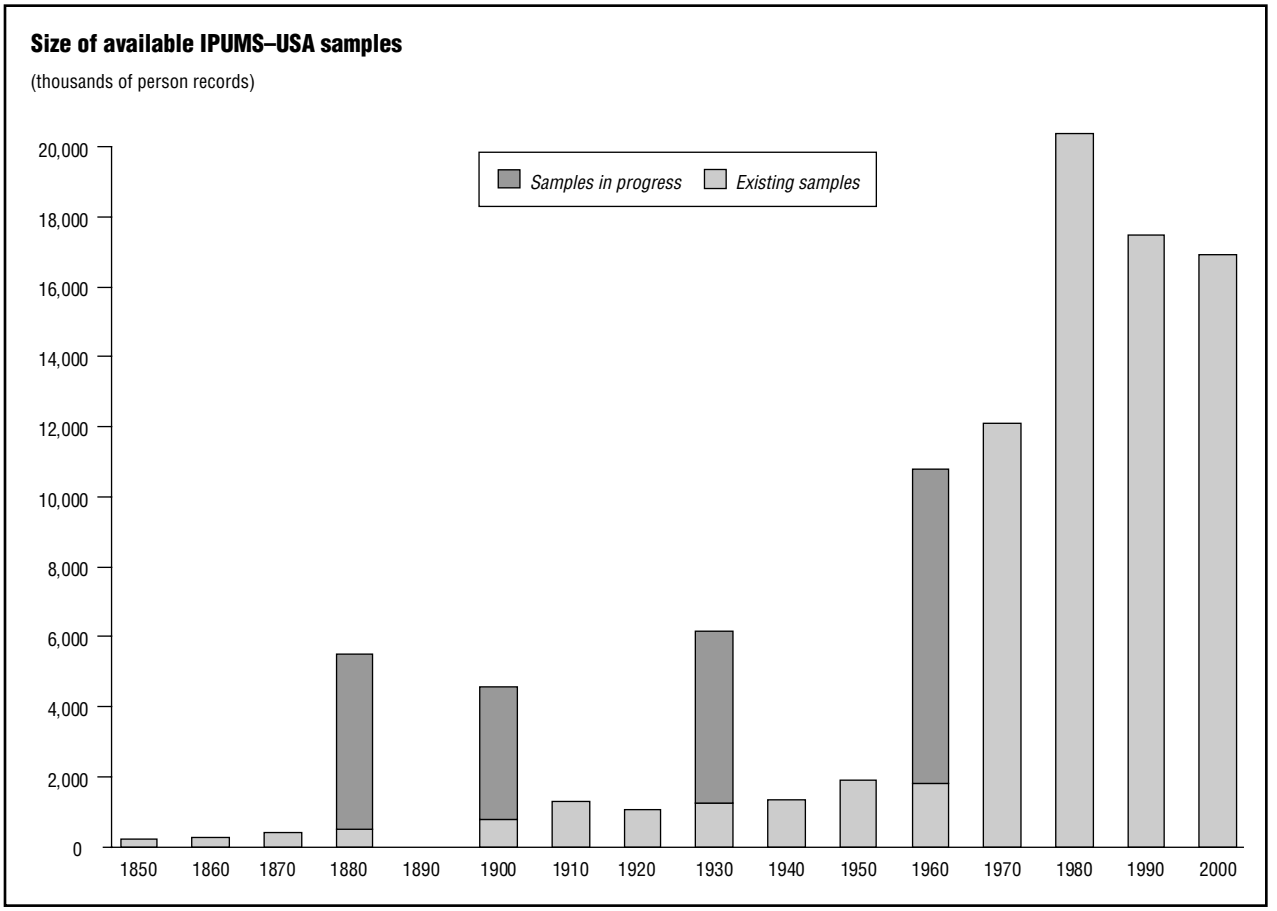

Table 1

sistent variable coding, and carefully documenting changes in variables over time, IPUMS is designed to facilitate the use of the census samples as a time series.

The sizes of IPUMS-USA samples are shown in Table 1. The only census year missing from the series is 1890, which was destroyed by fire. From 1970 onward, available samples include at least six percent of the population, and census years prior to 1970 cover approximately one percent of the population. Because the population grew rapidly in the nineteenth and twentieth centuries, the older 1 percent samples are considerably smaller than recent ones.

The large samples available for recent census years have proven valuable for study of small population subgroups, ranging from same-sex couples to the grandchildren of immigrants. In many instances, the large samples also permit the use of innovative methods; to take just one example, these files have allowed demographers to carry out multilevel contextual analyses by making it feasible to assess the characteristics of small geographic areas. Accordingly, projects are underway to create larger samples for the earlier census years. As shown in Table 1, higher-density samples are in preparation for the 1880, 1900, 1930, and 1960 census years.

IPUMS-USA is designed to encourage analyses that incorporate multiple census years for the study of change over time. The census has always contained certain core questions that are generally comparable over the entire time span of the database. Other questions have come and gone. Table 1 describes many of the subject areas covered by the census since 1850 (many of these topics correspond to multiple variables in the database). In general, the IPUMS samples include all the census questions available in each year, but for the period from 1940 onward, some detail is suppressed in order to preserve respondent confidentiality. In particular, geographic detail is far superior in the pre-1940 samples. In fact, the samples for the period prior to 1940 include the names and addresses of the respondents. On the other hand, topics such as income, educational attainment, and migration have only been covered by the census for the last six decades of the twentieth century. All IPUMS samples also include a common set of constructed variables to allow easy data manipula-

Availability of select IPUMS-USA subject areas, 1850–2000

	1850	1860	1870	1880	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Household record															
State	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
County	X	X	X	X	X	X	X	X	—	—	—	—	—	—	—
County group/microdata area	—	—	—	—	—	—	—	—	—		P	X	X	X	X
State economic area	X	X	X	X	X	X	X	X	X	X	P	—	—	—	—
Metropolitan area	X	X	X	X	X	X	X	X	X	X	—	X	X	X	X
City	X	X	X	X	X	X	X	X	X	X	—	—	X	X	X
Size of place	X	X	X	X	X	X	X	X	X	X	—	—	X	X	X
Urban/rural status	X	X	X	X	X	X	X	—	—	—	X	X	X	X	X
Farm	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ownership of dwelling	—	—	—	—	X	X	X	X	—	—	X	X	X	X	X
Mortgage status	—	—	—	—	X	X	X	—	—	—	—	—	X	X	X
Value of house or property	—	—	—	—	—	—	—	X	X	X	X	X	X	X	X
Monthly rent	—	—	—	—	—	—	—	X	X	X	X	X	X	X	X
Total family income	—	—	—	—	—	—	—	—	—	X	X	X	X	X	X
Person record															
Relationship to household head	—	—	—	X	X	X	X	X	X	X	X	X	X	X	X
Age	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sex	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Race	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Marital status	—	—	—	X	X	X	X	X	X	X	X	X	X	X	X
Age at first marriage	—	—	—	—	—	—	—	X	—	X	X	X	X	—	—
Duration of marriage	—	—	—	—	X	X	—	—	X	—	—	—	—	—	—
Times married	—	—	—	—	—	X	—	—	X	X	X	X	X	—	—
Children ever born	—	—	—	—	X	X	—	—	X	X	X	X	X	X	—
Birthplace	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Parents' birthplaces	—	—	—	X	X	X	X	X	X	X	X	X	—	—	—
Ancestry	—	—	—	—	—	—	—	—	—	—	—	—	X	X	X
Years in the United States	—	—	—	—	X	X	X	X	X	—	—	X	X	X	X
Mother tongue	—	—	—	—	—	X	X	X	X	—	X	X	—	—	—
Language spoken	—	—	—	—	X	X	X	X	—	—	—	—	X	X	X
School attendance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Educational attainment	—	—	—	—	—	—	—	—	X	X	X	X	X	X	X
Literacy	X	X	X	X	X	X	X	X	—	—	—	—	—	—	—
Employment status	—	—	—	—	—	X	—	X	X	X	X	X	X	X	X
Occupation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Industry	—	—	—	—	—	X	X	X	X	X	X	X	X	X	X
Class of worker	—	—	—	—	—	X	X	X	X	X	X	X	X	X	X
Weeks worked last year	—	—	—	—	—	—	—	—	X	X	X	X	X	X	X
Weeks unemployed	—	—	—	X	X	X	—	—	X	X	—	—	—	—	—
Total personal income	—	—	—	—	—	—	—	—	—	X	X	X	X	X	X
Wage and salary income	—	—	—	—	—	—	—	—	X	X	X	X	X	X	X
Value of personal or real estate	X	X	X	—	—	—	—	—	—	—	—	—	—	—	—
Migration status	—	—	—	—	—	—	—	—	X	X	X	X	X	X	X
Veteran status	—	—	—	—	—	X	—	X	X	X	X	X	X	X	X
Surname similarity code	X	X	X	X	X	X	X	X	X	X	—	—	—	—	—
Name	X	X	X	X	X	X	X	X	—	—	—	—	—	—	—

Note: X = available in that census year; P = available in a future data release.

Table 2

tion. Most important among these is a set of family interrelationship variables that have proven broadly useful in the construction of consistent family composition and own-child fertility measures.

In 2010 the scope of the U.S. census will be sharply reduced. The Census Bureau plans to eliminate the detailed long-form census questionnaire, and the census will include only a few basic inquiries such as age, sex, race, and relationship of each person to the householder. Information about such topics as income, education, housing, migration, or disability will instead be provided by the American Community Survey (ACS). With virtually the same questions as the Census 2000 long form questionnaire, the ACS provides data on three million households each year. The ACS has released an annual public use microdata file since 2000, and IPUMS has incorporated these samples. For most purposes, ACS samples are closely comparable to those from censuses, so the shift from census to surveys introduces only minor discontinuities to the data series.

IPUMS—International samples

Available 6/2006	
Brazil	1970, 1980, 1991, 2000
Chile	1960, 1970, 1982, 1992, 2002
China	1982
Colombia	1964, 1973, 1985, 1993
Costa Rica	1963, 1973, 1984, 2000
Ecuador	1962, 1974, 1982, 1990, 2001
France	1962, 1968, 1975, 1982, 1990
Kenya	1989, 1999
Mexico	1960, 1970, 1990, 2000
South Africa	1996, 2001
United States	1960, 1970, 1980, 1990, 2000
Vietnam	1989, 1999
Venezuela	1971, 1981, 1990
Samples in progress	
Argentina	1970, 1980, 1991, 2001
Armenia	2000
Austria	1971, 1981, 1991, 2001
Belarus	1999
Bolivia	1976, 1992, 2001
Cambodia	1998
Canada	1971, 1981, 1991
Czech Rep.	1991, 2001
Dominican R.	1960, 1970, 1981
El Salvador	1992
Egypt	1986, 1996
Fiji	1966, 1986, 1996
France	1999
Greece	1971, 1981, 1991, 2001
Guatemala	1973, 1981
Honduras	1961, 1974, 1988
Hungary	1970, 1980, 1990, 2001
Indonesia	1971, 1980, 1990, 1995
Iraq	1997
Israel	1961, 1972, 1983, 1995
Italy	1981, 1991
Madagascar	1993

Table 3

Researchers who require annual data for the preceding four decades can turn to IPUMS-CPS, which provides a coherent version of the widely used U.S. population survey produced by the Bureau of Labor Statistics. The CPS includes virtually all the subject areas covered by the decennial census and the ACS, but provides much greater detail in certain areas, such as health insurance coverage.

The IPUMS-International project is extending the IPUMS paradigm to approximately fifty countries around the world. Large quantities of machine-readable microdata survive from census enumerations since the 1950s, but few of them are available to researchers and most are at risk of becoming unreadable. The first goals of the IPUMS-International project are to preserve machine-readable census microdata files wherever possible and to obtain permission to disseminate anonymized samples of the data to researchers. Then—just like the original IPUMS project—researchers convert the data into consistent format, supply comprehensive documentation, and make microdata and documentation available through a Web-based data dissemination system. Table 2 summarizes current and planned IPUMS-International data releases. The project began releasing data in 2003, and with information on 143 million persons, by June 2006 it already exceeded the scale of IPUMS-USA. The project has concluded agreements to preserve and disseminate data from some 200 censuses in 71 countries; negotiations with most of the other major countries of the world are underway. Information on the IPUMS-International release schedule is available at http://ipums.org.

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INTEGRATION

Integration is the process by which individuals and groups come to interact freely and equally in society without regard to distinctions of skin color. In a completely racially integrated society, no systemic or institutional discrimination exists against the members of any racial group. Even if economic and cultural differences exist, these do not decrease access to employment, housing, politics, health, public services, and recreation for any racial group. Integration has both formal and substantive dimensions. Formal integration is based on principles, laws, and symbols that represent equality and nondiscrimination. Substantive integration involves the implementation (or actualization) of integration laws and is reflected in the significant and sustained incorporation of minority groups into the economic, political, and social institutions of the larger society.

By contrast, *segregation* describes a situation in which members of different racial groups rarely come into contact with one another or interact as social equals. Under segregation, separation along racial lines applies to nearly all aspects of life and those contacts between racial groups that do occur are socially controlled. Social distance is reflected in a "color line" that clearly demarcates dominant and subordinate groups. Segregation may vary from

de jure forms, which are overt, formal, and written into law, to de facto forms that are covert coded, and informal and exist independently of the law. In the United States, "Jim Crow" de jure segregation was dominant from the end of Reconstruction up until the early 1960s. In the North and West, however, de facto segregation based on custom and institutional discrimination was more prevalent.

Desegregation is the legal remedy used to bring about reforms in previously segregated institutions (Clark 1953, p. 2). While desegregation is often associated with "racial balance" and "racial mixing," and is necessary for the achievement of integration, it alone is not sufficient to bring about racial integration. First, while desegregation meets the expectations of formal integration in that it follows the "letter of the law," it does not meet those requirements of substantive integration that come closer to the "spirit of the law." Formal integration places the burden of integrating on the disadvantaged group and is commonly accomplished through "token" efforts. Secondly, desegregation does not necessitate that people in the reformed institutions interact freely and equally and without discrimination. Resegregation can occur with desegregation. For example, efforts to desegregate schools may result in "white flight" or the establishment of different tracks in schools, with disadvantaged racial groups disproportionately assigned to lower tracks. Third, the implementation of desegregation tends to be uneven and is influenced by the history, culture, and politics of different regions and communities and the salience of local color lines.

INTEGRATION POLICY RATIONALES AND IMPLEMENTATION

Racial segregation existed as both the "spirit" and "letter" of the law in the United States from the end of Reconstruction through the early post–World War II years. In 1896 the landmark Supreme Court case *Plessy v. Ferguson* declared racial segregation constitutional so long as public facilities were "separate but equal." The development of a system of "Jim Crow" segregation, built on dominant American beliefs in white supremacy, was socially reproduced in institutions, organizations, and daily folkways and mores. Discrimination restricted most black Americans that remained in the South to farm, domestic, and unskilled labor, and disproportionately subjected them to involuntary servitude in the form of convict labor. Indentured jobs and union membership were mostly closed to blacks, and when blacks were hired they were often used as strikebreakers. Blacks also suffered economic discrimination when it came to securing land, credit, and public relief and social welfare. The disenfranchisement of most blacks from voting and jury selection occurred as a consequence of violence, lynching, intimidation, "white-only" primaries, and poll taxes. Segregation and discrimination also extended to public schools, libraries, churches, recreational facilities, transportation, and other public accommodations.

Rationales for integrationist policy eventually emerged in response to sociopolitical changes brought about by World War II and the cold war, and as a result of the growing struggle for racial equality. As the United States entered World War II and the moral and ideological imperatives of fighting against German fascism and Nazi racial doctrines became increasingly evident, American leaders turned to inclusive egalitarian values to justify the war. Black leaders, black newspapers, and civil rights organizations called for a "Double V" Campaign—for victory against both fascism abroad and racism at home. The large-scale military and economic mobilization of the United States during World War II and the early years of the cold war involved a significant number of black Americans, both in the military and in civilian society. Black Americans struggled against the segregation and discrimination that continued during wartime, as evidenced by A. Phillip Randolph's March on Washington Movement (1941), which sought to end discrimination in defense industries, and by a campaign that threatened to mount civil disobedience protests against the segregation of the armed forces (1948). President Franklin D. Roosevelt's signing of Executive Order 8802 (1941), which prohibited discrimination in industries receiving federal defense contracts, and President Harry Truman's signing of Executive Order 9981 (1948), which integrated the armed forces, represented victories for these protest movements and provided precedents for substantive economic integration (Bennett 2003).

In the postwar period, the cold war between the United States and the Soviet Union and the international struggle to win the allegiance of newly independent nonwhite nations in Asia, Africa, and the Americas led to the articulation of enlarged moral and ideological imperatives favorable to racial equality. The convergence between these imperatives and the continuing struggles of black Americans and civil rights organizations against segregation and discrimination resulted in Supreme Court decisions and federal policies fostering integration (Klinkner 1999; Klarman 2004). Justifications for integration and desegregation policies also derived from practical considerations. By the cold war years, the cost of maintaining "separate but equal" schools and other facilities in the South had mounted substantially and was becoming increasingly impractical. "Equalization" strategies that were successfully used by the National Association for the Advancement of Colored People (NAACP) during the 1930s and 1940s forced many Southern districts that

wanted to maintain legal segregation to duplicate services and overspend on resources (McNeil 1983).

Those seeking to develop rationales for the implementation of integrationist policies were forced to consider two competing models of governance. A strong and centralized federal government with the ability to enact and forcefully implement civil rights laws was viewed as necessary by a coalition of liberal politicians and civil rights organizations who believed that only such a force could undo the historic and continuing effects of segregation and discrimination. It was recognized that reforms in segregation laws would open up the opportunity structure and improve the social and economic status of black Americans (Myrdal 1944; Clark 1953). Another, older conception of how racial justice might be achieved argued for reliance on local governments (i.e., "states rights"), and emphasized that states and local areas, rather than the federal government, should determine the appropriateness of laws concerning the functioning of institutions, including the color line. This conservative and segregationist coalition argued that only when the local folkways and mores had accepted the imperatives of racial equality should integration and desegregation occur.

The landmark Supreme Court decision *Brown v. Board of Education* (1954) illustrates the attempt to balance these competing conceptions of governance and, in effect, to reconcile integration and segregation. The Supreme Court's invalidation of the "separate but equal" doctrine with respect to school segregation provided arguments that formally initiated school desegregation. With respect to implementation, however, the Supreme Court ordered no immediate remedy and deferred reargument until the following year (1955). The Supreme Court endorsed a "gradual transition" to desegregation ("with all deliberate speed") that took local conditions into account and was sensitive to the "flexibility" of traditional principles of equitableness. The justices reasoned that immediate desegregation was unenforceable, impractical, and would lead to violence and school closures. President Eisenhower and the Justice Department supported a decentralized approach that would allow district court judges to return to the case and reargue it with limited guidance. By contrast, civil rights organizations such as the NAACP had urged complete and immediate desegregation (Klarman 2004).

Justification for integrationist policies also derived from the convergence between cold war domestic politics of the "Great Society" and the heightened mobilization of the civil rights movement during the early 1960s. The sustained mobilization of local organizing committees and movement organizations such as the NAACP, the Southern Christian Leadership Council, the Congress of Racial Equality, and the Student Nonviolent Coordinating Committee, along with the organized and sometimes violent resistance of local white institutional actors and communities, brought to America's consciousness the contradiction between democratic ideals and continued segregation and discrimination. The enactment and implementation of integrationist policies signified that the goals of the civil rights movement were legitimate and had been met—and that it was thus no longer necessary to mobilize demonstrations and protests. Minimalist conceptions of integration emphasized the principle of each individual being judged only by the "content of their character" and not by racial, ethnic, or religious distinctions.

The integration policies enacted during the 1960s comprised the most sweeping civil rights legislation in American history. The Civil Rights Act of 1964 was designed to target and prohibit all aspects of discrimination: voter discrimination (Titles I and VIII), public accommodation discrimination (Title II), public facilities segregation (Title III), segregation of educational facilities (Title IV), and employment discrimination (Title VII). It also mandated Civil Rights Commission investigations (Title IV) and established various federally assisted programs (Title VI). Resistance in several Southern states to ending voter discrimination was met head on by the mobilization of civil rights organizations, which resulted in the passage of the Voting Rights Act of 1965. This allowed federal registrars to take over the voter registration process in areas where past discrimination existed and oversee the polls on elections. The passage of the Civil Rights Act of 1968, which prohibited discrimination in housing, followed the assassination of Martin Luther King Jr.

Implementation of nondiscrimination policies depended on the voluntary actions of private-sector corporations, businesses, and firms, on public-sector bureaucracies and agencies, and on federal enforcement agencies such as the Equal Employment Opportunity Commission (EEOC) and the Office of Federal Contract Compliance Program (OFCCP). The policy of prohibiting racial discrimination in the employment practices of businesses that hold contracts with the government was formally strengthened with President John Kennedy's issuing of Executive Order 1375, which established an obligation on the part of federal contractors not only to refrain from discrimination but also to undertake "affirmative action" to ensure that equal employment principles are followed. The implementation of affirmative action as governmental policy took root under President Richard Nixon's administration as the "Philadelphia Plan." The government's motivation for pursuing the Philadelphia Plan was largely political, as the policy was designed to drive a wedge between the civil rights community and organized labor (Klinkner 1999, p. 294). As affirmative action evolved it came to encompass various programs and measures to improve the educational, employment, and busi-

ness opportunities of racial minorities, women, and other socially disadvantaged groups.

INTEGRATION: A DREAM FULFILLED OR DEFERRED?

Integration affirmed the principles of democracy and equality and sought the progressive inclusion of black Americans into the institutions and organizations of American society. As with nondiscrimination policies, the implementation of integration policies depended in practice on the voluntary actions of private-sector corporations and businesses, on public-sector bureaucracies, and on federal enforcement agencies. At the same time, federal court decisions mandating school desegregation were constrained by cautious gradualism, the persistence of localism and "states rights" governance, and high levels of racial segregation in the largest cities, where blacks were increasingly living. Federal integration policies had their most immediate impact in the South, where there was a history of de jure segregation.

While the effects of integration were immediately evident in the desegregation of public accommodations and the extension of voting rights, these advances did not translate into economic integration (or economic rights). After 1965 Martin Luther King increasingly emphasized the goal of achieving economic equality, which, he argued, would derive from: (1) the refocusing of macroeconomic policy from military-industrial spending and the Vietnam War to domestic economic spending and the poor; (2) improving black economic competitiveness through education and training; and (3) blacks leveraging their buying power by boycotting specific goods and services (King 1968). King's opposition to the Vietnam War and his support for the Memphis garbage-workers strike and the Poor People's Campaign were intertwined with his advocacy of economic rights. Since the late 1960s, civil rights organizations have followed King's lead by embracing affirmative action, "set-asides," "moral covenant" policies, and minority franchises (Walker 1998).

That integration was a dream deferred was made evident by the Kerner Commission's report, which warned that America was increasingly becoming two societies: one black, and living in the central cities; the other white, and living in the suburbs (National Advisory Commission on Civil Disorders, 1968). Integration's inability to address the social and economic conditions of the black masses and continuing conflicts between blacks and whites over education, jobs, housing, and the police led to the emergence of separatist and nationalist movements during the 1960s. Malcolm X, a national spokesman for the Nation of Islam, argued that black nationalism and separatism, rather than integration, were necessary for black empowerment and social improvement. Within segregated communities and ghettos, blacks were challenged to develop a sense of history, social consciousness, and solidarity and to support black institutions and organizations that would enable freedom and self-determination (Breitman 1990). The emergence of the black power movement signaled the fact that instead of embracing integration, blacks were increasingly "closing ranks" and seeking to control political and other institutions in black communities. At the same time that it criticized integration and black liberal coalitions, the black power movement introduced the concept of institutional racism to identify the complex intersection between institutional actions, cultural beliefs, and policies that contribute to the subordination of blacks (Carmichael and Hamilton 1967).

While federal policies of integration and desegregation began to reshape race relations in the South, in the North and West there was much less recognition on the part of white Americans that racism, discrimination, and segregation existed.

THE PERSISTENCE OF RACIAL SEGREGATION AND RESEGREGATION

The introduction of federal programs intended to foster integration was largely initiated during the cold war years of the 1960s. During the post–civil rights years of the 1970s, 1980s, and 1990s, the declining significance of cold war ideological and moral imperatives and of New Deal coalitions in national Democratic Party politics was accompanied by the rise of increasingly conservative political and social movements urging resistance to integration and racial equality. While the universal principles of integration were widely embraced, programs to implement integration and desegregation were frequently resisted (Schuman, Steeh, Bobo, and Krysan 1997).

The retreat from racial equality and the dismantling of programs intended to foster desegregation and integration have taken several forms. First, institutions such as the Supreme Court have retreated from strong interpretations of school desegregation, minority "set-asides," and affirmative action. At the same time, federal agencies such as the EEOC and the Fair Employment Practices Committee have been weakened by diminished funding. Second, in policy discussions and popular discourse affirmative action and integration programs are being redefined as "reverse discrimination." Although affirmative action applies to protected classes defined not only by race, but also by gender, age, and disability, and although enforcement of gender-based affirmative action largely surpass race-based enforcement, the discourse of "reverse discrimination" largely relates to the politics of racial resentment. Third, white Americans' perceptions and

beliefs concerning race-based economic inequality are more likely to emphasize individualistic explanations than structural or systemic explanations (Kluegel and Smith 1986; Kluegel 1990).

Despite important civil rights reforms such as *Brown v. Board of Education* (1954), the Civil Rights Act of 1964, the Voting Rights Act of 1965, the Fair Housing Act of 1968, and affirmative action, racial segregation continues to socially structure housing, education, the workforce, and other social institutions and organizations. Racial segregation remains a widespread social relationship, practice, and symbol of racial and ethnic inequality in American society. Continued patterns of segregation experienced by racial minority groups symbolize and actualize the lower social status of these groups in the social hierarchy and their limited access to opportunities and resources connected to the American Dream.

During the post–civil rights years, high levels of black segregation have continued despite small but steady decreases in segregation in those metropolitan areas with the largest black populations. Sociologists use a "segregation index" to measure the degree of segregation, ranging from 0 for full integration to 100 for complete segregation. In 2000 the average black-white segregation index in U.S. metropolitan areas was 65, and in the Northeast and Midwest it was 74 (Iceland, Weinberg, and Steinmetz 2002). Based on a multidimensional construct of segregation with five dimensions of spatial variability—evenness, isolation, clustering, and concentration—and scores of at least 60 on four of the five dimensions, twenty metropolitan areas were identified as "hypersegregated." Together, these contained roughly eleven million black Americans (in 1990) and constituted 36 percent of the entire U.S. black population (Massey and Denton 1993).

Hispanic segregation in metropolitan areas has been more moderate, with average scores ranging from 46 to 55 (between 1970 and 1990) (Denton and Massey 1988), and Asian segregation has been relatively lower than both black and Hispanic levels (averaging from 36 to 44 between 1970 and 1990) (Massey 2001, pp. 407–409). One of the most salient features of segregation is the concentration of blacks in central cities and whites in suburbs.

Racial segregation tends to be socially reproduced across institutional contexts. Individuals in racial groups who are segregated in one institutional area—whether in housing, education, employment, criminal justice, or informal social interactions—are also likely to have mostly segregated experiences in other institutional environments.

The persistence of internal segregation in schools derives from institutional relationships and public policies. High levels of residential segregation are associated with commensurate levels of racial segregation in schools. Although school segregation decreased between 1968 and 1980 as a result of judicial enforcement, during the 1980s and 1990s governmental inaction and deregulation of mechanisms to desegregate schools led to increasing resegregation. In many school districts where court-mandated desegregation has ended, there has been a major increase in segregation (Orfield and Lee 2004). Levels of school segregation have been higher in the Northeast and Midwest than in the South and West (Orfield 2001). The abandonment of desegregation as public policy has mirrored the rise in national politics of the assumption that segregation and racial inequality are historic problems that have already been addressed. Contemporary movements to expand educational choice, through publicly funded vouchers that enable students to attend private schools, are occurring in a context in which the civil rights afforded by the *Brown* decision are being derailed.

Racial minorities who attend racially segregated urban schools are less likely to take college preparatory courses and attend college than those in more integrated and suburban schools. Teacher assignment practices reinforce inequality, because the least proficient teachers tend to be assigned to the least desirable schools, which are often in minority neighborhoods. Yet even in more integrated schools, minorities experience disadvantage due to lower expectations on the part of teachers and placement in lower tracks.

During the post–civil rights years, continued improvements were made in high school graduation rates across racial groups, which was reflected in a narrowing of the racial gap. Although actual and percentage levels of college graduation increased for all groups during the 1990s, there has been a growing racial gap in college attendance rates between whites and blacks and between non-Hispanic whites and Hispanics (Blank 2001, pp. 25–26). Recent efforts in higher education to increase academic standards and eliminate affirmative action have come at the expense of continued movement toward racial equality and educational opportunity.

Continuing racial segregation and discrimination has affected wealth accumulation, earned incomes, and employment chances across racial groups. Racial differences in wealth, which reflect intergenerational wealth and current asset ownership, are more extreme than income differences. Wealth differences are reflected in differences in levels of home ownership, which are not merely the result of income differences but rather a product of the historical legacy of residential segregation, Federal Housing Authority and Veterans Administration policies, and redlining. Blacks are rejected for home loans 60 percent more often than whites with the same income level, black families pay more in mortgage interest than

white families, and the valuing of homes and equity is color-coded by segregation (Oliver and Shapiro 1995).

Segregation in labor markets, which are associated with different formal and informal social networks, is reflected in higher rates of unemployment and joblessness among racial minorities. Unemployment rates for both blacks and Hispanics have remained roughly twice the white unemployment rate. Among the factors contributing to high joblessness rates are *selective recruitment* and *statistical discrimination*, employer practices that reduce access to jobs for inner city applicants. These may involve limiting recruitment to selective neighborhoods, avoiding the placement of ads in central city newspapers, passing over applicants from black public schools, and subjective tests of job productivity (Wilson 1996, pp. 133–136).

Segregation and deprivation among blacks have been accompanied by criminal justice policies with impacts that are highly differentiated by race. "Racial profiling" by law enforcement associates particular racial and ethnic characteristics with dangers, risks, and threats. The federal Anti-Drug Abuse Act of 1988 prescribes the same mandatory-minimum sentence for 50 grams of crack cocaine (a form of the drug more likely to be used by low-income blacks) as it does for 5,000 grams of powdered cocaine (a form more likely to be used by high-income whites) (Blumenstein 2001, p. 26). An individual caught possessing only 1 to 5 grams of crack cocaine is subject to a mandatory minimum sentence of five years in prison. Crack cocaine is the only drug for which there exists a mandatory minimum sentence for the first offense (Kennedy 2001, p. 15). More than 30 percent of black high school dropouts will go to prison at some time in their lives, compared to 10 percent of white male high school dropouts (Patillo, Weiman, and Western 2004). Among black males in their twenties, 30 percent were under the control of the criminal justice system—prison, jail, probation, or parole (Mauer 1990).

When U.S. integration policies were first adopted, race-based discrimination was officially recognized and black-white relationships were the primary focus of formal and substantive integration. Through the 1960s, the federal government and its civil rights agencies were expected to end legal segregation and discrimination. By the post–civil rights years, the goals of integration had expanded into a policy of diversity, which policymakers struggled to implement. While civil rights organizations have emphasized that integration programs should be sustainable and relatively enduring considering the long history of slavery and segregation, there is a growing tendency among politicians to view integration as a set of transitional programs that have "run their course" and are no longer necessary. New patterns of integration emphasize formal integration and are based on the principle of "colorblindness," which argues that people should be treated as individuals and not as members of groups. By asserting that race does not matter, colorblindness as a principle and social policy denies the reality of continued discrimination. At the beginning of the twenty-first century, racial segregation and institutional discrimination persist in the United States despite the emergence of a colorblind society.

INTEGRATION IN CROSS-NATIONAL CONTEXTS

The philosophical bases for the adoption and implementation of integration policies in the United States may have been informed by similar attempts to promote racial and ethnic integration in other societies such as India, Brazil, Britain, and France. Integration policies in these countries have varied with respect to their emphasis on either formal or substantive integration, their articulation of race and racial discrimination (as distinct from ethnic and class discrimination), the role of the government and government agencies, and the demographic characteristics of racially and ethnically subordinate groups. Differences also exist regarding the question of whether such programs should be viewed as transitional or long-term.

India's integration policy, the "reservation system," grew out of the larger Indian struggles for home rule and independence, which had as one of their goals the elimination of the caste system. The Indian caste system, which existed for more than 2,500 years (up until 1947), was a status hierarchy and occupational stratification system with religious, color-based, and regional dimensions. Under the country's constitution, the "reservation system" sets aside a proportion of all government jobs, seats in educational institutions with government funding, and electoral constituencies for persons from "scheduled castes," "scheduled tribes," and "other backward classes" (Deshpande 2005, p. 10). Because Indian integration policies are based on the constitution, they cannot be legally challenged. National minority status, rather than racial status, is the basis of assignment to one of the protected classes. Unlike the United States, integration is based completely on voluntary efforts. Greatest resistance to the integration of the "untouchables" has come from the highest castes, which are highly represented in the decision-making positions of government. Critics of India's integration have emphasized that the poorest and outcast "scheduled castes" and "schedule tribes" are greatly outnumbered by the "other backward classes" and that the "quota system" has selected from the more privileged members of these underclasses and not the poorest. At the same time, many of the slots made available by the quota system go unfilled due to low levels of education, training, and preparation among low-caste groups (Sowell 2004).

Brazil's integration policies have been constrained by a national ideology that views the country as a "racial democracy," a self-perception supported by the absence of legalized racial segregation, substantial miscegenation and interracialism, and a constitutional provision of equality before the law. Until recently, race as an official category did not exist and public discussions of the "racial question" were officially prohibited. The ideology of "racial democracy," which maintains that race does not matter, is intricately combined with an informal system of discrimination and a social hierarchy of color (or "pigmentocracy"), in which lighter skin is associated with greater prestige and economic status and darker skin is associated with lower prestige and poverty. Under the dominant cultural belief system, African ancestry or blackness was defined by the European elites as anti-Brazilian. Relatedly, among blacks the notion of a colorblind "racial democracy" has undermined the legitimacy of organized struggle and the development of collective consciousness, self-help, and uplift. During World War II and the postwar years, any possibilities of integration in Brazil were further thwarted by two major periods of authoritarian rule (1937–1945 and 1964–1985) (Nascimento and Nascimento 2001).

More recently, Afro-Brazilian activists have struggled to have the "racial question" recognized as a national issue and have demanded the articulation of specific public policies addressing racism. At the same time, the number of Afro-Brazilians elected to political office and in other positions of power has increased, though it is still very far from proportionate. Also, racism is increasingly coming to be viewed as a question of human rights. In the late 1990s, President Fernando Henrique Cardoso publicly denounced racism and began to introduce affirmative action programs for Brazilians of African descent. The government of President Luiz Inácio Lula da Silva (2002–present) created the Special Ministry to Promote Racial Equality and state universities in Rio de Janeiro, Bahia, and Minas Gerais began the policy of reserving vacancies for blacks and public school students. The Brazilian Congress has also introduced bills that mandate quotas for all public universities, government services, and television shows. The implementation of affirmative action policies in the universities has derived from the convergence of Afro-Brazilian struggles and new governmental policies.

In Britain and France, official recognition of race, ethnicity, and discrimination was virtually absent until after World War II. In both countries, the large-scale influx of immigrants from former colonies in the Southern Hemisphere led to a perceived need for integration policies.

British integration policies grew out of legislation that was initially designed to restrict immigration and depoliticize race. In response to the growth of West Indian and East Indian immigrant populations, in 1964 the Labor-dominated British government enacted legislation that both restricted immigration and encouraged integration (Bleich 2003, pp. 65–66). Four years later, a progressive coalition brought about the enactment of the more comprehensive 1968 Race Relations Act, which made discrimination on racial grounds unlawful in housing, employment, training, education, and the provision of goods, facilities, and services. This legislation established an administrative agency for race-related issues, structured access into British institutions, and widened protections against racism. Paralleling developments in the United States, the 1968 Act reframed issues of integration as issues of access. The British Parliament expanded the definition of discrimination from direct intentional discrimination to indirect discrimination, whether intentional or not, and laid out a soft form of affirmative action known as *positive action* (Bleich 2003, pp. 101–102). The Race Relations Amendment (2000) extended the coverage of the 1976 Act to all public institutions, with only a few limited exceptions. Since the 1976 Race Relations Act, movement toward increased access has been constrained by institutional changes—such as decentralization, which saw political power shift to the judiciary, local jurisdictions, and the bureaucracy—and, beginning in the 1980s, by a succession of conservative-led British governments that were not receptive to "race-conscious" policies addressing indirect discrimination.

France's antidiscrimination policies derived from French memories of Nazism, anti-Semitic newspapers, and speeches by far-right demagogues. Protections against unequal access to employment and services were negligible. Focused largely on formal integration and "expressive racism," French integration legislation introduced in 1972 criminalized racial defamation and the provocation of racial hatred against groups or individuals; outlawed discrimination in hiring, firing, and the provision of goods and services; and enabled the government to disband groups that seek to promote racism. Protections against unequal access to employment and services remain negligible (Bleich 2003, pp. 139–141).

French legislation conceived of discrimination as based on religion or ethnic or national origin—but not on race. France has a "colorblind" code that omits the word *race*. The government collects no census data relating to race and ethnicity, and in 1978 it banned race-based statistics. There is no public- or private-sector use of racial or ethnic data to estimate the status of minorities (Bleich 2003, p. 141). Although the immigration of North and West Africans has continued, and immigrants in France

experience substantial economic inequality and segregation, structural discrimination and unequal access are not recognized in France's integration policy.

SEE ALSO *Affirmative Action; Anti-Semitism; Apartheid; Assimilation; Black Nationalism;* Brown v. Board of Education*, 1954; Caste; Caste, Anthropology of; Civil Rights Movement, U.S.; Crowding Hypothesis; Desegregation; Discrimination, Racial; Education, Unequal; Ethnocentrism; Ghetto; Great Society, The; Immigration; Jim Crow; Jingoism; Kerner Commission Report; Nation of Islam; Nazism; Quotas; Race-Blind Policies; Race-Conscious Policies; Racism; Segregation; Segregation, Residential; Segregation, School; Separate-but-Equal; Separatism; Voting Rights Act*

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Frank Harold Wilson

INTELLECTUAL PROPERTY

SEE *Property.*

INTELLECTUALISM, ANTI-

It is difficult to define *anti-intellectualism* with precision. In the simplest sense, the term expresses enmity against the life and works of the mind and adherence to allegedly unmediated practicality. Still, it is hasty to assume that this resentment of the intellect pertains to actions or practices devoid of intelligence. The name silences a basic contradiction. Anti-intellectualism refers to a certain tendency or mentality, therefore a specific state of mind, that paradoxically refuses to recognize the capacity and value of the mind.

It would be misguided to take anti-intellectualism at its word and determine that it consists of unexamined sentiment, pious faith, common sense, or unmitigated pragmatism. Anti-intellectual discourses deployed against ideas and values thereby pronounced dangerous are themselves propelled by a whole complex of ideas. However—and here lies the contradiction—these ideas must remain strictly unacknowledged; their presence and exercise must be denied. In this respect, there is something ideological about anti-intellectualism, or perhaps it is more accurate to say that anti-intellectualism is likely to adhere to the primacy of an ideological, rather than critical, relation to the world. This can be said despite the claim that in certain instances of modern history, under the banner of populist egalitarianism, anti-intellectualism was deployed in order to break down various ideologies of privilege.

Given anti-intellectualism's paradoxical conditions—whether we examine it as an idea, an attitude, or a historical phenomenon—it is most productive to trace its multiple and fluctuating reference frames rather than to insist, in anti-intellectual fashion perhaps, on its self-evident nature. As a departure point, we may take anti-intellectualism to consist of whatever discourse subverts conditions that enable intellectual life to flourish: an open horizon of interrogation, a plurality of sources of knowledge, the right to dissent, the freedom to challenge certainties and authorities, the capacity to pursue independent research and investigation. The means of subversion is to foster instead a climate of dogmatism and conformity, often driven by narrow and politically expedient aims, that enforces a closed system of thoughts and beliefs exercised throughout the social sphere, though often concentrated in the realms of religion, education, and mass culture. Anti-intellectualism triumphs when such conditions strangle not only the terms of intellectual life but also the very essence of democratic existence.

Anti-intellectualism in the United States should be considered "older than national identity itself," as Richard Hofstadter succinctly put it in his *Anti-intellectualism in American Life* (1963), which remains the consummate treatment of the subject. Published a few months before the assassination of President John F. Kennedy, at a time of tremendous intellectual optimism in U.S. politics and obviously unwitting of its imminent collapse, Hofstadter's book sought to theorize the conditions that produced McCarthyism—one of the gravest instances of American anti-intellectualism—by thinking backward, in broad historical terms, in order to elucidate a phenomenon with deep roots in American society.

Certainly, the anti-intellectualism that brought Dwight Eisenhower to power in 1952 against Adlai Stevenson (in whose name the term *egghead* achieved popular usage) could be seen as a replay, in another historical register, of the same attitude that brought Andrew Jackson to power against the privileged and bookish easterner John Quincy Adams. What became known as the Jacksonian Era (1824–1840) is traditionally considered to be a period of emancipatory democratization in U.S. history, and yet this is when the down-home posturing of David ("Davy") Crockett in the corridors of the U.S. Congress, his vulgar and contemptuous response to the American Enlightenment tradition, elevated him to what by today's standards would be a mass-cultural icon.

The anti-intellectualism exemplified by Crockett and many Jacksonians, which led to the "decline of the gentleman" in the American social imagination (Hofstadter 1963), does not automatically dispel the genuine argument that the Jacksonian Era signified real democratic expansion. Conversely, however, any argument henceforth about the processes of social democratization in the United States cannot avoid being tainted by suspicion of anti-intellectualism, a tradition that has repeatedly marked U.S. history by, if nothing else, driving the country into periods of self-imposed denial of the surrounding world, with disastrous social, political, and cultural consequences.

This early historical instance is a good example of how the study of anti-intellectualism might produce an equivocal assessment. For the Jacksonians, anti-intellectualism was an explicit platform against established class privilege, represented by the rich, powerful, and highly educated old New England families. In this respect, it served as means for upward mobility, as a weapon in a classic case of class warfare, whereby the intrinsic intellect or "know-how" of less educated folk—one might say, the entrepreneurial capacity (or autodidact practical intelligence) of the unprivileged bourgeoisie—was celebrated as the only genuinely American way of being. This is to say that the proponents of anti-intellectualism in the Jacksonian Era were not uneducated farmers or workers; they were educated middle-class men who sought (and got) a piece of the pie of privilege in the name of expanding the range of opportunity for the uneducated and the unprivileged (farmers or workers). Jackson's people were

great populist propagandists. In this sense, they managed to portray the Jackson-Adams presidential race as a contest of the representative of *vita activa* versus the representative of *vita contemplativa*, considering the latter to be too weak for the task of the presidency. The outcome of this contest legitimized a social and political imagination that drew its authority precisely from defying the Union's Enlightenment foundations, revering them as mere constitutional legacy while disregarding them in real life.

Conversely, one may just as easily argue that the Enlightenment tradition is only one strain of American foundation, obviously linked to the revolutionary politics that brought to this society a national existence. The other strain, less directly political but nonetheless profoundly social, is the morality of Christian Protestantism, particularly the pietist and Puritan strains of the early colonists. This aspect animated a certain imaginary in which communities formed by subsequent waves of immigration, even when not necessarily Puritan or even Protestant in a general sense, found solace and identification. It is this imaginary of Christian moral authority and Puritan work ethic, and not the Enlightenment imaginary of the nation's intellectual founders, that mobilized Western expansion and immigrant assimilation. This imaginary is constitutively anti-intellectual because it is essentially moralist and, more specifically, religious in its moralism. As one strain of a bifurcated social-imaginary foundation, anti-intellectualism is thus fundamental in American society, even if it is not consistently dominant in the public sphere.

Certainly, the contemporary emergence into political power by the Christian Right, with its explicit religious and moral fundamentalism, is but one more manifestation in a long history of evangelical participation in the American anti-intellectual tradition. The incessant drive to displace Darwinian theories of evolution from the high-school science curriculum in favor of creationism is an obvious such instance, signaling a profound reversal of a matter considered resolved in the 1925 Scopes trial. But equally obvious are the attempts to strong-arm court appointments at all levels of the justice system, where the actual stakes ultimately reside in a battle for an open framework of discussion and argument over interpretation of the law according to predetermined ideological principles that regard the institution of law not as a human enterprise and endeavor but an indication of the word of God written in stone. The current alliance between Christian evangelists and neoconservative ideologues at the highest levels of U.S. government elucidates the deceptive anti-intellectualism of the latter. Although the so-called neocons are all highly educated men, many of them with academic careers, they nonetheless espouse a vision of American society where plurality of views, open interpretation, interrogation of received knowledge, and, of course, dissent—the cornerstone of democracy—are rendered null and void.

Not surprisingly, the avowed enemies of contemporary anti-intellectualism reside in education and in media, two domains of enormous influence in matters of formation, cultivation, and refinement of democratic consciousness. But this current development has its roots in the Right's reaction to the United States' post-Vietnam conditions, particularly the fact that the student movement and an independent press played the most crucial role in the demise of the Nixon administration. Since the 1980s, U.S. social services and civil liberties have confronted the most orchestrated onslaught of government-based anti-intellectualism to such an extent that, for example, the "dumbing-down of American universities" turned from a slogan to a reality that is now statistically confirmed. With public primary and secondary schooling driven to bankruptcy due to fiscal restructuring that relegated education the lowest priority, the whole function of university education (anchored to its definitional demands for higher learning) is thus incapacitated. Although one surely finds anti-intellectual strains within academic ranks, of greatest concern regarding society's future is the increasing anti-intellectualism of the student population. This is manifested on campuses in myriad ways, from objections to types of courses and course materials to demands for uncritical expressions of opinion in the classroom in the name of objectivity or so-called balanced accounts.

American youth, however, cannot be blamed for what is de facto the "dumbing-down" of an entire country, which is most visible in the extraordinary manipulation and spectacular vulgarity that characterize contemporary media. Although there was a time one could count on investigative reporting to expose social and political injustice, thus restoring the democratic capacity of ordinary citizens, in the early twenty-first century one sees journalists, embedded in the political status quo, who merely seek to outdo each other in showmanship, quick and empty sloganeering, and allegedly bottom-line pronouncements. It is this talent for catchy slogans and cheap bravado that marks the ideological reversal of certain once-upon-a-time scions of the intellectual Left, such as David Horowitz and Christopher Hitchens, who now gloat on the front lines of neoconservative platforms. However we might judge whether and to what extent their politics (one way or another) were ever genuine, what accounts for their new conservative prominence is their blatant anti-intellectualism. In addition to narcissistic posturing in the media, the need to push the reporting of events through the news-item assembly line with the greatest possible speed, in the service of higher viewer ratings, feeds the anti-intellectualism that conceived of embedded journalism in the first place. It is certainly no surprise that American academics and intellectuals of great stature are nowhere to be seen in

the mass media. They are effectively censored, not merely because of their independent views but also because of their refusal to speak in advertising slogans, because their language has been rendered incompatible with the media's current production values.

It must be said, however, that responsibility for the charge that intellectuals are out of touch with the people because they speak a language that no one understands, a charge espoused so effectively by the agents of anti-intellectualism, rests on the shoulders of intellectuals themselves. Indeed, the best way to resist anti-intellectualism is by cultivating an intellectual life that: (1) does not let the attraction to concentrated and detailed knowledge become an endeavor of uncommunicative specialization; and (2) does not let the pleasure in concentrated and expert research get in the way of active participation in the public sphere of ideas and practices. In effect, anti-intellectualism will have no opposition from which to draw its menacing energy if the distinction between *vita activa* and *vita contemplativa* is rendered irrelevant.

SEE ALSO *Ideology; Intellectuals, Public*

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Stathis Gourgouris

INTELLECTUALS, ORGANIC

Rejecting the very idea of the disinterested scholar, Antonio Gramsci (1891–1937) in *The Prison Notebooks* (pp. 3–23) argues that all intellectual activity arises from specific socioeconomic circumstances. In fact, each sector of society yields its own variety of organizers, creators, mediators, and contemplators, whom Gramsci labels "organic intellectuals." In so arguing, Gramsci recasts some of the key notions of modern political thought: hegemony, civil society, class difference, and the national-popular. More recently, Gramsci's organic intellectual has served as a key concept within, or in opposition to, structuralist and poststructuralist theory, including postcolonial studies (Edward Said), subaltern studies (Renajit Guha), cultural studies (Stuart Hall, David Lloyd, Paul Thomas, Grant Farred), ethnic studies (George Lipsitz), post-Marxist thought (Jacques Rancière), and critical pedagogy (Henry Giroux, Michael Apple).

Gramsci introduces his notion, first, by insisting that education does not emerge from but actually creates the political foundations of the state; and second, by contesting existing views on traditional intellectuals. Typically seen as bearers of universal reason and general truths, such intellectuals in fact originate from the ecclesiastics qua the organic intellectuals of the aristocracy, and later take their place as subjects and agents of a particular historical block: the bourgeoisie. That the elite scholar is actually organic to a class, historical development, and social circumstance (points that Giroux and Apple emphasize) indicates as well that the division between the educated and uneducated, the cultured and uncultured, is not natural or necessary but contingent: a result of specific intellectual activity, whose true, if unspoken purpose, is to produce and reproduce these oppositions.

As to the working-class intellectual, Gramsci focuses upon the way in which the hegemonic state induces the consent of this group through the channels of an increasingly uniform civil society: the schools, the media, the Church, and so on. Gramsci's well-known *Prison Notebook* assertion that "all men are intellectuals" lies here (p. 3). Because assent on the part of the oppressed or working class turns on a nonviolent, *rational* acceptance of official discourses and edicts, intellect and reason are conditions even of that subjugation. The point, though, proves double-edged: If intelligence is the requisite of the worker's or peasant's suppression, the capitalist state cannot *not* risk generating the alternative interventions that upset its order, even though its goal (homogeneity, consensus) depends, precisely, on the eradication of those alternatives. And when the state confronts another reason and the reason of the other it is forced to swallow them repeatedly: Devour an exterior, unfamiliar, deleterious intellectual legitimacy—as opposed to an irrational or wild outside, which the state can always cast as hazardous, and thus annihilate in the name of right—into its common sense, transforming itself into a dynamic process of assimilation, transmutation, and becoming.

None of this means that organic intellectuals sprout, like plants, from the material ground into which they are born. They are contingently, not essentially, bound to a class base. The organic is not the natural. In fact, in order to realize themselves, organic intellectuals must venture into alien arenas, including if not especially the realm (the

metropolis) of universal reason, represented by the state. Intellectual activity is a perpetual outing. For example, manual laborers such as metalworkers must familiarize themselves with state edicts, disconnected from their daily labor, if they are to initiate an effective legal appeal for improved lathes, that is, for better safety conditions. Likewise, the attorneys who handle the appeal must, through communication with workers, attain detailed practical and technological knowledge of the lathe, possibly altering their daily contacts, the texts that they study, the library where they conduct the research, and the vocabulary of their briefs to do so. Unplanned constellations, leading to unintended though not accidental (for they are products of work) interventions, surface as the various classes and/or types convene: Out of a congregation of lawyers and manual laborers concerned with worker well-being emerges a non-class-based women's collective seeking state-sponsored child care. Such cross-professional encounters, moreover, generate novel jargons and idiolects. These both permit the diverse sectors to communicate and represent potential foundations for future expertises and experts, for new tasks grounded organically in the invented vernaculars and emergent gatherings.

Traditional education, Gramsci argues, involves the repetition, delivery, accumulation, coordination, and control of existing as well as new ideas. It both manufactures and casts as inevitable, as a matter of common sense, a current "state of affairs" whose base is class difference. Indeed, as the officialdom is naturalized, it need not even be taught: The commonsensical, by definition, goes without saying, thereby without teaching. The aim of public state education, it would seem, is its own obsolescence, as well as the obsolescence of the alterity that education oftentimes generates. Conversely, organic intellectuals, charged by Gramsci with the boosting of education via its revolutionary overhaul, forge the idioms that link, coming between and disrupting this accretion of familiar signifiers, and of the status quo that they represent. Class *difference* resurfaces through these connections and articulations as class *relations*: relative, contingent, and precarious, like class itself. Because they are neither inside nor outside (but between) the established fields of meaning, these relational formulations materialize beyond sense and nonsense, effecting a demand for interpretation and intelligibility, that is, for thought. Who will meet the challenge, broach and articulate the uncommon sense—the organic intellectual who could deploy it for novel activity, for the renovation of the social field itself, or the traditional intellectual who will either appropriate or eradicate it in the name of greater hegemonic expansion? Because, by logic, either could, the class struggle is traversed through and through by these questions of education, knowledge, and creativity.

The responsibility of the organic intellectual, then, is less to insert newly legitimized knowledges into the aggregate of thought, hence to displace the extant field, than to disclose the fact that current conditions do not go without saying. The class injustices that sustain the state are not present by nature; therefore, they can be altered. Leftist politics remains conceivable. Organic intellectuals are not working-class heroes but, as Gramsci put it in the *Prison Notebooks*, forgers of the bond between the *homo faber* and *homo sapiens* (p. 4), making and saying, practice and theory. Effecting the suspension of the common sense, they cut through, gnaw away from within, relay and relate the provisional nature of the capitalist state, which cannot stand without clear class oppositions, the very oppositions that the organic intellectual's labor calls into question.

Interestingly, recent scholarship that recurs to Gramsci's notion often departs fruitfully from the Italian philosopher's conceptualization—in part due to Gramsci's class- and state-based foundation, and in part due to the new interest in cultural difference and identity. Often focusing on transnational, largely cultural uprisings (examples include the civil rights movements in North America and the Caribbean, and Pan-African unrest) these studies tend to employ as their models activists, poets, and scholars such as Frantz Fanon and C. R. L. James—figures who demonstrate the way in which the organic intellectual, when recast, can play and indeed have played major roles in actual, contemporary insurgencies.

SEE ALSO *Communism; Gramsci, Antonio*

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Brett Levinson

INTELLECTUALS, PUBLIC

The term *public intellectual* has no meaning outside of an American context. Nowhere in the European tradition, for example, does one find references to this term because, strictly speaking, it is redundant. Intellectuals are distinguished from scholars or scientists because their role is necessarily public. They may indeed be scholars and scientists, academics and specialists in a particular discipline, and they may also be writers or artists, but they become intellectuals when the knowledge and learning they represent goes beyond the strict domain that gives them authority. Intellectuals achieve this status when their learned experience, their capacity for inquiry, interpretation, and speculation, is trained upon problems that concern the society to which they belong and, in the global epoch, problems that concern humanity and the planet as a whole.

That "public intellectuals" emerge into the English language as a specifically American idiom is indicative of a historical framework and tradition where anti-intellectualism carries a deeply imbedded and formidable legacy. Still, the term has a short history; it belongs to the latter half of the twentieth century. No one would think of identifying Thomas Jefferson (1743–1826), Benjamin Franklin (1706–1790), or Thomas Paine (1737–1809) as public intellectuals, though they were obviously intellectuals of great stature and public figures of enormous renown and influence. Though eighteenth-century scholars agree that Enlightenment ideas flourished politically because they coincided with (perhaps even had a hand in bringing about) the first vestiges of a veritable mass culture and the public sphere it demands, it is nonetheless a mark of the considerable alienation of intellectual life from politics in America that public intellectuals have become necessary as a specifically designated category since the Vietnam War. The term's redundancy raises questions in both directions: (1) What is the public (or even, is there a public?) that renders the role of intellectuals meaningful, and (2) of what must the role of the intellectual consist in order to merit (and achieve) a public?

The term *intellectual* itself is entirely modern, emerging during the great public debates in France over the Dreyfus affair (1894–1899). The elements of that specific historical conjuncture—the fact that citizens of learning engaged over a political issue (which, moreover, touched on fundamentals of national character)—cannot be maneuvered. It is not enough for intellectuals to apply themselves to the work of the intellect, or even to engage the world intellectually. It seems inevitable that intellectuals carry a political significance, that intellectual work is acknowledged as a domain of acts and practices that pertains to the political demands and conditions of the world they inhabit. It comes as no surprise then that the question of the role of the intellectual is one of the most debated issues in the Marxist tradition, with Antonio Gramsci's (1891–1937) famous theorization of intellectual positions having served as a departure point for subsequent theorizations even outside the Marxist canon. It is precisely because the role of the intellectual has assumed a political significance since the term was invented—in other words, that intellectuals achieve meaning only within the parameters of the *polis*—that the newer term, *public intellectuals*, inheres a redundancy.

Nonetheless, the current usage defines a particular object and deserves specific focus, as if the explicit insistence on the word *public* bears a need at the core for bringing attention to a lack. Only a society that develops a public sphere in which intellectuals are marginalized develops a need for the category of public intellectual. The marginalization of intellectuals in America is not ideologically driven, despite the grand tradition of anti-intellectualism. The causes are complex, but two factors must be specifically accentuated. First, there are real social-historical changes affecting the base of American politics since the 1950s, most important of which is the shift in the demography of political constituencies from the cosmopolitan urban centers to vast expanses of newly constructed suburban social landscapes. In the matter that concerns us here, this shift coincides with an increase in the ranks of college professionals across the country, simultaneous with a gravely rapid expansion in academic specialization. Second, the unprecedented development in mass media and communication technology in the so-called information age inevitably decenters both the authority and the dissemination of knowledge, producing instead multiple points of active and direct access (Internet technology) as well as passive reception of information (television and the entertainment industry—which, in recent years, have, in economic terms at least, merged into one). This disables the effect of old intellectual centers (New York being the most celebrated), where people of learning and the world of publishing and print media were at one time organically intertwined, driving one side to retreat behind academic walls and the other to alliance with the media forces of mass entertainment culture. These new realities have given rise to a widely evoked lament for the decline of American intellectual culture.

Though such laments have historical merit, they cannot, by definition, escape the shackles of nostalgia. Under contemporary conditions, intellectuals were forced to figure new ways to participate in the proliferation of authoritative knowledge, indeed to find the proper language to engage with the contentious field of public exchange without submitting to the streamlining of ideas and the sloganeering that satisfied the commercial demands of the mass media. This necessarily produces a broader profile of knowledge than the one accounting for top reputation in

a discipline, as is the case, for example, with Noam Chomsky, who as a linguist developed an entirely new field of linguistics, yet as a public intellectual distinguished himself as a political commentator. Incidentally, it is worth noting that a 2005 Internet poll—keeping in mind all caveats over the accuracy of Internet polling—showed Chomsky to be the world's most recognized intellectual, even though his reputation in the United States, by virtue of his politics, is much maligned. His is a case where a public intellectual achieves both stature and reputation outside his society; Chomsky's public sphere is not so much American society but the world at large.

Yet, the Chomsky phenomenon confirms that a public intellectual must create a public, not merely conform to the parameters of the established public sphere around him. In fact, in this era of great conformism to public opinion produced, disseminated, and controlled by mass media through the voice of alleged experts, a public intellectual becomes precisely the figure who interrogates the self-confirmation and unexamined repetition of expertise, a figure whose life consists of raising critical questions "in the quest for new uncertainties" (1963, p. 16), as Richard Hofstadter (1916–1970) so memorably put it. No one, however, has made a bolder and more farseeing description of the public intellectual's task than Edward Said (1935–2003): "This role has an edge to it, and cannot be played without a sense of being someone whose place it is publicly to raise embarrassing questions, to confront orthodoxy and dogma (rather than to produce them), to be someone who cannot be co-opted by governments or corporations, and whose raison d'être is to represent all these people and issues that are routinely forgotten or swept under the rug" (1994, p. 11). Said is exemplary, in this respect, because his global activist profile never compromised his intransigence or his rigor as a writer and a thinker, who was, moreover, unique in making the intellectual as such a subject of critical reflection.

Said adds a crucial dimension to the complex portrait of the public intellectual in America, which is usually overlooked or not quite articulated. In conversation with the classic 1927 book by Julien Benda (1867–1956), a French rationalist conservative who decried the political irresponsibility of intellectuals whom he dubbed "clerics," Said emphasized the quintessentially secular humanist task of the public intellectual. Even in the most committed activist practices, an intellectual's relation to the public must necessarily resist any sort of metaphysical or aestheticist investment. A public intellectual conceives this task neither as a prophet crying in the wilderness, in some sort of radical vanguard bearing a torch, nor as an ascetically restrained ethicist, advocating the integrity of a desiring public from the humble position of service to wisdom. The task is rather to foster a public, and indeed a public that reveres questioning authorities and identities, that shares the pleasure of disclosure, and in the end finds self-affirmation in dissent, in exercising its autonomy in the real social and political sphere.

There is, in other words, an intimate relation between whatever produces the need for public intellectuals and whatever cultivates the need, even in the darkest of times, for a real democratic politics—which must always be a politics of citizens unswayed by the pronouncements of experts, a politics of critique, self-authorization, and self-enfranchisement. Regardless of how they may articulate their personal politics, public intellectuals, by definition, must be engaged in democratic criticism, which must be uncompromising in its suspicion of pronounced authority and yet never nihilist. A public with democratic consciousness must be first and foremost a skeptical public, but nonetheless, a public committed to a vision of a future, an emancipated future. In the early twenty-first century world, where political stakes are graver than ever and political consciousness is in a state of questionable vitality, an intellectual public—however it is to be constituted—would best embody Gramsci's inimitable call for "pessimism of the intellect and optimism of the will."

SEE ALSO *Intellectualism, Anti-*

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Stathis Gourgouris

INTELLECTUALS, VERNACULAR

As a concept that pertains to language, the vernacular has a history that dates back centuries. The concept of the vernacular intellectual is, however, of much more recent vintage. It first entered the lexicon in 2003 with Grant Farred's work, *What's My Name? Black Vernacular Intellectuals*. Farred's term *vernacular intellectual* derives from a critique of Antonio Gramsci's (1891–1937) notion of traditional and organic intellectuals; in his famously democratic pronouncement, "all men are intellectuals," Gramsci distinguishes between traditional and organic intellectuals (Gramsci 1972, p. 13). The former are those trained primarily as ecclesiastics, initially rooted within the medieval church; the latter are those who locate themselves more firmly within the political apparatuses of their society—thinkers organic to their class, their political party, or the state bureaucracy.

The vernacular intellectual represents a reconsideration of the category *intellectual*. It is premised on the critical expansion of the category in that it proposes that the work of thinking assumes many guises and cannot be restricted to the formally educated classes. According to this reconception, the vernacular intellectual is an individual whose interventions into how a society thinks about itself—its politics, race, justice—are significant in part because of the person's identity and position. The vernacular intellectual represents a form of critical social engagement that demonstrates the intellectuality, or thought processes, of subaltern life.

The vernacular figure redefines who is understood to be an intellectual, challenging the restriction of the term *intellectual* to those trained by conventional intellectual means—accredited by the university system, by café or soiree society, or by political parties. This means that the vernacular intellectual may not be widely known, or not known at all, to wider society. This is because the vernacular intellectual generally emerges from the ranks of the subaltern classes and speaks the language of those constituencies, articulating a politics that is often, but not always, incommensurable with that of dominant society. The vernacular intellectual is not necessarily a figure who espouses a radical politics. The issue of language, including how the vernacular intellectual speaks and his or her vocabulary, metaphors, and idioms, is thus critical to the construction of the vernacular intellectual.

Cultural figures such as the boxer Muhammad Ali (b. 1942), the reggae singer Bob Marley (1945–1981), the singer Grace Jones (b. 1952), the rhythm and blues singer James Brown (c. 1933–2006), and the tennis player Martina Navratilova (b. 1956) all represent, in their different articulations, the vernacular intellectual. They speak particular truths to power: about race, anti-colonialism, poverty, oppression, sexuality, and subaltern pleasure. The vernacular is, therefore, most audible in popular culture: in the music, the articulations of sportspersons, and popular expressions.

When Muhammad Ali famously declared in 1966, "I ain't got no quarrel with them Viet Cong," he was doing considerably more than making public his own refusal to be drafted into the U.S. military. Through this statement, Ali simultaneously critiqued America's internal racism and its international imperialism and linked one to the other, demonstrating how the vernacular intellectual can make interventions into the public sphere in a highly idiomatic yet resonant language. The vernacular intellectual is, in essence, that cultural figure who addresses the political but whose critiques are almost never recognized as the work of an intellectual.

SEE ALSO *Ali, Muhammad (USA); Anticolonial Movements; Bureaucracy; Credentialism; Gramsci, Antonio; Imperialism; Intellectuals, Organic; Racism; Resistance; Vietnam War*

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Grant Farred

INTELLIGENCE

Intelligence is defined as the capacity for learning, reasoning, understanding, and similar forms of mental activity. This definition implies that the concept of intelligence is both multifaceted (i.e., reflective of many aspects of mental ability) and implicative of differences among people (i.e., reflective of degrees of capacity, ability, or aptitude among individuals). Yet this definition does not necessarily relate directly to the definition of intelligence used by scientists. In fact there is no consensus on the definition of intelligence among professionals who study it (e.g., psychologists, educators, computer scientists).

MULTIPLE DEFINITIONS

There have been multiple attempts to define intelligence. These definitions can be broadly classified into five large groups: (1) consensus definitions, (2) operational definitions, (3) task-based or psychometric definitions, (4) process-based definitions, and (5) domain definitions.

"Consensus definitions" of intelligence are typically associated with attempts of researchers in the field to consolidate a variety of points of view and produce, collectively, a comprehensive common definition. In this regard two symposia that brought together researchers in the field are important. The first symposium, which took place in 1921 under the title "Intelligence and Its Measurement: A Symposium," focused on the abilities to learn and adapt to the environment. However, the definitions of these abilities varied. For example, the American psychologist Lewis Terman emphasized abstract thinking, whereas another American psychologist, Edward Thorndike, stressed the importance of providing good responses to questions. The second symposium, which took place in 1986, brought together a new generation of intelligence researchers (e.g., Douglas Detterman, Ulric Neisser, Robert Sternberg). By then the field of intelligence had developed markedly, having produced hundreds of research articles and books. The resulting consensus definition kept the reference to learning and adaptive abilities but expanded to include many other abilities, including meta-cognitive abilities.

Although there is still no single consensus definition of intelligence, based on the discussions at these symposia, multiple other meetings, and in the press a broad definition of intelligence includes references to lower-level processes, such as perception and attention, and higher-level processes, such as problem solving, reasoning, and decision making, with regard to learning and demonstrating adaptive behaviors in problem situations. These lower- and higher-level processes are typically referred to in two dimensions: quality and speed. Quality refers to efficacy or lack of errors, and speed refers to time while learning or solving a problem. Intelligence implies the presence of no or few errors and high speed in all processes.

"Operational definitions" of intelligence are closely linked to the concept of intelligence testing. Intelligence testing was conceived of and developed by the French psychologists Alfred Binet and Théodore Simon, who first used such a test to identify learning-impaired Parisian children in the early 1900s. The "invention" was welcomed by psychologists around the world, especially in the United States, and resulted in the development of innumerable tests of intelligence. To reflect the wealth of the research and the differential power of intelligence tests in describing individual differences, the American psychologist Edwin Boring noted in 1923 that intelligence was simply what intelligence tests test. Although obviously circular in nature, this definition of intelligence is still powerful. Researchers and practitioners often use the common metric of IQ (intelligence quotient), even though IQ typically reflects many different theoretical positions when generated by different tests of intelligence. For example, the first tests of intelligence by Binet were primarily based on sensory processes; David Wechsler's tests (which exist in three versions spanning infancy, childhood, and adulthood) measure primary judgment skills. Then there are theory-based tests, such as the tests of Raymond Cattell, which are based on the theory of crystallized (i.e., acquired and learned over the total life span) and fluid (i.e., transformable to novel materials, situations, and tasks) intelligence, and such modern tests of intelligence as the Cognitive Assessment System (by Jack Naglieri and Jagannath Prasad Das) or K-ABC (by Alan and Nadeen Kaufman), which are both based on the theories of the Soviet neuropsychologist Alexander Luria. Yet as long as a test can generate an IQ, it is assumed to measure intelligence.

"Task-based or psychometric" definitions of intelligence are associated with ideas of defining intelligence through tasks that, by agreement among researchers, call for intelligence. One of the first proponents of task-based definitions of intelligence was the American psychologist Charles Spearman (1863–1945). In the early 1900s Spearman proposed that intelligence includes a so-called general (*g*-, or mental energy) factor and task-specific factors. The *g*-factor can explain the observation that indicators of performance on all intelligence tasks tend to correlate with each other (e.g., doing well on one task typically suggests strong performance on other tasks as well), whereas task-specific factors can explain why these correlations are not perfect (e.g., the performance indicators will differ on tasks that involve reading versus arithmetic). Spearman's work had a tremendous impact on the field of intelligence: Students and followers include Cattell, Wechsler, Anne Anastasi, Detterman, Arthur Jensen, and many others. Spearman's work also had opponents. For example, Thorndike argued for three forms of intelligence: abstract, mechanical, and social. Similarly Louis Thurstone argued that several primary mental abilities form intelligence (verbal comprehension, word fluency, number facility, spatial visualization, associative memory, perceptual speed, and reasoning). In an attempt to reconcile the theories of Spearman and Thurstone, Cattell proposed a hierarchical theory of intelligence in which lower-level abilities form two higher-order factors, fluid (reasoning with novel stimuli) and crystallized (reasoning with acquired knowledge) intelligence, which in turn contribute to the *g*–factor. Another opponent of Spearman's was Joy Paul Guilford, who, developing Thurstone's ideas, stated that intelligence can be represented by 150 abilities that result from different combinations of operations (e.g., cognition and memory), content (e.g., figural and symbolic), and products (e.g., unit and class).

"Process-based" definitions of intelligence are linked to theories that are not test or task based but, rather, capture processes involved in intelligence across tasks, domains, and tests. For example, the so-called triarchic

theory of Robert Sternberg postulates three fundamental processes underlying intelligence: (1) analytical processes, which reflect judgment of a quality of an argument; (2) practical processes, which indicate skills of adaptation to situations or environment; and (3) creative processes, which capture skills of generating new knowledge and practices. Each of these types of processes is "constructed" from three different components: (a) knowledge acquisition components, (b) performance components, and (c) metacognitive components. These componential processes can manifest themselves in any area of human functioning.

"Domain-based" definitions of intelligence are typically associated with domains of expertise. For example, Howard Gardner postulates eight dimensions of intelligence. These dimensions, to a various degree, are present in all people and are recruited when particular types of tasks are performed or in particular domains of expertise. Specifically these intelligences are (1) bodily-kinesthetic, in which sportsmen excel; (2) musical, demonstrated to a high degree by musicians; (3) interpersonal, characteristic of philosophers; (4) intrapersonal, common among politicians; (5) logical-mathematical, possessed by mathematicians; (6) naturalistic, demonstrated by scientists; (7) verbal-linguistic, characteristic of writers; and (8) visual-spatial, necessary at high levels for engineers. Another example of domain-based definitions of intelligence is the theory of emotional intelligence (developed by Peter Salovey, John Mayer, and Daniel Goleman). This theory specifies intelligence in the domain of emotional functioning as the ability to perceive, appraise, express, access, generate, and regulate emotions and feelings.

DEVELOPMENT OF INTELLIGENCE

The concept of IQ was developed by psychologists and statisticians in such a way that the distribution of scores remains relatively constant over a life span. IQs are compared across people, not within an individual, and are characterized by a population mean of 100 and a standard deviation of 15. Yet intelligence changes developmentally, and these changes occur in a number of ways. It is obvious that the intelligence of a one-year-old cannot be compared with the intelligence of a fifty-year-old, although their IQs can be compared. There are many developmental theories, for example those of Jean Piaget (1896–1980), that demonstrate that children reason in ways distinctly different from adults. Thus if a person had an IQ score of 110 at age one and has an IQ score of 110 at age fifty, this person's "texture" of intelligence has changed, but his or her relative position among peers has remained constant. A few relevant observations should be noted. First, early childhood intelligence is not a good predictor of level of intelligence later in life. Second, intelligence tends to vary across a person's life span, with a gradual increase toward middle age adulthood and a graduate decline in older ages. Third, it has been reported that in the developed world, intelligence tended to increase during the twentieth century (often called the Flynn effect), but it has appeared to stabilize or even decrease in the twenty-first century.

ETIOLOGY OF INTELLIGENCE

Individuals in the general population differ in their intelligence. Differences are captured by assessments of intelligence, which include both standardized tests (e.g., K-ABC) and experimental tasks (e.g., computerized tasks administered to register reaction time in response to particular stimuli). To identify the sources of these individual differences, researchers investigate the etiology (i.e., origin) of intelligence.

The etiology of intelligence is typically formulated in psychology as a question of nature and nurture: Does intelligence stem from genes (i.e., nature) or environments (i.e., nurture)? This question can be traced back to ancient times, where it was initially formulated as an "either/or" dilemma. In the early twenty-first century, however, there is a consensus that both hereditary and environmental factors play substantial and complementary roles in the development of intelligence. Two statistical coefficients are typically used to express the contributions of both genes and environments: "heritability," which shows the amount of variation in intelligence among individuals attributable to genes, and "environmentality," which captures the variation in intelligence attributable to environment. Both coefficients are relevant only at the level of population analyses and cannot be applied to individuals. Exciting tasks in early twenty-first century research pertain to the identification of specific genes and environments that underlie differences in intelligence. For example, it has been shown that variants in such genes as COMT (a gene responsible for the production of catechol-O-methyl transferase, an enzyme involved in the breakdown of major neurotransmitters) and BDNF (a gene responsible for the production of brain-derived neurotrophic factor, a protein involved in the biochemistry of neuronal survival, growth, and differentiation) are associated with individual differences in cognitive functioning and intelligence. It has also been shown that specific environments, such as impoverished or enriched with certain micronutrients (e.g., iodine), lead to individual differences in intellectual functioning. It is important to realize that neither genes nor environment have a deterministic impact on intelligence. The influence of both types of etiological factors, both additive and interactive, is probabilistic and takes place through the brain. Specifically there is a body of research that estab-

lishes evidence regarding which structures and pathways of the brain are associated with solving intellectual tasks and how patterns of brain activation vary among people and in different experimental conditions (e.g., sleep depleted versus deprived).

Although the majority of experts agree on the importance of both genes and environment in the etiology of intelligence, there are still leftovers of the raucous debate of the early 1990s related to the arguments put forth in *The Bell Curve*. Written by the psychologist Richard Herrnstein and the geneticist Charles Murray, *The Bell Curve* claimed IQ is hereditary and, as such, the single determinant of a person's life outcomes. That and similar debates indicate that the concept of intelligence remains a point of disagreement with the capacity to raise charged social issues.

The concept of intelligence is viewed by some as a social construct developed to capture individual differences in cognitive functioning and as such has no "permanent" definition or understanding; both vary with the change of societal context. Thus yet another disagreement in the literature on intelligence pertains to the debate of a "social" versus "real" phenomenon. Those who argue that the concept of intelligence is a social construct suggest it was invented by the privileged classes to maintain their privilege. Those who argue that the concept of intelligence is based on the latent ability truly differentiating people maintain it is a helpful differentiating and predictive concept that has value in decisions pertaining to education and job placement.

GROUP DIFFERENCES IN INTELLIGENCE

Four types of differences are typically discussed in the study of intelligence: sex differences, ethnic and racial differences, cultural differences, and differences in conditions (i.e., intelligence in deaf and hard of hearing versus in hearing people). Males and females tend to demonstrate equivalent or comparable average scores on tests of intelligence. Yet although there are no differences in performance when performance indices are averaged across tasks, there are differences on specific tasks as well as differences in variability and range. Specifically males tend to score higher on spatial and visual tasks, among others, requiring memory, motor tasks involving aiming, and certain tasks requiring mathematical skills. Females tend to score higher on tasks requiring phonological and semantic processing, verbal production and comprehension, and fine motor skills. Broadly speaking, males demonstrate advantages in spatial reasoning, and females demonstrate advantages in verbal reasoning, but this generalized statement can be challenged by the presence and absence of sex differences on other tasks. As of the early twenty-first century there is no consensus on the profile, stability, and nature of sex differences in intelligence.

Another source of group differences in intelligence is variation in performance among different ethnic and racial groups. Group differences are typically seen on standardized tests of intelligence, especially those that rely heavily on *g*-theories. The differences among ethnic and racial groups demonstrate the underperformance of Hispanic Americans, Native Americans, and African Americans as compared with Asian and white Americans (of a variety of ethnic backgrounds). The differences are asystematic, meaning that the profiles of differences vary for different tasks. In other words, there is no systematic differentiation of profiles of abilities among the ethnic or racial groups. It is of special interest that the ethnic gap appears to be smaller or closed when testing is conducted using tasks from process- or domain-based theories of intelligences.

Similarly people in different cultural groups around the world demonstrate varied performances on intelligence tasks. Moreover definitions of intelligence vary across cultures as well. Thus what is considered to be "intelligent" behavior among the Luo people of Kenya is different from that of Yup'ik people of Alaska. A number of researchers have studied so-called implicit theories of intelligence—ideas about intelligence conceived by laypeople. It turns out that definitions of intelligence in the East and the West, for example, are quite different, with Eastern cultures emphasizing more social-emotional components of intelligence and Western cultures emphasizing information-processing aspects of intelligence.

Another source of group differences is the difference among people with special needs. For example, deaf people tend to score lower on tests of intelligence that call for verbal skills, but their performance on tests of spatial reasoning is similar to hearing individuals. Blind people score lower on spatial tasks (when administered in Braille), but their scores are average on verbal tasks. Thus characteristics of biological development (i.e., hormonal differences), acculturation, education, and various other peculiarities of development can all be related to group differences in intelligence. At this point there is no definitive answer to why these group differences exist.

SEE ALSO *Cognition; Intelligence, Social; IQ Controversy; Memory; Multiple Intelligences Theory; Nature vs. Nurture; Psychology; Psychometrics*

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INTELLIGENCE, ADAPTIVE

SEE *Intelligence, Social.*

INTELLIGENCE, EMOTIONAL

SEE *Multiple Intelligences Theory; Intelligence, Social.*

INTELLIGENCE, SOCIAL

The term "social intelligence" is typically associated with the conception of intelligence developed by Edward Thorndike (1874–1949), a distinguished animal psychologist and a recognized founder of connectionism, a movement within the cognitive sciences attempting to explain human abilities and cognitive skills as complex emergent functions arising from the recruiting of simple elements (i.e., neurons and neuronal groups) into complex networks (i.e., neuronal networks). In the early twentieth century, Thorndike separated three types of intelligence: (1) abstract (capturing what tests of intelligence measure); (2) mechanical (related to visualizing relationships among objects and understanding how the physical world works); and (3) social intelligence (reflective of the degree of success in functioning in interpersonal situations). The notion of social intelligence was further developed in the 1920s and 1930s and referred primarily to the ability of getting along with people, but also to the ability to decode, understand, and manipulate the moods of others. In addition, during the 1920s and 1930s the first tests of social intelligence were developed. The George Washington Social Intelligence Test included, for example, tests of Judgment in Social Situations, Memory for Names and Face, Observation of Human Behavior, and Sense of Humor. Yet, the concept of testing for social intelligence was not uniformly accepted: Psychologist David Wechsler, for example, argued that social intelligence is a manifestation of general intelligence in its application to social situations.

After a number of empirical studies failed to show construct validity of the social intelligence concept as it was measured at the beginning of the twentieth century, work on social intelligence slowed down substantially. It was not until psychologist Joy Paul Guilford developed a representation of social intelligence through various abilities in the domain of behavioral operations (i.e., all behavioral-psychological acts) in the late 1960s that interest in the "essence" of the construct resurfaced. But the concept of social intelligence was defined differently, through a number of terms, such as behavioral or social cognition (by Maureen O'Sullivan), social competence (by Martin Ford and Marie Tisak), intra- and interpersonal intelligence (by Howard Gardner), practical intelligence (by Robert Sternberg), emotional intelligence, and dimensions of personality (by Hans Eysenck). Although in modern day there is great interest in the concept of social intelligence, there is no consensus definition and no unity with regard to assessment approaches. Another source of support for the importance of the concept of social intelligence is associated with implicit studies of intelligence. In this research, people are typically asked to generate a list of traits relevant to intelligent behavior. Of interest is the observation that in the majority of all such studies, the dimension of social competence inevitably comes up as an important component of intelligent behavior.

In the late 1980s, psychologists John Kihlstrom and Nancy Cantor systematized the literature on cognition, intelligence, and personality. Kihlstrom and Cantor derived the definition of social intelligence as a person's knowledge and expertise concerning oneself and the surrounding social world, and determinant of an individual's approach to solving problems of social life. They proposed to classify social knowledge into two categories: (1) declarative social knowledge including abstract concepts and specific memories, which can be subdivided into context-free semantic and context-dependent episodic memories; and (2) procedural knowledge including rules and skills (cognitive and motor), which are necessary for the translation of declarative knowledge into action. Examples of sets of declarative social knowledge are social concepts of personalities, situations and groups, and individuals' autobiographic memory. Examples of sets of procedural social knowledge are interpretive rules for understanding, processing, and representing social experience, such as establishing social causality; making inferences about other people's behaviors, emotions, and feelings; judging likeability; implying trust; inducing and deducing responsibility; managing cognitive dissonance; and formulating and testing social hypotheses. According to Cantor and Kihlstrom, social intelligence is evoked when a person is faced with the need to solve problems of social life, in par-

ticular when faced with life tasks, current concerns, or personal projects. These problems can either be formulated by people themselves or imposed on them from outside. Using this definition, social intelligence can be judged quantitatively (i.e., high or low) only through the eyes of the beholder, that is, from the point of view of the person whose life is in play.

Stephen Greenspan includes social intelligence, along with practical intelligence, in his model of adaptive intelligence. In turn, adaptive intelligence, together with physical competence and socioemotional adaptation, are dimensions of personal competence. This view of social intelligence implies that it consists of three components: (1) social sensitivity (captured in social role-taking and making social inferences); (2) social insight (manifested by comprehending social situations, generating social–psychological insights, and forming ethical and moral judgments); and (3) social communication (evoked in carrying out social communication and social problem solving). This conceptualization of intelligence is important in establishing levels of mental competencies. The main argument here is that mental retardation in human societies should be defined not only based on general levels of intelligence, but also on indicators of adaptive functioning, of which social intelligence is viewed to be a major portion.

In the late twentieth and early twenty-first centuries, work on social intelligence became closely linked to research on autism. It has been argued that one of the main deficits in autism and other disorders on the autism spectrum is a lack of proper development of social intelligence or expertise in dealing with people. This line of work on social intelligence is related to the "theory of mind," which typically refers to a specific cognitive capacity to understand that others have beliefs, desires, and intentions that are different from one's own.

Another line of research that uses the concept of social intelligence is linked to the work on artificial intelligence (AI), which is the capacity of a digital computer or computer-controlled robot device to perform tasks commonly associated with higher intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, and learn from past experience. The foundation of this link is in the realization that although computers can be programmed successfully to carry out effectively and proficiently some complex analytical tasks (e.g., simulating human capabilities for problem solving), there are still no computer systems that match human flexibility in navigating the breadth of tasks encountered in everyday life. Through its connection with AI, social intelligence is also studied in game theory (i.e., the investigation and modeling of decision-making by multiple players attempting to maximize their return), action selection (i.e., the investigation and modeling of performing a choice between multiple parallel, competing, conflicting and overlapping goals), swarm intelligence paradigm (i.e., the investigation and modeling of complex emergent intelligent networks), and many other fields of applied mathematics, computer science, economics, and evolution.

SEE ALSO *Cognition; Computers: Science and Society; Game Theory; Intelligence; Multiple Intelligences Theory; Personality; Theory of Mind*

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INTELLIGENT DESIGN

SEE *Creationism.*

INTERACTIONISM

SEE *Role Theory.*

INTERACTIONISM, SYMBOLIC

Symbolic interactionism is centrally but not exclusively concerned with the interpretive study of urban life. The American sociologist Herbert Blumer coined the term *symbolic interactionism* in 1937, initially using it to refer to the study of the symbols and meanings that operate

within specific social groups. He also emphasized the importance of the ideas of Charles Horton Cooley. Thirty-two years later Blumer published *Symbolic Interaction*, a book that clarifies the central ideas of the perspective, emphasizes that the origins of the approach are found in George Herbert Mead's work (rather than in Cooley's), and advocates the use of an eclectic set of qualitative methods without completely ruling out quantification. Blumer's interpretation of and extension to Mead's work also connected symbolic interactionism to the empirical interests of the Chicago school of sociology, the first major body of works specializing in urban sociology that arose during the 1920s and 1930s.

Symbolic interactionism has also retained its initial connection to the Progressive politics of the early-twentieth-century United States that were favored by many of the sociologists in Chicago during this time. Blumer's 1969 formulation of symbolic interactionism stresses three premises and six root images. The three premises are: (1) "human beings act toward things on the basis of the meanings that the things have for them"; (2) meanings are derived from social interaction and group life; and (3) "these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he [or she] encounters" (1969, p. 2). The six root images stress that social life is a group activity that is structured by layers of meaning. These meanings are incorporated into any group's understanding of physical, social, and abstract objects. Group members initially learn these meanings through childhood socialization processes and, over time, each group member develops a sense of self through both role taking and the internalization of the group into his or her own identity. This activity is not a mechanical process: People remake their social worlds collaboratively and Blumer stressed that symbolic interactionists must be aware of the fact that although social interaction is regulated, routinized, and therefore stable, it is not fixed.

Blumer believed that symbolic interactionism was an alternative to three rival approaches: mainstream sociological research with its emphasis on quantification and variable analysis; the structural functionalism of Talcott Parsons; and psychoanalysis. Contemporary sociologists, notably Gary Alan Fine in his 1993 work and David Maines in 2001, argue that the symbolic interactionist perspective has been incorporated into mainstream sociology. However, according to Maines, this incorporation is not widely acknowledged and has therefore produced a fault line that runs through the discipline. Fine argued that the contemporary relationship between symbolic interactionism and contemporary sociology is unclear because symbolic interactionism has simultaneously been "fragmented, expanded, incorporated, and adopted" by sociologists of very different persuasions. In Fine's view, symbolic interactionists themselves have become "intellectually promiscuous" (1993, p. 64).

In 1954 Manford Kuhn and his associates quantified traditional interactionist concerns, thus paving the way for contemporary quantitative studies of self and identity, notably by Peter Burke and Sheldon Stryker, both in 1980. Symbolic interactionists have also explored theoretical intersections, not only to structural functionalism and psychoanalysis, but also to semiotics, feminism, poststructuralism, and other traditions of thought. The journal *Symbolic Interaction* is a major resource for those interested in this perspective.

SEE ALSO *Blumer, Herbert; Groups; Mead, George Herbert; Parsons, Talcott; Sociology*

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Philip Manning

INTERDISCIPLINARY RESEARCH

SEE *Research, Trans-disciplinary.*

INTEREST, NATURAL RATE OF

Economists frequently refer to the interest rate the economy will tend toward under an equilibrium with price stability as the "natural" rate of interest. This equilibrium occurs in the long run, after any existing business cycles have played out. The natural rate of interest surfaced more than a century ago in the work of Swedish economist Knut Wicksell (1851–1926), though its prominence in mainstream economic thought has waxed and waned at different periods in time. Since the 1970s, the natural rate has taken a more central role in the study of monetary economics and is seen as one of the key ingredients in determining monetary policy.

One way to think about the natural rate of interest comes from the Keynesian IS-LM model of the macroeconomy. In this model, the interest rate adjusts to equate savings and borrowing decisions across the entire economy. Savings is determined by the level of output and there exists a rate of interest that clears the savings market for every level of output. The natural rate of interest is the interest rate where output is equal to potential output, with potential output defined as the level that results under full employment.

Figure 1 shows that the natural rate of interest is determined by the intersection of potential output and the IS curve. At the intersection, real GDP (gross domestic product) equals potential GDP, and the real interest rate equals the natural rate of interest. The IS curve represents all interest rate and output combinations that clear the savings market. This curve shows that output decreases as the real interest rate rises. This is due to the negative relationship between investment, a major component in aggregate demand, and the real rate of interest.

Yet another, more modern way of describing the natural rate of interest comes from the neoclassical growth model originally outlined in the works of Frank Ramsey (1903–1930), David Cass, and Tjalling Koopmans (1910–1985). In this model, households choose investment and consumption through time in order to maximize lifetime utility. The natural rate of interest in this model can be thought of as the rate that clears the capital market when the economy is growing at its natural steady rate. This rate turns out to depend inversely on the amount by which households value future consumption. If households value future consumption relatively less, then the natural rate of interest will be higher in order to compensate households that save and therefore give up current consumption in favor of future consumption.

In the United States and many other countries, the short-term interest rate is the primary monetary policy instrument. In particular, U.S. central bankers use the federal funds rate, the rate at which banks borrow from each other, as a tool to move interest rates and therefore the economy. As the main goals of monetary policy include price stability and output stabilization, the natural rate of interest provides an obvious benchmark for interest rate targeting. By setting the federal funds rate equal to the natural rate plus an inflation target (which could be zero), a bank is essentially trying to achieve the outcome resulting under an ideal economy. Interest rates above the natural rate tend to lower inflation, while rates below are expected to increase inflation.

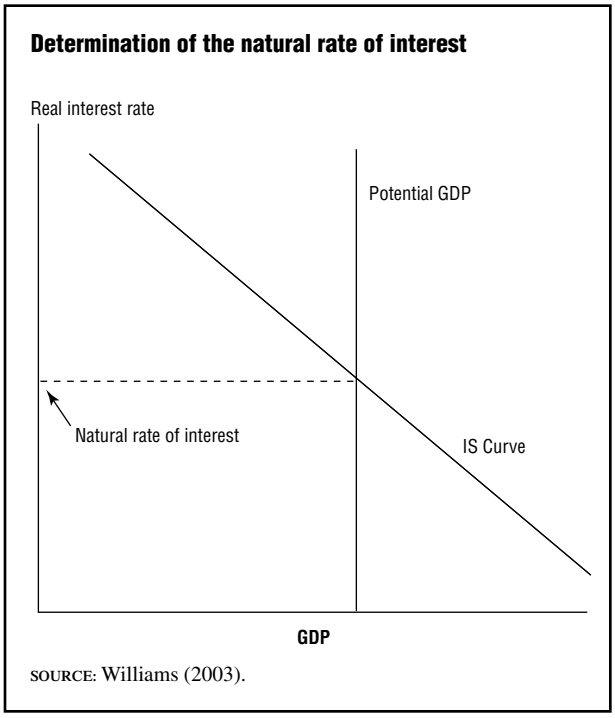

Figure 1

Interestingly, John Maynard Keynes (1883–1946) ultimately objected to the idea of a natural rate of interest. He believed that this rate depended on the level of employment in the economy. Thus, there were several possible natural rates of interest, each associated with a different level of unemployment. Keynes preferred this idea of a "neutral rate of interest," which describes the unique interest rate that equates savings and investment at full employment.

MEASURING THE NATURAL RATE

One of the major drawbacks in using the natural rate of interest is the inability to accurately observe or calculate it. Since the natural rate of interest can change due to persistent changes in aggregate supply or demand or even changes in the projections of federal government budget deficits, it is often hard to pin down. In addition, changes

in potential GDP can affect the natural rate of interest. Thus, measuring the natural rate of interest is not straightforward, and estimation techniques must be used. If the natural rate were actually constant over time, it could be estimated by averaging past real interest rates. Various methods have been implemented to account for the changing nature of the natural rate of interest.

Some methods involve weighting the data on past real interest rates differently. For example, one simple way would be to compute averages of past values of the interest rate while putting more weight on more recent data. Despite the differential weighting, this simple method does not work well during periods of large increases or decreases in inflation—when the real interest deviates substantially from the natural rate.

More sophisticated economic models have been used to measure the natural rate of interest. These include estimating the location of the slope of the IS curve and potential output to obtain estimates of interest rates. An important statistical technique known as the Kalman filter is used in some economic models to estimate the natural rate of interest. It works by adjusting the estimate of the natural rate based on how far off the model's prediction of output is from actual output. If actual output is higher than the prediction from the model, one possible explanation is that monetary policy was more expansionary than expected, which implies that the difference between the real federal funds rate and the natural rate of interest is more negative than expected. The estimate of the natural rate then increases by an amount proportional to the prediction error. This method allows for changes in the natural rate. The estimate of the natural rate by Thomas Laubach and John C. Williams (2003) using the Kalman filter technique was 3 percent in 2002, which is not far from the average of the historical federal funds rates. However, the estimate has varied from 1 percent in the 1990s to over 5 percent in the 1960s.

Despite its intuitive appeal, monetary policy analysis involving the natural rate of interest has serious drawbacks. There is no single agreed-upon method of estimating the natural rate, and estimates can be sensitive to the statistical method used to measure it. Nonetheless, the natural rate of interest is still an important concept for evaluating monetary policy, and central banks continue to devote attention to developing and improving estimation strategies.

SEE ALSO *Interest Rates; IS-LM Model; Neoclassical Growth Model; Policy, Monetary*

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Betty T. Tao

INTEREST, NEUTRAL RATE OF

The *neutral rate of interest* is, in modern parlance, the short-term interest rate that minimizes the gap between the actual and the potential output of the economy while keeping inflation close to zero. At that interest-rate level money is considered to be neutral in the sense that monetary policy does not exert any distinct influence on economic activity other than fulfilling its primary tasks of preserving a stable value of money and safeguarding the financial system.

The concept of the neutral rate of interest provides a benchmark for modern central banking in accordance with the core model of the new neoclassical synthesis, the mainstream framework for macroeconomic policy analysis that has replaced the IS-LM model. The new synthesis is based on the concept of a natural rate of output, which is the potential output that would be realized in an equilibrium with flexible wages and prices. The corresponding natural rate of interest keeps the output gap at a minimum. In an environment with sticky wages and prices this can be achieved only if inflation is minimized, such that the stickiness does not matter. Hence the term natural rate of interest is often used as synonymous with the neutral rate. Michael Woodford's key contribution to the new synthesis, his *Interest and Prices* (2003), is a prominent example (though it has few explicit references to neutrality).

However, caveats and objections have been raised, both to defining the neutral rate of interest in terms of inflation and output gap minimization, and to equating the neutral rate with the natural rate. The most relevant objections can be traced back to the very origin of neutral-rate concepts in Knut Wicksell's *Interest and Prices*:

> There is a certain rate of interest on loans which is neutral in respect to commodity prices, and tends neither to raise nor to lower them. This is necessarily the same as the rate of interest which would be determined by supply and demand if no use were made of money and all lending were effected in the form of real capital goods. It comes to much the same thing to describe it as the current value of the natural rate of interest on capital (1898, p. 102).

Wicksell's definition of neutral and natural rates of interest comprises three characteristics: price-level stability, capital market equilibrium, and the correspondence of barter lending to monetary equilibrium. The first characteristic implies zero inflation. The second characteristic requires that real investment (demand) equals saving (supply). The third characteristic is the claim that credit relations in monetary economies can be studied as if they were credit relations in economies where transactions are made in kind (*in natura*, hence the expression "natural rate"). A fourth characteristic, also contained in Wicksell's *Interest and Prices*, is the proposition that market systems tend to gravitate toward the natural rate of interest. As the representative monetary rate of interest converges on the natural rate, it becomes neutral with respect to the level and structure of real economic activity. This proposition is at the core of postulates of the (long-run) neutrality of money and has become a defining criterion for modern natural-rate concepts (such as the natural rate of unemployment).

In the early 1930s two followers of Wicksell, Erik Lindahl and Gunnar Myrdal, demonstrated that, in nonstationary monetary economies with more than one good, the expected rate of return on real investment cannot be determined independently of the monetary loan rate of interest. Hence they rejected the third characteristic of Wicksell's definition. Lindahl, Myrdal, and August Friedrich Hayek also argued that the absence of inflation does not necessarily imply that the underlying rate of interest is neutral. Interest-rate gaps, that is, discrepancies between loan rates and the rates of return to real investment, could lead to investment activities that change the capital stock, and hence the structure and level of the production, in such a way that the price level remains unchanged. Conversely, as Lindahl pointed out, a "neutral rate of interest does not necessarily imply an unchanged price level, but rather such a development of prices as is in accordance with the expectations of the public" (1930, p. 252). Wicksell's first characteristic of the neutral rate and key ingredient of its modern definition was thus put into doubt. On the base of all these arguments, Lindahl and Myrdal (though not Hayek) refuted Wicksell's fourth characteristic, the gravitational force of the natural rate. They argued that the equilibrium rate of return to real investment is influenced by past monetary policy through the latter's effect on market rates of interest and capital valuation. Thus money is not automatically neutral.

The only characteristic of Wicksell's neutral-rate concept that survived the scrutiny of Lindahl and Myrdal was the criterion of capital market equilibrium in the sense of planned investment equalling planned saving. Even this criterion came under attack when the English economist John Maynard Keynes published his *The General Theory of Employment, Interest and Money* (1936). In Keynes' system, as in the conventional IS-LM framework that was subsequently developed from it, the market rate of interest does not coordinate investment with saving ex ante, but saving adjusts to investment ex post, through the latter's multiplier effect on income. Saving thus equals investment at different levels of interest and income, and Keynes concluded that there is no unique "natural" or equilibrium rate of interest. The only rate of interest that is "unique and significant … must be the rate which we might term the neutral rate of interest, namely, the natural rate … which is consistent with full employment" (1936, p. 243). More strictly defined, the neutral rate of the interest is the rate that "prevails in equilibrium when output and employment are such that the elasticity of employment as a whole is zero" (p. 243). Whether a zero elasticity of employment is identical with potential output, and whether the latter can be described by the natural rate of unemployment has been a matter of much dispute ever since the debates about the Phillips Curve, the suggestion of a trade-off between inflation and unemployment, started in the 1960s. That the old caveats concerning the neutral rate of interest are ignored in its modern definitions is not necessarily a sign of scientific progress. It is largely due to a shift toward models of intertemporal general equilibrium in terms of continuous optimization of representative agents. Such modelling strategies simply have no room for the problems in the coordination of investment and saving decisions that were at the heart of older debates about the neutral rate of interest.

SEE ALSO *Employment; Full Employment; Inflation; Interest, Natural Rate of; Interest, Own Rate of; Interest Rates; Involuntary Unemployment; Keynes, John Maynard; Phillips Curve; Unemployment*

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Hans-Michael Trautwein

INTEREST, OWN RATE OF

The concept of own rates of interest can be traced back to Irving Fisher's *Appreciation and Interest* (1896, pp. 8ff.). It was then revived and extended by Piero Sraffa (1932) to the determination of "commodity rates of interest" on all durable assets in his critique of Friedrich August Hayek's *Prices and Production* (1931), and subsequently taken up by John Maynard Keynes in chapter 17, "The Essential Properties of Interest and Money," in his *General Theory of Employment, Interest and Money* (1936). There Keynes used the concept to demonstrate that the rate of interest on money plays a crucial role in setting a limit to production below full employment.

Keynes used Sraffa's notion that for every durable commodity there is a rate of interest for it in terms of itself, as, for example, a cotton rate of interest or a wheat rate of interest. Three components enter into the own-rate of interest of assets: a physical yield or output q, a carrying cost c, and its liquidity-premium l. Thus $q_i - c_i + l_i$ is the own-rate of interest ρ_i of any commodity i, with q, c, and l measured in terms of itself as the standard. These commodity rates of interest may differ between commodities, just as interest rates are likely to differ between different currency areas. For purposes of comparison, these commodity rates must be converted into a common standard of value (*numéraire*), usually money. Furthermore, one has to consider the expected rate of appreciation or depreciation of the price of a commodity $\delta_{i,t}$ in terms of money, determined on spot and forward markets. If, for example, the spot price of 100 quarters of wheat is p_t, the forward price in θ periods $p_{t+\theta}$, and the money rate of interest (the own-rate of interest on money) for θ periods $i_{t,\theta}$, then the own rate of interest of wheat between t and $t + \theta$ equals $\rho_{t,\vartheta} = \dfrac{(1+i_{t,\theta})p_t - p_{t+\theta}}{p_{t+\theta}} = \dfrac{(1+i_{t,\theta})p_t}{p_{t+\theta}} - 1.$

If the spot price of wheat is £100, the forward price for delivery in a year hence £107, and the money rate of interest 5 percent per annum, then the wheat rate of interest is about –2 percent per year (see Keynes 1936, p. 223).

According to Keynes, the own rate of interest of any commodity i in terms of money thus can be written as

$$i_{i,t} = \rho_i + \delta_i = q_i - c_i + l_i + \delta_i + \rho_i\delta_i .$$

The difference between the wheat rate of interest and the money rate of interest indicates that the market for wheat is not in long-run equilibrium. Although at any moment in time there might exist as many "natural" rates of interest as there are commodities, they would not be "equilibrium" rates, as has been emphasized by Sraffa in his critique of Hayek. It is only in equilibrium that the spot and the (discounted) forward price for all commodities coincide and that "all the 'natural' or commodity rates are equal to one another, and to the money rate" (Sraffa 1932, p. 50), which is regarded by Sraffa as the normal rate of interest for the economy as the whole.

The latter concept has no meaning in modern general equilibrium theory of the Arrow-Debreu type, in which a complete break with the classical concern with long-period equilibria has taken place. Commodities are specified not only in physical terms, but also with regard to their date of availability. The set of intertemporal equilibrium prices consists of prices paid on current markets for commodities to be traded at a future date. Although there is some technical similarity in the calculation of own rates of interest with a multiplicity of these rates in intertemporal equilibrium, there remains the crucial difference that the concept of a long-run equilibrium, in which all rates of interest are equal in terms of the standard of value and equal to the own rate of interest of that numéraire, is missing.

In contrast to modern general equilibrium theory, there are no complete future markets in Keynes's economics. In his *General Theory* Keynes came to the conclusion that in the long run, the economy may end up in an unemployment equilibrium, and that, in absence of rigid money wages, it is the level of the money rate of interest that rules the roost and creates a barrier to full employment. The reasons are to be found in three essential properties of money: (1) (near) zero elasticity of production, which makes it scarce because it cannot be produced privately; (2) (near) zero elasticity of substitution, a potential bottomless sink for purchasing power when money demand increases; and (3) a yield of nil with negligible carrying costs while comprising a substantial liquidity premium. This opens the way for the "liquidity trap" as the decisive cause for the money rate of interest to fall inadequately. Keynes used Sraffa's ideas in his analysis of the determination of the volume of investment. However, it is doubtful whether Keynes fully understood Sraffa's arguments (Kurz 2000). This is reflected in Keynes's ambiguous use of a short-run rate of interest and a long-run equilibrium rate of interest, and in the fact that his schedule of marginal efficiency of capital cannot be independent of the rate of interest (Barens and Caspari 1997).

SEE ALSO *Arrow-Debreu Model; Carrying Cost; General Equilibrium; Keynes, John Maynard; Liquidity; Liquidity Premium; Liquidity Trap; Long Period Analysis; Sraffa, Piero; Yield*

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Harald Hagemann

INTEREST, PUBLIC

SEE *Public Interest.*

INTEREST, REAL RATE OF

The *real rate of interest* is the money rate adjusted for the loss, due to inflation, of the purchasing power of the amount lent. In short, the real rate of interest is equal to the money rate of interest less the rate of inflation. This statement is often called the *Fisher equation* after Irving Fisher (1867–1947), an American economist who developed it in a series of publications in the first thirty years of the twentieth century. Looking back at interest rates and inflation at the end of a period, it is possible to use statistics to calculate how the real rate of interest behaved over that period. However, what is of major interest in economics is what decision makers think real interest is going to be in the future period relevant to the decision being made. Thus, in economics, as opposed to economic history, the size of the real rate of interest is something people think will hold in the future. It cannot be measured precisely. However, if at the end of a period the Fisher equation has not held, either the inflation rate was not what was expected at the beginning of the period or people did not fully take inflation into account and suffered, at least to some extent, from what is called *money illusion*. This latter view was the one held by Fisher himself. In his 1930 book *The Theory of Interest*, he argued that the relationship between the real rate of interest, the money rate, and inflation was a long-run relationship that only held when the rate of inflation did not change much over a long period. He thought that when the rate of inflation fluctuated, the rate of interest adjusted to some extent but not by enough to compensate fully, or even largely, for the changes in the rate of inflation; Fisher squarely blamed money illusion for this.

Although the real rate of interest is normally defined by the Fisher equation, it has a large role to play in economic theory apart from any relationship between inflation and interest rates. The dominant school in economics holds that the real rate of interest is the price that brings into equality the demand and supply of savings. The demand for savings comes partly from those who want to obtain income in the future either by investing in physical capital goods or by increasing their ability and skills. Demand also comes from those who wish to consume more now, relative to their income in the future. The supply of savings comes from those who wish to consume more in the future, relative to income, than now, those who are saving to buy a capital good in the future, and those who have borrowed in the past and are paying off loans. Overall, these various components of demand and supply depend on things that only change slowly, such as demographics, the rate of productivity change, institutions, and culture. When the underlying demand for savings equals the underlying supply of savings and there is no tendency for the rate of inflation to change, the real rate of interest is called the *equilibrium real rate of interest.* It is this rate that economists often have in mind when they are discussing real interest rates. It sums up for the community overall the degree to which future benefits and costs are discounted compared to those in the present. Depending on the context, this is called the *rate of time preference* or the *social discount rate.*

Modern economic theory assumes that money illusion is unimportant, that the economy moves quickly to a position of equilibrium, and that in equilibrium the real interest rate is stable. Taken together, these three propositions suggest that the real interest rate is less volatile than the money interest rate. However, empirical studies suggest that this is not the case and that, when the rate of inflation varies, the money interest rate adjusts less than it should if the above three propositions are correct. Given that it is the expected rate of inflation when decisions are made that is relevant, the key issue in these studies is how to measure expected inflation. Some studies use survey data. Others assume a variety of mechanisms by which

peoples' expectations are formed and use statistical techniques to measure the expectations, determined from the past data that formed expectations. Generally these studies show that, assuming a relatively stable real interest rate, the Fisher equation does not hold. Various ingenious propositions have been put forward to explain this, but the weight of the evidence confirms Fisher's view that money illusion has a significant role to play in the operation of the economy.

The real rate of interest is an important concept in economic theory. However, because this theory largely ignores money illusion, its relevance to economic policy is greatly reduced.

SEE ALSO *Expectations; Fisher, Irving; Inflation; Interest, Natural Rate of; Interest Rates; Interest Rates, Nominal; Investment; Money; Money Illusion; Policy, Monetary*

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J. W. Nevile

INTEREST GROUPS AND INTERESTS

In every democratic society, a plethora of interest groups seeks to influence public policy. Groups representing businesses, consumers, environmental causes, and a wide range of other concerns flock in the halls of power. Interest groups can, on the one hand, be seen as contributing positively to democratic processes by allowing different parties to state their case before government. On the other hand, they may be described as unduly affecting public policy on behalf of special interests. No matter which side of this ambivalence is emphasized, the role of such groups must be of great concern to those interested in understanding politics. Among the topics attracting particular attention are the questions of how groups attract and maintain members and how groups influence public policy.

Interest groups are conventionally defined as organizations seeking to influence public policy. They are distinguished from political parties in that they do not seek election to public office. Apart from this common ground, there are different opinions as to exactly which organizations should be categorized as interest groups. Notably, some authors include individual businesses, government institutions, as well as other types of organizations that make policy-related appeals to government. Others restrict the term to membership organizations, but accept that group members might be individuals, firms, or even other interest groups. In an attempt to clear up this confusion, Grant Jordan and his collaborators (2004) have suggested reserving the terms *interest group* or *pressure group* for organizations with members, while letting the term *pressure participant* refer to the wider spectrum of politically active organizations.

In discussions of interest groups, it is often fruitful to distinguish between different types of groups. Various ways of subdividing the universe of interest groups have been suggested, but among the most persistently used is the distinction between *special interest groups* and *public interest groups*. Special interest groups or *sectional groups* represent specific sectors of society, while public interest groups act for various causes. The latter are also referred to with the terms *cause groups, idealistic groups*, and *citizen groups*. This category encompasses both groups working for specific short-term goals and groups acting for more general causes, such as environmental protection or human rights. Whereas sectional groups typically recruit their members within the sector they represent, public interest groups are at least theoretically open to anyone supportive of group goals.

The classical approach within the study of interest groups is *pluralism*. Writing in the 1950s and 1960s, authors such as David Truman (1913–2003) attached great importance to groups. Pluralists portray groups as competing for influence in a relatively open political system. While resources are not seen as equally distributed among groups, it is asserted that no group is able to be consistently dominant. According to pluralists, new groups will mobilize almost automatically, provided their interests are sufficiently threatened, and these groups will counteract the influence of existing groups. Even though pluralism has come under attack from many quarters, it remains an important frame of reference in the interest group literature.

Among the important blows to pluralism was E. E. Schattschneider's (1892–1971) ascertainment that: "The flaw in the pluralist heaven is that the heavenly chorus sings with a strong upper-class accent" (Schattschneider 1960, p. 35). Contrary to the pluralist notion of a fairly balanced group system, Schattschneider and the scholars following in his footsteps documented that the interest group system is heavily biased in favor of business interests. The most influential attack on pluralism directly tar-

geted the assumption of automatic group mobilization. In *The Logic of Collective Action* (1965), the economist Mancur Olson (1932–1998) argued that rational self-interested individuals will not act to achieve their group interests. According to Olson, interest groups typically work to achieve public goods. It is in the nature of such goods that nonmembers cannot be excluded from consuming the good if the group is successful in providing it. If a business group is successful in obtaining business-friendly regulation of an industry, all firms in the industry will benefit. Furthermore, in large groups the contribution of one member does not make a difference in regard to whether a group will achieve its goals or not. Every potential member would therefore be better off by saving their membership dues than by joining the group. According to this logic, it is surprising that interest groups exist at all.

Following Olson's seminal work, much attention has been devoted to discussing how interest groups come into existence. Olson himself pointed out that interest groups might recruit members by offering selective incentives, such as cheap insurance or free magazines. Other authors have argued that groups offer their members a variety of benefits ranging from material goods over social relations to the good feelings arising from contributing to a cause one believes in. Further, the importance of entrepreneurs or patrons—private or governmental—investing in the creation of groups has been emphasized. Although numerous factors helping the creation and maintenance of groups have been identified, it is highly unlikely that the existing universe of interest groups reflects a perfect mobilization of all groups and concerns.

Once established, interest groups become active in influencing politics. In these efforts, they use different strategies. Groups can rely on *insider strategies*, where public decision makers are targeted directly, or they can engage in *outsider strategies*, where the media and citizen mobilizations are used to exert pressure on policymakers. In the U.S. literature, much effort has gone into studying the lobbying of Congress, whereas Europeans have focused more on the interaction between interest groups and the bureaucracy. Among other factors, this difference reflects cross-national variation in the importance of different lobbying activities. Apart from cross-national factors, the choice of strategy also depends on group type and on factors related to the issue at hand.

An important question in regard to interest groups is whether the political process can best be described as relatively open to different types of groups or as characterized by structured interaction by certain groups and public decision makers. In the United States, authors such as Theodore J. Lowi in *The End of Liberalism* (1969) pointed to the close interaction between interest groups and government agencies and the resulting accommodation of interest group demands—according to Lowi working to the detriment of liberal democracy. In Europe, many countries were even described as *corporatist*, indicating that the integration of interest groups into public decision making was a crucial element of the political system. Although stated in other terms, the literatures on iron triangles, policy subsystems, and policy communities share common ground with corporatism in emphasizing how policy processes are often much more structured and less open than the pluralists assumed. While this debate has attracted much scholarly attention, there is now widespread agreement that most societies exhibit both characteristics corresponding to the pluralist notion of competition between interest groups and more structured patterns of interaction between groups and government. The challenge is therefore to account for the causes and consequences of variation in the role of interest groups.

SEE ALSO *Associations, Voluntary; Campaigning; Collective Action; Free Rider; Lobbying; Organizations; Public Policy*

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Anne Binderkrantz

INTEREST RATES

In everyday language, *interest* is the payment, made by the borrower of a sum of money to the lender, that is in addition to the repayment of the amount borrowed. The *rate*

of interest is the price of loans, a critical economic variable. However, its importance extends beyond economics. Payment of interest has been a major issue in ethics, and the Jewish, Christian, and Islamic religions have all had, at least for long periods of their history, outright prohibitions on demanding interest when making loans. The dominant nature of interest varies according to the culture of the society in which it is set. For example, loans made to people who are in need and face severe hardship if they cannot get a loan are an essentially different type of transaction from loans that are made to an entrepreneur to finance business operations that are confidently expected to be profitable. This entry will concentrate on the nature and role of interest in modern market economics.

In technical economic language, *interest* is a payment for the use of capital, with the *rate of interest* the price paid for this use. Except in some specialized contexts, interest is a financial variable paid for the use of financial capital or money. Economists often talk of the rate of interest. In practice there is not one rate of interest but many, and the form of the transaction can vary from the usual. For example, one way in which banks borrow is by selling bank bills, or a promise to pay the holder of the bill a stated amount at a stated date in future. The difference between the amount paid for a bank bill and the amount the bank pays back on maturity is the interest on the loan to the bank. Also, of course, interest rates can be on loans of any length of time. Loans from overnight to ten years are common, but some are indefinite, with no commitment ever to repay the money. In addition to the amount paid for the use of capital, interest rates often incorporate a risk premium to compensate the lender for bearing the risk that the capital may not be repaid promptly or at all. The risk of most national governments defaulting is practically zero, so the interest rate they pay can be taken as a measure of the pure interest part of an interest rate.

INTEREST AND PROFITS

Since the interest rate is a financial variable, one would expect that interest rates are determined by the demand for, and supply of, loans and other financial assets. However, at least since the work of Adam Smith (1723–1790) in the late eighteenth century, the dominant view among economists has been that interest rates will tend toward a figure determined by profits. In equilibrium—that is, in a situation where there is no tendency to change—the rate of interest is equal to the rate of profit on the use of new physical capital goods. Hence, despite disturbances caused by purely financial factors, interest rates are largely determined by nonfinancial or real factors.

The modern form of the theory underlying this process is based on the work of Swedish economist Knut Wicksell (1851–1926). In his pathbreaking book *Interest and Prices* (1898), Wicksell was concerned with explaining trends in prices. Wicksell calls the interest rate fixed by financial markets the *money rate of interest*, and the interest rate determined by real factors the *natural rate of interest*. He starts with a situation in which the money rate is equal to the natural rate. Wicksell then assumes an increase in the natural rate due, say, to a new innovation increasing the productivity of capital goods. The money rate is assumed to remain unchanged. Since the new capital goods are more productive and the interest costs are unchanged, profits will increase, leading to an increased demand for new capital goods in the next period.

Like most other economists of his time, Wicksell thought that the economy was always more or less in a state where there was full employment of both labor and capital. Hence, an increased demand for new capital goods will raise their prices. The incomes of those supplying capital goods will increase, and they will spend more on consumer goods, raising the prices of consumer goods. The money rate of interest has not changed, so it is still profitable to borrow to cover any higher prices of inputs, and the whole process will continue until the banking system raises interest rates to the extent required to make the money rate equal to the natural rate. The reverse process occurs if the money rate is greater than the natural rate and causes falling prices. In both cases, equilibrium is only reached when the money rate of interest changes to be equal to the natural rate, which itself is equal to the profit rate on new capital goods.

This analysis of how a divergence between the natural and money rates of interest causes cumulative movements in prices can be adapted to explain changes in the rate of inflation from some rate widely accepted as normal. It can even include relaxation of the assumption of full employment, as long as any lapses are temporary and are automatically removed by the functioning of the economy. In this analysis, interest is the price that equates the supply of funds from net savings with the demand for funds for investment in new capital goods.

INTEREST AND MONEY

John Maynard Keynes's (1883–1946) enormously influential *General Theory of Employment, Interest, and Money* (1936), among other things, turned the focus of interest rate theory onto financial markets. In contrast to Wicksell's analysis, Keynes focused attention on why people want to hold money rather than other financial assets such as bonds. The reason for holding money is that it is completely liquid. One can use it immediately. Keynes listed three reasons for desiring liquidity. One is the *transaction motive*: to make easy both commercial and personal exchanges. Another is the *precautionary motive*: to have the ability to respond immediately to unforeseen future needs.

The last reason is the *speculative motive*: to try and make a profit by guessing or knowing the future better than the market as a whole. Keynes thought that the major influence on interest rates in the short run was that arising from speculation on the level of future interest rates.

Not surprisingly, given the institutional arrangements of his time, Keynes thought that the volume of money in a country was determined by the central bank. This supply of money, together with the demand for money, especially that resulting from liquidity preference, determined the rate of interest. Today, institutional arrangements are very different. The ability of financial markets to create money is determined by the demand for money, with external constraints much less important. Central banks now rely on more direct ways of influencing interest rates, mainly using changes in the interest rate they charge banks who borrow from them. Nevertheless, Keynes's emphasis on monetary factors and the allocation of assets remains important.

Fitting together the two theories by using monetary factors to explain interest rates in the short run and real influences to explain interest rates in the longer run does justice to neither theory. In both cases, the determination of the rate of interest is an integral part of the bigger whole. Keynesian economists deny the proposition that the economy trends strongly toward the full-employment position, which is a crucial part of the theory in the Wicksellian tradition. If the Keynesian view is correct and there can be continuing equilibrium at less than full employment, then causation will run more from interest rates determined in financial markets to real variables like output and capital productivity than the reverse. The different theories have very different implications for monetary policy.

INTEREST RATES AS A LINK WITH THE FUTURE

Irrespective of how it is determined, the interest rate has a crucial role to play in the allocation of new capital goods. Businesspeople will only buy new capital goods if the expected profit rate on those goods is equal to or greater than the rate of interest. The rate of interest sets the hurdle that determines which of the myriad ways in which new capital can be used are realized. Thus, the interest rate determines now what types of new capital goods there will be in the future, when the output these capital goods help to produce comes on the market.

So far this entry has not discussed the situation where the money borrowed is used to buy consumer goods, rather than capital goods. Here too the interest rate has a role to play in linking the present and the future. A person may borrow to increase current consumption because future income is expected to be greater than present income or future needs to be less than present needs. Alternatively, the borrower may give more weight to consumption in the present than to consumption in the future. The price of consuming more now is given by the interest rate. Generally, the higher the interest rate the less consumption is shifted from the future to the present, though the strength of the relationship may not be strong and for many individuals the desire to consume now may result in future consumption being discounted enough to outweigh any likely rate of interest.

Interest rates can also play a role in decisions about government expenditures and other policies, such as a tariff on imports of a particular commodity or the introduction of restrictions on logging. Cost-benefit analysis can be used to evaluate policy decisions, taking into account wider social criteria and not only narrow economic benefits and costs. There are many technical problems in estimating the various costs and benefits of a particular policy change. The one that is relevant here arises because many costs and benefits will occur in the future. In many cases, more of the costs occur in the near future compared to the benefits, so the choice of the interest rate used to discount future flows of costs and benefits has a major effect on the result. Some argue that the after-tax interest return on risk-free government bonds less the rate of inflation should be used in such analyses. Others argue that, because this is a market rate of interest, it incorporates a higher rate of discounting the future than is appropriate for a social discount rate.

MONETARY POLICY

The precise way monetary policy operates depends on the institutional arrangements of financial markets, but there is now widespread agreement that the immediate target of monetary policy is the level of interest rates. The dominant view among economists is that the underlying objective of monetary policy should be to contain inflation, often to keep it in a publicly announced target range. In Wicksellian terms, the objective is to keep the money rate close to the natural rate.

Orthodoxy also allows that, when employment is markedly below full employment, monetary policy can help hasten the return to full employment. Keynesian economists hold that, in the absence of policies to prevent it, a market economy can remain well below the full-employment level indefinitely. For them, monetary policy has a part to play in restoring full employment.

In countries with floating exchange rates, monetary policy may also be used to support the exchange rate. A freely floating exchange rate, where transactions are not constrained by any controls on capital transactions, is a very flexible price, responding quickly to changes in supply and demand. In the modern global economy, the vast

majority of foreign exchange transactions are investments in financial markets where the returns are high. The return to investing foreign funds in a country is the rate of interest obtained in the country plus the expected appreciation of the country's currency in foreign exchange markets (or less any expected depreciation). Thus, other things being equal, a rise in interest rates will lead to a higher exchange rate or prevent or reduce a fall in exchange rates if depreciation is expected. There have been clear examples of countries raising interest rates to very high levels to prevent a disastrous fall in exchange rates. Behind the scenes, use of monetary policy to support the exchange rate may be more widespread.

In the traditional story, interest rate changes affect inflation and economic activity through their influence on investment in new capital goods. The implication is that this investment is made by businesses. In fact, an interest rate change usually has a stronger direct effect on residential construction by households. It may also affect credit card usage and other forms of household debt.

A second way a change in interest rates can influence the economy is its effect on bank assets. The value of existing financial assets goes down when interest rates rise. When the values of banks' assets fall, banks are less willing to lend, and a slight or a serious credit squeeze occurs. Many economists think that the availability of credit is more important than the level of the interest rate in transmitting the effects of changes in monetary policy.

The exchange rate also has a part to play in transmitting the effects of changes in the rate of interest. If interest rates rise, the value of a country's currency will rise on foreign exchange markets. This will make imports cheaper and reduce the return to exports. The low prices for imports will help restrain inflation, and the lower returns in exporting and import-competing industries will discourage investment in these industries.

The exchange rate also has a major influence on the efficacy of monetary policy, especially in the case of small countries with many economic links to the outside world. If the exchange rate is fixed and expected to stay fixed at its current value, monetary policy relies on capital controls to stop people borrowing in foreign countries. Consequently, monetary policy is usually not effective.

On the other hand, if a country has a freely floating exchange rate, problems arise if a major depreciation of the value of its currency is expected in financial markets. In this situation, monetary policy may have to ignore its usual goals and focus solely on supporting the exchange rate.

More generally, globalization has reduced the efficacy of monetary policy. For example, if rising interest rates reduce the availability of credit from domestic sources, this will be offset to some extent by the willingness of foreigners to lend. The biggest problem is probably the risk that policy aimed at expanding economic activity by reducing interest rates may lead to expectations of a depreciation in the value of a country's currency. Some depreciation is usually helpful in these circumstances, but a large depreciation can have a serious impact, especially on the distribution of income. The desire to avoid such an impact may hamstring monetary policy in some circumstances. Nevertheless, the general view is that governments still have considerable freedom in domestic macroeconomic management, but since the efficacy of monetary policy has been reduced significantly, more reliance may have to be placed on other policies.

A different aspect of the operation of monetary policy has attracted considerable attention: its effect on the relationship between short-term and long-term interest rates. This relationship is usually called the *term structure* of interest rates or the *yield curve*. Central bank operations directly influence short-term interest rates. When the actions of the central bank raise short-term interest rates, longer-term rates may not rise much, since the rises at the short-term end of the market are often considered temporary and liable to be reversed when policy changes. Normally, interest rates rise as the term of the loan lengthens, probably due to increased uncertainty about the level of interest rates in the more distant future. Thus the yield curve slopes upward as the loan lengthens. For the reasons given above, tight monetary policy can flatten, or even invert, the yield curve. Many studies have documented a historical relationship linking a flat or inverted yield curve with a recession somewhat later. Interest has arisen in using the yield curve to predict the level of activity in the genuinely unknown future, but this is a much more difficult exercise.

SEE ALSO *Balance of Payments; Cambridge Capital Controversy; Central Banks; Cost-Benefit Analysis; Currency; Economics, Keynesian; Exchange Rates; Interest, Natural Rate of; Interest, Neutral Rate of; Interest, Own Rate of; Interest, Real Rate of; Interest Rates, Nominal; Keynes, John Maynard; Liquidity; Macroeconomics; Policy, Monetary; Profitability; Recession; Solow, Robert M.; Taylor, Lance; Yield Curve*

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INTEREST RATES, NOMINAL

The *nominal rate of interest* is the rate (usually per year) stated as the interest rate paid. If a lender charges fees of one sort or another, then the nominal rate is less than the actual rate of interest, where *interest* is defined as the price of the loan. Also, when interest is paid more than once a year, the nominal rate is less than the actual rate of interest received. For example, if money is lent at 8 percent for a year with the interest paid quarterly, 2 percent of the amount lent will be paid each quarter. Sometimes, the interest is compounded, that is, not paid but added to the principal amount and interest paid on the interest. In this case, the actual rate of interest received is approximately 8.24 percent. However, even if the interest is paid quarterly, the lender has the use of the money received and could lend it to another borrower, so that effectively the rate of interest is the same as when interest is compounded.

In many circumstances, the greatest weakness in using the nominal rate of interest in decision making is that it does not take into account the loss of purchasing power due to inflation. Thus, if in the example above there is 3 percent inflation over the year, after allowing for the loss of purchasing power the lender only receives as interest 5.24 percent of the amount lent. This figure is known as the *real rate of interest* and the difference between it and the nominal rate is called the *inflation tax*. If the loan is to the government, the inflation tax is indeed a tax. If it is to a person or institution in the private sector, it equally represents a transfer of real income from the lender to the borrower. Moreover, even if those participating in financial markets took into account the inflation tax and the rate of interest adjusted accordingly, all of the interest that the lender would receive would be subject to income tax, although part of it is not income but compensation for the loss of the purchasing power of the amount lent. It is possible to overcome to some extent these deficiencies in the nominal rate of interest by indexing the amount lent to a measure of the inflation rate, but this is not usually done.

In economic theory, the rate of interest used is usually, either implicitly or explicitly, the real rate of interest. It is assumed that the inflation tax is quickly taken into account by borrowers and lenders, and that the nominal rate of interest rises and falls more or less equally with the rate of inflation. The amounts lent and borrowed and the real incomes of lenders and borrowers are not changed, at least if the effects of income taxes are ignored. The use of the nominal rate of interest in contracts in the real world is mainly considered by theorists in the context of the effects of the taxation system on peoples' decisions. However, in the world of this economic theory, not only does everything happen quickly, there is also perfect knowledge. In the real world, neither of these conditions holds. Empirical research shows that nominal rates do not usually adjust quickly and fully when the rate of inflation changes. Nominal rates do rise and fall with inflation to some extent, but often slowly and rarely to the full extent, at least for decades. Sometimes a rise in interest rates may even come before the rise in inflation rates. Raising interest rates is the principal weapon central banks use to combat inflation, which is usually their most important concern. The lags in monetary policy are notoriously long, and central banks sometimes make a preemptive rise in interest rates when they expect a rise in inflation. When the inflation rate is falling, the reverse could occur. However, because of their great concern about inflation, central banks are often quicker to raise rates than to reduce them.

The use of the nominal rate of interest causes inefficiencies in the operation of the economy by subsidizing borrowers at the expense of lenders. Its use in monetary policy may have undesirable consequences for the distribution of income. If the rate of inflation is stable and relatively low, these consequences are small, but the more these two conditions are broken, the more important are the consequences of using the nominal rate of interest.

SEE ALSO *Central Banks; Equity Markets; Federal Reserve System, U.S.; Inflation; Interest Rates; Interest, Real Rate of; Money; Policy, Monetary; Stock Exchanges*

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J. W. Nevile

INTERGENERATIONAL TRANSMISSION

In the social sciences, *intergenerational transmission* refers to the transfer of economic or social status across generations. These cross-generational transfers occur through a variety of means, including the inheritance of occupational status, educational attainment, earnings, and wealth. In a society marked by significant levels of intergenerational transmission, there will be a corresponding persistence in economic and social stratification, and a child's socioeconomic outcome will be highly predictable. While immobility is not necessarily synonymous with inequality, intergenerational transmissions can generate unequal opportunities for children born into the society. Thus, the presence of intergenerational transmissions has strong implications for public policy, and many scholars have made efforts to improve the knowledge of how and to what extent these transfers exist.

RESEARCH ON LEVELS OF INTERGENERATIONAL MOBILITY

A central question in the analysis of social mobility and stratification is the extent to which advantages and disadvantages are passed from generation to generation. There is a rich history of scholarship attempting to quantify the level of intergenerational transmissions. In the 1950s sociologists improved both local data collection and mobility scales, and began to assemble intergenerational mobility tables to examine inflow and outflow percentages among different occupational classes. These classes were oftentimes highly aggregated, making it difficult to arrive at substantial conclusions on intergeneration mobility. Methodologies improved significantly in the 1960s, with the introduction of the socioeconomic index (SEI), a set of scores for occupational categories that allowed researchers to apply continuous data analysis techniques to occupational groups. In 1967 Peter Blau and Otis Dudley Duncan (creator of the SEI) published a groundbreaking work, *The American Occupational Structure*. In it, Blau and Duncan introduced their model of the "process of stratification," which allowed for the multivariate testing of direct and indirect effects (such as education and family background) on the earnings of children. In isolating the effects of various factors on a child's occupational status, Blau and Duncan found that the ratio of education effects to father's occupation effects on a son's current occupation is approximately 2.9 to 1, suggesting that achievement tends to be far more important than ascription in occupational outcomes.

Many scholars from around the world began to apply status-attainment models to their own intergenerational transmission analyses in the 1970s. As methodological improvements continued to be made, including the transition from multivariate linear regressions to loglinear models, a growing consensus developed that intergenerational mobility was at high levels in industrial countries. Specifically, in several Western European countries and the United States, researchers in the 1970s and 1980s consistently found intergenerational elasticity coefficients of 0.20 to 0.25 (which implies that only 20 to 25 percent of earnings gaps between groups would remain after one generation). In a 1988 address, American Economic Association president Gary Becker's comments reflected widespread sentiments at the time: "In every country with data that I have seen … earnings strongly regress to the mean[;] … low earnings as well as high earnings are not strongly transmitted from fathers to sons."

Yet the common belief that intergenerational mobility levels were high in industrial countries would change dramatically in the late 1980s and early 1990s. Regarding the United States, specifically, recent results for elasticity coefficients suggest that intergeneration mobility is more limited than previously thought. Gary Solon (1989) argued that the low correlation between a parent and child's socioeconomic indicators was due to selection biases and poor data measurement in previous studies. By using an entire dataset from the Panel Study on Income Dynamics (as opposed to the numerous data omissions typical of previous research) and using a five-year average of fathers' earnings data in lieu of the standard one-year data (to better represent lifetime earnings), Solon (1992) discovered that intergenerational elasticity coefficients rose significantly from 0.21 to 0.41. Using data from the National Longitudinal Survey, David Zimmerman (1992) arrived at a similar conclusion, and in combination these two studies provided compelling evidence that after methodological corrections, intergenerational mobility was more limited than previously thought.

Many scholars have since tried to replicate and expand on Solon and Zimmerman's original findings, and most have arrived at an intergeneration elasticity of about 0.4 or higher for the United States. Bhashkar Mazumder (2005) argued that the usage of five-year averages on fathers' earnings is flawed because data from such a short period of time can still reflect the effects of temporary shocks, which tend to be correlated in time. Mazumder is able to average fathers' earnings over sixteen years using

social security earnings histories, and finds that the intergenerational elasticity between a father and a child's earnings is dramatically higher at 0.6. By contrast, researchers in other industrialized countries have typically found intergenerational elasticity coefficients that are less than in the United States. It is important, however, to note the difficulty of cross-country coefficient comparisons, because variations in earnings measures, age ranges, and other important study characteristics can be misinterpreted as differences between countries. Taking this issue into account, it appears that Sweden, Canada, and Finland enjoy more mobility than the United States, whereas Britain and France may be slightly worse. "American exceptionalism"—the perception that the United States is a uniquely mobile country—is largely discredited as a myth.

RESEARCH ON HOW INTERGENERATIONAL TRANSMISSIONS OCCUR

Scholarly evidence suggests that intergenerational mobility is highly limited, particularly in the United States, but why it is limited and how these outcomes are transmitted across generations is not clear. One theory that has garnered much attention is the human capital explanation, developed by Gary Becker and Nigel Tomes (1979, 1986). Becker and Tomes argue that the human capital acquired by children greatly affects their earnings outcomes, and that this capital is greatly affected by investment choices made by "utility-maximizing" families. Given a limited set of resources (time, income), parents will continue investing available resources in a child until their expected rate of return (determined by a child's ability and earnings potential) is no better than the market rate of return on investments (i.e., interest rates). Some implications of this theory are as follows: (1) Given unlimited resources, the levels of investment in a child will be determined by the child's ability; (2) the presence of credit constraints (in low-income families) will lead to reductions in child earnings and less intergenerational mobility. Several findings support the Becker-Tomes framework, most notably the evidence from cross-country comparisons suggesting that countries with high levels of educational subsidies (and therefore lower levels of credit constraints) tend to be associated with more intergenerational income mobility. However, as previously mentioned, cross-country comparisons are difficult given the variety of alternative explanations for differences, and it should be noted that the overall evidence on the human capital investment explanation is mixed.

A second economic explanation for the persistence in intergeneration immobility is the transfer of wealth in the form of inheritances. This explanation has received little attention due to the lack of panel data on respondents who have reached the age at which bequests are typically passed on. In studying the death records of wealthy Connecticut residents and their children, Paul Menchik (1979) found an intergenerational elasticity of 0.69 between child and parent wealth at death. This finding suggests that inheritances are highly important for the upper end of the income distribution. However, scholars have largely dismissed wealth as a major factor in overall intergenerational persistence of outcomes simply because most families do not pass along substantial inheritances. For example, according to Casey Mulligan (1997) only 2 to 4 percent of estates passed on from deaths in the United States between 1960 and 1995 were subject to inheritance taxes.

Several other avenues of intergenerational transfer deserve mention as alternative explanations of immobility, despite having received minimal scholarly attention. George Borjas (1992) alludes to the possibility of "neighborhood effects" in his assessment of the impact of parent and ethnic group successes on the wage rates and occupational statuses of first- and second-generation Americans (excluding African Americans and Native Americans). His results suggest that ethnic group effects are at least as high as parent effects on the economic successes of these immigrant children. While Borjas does not attempt to explain what underlies these group effects, several possibilities exist, including discrimination, cultural effects on behavior and personality, and unequal access to information.

If discrimination is in fact a significant explanation for intergenerational immobility, this poses a considerable challenge to a society's claim to be a meritocracy. Indeed, scholarship since *The American Occupational Structure* has acknowledged the unique difficulties faced by African Americans in achieving economic and social mobility. Using data from the Panel Study on Income Dynamics, Tom Hertz (2005) finds a 25 to 30 percent difference in income between the adult income of blacks and whites who grew up in households with identical long-run average incomes, even when parental levels of education were taken into account. But is this due to discrimination, or other potentially confounding factors? For example, Dalton Conley (1999) asserts that it is not race that matters in the intergenerational transmission of poverty, but rather parental assets or the class status that is typically associated with race in America. Alternatively, Thomas Sowell (1981) argues that cultural deficiencies, not market-based discrimination, explain intergroup differences in economic success. By contrast, William Darity et al. (2002) have provided some evidence that despite sharing cultural backgrounds, black Latinos suffer discriminatory wage deficiencies relative to other Latinos, indicating that "color" matters. Overall, controversy continues over the interpretation of racial and ethnic differences. Further analysis is required to determine the extent to which a "legacy of race" is reflected in economic outcomes.

While the evidence is not definitive, research suggests that levels of economic mobility across generations are low, especially in the United States. Explanations for this persistence are inconclusive, although several possibilities, including human capital, wealth, group effects, and discrimination, have received some attention. Samuel Bowles and Herbert Gintis (2002) attempt to provide a comparison of some possible causal channels of intergenerational status transmissions in the United States, and conclude that wealth, race, and schooling are important, whereas IQ and genetics are not. Though the authors acknowledge that much of the transmission process remains unclear (at least two-fifths is still unexplained in their work), their analysis serves as a model for future research. Experts hope that continued efforts in this direction will result in a better sense of how intergenerational transmissions occur, and perhaps how social inequality can be rectified.

SEE ALSO *Achievement Gap, Racial; Discrimination; Human Capital; Inheritance*

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Jeffrey K. Lee

INTERGROUP RELATIONS

The study of intergroup relations has long been a staple in social science research and in particular, social psychology. More recent work has tried to determine when contact between groups is likely to result in positive outcomes (Lee et al. 2004). Events such as the 9/11 Al-Qaeda terrorist attacks in the United States, the 1994 Rwandan massacre of Tutsis, and the ongoing conflicts between Sunni and Shia Muslims in Iraq are all examples of intergroup relations gone awry.

Social psychologist Gordon Allport (1897–1967) is credited with having produced the earliest and most comprehensive research on intergroup relations. His book, *The Nature of Prejudice* (1954), has provided a foundation for the study of intergroup relations since the mid-1950s. Since that time, a great deal of research in social psychology has improved our understanding of intergroup relationships, and in particular the conditions most likely to give rise to positive contact between groups (e.g., Amir 1969; Lee et al. 2004). For example, it is now well established that dramatic shifts in population and immigration policies, technological advancements, and economic volatility, as well as the overthrow of existing political regimes, can alter the nature of relations between groups—for better and for worse.

Intergroup relations are influenced by the *social identities* and perceptions of groups that individual group members hold. Furthermore, the quality of intergroup relations influences group members' group identities. Thus, there is a circular aspect to group identity processes and the quality of intergroup relations. One influences and is influenced by the other.

The potential problem for intergroup relations lies in the overarching tendency human beings have for *social categorization*. Because of the perceptual tendency to divide the world into separate categories (i.e., social categorization), identification with one group rather than another is almost inevitable. People engage in social categorization to bring order to a seemingly endless array of stimuli (e.g., other people) that they encounter. Thus, the process of designating someone as a member of one's own group (i.e., the in-group) or not (i.e., a member of an out-group) is one that occurs almost automatically. When intergroup relations are harmonious, members of different groups will be less apt to emphasize differences between in-groups and out-groups. However, when there is conflict, identification with one's group becomes stronger, out-group differences are accentuated, and intergroup conflict increases.

According to researchers Henri Tajfel and John Turner, the tendency toward social categorization is all the more problematic if, as they suggest, people are generally motivated to enhance their self-esteem by identifying with certain social groups. According to *social identity theory* (Tajfel and Turner 1986), people are able to enhance their self-esteem by identifying with groups that they perceive to be superior to out-groups. This theory has been used most widely as an explanation for prejudice. *Prejudice* generally refers to negative attitudes toward members of a group that is based solely on the fact that they are members of that group. Individuals who harbor prejudice for members of a group usually have negative impressions about each of the group's members and tend to perceive the group members as being more similar to one another than is actually the case.

Early studies of prejudice revealed unabashed pronouncements of bigoted sentiment (LaPiere 1934; Pettigrew 1969; Hyman and Sheatsley 1956/1964). More recent work demonstrates that prejudiced attitudes in the United States have declined and become subtler. For example, whites express less prejudice toward blacks today because they are indeed less prejudiced than earlier generations, and also because it is socially unacceptable to appear prejudiced. This latter point is an important one because a large volume of research involving the use of subtle measures can detect the continuing presence of negative sentiment for members of various out-groups (e.g., Banaji and Bhasker 2000; Bargh and Chartrand 1999; Dovidio et al. 1997). Taken together, legislation, normative social pressure, and fears about retaliation have attenuated expressions of prejudice.

Though less sanguine, many contemporary social psychologists who study prejudice contend that what has replaced "old-fashioned" prejudice is a newer, more insidious form of prejudice called *modern racism* (McConahay et al. 1981). This form of prejudice involves the deliberate concealment of prejudiced attitudes except when in the presence of like-minded others. It is expressed in terms of opposition to race-related issues such as affirmative action and interracial marriage. The modern racist is one who attributes his or her prejudiced attitudes to reasons other than prejudice. Social psychologists have developed unobtrusive measures to assess this more contemporary form of prejudice (e.g., the Implicit Association Test).

Prejudice is usually accompanied by stereotypes. *Stereotypes* are cognitive structures that contain information about a person (group, place, or thing). Stereotypes influence the extent to which specific information is attended to, encoded, and subsequently retrieved. In short, stereotypes influence the processing of social information. Stereotypes are functional in that they permit the conservation of cognitive resources. By stereotyping, people are able to avoid engaging in effortful processing of social information. However, the problem with relying on these heuristics is that they neglect the variability that exists among people. When we stereotype others we ignore their individuality and impose limitations upon them. Not surprisingly, the quality and extent of intergroup relations is influenced by people's stereotypes and the prejudice they have toward out-group members. In the context of intergroup relations, less is definitely better (i.e., less stereotyping and prejudice is associated with more positive intergroup relations). Those who study intergroup relations have tended to focus upon the negative outcomes of intergroup relations, including prejudice and discrimination.

Discrimination represents a behavioral manifestation of prejudice. It involves unjustified behavior toward a group or its members simply because of their membership in that group. As is the case with outright expressions of prejudice, civil rights legislation and social normative pressure have effectively reduced blatant forms of discrimination in recent years in the United States and in other countries (Swim et al. 1995). Nevertheless, instances of discrimination continue to be unearthed and in some cases hotly contested. For example, according to Fred Pincus (2000), unchecked discrimination in the Los Angeles Police Department and criminal justice system resulted in the 1992 beating of Rodney King. The leadership of the Los Angeles Police Department condoned antiblack behaviors, and the assault on King was symptomatic of an atmosphere that supported discriminatory behavior toward black citizens. Moreover, when the defense requested a change of venue and the trial was moved to a conservative, predominantly white community, an all-white jury acquitted the officers. This is a clear example of discrimination at the institutional level.

Institutional discrimination usually refers to the way that an institution or an organization systematically or repeatedly treats people differently because of their race (or sex). This refers to the effect of practices and policies that may at times be carried out without conscious regard to race, but which has the net effect of having an adverse impact upon a group of a people. Individuals need not be personally prejudiced for institutional discrimination to be present.

The study of intergroup relations and its correlates (i.e., social identity, stereotypes, prejudice, and discrimination) continues to be a fruitful area of inquiry for researchers and policymakers. People around the world belong to many different types of groups, and groups often exert powerful influences upon individual group members and other groups. Recent and continuing world events underscore the importance of research aimed at explicating the conditions most likely to produce favorable intergroup relations.

SEE ALSO *Al-Qaeda; Contact Hypothesis; Discrimination; Economics; Economics, Stratification; Ethnocentrism; Genocide; Groups; Identity; Other, The; Prejudice; Racism; September 11, 2001; Social Categorization; Social Identification; Social Psychology; Stereotypes; Stratification*

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INTERNATIONAL BANK FOR RECONSTRUCION AND DEVELOPMENT

SEE *World Bank, The.*

INTERNATIONAL COVENANT ON CIVIL AND POLITICAL RIGHTS

SEE *Civil Liberties.*

INTERNATIONAL ECONOMIC ORDER

The term *international economic order* refers to the set of proscribed rules, norms, and procedures that regulate the cross-border exchange of goods, services, and capital. While economists have persistently preached the virtues of an open economy since David Ricardo (1772–1823), leaders have been warier because of a combination of ideological concerns, domestic politics, and realpolitik.

At present, the idea of an international economic order seems inextricably linked to multilateralism. However, in the century prior to 1945, almost all of the global economic rules were established at the bilateral or unilateral level. The opening of the global economy to trade in the mid-1800s was due to the Cobden-Chevalier Treaty (1860) between France and Great Britain, and the decision to extend most-favored nation trading status to

new trading partners (Stein 1984; Lazer 1999). As for capital markets, the gold standard was a creation of British hegemony; its large domestic market and deep capital markets compelled other countries to operate by the Bank of England's rules (Eichengreen 1996).

These arrangements were temporarily suspended during World War I (1914–1918), and then disintegrated after 1930. The British tried to sustain the pre-war order, but their economic power had waned, and the United States refused to act as a supporter of the system (Lake 1983). The interwar economic system was characterized by high tariffs and beggar-thy-neighbor policies, in which countries engaged in competitive devaluations of their currency as a means to improve their balance of trade (Kindleberger 1973).

During and after World War II (1939–1945), the United States was bound and determined to foster an international economic order that would prevent the high tariff barriers and beggar-thy-neighbor policies of the 1930s. This included a global trading system to ensure that all participating members received nondiscriminatory treatment in traded goods. To aid in trade expansion, the United States also pressed for currencies to be fixed in value relative to the dollar, which in turn could be exchanged for gold. Great Britain was reluctant to accede to this kind of regime, because it undermined the British system of imperial preferences, threatened currency runs on the war-torn European economies, and potentially constrained the autonomy of domestic policymakers.

In 1944 a conference in Bretton Woods, New Hampshire, hammered out a compromise that John Gerard Ruggie (1982) famously labeled "embedded liberalism." The world trading system was opened, and exchange rates would be fixed. Governments, however, were still given significant policy leeway to ensure full employment policies at home.

To ensure the stability of the system, the United States endorsed and funded the creation of international financial institutions (IFIs) to monitor and enforce the international economic order. The International Monetary Fund (IMF) was designed to prevent a balance-of-payments crisis among the participating countries. The World Bank was intended to help the European economies recover from the war. In contrast to the one-country/one-vote principle of other international organizations, decision-making power in the IFIs was weighted by economic size.

The third leg of the international economic order was to be the International Trade Organization (ITO). However, the proposed institution was never created due to the U.S. Senate's failure to ratify the Havana Charter. As a result, the General Agreement on Tariffs and Trade (GATT)—originally designed as an interim facility until the ITO came into existence—became the international regime governing trade.

The GATT was considered to be a weaker institution compared to the IFIs. Despite this gap in institutional strength, however, the trade regime yielded significant results. Between 1950 and 1970, merchandise trade levels grew at twice the rate of the global economy. In contrast, Bretton Woods was short-lived; western European countries did not make their currencies convertible until 1958, and the United States unilaterally ended the fixed exchange rate portion of the Bretton Woods agreement in 1971. At crisis junctures, the United States acted outside the IFIs to promote its stated interests, deploying greater resources in the process. In the late 1940s, for example, the resources committed to the Marshall Plan dwarfed those of the World Bank. In the mid-1990s, the United States provided its own financing to bail Mexico out of its financial crisis.

The failure of the IFIs to fulfill their intended functions was also due to the economic contradictions contained within Bretton Woods. As capital controls were removed, it became next to impossible for countries to maintain the "unholy trinity" of fixed exchange rates, open capital markets, and monetary policy autonomy (Cohen 1993). The United States also ran into the "Triffin Dilemma"—it was incapable of simultaneously increasing international liquidity while pledging to keep the dollar convertible into gold.

The collapse of Bretton Woods in 1971, the rise of the third world in the form of the Group of Seventy-Seven (G-77), and the oil shocks of the 1970s led to a bifurcated, contested international economic order. To handle exchange rates, the Group of Seven (G-7) countries (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) supplanted the IFIs. This ad hoc arrangement proved moderately successful over the next two decades in managing the floating exchange rate system among the G-7. The IFIs found themselves bereft of their original purpose at the same time that developing countries were hit by the oil crises of the 1970s. These institutions increasingly focused their resources toward the developing world. The debt crisis of the 1980s ensured that many developing countries needed the imprimatur of the IFIs in order to secure external financing. The IMF in particular exploited the conditionality of loans to developing countries in order to affect national macroeconomic policies.

The growing reliance on official financial flows came as an important shift in economic ideas was taking place. The IFIs moved away from promoting Keynesianism and toward more neoclassical policies of balanced budgets, trade liberalization, and low inflation.

At the same time, the newly sovereign nations of the third world began to contest the market-friendly rules that underpinned embedded liberalism. A slow decline in commodity prices caused worsening terms of trade in the developing world in the 1970s, and led governments to be suspicious of the vicissitudes of market forces. Inspired by the success of the Organization of Petroleum Exporting Countries (OPEC) cartel in increasing the price of oil, these countries proposed a "new international economic order" (NIEO; Cox 1979) in the 1974 United Nations General Assembly. The NIEO included several initiatives, including orderly market arrangements to stabilize commodity prices, institutionalized forms of technology transfer, and changes in trade rules to allow the third world greater access to Organization for Economic Cooperation and Development (OECD) markets while protecting their home markets from foreign competition and the presence of multinational corporations. All of these requests were resisted by the advanced industrialized states, and the structure of IFI voting guaranteed a veto by the G-7 countries in those venues (Krasner 1985). With the debt crisis of the early 1980s, third world solidarity on the NIEO collapsed, with little achieved beyond a modest increase in UN development funds.

The end of the cold war and the rise of economic globalization expanded the assigned tasks of the IFIs to include everything from advising transition economies, to establishing common financial codes and standards, to promoting democracy, to combating corruption. The leverage of the IFIs in these issue areas, however, has been limited to countries that cannot borrow from private capital markets.

The GATT morphed into the World Trade Organization (WTO) in 1995. Although the WTO has stronger enforcement mechanisms, the rising influence of developing countries like China, India, and Brazil has threatened to paralyze its ability to expand trade further. A partial response to the gridlock within the WTO has been a proliferation of regional and bilateral trade agreements outside the WTO's purview.

At the start of the twenty-first century, the international economic order remains relatively open for trade and finance, though there are no clear rules for migration. Increasingly, the focus of international economic negotiations has shifted to questions about business and social regulation (Braithwaite and Drahos 1999; Slaughter 2004). As China begins to challenge the United States as the economic hegemon, the stability of the current system will soon be open to question.

SEE ALSO *General Agreement on Tariffs and Trade; Globalization, Social and Economic Aspects of; International Monetary Fund; Internationalism; World Bank; World Trade Organization*

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INTERNATIONAL LABOR ORGANIZATION

SEE *Gender and Development; Sweatshops.*

INTERNATIONAL LAW

SEE *Internationalism.*

INTERNATIONAL MONETARY FUND

The International Monetary Fund (IMF) originated at a United Nations (UN) conference in Bretton Woods, New Hampshire, in July 1944. The IMF is thus known as a Bretton Woods institution. The forty-five governments represented at that conference decided to build an institution to facilitate economic cooperation. They hoped the existence of such an institution would help countries avoid a recurrence of the disastrous, self-interested economic policies that led to the Great Depression that began in the United States around 1929 and spread throughout the world. The principal architects of the IMF were the British economist John Maynard Keynes (1883–1946), the author of *The General Theory of Employment, Interest, and Money* (1936), a work that revolutionized economic theory, and the chief international economist at the U.S. Treasury Department, Harry Dexter White (1892–1948). The IMF actually came into existence in December 1945 when the first twenty-nine countries signed its Articles of Agreement. The goals of the IMF were to encourage international monetary cooperation, remove foreign-exchange restrictions, stabilize exchange rates, and facilitate a multilateral payments system between member countries.

The IMF acts as an umpire in the international market and takes action to ensure the stability of the world's financial system. Its main role in its first years was to supervise the newly established fixed exchange-rate system initiated in Bretton Woods. After the collapse of the fixed exchange rate in February 1973 and the adoption of flexible exchange rates, the IMF became more involved with member countries' economic policies by providing advice. In the 1980s the IMF had to confront the problem of mounting foreign debt in developing countries. In the 1990s the IMF addressed the transition of former socialist countries to market capitalism, and more recently it had to assist countries facing currency crises.

The main goal of the IMF is to promote a healthy world economy. The organization's responsibilities include: (1) promoting international monetary cooperation; (2) facilitating the expansion and balanced growth of international trade; (3) promoting exchange-rate stability; (4) assisting in the establishment of a multilateral system of payments; (5) fostering economic growth and high levels of employment; and (6) providing temporary financial assistance to countries experiencing balance-of-payments problems. The IMF also strives to reduce poverty in countries around the globe, independently and in collaboration with the World Bank and other international organizations.

The IMF had 184 member countries in 2007. With the exception of North Korea, Cuba, Liechtenstein, Andorra, Monaco, Tuvalu, and Nauru, all UN member states are members of the IMF or are represented by other member states. The IMF is headquartered in Washington, D.C., with an international staff of more than 2,500. As of March 2006, the IMF's total quotas were $308 billion, with loans outstanding of $34 billion to seventy-five countries, of which $6 billion to fifty-six countries was on concessional terms.

The IMF is financed by quota subscriptions, the share of each member in the IMF's total funds. The quota allocated to each IMF member determines that country's voting power, the amount of gold or international currency or its own currency that the country initially subscribes, and its access to various borrowing facilities. A large quota offers an IMF member prestige and borrowing power because a large initial subscription provides liability to extend credit to countries that need to borrow. National quotas are periodically revised.

The IMF strives to prevent economic crises by encouraging countries to adopt what IMF directors perceive to be appropriate economic policies. The organization meets these objectives primarily through surveillance, technical assistance, and lending. Surveillance is the regular policy advice that the IMF offers once a year to each of its members. The fund conducts an in-depth analysis of each member country's economic state of affairs. Members usually allow the publication of their IMF evaluation, supplying the information to the public. Technical assistance and training are offered, mostly free of charge, to help member countries strengthen their capacity to design and implement effective policies. Technical assistance is also offered in several economic areas, including fiscal policy, monetary and exchange-rate policies, banking, financial system supervision and regulation, and statistical collection and analysis. Financial assistance is available to help member countries correct balance-of-payments problems. Countries under financial distress are required to develop a policy program supported by IMF financing, and continued financial support is conditional on the effective implementation of the program.

Major controversies surround the role and practices of the IMF in the world economy, especially concerning the conditionality of financial support, which is provided only if recipient countries implement IMF-approved economic reforms. Indeed, in a world of mostly floating exchange rates, in contrast to the fixed exchange rates in existence when the IMF was established, it is even questionable why this institution remains in existence. The IMF has received extensive criticism from people representing the entire political spectrum, including grassroots protestors and activists objecting to IMF policies in countries subjected to "structural adjustment." Even the Austrian economist Friedrich Hayek (1899–1992) was deeply troubled by the global "statism" practiced by the

IMF. IMF policies are implemented under the principle of "one-size-fits-all" (Stiglitz 2002, p. 141). Jeffrey Sachs, the economic advisor who encouraged transitioning economies to implement shock therapy programs, argued that "the International Monetary Fund's view, all too often, is … based on a misunderstanding of what its own role should be" (1994, p. 504).

The principles behind IMF policies are based on what John Williamson (1990) referred to as the "Washington Consensus." *Washington*, for Williamson, encompassed the World Bank and the U.S. Treasury, in addition to the IMF. Williamson identified ten policy instruments for which Washington-based institutions could muster a reasonable degree of consensus, and he summarized the content of the Washington Consensus as macroeconomic prudence, outward orientation, domestic liberalization, and free market policies. The Washington Consensus, as the set of economic policies implemented by the administrations of U.S. president Ronald Reagan (1911–2004) and British prime minister Margaret Thatcher, has been labeled a "neoliberal manifesto." The program involves devaluation of the exchange rate, liberalization of markets where prices are regulated, privatization of public sector enterprises, contraction of public sector expenditure, and the implementation of restrictive monetary policy. There is an obvious hostility to inflation, which is strongly influenced by the effect of inflation on foreign investors (Payer 1974, p. 37). The IMF imposes these economic policies on countries in financial distress that request assistance through conditionality. Countries facing a crisis often have little alternative but to accept the terms stipulated by the IMF in order to receive assistance. Thus IMF financial support of a government program concurrently ensures obedient behavior (Payer 1974, p. 31).

Proponents of the IMF's conditionality policy argue that the fund should not give money away for free. The IMF is a financial institution, and, like any financial institution, when it lends out money it requires borrowers to guarantee the loan that they have signed by accepting IMF-approved policies. Proponents insist that it is reasonable to stipulate that further financial support will only be released after the successful implementation of reforms. At the same time, it is not clear whether the policies enforced by the IMF have been successful. Lance Taylor argues that "a fair assessment would say that the outcomes of orthodox packages ranged to moderately successful to disastrous" (1988, p. 147). Nevertheless, the success or failure of IMF programs should not be measured by monetary criteria alone; qualitative criteria, such as socioeconomic improvements and social reforms, should also be considered in any evaluation of the IMF (Körner et al. 1986, p. 4).

SEE ALSO *World Bank, The*

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INTERNATIONAL NONGOVERNMENTAL ORGANIZATIONS (INGOs)

International nongovernmental organizations (INGOs) are not-for-profit voluntary associations operating at the international, transnational, or global level, with members or participants from many countries. They bring together like-minded individuals or associations of individuals to conduct a wide variety of activities across virtually all social domains, from astronomy to football to plant biology to zoo management. Although the best-known INGOs focus on human rights (for example, Amnesty International), the environment (Friends of the Earth), disaster relief (the Red Cross), and the like, most INGOs are found in scientific, technical, business and industry, medical, and professional domains. Sizable numbers are also active in domains such as sports and recreation, development, education, women's rights, and many others. As of 2006, more than 7,000 "conventional" INGOs were in operation, along with about 20,000 internationally oriented nongovernmental organizations of more limited scope (Union of International Associations 2006).

ORIGINS AND EXPANSION

The earliest modern INGOs appeared toward the middle of the nineteenth century. Examples include the British and Foreign Anti-Slavery Society (founded in 1839), the World's Evangelical Alliance (1846), and the Verein Deutscher Eisenbahnverwaltungen (an association of German railroad companies, 1846). By the 1860s and 1870s new INGOs had been founded in many domains such as ophthalmology, labor, geodesy, international law, dentistry, hotel management, and so on. Hundreds of INGOs were in operation by 1900, and the first compilation of information about INGOs, the initial *Annuaire de la vie internationale*, listed 374 active organizations in 1909. Many hundreds more, across an expanding range of domains, appeared in the interwar period. Since the postwar period of rapid globalization INGO organizing has soared, with more than a hundred new organizations forming each year.

In the *Yearbook of International Organizations*, the successor to *Annuaire de la vie internationale* and the definitive source of information about INGOs, conventional INGOs are defined as (1) federations of INGOs whose members are themselves large INGOs, such as the International Scientific Union and the World Federation of Trade Unions; (2) "universal" INGOs, with members in at least sixty countries or at least thirty countries on several continents (e.g., International Union Against Cancer, Education International); (3) "intercontinental" INGOs, with members in many countries on at least two continents (e.g., American Association of Port Authorities, Suzuki Association of the Americas); and (4) "regional" INGOs, with members in many countries in one continent or region (e.g., European Association for Machine Translation, Pan African Organization for Sustainable Development). A more inclusive set of INGOs includes organizations of many different types—foundations, research centers, aid and relief organizations, advocacy groups, and so on—that are internationally oriented but are based in or operate from only one or a few countries.

Active conventional INGOs increased from 374 in 1909 to 841 in 1940, to more than 3,000 in 1972, and to more than 7,300 in 2005, with the total for INGOs of all types exceeding 27,000 in 2005 (Union of International Associations 1948–). INGO growth has been almost exponential in recent decades. The world wars interrupted INGO formation, but after each war voluntary international nongovernmental organizing immediately recovered. Most of the early INGOs were universal in scope, welcoming members from anywhere in the world and defining their goals in worldwide terms—seeking to organize, for example, all the world's chemical engineers, literary critics, rubber producers, or science librarians. After World War II regional INGOs began to appear in large numbers (Boli and Thomas 1999). The regions at issue include not only geographical areas such as Africa or Latin America, but also cultural regions (e.g., francophone countries or the Islamic world), ecological regions (tropical forest or alpine areas), and so on. In many cases, regional organizations have arisen within the aegis of universal (global) INGOs. For example, the International Organization for Standardization promoted the creation of regional technical standards bodies for Africa, Asia, and other geographical regions, whereas the International Society for Photogrammetry and Remote Sensing has encouraged the participation of relevant regional organizations (Asian, African, Pan American, South Pacific) as associates in its global endeavors.

Most INGOs founded before World War I were based in Europe or the more developed former European colonies, and INGO participation has always been higher among citizens of developed Western countries than elsewhere. However, in the postwar period the citizens of less developed, non-Western, and non-Christian countries have rapidly increased their participation in and founding of INGOs. This greater inclusiveness has increased dissension and conflict within INGOs, particularly with respect to issues of importance to members from poorer countries. For example, global women's organizations have found it difficult to grapple with issues such as veiling and female genital cutting because some non-Western women's groups embrace such practices and reject Western criticisms of them. Similarly, INGO members from outside the West often insist that social and economic rights—clean water, adequate food, basic health care—are more important than the civil and political rights that are usually championed by their Western human rights counterparts.

INGO OPERATIONS AND ACTIVITIES

INGOs are a highly disparate group of transnational organizations engaged in most arenas of human activity. As nonprofit voluntary associations, they rely primarily on donations, member fees, and voluntary labor for their operations. Their goals and activities are neither economic nor political in the usual sense. Instead, they are mostly concerned with information, communication, and practical projects to organize global domains or effect global change (Boli and Thomas 1999). Many are rule-making bodies; for example, some 200 international sports federations make worldwide rules for their respective sports, and hundreds of professional associations make global rules regarding the ethical norms that apply to their members. Some INGOs seek to solve social problems or improve living conditions; others aim to improve technology, advance knowledge, create global standards, protect

threatened peoples or species, or induce states, businesses, and individuals to abide by specific norms and principles. Such activities are typical of civil society organizations at the national level, and INGOs are often seen as the core of an increasingly active global civil society (Anheier et al. 2001–) that helps temper the power struggles of states and reduce the excesses of large corporations (Florini 2000). Unlike states or corporations, most INGOs focus on the promotion of public goods and the welfare of others. Only a portion of INGOs (a quarter to a third of the total), most of which are business and industry associations, act mainly to promote the interests of their members.

A striking trend in recent decades is the increasing interconnectedness of INGOs. Empowered by advanced communication systems, especially the Internet, INGOs frequently associate in loose networks and coalitions, particularly when tackling broad global problems such as environmental degradation, poverty, human rights violations, and related issues. A prominent example is the International Campaign to Ban Landmines, a coalition of more than 1,400 INGOs that convinced states to establish the 1997 treaty outlawing the manufacture, sale, or use of antipersonnel mines. Many INGOs are only "virtual" organizations with small staffs supported by tiny budgets, serving as information clearinghouses to help coordinate other INGOs' efforts. The most common targets of these networks and coalitions are major intergovernmental organizations (IGOs) such as the International Monetary Fund (IMF) and the World Trade Organization (WTO), which are taken to task for promoting neoliberal capitalist policies without regard for social, environmental, and cultural concerns. Large corporations are also frequent targets. INGOs insist that businesses must consider the "triple bottom line" that adds social and environmental concerns to the traditional focus on profit.

Although INGOs that criticize large companies or global governance organizations such as the IMF and WTO often have antagonistic relationships with their targets, cooperative relationships between INGOs and IGOs are increasingly common (Willets 1996). More than 2,000 INGOs have formal consultative status with the United Nations Economic and Social Council and many organizations work with UN agencies on disaster relief, development, education, health, agriculture, and other issues. INGOs are also heavily involved in the operations of technical and regulatory IGOs such as the International Telecommunication Union and the International Civil Aviation Authority. Both conflict and cooperation characterize INGO/IGO relationships at major world summits sponsored by the United Nations on matters such as the environment, human rights, and women's issues. At these summits INGOs gather in the thousands as the voices of global civil society speaking to states about their policies and programs, and conflicts over principles and practicalities are endemic. As increasingly professionalized and expert organizations, however, INGOs are emerging as accepted partners in these global governance fora (Charnovitz 1997).

CRITICISMS OF INGOS

Because INGOs focus unwelcome attention on the behavior of powerful states, corporations, and intergovernmental organizations, they themselves are subject to attack by their targets. Critics question INGO accountability, representativeness, and transparency. They argue that, unlike political leaders, INGOs are not accountable to identifiable constituencies and their members may not belong to the groups they claim to represent; unlike democratic institutions, INGOs are not entirely open about their internal operations. Critics also charge that INGOs promote irresponsible or unrealistic economic, social, and environmental policies. INGOs respond by invoking broadly legitimated world-cultural principles, standards, and norms as sources of their authority to justify both themselves and their criticisms of powerful global actors. At issue is a global struggle for legitimacy in which INGOs continue to have the edge because they are relatively disinterested and nonpartisan.

Criticism has been especially acute since 2000 regarding large development INGOs operating in the less developed countries. Both the intended beneficiaries of development aid and outside observers take development INGOs to task for numerous failings: inadequate knowledge of the cultures and societies where they operate, reliance on abstract measures of improvement that poorly reflect local realities, insufficient autonomy from donors (especially the official development assistance agencies of powerful Western states), excessive professionalization that raises barriers between INGO officials and local NGO workers, and piecemeal specialization that misses the interconnectedness of local needs and problems. Development INGOs are caught in a double bind: If they act primarily as funders and facilitators of development projects, critics deem their efforts distant, unengaged, and superficial; if they become deeply immersed in local power and stratification structures, critics accuse them of imperialistic meddling. In either mode, they may be castigated for promoting "developmentalism"—that is, projects, policies, and forms of development that exacerbate existing inequalities and exploitation while serving the economic and political interests of Western countries. Some of the most telling critiques have come from within the development sector itself. Many development INGOs have taken such criticism to heart, searching for better ways of engaging with and relying on the peoples they intend to help, but satisfactory improvements are not

easily generated and controversy remains endemic and ubiquitous.

Most INGOs, however, are neither subject to criticism nor involved in clashes of ideology, politics, or legitimacy. They operate in relative obscurity, organizing their specialized domains with considerable autonomy and exercising remarkably effective authority at the global and regional levels.

SEE ALSO *Foundations, Charitable*

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John Boli

INTERNATIONAL RELATIONS

International relations (IR) is the study of relationships among the actors of international politics. Such actors include nation-states, international organizations, nongovernmental organizations, and multinational corporations. The field is also sometimes called *international politics, international studies*, or *international affairs*. In the United States, IR is a branch of political science, while it is considered its own interdisciplinary field in the European and British academy. What makes IR unique from other forms of political analysis is that international politics is characterized by anarchy—or the absence of any authority superior to the nation-state. Sovereign states are thus the primary, though not the sole, important actors in the international system, because historically states are the organizations with the legitimate authority to use force within their geographically recognized areas.

APPROACHES TO IR THEORY

IR theorists do not all share the same epistemology (ways of knowing) or methodology (analyzing what they know) for approaching the puzzles of world politics. There are generally three epistemological perspectives in the field of IR. A plurality of IR scholars are *positivists*, and assert that the only way to know something about the world is to approach it scientifically, by producing models that approximate the reality of international politics. These models are tested with facts in order to predict the future behavior of international actors. *Interpretivists* disagree with this approach, in that they do not aim to predict the behavior of international actors, but to interpret and understand the motives behind that behavior. Interpretivists see a world of intersubjective understandings and ideas to be interpreted rather than used for prediction. *Post-positivists* think that both interpretation and causal analysis is inappropriate, and that the theories and models developed by IR theorists could instead be used to control global populations. Post-positivists seek to emancipate oppressed groups by deconstructing the relationships and concepts taken for granted in world politics to reveal how they are not "natural" but forms of power and discipline.

Epistemology influences the methodology various scholars use. For instance, most (but not all) positivists use quantitative, statistical techniques to test their models, whereas interpretivists and post-positivists use qualitative techniques (such as discourse analysis or process tracing) to illustrate their arguments.

There are several theoretical approaches in IR, as well as substantive subfields of study, as noted below.

Realism Realist IR theorists argue that the condition of anarchy in international politics results in one motivation for state action—survival. Because power helps states ensure their own survival, state interests are defined in terms of power. This means that cooperation among states will be rare, and plans to overcome such tension will ultimately fail. Classical realists like Hans Morgenthau (1946), John Herz, Raymond Aron, and E. H. Carr conceptualized power in a variety of ways—both materially (the military, the economy, geography) and strategically (diplomacy, prestige). While much of the defining literature of classical realism was produced in the immediate decades after World War II (1939–1945), later scholars such as Anthony Lang, Richard Ned Lebow, and Michael C. Williams (2004) resurrected the critical nature of classical realist work.

Liberalism Liberalism assumes that while states operate within anarchy and are primarily self-interested, this self-interest leads to cooperation rather than conflict. Institutional liberalism posits that international organiza-

tions and regimes facilitate cooperation by reducing uncertainty among states and increasing transparency. Economic or commercial liberalism asserts that open trading systems make cooperation more likely because the benefits of trade outweigh the costs of going to war. Political liberalism assesses the likelihood of cooperation or conflict based upon the nature of a country's political system. Political liberalism has developed into a separate research program known as *democratic peace theory*, which posits that democratic countries are less likely to go to war with one another because of the structural and cultural nature of democratic decision-making. Liberalism is often termed *idealism*, but this label is inaccurate in that all IR perspectives focus upon certain ideals over others. Yet liberalism is an admittedly more optimistic view of international politics than most other perspectives.

English School (Grotian or International Society) The English school has been a viable approach to the study of IR theory since the late 1950s and early 1960s. Representatives of this school include Herbert Butterfield, Hedley Bull, Adam Watson, R. J. Vincent, Martin Wight, and more recently Barry Buzan, Timothy Dunne, Robert Jackson, Nicholas Wheeler, and Barak Mendelsohn. The name *English school* refers to the location where many of the founders of the school first congregated—the London School of Economics. These scholars acknowledge the role that material forces play in international politics, but also how rules, principles, and ideas augment these material forces. Thus, while states cannot escape anarchy in their calculations with other states, certain "rules" of membership govern state relations. Therefore, international politics resembles an anarchical society where sovereignty as a principle is usually respected because states value order to ensure their survival (see Bull 2002).

Constructivism Constructivism is a sociological approach to social relations, rather than a specific theory of international politics. IR constructivists see the relations and patterns of nation-states and nonstate actors as socially constructed, or made up of intersubjectively shared ideas. Constructivists explore the manner in which identities, discourse, and rules shape and are shaped by states. They claim that states seek to do more than survive in a condition of anarchy; states also seek to socialize with other nation-states. Because ideas are intersubjectively shared among states, ideas can change and thus so can the interests of nation-states. This does not mean, however, that constructivists deny the importance of conflict. IR constructivists include such mainstream scholars as Alexander Wendt, Martha Finnemore, and Michael Barnett, as well as critical theorists such as Nicholas Onuf (1989) and Friedrich Kratochwil (1989).

Neorealism and Neoliberalism Neorealism (sometimes termed *structural realism*) and neoliberalism both represent attempts to develop classical realism and liberalism into scientific theories of international politics to make them more amenable to causal analysis. The defining publications—for neorealism, *Theory of International Politics* (1979) by Kenneth Waltz; for neoliberalism, *Power and Interdependence* (1977) by Robert Keohane and Joseph Nye—both attempted to develop systemic analyses of international politics. Both neorealists and neoliberals argue that states are units that act rationally to survive in a realm of anarchy, and such a universal motive produces regular behavior that can be predicted through hypothesis testing and theoretical development similar to that found in the physical sciences. The principal disagreement between the two approaches is whether states are concerned with relative gains (i.e., how a state performs relative to other states) or absolute gains.

Foreign Policy Analysis Foreign policy analysis seeks to understand the ways in which foreign policies are enacted by individuals or small groups of decision makers. International politics, from this perspective, is grounded in decisions made by leaders and elites. This subfield of IR borrows heavily from other disciplines in social science—most notably psychology. Much of this work views elites as having, for various reasons, imperfect rational capabilities, and thus attempts to make intelligible how individuals interpret incoming information and produce decisions that result in varied and sometimes disastrous outcomes. Although much foreign policy analysis focuses on individuals, it also accommodates the influence of domestic political entities (such as parties and coalitions) and bureaucracies on the foreign policy decisions made by elites. Scholars who have shaped this approach include Richard Snyder, James Rosenau, Harold and Margaret Sprout, Margaret Hermann, Charles Hermann, Richard Herrmann, Stephen Walker, and Martha Cottam.

CRITICAL THEORY

Critical theorists seek to challenge the core concepts and "commonsense" or prevailing wisdoms of mainstream IR approaches. Such theorists posit that mainstream approaches are "problem-solving theories" that through predictive analysis seek to form solutions to the most prevalent puzzles of international politics. Critical theory, on the other hand, is meant to develop an understanding of how theories and assumptions in IR are formed in the first place—and to reveal how some of these assumptions (like the "permanence" of nation-states) might instead be responsible for much of the suffering that occurs in international politics. Several forms of critical theory are discussed below.

Poststructuralism Poststructuralism draws on the social theory of philosophers like Jacques Derrida and Michel Foucault to reveal how forces and power operate in subtle ways. Poststructuralists problematize even the idea that history is connected in any meaningful way. Notable IR post-structuralists include Richard Ashley, David Campbell, and James Der Derian.

Neo-Marxist and Gramscian Theory World-systems theory and dependency theory are forms of what is known as neo-Marxist IR. Such perspectives focus less upon states and more upon the forces of capital and production in the international economic system. Gramscian perspectives (derived from the work of early twentieth-century Italian Marxist Antonio Gramsci), defined by Robert Cox (1981) and Stephen Gill, have focused upon the ways in which social relationships work in conjunction with market forces to produce certain processes and patterns evident in the international economy. It is not enough, Gramscian scholars posit, for the forces of capital to create the inequality that exists in international politics. It is also necessary for individuals and groups to believe in the market itself—and thus such internalization (ideas plus materials) makes change much more difficult and inequality more permanent.

Feminism Feminist IR is a subset of feminist social theory. As a form of critical theory, it challenges the mainstream assumptions of IR. For instance, feminist IR scholars such as J. Ann Tickner (1992), Spike Peterson, Elizabeth Hutchings, Christine Sylvester, and Cynthia Enloe have explored the masculine assumptions (war, aggressive behavior, etc.) that underpin how the nation-state is conceptualized in IR theory.

SUBFIELDS OF INTERNATIONAL RELATIONS

All these perspectives, to varying degrees, encompass important subfields in IR. *Security studies*, also known as *international security*, focuses on threats to states and the state system that stem from the environment, health (such as pandemics like HIV-AIDS), nuclear weapons, and transnational terrorist organizations. Certain scholars in this subfield use formal modeling and game theory to understand the strategic patterns of state behavior. *Civil society studies* focuses upon the manner in which nongovernmental organizations influence the state system. Another normative turn in IR theory has produced vibrant work on *international ethics*. Much of this work focuses upon phenomena such as humanitarian intervention, human rights doctrines, just war theory, genocide and ethnic conflict, and economic deprivation. The field of *international political economy* examines the relationships between nation-states and the international market, as well as how multinational corporations use the global economy to further their material goals. And *international law* remains an important subfield of interest for IR scholars. For instance, many constructivists and English school theorists have used the development of international laws to demonstrate their arguments regarding the presence of identity communities or an international society.

SEE ALSO *Constructivism; Just War; Liberalism; Nation; Neoliberalism; Nongovernmental Organizations (NGOs); Peace; Positivism; Poststructuralism; Realism; World-System*

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INTERNATIONAL RORSCHACH SOCIETY

SEE *Rorschach Test.*

INTERNATIONALISM

Internationalism has a series of overlapping meanings, all of which revolve around an attempt to regulate political

life at the global level in the hopes of constructing a more peaceful order. Its most common meaning is that of a political ideology that advocates greater cooperation among nation-states in the pursuit of peace through the creation of international law and institutions. It is closely associated with international organizations such as the League of Nations and the United Nations (UN), although it is not synonymous with these organizations.

Internationalism is also a U.S. foreign policy doctrine that advocates working through international organizations. Obviously related to the first definition of internationalism, this foreign policy idea is based upon the assumption that working through such organization is beneficial to U.S. national interests, and will additionally benefit the global community.

Internationalism is also a form of cooperation advocated by socialists that assumes the eventual disappearance of the nation-state. For some, this would come only through a revolutionary process; for others it would be a gradual reformation of the international system.

Each of these forms of internationalism is premised on the assumption that peace will result only from programmatic attempts at organizing international affairs. It is thus primarily a liberal ideology, although some suggest there can be a conservative version of it as well (Holbraad 2003). The overriding goal, however, is the promotion of peace through alignment of what might otherwise be conflicting interests.

IDEATIONAL HISTORY

As an idea, internationalism arose from the collapse of a European, Christian institutional order (Ishay 1995). As the Christian ethicopolitical order came under strain as a result of the rise of Protestantism, the Renaissance, and then the Enlightenment, political philosophers turned toward natural law as a means by which to construct a peaceful international system. An important part of this move was the recognition that allegiance to and obligations toward political communities are not necessarily wrong, but that such allegiances and obligations need to be modified by a larger set of rules and norms that might govern relations among those communities. One of the first attempts to construct such an order came from Hugo Grotius (1583–1645), a Dutch theologian and philosopher who helped create modern international law by linking older natural theories to an emerging Renaissance interest in the historical practice of political communities. Grotius's famous *The Rights of War and Peace* (1625) proposed a theoretical foundation for governing war that reformulated the "just war" tradition and launched modern international law.

The nineteenth century saw the emergence of positivist international law, which kept the same internationalist agenda but turned to different sources for its justifications (Nardin 1998). International law became the primary focus of attempts to promote internationalism, with its insistence that states remain the central agents and its attempts to limit their ability to launch war (Koskenniemi 2002). Internationalism as a political project arose from these legal attempts to align an unwillingness to give up on the nation-state with a desire for peace.

Internationalism was also an important idea among philosophers. Immanuel Kant famously argued for methods by which the international community could avoid war (Ishay 1995). Kant's proposal for a republican peace pact has been the foundation both of the democratic peace thesis and for internationalism. Kant argued that as more states became republics, their citizens would demand more cooperation (1795). This located internationalism within the nation, something that others sought to do during the Enlightenment and romantic periods.

A very different type of internationalism arose from the philosophy of Karl Marx. Marx's argument that the decay of capitalism would result in the construction of communism was meant to apply not just to specific states but also to the human condition more broadly. Lenin took Marx's ideas to a more specifically international level in his work on imperialism. These ideas were taken up by both revolutionary socialists, who argued that active attempts to overturn the nation-state and its bourgeois foundations were necessary, and reform-oriented socialists, who believed that cooperation through various international fora would lead to the collapse of the capitalist order.

INSTITUTIONAL HISTORY

These ideas, particularly those in the realm of international law, became more concrete at the end of the nineteenth and in the early twentieth centuries. Prior to and particularly after World War I, proponents of greater international institutional arrangements to ensure peace published a number of works (Navari 2000, Jones 2002). With the end of World War I, proposals for international institutions to moderate war came to fruition with the League of Nations. For some internationalists, the League was a concrete expression of their views, but for others it was too weak to create a truly internationalist sentiment. The failure of the United States to join the League and the abandonment of its tenets by Germany, Italy, and then Japan eviscerated it, and World War II finally forced the collapse of the League.

The end of World War II saw a resurgence of internationalism, particularly in the United States. Leading the way to the creation of a new international institution, the Americans agreed to host the newly created United Nations. Once again, some internationalists were enthusi-

astic about the new institution, but others found it wanting. The creation of the World Federalist League was an attempt to push the U.S. public, and the wider international community, toward greater forms of cooperation. Functionalists argued that as international affairs became more complex, there would be greater need for cooperation among nations.

Coupled with the creation of the United Nations, international law exploded in the post–World War II era. The International Law Commission, a body of international lawyers exploring important issues, pushed various issues forward on the international agenda, with some becoming treaties that led to new international organizations such as the International Criminal Court. As decolonization progressed the UN General Assembly soon grew beyond its few members and passed numerous nonbinding resolutions. After the end of the cold war the UN Security Council aggressively expanded its reach, producing not just binding resolutions but also more regulations to govern wider aspects of international life.

RELATED IDEAS

Internationalism needs to be kept separate from two related but distinct terms: *cosmopolitanism* and *globalization*. Cosmopolitanism finds its roots in antiquity, with Stoic philosophers from ancient Greece and Cicero in Rome arguing for the consideration of all persons as equal (Hayden 2006). If all were truly "citizens of the world," war and strife for the purposes of empire or monarchical advancement were pointless. This sentiment resurfaced in various religious traditions, with Christianity and Islam both arguing for a broadly understood universal community, albeit one founded on their particular religious tenets. Cosmopolitan thinking intersected with internationalism during the Enlightenment, but internationalists such as Immanuel Kant and Jean-Jacques Rousseau did not see much point in abandoning the nation-state. Instead, they thought that republican forms of cooperation, in which states agreed to limit their sovereignty for purposes of greater cooperation, were preferable to the destruction of those states in the name of a larger international community.

Cosmopolitanism has been revived with globalization, a process by which the international economic and cultural sphere becomes more unified and interdependent. Especially among analytic philosophers interested in global justice, cosmopolitan ideas have great resonance. Again, though, internationalists find some of these proposals at odds with the current power structure of the international system, in which great powers would be loathe to abandon their position in a formally anarchic, but practically hierarchic system.

Internationalism differs from proposals for a world government, against which it was largely posited in the late nineteenth and early twentieth centuries. Worried that a world government would lead to an oppressive and unwieldy bureaucracy, internationalists hoped to keep the nation-state as a foundation, but to moderate its aggressive elements through various institutional arrangements.

Finally, within the American polity, internationalism reflects a support for a foreign policy orientation toward international institutions. Although some international economic institutions—for example, the World Trade Organization, the International Monetary Foundation, and the World Bank—are widely accepted by the U.S. foreign policy elite, the United Nations continues to generate strong debate. Neoconservatives and libertarians find the constraints imposed by the UN on the ability of the United States to run its own affairs unconscionable, whereas many Democrats and centrist Republicans find the UN and its promise of multilateralism the only real option in a world so interconnected and conflictual. Especially as U.S. power is stretched to its limits in places such as Iraq, the benefits of internationalism as a foreign policy strategy will become more influential. For those who believe in the values of the Enlightenment, such a move would be most welcome, returning the United States to its role as a leading proponent of Enlightenment theory and practice.

SEE ALSO *Cosmopolitanism; Enlightenment; Globalization, Social and Economic Aspects of; Government, World; International Economic Order; International Monetary Fund; League of Nations; Lenin, Vladimir Ilitch; Libertarianism; Marx, Karl; Peace; Transnationalism; United Nations; World War II*

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INTERNET

The Internet is a vast global system of interconnected technical networks made up of heterogeneous information and communication technologies. It is also a social and economic assemblage that allows diverse forms of communication, creativity, and cultural exchange at a scope and scale unknown before the late twentieth century.

The terms *Internet* and *net* are often used when discussing the social implications of new information technologies, such as the creation of new communal bonds across great distances or new forms of wealth and inequality. Such a usage is imprecise: The Internet is distinct from the applications and technologies that are built upon it, such as e-mail, the World Wide Web, online gaming, file-sharing networks, and e-commerce and e-governance initiatives. There are also many networks that are or were once distinct from the Internet, such as mobile telephone networks and electronic financial networks.

Stated more precisely, the Internet is an infrastructural substrate that possesses innovative social, cultural, and economic features allowing creativity (or innovation) based on openness and a particular standardization process. It is a necessary, but not a sufficient, condition for many of the social and cultural implications often attributed to it. Understanding the particularity of the Internet can be key to differentiating its implications and potential impact on society from the impacts of "information technology" and computers more generally.

HISTORY AND STRUCTURE OF THE INTERNET

The Internet developed through military, university, corporate, and amateur user innovations occurring more or less constantly beginning in the late 1960s. Despite its complexity, it is unlike familiar complex technical objects—for example, a jumbo jetliner—that are designed, tested, and refined by a strict hierarchy of experts who attempt to possess a complete overview of the object and its final state. By contrast, the Internet has been subject to innovation, experimentation, and refinement by a much less well-defined collective of diverse users with wide-ranging goals and interests.

In 1968 the Internet was known as the ARPAnet, named for its principal funding agency, the U.S. Department of Defense Advanced Research Projects Agency (ARPA). It was a small but extensive research project organized by the Information Processing Techniques Office at ARPA that focused on advanced concepts in computing, specifically graphics, time-sharing, and networking. The primary goal of the network was to allow separate administratively bounded resources (computers and software at particular geographical sites) to be shared across those boundaries, without forcing standardization across all of them. The participants were primarily university researchers in computer and engineering departments. Separate experiments in networking, both corporate and academic, were also under way during this period, such as the creation of "Ethernet" by Robert Metcalfe at Xerox PARC and the X.25 network protocols standardized by the International Telecommunications Union.

By 1978 the ARPAnet had grown to encompass dozens of universities and military research sites in the United States. At this point the project leaders at ARPA recognized a need for a specific kind of standardization to keep the network feasible, namely a common operating system and networking software that could run on all of the diverse hardware connected to the network. Based on its widespread adoption in the 1970s, the UNIX operating system was chosen by ARPA as one official platform for the Internet. UNIX was known for its portability (ability to be installed on different kinds of hardware) and extensibility (ease with which new components could be added to the core system). Bill Joy (who later cofounded Sun Microsystems) is credited with the first widespread implementation of the Internet Protocol (IP) software in a UNIX operating system, a version known as Berkeley Systems Distribution (BSD).

The Internet officially began (in name and in practice) in 1983, the date set by an ad hoc group of engineers known as the Network Working Group (NWG) as the deadline for all connected computers to begin using the Transmission Control Protocol and Internet Protocol (TCP/IP) protocols. These protocols were originally designed in 1973 and consistently improved over the ensuing ten years, but only in 1983 did they become the protocols that would define the Internet. At roughly the same time, ARPA and the Department of Defense split the existing ARPAnet in two, keeping "Milnet" for sensitive military use and leaving ARPAnet for research purposes and for civilian uses.

From 1983 to 1993, in addition to being a research network, the Internet became an underground, subcultural phenomenon, familiar to amateur computer enthusiasts, university students and faculty, and "hackers." The Internet's glamour was largely associated with the arcane

nature of interaction it demanded—largely text-based, and demanding access to and knowledge of the UNIX operating system. Thus, owners of the more widespread personal computers made by IBM and Apple were largely excluded from the Internet (though a number of other similar networks such as Bulletin Board Services, BITNet, and FidoNET existed for PC users).

A very large number of amateur computer enthusiasts discovered the Internet during this period, either through university courses or through friends, and there are many user-initiated innovations that date to this period, ranging from games (e.g., MUDs, or Multi-User Dungeons) to programming and scripting languages (e.g., Perl, created by Larry Wall) to precursors of the World Wide Web (e.g., WAIS, Archie, and Gopher). During this period, the network was overseen and funded by the National Science Foundation, which invested heavily in improving the basic infrastructure of fiberoptic "backbones" in the United States in 1988. The oversight and management of the Internet was commercialized in 1995, with the backing of the presidential administration of Bill Clinton.

In 1993 the World Wide Web (originally designed by Tim Berners-Lee at CERN in Switzerland) and the graphical Mosaic Web Browser (created by the National Center for Supercomputing Applications at the University of Illinois) brought the Internet to a much larger audience. Between 1993 and 2000 the "dot-com" boom drove the transformation of the Internet from an underground research phenomena to a nearly ubiquitous and essential technology with far-reaching effects. Commercial investment in infrastructure and in "web presence" saw explosive growth; new modes of interaction and communication (e.g., e-mail, Internet messaging, and mailing lists) proliferated; Uniform Resource Locators (URLs, such as www.britannica.com) became a common (and highly valued) feature of advertisements and corporate identity; and artists, scientists, citizens, and others took up the challenge of both using and understanding the new medium.

PROTOCOLS AND THE INTERNET STANDARDS PROCESS

The core technical components of the Internet are standardized protocols, not hardware or software, strictly speaking—though obviously it would not have spread so extensively without the innovations in microelectronics, the continual enhancement of telecommunications infrastructures around the globe, and the growth in ownership and use of personal computers over the last twenty years. Protocols make the "inter" in the Internet possible by allowing a huge number of nonoverlapping and incompatible networks to become compatible and to route data across all of them.

The key protocols, known as TCP/IP, were designed in 1973 by Vint Cerf and Robert Kahn. Other key protocols, such as the Domain Name System (DNS) and User Datagram Protocol (UDP), came later. These protocols have to be implemented in software (such as in the UNIX operating system described above) to allow computers to interconnect. They are essentially standards with which hardware and software implementations must comply in order for any type of hardware or software to connect to the Internet and communicate with any other hardware and software that does the same. They can best be understood as a kind of technical Esperanto.

The Internet protocols differ from traditional standards because of the unconventional social process by which they are developed, validated, and improved. The Internet protocols are elaborated in a set of openly available documents known as Requests for Comments (RFCs), which are maintained by a loose federation of engineers called the Internet Engineering Task Force (IETF, the successor to the Network Working Group). The IETF is an organization open to individuals (unlike large standards organizations that typically accept only national or corporate representatives) that distributes RFCs free of charge and encourages members to implement protocols and to improve them based on their experiences and users' responses. The improved protocol then may be released for further implementation.

This "positive feedback loop" differs from most "consensus-oriented" standardization processes (e.g., those of international organizations such as ISO, the International Organization for Standardization) that seek to achieve a final and complete state before encouraging implementations. The relative ease with which one piece of software can be replaced with another is a key reason for this difference. During the 1970s and 1980s this system served the Internet well, allowing it to develop quickly, according to the needs of its users. By the 1990s, however, the scale of the Internet made innovation a slower and more difficult procedure—a fact that is most clearly demonstrated by the comparatively glacial speed with which the next generation of the Internet protocol (known as IP Version 6) has been implemented.

Ultimately, the IETF style of standardization process has become a common cultural reference point of engineers and expert users of the Internet, and has been applied not only to the Internet, but also to the production of applications and tools that rely on the Internet. The result is a starkly different mode of innovation and sharing that is best exemplified by the growth and success of so-called "free software" or "open-source software." Many of the core applications that are widely used on the Internet are developed in this fashion (famous examples

include the Linux operating system kernel and the Apache Web Server).

CULTURAL, SOCIAL, AND ECONOMIC IMPLICATIONS OF THE INTERNET

As a result of the unusual development process and the nature of the protocols, it has been relatively easy for the Internet to advance around the globe and to connect heterogeneous equipment in diverse settings, wherever there are willing and enthusiastic users with sufficient technical know-how. The major impediment to doing so is the reliability (or mere existence) of preexisting infrastructural components such as working energy and telecommunications infrastructures. Between 1968 and 1993 this expansion was not conducted at a national or state level, but by individuals and organizations who saw local benefit in expanding access to the global network. If a university computer science department could afford to devote some resources to computers dedicated to routing traffic and connections, then all the researchers in a department could join the network without needing permission from any centralized state authority. It was not until the late 1990s that Internet governance became an issue that concerned governments and citizens around the world. In particular, the creation of the Internet Corporation for Assigned Names and Numbers (ICANN) has been the locus of fractious dispute, especially in international arenas. ICANN's narrow role is to assign IP numbers (e.g., 192.168.0.1) and the names they map to (e.g., www.wikipedia.org), but it has been perceived, rightly or wrongly, as an instrument of U.S. control over the Internet.

With each expansion of the Internet, issues of privacy, security, and organizational (or national) authority have become more pressing. At its outset the Internet protocols sought to prioritize control within administrative boundaries, leaving rules governing use to the local network owners. Such a scheme obviated the need for a central authority that determined global rules about access, public/private boundaries, and priority of use. With the advent of widespread commercial access, however, such local control has been severely diluted, and the possibility for individual mischief (e.g., identity theft, spam, and other privacy violations) has increased with increasing accessibility.

On the one hand, increased commercial access means a decline in local organized authority over parts of the Internet in favor of control of large segments by Internet Service Providers (ISPs) and telecommunications/cable corporations. On the other hand, as the basic infrastructure of the Internet has spread, so have the practices and norms that were developed in concert with the technology—including everything from the proper way to configure a router, to norms of proper etiquette on mailing lists and for e-mail. Applications built on top of the Internet have often adopted such norms and modes of use, and promoted a culture of innovation, of "hacking" (someone who creates new software by employing a series of modifications that exploit or extend existing code or resources, with good or bad connotations depending on the context), and of communal sharing of software, protocols, and tools.

It is thus important to realize that although most users do not experience the Internet directly, the development of the particular forms of innovation and openness that characterize the Internet also characterize the more familiar applications built on top of it, due to the propagation of these norms and modes of engineering. There is often, therefore, a significant difference between innovations that owe their genesis to the Internet and those developed in the personal computer industry, the so-called "proprietary" software industry, and in distinct commercial network infrastructures (e.g., the SABRE system for airline reservations, or the MOST network for credit card transactions). The particularity of the Internet leads to different implications and potential impact on society than the impacts of "information technology" or computers more generally.

DIGITAL MUSIC, FILM, AND INTELLECTUAL PROPERTY

One of the most widely discussed and experienced implications of the Internet is the effect on the culture industries, especially music and film. As with previous media (e.g., video and audio cassette recorders), it is the intersection of technology and intellectual property that is responsible for the controversy. Largely due to its "openness," the Internet creates the possibility for low-cost and extremely broad and fast distribution of cultural materials, from online books to digital music and film. At the same time, it also creates the possibility for broad and fast violation of intellectual property rights—rights that have been strengthened considerably by the copyright act of 1976 and the Digital Millennium Copyright Act (1998).

The result is a cultural battle over the meaning of "sharing" music and movies, and the degree to which such sharing is criminal. The debates have been polarized between a "war on piracy" on the one hand (with widely varying figures concerning the economic losses), and "consumer freedom" on the other—rights to copy, share, and trade purchased music. The cultural implication of this war is a tension among the entertainment industry, the artists and musicians, and the consumers of music and film. Because the openness of the Internet makes it easier than ever for artists to distribute their work, many see a potential for direct remuneration, and cheaper and more

immediate access for consumers. The entertainment industry, by contrast, argues that it provides more services and quality—not to mention more funding and capital—and that it creates jobs and contributes to a growing economy. In both cases, the investments are protected primarily by the mechanism of intellectual property law, and are easily diluted by illicit copying and distribution. And yet, it is unclear where to draw a line between legitimate sharing (which might also be a form of marketing) and illegitimate sharing ("piracy," according to the industry).

THE DIGITAL DIVIDE

A key question about the Internet is that of social equity and access. The term *digital divide* has been used primarily to indicate the differential in individual access to the Internet, or in computer literacy, between rich and poor, or between developed and developing nations. A great deal of research has gone into understanding inequality of access to the Internet, and estimates of both differential access and the rate of the spread of access have varied extremely widely, depending on methodology. It is, however, clear from the statistics that between 1996 and 2005 the rate of growth in usage has been consistently greater than 100 percent in almost all regions of the globe at some times, and in some places it has reached annual growth rates of 500 percent or more. Aside from the conclusion that the growth in access to the Internet has been fantastically rapid, there are few sure facts about differential access.

There are, however, a number of more refined questions that researchers have begun investigating: Is the quantity or rate of growth in access to the Internet larger or smaller than in the case of other media (e.g., television, print, and radio)? Are there significant differences within groups with access (e.g., class, race, or national differences in quality of access)? Does access actually enhance or change a person's life chances or opportunities?

The implication of a digital divide (whether between nations and regions, or within them) primarily concerns the quality of information and the ability of individuals to use it to better their life chances. In local terms, this can affect development issues broadly (e.g., access to markets and government, democratic deliberation and participation, and access to education and employment opportunities); in global terms, differential access can affect the subjective understandings of issues ranging from religious intolerance to global warming and environmental issues to global geopolitics. Digital divides might also differ based on the political situation—such as in the case of the Chinese government's attempt to censor access to politicized information, which in turn can affect the fate of cross-border investment and trade.

SEE ALSO *Information, Economics of; Media; Microelectronics Industry; Property Rights, Intellectual*

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INTERNET, IMPACT ON POLITICS

Since the mid-1990s a new force has emerged to reshape modern society—the Internet. One aspect of society that the Internet has changed significantly is politics. In politics, the Internet has produced three types of change. The first is the way that politicians reach the voting public. Previously, politicians could only reach the public using the established media (television, radio, or newspapers and magazines) or by meeting people on the street. This is no longer the case. The second change produced by the Internet relates to the participation of the average citizen in political processes. People used to be limited to voting, sit-ins, strikes, public gatherings, letter writing, and similar types of activities, but since the advent of the Internet, many new activities have developed. The third change caused by the Internet is the creation of a whole new group of participants in the political process. Before the Internet was available, the only private groups that were

politically active were either very large, very specialized, or both; the Internet has enabled small, local groups to also participate in politics.

Politicians and their staffs can use the Internet to maintain contact with supporters and to gather new supporters. Chat rooms, blogs, and email updates are the preferred resources for maintaining contact with supporters. These allow supporters to form a community and to receive the latest news about a candidate directly. The process of drawing new supporters relies on World Wide Web (WWW) sites maintained by the candidate and his or her staff. Politicians may also gain support through blogs maintained by people not officially affiliated with the candidate, as well as through email briefs to bloggers and traditional media, search engines, and general information sources such as Wikipedia. The Internet is sufficiently important in political campaigns that by the time of the 2004 U.S. presidential election, major candidates maintained staff positions dedicated to Internet campaigning.

The ability of politicians to reach their constituents does have some drawbacks. Political opponents can employ the same technologies to undermine candidacies, as happened to Barack Obama in the presidential campaign at the end of 2006 with the release of information about his attendance at a Muslim school. In the beginning of 2007, John Edwards illustrated that candidates are also capable of damaging their own campaigns when attempting to employ blogs. Both of these incidents spread over the Internet with incredible speed. Some organizations form explicitly to use the Internet politically against politicians, as with Moveon.org's actions against President George W. Bush, while others such as PoliticsNow.com arise to inform voters. Just like organizations, individual reporters from independents like the Drudge Report to mainstream reporters from *The Washington Post* or *The New York Times* have used the Internet to present various positions.

During elections, private citizens can use the Internet to show support for preferred candidates by using the candidates' Web sites directly (including making online donations) or by visiting general sites, through which they may take part in opinion polls or contribute to blog commentary. Supporters may also visit private Internet sites supporting a candidate or even sites run by interest groups that support a slate of candidates. Although Internet voting has not yet been employed on a large scale, Arizona has experimented with limited Internet voting as far back as 2000. Beyond election-related activities, citizens can use the Internet to engage in the political process in many new ways. The U.S. Congress and some state legislatures post proposed and enacted legislation on the Internet. Interested citizens can then email a representative or senator. Some state, county, and even city governments provide Web broadcasts (webcasts) of meetings. Many big-city police departments maintain Web sites with law enforcement information and crime reports.

This information allows interested citizens to follow government activity and react quickly when appropriate. Usually, citizens communicate about politics using Web sites, email, and text messaging (also called instant messaging or IM). There have been a number of instances when people used Internet resources to come together quickly to pressure a government. For example, the Internet allowed people to organize for a large protest in the Philippines in early 2001 that forced President Joseph Estrada from power. In such cases, instant messaging can be used to gather large numbers of people so rapidly that law enforcement is too slow to respond. Such gatherings, known as *flash mobs*, have been known to force change in governments. Flash mobs were used by protestors during the 1999 World Trade Organization meeting in Seattle, Washington, and overwhelmed local law enforcement.

Small local groups are also able to use the Internet for political purposes. It was once necessary for groups to establish either size or significant specialization before they could influence national or international politics. The Internet has allowed smaller, more localized groups to combine their influence, tap public opinion, and take a role in both national and international politics. For example, the leaders of various organizations within the militia movement in the United States have used the Internet to connect with each other, organize jointly, disseminate propaganda, and trade techniques since the late 1990s. Examples of such efforts in other countries include the Mexican Zapatista movement, whose leaders used the Internet to garner international awareness of their situation and apply international pressure on the Mexican government during the mid- to late 1990s. Activists involved in the world environmental movement used the Internet during the June 1992 United Nations Conference on Environment and Development in Rio de Janeiro, a meeting known informally as the Earth Summit, to coordinate the activities of numerous disparate groups. During the 1992 Rio sessions, these groups organized and presented their positions to delegates using the Internet. As a result of these Internet-based efforts across national borders by small political-interest groups, the opinions of these groups were taken into account and included in the resulting international treaty. Although activities at the Rio sessions predate the Internet's arrival into mainstream political activity, it showed the potential of the then newly-emerging technology and helped to promote the early use of the Internet. Although the Internet was not sufficiently widespread for groups to reach public audiences, the environmental groups used email to communicate with technophiles in other groups and to coordinate

activities. The capacity of the Internet to influence closed totalitarian societies remains unclear, but its impact on open societies is generally accepted.

From the perspective of politicians, individual citizens, or interest groups, the Internet has changed the way in which people participate in politics by allowing them to break free from historical limitations. In the case of private citizens and small interest groups, the Internet has allowed both to gain access to the political process and political powers in a manner not previously available. The role of the Internet on politics is still developing, and research on its impact is underway.

SEE ALSO *Internet; Politics*

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INTERNET BUBBLE

A bubble is an unsustainable increase in the price of an asset type driven by the expectation of further price increases rather than fundamental characteristics. Bubbles are a concern of social science since they result from individual calculations about the behavior of others in society. Indeed, in his 1721 poem about the first price escalation for which the term bubble was widely used, Jonathan Swift linked the British South Sea Bubble to the "madness of the crowd" denying the fundamentals: "But as a Guinnea will not pass / At Market for a Farthing more / Shewn through a multiplying Glass / Than what it allways did before" (1958, p. 255).

During a bubble, the downplaying of fundamental analysis leaves little to counterbalance the momentum of the rising price and the solidifying of interests in its preservation. Lower-quality assets rise along with higher-quality assets when fundamental characteristics are less distinguished. As suggested by John Stuart Mill in *Principles of Political Economy* (1848), assessing price becomes even more difficult when money is borrowed: "Some accident, which excites expectations of rising prices … a generally reckless and adventurous feeling prevails, which disposes people to give as well as take credit more largely than at other times, and give it to persons not entitled to it" (1899, p. 47). The most vexing feature of a bubble was captured by Alan Greenspan, the chairman of the Federal Reserve Board, when he testified in April 2000 at a Senate Banking Committee hearing that a bubble cannot be definitively identified until after the fact. The benefit of hindsight suggests that there was an Internet stock bubble as Greenspan spoke.

The Internet Bubble was set against the backdrop of rapid growth in Internet use. The 1991 invention of the World Wide Web and the 1994 release of the Netscape browser transformed a text interface into a more accessible graphical interface that propelled Internet use from about 10 percent of Americans in 1995 to 50 percent by 2000. This growth held the promise of making money and a boom of investment capital flowed into Internet enterprises, commonly referred to as "dot.coms."

One way to generate investment dollars was by issuing stock in an Internet-related company. Upon issue, Internet stocks often experienced a dramatic rise in price. Multifold increases in price on the day of issue were common. The success of early Internet stock issues prompted additional offerings. Prices for Internet stocks continued to soar in the late 1990s.

The broad expectation of increasing Internet stock prices reduced concern for the fundamental characteristics of the individual companies whose stock price was increasing. Many of the dot.coms had never made a profit. Companies operated under the assumption that if they could generate a sizable user base by giving away their product or Web site content, they would eventually figure out how to make money. Traditional standards of longevity and profitability before issuing a stock gave way in a climate of high valuations for even fundamentally weak business models. The number of potential stock

buyers increased with the advent of online trading in which the Internet itself reduced transaction costs for buying stocks. Many stock buyers were encouraged to borrow based on expected price increases. Investment clubs and day traders proliferated. The expectation of rising prices was strong, but not sustainable. Lacking strength in the fundamentals, Internet stocks could not avoid the ultimate spiral downward when owners began selling to take profits and later to reduce losses.

The significant presence of Internet-related companies on the Nasdaq Stock Market makes it an appropriate place for identifying the contours of the Internet Bubble. Nasdaq closing values reveal a thirty-month period in which the composite index tripled and then returned. The Nasdaq closed at 1639.19 on October 20, 1998, reached 3000 for the first time on November 3, 1999, and peaked at 5048.62 on March 10, 2000. On the decline, it had closed below 3000 by November 13, 2000, and was at 1638.80 on April 4, 2001. The deflated bubble left Internet stock values at a tiny percentage of their highs and dotted the landscape with failed companies.

The massive shift of wealth during the Internet Bubble produced winners and losers. A variety of advantages, including access to the initial offering price and reserved shares, meant that those on the inside of stock offerings were more likely to be winners than were ordinary buyers. One clear winner was Internet innovation, which was facilitated by the large amounts of capital that went to enterprises during the Internet Bubble.

SEE ALSO *Bubbles; Great Tulip Mania, The; Internet; Technological Progress, Economic Growth; Telecommunications Industry*

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Robert J. Klotz

INTERNMENT, JAPANESE AMERICAN

SEE *Incarceration, Japanese American.*

INTERRACIAL MARRIAGE

SEE *Marriage, Interracial.*

INTERRACIAL SEX

SEE *Sex, Interracial.*

INTERROGATION

Interrogation is a process that seeks to obtain information by questioning (usually direct questioning) from a person often described as either a suspect or a source. Interrogation may be conducted for a number of reasons, most commonly in pursuit of a criminal investigation or to collect intelligence concerning foreign states, terrorist groups, or other persons considered to be actual or potential threats to national security. Interrogation raises a variety of legal and ethical issues that turn upon the techniques employed. But a practical issue common to all methods of interrogation concerns the efficacy of the method deployed. This depends, in part, on the ability of the interrogator (or the interrogator's associates) to detect deception. However, it is not possible to conduct a legitimate empirical study assessing the comparative efficacy of aggressive and nonaggressive interrogation tactics. Such a study would violate accepted norms of research ethics, not to mention numerous domestic and international legal provisions. For this reason, claims of relative efficacy tend to rest on sporadic anecdotal evidence.

METHODS OF INTERROGATION

Interrogation techniques range from so-called rapport-building—which often uses conversation to gain the trust and confidence of the suspect or source—to physical or mental torture that leaves the victim with permanent physical or mental scars. Between these two extremes are a number of aggressive tactics, such as stress positions, sleep deprivation, prolonged isolation, and exposure to temperature extremes. These techniques—particularly when used in combination—often constitute cruel, inhuman, or degrading treatment in violation of international law as well as domestic legal norms. In some cases, aggressive tactics may constitute physical or mental torture, despite the absence of permanent physical injury or psychological damage. Although interrogational torture has been used (and is still used) throughout the world, public statements of experienced interrogators tend to eschew torture on the grounds that it yields unreliable results.

This is because, under pressure, suspects tend to say what they think their interrogators want to hear.

Often suspects will confess in the hope that this will ease the pressure imposed by interrogators. These are sometimes called *pressured-compliant confessions* (Gudjonsson 2003). Sometimes persistent pressured interrogation leads suspects to doubt their own recollections, particularly in the face of apparently confident assertions by interrogators that the suspect is guilty of a crime. There have been a number of well-documented cases in which false confessions—and, as a result, criminal convictions—were obtained following the use of high pressure interrogation tactics. One of the best-known examples, given international prominence by the Oscar-nominated film *In the Name of the Father* (dir. Jim Sheridan, 1993), is the case of the so-called Guildford Four. It arose out of a devastating bombing campaign conducted by the Irish Republican Army on mainland Britain in 1974. Convictions were secured largely on the basis of purported confessions, despite the defendants' claims that they had been threatened and assaulted while in custody. The convictions were not overturned until 1989, after the defendants had spent fifteen years in prison. In 2005 the British prime minister, Tony Blair, apologized to the Guildford Four and said that they deserved to be "completely and publicly exonerated."

Interrogators have long been interested in using pharmacological agents to overcome resistance to interrogation. In the 1950s and 1960s, the U.S. Central Intelligence Agency (CIA) ran a program known by the codename MKULTRA, established in response to reports of alleged Soviet, Chinese, and North Korean mind-control techniques. (These reports were given some credence when thirty-six American airmen shot down in the Korean War falsely confessed to a vast plot to bomb civilian targets.) The MKULTRA program involved experiments (many of which were carried out on unwitting subjects) using psychoactive drugs such as LSD and mescaline in an attempt to control or influence human behavior. Other drugs reportedly used, either in experiments or during actual counterintelligence interrogations, include scopolamine, sodium pentothal, and sodium amytal. However, there is little evidence that any so-called truth serum has ever lived up to its name or its legend in popular culture. It has been alleged that, after the terror attacks in the United States on September 11, 2001, the CIA took a renewed interest in using drugs as interrogation aids. It has also been reported that the CIA used drugs prior to interrogating (among others) Khalid Sheikh Mohammed, a senior Al-Qaeda operative who is alleged to have been the architect of the 9/11 attacks and who was captured by the United States in 2003.

LIE DETECTION

There are a variety of approaches to detecting deception in interrogation. They include analysis of verbal and nonverbal behavioral cues, analysis of the content of interrogation responses, and measurement of the physiological responses to questioning. Empirical research indicates that most people (including many professional interrogators) are unable to detect deception from demeanor. Several studies have demonstrated that accuracy is generally close to chance. However, a very small number of people have proven exceptionally prodigious in their ability to detect deception. According to psychologist Paul Ekman, these people are able to detect lies by observing *microexpressions*, fleeting movements of dozens of facial muscles. (Ekman has catalogued these microexpressions and taught others to recognize them [Ekman 2004].) Another approach, *content-based criteria analysis*, scrutinizes the contents of statements for potential evidence of truthfulness, such as superfluous detail and spontaneous self-correction.

Advances in technology often seem to promise simpler methods for detecting deception, but they usually fail to deliver. The polygraph (the so-called lie detector) relies on physiological manifestations of anxiety—changes in skin conductance, heart rate, and respiration—in order to flag deception. It is therefore not effective when the subject is a sociopath or has learned to suppress these manifestations. In addition, anxiety about being tested makes the polygraph "intrinsically susceptible to producing erroneous results" (National Research Council 2003, p. 2). A number of universities and private companies—some of which are reported to have substantial U.S. government funding—are trying to develop and promote technologies such as functional magnetic resonance imaging (fMRI), electroencephalography (EEG), and infrared spectroscopy in order to detect deception by monitoring brain activity. Since the publication of a scientific paper on fMRI-based lie detection in early 2002 (Langleben at al. 2002), there has been considerable interest in the use of fMRI in particular. Despite concerns about the artificiality of such laboratory studies and their limited application in real-world scenarios, there are reports that fMRI may have already been used in counterterrorism interrogations. Some commentators have argued that fMRI has the potential to make interrogation more humane. However, false positives create further risk of mistreatment and abuse, particularly if there is undue confidence in the ability of the new technology to screen terrorists from a pool of suspects. On the other hand, if new brain imaging technologies ultimately meet their proponents' expectations, their impact on privacy and so-called cognitive liberty will need to be addressed.

CRIMINAL INTERROGATION AND INVESTIGATIVE INTERVIEWING

A popular approach to criminal interrogation in the United States is known as the *Reid Technique*, named after the late president of John E. Reid & Associates, a corporation that provides interrogation training to both public and private sectors in the United States. The Reid Technique is a nine-step process designed for use on "suspects whose guilt seems definite or reasonably certain" (Inbau et al. 2001). It commences with direct confrontation of the suspect by the investigator—who states that the suspect is considered guilty of the offense—and is intended to lead to a formal confession. Proponents of the technique advocate the use of deception, including props such as a large file containing blank sheets of paper, to create the impression that the investigator already has incriminating evidence. At various stages, the investigator evaluates the suspect's verbal and nonverbal responses. If the suspect listens attentively when he is offered a motive for the crime and a potential moral excuse, this may be taken as an indication of guilt. But if he reacts with resentment, it may be considered an indication of innocence. Critics of this approach claim that it rests on the assumption that the only method of solving many criminal investigations is by obtaining a confession from the perpetrator. They also challenge the need to use trickery, deceit, and psychological manipulation, including techniques that the general public would ordinarily consider unethical (Gudjonsson 2003).

There is considerable variation—even among Western democracies—in the legal rights accorded to suspects who are interrogated in the course of a criminal investigation. In the United States, before suspects in police custody are interrogated, they must be informed that they have the right to remain silent, that anything they say can and will be used in evidence against them, that they have the right to an attorney, and that if they cannot afford an attorney, one will be appointed for them. This is often described as the *Miranda warning* (while the rights themselves are referred to as *Miranda rights*) after the decision of the U.S. Supreme Court in *Miranda v. Arizona* (1966). That case made clear the necessity for the warning in order to implement and protect the privilege against self-incrimination (or the right not to be compelled to incriminate oneself) enshrined in the Fifth Amendment to the U.S. Constitution. If, following a Miranda warning, the suspect refuses to talk, the prosecution will not be permitted to comment at trial on the suspect's silence. A statement obtained by police without a Miranda warning cannot be relied upon by the prosecution in order to make its case at trial, unless the defendant contradicts that statement in his oral testimony—in which case, the statement may be used to impeach the defendant, that is, to undermine his credibility as a witness.

The Supreme Court has also made clear that suspects should not be "threatened, tricked, or cajoled into a waiver" of their Miranda rights. However, empirical studies suggest that in at least 80 percent of cases suspects do waive their rights and make a statement to the police. This may be due in part to strategies adopted by police interrogators—such as deemphasizing the importance of the Miranda warning by reading it in a monotonous voice or trying to persuade the suspect that he is being offered a good opportunity to tell his story and that the interrogator is trying to help him. These strategies will not invalidate the suspect's waiver of the Miranda rights if, taking into account all the circumstances, the court concludes that the waiver was "voluntary and intelligent."

INTERROGATION AND THE COLLECTION OF INTELLIGENCE

The laws of war—in particular, the provisions of the Third Geneva Convention of 1949—impose strict limits on the questioning of prisoners of war. Strictly speaking, prisoners of war are only required to state their name, rank, and serial number. They must not be subjected to physical and mental torture or "any other form of coercion," and they must be protected against "acts of violence or intimidation and against insults." If prisoners of war refuse to answer questions during interrogation, they "may not be threatened, insulted, or exposed to any unpleasant or disadvantageous treatment of any kind." Similar protections are also provided for civilian detainees by the Fourth Geneva Convention of 1949. The laws of war do not, however, prohibit positive inducements or incentives for responsiveness to questioning. International human rights law—which applies both in war and in times of peace—also prohibits torture and cruel, inhuman, and degrading treatment and positively requires the humane treatment of detainees.

Prior to the terrorist attacks in the United States on September 11, 2001, official U.S. Army interrogation policy and practice reflected these international norms. Army *Field Manual 34-52* (1992) on interrogation states that the laws of war and U.S. policy "expressly prohibit acts of violence or intimidation, including physical or mental torture, threats, insults, or exposure to inhumane treatment as a means of or aid to interrogation." It also states that the "use of torture and other illegal methods is a poor technique that yields unreliable results, may damage subsequent collection efforts, and can induce the source to say what he thinks the interrogator wants to hear." After 9/11, when further attacks were anticipated and feared, more aggressive interrogation techniques were formally authorized and adopted at U.S. detention facilities in Afghanistan, Iraq, and Guantánamo Bay, Cuba. Techniques used included sleep deprivation, stress posi-

tions, prolonged isolation, and exposure to temperature extremes. (Controversially, U.S. Army psychiatrists and psychologists—attached to military intelligence and acting as behavioral science consultants—were tasked with advising interrogators as to the most effective approach for individual detainees.) Such tactics were formally justified on a number of legal grounds, among them that terrorists were not subject to the protections of the Geneva Conventions and that the international human rights obligations of the United States did not prohibit cruel, inhuman, and degrading treatment of aliens detained abroad. (It was the latter claim that the U.S. Congress intended to rebut when it passed the so-called McCain Amendment to the Defense Appropriations Bill at the end of 2005.) The U.S. government has claimed that the use of more aggressive interrogation techniques has procured valuable intelligence, but this has not been independently verified.

The publication of photographs in 2004 recording the abuse of detainees by U.S. soldiers at Abu Ghraib prison in Iraq triggered public debate in the United States and abroad about the proper limits of interrogation. These debates were further fuelled by revelations that the CIA was interrogating detainees at secret locations in eastern Europe and elsewhere (called *black sites*, whose existence President George W. Bush subsequently confirmed) and that the United States had handed detainees over to nations known to torture suspects (a practice described as *extraordinary rendition*).

In a landmark decision in June 2006, the U.S. Supreme Court held that suspected Al-Qaeda detainees are entitled to the basic protections found in Common Article 3 of the Geneva Conventions (*Hamdan v. Rumsfeld* 2006). At a minimum, they must be treated humanely, and protected from cruel, inhuman, and degrading treatment and from outrages on personal dignity. A few weeks later the army published a new field manual on interrogation, *Field Manual 2-22.3* (2006), which prohibits interrogation tactics such as "waterboarding" (a procedure designed to simulate the experience of drowning), the hooding of detainees, and the use of barking dogs. However, this manual does not apply to detainees in the custody of the CIA, and concerns about the continuing use of aggressive interrogation tactics were fueled by two further developments.

After President Bush criticized the provisions of Common Article 3 of the Geneva Conventions for being "too vague," Congress passed the Military Commissions Act of 2006, which purports to give the president the authority to "interpret the meaning and application of the Geneva Conventions" (Sec. 6(a)(3)). When the president signed the act into law, he noted that it would "allow the Central Intelligence Agency to continue its program for questioning key terrorist leaders and operatives" (Bush 2006). Just days later, while lawyers and commentators were debating the effect of the act on permissible interrogation strategies, Vice President Richard Cheney sparked further controversy. When asked in a radio interview if "a dunk in water is a no-brainer if it can save lives," Mr. Cheney replied, "it's a no-brainer for me" (Eggen 2006, p. A2). He also expressed agreement with the view that the debate over interrogation techniques was "a little silly" (Eggen 2006, p. A2).

SEE ALSO *Human Rights; Torture*

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Jonathan H. Marks

INTERROLE CONFLICT

SEE *Role Conflict.*

INTERSECTIONALITY

The premise of intersectionality theory, first articulated by feminists of color, is that social differentiation is achieved through complex interactions between markers of difference such as gender, race, and class. In order to comprehend how an individual's access to social, political, and economic institutions is differentially experienced, it is necessary to analyze how markers of difference intersect and interact.

In the 1970s feminist theory could be divided into different perspectives based on the identification of the root of women's oppression. Liberal feminists identified unequal access to existing economic and political systems, whereas radical feminists named patriarchy, the control of women by men, as the key oppressive system. Marxist and socialist feminists, following the writings of Karl Marx and Frederick Engels, believed that capitalism was the main determinant of women's oppression. Socialist feminists engaged in active debates on the relationship between class and gender oppression, some arguing that women constituted a sexual class that functioned within the capitalist framework. Others, such as Betsy Hartmann, posited a dual-systems theory or a capitalist patriarchy in which patriarchy was viewed as a system of oppression anchored in material conditions (e.g., the institution of marriage, property ownership) acting alongside the relations of class. Issues of race and sexuality were largely absent from these debates.

Although second-wave feminists challenged traditional scholarship for positioning the experiences of men as universal, black feminists and lesbians critiqued these feminists for excluding issues of race and sexuality from feminist analysis, thus falsely universalizing the experiences of middle-class heterosexual white women. In the late 1970s only a few authors, mostly women of color, were writing about gender, race, and class as interconnected systems of oppression. The Combahee River Collective, a group of black feminist activists from Boston, is widely credited for first theorizing the interconnections between gender, race, class, and sexuality. In "A Black Feminist Statement" (1983) they outline how they view gender, race, class, and sexuality as connected: "We are actively committed to struggling against racial, sexual, heterosexual and class oppression, and see as our particular task the development of integrated analysis and practice based upon the fact that the major systems of oppression are interlocking. The synthesis of these oppressions creates the conditions of our lives" (p. 210). An intersectional approach complicates analyses of power relations that give priority to one element of identity.

Although intersectionality theory emerged in the 1970s, its roots can be traced back to a speech delivered by Sojourner Truth (c. 1797–1883), a black woman who had been a slave, at the 1851 Women's Rights Conference in Akron, Ohio. In this passage, she articulates how her identity is shaped not only by her gender, but also by her race and class: "That man over there says that women

need to be helped into carriages, and lifted over ditches, and to have the best place everywhere. Nobody ever helps me into carriages, or over mud puddles, or gives me any best place. And ain't I a woman?" (Painter 1996, p. 165). According to Avtar Brah and Ann Phoenix (2004), "Sojourner Truth's identity claims are thus relational, constructed in relation to white women and all men and clearly demonstrate that what we call 'identities' are not objects but processes constituted in and through power relations" (p. 77).

In the early twenty-first century, intersectionality theory received wide support from social science researchers. Many researchers adopted intersectionality theory in their development of research questions, methodologies, and analysis. Some researchers who used this approach framed the intersections of gender, race, and class as additive so that a black woman would be seen as facing a "double jeopardy" due to the combined impact of gender and racial inequality. Elizabeth Spelman (1988) argued that treating interlocking systems of oppression as additive implies that processes of gender, race, and class are separate entities, and it ignores how these factors interact to shape lived experience. Intersectionality approaches the concepts of gender, race, and class as social constructions that vary across geography and time; markers of difference are not viewed as static traits, but as processes that are (re)produced in the daily actions of people.

Both qualitative and quantitative researchers have taken up intersectionality theory in their investigations into the workings of social reality, although qualitative approaches have far outnumbered quantitative studies. Marlene Kim (2002) applied an intersectionality framework to her quantitative investigation of how gender and race processes affect the wages of women in the United States. Her research indicates that black women face a "race penalty" in that when all factors are considered, they earn 7 percent less than white women in the same industries. Feminist economists Rose M. Brewer, Cecelia A. Conrad, and Mary C. King (2002) point out that there are many challenges of applying an intersectionality framework to the empirical investigation of social differentiation: "Even as we increasingly understand the mutually constitutive nature of color, caste, race, gender, and class, analytically, as categories of analysis and identity, the project remains difficult" (p. 5). Quantitative research studies tend to address issues of gender independent of race or class.

An important quantitative research project was conducted by Leslie McCall (2001), who analyzes the impact of gender, race, and class on wage inequality in four U.S. cities with different local economic contexts: Detroit, Miami, St. Louis, and Dallas. By combining an analysis of case-study and large-scale survey data, McCall demonstrates that gender and racial inequality have different consequences in different contexts; in some instances, a decrease in gender inequality is accompanied by an increase in racial inequality between women. She identifies *configurations of inequality* as a term to describe the shifting interactions between gender, race, and class. These configurations "reveal that in no local economy are all types of wage inequality systematically and simultaneously lower or higher; complex interactions of various dimensions of inequality are the norm" (p. 6). Her analysis is an important development in understanding the relationship between relations of gender, race, and class.

Researchers who use intersectionality theory present a more sophisticated, nuanced understanding of the workings of power relations. Susan Stanford Friedman (1995) proposed a framework of "relational positionality" that acknowledges how "the flow of power in multiple systems of domination is not always unidirectional. Victims can also be victimizers; agents of change can also be complicit, depending on the particular axis of power one considers" (p. 18). Sherene Razack (1998) argues that "it is vitally important to explore in a historical and site-specific way the meaning of race, economic status, class, disability, sexuality, and gender as they come together to structure women in different and shifting positions of power and privilege" (p. 12). The research of intersectionality theorists makes an important contribution to the social sciences; it is now considered incomplete scholarship in women's studies or cultural studies for a researcher to undertake an analysis of gender relations without consideration of how race and class relations are also implicated.

SEE ALSO *Capitalism; Ethnic Conflict; Ethnic Enclave; Ethnicity; Feminism; Gender; Identity; Immigration; Inequality, Gender; Inequality, Racial; Liberalism; Nationalism and Nationality; Power; Race; Racism; Social Movements; Truth, Sojourner; Women; Women's Movement*

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Bonnie Slade

INTERSTATE COMMERCE COMMISSION

SEE *Progressive Movement.*

INTERSUBJECTIVITY

In its most general sense of that which occurs between or exists among conscious human actors, *intersubjectivity* is little more than a synonym for "the social." As used by social scientists, however, *intersubjectivity* usually denotes some set of relations, meanings, structures, practices, experiences, or phenomena evident in human life that cannot be reduced to or comprehended entirely in terms of either subjectivity (concerning psychological states of individual actors) or objectivity (concerning brute empirical facts about the objective world). In this sense, the concept is usually intended to overcome an unproductive oscillation between methodological subjectivism and objectivism. The concept is especially predominant in social theories and theories of the self.

Although German idealist philosophers Johann Fichte (1762–1814) and G. W. F. Hegel (1770–1831) stressed the importance of intersubjectivity, the concept became influential in the twentieth century through the work of American social psychologist George Herbert Mead (1863–1931). Mead claimed that the development of cognitive, moral, and emotional capacities in human individuals is only possible to the extent that they take part in symbolically mediated interactions with other persons. For Mead, then, ontogenesis is essentially and irreducibly intersubjective. He also put forward a social theory explaining how social norms, shared meanings, and systems of morality arise from and concretize the general structures of reciprocal perspective-taking required for symbolic interaction. In short, he argued that intersubjectivity—understood specifically in terms of linguistically mediated, reflexively grasped social action—furnishes the key to understanding mind, self, and society.

Although the work of Martin Heidegger (1889–1976) and Ludwig Wittgenstein (1889–1951) was often more directly inspirational, Mead's bold claim that self and society are irreducibly intersubjective has been rearticulated and supported by many distinct subsequent intersubjectivist approaches. Action theory, symbolic interactionism, lifeworld phenomenology, hermeneutic analysis, conversational analysis, ethnomethodology, social constructivism, dialogism, discourse theory, recognition theory, and objects relations theory all take intersubjectivity as central and irreducible. For example, Erving Goffman (1922–1982) insisted that we need a microanalysis of face-to-face interactions in order to properly understand the interpersonal interpretation, negotiation, and improvisation that constitute a society's interaction order. While macro- and mesostructural phenomena may be important in setting the basic terms of interaction, social order according to Goffman is inexplicable without central reference to agents' interpretations and strategies in actively developing their own action performances in everyday, interpersonal contexts. Harold Garfinkel and other ethnomethodologists likewise insist that social order is only possible because of the strongly normative character of a society's particular everyday interaction patterns and norms.

Widely diverse social theorists influenced by phenomenology also center their analyses in intersubjective phenomena and structures. Most prominently, Alfred Schutz (1899–1959) sought to show how the lifeworld of persons—the mostly taken-for-granted knowledge, know-how, competences, norms, and behavioral patterns that are shared throughout a society—delimits and makes possible individual action and interaction. In particular, he sought to analyze the way in which the constitutive structures of any lifeworld shape social meanings and personal experiences, by attending to the lifeworld's spatiotemporal, intentional, semantic, and role typifying and systematizing dimensions. Other theories analyze different aspects of the lifeworld: how experience and knowledge is embodied (Maurice Merleau-Ponty), the intersubjective construction of both social and natural reality (Peter Berger and Thomas Luckmann), the social construction of mind and mental concepts (Jeff Coulter), and the social power and inequalities involved in symbolic capital (Pierre Bourdieu). Finally, Jürgen Habermas emphasizes the linguistic basis of the lifeworld, constructing a theory of society in terms of the variety of types of communicative interaction, the pragmatic presuppositions of using language in order to achieve shared understandings and

action coordinations with others, and the role of communicative interaction for integrating society. While acknowledging that some types of social integration function independently of communicative action—paradigmatically economic and bureaucratic systems—Habermas claims that intersubjective communication is fundamental in, and irreplaceable for, human social life.

Diverse prominent theories of the self are united in supporting Mead's claim that the self is developed and structured intersubjectively. Martin Buber's (1878–1965) distinction between the different interpersonal attitudes involved in the I-Thou stance and the I-It stance leads to the insight that the development and maintenance of an integral sense of personal identity is fundamentally bound up with the capacity to interact with others from a performative attitude, rather than an objectivating one. Mead's claim is also developed in diverse theories of the self: Habermas's account of interactive competence and rational accountability, Axel Honneth's and Charles Taylor's theories of interpersonal recognition and identity development, Daniel Stern's elucidation of the interpersonal world of infants, and psychoanalytic object-relations theories stressing the dependence of the ego on affective interpersonal bonds between self and significant others.

SEE ALSO *Bourdieu, Pierre; Goffman, Erving; Habermas, Jürgen; Mead, George Herbert; Other, The*

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INTERTEMPORAL SUBSTITUTION

SEE *Elasticity; Time Preference.*

INTERVENTIONS, SOCIAL POLICY

Social policy interventions include policies affecting the social conditions under which people live. Social policy aims to improve human welfare and to meet human needs. Many policies that are ostensibly economic, such as cash assistance to the poor, fall under the rubric of social policy interventions because they have a direct impact on the social conditions under which people live and are aimed at improving human welfare and meeting human needs. Social policies may also regulate and govern human behavior in such areas as sexuality and morality. Policies that involve access to abortion or laws governing marriage and divorce therefore fall within the sphere of social policy interventions.

Between the 1880s and the 1920s, many European countries instituted pension and social insurance programs for industrial workers and needy individuals. These

programs became comprehensive social welfare systems in the 1950s to 1960s. Early U.S. social policy involved the most inclusive system of public education in the industrializing world, as well as generous benefits to elderly veterans and their families. The United States also instituted social benefits for women and their children. The Social Security Act of 1935 created a basic framework for U.S. social policy interventions that is still in place today. In the 1960s, in conjunction with the war on poverty, major new programs of public assistance were established in the United States.

Among comparably developed countries, the United States has the highest level of economic inequality and the lowest level of cash assistance to the poor. With noncash assistance added, the United States falls in the middle. Cash benefits require trust that recipients will spend the extra income on expenditures the public deems worthy. Noncash public assistance programs pay directly for those expenditures deemed worthy, such as food in the case of the Food Stamp Program or health care in the case of Medicaid.

EXAMPLES OF SOCIAL POLICY INTERVENTIONS

A broad set of public assistance or antipoverty programs exists in the United States; these programs constitute a fundamental social policy intervention. The four largest components of U.S. public assistance include: the Food Stamp Program; Medicaid; Aid to Families with Dependent Children (AFDC), replaced in 1996 with the Temporary Assistance to Needy Families (TANF) block grant; and the Earned Income Tax Credit (EITC).

The Food Stamp Program is a nationally provided program. It is the only public assistance program available to all poor people, whether or not they have children. The Food Stamp Program is the first line of defense against hunger in the United States. Food stamp recipients spend their benefits to buy eligible food in authorized retail stores. As family income increases, food stamp benefits decline. Therefore, recipients who live in states that provide less in the way of cash assistance to the poor receive more in food stamps.

Medicaid, established in 1965, pays for health-care costs among eligible low-income groups. The program is run by the states, with certain mandates from the federal government. Like all health-care costs, Medicaid costs have substantially increased over the 1980s, 1990s, and early 2000s. This is mostly due to increased costs for long-term care among the elderly and disabled, as well as the fact that the benefits expanded in the 1980s to include all poor children. Medicaid is the most costly of U.S. public assistance programs.

Aid to Families with Dependent Children (AFDC), commonly known as *welfare*, provides cash assistance to poor families with children. An individual receives the highest level of assistance from AFDC when she or he has the least income; in fact, for every extra dollar in income the recipient earns, a dollar is lost in benefits. In many cases, the economic reality of AFDC recipients' lives means that neither welfare nor low-wage work gives them enough income to meet their families' expenses. Moreover, inflation has steadily eroded the real value of AFDC benefits over the years. AFDC is a controversial social policy intervention, primarily due to changing views regarding the primary recipient population—single mothers. In 1996 Congress passed the Personal Responsibility and Work Opportunity Reconciliation Act, which implemented fundamental changes in the design and funding of public assistance programs in the United States, particularly AFDC. AFDC was abolished and replaced with a program called Temporary Assistance to Needy Families. States were expected to replace their AFDC programs with new programs of their own; federal mandates include work requirements for recipients and limited time periods for benefits.

The federal Earned Income Tax Credit (EITC) is another large and growing public assistance program. EITC is a refundable tax credit that reduces or eliminates the taxes that low-income working people pay. The program frequently operates as a wage subsidy for low-income workers. People who work, earn low wages, and have children are eligible to receive EITC. In contrast to AFDC, since EITC pays nothing for people who are not working, it provides an incentive to work, assuming that recipients understand how EITC operates. The rationale underlying this intervention is that employment alone is insufficient to bring people out of poverty. By the early 2000s, EITC had become one of the largest antipoverty tools in the United States.

Another example of an important, albeit controversial, social policy intervention is *affirmative action*. Affirmative action is a policy or program whose stated goal is to redress past or present discrimination through active measures to ensure equal opportunity, generally to higher education and employment. The stated goal of affirmative action is to counteract discrimination sufficiently such that the power elite reflect the demographics of society at large, at which point such a strategy will no longer be necessary. Groups who are targeted for affirmative action are characterized by race, gender, ethnicity, or disability status.

Proponents of affirmative action generally advocate it either as a means to address past discrimination or to enhance racial, ethnic, gender, or other diversity. Proponents argue that the simple adoption of meritocratic

principles of race blindness or gender blindness will not suffice to change the situation for several reasons: (1) Discriminatory practices of the past preclude the acquisition of "merit" by limiting access to educational opportunities and job experiences; (2) ostensible measures of "merit" may be biased toward the same groups who are already empowered; and (3) regardless of overt principles, people already in positions of power are likely to hire people they already know or people from similar backgrounds. Opponents claim that affirmative action: (1) acts as a new form of discrimination and benefits privileged individuals within minority racial groups (such as middle- to upper-class blacks) at the expense of disenfranchised individuals within majority racial groups (such as poor whites); (2) increases racial tension and creates a stigma such that all minority groups within a college or employment setting are perceived as having received special treatment; and (3) creates a skill "mismatch" (i.e., individuals who are less qualified than their peers are admitted into more rigorous programs in which they cannot adequately perform).

EVALUATION OF THE EFFECTS OF SOCIAL POLICY INTERVENTIONS

A central issue in the evaluation of social policy interventions is how the outcome of interest is defined. Many Americans contend that because high poverty rates continue to exist in the United States, antipoverty programs must be ineffective. However, many public assistance programs have accomplished exactly what they were intended to accomplish. Most of the antipoverty programs were not designed to eliminate poverty, but to provide assistance to needy families. For example, the Food Stamp Program has improved nutrition among the poor, and Medicaid has increased access to medical care and contributed to improvements in the health of the poor. The combined impact of these programs has also improved the health of pregnant women and reduced low birth weights among infants born to low-income mothers.

Studies have found that while cash assistance for the poor does not do much to decrease the overall poverty rate in the United States, such assistance provides more cash income to families than they would have otherwise, making them less poor. In the absence of welfare benefits, individuals work more on average, but do not earn as much money as they would receive or did receive from welfare. Moreover, earnings of less-educated U.S. workers have stagnated or fallen since about the 1970s, such that employment is not necessarily effective in combating poverty.

Affirmative action is another example of a controversial social policy that provokes intense debate regarding its effects. The evidence suggests that affirmative action has had a major impact on the representation of minorities in university admissions and employment, even if the overall numbers of redistributed positions is small. Replacement of affirmative action programs based on race and gender with class-based practices is likely to reduce the presence of minorities on college campuses while doing little to improve the overall position of white males. There is some evidence that the performance of students admitted to colleges and universities with the aid of affirmative action lags behind that of students admitted without such aid. However, there may be an overall benefit to more diversity on campuses. Moreover, minority students benefit greatly in the labor market from having attended college. Nevertheless, affirmative action programs remain under intense challenge.

Serious evaluation of any social policy intervention requires some sort of comparison group. A comparison group provides a means of evaluating the counterfactual, that is, what would have happened to program recipients in the absence of participation in the program. A randomized experiment where one group is assigned to receive the benefits of a program while another group receives no such benefits is typically considered the best way to deduce causation. However, most programs, particularly nationwide entitlement programs, provide limited opportunities for randomized experiments.

SEE ALSO *Affirmative Action; Experiments, Human; Gautreaux Residential Mobility Program; Natural Experiments; Negative Income Tax Experiment; Poverty; Public Health; Public Policy; Welfare State*

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INTERVENTIONS, SOCIAL SKILLS

Social relationships among individuals account for much of what is studied in the social sciences. Considerable research supports the essential role of social relationships

in behavioral, emotional, and academic/vocational well-being, showing that relationships with others directly impact self-esteem, daily functioning, and life success. Positive relationships foster positive well-being while problematic relationships result in poorer functioning. In keeping with these findings, the goal of social skills interventions (SSI) is to train individuals in specific skills and strategies that foster positive relationships.

One of the first theorists to propose that social relations with peers have a lasting impact on future intimate relationships as well as on personality development was Harry Stack Sullivan. In his seminal book *The Interpersonal Theory of Psychiatry* (1953), Sullivan postulated that childhood friendships, or "chumships," play a causal role in children's understanding of social rules and social roles. This belief system then determines interpersonal actions and reactions throughout adolescence and adulthood. Correspondingly, though SSI have been applied across the life span, they are most frequently practiced and studied with children during the elementary school years.

Generally, learning theory is the theoretical basis of SSI through which individuals are taught specific social skills and given opportunities to practice in a structured fashion. The assumption in SSI work is that factors within the individual are largely responsible for the quality of one's social relationships; if those factors are changed, then changes in social relationships will follow. Thus, the focus of SSI is on the individual, rather than the environment or other external contributing factors. However, conducting SSI within a group setting is considered an important ingredient for effecting change. In a group, individuals are able to learn and practice skills within a social context of same-aged peers. However, the group setting is more structured and safe than real-life peer settings, so fear of rejection and teasing is decreased and willingness to try new social behaviors is increased and supported. The social interactions within the group are also observed by group leaders who can then intervene when problems emerge and reinforce positive changes as they occur. The group leader serves as a coach, providing constructive criticism, alternative suggestions, and positive reinforcement.

Behavioral skills have traditionally been the mainstay of SSI. How to control impulses, how to cooperate with others, and how to initiate contact with others are basic behavioral skills taught through most SSI. In the 1980s social scientists began to recognize the mutual impact of thought, emotion, and behavior, and increasingly incorporated cognitive and emotional skills into SSI. Cognitive skill training focuses on helping individuals identify, challenge, and restructure maladaptive thought patterns. Negative social experiences, such as being bullied, tend to engender negative expectations for future social encounters. Testing negative assumptions and managing their influence on behavior is a core social-cognitive skill taught through SSI. Emotional skill training focuses on building self-awareness of how one feels in the moment and learning to manage those emotions. SSI help individuals recognize when emotions, such as anger or hurt, are short-circuiting social skills so they can control those emotions before acting.

SSI are appropriate for anyone who experiences social difficulties, such as isolation, rejection, or bullying. However, certain groups are at higher risk for social problems and, therefore, benefit particularly from SSI. Aggressive individuals experience high levels of conflict that are closely linked with negative relationships. Persons with attention deficit hyperactivity disorder (ADHD) exhibit increased activity level and impulsivity that are seen as intrusive and disruptive by peers. Individuals with developmental disorders, such as autism, or learning or physical disabilities stand out as different from peers and are more likely to display immature, awkward social behaviors that foster peer victimization and rejection. Finally, persons with emotional difficulties, such as depression or anxiety, are likely to withdraw from social interactions and experience isolation.

Research on SSI is intended to establish the effectiveness of intervention and better understand the mechanisms of change. A large literature exists evaluating the efficacy of different SSI with different populations and ages. A thorough review of interventions with school-age children was conducted by Mark Greenberg and colleagues in 2001. Overall, support for SSI for improving social competence and relationships has been found, although effect sizes tend to be moderate. SSI are most effective when: (1) cognitive and emotional skill training are included rather than behavioral skills alone; (2) training occurs over a longer period; (3) multiple components are used to bridge home, school, and clinical settings; and (4) training emphasizes both strengths and weaknesses of the individual.

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INTERWAR YEARS

The interwar years (1919–1938) pose a challenging puzzle for students of globalization: Why did the prolonged period of relative peace and prosperity in Europe, from 1815 to 1914, give way to world war, economic collapse, and the rise of fascism and socialism?

The interwar period began with the Paris Peace Conference and the Treaty of Versailles, which formally ended World War I—the "Great War"—in 1919. The war destroyed the Westphalian System under which elites of government colluded to channel the fate of Europe's empires and colonial subjects. The Treaty of Versailles humiliated Germany and imposed burdensome reparation payments. The war also saddled with national debts the other defeated Central Powers (Austria-Hungary and the Ottoman Empire) and the victorious Allies (France, Russia, Britain, Italy, and the United States).

This period witnessed efforts to construct a self-regulating global market, the rise of the human rights framework, and the emergence of new international political bodies, all of which ultimately failed, but which left lasting impacts on the economic, social, and political landscape of the twentieth century. Internationalists, who rejected policies of economic and political isolationism, pursued global peace through two mechanisms: the creation of the League of Nations and the restoration of the gold standard.

With the Westphalian balance of power in ruins, the U.S. president Woodrow Wilson promoted the League of Nations as the primary body for a new style of international relations. However, the League of Nations, which first met in November 1920, initially represented only forty-two nations. Germany, Russia, and the United States were notably absent. Embarrassingly for Wilson, the United States voted in 1919 against membership in the League, and the United States never joined. Although it refused to participate in international political bodies such as the League, the United States remained involved in the economic affairs of Europe. Throughout the 1920s the United States insisted upon repayment of the loans made to Britain and France during the war. France and Britain in turn insisted that Germany repay to them the enormous reparations agreed to at Versailles. But the strain on the German economy threatened to disrupt the German political and economic order and weaken European stability in general. The Dawes Plan in 1924 and the Young Plan in 1929 both refinanced international loans to Germany. But toward the end of 1929, the New York stock market boom had absorbed all available funds for foreign investment, which placed severe pressure on a German economy that had become dependent on this flow.

Other internationalists promoted a return to the gold standard. Conventional wisdom held that banknotes had value only if they represented gold. Between the 1870s and until the start of World War I, a transnational network of elites embracing market liberalism created a financial mechanism called the gold standard to extend the scope of markets internationally by enabling people in different countries with different currencies to freely engage in transactions with each other. The idea was to create a mechanism for global self-regulation by imposing a gold standard that relied on three rules: First, set the value of any nation's currency in relation to a fixed amount of gold and commit to buying and selling gold at that price; second, base the domestic money supply on the quantity of gold that your nation is holding in its reserves, so that circulating currency will be backed by gold; and third, give residents maximum freedom to engage in international economic transactions. However, efforts to restore the gold standard and an open world economy after World War I failed to reestablish the stability of the prewar period. The openness of the international economy only served to transmit deflationary pressures from one country to another after 1929, and acted as an obstacle to national recovery programs in the early 1930s.

In the United States, the Federal Reserve Board refused to manage the economy according to the gold standard. It instead acted to neutralize the expansionary effects of large gold imports into the United States from Europe, preventing a domestic price rise while placing an even greater burden of adjustment on European economies already facing severe economic problems. Despite the United States' contributions to the structural weakness of the interwar gold standard, it was not until the Great Depression that internationalists abandoned their experiment with restoring the gold standard. Germany, under the Nazis, built up a structure of exchange controls to close their economy off from the rest of the world, and U.S. president Franklin D. Roosevelt began institutionalizing his more protectionist New Deal policies.

More enduring signs of cultural transnationalism during this period were expressed in the form of jazz music, which was popularized initially in rapidly urbanizing North America but soon traveled to, and became localized within, Paris, as well as to more distant places such as Japan and China. Indeed, the interwar years are frequently referred to as "the Jazz Age," and the music became an important symbol of an emerging aesthetic of modernism, and cultural modernity more generally.

Despite earnest international efforts to construct institutions to secure global peace, and some signs of cultural transnationalism, conflict within nations was widespread and laid the groundwork for another descent into total war. In 1917 the Bolsheviks established a single-party dictatorship under the leadership of Vladimir Lenin

after seizing power in the Russian Revolution. After Lenin's death in 1924, Joseph Stalin abandoned Lenin's economic policy for a totalitarian system of central planning. When the better-off peasants (*kulaks*) rebelled in 1929 to 1930, Stalin initiated a reign of terror that killed three million people.

In the United States rapid demobilization and the lack of price controls sparked inflation and unemployment, which intensified competition for jobs among the working class. In 1919 more than twenty race riots erupted in cities across the country. White workers violently protested returning black soldiers' demand for equal rights to employment. Americans watched their stock market roar in the 1920s, only to suffer the Great Depression in the 1930s.

In China the Manchu Dynasty fell in 1911, leaving local warlords to tax their populations. In the 1920s Mao Zedong cofounded the Chinese Communist Party, and the nationalist organization Guomindang (GMD) became a mass party under the leadership of Chiang Kai-shek. By 1931 the GMD had defeated most of the warlords, confined the Communists to one rural region in the south, and gained nominal control of most of the country. Chinese peasants, hard hit by the Great Depression, helped Mao launch a comeback. Chiang was forced to contend with this Communist threat at the same time that he was battling Japanese encroachments on, and (in 1937) invasion of, Chinese territory.

Nationalism also grew in the Middle East during the collapse of the Ottoman Empire. During World War I the British had heavily sponsored Arab nationalist thought and ideology to challenge the Ottoman Empire. However, Britain's secret Sykes-Picot Agreement with France divided the eastern Arab lands between the two imperial powers, and Arab nationalism became the basis for an important anticolonial movement.

In Italy political tensions between fascist "black shirts" and Communist "red shirts" brought the country to the brink of civil war. The fascist leader Benito Mussolini took power, later became one of Hitler's most important allies, and provided support for the fascist cause, fueling Spain's civil war. In 1936 Spanish military nationalists under General Francisco Franco's leadership declared their intention to overthrow the government that replaced the monarchy. The stage was now set for World War II (1939–1945).

SEE ALSO *Arabs; Bolshevism; Collectivism; Communism; Fascism; Federal Reserve System, U.S.; Franco, Francisco; Gold Standard; Great Depression; Hitler, Adolf; Jazz; League of Nations; Lenin, Vladimir Ilitch; Mao Zedong; Mussolini, Benito; Ottoman Empire; Palestinians; Riots; Russian Revolution; Socialism; Spanish Civil War; Stalin, Joseph; Totalitarianism; Union of Soviet Socialist Republics; Wilson, Woodrow; World War I; World War II; Zionism*

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INTIFADA, THE

The Arabic term *intifada*—"the act of shaking-off"—was coined by Palestinians to refer to the Palestinian uprising of December 9, 1987, conjuring the image of shaking off the shackles of twenty years of Israeli occupation in the Gaza Strip, the West Bank, and East Jerusalem. The event that sparked the Palestinian uprising occurred in the refugee camp of Jabalya in Gaza on December 8, 1987, when an Israeli truck ran into two vans transporting Palestinian workers, killing four and injuring seven. At the funeral of three of the men in Jabalya refugee camp, which drew more than six thousand people from the Gaza Strip, the crowd protested the killings in a spontaneous demonstration that targeted the army outpost in the camp. The Israeli military used live ammunition, tear gas, beatings, and arrests to suppress the demonstrators, and in the process killed twenty-year-old Hatem Al-Sisi, who became the uprising's first martyr. Simultaneously, clashes between Palestinian youths and Israeli soldiers spread rapidly to the rest of the occupied Palestinian territories.

The intifada represented both a departure from as well as a reproduction of prior forms of Palestinian resistance against the Israeli occupation since 1967. The Palestinian repertoire of resistance up to 1987 had consisted of sporadic cycles of spontaneous demonstrations, strikes, and sit-ins, usually violently suppressed by the Israeli military and often resulting in Palestinian deaths. Those deaths were mourned in elaborate, mass-attended funerals that often ended in street protests, which were met by further Israeli military punishments, including the closing of universities, the bulldozing of Palestinian homes and olive trees, and the detention without trials and deportation of the activists. The difference with the intifada was that although it was initially spontaneous, it quickly became an organized and sustained popular resistance with a clear agenda of ending the Israeli occupation and demanding Palestinian self-determination. A broad strategy was articulated by its local leaders, the Unified National Leadership of the Uprising (UNLU), an underground umbrella coalition of the main Palestinian political factions in the occupied territories. The UNLU periodically published leaflets to inform the public and coordinate resistance activities in various parts of the territories; the Palestine Liberation Organization (PLO), stationed in Tunis, lent its support. Posing as an alternative to the UNLU, the Muslim Brotherhood mobilized a militant wing, Hamas, and joined the uprising, issuing its own leaflets that incorporated an Islamic ideology into the struggle.

The main aim of the uprising was to denormalize life under the Israeli occupation while increasing the cost of the occupation on Israel by using civil disobedience and protests. The UNLU leaflets urged Palestinians to strikes and peaceful protests (armed struggle by the civilian Palestinian population under occupation was rejected, and when it occurred, was limited); to stop paying taxes (which led to the tax rebellion in the town of Beit Sahour in the West Bank); and to boycott Israeli products, work in Israel, and all posts connected to Israeli administration of the territories.

The uprising was a decentralized movement involving coordination between the underground leadership and the "people's committees" that sprang up in the refugee camps and the villages of the territories and organized local initiatives. The mass-based structure of the uprising was possible only because people's committees had already been in place since the 1970s as part of Palestinian institution building to counteract the deteriorating conditions under occupation. When Palestinians realized in the 1970s that a speedy reversal of the occupation was not in sight, they focused on surviving on their occupied land, awaiting liberation from the external Palestinian national movement, and applied the term *steadfastness* to the process. In the absence of municipalities, they mobilized volunteer work committees, including medical relief committees that provided preventive medical care to the camps and villages and women's work committees that offered income-generating projects and support for prisoners' families. These and other groups formed the basis for sustaining the uprising and its goal of delinking from the occupation by meeting civil needs, from health to agriculture.

The Israeli response was repression, curfews, labor control through border control, and general movement restrictions. The repressive and often violent tactics supported by the Israeli defense minister Yitzhak Rabin (1922–1995) in January 1988 translated into high Palestinian casualties and detention rates. Between 1988 and 1990, one in twenty-two Palestinian children was either killed or injured, according to the Israeli human rights organization B'Tselem. By the time of the signing of the Oslo Accords in September 1993 between the PLO and Israel, the intifada had already waned, and casualties topped 1,500.

The uprising made visible the Palestinians as a people struggling against Israeli occupation through the images of the stone throwers—previously their plight had been coded under the "Arab-Israeli conflict"—and made it difficult for Israel to continue the occupation as before. Moreover, the uprising realized Palestinian will to be represented solely by the PLO (Jordan halted its administrative responsibility for the West Bank in July 1988). The Palestine National Council session in Algiers in November 1988 issued a Declaration of Independence of Palestine, making Jerusalem its capital. Shortly afterward, Yasser Arafat (1929–2004) promised future, formal recognition of Israel and Palestine's readiness for territorial concessions in the United Nations General Assembly address in December 1988.

Although Palestinians greeted the arrival of the Palestinian Authority in Gaza in 1994 as a symbol of the triumph of their intifada, their hopes for an independent state were not realized. Israel retained military and economic controls over Gaza's borders, air and sea routes, international relations, and overall security even after its disengagement, and more than half of the West Bank remained under Israeli control in 2000, with additional areas under Israeli security control. Palestinian living standards continued to deteriorate, falling to pre–intifada levels, as the Israeli policy of border closure since March 1993 placed Gazans in a prison-like situation with limited work options, mostly in the inflated Palestinian security forces.

A second widespread uprising broke out in reaction to events on September 28, 2000, when the controversial Israeli politician Ariel Sharon (b. 1928) made a provocative visit to Al-Aqsa mosque in East Jerusalem, deploying thousands of security forces to seal off the area. The urprising of December 9, 1987, came to be referred to as

the "first intifada" and the September 28, 2000, uprising came to be referred to as the "second intifada," or the "Al-Aqsa intifada."

By 2000 the Palestinian Authority was present in parts of the territories and more of the Palestinian population was armed, so during the second intifida there was greater focus on armed struggle and greater use of full military force by Israel, which constructs the intifada as a war between states. The Palestinian Authority is caught in a double bind: Israel expects them to contain the armed struggle, but at the same time they must maintain legitimacy among Palestinians, and this perpetuates not only the uprising but also internal Palestinian confrontation, with increased hardships for daily life for Palestinians.

SEE ALSO *Arab-Israeli War of 1967; Arabs; Arafat, Yasir; Civil Disobedience; Palestine Liberation Organization (PLO); Palestinian Authority; Palestinians; Peace Process; Protest*

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Mary Hovsepian

INTIMACY

SEE *Friendship.*

INTRAROLE CONFLICT

SEE *Role Conflict.*

INTUITIVE CRITERION

SEE *Screening and Signaling Games.*

INUIT

The Inuit make their homes in Chukotka, Alaska, Arctic Canada and Labrador, and Greenland, and are one of the several indigenous peoples of the Circumpolar North. The name *Inuit* (singular, *Inuk*) has political as well as cultural and linguistic connotations. It means "the people" in Inuktitut, the language of the Inuit in Greenland and the central and eastern Canadian Arctic. Since the late 1970s the term has become the political designation for all of the peoples once known as Eskimos. The term *Eskimo* remains correct for archaeologically known populations.

Numbering approximately 150,000 people in 2006, contemporary Inuit are diverse in lifestyle, cultural practices, language, and economic and social circumstances. Within the broad political category Inuit, there are four major cultural divisions: Siberian Yupik, Alutiiq, Alaskan Yup'ik, and Inuit. Those who call themselves Inuit make additional regional, language, and cultural distinctions such that those in north Alaska are known as Iñupiat, while Inuit in Canada differentiate among Inuvialuit, Inuinnait, and Inuit. Greenlanders sometimes refer to themselves as Inuit, but also use the regional and cultural designations of Kalaallit, Inughuit, and Iit. While these contemporary distinctions have some basis in cultural, linguistic, and regional difference, the current divisions are also a result of colonial and administrative histories that reified some differences and denied others.

CULTURAL ORIGINS

Linguistic, cultural, and archaeological data indicate that the Inuit populations are related to the indigenous peoples of Siberia, and Inuit cultures most likely have their origins in Siberia or Central Asia. Archaeological evidence suggests that the ancestors of contemporary Inuit peoples moved across the Bering Strait in several waves, and probably in small groups, as early as 5000 BCE. These hunting peoples spread out across the North American Arctic, where they depended on both land and marine animals. Around 1,500 years ago, the maritime-adapted peoples in southwest Alaska began spreading north, establishing themselves as whale hunters in north Alaska. Contemporary Iñupiat are their descendants. Some of these northern Alaskans moved eastward into the Arctic Archipelago and Greenland during a warming period around 800 to 1000 CE, and are the ancestors of the contemporary Inuit of Canada and Greenland. The Thule Eskimos, as they are known, either replaced or absorbed the Eskimo cultures that had preceded them.

There are similarities as well as differences between the various Inuit peoples. The similarities, which are most striking in terms of language and traditional cosmological beliefs, are clearly due to the relatively recent geographic divergence between groups. Linguists distinguish at least two closely related languages, Inuktitut and Yupiaq, each with several distinct but mutually intelligible dialects. Inuit cosmology attributed a life force to all aspects of the natu-

ral world. Humans, in order to survive and prosper, attended to numerous taboos and engaged in morally correct behavior. Animals were said to give themselves to those hunters who were respectful, modest, and generous. Souls of the dead, both human and animal, returned to the world of the living in new bodies. Alaskan Yupiit (plural of Yup'ik), for example, celebrated a Bladder Festival each winter in which the souls of the sea mammals killed that year were feasted and then returned to the sea where they would be reborn. The recycling of souls is also reflected in human naming practices, which bestow the name, and thus the soul, of a recently deceased person upon a newborn infant. This tradition of naming children continues, and many contemporary Inuit contend that the name/soul chooses the child rather than being chosen for the child.

The differences between the various Inuit peoples, in contrast, are superficial and generally reflect differences in material circumstances rather than distinctions in life ways and social values. Many of the differences result from variation in the natural environment across Inuit lands, which encompass a number of ecosystems and climatic conditions. At the southern margin, Alutiit (plural of Alutiiq) and Yupiit lived in subarctic boreal forest zones, built sod houses in permanent winter villages, and had economic security provided by dependable stocks of fish and sea mammals. Farther north, Iñupiat reliance on bowhead whales enabled them to establish semipermanent villages of up to five hundred people. Large numbers of people living together and cooperating in subsistence whaling demanded a fairly formal political organization. Iñupiat were led by male *umialiit* (singular, *umialik*; literally, "boat owners") and their wives, who organized and directed whale hunting activities and later distributed the proceeds of the hunt. The Iit, who live along the narrow rocky coastline of eastern Greenland, in contrast, led a precarious existence and occupied multifamily longhouses of stone and sod.

Only Inuit in the central and eastern Canadian Arctic lived in domed snowhouses and hunted seals at breathing holes. This stereotype of Inuit life was true for them only during midwinter and early spring. They and Inuit elsewhere depended upon seasonally variable marine and terrestrial animals for food, clothing, and tools. All Inuit peoples in the various regions and ecosystems adapted their communities and developed sophisticated technologies in order to survive and prosper.

COLONIAL EXPERIENCES

Inuit in Greenland, and possibly those in Labrador and on Baffin Island, had some contacts with the Norse colonists in the tenth century. In 1576 English explorer Martin Frobisher (c. 1535–1594) encountered Inuit at Baffin Island while searching for a northwest passage to Asia. His was the first of numerous, sometimes sustained European encounters with modern Inuit. It was only in the early eighteenth century that Europeans successfully colonized Inuit lands. The Danes, hoping to restore contact with the lost Norse, established a colony on the west coast of Greenland in 1721. A few years later Russians, having already established trading colonies in Chukotka, began exploring and settling Alutiiq regions of Alaska. Both established trading monopolies and sought to convert Inuit to Christianity and to make them into reliable suppliers of fur and other renewable resources.

Inuit in other parts of the Arctic, though not directly subjected to colonizing settlers, experienced the disruptive influence of whalers, traders, prospectors, and missionaries. The purchase by the United States of Alaska from Russia in 1867 and Canada's acquisition of British Arctic territories in 1870 and 1880 set the stage for those nations to administer Inuit lands and peoples. For the most part, however, both nations left the day-to-day administration to missionaries and traders. Inuit in both nations received the education, health care, and other public services provided to citizens of modern nation-states only after World War II (1939–1945).

Since the 1950s there have been dramatic changes in the social and material life of Inuit in all four nations. Some of the changes resulting from economic modernization and government administration have had positive consequences. Still, Inuit in all four nations have also suffered forced relocations, the imposition of alien cultural values and economic systems, and the reorganization of domestic and community life.

CONTEMPORARY CONCERNS

Today Inuit struggle to participate as citizens of modern nations while retaining a degree of cultural self-determination. There are concerns regarding resource development, economic and food security, education, language retention, health, and climate change. Greenlanders have succeeded in institutionalizing their language as the everyday vernacular of work and government, while the Siberian Yupik language is nearly extinct. The language situation in Alaska and Canada is mixed. Inuit have been required to adopt the political institutions and structures of their various nations. In all regions but Siberia, Inuit constitute a majority of the population in their traditional lands. Thus, they are able to maintain a measure of control over resource development, education, and other public services. This situation is recent. Struggles over resource development reached a climax in the 1970s and were catalysts for the settlement of aboriginal land claims in Alaska and Canada.

Hunting and the management of wildlife are also salient issues for contemporary Inuit. Although all Inuit

live in modern communities, and many work for wages, they have retained a cultural identification with hunting. Having access to and eating traditional foods continues to be socially, emotionally, and culturally valued. This traditional activity appears to be threatened by global climate change, which has created unstable, unpredictable, and dangerous weather conditions in the Arctic and threatens the survival of many animal species. The Inuit Circumpolar Conference, a nongovernmental organization representing Inuit in international affairs, has taken on climate change as its central focus and has argued that global climate change must be considered a human rights issue.

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Pamela R. Stern

INVENTORIES

Inventories are sets of goods and materials held available to cover immediate or future needs. Inventories can be goods and materials for sale after some processing or as they are, or they can be goods (like fixtures, supplies, furniture, or equipment) that are not for sale but are nevertheless kept by organizations, manufacturers, and service providers.

In business, inventories are assets that are used in the productive process and transformed to realize sales of the final products the market demands. They may be classified in three major categories: raw materials, work in process, and finished goods.

Inventories of raw materials are the collections of items used to begin the production process of a firm. They could be materials from agricultural, forest, or mining operations, or they could be the finished goods of another company. For example, a computer microchip could be the final product of a firm that manufactures microchips and a raw material for a firm that manufactures personal computers. Work-in-process inventories exist and are created in all the stages of the production process from the moment raw materials are received to the stage just before the production of the final goods ready for sale. An inventory of final goods represents the last stage of the production process. It is a collection of items that are ready to be sold to customers, having been inspected for quality to meet certain standards.

Inventories are acquired based on a production schedule and a sales forecast to determine the target level of inventories in each category. If the inventory level is too high, the company faces an unnecessarily high cost of carrying inventories. If the level is too low, the firm might not have enough materials for its production process and risks losing sales and dissatisfying its clients by not meeting their demand. The management of a company must therefore determine how much inventory it should carry by evaluating the costs with the production requirements and customer demand.

COMPOSITION OF INVENTORIES

The composition of a firm's inventories depends on several factors. Raw-materials inventories depend on the plans and schedules of production, the seasonality of sales, the available technology, the level of confidence toward the various suppliers for the on-time delivery of the needed goods, and several other factors. The level of work-in-process inventories depends on the type of the finished goods to be made ready for sale and the complexity of the production process. The level of finished-goods inventories depends on external factors, such as the expectations of the consumers and other market forces.

Inventories in business have certain financial characteristics that can be divided into three categories. First, they are part of the current assets on a firm's balance sheet and in most cases can be converted into cash during a period of one year. (There is an exception in some specialized industries in which the conversion might take longer.) Second, they are the least liquid of the current assets. This means that in companies with high variability in sales and production processes, it is more difficult to liquidate the company's inventories when needed unless they are sold at a discount, or less than their true value. Third, during the various inventory stages beginning with the purchase of raw-materials inventories until the realized sales of finished-goods inventories, there exist certain time lags that can have a positive or a negative effect for the firm. These are:

Manufacturing lag: The inventories that are bought by the company from its suppliers are usually raw materials. The payment for these inventories is usually made on credit. The credit period usually

is longer than one month, while other operating expenses of the firm, such as labor and wages, must be paid within a month. Furthermore, the firm can have the needed inventories available before it covers its obligations to its suppliers. Hence the firm has a type of financing for the goods it has obtained without any financial cost. This lag has a positive effect for the company.

Stockage lag: When the finished goods inventories are ready to be sold, in most cases they are not sold immediately and therefore do not create cash inflows. However, there are many cash outflows for the payment of labor, the payment of suppliers, and other expenses of the production process. This delay in selling the inventories and creating cash inflows to meet the realized cash outflows has a cost to the firm in reducing the firm's liquidity.

Sales lag: Even when sales are realized for the finished-goods inventories, they could be on credit and not cash sales, creating accounts receivable for the firm that sells the inventory. These accounts receivable could take up to a year to be paid and generate cash inflows. This type of cost is called the cost of maintaining or creating accounts receivable.

A company keeps inventories for the reasons of transaction, safety, and arbitrage. For the purpose of transactions, a firm keeps inventories of all types to have raw materials to work with and to have finished goods to sell in order to minimize or eliminate the risk of stock outs, (the risk of not having enough inventories of a certain type needed in the production process, so production will not stop or be delayed) or total depletion of inventory and to make financial transactions. If it keeps large amounts of inventories, the cost of investing in inventories rises, but the likelihood of stock outs falls. For the purpose of safety in meeting product demand, a firm must keep a high enough level of inventories to meet the demand for its products. For the purpose of arbitrage, a firm might keep a high level of inventories to take advantage of situations where prices are expected to increase. A firm that has bought or produced inventories at a low cost may profit by selling them later at higher prices. Furthermore, by purchasing higher amounts of raw materials, a firm can take advantage of possible discounts offered by its suppliers due to the larger quantities ordered.

CATEGORIES OF COSTS

A company might consider four major categories of costs before making significant decisions regarding inventories. The first category is carrying, or holding, costs. This category relates to the keeping of inventories and can be distinguished into the following specific types of carrying costs:

Storage and handling costs: A firm needs to store its inventories in specific locations it owns or rents. This involves rental costs or the opportunity costs of using the storage areas rather than renting them to others along with the labor expenses of moving, storing, cleaning, distributing, reporting, securing, and generally handling the inventories.

Destruction or theft costs: Once a firm stores its inventories in specific locations, it needs to protect them from theft or destruction from those outside or inside the company.

Security costs: Both the inventories and their storage locations have to be secured from fires, floods, accidents, and other natural catastrophes, usually through a purchased security or insurance program.

Age costs: Certain categories of inventories, such as medicine, food, and computer products, have an expiration date beyond which they become obsolete and unfit for sale. The cost of keeping inventory beyond its expiration date is the age cost.

The second cost category is the ordering costs, which concern the placement of orders to the firm's suppliers. Each order that is received by a supplier has costs for the invoice to be issued and paid, for the transportation of the goods, for their quality inspection once the goods arrive, and so on. If a firm reduces the number of orders it places (making fewer but larger orders instead), it also reduces the total ordering costs of its inventories and becomes more profitable.

The third category is the opportunity costs, which are related to the amount of funds invested in inventories. If a large amount of funds is tied up in inventories, the firm loses opportunities it might have had to invest its finances instead in more profitable opportunities. Furthermore, if inventories are financed by borrowed funds, this carries interest costs that the firm has to pay back, thereby reducing its profitability.

The fourth category is the stock out costs or the costs associated with keeping too low an inventory or depleting an inventory. This can cause breaks and delays in the production of the finished goods, with negative consequences for the firm. It will have dissatisfied clients and customers, it might lose sales, it might have to pay fees for delaying its products' delivery, and it will damage its reputation. According to Geoff Relph and Peter Barrar (2003), there

is also an opposite type of cost to stock out costs: that of having too much inventory, or overage. They suggest that firms should formally plan overage since an effective control of overage will enhance the company's profitability by minimizing the investment in inventories.

Certain factors affect the level of inventories a firm should carry to be profitable and efficient. These include:

- the required materials for each stage in the production process;
- the sales forecast;
- seasonal or cyclical factors that characterize the firm's sales during a year; and
- changes in technology that may render the finished-goods inventories obsolete.

INVENTORY MANAGEMENT

Inventory-management techniques aim to reduce the total inventory costs by holding and ordering inventories in the most efficient ways. They are covered extensively in special courses of production management. Inventory management also has economic consequences for a business and affects the value of the firm, so it is also studied from a financial point of view. The most common inventory management techniques follow.

- The ABC system separates inventories into the categories A, B, and C according to their importance and nature so the total cost of inventory control can be reduced. The most valuable inventories are in category A, while the least important ones are category C.
- The economic ordering quantity (EOQ) system uses a simple mathematical model to determine the ideal quantity of each order of inventories that will reduce the total ordering and carrying costs.
- The system of reorder point is based on the EOQ model and shows the quantity of inventories that should be on hand when an order is placed to keep the total inventory costs at a minimum.
- The automated system of inventory control is used by firms that have many products and determines the optimal quantities to be ordered based on the EOQ. It is a dynamic system that is easily adjusted depending on a company's needs.
- The just-in-time inventory system is a system first introduced in Japan that minimizes the level of inventories a firm carries and the investment in them by achieving a perfect coordination between the ordering and receiving of necessary inventories at each stage of the production process. Hence no inventory stocks are created, and the inventory costs are kept at a minimum. The disadvantage of this system is that if the coordination is interrupted between the product suppliers and the customers' orders, the costs can be high.

NATIONAL CYCLES

Inventories also play an important role in national accounts. Some short-term macroeconomic fluctuations are attributed to the inventory cycle. Goods held as inventories are considered an investment and are counted for the year produced, not the year sold. Although inventories are a small portion of the overall investment sector, all the inventories from all the businesses in one economy constitute a critical component of the gross domestic product (GDP).

If the economy is moving toward a recession period, an undesired accumulation of inventories is a negative signal. Leading up to a recession, consumers have less liquidity and reduce their purchases. This leads to fewer sales of goods and services, which causes inventories of finished goods to increase. As inventories pile up, businesses reduce their production of goods to keep costs low. Since there is less productive activity, fewer employees are needed, and firms lay off staff to further reduce costs. Unemployment rises, output falls, GDP growth falls, and the economy goes into a recession. The idea that a recession might be caused by low product demand was introduced as early as 1889 by Albert Frederick Mummery and J. A. Hobson in their book *The Physiology of Industry* and upset the neoclassical economists. However, the British economist John Maynard Keynes (1936) praised Mummery and Hobson for their "heresy," as Keynes called their proposition. Mummery and Hobson further proposed that too much saving has a negative effect in the economy since it leads to underconsumption. Lower levels of consumption will mean less demand for goods and services, which will cause the piling up of inventories in the immediate future and eventually will lead to lower production output, more unemployment, and a decrease of the GDP.

Conversely, an undesired or unexpected decrease in business inventories means that the demand for goods is greater than the one predicted by the firms, and the existing inventories become depleted quickly. Businesses reorder more inventories, hire more employees, and increase production to meet the increased demand and realize higher sales. As this phenomenon occurs throughout the economy, the unemployment rate falls, and the economic output rises, resulting in an increase in economic growth as measured by the GNP.

In addition, with more jobs, less unemployment, and higher output, income also increases and contributes further to a rise in the demand for goods and services. Higher

demand, though, leads to higher prices. The level of prices goes up, creating demand-pull inflation. As demand for more labor rises, wages increase, which will further increase the rate of inflation.

Inventories can thus be considered a leading indicator of business cycles. Changes in the variable of business inventories can lead to changes in the future condition of the economy and economic growth. Economic analysts therefore monitor the aggregate levels of business inventories for potential changes in future economic growth.

SEE ALSO *Business Cycles, Real; Depression, Economic; Economic Crises; Expectations; National Income Accounts; Recession*

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INVENTORY OF FATHER INVOLVEMENT

SEE *Fatherhood.*

INVERSE MATRIX

The concept of *inverse matrix* is somewhat analogous to that of the *reciprocal* of a number. If a is a nonzero number, then $1/a$ is its reciprocal. The fraction $1/a$ is often written as a^{-1}. Aside from the fact that only nonzero numbers have reciprocals, the key property of a nonzero number and its reciprocal is that their product is 1, that is, $a \cdot a^{-1} = 1$. This makes a^{-1} the *multiplicative inverse* of the nonzero number a.

Only nonsingular square matrices A have inverses. (A square matrix is *nonsingular* if and only if its determinant is nonzero.) When A is nonsingular, its inverse, denoted A^{-1}, is unique and has the key property that $A \cdot A^{-1} = I = A^{-1} \cdot A$, where I denotes the $n \times n$ *identity matrix*. The determinant of a square matrix A (of any order) is a single scalar (number), say $a = \det(A)$. If this number is nonzero, the matrix is nonsingular, and accordingly has a reciprocal. Moreover, when $\det(A) \neq 0$, the inverse of A exists and its determinant is the reciprocal of $\det(A)$. That is, $\det(A^{-1}) = (\det(A))^{-1}$.

A tiny example will illustrate these concepts, albeit somewhat too simplistically. Let

$$A = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix}.$$

Then, the determinant of A is the number

$$\det(A) = a_{11}a_{22} - a_{12}a_{21}.$$

If $\det(A) \neq 0$, then

$$A^{-1} = \frac{1}{\det(A)} \cdot \begin{bmatrix} a_{22} & -a_{12} \\ -a_{21} & a_{11} \end{bmatrix}.$$

As a check, one can see that

$$A^{-1} \cdot A = \frac{1}{\det(A)} \cdot \begin{bmatrix} a_{22} & -a_{12} \\ -a_{21} & a_{11} \end{bmatrix} \cdot \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}.$$

This formula for the inverse of a 2×2 matrix is useful for hand calculations, but its generalization to matrices of larger order is far more difficult conceptually and computationally. Indeed, the formula is

$$A^{-1} = \frac{1}{\det(A)} \operatorname{adj}(A),$$

where $\operatorname{adj}(A)$ is the so-called *adjoint* (or *adjugate*) of A. The adjoint of A is the "transposed matrix of cofactors" of A, that is, the matrix B with elements $b_{ij} = (-1)^{i+j} \det(A(j|i))$.

One way to carry out the inversion of a nonsingular matrix A is to consider the matrix equation $A \cdot X = I$, where X stands for A^{-1}. If A is $n \times n$, then this equation can be viewed as a set of n separate equations of the form $Ax = b$ where x is successively taken as the jth column of unknown matrix X and b is taken as the jth column of I ($j = 1, \ldots, n$). These equations can then be solved by Cramer's rule.

The concept of the inverse of a matrix is of great theoretical value, but as may be appreciated from the above discussion, its computation can be problematic, just from the standpoint of sheer labor, not to mention issues of numerical reliability. Fortunately, there are circumstances in which it is not necessary to know the inverse of an $n \times n$ matrix A in order to solve an equation like $Ax = b$. One such circumstance is where the nonsingular matrix A is lower (or upper) triangular and all its diagonal elements are nonzero. In the case of lower triangular matrices, this means (i) $a_{ii} \neq 0$ for all $i = 1, \ldots, n$, (ii) $a_{ij} = 0$ for all $i = 1, \ldots, n-1$ and $j > i$. Thus, for instance

$$A = \begin{bmatrix} 4 & 0 & 0 \\ 3 & -1 & 0 \\ 2 & 1 & 5 \end{bmatrix}$$

is lower triangular; the fact that its diagonal elements 4, –1, and 5 are all nonzero makes this triangular matrix nonsingular. When A is nonsingular and lower triangular, solving the equation $Ax = b$ is done by starting with the top equation $a_{11}x_1 = b_1$ and solving it for x_1. In particular, $x_1 = b_1/a_{11}$. This value is substituted into all the remaining equations. Then the process is repeated for the next equation. It gives $x_2 = [b_2 - a_{21}(b_1/a_{11})]a_{22}$. This sort of process is repeated until the last component of x is computed. This technique is called *forward substitution*. There is an analogous procedure called *back substitution* for nonsingular upper triangular matrices. Transforming a system of linear equations to triangular form makes its solution fairly uncomplicated.

Matrix inversion is thought by some to be a methodological cornerstone of regression analysis. The desire to invert a matrix typically arises in solving the normal equations generated by applying the method of ordinary least squares (OLS) to the estimation of parameters in a linear regression model. It might be postulated that the linear relationship

$$Y = \beta_1 + \beta_2 X_2 + \cdots + \beta_k X_k \qquad (1)$$

holds for some set of parameters $\beta_1, \ldots, \beta_k$. To determine these unknown parameters, one runs a set of, say, n experiments by first choosing values $X_{i2}, \ldots, X_{ik}$ and then recording the outcome Y_i for $i = 2, \ldots, n$. In doing so, one uses an error term U_i for the ith experiment. This is needed because for a specific set of parameter values (estimates), there may be no solution to the set of simultaneous equations induced by (1). Thus, one writes

$$Y_i = \beta_1 + \beta_2 X_{i2} + \cdots + \beta_k X_{ik} + U_i, \qquad i = 1, 2, \ldots, n. \qquad (2)$$

The OLS method seeks values of $\beta_1, \ldots, \beta_k$ that minimize the sum of the squares errors, that is $\sum_{i=1}^{n} U_i^2$. With

$$Y = \begin{bmatrix} Y_1 \\ \vdots \\ Y_n \end{bmatrix}, \quad X = \begin{bmatrix} 1 & X_{12} & \cdots & X_{1k} \\ \vdots & \vdots & & \vdots \\ 1 & X_{n2} & \cdots & X_{nk} \end{bmatrix}, \quad \text{and } \beta = \begin{bmatrix} \beta_1 \\ \vdots \\ \beta_k \end{bmatrix},$$

this leads to the OLS problem of minimizing $Y'Y - 2Y'X\beta + \beta'X'X\beta$. The first-order necessary and sufficient conditions for the minimizing vector β are the so-called *normal equations* $X'X\beta = X'Y$.

If the matrix $X'X$ is nonsingular, then

$$\beta = (X'X)^{-1}X'Y. \qquad (3)$$

Care needs to be taken in solving the normal equations. It can happen that $X'X$ is singular. In that case, its inverse does not exist. Yet even when $X'X$ is invertible, it is not always advisable to solve for β as in (3). For numerical reasons, this is particularly so when the order of the matrix is very large.

SEE ALSO *Determinants; Hessian Matrix; Jacobian Matrix; Matrix Algebra; Regression Analysis*

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INVESTMENT

There are three contexts of investment relevant to the social sciences. First, there is the authoritative investment of endowing a person with social and institutional authority, power, or privilege. Second, a financial investment consists of the production or purchase of an asset in order to obtain its yield, such as interest from bonds. Financial investments involve the exchange of one paper asset (money) for another asset—for example, stocks, bonds, and real estate. Third, an economic investment is the production of some new asset (new plant and equipment, expansion of inventories, new residential construction, reputation) or the creation of new laboring ability (human capital).

The methods of authoritative investing are delegation, inheritance, and usurpation. In a democracy, authoritative investment endows officials with authority in accord with the rules of elections and appointments to office. That authority vests the officials with power and privilege as legally delegated to them from the people, as ultimate sovereignty rests with the people. In a kingdom, royal authority is usually handed down by inheritance,

and inheritance also invests heirs with titles to private property. In a dictatorship, the chief of state invests himself or herself with ruling power, and criminals too vest themselves with power over their victims, such as when they illegitimately take property from their victims.

In finance and economics, investing is distinct from speculation. Speculators buy assets with the expectation of gaining due to shifts in supply and demand. Speculators buy shares of stock in a silver mining company if they expect the demand for the metal to increase. Investors buy the stock in order to obtain the dividends from the profits of the firm. The purchase can, of course, include both investment and speculation.

The yields of financial investments include interest, dividends, rentals, capital gains, and business profits. Dividends are a share of corporate profits from stocks or a mutual fund, while interest is obtained from loaned funds, such as bonds and savings accounts. Capital gains occur when an asset sells for a higher price than its initial price of purchase. The return to an investment can also be in the form of the retained earnings or profits of a corporation.

ECONOMIC INVESTMENT

Economic investment consists in the production of capital goods and the enhancement of human capital, the education, skills, and training obtained by workers. A capital good can be intangible, such as when a company invests in advertising in order to create goodwill and reputation capital. Human capital includes relationships with other persons, which is more specifically referred to as social capital. A person also invests in human capital to be a better consumer, such as learning music appreciation to enjoy symphonic music, which is more specifically referred to as cultural capital.

The inputs of production are classified as three "factors," land, labor, and capital goods. *Land* means natural resources, existing prior to and apart from human action and its products. The purchase of land is a financial but not an economic investment. *Capital goods*, such as buildings, machines, and inventory, are products whose value is not yet consumed. Improvements to a site, such as clearing and leveling the surface, are included in capital goods.

A bond is a loan of funds to a borrower who pays interest for the duration or term and returns the funds when the bond matures. The bond might be used by the seller to produce capital goods, but the bonds are not in themselves produced goods and so are not an economic investment.

Technology is embedded in both capital goods and in human capital. If there is no change in technology, investments eventually have diminishing returns. Given a fixed area of land, fertilizer can increase the yield of a crop, but as more and more fertilizer is added, the extra amount of fertilizer provides a reduced amount of extra yield. If one keeps adding fertilizer, eventually the *marginal product* or extra yield becomes zero and then negative—too many cooks spoil the broth.

An increase in the amount of a variable input eventually yields diminishing returns when some other input is fixed. However, there can initially be increasing returns from more investment if there are network effects that increase the value of each good. For example, if fax machines are more widespread, then a machine has higher usefulness because it can send and receive messages from more units. Capital goods can also complement other investments so that there are at first increasing returns. But such increasing returns themselves eventually diminish. Much of the historic increase in productivity has come not just from an increase in the stock of capital goods but from better technology. There are no diminishing returns to better technology.

Both capital goods and human capital depreciate; they lose economic value due to "wear and tear" as well as from obsolescence and uncertainty. Gross investment is the total amount of production of capital goods and human capital, while net investment equals gross investment minus depreciation. In national income or output accounts, typically only investments in capital goods are included in the investment category in calculating gross and net domestic product.

EFFICIENT FINANCIAL MARKETS

The purpose of investment is to maximize future consumption, thus to obtain the greatest increase in future yields. The optimal investment has the highest risk-adjusted rate of return. *Risk* means the possibility of loss with a known probability. *Uncertainty* means the possibility of change with no known probability. The optimal investment has the greatest net present value, the value at present of a stream of future income minus the initial outlay and other costs, discounted by the relevant interest rate.

Even though subject to large fluctuations, financial markets tend to be rather efficient, meaning that the prices of financial assets encompass the known public information about the asset, the relevant industry, and the economy. The seller is pessimistic, believing the price will fall, and the buyer is optimistic, believing the price will rise. The price is the midpoint between the pessimists and the optimists. On the average, one who buys the stock will do no better than the market average. In fact even most professional financial managers and advisers have not performed better than market averages in the long run.

The concept of efficient markets does not imply that prices are perfect reflections of future earnings and economic conditions but rather that it is not likely that one

will systematically profit from market timing or stock picking. It does imply, however, that riskier assets will normally have a higher return to compensate for the greater possibility of loss or of the greater fluctuations that make the price at some future date less predictable.

The theory of efficient markets for financial investments is called *modern portfolio theory* (MPT). It prescribes that an investor should seek no more than to match the averages of the various sectors of financial markets. However, the relevant knowledge has to be utilized by some investors or speculators in order to set the efficient price in the first place. Research into companies, industries, and the economies must offer some reward, and in an efficient market this reward would be commensurate with other gains.

Efficient markets also do not preclude some financial analysts from having insights and analysis superior to those of others in some types of markets and economic conditions. Not only is there great uncertainty about future economic variables, such as inflation and interest rates, but there is also a lack of consensus about many aspects of economic theory, such as business cycles.

SAVINGS AND INVESTMENT

Savings equal income minus consumption. In economics, *consumption* means the using up of economic value, like fire consuming wood. *Production* means the creation of economic value. The consumption of a house consists in its depreciation. The purchase of a car has the same economic characteristics; the car is an investment, and its consumption is the depreciation. From the economic point of view, all goods that one buys are investments until they are consumed, although in national income accounts, outlays other than for a house are counted as consumption.

Savings are either invested or kept in money. Few people normally hoard large amounts of cash, so ordinarily people save money in a financial institution, such as a bank or a money market fund. These institutions in turn loan out their money. Money borrowed for consumption offsets some of the money saved, and the rest is spent for investment. Thus in general the net savings of households is either invested or kept as money in the banking system. Banks are legally required to have a small portion of their deposits held in reserve, and they loan out the excess reserves.

Investment comes from savings, but the amounts households plan to save do not necessarily equal the amounts that investors seek to borrow. If investors seek to borrow more than what is available from savings, then the market rate of interest will rise, reducing the amount of intended borrowing while increasing the amount of savings. If the supply of savings increases, then interest rates fall as bankers seek to loan out the excess reserves. The market rate of interest thus has an important role in the economy: it equilibrates savings and investment so that the quantity of loanable funds supplied by savings equals the quantity demanded for investment by borrowers.

The total savings in the economy also includes government savings, government revenues minus government spending. A government deficit that is used for consumption creates negative savings, a reduction in national savings. Government bonds can compete with corporate bonds, raising interest rates and "crowding out" private investment that would have taken place unless the funds are borrowed from abroad or private savings increase. Unless the deficit spending is used for productive investments, such as infrastructure, the government deficit can burden future generations by reducing private investment and also by making future taxpayers pay interest on debt that does not benefit the present generation.

INVESTMENT AND THE BUSINESS CYCLE

Investment fluctuates much more than consumption. Major changes in investment drive the business cycle as recessions occur after a large decline in investment. Investment declines because entrepreneurs expect lower profits, and profits usually decline either because costs have gone up or because the demand for goods is expected to fall. In some economic models, the *accelerator principle* asserts that investment depends on the annual increase in output and the capital needed to produce the increase. The more fundamental explanation is that savings, interest rates, and expectations about the future determine the amount and the mix of investment.

Lower real interest rates induce more investment in fixed capital goods, such as real estate construction. When the monetary authority expands credit by injecting money into the banking system, the interest rate is lowered as the banks seek to lend out the extra money. Later, to prevent excessive inflation, the monetary authority then reduces the rate of money growth, and interest rates go back up. Investments profitable at the previous lower interest rates are no longer profitable, reducing investment and also wasting capital that would have been better invested in goods with a faster turnover.

Meanwhile the lowered rate of interest also makes it attractive to invest and speculate in real estate. Much of the benefit of economic growth is soaked up by higher rentals and land values due to the fixed supply of land and implicit subsidy to land values from public works not financed from the generated rents.

Speculative demand adds to the demand for use, pulling up real estate prices. At the peak of the boom, higher interest rates plus higher real estate costs diminish

profits, and industries such as construction slow down. The diminishing investment reduces demand for other goods, and the economy falls into a recession. Real estate prices and interest rates then fall, and the reduced costs eventually lead entrepreneurs to invest again, and then the economy recovers.

TAXATION, REGULATION, AND INVESTMENT

Income taxes reduce investment by taxing the interest, dividends, profits, and capital gains from savings, enterprise, and investment. The effect is more severe when, as in the United States, the income tax is on nominal gains and nominal depreciation, ignoring inflation, thus taxing the principal as well as the gain. This excess burden has been recognized by providing for tax sheltered savings, such as individual retirement accounts (IRAs), by lower tax rates on capital gains, and by investment credits for businesses. Nevertheless, much of investment remains subject to taxation. Sales and value-added taxes have similar excess burdens. Some economists advocate shifting public revenues to pollution charges, user fees, and rents of natural resources to avoid excess burdens on investment in both capital goods and human capital.

Regulations can enhance markets, such as when they prevent fraud, but they also impose costs similar to taxation. Excessive restrictions and reporting costs can create a deadweight loss similar to taxation, a reduction of investment not offset by social benefits.

SEE ALSO *Finance; Macroeconomics*

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Fred Foldvary

INVESTMENT BANKING

SEE *Banking.*

INVESTORS

The term *investor* is widely used not only by economics and finance academics and professionals, but also by ordinary people. An investor is an individual or an organization that makes an *investment*. The term *investment* itself is interpreted differently by the common public and finance professionals on the one hand, and by academic and professional economists on the other.

INVESTMENT IN ECONOMICS LITERATURE

In economics, *investment* refers to resources used to increase capital stock. The items included are expenditure on:

1. Plants (machines) and equipments.
2. Structures (factories, office building, etc.).
3. Inventories (of finished and unfinished goods).
4. New residential houses.

Moreover, the above items must be the result of *current* production. Suppose, for example, that General Motors (GM) spends $20 million in 2007 to build a new automotive factory to produce cars based on alternative fuel. GM will be considered by economists to have invested $20 million in 2007. This investment will add to the capital stock (the accumulated value of all capital: plants, equipment, buildings, factories, etc.) owned by GM at the end of 2006. However, if GM buys in 2007 a factory that Ford had utilized through 2006, economists will not consider the transfer of the automotive factory as investment from the nation's point of view. This is because the factory Ford sold is not new—it is not the result of production in 2007. The purchase of the Ford factory by GM merely reflects a change in ownership of existing capital. Similarly, if you buy a five-year-old mansion for $7.5 million, it is not considered investment by economists, but buying a new mansion will be counted as investment.

Notice that even long-lasting new things that consumers buy are not counted in investment, except for new houses. Suppose you spend $150,000 to buy a new seaworthy boat, and $90,000 to buy a new condominium. The condominium will be counted as investment, but not the boat (which is actually more expensive). The boat is considered a consumption item, not an investment item. However, if a business had bought the same new boat to operate a sightseeing tour, it would be considered an investment item.

Economists also distinguish between *net* and *gross* investment. This distinction is necessitated by the fact that there is a wear and tear of capital stock as it is used in the production process—that is, the capital stock *depreciates*. Thus, investment that includes depreciation is called *gross* investment, and after the value of *depreciation* is subtracted from the *gross* investment, the resulting amount is the *net* investment. The nation's capital stock during any year rises by the extent of net investment. The part of cur-

rent income that consumers do not consume is called *saving*. It is this saving that largely finances investment by businesses, and leads to an increase in the capital stock of the nation. The widely used term *capitalism* is based on the notion of an economic system that is based on ownership of capital.

INVESTMENT IN FINANCE LITERATURE AND ORDINARY USE

The use of the term *investment* in finance and by ordinary people refers to buying an asset. The asset can be a financial instrument, commonly called a *security* (such as stocks, bonds, and a certificate of deposit or CD) or a real object (such as real estate, gold, and paintings).

To understand the notion of an investor, one should look at the various types of investments that he or she could invest in. The choice of the investment vehicle by an investor indicates how much *risk* the investor is willing to take. The following describes the major categories of investment or assets.

Equity or *stocks* represent ownership in a company or business. If you own 10 percent of GM stocks, you literally own 10 percent of GM. Equities constitute a major asset class. Stocks are considered risky in the sense that you can lose money if their value falls or if the company goes bankrupt. Stock investors of Enron, a U.S. public corporation that went bankrupt in 2001, were left with stocks that were worthless. Ownership of stocks can change frequently—they are traded on stock exchanges or computer-linked systems.

Bonds are the second most prominent asset class. A bond, also called a *debt security*, represents a loan made by an investor to a borrower. Normally, a bond has a maturity period of one to thirty years. The maturity period of a bond indicates in how many years the loan is due to be repaid. Thus, an investor holding a ten-year GM bond will receive periodic interest payments (usually twice a year) from GM and will receive the principal amount loaned at the end of the ten-year period. There is risk associated with bonds as well, because the borrower may be unable to pay interest and the principal on time or not at all. This is called *default risk*. If a company goes bankrupt, the bondholders as lenders have claims on the company's assets. The company's assets when sold may provide to the bond investors, say, fifty cents for every dollar lent. Stockholders, being owners, do not get anything at all in this case. Two major entities provide default-risk ratings in the United States: Moody's and Standard & Poor's. Bonds issued by the U.S. Treasury are considered default-risk free.

Money market instruments are the third important asset class. They are also debt instruments like bonds, except that the maturity period is one year or less. Because fewer things can go wrong in a year, a money market instrument is less risky than stocks or bonds. In fact, the money market is a way for an investor to hold cash (a liquid or cashlike asset). By investing in money market instruments, an investor has a relatively riskless asset, while still earning some interest income.

In addition to the preceding three widely utilized assets, there are other assets that an investor may choose to invest in. These include (among others): real estate (ownership of land or buildings); foreign exchange or currency (U.S. dollars, yen, euros, etc.); commodities (precious metals, crude oil, soybeans, etc.); derivatives (such as options and futures—these financial instruments are derived from or based on other financial securities); and works of art or other collectibles.

To distinguish between the notion of investment as used in finance and economics, investment in items such as plants and equipment is called simply *investment*, whereas investment in financial securities is called *portfolio investment*.

The choice of security indicates the extent of risk an investor is willing to take—the greater the risk, the greater the expected return on the investment. A risk-averse investor tries to diversify within an asset class or across asset classes.

RELATED TERMS IN USE

One will encounter a large number of terms in the context of discussing an investor or an investment. The following provides a nonexhaustive list of terms that have not been mentioned above: individual investors (including trusts on behalf of individuals, and umbrella companies formed to pool investment funds from two or more investors), angel investor (an affluent person who provides capital for a business start-up), amateur investor (often indicating an individual who invests blindly or is influenced by romantic notions rather than hard facts), venture capital funds (which provide start-up capital in lieu of a share of the business), financial intermediaries, banks, mutual funds, pension funds, hedge funds, insurance companies, investment banks, investment trusts (such as real-estate investment trusts), and regulatory institutions (such as the U.S. Securities and Exchange Commission or SEC).

SEE ALSO *Equity Markets; Finance; Financial Markets; Investment; Investors, Institutional; Risk; Stock Exchanges*

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Anandi P. Sahu

INVESTORS, INSTITUTIONAL

Institutional investors are professional fiduciary entities managing investment portfolios on behalf of their clients as well as for their own proprietary accounts. The major groups include mutual funds, independent investment advisors, banks, insurance companies, foundations, endowments, pension funds, and, more recently, hedge funds.

Mutual funds are traditional investment companies managing investment portfolios for funds' shareholders. Independent investment advisors are typically associated with large diversified financial institutions (e.g., Lehman Brothers, Bear Stearns) and can invest for their own proprietary accounts as well as manage portfolios for their clients (such as wealthy individuals, pension funds, endowments, etc.). Investments managed by banks are mostly limited to trusts and some pension funds. Insurance companies invest primarily in fixed-income securities. University endowments and charitable foundations are mostly concerned with capital preservation and often outsource all or most of their investment portfolios to professional money managers (e.g., independent investment advisors). Hedge funds are mostly unregulated investment vehicles, which are restricted to qualified wealthy investors and are not required to register with the Securities and Exchange Commission or to report their ownership positions.

Since the 1950s, institutional investing has played an increasingly important role in global financial markets. Professional investors and money managers of the twenty-first century have control over a significantly larger asset base than their colleagues thirty or forty years ago. According to quarterly institutional filings with the Securities and Exchange Commission (Form 13F), both the number of institutional entities and aggregate assets under their management experienced tremendous growth during the second half of the twentieth century. According to Paul Gompers and Andrew Metrick (2001), reported U.S. holdings of large institutional investors (excluding hedge funds) grew from $375 billion in 1980 to $3.98 trillion in 1996. Institutional ownership of the U.S. equity markets grew from less than 10 percent in 1950 (estimated by Friedman 1996) to 27.6 percent in 1980 and to over 61.2 percent in 2005. According to the Conference Board, in 2005 large U.S. institutions controlled over $24 trillion in assets (excluding hedge funds). Independent investment advisors have experienced the greatest growth of all institutions. In 1997 there were roughly six times more independent investment advisors than in 1983 (1,128 versus 195). Most recently, hedge funds outpaced other types of institutions in number of entities, which skyrocketed from about 530 in 1990 to over 7,000 in 2007 (excluding funds of funds), and it is estimated that in 2007 hedge funds controlled between $1.5 to $2.0 trillion assets under management worldwide.

The growth in institutional investments can partially be attributed to the worldwide proliferation of public and private pension plans (e.g., Government Pension Investment in Japan, ABP in Netherlands, CalPERS in the United States) and tax-deferred retirement savings plans (e.g., 401(k), 403(b), IRA). Large institutional investors became active advocates of shareholder interests and corporate monitors (Hartzell and Starks 2003). Blockholders and other large owners play an increasingly important role in corporate governance as well as proxy battles. While some institutional investors are very independent in their voting decisions (e.g., CalPERS), others often rely on recommendations of Institutional Shareholder Services.

For their professional management, institutions earned a reputation of "smart money." In fact, some institutional investors appear to be able to predict future negative events, such as class-action shareholder litigation (Barabanov et al. 2007) and may also benefit through informed trading at the expense of less-sophisticated individual investors. For example, institutions capture postearnings announcement drift in stock prices (Cohen et al. 2002), participate less frequently in lower-quality seasoned equity offerings (Gibson et al. 2004), select stronger initial public offerings (Field and Lowry 2005), do a better job interpreting both analyst recommendations (Mikhail et al. 2005) and earnings announcements (Ali et al. 2004), and do not trade as often as individuals on misleading "pro forma" earnings (Bhattacharya et al. 2005). Sergey Barabanov and colleagues (2007) show that information advantage of institutional investors stems mostly from their skills in analyzing public quantitative information. Unlike some individuals, institutions seem to refrain from trading on illegal insider information.

Good performance of institutional portfolios is driven by institutions with a short-term performance focus, such as independent investment advisors and mutual funds (e.g., Barabanov and McNamara 2007), whose compensation is based primarily on performance relative to their peers and respective benchmarks. Unlike

institutions with a long-term focus (banks, insurance companies, foundations, and endowments), short-horizon institutions possess private information about long-term earnings, which is reflected in short-term prices (Ke et al. 2006). Mutual funds and independent investment advisors are typically more aggressive than banks, insurance companies, and endowments. Consequently, mutual fund managers often choose to invest in relatively risky securities with high levels of ownership turnover (Bennett et al. 2003). While 77 percent of mutual fund managers have been found to be return momentum traders (Grinblatt et al. 1995), bank-managed trusts and pension funds, in contrast, are typically more conservative in their investment policies and do not strongly pursue potentially destabilizing trading behavior such as herding (mass buying or selling of a particular asset) or momentum trading (e.g., Lakonishok et al. 1992). Because they are subject to the American Bankers Association's Model Prudent Man Investment Act and the American Law Institute's Restatement of Trusts, managers of bank trusts and bank-managed pension funds are personally liable and aim to ensure that their investments are considered prudent by courts should any litigation arise (Longstreth 1986; Del Guercio 1996). Insurance companies invest only a small portion of their assets in equities and prefer low volatility of returns (Badrinath et al. 1996). Endowment managers display conservative behavior as they typically do not have performance incentives for high relative returns, but may suffer highly negative publicity in the case of poor performance (Brown 1999).

Historically, institutions preferred to invest in large capitalization companies with better visibility and transparency of earnings, revenues, and management, wider analyst coverage, and low transaction costs (e.g., Gompers and Metrick 2001; Falkenstein 1996; O'Brien and Bhushan 1990). With increasing competition among professional money managers, institutional preferences have shifted toward smaller stocks, where they can achieve more benefits from their informational advantage (Bennett et al. 2003), as well as new asset classes (e.g., private equity, venture capital, hedge funds) and developing and emerging markets.

Institutional participation enhances market liquidity, efficiency, transparency, and corporate governance both in developed and emerging markets. The information acquisition activities of institutional investors, for example, stimulate the speed of adjustment to new information (Sias and Starks 1997) and reduce information asymmetries between insiders and capital markets (Szewczyk et al. 1992). Even though aggregate institutional ownership data provides evidence of institutional herding and momentum trading, this behavior appears to be exhibited less by institutions than by individuals and is attributed mostly to trading by mutual funds and independent investment advisors. Overall, institutional investors help mitigate potential instabilities in financial markets by facilitating efficient allocation of resources through transfers of risks and access to capital.

SEE ALSO *Equity Markets; Financial Markets; Herd Behavior; Information, Asymmetric; Initial Public Offering (IPO); Investment; Investors; Risk; Stock Exchanges; Transparency; Uncertainty*

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Sergey S. Barabanov

INVISIBLE HAND

SEE *Cantillon, Richard; Smith, Adam.*

INVOLUNTARY UNEMPLOYMENT

Unemployment is a labor-market state in which a person is without a job and is actively looking for work. There is nothing, however, in this definition to suggest whether the person is unemployed voluntarily or involuntarily. Prior to the publication of John Maynard Keynes's *General Theory of Employment, Interest, and Money* in 1936, mainstream economists within the "classical" (or, more correctly, the "neoclassical") tradition categorized unemployment into two major types, both relating to the supply side of the labor market. Unemployment could be conceived as a short-term *equilibrium* phenomenon arising from the choice of workers to participate in the labor market and engage *voluntarily* in job search—a situation in which individuals could find themselves temporarily "between jobs" and in a state of "frictional unemployment." On the other hand, unemployment was also construed as a *disequilibrium* phenomenon arising from the existence of institutional barriers in the labor market, such as trade unions, government fiscal and monetary policy, and the market power of firms, which were presumed to prevent the downward adjustment of real wages to shortfalls in labor demand. In this latter case, individual workers could be said to be *involuntarily* "off their labor supply function" because of labor-market imperfections. If only wages could be left to adjust freely to fluctuations in labor demand and supply, it was believed that competition would clear the labor market and result in a state of equilibrium at full employment compatible with the presence of only voluntary and/or frictional unemployment. From this orthodox analysis, it ensues that the existence of job scarcity in the labor market could never be a long-term phenomenon, unless institutional forces persist to prevent market clearance.

Keynes challenged this particular conception of the labor market. While recognizing the existence of frictional unemployment, he questioned the neoclassical view of unemployment as a supply-side phenomenon resulting from wage rigidity. For Keynes, the labor market cannot be analyzed in isolation but, instead, is itself dependent on conditions in the overall product market. Through derived demand for labor, it is the state of aggregate effective demand for goods and services in the economy that ultimately sets the constraint on the level of employment, and not the lack of a mechanism of competitive downward wage adjustment in the labor market that generates unemployment. Furthermore, even the most unlikely situation, where workers accept a reduction of their money wage, would not necessarily guarantee a reduction of their real wage. Indeed, Keynes argued that because of the negative feedback effect on current and expected future sales proceeds, a cut in wages could only make matters worse and result in even higher (rather than lower) unemployment.

Keynes dubbed this type of unemployment endemic to a demand-constrained economy stuck in a state of underemployment equilibrium—"involuntary unemployment." In chapter 2 of the *General Theory*, Keynes provides a test for the existence of involuntary unemployment:

> *Men are involuntarily unemployed if, in the event of a small rise in the price of wage-goods relatively to the money wage, both the aggregate supply of labour willing to work for the current money-wage and the aggregate demand for it at that wage would be greater than the existing volume of employment.* (Keynes 1936, p. 15, emphasis in original)

In short, if the gap between labor demand and supply persists with a fall in the real wage (brought about by a rise in prices), individual job seekers would be considered by Keynes to be in a situation of involuntary unemployment—a state associated with a nonzero elasticity of employment and output with respect to changes in aggregate demand (Darity and Young 1997, p. 26). In highlighting a particular causal sequence—going from changes in prices (for a given money wage) to a fall in real wages—he asserted that the fundamental cause of involuntary unemployment is job scarcity and the inadequacy of existing demand, not workers' obstinacy in resisting a cut in their real wage, as maintained by neoclassical economists.

Soon after the publication of the *General Theory*, numerous economists began to reinterpret Keynes's analysis. Influenced by Keynes's own empirical recognition of the stickiness of money wages in chapter 2 of the *General Theory* and the assumption of the money-wage unit as a mere historical datum, beginning with Franco Modigliani (1918–2003) in 1944 writers began to postulate a labor-supply function that is perfectly elastic up to full employment at a historically given money wage. Consequently, they began to explain involuntary unemployment as the result of workers' resistance to money wage adjustment because of irrational behavior (sometimes referred to as "money illusion"). A whole generation of Keynesian economists, such as Modigliani and James Tobin (1918–2002), from the 1940s to the 1960s built macroeconomic models to explain unemployment on the basis of this static wage rigidity assumption, despite the fact that Keynes himself had rejected wage stickiness as an explanation of involuntary unemployment. In the early post–World War II (1939–1945) years, however, there emerged a related, yet competing strand of thought, commencing in 1948 with the work of Don Patinkin (1922–1995), who reinterpreted a state of involuntary unemployment as a dynamic disequilibrium due not to exogenous wage fixity but to the sluggish adjustment of wages to labor market pressures. By the late 1960s and early 1970s this work had given rise to the so-called disequilibrium theory of involuntary unemployment, associated with such writers as Robert Clower, Robert J. Barro and Herschel I. Grossman, and Edmond Malinvaud. Whether framed in an equilibrium (static) or disequilibrium (dynamic) setting, in both strands of analysis the cause of involuntary unemployment was the lack of adequate downward adjustment of wages and prices to shortfalls in aggregate effective demand.

During the 1970s and 1980s both of these approaches quickly succumbed to the criticisms of Milton Friedman, Robert E. Lucas, and the new classical economists because of problems of logical inconsistency and insufficient microeconomic grounding. According to the monetarists and the new classical economists, one cannot develop theories of the economy that assume rational behavior for an economic agent in the product market (say, as consumer) but irrational behavior as supplier of labor services in the labor market, as the earlier Keynesian writers had surmised. Moreover, because of their assumption of continual market clearance, new classical economists easily eschewed the sluggishness argument of the disequilibrium theorists. Hence, new classical economists such as Lucas were able to conclude that it was not possible, "… even in principle, to classify individual unemployed people as either voluntary or involuntary unemployed …" (Lucas 1981, p. 243).

Despite the attempt of new classical economists to purge involuntary unemployment from the vocabulary of modern macroeconomics, the concept of involuntary unemployment has shown resilience in the hands of both New Keynesian and post-Keynesian economists over the last two decades. Numerous New Keynesian models have been developed within a choice-theoretic microeconomic framework compatible with neoclassical theory. Particularly noteworthy is the abundant literature on implicit contracts and on efficiency wages that reconcile wage rigidity and involuntary unemployment and now see the existence of the latter as a Pareto-efficient solution in the labor market (see Davidson 1990). In contrast, post-Keynesian models that follow more closely Keynes's original insights emphasize the macroeconomic basis of their theories of involuntary unemployment in which wage rigidity plays no role, even though some are founded on microeconomic foundations of Marshallian pedigree (see Davidson 1994, chapter 11).

The notion of involuntary unemployment is at the core of Keynesian theory. Ever since the publication of Keynes's *General Theory* more than seventy years ago, this concept has been plagued with controversy and has remained a wedge that separates those who believe that a capitalist economy is prone to systemic instabilities, as reflected in the existence of periodic recessions accompanied by mass unemployment, from those who believe in the strength of the self-correcting forces in market economies, in which actual unemployment is conceived as a mere short-term transitional phenomenon gravitating around some stable, long-term "natural" rate of unemployment. Although today one could find some strong Keynesian sympathizers who might even be prepared to do away with the concept of involuntary unemployment because of conceptual difficulties and refer, instead, to some less controversial notions of underemployment (see De Vroey 2004), the former concept still remains very deeply ingrained in the professional vocabulary of many contemporary economists.

SEE ALSO *Employment; Keynes, John Maynard; Unemployment; Voluntary Unemployment*

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Mario Seccareccia

IQ CONTROVERSY

Four issues dominate debate about IQ: how intelligence should be defined and measured; genetic versus environmental factors; group differences; and the degree to which IQ stratifies individuals and groups by class and occupation.

INTELLIGENCE DEFINED AND MEASURED

Science suggests a distinction between pre-theory and post-theory definitions. The transition from classical to modern astronomy marked a shift from one pre-theory concept to another, that is, from the notion that planetary motions should be reduced to circles to the notion of forces that are a function of mass and distance. The latter notion was more fruitful but had no advantage over the former in terms of clarity or quantification. Adding those attributes is the job of competing theories, each of which transforms the broad pre-theory concept into a post-theory concept. René Descartes said the sun turned on its axis and created a whirlpool; Isaac Newton said the sun attracted the planets in proportion to its mass and inversely as the distance squared; Albert Einstein said the sun warps space (and time) in its vicinity, and the planets follow the path of the resulting curved space. All accepted that they should pay attention to mass and space, but none thought that this concept should hand them specificity and measurability—that was their job.

Arthur Jensen (1998) gave up using the word *intelligence* because it lacked the specificity and measurability of his theory-embedded concept of *g*. He was asking a pre-theory concept to exhibit the characteristics that only a post-theory concept can have. In fact the architects of IQ tests have a perfectly satisfactory pre-theory concept to guide them: Intelligence is greater the greater the speed and quality of learning (where all have an equal chance and are positively disposed); and intelligence involves solving problems and therefore requires not only on-the-spot acuity but also working memory, information processing, a reasonable vocabulary, a reasonable fund of general information, basic numeracy, and so forth. IQ tests such as the Wechsler Intelligence Scale for Children (WISC) incorporate this notion of intelligence with subtests (Vocabulary, Information, and Coding), whose names betray their origins.

This concept was formulated in modern industrial societies. Those assessing intelligence in other social contexts should consult the Piagetian anthropologists. Some theorists recommend a broader concept. Robert Sternberg (1988) says we need not only analytic skills but also creativity and the practical intelligence to deal with problems such as a difficult coworker. Howard Gardner (1993) adds musical talent and athletic ability to the list of "intelligences." Daniel Goleman (1995) includes the character traits, such as empathy, temperance, and self-esteem, needed to solve "human" problems.

In response we need only amplify the pre-theory concept to make it plain that "speed and quality of learning" and "problem-solving skills" must be broad enough to allow various thinkers and students of various cultures to evidence just what skills and traits are relevant to socially valued problem solving. These empirical questions will not be settled by debate about whether we have an "adequate" definition of intelligence.

GENES VERSUS ENVIRONMENT

Twin studies show that genes are powerful and environment weak in affecting individual differences in intelligence. Massive IQ gains over time (average IQ has risen as much as 20 points in a single generation) suggest environmental factors of enormous potency. To resolve this paradox, we must distinguish between the dynamics of individual differences within a cohort and trends between cohorts.

As an example, John and Joe are identical twins separated at birth. Identical genes make them both taller and quicker than average. John goes to school in one city, plays basketball a bit better on the playground, catches the eye of the grade school coach, plays on a team, and goes on to play in high school, where he gets really professional coaching. Joe goes to a different school, in a city 100 miles

away. However, precisely because his genes are identical to John's, precisely because he is taller and quicker than average to the same degree, he is likely to have a similar life history. In contrast, Mark and Allen are separated twins whose identical genes make them both a bit shorter and stodgier than average. They too have similar basketball life histories, except in their case both play little, develop few skills, and become mainly spectators.

Turning to IQ, one child is born with a slightly better brain than another. Which of them will tend to like school, be encouraged, start haunting the library, get into top-stream classes, and attend a university? And if that child has a separated identical twin who has much the same academic history, what will account for their similar adult IQs? Not identical genes alone—the ability of those identical genes to co-opt environments of similar quality will be the missing piece of the puzzle.

Between generations, the effect of environment is hugely potent because persistent environmental factors seize control of a powerful instrument that multiplies their effects. With the invention of television, basketball got a mass audience, and the pay of professional players soared. Wider and keener participation raised the general skill level, and that higher average performance fed back into play. Those who learned to shoot baskets with either hand became the best—and then they became the norm—which meant you had to be able to pass with either hand to excel—and then that became the norm—and so forth. In other words, rising average performance became a potent causal factor in its own right, and there was a huge escalation of basketball skills in a single generation.

As for IQ, after the Industrial Revolution, when a grade school education became the norm, middle-class aspirations dictated a high school diploma. When a high school diploma became the norm, people wanted a university education. Economic progress created new expectations about hands-on parenting, highly paid professional jobs in which we are expected to think for ourselves, and more cognitively demanding leisure activities. No one wants to seem deficient as a parent, unsuited for promotion, or boring as a companion. Everyone responds by enhancing his or her performance, which pushes the average higher, so all respond to that new average, which pushes the average higher still.

The paradox is resolved. Within a generation, genetic differences use feedback processes to magnify IQ differences between individuals. Between generations, environmental trends use feedback processes to escalate mean IQ over time. It all depends on whose hand is on the throttle.

This has implications for interventions designed to raise IQ, which must be persistent, or the tendency of genes to match environmental quality will slowly erode their effects. However, genes do not pin each of us to a place on the IQ hierarchy. Similarly people can improve on their physical endowment for running. Either circumstances force you to train throughout life, or you develop a love for running and train without compulsion. There will be some who beat me even though I train more than they do, but I can run rings around every couch potato within twenty years of my age.

GROUP IQ DIFFERENCES

Factor analysis suggests two sorts of IQ differences: differences between racial or ethnic groups, and differences between groups separated by social trends over time. Often subjects take a whole battery of IQ tests; for example, the ten subtests of the WISC measure cognitive skills ranging from information, vocabulary, and arithmetic to coding, solving puzzles, and seeing what concepts have in common. Subjects who do better than average on one tend to do better than average on all. Factor analysis measures this tendency and calls the result the "*g* factor." Above-average subjects open up a wider gap over the average person on some tasks than on others, and these tend to be more cognitively complex. So cognitively complex tasks have higher "*g* loadings" than simple tasks, such as rote memorization. This is why Jensen thinks *g* a good measure of intelligence. It identifies those tasks on which intelligent people tend to do best. Some people excel to an unusual degree on verbal, or mathematical, or spatial tasks, and factor analysis also measures these tendencies and calls them "subordinate factors."

American whites outscore blacks by 5 to 17 IQ points, and the gap increases from ages five to twenty-five. The subtest differences are factor invariant, that is, the racial score gaps tend to mimic the *g* loadings. Indeed there is a tendency for the gaps to widen the higher the *g* loading. However, when a generation outscores the last by 9 to 20 points, subtest differences are wildly at variance with factor loadings. The Vocabulary and Similarities subtests are close for *g* loadings, and yet the latter shows a 24-point gain compared to a 2-point gain.

Another sports analogy: Factor analysis of the ten events of the decathlon produces a *g* because at a given time and place, someone who is superior on one is better on all. Different events get various *g* loadings because superior athletes perform further above average on some than others. The 1,500 meters has a low loading because endurance is not very necessary in the other events. The 100 meters, the hurdles, and the high jump all have large and similar loadings. However, over time social priorities change. People become obsessed with the 100 meters (which determines the "world's fastest human"). Over thirty years, performance escalates by a full standard deviation (SD) in the 100 meters, half an SD in the hurdles, and not at all in the high jump. The trends do not mimic

the relative *g* loadings of the "subtests." After thirty years, we do another factor analysis, and lo and behold, *g* is still there. Although average performance has risen "eccentrically" on various events, superior performers still do better than average on all ten events and are about the same degree above average on various events as they were thirty years before.

Athletic coaches lament that everyone prefers the 100 meters and do not take other events seriously. They point out that sprint speed may be highly correlated with high jump performance, but past a certain point it is actually counterproductive—if you hurl yourself at the bar at maximum speed, your forward momentum cannot be converted into upward lift, and you will time your jump badly. They are not surprised that increased sprint speed has made some contribution to the hurdles, because speed between the hurdles is important. But it is only half the story: You have to control your speed so that you take the same number of steps between hurdles and always jump off the same foot.

In the WISC subtests the *g* factor was a bad guide to which real-world cognitive skills are merely correlated and which are functionally related. Assume that science has engendered a sea change. Once we used logic primarily with concrete referents: All toadstools are poisonous; that is a toadstool, therefore it is poisonous. Now we use logic with the abstract categories provided by science: Only mammals bear their young alive; rabbits and dogs both bear their young alive; therefore they are both mammals. This would bring huge gains over time on the similarities subtest, which demands that we classify in terms of abstractions.

But on subtests that sample the core vocabulary and information of everyday life, this causal factor would not trigger large gains. Indeed changing social priorities might include both a more scientific outlook and less time for reading, in which case huge gains on the Similarities subtest would be accompanied by losses on the Vocabulary and Information subtests. Real-world functional skills would assert their autonomy from one another and from the straitjacket of factor loadings. IQ differences are not factor invariant, but they are not trivial. They just have a different real-world significance.

When blacks gained 5.5 IQ points on whites between 1970 and 2000, the gains were not *g* gains. Gains on various subtests did not tally with their *g* loadings. Despite this, the 2000 IQ gap between the races was still a *g* gap and had diminished by 5.13 points, largely because the difference in *g* loadings on WISC subtests are small. If further environmental progress eliminates the black-white IQ gap, blacks will probably match whites for *g* as well as for IQ.

Debate about whether the black-white IQ gap is genetic or environmental has shifted. It used to cite the work of Klaus Eyferth, who found that the offspring of black American soldiers in Germany had no IQ deficit; Sandra Scarr, Richard Weinberg, and Irwin Waldman (1993), who found that black children adopted by white parents show only small gains at maturity; and Jensen (1998), who emphasized that the racial gap was a *g* gap. Now the black loss of ground on whites with age is central. After all, the gap is only 4.6 points at age four (perhaps 1 point at nine months). If the decline with age were arrested, that would be that. Few would argue that the races enjoy complete environmental equality at present. Adherents of environment and genes both believe they can supply the causes of the decline.

STRATIFICATION BY IQ

There are IQ thresholds for various occupations. Someone with an IQ below 100 is unlikely to qualify as a professional, manager, or technician.

Blacks and whites have similar thresholds. Therefore as long as their IQ gap persists, only the top one-sixth of blacks will qualify for jobs open to the top one-half of whites. Chinese Americans develop a character structure such that they can qualify for these occupations with an IQ threshold of 93. They also capitalize more effectively on the pool of those who score above this threshold, and as a group they behave as if they had a bonus of 20 IQ points. Despite similar IQs, females outperform males academically. At age seventeen, the girl's median for written composition is at the boy's 75th percentile. The girl's median for reading is at the boy's 67th percentile. Female advantage in academic achievement does not translate into a better occupational profile because of larger investment in child rearing.

Measures of self-discipline, such as saving money, are better predictors of grades than is IQ. Noncognitive factors, such as self-esteem and the degree of control people feel they have over their fates, are as important as cognitive skills in predicting not only wages and productivity but also teenage pregnancy, smoking, marijuana use, and criminal behavior. When black women are matched with white women with the same IQs, the black women are about three times as likely to be single parents, have been on welfare, and be in poverty. They suffer from a marriage market in which for every 100 black women of marriageable age, there are only 57 black men in steady work.

Some predict a nightmarish scenario. As industrial societies equalize opportunity and environments, only talent will count, and because genes drive individual differences in talent, good genes will go to the top and we will have a caste system based on "merit." The least successful will become a permanent underclass. Because this scenario assumes people driven by wealth and status, it seems problematic that such people will finance the equalization of

environments. If an underclass does develop, their children will hardly profit from equal environments and opportunities. A meritocracy that engendered an underclass would be inherently unstable. Social stratification by genes or IQ is unlikely to make a radical break with the past.

SEE ALSO *Determinism; Determinism, Biological; Determinism, Genetic; Flynn Effect; Heredity; Intelligence; Meritocracy; Nature vs. Nurture; Science; Stratification; Twin Studies; Underclass*

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IRA

SEE *Irish Republican Army.*

IRAN-CONTRA AFFAIR

The Iran-Contra affair is a political scandal that occurred during the second term of Ronald Reagan's (1911–2004) presidency. The scandal encompassed two secret programs coordinated by the National Security Council: (1) the sale of arms to Iran in contravention of U.S. policy and without congressional approval; and (2) the diversion of the proceeds from the weapons sales to support the activities of the anticommunist Contra rebels in Nicaragua, in violation of the 1982 Boland Amendment ban on military aid.

In October 1986 the government of Nicaragua shot down an American cargo plane carrying military supplies to Contra forces and captured an American employee of the Central Intelligence Agency. One month later, a Lebanese news magazine, *Ash-Shiraa*, revealed a secret program for the sale and transfer of military weapons to Iran in exchange for the release of U.S. hostages being held in Lebanon. Iran, at war with Iraq for six years and in need of American-made military equipment, purchased weapons in exchange for securing the release of American hostages. In response to these reports, President Reagan denied on national television that any arms had been traded to Iran, but one week later he admitted the Iranian arms transfer occurred.

It was quickly discovered that the United States had begun negotiating with Iran in secret, while the country was allegedly neutral in the Iran-Iraq War and maintained a policy against trading for hostages. In early 1986 Reagan's first national security adviser, Robert McFarlane, and his successor, Admiral John Poindexter, shipped weapons, including surface-to-air and antitank missiles, from Israel to Iran's revolutionary government without congressional approval, diverting the proceeds from the sales to the Contras, who sought to overthrow the Sandinista government in Nicaragua. Reagan's attorney general, Edwin Meese, was directed to investigate the arms sales and requested the appointment of an independent counsel. In December 1986 Lawrence E. Walsh was appointed to investigate the weapon sales and the process by which the proceeds were diverted to the Contras.

In December 1986 President Reagan appointed former Republican senator John Tower (1925–1991) to investigate the Iran-Contra affair and issue a report on the actions of the National Security Council. The *Tower Commission Report* found Poindexter responsible for authorizing the illegal sale of arms to Iran in exchange for the release of the U.S. hostages, as well as for the diversion of the profits to support the Contras. The report also named Marine colonel Oliver North as the main negotiator. Both the sale of weapons to Iran and the funding of the Contras were found to be in violation of Congress, particularly the Boland Amendment and the 1976 Arms Export Control Act. The report faulted President Reagan for not properly supervising his subordinates and stated that ultimate responsibility for the events were the president's alone.

Poindexter and North were found guilty of obstruction of Congress, while Defense Secretary Caspar Weinberger (1917–2006) was indicted for withholding information from the independent council. The convictions of Poindexter and North were later overturned on appeal. In 1992, following his electoral defeat to William Jefferson Clinton, President George H. W. Bush, who had served as vice president during the Iran-Contra scandal, issued presidential pardons to all who had been indicted.

SEE ALSO *Iran-Iraq War; Reagan, Ronald*

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IRAN-IRAQ WAR

Since its establishment in 1921, Iraq has had a precarious relationship with its eastern neighbor, Iran. The sources of contention between the two countries involved border demarcation and the desire of both states to prevent the other's hegemonic aspirations in the Persian Gulf. However, the tensions did not result in armed conflict until Iraqi president Saddam Hussein decided to invade Iran in 1980.

Until the 1970s, both countries had been militarily and economically weak. This mutual weakness sustained a delicate balance that made open conflict undesirable to both sides. However, the rise of Iran as a regional power under Mohammad Reza Shah (1919–1980) in the 1970s undermined this balance. The Algiers Agreement of 1975 resulted in the reversal of a 1937 boundary treaty that had been preferable to Iraq. Iraq agreed to a less favorable border demarcation in exchange for Iran's withdrawal of support from the Kurdish insurgency in northern Iraq.

The relationship between Iran and Iraq entered a new phase with the Iranian Revolution of 1979. While the revolution severely hampered the military capabilities of Iran, it greatly increased the Iraqi perception of the Iranian threat. Fearful of the destabilizing impact of the Iranian Revolution to his rule, Saddam decided to preemptively strike on September 22, 1980. The immediate goal of the Iraqi invasion was to reverse the terms of the 1975 agreement; the strategic goal was the containment of the "Islamic threat."

Although Iraq was successful in the initial phases of the war, Iran managed to recover the Iraqi occupied territory by 1982. Yet repeated Iranian attempts to make inroads into Iraqi territory were unsuccessful, and Iraq repeatedly used chemical weapons against Iran. The war continued until 1988, when it became clear to Iran's clerical leaders that they could not achieve any decisive breakthroughs. A cease-fire was agreed on August 20, 1988, after Iran accepted United Nations Security Council Resolution 598 of 1987. The war resulted in no major border changes.

American policies during the war were driven by the goal of containing the new Iranian regime, which had threatened American hegemony in the Middle East. Consequently, official U.S. neutrality during the war was accompanied by policies that aimed to prevent a complete Iranian victory. The U.S. Navy engaged in skirmishes with Iranian forces in the Persian Gulf, and an Iranian passenger aircraft was shot down by a U.S. cruiser on July 3, 1988. However, at the same time, the United States was covertly supplying arms to Iran in an effort to free U.S. hostages in Lebanon and to finance Nicaraguan guerrillas.

Although the "Islamic threat" was contained, the war resulted in the consolidation of the authoritarian Islamic regime in Iran. With the exception of Libya and Syria, almost all Arab countries tacitly or actively supported Iraq during the war in an effort to thwart the prospect of Iranian hegemony. In the aftermath of the war, however, Iraq emerged as a major regional power with a strong military force, a development that led to the Iraqi invasion of Kuwait on August 2, 1990.

SEE ALSO *Destabilization; Diplomacy; Fundamentalism, Islamic; Hussein, Saddam; Iran-Contra Affair; Iranian Revolution; Khomeini, Ayatollah Ruhollah; Stability, Political; United Nations*

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IRANIAN REVOLUTION

A revolution is a mass movement that aims to establish a new political regime by violently transforming the existing government. The Iranian Revolution of 1978–1979 vio-

lently ended the monarchy of Shah Mohammed Reza Pahlavi (1919–1980) and replaced it with an Islamic republic, the theocracy of Ayatollah Ruhollah Khomeini (1901–1989). The shah's reign had been briefly interrupted between 1951 and 1953 with the interlude of Prime Minister Mohammed Mossadeq (1881–1967).

BACKGROUND

The shah's rule began on September 16, 1941, and witnessed twenty-four different prime ministers heading over forty cabinets. In 1951 Iranian nationalist Mohammed Mossadeq rose to power and amassed enough support to oust the shah. He presided over the establishment of the National Front, composed of divergent forces with similar goals. Mossadeq forced oil nationalization through parliament, which provoked boycott by European powers. Shah supporters and the U.S. administration perceived him as too far to the political left. A 1953 coup restored the shah's central authority. Alarmed over Mossadeq's leftist backing in nationalizing the oil company, numerous clergy and the *bazaaris* (those who make their livelihoods in the bazaars), among some others, supported the shah in regaining power. They welcomed the U.S. Central Intelligence Agency's (CIA's) pivotal involvement in the coup.

The shah aimed to lead his country towards a great civilization, which he asserted to have pre-Islamic, Aryan roots. This insulted Iran's devout Shi'is. Shi'ism, a branch of Islam that began as an opposition party, was the official state religion. Approximately ninety percent of the population was Shi'i. The shah's monarchy was based on the constitution of 1906 and 1907. Guided by U.S. and Israeli intelligence officers, he established the National Intelligence and Security Organization (SAVAK) in 1957. It became the government's strong arm and scrutinized allegedly suspicious organizations, such as labor unions, peasant organizations, student groups, guilds, and mosques. SAVAK's tactics instilled pervasive fear of consequences for criticizing the regime or of disagreeing with its policies. Suspects were imprisoned, stories of torture circulated underground, and censorship laws prevailed.

The shah's vision for Iran included a modernization program modeled after the West. In 1961 he ordered the government to implement a land law that limited the amount of land anyone could hold. Nevertheless, the Pahlavis continued to be one of the largest landowning families. The law elicited opposition predominantly from landowners, the clergy, and the resurgent National Front, culminating in riots at the University of Tehran. The peasants' economic position generally worsened as a result of the law's policies. Land reform also had economic consequences for religious institutions that relied on a network of exchange. In 1963 the shah inaugurated a six-point program, the White Revolution, to reshape Iran's economic, political, and social life. Numerous Iranians saw the measures as being imposed on Iran by the United States in order to bolster the shah's power and wealth while expanding U.S. dominance in the region. A religious uprising and a bloody counter-revolution resulted. In this context, Ruhollah Khomeini, bearing the title *ayatollah*, or man of God, became an emergent leader in opposition to the shah. His opposition ultimately landed Khomeini in exile in Iraq, from where he sent taped edicts and sermons to his followers.

The shah sought to develop an industrial base with an influx of foreign contractors and corporations. Some of these invested directly. In 1976 Iran was the fourth largest oil exporter in the world, and in 1977 its economy ranked fifteenth in the noncommunist world. A quantum jump in oil revenues created problems of absorbing those funds into the economic development process, resulting in dramatic increases in spending. Iran entered into a cycle of inflation, greater income inequality, corruption, and growing dependence on the West to help resolve increasing disparities. Peasants displaced to cities by land reform had to cater to thousands of Westerners for economic survival while also being confronted by the impressions Western culture had made in the cities. They found solace in the mosques, where they heard the taped sermons of Khomeini.

THE REVOLUTION HEATS UP

These massive cultural and structural changes, monitored by SAVAK, destabilized Iran's social order. With the exception of the administration of U.S. president Jimmy Carter, which demanded the observance of human rights and restricted the availability of military equipment, the United States supported the shah's rule. Accommodating Carter's human rights demands, the shah relaxed his grip over the country in 1977, but the experiment failed. Instead of dialogue at the negotiating table, a series of demonstrations in the streets ensued. Khomeini continued his attacks against the shah.

On January 9, 1978 students and clergy in Qom, Iran, protested Carter's visit to the country as well as a libelous story about Khomeini in the state press. This began a cycle of escalating violence as demonstrations became more massive and frequent. The shah declared martial law and banned demonstrations, which only provoked his opponents further. The infamous September 8 Black Friday resulted when the Iranian military responded to the public unrest and killed several hundred demonstrators in Tehran. Increasingly alienated Iranians took to the streets and hundreds were killed daily. Iran's allies abroad distanced themselves. During the holy month of Muharram, on December 12, several million demonstrated against the shah in Tehran. The military disintegrated and the regime crumbled.

The revolution saw an eclectic alliance of secular and religious factions, including intellectuals, students, workers, peasants, bazaar merchants, trades people, and clergy. They coalesced around the Ayatollah Khomeini, who symbolized identity, stability, and social justice. In contrast to the shah, supporters perceived Khomeini as leading a simple life, refusing to compromise with foreign powers. All of the revolutionaries wanted to end the shah's rule. They differed on their vision for the type of government for Iran, but the theocratic republic prevailed. The shah was forced from the throne and left Iran on January 16, 1979, and Khomeini returned from exile on February 1.

EFFECTS

With its platform of social justice and autonomy, the Iranian Shi'i theocracy had a potentially destabilizing effect on neighboring countries with Shi'i populations. Worried over Iran's call to oppose corruption and foreign influence, particularly U.S. and Soviet policies, neighboring governments feared internal social unrest. Iran supported developing African nations, Cuba, and the Palestine Liberation Organization (PLO), among others. Iraq, with its Shi'i majority in numbers, but minority in terms of access to power, felt particularly threatened and invaded Iran in 1980. The invasion was an effort to preempt a possible Shi'i attempt to gain political power and overthrow the Sunni-controlled government of Iraq's president, Saddam Hussein. Thus began a costly and bloody eight-year war between Iran and Iraq, in which Iraq was largely supported by the United States and most Arab regimes. The war had an unanticipated consequence: Iranians with previously divergent views banned together behind their government in the face of this external threat. This development reinforced the outcome of the revolution. At the same time, as it united Iranian hard-liners and moderates even more against the United States, it influenced the nature of the future relationship between the two countries.

SEE ALSO *Dictatorship; Fundamentalism, Islamic; Iran-Iraq War; Revolution*

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IRAQ-U.S. WAR

Years of tension between the United States and Iraq led in March 2003 to a direct invasion of Iraq by an American-led coalition. Iraq's Ba'th Party government, headed by Saddam Hussein (1937–2006), was quickly overthrown, but years of instability followed as a variety of Iraqi groups, and some foreigners, fought against the American occupying forces and against the new Iraqi government the United States sponsored.

TENSION: 1991–2001

In the first Gulf War, in 1991, a coalition led by the United States drove Iraqi forces out of Kuwait and destroyed much of the Iraqi military, but major coalition ground units went only a modest distance into southern Iraq; they did not attempt to enter any city.

Hussein, and most key leaders of his government and of the Ba'th Party, were Arabs belonging to the Sunni branch of Islam. Sunni Arabs made up about one-fifth of Iraq's population; they lived mostly in central and western Iraq. Another fifth were Kurds, who lived overwhelmingly in the north. Arabs belonging to the Shiite branch of Islam made up a majority of the population; they were especially strong in the south. Most of the Kurds were Sunni, but when people spoke of "the Sunnis" in Iraq, they almost always meant just the Sunni Arabs, not the Kurds.

Immediately after the 1991 war, there were revolts by both Shiite Arabs in the south and Kurds in the north. The government put down the Shiite rebellion with great brutality, but international intervention helped the Kurds achieve de facto autonomy in a large region of northern Iraq, called Kurdistan.

Iraq grudgingly accepted United Nations Security Council resolutions under which it was to eliminate, under international supervision, all nuclear, chemical, and biological weapons ("weapons of mass destruction" or WMDs). Hussein believed at first that he could conceal Iraq's extensive WMD programs and stockpiles from UN inspectors, but the inspectors proved more effective than he had expected. He then disposed of most of his prohibited weapons and programs, keeping no more than he could reasonably hope to conceal from the inspectors. Years of cat-and-mouse games followed. Late in 1998 the United States and Britain launched strikes using aircraft and cruise missiles to punish Hussein for his refusal to cooperate with the inspection process. The inspectors withdrew from Iraq before these strikes, and did not return afterward.

Iraq remained under severe economic sanctions, originally imposed late in 1990 after the Iraqi invasion of Kuwait. The effect of these was moderated only somewhat by the "oil-for-food" program after 1996. The Iraqi econ-

omy remained crippled, and the Iraqi armed forces remained far below their 1990 strength for lack of funding. U.S. aircraft patrolled large "no-fly zones" where the Iraqis were forbidden to operate military aircraft. The patrol aircraft frequently bombed antiaircraft guns, surface-to-air missiles, and radars when the Iraqis fired on aircraft or seemed about to do so.

TOWARD A SECOND WAR: 2001–2003

After the Afghanistan-based terrorist organization Al-Qaeda attacked the United States on September 11, 2001, President George W. Bush quickly began thinking of invading Iraq. Senior administration officials believed that significant links existed between the Iraqi government and Al-Qaeda. In June 2002 they increased the frequency of U.S. air strikes in southern Iraq. These continued to be officially explained as responses to attacks and threats against aircraft patrolling the no-fly zones. But, in fact, the United States was systematically destroying Iraqi air-defense systems.

The U.S. Congress authorized the use of force against Iraq on October 10, 2002, but the UN Security Council was reluctant to go so far. Security Council Resolution 1441, passed on November 8, offered Iraq "a final opportunity to comply with its disarmament obligations," with a reminder that the Security Council "has repeatedly warned Iraq that it will face serious consequences as a result of its continued violations of its obligations." The United States expected, after a short interval, to obtain a second resolution stating that Iraq had missed its final opportunity, and authorizing force. But Iraq allowed the UN weapons inspectors to return before the end of 2002, and gave them cooperation that was, while not perfect, far better than at any time in the 1990s. In early 2003 the United States was arguing, with evidence that later turned out to have been mostly inaccurate, that Iraq's WMD programs and stockpiles were so large and diversified as to constitute a major threat, justifying military action. But it was difficult to reconcile these American claims with the failure of UN inspectors to find any WMDs, despite searching in the places where American officials told them to search.

The U.S. government responded by attacking the credibility of the inspectors. But French Foreign Minister Dominique de Villepin and his allies, who argued that there was no immediate need for war, drew increasing support from the members of the Security Council. President Bush decided to go to war without UN authorization, as head of a "coalition of the willing."

THE INVASION OF IRAQ: MARCH–APRIL 2003

Early on March 20, 2003, the United States tried to kill Saddam Hussein and his two sons using aircraft and Tomahawk cruise missiles. The ground invasion of Iraq, coming from Kuwait, began a few hours later. The number of troops involved was surprisingly small. American leaders were so confident of Iraq's weakness that, for an invasion aimed at taking the whole country, they used a force far smaller than the one they had sent in 1991 to accomplish much more limited goals.

A primarily British force occupied the extreme southeast, around the city of Basra. American troops took the main body of Iraq. Marine units, on the right wing, crossed the Euphrates River at Nasiriyah; the heaviest American losses of the campaign were in that city. Most of the Marines proceeded north, crossed the Tigris River, and then turned west toward the capital, Baghdad. Army units, on the left wing, went west across the deserts south of the Euphrates until they were south or even a little southwest of Baghdad, then turned north and finally came at Baghdad from the southwest.

Iraqi air defenses had been so weakened by months of American air strikes that U.S. helicopter gunships and fixed-wing aircraft were able to operate in comparative safety in large areas of Iraq. They devastated Iraqi military units in the path of the American ground forces, especially the larger units with heavier weapons. What remained of the Iraqi forces were no match for American ground forces. And the Americans moved so fast that the Iraqis had little opportunity to draw lessons from the defeat of one unit that could enable another to do better.

The speed with which the Americans advanced would have made them vulnerable to ambushes, and attacks on their supply lines, by competent and innovative enemy forces. They encountered few such forces. The Iraqi units that were willing to fight—that did not just fade away—mostly placed themselves unimaginatively in the path of the American juggernaut, and were crushed by it. The first unpleasant surprise for the Americans was a paramilitary organization, the Fedayeen Saddam. But the surprise was that the Fedayeen Saddam fought at all. They did not fight with great skill, they did not have heavy weapons, and they did not inflict heavy casualties on the Americans. Another surprise was more ominous. On March 29 a suicide bomber driving a taxi killed four U.S. troops at a checkpoint. Another suicide bomber killed three Americans on April 3.

Small groups of American forces went into northern Iraq by air, seizing some positions themselves and helping Kurdish forces, the *peshmerga*, to seize others. The United States had hoped to send in a much larger force through Turkey, but the Turks had refused permission.

American bombing of the Iraqi air-defense system before the nominal opening of the war had been effective, and the tactical air strikes that supported the ground invasion were very successful. American strategic bombing during the war was less so. The "shock and awe" bombing of conspicuous government buildings and palaces in central Baghdad, on March 21, did not have the hoped-for psychological effect.

The American forces went more than half the distance from Kuwait to Baghdad in a week, paused for a few days to allow supplies to catch up with the front of the advance and to clear Iraqi forces away from their supply lines, and then resumed their advance. U.S. Army troops had full control of Baghdad's main airport, west of the city, by April 5. On that day, a task force of tanks and other tracked vehicles made an armed reconnaissance patrol, a "thunder run," going deep into Baghdad from the south and then departing to the west. One American was killed, but American forces killed an estimated eight hundred to one thousand Iraqi soldiers. Two days later the same task force and two others made a second thunder run. This time they went to the heart of the city, occupying, among other sites, two of Hussein's palaces beside the Tigris, and remained there. The Iraqis were unable to dislodge them on April 7 and 8, and meanwhile other Army units were entering the city from the northwest. U.S. Marines were coming from the southeast. During the night of April 8 to 9, Iraqi leaders, recognizing that they had lost the struggle for Baghdad, went into hiding. Their government ceased to function as a government, though some of their soldiers continued to resist the Americans.

Looting began in parts of Baghdad on April 7. It reached disastrous levels on April 9. There were not nearly enough American troops to restore order, and they did not at first even make much of an attempt; few thought of the maintenance of order as their responsibility.

RECONSTRUCTION AND RESISTANCE

The United States had done little to prepare for the occupation of Iraq. Apparently it was believed that once Saddam Hussein was gone, a new government, with exiled leaders such as the secular Shiite Ahmad Chalabi playing key roles, could be created with little further American effort. When this did not happen, Paul Bremer was sent in May 2003 to head a new body, the Coalition Provisional Authority, which ruled Iraq until mid-2004. An "Iraqi Governing Council" was established in July 2003 but was not given much authority.

An insurgency made up primarily of Sunni Arabs emerged gradually out of the background of general lawlessness that followed the war. Its diverse elements often cooperated, but had no overall command. First, there were the surviving elements of the Ba'th Party. When the government collapsed in April 2003, leaders and officers going into hiding took with them considerable funds, some of which they used to finance the insurgency. The Americans at first overestimated the importance of the Ba'th leaders, and hoped that the capture of Hussein in December 2003 would seriously weaken the insurgency, but there was not much effect. (Hussein's execution in December 2006 seemed, if anything, to inflame the insurgency further.)

Groups rooted in local communities and tribes formed the great mass of the insurgency. Many felt a nationalist hostility toward foreign occupiers. Many resented the way the Americans had reduced the power of the Sunni Arabs, traditionally the dominant force in Iraq, by empowering the Shiite majority and the Kurds. Many were angry with the number of Iraqis the Americans had killed, about the way troops searched Iraqi homes at night, looking for weapons and hauling off suspects in handcuffs and hoods, and so forth.

Finally, there were foreign fighters from many countries. The most important of these were very similar to Al-Qaeda and eventually began calling themselves "Al-Qaeda in Mesopotamia." They were led by a Jordanian, Abu Musab al-Zarqawi, until his death in June 2006. They thought of Iraq as one front in a broader struggle directed both against the United States and against corrupt secular governments in the Muslim world. They are believed to have been responsible for most of the spectacular suicide bombings in Iraq, killing large numbers of people, including many Shiite civilians, and trying to trigger a civil war of Sunnis against Shiites.

The coalition headed by the United States had a substantial number of British troops and smaller numbers of troops from other nations, but these were overwhelmingly in areas of southern Iraq that were predominantly Shiite. It was the Americans who faced the Sunni Arab insurgency.

The violence had become a major problem by August 2003, and it grew thereafter. By early 2004 numerous towns were under insurgent control. In April, when the United States assaulted Fallujah, west of Baghdad, it became apparent that taking Fallujah would require so much firepower as to destroy much of the city. The Americans backed off, and Fallujah remained under insurgent control until it was finally taken in a bloody battle that indeed destroyed much of the city in November 2004.

At times, the coalition faced a dangerous widening of the insurgency into the Shiite community. A radical young Shiite cleric, Moqtada al-Sadr, wanted Iraq to have a religiously based government similar to that of Iran. His militia, the Mahdi (Mehdi) Army, clashed with American forces on a serious scale in April 2004, and again in August.

On June 28, 2004, the United States officially granted sovereignty to an Iraqi government headed by Prime Minister Ayad Allawi, a secular Shiite. In January 2005 elections were held for a national assembly. An alliance of religiously oriented Shiites, presided over but not openly led by Ayatollah Ali al-Sistani, the most respected religious leader in Iraq, won a majority of the seats. A constitution was then written, and an election under the new constitution was held in December 2005. Many more Sunni Arabs voted in this election than had voted in January. It was hoped that this development would lead many of those who had supported the insurgency to shift their efforts toward participation in peaceful political processes. But this did not quickly occur.

In the second half of 2004, the United States significantly expanded its efforts to train Iraqi military and security forces. By the second half of 2005, Iraqi forces were having a clear and substantial impact, establishing, for example, a reasonable level of security on the notorious highway linking the city of Baghdad with its airport. But there was increasing concern about the extent to which some elements of the security forces, especially the police, were being infiltrated by and becoming tools of the militias of Sadr and other religiously oriented Shiite leaders.

For a long time, the Shiites showed remarkable restraint, not retaliating indiscriminately for Sunni insurgents' murders of Shiite civilians. But in February 2006 insurgents blew up the Golden Mosque in Samarra, one of the holiest Shiite shrines in Iraq, and the Shiites exploded in rage. Soon Shiite "death squads" were abducting, torturing, and murdering Sunnis by the thousands, and Sunnis were doing the same to Shiites in a cycle of revenge killings, mainly in Baghdad and nearby cities, that produced higher death tolls than the ongoing struggle pitting the insurgency against coalition and government forces. Militants on each side carried out ethnic cleansing, driving members of the other group out of mixed neighborhoods. The United States blamed Shiite militias, especially the Mahdi Army, for the worst of the violence. But Prime Minister Nuri al-Maliki was politically allied with Moqtada al-Sadr and other militia leaders; he often resisted American efforts to crack down on the militias.

U.S. Secretary of Defense Donald Rumsfeld was determined to use as few American military personnel as possible in the occupation of Iraq, and he long downplayed the magnitude of the problems there. Critics argued that the American force in Iraq was too small to accomplish its mission. But as the violence escalated, political support for the war effort declined in the United States. Critics of government policy increasingly spoke of setting a timetable for withdrawal of the forces the United States already had in Iraq, rather than sending more.

Rumsfeld resigned at the end of 2006, and top American officials spoke more openly than ever before about the need for a change of policy. In January 2007 President Bush announced that Prime Minister al-Maliki had committed himself to a real crackdown on violent militias, regardless of sect. Bush also announced that he was sending more than 21,000 additional American troops to Iraq, most of them to Baghdad, to support Iraqi government efforts to restore order. Few in the American public or the Congress had much faith that this new effort would succeed, though as of spring 2007 violence in and around Baghdad decreased significantly.

SEE ALSO *Al-Qaeda; Arabs; Bush, George W.; Counterterrorism; Gulf War of 1991; Hussein, Saddam; Islam, Shia and Sunni; Petroleum Industry; September 11, 2001; Terrorism; War; Weapons of Mass Destruction*

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IRISH REPUBLICAN ARMY

The term *Irish Republican Army* was first used during the Fenian raids in Canada during the 1860s. Today the term is used in concert with the outbreaks of violence throughout Ireland, and especially in Northern Ireland, called the *Troubles*. The Irish Republican Army has a much longer

history than that begun in the late 1960s and early 1970s, having been instrumental in the Easter Uprising in 1916. The *Troubles* refers to the sectarian conflict in Ireland (especially Northern Ireland) that began in the late 1960s.

The immediate postfamine years in Ireland were a period of escalating unrest between the Irish and their English occupiers. In 1916 the conflicts came to a head when a group of charismatic Irish began a revolt in Dublin. The focal point of the revolt was the General Post Office, now a shrine to their efforts, but the entire city, especially the area in and around O'Connell Street and Parnell Square, was involved in the violent armed conflict. In the end, the leaders of the revolt were arrested, put in Kilmainham Gaol, and many were executed. In the aftermath of the uprising and their executions, Michael Collins (1890–1922) and others organized guerrilla forces against the English Black and Tans. These forces became known as the Irish Volunteers.

In 1919 the Dáil Éireann or First Dáil (the government of Ireland) recognized the Irish Volunteers as the Irish Republican Army (IRA), and they in turn fought the Irish War of Independence from 1919 to 1921 against the English. At the signing of the Anglo-Irish Treaty in 1921, the IRA split into protreaty forces (which became known as the Old IRA, government forces, or regulars) and antitreaty forces (Republicans or irregulars). The antitreaty forces continued to use the name Irish Republican Army. In 1922 the two sides entered into the Irish Civil War, with the regulars led by Michael Collins on the side of the new Irish Free State, which still recognized England, and the Republicans led by Liam Lynch (1893–1923) refusing to recognize the new state or the partitioning of Northern Ireland. Collins was later assassinated by IRA members for his participation in the Civil War and support of the Free State government.

Éamon de Valera (1882–1975), a member of the antitreaty group Sinn Féin, eventually came to power as leader of the Fianna Fáil Party, currently the largest political party in Ireland. The IRA remained active in the Republic until the 1960s, when it split again to become the Official IRA (OIRA) and the Provisional IRA (PIRA). The Provisionals were most active in Northern Ireland and split with the Official IRA due to what they recognized as the OIRA's lack of protection for nationalist communities in the North. This split came in 1969 as violence between sectarian communities and Republican and Unionist groups began to escalate. This is often recognized as a conflict between Catholics and Protestants in the North, but the underlying reasons remain tension between Unionists (those who support English rule) and Republicans (those who support unity with the Republic of Ireland and devolution from England).

Bloody Sunday, a violent clash between protesters and British and Northern Irish troops in Derry in 1972, was a flashpoint in the sectarian conflicts. Troops opened fire upon the crowd of protesters killing thirteen, all of whom were unarmed. There are conflicting reports from those present that suggest either a gun was fired from the protesters' side toward the troops or that the troops were commanded to fire on the agitated crowd. In the days and months that followed, extreme violence in the form of shootings, bombings, murders, and arson engulfed the North. The PIRA carried out many of the killings and are suspected to be the perpetrators of specific acts of violence carried out against the Royal Ulster Constabulary (RUC) and the British army, among them the bombings of police stations and barracks and the targeting of pubs frequented by the RUC and the army. They are also accused of a number of attacks in Dublin and throughout the United Kingdom. In over thirty years of violence in Northern Ireland, more than three thousand people have died as a result of the conflict.

Since the mid-1990s, a process of political devolution has been under way in Northern Ireland. The peace process, as it is known, has been opposed by many, including the Real IRA, a splinter group of the PIRA that broke ranks in 1997. The Real IRA, considered to be a paramilitary group, has held out against the decommissioning of weapons as proposed in the Hume-Adams report. In 1993 the Hume-Adams initiative agreed to by John Hume, leader of the SDLP (the North's nationalist party) and Gerry Adams was a directive to begin an IRA cease-fire and to include Sinn Féin in the peace talks. This in turn led to a series of cease-fires and began the peace process. Sinn Féin, led by Gerry Adams, entered the Dáil Éireann and now participates in the political decision-making process.

SEE ALSO *Peace Process; Revolution*

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IRON CURTAIN

The term *iron curtain* was coined by the British author and suffragette Ethel Snowden in her book *Through Bolshevik Russia* (1920). In her very early and negative critique of the Bolshevik form of communism, this British feminist referred to the iron curtain simply as the contemporary geographical border of Bolshevik Russia in 1919 ('We were behind the 'iron curtain' at last'). At the end of the Nazi regime in Germany the minister of propaganda, Joseph Goebbels, used the term in a journal article and several times in his private diary in February 1945, and the minister of finance, Lutz Graf Schwerin von Krosigk, used it in a radio broadcast on May 2, 1945. Both Nazi leaders argued that the Soviet Army is occupying one country after the other, lowering an iron curtain immediately afterward on these occupied countries in order to commit war crimes, without being observed and controlled by the outside world. During the last months of the Third Reich, both ministers regarded the iron curtain as a moving part of the ongoing occupation process by Soviet troops within the territorial scope of the Yalta agreements from 1943. This analogy with an iron curtain in a theater (Goebbels was in charge of German theaters and culture) in this usage of the notion refers to the fact that events behind the theater curtain are not visible by the audience and somehow cut off from outside observation. The British prime minister Winston S. Churchill used the term in a diplomatic telegram to President Harry S. Truman in May 1945, and in a public speech in the British Parliament on August 16, 1945, but the term was not popularized until the following year, with Churchill's speech at Westminster College in Fulton, Missouri, on March 5, 1946:

> From Stettin in the Baltic to Trieste in the Adriatic an iron curtain has descended across the Continent. Behind that line lie all the capitals of the ancient states of Central and Eastern Europe, Warsaw, Berlin, Prague, Vienna, Budapest, Belgrade, Bucharest and Sofia; all these famous cities and the populations around them lie in what I must call the Soviet sphere, all are subject, in one form or another, not only to Soviet influence but also to a very high and in some cases increasing measure of control from Moscow. (Cannadine 1990, pp. 303–304)

The iron curtain refers to the boundary that divided Europe politically and militarily from the end of World War II until the end of the cold war. Geographically, the borderline ran from Estonia in the north to Yugoslavia in the south. Churchill's famous 1946 address, which is sometimes referred to as the "Iron Curtain Speech," is regarded as marking the commencement of the cold war between the democratic Western world and the Communist Eastern bloc with the Soviet Union as its political center. Between 1946 and 1989, the existence of this symbolic boundary forced many Central and East European countries to join the Communist bloc under the control of the Soviet Union. These countries—Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, and (until the 1960s) Albania—were labeled "Iron Curtain countries."

The iron curtain was manned and defended militarily against the West by the Warsaw Pact, which combined the Soviet Red Army and troops from the new Communist one-party states after the end of World War II. It also served as a wall to prevent citizens of Eastern bloc countries from migrating west. In Berlin, the section of the iron curtain dividing West from East Germany took the form of the Berlin Wall, a long concrete wall separating Berlin into democratic and Communist parts; many East Germans lost their lives trying to escape over the wall to the West. In other areas, the iron curtain was constructed of nearly impenetrable steel fencing, creating a long and narrow strip of no-man's-land of untouched wildlife.

The iron curtain was finally lifted on June 27, 1989, at the border between Austria and Hungary by the foreign ministers Gyula Horn (Hungary) and Alois Mock (Austria), forty-three years after Churchill's historic speech. This first crack in the long border between the free world and the Communist world was the beginning of the final collapse of communism in November and December 1989, and the first sign of the fall of the Soviet Union in 1991. The fall of the iron curtain coincided with the end of the cold war, signifying the end of a crucial and dramatic period of European and world history.

SEE ALSO *Berlin Wall; Churchill, Winston; Cold War; Communism; Democracy; Diplomacy; International Relations; Union of Soviet Socialist Republics*

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IRON INDUSTRY

SEE *Steel Industry.*

IRON LAW OF OLIGARCHY

SEE *Oligarchy, Iron Law of.*

IROQUOIS

The Iroquois were a Native North American confederacy of five nations whose aboriginal territory included much of upstate New York. The Iroquois thought of this territory as a longhouse, a rectangular multifamily dwelling with a door at each end and a series of hearths in the aisle that ran the length of the dwelling. Each of the five Iroquois nations occupied one of the five fireplaces in this metaphorical longhouse. From east to west these were the Mohawk, the Oneida, the Onondaga, the Cayuga, and the Seneca. As the western-most nation in the Iroquois longhouse, the Senecas were considered the "Doorkeepers of the Confederacy" and the Mohawks are often styled the "Keepers of the Eastern Door." Iroquois refer to themselves as *Haudenosaunee* (with variant spellings) meaning, roughly, "people of the longhouse," a designation many contemporary Haudenosaunee prefer. *Iroquois* was the name utilized by the French; the English usually referred to the confederacy as the Five (later, Six) Nations.

At the time of contact with Europeans the Iroquois lived in large villages consisting of elm-bark longhouses, each housing a number of families. Surrounding the village were fields in which the women planted the "three sisters"—corn, beans, and squash. These crops were the staples of Iroquois diet.

Each of the Iroquois nations was divided into exogamous matrilineal clans. The Wolf, Bear, and Turtle clans were found in all five nations; five or six additional clans were found among the Onondagas, Cayugas, and Senecas. The clans were further divided into matrilineages, each headed by a senior female, the lineage matron. Some of these lineage matrons enjoyed considerable political power. The Iroquois Confederacy Council consisted of fifty positions, each hereditary within a matrilineage. The lineage matron appointed a male member of her matrilineage to that position and had the right to depose him if he proved negligent or incompetent in that role.

Dean Snow estimated the Iroquois population as almost 22,000 in 1630, prior to their first experience of smallpox (Snow 1994, p. 110). Diseases introduced to North America from Europe took a terrible toll in Iroquoia, but these population losses were to some degree offset by the Iroquois practice of adopting war captives and incorporating refugee populations. One refugee group, the Tuscarora, arrived in the 1720s, and after their arrival the confederacy was often known to the English as the Six Nations.

Initially the Iroquois established a strong trading relationship with the Dutch colony of New Netherland. The Iroquois quickly adopted elements of European culture such as brass kettles and steel axes and knives. These economic and political ties continued after the English replaced the Dutch as governors of the colony, having renamed it New York.

Occupying a highly strategic position between the English colonies on the Atlantic Coast and the French in Canada, the Iroquois usually maintained neutrality between the two colonial powers. On occasion Mohawks took the field as allies to the British whereas the Senecas, close to the French trading post at Niagara, sometimes fought beside the French. There were several Mohawk colonies on the St. Lawrence River established by converts to Catholicism who were persuaded by their Jesuit priests to migrate to a locale remote from English influences. These people, from the founding of their communities in the 1670s, consistently fought as allies to the French.

By the outbreak of the American Revolution the Iroquois had largely abandoned the multifamily bark longhouses and were living in smaller houses, often log cabins. The Mohawks had converted to the Church of England. The Oneida were heavily influenced by the New England missionary Samuel Kirkland (1741–1808). Those nations farther to the west were not yet Christian, but their towns closely resembled those of the non-Indian inhabitants of the frontier.

The American Revolution divided the Iroquois Confederacy. The Oneidas and Tuscaroras aided the supporters of the Continental Congress; Mohawks, Cayugas, and Senecas (and later the Onondagas) fought as allies to the British. The treaty that ended that conflict in 1783 made no provisions for the Indian allies of the Crown, and Britain surrendered all interests in the Iroquois homeland south of Lake Ontario. Many Iroquois moved north of the new American border to lands secured for them by Quebec governor Frederick Haldimand. These lands included the Tyendinaga Mohawk Reserve (or Territory) on the Bay of Quinté and the Six Nations Reserve on the Grand River, both in what is now Ontario. The latter was settled predominantly by Mohawks, Cayugas, and Onondagas. Most of the Senecas remained in New York State, and a series of treaties (Fort Stanwix [1784], Canandaigua [1794], and Big Tree [1797]) established several reservations, of which Allegany, Cattaraugus, Oil Spring, and Tonawanda remain in Seneca hands. The

Onondaga Nation retains territory near Syracuse, New York, but Cayuga and Oneida lands in New York were purchased through treaties of questionable legality with the State of New York. The larger portion of the Oneidas migrated to lands secured in Wisconsin and Ontario early in the nineteenth century.

In 1799 a Seneca, Handsome Lake (1735–1815), experienced a vision that led him to preach a message of both nativism and reform that established the contemporary practice of traditional Iroquois (or Longhouse) religion. Anthony F. C. Wallace's ethnohistorical analysis of these events formed the basis of anthropological understanding of revitalization movements (Wallace 1970).

In the 1840s Lewis H. Morgan pursued personal contacts, particularly through a bilingual Seneca youth, Ely S. Parker, among the Tonawanda Senecas to compile what has been touted as the first ethnographic monograph describing a Native North American culture (Morgan 1851).

Any estimate of current Iroquois population is subject to error, but a compilation of numbers of those formally enrolled in various Iroquois communities between 1990 and 2000 states that 16,829 are enrolled in New York Iroquois communities, 42,857 belong to communities in Ontario, 10,831 are enrolled in Quebec Iroquois bands, 11,000 belong to the Wisconsin Oneida community, and 2,460 belong to a Seneca-Cayuga group that resides in Oklahoma (Lex and Abler 2004, p. 744).

Some Iroquois communities have pursued land claims for nearly two centuries (see Vecsey and Starna 1988), seeking the return or compensation for lands felt to be fraudulently taken. These claims have led to violent clashes with authorities, as at Ganienkeh in northern New York in the 1970s and at Kanesatake outside Montreal in 1990. Legalized gambling and other economic activities have also deeply divided many communities, creating internal conflicts that have led in some cases to violence, arson, and even deaths.

SEE ALSO *Native Americans*

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Thomas S. Abler

IRREDENTISM

SEE *Nationalism and Nationality.*

IRRIGATION

Irrigation refers to techniques for augmenting the moisture content of soil to grow crops. These techniques have played an important role in intensifying agriculture, increasing production, and improving the productivity of land and labor. Early civilizations in China, Egypt, Mesopotamia, Peru, and India relied on them to support large and complex populations. One of the earliest and most successful large-scale hydraulic works was the Dujiangyan irrigation project built in the third century BCE in southwest China's Sichuan Province. The project was designed to simultaneously solve the problem of the incessant flooding of the Minjiang River, a tributary of the Yangtze River, in the summer, and provide water during the winter when it was beset with drought. Working without a dam, the river was divided by a long bank in the middle, with the inner river serving as a channel for delivering water for irrigation and the outer river used as a floodway. This enabled the delivery of water during the dry season and the return of excess water during the winter to the mainstream of the Minjiang River. A weir made of bamboo cages filled with stones balanced the channel's inflow. The project fed a grid of irrigation canals watering 160,000 hectares of arable land in the Chengdu Plain.

Many ancient large-scale irrigation systems were accompanied by elaborate, complex, social organization. Descriptions of these systems in the nineteenth century intrigued the social theorists Karl Marx (1818–1883) and Max Weber (1864–1920). Marx's idea of the Asiatic mode of production, based largely on irrigation-based societies in China, included state control and collection of rents, a despotic political system, and societal organization obtained through religion, rather than economics and exchange. Village life, rather than cities, circumscribed the social spheres of people. Weber, in contrast, drew atten-

tion to the peculiar "hydraulic-bureaucratic official-state" in China and India. Although flawed due to limits in the data then available, these constructs were quite influential in the subsequent development of social theory.

Karl Wittfogel, inspired by the writings of Weber, revisited the materials and proposed in *Oriental Despotism* (1957) that large-scale waterworks required centralized direction, bureaucratic organization, and disciplined armies. He distinguished such "hydraulic societies" from smaller-scale "hydroagricultural societies" relying on less provident water sources in regions where geographical features hydraulically compartmentalized the countryside. Wittfogel's hydraulic society thesis generated various criticisms, of which the most telling were examples of locally controlled and managed irrigation in societies where irrigation authority was formally centralized. More recently, Donald Worster in *Rivers of Empire* (1985) reinvigorated the discussion of large-scale irrigation, arguing that Wittfogel's hydraulic societies take a somewhat different form in the modern world. In his analysis of river-based irrigation in the western United States he finds parallels between the archaic centralized regimes of ancient hydraulic societies and the centralized state agencies of the Bureau of Reclamation and the Army Corps of Engineers.

IRRIGATION TECHNIQUES

The motivation for irrigation stems from the difficulties of farming in arid and semiarid areas of the world beset with insufficient or unreliable precipitation. Where precipitation is insufficient, irrigation may be the only way farmers can supply moisture for growing crops. In areas with sufficient, but otherwise unreliable, precipitation, it can provide insurance against crop failure. And in lands with adequate moisture, irrigation can be used to grow water-intensive subsistence crops such as rice, or high-value market crops such as sugar beets or beans.

Irrigators commonly draw on gravity to move surface water from a source through canals and furrows to fields and to store water in reservoirs and cisterns. Techniques to move surface water run the gamut from simple and unsophisticated counterbalanced poles mounted with buckets to complex, labor-intensive feats of engineering such as large-scale dams and canal systems. Surface-water irrigation often works in concert with the control and manipulation of floodwater. In one frequent form, as soon as the flood in a perennial river reaches a sufficient level, inundation canals start to flow and water is led over fields. In another, recession irrigation, a rising perennial river overflows its banks and inundates the plains alongside the river. Crops are grown on the rising or receding flow or on the residual moisture.

In spate irrigation, found throughout semiarid environments of the Middle East, North Africa, East Africa, West Asia, and parts of Latin America, seasonal water is used as a source. Seasonal floods are contained in mountain catchments or diverted from riverbeds and spread over large areas. Seasonal floodwater may last only a few hours or a few days, and sophisticated local knowledge is required to organize and manage the accumulation and distribution of the floodwater. Spate irrigation is associated with low returns to labor, great variability in productivity between good and bad years, and a high degree of social organization. Its uncertainty restricts its appeal to only the very poorest.

In areas with high water tables or surface depressions, human or animal energy has been used to raise groundwater for irrigation. Gravity usually has only limited potential in this regard. One exception is the complex "horizontal wells" that tapped subterranean aquifers through filtration galleries in the ancient Middle East (*qanats*), and the Andes (*puquios*). In the nineteenth century pumps driven initially by steam, and later by electricity and gasoline or diesel, were adopted to irrigate with groundwater from shallow aquifers and deep groundwater basins. The availability of small, portable, inexpensive, submersible pumps in the late twentieth century expanded groundwater irrigation dramatically. In groundwater-rich spate-irrigated areas, hydraulic infrastructure has been neglected and land use intensified through perennial cropping.

The adoption of industrial irrigation altered significantly the scale, impact, and productivity of agriculture, and its reliance on inanimate mechanical converters of energy, especially fossil fuels. Irrigation played a key role in the Green Revolution of the 1960s, helping to ensure the high yields of "miracle seeds." It remains instrumental in realizing the potential of genetic engineering and precision agriculture, the application of space-age technologies to tailor soil and crop management to local conditions. Two techniques now in widespread use include drip irrigation, relying on emitters to release carefully calibrated amounts of water, and sprinkler irrigation, with relatively permanent or portable sprinkler systems.

Despite new and more efficient irrigation technologies, today's demands for water produced by the Green Revolution, population growth, urbanization, and industrialization outstrip supply. Scarcity of water provokes conflicts in many areas of the world; they are endemic in the Middle East over access to the water of the Euphrates, Jordan, and Nile Rivers. At the heart of the Arab-Israeli conflict is the allocation to Israel, Jordan, the Palestinian Territories, and Syria of the water of the Jordan River, its tributaries, coastal rivers, and two aquifer systems.

SUCCESSES AND FAILURES

Although many regions in China, Egypt, Mesopotamia, and India have enjoyed continuous and sustainable irriga-

tion for centuries, it has not always been an unmitigated success. Archaeological and historical research has uncovered significant evidence of cases of agrarian collapse due to environmental degradation and mismanagement. Poorly managed surface-water irrigation can lead to the excessive buildup of salts, exacerbated by shallow soils, water with relatively high salt content, aridity, and high water tables. For example, the Aral Sea, located in inland Central Asia, has been shrinking since the 1960s as the U.S.S.R. diverted the rivers that feed it for irrigation.

Often, inadequate drainage is at the root of the irrigation failures. Drainage does not always have to be a problem, however. Some societies have devised techniques for draining heavily waterlogged soils to levels sufficient to support intensive agriculture. Raised-bed agriculture in Lake Titicaca of southern Peru and Bolivia achieved levels of productivity comparable to irrigated land.

In the industrial era, irrigation has increased the risks of ground- and surface-water pollution from the intensive use of pesticides and nitrate fertilizers. Groundwater extraction poses an additional problem; it is much more difficult to regulate than surface-water irrigation and in many regions of the world, overpumping has contributed to the drying up of aquifers and groundwater basins.

SEE ALSO *Development, Rural*

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David W. Guillet

ISHI

SEE *Kroeber, Alfred Louis.*

ISLAM, NATION OF

SEE *Nation of Islam.*

ISLAM, SHIA AND SUNNI

Islam was born in the Arabian Peninsula in the seventh century CE, a time when the peninsula was populated by nomadic tribes, as well as settled agriculturalists and merchants. There was no central authority beyond a scattering of tribal leaders, most of them devoted to polytheistic religions.

The Prophet Muhammad was born around 570 CE, in Mecca. His family came from a poor branch (the Banu Hashim) of the leading Meccan tribe (the Quraysh). His father died before he was born and his mother died when he was a child; he was brought up by his grandfather and uncle. As a young man, Muhammad worked as the business manager of a wealthy widow named Khadijah (d. 619). He was dubbed "the trustworthy" for his business dealings and was thoroughly respected. He married Khadijah, who was his senior, when he was in his twenties. They had four daughters who married into eminent families. Little more is known about his early life before his "call" at age forty.

Like other young men in Mecca, Muhammad made solitary retreats into the nearby mountains. He was known to have become contemplative about leading a pure and honest life. On one of these occasions, he had a vision in which the angel Gabriel commanded him to recite God's message which is now encapsulated in the Qu'ran, Sura 96, verses 1–5. According to the *hadith*, a collection of the Prophet's sayings and actions, Muhammad was terrified by his vision. He is supposed to have wondered whether he was going mad, and he was physically affected by these thoughts, which he knew were not his own; this manifestation has been compared to an epileptic seizure.

Muhammad was reassured by his early supporters, including his wife, his cousin Ali ibn Abi Talib (599–661), and his close friends Abu Bakr (c. 573–634) and Uthman ibn Affan (d. 656), that he was not losing his mind. In 613 Muhammad began preaching in the streets of Mecca. His monotheistic message offended leading members of the dominant Quraysh, and he was scorned, derided, and attacked. One of his persecutors, Umar ibn al-Khattab (c. 586–644), later became a convert.

In 619 Muhammad's wife and uncle died, and his position in Mecca became precarious. He began to look for support outside of Mecca, and was encouraged by exchanges with people from Medina (about 250 miles north of Mecca), a town with a population of émigré Jews. In 622 he moved to Medina in the so-called *hijrah* (migration), and, around this time, he gave his movement a political identity, formulating the ideal of a community of religious believers, known as the *ummah*.

In Medina, Muhammad came into contact with Christians as well as Jews and soon became a leader in the community. In 624 he began to ambush the caravans of Meccan traders in an attempt to economically and psychologically undermine the prestige of the Quraysh clan. The Meccans responded by sending an army against Muhammad and his followers, who, though seriously outnumbered, were victorious. Muhammad led an expedition into Syria, and his military prowess won him the support of Bedouin tribesmen. In 627 the Quraysh again were unsuccessful in their attempts to suppress Muhammad and his followers. In 630 Muhammad returned to Mecca as the leader of a united Arabian Peninsula. He died in 632.

After Muhammad's death, his followers expanded throughout the Mediterranean basin and into the east. In the west, their expansion was checked by the Frankish ruler Charles Martel (c. 688–741) at the Battle of Tours in 732.

Muhammad's death precipitated a crisis among his followers. The community was in danger of crumbling, and it was only through the vigorous efforts of his successor, Abu Bakr, that it survived. Abu Bakr kept the Arabs unified by pursuing an expansionist policy, invading Syria and Iraq. When Abu Bakr died, he was succeeded by Umar, who continued the expansion, taking Egypt and Syria, and overthrowing the Persian Empire. Umar's conquests were culturally important in that they bought a refined civilization within the Muslim orbit.

When Umar died in 644, the succession was contested. The two main candidates were Uthman and Ali. The electors chose Uthman. Uthman's reign began with an initial period of calm followed by corruption and lawlessness. He was asked to abdicate his position by the son of the first caliph Muhammad Abi Bakr, who reportedly was part of a group of men from Egypt who seized Uthman's house and murdered him. After Uthman's death, Ali took control, but a civil war broke out between him and Uthman's cousin, Muawiya ibn Abu Sufyan (d. 680), the governor of Syria. In 661 Ali was murdered by Ibn Muljam of the Kharijites (secessionists), one of the earliest sects of Islam that contested the validity of the caliphate, and the line of "right-guided" caliphs (community leaders) ended. Muawiya inaugurated a new dynasty (the Umayyad caliphate), centered in Damascus.

The civil war precipitated the first split in Islam. A minority group, known as *Shiites*, became differentiated from the majority (later to be known as *Sunnis*) in their belief that the descendants of Ali had a special claim to authority. Many Shiites assert that they are linked by blood to the Prophet through a series of holy men. In subsequent centuries, further splits developed within Shia Islam.

The Umayyads continued the holy war, spreading into North Africa, Spain, and France. Their success resulted from the weakness of the Byzantine Empire and the Latin West, the bureaucratic skills of the Umayyad caliphs, and the fact that the Germanic Goths and Vandals had trouble adapting to a settled way of life. In the 740s the Umayyad dynasty gave way to the Abbasid line, and the center of Islam moved from Damascus to Baghdad.

THE BASIC RELIGIOUS TENETS

Muslims of all sects share several basic principles. At the center are two main doctrines: (1) there is one God; and (2) the righteous are required to submit to God. Etymologically, *Islam* means "submission to God" and *Muslim* means "one who has submitted." A *Muslim* then, is someone who adheres to Islam by accepting and committing to the teachings of the Qu'ran and the Prophet Muhammad. In time, the term *Islam* came to signify more than just a tradition of faith; it is also used to refer to entire peoples, cultures, and nation-states.

Submission involves the five pillars of the faith:

1. Confession of faith: "There is no God but God, and Muhammad is his Prophet." Muhammad is regarded as the last and greatest in a line of prophets, including Abraham, Moses, and Jesus.
2. Prayers. Muslims offer prayers five times daily, preceded by ritual purification.
3. Almsgiving. One must give a minimum of one-fortieth of one's income for the benefit of the poor and the underprivileged in the community; the righteous give more. The Qu'ran repeatedly urges fairness and generosity.
4. Fasting. In the month of Ramadan, nothing may be eaten or drunk between sunrise and sunset (allowances are made for the sick, pregnant women, and travelers). Ramadan marks the month that the Qu'ran was revealed to Muhammad.
5. Pilgrimage to Mecca. The pilgrimage to Mecca involves visiting the site at which Abraham is supposed to have placed a sacred rock. The pilgrimage connects Islam not only with the source of Judaism and Christianity, but also with Arab traditions that precede Islam.

All of the pillars, with the exception of almsgiving (*zakat*), are matters of ritual. *Zakat* concerns everyday behavior. The Qu'ran is much concerned with directing the *actions* of the faithful. It insists again and again on honesty and justice in daily life.

There may be a sixth pillar—*jihad*. According to some interpretations of the Qu'ran, Muslims must spread the word of Allah and contend with nonbelievers. This interpretation is controversial, and some have described

jihad to mean holy war. The concept of jihad is as old as Islam but may be manipulated. In the Qu'ran, it is discussed as a personal struggle (in terms of faith, belief, and virtue). This has been interpreted as a larger struggle against non-believers.

All Muslims have in common a belief in the scripture. This is particularly important in understanding and approaching Islam as a discursive or textual (rather than oral) tradition, as argued by Talal Asad (1986).

SUNNISM

The branch of Islam known as Sunnism was already defined as distinct from Shiism in the eighth century. Sunnis represent nine-tenths of the total world Muslim population. Taking a cue from Marshall Hodgson (1974), one should not consider Sunnism to be mainstream Islam, nor the normative depiction of what is considered Islamic orthodoxy to be represented by Sunnism, with Shiism standing for heterodoxy. Sunnism, as it has been shaped since shortly after the birth of Islam, should be considered a sect of Islam. The followers of this sect are referred to as the "men of the sunnah" (established practice) and the *jama'ah* (Muslim community). The term is an acknowledgment of the religious power of Muhammad's companions, and does not refer to the bloodline of Ali and his family. By this definition, *Sunnism* encompasses the majority of the Muslim community.

During the eighth century, Sunnis strove to continue the tradition of the Prophet's daily practices as expressed in the hadith. By the ninth century, Sunni Islam had become well established through schools of law and seminaries known as *madrasahs*. Sunnis acknowledged the Qu'ran, the hadith, and the *sharia* (Islamic law) as the basic principles of Islam. The Umayyad caliphate endeavored to establish a belief system that would not differentiate Muslims based on creed or set a specific standard for what it is to be a Muslim.

For Sunni Muslims, Islam became institutionalized in four schools of law: (1) the Maliki school in North Africa; (2) the Hanafi school, dominant in South Asia, Central Asia, Turkey, Egypt, Syria, Jordan, and Iraq; (3) the Shafii school, established in Egypt and Southeast Asia; and (4) the Hanbali school in Saudi Arabia. Though distinct in approach, all four schools agreed on the basic principles of the faith.

SUFISM

Literally, the term *Sufism* refers to the woolen clothing worn by adherents. Sufism dates back to the beginning of Islam when companions of the Prophet sought an ascetic and monastic lifestyle. A strong relationship with God is important to Sufis, who retreat inward while striving to become closer to God and gain a better understanding of Islam. The earliest Sufi master (*pir*) was Hasan al-Basri (d. 728), a hadith scholar who taught fear of God. Sufism began to take shape among Sunnis in Kufa at the same time that Shiism and Sunnism were developing. In these early years, most Sufis were Sunni. However, Sufis developed strong ties to Shiite thought and practice, especially the idea of the imam as infallible and a belief in the imam's close, esoteric, and mystical relationship with God.

The concept of a community led by an exalted leader with divine ordinance is central in Sufism, as are spirituality and a personal relationship with God. Sufi forms of worship also differ from those of Sunni and Shiite practice. Sufis attend weekly meetings at a place of worship (*khanaqah, tekke*, or *zawiyah*) and perform *dhikr*, which is the union with God through constant repetition of his name. These meetings vary among each Sufi order.

Sufism grew from a small movement in the eighth and ninth centuries to become an important aspect of Islamic civilization. It was particularly important in spreading Islam to South Asia and Southeast Asia. Most Sufi masters lived by example, but a few actually developed schools of thought. Al-Junayd (d. 910), founder of the school of Baghdad, was the first Sufi Muslim to develop a comprehensive system of Sufi thought. Al-Hallaj (d. 923), founder of the school of Khurasan, became a martyr among Sufis after he was executed by the Abassid caliph for heresy for proclaiming, "I am *haqq*" (truth, here meaning God).

By the twelfth century, Sufi orders had begun to develop global followings. Some orders later became politically active (especially in Turkey during the 1920s when they were threatened by Kemal Atatürk [1881–1938]). Others shunned material life and took vows of chastity and purity, all in order to bring them closer to God and truth.

SHIISM

The term *Shia* refers to followers of Ali. There are several sects within Shiism: the Alids, who believe in Ali as leader of the Muslim community (followers are few and spread throughout the globe but can be found largely in Syria); the Zaydis, followers of Zayd (d. 738), a brother of the fifth imam who established a dynasty in Yemen that lasted until the 1960s; the Ismailis or Seveners, considered by many to be militant because of their establishment during the tenth through twelfth centuries of the Fatimid dynasty in Syria and Egypt; and the Twelvers, the largest of the Shiite groups, found mostly in Iran, Iraq, and Lebanon.

The most important event in Shiite history is the Battle of Karbala (680). The governor of Syria and Uthman's cousin, Muawiya urged the Muslim community to accept his son Yazid as the leader of the community. Some of the older families refused to accept Yazid and

urged Ali's second son, Husayn, to rebel in the city of Kufah in present-day Iraq. Husayn, the Prophet's grandson, was belied by the people of Kufah who showed their support for Yazid. Husayn and his small army, which included his family, did not surrender and were pushed out to the desert near the city of Karbala. They were murdered at this famous battle. After this battle, the Shia considered themselves distinct from the Sunnis. The battle also led to the institutionalization of Shiite rituals that commemorate Imam Husayn's martyrdom, a holiday called Ashura that is held on the tenth of the Islamic month of Muharram. Spectacular passion plays are set each year reenacting Husayn's martyrdom, leading to what Hodgson called "the piety of protest" and an idealization of martyrdom. Some Shia groups do not participate in such commemorations of the Battle of Karbala.

After the death of Muhammad in 632, Muslims rallied around Ali, who was regarded as the Prophet's successor. However, the first three caliphs questioned Ali's succession. The first caliph, Abu Bakr, by establishing the caliphate, stripped the Prophet's family of its special privileges, an act that challenged the ascendancy of blood over community (*ummah*). Thus, the caliph's position as head of the community was established shortly after the death of Muhammad.

The second caliphate, headed by Umar, was established in 634 after the death of Abu Bakr. Before his death, Umar urged six men to choose a new caliph. Uthman was chosen and became the third caliph in 644. However, some Muslims considered Uthman to be corrupt and ineffective. According to some sources, Ali began to express disapproval of Uthman's reign and with his followers formed a party of dissent—the Shia. Thus, the rift between Sunni and Shia developed during the third caliphate. Ali had support in KuFa (in present-day Iraq), and he established his governance there. Muawiya decided to avenge his cousin Uthman's death. Muawiya questioned Ali's role in his cousin's death because Ali initially refused to avenge his death, preferring to end the bloodshed instead of seeking revenge. What followed were a series of skirmishes and arbitration that led to Muawiya raising a successful army and gaining territory, while Ali lost support, the caliphate, and ultimately his life to kharijites, or seceders. Kharijites are the earliest sect of Islam, who opposed many of the caliphate's governance.

The Umayyad caliphate, led by Muawiya, sought power after the death of Ali by signing a peace treaty with his son Hasan (625–670). Muawiya, in turn, promised the safety of the followers of Ali. After Muawiya's death in 680, his son Yazid (c. 645–683) was named his successor, an event that is considered the first dynastic succession in Islamic history. Yazid's first order of business was to establish unity and allegiance to the Umayyad caliphate. He called on Husayn to give his allegiance to the governor of Medina, but Husayn refused, an act that prompted oppositional movements against Yazid in other cities. Having discovered that his legitimacy as caliph was being questioned by some prominent families in Medina, Yazid decided to crush Husayn and his small army. After Husayn refused to surrender, Yazid's forces isolated him in the desert near Karbala, where he was killed in battle in 680. That event, along with Ali's death, confirmed the role of Shiites as protesters to tyranny and established power.

For Shia Islam, authority lies in the figure of Ali as imam and caliph, and allegiance and loyalty to Ali and his descendents became a guiding principal. Thus the imamate system is the single most important theological and political aspect of Shiism. Shiites developed their own hadith based on Ali's *Nahj al-Balaghah* (Path of Eloquence); for Shiites, these missives, aphorisms, and sayings of Ali remain words to live by. Shiism also developed its own school of law—the Jafari school, named after the sixth imam, Jafar al-Sadiq (c. 702–765), who established the principle of *nass*. *Nass* refers to a special power to gain a deep understanding of the Qu'ran and hadith, as well as the power to pass this knowledge on to the succeeding imam. It is common in Shiism to view the imam as *masum*, an innocent, flawless leader of knowledge concerning religious truth.

Ali's line of descendents ended with the twelfth imam, Imam-i Zaman (born in 689, and believe to be still alive in occultation) who was referred to as the *mahdi*, or the messiah, a crucial fact about the imamate system within Shiism. The twelfth imam is believed to have left the earthly world only to return to restore the true faith and to establish justice and a kingdom of God on earth. This view is markedly different from what the majority of Sunni Muslims believe. Sunnis believe strongly in the strength of tradition (hadith) and the agreement of jurists on all matters, as opposed to belief in the piety of Ali and his descendents.

SEE ALSO *Heaven; Hell; Mecca; Monotheism; Muhammad; Religion*

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Narges Erami

ISLAM, SHIITE

SEE *Islam, Shia and Sunni.*

ISLAMIC ECONOMICS

SEE *Economics, Islamic.*

ISLAMIC SOCIALISM

SEE *Socialism, Islamic.*

IS-LM MODEL

Macroeconomics is a subfield of economic theory that is concerned with the study of economies as a whole. It bears on aggregate variables and is geared toward providing policy advice. The IS-LM model was the prevailing macroeconomic model from the 1950s to the 1970s.

FROM KEYNES TO HICKS

The origin of the IS-LM model is to be found in *The General Theory of Employment, Interest, and Money* (1936) by John Maynard Keynes (1883–1946). This book was written in the aftermath of the Great Depression of the 1930s, a time of great disarray, with unemployment reaching peak levels while no remedy seemed to be available to fix the ailing economic system. The general confusion did not spare academic economists, who were torn between their expertise and their gut instincts. According to economic theory, unemployment must have been caused by real wages being too high, so decreasing them should be the remedy. Yet the economists' instincts told them that this was untrue, and the remedy lay in state-induced demand activation. Keynes's book aimed at solving this contradiction by providing a theoretical basis for the economists' gut feelings. The proposed path was to generalize Marshallian theory, which was exclusively concerned with partial equilibrium analysis, so as to enable it to address issues related to interdependency across markets. Keynes's hunch was that unemployment was due to deficient aggregate demand, the cause of which had its roots in the money market or finance.

Keynes's book was kaleidoscopic, mingling several threads of reasoning. Its central message was clarified when three young economists—James Meade (1907–1995), Roy Harrod (1900–1978), and John Hicks (1904–1989)—presented their interpretations of Keynes's book at the European meeting of the Econometric Society in Oxford in September 1936 (see Young [1987] for a vivid account of the event). Of the three papers, Hicks's (1937) came to prominence. It contained the first version of what was to become the IS-LM model. Hicks succeeded in transforming Keynes's convoluted reasoning into a simple system of simultaneous equations comprehensible to working economists. Hicks's paper also included an ingenious graph, allowing the outcome of two distinct markets to be represented in one simple two-dimensional diagram. At the time, Hicks could not have imagined the success his model would later encounter. In effect, it became the organizing theoretical apparatus of the emerging discipline of macroeconomics, in spite of the fact that its ability to capture the central message of the *General Theory* has been questioned by several interpreters of Keynes's work. Hicks's original diagram is shown in Figure 1.

This diagram resembles the Marshallian scissorlike representation of the matching of supply and demand in a given market, but its content is totally different. First, it

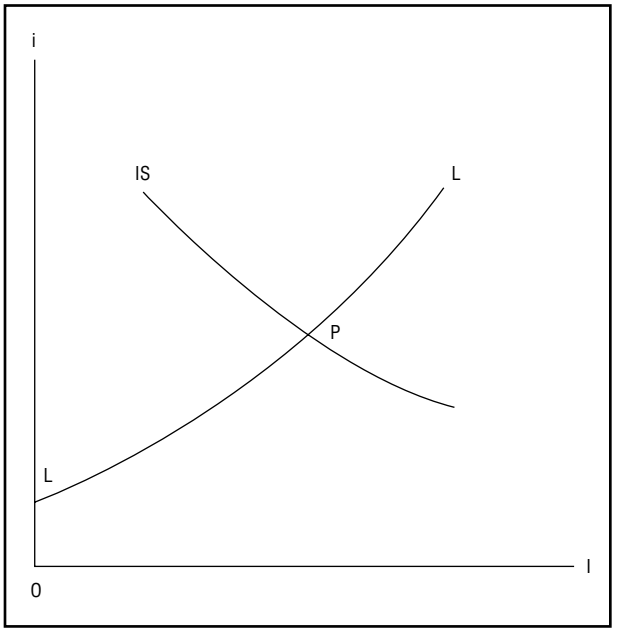

Figure 1

does not relate to a single market. Second, the two functions it displays are not supply and demand. Instead, it sets the interest rate on the vertical axis, and the aggregate nominal income on the horizontal axis. The downward-sloping IS curve is the combination of income (I, to become Y in the subsequent literature) and the interest rate (r), for which investment (a function of interest rates) and saving (a function of income) are equal. It is assumed that investment varies inversely with the rate of interest and that saving increases with income. Higher income implies higher saving. As a result, in order for investment to equal saving, the rate of interest must be lower. This explains the inverse relationship between income and the interest rate. The upward-sloping LL curve represents the combination of income and the interest rate that keeps the demand for and the supply of money equal. In the money market, a given supply of money faces a demand for money, which is a function of income and the interest rate. As income increases, the transaction demand for money increases. The other component of the demand for money is *liquidity preference*. Holding money entails the opportunity cost of foregoing interest on bonds. Hence, the higher the interest rate, the lower this second component of the demand for money. Assuming a fixed supply of money, an increase in income involves a higher transaction demand for money. In order for the total demand for and supply of money to match, the liquidity preference part of the total demand must decrease. This requires a higher interest rate. Hence the upward slope of the LL curve.

Hicks located the essential difference between Keynes and the classical economists in the shape of the LL curve. According to Hicks, Keynes's system becomes "completely out of touch with the classical world" (1937, p. 154) whenever the LL curve exhibits a horizontal section with the IS and the LL curves intersecting on this section. In this situation, which came to be called the *liquidity trap*, monetary expansion—unlike fiscal policy—is unable to increase employment.

FROM HICKS'S IS-LL MODEL TO THE TEXTBOOK IS-LM MODEL

Hicks's model was not to become the canonical IS-LM model. Franco Modigliani (1918–2003) was the economist responsible for the transition from the Hicks's model to the IS-LM formulation (Modigliani 1944). Another influential economist in this move was Alvin Hansen (1887–1975) (1949, 1953). While dismissing the role of liquidity preference, Modigliani argued that a Keynesian outcome was sure to arise whenever two factors were jointly present: a particular shape of the labor supply curve (supposed to capture the sociological elements that affected the labor supply) and some form of money disturbance, in particular, an insufficient quantity of money. In this recasting, the classical and the Keynesian submodels become more sharply opposed than they had been in Hicks's original paper (see De Vroey 2000). The classical model now featured flexible wages and generalized market clearing, the Keynesian model's downward-rigid wages, and (possibly) involuntary unemployment. According to Modigliani, the Keynesian model is characterized less by a lack of investment than by a maladjustment between the quantity of money and the money wage, the latter being too high relative to the quantity of money. The proper remedy for this situation is an increase in the money supply.

For some twenty-five years after the end of World War II (1939–1945), the IS-LM model dominated macroeconomics. By degrees, standard textbooks adopted the IS-LM model as their framework. It was enriched in various ways by the consideration of open economies, the integration of the Phillips curve, and attempts at giving microfoundations to the consumption function, portfolio decisions, and investment schedules. The success of the IS-LM model can also be explained by its adaptability to econometric modeling.

As the model became more dominant theoretically, it lost its Keynesian character with respect to practical policy issues. That is, non-Keynesians could simply state that only its classical variant was valid, its Keynesian variant being flawed by its ad hoc assumption of rigid wages. Thus, friends and foes of Keynes alike could use the model to promote or refute Keynesian policy prescriptions.

There are several reasons for the success of the IS-LM model. First, it made Keynes's theory tractable. Second, it provided a simplified account of interdependency across markets, allowing the interrelationships between fundamental macroeconomic variables such as income, interest rate, saving, investment, and the supply and demand for money to be studied. Third, the model prompts interesting comparative statics exercises. For example, an increase in the propensity to invest shifts the IS curve to the right, and an increase in the money supply moves the LM curve to the right. Fourth and finally, it has proven to be resilient in the face of criticism.

THE DEMISE OF THE IS-LM MODEL

In the 1970s the dominance of the IS-LM model was strongly challenged as part of a broader offensive against Keynesian theory led by new classical economists, such as Robert E. Lucas and Thomas Sargent. The model's demise accompanied the dethroning of Keynesian macroeconomics, centered on the study of unemployment, and its replacement by dynamic stochastic Walrasian macroeconomics in which the issue of unemployment has only a minor place.

Flaws in the IS-LM model that had until then been overlooked were now fully exposed: the sloppy micro-

foundations of the model, its lack of consideration for expectations, its lack of connection with long-period analysis, and the inability of macroeconometric models to guide the choice between alternative economic policies.

However, the IS-LM model lives on. While no longer central to the graduate training of most macroeconomists or to cutting-edge macroeconomic research, it continues to be a mainstay of undergraduate textbooks, finds wide application in areas of applied macroeconomics away from the front lines of macroeconomic theory, and lies at the conceptual core of most governmental and commercial macroeconometric models.

SEE ALSO *Hicks, John R.; Keynes, John Maynard; Macroeconomics; Mundell-Fleming Model*

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Michel De Vroey

IS-LM-BP MODEL

SEE *Mundell-Fleming Model.*

ISOLATIONISM

Isolationism can be defined as a state's deliberate policy of extensive withdrawal and seclusion from some forms of interaction in the international system. Notable examples include the economic isolationism of Japan and China before the nineteenth century and the cultural isolationism of China and the Soviet Union in parts of the twentieth century. In the U.S. context, isolationism has constituted one of the principle foreign policy grand strategies from the founding of the country up to the present day.

EARLY U.S. ISOLATIONISM

From the United States' inception, isolationists such as George Washington have argued for the benefits of avoiding wars and "entangling alliances" with other great powers at all costs. Military commitments and involvement in the affairs of such states bleed the country of its prosperity. Precious money is wasted on armaments that often antagonize foreign nations. Democratic principles are sometimes suspended and sacrificed in the effort to fight wars. And the United States is unnecessarily distracted from more pressing objectives. "Keep the ships at home," said Thomas Jefferson (1743–1826), "and we will have fewer reasons to fight." It was such philosophies that helped keep the United States out of war with European states for most of the eighteenth and nineteenth centuries. Apart from the United States' relatively minor involvement in the Napoleonic Wars against France from 1798 to 1801, the only war that was fought with a European power was the War of 1812 against the British. Isolationist policies freed America to focus on territorial expansionism in North America, interventionism in Asia and Latin America, and economic activism throughout the globe.

While it is true that U.S. isolationism was assisted by its geographic separation from Europe by the Atlantic Ocean, as Walter Lippman describes in *U.S. Foreign Policy: Shield of the Republic* (1943), U.S. security during most of the nineteenth century was safeguarded more through a shrewd, unwritten 1823 alliance with Great Britain and the British-led balance of power in Europe than through its geography. Because of Britain's naval dominance of the approaches from Europe to the Western Hemisphere, Britain was the only force that in theory posed a significant threat to the United States. From the perspective of the British, such an alliance had the advantages of freeing much of its navy to police more critical regions than the Western Hemisphere and to preserve its dominion of Canada from U.S. messianic visions of continental annexation.

When the British-led European balance of power unraveled at the end of the nineteenth century, isolationists nevertheless persisted with the false assumption that the United States was still secure. To avoid a creeping U.S. allegiance to any side in Europe, Congress enacted the Neutrality Acts of 1934 and 1936, which forbade the sale of war matériel to belligerent states. German efforts to dominate Europe during World Wars I and II and Soviet expansionism after World War II nevertheless shattered the illusion of geographic invulnerability. U.S. leaders realized that a single power, such as Germany or the Soviet Union, or a hostile alliance of powers, in control of most of Eurasian military and industrial power, could pose a potentially superior threat. Therefore, the possibility of an unfriendly balance of power against the United States jus-

tified a policy of military "preponderance" rather than isolationism (Layne 1997, pp. 88–97).

COLD WAR

When the cold war became the dominant focus of U.S. policymakers, isolationism returned as one among a number of realist strategies, including containment and rollback, which were designed to secure U.S. interests when faced with a menacing Soviet Union. Proponents of cold war isolationism, such as Robert A. Tucker (1972), departed from some of the traditional isolationist arguments. Tucker conceded that isolationism had previously failed to take into account the necessity of having allies. Allies tipped the world balance of power in the United States' favor by helping to preclude the emergence of a threatening Eurasian hegemon.

Tucker (1972), however, argued that with nuclear weapons powerful allies in Western Europe or elsewhere were no longer necessary. The threat of mutually assured nuclear destruction made concerns about a balance of power irrelevant. Even if the Soviet Union were to somehow conquer Western Europe, Soviet control of the European military-industrial complexes would do little to add to the existing threat posed by a Soviet nuclear first-strike from submarine-based nuclear missiles. In the new nuclear-armed world, the United States was safe from direct Soviet threat because of the deterrent effect of an assured U.S. nuclear counterstrike, not by whether U.S. allies were safe.

Furthermore, it was argued that an isolationist foreign policy is completely compatible with fulfilling an activist U.S. economic agenda abroad since market forces provide the incentives for trade rather than alliances or physical control. For example, even hostile states will be eager over the long run to sell their oil and other goods to the United States—let alone friendly and developed states—whose economies frequently have more to lose through a loss of U.S. trade than the U.S. economic colossus has with respect to them. And with the complete withdrawal of U.S. military commitments from Asia and Europe, those regions will be physically secure from an economically devastating attack, because states such as Germany and Japan would acquire their own nuclear capabilities.

POST–COLD WAR

While the term *isolationism* may not be so popular today, the assumptions, goals, and remedies that the isolationist concept provides continue to be attractive to many. Modern-day versions of isolationist foreign policy are variously referred to as "disengagement," "benign detachment," "policy of restraint," "offshore balancing," and "Jeffersonian policy." Post–cold war isolationists build on the aforementioned cold war arguments. They continue to stress the great costs and dangers of a forwardly engaged military with bases and troops across the globe. Such militarism, they argue, incites terrorism, creates incentives for nuclear proliferation, needlessly wastes money when the United States would be secure anyway, and tends to "turn allies into neutrals and neutrals into enemies" (Gholz, Press, and Sapolsky 1997, p. 37). Like their predecessors, modern isolationists nevertheless agree with limited military engagement. They are in favor of a strong (although significantly reduced) military to fight piracy, defend the homeland, and to ensure the safety of commerce. They believe in maintaining a considerable nuclear deterrent. And they support firm U.S. retaliation in the event of attack. Isolationists, however, continue to be criticized. Critics are uncomfortable with trusting other states to a multipolar balance of power based on nuclear weapons. As the Cuban missile crisis showed, brinksmanship and near misses are still possible even with nuclear weapons. Still, others criticize the isolationists for being immoral and irresponsible in their strong reluctance to forcefully prevent wars, humanitarian emergencies, and genocide. They are also criticized for being careless in protecting U.S. economic interests abroad in the event of future regional conflicts.

SEE ALSO *Public Policy*

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ITEM RESPONSE THEORY

SEE *Psychometrics.*

J

JACOBIAN MATRIX

The Jacobian matrix was developed by Carl Gustav Jacob Jacobi (1804–1851), a German Jewish mathematician. The Jacobian is a matrix whose entries are first-order partial derivatives defined as $\begin{matrix} \partial y_1 / \partial x_1 & \supset & \partial y_1 / \partial x_n \\ \vdots & \ddots & \vdots \\ \partial y_m / \partial x_1 & \supset & \partial y_m / \partial x_n \end{matrix}$, where the function is given by m real-valued component functions, $y_1(x_1, \ldots, x_n)$, $\ldots$, $y_m(x_1, \ldots, x_n)$, continuous (smooth with no breaks or gaps) and differentiable (the derivative must exist at the point being evaluated). If $m = n$, then the Jacobian matrix is a square matrix. This matrix is denoted by $J_F(x_1, \ldots, x_n)$.

The interesting concept about the Jacobian is its determinant: Jacobian determinant, |J|. The analysis of the |J| permits one to characterize the behavior of the function around a given point, which has uses in the social sciences.

First, |J| is used to test functional dependence, linear and nonlinear, of a set of equations. If |J| = 0, the equations are functionally dependent. If |J| > 0, the equations are functionally independent. Note |J| does not determine the functional relationship, linear or nonlinear. Second, if |J| at a given point is different from zero, the function is invertible near that point, that is, an inverse function exists. Then the Jacobian determinant in conjunction with the implicit function theorem can be used to identify changes in an endogenous variable, which may be a choice or optimization variable, as an exogenous variable changes.

Unlike the Hessian matrix, the Jacobian can be used to analyze constrained-optimization problems. However, like the Hessian, calculating the |J| becomes laborious as the dimensions of the matrix increase. In addition, the Jacobian is difficult to use with a nonlinear optimization problem, which produces a Jacobian matrix with elements that may not be constant.

SEE ALSO *Inverse Matrix; Matrix Algebra*

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JACOBINISM

The Jacobins, founded in 1789 by the Breton deputies to the National Assembly, were the most famous and powerful of the political clubs or societies of the French Revolution. Their official name was the Society of the Friends of the Constitution. They derived their popular name from the house on the Rue St. Jacques where they met in Paris. The bloodiest excesses of the Reign of Terror (1793–1794) can be attributed to their influence and activities. Jacobinism came to denote rabble-rousing radicalism.

Some of the most famous figures of the revolution, most notably Maximilien Robespierre (1758–1794), were members of this society. Many of its leaders served in prominent posts in the Directory of Public Safety that, following the overthrow of the monarchy, ruled France from 1793 to 1794. At first, only deputies, liberal aristocrats, and well-off bourgeois could afford to belong. However, after the reduction of its subscription rates, its ranks were open to the less well off: writers, small shopkeepers, and artisans. The expansion of its membership brought in members with more radical antimonarchical and anticlerical views.

Political clubs grew in popularity as the church and guilds declined. Hundreds of organizations similar to the Jacobin clubs were established from the 1780s to the reign of Napoleon Bonaparte (r. 1804–1815) when they were abolished. They performed many of the functions of a modern political party or party caucus where citizens could meet to discuss public issues, devise strategies, hear speakers, and send delegations to the National Assembly to lobby or threaten.

The mother club in Paris spawned a network of approximately 5,500 Jacobin "cells" in the provinces. These clubs served a variety of roles and functions. They were foremost agents for propaganda-disseminating newspapers, pamphlets, and circulars. As quasi-official units of government, the clubs promoted civic improvement. They held rallies and revolutionary festivals to arouse revolutionary passion and honor the heroes of the revolution. They also raised funds to assist the widows and orphans of victims of revolutionary wars and helped members find jobs. In addition, the clubs operated a spy network to keep an eye on local authorities and émigrés, refractory priests, and other suspected persons. During the Reign of Terror the Jacobins were especially vigilant denouncing persons and purging administrators suspected of antirevolutionary sympathies. Similar to the Communist Party under Vladimir Ilitch Lenin, they were the ideological and organizational heart of the revolution. Their highly centralized organization was held together by their implacable faith in equality and the revolution.

The Jacobins championed republican government, the rule of the people, the abolition of the hereditary aristocracy, popular education, separation of church and state, and universal manhood suffrage. Convinced that the unequal distribution of private goods would lead to political inequality, Robespierre favored fixed limits on the accumulation of wealth. Envisioning a nation of small property owners, however, he opposed the demand of the more radical *Enragés* for the nationalization of all property. The Jacobins, in their bourgeois phase, believed in laissez-faire economic policies and a qualified right to private property that would exclude émigrés and priests.

All people were created equal, they believed, because they are naturally good and virtuous. Tradition, custom, and religion were condemned as impediments to the attainment of universal equality. Social inequality would be eliminated by the spread of education and enlightened reason. Confident of their personal virtue, the Jacobins condemned their opponents as not only wrong but also evil. Moreover, this "band of the elect" felt obligated to root out political heresies and blasphemies.

As historian Crane Brinton (1961) points out, the Jacobins were mostly prosperous middle-class people who became religious fanatics. After the ascendancy of Robespierre, Jacobinism was transformed into a kind of quasi-religious cult. Robespierre saw himself as the prophet of a new civic religion. He envisioned a spiritual republic, a Republic of Virtue, rooted in "holy Equality and the sacred Rights of Man." Under his leadership a totalitarian dictatorship was created through the Committee of Public Safety. His religion of virtue would bring a new moral world and the regeneration of humanity. This creed also provided a moral justification for the Terror. Purity became a political fetish. Anyone who did not enthusiastically embrace the new faith was suspected of harboring antirevolutionary opinions and summarily condemned to the guillotine.

The end for the Jacobins came swiftly. As Robespierre's power grew, his popularity waned. The members of the National Convention, fearing that a new purge would be directed at them, declared him and his associates to be outlaws on July 27, 1794, and had them guillotined the following day. With the fall of Robespierre came the fall of the Jacobins.

The spirit of Jacobin ideas continued in a somewhat altered form in the Directory and later in the Revolution of 1848 and the Paris Commune of 1871. Some of the ideas of the Jacobins persist as a radical opposition to European and North American civilization. They gained a small victory in the Americas when their slogans of "liberty and equality" inspired the 1791 slave revolt in the French West India colony of San Domingo. Called "black Jacobins" by the black Marxist historian, C. L. R. James

(1938), Toussaint Louverture (1746–1803) and his followers successfully fought for the French Republic against the British, forcing them to withdraw from Haiti in 1798. In the early twenty-first century, some critics of American foreign policy believe that the neoconservative quest for global hegemony in the name of "human rights," "democracy," "freedom," "equality," and "capitalism" represents an extension of the Jacobin imagination.

SEE ALSO *French Revolution; Left and Right*

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W. Wesley McDonald

JACOBS, JANE
1916–2006

Jane Jacobs was an original American social thinker whose books challenged mainstream views on urban planning and socioeconomic development. Devoid of any professional training, she used her own observations to develop an evolutionary perspective on cities, economy, and society. Jacobs was against social engineering, one-size-fits-all strategies, and big plans; instead, she stressed the importance of the human measure, diversity, and small-scale initiatives for development.

On May 4, 1916, Jacobs was born as Jane Butzner in Scranton, Pennsylvania, where her father was a family doctor. Shortly after graduating from high school she went to New York City and accepted all kinds of writing jobs. In the periods when she was unemployed, Jacobs took long city walks that gave her a notion of what was going on in urban and business life. In 1944 she married the architect Robert Jacobs, with whom she had three children. From 1952 to 1962 Jacobs worked as an associate editor of *Architectural Forum*; thereafter she was regularly involved in neighborhood activism to oppose urban renewal in New York. In 1969 Jacobs moved with her family to Toronto, where she lived and wrote until her death on April 25, 2006.

Jacobs's most significant works can be divided in two periods. In the first phase (Jacobs Mark I) she published three books on cities. In *The Death and Life of Great American Cities* (1961) Jacobs portrayed urban life as a "sidewalk ballet" that is served best by diverse, mixed, and densely populated neighborhoods with short building blocks. In *The Economy of Cities* (1969) and *Cities and the Wealth of Nations* (1984) Jacobs used urban history and archaeology to show that cities always have been the driving force behind economic development. In the second phase (Jacobs Mark II) Jacobs shifted her attention to socioeconomic issues. *Systems of Survival* (1992) focused on the moral differences between people working in commerce ("traders") and politics ("guardians"), whereas *The Nature of Economies* (2000) dealt with the similarities between the economy and the ecosystem ("biomimicry"); both books were written in the form of a dialogue between fictional New Yorkers. In her last book, *Dark Age Ahead* (2004), Jacobs warned that the decay of fundamental societal pillars (e.g., family and education) might lead to the deterioration of western civilization.

Undoubtedly, *The Death and Life of Great American Cities* was Jacobs's most influential work. Her strong critique that traditional urban renewal policy only destroyed communities shocked planners and established Jacobs's reputation as a radical thinker. Her writing style has been called "urban montage" (like snapshots of real city life) and thus is often dismissed as unscientific. Indeed, her analyses are rather anecdotal, unsystematic, and subjective, but that is exactly where their power lies: Unhindered by mainstream thinking, Jacobs could approach urban and socioeconomic issues in a relatively unbiased manner. Therefore it is not so much for the scientific analysis that Jane Jacobs's books still deserve a wide read, but for the provocative and original insights they provide.

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Gert-Jan Hospers

JAINISM

Currently numbering only about 4.2 million (according to the 2001 census of India), the Jains are an ancient religious community of India. They are basically an urban community, and their largest numbers are found in the Indian states of Gujarat, Karnataka, Madhya Pradesh, Maharashtra, and Rajasthan. Trade is the traditional occupation of Jains, and they are extremely prominent among India's merchants, especially in the country's north and west. Contrary to stereotype, not all Jains are rich traders, but many are, with the result that Jains have achieved a degree of economic and political influence in modern India disproportionate to their relative smallness as a community.

The Jains themselves believe their religion to be eternal and thus uncreated. They maintain that it is merely rediscovered by omniscient teachers known as *Tirthankaras* (fordmakers) or *Jinas* (victors), that it is something that has already occurred, and will continue to occur an infinity of times, because time itself is beginningless and endless. Modern scholarship, however, traces the origin of Jainism to Lord Mahavira, a genuine historical figure whom Jains consider to be the most recent of the *Tirthankaras* to have appeared in our region of the universe. Mahavira's date and place of birth are not certain, although tradition maintains that he was born in 599 B.C.E. in a city called Kundagrama in the Ganges basin near modern-day Patna. It is possible that Mahavira was influenced by the teachings of an earlier figure named Parshva, the only other *Tirthankara* considered a historical figure by scholars.

Mahavira lived and taught during a period of rapid social change and urbanization in which the Vedic orthodoxy promoted by the Brahman priesthood of those days faced powerful challenges. Wandering ascetics were preaching new religions that devalued Vedic ritualism and emphasized instead the centrality of the individual salvation seeker who renounces the world. Of the nonorthodox traditions that emerged at that time, only two survive as living religions, Jainism and Buddhism, and of these, only Jainism survived in India. As did the other dissenting traditions, Jainism seems to have found special favor among newly emerging urban classes, especially the urban nobility and the merchant class. Merchants (as well as wandering mendicants) played a key role in the spread of Jainism from the Ganges basin to other regions, and royal patronage was an important factor in establishing Jainism in the south.

A major disagreement emerged early in Jainism's history over the question of whether Jain monks should wear clothing, and the dispute crystallized into a schism in the fifth century C.E. Monks and nuns belonging to the Shvetambara ("white clad") sect wear white garments; monks (not nuns) belonging to the sect known as Digambara ("space clad") are nude. The divide between the Digambaras and Shvetambaras has been deep and lasting, and is the principal sectarian divide in Jainism today, with further subsectarian divisions on either side. The Digambaras are especially prominent in South India, with the Shvetambaras strongest in the northwestern states of Gujarat and Rajasthan.

The Jains maintain that the cosmos contains an infinite number of souls (*jivas*) that do not perish when the body dies, but are reborn in other bodies. Each soul recycles unceasingly, finding rebirth—as determined by its behavior in life—as humans, denizens of hell, deities, animals and plants, and even as primitive life forms inhabiting inanimate objects and substances. The cosmos is a vast structure with multiple heavens above and hells below, separated by a small zone where human life is found. Even the gods in the heavens, however, are caught in the same cycle of death and rebirth as all of the other creatures of the cosmos. Indeed, the Jains maintain that because the cosmos was uncreated and will never cease to be, all souls have already inhabited all possible bodies an infinite number of times, and will do so an infinite number of times to come unless liberated from the cycle, which is the ultimate goal of Jain religious life.

The Jains say that *karma* is the cause of the soul's bondage to the cycle of death and rebirth. In contrast to other Indic traditions, the Jains consider karma to be an actual material substance that accumulates as an encrustation on the soul as a result of its actions. To attain liberation, therefore, one must bring the accumulation of additional karmic material to a stop and rid one's soul of past accumulations. Because violent action is a potent cause of karmic influx, nonviolence (*ahimsa*) is a key strategy in the pursuit of liberation and is the foundation of Jain ethics. However, the attainment of liberation also requires the eradication of already accreted karmic matter. Ascetic practice, for which the Jains are justly famous, is said to "burn away" karmic accumulations, and is a conspicuous feature of Jain life. Once liberated, the soul rises to the apex of the cosmos, where it remains for all eternity in a state of isolated and omniscient bliss.

Jain tradition divides the Jain social order into four components: laymen and laywomen and monks and

nuns. The monks and nuns constitute a small and peripatetic mendicant elite, and although all Jains are supposed to aspire to liberation, the mendicants are viewed as more directly on liberation's path than are the laity. The mendicants' daily conduct is governed by five "great vows" (*mahavratas*): (1) nonviolence (*ahimsa*), (2) truthfulness, (3) not stealing, (4) celibacy, and (5) nonpossession. All five vows leave a deep imprint on mendicant life, but especially notable are the first and fifth. The vow of nonviolence is the foundation for much of the distinctive character of Jain mendicants' day-to-day life, which is organized around the need to avoid violence even to microscopic forms of life. For example, they carry special brooms with which to clear living things from surfaces on which they intend to sit or lie, and in some subsects wear masks over their mouths to prevent their hot breath from harming microscopic life forms in the air. The vow of nonpossession cements the lay and mendicant communities into a single social order by ensuring that the mendicants are totally dependent on the laity for their most basic needs, including nourishment, which must be sought from lay households on a daily basis.

Although Jainism was once a proselytizing religion, recruitment today is by birth, and most Jains belong to merchant castes that are Jain or partly Jain in composition. Lay religious life centers on support of mendicants, ascetic practices (especially fasting), observance of Jain calendrical rites, and—in those subsects that permit it—worship of the *Tirthankaras'* images in temples. By comparison with the mendicants, the requirement of nonviolence is relaxed for laity, but there are normative minima applying to all lay Jains, and of these, strict vegetarianism is the most essential. Laity do the work of the world and support the mendicant elite, with the result that the mendicants are insulated from the negative effects of the violence that is an inevitable requirement of making a living, food preparation, and simply living in the workaday world. Laymen and laywomen, in turn, benefit from the mendicants' teaching and from the worldly and spiritual rewards of the merit generated by supporting them.

SEE ALSO *Hinduism; Religion*

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Lawrence A. Babb

JAJMANI MATRIX

In two papers published in 1991 and 2004, James G. Scoville analyzed the traditional Indian caste system using a matrix algebra format. Matrix algebra provides a simple way of expressing and analyzing large sets of equations involving numerous variables.

In these papers, Scoville employed a conceptual device called the Jajmani matrix. This matrix, denoted *J*, has as its elements the flows of goods or services produced by a household of one caste to households of other castes (as well as to itself). Thus, a farming household provides foodstuffs to the carpenter household based on a reciprocal flow of carpentry services; a barber provides haircuts to the washerman based on a reciprocal flow of laundry services. In practice, these transactions are highly complex, but *J* abstracts from all that complexity and measures (in theory) flows between typical households.

The system of reciprocal flows described is called the jajman system, from the Hindi word for patron. Hence the descriptive adjective is applied to the matrix: *Jajmani.*

The conceptual utility of the Jajmani matrix is to serve as a key tool in a social accounting framework for the exchange relations associated with the occupational hierarchy of the Hindu caste system. These output and income flows are built into an essentially classical economic model of the traditional Indian caste system. This accounting framework shows the flow of goods and services to a particular caste; one can then compare those flows with some vector of basic needs to see if those needs are met. If there is a surplus, a classical economist might expect that caste's population to grow; a shortfall would cause that caste's population to shrink. The mechanism by which caste populations adjust to surpluses or shortages compared to needs is argued to be through changes of marriage rules (age of marriage, number of children, widow remarriage practices). Scoville found some support for the predicted population effects in Indian Census data, and outlined these findings in his 2004 paper.

SEE ALSO *Caste; Hierarchy; Inequality, Political; Stratification*

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James G. Scoville

JAMES, C. L. R.
1901–1989

Cyril Lionel Robert James was born and raised in Trinidad but spent most of his adult life in Britain and the United States. A gifted essayist and speaker, he wrote with great insight on Shakespeare, Melville, Hegel, Athenian democracy, slavery, the Soviet Union, black nationalism, calypso, and cricket. His novel *Minty Alley* (1936) signaled the emergence of a West Indian literary voice, while *Beyond a Boundary* (1963) fused autobiography, sports history, and area studies. He penned a critical study of Soviet foreign policy, *World Revolution 1917–1936: The Rise and Fall of the Communist International* (1937), followed by *The Black Jacobins: Toussaint L'Ouverture and the San Domingo Revolution* (1938), which brought a comparative perspective to the study of the French and Haitian revolutions. James explored U.S. culture and history in *American Civilization* (1950), and lauded a major novelist in *Mariners, Renegades, and Castaways: Herman Melville and the World We Live In* (1953). In *Modern Politics* (1960), he applied Enlightenment ideals to West Indian conditions, while *Party Politics in the West Indies* (1962) leveled a blistering critique of Trinidad's independence movement. James wrote on West Africa in *Kwame Nkrumah and the Ghana Revolution* (1977). In his final years, he oversaw the publication of three volumes of selected writings, a single-volume reader, and a collection of essays on cricket. In 1988 he was awarded the Trinity Cross, Trinidad and Tobago's highest national honor.

C. L. R. James embraced Marxism in the mid-1930s, while living in England. He threw himself into political activity and was widely known on the Left for his simultaneous advocacy of socialism and Pan-Africanism. Prior to leaving for the United States in 1938, James edited a Trotskyist newspaper, *Fight*, and the journal of the International African Service Bureau, *International African Opinion*. In the United States in the 1940s he collaborated with a small circle of co-thinkers, the Johnson-Forest Tendency, which staked out an independent radical praxis that characterized the Soviet Union as "state capitalist" and emphasized the creative role of blacks, women, young people, and workers in the making of a "new society." ("Johnson" was the "party name" for C. L. R. James, while "Forest" was Raya Dunayevskaya, a Russian-born intellectual.) The group produced boldly argued texts on topics ranging from the 1956 Hungarian uprising to Marx's early writings. While the tendency never numbered more than one hundred members, its ideas prefigured certain New Left positions of the 1960s and 1970s.

James was apprehended by the U.S. immigration authorities in 1952 and expelled the following year. After that, he mainly resided in Britain, although he traveled widely in continental Europe, Africa, and the Caribbean. In the late 1950s and early 1960s he spent nearly four years in Trinidad, playing a high-profile role in the transition to independence. For eighteen months he edited the newspaper of the People's National Movement (PNM), at the invitation of his old friend and former pupil, Eric Williams, whose landmark *Capitalism and Slavery* (1944) drew on *The Black Jacobins* and benefited from James's comments on successive drafts. James's relationship with Williams and other PNM leaders soured as a result of differences over foreign relations and party-building. James left Trinidad on the eve of formal independence, and when he returned in 1965, Williams placed him under house arrest as a dangerous subversive. After his release, James founded the Workers and Farmers Party (WFP) as an electoral challenge to Williams's rule. The WFP performed poorly in the 1966 elections, and James flew back to Britain.

Since the mid-1990s, there has been an outpouring of scholarship on James's life and work. Some scholars have focused on retrieving biographical information, and making available unpublished or neglected writings, while others have explored James's contributions to literary criticism, scholarship on Hegel, cultural studies, and postcolonial studies. A number of authors have emphasized his role as an observer of cultural and historical change; others have focused on his relationship to left politics and historical materialism. Along with Antonio Gramsci, James offers an example of a twentieth-century Marxist whose reputation has risen after the collapse of Soviet Communism. The fact that his name is embedded in the West Indian cultural firmament speaks to the multifaceted character of his complex legacy. There are few modern writers of note who ranged as widely and creatively as C. L. R. James did across the humanities and social sciences.

SEE ALSO *Black Nationalism; Caribbean, The; Haitian Revolution; Marxism*

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Kenton W. Worcester

JAMES, SHERMAN

SEE *John Henryism.*

JAMES, WILLIAM

1842–1910

William James was born in New York City on January 11, 1842, and died in Chocurua, New Hampshire, on August 26, 1910. He was one of the most important and influential American thinkers of the late nineteenth century and early twentieth century and is particularly known for his contributions to the growth of psychology as a scientific field of study and to the school of philosophy known as pragmatism.

CONTRIBUTIONS TO PSYCHOLOGY

James came from a distinguished family. His father, Henry James Sr. (1811–1882), was a philosopher and author in his own right and a close friend of Ralph Waldo Emerson (1803–1882). His younger brother, Henry James Jr. (1843–1916), became a highly regarded novelist and literary figure. In his early years William James experienced a crisis in deciding on a career. He briefly studied art and painting but was convinced by his father to pursue scientific studies instead. While attending Harvard Medical School in the mid-1860s, James spent a year traveling and studying in Germany, and it was during this time that he was exposed to the research being done in that country on the relationship between physiology and psychology, a direction that would lay the groundwork for the emergence of psychology as a scientific discipline.

After returning to Harvard and completing his medical degree, James joined the Harvard faculty in the early 1870s. He served first as an instructor of anatomy and physiology, and then in 1875 began offering a course in psychology based on the ideas he had encountered in Germany. In the same year he established at Boylston Hall one of the first experimental laboratories for psychological research. Among his important early contributions to the field of psychology was his formulation, simultaneous with that of the Danish psychologist Carl Lange (1834–1900), of the James-Lange theory of emotion, which argues that emotion follows, rather than precedes, physiological stimulus. He continued to focus on the study of psychology throughout the 1880s and in 1890 published his great, two-volume work *The Principles of Psychology*. The work, which had taken him twelve years to write, gained him an international reputation and stands as a landmark in the development of psychology as a scientific field of study.

JAMES AND PRAGMATISM

James's approach to psychology was based on what he later called (in the preface to *The Will to Believe*, 1897) "radical empiricism." In this view, human consciousness resembles a flowing stream of undifferentiated objects or data out of which the mind selects specific items, by virtue of personal interest or need, on which to focus its attention. This theory of the mind, and especially its epistemological implications, led James increasingly to the study of philosophy, in which he first offered courses at Harvard in the 1880s, and in particular to the philosophical ideas of pragmatism.

During his earliest days as a teacher at Harvard, James had been part of a group known as the Metaphysical Club that included among its members Charles Sanders Peirce (1839–1914), considered to be the founder of pragmatic philosophy. After the publication of *Principles of Psychology* in 1890, as James turned more to the investigation of philosophical and epistemological questions in his work, Peirce's ideas influenced his direction. The root assumption of pragmatic epistemology is that theoretical ideas ought to be judged in terms of their practical consequences—if some real benefit accrues from holding a particular idea, then it is valuable; if there is no discernable benefit, it can be discarded. In this view, truth should never be viewed as wholly complete or absolute, because one must be prepared to adjust it to accommodate new information and new understandings.

Although James's best-known discussion of pragmatism appears in the essay collection *Pragmatism: A New Name for Some Old Ways of Thinking* (1907), an earlier collection, *The Will to Believe, and Other Essays in Popular Philosophy* (1897), also offers a good expression of his thought. As these titles suggest, James was by no means strictly an academic philosopher but instead sought to make his ideas accessible to a general audience. To this end his essays, often written originally as public lectures, are both interesting and highly readable, and he demonstrates a particular skill in using examples drawn from everyday life. In one of his best known short essays, "What Pragmatism Means" (in *Pragmatism*), he begins with a story about a group of individuals on a camping trip arguing over the position of a squirrel on a tree and then uses this incident as a way to discuss the pragmatic approach to truth. James also felt strongly that philosophy ought to address the significant social and moral issues of the times. In his essay "The Moral Equivalent of War," based on a talk he gave at Stanford University in 1906, James argued for a form of organized national service that anticipated the Civilian Conservation Corps in the 1930s as well as later programs such as VISTA and AmeriCorps.

Pragmatism is sometimes seen as a philosophy that destroys any hope of discovering absolute truth and that

leads, through its emphasis on "usefulness" as a primary criterion for establishing truth, to moral relativism. James to some degree anticipated these concerns in his work. Pragmatic epistemology, in his view, remains open to the introduction of new information, especially information resulting from new scientific discoveries, and his application of pragmatic principles to the questions of ethics and even to religion led him to hold highly traditional views on both. In essays such as "The Will to Believe" and "Reflex Action and Theism" (in *The Will to Believe*) and "Pragmatism and Religion" (in *Pragmatism*) he set forth the reasons for believing in a theistic God. In fact the study of religion was a matter of considerable importance to James, and his wide-ranging study of religious experience, *The Varieties of Religious Experience* (1902), made a significant contribution to the study of comparative religion.

JAMES'S LONG-TERM SIGNIFICANCE

James's ideas were extremely significant. They influenced a generation of thinkers who followed him, most notably the great philosopher-educator John Dewey (1859–1952), and they played a role in forming the underlying mind-set—of social experimentation and reform—that characterized the Progressive (1900–1917) and New Deal (1933–1939) periods in U.S. history.

SEE ALSO *Emotion; Empiricism; Epistemology; Functionalism; National Service Programs; New Deal, The; Philosophy; Pragmatism; Progressive Movement; Psychology; Religion; Stream of Consciousness; Theory of Mind*

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Scott Wright

JANATA PARTY

India's Janata Party grew out of the tumultuous political conditions of the 1970s. Following India's military success in East Pakistan in 1971, leading to the independence of Bangladesh, the architect of this victory, Prime Minister Indira Gandhi (1917–1984), led the Congress Party to an overwhelming political victory in the March 1971 national elections. The Congress Party gained two-thirds of the seats in the lower house of parliament, the Lok Sabha. Thereafter, there were accusations of political corruption against Gandhi, arising initially from the charge that she had illegally used the state's political machinery and funds to conduct her election campaign in Allahabad, Uttar Pradesh. When, in 1974, the Allahabad supreme court ruled that she had violated the law, several opposition groups led by Jaya Prakash Narayan (1902–1979) demanded her resignation as prime minister. Widespread demonstrations against Gandhi occurred amidst labor strikes, a slow economy, and public discontent.

Led by Narayan, the head of an opposition socialist party, a group of parties that included the Bharatiya Jan Sangh (BJS), the Bharatiya Lok Dal (BLD), the Rashtriya Swayamsevak Sangh (RSS), and the breakaway Congress Party of Morarji Desai (1896–1995) joined together to form a new party called the Janata Party (the "Peoples Party"). Gandhi's Congress Party was defeated in 1977 by the newly formed Janata Party, ushering in the first non-Congress government of India. Morarji Desai, a former Congress Party finance minister, became the first Janata prime minister. The Janata Party held 270 out of 539 electoral seats in the Lok Sabha. (The total number of seats in the Lok Sabha is 542, including reserved nonelected seats for minorities and backward castes.) Desai's two rivals for leadership, Charan Singh (1902–1987) and Jagjivan Ram (1908–1986), became his deputy prime ministers. The leader of the BJS, Atal Bihari Vajpayee, became the minister for external affairs. H. M. Patel became the finance minister, and Lal Krishna Advani became the minister for information and broadcasting. Neelam Sanjiva Reddy (1913–1996), a Janata leader, was elected president of India in 1977 upon the death of the incumbent, Fakhruddin Ahmed (1905–1977), thus completing the Janata hold over India's political cabinet and presidency.

The Desai administration lasted from 1977 to 1979, when various splits emerged in the Janata government. The BJS and the RSS wings broke away from the Janata coalition, and the BLD also threatened to leave.

With sufficient coalition partners under the Janata political banner, Charan Singh was sworn in as the new prime minister in June 1979 as leader of the BLD and the new Janata (socialist). But his government did not have a majority in the Lok Sabha, and needed the support of the Congress Party to maintain a majority vote in parliament. Indira Gandhi initially promised to support Singh, but later withdrew the offer, leaving Singh unable to form a government. The Lok Sabha was dissolved and President Reddy called for new elections in January 1980.

Indira Gandhi's Congress Party was swept back into power by an overwhelming majority in 1980. After her assassination in 1984, her son Rajiv Gandhi (1944–1991) became prime minister and achieved a commanding victory in the elections of 1985. However, in the 1989 elections, Rajiv Gandhi's Congress Party was defeated under circumstances similar to those Indira Gandhi had faced. Once again, the Janata-BLD coalition, led this time by V. P. Singh, took power with a narrow majority. The Singh Janata government fell in 1991. Since then, several groups have called themselves the Janata Party or variations of that name. By 2007 the party was most closely identified with the group led by Subramaniam Swamy.

SEE ALSO *Communalism; Congress Party, India; Gandhi, Indira; Political Parties*

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Raju G. C. Thomas

JANE CROW

SEE *Jim Crow.*

JANOWITZ, MORRIS
1919–1988

The sociologist and political scientist Morris Janowitz was born on October 22, 1919, in Paterson, New Jersey, the son of an immigrant family from eastern Europe. He attended Paterson East Side High School, and in 1937 he enrolled at Washington Square College of New York University, where he came under the influence of the political scientist Bruce Lannes Smith and the philosopher Sydney Hook. He graduated with a degree in economics four years later.

After college, Janowitz worked briefly for Harold Lasswell, who was heading the Experimental Division for the Study of War Time Communications at the Library of Congress. He then went to work for Attorney General Francis Biddle at the Department of Justice Special War Policies Unit. In 1943 he was drafted to serve in the armed forces. He was assigned to the Office of Strategic Services (OSS) in London, and then moved to the General Headquarters (GHQ) of the Allied Expeditionary Forces. He worked on mass communication, morale, and propaganda before being sent to Compiègne, France, where he directed interviews of German POWs. This experience fed his calling as a social scientist, as well as his awareness about issues he would always consider important, such as the inescapability of collective violence and the fabric of social control. The experience also provided data for seminal coauthored papers, including the classic 1948 article, written with Edward Shils, about the effects of primary groups on cohesion and fighting capabilities in the Wehrmacht.

After being discharged, Janowitz was employed briefly as an intelligence analyst for the U.S. State Department. But the advice of friends such as Edward Shils and his own attraction to a stimulating and distinguished academic environment led Janowitz to enroll at the University of Chicago in 1946. He became a lecturer in sociology the following year, and in 1948 he obtained a doctoral degree with his thesis *Mobility, Subjective Deprivation, and Ethnic Hostility.* It was also at Chicago that he formed close associations with Bruno Bettelheim, William Ogburn, Quincy Wright, Lloyd Fallers, and Edward Shils.

Early in 1951, the same year he married Gayle Shulenberger, Janowitz went to the University of Michigan, where he became full professor in 1957. He returned to the University of Chicago in 1961, where he stayed till his premature death on November 7, 1988. Between 1967 and 1972 he chaired the Sociology Department, helping to restore the prestige it had enjoyed in the past.

The centrality of the themes Janowitz dealt with and the depth and originality of his thinking gave his scholarship an exceptional quality and made him a major figure in American social sciences. In addition, the variety of his interests is astonishing. He explored issues such as social stratifications, mass communication, propaganda, race and ethnic prejudice, collective action, voting behavior, and the institutional use of armed force (an issue to which he drew other social scientists). His work cut across numerous fields of the social sciences, from psycho-sociology to international relations, and from urban studies to comparative politics. The list of his publications is indeed impressive. Many of his books are now considered to be classic reference works. Among them are *The Dynamics of Prejudice* (1950, with Bruno Bettelheim), *Community Press in an Urban Setting* (1952), *The Professional Soldier* (1960), *Institution Building in Urban Education* (1969), *The Social Control of the Welfare State* (1976), *The Last Half-Century* (1978), and *The Reconstruction of Patriotism (*1983). His major edited pieces include *The New Military* (1964b), *Reader in Public Opinion and Communication* (1966, with Bernard Berelson), and *Civil-Military Relations* (1981). Some of his leading articles have been republished in collections such as *Political Conflict* (1970) and *Military Conflict* (1975). These works offer a system of innovative hypotheses, each having a value of its own, at the same time addressing the larger, all-encompassing issues and problematics in the social sciences, giving coherence and logic to the whole. His hypotheses about the modern military—for example, his developments on the changing format of military institutions, comparative models of civil-military relations, or the "constabulary use" of force in contemporary international relation—are illustrative in this regard, for they served both to define the perimeter of a new field of social science inquiry and to orient research on the subject.

One of these central concerns Janowitz touched upon was how the organization and the regulation of societies—never more than an ensemble of loosely aggregated institutions—operate in an orderly manner, especially in constantly changing environments, and especially when subjected to the disruptive forces of modernization. In other words, how can social control, which helps to mitigate self-interest in favor of common values, be maintained, when coercion and socialization have only a limited effect? To grasp such an all-encompassing issue, Janowitz—who considered grand theories inadequate as they postulate more social coherence than in reality—favored an institutional perspective that underlines interorganizational linkages and reciprocations, which, in some circumstances, can be negative, leading to "fragmentation" or "disarticulation," as with contemporary extended welfare states, for example, affected by lower social cohesion, weakened citizenship, and fragile political legitimacy. At the same time, his analysis is multileveled and shows a preoccupation with micro-macro interactions, without which the complexity of modern society cannot be understood. These include the links between primary groups and larger structures, as well as the formation of social personality, a concept derived from W. I. Thomas to refer to enduring predispositions externalizing the psychic and "which carry over from one interpersonal and social setting to the next."

Pragmatism was Janowitz's intellectual standpoint. He was directed to it by Sydney Hook, as well as by his own reading of John Dewey and his familiarity with the outlooks and methods of the Chicago school of sociology. A pragmatic approach provided him with intellectual direction, informed him with the thematic centrality of his sociological concern, and gave him the theoretical and methodological unity his work demonstrates. It also fashioned his career conceptions and his ideas on the social role of a scholar, rejecting on the one hand the "engineering" posture essentially concerned with applied research, and on the other hand the ivory tower style of pursuit of knowledge. He always argued that the social sciences should contribute to the alleviations of social strains, the maintenance of democracy, and effective citizenship by offering the public as well as decision makers reasoned evaluations of problems and possible solutions and policies. He was thus a fervent advocate of the "Enlightenment model." In this regard, he considered himself a "citizen sociologist," and his conception of institution building highlights his belief in the public calling of social scientists. He was concerned with searching for renewed forms of social control to cope with fragmented social systems, such as an enhanced civic consciousness, which could emerge from converging reforms aimed at enlarging the professional outlook of the military, education, and justice.

This high sense of responsibility, together with his conception of the academic profession, led him to devise means, both institutional and material, to support, encourage, and expand research. Thus, in 1960 he founded the Inter-University Seminar on Armed Forces and Society, as well as the organization's quarterly *Armed Forces and Society,* a leading interdisciplinary journal that has given a strong impetus to the social science study of the military and armed conflict. Similarly his editing of the *Heritage of Sociology* series offered the academic community important comments and analyses about classical sociological works, beginning with the Chicago school. His challenging teaching and thesis direction are remembered by many who now occupy a prominent place on the academic scene in America and elsewhere.

SEE ALSO *Bettelheim, Bruno; Civil-Military Relation; Lasswell, Harold; Militarism; Military; Military*

Regimes; Organization Theory; Organizations; Pragmatism; Prejudice; Selective Service

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Michel Louis Martin

JAPANESE AMERICAN INCARCERATION

SEE *Incarceration, Japanese American.*

JAPANESE AMERICAN INTERNMENT

SEE *Incarceration, Japanese American.*

JAPANESE AMERICANS

There may well be no other group that simultaneously represents and challenges the meaning of such terms as *American dream*, *model minority*, or *reparations.* These terms are essential to debates about immigration policies, racial politics, and economic opportunities in the United States. Like other immigrant groups, Japanese Americans (*Nikkei*) embody the struggles, contradictions, and possibilities that are inherent in the promise of a new life in America. And like other nonwhite groups in the United States, the attempts of Japanese Americans to take advantage of what American life promised were met with racism. And like many other U.S. minority groups, racial or not, Japanese Americans have faced an enormous amount of overt and covert discrimination throughout their history. It is here, at the crossroads of U.S. immigration history, racial politics, civil rights struggles, and ideas about economic success, that Japanese Americans, past and present, stand out most starkly.

A MODEL MINORITY

There is no question that Japanese Americans, who began to come to the United States and Hawaii in the late nineteenth century as laborers in the vegetable and sugarcane fields of the Pacific and Western coastal states, could be collectively called an immigrant success story. As the first waves of men arrived, eventually followed by their wives and children, they immediately began to encounter blatant discrimination and exploitation from employers and neighbors, as well as from local, state, and federal governments. They were not alone. The first Japanese immigrants entered the United States at a time when xenophobia, racist nativism, jingoism, and labor struggles helped to create the realities of hardship and survival that give credibility to every American immigration success story. The first Japanese immigrants faced a configuration of the Asiatic Exclusion League, formed in 1908; the Alien Land Laws, passed in 1913 and 1922; the 1922 U.S. Supreme court ruling declaring Japanese ineligible to become naturalized citizens (*Ozawa v. United States*); the bloody strikebreaking and lockouts in the Hawaiian cane fields during the 1920s and 1930s; and in 1942 the signing of Executive Order 9066, which began the forced removal and incarceration of Japanese Americans during World War II (1939–1945).

When comparing this first generation (*Issei*) and their children (*Nisei*) to today's fourth (*Yonsei*) and fifth (*Gosei*) generations, it is not difficult to see why Japanese Americans are considered to be a model minority. The differences between the first and subsequent generations are obvious. And because of the internment of Japanese Americans during World War II, the comparison of the earliest Japanese immigrants to Japanese Americans living in the early twenty-first century is remarkable, and emotionally charged for many. This increasingly multiracial and multiethnic group of descendants, as well as a large number of people who do not claim Japanese ancestry, looks to the history of Japanese people in the United States as representing the best and the worst of what going to America for a better life has meant.

It is not just that Japanese men and women, through their diligence and hard work, laid the framework, both economically and culturally, for their descendants to achieve increasing success with each new generation. That story is part of the immigrant history for many American ethnic groups. Japanese Americans stand out because their history includes the experience of internment, and not only surviving but thriving after being released. As a group, they not only prospered in the postwar years, with a long list of notable and famous Japanese Americans, but they were able to mobilize and achieve redress and reparations in 1988 against a great deal of opposition from the U.S. government. But, like all immigrant histories, the Japanese American success story demands a closer look in order to understand the realities, as well as the images, that give it power and appeal.

Academic research on Japanese Americans has tended to focus on three subjects—the Issei generation, World War II (including internment and Nisei military service), and the redress movement of the 1980s. There are multiple ways of interpreting these episodes, and many stories that remain untold. As interest in the Japanese success story has increased, an attempt to build upon existing understandings and analyses of the varieties of Japanese American histories has unfolded, and with it a desire to expand the ways that Japanese Americans, as individuals and as a group, are seen as part of U.S. history. This effort has cut across disciplinary boundaries and generated a great deal of exciting and often controversial work.

Some scholars have challenged assumptions about who the men and women were that left Japan and what they brought with them as they faced a system of anti-Japanese laws and sentiment in the United States. The assumption that they came with no skills and little education and were able to achieve middle-class status in one (or less than one) generation encourages a look at culture and not economics for an explanation. This is especially important when Japanese Americans are set in stark contrast to other nonwhite and ostensibly nonachieving groups in the United States. Economist Masao Suzuki (2002) makes it clear that the story of Japanese Americans is much more complex than commonly imagined. Focusing on the large out-migration of Japanese back to Japan during the 1920s (the majority of immigrants left) and the ways that the Gentlemen's Agreement of 1908 regulated and thus changed the type of Japanese immigrant coming to the United States from Japan (the earliest Issei were unskilled farmers; later Issei came with more education and skills), Suzuki argues that the Japanese American immigration story demands contextualization. He argues that lateral mobility, not upward mobility, and selective immigration must be stressed when considering which Japanese Americans achieved economic success, and how they did so. Arguments like this challenge other widely held interpretations that focus on Japanese cultural values by calling attention to the gendered, classed, generational, and regional realities of Japanese Americans before World War II.

INTERNMENT

When President Franklin D. Roosevelt (1882–1945) signed Executive Order 9066 in February, 1942, he did more than direct the removal of more than 120,000 Japanese Americans to desolate areas in the U.S. mainland interior. He helped to create one of the most symbolic moments in both U.S. and Japanese American history.

The internment of Japanese Americans, like the Holocaust, the Great Migration, and the Trail of Tears, is a deservedly major event in U.S. history. Today, the internment is written about widely. This was not always the case, as the subject was not generally discussed in textbooks or in popular culture until the 1980s. This was due, in part, to the decision by many Japanese Americans, though not all, to downplay this injustice.

The removal and four-year incarceration of Japanese Americans led to more than economic hardship and emotional suffering. As they were rounded up and sent to assembly centers in California, Oregon, and Washington with little more than what they could carry—many Issei men were sent to federal prisons without trials or evidence—the meaning of *Japanese American* began to change. Most were American citizens and minors who were taken to places where their alleged allegiance to Japan would not be a threat to the U.S. war effort. And although such accounts of injustice factor into the ways that internment is useful in arguing that Japanese Americans were a model minority, the incarceration and eventual relocation of Japanese Americans helped to create a generation of Nisei who would never forget the racial injustice that they and their relatives faced during the war. In places like Tule Lake in California and Rowher, Arkansas, some Japanese Americans looked out from behind barbed wire in armed camps and began to rethink what it would mean to be Japanese in postwar America.

Some young Japanese men joined the U.S. military and won numerous medals during the war in an effort to prove their loyalty and make things easier for their relatives. Others, known as the No-No Boys, refused to pledge allegiance or serve in the U.S. military and thus were sent to jail. After the war, some moved as far away from their old lives and the internment camps as possible, creating large postwar Japanese populations in cities like Chicago, where they and their families became part of a new fabric of race, class, and civil rights struggles. During this period, the model minority and success labels began to be applied to Japanese Americans. Yet Japanese American responses to the incarceration indicate that there is a multiplicity of ways that their history can be conceived, both within and outside of the model minority and Japanese American success story images.

REPARATIONS

Beginning in 1970 and ending with the Civil Liberties Act of 1988, the struggles of Japanese Americans to achieve recognition and a token payment for what happened to them during World War II mark yet another moment where the contradictions of the Japanese American immigrant success story are laid bare. There were differing opinions on how to achieve redress, and, as the only racial or ethnic group to be granted an apology and cash settlement from the federal government, this hard-earned victory also helped cast Japanese Americans as a favored minority. As other minority groups, such as African Americans and Native Americans, continue to work for their own reparations, the Japanese American success is held up by a variety of interests who are either demanding or suppressing calls for further reparations acts. What is perhaps most interesting with regard to future claims by other groups was the way that the Japanese American redress initiative was cast—it was about citizenship, not race. Today, the Japanese American Citizen's League (JACL) continues to frame itself as an organization committed to preventing a recurrence of the civil rights violations that led to the internment. The JACL has, for example, been a loud voice in post-9/11 debates over national security. The images and realities that Japanese Americans embody continue to be of major importance to how life in the United States is imagined and lived.

SEE ALSO *African Americans; Citizenship; Discrimination; Immigrants, Asian; Incarceration, Japanese American; Migration; Mobility, Lateral; Model Minority; Native Americans; Race; Racism; Reparations; Whites; World War II*

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Jacalyn D. Harden

JAPAN, INC.

SEE *Orientalism; Xenophobia.*

JAZZ

Jazz is a uniquely American style of music that developed in the early twentieth century in urban areas of the United States. As it grew in popularity and influence, jazz served as a means of bringing young people together. It has always created and sustained artistic subcultures, which have produced new and increasingly sophisticated artistry. As a pervasive and influential musical style, jazz has at times been a great social leveler and unifier. It has melded black and white citizens in a love of fast, rhythmic music, which was first proliferated through radio and the recording industry. Jazz became the basis for most social dance music and also provided one of the first opportunities for public integration.

Jazz first emerged in the black cultures of New Orleans from the mixed influences of ragtime (songs with a syncopated rhythm), blues, and the band music played at New Orleans funerals. The term *jazz* or *jass* derives from a Creole word that means both African dance and copulation. The term *jazz* referring to peppy dance music first appeared in a March 1913 edition of the *San Francisco Bulletin*, an appearance that indicates jazz's rapid spread as a popular musical genre as well as its connection to dancing and nightlife. Developed by such innovative musicians as Buddy Bolden (1877–1931) in New Orleans in the first decade of the twentieth century, jazz had moved west, east, and north to Chicago by 1919. Spread by such New Orleans jazz groups and performers as King Oliver (1885–1938) and his Creole Jazz Band and Jelly Roll Morton (1890–1941), jazz first became popular in the nightclub cultures of big cities. King Oliver's band in Chicago was soon joined by a young Louis Armstrong (1901–1971), who pioneered the rapid rhythmic jazz style called *hot jazz*. White musicians such as Bix Beiderbecke (1903–1931), Jack Teagarden (1905–1964), and Joe Venuti (1903–1978) began to copy the jazz style of New Orleans bands, and soon jazz was an American national phenomenon, appealing to sophisticates and young audiences around the country.

Jazz evolved simultaneously in the 1920s in New Orleans, Chicago, and Kansas City, performed by both black and white ensembles and orchestras. As it developed from its Dixieland forms, jazz styles ranged from the hot jazz of Louis Armstrong to the "symphonic" jazz of Paul Whiteman's (1890–1967) band. Hot jazz, one of the first influential developments of jazz, featured a strong soloist whose variations on the melody and driving momentum were accompanied by an expert ensemble of five or seven players. The idea of soloists playing in relation to backup ensembles also worked easily with larger bands, which began to form in the 1920s.

Fletcher Henderson (1897–1952) and Duke Ellington (1899–1974) established black jazz orchestras that began performing at prominent nightclubs in Chicago and New York. Henderson employed some of the most accomplished jazz musicians of his time, including Armstrong and saxophonist Coleman Hawkins (1904–1969). Ellington, who began as a piano player, established another orchestra, noted for its sophistication in its long-running appearance at New York's Cotton Club. Paul Whiteman, a successful white California orchestra leader, adapted jazz for his larger dance orchestra, which became the most popular band of the 1920s. Whiteman was interested in distinguishing a high art jazz as represented by George Gershwin's (1898–1937) *Rhapsody in Blue* (1924, which Whiteman had commissioned for his orchestra) from what he thought of as the cruder jazz of such white jazz ensembles as the Original Dixieland Jazz Band. The Original Dixieland Jazz Band, booked into New York in 1917, was one of the first successful jazz groups.

Live band appearances and a booming recording industry increased jazz's audience, as did Prohibition, which paradoxically made nightlife even more fashionable. Associated with nightclubs and nightlife, jazz became attractively exotic both in the United States and in Europe. Popular jazz bands traveled widely, playing at all kinds of venues from dancehalls and nightclubs to restaurants. The rapidly growing record industry quickly became interested in jazz performers. Such artists as Louis Armstrong, Jelly Roll Morton, Paul Whiteman, Benny Goodman (1909–1986), Duke Ellington, Fletcher Henderson, and others made records that reached audiences who did not venture into city nightlife.

The Great Depression, however, took its toll on smaller and less successful jazz bands, black bands more than white bands. With the advent of *swing* music, many white bands could continue to prosper, but many black bands had more difficulty finding large audiences. They were less commercially successful in general, since most black orchestras did not have the mainstream connections and recording contracts of white bands. In addition, Jim Crow segregation laws kept black orchestras separate from white orchestras. For these reasons, many black jazz musicians went to Europe in the 1920s and 1930s, where they were welcomed. Coleman Hawkins and clarinetist Sidney Bechet (1897–1959) both played in Europe, where audiences were captivated by the erotic suggestiveness of jazz.

Swing, a jazz-inflected dance music, developed in the 1930s and was hugely popular during World War II (1939–1945). Swing jazz was designed for larger musical groups. It continued hot jazz's back-and-forth between a solo player and the supporting ensemble, but it framed and balanced the solo with a more structured accompaniment, which often involved a musical battle between various sections of the band. Swing developed gradually, but

Benny Goodman's August 21, 1935, performance at the Palomar Ballroom in Los Angeles is often considered swing's debut. Its popularity established swing as a dance music and style that cut across classes and races. Swing bands—known as *Big Bands*—also employed band singers, many of whom became hugely popular in their own right. Frank Sinatra (1915–1998), for example, caused riots during his appearances with the Tommy Dorsey Band, while Bing Crosby (1903–1977), Ella Fitzgerald (1917–1996), Billie Holiday (1915–1959), Doris Day, and Rosemary Clooney (1928–2002) all became stars in their own right.

Female singers, especially Fitzgerald and Sarah Vaughn (1924–1990), had a larger part in the evolution of jazz than most women did. Since its inception, innovations in jazz seemed to come mainly from those who played wind instruments—trumpet players Louis Armstrong, Dizzy Gillespie (1917–1993), and Miles Davis (1926–1991); saxophonists Charlie Parker (1920–1955) and John Coltrane (1926–1967); and clarinetist Benny Goodman. Players of other instruments, such as piano, drums, bass, and guitar, though enjoying roles as soloists, were primarily responsible for maintaining the driving rhythm of jazz pieces. Until they became prominent as jazz vocalists, women musicians seemed to have little role as jazz artists or innovators. Although they occasionally played in jazz groups, women musicians were most often pianists, such as Louis Armstrong's wife, Lillian Hardin (1898–1971). The introduction of female vocalists whose role was increasingly like that of other featured wind instruments broadened the dimensions of jazz. *Scat* singing, or singing nonsense syllables, which had been used earlier by Ethel Waters (1900–1977), Edith Wilson (1896–1981), and Louis Armstrong, made the voice sound more like a jazz instrument. Melodic voice improvisation developed by such women vocalists as Adelaide Hall (1904–1993), Ivie Anderson (1905–1949), and most notably Fitzgerald made the voice an instrument and an important part of the jazz repertoire. Vocalist Billie Holiday added her own brand of blues inflected improvisation, phrasing like a wind player and injecting fun and suggestiveness into the music. In the 1940s two other vocalists, Dinah Washington (1924–1963) and Sarah Vaughn, added their own imprimatur to jazz: Washington imported a powerful clarity from gospel music, and Vaughn further developed the voice as an instrument in the context of bebop.

The popularity of swing music beginning in the 1930s also enabled bands to cross color lines. Before swing, bands mostly played to audiences of their own race, but with swing, white audiences began to follow black bands as well. In the mid-1930s, Benny Goodman integrated his jazz ensemble, working with Teddy Wilson (1912–1986), a pianist, and Lionel Hampton (1908–2002), a vibraphonist. Because jazz musicians knew, admired, and even borrowed one another's work, jazz ensembles were among the first integrated public performance groups.

Swing also helped moor up the national mood both during both the Depression and the Second World War. Armed Services Radio broadcast swing music to soldiers. Although musicians and record companies were at a standoff over musicians' royalties for airplay in 1942, a special V-Disc program produced records for the use of the military.

After the war, many musicians who had begun their careers in swing bands—including Charlie Parker and Dizzy Gillespie—began exploring a more frenetic small-ensemble form of jazz known as *bop*. With such younger artists as Miles Davis and Art Blakey (1919–1990), bop developed as a more hard-driving, difficult jazz characterized by the prominence of soloists who played rapid complex improvisations in business suits. Bop was primarily the bailiwick of black musicians, who were rescuing the form from the pleasant popularity of swing and who would, with their development of *hard bop* or *bebop* and *cool jazz*, turn jazz into something more intellectual, difficult, and soulful. These later forms became a connoisseur's jazz, played again in smaller clubs and establishing jazz artists as the avant-garde of music. Such *beat* artists as Jack Kerouac (1922–1969) extolled bop jazz as representing an expression of soul that beat writers wished to emulate by breaking down traditional forms.

Despite its often improvisational character, jazz benefited from a number of talented composers. Instrumentalists such as Bix Beiderbecke, Louis Armstrong, Dizzy Gillespie, Charles Mingus (1922–1979), Miles Davis, Horace Silver, Thelonious Monk (1917–1982), Sun Ra (1914–1993), Wayne Shorter, and Randy Weston contributed to the growing body of jazz music, as did Duke Ellington and his collaborator Billy Strayhorn (1915–1967). Ellington and Strayhorn, both pianists, forged a productive association, writing Ellington's theme song, "Take the 'A' Train" (1941), as well as other well-known favorites played by the Ellington orchestra. More recently, other composers have continued jazz's evolution, including Jeff Wains and Wynton Marsalis.

Jazz had also long incorporated a broader base of musical styles and influences, so even as it became cool and increasingly sophisticated, it also dipped again and again into a variety of sources, renewing itself and extending its influence into more popular musical forms. As Dizzy Gillespie developed bop, he also infused his music with Afro-Cuban jazz rhythms and musicians. Chano Pozo (1915–1948), a Cuban percussionist, joined Gillespie's band in 1947, and the addition of Pozo and a wide array of Latin percussion instruments, such as the

congas, bongos, timbales, and claves, produced complex and rapidly moving pieces. Latin musicians such as trumpet player Arturo Sandoval also joined Gillespie. In the 1950s Puerto Rican percussionist Tito Puente (1923–2000) and Cuban musicians Chico O'Farrill (1921–2001) and Chucho Valdés played Latin mambo in New York, influencing both big band and jazz ensemble sounds. In the early 1960s Brazilian jazz, called *bossa nova*, emerged in the United States. João Gilberto and Antonio Carlos Jobim (1927–1994) brought the style to the United States, and their work was taken up by saxophonist Stan Getz (1927–1991). Miles Davis worked with Brazilian drummer Airto Moreira, and in the 1990s Roy Hargrove incorporated Afro-Cuban elements in his Crisol project. The influence of Latin rhythms and styles enlarged the appeal of jazz, making it more joyous and rhythmic, and via such forms as bossa nova, linking it to more mainstream styles.

As jazz became more esoteric, it became more sophisticated than popular. Although it continued to influence the styles of newer music, such as rock and roll, its audience shrank to those who could appreciate its difficulties, and jazz no longer played as direct a role in the evolution of popular music. It retained its links to nightclubs, but lost its aura of carefree joy. Jazz musicians of the 1950s, 1960s, and 1970s became associated with the innovations and countercultural sentiments of the beats. Some, such as pianist Dave Brubeck and saxophonist Paul Desmond (1924–1977), became campus favorites, touring with their jazz quartet around Midwest college campuses in the 1950s. In its links to countercultural art and lifestyles, as well as to a more intellectual milieu, jazz also became associated with civil rights efforts, Black Nationalism, and other radical movements of the 1960s and 1970s. Although jazz musicians (like many performers) had long been linked to drugs and less-than-suburban lifestyles, as drugs became an openly rebellious facet of the hippie and youth movements of the 1970s, they became a part of the myth of jazz as well.

At the same time, jazz also became more academic and respectable as a high culture phenomenon. Music conservatories and universities began offering courses in jazz history and composition and training jazz musicians. Such renowned institutions as the Berklee College of Music in Boston, the Juilliard School in New York City, and the Eastman School of Music in Rochester, New York, as well as numerous universities in the United States and throughout the world, train jazz musicians.

Jazz of the later twentieth century continued to develop multiple styles—free jazz, soul jazz, jazz-rock fusion—that represented attempts to reclaim jazz as a specifically black musical tradition, even though jazz continued to be an integrated effort. Jazz groups again became smaller ensembles and their work became more experimental and aimed at appreciative listeners rather than at dancing. Jazz clubs developed in larger cities; the clubs attract audiences of jazz lovers but not nearly the kind of widespread adulation given to swing. In the 1990s Wynton Marsalis and his brother Branford Marsalis led a renaissance in the widespread popularity of jazz. Wynton Marsalis, a classically trained trumpet player, won Grammy Awards in both classical and jazz categories. More important perhaps was his energetic advocacy of jazz as a central genre of American music. Collaborating with documentary filmmaker Ken Burns, Wynton Marsalis contributed his own more conservative perspective to Burns's twenty-hour documentary, *Jazz* (2001). Some musicians, such as Miles Davis, thought that Marsalis's ideas of a pure jazz were too conservative, but Marsalis has certainly been responsible for the revival of jazz as an important musical form.

As it has throughout its history, jazz continues to find talented and innovative musicians who continue to reinvent and redefine jazz. Becoming increasingly international and opening slightly to greater participation by women musicians, jazz continues to influence developing musical styles, but its mixture of styles, its contributions to racial integration, and its establishment of a uniquely American form as a central influential musical tradition already form its legacy.

SEE ALSO *Music, Psychology of; Popular Music; World Music*

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Judith Roof

JAZZ AGE

SEE *Interwar Years.*

J-CURVE

A country's trade balance is defined as the difference between the amount it exports and the amount it imports. When the value of imports exceeds that of exports, the trade balance is said to be in a deficit position. One policy to improve a deficit situation is devaluation; that is, lowering the value of one currency in terms of another currency. By devaluing its currency, a country makes its exports cheaper in terms of foreign currency and its imports more expensive in terms of domestic currency, leading to an increase in export volume and a decrease in import volume. The expansion in exports and retardation of imports are expected to improve the trade deficit. However, for several reasons, after devaluation the trade balance often worsens before improving. Since this pattern of movement of the trade balance over time subsequent to devaluation resembles the letter *J*, economists have termed it the J-Curve phenomenon.

Several factors contribute to the J-Curve effect. First, at the time of devaluation, commodities in transit are priced at the old exchange rate. If the trade balance had been deteriorating before devaluation, it will continue to deteriorate after devaluation. Only after the passage of some time when new prices begin to prevail at the new exchange rate will the trade balance improve. Second, at the time of devaluation a country could experience a rapid increase in its economic activity, leading to economic growth. Since a growing economy consumes more of not only domestically produced goods but also of imported goods, its imports could rise substantially. The increase in imports may offset any favorable effects of devaluation, resulting in a short-run deterioration of the trade balance. Finally, devaluation is expected to increase the volume of exports and reduce the volume of imports. However, the adjustment of export and import volumes to a change in the exchange rate may occur with some time delay or adjustment lags. For example, there may be lags in delivery time, lags in replacing inventories, and lags in adjusting the production process.

The J-Curve effect was first observed in 1973 by Stephen Magee when the U.S. trade balance deteriorated in 1972 despite devaluation of the dollar in 1971. One question researchers have raised is how long it takes for the trade balance to experience an improvement after devaluation. In an effort to provide an answer to this question, in 1985 Mohsen Bahmani-Oskooee was the first to introduce a method of testing the J-Curve phenomenon by directly relating the trade balance to the exchange rate in addition to other determinants. Early studies employed aggregate trade data (i.e., export and import data between one country and the rest of the world) to test the phenomenon. Generally, these studies provided mixed results and were criticized as suffering from aggregation bias. To overcome the problem, a second group of studies concentrated on the trade between one country and each of its major trading partners, a disaggregation at the bilateral level. This group was able to discover more evidence in support of the J-Curve. A few studies in the last decade have disaggregated the trade data further by investigating the response of trade flows to exchange rate changes at the commodity level. These studies show that the phenomenon could be commodity specific.

Recent advances in time-series analysis have helped researchers to modify the definition of the J-Curve as a short-run deterioration of the trade balance and a long-run improvement. This definition extends the original definition of the J-Curve and is in line with more recent advances in econometric modeling such as error-correction and cointegration techniques. Generally, the error-correction specification of any model tests the short-run dynamics while cointegration tests the long-run effects. The modified definition and application of modern techniques generally provide strong support for the phenomenon.

SEE ALSO *Beggar-Thy-Neighbor; Currency Devaluation and Revaluation; Exchange Rates*

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JEFFERSON, THOMAS
1743–1826

Thomas Jefferson's interests and pursuits presaged many substantive and methodological concerns of the modern social sciences. Jefferson exemplified the spirit of the Enlightenment—that great, diverse intellectual movement that dominated Atlantic civilization from the late seventeenth century to the dawn of the nineteenth century. The sorting and synthesizing habits characteristic of Enlightenment thought formed the core of his thinking. Not just intellectual curiosity spurred Jefferson, however. The challenges posed by the American Revolution (1775–1783)—creating a new nation, defining its form of

government and politics, and shaping the kind of nation that the United States would become and the kind of people it would have—lent practical urgency to Jefferson's investigations of the natural, social, and political world.

Jefferson was born in Shadwell, Virginia, on April 13, 1743, the son of a gentleman planter determined to secure the best possible education for his son. At the College of William and Mary, Jefferson found his two mentors. Professor William Small (1734–1775) introduced Jefferson to Enlightenment thought and the study of natural philosophy (his era's term for science), and the attorney George Wythe (1726–1806) inspired Jefferson to join the bar. Wythe supervised Jefferson's legal training, insisting that he not only master the law but see it as a learned profession. Under Wythe's tutelage, Jefferson situated his legal knowledge within a wide and deep classical, historical, and philosophical education. Though his legal practice lasted less than a decade, his legal training continued to shape his work as a politician and a scientific and political thinker.

Jefferson's lifelong commitment to public service began with his election in 1768 to the Virginia legislature. Jefferson watched with anxiety the growing dispute between Great Britain and its North American colonies over the scope of British power to tax the colonists and legislate for them. In 1774 Jefferson drafted a set of instructions for the Virginia delegation to the First Continental Congress. His draft, judged too radical, nonetheless appeared as a pamphlet, *A Summary View of the Rights of British America*. Jefferson's eloquence and cogency won him acclaim, but his willingness to lecture King George III (1738–1820) on his duty to his American subjects provoked hostility in London.

In 1775 Jefferson was named a Virginia delegate to the Second Continental Congress. Though he rarely took the floor, he won his colleagues' respect by his ability as a draftsman to synthesize their clashing views. His ultimate challenge came when, in June 1776, Congress named him to a committee, with John Adams (1735–1826), Benjamin Franklin (1706–1790), Robert R. Livingston (1746–1813), and Roger Sherman (1721–1793), to draft a declaration of independence; the committee assigned the task to Jefferson. Jefferson always preferred his draft to Congress's version, complaining that Congress had ruined his work by cutting key portions of his argument, including a passage blaming George III for the American institution of chattel slavery; by contrast, most historians maintain that Congress's edits improved the document's cogency and force. The Declaration of Independence has three parts: (1) a preamble invoking Lockean social-contract theory to lay the intellectual groundwork for the Americans' assertion of the right of revolution; (2) an indictment of George III for violating the unwritten English constitution as the Americans understood it, thus dissolving Americans' obligations to remain loyal to him; and (3) a closing incorporating the congressional resolution declaring independence. The Declaration looks backward, tying off the constitutional argument with Great Britain, and forward, delineating the core principles of an independent America. Further, the eloquent preamble of the Declaration inspired democratic revolutions for generations thereafter.

Recognizing that independence required legitimate government, Congress authorized the thirteen colonies to frame new constitutions. For Jefferson, new-modeling constitutions and laws was integral to creating a good American society. Sweeping away such vestiges of feudalism as primogeniture (a system of inheritance naming the oldest son sole heir) and entail (a system of land ownership allowing the original owner to restrict transfer of his lands to heirs of his family) would, he thought, advance the cause of democracy and republican government. The resulting society would be a true republic committed to the ideals of the Revolution.

For these reasons, when he returned to Virginia, Jefferson focused his energies on legal reform. With his mentor George Wythe and Wythe's rival Edmund Pendleton (1721–1803), Jefferson launched a project to revise the state's laws. Their 1779 report included such pathbreaking proposals as Jefferson's "Bill for Establishing Religious Freedom," his "Bill for Proportioning Crimes and Punishments," and his "Bill for Establishment of a System of Public Education." This compilation crystallized Jefferson's vision of the good society, forming his political agenda for Virginia for the rest of his life. The legislature, however, tabled the report. In the 1780s, Jefferson's ally, James Madison (1751–1836), spearheaded efforts to enact some of the report's bills, including the 1786 Act for Establishing Religious Freedom.

Two of the three key measures of Jefferson's lawmaking had to do with the life of the mind and individual liberty; all three embodied his devotion to Enlightenment ideals. Arguing that any alliance between church and state was dangerous to individual liberty and the health of the political realm, Jefferson insisted on strict separation of church and state, denying government any power to direct what citizens should believe or do in matters of religious belief and observance. Jefferson's proposed system of public education embodied his view that an informed citizenry was essential to the success of republican government. Finally, his measure for proportioning crimes and punishments reflected the profound influence of Marquis Cesare di Beccaria's (1738–1794) *Treatise on Crimes and Punishments* (1764), in particular Beccaria's commitment to humanizing law and setting aside old,

barbarous punishments as inconsistent with a modern, just legal system.

In 1779 the legislature elected Jefferson governor of Virginia—a post with many responsibilities but little power. Jefferson served two one-year terms, but in 1781 his governorship's closing weeks, when he faced a British invasion of Virginia, provoked criticism souring him on public life, and he decided to retire. One incident of his governorship has lasting significance for his role in the social sciences. François de Barbé-Marbois (1745–1837), a French diplomat, sent the governors of all thirteen states a questionnaire about each state's geography, history, resources, people, and laws. Jefferson restructured this list of queries and made it the skeleton of his only full-length book, *Notes on the State of Virginia*, which occupied him, on and off, for the next six years. It distracted him from his sorrows after his wife's sudden death in 1782, and it gave him an intellectual focus while he returned to public life, first as a delegate to the Confederation Congress and then as American minister to France (1784–1789).

Published privately in Paris in 1785 and in a revised form in London in 1787, *Notes on the State of Virginia* embodied the spirit of the Enlightenment. It gave Jefferson the chance to advocate some of his cherished ideas, such as the need for religious liberty and separation of church and state, the excellence and desirability of republican government, and his love for his native land, which he promoted as a welcoming refuge from the corruptions of the Old World and a model of what a good society could be. Jefferson offered a powerful defense of America against the strictures of such European thinkers as the Comte de Buffon (1707–1788), who argued that nature and humanity degenerated in the New World. In particular, Jefferson defended Native American peoples against charges that they were lesser beings than Europeans, foreshadowing his lifelong interest in ethnography. At the same time, *Notes* presents Jefferson's agonized struggles with the issue of slavery. Jefferson, himself a slaveowner, wrote eloquently about slavery's injustice but offered a tortured case for slavery based on his claim that people of African descent were inferior to Europeans in intellect, morals, and physical beauty, and thus could not be trusted with liberty. Though such thinkers as Immanuel Kant (1724–1804) and David Hume (1711–1776) had voiced racist views of Africans, these were casual asides. By contrast, Jefferson expounded a defense of slavery based on what later generations would call "racial science."

While Jefferson was in France, he began a sexual relationship with his slave Sally Hemings (1773–1835), a daughter of Betty Hemings (1735–1807), who had been both the slave and the mistress of Jefferson's father-in-law. (Thus, Sally was half-sister to Jefferson's wife, Martha Wayles Skelton Jefferson [1748–1782].) The teenaged Sally Hemings came to France with Jefferson's younger daughter, Maria Jefferson (1778–1804), whom he had summoned to live with him and his older daughter, Martha (1772–1836). According to Sally Hemings's son Madison Hemings (1805–1877), the two became lovers in France, and Sally extracted from Jefferson a promise that if she returned with him to Monticello, he would free all her children. The liaison continued for more than two decades. When Jefferson died, the only slaves that he freed were children of Sally Hemings and others connected with the Hemings family.

During Jefferson's presidency, James Thomson Callender (1758–1803), a muckraking journalist furious that Jefferson had not rewarded his support with a government job, revealed the Jefferson-Hemings liaison in the *Richmond Enquirer*. Jefferson's allies, family, and most biographers rejected the accusation as a political smear. In 1997, however, Professor Annette Gordon-Reed of New York Law School reexamined the evidence and the controversy's history, challenging assumptions that influenced previous scholars (such as "black people lie, white people tell the truth" and "slaves lie, slaveowners tell the truth"). Her rigorous assessment convincingly showed that the Jefferson-Hemings liaison was more probable than not. In 1998 a DNA analysis of evidence from descendants of Eston Hemings (1808–c.1853) and descendants of Jefferson's uncle Field Jefferson (1702–1765) found a match indicating that a male member of Jefferson's family was the father of Eston Hemings. That finding, combined with Gordon-Reed's analysis of the historical evidence and the discovery that every time Sally Hemings gave birth Jefferson was in the vicinity nine months before the delivery, reversed the scholarly consensus from rejection to acceptance of the liaison between Jefferson and Hemings.

While he served as American minister to France, Jefferson became a mentor to such French politicians as Lafayette (1757–1834) and Mirabeau (1715–1789). Indeed, in 1789 Jefferson was an informal adviser to the drafting of the French Declaration of the Rights of Man. He also traveled widely in Europe; his travel diaries and letters reveal him to be an astute observer of society and politics. His letters' recurring themes include his contrast of European corruption with American innocence. His approval of the French Revolution (1789–1799)—though its excesses horrified many of his friends, such as John and Abigail Adams (1744–1818) and William Short (1759–1849)—was rooted in his conviction of the horrifying injustices perpetuated by the *ancien régime* and his belief that revolutionary violence was not too high a price to pay to end those abuses.

In late 1789 Jefferson returned to America for a leave of absence. Instead, he accepted President George

Washington's (1732–1799) offer of the post of secretary of state in the new government under the Constitution. When Jefferson took office in May 1790, still in the grip of his impressions of Europe, he was horrified by what he found. In his eyes, Americans were falling under the spell of corrupting doctrines from Great Britain privileging commerce and speculation, undermining his vision of an honest agrarian republic of yeoman farmers. These realizations caused Jefferson to become increasingly doctrinaire and rigid.

The fiscal policies of Treasury Secretary Alexander Hamilton (1755–1804) formed the first flashpoint of contention, followed by clashing views about America's relations with the revolutionary French Republic. Unlike Jefferson, the prophet of agrarian democracy, Hamilton argued for a national economic system in which agriculture, trade and commerce, and manufacturing would form the three pillars of a healthy and prosperous nation. Hamilton also favored a vigorous national government—which Jefferson saw as a threat to American liberty. Finally, Jefferson hailed the French Revolution as the first salvo of a worldwide democratic revolution that he hoped would reshape the world, whereas Hamilton saw it as a threat to stability, religion, property, and good order—the props of a stable republic.

Until Jefferson stepped down from Washington's cabinet at the end of 1793, and for a decade thereafter, his epic political and constitutional battles with Hamilton helped to define key polarities of American politics—strict versus broad interpretation of the Constitution, agrarianism versus commerce and trade and industry, and decentralized versus centralized government. In response to what he saw as Hamilton's threat to liberty, republican government, and the success of the American Revolution, Jefferson and Madison helped lay the groundwork for partisan politics under the Constitution. Frustrated and exhausted by partisan battles, Jefferson retired in 1793, not returning to politics until his election as vice president in 1796, under his old friend and political adversary, President John Adams.

The Adams presidency was plagued by strife over the French Revolution and the wars convulsing Europe. Facing the quasi-war with France (1798–1800), the Adams administration rammed through Congress laws restricting rights of aliens and defining federal power to punish criticism of the government. Jefferson and Madison covertly penned two sets of resolutions against these measures that the Kentucky (Jefferson) and Virginia (Madison) legislatures adopted. These resolutions argued that the federal laws were unconstitutional and that the states had varying means to resist unconstitutional federal laws, helping to fuel generations of controversy over the nature of the American union and the powers of the federal government over the states.

In 1801, after an electoral deadlock that threatened to shake the government to its foundations, Thomas Jefferson was sworn in as the nation's third president. With the support of solid Republican majorities in Congress, Jefferson set out to undo what he viewed as Federalist corruption of American principles, outlining in his inaugural address his approach to American government: "a wise and frugal government" overseeing a union of states that would keep its distance from the wars convulsing Europe.

When Jefferson took office, access to the Mississippi River was a key political and diplomatic issue. Determined to secure that access and American claims to the trans-Mississippi West, Jefferson devised a combined scientific and military expedition, blending the goal of scientific research into the geography, flora, fauna, and native peoples of the region with the equally important goal of assertion of American power. At the same time, he sent American diplomats to Paris to find a means to acquire the vital port of New Orleans. By good fortune and deft diplomacy, these diplomats secured from France the entire Louisiana Territory, including New Orleans. Jefferson then set in motion his plans for the expedition, to be commanded by captains Meriwether Lewis (1774–1809) and William Clark (1770–1838). Jefferson's confidential instructions to Lewis set an ambitious research agenda and became a model for all later American expeditions of science and discovery. The Lewis and Clark expedition ranks with the Louisiana Purchase among the greatest achievements of Jefferson's presidency.

Jefferson's first term was notably successful, in great measure because he could control the development of events; his second was less so, as increasingly he had to react to events beyond his control in the international realm. Seeking to end European hostilities threatening American shipping, Jefferson imposed an embargo on the warring nations, hoping to use American economic power to coerce Britain and France to make peace. The policy backfired, forcing Jefferson to adopt ever-more draconian enforcement measures, creating the very model of a strong central government that he had so long opposed. It was with relief that he retired from the presidency in 1809.

Jefferson's life followed a pattern of ventures into public life followed by retreats into retirement at his home, Monticello. In the early 1770s, Jefferson leveled a hilltop inherited from his father and began to build a house, deriving its design from the works of the Italian architect Andrea Palladio (1508–1580), himself strongly influenced by classical models. Not only did Palladio please Jefferson's aesthetic sense, his work echoed Jefferson's belief that classical architecture fostered values

associated with the Athenian democracy and the Roman Republic. For a decade, Jefferson worked to make Monticello a model of classical refinement. When in 1789 he returned from France, he recast his plans for Monticello; from 1793 to the early 1820s he undertook a massive program of pulling down and building up—a plan interrupted by his service as vice president, continued in fits and starts during his presidency, and resumed after his retirement in 1809. In this period, Monticello acquired its present form—a house designed to appear from outside as a single story, with a low dome and porticos on both fronts. Monticello also was a stage set where Jefferson could welcome visitors as the sage of Monticello.

Monticello is only one of Jefferson's architectural achievements. The second example is the Virginia capitol, which he modeled on the Maison Carrée at Nîmes, France. The third example is Jefferson's country home, the octagonal Poplar Forest, completed in 1809, which was his refuge from the pressure of visitors at Monticello. With the University of Virginia, these projects were pivotal in popularizing classical ideas and ideals of architecture in the United States.

The former president became a figure of interest for the hundreds of travelers and fellow-citizens who hoped to meet him. He also dealt with a massive correspondence, "drudging at the writing-table" (as he told John Adams, with whom he resumed friendship in 1812). Jefferson used his letters to explore issues of democracy and republican government that had preoccupied him since the Revolution. He argued that laws and constitutions must change with changing times and circumstances and that each generation ought to be able to make its own laws and create its own government without being held hostage by the work of previous generations. Dearest to his heart was his idea that society and government should be divided into wards or hundreds, which would form counties, which would form states linked together in a union of shared affection, sentiments, and interests and needing only a weak government to superintend foreign relations. Jefferson was not a rigorous political theorist, however, and never produced a sustained work of political philosophy.

Jefferson devoted his last years to two great endeavors in the social sciences. Building on the work of his friend, the chemist and theologian Reverend Joseph Priestley (1733–1804), he prepared a short book for his own use, *The Life and Morals of Jesus of Nazareth*, removing from the Gospels what he deemed false and fraudulent material attributable to "priestcraft." Published for the first time in 1804 by Congress, this book, a pioneering example of historical criticism of the Bible, has acquired the (mistaken) title *The Jefferson Bible*.

Closest to Jefferson's heart, and in many ways his last great struggle, was his campaign to create a new university for Virginia, not allied with any religious sect or denomination. It was the capstone of his plan of a system of public education, but he now realized that the university was all that he would have a chance to create. At Jefferson's urging, the Virginia legislature created a commission that he would chair. He wrote its report, shepherded it through the legislature, and began to design the University of Virginia. He picked the professors, defined the curriculum, laid out the campus, and designed all the buildings. When it opened in 1825, with Jefferson as its first rector, it was the culmination of his life's work.

Jefferson died on July 4, 1826, the fiftieth anniversary of the adoption of the Declaration of Independence, at the age of eighty-three. A few hours after he died, his friend and fellow signer of the Declaration of Independence, John Adams, died at the age of ninety. The coincidence of these deaths seemed to their fellow citizens an event of almost biblical proportions, as if the almighty had called the two patriarchs to heaven to honor their political labors.

In his epitaph, drafted in the last months of his life, Jefferson codified his legacy: "Author of the Declaration of Independence and of the Virginia Statute for Religious Freedom, and Father of the University of Virginia." This summation distilled his commitment to the revolution of ideas that reshaped the world in the late eighteenth century. In addition, these achievements helped to shape a world in which the social sciences could evolve into powerful tools by which human beings could come to understand their world and reshape it for the better. And yet, Jefferson's life and thought also show the dangers as well as the hopes of uncritically relying on the social sciences to make the world anew.

SEE ALSO *American Revolution; Americanism; Constitution, U.S.; Declaration of Independence, U.S.; Education, USA; Enlightenment; Ethnography; Hume, David; Kant, Immanuel; Presidency, The; Republicanism; Slavery; Washington, George*

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R. B. Bernstein

JENCKS, CHRISTOPHER
1936–

Christopher Jencks is among the most widely respected and influential social scientists in the United States. His career has been driven by an interest in economic opportunity and the welfare of individuals at the bottom of the income distribution. Following a brief tenure as a high school teacher, Jencks entered the social policy world in the early 1960s as a self-described "journalist and political activist," working at *The New Republic* and the Institute for Policy Studies, a left-leaning Washington, D.C., think tank. The public impact of the "Coleman Report" (Coleman et al. 1966) impressed Jencks with the power of fact-based social science research to influence public attitudes. He subsequently began a distinguished academic career marked by an adherence to data-driven conclusions that challenge the preconceptions of all ideological perspectives.

He joined the faculty of the Harvard Graduate School of Education's newly formed Center for Educational Policy Research in the late 1960s, where he and his collaborators produced *Inequality: A Reassessment of the Effect of Family and Schooling in America* (1972) and *Who Gets Ahead? The Determinants of Economic Success in America* (1979). *Inequality* challenged the received wisdom that equalizing educational opportunities would eliminate economic inequality by showing, not uncontroversially, that while both schools and family background have sizable effects on economic success, they still explain only a modest fraction of the total variation in income. *Who Gets Ahead?* argues for the importance of cognitive skills and personality, though it also highlights the roles of family background and schooling. The findings in these volumes catalyzed much subsequent research on the causes of economic inequality and on policies to reduce inequality.

In his influential 1992 book, *Rethinking Social Policy*, Jencks focuses on a set of policy issues that had risen to prominence in the preceding decade—including affirmative action, welfare, and the "underclass." His measured analyses aim to both illuminate and temper debates over those controversial issues by, as he writes, "unbundl[ing] the empirical and moral assumptions that traditional ideologies tie together" (Jencks 1992, p. 21). For example, while the nature versus nurture debate polarizes individuals on opposite ends of the political spectrum, Jencks argues that the question is neither completely resolvable—since the two interact—nor necessarily relevant to deciding what policy choices are best for dealing with poverty and inequality. Jencks's research has also challenged the validity of income-based measures of poverty, instead arguing for increased government efforts to directly track material hardship. His ensuing policy recommendations regarding the safety net emphasize both the importance of the responsibilities of society to its members and those of individuals to the collective.

The Homeless (1994) attributes the rise in the number of homeless people in the United States during the 1980s to the deinstitutionalization of the mentally ill, the crack-cocaine epidemic, the rise in long-term joblessness, the decline in the value of welfare benefits, the decline in marriage among women with children, and the decline in the availability of cheap "skid row" housing. It also proposes a series of policies aimed at different groups within the homeless population.

Jencks returned to the potential of human capital policies to reduce inequality in his edited volume (with Meredith Phillips), *The Black-White Test Score Gap* (1998). Contrary to his prior assertions that human capital policies would have little effect on reducing inequality, he argues that "reducing the test score gap is probably both necessary and sufficient for substantially reducing racial inequality in educational attainment and earnings" (Jencks and Phillips 1998, p. 4). This new conclusion is warranted because "the world has changed" (p. 4).

In addition to his empirically based analyses, Jencks has contributed to philosophical perspectives on the meaning of equal opportunity. Seemingly all political groups in the United States support the ideal of equal opportunity. In his essay, "Whom Must We Treat Equally for Educational Opportunity to be Equal" (1988), Jencks shows that the apparent consensus is due to the multiple meanings attached to the term. While equal opportunity's

popularity is largely due to its pliancy, Jencks laments that this impreciseness ultimately renders it of little use as a guide to policy.

After a career focused on the causes of inequality, Jencks turned his attention to its consequences for social outcomes such as family structure, educational attainment, and civic engagement. Jencks is known for his clear, penetrating writing style, and he frequently publishes in nonacademic venues such as *The New York Review of Books* and *The American Prospect*, where he serves on the editorial board. His numerous awards and honors include four book awards and memberships in the National Academy of Sciences, the American Philosophical Society, and the American Academy of Political and Social Science. Jencks has been the Malcolm Wiener Professor of Social Policy at Harvard University's Kennedy School of Government since 1998.

SEE ALSO *Affirmative Action; Class; Education, USA; Equal Opportunity; Family; Homelessness; Human Capital; Income Distribution; Inequality, Income; Poverty; Upward Mobility; Welfare*

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Andrew Clarkwest
David J. Harding

JENKINS ACTIVITY SURVEY

SEE *Personality, Type A/Type B.*

JENSEN, ARTHUR

SEE *Race and Psychology.*

JERVIS, ROBERT

1940–

Robert L. Jervis, the Adlai E. Stevenson Professor of International Politics at Columbia University since 1980 and president of the American Political Science Association (2000–2001), has been a leading figure in academic research on war, peace, and diplomacy. His theories explain how misperceptions, unintended consequences, and competitive dilemmas often confound the efforts of political leaders and strategists to escape from the insecurities of international competition.

The Logic of Images in International Relations (1970) introduced the distinction between *signals* and *indices* in strategic bargaining, later referred to as "cheap talk" and "costly signals." *Perception and Misperception in International Politics* (1976) assessed the applicability of a wide range of psychological propositions to the study of deterrence failures, conflict spirals, intelligence failures, strategic assessments, and diplomatic judgments and misjudgments. The central message is that perception is theory-driven, that decision makers tend to see what they expect to see, and that these expectations are often driven by stereotyped lessons of history, analogies, or routine scripts that provide short cuts in making assessments under uncertainty. Jervis examines common perceptual biases, such as the cognitive shortcuts that lead actors to overestimate the extent to which their opponents intend the harmful consequences of their actions and underestimate the extent to which those actions are a reaction to the observers' own initiatives.

Jervis's most cited article, "Cooperation Under the Security Dilemma" (1978), draws on Jean-Jacques Rousseau's (1712–1778) parable of the stag hunt and the prisoner's dilemma game to show how states seeking only to defend the status quo can end up fighting due to the fears engendered by the situation of anarchy. Jervis defines a *security dilemma* as a situation in which any state's efforts to increase its security necessarily decreases the security of others. In this situation, one side's efforts to escape its insecurity through an arms buildup or through the conquest of strategic territory will inevitably trigger similar

behavior by other security-conscious actors. Both strategic circumstances and the whole array of perceptual biases discussed in Jervis's earlier work shape behavior under the security dilemma. Offensive military technology and barrier-free geography heighten vulnerability to attack and thus intensify the security dilemma. Strategists and political leaders often misestimate the ease of attacking or defending, misperceive the balance between offensive and defensive incentives, and err in their judgment of the likelihood that the other "stag hunters" will defect from cooperation.

Applying these ideas to the problem of nuclear deterrence, Jervis explained why nuclear war-fighting is a delusion and how a stable balance of terror relaxes the security dilemma. While building on earlier theories of deterrence, Jervis added important new insights by drawing on new ideas from cognitive psychology. For example, psychologists have found that most people are risk-averse when faced with the chance to grab gains, but are more risk-acceptant in forestalling losses. Thus, Jervis reasoned that the side defending the status quo, and in particular the side defending its vital interests, should be more willing to run the shared risk of mutual annihilation. If so, the nuclear stalemate ought to make threats to change the status quo less credible and consequently should ease the security dilemma. In 1990 Jervis's *The Meaning of the Nuclear Revolution* (1989) won the Grawemeyer Award for the book with the Best Ideas for Improving World Order.

Jervis received his BA from Oberlin College in 1962 and his PhD from the University of California, Berkeley, in 1968. He also taught at the University of California, Los Angeles (1974–1980), and Harvard University (1968–1974).

SEE ALSO *American Political Science Association; Conflict; Cooperation; Deterrence; Deterrence, Mutual; Diplomacy; International Relations; National Security; Risk; Risk Neutrality; Risk Takers; Strategic Behavior; Strategic Games; Weaponry, Nuclear*

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Jack Snyder

JESUS CHRIST

Jesus of Nazareth, one of the most influential humans in history, lives on as Jesus Christ. One-third of the human race, almost 2 billion people, identify with his name, calling themselves Christians. He is influential and believers identify with him because most of them see him as not merely human but as divine, whether as "Son of God" or in some other way uniquely bearing divine nature. Beyond the circle of believers as well as within it, many admire him, cite him, and seek to apply his teachings—especially about love—in human affairs apart from what most Christians claim about his divine character or his deity.

This fame and acclaim are astonishing, given the humbleness of his circumstances, the obscurity of origins and details about his life, and the arguments from the beginning about the meaning of his ministry and his character as being both human and divine. As for the circumstances, he was born to Mary, a young woman of Nazareth in Galilee, probably from four to six years "before Christ." That confusing calendar reference results from adjustments in chronology made in more modern times. The period found Israel, which was conceived—also by Jesus—to be God's special people, under the rule of

Romans, to whom they grudgingly paid taxes and against whom there were occasional revolts. Jesus himself came to be regarded as suspicious both by Jewish authorities in religion and in their relations to the Roman rulers as well as to the Romans themselves. In the mixture of loyalties and disloyalties, Jesus was executed by crucifixion. His dispersed followers regathered instantly, convinced that he was risen from the dead and that many among them had "seen the Lord" after his death. Forty days later they witnessed his Ascension and adored him as one who, in the words of the best-known Christian creed, "sits at the right-hand of his Father" in heaven and as invisible ruler of the world.

THE GOSPEL ACCOUNTS OF JESUS

Historians know this information not because a single Roman or Jewish historian left a record of any sort before Jesus' death, but because stories cherished by Jesus' immediate followers, quotations of his sayings and parables, and ponderings of the meaning of his divine and human character inspired his followers, or disciples, to produce four documents called "gospels," which were transmissions of "good news" about him. Three of them, called Matthew, Mark, and Luke, were edited into the forms contained in the modern Bible, probably a generation after his death. The authors or editors of these had slightly different intentions, depending upon whether they wanted to attract Jewish or Gentile readers, or for some other purpose. Yet, for all their variations and despite some conflicts in their accounts, overall they present a coherent portrait. The Fourth Gospel, called John, may have come around the end of the first century of the Common Era, and includes more reflection on the meaning of Jesus' words and works. In the centuries that followed, numbers of other "gospels" appeared. While some of them have advocates in the twenty-first century, none of them were accepted into the canon, the authorized collection called the New Testament that was approved by church leaders in the second and third centuries.

THE REFLECTION OF JESUS IN THE LETTERS OF PAUL

Before the gospels appeared, however, reflection on Jesus, now called "the Christ," which meant "the anointed one of God" who had been foreseen and promised in the Hebrew Scriptures—the "Messiah" whom devout Jews still await—was developed and spread most notably by Saul of Tarsus, called Paul the Apostle after his own conversion. In his letters collected in the New Testament and in stories within the book of Acts, which can be seen as "Volume Two" after Luke's Gospel as "Volume One," Paul describes himself as a persecutor of Christian believers until he had an ecstatic experience of Jesus, who called him to a new vocation. Paul's letters make very few references to the life of Jesus as it is described in the Gospels, but they concentrate on the meaning of his death and resurrection. In such writings Jesus is no longer the rabbi, healer, and wonder-worker of Nazareth so much as the risen and exalted Lord of all creation. Through faith in the divine grace God gave to believers in Jesus the crucified and self-sacrificial Savior from sin and divine condemnation, these believers are gathered as a kind of mystical "Body of Christ" and are to be raised from the dead as he was.

The understandings of who Jesus was were vastly diverse. President Thomas Jefferson, almost eighteen hundred years after Jesus' death, despised the assertions and beliefs about Jesus the miracle-maker and exalted divine Lord. Like so many other advocates of the Enlightenment in his century and many admirers of Jesus in the twenty-first century, he wanted to rescue Jesus from the priests and to see him as the greatest exemplar of love and teacher of justice. At the opposite extreme there have been through all of Christian history movements that can be classified as "docetic," for in their vision Jesus only *appeared* to be a mortal. Attempts to reconcile the extremes, represented already in the first Christian centuries by those who stressed his "human nature" versus those who overstressed the divine nature, became the preoccupying agenda item for a series of church councils, whose influence extended from the fourth century into modern times and into Christian discourse and teaching on all continents.

THE SPREAD OF WITNESS TO JESUS

As for these councils: According to the book of Acts and the New Testament letters of Paul, Jewish religious authorities in Jerusalem and Roman rulers there and elsewhere began to persecute followers of Jesus. Some saw them as subversive of Jewish temple practices and others as threats to Roman rule throughout the Empire. Very soon after Jesus' death and resurrection, according to the book of Acts, a witness named Stephen was stoned to death in Jerusalem. According to tradition, in 64 CE both Paul and a leading disciple named Peter were executed in Rome. While many followers of Jesus in these times were basically nonpolitical, they refused to engage in simple acts of what to them looked like betrayals of Jesus, such as offering a pinch of incense on the emperor's shrine, the emperors then being conceived themselves as somehow divine.

The boldness of the apostles, as early articulators and witnesses were called, and then the readiness of their followers to face whatever the authorities threatened because of their faith in Jesus, only added luster to his reputation

and served to attract ever more followers. By the second century followers of Jesus, called not "Jesusians" or "Jesusists" but "Christians," were spreading north and east beyond Antioch into present-day Syria and through Asia Minor, present-day Turkey. Early strongholds of belief in Jesus were in northern Africa, where notable "church fathers" held sway. In both Asia and Africa some followers took the call of Jesus to mean denial of the pleasures of the world, and went to the desert and other remote places, there in isolation of community to become monks. They pioneered in a practice that through the twenty centuries had led to special devotion to Jesus and self-sacrifice in his honor and following his commands.

Those commands, however, took their impetus from Gospel records that embody and impart some apparently contradictory impulses and commands. On one hand, the Gospel writers remember Jesus calling for drastic self-renunciation. Followers were to deny themselves, take up their cross—a reference to the mode of his death by crucifixion—and even to desert their families and familial obligations.

On the other hand, and just as emphatically, the Gospel writers depict Jesus as enjoying life and teaching others to do the same. His special form of discourse was in parables, short stories that usually included a kind of overturning of conventional ways of looking at reality. It has been said that one will not understand these preserved parables without recognizing that they turn everything topsy-turvy. The proud and powerful and respectable will be dumped and debased, while the humble and weak and outcast will be privileged in what Jesus announced as "the Kingdom of God." Kingdom of God did not mean an early reign, since the Gospels have him saying that his kingdom was not of this world, but instead focused on the sovereign saving activity of God manifested in Jesus who was in their midst. So "the last will be first" and the first last; no one could enter the kingdom, he had said, unless they changed and became "like a little child;" the lost sheep matters more than those at home in the flock. More shockingly, Jesus favored the company at table of prostitutes, the hated tax collectors, and others seen as marginal or outcast by respectable people.

JESUS ON JUSTICE AND LOVE

The Gospel portraits show Jesus as both an announcer of God's justice and imparter of God's love. As for justice, a series of sayings preserved as the Sermon on the Mount or, in another gospel, the Sermon on the Plain, called for radical adherence to the call of God to effect justice in the world. The discourse combines such stern language with words of blessing and comfort, sayings followers have cherished through the centuries. These announce that "blessed are" the peacemakers and those who hunger and thirst after righteousness.

It is not likely that Jesus would have remained such a powerful and attractive force to all conditions and sorts of people, from those in royal courts to those falsely imprisoned or abandoned by others, were it not for the Gospels' portraits and preserved sayings about love. Jesus in these accounts showed extreme devotion to the law of God, also as it was believed to be condensed in the Ten Commandments and in many other laws preserved in the Hebrew Scriptures and declared as applicable in Jesus' own time. He was even more extreme in declaring that this Law of God had its limits in the face of human need. He saw the value of the Sabbath, the divinely commanded day of rest, yet when his disciples were desperately hungry he allowed them to prepare grain for food, and when someone needed healing, he healed, scorning those who invoked the Law of God over the call to love. He was particularly confrontational when he faced religious authorities that overlooked human need in the name of their interpretations of divine commands. When asked to summarize all the commandments he drew them down to two: the love of God and the love of neighbors, or others. Every serious return to the teachings of Jesus focuses on both the seriousness of his demands for justice and the abundance of his calls to love, the love that followers saw in his giving of himself to death.

JESUS IN PRAYER AND DOCTRINE

To believing Christians in all cultures, Jesus is not merely an historical figure, written about and admired after twenty centuries. Most of them regard him as a living presence. The Gospels hear him saying that when two or three followers are gathered in his name, he is there among them, so they regularly worship in his name. Some pray *to* him, but the main interest for Christians is to pray *through* him, following his word that they are to approach God, the one he called "Abba," an endearing word for "Father," in his name. Catholic Christianity in many denominational forms is sacramental, and its adherents believe that Jesus is especially present among them in the sacred meal described in the Gospels as occurring first the night before he was killed and which he commanded that they should repeat.

Second, Jesus has been present in visual representations. No one knows what he looked like, and in all societies and cultures artists portray him as an ideal figure in their own. In the Eastern Orthodox churches he appears in very formal guise in icons. In Latin (in Europe, in Spanish cultures; in the Western Hemisphere, in Latin American cultures), he is usually portrayed as a whipped, bleeding sufferer on the cross. In other cultures he is

domesticated and portrayed as a kind of bourgeois comforter of children and quiet teacher.

Third, Jesus lives on in doctrine or dogma. While the gospels show him uninterested in abstractions and distant from formulations, it was natural that as Hebrew-speaking Jewish followers of Jesus moved into the larger culture today called "Greco-Roman"—the Gospels about Jesus and other speakers of Aramaic and Hebrew were themselves written in common Greek—teachers found it important to define how Jesus differed from others for whom divine claims were made. They had to show how he related to his divine Father and, since the New Testament writings made much of this, to the Holy Spirit. In the early church councils leaders combined Hebrew biblical testimony and simple stories with Greek philosophical themes. They had to show how to make sense in their world of their belief that the human Jesus was also the exalted Lord. They were pressed to show to Jews and others that and how they were monotheists, believers in one God, and not in two or, with the Holy Spirit, in three. Out of this grew the doctrine of the divine Trinity, in which Jesus is "of one being" with the Father and is also a true human.

JESUS IN SOCIETY AND POLITICS

Those interested in the social sciences—history, sociology, and political science—may be aware of the other three modes but they also study how devotion to Jesus inspires ethical response among those who want to be numbered as his followers. They pay attention to the movements and church bodies that exist because of the desire by believers to respond to his calls and promises. In his name leaders helped guide the persecuted believers to situations of power. After Constantine in the fourth century, both in the Roman West and the "Constatinopolitan" East, Jesus, as represented by bishops and other church leaders, shared earthly power with emperors and magistrates. The name of Jesus was invoked by his followers against their and, they believed, his enemies. His cross appeared on the banners of Crusaders who more than a thousand years after Jesus carried on campaigns against those who occupied lands in which he lived or sites devoted to worship of him and to his memory. In both the Christian West and East, both sides invoked his blessing on their troops and, when victorious, credited him, however all these military doings seemed to have departed from the humble portrait of one who called them to be peacemakers.

No portrait of Jesus and invocation of his memory would be fair, however, did one not notice that more than the warrior, Jesus remains the peacemaker and bears the image of the healer. He called disciples to treat the homeless, the hungry, the imprisoned, and the ill, as if they were treating him—or even *because* they were treating him, as he lived in people of need. In prayers and hymns his name lives on as someone to be relied on and invoked by those who are troubled, ill, or dying. If these invocations seem far removed from those that see him as a ruler through representatives on Earth, as the leader of "Christian soldiers, marching as to war," the anticipations of both are present in the writings of Paul, the portraits of the Gospel, and the many efforts through the ages by believers to come to terms with someone they believe is obviously human and, in faith, adored and often followed as divine.

SEE ALSO *Christianity; Fundamentalism, Christian; Liberation Theology; Religion*

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Martin E. Marty

JEWISH DIASPORA

Diasporas in general and the Jewish Diaspora in particular are very important complex sociopolitical entities that are playing a growing role in most states worldwide, as well as in regional, international and transnational politics. The diaspora phenomenon, including the Jewish Diaspora, is an expanding field of study.

Many people worldwide, including scholars—especially those adhering to the instrumentalist and constructivist approaches to the origins and development of ethnic groups, nations, and diasporas—consider the Jewish Diaspora as a modern or even a postmodern phenomenon. While it is true that the period since the mid-nineteenth century has seen a marked change in the entire diasporic phenomenon—including the Jewish Diaspora—the Jewish Diaspora, like other ancient diasporas, has maintained many of its "old" characteristics.

THE HISTORY OF THE JEWISH DIASPORA

The Jewish Diaspora was established as a result of both voluntary and forced migrations of Jews out of their ancient homeland—Eretz Israel (the Land of Israel). Later, Jews were either exiled from their host countries (such as Spain and England in the Middle Ages and Middle Eastern states in the twentieth century) or voluntarily migrated to secondary and tertiary host countries. The forced and voluntary migrations that resulted in the establishment of the Diaspora began much earlier than what has been regarded as the "official" date of the

Diaspora's establishment, that is, the creation of the Jewish Diaspora in Babylon.

Return movements of Hebrews from Egypt (the Exodus) and other Middle Eastern countries to the Land of Israel have occurred throughout antiquity and the Middle Ages. Nevertheless, Jewish communities continued to exist in these countries after such return migrations. Hence, a Jewish Diaspora has persisted since antiquity.

The expulsion of the Israelites by the Assyrians and of the Judeans by the Babylonians only added new larger groups to the already-existing Jewish diasporic communities in various parts of the Middle East. This means that after the initial establishment of the Jewish diasporic entities in Egypt and Syria, new Jewish diasporic entities were established in various parts of the Middle East and Asia Minor and later in the Balkans. The Babylonian Jewish Diaspora served as a model because the Jews created there an "autonomous diasporic sociopolitical system," in which the Diaspora, rather than the devastated homeland, became the national center and played the crucial role in the nation's persistence, cultural development, and political influence.

The establishments of the Greek Empire and later the Roman Empire, both of which controlled vast territories, facilitated both the permanent settlement of Jews and the establishment of communities in various parts of these empires and the communication between the various dispersed Jewish communities.

This expansionist trend continued during most of the Middle Ages. The Jewish Diaspora spread from the eastern Middle East, Greece, and Rome to North Africa, Europe, and Asia. Later, partly voluntarily and partly because of anti-Semitism, anti-Jewishness, and hatred, Jews migrated and established diasporic entities in South and Latin America, and then they moved to the United States, Canada, Australia, and South Africa. In fact, the center did not shift back to the homeland even when the regional geopolitical situation changed.

MORE RECENT DEVELOPMENTS

The Zionist Movement, which advocated the return to Palestine and the establishment of a Jewish independent state there, was established toward the end of the nineteenth century and during the early twentieth century. Because of growing temptations of assimilation and of integration into democratizing and secularizing host lands, on the one hand, and because of persecution, anti-Semitism, and pogroms, on the other hand, the most urgent problem then facing Jewry was how to prevent defection of individuals and groups from Judaism and from membership in the Diaspora's communities. Thus, already at that historical juncture, the problem was how to ensure continuity and enhance the readiness of Jews to identify as such, as a basis for a solidarity that could enable Jewish diasporic joint action.

Partly because of the Diaspora's geographic dispersion and partly because of ideological pluralism among Diaspora Jews, it was difficult to reach consensus about the preferable strategy for the nation's survival and persistence. Hence, during the late nineteenth and early twentieth centuries there emerged various approaches to these questions, and virtually all shades of strategies gained adherents. These included assimilation, integration, participation in class struggle (namely, adopting the socialist and social-democratic solutions), cultural and political autonomy, and corporatism, the latter of which meant formal representation of the Jewish community vis-à-vis host governments, such as in Great Britain.

During this period, the main new facet was the birth of the separatist Zionist movement's strategy, which called for the Jews' return to Palestine and the reestablishment there of their own sovereign state.

Prior to World War II (1939–1945), the emerging but small Zionist movement faced tough intranational competition with other Jewish movements that had emerged in the Diaspora. Actually, prior to the emergence of Nazism and World War II, Zionism was a marginal movement in world Jewry, and its strategy did not attract the majority of Jews. The impact of that war, especially the painful realization of the full scope of the Holocaust and its disastrous consequences, created the right backdrop for a breakthrough by the Zionist movement. Many Diaspora Jews realized that the Zionist strategy was not only feasible but also an appealing solution to the problem of Jewish survival and national revival. Though the situation was ripe for the implementation of the Zionist strategy, membership in and support of the Zionist movement was still rather limited.

DEBATES ABOUT FUNDAMENTALS

The efforts to form consensus around the Zionist solution generated many delicate questions about central issues, some of which are still debated in the early twenty-first century. Among these, an important issue has been what should be the relations between the Zionists and other Jewish groups that opted for other strategies. Another unsolved issue revolves around reconciling the various elements in the national identity and perceptions. Because this fundamental question has not been solved, the issues of the principles that determine Israeli citizenship, and consequently the relations between Israel and certain segments in the Diaspora, have remained unsolved.

An additional debate about essentials that has not been concluded concerns the centrality of Israel versus the autonomy of diasporic communities. In two large and

strong diasporic communities—the U.S. and French communities—strong inclinations toward cultural and political self-sufficiency and freedom of action have emerged vis-à-vis Israel. Connected to these trends, new attitudes have emerged concerning certain practical issues, such as loyalty to Israel versus host countries, and Israel's "right" to influence Diaspora leaders and members in order to increase support for its endeavors.

Furthermore, there was and there still is no consensus between Diaspora and Israeli leaders concerning the role of the Diaspora in the establishment of the Israeli state. In the wake of World War II, this historical act was promoted and actually implemented by leaders and parties adopting an ideology that emphasized the predominance of the Yishuv (the Jewish community in Palestine) in the Jewish nation.

After the Holocaust, when the Jews still constituted a stateless diaspora, large segments in various Jewish communities adopted an exceptionally supportive strategy toward the Jewish state. Later this strategy changed. In most Western democracies, where Jewish communities have been able to act relatively freely, these entities have adopted a communal strategy. Essentially, this strategy means not only moderate social, political, and economic behavior, but it also has determined the nature of the organizations the Diaspora operates. On a spectrum of strategies that runs from an assimilationist poll, on the one hand, to a return to the homeland, on the other hand, the communal strategy is regarded as one that poses major threats neither to the host countries nor to the members of the Diaspora. By adopting this strategy the Diaspora members implicitly pronounce that they accept the main social, political, and economic rules of the game in the host countries and that only under extreme circumstances would they adopt dual loyalties. When fully implemented, this pattern diminishes potential and actual controversies and clashes between the Diaspora and its host lands.

THE EFFECTS OF THE ESTABLISHMENT OF THE STATE OF ISRAEL

The establishment of Israel in 1948 marked a fundamental change in the position of the Jewish Diaspora. Whereas prior to its establishment the Jews constituted a "classical stateless diaspora," afterward the Jews dwelling outside Israel should be regarded as a "classical state-based diaspora." Since 1948 the Jewish Diaspora has shown great similarity to other classical diasporas whose connections are with independent homelands.

After the establishment of Israel a new group joined the classical Jewish Diaspora—Israeli emigrants. Most of these Israelis emigrated to and settled in various host countries as a result of voluntary decisions, and therefore they also hardly regard their situation as exilic.

The Land of Israel is a crucial element in the ethnonational-religious identity of Diaspora Jews. Throughout history the collective memories of the homeland remained vivid in the hearts and minds of Diaspora Jews. The spiritual and emotional ties of Jews, though not all Jews, to the ancient homeland contributed to a sense of national solidarity. Later this solidarity also served as a basis for various activities on behalf of that segment of the nation that dwelled in the homeland. Such support peaked in the wake of the establishment of modern Israel, and still later during and after the 1967 and 1973 wars. Since then general support for the Jewish state has been declining.

Similar to the situation with all other diasporas, the Jews form a majority only in Israel, and only small minorities in all their host countries. In fact, the majority of the nation dwells outside the homeland—most of them in relative security, economic prosperity, and cultural bloom. These facts and Israel's problematic security situation have raised the issue of the location of the national center, and of its corollary, the question of peripheriality in this nation. During the first two decades after the establishment of Israel it seemed as if the Diaspora recognized the new nation-state as the main Jewish center, and its policies and actions determined developments in the Diaspora.

By the early twenty-first century, there were at the least four major Jewish centers—the American, French, Russian, and Israeli. Among these centers there is implicit and explicit, continuous tacit competition about predominance in the entire nation.

In most of the host countries, especially the United States, Canada, Great Britain, France, Australia, Mexico, and Peru, there are relatively large groups of core Jews who have well integrated into these societies, political systems, and economies. These Jews—most of whom were in their forties and fifties in the early twenty-first century—obtained an academic education and became affluent. Many of the members of these well-integrated groups are in high-tech fields, academia, and other professional occupations, such as journalism, medicine, banking, insurance, and law. Some of them belong to the richer segments in these countries, but most of the members of these groups belong to the middle and upper-middle class. The main reasons for these achievements are: Jews' determination to continue to survive and overcome actual and perceived difficulties in their host lands, their painful memories of historical deprivation and persecution, family and communal support and encouragement, a strong emphasis on education within their families and communities (education being a precondition for economic success), and the existence of Jewish communal and international networks and systems of communication.

There are, however, still many Jews permanently residing in the above-mentioned and other host lands, such as east and central European and some Latin and South American countries. These Jews are typically older and belong to lower income groups or to the working class. These poorer Jews need support from their host governments and their Jewish communities. This last factor affects the allocation of the resources that are at the disposal of the various Jewish diasporic communities. When the political and economic conditions in such host lands become more difficult, such Jews get support from the wealthier Jewish communities. This has been the case, for example, with the Jewish refugees created by World War II, with Jews in Middle Eastern and North African countries until the 1950s, and, more recently, with Ethiopian Jews.

By the early twenty-first century, the return of Jews to countries where they were persecuted and from which they were expelled had also become apparent. The "return" of Jews to host countries such as Germany, Spain, and Austria, shows that Israel is not regarded as the undisputed national center. Moreover, the majority of Diaspora Jews has stayed and will be staying in their host countries.

Despite persecution and migration to secondary and tertiary host countries, on the one hand, and acceptance by host societies and governments that result in assimilation or full integration, on the other hand, in various host countries a Diaspora core is maintained. These cores of devout Jews maintain their ethnonational and religious identity and resist assimilation or full integration.

In the past, the religious element in the Jewish identity was essential for the entire nation. Since World War II, however, this element has lost some of its significance. Though religious Jews claim that they constitute the main barrier against a sweeping assimilation that would result in the disappearance of Jewry, the ethnonational factor now serves as the basis for the continuous existence of many Jewish communities all over the world.

THE COMPARATIVE PERSPECTIVE

Because of its origins, endurance, and attachment to its ancient homeland, it is not surprising that the Jewish Diaspora has been considered an imperishable "classical," "archetypal," and "mobilized" diaspora. Some observers, however, are pessimistic about its future survival. The gist of the pessimists' argument is that the new pluralism, multiculturalism, and tolerance toward the "others," which prevail in the more democratic host countries, speed up the assimilatory tendencies that demographically decimate world Jewry.

This diaspora should now be regarded as an ethnonational–religious state–linked diaspora that is similar to other older and newer existing diasporas. In fact, the Jewish Diaspora fits a collective profile of ethnonational diasporas (Cohen 1997; Sheffer 2006). As applied to the Jewish case, the profile includes a number of elements.

As has been shown in the historical analysis above, the Jewish Diaspora was created as a result of voluntary and forced migration out of its homeland—Eretz Israel—and out of other host countries, and eventually as a result of its members' permanent settlement in host countries. This diaspora has remained a rather small minority in all its host lands; after permanently settling in their host lands, the Diaspora's members have maintained their ethnonational identity. This identity is buttressed by strong religious beliefs. The identity of this entity's members is based on a combination of nonessentialist-primordial, psychological, and instrumental factors. The nonessentialist-primordial factors include the idea of common ancestry, biological connections, a common historical language, collective historical memories—among which the twentieth-century Holocaust is important—a discernable degree of national solidarity, a deeply rooted connection to the ancient homeland, and similar patterns of collective behavior. This identity is also based on instrumental factors concerning various benefits that derive from being members of the Diaspora. The strategy of many Jewish diasporic entities is communalist and is implemented through multiple organizations and active trans-state networks that protect and promote the diaspora's political and economic interests. Another element of the profile is that most members of the Diaspora do not regard their existence in their host countries as exilic.

On the basis of such identity and identification, a sense of solidarity emerged and has been sustained. Such solidarity has facilitated continuous connections between the elites and active members on the grassroots level, which pertain to the cultural, social, economic, and political matters of the entire entity. In turn, these constitute determining factors in the relations among Jewish diasporans, their host countries, their homeland, their brethren in other host lands, and other international actors.

All the above-mentioned factors serve as the bases for organization and collective action. An essential purpose of these organizations and activities is to ensure the Diaspora's capability to survive and to promote its interests in host lands and in the homeland, as well as to maintain cultural, social, economic, and political connections with the homeland and with other segments of the same nation.

Wherever and whenever they are free to choose, Jewish diasporans tend to adopt distinct strategies concerning their existence in their host lands and with their homeland. Generally, core members of the Jewish Diaspora adopt the communalist strategy, which is intended to ensure integration, rather than assimilation,

in the host countries. This strategy, coupled with the wish to maintain contacts with the homeland determines the nature of the organizations that the Diaspora establishes, and also leads them to establish elaborate and labyrinthine trans-state networks.

The establishment of the Diaspora's organizations, including the trans-state networks, and their subsequent activities, raises complex issues of loyalty. To avoid and prevent undesirable clashes between the Diaspora and its host societies and governments concerning the laws of the land and the norms of the dominant segments in the host societies, the Diaspora's members usually accept these norms and comply with the laws. Nevertheless, during certain periods, especially when the homeland or the host country finds themselves in the midst of crises, or when the Diaspora encounters severe difficulties, certain segments in the host societies develop negative attitudes about the Diaspora's disloyalty. On certain occasions, such tensions and clashes lead to the homeland's intervention on behalf of its Diaspora or meddling in its affairs.

As noted above, despite certain pessimistic predictions of the demise of this ancient diaspora, all indicators show that like other similar diasporas, the Jewish Diaspora will continue to exist and even prosper.

SEE ALSO *Anti-Semitism; Assimilation; Citizenship; Communalism; Ethnicity; Holocaust, The; Jews; Judaism; Migration; Pogroms; Socialism; Statelessness; Zionism*

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JEWS

According to the Torah, the history of the Jewish people begins with a call to the patriarch Abraham to abandon his ancestors' idol worship and to "Get thee out from thy country … unto the land that I will show thee" (Gen. 22:1). Jewish history and identity, as recounted within the people's own tradition, thus begin with a command, a renunciation, and a departure. The Torah also recounts the earliest Jewish generations' experience of exile in Egypt, followed by the miraculous deliverance, return, and reconquest of that divinely promised land. However, current archaeological consensus is unable to agree on confirmation of key moments in the biblical account.

The name *Jew* and its various cognates (e.g., French *Juif*, German *Jude*, Arabic *yahud*) all stem from the name *Judah*, the ancient kingdom that shared the name of one of the twelve sons of the biblical patriarch Jacob. Other names for the group are *Hebrew* (generally referring to the ancient period, but also the name of the main ethnic language) and *Israel* (a name of Jacob in the Bible and also the name of the second ancient Jewish kingdom).

REASONS FOR AND LOCATIONS OF THE ORIGINAL DIASPORA

Jews are known simultaneously for their lasting devotion to their homeland (Israel, Zion, Palestine, or simply "the Land") between the eastern shore of the Mediterranean and the Jordan River, and for their long endurance in conditions of diaspora or exile. The main historical exiles of ancient Jewry followed the destruction in 586 BCE, by the Babylonians, of the ritual center in Jerusalem known today as the First Temple, and then the destruction in 70 CE, by the Romans, of the Second Temple. However, Jewish *diaspora*—the existence of stable and persistent Jewish communities outside the historical homeland—long predates the loss of the ritual center and of Jewish sovereignty. The ancient Jewish community of Alexandria, with its rich Hellenic culture and regular remission of tribute to Jerusalem, is only the most dramatic example of such a pre-exilic diaspora.

Babylonia quickly became a key and powerful center of ancient Jewish life, throughout the entire Second Temple period and beyond. In the wake of the Roman exile, groups of religious leaders collectively known to current scholarship as "the Rabbis" devoted generations to the elaboration and transmission of the Oral Torah, eventually redacted into the texts known as the Mishnah, and in the commentaries on the Mishnah known respectively as the Babylonian Talmud and the Jerusalem or "Palestinian" Talmud. Rabbinic Judaism was a minority formation in its earliest centuries (outnumbered by what is broadly known as Hellenic Judaism and by other rival formations, eventually including its only surviving rival,

known as Karaite Judaism). Despite continuing sentimental attachment to the ancient homeland, the Babylonian Talmud retained far more central authority than its Jerusalem rival. The Rabbinic models of scriptural interpretation, legal adaptation, and substitution of prayer for Temple ritual came to serve as the fundamental template for Jewish communal life throughout various diasporas until the modern period.

BASIC RELIGIOUS BELIEFS AND PRACTICES

The notion of "chosenness" is understood in Jewish tradition in terms of obligation and reward. The Book of Deuteronomy recounts the Hebrew nation's reaffirmation of God's original covenant with Abraham; the people will keep God's "statutes" and "commandments" and "ordinances," and God will in turn keep them as "His own treasure" (*am segula*) (Deut. 26:16–18). Various examples of the literary genre of commentary known as *midrash* recount God's prior offer of the Torah to other nations, each of which is unable to accept one of its major premises and thus refuses to enter into the divine covenant.

Though this deity is sometimes referred to as "the God of our ancestors" or "the God of Israel," the biblical narrative—and especially the Prophetic writings—reflect the conviction that, as the creator of all being and of all humanity, this divinity's sphere of power and interest is not limited to one nation or territory. Moreover, in sharp contrast to some other national epics, the origin of the people in human history is separated from the original creation of the earth and its creatures. Accordingly, Jewish tradition and rhetoric view the non-Jewish "other" through a range of metaphorical frameworks: as "cousins," descended through a mythic genealogy from the common human ancestors Adam and Eve; as instruments of a divine plan centrally dependent on the covenant and on the Jews' always inadequate performance thereof; and occasionally as creatures equally precious in the sight of God: "Are ye not as the children of the Ethiopians unto Me, saith the Lord?" (Amos 9:7).

At the ideological plane, diaspora Jewish life has been played out in this continuing and productive tension between ethnocentrism and universalism. The synagogue, wherever it is, becomes a form of *mikdash me'at*, a "miniature" substitute for the lost Temple in Jerusalem. The study of the forms of Temple worship and recitation of the order of sacrifices both recall ancient sovereignty and give form to dreams of messianic restoration. The study of sacred texts transcends mere recitation through a chain of commentaries that both preserve understandings and distort them to make the authorities fit new circumstances. The Rabbinic academies (*yeshivot*) of ancient Babylonia come to serve as models for the new academies in eastern Europe devoted to the defense and reinvention of Talmud study in response to modern forms of knowledge and inquiry.

Practice—the meticulous and highly rationalized observance of positive commandments and prohibitions—is central to the conduct of a traditionally Jewish life. Laws of separation and purity (such as dietary limitations, bans on the mixing of certain species in agriculture, and menstrual taboos) both help to order the social world and sustain the larger lifeworld separation distinguishing Jews from non-Jews. During the period of Jewish sovereignty, many of these laws served to underscore the special sacredness of the land itself. In diaspora, their function in preventing the dissolution of the Jews as a kin and ideological group become more salient.

Jewish law and custom are all highly androcentric, though not univocally so. They are heteronormative, though they do not reflect the gender structures of the post-Enlightenment European bourgeoisie, from the perspective of which the Rabbinic ideal of the quiet, studious, "tent-dwelling" Jacob may even seem effeminate (see Boyarin 2004). Men under traditional Jewish law exclusively enjoy various rights and powers, such as serving as witnesses, as members of prayer quorums, and as the initiators of divorce. Apologetic accounts stress the key role of women in the family, but at various points women in Jewish communities have also held important economic roles, and the Talmud also makes clear the rights of women as property holders and contracting parties in ancient Babylonia.

Since the Prophetic response to the nation's demoralization in the wake of the first and second exiles, the messianic promise of ultimate redemption and restoration—sometimes accompanied by visions of universal peace and well-being—has been a core tenet of Jewish belief, ritual, and culture. Messianism has also been a central motivating theme of the powerful and continuing tradition of Jewish mysticism, which has sometimes coexisted with and sometimes contended with Rabbinic textualism. Some leading scholars have argued that Jewish messianism is distinctly characterized by the expectation of the advent of the messiah as a historical and public event, over and against ideologies of individual redemption.

JEWISHNESS AND ITS OTHERS

Since earliest times, and including periods of state sovereignty, the Jewish collective has often found itself either a client of or in conflict with larger powers. Much Prophetic discourse turns on the geopolitical dilemma of choosing between loyalty to the rival empires of Assyria and Egypt. The biblical narrative of enslavement and deliverance turns on an image of the Egyptians as heartless and

unworthy emperors. The destruction of the Second Temple resulted in large part from Jewish resistance to incorporation within the Roman provincial administrative system. Christianity was an outgrowth of certain messianic trends among Jews, and there has been growing scholarly acknowledgment in recent years not only of the significance of Jesus' Jewishness, but the continued Jewishness of many of the first "Christians," including Paul. Yet Christianity became radically distinguished from, and powerfully opposed to, Judaism and Jewishness once it became the state religion of the Roman Empire. Similarly, Islam arose in Arabia in a social milieu where Jews were a prominent part of the mix, yet the rejection of Muhammad's (c. 570–632) message by the local Jewish community gave rise to strains in Islam that are at best ambivalent toward Jews and at worst overtly hostile.

ENGAGEMENT IN WORLD CIVILIZATION

Jewish communities eventually spread (or were established by conversion) throughout the circum-Mediterranean region, Central Asia, and eastern and western Europe. With the exception of sub-Saharan Africa and much of East Asia (there were smaller Jewish communities for centuries in India and China), Jews were thus found throughout the Old World. Throughout the medieval and early modern periods, Jews played prominent roles in the world system of trade and communication that stretched from the Atlantic coast of Europe through the Mediterranean and into Asia, and for centuries, Jewish communities were concentrated in Islamic lands, ranging from Iberia through North Africa and the Middle East. Yet that world system was unstable, and Crusader anti-Muslim zeal sometimes spilled over into murderous anti-Jewish violence.

During the High Middle Ages, in a complex process tied to the formation of nascent nation-states, long-established Jewish communities were forced out of various parts of western Europe; many of their number migrated to regions in eastern Europe that were then being colonized by Christian nobility, peasants, and clergy. More than a century of forced conversions and persecutions culminated in the expulsion of Jews from Iberia at the end of the fifteenth century. While this ended centuries of fruitful and conflicted multireligious contact that had produced Jewish luminaries such as Moses Maimonides (1135–1204), Abraham Ibn Ezra (1092–1167), and Solomon Ibn Gabirol (c. 1021–1058), it also gave rise to new, flourishing, and influential communities across the Ottoman Empire, known as Sephardim and speaking the Judeo-Spanish language of Ladino. However, a dramatic rise in the Jewish population of eastern Europe during the nineteenth century radically shifted the "center of gravity" of Jewish communities in the modern period.

THREATS AND SOLUTIONS TO EXISTENCE IN MODERNITY

Modern European nationalism, the rise of democratic citizenship, and Enlightenment ideologies of individual autonomy and of freedom of conscience all presented both dangers and opportunities for Jews and Jewishness. Distinctive legal status—both limitations and protections—for Jews began to crumble. In western Europe, the National Assembly during the French Revolution of 1789 heralded the abolition of autonomous Jewish communities with the famous phrase, "To the Jews as a nation, nothing; to Jews as individuals, everything." In modernizing Germany, Jews were prominent in literature, science, and the arts, though they continued to suffer social and institutional discrimination. In the Russian Empire, "the prisonhouse of nations," Jewish communities faced a bewildering and inconsistent sequence and array of liberalizing gestures, increasing restrictions on settlement and occupations, and forced assimilation in the guise of modernization. Individual Jews and Jewish movements (notably the Jewish Workers' Bund in Russia, Poland, and Lithuania) were prominent in socialist and revolutionary efforts to overthrow the czarist regime. Jews were full participants in colonial, democratic, and capitalist ventures in the New World, and the United States became a center of Jewish population and creativity.

Perhaps fueled by the dramatic encounter between traditional Jewish communities and the new bourgeois sphere, thinkers of Jewish origin such as Karl Marx (1818–1883), Sigmund Freud (1856–1939), and Émile Durkheim (1858–1917) were pioneers in the reflexive articulation of modernity's self-understanding, while Jewish writers, scientists, and musicians likewise made disproportionate contributions to modern culture. The *haskalah* or "Jewish enlightenment" stimulated a new, secular Hebrew literature, as well as a modern Yiddish literature, much of which has stood the test of generations as a commentary both on the limitations of tradition and on the frequently empty pretensions of the new.

Yet Jewishness and the Jews were frequently seen as a "problem" for Western modernity, whether because their potential loyalty and capacity for absorption as fellow citizens of secular nation-states was in question, or because the organizing logic of those nation-states rested in unacknowledged ways on assumptions of their constituents' shared Christian heritage. One reaction was the crystallization of Zionism as the Jews' own modern nationalist movement, which eventually took material form in the effort to convince Jews to migrate to Palestine and to create the infrastructure for Jewish state sovereignty there to

be renewed after nearly two millennia. Zionism bears in turn a complex relation to traditional Jewishness, rejecting as neurotic substitutions much of the diasporic forms of Jewish life, while mobilizing the memory and longing for the lost homeland that have nourished Jewish sensibilities in exile.

Political engagement by Jews in liberal and socialist struggles throughout the West helped fuel the modern anti-Semitic movement. Anti-Semitism was itself a reactionary response to the rapid pace of social and economic change, paradoxically bolstered by modern theories of biologically determined and hence immutable racial characteristics. During the 1930s, a time when Western economy and society were simultaneously resisting workers' revolution and reeling from catastrophic disruption to the capitalist economy, Jews were irrationally but opportunistically tarred as the bête noire of the imagined "Aryan" race. The consequent call to eliminate the Jews, originally a demand for expulsion, was transformed in the course of World War II (1939–1945) into an active program of genocide. There were an estimated 18,000,000 Jews at the beginning of that war; by its end, a third of them had been slaughtered.

PRESENT SITUATION

The map of the Jewish world has been dramatically reshaped in past centuries, as a result of genocide, assimilation, migration, nation-building, and renewal. The Jews of the world are far less widely dispersed than they once were, and much has been lost. The State of Israel explicitly defines itself as a Jewish state, yet along with a significant Arab minority, its population includes numbers of immigrants whose "Jewish" status according to religious law has been hotly debated. Moreover, Israel and its Jewish population continue to face vital issues of cultural and political integration into the Middle East.

Along with Israel, the United States holds by far the world's largest Jewish population, and American Jews are generally considered well integrated. Markers of Jewish identity and culture are readily present and celebrated in media and popular culture. Those concerned with Jewish continuity worry about high rates of intermarriage among moderately affiliated Jews. There is an extraordinary range of options for expression of religious Judaism, for the explicit linkage of Jewishness to other nonmajoritarian identities, and for the preservation and reinvention of secular Jewish culture. Meanwhile, traditionalist religious communities have enjoyed a resurgence, experiencing high birthrates and close to universal retention of young people within their communities.

Outside of Israel and the United States, France retains the largest Jewish population, largely comprising North African immigrants and their descendants. French Jewry today stands as a test case for the continued viability of Jewish and indeed of minority communities more generally in contemporary western Europe, and some see its future as clouded by the appearance of a "new anti-Semitism" there. Significant Jewish populations also are found in the countries of the former Soviet Union, in Canada, in the United Kingdom, and in Argentina.

SEE ALSO *Anti-Semitism; Assimilation; Christianity; Enlightenment; Ethnocentrism; Gender; Genocide; Heteronormativity; Holocaust, The; Islam, Shia and Sunni; Jewish Diaspora; Judaism; Migration; Modernism; Modernization; Nation of Islam; Nationalism and Nationality; Religion; Reparations; Supreme Being; Zionism*

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JIHAD

Jihad is an Arabic term meaning, as a noun, "struggle" or, as a verb, "to exert effort" toward a goal. The primary associations of the term are religious, specifically with reference to Islam. The Qur'an exhorts believers to struggle "in the path of God" or "to make God's cause succeed" (8:39). Such struggle involves all of one's power and resources, as one seeks to "command right and forbid wrong." Under

certain circumstances, jihad is identified with *qital*, meaning "fighting" or "killing"; indeed, in Islamic juridical discourse, this association is prevalent, so that in some contexts, jihad can be translated as "armed struggle." In some contemporary writing by Muslims, the broader meaning of the term as "moral struggle" is stressed, and military associations are downplayed. Overall, it is best to keep in mind that the term occurs in connection with a view by which human responsibility is a matter of striving to bring all of life into a pattern of relationships consistent with God's will. In some circumstances, the means appropriate to this struggle are military; in others, not.

Stories by which Muslims interpret the Qur'anic "verses on fighting" illustrate this way of construing the meanings of jihad. According to traditional dating, Muhammad's call to prophecy occurred in the year 610 CE, and by 612 he began to preach or to "call" others to Islam. A small band of "companions" gathered around him. They met with hostility, even persecution from the people of Mecca, the Prophet's home city. In this context, some of the companions urged the use of force, by way of retaliation for wrongs done to the believers, and to deter further persecution. Muhammad resisted, indicating that God's orders only allowed him to preach.

By the year 622 (the year 1, in the Islamic calendar), things had changed. In that year, Muhammad received God's order to immigrate to Medina, a city to the north. He also received permission to fight, specifically in terms of God's provision for the protection of believers (Qur'an 22:39–40). Once in Medina, Muhammad functioned as head of state and military commander, all the while continuing to preach. Verses of the Qur'an that Muslims number among the "Medinan" texts indicate a growing sense that military action is not only permitted, but necessary, and finally obligatory in the campaign to establish a "zone of security" for the Islamic community. In his Farewell Sermon (630), Muhammad declared that "Arabia is now solidly for Islam," meaning that the various tribes were now under Islamic governance.

In the years following Muhammad's death, jihad came to be associated with the efforts of Muslims to extend the benefits of Islamic governance to people and territories beyond Arabia. A series of conquests "opened" most of the Middle East, and much of North Africa and Asia, to the influence of Islam. In this connection, the religious specialists called *"ulama"* developed a set of "judgments pertaining to jihad" that function as an Islamic "just war tradition." Thus, jihad, in the sense of legitimate war, must be commanded by the officials of an Islamic state. It should be fought for the cause of God, meaning the expansion, establishment, or defense of Islamic territory. And it should be fought with right intention, in the sense of avoiding undue aggression. Fighters should avoid directly targeting noncombatants and, according to some authorities, they should further avoid the use of weapons or tactics that might bring about unacceptable levels of "indirect" damage to civilian life. The rules governing jihad were developed and recognized by specialists associated with the majority (Sunni) and minority (Shia) versions of Islam, though the latter insisted that jihad could only be authorized by a divinely authorized Imam or leader, the implication being that most wars fought in the name of Islam did not really qualify.

In the nineteenth and twentieth centuries, jihad came to be associated with Muslim resistance to European and North American imperialism. Some argued for military resistance, others for education designed to make Muslim economies competitive. Important examples of military jihad include uprisings led by Uthman Dan Fodio (1754–1817) in Nigeria and Muhammad Ahmad al-Mahdi (1884–1885) in Sudan. As for the educational approach, the development of Aligarh Muslim University in India by Sayyid Ahmad Khan (1817–1898) and the campaign for educational reform in Egypt led by Muhammad 'Abduh (1849–1905) are particularly worthy of mention.

More recently, jihad has come to be associated with the program of certain groups (called *jihadis*) who hold that armed force is a necessary means for Muslims to resist the encroachment of a "Zionist-Crusader alliance" by which a variety of false or idolatrous practices are being foisted upon humanity. These practices, which include democratic politics, free market capitalism, and the equality of men and women, are held to violate divine law. Various declarations issued by the leaders of Al-Qaeda and like-minded groups suggest that the spread of these practices constitutes a kind of emergency condition for Muslims, and that in such a condition, fighting becomes an obligation for every Muslim. In contrast with the historic "judgments pertaining to armed struggle," this contemporary jihad involves fighting without authorization by established heads of state. According to many *jihadis*, the new jihad may also be conducted without regard to distinctions between civilian and military targets. Such points are controversial, with the large majority of Muslims condemning such tactics as violations of Islamic tradition, even while expressing sympathy for some of the causes *jihadis* cite as motivation, viz., the rights of Palestinians, resistance to "undue influence" by the United States and others in the internal affairs of historically Muslim countries, and the desire for effective and legitimate government in Muslim lands.

SEE ALSO *Fundamentalism, Islamic; Islam, Shia and Sunni*

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John Kelsay

JIM CROW

Jim Crow was the colloquial term for forms of systematic discrimination employed by whites against African Americans from the second half of the nineteenth century through the first half of the twentieth. The expression insinuates the legal components of the color line (e.g., Jim Crow laws), but also encompasses the cultural and symbolic conventions of hierarchical race relations.

OVERVIEW

The roots of Jim Crow lay deep in the American landscape of slavery. Despite its jocular allusion to a persona, Jim Crow articulated ideologies of black inferiority, which, wrapped in racist rhetoric, signified white supremacy, the control of virtually every aspect of black public life, and access to black private life. As shorthand for the malice of race relations in America, Jim Crow lived out a "strange career," the historian C. Vann Woodward (1908–1999) wrote. "Jim Crow … did not assign the subordinate group to a fixed status in society. [It was] constantly pushing the Negro further down" (Woodward [1955] 2002, p. 108).

The scholar W. E. B. Du Bois (1868–1963) used the term "the veil" in reference to the barrier separating blacks and whites. Penetrable but immovable, the veil provided African Americans with a view outward, while limiting the ability of whites to see into black society. "Within and without the somber veil of color," Du Bois wrote of black life in *The Souls of Black Folk* (1903), "vast social forces have been at work,—efforts for human betterment, movements toward disintegration and despair, tragedies and comedies in social and economic life, and a swaying and lifting and sinking of human hearts which have made this land a land of mingled sorrow and joy, of change and excitement and unrest" (pp. 181–182). Behind the veil, then, African Americans engaged in the discourse and action of daily life, often unconcerned with white life. Here, they forged lively communities, built strong institutions, and nurtured generations of activists who took part in the long civil rights movement to "destroy Jim Crow."

As a period of history, the "Jim Crow era" can be set off by two significant decisions made by the U.S. Supreme Court, each determining the constitutionality of racial segregation. On one end, *Homer Plessy v. John H. Ferguson* 163 U.S. 537 (1896) sanctioned racial segregation and discrimination with the doctrine of "separate but equal," arguing that the Fourteenth Amendment "could not have been intended to abolish distinctions based upon color, or to enforce social, as distinguished from political equality, or a commingling of the two races upon terms unsatisfactory to either." On the other end of a timeline, *Oliver Brown, et al. v. Board of Education of Topeka, et al.* 387 U.S. 483 (1954) outlawed racial segregation in public schools arguing that "separate educational facilities are inherently unequal." *Brown* opened the door to question and to challenge other forms of racial inequity.

THE HISTORY OF JIM CROW

Jim Crow far exceeds the temporal markers of Supreme Court decisions, reaching back to the mid-nineteenth century and beyond the modern civil rights movement. Moreover, although Jim Crow is associated mostly with the intractable South, similar patterns, indeed its cultural origins, can be found in the North. The term was being used by the mid-nineteenth century by African Americans and abolitionists to describe the unfair practice of directing black passengers to separate substandard railroad cars. *Jimcrow* or *jimcrowing* referred to the injustice of segregating blacks to lesser facilities.

The term *Jim Crow* originated in American popular culture, specifically in a stage performance, a mocking imitation of a black plantation slave by Thomas Dartmouth "Daddy" Rice (1808–1860), a white entertainer. In the tradition of minstrelsy, Rice blackened his face with burned cork or black wax, wore ragged clothes as a costume, shuffled as he danced, and sang:

Come listen all you galls and boys I's jist from
Tuckyhoe,
I'm going to sing a little song, my name's Jim
Crow,
Weel about and turn about and do jis so,
Eb'ry time I weel about I jump Jim Crow.

A popular little ditty, "Jump Jim Crow" was a centerpiece of an emerging American popular culture. Popularized, the character Jim Crow and his stage counterpart Zip Coon—an urban dandy from the North—caricatured African Americans as foolish, dim, lazy, sneaky, incompetent, untrustworthy, dishonorable, and without the strength of character required to be an American citizen and white. These degrading stereotypes, infused by distortion and propaganda, provided a substantial base on which to create a rationale for slavery: that African Americans required close supervision, and that only under the control of whites could such people be restrained.

Jim Crow entered a new phase after the Civil War (1861–1865) with enactment of the Black Codes. At the end of the war, in the political chaos that followed Abraham Lincoln's death in 1865, Confederates claimed southern legislatures and passed laws that restricted the freedom of freedpeople. Replicating slavery in all ways except name, the Black Codes required blacks to accept unfavorable work contracts, limited their mobility, and denied them citizenship rights. As traditional powers collapsed at the beginning of Reconstruction, African Americans claimed and exercised the citizenship rights guaranteed by the Thirteenth, Fourteenth, and Fifteenth amendments. Southern whites viewed this new societal arrangement as a corruption of race and gender relations that historically favored white males.

At the end of Reconstruction, when power returned to white southerners, distorted descriptions of Reconstruction governments signified whites' resentment for their losses and provided the tinder for racial fires to burn through the turn of the century. Referring to black political participation as "Negro rule" or "Negro domination," and distorting the work of Reconstruction legislatures as corrupt and immoral, white politicians determined that black power would neither continue nor return. By the end of the nineteenth century, every southern state and community had forged a set of constitutional amendments, legislation, or legal maneuvers to disfranchise African American men by force of law and intimidation. Almost every school was racially segregated and disparate in condition. Consistently, blacks were employed in the most difficult jobs for the lowest of wages.

As the color line itself solidified at the turn of the nineteenth century, Jim Crow imposed on black people clear tactical disadvantages: restricted economic possibilities, narrow educational opportunities, inadequate housing options, high rates of death and disablement, persistent unemployment, and unrelenting poverty. Inasmuch as Jim Crow represented the race problem described by Gunnar Myrdal (1898–1987) in his 1944 treatise *The American Dilemma*, it was Jim Crow that created the race quandary; whites constructed the obstacles African Americans confronted, while also blaming them for their conditions, denying them access to the resources of problem solving, and daring them—under threat of violence—to complain, protest, or advance.

Jim Crow laws segregated not only public venues but also restaurants, restrooms, hospitals, churches, libraries, schoolbooks, waiting rooms, housing, prisons, cemeteries, and asylums. Customary signs noting "colored" and "white" or "white only" marked off the southern landscape, dividing public conveyances, public accommodations, and birth, residence, and death. Purportedly equal, these circumstances usually were unequal. Laws regulated not only segregation but also social relations. In most states, blacks and whites could not marry by law, or socialize by custom. According to a Maryland law, "all marriages between a white person and a negro, or between a white person and a person of negro descent, to the third generation, inclusive … are forever prohibited, and shall be void." Blacks and whites could not compete against each other, whether at checkers or college sports. A Mississippi law read, "any person guilty of printing, publishing or circulating matter urging or presenting arguments in favor of social equality or of intermarriage between whites and negroes, shall be guilty of a misdemeanor."

ENFORCEMENT

Jim Crow could be fluid, amorphous, and nuanced. Because the laws and practices of Jim Crow varied from place to place, the scheme was confusing, and African Americans were careful to learn the racial etiquette of the locales to which they traveled. In addition, different groups of African Americans, rural and urban, women and men, and people of varying classes, experienced Jim Crow in different ways. Inasmuch as women and men faced differential limitations of Jim Crow, civil rights and women's movement activist Pauli Murray (1910–1985) coined the term *Jane Crow* to describe sex discrimination against women, and race and sex discrimination against black women. African Americans could not always unify against Jim Crow because segregation could benefit some to the detriment of others. Black colleges thrived, for example, but most segregated public elementary and secondary schools struggled with inadequate resources to prepare students for higher education.

Finally, protests or challenges to Jim Crow often proved futile, given law enforcement's complicity in the

structure. From emancipation to the turn of the century, the Ku Klux Klan operated as a paramilitary arm of the Democratic Party in the South. The Klan, nightriders, red shirts, and other white terrorists intimidated African Americans with personal attacks, school burnings, and lynchings. African Americans rarely served as policemen, sheriffs, or deputies before the late 1940s. During the 1950s and 1960s, the connections between municipal and state governments, law enforcement, and racial violence were well known by officials and citizens alike. White officers were known to harass black people, disrupt black neighborhoods, and assault black women. Arrested for inflated charges, denied satisfactory counsel, and serving harsh sentences, African Americans were further disadvantaged in the courtroom. Rarely did they receive good counsel, nor could they serve on juries. When black lawyers could appear in the courtroom to argue cases, white judges and juries rarely listened. All-white juries decided against black defendants, even in the most obvious cases of innocence, but rarely convicted white defendants, despite evidence of guilt. African Americans—including the innocent—suffered the harsher punishments of extended jail time, forced farm labor, and peonage. Even women could be placed on the chain gangs working the roads and tracks across the South.

Extralegally, Jim Crow justice was rough. According to the National Association for the Advancement of Colored People (NAACP), between 1889 and 1918 over 2,500 African Americans were lynched: captured and viciously murdered by mobs. Ostensibly, accusations of rape provided the reason for lynching, yet rarely were these cases validated. A form of social control and vengeance, lynching followed when a black person stepped out of line, did not demonstrate enough deference, acted out of antagonism, committed assault or manslaughter as self-defense, or spoke out of turn. Through the first half of the twentieth century, furthermore, riots flared as an expression of white antagonism, among them the Wilmington Riot of 1898, the Atlanta Riot of 1906, the East Saint Louis Riot of 1917, and the Tulsa Riot of 1921. In each of these and other conflagrations, whites expressed their racial rage by entering black neighborhoods to assault men, women, and children, and by burning down homes, schools, and churches. African American veterans in uniform also were targets of random attack, subject to vengeance for wearing a symbol of American citizenship.

AFRICAN AMERICANS AND JIM CROW

For these reasons, Jim Crow presented a formidable opponent—one that could divide its victims against themselves. Numerous leaders stepped forward to speak to the quandary of race relations. Booker T. Washington (1856–1915) advised black men to shift their focus from electoral politics to economics, to take up the trades, farming, and domestic and service work in order to build character and capital. While Washington supported industrial education, Du Bois recommended that the most talented of black folk be trained in the liberal arts so that they could emerge as leaders of the race. Ida B. Wells-Barnett (1862–1931), a fearless antilynching campaigner, took up the mantle of agitation, advising African Americans to protect themselves and to leave the South altogether.

The question of migration as a form of protest dominated black discourse and action after emancipation, and as the century turned, a trickle of black southerners, mostly women, began to leave the land for the cities of the South and the North. They laid the groundwork for what was later called the Great Migration, when millions of African Americans left the brutalities of the South for the possibilities of the North. Black migrations were fueled by several factors. African Americans hoped to escape the tyranny of the South, especially economic oppression. The importunate character of sharecropping pressed families to give up the land for the city. There, however, they found new sets of barriers to employment or improved living conditions. Nevertheless, as the war economies expanded and European immigration slowed, African Americans found employment in the industries and the trades. Black people also migrated to find personal freedom not available to them in the South. African American women, for example, migrated to escape the persistent danger of public sexual assault by white and private assault by black men. As migrants within the South, women also laid the foundations upon which black southern communities were built, and it is here that the war against Jim Crow took place.

In urban areas, African Americans upbuilt communities from small settlements of freedpeople into dynamic neighborhoods of homes, institutions, and organizations. Although segregated, schools instilled a sense of race pride and responsibility in children. Churches served multiple roles, as community, political, and recreational spaces. Teachers, professors, undertakers, doctors, lawyers, and nurses served to uplift the black community. Held in high esteem, they presented not only models to emulate, but also a daily reminder of black accomplishment despite Jim Crow. National organizations like the NAACP, the National Negro Business League (NNBL), and black fraternities and sororities all functioned to improve the quality of life for African Americans. Founding segregated YWCAs, YMCAs, Boy's Clubs, Boy Scouts, and Girl Scouts, adult African Americans supervised the development of young people with an eye toward the demands of citizenship. Indeed, although historians have called the

early years of Jim Crow "the Nadir," the lowest point in African American history, the period also was the zenith of the black press, black business, black church organizations, and the black women's club movement as African Americans set about the work of race progress.

Still, the disadvantages of Jim Crow far outweighed the advantages, and beginning in the 1930s, African Americans took up a number of civil rights crusades. The NAACP, for example, began the battle against educational inequality, with the support of local branches. Local communities also engaged in "don't-buy-where-you-can't-work" campaigns, denying their dollars to businesses that did not employ black people. Veterans returned from a war against racism expecting to be accorded citizenship rights commensurate with their sacrifices. Turned back at the courthouses, they launched voting rights campaigns. By the 1940s, several events signaled that the demise of Jim Crow had begun. In Texas, the Supreme Court decision in *Smith v. Allwright, Election Judge, et al.* 312 U. S. 649 (1944) ended the all-white primary, opening the southern electoral process to black voters. In 1948 President Harry Truman (1913–2003) signed Executive Order 9981, desegregating the armed forces. Finally, the Supreme Court decision in *Brown v. Board of Education* sounded the end of constitutionally sanctioned Jim Crow in public schools, making way for African Americans to demand the integration of all public facilities and accommodations.

Just as Jim Crow was not a strictly definable historical period, the struggle against it was protracted. Using forms of direct action, nonviolent protests, and demonstrations, civil rights activists of the 1950s and 1960s were determined to break the back of Jim Crow, and they were successful, at least as far as the legal arena was concerned. Inasmuch as Jim Crow was a milieu that permeated culture and ideology historically, the struggle against American apartheid continues.

SEE ALSO *Apartheid;* Bamboozled*; Black Face;* Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Civil Rights; Civil Rights Movement, U.S.; Discrimination; Discrimination, Racial; Ku Klux Klan; Lynchings; Minstrelsy; Race Relations; Racism; Segregation; Separate-but-Equal; Stereotypes; Truman, Harry S.; Tulsa Riot; Voting Rights Act; White Supremacy; Whiteness; Wilmington Riot of 1898*

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Leslie Brown

JINGOISM

The term *jingoism* dates from the late 1870s. The jingoes, so termed after a music-hall song, were vociferous supporters of a strong British foreign policy in the Near East. *Jingoism* subsequently came to define any foreign policy in support of national interests that took its cue from public opinion. For social scientists, jingoism stands as one of the manifestations of nationalism in the Western world in the half-century leading up to World War I (1914–1918).

In the spring of 1877, Russia went to war with Turkey. The Conservative British government, led by Benjamin Disraeli (1804–1881), was concerned that Constantinople might fall to the Russians and that this would endanger the security of British routes to its Indian empire. Neutrality was declared, but conditional on the safeguarding of British interests. Toward the end of the year, it seemed as if these interests might be threatened, and the possibility loomed that Britain would become involved in a reprise of the Crimean War of the 1850s. A strong peace campaign urged the government not to get involved in the war, and for some weeks it seemed to carry all before it. But then, in January 1878, the peace meetings began to be broken up by supporters of a strong policy. The changing mood of the public was evident also in popular entertainment. G. W. Hunt (c. 1830–1904) wrote and composed a song to reflect and express the views of those who wanted the government to stand firm in the face of the Russian advance. It played on a deep-rooted Russophobia in Britain, one verse going:

> The 'Dogs of War' are loose, and the rugged Russian Bear,
> Full bent on blood and robbery, has crawled out of his lair,
> It seems a thrashing now and then will never help to tame

That brute, and so he's bent upon the 'same old game.'

Sung by G. H. Macdermott (c. 1845–1901) in London, and then on a provincial tour, the song became a popular hit, its rousing chorus giving the jingoes their name:

We don't want to fight,
But by Jingo if we do
We've got the ships, we've got the men, we've got the money too.
We won't let the Russians get to Constantinople.

Thoroughly alarmed at the changing mood of the public, and at the violent breakup of their meetings, the advocates of peace described their opponents as *jingoes*, "the new tribe of music-hall patriots who sing the jingo song."

From that moment on, through the late nineteenth and early twentieth centuries, *jingoism* was a term used by opponents of an assertive foreign policy. Moderate Conservatives as well as Liberals and socialists were alarmed at what they saw as the undue influence on policymaking of raucous public opinion. It was not that there had not previously been virulent antiforeign sentiment, against the Spanish in the early modern period, and against the French in the eighteenth and early nineteenth centuries. A fear of Russia itself had deep roots. What was new, and what distinguished jingoism from these earlier manifestations, was that it coincided in time with Britain becoming increasingly democratic. Most urban working-class men had become entitled to vote in 1867, and this was extended to those living in rural areas in 1884. The worry of the elite classes, whatever their politics, was that an undereducated electorate, swayed by a cheap popular press and music-hall songs, would exercise an undue influence on the conduct of foreign policy.

Lord Derby (1826–1893), who had been Disraeli's foreign secretary in 1878 but lost his job when Disraeli gave way to the jingoes, complained in 1882 that the leading idea of jingoism seemed to be "that no State can be in a healthy condition that is not occasionally pitching into its neighbour." Lord Salisbury (1830–1903), Conservative prime minister for much of the late nineteenth century, argued in 1897 that an arbitration system "would be an invaluable bulwark to defend the Minister from the jingoes." The most extended attack on jingoism came from the Liberal publicist J. A. Hobson (1858–1940), whose *The Psychology of Jingoism* (1901) was prompted by the renewed breakup of peace meetings during the South African War of 1899 to 1902. Hobson explained jingoism by linking together the fashionable psychology that was alarmed by the "herd instinct" of the populations of the large cities of the modern world and the growth of the popular press, which seemed to pander to the worst instincts of these urban masses.

Detailed research on those who might be called active jingoes—those who tried to break up peace meetings—suggests that they were often associated with other right-wing populist causes such as fair trade (to keep out foreign imports) and opposition to immigration. Medical students, hardly typical of an undereducated urban mass, featured prominently in the rowdy meetings. Many jingoes had links with the Conservative Party. Although the party leaders were often distinctly lukewarm about jingoism, there is much evidence that, as in the 1900 general election where the South African war was the dominant issue, Conservatives gained by their association with an assertive foreign policy. More generally, a nationalistic foreign policy appealed to the growing lower middle class of clerks and shopkeepers who may have been trying to overcome their anxiety about their status by affirming loyalty to the nation.

Jingoism as a word crossed the Atlantic, its use particularly prevalent in the 1890s. In 1896 the *Nation* in New York referred to "Jingoish ideas of America's past and future," and in 1898 President William McKinley (1843–1901) was reported to have said that he "will not be jingoed into war." But whether or not the word *jingo* was used, all Western countries were familiar with the phenomenon prior to World War I. In France, *chauvinism* was the equivalent of *jingoism*.

The experience of World War I put an end to the more overt assertions of national aggression. There were people who continued to hold views similar to the jingoes, but they were more on the fringe. The right-wing nationalism of the 1920s and 1930s came in the even more alarming form of fascism. After World War II (1939–1945), critics of British foreign policy or public opinion sometimes blamed jingoism, for example, for the war over the Falkland Islands in the 1980s. But as a permanent presence on the political scene, jingoism had a lifespan of some forty years preceding World War I.

SEE ALSO *Boer War; Conservative Party (Britain); Elites; Ethnocentrism; Foreign Policy; Herd Behavior; Imperialism; Militarism; Nationalism and Nationality; Nativism; Patriotism; Right Wing; World War I; World War II*

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Hugh Cunningham

JINNAH, MOHAMMED ALI
1876–1948

Mohammed Ali Jinnah was born in 1876 in Karachi, then a small port town on the western coast of British India. A bright and ambitious young boy, he soon found his way to London and joined Lincoln's Inn, one of the best-known legal institutions in England. Jinnah acquired many things from British culture, perhaps most important of all, a sense of respect for the law.

On returning to India, Jinnah set up practice in Bombay and soon made a mark on society as a prominent leader. He became a passionate nationalist for the freedom of India and for unity between the two major communities of South Asia—Hindus and Muslims. He was called the "ambassador of Hindu-Muslim unity" by Gopal Krishna Gokhale (1866–1915), the distinguished Hindu leader. In 1918 Jinnah fell in love with and married Ruttie, who was half his age, and they had one child, a daughter called Dina.

In the 1920s the politics of India was changing dramatically. Mohandas Gandhi (1869–1948) and Jawaharlal Nehru (1889–1964) emerged as superstars to lead the Indian National Congress. The main Muslim party, the Muslim League, could not field anyone of their stature. Uncomfortable with what he saw as the emergence of communal politics, Jinnah was finding it difficult to place himself.

When Ruttie died in 1929, Jinnah left India to practice law in London. In the meantime, the Muslims of India became alarmed at the growth of what they saw as Hindu communalism in politics and the vulnerability of Muslims. Several delegations visited Jinnah and asked him to return to India and lead the Muslims.

Jinnah was persuaded to return and by the late 1930s galvanized the Muslims into a political force. He changed the way he dressed and even his arguments to reflect a more Islamic identity. In a historic Muslim League session in 1940 in Lahore, Jinnah introduced the idea of Pakistan, a defined political entity for the Muslims of India. Jinnah then led a full-scale campaign to create Pakistan in the face of vigorous opposition from the Indian National Congress and, initially, from the British.

In August 1947 Pakistan was carved out of the Muslim dominated areas of the northwest of India and the province of Bengal in the east. Although Jinnah had warned against it, Lord Louis Mountbatten (1900–1979), the viceroy, ensured that the two major provinces of India, the Punjab and Bengal, were cut in half. This division plunged the subcontinent into a bloodbath as some fifteen million people escaped communal rioting to migrate to the new homelands—Hindus and Sikhs escaping from Pakistan to India, and Muslims from India going to Pakistan. It is estimated that about two million people died in the communal frenzy that summer.

Jinnah became the first governor-general of the independent state of Pakistan, which was then the largest Muslim nation on earth. But the moment of triumph was darkened for Jinnah by the scale of the death and destruction. Depicted as a cold and formal man, Jinnah could not control his emotions at the scale of the tragedies unfolding around him. In speech after speech, he talked of the "harrowing accounts of the terrible happenings" and his "deep distress and heavy heart." Fatima Jinnah, his sister and constant companion, wrote of Jinnah's emotional condition in the last months of his life. "As he discussed with me these mass killings at the breakfast table, his eyes were often moist with tears. The sufferings of Muslim refugees that trekked from India into Pakistan, which to them had been the Promised Land, depressed him" (Jinnah 1987, p. 11).

In the midst of the chaos, Jinnah set up an entirely new government based in Karachi. His first two speeches to the Constituent Assembly in August that year clearly outlined his vision of a modern Muslim state: while inspired by the principles of Islam, the rights of everyone were to be respected. Jinnah specifically mentioned the freedom that non-Muslims would enjoy in Pakistan. He condemned nepotism and corruption in the strongest terms.

Already ill, Jinnah was now physically and emotionally exhausted. He spent several months in Ziarat, a hill station in Baluchistan, in the hope of recovering his health. In September 1948 Jinnah died in Karachi.

Pakistanis saw Jinnah as a leader who gave them their own homeland against impossible odds, and they called him the *Quaid-e-Azam*, or the great leader. Alan Campbell Johnson (1913–1998), a key official of Lord Mountbatten, described Jinnah thus: "Here indeed is Pakistan's King Emperor, Archbishop of Canterbury, Speaker and Prime Minister concentrated into one formidable Quaid-e-Azam" (Mitchell 1997). Jinnah's grand

mausoleum in Karachi is a main attraction for foreigners and Pakistanis alike.

With the triumph of Jinnah's life, there were also great tragedies that still haunt South Asia. One of these is the unresolved dispute over the large and important state of Kashmir. Pakistan has advocated that a plebiscite be held so that Kashmiris can decide their own fate. Its mainly Muslim population and contiguous territory to Pakistan have led Pakistanis to believe that Kashmir should have become part of Pakistan in 1947. However, its Hindu ruler opted for India. Pakistanis suspected that the friendship between the Mountbattens and Nehru, the first prime minister of India, was responsible for this injustice. Three wars have been fought between India and Pakistan over Kashmir, and now that both countries are nuclear powers, the region has been described by President Bill Clinton as the most dangerous place in the world.

Jinnah's life shows the importance of personal relationships in politics. While Jinnah was comfortable dealing with such contemporaries as Gandhi and Motilal Nehru (1861–1931), father of Jawaharlal, there was little rapport between him and the Mountbattens or their friend Jawaharlal Nehru. They, in turn, saw him as a figure from the past and spoke unkindly of him. Jinnah's relationship with B. R. Ambedkar (1891–1956), the leader of the Dalit—or those once called the "untouchable" caste—is surprisingly neglected. Jinnah and Ambedkar came to represent the two important minority groups of India—the Muslims and the Dalit. Both were suspicious of Gandhi's identification with mainstream Hinduism and warned against *Ram Raj*, or the rule of upper-caste Hindus who used Lord Ram as a symbol of Hindu revivalism. Ambedkar was supportive of the idea of Pakistan, but he did point out the problems its creation would pose for Hindus and Muslims in general. While Jinnah appreciated Ambedkar's criticism of Hinduism, he was also aware of Ambedkar's vitriolic criticism of some of the social practices of Indian Muslims. The tactical alliance between the Muslims and the Dalit that could have altered the shape of Indian politics thus never took place.

Considering the scale of his achievement, it is not surprising that Jinnah remains a subject of discussion and debate. Historians continue to interpret his position on the creation of Pakistan. For some, the Pakistan movement was the logical outcome of the politics and social ideas of the first half of the twentieth century (Ahmed 1997; Wolpert 1984, 2006). Others have argued that Jinnah was using the demand for Pakistan as a bargaining chip to improve the position of the Muslim minority in India (Jalal 1985). Jinnah would have thus resolved the contradiction between a demand for a separate Muslim state and the need for a strategy that would safeguard the interests of all Indian Muslims. No one, however, can deny that Jinnah did what few have done in history: almost single-handedly, he created a nation.

SEE ALSO *Ambedkar, B. R.; Caste; Caste, Anthropology of; Decolonization; Gandhi, Mohandas K.; Islam, Shia and Sunni; Muslims; Nation-State; Nehru, Jawaharlal; Partition; Secession*

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Akbar S. Ahmed

JOB GUARANTEE

A job-guarantee program is one in which government promises to make a job available to any qualifying individual who is ready and willing to work. Qualifications required of participants could specify age range (e.g., teens), gender, family status (e.g., heads of households), family income (e.g., below poverty line), educational attainment (e.g., high school dropouts), residency (e.g., rural), and so on. The most general program—sometimes called an *employer of last resort* (ELR) program—would provide a universal job guarantee by which government promises to provide a job to anyone legally entitled to work.

Many job-guarantee supporters see employment not only as an economic condition, but also as a right. L. Randall Wray and Mathew Forstater (2004) justify the right to work as a fundamental prerequisite for social justice in any society in which income from work is an important determinant of access to resources. Philip Harvey (1989) and John Burgess and William F. Mitchell (1998) argue for the right to work on the basis that it is a fundamental human (or natural) right. Such treatments find support in modern legal proclamations such as the United Nations Universal Declaration of Human Rights,

the U.S. Employment Act of 1946, and the Full Employment Act of 1978. Amartya Sen (1999) supports the right to work on the basis that the economic and social costs of unemployment are staggering, with far-reaching consequences beyond the single dimension of a loss of income (see also Rawls 1971). William Vickrey identified unemployment with "cruel vandalism," outlining the social and economic inequities of unemployment and devising strategies for its solution (Forstater and Tcherneva 2004). A key proposition of such arguments is that no capitalist society has ever managed to operate at anything approaching true full employment on a consistent basis. Further, the burden of joblessness is borne unequally, concentrated among groups that already face other disadvantages: racial and ethnic minorities, immigrants, younger and older individuals, women, people with disabilities, and those with lower educational attainment. For these reasons, government should and must play a role in providing jobs to achieve social justice.

There are different versions of the job-guarantee program. Harvey proposed to provide to anyone unable to find work a public sector job with pay approximating a "market wage"; more highly skilled workers would receive higher pay (1989). Argentina's Jefes program (examined below) targets heads of households only, offering a uniform basic payment for what is essentially half-time work. In another model, initially proposed by Hyman Minsky (1965) and developed further at the Center for Full Employment and Price Stability, University of Missouri—Kansas City, and independently at the Centre of Full Employment and Equity, University of Newcastle, Australia, the federal government provides funding for a job-creation program that offers a uniform hourly wage with a package of benefits (Wray 1998; Burgess and Mitchell 1998). The program could provide for part-time and seasonal work as well as other flexible working conditions as desired by the workers. The package of benefits would be subject to congressional approval, but it could include health care, child care, payment of Social Security taxes, and usual vacation and sick leave. The wage would also be set by Congress and fixed until Congress approved a rate increase, much as the minimum wage is currently legislated. The perceived advantage of the uniform basic wage is that it would limit competition with other employers because they could attract workers out of the ELR program by offering them a wage slightly above the program wage. Since the basic wage is held constant, it will not go up in competition with private employers, to try to bid workers away from them.

Proponents of a universal job-guarantee program operated by the federal government argue that no other means exists to ensure that everyone who wants to work is able to obtain a job. Advantages include poverty reduction, amelioration of many social ills associated with chronic unemployment (such as health problems, spousal abuse and family breakups, drug abuse, crime), and enhanced skills from training on the job. Such a program would improve working conditions in the private sector because employees would have the option of moving into the ELR program; hence, private sector employers would have to offer a wage and benefit package and working conditions at least as good as those offered by the ELR program. The informal sector would shrink as workers become integrated into formal employment, gaining access to protection provided by labor laws. There would be some reduction of racial or gender discrimination because unfairly treated workers would have the ELR option, although, of course, an ELR program by itself cannot end discrimination. Still, it has long been recognized that full employment is an important tool in the fight for equality (Darity 1999). Mathew Forstater has emphasized how an ELR program could be used to increase economic flexibility and to improve the environment, as projects can be directed to mitigate ecological problems (1999).

In addition, some supporters emphasize that an ELR program with a uniform basic wage helps to promote economic and price stability by acting as an automatic stabilizer as employment in the program grows in recession and shrinks in economic expansion, counteracting private sector employment fluctuations. The federal government budget becomes more counter-cyclical because its spending on the ELR program likewise grows in recession and falls in expansion. Furthermore, the uniform basic wage reduces both inflationary pressure in a boom and deflationary pressure in a bust. In a boom, private employers can recruit from the ELR pool of workers, paying a premium over the ELR wage. The ELR pool acts like a "reserve army" of the employed, dampening wage pressures as private employment grows. In recession, workers downsized by private employers can work at the ELR wage, which puts a floor to how low wages and income can go.

Critics argue that a job guarantee would be inflationary, and they point to a version of a Phillips Curve approach, according to which lower unemployment necessarily means higher inflation (Sawyer 2003). Some argue that an ELR program would reduce the incentive to work, raising private sector costs because of increased shirking, because workers would no longer fear job loss; in fact, workers might be emboldened to ask for greater wage increases. Some argue that an ELR program would be so big that it would be impossible to manage; some fear corruption; others argue that it would be impossible to find useful things for ELR workers to do; still others argue that it would be difficult to discipline ELR workers. It has been argued that a national job guarantee would be too expensive, causing the budget deficit to grow to unsus-

tainable levels, and that higher employment would worsen trade deficits (Aspromourgous 2000; King 2001). (See Mitchell and Wray 2005 for responses to all of these critiques.)

There have been many job-creation programs implemented around the world, both narrowly targeted and broad-based. The United States' New Deal of the 1930s contained several moderately inclusive programs, including the Civilian Conservation Corps and the Works Progress Administration. Sweden developed broad-based employment programs that virtually guaranteed access to jobs, until government began to retrench in the 1970s (Ginsburg 1983). In the aftermath of its economic crisis that came with the collapse of its currency board in December 2001, Argentina created *Plan Jefes y Jefas* in April 2002, which guaranteed jobs for poor heads of households (Tcherneva and Wray 2005). The program successfully created two million new jobs that provided not only employment and income for poor families, but also needed services and free goods to poor neighborhoods. More recently, India passed the National Rural Employment Guarantee Act (2005), which commits the government to providing employment in a public-works project to any adult living in a rural area. The job must be provided within fifteen days of the applicant's registration, and must provide employment for a minimum of 100 days per year (Hirway 2006). These real-world experiments provide fertile ground for testing the claims on both sides of the job-guarantee debate.

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L. Randall Wray

JOHANSON, DONALD

1943–

Donald Carl Johanson was born in Chicago, Illinois, on June 28, 1943. He earned a BA from the University of Illinois, Urbana-Champaign, in 1966 and an MA and a PhD from the University of Chicago's Anthropology Department in 1970 and 1974, respectively. Johanson wrote his doctoral thesis on variability in the dentitions of bonobos and chimpanzee subspecies, chiefly under the guidance of Albert A. Dahlberg, the founder of U.S. dental anthropology. Before getting his doctorate, Johanson worked variously on archaeological projects in Iowa and Illinois, as a research assistant in a dental anthropological study on Kodiak Island, Alaska, and as a research assistant to F. Clark Howell with the Omo Research Expedition to the Lower Omo Basin, Ethiopia (1970–1971).

In 1972 Johanson joined the International Afar Research Expedition to Ethiopia's Afar Depression, where the following year he found four Pliocene hominid fossils, consisting of femoral fragments and a knee joint (A.L. 129-1), that clearly indicated bipedal posture. Initially, Johanson thought that more than one species was represented, but when the sample was greatly augmented by

the discovery in 1974 of a notable portion of a skeleton (AL-288-1, dubbed "Lucy"), and a large collection of remains of hominids at locality 333 (dubbed "the first family") in 1975–1977, he came to believe that the findings represented a variable single species, *Australopithecus afarensis*, which lived between 3 and nearly 4 million years ago. Furthermore, he concluded that contemporaneous specimens from 3.5-million-year-old deposits at Laetoli, Tanzania, discovered by a team led by Mary Leakey, were also *Australopithecus afarensis*. Johanson's use of one of the Laetoli mandibles (LH-4) as the type specimen for *Australopithecus afarensis* and his negative comments about Richard, Mary, and Louis Leakey and other professional colleagues in *Lucy: The Beginnings of Humankind* (1981) and *Lucy's Child: The Discovery of a Human Ancestor* (1989) and on the lecture circuit detracted from his overall scientific credibility among some peers. Nonetheless, Johanson stands as the foremost U.S. contributor to the hominid fossil record during the 1970s, the 1980s, and the early 1990s.

Beginning in 1972 Johanson served as a curator of anthropology, then of physical anthropology, at the Cleveland Museum of Natural History and was on the faculties of Case Western University in Cleveland, Ohio, and Kent State University in Kent, Ohio. In 1981 he founded the Institute of Human Origins (IHO) in Berkeley, California. In 1998 the IHO relocated to the University of Arizona, where Johanson continues as director and occupies the Virginia M. Ullman Chair in Human Origins. He and his colleagues at IHO have continued to augment knowledge and understanding of human development via empirical paleoanthropological data from the field, educational television films—most notably, *Lucy in Disguise* (1980), *The First Family* (1980), and *In Search of Human Origins* (1994)—public lectures, presentations at scientific meetings, and publications. Johanson has also trained many doctoral and postdoctoral students, some of whom are from Ethiopia and other nations where hominid fossils are found.

SEE ALSO *Anthropology; Archaeology; Leakey, Richard; Primates*

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Russell H. Tuttle

JOHN HENRYISM

John Henryism (JH), a psychological construct formally proposed in 1983 by Sherman James and colleagues (James et al. 1983), is defined as a "strong behavioral predisposition to cope actively with psychosocial environmental stressors" (James 1994, p. 163). JH is characterized by three factors: (1) efficacious mental and physical vigor; (2) a strong commitment to hard work; and (3) a single-minded determination to succeed. James and colleagues hypothesized that for persons lacking sufficient socioeconomic resources, active coping (i.e., sustained cognitive and emotional engagement—in other words, prolonged determination to succeed) with persistent psychosocial and environmental stressors may increase the risk of negative health outcomes.

JH takes its name and is inspired in part by the story of John Henry, the fabled "steel-driving man." According to legend, John Henry was an uneducated black steel driver who participated in a competition with a mechanical steam-powered drill. Though he rallied the physical strength needed to win the competition, he died soon after from overwhelming mental and physical fatigue. For James, the story of John Henry was a metaphor for the empirical literature that links active coping with psychosocial stress to dysregulation of the sympathetic nervous system (which may heighten blood pressure and hypertension risk).

James and his colleagues conducted a number of cross-sectional investigations of the JH hypothesis in then-rural North Carolina. The initial 1983 study of 132 working-class black men aged seventeen to sixty years demonstrated that black men with low education and high JH had higher mean diastolic blood pressure than other subgroups, though the difference was not statistically significant. However, in their 1984 follow-up study, James and his colleagues found a significant interaction between JH and perceived job success in the prediction of diastolic blood pressure among 112 black male workers. In 1987, James et al. recruited a sample of 820 black and white men and women aged twenty-one to fifty years, and found that blacks with high JH and low socioeconomic status (SES) were almost three times as likely to be hypertensive, compared to blacks of high socioeconomic position; no similar relationship was found among whites.

James's group focused their 1992 study on a much larger sample of African Americans from an eastern North Carolina county that was more urbanized and socioeconomically diverse than the areas in their previous studies. When the traditional JH hypothesis—high JH and low SES constitutes risk—was not supported, James posited that high JH should only be deleterious for those of lower SES who also have high levels of perceived stress. Indeed, post hoc analyses revealed significantly elevated blood pressure levels among those with high JH and low SES, but only for those who also reported high levels of perceived stress.

In addition to James's early work, a number of other studies have investigated the JH hypothesis in sociodemographically diverse samples, with a wide array of health outcomes. Results from these studies have been mixed. For example, Lynda Wright and colleagues (1996) demonstrated that high JH scores were associated with higher resting blood pressure, higher total peripheral resistance, and lower cardiac index among 173 healthy white and black children aged ten to seventeen. William Wiist and John Flack (1992) found that high JH, low SES participants were significantly more likely to have higher cholesterol levels (> 240 mg/dl). In a sample of 600 African American men and women, William Dressler and colleagues (1998) found an interaction between gender and John Henryism such that for men, higher JH was associated with increased systolic blood pressure and hypertension risk, whereas elevated JH was associated with lower blood pressure and hypertension risk among women.

Despite these and other positive findings, a number of studies have failed to support the traditional JH hypothesis. To illustrate, Linda Jackson and Lucile Adams-Campbell (1994), found no JH effect on blood pressure among urban black college students. A study of 658 Nigerian civil servants yielded a nonsignificant trend for higher blood pressure among those with high levels of both JH and socioeconomic status (Markovic et al. 1998). Anita Fernander and colleagues (2005) found that participants with low education who had low JH reported higher nicotine dependence scores, compared to any other subgroup. Finally, Vence Bonham and colleagues (2004) found that better self-reported physical health among a sample of high socioeconomic-position African American men was marginally associated with high John Henryism.

Methodological inconsistencies as well as differences in the sociodemographic composition of study samples may partly explain these mixed findings. For example, although JH originally was thought to constitute risk in the context of lower socioeconomic position, a number of studies have studied JH as an independent risk factor (i.e., without modeling the JH x SES interaction). Most studies investigating JH independently have shown no association with the studied health outcomes. Certainly, there is controversy regarding the most appropriate measures of SES, though there is consensus that the definition varies by population. A wide variety of socioeconomic indicators have been studied in association with JH, but no clear pattern has emerged. A largely unresolved issue concerns whether JH is most predictive in specifically socially disadvantaged populations, or whether it is more widely occurring.

Those researching the JH construct have examined a range of health outcomes, but have been primarily focused on cardiovascular parameters (particularly blood pressure). Other outcomes with positive findings include cholesterol, cigarette smoking, pain susceptibility, and stress-related illness. JH research has been conducted with various samples (e.g., older populations, high school and college students, clinical samples) of various racial-ethnic, socioeconomic, and geographic composition. Though support for the JH hypothesis was originally found among populations in the American southeast, the construct has been widely investigated in a range of populations throughout the United States and in European and African countries, and in both urban and rural settings. A growing area of JH research concerns the role of JH in predicting the adoption of adverse health behaviors (including smoking, alcohol dependence, and stress-related eating). A new body of work uses JH in the clinical realm to learn more about the health effects of high-effort coping among those with chronic illness. A recent study has estimated the proportion of JH behaviors that are inherited (Whitfield et al. 2006). The JH literature proposes a novel and compelling hypothesis for understanding the promotion of disparities in a number of key health outcomes. The body of evidence investigating JH is replete with areas for additional inquiry, thus ensuring that JH research will continue.

SEE ALSO *Anxiety; Disease; Hypertension; Inequality, Racial; Stress*

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JOHNSON, LYNDON B.
1908–1973

As thirty-sixth president of the United States, Lyndon Baines Johnson presided over one of the most turbulent periods in American history. His administration's confrontations with both severe domestic turmoil and international conflict highlight the potential and constraints of the modern presidency.

Johnson was born in Stonewall, a poor rural outpost located on the Pedernales River in central Texas. His political education began at an early age, as his paternal grandfather regaled his progeny with stories of his participation in the Populist movement of the late nineteenth century, while Johnson's father was active in state and local politics and served in the Texas state legislature during Johnson's youth.

Still, while politics played an important role in Johnson's life in childhood, it was during his attendance at Southwest Texas State Teachers College in San Marcos that Johnson developed the attitudes and qualities that would suffuse his political career. Upon his arrival at the college, he quickly set about the task of studying the school's internal dynamics and used the information he garnered to place himself close to its centers of power, a pattern he repeated several times during his participation in national politics. It was also at this juncture that Johnson articulated—in a series of editorials in the college newspaper—much of the philosophy that guided his political activities and approach to government later on.

After graduation, Johnson took a high school teaching position in Houston. Shortly thereafter, however, Johnson began to dabble with increasing seriousness in national politics, first as campaign manager for a Texas state legislator and then as a staffer for a newly elected member of the U.S. Congress. This latter position finally brought Johnson to Washington, D.C., where he remained for much of the duration of his political career. And as he had done in San Marcos, Johnson devoted his time to unearthing the sources of influence in the federal legislature and, armed with that knowledge, maneuvering himself as close to its power center as possible.

Johnson entered elective politics in 1937, when he was sent to Congress in a special election in Texas's Tenth District. He served in the House of Representatives until his 1948 election to the Senate, where he rose quickly through the Democratic Party ranks to become Senate minority leader in 1953 and majority leader in 1955. It was in these roles that Johnson's political career reached its zenith. Perhaps most notably, it was in these leadership roles that he perfected what quickly came to be known as "the Johnson treatment": a repertoire of psychological appeals and talking points that Johnson employed to enforce party discipline and more generally coax and strong-arm recalcitrant colleagues to rally around his legislative agenda.

The Senate leadership roles thus presented an ideal platform for Johnson to exploit the deep understanding of legislative power he had cultivated during his congressional career. As a Texan who brought to politics both pragmatism and a keen awareness of the possibilities for using the power of government to address social problems, Johnson was pivotally poised to mediate between the congressional Democratic Party's liberal and southern factions. In many ways, therefore, being Senate majority leader offered Johnson the opportunity to exert substantial influence over the course of national politics and public policy.

Nevertheless, Johnson left the Senate in 1961 to serve as President John F. Kennedy's vice president until

November 22, 1963, when Kennedy was assassinated during a political tour in Dallas, Texas. Johnson was sworn in as president that same afternoon and served out the remaining year of Kennedy's term. Then in November 1964 he was elected president in his own right in a landslide victory against the Republican Party's ultraconservative candidate, Barry Goldwater.

The hallmark of Johnson's presidency was the Great Society program, which, as he described it in his commencement address at the University of Michigan in 1964, sought to "enrich and elevate our national life, and to advance the quality of our American civilization" (Johnson 1965, p. 704). Specific initiatives included the declaration of a War on Poverty; the introduction of various laws aimed at improving education, Social Security, health care, and the environment; and the creation of Head Start, the Job Corps, and the National Endowment for the Arts and the Humanities. Civil rights also figured prominently in Johnson's domestic agenda. One of his first acts as president was to fulfill the Kennedy administration's promise to support an antisegregation bill by working tirelessly to secure passage of the omnibus Civil Rights Act of 1964. A dramatic wave of protests in Alabama the following winter led him to champion ratification of the Voting Rights Act of 1965. And although Congress failed to enact the civil rights legislation he introduced in 1966 and 1967, Martin Luther King Jr.'s assassination created favorable conditions for Johnson to push through a Fair Housing Act in 1968.

In foreign policy, Johnson was preoccupied primarily with the United States' protracted postwar effort to contain communism, in which the Vietnam War played a particularly prominent role. This conflict, which pitted North Vietnam and the Viet Cong against the southern Army of the Republic of Vietnam, began prior to Johnson's accession to the presidency. Nevertheless, his administration was responsible for the sizable escalation of U.S. involvement in the struggle. Johnson's war policies faced considerable opposition on the domestic front, especially from draft-age college students. This unrest contributed to Johnson's decision to retire from politics rather than run for a second term in 1968.

The legacy of Johnson's presidency is mixed. His ambitious agenda had many significant implications for the subsequent dynamics and practice of American politics, particularly with regard to the scope of domestic policy and federal-state relations. Nevertheless, the difficulties he faced in negotiating the highly charged social and political atmosphere of the late 1960s cast doubt on the possibility of effective presidential leadership and inaugurated an era of distrust in government.

SEE ALSO *Civil Rights Movement, U.S.; Great Society, The; Kennedy, John F.; Marshall, Thurgood; Presidency, The; Vietnam War; Voting Rights Act*

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Shamira M. Gelbman

JONES, EDWARD ELLSWORTH

1926–1993

The American social psychologist Edward Ellsworth Jones earned his AB (1949) and PhD (1953) from Harvard University, both under the direction of Jerome Bruner. He held professorial appointments at Duke University from 1953 to 1977, and was the Stuart Professor of Psychology at Princeton University from 1977 until his untimely death in 1993.

Social psychologists had been interested in the accuracy of interpersonal judgments from the field's inception, but in the 1950s seminal figures such as Solomon Asch and Fritz Heider sparked a new interest in understanding the cognitive processes by which such judgments were made. Heider in particular suggested that ordinary people think of behavior as a product of an actor's enduring dispositions and the situation within which that behavior unfolds, and that a small set of inferential rules allows them to determine to which of these variables an actor's behavior should be attributed on any occasion.

Jones offered social psychology its first formal model of these attributional rules (Jones and Davis 1965). His correspondent inference theory, along with some like-minded theories (e.g., those outlined in Bem 1967, Kelley 1967, and Schachter and Singer 1962), created a sea change in social psychology, and by the early 1970s attribution theory had replaced cognitive dissonance theory as

the field's premiere theoretical engine. (A full history of attribution theory can be found in Gilbert 1998).

One prediction of correspondent inference theory was that rational observers should not infer dispositions from actions that are performed under extreme duress. But in his experimental work, Jones found that observers do, in fact, infer dispositions under these circumstances (Jones and Harris 1967), and much of his research in the following decades was devoted to exploring the causes and consequences of this "correspondence bias," or "fundamental attribution error." His discovery and analysis of this important and robust phenomenon set the stage for the explosion of research in social psychology on biases in human inference that took place in the 1980s.

Having established that observers tend to make a particular kind of mistake when drawing inferences about others, Jones suggested that observers make precisely the opposite mistake when drawing inferences about themselves (Jones and Nisbett 1971). He argued that people tend to think of their own actions as having been controlled by situational forces, but tend to think of others' actions as expressions of the other's enduring beliefs, desires, and propensities. His analysis of this "actor-observer effect" implicated perceptual and cognitive factors rather than emotional or motivational factors as the primary sources of what was often a self-serving pattern of inferences, and in so doing, it pioneered a new style of explanation in social psychology.

Jones also argued that if people use attributional rules to draw inferences about others, then they can use these same rules to manipulate the inferences that others draw about them. For example, ingratiation is a tactic by which actors attempt to make observers like them, and Jones's early analysis of this phenomenon (Jones 1964) laid the groundwork for his later, more general work on strategic self-presentation (Jones and Pittman 1982). His work on self-handicapping (Berglas and Jones 1978) showed that people sometimes use these tactics to deceive themselves. He summarized much of his thinking on these and other issues in his final book, *Interpersonal Perception* (1990).

Jones won virtually all the major awards his field could offer, including the American Psychological Association's Distinguished Scientific Contribution Award in 1977. He was an influential and productive social psychologist who combined a deep insight into human affairs with an unflagging commitment to clear theorizing and experimental investigation. In a half-century of careful and inspiring work, he built a significant part of the foundation on which modern social psychology rests.

SEE ALSO *Attribution; Ingratiation; Self-Presentation*

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Daniel Gilbert

JOURNALISM

Journalism is the gathering, writing, editing, photographing, or broadcasting of information through newspapers, magazines, radio, television, or the Internet by any news organization as a business. Just as journalism reports day-to-day news and current affairs, its attributes change with the times. Journalism's history is closely associated with democracy and business. Not only does journalism derive

its financial strength and power from mass audiences purchasing the product, but it also attains its political strength by swaying the masses. Thus while many may decry the commercialization of information, the mark of success, whether financial or political, is seen in the number of people who access that information and therefore support the endeavor. It is described as the lifeblood of democracy. The intersection between politics and journalism has important and fundamental effects on the stability and legitimacy of democratic regimes.

EARLY JOURNALISM

Newsletters contained news that was written for merchants, businesspeople, and politicians during the seventeenth century. The newsletters exchanged sporadic information about friends abroad or in other colonies between people with common interests. This created an organized circulation, which eventually led to the development of the newspaper.

Pamphlets were published papers that dealt with public questions, while ballads were accounts written in verse. These were distributed in public houses, coffeehouses, and taverns. Such information was printed on broadsides, meaning it was printed on one side of a single sheet. These sheets were sold on the street for a few pence.

Journalism's popularity and influence in the political process emerged at about the same time as the European discovery and colonization of North America. Johannes Gutenberg (1400–1467) created the first moveable type press in 1455, yet it was not until Christopher Columbus (1451–1506) sailed from Spain in 1492 that the printing press was popularized in Europe. Columbus wrote many letters describing his discoveries of the "Indies." In 1620, around the time the *Mayflower* landed at Plymouth, the first "coranto," or pioneer newspapers, appeared for sale in the streets of London. The first printing press was imported to America in 1639. Over the next forty years, journalism became established in England with the first newspaper, the *Weekly Newes*.

In England, the popularization of such materials represented the first clash between government and journalism, with authors and importers of imported books being subject to censorship and harsh prosecutions as well as other impediments, such as high taxes. Undeterred by those punishments, the business of journalism grew. It is estimated that between 1640 and the restoration of the monarchy in 1660, more than 30,000 political pamphlets and newspapers were issued. The beginnings of journalism also coincided with the rise of political parties in England. Political groups realized that if they could get endorsements from newsletters and pamphlets, their interests would be more easily disseminated to the public. This eventually led to the partisan press in both the United Kingdom and America.

The first continuous American newspaper began publishing in Boston on April 24, 1704. It was founded by the city's postmaster, John Campbell, and was called the *Boston News-Letter*. It carried news from London journals and focused on English politics and foreign wars. Local content was limited to the arrival of ships, deaths, sermons, political appointments, storms, crimes, and misadventures.

The modern newspaper progressed over the next 200 years, evolving from the broadsheets and pamphlets to weekly sheets and eventually the daily press. Notable figures in the early days of newspapers include Benjamin Franklin (1706–1790), who, with his brother James, published the *New England Courant*. Seeking new sales, Franklin established the publishing tradition of letters to the editor. Initially Franklin himself wrote letters under pseudonyms to create controversy and arouse interest in his own editorials. The first daily newspapers tended to be highly partisan. This partisan press eventually was replaced by the penny press.

Economies of scale figure prominently in the evolution of newspapers. As presses became larger, the need for greater capital also increased. Those with the most capital were able to secure larger presses and larger audiences, thereby pushing out of business the small, independent producers and creating larger, more standardized formats. The larger scale of the modern newspaper helped develop the craft and techniques of journalism. Tenants of modern journalism are objectivity, the inverted pyramid, and other conventions of standardized writing. The formatting of news in specific ways, such as the inverted pyramid, means that the most important information, the five *W*s (who, what, when, where, and why), are placed at the start of the story. This allows readers to find the most important facts quickly. It also means that if the story has to be edited because of space limitations, the last paragraphs are easily cut without losing the main story elements and without the need to rewrite the story.

In addition to movable type, other advances occurred in the creation of the newspaper that influenced the way in which news is reported. The stereotype was invented in 1725 by the Scottish goldsmith William Ged (1690–1749). This consisted of a printing plate of a whole page of type cast in a single mold. These stereotypes were mass produced and were thin enough to be sent through the mails. Large presses purchased the stereotype and sent it to various newspapers. Subscribing newspapers could simply take the stereotype of the news or of cartoons and reproduce them for local readers. The stereotype proved to be so successful that by 1877 nearly eight out of ten newspapers in America provided their readers the same politi-

cal cartoon more cheaply than they could write and set their own. The term s*tereotype* is now used to describe how ideas and public opinion were formed through a consistent message, often one that is simplistic and erroneous.

NEWSWIRES, THE PENNY PRESS, AND YELLOW JOURNALISM

As competition increased, so did the need to be the first to break the news. Many technological advances in the nineteenth century facilitated news-gathering competition. These included the steamship, the railroad, and the magazine telegraph. The telegraph proved to be the most efficient means of conveying information over long distances, and the newspaper helped to popularize and ensure its success. While the telegraph was a boon for the speed of news, it was also expensive.

The first newswire, Agence Havas, was started in 1835 by Charles-Louis Havas (1783–1858), considered the father of the press agency. Havas translated material from abroad for the French national press. In 1940 the company was taken over by the state and renamed Agence Française de Presse (AFP). Twelve years later the first North American press agency was created, starting with an agreement between the publishers of the *Journal of Commerce* and the *New York Herald*. In 1848 the Associated Press (AP) was founded at a meeting of ten men representing six New York newspaper publishers. They pooled their efforts in collecting international news. Horace Greeley (1811–1872), the founding editor of the *New York Tribune*, was also a founder of the AP. Having a news wire license would mean a great deal to future newspaper barons because it would ensure their success against competitors who did not have access to the wire. By October 1851 the German-born Paul Julius Reuter (1816–1899) was transmitting stock market quotes between London and Paris over the Calais-Dover cable. His agency, which eventually became known as Reuters, extended its service to the whole British press and to other European countries. Other news wires that emerged were the United Press Association, set up by E. W. Scripps (1854–1926), U.S. Newswire, and Bloomberg, whose focus remains business news. Most countries have some form of newswire service. Newswires helped move newspapers away from partisan declarations. To be a successful news agency, one had to have many subscribing newspapers. The ability to get the story meant stripping the copy of its editorial content and focusing on the facts.

As newspapers became more powerful, their partisan nature extended their impact. Journalism was said to be so powerful that it could elect presidents as well as ruin political careers. One figure who changed the power structure of the partisan press was Joseph Pulitzer (1847–1911), whose career in publishing began inauspiciously with his account of being taken in as a scam artist, written for the *Westliche Post*, a German-language paper in St. Louis, Missouri. After establishing himself, he purchased the *St. Louis Post-Dispatch* at auction for $2,500 (Brian 2001, p. 31). Pulitzer had an inherent sense of social justice, which he brought to his paper. His editorial position was that the *St. Louis Post-Dispatch* would not be a tool of partisan politics. Denis Brian (2001) noted Pulitzer's pledge: that the paper "opposes all frauds and shams wherever and whatever they are, will advocate principles and ideas rather than prejudices and partisanships" (Brian 2001, p. 32).

Pulitzer is also associated with yellow journalism. Once the *St. Louis Post-Dispatch* was an established and successful paper, he moved to New York and purchased the *New York World*. Within a few years, he took a derelict paper and made it one of the most profitable newspapers in the most competitive U.S. market. To do this he made the paper affordable, cutting the price to 2 cents an issue, and focused on stories that attracted the mass public. Much of this centered on reporting crime and scandal. Later William Randolph Hearst (1863–1951), who admired Pulitzer's business acumen, copied his success and launched the *New York Journal* to compete against the *World*. The competition for readers between the two New York papers culminated in the dueling Sunday supplements containing the Yellow Kid cartoons, the first cartoons published in color. The *New York Press* editor Ervin Wardman dubbed this competition "yellow journalism," and the phrase soon became a metaphor for any kind of salacious reporting.

Yellow journalism is the reporting of scandal, divorce, and crime alongside sports. Yellow journalism also refers to false reports, faking of news or interviews, and heavy use of graphic pictures. The battle between Hearst and Pulitzer raged with misleading headlines and each accusing the other of false reports. While the era of yellow journalism reigned from 1892 to 1914, many of its features still linger in contemporary journalism: big headlines, the use of pictures to present information, and the colored comic Sunday supplement.

Despite being associated with the worst of journalism, Pulitzer is also associated with its best. His penchant for accuracy, brevity, and persistence became hallmarks of journalism. While at the time of his death Pulitzer's estate was in excess of $18 million, he remained interested in the common good. His core journalistic credo was that journalism should never worry about the profits of the owners but rather about telling the truth and uncovering injustice. To this end he provided $2 million for the creation of the Columbia School of Journalism, which opened on September 30, 1912, just under a year after Pulitzer's death.

While journalism had been big business for some time, the height of its power began at the end of the nine-

teenth century. As the investment in presses became larger, so did the business of journalism and the realization that more money could be made if one owned several small papers rather than one large paper. The person who pioneered this type of capital investment in newspapers was E. W. Scripps, who purchased established papers rather than start new ones. He would choose a city with 50,000 to 100,000 in population and purchase a paper already in operation. Most every year from 1893 until his death, he added nearly a half dozen papers to his holdings. In 1926 the Scripps chain owned thirty-four papers. Hearst too amassed a newspaper empire. The difference was that Hearst established himself in the largest American cities. By the end of 1922 Hearst owned twenty daily papers and eleven Sunday papers in thirteen markets. At his peak Hearst had bought or established forty-two daily papers.

MODERN INNOVATIONS: RADIO, TELEVISION, CABLE, AND THE INTERNET

Newspaper journalism began to wane in popularity as other communication technologies emerged. Radio had a unique ability to transmit wire information directly to the public. This challenged newspapers, which feared they would lose their influence. Initial attempts by newspapers to prevent radio from taking over journalism included blocking radio from receiving newswire stories. Nonetheless, there was little to prevent radio stations from reading the news from competing newspapers. When limiting information to radio did not work, newspapers tried to discredit radio journalism by claiming that radio could not uphold the ideals of objectivity, could not provide public service, or was bad for democracy. All these issues were resolved when AP lifted its ban on radio in 1939, allowing radio to compete with newspapers.

Just as radio challenged and changed the nature of journalism, so too did television news. Not only was information equally available, but television news provided better pictures than newspapers with the timeliness of radio. The focus on images in television news changed the nature of journalism, with images reigning paramount over content. From 1950 to the 1980s television news was the most popular means by which the public received information on current events. Television's success was in part due to the ease of receiving the information as well as the visual nature of the medium.

The American networks created bureaus in countries around the world and furnished firsthand accounts of history unfolding. While newspapers were severely challenged by radio, both radio and television eventually lost part of their audience. While newspapers declined, they still maintain significant readership. Radio journalism has suffered the most and is used less frequently than other forms of journalism.

Despite the technical innovations of getting the message out, the period between the 1920s and 1970s saw journalists become more routinized and codified in their presentation of material. Journalism schools were created, and the occupation of journalist was elevated from a technical or trade occupation—one that was also low paying—to a profession characterized by higher education, social status, and eventually pay.

As journalism became more standardized, so too were complaints of perceived bias in the media. Those who supported more government intervention in the economy argued that because journalism is a big business, it focuses on protecting the elites and avoiding stories that might embarrass advertisers. Others, those who supported less government, charged that because journalists were becoming more educated, their views were more in keeping with left-wing intellectuals. At the height of the cold war Senator Joseph McCarthy (1908–1957) led the charge by accusing many prominent journalists (as well as entertainers) of being Communist sympathizers. In particular he took issue with the popular former war correspondent and radio and television journalist Edward R. Murrow (1908–1965) as evidence. Murrow fought back, exposing McCarthy's false accusations and setting the standard for hard-hitting investigative journalism. His documentary on McCarthy is considered the most famous ever broadcast, and it signaled the end of McCarthyism. When one considers that television news was still in its infancy, with relatively few people having direct access to television, and that it was a program not promoted by the network, it spoke to the potential impact of the medium. That impact was developed during the 1960s and 1970s with domestic events such as race relations and the assassinations of President John F. Kennedy, civil rights leader Martin Luther King Jr., and Senator Robert Kennedy. All these events were given heightened sense of crisis and immediacy in part because television news was able to provide the pictures to go along with the information.

In addition to broadcasting local events in North America as well as Europe, television news could provide pictures from faraway places such as Africa and Southeast Asia. Walter Lippmann's 1922 depiction of "the world outside and the pictures in our heads" (Lippmann 1922, p. 1) was never more true than with television news broadcasting images from faraway places.

Walter Cronkite, the managing editor and anchor of CBS News from 1962 to 1981, was a trusted and well-respected journalist in part because he maintained the CBS News policy of independent, nonpartisan reporting. Some argue that it was not the continuing pictures and stories of the war from Vietnam that changed the major-

ity view on the conflict but the fact that Cronkite, a former World War II (1939–1945) correspondent, stepped aside from the neutral anchor to present his opinion on the war.

That legacy continued and culminated with the *Washington Post*'s reporting of a break-in in the Watergate complex in Washington, D.C., in 1972. Relatively junior reporters Bob Woodward and Carl Bernstein are credited with investigating the story in a series of newspaper articles that revealed that the break-in was linked to the Republican Party, whose officials were seeking information about the Democratic Party. President Richard Nixon eventually resigned rather than face impeachment. While many point to the Watergate reporting as the high-water mark for investigative journalism, others argue that the role of journalism in bringing down the president is more myth than fact. Edward Jay Epstein, for example, argues that Woodward and Bernstein were only slightly ahead of the prosecutors and relied on leaked information from the prosecutor's case. As such, Epstein argues, the information would have come out anyway. It was not Woodward and Bernstein who uncovered the link between the burglars and the White House and traced the illegal activities to the Nixon campaign, it was the FBI. Epstein charges that Woodward and Bernstein "systematically ignored or minimized" the work of law enforcement officials to "focus on those parts" of the story "that were leaked to them" (as quoted in Feldstein 2004, p. 3).

Nixon aide Howard Dean states that the role of the journalists in the Watergate story was not investigative reporting but keeping the story alive long enough to legitimize law enforcement agents who were doing the investigation. The media coverage and subsequent frenzy is what kept the Watergate story in the public eye. The press coverage also helped to keep the public's interest alive during the televised hearings about the scandal. Ultimately, however, the business of journalism is sustained by the routine gathering of news rather than by investigative journalism. While television became dominant in news gathering and dissemination, the investigative model is ultimately time consuming and expensive. The day-to-day news business is focused on feeding the news cycle with short, easily digested information. As a result investigative articles are more rare than routine.

Only with the emergence of cable news networks did network television news begin its decline. Despite the pressures from other communications technologies, public opinion surveys indicate that local television news remains the most frequent source of information, followed by local newspapers.

Cable news networks challenged traditional television news in several ways. First, providing one service on cable was significantly cheaper than having to supply stations in every market. These savings allowed cable networks such as CNN to establish more bureaus around the world at a time when network television news had to close down bureaus or cut staff. The twenty-four-hour format gave CNN an advantage on stories with great public interest, such as the 1991 Gulf War. CNN not only changed the way international news is covered but also increased interest in and the scope of international affairs on public policy. Thus it is seen as a catalyst for Western governments to intervene in humanitarian crises, subsequently dubbed the "CNN effect." The extent to which governments react to media coverage of suffering people is debatable, but the public's awareness of humanitarian crises are much more extensive as a result of the twenty-four-hour news format. By shifting the focus from local topics to international issues, the focus of the public has become more globalized.

The popularization of the Internet has blurred the lines of journalism and public comment. The Internet not only allows for on-demand news, which traditional media have adopted, but it also allows for individuals not normally considered journalists to present their interpretations of current affairs. The Web log, or blog, is a Web site on which individuals write their views on any subject. Blogs have been associated with breaking publication bans, providing critical commentary on accepted journalistic stories, and popularizing certain political interests. Just as challenges to newspapers were discredited as not being proper journalism, traditional journalists also question and try to discredit blogs. The current definition of journalism disavows blog writers in that they do not typically write for commercial interests. The Washington Press Gallery, for example, limits membership by stipulating that to qualify as a journalist, one must be employed by "a periodical that is published for profit and is supported chiefly by advertising or by subscription" (United States House of Representatives, Periodical Press Gallery, Rules and Regulations).

SEE ALSO *Democracy; Internet; Media; Medium Is the Message; Radio Talk Shows; Television; Watergate*

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Lydia Miljan

JOURNALS, PROFESSIONAL

There are several means to disseminate ideas, results, experiments, criticism, and discoveries in the sciences and humanities. The most often used are professional journals, books, working papers, technical reports, pamphlets, and presentations at academic conferences. Professional journals are the main means of communication because the majority of journals use the referee or peer-review system for papers submitted for publication. The referee system aims at selecting the best papers and achieving the greatest objectivity possible. In addition, journals provide a fast and efficient way to spread the latest developments in a field of study. They also serve as a forum for discussion, which is essential for the advance of knowledge.

Publications in academic journals are used to rank departments and scholars. Publications are one of the key instruments used to assess the quantity and quality of scholars and departments through objective criteria, a method in line with the belief that scholars and academic institutions should be evaluated on the basis of merit. The ranking of departments and scholars requires a list of journals that are themselves ranked according to their importance. Rankings of journals are based on the relative impact of the papers published. Generally, the impact of a journal is captured by the number of citations to its articles in other journals (Liebowitz and Palmer 1984). An alternative approach to ranking journals is to survey members of the relevant profession (Malouin and Outreville 1987).

Due to the increase in specialization among and within many branches of the sciences and humanities, the number of specialized journals is increasing. Rajeev Goel and João Faria (2007) showed, in a differential game between editors and authors, that the launching of new journals generates greater competition among editors, enhancing research quality. Another consequence of specialization can be observed in economics, where there has been a fall in the importance of general journals relative to specialized journals (Faria 2002a). In addition, new academic journals have been established as a result of the publication congestion in existing journals. This congestion results from the increasing difficulty of producing high-reputation journals, causing a rise in rejection rates and a time delay between submission, acceptance, and final publication of papers. Glenn Ellison (2002) argues that in economics this slowdown is due to an increasing tendency among journals to require that papers be extensively revised prior to acceptance.

Professional journals are part of the publishing business and thus are subject to market forces. The main agent behind the market performance of academic journals is the publisher. In most cases, a publisher with a good reputation, experience, and penetration in the academic market can make a difference in the performance of an academic journal. In economics, commercial publishers have gained a substantial market share. They have been successful in creating new journals, as well as taking over top journals formerly published by nonprofit organizations, such as professional associations and university presses.

One consequence of the increasing role of commercial publishers in the production of professional journals is a rise in prices. David Rosenbaum and Meng Hua Ye (1997) produced evidence that commercial publishers engage in price discrimination between individual and library subscribers, showing that library prices rise faster than individual subscribers' prices. Owen Phillips and Lori Phillips (2002) showed that library prices are two to ten times higher than private prices. Nathan Berg (2002) proposed that university libraries, in order to cope with journal-price inflation, pick a threshold level of quality of academic journals below which no subscriptions are ordered.

Plagiarism, rhetorical conventions, and editorial favoritism are among the potential problems that plague professional journals. The majority of the 117 editors of economic journals surveyed by Walter Enders and Gary

Hoover (2004) considered the use of several unattributed sentences to constitute plagiarism. Eighty-three of the 117 editors said that they had seen no cases of plagiarism in a typical year. Of the remainder, twenty-eight editors reported a collective total of forty-two occurrences of plagiarism in an average year. The key findings of Enders and Hoover are that editors tend to rely on copyright law to protect themselves from plagiarism; they are not likely to publicize an instance of plagiarism; and the majority of editors favor a code of ethics enumerating various forms of plagiarism and the appropriate penalties.

Technological innovations change the research tools and may affect the way professionals present their findings. Rhetorical conventions become a problem for journals when professionals put more importance on the presentation of their work than on its content (see McCloskey 1991). Anecdotal evidence suggests, at least in economics, that technical knowledge, such as sophisticated mathematics and econometric techniques, increases the chances for publication. One possible reason lies in the fact that technical knowledge decreases the opportunity cost for a contributor who has acquired the minimal technical expertise demanded by the journal (Wallis and Dollery 1993); in addition, technical knowledge makes it easier for a referee to evaluate an article. As stressed by Bruno Frey (2001), the emphasis on formalism may lead to a disregard for relevance and originality.

Editorial favoritism is a serious problem for professional journals because it can be a significant source of bias in the evolution of knowledge. The bias is mainly reflected in the choice of topics, research techniques, and literature. Editors and referees may choose to publish a paper not because of its content but because of the author's network of connections or his or her views. David Laband and Michael Piette (1994) point out that editorial favoritism generates sizable wealth redistributions among members of the scientific community, providing strong incentives for authors to attempt to influence their chances of publication and citation. Of course, academic networks facilitate the circulation of ideas and personal contacts, which are essential to fostering the advance of knowledge (Faria 2002b). In the same vein, editors, following Thomas Kuhn (1962), may be interested in defending the prevalence of and reinforcing a given paradigm. However, in spite of the difficulty in investigating the fundamentals of editorial bias (Medoff 2004), the possibility of its occurrence raises a red flag on the dangers of exogenous factors interfering with the process of knowledge formation.

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João Ricardo Faria

JUÁREZ, BENITO
1806–1872

In twentieth-century Mexico, no name was used more frequently to name streets, public buildings, and towns than that of Benito Juárez. A Zapotec Indian lawyer from the southern state of Oaxaca, Juárez stood at the helm of the liberal, reformist republican project during the bloody nineteenth-century civil war against the conservatives,

which became a struggle against a monarchical regime supported by French military intervention (1858–1867). He then presided over the restoration of the republic and governed, until his death, under the heavy criticism of the opposition in Congress and an exceptionally free press. One of nineteenth-century Mexico's ablest politicians, he became, within a generation of his death, one of the nationalist imagination's most enduring symbols. His life story opens a window on the complex workings of politics in nineteenth-century Mexico at a critical juncture, and the recurrent reconstruction of his image as a national symbol offers clues to the transformations of Mexican political culture.

Juárez left the monolingual Zapotec community of San Pablo Guelatao as a twelve-year-old who spoke little Spanish (he would later be able to read Latin, English, and French) to join his sister, a house servant, in the state capital city of Oaxaca. He studied law at the city's seminary and then at its secular, modern Institute of Arts and Sciences. In a state where liberalism had a broader, more popular appeal than in other regions, Juárez entered politics early and gained experience at all levels of government. He was a member of the Oaxaca city council and of the local and then the federal Congress. He was also a judge, prosecutor, secretary of state, and governor. Nevertheless, his promising political career was interrupted, like that of many young politicians in the provinces, by the dictatorship, from 1853 to 1855, of military strongman Antonio López de Santa Anna (1794–1876), which sought to put an end to representative politics and state autonomy. Juárez was exiled and ended up in New Orleans, Louisiana, where his perspectives were broadened and his political vision sharpened through contacts with more sophisticated Mexican radicals like Melchor Ocampo, Ponciano Arriaga, and José María Mata.

The fall of Santa Anna brought about a new era in Mexican politics that was known as the Reform (1855–1867). Despite differences among them, the young provincial liberals who arrived on the national stage in 1855—among whom Juárez would cut an elder-statesman figure—were committed to modernizing Mexico through the restoration of federalism, the strengthening of the national government, and the destruction of those "vices" that were the legacy of colonial times: corporate privilege, which denied equality before the law; corporate ownership of land, which made for a sluggish economy; and the overwhelming power of the Church. Their project was given expression in the 1857 constitution, which prevailed after ten years of armed struggle. The first conflict (1858–1860) was against the conservatives, who feared that the constitution's attack on the Church and religion would tear apart the deteriorated social and moral fabric of Mexican society. The struggle next included Napoléon III's army, who joined the conservative cause and sought to establish a French-sponsored empire led by Austrian archduke Maximilian, who served as emperor of Mexico from 1864 to 1867. Unlike the four constitutions that preceded it, that of 1857 provided a stable, if not always heeded, juridical framework over the course of half a century.

Juárez, as minister of justice, drafted the 1855 law that put an end to ecclesiastical and military judicial privilege in civil suits. Although he did not participate in the design of the constitution, having been reelected governor of his home state, it became his touchstone and source of legitimacy as he assumed the presidency in 1858 after a conservative coup d'etat. When the coup set up a government that abrogated the constitution in the nation's capital, Juárez set up the constitutional government in Veracruz. The country was effectively divided in two. For Juárez, the constitution stood for putting the rule of law above petty rivalries, politically convenient shortcuts, and regional interests. The Reform laws promulgated by Juárez in 1859 and 1860 greatly diminished the power of the Church by nationalizing ecclesiastical wealth, shutting down religious orders, establishing a civil registry, and formalizing religious freedom. It was his insistence on adherence to the constitution that consolidated his legitimate leadership as a civilian president over the military. It provided the principles through which he tried to solve one of the national government's most pervasive problems since independence: its recurrent altercations with the states, particularly over men and money. On the other hand, he did not consider constitutional principle a strict mandate for government action. Like all presidents who governed under the 1857 law, he repeatedly asked Congress for emergency powers. In 1865, when his presidential period ran out, he refused to step down, alleging that the war made holding new elections impossible. When in 1867 he tried and failed to amend the constitution, he appealed directly to the electorate instead of following the constitutionally mandated process for reform.

After leading the country in what was then called the second war of independence, Juárez won two contested reelections, carried by a political machine that relied on the federal bureaucracy. He died as president in 1872, having secured the principle of constitutional rule; until 1917, challenges to political authority were articulated in defense of the constitution, never again against it. But if the constitution was consecrated as a national symbol and as the structure for political struggle, it failed to set up the mechanics for some crucial aspects of government, particularly for the transmission of power through elections. This is attested by the two rebellions led by Porfirio Díaz (1830–1915), one called the Plan de la Noria in 1871, the other called the Plan de Tuxtepec in 1876. Additionally, the Reform's disentitlement of communal lands and the

nationalization of Church wealth did not bring about the prosperous nation of farmers that the liberals envisioned, but often the concentration of land ownership and the discontent of Indian communities.

Juárez's performance as a politician and statesman was controversial. Nevertheless, his transformation into an icon preceded his death: In the 1860s, other Latin American countries hailed him as a symbol of successful resistance to European imperialism. Once dead, Juárez, as Charles Weeks writes in his book *The Juárez Myth in Mexico* (1987, p. 42), "was far more valuable to all" as a particularly powerful and pliable symbol. In the 1890s orthodox liberals, despairing of Porfirio Díaz's authoritarian ways and his rapprochement to the Church, upheld Juárez as a symbol of true liberalism betrayed. Díaz ably took this banner away from them by claiming to be Juárez's true heir and throwing the weight and resources of government behind the *juarista* cult. In 1904 Francisco Bulnes (1847–1924), a prominent Porfirian politician, wrote a scathing critique of Juárez's actions during the French intervention and of the nationalist narrative that he believed was reducing history to hagiography. He unleashed a furious reaction from both Porfirian intellectuals and their opposition, and his criticism of Juárez was taken as an attack on the nation.

The Bulnes controversy sets the tone for the use and abuse of Juárez's figure as a source of legitimacy throughout the twentieth century as the self-proclaimed revolutionary state took up the mantle of nineteenth-century liberalism. References to Juárez in official rhetoric have been inevitable, especially from the mid-1940s, with the consolidation of civilian government and with the increasing importance of stability and economic growth over reform. He has personified administrative honesty, the secular state (despite his moderation and good relations with the Church in Oaxaca), strict adherence to law (although he violated the letter of the constitution), the defense of national sovereignty (although he authorized the signing of the unfavorable McLane-Ocampo treaty with the United States in 1859), and indigenism (even though he did not speak of "Indian rights" and repressed Che Gorio Melendre's movement to defend community resources in Juchitán in 1850). To the opposition right, on the contrary, he has been the embodiment of treachery to the true (Catholic) nation. Allusions to Juárez, then, are not meant to refer to historical experience or to policy content; they intend to draw the line between good and evil, patriotism and treason. Juárez has arguably been more important for what he has represented than for what he did.

SEE ALSO *Mexican Revolution (1910–1920); Revolutions, Latin American*

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Erika Pani

JUDAISM

Judaism is the religion founded upon the Hebrew Scriptures, or "Old Testament," which is viewed as an exhaustive account of God's will for humanity. Judaism is the oldest of the three monotheist religions—the others being Christianity and Islam. The Hebrew scriptures first took shape around 450 BCE with the assembling of the Torah ("instruction"), which recorded the revelation of God to Moses at Mount Sinai. The Torah is composed of the Five Books of Moses: Genesis, Exodus, Leviticus, Numbers, and Deuteronomy. The sacred Scripture also encompasses the Prophets: Joshua, Judges, Samuel, and Kings, Isaiah, Jeremiah, and Ezekiel, and the twelve minor prophets; as well as the Writings: Psalms, Proverbs, Job, Ecclesiastes, Lamentations, Song of Songs, Ruth, Esther, Daniel, Chronicles, and Ezra-Nehemiah.

The Torah and the Prophets tell twin stories of exile from Paradise—one concerned with humanity as a whole, the other with Israel, the people of the Torah. Adam and Eve, representing humanity, lose Paradise—the Garden of Eden—because of their rebellion against God. The people of Israel likewise lose their paradise—the Land of Israel—because of their disregard of God's will as revealed in the Torah. Israel had acquired the Promised Land in fulfillment of God's covenant with Israel's founders, Abraham and Sarah, and their descendants. In 722 BCE, however, the northern kingdom of Israel fell to the Assyrians and was incorporated into Assyria, and in 586 BCE the southern kingdom of Judea fell to the Babylonians, who destroyed the Temple of Jerusalem. Following this, the Jews went into exile in Babylonia (present-day Iraq). In the later sixth century BCE the Babylonians were conquered by the Persians, who in 530 permitted the exiled Judeans to return to Jerusalem and rebuild the Temple there on Mount Zion. Some did just that. Then, around 450 BCE the scribe Ezra, in cooperation with the Temple

priests, promulgated the Torah of Moses as the law for Israel.

The Torah portrays Israel's exile as the consequence of rebellion and its return as its reward for repentance, and sets forth the rules that Israel must keep if it is to retain paradise in the Land of Israel. The parallel narratives—the stories of Adam and Eve and their counterpart, the people of Israel—part ways with the return to Zion, for whereas Israel could repent and reform, Adam, representing the rest of humanity, without the Torah could do nothing to regain Paradise.

THEOLOGY OF JUDAISM

The theology of Judaism is set forth by the rabbis of the first six centuries CE in their readings of Scripture. These readings took place in dialogue with a set of documents that record the oral traditions that had been passed on via a chain of masters and disciples stretching back to Moses and up to the early centuries of the Common Era. The first of these documents recoding oral tradition is the Mishnah (ca. 200 CE), a law code that both amplifies the laws of Scripture and sets forth laws that take up topics not treated by Scripture. A collection of supplements, the Tosefta (ca. 300 CE), and two commentaries to the Mishnah, the Talmud of the Land of Israel (ca. 400 CE) and the Talmud of Babylonia (ca. 600 CE), augmented the laws of Scripture as systematized in the Mishnah's topical expositions. The same rabbis produced commentaries on Scripture, called Midrashim: among others, Genesis Rabbah (ca. 400), on Genesis; Mekhilta Attributed to Rabbi Ishmael (ca. 300), on Exodus; Leviticus Rabbah (ca. 450), on Leviticus; and Sifré to Numbers and Sifré to Deuteronomy, on Numbers and Deuteronomy, respectively.

The monotheism of Judaic theology as set forth in Scripture and oral tradition contrasts strongly with the polytheism prevalent at the time of Judaism's foundation. For a religion of numerous gods, life's problems have many causes; for a religion of only one God, there is only one cause. To explain why life is seldom fair and often unpredictable, polytheism identifies multiple causes, one god per anomaly. Diverse gods do diverse things, so it stands to reason that the outcomes of their actions conflict. Monotheism by its nature explains many things in a single way. One God rules all and everywhere. Life is meant to be fair, and just rules are supposed to describe what is ordinary, all in the name of that one-and-only God. Thus, in Judaic monotheism a simple logic governs, to limit ways of making sense of things. But that logic contains its own dialectics. If one true God has done everything, then, because he is God all-powerful and omniscient, all things are credited to, and blamed on, him. In that case he can be either good or bad, just or unjust—but not both.

Jewish theology attempts to systematically reveal the justice of the one-and-only God of all creation. God is not only God but also good. The Torah pictures a world order based on God's justice and equity. Judaism finds its dynamic in the struggle between God's plan for creation—to create a perfect world of justice—and man's will. That dialectic is embodied in a single paradigm: the story of Paradise lost and regained.

Four key sets of beliefs characterize the theology of Judaism:

1. God formed creation in accord with a plan, which the Torah reveals. The facts of nature and society set forth in that plan conform to a pattern of reason based on justice and together constitute God's world order. Private life as much as public order conforms to the principle that God rules justly in a creation of perfection. Those who possess the Torah—namely, Israel—know God and those who do not—the gentiles—reject him in favor of idols. What happens to these two sectors of humanity, respectively, corresponds to their relationship with God. Israel in the present age is subordinate to the nations, because God has designated the gentiles as the medium for penalizing Israel for its rebellion—meaning that Israel's subordination and exile is intended to provoke repentance.
2. The perfection of creation, realized in the rule of exact justice, is signified by the timelessness of the world of human affairs, and its conformity to a few enduring paradigms that transcend change. Perfection is further embodied in the unchanging relationships of the social commonwealth, which assure that scarce resources, once allocated, remain unchanged. Further indications of perfection lie in the complementarity of the components of creation, and in the correspondence between God and man, who was created in God's image.
3. Israel's condition, public and personal, constitutes flaws in creation. What disrupts perfection is the sole power capable of standing on its own against God: man's will. What man controls and God cannot coerce is man's capacity to form intention and therefore choose either arrogantly to defy, or humbly to love, God. Because man defies God, the sin that results from man's rebellion flaws creation and disrupts world order. As with Adam and Eve's exile from Eden, the act of arrogant rebellion leads to humanity's flawed condition. God retains the power to encourage repentance through punishing man's arrogance. In mercy, moreover, God exercises

the power to respond to repentance with forgiveness—that is, a change of attitude bringing about a change in man's condition. Because man also has the power to initiate the process of reconciliation with God through repentance—an act of humility—man may restore the perfection of that order his arrogance has marred.

4. God ultimately will restore that perfection that embodied his plan for creation. In the process of restoration, death—which exists because of sin—will die, the dead will be raised and judged for their deeds, and most, having been justified, will go on to eternal life in the world to come. The paradigm of man restored to Eden is realized in Israel's return to the Land of Israel. In that world or age to come, idolaters will perish, and the remaining portion of humanity, comprising Israel, will know the one, true God and spend eternity in his light.

JUDAISM AND PHILOSOPHY: MEDIEVAL RATIONALISM

The theology of Judaic monotheism set forth by the rabbis of the first six centuries CE was subsequently amplified by philosophers and mystics. Judaic intellectuals in the Islamic world, from the advent of the Prophet Muhammad in the seventh century CE, faced the challenge posed by Muslim rationalism and philosophical rigor. The task at hand was to reconcile and accommodate Torah and the philosophical form of science.

That is why alongside the study of Torah—meaning the Babylonian Talmud and later codes, commentaries, and rabbinical court decisions—a different sort of intellectual-religious life flourished in Judaism. This was the study of the Torah-tradition through the instruments of reason and the discipline of philosophy: the quest for generalization, a critical sifting of evidence, and, above all, the attempt to find harmony between the generalizations of the Torah and the scientific principles of Aristotle. For example, how can the scriptural notion that God changes his mind be harmonized with the Aristotelian principle that change indicates imperfection, and how can the belief that miracles interrupt the course of nature be reconciled with the philosophical principle that laws of nature are immutable? If God is arbitrary, then God is no philosopher. But for Judaic, Christian, and Islamic theology, God is the source of all truth, whether revealed in nature or in scripture.

The Judaic philosopher had to cope with problems imposed not only by the Torah's conflict with philosophy, but also by the anomalous situation of the Jews themselves. For instance, what was the meaning of the unfortunate history of the Jews? How was philosophy to account reasonably for the homelessness of God's people, who were well aware that they lived as a minority among powerful, prosperous majorities—Christian or Muslim? If the Torah were true, why did different revelations claiming to be based upon it—and to complete it—flourish, while the people of Torah suffered? Why, indeed, ought one to remain a Jew, when every day one was confronted by the success of the daughter religions? Conversion was always a possibility—an inviting one even under the best of circumstances—for a member of a despised minority.

The search was complicated by the formidable appeal of Greek philosophy to medieval Christian and Islamic civilizations, two cultures in which Judaism was practiced. Its rationalism, openness, and search for pure knowledge challenged all revelations. Philosophy called into question all assertions based not on reason, but on appeals to a source of truth not universally recognized. Specific propositions of faith and the assertions of holy books had to be measured against the results of reason. Belief in mysterious divine plans conflicted with claims for the limitless capacity of human reason. It seemed, therefore, that reason stood in opposition to revelation, and free inquiry could not be relied on to lead to the synagogue, church, or mosque. Faith *or* reason—this seemed to be the choice.

For the Jews, moreover, the very substance of faith—in a personal, highly anthropomorphic God who exhibited traits of character not always in conformity with humanity's highest ideals and who in rabbinic hands looked much like the rabbi himself—posed a formidable obstacle. The obvious contradictions between belief in free will and belief in divine providence further enriched classical philosophical conundrums. Is God all-knowing? Then how can people be held responsible for what they do? Is God perfect? Then how can he change his mind or set aside his laws to forgive people? No theologian in such a cosmopolitan, rational age could begin with an assertion of a double truth or a private, relative one. The notion that something could be true for one party and not for another, or that faith and reason were equally valid and yet contradictory were ideas that had little appeal.

JUDAISM AND THE OTHER MONOTHEISTIC RELIGIONS

From the time of the Roman emperor Constantine, who in the fourth century declared Christianity legal and whose heirs made it the religion of the Roman Empire, to the nineteenth century, Jewry in Christendom had sustained itself as a recognized and ordinarily tolerated minority. The contradictory doctrines of Christianity—which saw Jews as Christ-killers to be punished, and as witnesses to be kept alive and ultimately converted at the second coming of Christ—held together in an uneasy balance. Official policy—keep the Jews alive, but do not

reward their disloyalty—accounts for the Jews' survival in some of the Christian realms, particularly those on the frontiers of Christian Europe, south and east. The pluralistic character of some multiethnic societies explains the welcome accorded Jewish entrepreneurs in certain territories, including Spain before 1492, and Norman England, Lithuania, Poland, Russia, and Ukraine in the early centuries of their development.

The rabbinic system, for its part, had addressed the agenda of Christianity and for long centuries had given answers that, for Israel, proved self-evidently valid. Judaism had answered the question made urgent by Christianity's triumph: What is Israel in the divine plan? This it did by appeal to the sanctification of Israel and its future salvation. Normative Judaism had taken shape in response to the challenge of Christianity. So long as in Christian lands Christianity defined the issues, Judaism would flourish without effective competition within Jewry, absorbing and accommodating new ideas. The same was true of Islamic lands and the character of Judaism in the Muslim world.

JUDAISM AND MODERNITY

In modern times, faced with the political changes brought about by the American Constitution of 1787 and the French Revolution of 1789, Jews in western Europe and the United States aspired to rights possessed by the majority population: citizenship, equality before the law. But an urgent question emerged: How could and why should one be *both* Jewish *and* German or Jewish and French or Jewish and British? (The issue was conceived in terms of the categories of religion and nationality; that is, Jews were Jewish by religion and German by nationality. In the late-twentieth-century United States the issue would be conceived in terms of religion and ethnicity; thus, one could be both Christian and ethnically Jewish.) From the earliest decades of the nineteenth century, new Judaisms took shape, dealing with this and other urgent questions. They offered explanations of how a Jew could be not solely an Israelite but also something—anything—else. To do so, people had to identify a neutral realm in the life of individuals and consequently of the community, a realm left untouched by the processes of sanctification leading to salvation, which had for so long made Jews into "Israel," the community of Judaism. Each of these Judaisms claimed to continue in linear succession the Judaism that had flourished for so long, to develop it incrementally, and so to connect, through the long past, to Sinai. But in fact, each one responded to contemporary issues deemed urgent among one or another group of Jews.

THE REFORM, ORTHODOX, AND CONSERVATIVE JUDAIC RELIGIOUS SYSTEMS

Three main new Judaisms took shape between 1800 and 1850. The first to emerge was Reform Judaism, which developed in the early part of the nineteenth century. Reform Judaism made changes in liturgy, then in doctrine and in the Jewish way of life. More significantly, perhaps, it recognized the legitimacy of making changes and regarded change as reform—hence its name.

Second to develop was Orthodox Judaism, which achieved its first systematic expression in the middle of the nineteenth century. A reaction to Reform Judaism, Orthodox Judaism was in many ways continuous with traditional Judaism, but in other ways it was as selective in its adoption of elements of traditional Judaism as was Reform Judaism. Orthodox Judaism denied the validity of change, and held that Judaism lies beyond history; it is the work of God, and constitutes a set of facts of the same order as the facts of nature. Hence change is not reform, and Reform Judaism is not Judaism. But, at the same time, Orthodox Judaism affirmed that one could devote time to science as well as Torah-study, an accommodation with contemporary culture different only in degree from the Reform compromise.

Third in line and somewhat after Orthodox Judaism came positive Historical Judaism, known in America as Conservative Judaism, which occupied a middle position between the two other new Judaisms. This Judaism maintained that change *could* become reform, but only in accordance with the principles by which legitimate change may be separated from illegitimate change. Conservative Judaism would discover those principles through historical study. In an age in which historical facts were taken to represent theological truths, the historicism of Conservative Judaism gave it compelling weight. Positivism and dependence on history to validate theological conviction would serve Conservative Judaism poorly later on, however, when the discoveries of archaeologists called into doubt principal parts of the scriptural narrative.

SEE ALSO *Jews*

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Jacob Neusner

JUDICIAL REVIEW

Judicial review is the legal principle that recognizes the power of courts to declare an act of Congress or the president unconstitutional. This power was most firmly established in the 1803 U.S. Supreme Court case of *Marbury v. Madison*. In a larger sense, the case exemplifies the uncertainties of litigation and how law evolves in a democratic form of government. It was the uncertainty embedded in litigation that prompted Supreme Court Justice Oliver Wendell Holmes (1841–1945) to declare that the object of the law is prediction when he stated that: "the prophecies of what the courts will do in fact, and nothing more pretentious are what I mean by the law" (1897, p. 461). In the American judicial system, what courts will do in fact about legal controversies brought before them will necessarily differ and possibly evolve from one case to another depending upon the facts and circumstances surrounding each case. Although the Framers conceived of the judiciary as the "least dangerous branch" insofar as the constitutional rights of the people are concerned, many now believe that this claim no longer rings true because they see the Supreme Court as the most powerful of the three stations of constitutional power in U.S. government. For the most part, the Court owes its current power and high status to the principle of judicial review.

The story of the origin of modern judicial review started in earnest with the presidential election of 1800 between the incumbent president John Adams (1735–1826) and the challenger Thomas Jefferson (1743–1826). That contest produced no clear winner after all Electoral College votes were counted. In that situation, the U.S. Constitution requires the House of Representatives to settle the election by choosing the president and vice president. During the month of February 1801, after much debate in Congress, Thomas Jefferson was selected president and Aaron Burr (1756–1836) vice president. Because the Federalist Party (the modern-day Democratic Party) had lost control of Congress and the presidency, the outgoing president, John Adams, proposed and Congress approved the Circuit Court Act of 1801, which authorized six new circuit courts and several district courts to accommodate the new states of Kentucky, Tennessee, and Vermont. This bill guaranteed the Federalists temporary control over the judiciary. During his final six months in office, John Adams submitted well over two hundred nominations to Congress, with sixteen judgeships approved by the Senate during his last two weeks in office.

One of the most important developments that took place during this transition period was that Federalist Oliver Ellsworth (1795–1800) resigned his position as chief justice of the Supreme Court, giving Adams an opportunity to name a Federalist successor. Adams immediately turned to former Chief Justice John Jay (1745–1829), who had resigned to become the governor of New York. Jay refused to return to the center chair. Then Adams turned to his secretary of state, John Marshall (1755–1835). Marshall accepted the appointment and was quickly confirmed by the Senate in January 1801 while he was still serving as secretary of state.

In addition to the Circuit Court Act, the Federalist Congress enacted the Organic Act, authorizing the president to appoint forty-two justices of the peace in the District of Columbia. The men Adams chose to fill these positions were called "midnight appointees," and virtually all were Federalists. It is noteworthy that this seemingly trivial act would set the stage for the most dramatic event that led to the Court's decision in *Marbury v. Madison*, the case that firmly established the doctrine of judicial review.

During the last days of John Adams's administration, there was a sudden rush to clean house in preparation for the new administration's arrival. As a result, Secretary of State John Marshall neglected to deliver some of the commissions for justice of the peace. If he had not neglected this duty, the ensuing controversy would have been avoided. One of these commissions belonged to William Marbury, a resident of the District of Columbia. When the new administration assumed power, Thomas Jefferson was displeased with his predecessor's blatant effort to pack the judiciary with Federalist loyalists. Therefore, he ordered his secretary of state, James Madison (1751–1836), not to deliver the commissions. Determined to obtain their commissions, Marbury and three others went directly to the Supreme Court. They invoked the Court's original jurisdiction powers and requested a writ of mandamus, which is an order that would require a government official (in this case, the secretary of state) to perform a government function (e.g., deliver the commissions). The case was placed on the Court's docket for the 1802 term. But while the case was pending, the new Republican majority in Congress decided to eliminate the entire 1802 Supreme Court term out of anger toward the actions of a lame-duck

president, and so the decision in *Marbury v. Madison* was postponed until February 24, 1803.

This case presented John Marshall and the Supreme Court with a daunting predicament. Should the Supreme Court issue the writ of mandamus? What if the writ were issued and President Jefferson (through his secretary of state) refused to honor it? These were important questions requiring careful deliberation. Certainly the potential institutional consequences for the Supreme Court could be disastrous if the Court made the wrong choice. The balance of power in the government would be dramatically altered and the Court would suffer further diminished influence in the current and future affairs of government. Worse still, Jefferson and subsequent presidents could play fast and loose with the Constitution by assuming an inherit authority to act as they pleased without the watchful eye of the Court.

One can think of this case as a game of strategy. Both the Court and the president had real choices to make and each choice presented a real consequence. Since the Supreme Court had to make a decision after receiving the case, it got to move first in the game. The Court had to decide whether to issue the writ or not. If the Court chose to issue the writ, President Jefferson would probably choose not to honor it, precipitating a constitutional crisis. In this outcome, the Court would be severely weakened since it would lack the power to enforce its own decisions. If Jefferson honored the writ, however, that choice would be viewed as an embarrassing defeat for him and his administration. His power of persuasion would be damaged. Neither of these two possible scenarios—the Court's choices or the president's—sounded promising.

If, on the other hand, the Supreme Court failed to issue the writ, it would be viewed as weak by members of the Federalist Party in Congress and Marshall's reputation within the party would be severely tarnished. The remaining decisional choice was for the Court to declare the law authorizing William Marbury's legal request unconstitutional. The Court settled for this option, thereby avoiding a constitutional confrontation with the president. By declaring a federal law null and void for the first time, the Supreme Court firmly ushered in judicial review and sent a clear message that it stood ready to assert itself as an independent and coequal branch of the federal government. Historians of the Marbury affair consider the Court's decision something of sheer genius, although by all practical purposes it is possible that both the Supreme Court and the president were merely reacting rationally based upon information available to them.

How did John Marshall and the Supreme Court reach that decision? Analysis of the opinion suggests that the Court addressed three interrelated questions raised in the case. First, was William Marbury legally entitled to the commission? The Court answered yes, noting that the commission was indeed signed by the president; hence the appointment was made and it was completed when the secretary of state affixed a seal of the United States. Marbury therefore suffered a legal injury and as a matter of right was entitled to the commission. Second, did the law afford Marbury a remedy for his claim? Yes. Failing to offer Marbury an appropriate remedy would amount to a plain violation of his right under the Constitution. Finally, was that remedy a mandamus issued by the Supreme Court? The Court said no. Even though the Judiciary Act of 1789 authorized the Court to issue a writ of mandamus to "persons holding office, under the authority of the United States," the Court lacked the proper jurisdiction to issue a writ of mandamus because Section 13 of that Act provides an unconstitutional grant of original powers to the Supreme Court. Article III of the U.S. Constitution specifies in full the original jurisdiction powers of the Supreme Court. To alter that constitutional grant of power requires a constitutional amendment, not a congressional statute.

Judged under proper standards of ethical behavior, it seems that Marshall should have exempted himself from participating in this case since his own absent-mindedness precipitated the conflict in the first place. Although the law creating the vacancies for justice of the peace was later repealed by the anti-Federalist Congress, its legacy has lived and will continue to live on for generations to come.

The significance of *Marbury v. Madison* is that it declared an act of Congress unconstitutional, thereby affirming judicial review and independence. But the idea of judicial review itself was neither new nor born in that case. For instance, in 1795, eight years before the *Marbury* decision came down, there was a glimpse of the Court's thinking on the issue of judicial review in the case of *Van Horne's Lessee v. Dorrance*. In that case, Justice William Paterson (1745–1806) explained that in the American form of government, the "Constitution is the sun of the political system, around which all Legislative, Executive, and Judicial bodies must revolve. Whatever may be the case in other countries, yet in this there can be no doubt, that every act of the Legislature, repugnant to the Constitution, is absolutely void" (*The Supreme Court of the United States* 1992, p. 18). It was the principle elegantly expressed by Justice Paterson that *Marbury v. Madison* confirmed and later institutionalized as the most wide-ranging grant of power to the American judiciary.

Since Marbury's decision came down, the Supreme Court has relied on its power of judicial review to redefine the institutional relationships between the three branches of government, as well as the power-sharing relationships between the states and federal government. Most observers think judicial review has been a success. And

this can be seen in part by the adoption of judicial review by emerging and even well-established democracies. In 2004, for example, an independent judiciary with the power of judicial review in Ukraine nullified a widely perceived fraudulent presidential election. In South Africa, Ecuador, and many other young democracies, judicial review has been adopted as an institutional reform to bring about a sense of permanence and stability to their governments. Clearly, these countries have seen the benefits of judicial review in the United States and other established democracies, such as Germany, Japan, and Spain.

SEE ALSO *Activism, Judicial; Bill of Rights, U.S.; Electoral College; Judiciary; Supreme Court, U.S.*

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Isaac Unah

JUDICIARY

The judiciary is the branch of government charged with resolving, or adjudicating, disputes between citizens, between other government institutions, and between the government and its people. Judicial power may extend to three separate functions: (1) administering the criminal justice system by determining when a violation of the criminal law has occurred and declaring the appropriate sanction for that violation; (2) administering the civil justice system by resolving disputes, enforcing contractual obligations, and protecting property rights; and (3) exercising judicial review of legislative enactments to ensure that new laws comport with constitutional requirements.

The disputes resolved by judicial entities—often called *courts* or *tribunals*—are referred to as *cases*. Courts may rest the authority to resolve a case in a single official, who may be called a *magistrate*, a *judge*, or a *justice*. In the alternative, some courts, called *collegial courts*, place decision-making authority in a group. In a collegial court, a group of judges will hear a single case and will collectively be responsible for adjudicating its outcome.

The scope of a court's authority is its *jurisdiction*. Jurisdiction may be defined geographically, with a judicial entity having authority over a particular city, state, or region. In the alternative—or additionally—a court's jurisdiction may be defined by subject matter. For example, a court may have authority only over issues of intellectual property or only over issues of criminal law; such a court would be a court of limited jurisdiction, as opposed to a court of general jurisdiction.

Finally, a court's jurisdiction may be *original* or *appellate* in nature. A court's original jurisdiction extends to those cases it hears before any other court. In contrast, a court's appellate jurisdiction extends to cases in which it is reviewing the decision of another court. The notion of appellate jurisdiction presupposes a hierarchical judicial system.

For example, in the United States, each state has its own judicial system, and the federal government has a separate—more appropriately, a parallel—judicial system. The federal judiciary is hierarchical: federal district courts, which have original jurisdiction in most disputes, have jurisdiction over a set geographic territory, no larger than a state; U.S. circuit courts of appeals, which function as intermediate appellate courts, also have jurisdiction over a set geographic territory, usually a group of contiguous states; and the U.S. Supreme Court is a single judicial body that has jurisdiction over the entire nation.

The U.S. Supreme Court primarily exercises appellate jurisdiction, reviewing decisions of lower federal courts and state high courts; a citizen involved in a dispute with his neighbor cannot go directly to the U.S. Supreme Court but, rather, can only appeal to the U.S. Supreme Court after attempting to obtain a favorable verdict from at least one lower court, and usually several. The U.S. Constitution, however, carves out a few types of cases, such as cases involving foreign officials, over which the Supreme Court has original jurisdiction; accordingly, such a case could begin and end in the Supreme Court, with no other judicial body ever rendering a decision.

COMMON PRINCIPLES

Although judicial systems vary significantly from nation to nation—and even sometimes from jurisdiction to jurisdiction within a single nation—there are a few aspirational characteristics that most judicial bodies share. Among these ideals are objectivity and institutional independence.

Objectivity The *rule of law* is a cornerstone of government legitimacy, particularly in democratic states. The judiciary is the voice of the law, and in a just society the application

of the law is not affected by favoritism or bias. Accordingly, an ideal judicial system is objective.

Judicial officials are expected to leave their personal preferences out of their decision making, and institutional rules are often designed to eliminate or minimize the possibility, even the appearance, that judges are motivated by anything other than the law. In an effort to expose potential bias, judges frequently must disclose their financial records, and in systems where judges are elected, rules relating to campaign contributions may be especially stringent. Many judicial systems provide rules against *ex parte communication*—communication about a case with one party or attorney to which the other party or attorney is not privy—and rules against the judge discussing the case with the public or media before an official decision has been rendered. Ultimately, the goal of all of these rules is to eliminate any personal interest in the outcome of the case and to limit the ability of outside parties to sway the judge's position.

Of course, like every government institution, the judiciary is composed of human beings who cannot leave their humanity at the door. Most judges have studied the law, perhaps worked as attorneys or held other public office, and are generally well-informed individuals. It would be bizarre to expect that they do not have opinions about legal issues, judicial philosophy, and public policy. Moreover, it would be unreasonable to expect that judges can compartmentalize their own opinions to such an extent that they have no effect whatsoever on their judicial decisions.

Studies of judicial behavior, primarily of justices on the U.S. Supreme Court, have persuasively demonstrated that judicial decisions are affected to some extent by ideological concerns. Specifically, to the extent that Supreme Court justices disagree about the outcome of a particular case—an indication that the law is not entirely clear—there are predictable patterns of agreement between the justices and predictable patterns of voting that correspond, roughly, to liberal and conservative viewpoints. There is considerable debate about the conditions under which and the degree to which ideology colors judicial decision-making, but it is generally accepted that ideology is a factor. Indeed, decisions about selecting and electing judges in the United States are highly politically charged because it is generally understood that judges bring their individuality to the task of judging and are not, rather, automatons rigidly applying the law.

Institutional Independence To protect the rule of law, judicial officials must be objective; the influence of their personal preferences, biases, and interests on their decisions should be minimal. Yet it is not enough to constrain the members of the judiciary; they must also be protected from threats of reprisal from unpopular decisions. Thus, another common ideal for judicial institutions is that they enjoy institutional independence.

Referring to a government institution as a judiciary generally distinguishes it from a legislature (a deliberative body that develops laws and policies) or an executive (the individual or individuals charged with carrying out the will of the government). The judicial power, however, is not always severed from the legislative and executive powers. For example, the biblical King Solomon was renowned for his ability to resolve disputes, and in the English feudal system of the Middle Ages, landowners adjudicated disputes among their tenants. Similarly, many Native American tribes traditionally vested the authority to resolve disputes and impose criminal sanctions in the tribal council, a body that also possessed legislative and executive powers. Such intermingling of political responsibility and judicial responsibility is generally considered suboptimal because it often means that the individuals exercising judicial authority are subject to political pressures that may taint their judicial decisions.

Even when the judicial power resides in a formally separate institution—a judiciary—the relationship between the judiciary and other institutions of government may impair the ability of the judiciary to uphold the rule of law. Judges who rely on other government actors to secure their wages, to maintain their staffs and their facilities, and even to keep their jobs are understandably vulnerable to political pressures. Freeing the judiciary from these sources of dependence, specifically by institutional arrangements that make it difficult if not impossible for other government institutions to undermine the judiciary's ability to function, advances judicial independence.

While it is easier to insulate the judiciary from public pressure, the separation of the judiciary from electoral influence poses more philosophical problems for democratic states, particularly when the judiciary exercises judicial review. The notion of a government entity that is not answerable to the public effectively exercising a veto over legislative acts runs counter to the idea of majority rule; for precisely that reason, some states opt to select judges through popular elections or allow the public to remove unpopular judges through recall elections.

Advocates of judicial independence argue, in response, that the judiciary provides a critical check on majoritarian government, protecting enduring political values and the interests of political minorities from fleeting political passions or minority tyranny. Proponents of judicial independence suggest appointing judges based on merit, for life tenure or for a fixed, nonrenewable term.

Even when institutional arrangements maximize judicial independence, the interplay between the judiciary and more political forces is apparent. For example, members

of the U.S. federal judiciary are appointed by the president but must be confirmed by the Senate, and they enjoy life tenure. Still, historically, the federal courts have shown deference to political sentiment. The U.S. Supreme Court seemed to abandon principle to political pressure when it upheld the constitutionality of the Japanese internment during World War II (1939–1945) and when it shifted its position on economic liberty to allow adoption of the New Deal policies of Franklin D. Roosevelt (1882–1945). Even when the Supreme Court made the politically unpopular move of ordering the desegregation of public schools, the Court's concern for public opinion was apparent; Chief Justice Earl Warren (1891–1974) carefully crafted his opinion in *Brown v. Board of Education* (1954) to ensure a unanimous Court, and the Court waited a year after declaring segregated schools unconstitutional before issuing the opinion ordering desegregation. In other words, even when the Supreme Court uses its independence, it often attempts to make concessions for public opinion.

VARIATION IN JUDICIAL SYSTEMS

While most judicial systems share a common purpose and certain common ideals, there is tremendous variation in the structure and function of judicial systems when viewed in comparative perspective. The rest of this article will focus on some of the key dimensions along which judicial systems vary.

Criminal Justice: Inquisitorial and Adversarial Systems The judiciary often bears primary responsibility for the administration of criminal justice: adjudicating guilt and assessing sanctions for the violation of criminal laws. Criminal justice systems and, more specifically, the role of courts in those systems, may be *adversarial* or *inquisitorial*; these terms define endpoints on a continuum, with most judicial systems blending elements of both adversarial and inquisitorial procedures.

In a purely adversarial system, prosecutorial and adjudicating powers are completely separated. A prosecuting authority makes the decision to charge a citizen with a crime, gathers evidence of guilt, and argues on behalf of the state. The role of the judiciary is limited to receiving evidence from both the prosecutor and the accused, weighing that evidence, and adjudicating guilt. Thus the party adjudicating guilt and innocence hears both sides of the story, presented as cohesive wholes, in relatively quick succession.

In contrast, in a purely inquisitorial system, both prosecutorial and adjudicating authority are vested in a single institution. In an inquisitorial system, the same individual or institution will be responsible for charging a citizen with a crime and for determining whether the citizen is guilty. Judicial officials in inquisitorial systems gather evidence and directly question witnesses. The danger of an inquisitorial system is that during the course of investigation, the judicial authority will become committed to a particular theory or belief and that subsequent, countervailing evidence will not be accorded sufficient weight. In other words, inquisitorial systems create a real risk that prosecutorial zeal and momentum will cloud the ultimate determination of guilt.

Civil Justice: Common Law and Civil Law Systems The role of the judiciary in the administration of civil justice—the resolution of disputes between private parties—varies considerably between *common law* countries and *civil law* countries. Common law countries are, generally, England and its former colonies, while the civil law tradition has its origins in France.

The common law tradition is premised on the notion that law, as a body of community norms, derives as much from custom and usage as from government edicts. In common law countries, a significant portion of the law is developed by the judiciary through the process of resolving disputes. When confronted with a new dispute, courts will look at past similar disputes—what we call *precedent*—for guidance. In this incremental fashion, building resolution upon resolution, a body of judge-made common law is created.

In the civil law tradition, the role of the judiciary is considerably more limited. Codified law is far more detailed and governs every aspect of social intercourse. The role of the judiciary is limited to interpreting those laws that have been enacted by the legislative branch of government.

Judicial Review: American and European Models One dimension along which we can differentiate types of judicial systems is the manner in which they exercise *judicial review*. Judicial review is the process of evaluating new legislative enactments and executive policies to ensure that they are consistent with constitutional requirements. There are two principal models of judicial review: the European model and the American model.

The European model is characterized by a division between ordinary courts, which are typically hierarchical systems for addressing basic civil and criminal matters, and a constitutional court, which is a single court of limited jurisdiction devoted solely to the business of ruling on the constitutionality of legislative acts. France, Portugal, Germany, and Russia all have a constitutional court system. In these countries, when the legislature passes a new law, it may be challenged directly in the constitutional court. In some countries, such as France, the challenge

must come from a state actor. In others, such as Germany, even ordinary citizens may allege a constitutional violation.

The American system is considerably less efficient. The American judicial system is unified: there is a single, hierarchical federal court system—with trial courts, intermediate appellate courts, and a Supreme Court—that handles civil matters, criminal matters, and constitutional questions. Challenges to the constitutionality of legislative enactments must work their way through the complete hierarchy, a long and burdensome process. What's more, the challenges must arise in the context of an actual case or controversy rather than as a simple allegation of unconstitutionality.

To illustrate, imagine a law forbidding the distribution of pamphlets critical of the government. In a country with a European system of constitutional courts, an individual who believes the law violates the country's constitution would address this argument directly to the constitutional court; the constitutional court would rule up or down on the issue of constitutionality, and the dispute would be over. In an American-model country, however, an individual who believes the law is unconstitutional would have to create a case—likely by breaking the law, enduring arrest, and then challenging the constitutionality of the law during the course of his or her criminal trial. The challenge may need to be repeated in the trial court, one or more appellate courts, and finally the U.S. Supreme Court.

SEE ALSO *Activism, Judicial; Bill of Rights, U.S.; Jurisprudence; Supreme Court, U.S.*

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Wendy L. Watson

JUNG, CARL
1875–1961

Carl Gustav Jung was born in Kesswyl, Switzerland, on July 26, 1875. Jung was a self-described lonely and isolated son of an emotionally troubled mother and a poor but extremely well-read country pastor. A gifted student, Jung originally wanted to be an archaeologist. Due to limited financial resources, Jung was forced to attend the University of Basel, which did not offer courses in archaeology, and he studied medicine with the intention of becoming a surgeon. Jung switched to psychiatry to pursue his interests in dreams, fantasies, the occult, theology, and archaeology. Upon graduation Jung received an appointment to the Burgholzli Mental Hospital in Zurich where, from 1900 to 1909, he studied the nature of schizophrenia and developed into a world authority on abnormal behavior.

Jung was an early supporter of the psychotherapist Sigmund Freud (1856–1939) because of their shared interest in the unconscious. When the International Psychoanalytic Association was formed in 1910, Jung became its first president at the request of Freud. However, growing theoretical differences between them, especially over the importance of libido (i.e., sexual energy) and the nature of the unconscious resulted in Jung's resignation from the group only four years later. The two men never met or spoke to each other again.

From 1913 to 1917, while Jung was experiencing serious emotional difficulties in his life and even contemplating suicide, he engaged in an extensive self-analysis. The outcome of his self-analysis produced some of Jung's most original theoretical concepts, which he continued to develop over the next sixty years as Jung established himself as one of the most noted psychological and eclectic thinkers of the twentieth century. For example, Jung was extremely well read in theology, anthropology, archaeology, psychology, ancient texts, the occult, mythology, and psychiatry. He studied psychological adjustment in selected groups of individuals around the world (e.g., Navajo Indians, native tribes in Africa); and participated in archaeological and anthropological expeditions in a variety of cultures (e.g., Egypt, Sudan, India), while incorporating his diverse knowledge and experience into his theory of personality and psychotherapeutic applications in an attempt to verify his ideas. Jung died on June 6, 1961, in Zurich at the age of 85. He was an active and productive researcher and writer his entire life, with a collection of works totaling twenty volumes.

FREUDIAN VERSUS JUNGIAN TRADITIONS

Although initially a strong supporter of Freud and his ideas, Jung's eventual disagreement with some of the cornerstones of Freud's theory resulted in the termination of their professional relationship and personal friendship. A principal source of disagreement was with Freud's concept of libido. Freud's conceptualized libido as primarily the source of sexual energy that served to created a state of emotional tension that the individual was driven to decrease, forming the basis of the two primary motivating sources of behavior—life instinct (i.e., creation of tension) and death instinct (i.e., the reduction of tension). In direct contrast, and much to Freud's disagreement, Jung deemphasized the importance of the libido as a source of sexual energy. Jung described libido as a more generalized life energy source that served to motivate the individual to seek a sense of personal balance within the psyche in a number of different ways, including socially, intellectually, emotionally, spiritually, and creatively.

This point of disagreement regarding the nature and role of libido helped to create the distinction between the Freudian and Jungian traditions in psychology. The Freudian tradition is characterized by the presence of intrapsychic conflict and the creation and reduction of psychic tension. The Jungian tradition, referred to as "analytical psychology," is characterized by the seeking of intrapsychic harmony and the balanced expression of the separate aspects of the self.

THE STRUCTURE OF THE MIND AND ITS CONTENTS

Another significant source of disagreement between Freud and Jung was their contrasting views of the structure of the mind and the nature of unconsciousness. In comparison to Freud, Jung's view of the structural nature of personality reflected a redefined and expanded view of the mind, especially the unconscious mind, which Jung believed to be much deeper and wider in the scope of its content than Freud. The "conscious ego" is the center of conscious awareness of the self. The major functions of the conscious ego are to make individuals aware of their internal processes (e.g., thoughts or feelings of pain) and the external world (e.g., surrounding noises) at a level of awareness necessary for daily functioning.

Directly next to the conscious ego and below conscious awareness, Jung proposed the "personal unconscious" region of the mind. The contents of the personal unconscious include all thoughts, memories, and experiences that are momentarily not being thought about and/or repressed because they are too emotionally threatening. The most important elements in the personal unconscious are what Jung described as "complexes." A complex is a collection of thoughts, feelings, attitudes, and memories that center around a particular concept. The more elements attached to the complex, the greater its influence on the individual. If the complex becomes too strong it can become pathological, serving to create a sense of imbalance in the individual's personality, such as a power complex associated with a dictatorial leader.

While the personal unconscious is unique to each individual, the collective unconscious was the region of the unconscious mind believed by Jung to be shared by all people. Jung conceptualized the collective unconscious as being "transpersonal" in nature. The transpersonal nature of the collective unconscious reflected Jung's view that there is a region of the unconscious mind containing a collection of general wisdom that is shared by all people, has developed over time, and is passed from generation to generation across the ages. The principal function of this wisdom is to predispose individuals to respond to certain external situations in a given manner. For example, anytime a group of individuals gets together, there is a natural tendency or predisposition for them to establish a social order.

The most significant of these predispositions or images in the collective unconscious are referred to as "archetypes." Archetypes are universal thoughts, symbols, or images having a large amount of emotion attached to them. Their special status comes from the importance they have gained across the many generations and the significant role they play in day-to-day living. Another concept Jung used to illustrate the universal connectedness of the collective unconscious was the principle of "synchronicity." Jung used synchronicity to explain the occurrence of two meaningful events that do not appear to have any physical cause-and-effect sequence, such as dreaming of a distant relative's death and then receiving news a week later that the relative had died on the same day you had the dream.

While there are a variety of archetypes, there are four archetypes that play a significant role in the establishment of a balanced personality: the persona; animus/anima; shadow; and self. The "persona" is an archetype that develops over time as a result of the tendency of people to adopt the social roles and norms that go along with living with other people. From the Latin word meaning "mask," the persona reflects what might be defined as a person's public personality (e.g., being courteous in public). However, attaching too much emotion and importance to the persona can result in the individual losing contact with his or her true feelings and identity, which can then become dictated by others (e.g., an individual with a shallow and conforming personality). Jung believed that individuals were psychologically bisexual in nature in that each individual possesses characteristic features and ten-

dencies of the opposite sex that are represented by the archetypes of the animus and anima. The "animus" is the masculine aspect of females, such as being aggressive. The "anima" is the feminine aspect of males, such as being nurturing. The well-developed personality contains both masculine and feminine characteristics. The "shadow" represents the dark and primitive side of personality. Like the id developed by Freud, the shadow represents all of the instinctive and impulsive aspects of personality typically repressed in the unconscious regions of the mind and kept out of the public personality.

The "self," the most significant archetype, is that element of the personality predisposing the individual to unite all other aspects of the personality. The development of the self as an archetype reflects the desire by people across generations to seek unity and harmony. Within the individual, the self is the motivating force seeking to achieve unity and harmony between all the private and public, masculine and feminine, and conscious and unconscious aspects of the individual. Failure on the part of the self to achieve this sense of unity and balance can result in the overdevelopment of one aspect of the personality at the expense of all others.

JUNG'S PERSONALITY TYPES

According to Jung there are two general types of personality attitudes by which individuals orient themselves toward their environment: extraversion and introversion. The "extraversion" attitude is an outward orientation in which psychic energy is invested in events and objects in the external environment (e.g., preference for group activities). The "introverted" attitude reflects an inward orientation in which psychic energy is invested in internal and personal experiences (e.g., preference for spending time alone). While Jung believed that both types of attitudes are present within each personality, he thought that in each person one attitude is expressed more at the conscious level than the other.

Besides the two basic attitudes of personality, Jung also proposed the existence of four functions of personality. Each function is characterized by a specific orientation for understanding the events and experiences in the environment.

- The "sensation function" involves relating to the world through the senses.
- The "thinking function" refers to the tendency to relate to the world through ideas and intellect.
- The "feeling function" concerns reacting to the world on the basis of the emotional quality of one's experiences with it.
- The "intuition function" goes beyond all other conscious functions and relies on a deeper, more internal sense of understanding.

As with the two attitude types, Jung assumed that each personality possesses all four functions, but one is often expressed at a predominant, conscious level at the expense of the others.

The technique of personality assessment most closely identified with Jungian principles is the Myers-Briggs Type Indicator (MBTI). The MBTI is a self-report instrument using objective criteria (i.e., standardized response and scoring procedures) based on Jung's type theory and designed to assess how variations in the expression of the two attitudes and four functions result in differences in the way individuals use perception and judgment as general orientations to their experiences when taking in information and making decisions. The utility of the MBTI can be seen in its use in a variety of areas, including literary criticism, career-counseling, organizational consulting, design of information technology, academic advising, and the health care industry.

THE NATURE OF MENTAL HEATH AND ANALYTICAL PSYCHOTHERAPY

Mental health was represented by Jung as a balanced expression of the various archetypes. Jung proposed that well-adjusted individuals learn to incorporate private aspects of their personality into the persona and express them consciously in socially acceptable forms. The developmental concept of "individuation" is used to describe the process by which individuals become aware of the different aspects of their personality at both the conscious and unconscious level, and expend mental energy to develop and express them in a meaningful way. The development of "neuroses" is a result of the individual failing to achieve a sense of integration, resulting in the projection of the underrepresented aspects of the self (e.g., connectedness with others) on to others (e.g., blaming a spouse for not being affectionate), which serves to foster maladaptive interpersonal social relationships. The development of "psychosis" is a result of extreme and prolonged repression of underrepresented aspects of the self, resulting in the aspects exploding into the individual's psyche in the form of drastic shifts away from the conscious, public persona (e.g., massive retreat into the unconscious mind and away from reality, as is with schizophrenia).

Based on Freud's technique of psychoanalysis, Jung's form of therapy is referred to as "analytical psychotherapy" and is characterized by a greater emphasis in the unconscious and the reestablishing of psychological balance within the individual. One method used to investigate the

unconscious was the word association test. The test, which Jung invented, was used principally to help identify the client's problematic complexes. A problematic complex is characterized by the overinvestment of mental and emotional energy into one aspect of an individual's personality (e.g., obsession with work) at the expense of other aspects of the individual's personality (e.g., neglecting one's family).

Going beyond the identification of problematic complexes, Jung analyzed dreams to explore the archetypes of clients using a technique referred to as the "method of amplification," which he also developed. In this method the client not only reports what is going on in the dream but also expands on the details as if actually a part of the dream (e.g., describing how it feels to be free and very powerful, as represented by a sports car as a symbol of the self in the dream). To facilitate this process, Jung used the dream series method, which involved amplifying and analyzing a series of dreams for the repeated occurrence of particular archetype symbols (e.g., the self appearing as the sun or a tall building). He also used the method of active imagination in which the client is asked to imagine having an interaction with the significant archetypes identified during treatment (e.g., talking to a "mechanic/therapist" about making the "car/self" perform more effectively).

JUNG'S RELATIONSHIPS WITH NAZISM

In 1933 as Adolf Hitler came to power, the German Medical Society of Psychotherapy was reorganized based on National Socialistic principles in an attempt to remove its Jewish members. An International General Medical Society for Psychotherapy was organized in Germany and permitted individual membership, including Jewish members, and national societies, including the German Society. Jung was elected the International Society's first president in 1933 and served until 1939. Jung also served as the chief editor of *Zentralblatt für Psychotherapie und ihre Grenzgebiete*, a journal that eventually published an article promoting Hitler's *Mein Kampf* as required reading for all psychoanalysts. Jung's affiliation with this Nazi-dominated International Society led to accusations that Jung was a Nazi sympathizer. Jung maintained that his involvement with the International Society was an indirect attempt to make it possible for Jewish practitioners to maintain their professional involvement and help preserve psychoanalysis, which the Nazis viewed as a "Jewish science." It should be noted that Jung resigned from the International Society for Psychotherapy toward the end of World War II (1939–1945), had public supporters who were Jewish, was blacklisted by the Nazis, and had his works suppressed in Germany and other occupied countries by the Nazis.

Despite Jung's novel contributions to the study of personality and psychotherapy, the acceptance of Jung's ideas has been limited by the vague definitions of his principal concepts (e.g., the collective unconscious, archetypes, synchronicity), which made his concepts difficult to test empirically by the traditional scientific methods. Given the difficulty in quantitative testing, Jung's ideas have been more popular and influential in the more qualitative areas of scholarship, such as the humanities (e.g., literary criticism, mythology, and symbolism) and humanistic social sciences (e.g., anthropology and qualitative sociology) than the quantitative areas associated with postmodern experimental psychology and psychiatric medical research.

SEE ALSO *Freud, Sigmund; Hitler, Adolf; Nazism; Personality; Psychology; Psychotherapy*

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JURISPRUDENCE

The term *jurisprudence* refers generally to the science or study of law and encompasses any effort to define, describe, or conceptualize the nature of the law. In practice, such efforts vary dramatically in scope and focus. Broadly speaking, jurisprudential efforts can be divided into two types: applied jurisprudence and the philosophy of law.

APPLIED JURISPRUDENCE

Applied, or empirical, jurisprudence is the study of the nature and development of the law through its actual practice. In other words, the endeavor of applied jurisprudence is to examine judicial decisions in which rules of

law are applied to actual cases and conflicts, and from that application infer something about the nature of the law being applied. For example, one might look at a series of U.S. Supreme Court decisions that apply the establishment clause of the First Amendment to actual conflicts and, from those decisions, develop an understanding of what the establishment clause means and how it might be applied to other, hypothetical situations. This understanding and the judicial decisions giving rise to it would be known, collectively, as *establishment clause jurisprudence*.

Applied jurisprudence is particularly important in common law legal systems—primarily in England and its former colonies. *Black's Law Dictionary* defines common law as "the body of law derived from judicial decisions, rather than from statutes or constitutions" (1999, p. 270). Common law systems are based on the idea that law derives primarily from custom or usage. In a common law system, the basis or grounds on which a court resolves a dispute comes from past decisions of the court; those past decisions are called *precedents*. Statutes and other codified laws may alter or supersede common law principles, but common law principles are used to interpret statutes, and traditional common law principles fill the interstices between codified laws.

In common law systems, legal norms develop incrementally over time, with judicial decisions announcing or explaining the law only when necessary to resolve the particular dispute before it. Anticipating how the law will be applied to a new factual scenario necessarily requires assimilating a large number of judicial decisions and analogizing to the new fact pattern. As a result, the endeavor of applied jurisprudence—looking at judicial decisions and, from them, discerning the nature of the law—is an integral part of the practice of law in common law countries.

PHILOSOPHY OF LAW

The term *jurisprudence* also refers to the philosophy of law, which is concerned not with the law of a particular state or country but with the nature of law more generally. The philosophy of law is concerned with the origin of law, the difference between law and other social norms, the difference between legal systems and other institutions, and the legitimacy of laws and legal systems. Some philosophical inquiries focus on what the law is, and these inquiries form the basis of *analytic jurisprudence*. Other philosophical inquiries focus on what the law should be, and these inquiries form the basis of *normative jurisprudence*.

Analytic jurisprudence addresses questions about what the law is: What do we mean by the term *law*? How do we come to understand the law? What differentiates laws from other norms and institutions? What is the relationship between the law and other concepts, such as power and morality?

Perhaps the most significant and fundamental issue in the context of analytic jurisprudence is the debate between natural law theorists and legal positivists. Put very simply, natural law theorists assert that law derives from a higher order, imposed by God or nature and adducible by reason; law exists independently of states and sovereigns, and law is inseparable from morality. A state may articulate a rule and use its coercive power to enforce that rule, but the rule is not genuinely law unless it conforms with some standard of what is right, moral, or just. Although philosophical writings dating back to Aristotle (384–322 BCE) reflect the theory of natural law, its most prominent champion in the twentieth and early twenty-first centuries is the Australian legal scholar John Finnis.

In contrast to natural law, legal positivism views law as a purely social construct and asserts that the law is what the sovereign declares it to be; the question of whether a law is good or right is distinct from the question of whether it is, in fact, a law. Some of the most notable proponents of legal positivism include the British jurist John Austin (1790–1859) and the British scholar H. L. A. Hart (1907–1992).

Legal interpretivism presents a conceptual alternative to both natural and positive theories of law. The interpretivist approach argues that law is not a fixed concept at all, but the result of legal practice. Rules articulated by the state must be interpreted, and their interpretation by legal practitioners is necessarily informed by those practitioners' moral beliefs. Thus, law does not derive from morality but is shaped by it. The interpretivist approach is most often associated with the American legal scholar Ronald Dworkin.

Whereas analytic jurisprudence seeks to describe law and legal systems objectively and, in some circumstances, to address the relationship between law and morality, normative jurisprudence addresses the moral questions raised by legal problems: When should the rights of one person be compromised to protect the rights of another? Is a state justified in restricting an individual's liberty to protect that individual by, for example, requiring the use of automobile seatbelts or prohibiting suicide? Why and how should violations of the law be punished?

Normative jurisprudential debates frequently invoke religious arguments and overlap with political philosophy. For example, one of the most enduring questions of normative jurisprudence is whether a state is ever justified in imposing capital punishment. Both the popular and scholarly dialogues on the issue frequently involve arguments based on religious teachings. Similarly, in the United States, the capital punishment debate is sometimes framed as a political question: As the ultimate restriction

on liberty, is capital punishment consistent with liberal democratic values?

SEE ALSO *Judicial Review; Judiciary; Law*

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JURORS, DEATH-QUALIFIED

In a process unique to criminal law in the United States, jurors in capital trials are subjected to a process known as "death qualification." Since 1976 all criminal trials for which the death penalty is a possible sentence have been held in two different phases (producing what is known as a "bifurcated trial"): a guilt-determination phase, followed by a penalty phase if the defendant is found guilty of a capital crime. The rationale for death qualification is that justice in capital cases cannot be properly administered if jurors' views about the death penalty are so strong that they prevent impartial decision making. So, during the voir dire jury-selection process, the prosecution and defense lawyers have an opportunity to "death-qualify" potential jurors by questioning them about their views regarding the death penalty.

Contemporary death qualification under the Supreme Court decision in *Wainwright v. Witt* (1984) eliminates potential jurors if they believe that their ability to function as a juror in a capital case would be impaired because of their views on the death penalty. This standard differs notably from that established previously by *Witherspoon v. Illinois* (1968), which excluded only those jurors who indicated such a strong opposition to the death penalty that they would not consider voting for a guilty verdict if there was even a possibility that a death sentence would be ordered.

Criticism of the death-qualification process has focused on two basic arguments: (1) that the process is unreliable, and (2) that the process creates systematic bias among the pool of eligible jurors such that they are predisposed toward guilty verdicts during the penalty phase. Research in this area generally has relied upon mock-juror and mock-jury studies in a social-psychological tradition, although sometimes researchers have been able to question jury-pool members and jurors who have served in actual capital cases.

A mock-juror study conducted by Ronald Dillehay and Marla Sandys (1996) suggested that the current *Witt* standard for excluding jurors in death penalty trials is unreliable, eliminating those who would ultimately be able to perform adequately as capital jurors and failing to identify some potential jurors known as "automatic death penalty" jurors who would always vote for the death penalty if a defendant had been convicted of murder. In addition, the death-qualification process itself may cause jurors to believe that the defendant is guilty and that a penalty of death is expected. Social science research also suggests that the death-qualification process may increase the likelihood of guilty verdicts during the first stage of bifurcated trials.

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JURY SELECTION

The jury system is the cornerstone of the common law legal system, the legal system shared by England and most of its former colonies. The common law legal system is premised on the notion that legal norms develop through common practice rather than formal rules; juries—groups of people lacking formal legal training who are brought in to adjudicate disputes—provide the perspective of the community, a common rather than formal perspective. Because juries are essential to the common law legal tradition, their selection and composition affect the very heart of common law systems of justice. Jury selection systems vary from jurisdiction to jurisdiction, but the goal of all such systems is to convene juries that are representative of the broader community and that are unbiased.

Jury selection begins with the process of identifying those people who are eligible to serve. A list of potential jurors may be constructed from voter registration lists, drivers' license and state identification lists, or other official rosters of citizens. The goal of a representative jury is best achieved with a comprehensive list of potential jurors;

using voter registration lists as a source of potential jurors, for example, may result in a jury pool that underrepresents certain demographic groups, such as the poor and young adults.

From the list of potential jurors, a jury pool is randomly selected. In smaller jurisdictions, where the need for a jury is rare, a jury pool may only be selected when the need arises. In most jurisdictions, however, jury pools are convened as a regular matter. From a single jury pool, multiple juries will be selected over the course of the pool's service (which may range from a single day to several weeks to several months).

Individuals who receive a summons to appear for jury duty—to be a part of the jury pool—are generally asked to complete a short list of questions. Based on their answers, jurors may be disqualified—deemed ineligible to serve. Citizens may be disqualified for jury service because of a lack of language proficiency, mental or emotional disturbance, or a criminal record or pending criminal charges. Historically, in the United States, citizens were disqualified from jury service on the basis or their race or gender, but the U.S. Supreme Court has determined that such disqualifications are inconsistent with the equal protection clause of the Fourteenth Amendment to the Constitution.

Some potential jurors, while not disqualified, are nevertheless excused from jury service. In other words, while they may serve, they are not legally obligated to serve. Members of certain professions—doctors, teachers, lawyers, military personnel, and small business owners—as well as individuals whose physical condition would make jury service difficult, may be excused.

When a particular jury is needed for a particular case, names are randomly selected from the jury pool. These individuals—called *venirepersons*—are subjected to more detailed questioning by the attorneys and judge involved with the case. This questioning process is known as *voir dire*. The purpose of voir dire is to identify particular biases a juror might have that would affect his or her ability to be objective in resolving the case: knowledge of the parties to the case, witnesses, or attorneys; exposure to prejudicial media coverage about the case; past experiences that might color the juror's judgment; or even biases against certain groups of people.

On the basis of the venirepersons' answers to questions during voir dire, attorneys may challenge their ability to serve on the case. Specifically, attorneys may use two types of challenges: *challenges for cause* and *peremptory challenges*. In a challenge for cause, the attorney requests that the judge strike the potential juror because of some obvious bias. For example, in cases involving the death penalty in the United States, the prosecuting authority is entitled to a jury of individuals who are not opposed to capital punishment; such a jury is said to be *death-qualified*. If, during the course of voir dire, a venireperson expressed opposition to the death penalty, the prosecuting attorney could challenge that venireperson for cause.

Attorneys can use peremptory challenges to strike jurors who are not clearly biased. Peremptory challenges give attorneys the opportunity to strike jurors whose answers do not necessarily reflect bias but whose demeanor or background raise concerns for the attorney. Attorneys use questions about the types of television shows jurors watch, the books they read, their hobbies, and even the bumper stickers on their cars to develop profiles of potential jurors and to expose unspoken biases. While there is no limit to the number of potential jurors who may be struck for cause, each party to a case has a fixed number of peremptory challenges and, once they are exhausted, may not exercise any more.

Peremptory challenges are controversial. In England, peremptory challenges are not allowed. In the United States, peremptory challenges are allowed, but they cannot be used to eliminate jurors on the basis of race or gender, and there is considerable variation in how the process is implemented. Specifically, some jurisdictions use a *sequential system*, while others use what is called a *struck system*.

In a sequential system, the number of venirepersons empanelled equals the number of individuals needed for the jury, so that when a party uses a peremptory challenge to strike a venireperson, that party has no idea what the replacement venireperson will be like. A party may use its last peremptory challenge to strike a venireperson only to find that the replacement venireperson is even less desirable. In a struck system, however, the number of venirepersons chosen equals the number of jurors required plus the total number of peremptory challenges the parties may exercise. Thus, a party may use its peremptory challenges to eliminate the least desirable of a known set of potential jurors.

Once both parties have passed the jury panel for cause—concluded that everyone who remains is capable of serving impartially—and have exercised all of the peremptory challenges they choose to use, the remaining venirepersons are issued an oath of service and become the jury. While no jury is perfectly representative and some personal bias is unavoidable, the iterative process of random selection and careful screening increase the likelihood of a jury that reflects community values and common sense in legal decision making.

SEE ALSO *Judiciary; Jurors, Death-Qualified*

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JUST WAR

"Just war" principles seek to transform war and peace into moral questions, to move international relations beyond the "realist" conception classically expressed in *The Peloponnesian War* by the fifth-century BCE Greek historian Thucydides. A realist conceives of wars as a normal if undesirable fact of international relations, a matter of irreconcilable national interests or policies in which the "royal prerogative," the authority to decide for war or for peace, is an inherent sovereign power of governments. The realist is dubious about the contention that, in a world order still characterized by anarchy, war can be reconceived at its root as a moral matter, although moral considerations can certainly be compelling in one way or another. To a realist, wars have occurred in history because, as the French philosopher Jean-Jacques Rousseau (1712–1778) said, there is nothing adequate to stop them. To a just war advocate, on the other hand, realism is far from irrelevant, but it is only the beginning of civilizing, that is, justifying and limiting humankind's most damaging activity.

But just war principles are not at all the same as pacifism. Just war theorists argue that all war is in some sense evil, yet some wars are justified. A universal presumption against war, let alone a national policy of nonviolence, would be not only self-destructive but immoral because sometimes war is both necessary and right, particularly wars of self-defense against aggression.

CRITERIA FOR A "JUST WAR"

A just war is a right use of force founded in the moral responsibility of a government for the political community as a whole. In just war thinking, the "Westphalian system" launched in 1648 was based on a great mistake. This system refers to the modern international order consisting of sovereign nation-states, established by the European Treaty of Westphalia in 1648. Sovereignty was defined in purely procedural terms, implying that whoever successfully controls a territory should be accepted internationally as sovereign in it. The result was that, until quite recently, dictators used the legal principle of national sovereignty as a shield to protect themselves while tyrannizing their own people. Just war principles attempt to inject the concept of sovereignty with substantive moral meaning.

The just war idea has roots in ancient Israel and was first conceptualized in Catholic tradition by Augustine (354–430 CE), the bishop of Hippo, in *The City of God*. The Italian natural law philosopher Thomas Aquinas (1225–1274) gave the classic statement of just war principles in *Summa Theologica*. According to Thomas Aquinas, a just war is defined by two sets of criteria: whether the cause is just (*jus ad bellum*) and whether the methods of combat are just (*jus in bello*). Just war is thus an issue of both means and ends: A just war may be fought unjustly and vice versa. While the principles are fairly clear (although not entirely without ambiguity), controversy is inevitable in judging any particular case, a theme particularly well developed in the work of the influential American just war theorist Michael Walzer (2000).

Walzer argued that a just cause for war exists if five criteria are met. (1) The intention must be right, meaning a war must be waged either in self-defense against aggression or it must be an international intervention to aid another people victimized by egregious aggression. Since World War I (1914–1918), certain states (especially the United States) and international organizations (the United Nations, the North Atlantic Treaty Organization [NATO], and the European Union) have invoked a right to intervention on moral and humanitarian, as well as realist, terms. Since the 1990s, the international community, in the United Nations and outside it, has begun to codify not only a right to intervene but also a duty to do so—a "responsibility to protect" peoples in danger, a duty to reverse grave violations of human rights. (2) The decision to go to war must be made by a duly constituted sovereign, that is, a legitimate authority. (3) War must be a last resort, the *ultima ratio*, undertaken only after all diplomatic means have failed. (4) There must be a reasonable probability of success, the reason being to avoid futile damage. (5) The good to be achieved must clearly outweigh the harm to be done, the intrinsic evil aspect of even a just war.

In terms of the means of combat, a war is considered just if it meets two conditions. The principle of "discrimination" must be respected, that is, distinguishing insofar as possible between combatants and civilians, and strictly limiting the "double effect" or "collateral damage" of killing innocents while fighting. In addition, the principle of "proportionality" must be respected, meaning that

damage inflicted must bear some reasonable relationship to the original aggression.

In retrospect, the catastrophic world wars and genocides of the twentieth century paradoxically emphasized both the continued relevance of realist international-relations thinking and the desirability of moving toward just war principles. For example, the Geneva Conventions on protection of prisoners of war and the prohibition of torture may be considered just war treaties. The Holocaust, the atomic bombings of the Japanese cities of Hiroshima and Nagasaki, and the firebombing of German and Japanese cities during World War II (1939–1945) have led to a widespread conclusion that genocide or the use of weapons of mass destruction can never be justified.

The American-led Gulf War of 1991 to reverse Saddam Hussein's invasion and annexation of Kuwait, the European-American intervention in the Balkan wars of the 1990s, and the post–September 11, 2001, war in Afghanistan all were fought as just wars, that is, moral campaigns larger than the evident interest of the international community in reestablishing peace and security. There may be serious argument about whether or not any particular war is a just war (for example the American-led invasion of Iraq in 2003 to overthrow Saddam Hussein's regime). But at the beginning of the twenty-first century it is evident that moral arguments about goals and methods of war are increasingly relevant in the real world of international relations, as opposed to realist Westphalian-type declarations of national interest or policy. This is fundamental moral progress, even as it is obvious that prudence remains the statesperson's necessary virtue.

"JUST WAR" AND TERRORISM

The new age of global-scale terrorist attacks has obvious relevance for just war thinking. On the other hand, evaluating the justice of terrorist campaigns, although it may seem simple, is no easy matter. Judgments are not intuitive and the results are a matter of sharp dispute in world politics in the early twenty-first century. While it is insufficient simply to say that "one man's terrorist is another man's freedom fighter," distinctions can and must be made in the real world or else it is too easy to end up in a situation in which might, or the most effective propaganda, makes right. Gradually, as with other aspects of international law, such as outlawing torture and genocide, increasing consensus about terrorism across different kinds of states, cultures, religions, and world regions may emerge. One example of international agreement on a definition of terrorism is found in the 2004 United Nations report, "A More Secure World."

Terrorist acts are a tactical means of waging war. In just war terms, terrorism is illegitimate and unjust in itself, no matter how much sympathy this form of fighting may inspire in a civilian population. However, it is important to remember that terrorist groups are unaffected by this, since they reject the customary international laws of war as such, invoking their own, usually religious conception of just war ends and means. Terrorist groups, especially the new phenomenon of global terrorist networks, willfully defy the principle of discrimination by intentionally targeting civilians on a wide scale in an attempt to instill destabilizing fear in governments and populations. There is a sharp difference, at least in principle, between the intentional killing of innocents and military action that kills or wounds civilians in spite of genuine attempts to limit such damage, generally called *collateral damage*. In just war theory, intentions are fundamental, and the fallacy of moral equivalence—that is, civilians killed are civilians killed, no matter what the circumstance—must be avoided.

On the other hand, the concept of collateral damage can be dangerous because it can become overly expansive. For example, in spite of rigorous attempts to limit the killing of civilians in certain ways, a given state's overall military campaign against terrorism may involve collateral damage on such a scale, with a more or less hidden intent to terrorize a population and turn it against erstwhile popular terrorist groups (themselves fighting with unjust means), that the military campaign itself becomes state-sponsored terrorism. In other words, terrorism may be a weapon of duly constituted, sovereign authority.

Furthermore, a terrorist group may in fact be fighting for a just cause—for example, it may be a military wing of a national liberation movement seeking national sovereignty and independence against a colonialist foreign power, or one or both sides in a civil war. Success of a terrorist campaign in such a case will not be military victory; rather, its goal will be to demoralize the adversary's military or political leadership or its home population to the extent that a negotiated compromise or even total withdrawal may result. In such a case, a terrorist campaign that historically was only one aspect of a successful struggle for national independence may be remembered differently than it would have been had the struggle been lost.

In any case, however, terrorist acts on any side remain in and of themselves unjust and illegitimate. It is wrong to take any innocent person's life, whether or not it can be claimed that a just end is being served. It is a fallacy to contend flatly that "just war trumps unjust means." At the same time, just war judgments must somehow recognize a situation in which a rebellion's use of only just means will leave a population more or less defenseless against an even more unjust power—whether the latter is its own government or an outside power. In such a case, agreement might be reachable by saying that, as with war itself, all

terrorism is evil but it is always justifiable to choose the lesser evil.

Altogether, just war principles are not—far from it—a single unified doctrine that will easily unite the world politically or could be easily codified in international law. They represent moral guidelines, extending long-established, basically pragmatic, realist laws of war. They constitute a broad set of standards continuing a secular struggle to justify war in human terms and to limit its damage, against which individual cases can be argued and measured. Again, just war thinking does not envisage the abolition of war, because sometimes war is not only necessary but right.

Perhaps the appropriate conclusion at this point is to say that just war thinking is simultaneously a beginning and a hope, above all if, as increasing numbers of thoughtful people agree, war is a cultural phenomenon rather than human fate. Cultural practices may evolve in response to circumstances. In any case, realism and prudence will remain, at least for some time, the necessary foundations of international policy in a world order still characterized by anarchy.

SEE ALSO *Civil Wars; Law; Terrorism; Terrorists; War*

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Ronald Tiersky

JUSTICE

Justice is a moral quality of individuals and of institutions, whereby they give equality of respect to persons and strive to preserve the rights of all. Along with wisdom, courage, and moderation, justice was considered by ancient Greek as well as medieval Christian and Islamic thinkers to be a cardinal virtue. In the *Republic,* Plato (c. 427–347 BCE) portrays justice as the right ordering of the parts of the individual soul and the groups of persons in the city. Aristotle (384–322 BCE) devoted a central chapter of the *Nicomachean Ethics* to the virtue of justice. He distinguished between *general justice*, which is the complete exercise of all the virtues in one's treatment of other persons, and *special justice*, which is both the fair distribution of honors, wealth, and other goods, and fairness in the exchange of goods. Later tradition followed Aristotle by distinguishing between *distributive* justice (justice in the allotment of commonly held goods) and *commutative* justice (justice in exchange and in rectification of injuries). Distributive justice is governed, for Aristotle, by equality, but not by identical treatment for all. If "the people involved are not equal, they will not [justly] receive equal shares" (Aristotle 1985, p. 123). Whether one is wealthy, of good birth, or virtuous are among the factors that are believed by different people to affect one's just share of common goods, according to Aristotle.

Medieval philosophers followed the Greeks in defining justice as part of the *natural law*, those laws governing human actions that are founded in reason, in the human need to live in societies, and ultimately in a divine ordering of the universe.

MODERN ACCOUNTS OF JUSTICE

Modern political philosophy, although still sometimes using the language of natural law theories, transposed the discussion of justice into a *social contract* framework of thought. The English philosopher Thomas Hobbes (1588–1679) argued in *Leviathan* (1651) that prior to the establishment of a government, people lived in a *state of nature*, a state of war in which their lives and property were utterly insecure. In the state of nature, justice and injustice did not exist: "Therefore before the names of just, and unjust can have place, there must be some coercive power, to compel men equally to the performance of their covenants, by the terror of some punishment" (Hobbes [1651] 1962, p. 113). Justice, for Hobbes, has its ground in self-preservation and self-interest. John Locke (1632–1704) argued in the *Second Treatise of Government* (1690) that even in the state of nature people have a natural right to life, liberty, and property. The rulers, once the commonwealth is established, are obligated, according to Locke, to preserve these natural rights of individuals. Thus justice, for Locke, predates the establishment of the government and places some constraints upon the actions of those in power.

JUSTICE AND UTILITARIANISM

Utilitarian philosophy, resting as it does on the principle that the rightness of actions and of social institutions depends on the degree to which they promote human happiness, has often been charged with disregarding justice. Because the happiness of the greatest number could, at least in theory, result from unjustly depriving a minority of their rights or even of their lives, utilitarianism is often accused of failing to account for intuitive and traditional judgments about justice toward individuals. In defense of utilitarianism, John Stuart Mill (1806–1873) argued in *Utilitarianism* (1863) that the claims of justice, including individual rights to life, liberty, and property, as

well as the right of individuals to be dealt with truthfully and impartially, are fully compatible with utilitarianism. Because there can be no security for anyone unless each is treated justly, Mill argued, justice is the foundation of any society that seeks to promote the general happiness. Mill acknowledged widespread disagreement over such issues as whether those with greater talents or skills should be rewarded better than those without and whether taxes should be assessed based on the ability to pay or as an equal share.

A number of questions emerge from the foregoing sketch of historical views of justice: Should justice be considered a social convention or does it have a basis in natural or divine law? To what extent does justice, which demands that everyone be treated in some sense equally, admit that different treatment is appropriate in different cases? What are the differences (e.g., of individual merit or of need) that appropriately lead to differences in treatment?

RAWLS'S THEORY OF JUSTICE

The American philosopher John Rawls (1921–2002) was the twentieth century's most influential thinker concerning these questions. In *A Theory of Justice* (1971), Rawls argued that justice is at its basis a matter of fairness. Justice, for Rawls, is "the first virtue of social institutions, as truth is of systems of thought" (Rawls [1971] 1999, p. 3). Rawls's theory advocates a form of *procedural justice*, meaning that justice results from following a fair procedure, where there is no separate measure of what a just outcome would be. In the tradition of social contract theory, Rawls describes a hypothetical "original position" in which free and equal parties agree to the principles of justice by which society will be governed. To ensure fairness, the choice is made behind a "veil of ignorance" in which each of the contracting parties is denied knowledge of certain facts about themselves. None of them knows "his place in society, his class position or social status, nor does anyone know his fortune in the distribution of natural assets and abilities, his intelligence, strength, and the like" (p. 11). The parties are ignorant of their gender, and they do not know to what generation they belong. They know that when the veil is lifted they will have some conception of the good, that their notions of the good life will require some measure of resources to carry them out, and that those resources will be somewhat scarce.

Once the agents of the original position have been presented with a variety of available conceptions of justice, Rawls argues that they would adopt what he calls the two principles of justice. "First: each person is to have an equal right to the most extensive scheme of equal basic liberties compatible with a similar scheme of liberties for others. Second: social and economic inequalities are to be arranged so that they are both (a) reasonably expected to be to everyone's advantage, and (b) attached to positions and offices open to all" (Rawls [1971] 1999, p. 53). Rawls gives priority to the first of these principles, such that basic liberties "can be restricted only for the sake of liberty" (p. 266). He refines the second principle (termed "the difference principle") to say that inequalities are to be "to the greatest benefit of the least advantaged" (p. 266). As a result of adopting these principles of justice, Rawls defends a liberal constitutional democracy in which the government protects basic liberties and oversees the just distribution of resources. The principles of justice led Rawls, in his 2001 book *Justice as Fairness: A Restatement,* to criticize welfare and laissez-faire capitalism, as well as state socialism having a "command economy," in favor of "property-owning democracy" and "liberal socialism" (Rawls 2001, p. 138).

In his 1993 book *Political Liberalism*, Rawls argues that the principles of justice are subject to an *overlapping consensus*, that is, that they are acceptable from the perspective of many different philosophical or religious systems of thought. In this way, Rawls advances the discussion of the principles of justice without requiring a decision on whether justice is ultimately a matter of social convention or of natural or divine law.

Though not a strict *egalitarian* (for he allows inequalities as long as they are to the advantage of the least well-off), Rawls views as unjust any distribution of goods that serves only to better the conditions of those possessing greater natural or social advantages than others. It is important to note that, for Rawls, individual endowments such as talent, wealth, and social standing are arbitrary gifts of fortune rather than individual possessions or entitlements. The "difference principle" ensures that those who possess such advantages will not be able to translate them into a greater share of society's goods at the expense of those who are less advantaged. Thus, on the question of whether merit, need, or some other criterion should become the basis for the distribution of social goods, Rawls asks that we remember that what appears to be an individual's "merit" is generally the result of luck rather than desert.

OBJECTIONS TO RAWLS'S THEORY

Rawls's work has been widely praised and criticized. Communitarian critics, such as Michael Sandel, have objected that the parties in the original position are artificially deprived of the knowledge that membership in a particular community is essential to their identities, leading to an overly individualistic account of justice. Libertarians, including Robert Nozick (1938–2002), viewed Rawls's principles as leading to infringements of individual liberty because of Rawls's willingness to redis-

tribute social goods that were initially obtained through what libertarians view as legitimate means (e.g., not obtained through deceit or coercion). Advocates of Catholic social teaching, along with other religiously oriented thinkers, have objected that Rawls's thought relegates religious belief to the private sphere, thereby denying the important role of religious faith in the promotion of social justice. The feminist political thinker Susan Moller Okin (1946–2004) argued that Rawls overlooked the need for justice within families. Advocates of *capability ethics*, including Amartya Sen and Martha Nussbaum, criticized Rawls for stressing the equal distribution of goods without noting the differing degrees to which society enhances or undermines individuals' capacities to make use of those goods. (Nussbaum has, in her own work, extended the discussion of justice to include questions of justice toward the disabled, toward nonhuman animals, and across international boundaries.) Despite these and other objections, Rawls's theory, with its powerful defense of individual rights and its attention to the claims of the disadvantaged, continues to exert a commanding influence on contemporary ethical and political thought.

SEE ALSO *Democracy; Egalitarianism; Equality; Justice, Distributive; Locke, John; Rawls, John; Social Contract; Utilitarianism*

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Paulette Kidder

JUSTICE, DISTRIBUTIVE

Distributive justice refers to a process whereby a society allocates certain rewards and resources to persons based on a moral belief or set of moral beliefs. Once a typical feature of envisioned social utopias, ranging from a late medieval scheme of Thomas More (1478–1535) to the more modern experiments of thinker-activists like Robert Dale Owen (1801–1877), allocation became linked to modern theories of justice with the rise of bourgeois democracies. Jeremy Bentham's (1748–1832) liberal utilitarian creed of the greatest good for the greatest number was contrasted in the nineteenth century with oppositional calls by radical thinkers from anarchist, socialist, and communist movements for a collectivist justice based on some form of economic leveling or allocation to each according to his or her needs.

The call for distributive justice found its expression in the transformation of Western bourgeois democracies into social democracies, along with the development of a postrevolutionary form of state socialism in the Soviet Union. The first consisted of state-centered provision of various forms of universal insurance, as well as of a full range of social and human services, and was financed typically by more progressive income and inheritance taxes. Greater equity, but not broad-based economic equality, resulted. Scandinavian countries, notably Sweden, had the greatest success in reducing income and wealth differences. The Soviet Union achieved much greater equity, though the creation of a nomenclature consisting of party officials and state bureaucrats did great damage toward attempts to achieve absolute economic equality.

Since the 1970s with the decline of Communist regimes and a general retreat from socialist/reformist thinking, there has been a return of more liberal calls for greater economic and social equity. They possess a twofold and somewhat contradictory character. First, they are decidedly more individualist and libertarian in their concerns. Modern philosophers in the Anglo-American tradition, such as John Rawls (1921–2002), stress the need to provide individuals with adequate resources for fulfilling lives—*equality of opportunity*, in a phrase. The leveling process, contrary to utilitarian and generally socialist aims, is clearly curtailed in this tradition by the desire to protect individual liberty and the freedom of choice in the economic transactions of civil society. Ronald Dworkin argues for an *equality of outcomes*, insofar, however, as persons are prudent and responsibly choose forms of insurance that could be offered by a state to compensate persons from potential or real harms.

Simultaneously, distributive justice has acquired a distinctly collective sociological character. The modern study of invidious distinctions ranging from class and caste to status, and the differences among persons thereby, have created a more radical theory of justice based upon the elimination of economic and social inequalities arising from membership in disadvantaged classes based upon income, wealth, race, gender, sexuality, and disability.

Empirical social science has provided extensive documentation that has been used by judiciaries, legislators, public administrators, and policy formulators to construct a variety of remedies, ranging once more from providing equality of opportunity to the more demanding requirement of equality of outcomes. The latter often requires limiting the freedom of others more privileged in some sense and of transferring resources to members of disadvantaged classes in amounts equal to or greater than amounts available to those not suffering from the disadvantage(s) under review.

More recently, economist and philosopher Amartya Sen has sought to join concerns for the well-being of individuals with the disadvantages they acquire as members of a discriminated class. Every individual, Sen argues, is an assemblage of specific capabilities. To provide equality of opportunity, interventions need to provide resources that strengthen an individual's capabilities to function in a manner she finds conducive to her well-being. Her freedom of choice is preserved, along with her desire to live her particular life. To get resources to individuals with discernible capability deficits, Sen argues strongly that resources must be targeted to specific kinds of persons rather than simply added to a society's macroeconomic mix. Hence, the individuality of deficits is matched with ameliorative social programs based upon the realization that deficits can be identical, person to person. Gender inequality, for instance, commonly affects certain women who could be grouped into a class, while this same class could differ from other women with another provenance.

This shift in the concept of distributive justice from universal entitlement to individual capabilities in the 1990s has had an enormous influence on social policy. International assistance to poor countries by the World Bank, rich countries, and nongovernmental organizations has been redirected from capital-intensive infrastructure projects to expenditures on public health and basic education, as well as gender-related remedies founded on the widespread recognition that women's capabilities are sorely damaged by discrimination worldwide. In rich countries, the focus on individual capability deficits has led to a restructuring of income support programs that seek to hold individuals more responsible for their own development.

The calls for more equitable forms of distributive justice have stimulated a variety of opposition responses. The first might be termed a *naturalist* response. Persons are composed of innate differences in a variety of aptitudes that cannot be overcome by programs of distributive justice. Even if persons are compensated in ways that provide each with economic equality, natural differences will express themselves in the original cohort or in their progeny to re-create natural differences in aptitude once more. Charles Murray and Richard Herrnstein (1930–1994) argue that differences in intelligence lead to the formation of an elite based upon their superior abilities, and subaltern status for those less fortunate. A second, less genetically based version posits that subaltern groups form destructive ways of life that greatly diminish their chances for well-being. This position is typically referred to as the *culture-of-poverty* argument.

A second response bears a long and distinguished genealogy, and viewed from this end of the telescope is a profoundly sociological account of the origins and development of society. There are several sources. Thomas Hobbes (1588–1679) argues that the very equality between persons in the original state of society creates a drive for aggrandizement on a person's part, if only to protect one from the envy and finally aggression of another. A state thus becomes necessary to protect each from all. John Locke (1632–1704) held a more congenial view of humankind, believing that persons were self-possessed and cognizant of their own needs and wants. The products of their toil, Locke argued, were theirs. The acquisition of property, however, provided them with a place for amicable exchange but also of legal defense against others in an organized society. Money creates a fetter in this otherwise peaceable kingdom, requiring that a civil government adjudicate fairly the disputes that arise between persons, especially as they become more unequal.

Both the more punitive motivations of Hobbes and the more genial motivations of Locke contribute to a modern, minimalist view of the state whose justice consists of ensuring fairness in the exchanges of individuals. Often called the *night watchman state* theory, its principal exponent in modern discourse is Robert Nozick (1938–2002). The job of the state, on Nozick's view, is to repel national invaders and enforce contracts. As humans are their own property and not that of others, they are entitled to whatever property they acquire through their efforts—in fact, as much as they can acquire so long as they do not destroy the property of others or that of the commons. The state guarantees free markets in property, capital, and labor. Justice is no longer connected with distribution, but instead associated with equitable rules applied in the marketplaces of society.

This broad view has been used to support free-market-based economic and social policy. In the social sciences, it underlies the increased resort to so-called *rational choice* theory, whereby individuals are taken a priori to be rational, and create society via interactions on their own behalf. However, from this same premise, this notion that the self-interested person is a rational person can be severed from a purely means-ends rationality and applied to assumptions about the strength of greed, network, and group ties in orienting action.

This position also affected the nature of the social scientific investigation of inequality. Considering the broad endorsement of a kind of first-order naturalness to unequal social existence, investigators from the functionalist tradition in the postwar period produced descriptive paradigms of economic and social inequality in modern societies, and between rich and poor societies, that abjured comment on the moral and political dimensions of their studies. Their fundamental premise was that societal development necessitated an increasing division of labor, and inequality was its inevitable—and valuable—result.

A strong critical and highly politicized movement developed across the social sciences to combat what was seen as this received view. As a consequence, normative theorizing about inequality and the value of forms of distributive justice now constitute themselves as the normal conditions of discourse.

SEE ALSO *Choice in Economics; Culture of Poverty; Egalitarianism; Equal Opportunity; Equality; Ethics; Hobbes, Thomas; Inegalitarianism; Inequality, Gender; Inequality, Political; Inequality, Racial; Locke, John; Philosophy; Rationality; Rawls, John; Sen, Amartya Kumar; Socialism; Welfare Economics*

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Michael Blim

JUSTICE, SOCIAL

There are two important types of justice. *Procedural justice*, a primary goal of Western law, focuses upon using and implementing decisions according to fair processes. *Substantive justice*, on the other hand, reflects the content of the result of procedural justice and often is concerned with deeper issues of equity. Procedural justice can be viewed in terms of whether the process of punishment appears *objectively* fair to outside observers, while substantive justice can be interpreted in terms of whether a punishment *subjectively* is perceived as fair by the participants inside the process. Theories on justice and equity, and the implementation of these ideals, are usually found in philosophical literature. Justice as a concept typically is presented as universal and transcendent rather than as grounded in a social reality that has a particular historical and comparative context. Most of the dominant theories focus on the normative goal of what justice should be rather than studying how justice is defined by societies in specific places and at particular times. These concepts increasingly are used and imposed via hegemony (Gramsci 1971); that is, they are often exported through processes of cultural imperialism (Fanon 1967).

ENTITLEMENT AND UTILITARIAN VIEWS OF JUSTICE

The entitlement or libertarian view of the American philosopher Robert Nozick (1938–2002), the utilitarianism of John Stuart Mill (1806–1873), John Locke's (1632–1704) concept of consensual constitutional government, and the social contract of Immanuel Kant (1724–1804) via the American philosopher John Rawls (1921–2002) represent some of the more popular Western

theories of justice. Justice from these perspectives often serves as a source of legitimation for the development and use of law. Justice from an entitlement perspective emphasizes the importance of private property and individual freedom in juxtaposition to the increasingly controlling role of the state. Entitlement stresses the importance of liberty and efficient economic relations—whereby liberty is posited as more crucial than equality. As a transfer of property, however, such a system of social relations has not been realized in practice. Specifically, its assumptions about fairness in acquisition and transfer not only have proved unworkable, they are a central part of the allegiance to entitlement for the privileged and typically reproduce or increase inequity in class and community relations. When put into action, entitlement theory has placed efficiency before equity, and greater inequality has ensued.

Justice from a utilitarian point of view following Mills's demands that society provide the greatest utility or happiness to the greatest number, the majority. A dominant part of this theory requires that people treat each other equally, yet equity can be sacrificed for the greatest utility or happiness. However, as Rawls argues, natural endowments should not determine material outcomes, although this theory of merit, too, can be revised in light of what most benefits the common good. More problematic is how the majority often has been defined—for example, Aristotle's (384–322 BCE) exclusion of slaves in ancient Greece, and the exclusion of indigenous peoples in many modern nation-states. In the Western tradition, the "majority" typically is defined as those who support, implicitly or explicitly, the Western liberal project and the narrow meaning of rational "man" and are uncritical of technological development. Following the current standards of most international organizations, however, the majority of the population in the world consists of "minorities."

Rawls's social-contract metaphor presents the idea of a veil of ignorance to correct such inequities. Behind this veil, individuals make decisions about fair and equitable resource allocations. The role of conventional policymaking in implementing the contract reveals, however, consistent allegiances to uncritical plans of development promoting, once again, efficiency over equality. Policymakers and planners often do not serve the interests of justice because they or their political authorities serve their own interests at the expense of others. Rawls's justice principle—that development for some is justified only if it benefits all—becomes circumvented.

The problems mentioned above can be addressed by deriving principles of justice from a particular historical and comparative context. Justice can be examined within social relations and material conditions that are specific and concrete. In this context, justice can become an important tool for analyzing change, "development," and the use of law. Legal equality, for example, is an abstract ideal that often has been employed as a metaphor for justice. From the Western perspective on liberalism, in the United States in the eighteenth century, for example, the individual was defined as autonomous, the fundamental unit of society. Rather than viewed as subjects, individuals were defined as citizens who were born equal and free. This definition excluded the majority. Under the declaration that all "men" are created equal, women, poor men, and slaves were ignored. Legal equality for women, poor men, and slaves did not become a fact until the twentieth century. Legal equality, therefore, far from being a reality, can be viewed as a metaphor that emerges from specific, historical conditions.

As the twentieth century progressed, the modern nation-state legitimated its control and expanded its jurisdiction by deconstructing indigenous solidarity, experiential education, and family and community welfare as it constructed national citizenship, formal education, and limited forms of government welfare for individuals. Concepts of *nation-state* and *citizen* were presented as major sources of solidarity and identity, emphasizing an abstract concept of nationalism. Formal education was proclaimed as superior to experiential learning. The nation-state centralized welfare amid claims of its progressive care, yet modern forms of state welfare usually have created varying levels of stigma for recipients.

THE NEED FOR COMPARATIVE AND HISTORICAL ANALYSIS OF JUSTICE

Justice, then, is a useful concept when one examines how it is constructed in different social and political settings and explores how it is used as a source of legitimation for the development and use of rules such as law (Lauderdale 1997). The study of justice should include an analysis of the fair distribution of benefits and burdens, including rights, obligations, deserts, and needs. This manner of studying justice also differentiates between short- and long-term impacts of change, and may identify well-intentioned suggestions for change that may result in unfortunate consequences. The comparative and historical analysis of theories and practices of justice is a relevant alternative to most perspectives on what justice should be. A commitment to addressing the injustices committed in the past by making the lives of people who have suffered those injustices more secure, peaceful, and prosperous may benefit those people who have (directly or indirectly) benefited from historical injustices (Thompson 2002).

A comparative and historical analysis of justice also considers the crucial role of noneconomic factors, such as

religious beliefs and ideology, which people sometimes privilege over the goals of Western development. Liberation theology, for example, appeared as a religious social movement in reaction to the binding ties between the elites and the Catholic Church, which exacerbated obvious inequities, especially those of land use and ownership (Gutiérrez 1988). The theology began not with theory but with the realities of injustice experienced by the peasants and indigenous people of Latin America. It calls for individuals, communities, and corporate entities to be involved in extricating themselves from serving the interests of the elites of society and instead to work on behalf of the marginal with the goal of establishing solidarity and equity. Working with the oppressed is presented as a pragmatic prescription to fight poverty and oppression and to liberate people here and now. From such a perspective, justice is revealed as a structural phenomenon, and the dynamics of the world market system, promoted in tandem with liberal democratic principles, are shown to be unjust.

Such approaches to justice stress the development of peoples and not economies, emphasizing the conditions under which economic and political dependency works against community determination and autonomy. The perspective, then, is about whether certain kinds of growth can really solve the problems at hand. The dominance of capital or economic interests as the developing principle is seen as contradicting the ethical principle that workers and labor must be given priority in development of an economy based upon justice. Here, there is a principle that there must be an ethics of means as well as ends. The scholasticism found in many ethnocentric theories of justice based on Western philosophy can benefit from analyses of where perceptions of justice emerge.

Theories of justice based solely on abstract and universalistic criteria have been unable to respond to people throughout the world who are experiencing the presence of injustice in the form of poverty, landlessness, dispossession, political and religious oppression, and genocide. Philosophical formulas of justice are inadequate without systematic explications of the sources of injustice, including, at least: (1) an analysis of how participants are excluded from the creation of justice-related agendas, as well as decision making regarding policy agendas; (2) the continued exposure of exploitation in labor relations; (3) an examination of the factors leading to the erosion of communities, collective identity, and the right to sovereignty; and (4) the long-term cost to nature (including humans) when justice is defined as separate and subservient to humans.

Diversity cannot be denounced as deviance. Society cannot fail to acknowledge the dialectical nature of the conflict between totalization and particularism, corporate monoculture and bioregional diversity, and abstract universalism and collective indigenous identity. Time (historical setting) and place (comparative setting) have proven that traditional assumptions about the implementation of fairness and equality are inadequate, especially for those individuals who exist at the margins of globalization. A workable theory of justice not only must acknowledge and extend foundational theories, but also must critically evaluate those theories so as not to neglect the fundamental connection.

SEE ALSO *Democracy; Egalitarianism; Equality; Justice, Distributive; Locke, John; Rawls, John; Social Contract; Utilitarianism*

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Pat Lauderdale

JUSTIFICATION, SELF-

SEE *Self-Justification.*

K

KAHN, RICHARD F.
1905–1989

British economist Richard Ferdinand Kahn, fellow of King's College Cambridge (from 1930) and professor of economics at the University of Cambridge (from 1951), was John Maynard Keynes's (1883–1946) favorite pupil and closest collaborator during the writing of Keynes's *General Theory* (1936). Kahn became Keynes's literary executor and remained the torchbearer of Keynesian theory and policy throughout his life (Pasinetti 1987). Kahn first graduated in 1927 in natural sciences, then switched to economics and was awarded first-class honors in the 1928 Economics Tripos (courses and examinations leading to the Cambridge B.A.). In the following year and a half, he wrote a dissertation on *The Economics of the Short Period* (1989), which secured him a fellowship at King's College. Kahn's dissertation remained unpublished for fifty years, but it contained the essentials of the economics of imperfect competition, which would be refined and extended by Joan Robinson (1903–1983) in her 1933 book, *The Economics of Imperfect Competition*, as well as the short-period method, which came to form the mold in which the *General Theory* was cast (Marcuzzo 1994).

Kahn is best known for his discovery of one of the ingredients of the Keynesian revolution, namely, the principle of the multiplier. By this is meant the relation between the increase in any component part of the exogenous aggregate expenditure and the increase in income and employment whenever there are idle resources in the economy, such as undercapacity utilization of plant and machinery and unemployment of labor. In its simple form, it can be stated as follows: if c is the fraction of any increase in income that individuals decide to consume, an increase of, say, $1 in expenditure will generate an increase in income equal to $1/ (1-c).

Kahn presented his result in the midst of the controversy over public investment as a means to fight unemployment; the idea was to show that an increase in public expenditure would be effective in increasing total employment, contrary to the view held at the time that it would simply "crowd out" private employment (Kahn 1931). Its main implication, which is central to Keynesian macroeconomics, is that it is the level of investment that determines savings and not the other way around, as pre-Keynesian economic theories had it.

Besides playing a leading role in the discussions that paved the way to the *General Theory*, Kahn contributed to extending and clarifying some of its concepts and tools of analysis. His evidence to the Radcliffe Committee on the Working of the Monetary System (Kahn 1959a, 1959b) and his work on the liquidity preference (Kahn 1954) are landmarks in the Keynesian view of monetary theory and policy (Dardi 1994). He also contributed to the understanding of the so-called wage-spiral, built into the process of wage negotiation, in causing inflation (Kahn 1976), and, last but not least, left his mark on the post-Keynesian theory of growth and income distribution (Kahn 1959c).

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Maria Christina Marcuzzo

KAHNEMAN, DANIEL

SEE *Rationality.*

KALDOR'S LAW

SEE *Verdoorn's Law.*

KALECKI, MICHAŁ
1899–1970

The Polish economist Michał Kalecki was born in 1899 in Lodz and died in Warsaw in April 1970. His academic training was in engineering, and he was self-taught in economics, influenced by writers such as Karl Marx (1818–1883) and Rosa Luxemburg (1870–1919). He obtained his first quasi-academic employment in 1929 at the Research Institute of Business Cycles and Prices in Warsaw. A Rockefeller Foundation fellowship allowed him in 1936 to study abroad in Sweden and then England, where he remained for the next ten years, including employment during World War II (1939–1945) at the Oxford University Institute of Statistics. After working for the International Labour Office in Montreal in 1945 and 1946, Kalecki was appointed deputy director of a section of the economics department of the United Nations Secretariat in New York at the end of 1946. He resigned from the United Nations in 1954 in response to the appointment of a board of directors to exercise control over the World Economic Report, which was seen as resulting from American involvement in the work of the United Nations. Kalecki returned to Poland in 1955, where he was heavily involved in the debates over the role of decentralization and workers' councils, the speed of industrialization, and the relative size of consumption and investment. In the last decade of his life, Kalecki was heavily involved with problems of economic development.

Kalecki discovered a range of ideas on the importance of effective demand and the role of investment similar to those discovered by John Maynard Keynes (1883–1946), and Kalecki can claim priority of publication (1933 for Kalecki versus 1936 for Keynes). While there are similarities between Kalecki and Keynes, there are also differences—for example, over the determinants of investment and the perception of the economy as competitive or oligopolistic (on the relationship between Kalecki and Keynes, see Sawyer 1985, chap. 9). The school of thought known as *post-Keynesianism* has been strongly influenced by the work of Kalecki, and many of the ideas current there can be traced back to Kalecki (King 1996 and 2002, chap. 2). Kalecki was influenced by Marx and Marxist writers but would not have described himself as a Marxist (Sawyer 1985, chap. 8).

A key element in Kalecki's work was the idea that the level of economic activity would be determined by the level of aggregate demand, and that investment decisions were a particularly significant element in the determination of the level of demand. Any decision to increase investment expenditure can only come to fruition if finance is available and provided through the banking system. Actual investment expenditure generates a corresponding amount of savings. Kalecki argued that savings were undertaken predominantly out of profits, and he often assumed as a first approximation that workers did not save, and hence investment expenditure in aggregate determined the volume of profits. As Kalecki wrote, "capitalists as a class gain exactly as much as they invest or consume, and if—in a closed system—they ceased to construct and consume they could not make any money at all" (Kalecki 1990, p. 79). The assumption that wages are spent and the view that capitalists' expenditure determines their income was reflected in an aphorism that was ascribed by Joan Robinson to Kalecki—"the workers spend what they get, and capitalists get what they spend"

(Robinson 1966, p. 341)—though it cannot be found in the writings of Kalecki. There is also a reverse direction of causation at the level of the enterprise, whereby the profitability of the enterprise will influence its investment decisions. Profits provide internal finance for investment, and the present level of profits influences expectation on future profits.

Kalecki saw capitalism as oligopolistic and monopolistic, and he dismissed the notion of perfect competition as a "dangerous myth." His approach to pricing put forward the idea of the "degree of monopoly," which expresses the notion that the market power that an enterprise possesses will strongly influence the markup of its price over its (production) costs. The extent of market power depends on such factors as the dominance of the enterprise in its market, the barriers to entry into the industry, and so on. The degree of monopoly leads to a theory of the distribution of income and of the determination of real wages. At the level of the enterprise, the degree of monopoly sets the price-cost ratio; from this, the ratio of profits to sales can be derived. Further derivation and then aggregation indicates that the share of profits in national income depends on the average degree of monopoly and on the cost of imports. Since wages are a major component of costs, the degree of monopoly has a major impact on the real product wage. Kalecki thus advanced a distinctive theory of the distribution of income between wages and profits, and the view that a firm's pricing behavior, rather than events in the labor market, set the real wage.

The phenomenon of the business cycle was central to Kalecki's economic analysis of capitalism, and his discovery of the importance of aggregate demand for the level of economic activity was undertaken in the context of cyclical fluctuations. Kalecki viewed "the determination of investment decisions by, broadly speaking, the level and the rate of change of economic activity" as the pièce de résistance of economics (Kalecki 1968, p. 263). The central feature of Kalecki's explanation of the business cycle is the influence of investment on economic activity and hence the determinants of investment. Kalecki distinguished between the decision to invest and the placing of orders for investment, with a significant lag between investment orders and actual investment. Investment orders depend on profits, and profits are generated by actual investment.

Kalecki also postulated that investment is negatively influenced by the size of the capital stock. Combining these elements, Kalecki arrived at a mixed differential-difference equation (Kalecki 1990, pp. 82–83), for which there may be many solutions. Kalecki sought to establish that there is one solution for which the amplitude remains constant. "This case is especially important because it corresponds roughly to the real course of the business cycle" (Kalecki 1990, p. 87). He then argued that, with that condition satisfied, the other parameters of the model are such that a regular cycle of around ten years would be generated, which conforms with the general pattern of the time of a cycle of the order of eight to twelve years in length. The mixed differential-difference equation was the basis of Kalecki's attempt to generate a self-perpetuating cycle, which was later to be resolved through the notion of *limit cycles*.

Another important ingredient of his approach is summarized in the oft-quoted statement that "the long-run trend is but a slowly changing component of a chain of short-period situations; it has no independent entity" (Kalecki 1968, p. 263). This can be interpreted as undermining the predominant equilibrium approach to economic analysis whereby there is a long-period equilibrium around which the economy fluctuates or toward which the economy tends and which is unaffected by the short-period movements of the economy.

The discoveries of Keynes and Kalecki in the 1930s on the principle of effective demand and the associated idea that governments could (and should) manipulate their budget stance to generate high levels of employment (rather than aim for a balanced budget) seemed to open the way for the achievement of permanent full employment in capitalist economies. Kalecki raised many doubts about the possibilities of achieving prolonged full employment in a laissez-faire capitalist economy, most notably the resistance by business to prolonged full employment arising from a loss of "discipline in the factories."

SEE ALSO *Economics, Post Keynesian*

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Malcolm Sawyer

KANT, IMMANUEL
1724–1804

Immanuel Kant was born in 1724 in Konigsberg, Prussia (now Kalingrad, Russia). He contributed to metaphysics, epistemology, ethics, and political philosophy. He lived most of his life in Konigsberg, where he died in 1804. He lived long enough to see the early stages of the French Revolution, which he initially welcomed because of its emphasis on both liberty and equality.

Kant's philosophy emphasized the reconciliation of disparate themes and theories. In human nature he tried to reconcile the demands of heteronomy and autonomy. The latter has two distinct meanings: one ethical, the second metaphysical. In epistemology he tried to reconcile the competing claims of the rationalists—who emphasized a priori knowledge, primarily mathematics—with those of the empiricists, who claimed that all knowledge is based on experience. David Hume's skeptical development of empiricist philosophy, Kant said, "interrupted my dogmatic slumber" (Kant [1783] 1953, p. 9). Humean skepticism threatened both traditional theism and the recently triumphant Newtonian science.

KANT'S COPERNICAN REVOLUTION

Kant wanted to defend religion from skeptical arguments and Newtonian science from a similar type of skepticism. He also defended a libertarian theory of human nature from the new determinism that many saw as implicit in Newtonian physics. This is the problem of *heteronomy* and *autonomy.* The former is the view that even human behavior is controlled by the same laws as the rest of the universe, implying that free will is an illusion. The latter is the view that not all human actions are dependent on (or deducible from) the laws of nature.

Kant's theory of knowledge was based on a complex theory of categories of the mind that we have a priori (prior to, and independently of, experience) and that we apply to experience. Without it we could not have any coherent experience. It constitutes a third way of knowledge between a priori mathematical and logical concepts and those based on experience. It is *synthetic* a priori knowledge. Just as Copernicus reversed the roles of the sun and earth, so Kant reversed the role of thought and experience: We impose our mental categories on the world, not vice versa.

Kant argued that these concepts applied only to the world of experience and could not apply to metaphysical problems such as God, freedom, and immortality. He produced a complex critique of the three traditional theistic proofs (ontological, teleological, and cosmological) but also argued that reason could not disprove God's existence, and then offered pragmatic proofs for such a belief. Kant's *Religion within the Limits of Reason Alone* ([1787] 1960) was an attempt to replace religion based on revelation or fideism.

MORAL AND POLITICAL PHILOSOPHY

Kant's moral philosophy was based on an ethical interpretation of autonomy culminating in his categorical imperative(s) and his proto-liberal political philosophy of freedom. The categorical imperative has two versions: "I ought never to act except in such a way that I can also will that my maxim should become a universal law" ([1797] 1964, p. 70) and the somewhat clearer, "act in such a way that you always treat … the person of any other, never simply as a means but always … as an end" ([1797] 1964, p. 96). The best interpretation of this is: "Don't use people as if they were tools or machines; they are persons with independent wills and desires of their own." Because Kant assumed that people have conflicting wills and desires, he asserted that legislators must pass laws that protect everyone equally. Kantian equality is purely formal, meaning that laws must protect everyone equally, but he permitted massive material inequality, based on differences in everyone's "talent, industry, and good fortune" ("Two Essays on Right" [1797] in Phelps 1973). Kant denied that there could be a principle of welfare or happiness, inferring from this that neither morality nor legislation could be based on experience

Kant distinguished between perfect and imperfect duties. The former are based on the putative rights of others; the latter are not. Therefore, although animals do not have rights, we should not be cruel to them. Charity to the poor is another imperfect duty.

Despite the cosmopolitan character of his categorical imperative and political philosophy, Kant seemed to absorb from Hume an uncritical racism, especially concerning Africans. There are two ways in which one might defend either Kant or Hume. One would be the historicist argument, that we cannot judge people from different times and places by our contemporary standards. The other is to downplay the significance of these views in either philosopher in their overall philosophy. The latter is the more promising route because the eighteenth century was

allegedly the age of Reason and Enlightenment. It also was the age in which slavery was first attacked on a widespread basis, leading to its eventual abolition in most of the world. Jeremy Bentham (1748–1832) argued for decent treatment for blacks, for animals, and (albeit secretly) for homosexuals, on the grounds that the key issue was not "Can they reason?" but "Can they suffer"? In addition, racism seems to conflict logically with Kant's cosmopolitanism.

Kant's greatest influence on the twentieth century may have involved his proposals for perpetual peace via a League of Nations. He also had great faith in republican governments to promote such peace better than monarchies would. In 1784 he wrote "What Is Enlightenment?" The basic idea was a willingness to dare to think for ourselves. His idea of autonomy, however, should not be confused with a "do your own thing" mentality: Instead, it meant that the laws we impose on ourselves are based on logically impeccable arguments.

SEE ALSO *Autonomy; Bentham, Jeremy; Enlightenment; Epistemology; Ethics; Hermeneutics; Hume, David; League of Nations; Philosophy; Racism; Religion; Slavery*

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Calvin Hayes

KARIEL, HENRY S.
1924–2004

Henry S. Kariel was one of the most influential postmodern political scientists of the latter half of the twentieth century and a significant critic of the fundamental concept of pluralism in American politics. Born in Plauen, Germany, on July 7, 1924, Kariel earned his doctorate in political science at the University of California at Berkeley and served primarily on the faculty of the University of Hawaii at Honolulu. Kariel's scholarship vaulted him to the forefront of the "antipluralist" movement that attempted to interpret and describe the political and social unrest of the 1960s and 1970s. He proposed a new methodology of political science rooted in the identification of citizens at the political margins. This was a concerted effort to expand democracy by transforming the disaffected into willing and vital participants within the political process at the expense of the traditional pluralistic tradition.

Kariel was heavily influenced by German philosopher Friedrich Nietzsche (1844–1900), who argued that it was impossible for human beings to attain final knowledge of the political and social realms. Kariel's political science was informed by this brand of postmodern relativism, and he posited that a consistent relativism recognized the claims and ends of all people, rather than those of a pluralistic elite. Established truths were no longer true, especially in rapidly changing social conditions. In this view, what the individual believes to be real is subjective, and the political scientist must therefore question established systems and truths in an effort to understand and make sense of new directions, as well as help create a more direct democracy that serves the needs of all.

Kariel viewed the student protests against the Vietnam War on college campuses, the riots in urban ghettos, governmental scandals, and the general backlash against the pluralistic reliance upon trusted institutions that often characterized the late 1960s and 1970s as evidence of the decline of pluralism and the onset of a new political dichotomy, one that legitimately questioned the authority of government while demanding an egalitarian society. As opposed to the general disturbance among citizens and more conservative academics that such events caused, Kariel and many critics of liberal pluralism saw not wanton violence or decadent protest, but rather a controlled effort aimed at forging a new political and social reality. He thus urged the adoption of "a suspension of the empirical" and looking beyond traditional data-gathering to define and explain new political theory.

While Kariel claimed to not repudiate constitutionalism, his approach was criticized for contradicting the fundamental ideology of constitutionalism. The essential critique of Kariel posited that while the citizenry's flexibility and freedom to act politically are indeed a part of the pluralistic tradition, the sovereign power to govern is limited by the people's own creation—the Constitution. In addition, critics charged that antipluralists such as Kariel

failed to explain how a society in which everything was politicized would guarantee equitable results. In addition, despite the difficulties of the late 1960s and the demoralizing resignation of President Richard M. Nixon in 1974, citizens were unlikely to abandon the authority vested in governmental institutions in favor of the unknown dynamic for which Kariel argued. Kariel died in Hawaii on July 8, 2004.

SEE ALSO *Constitutionalism; Constitutions; Critical Theory; Elite Theory; Freedom; Nietzsche, Friedrich; Pluralism; Political Science; Postmodernism; Power; Sovereignty; Vietnam War*

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Matthew May

KARMA

SEE *Reincarnation.*

KARUSH-KUHN-TUCKER CONDITIONS

SEE *Maximization; Programming, Linear and Nonlinear.*

KAUNDA, KENNETH

1924–

The decolonization decade of the 1960s in Africa produced not only a bevy of territorial successor states, but a crowd of would-be "fathers" of new countries. Most remembered, perhaps, are Kwame Nkrumah (1909–1972) of Ghana, Julius Nyerere (1922–1999) of Tanzania, and Félix Houphouët-Boigny (1905–1993) of Côte d'Ivoire. In the same class, but perhaps less memorable for indiscernible reasons, is Kenneth David Kaunda, who was prime minister and first president of Zambia (formerly Northern Rhodesia) in Central Africa. Kaunda stayed in office for twenty-seven years, peacefully handing over power to an elected successor in 1991. With his country prey to the powerful and white supremacist neighbor, South Africa, painfully dependent on the one major natural resource, copper, and threatened by ethnic strife, Kaunda proved unable to transcend his country's underdevelopment and vulnerability to division, nevertheless accomplishing the daunting feats of maintaining independence and national integration.

Similar to other emergent civic leaders of his generation, Kaunda was educated in mission schools (his father was a missionary), became a teacher, served on a local council, and plunged into nationalist politics. In 1950 he was secretary of his branch of the Northern Rhodesia African Congress; by 1953 he was secretary-general of the African National Congress (ANC). He served a brief term in prison for a political offense, visited Britain as a guest of the anticolonialist Labour Party, and broke with the ANC in 1958. The politics of the era was dominated by the Southern Rhodesian whites and the British government's attempt to form a Central African Federation. Resistance to federation resulted in another prison term for Kaunda and then to the formation of the United National Independence Party (UNIP) that delivered independence in 1964 to an ultimately unfederated Northern Rhodesia.

Kaunda's leadership received popular approval, achieving renewal every five years—in 1988 with 95 percent of the vote—until an ignominious defeat in 1991 in an internationally observed contest. In keeping with the political trend of the era, Zambia banned opposition parties in 1968, became a one-party state in 1972, and declared an official ideology called *Zambia Humanism*, which reflected the "African socialist" fad of the times, as represented by Nkrumah's *Consciencism* and Nyerere's *Ujamaa*. Like these two well-known African figures, Kaunda published an autobiography (1962), a volume of speeches (1966), and a guide to his own thinking, *Humanism in Zambia and a Guide to Its Implementation* (1968).

Kaunda's successor, Frederick Chiluba, treated the country's founder-president rather shabbily in the post-election period, first attempting to deport him as a "noncitizen" (Kaunda's father was born in Malawi), then getting the country's constitution amended to prevent Kaunda from entering the elections of 1996. After accusations of sponsoring a failed coup attempt in 1997, Kaunda retired from politics, devoted himself to good works and his passion for ballroom dancing, and assumed the post of African president-in-residence at Boston University (2002–2004).

Kaunda's achievements ultimately remain mixed. His writings come across as more diffuse than his contemporaries Nkrumah and Nyerere, although no one doubts Kaunda's personal integrity. His efforts to negotiate with South African president John Vorster (1915–1983) exposed him to charges of naiveté, although Kaunda was steadfast in providing sanctuary to the (South African) African National Congress in its exile. While avoiding a successful coup—characteristic of West African states in the 1960s and 1970s—Kaunda continually faced sectional and ethnic tensions in the country, despite single-party rule in the 1970s.

As to economic development, Zambia lurched through several programs of rural development and state-led strategies, piling up huge international debts. With copper and cobalt providing 95 percent of the country's foreign exchange, dramatic drops in international prices from the mid-1970s caused great economic pain, stirring massive opposition among mineworkers, whose union formed the basis of political opposition that ultimately produced the person who ousted Kaunda, Frederick Chiluba.

Kaunda sought help from the World Bank and the International Monetary Fund in the 1980s. One immediate consequence was the fateful maize-meal riots on Zambia's Copperbelt in December 1986. The Zambian government backtracked; the World Bank and Western governments withheld funds; and inflation, black markets, and internal unrest all ensued. The June 1990 university student protests led to more riots, an announced coup, dancing in the streets, Kaunda contradicting himself on a referendum, and finally a restoration of multiparty government. By 1991 the major opposition party, the Movement for Multiparty Democracy, swept parliamentary voting and retired Kaunda as president with less than 20 percent of the ballots. Kaunda's message to his successor included a final contribution to democratic government: "Well, congratulations, you have won… I stand ready to assist you, if you should need my services. For the time being, God bless and goodbye."

SEE ALSO *African National Congress; Anticolonial Movements; Decolonization; Developing Countries; Labour Party (Britain); Liberation Movements; Neocolonialism; Nkrumah, Kwame; Nyerere, Julius; Socialism, African*

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Harvey Glickman

KAUTSKY, KARL

SEE *Imperialism.*

KEFAUVER, ESTES

1903–1963

Carey Estes Kefauver was born to Phredonia Estes and Cooke Kefauver July 26, 1903 on a farm near Madisonville, Tennessee. His older brother, Robert, and younger sisters, Nancy and Leonora, rounded out his family. Following a career in law and service in the U.S. House of Representatives (1939–1949) and the U.S. Senate (1949–1963), Kefauver died in Washington, D.C. August 10, 1963. Kefauver attended local public schools, and then entered the University of Tennessee, where he participated in various extracurricular activities. He earned a BA in 1924 but had already begun to study law. After brief service as a teacher and coach in Arkansas, Kefauver entered Yale Law School and was granted an LLB *cum laude* in 1927. He had previously passed the Tennessee bar examination, so Kefauver moved to Chattanooga and joined first a practice set up by his cousins and later another firm, where he became a junior partner in 1930. Civic affairs, work with the Tennessee Valley Authority (TVA), and representation of a local newspaper promoting government reform led Kefauver into political activism, and in 1936 he was narrowly defeated in a state senate bid.

In 1939 Kefauver was appointed state finance and taxation commissioner, served briefly, returned to his law

practice, then entered a special election for Tennessee's third congressional district (Chattanooga) seat upon the incumbent's death. Kefauver won, and was reelected four times; in 1948 he sought a U.S. Senate seat and won a plurality victory in the Democratic primary over the incumbent and a third candidate sponsored by Tennessee's "Boss" Crump. He was reelected in 1954 and 1960, and in intervening years pursued the Democratic presidential nomination. In 1952 President Harry S. Truman and other party leaders offset Kefauver's surprising string of primary victories and delivered the nomination to Illinois governor Adlai Stevenson; the 1956 rematch also produced a Stevenson nomination, but Kefauver's withdrawal in favor of Stevenson late in the campaign encouraged Stevenson to allow convention delegates to select his running mate. Kefauver was nominated, but the Democratic ticket was again defeated in the election, by Dwight Eisenhower.

Kefauver's presidential efforts grew out of his work chairing the Senate's Special Committee to Investigate Organized Crime in Interstate Commerce during the Eighty-first and Eighty-second Congresses. While a congressman, Kefauver had supported Presidents Roosevelt and Truman, the TVA, and government reform and antitrust policy; he sponsored the modern presidential succession statute and supported abolition of the poll tax. Kefauver's involvement in a House investigation of judicial corruption, as well as his personal ambition, underscored by encouragement of some newspaper executives, caused him to see opportunity in a Senate study of organized crime. Events overcame the Democratic Senate leadership's reluctance, and internal Senate politics led to Kefauver's selection as chair when the committee was authorized in May 1950.

The committee held hearings in several cities and began to attract attention as witnesses helped to build a case that criminal elements had developed a national organization substantially rooted in illegal gambling and protected from law-enforcement efforts through bribery and the efforts of friends in useful offices. Public interest in the investigation grew with the publicizing of the connections between racketeers and various public officials, as well as several prominent political organizations; it flourished as hearings first in New Orleans and subsequently in other cities were televised. Committee proceedings were less popular, however, in the White House and in Democratic Senate Majority Leader Scott Lucas's office, as they suggested ties between the Kansas City Democratic organization (President Truman's home base) and gangsters and between Cook County, Illinois, Democrats (Lucas's base) and criminal elements. Kefauver refused to defer study of them, which probably led to Lucas's defeat in his 1950 reelection bid and Truman's opposition to Kefauver's 1952 Democratic presidential nomination quest. The committee's work bore legislative fruit only after the Kennedy administration took office, but several states defeated legalized gambling, and a number of cities established crime commissions in the immediate wake of its reports.

Kefauver had married Nancy Paterson Pigott, Scottish-born daughter of American expatriates and an aspiring artist, in 1935. Daughter Eleanor was born to the couple in 1941, and when other children did not quickly follow, they adopted six-week-old David in 1946. Diane was then born in 1947, and Gail completed the family upon her birth in 1950.

Kefauver fell ill during the summer of 1963 and was diagnosed as having an aortal aneurism; it burst before remedial measures could be taken, and he died at Bethesda Naval Hospital. He was buried in the family cemetery in Madisonville, Tennessee.

SEE ALSO *Congress, U.S.; Crime and Criminology; Mafia, The*

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James F. Sheffield Jr.

KELLEY, HAROLD
1921–2003

Harold Harding Kelley's field of study, social psychology, has been defined variously as the study of attitudes, of groups, or of the ways mental representations shape social behavior and person perception. Hal Kelley contributed to all of these aspects of his field.

Kelley was among the young scholars, including Morton Deutsch (born 1920), Stanley Schachter (1922–1997), and John Thibaut (1917–1986), drawn to the Research Center for Group Dynamics established by Kurt Lewin (1890–1947) at the Massachusetts Institute of Technology (MIT). Kelley's (1950) dissertation research at MIT asked: Do people "key" on particular social information? He found that when a person was described by a list of adjectives, others' attitudes toward that person were especially affected by whether the word *warm* or *cold* appeared in the list. Kelley's interest in person perception

was evident again approximately fifteen years later when he coined the term *attribution theory*.

Kelley's true forte was not empirical research, however; it was theorizing. In his academic appointment at Yale University in the early 1950s, Kelley collaborated with a leading attitude researcher, Carl Hovland (1912–1961), and Irving Janis (1918–1990) to review and synthesize theory and research concerning communication and persuasion.

But it was with John Thibaut, while at the University of Minnesota and later the University of California at Los Angeles, that Kelley developed a prominent theory concerning interpersonal influence in groups. The theory focused on interdependence in the simplest social group—the *dyad* (two-person "group"). *Interdependence* implies that the dyad members can benefit or harm one another, and the theory identified bases of mutual influence stemming from patterns of interdependence. *Reflexive control* constitutes the extent to which dyad members control their own outcomes independent of the other's actions; *fate control* is the extent to which individuals control the other's outcomes irrespective of the other's actions; and *behavior control* concerns the extent to which both members of the dyad gain or lose based on the configuration of their actions. For example, when mutual cooperative action is particularly beneficial, or competition is harmful, there is an incentive for each to coordinate with the other's actions, yielding mutual behavior control.

Although the best-known precursors to this theory, by George Homans (1910–1989) and Peter Blau (1918–2002), are labeled *exchange* theories, Kelley rejected this label in favor of *interdependence* theory, because exchange of rewards is just one solution to some of the problems posed by particular interdependence structures. For example, people can reevaluate outcomes or develop sequences of actions (described by *transition lists*) that are more complex than simple exchange.

Kelley probably is best known for work on attribution theory. He proposed that laypeople can be systematic processors of social information, implicitly arraying information in what came to be known as *Kelley's cube*. This ANOVA model distinguished three types of information that people can use to analyze the causes of others' (or their own) behavior. For example, when a person *uniquely* (i.e., low on the *consensus* dimension of the information cube) and *consistently* chooses to play backgammon but not, say, chess or checkers (yielding *distinctiveness* of game-playing behavior), the behavior is attributable to something internal to the person (e.g., a strong preference), and not external (e.g., social convention). Later, Kelley described alternate attribution processes involving cognitive schemas. Hundreds of subsequent studies of attribution, conducted over the next decade, were reviewed by Kelley and John Michela (1980).

In the 1980s and 1990s Kelley helped to build a community of researchers of close relationships (e.g., marriages). One outgrowth, *An Atlas of Interpersonal Situations* (2003), may be seen as a step in the direction of Kelley's vision that social psychology should develop very general principles—paralleling chemistry's periodic table, for example—and steer clear of demonstrations of counterintuitive social phenomena that often dominate the field but are neither cumulative nor rich.

Harold Kelley received numerous awards for his contributions, from social psychology societies and from the broader scientific community, as when he was elected to the U.S. National Academy of Sciences.

SEE ALSO *Blau, Peter M.; Communication; Cooperation; Intergroup Relations; Persuasion; Schachter, Stanley; Social Psychology*

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John L. Michela

KENNEDY, JOHN F.
1917–1963

John Fitzgerald "Jack" Kennedy, the thirty-fifth president of the United States, was born May 29, 1917, in Brookline, Massachusetts, and was assassinated in Dallas, Texas, on November 22, 1963. Jack was the son of Joseph Patrick Kennedy (1888–1969) and Rose Fitzgerald (1890–1995); both grandfathers, Patrick Joseph Kennedy (1858–1929) and John F. "Honey Fitz" Fitzgerald (1863–1950), had been politically prominent in Boston. Jack's father was determined to see his first born, Joseph

Patrick Jr., elected president, but Navy pilot Joe Jr.'s death in 1944 caused Joe to transfer his political dreams to Jack.

Jack was an indifferent student at day schools, then in a Catholic boarding school, and finally at Choate, a preparatory school in Connecticut that Joe Jr. was attending. Fellow seniors named Jack "most likely to succeed," and he graduated in the middle of his class. Joe Jr.'s shadow led Jack to attend Princeton University rather than Harvard, but poor health, which plagued his entire life, soon forced him to withdraw. He entered Harvard in 1936 and continued to perform modestly as a student, but public affairs then captured Jack's attention. He registered for a heavy academic load in the fall of 1937 so that he might travel to Europe in early 1938 to research an honors thesis on contemporary politics. That paper reviewed Great Britain's prewar policies toward Germany and was published in 1940 as *Why England Slept*; it proved unexpectedly popular in an America unnerved by world events.

War approached, and Kennedy attempted to enter officer candidate schools, but failed the physical examinations. Joe Kennedy Sr., the U.S. ambassador to Great Britain in the late 1930s, arranged through his former naval attaché for Jack to enter the U.S. Navy in late 1941. Kennedy was trained to operate patrol-torpedo boats and was sent to the Pacific, where his boat (*PT-109*) was rammed by a Japanese destroyer in August 1943. Jack led survivors to a nearby island, directed successful efforts to attract a rescue, and later returned to duty, but physical maladies caused his return to the states and his eventual retirement from the Navy.

Joe Kennedy enthusiastically supported Jack's race for the eleventh Massachusetts congressional district seat in 1946, and after three terms in the U.S. House of Representatives Jack successfully challenged incumbent Henry Cabot Lodge Jr. (1902–1985) for a U.S. Senate seat. Kennedy's bid for the 1956 Democratic vice-presidential nomination fell just short, and immediately following Dwight D. Eisenhower's (1890–1969) reelection he mounted a campaign for the 1960 Democratic presidential nomination. Kennedy's Catholicism was inevitably an issue, but he defused it by asserting the principle of church-state separation. He won the nomination, then defeated the Republican candidate, Richard Nixon (1913–1994), by 120,000 popular votes; the electoral vote was not so close (303–219).

Jack, his wife Jacqueline Bouvier Kennedy (1929–1994), and their young children presented active, sophisticated, optimistic faces to the country. In accepting his party's nomination, Kennedy had described a "New Frontier" of possibilities for the nation, and his inaugural speech built on that vision. The White House became "Camelot" after the romantic stage version of King Arthur's reign; the Kennedys were admired as royalty, and it was sometimes suggested that a Kennedy dynasty had begun wherein Jack would be succeeded first by his brother Robert (1925–1968) and then by their younger brother Edward (b. 1932).

Cold War issues hounded the Kennedy presidency, however. A 1961 invasion of Cuba, a Soviet client, at the Bay of Pigs by CIA-sponsored Cuban exiles failed, and it was soon followed by East Germany's provocative construction of a wall isolating western sectors of Berlin. In 1962 U.S. intelligence efforts revealed that the Soviet Union was basing offensive missiles and long-range bombers in Cuba. Kennedy mobilized the military, authorized complaints in the United Nations Security Council, and ordered the Navy to "quarantine" Cuba to prevent receipt of more weapons. Diplomacy and U.S. willingness to resort to military action caused removal of the arsenal. This incident provided the most dangerous moment of the Cold War.

The "space race" gave Kennedy another means of challenging the Soviets, one that was also infused with domestic policy. Soviet satellites and manned orbital flights embarrassed the United States. Initial American efforts were spectacular failures, but science advisors concluded that a manned moon landing was feasible. Convinced that gaining the upper hand in space would enhance U.S. prestige abroad, restore American confidence, and open doors to technological and economic advances, Kennedy committed the United States to a safe manned flight to the moon and back by the close of the 1960s. His vision was fulfilled in July 1969.

The civil rights movement posed different domestic policy problems. Kennedy had telephoned the wife of Reverend Martin Luther King Jr. (1929–1968) when King was imprisoned during the election campaign; this encouraged many to expect Kennedy to champion civil rights. His administration proved less than they hoped, although it made some efforts to extend voting rights and to reduce employment discrimination. But activists known as "freedom riders," who were testing Kennedy's promise to end public-transportation segregation, were violently attacked in Alabama, and the University of Mississippi was awkwardly integrated, causing a deadly riot. Kennedy proposed a sweeping civil rights bill during the summer of 1963, but Congress acted only when Kennedy's successor, Lyndon Johnson (1908–1973), promoted the bill as a memorial to the slain president.

In November 1963 Kennedy traveled to Texas to end bickering among Democrats there. As his limousine approached downtown Dallas, gunshots fatally wounded him. A government commission headed by Chief Justice Earl Warren (1891–1974) later blamed Lee Harvey Oswald (1939–1963) for the act as a solitary assassin, but

conspiracy theories abounded. Robert Kennedy and President Johnson were suspicious of the CIA, American mobsters, and Cuban operatives, and Johnson himself was suspected of involvement by some. Oswald's murder as he was being transferred between jails only two days after Kennedy's shooting further fueled misgivings that persisted for decades. Gerald Posner's 1993 book *Case Closed* best refuted conspiracy advocates.

Kennedy was survived by Jacqueline, who later remarried, was again widowed, and died in 1994 of cancer; daughter Caroline, who became a writer, attorney, wife, and mother of three Kennedy grandchildren; and son John Jr., who perished in a 1999 private-plane crash. Another son, Patrick Bouvier Kennedy, had been born prematurely and died within days in August 1963.

Had Kennedy not been murdered, health problems may have prematurely ended his presidency; some suggest that scandals resulting from his dealings with gangsters and a succession of female acquaintances would have brought down his administration. The Vietnam War may have ended sooner under Kennedy's leadership, but that may have delayed the eventual Soviet collapse and slowed establishment of Chinese-American relations. Civil rights legislation may have been slower and more limited, and America's baby boomers may have become more constructively active and less cynical and distrustful. The more positive vision suggests that a "normal" Kennedy presidency could have forestalled many of the political traumas that later plagued the United States, along with the personal, combative political style that they engendered.

SEE ALSO *Bay of Pigs; Civil Rights Movement, U.S.; Cuban Missile Crisis; Johnson, Lyndon B.; Presidency, The*

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James F. Sheffield Jr.

KENYATTA, JOMO
1893–1978

Jomo Kenyatta, also known as Mzee Jomo Kenyatta, is considered the founding father of the independent nation of Kenya. He became Kenya's first prime minister (1963–1964) and first president (1964–1978). Acknowledged as a fascinating and courageous leader, his controversial life began when he was born to Muigai and Wambui as a member of the Kikuyu people. His birth name was Kamau wa Ngengi. His parents died while he was a young boy, and he spent time in his youth working with his grandfather, who was a medicine man steeped in the Kikuyu tradition. Kenyatta married his first wife, Grace Wahu, in 1920. They had two children, a daughter and a son.

Kenyatta entered local politics in 1924 when he joined the Kikuyu Central Association (KCA). He created and began to edit a monthly journal for the KCA known as *Muigwithania* (The Reconciler) in 1928. Much of the writing in this journal was focused on cultural nationalism, unity, and moral ethnicity for the Kikuyu people. He also focused heavily on campaigning for land reform, ownership rights, and political rights for African people. The KCA sent Kenyatta to London to lobby for Kikuyu rights, and in 1931 he enrolled in Woodbrooke Quaker College in Birmingham, England. He later attended the Comintern School in Moscow, then returned to London to study at the University College London and the London School of Economics (LSE). He focused on social anthropology and economics, and published his LSE thesis in 1938 as his first book, *Facing Mount Kenya*, an ethnography of the Kikuyu people penned under the name Jomo Kenyatta. He was briefly married to Edna Clarke during this period, and she gave birth to his son in 1943.

In England, Kenyatta had many friends and associates, and formed the Pan-African Federation with Kwame Nkrumah (1909–1972) in 1946. He then returned to his homeland and became the principle of Kenya Teacher's College and president of the Kenya African Union (KAU). Upon his return to Kenya, he married Grace Wanjiku in 1946. She died in childbirth in 1950 after giving birth to a daughter. The following year, he married his fourth wife, Ngina Kenyatta, to whom he would remain

married for the rest of his life. They had four children together.

On October 20, 1952, Kenyatta was arrested by the British government and charged with being a manager and member of the society of Mau Mau. The Mau Mau revolution was a lengthy battle of the Kikuyu people against British control. Kenyatta denied any participation and countered that he spoke out against the Mau Mau because they were not working with the KAU. After a lengthy trial in 1953, Kenyatta was convicted and imprisoned for six years in Lokitaung, a region in northwestern Kenya. He was later sent into exile. While in exile, he was elected president in absentia of the Kenya African National Union, which later joined with the Kenya African Democratic Union to become one party. Kenyatta was released by the British government, and returned to government in 1961. He was instrumental in forming a parliamentary body, instituting a new constitution, and creating the republic of Kenya. Kenyatta is heralded as a great leader. He was also a noted author, publishing numerous books and pamphlets, including *My People of Kikuyu and the Life of Chief Wangombe* (1944), *Suffering without Bitterness* (1968, a biography), *Kenya: The Land of Conflict* (1971), and *The Challenge of Uhuru: The Progress of Kenya, 1968 to 1970* (1971). He died in his sleep in Mombasa in 1978.

SEE ALSO *Anticolonial Movements; Kimathi, Dedan; Mau Mau; Nkrumah, Kwame; Pan-African Congresses*

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Kijua Sanders-McMurtry

KEOHANE, ROBERT
1941–

Robert Owen Keohane is an American political scientist and an expert in international relations. He is most well known for his insistence on the importance of international institutions in shaping state behavior. Keohane challenged the stress of many political scientists on unitary actors and on the conflictual tendencies of anarchy; he simultaneously shifted the focus of the discipline away from security studies and toward economic policies and relationships.

In turning to economic policy in his early work in the 1970s, Keohane saw that this arena involved the interaction of political actors within states in behaviors that cut across states. This observation challenged the unitary actor assumption, a key element of the "realist" school, which treats states as unitary wholes, preoccupied primarily with the problem of national security, which is seen largely in military terms. The concepts of "transnational relations" and "complex interdependence," which Keohane developed with political scientist Joseph Nye, replaced the unitary actors with networks of firms and interest groups operating within and across borders, and offering conflicting pressure on decision makers to define "national interest." Keohane argued that national governments are players in a policy arena, but their control is by no means exclusive, nor total. Regimes (a mixture of norms and institutions cutting across states) shape state behavior and policy outcomes.

Keohane and Nye pointed out the decline of force as the exclusive issue area, the importance of international regimes, and the fragmentation of authority in each state and thus in their interactions. From 1974 to 1980, Keohane served as editor of *International Organization*, a scholarly journal on international affairs, and transformed it from a largely descriptive and evaluative publication into a significant vehicle for social science and peer-reviewed research.

In the 1980s Keohane shifted his attention away from the fragmented, national-actor arena of domestic politics toward a debate on the international system with the political scientist Kenneth Waltz. Whereas Waltz theorized that anarchy was the root of conflict, because the logic of self-help created a security dilemma (in protecting oneself, one antagonizes others), Keohane argued that cooperation could take place among units in anarchy under the right conditions. According to Keohane, international institutions could solve the problems of coordination and information that inhibit cooperation. These institutions would not be supranational—that is, they do not impose rules from above, but arise out of voluntary participation.

Drawing on research in game theory and institutional economics, Keohane argued that institutions make it easier to share information, reduce transaction costs, facilitate bargains across issue areas, provide mechanisms for dispute resolution, and supply processes for making decisions. Institutions can increase cooperation even without coercive power. Institutions may increase iteration—that

is, the number of interactions among units—thus generating a positive cycle of cooperation. The debate between Keohane's neoliberal institutionalism and Waltz's neorealism structured the field for many years.

Three lines of inquiry challenged the centrality of the Keohane-Waltz debate. First, the domestic politics school, whose members generally were sympathetic to Keohane's critique of Waltz, complained that by moving the debate toward system arguments—cooperation versus conflict by unitary states under anarchy—the domestic political elements of international politics were being neglected. These writers wanted to continue the disaggregation of the unitary state, which Keohane had begun to do in the 1970s, by exploring the role of domestic politics in shaping how states defined their position in the world. A state's position in the international system is open to rival interpretations. The issue of whether a state wants to cooperate turns on domestic politics, on whether there is support at home for international cooperation, and on whether the supporters are able to prevail in policy debates.

The second line of inquiry, forwarded by constructivists and sociological theorists, complained that both Keohane and Waltz neglected nonrationalist and nonmaterial aspects of the interaction of units. Keohane accepted, after all, Waltz's assumption that states were utility maximizers. What he disputed was what maximization under anarchy led to; under the right conditions, according to Keohane, it led to cooperation, not the inevitability of conflict. But neither Keohane nor Waltz paid much attention to such aspects as culture, ideas, values, the internalization of norms, the constitutive elements of identity, and the tissue of human exchanges and cultures, which structure interaction.

A third line of inquiry, advanced largely by security specialists, attacked Keohane's emphasis on institutions, on the way these operate, and on the neglect of security issues, generally and in relation to the functioning of institutions. Some specialists in this camp are realists who agree rather more with Waltz, while others disagree on agenda, the evaluation of interests, the actual prospects for cooperation, and the implications for public policy.

Keohane was born in Chicago in 1941. He earned a bachelor's degree from Shimer College in Mount Carroll, Illinois, in 1961, and a Ph.D. from Harvard University in Cambridge, Massachusetts, in 1966. Keohane's distinguished teaching career began at Swarthmore College in Pennsylvania in 1965. He then taught at Stanford University in California (1973–1981), Brandeis University in Massachusetts (1981–1985), Harvard University (1985–1996), and Duke University in North Carolina (1996–2004). In 2005 Keohane became professor of international affairs at the Woodrow Wilson School of Public and International Affairs at Princeton University in New Jersey. In 2005 Keohane was elected to the National Academy of Sciences, an unusual honor for a political scientist.

SEE ALSO *International Relations; Waltz, Kenneth*

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Peter Gourevitch

KERNER COMMISSION REPORT

From 1965 through 1968, a total of 329 racial disturbances erupted in 257 U.S. cities, causing 300 deaths and millions of dollars in property damage. In summer 1967 rioting broke out in several cities, causing 84 deaths and an estimated $75 to $100 million in property damage. Federal troops had to be brought in to quell the disorder. In Detroit alone, in 1967 43 people died and 1,383 buildings were burned. Alarmed, on July 28, 1967, President Lyndon Johnson created the National Advisory Commission on Civil Disorders, commonly known as the "Kerner Commission" after its chairman, Otto J. Kerner Jr., the governor of Illinois, to investigate the causes of the civil disturbances and to provide recommendations for the future.

The other members of the bipartisan commission appointed by President Johnson included John Lindsay, the mayor of New York; Senator Fred R. Harris,

Democrat of Oklahoma; Representatives James C. Corman, Democrat of California, and William M. McCulloch, Republican of Ohio; I. W. Abel, president of the United Steelworkers of America; Roy Wilkins, director of the National Association for the Advancement of Colored People; Senator Edward W. Brooke, Republican of Massachusetts; Charles B. Thornton, chairman of Litton Industries, Inc.; Katherine Graham Peden, Kentucky's commissioner of commerce; and police chief Herbert Jenkins of Atlanta. A large staff headed by David Ginsburg, a Washington, D.C., lawyer, was drawn from the liberal establishment that had supported the civil rights movement. The 426-page report, issued on February 28, 1968, quickly became a best seller, selling more than 2 million copies, and influenced thinking on race relations in the United States for the forthcoming decade.

President Johnson suspected that a political conspiracy was responsible for encouraging black urban militants to incite racial uprisings. But the commission found no evidence of a political conspiracy; instead, it blamed the racial upheavals on the frustrations and grievances of inner-city blacks, which were caused by persistent economic deprivation and racial discrimination. The most frequently quoted sentence from the report warned that the United States was "moving toward two societies, one black, and one white—separate and unequal" (National Advisory Commission on Civil Disorders 1968a, p. 1) The problems of racial discrimination, poverty, high unemployment, poor schools, inadequate schools, poor health care, and police bias and brutality were cited as major contributing factors to the United States' racial apartheid. Unless these problems were remedied, the report predicted, the racial divide in the United States would widen. The commission called for sweeping reforms: a large increase in federal aid to cities, a federal jobs program, a system of income supplementation, and an increase in the minimum wage.

None of the proposals were implemented during the Johnson administration, and they were largely ignored after the election of President Richard M. Nixon in 1968. Martin Luther King Jr. hailed the report as a "physician's warning of approaching death, with a prescription for life." (Report of the Select Committee on Assassinations, U.S. House of Representatives 1979, pp. 356-357.) Critics, though, argued that by blaming the problems of the black community on white racism, the report spawned an enduring sense of black victimization and hopelessness.

SEE ALSO *Black Power; Civil Rights; Civil Rights Movement, U.S.; Discrimination; Discrimination, Racial; Integration; Johnson, Lyndon B.; Nixon, Richard M.; Policing, Biased; Race; Race Relations; Race Riots, United States*

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W. Wesley McDonald

KEY, V. O., JR.
1908–1963

V. O. Key Jr., one of the United States' greatest political scientists, pioneered the study of elections, political parties, and public opinion, and left a remarkable collection of books and articles despite a career cut short at age fifty-five. His *Southern Politics in State and Nation* (1949) analyzed in penetrating fashion the confusing, little-understood political arrangements of the one-party Democratic South using innovative, intelligible techniques of electoral analysis. Noting that in "its grand outlines, the politics of the South revolves around the position of the Negro" (1949, p. 5), Key went on to show that the big losers in the region's odd political system were "those who have less," of both races.

Likewise, his masterful *Public Opinion and American Democracy* (1961) offered invaluable theoretical insights into the elusive role of public attitudes in the governing process, elucidating the all-important linkage between what governments do and what the people think. "If a democracy tends toward indecision, decay, and disaster, the responsibility rests [with its political leaders], not in the mass of the people" (1961, p. 558), he concluded.

Key grew up in the West Texas town of Lamesa, where his father was a prominent lawyer. After earning a BA and MA at the University of Texas, he studied at the University of Chicago from 1930 to 1934 under Charles Merriam, an advocate of a "new science of politics," earning his PhD in 1934. After two years of teaching at UCLA and a year each working for the Social Science Research Council in Chicago and the National Resources Planning

Board in Washington, D.C., Key assumed his first long-term faculty position, at Johns Hopkins University in 1939. There he immediately launched into writing his influential, path-breaking textbook *Politics, Parties, and Pressure Groups*, which appeared in 1942 and went through five editions. His colleagues hailed the book; Charles Beard wrote to the author that his "bully" book "gleams with humor well concealed" (quoted in Lucker 2001, p. 49). Key made political power the book's central theme, telling the publisher in his 1939 proposal that "all of what we call political phenomenon can be interpreted" around this concept, adding: "By imaginative treatment, these dry-as-dust matters could perhaps be made, if not to sparkle, at least gleam" (quoted in Lucker 2001, pp. 43–44). Therein lies an element of Key's success: He matched insightful analysis with an engaging writing style.

Key remained at Johns Hopkins University for a decade, broken only by wartime service at the Bureau of the Budget. Yale University lured him away in 1949, but two years later he moved to Harvard, where he operated at the pinnacle of his discipline for the last twelve years of his life. In the *Journal of Politics* in February 1955 he published his most famous article, "A Theory of Critical Elections," which called attention to a type of election "in which the decisive results of the voting reveal a sharp alteration of the pre-existing cleavage within the electorate" (p. 4). The article gave birth to an enduring subfield—the study of electoral realignments.

Always at the forefront of his discipline, Key mastered the new techniques of survey research in the late 1950s, taking up residence at the University of Michigan to work with the National Election Studies, then in their infancy. "To speak with precision of public opinion," he asserted at the outset of his resulting 1961 book, *Public Opinion and American Democracy*, "is a task not unlike coming to grips with the Holy Ghost" (p. 8). But in 550 well-crafted pages, Key captured the elusive topic, locating it firmly within the political process.

At the time of Key's death in 1963, he was at work on a massive study of the voting process. Using Key's incomplete manuscript, his student Milton C. Cummings published *The Responsible Electorate* in 1966. The central theme of this slim volume is that voters exhibit an impressive amount of rationality in light of the choices they face, a notion still widely quoted using Key's apt phrasing: "Voters are not fools." If he had lived to complete the work himself, there is no doubt he would have produced a weighty study comparable to his last classic, *Public Opinion and American Democracy*.

SEE ALSO *Democracy; Elections; Interest Groups and Interests; Merriam, Charles Edward, Jr.; Political Science; Politics, Southern; Public Opinion; Race and Political Science; Rationality; Survey; Voting Patterns*

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Alexander P. Lamis

KEYNES, JOHN MAYNARD

1883–1946

The doyen of Cambridge economists, bursar of King's College, and eventual Baron Keynes of Tilton, John Maynard Keynes was a leading member of the Bloomsbury Group, an astute collector of the writings of Isaac Newton (1642–1727), a long-time editor of the *Economic Journal*, a U.K. government policy advisor of significant magnitude, and the main instigator of a revolution in economic theory that created an approach *(Keynesianism)* that came to dominate Western economic discourse from the end of World War II (1939–1945) until the mid-1970s.

Keynes was undoubtedly the most famous and influential economist of the mid-twentieth century. His 1936 book *The General Theory of Employment, Interest, and Money* is often cited as the single most important book in economic theory published in the interwar period, and it could reasonably be said to have created modern macroeconomics. One graphical representation of the economy that came out of this book—IS-LM analysis—became a staple of textbook economics for many years to come, even though it was later shown not to originate from Keynes's work alone, but from one individual's particular interpretation of it. Keynes's interventionist proposals for helping to regulate the aggregate level of employment

through demand management remained in use in various forms for decades after World War II, and his policy advice on financing both World War I (1914–1918) and World War II was crucial to enabling Allied victories on both occasions. Some of his pithy aphorisms, such as "in the long run we are all dead," have become legendary.

Despite his undoubted great influence on economics, his legacy is highly controversial. Criticized from the right for advocating inflationary financing, and from the left for attempting to rescue capitalism rather than replace it, the demise of Keynesianism as the dominant force in mainstream economics is usually dated to the mid-1970s, when inflation combined with high unemployment to produce stagflation, something that Keynes had not predicted. Despite such unforeseen developments, his influence still remained active through a number of heterodox approaches to the subject, such as *post-Keynesian* economics and even *new Keynesianism*. Like all truly great intellectuals, fresh interpretations of his work are periodically presented, and neglected aspects of it are continually rediscovered.

BIOGRAPHY

Maynard Keynes (as he was known to his friends) was the son of John Neville Keynes (1852–1949), also a well-known economist and the author of *The Scope and Method of Political Economy* (1891). Maynard Keynes experienced an elite education at Eton and then studied at King's College Cambridge, where he was appointed to a lectureship in economics after a period working in the British Civil Service. He was soon involved in providing policy advice on financial affairs in India, which then developed into governmental service in the U.K. Treasury regarding the financing of World War I. He was the main Treasury representative at the signing of the Peace Treaty at Versailles, and after the war he strongly criticized the level of the reparations demands made on Germany. In the early 1920s, he argued that Britain should not return to the prewar gold standard system, and if it did, it should not be at prewar parity. In both these instances, his advice was ignored, but in retrospect his judgment has appeared correct to many commentators. By the end of the 1920s, Keynes was supporting David Lloyd George's (1863–1945) call for a program of government-funded economic expansion of around 2.5 percent of national income per year, in order to cure persistent unemployment.

In addition to his economic works, Keynes published *A Treatise on Probability* (1921), which provided a critique of the frequency conception of probability then in vogue. Instead of this approach, Keynes favored a logical conception in which probability was seen as being relative to human knowledge, rather than being taken as a given fact of nature. He also published various essays on political matters and even some biographical sketches. In an essay on his early beliefs, he stressed the significance of the British philosopher G. E. Moore's (1873–1958) *Principia Ethica* (1903) to the formation of his general attitudes. Keynes had interpreted Moore as applying logical analysis to such areas as feelings, sense-data, and morality, and he later described such an approach as "sweeter air by far" than Sigmund Freud (1856–1939) or Karl Marx (1818–1883). During World War II, Keynes again successfully served in the U.K. Treasury, where he coordinated his activities closely with the U.S. government. He died in 1946, a year after the war ended.

ECONOMIC THEORY

Keynes is best known for introducing into the vocabulary of economists concepts such as the marginal efficiency of capital, liquidity preference, effective demand, the multiplier, and the propensity to consume. He also developed more rigorous definitions of the basic elements of economic analysis, such as income, savings, and investment. However, it is important to realize that Keynes was not working in isolation; instead he actively participated in debates that occurred throughout the 1920s and 1930s among British economists such as D. H. Robertson (1890–1963), Richard F. Kahn (1905–1989), R. G. Hawtrey (1879–1975), and Joan Robinson (1903–1983). Consequently, what precisely is taken to constitute the "Keynesian revolution" in economics is an essentially disputed topic. Keynes himself emphasized that the revolution was directed against the classical theory of employment, but his account of this theory through the work of the economist A. C. Pigou (1877–1959) was itself controversial. Keynes argued that the classical approach only allowed for the existence of frictional and voluntary unemployment, and denied the possibility of involuntary unemployment. Given the context of the Great Depression of the 1930s, Keynes implied that this approach was unrealistic, and set about showing how capitalism could generate significant levels of involuntary unemployment when certain conditions were met.

Keynes presented effective demand (aggregate demand backed by money) as the key concept of his general theory. He asserted that the volume of total employment was determined by the interrelation of aggregate supply and aggregate demand. As opposed to the classical doctrine, in which supply was said to create its own demand (Say's Law), Keynes suggested that in reality an increase in supply did not necessarily lead to a corresponding increase in demand. This was because when employment increased, aggregate real income also increased. However, due to the psychological factors involved (the propensity to consume), when income increased so also

did consumption, but (crucially) by not as much as income. In order to cover this deficit, an increase in investment sufficient to absorb the excess was required, but there was no guarantee that the necessary level of increased investment would naturally follow. Keynes outlined that the amount of investment was actually dependent on the inducement to invest, which in turn was determined by the relation between the marginal efficiency of capital and interest rates.

Keynes defined the marginal efficiency of capital as being equal to the interest rate that would make the present value of the future returns from a capital good equal to its supply price, and hence it depended on expected returns. Keynes further outlined how the marginal efficiency of capital declined as investment in any particular capital good increased. Given this declining schedule and with any given rate of interest, there was no reason to assume that actual investment would correspond to the amount required to cover the deficit between increased income and consumption. Thus the level of effective demand required to ensure full employment was not necessarily created by the self-adjusting mechanisms of a market economy. Put another way, the economic system did not automatically generate full employment.

To explain the unusual duration of the Great Depression, Keynes suggested that in the 1930s the marginal efficiency of capital was actually much lower than it had been in the nineteenth century, and hence the rate of interest that would generate higher employment levels was unacceptable to many owners of accumulated wealth. To explain the heightened amplitude of depressions, Keynes christened the ratio between an increment of investment and increased income the *investment multiplier*, and suggested that a multiplier greater than unity accounted for how relatively small fluctuations in investment could generate much larger fluctuations in employment. Keynes concluded from this analysis that investment was promoted by low rates of interest and that this would be facilitated by the disappearance of the rentier class within capitalism.

The "Keynesian revolution" was not only directed against classical economists, but also against Keynes's earlier approach, which had preached adherence to the framework provided by the Cambridge version of the quantity theory of money. In this respect it is necessary to consider Keynes's major works in economics published prior to *The General Theory*. His first book was *Indian Currency and Finance* (1913), which provided an analysis of the operation of the gold-exchange standard. This was followed by *The Economic Consequences of the Peace* (1919), an attack on the terms of the Versailles Peace Treaty, and a *Tract on Monetary Reform* (1923), dealing with the problems of postwar inflation. These books, although undoubtedly important in practical terms, were less significant in terms of providing innovations in pure theory. The *Treatise on Money* (1930) was Keynes's most significant work in economic theory prior to *The General Theory*. Here Keynes emphasized the importance of the behavior of the banking system to understanding fluctuations; by controlling credit, banks necessarily controlled aggregate expenditure. Booms and slumps were thus the result of the oscillation of the terms of credit about their equilibrium position, defined as occurring when savings equaled investment. Disequilibrium was possible in this model as international influences adversely affected the domestic banking system, causing the terms of credit to move above or below their equilibrium level at any given time. The difference between this type of analysis of trade cycles and that given in *The General Theory* was significant; in the latter, emphasis was transferred away from monetary factors to psychological propensities and expectations of future yields on investment goods.

THE CONSEQUENCES OF KEYNES

Keynes's new economics, brilliant though it undoubtedly was, was not without flaws. The abstract concepts that Keynes deployed with such aplomb were sometimes ambiguous, and his use of them produced much ongoing debate. Milton Friedman's *A Theory of the Consumption Function* (1957) was devoted to empirically investigating Keynes's psychological rule of increased savings (in percentage terms) as income rose. Friedman concluded that Keynes was mistaken in his presentation of the nature of the propensity to consume, as the ratio between income and savings was the same for all levels of income, but depended on other factors, such as interest rates and the ratio of wealth to income. Friedman later led the monetarist counterrevolution against the Keynesian approach. There was also a question over how "general" Keynes's *General Theory* actually was. Since it was designed in part to explain the historical circumstances of the 1930s, was its relevance limited only to the interwar period?

Despite such ambiguities, the impact of *The General Theory* on Western economics immediately after 1936 was so great that it swept aside the valuable contributions of contemporary economists like Joseph Schumpeter (1883–1950), whose monumental work *Business Cycles* (1939) found little direct resonance in the West due, at least in part, to the phenomenal success of Keynes's book. Keynes also became involved in a debate over the importance of the new econometric methodology (as developed by the Dutch economist Jan Tinbergen [1903–1994]) to economic analysis. Keynes was highly critical of the extensive use of mathematical models in economics being promoted by the econometricians, but his reservations were quickly swept aside. Ironically, it was the success of the

Keynesian IS-LM model that added some impetus to the drive for econometric modeling.

The Keynesian system was for many years after World War II hailed by the Left as proof of the inadequacies of capitalism as an economic system and the necessity of increased state control of the commanding heights of the economy. Keynes himself saw his work as a means of improving the internal mechanics of the free-market system, and he criticized state socialism as inefficient and as too restrictive of individual freedoms. Keynes traveled to the USSR on a number of occasions, but he found the fanatical zeal of the Bolsheviks toward Marx's *Capital* to be incomprehensible. He declared support for significant inequalities of wealth and income, but not to such a degree that it would impede the entrepreneurial function. Yet he disputed the argument that enlightened self-interest always operated in the public interest, and he saw an important role for the directive intelligence of society organized as a whole exercising some control over private business.

Given the level of his fame and the degree of his policy influence, Keynes's private life and general views have come under some scrutiny. Early in his life he had intimate relationships with male suitors (such as Duncan Grant [1885–1978], the Bloomsbury painter), but he went on to marry a Russian ballerina in 1925, his "conversion" to heterosexuality being the cause of some friction between members of the Bloomsbury set. He has been accused of "soft" anti-Semitism and also of not realizing the full consequences of his policies of war finance for less developed countries like Russia. Despite such criticism, Keynes's status as one of the most important economists since Adam Smith (1723–1790) remains unshaken, and his legacy of bringing greater sophistication to economic theory is an enduring one. It seems unlikely that any individual economist could replicate Keynes's pervasive influence over the subject in the future.

SEE ALSO *Absolute Income Hypothesis; Consumption Function; Economics, Keynesian; Economics, New Keynesian; Economics, Post Keynesian; Interest, Neutral Rate of; Macroeconomics; Policy, Fiscal; Policy, Monetary; Unemployment; Voluntary Unemployment*

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Vincent Barnett

KHALDŪN, IBN

SEE *Ibn Khaldūn.*

KHMER ROUGE

The Khmer Rouge (Cambodian for "Red Khmer") was a Communist regime that ruled Cambodia from April 1975 to January 1979. The group, led by Pol Pot, was formally the Communist Party of Kampuchea. In trying to reach its ambitious agricultural production goals and to protect itself against opposition, the regime worked large numbers of people to death and slaughtered its perceived opponents. Characterized by extreme brutality, the regime was responsible for the deaths through slaughter, starvation, overwork, and disease of 1 to 1.7 million Cambodians of a pre-1975 population of 7 or 8 million.

Under the Khmer Rouge, the cities were emptied; industry virtually halted; money, markets, and religion extinguished; and the entire populace sent out to agricultural labor camps in the countryside. Despite the regime's notional commitment to creating a classless society, in practice, people were divided into "base people," those who had been under the Khmer Rouge before April 1975 and "new people," those who came under the regime's control only with the final victory. New people suffered particularly in the austere rural labor conditions. Food was inadequate, the work schedule was harsh, and medical facilities and medicine were almost nonexistent. Gradually, the family unit was broken up; from 1977 dining was communalized.

The regime slaughtered officials from the old regime, intellectuals (which included teachers), Buddhist monks, and uncovered "enemies." The *Santebal* internal security service kept meticulous records of the tortures and executions in which it engaged, Phnom Penh's S-21/Tuol Sleng facility being the pinnacle of the regime's torture camps. Failures to achieve the regime's unrealistic economic goals

were blamed on internal and external conspirators. Confessions of sabotage were wrung from Cambodians who were forced to name their accomplices, drawing more innocents into the regime's web of terror. Cambodia's numerous mass grave sites have come to be known as the Killing Fields.

Khmer Rouge thought placed particular attention to the idea of Khmer purity. Non-Khmer Cambodians of Vietnamese, Cham (Muslim), or Chinese descent faced particular threats. The young were considered especially pure by the Khmer Rouge, as they had not been tainted by the attitudes of the past (*Pol Pot's Little Red Book* cites the following Khmer Rouge slogan: "Clay is molded while it is soft"). Society was supposed to start afresh from the "year zero."

Heavily influenced by the ideas of Mao Zedong of China, Cambodia's Communist leaders believed they could substitute human willpower for other economic inputs, thus carrying out a "super great leap forward" and revolutionizing agricultural production. The need to continually write one's autobiography and correct errors of thought were also borrowed from the Chinese Communists. Self-reliance was a core value and, with the exception of supporter China, the regime was effectively closed to the outside world.

In 1979, the Khmer Rouge was ousted from power by a Vietnamese invasion. The regime's remnants fled to the Thai border and continued to control territory and followers into the 1990s. A United Nations (UN)–organized election in 1993 marginalized the group, which boycotted the polls. By 1996–1997, primarily through defections to the new government, the Khmer Rouge was virtually nonexistent. A show trial of Pol Pot was held in the Khmer Rouge–controlled zone of Cambodia in 1997, and the former leader was put under house arrest. He died in April 1998. In conjunction with the UN, Cambodia agreed in 2003 to set up a mixed Cambodian/international tribunal to bring remaining top Khmer Rouge leaders to justice for their crimes while in power, including Ta Mok, known as "the Butcher," and Comrade Duch, the head of the S-21 camp.

SEE ALSO *Communism; Genocide; Killing Fields; Military Regimes; Pol Pot; Underclass; United Nations*

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Paige Johnson Tan

KHOMEINI, AYATOLLAH RUHOLLAH

1902–1989

Ayatollah Ruhollah Khomeini was the leader of the Islamic Revolution in Iran. He was born on September 24, 1902, in the western Iranian town of Khomein to a clerical family. His father Mustafa was murdered by bandits when Khomeini was five months old. His older brother Sayyid Murtaza (later known as Ayatollah Pasandida) assumed responsibility for Khomeini's education after their mother died in 1918.

At nineteen, Khomeini traveled to nearby Arak, where he studied religion under Ayatollah Abd al-Karim Ha'iri, a well-known Islamic scholar. Khomeini followed Ha'iri to the Fayzieh *madrasa* (religious college) in Qom the following year, where Khomeini distinguished himself in ethics and religious philosophy. Upon completing his education, Khomeini taught Islamic philosophy and jurisprudence. After Ha'iri's death in 1937, he became an assistant to Ayatollah Husayn Boroujerdi, one of the leading Shi'ite authorities of the day. Khomeini's residence in Qom coincided with the rise of Reza Shah, who curtailed the influence of the clergy as he centralized authority.

In 1932 he married the daughter of a prominent Tehran cleric and had seven children, five of whom survived infancy. Both sons died under mysterious circumstances—his eldest son Mustafa in Najaf in 1977 and his youngest son Ahmad died in Tehran in 1995.

Khomeini published his first tract on spiritual philosophy at age twenty-seven. His reputation as a teacher of *fiqh* (Islamic jurisprudence) grew throughout the 1940s and 1950s. He published his first major book, *Kashf al-*

Asrar ("Secrets Revealed"), in 1944, to refute an influential antireligious pamphlet published several years before.

Khomeini catapulted to the national stage in 1962 after he publicly opposed a government reform package that included land reform, women's suffrage, and a provision which would allow the religious minority Baha'is to seek office. He was a master of rhetoric and coalesced an opposition including traditional clergy, nationalists, and the poor. After Khomeini denounced the Iranian government on June 5, 1963, the shah ordered his arrest, but he was soon released because of popular pressure. After two more arrests, on November 4, 1964, the shah exiled Khomeini to Turkey from where he made his way to Najaf.

It was during his Iraqi exile that, in 1970, Khomeini wrote *Hukumat-i Islami* (Islamic government) that outlined his theory of *vilayat-i faqih* (guardianship of the jurists) in which he countered the traditional Shi'ite opposition to direct clerical rule. Khomeini's followers smuggled many of his sermons into Iran by audiocassette.

Protests erupted on January 7, 1978, after a state-controlled newspaper questioned Khomeini's sexuality and patriotism. Police fired onto the crowds, beginning a cycle of escalating demonstrations. In October 1978, Khomeini flew to France where he received Iranian visitors and the Western press. The shah fled Iran on January 16, 1979. On February 1, 1979, Khomeini returned to Iran and, two months later, declared the Islamic Republic. As supreme leader (*rahbar*) and against the backdrop of the U.S. hostage crisis and Iran-Iraq War, he launched a cultural revolution and consolidated his power in a series of bloody purges. Khomeini died on June 4, 1989.

SEE ALSO *Fundamentalism; Fundamentalism, Islamic; Iranian Revolution; Iran-Iraq War; Religion*

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Michael Rubin

KHRUSHCHEV, NIKITA
1894–1971

Nikita Sergeyevich Khrushchev, born into an illiterate peasant family in Kalinovka, Russia, rose through the Communist Party ranks to become the third leader of the Soviet Union. An activist from his teenage years, and a political commissar with the Bolshevik forces during the Russian Civil War, Khrushchev joined the Communist Party of the Soviet Union in 1918. After studying at Kharkov University, he undertook a series of political assignments, which gained the attention of top party leaders in the Ukraine (see Smith 1992). In 1931 Khrushchev moved to Moscow, where he served as secretary of the Bauman district party organization. He became first secretary of the Moscow party organization in 1935.

By 1938 Khrushchev had become a member of the Politburo and went on to serve as first secretary in the Ukraine, where he oversaw the Ukrainian party organization's purges. He fought in World War II (1939–1945) and afterward became chairman of the Ukrainian Council of Ministers. Other notable positions held by Khrushchev include first secretary of the Moscow City Party Committee (1949), member of the Central Committee Secretariat responsible for supervising party affairs in the various republics, and full member of the Presidium, which well situated him for ascension to the Communist Party's top leadership after the death of Joseph Stalin in 1953. Khrushchev almost immediately espoused a plan for reforming the economy and stimulating agricultural output. For example, the Virgin Lands program called for plowing up virgin prairie lands in the Caucasus regions, Siberia, and the Volga Basin, and planting corn to use as feed to expand beef production. The plan, a dismal failure, coupled with other failures and leadership challenges, had an impact on Khrushchev's popularity (see Breslauer 1982).

In 1956 Khrushchev launched a de-Stalinization campaign as a means to shore up his popularity, but it also enhanced the rule of law in Soviet society. The de-Stalinization campaign called attention to a series of Stalinist abuses and breaches of power that included establishing a personality cult, orchestrating purges that terrorized innocent people, and violating the Leninist principle of collective leadership. Khrushchev's campaign and reforms also yielded unintended results, as exemplified by the burst of artistic creativity, strikes, demonstrations, and political reform efforts in Eastern Europe. This aside, he also sought to reduce the Soviet Union's isolation in the world.

Khrushchev was the first Soviet leader to advocate "peaceful coexistence" with the West, and the first Soviet leader to visit the United States. In 1959 he met with President Dwight D. Eisenhower (1890–1969) at Camp David, traveled to Iowa to learn about hybrid corn, and toured IBM and Disneyland. The path to improved relations was, however, short-circuited by the 1960 U-2 affair, the 1961 U.S.–sponsored Bay of Pigs invasion, and the 1962 Cuban missile crisis. Interestingly, Khrushchev's

public persona, as exemplified by heated exchanges with Richard Nixon (1913–1994) during the so-called kitchen debate in 1959, his shoe-banging demonstration at the United Nations in 1960, and communications with John F. Kennedy (1917–1963) during the Cuban missile crisis, most likely contributed to his downfall and banishment from Soviet politics.

SEE ALSO *Communism; Cuban Missile Crisis; Eisenhower, Dwight D.; Kennedy, John F.; Nixon, Richard M.; Stalin, Joseph; Stalinism; Union of Soviet Socialist Republics; United Nations*

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Kathie Stromile Golden

KILLING FIELDS

Killing Fields, the term for Cambodia's mass grave sites, has become synonymous with the country's Khmer Rouge regime that ruled Cambodia from 1975 to 1979. In trying to reach its ambitious agricultural production goals and to protect itself against opposition, the regime worked large numbers of people to death and slaughtered its perceived opponents, resulting in the deaths of between 1 and 1.7 million individuals of a pre-1975 population of 7 to 8 million.

Agricultural production was key to the Khmer Rouge's plans for Cambodia's transformation. The entire population was transferred to state-run farms where food was inadequate, medical attention sparse, and working conditions harsh. The population was exhorted to produce the unrealistic quantity of "three tons [of rice] per hectare." Many of those who died under the Khmer Rouge died from overwork. Failure to work hard enough or "feigning" illness could transform one into a perceived enemy of the regime, and the regime resolutely hunted its enemies.

Reasons for torture and execution included expressing doubts about the government; having a prerevolutionary past as an intellectual, professional, teacher, or servant of the old regime; or growing one's own food. The Khmer Rouge also gorged on its own with frequent brutal purges within the Khmer Rouge ranks. Soldiers, fellow workers, even one's own children were encouraged to report on one's incorrect thoughts or actions. The Khmer Rouge did little to engage in re-education of those found to have erred. Interrogation involved torture meant to elicit confessions of wrong-doing, thus proving the party's correctness in arresting the person; death came during torture or soon thereafter. Fewer than ten persons are known to have survived the regime's most notorious torture camp, S-21 in Phnom Penh.

It was from the S-21/Tuol Sleng facility that victims were taken to Cambodia's most well-known killing field site at Choeung Ek, nine miles outside the capital, where victims were killed by blunt-force trauma (a rifle butt or farm implement to the base of the head), stabbing/hacking, or shooting. In the early twenty-first century, at Choeung Ek, a stupa (Buddhist shrine) of human skulls and a map of the country made of skulls and other bones remind visitors of the horror once meted out there. Almost 9,000 sets of remains have been excavated from the Choeung Ek grounds. Many more bodies remain buried, though, as tens of graves at the site have been left undisturbed.

The regime crumbled in 1979 due to a Vietnamese invasion, after which S-21 was transformed into the Tuol Sleng Museum of Genocide. Following a United Nations (UN)–brokered peace plan in 1991 and elections in 1993, the Khmer Rouge was gradually sidelined. In conjunction with the United Nations, Cambodia agreed in 2003 to set up a mixed Cambodian/international tribunal to bring remaining top Khmer Rouge leaders to justice for their crimes while in power.

SEE ALSO *Communism; Genocide; Khmer Rouge; Military Regimes; Pol Pot; Underclass; United Nations*

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Paige Johnson Tan

KIMATHI, DEDAN
1920–1957

Dedan Kimathi (also known as Kimathi wa Waciuri) was an important member of Kenya's militant nationalist group, the Mau Mau. He became notorious as the elusive "general." Born in 1920 in the village of Thegenge in the Tetu Division of the Central Nyeri district in Kenya, Kimathi began his formal education at the age of fifteen when he enrolled at the local elementary school, Karunaini. He funded his education by collecting seeds for the forestry department. He later entered the Tumutumu CMS School, but could not complete his secondary education due to a lack of funds. In 1941 Kimathi enlisted in the army to help prosecute World War II (1939–1945), but he was discharged three years later for misconduct. In 1946 he became a member of the Kenyan African Union (KAU), a political organization established to fight British colonialism. In 1949 he returned to teach briefly at his former elementary school, but quit within two years.

In 1950 Kimathi embraced radical politics when he subscribed to the oath of the Mau Mau, the group demanding freedom and the return of Kenyan land from the British. Kimathi became one of the most prominent of the three dominant leaders of Mau Mau's Land and Freedom Armies, with oversight functions for the Aberdare forest. In 1952 he was elected the local branch secretary of the KAU in the Ol' Kalou and Thomson's Falls area. He was arrested the same year when he was implicated in a murder, but he escaped from police detention with the help of a sympathizer. The following year he created the Kenya Defense Council to coordinate guerrilla activities, and moved to the Nyandarua forest, which served as the operational base of his army. Besides the armed struggle, he toured the forest and towns attempting to inspire people to join his group. Kimathi soon developed skills as a strategist and became an accomplished master of disguises. In addition, he became a skillful writer, penning letters to the colonial authorities and to friendly and unfriendly chiefs, as well as articles that were published in newspapers. Due to the activities of the Mau Mau, the colonial regime was forced to declare a state of emergency in 1952.

In 1956 Kimathi was captured with Wambui, his "forest wife," and sentenced to death. He was hanged on February 18, 1957, at Nairobi Prison and was buried in a mass grave. Despite attempts by British propagandists to label him a dangerous and elusive terrorist, Kimathi became a folk hero among the people of Kenya. After independence, several towns in Kenya named buildings or streets after him. A statue was also dedicated to him in Nairobi in December 2006. Kimathi's life has inspired several literary and historical works, including *The Trial of Dedan Kimathi* (1976) by Ngugi wa Thiong'o and Micere Mugo, and *L'inafferrabile Mau Mau* (The Elusive Mau Mau, 1957), a novel by Ottavio Sestero. Kimathi also lives on in the history, legends, and music of ordinary Kenyans.

SEE ALSO *Anticolonial Movements; Decolonization; Kenyatta, Jomo; Mau Mau*

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Olutayo C. Adesina

KIN SELECTION

SEE *Sociobiology.*

KINDLEBERGER, CHARLES POOR
1910–1993

Charles Kindelberger's career unfolded in three distinct phases: public service; university teaching; and postretirement scholarship. A native New Yorker, he entered Columbia University's doctoral program in 1932 near the bottom of the Great Depression. His first employers were the U.S. Treasury and the Federal Reserve. As World War II approached, he moved to the Bank for International Settlements in Switzerland, returning to Washington in 1940. After Pearl Harbor, he served with the Office of Strategic Services (OSS) and the U.S. Army in Europe. An unpretentious man of Kantian moral standards, he was overjoyed to have played an important role at the State Department in establishing the Marshall Plan for

European Recovery. Kindleberger moved to the Massachusetts Institute of Technology in 1948, where he remained until he retired in 1976. In response to the warmth, wit, and wisdom he showered on students and colleagues alike, he was universally known as "Charlie" or "cpk."

Kindleberger enjoyed contrasting his expertise in old-fashioned "literary economics" with the more-circumscribed "technical economics" practiced by his colleagues and graduate students. The belief that he could help government policymakers avoid a repeat of signal economic disasters served as the cornerstone of his sixty-year professional life.

Unlike most of his contemporaries, Kindleberger made his mark through books, words, and index cards rather than with articles, equations, and datasets. His curiosity, energy, and vision overspread not only the page limits enforced by journal editors, but the narrow taxonomy of problem areas and research paradigms recognized in modern economics.

His teaching and research in international economics embraced the idea that nations, exchange-rate regimes, and technologies had ineluctable life cycles. His efforts to document these cycles spilled increasingly into what he teasingly renamed "historical economics."

The transition became clear in 1964 with the publication of *Economic Growth in France and Britain: 1851–1950*, but reached full flower only after his retirement. Kindleberger saw himself not as doing history, but as using "historical episodes to test economic models for their generality" (Kindleberger 1990, p. 3). His research method was to read everything he could find on a subject and then to turn what he had learned into a coherent explanation of things. The eclectic syntheticizations this method produced challenged the methodological foundations of both financial history (*The World in Depression, 1929–1939*, 1973) and mainstream finance (*Manias, Panics, and Crashes: A History of Financial Crises*, 1978).

Both books portray financial institutions and markets as so volatile and prone to crisis that they must be stabilized by government. *The World in Depression, 1929–1939* developed the thesis that the instability of national economies between the wars was a global problem that was enabled to spread by the absence of a dominant nation-state (a "hegemon") willing and able to act as an international lender of last resort. *Manias, Panics, and Crashes* sought to refute the widely held hypothesis that participants in financial markets process information rationally.

These studies stand out from Kindleberger's other twenty-eight books in the size, heat, and durability of the controversies they produced. On one side of the debate, opponents in political science and finance dispute the empirical applicability of his models of irrational actors and breakdown-prone markets and institutions. Many of these critics see government action as more likely to spawn or exacerbate institutional and market failures than to prevent or mitigate them. On the other side, Kindleberger attracted many followers and is remembered as a founding father of the fields of hegemonic stability and behavioral finance. He spent his last years energetically preparing new editions that answered specific critics and applied his models to additional episodes.

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Edward J. Kane

KINDNESS

SEE *Altruism.*

KING, MARTIN LUTHER, JR.

1929–1968

Martin Luther King Jr. was a Baptist minister and iconic leader of the U.S. civil rights movement. Famous for advocating nonviolent resistance to racial oppression, he led numerous demonstrations, boycotts, and voter registration drives from the mid-1950s until his death by assassination in 1968. King was fueled by a strong religious faith, believing that Christian love could function as a powerful agent for social change.

Both his maternal grandfather, A. D. Williams, and his father, Martin Luther King, were Baptist ministers and leaders of Ebenezer Baptist Church in Atlanta, Georgia. King carried on the family tradition, becoming an ordained Baptist minister at the age of eighteen. After completing a sociology degree from Morehouse College, a historically black institution in Atlanta, King attended

racially integrated Crozer Theological Seminary in Pennsylvania, graduating as valedictorian of his class in 1951. He then continued his training at Boston University, earning a doctorate in systematic theology in 1955.

It was while immersed in his graduate studies that King first encountered Mohandas Gandhi's philosophy of nonviolent resistance. King combined Gandhi's belief that nonviolence was not only the most ethical but also the most effective form of social protest with his own rigorous training in Christian theology, claiming, "Christ furnished the spirit and motivation, while Gandhi furnished the method" (King 1958, p. 85). Nonviolent protest as King described it was "nonagressive physically but dynamically aggressive spiritually," seeking the "friendship and understanding" of one's opponent (King 1957, p. 166).

On June 18, 1953, King married Coretta Scott, then a student at the New England Conservatory of Music. The marriage produced four children. In 1954 the couple moved to Montgomery, Alabama, where King became pastor of the Dexter Street Baptist Church.

EMERGENCE AS A CIVIL RIGHTS LEADER

Shortly after moving to Montgomery, King was catapulted into the growing civil rights movement. On December 1, 1955, local civil rights activist Rosa Parks (1913–2005) was arrested after she refused to give up her seat to a white passenger on a segregated city bus. The local black community organized a bus boycott to protest Parks's arrest and elected King as leader of the Montgomery Improvement Association, an organization created to support the boycott. Under King's leadership, the black community responded nonviolently to white intimidation and violence and sustained the boycott for over a year. In 1956 the Supreme Court ruled segregated seating on buses unconstitutional. King chronicled his involvement in the boycott in his powerful 1958 memoir *Stride toward Freedom.*

After the success in Montgomery, King and a group of black ministers formed the Southern Christian Leadership Conference (SCLC) in 1957. King was elected leader of this new organization, which was designed to support various civil rights activities.

The SCLC was not the only civil rights organization operating in the United States at this time, but King and his followers were key players in many of the most memorable showdowns between civil rights activists and the forces of white supremacy. In 1963 the SCLC joined Reverend Fred Shuttlesworth in a campaign to end segregation in Birmingham, Alabama. Defying a court injunction forbidding protest activities, King was arrested on April 12, 1963. While in prison he penned his famous "Letter from Birmingham Jail," eloquently defending civil disobedience and urging religious leaders to enlist in the struggle for civil rights.

Local Birmingham officials, shamed by national media coverage of police attacking unarmed protestors with fire hoses and police dogs, reluctantly agreed to many of the activists' demands. However, white resistance did not immediately abate. On September 15, 1963, in a particularly gruesome display of violence, the Ku Klux Klan bombed the Sixteenth Street Baptist Church, killing four young African American girls.

The SCLC and other civil rights advocates met similarly mixed results elsewhere, winning concessions but drawing violent reprisals from white supremacists. The SCLC was involved in many demonstrations including campaigns in Albany, Georgia, and Selma, Alabama. The federal government eventually responded to the problem of racial inequality by passing important civil rights legislation. The Civil Rights Act of 1964 outlawed discrimination in public facilities and in employment, and the Voting Rights Act of 1965 effectively put an end to disenfranchisement on the basis of race.

INTERNATIONAL FAME

King quickly became the most visible face of the civil rights struggle, capturing media attention wherever he went. On several occasions he met with President John F. Kennedy and later with President Lyndon B. Johnson. In 1963 he was named *Time* magazine's "man of the year," and in 1964 he was awarded the Nobel Peace Prize. During the 1963 March on Washington for Jobs and Freedom, he delivered his sonorous "I Have a Dream" speech, one of the most memorable examples of American oratory in the twentieth century.

Due in part to growing resentment over King's fame, tensions developed between the SCLC and other civil rights organizations. The National Association for the Advancement of Colored People (NAACP) focused on fighting white supremacy through litigation rather than through the direct-action campaigns favored by the SCLC, causing tactical disagreements between members of the respective groups. Leaders of all the major civil rights organizations vied with one another and with King for media coverage and for opportunities to shape the direction of the movement. Roy Wilkins, executive secretary of the NAACP, was no exception. After NAACP field secretary Medgar Evers's death by assassination on June 11, 1963, Wilkins became resentful of King's efforts to raise funds in honor of the slain man, demanding instead that memorial contributions be sent exclusively to the NAACP. Despite these pressures, King remained an

ardent supporter of Wilkins and of the venerable civil rights organization he represented.

Similarly, many members of the Student Nonviolent Coordinating Committee (SNCC) offered powerful critiques of King. Some resented the media's depiction of King as the predominant leader of the movement, referring to King in jest as "De Lawd." Weary of being jailed and beaten, many young activists grew increasingly skeptical of King's dedication to nonviolent resistance. Others began to embrace black nationalism rather than King's integrationist vision for the United States. King remained receptive to criticism, and these profound disagreements did not stand in the way of warm, personal relationships between King and many SNCC members, including Stokely Carmichael (1941–1998), the radical black nationalist who was elected to the chairmanship of SNCC in 1966.

Malcolm X (1925–1965), the charismatic minister of the Nation of Islam and later, founder of the Organization of Afro-American Unity, was critical of nonviolent resistance, a tactic he regarded as cowardly. Malcolm was particularly outspoken in his criticisms of King, labeling him a "traitor to the Negro people." King was stung by Malcolm's condemnation, but the pair shared a well-publicized handshake on Capitol Hill on March 26, 1964. Although he continued to repudiate nonviolent resistance, Malcolm later sought ways to cooperate with King and other civil rights leaders. However, King rebuffed Malcolm's efforts, certain that his fiery rhetoric and failure to embrace nonviolence would "reap nothing but grief."

King was also a prominent target of the FBI director, J. Edgar Hoover (1895–1972). Hoover used wiretaps, spread false rumors, and planted infiltrators in an attempt to disrupt the movement and to tarnish the reputation of King and other leaders.

CHANGING DIRECTIONS

Throughout his life, King remained committed to the principal of nonviolent resistance, but his thinking did not become static. He listened thoughtfully to criticism and responded to the changing times. In 1965 he expanded the scope of his activism by speaking out against the Vietnam War. Increasingly, King began to focus on class issues, seeking ways to improve the lives of the underprivileged, regardless of race. In 1967 the SCLC began planning a Poor People's Campaign designed to protest economic inequality through nonviolent direct action.

In 1968 King's struggle for economic justice brought him to Memphis, Tennessee, to support striking sanitation workers. While there he gave what was to be his final address, "I've Been to the Mountaintop." The recipient of frequent death threats, King long knew that his civil rights activism might cost him his life. That night he prophetically told his audience, "I might not get there with you … [but] we, as a people, will get to the Promised Land." The next day, April 4, 1968, while standing on the balcony outside his hotel room, King was shot and killed by a sniper.

White supremacist James Earl Ray (1928–1998) was arrested for King's murder. In order to avoid the death penalty, Ray made a plea bargain and confessed to the killing. However, Ray almost immediately recanted his confession, claiming that he was framed. In 1997 Ray convinced King's son Dexter Scott King of his innocence, but Tennessee authorities refused to grant Ray, who died in prison in 1998, a new trial. King's death has been the subject of many conspiracy theories, some involving the federal government in the plot to kill King.

Today King's vision of interracial harmony has gained widespread acceptance among many Americans. However, his radical critique of economic inequality in the United States is less widely remembered. In 1983 Congress voted to establish a national holiday in his honor, enshrining King among the nation's pantheon of heroes.

SEE ALSO *Black Power; Civil Disobedience; Civil Rights; Civil Rights Movement, U.S.; Malcolm X; Passive Resistance*

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Jennifer Jensen Wallach

KINSEY, ALFRED
1894–1956

No figure in twentieth-century American sexuality is more influential, controversial, or misunderstood than

Alfred Charles Kinsey. Kinsey was born on June 23, 1894, in Hoboken, New Jersey, a product of working-class Protestant culture. Throughout his life, Kinsey struggled with the contradictions of a profoundly moralistic attitude toward sexuality and faith, a love of nature and the Boy Scouts, and a zealous commitment to purge sexual education of its religiosity and moralism. Following a doctor of science degree from Harvard University (1919), Kinsey became a highly respected entomologist and naturalist, with an unshakable belief in science and a fascination with sex. His research was undertaken primarily at Indiana University beginning in 1920, where he eventually founded the Kinsey Institute (1946) and conducted the largest survey study of American sexuality, unsurpassed until the 1990s.

Kinsey's work represented a scientific reaction to Sigmund Freud's (1856–1939) popular developmental sexuality and the sexual "psychopath" laws that sprang from its medical model. Kinsey famously created a population-based questionnaire emphasizing the diversity of sexuality and the collection of representative numbers of individual interviews to understand sexual behavior across the course of life. Even homosexuality was, for Kinsey, a variation of the norm, and unlike Freud, Kinsey believed that it was better to express, rather than sublimate, these desires. Culture was largely an impediment to sexuality in his model, however, since he believed that culture and religion undermined sexual desire and pleasure, resulting in "unnecessary" sexual taboos.

Between the late 1930s and 1950s, Kinsey and colleagues collected more than 5,300 male sexual histories and 5,940 female histories, many actually conducted by Kinsey, subsequently published in two books: *Sexual Behavior in the Human Male* (1948) and *Sexual Behavior in the Human Female* (1953). Demonstrating that Americans' beliefs were at odds with "reality," Kinsey showed that masturbation, homosexuality, and premarital and extramarital sexual relations for men and women were far more common than previously believed. The famous "Kinsey scale" of heterosexual to homosexual, based upon seven kinds of preference, countered the conventions of male/female, heterosexual/homosexual binaries. The methodology was criticized for its white male bias, behavioralism, lack of African American sample, and overrepresentation of homosexuals. Although Kinsey sometimes interviewed the same person at two different times, he always used only the most recent interview score, which was aggregated into the general sample, thus militating against the sense of dynamic change across the life course of individuals (Herdt 1990).

Politically attacked from its inception, Kinsey's research facilitated social progress in attitudes and laws regarding American sexuality, particularly on issues surrounding the frequency of female sexual pleasure and masturbation, the normalization of homosexuality, and sexual expression outside of marriage. Such cultural changes, of course, represented challenges to gender and familial stereotypes and cold war ideologies. Historians have argued that Kinsey's empirical data—such as, for example, the finding that 37 percent of all American males had had some homosexual experience—was significant in changing sexual attitudes, perhaps laying the groundwork for second-wave feminism, the sexual revolution, and the gay and lesbian social movement. By compelling a different understanding of the world in which they were growing up, individuals who came of age under the influence of the Kinsey reports in the media and popular culture of the late 1950s and early 1960s greeted sexuality through the lens of changing norms about masturbation, female sexuality, and homosexuality. The absolute influence of taboos and laws was to some extent mediated by a growing idea of cultural relativism and social constructionism in universities. Armed with new knowledge and data that laid the foundation for social advocacy in society and the university, second-wave feminism and the gay and lesbian movement began the push toward greater tolerance for new gender roles and sexual diversity in America. In subsequent decades, the roots of these changes in Kinsey's works were sometimes eclipsed, but a rash of new biographies and filmic studies suggests a renewed appreciation for the pivotal role of this seminal thinker in American sexuality.

SEE ALSO *Hite, Shere; Sexuality*

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Gilbert Herdt

KINSEY REPORT

SEE *Kinsey, Alfred.*

KINSHIP

Kinship refers to relationships among individuals and groups that are based on descent or marriage. The study of kinship covers how different cultures conceptualize these relationships, the linguistic terms by which they distinguish and classify kin, marriage rules and practices, and the social, political, economic, religious, and symbolic uses that human societies make of kinship. Kinship is a human universal, found in all societies, although the cross-cultural variation in all these aspects of kinship is significant.

Anthropologists use a particular set of symbols to represent kinship relations, see Figure 1. These symbols are used to construct kinship diagrams for many different purposes. For example, they can be used to represent an individual's genealogy as in Figure 2, which shows a male (called "ego" and shaded in the diagram) in relation to an array of relatives. This diagram also shows that ego's four grandparents are deceased and that while many of ego's relatives are married, his mother's brother is divorced and his mother's brother's son is unmarried but has a sexual relationship with a partner.

The diagram labels ego's kin with English terms that follow the Eskimo terminology system (named after the Inuit, who were once called Eskimos). Other terminology systems classify kin differently. For example, in the Hawaiian system, ego calls all female kin of his parent's generation (mother, mother's sister, and father's sister) by the same term he or she uses for mother. Worldwide, there are only a few major types of kinship terminology systems.

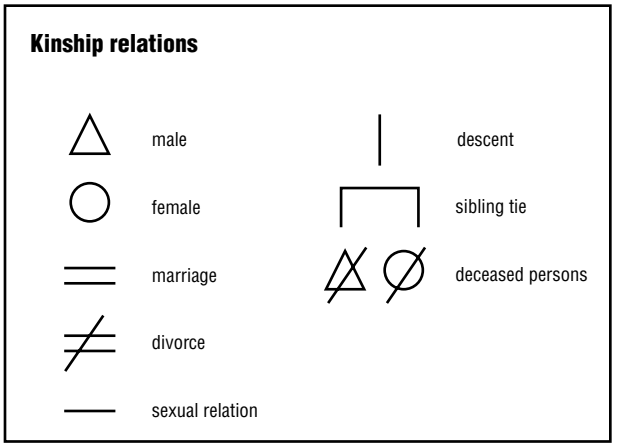

Figure 1

As with kinship terminology systems, societies vary in how they trace descent and how they use it to form important groups. Some societies follow unilineal descent, meaning that they trace membership in descent groups through one gender only. Unilineal descent may be either patrilineal (tracing descent only through males) or matrilineal (tracing descent only through females). In patrilineal descent, both male and female children inherit

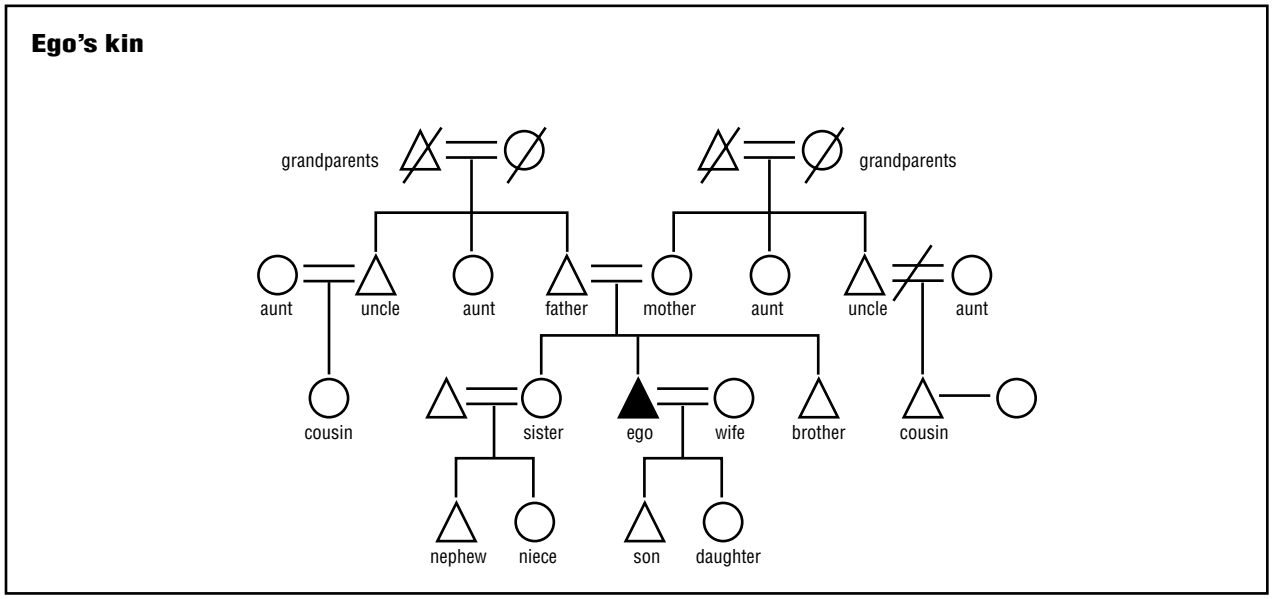

Figure 2

affiliation with their father's descent group, but only males pass on membership to their children. Chinese societies show examples of patrilineal descent. In the matrilineal case, male and female children are members of their mother's descent group, but only females pass on this membership to their children. The Navajo Native Americans are an example of a matrilineal group. Unilineal societies trace descent through one gender only, but in virtually all societies individuals trace many other ties of kinship bilaterally, or through both parents.

Other societies trace descent cognatically, or through both males and females. All descendants of a founding ancestor may be members of the descent group. An example is the Kwaio of the Solomon Islands, where cognatic descent groups control territory and their members have rights to use this land. Most people of Europe and North America perceive descent cognatically but do not use this principle of decent to form significant groups.

Worldwide, patrilineal descent is the most common, covering an estimated 44 percent of world cultures. Societies tracing descent through both genders account for another 36 percent, whereas matrilineal descent covers about 15 percent of world cultures. Another rare descent type accounts for the final 5 percent.

Many societies with unilineal or cognatic descent use these descent principles to form important groups such as lineages and clans. Lineages are kin groupings in which members are cognizant of the paths through which they trace common descent. Clans are kin groups in which the exact routes by which people trace common descent are not known or considered: Individuals simply know their clan affiliations by inheriting a clan name from a parent. Some societies have both clans and lineages, in which case the lineages are subdivisions of the clans. The founding ancestors of clans are often considered to be mythological animals, plants, or special objects. Many clans have origin myths about how they were created from such mythological forces.

In many societies descent reckoning thus links individuals and groups together into larger kinship units in such a way that descent is a fundamental framework for the social and political organization of a people. In some societies descent groups are extremely important and powerful. They can be large corporations, owning property and other resources in common and transmitting rights to such property over the generations. Often descent groups are interwoven with religion, where, for example, members worship their ancestors in common.

One of the ways in which descent groups are important in the lives of individuals is that descent group membership specifies whom one may or may not marry. Very often descent groups are exogamous, that is, marriage is forbidden within them. In these cases, descent groups may arrange marriages with outside groups as a means of forging important social and political alliances with them. In other cases, descent group endogamy, or marriage within the group, is permitted or encouraged; for example, a man in a patrilineal system may be allowed or encouraged to marry his father's brother's daughter (or a father's father's brother's son's daughter). One consequence of descent group endogamy is that the wealth that both brides and grooms may inherit can be kept within the descent group.

Like notions of descent, the institution of marriage is found in all human cultures. Marriage may either be monogamous (two people, usually a man and a woman, are united in marriage), polygynous (a man is married to more than one woman at the same time), or polyandrous (a woman is married to more than one man at the same time). Monogamous marriages are the most common worldwide. Many societies permit polygyny, but in these, polygynous unions may account for only a fraction of all marriages. Polyandry is rare, but is found among some Tibetan populations and a few other groups.

Along with relationships of descent and marriage, anthropologists have studied how societies construct so-called "fictive" kinship, that is, kin-like relationships locally understood to be apart from standard kinship. Examples include adopted children, ritual siblings such as "blood brothers," and godparents. These kinds of relationships are found worldwide.

The study of family relationships is important in many social sciences, but kinship studies developed as a particularly significant specialty within the discipline of anthropology. Beginning in the late nineteenth century, the work of Lewis Henry Morgan (1818–1881) in the United States brought kinship into the fold of the discipline. Morgan focused on kinship terminology systems and interpreted them as reflecting earlier levels or stages of peoples' cultural evolution. This evolutionary perspective of Morgan and others was discredited by later anthropologists, but ever since Morgan, kinship study has continued to reflect the currents of the broader theoretical perspectives within anthropology.

By the 1970s anthropology had accumulated a considerable body of kinship data worldwide. But by this time also, some anthropologists contended that anthropological concepts of kinship had grown too rigid, that they did not quite fit with the way local peoples themselves were conceptualizing their own kinship. In this context, David Schneider in the United States and Rodney Needham in England charged that anthropological kinship was seriously flawed. Schneider in particular pointed out that anthropological concepts of kinship were rooted in notions of biological procreation, reflecting "kinship" as understood in the particular cultural framework of the

Western world. However, other cultures often construct "kinship" relationships on other bases, such as common residence or food sharing. In other words, the anthropological concept of kinship had been an ethnocentric imposition of Western cultural constructs on other cultures.

With this critique, kinship in anthropology suffered a twenty-year decline, although it was kept alive within feminist anthropology, where it was studied in relation to gender. By this time a shift in kinship studies was evident. Over the first half of the twentieth century anthropologists studied kinship primarily as a key to peoples' social, political, and economic structures, often drawing comparisons among cultures. Through the 1980s, by contrast, kinship studies were conducted from within each culture separately, in terms of purely local categories and cultural meanings.

Kinship not only survived in anthropology, but, beginning in the 1990s, it revived. Influencing this revival was Janet Carsten, who sought to broaden the concept of kinship to make it cross-culturally valid. The work of Carsten and others also reflected another trend: the view of kinship as process. Their research demonstrated that in many societies kinship statuses or ties are not set once and for all by acts of birth, but rather emerge, strengthen, or fade through the process of human interactions, for example, the giving and receiving of food. Kinship studies of this period also incorporated the idea of kinship as choice. In the United States and Europe, for example, studies of gay or lesbian families, as well as studies of "blended" families consisting of stepparents and stepsiblings, have shown that meaningful kinship construction can be as much a matter of choice and commitment as biological connection.

In the opening decades of the twenty-first century the central question of kinship studies became not so much "How do kinship systems work?" but rather, "How do people work cultural constructions of kinship?" How do individual human actors confirm, challenge, or change these constructions? With this emphasis kinship studies focused on a wide variety of topics, including the impact on kinship constructions of the new reproductive technologies and new family forms, and the intersection of kinship with political struggles and transformations.

SEE ALSO *Family*

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Linda Stone

KINSHIP, EVOLUTIONARY THEORY OF

Altruistic behavior—"self-sacrificial behavior performed for the benefit of others" (Wilson 1975, p. 578)—has long been a paradox for evolutionary theorists, because natural selection favors traits that contribute to the reproductive success ("individual fitness") of those who possess or perform them. Hence, altruism, which by definition contributes to the reproductive success of competitions at the expense of performers, ought not to evolve by natural selection. Yet it is widespread in nature. The sterile worker castes in bees, ants, and wasps provide prime examples (Wilson 1975). In 1964 William Hamilton, a graduate student at the University of London, saw that biological altruism can evolve, even though it reduces the individual reproductive success of the help's donor, if it aids the donor's genetic kin, some of whom inherit the helping allele from a common ancestor of the donor and recipient.

Consider C, the cost to a donor of a helping act, and B, the benefit of the act to a recipient. Hamilton's statement can be expressed as $Br_1 > Cr_2$ where r_1 equals the probability that the recipient's offspring has a copy of a helping allele inherited from a common ancestor of the donor and recipient, such as a parent or grandparent; and r_2 equals the probability that the donor's own offspring would have a copy of the same helping allele inherited from a common ancestor, such as a parent or grandparent. These probabilities are called "genetic correlations" or "coefficients of relatedness" between individuals.

As an example, consider a donor who inherited a helping allele from his mother for giving up one offspring to help a half-sibling produce three additional offspring. This allele was inherited via the common parent of the half siblings, their mother. When an organism reproduces, only one of each pair of chromosomes is passed to its gamete (Mendel's law of segregation), which unites with a gamete from another individual to produce the zygote

that grows into an adult. Therefore, the probability that any particular allele at a locus on a chromosome in a parent is passed on to its offspring is 0.5. There are two gamete-producing reproductive events between the donor and any of his or her three *additional* half nieces or nephews produced *because* of the help: One produces the half-sibling that is being helped; the other produces each of the three offspring of the half-sibling who is being helped (the half-nieces and half-nephews of the donor) *because* of the help. Therefore, there is a $0.5 \times 0.5 = 0.25$ chance that any one of them inherits a copy of the helping allele possessed by the donor, their uncle or aunt. Putting these numbers into the above equation produces $3(0.25) > 1(0.50)$; $0.75 > 0.50$.

Hence, natural selection can favor the evolution of psychological mechanisms for producing helping behaviors directed to genetic relatives. Note that both sides of the equation refer to changes in the helper's reproductive success *because* of helping acts. The right side, Cr_2, indicates the direct reproductive cost to the donor through offspring not produced, whereas the left side, Br_1, indicates the indirect reproductive benefits to the donor through *additional* offspring—a genetic relative produced *because* of the help. This reasoning leads to replacing the concept of individual fitness with the concept of "inclusive fitness," the reproductive success of an individual adjusted by the help it gives and receives from genetic relatives. *Kin selection* refers to natural selection acting via inclusive fitness rather than via individual fitness. Finally, note that those desiring an evolutionary explanation for "true altruism," in which a donor receives no benefit for a helping act, will not find it in Hamilton's equation.

Hamilton's paper (1964) is one of the most important scientific papers of the twentieth century. First, it enables evolutionary explanations for a wide range of social interactions in organisms (Alcock 2005; Wilson 1975) and humans (Burnstein 2005; Buss 2004). Second, it shifted the focus in evolutionary thinking from the reproduction of individuals to the replication of genes. Albert Einstein gave us relativity theory when he imagined how the universe would look if he were riding on a beam of light; Hamilton gave us a new way of thinking about evolution when he imagined how natural selection would seem to work if he were riding on a gene as it crossed generations.

SEE ALSO *Altruism; Darwin, Charles; Evolutionary Psychology; Hamilton's Rule; Natural Selection; Sociobiology*

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Charles Crawford

KISSINGER, HENRY

1923–

Henry Kissinger is a political scientist who served as national security adviser (1969–1975) and secretary of state (1973–1977) during the presidencies of Richard M. Nixon (1913–1994) and Gerald R. Ford (1913–2006).

Born Heinz Alfred Kissinger on May 27, 1923 in Fürth, Germany, Kissinger and his family escaped Nazi persecution by immigrating to New York City in 1938. Kissinger joined the U.S. army during World War II, and later earned his BA, MA, and PhD in government at Harvard University. After joining the Harvard faculty, in 1955 and 1956 Kissinger served as director of a study group set up by the Council on Foreign Relations to analyze the influence of nuclear arms on international relations. Although he served as a consultant to the Democratic administrations of John F. Kennedy (1917–1963) and Lyndon B. Johnson (1908–1973), Kissinger tried but failed to secure a major, influential position under either Kennedy or Johnson. Generally indifferent to party affiliations, Kissinger also served as a foreign and defense policy adviser to Governor Nelson A. Rockefeller of New York (1908–1979), a liberal Republican with presidential ambitions during the 1960s.

Partly because Kissinger was identified with the Rockefeller faction of the Republican Party, President Richard M. Nixon appointed Kissinger national security adviser in 1969. Kissinger perceived the United States to be experiencing a period of relative decline in its international power during the 1970s. He believed that U.S. foreign policy needed to adapt to this relative decline by practicing "power politics," or the politics of "realism," by reducing its ideological hostility and distrust of the Soviet Union and mainland China and protecting U.S. interests through the creation and maintenance of a balance of power and spheres of influence among major world powers. Kissinger had studied and developed the ideas of "realism" in international relations since he was a student

at Harvard. His application of "realism" in Nixon's and Ford's foreign and defense policies was evident in the gradual U.S. military withdrawal from Vietnam, the negotiation and signing of the Strategic Arms Limitation Treaty (SALT) with the Soviet Union in 1972, and Nixon's diplomatic visit to Communist China in 1972. For their efforts in negotiating and securing a peace treaty to end the Vietnam War, Kissinger and Le Duc Tho, a North Vietnamese diplomat, received the Nobel Peace Prize in 1973.

Kissinger, however, found the practice of "power politics" to be more difficult in the Middle East. Oil-producing nations in the Middle East imposed an embargo on oil exports to the United States, and U.S.-Soviet relations were strained because of U.S. support of Israel during the Yom Kippur War of 1973. Nonetheless, Kissinger's diplomacy helped to achieve cease-fire agreements between Israel and Egypt and Israel and Syria. During the 1976 presidential election, Kissinger's "realism" was criticized by Democratic presidential nominee Jimmy Carter (b. 1924) for neglecting human rights and lacking a moral purpose.

After leaving the Ford administration in 1977, Kissinger headed an international consulting firm, lectured, wrote his memoirs, and occasionally advised Presidents Ronald W. Reagan (1911–2004) and George H. W. Bush (b. 1924) on foreign policy. In 1983 Seymour Hersh, an American journalist, published *The Price of Power*, in which he implicated Kissinger in several controversial decisions of Nixon's foreign policy such as the 1970 invasion of Cambodia, the massive U.S. bombing of North Vietnam in 1972, and the 1973 overthrow of President Salvador Allende of Chile. During the 1990s more national security documents and other government sources pertaining to Kissinger's roles as national security adviser and secretary of state were made available to researchers. Using some of these primary sources, Christopher Hitchens, a British journalist, published *The Trial of Henry Kissinger* (2001), denouncing Kissinger as a war criminal. In particular, Hitchens argued that Kissinger's influence on U.S. foreign policy prolonged the Vietnam War, violated human rights and international law, and contributed to politically motivated mass murders in Chile, Cambodia, East Timor, and elsewhere.

Kissinger refused to publicly comment on Hitchens's book. He continued to lecture, write, and manage his consulting firm, Kissinger and Associates. He briefly served as chairman of the 9/11 Commission in 2002, but resigned after Democrats claimed that there were conflicts of interest between his chairmanship and consulting firm.

SEE ALSO *Diplomacy; Nixon, Richard M.; Nobel Peace Prize; Realism, Political; Union of Soviet Socialist Republics; Vietnam War*

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Sean J. Savage

KITCHEN DEBATE

SEE *Khrushchev, Nikita; Nixon, Richard M.*

KITCHIN CYCLE

SEE *Business Cycles, Real.*

KLEIN, LAWRENCE

1920–

Lawrence R. Klein was born in Omaha, Nebraska, in 1920, graduated from the University of California at Berkeley in 1942, and went on to receive in 1944 the first PhD awarded by a Department of Economics at MIT that was, like himself, at the very beginning of a long and eminent career. Klein's first post was a three-year stint as research associate of the Cowles Commission at the University of Chicago; Cowles was then strongly oriented to econometrics, and was certainly an important influence on Klein's early research interests. In 1949 he migrated to teaching and research posts at the University of Michigan. He was driven from Ann Arbor, and from the United States, by the McCarthy witch hunt, and went in 1954 to the Institute of Statistics at Oxford. In 1958 he became professor of economics at the University of Pennsylvania, then University Professor and Benjamin Franklin Professor, until his formal retirement in 1991.

Klein's long and distinguished career led to an enormous list of articles, many books, thirty or more honorary

degrees, a series of visiting professorships, the presidency of the Econometric Society in 1960 and the American Economic Association in 1977, the John Bates Clark Medal of the American Economic Association in 1959, and the Alfred Nobel Memorial Prize in Economic Sciences in 1980. It is safe to say that what honors were available, he has had.

Beginning with the publication of *Economic Fluctuations in the United States, 1921–1941* (1950), Klein succeeded the Dutch economist Jan Tinbergen (1903–1994) as the preeminent macroeconometric model builder in the United States and the world. With a series of coauthors, he produced a larger and improved model of the United States in 1955 and a model of the United Kingdom in 1961, participated in the Brookings quarterly econometric model of the United States (1965, 1969, 1975), and was the guiding force in the Wharton model of the United States (1967, 1968). From its start in 1968, Klein led a large group of participants in Project LINK, a systematic effort to link together, through explicit trade and capital flows, as many national econometric models as could be mustered. In his eightieth year, Klein was actively engaged in the econometric modeling of the Chinese economy.

His first macroeconometric models were Keynesian in inspiration, drawing on *The Keynesian Revolution* (1947, based on his PhD thesis). They were primarily models of aggregate demand. Later versions began to add a supply side and a model of inflation. In view of later controversies in academic macroeconomics, it is useful to note that one of Klein's earliest articles (1946) was on "Macroeconomics and the Theory of Rational Behavior." In those days, attention to "microfoundations" amounted to asking if this or that macro-equation could arise from the approximate aggregation of the behavior of rational agents. That still seems more sensible than the current tendency to a much more literal interpretation that leads to the casual acceptance of extreme assumptions for no better reason.

From the beginning, Klein was motivated by the possibility that empirical macromodels could be used to guide fiscal and monetary policy, and to estimate the effects of other policy measures. Sixty years later, the technique is still highly imperfect. But nothing better has been found in practice; and central banks, government agencies, and international agencies all over the world maintain and use econometric models that are direct descendants of Klein's lifework.

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KNESSET, THE

The Knesset is the unicameral parliament of the State of Israel, and as such it is the country's highest legislative body. There are 120 members of Knesset (MK), who are elected to four-year terms in office. In addition to passing legislation, the Knesset also appoints Israel's president—a largely symbolic position—and the state comptroller. In addition, the Knesset has the authority to dissolve itself by simple majority, which would result in the holding of new elections and the formation of a new government. The Knesset meets in Jerusalem, the capital of Israel. When the State of Israel was initially established in May 1948, the Knesset sat in Tel Aviv. It moved to Jerusalem in December 1949 and has remained there ever since.

Because Israel does not have a written constitution, the rules and regulations governing how the Knesset functions—and even its establishment—are laid down in Israel's Basic Laws. According to "Basic Law: The Knesset," article 4, elections for the Knesset are to be "general, country-wide, direct, equal, secret, and proportional" (Government of Israel 2004). Israel has universal suffrage for all citizens aged eighteen and over, and all citizens are eligible to vote in these elections. In this respect, elections for the Knesset are viewed as general elections, as opposed to elections for municipal officers. With respect to the elections being "country-wide," for the purposes of

Knesset elections, the entire country is considered one district. There are not separate electoral districts based on geographic region for distribution of Knesset seats.

Numerous parties participate in Israeli politics and are represented in the Knesset. According to the 1992 Parties Law, a *party* is defined as "a group of persons who joined together in order to promote in a legal way political or social objectives and to express them in the Knesset by their representatives." Parties can be established by registering the signatures of one hundred adult Israeli citizens who are residents of Israel. However, a party is prohibited from registering or competing in the electoral-legislative process if one of the following four conditions is found to be present in its "objectives or actions": (1) it rejects the existence of Israel as a Jewish and democratic state; (2) it encourages racism; (3) it supports the armed struggle against the State of Israel by either terrorist organizations or enemy states; and (4) it is believed that the party will be used "for illegal activities."

In order to gain entry to the Knesset, a party must obtain 2 percent of the votes cast in the election. Since the entire country is one "district" for the purpose of Knesset elections, parties must receive 2 percent of all votes cast throughout the country in order to be represented in the Knesset. The division of seats in the Knesset is based on a system of proportional representation. The number of seats that each party receives in the chamber is proportional to the number of votes it receives in the election, once the 2 percent threshold has been passed. Previously, the threshold had been as low as 1 or 1.5 percent, but it was raised to 2 percent in 2003. Individuals are elected to the Knesset based on what are known as *closed party lists*. In other words, when an Israeli citizen votes in a Knesset election, he or she votes for a particular party, not for an individual representative. Different parties choose their slate of representatives in different ways, but the individual voter does not get to select individual representatives on election day.

As a result of this system, no party has ever received the necessary majority (sixty-one seats) to form a government on its own. In this respect, Israeli governments have always comprised multiple parties, or, in other words, they are coalition governments. Occasionally, parties have been able to form "minority" governments (a coalition of fewer than sixty-one seats) with the support of Arab parties that vote with the government but are not formal members of the coalition. At the same time, the relatively low threshold necessary to gain entry into the Knesset has also resulted in the proliferation of numerous small parties into the Knesset and in the Israeli political system as a whole. There are parties representing all different groups of Israeli society, ranging from religious to secular, right wing to socialist, and parties that specifically represent Arab citizens. Generally, however, Israeli politics has been dominated by large left-leaning parties (e.g., Labor and its predecessors) and right-leaning parties (e.g., Likud and its predecessors), with smaller parties and religious parties floating between the larger parties to create the government coalitions.

As the parliament, the Knesset is responsible for writing and passing legislation. Bills must pass three readings before they are signed into law. There is no process of judicial review. However, existing legislation may be amended or canceled by the passage of a new bill. Additionally, there is no authority that has power to veto legislation that is passed by the Knesset. While the Knesset has supreme legislative authority, in matters concerning "personal status," such as marriage, divorce, or burial, it is the various religious denominations that set the rules, based on their own religious laws. In other words, the Jewish authorities regulate marriage and divorce for Jewish citizens, the Muslim religious authorities do the same for Muslim citizens, and the Christian religious authorities for Christian citizens.

As a parliamentary system, the prime minister is usually the head of the largest party in the Knesset. However, in an attempt to create more stability in the Knesset and the governments, between May 1996 and March 2001 the prime minister was directly elected separately from the rest of the Knesset. The election did not have the intended consequences, however, and many argued that the "reform" was a resounding failure. The direct election provision was quickly repealed, and the prime minister is again the head of the largest party in the Knesset.

SEE ALSO *Parliaments and Parliamentary Systems*

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KNOWLEDGE

If someone asks, "What is knowledge?" science seems a likely answer. Its impact is enormous, and its method is logical and rigorous, immunized from personal bias, and based on repeatable experiments revealing predictable

facts of the universe. But can one live by science alone? One should not overlook the "who-why" question: "Who wants to know, and why?" The twenty-first-century economy seems even more dependent on knowledge than when the extracting and producing industries were dominant and natural science seemed all one needed to know. Now the economy comprises "knowledge workers," information technology, intellectual property, collaborative networks—to say nothing of laws, customs, culture, and the other aspects of social life—so it is probably even more important to understand what the term *knowledge* means.

The study of knowledge is *epistemology*, a type of philosophizing that differs from metaphysics, logic, aesthetics, or ethics. From Plato (427–347 BCE) one learns that knowledge is "justified true belief." When one believes something to be true, the burden of demonstrating it as knowledge rather than mere opinion falls on how it is justified or "warranted." In René Descartes's (1596–1650) time, "full justification" was taken to mean that a statement was certain beyond doubt. Knowing that the senses can be deceived, Descartes attacked our knowing with radical doubt. He argued that only our own thinking is unmediated by the senses, so our only certainty is the mind's certainty of itself. This positioning of reasoning cut through millennia of muddled debate and established knowledge as the antithesis of doubt, rather than the achievement of certainty. But epistemology has struggled ever since with the damage done: a loss of innocence spawning a plurality of epistemologies, each defining doubt and knowledge differently. We shall look at knowledge through this multi-epistemic prism, focusing on doubt and outlining the types of knowledge emerging, and conclude with their integration. Rather than merely list the knowledge types spoken of today (explicit, tacit, social, individual, practical, emotional, etc.), our analysis proposes a framework for their mutual constitution.

Descartes presumed that thinking should be logical; operating correctly, the mind is computer-like. This view sets emotion, also unmediated by the senses, in opposition to cold reason, dismissing emotion from knowing. Second, with both sense-data and emotion dismissed, there can be no knowledge of the world beyond the mind's computations—for example, of the physical world in which the brain seemingly exists. So what can be known is of no relevance to our world, and what is certain is so because it is tautologous, like a mathematical proof. Given these assumptions, this conclusion is inescapable. Knowledge is also individual, private, within the mind, and detached from the interests, discourses, and activities of our fellows, denying Francis Bacon's (1561–1626) maxim that "knowledge is power."

Logicality is powerful justification, but alone it demands too much. Scientific knowledge is a compromise between logic and other warrants that allows knowledge of the world beyond Cartesian tautology without demanding certainty. Instead of entirely removing doubt, science treats doubt as pervasive, a condition to be managed. Reaching beyond the mind, all doubt-managing, as opposed to doubt-rejecting, epistemologies take off from assumptions about what and where we are—thinking, memorizing, observing, experiencing, and so forth—though each person orders these differently. For most people, science is a variation on realism and embraces, for instance, positivism and critical realism. Realisms presume a logical and observable reality "out there," independent of our observing. All knowledge is of this reality. Sense-data is prioritized over what we think, over opinion. Science aspires to the facts of this reality, though, afflicted by doubt, we know our impressions are conjectures, never certainties.

In contrast to realism, idealist or interpretive epistemologies like phenomenology bring us closer to Descartes, prioritizing the mind over assumptions about reality. They presume we can never know reality's essence, and this is not our target; indeed our senses may be incapable of capturing it. All we can know is experience and our senses' impact on our thinking. This becomes ordered as we lay mental maps or meaning systems over our experience, capturing it as knowledge. We make this our knowledge of the world, rather than our imaginings, by using it to predict our experience. We may structure it as causal relationships, but, as David Hume (1711–1776) argued, we impose such causality; we cannot observe it at work. Knowledge as meaning takes us a step back from immediate sense-data about the objects that comprise the world and into generalizations, relations, associations, covering laws, and so forth. Though epistemologically distinct, facts and covering laws are both representations of the world. Facts make the stronger claim, purporting to describe the world as it really is, but covering laws may be more useful, describing relations or forces between the factlike objects comprising the world.

All epistemologies seek justified truth-yielding links between our thinking and the world beyond the mind, which obviously includes our brains and bodies. Each epistemology adopts different strategies to manage the doubt involved. Naive realism, for instance, proposes that the mind is in intimate contact with nature; things are what they seem to be and doubt does not enter. Knowledge is individual. Justified true belief differs, for it moves knowledge beyond the privacy of the mind, presupposing its capture in a shared language whose construction and interpretation is knowing. Scientific knowledge is intersubjective, beyond the individual, and necessarily contextualized to a specific society and located in its discursive spaces and activities—book-learning statements in libraries or at conferences, for instance.

Statements can be conjectural, as Albert Einstein's (1879–1955) were, to be tested later, or they can be empirical, based on past experience of the world. Our hypothesizing and experimentation integrates our thinking and observing, and doubt is managed through science's intersubjective processes, supported by open discourse, multiple experiments, statistical analysis, and criticism. Disputes about whether or not this process manages doubt adequately comprise the philosophy of science (Curd and Cover 1998). Some argue that experimental confirmations raise confidence in our conjectures. Karl Popper (1902–1994), in contrast, sought falsification, seeing logical asymmetry between verification and rejection. This is an error. Rejection depends on observation theory too, so experimentation merely compares science's confidence in the theorizing behind the hypothesis and the observation. As neither is free of doubt, the outcome remains logically ambiguous.

The methods of science can generate knowledge of the entities comprising society, as well as of the objects and relationships comprising nature. Thus realist sociology and psychology are warrantable companions to realist physics, chemistry, and biology, but who-why questions loom larger as we move from the natural to the social sciences. In pragmatist epistemologies, the usefulness of knowledge becomes the truth criterion. Representational correctness gives way to utility or "cash value." Pragmatism is a flavor of realism in that it takes the world's existence for granted, though this world is social, technological, and political, rather than that of the natural scientist. Jürgen Habermas integrated pragmatism with our presumed common rationality to locate knowledge in the intersubjective discourse of the democratic "ideal speech situation," where knowledge is consensual and directed toward our interests, such as changing the lived world (Habermas 2003).

Reintroducing peoples' interests inclines us to think reflexively of ourselves as knowing. Given doubt and a pragmatic point of view, it may be more useful to know why someone acted as they did than to know the facts of the situation they faced. Two things are going on here. First, as an actor's knowledge is never free of doubt, there is a crucial difference between the facts and the actor's perception of them. Instead of knowing the causes that move people as objects, we seek the actor's perceptions and explanation of the situation. But this admits heterogeneity, for we know with all the force of *cogito ergo sum*, that people and their knowing differ. Second, doubt is transformed into the necessity to choose. Since reality cannot speak to us directly, we choose how to attend to and interpret the world. This choice transforms the relationship between the actor and the actor's knowledge, for this is now more than a representation to be applied through rational decision making; it is shaped by the actor's values and intentions, and so by his or her emotions. Doubt and emotion become integral parts of our agency and interest in changing the world. When things are certain, our actions are wholly determined; we have no options, no way of manifesting ourselves in the world. Thus doubt, emotion, variety, and diversity challenge our notions of knowledge as universal.

Science works hard for universality, and, given doubt, agreement across the community of scientists becomes a proxy for objectivity and truth, seemingly limiting the impact of emotion. But the relativism implicit in perception raises subjective doubt, not so much separating the mind from the thing known as separating people, in their knowing, from each other and undercutting the idea of knowledge as intersubjective and shared. Once admitted, intersubjective doubt needs to be managed if we are to escape epistemological anarchy and the conclusion that knowledge is whatever one wishes it to be. The openness of scientific discourse seeks convergence, or at least some form of epistemological democracy. Rejecting naive realism or a "correspondence theory" of knowledge can lead to the universal consensuality of Habermas or, within a discipline, a Kuhnian paradigm that presumes that right-thinking scientists are in broad agreement. This "social constructionist" discourse institutionalizes scientific knowledge or, rather, manages doubt and emotion in institutionalized ways (Gergen 1994). Historical studies like Thomas Kuhn's (1922–1996), or those of sociologists of knowledge like Karl Mannheim (1893–1947) and Robert K. Merton (1910–2003), suggest that socially constructed knowledge may change sharply and unpredictably, like an ecology, and that the politics and clashing interests of the group may shape both its changes and what the group defines as knowledge. Power penetrates the discourse and process of justification.

Thus far this entry has touched on three principal modes of justification: reality, social agreement, and utility. All such post-Enlightenment epistemologies embrace reason and empiricism and stand against the transcendentalism that preceded them, when, perhaps, holy books or the Delphic oracle were the warrants for knowledge. These epistemologies also presuppose constancy of situation, reflecting the realist's assumption of nature's invariance. Will what was useful yesterday be useful tomorrow? Just as we know we differ, so we know situations change. Absent doubt, of course, we would be at that Archimedean fulcrum of equilibrium and truth from where we would understand change as the world's dynamic, just as we understand a clock in spite of its moving hands. But the phenomenological drift contradicted the idea of knowledge as just about the world "out there," turning us toward the notion of knowledge as more about ourselves and our agentic choices. Just as we become what we eat, we become what we choose to know. Knowledge

is us, and this is clear for today's knowledge-intensive professional. But if by *us* we mean only what we think, we fall into the chasm of relativism that terrorizes all epistemologies. Social conformance might save us, implying that we become a member of a society or a profession as and because we share its body of knowledge. But knowledge's susceptibility to power and history makes us cautious. Is there a more justifiable basis for justification? Pragmatism's usefulness criterion seems a good way to go, but it is tricky to establish ahead of the action to be evaluated. Still, it brings justification back to us and our intentions.

Given doubt, and not finding definitive invariance in nature or social reality, we presume it in ourselves. Only then can our knowing be carried from one instance to another. This takes us back to the model of humans on which our epistemology stands. But as we probe our agency, we find imagination as well as rationality. Doubt attacks reasoning, interfering with computation and action; the computer freezes, yet we act anyway. John Locke (1632–1704) attributed this to "judgment," our native facility to arrive at conclusions in the absence of certain knowledge, that is, under conditions of doubt. To this point, what we might mean by "not-knowledge" has been dismissed as emotion or as falsified or undiscovered knowledge. Lockean judgment, on the other hand, implies forms of knowing beyond that captured in language. This suggests two things. First, as we negotiate the lived world we draw on these extra-linguistic forms of knowing. Second, knowing is no longer the application of knowledge abstracted and brought into the reasoning process; it is more intimately wrapped into the immediacy of living. Knowing is more than representing. It includes dealing with the unrepresented aspects of being in the world. Our knowing becomes who we are, integrating a complex of memorized facts and meanings, our ability to compute, and our ability to imagine as doubt intrudes and memory or reason fail. We redefine knowledge as our identity as we engage in effective practice.

The search for objectivity is also the observer's search for a vantage point outside and abstracted from the practice of living. Knowledge is what is left behind as the observer withdraws. In contrast, the phenomenological attitude ultimately draws us into the world, suggesting an engagement and intimacy of practice that generates a different kind of knowledge—the actor's epistemology proposed, for example, by Edmund Husserl (1859–1938) and Martin Heidegger (1889–1976). As we consider the action of the imagination as it deals with the experience of doubt, we move toward constructivist views, the idea that the only world we can know is the one we ourselves have constructed, that knowledge itself is a construction, a set of tools for dealing with living in the world. The critique must be equally applied to our assumptions about ourselves. While senses, reason, and imagination may be necessary conditions for consciousness and agency, they are not sufficient. Our sense of ourselves is also a construction of these components and, penetrated again by doubt, we never know ourselves with certainty or completely.

Following the work of Michel Polanyi (1891–1976), it has become common to use the description "tacit" to point to this extralinguistic form of knowing, covering both the ability to act under conditions of doubt and, reflexively, to bridge the gap between our sense of identity and our doubting self-knowledge. What we mean by knowledge must cover both what is known explicitly, justified true belief about the natural, social and psychological entities comprising our world, and what we know tacitly, only evident in our ability to act and sustain our identity living under the normal conditions of doubt and uncertainty. Constructivist epistemologies, such as Ernst von Glasersfeld's (1995), show that constructing the world also sets its boundaries, the limits to what can be known about what we might refer to as the context of our situated knowledge. Ludwig Wittgenstein (1889–1951), who considered all truth to be carried in language, saw practice as giving language meaning. If individuals are the only agents, then constructivism is individual. But others see knowledge and agency as intersubjective and see groups, organizations, and societies as agentic, suggesting social or collective constructionism (Nelson and Winter 1982). So to the previous modes of justification—reality, social consensus, and utility—we can add efficient practice and identity. Practice is a complex—either the deductive application of reason and explicit knowledge, or the constructive application of our judgment or imagination that indicates our tacit knowledge. The pragmatist's utility criterion turns out to be far from project evaluation, performed from a point outside the practice itself. On the contrary, the constructivist view presupposes the instant-by-instant co-construction of meaning, context, and identity.

This multi-epistemic snapshot summarizes our different types of knowledge: realism suggests knowledge as data about the world "out there"; cognition focuses on the explicit systems of meaning we impose on our experience; while the immediacy of phenomenalism focuses us on various forms of practice, individual and collective, and the distinction between reasoning and imagining. Mnemonically we can distinguish *knowledge-as-data* from *knowledge-as-meaning* and *knowledge-as-practice*. In the same way that knowing embraces both what is known, memorized, and recoverable for abstract computation, it also includes the self-based judgment to cope with doubt. Practice embraces both the execution of rational plans and the recursive co-construction of self and context. Emotion is an aspect of that response, and emotional knowledge comes from observing the construction of self and being

able, pragmatically, to apply that to the agentic process (Nussbaum 2001).

Today's knowledge-intensive lives entail integrating our knowing across these distinctions, imaginatively coping with the disjunctions and distinctions entering our thinking with our epistemology-originating assumptions. Integration comes into sight as we appreciate that each type of knowledge presumes the other. There can be no mind without the brain, no knowledge without the mind, no meaning or living without practice, no data without meaning, and so forth. Each mode of justification entails the others. To grasp today's meaning of "knowledge" we must first admit the multiple epistemologies spawned by Cartesian doubt while realizing our ability to traverse the void of doubt between them by deploying our native creativity to construct life's seeming coherence. Knowing harnesses our imagination and reason to our senses, memory, and language as we reach out agentically to our fellows. From this vantage point, our knowing is part of our consciousness and identity, but all of a piece, embracing knower and known, as each epistemology reflects its unique axiomatic emphasis as an analytic tool, disparate elements in our doubt-pervaded toolkit.

SEE ALSO *Cognition; Cognitive Dissonance; Collective Wisdom; Epistemology; Ideology; Information, Economics of; Intelligence; Intelligence, Social; Journalism; Knowledge Society; Knowledge, Diffusion of; Science; Social Cognition*

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KNOWLEDGE, DIFFUSION OF

Diffusion suggests a drop of color in water, spreading until uniformly distributed. Knowledge, such as the cause of a disease, can diffuse until "everybody knows." Diffusion is less specific than communication, and seems driven by the inherent tendency for the differentials between knowledge and ignorance to disappear, just as heat differences decay and entropy rises. But managing diffusion may be very different. Instead of knowledge moving under its own impulse, seeking equilibrium,

knowledge needs to be "pushed" or "pulled." It may be "sticky," as if in a frictional medium; pressure is required to make knowledge flow. At other times, knowledge seems "slippery," and one struggles to prevent leakage. Knowledge is inherently diffusible because of its nonrivalrousness, there being no loss of knowledge by those who already have it as it is diffused to others who do not.

Stickiness and slipperiness seem inherent properties of different types of knowledge. But diffusion may be more shaped by the relationship between the knowledge being moved and the context or medium through which it is moving. Stickiness implies antipathy, whereas slipperiness implies a mutuality of context, a readiness to take up and move the knowledge along, as when rumors fly. Contexts can be local, as when one department resists sharing knowledge with another, or broad, as when new political ideas spread like wildfire.

The heterogeneity of diffusion contexts is explored in network theory. Early research reflected communications technology and distinguished "star" or "radial" networks from "wheel" and more complex interconnections. Recent research focuses on social systems and social capital, when the context of knowledge flow is shaped by political, social, or economic power, or by interconnectedness (centrality). Horizontal and vertical knowledge diffusion imply transfer between equals versus transfer between those with different social power or degrees of centrality. "Small world" or "scale-free" structures are particularly interesting, suggesting people are closer and knowledge flows more rapid than were social networks randomly connected (Watts 2003).

But people ignore questions like "what is knowledge?" and "what flows?" (Ryle 1949). Knowledge cannot be understood simply in contrast to ignorance, for that would require a person to know ignorance too. Knowledge is revealed by contrasting types of knowledge. The explicit/tacit distinction is often invoked to "explain" stickiness (e.g., Szulanski 1996; Boisot 1998), presuming a normal context is sympathetic to explicit messages but less so to tacit knowledge. Yet in other contexts, explicit knowledge may be sticky and resisted, and tacit knowledge slippery. The explicit message "smoking kills" is well known, but apparently not in ways that greatly affect the behavior of smokers. Child abuse is often based on cycles of slippery tacit knowledge-diffusion that seem difficult to break. In short, analyses of the diffusion of the "knowledges" shaping human behavior must consider both the heterogeneity of the modes of knowing and of the contexts of that knowing. Thus the analysis of knowledge diffusion calls up epistemological assumptions about human beings and the world to be known, and their interaction.

For many, knowledge is about gathering data about the world "out there." Data can be diffused or moved so long as the underlying notion of that world is shared and stable. Knowledge-as-data contrasts with knowledge-as-meaning, the lens that is put over data to make sense of it, to make it accessible to analysis. Meaning is about people rather than the world of facts, and diffusing it is different from diffusing data that fits within a shared meaning system. Language can only inform those who already speak it, and Ludwig Wittgenstein (1889–1951) argued that practice is the key to meaning. Data and meaning are mutually supporting and are tied together in information. Both are mental and imply stepping back and reflecting on one's experience of the world. But practice, in contrast, is in the world and the instant. Tacit knowledge is important because it draws attention to this third type of knowledge, knowledge-as-practice, which lies beyond data plus meaning.

Diffusing data means helping the receiver distinguish, within an agreed field of possibilities, the noted from the unnoted. But to diffuse meaning, you rely on receivers to add something of their own construction; you can only send data to another. Even more creative, to diffuse your practice, you rely on receivers to cope with the unique moment and context of their activity and construct practices that emulate yours. Thus practice is always embedded in its context and cannot be transferred to another. Diffusion means creating a new practice, guided rather than determined by prior practice.

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KNOWLEDGE ECONOMY

SEE *Knowledge Society.*

KNOWLEDGE, GROUP

SEE *Collective Wisdom.*

KNOWLEDGE SOCIETY

The term *knowledge society* refers to a society in which the creation, dissemination, and utilization of information and knowledge has become the most important factor of production. In such a society, *knowledge assets* (also called *intellectual capital*) are the most powerful producer of wealth, sidelining the importance of land, the volume of labor, and physical or financial capital.

The term *knowledge society* has several meanings. First, it is used by social scientists to describe and analyze the transformation toward so-called postindustrial society. Second, it is used to refer to a normative vision that nations or companies should aspire to fulfill. Third, it is used as a metaphor, rather than a clear-cut concept, under which various topics are examined. In many cases, the distinction among these three usages is blurred, and it is not clear whether the author using the term is putting forward an analysis of current trends, is forecasting changes, or is proposing a strategy that should be followed.

Although the term is frequently evoked, it is rarely defined and explored in a systematic way. However, the key characteristics of a knowledge society can be outlined as follows: (1) the mass and polycentric production, transmission, and application of knowledge is dominant; (2) the price of most commodities is determined by the knowledge needed for their development and sale rather than by the raw material and physical labor that is needed to produce them; (3) a large portion of the population attains higher education; (4) a vast majority of the population have access to information and communication technologies and to the Internet; (5) a large portion of the labor force are *knowledge workers* who need a high degree of education and experience to perform their job well; (6) both individuals and the state invest heavily in education and research and development; and (7) organizations are forced to innovate continually.

EVOLUTION OF SOCIETAL DEVELOPMENT

All societies have rested on knowledge, and knowledge has always played an important role in the rise of prosperity and social well-being. Why then should we speak of this emerging type of society as a "knowledge society"? It is useful to contrast a knowledge society with previous types of human society that were based upon the dominant mode of production and the most common source of livelihood.

In a *hunting and gathering society*, the earliest societal type, people gained their livelihood from hunting, trapping, fishing, and gathering edible plants growing in the wild. About 8000 BCE, some hunting and gathering groups began raising domesticated animals and cultivating fixed plots of land. This domestication revolution led to the advent of *horticultural* and *pastoral societies*. A pastoral society is a society in which the primary means of subsistence is domesticated livestock, whereas in horticultural societies the primary means of subsistence is the cultivation of crops using hand tools. Many societies were pastoral and horticultural at the same time. The replacement of horticulture by agriculture is associated with the invention of the plow in about 3000 BCE in Mesopotamia and Egypt. This process, sometimes called the *agricultural revolution*, made large-scale agricultural production possible and led to the development of *agrarian societies*. The agricultural revolution had such a profound impact on society that many people call this era the "dawn of civilization." During this period, not only the plow, but also the wheel, writing, and numbers were invented. Nevertheless, in an agrarian society, land and livestock were the key resources.

Agrarian societies, in which most of the population was directly engaged in the production of food, began to be replaced by a new societal type around 1750 at the dawn of the Industrial Revolution. *Industrial Revolution* is a shorthand term for a complex set of technological innovations that led to a dramatic change in the nature of production in which machines replaced tools and inanimate power resources (such as steam and electricity) replaced human or animal power. Productivity and wealth creation in an *industrial society* is based upon the mechanized manufacturing of goods, or, more specifically, upon the extensive and organized use of machines in factories. In an industrial economy, physical assets such as steel, factories, and railroads are the key factors of production. A large majority of the employed population works in factories and offices (while the proportion of the population engaged in agriculture rapidly declines). In addition, people are geographically concentrated. Because most jobs can be found in towns and cities, people move to cities, and industrial society becomes highly urbanized.

THEORIES OF POSTINDUSTRIAL SOCIETIES

Since the 1960s, many authors have suggested that we are entering into a type of society beyond the industrial era altogether. The first comprehensive description of the so-called *postindustrial society* was provided by Daniel Bell (1973). According to Bell, service occupations grow at the expense of those producing material goods, and white-collar workers come to outnumber blue-collar workers employed in factories. Work in services generally requires more knowledge and intellectual ability than work in industrial occupations. Bell also argued that theoretical knowledge is the main strategic resource of society, and those who are concerned with its creation and distribution (scientists and professionals of all kinds) become the leading social group, replacing industrialists and entrepreneurs.

Some scholars have challenged Bell's ideas. First, his theory rests upon the now-obsolete distinction between primary (agriculture, mining, fishing, and forestry), secondary (industry), and tertiary (services) economic sectors. In contrast to Bell's assumption, the manufacturing sector is not declining in terms of its contribution to overall economic performance and growth. The term *postindustrial* is thus misleading because "industry" is neither disappearing nor losing its importance. Both within the agricultural and industrial sector, significant transformations are taking place: Even agriculture and industry are becoming more knowledge-intensive, and thus more productive. In contrast, many jobs in services are in fact blue-collar (such as a gas-station attendant), while many white-collar positions involve very little specialized knowledge.

Terms such as *information society* or *network society* have been proposed to replace *postindustrial society*. Such terms attempt to capture the unprecedented development and use of information and communication technologies and the fact that information generation, processing, and transmission have become the fundamental sources of productivity and power (Castells 1996). These concepts, however, have been criticized as too narrow and too oriented toward technology. Critics argue that technology is merely useless "hardware" if not accompanied by "software"—the knowledge, work, and creativity of people who actually understand, make sense of, and apply the information available. Consequently, from the late 1990s the broader concept of *knowledge society* came to be preferred (Stehr 1994).

CONSEQUENCES OF KNOWLEDGE SOCIETY

Empirical data reveals that some countries (especially Scandinavian and western European countries, as well as Japan, the United States, Canada, and Australia) have moved toward becoming truly knowledge-driven societies (World Bank 1998; United Nations 2005). Many other countries remain in an industrial age, while others are still essentially agrarian. Why is this so? If knowledge is considered the most productive factor, why are not all societies knowledge-based or at least heading in that direction? And how can industrial and agrarian societies become knowledge societies?

In principle, knowledge is a nonrival and nonexcludable public good: one person's use of a particular piece of knowledge does not preclude the use of that same knowledge by others, and when a piece of knowledge is already in the public domain, it is difficult for the knowledge creator to prevent others from using it. In reality, knowledge, in contrast to information, cannot be easily acquired and applied. First, only so-called explicit knowledge can be easily transferred across time and space. Large portions of knowledge—tacit knowledge—reside in people's minds, can be accessed on a first-person basis only, and take time to develop. Second, the effective creation and application of knowledge depends upon the broader context—culture, institutions, and governance. Knowledge must be integrated into an effective system of research institutions, innovation-driven enterprises, universities, and other establishments. Third, because knowledge is considered the key factor of production and is expensive to create, rich countries have broadened the protection of intellectual property rights (especially patents), and thus have increased the amount of knowledge that is secured and monopolized.

These factors contribute to an unequal distribution of knowledge across and within countries, a situation known as the *knowledge gap*. Indicators used to evaluate the development of knowledge society (such as educational attainment, investment in research and development, and Internet access) seem to show that the knowledge gap has been widening, because knowledge produces further knowledge in an ever-increasing rate, and this in turn increases productivity. It is risky for a country or company to rely largely on unskilled labor and natural resource–based goods. Countries, companies, and people who do not invest sufficiently in education and new technologies for acquiring and disseminating knowledge will find it increasingly difficult to catch up to those who did invest. Yet, investment in education and new technologies is not enough; it is also necessary to create appropriate conditions to foster innovation, creativity, and cooperation. Otherwise, negative consequences, such as *brain drain* (the emigration of one country's highly educated people to other countries offering better economic and social opportunity), can be expected.

SOCIAL STRATIFICATION IN KNOWLEDGE SOCIETY

What will be the class structure of knowledge society? Who will become richer and who poorer? According to Robert Reich (1991), there is a three-tiered workforce in the most advanced economies. At the bottom are workers who offer personal services; in the middle are production workers in factories or offices performing simple, repetitive tasks; and at the top are *symbolic analysts* who solve, identify, and broker problems by manipulating symbols. Symbolic analysts include research scientists, engineers, lawyers, and consultants of various types, but also publishers, writers, editors, journalists, or musicians. Reich predicted that advances in technology and globalization would widen the gaps in income and opportunity between these tiers.

While symbolic analysts are globally in great demand and their income is thus steadily increasing, production

workers in advanced economies could be easily replaced by routine producers in other nations, which results in the disappearance of available routine jobs. Similarly, Peter Drucker (1994) and others speak of *knowledge workers*, that is, a newly emerging dominant group being employed in professions that require formal education and theoretical knowledge, as well as a different approach to work—qualifications that the industrial worker does not possess and is poorly equipped to acquire. Drucker also warned, though without details, against a potential new class conflict between the highly productive minority of knowledge workers and the majority of people who make their living traditionally. Though the future of knowledge and nonknowledge workers remains to be seen, even now there is empirical evidence that in advanced economies the number of jobs that demand only low cognitive skills is declining and that high-level skills and knowledge are substantial determinants of earnings (OECD 2000).

If knowledge workers are the leading social class economically, do they also dominate in a political and cultural sense? Who possesses control and power in a knowledge society? Can a knowledge society devolve into an Orwellian totalitarian society, where one social group is able to dominate other groups through its possession of knowledge and information? Authors disagree on this. According to Zbigniew Brzezinski (1970), we are entering into a "technetronic society," where scientific and technical elites will seize control of the essential flow of information; their claim to political power would rest on allegedly superior scientific know-how. Similarly, Alvin Gouldner (1979) forecasts the rise of a so-called "new class"—as opposed to the "old moneyed class"—that is composed of intellectuals and technical intelligentsia. This class will be bonded by similar education, culture, and language codes that facilitate solidarity between class members and enable collective political action. This "culture of critical discourse," as Gouldner terms the essential unifying attribute of this new class, functions as more than the group's common ideology; it is its instrument of domination and control and the source of its growing power.

In contrast, Nico Stehr (2002) argues that knowledge-based occupations do not and cannot form a social class because they are found in all sectors of the economy and their job description and interests are very diverse. Moreover, in decentralized and pluralistic democracies like the United States, all policymaking actors try to legitimize their claims using knowledge and information, and for this reason they employ various experts and consultants. In turn, it is difficult to enforce any claim solely on the basis of knowledge. Although those with scientific knowledge have a high social standing, they are often questioned. The consequence is a fragile society where controlling, planning, and predicting social conditions becomes more and more difficult and where the power of formerly monolithic institutions, such as the state, the church, and the military, declines.

The basic difference between Gouldner and Stehr is an assumption of knowledge distribution and its attributes. While Gouldner believes that knowledge can be concentrated in relatively few hands, Stehr assumes that knowledge is widely dispersed, that there are various types of knowledge and they are rapidly changing. Empirical studies seem to support Stehr's view. Though the number of experts has grown rapidly since World War II (1939–1945), they have limited influence on policymaking, except on issues of narrowly technical interest (Brint 1994).

CONCLUSION

If *knowledge society* is to be a useful term, it must be taken critically and further elaborated. There are several problems with its usage. First, it does not (and cannot) capture all aspects of modern postindustrial societies. It simply states that knowledge is the most important productive factor. Yet, any type of economic determinism should be avoided. There can be different types of knowledge societies, with different value structures, life styles, and even political systems. Similarly, modern societies can be given many other labels, such as risk society, consumption society, and so on. Second, *knowledge* is too broad a term and should be carefully decomposed and defined in any analysis or strategy. Third, attaining a knowledge society is not ensured but must be actively supported. Fourth, there is no clear-cut threshold from which societies become knowledge societies. It is more about processes (knowledge production, learning, innovation, and creativity) than about fulfilling static objectives.

SEE ALSO *Globalization, Social and Economic Aspects of; Knowledge*

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Arnost Vesely

KOHLBERG, LAWRENCE
1927–1987

The psychologist and educator Lawrence Kohlberg proposed a cognitive-developmental theory of morality that dominated the fields of moral psychology and moral education for over two decades until the mid-1990s. Though born of a wealthy family in New York, he chose to identify himself with the oppressed, helping to smuggle Jews through the British blockade of Palestine after World War II (1939–1945). He viewed his theory of moral development as a response to Nazi Germany and the Holocaust. Despite the pervasive reliance of everyday decision-making on notions of right and wrong, good and bad, that constitute the domain of moral psychology, little empirical research had actually been done on the subject. At the time Kohlberg completed his dissertation in 1958, moral psychology in North America was dominated by theories that portrayed people as either caught in a conflict between powerful self-interest and social convention (Freudian psychoanalysis) or passively molded by social norms (behaviorism). In Freud's account, morality was at best something to be endured in order for people to live cooperatively. On the assumption of cultural relativity, there were no morally justifiable grounds upon which to judge Hitler's actions as wrong.

It was in Kohlberg's seminal work *From Is to Ought: How to Commit the Naturalistic Fallacy and Get Away with It* (1971) that he acknowledged self-interest, cultural embeddedness, and cultural relativity (the "is"), and at the same time saw within the process of cognitive development the grounds for validating a formally more adequate and universal morality (the moral "ought"). (The "naturalistic fallacy" of the book's title refers to the invalid derivation of the moral good from the facts of how the world is.) Extending the earlier work of Jean Piaget, he proposed three broad and universal levels of moral development that proceeded from primary self-interest (level 1: preconventional morality), to embeddedness within social norms and structures (level 2: conventional morality), to the highest level of developmental maturity (level 3: postconventional or principled morality). Each of the three levels was further divided into two stages. Nature would point the way, so to speak, in differentiating higher-stage morality from more conventional views on morality, and moral development was described as proceeding through an invariant and irreversible stage sequence.

Each successive stage of moral development was made possible by increases in perspective-taking ability, with the highest, principled level taking into account the perspectives of all individuals in a moral conflict (i.e., a universal perspective). Level 3: stage 5 (the social-contract legalistic orientation) includes a number of moral principles commonly found in philosophy and professional codes of ethics. Ideal societies are those that are founded upon: (1) a free and willing participation in a common agreement (or contract) to live together in a law-structured society, (2) respect for individual rights, and (3) a utilitarian analysis of consequences to society for one's actions. Stage 6 (the universal ethical principle orientation) was Kohlberg's vision of ideal moral reasoning, where self-chosen, abstract moral principles of universal justice were viewed as transcending social convention and law.

To investigate moral reasoning within Kohlberg's model, research participants are asked to discuss hypothetical dilemmas that place values into conflict (e.g., life versus law). In the most famous of these dilemmas, the protagonist Heinz considers stealing an unaffordable drug that would cure his terminally ill wife. Heinz has explored every option but comes up financially short. Should Heinz obey the law or steal the drug to save his wife's life? For scoring purposes, the decision to steal or not steal the drug is not as important as the stage of reasoning used to reflect upon the life-versus-law conflict the story imposes. Using this procedure, a considerable body of longitudinal and cross-cultural research has confirmed that individuals do progress through Kohlberg's stages in the proposed invariant sequence (stages 1, 2, 3, etc.).

Despite the far-reaching theoretical and practical influence of Kohlberg's model within psychology, education, and even correctional settings, the model has not been without its strong critics. The theory has been alleged to be biased against women and non-Western cultures who were said to reason in "lower level," social conventional terms (Gilligan 1982; Shweder 1994). Even in Western culture, few individuals reason about moral dilemmas in "high level," post-conventional terms. The most recent version of the scoring manual has removed the highest level (stage 6) reasoning altogether—not a small deletion given that stage 6 defined the stage sequence as a theory of justice reasoning. Although many of the criticisms have been addressed, the model seems to have lost its conceptual hold within the field. In comparison with earlier published reviews of moral psychology that celebrated the legacy of Kohlberg, more recent reviews emphasize the very social, relationship, and emotional-personality factors that he sought to exclude from the moral domain. Nonetheless, his work remains an important foundation within the field.

SEE ALSO *Morality; Piaget, Jean*

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Karl H. Hennig

KONDRATIEF, NIKOLAI

SEE *Russian Economics.*

KONDRATIEF WAVE

SEE *Long Waves.*

KONDRATIEV, NIKOLAI

SEE *Russian Economics.*

KOOPMANS, TJALLING
1910–1985

Tjalling Charles Koopmans, who shared the 1975 Nobel Memorial Prize in Economic Sciences with Leonid Kantorovich (1912–1986), was born in Graveland, the Netherlands. Koopmans studied mathematics and physics at the University of Utrecht (MA, 1933, publishing a paper on quantum mechanics) and mathematical statistics at the University of Leiden (PhD, 1936). His pioneering dissertation introduced concepts developed by R. A. Fisher (1890–1962) and by Jerzy Neyman (1894–1981) and Egon Pearson (1895–1980) in probability theory and statistical inference into econometrics, which he published in English (Koopmans 1937). He studied economics and econometrics with Jan Tinbergen (1903–1994) at the University of Amsterdam in 1934 and for five months with Ragnar Frisch (1895–1973) in Oslo. At Frisch's request, Koopmans lectured in Oslo about statistical inference, but Frisch did not accept the case for using probability models in econometrics put forward by Koopmans and by Frisch's student Trygve Haavelmo (1911–1999). Koopmans took over Tinbergen's classes at the Rotterdam School of Economics in 1937 when Tinbergen moved to Geneva to conduct his League of Nations study on statistical testing of business cycle theories. Koopmans then took Tinbergen's place in Geneva upon Tinbergen's return in 1939. Koopmans moved to the United States in 1940 (eventually taking U.S. citizenship), where he was employed as a research assistant at Princeton, an instructor in statistics at New York University, an economist with a Philadelphia insurance company, and from 1942 a statistician for the British Merchant Shipping Mission in Washington, D.C., analyzing optimal routing of ships.

In 1944 Koopmans became a research associate with the Cowles Commission for Research in Economics at the University of Chicago, where he was also associate professor of economics from 1946 (full professor from 1948). He succeeded Jacob Marschak (1898–1977) as Cowles research director in 1948 and became president of the Econometric Society in 1950. While in Chicago, building upon his and Haavelmo's dissertations, Koopmans led the development of the Cowles Commission approach to the identification and estimation of simultaneous-equations econometric models, including full-information maximum likelihood (FIML) estimation, stressing that simultaneous-equations methods are better asymptotically (that is, as sample size approaches infinity) than single-equation least-squares estimation (Koopmans 1950; Koopmans and

Hood 1953). Another pioneering Cowles monograph edited by Koopmans (1951) applied linear programming methods to the analysis of production and allocation. This work was the basis for his sharing the Nobel Prize with Kantorovich, who had conducted parallel research in the Soviet Union. George Dantzig (1914–2005), another pioneer of linear programming (and a contributor to Koopmans [1951]), did not share the prize, presumably because he was a mathematician rather than an economist. Koopmans anonymously donated to a research institute associated with Dantzig what would have been Dantzig's share of the prize money, a fact not revealed until after Koopmans died.

In 1947 Koopmans sharply criticized the empirical business cycle research of Arthur F. Burns (1904–1987) and Wesley Mitchell (1874–1948) of the National Bureau of Economic Research as "Measurement without Theory," and he urged that empirical economists use formal economic theory as the starting point for explicit, structurally identified models (Hendry and Morgan [1995] reprint Koopmans's review article, together with his subsequent exchange with Rutledge Vining). This methodological controversy worsened relations between the Cowles Commission and other University of Chicago economists, especially Milton Friedman (1912–2006), once Burns's doctoral student, who insisted that Mitchell's approach was also a valid form of economic theorizing. When Koopmans was scheduled to go on sabbatical (to write his *Three Essays on the State of Economic Science*), James Tobin (1918–2002) of Yale was invited to succeed him as Cowles research director. When Tobin declined to leave Yale, the Cowles Commission (including Koopmans) moved to Yale in 1955 as the Cowles Foundation for Research in Economics. Koopmans, a professor of economics at Yale from 1955 until his retirement in 1981, succeeded Tobin as director of the Cowles Foundation from 1961 to 1967.

Following his critique of NBER methodology, Koopmans's *Three Essays* (1957), his most widely read work, offered a positive statement of his own methodology. The first essay argued that the use of more fundamental methodological tools reveals the common logical structure of economic theories of diverse origin. The second urged "a clearer separation, in the construction of economic knowledge, between reasoning and recognition of facts, for the better protection of both" (Koopmans 1957, p. viii). The concluding essay speculated on the future interaction between tools of analysis and choice of problems in economics. Koopmans's later research concentrated on the normative analysis of optimal economic growth and on the incorporation of exhaustible natural resources into growth theory (Koopmans 1970–1985; Gordon et al. 1987; Werin and Jungenfelt 1976, Pt. II).

SEE ALSO *Frisch, Ragnar; League of Nations; Linear Systems; Maximum Likelihood Regression; Mitchell, Wesley Clair; Programming, Linear and Non-Linear; Simultaneous Equation Bias; Tinbergen, Jan; Tobin, James*

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KOREAN AMERICANS

SEE *Immigrants, Asian.*

KOREAN WAR

On June 25, 1950, North Korea's invasion of South Korea transformed a civil conflict under way since the end of World War II (1939–1945) into a conventional war. In

April 1945, U.S. president Harry S. Truman (1884–1972) abandoned a trusteeship plan for the restoration of Korea's sovereignty after forty years of Japanese colonial rule. His quest for unilateral U.S. occupation, after an atomic attack forced Japan's prompt surrender, ended when the Soviet Union entered the Pacific war, resulting in the last-minute decision to divide Korea at the 38th parallel into zones of occupation. The failure of negotiations to reunite Korea led to the creation in 1948 of an authoritarian government under Syngman Rhee (1875–1965) in the south and a Communist regime under Kim Il Sung (1912–1994) in the north. Both Koreas were obsessed with reunification, resulting in major military clashes at the parallel during the summer of 1949. Washington and Moscow, however, opposed their clients' plans for invasion until April 1950, when Kim persuaded Soviet premier Joseph Stalin (1879–1953) that an offensive would spark an internal uprising and bring swift conquest of the peninsula.

At first, Truman hoped that South Korea could defend itself with U.S. air support and more military equipment, actions that the United Nations endorsed in resolutions calling for a ceasefire and assistance for South Korea. Commitment of U.S. ground forces came after General Douglas MacArthur (1880–1964), the U.S. occupation commander in Japan, visited the front and advised that the South Koreans could not halt the advance. Overconfident U.S. soldiers would sustain defeat as well, retreating to the Pusan Perimeter, a rectangular area in the southeast corner of the peninsula. On September 15, MacArthur staged a risky amphibious landing at Inchon behind enemy lines that sent Communist forces fleeing back into North Korea. Mao Zedong (1893–1976), leader of the People's Republic of China (PRC), viewed the U.S.–South Korean reunification offensive that followed as a threat to China's security and prestige. In late November, Chinese "volunteers" attacked en masse. After a chaotic retreat, UN forces counterattacked in February 1951 and moved the line of battle just north of the parallel. MacArthur wanted to widen the war to China, but Truman instead sought a ceasefire and then relieved the general for publicly ridiculing this policy. By June 1951, fighting had reached a stalemate.

Negotiations to end the war began in July 1951, but, after steady progress toward a truce, stalemated in May 1952 over the issue of repatriation of prisoners of war. Peace came because of Stalin's death in March 1953 rather than a U.S. threat to use nuclear weapons against China. An armistice in July ended a brutal war that killed nearly three million combatants and Korean civilians. Almost as destructive was the conflict's impact on world affairs. Still divided, Korea would remain a source of tension threatening regional peace. Sino-American relations were poisoned for twenty years, especially after the United States persuaded the United Nations to condemn the PRC for aggression in Korea. For Japan, Korea not only ignited economic recovery, but led to treaties restoring sovereignty and establishing a security alliance with the United States. Hailed as an example of collective security, the war instead severely strained relations between the United States and its allies, not least because it ensured the survival of odious regimes on Taiwan and in South Korea. Most important, the Korean conflict intensified the cold war, motivating huge increases in U.S. defense spending, the rearmament of West Germany, and the militarization of the North Atlantic Treaty Organization.

SEE ALSO *Cold War; Communism; Mao Zedong; North Atlantic Treaty Organization; Partition; Truman, Harry S.; Union of Soviet Socialist Republics; United Nations*

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James I. Matray

KOYCK LAGS

SEE *Lags, Distributed.*

KREPS, DAVID

SEE *Screening and Signaling Games.*

KRISTOL, IRVING

SEE *Neoconservatism.*

KROEBER, ALFRED LOUIS

1876–1960

Alfred Louis Kroeber earned the second PhD awarded in anthropology in North America, and is regarded as a founder of the modern discipline. He was born in

Hoboken, New Jersey to well-to-do German-speaking parents. Although his family is often described as Protestant, Kroeber attended the Ethical Culture School, which though officially nonsectarian was associated with a secular humanist strand of Judaism. He studied English at Columbia College, switching to anthropology after meeting the charismatic and forceful Franz Boas. His twenty-eight-page dissertation "Decorative Symbolism of the Arapaho" (1901) was an analysis of specimens he collected for the American Museum of Natural History. Kroeber spent his academic career in California, where he established the Department of Anthropology at the University of California at Berkeley and directed what became the Museum of Anthropology there. He retired in 1946, but remained active in the field until his death.

Kroeber married twice. His first wife, Henrietta Rothschild, died in 1913 of tuberculosis. He married Theodora Kracaw Brown in 1926, and adopted her sons, Theodore and Clifton, from an earlier marriage. Theodora and Alfred had two more children, Ursula and Karl. The Kroebers were an academic and literary family. Theodora published many books, including *Ishi in Two Worlds* (1961), a biography of a California Indian. Alfred Kroeber's relationship to Ishi has recently become a controversial subject addressed in *Ishi in Three Centuries* (2003), a collection of scholarly articles edited by sons Karl, a professor of literature, and Clifton, a historian. Kroeber's daughter is the science fiction and fantasy writer Ursula K. LeGuin.

Alfred Kroeber regarded anthropology as a method for doing history. His academic research and writings addressed two broad concerns: theorizing the nature of culture, and delineating the boundaries of and patterns within specific cultures. In the case of the latter, this can be appreciated in his archaeological investigations in Nazca, Peru, through which he contributed to the archaeological concept of seriation, or relative dating, by observing stylistic changes over time. Cultural boundaries figured into his work on the culture area concept published in *Cultural and Natural Areas of Native North America* (1939), whereas patterns within cultures was the subject of his much criticized *Configurations of Culture Growth* (1944). In both works he developed typologies of cultures based on compilations of traits. For Kroeber, a culture was something analogous to grammar: Both were composed of unconscious mental rules or patterns that could be discerned and described.

Perhaps Kroeber's most controversial idea concerned his concept of culture generally. In a 1917 article published in *American Anthropologist* he described culture as "superorganic," an entity that existed apart from and independent of individuals. It was not inherited, only transmitted socially. In other words, culture caused culture. One corollary of this was that individuals and individual variation were inconsequential to describing specific cultures. The trouble with this position is that it ignores the context in which people, the culture bearers, live. The problem is illustrated in a story told by the late George Foster, a founder of medical anthropology and one of Kroeber's students at Berkeley in the 1930s. As a young graduate student Foster was expected to learn how to collect ethnographic data by interviewing an elderly member of a northern California Indian tribe, a man who had been Kroeber's informant many years earlier. As required, Foster traveled to northern California and conducted a series of interviews about "Native culture" with the old man. Finally, the elder told Foster he would have to stop the interviews as he was becoming exhausted from reading Kroeber's *Handbook of the Indians of California* (1925) every evening in order to have something to tell Foster each day.

Kroeber's understanding of culture as monolithic also informed his relationship with the Native California man known as Ishi (c.1860–1916). Ishi was the sole survivor of a group of northern California Indians hunted, harassed, and dislocated by white ranchers and other settlers. In 1911, alone and starving, Ishi came into the town of Oroville, where he was jailed and then turned over to Kroeber's Department of Anthropology. Kroeber, like others in that era, believed Ishi to be the "last wild Indian," and therefore to be in possession of culture uncontaminated by "civilization." Kroeber arranged for Ishi to live and to be a living exhibit at the University of California museum. Kroeber also arranged for his academic colleagues, T. T. Waterman and Edward Sapir, to "work" with Ishi to record his culture and language. The story of Ishi's life in San Francisco is well told in a film made for public television, *Ishi, The Last Yahi* (1992). Ishi died of tuberculosis while Kroeber was in Europe, and despite Kroeber's supposed directive to the contrary, his body was autopsied "for science." Kroeber himself sent Ishi's brain to the National Museum of Natural History of the Smithsonian Institution. The whereabouts of Ishi's brain and Kroeber's role during Ishi's last years of life became a controversy in 1999. Eventually, the brain was removed from the museum and was buried with Ishi's cremated remains in northern California in 2000.

Kroeber's actions and his academic work show him clearly as a man of his time. Despite theoretical and methodological shortcomings now apparent in his work, Kroeber rightly deserves recognition for his contributions to the discipline of anthropology: He published more than 600 scholarly articles and books; along with Boas, he is responsible for institutionalizing anthropology as a university-based discipline; and most significantly, he established culture as the primary object of North American

anthropological inquiry, where it remains a productive subject for social theory.

SEE ALSO *Anthropology; Boas, Franz; Culture; Ethnography; Jews; Le Guin, Ursula K.; Native Americans*

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KSHATRIYAS

The word *Kshatriya* (from the Sanskrit *kṣatra*, meaning "power") refers to the military and administrative subdivisions of South Asian society that arose by the first millennium BCE and those who claim descent from them. It is the second of four *varṇa*s (commonly known as *castes*) in an idealized Hindu social order. Despite shifting political configurations under and after colonialism, the designation *Kshatriya* remains potent as a status marker in the Indian Subcontinent and, to a lesser degree, Southeast Asia due to its prestigious ritual entitlements and literary associations.

Although the word itself is not used, the earliest reference to Kshatriyas as a ruling class appears in the *Rig Veda* (c. 1000 BCE), a sacred text whose codification was roughly contemporaneous with the ostensively occupational stratification of society in what is now Pakistan and northern India. Shortly thereafter, Vedic commentaries assigned differing sacrificial obligations, food prohibitions, greetings, funeral practices, and so on to each of the four *varṇa*s. Kshatriyas were, for example, polygamous and allowed meat and alcohol. However, recorded instances of intermarriage and occasional upward mobility between Brahmans and Kshatriyas of this period illustrate an early fluidity, as well as a tendency to group these two higher *varṇa*s together in relation to everyone else (Anand 1985).

Endogamy and Commensality prohibitions had probably taken hold by around the sixth century BCE, when Brahmans and Kshatriyas began to share competing claims to the top of the status hierarchy. The frame-stories of the philosophical *Upanishads* feature Brahmans at the feet of Kshatriya gurus, while the scriptures of the Kshatriya-founded Buddhist and Jain faiths contain references to and arguments for Kshatriya supremacy.

Brahmanical rejoinders appear in the Indian epics *Ramayana* and *Mahabharata* and in treatises on law and statecraft compiled in the early centuries of the Common Era. The literary record balances valorization of archetypical Kshatriyas such as Rama, the ideal king, with insistence on the superiority of Brahmans and the traditional separation of powers. Much of the conflict in the latter of the two epics, the *Mahabharata*, stems from the reluctance of Kshatriya characters to fulfill their royal or martial duties. This is explicitly argued in the *Bhagavad Gita*, where the god Krishna, himself a Kshatriya, teaches that "heroism, fiery energy, resolve, skill, refusal to retreat in battle, charity, and majesty in conduct" are qualities intrinsic to Kshatriyas, who either act accordingly or incur sin (Miller 1986, p.149). Furthermore, the epics narrate tensions between Brahmans and Kshatriyas in the story of the semidivine axe-wielding Brahman Parashurama's extermination of the world's Kshatriyas. This myth enabled claims, particularly in south India, that true Kshatriyas no longer exist.

A textual tradition that took shape around the same time as the epics concerned itself with the science of *dharma* (law, duty). In addition to a battery of distinctive ritual prescriptions and provisions for succession and alternate sources of income (trading, farming, or banking) under extenuating circumstances, the sustained reflections on the Kshatriya *varṇa* found in these sources interrogate the relationship between the Kshatriya *varṇa* and kingship. An impetus for this debate, which continued into the seventeenth century, was the rise of non-Kshatriyas to political sovereignty. A variety of positions emerged in response, with "only Kshatriyas are rightfully kings" on one end of the spectrum and "whoever rules is king" on the other (Pollock 2005). In practice, further slippage seems to have occurred such that even Muslim rulers could be considered Kshatriyas through matrimonial alliances (Alam 2004).

Varṇa was the primary category employed in the early censuses of the British Raj, which showed marked regional variation in the distribution and social position of the numerous subcastes (*jāti*) anachronistically labeled

Kshatriyas and Allied Castes. While well represented in the north and northwest, Kshatriyas were fewer, poorer, and less educated in eastern and especially southern India, where some Kshatriya subcastes are now considered "backward" and eligible for quotas in the public sector under the Indian constitution (Dirks 2001). Nonetheless, numerous clerical, merchant, and agriculturalist groups around the country, viewing the census reports as opportunities to bolster their reputation, representation, and local rights, formed caste associations to lobby the state for recognition as Kshatriyas. The claims of groups that allowed widow-remarriage or dined with their purported inferiors were denied, but their desire to become known as Kshatriyas and the later use of the Kshatriya ideal to inspire bravery and patriotism by Aurobindo Ghose (1872–1950) and other Indian nationalist leaders highlights the category's cultural capital (Varma 1904).

In 2003 American scholar James Laine's biographical study *Shivaji: Hindu King in Islamic India* provoked heated and at points violent controversy in part by questioning the Kshatriya pedigree of the seventeenth-century hero. Although Oxford University Press withdrew the book from publication in Indian and issued an apology, activists in Pune, Maharastra, assaulted local scholars known to have assisted Lane and severely vandalized the Bhandarkar Oriental Research, where Laine conducted much of his research. Soon thereafter, the state of Maharashtra banned the book and filed slander charges against Laine; all of which indicates that the Kshatriya *varṇa* remains extremely powerful, at least as an idea.

SEE ALSO *Brahmins; Buddhism; Caste; Caste, Anthropology of; Dalits; Hierarchy; Hinduism; Jainism; Stratification; Sudras; Vaisyas*

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KUHN, THOMAS
1922–1996

Thomas Kuhn was the author of five works in the history of science, of which the most influential, *The Structure of Scientific Revolutions*, explores the character of scientific change. On its appearance in 1962 it became the central document for attacks on the logical empiricist account of science as the progressive accumulation of objective knowledge controlled by experimental and observational methods. Though Kuhn regretted and rejected the radical interpretation of this book, this interpretation was natural and served as the starting point for one side in a generation-long "culture war" between exponents and detractors of science's claim to objectivity.

Kuhn's ostensible topic was scientific change, how the broadest theories replace one another during periods of scientific revolution. Among the most important of these was the shift from Aristotelian physics to Newtonian mechanics, from phlogiston chemistry to Lavoisier's theories of reduction and oxidation, from nonevolutionary biology to Darwinism, and from Newtonian mechanics to relativistic and quantum mechanics. Periods of revolutionary change in science alternate with periods of what Kuhn called "normal science," during which the direction, methods, instruments, and problems that scientists face are all fixed by what he called "a paradigm" (the term has gone into common usage). Paradigms are more than just

equations, laws, statements encapsulated in the chapters of a textbook. The paradigm of Newtonian mechanics was not just Newton's laws of motion, it was also the model or picture of the universe as a deterministic clockwork in which the fundamental properties of things were their position and momentum from which all the rest of their behavior could eventually be derived when Newtonian science was completed. The Newtonian paradigm also included apparatus, a methodology, indeed an entire metaphysics. Paradigms drive normal science, and normal science dictates the direction of scientific progress by determining what counts as science altogether.

During normal science, three sorts of empirical enquiries flourish: redetermining previously established observational claims to greater degrees of precision; the establishment of facts without significance themselves but which vindicate the paradigm; experiments undertaken to solve problems to which the paradigm draws one's attention. Failure to accomplish any of these three aims reflects on the scientist attempting them, not the paradigm employed.

Naturally, some disciplines are, as Kuhn put it, in "pre-paradigm" states, as evinced for example by the lack of textbook uniformity. These disciplines are ones, like many of the social sciences, where the lack of commonality among the textbooks reveals the absence of consensus on a paradigm. At some points in the histories of each of the mature sciences, a ruling paradigm emerged. But it could not have done so owing to its correctness or empirical warrant. Apparently, its ascendancy must have a social explanation.

According to Kuhn, once established, the paradigm determined the outcome of empirical inquiry. It is not empirical inquiry that determines the paradigms scientists embrace. Independent of paradigms there are no empirical facts to observe. To illustrate and support this claim Kuhn cited evidence from psychological experiments about optical illusions, gestalt-switches, expectation-effects, and the unnoticed theoretical commitments of many apparently observational words we incautiously suppose to be untainted by presuppositions about the world. Here was Kuhn's most forceful direct attack on the theoretical/observational distinction that underwrites logical empiricism's account of scientific knowledge.

As normal science progresses, its puzzles succumb to what Kuhn called "the articulation" of the paradigm. A small number of puzzles continue to be recalcitrant: phenomena that the paradigm cannot explain, or phenomena the paradigm leads us to expect but that do not turn up, discrepancies in the data beyond the margins of error, or major incompatibilities with other paradigms. In each case, there is within normal science a rational explanation for these anomalies; and eventually further work turns an anomaly into a solved puzzle. Revolutions occur when an anomaly resists solution long enough to produce a crisis. As more scientists attach paramount importance to the problem, the entire discipline's research program begins to be focused around the unsolved anomaly. At some point a (usually younger) scientist formulates a new paradigm, which turns the anomaly into a solved puzzle. But revolutionaries are not behaving in the most demonstrably rational way; nor are their (usually elderly) establishment opponents who defend the ruling paradigm against their approach acting irrationally.

During these periods of competition between old and new paradigms, nothing between them can be settled by observation or experiment. Often there is little or no difference between the competing paradigms when it comes to predictive accuracy, and often the new paradigm fails to solve puzzles solved in the old one. A new paradigm disagrees radically with its predecessor. Sometimes new paradigms are advanced by scientists who do not realize their incompatibility with ruling ones. But the new paradigm must be radically different from its predecessor just insofar as it can treat as a mere puzzle what the previous one found an increasingly embarrassing recalcitrant anomaly. Paradigms are so all encompassing, and the difference between paradigms is so radical, that Kuhn wrote that scientists embracing differing paradigms find themselves literally in different worlds. Paradigms are, in Kuhn's words, "incommensurable" with one another, in the sense of not being translatable one into the other, as poems in one language are untranslatable into another. And this sort of radical incommensurability underwrites the further claim that paradigms do not improve on one another, and that therefore science does not cumulate in the direction of successive approximation to the truth. Thus the history of science is like the history of art, literature, religion, politics, or culture, a story of changes, but not over the long haul a story of "progress."

Because a new paradigm is literally a change in worldview, and at least figuratively a change in the world in which the scientist lives, it is often too great a shift for well-established scientists. These scientists, wedded to the old paradigm, will not just resist the shift to the new one, they will be unable to make the shift; what is more, their refusal will be rationally defensible. Or at any rate, arguments against their view will be question-begging because they will presume a new paradigm they do not accept. What is more, there is, recall, no neutral ground on which competing paradigms can be compared. When allegiance is transferred from one paradigm to another, the process is more like a religious conversion than a rational belief shift supported by relevant evidence. Old paradigms fade away as their exponents die off, leaving the proponents of the new paradigm in command of the field.

Progress is to be found in science, according to Kuhn, but like progress in evolution, it is always a matter of increasing local adaptation. In one of the last pages of his book Kuhn wrote, "We may, to be more precise, have to relinquish the notion, explicit or implicit, that changes of paradigm carry scientists and those who learn from them closer and closer to the truth" (1962, p.170).

The consequences of this account for skepticism about science's epistemic status were evident to Kuhn. He spent much of his career after the appearance of *The Structure of Scientific Revolutions* trying to reconcile its account of scientific change with the objectivity and cumulation of scientific knowledge.

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KUHN-TUCKER CONDITIONS

SEE *Maximization; Programming, Linear and Nonlinear.*

KU KLUX KLAN

Founded in Pulaski, Tennessee, in the spring of 1866 by six former Confederate soldiers, the Ku Klux Klan quickly emerged as an antiblack and anti-Republican force in the South. Following the passage by Congress of the Reconstruction Acts in 1867, Klansmen began a reign of terror, abusing, intimidating, assaulting, and sometimes murdering those who sought to create a true democracy in the former slave states. Riding across the countryside in white (and black) robes, they burned churches, schools, and the homes of former slaves and their white sympathizers.

In his fine study of the topic, Allen Trelease (1971) described this first Klan as a "conspiracy" among many whites in the Democratic Party to subdue their rivals, but historians have pointed out the lack of communication between Klan members in different states and locales during this period. Even if there was no conspiracy, there was large-scale participation. One estimate noted that in Alabama alone there were ten thousand Klan members. In 1870 and 1871, however, President Ulysses S. Grant (1822–1885) signed into law what were called the Force Acts, giving the federal government authority to protect freedmen and Republicans. The Force Acts drove the Klan underground, and the racial and political violence that occurred in subsequent years was mostly caused by white vigilante groups.

The second Klan, founded by William Joseph Simmons (1880–1945) at Stone Mountain, Georgia, in 1915, expanded the geographical reach and organizational purpose of the group. The second Klan acquired immediate legitimacy with the almost simultaneous release of D. W. Griffith's sympathetic and successful motion picture, *Birth of a Nation* (1915), based on Thomas Dixon Jr.'s novel *The Clansman* (1905). By the 1920s, Klan rallies, complete with cross burnings, were being held in the South, Southwest, and north-central states. The city where perhaps the largest Klan rally in American history occurred was Kokomo, Indiana, on July 4, 1923, when about 100,000 Klansmen and Klanswomen gathered to celebrate the inauguration of a new Grand Wizard. The second Klan stood against foreigners, Jews, blacks, and Catholics, proclaiming "Native, white, Protestant supremacy." In this movement to create an all-white society, the Imperial Wizard of the Invisible Empire, as the head of the Klan was called, explained: "We know that we are right in the same sense that a good Christian knows that he has been saved and that Christ lives" (Mann 1968, p. 129). With a national organization and national distribution of regalia, the new message of hate attracted a large membership, estimated at several million. It was this incarnation of the Klan that neither the U.S. government nor state and county agencies, including law enforcement departments, were able to curb or drive to cover. The Great Depression of the 1930s, however, decimated its ranks. With poverty, hunger, and unemployment among millions of Americans during the Great Depression of the 1930s, the Klan's membership declined precipitously.

Following World War II (1939–1945), several Klan organizations emerged in various sections of the country. Klan members fought against the civil rights movement in the South and were responsible for bombings, burnings, and murders in Alabama, Mississippi, and other states. In response to this violence, the Southern Poverty Law Center, a small civil rights law firm, was founded in 1971 in Montgomery, Alabama. Today, the center is internationally known for its tolerance education programs, its legal victories against white supremacists, and its tracking of hate groups. More recently, some Klansmen, including David Duke, have gained celebrity status by appearing on television talk shows. Throughout its history, however, the Ku Klux Klan has been a secret, terrorist organization dedicated to promoting white supremacy in the United States.

SEE ALSO *Racism; White Supremacy*

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Loren Schweninger

KURTOSIS

SEE *Descriptive Statistics.*

KUZNETS' CURVE

SEE *Kuznets Hypothesis.*

KUZNETS HYPOTHESIS

During the twentieth century, economists began analyzing the growth and development of economies to determine their welfare-improving effects on citizens. One of the ways these effects have been measured is by calculating the impact of economic growth on a country's income distribution. Simon Kuznets (1901–1985) was the first economist to attempt to do this. Kuznets (1955) conducted a study into the evolution of the distribution of personal income from 1870 to the 1950s and found that the relative distribution of pretax income in the United States, Germany, and England had been gradually moving toward equality. Per capita income in these countries had been increasing over the entire period, but at some point the share of the lower-income group began increasing more rapidly than that of the higher-income groups. The developed countries saw increasing income inequality with growth, then experienced decreasing income inequality. In developing countries, however, income inequality had been increasing along with increases in per capita income.

Economic theory suggests that a higher income share among a country's wealthy will lead to increased savings, thus increased wealth. Economic growth also usually leads to an increase in industrialization and urbanization, with an increasing disparity in income between rural and urban sectors. These trends suggest that there should be increased inequality with economic growth. Therefore, the trend toward income equality for these developed economies was a puzzle to Kuznets.

W. A. Lewis's (1954) dual economy model provides some explanation. According to Lewis, an economy starts with unlimited supplies of labor in its agricultural sector. As the economy develops, it creates another more industrialized sector—a manufacturing sector. This change causes a movement of labor from the agricultural sector to the new sector, and leads to worsening income inequality as the new sector enjoys better returns. However, increased movement of labor across the two sectors will, in the long run, reach a turning point, causing incomes in the agricultural sector to improve and leading to greater income equality.

Another plausible explanation for the effect of development on income inequality is its effect on education and the production of human capital. At the initial stages of development, only the rich may be able to afford education, augmenting their skills and thus their income. This will increase income inequality. However, as per capita income increases and more people are able to afford education, the income of the poor will converge with that of the rich.

THE INVERTED-U HYPOTHESIS

The inverted-U hypothesis paradigm originated from Kuznets's initial observation of the growth and distribution of income inequality in the United States, Germany, and England. Some economists argue that this theorem can be applied to all economies, and they have been using empirical evidence to prove this theorem and to determine the causal roots of this process. To be able to successfully test this theorem, however, long-term income distribution data is required. The lack of such data has led to many creative means of testing and to a lack of consensus among economists on how the hypothesis works and what happens when there is increasing per capita growth.

Felix Paukert (1973) used cross-sectional data of countries (although he acknowledged the need for long-term data) and found a tendency toward equality among developed countries, as evidenced by an increase in the share of income of the bottom 60 percent. Among developing countries, however, there is a tendency toward inequality, although Paukert was unable to offer definitive conclusions due to the lack of data in the sample. He therefore analyzed a cross section of forty-three countries and found a Gini ratio of 0.467 among developing countries and 0.392 among developed countries. Since the Gini ratio measures inequality of a distribution ranging from 0 to 1, where 0 corresponds to perfect equality (everyone has the same income) and 1 corresponds to perfect inequality (all but one person has zero income), Paukert's findings suggest that developed countries have moved toward greater equality relative to developing countries.

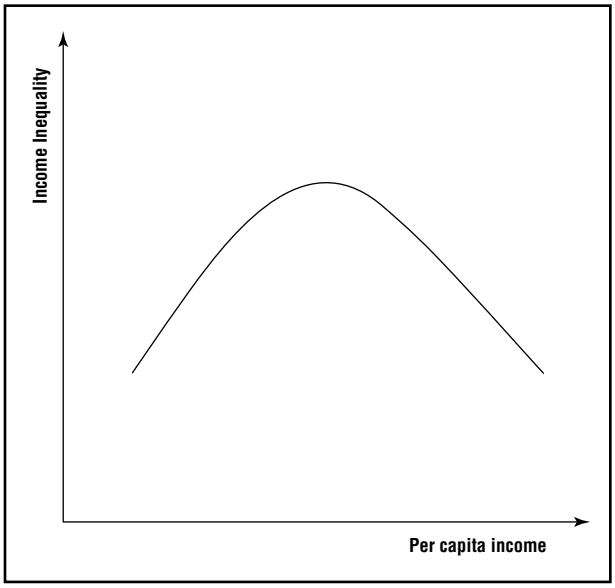

Figure 1

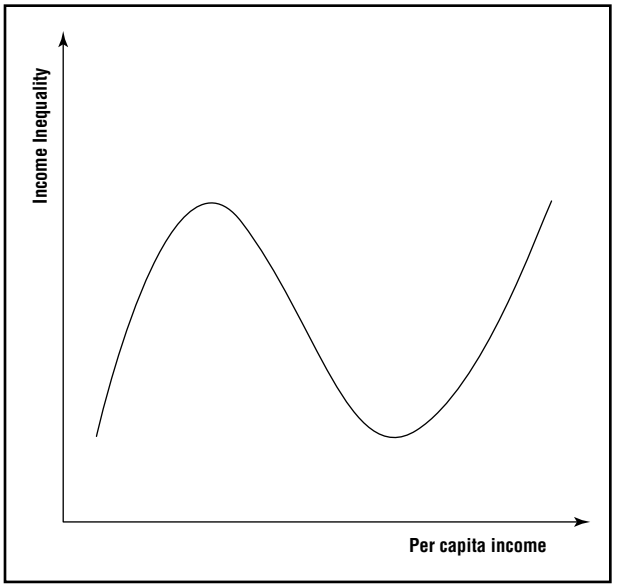

Figure 2

Montek Ahluwalia (1976) followed up on the work of Paukert and determined the relationship between income inequality and per capita growth rate using cross-country data. His sample included sixty countries—forty developing countries, fourteen developed countries, and six socialist countries. Ahluwalia's results showed that an inverted U-shape could be fitted onto the countries at various stages of development and income inequality. However, the slope of the fitted curve changed when he looked at the sample of developing countries. These results were, however, obtained by controlling for socialist countries, because their policies tend to move countries toward development. Ahluwalia suggested that these results may be "stylized facts" for which an explanation may not be possible.

The use of cross-country regressions with countries at different stages of development is not an effective method for testing the Kuznets hypothesis. This method assumes that the turn from increasing to decreasing income inequality happens around the same level of per capita income for all countries. It also assumes homogeneity across countries. Ashwani Saith (1983) questioned whether the empirical work done to confirm the U-hypothesis is in vain. There exists diversity between countries that cannot be accounted for by controlling for whether a country is socialist or developing. A logical way to test the hypothesis may be a time series analysis for individual economies or simultaneous equations on all countries. Nonavailability of the necessary data has kept this project from being undertaken.

THE S-CURVE

Income inequality began increasing in the late 1960s and early 1970s in the United States, England, and Germany, creating yet another puzzle for economists. Rati Ram's (1991) time series study of U.S. data on income inequality from 1947 to 1987 showed that income inequality followed more of a U-shaped pattern than an inverted-U. His data do not include the earlier period of increasing income inequality. This finding has led to the S-curve hypothesis, which implies that with growth in per capita income, an economy will begin to experience increasing and then decreasing income inequality, and after a period of adjustments, income inequality will begin to rise again. Other economists have argued that the inverted-U is just repeating itself, and thus we should expect to see another period of declining inequality. However, the why and when remain unanswered.

John List and Craig Gallet (1999) analyzed data from seventy-one countries for the 1961–1992 period to test this hypothesis, and found that countries could be placed along all the turns of an S-curve. For example, third-world and developed countries are located on the upward-sloping portion of the curve, while emerging economies are located on the downward-sloping portion. Unfortunately, in addition to covering only a short time period, their data did not include all years for all countries. What they ultimately prove is the relationship between per capita income and income inequality in the world. They fail to address historical change in inequality with changes in per capita income.

Romie Tribble (1999) associated the turn from decreasing income inequality to increasing income inequality with another change in the important sector that affects economic growth. The first turning point in the S-curve can be attributed to economies moving from an agricultural to a manufacturing sector. The second turning point occurs when the service sector becomes dominant, a development characterized by increasing returns to education, thus leading to economic growth. Using U.S. data from 1947 to 1990, Tribble proved that the S-curve fit the data. The shifts in the sectors matched the years considered, but he was unable to test this finding. If his analysis is correct, it implies that some developing countries that never build up their manufacturing sector and seemingly move directly from an agricultural sector to a dominant service sector may never experience a period of decreasing income inequality.

THE CURRENT STATE OF INCOME INEQUALITY

An example of whether Kuznets's hypothesis can be translated to other developing countries can be found in the economic growth of Asian countries, especially the "tigers." The four big East Asian tigers—Singapore, Taiwan, Hong Kong, and South Korea—achieved high growth rates between the 1960s and the 1990s through export-driven economies. They were able to maintain this growth rate by an increasing shift to the manufacturing sector, industrialization, and improvements in education. However, armed with the experiences of developed nations, these economies offered protection for their agricultural sector in the form of better property rights and subsidies. A graph of income inequalities as measured by the Gini-coefficient over this period shows Hong Kong with a U-shaped curve, and its minimum inequality occurring in 1980 at a Gini of 0.39. Taiwan experienced declining income inequality up to the 1980s, and its Gini of about 0.29 remained fairly constant thereafter. Singapore and South Korea's income inequality also appears to have remained fairly constant over the time period (data obtained from the UNU/WIDER World Inequality Database, Version 2.0, developed from the Deininger and Squire [1996] dataset).

Income inequality has been increasing in most countries, with the worst increases occurring in developing countries. Countries that should be experiencing decreasing inequality according to the inverted-U hypothesis do not experience it. Increases in cross-country trade, factor mobility, and the ease of capital movement across nations have led to increased globalization. Growth in per capita income could thus be occurring in a nation, but its benefits may not be realized by its population.

CONCLUDING REMARKS

Empirical work done on the Kuznets hypothesis generally begins with an assumption about what the relationship between growth and inequality should be, leading to an estimation technique that confirms the assumption. Growth in per capita income cannot fully explain changes in income inequality. Economic growth does not in itself change the income of the poor; rather, it presents opportunities for improving the population's welfare through the policies adopted in a country. Analyzing this relationship requires a better understanding of these policies and their effects.

Another complication in this analysis is the reverse effects that income inequality could have on economic growth. Economists have theorized that more money in the hands of the rich would lead to increased investments and thus growth in the nation. However, isolating the effects of economic growth could prove daunting.

SEE ALSO *Inequality, Income*

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Frimpomaa Ampaw

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LABAN, RUDOLF VON

SEE *Dance.*

LABANOTATION

SEE *Dance.*

LABELING THEORY

According to the French sociologist Émile Durkheim, the broad themes of labeling theory are located in the definition of crime as necessarily relative. Other antecedents of the explicit theory include Erving Goffman's stigma, Robert K. Merton's discussions of innovators, rebels, and conformers, Frank Tannenbaum's wonder at the actual normalcy of much delinquent behavior, and Edwin M. Lemert's distinction between primary and secondary deviance. The theme of social conflict over the decision of what to label as deviant is at the heart of this concept, and scholars emphasize it repeatedly. Further, John Hagan's work asserts that labeling theory is fundamentally concerned with the effect of the label in the process of creating the deviant career.

The work of identifying the deviant and the importance of the deviant's label has primarily focused on crime and illness, both mental and physical, although Goffman's general concern with stigma and spoiled identities includes attention to understanding minority identities as deviant. After acknowledging the power and consequences of the label, several authors discuss the tools people use to achieve, contest, hide, or discard these labels. In his research, William Chambliss focused on the importance of visibility in the labeling of deviants as in part a function of economic inequality. The expertise of appropriate demeanor when confronted with authorities to whom one is visible is also crucial. Others tools include reinforcement/intervention, identity transformation and reintegration, selective concealment, and negotiation and fighting back.

Although prolific in symbolic interactionist and micro-level approaches, historical analyses of the labeling process look to structural, macro-level processes, such as the change in label from serf to vagrant, and the implications of the "new" phenomenon of middle-class delinquency, understood in part as a function of a failure to label due to structural positions of particular deviants and the "informal handling and preferential treatment" they thus receive (Vaz 1967, p. 1). While not necessarily using labeling theory terminology, the law and society perspective incorporates the idea that what the law does is label and create insiders and outsiders. As well, in general social structural terms, the importance of the moral entrepreneur in re-labeling in social change efforts, such as the Marijuana Tax Act or the civil rights movement, is important.

Critiques of the theory have focused on its assumption of an overly reactive individual. Sethard Fisher argued that labeling theory improperly weighted the label, and did not pay sufficient attention to choice, opportunity, or "common pre-existing characteristics" that might lead one to commit a deviant act (1972, p. 83). This involves a focus on the preexisting in terms of an actual deviant labeling process vis-à-vis a particular instance of behavior, but it is perhaps too narrow a focus. Labeling as a perspec-

tive may be understood to encompass attention to the interaction of a host of labels, social positions, or roles. In this early set of critiques, Hagan also posited "psychological difference" as one such preexisting difference that labeling theory does not attend to with enough rigor. However, research does support that preexisting differences such as class, race, and gender are among the prime concerns of the perspective, even if psychological differences per se are not.

Hagan's late-twentieth-century work introduced the Power-Control theory, which emphasizes inherent power relations in determining delinquent actions and what is considered deviant; for example, "the class structure of the family plays a significant role in explaining the social distribution of delinquent behavior through the social reproduction of gender relations" (1988, p. 146). This is an explicit acknowledgement of the problem of failing to live up to a variety of labels (e.g., girl, middle-class, white). However, this position does not seem to acknowledge that interaction across "vertical, hierarchical lines of power" has indeed been the major theme of labeling theory. For example, "[P]ower usually brings preferential symbolism" (1988 p. 2) seems to be another way to say, "In the eyes of the police and school officials, a boy who drinks in an alley and stands intoxicated on a street corner is committing a more serious offense than a boy who drinks to inebriation in a nightclub or a tavern and drives around afterwards in a car" (Chambliss 1973, p. 10). "What distinguishes a structural criminology is its attention to instrumental and symbolic uses of power, both in relation to criminal behavior and in the study of reactions to this behavior" (Hogan 1988, p. 2), is not unlike Nancy J. Herman's argument—albeit in the lifeworld of the ex-crazy—on such negotiations of power. Thus, the newer perspectives of critical criminology and structural criminology are in many ways permutations of the general themes of the labeling perspective: "rules are the product of someone's initiative" and "duties are imposed upon us that we have not expressly wished. Yet it is through a voluntary act that they arose" (Becker 1963, p. 147; Durkheim 1982, p. 174). In other words, members of society must negotiate over their labels, even if they do so from within unequal positions of social power.

SEE ALSO *Deviance*

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Sarah N. Gatson

LABOR

Labor is one of the three primary factors of production, next to capital and land. However, different from the other two, labor deals with the work of humans rather than money or the property it can rent or buy. Being part of labor requires thus that one is paid for one's labor services.

The provision of labor was seen by the French sociologist Émile Durkheim (1858–1917) as part of the identification of a worker with society or part of the struggle of the personality with society. The laborer as the member of a class—the working class—is also a recurring theme in sociology. Two classical expositions come from the political philosopher Karl Marx (1818–1883), who offers a historical analysis of class struggle, and the sociologist Max

Weber (1864–1920), who uses class more as a classification of stratification. The reward of wages in the context of labor, especially its share of the entire production process encompassing all factors of production, also mirrors the importance and power of the class within society.

ANCIENT LABOR TO INDUSTRIALIZATION

Ancient labor markets, especially in ancient Greece and Rome, were based on agriculture and manufacturing. Both relied heavily on slave labor, which provided both skilled and unskilled labor.

In medieval times, the common agricultural laborer, or peasant, produced for self-sufficiency, and there was little exchange economy. Labor was dependent on the aristocrats, who were the landowners. The feudal landlords granted protection and the right to use the land in exchange for taxes that included labor services, which is commonly called bondage. This hierarchy from lord to serf was common from higher to lower aristocracy and from aristocrats to peasants. Extortion of both goods and labor services were enforced not only by the aristocracy's ownership of the land, but also by their executive and judicial power.

Manufacturing, which was usually strong in the free cities (i.e., those not under the rule of an aristocrat), was in the hands of guilds whose members organized themselves to protect their interests. Workers had to learn a craft by going through the apprenticeship as journeyman, and they depended on their guild master both financially and also professionally as the guild masters decided upon elevation to the master level. While labor was in this sense not free, moving to the free cities to become a craftsman allowed one to free oneself from aristocratic rule.

Factory work forms the core process of industrialization, moving away from small-scale production at home and toward large-scale, specialized production. This specialization process is described with the example of the pin factory by the Scottish economist Adam Smith (1723–1790):

> [I]n the way in which this business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches, of which the greater part are likewise peculiar trades. One man draws out the wire, another straights it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on, is a peculiar business, to whiten the pins is another; it is even a trade by itself to put them into the paper; and the important business of making a pin is, in this manner, divided into about eighteen distinct operations, which, in some manufactures, are all performed by distinct hands. (Smith 1776, p. 15)

While Smith understood the importance of specialization, in his time the impact of machines was probably still underestimated. Mechanization using the steam engine in the eighteenth century led to a higher productivity of factory work, which is commonly seen as the breakthrough in the process of industrialization.

Smith did provide the intellectual underpinning of the capitalist model in which the pursuit of self-interest under free competition leads to higher wealth for society. His influential work was even used in English courts to prohibit union activities, as the unionization of labor was seen as a hindrance to free competition.

Together, mechanization and specialization led to a certain alienation of the laborer toward the production process. Labor became, next to capital, a true factor of modern production. During the period of industrialization, peasant workers moved away from agricultural work and toward that of unskilled labor in the newly established manufacturing plants. These laborers were no longer dependent on landowners but became wage workers, forming the working class. The process of industrialization was a long one. Exploitation of the workers was the norm rather than the exception as sufficient labor arrived from the ranks of agricultural workers. Edward P. Thompson, in "The Moral Economy of the English Crowd in the Eighteenth Century" (1971), writes of the formative years from 1780 to 1832 in England. He describes in detail the life and the movements of the English working class of that time. It was through the struggle of the workers that the notion of a working class evolved, which was necessary to develop labor organization.

It took about a century for wage labor to become the norm in the nineteenth century as increasingly more workers were employed, replacing work on the land with work in the newly established factories. The movement from larger workshops to mechanized industries took two centuries, from the late eighteenth century into the early twentieth century. Industrialization commenced in England and was started in continental Europe several decades later, starting with Flanders, France, and later in Germany, Switzerland, and some southern European countries.

LABOR ORGANIZATION

Labor organization commenced in Europe in the eighteenth century, first within an urban setting or within factories, solely to perform the social functions of exchange and insurance against illness. National organization arose in Europe in the late nineteenth century. It was the skilled worker, at a level between owner and unskilled labor, who

participated in the organization of labor in unions. Labor organization was not at first a reaction to hardship. In fact, the living standards of workers, unionized or not, were steadily rising throughout Europe from 1850 to 1900.

The history of unions in the United States started in the nineteenth century. In the turbulent decades from 1870 to 1890 the groundwork for organized labor was laid. The National Labor Union (NLU), founded in 1866, was the first federation of unions, followed by the Knights of Labor in 1869. The latter disintegrated after the Haymarket Riot on May 1, 1886, in Chicago in which unions unsuccessfully demanded the eight-hour working day.

The American Federation of Labor (AFL), founded in 1886, organized mainly skilled workers, while the more radical Industrial Workers of the World (IWW), founded in 1905, provided a federation for unskilled labor. The membership in the IWW declined with the Palmer Raids (1918–1921), named for Alexander Mitchell Palmer, the U.S. attorney general after World War I who led the government attack on the radical left during the "Red Scare" period.

Unions in the United States did not become a political factor in those years. This has been attributed to several reasons: The U.S. political system was fragmented between states and the federal level, and it discouraged worker movements. Furthermore, employers' associations reacted very strongly against the labor organizations. Janet Currie and Joseph Ferrie argue in the *Journal of Economic History* (2000) that despite some legislative changes in favor of the laborer, unions refrained from a national political influence and instead sought to negotiate on a company level.

This changed after the Great Depression and especially under the New Deal programs of President Franklin D. Roosevelt. The labor movement was strengthened, and the government found its role in brokering agreements between businesses and labor unions. The government's aims were to provide some assistance to poor and unemployed workers and to establish the rights of labor unions, which culminated in the Wagner Act.

During the 1930s, the Congress of Industrial Organizations (CIO) organized industrial workers who were part of the emerging large-scale corporations. This represented a movement from crafts-based unionism toward industry unions. The CIO argued that crafts-based unionism was no longer suitable to many industries in which several crafts were undertaken, thus artificially dividing the unionized workers within a firm. One union organized within the CIO was the United Auto Workers (UAW). The CIO split off from the AFL to form its own entity in 1938. After World War II (1939–1945), as most differences were settled, the two combined into the AFL-CIO, under which most unions are aligned.

NEW MODES OF PRODUCTION, LABOR SAVINGS, AND GLOBALIZATION

The 1960s marked the beginning of steady decline in union membership. After the economically strong years following World War II, workers faced increasingly more plant shutdowns. During the 1970s the fear of mechanization and the displacement of men by machines was a recurring theme. In the 1980s cheaper foreign labor began replacing domestic labor. This was most explicit within the automobile industry, in which European and especially Japanese manufacturers provided fierce competition against the American car manufacturers. Under this pressure, union power eroded over time. The fear of globalization was amplified during the negotiations about the North American Free Trade Agreement, which opened up the markets of Mexico, Canada, and the United States in 1994. The opponents feared U.S. workplaces being moved to Mexico, with cheaper labor and lower working standards. In consecutive years, intensifying trade and the outsourcing of labor-intensive industries, especially to Asian countries, weakened the union even more.

This increasing globalization was anticipated in Robert Reich's book *The Work of Nations* (1991). His main theme is that the division of workers into skilled and unskilled occupations is extended to a threefold partition into routine producers, in-person service providers (services that have to be provided person to person), and knowledge workers. The last type is rather broad as it includes some people who are usually not considered part of labor, such as entrepreneurs. It is this last type of worker for whom Reich foresees the best prospects, while the routine producers in particular will be replaced either by foreign competition or machines. The in-person service workers are somewhat protected from foreign competition as they require the physical availability of labor.

While the traditional struggle between the capitalist class (the providers of capital) and the labor class seems outdated, Stanley Aronowitz argues in *How Class Works* (2003) that labor still struggles over institutional arrangements such as working hours, overtime pay, and working conditions. These social movements are in essence class struggles over the division of power between capital and labor. In the United States capital is still the decisive element, argues Aronowitz, as the workers did not unite the aims of the different groups (immigrants versus native, black versus white, male versus female), but Aronowitz argues labor should still strive to unite as a force in order to strongly support its common goals.

U.S. FEDERAL LABOR LAW

Labor law reflects the struggle and achievement of labor in a nation. In the United States, the following legal developments show the evolution of current laws. While not intended to forbid the labor unions, the Sherman Antitrust Act of 1890 was used for many years to hinder union work. Its unspecific nature prohibiting "combinations in restraint of trade" allowed its use against combined, unionized demands from workers. The Clayton Antitrust Act, Section 6 (1914), remedies this shortcoming as it explicitly exempts labor unions. The National Labor Relations Act, or the Wagner Act (1935), allowed union representation and established the National Labor Relations Board. It allowed for collective bargaining and strikes to enforce demands. However, the Wagner Act does not encompass all workers; agricultural workers, for example, are excluded.

The Fair Labor Standards Act (1938) enacts minimum wages and overtime pay, and it abolishes oppressive child labor. While it originally included many exemptions, over time several of those have been eliminated so the act covers all blue-collar workers while excluding supervisory functions.

During World War II, the Fair Employment Act (1941) was introduced, prohibiting racial discrimination. Initially it was intended only for the national defense industry, but it was later extended to encompass all labor relations and to prohibit many forms of discrimination in the workplace.

The Taft-Hartley Act (1947), or Labor-Management Relations Act, and the Labor Management Reporting and Disclosure Act (1959) amended the National Labor Relations Act to restrict union power. The acts prohibit unfair labor practices by unions, which were previously only prohibited for employers. Unions were no longer allowed to influence the employers in their allocation of work to different plants. Secondary boycotts—for example, the refusal to handle the goods of non-unionized companies—were also prohibited. Closed-shop agreements—that only union labor could be hired by employers—were also outlawed.

LABOR INSTITUTIONS

The International Labor Organization (ILO) was created in 1919. There were several reasons for the establishment of such an organization. Its primary concern, a humanitarian one, was for the welfare of the worker. Numerous workers in many different countries had to work under exploitative circumstances, threatening their life, health, and family life. A second purpose was to integrate the growing working class into the political process and thereby to avoid social unrest or revolutions that could impede international peace. This aim is also found in the constitution of the ILO, as peace can only be achieved along with social justice. An economic motivation for the establishment of the ILO was concern over the cost of upholding humanitarian working standards. It was generally agreed that international standards for working conditions would avoid a race to the bottom—that is, a competition among nations over low labor costs, to the detriment of the workers. The organization of the ILO is tripartite. Each member country has two representatives of the government, one of the employers' associations, and one of the labor unions.

In 1926 the ILO introduced a supervisory system to control the implementation and enforcement of its standards. This was an important step toward a more functional organization that went beyond discussing pressing issues. The United States, which was involved in several aspects of the founding and establishment of the ILO, became a member in 1934. One of the main steps forward was the Declaration of Philadelphia, adopted in 1944, which introduced freedom of association for workers. In 1969, the ILO was awarded the Nobel Peace Prize.

The U.S. Department of Labor is the governmental organization responsible for labor in relation to occupational safety, wage and hour standards, unemployment insurance benefits, reemployment services, and labor statistics. On the national level, the Bureau of Labor Statistics is the principal organization within the United States to provide statistical information and research for the government. While it is part of the Department of Labor, it serves as an independent statistical agency and provides labor market statistics as well as occupational forecasts. Other countries have organizations that have similar goals, albeit often less extensive ones.

SEE ALSO *Agricultural Industry; Capitalism; Class Conflict; Division of Labor; Factories; Factory System; Industrialization; Industry; Labor Force Participation; Labor Market; Labor Supply; Labor Union; Management; Productivity; Smith, Adam; Thompson, Edward P.; Unions; Work; Work Day; Work Week*

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Ben Kriechel

LABOR, MARGINAL PRODUCT OF

Consider a firm producing a homogeneous output y employing labor l and other n factors of production: x_1, x_2, …, x_n. The change in output resulting from the addition of one extra unit of labor, with the other inputs being held constant, is called the marginal, or physical, product of labor (MPL). Formally, assuming that the technology of the firm is described by the production function $y = f(l, x_1, x_2, \ldots, x_n)$, MPL is expressed as follows:

$$\text{MPL} = \frac{\Delta y}{\Delta l} \quad (\text{given } x_1, x_2, \ldots\ldots x_n)$$

Broadly speaking, the concept of MPL describes the ratio of change in output stemming from a small, or "marginal," increase in the use of labor. Moreover, modern neoclassical production theory assumes that labor (and the other inputs it is combined with) can be employed at a continuous level (a realistic assumption labor is measured in "labor time"), and that the production function is continuous, with continuous first derivatives. The marginal product of labor can then be rigorously expressed by the first partial derivative of f with respect to l:

$$\text{MPL} = \frac{\partial f(l, x_1, x_2, \ldots\ldots x_n)}{\partial l}$$

Although the same name is generally given to the two definitions reported above—and what follows will conform to this general use—it would be more appropriate to call the former (the discrete case) the "marginal product of labor," while the latter (the continuous case) would be more appropriately defined as the "marginal *productivity* of labor." These definitions may be easily extended to the case of joint production, that is, when a firm, for a given combination of inputs, produces more than one output (the so-called multiproduct firm).

THE MARGINAL PRODUCT OF LABOR AND THE DISTRIBUTION OF INCOME

The concept of MPL has a central place in marginal productivity theory, since at the very core of this approach is the understanding that in a competitive market the remuneration of each productive factor should be equal to its marginal contribution to production. A direct implication is that as the relative prices of factors change, the proportion in which they are employed will change as well, in order to reestablish equality between marginal product and input prices. This is known as the *principle of variation*. With respect to labor (p and w are, respectively, the unit prices of output and labor), profit maximization requires that, at equilibrium, the real wage should be equal to MPL: $\frac{\Delta y}{\Delta l} = \frac{w}{p}$. This can also be written as $p\frac{\Delta y}{\Delta l} = w$ (the second order condition for a maximum is guaranteed by the assumption that MPL is, at least to a certain level of l on, a decreasing function of l). The equation $p\frac{\Delta y}{\Delta l}$ represents *the value of the marginal product of labor* (VMPL) and its schedule below the maximum of the *value of average product of labor* (VAPL $= p\frac{y}{l}$) represents the short-run firm's demand curve for labor. If the firm operates in a noncompetitive market for its product, profit maximization requires that MPL × MR = w, where MR is the marginal revenue generated by an extra unit of output (in perfect competition MR = p). MPL × MR is called *the marginal revenue product*, and in this case its schedule (below the maximum of VAPL) represents the short-run firm's demand curve for labor (a deeper analysis of these matters may be found in any standard microeconomic text).

THE LAW OF VARIABLE PROPORTIONS AND THE LAW OF DIMINISHING PRODUCT

Consider, for the sake of simplicity, a "canonical" short-run production function: $y = f(K_0, l) = F(l)$, where l (as before) is labor, y is the output of the firm, and K_0 is a fixed given amount of another input that is conventionally defined as "capital" (or better services of a "capital

good"). Neoclassical production theory admits various possibilities concerning the variation of MPL as l changes. According to the *law of variable proportions,* as the firm increases the use of labor, holding K constant at a given level (K_0), the output will first increase at an increasing rate up to a point, say $l = l^*$, and thereafter increase at a decreasing rate, depicting a *S*-shaped production function. This law expresses the idea that, for given input prices, there is an optimal employment ratio of K and l in correspondence of each quantity of output produced, but since capital is an indivisible input the firm cannot use less capital than K_0. Consequently, the first increments of l will cause y to increase at an increasing rate, since the addition of further units of labor leads to a more "favorable" proportion between l and K_0. However, successive additions of labor will lead, sooner or later, to a point (E in Fig. 1) where the constraint of the constant factor will operate in the opposite manner. From this point on, further units of labor lead to a less "favorable" proportion between l and K_0, so that each additional unit of labor will add less output than its predecessors.

Another widely used assumption about MPL is the so-called *law of diminishing product*, which states that as l increases, output will always increase less than proportionately, implying a concave production function (the explanation is the same as for the one given above from point E on). Although this second law avoids the indivisibility assumption (which is not necessary in the neoclassical productivity theory, and may lead to some theoretical contradictions), it rests on an idea that is sometimes difficult to justify: that MPL will always decrease whatever the given amount of K may be.

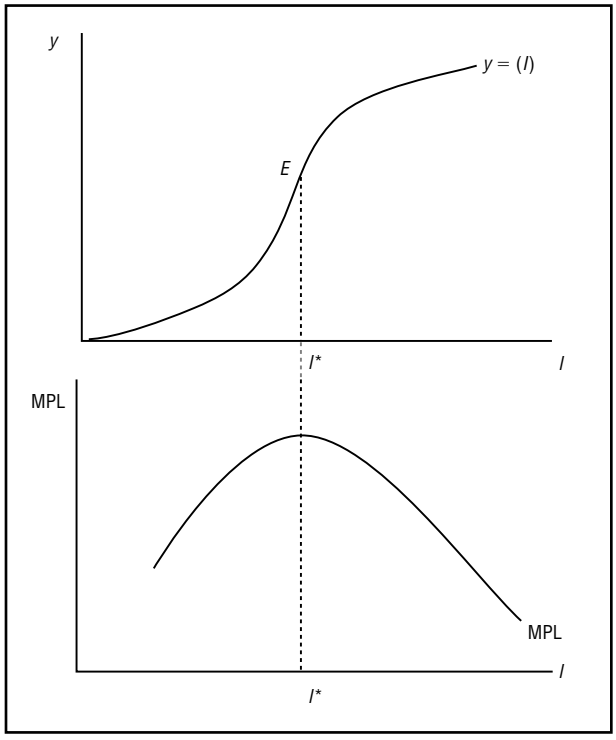

Figure 1: The Law of Variable Proportions

Both laws admit the possibility that a level of l may be reached at which MPL = 0, after which further increments of l will cause the MPL to become negative. One could say that at this point the given capital stock will treat further additions of labor as a "disservice."

HISTORICAL DEVELOPMENT OF THE CONCEPT

The first formulation of the law of variable proportions can be found in a work by the French economist Anne-Robert-Jacques Turgot (1727–1781), who showed that when advances (seeds) on a given piece of land are increased, the product will first rise more than proportionately, but that after a certain point the diminishing product will prevail, until "the fertility of the soil being exhausted … an addition to the advances will add nothing whatever to the produce" (quoted in Sraffa 1925, pp. 327–328). The role of MPL in the explanation of labor's reward may be found in various forerunners of marginal revolution, and in the works of the earlier neoclassical economists—particularly William Stanly Jevons (1835–1882) and Carl Menger (1840–1921). Only in the 1890s, however, with the contributions of John Bates Clark, Alfred Marshall, Knut Wicksell, and Philip H. Wicksteed, was a coherent theory of distribution fully established. Marshall, also through numerical examples, proved that profit maximization requires that real wages equal MLP. Clark claimed that, according to the marginal theory, production and distribution become faces of the same process of determination of value (undoubtedly one of the main goals of neoclassical theory), and that each "social class gets what it contributes, under natural law, to the general output of industry" (Clark 1891, p. 313; see also Clark 1899, p. v).

A few years later, however, Wicksteed showed that the marginal theory of distribution, in order to be consistent, must assume a homogeneous production function of degree 1 (i.e., constant returns to scale). Only under this assumption, in fact, would the sum of factors' rewards, determined on the basis of their marginal products, be equal to the total output produced (this is the *product exhaustion theorem*). The assumptions about production processes and the "laws" governing income distribution thus became strictly interconnected, requiring the marginal theory of distribution, if it is to be consistent, to postulate a particular configuration of productive processes. Wicksell thus suggested using the following production function (later called Cobb-Douglas): $y = l^{\alpha}K^{\beta}$, with $\alpha > 0$, $\beta > 0$, $\alpha + \beta = 1$. This function, and the law of diminishing product of labor (and

of capital) it incorporates, is still the most commonly used in neoclassical micro- and macroeconomic theory. It should be noted that the assumption of constant returns to scale represents a serious limitation, since it rules out the important phenomenon of increasing returns to scale—that is, it rules out the case for: $\alpha + \beta > 1$ (see Debreu 1959, p. 41, for a similar statement with regard to general economic equilibrium analysis).

SOME CRITICISMS

Soon after its formulation, the neoclassical theory of wages raised many "grumbles," as Dennis Robertson put it. One criticism concerned the distributive justice implied by what Clark defined as "natural law." It was pointed out that only the last—or better, the "marginal"—worker would be paid according to his or her contribution to production (equal to the marginal product), while all the other workers would be paid less than that, because under the assumption of diminishing product of labor, their marginal product is higher than that of the last worker employed. The marginal theory of distribution would therefore imply labor "exploitation."

Two points should be noted here. First, it makes sense to talk of a "first worker," a "second worker," and so on, only in a logical sense, since labor l is a homogeneous factor of production, and all that can really be discussed is the marginal product of the homogeneous factor l (Clark 1891, p. 308). Second, the "exploitation" (of both labor and other inputs) is denied by the assumption (fully compatible with other hypothesis about MPL) of constant returns to scale, which guarantees product exhaustion.

Contrary to Clark's claim, however, even if labor is considered a homogeneous factor, empirical evidence suggests that discrimination on labor markets may lead to wage differentials for equally productive worker groups. Beginning with the seminal work of Gary Becker in 1957, neoclassical theory has explained *discrimination* mainly as the outcome of personal prejudices of some groups (particularly employers) against others (women, racial minorities, etc.). Suppose that an employer (in a competitive product market) has a prejudice against a group, say women (although females and males have, by assumption, the same marginal productivity). On the basis of this prejudice, the employer will undervalue women's contribution to production, with the consequence that different equilibrium wages for the two groups will be fixed. The monetary wages of females and males are represented by w_f and w_m, respectively, so that labor market equilibrium conditions are given by for males, and by for females, where $d > 0$ is the "discrimination coefficient" that measures the employer's prejudice. Since MPL is the same for both men and women, it is easy to realize that women will be paid *less* than their VMPL (i.e., $w_f = w_m - d$). According to this model, discrimination is possible only in the short run, however, since competition among employers and workers will eventually equalize the wages of the two groups.

Alternative non-neoclassical models explain the persistence of discrimination by focusing on the "segmented labor market approach," in a general noncompetitive theoretical framework. According to this approach, if the labor market is split into submarkets (think of the "dual" labor-market case, with a "primary" and a "secondary" segment), and if there are barriers to employee mobility, discrimination may take the form of occupational segregation, since workers who are discriminated against will be crowded into the only accessible labor market characterized by a lower equilibrium wage. In this case, however, unlike the neoclassical "taste model" presented above, all workers are paid according to their actual VMPL and wage differentials are the result of different labor supply conditions in the two submarkets, given the presence of barriers to employee mobility (see Smith 2003, ch. 6 and Ehrenberg-Smith 2003, ch. 12, for an exhaustive overview of discrimination theories).

Other criticisms concentrate on the "impossibility of disentangling the specific product of the various factors of production, even at the margin of their application" (Robertson 1931, p. 224). This argument rejects the very possibility of defining and measuring the marginal product of a factor (and particularly of labor). Among the various authors who have raised objections of this kind is J. A. Hobson, who did a good job synthesizing the various implications of the argument. In his view, if a productive process is characterized by cooperating factors employed in a well-defined proportion, an increase or a reduction of one of these factors (e.g., labor) will imply a reorganization of the entire process, thus modifying the average and marginal product of all the other fixed factors. If this is the case, it is not possible to attribute the corresponding change in output to one variable factor alone. Marshall, following Francis Y. Edgeworth, claimed that Hobson mistakenly assumed a discrete "violent check" in the supply of one input, rather than referring to continuous variations at the margin. In this case, the changes in the marginal product of the fixed factors would be negligible. In other words, Hobson's critics maintain that he was wrong because he was referring to a "broad" variation , while rigorously marginal productivity theory is concerned with the infinitesimal variation . Here, the relevance of the distinction between the marginal product and the marginal productivity of labor becomes apparent.

Hobson, however, was clearly discussing quite a different problem, which can be explained in the following

way: If inputs used in a productive process must be employed in a well-defined fixed proportion, the principle of variation is not effective, and consequently the marginal product of labor (or of any other input) is a meaningless concept. An increase in one unit of labor will probably yield no additional output, while the withdrawal of one unit of labor will cause a notable diminution of both total product and the contribution of other inputs. In other words, if capital has to be considered as a specified physical endowment of goods, it could be combined only with a specified amount of labor (unless it is a sort of "butter capital" or "jelly capital," as John B. Clark put it, that can employ a widely variable quantity of labor). This position is still supported by many opponents to neoclassical theory, and it was partially supported by some of the older neoclassical economists, such as Léon Walras and Vilfredo Pareto.

There is a less radical way to consider Hobson's criticism. Although an extra unit of labor may cause an increase in total output, this can only occur if the productive process is reorganized by way of a change in technique of production, such as an increase in the division of labor. But this means that one is not working on the same production function, but rather "jumping" from one function to another one. In this case, there would be little sense in talking about the marginal product of labor in a static framework. The idea of a change in the technological configuration as the employment of labor is changed is a characteristic feature of modern theory of economic growth and particularly of the literature on increasing returns (a line of thought of this kind can be traced back to Adam Smith, passing through Allyn A. Young up to the contributions in the late 1990s of James Buchanan and Yong J. Yoon with their notion of "generalized increasing returns").

Hobson's criticism anticipated most of the elements later discussed in the famous "Cambridge Capital Controversies" that raged from the mid-1950s to the mid-1970s between neoclassical economists in Cambridge, Massachusetts, and post-Keynesian economists in Cambridge, United Kingdom. Although the controversy was mainly concerned with the nature and the unit of measure of capital, it nevertheless had serious implications for the consistency of the whole marginal theory of distribution. In fact, the main theoretical result of the debate was that if one considers a production process that employs (given the assumption of constant returns to scale) at least one other factor of production in addition to labor (i.e., "capital"), then, in general, it will be impossible to derive distributive shares from the specification of production function. Furthermore, the critics pointed out that, in general, other "strange" phenomena—such as "capital inversion" or the "re-switching of techniques"—may occur, which would undermine the principle of variation.

In conclusion, the only case consistent with the marginal productivity theory is that of a "one-commodity" economy, in which capital (in line with Clark's definition) is indistinguishable from consumption goods, and in which the only specific input is represented by labor. But in this case, as the critics have pointed out, both Ricardian and Marxian theories of value and distribution hold.

SEE ALSO *Becker, Gary; Cambridge Capital Controversy; Crowding Hypothesis; Economics, Labor; Economics, Marxian; Economics, Neoclassical; Economics, Neo-Ricardian; Economics, Post Keynesian; Employment; Exploitation; Income Distribution; Labor Demand; Labor Force Participation; Labor Market; Labor Market Segmentation; Labor Supply; Marginalism; Marshall, Alfred; Returns to Scale; Returns, Diminishing; Smith, Adam; Wages*

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Giorgio Colacchio

LABOR, SURPLUS: CONVENTIONAL ECONOMICS

Surplus labor models are a class of models for analyzing developing countries as dual economies with a modern capitalist sector and a traditional precapitalist sector. The precapitalist sector is viewed as having a large pool ("unlimited supplies") of labor from which the capitalist sector may draw at constant cost. While these models are often described as finding their inspiration in the old classical economists and Karl Marx, the 1954 model of W. Arthur Lewis and its extensions are technically more neoclassical than truly classical. The Lewis model was elaborated and formalized by many others, most notably John C. H. Fei and Gustav Ranis (1964), with important theoretical contributions from Amartya Sen (1966) and Stephen Marglin (1976). Questions have been raised as to the historical relevance of the neoclassical labor surplus models (Schultz 1964; Myint 1971; Arrighi 1973; Williamson 1985).

In the Lewis model, the economy is divided into two sectors, a traditional precapitalist sector and a modern capitalist sector. Lewis emphasized that this sectoral distinction is not identical to that between manufacturing and agriculture, as there may be both traditional (craft) manufactures and capitalist agriculture. The traditional sector is characterized by a large pool of labor, available to the modern sector at a constant (subsistence) wage. The wage is exogenous and above the marginal product of labor in the traditional sector. Thus the labor supply in the modern sector is infinitely elastic. Lewis stated that the marginal product of labor in the traditional sector could be small, zero, or even negative, but whereas he also emphasized that this was not an assumption of fundamental importance, later developers and critics of the model devoted considerable attention to this assumption. For Lewis, the supply of labor is considered "unlimited" as long as the labor supply exceeds labor demand at the subsistence wage rate. The demand for labor in the modern sector is determined by the stock of capital. Under such conditions, labor shortage is never a constraint on the expansion of the modern sector. As demand is also not a constraint on expansion in the Lewis model, the modern sector hires labor out of the traditional sector, and output increases. Profits in the modern sector rise and are reinvested, fueling capital accumulation. This is how successful "development" is defined. Eventually, the marginal product of labor and the wage will become equal in both the traditional and modern sector, and dualism comes to an end. With the equalization of the wage in the two sectors, the presumption is that the wage will now be "neoclassically" (i.e., "market") determined.

A number of criticisms have been made of the Lewis model (see, for example, Leeson 1979; Bharadwaj 1979). First, it has been argued that the model assumes that employment transfer proceeds at the same rate as capital accumulation in the modern sector, and that this will not be the case if there is laborsaving technological change in that sector. Lewis did recognize that there are two forces working in opposite directions—capital accumulation increasing employment and technical advance which may reduce employment—though he rejected the argument that the latter would outweigh the former on empirical grounds in his original article. Second, a number of critics have asserted that the situation in many developing countries is precisely the opposite of what Lewis assumed: There is significant unemployment and underemployment in urban areas and full employment in rural areas. A defense of Lewis might point out that the traditional/modern distinction is not the same as the rural/urban distinction, and that what appears as full employment in some areas is disguised unemployment; people are working, but their transfer from the traditional to the modern sector will not reduce output in the traditional sector, or will only reduce output there by the amount that the individual was consuming. Third, it has been noted that Lewis assumes away the problem of the creation of a capitalist or entrepreneurial class in developing countries, whereas in fact this is one of the main obstacles to development. Fourth, critics have argued that real and nominal wages in the modern sector do not appear to behave in the way they are pictured in the Lewis model—they both are able to rise quite rapidly—and the relation of wages and employment also differs in that rates rise even in an atmosphere of significant unemployment. Fifth, Lewis's

assumption that the sectors are homogeneous has been criticized with arguments developed that each sector can be quite heterogeneous, generating conflicts that affect the accumulation process. Finally, the assumption that "perfect competition" holds in the capitalist sector has been attacked both for ignoring the way in which monopoly characteristics had been inherited from the colonial era and for the neoclassical implications for the analysis of investment, allocation, and factor payments.

The Lewis model has also been criticized on historical grounds. Jeffrey Williamson (1985) argues that the early British experience does not confirm the model, while Giovanni Arrighi (1973) has attacked the argument that the model applies to southern Africa. One of the primary challenges of colonial capitalism was getting the indigenous populations to work as wage laborers or grow cash crops when they still had possession of means of production for producing the means of subsistence. In addition to forced labor and land alienation, the requirement that taxes be paid in colonial currency was one of the most important means of pressuring Africans to work on plantations and in mines or to grow cash crops.

Others challenging Lewis concerning surplus labor in developing nations included Theodore Schultz (1964) and Hla Myint (1971). Schultz studied the 1918–1919 influenza epidemic in India and the changes in output resulting from the reduction of the labor force, concluding that the surplus labor theory is false. Sen (1967) replied that the surplus labor doctrine refers to changes in the labor force resulting from the operation of economic incentives and principles, and that the influenza epidemic does not qualify. A single family member leaving the traditional sector is not the same as an entire family dying from influenza. Myint (1971) critiqued the idea that if a family member leaves a traditional farm, the other family members will increase their labor services to maintain a target level of output. Many of these critiques confuse modern/traditional with manufacturing/agriculture and, moreover, continue to ignore Lewis's claim that the assumption of zero marginal productivity is not crucial, that the marginal product of labor can be zero, positive, or negative, and that the supply of labor is considered "unlimited" as long as the labor supply exceeds labor demand at the subsistence wage rate.

SEE ALSO *Development Economics; Dual Economy; Economics, Neoclassical; Labor, Surplus: Marxist and Radical Economics; Lewis, W. Arthur*

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Mathew Forstater

LABOR, SURPLUS: MARXIST AND RADICAL ECONOMICS

The theory of capitalist accumulation devised by Karl Marx (1818–1883) rests upon the labor theory of value, according to which capitalists (i.e., owners of the means of production) appropriate the surplus value produced by the workers (i.e., owners of labor power or the capacity to labor) whose labor power they purchase. Capitalists then sell the products in which surplus value is embodied, and keep the profits for themselves. If, after commodities are sold, capitalists were to end up with an amount of capital equal to that spent purchasing the elements of the production process—that is, without profits—they would not invest. Investments are profitable, however, because the product can be sold for a sum greater than the original investment. In the production process, workers produce not only value but *surplus value*—that is, value greater than the value of their labor power; it is the sale of surplus value that is the source of profits. The value of the means of production is incorporated, unchanged, in the product, as machines and tools wear out and are eventually replaced by others. The difference between the value of labor power (i.e., the amount capitalists spend in wages)

and the value labor power produces in the production process (i.e., the amount capitalists collect once the product is sold) is the profit capitalists appropriate. To understand why this is so, it is necessary to examine the main features of the capitalist production process.

Labor power, under capitalism, is a commodity that has the property of producing value. The value of labor power, like the value of any other commodity, is determined by the labor time necessary for its production and reproduction. As labor power is a capacity of living workers, its value is resolved in the labor time necessary for the production of the means of subsistence (i.e., a historically established bundle of commodities) necessary for the maintenance, and reproduction over time, of the individuals whose livelihood depends on their ability to sell their labor power in exchange for wages (Marx [1867] 1967, pp. 169–171). The use-value of labor power is its exercise in the production process where, combined with means of production and various materials, it produces specific useful goods, or use-values. Capitalists purchase the elements of the production process: means of production, raw materials or already processed materials, and labor power. They consume the use-value of labor power by setting the workers to work. Capitalists control the labor process and own its products, a quantity of use-values which, when sold, become commodities imbued with value and exchange-value (Marx [1867] 1967, pp. 174–175).

Workers sell their labor power for wages sufficient for the sustenance of themselves and, to a variable extent, their families. Once sold, the use-value of their labor power belongs to the capitalist who, being in control of the production process, can fix the length of the working day within limits set by the outcome of struggles between the capitalist class and the working class (Marx [1867] 1967, p. 235; Weeks 1981, p. 69). The working day can be divided in two parts of varying duration. During a number of hours that depends on the quantity of labor time necessary to produce the workers' means of subsistence, workers produce a value equivalent to their wages. In this portion of the working day, workers engage in *necessary labor*, which is spent in necessary labor time. It is necessary because workers need to replenish their energies and because capitalists need a productive labor force. The working day, however, lasts longer than the time necessary to produce the value of the wages. Workers are compelled to engage in surplus labor, creating value for the capitalist during surplus labor time. Capitalists seek to lengthen the quantity of surplus labor time by keeping wages low, thus decreasing the quantity of necessary labor time. The lower the value of the commodities necessary to maintain and reproduce labor power, the lower the wages and the higher the quantity of surplus labor time. The ratio of surplus labor to necessary labor, which can also be stated as the ratio of the surplus value to the value of the wages or variable capital, is the rate of surplus value that "expresses the degree of exploitation of labor-power by capital, or of the laborer by the capitalist" (Marx [1867] 1967, pp. 216–218). The higher the rate of exploitation, the greater the profits and the power of the owners, who constantly strive to increase the rate of exploitation by lengthening the working day or by introducing technology intended to speed up the production process or replace workers with machines.

In the processes of capital accumulation, the proportion of capital invested in means of production (i.e., constant capital) and labor power (i.e., variable capital) can remain constant or it can change. If it remains constant, the more capital is invested, the greater the demand for laborers; as technology remains the same, the rate of exploitation remains unchanged. Growth in the demand for labor can lead to higher wages as long as profits are not diminished. When wages rise to the extent of undermining profits, capitalists may choose to slow down investments, thus producing a decline in employment and wages, or they may force workers to labor longer hours, thus lengthening the proportion of the working day spent in surplus labor. With the development of the forces of production (i.e., technological changes increasing the productivity of labor), it becomes possible for capitalists to augment their profits while reducing, at the same time, the demand for labor: more capital is invested in constant capital and less is spent in wages or variable capital. The greater the productivity of labor, the lower the quantity of labor time spent in necessary labor, the greater the proportion of the working day spent in surplus labor, and, therefore, the greater the profits.

Technological changes and growth in the productivity of labor result in changes in the division of labor and in the quantity and quality of the demand for labor. Changes in the division of labor increasing the demand for more skilled labor result in higher wages for those fortunate enough to have those skills, or access to the necessary training to acquire such skills. At the same time, these changes devalue formerly needed skills and push masses of workers into underemployment and unemployment. The relatively privileged position of skilled workers, however, is not permanent, as capitalists seek to lower wages through processes of de-skilling (i.e., breaking up skilled jobs into their constituent elements) even as they develop new technologies that eventually will render such jobs obsolete, in a never-ending cycle of skilling and deskilling that exploits and discards workers as mere things to be used as needed in the process of capital accumulation (Braverman 1974).

Quantitative changes in the demand for labor reflect changes in the composition of total capital invested; that is, in the proportion of capital invested in constant and

variable capital. As capital investment and the productivity of labor increase, the demand for labor decreases relative to the quantity of capital invested (Marx [1867] 1967, p. 629). These changes in the composition of capital are reflected in fluctuations in the employment rate and growth in unemployment. It would seem that there are too many workers, that the labor force is increasing too fast, that workers are having too many children, and so on. But, as Marx observed, this apparent increase in the size of the laboring population is an illusion: "it is capitalistic accumulation itself that constantly produces … a relatively redundant population of laborers … a surplus population" (Marx [1867] 1967, p. 630). As capitalists use increasingly productive technology (e.g., assembly lines, automation), less and less labor time is needed to produce larger quantities of products and a growing proportion of workers become unemployed and even unemployable, thus constituting a "reserve army of labor" or *relative surplus population* (RSP), which has important economic and political effects: its presence limits the bargaining power of workers even at times of economic growth.

Within a national economy, the RSP can assume three forms: (1) the *floating RSP*, which is manifested when rapid and drastic technological changes substantially alter the location and kind of capital investments and the organization of production, thus producing rapid declines in employment; (2) the *latent RSP*, which emerges in rural areas as agribusiness replaces small, labor-intensive farming and farmworkers migrate to the urban and industrial areas; and (3) the *stagnant RSP*, which includes masses of workers permanently expelled from the labor force, able to obtain only irregular employment but remaining largely unemployed, constituting a large reserve of very low-paid, low-skilled, and unskilled labor power (e.g., today's poverty and near poverty population in the United States, largely dependent on welfare and irregular, minimum-wage employment). The stagnant RSP becomes "a self-reproducing and self-perpetuating element of the working class, taking a proportionally greater part in the general increase of that class than the other elements" (Marx, [1867] 1967, p. 640).

SURPLUS LABOR AND SOCIAL CLASS

Exploitation is "a social (society-wide) phenomenon under capitalism" (Weeks 1981, p. 64); it is at the core of the Marxist concept of social class, as an exploitative relation between capitalists and workers. While this seems a clear and useful definition, changes in the forces of production since the mid-nineteenth century have produced qualitative changes in the social and technical divisions of labor, thus altering the composition of the working population. In advanced capitalist social formations, like the United States, the proportion of workers exploited at the point of production, producing surplus labor for the owners of capital, has declined relative to the proportion of workers employed in services, white-collar, technical, professional, and managerial jobs. Automation and information technologies have contributed to the decline in the proportion of well-paid blue-collar workers that, in the United States, were considered "the backbone of the middle class."

Were Marxist social scientists to define the working class using as the sole criteria the production of surplus labor by manual workers, they would have to conclude that the size of this class is dwindling. The Marxist theorist Nicos Poulantzas (1936–1979), for example, argued that only productive workers (i.e., workers who produce surplus value) are part of the working class, unlike unproductive workers, whose work is located in the other spheres of the mode of production (e.g., circulation). Not all productive workers, however, are members of the working class; technicians and engineers, for example, occupy a contradictory class position, for they contribute to the production of surplus value while placed in positions of authority over the labor process, thus representing the power of capital. Classes cannot be identified solely on economic criteria; ideological and political criteria—namely, location in the relations of production and the social division of labor—matter as well (Poulantzas 1973, pp. 31–35).

GLOBALIZATION, SURPLUS LABOR, AND CLASS

When examining classes empirically, at the level of social formations, the capitalist/working class dichotomy is submerged under the heterogeneity of the technical and social division of labor, and the existence of noncapitalist classes, such as the petty bourgeoisie (independent producers) and the peasantry. Social scientists are compelled to introduce additional criteria for defining classes, such as, for example, *contradictory* class locations based on property relations, levels of skills and knowledge, and location in authority relations (e.g., Wright 1997). The heterogeneity of the working population does not obliterate, however, the importance of the underlying division between capitalists and workers and the significance of surplus labor in the process of capital accumulation. As capitalists seek to increase profits and lower labor costs, they continuously revolutionize the organization of production and change the kind and location of investments. Capitalist accumulation strategies result in changes in the quantity and quality of the demand for labor, changes in the social and technical division of labor, and, consequently, changes in the social stratification profile that can be documented in

a given society at a given time. These changes reflect not only technological imperatives and competition among capitalists, but the extent of capitalist power over the working classes.

In the United States, where labor is relatively powerless if compared with its counterpart in Western Europe, globalization has resulted in declining benefits and real wages for the working classes; a decline in job security, benefits, and employment opportunities for the middle classes; and deepening wealth and income inequality. Downsizing, outsourcing, deindustrialization, growth in poorly paid service jobs, temporary and contingent employment, and, consequently, growth in the size of all the forms of the RSPs, especially the stagnant RSP, are some of the effects of capitalist efforts to lower labor costs.

The value of labor power in poorer countries is very low, thus resulting in a higher rate of exploitation; capitalists seeking higher profits flock to those countries, intensifying inequality and the growth of their RSPs, thus triggering massive migration flows toward the wealthy countries. The working classes in the wealthy capitalist countries, therefore, face national and global RSPs that have effectively contributed to the undermining of workers' bargaining power. Contributing to the lowering of the value of labor power in the rich countries is the export of cheap commodities from China and other exceedingly low-wage countries, which thus lowers the overall cost of the bundle of commodities necessary for the maintenance and reproduction of the working population.

To conclude, at the level of analysis of social formations, surplus labor plays a lesser role in the identification of social classes. However, at the level of analysis of the capitalist mode of production, globally considered or within a country, it is not possible to understand changes in the empirically observable stratification system without taking into account the dynamics of class exploitation and capital accumulation, which, as capitalists pursue the appropriation of as much surplus labor as feasible, constantly alter the structure of opportunities of all working people.

SEE ALSO *Accumulation of Capital; Class; Labor, Surplus: Conventional Economics; Marx, Karl; Profits; Surplus Value; Unemployment*

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LABOR CAMPS

SEE *Concentration Camps.*

LABOR DEMAND

The "demand for labor" is usually understood by economists to mean the demand for labor services by a firm, an industry, or the economy at a given real wage. In a capitalist economy, labor becomes a commodity that is bought and sold on the market just like any other commodity, such as bread or butter. Labor is a unique commodity, however, and when an employer buys labor, he or she obtains a worker's "labor power" which is the amount of services that the employer gets from the worker. These services depend on the power the employer has over the worker. If there is high unemployment, for example, the worker is in a weak position and greater labor services can be extracted from him or her. The amount of labor services that the employer obtains (not only in terms of hours of work, but in terms of the efficiency of those services) also depends on the nature of the employment contract, the real wage paid to the worker, the conditions of employment, and the attitude of the employer to the worker (and vice versa).

Labor services consist of three components: the number of workers (employees), the average hours worked per worker, and the efficiency per hour of the worker. There are several institutional and legal constraints on employers in most developed countries. For example, there may be laws against discrimination, equal pay legislation, minimum wages (henceforth, the term *wages* refer to real wages), occupational health and safety requirements, hiring and firing restrictions, and penalty rates for overtime.

The demand for labor is a derived demand: Firms wish to hire workers to produce goods and services that they sell in order to earn profits. Alfred Marshall, in his *Principles of Economics* (1930) suggested that labor demand becomes more responsive to wage changes if the substitution possibilities between labor and capital increase. In other words, the easier it is to substitute capital for labor, the greater the share of wages in total costs, and the more responsive the other factors of production are to their prices.

Much of the formal economics literature is based on simple models of firm behavior in a perfectly competitive economy (for a closed economy, that is, without any international trade), assuming that labor is a homogeneous commodity. In a prototype model, a firm is assumed to maximize profits (or minimize costs) subject to a so-called "well-behaved" production function that depends on homogeneous labor and capital. By simple mathematical manipulation, it is easy to show that the firm's demand for labor is a negatively sloped marginal revenue product (MRP) curve, and that employment is determined by equating the marginal revenue product of labor with the wage rate. In such models, it is usually assumed that labor and capital are substitutable (usually in a Cobb-Douglas production function). There are some difficulties, however, in moving from a firm labor-demand function to an industry or aggregate labor-demand function because of the possible interactions between firms, the heterogeneity of labor, and other factors.

In most of these models, it is assumed that the technology of production is given and unchanging. Alternatively, technological change is simply an exogenous variable that falls like manna from heaven on all existing inputs. Labor services are often assumed to be such that hours of work and employees are perfectly substitutable.

The impact of technological change on the labor market and on labor mobility is very significant, but it often has contradictory effects. Technological change is usually defined as being either a change in the product or a change in the process of production. Technological change that leads to the introduction of new products will lead to either new firms being set up or old firms expanding into a new product line, which would lead to increased employment through job creation and job destruction. Job destruction leads to the closing down of firms producing some products that are replaced by new firms producing new products. However, demand for a new product may lessen demand for competing products, leading to a reduction in labor demand elsewhere in the economy. Similarly, a technological change in the production process may lead to the substitution of capital for unskilled labor, and hence to a decrease in labor demand. It may also lead to an increase in the demand for skilled labor, however, due to a complementarity of capital with skilled labor.

In more advanced models, labor is treated as a "quasi-fixed" input, like a capital good (see Oi 1962; Nickell 1986). In other words, there are significant fixed costs associated with changing employment, due to hiring and firing costs. Usually, it is assumed that these costs of adjustment are quadratic (implying increasing marginal costs of adjustment), so that if there is an increase in the demand for goods the impact on the demand for labor is spread out over a few periods. In the short run, the demand for labor adjusts slowly in response to any external shock. Given that there are costs of adjustment, the firm would find it easier to either adjust the hours of work of existing workers or hire casual part-time workers. It is cheaper, however, to hire and fire casual part-time workers. European countries that have a more regulated labor market, with larger hiring and firing costs, have been found to have a slower adjustment process to shocks. However, the evidence on this is very controversial and needs further research (see Blanchard 2006).

There has been a large amount of econometric work to estimate the impact of a change in real wage rates (corrected for inflation) on labor demand holding the level of production constant using large datasets. Most of these studies have found that elasticity (the percentage change in labor demand in response to a 1 percent change in the real wage rate) lies between –0.15 and –0.75, with "a best guess" of –0.30. However, studies of the impact of minimum wages on employment suggest that there is no significant impact (see Card and Krueger 1995). David Neumark and William Wascher have found otherwise, however, perhaps because it is mainly unskilled labor, while usual studies of labor demand are for skilled and unskilled labor taken as a whole. The scale elasticity (i.e., the impact of increased output) is almost unity: a 1 percent increase in the level of production (output) leads to a 1 percent increase in labor demand.

Firms demand labor services from employees who provide honest, committed, and productive work at wage rates that the employer determines (either unilaterally or as a bargain between the employer and employee). Ideally, employers would like to employ workers who take a positive long-term interest in their work and make useful suggestions to improve the production process. In general, firms have flexibility in the wage (and other conditions of work, including perquisites) they offer to their employees. There are also theories of deferred payment, tournaments to provide a stimulus to get wage increases, and "efficiency wages." It has been shown that employers can get higher productivity from their workers, and hence make higher profits, if they pay a higher real wage. This idea was first put forward in a classic paper by Harvey Leibenstein (1957), who argued that in a developing country, paying higher wages led to workers getting better nutrition and providing better productivity.

This essential link between wages and productivity, or "efficiency wages," was extended in a series of papers: In 1984, Carl Shapiro and Joseph Stiglitz put forward the view that higher wages decreased shirking by employees; Steven Salop argued in 1979 that higher wages lowered worker turnover, increased productivity, and increased profits; and Andrew Weiss (in 1980) and George Akerlof

(in 1982) both showed that if employers paid higher wages as a partial gift, workers would reciprocate by providing greater effort. Thus, there is no unique negative relationship between the real wage and employment, because an employer who pays a wage in excess of the "market wage" gets greater productivity. Lowering the wage does not increase employment. Experimental economics, particularly the work of Ernst Fehr and Simon Gächter, has shown the importance of considerations of "reciprocity" (e.g., fairness, equity, and other issues) in the employment relationship.

In a globalized world, the demand for labor becomes more confused as various activities are "outsourced." In other words, the firm can produce a larger quantity of output by either hiring more labor, buying more capital goods, improving its technology, or simply by outsourcing a particular activity. Call centers in less developed countries are good examples of this. Hence, the link between the output of a firm and its demand for labor is no longer constrained by a given production function.

There has been a large amount of econometric analyses of the demand for labor, suggesting, in general, a negative link between wages and employment. There are important policy implications that can flow from the research about minimum wages, but the results are contradictory and controversial (see Card and Krueger 1995; Neumark and Wascher 1992). Similarly, the efficiency wage literature also throws some doubt on a simple negative relation between wages and employment. The literature on hiring and firing costs has been used to suggest that a deregulated labor market would lead to higher employment, but this is still being debated.

SEE ALSO *Economics, Labor; Employment; Labor; Labor Force Participation; Labor, Marginal Product of; Labor Market; Labor Market Segmentation; Labor Supply; Wages*

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P. N. Junankar

LABOR FORCE PARTICIPATION

The labor force participation rate is defined as the proportion of a population that is either employed for pay or profit (for one hour or more in the reference week or fortnight) or looking for paid work over some period of time. By definition, people who are carrying out unpaid work in the home or voluntary work are not counted as employed.

The concepts of employment and unemployment are more easily defined for a developed capitalist economy that has a market for wage labor. In less developed countries (LDCs), where wage labor is not a predominant form of employment, the concept of unemployment becomes "fuzzy": The line between employment in the informal sector (e.g., selling cigarettes on street corners) and unemployment is not clearly defined (see Turnham 1993). Similarly, the concept of "looking for work" becomes vague when social security benefits are not available and

when labor markets are not developed. Often, when the unemployed are unable to find work for any length of time they give up looking for work and hence are not in the labor force (they are the so-called "discouraged workers"). In societies that provide welfare benefits to people with disabilities, people often move between the unemployed and disabled categories, and hence the participation rate as measured is unclear. Because the concept of unemployment is problematic in some countries, economists often compare employment-population ratios instead of participation rates.

Social customs, culture, and institutions (including the legal framework) play a large part in the participation of women and younger people in the labor market. In LDCs where there is no compulsory schooling, children are part of the labor force. In certain cultures where religion plays an important role, females do not engage in paid work and hence are not part of the labor force.

It is common to distinguish between the participation rate of males and females, and more detailed studies look at differences in the participation rates of several subgroups, such as married females and single females, whites and blacks, young and old, migrants and natives. In general, female labor force participation rates have been rising and male participation rates have been falling in most countries of the Organization for Economic Cooperation and Development (OECD), except for Japan, where male participation rates have risen. Male participation rates for older workers have been rising since the mid-1990s, possibly because of better employment conditions and better superannuation provisions for retirement after sixty-five years of age, or due to (in the United States) provision of health care for employed workers. Note, however, that the participation rate of both males and females has fallen in the United States since 2000, and whether this is a trend fall or a cyclical fall is a contentious issue (see Aaronson et al. 2006 and Juhn and Potter 2006). Participation rates tend to first rise with age and then fall as people get older. Participation rates of more educated people are usually higher than those of less educated people.

During World War II many women from the combatant countries worked in the war industries, and after the end of the war continued in the labor force. The increase in female participation rate is sometimes explained by the change in the structure of the economy from a dominant manufacturing sector to a dominant services sector that demands (allegedly) "feminine" skills such as computer keyboard skills. The increased level of education of females has also led to increased female participation, especially in white-collar jobs, often in part-time employment. The changing social mores that came with the women's liberation movement and the increased access to and ease of contraception via the Pill, which provided greater control over and timing of childbearing, lowered fertility rates and increased female participation rates. Increased real wages of women, as well as the introduction of equal pay legislation in many OECD countries, increased female participation rates. The development of household appliances (e.g., washing machines, microwave ovens, and so on) that lower time spent in household work for females have also had a positive impact on female participation rates (see Blau and Ferber 1992).

Male participation rates have declined with a fall in employment in the manufacturing sector, especially for older males who were made redundant and were unable to find work in the newer industries. However, in most OECD countries expanding economies (and perhaps the tightening of access to welfare benefits) appear to have increased participation rates for all males (including older males) since about 2000.

It is important to note that the labor force participation rate depends on both demand and supply factors: For example, a higher proportion of women are working if the demand for the skills that women offer is high. Generally, participation rates are procyclical: They rise during booms and fall in recessions. If for some reason employers discriminate against women in one country, their participation rate is lower than in a society where such discrimination does not exist. Similarly, women's participation rate is higher when they place a lower value on their time spent at home, and so are willing to supply more labor.

Economic analysis of labor force participation begins with neoclassical models of utility maximization subject to a budget constraint: Individuals are assumed to be maximizing their individual welfare (dependent on consumption and leisure or nonmarket time) subject to a given wage rate and some nonlabor income (either from social security or from family sources). (Usually the models are based on individual maximization, rather than family decision-making.) This typically provides an individual with a "reservation wage" that depends on the value of leisure (or nonmarket time). A "reservation wage" is defined as that wage below which the individual prefers not to work. Individuals have different reservation wages depending on their preferences for leisure, their access to nonlabor incomes, and their educational background. Female labor force participation is more difficult to analyze due to their roles as household managers, childbearers and caretakers, and paid market work. Even though social mores have changed over the past few decades, women continue to do the same amount of unpaid household work.

Models that allow for family decision-making (where the husband and wife choose whether to work or not, and

decide who produces "household goods," e.g., child care at home, meals at home, etc.) are more complex and difficult to estimate econometrically. Some models treat these as "bargaining models" in a game theoretic context. In general, the probability of a wife working is positively related to her husband working (Pencavel 1998). This may, of course, also be explained in terms of "assortative mating,"—that is, highly educated and well paid males tend to marry highly educated and well paid females.

In a life-cycle context, males invest in education in their youth, then work and acquire pension or superannuation benefits, and retire in older age. Females invest in education (more so since World War II), work for some time, have children and leave the labor force, return to the labor force when the children are of school-leaving age, and then work until retirement. This stylized life-cycle behavior is easily explained by simple models of utility maximization. Participation rates of young people decreased with the increased participation in education in the postwar period. Retirement decisions were based on availability of pension or social security funds, accumulation of wealth over the life cycle, and health and family considerations.

There is an important interaction between the tax and welfare systems and participation rates, which makes the budget constraint nonlinear and sometimes nonconvex: Simple models of maximization of utility become complex and difficult to estimate. It is often argued that welfare benefits tend to lower participation rates, especially of women, as their nonlabor income is higher and hence their valuation of nonmarket time is higher. Child care support for families generally increases participation rates for married females.

To summarize, the research on labor force participation has expanded dramatically over the last decade, especially studies of the impact of tax and welfare policy changes. There is little hard evidence to support the popular view that welfare and social security provide disincentives to work. Most of the empirical evidence is based on simple static (one-period) individualistic models that do not allow for family decision-making. Work on household decision-making is still in its early stages, and further research is needed that allows for life-cycle decisions that include household saving jointly with labor-supply decisions and family formation and dissolution. Most empirical studies of labor-force participation find that noneconomic considerations play an important role in explaining behavior.

SEE ALSO *Business Cycles, Real; Education, Unequal; Employment; Game Theory; Gender Gap; Inequality, Gender; Inequality, Racial; Labor; Labor Demand; Labor Market; Labor Supply; Utility Function; Wages; Work; Work and Women*

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LABOR LAW

The purpose of labor law is to protect the interests of employers and employees in the workplace. Labor laws grant employers and employees the right to engage in certain conduct such as collective bargaining, strikes, and lockouts, in pursuit of their demands.

In the United States the area of labor law is governed by federal and state statutory law, judicial decisions and regulations, and decisions of administrative agencies. The National Labor Relations Act (NLRA), also known as the Wagner Act, enacted by Congress on July 5, 1935, marks

the foundation of modern U.S. labor law. The NLRA covers all employers and employees involved in businesses that affect interstate commerce. The NLRA protects workers' rights to strike, associate freely with one another, join labor organizations, and bargain collectively without interference. The NLRA also prohibits employers and unions from engaging in "unfair labor practices" and requires both parties to engage in good-faith negotiations to resolve their disputes.

The NLRA was amended in 1947 by the Taft-Hartley Act (29 U.S.C. § 141 et seq.), which was aimed at reducing the number of industrial disputes and strengthening the power of employers in their dealings with unions. The Taft-Hartley Act was a response to problems that emerged during World War II (1939–1945), such as closed-shop and union-shop agreements, secondary boycotts, and strikes that often resulted in violence. Under a closed-shop agreement, employees are required to join the union as a precondition of employment. Closed shops are the opposite of open shops, which are characterized by the unlawful refusal to hire persons or give them preference in hiring based on their membership in a union. Union-shop agreements do not require employees to be union members as a precondition of employment, but do require employees to join the union or pay union dues within a set period of time after being hired.

The Taft-Hartley Act outlawed the closed shop in the United States, but permits the union shop in states that have not enacted "right-to-work" laws. Right-to-work laws are statutes that discourage collective bargaining and prohibit unions from making union membership a condition of employment. Currently, there are twenty-two states that have right-to-work laws, including Florida, Texas, Virginia, North Carolina, Arizona, Georgia, and Nevada. According to the Bureau of Labor Statistics and the U.S. Census Bureau, the share of jobs in the manufacturing sector rose from 25.4 in 1970 to 34.3 in 2000 in right-to-work states, and all right-to-work states registered a net gain in manufacturing payrolls despite the loss of nearly 875,000 manufacturing jobs nationwide during this period. Moreover, from 1978 to 2000, right-to-work states had lower average annual unemployment rates for all but five years. However, in 2000, per capita disposable income was approximately 10 percent higher in union-shop states than in right-to-work states, and both the poverty rate and income inequality remained higher in right-to-work states than in union-shop states.

The National Labor Relations Board (NLRB) was established under the NLRA to hear disputes between employers and employees. The NLRB's purpose is (1) to prevent and remedy unfair labor practices, whether committed by labor organizations or employers, and (2) to establish whether or not certain groups of employees desire labor organization representation for collective-bargaining purposes, and if so, which union. The NLRB is composed of five members whose five-year terms are staggered. There is a long-standing tradition that the board consist of a split in political party affiliation, usually a 3 to 2 split in favor of the president's party. The president designates the chairman of the NLRB. The NLRB's membership as of 2007 included Robert J. Battista (chairman), Wilma B. Liebman, Peter Carey Schaumber, Dennis P. Walsh, and Peter N. Kirsanow.

Usually, both labor and management are represented by attorneys who file grievances in writing with the NLRB, prepare and submit evidence, and argue their positions in the grievances. In cases where the employer-employee relationship is not governed by the NLRA, that relationship may be governed by other federal statutes such as the Federal Service Labor-Management Relations Act (5 U.S.C. § 7101 et seq.) or the Railway Labor Act (29 U.S.C. § 101). State law may also govern the employer-employee relationship where federal statutes do not apply.

Since 2005, new labor legislation has been enacted in several states seeking to improve standards associated with child labor, drug and alcohol testing, equal employment opportunity, human trafficking, the minimum wage, the prevailing wage, time off, wages paid, and worker privacy, among other areas. Currently, seventeen states and the District of Columbia have a higher minimum-wage rate than the federal minimum-wage rate of $5.15 per hour. Kansas and Ohio are the only two states with a minimum-wage rate lower than the federal rate.

The labor movement has been instrumental in the establishment of laws protecting workers' rights around the globe. For example, over 90 percent of all nations have some kind of minimum wage law. Eighteen out of twenty-seven members of the European Union have national minimum wages, and the People's Republic of China, too, has established a monthly minimum wage for full-time workers and an hourly minimum wage for part-time workers. Moreover, labor-rights advocates in Europe have had success pushing through legislation that strengthens maternity and paternity rights and protects individuals from discrimination on the basis of age, religion, and sexual orientation, as well as gender, race and disability. The 35-hour maximum work week in France and the Working Time Directive in the United Kingdom, which covers working time, rest breaks, and the right to paid annual leave, are two of the most progressive pieces of labor legislation.

With the growth of democracy and capitalism worldwide, labor law will become more important in balancing the interests of employers and employees in the twenty-first century.

SEE ALSO *Employment; Labor; Law; Occupational Safety; Regulation; Unions; Wages; Work; Work Week*

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LABOR MARKET

According to textbooks such as Ronald G. Ehrenberg and Robert S. Smith's *Modern Labor Economics* (2005), a "labor market" is the place where labor services are bought and sold. The term *labor* is equated to the term *work*, not only manual work but also knowledge work. Sometimes, the place where labor services are bought and sold is a clearly identifiable one such as a construction site or a lawyer's office. Other times, the place is ill-defined, as for the work of most readers of this article, who are hired in one location and who perform labor services in a number of others, such as offices, libraries, home offices, airplane lounges, and hotel rooms.

Labor markets are defined in overlapping ways—by geography (the New York City labor market), occupation (the labor market for economists), or skill level (the labor market for college graduates).

Whatever the defining criterion may be, labor markets always have two sides: labor demand and labor supply. On the labor demand side are firms (including companies, not-for-profit organizations, and government agencies), which hire labor in order to produce goods and services. On the labor supply side are workers, who sell their time in exchange for compensation which, in standard terminology, is called the wage.

On both sides of the labor market, the relevant parties engage in purposeful behavior. In the core model of economics, companies seek to maximize the net present value of profit, which is the difference between the revenues they take in from the goods and services they sell and the costs they incur in producing those goods and services. Individuals, for their part, are assumed to seek to maximize utility, which depends positively on the goods they are able to buy with their income and negatively on the amount of leisure foregone while working.

The amount of labor demanded and supplied are both functions of the wage. The amount of labor demanded in a labor market decreases with the wage, all other things being equal. This negative relationship arises for two reasons: a higher wage induces existing employers to hire fewer workers than they would have if the wage had been lower, and it may induce some of these employers to go out of business entirely and hire nobody. On the other hand, the amount of labor supplied to a labor market increases with the wage, all other things being equal. Here too, there are two basic reasons: a higher wage in one labor market induces some workers to enter that labor market from other labor markets and also induces some individuals who are outside the labor market (the old, the young, full-time students) to seek work in this labor market.

Of course, other things are frequently not equal; labor demand and labor supply are functions of these other things as well. For instance, an improvement in product market conditions will cause more labor to be demanded at any given wage than before, and heightened prestige for a given occupation will cause more labor to be supplied at any given wage than before.

As with other markets, a labor market is said to clear when the amount of labor demanded equals the amount of labor supplied. It is said to be in equilibrium when the economy tends toward a particular set of conditions and, once there, tends to stay there.

Whether an equilibrium is characterized by market clearing or not depends on which equilibrating forces are free to operate in the labor market in question. In the standard labor market models, three fundamental equilibrating forces are postulated. First, firms are free to hire as many or as few workers as they want depending on wages and other conditions of employment. Second, workers are free within limits to move from one labor market to another or into and out of the labor force depending on wages and other conditions of employment. And third, the wage paid is free to rise or fall depending on supply and demand conditions.

When all three of these equilibrating forces are free to operate, the labor market is expected to clear in equilibrium. Wages and employment will therefore reflect supply and demand conditions.

The market-clearing model provides enormous insight. It explains, for example, why workers in the United States are paid so much, why workers in Mexico are paid so little, and why professional athletes are paid so much more than farm laborers.

These examples also highlight two important types of restrictions on equilibration in labor markets. First, every country imposes restrictions on international migration.

Because of the large differences in labor market earnings, a great many workers in Mexico and other countries would like to become American workers, but U.S. immigration law prohibits them from doing so. An estimated 6 million Mexican workers have taken matters into their own hands and have entered the United States illegally. Second, workers differ in terms of their productivity and skills. It is effectively impossible for farm laborers to acquire the skills needed to become professional athletes.

Beyond these barriers to equilibration, which are ubiquitous, there are also settings in which one of the equilibrating forces, the wage rate, is not free to adjust. Wages may be set above the market-clearing level by a variety of institutional forces including minimum wages, trade unions, multinational corporations, public-sector pay policies, and national labor codes. When this happens, the predictable consequence is unemployment. The high rate of unemployment in Europe compared to North America is usually explained in such terms. Infrequently, the wage in a labor market is set not above the market-clearing level but below it. The government of Singapore did this to try to hold down labor costs and maintain international competitiveness. That nation's wage-restraint policy was halted only when employers persuaded the government to allow them to raise wages so that they could attract more workers and increase production.

Moving beyond this basic labor market model, a number of other features are at the forefront of labor economics modeling today. Efficiency wage models recognize that a higher wage may increase worker productivity, because existing workers have greater incentives to work more efficiently and/or because firms that pay higher wages attract a larger pool of applicants, from whom they can hire more selectively. Human capital models recognize that workers' skills and productivity can be augmented through education and training. Imperfect information and matching models recognize that it takes time and resources for workers to find appropriate jobs and for firms to find appropriate workers. Models of labor market segmentation and dualism recognize that "good jobs" and "bad jobs" may coexist for workers of a given skill level. Labor market discrimination models recognize that employers, coworkers, and customers may have prejudicial tastes that they exercise in the labor market. In all of these areas, the consequences for employment and wage levels have been carefully worked out.

Finally, a fundamental aspect of labor market economics is that labor markets do not operate in isolation. Wages and employment levels in one geographic area, occupation, or skill group are determined not just by conditions in that labor market but by conditions in other labor markets as well. Multi-sector labor market models, though more complicated than models of individual labor markets, offer insights that models of single labor markets cannot—for example, the understanding that the solution to urban unemployment may be rural development.

SEE ALSO *Employment; Labor Demand; Labor Force Participation; Labor Supply; Wages*

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LABOR MARKET SEGMENTATION

Labor market segmentation theory (LMS) has two principle elements: (1) the labor market can be modeled as consisting of a small number of distinct markets offering different wages, and (2) workers, particularly those from racial and ethnic minorities, women, and new entrants, cannot necessarily find employment in the segment that offers them the highest compensation.

The most common version of LMS is the dual labor market model. This divides the labor market into a primary labor market with well-developed internal labor markets, offering secure long-term employment and higher wages for well-educated, experienced, and senior workers, and a secondary labor market with little job security, short-lived jobs, and wages independent of education and experience. For men, a statistical model of wages with two sectors predicts individual wages much better than does a model with the same number of parameters but only one sector. Moreover, in one sector education and experience have a positive effect on wages, whereas in the other they do not. For women, the dual labor market model does not fit the data well.

Mainstream labor economists have also sometimes modeled the labor market as consisting of two sectors: government and private, manufacturing and nonmanufacturing, skilled and unskilled, and so on. But LMS differs from mainstream models of the labor market in two important ways. First, it implies that low wages are associated with undesirable job characteristics, whereas conventional models imply that workers in jobs with otherwise undesirable characteristics receive a compensating (higher) wage differential. Second, in LMS, wages do not adjust to clear the market. There are workers who are qualified for desirable jobs but are unable to find employment in those jobs.

In fact, high wages are often associated with good job characteristics. There is relatively little evidence that workers are compensated for bad job characteristics. This is not decisive evidence in favor of LMS. Advocates of the standard view argue that we have relatively poor data on workers' earnings potential. Workers with high earnings potential take their compensation partly in the form of high wages and partly in the form of better working conditions, which explains the positive relation between wages and working conditions.

LMS is sometimes interpreted incorrectly as meaning that there is little mobility among sectors. Low mobility might mean most workers are happy where they work. In contrast, workers initially trapped in the secondary sector would change sectors upon obtaining primary-sector employment. The existence of queues for good jobs is the most significant departure of LMS from the conventional view, but it is difficult to test. Although compared with secondary-sector jobs, primary-sector jobs pay more and have characteristics that most people prefer; some secondary workers may not be excluded from primary jobs, but instead prefer secondary jobs and willingly accept the lower pay. However, the overrepresentation of some groups in the secondary sector is only consistent with free choice if their members are more likely than others to like secondary jobs. For some groups, such as African Americans, this is implausible and suggests that some workers in the secondary sector would prefer primary-sector employment.

SEE ALSO *Dual Economy; Harris-Todaro Model*

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Kevin Lang

LABOR SUPPLY

For economists, "labor supply" usually means the hours of work, usually per week, offered for pay or profit. This definition therefore excludes unpaid household work and voluntary work. Usually, the question of labor-force participation (the question of whether a person is working or looking for work) is treated separately. Research on both the theoretical and applied labor supply exploded in the 1980s and 1990s, with the work ranging from models of individual behavior in a static one-period model to dynamic multi-period models for a household. Simple theoretical models that gave a backward-bending supply curve (where labor supply first increased and then decreased with wage rates, for which little evidence exists) have given way to empirical labor-supply curves that are usually (but not always) positively sloped with respect to the wage rate. Beginning in the late twentieth century, much of the focus of research has been on labor supply as a whole, not on particular firms, industries, or occupations.

The concept of "labor supply" is defined for economies with a well-developed labor market; that is, a market where wage labor is employed. The concept of labor supply in less developed countries (LDCs) is less clearly defined, because culture, history, and institutions affect labor supply. In some LDCs, women are not involved in the formal labor market, and the labor activities that women perform may be limited by tradition, either for religious or cultural reasons. Because precapitalist conditions exist in LDCs, labor in these nations is often tied to a particular feudal lord, and the worker does not have the freedom to move from one employer to another, or from one location to another.

In LDCs, as the economy develops, labor moves from the agricultural sector to the industrial sector. W. Arthur Lewis, in his seminal 1954 paper "Economic Development with Unlimited Supplies of Labour," put forward a dual-economy model in which the surplus agricultural labor (defined as labor with a zero marginal product) moved to the industrial (modern) sector, providing a nearly infinite supply of labor at a constant wage. This provided a boost to economic development because the industrial sector could expand with a "surplus" (i.e., a profit) being created with cheap labor. The rapid growth of the Chinese economy in the first decade of the twenty-first century provides an example of how surplus labor from agriculture can provide a boost to economic growth.

In general, there are important differences in labor supply for males and females. Biology, history, and society have led to women spending more time in housework, child rearing, and various other domestic duties. For various reasons, including discrimination, society appears to have accepted a gender segregation of roles in the labor market. For example, women work in the textile industry while men work in mining, and women work as primary school teachers while men work as lawyers. Fortunately, many of these stereotypes are breaking down slowly, at least in most Western countries.

The labor supply in a particular economy can increase through population growth (natural increase), immigration, an increase in people employed or looking for work, and through workers offering longer hours of

work in each period. Although the labor supply of different educational or skill levels is considered in many models, the issue of the efficiency of labor services (i.e., how hard and diligently a person works) is usually ignored.

In most models of labor supply, the determination of the hours of work is derived from an assumption of utility-maximizing individuals who face given wage rates and prices and a time constraint. In all these models, it is assumed that there is a disutility from work—that is, it is assumed that people do not like working. There is a good deal of evidence, however, from psychologists, sociologists, and industrial relations experts that work provides an individual with a set of contacts, imposes a time structure on the waking day, provides social status and identity, and enforces activity (see Jahoda 1982). Further, an unemployed person often suffers from a level of despair that may lead to mental illness.

Standard neoclassical models are set up to analyze competitive capitalist economies with a well-developed wage-labor market. The utility function, which is unchanging over the life cycle, depends on leisure and consumption goods. An increase in the wage rate leads to a substitution effect (leisure becomes expensive) and an income effect (a person can purchase more leisure and goods). If leisure is a normal good, then these two effects work in opposite directions. The net effect of a wage rate change is therefore ambiguous. The introduction of income taxes and social security payments make the analysis more complex, since the budget constraint becomes nonlinear.

In a novel extension to the concept of labor supply, George Becker argued in a 1965 paper that individuals choose "commodities" that are produced by combining consumer goods with the individual's time. Hence, a consumer good that is purchased, such as meat, also needs time (e.g., cooking time, washing-up time) to form the "commodity" called dinner. The time used in cooking thus has an "opportunity cost." Alternatively, the "dinner" can be purchased in a restaurant with less time spent in obtaining it. The choice of cooking at home or eating out depends on the opportunity costs of time. For a professional person, the opportunity costs of cooking a meal are generally too high. This approach is especially useful in analyzing nonmarket work done (mainly) by women.

In an early model, labor supply was dependent on current wages and (expected) future wages, such that people would offer to work less in the current period if future wages were expected to be higher. Robert Lucas and Leonard Rapping deal with the intertemporal substitution of labor in "Real Wages, Employment, and Inflation" (1969). In advanced models, labor supply is dependent on the planned time path of consumption goods and leisure, along with a choice of saving and wealth accumulation over an entire lifetime. A critical assumption in these dynamic models is of a utility function that is not affected by habits or learning (intertemporal separability over time), as this could make the wage rates depend on individual's behavior (see Card 1994). There are significant differences in the labor supply of males and females due to cultural and institutional factors. Typically, the female labor supply is significantly affected by the number of preschool children in the family.

Expanded models of labor supply allow for joint household decision making, with bargaining between husband and wife (see Vermeulen 2002). The aggregate supply of hours depends on the number of people who are willing to work (given wage offers and their reservation wage) and the hours offered per person. Individuals are assumed to work out a "reservation wage," meaning a wage below which they are not willing to work because the opportunity cost of leisure is too high. This reservation wage is obviously influenced by an individual's age, education, experience, family commitments, social security benefits, and wealth status. Changes in the minimum wage are likely to lead to a change in the distribution of reservation wages, because the idea of "fair wages" will also change (see Falk, Fehr, and Zehnder 2005). Changes in reservation wages can also affect the aggregate supply of labor.

It is generally assumed that the individual can work as many hours at a given wage as she or he desires (either within a firm, choosing different offers from different firms, or with multiple jobs). It is also usually assumed that there are no institutional constraints (e.g., a specified work week for a full-time person), and that the nonavailability of work (i.e., involuntary unemployment) is not a factor. Most estimates of labor supply are based on people who are working. This creates a selection bias, because it excludes those who want to work but cannot find work or have refused the wage offered to them. However, an individual can influence his or her wage through an appropriate investment in human capital, such as acquiring new skills or additional education. In some labor markets (especially for highly skilled labor) an individual may be able to bargain for a package of wages, hours, and other perquisites.

Some empirical regularities have been seen in OECD (Organisation for Economic Co-operation and Development) countries in the post-war period. These include an increase in the number of women working, a decrease in the number of older males working, a fall in the average number of hours worked, and educated people working longer hours. Most of the research on this subject has focused on an econometric estimation of labor supply for males, females, and households. Econometric estimation has moved progressively from time-series data to cross-

section data to panel data. Most estimates of labor supply find a small positive link between wages and hours worked—known as "elasticity," the percentage increase in labor supply as a result of a one percent change in the wage rate—although there is a large element of "unexplained" variance. A major interest has been the extent to which welfare benefits and changes in tax rates affect the labor supply. Policy changes in these and other areas could affect people's decision whether or not to seek work. Again, because most labor-supply models are based on data on working people, the possibility of selection bias must be considered.

Labor supply is also important from a policy perspective. How people respond to changes in tax rates, social security payments, and other institutional features like minimum wages are all relevant. Much of the evidence is based on simple models of single-person (or "unitary") households, and is thus subject to debate. The evidence on many of these issues is very controversial, especially the impact of minimum wage on employment. And as Richard Blundell and Thomas Macurdy point out, there is little evidence to support the view that welfare programs have a disincentive effect on the labor supply.

Even though there have been significant advances in the theoretical modeling of labor supply, and in econometric estimation techniques, there are still large gaps in our understanding of the impact of policy changes on labor supply. Models need to be extended to households in which people decide simultaneously whether to work and how many hours to work over a longer period, including their saving behavior, and with some allowance made for the existence of demand-constrained choices. The existence of persistent unemployment in most OECD economies suggests that a basic underlying assumption of labor supply models is unrealistic, namely that workers can choose whether to work and how many hours to work.

SEE ALSO *Economics, Labor; Employment; Human Capital; Labor; Labor Demand; Labor Force Participation; Labor Market; Selection Bias; Wages*

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LABOR THEORY OF VALUE

Fundamentally, the labor theory of value is a prohibition: it asserts that produced means of production cannot be sources of surplus value, and hence of profit. Once seen as an essential component of Marxian economics, it is now a divisive issue even amongst economists who describe

themselves as Marxist. It is rejected by many non-neoclassical economists, and of course by the neoclassical school in general. However, it is still championed by several subschools of Marxian economics, and will no doubt always be part of the ideological appeal of anti-capitalist political parties.

The concept that work, or relative effort, was the just determinant of the ratio in which two commodities were freely exchanged was first aired by Aristotle (c. 450–388 BCE) in his *Nicomachean Ethics*. Starting from the premise that "the good has rightly been declared to be that at which all things aim" (Bk. 1, chap. 1), Aristotle deduced that, for justice to prevail, commodities should exchange in relation to the amount of work embodied in them: "Let A be a builder, B a shoemaker, C a house, D a shoe. The builder, then, must get from the shoemaker the latter's work" (Bk. 5, chap. 5). However, Aristotle subsequently added demand, or utility, as the basis of exchange, thus conflating the two great traditions in the determination of value and exchange: that relative prices are set either by the objective effort expended in production, or by the subjective utility enjoyed in consumption.

By the time of Adam Smith (1723–1790) and David Ricardo (1772–1823), these two perspectives were regarded as essentially contradictory. The then-dominant classical school subscribed to the former, while the then-nascent neoclassical tendency asserted the latter. However, though Smith identified work as the basis of exchange, and labor as its measure, he also argued that nonhuman inputs could be productive, and hence sources of profit: "labouring cattle, therefore, … not only occasion … the reproduction of a value equal to their own consumption, … but of a much greater value" (Smith [1776] 1904, Bk. 2, chap. 5). He also argued that only "in that early and rude state of society which precedes both the accumulation of stock and the appropriation of land" (Bk. 1, chap. 6) could commodities actually exchange in proportion to the labor embodied in them.

Ricardo also treated labor as a measure of value, rather than its sole source. The assertion that labor was not only the measure but also the source of value, and hence profit, was first made by Karl Marx (1818–1883).

Marx argued that profit could originate even when commodities exchanged at their costs of production. He assumed that commodities exchanged at their value, where value was "socially necessary labor-time," so that capitalists purchased labor at its value, which was a subsistence wage (the value of *labor-power*, signified by v). These commodities might take, say, six hours of direct and indirect labor to produce (where indirect labor included the depreciation of machinery and consumption of raw materials).

Marx then drew a crucial distinction between labor (actual work activity) and labor-power (working ability). Workers receive a wage that is equal to the value of their labor power; however, the value created by workers will normally be greater than this. Surplus value (signified by s) arises from the fact that the working day is longer (typically twelve hours in Marx's day) than the time required for laborers to create value equal to the value of labor-power (say, six hours). Surplus value arises from the unpaid labor time that accrues to capitalists as a legal right, and not because of capitalists' contribution to production. The capitalist gains this unpaid labor time "for free" from the labor contract. Expansions in the length of the workday, increases in the speed of work, or productive changes in the organization of work will all extend this gap between the value of labor-power (v) and the value of labor activity ($v + s$), giving rise to a surplus (s).

So, in Marx's analysis, surplus value does not arise because commodities exchange above their value: the commodity that is produced is exchanged according to its value, and laborers are paid a wage that is equal to the value of labor-power. Exploitation, which for Marx means the creation of surplus value, occurs because workers create value that is greater than the value of their labor-power. Marx argued that labor-power is the only commodity with the capacity for value greater than its own value, and he regarded the distinction between labor and labor-power as his important contribution to political economy.

Marx assumed that s/v, the "rate of surplus value," was constant across industries, though it could of course vary over time. He was emphatic that all other inputs to production (signified by c and measured by their depreciation) made no net contribution to surplus: "However useful a given kind of raw material, or a machine … may be, though it may cost £150 … it cannot, under any circumstances, add to the value of the product more than £150" (Marx [1867] 1887, chap. 8). Surplus, and therefore profit, thus emanated solely from labor.

The rate of profit, which Marx defined as $s/(c + v)$, was positively related to the rate of surplus value and negatively related to the ratio of c to v (c/v, the ratio of capital to labor, which Marx termed the *organic composition of capital*). Allied with an alleged tendency for the organic composition of capital to rise over time, this led to Marx's prediction of a falling rate of profit that would ultimately lead to the demise of capitalism via a socialist revolution.

Critics of Marx's economics have long argued that the dilemma for the labor theory of value was that it could not be made consistent with the competitive equalization of the rate of profit across different industries, when the organic composition of capital differed from one industry to another. Marx's solution of what became known as the

transformation problem was strongly challenged by Ladislaus von Bortkiewicz (1868–1931) and remains a contentious issue within Marxian economics.

By the end of the twentieth century, economists inspired by Marx had broken into two broad camps: those who accept the labor theory of value and those who do not (most of whom would describe themselves as belonging to other schools of non-neoclassical thought). Indeed, one of the most influential present-day economists inspired by Marx, Ian Steedman, believes that "the project of providing a materialist account of capitalist societies is dependent on Marx's value magnitude analysis only in the negative sense that continued adherence to the latter is a major fetter on the development of the former" (Steedman 1977, p. 207).

Anwar Shaikh (1984) presents an orthodox defense of Marx's value theory. Two other important attempts to sustain the labor theory of value are the *temporal single system* interpretation that the determination of price from value is a dynamic process in which the labor theory of value can be sustained (Foley 2000), and the empirical argument that, while subject to theoretical criticism, the proposition that prices are proportional to labor values is empirically valid (Cockshott and Cottrell 1998, 2005). Both the theoretical and empirical defenses are subject to criticism from other non-neoclassical economists (Mongiovi 2002; Podkaminer 2005).

Most critiques of the labor theory of value, as with Steedman's pivotal contribution, effectively discourage consideration of other aspects of Marx's thought, such as his philosophy of dialectical materialism. An exception here is Steve Keen's argument that Marx's philosophy itself contradicts the labor theory of value. Keen argues that, after 1857, the concept of a dialectic between the objective use-value of a commodity and its exchange-value became Marx's fundamental axiomatic base, rather than the labor theory of value itself.

Marx mocked Ricardo for not having an explanation of the gap between the value of labor and labor-power: "Value of labour is not identical with wages of labour. *Because* they are different. *Therefore* they are not identical. This is a strange logic. There is basically no reason for this other than that it is *not* so in practice." In contrast, Marx argued that "what the capitalist acquires through exchange is labour capacity: this is the exchange value which he pays for. Living labour is the use value which this exchange value has for him, and out of this use value springs the surplus value and the suspension of exchange as such" (Marx [1857] 1973, pp. 561–562).

The distinction between use-value and exchange-value was also central to Marx's explanation of surplus value in *Capital*: "The past labor that is embodied in the labor-power, and the living labor that it can call into action … are two totally different things. The former determines the exchange-value of the labor power, the latter is its use-value" (Marx [1867] 1887, chap. 7, sec. 2). Keen (1993) asserts that Marx misapplied this dialectic to machinery to sustain the labor theory of value, and that when properly applied, Marx's dialectic concludes that the means of production are also sources of surplus value. This critique thus maintains Marx's philosophy, while also rejecting the labor theory of value.

SEE ALSO *Exchange Value; Immiserizing Growth; Marx, Karl: Impact on Economics; Primitive Accumulation; Relative Surplus Value; Surplus Value; Transformation Problem; Value*

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Steve Keen

LABOR UNION

A labor union is typically an association of wage and salary earners aimed at improving the welfare of its associates through raising the bargained wage above the competitive level, improving working conditions, and preserving occupational levels. These aims can be achieved by unions using a number of strategies, according to the institutional framework under which unions and employers operate, general economic conditions, and political economy considerations.

In most industrialized economies, wages are largely determined through collective agreements between unions and employer confederations. Total output is shared between the two parts according to the relative bargaining power. These agreements are usually binding for a proportion of total employees that does not include union members only. The proportion of contracts usually covered by collective agreements is known in the literature as *union coverage*. The membership rate among wage and salary earners is referred to as *union density*.

The bargaining process may take place at the firm, industry, regional, or national level and may involve other issues, such as the work schedule, working conditions, holidays, and training. The attitude of unions during the bargaining process may differ, according to how much they internalize the consequences of the bargaining decisions on the economy as a whole. This amounts to unions being more or less coordinated with employer confederations in defining bargaining outcomes that can be beneficial or detrimental for economy-wide growth and welfare. Alternatively unions may adopt bargaining strategies aimed at improving the welfare of their associates only, regardless of the consequences on the economic system. For example, unions mainly representing insiders—that is, employed workers—may bargain for a higher wage, therefore improving the welfare of associated employees, despite the adverse effect on outsiders, including the unemployed and new entrants in the labor market.

Sometimes unions' actions and organization may be defined and managed under specific regulations. For example, in the United States public sector workers do not have the right to strike, while in other countries certain limitations apply in order to guarantee a minimum amount of public services during collective actions. Other regulations apply to the collection and management of union dues. For example, all employees may be required to pay union dues within a fixed period of time after hiring, although unions may be limited in their ways of spending financial resources collected from nonmembers.

One possible representation of union preferences is based on the assumption that union members are identical. The union objective function consists then of the expected utility of the representative member. This amounts to the utility associated, respectively, to the state of employment and unemployment, that is, by the real wage W and the reservation wage $\bar{W}$, weighted by the probability of being in each of the two states. With N and L being, respectively, the labor force and the employment level, and $v(\cdot)$ an indirect utility function, this can be written as $E(U) = \frac{L}{N} v(W) + \left(1 - \frac{L}{N}\right) v(\overline{W})$ with $v'(W) > 0;\ v''(W) \leq 0$.

Union members are, however, typically heterogeneous. In this case, the union objective function will depend on the mechanisms regulating the functioning of the union. If unions are perfectly democratic organizations, then their objectives will typically depend on the preferences of the median member. However, because they are collective organizations, unions respond to political economy incentive structures, like firms and political parties, and their leaders may be assigned discretionary power. In this case, union leaders may operate for objectives that are different from their organization's statutory objectives.

Wage-bargaining models can be classified into two main theoretical frameworks, known in the literature as *right to manage* and *efficient bargaining*. Under the right-to-manage approach, unions and firms bargain over the wage, with firms setting labor demand given the bargained wage. As a result, the bargaining outcome will always be on the labor-demand curve. This approach can be rationalized under a simple Nash framework, with the bargained wage W^* being the result of the following maximization problem: $\max_W B = V(W)^{\gamma} \Pi(W)^{1-\gamma}$, where $V(W)$ and $\Pi(W)$ are, respectively, the bargaining outcome gains for unions and firms, and γ (with $0 < \gamma < 1$) is the bargaining power of unions. A higher wage will increase the employed workers' utility, but at the same time it will lower the firms' profits per worker as well as the aggregate employment level.

Under the efficient bargaining approach, it is shown that unions and firms can reach bargaining outcomes that are Pareto-improving with respect to the right-to-manage hypothesis. The bargaining equilibrium is then located on the contract curve, that is, on the locus of the tangency points between firms' isoprofit curves and unions' indifference curves. The exact location of the equilibrium on the contract curve will depend on the relative bargaining power γ. The empirical evidence is mainly consistent with the first setting.

Historically, in many industrialized countries, union density rates have increased especially during the expansion of the industrial sector. Recent decades, characterized by a declining industrial sector and the development of a service-oriented economy in many advanced economies,

have witnessed heterogeneous patterns in union density rates, with a decline in some countries and an increase in others. These patterns seem to have followed the general institutional settings prevailing in each country as well as the ability of unions to adapt their objectives and strategies to new economic environments. As a result union density rates across Organization for Economic Cooperation and Development (OECD) countries display a significant amount of variation, from a minimum of around 10 percent in France, the United States, and Spain in 2001 to a maximum of around 80 percent in Finland and Sweden. The same is true for union coverage that ranges from a minimum of 14 percent in the United States to above 90 percent in Austria, Belgium, Finland, France, and Sweden. Even within the same country, unions are characterized by different membership rates across sectors. For example, in the United States private sector unions represent around 8.5 percent of workers, whereas public sector unions represent around 30 percent of workers in their sector.

SEE ALSO *Game Theory; Labor; Negotiation; Unions; Wages*

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Luca Nunziata

LABOUR PARTY (BRITAIN)

The Labour Party currently led by Tony Blair (b. 1953) has formed the governments of Britain since 1997 through its successes at three consecutive general elections in 1997, 2001, and 2005. It is now a party committed to the "New Labour" ideas of its leader, who maintains a "third-way approach" that accepts that both the state and public enterprise should jointly contribute to Britain's economic recovery. Peter Mandelson and Roger Liddle in their book *The Blair Revolution* (1996) state that "New Labour believes that it is possible to combine a free-market economy with social justice: liberty of the individual with wider opportunities for all; One Nation security with efficiency and competitiveness" (p. 1).

As part of this strategy Blair forced the party to drop its traditional Clause 4 when he became leader in 1994, replacing it with an amorphous alternative and thus abandoning a commitment to public ownership, playing down the importance of traditional trade-union and working-class demands, and opening up the possibility of the party capturing more white-collar and middle-class support, the middle ground in British politics. He was able to do so largely because of the way in which both Neil Kinnock (b. 1942), leader between 1983 and 1992, and John Smith, leader from 1992 to 1994, had transformed the party after Labour's disastrous general election of 1983. Gerald Kaufmann, a Labour MP, had described Labour's manifesto of 1983 "as the longest suicide note in history," tied as it was to nationalization in the hands of an increasingly left-wing party that was becoming unpopular in the country and that was ultimately out of power from 1979 until 1997.

In the early 1980s the Labour Party was organized into local constituency Labour parties, which were usually dominated by the bloc-vote influence of the trade unions and often could be operated by a small minority of activist members. The trade unions and left-wing activists usually dominated the local parties, and therefore their representatives often held sway in the annual national conference of the party, which often elected a predominantly left-wing National Executive Committee. Fearful that a small extreme minority could easily dominate the party, Kinnock pressed for a number of reforms, including instigating four policy reviews between 1988 and 1991, one of which, *Meet the Challenge and Make the Change* (1989), challenged Labour's shibboleth of nationalization. His policy reviews also ended Labour's commitment to full employment and universal provision within Britain's welfare state. Kinnock set up committees to be responsible for Labour's manifesto commitments and policies, the centralizing authority around the Labour leader. Trade union power at the annual party conference was also reduced to 40 percent of the vote, considerably less than the 1987 bloc vote, and the rest of the vote was based upon an individual ballot of rank-and-file members. The method of electing the party leader was changed, and by the late 1980s the voting in leadership and deputy-leadership elections was established on the basis of One Member One Vote (OMOV). Effectively, then, Kinnock centralized power around the Labour Party leader, neutralized left-wing policies, and reduced the power of the trade unions within their local constituencies and at party conference. It was out of these changes that Blair was able to press forward with his more moderate to right-wing agenda of "New Labour."

The present Labour Party is thus a far cry from the organization formed as the Labour Representation Committee in 1900, which became the Labour Party in 1906. This had been an alliance of trade unions and socialist groups committed to operating as an indepen-

dent working-class organization within a parliamentary system. Led at various times by James Keir Hardie (1856–1915), Ramsay MacDonald (1866–1937), and Arthur Henderson (1863–1935), it had emerged quickly, was drawn into the wartime coalition of World War I (then referred to as the "Great War,") and was able to form its first, albeit minority, Labour government in 1924. By that time the party had become officially socialist as a result of accepting Clause 4 (clause 3d) in its 1918 constitution, which committed it to the public ownership of the means of production. MacDonald's first government was short-lived, but its essential moderation helped to allay the fears of newspapers that announced the first Labour government's formation in January 1924 with the headlines "Lenin dead, MacDonald in power." This government was defeated in the 1924 general election, which was dominated by the Zinoviev, or "Red Letter," scare, in which what was almost certainly a forged letter was published as evidence that the Soviet Union wished to use the Labour Party to extend the influence of communism in Britain.

MacDonald formed another, minority, Labour government in 1929, but it too was defeated after a brief existence as a result of the mounting economic crisis of 1931, when the Labour cabinet was divided on cutting unemployment benefits by 10 percent. The government resigned but MacDonald continued as prime minister of a national government, and Labour was decimated, cut down from 289 to 52 seats, in the general election of October 1931.

Labour remained in the political wilderness until May 1940, when Clement Attlee (1883–1967), elected leader in 1935, became a member of Winston Churchill's wartime cabinet. Out of office, the party rethought its policies, and partly because of this, and partly because of the leftward shift during World War II, it won the general election of July 1945 with 393 seats and a thumping majority of 146 seats in the House of Commons. As a result, Attlee led his first administration from 1945 to 1950, and narrowly won a second term from 1950 to 1951. These two Attlee governments were immensely talented, with members such as Ernest Bevin (1881–1951), a foreign secretary who pushed for the North Atlantic Treaty Organization in 1949, and Aneurin (Nye) Bevan (1897–1960), who inspired the introduction of the National Health Service in 1948.

Nevertheless, in the early 1950s the Labour government was divided, and it collapsed after Bevan left in 1951 over his opposition to the threatened prescription charges on medicines. The Labour Party was defeated at the 1951 general election and remained out of office for thirteen years, during which it was divided between its left-wing public-ownership groups and its right wing, led by Labour Leader Hugh Gaitskell, who wanted to drop public ownership from his policies. Gaitskell died in 1963, but Labour returned to power under the then moderate, but once left-wing, Harold Wilson (1916–1995) in 1964, and won again in the 1966 general election. However, the Wilson administrations faced serious economic problems, had to devalue the pound, and fell out with the trade unions over how to deal with strikes. Defeated in the 1970 general election, the party brokered a deal with the trade unions in the early 1970s that saw it win two general elections in 1974. Nevertheless, the Wilson and James Callaghan governments of 1976 to 1979 were unable to introduce policies of redistributing income in return for the small wage increases that trade unions were going to accept under the so-called "social contract," and as a result the Labour Party lost the general election of 1979 following the strike-prone "winter of discontent."

The Labour Party came under the influence of left-wing trade unionists in the early 1980s when led by Michael Foot (b. 1913). However, the disastrous general election of 1983 augured the change of leadership and a move to the right that occurred under Neil Kinnock, John Smith (1938–1994), and Tony Blair. It is now epitomized by the "New Labour" party of Tony Blair.

SEE ALSO *Multiparty Systems*

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Keith Laybourn

LADEJINSKY, WOLF
1899–1975

Wolf Isaac Ladejinsky significantly influenced global debates and policy surrounding rural development and cold war strategy. He was perhaps the most influential advocate of using agrarian reforms to win the support of the peasantry in order to preempt communist appeals—"stealing communist thunder," in one of his memorable formulations. The most significant effect of his policies

was, perhaps, the decade of social conservatism resulting from post–World War II land reforms in Taiwan and, especially, Japan.

Ladejinsky fled Soviet power in the Ukraine in 1922, after expropriation of his father's business. His life was subsequently dedicated to the defeat of communism. In his view—much influenced by Bolshevik successes—communist mobilization fed on unattended peasant grievances; the remedy was preemptive policy against rural injustice.

Four years after landing in New York City, Ladejinsky entered Columbia University; he graduated in 1928. Though he made extensive studies of Soviet state farms as a graduate student, he did not finish his PhD Ladejinsky began working for the U.S. Department of Agriculture in 1935; by the end of the World War II, he was head of the Department's Far East division. In 1945 he joined General Douglas McArthur's staff overseeing American occupation forces in Japan, where he forcefully advocated land reform to promote social peace and centrist politics during reconstruction. Ladejinsky's "root-and-branch" land reform in Japan under occupation authority broke the power of large landlords and established the landless as small farmers. Farmers became the backbone of conservative governance that served many American foreign-policy objectives. Contemporary consensus is that land reforms contributed significantly to postwar Japan's political stability and economic growth. Ladejinsky's model of "stealing communist thunder" by redistributing land was also successful in Taiwan, in ways parallel to developments in Japan, but proved impossible to implement in China, where Mao Zedong's revolution promoted agrarian reform.

Time magazine observed in 1955 that the "Americanization of Wolf Ladejinsky was a copybook success story. An immigrant, he won an education and renown as a U.S. agricultural expert who helped to stymie the Communists in the Far East." Ironically, this successful anticommunist was accused of having communist sympathies by Eisenhower's secretary of agriculture; Ladejinsky lost his job in 1955 as one of many victims of anticommunist hysteria organized by Senator Joseph McCarthy.

After having had both success and failure in Asia, and losing his government job, Ladejinsky served as adviser to the U.S.-backed Diem regime in South Vietnam from 1956 to 1961. Vietnam proved more like China than Japan; Ladejinsky's attempt to use land reform as the antidote to communism foundered on the inability of Diem's regime to confront landlords. Ladejinsky subsequently served as adviser to the Ford Foundation and World Bank, concerned with Indonesia, Nepal, and the Philippines. He ended his career in India, keenly observing rural dynamics and promoting agrarian reform until his death in l975.

SEE ALSO *Land Reform; Landlords*

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Ronald J. Herring

LAFARGUE, PAUL
1842–1911

Paul Lafargue was a Haitian-Cuban-French Marxist economist, activist, politician, and writer, who considered himself black and referred to himself as African in letters to the German socialist Friedrich Engels. One might say with much justification that Lafargue was Cuba's first socialist.

FAMILY BACKGROUND AND EDUCATION

Lafargue was born on January 15, 1842, in Santiago, Cuba, the most popular and culturally Africanized part of the country to this day. His father, Francisco/François Lafargue (b. c. 1791–1803, d. 1870), was a wine seller, landowner (with New Orleans, Cuban, and Bordeaux properties), and tobacco or coffee planter. His mother was Ana Virginia Armaignac/Armagnac (1803 or 1810–1899). His paternal grandparents were Jean Lafargue (d. c. 1791–1803), a French colonist in St. Domingue from the Bordeaux area, and Catalina Piron (d. after 1891), a "mulatto" woman from St. Domingue. His maternal grandparents were Abraham Armagnac, the scion of a French Jewish colonialist family in St. Domingue, and Margarita Fripie/Frijie, a Carib woman residing in Kingston, Jamaica. François's mother, Caralina, fled from St. Domingue to Santiago, Cuba, probably in 1803, after the death of her French husband, Jean Lafargue, François's father, during the Haitian Revolution (1791–1803). She evidently was pregnant with François at the time of the flight, for he was born in Santiago.

In 1891, when Paul was running for the Chamber of Deputies from Bordeaux, his grandmother Catalina provided proof of her husband's French nationality. This implies that by this time Catalina also had marriage documents, or some other written token of her son's legal relationship to Jean Lafargue. Francisco was registered with the French consul in Santiago as a Frenchman, as evidently was his mother, Catalina. Actually, however, Francisco was a French citizen by virtue of article 59 of the 1685 Code Noir, which provided that any slave freed from French captivity became a French citizen. This implies that Catalina or her ancestors were freed slaves, and suggests that her descendants had documents in 1891 to prove her French slave and freedman origins.

In any case, Catalina Lafargue was among the approximately twenty thousand civilian refugees who fled from the island of Hispaniola to Cuba during the Haitian Revolution. In 1809 the Spanish government of Cuba forced Catalina and her son Francisco to flee once more. She went to New Orleans because Louisiana was the nearest location with a large French population and culture. They remained in the French Quarter and neighboring areas from about 1809 until 1814. In New Orleans the Lafargues were well-established Creoles as well. Catalina apparently never remarried, and little more is known about her.

Paul Lafargue's parents married in 1834, evidently in Santiago, Cuba. During the next seventeen years, they had one child, Paul (or Pablo, his name at baptism), and acquired property in Cuba, New Orleans, and perhaps in other places as well. The Lafargue's Cuban property included slaves, which they held at least until 1866. Paul attended the Colegio de Santiago, a Jesuit primary and middle school. Between 1814 and 1851, his parents acquired the property that made Francisco a landowner, wine seller, and slave-managed coffee plantation owner.

In 1851, three years after the Revolution of 1848 had eliminated slavery in France and its colonies, Paul's parents leased their Cuban property, La Maison de Saint Julian, with its slaves, and moved to Bordeaux, France. Paul was nine years old at the time. His parents retained possession as well of a house in Santiago. Apparently, relatives of theirs who remained in Cuba managed the leased property and the house. Paul's parents left at this time to avoid the increasingly burdensome laws directed against free blacks and mulattoes.

In Bordeaux, which at that time had a population of around 180,000, Paul studied for eight years under a private teacher, a Messieur Roger-Mice, and then in the lycées of Bordeaux and Toulouse. In the lycées, he received a good education in classical languages, literature, philosophy, and science.

Under Napoléon, a boarding school system existed in which boys spent ten months a year at gender-segregated school for eight or nine years, seeing little of their families. They wore military uniforms. Lycées for boys in Bordeaux at that time included the Lycée Michel Montaigne and Lycée Bertrand de Born. Lafargue evidently lived at home while attending one of these lycées. Lycées for boys in Toulouse included the Academie Royale de Toulouse (established 1345). Lafargue graduated from the Toulouse lycée in 1861 with a baccalaureate degree.

After completing lycée, Lafargue moved to Paris to study pharmacy, hoping to become an apothecary. He changed his mind, however, and enrolled at the Faculté de Medecin in Paris, studying medicine there from 1861 to 1865. His professors included his mentor, Jules-Antoine Moilin, and Carriere, his advisor. Moilin, a psychologist, also wrote on social economics, and was a left-wing radical who was ultimately executed by the government. Carriere, whose first name is not known, was himself driven into exile and began teaching physics and chemistry in London at St. Bartholomew's Hospital Medical School (now part of the University of London). Having been expelled from the University of Paris in 1863 for insulting church and state, Lafargue elected to continue his medical studies in London, gaining entrance to St. Bartholomew's in 1865 with Carriere's help. Lafargue graduated in July 1868 as a physician, qualified for the Royal College of Surgeons as an assistant surgeon, and practiced at the hospital.

MARRIAGE AND CHILDREN

Lafargue had joined the social democratic labor movement in France. Because of his residence in England for medical school, he was accredited as a representative of the Prudhonist French labor party and the French section of the First International in London in 1865. At that time, he was converted to Marxism by debates with Karl Marx at the meetings and at Marx's home. He met Marx's daughter Laura (1845–1911), and they were married in 1868. They had three sons, all of whom died in infancy or early childhood—Charles Étienne (1868–1872), François (1870–1870), and Marc-Laurent (1871–1872).

For their honeymoon, Paul and Laura were supposed to come to the United States, where his parents owned property in New Orleans, but Paul's commitments to the international socialist movement preempted this trip. Quite possibly, the Lafargues, or the Armagnacs, had and still have relatives and descendents in New Orleans and/or the United States, because this was fifty-four years after they had left New Orleans, and seventeen years after they had left the Caribbean for Europe. If they owned property in New Orleans, presumably someone had been in charge of managing their property during that period, and that someone was likely to have been a relative. The Lafargue

family was well established in both Bordeaux and Louisiana in the nineteenth century.

REVOLUTIONARY ACTIVIST AND POLITICIAN

After completing his medical residency in London in 1870, Lafargue moved back to Bordeaux with his wife. That year, he participated in the Paris Commune. As a result, he was arrested, and his papers were burned by police in Paris and Bordeaux. Lafargue founded the Marxist labor party in France, as well as the French, Spanish, and Portuguese sections of the First International. From 1872 to 1882, he and Laura lived in London, and then returned again to France. From 1891 to 1893 Lafargue represented a district in Lille in the Chamber of Deputies. In 1898 he also completed a thesis in law.

WRITING CAREER

Lafargue was a prolific writer, but his lasting legacy is to have introduced Marx's magnum opus, *Das Kapital*, to France and Italy. In 1890 Lafargue began work on a French translation of excerpts from *Kapital* that encompassed only the first nine chapters. The selected excerpts presented Marx's theory of historical materialism and class struggle, his distinction between use value and exchange value, his labor theory of value, and the beginning of his scheme of simple reproduction. Published in 1893, this translation featured an introduction by Vilfredo Pareto, which was intended as a refutation. This version of *Kapital* was also published in Italian in 1894 with a translation by Pasquale Martignetti, an Italian socialist and the translator into Italian of two of Engels's works.

The inclusion of Pareto's introduction in this version of *Kapital* was particularly significant. Pareto approved the theory of historical materialism and class struggle, but opposed the labor theory of value. He did not address the theory of simple reproduction. At this time, he was a supporter of socialism, and in this book, he began the research that led in 1897 to the construction of his renowned general equilibrium model of socialist economic planning. This collaboration between a Marxist theorist and a quasi-socialist economist (Pareto) is unique at this high level of rigor, and has had immense consequences for the theory of macroeconomic modeling for more than a century, despite the later waning of Pareto's sympathy for socialism. All national economic planning owes its origin to *Kapital*.

Although Marxist theoreticians had been writing and talking about trusts for decades, none had published a book on the subject until Lafargue published *Les trusts américains* in 1903. Using *Moody's Manual*, he identified 793 trusts, capitalized at $69.781 million, out of a total U.S. "fortune" of $485 million. Five railroad groups held additional capital. He focused his analysis on the petroleum, tobacco, and steel trusts, in which most of this capital was concentrated, and discussed their leading firms: Standard Oil, American Tobacco, United States Steel, and the Morgan, Gould-Rockefeller, Harriman-Kuhn-Loeb, Vanderbilt, and Pennsylvania railroad groups. Lafargue offered a straightforward empirical analysis, with no novel argumentation or conclusions.

The Right to Be Lazy was first published in French as a series of articles in *L'Egalite* in 1880, then appeared as a pamphlet the following year, and was first translated into English in 1898. It was a sardonic attack on the Protestant ethic that Lafargue argued underlay capitalism. Rather than a right to work, workers had a right not to work, or to work as little as possible. Lafargue took this idea from Aristotle's dictum that merchants and other workers had no time to develop the mind, and so were inferior to pure intellectuals or philosopher kings. Practically, implementing this idea would have the effect under capitalism of reducing unemployment by sharing the available paid work. Lafargue, however, argued not only for abolishing work, but that people engage in hedonism with their newly found free time. This pamphlet became the most translated socialist work after the *Communist Manifesto*, and was translated into Russian before the latter had been.

The modern Zerowork tradition may be said to have begun with Harry Cleaver (b. 1944) of the University of Texas and the two issues of the New York journal *Zerowork* published in 1975 and 1977. The journal engaged in polemics leading back to the materialist class struggle theory of classical Marxism of the 1848–1917 period, and against the idealist tendency promoting Marx's philosophical ideas of the early 1840s. These polemics even represented the Russian Communist leader Leon Trotsky (1879–1940) as an idealist. A liberal strand of this movement, led by Jeremy Rifkin, argues that it is now technologically possible to abolish work. Another strand followed the economic anthropologist Marshall Sahlins (b. 1930) and others in showing that primitive hunter-gatherers worked less than the proletariat in capitalist societies, because they are not forced by capitalists to produce economic surplus value to be extracted; thus, they limit their desires, producing only what is necessary for subsistence. This tradition may be viewed as a Lafarguean movement, in inspiration, one attempting to show that work is neither desirable nor necessary, or even possible.

SEE ALSO *Haitian Revolution; Labor; Marx, Karl; Marxism; Monopoly; Pareto, Vilfredo; Slavery; Socialism; Syndicalism; Unions; Work*

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Julian Ellison

LAGGING, LEADING, AND COINCIDENT INDICATORS

The *index of leading indicators* comprises economic indicators that generally turn down and up prior to the business cycle peaks and troughs designated by the Business Cycle Dating Committee of the National Bureau of Economic Research. The *index of coincident indicators* consists of data series whose turning points tend to coincide with peaks and troughs in overall economic activity, and the *index of lagging indicators* comprises indicators whose turning points generally occur after recessions and recoveries begin.

The three indexes are published by the Conference Board, a not-for-profit business-membership organization. Prior to 1996, they were published by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce.

The ten components of the leading index are:

1. The length of the workweek for production workers in manufacturing.
2. Initial weekly claims for unemployment insurance.
3. Manufacturers' new orders for consumer goods and materials.
4. A measure of slower deliveries by vendors.
5. Manufacturers' new orders for nondefense capital goods.
6. Permits issued for the construction of new housing units.
7. Stock prices.
8. The inflation-adjusted money supply.
9. Consumer expectations.
10. The difference between the interest rate on ten-year Treasury securities and the federal funds rate, which banks charge one another on short-term loans.

Various explanations have been offered for why these indicators turn up and down before the economy does. Stock prices, for example, are regarded as a reflection of people's confidence in the economy, and such confidence (or the lack thereof) is self-fulfilling. If people think the economy will do well, they will behave in ways (e.g., spending more freely) that will cause the economy to do well. Also, changes in stock prices create changes in wealth that—with a lag—lead to changes in consumer spending.

While the leading index is intended to predict cyclical turning points in the economy, it has major weaknesses as a forecasting tool. One weakness is that the time period between the turn in the index and the turning point for the economy varies greatly, before both recessions and recoveries. In 1993, when the BEA revised the index, it reported that the lead time provided by its new index had varied in the post–World War II (1939–1945) period from five months before the July 1953 peak to twenty months before the August 1957 peak, and that the lead time provided by the index that was being replaced had varied even more—from two months before the recessions that began in 1981 and 1990 to twenty months before the August 1957 peak. Under a widely accepted rule of thumb that a decline in the index is not meaningful until it has lasted at least three months, the leading indicators failed to signal the recessions that began in 1981 and 1990. Also, the index sometimes gives a false signal of a recession, as in 1984, when a large drop in the index was not followed by a downturn in the economy.

The BEA has pointed out, too, that the size of a drop in the leading index is not a sign of the severity of an ensuing recession; a mild recession may be preceded by a sharp drop in the index, and a severe recession may be preceded by a moderate decline in the index.

The coincident index includes:

1. The number of employees on nonagricultural payrolls.
2. Inflation-adjusted personal income less transfer payments (such as unemployment insurance benefits).
3. Industrial production (a measure of the output of the manufacturing, mining, and utility industries).
4. Inflation-adjusted manufacturing and trade sales.

The index is regarded as a gauge of the current health of the economy, although in the "jobless" recovery from the recession that ended in November 2001, payroll employment did not hit its low until August 2003.

The index of lagging indicators comprises:

1. The average duration of unemployment (inverted).
2. The ratio of inventories to sales in manufacturing and trade.
3. The change in labor cost per unit of output in manufacturing.
4. The average prime rate of interest charged by banks.
5. Commercial and industrial loans outstanding (adjusted for inflation).
6. The ratio of consumer credit outstanding to personal income.
7. The change in the consumer price index for services.

These series measure the types of forces (debt burdens, for example, and price and credit pressures) that build up during expansions and that can bring an expansion to a close if they build up excessively. Thus, the ratio of the coincident index (which measures economic activity) to the lagging index serves as a leading indicator of recessions. A decline in the ratio during an expansion, suggesting that expansion-threatening forces are building up faster than economic activity is increasing, is a leading indicator of a possible recession.

The Conference Board publishes cyclical indexes for a number of countries other than the United States, and the makeup of those indexes differs somewhat from that of the U.S. indexes. For example, the coincident index for Mexico includes retail sales and the (inverted) unemployment rate, and the leading index for Australia includes the sales to inventories ratio.

SEE ALSO *Business Cycles, Real; Equity Markets; Industry; Inflation; Inventories; Leisure; Maximization; Misery Index; Money, Supply of; Stock Exchanges; Unemployment; Unemployment Rate; Utility Function*

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Edward I. Steinberg

LAGRANGE MULTIPLIERS

Lagrange Multipliers is a mathematical device introduced to find local extrema of a function subject to constraints. Problems of this general type are ubiquitous in the social sciences. For instance, they arise as optimization problems for quantities that depend on variables that satisfy some additional relations. An example in neoclassical economics is the optimization problem of the utility function with restrictions imposed by a fixed budget.

A typical problem of this type involves a function $f(x_1, \ldots x_n)$, say, dependent on n variables. One seeks values for the variables x_i so that f has a local extremum; that is, f has a local maximum or minimum. This requirement is equivalent to the statement that all partial derivatives of f vanish:

$\partial f/\partial x_i = 0$ for all $i = 1, \ldots, n$.

Quite often the variables x_i are not independent of each other but must satisfy some additional conditions. In such cases one cannot simply solve the above condition on the partial derivatives of f since the variables x_i are not independent of each other. The Lagrange multiplier technique can be employed in cases where the constraints on the variables can be expressed as equations:

$g_\alpha(x_1, \ldots, x_n) = 0$, for $\alpha = 1, \ldots, k$.

In such cases the above extremization problem can be expressed in a different form. Consider a new function F defined through the relation:

$F(x_1, \ldots, x_n, \lambda_1, \ldots, \lambda_k) = f(x_1, \ldots, x_n) + \Sigma\, \lambda_\alpha g_\alpha(x_1, \ldots, x_n)$.

This definition introduces k new variables λ_α—one for each constraint g_α. The sum in the above expression is over α. The new variables λ_α are called Lagrange multipliers.

In terms of F it is possible to express the previous problem of constrained extremization as a simple extremization problem. Since F depends on $n + k$ variables, finding local extrema for F can be split up into two sets of equations:

$$\partial F/\partial x_i = \partial f/\partial x_i + \partial g/\partial x_i = 0 \text{ for all } i = 1, \ldots, n.$$

as well as:

$$\partial F/\partial \lambda_\alpha = g_\alpha = 0 \text{ for all } \alpha = 1, \ldots, k.$$

The second set of equations imposes the constraints ($g_\alpha = 0$), while the first set imposes a new condition. This apparently new condition actually reduces to the condition that the partial derivatives of f vanish once the constraints $g_\alpha = 0$ are taken into account.

As an example from neoclassical economics, consider the problem of optimizing utility for a consumer who can buy two commodities, a and b, with price per unit p_a and p_b, respectively. The consumer is constrained to spend within his or her budget w. Let the number of commodities of each kind, a and b, purchased by the consumer be given by x_a and x_b, respectively. The budget of the consumer imposes the constraint:

$$p_a x_a + p_b x_b \leq w.$$

This states simply that the total price paid for the two commodities should be less than the available budget. In many neoclassical models the inequality is transformed into an equality. This is justified by hypothesizing one of a number of characteristics of consumer behavior. One hypothesis that justifies this modification is that the consumer is "insatiable" that is, the consumer will buy to the maximum of his or her buying ability. In any case, these hypotheses lead to the modified constraint:

$$p_a x_a + p_b x_b = w.$$

The utility function u is a measure of the happiness of the consumer. The utility is a function of x_a and x_b: $u = u(x_a, x_b)$. Consumers in neoclassical economics base their behavior on maximizing their utility function while satisfying the budgetary constraint. This problem is of the general type discussed above with $f = u(x_a, x_b)$, and $g(x_a, x_b) = p_a x_a + p_b x_b - w$. To illustrate the method, consider a utility function given by $u(x_a, x_b) = x_a x_b$.

To apply the Lagrange multiplier method one constructs a new function:

$$F(x_a, x_b, \lambda) = u(x_a, x_b) + \lambda g(x_a, x_b) = x_a x_b + \lambda(p_a x_a + p_b x_b - w).$$

Setting the partial derivatives of F to zero, one finds:

$$0 = \partial F/\partial x_a = x_b + \lambda p_a$$

$$0 = \partial F/\partial x_b = x_a + \lambda p_b$$

$$0 = \partial F/\partial \lambda = p_a x_a + p_b x_b - w$$

These equations can be solved to yield:

$$x_a = w/2p_a$$

$$x_b = w/2p_b.$$

These give the proportions of each of the commodities that optimize the utility function. The Lagrange multiplier

$$\lambda = -w/2p_a p_b$$

has an economic interpretation. The Lagrange multiplier can be expressed as a derivative of F:

$$\lambda = \partial F/\partial w.$$

It tells one how F changes when w is varied. Since on the extremum of F, the constraint is satisfied F coincides with u, the utility. The Lagrange multiplier is thus a measure of how the utility u changes when the budget w is varied, with this interpretation the Lagrange multiplier λ is called the shadow price.

SEE ALSO *Constrained Choice; Maximization; Minimization; Shadow Prices; Utility Function*

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Ansar Fayyazuddin

LAGRANGE MULTIPLIER TEST

SEE *Specification Tests.*

LAGS, DISTRIBUTED

Often when we try to model statistical relationships, we tend to use contemporaneous values. For example, if we want to model changes in consumption because of a change in disposable income, we may try to run the regression $\Delta y_t = \alpha + \beta \Delta x_t + \varepsilon_t$, where Δy_t is the percentage change in consumption and Δx_t is the percentage change in the disposable income, α and β are the regression parameters, and ε_t is the random error. The relationship works very well, but it has been documented that people demonstrate "consumption inertia"—that is, the

consumption habits of consumers do not change right away in response to an increase in the disposable income. Because consumption expectations are formed by past changes in income, this class of models is called backward-looking expectations models. The best way to capture consumption inertia is to include in the regression model not only the current change in disposable income but also previous changes. If an independent variable (Δx_t) appears more than once, with different time lags, then the model is called a distributed lag model. Generally, with only one dependent variable and one explanatory variable, the distributed lag model is represented as $y_t = \beta_0 x_1 + \beta_1 x_{t-1} + \beta_2 x_{t-2} + \ldots + \beta_n x_{t-n} = \sum_{i=0}^{n} \beta_i x_{t-i} + \varepsilon_t$. The β_i are coefficients, x_{t-i} are the lagged values of the explanatory variable and ε_t is the independent white noise random error.

To demonstrate the distributed lag model empirically, with personal consumption data let y_t, be the change in U.S. personal consumption expenditure in quarter t, and x_t be a change in U.S. personal disposable income in quarter t. The results of a regression of one lag of personal disposable income are:

y_t = .005 + .124 x_t + .142 x_{t-1} (3.52) (1.89) (2.17) (t-stats).

This illustrates that a 1 percent change in disposable income induces 0.124 percent of the change in the current consumption. However, last quarter's change in disposable income has statistically significant (t-statistics in the parenthesis) influence on the change in the consumption. A 1 percent increase in disposable income would cause about 0.142 percent increase in current consumption. The implication of this finding is that changes in personal disposable income have lasting influence on the changes in consumption.

The obvious statistical question then is why estimate the model with only one lag. How many lags are appropriate? This has long been one of the problems with the distributed lag models, even in the early work of Irving Fisher (1937) in the 1930s. Researchers such as Jan Tinbergen (1949) suggest including lags until the coefficients of the lagged variables become insignificant or the signs of the coefficient become erratic. There are several problems with this kind of ad hoc specification. First, there is no guidance in terms of lag length. Second, if the sample size is small, then as the lag length increases statistical inference may be somewhat shaky, with fewer degrees of freedom. Finally, successive lags tend to have high correlations (multicollinearity), leading to smaller t-ratios and incorrect inferences.

One way to reduce the number of lags and the extent of multicollinearity is to use L. M. Koyck's (1954) adaptive expectations model. In this type of model, in addition to the explanatory variable a lagged dependent variable is included and is represented as $y_t = \alpha + \beta_1 x_t + \beta_2 y_{t-1} + \upsilon_t$, where υ is the error term. The adaptive expectation model can be illustrated by using the data on personal consumption expenditures and disposable income. The results of the model are:

y_t = .007 + .067 x_t + .107 y_{t-1}

The coefficients of the above model have some interesting interpretations. The coefficient of disposable income (x_t) shows short-run impact of a change in disposable income on consumption. A 1 percent change in disposable income would cause a 0.67 percent increase in consumption in the short run. The estimate 1.15 percent (0.107/(1 – 0.067)) provides the long-run impact of a change in disposable income on consumption. The results reveal that a 1 percent increase in disposable income would cause consumption to go up by 1.15 percent in the long run.

If the dependent variable is random, the lagged dependent variable may also be random, and including a random explanatory variable in the model may produce biased and inconsistent estimates. Thus, in order to use this model it is essential to verify that the lagged dependent variable is not correlated with the random errors. In addition, in the above models serial correlation in the errors cannot be tested using normal autocorrelation statistics. One of the assumptions of infinite distributed lag models such as Koyck's is that the coefficient on the lag variables declines geometrically as the lag length increases. If the coefficients do not behave in this manner, then the above lag structure may not be suitable. In these circumstances, you need a more flexible model that would incorporate a variety of lag structures, such as Shirley Almon's (1965) distributed lag models.

To estimate a flexible model such as Almon, we must a priori specify the lag length to verify the changes in the size of the coefficients. If βs decrease at first and then increase with higher lags, β_is can then be approximated by a second-degree polynomial because we have one size change. The more the turning points, the higher the degree of polynomials. We can illustrate the Almon distributed lag model by using the data on personal consumption and disposable income. First, we assume that change in consumption depends on the current change and preceding two-quarter change in disposable income. Second, we also assume that β_i can be approximated by a second-degree polynomial. The results of this estimation of are $y_t = 0.006 + 0.121 z_0 - 0.047 z_1 - 0.064 z_2$, where zs are constructed as a linear combination of x (change in disposable income) series. For this example of two lags and second-degree polynomial, the zs are:

$$z_0 = \sum_{i=0}^{3} x_{t-i} = (x_t + x_{t-1} + x_{t-2})$$

$$z_1 = \sum_{i=0}^{3} i x_{t-i} = (x_{t-1} + 2x_{t-2})$$

$$z_2 = \sum_{i=0}^{3} i^2 x_{t-i} = (x_{t-1} + 4x_{t-2}).$$

From the above estimates, original βs can be obtained and are presented as $y_t = 0.006 + 0.103x_t + 0.121x_{t-1} + .001x_{t-2}$.

The above values are provided in standard econometric software programs. Although this model offers more flexibility than Koyck's model, there are still problems with this technique. First, there is no real guidance as to the selection of lag length or the degree of polynomial. Second, the constructed zs are likely to exhibit multicollinearity, which may lead to statistically insignificant coefficients due to large standard errors. Nevertheless, the distributed lag models in general are very useful in modeling issues when the dependent variable exhibits delayed reaction to changes in the independent variable.

SEE ALSO *Error-correction Mechanisms; Vector Autoregression*

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LAISSEZ-FAIRE

The doctrine of laissez-faire was first systematically developed by the physiocrats in France. It was at first primarily considered a moral doctrine that sanctified the freedom of the individual and had implications for economic life, not just an economic policy doctrine. Later laissez-faire came to be understood mainly as an economic policy doctrine.

Folklore has it that during the reign of Louis XIV (1638–1715), the finance minister, Jean-Baptiste Colbert (1619–1683), asked a group of French businessmen what the government could do to aid the cause of commerce, and the response was *laissez-faire*, or let the people do as they freely choose. The social-philosophic doctrine that emerged opposed government interference in economic affairs beyond providing the minimum functions of ensuring peace, administering justice, and providing basic public goods. In the English-speaking world, the laissez-faire doctrine came to be identified with Adam Smith (1723–1790) and in particular the argument for free trade associated with *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776).

The moral theory aspects of the doctrine of laissez-faire remained in classical political economy, but the economic policy implications came to dominate the debates around the doctrine. The idea of economic freedom and limited government would be developed in the century after Adam Smith by Jeremy Bentham (1748–1832), J. B. Say (1767–1832), Frédéric Bastiat (1801–1850), and John Stuart Mill (1806–1873). Even as Mill made an explicit case for exceptions to the laissez-faire principle in economic life, he argued that "laisser-faire, in short, should be the general practice: every departure from it, unless required by some great good, is a certain evil" (Mill [1848] 1976, p. 950).

From the beginning, however, critics of laissez-faire attempted to paint a picture of extremism and lack of concern for the least advantaged in society. This characterization of the position was immortalized by Charles Dickens's (1812–1870) portrayal of Scrooge (a thinly veiled depiction of Herbert Spencer [1820–1903]) and the claim that rather than give aid to the poor we should allow the surplus population to decline naturally. But as Jacob Viner (1892–1970) pointed out in his "The Intellectual History of Laissez Faire," only "unscrupulous or ignorant opponents of it and never its exponents" used the term *laissez-faire* to mean a position of "philosophical anarchism, or opposition to any governmental power or activity whatsoever" ([1960] 1991, p. 200). Instead, the term *laissez-faire* as used by its systematic exponents meant freedom of choice and trade and a limitation on the scope of governmental activities to defense against foreign powers, establishment of a system of justice to prevent members of the society from oppressing others in that society, and the maintenance of essential public works and institutions. Laissez-faire, Frank Knight (1885–1972) declared, "simply means freedom, in the particular case of economic policy: freedom of economic conduct from dictation by government" ([1967] 1999, p. 435).

The nonsubtle reading of laissez-faire argues that the position is claiming that the individual pursuit of self-interest is enough to realize a benevolent social order irrespective of the social rules of interaction that are in place. In fact, the critics read the doctrine as insisting that there is an absence of governance, rather than just limits on the scope of government. In this regard, advocates of the doc-

trine of laissez-faire are accused of being unreasonable and doctrinaire. F. A. Hayek (1899–1992), in fact, argues that nothing has done more harm to the cause of economic liberalism than a "wooden insistence" on the principle of laissez-faire (1945, p. 17). A more nuanced and appropriate reading of laissez-faire would emphasize the essential role of institutions of governance (though not necessarily provided only by government) in explaining how a benevolent social order can result from individuals freely choosing.

Critical to understanding the defense of the doctrine of laissez-faire are two subsidiary arguments. First, the defender of laissez-faire must present a demonstration through the logic of economic analysis of the "invisible hand" proposition (see, e.g., Nozick 1974, pp. 18–22). Second, the defender of laissez-faire will proceed to conduct a comparative analysis (both theoretical and empirical) of market versus governmental decision-making within the sphere of economic affairs (see, e.g., Buchanan and Tullock 1962). The combination of these two subsidiary arguments, often alongside a moral stance derived from natural law theory, can be found in almost any presentation of the laissez-faire position from Smith to Hayek, from Bastiat to Milton Friedman (1912–2006).

As Viner pointed out in his essay "Adam Smith and Laissez Faire," even when Smith "was prepared to admit the system of natural liberty would not serve the public welfare with optimum effectiveness, he did not feel driven necessarily to the conclusion that government intervention was preferable to laissez faire. The evils of unrestrained selfishness might be better than the evils of incompetent and corrupt government" (Viner [1927] 1991, p. 104). In order to justify intervention, Smith argued, one would have to demonstrate not only that individuals freely choosing would not advance the public welfare, but also that government officials would be in a position to know better what was in a man's interest than he would be himself. This was a position that Smith vehemently refused to concede in the realm of economic affairs. As Smith put it:

> The statesman, who should attempt to direct private people in what manner they ought to employ their capitals, would not only load himself with a most unnecessary attention, but assume an authority which could safely be trusted, not only to no single person, but to no council or senate whatever, and which would no-where be so dangerous as in the hands of a man who had folly and presumption enough to fancy himself fit to exercise it. (Smith [1776] 1976, bk. IV, chap. 2, p. 478)

On the other hand, the individual from the vantage point of his local situation is in a better position to judge what is the best course of action for himself. Smith, it is important to stress, did not presume that acting self-interestedly was enough to ensure a benevolent social order. Self-interest is what guides the statesman to overburden himself; it is also what leads to Oxford dons not satisfying the educational demands of their students (Smith [1776] 1976, bk. V, chap. 1, p. 284) and to teachers of religious doctrine being less zealous and hardworking in the state-supported religious sects as compared to those sects that rely solely on voluntary contributions (bk. V, chap. 1, p. 309). Self-interest also leads the businessman to conspire with his competitors to set prices (bk. I, chap. 10, p. 144) and to seek out protection from foreign competitors (e.g., bk. IV, chap. 2, pp. 489–490). It is self-interest that is behind the sophistry of the merchants and the manufacturers in the quest for monopolistic status, just as it is self-interest among professors and preachers when they seek secure incomes and protection from competitors in the instruction of philosophy and religious doctrine.

Self-interest is also what drives the refinements in the division of labor, the coordinative activities of an economy guided by relative price movements, and the innovations of the entrepreneur. Self-interest is not unique to laissez-faire, but a regime of laissez-faire (within the specified institutions of natural liberty) will channel self-interest in a direction that will maximize the likelihood of a social order of peace and prosperity. When the institutions of natural liberty are absent, or government attempts to thwart their development, Smith's claim was that tyranny and poverty would result. As he put it in the notebooks that preceded the *Wealth of Nations*:

> Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice; all the rest being brought about by the natural course of things. All governments which thwart this natural course, which force things into another channel or which endeavor to arrest the progress of society at a particular point, are unnatural, and to support themselves are obliged to be oppressive and tyrannical. (Smith [1776] 1976, p. xl)

The laissez-faire doctrine would latter become identified with the *harmony of interest* doctrine, a doctrine that claimed that the competing interests of individuals could be reconciled through the market mechanism. The proposition is actually older than Smith, and can be traced back to Voltaire (1694–1778). In the sixth of his *Letters Concerning the English Nation*, Voltaire discusses how even passionate warring factions can be reconciled through commerce:

> Take a view of the Royal Exchange in London, a place more venerable than many courts of justice,

> where the representatives of all nations meet for the benefit of mankind. There the Jew, the Mahometan, and the Christian transact together, as though they all professed the same religion, and give the name of infidel to none but bankrupts. There the Presbyterian confides in the Anabaptist, and the Churchman depends on the Quaker's word. At the breaking up of this pacific and free assembly, some withdraw to the synagogue, and others to take a glass. This man goes and is baptized in a great tub, in the name of the Father, Son, and Holy Ghost: that man has his son's foreskin cut off, whilst a set of Hebrew words (quite unintelligible to him) are mumbled over his child. Others retire to their churches, and there wait for the inspiration of heaven with their hats on, and all are satisfied. (Voltaire [1733] 1994, pp. 29–30)

This *doux-commerce* thesis, which argued that commerce was a civilizing influence on humanity, has been identified with Montesquieu (1689–1755) and Voltaire, and then received its systematization in the works of David Hume (1711–1776) and Smith. It is very much a part of the underlying argument for the laissez-faire doctrine. Understanding the logic of this argument and its implications came to be synonymous with becoming an economist or a classical political economist.

Critics of the laissez-faire doctrine emerged from the beginning and tended to focus on variants of the following arguments through the years:

1. Poverty traps that cannot be escaped through free choice.
2. General glut that results from overproduction or underconsumption.
3. Monopoly power that emerges naturally in the market and allows businesses to exploit consumers.
4. Exploitation of the working class that pushes wages down to subsistence and compels laborers to work in harsh and unsafe conditions.
5. External economies that generate situations where desirable goods are underproduced on the market, and undesirable goods are overproduced on the market.
6. Public goods that are not supplied by the market due to free-rider problems.

Beginning in the late nineteenth and continuing throughout the twentieth century, a stream of economic schools of thought rose to challenge the presumption for laissez-faire. In fact, the American Economic Association was formed by economists who were decidedly non-laissez-faire thinkers, but instead were government reformers and activists. Laissez-faire was identified in their minds with an economic policy of noninterventionism, which meant that the social ills of monopoly, unemployment, inequality, and exploitation would go unchecked. The institutional school of Thorstein Veblen (1857–1929), John Commons (1862–1945), and Clarence E. Ayres (1891–1972) was critical of the laissez-faire doctrine. John Maynard Keynes (1883–1946) declared "The End of Laissez Faire" in the 1920s, and the development of Keynesian economics in the 1930s and 1940s transformed the discipline of economics from one that sought philosophic understanding to one that provided tools for social control. Mid-century arguments for market socialism and market failure theory added to the dismissal of the presumption for laissez-faire that was in the classics from Smith to Mill. And the arguments against laissez-faire from Karl Marx (1818–1883) to Paul Samuelson relied on some version of the six critiques listed above. Even the most sophisticated modern criticisms of laissez-faire (e.g., asymmetric information, network externalities, or behavioral irrationalities) rely on a variant of these basic criticisms that have been leveled since the beginning of the history of the idea.

The argumentative strategy of the opponents of laissez-faire usually took the form of: (1) characterization of the laissez-faire position as based on unrealistic assumptions concerning man (e.g., atomistic and hyperrationality); (2) depiction of reality that highlighted deviations from what would be theoretically optimal (e.g., deviations from marginal cost pricing); and (3) a willful ignoring of the costs of decision-making when government is called upon to serve as a corrective to social ills.

During the twentieth century, three figures emerged as the heirs to Adam Smith and the defenders of the laissez-faire doctrine—F. A. Hayek (1974 Nobel Prize in Economics), Milton Friedman (1976 Nobel Prize in Economics), and James Buchanan (1986 Nobel Prize in Economics). Keep in mind what was argued in the beginning of this entry concerning Smith's argument—that there were two intellectual moves in the laissez-faire argument: first, the invisible hand; second, the comparative analysis on nonmarket decision-making. Hayek, Friedman, and Buchanan argued that more often than not the breakdown of the invisible hand was a consequence of governmental policy that had previously not been considered by the critics of laissez-faire. Adam Smith, they reminded everyone, did not argue that self-interest under any conceivable set of circumstances would produce a beneficial social order. Self-interest within a system of clearly defined and strictly enforced property rights could be relied upon to channel self-interest to serve the public welfare, but if property rights are unclear or weakly enforced, self-interest may very well produce undesirable outcomes. The tragedy of the commons, in other words, is not a challenge to Smith (or Hayek, Friedman, and

Buchanan) but a confirmation of their basic insight into how the "invisible hand" works. Second, even if the market order failed to produce the best of all possible outcomes (as it inevitably always did at any point in time), the critic must not leave the costs of governmental decision-making unexamined (including unintended and undesirable consequences). The standard twentieth-century argument for interventionism presumed both that the government possessed the knowledge to solve the problem, and that the decision process was relatively costless because the government actors were acting as economic eunuchs. Works such as Hayek's *The Road to Serfdom* (1945) and *The Constitution of Liberty* (1960), Friedman's *Capitalism and Freedom* (1962) and *Free to Choose* (1980, with Rose Freidman), and Buchanan's *The Limits of Liberty* (1975) and *Democracy in Deficit* (1977, with Richard Wagner) challenged the government as corrective presumption, and helped forge a revitalized case for laissez-faire in the late twentieth century.

In the narrative on laissez-faire just constructed, little reference was made to the actual historical record for the simple reason that such a discussion would require multiple entries. The critics of laissez-faire attribute the late nineteenth-century robber barons, the miserable working conditions of the poor in early twentieth century, the Great Depression, and the bigotry of racial segregation to laissez-faire capitalism. The defenders of laissez-faire, on the other hand, reject each of these interpretations and attempt to show either that the root cause of the problem was government interference with the competitive process or that the competitive forces of the economy were in fact alleviating the problem at the time that government stepped in to claim credit for easing social tension. One side sees market forces as ameliorating social ills and reconciling conflicts, while the other side sees the market as augmenting social ills and aggravating conflicts. This has been an ongoing argument for three centuries, and it does not appear to be resolvable in a clear-cut empirical manner. Instead, the debate turns on analytical arguments, empirical evidence and counterevidence, and explicit or implicit moral judgments.

SEE ALSO *Austrian Economics; Bentham, Jeremy; Capitalism; Competition; Economics, Classical; Free Trade; Government; Hayek, Friedrich August von; Liberty; Market Fundamentals; Markets; Mill, John Stuart; Natural Rights; Naturalism; Physiocracy; Smith, Adam; Social Statics*

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LAKATOS, IMRE
1922–1974

The pivotal philosophical debate of twentieth-century Anglo-American philosophy originated with Thomas Kuhn's 1962 *The Structure of Scientific Revolutions*. Kuhn (1922–1996), along with Imre Lakatos and Paul Feyerabend (1924–1994), made the history and sociology of science central to conceptions of scientific progress and rationality. Lakatos, a Hungarian émigré who escaped the failed 1956 revolution, became Karl Popper's (1902–1994) best and favored student, but he joined forces with Kuhn and Feyerabend against Popper's refusal to see scientific method as having historical roots and hence being subject to change. Lakatos maintained Popper's anti-posi-

tivist view that scientific knowledge has no epistemological foundation, but that progress occurred through continual criticism and revision. Lakatos made the historicism in that view explicit by critically elaborating Popper's approach into an interpretative method for the history of science and mathematics. Instead of Popper's ahistorical "logic of scientific discovery" Lakatos saw an historically *changing* logic of criticism and the growth of scientific knowledge. But like Popper and Feyerabend, and unlike Kuhn, Lakatos recommended a normative conception of scientific method, analogous to normative philosophical models of political or civic processes. Lakatos created his critical theory of science using a sui generis historiographical approach for reconstructing the scientific present as a value-laden history of progress and decline.

The historiographical toolkit is Lakatos's methodology of scientific research programs. In contrast to Popper's confrontations of falsifiable theories, with their risky predictions and hence potential refutations, Lakatos argued that individual theories are poorly chosen "units" for scientific change. In practice, as Kuhn and Feyerabend dramatically demonstrated, the best theories can be formally inconsistent; they may contradict stable observations or received theories, or they may violate traditional canons of scientific method—not all at once, but individually or opportunistically, as needed for theory improvement. Lakatos also assumed no theory-neutral observational basis to conclusively refute a single theory. Hence there was no guarantee that confirmatory or refuting data might not itself be reinterpreted and overturned, thus making conclusive refutation of single theories either impossible or subject to unrealistic and overcomplex methodological criteria.

This messy and chaotic milieu of chronic uncertainty requires the intelligence and flexibility of working scientists, whose theories Lakatos organized in terms of long-term research programs. These need not coincide with projects of individual researchers. Instead, they are a post festum historical reconstruction used to characterize scientifically recognized progress or failure. Lakatos proposes a philosophical model to characterize just what, in long-term patterns of theory choice, empirical discovery, and interpretation, led to a recognition, perhaps erroneous, by scientific communities as achievement or decline. A research program, then, was defined as a series of theories that were loosely united by a shared hard core of key principles, ranging from inchoate metaphysical ideas to favored modeling approaches; a positive heuristic of plans for generating theoretical improvements, and turning theories into operational models for addressing open problems, hopefully creating novel confirmations or predictions; ancillary touchstone and observational theories, used to interpret and organize a changing basis of theory-laden "facts" relevant to the program; a protective belt of theories or models insulating the program from critical attack; perhaps ad hoc theories or models needed as temporary fixes; an inventory of Kuhnian puzzles, contradictions, and anomalies awaiting resolution; and an environment of competing research programs against which relative progress is gauged.

Thus "scientific" describes not individual theories, but sequences of theories in time, not necessarily coordinated by any single individual or group. Such science, then, is either progressive or degenerating, the outcome measured by the presence or absence of novel confirmations, persistent puzzles and contradictions, powerful model development, and more or less ad hoc fixes—all of these judged relative to competing programs with a shared domain of problems, relevant phenomena, and research objectives. Lakatos's historiography of research programs is a theory of modern scientific progress in which a role for scientific truth is reduced in proportion to the Faustian ambitions of theoreticians and experimenters.

Lakatos and others rewrote episodes from the histories of various sciences, using research program categories: the phlogiston and oxygen programs of Joseph Priestley (1733–1804) and Antoine-Laurent Lavoisier (1743–1794); the wave and corpuscular programs for light; nineteenth-century atomic-versus-phenomenological theories of heat; modern plate tectonics; classical political economy from Adam Smith (1723–1790) to David Ricardo (1772–1823) and Karl Marx (1818–1883); and several segments of twentieth-century physics. These projects led to successes and failures, the latter occurring when a major change, like the replacement of classical physics with relativity theory, or the emergence of modern science altogether, is forced into Lakatos's research program categories, which can be thought of as a nuanced conception of Kuhn's "normal science," and absent Kuhn's confusing normative views. Lakatos saw this historical work as "scientific," meaning that methodological reflection itself was an ongoing, theory-laden activity of understanding the "phenomena" of the scientific past. As in science proper, no perfect match is expected between historical theory and historical data, implying, as Lakatos points out, no "true" scientific consciousness: our knowledge of science is imperfect and uncertain, just as in science proper. Lakatos's dialectical histories demonstrated that understanding past knowledge is possible only through some contemporary normative criteria for what counts as scientific, whether clearly articulated or not. His project was to make that condition of historical knowledge his primary lesson for the new philosophy of science. Lakatos and others carried out this project by using the methodology of scientific research programs as a historiographical guide and toolkit. Feyerabend identified the characteristic feature of modern scientific knowledge as a constantly

expanding horizon of facts. Lakatos thought it best to comprehend that post-Renaissance process using normative and philosophical concepts that make historical knowledge an object of rational, even scientific, self-understanding.

SEE ALSO *Kuhn, Thomas; Philosophy of Science; Popper, Karl; Science; Scientific Method*

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John Kadvany

LAND CLAIMS

A *land claim* is the pursuit of recognized territorial ownership by a group or individual. In modern nation-states, the vast majority of such claims have been advanced by indigenous peoples who have been dispossessed of land and resources in the course of imperial expansion and nation building. In the context of a worldwide rise in aboriginal political power since the 1970s, aboriginal leaders have initiated land claims in an effort to reverse the marginalization of Native societies in countries dominated by non-Native peoples and to provide a means of wealth and security. While indigenous peoples have pursued land claims across much of the globe since at least the early 1980s (see Fondahl et al. for Russian examples), they have become particularly well developed in the countries that have emerged out of the former British settler colonies: Canada, the United States, Australia, and New Zealand. As with so many other struggles for the acknowledgement of minority rights, land claims are often marked by protest and conflict between, on one side, sets of property owners, corporations, and governments that stand to benefit from the maintenance of the status quo and, on the other side, aboriginal peoples who hope to regain control of territory and resources. In the context of social science research and study, understanding land claims requires consideration of the intersection of geography, politics, economics, and social pluralism.

At the root of the pursuit of modern land claims is the assertion of *title* by aboriginal peoples. Claimants argue that they hold ownership of land and resources based upon long-term occupation and use of particular territories. Thus, for a land claim to proceed, title must be ascertained and recognized by a country's legal institutions. In different jurisdictions, recognition of Native title has varied greatly. In Canada, for example, aboriginal claims of ownership are backed by the Royal Proclamation of 1763, in which the British Crown affirmed Native ownership of land and resources in Britain's North American colonies where obvious occupation and use was in evidence. Under this law, British settlers were obliged to negotiate in good faith with Native peoples for the transfer of land and resources (Usher 2003, p. 377). Since the early 1990s, land and resource claims advanced by a number of Native groups in British Columbia have been based on the historical fact that the requirements of the Proclamation have not been met in the province (Rossiter and Wood 2005, pp. 358–359). The United States, another outgrowth of British colonization, also recognized the existence of aboriginal title through the negotiation of historic treaties between the federal government and individual Native groups (Hendrix 2005, p. 765). Modern land claims in the United States, such as those advanced in the 1980s and 1990s by the Western Shoshone Nation in Nevada (see Luebben and Nelson 2002) have resulted from failures of governments to live up to the terms of these treaties. By contrast, in Australia the recognition of the existence of aboriginal title prior to settlement by British colonists only emerged in 1992 with a High Court ruling that entrenched the principle in the country's body of common law (Davies 2003, p. 28). Whatever the case, however, once the general principle of prior indigenous title has been accepted by a state, land claims by Native groups may then be pursued in order to regain or affirm clear ownership in cases where such ownership has not been superseded through recognized legal means, yet practical control of territory has been lost to either government or private interests.

When countries' legal institutions recognize the existence of Native title in relation to territory where aboriginal control has been superseded, they place demands on governments and other property holders to either extinguish Native title through accepted channels or return control over land and resources to claimants. As with the acknowledgement of Native title, the means of extinguishment has varied greatly between countries. In Canada (Usher 2003, p. 366) and the United States (Hendrix 2005, p. 764), negotiated agreements (treaties) between governments and aboriginal groups have been the typical

means of title extinguishment. However, in Australia the existence of freehold property resulting from government land alienation schemes developed in the late nineteenth and early twentieth centuries is recognized in that country's body of law as an adequate means of extinguishment (Davies 2003, p. 28). As uneven as the approaches are, once title is said to be extinguished, governments consider claims to be settled and no further action can be pursued by claimants in relation to questions of ownership.

The principal means of modern title extinguishment, and thus the main outcome of modern land claims negotiations, has been the negotiation of durable and comprehensive treaties. While often focused on the return of land and resources to aboriginal control, treaties are not marked by this feature alone. As land claims launched by aboriginal peoples against modern nation-states often involve territory that is occupied by cities or other intensive and permanent land use, the return of land can be extremely problematic. In such cases, or in cases where two or more groups launch overlapping claims, negotiated settlements between Native groups and governments often include monetary compensation in lieu of returned territory. Further, issues of tax status, education and health provision, and linkage (social, political, economic) with non-Native territories are also frequently addressed in the negotiation of treaties. As Usher notes (2003, p. 379), in Canada treaty negotiations are increasingly marked by a concern with providing claimants with the opportunity to build governance and management capacity through education and partnership. Thus, far from simply serving to settle land and resource disputes between indigenous and settler populations, the treaties that result from land claim negotiations are often required to address the social, political, and economic marginalization of Native populations that has arisen out of colonial situations.

While land claims hold out the possibility of transforming the material (and therefore social) conditions of life for aboriginal peoples in the former settler colonies of the world, they also, as Hendrix argues, provide a possible means through which the historical and geographical memories of settler populations might be reworked. The dominant narratives of American and Australian settlement treat the period prior to European contact as prehistoric; the lands were empty and awaiting improvement by industrious hands, so goes the story. By successfully reclaiming land and resources through resort to the institutions put in place by colonial societies, however, Native peoples across the world are taking back ownership of more than territory. Insisting upon official recognition of precontact occupancy and title, marginalized cultures are writing themselves back into history and, therefore, into the fabric of modern nation-states.

SEE ALSO *Annexation; Colonialism; Decolonization; Indigenismo; Indigenous Rights; Native Americans; Natives*

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David A. Rossiter

LAND GRANTS

SEE *Development, Rural.*

LAND REFORM

The term *land reform* refers principally to the redistribution of agricultural land from existing private or public landowners to tenant farmers, agricultural laborers, or collective farmers who work on such land without owning it. The absence of ownership or equivalent secure rights to land carries numerous negative consequences. These include lack of ability, or motivation, to invest in the land; stagnant agricultural productivity; rural poverty and malnutrition; lack of status and power for the landless; pressures to flee rural poverty for ill-equipped cities; land degradation; and a dearth of rural families with assets or savings.

By contrast, successful redistributive land reform can confer broad benefits, including increased crop production and improved nutrition, reduction of rural poverty, greater grassroots empowerment and a lessening of social unrest, reduced pressure for urban migration, better envi-

ronmental stewardship, and the creation of wealth in the beneficiaries' hands.

Widespread positive results from redistributive land reforms have been experienced by well over a billion people since World War II ended in 1945. While land reform is not a panacea against rural poverty, it has been a foundational element for effective economic and social development in many settings. Fully a billion others are potential future beneficiaries.

This entry begins with a brief historical perspective, then looks at major post–World War II land reforms, followed by some key program-design considerations, a review of where land reform remains relevant today, and the broader economic, social, and political issues likely to influence decisions about undertaking future land-reform programs.

HISTORY

Documented land reforms occurred in ancient Greece in the sixth century BCE and Republican Rome in the second century BCE. Perhaps reminding us how controversial land reform can be if not adequately designed or explained, the brothers Gracchi successive tribunes or leaders of the Republic, were assassinated, largely because of their support for redistributive land reform. There is also an Old Testament reference to the requirement of land redistribution every fiftieth year, in the "year of the jubilee" (Leviticus 25:23), although scholars are unsure of the extent of actual implementation.

A major land reform was carried out around the beginning of the French Revolution (1789), after which the reasonably satisfied French peasantry largely sat out the (mostly urban) violence and upheaval. About the same time, a democratic and nonviolent land reform began in Denmark.

A variety of land-reform undertakings are found in nineteenth-century Europe. Notable among them was the emancipation of the Russian serfs by Czar Alexander II (1818–1881) in 1861, accompanied by a major distribution of land (however, heavy repayment obligations were imposed on the land recipients). While President Abraham Lincoln (1809–1865) emancipated the slaves in 1863 in the midst of the Civil War in the United States, this was unfortunately not followed by redistribution to the freed slaves of the southern plantation lands on which they had worked: Most were left socially and economically disempowered, many working as sharecroppers with insecure tenure and paying high rents on the same lands on which they had worked as slaves.

The twentieth century before World War II saw a number of democratic and nonviolent land reforms, including many in European countries, as well as several violent civil upheavals that were significantly fueled by the grievances of landless or near-landless peasants. The Mexican peasantry supported a revolution (1910) and fought a subsequent civil war, eventually receiving perpetual land rights beginning in the 1930s. The Russian peasantry, still land-hungry, supported the 1917 revolution and received land, but later were forced to turn that land over to collective farms (1930s). A weak republican government in Spain made indecisive efforts to redistribute land in the 1930s, ultimately collapsing before the catalyzing acts of peasants who wanted land and seized it, and large landowners and their allies who feared communism or anarchy, and helped foment a successful military rebellion (the 1936–1939 Spanish Civil War).

POST–WORLD WAR II

There have been three principal waves of land reform since 1945. The first, during the decade following World War II, occurred largely where the war had catalyzed or helped speed regime change.

Leading examples were land-to-the-tiller programs in Japan, Taiwan, and South Korea—with tenant farmers receiving ownership of the same land on which they had been tenants—carried out under U.S.-supported noncommunist regimes. In mainland China, the Communists conducted a similar reform (but accompanied by antilandlord violence) when they took power in 1949, but this was followed by forced collectivization of all farmland in the mid-1950s. This period also included involuntary collectivizations carried out by Eastern European communist regimes that were within the Soviet sphere—even though the great majority of affected farmers had already been individual owners. Poland was a notable holdout, maintaining its system of small owner-operated farms.

A second wave of land-reform efforts occurred as many countries gained independence from colonial powers from the late 1940s onward. But most of these reforms were poorly designed and had little impact. The handful of successes—mainly land-to-the-tiller programs—included a few Indian states (each state legislates its own land-reform rules), notably West Bengal and Kerala in the 1970s and 1980s, and also included South Vietnam, under the threat of a communist insurgency, during the 1970–1973 period.

Also of importance during this time were programs taking large estates for redistribution to farm laborers, continuing in postwar Mexico, going forward in 1950s Bolivia, and undertaken in 1980s El Salvador, the latter again under the threat of a communist insurgency. The El Salvador reform also included a land-to-the-tiller program for tenant farmers.

There were also many failures during this period. These included other Latin American attempts, chiefly involving large estates, such as occurred in Brazil,

Colombia, and (reversed through the 1954 U.S.-sponsored overthrow of the regime) Guatemala. Failures in Asia, mostly attempts to redistribute tenanted land or above-"ceiling" land, included most Indian states, Pakistan, Bangladesh, Indonesia, and the Philippines, among others. In Africa, where land-redistribution efforts have centered on regions of white-owned estate land, many programs have shown slow progress (South Africa) or gone far astray (Zimbabwe, apparently benefiting largely the president's cronies and militia, while evicting most farm laborers).

One impetus to land reforms that has largely disappeared with the demise of militant Marxist ideology was the threat of communist insurgency built upon the promise of land, which led both to revolutionary land reforms (Russia, China, Cuba, Nicaragua, Vietnam) and to protective, anticommunist land reforms (South Vietnam, El Salvador). But some such insurgent movements persist (the Naxalites in eastern India, the New People's Army in the Philippines), and extralegal efforts to occupy large estates, though well short of armed insurgency, are still found in countries like Brazil.

The latest wave of postwar land reform has involved efforts to break up the large collective farms that existed under many communist regimes (*decollectivization*) and to give ownership or equivalent secure individual land rights to the former collective-farm workers (*privatization*). Progress has varied on these two aspects: China was the first to decollectivize (1979–1983) but has only partially privatized the resulting individual farms; Vietnam has now done both, as have most (but not all) Eastern European countries; Russia and Ukraine have formally privatized, but the former collectives remain the major operating units, usually renting in from their workers the individual land rights those workers have received. Finally, some countries, such as North Korea and Cuba, have neither broken up the collectives nor given individual land rights. Where physical breakup has occurred, it has generally affected cropland, but left grazing land as commons lands available for joint use.

PROGRAM DESIGN

Accumulated land-reform experience indicates numerous features of program design, subject to deliberate change, which can play an important role in determining success or failure. Three features of continuing importance are discussed below.

First, will "full-size" farms, or something much smaller, be the goal? If a full-size farm by local standards, say two to three acres, is to be allocated, then multiplying this size farm by the number of households needing land often indicates that 20 to 40 percent of the country's cropland will have to be taken and redistributed. In most contemporary settings, such a program is politically and financially impractical.

Thus, it is important that recent research in many countries, such as India, now indicates that the "benefits curve" rises extremely rapidly with the first few thousand square feet of land distributed. In particular, distributing a homestead plot of one-tenth acre or even less, to supplement the family's existing livelihood, not only affords room to erect a small house, but beyond that allows an area for intense cultivation and for keeping one or two animals. This results in substantial increments to that family's nutrition, income, and status. Yet distribution of such homestead plots to nearly all the landless may require only 1 percent or less of the country's cropland, changing judgments as to political and financial feasibility—as currently in India—in a dramatically favorable way. The disproportionately large contribution of small plots to agricultural production has also been seen in many collective-farming systems where the workers were permitted to have "private plots" near their homes for personal cultivation, as well as in the "garden plots" that many of these countries have allowed urban households to maintain on the peri-urban fringe.

Second, will the land reform be heavily publicized? China's program to give former collective (now individual) farmers secure, long-term rights exemplifies the impact of publicity. An earlier, 1998 law was widely publicized, and achieved over 40 percent effective implementation by mid-2001. A later, 2002 law, although providing even stronger rights to the farmers, received little publicity, and by mid-2005 achieved only minimal additional implementation among farmers unaware of their rights.

Finally, will beneficiaries receive support, such as technical advice and farm credit? While wide agreement exists that this is desirable, there remains disagreement as to how vital it may be in particular settings. It would be rare, however, that an otherwise-feasible land redistribution should be delayed because such complementary programs were not yet available.

Still another measure might be noted, one that has stirred considerable recent debate. That is the impact of giving confirmatory land-rights documents (titles) to those already in reasonably uncontested possession of land (by contrast, there is little question that beneficiaries of redistribution of land that had been privately owned by someone else, such as tenants receiving the land of former landlords, or agricultural laborers receiving the land of former plantation owners, should receive confirmatory documentation). The issue as to titling those in already-existing uncontested, but undocumented, possession is more complex than may be immediately evident. Some customary or traditional land rights may exist as distinct elements or layers that may be difficult to separately

describe and document; some may be held by groups rather than individuals; and in some settings those who actually hold the rights may be preempted (through corruption or chicanery) by false claimants when a documentation process occurs. The benefits of giving documentation to uncontested existing possessors appear to be situational, emerging most clearly in urban settings.

CURRENT NEEDS

The two most populous developing countries at the beginning of the twenty-first century, China and India, are also the two most critical arenas for further land reform measures. Both countries have already adopted the essential laws, but both need to move to much wider implementation. In China's case, such efforts would involve renewed publicity and expanded formal documentation for farmers' long-term land rights. In India, the central government needs to help finance, and the individual states need both to finance and implement, a widespread homestead-plot program.

There are many additional settings where land reform efforts could have a major impact. Homestead-plot programs, for example, hold important potential in Indonesia, Pakistan, and Bangladesh, and in a number of other Asian, African, and Latin American countries with significant numbers of landless poor. And, in some settings, unused or underutilized land in large estates may still be sufficient in quantity and cheap enough in price to provide full-size farms to many of the rural poor: for example, in Brazil and further significant parts of Latin America, as well as in some parts of Africa with large-farm colonial legacies.

Also, communist or formerly communist countries that have not yet done so must eventually confront the twin tasks of decollectivizing and privatizing their inefficient and low-productivity collective-farm sectors, among them North Korea and Cuba. Others, like Russia and Ukraine, which have formally privatized, will have to facilitate the actual breakup of the large farms.

Altogether, the remaining potential for land reform is at least as great as what was carried out globally during the six decades after World War II.

BROADER ECONOMIC, SOCIAL, AND POLITICAL ISSUES

Every land reform, no matter how well designed, has to take account of broader economic, social, and political challenges and issues in the particular country.

Economic Issues Land reform neither creates nor destroys land: It simply puts an existing population into a relationship with an existing agricultural land base that is likely to be fairer and more productive than the present one. One consideration is that the accumulated evidence now indicates that small farms are, in terms of total factor productivity (that is, with regard to the value of land, capital, and labor inputs), generally more productive than larger farms in less-developed-country settings. Such countries are typically short on land, short on capital, and long on labor. Hence it makes good economic sense to have many motivated families—and ownership provides crucial motivation—applying family labor intensively on small farms while using as little capital (machinery, pesticides, etc.) as possible to achieve a given production result.

A related economic point on which there is general agreement is that large farms with a large number of laborers working together—such as most plantations or collective farms—are generally inefficient, because of the great difficulty of supervising labor on these far-flung operations with their complex and variable sequences of tasks.

A further economic point: Viable land reform in the transitional (communist or formerly communist) societies entails no land costs, since the land to be redistributed is presently publicly owned. And improved design will greatly reduce total land costs in traditional developing-country settings, wherever policymakers opt for a program based on homestead plots rather than full-size farms.

A final economic point, applicable in both traditional land-reform settings and those of the transitional societies, is whether recipients of individual land rights should be restricted in selling or leasing those rights, and if there are such restrictions, how broad should they be and how long should they last? There is disagreement on these issues: Such restrictions may improvidently prevent the creation of wealth in the hands of land-reform beneficiaries, but they may also forestall hasty sales at a low price or leases having adverse terms. Restrictions that are temporary and narrower (e.g., no land sales to foreigners or no large accumulations of land) may be easier to justify than long-term and broad restrictions, which may also be widely ignored and eventually abandoned (as in Mexico).

Social Issues This entry noted above some of the likely consequences of successful redistributive land reform. There are also broader social consequences that are likely for the newly landowning families, such as reduced infant and child mortality resulting from better nutrition; the affordability of increased school-going, including for girls; and increased participation in community affairs for those with the status of "landowner."

Political Issues To communicate the economic and social case for land reform is, in many settings, to move considerably toward achieving the necessary political support.

Three additional factors, important to what is sometimes called "democratic land reform," are likely to bolster such political support: (1) acquiring any privately held land needed for the land reform on the land market through voluntary sales, or (if the acquisition is involuntary) paying a fair and reasonable price; (2) coupled with this, treating any acquisition of privately held land simply as something needed for a higher social purpose (like land needed for a highway or hospital), not as a judgment that landlords are bad; and (3) giving the beneficiaries a free choice as to how they wish to organize their farming.

SEE ALSO *Chiapas; Ladejinsky, Wolf*

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LANDLORDS

A landlord is a person or organization that rents out real estate, holding the rights to receive the rentals paid by tenants. Usually a landlord has a freehold estate, a legal right to the possession of, and income from, real estate. A landlord can also be a tenant who subleases the premises to another tenant. A lease divides the estate into a leased fee estate for the owner and a leasehold estate for the renter, the latter providing rights of possession, as laid out in the lease, for a specified duration. If the lease expires and the tenant continues to have possession, he has a tenancy at sufferance.

"Land" in this context includes all space that can be controlled, including territory with water and in the atmosphere, and "real estate" consists of the land and the objects attached to the land, the rest being movable property. Land that is common property, such as the oceans beyond the jurisdiction of governments, are rent free, although international organizations and international law can be considered landlords if they can enforce their authority.

HISTORY OF LAND TENURE

"Land tenure" is the pattern of land ownership. In some small-group societies, the community as a whole often owns territory. The land can either have open access by anyone, or be allocated to families for use, but without inheritance. In some cases, an individual or family has periodic access to lands forming the commons of a village, and families have access to the commons for hunting, fishing, and gathering. Some societies provide priority rights to land when a member makes improvements on the site.

Social scientists such as Franz Oppenheimer have theorized that such land tenure changed mostly because of conquest, as the conquerors became the landlords and the original inhabitants became tenant farmers. In Europe after the collapse of the Roman Empire, the feudal system took hold, where serfs became attached to the land held by the aristocracy.

As trade became more widespread, land became more of a commodity that could be exchanged and operated by landlords for profit rather than for governing power. This change was facilitated in the United Kingdom by the "enclosure" movement, in which the aristocracy took over land that had been held collectively by village residents. The landlords switched much of the enclosed land from farming to raising sheep, and the expelled villagers had to move to cities where they became vagabonds and beggars, some of whom suffered from hunger and illness. Eventually, many became "proletarians" who had little choice but to work for the emerging Industrial Revolution for low wages.

Modern markets for the sale and rental of real estate and of mortgages on real estate are based on having secure and transferable titles to real estate, including the ability to verify a deed to real property. A governmental cadastre or registry of deeds and titles of ownership of estates in

land facilitates the real estate market. During the Middle Ages in Europe, manorial court rolls recorded the titleholders and descriptions of the landholdings. As land become more marketable, the registration of deeds by governments developed to facilitate loans and transactions. In the United States, the recording of titles is the responsibility of the states, usually implemented at the county level. In the United Kingdom, governmental registration of land titles was not fully developed until the twentieth century with the Land Registration Acts of 1925 and 2002.

In his book *The Mystery of Capital*, Peruvian economist Hernando de Soto has emphasized that the absence of land titles has hampered economic development, as squatters avoid building improvements when they fear that their investment may be confiscated. Societies with communal or governmental land can obtain similar security with long-term (e.g., ninety-nine-year) transferable leaseholds.

In Latin America, the Spanish and Portuguese seized land from the Indians and turned the native population into tenants working on large estates, the "latifundia," as well as working small plots of land for their subsistence. In the southern states of the United States, the Indians were mostly expelled, and plantations utilized slaves imported from Africa.

Although Americans commonly think of the frontier as having been settled by homesteading, most of the western lands were not settled that way but were granted to various special interests such as the railroads, veterans, land-grant colleges, and speculators. As Henry George (1871) described, much land was obtained through dishonest means, such as by fraudulent titles. In California, the Southern Pacific Railroad became the largest landlord, giving the company great political clout.

In continental Europe, the aristocracy continued to own much of the land after the end of feudalism. In Germany, the Prussian aristocrats, called Junkers, owned half the land. In Russia, where the aristocracy remained landlords after the serfs were legally freed, revolution gained popular support with the slogan, "land and liberty," as popular movements for liberation have recognized a close relationship between liberty and landownership.

In the United States, some two-thirds of the people live in owner-occupied homes, but commercial and industrial land value remains highly concentrated. Landowners and real estate interests have great political clout, which they maintain with significant contributions to political campaigns. As a result, landowners obtain great tax benefits relative to those from other property and sources of income.

The tax benefits of real estate owners include being able to deduct mortgage interest and property taxes from taxable income and to exchange rental properties while deferring payment of capital gains taxes. Further, owner-occupants have a large capital-gains exemption, and in most places, they enjoy a rather light property tax on their land value relative to the civic benefits that raise their land values and rentals.

LANDLORDISM

The term *landlordism* is used in sociology and anthropology to refer to land tenure and status relationships with three characteristics: The land tenure is extremely unequal, the landlords tend to be rentiers who receive rent but do not actively manage their lands, and the landowning class controls and benefits most from the government.

The most stark examples of landlordism are the landed aristocracy and the large landed estates, as in Latin America, but most economies today have significant landlordism. Landlords of dilapidated buildings in blighted areas are disparagingly called "slumlords."

Since the supply of land is fixed, as the population and wealth grow, a rising demand for land increases rentals and land prices. Much of the gains from increased productivity flow to the landowners as rent and site values. Land value is enhanced even more by public works. The political clout of landowners induces government to place much of the tax burden on labor and enterprise, thus implicitly subsidizing landownership. Landlordism is thus endemic in most economies today, even if it is not as obvious as in the more visible form of a landed agricultural aristocracy.

Some governments have enacted rent control in order to set a maximum rental paid by tenants. Such price controls create shortages of rental units and can discourage maintenance.

In developing countries, prevailing landlordism has induced movements for land reform, a change in land tenure to a more widespread ownership of land. Land reformers have usually advocated a redivision of the land by splitting up large estates. In some cases, the "reform" has granted land to the politically well connected and to inefficient farmers. An effective way to accomplish land reform is by taxing the land value, which then induces the large holders who are not using their land efficiently to sell their land, thus accomplishing redistribution with greater productivity. This policy was implemented to some degree by Japan in the latter 1800s and Taiwan after 1950.

LANDLORD–TENANT LAW AND RELATIONSHIPS

The landlord–tenant relationship is governed by private law as set by the lease and by governmental law regarding landlording. A lease is a contract of tenancy, which trans-

fers some of the rights of possession from the landlord as lessor to the tenant as lessee. A tenant has the right of quiet enjoyment, meaning an unmolested, tranquil use, free from interference or disturbance. However, the landlord retains the right of entry either with advance notice or in an emergency. Upon the expiration of the lease, the landlord is entitled to reversion, that is, to retake possession.

The lease provides an implied if not explicit warranty of habitability that requires the landlord to maintain the premises in a reasonably safe condition, but tenants can be held liable for the damage they cause. Usually the landlord pays the property taxes, but in a gross lease, usually for commercial real estate, the tenant pays the gross costs of occupancy, including real property taxes, utilities, insurance, and operating expenses. For residential leases, the landlord usually does the maintenance and pays the taxes and insurance, although tenants pay for any renters' insurance on their personal property.

The lease can specify a fixed time interval of tenancy, or go from month to month. If there is no written lease or no specified time, the relationship is a tenancy at will, subject to termination by the landlord or the tenant at any time. If the tenant remains after the expiration of a lease, the tenant remains liable for the rent. Governmental law limits the power of a landlord to choose a tenant. In the United States, the Civil Rights Act of 1968 prohibits discrimination in housing based on national origin, race, religion, or color. In 1974, sex or gender discrimination was added. The 1988 Fair Housing Act extended antidiscrimination protection to familial status. The Americans with Disabilities Act prohibits discrimination that denies the equal use of property due to physical or mental disabilities. State laws can duplicate or extend the application of antidiscrimination law; for example, the California Fair Housing Laws prohibit discrimination based on sex, color, race, religion, marital status, ancestry, or national origin.

Tenants can exploit landlords as well by causing damage and taking advantage of laws that delay eviction. Landlords can protect themselves by screening tenants in legal ways, by visiting where they live, observing the condition of their car, asking parents of young tenants to cosign leases, making tenants responsible for minor repairs, and providing a discount for prompt payments of rental (which is better psychologically than fines for late payment).

Landlords in the United States are also vulnerable to civil asset forfeiture, that is, the confiscation of their property if the police suspect that there is illegal drug activity on the premises, even if the landlord is not aware of it. While large-scale landowners and developers typically have political clout, they sometimes use their political power at the expense of other real estate owners, such as when a government uses eminent domain to forcibly take real estate from some owners and transfer it to private developers, a practice that was widely reported in *Kelo v. City of New London* (2005). The Supreme Court's decision alarmed many property owners, who feared the case would facilitate more real estate "takings" by governments, and some states have enacted laws limiting such wide powers of eminent domain.

SEE ALSO *Aristocracy; Class, Rentier; Common Land; Land Claims; Land Reform; Latifundia; Rent*

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Fred Foldvary

LANDLORDS, ABSENTEE

The term "absentee landlord" describes the situation where a person with the ultimate ownership of land—and this may be an actual person, a corporate entity, or even the state itself—does not personally use the land but instead extracts payment for its use by another. In one sense most landlords are "absent" in that the land is let for a rent to another person who enjoys physical possession and use of it, but an "absentee landlord" is a more pejorative description. It is meant to signify a landowner whose only interest in the land is to extract its economic value and who pays little or no regard to the state of the land or the welfare—economic, social, or political—of the person who is paying the rent. Such landlords are "absent" both in the sense that they have little or no social, emotional, or physical attachment to the land, and also because in many cases they are physically distant from the land, preferring either to regard the land as if it were merely an entry on a profit and loss account or, in some cases, to appoint a more local agent who will manage the land for the landlord on a purely commercial basis.

Historically absentee landlords have generated both social and economic problems on a grand scale, especially when the absenteeism is allied with external domination

of the local territory. The Protestant owners of lands in Catholic Ireland in the seventeenth century and the mainly English absentee landowners of Prince Edward Island, Canada, in the eighteenth century are well-known examples of how absentee ownership can go hand in hand with "colonial" dominance, but this is not merely an historical problem. Absentee owners of Scottish Highland sporting estates; anonymous state control of land in less developed countries; corporate investors (e.g., pension funds) in city center business districts; absentee owners of Midwestern agribusinesses in the United States; and absent landlords of low-quality, deteriorating residential properties in most of our major cities are just a few examples from the twenty-first century.

Absentee landlords are perceived to be a threat to the economic and social viability of communities. By extracting value from the land (rent) but not spending or reinvesting in the local community, absentee landlords produce an outward flow of economic capital. They drain the local community. When accompanied by a constant turnover of short-term tenants, the social capital of a community is diminished and all of those community activities that depend on the interest and commitment of stable residents are lost. Given that absentee landlords may regard the land as merely another form of economic asset, rather than as a social and economic resource for the community in which the land is situated, many absentee landlords observe only the bare minimum of standards in relation to the land and the buildings on it. Properties owned by absentee landlords often are in a poor state of repair and building and zoning controls are either ignored or observed to the minimum standard permitted. An effective local management team can prevent some of the worse excesses, but the geographically absent landlord may be slow to respond to requests from the tenants or the local authorities. In many cases such landlords will simply sidestep calls for repairs or renovations and attempt to avoid local taxation.

Absentee landlords also generate numerous legal problems. Enforcing obligations in letting arrangments, serving of notices for the enforcement of tenants' rights, and ensuring observance of public rights affecting the property (for example public access routes and rights of way) are common problems. In extreme cases in countries without a systematic register or record of land ownership, it may be difficult to identify who actually is the ultimate owner and this can lead to problems of squatting as well as making the land economically stagnant.

The economic and social cost of absentee landlords can be considerable and many countries or localities have attempted to impose regulatory or legal requirements either in order to curb absenteeism or to remove its harmful effects. These have included public access to land registers in order to identify absent owners, tax incentives for owners who maintain an economic presence in the local community and penal local taxes for those draining the local economy, enhanced procedures for the recovery of land for local landlords when faced with defaulting tenants, compulsory enfranchisement (sale of the land to the tenant) on long leases, and the enhancement of enforcement powers for violators of building codes.

Martin J. Dixon

LANGUAGE

SEE *Psycholinguistics.*

LARGE SAMPLE PROPERTIES

In empirical work, researchers typically use estimators of parameters, test statistics, or predictors to learn about a given feature of an underlying model; these estimators are functions of random variables, and as such are themselves random variables. Data are used to obtain estimates, which are realizations of the corresponding estimators—that is, random variables. Ordinarily, the researcher has available only a single sample of n observations and obtains a single estimate based on this sample; the researcher then wishes to make inferences about the underlying feature of interest. Inference involves the estimation of a confidence interval, a p-value, or a prediction interval, and it requires knowledge about the sampling distribution of the estimator that has been used.

In a small number of cases, exact distributions of estimators can be derived for a given sample size n. For example, in the classical linear regression model, if errors are assumed to be identically, independently, and normally distributed, ordinary least squares estimators of the intercept and slope parameters can be shown to be normally distributed with variance that depends on the variance of the error terms, which can be estimated by the sample variance of the estimated residuals. In most cases, however, exact results for the sampling distributions of estimators with a finite sample are unavailable; examples include maximum likelihood estimators and most nonparametric estimators.

Large sample, or asymptotic, properties of estimators often provide useful approximations of sampling distributions of estimators that can be reliably used for inference-making purposes. Consider an estimator

$$\hat{\theta}_n = g(Y_1, \ldots, Y_n)$$

of some quantity θ. The subscript n denotes the fact that $\hat{\theta}_n$ is a function of the n random variables $Y_1, \ldots, Y_n$; this suggests an infinite sequence of estimators for $n = 1, 2, \ldots$, each based on a different sample size. The large sample properties of an estimator $\hat{\theta}_n$ determine the limiting behavior of the sequence $\{\hat{\theta}_n \mid n = 1, 2, \ldots\}$ as n goes to infinity, denoted $n \to \infty$. Although the distribution of $\hat{\theta}_n$ may be unknown for finite n, it is often possible to derive the limiting distribution of $\hat{\theta}_n$ as $n \to \infty$. The limiting distribution can then be used as an approximation to the distribution of $\hat{\theta}_n$ when n is finite in order to estimate, for example, confidence intervals. The practical usefulness of this approach depends on how closely the limiting, asymptotic distribution of $\hat{\theta}_n$ approximates the finite-sample distribution of the estimator for a given, finite sample size n. This depends, in part, on the rate at which the distribution of $\hat{\theta}_n$ converges to the limiting distribution, which is related to the rate at which $\hat{\theta}_n$ converges to θ.

CONSISTENCY

The most fundamental property that an estimator might possess is that of consistency. If an estimator is consistent, then more data will be informative; but if an estimator is inconsistent, then in general even an arbitrarily large amount of data will offer no guarantee of obtaining an estimate "close" to the unknown θ. Lacking consistency, there is little reason to consider what other properties the estimator might have, nor is there typically any reason to use such an estimator.

An estimator $\hat{\theta}_n$ of θ is said to be weakly consistent if the estimator converges in probability, denoted

$$\hat{\theta}_n \xrightarrow{P} \theta$$

This occurs whenever

$$\lim_{n \to \infty} P(|\hat{\theta}_n - \theta| < \varepsilon) = 1$$

for any $\varepsilon > 0$. Other, stronger types of consistency have also been defined, as outlined by Robert J. Serfling in *Approximation Theorems of Mathematical Statistics* (1980). Convergence in probability means that, for any arbitrarily small (but strictly positive) ε, the probability of obtaining an estimate different from θ by more than ε in either direction tends to 0 as $n \to \infty$.

Note that weak consistency does not mean that it is impossible to obtain an estimate very different from θ using a consistent estimator with a very large sample size. Rather, consistency is an asymptotic, large sample property; it only describes what happens in the limit. Although consistency is a fundamental property, it is also a minimal property in this sense. Depending on the rate, or speed, with which $\hat{\theta}_n$ converges to θ, a particular sample size may or may not offer much hope of obtaining an accurate, useful estimate.

A sequence of random variables $\{\hat{\theta}_n \mid n = 1, 2, \ldots\}$ with distribution functions F_n is said to converge in distribution to a random variable $\hat{\theta}$ with distribution function F if, for any $\varepsilon > 0$, there exists an integer $n_0 = n_0(\varepsilon)$ such that at every point of continuity t of F, $|F_n(t) - F(t)| < \varepsilon$ for all $n \geq n_0$. Convergence in probability implies convergence in distribution, which is denoted by $\hat{\theta}_n \xrightarrow{d} \hat{\theta}$.

Often, weakly consistent estimators that can be written as scaled sums of random variables have distributions that converge to a normal distribution. The Lindeberg-Levy Central Limit Theorem establishes such a result for the sample mean: If $Y_1, Y_2, \ldots, Y_n$ are independent draws from a population with mean μ and finite variance σ^2, then the sample mean

$$\bar{Y}_n = n^{-1} \sum_{i=1}^{n} Y_i$$

may be used to estimate μ, and

$$\frac{1}{\sigma} n^{1/2} (\bar{Y}_n - \mu) \xrightarrow{d} N(0,1)$$

The factor $n^{1/2}$ is the rate of convergence of the sample mean, and it serves to scale the left-hand side of the above expression so that its limiting distribution, as $n \to \infty$, is stable—in this instance, a standard normal distribution. This result allows one to make inference about the population mean μ—even when the distribution from which the data are drawn is unknown—by taking critical values from the standard normal distribution rather than the often unknown, finite-sample distribution F_n.

Standard, parametric estimation problems typically yield estimators that converge in probability at the rate $n^{1/2}$. This provides a familiar benchmark for gauging convergence rates of other estimators. The fact that the sample mean converges at rate $n^{1/2}$ means that fewer observations will typically be needed to obtain statistically meaningful results than would be the case if the convergence rate were slower. However, the quality of the approximation of the finite-sample distribution of a sample mean by the standard normal is determined by features such as skewness or kurtosis of the distribution from which the data are drawn. In fact, the finite sample distribution function F_n (or the density or the characteristic functions) of the sample mean can be written as an asymptotic expansion, revealing how features of the data distribution affect the quality of the normal approximation suggested by the central limit theorem. The best-known of these expansions is the Edgeworth expansion, which yields an expansion of F_n in terms of powers of n and higher moments of the distribution of the data. Among those who explain these principles in detail are Harald Cramér in *Biometrika* (1972), Ole E. Barndorff-Nielsen and David Roxbee Cox in *Inference and*

Asymptotics (1994), and Pranab K. Sen and Julio M. Singer in *Large Sample Methods in Statistics: An Introduction with Applications* (1993).

Many nonparametric estimators converge at rates slower than $n^{1/2}$. For example, the Nadarya-Watson kernel estimator (Nadarya 1964; Watson 1964) and the local linear estimator (Fan and Gijbels 1996) of the conditional mean function converge at rate $n^{1/(4+d)}$, where d is the number of unique explanatory variables (not including interaction terms); hence, even with only one right-hand side variable, these estimators converge at a much slower rate, $n^{1/5}$, than typical parametric estimators. Moreover, the rate of convergence becomes slower with increasing dimensionality, a phenomenon often called the curse of dimensionality. Another example is provided by data envelopment analysis (DEA) estimators of technical efficiency; under certain assumptions, including variable returns to scale, these estimators converge at rate $n^{2/(1+d)}$, where d is the number of inputs plus the number of outputs. Léopold Simar and Paul W. Wilson discuss this principle in the *Journal of Productivity Analysis* (2000).

The practical implications of the rate of convergence of an estimator with a convergence rate slower than $n^{1/2}$ can be seen by considering how much data would be needed to achieve the same stochastic order of estimation error that one would achieve with a parametric estimator converging at rate $n^{1/2}$ while using a given amount of data. For example, consider a bivariate regression problem with $n = 20$ observations. Using a nonparametric kernel estimator or a local linear estimator, one would need m observations to attain the same stochastic order of estimation error that would be achieved with parametric, ordinary least-squares regression; setting $m^{1/5} = 20^{1/2}$ yields $m \approx 1{,}789$.

The large sample properties of parametric and nonparametric estimators offer an interesting trade-off. Parametric estimators offer fast convergence, therefore it is possible to obtain meaningful estimates with smaller amounts of data than would be required by nonparametric estimators with slower convergence rates. But this is valid only if the parametric model that is estimated is correctly specified; if not, there is specification error, raising the question of whether the parametric estimator is consistent. On the other hand, nonparametric estimators largely avoid the risk of specification error, but often at the cost of slower convergence rates and hence larger data requirements. The convergence rate achieved by a particular estimator determines what might reasonably be considered a "large sample" and whether meaningful estimates might be obtained from a given amount of data.

CENTRAL LIMIT THEOREM

Aris Spanos, in his book *Probability Theory and Statistical Inference: Econometric Modeling with Observational Data* (1999, pp. 464–465), lists several popular misconceptions concerning the large sample properties of estimators. It is sometimes claimed that the central limit theorem ensures that various distributions converge to a normal distribution in cases where they do not. The Lindeberg-Levy central limit theorem concerns a particular scaled sum of random variables, but only under certain restrictions (e.g., finite variance). Other scaled summations may have different limiting distributions. Spanos notes that there is a central limit theorem for every member of the Levy-Khintchine family of distributions that includes not only the normal Poisson, and Cauchy distributions, but also a set of infinitely divisible distributions. In addition, continuous functions of scaled summations of random variables converge to several well-known distributions, including the chi-square distribution in the case of quadratic functions.

SEE ALSO *Central Limit Theorem; Demography; Maximum Likelihood Regression; Nonparametric Estimation; Sampling*

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Paul W. Wilson

LASPEYRE'S INDEX

SEE *Price Indices; Quantity Index.*

LASSWELL, HAROLD

1902–1978

Harold Lasswell was an influential social scientist who contributed to the field of political science through research on political psychology, quantitative methods, and public policy. Lasswell was born in Donnellson, Illinois, to a schoolteacher and Presbyterian minister. At the age of sixteen, Lasswell received a scholarship to study at the University of Chicago, and he later completed graduate studies at the London School of Economics. Lasswell was a faculty member at the University of Chicago from 1922 to 1938 and at Yale University from 1946 to 1970. Lasswell died in 1978 in New York City.

Laswell's approach to political science was behavioral, and he was a part of the "Chicago school" of sociology. The Chicago school was a group of academicians in the 1920s and 1930s who focused on the urban environment, specifically through ethnographic fieldwork and an emphasis on social issues. Lasswell believed that propaganda was a key tool in public policy making, arguing that the citizenry was largely uninformed and often did not understand what was in its best interest. Lasswell was one of the first scholars to define and systematically explore the concept of propaganda, through his book *Propaganda Technique in World War I* (1927).

Lasswell's work on propaganda later expanded into a more general research agenda on communication. Lasswell contributed to the field by suggesting that more than one "channel" of media can carry a message. His model of communication is shown through a basic question: "Who says what, in which channel, to whom, and with what effect?" This model identified the several different components of communication in a political sphere: "Who" involved the political body or agency communicating, "what" is the gist of the message or idea, "channel" is the venue of communication, "whom" is the target audience, and "effect" is the policy outcome. His model encouraged systematic thinking about political communication and the psychological and policy implications of different forms of communication. Perhaps Lasswell's most famous and widely read work is his general treatise on politics, *Politics: Who Gets What, When, and How* (1936), which is an abridged but more general commentary on his model of communication.

Lasswell's work shifted in the later stages of his career to more of an emphasis on the policy sciences. Many see him as the father of policy sciences, and his work in that area is certainly among the first and most influential. Lasswell's research became larger in scope and resulted in policy-making frameworks that were more comprehensive and less concerned with narrow theorizing. Lasswell's ideas were rooted in his early work on propaganda—actors in the policy process were seen as sometimes irrational and pursuing goals that would ultimately harm them, and this led to a need for policies that went beyond those based in simple rational choice. Lasswell argued that misguided political behavior could easily undermine democracy, and called attention to the need for policymakers to consider both expressed and unexpressed constituent needs.

Lasswell argued that the role of the policy sciences was to produce knowledge for democracy. His emphasis on contextualism influenced quantitative research in important ways, guiding analysts to consider as many external influences as possible in their research. Lasswell believed that the role of the analyst was both scientist and activist—the policy analyst cannot be completely objective in selection of goals, but should work toward objectivity in analysis of results. Although some have cast Lasswell as a positivist, his approach had both positivist and postpositivist themes.

Lasswell's approach to political science and public policy was met with some criticism. Many disagree with Lasswell's assertion that citizens often do not understand what they need, finding his approach to be at once paternalistic and naïve. Some also believe that Lasswell's view of the policy analyst is a romanticized one, exaggerating the impact that the analyst can have on policy making and ignoring issues with using objective data for political decision-making.

SEE ALSO *Media; Political Psychology; Political Science; Propaganda; Public Opinion; Sociology, Political*

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David W. Pitts

LATIFUNDIA

A *latifundium* is a large piece of contiguous land that belongs to a single individual or family. It is a form of property as well as a mode of production that for centuries has determined the socioeconomic structures in many parts of the world, even through to the present day. Historically, latifundia were owned by members of the aristocracy, conferring upon them considerable social and political power and providing them with the income needed to support a lavish lifestyle.

To become the owner of a latifundium did not require much capital. Through ways more or less legal, latifundisti appropriated lands from the public domain and took over the holdings of poor peasants. The size of latifundia varied: from 600 acres in ancient Rome, which guaranteed the owner a senatorial seat, to the estates of Polish magnates extending over 250,000 acres, to those of *hacendados* in Mexico of over half a million. From the beginning, latifundia were commercial enterprises dedicated primarily to growing produce and livestock for profit, both for distant and nearby urban markets. In *On Agriculture*, Cato the Elder (234–149 BCE) emphasized the importance of latifundia being located near good roads and waterways so as to get the crops to their markets. All later forms of latifundia—haciendas, plantations, and Balkan *chifliks*—followed the same model and reproduced the same form of class domination: a paternalistic landlord ruling over a mass of laborers—slaves, landless peasants, manorial serfs, or peons. Latifundisti maintained political control in the provinces as well, despite being absentee landlords who resided in urban centers and left management of their estates to *villici*, or hired administrators.

The term *latifundium* is synonymous with other terms commonly used for large estate systems: Russia's *pomiestny*, Prussia's *Junkerdom*, Poland's magnate estate, and Latin America's hacienda (*fazenda* in Brazil, *estancia* in Argentina, *fundo* in Chile, *finca* in Bolivia and Peru). The term itself carries with it a wide range of negative connotations that comprise what may be called a "black legend." Ancestors of slave plantations, the ancient Roman latifundia have been described as the model for imperialism, colonialism, and modern slavery. A latifundista was a landlord who monopolized huge tracts of land, much of which he left fallow "by virtue of indolence." The system has been blamed for hindering modernization, preventing social mobility and the rise of the middle classes, making a few people very rich and bringing dire misery to the many, and finally for destroying the peasantry and unraveling rural society. The black legend was famously summed up by Pliny the Elder (23–79 CE) as *latifundia perdidere Italiam*, causing the ruin of Rome, together with its provinces—Egypt, North Africa, Gaul, Spain, and Sicily.

Latifundia were originally a Roman phenomenon. There were no large landholding fortunes before then, neither in ancient Greece nor in the early Roman republic, where laws systematically restricted the size of a family's property (the average farm was four acres). Extensive holdings first appeared in the fourth century BCE when Rome converted part of its newly conquered territory in Italy into state domain and then rented it out to wealthy people. These first latifundia, some 1,000 acres in size, became common in Etruria and southern Italy. Wars with Carthage further enriched a Roman patriciate who—excluded from trade and commerce—invested their war booty into large latifundia so as to make profits along capitalistic lines.

Prolonged warfare and centuries of conquest eventually concentrated the land in the hands of a few and pushed small peasants off the land. Before long, the city of Rome was overrun with dispossessed paupers.

By 23 BCE the newly formed Roman Empire was one hundred times larger than the republic had been at the time of the Punic Wars, and latifundisti were cultivating the soil of their immense estates with armies of slaves. In Nero's time (37–68 CE), Pliny tells us, half the land of the North African province was divided up among six patricians and organized in huge latifundia farmed by slaves and native peasants. "Life on the great estate," splendidly illustrated in mid-second-century mosaics in Tunisia, became a popular art genre. But it was an ultimately oppressive system that gave rise to slave revolts, like the one famously led by Spartacus in 73 to 71 BCE.

In the final years of the Roman Empire, these slave workers were replaced by *coloni*, small tenant farmers who became permanently attached to the estates (*glebae adscripti*) and evolved eventually into feudal serfs. Latifundia persisted in Italy, Gaul, Spain, southern Britain, along the Rhine, and in the eastern Byzantine Empire for centuries after the fall of Rome; in Sicily they survived until the 1950s. Even if, after the German invasions, a new class of landowners began to emerge as different groups adapted the Roman agrarian system to their particular needs, there still existed considerable continuity over the centuries, from the Roman latifundium and its slaves to the manor and its serfs.

The conquest of the Americas and the expansion of the world economy in the sixteenth century created ideal conditions for exporting the European manorial system. While vast commercial estates emerged in the New World, agrarian capitalism also began to flourish throughout much of Europe.

Beyond the Elbe River, for example, and in the eastern part of the Austrian Empire, feudal lords transformed

their large properties into *Gutsherrschaften*. In Poland, especially in the Ukraine and Lithuania, immense lands and power became increasingly concentrated in the hands of the magnates. In Spain, the south was turned into large latifundia, established on formerly Moorish land (they had virtually abolished the manor system). All these market- and profit-oriented latifundia were farmed by peasant-serfs through a system of compulsory labor.

There were no market economies or commercial estates in the New World before the Europeans arrived and only the merest hint of a landed aristocracy in the Aztec and Incan empires. The profit-oriented latifundia system came with the colonists, and it carefully reproduced the European model. With few exceptions, the haciendas traced their origins to the sixteenth century, when viceroys divided up the Indians and the land (*encomiendas*) among the conquerors. In time, with a minimum outlay of capital, *encomenderos* became latifundisti (*hacendados*), the Indians became their peons, and the latifundium (hacienda) the most highly visible social and economic institution of the countryside.

The traditional monolithic model of the Latin American *latifundium* emphasized its continuity with late-medieval Spain. The landowner had aristocratic pretensions and displayed ostentatious patterns of consumption. He tied the laborers to the estate through debt peonage, built his great house to resemble a fortress, made the estate self-sufficient, and paid lip service to a kind of unproductive mentality. This "feudal" representation of the latifundium was challenged by dependency theorist André Gunder Frank (1929–2005), among others, who saw the latifundia as actively engaged in capitalist modes of production and the world market. Similarly, the North American plantation system, based on African slave labor, must be seen as a capitalist enterprise.

Similar patterns existed in Asia as well. In the Philippines, for example, Spanish latifundia were established on the land of Dominican friars and were farmed by Tagalog and Chinese laborers who were relieved of their "public corvées" to sustain the priests' cash-crop-export enterprise. In Vietnam, latifundia arrived with the French, who wanted to turn the colony into a major exporter of agricultural products. In India, it was the British who established an abusive and irresponsible absentee landowner system. Only in China had the system existed independently for centuries, until the 1600s, when it gave way to tenancy.

By the eighteenth century, latifundia dominated the life of the world's rural peripheries. Associated with serfdom and debt-peonage, the institution came under harsh criticism from scholars and bureaucrats who espoused physiocratic doctrines, while estates were the target of violent peasant attacks.

Despite calls for change, nearly all agricultural production for the world market was still controlled by latifundia in the nineteenth century, and the concentration of land had significantly increased. In Bohemia, Hungary, the Balkans, Poland, Germany, Ireland, Chile, and Mexico, more than half of the land belonged to large estates, some of which achieved truly princely dimensions. The secularization and subsequent sale of ecclesiastic property gave rise to new latifundia in southern Italy and Spain, as well as in Latin America. Many economists saw small-scale farming as economically wasteful, and even some social democrats like Karl Kautsky (1854–1938) argued in favor of the modern latifundium.

The nineteenth-century latifundia system survived the abolition of slavery and serfdom, replacing them with various contractual arrangements and modes of labor control. Junker land was now being cultivated by day laborers and seasonal Slavic workers. While the Balkan *chifliks* were regulated by the bailiff system, the system of rent-racking (landlords raising rents exorbitantly upon expiration of leases) in Ireland did not change at all.

The development of industrial capitalism in Europe created new market conditions and new possibilities for agrarian systems in Latin America—a development that political independence from the Old World only served to promote. Coffee, cereal, and sugar plantations expanded, these often owned by Creoles and mestizos. Latifundia also expanded exponentially following the confiscation and sale of the vast holdings of the Catholic Church. And finally, as the nonrural sectors declined during the Latin American wars of independence, latifundisti gained an unprecedented degree of political power, often running their own private regional states. Not only did they control the conservative parties and the military, but they often had the support of the liberals as well.

As new market opportunities opened up in the nineteenth century, latifundisti moved effortlessly with the times, acquiring credit from banks to purchase more land and expand the number of laborers. Their ways of operating were neither "traditional" nor "modern," neither feudal nor capitalist, as can be seen by the example of the Barracco latifundium system in southern Italy.

This new commercial growth was accompanied by the emergence of an impoverished and embattled landless proletariat. Their plight placed latifundia, once again, at the center of the so-called agrarian question. Circa 1900, latifundisti still owned and cultivated one-fourth of the total agricultural land of Germany and half of the arable land of Romania and Hungary, employing a full one-third of the population (six million workers) in this latter country. It was then that peasant movements and progressive parties joined forces to declare war on the latifundia, calling for the expropriation of vast tracts of land. Following

World War I (1914–1918), the old order seemed doomed (at least in Europe and Mexico), and national agrarian reforms began expropriating land belonging to absentee owners and corporations.

The last vestiges of latifundism definitively vanished from Europe in the second half of the twentieth century, while still maintaining a toehold as late as the 1950s in Italy and the 1970s in Spain. In Latin America, however, the latifundium remains a dominant and even expanding form of productive organization that has profitably adjusted itself to the modern, dynamic, and export-oriented economy of late capitalism. With the exception of Mexico, Latin American agriculture is twice as large a sector as manufacturing, and three times as large as commerce. The greater part of the national wealth of many of these countries depends upon the production of coffee, sugar, bananas, cotton, and beef. The beef-producing latifundia, in particular, are expanding, benefiting from the international "hamburger connection."

As Stanley Stein cautioned in 1961, we should not underestimate the political resilience of Latin America's socioeconomic elites and their ability to adapt the latifundia system to late capitalism, using their influence to persuade sympathetic governments to provide infrastructure and protection. Although profitable, this system exacerbates the old latifundia/minifundia dichotomy, for Latin America's agrarian structure is the most unequal in the world: ten of the fourteen countries with the highest concentration of land in the hands of single individuals are to be found there. This inequitable distribution lies at the root of the region's persistent poverty. It was also the fundamental cause of civil wars and social uprisings in Guatemala, El Salvador, and Nicaragua during the 1980s and 1990s and more recently in Brazil and in the Mexican state of Chiapas.

SEE ALSO *Landlords; Plantation*

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LATINO NATIONAL POLITICAL SURVEY

The Latino National Political Survey (LNPS) of 1989–1990 is a nationally representative dataset designed to measure the political attitudes and behaviors of the three major Latino subgroups in the United States: Mexicans, Puerto Ricans, and Cubans. The principal investigators of the LNPS consisted of four political scientists—Rodolfo de la Garza, Angelo Falcon, F. Chris Garcia, and John A. Garcia. Temple University's Institute for Survey Research conducted the survey.

DESCRIPTION OF THE LNPS

Data collection for the survey began in July 1989 and continued through March 1990. Latinos in the survey consist of individuals who reported having at least one parent or two grandparents (in any combination) of Mexican, Puerto Rican, or Cuban ancestry. The LNPS dataset includes 2,817 Latino respondents (1,546 Mexicans, 589 Puerto Ricans, and 682 Cubans).

The LNPS is the primary dataset examining the political attitudes and behaviors of Latinos on a national basis. According to the LNPS codebook, the survey contains a variety of variables, including the following broad categories: family history, organizational membership, political participation, voting behavior, attitudes toward a wide variety of political issues, attitudes toward a variety of racial/ethnic/national origin groups, and typical demographic characteristics (e.g., age, sex, and generational status). The dataset also includes information on the phenotype of respondents.

THE USES OF THE LNPS

The LNPS dataset has been disseminated widely. Indeed, it is available to researchers at the Inter-University Consortium for Political and Social Research (ICPSR).

Social science researchers, public policy practitioners, and the mass media have used the dataset.

The LNPS has been used widely by social scientists. Thirty-one articles based on the LNPS are abstracted in *ISI Web of Science* and/or *Sociological Abstracts*. These were published in eighteen journals, including *American Journal of Political Science, Applied Economics Letters, Armed Forces & Society, British Journal of Political Science, Cambridge Journal of Economics, Centro Journal, Demography, Hispanic Journal of Behavioral Sciences, International Migration Review, Journal of Family and Economic Issues, Journal of Health Care for the Poor and Underserved, Political Behavior, Population Research & Policy Review, PS: Political Science & Politics, Social Forces, Social Science Quarterly, The Sociological Quarterly*, and *Transforming Anthropology,* and one forthcoming article in the *Ethnic and Racial Studies* journal. Two journals—*Hispanic Journal of Behavioral Sciences* and *Social Science Quarterly*—stand out in terms of publishing the most articles using the LNPS. Indeed, *Hispanic Journal of Behavioral Sciences* devoted an entire issue (volume 18, issue 2) to work on the LNPS in 1996 (Garcia et al. 1996).

The LNPS has been applied to a broad range of social science topics, including the political attitudes of Latinos, the correlation between discrimination and phenotypes, residential patterns among Latino groups, and migration/immigration issues facing Latino groups. For example, in 2002 the *Social Science Quarterly* published an article titled "Latino Phenotypic Discrimination Revisited: The Impact of Skin Color on Occupational Status" (Espino and Franz 2002) based on the LNPS. This work showed that dark-skinned Mexicans and Cubans—but not Puerto Ricans—held less prestigious occupations than their lighter-skinned counterparts. In addition, *Social Science Quarterly* published another article in 2003 titled "The Corrosive Effect of Acculturation: How Mexican Americans Lose Political Trust" (Michelson 2003) using the LNPS. This particular article showed how political trust among Mexican Americans decreases with greater acculturation and exposure to mainstream society.

Social sciences such as economics and anthropology have also utilized the LNPS. For example, the journal *Applied Economics Letters* published an article in 2002 entitled "Passing on Blackness: Latinos, Race, and Earnings in the USA" (Darity, Hamilton, and Dietrich 2002). The article used previous findings from the LNPS to examine labor-market outcomes of people with Latino ancestry who also self-identify as black. Similarly, the anthropological journal *Transforming Anthropology* published an article in 2005 titled "Bleach in the Rainbow: Latin Ethnicity and Preference for Whiteness" (Darity, Dietrich, and Hamilton 2005). Like the economics-based study, this article examines Latinos, particularly Puerto Ricans, who self-identify as black. The article cited a previous study that examined racial self-characterization categories ranging between black and white.

The LNPS has also been used in recent years by public policy agencies to better understand the political attitudes and voting behaviors of Latinos. Groups such as the Pew Hispanic Center, a Washington, D.C., think tank, and the Center for Information and Research on Civic Learning and Encouragement have utilized the LNPS to better comprehend the political behaviors of this increasingly influential population group.

Furthermore, the national media have also used the LNPS. In the early 1990s the Associated Press (AP)—specifically *USA Today* (Benedetto 1991)—and *El Sol del Valle* (Contreras 1995) referenced the LNPS. Each of these news pieces discussed political and related attitudes and behaviors of Latinos. The AP's usage of the LNPS demonstrates the wide application of this dataset.

LIMITATIONS OF THE LNPS

Despite the major contributions and the wide use of the LNPS, the dataset has some limitations. First, it focuses on only three Latino subgroups (Mexicans, Puerto Ricans, and Cubans). This creates a problem in generalizing the observed trends to other Latino groups such as Dominicans, Central Americans, and South Americans.

Second, as is typical of cross-sectional surveys, the information collected provides only a "snapshot" of individuals' attitudes and behaviors at a single point in time (1989–1990). Thus, researchers using the LNPS cannot analyze temporal changes related to political attitudes and behaviors. Moreover, the data are now quite dated. Many important changes have taken place since 1990, especially with respect to the politics of immigration. Longitudinal datasets need to be developed in order to capture the major demographic, social, economic, and political changes taking place within the Latino population.

Third, while the LNPS has a major focus on the political attitudes and behaviors of Latinos, other important dimensions (immigration, education, health, work, and gender relations) of the Latino experience are neglected or receive little attention. A new dataset, funded by private and public agencies and research centers, will be available in the fall of 2007 through the University of Washington's "WISER" Web site and the ICPSR. The new dataset, titled the Latino National Survey (LNS), focuses on the same ethnic groups as the LNPS (Mexicans, Cubans, and Puerto Ricans). This new survey is based on a random sample of 8,634 respondents interviewed by telephone. The sample is drawn from fifteen states and the District of Columbia. Selection of the states was based on Latino population estimates using U.S.

Census data. The LNS covers broader issues compared to the LNPS, including, but not limited to, inter- and intragroup relations, transnationalism, education, and gender.

SEE ALSO *Ethnicity; Latino/a Studies; Latinos; Race; Racial Classification; Survey; Surveys, Sample*

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LATINO/A STUDIES

The academic discipline of Latino/a studies examines the experience of the Latino/a population of the United States and is rooted in the inception of Chicano/a and Puerto Rican/Boricua studies in the late 1960s and early 1970s. The adoption of the panethnic term *Latino/a* recognizes the origins of Mexican Americans, Puerto Ricans, Cuban Americans, and members of other Latin American and Caribbean societies, thereby enveloping the heterogeneity of this diverse population. Latino/a studies programs in institutions of higher education have provided not only needed attention to the struggle of Latino/as in the United States but also academic legitimacy for Latino/a students and faculty and recognition of the interdisciplinary interests of Latinos/as.

The civil rights movements of the 1950s and 1960s facilitated the implementation of Latino/a studies scholarship in U.S. colleges and universities. Activists fighting against systemic racism and discrimination provided an impetus for Latino/a students and faculty seeking scholarship that met the needs of Latinos/as in the United States. At the time Latinos/as were essentially invisible in mainstream white America. For instance, although both Chicanos/as and Puerto Ricans represented the two largest Latino/a subgroups in the United States, their incorporation by conquest resulted in their limited participation and integration into political, social, and economic institutions.

The systemic exclusion and historical underrepresention of people of color was reproduced in academic institutions of higher education. Scholars studying U.S. race relations regularly failed to take a critical view of the social, economic, and political disparities and realities of the Latino/a population. For example, scholars with research interests in the Mexican-origin population of the United States were "primarily concerned with understanding the reasons for the perceived inability of Mexicans to assimilate into American society in the manner of other ethnic groups, from Europe" (García, Lomelí, and Ortiz 1984, p. 1). Therefore Latino/a students and faculty sought to establish academic programs that rejected the colonizing ideology of white America, advocating instead the development of scholarship that provided students with critical knowledge and training of Latino/a culture and history (Rodriguez 1990; Muñoz 1984). The implementation of Latino/a studies programs concentrating on the issues affecting Latino/a communities and the development of resolutions that dealt with these were the goals of Latinos/as who were privileged to be affiliated with colleges and universities (Rodriguez 1990; Muñoz 1984).

With these issues in mind, Chicanos/as and Puerto Ricans paved the way for the development of Latino/a studies. Latino/a students and faculty pioneered changes at historically white colleges and universities, beginning with the creation of the first Chicano/a studies program at California State University, Los Angeles, in 1968 and following with Chicano/a studies programs at universities in the Southwest and Puerto Rican/Boricua studies programs in the Northeast. Despite these accomplishments, Latino/a studies programs have experienced a number of challenges. Marginalized within their respective institutions, programs have been underfunded, denied autonomy, and at times, subsumed within other programs in their respective colleges and universities (Cabán 2003).

Influential in the creation of Latino/a studies scholarship were Latino/a student activists who protested and participated in strikes that confronted racial and class oppression (Muñoz 1984); Latino/a faculty also played

pivotal roles in the creation of Latino/a studies programs. Julian Samora (1920–1996), the first Chicano to receive a doctorate degree in sociology and anthropology—in 1953 from Washington University in Saint Louis—was particularly important in establishing the field of Chicano/a studies. In addition to cofounding the National Council of La Raza and creating the Mexican American Legal Defense and Educational Fund, Samora mentored hundreds of undergraduate students and supervised the completion of more than fifty doctoral degrees at the Notre Dame University. His accomplishments influenced studies in the areas of bilingual education and immigration. In 1989 Michigan State University established a Latino/a research organization in his name, the Julian Samora Research Institute.

Likewise Frank Bonilla influenced the development of Puerto Rican/Boricua studies. Anne Quach chronicled Bonilla's U.S. military experience, describing how it motivated his pursuit of an academic career (Quach 2004). His own interests, along with those of other young social activists, spurred the formation of the Puerto Rican Hispanic Leadership Forum, thus paving the way for the establishment of Aspira (Quach 2004). Aspira is the first national nonprofit organization to empower Latino/a youth through the development of leadership skills that motivate Latino/a community advancement. These organizations, which seek to meet the needs of Puerto Ricans and other Latinos/as, originated from a response to the racism and discrimination that Puerto Ricans faced in the United States. Bonilla's interests also focused on issues of globalization and immigration (Quach 2004). Both Samora and Bonilla, along with many others, were pivotal forces in addressing the needs of Latinos/as in the United States, and they mentored many others toward initiating change.

In spite of their turbulent beginnings, Latino/a studies programs have gained academic legitimacy and produced scholarship directed toward multidisciplinary interests (Cabán 2003). Traditionally social science scholars in the disciplines of sociology and political science, for instance, focused Latino/a research in the areas of politics, sociology, political science, and economics. However, the emergence of interdisciplinary research within the field has sprung from the very nature of the heterogeneity of the Latino/a origin population and resulted in a hybrid that acknowledges the diverse cultures and disciplinary interests of Latinos/as (Masud-Piloto 2003). By the 1990s Latino/a studies scholarship encompassed nontraditional areas of study, such as border studies, women's studies, and performance and film studies (Masud-Piloto 2003). Further developments included the incarnation of "a multidisciplinary academic field that explores the diversity of localized and transnational experiences of Latin American and Caribbean national origin populations in the United States" (Cabán 2003, p. 6).

The origin of Latino/a studies scholarship was a response to the racial and class oppression faced by Chicanos/as and Puerto Ricans. Although programs face internal divisions and marginalization within their respective academic institutions, Latino/a studies programs continue to meet the needs of Latinos/as and to inspire students and faculty to examine various areas of research, thereby acknowledging the diversity of the Latino/a population.

SEE ALSO *Boricua; Ethnicity; Immigrants to North America; Immigrants, Latin American; Immigrants, New York City; Latino National Political Survey; Mexican Americans; Nuyoricans; Politics, Latino; Race; Whiteness*

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LATINOS

The Latino population represents the largest minority group and most rapidly growing ethnic group in the United States. This population is composed of a variety of subgroups tracing their origins to Mexico, the Caribbean, Central America, South America, and Spain. While Latinos represented one-sixteenth of the U.S. population

in 1980, they were one-seventh of the U.S. population in 2005, when they numbered 42.7 million. They accounted for two-fifths of the nearly 70 million people added to the national population between 1980 and 2005. Population projections indicate that Latinos will continue to drive the demographic changes in this country throughout the twenty-first century. Indeed, they are expected to make up 46 percent of all people projected to be added to the U.S. population between 2000 and 2030. Thus, by 2030 Latinos are predicted to number 73.1 million, accounting for one-fifth of all people in the nation.

This entry provides an overview of the emergence of the terminology to describe this population, the mode of incorporation of the major Latino populations into the United States, and the contemporary social and economic standing of the Latino population in the country.

THE IDENTIFICATION OF LATINOS

In the United States, race and ethnicity have been central to public discourse, government, and economics. Throughout U.S. history racial and ethnic categories functioned as a basis for inequality and discrimination. Governmental changes to identifiers during the twentieth century came as a result of the pursuit of civil and equal rights by minorities in areas regarding education, housing, employment, and public services. For instance, mid-twentieth-century civil unrest and subsequent legal challenges compelled the Federal Office of Management and Budget to develop the term *Hispanic* in 1970 to mean "a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race" (Hayes-Bautista and Chapa 1987, p. 64). While many adopted the Hispanic ethnic identity, many others eschewed the term as it failed to take into account the unique origins and historical experiences of distinct subgroups. Therefore, the term *Latinos* has been widely adopted as a more acceptable term of self-identification by people of Latin American ancestry.

Despite pan-ethnic identifiers, the groups that make up the Latino population have diverse histories, cultures, and modes of incorporation into the United States. For instance, the initial incorporation of some groups occurred through warfare, while that of others was the result of civil unrest. For all groups, economics—the search for favorable employment—has been an attraction to the United States.

HISTORICAL OVERVIEW AND MODES OF INCORPORATION OF LATINO GROUPS

Over the course of 185 years, nearly 15 million people from Latin America migrated on a legal basis to the United States, according to the U.S. Department of Homeland Security in 2006. The majority of this movement took place during the late twentieth and early twenty-first centuries (77% of the 15 million immigrated after 1970). About 45 percent of all immigrants who entered the United States legally between 1970 and 2005 originated from Latin America. Mexico alone accounted for one-fifth of all legal immigrants entering the country during this period. The ten countries with the most Latinos immigrating to the United States from 2000 to 2005 were Mexico (867,417), El Salvador (139,390), Dominican Republic (127,066), Cuba (97,988), Colombia (91,808), Guatemala (78,594), Peru (58,318), Ecuador (47,094), Nicaragua (36,620), and Venezuela (32,500).

Latino groups have entered the United States at different periods under varying conditions. The two groups that have been in the United States the longest, Mexicans and Puerto Ricans, were initially incorporated into the United States through warfare. Numerous other groups—including Cubans, Guatemalans, Nicaraguans, and Salvadorans—have sought asylum in the United States due to warfare in their home countries. Still, the majority of Latin American immigrants came to the United States for economic reasons, drawn by labor opportunities and propelled by poor employment prospects in their home countries.

Mexicans Mexicans, approximately three-fifths of all Latinos living in the United States, have been in the country the longest. Mexicans were incorporated through the Mexican-American War that Mexico lost, along with approximately half of its land, to the United States under the Treaty of Guadalupe Hidalgo of 1848. Mexicans who were living on what was now U.S. land were given the choice to remain and become U.S. citizens or return to Mexico. They overwhelmingly elected to remain on their land. Although Mexican Americans were guaranteed all rights as U.S. citizens, including respect for their property, culture, and language, as former Mexicans they became, at best, second-class citizens.

In actuality, Mexican Americans experienced colonization and exploitation as whites from other parts of the United States entered the acquired territories. Colonization included the loss of land due to legal and extralegal means, according to Rodolfo Acuña (2000) and David Montejano (1987). Mexican Americans became a landless proletariat and provided inexpensive labor for Anglo settlers. Similar to the situation that African Americans experienced in the South, Mexicans and Mexican Americans in the Southwest experienced great legal and illegal violence, discrimination, oppression, and disenfranchisement.

During the opening decades of the twentieth century, Mexicans fled political and civil unrest to the United States. Ironically, during a period when the United States was creating policies to keep southern and eastern Europeans and Asians from entering the country, many industrialists and growers welcomed Mexican immigrants as cheap labor for a growing economy. By the mid-1920s their growing presence, the country's economic instability, and the xenophobic attitudes of whites compelled the U.S. government to evict Mexicans from the country. For example, approximately 500,000 Mexicans—roughly one-third of the Mexicans enumerated in the 1930 U.S. census—were repatriated to Mexico during the Great Depression. Within ten years the United States and the Mexican government colluded to establish the Bracero Program to deal with U.S. labor shortages associated with World War II; because of its wide popularity among U.S. employers, the Bracero Program was extended nearly two decades beyond the conclusion of the war. The program allowed United States employers to actively recruit and import Mexican contract labor to meet their needs. In all, approximately 4.7 million Mexicans came to the United States under this program. Since the 1970s, there has been a significant increase in Mexican immigrants and settlers. The entrance of U.S. capital into Mexico—in the form of the Border Industrialization Program and the North American Free Trade Agreement—have altered social and economic structures in Mexico that have helped to create the movement of workers (some of these displaced) to the United States. The combination of "old-timers" (those whose roots extend back multiple generations) and "newcomers" (those who have come to the United States in the recent past) has created a diverse Mexican-origin population, as described by Rogelio Saenz in his census report *Latinos and the Changing Face of America* (2004).

Puerto Ricans Puerto Ricans share a colonized past with Mexico. Indeed, the island of Puerto Rico has been marked by colonial exploitation beginning with its colonization by Spain and continuing into the present as a Commonwealth of the United States. The history of Puerto Rico is similar to that of other Latin American countries that have been under the sovereignty of colonial nation-states. The native people of the island were first colonized in 1493 by the Spanish. When this population declined as a result of forced labor and disease, according to the writers Joe R. Feagin and Clairece Booher Feagin in their book *Racial and Ethnic Relations* (1999), slaves were brought in to fill the labor gap until 1873, when slavery was abolished. Rule over Puerto Rico was ceded to the United States as result of the Spanish-American War and the subsequent signing of the Treaty of Paris in 1898. Puerto Ricans received U.S. citizenship with the passage of the Jones Act of 1917 and gained self-governance in 1952. However, although Puerto Ricans are U.S. citizens, island residents are not allowed to vote in U.S. presidential elections, but they are required to enlist in military service to the United States.

Puerto Rico functioned economically in an agricultural system until the late 1940s when a rapid program of industrialization, known as Operation Bootstrap, was introduced by then Governor Luis Munoz Marin. Operation Bootstrap allowed locally tax-exempt U.S. corporations to develop industries on the island, which placed an economic burden on the Puerto Ricans who were required to finance the necessary infrastructure through high personal taxes. Although Puerto Rican migration to the U.S. mainland existed prior to the rapid-industrialization projects, massive unemployment in the 1970s resulted in the migration of approximately one-third of the island's population to the United States (Feagin and Feagin 1999).

Due to their U.S. citizenship status, Puerto Ricans tend to migrate in a circular pattern. Over the years many have settled in the United States. Puerto Ricans have subsequently had a major impact on mainstream American culture, especially in cities such as New York, where ethnic enclaves have existed since the 1920s.

Cubans The island of Cuba became a U.S. protectorate in early 1900, and in the middle of the twentieth century, through revolution, it became a socialist state. U.S. interest in Cuba arose out of economic investments by U.S. businesses. The United States became the major market for Cuban goods and a provider of essential supplies needed to sustain the island's economic system. The political instability on the island began in the 1930s and lasted through the 1950s; student-led protests, along with instability within the Cuban polity, threatened the economic, social, and political interests of capitalist Cuban elites, U.S. investors, and as a result the governments of both countries. Socioeconomic disparities led to the establishment of a socialist state with Fidel Castro in power beginning in 1959. Castro's rise to power resulted in large-scale emigration of the middle and upper classes, who sought asylum in the United States. As advantaged political refugees fleeing what was labeled as a communist state by those who were adversely affected by Castro's rise to power, Cuban refugees were offered numerous resettlement benefits by the United States.

Other refugees accepted into the United States in 1980, however, were not provided resettlement programs. This group, referred to as *Marielitos* (after the Cuban port from which they left, Mariel Bay), were drawn from the lower classes and were largely black. While the group included some criminals, the media exaggeratedly portrayed *Marielitos* as "undesirables," write Alejandro Portes

and Robert L. Bach in their book *Latin Journey: Cuban and Mexican Immigrants in the United States* (1985, p. 87). The group was confronted with a negative reaction from the American mainstream and their own communities, notes Juan González in his book *Harvest of Empire: A History of Latinos in America* (2000).

Still, the favorable economic and human-resource assistance that the early waves of Cubans received helped some to achieve upward mobility in the United States. Cuban enclave enterprises have been highly successful in Miami and have helped integrate Cuban immigrants, according to Portes and Bach (1985).

Nicaraguans Significant immigration to the United States by Nicaraguans is often recognized as beginning in the late 1970s at the end of the regime of Anastasio Somoza Debayle. Immigrants were escaping a repressive government whose actions had impoverished the majority of the population, destabilized the economy, and started a U.S.-supported revolution. Nicaraguan immigration was characterized by three subsequent waves.

The initial arrivals were limited in number and composed of upper-class or elite families—industrialists, large landowners, and top businessmen—escaping the Sandinista takeover of the country. Many had the financial means and education required to establish themselves in the United States. Their arrival and presence was therefore much less noticeable than subsequent arrivals.

The second phase of Nicaraguan migration occurred in the early 1980s and consisted of political asylum–seeking urban, middle-class professionals and business personnel escaping a dysfunctional economy destabilized by political turmoil. Some used prior degrees and skills to find jobs, but the majority of immigrants were reduced to labor occupations until they could better accommodate themselves. State assistance was provided for them as long they had legal documentation. Improper documentation resulted in deportation procedures.

The third wave of immigrants began in the mid-1980s and consisted of laborers and peasants escaping the Contra war and a disrupted economy. Many resorted to the informal economy in order to earn subsistence wages. These arrivals initiated a recognizable flow that alarmed many Americans, who urged the U.S. government to respond.

Unlike the Cuban experience, but much like that of other Central and South Americans, Nicaraguans were hardly welcomed to the United States or given much opportunity for permanent settlement. By the late 1980s the Reagan administration's support for the Contra military was overtly stopped, and the flood of refugees to the United States seeking asylum increased exponentially. In an effort to stop the flow of refugees, the United States detained and incarcerated all new arrivals while their cases for asylum were processed. The U.S. Immigration and Naturalization Services classified most as illegal aliens and initiated deportation. Established Nicaraguans attempted to intercede, but U.S.-supported political changes in Nicaragua compelled democratic changes and prompted refugees to return. In contrast to other refugee groups, Nicaraguans were offered no resettlement programs, note Portes and Alex Stepick in *City on the Edge: The Transformation of Miami* (1993).

CONTEMPORARY AMERICA

Latinos have comparable, yet distinct immigration experiences. Foreign policies and territorial ambitions coupled with the United States' need for cheap labor established the initial ties between Latin America and the United States, paving the way for immigration and setting the stage for Latino identity in the United States, as described by José Calderón in his contribution to *Latin American Perspectives* (1992). Latino Americans who settled in the United States are represented in all socioeconomic classes and at various stages of assimilation or acculturation. Latino subgroups have established distinct communities around the country. Ethnic enclaves attract newcomers that reinvigorate immigrant culture, and each successive generation blends with mainstream American culture, shaping a new identity for Latinos.

There is a significant amount of stratification within the Latino population, notes Saenz (2004). Cubans and South Americans tend to have the highest levels of socioeconomic achievement in the United States, while Mexicans, Puerto Ricans, Dominicans, and, to some extent, Central Americans are positioned at the bottom of the socioeconomic ladder.

Nonetheless, due to their increasing numbers, Latinos have begun to achieve some degree of political success. Furthermore, because they are situated in urban areas and in the most populous states, they are a group that politicians must acknowledge. However, other forces tend to limit the political power of Latinos: They are a young population (with many not old enough to vote), many Latinos cannot vote because they are not U.S. citizens, and they are noticeably divided across national origin and class lines.

The presence of a diverse and growing Latino population may diminish Anglo cultural dominance and introduce a sense of multiculturalism to U.S. society. As Latinos retain and assert their own ethnic identities, they add cultural distinction to their respective geographical centers across the United States.

As a consumer group, Latinos have been recognized by marketing agencies and corporations who previously had failed to target this large group and their buying

potential, observes Arlene Dávila in *Latinos, Inc.: The Marketing and Making of a People* (2001). In this regard, the influence of Latinos in the labor market and their presence as a consumer force impact economics in the United States and abroad.

SEE ALSO *Boricua; Bracero Program; Citizenship; Cuban Revolution; Ethnicity; Identity; Immigrants to North America; Immigrants, Latin American; Immigrants, New York City; Latino/a Studies; Mexican Americans; Naturalization; Nuyoricans; Politics, Identity; Politics, Latino; Race*

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LATITUDES

SEE *Social Judgment Theory.*

LAUSANNE, SCHOOL OF

The expression "School of Lausanne" indicates the body of ideas and analytical techniques associated with the early mathematical formulations of general economic equilibrium, due to Léon Walras (1834–1910) and Vilfredo Pareto (1848–1923); later writers working in that field are occasionally classified as belonging to the School of Lausanne as well.

In 1870, the Frenchman Léon Walras was appointed to the newly created chair of political economy at the University of Lausanne, Switzerland. Walras aimed at attacking *La Question Sociale* (the problem of the distribution of social wealth) by means of a new approach to economics and social economics revolutionizing its philosophical foundations. He aimed at discovering the scientific laws of the most equitable distribution of the most abundant production. Walras pursued this project during his entire life, but he only managed to achieve a systematic presentation of his *Pure economics* (*Éléments d'économie politique pure,* 1874–1877, 1889, 1896, 1900). As Walras surrendered to age and fragile health, in the end his theory of distribution of social wealth (*social economics*) and his theory of production of social wealth (*applied economics*) had to appear as collections of articles under

the titles *Études d'économie sociale* (1896) and *Études d'économie politique appliquée* (1898).

In 1893 the Italian Vilfredo Pareto succeeded Walras, taking over the chair officially on October 23, 1894. While retaining Walras's general equilibrium approach, Pareto severed it from social economics and renounced its use as a conceptual tool to deal with *La Question Sociale*, thereby denying that it can serve any purpose as an instrument for social reform. In fact, Pareto came from a quite different ideological tradition and was much more concerned with the demonstration of the advantages of free trade than with *La Question Sociale*. Their philosophical backgrounds are not quite the same either. Walras was an heir to the tradition of French rationalism whereas Pareto was influenced by the English empiricists. In fact, notwithstanding the rather similar mathematical models, Walras and Pareto strongly disagreed regarding to what general equilibrium is supposed to refer. The relationship of individual choices and the market was also interpreted in radically different ways. Whereas for Walras free and absolute competition is a pure, idealized mechanism that logically comes before the actual individual actions, Pareto takes the individual actions as his starting point and sets them in the context of perfect competition as a market form. There are hints of this change of approach beginning with Pareto's *Cours d'Économie politique professé à l'Université de Lausanne* (1896–1897). However, it was in the *Manuale di Economia politica con una introduzione alla scienza sociale* (*Manual of political economy, with an introduction to social science*, 1906) that Pareto set out the foundation of the modern theory of rational choice, characterized by an ordinal ordering of preferences.

This was perhaps the last important contribution of the Lausanne School to economic theory. Later, in fact, Pareto turned away from the study of individual logical action (pertaining to economics) and dedicated himself to the study of non-logical actions (the domain of sociology). The few articles written by Pasquale Boninsegni (1869–1939), who succeeded Pareto at Lausanne and taught at the University until 1939, did not supply theoretical advances comparable to his predecessors' achievements.

The School of Lausanne is important not only for its theoretical contributions, but also for its attempt to couch them in mathematical form, or at any rate for having interpreted economic mechanisms by means of mathematical procedures. Walras and Pareto paved the way for the mathematization of economics, and accordingly the School is often referred to as the Mathematical school.

This feature attracted the attention of some renowned mathematicians, beginning with those participating in Karl Menger's Vienna seminar in the 1930s and later with some at the Cowles Commission for Research in Economics in Chicago.

These new contributors shifted the focus of research toward the formal aspects of the general equilibrium approach, in particular the issues of existence, uniqueness, and stability of equilibrium, leaving the heuristic aspects aside. The existence and uniqueness of a general equilibrium solution were established in the 1950s. The issue of its stability, however, has not yet been solved, and there are indications that it will remain unsettled. In other words, one can prove that under some carefully chosen assumptions in a perfectly competitive world individual choices are mutually compatible; but it is highly unlikely that such coordination actually takes place.

SEE ALSO *Competition; Economics; Equilibrium in Economics; General Equilibrium; Marginalism; Mathematical Economics; Neocolonialism; Ordinality; Pareto, Vilfredo; Rational Choice Theory; Utility Function; Walras, Léon*

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Roberto Baranzini

LAW

The importance of law is much more easily determined than its definition. Law is perhaps the most conspicuous arena wherein theory and practice meet. Law often acts as a catalyst in society, introducing ideas and solutions that might not otherwise take hold. Law can also act as a barrier to social progress and justice. The civil rights legislation of the 1960s, constructed in part to end desegregation in the U.S. South, is an example of law as a catalyst. The very laws overturned by the civil rights legislation illustrate how law can impede social change. Law also reacts to cultural and moral developments and can be understood as responding to a new social consensus or understanding. In this sense the same civil rights legislation that acted as a catalyst in one region of the United States can be said to have simultaneously reflected a growing national consensus; in this case, a national judgment that racial segregation in public schools was a gross violation of American ideals.

But if law, and the study of law, is important because of its obvious connection to social problems and social

change, what exactly is it? For a straightforward definition one need only consult *Black's Law Dictionary,* which describes law as "a rule of civil conduct prescribed by the supreme power in a state," or more fully, a law is a "general rule of human action, taking cognizance only of external acts, enforced by a determinate authority, which authority is human, and among human authorities is that which is paramount in a political society."

These definitions are helpful in identifying some important features of the law and legal systems. Not surprisingly, however, such definitions cannot entirely capture other salient features of what is meant by the term *law*. A more comprehensive approach to the question of what law is involves taking a closer look at some of the most important components of law. Finally, some of the different types of law must be examined, as well as methods of approaching the study of law.

ELEMENTS OF THE LAW

In what remains one of the most elegant and insightful investigations into the nature of law, the English scholar H. L. A. Hart opens his 1961 book *The Concept of Law* by noting that law is a unique discipline. Chemists, professors of French literature, and medical doctors do not expend a great deal of intellectual energy on the question of what comprises chemistry, French literature, or medicine. Yet scholars who study law, also known in this context as *jurisprudence* or *philosophy of law*, have created a voluminous literature dedicated to the question of the essence of law.

This seems rather odd, given that most of us would have no problem identifying examples of "the law." Hart describes five features that we would expect to find in a legal system ([1961] 1994, p. 3). First, there are laws mandating some actions (e.g., wearing a seatbelt in a car) while prohibiting others (e.g., driving the car above a certain speed limit). If citizens run afoul of such laws, and are convicted as such, there are prescribed punishments. Second, there are rules that require citizens to repay those whom they have injured in some way. Third, there are laws that allow citizens to create legally recognized relationships that did not exist before; for example, marriage and contract laws. Fourth, there are courts created by law for the express purpose of determining when and how laws have been broken and what recompense is warranted. Finally, there is a special category of law that concerns how new laws are created. Article 1 of the U.S. Constitution is an example of this sort of law, as it specifies how Congress as the legislative branch can create new law.

But note that these bare minimum characteristics describe a *legal system*, not necessarily the *law* itself. How might one understand the difference? Although there is some conceptual overlap between the two terms and they are often used interchangeably, generally, legal systems are concrete attempts to instantiate laws within a given political community. Some examples include the U.S. legal system, the British legal system, and the Chinese legal system. Social scientists can describe various legal systems with more precision than they can the more ambiguous concept of law itself. A legal system can be explained by reference to its constitution, legal traditions, and the actual practices of a government; a flow chart can show the defining governing bodies, powers, checks, and legal rights and responsibilities. However, defining and understanding various legal systems does not do away with the need to understand law as conceptually distinct from the various legal systems that attempt to instantiate and embody different understandings of law. One need only consider, as Hart notes, that the very constitutional conventions that establish modern legal systems have something to do with law, yet cannot themselves be understood as identical with the legal systems they create. Legal systems, however they may differ from nation to nation, are attempts to instantiate law.

What, then, is the purpose of law? Law exists to secure social and public goods, which include such important political priorities as order, justice, equality, and liberty. In short, and paraphrasing legal scholar Ronald Dworkin's introduction to his influential 1986 tome *Law's Empire*, we "live in and by the law," pursuing our goals and relationships, our identities and our livelihoods, within the framework created and maintained by a system of laws.

But this does not capture all the essential elements of what law is or how law works in society. A system of law has by definition at least an element of coercion. Laws that proscribe or enjoin behaviors have attached to them penalties that must be enforced by some level of government. As Hart's example of a marriage law illustrates, not every law has a punitive or coercive element to it, but given the impossibility of voluntary and unanimous adherence to laws, coercion and punishment are necessary components of a legal system.

This notion of coercion leads naturally to the questions of authority and legitimacy and their relation to a society's laws. By what authority are laws made, and who has the right to enforce them? One answer to this question is based purely on power: Whoever can impose laws and enforce them has authority. But this answer collapses any understanding of what is lawful into a mere description of who holds power. It undercuts a basic intuition that law serves a normative purpose and can be imposed by a legitimate governing body. Most liberal constitutional democracies, at a procedural minimum, understand a legitimate governing body to be one that enjoys the consent of those governed by its laws and is ultimately accountable for its representation of its citizens through fair and regular elections.

Legitimacy itself is best understood as a normative or moral concept, and it highlights the link between law and morality. Scholars differ as to exactly how morality and law are related, and as to how morality should inform descriptions and theorizing about law, but there is some general agreement that describing law accurately entails some measure of understanding of what actors in the legal arena aim to do. Thus one is brought back to the social goals mentioned previously: justice, order, freedom, and the like. These are inherently normative concepts, the realization of which can be understood as making society somehow better. Traffic laws, for example, aim at providing an orderly and safe means of transportation. This in turn protects the value one's society places on life, commerce, free movement, and so on. To be sure, there are often tensions between social goods, such as liberty and security, and laws are often inefficient means of promoting or securing such goods (indeed, laws themselves can be instruments of injustice). Moreover, the content of morality and law are not identical. Many citizens might consider a given behavior, for example gossiping, to be immoral without thinking that it should also be illegal. Nevertheless, there does seem to be a connection between law, its social function, and morality. It is difficult to persuasively describe what law is without making at least some reference to a society's understanding of what law ought to be.

TYPES OF LAW

Legal emphases and specialties have proliferated to the point where categorizing all the different types of law is a Herculean task. In addition to traditional subject areas such as contract law, torts, criminal law, and constitutional law, prospective lawyers, social scientists, and interested laypersons can expect to find new avenues of research and study in environmental law, election law, intellectual property law, Internet law, and law pertaining to the rights of indigenous peoples, to name just a few. With that in mind, a few words are in order about some of the central areas of law: constitutional law, criminal law, and torts.

Constitutional Law A constitution acts as the framing document of a given political entity. Often, constitutions will include an aspirational preamble, a declaration or bill of rights, explicit means whereby the constitution may be amended, and the basic framework of the government's bodies in their executive, legislative, or judicial functions. Constitutions vary a great deal, not only in their allotment of political responsibility but also in their means of interpretation. In the British parliamentary system the executive and legislative functions are both found in Parliament, whereas the U.S. Constitution places legislative duties with Congress and executive duties with the president. In some European nations a court must review the constitutionality of every piece of legislation; in the United States the Supreme Court does not review the constitutionality of a law unless a citizen or state pursues the issue through the lower courts.

Constitutional law, then, is the practice of law that concerns itself both with applying constitutional norms to contemporary issues and with arguments about the constitution itself. An example of the former is found in deciding how to apply constitutional provisions to new technologies or developments. For example, the framers of the U.S. Constitution forbade "unreasonable search and seizure" but could not have anticipated how to apply this norm to telephone technology and wiretapping. Constitutional law is also the purview of those who might want to change the constitution itself.

Criminal Law One of the major areas addressed by constitutional law is criminal law. Criminal law addresses wrongs that are public in nature. District attorneys prosecute crimes in the name of the people of their particular state, province, or city. This is because some wrongs are seen as injuring not only the individual victim, but also the wider public. Criminal law includes prohibited and required actions as well as the safeguards in place to ensure fair trials and sentencing. Obviously this area is most closely identified with the coercive element of law.

Torts Not all wrongs committed between citizens are considered public wrongs that would be tried in a criminal court. These other wrongs are called *torts*, or civil wrongs, and these sorts of cases are what is commonly meant when lawsuits are filed between citizens. One of the chief differences between civil and criminal trials is that in a civil trial the state acts as a facilitator in the attempt to resolve the conflict, whereas in a criminal trial the state, in its executive function, is itself a party in the dispute. Another key difference is that damages in a civil trial are usually monetary; in a criminal trial prison time in addition to monetary fines is a frequent punishment. Occasionally the same event can result in both a criminal and civil trial. One famous example of this is the 1994 murder of Ron Goldman and Nicole Brown Simpson. O. J. Simpson was found not guilty in the criminal case brought against him by the state of California in 1995, but the parents of Ron Goldman sued successfully for damages in civil court in 1997.

TWO METHODOLOGICAL AIDS

The topic of law can certainly seem overwhelming given the innumerable manifestations of law, debates over its essence and application, and differing social science approaches in how to describe law and its relation to pol-

itics and society. There are two methodological aids that may be helpful for anyone interested in pursuing the study of law regardless of discipline (i.e., law school, sociology of law, philosophy of law).

The Central Case The "central case" method is useful for trying to determine what counts as law or a legal system, given that such descriptions are not always a clear matter of either-or categorization. For example, international law courts have many of the salient features of a legal system save one, coercion. There is as yet no authority superior to a nation-state to enforce international law. If coercion is a necessary feature of a legal system, should international law be categorized as law, or something else? The legal philosopher John Finnis in his 1981 book *Natural Law and Natural Rights* builds on insights from the ancient Greek philosopher Aristotle and contemporary legal philosopher Joseph Raz in presenting the central case as a useful tool (pp. 9–16).

What the central case method allows one to do is articulate several key elements of a legal system and thus identify an authoritative definition of law without having to then dismiss every example that does not exhibit every single key element, or does not exhibit them to the same degree. For example, one might describe the central case of constitutional government as being one that includes the rule of law, regular and fair elections, separation of powers, and an independent judiciary. A political scientist working on comparative legal systems can identify nations whose legal systems fulfill these criteria, as well as nations that are missing one of these elements (e.g., an independent judiciary). We might describe such a nation's legal system as being a somewhat watered-down version of the central case. The central case method is a useful tool that allows observers to describe legal and social phenomena with enough flexibility to allow for real-world conditions that are not always amenable to orderly categorizations.

The Internal Point of View Another of H. L. A. Hart's contributions to the study of law is the internal point of view (Hart [1961] 1994, pp. 89–91). The social scientist or observer who utilizes the internal point of view counts as worthwhile knowledge the self-understanding of the actors in any given system or social group. Consider for example U.S. Supreme Court Justice Oliver Wendell Holmes's famous definition of law in his 1897 "The Path of the Law" address, that law is the "prophecies of what the courts will do in fact" (1920, p. 173). Whatever merit this view of law might have, it does not take into account what judges and lawmakers understand themselves to be doing. Legislators who pass laws, and judges who interpret them, understand themselves to be doing more than merely guessing how judges will rule on various situations in the future. Hart's point is not that one need adopt the viewpoint of the judge, or anyone else, as one's own. Rather, his argument is that one cannot accurately describe social phenomena without taking the internal view into account, precisely because those internal views are themselves part of the social phenomena and they help explain actions taken by legal actors in the system.

When faced with any study or explanation of legal behavior or phenomena, the notion of the internal point of view is helpful. Does a particular study of why judges decide cases the way they do take into account how judges understand their own role? If not, do the authors offer a persuasive explanation for their methodological choices? If nothing else, understanding Hart's endorsement of taking into account the internal point of view encourages the student of law and legal phenomena to be aware of important questions regarding the objectivity and accuracy of legal theorists and social scientists.

SEE ALSO *Authority; Crime and Criminology; Government; Judiciary; Jurisprudence; Justice; Legal Systems; Litigation, Social Science Role in; Regulation; State, The*

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LAW, ADMINISTRATIVE

SEE *Administrative Law.*

LAW, JOHN
1671–1729

John Law was an outstanding monetary theorist who, unusually for a theorist, was given the opportunity to implement his monetary theory as policy. This he did during the 1716–1720 period through the Indies Company (Compagnie des Indes), which was popularly known as the Mississippi Company. The shares of this company rose from a low of 150 livres in 1717 to a high of over 10,000 in early January 1720, producing in the process Europe's first major stock-market boom. Such was the success of Law's policy in its initial phases that he was made controller-general of finances, a position akin to prime minister of France, at the start of 1720. Fearing that Law's success with the Mississippi Company was regenerating the French economy, the British government authorized the South Sea Company to carry out similar debt-management style operations in 1720, resulting in a considerable boom in share prices in London up to August 1720. The subsequent collapses of both the Mississippi and the South Sea companies in the autumn of 1720 had considerable repercussions in delaying the development of the financial systems of France and, to a lesser extent, Great Britain until well into the nineteenth century. As a result of the failure of his company, Law was excoriated by contemporaries and later by a long line of distinguished economists including Richard Cantillon (1680–1734), Adam Smith (1723–1790), Karl Marx (1818–1883), and Alfred Marshall (1842–1924).

These criticisms were unfair to Law in that he was a man with thoroughly modern conceptions of money and banking. Law had the advantage that he was born the son of an Edinburgh goldsmith in 1671 at a time when goldsmiths were becoming embryonic bankers. His early career did not result in him following this banking gene. Instead, Law became a rake, a gambler, and a philanderer in London in the early 1690s. He killed a rival, Edmund Wilson, in a duel in Bloomsbury in 1694. Arrested for killing Wilson, Law was sentenced to death. However, he escaped from the gallows, most probably assisted by high-ranking members of the government. Law was forced to travel to the Continent. There, using his mathematical knowledge, he made a fortune at the gambling tables. He also became highly interested in the banking systems that he observed in Italy and Holland. Law's new interest in banking encouraged him to send proposals to the English and Scottish authorities in 1704 and 1705.

Law outlined his monetary theory in two major works: *John Law's Essay on a Land Bank*, written around 1704 but not published until 1994, and *Money and Trade Considered* (1705). In the former work, Law became the first economist to introduce the term *demand* in its proper economic sense into English. He then introduced the concept of the demand for money, and showed how inflation could arise when the demand for money was out of line with the supply of money. These were extraordinary achievements for someone writing in the first decade of the eighteenth century. In *Money and Trade*, he attempted to show the real role of money in the economy, contending that an increase in the money supply would generate increases in economic activity when there were unutilized resources in the economy, as was the case in Scotland in 1705. Law presented a rudimentary, circular flow-of-income model of the economy, the money-in-advance requirement, and the law of one price.

Law was provided with the opportunity to implement his monetary theories in France after the death of Louis XIV in 1715. In 1716 Law created the General Bank, and followed this a year later with the establishment of the Company of the West, which became the Mississippi Company. The General Bank, later transformed into the Royal Bank, attempted to solve France's monetary crisis through the issue of banknotes, while the Mississippi Company addressed the problems of debt management and the development of colonial trade, particularly that of North America, where the Mississippi Company claimed ownership of all the lands between the British holdings in the Carolinas and those of the Spanish in Texas. In theory, this meant that the company had claims to half of the current contiguous United States. Law hoped that by swapping the equity of the Mississippi Company for government debt, he could greatly reduce France's debt problem. Initially, the system worked, and people flocked to Paris to invest in the company. However, Law had created a financial circuit that was out of line with the real economy. When he attempted to address this problem in May 1720 by reducing the value of shares and paper money, confidence in the system was lost, and by December 1720 he was forced to flee from France. He was nearly brought back to France in 1723, at the invitation of the regent, Philippe (1674–1723), duke of Orléans. However, the latter's sudden death stopped that possibility. Law died in Venice in 1729.

Law believed that money was the value *by which* goods are exchanged and not the value *for which* goods are exchanged. This placed him on the outside of most economic theory of his time, because he was asserting that money did not need to be intrinsically valuable. He wanted to rid the monetary system of the use of gold and silver, and replace these metals with paper money and bank credit. For a short period in France, he showed that this was possible, but it would take another 250 years before the final link with the gold standard was broken by the decision of the United States to refuse to guarantee the price of the dollar in terms of gold.

SEE ALSO *Bubbles; Demand; Economic Crises; Gold Standard; Mercantilism; Monetary Theory; Money, Demand for; Quantity Theory of Money*

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Antoin E. Murphy

LAW AND ECONOMICS

Since the 1970s, a new approach to the analysis of law has developed. Known as *law and economics*, its focus is on identifying the effects of legal rules. Law and economics addresses questions like these: What is the effect on the number of automobile accidents of legal rules that hold negligent drivers responsible for harms that they cause? What is the influence on the amount of pollution of laws that penalize firms for releasing harmful wastes into the environment? Does the death penalty reduce the number of murders, and if so, by how much? In seeking to answer such questions, economic analysts generally assume that individuals and firms want to avoid legal sanctions, and the analysts often use data and statistics to verify their theoretical predictions.

Despite its name, the law and economics approach is not necessarily concerned with matters of money or markets. Determining the effects of the death penalty, for example, involves, among other things, consideration of whether an incensed individual would be deterred from shooting someone by fear of the punishment of execution. The *economic* aspect of law and economics lies in its emphasis on incentives in predicting behavior. In the field of economics proper, the incentives are to make profits or to find a good price; here the incentives are to avoid legal sanctions.

Because economic analysis of law allows the effects of legal rules to be ascertained, the approach is useful for evaluating and comparing rules with regard to their social desirability. If, for example, it is found that the death penalty fails to deter murders carried out by incensed individuals, then it might be concluded that the death penalty is undesirable as a punishment for such murders.

Economic analysis of law has been controversial, mainly because it is centered on identifying the effects of legal rules rather than on the fairness of the rules, the focal issue of traditional analysis. The economic approach to law can be traced in significant respects to the English philosopher Jeremy Bentham (1789), and its modern pioneers include Ronald Coase (1960), Guido Calabresi (1970), and Richard Posner (1972). Posner is also an exponent of the hypothesis that the legal rules that exist are approximately rational in the sense that the consequences of their use are socially desirable.

This entry will provide two illustrations of the economic approach to the analysis of law and will make comparisons with traditional analysis of law. The first illustration concerns legal liability for harm caused in accidents, such as automobile accidents, oil spills, and construction mishaps like the collapse of a crane. A major effect of legal liability is that it fosters the taking of precautions. For instance, in order to avoid being held liable for harm due to an oil spill, the owner of a supertanker might install better navigation devices or hire more experienced crews. Or consider a numerical example: Suppose that if a person does not take a precaution, it is certain that his activity will cause harm of $100,000, for which he would be held liable. If he takes the precaution, however, he would definitely prevent the harm. The precaution would cost $30,000. Then the person would be induced to spend the $30,000 because it would save him a liability expense of $100,000. Such logic underlies the conclusion that, under many forms of liability, parties will be led to take socially desirable risk-reducing steps, and empirical evidence suggests that the liability system has often substantially reduced harm from accidents.

A number of complications arise in assessing how the threat of liability for accidents affects behavior. One issue involves liability insurance, which covers insured parties if they are held liable for harm. If the owner of a supertanker has liability insurance protecting it against having to pay for harm caused by an oil spill, the owner's reason to invest in navigation devices to prevent spills might be dulled. However, the liability insurer might insist that the

owner install such devices. Another complication is that parties who cause harm might themselves suffer harm in accidents, as is true in automobile accidents. In this situation, parties have a strong reason to avoid causing accidents, regardless of the threat of being held liable. Taking such factors into account is necessary to obtain good estimates of the influence of liability on accidents.

Given analysis of the effects of liability in reducing accidents, questions about legal policy can be addressed. For example, would raising the amount that has to be paid for oil spills significantly reduce the number of oil spills? A radical question is whether, in some areas of activity, it is worthwhile using the liability system at all. This question is an important one in view of the high costs of the liability system. It is estimated that for every dollar that an accident victim receives through the liability system, approximately one additional dollar is spent on lawyers, making the liability system extremely expensive for society to employ. For that reason, economic analysis suggests that, unless the liability system substantially reduces the number of some type of accident, the system may not be worthwhile for that type of accident. Consider automobile accidents. Liability may not much reduce the number of automobile accidents, since the fear of being injured in an accident (or of being arrested for drunk driving) may already provide most drivers with a sufficient motive to drive with reasonable care. Hence, it might be advantageous for society to do away with the liability system for automobile accidents (something that has largely been done in a number of American states).

The foregoing economic analysis of legal liability for accidents may be contrasted with traditional legal analysis of the topic. Traditional analysis stresses the perceived fairness of liability, and notably, the view that an individual who wrongly injures another ought to compensate the victim for his losses. Under traditional analysis, liability is often seen as desirable *without* real regard to the degree to which it reduces the number of accidents or the costs of its use (or to the ability of accident victims to obtain compensation through their insurance policies). At the same time, economic analysts have generally not considered notions of the fairness of liability, although this issue is now beginning to receive some attention from them.

The second illustration of the economic approach to the analysis of law relates to a specific legal doctrine. When a person is making a contract, the law may impose on the person an obligation to disclose material information to the other party to the contract. For example, if a person is selling a home with a leaky basement, the person might be required to disclose this fact to the buyer. Or if an oil company is purchasing land and believes oil is likely to be found there, the company might have a duty to disclose this information to the seller.

Under the economic approach to law, emphasis is given to ascertaining the effects of a disclosure obligation. In the case of leaky basements, a principal effect of a disclosure obligation is that buyers will know about problems and will be able to take appropriate remedial steps, such as not storing valuables in the basement. Hence, a disclosure obligation for such problems as leaky basements may be socially desirable. However, the case of oil and land is different. If oil companies must reveal their knowledge about the high oil-bearing potential of land, they will have to pay significantly higher amounts to purchase land with promising potential. This will tend to reduce the willingness of oil companies to make investments, such as in geological surveys, to locate land with good oil-bearing potential. (Note that this issue of acquisition of information is not relevant in the case of leaky basements—homeowners will automatically learn about leaks, just because they live in their homes.) Therefore, it might not be desirable to obligate buyers to disclose what they know in situations like that of an oil company purchasing land (and, in fact, the law sometimes does not impose an obligation to disclose in these situations).

Under traditional analysis of law, the consideration of a disclosure obligation has mainly to do with whether it would be seen as unfair or immoral not to disclose information at the time of contracting. From this perspective, it might be thought that both a homeowner with knowledge of a leaky basement and an oil company with knowledge that there is probably valuable oil under a person's land ought to reveal their information, for it would be underhanded, and perhaps akin to a lie, not to do so. Under traditional analysis, there would be no obvious reason to draw a distinction between the two types of cases, and the effects of the disclosure obligation on behavior and outcomes would not be the focus of attention.

These two illustrations show the importance of economic analysis of law, that is, of identifying the effects of legal rules, and the contrast between economic analysis and traditional analysis of law. Over time, economic analysis of law is likely to have a major, if not a revolutionary, influence on the understanding of law and on lawmaking activity.

SEE ALSO *Information, Asymmetric; Insurance; Mechanism Design*

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Steven Shavell

LAW AND ORDER

The term *law and order* refers to a prominent theme of Richard Nixon's (1913–1994) successful 1968 campaign for the American presidency. Law and order became a potent campaign symbol for Nixon, and related themes have sometimes surfaced in later Republican presidential campaigns—especially in 1972 and 1988. The term *law and order* is a political symbol capturing public anxieties about civil unrest, urban riots, black militant groups (which, some charged, fomented violence), and rising crime rates. Later events, such as the violence in the Boston area in response to court-ordered busing, widely publicized crime sprees like the Son of Sam murders in New York City, and continued rising crime rates, stoked fears of societal breakdown during the 1970s and gave law-and-order appeals additional resonance. These developments, sometimes connected with subtle racial appeals, contributed to the erosion of the Democratic Party's dominant position in American politics after 1968.

1962 TO 1965: VIOLENT RESISTANCE TO CIVIL RIGHTS

After a period of relative domestic tranquility in the 1950s, the 1960s came as a rude shock to many Americans. Between 1961 and 1964, violent actions by southern whites bent on defending racial segregation became commonplace. Demonstrators at sit-ins and freedom riders, black and white, faced actual or threatened violence and mass arrests on fabricated charges. More violence erupted as federal officials attempted to carry out court-ordered desegregation. When black student James Meredith sought to enroll at (and integrate) the University of Mississippi, thousands of segregationists rioted, resulting in two deaths and forcing President John F. Kennedy (1917–1963) to mobilize thousands of troops to restore order.

As the civil rights movement continued, it was met with more violence. Police in Birmingham, Alabama, deployed dogs and high-pressure water cannons against unarmed civil rights demonstrators in 1963. The murders of National Association for the Advancement of Colored People (NAACP) leader Medgar Evers in Jackson, Mississippi, in 1963 and of three civil rights workers near Philadelphia, Mississippi, in 1964 fed fears of mounting social unrest. A 1963 bombing of a Birmingham black church killed four little girls, and Alabama state troopers attacked unarmed voting-rights marchers with dogs and electric cattle prods in March 1965. These cumulative shocks to the national consciousness were amplified by the 1963 assassination of President Kennedy in Dallas, Texas.

1965 TO 1970: BLACK MILITANT GROUPS AND URBAN UNREST

In response to white violence against civil rights activists, some black leaders adopted increasingly belligerent rhetoric. The rise of black radicalism was personified in militants like Stokely Carmichael (1941–1998) and H. Rap Brown. As political scientists Donald Kinder and Lynn Sanders noted, the new rhetoric frightened many whites. There was "less talk of nonviolence and more of self-defense; less yearning for integration and more for solidarity and black nationalism; 'We Shall Overcome' was replaced by Black Power and 'burn, baby, burn' " (1996, p. 103). The image of neatly-dressed blacks pummeled by vicious white violence faded, replaced by images of blacks rampaging through city streets, torching cars and buildings and looting stores. The initial trigger for the changing imagery was the August 1965 Watts riot in Los Angeles. As Kinder and Sanders described the Watts riot:

> The violence raged unchecked for three days, and three days longer in sporadic eruptions. Blacks looted stores, set fires, burned cars, and shot at policemen and firemen. Before the violence was halted, 14,000 National Guard troops, 1,000 police officers and 700 sheriff's deputies were pressed into service.… In the end, 1,000 buildings were damaged, burned, looted or completely destroyed; almost 4,000 people were arrested; more than 1,000 were injured seriously enough to require medical treatment; and 34 were dead, all but three of them black. (Kinder and Sanders 1996, p. 103)

Watts was only the beginning, as 1966, 1967, and 1968 each brought more unrest. In 1967, 250 serious uprisings occurred, including the Detroit riots, which killed forty-three people. More disturbances erupted in multiple cities after the assassination of Martin Luther King Jr. in April 1968. As Kinder and Sanders observe:

> For one long, hot summer after another, Americans watched what appeared to be the coming apart of their own country. On the front page of their morning newspapers and on their television screens in the evening appeared dramatic and frightening pictures of devastation and ruin: cities on fire, mobs of blacks looting stores and hurling rocks at police, tanks rumbling down the avenues of American cities.… Discussion of the "race

> problem" in America … centered on the threat that inner-city blacks posed to social order and public safety. (Kinder and Sanders 1996, p. 103)

In 1968 the Kerner Commission released a report on the civil disturbances, warning that the United States was "moving toward two societies, one black, one white—separate and unequal." The urban violence and Kerner Commission report created an opening for Republicans to pounce on the law-and-order theme. Republican presidential candidate Richard Nixon blasted the report for "blaming everybody for the riots except the perpetrators of violence," promising "retaliation against the perpetrators" that would be "swift and sure." As noted by journalists Thomas Edsall and Mary Edsall, Nixon's running mate, hard-line Maryland governor Spiro Agnew (1918–1996), summoned black leaders in Baltimore to a stormy meeting where he accused them of cowardice for refusing to renounce black militant leaders like Stokely Carmichael and H. Rap Brown. Speaking of the violence in Baltimore after the King assassination, Agnew charged: "The looting and rioting which has engulfed our city during the past several days did not occur by chance. It is no mere coincidence that a national disciple of violence, Mr. Stokely Carmichael, was observed meeting with local black power advocates and known criminals in Baltimore three days before the riots began" (quoted in Edsall and Edsall 1991, p. 85).

The 1968 Democratic national convention met in Chicago following the June 1968 assassination of Democratic presidential candidate Robert Kennedy. Chaotic scenes of police beating demonstrators in Chicago's streets and parks echoed the tumult within the convention hall, as party delegates splintered over the Vietnam War (1957–1975). By 1965 almost all American homes had televisions, bringing searing images of one dramatic (and sometimes horrifying) event after another into the public consciousness. The racial subtext to much of the unrest of the 1960s is unmistakable. As Kinder and Sanders note:

> The riots opened up a huge racial rift. Fear and revulsion against the violence were widespread among both white and black Americans, but whites were much more likely to condemn those who participated in the riots and more eager for the police and National Guard to retaliate against them. Where blacks saw the riots as expressions of legitimate grievances, whites were inclined to explain them as eruptions of black hatred and senseless criminality.… To many white Americans, then, the civil disorders of the 1960s amounted to an appalling collective mugging. (Kinder and Sanders 1996, p. 104).

Liberals, then, faced the unenviable task of explaining why, after leading the fight to pass major civil rights laws, blacks appeared to be responding not with gratitude, but with annual explosions of violence, looting, and destruction.

As political analyst James Sundquist observes, the potency of law-and-order themes was evident as early as 1966, when Ronald Reagan (1911–2004) easily won the governorship of California after promising to "get tough" on welfare, crime, riots, and student unrest. In October 1966, the Republican Coordinating Committee charged that officials in the Lyndon B. Johnson (1908–1973) administration had "condoned and encouraged disregard for law and order." In an August 29, 1967, press conference, House Republican leader Gerald R. Ford (1913–2006) proclaimed:

> The war at home—the war against crime—is being lost. The Administration appears to be in full retreat. The homes and the streets of America are no longer safe for our people. This is a frightful situation.… The Republicans in Congress *demand* that the Administration take the action required to protect our people in their homes, on the streets, at their jobs.… There can be no further Administration excuse for indecision, delay or evasion. When a Rap Brown and a Stokely Carmichael are allowed to run loose, to threaten law-abiding Americans with injury and death, it's time to slam the door on them and any like them—and slam it hard! (quoted in Sundquist 1983, p. 385)

As Sundquist notes, Ford's statement illustrates that "by 1967, the Republicans were pulling out all the stops" (on the law and order issue). In 1968 "the issue was propelled by so many events that it hardly needed partisan exploitation" (1983, p. 385).

The cumulative effect of civil-rights violence, assassinations, urban rioting and unrest, the tumult at the 1968 Democratic convention, and the comparatively peaceful 1968 Republican convention in Miami was to create a climate unmistakably ripe for Republican law-and-order appeals. Many Americans were shell-shocked by the rising crime rates and domestic violence of the 1960s, amplified by the increasingly controversial Vietnam War, with antiwar demonstrators burning their draft cards and soldiers coming home, some in body bags, others maimed. In May 1970, Ohio National Guardsmen opened fire on antiwar protesters at Kent State University, killing four students and injuring nine. Many Americans sympathized more with the shooting guardsmen than with the dead students—a sentiment captured in Neil Young's protest song "Ohio" (written immediately after the Kent State shootings and performed by Crosby, Stills, Nash, and Young).

The song characterized conservative sentiment as celebrating the shootings: "should've been done long ago."

LAW AND ORDER IN THE 1968 CAMPAIGN

The political context in 1968 was clearly ripe for a campaign centering on law and order. The Nixon campaign eagerly seized the opening. Nixon's selection of Agnew as his running mate sent an unmistakable signal that if elected president he would "crack down" hard on rioters, draft protesters, and others perceived as contributing to or fomenting social and urban unrest. At the 1968 Republican convention, Nixon began his acceptance speech: "As we look at America, we see cities enveloped in smoke and flame. We hear sirens in the night." Nixon's speech continued by attacking Democratic-sponsored government programs for the unemployed, the poor, and cities as "reaping an ugly harvest of frustration, violence, and failure across the land." Nixon's campaign advertisements, too, reinforced the law-and-order theme. As Kinder and Sanders note:

> Nixon's television advertisements played upon Americans' fear of crime. While voiceovers pointed to sharp increases in violent crime and blamed the Democrats, the television viewer witnessed scenes of riots and buildings in flames, montages of urban decay, a lonely policeman on the beat, a mugging, crowds taunting the police, faces of anxious and perplexed Americans, and a woman walking alone on a deserted city street as darkness fell. (Kinder and Sanders 1996, p. 226)

After Nixon's election victory in 1968, Agnew, as vice president, demonstrated a slashing, attack-dog speaking style that further expanded on law-and-order themes. As noted by Sundquist, Agnew toured the country to support Republican candidates, attacking and denouncing "permissivists," "avowed anarchists and communists," "misfits," the "garbage" of society, "thieves, traitors and perverts," and "radical liberals" (1983, p. 387). This rhetoric is anything but subtle in positioning the Republican Party as representing the masses of "middle America" that abide by society's rules, are horrified by social violence, and support harsh crackdowns against it—a group that later would be targeted by the appeal of the 1972 Nixon campaign to the "silent majority." By implication, Agnew sought to position Democrats as representing less savory elements: antiwar radicals, draft-card burners, urban rioters, black militants, hippies, and practitioners of recreational drug use and sexual activity. Agnew's language, then, expanded the law-and-order theme to imply that Democrats sympathized not only with those who encouraged and practiced crime and violence (i.e., black militants, urban rioters, and draft-card burners), but also with groups that encouraged a more general social permissiveness and breakdown of traditional moral values—that is, permissivists, radical liberals, and perverts. These themes foreshadowed Nixon's 1972 reelection campaign, which would successfully brand Democratic presidential candidate George McGovern as the candidate of "acid, amnesty, and abortion."

1972 TO 2007: LAW-AND-ORDER THEMES RECYCLED

Since 1972, explicit law-and-order themes have become less central issues in most campaigns. However, a major exception was the 1988 presidential campaign, when George H. W. Bush portrayed Democratic candidate Michael Dukakis as "soft" on violent crime in a campaign that critics charged appealed to racial prejudices. The campaign featured the story of William "Willie" Horton, a black convict who, released from prison on a weekend furlough (a controversial program supported by Massachusetts governor Dukakis), escaped to Maryland, where he attacked a couple in their home. Republican strategists openly exploited the Horton case. One television advertisement, sponsored by an independent pro-Bush group, showed a sinister and unruly-looking Horton in a mug shot, while an announcer recounted Horton's crimes, emphasized by the words *kidnapping*, *raping*, and *stabbing* appearing in large print on the screen. Republican strategist Lee Atwater (1951–1991) promised that "by the time this election is over, Willie Horton will be a household name." Later, he said "the Horton case is one of those gut issues that are value issues, particularly in the South, and if we hammer at these over and over, we are going to win." As Kinder and Sanders note, Atwater joked to a Republican gathering, "There is a story about Willie Horton, who, for all I know may end up being Dukakis' running mate.… Maybe [Dukakis] will put this Willie Horton on the ticket when all is said and done" (1996, p. 255).

The 1988 campaign illustrates the political dangers for Democrats of not responding adequately to Republican efforts to brand them as "soft on crime." Especially in the more conservative South, Democrats have responded by emphasizing crime-fighting credentials and support for the death penalty. Bill Clinton used this formula successfully in his 1992 and 1996 presidential campaigns, and in 2005 Democrat Timothy Kaine won the governorship of Virginia, a conservative state. Kaine successfully fended off Republican attacks on his personal opposition to the death penalty by promising to uphold death sentences handed down by Virginia juries. The law-and-order campaign theme most clearly applies to the 1968 presidential campaign. However, it has spawned similar campaign themes, usually pursued by Republicans

eager to portray Democrats as "soft on crime," with varying degrees of success.

LAW AND ORDER AND VIGILANTISM IN AMERICAN LIFE AND FILM

Paradoxically, the appeal of law-and-order themes has potentially contributed to citizen vigilantism at times. American history offers numerous examples of citizens "taking the law into their own hands." White southerners' lynchings of blacks are but one example of vigilante actions defending a social order that is anything but admirable. In 1898, for instance, the majority-black port city of Wilmington, North Carolina, was consumed by a race riot in which an unknown number of blacks (probably dozens) were murdered and hundreds more banished by an armed white mob bent on establishing white supremacy in local and statewide politics. Historian Timothy Tyson described the actions and motives of riot instigators as follows:

> On Nov. 10, 1898, heavily armed columns of white men marched into the black neighborhoods of Wilmington. In the name of white supremacy, this well-ordered mob burned the offices of the local black newspaper, murdered perhaps dozens of black residents—the precise number isn't known—and banished many successful black citizens and their so-called "white nigger" allies. A new social order was born in the blood and the flames, rooted in what *News and Observer* publisher Josephus Daniels, heralded as "permanent good government by the party of the White Man." (Tyson 2006)

Tyson added that the riot "marked the embrace of virulent Jim Crow racism" nationwide. The Red Shirts, a paramilitary arm of the then-white-supremacist Democratic Party, had rampaged across North Carolina before the 1898 election, disrupting black church services and Republican meetings, and attacking blacks, who leaned Republican. These violent, vigilante actions were justified as necessary to preserve a cherished social order, white supremacy, by any means necessary. That their actions were neither lawful nor orderly probably never crossed the minds of either the Red Shirts or the white participants in the Wilmington riot.

Similarly, some anti-immigration activists along the U.S.-Mexican border have launched vigilante efforts to deter would-be undocumented immigrants from crossing from Mexico into the United States. Ranch Rescue is one such group, which styles itself as a defender of U.S. borders and private property rights against what it calls "criminal aliens" and "terrorists" out of a belief that law enforcement is unable or unwilling to act appropriately toward these ends. In 2005 Ranch Rescue founder Casey Nethercutt lost his southern Arizona ranch to satisfy a court judgment levied against him and other Ranch Rescue members for seizing and traumatizing two Mexican immigrants (Pollack 2005). The Wilmington riots and the Ranch Rescue case illustrate behaviors that are probably driven by the conviction that to restore law and order—or a cherished social goal—requires violating law and order at least temporarily.

The vigilantism inherent in the actions of the Wilmington riot instigators and Ranch Rescue members is also reflected in some American films. In movies like the *Death Wish* series starring Charles Bronson (1921–2003) and *The Punisher* (1989 and 2004), vigilantism is celebrated, with a curious and unmistakable implicit message: exacting revenge sometimes requires violating law and order—even abandoning the rule of law altogether. Law and order, then, has morphed from an often-potent political symbol from the 1960s through the 1980s to a notion that some action films celebrate violating—but whose impact in real-world politics is largely blunted.

SEE ALSO *Law; Rule of Law*

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Fred Slocum

LAW OF LARGE NUMBERS

Classical statistics assumes simple random sampling in which each sample of size n yields different values. Thus, the value of any statistic calculated with sample data (for example, the sample mean) varies from sample to sample.

A histogram (graph) of these values provides the sampling distribution of the statistic.

The law of large numbers holds that as n increases, a statistic such as the sample mean ($\bar{X}$) converges to its true mean (μ)—that is, the sampling distribution of the mean collapses on the *population mean.* The *central limit theorem,* on the other hand, states that for many samples of like and sufficiently large n, the histogram of sample means will appear to have a normal bell-shaped distribution. As the sample size n is increased, the distribution of the sample mean becomes normal (central limit theorem), but then degenerates to the population mean (law of large numbers). This process is shown in Figure 1. For an infinite number of samples, each of size $n = 5$, drawn from an exponential distribution with a mean of one, the probability density function (pdf) of $\bar{X}$ is right skewed, but for $n = 30$ the pdf appears more bell-shaped, and for $n = 90$ it is approximately normal. As n gets larger and larger (approaching infinity) the pdf of $\bar{X}$ appears to be a thick line at a mean of one, which illustrates the law of large numbers. Remember, however, that even as n goes to infinity, within two standard deviations of the mean there will continue to be approximately 95 percent of the distribution. It is the standard error of the mean ($\sigma / \sqrt{n}$)that keeps shrinking.

More technically, a distinction is made between the weak law of large numbers and the strong law of large numbers. The *weak law of large numbers* states that if X_1, X_2, X_3, … is an infinite independent and identically distributed sequence of random variables, then the sample mean

$$\bar{X} = (X_1 + X_2 + X_3 + \ldots + X_{n-1} + X_n) / n$$

converges in probability to the population mean μ. That is, for any positive small number ε,

$$\lim_{n \to \infty} P(|\bar{X}_n - \mu| < \varepsilon) = 1.$$

The *strong law of large numbers* states that if X_1, X_2, X_3, … is an infinite sequence of random variables that are independent and identically distributed with $E(|X_i|) = \mu < \infty$, for all i, then

$$P(\lim_{n \to \infty} \bar{X}_n = \mu) = 1.$$

That is, the sample average converges almost surely to the population mean μ.

Students, scientists, and social commentators have been and continue to be befuddled by the law of large numbers versus the central limit theorem. Although the law of large numbers was articulated by Jacob Bernoulli (1654–1705) in the seventeenth century, in the nineteenth century *curve fitting* and the finding of *normality in nature* were popular. It was believed that if the sample was big enough then it would be normal (not understanding that the central limit theorem applies to $\bar{X}$ and not to a single sample of size n). For instance, Adolphe Quetelet (1797–1874), originator of the "average man," made his early reputation by arguing that bigger and bigger samples would yield a bell-shaped curve for the attribute being sampled. He did not make the connection between the mean of one random sample and the distribution of means from all such samples (see Stigler [1986] for this history). By the law of large numbers, the larger the sample size the more the sample will look like the population (the sampling distribution of $\bar{X}$ appears to collapse on μ).

To this day, confusion exists among those who should know the difference between the law of large numbers and the central limit theorem. For example, in his otherwise excellent book, *Against the Gods,* Peter Bernstein wrote:

> Do 70 observations provide enough evidence for us to reach a judgement on whether the behavior of the stock market is a random walk? Probably not. We know that tosses of a die are independent of one another, but our trials of only six throws typically produced results that bore little resemblance to a normal distribution. Only after we increased the number of throws and trials substantially did theory and practice begin to come together. The 280 quarterly observations resemble a normal curve much more closely than do the (70) year-to-year observations. (Bernstein 1996, p. 148)

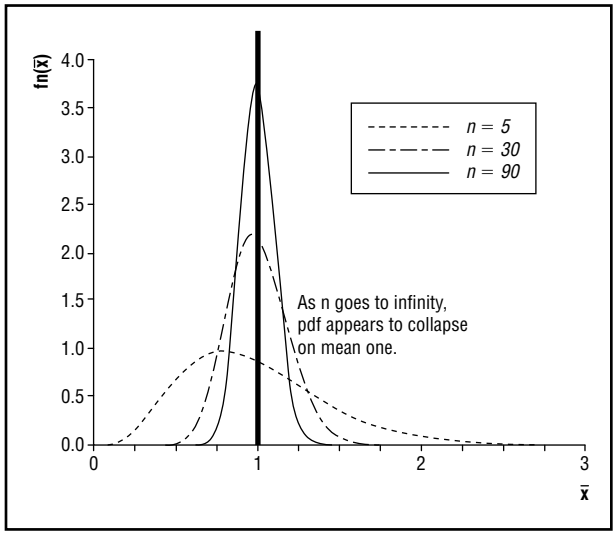

Figure 1: Sample mean pdf. expotential (1) population.

SEE ALSO *Central Limit Theorem; Classical Statistical Analysis; Random Walk; Risk; Sampling; Statistics*

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William E. Becker

LAW OF MORTALITY

SEE *Morbidity and Mortality.*

LAW OF ONE PRICE

SEE *Purchasing Power Parity.*

LAY THEORIES

Laypeople, like scientists, develop and use theories to help them understand and respond to their social world. *Lay theories*, then, are the theories people use in their everyday lives. Lay theories are often captured by proverbs such as "the early bird gets the worm" (Protestant work ethic), "you can't teach an old dog new tricks" (entity theory), and "it's never too late to turn over a new leaf" (incremental theory). Such lay theories often reflect the core beliefs of people living in a given culture or environment. Since the 1990s there has been greater recognition that people's perceptions are filtered through and guided by their lay theories and thus there is not one universal way for people to perceive and respond to the same social information.

Researchers—namely cognitive, social, personality, and developmental psychologists—have identified different kinds of lay theories and their far-reaching impact on judgments and behaviors toward the self, individual others, and groups. Lay perceivers can rather easily report their lay theories, agreeing or disagreeing with simple, straightforward sentences reflecting those ideas (e.g., "people who work hard succeed"). Yet people are generally unaware of the tremendous impact that their lay theories have on them and on others, such as guiding decisions on whom to ask out on a date, what career path to choose, whom to vote for for president, and whether to befriend or avoid members of certain groups. As one example, individuals who hold the lay theory that people cannot change their personality, morality, or intelligence (e.g., entity theory) tend to give up in the face of an academic or social failure; often judge a defendant as guilty based on minimal negative information about his or her character; and frequently endorse stereotypes of socially stigmatized groups.

Lay theories are readily used in everyday life in part because they are socially transmitted and shared but also because they are functional. Like scientific theories, lay theories provide understanding, prediction, and a sense of control over one's social world. However, unlike scientific theories, lay theories need not be objective, testable, or true. Lay theories serve people's needs to label their observations as reflecting a correct social reality. Lay theories such as the Protestant work ethic can fulfill important values (e.g., value of hard work). People may use lay theories as well to justify their attitudes and prevailing social norms. For example, the Protestant work ethic is an ingredient in racism toward African Americans at the hands of European Americans in the United States; African Americans are sometimes seen as not conforming to the work ethic (not working hard enough) and thus deserving disadvantage. Some lay theories may serve many cognitive, social, and psychological functions, and other lay theories may serve only one. What is more, some lay theories are more or less useful to certain members of a culture (e.g., relatively advantaged or disadvantaged group members) or more or less useful in certain contexts (e.g., at home or at work).

In summary, lay theories have far-reaching implications for understanding how people work. Lay theories can both drive and justify thought and behavior that impact the self and others.

SEE ALSO *Attitudes; Attribution; Norms; Social Cognition; Social Judgment Theory; Stereotypes*

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Sheri R. Levy

LAZARSFELD, PAUL FELIX

1901–1976

The Austrian sociologist Paul Lazarsfeld studied law, social psychology, and mathematics at the University of Vienna under the direction of Ernst Mach, physicist and founding figure in the field of philosophy of science. Lazarsfeld received his PhD in applied mathematics in 1925. In 1929 he founded a research institute for applied social psychology connected with Karl Buhler's research center in Vienna, then moved to the United States on a Rockefeller Foundation grant in 1933. While at Princeton

University directing the Office of Radio Research, Lazarsfeld studied the listening habits of radio audiences, the first of many studies on the media and public opinion. In 1940 he moved to Columbia University in New York to direct the Bureau of Applied Social Research, where he conducted extensive empirical social research and later joined the sociology department. At Columbia University Lazarsfeld collaborated with prominent sociologists such as Robert Staughton Lynd (1892–1970) and Robert K. Merton (1910–2003). Lazarsfeld continued to work at Columbia University until 1970, when he moved to the University of Pittsburgh, where he taught until his death in 1976.

Along with Albert Einstein (1879–1955), Enrico Fermi (1901–1954), Max Horkheimer (1895–1973), Theodor Adorno (1903–1969), and Niels Bohr (1885–1962), Lazarsfeld was part of an intellectual migration of academics from Europe during the early stages of Nazism. Many moved to the United States where they conducted research free from government interference and created a wealth of intellectual activity in U.S. universities.

Lazarsfeld's research in the field of sociology, particularly in the areas of social and applied psychology, used statistics to determine the influence of radio and print media on Americans' voting habits and personal preferences. Concerning himself with the development of empirical social science methods, Lazarsfeld applied his background in mathematics in the field of sociology, conducting independent and corporate-funded research on public opinion, voting, and popular culture. Written contributions to the field of empirical social science and survey research include *The People's Choice* (1944), with Bernard Berelson and Hazel Gaudet, a study of how public opinion was formed prior to elections; *Radio Listening in America* (1948), an analysis of radio listening habits; and *Voting* (1954), with Berelson and William N. McPhee, an inquiry into the determining factors of candidate selection. These publications placed Lazarsfeld's Bureau for Applied Social Research at the forefront of postwar American sociology.

Lazarsfeld is considered a pioneer in the field of media research. His research, both quantitative and qualitative, provided a scientific framework to study media influence on political attitudes. Lazarsfeld's research on radio listeners and the effect of radio listening on public preferences was used by market researchers, pollsters, and political campaigns to better understand the relationship between popular culture and public tastes. One of the first to systematically study the media, Lazarsfeld's research influenced mass communications theory, survey research, public opinion, and polling. In his theory of the two-step flow, Lazarsfeld explained how media information flows from opinion leaders to the larger public. He is also credited with introducing the concept of agenda setting, which was further developed by a later generation of social theorists. His empirical social analysis was later criticized by C. Wright Mills in *The Sociological Imagination* (1959). Lazarsfeld is credited with educating a generation of sociologists and bringing the academic discipline of sociology into the modern era, incorporating social and applied psychology and mathematics into the field to solve substantive sociological problems.

SEE ALSO *Communication; Lynd, Robert and Helen; Media; Merton, Robert K.; Political Psychology; Political Science; Public Opinion; Radio Talk Shows*

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LAZARUS, RICHARD S.

SEE *Coping*.

LEADERS

Leadership is influencing the performance of group members toward the achievement of organizational goals through persuasion, example, direction, control, or oversight. There are two inherent conflicts in the very idea of leadership in a democratic society. The first is embodied in the British statesman and orator Edmund Burke's (1729–1797) distinction between employing one's own best judgment in service of constituents (a trustee), and trying as assiduously as possible to implement the will of

the majority, regardless of whether it seems right to the "leader" (a delegate):

> Your representative owes you, not his industry only, but his judgment; and he betrays, instead of serving you, if he sacrifices it to your opinion ("Speech to the Electors of Bristol," November 3, 1774, reprinted in Laski, 1998).

This point is deeper than the indeterminacy of the social choice problem, raising instead a paradox in the nature of leadership itself. There is a distinction, dating back at least to Plato, between *rulers* (members of an elite, born and socialized to rule by virtue of merit), and *leaders* (people chosen by the people from among themselves). If decisions are truly democratic, why does a society need leaders in the first place?

An interesting example of the tension between leading the people and simply implementing their will can be found in the October 1944 diary of British member of Parliament Sir Cuthburt Headlam (1999, entry for 10/12/44): "Never was a party so leaderless as the Conservative party is today." What leader was it that Sir Headlam held in such low esteem? Winston Churchill, perceived by history as one of the great wartime leaders of all time. But in terms of advancing the fortunes of his party, Churchill either did not care or could not be bothered. Who was right: Headlam or history? In voters' minds, Headlam's view was correct. Churchill was unceremoniously dumped from office, with his Conservatives so resoundingly defeated in July 1945 that the opposition Labour Party gained a majority of more than 180 seats.

The second inherent conflict divides transactional leadership and transformational leadership. Transactional leadership is close to Taylorist principles of management and control, focusing on mechanism design and incentive compatibility, assuming that rewards and punishment motivate workers. The successful transactional leader compensates workers in a strict hierarchy in exchange for their service to the collective goal.

Transformational leaders begin with a vision, and persuade subordinates to share that vision. Inspiration, rather than either direction or control, is the objective. Transformational leaders believe that success comes first and last through deep and sustained individual commitment among followers.

These two distinctions suggest the following schematic representation of leadership.

It is useful to consider in more detail two accounts of charismatic leadership that have had a large impact both in the training of leaders and in the academy. The first of these is by the German social theorist Max Weber; the second is the work of contemporary management theorist Bernard Bass.

THEORIES OF CHARISMATIC LEADERSHIP

Weber believed that there are three types of systems in which leadership matters. The first is traditional/feudal; the second is charismatic leadership; and the final type, the highest achievement of leadership in an evolutionary sense, is the legal/rational leader, whose authority is based on expertise, experience, and technical training.

Traditional leadership authority is based on tradition and patriarchy, suppressing conflict but substituting an irrational and capricious order. Government actions arbitrate competition among those seeking favors, income, and other advantages, with leaders personally collecting fees. This system allows for some mobility among the classes, but the actual functions of government are based on loyalty, not merit.

Charismatic authority derives from the exceptional sacrifice, heroism, or exemplary character of the leader. Claims to charismatic authority are bolstered by assertions of destiny, being "chosen" or selected, or other supernatural signs. But pure charismatic leadership does not rely, or even allow, any other administrative or governmental organizations. If an organization relies on charismatic leadership, it may collapse into chaos if the leader dies or leaves, because subordinates act out of personal regard for that individual leader rather than the organization as an abstraction.

Source of authority

Style of leadership	Delegation	Trusteeship
Transactional	*The committee chair.* Ad hoc style of leadership. Short-term, few resources, limited and group-determined goals. Everybody gets something for participating	*The general.* Military command; extreme hierarchy, harsh punishment, complete authority over subordinates
Transformational	*The quarterback.* Charismatic and inspirational, but focused on needs and wants of subordinates. Teamwork, shared responsibility, focus is as much on transformation of team members themselves as on ultimate goals	*The savior.* Classic true charismatic leader, narcissistic focus on internal vision, willing to sacrifice underlings to achieve that vision

The highest expression of the potential for leadership authority, for Weber, was rational/technical/legal authority. Weber argued that bureaucracy is "the exercise of control on the basis of knowledge" (1947, p. 339). The leader is controlled and disciplined by rules and procedures, and open commitment to these procedures is the entire basis for the leader's authority. The office holder is constrained to impersonal, official obligations and commands, and cannot benefit either directly or indirectly from decisions. In the hierarchy of offices, it is office holders, not persons, who exercise authority. Real leadership requires extensive training and demonstrated expertise and experience. Deference and obedience are owed not to individuals, but to the impersonal order.

Bass accepted many of Weber's claims, but adapted for his own purposes the idea of charismatic rather than legal/rational relations among leaders and subordinates. In his *Leadership and Performance Beyond Expectations* (1985) Bass began with what seems like a paradox, from the perspective of Weberian or Taylorist perspectives on leadership. Why is it that most leaders are able to elicit only competent performance from employees? Why are some leaders able to elicit much more, and to make the workers happier and more fulfilled at the same time?

The explanation Bass offered is that the transactional, contractual approach described by Weber, and the charismatic leader Weber admired but considered anachronistic, could be combined into a new synthesis. Truly successful leadership depends on charisma, and successful organizations must nurture and promote charismatic individuals to leadership positions.

Bass created a taxonomy of personalities in an organization. The mix of personalities on teams, and the profile of the leader, might have as much to do with the success of the team as the abilities of the team and the technical nature of the task. He calls the three personality types self-oriented, task-oriented, and interaction-oriented. Task-oriented personalities are self-sufficient, resourceful, competitive, and motivated by intellectual challenges if they are not distracted. Self-oriented personalities are disagreeable, introverted, and often jealous, but they can be motivated by their desire for personal success and rewards. Interaction-oriented personalities are motivated by contact and interaction with others, and have much lower needs for autonomy or personal rewards.

Bass claimed that charismatic, transformational leaders could have an unexpectedly large impact on nearly any organization, so long as they consciously focused on three things. First, subordinates must be made to feel aware of the importance of their tasks and the importance of performing well. Part of this "importance" rests in expectation of reward, but much of it could simply be expectation of recognition and respect.

Second, Bass argued it was important to make subordinates aware of their needs for personal growth, development, and accomplishment. That is, the specific tasks being worked on today might be less important, both to the individual and the organization, than the impact that task might have on the employee's career. Finally, Bass claimed that transformational leaders must motivate their subordinates to work for the good of the organization rather than exclusively for their own personal gain or benefit. This might be achieved by making subordinates feel they belong, or can depend on each other, in a variety of ways, but the important thing is reconciling collective goals and individual fulfillment.

SEE ALSO *Authority; Leadership*

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Michael Munger

LEADERSHIP

The study of leadership is not only a search for understanding the thoughts and actions of leaders, but also an investigation into how to improve the performance and motivation of both individuals and groups. Given the importance of leadership to the success of groups, organizations, or even entire civilizations, there are few more pressing questions than, "What is leadership?" Attempts to answer this question are evident in early discussions of the notion of leaders. Governments, businesses, industries, and private organizations have all turned to behavioral scientists to better understand how organizations work efficiently, how managers can improve workers' performance, how teamwork and commitment can be instilled, and how an environment conducive to change can be structured.

DEFINING LEADERSHIP

The notion of leadership "connotes images of powerful, dynamic individuals who command victorious armies, direct corporate empires from atop gleaming skyscrapers, or shape the course of nations" (Yukl 2002, p. 1). Yet, considerable debate exists among researchers regarding an understanding of who exerts influence, what kind of power or influence is exerted, when and where leadership takes place, and why and how this phenomenon occurs.

As many definitions of leadership exist as do authors who have studied the concept. Conceptions and definitions of *leader* and *leadership* have been reviewed by Carroll Shartle (1956), Bernard Bass (1960), and James Hunt and colleagues (1982), among others. Some of the more recent definitions focus on influence, collective understanding, effectiveness, and facilitation:

- "Leadership appears to be a working relationship among members in a group, in which the leader acquires status through active participation and demonstration of his or her capacity to carry cooperative tasks to completion" (Bass and Stogdill 1990, p. 77).
- "Leadership is a process of giving purpose [meaningful direction] to collective effort, and causing willing effort to be expended to achieve purpose" (Jacobs and Jaques 1990, p. 281).
- "A definition of leadership that would be widely accepted by the majority of theorists and researchers might say that 'leadership is a process of social influence in which one person is able to enlist the aid and support of others in the accomplishment of a common task' " (Chemers 1997, p. 1).
- "Leadership is influencing people—by providing purpose, direction and motivation—while operating to accomplish the mission and improving the organization" (Department of the Army 1999, pp. 1–2).

The common thread in the majority of definitions is that leadership is an active process of one person exerting influence over one or more other persons toward a common goal or objective. However, the similarities end there, and leadership definitions do not always fit into the applications for which they are used. For example, Bernard Bass and Ralph Stogdill's definition of leadership does not fully account for hierarchical structures, and T. Owens Jacobs and Elliot Jaques's definition does not address the interactive nature of leadership between a superior and a subordinate. A more adequate definition of leadership needs to account for both the individual person and the situational context. The definition provided by the U.S. Army is comprehensive and useful. Therefore, this entry also defines leadership as "influencing people—by providing purpose, direction and motivation—while operating to accomplish the mission and improving the organization" (U.S. Army 1999, pp. 1–2).

Having defined leadership, it is necessary to examine assumptions about the topic. Some commentators assume that certain individuals are predisposed to be leaders, while others are not. If the person is the most important predictor of leadership success, then personnel selection matters most. However, other scholars assume that context is most important in developing leaders. If the situational variables are the most influential aspects of leadership success, then the training models employed would seem most important. A review of the historical approaches to leadership will highlight these two divergent approaches.

A REVIEW OF THE HISTORICAL STUDY OF LEADERSHIP

An understanding of the historical literature and the changing philosophies behind leadership studies add meaning and depth to current integrated theories. The concepts examined provide a framework for understanding current models and examining future directions.

Traits and Attributes Theories Few areas of research have had a more controversial history than that on leadership traits and attributes. One question that researchers have tried to answer is "who is exerting the influence?" During the nineteenth and early twentieth centuries, "great man" theories dominated leadership discussions. The great man concept suggested that leaders possessed special traits or characteristics that allowed them to ascend above others and enhanced their ability to be leaders (Hollander and Offermann 1990b). This view is often linked to the nineteenth-century philosopher Thomas Carlyle, who wrote "the history of the world is but the biography of great men" (1841). In short, the attributes of effective leaders were seen as inborn and permanent, and they applied to various circumstances. Later, Francis Galton expounded on this concept in *Hereditary Genius* (1869), where he argued that reputation flows from heredity.

The great man theory led to hundreds of research studies that looked at personality traits, physical characteristics, intelligences, and values to differentiate leaders from followers. In the early 1900s, psychologists developed intelligence testing to measure individual differences in analytic ability. Initial findings that intelligences correlated with leadership led researchers toward searching for additional nonintellective traits that might be predictors of behavioral tendencies (Chemers 1997).

Ralph Stogdill was the first researcher to summarize the results of these studies. He examined 124 studies to determine the characteristic differences between leaders and followers. He came to two major conclusions. First, Stogdill found slightly higher intelligence measures for leaders, as well as positive relationships between leadership and adjustment, extroversion, and dominance. However, Stogdill failed to find traits that were universally associated with leadership and could be reliably used to predict who might be an emerging leader. Stogdill concluded that "a person does not become a leader by virtue of the pos-

session of some combination of traits" (1948, p. 63). Later, Richard Mann (1959) came to the same conclusions that although individuals with certain characteristics were more likely to be successful leaders, leaders were not altogether different from followers. As a result, later researchers erroneously concluded that personal traits and attributes alone could not be used to predict future leadership success.

It was not until the publication of a meta-analysis by Robert Lord, Christy de Vader, and George Alliger (1986) that such traits as intelligence and personality regained favor with leadership researchers. Their article reexamined the relationship between personality traits and leadership perceptions and emergence. In contrast with the conclusions of earlier nonquantitative literature reviews on traits and leadership, Lord and his colleagues utilized the literature investigated by Mann in his 1959 review and subsequent relevant studies and found that prior research on trait theories was misinterpreted as applying to leader effectiveness when it actually applied to the relationship between leader traits and leader emergence. Using meta-analytic techniques, their results supported social perception theories where several traits were expected to be related to leadership perception. Specifically, they found that intelligence, masculinity-femininity, and dominance were significantly related to followers' perceptions of their leader's effectiveness. Shelley Kirkpatrick and Edwin Locke (1991) found that successful leaders' traits include drive, the desire to lead, honesty and integrity, self-confidence, cognitive ability, and competence. Overall, as the study of traits and attributes in relation to leadership continued, the beginnings of the study of leadership as a behavioral phenomenon began.

Behavioral Theories After World War II (1939–1945), researchers emphasized the observable aspects of leadership in order to differentiate not only the nature of leadership and leader activity but also the behavioral patterns of effective leaders (Chemers 1997). A research program at Ohio State in the 1940s attempted to measure leadership behavior as group members described the behavior of the leader. From this data, John Hemphill (1950) quantified 150 behavior descriptors that were incorporated into the Leader Behavior Description Questionnaire (LBDQ), which is still used as a measure in leadership research. Andrew Halpin and Ben Winer (1957), while adapting the LBDQ for use in the U.S. Air Force, identified *initiating structure* and *consideration* as two fundamental dimensions of leader behavior. Earlier, Daniel Katz and Robert Kahn (1966) had attempted to identify general styles of leadership. From interviews with subordinate employees or "followers," they recognized two general styles: *production-oriented* and *employee-oriented*. The former is focused on planning, preparation, direction, and end-state productivity. In contrast, employee-oriented leaders identified with followers, exemplified openness, and showed concern for the well-being of subordinates.

With the limitations of behavioral approaches for explaining why some leaders are more effective than others, leadership researchers shifted their focus away from what leaders *are* toward developing a better understanding of what leaders actually *do*, and how such behaviors relate to leader effectiveness (i.e., how often a leader communicates with followers, what types of reward and discipline methods he or she uses, and the decisions leaders make).

Although behavioral approaches to leadership generated great interest, they also generated a number of controversies, including accusations of inconsistencies in findings (Bass and Stogdill 1990). For example, there are significant variations in most relationships between leadership styles and behaviors and the various indicators of leadership effectiveness, such as morale and satisfaction (Bryman 1992). These inconsistencies in the literature instigated the emergence of contingency approaches to leadership to account for differences found across situations.

Contingency and Situational Theories Contingency and situational theories examine both the tasks and the follower characteristics to specify what behavior is required of effective leaders. The circumstance in which leader-follower interaction takes place plays a major role in the process of leadership. Captured in the situational leadership approach are the quality of relationships, tasks, and activities to be performed, perceptions of the leader based on history, the motivation of both the leader and the follower, and personal characteristics influencing the situation. There exist several contingency and situational theories, but perhaps the most commonly researched were F. E. Fiedler's (1967) *contingency theory* of leadership, Paul Hersey and Kenneth Blanchard (1969) *situational leadership model*, Robert House's (1971) *path-goal theory* of leadership, and Victor Vroom and Philip Yetton's (1973) *normative decision model*.

Fiedler's contingency model proposes that leader effectiveness is a function of the match between the leader and specific situational factors, including position power, task structure, and leader-member relations. Fiedler's model differentiates between *task-oriented* and *relationship-oriented* leadership styles, but also measures ratings of the person with whom employees are least able to work. Fiedler found that the effectiveness of the leader-follower interaction was contingent upon the factors of leader-follower relationship, task structure, and leader position. If these factors were all high or all low, it was determined that a task-centered leader would be most effective. However, if the factors were mixed, an employee-centered leader was found to be most effective (Fiedler 1967).

Further, Fiedler argued that leaders cannot adjust their behavior to changing circumstances. If a leader's style is not appropriate for the specific situation, the leader will not be successful and an organization must change the leader. However, most contemporary theorists believe that leaders can adjust their style. If that is so, what should leaders consider in making adjustments?

Hersey and Blanchard's situational leadership model sought to answer this question. There was little evidence to support a relationship between leader behavior and leader effectiveness. Instead, the relative effectiveness of these two elements often depended on the context of the task. Hersey and Blanchard used the terms *task behaviors* and *relationship behaviors* and sought to explain why leadership effectiveness varies across these two dimensions. In their model, they depicted task behavior and relationship behavior as orthogonal dimensions. They argued that this approach is useful because certain combinations of task and relationship behaviors may be more effective in certain situations than in others.

Another contingency model deals with different aspects of leader-follower relationships. Path-goal theory is based on the idea that it is the leader's responsibility to clarify the path, remove obstacles, motivate his or her followers, and provide feedback to achieve organizational goals while setting guidelines on how to accomplish those goals. Path-goal theory examines the contingency of the leader's effectiveness at increasing a subordinate's motivation along a pathway leading to a certain goal. House proposed three areas that would affect the path-goals relationship: the task, the characteristics of the followers, and the nature of the group to which the followers belong. The theory hypothesizes that certain subordinates will respond better to directions when a task is unstructured (e.g., developing building plans) than when a task is structured (e.g., air traffic controlling) (House and Dessler 1974). The response is contingent upon differences in both the individual and the task. More importantly, understanding the effects of the nature of the task should influence how leaders behave.

Another influential model within the contingency approach is the normative decision model from Vroom and Yetton. In this model, emphasis is placed on increasing followers' involvement. The leader's method of including followers is contingent upon such constraints as time, talents, and resources. Another important aspect of the model is to what extent the support of followers is critical to successful outcomes. The implications of this model are that leaders who possess an awareness of their subordinates' involvement can improve the decision-making process.

All of these models have helped to develop an understanding of leadership complexities. Although contingency theories dominated leadership research for decades, a number of writers have questioned the methods used to tests these theories (Yukl 2002). For example, J. C. Wofford and Laurie Liska (1993) quantitatively reviewed 120 path-goal studies and found that only seven of the moderators used were significant. Katherine Miller and Peter Monge (1986) meta-analyzed research on the effects of participation in decision making on satisfaction and productivity. Results failed to support the contingency model predictions.

Transactional Theories Transactional models describe a process-oriented exchange between leaders and followers. As Edwin Hollander and Lynn Offermann (1990a) explained, transactional models focus on the follower's perceptions of the leader's actions. The concern for process stems from the social exchange between leaders and followers as a function of effectiveness (Shaw and Costanzo 1982). These models emphasize persuasive influence instead of compelled compliance. Hollander developed a transactional leadership model, and in its context coined the term *idiosyncratic credit*. Idiosyncratic credits are often defined as a tit-for-tat exchange. Hollander (1958) explained that leadership was a social exchange transaction between leaders and followers where "legitimacy" was the currency of the exchange. To have a successful transaction, the leader must provide direction, guidance, and technical knowledge, as well as recognition of followers' inputs. In turn, followers increase their receptiveness and add legitimacy to the leader's influence (Hollander 1993).

By demonstrating competency, assisting the achievement of group goals, and conforming to group norms, leaders demonstrate commitment to the group and in turn earn credits (Chemers 1997). By obtaining credits, the leader gains latitude to explore new and perhaps nonnormative ideas, methods, and courses of action, all of which can potentially lead to innovations. Overall, the successful employment of the idiosyncrasy credit exchange leads to legitimacy in shaping the perceptions of subordinates. In a cyclical nature, from the leader-follower exchange, group performance is increased (Green and Mitchell 1979).

Other relationship- and influence-oriented theories include *implicit leadership* theory, *leader-member exchange* theory, and *Pygmalion* theory. According to implicit leadership theory, a leader's behavior will not be effective unless the person is perceived as a leader (Calder 1977). Leader-member exchange theory (Graen and Ginsburgh 1977) proposes that leaders have *in-groups* of trusted individuals within their organization. Subordinates in the *outgroup* are supervised through a more formal authority process. Another approach is referred to as Pygmalion

theory. A critical component of this theory is the self-fulfilling prophecy, which suggests that raising leader expectations regarding follower achievement produces an improvement in the followers' performance (Eden 1990). Over nearly three decades, researchers have found that if leaders have confidence in followers and set high goals and expectations for them, then the followers' likelihood of success is higher due to a self-fulfilling prophecy effect (see Eden et al. [2000] for a review of this literature).

From a theoretical perspective, a common complaint against these theories is their lack of generalizability to women and to established work groups (White and Locke 2000). For example, several Pygmalion studies, with the exception of D. Brian McNatt's (2000) meta-analysis, have reported weak effect sizes when controlling for gender (Eden et al. 2000). Indeed, McNatt reported significant differences in the effect sizes across different leadership contexts, with the results stronger in the military, with men, and for followers for whom low expectations were initially held.

R. E. Kelly (1988) brought attention to the active role of followers in achieving group success. He argues that a prerequisite to effective leadership is followership. Effective followers are "intent on high performance and recognize that they share the responsibility for the quality of the relationship they have with their leaders" (Potter et al. 2000, p. 130). The study of followership includes an understanding of two separate dimensions of follower initiative: performance and relationships. Successful organizations that have the ability to change in positive directions have leaders who value and encourage partners, and followers who seek to become partners (Potter et al. 2000).

The relationship and influence theories have furthered scientific understanding of the leadership phenomena. They have also assisted in answering the question, "Can we develop leaders?" However, these theories do not address the most pressing questions. For example, how do leaders build more enlightened and transformational forms that create referent effects beyond mere legitimacy? Modern theories have sought to explain these challenges. These more recent ideas are examined under the umbrella of *new-genre* theories.

New-genre Theories *New genre* refers to theories that have dominated leadership research since the 1980s, including charismatic, inspirational, transformational, and visionary leadership (Bass 1998; Bryman 1992). New leadership approaches emphasize symbolic leader behavior, visionary and inspirational messages, emotional feelings, ideological and moral values, individualized attention, and intellectual stimulation. Charismatic and transformational leadership theories have turned out to be the most frequently researched theories since the early 1990s (Judge and Piccolo 2004), with the accumulated research showing that charismatic and transformational leadership is positively associated with leadership effectiveness and a number of important organizational outcomes across many different types of organizations, situations, levels of analyses, and cultures (see Avolio, Bass, Walumbwa, and Zhu [2004] for a summary of this literature).

Hollander and Offermann described transformational leadership "as an extension of transactional leadership, but with greater leader intensity or follower arousal" (1990a, p. 88). The study of transformational leadership is rooted in Max Weber's (1946) notion of a leader. In this theory, leaders are seen as active transforming agents, changing the outlook and behavior of their followers (Burns 1978). Transformational leaders may employ one or more of the core competencies of transactional leadership to obtain greater outcomes.

Factor analytic studies have recognized four key components of transformational leadership (Bass 1985; Avolio and Howell 1992): (1) charismatic leadership or idealized influence; (2) inspirational motivation; (3) intellectual stimulation; and (4) individualized consideration. Transformational leaders act as role models to their subordinates. The use of power is a last resort for a transformational leader. Transformational leaders motivate and inspire subordinates by providing meaning and challenge through emphasis on teamwork. Inspirational motivation leads to internalization. Leaders ensure an open exchange of ideas by allowing mistakes, soliciting new methods for problem solving, and evaluating followers' processes rather than just situational outcomes. The leader acts as a coach, teacher, and mentor for each subordinate, providing individual attention and feedback, both positive and negative (Bass 1996).

Components of transformational and transactional leadership principles are incorporated into training strategies used by governments, corporations, and sports teams. As a result of training and education, transformational leaders motivate and enable followers to accomplish more than what is expected, set increasingly higher goals, and achieve higher standards. Transformational leadership is particularly evident in successful teams when coaches increase performance by providing motivation and inspiration. In contrast, current research on *in extremis* leadership, or leadership of teams facing death (e.g., fire departments, SWAT teams, and the military) shows that the environment itself provides the inherent motivation. Therefore, leaders in these extreme environments focus on continual learning and shared risk to build competency, loyalty, and trust (Kolditz 2007).

Like transformational leadership, the concept of charismatic leadership is an outgrowth of Max Weber's

description of a form of influence based on follower perceptions that the leader possesses certain enviable characteristics. Weber proposed that charisma can occur when a leader with certain qualities emerges during a crisis to propose a new vision (Weber 1946). Charismatic leaders exert enormous power and influence over followers, especially followers searching for direction or for guidance during times of crisis. Leadership is considered charismatic when it "inspires the follower with challenge and persuasion, providing a meaning and understanding" (Bass 1996, p. 5). Robert House (1977) developed a theory of charismatic leadership based on the premise that charisma has a distinct effect on followers. Charismatic leaders tend to be self-confident and achievement-motivated; they also desire to assert influence, and they possess strong convictions. These types of leaders advocate change and are able to mass followers in support of their own vision. Other theories centering on charisma focus on attributes (Conger and Kanungo 1987), self-concept (Shamir et al. 1993), and social contagion (Meindl 1990).

One of the latest new-genre approaches to leadership is the framework proposed in *authentic leadership* theory (Gardner et al. 2005; Avolio and Gardner 2005; Avolio, Gardner, Walumbwa, et al. 2004). This theory holds that high levels of leader self-awareness, self-regulation, and transparency, among other things, will increase the leader's positive effects on their followers. Another current approach to understanding leadership evaluates the unique characteristics of leaders in life and death situations or *in extremis* leaders. These leaders demonstrate inherent motivation, continuous learning, shared risk, common lifestyle with their followers, competency, trust, and loyalty (Kolditz 2007).

A 2004 meta-analysis by Avolio and colleagues compared studies in which the researcher manipulated new-genre leadership with studies that manipulated traditional theories (e.g. behavioral, trait, or contingency theories) (Avolio, Reichard, Hannah, et al. 2004). Results showed that new-genre approaches to leadership had appreciably larger effects than those based on traditional leadership theories for both affective and cognitive dependent variables, while traditional theories had a slightly larger effect on more proximal behavioral outcomes. These findings appear consistent with the core focus of these theories. New-genre theories, such as transformational leadership, are believed to have strong affective and cognitive components, and they are thus positively linked to such dependent variables as liking, trust, or intellectual engagement. Conversely, research on contingency and other more transactional leadership approaches has focused more on short-term behavioral change.

Studies suggest that researchers will continue to examine leadership in search of both an understanding of the thoughts and actions of leaders and improvements to organizational performance and motivation.

SEE ALSO *Behaviorism; Conformity; Hierarchy; Organizations; Personality, Cult of; Political Science; Pygmalion Effects; Self-Fulfilling Prophecies*

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LEADERSHIP, CONTINGENCY MODELS OF

One of the earliest theories of leadership that deliberately included features of the situation was proposed by the Austrian-born American psychologist Fred E. Fiedler (1967). According to Fiedler's *contingency model of leader effectiveness*, the performance of a group is a joint function of the style of the leader and key attributes of the context. Broadly stated, the model identifies appropriate "matches" of different leadership styles for particular types of situations.

Fiedler characterized leader style as varying across a single dimension of socioemotional orientation versus task orientation. Socioemotional orientation denotes a leader who is primarily concerned with maintaining positive social relations, whereas task orientation denotes a leader who is primarily concerned with task structure and accomplishment. This stylistic orientation is assessed by having a leader complete a "least preferred coworker" (LPC) attitude scale. Comparatively high (or lenient) LPC scores are interpreted as an indication of a socioemotional orientation, while low (or harsh) LPC scores are interpreted as an indication of a task orientation. The assumption that a social-relations orientation and a task orientation are opposite ends of a single continuum differs from other popular approaches to conceptualizing leader style (e.g., the Ohio State University–based conceptualization of consideration and structuring proposes two independent dimensions of leadership style).

Situations are judged in terms of how much control they afford the leader. High-control situations are those that provide a leader with strong subordinate support, clear task structure, and substantial power that is tied to the leader's formal position. The model posits that in extremely high-control situations and extremely low-control situations, leaders who are low LPC (i.e., task oriented) will be more effective than high LPC (i.e., socioemotional oriented) leaders. For more intermediate-control situations, the ordering of leader effectiveness is reversed, and high LPC leaders are predicted to be comparatively more effective. The precise underlying social process that might explain this pattern of association has been a major topic of study throughout the model's history.

Fiedler developed his model from data collected over a large number of work groups in a great variety of settings. As the results of these studies were used to induce the model's principles, subsequent research efforts have attempted to verify the proposed interaction of leader style and leader circumstance. By and large, these later attempts at verification have met with mixed success. Meta-analytic efforts (designed to summarize results across many studies) do suggest the model may be valid in certain extreme combinations of subordinate support, task structure, and leader position–based power (Peters et al. 1985). However, the magnitude of these effects for the observed associations of LPC with group performance in specific situations is not great. Moreover, there is some evidence that performance may actually decrease as situational control decreases (Schriesheim et al. 1994; Vecchio 1977). This suggests that performance may be maximal (and, therefore, situations should be created) where high LPC leaders are located within settings of extremely high situational control (i.e., positive leader-subordinate social relations, maximum task structure, and strong leader position power). Because much prior research has focused on within-setting comparisons of leaders, this across-setting comparison deserves further study.

Despite these concerns, Fiedler's contingency model of leadership is important for its emphasis on the interplay of leader style and the situation, and its suggestion that, in some settings, it may be more reasonable to modify or engineer the situation to fit the leader's personality, rather than attempt to modify the leader's style.

SEE ALSO *Leadership; Meta-Analysis*

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Robert P. Vecchio

LEADING INDICATORS

SEE *Lagging, Leading, and Coincident Indicators.*

LEAGUE OF NATIONS

The League of Nations, inaugurated in 1920, was the first major international organization to attempt to tie individual nation-state security to international security. Envisioned as a collective security—rather than a collective defense—organization, the League of Nations attempted to replace individual nation-state self-interest with an altruistic vision of international justice and cooperation. In a first for international law, the Covenant of the League committed every signatory to settle disputes through arbitration before going to war. The centerpiece of the League Covenant was Article 10, which bound the League to collectively preserve "the territorial integrity and existing political independence of all Members."

Despite its all-encompassing mandate to preserve peace and security of the international community though mutual action, the League was not the first international organization to espouse such goals. The Concert of Europe (1815–1900) and the two Hague Conferences (1899 and 1907) had each in their way advanced the issue of international cooperation on the world stage, but both had serious limitations. The Concert of Europe was limited by the fact that only the Great Powers of Europe took part, and its means of conflict resolution (arbitration) only worked as long as each power agreed to submit. For their part, the two Hague Conferences were more inclusive (twenty-six and forty-four states, respectively) and accomplished more with respect to codifying into international law the peaceful settlement of disputes. The three Hague Conventions that arose from these conferences, along with the Permanent Count of Arbitration, presaged the Covenant of the League of Nations.

The League was born out of the experience of World War I. Many politicians believed the war had occurred in large part due to the brutal nature of *realpolitik* and the secretive diplomacy and shifting alliances between the Great Powers. For Woodrow Wilson, president of the United States from 1912 to 1920, the League of Nations represented a capstone of a morally based foreign policy; one designed to replace the dangerous balance of power politics with a more transparent and cooperative system between sovereign, democratic states governed by the principle of national self-determination. Wilson articulated his vision several times during his presidency, but his most famous statement on the League concluded his famous Fourteen Points speech presented before the U.S. Congress on January 8, 1918: "A general association of nations must be formed under specific covenants for the purpose of affording mutual guarantees of political independence and territorial integrity to great and small states alike."

The League was an integral part of the Treaty of Versailles, negotiated in early 1919 and enacted on January 10, 1920. The League began operations in Geneva, Switzerland, with Sir Eric Drummond its first secretary general. Structurally, the League consisted of a council, an assembly, and a secretariat—a structure that would subsequently serve as the model for the United Nations. The Council was originally designed to have nine members: the five great powers (Britain, France, Italy, Japan, and the United States with permanent seats, as well as four temporary rotating members (the first four were Belgium, Brazil, Greece, and Spain). However, despite an ardent cross-country campaign by Wilson, which eventually contributed to his debilitating stroke, the isolationist Senate failed to ratify the treaty and the United States never officially joined the League. Thus, the Council consisted of eight members until 1922, when two additional small states were added. In 1926 the Council was further increased to fifteen members, including Germany.

The foremost goal of the League was the prevention of another world war, and the League Covenant included calls for disarmament and dispute resolution through arbitration in the International Court or inquiry before the League Council. The central focus of the Covenant was the set of articles outlining the principles and responsibilities of collective security. Article 16 declared that any state that went to war without first vetting disputes through the League processes would be deemed to have committed an act of war against all other member states of the League. Building upon the idea of deterrence through the threat of "all against one," the collective members were then expected to sever all trade and financial relations with the aggressor state. Notably member states were not legally obliged to apply military sanctions, although Article 16 claims that military sanction may be "a political and moral duty incumbent to states." The League's architects, including Wilson, believed that this collective security system would ultimately preempt the precarious alliance behavior and arms races that had caused war repeatedly in the past.

The League did enjoy numerous successes, particularly in settling territorial disputes such as those between Albania and Yugoslavia (1921), Germany and Poland over Upper Silesia (1922), and Greece and Bulgaria (1925). Yet it is largely the League's spectacular failures that stand out when accounting for its fate. Conventional wisdom holds that the refusal of the U.S. Senate to ratify the Treaty of Versailles crippled the League from the outset. Other reasons for failure are both structural and operational. Reflecting its origins as an international organization with members of varying power and interests, the League Covenant contained structural compromises needed to ensure member state ratification and participation. The biggest of these concessions was the discrepancy between Articles 5 and 10. Article 10 promised collective preservation of territorial integrity and political independence of all member states, whereas Article 5 required all decisions taken by the League Council be made on the basis of unanimity of the members in attendance. Article 5 thus ensured a veto for any member of the Council who undertook aggressive action against another member.

Operationally the League was hampered throughout its existence by the reluctance of its member states to intervene in international disputes and apply collective security mechanisms. One of the most egregious cases was the League's weak response to Japan's invasion of Manchuria in 1931. Instead of sanctioning Japan, the League failed to take decisive action for more than seven months—partly due to the structural flaw of the League Council, which enabled Japan (as a permanent member) to delay League action. The League finally sent observers, but only after Japan formally withdrew from the League. By 1934 the League's lack of teeth would become readily evident again in the case of Italy's invasion of Ethiopia (which solicited only a weak set of economic sanctions on the part of the League) and Adolf Hitler's obvious rearming of Germany. Ultimately, the declaration of World War II—which the League was designed to prevent—spelled the demise of the institution. Although the League lingered on through the war, it finally faded into irrelevance and it functions were formally turned over to the newly created United Nations in 1945.

SEE ALSO *Alliances; Confederations*

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Catherine Weaver

LEAKEY, RICHARD

1944–

Born into a family with a legacy of seeking out the origins of humankind, Richard Erskine Leakey was the second of the three sons of Louis Leakey (1903–1972) and Mary Leakey (1913–1996). Both of Leakey's parents were renowned for their archaeological finds and influenced future generations of Leakeys toward the study of human origin. Louis Leakey had been born in Nairobi, Kenya, to missionary parents. Young Louis learned the culture, language, and traditions of the Kikuyu people and was even initiated as a member of the Kikuyu tribe at the age of thirteen. Louis later completed studies at Cambridge University in the fields of anthropology and archaeology. Louis and his wife Mary were both instrumental in shaping the fields of archaeology, paleoanthropology, and primatology due to their many discoveries.

Young Richard was often in the field with his parents on digs, and found his first fossil, of an ancient pig, at the age of six. During his youth, he had a horrible time with bullying in school and eventually left school to pursue his interest in observing and tracking animals. He initially resisted the idea of following the career path of his parents and decided to start a safari business. His business was fairly successful until his curiosity about paleontology led him in a different direction. Leakey began to go on fossil hunting expeditions in East Africa with colleagues of his parents. In 1967 he became part of an expedition funded through one of his father's research projects: Richard served as the field leader for a trip to the Lower Omo Valley in Ethiopia. In this area, the team found many early hominid fossils that were at least 130,000 years old.

Around this time, Leakey married Margaret Cropper, who traveled with him on the Omo Valley expedition. He faced difficulty early in his career because he lacked the credentials that many anthropologists and archaeologists possessed. Thus, he returned to school and completed the requirements to gain entry into a university. After he completed his entrance exam, he aimed to pursue higher education, but was soon distracted by his curiosity about a particular archaeological site and his desire to obtain a position with the National Museums of Kenya. He chose not to attend college.

Leakey's interest in further excavating Kenya was inspired by a flight from Omo to Nairobi. The aerial view

provided him with a glimpse of what appeared to be fossil-bearing sedimentary rock. He determined that he would obtain funding to go back to that area and find fossils on Kenyan land. His excavations in the area around Kenya's Lake Turkana would yield many significant finds and result in his distinguished career in the field of paleoanthropology. In 1968 he began the first of many excavations at this site. He also began to lobby for a position with the National Museums of Kenya. He was named administrative director of the museums in May of 1968 and remained in this position until 1989.

Leakey and his wife Margaret had one daughter named Anna, who was born in 1969, but they were divorced soon after this time. Richard then met and fell in love with Meave Epps, a zoologist who had recently completed her PhD at the University of North Wales. They married and had two children: Louise born in 1972, and Samira born in 1974. Leakey established a camp in Koobi, which became the site of one of his best-known discoveries, called *skull 1470*. This discovery helped him mend a long-standing rift with his father that was instigated by conflicts between Richard's role as the director of the National Museum and his father's center, which had been in existence for many years. Richard was able to show skull 1470 to his father just before Louis died on a trip to London in October 1972.

The discoveries by Leakey's team of the *Homo habilis* skull in 1972 and the *Homo erectus* skull in 1975 were significant findings. Leakey's health began to suffer thereafter due to kidney disease, and he had to receive a kidney from his brother Phillip in 1979. Leakey is most well-known for the discovery in 1984 of what would become known as Turkana Boy, a *Homo erectus* skeleton roughly 1.6 million years old. Two members of his team have been credited with working with him on this find: Alan Walker and Kamoya Kimeu. It is one of the most complete *Homo erectus* skeletons ever found, and it has brought Leakey and Kenya worldwide acclaim in the field of paleoanthropology.

Leakey resigned his post as director of the National Museums of Kenya amidst a wave of controversy in 1989. Leakey had been appointed director of the Kenya Wildlife Service by President Daniel Arap Moi. In this capacity, he spoke out against the rampant practice of elephant poaching and created many enemies because of the confrontational methods of his antipoaching campaign. In 1993 Leakey lost both of his legs in a suspicious plane crash, although within a few months he was walking again on artificial limbs.

Accusations of corruption and fraud led to his resignation from his post with the Kenya Wildlife Service in 1994. In 1995 Leakey created a political party, called Safina, which stood in opposition to the Kenyan African National Union. Leakey was subjected to a public beating and humiliation in the streets by opponents. His tense relationship with political leaders and poachers in the country was a primary cause of this attack. Leakey was reappointed to a position with the Kenya Wildlife Service in 1999, but resigned again in 2001. His daughter Louise completed a PhD in paleontology at the University of London and has followed in the footsteps of her parents. She and her mother, Meave, continue to lead annual expeditions to the Turkana Basin. Leakey remains active, lecturing and writing books on the preservation of wildlife and the environment. He has authored seven books related to his life and work, including *Origins Reconsidered* (1992) and *The Origin of Humankind* (1994).

SEE ALSO *Anthropology; Anthropology, Biological; Archaeology; Primates*

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Kijua Sanders-McMurtry

LEARNED HELPLESSNESS

The term *learned helplessness* was coined by psychologists Martin Seligman and Steven Maier in 1967 to describe the behavior of dogs who, after experiencing inescapable electric shocks behaved as if they were helpless. As with many terms in psychology, *learned helplessness* is both descriptive and explanatory. Learned helplessness describes a constellation of maladaptive passive behaviors that animals (dogs, rats, cats, fish, mice, and humans) frequently exhibit following exposure to uncontrollable events. Learned helplessness is also a cognitive, expectancy-based explanation; after repeated, inescapable, aversive helplessness, animals *expect* to be helpless and do not attempt to change the situation—they have *learned* that their actions are ineffective.

Research on learned helplessness began in the 1960s at Richard L. Solomon's (1918–1995) psychology lab at the University of Pennsylvania. Graduate students Russell

Leaf and J. Bruce Overmier had discovered that after Pavlovian conditioning with unavoidable mild shocks, the lab dogs were useless for any subsequent experiments that required learning how to avoid or escape shock. The majority of the dogs would sit and passively endure the aversive but otherwise physically harmless shock. This phenomenon piqued the interest of graduate students Maier and Seligman, who set out to show that the dogs had learned more than just Pavlovian conditioning. Maier and Seligman suggested that the dogs had learned that when shocked, nothing they did mattered—they had learned that they had no control over their environment. This explanation was unusually "cognitive" given the behaviorist climate of that era.

Most early research on learned helplessness used a three-group, two-phase, experimental design to make sure that uncontrollability was the cause of the helplessness. In the first phase, one group experienced controllable aversive stimuli; for example, they could learn to avoid a shock by jumping across a barrier into a safe area. A second, "no control" group also experienced the aversive stimuli, but had no means by which to escape it. To make sure that subsequent differences in helplessness were not due to differences in the rate or length of exposure to the uncontrollable stimuli, experimenters pair, or yoke, each "no control" animal with a "has control" animal. The "no control" animal only experiences the aversive stimuli when the "has control" animal does. Researchers call this a "yoked control group." Animals in a third naive control group experience no aversive stimuli at all. In the second phase, the experimenters subject all three groups to aversive stimuli in a new controllable context; in other words, all have equal opportunity to escape.

In Seligman's studies, usually about two-thirds of the "no-control" dogs display helpless behavior in the new situation. Six percent of the naive control group dogs also displayed helplessness, which Seligman suggests may have been due to prior traumatic experiences. Typically helpless animals show signs of stress, such as lethargy, dejection, and reduced appetite, dominance aggression, sexual appetite, and serotonin levels.

These studies demonstrated that for most animals, uncontrollable aversive experiences have devastating effects on subsequent learning, motivation, and emotion. Seligman reports that therapy for dogs with learned helplessness required dragging them into the safe area a number of times before they began to respond on their own. On a positive note, Seligman and colleagues also found that they could "immunize" dogs against learned helplessness by giving them several trials of escapable shock before exposing them to inescapable shock.

Donald Hiroto and Seligman (1974) subsequently extended this research paradigm to humans, using insoluble discrimination problems rather than shocks. It is important to note that in this transition from animals to humans, stimuli aversiveness was not the only parameter to change; the transition also included a shift from simple taskless stimuli to tasks such as unsolvable discrimination problems or puzzles. This shift has complicated the explanation of learning deficits following failure. Additionally, human susceptibility to learned helplessness varies considerably across individuals and situations. These differences correlate with a variety of characteristics: low mastery behavior, anxiety, depression, need for structure, and ego value of academic performance, to name a few. Nonetheless, the core features of the learned helplessness phenomenon remain: (1) following an uncontrollable situation, people exhibit a variety of learning, motivational, and emotional deficits, including increased vulnerability to depression and anxiety; (2) previous exposure to controllable aversive events immunizes people against learned helplessness; and (3) forced exposure to controllable contingencies reverses learned helplessness.

A significant portion of research on learned helplessness in humans has focused on its relationship with reactive depression. One of the earliest, and perhaps most fertile, explanations of learned helplessness as a cause of depression was Lyn Abramson, Seligman, and John Teasdale's 1978 reformulation of learned helplessness theory using concepts from Bernard Weiner's attribution theory. This reformulation recognizes that much of life is uncontrollable, yet not everyone is depressed by it. According to the reformulation of learned helplessness theory, whether depression results from helplessness situations depends on the attributions people make about the causes of the negative event. Depression is more likely if persons attribute negative events to internal causes ("it's me"), stable causes ("it's going to last forever"), or global causes ("it's going to mess up everything I do"). This pessimistic style is evident in a student who attributes her poor math performance to "being a girl" (internal and stable) and assumes that failure in a specific math class will mean the end of her medical school dream (a global attribution). In contrast, a student who attributes failure on an exam to not studying is protected from depression because he or she has attributed it to an internal ("I didn't study"), unstable ("I can study next time"), and specific ("failing on this test isn't going to mess up my whole life") cause. Each of these causal attributions has a different effect on subsequent behavior. Global attributions generalize helplessness across tasks and time, internal attributions imply a sense of failed responsibility, and stable attributions imply that it is not possible to change the parameters of the current situation.

A large body of research has found long-term individual differences in explanatory style and vulnerability to helplessness. Persons who have experienced a significant

childhood loss (e.g., the death of a parent) or trauma (e.g., sexual or physical abuse) are more likely to develop pessimistic explanatory styles. Research has also found that parents and children have correlated explanatory styles, and messages from peers, teachers, media, and other community members have an impact on children's explanatory style. The repercussions of explanatory style is still being studied, for example, the effects of pessimistic explanatory style on negative health outcomes, occupational success, and the quality of social relationships.

The concept of learned helplessness has also been used extensively in educational and social psychology; for example, there is now an impressive body of research on individual differences in persistence following failure on evaluative and learning tasks. Some people's motivation is unaffected by experiencing failure; rather, they use failure as an additional source of information. Consequently, their performance quickly rebounds when given solvable problems. In contrast, "helpless" people appear to crumble under the experience of failure, or even just difficulty. They may regress to a lower skill level, exhibit negative affect, and conclude that they lack ability. Learned helplessness theory argues that helplessness following failure-feedback is the result of learning that responses and outcomes are noncontingent, which interferes with subsequent learning. Research in achievement motivation has found, however, that helplessness following failure can also be a strategic way to protect self-worth (e.g., "If I don't try, failing won't make me look bad"). Achievement motivation researchers call this an ego or performance goal.

A large and productive body of research has explored individual differences in resiliency and helplessness through the lens of achievement goals. Researchers have identified two major goal orientations: *mastery* or *task* goals and *performance* or *ego* goals. Mastery goals focus on intrinsic reasons for learning, which protects against learned helplessness. Performance goals focus on extrinsic reasons for learning—demonstrating one's ability and competing with others—which reduces vulnerability to learned helplessness. Recent research has extended these concepts by distinguishing between ego goals that focus on the display of skill (performance approach) and ego goals that focus on avoiding displays of incompetence (performance avoidance).

Finally, from an information-processing perspective, Grzegorz Sedek (1990) has described the phenomenon of learned helplessness as a state of cognitive exhaustion produced by nonproductive problem solving. This perspective reminds us that giving up is also an adaptive response because animal brains have finite energy resources. Helplessness behavior may be an adaptive avoidance of indiscriminant persistence. From this perspective, helplessness is not so much "learned" as it is "triggered."

There is little disagreement among researchers that helplessness as described by Seligman is a real and fascinating phenomenon; however, there is less consensus about its cause. Presently, separate bodies of research (learning theory, cognitive theory, cognitive behavioral therapy, achievement motivation, and information processing) support the existence of the helplessness phenomenon, but each gives a somewhat different explanation of its cause (i.e., helplessness as learned, helplessness as a cognitive interpretation of events, helplessness as a form of ego protection, and helplessness as an adaptive conservation of resources). Future research should intentionally compare these causes and the perhaps differential conditions under which they occur.

SEE ALSO *Attribution; Classical Conditioning; Depression, Psychological; Locus of Control; Motivation; Operant Conditioning; Pavlov, Ivan; Positive Psychology; Psychotherapy; Resiliency; Self-Efficacy; Seligman, Martin; Vulnerability*

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LEARNED OPTIMISM

SEE *Learned Helplessness; Seligman, Martin.*

LEARNING

SEE *Developmental Psychology; Education, Remedial; Education, Unequal; Education, USA; Intelligence; Learned Helplessness; Reinforcement Theories.*

LEARY, TIMOTHY

1920–1996

Timothy Francis Leary was a psychologist, scientist, and philosopher who made substantive contributions to interpersonal theory and methodology and also gained notoriety for his endorsement of and research on hallucinogens. Born in Springfield, Massachusetts, on October 22, 1920, Leary was an only child raised by his mother's family in a devout Irish Catholic household. His father, a successful dentist and prominent member of the community, left the family when Leary was thirteen years old. Initially expelled from the University of Alabama for spending a night in the women's dormitory, he appealed the dismissal in 1945 and was awarded his bachelor's degree in psychology while serving in the army during World War II (1939–1945).

Leary met his first wife, Marianne, in 1944 while serving as a psychometrician at Deshon General Hospital in Butler, Pennsylvania. A year later they were married in the same hospital before departing for the state of Washington, where Leary began work on his master's degree. In 1946 Leary received his master of science degree under the supervision of renowned psychologist Lee Cronbach (1916–2001) at Washington State University. The title of his master's thesis was "The Clinical Use of the Wechsler/Mental Ability Scale: Form B," which he later retitled "The Dimensions of Intelligence." Following the completion of his master's degree, Leary entered the doctoral program in clinical psychology at the University of California, Berkeley. In 1950 he received his PhD in clinical psychology with the dissertation "The Social Dimensions of Personality: Group Process and Structure."

Leary's seminal monograph, *The Interpersonal Diagnosis of Personality: A Functional Theory and Methodology for Personality Evaluation*, was a direct product of his doctoral thesis. First published in 1957, Leary considered his monograph to be a methodological extension of the interpersonal theory of Harry Stack Sullivan (1892–1949). According to Leary, the emotional, interpersonal, and social life of individuals could be best understood as attempts to avoid anxiety. Leary's monograph focuses on five levels of personality that include: (1) public communication, (2) conscious communication, (3) private communication or preconscious symbolization, (4) unexpressed or unconscious communication, and (5) the value or ego-ideal.

The majority of Leary's monograph is devoted to the development of a two-dimensional circumplex model of personality, his most lasting contribution to clinical psychology. Developed by Leary in collaboration with several of his mentors at Berkeley, the circumplex model presents a methodology for measuring interpersonal behavior using a collection of simple and specific behavioral descriptors. Each behavior is situated along a continuum defined by two dimensions: dominance-submission and hostility-affiliation. Sixteen generic interpersonal themes are identified along the circumference of a circle where the two dimensions comprise the circle's axes. The circumplex model can be utilized for a variety of purposes, including the assessment of the structure of personality, temporal variation in personality, and variability in personality due to situational context. Extensions and revisions of the Leary circumplex continue to be developed with the primary goal of better measuring and understanding the multifaceted and complex nature of interpersonal relationships.

After a brief tenure as assistant professor at Berkeley (1950–1955), Leary worked as director of the prestigious Kaiser Foundation in Oakland, California (1955–1958), where he applied his circumplex model to understand the process of group psychotherapy. During the time of his greatest academic achievements, Leary experienced a personal tragedy when his wife committed suicide in 1955, leaving him to raise their eight-year-old daughter and six-year-old son.

In 1958 Leary left Berkeley with his two children and moved to Harvard, where he accepted a position as lecturer at Harvard's Center for Personality Research and began the most controversial period of his academic career. In collaboration with his Harvard colleagues, most notably Richard Alpert and Ralph Metzner, Leary started an experimental research program examining the effects of psychedelic/hallucinogenic drugs on behavioral change. In a series of studies with Metzner, Leary explored the rehabilitative effects of psilocybin on young criminal offenders at the Massachusetts Correctional Facility in Concord. Leary believed that psilocybin, under guided professional supervision, could act as a conduit for internal reflection and behavioral change. In a second series of studies, Leary's doctoral student, Walter Pahnke (1931–1971), examined the effects of psilocybin on the mystical and religious experiences of volunteer seminary students, hypothesizing that psychedelic drugs would facilitate such experiences.

Leary's research, and his expulsion from Harvard in 1963, would catapult him into the public spotlight, where he became a counterculture icon. Popularizing the catch phrase "Turn on, Tune in, Drop Out" in the 1960s, Leary was an open advocate of the use of psychedelic drugs as a method of exploring and expanding consciousness. He

published several books on the subject, including *The Psychedelic Experience* (1964), coauthored with his former Harvard colleagues Metzner and Alpert. A controversial and outspoken figure throughout his life, Leary died of prostate cancer in 1996.

SEE ALSO *Castaneda, Carlos; Consciousness; Drugs of Abuse; Hallucinogens; Personality*

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LEAST SQUARES, ORDINARY

Ordinary least squares (OLS) is a method for fitting lines or curves to observed data in situations where one variable (the response variable) is believed to be explained or caused by one or more other explanatory variables. OLS is most commonly used to estimate the parameters of linear regression models of the form

$$Y_i = \beta_1 + \beta_2 g_2(Z_{i2}) + \cdots + \beta_K g_K(Z_{iK}) + \varepsilon_i. \quad (1)$$

The subscripts i index observations; ε_i is a random variable with zero expected value (i.e., $E(\varepsilon_i) = 0$, for all observations $i = 1, \ldots, n$); and the functions $g_1(), \ldots, g_k()$ are known. The right-hand side explanatory variables $Z_{i2}, \ldots, Z_{iK}$ are assumed to be exogenous and to cause the dependent, endogenous left-hand side response variable Y_i. The $\beta_1, \ldots, \beta_K$ are unknown parameters, and hence must be estimated. Setting $X_{ij} = g_j(Z_{ij})$ for all $j = 1, \ldots, K$ and $i = 1, \ldots, n$, the model in (1) can be written as

$$Y_i = \beta_1 + \beta_2 X_{i2} + \cdots + \beta_K X_{iK} + \varepsilon_i. \quad (2)$$

The random error term ε_i represents statistical noise due to measurement error in the dependent variable, unexplained variation due to random variation, or perhaps the omission of some explanatory variables from the model.

In the context of OLS estimation, an important feature of the models in (1) and (2) is that they are linear in parameters. Since the functions $g_j()$ are known, it does not matter whether these functions are linear or nonlinear. Given n observations on the variables Y_i and X_{ij}, the OLS method involves fitting a line (in the case where $K = 2$), a plane (for $K = 3$), or a hyperplane (when $K > 3$) to the data that describes the average, expected value of the response variable for given values of the explanatory variables. With OLS, this is done using a particular criterion as shown below, although other methods use different criteria.

An estimator is a random variable whose realizations are regarded as estimates of some parameter of interest. Replacing the unknown parameters $\beta_1, \ldots, \beta_K$ and errors ε_i in (2) with estimators $\hat{\beta}_1, \ldots, \hat{\beta}_K$ and $\hat{\varepsilon}$ yields

$$Y_i = \hat{\beta}_1 + \hat{\beta}_2 X_{i2} + \ldots + \hat{\beta}_K X_{ik} + \hat{\varepsilon}_i. \quad (3)$$

The relation in (2) is called the population regression function, whereas the relation in (3) is called the sample regression function. The population regression function describes the unobserved, true relationship between the explanatory variables and the response variable that is to be estimated. The sample regression function is an estimator of the population regression function.

Rearranging terms in (3), the residual $\hat{\varepsilon}_i$ can be expressed as

$$\hat{\varepsilon}_i = Y_i - \hat{\beta}_1 - \hat{\beta}_2 X_{i2} - \cdots - \hat{\beta}_K X_{ik}. \quad (4)$$

The OLS estimators $\hat{\beta}_1, \ldots, \hat{\beta}_K$ of the parameters $\beta_1, \ldots, \beta_K$ in (2) are obtained by minimizing the error sum-of-squares

$$\text{ESS} = \sum_{i=1}^{n} \hat{\varepsilon}_i^2 = [Y_i - \hat{\beta}_1 - \hat{\beta}_2 X_{i2} - \cdots - \hat{\beta}_K X_{ik}]^2 \quad (5)$$

with respect to $\hat{\beta}_1, \ldots, \hat{\beta}_K$. Hence the OLS estimator of the population regression function (2) minimizes the sum of squared residuals, which are the squared distances (in the direction of the Y-axis) between each observed value Y_i and the sample regression function given by (3).

By minimizing the sum of squared residuals, disproportionate weight may be given to observations that are outliers—that is, those that are atypical and that lie apart from the majority of observations. An alternative approach is to minimize the sum

$$\sum_{i=1}^{n} |\hat{\varepsilon}_i|$$

of absolute deviations; the resulting estimator is called the least absolute deviations (LAD) estimator. Although this

estimator has some attractive properties, it requires linear programming methods for computation, and the estimator is biased in small samples.

To illustrate, first consider the simple case where $K = 1$. Then equation (2) becomes

$$Y_i = \hat{\beta}_1 + \varepsilon_i \tag{6}$$

In this simple model, random variables Y_i are random deviations (to the left or to the right) away from the constant β_1. The error-sum-of-squares in (5) becomes

$$\text{ESS} = \sum_{i=1}^{n} \hat{\varepsilon}_i^2 = [Y_i - \hat{\beta}_1]^2. \tag{7}$$

This can be minimized by differentiating with respect to $\hat{\beta}_1$ and setting the derivative equal to 0; that is,

$$\partial \text{ESS}/\partial \beta_1 = -2\sum_{i=1}^{n} (Y_i - \hat{\beta}_1) = 0$$

and then solving for $\hat{\beta}_1$ to obtain

$$\hat{\beta}_1 = n^{-1}\sum_{i=1}^{n} Y_i.$$

In this simple model, therefore, the OLS estimator of β_1 is merely the sample mean of the Y_i. Given a set of n observations on Y_i, these values can be used to compute an OLS estimate of β_1 by simply adding them and then dividing the sum by n.

In the slightly more complicated case where $K = 2$, the population regression function (2) becomes

$$Y_i = \beta_1 + \beta_2 X_{i2} + \varepsilon_i. \tag{8}$$

Minimizing the error sum of squares in this model yields OLS estimators

$$\hat{\beta}_2 = \sum_{i=1}^{n} (X_{i2} - \bar{X}_2)(\bar{Y}_i - Y) / \sum_{i=1}^{n} (X_{i2} - \bar{X}_2)^2 \tag{9}$$

and

$$\hat{\beta}_1 = \bar{Y} - \hat{\beta}_2 \bar{X}_2$$

where $\bar{X}_2$ and $\bar{Y}$ are the sample means of X_{i2} and Y_i, respectively.

In the more general case where $K > 2$, it is useful to think of the model in (2) as a system of equations, such as:

$$\begin{aligned} Y_1 &= \beta_1 + \beta_2 X_{12} + \ldots + \beta_K X_{1K} + \varepsilon_1 \\ Y_2 &= \beta_1 + \beta_2 X_{22} + \ldots + \beta_K X_{2K} + \varepsilon_2 \\ &\vdots \\ Y_n &= \beta_1 + \beta_2 X_{n2} + \ldots + \beta_K X_{nK} + \varepsilon_n. \end{aligned}$$

This can be written in matrix form as

$$Y = X\beta + \varepsilon \tag{10}$$

where Y is an $(n \times 1)$ matrix containing elements $Y_1, \ldots, Y_n$; X is an $(n\,Y\,K)$ matrix with element X_{ij} in the i-th row, j-th column (elements in the first column of X are equal to 1); β is a $(K \times 1)$ matrix containing the unknown parameters $\beta_1, \ldots, \beta_K$; and ε is an $(n \times 1)$ matrix containing the random variables $\varepsilon_1, \ldots, \varepsilon_n$. Minimizing the error-sum-of-squares yields the OLS estimator

$$\hat{\beta} = (X'X)^{-1}X'Y. \tag{11}$$

This is a $(K \times 1)$ matrix containing elements $\hat{\beta}_1, \ldots, \hat{\beta}_K$. In modern software, $\hat{\beta}$ is computed by inverting the $(K \times K)$ matrix $X'X$ using the Q-R decomposition. The OLS estimator can always be computed, unless $X'X$ is singular, which happens when there is an exact linear relationship among any of the columns of the matrix X.

The Gauss-Markov theorem establishes that provided

i. the relationship between Y and X is linear as described by (10);

ii. the elements of X are fixed, nonstochastic, and there exists no exact linear relationship among the columns of X; and

iii. $E(\varepsilon) = 0$ and $E(\varepsilon\varepsilon') = \sigma^2 I$,

the OLS estimator $\hat{\beta}$ is the best (in the sense of minimum variance) linear, unbiased estimator of β. Modified versions of the OLS estimator (e.g., weighted least squares, feasible generalized least squares) can be used when data do not conform to the assumptions given above.

The variance-covariance matrix of the OLS estimator given in (11) is $\sigma^2(X'X)^{-1}$, a $(K \times K)$ matrix whose diagonal elements give the variances of the K elements of the vector $\hat{\beta}$, and whose off-diagonal elements give the corresponding covariances among the elements of $\hat{\beta}$. This matrix can be estimated by replacing the unknown variance of ε, namely σ^2, with the estimator $\hat{\sigma}^2 = \hat{\varepsilon}'\hat{\varepsilon}/(n - K)$. The estimated variances and covariances can then be used for hypothesis testing.

DISCOVERY OF THE METHOD

Robin L. Plackett (1972) and Stephen M. Stigler (1981) describe the debate that exists over who discovered the OLS method. The first publication to describe the method was Adriene Marie Legendre's *Nouvelles méthodes pour la détermination des orbites des comètes* in 1806 (the term *least squares* comes from the French words *moindres quarrés* in the title of an appendix to Legendre's book), followed by publications by Robert Adrain (1808) and Carl Friedrich Gauss ([1809] 2004). However, Gauss made

several claims that he developed the method as early as 1794 or 1795; Stigler discusses evidence that supports these claims in his article "Gauss and the Invention of Least Squares" (1981).

Both Legendre and Gauss considered bivariate models such as the one given in (8), and they used OLS to predict the position of comets in their orbits about the sun using data from astronomical observations. Legendre's approach was purely mathematical in the sense that he viewed the problem as one of solving for two unknowns in an overdetermined system of n equations. Gauss ([1809] 2004) was the first to give a probabilistic interpretation to the least squares method. Gauss reasoned that for a sequence $Y_1, \ldots, Y_n$ of n independent random variables whose density functions satisfy certain conditions, if the sample mean

$$\bar{Y}_n = n^{-1} \sum_{i=1}^{n} Y_i$$

is the most probable combination for all values of the random variables and each $n \geq 1$, then for some $\sigma^2 > 0$, the density function of the random variables is given by the normal, or Gaussian, density function

$$f(Y_i) = \frac{1}{\sigma\sqrt{2\pi}} \exp[\tfrac{1}{2}\sigma^{-2} Y_i^2].$$

In the nineteenth century, this was known as the law of errors. This argument led Gauss to consider the regression equation as containing independent, normally distributed error terms.

The least squares method quickly gained widespread acceptance. At the beginning of the twentieth century, Karl Pearson remarked in his article in *Biometrika* (1902, p. 266) that "it is usually taken for granted that the right method for determining the constants is the method of least squares." Beginning in the 1870s, the method was used in biological, genetic applications by Pearson, Francis Galton, George Udny Yule, and others. In his article "Regression towards Mediocrity in Hereditary Stature" (1886), Galton used the term *regression* to describe the tendency of the progeny of exceptional parents to be, on average, less exceptional than their parents, but today the term *regression analysis* has a rather different meaning.

Pearson provided substantial empirical support for Galton's notion of biological regression by looking at hereditary data on the color of horses and dogs and their offspring and the heights of fathers and their sons. Pearson worked in terms of correlation coefficients, implicitly assuming that the response and explanatory variables were jointly normally distributed. In a series of papers (1896, 1900, 1902, 1903a, 1903b), Pearson formalized and extended notions of correlation and regression from the bivariate model to multivariate models. Pearson began by considering, for the bivariate model, bivariate distributions for the explanatory and response variables. In the case of the bivariate normal distribution, the conditional expectation of Y can be derived in terms of a linear expression involving X, suggesting the model in (8). Similarly, by assuming that the response variable and several explanatory variables have a multivariate normal joint distribution, one can derive the expectation of the response variable, conditional on the explanatory variables, as a linear equation in the explanatory variables, suggesting the multivariate regression model in (2).

Pearson's approach, involving joint distributions for the response and explanatory variables, led him to argue in later papers that researchers should in some situations consider nonsymmetric joint distributions for response and explanatory variables, which could lead to nonlinear expressions for the conditional expectation of the response variable. These arguments had little influence; Pearson could not offer tangible examples because the joint normal distribution was the only joint distribution to have been characterized at that time. Today, however, there are several examples of bivariate joint distributions that lead to nonlinear regression curves, including the bivariate exponential and bivariate logistic distributions. Aris Spanos describes such examples in his book *Probability Theory and Statistical Inference: Econometric Modeling with Observational Data* (1999, chapter 7). Ronald A. Fisher (1922, 1925) later formulated the regression problem closer to Gauss's characterization by assuming that only the conditional distribution of the response variable is normal, without requiring that the joint distribution be normal.

CURRENT USES

Today, OLS and its variants are probably the most widely used statistical techniques. OLS is frequently used in the behavioral and social sciences as well as in biological and physical sciences. Even in situations where the relationship between dependent and explanatory variables is nonlinear, it is often possible to transform variables to arrive at a linear relationship. In other situations, assuming linearity may provide a reasonable approximation to nonlinear relationships over certain ranges of the data. The numerical difficulties faced by Gauss and Pearson in their day are now viewed as trivial given the increasing speed of modern computers. Computational problems are encountered, however, in problems with very large numbers of dimensions. Most of the problems that are encountered involve obtaining accurate solutions for the inverse matrix $(X'X)^{-1}$ using computers with finite precision; care must be taken to ensure that solutions are not contaminated by round-off error. Åke Björck, in *Numerical Methods for*

Least Squares Problems (1996), gives an extensive treatment of numerical issues involved with OLS.

SEE ALSO *Classical Statistical Analysis; Cliometrics; Econometric Decomposition; Galton, Francis; Ordinary Least Squares Regression; Pearson, Karl; Regression Analysis; Regression Towards the Mean; Statistics*

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LEAST SQUARES, THREE-STAGE

The term *three-stage least squares* (3SLS) refers to a method of estimation that combines system equation, sometimes known as *seemingly unrelated regression* (SUR), with two-stage least squares estimation. It is a form of instrumental variables estimation that permits correlations of the unobserved disturbances across several equations, as well as restrictions among coefficients of different equations, and improves upon the efficiency of equation-by-equation estimation by taking into account such correlations across equations. Unlike the two-stage least squares (2SLS) approach for a system of equations, which would estimate the coefficients of each structural equation separately, the three-stage least squares estimates all coefficients simultaneously. It is assumed that each equation of the system is at least just-identified. Equations that are underidentified are disregarded in the 3SLS estimation.

Three-stage least squares originated in a paper by Arnold Zellner and Henri Theil (1962). In the classical specification, although the structural disturbances may be correlated across equations (*contemporaneous correlation*), it is assumed that within each structural equation the disturbances are both homoskedastic and serially uncorrelated. The classical specification thus implies that the disturbance covariance matrix within each equation is diagonal, whereas the entire system's covariance matrix is nondiagonal.

The Zellner-Theil proposal for efficient estimation of this system is in three stages, wherein the first stage involves obtaining estimates of the residuals of the structural equations by two-stage least squares of all identified equations; the second stage involves computation of the optimal instrument, or weighting matrix, using the estimated residuals to construct the disturbance variance-covariance matrix; and the third stage is joint estimation of the system of equations using the optimal instrument. Although 3SLS is generally asymptotically more efficient than 2SLS, if even a single equation of the system is misspecified, 3SLS estimates of coefficients of all equations are generally inconsistent.

The Zellner-Theil 3SLS estimator for the coefficient of each equation is shown to be asymptotically at least as efficient as the corresponding 2SLS estimator of that equation. However, Zellner and Theil also discuss a number of interesting conditions under which 3SLS and 2SLS estimators are equivalent. First, if the structural disturbances have no mutual correlations across equations (the variance-covariance matrix of the system disturbances is diagonal), then 3SLS estimates are identical to the 2SLS estimates equation by equation. Second, if all equations in the system are just-identified, then 3SLS is also equivalent to 2SLS equation by equation. Third, if a subset of m

equations is overidentified while the remaining equations are just-identified, then 3SLS estimation of the m overidentified equations is equivalent to 2SLS of these m equations.

The 3SLS estimator has been extended to estimation of a nonlinear system of simultaneous equations by Takeshi Amemiya (1977) and Dale Jorgenson and Jean-Jacques Laffont (1975). An excellent discussion of 3SLS estimation, including a formal derivation of its analytical and asymptotic properties, and its comparison with full-information maximum likelihood (FIML), is given in Jerry Hausman (1983).

SEE ALSO *Instrumental Variables Regression; Least Squares, Two-Stage; Regression; Seemingly Unrelated Regressions*

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Mitali Das

LEAST SQUARES, TWO-STAGE

Two-stage least squares (2SLS or TSLS) is an alternative to the usual linear regression technique (ordinary least squares, or OLS), used when the right-hand side variables in the regression are correlated with the error term. 2SLS uses additional information to compute asymptotically unbiased coefficients (i.e., approximately unbiased in large samples), in contrast to the OLS coefficients, which are biased even in large samples.

In the regression model with k explanatory variables and n observations

$$y_i = b_1 x_{i1} + b_2 x_{i2} + \cdots + b_k x_{ik} + e_i$$

OLS will produce biased coefficients if any of the x variables is correlated with the error e. Such correlation may occur if any of the x variables is measured with error, if relevant variables are left out of the specification, or if any x variables are endogenous (determined in part by y.)

Suppose the investigator has a list of q ($q \geq k$) instrumental variables, $z_1, \ldots, z_q$, where to qualify as an instrument each z must be correlated with one or more x variables and must be uncorrelated with the error term. In the *first-stage* regressions, each x is regressed on the instruments and the fitted value $\hat{x}$ is computed. By construction, $\hat{x}$ will be a proxy for x that is uncorrelated with the error term e. In this way, $\hat{x}$ is purged of the correlation that made x unsuitable for use in the regression. In the *second stage* regression, y is regressed on the set of fitted $\hat{x}$'s. The estimated coefficients from this second stage are the two-stage least squares estimates of b. Appropriate adjustments are made to compute standard errors and other statistics associated with the regression, as the statistics reported directly in the second-stage regression are not valid.

In the simple case of one explanatory variable and one instrument, the formulas for the OLS and 2SLS coefficients are given by, respectively

$$\hat{b}_{OLS} = \frac{\sum_{i=1}^{n} y_i x_i}{\sum_{i=1}^{n} x_i^2} \qquad \hat{b}_{2SLS} = \frac{\sum_{i=1}^{n} y_i z_i}{\sum_{i=1}^{n} x_i z_i}$$

Note that modern software computes 2SLS coefficients directly, rather than actually computing two stages of regression.

The difficult task in using 2SLS is to specify a list of instruments known a priori to be uncorrelated with the error term. In a linear simultaneous equation model, all exogenous variables (those variables not determined in the model) are candidates to serve as instruments. In particular, a variable may serve both as an explanatory variable and as an instrument (x and z) if it is uncorrelated with the error. *Identification* requires that the number of instruments, q, be equal to or greater than the number of right-hand side variables, k.

2SLS is an *instrumental variable* (IV) estimator and the terms 2SLS and IV are often used interchangeably. Estimators closely related to 2SLS include the generalized method of moments (GMM) for nonlinear estimation, three-stage least squares (3SLS) for estimation of systems of equations, and limited-information maximum likelihood (LIML).

2SLS is a well-established technique, particularly in economics. Difficulties due to *weak instruments*, where the correlation between x and z is very low, constitute an ongoing area of investigation.

SEE ALSO *Error-correction Mechanisms; Least Squares, Ordinary; Least Squares, Three-Stage; Properties of Estimators (Asymptotic and Exact); Regression*

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Richard Startz

LEBANESE CIVIL WAR

The Lebanese civil war erupted in April 1975 and ended in October 1990. Since its independence in 1943, Lebanon has been governed by a confessional political system in which parliamentary seats and governmental and civil service positions are distributed among religious sects in accordance with their population ratio. The 1926 constitution, which officially recognizes the distribution of cabinet positions and governmental jobs on a sectarian basis, was supplemented at the time of independence in 1943 by an informal "gentlemen's agreement," the National Pact, at the time of independence. According to this agreement, the president has to be a Maronite Christian, the prime minister a Sunni Muslim, the speaker of the Parliament a Shia Muslim, and the deputy speaker a Greek Orthodox. The Muslims shunned pan-Arabism and recognized Lebanon's independence; Christians agreed to the Arab character of the country and eschewed western protection. This consociational democracy was based on cooperation and moderation among mainly Maronite and Sunni elites, perpetuated a weak state, and institutionalized the sectarian differences. Despite its defects, though, the Lebanese political system established order and stability from 1943 until 1975, weathering the crises of 1952 and 1958.

CAUSES OF THE WAR

Several developments in the 1960s undermined the precarious Lebanese republic. First, socioeconomic developments exacerbated economic inequalities. The Lebanese economy was characterized by free trade, low industrialization, low taxation, and minimal state intervention. Hence, the state was in position to effectively address the needs of the poorer segments of the population. Also, economic differences overlapped with sectarian differences: Whereas Christians in general disproportionately benefited from the economic growth, the Shia remained at the bottom of the socioeconomic ladder. Second, demographic trends changed the population ratio between sects. The Shia had the highest fertility rate, followed by the Sunnis. The distribution of political power, which was based on the 1932 census, ceased to reflect demographic realities, and these developments augmented the Muslim demand for institutional reform. The rise of radical and populist forces undermined the power of the traditional Sunni and Shia elites. Third, and most importantly, regional events put immense burdens on the Lebanese political system. The rise of Arab nationalism in the 1950s exacerbated the sectarian tensions in Lebanon. Although Sunni Muslims were supportive of the anti-western policies of Egyptian president Gamal Abdel Nasser (1918–1970), the Maronites adamantly refused to allow Lebanon to join the pro-Nasser camp. Lebanon was on the brink of civil war in 1958 when the Maronite president asked for help from the United States. The landing of the U.S. marines in Beirut quelled the violence, and a compromise candidate, Fuad Chehab, was elected president. After the 1967 Six Days War and their expulsion from Jordan in 1970, Palestinian guerillas chose Lebanon as the main base of their operations against Israel. The November 1969 Cairo agreement between Lebanon and the Palestinian Liberation Organization (PLO) gave the PLO extraterritorial rights. The entrenchment of the PLO in Lebanon provoked Christian resentment because it further changed the demographic ratio to the disadvantage of Christians, and it brought fierce reprisals from the Israelis, who held the Lebanese government responsible for the actions of the Palestinians. The Lebanese army was unable to control the PLO or to defend the country against Israeli incursions. The insecurity in southern Lebanon led to the dislocation of Shia villagers to urban peripheries. Furthermore, after Hafez al-Assad (1930–2000) assumed the presidency of Syria in 1970, Syria pursued a more assertive and ambitious foreign policy in Lebanon. The ruling Alawite minority perceived the Shia of Lebanon as a counterweight against the Sunni majority of Syria and the Palestinians.

By 1975 two main coalitions were confronting each other. On the one hand, Maronite Christians came together under the rubric of the Lebanese Forces (LF), which was dominated by the Phalange Party led by Bashir Gemayel (1947–1982). The LF was in favor of the continuation of the existing confessional system of government in Lebanon and opposed any institutional reform benefiting the Muslims. Moreover, it espoused the end of Palestinian extraterritorial rights. During the conflict, the LF toyed with the idea of creating a small Christian state in Mount Lebanon, an idea that was rejected by several more moderate Maronite leaders. On the other hand was

an amalgam of groups that demanded the end of the confessional system and sympathized with the Palestinian goals. The Lebanese National Movement (LNM) included the Progressive Socialist Party (PSP) led by the Druze leader Kamal Jumblatt (1917–1977), the Amal militia headed by the Shia leader Musa al-Sadr (1928–1978?), the Syrian Social Nationalist Party (SSNP), the Communists, the Arab nationalist Baʿth Party, and the Sunni al-Murabitun militia, and it had the support of the PLO.

FIGHTING FROM 1975 TO 1985

Fighting broke out between Palestinian guerrillas and the Phalange in April 1975, and several months later Lebanon was engulfed in full-scale civil war. The first phase of the civil war continued for eighteen months. By December 1975 the LNM was on the verge of defeating the LF, but Syria intervened to prevent that outcome because the ruling Alawite regime in Syria feared that the dissolution of Lebanon or the leftist and PLO domination of Lebanon would jeopardize its rule over the Sunni majority in Syria. Both the United States and Israel gave tacit agreement to Syria's intervention, which resulted in de facto partition of Lebanon. With the Syrian army in control of most of the country, the LF, the PLO, the Druze, and the pro-Israeli Free Lebanon Army established themselves in different parts of the country. The United Nations Interim Force in Lebanon (UNIFIL) became a buffer between the pro-Israeli militia and the PLO.

From 1976 to 1982 the conflict between the PLO and Israel continued unabated. In March 1977 Jumblatt was assassinated, and the LNM was beset by factionalism. In August 1978 al-Sadr disappeared while on a trip to Libya. Meanwhile, the relations between the LF and Syria deteriorated, and the Syrian regime suppressed the Muslim Brotherhood after much bloodshed. In 1981 Syrian-Israel relations deteriorated further, and Israel initiated a large-scale invasion of Lebanon in 1982. The Israeli goals were the destruction of PLO autonomy, the weakening of the Syrian influence in Lebanon, and most ambitiously, the reconstruction of the Lebanese state under the control of Gemayel, who allied himself with the Israelis. The invasion achieved its first goal, as the PLO was obliged to leave West Beirut in 1982 and later, Tripoli in 1983 after the Syrian attacks. However, the Israeli army's defeat of the Syrian forces did not end Syrian influence, which was rapidly restored with Soviet support. Gemayel was assassinated in September 1982, shortly after he was elected president. A security pact signed between Israel and Lebanon in May 1983 was later abrogated. Moreover, the LF massacres of Palestinian refugees in the Sabra and Shatila camps surrounded by the Israeli army in September 1982 left the Israeli goal of establishing order in Lebanon in tatters. A multinational force composed of U.S., French, and Italian forces landed in West Beirut in October 1982, but its mission became a disaster when the U.S. and French barracks were devastated by suicide bombing attacks in October 1983. The Israelis withdrew from most of Lebanon in 1985, but remained in control of the southern border zone by sponsoring a Christian-dominated militia, the South Lebanon Army. The Israeli occupation eventually ended in May 2000, but it had contributed to the Islamic mobilization of the Shia and the rise of Hezbollah as the most powerful local organization in Lebanon. Support from the Islamic republic of Iran and the cooperation of Syria contributed to the emergence of Hezbollah as an effective guerrilla organization with extensive social services.

END OF THE CIVIL WAR

The later 1980s saw intra-sectarian conflict among the Muslims and Christians and the complete fragmentation of the state authority in Lebanon. The Shia militia Amal took over West Beirut in February 1984, and tensions between Amal and the Palestinians erupted into open conflict—the "war of the camps"—in 1985, prompting the Syrian occupation of West Beirut in 1987. Armed rivalry between Hezbollah and Amal from 1988 to 1990 resulted in the establishment of the former as a major force in Beirut. Among Christians, General Michel Aoun (b. 1935), the commander of the Lebanese army, emerged as a strong contender for leadership; President Amine Gemayel appointed him prime minister in 1988 in defiance of the National Pact. Aoun vehemently opposed Syrian interference and portrayed himself as a secular nationalist leader. He clashed with the LF for control of the Christian enclave and declared a "war of liberation" against Syria in March 1989. He was ultimately unsuccessful, and was forced into exile in 1991. With his defeat, the Lebanese Civil War came to an end.

A principal reason for the end of active hostilities was the exhaustion brought on by the fifteen years of warfare. None of the groups was able to establish dominance over others, and sectarian divisions continued as before. Syria emerged as the hegemonic power in Lebanon, with U.S. endorsement, and achieved veto power over all important political decisions. The Ta'if Agreement (1989), which was signed by the surviving Lebanese parliamentarians and crystallized the ethos of "no victor and no vanquished," amended the constitution but did not dismantle confessionalism. By its terms, the power of the president was reduced in favor of the prime minister and the speaker of the Parliament, and the parliamentary seats were equally distributed between Christians and Muslims. All the militias were disarmed in March 1991 with the exception of Hezbollah, which continued its "resistance"

against Israel in the border zone. Syria did not completely withdraw from Lebanon until 2005.

SEE ALSO *Arab-Israeli War of 1967; Civil Wars; Communalism; Conflict; Democracy, Consociational; Ethnic Conflict; Ethnic Fractionalization; Muslims; Palestine Liberation Organization (PLO); Palestinians; Phalangists; Suez Crisis*

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Gunes Murat Tezcur

LE BON, GUSTAVE

SEE *Race and Psychology.*

LE DUC THO

1911–1990

Phan Dinh Khai was born the son of a midlevel Vietnamese civil servant in Nam Ha Province of French Indochina on October 14, 1911. He changed his name to Le Duc Tho when he became a committed revolutionary during his teenage years. In 1929 Tho joined with Ho Chi Minh (1890–1969) and other Vietnamese radicals in founding the Indochinese (later Vietnamese) Communist Party. For agitating against French rule, Tho and his comrades spent much of the 1930s in French colonial prisons. During World War II (1939–1945), Tho helped to organize the Viet Minh, the Communist-led resistance movement against the Japanese occupiers of Indochina. By the end of the war, Tho was a member of the Central Committee of the Communist Party and a leader of the Viet Minh. When France tried to retake Indochina in 1945, Tho led southern Viet Minh resistance during the Indochina War (1946–1954). With the defeat of the French, North Vietnam gained independence. Tho became a member of the Politburo in 1955 and secretary of the Central Committee in 1960.

During the Vietnam War (1956–1975), Tho returned south to organize Viet Cong guerrilla resistance against U.S. forces and the South Vietnamese government. In 1968, when peace talks began in Paris between the United States and North Vietnam, Tho participated as a lead negotiator for the Communist side. For years, Tho stonewalled the talks with nonnegotiable demands for U.S. withdrawal and the dismantling of South Vietnam's government. In 1970 Tho agreed to meet in private with U.S. national security adviser Henry Kissinger. Over the next two years, these secret back-channel discussions gradually resolved the many difficult issues involved in disengaging the United States from the Vietnam War. Finally, in October of 1972, Kissinger revealed to the world that "peace is at hand," just in time to help President Richard Nixon (1913–1994) obtain reelection by a landslide. After one last round of U.S. bombing killed thousands of Vietnamese civilians, Tho and Kissinger signed the Paris Peace Accords on January 25, 1973.

For their role in ending the American phase of the Vietnam War, Tho and Kissinger were jointly awarded the 1973 Nobel Peace Prize. Tho was the first Asian ever to win this honor—but he declined the award, saying that peace had not yet come to his country. Instead, Tho returned to South Vietnam to supervise the North Vietnamese offensive that delivered a Communist victory in 1975. A decade later, Tho told U.S. television viewers: "We hope American wives and mothers will never again allow their husbands and sons to go to die in another Vietnam War anywhere in the world" (quoted in Dowd 1985, p. A4). Tho remained active in party leadership after the war and oversaw the Vietnamese invasion of Cambodia in 1978, but he opposed economic reforms introduced by his government in the 1980s. Out of step with changes in Vietnamese Communism, Tho resigned his official posts in 1986 and retired. He died of cancer on October 13, 1990.

SEE ALSO *Anticolonial Movements; Communism; Guerrilla Warfare; Kissinger, Henry; Liberation Movements; Nixon, Richard M.; Nobel Peace Prize; Vietnam War*

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Glen Gendzel

LEE, ROBERT E.
1807–1870

Robert Edward Lee was the most famous general of the Confederate forces during the American Civil War (1861–1865). Lee served as commander of the Army of Northern Virginia and eventually general-in-chief of the entire Confederate Army until the war's completion in 1865.

Lee was born January 19, 1807, in Westmoreland County, Virginia. His father, whom he barely knew, was the famous Revolutionary War hero, Henry "Light Horse Harry" Lee (1756–1818). In 1829 Robert E. Lee graduated second in his class without a single demerit at the United States Military Academy in West Point, New York. In 1831 Lee married Mary Custis (1808–1873), a great-granddaughter of Martha Washington (1731–1802). Together they had seven children.

During the Mexican War (1846–1848), Lee served on the staff of General Winfield Scott (1786–1866). As an engineer, Lee directed the placement and transport of heavy artillery in the Veracruz landing and subsequent march to Mexico City in 1847. In 1852 he became superintendent of West Point. In 1859 he commanded a force of marines that together with local militia put down John Brown's (1800–1859) raid of the Harpers Ferry armory.

Lee headed the Department of Texas from 1860 until March 1861. In April, in Washington, D.C., he was offered and then declined the command of the Union (North) Army. Within the month, he had joined the Confederate Army. In 1862 he assumed command of the Army of Northern Virginia, leading Confederate forces to decisive victories at such battles as Second Bull Run (August 1862), Fredericksburg (December 1862), and Chancellorsville (May 1863). He and his army suffered a crushing defeat at the Battle of Gettysburg in July 1863, arguably the turning point of the American Civil War. Shortly after the defeat at Petersburg, Lee surrendered the Confederate forces to Union general Ulysses S. Grant (1822–1885) on April 9, 1865, at Appomattox Courthouse in rural Virginia.

Following the war, Lee served as president of Washington College (later renamed Washington and Lee College) in Lexington, Virginia. He died of pneumonia on October 12, 1870, and was buried underneath the chapel at Washington College.

TRADITIONALIST AND REVISIONIST HISTORY ON LEE

Much of the literature on Robert E. Lee can be categorized by two historical perspectives. The *traditionalist* perspective interprets Lee as noble and full of virtue, fighting for the South out of a sense of duty to protect his Virginia homeland and confronted by forces beyond his control that compelled him to serve and fight against the Union. This perspective originated in the 1870s, was reinforced and consolidated over the following decades, and culminated with the publication of Douglas Freeman's four-volume biography, *Lee* (1934). In contrast, Thomas Connelly's *Marble Man* (1977) exemplifies the *revisionist* perspective, which took a more critical view of Lee as a southerner and as a soldier.

Proponents of these perspectives contest much about Lee's life, but three debates remain especially salient. The first surrounds Lee's views on slavery (Fellman 2000, esp. chap. 4). Traditionalists resurrected a Lee that was anti-slavery, and fought for the Confederacy despite this. They cite as evidence Lee's letters where he referred to slavery as a "moral and political evil" and that Lee manumitted slaves held by his father-in-law, George Washington Parke Custis (1781–1857), after the latter's death. Nevertheless, this did not mean Lee supported abolition; although Lee spoke of slavery as a moral and political evil, in the same correspondence he also claimed that slavery was God's will, that "blacks are immeasurably better off here [enslaved] than in Africa … the painful discipline they are undergoing, is necessary for their instruction as a race.… Their emancipation will sooner result from the mild and melting influence of Christianity, than the storms and tempests of fiery Controversy" (Freeman 1934, p. 372).

The second debate focuses on Lee's responsibility for the Confederate defeat at the crucial Battle of Gettysburg in 1863. Many traditionalists, such as Confederate general Jubal Early (1816–1894), generally blamed General James Longstreet (1821–1904) for his slow execution of Lee's plan to attack Union forces at Cemetery Ridge on July 2, 1863. Revisionist critics, including historical novelist Michael Shaara, author of *The Killer Angels* (1974), attribute the Confederate loss to Lee's poor judgment in attacking a Union force that possessed superior ground and material and a greater quantity of troops.

A third debate centers on Lee's involvement with the secessionist movement and his subsequent decision to serve in the Confederate forces in 1861. Proponents of both perspectives agree on two facts regarding this issue: (1) that Lee viewed secession as illegal, and (2) that he was offered, and declined, the position of commander of Union forces by the U.S. government. Traditionalists argue that Lee tortured over the decision to fight for the Confederacy, ultimately deciding to fight out of a sense of

"duty" to Virginia: "If secession destroyed the Union, Lee intended to resign from the army and to fight neither for the South nor for the North, unless he had to act one way or the other in defense of Virginia" (Freeman 1934, p. 423). Revisionist Connelly, while conceding that Lee equated secession as "nothing but revolution," questions the traditionalist interpretation, asking: "One wonders why Lee did not endeavor to use his influence within Virginia to squelch the secession movement? He certainly might have been able to do it" (1977 p. 198). In addition, "almost instantaneously the secession movement which he supposedly abhorred was a holy cause, and the Union he loved had become a deadly enemy" (p. 201). In contrast with the "tragic hero" of Freeman's Lee, Connelly's is "a child of the seventeenth-century New England mind, and not of the later Enlightenment," one whose "belief implied an unquestioning spirit which submitted to unseen forces … and a denial of the reasoning process" (p. 199). Yet no evidence exists that Lee was active in the secessionist movement. His service in Texas immediately prior to Virginia's secession makes it difficult to suggest that Lee was a secessionist conspirator.

Scholars and students of history and the social sciences should take special note of Robert E. Lee as a model of historiography—an example of how interpretations of the past may serve the interests of those living in the present.

SEE ALSO *Confederate States of America; Davis, Jefferson; Mexican-American War; Secession; U.S. Civil War*

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Brent J. Steele

LEE, SPIKE

SEE *Bamboozled.*

LEFEBVRE, HENRI

1901–1991

Known as the "father of the dialectic," Henri Lefebvre was a key figure in the dissemination of the theory and method of dialectical materialism outside of Communist countries in the twentieth century, thanks to his widely translated *Le matérialisme dialectique* (Dialectical Materialism, 1939) and other works that emphasized a philosophically rigorous approach to the work of Karl Marx (1818–1883), G. W. F. Hegel (1770–1831), and Friedrich Nietzsche (1844–1900). One of the first serious French commentators on these scholars, Lefebvre pioneered their translation and popularization. He advocated the application of dialectical materialism as a methodology, even when it challenged Marxist orthodoxy. Lefebvre encouraged the elaboration of social critique by later generations, including the Situationniste Internationale group, 1960s student activists, 1970s Marxist critics of urban governance, and the 1980s critical postmodernists in the United States. Lefebvre was a witness to both world wars and to the modernization of everyday life in France, including the industrialization of the rural economy and the suburbanization of its cities.

In the early 1950s, Lefebvre was the measure of orthodoxy for pre-Stalinist French Marxism, until his humanism and interest in the alienated quality of everyday life led to expulsion from the Parti Communiste Français. These themes can be found in his series of works on the banality (*quotidiennité*) of everyday life under capitalism, *Critique de la view quotidienne* (Critique of Everyday Life, 4 vols., 1958–1981), in which he examines such topics as the requirement to commute long distances and work long hours. Reacting against his youthful romanticism and Martin Heidegger's (1889–1976) metaphysical critique of *Alltäglichkeit* (everydayness, banality), rather than seek an aesthetic or poetic solution to the problem of alienation, Lefebvre argued for concrete changes in collective practice. Contemporary social life is not just banal, it is the deliberate outcome of a bureaucratized, consumption-oriented society, suggesting that changes in its organization are required, not more refined individual sensibilities.

The commercialized and inauthentic ambient environment in cities, suburban developments, and housing design inspired his critiques of contemporary planning practice and the development of a critical theory of the production of these environments as social spaces. In collaboration with members of the Situationniste Internationale, whom he met in Strasbourg while establishing one of the first sociology departments in France, he championed the revolutionary potential of the ludic and the carnivalesque. This perspective informed the strategy of Lefebvre's later students in May 1968 at the University of Nanterre when they initiated student unrest in Paris. The inconclusive outcome was seen at the time as a failure of Lefebvre's Marxist humanism. However, interest in his pioneering appreciations of the spatial matrix and rhythms of urban life resumed in the 1990s.

Lefebvre was widely influential as a critic of structuralism, a founder of rural sociology, and an analyst of the role of the state in the creation of favorable conditions for capitalists and for the organization of production. He stressed that this took material and performative, rather than ideological forms. Capitalism is embodied, it is a built environment and landscape, and it is lived in the rhythms and divisions of our days.

SEE ALSO *Capitalism; Cultural Landscape; Hegel, Georg Wilhelm Friedrich; Humanism; Marx, Karl; Marxism; Materialism, Dialectical; Methodology; Nietzsche, Friedrich; Praxis; Protest; Resistance; Structuralism*

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Rob Shields

LEFT AND RIGHT

Left and *Right* are benchmarks of spatial understandings of politics. Such descriptions are widely used as shorthand for communicating information about relative policy positions. The origin of the terms, designating positions of factions in the French revolutionary assembly, reflects a transformation from a vertical, or hierarchical, understanding of politics to a horizontal, or democratic, arrangement of conflict. Thus, the spatial metaphor is not just useful; it is fundamental to the way that people decipher democracy.

The terms should be used with care, however. There is some consistency in the meaning of *left* and *right* for political position across time and space. But the particular associations between left and right and definite policy positions are inexact and changeable. And many issues and perspectives correspond only loosely, at best, to a position on a stylized left-right dimension.

ORIGINS

The first use of the left-right spatial metaphor was in France, in the period following the Revolution of 1789. Before the revolution, the polity had been divided into caste-like "estates." The first estate was the clergy; the second was the hereditary nobility. The third estate (artisans and professionals) was more numerous but politically weaker.

French society was explicitly hierarchical, with the monarch being superior to all estates. "Position" was defined by class and station, which were in turn decided at birth. The idea of political positions as ideative views of the good, rather than simply shared interests of the estate or class one belonged to, had little place in such a system.

But the French Revolution, literally and figuratively, leveled many of the institutions of France. Historians Alexis de Tocqueville and Francois Guizot, separately looking back decades later at the impact of the French Revolution, both used the word "leveling" to describe its primary political impact. But this meant that two traditional links had been broken. First, the inherent connection between a fixed caste and its place in society was uprooted. Second, all citizens took an equal place in the society, each equally worthy of respect and equally politically powerful.

With the passing of the static caste-based conception of French society, citizens sought some effective way of mentally organizing the new, often chaotic, situation. What was required was a mental construction based on politics (the contest among equals, on a level playing field), not class or estate (immutable vertical distinctions of social privilege and political advantage). The replacing of the vertical understanding of hierarchy with the spatial metaphor of political disputes among equals may have been inevitable. Spatial imagery was the result of the new vision citizens in a democracy had of the alternatives open to them.

The French National Convention, meeting in September 1792 in the aftermath of the dissolution of the Legislative Assembly, was chaotic and unruly. A significant plurality of the deputies elected to the convention was independent. They were too poorly organized to raise issues on their own, but at more than 500 they were numerous enough to determine the outcome on most votes. They were seated in the middle section of the huge hall, an area referred to as "the Plain."

The Gironde, the party physically located on the right of the hall (in the convention as had been true in the two previous assemblies), controlled the government in this period. They were pro-business, and advocated only mild and marginal reform of institutions. Their power base lay in the relatively conservative provinces.

The denizens of "the mountain," the high benches on the far left of the assembly hall, were the most organized opposition to the Girondins. These overtly populist Jacobins agitated for change, for radical reform, and for anything else that made it more difficult for the Gironde to control the country. Their focus was on centralization of power in Paris, reform of banks and the monetary system, and widespread nationalization of the assets and wealth of the first two estates.

The Gironde, the party on the right, proved unable to pursue its mix of military defense, free trade econom-

ics, and fiscal restraint. By the spring of 1793, the government collapsed. The Jacobins, the party seated on the left of the hall, seized its opportunity to implement a variety of collectivist reforms and political purges. These general associations, with the party of the right defending the status quo and the party of the left attempting to implement reforms and significant changes, persists in our political language still.

GENERAL CATEGORIES OF MEANINGS OF LEFT AND RIGHT

Spatial descriptions of positions have become nearly generic, like using "Coke" as a name for any carbonated cola drink. But it is a mistake to think that such generic designations have more than colloquial meaning in any specific political situation. Further, the generic meanings themselves are contradictory, or at least fundamentally different.

Keeping this caveat in mind, there are at least three broad categories of meaning for the labels Left and Right.

1. *Divisions with respect to perspective on property.* Left: Public ownership of the means of the production, government uses its power to redistribute wealth and power to achieve near-equality. Right: Private ownership, capitalist economy, government uses its power to preserve deep disparities in wealth and social status.
2. *Divisions with respect to status quo policy of current government.* Left: Radical reformers, seek to change status quo policies and break free from outmoded or repressive rules of the past. Right: Conservative defenders of the status quo, tradition, and customary relations.
3. *Fairness-based divisions.* Left: Emphasize fairness in terms of outcomes. In different ways, this perspective is embodied in such thinkers as Jean-Jacques Rousseau, Karl Marx, or John Rawls. Right: Emphasize fairness in terms of process, and stability of use of traditional processes. Examples include Robert Nozick's focus on historical principles, or Edmund Burke's defense of tradition and custom.

PROBLEMS: TIME, CULTURAL UNDERSTANDING, AND STRATEGIC ACTION

The use of the left-right spatial metaphor makes several hidden assumptions that are arguable, at best. First, there is a single primary dimension of political and social conflict in the society. Second, this dimension and its connection to specific issues and beliefs are constant over time. Third, this dimension of conflict is transcultural, implying that the same understanding of left-right imagery and its connection to everyday politics is broadly shared.

It is more likely that, though the use of left-right as a means of organizing discourse about politics is generally useful, the actual meaning of the end points, or extremes, of Left and Right are both time-bound and culturally specific.

SEE ALSO *Cleavages; Jacobinism; Political Parties*

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Michael Munger

LEFT WING

The term *left wing* originated with the seating arrangement of the French National Assembly of 1791. The deputies representing the Third Estate, the ordinary people, were seated to the left of the president's chair on an elevated section called the Mountain, while the nobility, the Second Estate, sat on the right side of the chamber. Between them sat a mass of deputies, known as the Plain, who did not belong to any particular faction.

CHANGING MEANINGS

Originally most members of the French National Assembly seated on the left were moderate reformers who called for a constitutional monarchy and a unicameral legislature for France. On the right sat the delegates who supported the more conservative royalist, aristocratic, and clerical interests. But the Left/Right labels took on new meanings during the course of the French Revolution, which began in 1789. The Left became increasingly radicalized as Maximilien Robespierre (1758–1794), Louis Saint-Just (1764–1794), Jean-Paul Marat (1743–1793), and the powerful Jacobin clubs (the most famous political group of the French Revolution) gained influence. Under their sway, King Louis XVI (1754–1793) was executed, a republic was declared in France, and the Reign of Terror (the period of the French Revolution when thousands of people were executed) commenced. Anyone who opposed the monarchy, or *ancien régime* (old order), was regarded as a member of the Left. Although differing on the polit-

ical objectives, the Left and the Right shared similar economic views. Both factions supported laissez-faire capitalism and free markets, ideas later espoused solely by the right wing. Some radicals on the far Left, though, held that the revolution's promise of equality could only be achieved by redistributing wealth and land. Recognizing that genuine equality could not be fully realized without government intervention on behalf of the poor, the Left in European politics generally came to embrace socialism.

LEFT-RIGHT POLITICAL SPECTRUM

Political scientists and historians typically use the Left-Right political spectrum to classify modern political ideologies. At the extreme left end of the Left-Right divide are the communists and revolutionary socialist groups, such as the syndicalists, who historically endorsed the use of armed rebellion for achieving power and totalitarian means for imposing their socialist schemes. Moving toward the left-center of the spectrum are the social democrats, Christian socialists, Fabian socialists, Proudhonists, evolutionary socialists, and various groups associated with trade union movements. These groups believe that socialism can be established through democratic and incremental methods. At the opposite side of the political spectrum are such groups as the fascists, who believe in a centralized autocratic government often headed by a dictatorial leader. The far Right typically favors a corporatist economy and the mobilization of the nation against Marxist internationalism. Often these ideologies were espoused by military dictatorships, such as that of Juan Perón (1895–1974) of Argentina. On the right-center are the royalists or monarchists, followed by other traditional conservatives, such as British politician and orator Edmund Burke (1729–1797). Anarchists and libertarians were and are difficult to position on the Right-Left political continuum, since there are left-wing and right-wing variants of each.

What it means to be a left-winger varies depending on the country, culture, and particular issue. Since the eighteenth century until the latter part of the twentieth century, right- and left-wing ideologies battled mostly over questions of economics and class. The Left sought to equalize wealth and property while the Right defended the propertied interests of the privileged classes. Left-wingers always saw themselves as defenders of the disadvantaged and oppressed against the privileged elite. For them the equality of humankind was both a biological given and a political goal. The afflictions from which people have historically suffered, such as poverty, war, strife, crime, and so on, would be eradicated, they held, as advances toward greater economic, social, racial, and gender equality were made. The Left generally opposed at least in principle the institutionalization of sexual distinctions. Since the natural equality of people is assumed, they blamed the persistence of social and economic inequalities on the maldistribution of wealth and property which fosters in turn the social prejudices that perpetuate and entrench the class system. Left-wingers tended to be social and economic levelers who believed that human nature itself can be transformed and improved through governmental action. People are born good, they held, but their natural goodness is corrupted by the environment. Hence leftists had an enormous faith in the efficacy of their political schemes to perfect human nature. Most social problems, it followed, could be remedied by economic fixes or social engineering. To achieve these ends, left-wing movements advocated central economic planning and nationalization of the economy. They were and are generally hostile to intermediary groups and associations such as local governing authorities, religious institutions, civic organizations, privately owned businesses, and traditional family structures that impede the power of the central government to reconstruct society in a more egalitarian direction.

During the French Revolution the Jacobins violently attacked the Roman Catholic Church and attempted to replace Christianity with the worship of "Reason." Left-wing ideologies continue today to be generally secular. The separation of church and state is a basic principle to the Left. Some believe that all religious expression should either be strictly limited or suppressed, while more religiously tolerant leftists would argue only that religion should play no part in political discourse.

THE LEFT WING IN THE TWENTY-FIRST CENTURY

Beginning in the latter part of twentieth century, moral, cultural, and social issues, such as abortion, gay rights, secularism, feminism, and multiculturalism, rather than economic or class questions, have come to characterize Left-Right political struggles. The Left typically today supports the legalization of gay marriage, extending abortion rights, and opening the national borders to unrestricted immigration. Opponents of these policies are sometimes accused of being hatemongers, homophobes, male chauvinists, and racists. These cultural wars have almost totally replaced the economic class warfare that once dominated Western politics. The central creed of the post-Marxist Left, as historian Paul Gottfried (1943–) argued in his *The Strange Death of Marxism: The European Left in the New Millennium* (2005), is no longer the elimination of economic classes but the establishment of the therapeutic-managerial state in which all gender, ethnic, racial, and cultural distinctions have been abolished.

The Left in the early twenty-first century would include the European Social Democrat and Green parties,

the Labour Party of Great Britain, the much weakened European Communist parties, and the liberal wing of the United States Democratic Party. Left-wing political movements are still strong and active on the South American and African continents. As self-proclaimed Marxist Peoples' Democracies, the governments of Cuba and North Korea are leftist as well. American neoconservatism, some critics argue, should be considered a movement of the Left rather than the Right since it, like the French Jacobins, gives primacy to the principle of equality and supports global crusades to spread human rights and democracy.

The term *left wing* is rarely embraced by those who profess beliefs that would place them on the left end of the political spectrum. Rather the preferred label is *progressive,* which implies a commitment to egalitarianism and a willingness to promote governmental programs to help the poor, disadvantaged, and minorities. In the early 2000s the term was usually employed as a pejorative label by such right-wing political commentators as Rush Limbaugh, Bill O'Reilly, Ann Coulter, and Michelle Malkin, who applied it to their ideological adversaries.

SEE ALSO *Communalism; Egalitarianism; Fabianism; French Revolution; Jacobinism; Labor Union; Left and Right; Monarchy; Neoconservatism; Progressives; Republicanism; Right Wing; Socialism; Socialism, Christian; Syndicalism; Unions*

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LEGACY EFFECTS

Legacy effects are the impacts that one generation leave on the environment for future generations to inherit. There are very few parts of the globe where human beings have not left their imprint or legacy. Archeological evidence suggests that from the earliest times the human, the hunter, was responsible for the extermination of numerous other forms of life—flora and fauna—a pattern that persists today. The early civilizations changed watercourses, initiated farming, and denuded landscapes of many species of trees and shrubs; the barren lands of the eastern Mediterranean, for example, are largely a legacy of the classical period of ancient Greece. The advent of industrialization and mass production has resulted not only in further damage to the natural landscape as massive resource depletions take place, but also legacies of unsightly built environments.

Legacy effects are not all negative, at least in terms of public perception. Although the classical period saw the destruction of woodlands, it did leave a legacy of fine buildings that are seen by most as environmental attributes. The dividing line between what is a negative legacy effect on the environment and what is not is sometimes a fine one to draw and depends on who is being consulted.

Legacy effects occur because of the lack of a full allocation of long-term property rights to resources, which leads to excessive myopia in decision making. The 1987 report of the World Commission on Environment and Development, *Our Common Future* (the Brundtland Report), emphasizes that sustainable development requires current generations to leave an adequate legacy of resources for future generations. To achieve this goal, individuals have to take responsibility for resources. Without a complete legal definition of who owns these resources, however, it is difficult to ensure that adequate conservation is achieved. If this is not accomplished, then what is known as the "tragedy of the commons" becomes apparent as individuals in each generation excessively exploit resources with no regard to future needs or the implications for future generations.

Dealing with legacy effects poses a variety of public policy challenges. Ideally, property rights should be allocated across generations so that decisions regarding current consumption are made with due cognizance of their implications for future generations. Because the lack of adequate property-rights allocations in the past has burdened current generations with environmental costs, an inevitable degree of remedial action may be justified. In many countries, for example, large sums are being spent on cleaning watercourses where runoff from mining activities prevents plants or fish from living, on removing dams to allow salmon to move upstream, and on reforestation. The general approach to these legacy situations is to apply some form of informal benefit-cost analysis that seeks to weigh the immediate costs of remediation against the social benefits for future generations. In many cases, the financial burden for such measures is spread across communities as the state directly shoulders the burden, but in other cases there may be requirements for particular groups to pay. It may, for example, be necessary for a land developer to clean contaminated soil associated with a previous land use before new construction is allowed. In some cases, this latter approach can actually pass part of the cost back to those who caused the problem; in the land use example, the seller of the contaminated site will get a lower price for it.

The embrace of legacy effects in the public policy process often encounters an informational problem. Technology changes over time, and the long-term environmental implications of any action are difficult to fully assess, particularly when there are major technological or social changes taking place. In general, the world's current generations are materially better off than previous generations; its members live longer and there is also evidence that in many respects the environment is locally less polluted than it was forty or fifty years ago. Consequently, simply thinking in terms of the costs of future remedial actions to counter ongoing environmental intrusions may produce overestimates. Additionally, there are some current actions now that we do not understand well enough to be able to assess their legacy effects, either negative or positive. The lack of any real indication of the risks involved makes "insurance" policies difficult to formulate in these circumstances, and hence many advocate abstinence from any actions without knowing their full implications.

To combat current environmental effects that we know will be passed on to future generations, a number of micro- and macrostrategies have been adopted. At the micro level, many countries seek to economize on excessive resource depletion by stimulating recycling—for example, by requiring payment of a deposit at the time of purchase of an item, which is refunded when the item is returned for recycling. These initiatives encompass such items as bottles and cans, and even motor vehicles in some Scandinavian countries. There are also various standards that effectively "sunset" any adverse environmental effects—for example, the compulsory use of biodegradable materials for some products, or term limits on fisheries.

Macro legacy effects include global warming and the handling of nuclear products. Both of these are long-term matters affecting generations extending far into the future. They also have international ramifications; the effects represent a legacy with implications for citizens of other countries. Efforts to deal with this type of intergenerational externality have involved the United Nations (e.g., the International Atomic Energy Agency) and a series of global summits (resulting in, for example, the Kyoto Protocol).

SEE ALSO *Natural Resources, Nonrenewable; Pollution; Tragedy of the Commons*

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Kenneth Button

LEGAL SYSTEMS

A legal system is a mechanism for creating, interpreting, and enforcing laws in a given jurisdiction. The major legal systems in the world include civil law, common law, socialist law, religious law, and customary law. Most nations have incorporated aspects of some or all of these systems, or developed variations on each system, into their own legal system.

CIVIL LAW

The civil law system is the predominant legal system in the world. It developed out of Romano-Germanic law—the law of continental Europe—based on a mixture of Roman, Germanic, ecclesiastical, feudal, commercial, and customary law. The beginnings of the civil law tradition can be traced to the Twelve Tables, written in 449 BCE, which laid the foundation for Roman law and would eventually become one of the most advanced systems of law in history.

Following the rise of the nation-state system in Europe, natural or civil codes were established in several countries, including France, Spain, Germany, and several Latin American and East Asian countries. The purpose behind the civil codes was to create a unified system of laws or statutes derived from basic principles and upon which judicial decisions are based. Perhaps the most widely known civil code is the Napoleonic Code established in France in 1804, which is the foundation for the civil law systems of Quebec and Louisiana. The German Civil Code, too, provides the legal foundation for the civil law systems of the former Soviet bloc countries, Japan, South Korea, China, and Taiwan. Most of Latin America also uses the civil law system as a result of the influence of its former colonial masters in Europe.

A distinguishing feature of the civil law system is that it is based on the idea of flexibility and judicial discretion in interpreting the law. Different schools of judicial interpretation exist in most civil law countries, and the law tends to be a product of these competing schools. Judicial disregard of precedent is considered to be a strength of the civil law system because it allows for alternative interpretations of the law that may be more compatible with the facts and circumstances of a particular case. One of the results of this more flexible approach in applying the law is that judicial opinions tend to be more concise, as courts

discuss only the relevant legislation that applies rather than detailing how a decision was reached. However, the civil law system is still subject to the vagaries and uncertainties of judge-made law where the role of precedent has little influence.

COMMON LAW

Common law systems can be found in many nations that were former colonies or territories of England. The common law originated with the unification of England and the institutional stability provided by William the Conqueror (c. 1027–1087) after 1066. In 1215 King John (1167–1216) elevated the importance of the common law at Runnymede when he signed the Magna Carta. The Magna Carta freed the church, localized the court system, and codified the basic principles of the common law. By the sixteenth century, the common law system had supplanted the civil law system in England, and over time it would become more reliable as a consistent record of case law for judges and lawyers developed.

An important aspect of the common law is the role of precedent or the principle of *stare decisis* ("let that stand which has been stated"). The common law represents the law as expressed by judges in the form of judicial decisions based on precedent rather than statutes. These judicial decisions, if issued by the highest court in a jurisdiction, are binding on all other lower courts within that same jurisdiction. To ensure predictability in the law, high courts are expected not to overturn their own precedents in the absence of strong justification. Though new rules are adopted from time to time and judicial decisions can be overturned, these new rules or decisions also become binding precedents, thus restoring certainty to the law.

In the early twenty-first century, every state in the United States, except Louisiana, utilizes the common law system. Most state statutes provide that the common law, equity, and statutes in effect in England in 1603 be deemed part of the law of the jurisdiction. The common law system also constitutes the basis of the legal systems of Canada (except for Quebec), Australia, Hong Kong, India, Malaysia, New Zealand, and South Africa, among other nations. Each of these common law jurisdictions recognizes the importance of the adversarial system and the fundamental principles of law that have been adopted over the centuries by way of custom and precedent.

SOCIALIST LAW

Socialist law is the legal system used in most Communist states. It is based on the civil law system and Marxist-Leninist ideology. During the cold war period, it was incorporated into the legal systems of the Soviet Union and its former satellite states in Central and Eastern Europe. These systems were built on the notion that the state, rather than private individuals, should own most of the property within its jurisdiction.

When the cold war ended and the Soviet Union collapsed in 1989, support for the socialist legal model waned considerably. Some states, such as China, Cuba, Vietnam, and North Korea, continue to practice their own version of socialist law; however, most of these states have modified their legal systems in response to the growing popularity of market-oriented reforms and the inevitable forces of globalization.

RELIGIOUS LAW

Religious law is based on the sacred texts of religious traditions, which advocate norms, principles, or rules as revealed by God that are intended to govern human behavior. Most of the major religions of the world, including Islam, Christianity, and Hinduism, espouse a particular code of ethics or morality that is believed to be required by God and necessary to promote justice within a state. Many nations incorporate religious law into their national legal systems and, in some cases, there is no separation between religion and the state in administering these systems.

Islamic law, or *sharia*, is based on the Qu'ran, the primary source of Islamic jurisprudence, and the *sunna*, which purportedly incorporates the practices of the Prophet Muhammad (c. 570–632). Muslims believe that there is no distinction between religious and secular life and, therefore, national laws should reflect Islamic principles. Nations practicing some version of Islamic law in 2007 include Afghanistan, Saudi Arabia, Iran, Iraq, Pakistan, Indonesia, Libya, Morocco, Algeria, Turkey, Egypt, Kuwait, Tunisia, Syria, Sudan, Mauritania, and Lebanon, to name a few.

Canon law is a legal system developed by the Catholic Church and based on the Bible, the foremost source of Christian law. The Code of Canon Law has been compiled, organized, and revised over the centuries to reflect changes in the Catholic Church's hierarchical, administrative, and judicial practices. Today, the canon law system, which consists of its own courts, judges, lawyers, and legal code of ethics, makes up the legal system of the Vatican in Rome.

Hindu law is a body of rules and principles set forth in the *Manu Smriti* and practiced by the Hindus. It is one of the oldest religious systems in the world and is characterized by beliefs and practices rooted in ancient Vedic culture. Hinduism is the third-largest religion in the world, and its followers are concentrated mainly in India. During the occupation of India by the British, Hindu law was recognized by the British government, but it has been corrupted by the imposition of British common law and secularization.

Other major religious legal systems include the Baha'i faith (Iran), halacha (Jewish law), Buddhist law (Tibet and Southeast Asia), and Confucian law (China).

CUSTOMARY LAW

Customary law is law developed from the bottom up. It consists of established patterns of behavior that are capable of being observed, and it gives rise to expectations that guide people's actions. An important feature of customary law is that it is not imposed, or handed down, by some coercive institution or individual, but is instead created through mutual recognition and acceptance. Customary law consists of two elements: (1) an observable practice; and (2) a conception that the practice is required by or consistent with a prevailing norm (*opinio juris*). Customary international law is a type of customary law that refers to the "law of nations" and the rules developed over time as a result of state practice and *opinio juris*.

SEE ALSO *Administrative Law; Judiciary; Law; Law and Economics; Law and Order; Rule of Law*

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Klinton W. Alexander

LEGENDS

SEE *Storytelling*.

LE GUIN, URSULA K.

1929–

Ursula K. Le Guin is a prolific writer of science fiction, children's literature, poetry, and a great many essays and nonfiction works. She was born Ursula Kroeber in Berkeley, California, the daughter of anthropologist Alfred Louis Kroeber (1876–1960), known for his work among Native American tribes, and Theodora Kracaw Kroeber (1897–1979), a psychologist and the author of the best-selling *Ishi in Two Worlds: A Biography of the Last Wild Indian in North America* (1961). Raised by parents whose professional interests centered on observation and analysis, words, myth, and storytelling, Le Guin developed a fascination with strange worlds and places early on in her life. She submitted her first science fiction piece to *Astounding Science Fiction Magazine* at age eleven (it was rejected). In 1947 she left California to attend Radcliffe College in Cambridge, Massachusetts, where she received a B.A. in Romance literature in 1951. She continued her education at Columbia University, where she earned an M.A. and a Fulbright Scholarship in 1952. Sailing to France in 1953, she met the historian Charles Le Guin, whom she married in Paris several months later. The couple have lived for more than fifty years in Portland, Oregon, where they raised their three children.

The ostensible uneventfulness of Le Guin's life stands in stark contrast to her extraordinary career and the range and variety of her work. With seventeen novels, eleven children's books, more than a hundred short stories, two collections of essays, five volumes of poetry, and two volumes of translations and screenplays to her name, and having been lavished with numerous literary prizes, including the National Book Award, five Hugos, five Nebulas, the Kafka Prize, and several lifetime achievement awards, she figures as one of the most distinguished writers of her generation. Fighting at the forefront of the civil rights, feminist, and antiwar movements of the 1960s, Le Guin first gained fame with her 1969 novel *The Left Hand of Darkness*, an exploration of the effects of sexual identity and (non)gender on an androgynous race in an imaginary country set in the distant future. Both here and in her other science fiction works, such as the award-winning *The Dispossessed: An Ambiguous Utopia* (1974), *Worlds of Exile and Illusion* (1996), and *The Telling* (2000), Le Guin puts a strong emphasis on the social sciences, especially on sociology and anthropology, using strange, alien cultures to explore and assess aspects of her own culture.

Praised for her ability to invent credible imaginary worlds populated with highly likeable human and nonhuman characters, Le Guin's work is different from that of other fantasy writers because she is primarily concerned with the human condition. She often uses the alien, nonearthly settings of her stories to present a critical perspective on sociocultural and political issues in our own world, imaginatively exploring new possibilities of living and being in alternative cultures. Politically progressive, witty, and a brilliant stylist, Le Guin has not only gained her reputation as a writer of "speculative fiction": With her nonfiction works, such as *Dancing at the Edge of the World: Thoughts on Words, Women, Places* (1989) and

Steering the Craft (1998), she has also established her name as an incisive social and cultural critic.

SEE ALSO *Science Fiction*

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renée c. hoogland

LEIJONHUFVUD, AXEL

SEE *Price vs. Quantity Adjustment.*

LEISURE

Leisure is not an essential human characteristic or pursuit. Yet it has a history and a variety of cultural manifestations (in language, rituals, and recurring occasions and events) determined by a variety of historical settings. Through its bewildering array of forms, leisure's only constant is its relation to work. Work and leisure are a mutually defining pair in their origin and through their historical development. Indeed, as work changed, so did leisure.

Originally, and still today among hunters and gatherers, humans had no abstract, general word for subsistence-related activities. The concept of work emerged with humans' ability to control other humans—primarily with slavery. As humans recognized work as a distinctive cultural reality, so too did they begin to recognize freedom from work and control as leisure.

The combined human concept of work and leisure as "figure and ground" (as a mutually defining, historical pair) is demonstrated by some of the first words for the pair: The Greek word for work (*a-scholia*, meaning "not leisure") was defined by its negative relation to leisure (*scholê*), just as the Latin *neg-otium* (not leisure) was defined in relation to *otium* (leisure).

In the classical age and the medieval world, leisure was the basis of culture—it represented the privilege of the few founded on the slavery of the many. As Aristotle famously noted, for the rich and powerful, the purpose of work and economic concerns was the freedom to become more fully human by doing those activities that were more complete in themselves, such as the liberal (free) arts, philosophy, politics (including all forms of free civic engagement), contemplation, and celebration. Over the centuries, leisure became so identified with learning and culture that the Greek word for leisure (*scholê*) developed as the etymological root of words for "school" and "scholarship" in many modern languages.

The positive view of leisure as work's purpose and fulfillment persisted in the West until the Reformation, when, as a variety of scholars beginning with Max Weber recognized, the cultural valuations of leisure and work became reversed. Weber understood that the modern view of work—summed up as "one does not work to live; one lives to work"—represented an historical revolution (Pieper 1952, p. 40).

After the sixteenth century, what Hannah Arendt called the modern "glorification of work," and Joseph Pieper described as "the rise of the world of total work" progressively eclipsed leisure as the basis of culture. The spread of capitalism and the marketplace commodified and rationalized leisure as well as work. More and more kinds of previously free activities were drawn into the marketplace, and various products were being produced to be bought and sold.

In the modern age, leisure is no longer widely valued among the newly emerging business classes or their socialist critics as the freedom to realize human potential. Writers such as Thorstein Veblen and Friedrich Engels, defining humanity as "Homo Faber" (man-the-worker/tool maker) insisted that work was the essential human characteristic. Veblen saw leisure as an example of the conspicuous consumption of the rich, a dangerous example for society that tempted its productive members to forget that work was the foundation of human morality and solidarity.

Increasingly, residents of the West have tended to turn from leisure to work as the time to realize their humanity, as the glue that holds humans in society, and as the fundamental moral imperative. However, all have not been true believers in the Protestant work ethic; its later secularized version, the "spirit of capitalism"; or socialist work-utopias. Early in the nineteenth century, as labor was increasingly rationalized and brought into the marketplace, working classes in Europe and America began a struggle for shorter working hours that lasted over a century and cut work time nearly in half.

The primary motive driving this process, one of the longest and most broadly based social movements in the history of the Western world, was workers' desire to have more leisure to spend with family, friends, and neighbors—and, according to a popular nineteenth-century doggerel, "to do with as we will." At the beginning of the labor movement in the United States, Philadelphia jour-

neymen carpenters, after striking for a ten-hour work day in 1827, resolved that "all men have a just right, derived from their Creator, to have sufficient time each day for the cultivation of their mind and for self-improvement." Union leaders regularly repeated these sentiments for over a century, fully expecting that the "progressive shortening of the hours of labor" would eventually elevate leisure to life's center, reducing "human labor to its lowest terms" (Hunnicutt 1988, p. 322).

Ever since the founding of the United States, myriad believers in progress agreed that industry and the free market must eventually provide all people with enough "necessaries," as well as the steadily increasing leisure to enjoy them. As early as 1794, the U.S. inventor Samuel Hopkins foresaw a two- or three-hour work day, an expectation repeated regularly until the 1920s and 1930s, when influential scientists and economists such Julian Huxley and John Maynard Keynes confidently predicted, on the basis of a century-long economic trend, that the marketplace would soon provide everyone with all that they might rationally need in exchange for two or three hours of work a day. Before the twentieth century ended, it was believed, leisure would replace the economy as mankind's primary concern.

Clearly, such predictions were wrong. Instead of the "progressive shortening of the hours of labor," there has been little or no increase in leisure since the years of the Great Depression. In the early 1990s, the sociologist Juliet Schor presented a persuasive case that leisure had been declining over the previous three decades in the United States. These changes have coincided with the commodification and trivialization of leisure. More importantly, the nineteenth-century and early twentieth-century vision of the expansion of life beyond the pecuniary realm as a logical part of industrial progress has been forgotten.

Instead of following the lead of sociologists, educators, and economists of the early part of the twentieth century, who were trying to prepare the nation for "the worthy use of leisure," social scientists now assume that leisure is valuable mainly because it contributes to recreational spending, and because it allows people to recuperate for more work and to "adjust" to the pressure of modern life. The millennia-long belief that as humans get enough of the things that money can buy they might then live a fuller and happier life by moving up to freer and better things has been obscured by the modern credo that eternal economic growth and perpetual work expansion and job creation are humanities' *summa bona.* The concept of "work without end" has replaced the old dream of expanding leisure as humanities' final challenge.

SEE ALSO *Sports; Veblen, Thorstein; Weber, Max; Work; Work Day; Working Day, Length of*

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Benjamin Hunnicutt

LEMONS

SEE *Akerlof, George A.*

LENDER OF LAST RESORT

All advanced economies have relatively sophisticated banking systems. The commercial banks that make up the system operate on the basis of the *law of large numbers.* They accept deposits in the form of government-issued currency or transfers of cash reserves from other banks. The commercial banks then lend a large fraction of these reserves to businesses and individuals. This means that the claims of depositors against the banks exceed the banks' holdings in cash reserves by a wide margin. Banks are able to operate in this manner because the law of large numbers is at work. A single bank has a large number of depositors, whose deposit and withdrawal patterns vary widely. On any given day, deposits and withdrawals largely cancel out, permitting banks to meet their necessary net payments with relatively small cash reserves. Banks are able to operate in this manner because depositors are confident that their banks will always honor their requests to transfer funds or make withdrawals.

A system that is based on confidence can collapse if confidence fails. If depositors fear that their bank might be unable to honor all their requests for funds, they may "run on" the bank: The law of large numbers breaks down as depositors attempt to withdraw their funds from the bank. Since most of the bank's assets are tied up in loans

that cannot be sold quickly to other financial institutions, the bank may have to stop payment.

In general, bank runs stem from one of two sources. Runs on individual banks may occur when depositors suspect that a bank is insolvent, that is, its net worth is negative. If the bank is in fact solvent (it has positive net worth), it should be able to borrow cash from other banks, enabling it to weather the run. General bank runs, affecting all banks in an area or throughout the economy, occur when depositors fear that the failure of other banks will trigger the failure of their own banks. Thus, depositors have the incentive to run on solvent banks. Because the bank run is general, individual banks cannot borrow from other banks, which are also under pressure. In the absence of a bank able to inject large quantities of legal currency into the banking system, the entire system is liable to collapse. A bank able to provide currency to the banking system in such situations is called a *lender of last resort*.

The importance of a lender of last resort to the banking system was recognized in 1797 by Sir Francis Baring (1740–1810), a London financier, and Henry Thornton (1760–1815), a London banker. Both argued that the Bank of England should respond to a large increase in the demand for currency by the English public by increasing the amount of currency issued by the Bank. Failure to meet the increased demand for currency would drain liquidity from the financial system, causing many solvent financial firms to fail. Widespread financial failure would be followed by an economic downturn.

Although the Bank of England did, on occasion, play the role of a lender of last resort (O'Brien 2003), the bank's directors rejected calls to formally accept the role of lender of last resort, even after Walter Bagehot (1826–1877) made the classic case for it in 1873 (Bagehot [1873] 1999), further developing Thornton's ([1802] 1939) analysis. The bank's directors argued that promising to act as the lender of last resort would prompt banks to take on more risk, a behavior known as *moral hazard*. The result would be perverse: a lender of last resort might lead to more bank failures. In subsequent decades, the Bank of England held no larger gold reserves than it had before, refusing to commit to serve as Great Britain's lender of last resort.

One of the purposes in establishing the Federal Reserve System in the United States was to improve the ability of the U.S. monetary system to meet increases in the demand for currency. Before 1914, the United States did not have a central bank, and increased demand for currency by rural banks during the harvest season resulted in several banking crises. The creation of the Federal Reserve System made it possible for commercial banks to obtain reserves by using short-term commercial loans as collateral for loans from the Federal Reserve banks. The United States experienced no liquidity crises from 1914, when the Federal Reserve System began operations, until the early 1930s, when the Federal Reserve's failure to respond to large increases in the demand for currency contributed to the failure of more than ten thousand banks and to the severity of the Great Depression. Following the lead of Irving Fisher (1867–1947) and Henry C. Simons (1899–1946), Hyman Minsky (1919–1996) developed an argument in favor of a lender of last resort based on a *financial fragility hypothesis*. Minsky argued that overextension of credit by the banking system could lead to a general collapse of credit in the absence of a lender of last resort. In the post–World War II period, the Federal Reserve has acted on several occasions to prevent liquidity crises from developing.

SEE ALSO *Banking; Banking Industry; Casino Capitalism; Central Banks; Federal Reserve System, U.S.; Financial Instability Hypothesis; Insurance; Law of Large Numbers; Lombard Street (Bagehot); Minsky, Hyman; Moral Hazard*

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LENIN, VLADIMIR ILITCH
1870–1924

Vladimir Ulianov was born in 1870, and in the 1890s he chose *Lenin* as his revolutionary pseudonym. Lenin formed the Bolshevik Party in 1903 and used it to conduct a Communist revolution in November 1917. As the first leader of the Soviet Union, he consolidated power and introduced a socialist system.

At a time when Western Marxists rapidly were deciding that socialist goals could be achieved through parliamentary action, Lenin firmly rejected Western democracy as a way of improving the lot of the workers. Conceding that workers were attracted to short-term economic gains, Lenin insisted in *What Is to Be Done?* (1901–1902) that a

revolution was still possible by use of a tightly organized, centralized party that adhered strictly to orthodox Marxist ideas. Lenin's party proved very popular among the ethnic Russian workers and peasants in central Russia who worked part-time in the cities. After the overthrow of the tsar in March 1917, he won majority support in the elections of the soviets of central Russian cities. In an election in late November 1917 he won only 25 percent of the vote in the nation. He lost the truly peasant areas (both Russian and non-Russian), but won a strong plurality in the major cities and the peasant population surrounding the cities in the northwest region of the country.

When a military coup failed in September 1917, Lenin drove his reluctant lieutenants to seize power on November 7, and he became head of government (chairman of the Council of People's Commissars). Yet, he had established the party as the major political instrument, and really ruled as chairman of the Central Committee and Politburo of the Communist Party.

Lenin had only five years to rule the Soviet Union before he was disabled by a stroke. The first three of these years were marked by civil war, and the next two by a desperate effort to restore the economy. These five years made it clear that Lenin was determined to establish a quite centralized political system. He banned other parties, strengthened central control over the Communist Party, and even created a Communist International (Comintern) to subordinate foreign Communist parties to Moscow.

The great mystery about Lenin concerns the type of socialist economic system he would have left in place if he had lived longer. He died at the age of 54, and he had only five years in power, three of them during a fierce civil war. His *State and Revolution* ([1918] 1993) combined an anarchic vision of the long-term future that embraced Marx's "withering away of the state with a medium-range centralized view of an economy run by the state with the precision of a post office."

But when the civil war ended, Lenin introduced a New Economic Policy (NEP) that legalized private agriculture and trade in an effort to restore the economy. The question is whether he eventually would have established a state-directed economy, as Josef Stalin did in 1929, or whether he would have accepted a more mixed economy. No one knows, of course, but he did leave in place a highly centralized political system that Stalin could use to consolidate power and do with as he wished.

The major theoretical—and practical—contribution of Lenin to Marxism was his insistence that a country could jump easily from feudalism to socialism where the bourgeoisie was weak and avoid the long capitalist stage of the West. In practice, this meant that such a revolution was possible in Russia. But in his *Imperialism: The Highest Stage of Capitalism*, Lenin laid a broader theoretical base behind this theory. He argued that Western capitalism had postponed revolution by exploiting colonies and semi-colonies, and that this was so necessary to the survival of Western economies that the struggle for colonies led them to war. In this terrible war, the whole capitalist system would collapse around the world. This doctrine was called Marxism-Leninism, and Lenin's anticolonial addition was a crucial element in making communism attractive in the Third World.

SEE ALSO *Bolshevism; Bureaucracy; Capitalism; Communism; Imperialism; Leninism; Marxism; Oligarchy; Peasantry; Russian Revolution; Socialism; Stalin, Joseph; Trotsky, Leon; Union of Soviet Socialist Republics*

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LENINISM

The term *Leninism* refers to the political and economic ideas associated with Vladimir Ilyich Lenin (1870–1924), leader of the Russian Bolshevik Party and of the Soviet Union following the revolution of October 1917. Lenin saw himself as a follower of Karl Marx (1818–1883) and sought to give Marx's ideas practical expression.

In *What Is to be Done?* (1902), Lenin advocated the formation of a disciplined and centralized organization of professional revolutionaries in Russia to agitate for socialism, rather than the looser grouping favored by other Russian Marxists. Initially, he viewed this as necessary only because of the need to organize clandestinely in czarist Russia, where revolutionary groups were illegal, but later he generalized this model. Lenin argued that it was necessary in all advanced countries to build parties consisting of the most militant and class-conscious members of the working class in order to combat ruling-class ideology and overcome divisions between workers. This revolutionary vanguard would have the clarity of purpose and independence of action necessary to win a majority to its program during a period of major political and economic crisis, and to lead a successful socialist revolution.

Lenin's Bolsheviks put his theory into practice in Russia during the course of 1917, but within a few years the

revolution that they led had degenerated into a one-party regime that bore little resemblance to the ideal of workers' democracy defended in his *State and Revolution* (1918). Lenin's critics see this as proof of an undemocratic impulse in his basic outlook, while his defenders argue that the revolution's degeneration was a consequence of adverse circumstances, including a brutal civil war, economic collapse, external threats, and the failure of revolution to spread successfully to more economically advanced countries, such as Germany. Certainly before the early 1920s there was always much disagreement, discussion, and debate in Lenin's party, in sharp contrast to the monolithic dictatorship that developed under his successor, Joseph Stalin (1878–1953), and to the practice of most Communist parties around the world that claimed, following Stalin, to be committed to the tenets of *Marxism-Leninism*.

Among Lenin's most influential theoretical contributions is his analysis of imperialism and war. Drawing on the work of the British economist J. A. Hobson (1858–1940), Lenin argued in *Imperialism: The Latest Stage of Capitalism* (1917) that the imperialist expansion by the world's major powers in the late nineteenth century was an outgrowth of the development of monopoly capitalism, in which economic power in the advanced countries is increasingly concentrated in a relatively small number of large firms, industrial capital merges with big banks, and there is growing integration of private companies and the state. Competition between capitals for markets thus gives rise, on Lenin's account, to military and territorial competition between nation states, which he viewed as the underlying explanation of the world war that broke out in 1914. On this analysis, rivalries and wars between major powers are rooted in the dynamic of capitalist development itself, and can only be eliminated by radically restructuring the economic system and replacing capitalism with socialism.

SEE ALSO *Bolshevism; Communism; Imperialism; Lenin, Vladimir Ilitch; Maoism; Marxism; One-Party States; Revolution; Russian Revolution; Socialism; Stalin, Joseph; Union of Soviet Socialist Republics*

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Philip Gasper

LEONTIEF, WASSILY
1905–1999

Wassily Leontief was born into an academic family on August 5, 1905, in Saint Petersburg, Russia. He earned his undergraduate degree from the University of Saint Petersburg. Upon completing his doctoral dissertation at the University of Berlin in 1928, Leontief started his professional life at the Institute of World Economics at the University of Kiel. He moved to the United States to work for the National Bureau of Economic Research in 1931 and then Harvard University in 1932. He served as the director of the Harvard University Research Project until 1973. Leontief left Harvard for New York University in 1975 to found the Institute for Economic Analysis. He was awarded the Nobel Prize in economic sciences in 1973.

Leontief 's greatest achievement was the creation of a new area of economics, namely *input-output analysis*. In 1941 he published the classic *Structure of American Economy*, which laid the foundation for what is now known as a *social accounting matrix*. Such a matrix gives a snapshot of all transactions in an economy between and within producing sectors, households, factors of productions, institutions, and consumers at a level of disaggregation permissible by the availability of data.

Leontief was one of the first to discuss the issue of simultaneous estimation of demand and supply curves and the problems of identification. His work on aggregation and index numbers (1936) has also had a lasting impact. Leontief was one of the early contributors to the theory of aggregation in production relations (1947). He derived conditions under which one can identify structural mathematical relationships from reduced-form equations. His empirical research on the pattern of trade in the United States (1953) led to the well-known Leontief paradox. Later in life, he wrote on a number of diverse subjects, including the environment, population growth, automation, and defense.

The common thread in all his works was his love of general equilibrium analysis and his attempt to provide an empirical foundation to the theoretical work of the French economist Léon Walras (1834–1910). Leontief went well beyond that and brought the role of intermediate inputs to the forefront.

Input-output analysis was developed on the premise that different sectors of production in an economy are interconnected via production relations. One of the fundamental concepts in input-output analysis is the distinction between *direct* and *indirect* input requirements. This distinction led to the *Leontief multiplier*, which gives the total inputs required to produce a given level of final use as the sum of direct requirements and an infinite series

(first round, second round, etc.) of indirect requirements. A sector can be more labor intensive (or, more polluting) than another in terms of the direct coefficient, but less so in terms of the total coefficient.

The Heckscher-Ohlin theorem on international trade suggests that a country should export goods that use more intensely the factor of production in which the country is relatively abundant; a country should import goods that use more intensely the factor of production in which the country is relatively less abundant. For example, China, which is relatively more abundant in labor, should export labor-intensive goods, whereas the United States, which has relatively more capital, should export capital-intensive goods. Using a 1947 input-output table for the United States, Leontief (1953) found an apparent contradiction between reality and the predictions of the Heckscher-Ohlin theorem. Leontief showed that the United States was apparently exporting labor-intensive goods. The Leontief paradox arises if one uses total coefficients (rather than the direct coefficients) in deriving labor and capital requirements. Direct coefficients are defined per unit of output, but the total coefficients are defined per unit of final use. Leontief made this distinction very clear. He lists the two as "requirements per million dollars of output" and "requirements per million dollars of final output." He defined capital and labor requirements for competitive imports as those that would be required if the imports were replaced by domestic production. Leontief found that capital and labor ("man" years) per million dollars of U.S. exports in 1947 were 2,550,780 and 182,313 respectively (in U.S. dollars and 1947 prices). The corresponding figures for competitive imports were 3,091,339 and 170,004 respectively. Thus the capital-labor ratio for a million dollars worth of exports is smaller than the capital-labor ratio for a million dollars worth of competitive imports.

The similarity between the Marxian labor theory of value and input-output analysis has led some to speculate that Leontief was influenced by Karl Marx (Bailey 1994). Perhaps Leontief was influenced indirectly by Marx, but it is more likely that both Marx and Leontief had a common source of inspiration in the French physiocrat François Quesnay (1694–1774), who considered a three-way classification of the French economy—farmers, manufacturers, and landowners.

SEE ALSO *Input-Output Matrix; Social Accounting Matrix*

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LEONTIEF MATRIX

SEE *Input-Output Matrix.*

LEONTIEF-SONO SEPARABILITY CONDITION

SEE *Separability.*

LERNER, ABBA

SEE *Economics of Control.*

LERNER INDEX

SEE *Competition, Imperfect.*

LESBIANISM

SEE *Sexual Orientation, Determinants of.*

LEVELLERS

The term *leveller* has a long history. It seems to have emerged in its modern understanding during the early years of the English Revolution (1640–1660), when it was used to designate the perceived political aims of the Long Parliament (so called because the Parliament sat from 1640–1653, long after it would ordinarily have been disbanded). Later, it referred to a group of agitators both

within and outside of the New Model Army (NMA), which had been formed in 1645 by Parliament in the course of the Civil War/Revolution against Charles I. Yet the Levellers are notoriously difficult to pin down, due in part to the heterogeneity of their composition, the shifting nature of their demands, and the fact that the group of radicals the term is understood to designate rejected the appellation.

The Levellers arose out of agitation for the release of John Lilburne (1615–1657). Lilburne had been a radical cause célebre under King Charles I (r. 1620–1649), who had him publicly whipped, pilloried, and imprisoned in 1638 for publishing Puritan tracts. Lilburne was released from prison in 1641 and became a soldier in the Parliamentary army. He was imprisoned again in 1644 for advocating liberty of conscience and the interests of common soldiers, both of which would be successful planks in later Leveller agitation.

In what is generally understood to be the founding document of the Leveller movement, Richard Overton and William Walwyn published *A Remonstrance of Many Thousand Citizens* in 1646. They demanded the release of Lilburne and listed a number of political and social demands that would become the backbone of Leveller ideology. Most significantly, the *Remonstrance* demanded annual parliaments, an expansion of the voting franchise, a form of progressive taxation, the abolition of the House of Lords, liberty of religious conscience, and a written constitution.

Though the Levellers propagandized with success among civilians, their greatest inroads were made in the New Model Army, which at this time had become the de facto government of England. They combined the political concerns of the *Remonstrance* with the concerns of the army, including inaction on back pay and the failure of Parliament to produce amnesty for acts committed during the Civil War. Plans to disband the NMA and raise a new army for the invasion of Ireland made these concerns more acute, as they threatened to eliminate the political clout of the army.

The NMA Levellers elected Agitators, or New Agents, from each regiment to press these concerns, and with Overton, Lilburne, and Walwyn they produced *The Case of the Armie Truly Stated* and the *Agreement of the People* (1647), vowing that the army would not disband or be deployed until their demands were met.

The tracts were debated at Putney in October and November of 1647, with much of the debates centered around the franchise. Oliver Cromwell, Henry Ireton, and a handful of officers represented the Grandees (the officers of the NMA) against the Agitators, with Ireton taking the lead. Ireton began the attack by cynically arguing that the Agitators had presented a "levelling" scheme (hence the term) that would result in "communism" and ultimately "anarchy." He claimed that the *Agreement*, if adopted, would extend the franchise to persons (including "foreigners") "with no interest" (as manifested in land) in England, and that it would therefore threaten the country's stability. The Agitators responded that they had risked their lives in war, and thus had more "interest" in England than those who had merely risked land. Though arguments for universal manhood suffrage were made, this does not seem to have been the general aim of the Agitators, and such arguments appear for the most part specifically related to suffrage among soldiers.

The general mood of the Agitators tended toward suffrage of persons considered "independent" (i.e., holders of small property) and did not include such persons as "servants and beggars." This position met with surprising success among NMA officers, including Colonel Thomas Rainborough, who became an eloquent spokesman for their cause. On the whole, the Agitators' aims may be summed up in their oft-repeated self-designation—they were for "liberty and propriety," as opposed to "community and levelling."

Though the *Agreement* enjoyed the support of a wide swath of officers and rank-and-file soldiers, it was scuttled by a familiar Cromwellian combination of force, fraud, and circumstance. The Levellers ceased to be a political force after 1648. The terms *leveller* and *levelling*, however, almost immediately entered the political lexicon, mostly on Ireton's terms. As early as 1649, the term *leveller* was in use by Gerrard Winstanley and William Everard, the founders of the Digger colony at St. George's Hill in Surrey, which sought to lay the foundations of a communist society. The group alternately referred to themselves as "True Levellers." A popular Ranter named Abiezer Coppe decried the murder of the "Levellers (so called)" and (in a typically apocalyptic flourish) promised that, as a result, the risen Lord was now going to "levell … in good earnest."

Though Leveller arguments could, in part, be seen at the root of John Locke's *Two Treatises* and other Whig thinking, the terms *leveller* and *levelling* came to represent a sort of radical redistribution of political and economic power, usually synonymous with anarchy. As such it was something of a "hot potato" for those so accused, with the notable exception of the eighteenth-century revolutionary Irish underground organization called the White Boys, who also referred to themselves as Levellers.

The term enjoyed a renaissance of sorts in England around the time of the French Revolution. Elites bankrolled societies for "the Preservation of Liberty and Property against Republicans and Levellers," with "republican" replacing "community." Edmund Burke categorized republican agitation as "mad" levelling schemes that

sought to "pervert the natural [i.e., hierarchical, hereditary] order." Levelling thus retained a strong association with "anarchy," "chaos," and rule by the "rabble." The radical pamphleteer Thomas Paine, whose writings owe a deep (if unwitting) debt to the seventeenth-century Levellers, sought to distance himself from such accusations and turn them on his critics, arguing that a hereditary aristocracy was itself a levelling scheme that ignored merit and elevated the bad, corrupt, and incompetent to positions of power by virtue of birth.

If Paine sought to distance democratic reform from accusations of levelling, plebeian revolutionaries who followed in his wake were less skittish regarding the term, which was used interchangeably in such circles with *radical reformer*. The radical writer Thomas Spence (1750–1814) derived some of his ideas regarding land redistribution from the Diggers, or True Levellers, and he was publishing excerpts from seventeenth-century Leveller writings in his *Pig's Meat, or Lessons for the Swinish Multitude* in the late eighteenth century. In Spence's example, British ultra-radicals reveled in accusations of levelling (and in being part of the "swinish multitude"). The publisher Samuel Waddington's *Medusa*, an ultra-radical publication, spoke approvingly of "levelling," as did the poet Richard "Citizen" Lee, who, perhaps confirming reactionary fears, combined the term with an affection for the guillotine. The wildly popular ultra-radical preacher (and son of a slave) Robert Wedderburn was enormously fond of metaphors of levelling, and he was tried for seditious blasphemy in 1819 partly for linking Jesus Christ with such concerns.

Levelling tended to fall from use in the nineteenth century, when it was replaced by *radical*, *socialist*, *communist*, and other terms that reflected the political landscape of the time. The seventeenth-century Levellers became a subject of great interest both for socialist and Whig historians in the early twentieth century after the discovery of Clarke's minutes of the Putney Debates. These permitted a serious appraisal of just what the Levellers had stood for, and the term has lost its pejorative sense as many of their demands have been achieved and even superseded.

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LEVERAGE

Leverage is the indebtedness of a company, or the process of increasing the indebtedness of a company (as in the phrases "highly leveraged company" or "acquiring leverage"). It is usually measured by one of two *gearing* ratios. *Capital* or *financial gearing* is the amount of debt that a company has relative to its total capital. Alternatively, *income gearing* is the ratio of a company's debt to its total income.

Until the twentieth century, income gearing was the common measure of leverage. This reflected a corporate practice in which the only possible gainful use of debt—that is, aside from its traditional unproductive use in financing consumption or government—was to finance commerce or industry. It followed that the key indicator in determining the amount of borrowing was the possible income that it might generate in trade or production.

With the emergence of active markets in corporate finance toward the end of the nineteenth century in Britain and the United States, the scope for the gainful employment of leverage extended beyond commerce and industry, and into the capital market itself. Once that market became sufficiently large, the return from profitable trade in it was determined by the total amount of capital that could be turned over in that market. In these circumstances, the major consideration was no longer possible future income in trade or production, because these are irrelevant in determining income from arbitraging in the capital market, but the amount of capital that could be applied to a profitable arbitrage. That amount of capital, and hence the income from it, was maximized by adding borrowing to equity. From this emerged the measure of leverage common today, namely the ratio of debt to total capital.

The roots of this change in definition, in the changing business of finance, was obscured in the 1950s by the

famous Modigliani-Miller theorem, which claimed to prove that the value of a corporation is not affected by the division of its capital into equity and debt. But this is under the assumption of a perfect capital market, with no arbitrage possibilities, so that the return on debt was ultimately provided by income from commerce or industry, rather than further financial transactions. The "theorem" set off a number of hares in the academic finance literature to determine whether variations in leverage were caused by capital market imperfections or differences in the tax treatment of interest on debt, as opposed to the tax liability on the return to equity.

By the mid-2000s it was increasingly recognized that the business opportunities available to a company and its liquidity are clearly affected by its leverage. A company with $1 million of equity, tied up in productive equipment and work in progress, is a relatively illiquid company that may experience financial difficulties if a larger than expected bill needs to be paid. That same company with an additional $10 million of debt invested in the money market is a highly liquid company that can cope with larger-than-expected payments. Such a company can undertake new projects without having to waste management time in finding financial backers. Most importantly, it can itself engage in speculative buying and selling of companies in the capital market without reducing its liquidity, as long as that market stays liquid. With the expansion of capital market financing beyond the United States and United Kingdom into Europe and emerging markets elsewhere, leverage is becoming an increasingly widely used way of making medium-sized businesses into large corporations without the tedium of expanding productive or commercial capacity.

SEE ALSO *Capital; Capitalism, Managerial; Corporations; Equity Markets; Finance; Financial Instability Hypothesis; Financial Markets; Liquidity; Loans; Modigliani-Miller Theorems; Overlending; Wealth*

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Jan Toporowski

LEVIATHAN

SEE *Hobbes, Thomas; Social Theory.*

LÉVI-STRAUSS, CLAUDE

1908–

Anthropologist and philosopher Claude Lévi-Strauss, one of the leading figures in structuralism, was born in France in 1908. He studied philosophy in Paris and taught sociology at the University of São Paolo, Brazil, from 1934 to 1938. During these years, Lévi-Strauss traveled in Brazil and lived intermittently with the Amazonian tribes, especially the Nambikwara. The result of this early contact of Lévi-Strauss with precapitalist societies formed the basis of his first book, *The Elementary Structures of Kinship* (1949). He returned to Paris in 1939 to fulfill his military service requirement but had to flee France and the advancing Nazi threat, a flight that brought him to New York. In New York, he lectured at the New School for Social Research and came into contact with the linguist Roman Jakobson (1896–1982), with the Department of Anthropology at Columbia University and the anthropologist Franz Boas (1858–1942), and with the fieldwork- and practice-oriented American anthropology.

The encounter with Jakobson proved decisive for the development of Lévi-Strauss's structuralism. Taking from Émile Durkheim (1858–1917) the notion that religion is part of a symbolic system of human understanding of humanity, Lévi-Strauss developed the theory of human culture as a logical, coherent, but unconscious system of interlocking symbolic subsystems (such as religion, kinship, mythology, and economics). Elaborating further on Marcel Mauss's (1872–1950) theory of gift exchange as a local theory of reciprocity, Lévi-Strauss was able to expand his analysis of symbolic exchange to include marriage and kinship patterns. Jakobson's theory of structural linguistics brought all these theorizations of Lévi-Strauss into a neat package that claims to explain human behavior and culture as an intricate system of analogies between the tactile and the symbolic universe of humanity. His whole scheme of explanation rests on the fundamental notion of Jean-Jacques Rousseau (1712–1778) of savage nobility, where the true nature of the human is only to be found in the state of nature, prior to the corruption of the human by civilization and the development of private property. Lévi-Strauss's indebtedness to Rousseau is evident both in his autobiographical work *Tristes tropiques* (1955), one of the most eloquent and beautifully written books in anthropology, and in *The Savage Mind* (1962, the English title an inadequate translation of the original French *La Pensée sauvage*, with its double meaning of "thinking savage" or "wild pansy").

Lévi-Strauss's structuralism owes its foundational premise to Jakobson and Russian linguist Nikolai Trubetzkoy's (1890–1938) elaboration on the significance of *phonemes* for linguistic structure. Jakobson and Trubetzkoy had shown that phonemes provided linguistic structures with a specific economy of terms of meaning, and that the relationship between those terms is more significant than the terms themselves. Therefore the relationship between the terms that signify death, for instance, is a universal constant, despite the fact that the specific terms are universally different. One way of detecting the significance of the relationship of terms, Lévi-Strauss claims, originally in his three-volume *Mythologiques* (1964–1968) and later in *The View from Afar* (1983), is by looking at myths that are universally constituted by *mythemes* (analogous to the linguistic phonemes). These mythemes, despite the fact that they appear in different terms in the myths encountered throughout in the world, underline the fact that all societies have engaged in the deciphering of the foundational question, which for Lévi-Strauss is always the same, namely, the riddle of the transition from nature to culture, from animality to humanity. Thus myths are the results of unconscious explanations about the origins of humans. The insularity of structuralism as a theory of explanation prompted anthropologist Clifford Geertz in his *The Interpretation of Cultures* to proclaim that Lévi-Strauss has "made for himself an infernal culture machine" (1973, p. 355).

Lévi-Strauss lives in Paris. He has taught for many years at the Collège de France and in 1973 was elected to the Académie française.

SEE ALSO *Anthropology, U.S.; Boas, Franz; Structuralism*

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Neni Panourgiá

LEWIN, KURT
1890–1947

Kurt Lewin was a psychologist with wide-ranging interests in psychological theory, child development, personality, social psychology, and social issues. He was born on September 9, 1890, to a Jewish family in Prussia. His family moved to Berlin in 1905 to provide access to better educational institutions for their children. Lewin entered the University of Berlin in 1910 and completed requirements for the PhD in 1914, under the direction of Carl Stumpf (1848–1936), director of the psychology laboratory since 1894. Lewin then enlisted in the kaiser's army as a private, rose to the rank of lieutenant, was wounded in combat and awarded the Iron Cross. After discharge from the military, he returned to the university and began lecturing and conducting research, receiving an appointment as privatdozent in 1921. He was promoted to *Aussenordenlicher Professor* in 1927. In 1932 Lewin accepted an appointment as visiting professor at Stanford University. His sojourn allowed him to form friendships with a number of American psychologists who assisted him in immigrating to the United States after Adolf Hitler (1889–1945) and the Nazis took control of Germany in 1933. Lewin held a two-year appointment at Cornell University, moved to the University of Iowa from 1935 to 1944, and then to the Massachusetts Institute of Technology from 1944 until his death, from a heart attack, on February 12, 1947.

While in Berlin, Lewin began to study psychological issues considered too complex by the experimental psychologists of the time. He was interested in child development, human motivation and emotion, and personality. He considered the development of theories about these processes to be critical, and the use of experiments to test theory-based hypotheses as essential to progress in psychology. Lewin's overarching theoretical approach was *field theory*, which asserted that human behavior was a function both of the person and the environmental forces acting on the person at the time, giving rise to his famous equation $B(\text{behavior}) = f(\text{function})[P(\text{person}), E(\text{environment})]$. He and his students designed experiments in which theoretically defined variables were manipulated by

complex changes in the social and physical environment. Theories focusing on complex intrapsychic processes and equally complex experimental manipulations were Lewin's unique contributions to the psychology of his time, as well as his legacy in the psychology that would develop after his death. Two books, *A Dynamic Theory of Personality* (1935) and *Principles of Topological Psychology* (1936), provide systematic treatments of his approach. His many experimental reports display his innovations in research methods. Early criticisms of Lewin's work focused on the difficulty and unfamiliarity of the concepts he employed, as well as the complexity of the experimental protocols he used. Over time, these criticisms faded as the psychological issues he explored became important research topics, while the details of his theoretical work received less and less attention. His style of experimentation was adopted by his students and colleagues, notably Leon Festinger (1919–1989), and became a robust tradition in social psychology.

Lewin had a lifelong dream of establishing a research institute that would conduct applied research focused on social issues such as prejudice, intergroup conflict, and social change. He succeeded in establishing the Research Center for Group Dynamics at MIT in 1944, and the Commission on Community Interrelations for the American Jewish Congress in 1945 in New York. An outgrowth of this work was the development of the National Training Laboratories, within which the T-group, or sensitivity training, was created.

Lewin is regarded by many social psychologists as the father of their discipline. He is certainly one of the field's towering ancestral figures, for two reasons. His unique combination of theory with bold experimentation provided the conceptual and methodological tools to study complex human social interaction. And, from his days in Berlin until his death in Massachusetts, he attracted and inspired dozens of students who used those tools to develop many of the central theories and findings in social psychology, including group dynamics, level of aspiration, social comparison processes, and action research.

SEE ALSO *Social Psychology*

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Darwyn E. Linder

LEWIS, OSCAR
1914–1970

The anthropologist Oscar Lewis is best known for devising the "culture of poverty" theory and applying the life history and family studies approach to studies of urban poverty. The concept of the culture of poverty is cited often, especially in the popular press, and at times it is misapplied as an argument that supports the idea of "blaming the victim." Not surprisingly, given the continuing salience of debates about the causes of poverty, Oscar Lewis's legacy within anthropology and the social sciences is still very much debated. Indeed, the notion of a "culture of poverty" has since reemerged in discussions of the "urban underclass." While most researchers view the causes of poverty in terms of economic and political factors, there is still a strain of thinking that blames poverty on the behavior of the poor.

Oscar Lewis was born on December 25, 1914, in New York City, and he was raised in upstate New York. He received a BA in history from the City College of New York While in college he met his future wife, the former Ruth Maslow, who would also become his co-collaborator in many of his research projects. He enrolled in graduate school in history at Columbia University, but under Ruth Benedict's guidance he switched to anthropology. Partially due to a lack of funding, his PhD dissertation on the impact of white contact on Blackfoot culture was library based. After graduating he took on several jobs, including United States representative to the Inter-American Indian Institute in Mexico, which led him to begin conducting research on the peasant community of Tepoztlán. Lewis's critique of Robert Redfield's 1930 study of the same village is considered a classic in Mexican anthropology. Lewis's research shows, in contrast to Redfield's, that peasant culture in Tepoztlán is not based on "folk" solidarity but is rather highly conflictual, driven by struggles over land and power. In 1948 Lewis joined the faculty at the University of Illinois at Urbana-Champaign, where he was one of the founders of the anthropology department.

During his tenure at Illinois, Lewis produced his best-known works including *Five Families* (1959), *The Children of Sánchez* (1961), and *Anthropological Essays* (1970). In both *Five Families* and *The Children of Sánchez*, Lewis describes the culture of poverty theory and provides rich insights on urban poverty in Mexico through the narratives of his informants. In *Anthropological Essays*, Lewis reiterates the culture of poverty theory, which at its most basic level is an adaptation to economic circumstances: "The culture of poverty is … a reaction of the poor to their marginal position in a class-stratified, highly individuated, capitalistic society" (Lewis 1970, p. 69). Included in Lewis's trait list of the culture of poverty are feelings of inferiority and aggressiveness, fatalism, sexism, and a low

level of aspiration. Lewis saw the culture of poverty as resulting from class divisions, and therefore present not only in Mexico but throughout the world.

Because Lewis's description of the poor went against the clean-cut image presented by the Mexican media, there was, within Mexico, harsh criticism of the notion of a culture of poverty. This response, as Miguel Díaz-Barriga (1997) points out, obfuscates the overlap between Lewis's representations of the urban poor and Mexican social thinkers such as Samuel Ramos and Octavio Paz. Díaz-Barriga shows that in their interviews, many of Lewis's informants ironically played off of well-known stereotypes of the urban poor, and that Lewis took their statements literally.

In the United States, the culture of poverty theory became well known through its application in Daniel Moynihan's 1965 report for the Department of Labor, *The Negro Family: The Case for National Action*, which informed national policymaking, including Lyndon B. Johnson's War on Poverty. By focusing on the "pathologies" that emerged from slavery, discrimination, and the breakdown of the nuclear family, Moynihan saw the emergence of a culture of poverty among the African American poor. This emphasis on the pathologies of poverty has since been reframed in terms of theories of the urban underclass that seek to understand the urban poor as being both economically and culturally isolated from the middle-class. While sociologists such as William Julius Wilson (1980) have devised sophisticated understandings of the urban underclass, this concept, especially in the popular press, has become a stand-in for arguments that see the causes of poverty in terms of cultural pathologies.

In their well-known 1973 refutation of the application of the culture of poverty theory, Edwin Eames and Judith Goode argued that many of the characteristics associated with poverty, including matrifocal families and mutual aid, are rational adaptations. The continuing prevalence of poverty, they stated, must be understood in terms of restricted access to and attainment of job skills. Studies that pathologize the poor have received justified criticism for privileging middle-class values, being vague about the overall characteristics of poverty and their interrelations, and viewing matrifocal households as being a cause rather than a result of poverty. The historian Michael Katz argues that, when given educational and employment opportunities (instead of dead-end service sector jobs), the urban poor aspire to succeed as much as their middle-class counterparts. Katz convincingly calls for a historical understanding of the educational, housing, and economic policies that have generated urban poverty.

As evidenced by essays marking the fortieth anniversary of the Moynihan Report in the popular press, many continue to believe that the culture of the poor must be understood as a cycle of broken households and disruptive behavior. This renewed cycle of applying the culture of poverty theory represents the pathological ways that American society has sought to overcome class-based and racial inequalities. Indeed, it is easier to blame the poor for their poverty than to do the hard work of understanding the historical and economic factors that have generated poverty and the policy options that can transform cities.

When Oscar Lewis died, on December 16, 1970, social scientists were beginning to forcefully criticize his work for blaming the victim. Lewis's death at fifty-five years old was particularly untimely because he was not able to respond to these critiques. Indeed, the social sciences lost an opportunity to engage Lewis's responses and, perhaps, reach agreement on more fruitful ways to explore urban poverty.

SEE ALSO *Culture of Poverty; Moynihan Report; Moynihan, Daniel Patrick; Poor, The; Poverty*

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Miguel Díaz-Barriga

LEWIS, W. ARTHUR
1915–1991

William Arthur Lewis was quintessentially Caribbean. Born on January 23, 1915, in colonial St. Lucia of immigrant Antiguan parents who were both schoolteachers, he spent much of his life living in Britain or the United States but working on the problems of the Caribbean, Africa, Latin America, and Asia. In 1933, on a government scholarship, Lewis went to the London School of Economics (LSE) to do the Bachelor of Commerce degree. He graduated with first-class honors in 1937 and received a scholarship to do the PhD in economics, which he completed in 1940. In 1979, Lewis shared the Nobel Prize in economics with Theodore Schultz for pioneering research into economic development, in particular the problems of developing countries.

Lewis's great achievements were in economics, but he also had a distinguished career as an administrator. He was UN Economic Adviser to Kwame Nkrumah, the prime minister of Ghana, deputy managing director of the UN Special Fund, vice-chancellor of the University of the West Indies (1960–1963), and founder of the Caribbean Development Bank (1970–1974). By his account, this experience taught him more about policy than economics and motivated his publications on development planning. Scholarly enrichment came from his travels (Lewis 1994, p. xlviii).

Lewis published extensively on industrial economics after 1937, then published *Overhead Costs* in 1948 and dropped the subject. In 1948, at age thirty-three, Lewis became a full professor at the University of Manchester. There, he tackled development economics, addressing: (1) the fundamental forces determining the rates of growth of agricultural and industrial countries or sectors; (2) the relative price of agricultural and industrial products; and (3) distribution—the adjustment of the real wage rate and wage share of output as capital accumulates. As Lewis tells it, one day in August 1952, on the road in Bangkok, he saw the common solution to these problems: Use the classical assumption of "an unlimited supply of labor" available to a capitalist sector from an indigenous noncapitalist sector "at subsistence wages" (Lewis 1992). Unlimited supplies keep the wage low and fairly constant and generate a high rate of profit and a low relative price of agricultural output. They also allow creation of new capital with technological progress, a rising rate of profit and savings, and expanded employment and output in the capitalist sector without raising consumption per worker. This initially causes faster growth in industrial countries because they reap all the benefits of technological progress. However, as industrial countries face rising wages, they export capital and encourage immigration, thereby allowing the growth rate of surplus labor countries to catch up. How much growth these capital exports generate for surplus labor countries depends partly on their natural resources, capital stock, demand in industrial countries, and the terms of trade. Lewis published this solution in his classic 1954 article, "Economic Development with Unlimited Supplies of Labour."

In 1963, Lewis took up a new professorship of political economy at Princeton University, a position he held until his death on June 15, 1991. At Princeton, Lewis used the growth channel of his "unlimited supplies" model to clarify the evolution of the international economic order since 1870. Trade is the principal link through which growth of industrial countries causes growth of the labor-surplus countries. Moderated growth in industrial countries causes slower growth of surplus-labor countries, unless an alternative growth engine is found. One option is a greater share of the markets of industrial countries, but this is unreliable. Preferable is growing trade among surplus-labor countries. This alternative trade engine could arise if a sufficient number of the large surplus-labor countries, such as India and Brazil, can end trade dependence on industrial countries, achieve self-sustaining growth, and provide alternative markets to the others. Lewis published these findings in his book *The Evolution of the International Economic Order* (1978) and his 1980 Nobel Lecture, "The Slowing Down of the Engine of Growth." By his logic, the current explosion of growth in excess of 7 percent per annum in Brazil, China, and India should provide much stimulus for the development of other surplus labor economies.

Lewis's Bangkok inspiration was rooted more firmly in influences of economic historians of the British nonrevolutionary socialist Fabian Society. Leading earlier members Barbara and J. L. Hammond (1917) had argued that the English industrial revolution was possible mainly because the emerging bourgeoisie could attract a large redundant rural labor force into urban industrial activity at low and constant wage rates. Lewis's firsthand knowledge of the Caribbean and observations of Egypt and Asia convinced him that a similar exodus could also underwrite an industrial revolution in those and similar countries where many nonindustrial subsistence workers contribute a zero or negative marginal product. However, an attendant condition was active trade unions and an emerging class of entrepreneurs or an active government operating

democratically and dedicated to making and accumulating capital. Lewis (1949) summarized the main arguments in a Fabian pamphlet, foreshadowing the arguments of the 1954 paper.

From the start, economists questioned the updated classical assumption, the assumption that surplus labor only creates new capacity within the capitalist sector, along with Lewis's pessimism about the ability of surplus-labor countries to win a greater share of developed-country markets. Schultz (1964) used neoclassical data, competitive conditions, the assumption of rationality, and evidence from Egypt and Asia to argue that the marginal product of labor is neither zero nor negative. With transformation of traditional agriculture, rural wages could fall low enough relative to the marginal product in agriculture to enable full employment. Lewis's views amounted to assuming either an uncompetitive market or a distorted preference for leisure among agricultural workers.

Lewis himself viewed peasants as hardworking and thrifty and held that the main problem was a capitalist sector that is too small or disinclined to transform agriculture by accumulating capital (Lewis 1936, 1949, 1954, 1955, 1968, 1979). Amartya K. Sen (1966) also objected to Schultz, citing contrary evidence for India and observing that Lewis's assumption really means that the marginal product in the capitalist sector is greater than the average product of the subsistence sector. Nevertheless, Lewis's essential difference with Schultz on the capitalist wage is that its floor is set by the average productivity of the self-employed. As William Darity (1984) observed, Lewis employed an economic anthropology of traditional agricultural systems. Subsistence workers were household and community members who could not be easily dismissed without damaging established family and social norms. They could opt for the average benefits of the family operation rather than a lower capitalist real wage and thereby cause a breakdown of Adam Smith's law of demand.

Perceptive critiques of Lewis also came from the Caribbean. In three major proposals on Caribbean industrialization, Lewis proposed attracting multinational corporations to lead the process (Lewis 1950, 1951; UN 1951). Lloyd Best lampooned the strategy, naming it "industrialisation by invitation" and calling Lewis an "Afro-Saxon" (Best 1999). Multinational corporations would continue to import labor-displacing capital, re-create surplus labor, repatriate high rents, avoid the push for good governance, and promote repression of radical labor and neglect of the peasantry, as Lewis himself had complained (Lewis 1936). More important, the subsistence sector included viable entrepreneurs and collaborators producing and accumulating capacity and trading with the capitalist sector, not as pain and trouble but for the pleasure of building an alternative to the legacies of slavery and strict indenture. The market for labor was tighter than Lewis implied and rising real wages were inevitable (Best 1975). Once import substitution started in the Caribbean, this became evident, but Lewis found it perplexing (Lewis 1958, 1968).

Yet Lewis's formulations can accommodate the Caribbean critique. His geometry of the marginal product of labor features diminishing returns to capital scarcity and an implicit production function that may not be algebraic and is dynamic, taking into account net capital accumulation, technical progress, increasing returns, and an underlying multiplier linked to the capitalist employment rate and the ratio of the marginal product of labor to its maximum. It allows residual profit at a rate different from the marginal product of capital and an independent distribution identity, and can be updated to account for rents on imported capital and production and accumulation of domestic capacity. With deliberate domestic capacity creation and supporting policy for their indigenous sectors, abundant externalities and stabilized rentals on imported capacity can replace Lewis's cheap constant wage as the driver of the savings mechanism, and surplus-labor countries need not be pessimistic about winning higher market share in industrial countries over time in the context of rising real wages. These adjustments would still be consistent with Lewis's view of how to achieve balanced growth, clarified in his 1949 note on "Colonial Development" in United Nations (1951) and in Lewis (1954, 1964). So, Lewis's independent marginal product function and his associated price, distribution, and growth theories represented major steps in clarifying how surplus-labor countries grow and the wider world economy evolves. They hold as limiting cases, providing an updated classical alternative to the increasingly dominant neoclassical theory of growth and trade, and they still apply to many countries of the world today. Viewed in this light and his time, Arthur Lewis was among the best of his generation and one of the greatest economists of all time.

SEE ALSO *Development; Development Economics; Dual Economy; Economics, Nobel Prize in; Fabianism; Industrialization; Labor, Surplus: Conventional Economics; Nkrumah, Kwame; Noncompeting Groups; Peasantry; Sen, Amartya Kumar; Subsistence Agriculture; Wages*

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Vanus James

LEXICOGRAPHIC PREFERENCES

Once behavioral economists took seriously the limited information-processing capacity of the human brain (bounded rationality), they had to replace the neoclassical economic theory of consumer choice. The previous theory assumed additivity—the capacity to weight and add up all of the various features of all goods and thus rank and compare them to maximize utility within one's budget. Lexicographic preferences are consistent with bounded rationality. Economists conceive of a consumer having a manageable list of product characteristics organized ordinally, like an alphabetized dictionary. Consumers compare products with respect to the highest-ranked characteristic, and if one product is imagined better in that characteristic, the search stops and purchase ensues. If not, the consumer goes on to the next characteristic and repeats the procedure. This requires much less information processing than the additive model. It implies that other product features cannot compensate for failure to qualify on the first priority features. Price can be considered as just another product characteristic, and it may not be at the top of the list.

Theorists such as Peter Earl (1983) added uncertainty considerations to the basic conception without the computational requirements of attaching numerical probabilities to the satisfaction expected from consuming a product. A consumer may conceive of an acceptable gamble beyond which possible gains are not attractive.

Lexicographic preferences have implications for producers. Earl suggests that advertising should be aimed at changing consumers' priority rankings rather than emphasizing their product's strong points. If products are comparable with respect to high priority features, it may pay to introduce new product dimensions to meet emerging and created demands ahead of competitors. The theory lends itself to market surveys of yes-no questions rather than complicated sets of numerical tradeoffs.

In modern marketing, firms invest heavily in brand preeminence, perhaps hoping to displace any kind of characteristic comparison, simple or weighted. Further, firms search for how to create an image with which the

consumer personally identifies. An emotional trigger that forestalls comparison is the ultimate lexicographic process. People do not necessarily have either probable values attached to products or priority lists for all categories of purchases. Decisions to buy may be formed in the particular case and are description, context, and procedure dependent. Daniel Kahneman (1999) suggests that people imagine an answer to the subjective happiness question on the fly, instead of retrieving preferences from memory. Stores aim to create impulse purchases.

A complementary conception of choice conserving of mental energy involves allocating one's budget to broad categories of spending all within a total budget constraint. Once the categories are set, there may be little substitution of items from one budget to another. Further, there seems to be a class of products that are pursued initially regardless of cost.

Some economists consider the inability of lexicographic preferences to provide deterministic formal support for the theory of market equilibrium as a drawback, while others were never fascinated with theoretical equilibrium in the first place.

SEE ALSO *Choice in Economics; Choice in Psychology; Cognition; Economic Psychology; Economics, Behavioral; Endogenous Preferences; Equilibrium in Economics; Gambling; Happiness; Information, Economics of; Preferences; Preferences, Interdependent; Rationality; Risk; Uncertainty; Utility, Subjective*

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A. Allan Schmid

LIABILITIES

SEE *Wealth.*

LIBERAL PARTY (BRITAIN)

The Liberal Party in Britain was formed in March 1988 as the Social and Liberal Democratic Party (SDP) when the Liberal Party merged with the Social Democratic Party. A vote in July 1989 finalized its new name as the Liberal Democrats. The two merging parties had merely strengthened the alliance between the two parties that had existed from 1981 and that had operated since that year under the dual leadership of David Steel (Liberal) and David Owen (SDP). In 1988 Owen refused to agree to the merger and Steel, although he led the Liberals into the merger, declined to lead the new party. The leadership of the new party fell to Paddy Ashdown who won a contest against Alan Beith, in July 1988. Ashdown now led a small struggling party whose position was thwarted by the fact that Owen continued to operate outside the merger with his short-lived continuing SDP, and Michael Meadowcroft, Liberal member of Parliament (MP) for Leeds West, refounded the by now miniscule Liberal Party. Nevertheless, since that period the Liberal Democrat leaders Ashdown, Charles Kennedy, and Ming Campbell have successfully revived the status of the Liberal Democrats, and indeed the old Liberal Party, to a level of political success not seen since the 1929 general election.

The revival of the Liberal Democrats began with a by-election victory at Eastbourne in October 1990, an event that contributed to the fall from office of Prime Minister Margaret Thatcher. It continued to secure victories in parliamentary by-elections and in municipal contests, although it won only twenty seats in the House of Commons in the 1992 general election, securing only 18 percent of the vote, an insufficient number to project it to major success under the first-past-the-post (winner takes all) British system of electing the House of Commons. Nevertheless, the Liberal Democrats have continued to grow in number and influence, largely on a mixture of Liberal policies, and have risen to approximately 60 members of Parliament (MPs).

Traditionally the Liberal Party has been committed to free trade but by the 1980s it was drifting toward the view that government might, under some circumstances, be justified in intervening in economic growth. It also supported the Conservative Party in Europe in 1993 by endorsing the Conservative government and the Maastricht Treaty in 1993. The Party supported the Labour Party under Prime Minister Tony Blair, following the general election of 1997, and particularly supported the Labour government's moves toward devolution for both Scotland and Wales, the Celtic areas that the Liberal Democrats and the old Liberal Party had traditionally considered to be their strongholds. However, its distinctive demand for proportional representation in elections marks it off from the Conservative and Labour parties, who prefer to maintain the existing winner-takes-all strategy of British parliamentary politics. Although Blair set up a commission on changes in the voting system under Lord Roy Jenkins of Hillhead, LDP leader in the House

of Lords, to examine alternative political systems and to make recommendations, the Labour government has shown scant interest in any system that would undermine its massive parliamentary majorities secured under the winner-takes-all system. Nevertheless, the Liberal Democrats had an indication of what might be elected when the European elections of June 1999 were conducted on a basis of proportional representation. Under the winner-takes-all system used in 1994 they secured only two members of the European Parliament (MEPs) with 17 percent of the vote. In 1999 they secured ten MEPs with only 13 percent of the vote.

Although it attracts support from across the social divide, the Liberal Democrat Party tends to attract middle-class and professional people committed to the ongoing protection of individual rights but who are prepared to accept that the state has an important social role to fulfill. It is now no longer the party of big business as it was in the nineteenth century but more that of the small shopkeeper and the small businessperson. It also represents the interests of some of the old right-wing Labour voters who left the Labour Party in 1981 to form the SDP, and which finally flowed into the Liberal Democrats.

Despite its growth, the Liberal Democratic Party of today is a far less successful party than the old Liberal Party that emerged in the mid-nineteenth century, even though its policies are still largely in tune with the old Liberal Party. The Liberal Party is considered to have emerged at a meeting at Willis's Rooms in 1859 when the Whigs, Peelite Tories who opposed protectionism, and radicals met to serve under Lord Palmerston. The group was subsequently led by Lord John Russell and W. E. Gladstone, who firmly established Gladstonian Liberalism in his 1868–1874 and 1880–1885 ministries and drew considerable support from the nonconformist religions at this time. From the start the Liberal Party was committed to free trade, religious toleration, efficiency, and an international policy of promoting peace. Although the Nonconformist association has long gone, most of the other policies are reflected in the modern Liberal Democrats. The Liberal Party operated throughout the country in Liberal clubs organized into constituencies through local bodies that denoted their number: the Liberal Two Hundred or the Liberal Four Hundred. These groups were brought together and given a sense of unity by the formation of the National Liberal Federation in 1877.

Under Gladstone the Liberals split in 1886 on the issue of Home Rule for Ireland, the Home Rule supporters siding with Gladstone and the Unionists, who favored the continuation of the union with Ireland, moving with Joseph Chamberlain into the Conservative Party. Lord Rosebery, who succeeded Gladstone in 1894, pressed for issues such as temperance, strongly supported by the Nonconformists and the disestablishment of the Welsh Church. However, the divided party struggled until 1905 when it replaced the Conservatives and won a general election in 1906. This brought about a landslide Liberal victory, which sustained the Liberal Party in office until 1915 with the help of two further general elections in 1910. During these years the Liberals, greatly influenced by their parliamentary leader Henry Campbell-Bannerman, Prime Minister Herbert Asquith, and their Chancellor of the Exchequer, David Lloyd George, introduced the Liberal social reform of old-age pensions and national insurance, which were designed to alleviate poverty and avoid the need for a costly break-up of the New Poor Law. However, though these were remarkable developments, the Liberal Party found difficulty in prosecuting effectively Word War I, which started in 1914, and Asquith formed a wartime coalition government in 1915. As a result when Asquith resigned as prime minister in 1916, perhaps with the expectation of being brought back, Lloyd George stepped into the breach. The result was a split within the Liberal Party, which was not officially healed until 1923. Even then the Liberal Party remained divided, and by the 1930s there was the Lloyd George group, the Samuel group, which was the old Liberal Party, and the Sir John Simon Liberals, who joined the Conservative Party. Long before this final split the Labour Party had replaced the Liberal Party as the progressive party of government in British politics. Over the next fifty years the Liberals declined as a party, with occasional revivals under Jo Grimond and Edward Thorpe as well as a brief period of a Lib-Lab Pact in 1977–1978. However, none of this brought the revival of the Liberal Party back to the position of being a party of government, and even under the modern Liberal Democratic Party the prospects of forming a government remain extremely remote.

SEE ALSO *Multiparty Systems*

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Keith Laybourn

LIBERALISM

Liberalism has been conceived of as at once a political philosophy, as an allied political movement, and as a way of thinking about the foundations and practices of government. Liberalism has historically been defined by a great diversity of ideas, largely due to the changing contexts within which and against which liberal thought has taken shape. Despite this diversity, there are a number of basic premises common to all liberal traditions. The most central of these is a valorization of the individual and of individual liberty, and much liberal debate has concerned the conceptions of human nature that undergird these terms. Linked to this, liberal thought has been preoccupied with how individuals should govern and be governed with the least possible intervention or coercion. While liberalism arose simultaneously with the Enlightenment as an often revolutionary response to religious and absolutist forms of government, liberal democracy has, in the aftermath of the Cold War, become the dominant form of government.

HISTORY

While the term *liberal* was not commonly used until the mid-nineteenth century, much liberal thought traces its origins to early modern writing, and in particular to John Locke's (1632–1704) writings on natural law in the context of the Glorious Revolution of 1688. Against the doctrine of the divine right of kings, Locke ([1690] 1988) argued that individuals are God's property and as such have a natural right to the means of survival—life, health, liberty, and property. The social contract is not, as it was in Thomas Hobbes (1588–1679), necessitated by fear, but rather secures the protection of the natural rights that individuals enjoyed in the state of nature. Locke's most lasting contributions to liberal theorizing were his conception of civil society as a society of free men, equal under the rule of law, and the link he drew between liberty and property. Locke's thought and in particular the emphasis he placed on consensual government would become central in the formulation of the American Declaration of Independence and the U.S. Constitution.

With the eighteenth-century Scottish Enlightenment and the rise of free market capitalism, liberal thought came to entail a more encompassing framework, including most importantly an economic theory. Against mercantilism, Adam Smith (1723–1790) argued in *The Wealth of Nations* ([1776] 2000) that a free market economy, if left to its own devices, would automatically regulate itself through an "invisible hand." Smith viewed human nature as inherently propelled by self-interest that is, however, softened by the capacity for "sympathy." Through the process of competition, individuals would fulfill their self-interest and, in the process, produce a balanced society. On the European continent, the Enlightenment tradition was defined by a much more rationalist conception of human nature that centered on the individual ability to reason and to direct change. The conceptions of individual reason and limited government in the work of Immanuel Kant (1724–1804) and Wilhelm von Humboldt (1767–1835) in Germany and Voltaire (1694–1778) and the Marquis de Condorcet (1743–1794) in the context of the French Revolution (1789–1799) had a lasting influence on liberal thought.

In the nineteenth century, English liberal thought developed an increasingly rationalistic turn. Starting with the utilitarianism of Jeremy Bentham (1748–1832) and James Mill (1773–1836), increasing trust is placed in the human capacity for reason and for the rational design of social institutions. The principle of utility, which in Adam Smith was reduced to individual calculations unknowable to the sovereign, now becomes the basis of governing society as a whole. Human action, argue the utilitarians, needs to be judged according to whether it promotes the greatest happiness for the greatest number of people. John Stuart Mill (1806–1873), while placing himself within the utilitarian tradition, argued that representative democracy was the best system to ensure that everyone had the freedom to pursue his own conception of happiness. In his most seminal contribution to liberal thought, *On Liberty* ([1859] 1989), Mill sought to fuse his father's utilitarianism with a strong defense of individuality and personal autonomy. His argument hinged on the idea of character and "self-development" based on a notion of human nature as perfectible. By extension, however, Mill's argument allowed for gradations of democracy based on the principles of civilization and progress that, especially in the colonies, entailed the justification of despotism (Mehta 1999).

In the early twentieth century, in the context of the crisis of the free market regime and the rise of socialism, a more state-centered strand of liberalism developed in Britain that sought to balance individual freedoms with equality in the form of welfare provisions. Elaborated in the work of sociologist Leonard Hobhouse (1864–1929) and later supported by the economic theories of John Maynard Keynes (1883–1946), the "new liberalism" was central to the development of the welfare state. In the aftermath of World War II (1939–1945) and in the context of the Cold War, a liberal conception and critique of totalitarianism arose in the work of Karl Popper (1902–1994) and in Isaiah Berlin's (1909–1997) conception and valuation of negative liberty (freedom from) over positive liberty (freedom to). For much of the century, however, welfare-state liberalism remained hegemonic in liberal thought and politics.

However, in the context of the crisis of the 1970s and rising critiques of the welfare state, liberal debate on the

role of the state was reinvigorated. Arguing against the aggregating postulates of utilitarianism, John Rawls's (1921–2002) *A Theory of Justice* (1971) proposes a neo-Kantian, rights-based conception of "justice as fairness." Against a teleological conception of the good, this contractarian approach is premised on a heuristic device Rawls terms the "original position" in which individuals are imagined to be behind a "veil of ignorance" about their potential standing and attachments within society. From this position of distance and ignorance, individuals will rationally decide on a generalizable principle of justice. Importantly, this conception enables Rawls to move away from making any substantive claims about the public good or liberal society, to instead propose a proceduralist conception of justice based on rights rather than any particular version of the good. Partly as a response to his critics, Rawls (1993) later proposed the concept of political liberalism. Here, the question of pluralism is addressed by reducing the conception of justice to the idea of public reason defined by an "overlapping consensus." According to Rawls, this revised conception is necessitated in order to guarantee the stability of society in the context of diverging conceptions of the good.

In a 1974 critique of *A Theory of Justice*, Robert Nozick (1938–2002) proposes a minimal state, responsible primarily for the protection of private property. Friedrich von Hayek (1899–1992), who had throughout the period of welfare-state liberalism argued against state intervention into the economy, became one of the most influential proponents of a return to classical liberalism. Drawing on the Scottish Enlightenment tradition, Hayek proposed that society and in particular the economic sphere were unknowable to policymakers and would be governed by a "spontaneous order" as long as state intervention would be reduced to sustaining a peaceful order. Hayek's theorization of the limits of state reason became one of the most influential tracts in the rise to hegemony of neoliberalism in the last decades of the twentieth century.

LIBERALISM AND ITS CRITICS

Critiques of liberalism have usually converged on liberalism's disembodied conception of the individual. Edmund Burke's (1729–1797) writing on the French Revolution ([1790] 2001) lay the groundwork for the conservative critique of liberalism. Burke posited the organic nature of traditions evolved over time against what he perceived to be the ephemeral and dangerous rationalism of the Enlightenment. More recently and in explicit response to John Rawls, what has come to be known as the *communitarian critique* faults liberalism on both an ontological and a normative basis. The individual, communitarians like Michael Sandel (1984) argue, is not presocial; rather, the individual only emerges through and within social and communal relations. Secondly, a society of atomized individuals is undesirable, since it removes the individual from the relations through which life becomes intelligible (MacIntyre 1981) and morally meaningful (Taylor 1979).

In his critique of liberal conceptions of freedom, Karl Marx (1818–1883) argued that the political emancipation of the individual is enabled by removing all difference from the political to the private realm. The liberal conception of autonomy is thus fictitious in that an individual's socioeconomic and religious particularities continue to exist outside liberalism's purview. Later, and here more explicitly linking liberalism to the rise of capitalism, Marx showed the ambiguities of liberal emancipation, famously suggesting that capitalism freed workers to sell their labor-power in the market place and simultaneously "freed" them from the means of production.

Similarly concerned with the constitution of the individual, Michel Foucault (1926–1984) viewed liberalism as a political rationality, as a practical way of thinking about the modalities and targets of government. Liberalism entails both the critique of previous ways of governing and the rise of new modalities of power that seek to produce a citizenry capable of self-government. Processes of responsibilization, disciplining, and normalization are thus not antithetical to liberalism, but rather the condition for liberal forms of rule. Liberal freedom is here not conceived of as the gradual removal of state intervention, but as entailing a new regime of power and a new approach to how one should govern oneself and others.

SEE ALSO *Cold War; Colonialism; Foucault, Michel; French Revolution; Globalization, Social and Economic Aspects of; Hobbes, Thomas; Identity; Locke, John; Marx, Karl; Marxism; Neoliberalism; Pluralism; Rawls, John*

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Antina von Schnitzler

LIBERALISM, BLACK

SEE *Black Liberalism.*

LIBERALIZATION, ORDER OF

SEE *Liberalization, Trade.*

LIBERALIZATION, TRADE

In 1960 less than one-sixth of the countries in the world had open trade policies. Most countries had various types of trade restrictions such as high tariff rates (taxes on imports) and extensive nontariff barriers (such as quotas that restricted the physical quantity of specific imports allowed into a country). In addition, the official exchange rate often exceeded the black-market exchange rate, and governments exercised monopoly controls on exports and other trade-related matters. Yet by 2000 three-quarters of the countries in the world had removed many of these impediments and were now open to international trade. This is a remarkable transformation and highlights the importance of trade liberalization in the global economy.

What precipitated the extensive trade liberalization that occurred? Much of the credit is usually given to the sixty years of multilateral trade negotiations that has resulted in ever-lower trade barriers under the auspices of the General Agreement on Tariffs and Trade (GATT). Since GATT's inception in 1947, manufacturing tariffs in industrialized countries have fallen from 40 percent to 4 percent, and world trade has increased eighteenfold. Initial GATT membership of 23 countries expanded to 148 countries and the trade rounds became the international forum in which member governments agreed on rules for the conduct of international trade. The multilateral trade agreements involved nondiscriminatory tariff reductions so that all countries benefited—the "most favored nation" clause—and the tariff cuts were "binding" and could not be restored at a later date.

Countries would not have agreed to lower levels of import protection unless there were good arguments in their favor. Trade liberalization allows countries to specialize production and export in their areas of relative strength and to import products that other countries can make at lower cost. It enables access to a wider range of products, and access to foreign products helps diffuse innovations and new technologies. Openness to trade provides additional competition that can spur local firms to greater efficiency and keeps domestic prices low.

In the context of developing countries, a series of country studies sponsored by the World Bank, the Organization for Economic Cooperation and Development (OECD), and the National Bureau of Economic Research demonstrated that trade barriers imposed significant costs, whereas trade openness appeared to be associated with improved economic performance, although the underlying empirical research has not gone unquestioned (Rodrik 1999). For these countries, import substitution using high effective rates of protection had been the dominant vehicle by which industrialization has proceeded. Initially, local suppliers would have to be nurtured and protected from the competitive pressures applied by long established foreign producers. Over time, domestic inefficiencies would decline as these "infants" learned from experience and were able to reduce costs of production. The end result would be a far more diversified and self-reliant industrial structure less dependent on the vagaries of international commodity prices. In the 1970s increasing disenchantment with this strategy emerged, and an alternative approach, identified as outward- (or export-) oriented and associated with East

Asian development, became more popular and trade barriers fell (Edwards 1993).

While trade barriers in manufacturing have fallen extensively, the trade liberalization agenda has expanded its scope and consequently run into considerable difficulties. In 1995 GATT's successor, the World Trade Organization (WTO), became operational. Whereas GATT focused on trade in goods, the WTO concentrates on trade in services, intellectual property, and agricultural subsidies. According to the OECD, rich countries spend $280 billion a year on agricultural producer support; agricultural price support amounts to 20 percent in the United States, 50 percent in Europe, and 80 percent in Japan. These agricultural subsidies are trade-distorting, encouraging supported farmers to produce more, and this in turn lowers world prices and hurts farmers in poor countries that have a comparative advantage in the production of these subsidized commodities. Poor countries want agricultural liberalization in rich countries, yet there has been little progress in persuading richer countries to dispense with these subsidies. This leads credence to the claims about unfairness in trade negotiations made by Kevin Watkins and Penny Fowler in *Rigged Rules and Double Standards* (2003).

Trade in services, especially related to issues of labor mobility across national boundaries, and TRIPs (trade-related aspects of intellectual property rights), which are of special interest to the pharmaceutical and software industries, are equally contentious issues. The latter is related to the manufacture of generic drugs and their sales to poor countries. Claims for "fair trade" rather than "free trade" cloud trade negotiations even further, because nongovernment organizations have been advocating "social clauses" in trade liberalization agreements relating to child labor, human rights, the environment, wages, and conditions. Their position is that trade sanctions should be imposed against countries that do not meet international standards in these areas.

Given these stumbling blocks and complications, it is not surprising that there has been a move away from multilateral forums to negotiated bilateral or regional trade agreements outside the WTO framework. More than 300 such preferential trade agreements exist as of 2007. Whether these agreements assist global trade liberalization or hinder the process is not clear (Bhagwati 2002).

Trade liberalization is only part of a broader globalization movement and it needs to be carefully sequenced with other policy reforms. In general, trade liberalization should precede financial liberalization, domestic financial liberalization should precede external financial liberalization, and direct investment liberalization should precede portfolio and bank loan liberalization (capital account liberalization). Free inflows of foreign financial capital should only be allowed at the tail end of a liberalization program, and controls on suddenly increased inflows of short-term capital may be warranted. The purpose of these controls is to quarantine economies from excessive "hot" money inflows and outflows that disrupt economic stability and lead to exchange rate misalignments.

Overall, the welfare effects of trade liberalizations fall within the realm of second-best economics. There is still dispute about the direction of causation in the association between openness to trade and East Asia's rapid growth. What role have trade liberalization packages played in the performance of outward-oriented economies? A number of these countries, such as Japan, Korea, Singapore, and Taiwan, have promoted exports, but in an environment where imports had not been fully liberalized. The success of the East Asian countries with export-led growth suggests that some selectively determined degree of government intervention played a key role. Imports and lower tariffs may stimulate productivity, but import competition may have little impact on productivity growth if the domestic producers are technologically backward: Benefits accrue only to domestic producers that are roughly comparable to their foreign counterparts. This, then, suggests a role for trade-adjustment packages and safety nets for those disadvantaged by trade liberalization.

SEE ALSO *Barriers to Trade; Quotas, Trade; Tariffs*

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John Lodewijks

LIBERATION

Liberation entered the English language during the fifteenth century. In modern terms liberation has taken on a political meaning to describe a condition of being free from impediments and more particularly activities leading toward the removal of restrictions to free action by a group or a person defined by nationality, race, gender, sex-

ual orientation, or class. *Free action* is used here in relation to other key concepts that are part of the modern discourse of political life: autonomy, self-determination, and sovereignty. The development of a modern sense of individual rights, or the rights of a group of people to make decisions over their lives without external interference, is central to the way people understand sovereignty in the early twenty-first century. Liberation is therefore associated with particular historical movements toward the realization of sovereignty over one's self, among a "people," or over a country. In the twentieth century liberation emerged as an important desire expressed through a number of movements—examples of which will be discussed below—that have defined the character of social and political struggles in the contemporary world.

LIBERATION FROM SLAVERY

The abolitionist movement sought to end the practice of slavery on a global scale by ending the slave trade and emancipating slaves held in bondage. The Emancipation Proclamation (1863) issued by Abraham Lincoln (1809–1865), for example, declares that all slaves in Confederate territory were to be "freed." The act of manumission also allowed slave owners to set their slaves free. The Haitian slave revolt (1791) against French slavery, led by Toussaint Louverture (1743–1803) on the island of Saint Domingue, heralded briefly the first free black republic. The slaves in Saint Domingue drew on the Declaration of the Rights of Man, adopted by the leaders of the French Revolution in 1789, to demand liberation from the bondage of slavery, allowing them to be considered free and equal human beings, a right denied to subjects in French colonies. Initially the demand of the slaves in Saint Domingue was to be freed from slavery in order to be part of the French Empire as free people. Later in the revolt, as pointed out by C. L. R. James (1901–1989) in *The Black Jacobins* (1938), this changed to a demand for independence after the refusal of France under the rule of Napoléon Bonaparte (1769–1821) to grant the slaves "the rights of man."

COLONIALISM AND NATIONAL LIBERATION

While the expansive empires of the Romans, the Ottomans, and the Greeks possessed what might be considered colonies, it was after the sixteenth century that colonialism took on its modern meaning and eventually led to national liberation struggles. Developments in navigation and the technologies of war along with the changing patterns of trade facilitated the expansion and intensification of colonial rule and settlement by European powers over the rest of the world. Colonialism therefore meant ruling over another territory and its peoples either indirectly, through local elites like chiefs, or directly where there was a settler population, as in Australia and large parts of Africa and Asia.

The existence of empires that controlled large swaths of territory from a remote center of political power was challenged by the emergence of self-determination and nationalism. These principles held that states and groups of people who shared an affinity had the right to rule over themselves. The right to self-determination came into conflict with the maintenance and possession of colonies. This dilemma led to a protracted debate among prominent European philosophers of liberal thought, including John Stuart Mill (1806–1873) and Alexis de Tocqueville (1805–1859). Some argued that "states," following the Treaty of Westphalia (1648), should observe the principle of self-determination and, where states existed, this principle should be upheld to preserve territorial integrity. However, this principle did not necessarily apply to "peoples."

Benedict Anderson has argued that as a sensibility, nationalism emerged first in the Latin American colonies among the Creole elites. While "nations" may define themselves based on the subjective sense of a shared language, culture, or history, Anderson argued that nations are "imagined political communities" (Anderson 1991, p. 6). As a political idea, it holds that a "people," however defined, have the right to self-government, self-rule, or self-determination, and this principle was formally adopted by the United Nations in 1960 with the Declaration on the Granting of Independence to Colonial Countries and Peoples. A "people," defined as such, could legitimately claim the right to independence, but this idea was not universally accepted, and the struggle to realize independence was taken up by a range of national liberation movements in Africa, Asia, and the Americas. In these movements *liberation* was used to refer to the right of peoples to rule themselves, free from foreign domination by an external occupying power, and to live under an independent political authority. The methods used to achieve the aims of liberation by these movements took various forms, from nonviolent political agitation, as exemplified by Mahatma Gandhi's (1869–1948) idea of satyagraha to end British control over India, to the use of force and guerrilla warfare, as in the cases of Cuba from Spain, Algeria from France, Angola from Portugal, Zimbabwe from Britain, East Timor from Indonesia, Tamil nationalists in Sri Lanka, and Palestine from Israeli occupation.

RACIAL OPPRESSION, DISCRIMINATION, AND LIBERATION

The expansion of imperial rule, from which modern colonial rule emerged, was also facilitated by the notion of

"race" as understood by Count de Gobineau (1816–1882), a French diplomat and writer who categorized humans as belonging to and originating from different "racial stocks." It was believed that races had different strengths, capabilities, and weaknesses and that some races should be socially nurtured while others could be destroyed. Europeans of an Aryan stock were placed at the acme of the pyramid in Gobineau's typology. This "scientific racism" contributed to the practice of colonialism and also fostered forms of social discrimination against particular groups of people within states, such as Jews in Germany and Poland, the descendents of free slaves in the United States, and black South Africans. On this basis therefore various forms of racism took root and fostered relations of hierarchy and domination between states and within states.

Racial discrimination led to another sense in which *liberation* came to refer to the struggle to free societies and individuals from racist institutional practices and racist thinking. The civil rights movement in the United States, led by African Americans such as Dr. Martin Luther King Jr. (1929–1968), demanded an end to the practice of segregation of Americans of African descent in southern states. The American civil rights movement also demanded representation in the democratic political system through the vote. Racism, in the institutionalized form that was practiced in South Africa, led to the demand for liberation from the severe effects of social, economic, and spatial separation of people on the basis of race, a situation formalized as apartheid after 1948 with the coming to power of the Afrikaner Nationalist Party.

While institutionalized racism has been successfully challenged by liberation movements, with African Americans now having the vote and South Africa inaugurating a nonracial democracy in 1994 under the presidency of Nelson Mandela, some argue that the more enduring psychological aspects of racism's legacy continue to require a form of liberation. The Martinican-born psychiatrist Frantz Fanon (1925–1961) wrote in *Black Skin, White Masks* (1967) of the mental effects of racism on human beings, who need "mental liberation" to free the mind from racist ways of thinking about the self and others. Applying Fanon's insights to academic knowledge, Edward Said (1935–2003), an American literary theorist of Palestinian descent, showed how racist assumptions underpinned many European understandings of the "Orient" and continue to operate in the academy with negative political effects. Also influenced by Fanon, the South African political leader Steve Biko (1946–1977), who was killed in police custody, emphasized the need for black South Africans to liberate their minds from the acceptance of racism by developing a "black consciousness."

CLASS STRUGGLE AND THE LIBERATION OF THE WORKING CLASS

Liberation from racism and slavery has largely been based on the liberal premise that people are entitled to individual rights. Marxists, however, have argued that capitalist societies are also based on relations of exploitation defined by economic class distinctions between groups. For Karl Marx (1818–1883), liberation entailed freeing the working class from wage labor or "wage slavery," which kept workers dependent on their bosses for their material reproduction. Liberation, Marx and Friederich Engels (1820–1895) noted in *The German Ideology* (1846), was therefore a process that required the material reorganization of society through the rearranging of the economic relations of production, thereby creating a classless society: "People cannot be liberated as long as they are unable to obtain food and drink, housing and clothing in adequate quality and quantity" (Marx and Engels [1846] 1967, p. 437). Marxism has inspired significant political liberation movements, notably the Russian Revolution of 1917, which provided the most influential alternative model of liberation to the liberalism of the West after World War II (1939–1945) until the collapse of the Soviet Union in 1990.

GENDER, SEXUALITY, AND THE FREEDOM TO CHOOSE

Since the nineteenth century the term *liberation* has also been used in defining movements that advocate changes in attitudes toward gender and sexuality (Wollstonecraft [1792] 1993). The American journalist Gloria Steinem declared 1970 "the year of women's liberation." "Women's lib," or feminism, as this movement has come to be known, refers to a diverse range of movements and philosophies that share the idea that gender should not be the primary determinant of an individual's economic or sociopolitical rights, obligations, or opportunities. Women's liberation has involved demanding for women the rights to vote in a democracy, to receive the same pay as men, and to exercise choices over their own bodies. Women, proponents argue, need to be liberated from the strictures of a male-dominated or patriarchal society. This liberation applies not only to women but to the gendered roles that men and women are socialized into performing, which reinforce patterns of inequality and discrimination. This notion is distinct from the use of *liberation* to redefine sexual relations in society. Such movements advocate an end to discrimination based on sexual orientation. The gay and lesbian movements, for example, advocate a redefinition of marriage to include same-sex couples. Such marriages are now recognized as legal in some countries, but it remains an ongoing liberation struggle.

SEE ALSO *Anticolonial Movements; Apartheid; Aryans; Autonomy; Capitalism; Civil Rights Movement, U.S.; Colonialism; Empire; Feminism; French Revolution; Gandhi, Mohandas K.; Gender Gap; Gobineau, Comte de; Haitian Revolution; Human Rights; Imperialism; Jews; Liberation Movements; Liberation Theology; Marx, Karl; Marxism; Mill, John Stuart; Neocolonialism; Race; Racism; Revolution; Russian Revolution; Said, Edward; Self-Determination; Sexual Orientation, Social and Economic Consequences; Sexuality; Slave Resistance; Slavery; Social Movements; Sovereignty; Tocqueville, Alexis de*

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LIBERATION, WOMEN'S

SEE *Women's Liberation.*

LIBERATION MOVEMENTS

A liberation movement is a type of social movement that seeks territorial independence or enhanced political or cultural autonomy (or rights of various types) within an existing nation-state for a particular national, ethnic, or racial group. The term has also been extended to or adopted by other types of groups (e.g., women and gays and lesbians) that seek to free themselves from various forms of domination and discrimination. National liberation movements have been an especially important force in the modern world, and scholars have been interested in explaining their origins, strategies, and impacts. The division of the globe into nation-states, many of the wars among these states, and the hundreds of historical and contemporary conflicts among states and ethnic groups—in short, fundamental aspects of the modern world—cannot be understood without also understanding liberation movements.

TWO TYPES OF LIBERATION MOVEMENTS

Some national liberation movements are based on identification with and loyalty to a population and "its" state (or prospective state), regardless of the ethnic or racial composition of this population. The national feeling and identity underlying such movements is sometimes called "civic nationalism." For example, the leading liberation organization in South Africa, the African National Congress (ANC), has long advocated a policy of "nonracialism" (in

effect, multiracialism), maintaining that South Africa belongs to all people who live there, whatever their race or tribe. Nationalism in the United States is also generally understood as civic in nature, although ethnic and especially racial nationalism (white and black) has often competed with this understanding.

In fact many liberation movements are based on identification with and loyalty to a specific ethnic or racial group that may or may not live within the jurisdiction of a single state. In fact bringing all co-ethnics within a single nation-state, through territorial expansion if need be, has been the aim of a number of nationalist movements. This type of national identity is often called "ethnic nationalism." For example, the Zionist movement that founded the state of Israel may be understood as a type of ethnic (specifically, Jewish) nationalism. Similarly the Palestinian liberation movement, which has long been at odds with Zionism, is also mainly an ethnonationalist liberation movement—although a very small number of Israelis and Palestinians support the creation of a single "binational" state for both Jews and Palestinians that would incorporate Israel, the West Bank, and Gaza (i.e., historical Palestine).

The word *liberation*, originally meaning "setting free or releasing from," first entered the English language in the fifteenth century. The term was not widely used in a political sense until the mid-nineteenth century and especially the mid-twentieth century. National liberation movements can, however, be traced back to the late eighteenth century. The temporal and geographic span of such movements—ranging from the North and South American wars of independence in the late eighteenth and early nineteenth centuries to the related (but distinct) European nation-building processes of the mid- and late nineteenth century and continuing through the decolonization struggles in Asia and Africa in the mid-twentieth century and beyond—raises the question of just how similar these movements actually are. Yet despite the wide variation among national liberation movements in terms of historical context, social base, strategies, and specific aims, a common thread uniting them all has been the need to contend, whether as friend or foe, with the nation-building projects that have been so central to the modern world.

The modern nation-state, along with the movements seeking to bring this form of political and social life into existence—whether through intellectual argument, cultural imagining, or force of arms—has been a contradictory social phenomenon. Objectively the political form of the nation-state is thoroughly modern, having come into wide existence only within the last 200 years or so, as well as highly contingent, with the ability of any given national liberation movement to achieve its objective of nationhood dependent upon a host of historical variables. Yet subjectively the nation or "the people," despite (or perhaps because of) its existence as what Benedict Anderson (1991) calls an "imagined community," is necessarily understood as natural, eternal, and as unchanging as the sun. The two core elements of national liberation movements—the political task of obtaining state power (whether through seizure or creation) and the cultural process of constructing a "nation"—have therefore frequently coexisted uneasily. The efforts of artists, intellectuals, and political leaders in the vanguard of national liberation struggles—along with the mass movements they have sought (with varying success) to inspire—have been aimed at the creation of a nation-state that, by definition, did not yet exist; yet this struggle has been represented as the natural unfolding of an inevitable, historically preordained process.

The concept of democracy, the idea (and ideal) that the state should represent the interests of the nation or the people, has provided an important ideological justification for attempts to bring together the cultural and political dimensions of the nation-state form. Yet the inclusive, revolutionary-democratic equation of state, nation, and people, ushered into the modern era most powerfully by the French Revolution, has existed alongside the exclusionary practices of modern bureaucratic states, including the "purification" and standardization of a single national language, mass education aimed at spreading this language and an attendant national feeling, and even occasionally the mass expulsion or genocidal elimination of those unfortunates who do not belong to the "right" national or ethnic (including religious or linguistic) group—all in the quest to create an ethnically homogenous nation. Many national liberation movements, moreover, have ignored or even actively suppressed social antagonisms based on class and gender, for example, that would allegedly weaken national identity. Thus the "liberation" these movements have sought has typically been partial at best.

The nation-state has existed throughout its relatively brief history in a complex relationship with another great force that has shaped the modern world—capitalism. Although nineteenth-century liberal economic doctrine extolled the benefits of free trade, the rise of industrial capitalism in Europe was closely linked to mercantilism and state-led "national economies," a fact that "no economist of even the most extreme liberal persuasion could overlook," as E. J. Hobsbawm (1992, p. 28) notes. Anderson's (1991) argument that "print-capitalism" fueled the rise of the mass-circulating newspapers and books upon which the "imagined community" of the nation arose shows that the relationship between capitalism and the nation-state was cultural as well as economic. Furthermore the decolonization struggles of the

post–World War II (1939–1945) era must of course be understood in relation to the dynamics of capitalist imperialism. Hobsbawm (1992) points out the close links forged in at least some anti-imperialist national liberation movements between the goals of political independence and social revolution. At the dawn of the twenty-first century—amid neoliberal celebrations of the weakening of state regulation of the economy (seen as the final unfettering of the free market), unprecedented worldwide flows of capital, people, and goods, *and* a resurgence of nationalist feeling—debate rages as to whether the nation-state form can survive capitalism's global expansion. Many analysts, especially Marxists, have long predicted that global capitalism would undermine "parochial" nationalist sentiments—though this seems no closer to realization than it was at the beginning of the twentieth century.

THE ORIGINS OF LIBERATION MOVEMENTS

What causes liberation movements? Why do they arise when and where they do? Clearly national or ethnic identity and solidarity alone do not automatically produce social movements, and to some extent national identity is itself a product of nationalist mobilization. Furthermore, while nationalism may help to facilitate capitalist economic activities—by encouraging a common language, for example, or by weakening potentially disruptive class identities—its functionality for capitalism does not explain the origins of national identity or nationalist movements in the first place.

Many scholars would argue that liberation movements arise for the same reasons any social movement emerges: widespread grievances, plus a preexisting collective identity (in this case, a widespread national or ethnic identity), plus some significant formal or informal organization or social ties among this self-identified population, plus a sense of political empowerment or efficacy, plus a political context that facilitates (or at least is not inimical to) collective action. As noted, however, national or ethnic identities may be more of an outcome than the initial cause of liberation movements. That is, liberation movements may initially focus on very specific grievances and only gradually address more general grievances and evolve into movements claiming to represent the aspirations of a national or ethnic group as such. During and after the transformation of such movements into national or ethnic movements, they typically help spread a sense of national or ethnic identity to growing numbers of people. Nationalist identities and movements, in short, typically evolve contemporaneously.

Some scholars have also proposed specific theories of nationalist or ethnic mobilization. These theories tend to focus on the political and social conditions that encourage specifically ethnic or national identities—as opposed especially to class identities—and that generate widespread grievances among ethnic and national groups. In one view, those socially and territorially segregated ethnic groups that come into economic or military competition with one another are especially likely to develop strong ethnic identities and to mobilize in collective self-defense. The wealthier and more powerful group may mobilize in reaction to a perceived threat, and the poorer and less powerful group may mobilize so as to improve its own collective interests. Paradoxically, competition may be especially fierce if the two communities are or become more nearly equal. This competition (and concomitant nationalist mobilization) may gradually erode to the extent that the two populations become socially integrated (through voluntary association, for example, or intermarriage), but it is likely to persist if the two groups remain "socially distant" from one another.

The political exclusion and domination of particular ethnic groups, on an explicitly ethnic basis, is also likely to encourage ethnonationalist identities and movements for political rights. Overseas imperialism in its colonial form strongly encouraged the formation of national identities and liberation movements even among groups that did not previously consider themselves members of the same group (the boundaries of colonies were typically established with little regard for the ethnic composition of the local populations). Identities such as "Indonesian" and "Mozambican"—let alone liberation movements based on these identities—did not exist prior to the creation of colonial states.

The strategies of liberation movements have generally been shaped by their organizational strength as well as by the responses of authorities (Irvin 1999). Some authorities have seen political advantages to extending rights to liberation movements or even granting territorial independence in colonial situations. Not surprisingly, authorities have been more accommodating to narrowly political movements, dominated by economic elites, that do not challenge the economic well-being of these authorities and their constituents. By contrast, authorities have strongly and usually violently resisted liberation movements that represent a threat to their economic interests, and such resistance has generally induced liberation movements to adopt more coercive strategies of their own, including forms of armed struggle such as guerrilla warfare and terrorism—the latter strategy especially common in colonies with large settler populations.

THE FUTURE OF LIBERATION MOVEMENTS

In an age of increasing globalization, some have suggested that the relative importance of nation-states is declining,

as states find it increasingly difficult to control the movements of labor, commodities, and especially capital. In this view, the advantages of creating or controlling states (or subnational political units) are rapidly decreasing. And yet there are numerous instances of ongoing national liberation and ethnonational movements around the world. These movements have a range of goals—from national independence to regional autonomy—as well as varied social bases—from immiserated Palestinians in the West Bank and Gaza to wealthy elites in the Santa Cruz region of Bolivia. A short list of early twenty-first-century liberation struggles includes Irish nationalists in North Ireland, Tamils in Sri Lanka, Tibetans in China, Palestinians in the West Bank and Gaza, Kurds in Iraq and Turkey, Kashmiris in India, Muslims in southern Thailand, Chechens in Russia, Quebecois in Canada, Basques in Spain, Zapatistas and other indigenous groups in Mexico, Albanians in Yugoslavia (Kosovo), Acehnese in Indonesia, several ethnic groups in the northeastern states of India (including Nagaland and Tripura), and many others. Despite the enormous variety and complexity of such conflicts, their sheer number indicates that ethnonational and national liberation movements will remain extremely important for the foreseeable future.

SEE ALSO *African National Congress; Anticolonial Movements; Capitalism; Ethnicity; Ethnocentrism; French Revolution; Globalization, Anthropological Aspects of; Globalization, Social and Economic Aspects of; Liberation; Nationalism and Nationality; Nation-State; Revolution; Social Movements; Zionism*

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LIBERATION THEOLOGY

Liberation theology, or theology of liberation, is among the movements for social change that emerged in the Americas in the 1960s. Born within Christian churches, it upholds an understanding of the Christian faith as demanding an "option for the poor," that is, a continuous commitment to the self-liberation of the oppressed. From its inception, it has had important ties with grassroots organizations and actions for social change—siding with the victims of socioeconomic oppression and of political and military repression.

Since early on liberation theology attracted the attention of social scientists and policymakers, as its effects both belied scholarly assumptions—for example, religion having a decreasing influence and a predominantly conservative function in the larger society—and raised fears of grassroots opposition to capitalism among the economic, political, and military elites north and south of the Rio Grande.

ROOTS AND DEVELOPMENT

Several factors influenced the emergence of liberation theology. The growing resistance throughout the Americas in the 1960s to economic exploitation, political repression, and official complicity with both is indeed among these. This resistance, partially inspired by the Cuban Revolution (1959), found mounting echoes among urban youth, the poor, students, and intellectuals—including a rising number of church activists and thinkers. These stimulated attempts (including a "theology of revolution," "Christian left," and Christian "communitarianism") to ground the struggle against exploitation and repression in the biblical tradition, especially in Jesus's actions, words, death, and resurrection—and thus to disprove the claim (shared both by Christian capitalists and Marxist atheists) that the churches' social role could only be a conservative one. Following suit, churches started not only initiatives for economic development and respect of human rights, but also theological foundations for such initiatives. The Second Vatican Council (1962–1965), the social encyclicals of Popes John XXIII (1963) and Paul VI (1967), as well as the 1968 Second General Conference of Latin

American Roman Catholic Bishops, were all particularly influential in that change of direction—particularly through their explicit Christian affirmation of the divine right of all peoples to govern themselves democratically, and to have access to the material goods necessary to satisfy their basic material needs, even through revolutionary social, economic, and political change, if necessary. On the Protestant side, the World Conference on Church and Society in Geneva, sponsored by the World Council of Churches (1966), a follow-up Consultation on Church and Society in São Paulo, Brazil, sponsored by a provisional commission for the Unity of Latin American Evangelicals (1967), and the Third Latin American Evangelical Conference (Buenos Aires, 1969), all contributed to Protestant Christians' embracing movements for social justice. In both Protestant and Catholic quarters, a growing chorus of voices, official and otherwise, affirmed much more clearly from the 1960s on than in earlier times the Christian obligation to fight for socioeconomic justice, political democracy, human rights, and world peace, especially in defense of the poorer populations. Entwined with these, in the United States, the civil rights movement, the Black Power movement, the antiwar movement, the United Farm Workers movement, the women's movement, and the American Indian liberation movement, all contributed to the emergence of a rich diversity of theological reflections from the late 1960s on.

A first digest of some key ideas of a liberation theology, as well as a first Spanish use of the idiom itself, *theology of liberation*, appeared in the lecture "Hacia una teología de la liberación" (Toward a theology of liberation), delivered in 1968 to a clergy meeting in his native Peru by Roman Catholic priest Gustavo Gutierrez (b. 1923), dubbed "the father of liberation theology" since. About the same time, the former Brazilian Presbyterian pastor Rubem Alves (b. 1933), exiled in Princeton Theological Seminary, used the expression in his dissertation *Towards a Theology of Liberation*, with ideas converging with Gutierrez's. In 1969 the African Methodist Episcopal minister/theologian James H. Cone independently finished his book *A Black Theology of Liberation*, the cornerstone of black liberation theology—deeply inspired by the revolutionary call of the Black Power movement for the black population in the United States to take in its own hands the task of achieving equality, autonomy, and respect "by any means necessary," as well as by its criticism of the complicity of churches and theologians with white supremacy.

Throughout the 1970s and 1980s, the movement grew in numbers, visibility, and influence across the churches in the Americas. In response, military dictatorships—in at least ten countries of the Caribbean, Central America, and South America—unleashed violent repression against those linked to liberation theology. Among the hundreds of thousands of lives thus lost, Msgr. Oscar Arnulfo Romero, archbishop of San Salvador, murdered while celebrating mass in a hospital chapel in 1980, was the most remarkable victim of that backlash, becoming a popular saint-martyr symbolizing the Christian commitment to the liberation of the poor. That year, a document outlining the inter-American strategy of the Reagan administration stated: "U.S. foreign policy must begin to counter (not react against) liberation theology as it is utilized in Latin America by the 'liberation theology' clergy" (Committee of Santa Fe 1980).

The military repression; the stifling of dissent in Roman Catholicism under Pope John Paul II (1978–2005), with parallel processes in many Protestant churches; the accelerating impoverishment of Latin American peoples under the new global economy; the emergence of fragile democracies in the wake of most military dictatorships; and the growing appeal of Pentecostalism among the Latin American poor stunned and beset liberation theology through the last two decades of the twentieth century.

KEY IDEAS, DEBATES, AND REPERCUSSIONS

For liberation theology God is the God of the poor. God's self-revelation is first and foremost in, to, and through the poor—not least in the incarnation, birth, words, deeds, persecution, torture, execution, and resurrection of Jesus, as expressed, among others, in Matthew 25: 31–46. Modern poverty is not a result of accidental scarcity (as it might have been in other times and places), but of systemic exploitation by the few at the expense of the many. Poverty is the result of the sin of the powerful, not of the poor: the product of a free human rejection of God's call for caring for the poor and oppressed. Salvation is, therefore, inseparable from the radical embracing of God's option for the poor, and thus entailing, among others, a call against capitalist exploitation.

The theology of liberation has often been charged with reducing Jesus to a social revolutionary. Albeit the charge could be deemed unfair, the fact is that such an iconic image was quite pervasive during the first two decades of the history of the movement—more among some "followers" than amid the theologians in the movement proper. As the years went by, such images became less recurrent. As in any emerging movement fighting for deep structural change, liberation theology developed much more what distinguished it from conservative, dominant theologies, than what both might hold in common. Thus, an emphasis on the historical Jesus, on the human facet of the divine incarnation, and on the social dimensions of the life, message, passion, death, and resurrection of the Christ, have been critical in liberation theology. The image of Jesus in this theology is and has been that of

someone essentially identified with "the least among us," whose entire life was (is, and will continue to be) radically revolutionary—and not just marginally or accidentally—and thoroughly world-shattering in terms economical, social, political, ethnic, linguistic, and gender-based.

For liberation theology, theology is only a second moment—a moment of reflection on the actual praxis of faith—and dominant theologies are, all too often, unconscious sacralizations of the self-interested faith praxis of the elites. Theological work requires, therefore, an effort of critical social analysis of the social conditions and interests shaping its course, so that all theology moves toward bearing the good news of God's liberation for the poor and oppressed. But, as Gutierrez would put it, what matters is not the fate of theology (not even of liberation theology), but the fate of the poor and oppressed.

Possibly, however, the most significant and enduring impact of liberation theology—including in places as distant as Chile, the Philippines, Korea, South Africa, and Los Angeles—has to do with its emphasis on the obligation of theology and theologians to involve themselves in the actual struggles for liberation of the oppressed themselves. One major facet of this emphasis on praxis are the so-called "basic ecclesial communities" (BECs): small gatherings of lay Christian neighbors—with or without a pastor present—to read the Bible in community, reflect on its practical demands for the larger life in community, and organize and mobilize to enact those demands in the real existence of the area. Such BECs sprouted in many places in South America and beyond (notably in Brazil, with estimates of more than 100,000 BECs in the 1980s touching the lives of several million people), turning the message of liberation theology into the actual development of neighborhood clinics, literacy campaigns, independent schools, labor unions, strikes, mass protests, housing projects, and neighborhood cleanups.

The social and political movements leading to the victories of more socially concerned leaders in Latin America from 1979 on (Nicaragua's Sandinistas, Haiti's Lavalas, Brazil's Workers Party, Venezuela's Chavez, Chile's Bachelet, and Bolivia's Evo Morales), are probably inexplicable without factoring in the influence, large or small, of liberation theology and BECs.

These initiatives have placed liberation theology, on the one hand, in dialogue and cooperation with other movements (Christian or not) fighting for social justice, democracy, equality, and peace, and therefore, on the other hand, also in conflict with both the elites—social, economic, political, military, and, often too, religious—of many nations, as well as with those Christians who view their faith from vantage points outside of the liberation of the poor and oppressed.

Liberation theology has been variously critiqued for being more Marxist than Christian; reducing the Christian faith, evangelization, and salvation to this—a worldly, socioeconomic agenda; promoting hatred of the rich, class warfare, and armed revolution; erasing the spiritual dimensions of the Christian faith; turning the church into a political party; and sacralizing the poor while demonizing the wealthy. Liberation theologians, responding more indirectly than directly to such accusations, have nuanced and deepened their reflections, especially from the 1980s on, while inspiring further critical analyses of the complex social and religious dynamics beneath the charges laid against them.

NORTH AMERICAN LINKAGES

The reach, yield, sway, and publicized persecution of Latin American Roman Catholic liberation theology have often created the impression that it is only, or at least mainly, a Latin American and/or Roman Catholic phenomenon. Liberation theology, however, developed simultaneously in North America, too, and, not much later, in Asia, Africa, and the Middle East.

Black liberation theology was the first North American liberation theology. U.S. Hispanic/Latino theologies followed not long after both Black and Latin American liberation theologies. Feminist, pacifist, Native American, Asian American, and Jewish liberation theologies came immediately thereafter, followed by lesbian and gay liberation theologies. Each one has both advanced the critique of the ways in which their own religious tradition has been an unwitting accomplice of oppression, and contributed to reinterpreting such tradition in further solidarity with the victims of oppression and with their struggles for liberation. In the process, several forums have contributed to the dialogue, reciprocal critique, and cross-pollination between these liberation theologies—the most significant being the EATWOT (Ecumenical Association of Third-World Theologians).

At the onset of the twenty-first century, the multiplicity of liberation theologies, as well as the diversity of situations in which they exist, does not allow for any sweeping diagnosis or prognosis. It can be said, however, that it is not possible any longer to preach Christian theology without facing, sooner or later, knowingly or not, the key question raised by liberation theology: What have we done for the poor and oppressed in our midst? Simultaneously, at least in Latin America, it is hardly possible any longer to administer politics (leftist, centrist, or right-wing; civilian or military; governmental or oppositional; democratic or otherwise), without facing the demands of a significant sum of Christians for respect, justice, and peace for all—beginning with the most vulnerable.

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Otto Maduro

LIBERTARIANISM

From the customs of liberal society and the writings of John Locke (1632–1704), David Hume (1711–1776), Adam Smith (1723–1790), and myriad others, there emerged an ideological sensibility dubious of government activism, leery of collectivist urges, and resistant of nationalistic sentiments. It learned to accept commercial society and cosmopolitanism, and even celebrate them. It maintains a presumption of individual liberty. The name of this sensibility has varied in time and place, but in the United States since the 1970s the name has been *libertarianism.*

The signal feature of libertarianism is the distinction between voluntary and coercive action. Coercion is the aggressive invasion (including the threat of invasion) of one's property or freedom of consent (or contract). Libertarians maintain a logic of ownership whereby owners have a claim to the control and use of their property, a claim good against the world. The logic is exhibited throughout centuries of liberal society in the normal, legitimate goings-on of private parties. It emerges as intuitive and natural. Adam Smith wrote in *The Wealth of Nations* (1776) that "the obvious and simple system of natural liberty establishes itself of its own accord" (bk. 4, chap. 9). As for the determination of who owns what, there are universal norms, beginning with ownership in one's own person, and extending to property acquired within the family and in voluntary interaction with others (such as trade, production, and gift relations). Libertarians admit the holes and gray areas, but argue that the distinctions nonetheless hold much water, and that rival ideologies are also plagued by holes and gray areas, even more so.

Libertarians reject any "social contract" device as a way to bring political relations into "consent." They reject the idea that, whether by virtue of democracy or simply by maintaining residence within the polity, one voluntarily agrees to the government laws one lives under. Government is recognized as a special kind of organization, and might be said to enjoy a special kind of legitimacy, but it does not get a special dispensation on coercion. In the eyes of the libertarian, everything the government does that would be deemed coercive and criminal if done by any other party in society is still coercive. For example, imagine that a neighbor decided to impose a minimum-wage law on you. Since most government action, including taxation, is of that nature, libertarians see government as a unique kind of organization engaged in wholesale coercion, and coercion is the treading on liberty. This semantic, libertarians say, was central in eighteenth- and nineteenth-century custom and social thought, for example in Adam Smith's treatment of "natural liberty" and through the American founders, the abolitionists, John Stuart Mill (1806–1873), Herbert Spencer (1820–1903), and William Graham Sumner (1840–1910). (Indeed, libertarians will argue that the vocabulary of modern liberalism is in many respects a systematic undermining of the older vocabulary.)

To just about anyone, *coercion* has a negative connotation. And, indeed, libertarians generally oppose government action. That disposition holds not only against economic intervention, but extends to coercive egalitarianism (the welfare state), restrictions on personal lifestyle (such as drug prohibition), and extensive government ownership of resources. Libertarians also tend to oppose military action abroad, though some libertarians may favor it when they believe that it bids fair to reduce coercion on the whole (that is, across the globe).

Within libertarian thought, there has been much debate over whether the principle of liberty is absolute (that is, 100 percent), or, as Adam Smith held, simply a presumption (say, 90 percent). Most classical liberals regarded it as a presumption, as have the transitional figures Ludwig von Mises (1881–1973) and Friedrich Hayek (1899–1992), both originally from Austria, and the famous American economist Milton Friedman. In judging where coercive government policy should be accepted or even deemed desirable, the "maxim" libertarians appeal to broad sensibilities about consequences, including moral and cultural consequences, of alternative policy arrangements. They do not attempt to set out any complete or definitive characterization of such sensibilities, any algorithm of desirability, and they declare that it is unreasonable to demand that they do so, especially since the same demand is not made of rival ideologies.

In justifying the presumption of liberty, most libertarians, especially economists, emphasize the practical arguments—liberty works better than government intervention—but others have maintained that liberty has an

ethical authority established quite separately from any consideration of practical results.

The emergence of libertarianism, as such, comes about from the retreat of classical liberalism (particularly after 1900) and, particularly in the United Kingdom and the United States, the concurrent change of the popular meaning of *liberalism*, such that those who kept up cosmopolitan, laissez-faire, antistatist views no longer had a name.

Mises, Hayek, and Friedman clung to the old term *liberalism*. The term *libertarian* was used occasionally, but was really seized by the critical figure of modern libertarianism, Murray N. Rothbard (1926–1995). Beginning in the 1960s, Rothbard reasserted the old definition of *liberty* and infused *libertarianism* with a paradigmatic content holding that institutionalized coercion is always wrong and government action always damaging to social utility. Libertarianism implied anarchism. A prodigious polymath and challenging, charismatic personality, Rothbard erected an integrated doctrine for ethics, politics, and economics.

Anarcho hyphenates (such as *anarcho-capitalism*) were discussed also by other libertarian theoreticians, notably favorably by David Friedman and critically by Robert Nozick (1938–2002). Rothbard, David Friedman, and others built on the notion that private ownership and voluntary exchange are intuitive and focal, and hence lend themselves to a kind of spontaneous adoption by decentralized social institutions. They speculated on how there could be a free market in the enforcement of property rights, like private security companies today. Later research on voluntary reputational practices and institutions, exemplified, for example, by credit reporting agencies, would lend support to the view that, in a world where practically all property is privately owned, government police would not be necessary to resolving disputes and maintaining internal order. As for defense from external aggression, Rothbard tended to argue that no foreign government would have plausible cause or the practical means to conquer an anarcho-libertarian society, while David Friedman admitted uncertainties. The anarcho speculations, as well as Rothbard's extreme claims for liberty, arguably diverted libertarians from the task of developing a persuasive, relevant ideology, and hindered the penetration of libertarian thinking into mainstream discourse.

Many of the same people in the United States who were fashioning modern libertarianism were also busy fashioning the so-called Austrian school of economics, named for the influence of the Austrians Mises and Hayek (who in 1974 was awarded a Nobel Prize in economics). Austrian economics is solidly pro-laissez-faire, but there has always been a tension between two types of thought. One, exemplified by Mises and Rothbard, champions human reason as an engine of discovery of scientific truth and purports to deduce a priori the superiority of voluntary arrangements. The other, inspired by Smith and exemplified by Hayek, criticizes the pretense of knowledge. It views economic processes as a skein of local practices and peculiarities, with their own dialectics of change and correction, and hence largely unknowable to regulators or even the most assiduous intellectuals. Followers of Mises and Rothbard claim a scientific foundation for laissez-faire economics; followers of Smith and Hayek criticize the scientific claims of interventionist economics. All "Austrian" economists are at least broadly libertarian in their policy views, but many libertarians are mainstream in economic method; Milton Friedman and David Friedman, for example, though admiring of Hayek, would be sharply critical of Austrian economics, particularly the Mises-Rothbard version. In fact, Hayek surely had grave misgivings about that as well, and never favored the fashioning of a separate "Austrian" school of economics.

Another important figure in the resurgence of antistatist ideas was the novelist and pop-philosopher Ayn Rand (1905–1982). Like Rothbard a messianic personality, though with much less learning and scholarship, Rand too set forth a highly integrated belief system, "objectivism." However, Rand strongly favored government's function as the keeper of the peace, and, in sharp contrast to Rothbard, an anticommunist foreign policy. She detested libertarianism, and Rothbard attacked her movement as a cult.

Rothbard's paradigm was so clear and consistent that even the libertarians who soundly rejected his extreme claims for liberty nonetheless found themselves working out their ideas in relation to principles like those he propounded. Nowadays, there remain loyal Rothbardians, but most libertarians think more in the fashion of Smith, Hayek, and Friedman. They insist that government intervention, including taxation, is coercive, but they take the anticoercion principle to be, not a natural axiom, but a natural maxim. They see government as having at least one important and necessary function—the undoing of other governmental functions. (In contrast, Rothbard's vision of libertarian social transformation held that after long years of ideological stirrings, there would come the inevitable internal political crisis, yielding to a widespread awakening and some kind of spontaneous, bottom-up institutional house-cleaning.)

Libertarianism joins the mainstream conversation as a political persuasion anchored in the status quo, not some ideal libertarian society, and yet opposed to the status quo, favoring freer arrangements pretty much across the board. It is perhaps best represented by public-policy institutes, such as the Cato Institute and the Independent

Institute, that develop policy argumentation on an issue-by-issue basis. As for the academic world, the most notable libertarian strongholds are the economics department and law school at George Mason University.

Libertarianism is now a broad tent, rooted in policy issues and insistent on the Locke-Smith-Spencer-Rothbard definition of liberty. Within the tent, only a small portion would defend "anarchism," but all remain radical in the sense that they insist that government intervention is coercive, and on most issues they entertain and quite likely favor abolishing the government agency or interventions in question.

There has also existed since the 1970s in the United States a Libertarian Party. However, libertarians are usually not much interested in it, chiefly because they feel that within the American system third parties are impossible or even damaging to their own cause.

SEE ALSO *Freedom; Friedman, Milton; Hayek, Friedrich August; Mises, Ludwig Edler von; Philosophy, Political*

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Daniel B. Klein

LIBERTY

The etymological origin of *liberty* is the Latin word *libertas*, from *liber*, which means "free." In the social sciences, *liberty* and *freedom* are often used interchangeably. However, in common parlance, a distinction can be made. *Freedom* is the more general term referring to a lack of restraint in all its manifestations. *Liberty*, in contrast, is typically used when discussing the political and legal aspects of the human condition, particularly those involving choice.

Liberty, as a political ideal, has had a profound influence over the course of human events going back to the eighteenth century. It was a central theme for both the American Revolution (1775–1783) and the French Revolution (1789–1799). Liberty was a fundamental motivation for the rise of the modern democratic state, capitalist economies, and the concern for human rights. In contemporary practice, a number of freedoms are commonly protected by the state, including assembly, association, press, religion, speech, thought, and trade. The importance and significance of liberty is widely acknowledged. Still, there are fundamentally different understandings about what it means and why it is valuable.

Benjamin Constant (1767–1830), for example, distinguishes between what he calls "liberty of the ancients" and "liberty of the moderns." *Ancient liberty* refers to the direct sharing of political power. It is the "active and constant" participation of citizens in the collective governing of their communities. Consequently, it can only be realized in smaller political units such as the city-state. Ancient liberty involves citizens being able to make truly meaningful contributions to political decisions on a continual basis, thus allowing them to play an intimate role in determining the course of their collective lives. This identification of liberty with ongoing collective political decision-making, however, entails the "complete subjection of the citizen to the authority of the community" (Constant [1820] 1988, p. 311). Still, authentic self-government brought such a "vivid and repeated pleasure" (p. 316) that citizens were willing to make great sacrifices to preserve this form of liberty. The problem is that too little value was attached to the rights of individual citizens.

With the emergence of larger political units like the nation-state, ancient liberty was no longer possible. "Lost in the multitude, the individual can almost never perceive the influence he exercises" (Constant [1820] 1988, p. 316). Liberty, therefore, became associated with individual rights and freedoms. This *modern liberty* consists in "peaceful enjoyment and private independence" (p. 316) for each citizen. It is made possible by legal guarantees such as the rule of law, freedom of expression, property rights, freedom of association, elected political representation, and the right to petition the government. The purpose of modern liberty is to give citizens the opportunity to choose and enjoy their own "private pleasures." The danger of this type of liberty is that people will get so absorbed in pursuing their personal happiness and interests that they neglect their political responsibilities, thereby allowing the government to overstep its limits.

Another well-known distinction is Isaiah Berlin's (1909–1997) understandings of negative and positive conceptions of liberty. On the one hand, *negative liberty* simply refers to the absence of external constraints and

obstacles. It is freedom "from." Liberty, in this sense, is the ability to act without human or institutional hindrances. It is concerned with the boundaries of individual autonomy. Negative liberty deals with the question, "What is the area within which the subject—a person or group of persons—is or should be left to do or be what he is able to do or be, without interference by other persons?" (Berlin [1958] 1990, p. 121–122). *Positive liberty*, on the other hand, refers to being able to live an authentic or self-directed life. It is the freedom "to." This type of liberty is associated with concepts like self-mastery and self-realization. It is interested in the question, "What, or who, is the source of control or interference that can determine someone to do, or be, this rather than that" (p. 122).

Berlin notes that negative and positive liberty might be thought of as two sides of the same coin. The former focuses on the freedom that exists when there are no constraints on the individual, and the latter concentrates on the freedom that comes from personal self-determination. Berlin claims, however, that the theoretical development of these two types of liberty has led to divergent understandings. While the meaning of negative liberty remained the same, positive liberty took on a more psychological orientation. Positive liberty became associated with overcoming internal obstacles that thwarted self-mastery. Berlin contends that this understanding of liberty is dangerous because state coercion can be justified as a benevolent action. By coercing people into living according to their supposed authentic desires, the state is simply advancing positive liberty. Overlooked is the fact that individuals are still being constrained against their will and the state is assuming to know better the true interests of its citizens. Appeals to positive liberty, therefore, divert attention from the disquieting contradiction that the state is forcing its citizens to be free. Berlin sardonically observes that, in this case, "true" freedom is obtained "even while my poor earthly body and foolish mind bitterly reject it, and struggle against those who seek however benevolently to impose it" (Berlin [1958] 1990, p. 134).

Even though positive liberty can be used to justify political tyranny, the association of self-mastery with liberty may nonetheless reflect how humans tend to think about what it means to be free, at least in part. Charles Taylor argues that humans do have higher order, life-orienting aims that can be undermined by impulses and desires. Unhealthy indulgences, for example, may harm an individual's physical well-being. Irrational fears may prevent people from taking advantage of opportunities that are in their best interests. In these types of situations, "is freedom not at stake when we find ourselves carried away by a less significant goal to override a highly significant one?" (Taylor 1979, p. 185)

Positive liberty is also associated with having requisite resources and opportunities to act. T. H. Green (1836–1882), for example, contends that freedom is commonly recognized as involving the "positive power or capacity" to maximize human potential. Liberty involves not simply the lack of constraint; it also includes the ability to successfully pursue personal goals and ambitions. Green contends that this success depends on people having basic protections and services. Moreover, it is society's responsibility to provide this assistance. Positive liberty, consequently, requires the provision of educational opportunities, safety regulations for the workplace, and adequate housing. Without health and knowledge, people are not able to develop their faculties and make the most out of themselves.

Liberty, variously understood, has been a central concern for liberalism, the dominant political ideology of the modern age. John Locke (1632–1704), for example, considered individual liberty a natural right along with life, health, and property. The state, therefore, had a responsibility to protect the freedoms of its citizens. Thomas Jefferson (1743–1826) adopted Locke's theme for the Declaration of Independence, asserting that humans "are endowed by their Creator with certain unalienable rights," including "life, liberty, and the pursuit of happiness." This concern for individual freedom was further formalized in the first ten amendments to the Constitution, which provide citizens with rights that limit the power of the state.

John Stuart Mill (1806–1873) was also interested in protecting the liberty of citizens to think and act without interference by the state. He provides a seminal defense of civil liberties in his classic work, *On Liberty* (1859). His justification, however, was not based on natural or inalienable rights; it was based on utility. Mill claims that maximizing individual liberty creates the greatest utility for society. There are three fundamental types of civil liberties that need to be protected: (1) thought and opinion, (2) tastes and pursuits, and (3) association. The limits of these liberties should be based on what has come to be called the *harm principle*. "The only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others" (Mill [1859] 1978, p. 9).

Jean-Jacques Rousseau (1712–1778) provided a markedly different approach to protecting individual liberty. Instead of trying to limit the power of the state, he sought to align the individual will with the general will, which is the sovereign will of the people. To accomplish this task, there must be the "total alienation of each associate, together with all his rights, to the entire community" (Rousseau [1762] 1987, p. 24). In so doing, each citizen, "while uniting with all, obeys only himself and remains as free as before" (p. 24). The identification of the

individual will with the general will means the state's decisions are simply reflections of each citizen's preferences. Consequently, people are not under the subjection of any other person. If citizens have preferences contrary to the general will, then it merely proves that they were "in error" about the good of the community and their true interests.

Liberal political philosophers may justify liberty in terms of natural rights or utilitarianism. They may advocate negative or positive understandings of liberty. Regardless, all liberal political theories share two basic assumptions: Freedom is a key human value and all individuals are equal in some primary sense. Equality is a necessary complement for liberty. At the same time, however, it can provide a significant challenge. The grant of liberty inevitably undermines equality. The imposition of equality inevitably requires restrictions on liberty. The proper balance of liberty and equality, therefore, is an issue that will always have to be addressed by liberal political theories.

SEE ALSO *American Revolution; Choice in Psychology; Citizenship; Civil Rights; Constitutions; Democracy; Freedom; French Revolution; Government; Human Rights; Individualism; Liberalism; Liberation; Mill, John Stuart; Natural Rights; Philosophy, Political; Political Theory; Privacy; Utilitarianism*

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Johnny Goldfinger

LIBIDO

SEE *Psychoanalytic Theory.*

LIFE COURSE PERSPECTIVE

SEE *Developmental Psychology.*

LIFE-CYCLE HYPOTHESIS

The life-cycle hypothesis (LCH) is the theory of private consumption and saving developed by the Italian-born American economist Franco Modigliani (1918–2003) and his collaborators in the 1950s and 1960s. The LCH posits that individuals, trying to maintain a stable level of consumption over time, save in their working years for retirement. Consequently, lifetime resources, rather than current income, are what determine the level of consumption. On an aggregate level, growth in aggregate lifetime resources, often as a result of growth in productivity and a shift in demographics, ultimately determines the saving-income ratio in an economy. The macroeconomic implications of the LCH set it apart from the prevailing Keynesian theory at the time, which assumed that the saving-income ratio was determined by level of income.

Modigliani was awarded the Nobel Prize in economics in 1985, thanks in part to his construction and development of the life-cycle hypothesis. According to the Royal Swedish Academy of Sciences, the LCH represents "a new paradigm in studies of consumption and saving."

FROM THE GENERAL THEORY TO LCH

The standard consumption theory prior to LCH was established by John Maynard Keynes (1883–1946) in his groundbreaking *General Theory*, published in 1936. Keynes observed that aggregate consumption was determined by (current) income and would increase as income increased, but not as much. A theory of saving was not formally developed in Keynes's *General Theory*; however, it could be derived from the consumption function that the saving-income ratio was determined by the level of income and would increase as income increased. This implication was later found to contradict empirical evidence. U.S. national income accounts data did not show a rising saving rate over time. Nor did cross-country studies reveal that rich countries necessarily saved more.

In 1954 Modigliani first articulated the life-cycle hypothesis in a paper coauthored with Richard Brumberg (d. 1955). The LCH starts out from the framework that a household makes its consumption and saving decisions at any given time based on the household's lifetime

resources. In other words, consumers choose their level of consumption in each period to maximize their utility subject to the constraint of their lifetime resources. With the added assumption that consumers prefer a stable pattern of consumption over time, it can be readily shown that households must save in their productive years for consumption after retirement.

The seemingly simple formulation of the LCH differed fundamentally with the accepted theory of the time. In the LCH setting, consumption in any period does not depend on current income but rather on lifetime resources; savings in any period, therefore, depend on the difference between lifetime resources and current income. In contrast to the traditional theory, which predicts that the rich save and the poor dissave, the LCH predicts that the rich and the poor save a similar share of their lifetime resources.

Milton Friedman independently reached the same conclusion at about the same time. In the setting of Friedman's permanent income hypothesis (PIH), lifetime resources are referred to as *permanent income*, and the difference between permanent income and current income as *transitory income*. A change in the level of permanent income affects the level of consumption much more than a change in transitory income. However, thanks to Friedman's assumption of an infinite life span for individuals, the PIH does not share the most important implication of the LCH presented below—that is, the aggregate saving-income ratio is first and foremost determined by the growth in an economy.

It is important to note that the LCH defines savings, *S*, as the change in aggregate private wealth, *W*, that is, $S = \Delta W$. Therefore, the saving rate, *s*, is simply

$$s \equiv S/Y = (\Delta W/W) \bullet (W/Y) = \rho w \qquad (1)$$

where ρ is the growth rate of the economy and w is the wealth-income ratio.

The two common sources of growth in an economy are population growth and productivity growth. In the case of population growth, the intuition is that as more young laborers enter the workforce, they would save more than what the retirees dissave and drive up the saving rate in the economy. Similarly, in the case of productivity growth, the younger population will have higher levels of consumption in their productive years and will save more as well, such that they can maintain their higher level of consumption after retirement. In aggregate, they will save more than the retirees dissave, and the saving rate will go up.

Some of the implications of the LCH are counterintuitive. As one can see from equation (1), the saving rate in an economy is not affected by per capita income in any way. When the wealth-income ratio is constant, the saving rate depends entirely on the growth rate. If there is zero growth in the economy, the saving rate will be zero. A country with a higher long-run growth rate will save more proportionately than a country with lower growth, irrespective of the per capita income level.

The LCH also predicts that the wealth-income ratio is a decreasing function of growth and is largely determined by the typical length of retirement in the economy.

THE EXTENDED LCH

Although the LCH emphasizes the role of growth in savings determination, alternative saving motives and macroeconomic variables can also be analyzed in its framework. These extensions enhance the explanatory power of the pure LCH model.

Bequest had long been considered to be the primary motive for saving before the LCH. It is now generally considered part of the supporting cast. In the extended LCH setup with bequest, receiving an inheritance increases permanent income, and a bequest to the next generation can be considered a choice for the household in addition to consumption in any period. Bequest raises the wealth-income ratio and hence the saving rate. The net effect on consumption depends on whether households pass on more than they inherit.

Literature on the precautionary motive also dates back to well before the LCH. In the extended LCH formulation with uncertainty in future income, households save more so that they can maintain a smooth consumption pattern in case of an unanticipated drop in income. This effect should be more profound for young and old households because they have fewer assets to tap into for this purpose.

Another area of research is forced savings programs, such as Social Security in the United States and pensions. It is intuitive to see the substitute effect of these programs in that they replace private saving. In reality, however, these programs often have the unintended effect of inducing participants to retire early as benefits decline for people working beyond retirement age. The net result is unclear from a theoretical perspective. Ignoring these programs, however, will bias the savings and income measures downward.

Liquidity constraint prevents households from borrowing to maintain their preferred level of consumption when current income falls below permanent income. In the extended LCH with liquidity constraint, households cannot consume more than their current income, which typically results in higher levels of consumption in later years than in earlier years.

Periods of high inflation often cause consumers to overestimate their real income, which leads to undersaving. In addition, when the return on assets does not fully

adjust to the increase in the price level, inflation will reduce the real value of such nominal assets as bank deposits and bonds, and will consequently lower permanent income.

EMPIRICAL EVIDENCE FROM THE UNITED STATES AND CROSS-COUNTRY STUDIES

The LCH variables are not directly observable, making the hypothesis difficult to test. In addition to equation (1), the most commonly tested LCH equation is the consumption function in the form of

$$C = \alpha YL + rW \qquad (2)$$

where C is consumption, YP is labor income, W is wealth, and r is asset return. Note that, under the LCH, YL is not consistent with current income in the national accounts; consumption does not include the portion of housing and durables purchased in a period but consumed later; and saving is not the residual of current income and current consumption but a comprehensive measure of change in nominal and real assets.

Despite these challenges, the LCH has been successful in explaining the saving behavior in many cross-section and time-series studies. Research in the 1960s, when data regarding private wealth in the United States and national income accounts for many Organization for Economic Cooperation and Development (OECD) countries first became available, accounted for the low saving-income ratio in the United States versus "poorer" countries under the LCH framework. Growth has also been proved to be the driving force behind the high saving-income ratio in Japan in the 1960s to 1970s and in China from the 1980s to 1990s.

Many studies have also documented evidence supporting the various extended versions of the LCH discussed above. Bequest and precautionary motives help explain why the wealth-income ratio does not decline as fast as the pure LCH predicts. Renewed interest in liquidity constraint has found the concept helpful in explaining the lower level of consumption in households' early years.

The LCH lends itself well to studying implications of policies designed to influence private consumption and saving, such as the Social Security program discussed above. Interest rate policy affects permanent income through the asset return variable directly and through its impact on housing and stock prices indirectly. In contrast to bequest, deficit financing increases current generations' permanent income at the cost of future generations.

SEE ALSO *Absolute Income Hypothesis; Consumption; Expectations; Modigliani, Franco; Permanent Income Hypothesis; Relative Income Hypothesis*

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Shi Larry Cao

LIFE EVENT MODEL

SEE *Life Events, Stress.*

LIFE EVENTS, STRESS

Interest in the relationship between life events and stress has sparked thousands of studies over the past several decades. The thrust of this research was that any event that required a person to change aspects of his or her life would have negative consequences for psychological and physical health. According to this perspective, whether the event was positive or negative did not matter. Rather, the most important variable in linking stress and illness was whether the event changed the status quo in one's life and required change. Therefore getting married (presumably a happy event for most) is considered more stressful than getting fired at work or the death of a close friend.

The stress associated with life events can be measured in a variety of ways. The Social Readjustment Rating Scale (SSRS) (Holmes and Rahe 1967) is the most widely used of such measures. It consists of a list of forty-three events in nine categories: personal, family, community, social, religious, economic, occupational, residential, and vocational life. The events are intended to represent significant changes in life that require adaptive or coping behavior. Each event is given a score: for example, death of a spouse is given a 100, marriage a 50, and troubles with boss a 23. Individuals are asked to indicate which of the events listed have occurred over a designated period (from six months

to two years). The sum of the weights for the checked items is then summed as the life-change score for a given individual.

Although the SRRS has been widely used, it has also been widely criticized. The relationship between life events and illness is thought to be small, and problems such as validity of the weights applied, biases in how people remember personal life events, overlap between life events and illness (e.g., change in sleeping habits) that might be related to illness all point to limitations in measuring a relationship between life events and stress (Smith 1993). Importantly, however, the use of this measure has led to an understanding of the type of life events that seem to have the greatest impact on stress levels; those include events that are unwanted, random, uncontrollable, and close together in time.

More recent perspectives on stress and illness appreciate that stress is a complex process involving different types of appraisals and coping as well as short- and long-term consequences. Perhaps the most applied theory of stress—the transactional model (Lazarus and Folkman 1984)—defines stress as a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being. According to this view, stress is conceptualized in terms of cognitive appraisal and coping, and stress is considered a continuous process. Furthermore patterns of coping are thought to change from one stage of a stressful encounter to another. For example, in the early stages of coping with the breakup of a relationship, one may seek social support from friends in order to get sympathy, understanding, or another perspective. In time one may find it more effective to cope by reinterpreting the breakup in a positive light, such as how it contributed to personal growth or opened up new and better possibilities.

Research has concluded that an important resource for dealing with stress is social support. People who have strong ties with other people are generally healthier and better able to cope with stressful life events. Other people can help reduce stress in a variety of ways by providing different forms of emotional support (e.g., intimacy and a sense of value), informational support (e.g., advice and guidance), and instrumental support (e.g., physical and material assistance). All these sources of support relate to a range of better health outcomes.

Applications of the stress and coping model to a specific stressor, discrimination, illustrates that exposure to potentially stressful events does not necessarily lead to reduced well-being. A stress and coping approach to understanding the experience of discrimination highlights the importance of examining how stressors are cognitively appraised; the coping strategies targets use to deal with stressful events; and the personal, situational, and structural factors that affect cognitive appraisals and coping processes (Major, Quinton, and McCoy 2002). Members of stigmatized groups confront discriminatory events by engaging in a variety of coping responses that can protect them from or make them more vulnerable to the adverse effects of stress (e.g., James, Hartnett, and Kalsbeek 1983; Krieger and Sidney 1996). The ways one responds to stress in general and discrimination in particular are important in understanding outcomes associated with stress.

SEE ALSO *Coping; Diathesis-Stress Model; Hypertension; John Henryism; Racism; Resiliency; Stress; Stress-Buffering Model; Vulnerability*

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LIFE EXPECTANCY

SEE *Morbidity and Mortality.*

LIFE SPAN, HUMAN

SEE *Morbidity and Mortality.*

LIFESPAN DEVELOPMENT

SEE *Developmental Psychology.*

LIFESTYLES

Lifestyles is a term found in both popular and scholarly literatures, most often referring to health-related behaviors such as drug use and "unsafe" sex, various forms of deviance, and consumption choices. Two of the earliest uses of *lifestyles* are in the work of psychologist Alfred Adler and sociologist Max Weber. Unlike Freud, Adler viewed human behavior as oriented toward future goals rather than driven mechanistically by the past. In *The Science of Living* (1929), he employed the concept of "style of life" to describe the individual's way of striving toward a goal of perfection within his or her particular social context. In contrast to Adler's focus on the individual, Weber viewed lifestyles as socially structured, introducing *lifestyle* to differentiate between class and status. Weber argued that classes are defined by their relation to the production of goods, while status groups are differentiated according to their consumption of goods; the various ways in which groups consume goods cluster into distinctive lifestyles.

The common use of *lifestyles* in popular culture as well as in studies of health and deviance shares Adler's focus on the individual to explain behavior, often connecting deviant behaviors such as drug use or unsafe sex to individual life decisions. In the scholarly and policy literatures, variables such as nutrition, housing, risk-taking behavior, health attitudes and beliefs, and preventative health behavior are used as primary indicators of lifestyles. In particular, tobacco use, alcohol consumption, diet, and sexual and intravenous drug practices (e.g., prostitution, needle sharing) are used to predict negative health outcomes. Experts in this field agree that individuals who abstain from smoking and drug use, consume alcohol in moderation, eat a healthy diet, refrain from violence, and practice safer sex have better survival rates than those who do not.

While the use of *lifestyles* in the health and behavioral sciences centers largely on individual practices, a vibrant social science discourse, in the tradition of Weber, points out that risk factors such as those listed above are only proximate causes of disease. A more sociological approach thus examines these lifestyles in terms of the social factors that put certain groups at greater risk for these behaviors in the first place. For example, in *A Plague on Your Houses* (1998), Deborah Wallace and Rodrick Wallace argue that living conditions in low-income areas—such as overcrowding and persistent displacement due to urban renewal—result in outbreaks of substance abuse, violence, and contagious disease. Similarly, Carol Cunradi et al. (2000) demonstrate a causal link between neighborhood poverty and intimate partner violence. Other sociologists argue that deviant behavior does not inhere in particular individuals but is learned through social interaction. Contrary to the conventional wisdom of the time, Howard Becker, for example, in *Outsiders: Studies in the Sociology of Deviance* (1963), finds that marijuana smokers do not naturally adopt deviant behavior because of flawed personalities or psychological problems but instead have to learn from others how to smoke marijuana. Later work in the sociology of deviance led to the concept of *subcultures*, which are characterized by the social organization of deviance as distinctive lifestyles.

The concept of *lifestyles* also appears prominently in the "culture of poverty" debate (see Lewis 1966). The culture of poverty thesis, widely disseminated in the Moynihan Report (1965), holds that the qualitatively different values held by the poor result in deviant lifestyles, which in turn lead to continued poverty. This argument has been criticized by sociologists such as Herbert Gans (1972, 1995), Ann Swidler (1986), and Elijah Anderson (1999), among many others, for its lack of attention to structural factors such as unemployment, inequality, and discrimination.

The socially structured nature of lifestyles is also emphasized in the sociology of consumption. In his famous study, *The Theory of the Leisure Class* (1899), Thorstein Veblen argued that the wealthy translate their money into symbols of prestige through "conspicuous consumption" and leisure. Veblen connects lifestyles to social hierarchy and explains that the lower classes emulate the "scheme of life" of the upper class. For Veblen, lifestyles are always observable, external, and conscious—in other words, conspicuous—that is, primarily enacted as vehicles for status and power.

Along these lines, economists, psychologists, and demographers explain lifestyles as sets of shared preferences. Tracing the development of American consumer culture, Lizabeth Cohen in *A Consumer's Republic* (2003) reveals that after World War II, merchants and advertisers moved away from treating consumers as a homogeneous group. Instead, marketers sought to "identify clusters of customers with distinctive ways of life and then set out to sell them idealized lifestyles constructed around commodities" (p. 299).

Target marketing both reflected and indeed created particular consumption patterns, defined not only by material goods but also by cultural frameworks for how to live, particularly through techniques such as "slice of life" advertising.

Another seminal work in the consumption literature is Pierre Bourdieu's *Distinction* (1984), which argues that the tensions of late capitalism are played out through consumption as social practice. In contrast to Veblen, Bourdieu emphasizes the habitual, internalized, and largely unconscious cultural practices implicated in lifestyles by explaining that people's class positions predispose them to certain lifestyles, which they experience as

personal and freely chosen. Thus, Bourdieu creates a map of ostensibly natural and individual lifestyles—centered on taste—and reveals their socially patterned, cultural logic. His use of lifestyles is radically anti-individualist: Even seemingly idiosyncratic qualities such as ways of walking and talking are rooted in socially structured material inequality. Bourdieu's approach thus marks a significant advance over sociologists whose use of *lifestyle* as a secondary marker of class position draws superficial correlations between lifestyles and other variables such as race, ethnicity, political orientation, education, and urban/suburban/rural residence.

More generally, social theorists of contemporary culture, such as Lears (1983), Campbell (1987), and Bauman (1998), do not see a tight connection between class and consumption, instead linking lifestyles to the growing identity crisis of modernity, thus marking a shift from Bourdieu's structural analysis of the role of lifestyles in class reproduction. For instance, Don Slater contends in *Consumer Culture and Modernity* (1997), that "In theorizing pluralization and identity crisis, two terms keep appearing: 'expertise' and 'lifestyle.' Both denote features of modern life which manage, assuage, and organize anxieties about modern identity and at the same time can be used to exploit and intensify them" (p. 86). Lifestyles, which center on consumer goods, services, and experiences, thus become a vehicle for the modernist project of realizing the self. This centrality of lifestyles indicates, for some theorists, the instability of modern forms of social membership. Anthony Giddens, for example, argues in *Modernity and Self-Identity: Self and Society in the Late Modern Age* (1991) that the consumption of goods replaces the genuine development of the self. Since the 1980s, *lifestyle* has become increasingly detached from traditional demographic variables—class, race, or gender, for example—and has come to represent personal, voluntary choices about how to consume.

SEE ALSO *Anthropology; Bourdieu, Pierre; Class, Leisure; Conspicuous Consumption; Culture, Low and High; Distinctions, Social and Cultural; Ethnography; Gans, Herbert J.; Giddens, Anthony; Habitus; Lewis, Oscar; Moynihan Report; Neighborhoods; Popular Culture; Poverty; Relative Income Hypothesis; Suburbs; Veblen, Thorstein; Weber, Max*

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LIKELIHOOD RATIO TEST

SEE *Specification Tests.*

LIKERT, RENSIS

SEE *Likert Scale.*

LIKERT SCALE

The Likert scale is arguably the most widely used type of attitude scale in the social sciences. The typical Likert scale appears as a collection of statements about an attitude object (person, group, institution, idea, etc.) reflecting favorable or unfavorable attitudes toward the object. Each statement is accompanied by a graded-response rating scale, typically with five response choices, the most commonly used being: "Strongly Agree," "Agree," "Undecided," "Disagree," and "Strongly Disagree." The respondent is instructed to select one of the response choices for each statement. To score the scale, the response choices are given weights to reflect the attitude continuum, typically weights of 1 to 5, 1 for the most unfavorable (or least favorable) attitude and 5 for the most favorable. The weights for the respondent's choices are then summed across all statements. The resulting total score may be interpreted normatively, with reference to some comparison group, or absolutely, with reference to theoretically or empirically chosen cut-off scores.

As examples, here are two contrasting items from a Likert scale on attitudes toward work:

1. Work is an activity to be avoided.

__Strongly Agree __Agree __Undecided __Disagree __Strongly Disagree

2. Work brings out the best of my abilities.

__Strongly Agree __Agree __Undecided __Disagree __Strongly Disagree

The first item reflects an unfavorable attitude toward work and therefore "Strongly Agree" is scored 1, "Agree" is scored 2, and so on, up to 5 for "Strongly Disagree." The second item, reflecting a favorable attitude, is scored 5 for "Strongly Agree," 4 for "Agree," and so on, up to 1 for "Strongly Disagree."

The format of five response choices per statement is so widely used that some have mistakenly called any instrument using this format a Likert scale. But it is not the five-choice format that characterizes a Likert scale. Rather, it is the method used in developing the scale—Rensis Likert's method—that makes an instrument a Likert scale, regardless of the number of response choices used.

Likert's method is essentially the construction of an internally consistent scale. Likert's idea, innovative for its time in the 1930s, was to use total score as the criterion for item selection, on the assumption that total score was a "best estimate" of a respondent's attitude. Likert proposed two different methods of item selection: (1) *item analysis*, in which selection is based on the correlation of item score with total score; and (2) the employment of a *criterion of internal consistency*, which is used to examine, for each statement, the difference in average item score between high-scoring and low-scoring groups defined on the basis of total score. Both methods turned out to be variants of the same general method for constructing internally consistent scales.

Likert's insight was that psychometric methods (at that time used only in ability and achievement test construction) could be applied to attitude measurement, just as Louis Thurstone's insight was that psychophysical methods, such as the method of equal-appearing intervals, could be used in attitude measurement. Louis Guttman, the third pioneering great of attitude measurement, invented a unique scaling method based on a rigorous definition of unidimensionality and its implications for the rank-ordering of attitude statements and respondents. Whereas Thurstone's method scaled stimuli (attitude statements) and Likert's method scaled responses and respondents, Guttman's method scaled both stimuli and respondents simultaneously. However, Guttman's method was rather difficult to apply, and Thurstone's method was quite labor-intensive. Consequently, Likert's method became the method of choice for constructing attitude measures and other self-report instruments, especially with the advent of computers and statistical computer programs. Nowadays, the application of Likert's method often begins with a factor analysis of a large pool of statements, followed by the (Likert) scaling of high-loading statements for each factor. The usual criterion for item retention is contribution to internal consistency reliability. All the techniques of psychometrics, including—more recently—item response theory, can be applied to the construction of Likert scales.

Likert scales are essentially rating scales, hence they are susceptible to the problems of rating scales. Many of these problems involve *response sets*, which comprise response tendencies that are independent of the semantic content of the attitude statements. Response sets may result in errors of three kinds: (1) *mean error*, the tendency to center responses around some preferred mean value (*leniency error*, when the preferred mean is high, and *strictness error*, when the preferred mean is low); (2) *variance error*, the tendency to restrict or to expand the rating range regardless of correspondence to reality; and (3) *covariance error*, the tendency to rate all statements similarly (also called the *halo effect*). These errors may be avoided or minimized by various procedures described in psychometric texts.

Likert scales are also self-report scales, hence they are susceptible to the biases implicit in self-disclosure. Clerical errors aside, responses to a Likert scale reflect the extent to which a respondent decides to "self-disclose," which, in turn, depends on the ability and the motivation of the respondent to self-disclose. Ability to self-disclose is

affected by such factors as reading comprehension (of the scale's statements, instructions, etc.), experience, and familiarity with the subject matter of the scale. Motivation to self-disclose is more difficult to parse; respondents may be motivated by any number of reasons to understate or to overstate their attitudes. Such distortion may be avoided or minimized if the scale administrator has credibility and rapport with the respondents.

Likert scales can be measures of either stable or changeable attitudes. It behooves scale constructors to determine which kind of attitude they are measuring by conducting test-retest and longitudinal studies. These studies are especially important when the scale constructor intends (for theoretical or other purposes) to measure one kind of attitude rather than the other.

Finally, unless it is actual self-report that is of interest (as, for example, in opinion surveys), Likert scales should be validated against other independent indicators of the attitude(s) being measured. As psychometric instruments, Likert scales have to meet the basic psychometric requirements of reliability and validity.

SEE ALSO *Guttman Scale; Reliability, Statistical; Scales; Surveys, Sample; Validity, Statistical*

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LIMINALITY

SEE *Turner, Victor.*

LIMITS IN PROBABILITY

SEE *Probability, Limits in.*

LIMITS OF GROWTH

The proposition that economic growth could not continue indefinitely was first put in a formal quasi-mathematical manner by Thomas Malthus's (1766–1834) pamphlet *An Essay on the Principle of Population* (1798). Malthus's essential propositions were that "population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. A slight acquaintance with numbers will shew the immensity of the first power in comparison of the second" (Malthus 1798, chap. I.18).

Malthus's analytic concept, of a clash between variables growing at fundamentally different rates, failed to take root in economic methodology, which instead came to be dominated by concepts of stability and equilibrium. Also, contrary to Malthus's assumptions, both food and income per capita grew in Europe over the next two centuries.

However, world population also continued to grow, and at an accelerating exponential rate, rising from about one billion in Malthus's time to four billion by the early 1970s. The specter of population outrunning food production was once again raised by the biologist Paul R. Ehrlich in *The Population Bomb* (1968). The oil engineer M. King Hubbert (1956) hypothesized that economic growth would exhaust oil supplies during the twenty-first century. And, in *The Limits to Growth* (1972), Donella Meadows and colleagues argued that complex interactions between population, resources, and pollution would limit economic growth.

Ehrlich's analysis, like Malthus's, focused predominantly on the relationship between population and food output. On the basis of verbal hypotheses, Ehrlich presented a number of future scenarios with short-term quantitative predictions that were soon falsified. The key weaknesses in Ehrlich's analysis were the extrapolation of short-term trends, and the expectation that these trends would manifest in near-immediate problems. However, these short-term trends were not maintained. For example, Ehrlich's book coincided with the "green revolution" in agriculture and extensive birth control programs, which undermined his predictions of imminent widespread famines.

Hubbert's argument differs from those of Malthus and Ehrlich by considering a nonrenewable resource as the limit, rather than food. Hubbert proposed a logistic depletion of total reserves, so that actual oil output would follow a bell-like curve, peaking in the early twenty-first century when approximately half the planet's finite stock of oil had been mined. Though the model works well for given deposits, its aggregate outcome is disputed. Critics argue that technological change and price incentives will increase the amount of recoverable reserves indefinitely. Adherents assert that the physical limit will ultimately assert itself, thus limiting economic growth because alternative energy sources to oil have lower net energy gains than oil.

Meadows and colleagues present a sophisticated case for limits to growth using a systems dynamics computer model known as World3. The key features of a systems dynamics model are: (1) the model consists of a set of cou-

pled difference or differential equations (that are represented as flowcharts rather than symbolic equations); (2) the model specifies both positive and negative feedbacks between variables; and (3) time relationships between variables are depicted (there is, for example, a fifteen-year lag between the emission of a chlorofluorocarbon molecule at sea level and its entry into the stratosphere, where it will destroy about 100,000 ozone molecules for about one century before decaying).

Whereas Malthus and Ehrlich presumed the rates of population change remained constant, World3 made this and other rates of change depend on feedbacks from other variables. For example, the fertility rate is affected by negative feedbacks from per capita gross domestic product (GDP), social services, and per capita expenditure on birth control—so that increasing incomes reduce the rate of population growth. Overcrowding and pollution are positively linked to the death rate—so that increasing pollution also reduces the rate of population growth.

World3 allows for technological change that enables increased output per unit of input—an effect that reduces the severity of physical constraints on growth over time. The model is also designed to accept different specifications of ultimate physical constraints, while specifying base-level estimates related to known levels in 1970. Physical constraints included both *sources*, or fixed nonrenewable resources such as land and oil, and *sinks*, or the capacity of the ecosystem to absorb pollutants.

As an aggregative numerical model, World3 has to reduce some multifaceted phenomena—such as population, food, pollution, and technology—to index numbers that represent each variable's current level and a set of influences on other variables over time. The model's numerical outcomes are thus not predictions but broad scenarios, where increases in some index numbers—for example, pollution—cause severe dampening effects upon others, such as population or average human welfare. The model also operates at a global level, and thus omits the possibility that some interrelations, and therefore crises, may be localized (for example, land degradation problems are more likely to be severe in Africa and Australia than in Europe and Japan).

In *The Limits to Growth*, World3's index values were calibrated to ensure rough compliance of the model with data from 1900 till 1970. The model was then run forward to the year 2100 under a range of different scenarios—starting from "business as usual"—and then adding a layered range of alternative futures, with changes to population growth norms, accepted levels of pollution, rates of technical change, and desired levels of consumption. Differing levels of physical constraints were also considered.

In contrast to Malthus and Ehrlich, the Meadows group concluded that it was feasible that the world could provide a high-quality life for the entire human population for the indefinite future. However, they also concluded that current growth patterns were likely to overshoot this ideal, leading to some form of severe crisis that would cause world population to fall precipitously in the middle of the twenty-first century.

The Meadows study was a popular success, selling millions of copies, but it was also highly controversial. Critics attacked it on four main grounds, asserting that it:

- Applied unrealistically low-capacity constraints
- Underestimated the market's response to price signals and the adaptability of technology
- Based crucial causal relations on inadequate data
- Used an inappropriate modeling technique

The Meadows group rejects these criticisms on the general ground that they result from applying a mistakenly reductionist approach to their holistic study. For example, they allege that the criticism about capacity constraints being set too low ignores the corollary that, with higher capacity constraints, there is an increased likelihood of pollution levels overwhelming the planet's sinks. In their *30-Year Update*, published in 2004, they argue that to really disprove their conclusions, one or more of the following assumptions has to be disproved (Meadows et al. 2004, pp. 175–176):

- "Growth is considered desirable."
- "There are physical limits to the sources of materials … and there are limits to the sinks that absorb waste products."
- "The growing population and economy receive signals … that are distorted, noisy, delayed.… Responses to those signals are delayed."
- "The system's limits are not only finite, but erodable when they are overstressed … there are strong nonlinearities—thresholds beyond which damage rises quickly and can become irreversible."

They also argue that the systems dynamics approach to modeling is superior to the general equilibrium approach favored by economists. One of the disappointments for the Meadows group has been the lack of adoption of systems dynamics methods by other social sciences—and in particular, by economics.

The 1972 report predicted that environmental issues would dominate early twenty-first century politics. That expectation is confirmed by the widespread political acceptance that global warming is occurring—the underlying cause of which is the emission of far more carbon dioxide than the planet's carbon-absorbing sinks can process, and the degradation of those sinks in a feedback

process. CO_2 levels have risen from 325 parts per million at the time of *The Limits to Growth* report to 380 parts per million in 2006, consistent with the report's predictions.

Nicholas Stern (2006), using accepted economic computable general equilibrium methods, has amplified the political acceptability of the proposition that global warming will limit growth potential. However, Stern makes much milder predictions of a 5 to 10 percent fall in mid-twenty-first century global GDP because of climate change, and he asserts that addressing global warming will cost only 1 percent of annual GDP. *The Limits to Growth*'s standard run, on the other hand, contemplates a fall in human welfare of more than two-thirds from its peak level. Its sustainable society achieves high human welfare, but requires population stabilization policies, limits on material production, and innovation in food technology, in addition to the power generation, transport efficiency, and pollution abatement contemplated by Stern.

The Meadows group is broadly pessimistic about whether these policies will be implemented in time. In the *30-Year Update*, they argue that humanity's "ecological footprint" (Meadows et al. 2004, p. xv, following Wackernagel and Rees 1996) exceeded its carrying capacity by more than 20 percent in 2000. They therefore predict that, given the lags in systemic adjustments and the erosion of physical limits, the twenty-first century will experience an "overshoot." Their policy recommendations, which were intended to avoid overshoot in 1970, are now designed to limit the impact of overshoot to oscillations and a diminished carrying capacity, rather than a serious collapse.

SEE ALSO *Change, Technological; Club of Rome; Economic Growth; Green Revolution; Malthus, Thomas Robert; Malthusian Trap; Natural Resources, Nonrenewable; Overpopulation; Ricardo, David*

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Steve Keen

LINCOLN, ABRAHAM
1809–1865

Abraham Lincoln, the sixteenth president of the United States, was born February 12, 1809, in a log cabin in Kentucky. His opinions against slavery seem to have been shaped while he was a boy, partly by his father's antislavery opinions, partly by the fact that his father took everything Lincoln earned until he was of majority, and partly by a trip to New Orleans where he witnessed the institution in operation.

Lincoln's political career began in 1832, when he ran as a Whig for the Illinois state legislature from the town of New Salem and lost. He won two years later, though, and began studying law. New Salem was not a promising town, and Lincoln moved to Springfield in 1837. There he honed his legal skills, ultimately becoming one of Illinois's most prominent attorneys and, in the 1850s, a successful corporate lawyer. It was also in Springfield that he met Mary Todd (1818–1882), whom he married in 1842. They had four sons together, only one of whom lived past eighteen.

After four terms in the legislature, Lincoln was elected to Congress in 1846. To the extent that he made a name for himself in Washington, it was by challenging the grounds on which the Mexican War began. Lincoln was not reelected. Discouraged about politics, he focused on his practice instead. The Kansas-Nebraska Act (1854), which allowed Kansas to decide whether it would have slavery and sparked a virtual civil war within the territory, reengaged Lincoln. He won his fifth legislative term but resigned to run for the U.S. Senate, a campaign he lost in 1855.

The following year, he joined the Republican Party, which positioned him for his most dramatic campaign to date: his 1858 race for the Senate against one of the country's best-known Democrats, Stephen A. Douglas (1813–1861). Lincoln's acceptance of the nomination has come to be known as his "House Divided" speech. Equally famous is the series of debates he had with Douglas in seven different towns across the state. The Lincoln-Douglas debates drew thousands of observers and national press attention as the two men argued about whether or under what circumstances slavery should be allowed to spread into the territories. Douglas tried to undermine Lincoln by painting him as an abolitionist (Lincoln actually did not target slavery in the states where it already existed; his goal was to keep it from moving into the territories), and Lincoln pressed on the moral aspect of slavery and Douglas's position. Lincoln lost the contest, but gained nationwide recognition, which he leveraged in a prominent 1859 speech at New York's Cooper Union.

Despite Lincoln's rising prominence, he remained a man with little political baggage. That made him an appealing compromise candidate for the Republicans at their 1860 convention. In November Lincoln ran against three other candidates, including his old nemesis, Douglas. Lincoln won with just 39.8 percent of the popular vote, but a clear majority of electoral votes.

Despite Lincoln's repeated assertions that he was interested only in keeping slavery out of the territories, southerners were convinced that he wanted to abolish it completely and immediately. South Carolina was the first state to secede from the Union, on December 20, 1860. Six states followed shortly thereafter, and four more joined after the rebels opened fire on Fort Sumter on April 12, 1861.

Lincoln initially believed that a number of Unionists in the South would rise up against the Confederate government, so for the first year of the war he favored a strategy that avoided targeting slavery. As late as the spring of 1862, Lincoln believed in trying to compensate slaveowners in places such as the border state of Kentucky for their property, and he thought freed blacks should be sent to colonies elsewhere, on the grounds that blacks and whites could not live together. By July 1862, Lincoln realized that the Confederacy did not have a critical mass of Union supporters, and he decided to hit at the rebels' point of vulnerability. In issuing the Emancipation Proclamation on January 1, 1863 (he had issued a preliminary version the previous September), he believed he was striking at the Confederates in two ways: First, the proclamation would deny southerners their slaves, and second, it would also deny them the workforce that kept the Confederate army going. The proclamation was limited, however, affecting only those parts of the South that were in rebellion and out of the Federals' reach.

Lincoln was fundamentally moderate. He was also a man of his times. Both these points account for his approach to the slavery question as president. Critics have assailed Lincoln's slowness on emancipation, but he believed the Constitution limited his powers in this regard. Because of these constitutional concerns, he issued the proclamation as a military measure. One thing is clear from the historical record, however, and that is that Lincoln was always personally opposed to slavery. He was also willing to change, and he did. In fact, it is difficult to generalize about most of Lincoln's policies because he underwent such transformation in office. For instance, Lincoln abandoned his positions on compensation and colonization and, in the summer of 1864, when he was under great pressure to abandon emancipation as a condition for peace, he staked his career on protecting freedmen, saying he would be "damned" if he abandoned them. He also approved of Sherman's March through Georgia and later into the Carolinas, a maneuver that amounted to hard, if not total, war—a far cry from his gentler approach at the war's outset.

Even as he moved toward harder war, Lincoln wanted a soft peace. His early efforts at reconstruction called for Louisiana to establish a new state government when just 10 percent of the voters in the 1860 election took a loyalty oath and accepted emancipation. Many in Congress deemed this to be too lenient, but Lincoln at the end of his life appeared to be determined to return the rebel states to the fold with as little rancor as possible, while simultaneously protecting and advancing the rights of blacks. This included extending the vote to at least some African Americans. Lincoln was preparing a new reconstruction plan when he was assassinated April 14, 1865—Good Friday—while watching a play. He died the next morning.

While we will never know Lincoln's precise plans for Reconstruction or how they would have changed in response to the contingencies of the day, it seems fair to say that Reconstruction would have been markedly different under Lincoln. Instead, his successor, Andrew Johnson (1808–1875), proved to be a white supremacist who easily bent to the wishes of southern elites. This led to such tragic consequences as the Black Codes, laws that all but reinstated slavery in many parts of the South. Johnson's ready acquiescence to southern demands prompted Congress to wrest control of Reconstruction from the president and impose its own plan on the South, which proved to be to the short-term benefit of black southerners but provoked a bitter and violent response from whites in the region.

SEE ALSO *Slavery; U.S. Civil War*

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Jennifer L. Weber

LINDBLOM, CHARLES EDWARD

1917–

Raised in Turlock, California, Charles Edward Lindblom attended Stanford University and then went to graduate school at the University of Chicago. Shortly after he began teaching economics at the University of Minnesota in 1939, the department chair rebuked Lindblom "for giving a talk to an undergraduate club on … Lange's concept of market socialism." He subsequently "met with many other sharp intolerances" from faculty and did not receive tenure. After moving to Yale, he found greater diversity of thought but nevertheless "was heavily influenced by the intolerances of the discipline of economics" (*Democracy and Market System*, 1988, p. 17).

Although the tensions were framed in terms of "good economics," not ideological disagreement, the response to his dissertation (*Unions and Capitalism*, 1949) was telling: Whereas the text offered a symmetrical analysis depicting corporate and union power relations on a collision course likely to lead to serious problems including inflation, reviewers were sure the author was calling for limits on collective bargaining. Lindblom's subsequent work reveals that he already was contemplating restraints on corporate executive discretion.

Lindblom's research questions and methodology were so out of favor that the Yale economics chair urged him to resign, predicting he would "die on the vine" and never be promoted to full professor. However, coteaching and scholarly collaboration with Robert Dahl led to a joint appointment in political science and a gradual shift of attention toward a discipline that recognized the landmark nature of his work. Lindblom chaired the political science department from 1972 to 1974 and later was named to Yale's most prestigious chair as Sterling Professor of Economics and Political Science. He served as president of the Association for Comparative Economic Studies and of the American Political Science Association.

Lindblom helped found the Institution for Social and Policy Studies, intended to move the university's social sciences into interdisciplinary conversation while enhancing their relevance to public issues. As director from 1974 to 1980, Lindblom led mapping projects designed to frame research questions with the professional care normally reserved for the conduct of research. Present-day research on the not-for-profit sector traces partly to an exploratory ISPS project, as do Richard Nelson and Sidney Winter's evolutionary economics and Robert Lane's studies of market and personality.

In a presidential address to political scientists titled "Another State of Mind" (1982), Lindblom argued that "conventional theory is embarrassingly defective. It greatly needs to call more heavily on radical thought" (p. 20). At four regional political science meetings, he asked audiences: "Suppose—just to limber up our minds—that we faced the fanciful task of designing … a political/economic system that would be highly resistant to change. How to do it?" A "simple and fiendishly clever" approach would be "to design institutions so that any attempt to alter them automatically triggers punishment" ("The Market as Prison," 1982, p. 324). Far from fanciful, something approaching that arrangement occurs as market systems imprison policy, sometimes via tangible constraints, as when officials fear businesses will move if "excessively" regulated. More insidious and fundamental are imprisonments of mind, a wide range of helpful policy options becoming unthinkable because their adoption would require deviating from tightly held and carelessly examined beliefs about corporation and market.

Politics, Economics, and Welfare (1953, with Robert Dahl) remains the most systematic comparison yet attempted of the price system, hierarchy, polyarchy, and bargaining as political-economic processes of rational calculation and social decision-making. It closes with an insight still fresh generations later: "Through what social processes should action take place? Clearly the answer … (depends on another) question: What kind of human being is wanted?" (p. 523).

The idea of incrementalism introduced therein was refined in "The Science of 'Muddling Through' " (1959), which still garners hundreds of citations annually. The core idea, derived in part from Lindblom's training in marginalist economic analysis, was a challenge to the Western political tradition's extreme faith in reason: Analysis is inevitably incomplete, excessively costly, and a poor guide to big changes; political interactions negotiating smaller changes often are both more feasible and more reliable. *A Strategy of Decision* (1963, with David Braybrooke) and *The Intelligence of Democracy* (1965)

offered detailed treatments of mutually adjusting interaction as a method of analyzing and determining policy moves, the latter still unparalleled regarding forms of mutual adjustment other than bargaining.

Neither critics nor followers did especially well by disjointed incrementalism. Many readers reduced the concept's nuances to the oversimplified notion of small steps, degenerating into arguments that Aaron Wildavsky subsequently pilloried as the search for the "magic size" of an increment. Some perceived incrementalism as overly conservative (Dror 1964, Etzioni 1966), seemingly blaming the decision strategy for conservative tendencies in U.S. politics, or perhaps failing to recognize that, in principle, "A fast-moving sequence of small changes can more speedily accomplish a drastic alteration of the status quo than can an only infrequent major policy change" ("Still Muddling, Not Yet Through," 1979, p. 520).

Goodin and Waldner (1979) argued that actually practicing incrementalism would be more difficult than it sounds. Some theoretical understanding is needed to decide where and how to intervene, and to determine how long to monitor a policy trial before deciding whether to change it. They pointed as well to difficulties posed by threshold and sleeper effects and questioned the idea that small changes are always less dangerous and more reversible. To the claim that reforms can be thought of as experiments, they found nontrivial difficulties in actually learning from early trials. A number of analysts pointed to circumstances where the value of incrementalism would be reduced, including Schulman's (1975) recognition that large-scale policy choices such as the lunar program sometimes have to be undertaken completely if they are to work at all.

Lindblom acknowledged the validity of some of these insights but found that the critics had not really proposed an alternative way of grappling with the basic predicament: "Incremental policy making is weak, often inefficacious, inadequate to the problem at hand; and the control over it often falls into the wrong hands. It is also usually the best that can be done," given the imprisoning effects of corporation and market, gross political inequalities, and elite-catalyzed impairments in political thinking by citizens, government functionaries, and social scientists (*Democracy and Market System*, 1988, p. 11). Neo-incrementalists recently have begun to take up the challenge, responding to the critics' concerns and extending incrementalist thought to deal better with inequality and with institutional malfunctioning (Collingridge 1992; Hayes 2001).

Lindblom returned to studying the economic side of political life in *Politics and Markets* (1977), winner of the APSA Woodrow Wilson Award, which concluded, "The large private corporation fits oddly into democratic theory and vision. Indeed, it does not fit" (p. 356). The work garnered sufficient public notice to evoke an attacking ad by Mobil in *The New York Times*. The "privileged position of business" and political-economic inequalities were central in *The Policy-Making Process* (1993, originally written in 1973), a soon-classic text for policy-oriented courses. *The Market System* (2001) summarized the great merits of market systems as social coordinating mechanisms, simultaneously offering an elegant overview of systemic defects not encompassed in conventional analyses of market failure.

Usable Knowledge (1979, with David Cohen) argued that professional social inquiry is "incapacitated in contributing to social problem solving because of its own metaphysics, fashions, traditions, and taboos" (p. 95). *Inquiry and Change* (1990), another APSA best book award winner, analyzed inequality as a barrier to rationality while contrasting the analysis-heavy ideal of scientifically guided society with a more egalitarian and cognitively realistic self-guiding society. Among many barriers to self-guiding society, foremost is impairment, Lindblom argued: Not only corporation and government, but family, school, church, and media hamper development of capacities for probing problems and possibilities. Social scientists can assist people in understanding and shaping their societies by conducting partisan analysis challenging the status quo better than by aiming for avowedly neutral, supposedly authoritative knowledge that actually is forever unattainable.

Although following in the tradition of the Enlightenment, then, Lindblom's "aspiration to improve social problem solving … pursues inquiry and the resourceful utilization of its results more than it pursues firm knowledge. Thus, it rewrites Kant's 'Dare to know!' as 'Dare to inquire!' "(*Inquiry and Change*, p. 301).

SEE ALSO *American Political Science Association; Corporations; Corporatism; Economics; Incrementalism; Marginalism; Norms; Pluralism; Political Science; Public Policy*

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LINEAR REGRESSION

Linear regression refers to a linear estimation of the relationship between a dependent variable and one or more independent variables.

Social researchers typically assume that two variables are linearly related unless they have strong reasons to believe the relationship is nonlinear. In general, a linear relationship between a dependent variable (Y) and an independent variable (X) can be expressed by the equation $Y = a + bX$, where a is a fixed constant. The value of the dependent variable (Y) equals the sum of a constant (a) plus the value of the slope (b) times the value of the independent variable (X). The slope (b) shows the amount of change in Y variable for every one-unit change in X. The constant (a) is also called the *Y-intercept*, which determines the value of Y when $X = 0$.

Theoretically, if the dependent variable Y can be perfectly estimated by the independent variable X, then the y should be precisely located on the predicted line. The equation of the predicted line can be expressed as $\hat{Y} = a + bX$. The $\hat{Y}$ ("Y hat") represents the predicted value Y. However, actual social data never follow a perfect linear relationship. In fact, the actual observed value of Y is rarely on the predicted line. Therefore, it is necessary to take the deviations between the predicted value and actual value into account through the linear regression model. In the linear regression model, for every X value in the data, the linear equation will predict a Y value on the "best-fitting" line. This "best-fitting" line is called a *regression line*. The linear regression model should then be expressed as $Y = a + bX + e$. The e is the error term, or a residual, which represents the distance between predicted value ($\hat{Y}$) and the actual Y value in the data.

The goal of linear regression estimation is to develop a procedure that identifies and defines the straight line that provides the best fit for any specific set of data. A basic approach of linear regression is to estimate, by minimizing the residuals, the values for the two regression coefficients (a and b) based on the observed data. In other words, the predicted errors estimated by regression equation must be smaller than the errors made with any other linear relationship. To determine how close the predicted scores are to the observed scores, the method of Ordinary Least Squares (OLS) is the most popular approach used in the linear regression.

OLS estimates regression equation coefficients (a and b) that minimize the error sum of squares. That is, the OLS approach sums the squared differences between each observed score (Y) and its score predicted by the regression equation $\hat{Y}$, and produces a quantity smaller than that obtained by using any other straight linear equation. The result is a measure of overall squared error between the line and the data: Total squared error = $\Sigma(Y-\hat{Y})^2$.

In Figure 1 the distance between the actual data point (Y) and the predicted point on the line ($\hat{Y}$) is defined as $Y-\hat{Y}$. The best-fitting line to the data should thus show a sum of absolute values of $Y-\hat{Y}$ to be the minimum, or the

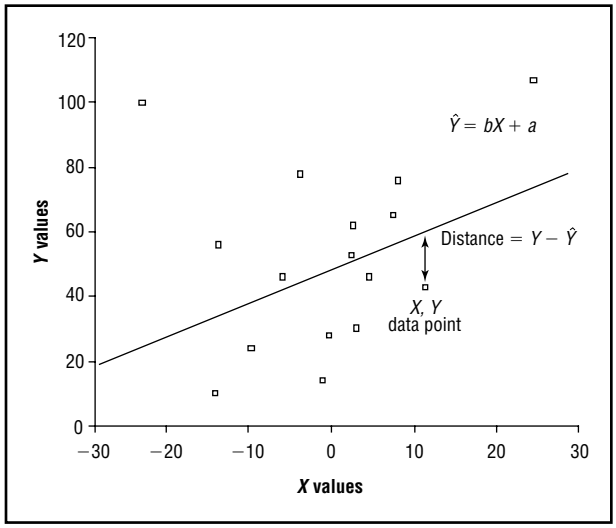

Figure 1

sum of distances between $Y–\hat{Y}$ to be the shortest if there are only two sets of X and Y. Because some of these distances will be positive and some will be negative, the sum of the residuals, $\Sigma(Y–\hat{Y}) = \Sigma e$, is always zero. The process of squaring removes the negative signs so that the sum of these squared errors is greater than zero. Also, it minimizes the sum of all the squared prediction errors.

Under certain ideal conditions, OLS is in fact superior to other estimators. If these necessary assumptions are true, OLS is the best linear unbiased estimator of corresponding population parameters. The OLS assumptions include:

1. Linearity. The relationship between the dependent variable (Y) and independent variable(s) (Xs) has to be linear. But sometimes the true relationship is better described by a curve.
2. Normality. It is assumed that y has a normal distribution for every possible value of X. This assumption is especially important in small samples for the marked skewness or severe outliers of residuals.
3. Homoscedasticity. It is assumed that the population variance of Y is the same at all levels of X. This assumption of homoscedasticity is required for regression t and F tests, as well as difference-of-means tests and analysis of variance.
4. No autocorrelation. The sample observations are assumed to be independent of each other if they were individually and randomly selected from a large population. That is, there should be no correlation between errors and X variables (Hamilton 1992, pp. 110–111).

However, perfect data fitted with all OLS assumptions are rather rare in practice. For example, the OLS assumptions may be violated by problems of a nonlinear relationship, omitting relevant independent variables (Xs) including irrelevant independent variables (Xs), correlation between X and errors, X measured with errors, heteroscedasticity, non-normal distribution, and multicollinearity, and so on. To deal with these problems, certain nonlinear robust estimators are better and more efficient than the OLS estimation, which will yield unbiased estimations of the correlation between X and Y variables. Therefore, the selection of regression techniques is highly dependent on the characteristics of the selected data.

SEE ALSO *Logistic Regression; Ordinary Least Squares Regression*

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Chiung-Fang Chang

LINEAR SYSTEMS

Linear systems are systems of equations in which the variables are never multiplied with each other but only with constants and then summed up. Linear systems are used to describe both static and dynamic relations between variables.

In the case of the description of static relations, systems of linear algebraic equations describe invariants between variables such as:

$$a_{11}x + a_{12}x_1 = c_1$$
$$a_{21}x + a_{22}x_2 = c_2$$

Here, one would be interested in the values of x_1 and x_2 for which both equations hold. This system of equations can easily be written in matrix form:

$$\begin{pmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{pmatrix} \begin{pmatrix} x_1 \\ x_2 \end{pmatrix} = \begin{pmatrix} c_1 \\ c_2 \end{pmatrix}$$

or, more concisely:

$$Ax = c$$

The solution can be written as $x = A^{-1}c$ if the matrix A is invertible. Another frequent application of systems of linear algebraic equations is the following:

$$y_i = b_0 + b_1x_{i1} + b_2x_{i2} + b_3x_{i3} + \ldots + b_mx_{im} + e_i$$

The above is a regression equation stating that for every object i, its attribute Y has a value that can be

expressed as the weighted sum of its attributes X_1 through X_m, with a measurement error of E (whose variance should be a minimum in the classical regression analysis). The term linear is derived from the fact that the graphical representation of the above equation for $m = 1$ is a straight line (with intercept b_0 and slope b_1). The above equation holds for all i, thus the system of equations:

$$y_1 = b_0 + b_1x_{11} + b_2x_{12} + b_3x_{13} + \ldots + b_mx_{1m} + e_1$$
$$y_2 = b_0 + b_1x_{21} + b_2x_{22} + b_3x_{23} + \ldots + b_mx_{2m} + e_2$$
$$\ldots$$
$$y_n = b_0 + b_1x_{n1} + b_2x_{n2} + b_3x_{n3} + \ldots + b_mx_{nm} + e_n$$

for all n objects is often written in the abbreviated form, using matrices and vectors,

$$y = Xb + e$$

where y and e are column vectors containing all y_i and e_i, respectively ($i = 1 \ldots n$), b is a row vector containing all b_j ($j = 0 \ldots m$), and X is a $n \times (m + 1)$ matrix (with n rows and $m + 1$ columns) containing x_{ij} in the cells in row i and column j (where $x_{i0} = 1$ for all i). Here one is interested in the values of the regression coefficients b_j ($j = 0 \ldots m$) which minimize the variance of the regression residual E. This is solved by calculating e^Te which is the sum of the squares of the still unknown e_i and calculating the derivatives of e^Te with respect to all (also unknown) b_j. These derivatives will be 0 for $e^Te = min$, and the solution of this minimization problem is expressed as follows:

$$\frac{\partial b^TX^TXb}{\partial b} = 0 \quad \text{for} \quad b = (X^TX)^{-1}y$$

Linear systems are also used to describe dynamic relationships between variables. An early standard example from political science is English physicist Lewis Fry Richardson's (1881–1953) model of arms races, which consists of the following simplifying hypotheses:

- The higher the armament expenses of one military block, the faster the increase of the other block's armament expenses (as the latter wants to adapt to the threat as quickly as it can).
- The higher the armament expenses of a military block, the slower those expenses will increase (as it becomes more difficult to increase the proportion of military expenses with respect to the gross national product).

Calling the armament expenses of the two blocks x_1 and x_2, respectively, and their increase rates $x\dot{x}_1$ and $x\dot{x}_2$, respectively, one can model the increase rates as proportional both to the military expenses of the other block and the nonmilitary expenses of the own block (the total expenses x^{max}_1 and x^{max}_2 being constant), with some proportionality constants a, b, m, and n:

$$x\dot{x}_1 = m(x^{max}_1 - x_1) + ax_2 = g - mx_1 + ax_2 \; g = mx^{max}_1$$
$$x\dot{x}_2 = bx_1 + n(x^{max}_2 - x_2) + h + bx_1 - nx_2 \; h = nx^{max}_2$$

or, in shorter form:

$$\begin{pmatrix}\dot{x}_1\\ \dot{x}_2\end{pmatrix} = \begin{pmatrix}g\\ h\end{pmatrix} + \begin{pmatrix}-m & b\\ a & -n\end{pmatrix}\begin{pmatrix}x_1\\ x_2\end{pmatrix}$$
$$\dot{q} = c + Aq$$

Such linear systems of differential equations usually have a closed solution, that is, there is a vector-valued function $q(t)$ that fulfills this vector-valued differential equation. Usually, the precise form of $q(t)$ is not very interesting, but generally speaking it has the form:

$$q(t) = \theta_1q_1e^{\lambda_1 t} + \theta_2q_2e^{\lambda_2 t} + q_s$$

where q_1, q_2 and q_s are constant vectors and θ_1, θ_2, λ_1 and λ_2 are constant numbers of which mainly q_s, λ_1 and λ_2 are of special interest. q_s is the stationary state of the system of differential equations, that is, once the system has acquired this state, it will never leave that state, as the derivatives with respect to time vanish. λ_1 and λ_2 are the so-called eigenvalues of the matrix A, which, as the exponents of the two exponential functions in the above equation, determine whether the function $q(t)$ will grow beyond all limits over time or whether the two first terms in the right-hand side of the above equation will vanish as time approaches infinity. For negative values of both λ_1 and λ_2 the latter will happen, and the overall function will approach its stationary state (in which case the stationary state is called *stable* or an *attractor* or *sink*). If both eigenvalues are positive, then the function will grow beyond all limits (in which case the stationary state is called *unstable* or a *repellor* or *source*). If one of the λs is positive while the other is negative, the stationary is also unstable, but is called a *saddle point* because the function will first approach the stationary state and then move away. There is a special case when λ_1 and λ_2 are pure imaginary numbers—which happens if $4ab < 0$ and $m = n = 0$, as $\lambda_{1,2} = -\frac{m+n}{2} \pm \sqrt{4ab + (m-n)^2}$. In the arms race model this is not a reasonable assumption, as one block would increase its arms expenses faster, the smaller the arms expenses of the other block are (exactly one of a and b would be negative and the respective block would behave strangely, the other constant would be positive, so the other block would behave normally) and both would increase or decrease its arms expenses regardless of what their current values are ($m = n = 0$ means that there is no influence of the current value of arms expenses upon its change for both blocks). In this case both variables x_1 and x_2 oscillate around the stationary state.

The example demonstrates that systems of linear differential equations always have a closed solution, which can be expressed in several different forms. There is always

exactly one stationary state (except in the case that the matrix A is not invertible) that can either be a sink or a source or a saddle or a center. Nonlinear systems often have more than one stationary state, but their behavior can be analyzed in a similar way, taking into account that a linear approximation of a nonlinear system behaves approximately the same in a small neighborhood of each of its stationary states.

SEE ALSO *Input-Output Matrix; Matrix Algebra; Nonlinear Systems; Simultaneous Equation Bias; Vectors*

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Klaus G. Troitzsch

LINGUISTIC TURN

"Where word breaks off no thing may be": This line from a poem by Stefan George was repeatedly cited by the German philosopher Martin Heidegger (1889–1976) to indicate his version of the linguistic turn, which affected many philosophers in the early twentieth century—literary scholars already having made the turn, whether consciously or not (Heidegger [1959] 1982, p. 63). The phrase *linguistic turn* actually was coined by the philosopher Gustav Bergman, a former member of the Vienna circle, who made an effort to reformulate philosophy with regard to syntax and interpretation and was given new currency by the American philosopher Richard Rorty (b. 1931). Currently it is extremely popular, but the phenomenon is far from unprecedented (Rorty 1992; and see Jay 1982). Friedrich Nietzsche's idea of "the infinite interpretability of all things" (Nietzsche [1901] 1967, p. 327) is an analogy drawn from language, and a century later Hans-Georg Gadamer (1900–2002) carried on the criticism of Kant's transcendental turn (1975, p. 176)—that is, his "metacriticism" of Kant, which Jacques Derrida likewise recalled (Michelfelder and Palmer 1989, p. 102; cf. Derrida 1978). Renaissance humanism, too, was in part a linguistic—a philological, a rhetorical, and a literary—protest against the excessive abstraction of scholasticism, following the lead of the ancient Sophists and orators (Kelley 1991).

The linguistic turn was apparent also in the "new rhetoric" of the mid-twentieth century, which drew attention to the habits and conventions of language, as when Michel Foucault (1926–1984) denied the control of speakers and writers over their own discourse (e.g., Foucault 1970). The arts of speaking and writing are based on conscious imitation, but every literate person moves in linguistic channels carved by predecessors, deposited in the memory, and repeated in different contexts. Particular languages produce semantic fields that make possible communication and dialogue; and linguistic usage—for example, *topoi*, copulas, and word combinations—has its own inertial force that acquires meaning apart from the intentions of users. This is one reason for distrusting the "intentional fallacy" in interpreting texts.

One of the most impressive vistas opened up by the linguistic turn is the modern philosophy of hermeneutics in the form given by Gadamer, who, following Heidegger, extended the line of thought in the direction suggested not by Nietzsche (as did Heidegger and Derrida) but rather by the German philosopher and historian Wilhelm Dilthey (1833–1911). Rejecting revolutionary ruptures as a condition of understanding, Gadamer preserved belief in a kind of continuity that made communication and "dialogue" possible not only between speakers but also over time (Gadamer 1975). There are no absolute beginnings, no understanding without prejudice and the "forestructures of understanding" provided by language and the "life-world." Pursuing the old quest for "the I in the Thou," Gadamer accepts the horizon-structure of experience but doubles it to accommodate the contexts of past as well as the inquiring present. Language is a continuum making interpretation possible, but it does not permit the sort of retrospective mind reading assumed by the "empathy" of Romantic hermeneutics. That meaning is always constructed in the present is the hermeneutical condition of Gadamer's historicism. To understand, in short, is always to understand *differently*.

An important offshoot of hermeneutics is reception theory, or reception history (*Rezeptionsgeschichte*), which follows Gadamer in shifting attention from writing to reading. In fact, intellectual history is more concerned with the intention of authors and meaning of their texts than with their "fortune" in later contexts. Paul Ricoeur's "semantic autonomy" of texts is the condition of interpretations and misinterpretations accompanying the reception of writings (Ricoeur 1981, 63ff). For him, the poles of interpretation are hermeneutics of tradition and hermeneutics of suspicion, the first locating the position of Gadamer, who seeks an experience of tradition, the second that of Foucault, who is devoted to the critique of ideology. For Gadamer, "tradition" and continuity produce the common ground of understanding and commu-

nication which, via ideas, connects present and past; for Foucault, they mean entrapment in or complicity with ideology and a denial of the ruptures between the successive *epistemes* that represent decipherable codes (critically fabricated *Weltanschauungen*) of culture and patterns of underlying power relations.

This is also to some extent the noble dream of the German approach to intellectual history that is the "history of concepts" (*Begriffsgeschichte*), an effort to reconstruct an intellectual field through the history of terms and families of terms such as the English study of "keywords" (Williams 1983, and see Richter 1995). Under the influence of J. G. A. Pocock, Quentin Skinner, and others, political thought has turned its attention to questions of terminology and vocabulary rather than abstract systems (Pocock 1971; Tully 1988). Likewise, *Begriffsgeschichte* is a species of cultural history focusing on semantic change and the historical context of ideas, and it depends on metahistorical considerations to determine the meanings behind the keywords being analyzed. Such enterprises began thirty years ago, before databases such as Proteus and ARTFL made possible a much more extensive searching of semantic fields, but nonetheless they have greatly enriched the practices of intellectual and social history after the linguistic turn.

The linguistic turn has had an impact across the whole range of disciplines, whether through the idea of social construction or through the extension of the interpretive method into the human and even the natural sciences (Bernstein 1980; Nelson, Megill, and McCloskey 1987). The result was to place the observer in the field of observation, that is, the discipline, in the search for meaning. In anthropology this meant not the establishment of general "scientific" knowledge, but rather the hermeneutical "interpretation of cultures," in Clifford Geertz's phrase (Geertz 1973); and so it was in the other social and human sciences, which after the linguistic turn took language rather than mathematics as the model of understanding. For some scholars this represented the threat of relativism or the basis for a claim to postmodernism, but in any case it permitted a more critical approach to the social sciences.

The "new cultural history" proclaimed in the 1980s also included a linguistic turn, drawing extensively on post-Marxist literary theory and the idea of history as a text to be read. Some social scientists have resisted this move toward the social construction of knowledge, and a decade later a number of scholars affected to take their disciplines "beyond the cultural turn" (Hunt 1987; Bonnell and Hunt 1999). In any case, there is no turning back.

SEE ALSO *Meaning*

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Donald R. Kelley

LINGUISTICS

SEE *Psycholinguistics; Anthropology, Linguistic.*

LIQUIDITY

An asset is considered to be liquid if it can be: (1) easily exchanged; (2) quickly exchanged; and (3) exchanged at little or no cost. For example, currency (coins and paper money) is an extremely liquid asset, whereas consumer durables and housing are very illiquid assets. Other assets, such as money in the bank, stocks, and bonds, fall between these two extremes, depending on the nature of their market. Hence, if someone needed to sell illiquid assets to raise money, say, as a result of a bad income shock, he should expect a loss, because he will not get the full value of his illiquid assets in a distress sale.

Even though the goal of holding assets is to obtain a return, firms and consumers regularly hold currency, which offers no return. The reason for this, first put forth by John Maynard Keynes (1883–1946), is that "bills and call loans are more 'liquid' than investments, i.e., more certainly realizable at short notice without loss" ([1930] 1971, p. 59). According to John R. Hicks (1904–1989), this is the first time the term *liquid* was used to describe the ability of an asset to be converted to cash without suffering a loss, and sets the foundation for Hicks's subsequent *liquidity preference framework* (a theory of nominal interest rate determination) and the *IS-LM framework* (a theory of determination of aggregate output and the interest rate) (see, for example, Mishkin and Serletis 2007).

These Keynesian models lead to the conclusion that an increase in the money supply (everything else remaining equal) lowers interest rates. This is known as the *liquidity effect.* However, Milton Friedman (1912–2006), the 1976 Nobel laureate in economics, argued that an increase in the money supply might not leave everything else equal, and that there are other possible effects of an increase in the money supply on interest rates, such as the *income effect*, the *price-level effect*, and the *expected-inflation effect.* In fact, the empirical evidence, mainly based on vector autoregressions (VARs), seems to indicate that money and interest rates are positively rather than negatively related, thereby producing a *liquidity puzzle.* There have been many attempts to unravel this puzzle (e.g., Eichenbaum 1992; Strongin 1995; Christiano et al. 1996). In general, as more variables are introduced and as the VAR specification is refined, it produces results consistent with traditional Keynesian and monetarist analysis (see, for example, Cochrane 1998).

A purely theoretical concept that is also due to Keynes is the idea of a *liquidity trap*—an extreme case of ultrasensitivity of the demand for money to interest rates. In this case, the money demand curve is completely flat in the liquidity preference framework and the LM curve is horizontal in the IS-LM framework, meaning that increases in the money supply are absorbed without any decline in interest rates. Thus monetary policy is without effect and fiscal policy is the only means of economic control. The empirical evidence, however, indicates that although the demand for money is sensitive to interest rates, a liquidity trap has never existed.

Over the years, several measures of liquidity have been employed. For example, for individual assets, liquidity can be measured by a *liquidity premium*—the lower the liquidity premium, the more liquid (and the more like money) the asset is. If one wanted to obtain an aggregate measure of liquidity, one would add the assets together, giving higher weights to those assets with lower liquidity premiums. In this regard, the money measures currently in use by central banks around the world (known as *monetary aggregates*) are simple-sum indices in which all financial assets are assigned a constant and equal (unitary) weight. This index is M_t in $M_t = \sum_{j=1}^{n} x_{jt}$ where x_{jt} is one of the n components of the monetary aggregate M_t. This summation index implies that all financial assets contribute equally to the money total, and it views all components as dollar-for-dollar perfect substitutes. Such an index, there is no question, represents an index of the stock of nominal financial wealth, but cannot, in general, represent a valid structural economic variable for the liquidity services of financial assets in the economy.

In light of the foregoing arguments, there have been many attempts at properly weighting financial assets within a simple-sum aggregate. With no theory, however, any weighting scheme is questionable. William A. Barnett (1980) applied economic aggregation and index number theory and constructed monetary aggregates based upon W. Erwin Diewert's (1976) class of superlative quantity index numbers. The new aggregates are Divisia quantity indices, named after François Divisia (1889–1964), who first proposed the index in 1925. The Divisia index (in discrete time) is defined as $\log M_t^D - \log M_{t-1}^D = \sum_{j=1}^{n} w_{jt}^{*}(\log x_{jt} - \log x_{j,t-1})$, according to which the growth rate of the aggregate is a weighted average of the growth rates of the component quantities, with the Divisia weights being defined as the expenditure share averaged over the two periods of the change, $w_{jt}^{*} = \frac{1}{2}(w_{jt} + w_{j,t-1})$, for j = 1, …, n, where $w_{jt} = \frac{\pi_{jt} x_{jt}}{\sum_{k=1}^{n} \pi_{kt} x_{kt}}$, is the expenditure share of asset j during period t, and π_{jt} is the user cost of asset j, derived in Barnett (1978), $\pi_{jt} = \frac{R_t - r_{jt}}{1 + R_t}$, which is the opportunity cost of holding a dollar's worth of the jth liquid asset.

Above r_{jt} is the market yield on the jth asset, and R_t is the yield available on a benchmark asset that is held only to carry wealth between multiperiods. At the margin, the greater the difference between R_t and r_{jt}, the greater is the liquidity services that asset j yields.

SEE ALSO *Capital; Financial Instability Hypothesis; Financial Markets; Friedman, Milton; Interest Rates; IS-LM Model; Keynes, John Maynard; Leverage; Liquidity Premium; Liquidity Trap; Loans; Monetary Theory; Money; Money, Demand for; Neutrality of Money; Overlending*

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LIQUIDITY PREMIUM

Liquidity premium is the amount of monetary return that one would be willing to forgo for the convenience or security of disposing of an asset quickly and with minimal or no cost. The power of disposal of an asset is measured in terms of how easily it can be sold as well as in terms of the degree of expected capital risk if the asset is liquidated (Keynes [1936] 1964, p. 226).

Each asset has an expected total return (an "own rate of return") composed of q—the expected income from employing the asset in production; c—the carrying cost; a—the expected capital gains (appreciation or depreciation); and l—liquidity premium. An own rate of return for an asset is calculated in the following way: $q - c + a + l$. Thus liquidity premium is one of the elements that constitute the value of an asset. Assets are differentiated according to combinations of expected monetary returns and liquidity premiums they are anticipated to offer (Carvalho 1999, p. 126).

The state of expectations refers not merely to subjective assessments of what events might or might not occur but also to the anticipated costs of undertaking alternative courses of action (Kregel 1998). So long as there are alternative ways to store value and money is one of them, the option of not "using" money—that is, not purchasing capital assets—and hedging against uncertainty affects investment in less liquid capital assets (Davidson 1978). Thus liquidity premium is an expression of the "return" from holding money as an asset (Keynes [1936] 1964, p. 227). This return establishes the standard that expected yields of capital assets must achieve. In order for capital assets to be purchased, their prices must be at a level at which the expected yield ($q - c$) equals the liquidity premium l. Consequently the expected return of a capital asset has to be such as to compensate for its degree of illiquidity given the degree of uncertainty felt by asset holders. The degree of uncertainty determines the liquidity premium (Carvalho 1999, p. 127).

Liquidity reduces the uncertainty about fulfilling future commitments and, implicitly, about future income and capital returns. The willingness to borrow and purchase capital assets depends on business enterprises' perception of borrower's risk, whereas the willingness of banks to make the requested loans depends on their perception of lender's risk (Minsky 1975). The assessment of these types of risks depends on the state of expectations and on the margins of safety or the amount of monetary returns that borrowers and lenders are willing to forgo to be liquid—in other words, on liquidity premium.

These margins of safety vary across time and geopolitical space with the tendency for perception of higher risks and thus with higher liquidity preference in developing countries (Dow 1995, p. 8). At the international level, this can result in a tendency for liquid portfolio investment rather than greenfield foreign direct investment in "emerging markets." Because liquidity premium is a manifestation of the margin of safety thought necessary to deal with uncertainty and perceived capital risk, it enters the

determination of domestic and global level composition of investment, output, and employment.

SEE ALSO *Carrying Cost; Equilibrium in Economics; Equity Markets; Expectations; Financial Instability Hypothesis; Keynes, John Maynard; Liquidity; Minsky, Hyman; Money, Demand for; Risk; Uncertainty; Yield*

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LIQUIDITY TRAP

The inability of a nation's central bank to decrease the interest rate when it is already very close to zero is known as the "liquidity trap." It was first referred to by John Maynard Keynes in his 1936 "General Theory." It was John Hicks, however, who—by laying the foundations of the IS-LM model in the 1930s in an attempt to present and popularize Keynes's main propositions—put forward the concept of the liquidity trap and its policy implications.

The IS-LM presentation of an economy became a very popular tool for macroeconomic analysis and for policy propositions after World War II (1939–1945). In an IS-LM model, the IS curve is a negatively sloped curve that presents the locus of points in which investment (I) equals savings (S) for all possible combinations of interest rates and levels of output (Y). The LM curve is a positively sloped curve that presents the locus of points in which the demand for money or liquidity preference (L) is equal to money supply (M) for all possible combinations of interest rates and level of income (Y). The intersection point of the two curves represents the equilibrium interest rate and output of an economy. The IS curve represents the real sector of the economy and it shifts outward to the right when aggregate demand increases (and inward to the left when demand decreases). The LM curve represents the monetary sector of the economy and it shifts outward to the right with an expansionary money policy (and inward to the left with a contractionary policy). Hence, economic analysis based on IS-LM analysis suggests that an appropriate mix of fiscal and monetary policies can bring the economy to equilibrium with full employment.

It is argued that the lower left segment of the LM curve is very flat, and that for very low (close to zero) interest rates it becomes horizontal. The reason is that at very low interest rates, economic agents prefer to keep cash for liquidity purposes. Financial assets are not as desirable in this situation because their liquidity is lower and their yield is close to zero. Hence, the liquidity preference schedule becomes infinitely elastic due to investors' expectation that the rate of interest cannot fall any further, and because bond prices are so high that no one expects them to rise still higher. In this flat state, the economy is in "liquidity trap," meaning that interest rates are so low that people are indifferent between holding money or other assets. The demand for money is therefore infinitely elastic.

The liquidity trap hypothesis has led to a theoretical dispute over the extent to which the demand for money depends on interest rates. Neoclassical and monetarist economists argue that the interest rate is determined in the real sector, and that money, by being neutral, makes monetary policy an ineffective tool. Keynesians, on the other hand, argue that interest rates are defined in the money market, and that money is not neutral. In fact, the liquidity trap hypothesis rests on the neutrality of money, whereas Keynes's analysis of conditions of less than full employment is predicated on the nonneutrality of money. Another implication of a liquidity-trap situation is that neoclassical analysis becomes inconsistent at such low interest rates, since the system can be in equilibrium at less than full employment. In fact, the liquidity trap argument suggests that the neoclassical case has no equilibrium solution; that is, it does not include a positive interest rate that will equate investment and demand.

According to neoclassical analysis, interest rates are the equilibrators of both capital and goods markets. Interest rates keep investment equal to saving at full employment levels, and as a result the real full equilibrium of the economy is independent of nominal prices. The neoclassical proposition, often associated with the quantity theory of money, states that the interest elasticity of money demand is zero, and that with perfect flexibility of all wages and prices (present and future), full employment

will be maintained. On the other hand, Keynes's suggestion is that a perfectly competitive economy does not, in fact, tend automatically toward full employment. The inflexibility of wages and prices, the low interest-elasticity of investment demand, and the liquidity trap might all suffice to prevent attainment of full employment equilibrium.

According to Keynesians, if the economy is stuck in a liquidity trap, a shift of the IS curve to the left (lower aggregate demand) does not allow for the intersection of aggregate demand and supply curves, suggesting that wages and prices will fall continuously and there will be no equilibrium. In other words, the problem with the neoclassical analysis is that equilibrium output, either on the supply side or on the demand side, does not respond to the price drop in the liquidity-trap case. In fact, as Keynes argued, it is possible for interest rates to fall so low in the neoclassical model that neither an expansionary monetary policy nor falling prices could ever increase the level of demand-side equilibrium output. Thus, with employment determined in the labor market and demand caught in the liquidity trap, the neoclassical model offers no solution.

The British economist Arthur Pigou attempted to remove this inconsistency in the neoclassical model by suggesting that falling prices would increase consumers' real wealth, leading to increased spending and reduced saving (the "real balance effect"). The rise in real consumption that occurs with falling prices would shift the IS curve out and raise the level of demand-side equilibrium output. This solution to the inconsistency in the neoclassical model generally implies that, after a long period of falling wages and prices, equilibrium will be reestablished. However, in the 1930s, the U.S. economy seemed to reach a different result: a fairly stable low level of employment with wages and prices dropping to a fixed level. Another solution to inconsistencies arising from the neoclassical analysis in liquidity trap conditions is the rigid-wage hypothesis, which allows for the equilibrium intersection between demand and supply.

Keynes mentioned that he was not aware of there ever having been a liquidity trap. Yet in 1998, Japan's interest rate was almost zero and output had barely changed, even in the face of expansionary monetary policy by the Bank of Japan, the nation's central bank. Thus, the Japanese government pursued an expansionary fiscal policy in its effort to increase output. The liquidity trap analysis should therefore clearly be part of the argument, which reveals that Keynesian economics teaches us that the automatic adjustment mechanism of competition cannot be relied upon for purposes of achieving certain policy objectives, such as full employment and price stability.

SEE ALSO *Economics, Keynesian; Interest Rates; Keynes, John Maynard; Liquidity; Money; Money, Demand for; Policy, Monetary; Unemployment*

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Persefoni V. Tsaliki

LITERATURE

The word *literature* can simply mean a body of published texts, as in, "Are you familiar with the literature on global warming?" In a more restrictive sense, it alludes to creative works of the imagination. Conventionally these are divided into poetry, drama, and fiction. This concept of literature is a relatively recent one, first used in the late eighteenth century.

BEGINNINGS

The English word *literature* derives from the Latin *litteratura*, from *littera* (a letter of the alphabet). Most European languages—Romance, Germanic, and Slavic—have direct Latin cognates of similar meaning. Originally, *literature* in English signified knowledge of books, book learning, and familiarity with *letters*, that is, written works. Creative writing was termed *poesy* or *poetry* in English, irrespective of its form, from the Greek word for "to create." The earliest forms of poesy or what we would now call *literature* were the oral narratives of preliterate cultures—myths and folktales—handed down in written form. These include the oldest known literary text, the Sumerian *Epic of Gilgamesh* (3000 BCE), ancient Egyptian tales from 2000 BCE, Indian poems in Sanskrit (such as the Hindu epics *Ramayana* and *Mahabharata*), and ancient Chinese poetry. Homer's epics, *The Iliad* and *The Odyssey* (eighth century BCE), and the tragedies of Sophocles, Aeschylus, and Euripides (fifth century BCE) stand at the beginnings of the Western canon, or the body of literature generally accepted as worthy of study. Indeed, ideas of literary excellence were already present in the Dionysia festivals in Athens, when Greek playwrights competed for prizes. In a comedy that won first prize in 405 BCE, *The Frogs*, Aristophanes (c. 450–388 BCE) contrasted two preeminent tragedians—Aeschylus (525–456

BCE) and Euripides (c. 484–406 BCE)—clearly revealing the Athenians' general familiarity with their dramas. Through attending epic or dramatic performances, a largely unschooled populace could be exposed to *poesy* or *literature*.

Some of the first Greek libraries were established to gather together accurate copies of the prize-winning dramas. The earliest known library—a collection of Babylonian clay tablets—dates from the twenty-first century BCE. Other ancient examples are the libraries at Nineveh (in modern Iraq), at Egyptian temples, and at the temple at Jerusalem, as well as the Hellenistic libraries of Alexandria and Pergamum, established under royal patronage, and Roman libraries, both private and public. The famous Library of Alexandria, estimated at 500,000 scrolls, was joined to a research center (the Museion or Museum), encouraging the systematic study of philology, that is, language and letters. Literary commentary was already practiced in classical Greece; the best-known examples are those of Plato and Aristotle (fourth century BCE), followed in Roman times with Horace (65–8 BCE), Plutarch (c. 46–120 CE), and Pseudo-Longinus (first century CE), as well as the third-century Neoplatonist Plotinus, whose ideas would resound in the romantic era. The work of these ancient Greco-Roman libraries and commentators established crucial ideas of literary evaluation and the literary canon that would influence Renaissance and later scholarship.

"Poetic" works in verse and prose were produced from antiquity through the Middle Ages and the Renaissance without being considered *literature*. In Europe these included imaginative works in Greek and Latin, as well as later texts in the vernacular languages, such as the Norse, Irish, and Germanic epics (including the Old English poem *Beowulf*), courtly love poems of medieval France, the *Divine Comedy* of Dante Alighieri (1265–1321), the tales of Giovanni Boccaccio (c. 1313–1375), the poetry of Geoffrey Chaucer (c. 1342–1400), and the plays of William Shakespeare (1564–1616). The term *literature* first enters English in the late fourteenth century (according to the authoritative *Oxford English Dictionary*) in the original sense of literacy or acquaintance with books.

MODERN DEFINITION

It is not until the late eighteenth century, with such developments as the growth of the modern nation-state; the rise of printing, publishing, and literacy; and the move from aristocratic patronage to commercial support of writing, that *literature* came to signify a body of literary texts. In this general sense, literature includes creative writing (poetry, fiction, drama, and essays), popular narratives, and works produced by philosophers, historians, religious and social thinkers, travelers, and nature writers, as exemplified in standard literary histories or reference volumes like the *Oxford Companion to American Literature*. In the more restricted sense of imaginative literature, the definition alludes to what in French is called *belles letters* or "fine writing" (a term also sometimes used in English but now tinged with the dismissive meaning of light or artificial dabbling). Imaginative literature can be defined by its fictional and autotelic nature, the dominance of the aesthetic function within it, and its special use of language, which René Wellek (1903–1995) and Austin Warren (1899–1986) in *Theory of Literature* characterized as follows: "Poetic language organizes, tightens, the resources of everyday language, and sometimes does even violence to them, in an effort to force us into awareness and attention" ([1949] 1978, p. 24). Complexity and appeal to generations of readers are also viable characteristics.

AESTHETICS AND NATIONALISM

The nineteenth century brought about an increasing emphasis on the aesthetic properties of literature and the rise of the field of literary criticism, independent of philosophy or rhetoric. The romantic poets fostered a sense of literature as the field of unique genius and stressed the aesthetic experience of reading. Literature was also increasingly seen as an important element in constructing a unified national consciousness and providing citizens with a sense of their cultural heritage, both through the training of students and through the accumulation of literary works in research libraries and their interpretation by specialists. Famously defining the critic's object of study as "the best which has been thought and said in the world" in his *Culture and Anarchy* ([1869] 1993, p. 190), Matthew Arnold (1822–1888) played an important role in making literature and literary criticism prominent in Anglo-American culture, vying with philosophy and religion as a way to reflect on the world.

In British and American colleges, the core curriculum was already heavily concentrated on the classics, the study of the languages and literatures of ancient Greece and Rome. English literature was introduced in the 1820s at London and other universities, followed much later in the century by Oxford, Cambridge, and American universities, aided by an influx of women entering college. The national literature was seen as offering a valuable unifying cultural tradition, both in Britain after the shock and disruptions of World War I (1914–1918), and in the United States after the Civil War (1861–1865) and massive waves of immigration in the second half of the nineteenth century. The Victorians produced a staggering array of novels, short stories, and poetry to feed a rapidly growing, increasingly literate and middle-class reading public. The

realistic novel became the dominant literary mode in Western literature, with a growing tendency toward a split between lowbrow or popular fiction—due to a proliferation of new subgenres, such as the romance, the mystery, and science fiction—and highbrow literature, made up of critically approved fiction, poetry, and drama.

Modernist literature of the beginning decades of the twentieth century moved away from the realism and naturalism of the nineteenth century, toward experimentation, disruption of chronology and causality, and increasing complexity, a style more suited to developments in the twentieth century. Here T. S. Eliot (1888–1965) played a crucial role in elevating literature to a high art through his poetry and literary criticism, which helped develop the American formalist New Criticism and *The Great Tradition* (1948) school of F. R. Leavis (1895–1978) in Britain. This led to the mid-twentieth-century view, aptly summarized by Peter Widdowson, of high literature as "a select(ive) and valuable aesthetic and moral resource to replenish those living in the spiritual desert of a mass civilization" (1999, p. 59).

THE CANON AND BEYOND

What is deemed of literary significance or high literature is to a large extent the purview of the national educational system, where academic critics establish the canon of works considered worthy of reading and study at the school and college level. The canon in its original meaning refers to the authoritative set of orthodox, established texts of the Christian church. The biblical canon excludes a number of texts deemed heretical, such as gnostic writings. Similar exclusionary policies have been seen in literary canonization, leading to postmodernist disruptions of the canon under the pressures of new authors and literary theories, including feminism, queer theory, poststructuralism, deconstruction, and postcolonial studies. From the 1960s onward, the canon, long seemingly the domain of dead white males, was opened up to women, people of color, and other minorities. It was again in flux, with the emergence of these new writings and new genres, such as New Journalism or the nonfiction novel, as well as the self-reflective playfulness of postmodern fiction.

Literature is now increasingly in competition with film, television, and other mass media. Nevertheless, it is sustained by a huge publishing industry, bookselling businesses, the school and university systems, academic and public libraries, and the seemingly infinite resources of the Internet. In his study *On Literature*, J. Hillis Miller notes the crucial feature of creative writing: "A literary work is not, as many people assume, an imitation in words of some pre-existing reality, but on the contrary, it is the creation or discovery of a new, supplementary world, a meta-world, a hyper-reality. This new world is an irreplaceable addition to the already existing one. A book is a pocket or portable dreamweaver" (2002, p. 18). Although threatened by the visual culture of the twenty-first century, literature still retains its unique quality of being able to generate alternative realities through the use of words as signs without visible referents.

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Elżbieta Foeller-Pituch

LITIGATION, SOCIAL SCIENCE ROLE IN

Judicial opinions have four elements: (1) jurisdiction (the court's authority to adjudicate this dispute); (2) findings of fact (what happened); (3) conclusions of law (what laws apply to these facts); and (4) order (what the court directs to be done). Social science is utilized in all four parts. For example, social scientists debate the merits of existing and proposed law, and their writings may be brought to the attention of judges, legislators, and government administrators (Meier et al. 1986, and Dixon and Gill 2002). They are most directly active, as participants, in finding fact, usually as expert witnesses. John L. Solow and Daniel Fletcher describe the role of the antitrust economist as "reaching conclusions about factual issues like the existence of market power or barriers to entry, and drawing causal links between firms' actions, market outcomes, and claimed damages" (2006, p. 31).

The law categorizes two kinds of fact: legislative and adjudicative. Legislative fact is about generalizations. For example, courts often want to know if a screening device (for school admission, or for employment or termination,

for example) is "valid." But the effectiveness of a device used to screen plaintiffs cannot be tested on them, because validation requires observations on success or failure of persons who achieved the positions the plaintiffs have been denied. As a Fifth Circuit panel observed, "We fail to understand how passing scores conclusively establish the demographics of the qualified applicant pool if passing scores mean nothing with respect to predicting the quality of future firefighters" (*Dean v. City of Shreveport* 2006, p. 457). A validity study therefore is always legislative fact. The most famous legislative fact argument in litigation, appearing in an appeals brief by Louis Brandeis, was put together by his social scientist sister-in-law, Josephine Goldmark. Brandeis argued that as women are physically and socially different from men, it is appropriate that they have special protective legislation (*Muller v. Oregon* 1908). In *United States v. Virginia* (1996), in contrast, plaintiffs' experts argued convincingly that academically qualified women who could pass the same physical test as men needed only equal assessment.

To accept legislative fact requires that the court extrapolate from one population to another. When faced with an explicit recognition that such extrapolation is required, some judges have been reluctant to do it, despite precedential acceptance by the Supreme Court of Kenneth Clark's "doll studies," which showed that both white and black children prefer to play with white dolls. Clark had tested some children at issue in the U.S. Supreme Court's decision in *Brown v. Board of Education* (1954), which held that race is an unconstitutional basis for school assignment, but the Court referred only to his larger studies of children not connected with this case (Beggs 1995). In contrast, a massive study that contended that harsher sentences (particularly for execution) are handed down more often in black-on-white murder cases (i.e., black murderer of a white victim) than in cases involving any other race combination was rejected because it was legislative fact, where what the Court required was evidence that the particular sentence being challenged was tainted with racial bias (*McCleskey v. Kemp*, 1987). In another example, the First Circuit Court of Appeals rejected a sociologist's argument that "relies on evidence from one locality to establish the lingering effects of discrimination in another" (*Wessman v. Gittens* 1998, p. 804).

Adjudicative fact is particular. Much of what the social scientist expert does is devise ways to measure the concepts that seem relevant to the law. Redistricting, jury representation, antitrust, and equal employment opportunity issues inherently call for such social science fact. To show that juries are unrepresentative of "the community," for example, one needs a measure of that community, as well as of the jurors. Even if population demographics are stable, individuals may come and go, and not be available for jury duty. The Hispanic population may be younger and more likely to be single and renting—and therefore implicitly more mobile—than the non-Hispanic population. As Hispanics tend to live in identifiable areas, one can describe their mobility directly from address-based data sources. Inferring characteristics of a set of people from data describing their tract or block or zip code is called *geocoding*.

In another example, invalid implicit screening devices may be used to make employment decisions. An implicit device might be a prejudice held, perhaps unknowingly, by the decision-maker, for example, thinking that fat people are lazy. According to R. Matthew Wise, "social framework evidence is the product of social science research that an expert compiles and uses to construct a frame of reference for specific issues central to the resolution of a case" (2005, p. 548). That is, particular evidence offered by such an expert may be an amalgam, applying legislative fact to case-specific attributes. Whether that type of study will be admitted is always in question.

Three other distinctions loom large in explaining the role of the social scientist as expert witness. First, laws are about events, whereas data are almost always about situations. Changing one's residence is an event, but most data describe the population in an area at one time, and then at another. Hiring and firing are events, but the majority of employment-discrimination analyses have compared situations, such as the racial composition of a firm's employees with the racial composition of a subset of a proximate area's workforce. In another example, one seldom observes the collusion implied in some antitrust charges; that event is inferred from situations, such as where stores are located and the prices of their goods.

The complaining party's expert tries to explain the relationship between the outcome and the alleged events, excluding other, benign events that could have led to the same outcome. The defending party's expert tries to show that it likely was benign events that led to the same outcome, and also argues that plaintiffs' descriptions of the situations are themselves incorrect or misleading. An example in which how one defines a variable determines the statistical result is *McReynolds v. Sodexho Marriott Services, Inc.* (2004), where the plaintiffs' expert does not measure "promotions" as defendant firm defines them. Courts generally dislike plaintiffs' analyses that have not considered alternative explanations for the events complained about. The defendant may prevail merely by criticizing the plaintiffs' "proof." For example, "A statistical analysis which fails to control for equally plausible nondiscriminatory factors overstates the comparison group and, under the facts of this case, cannot raise a question of fact for trial regarding discriminatory impact" (*Carpenter et al. v. The Boeing Company*, 2004, *affirmed* 2006).

Second, the social scientist's evidence is subject to legal distinctions, such as the difference between *disparate treatment* (in which actions are at issue) and *disparate impact* (in which the action's effect is at issue). Measuring the "cost" of gasoline at its market price (opportunity cost), evaluating damages to resorts from oil spills by lost consumer surplus, failing to distinguish allowable from nonallowable behavior as causes for an outcome in antitrust litigation, and using the wrong basis for a survey are examples of legal mistakes made in social science evidence. See, for example, *Rebel Oil Company, Inc. v. Atlantic Richfield Company* (1996), *In the Matter of Oil Spill by the Amoco-Cadiz off the Coast of France on March 16, 1978* (1992), *Williamson Oil Co. v. Philip Morris* (2003), *Citizens Financial Group, Inc. v. Citizens National Bank of Evans City* (2004), and *Autozone v. Tandy Corp.* (2001).

Third, although both an eyewitness and a social science witness may present adjudicative fact as they see it, the social scientist provides *circumstantial* evidence. (Social scientists would call it *inferential* evidence.) Therefore, social science results must be reported probabilistically. The social scientist cannot be "certain" in the way an eyewitness can.

However, no matter how firmly held, eyewitness testimony is often wrong—it, too, is probabilistic. See *United States v. Veysey* (2003), referring to Judge Frank Easterbrook's discussion of probabilistic evidence in *Branion v. Gramley*, 1988: "Much of the evidence we think of as most reliable is just a compendium of statistical inferences."

Estimates of the fallibility of eyewitness identification (legislative fact) sometimes are allowed into evidence, sometimes not. Thus, although a social scientist cannot testify that "X did not do Y," he may be called upon to testify that although Z says that X did Y, Z may be mistaken; or that such mistakes happen in such and such circumstances, more or less to such an extent. On the fallibility of eyewitness identification, see Munsterburg (1909), Loftus and Monahan (1980), and Bradfield and Wells (2000). Similarly, "forensic" experts often allude to a certainty in their identification (e.g., by handwriting, fingerprints) that social scientists find offensive. Social science research about the fallibility of forensic evidence is sometimes admitted in rebuttal, sometimes excluded.

Geocoding is a powerful method of examining voting patterns, even though individual ballots remain secret. Social scientists have debated whether gerrymandering had been directed by race (impermissible) or party (permissible) in situations when the outcome of the vote is known and the race of the voters is inferred. J. Morgan Kousser attributes the setting of district boundaries to the majority's attempt to prevent minority successes (1999). In *Thornburg v. Gingles* (1986) the Supreme Court found race to be too important a factor to let the redistricting stand; and in *Hunt v. Cromartie* (2001) it found that race was not important enough to disallow the redistricting. (See Grofman 1998 for social science studies concerning judicial redistricting decisions.)

The federal judicial system had no formal rules of evidence until 1975, prior to which judges usually accepted a witness as an "expert" if he was regarded to be one by others in the same "field" (*Frye v. United States* 1923). Although the institution of rules of evidence gave judges the authority to determine the expertise of proffered experts, decisions at first were little affected. "Junk science" was sometimes determinative (Huber 1991). In *Daubert v. Merrill Dow Pharmaceuticals, Inc.* (1993) the Supreme Court held that the Federal Rules of Evidence superseded *Frye*. Trial judges were instructed to exclude expert testimony they found insufficiently reliable or unhelpful to a fact finder.

The decisions of the "Science Evidence Trilogy"—*Daubert*, *Joiner v. General Electric Company* (1997), and *Kumho Tire Co. v. Carmichael* (1999)—now govern the use of scientific and technical testimony. Joëlle Anne Moreno describes the slowness with which *Daubert* principles have been applied to criminal cases, and the resulting bias against rebuttal experts offered by defendants (2004). John V. Jansonius and Andrew M. Gould (1998) and Mark S. Brodin (2004) discuss the problem of applying the Science Evidence Trilogy to social science. Credentials remain important. Practice has not evolved to focus solely on the proposed testimony. For example, in *Gary Price Studios, Inc. v. Randolph Rose Collection, Inc.* (2006), a proffered expert's method for evaluating damages was internally contradictory. The judge took pains to show that the witness was not otherwise qualified, when the rules would have allowed him to dismiss the testimony as clearly incorrect and therefore unhelpful.

Subjects amenable to expert study are fast expanding as imaginative attorneys find new ways to argue for their clients. Courts are increasingly willing to hear evidence from statistical models. For example, adjudicative studies based on samples at one time were not acceptable; see *United States v. United Shoe Machinery Corp.* (1953), in which Judge Wyzanski drew his own sample, breaking that tradition. "The Court arbitrarily selected from a standard directory of shoe manufacturers, the first 15 names that began with the first letter of the alphabet, the first 15 names that began with the eleventh letter of the alphabet, all 8 of the names that began with the twenty-first letter of the alphabet, and the first seven of the names that began with the twenty-second letter of the alphabet" (p. 305). Now, over fifty years later, the parties' experts would do the sampling, presumably more skillfully. Opposing

experts may come from different fields. Some judges complain that they do not have the skills to resolve technical disputes, and sometimes they engage their own experts, as the Rules of Evidence permit.

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LITTLE RED BOOK

The "little red book" was a Western nickname for the *Quotations from Chairman Mao Tse-tung*, a collection of Mao Zedong's (1893–1976) quotations published in 1964 under the auspices of the People's Liberation Army (PLA). It is most commonly referred to in China as a "little treasure book." This pocket-sized quotation book contained more than four hundred select quotations from Mao's speeches and writings. It was widely circulated in China and around the world during the infamous Cultural Revolution (1966–1976). By the time the Chinese Communist Party finally ordered a halt to the printing of the book in February 1979, at least one billion official copies had already been printed. Some estimates put the total as high as five billion copies worldwide. This impressive number made the little red book one of the most popular publications in the world in the twentieth century.

The little red book was born during a campaign to study Mao's political thought that was initiated in 1959 by General Lin Biao (1907–1971). Hoping to further his own political ambitions, Lin Biao asked the staff of the *People's Liberation Army Daily* to compile a small collection of Mao's quotations in 1964. Its original compiler was Xian Xiaoguang, an editor who worked for the newspaper. Once the book was approved, it immediately became popular among PLA soldiers, since most of them had little education and found it difficult to read Mao's original writings. Lin ordered that a free copy be issued to every soldier.

When the Cultural Revolution began in 1966, Mao's personality cult had reached its peak and demand for the quotation book hit an all-time high. After several revisions, the 88,000-word book was finally made available to the public. It soon became a political bible and a source of spiritual inspiration. Every person in China had at least one copy, and its reading and recital became a daily ritual.

People would carry the little red book everywhere and studied it religiously; they could get into trouble for showing disrespect for the book or for misquoting it. The little red book was carried by millions of Red Guards during the Cultural Revolution, and it became a symbol of China's rebellious and revolutionary youth.

The influence of this publication was tremendous. Mao's formal writing was too difficult for ordinary peasants and workers to read, and this quotation book quickly became a useful literacy reader. It also provided a simplified version of Mao's basic ideas and served as a central tool for the widespread political indoctrination of Communist ideology. The little red book socialized an entire generation of Chinese, and some of its passages remain in use today. Nevertheless, the Chinese Communist Party later denounced the book, and blamed it for its harmful effect on the holistic understanding of Mao's thought.

The downfall of Lin Biao and the end of the Cultural Revolution brought an abrupt end to the worship of Mao and his quotation book. In recent years, the little red book has become a popular collectable item. But as a political reader, it has lost its old status.

SEE ALSO *Communism; Mao Zedong; Maoism*

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Baogang Guo

LITTLE ROCK NINE

SEE *Civil Rights, Cold War.*

LIVERPOOL SLAVE TRADE

In 1740 Thomas Augustine Arne set the words of James Thompson's poem "Rule Britannia" to music. This poem emphasized how Britain was a "Blest Isle" of liberty and that "Britons never will be slaves." Yet at the same time Britain was one of the major suppliers of Africans to the Americas as a slave labor force. In the course of the eighteenth century British ships forcibly transported an estimated 2.5 million individuals from Africa. This accounted for 40 percent of an estimated six million Africans carried by ships of all nations.

LIVERPOOL'S ROLE IN THE TRADE

By the 1740s Liverpool had emerged as Britain's leading slave port, eclipsing London and Bristol, its nearest rivals. Rawley and Behrendt point out in *The Transatlantic Slave Trade* (2005) that the "adroitness of the Liverpool merchant community" was one of a number of factors accounting for Liverpool's rise to prominence (p. 167). The sailing of the *Blessing* and the *Liverpool Merchant* in 1700 marked Liverpool's entry into the trade. Over the next century approximately 5,300 slave ships sailed from Liverpool, accounting for almost one-half of 11,000 British slave ship clearances. By the end of the century Liverpool's dominance was still more pronounced, as three-quarters of all British slaving ventures cleared from Liverpool. Behrendt (1991) points out that approximately 779 slave ship captains were active in Liverpool between 1785 and the abolition of the trade in 1807. Many were migrants from Scotland and the Isle of Man, attracted by career opportunities in the trade.

Liverpool vessels traded for slaves at a wide variety of locations on the West African coast, although the Bight of Biafra developed as a particularly important source of supply from the second quarter of the eighteenth century. John Dawson and William Boats, two of Liverpool's leading slave merchants, controlled a significant share of the market at Bonny in the Bight of Biafra in the late eighteenth century. Captains trading at Bonny had to be skilled in negotiating with African merchants for the supply of slaves. They were often assisted in this trade by surgeons who carefully inspected the men, women, and children brought from the interior by African merchants.

CONTEMPORARY ATTITUDES AND ASSUMPTIONS

Copious business records were generated by British merchants who regarded the shipping of enslaved Africans as "morally indistinguishable from shipping textiles, wheat, or even sugar" (Eltis et al. 1999, p. 1). In contrast, few detailed personal accounts of captains engaged in the British slave trade have survived. Three examples are available for eighteenth-century Liverpool: Hugh Crow, James Irving, and John Newton. The best known is undoubtedly Newton, an evangelical clergyman who composed the hymn "Amazing Grace" in 1772. In his *Thoughts upon the African Slave Trade*, published in 1788, Newton bitterly regretted his former career as a slave captain. He explained that when he commanded the *Duke of Argyle* and the *African* between 1750 and 1752 he had no idea that the trade was wrong. He stated that "I never had a scruple

upon this head at the time. … What I did I did ignorantly; considering it as the line of life which Divine Providence had allotted me" (Martin and Spurrell 1962, pp. 98–99).

His profound guilt and contrition are unlikely to be typical of other men engaged in the trade. Crow probably provides a more typical example of how slave traders reacted to abolitionist debate. Reflecting on his slave trading career in Liverpool between 1790 and 1807, Crow asserted that "it has always been my decided opinion that the traffic in negroes is permitted by that Providence that rules over all, as a necessary evil" (Crow 1830, pp. 132–133).

As the letters and journals of James Irving, a Scottish surgeon and captain, were not intended for publication, they provide a more accurate insight into the cultural assumptions and mind-set of a practitioner in the trade. On his third slaving venture, Irving wrote to his wife from New Calabar (Bight of Biafra) in August 1786 and informed her that trade was slow. He estimated that the process of bartering for slaves would take nine or ten weeks. After completing the Middle Passage from Africa to the West Indies, Irving wrote to his wife in December 1786 and informed her that they were awaiting the sale of their "very disagreeable cargo." He ended this long conversational letter abruptly, and pointed out that "I think I'll desist [writing] as our black cattle are intolerably noisy and I'm almost melted in the midst of five or six hundred of them" (Schwarz 1995, pp. 112–113). Irving's description of the 526 Africans confined in the stifling heat of the ship's hold as "black cattle" sheds light on the brutal inhumanity of the slave trade. Irving failed to recognize the humanity of the Africans and viewed them as inferior and eligible for enslavement.

After five voyages as a surgeon, Irving was promoted to his first command. Three weeks after sailing from Liverpool on May 3, 1789, the *Anna* was shipwrecked on the Atlantic coast of Morocco. Irving and his crew were captured and enslaved and spent fourteen months in captivity. Redeemed through the efforts of British consular officials, Irving remained completely blind to the irony of his situation and within a month of returning to Liverpool had agreed to command another slave ship. Irving had no compunction about returning to his former occupation of enslaving Africans, and his captivity prompted no reflection on the morality of the trade. Despite his personal experience as a chattel slave, he recognized no similarities with the transatlantic slave trade principally because he did not accept that Africans were fellow humans. Irving died during this second captaincy of the *Ellen* on December 24, 1791. His correspondence indicates how older attitudes sustaining the trade were deeply entrenched, and that a slave trader who valued his own freedom had no qualms about depriving Africans of their liberty.

Historical controversy continues to center on the extent to which Liverpool's rapid growth in the eighteenth century was linked primarily to the wealth generated by the slave trade. The complex and enduring legacies of the transatlantic slave trade were explored in an exhibition opened at the Merseyside Maritime Museum in Liverpool in 1994. This gallery, entitled "Transatlantic Slavery: Against Human Dignity," was groundbreaking as it was the first permanent exhibition of its kind in the world. The new International Slavery Museum opening in Liverpool in August 2007 will considerably extend the scope of the original exhibition.

SEE ALSO *Freedom; Insurance Industry; Liberty; Shipping Industry; Slave Trade; Slave-Gun Cycle; Slavery; Slavery Industry*

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Suzanne Schwarz

LOAN PULLING

SEE *Loan Pushing.*

LOAN PUSHING

One of the international social interactions that occurs between countries is lending by banks of one country (the *creditor*) to individuals or the government of a different

country (*the debtor*). *Loan pushing* refers to the attempt of a creditor with market power to sell a higher volume of credit at a higher rate of interest to a debtor than the creditor would if it lacked market power. The creditor's market power may stem from a low number of credit suppliers or from the formation of a consortium or syndicate of creditors, such as a consortium of four hundred international banks negotiating with a single country. *Loan pulling*, in contrast, is the effort of a debtor to gain more credit if it is not faced with loan pushing but rather with *credit rationing*, which means that the debtor does not get as much credit as it would like at a given interest rate. If the debtor has no market power, it will not get more credit than the rationing creditor wants to give it.

Jonathan Eaton and Mark Gersovitz (1981) show that many countries, but by far not all countries, are credit rationed. William Darity (1986), Barry Eichengreen (1989), and Kaushik Basu (1991) have collected anecdotal evidence for loan pushing. Articles by Thomas Ziesemer (1997) and Ashwini Deshpande (1999) describe loan pushing and related forms of excessive lending.

THEORY

A theoretical model for loan pushing is presented in Figure 1. Imagine that a bank consortium uniting all banks and thereby constituting a monopoly is the supplier of credit and a country is the debtor. The debtor would like to incur debt L for any given interest rate i as indicated by the curve DD'. All combinations of interest, i, and credit volume, L, along the line DU_0 are considered to be as good as getting no credit. The monopolist creditor gets the amount of money to be lent, L, from the world market at interest cost rL. The monopolist obtains interest revenue iL and assumes it will get the money back.

Kaushik Basu's loan-pushing model

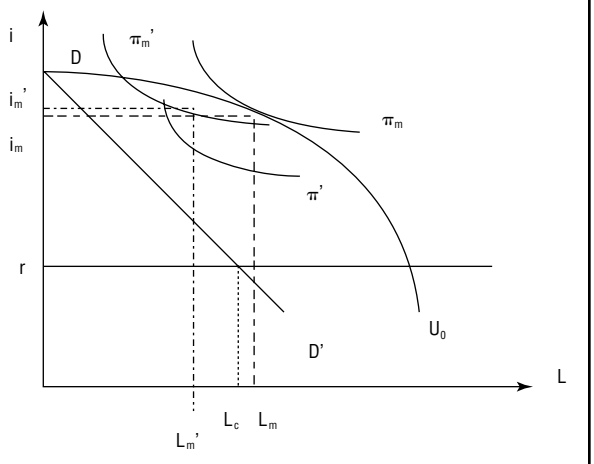

SOURCE: Basu 1991.

Figure 1

The monopolist now can choose between two types of behavior. It can either be customer friendly, offering a contract on the curve DD', or it can look at its profits and try to maximize them. In the latter case, the monopolist creditor will recognize that curves such as π' (or π_m) represent combinations of interest rates and credit volumes that have equally large profits and therefore are called *isoprofit lines*. But a curve with higher interest and credit volume represents higher profits. The monopolist knows that the debtor will not accept a contract with interest and credit volume making the debtor worse off than getting no credit; the debtor therefore will reject offers represented by points to the upper right of DU_0. The highest profit the creditor can get is therefore a combination such as (L_m, i_m). The monopolist can achieve this by telling the customer "either you take this or you get no credit at all." This is called a *take-it-or-leave-it offer*. The debtor accepts because it is slightly better off with the contract than without it.

Of course, this scenario works only if there is no competitor offering a better contract to the debtor and only if the monopolist creditor really is a monopolist. Compared to a situation without monopoly power, where the debtor can get L_c at interest rate r, the interest rate is higher and the credit volume is larger, as stated in the definition of *loan pushing* above. Therefore, (L_m, i_m) is also called the *loan-pushing equilibrium*, and (L_c, r) is called the *competitive equilibrium.*

Now, eliminate the assumption that the creditor is sure to receive its money back with interest. Instead, the creditor may expect *sovereign risk*—a political problem caused by governments that wish to protect debtors who refuse to pay (repudiation)—and expect to get only some payment, which increases with the money lent, say $b(L)$. This scenario is illustrated in Figure 2. The creditor would want to make sure that it does not lend more than it can get back. If the creditor can impose a punishment $b(L)$ on the repudiating debtor, the creditor would prefer to limit the credit such that the punishment is as large as the money to be paid, $b(L) = (1 + i)L$, or, $i = b(L)/\mathrm{L} - 1$. The profit $(i - r)L$, after insertion of this constraint with equality is, $b(L) - (1 + r)L$. Its maximum now is where the $b(L)$ curve in Figure 2 has the maximum distance from the $(1 + r)L$ curve, at L_r. If the debtor wants less credit, there is no problem; but if the debtor wants more credit, it will not be offered and the debtor is called to be rationed at L_r.

UNDERSTANDING THE 1982 DEBT CRISIS

An essential feature of the debt crisis in the beginning of the 1980s was the sharp rise in the world market interest

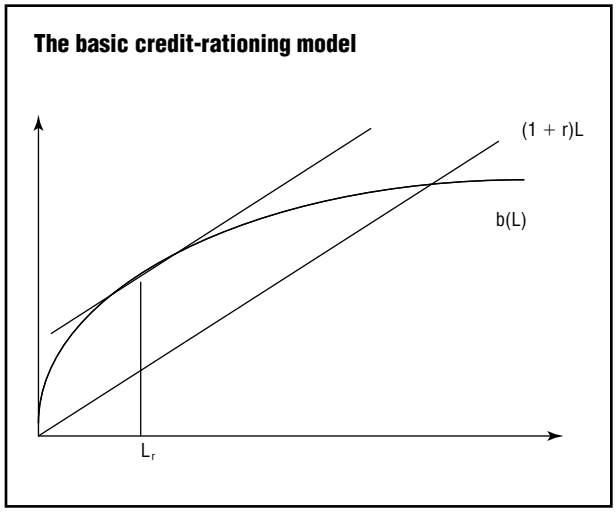

Figure 2

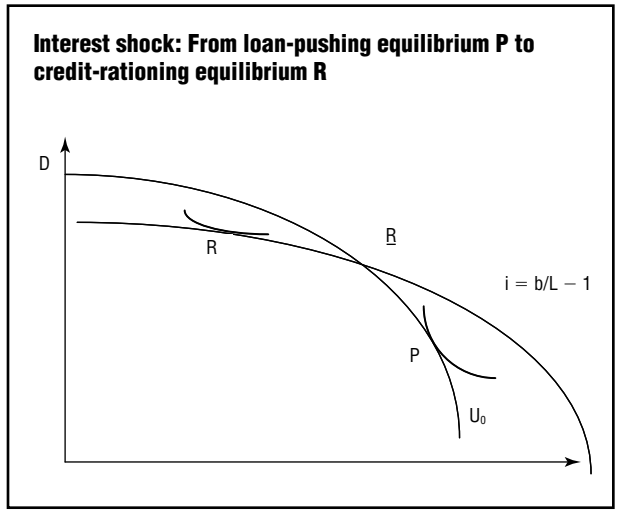

Figure 3

rate *r*. If credit markets were competitive, as at the equilibrium (r, L_c) in Figure 1, the horizontal line would shift up and L_c would fall. Similarly, if the economy is and remains in a loan-pushing equilibrium, it moves along the reservation-utility line DU_0 to the upper left, resulting in (L_m', i_m') with higher interest rates i_m and a lower credit volume, as isoprofit lines can be shown to flatten for a higher world interest rate *r* and moving from π^* to $\pi^{*\prime}$.

If the country is and remains in the credit-rationing regime shown in Figure 2, the line $(1 + r)L$ becomes steeper when *r* rises, and therefore the profit maximizing point moves to lower credit volumes. However, whereas the evidence described above indicated that there was loan pushing before the 1982 crisis, the evidence after the crisis was that the balance of trade in goods and services had shifted to positive values and credit was limited to ensure that interest could be paid. Basu (1991) suggested that this would indicate that there was a shift from loan pushing to credit rationing. Ziesemer (1997) showed that this is possible if, in terms of Figure 3: (1) the credit-rationing function, $i = b(L)/L - 1$, intersects with the DU_0-line; (2) the former is flatter than the latter; (3) the initial equilibrium is the loan-pushing equilibrium *P*; and (4) the increase in the world market interest rate is large enough to come to a credit-rationing equilibrium *R* rather than to an equilibrium between *P* and the intersection point *R*. A flat function $b(L)/L$ means that the punishment function must have a slope that is not decreasing too strongly with the credit volume *L*. The crucial point then is that, for some countries, credit rationing does not prevent crises but occurs upon an interest shock in order to avoid high losses from sovereign risk after the crisis, which was preceded by loan pushing.

BEYOND THE MODEL

Why is it profit-maximizing to push rather than to ration? There are several answers to this question. First, banks make the salaries of sales agents dependent on profits, $(i - r)L$. Selling more and at higher interest rates maximizes agents' salaries (Darity 1986).

Second, third parties, such as a firm selling machines to a debtor country paid by the credit money, *L*, and being a client of the bank(s), may play a role. For example, the client may be a current bad risk that the bank can get rid of by giving the credit, which is used to increase the revenue when the machines are sold. The bank may now substitute a current risk of the firm by a future risk from the debtor country. Or, more generally, the firm has higher revenue and deposits more money in the bank, thus enhancing expected bank profit. Deshpande (1999) extends the loan-pushing part of Basu's (1991) model to include a third party and a more general cost function. Deshpande also provides anecdotal evidence and discusses the role of large and small banks in a syndicate.

Third, illegal activity may occur. For example, a bank manager may own shares of the firm, which increase in value if the firm can sell machines to the debtor country. A gain for the manager is exchanged for a risk for the bank. Fourth, economies of scale and scope of the bank may be valued higher than the new risk from the debtor country, especially if the latter is perceived to be low.

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Thomas Ziesemer

LOANS

A loan is a type of debt. In general, a loan refers to anything given on the condition of its return or the repayment of its equivalent. All material things can be lent, but the most common type of loan is the monetary loan. Like all debt instruments, a loan implies the redistribution of financial assets over time between the lender and the borrower.

In a monetary loan, the borrower initially receives an amount of money from the lender, which he pays back, usually in regular installments. This service is generally provided at a cost, referred to as interest on the debt. The provision of loans is one of the principal tasks of financial institutions. A loan also may be acknowledged by a bond, a promissory note, or a mere oral promise to repay.

The concept of loans dates back to the very old ages of the agricultural era, when people had started living in organized societies. However, it developed and became widespread with the use of money. Because of biblical injunctions against usury, the early Christian church forbade the taking of interest. In feudal European society, loans were little needed by the great mass of relatively self-sufficient and noncommercial farmers and serfs, but kings, nobles, and members of the church community borrowed heavily for personal expenditures. The role of the moneylender was undertaken back then by merchants and other townsmen, especially the Jews, while various devices were found for circumventing the prohibition of usury.

The development of money lending among the Jews as their almost exclusive occupation began in the twelfth century, and it was probably the consequence of the persecutions during the First Crusade; Jews at this time could not own land or vineyards, so money lending was one of the few occupations open to the Jews as a means of livelihood. In addition, the Catholic Church's prohibition against money lending for Christians provided Jews with a unique opportunity to step into this void in establishing themselves as bankers. The laws regarding pawn-broking also became increasingly more detailed. During the Middle Ages, local rulers prohibited Jews from occupying most professions, so they were pushed into marginal occupations that were considered socially inferior, such as money lending.

Historically, attacks on usury have often been connected with anti-Semitism. Moreover, Judaism has been a more lenient religion with respect to lending than other religions. The Torah and later sections of the Hebrew Bible criticize the taking of interest, but interpretations of the biblical prohibition vary. One common interpretation is that Jews are forbidden to charge interest upon loans made to other Jews but allowed to charge interest on transactions with non-Jews. However, the Hebrew Bible itself gives numerous examples where this prohibition was evaded. Moreover, legislation concerning the Jews recognized the rabbinical law. According to the latter, for instance, a Jew who had advanced money on a stolen article was entitled to recover the amount he had loaned for it, including interest, if he could swear that he did not know it had been stolen.

By contrast, many religions prohibit the charge of interest. The most prominent example is that of Islam. Sharia, the Islamic law, does not allow the collection and payment of interest (*riba*). However, as Maxime Robinson demonstrates in his book *Islam and Capitalism* (1974), even the Islamic prohibition of usury and other kinds of transactions was no barrier to the continuation and elaboration of pre-Islamic capitalistic practices. The Koranic revelation, therefore, did not bring into being an exemplary moral economic system that was fundamentally different from any other existing economic system. Thus, Islamic prohibitions on usury were circumvented with the establishment of Islamic banks. Islamic banks have the same purpose as conventional banks but are believed to obey the rules of Sharia. Islamic banking is based on the sharing of profit and loss and the prohibition of interest. According to a common practice used to lend money for a purchase, a bank might buy the item itself from the seller and resell it to the buyer at a profit while allowing the buyer to pay for it in installments. To protect themselves against default, Islamic banks retain ownership of the item until the loan is paid.

The United States has an old tradition of lending. Americans have long relied on credit, which, for day-to-

day matters, typically took the form of charge accounts with local retailers. In the early years of the United States, when it was primarily an agrarian society, income for many people rested upon when the crops were harvested and sold. Credit and charge accounts, rather than the more structured repayment of an installment purchase, were more individual in nature, relying heavily on the personal relationship between the consumer and the retailer. Credit cards and other more modern and impersonal means of credit and charge-account purchasing became a fixture in the consumer-retailer relationship in the 1950s. However, even today the traditional, more personal and informal types of charge accounts do exist. Without extending some sort of credit to customers, many businesses in the past simply would not have been able to operate. Today's modern means, the credit card, has greatly reduced the degree to which individual retailers personally extend credit to consumers. However, credit itself remains as essential to the retail economy as it has ever been.

The history of formal lending in the United States is also deeply related to the rise of homeownership in the lower socioeconomic classes. Formal lending, in terms of institutional lending, has long been the means by which many have been able to buy their own home. Before institutionalized lending that was accessible to those who were not wealthy, people relied on private loans or small, regional networks serving a particular ethnic or professional group. These types of lending situations, however, did not nurture and support homeownership in the same ways, or for as great a percentage of people, as does formal or institutional lending today.

The early types of formal mortgages were extended by insurance companies. The terms of these mortgages, however, were often quite risky for the borrower, with the balance of power distinctly tipped toward the lender in ways that would be deemed unfair and even predatory by today's standards. Savings and loan associations also evolved, although they remained separate from traditional banks, which could offer checking accounts and other services, until the 1970s, when banking regulations changed. Once those regulations changed, savings and loan associations became almost indistinguishable from the typical bank of today, but their loan practices became the universal standard among many of today's financial institutions. The practices have been revised continuously through the years by regulations meant to ensure that minorities and women were able to have equal access to fair lending.

Today, banks and finance companies usually extend loans against collateral, such as stocks, personal effects, and mortgages on land and other property. Credit activity is considered to be strongly correlated with consumption, and it is expanding due to the gradually decreasing savings rates of typical households. Financial institutions are the ones responsible for extending loans, and they make a large share of their profits out of this activity. The low penetration of loans to an economy, as is the case in the developing countries of central and southeastern Europe, attracts many foreign direct investments in those countries.

Bank loans and credit are considered to be one way to increase the money supply. Policymakers, such as many central bankers, take into account credit growth developments in their decisions about interest-rate movements. Another aspect of the internationalization of loans is the ability of the participants of economic activity—governments, companies, and households—to borrow from abroad under better terms and conditions.

Apart from those who have access to financial markets, the establishment of organizations such as the International Monetary Fund and the World Bank allow the provision of loans to countries experiencing economic problems. This financial assistance enables countries to encounter economic difficulties, reconstruct, and restore conditions for economic growth. Moreover, Muhammad Yunus of Bangladesh, who was awarded the Nobel Peace Prize for providing, through his Grameen Bank, small loans known as micro-credit to poor people without any collateral showed that loans can be accessible and provide support even to those who have no financial security.

SEE ALSO *Banking; Banking Industry; Discounted Present Value; Equity Markets; Financial Instability Hypothesis; Financial Markets; Hedging; Leverage; Liquidity Premium; Microfinance; National Debt; ROSCAs*

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Eleni Simintzi

LOBBYING

Lobbying is the process by which an organized interest communicates its concerns and preferences to governmental policy makers in order to influence a policy decision. Lobbyists are the individuals who directly attempt to persuade policy makers to take a particular action. They may be full-time employees of a corporation or an interest group, but are often contract lobbyists hired by an interest group. Additionally, governmental employees act as legislative liaisons for their agencies and at the state level a small percentage of lobbyists are volunteers. Regardless of the extent to which lobbying persuades policy makers, a topic debated by scholars, lobbying serves instrumentally at several stages of policy making. Therefore, understanding the process of lobbying complements knowledge of how policy is made.

HISTORY

The first use of the term *lobby* seems to have been in the mid-seventeenth century when the large anteroom near the English House of Commons floor became known as the lobby. It was a public room in which members of Parliament could be easily approached by individuals seeking favors, called lobby agents. In the early 1800s in the United States those who petitioned government officials in lobbies or common areas were called lobbiers and later lobbyists. This label transferred to their petitioning activity, termed lobbying. Members of Congress did not have private offices until after 1900 so influence seekers commonly buttonholed them in the rotunda of the U.S. Capitol. Similarly, state legislators could be easily waylaid in the halls and anterooms of their capitol buildings as private offices did not appear in some states until the mid-1970s.

FORMS OF LOBBYING AND THEIR ROLES

In the United States, lobbying plays a role in all three branches of government, though legislative lobbying gains the most attention in scholarship and in the media. In Congressional and state legislatures, lobbyists provide drafts of bills to sympathetic members who introduce them, given the need to show policy entrepreneurship and in order to lower the cost of bill preparation by staff. Later, in the committee stage, lobbyists focus mostly on rallying their base rather than persuasion. They typically contact two kinds of legislators: those who are sympathetic ideologically to their client and those who represent a constituency in which their company or group has a strong presence. Similarly, on a floor vote, lobbyists again focus mostly on their base, but if necessary they try to persuade fence-sitting legislators to gain sufficient support for the bill's passage.

Lobbyists provide technical expertise about the issue and expected effects of the policy as well as political intelligence about the electoral consequences of a member's vote. The most important means of presenting information are testimony at committee hearings and contacting legislators directly, tactics used by 95 percent of Washington lobbyists. Lobbyists can more easily contact legislators if they represent an organized interest whose members constitute a significant portion of the legislator's constituency. Mobilizing a group's members to contact a legislator, known as grassroots lobbying, has become an important tool in politics. Lobbyists often control another resource—money—in the form of Political Action Committee (PAC) campaign contributions, which may help secure access to legislators and, some allege, influence floor votes. Political scientists caution that many forces besides money influence a congressperson's vote, and detecting money's direct impact on voting has been limited.

Lobbying also extends to the federal executive branch and the U.S. court system. Starting with the presidency, since 1974 the Office of Public Liaison has served as the White House's primary means of interaction with organized interests. Interests gain access to prominent officials, and the White House receives information and lobbying support from organized interests. It is not always clear what the interests gain from this approach. More transparently, interests lobby bureaucrats in the regulatory process. Whenever Congress enacts legislation, an agency must write rules for implementation, a process open to public comments and hearings, in which lobbyists regularly participate. Agencies pay attention to comments because regulations can be legally challenged for a variety of reasons.

Indeed, legal challenges and influencing the courts are also part of the domain of lobbying; however, lobbyists cannot directly contact judges about rulings, so in this approach organized interests use indirect lobbying techniques. The first technique is lobbying during judicial selection. At the federal level lobbyists simply encourage senators to vote for the confirmation of judicial nominees favorable to their group's concerns, while in the thirty-eight states where judges stand for election, interest groups get more directly involved in campaigning. A second means is actual litigation either through an organization's defending itself or sponsoring a test case. A final means of influencing courts is by submitting *amicus curiae* briefs on cases with which the organized interest is not involved as a litigant, yet has a policy interest. These briefs advance legal and social arguments that may not be raised by the litigants. When seemingly technical rule-making by bureaucrats or rulings by courts affect policies of interest to their clients, lobbyists attempt to influence these decisions.

REGULATION

In regulating lobbying by organized interests, the primary focus at both the federal and state levels has been on registration and public visibility, rather than restricting activity. Lobbying is protected by the First Amendment, which guarantees the right "to petition the Government for a redress of grievances." The Federal Regulation of Lobbying Act of 1946 was the first law to require lobbyists at the national level to register, but court rulings substantially narrowed the range of groups that had to register. The Lobby Disclosure Act of 1995 established a meaningful registration requirement for nearly all organizations engaged in direct lobbying. In 2005 36,689 individuals lobbied Congress, according to PoliticalMoneyLine, an independent campaign finance Web site. States began oversight of lobbying in the 1960s, primarily by requiring lobbyist registration and disclosure of expenditures. In the 1990s many states tightened their rules, often imposing gift bans, so that in the early 2000s state laws are substantially more stringent than federal law. The Center for Public Integrity reported that 47,000 organized interests were registered to lobby in state capitals in 2004, employing more than 38,000 individual lobbyists.

SEE ALSO *Interest Groups and Interests; Pressure Groups*

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LOBOTOMY

Lobotomy describes a class of psychosurgical techniques that involve the cutting of nerve fibers in the prefrontal area of the brain with the intent to calm severely disturbed psychiatric patients. These procedures are designed to disrupt the limbic system, the area of the brain most closely associated with regulating emotion.

António Egas Moniz (1874–1955), a Portuguese neurologist, is credited as initiating the widespread use of psychosurgery. In 1935 Moniz attended a presentation by psychologist Carlyle Jacobsen at the Second International Neurological conference in London. Jacobsen noted that destruction of the prefrontal area in monkeys eliminated "experimental neurosis," a pattern of frustrated behavior in response to errors when monkeys were given problem-solving tasks. Moniz questioned Jacobsen as to whether similar procedures could be used in humans to eliminate anxiety. Moniz and his colleague Almeida Lima initially treated psychiatric patients by using alcohol injections to destroy parts of the frontal lobes. By the end of 1935 Moniz and Lima were performing prefrontal leucotomy, a technique that involved cutting open the skull and severing nerve connections using a surgical instrument with a wire loop on the end called a leucotome.

In 1936 Moniz published encouraging results from twenty patients. Of these Moniz reported fourteen were either cured or showed improvement. Interest in lobotomy and for other dramatic procedures like insulin-induced coma and electroconvulsive therapy grew rapidly in response to the social pressures of a growing number of psychiatric patients in state hospitals during the 1930s and 1940s. Available treatments prior to the rise of psychosurgical techniques consisted primarily of the use of heavy sedatives, such as opiates or barbiturates. Psychoanalysis was growing in popularity but was impractical for widespread use in hospital settings especially among patients with severe disorders, such as those with schizophrenia. In recognition of his contribution to medicine, Moniz was awarded the Nobel Prize in 1949.

Lobotomy's greatest promoter was Walter Freeman, a U.S. neuropsychiatrist. Freeman corresponded with Moniz and closely followed the reports of his work. Freeman and neurologist James Watts established a practice and began performing their first lobotomies in 1936. Although Watts was trained as a surgeon while Freeman was not, the two often performed the operation together. After performing several surgeries using Moniz's technique, Freeman and Watts developed a technique that involved drilling burr holes in both sides of the skull to be used as landmarks for making more precise cuts. Their procedure became known as the standard Freeman-Watts lobotomy. Freeman and Watts published *Psychosurgery* in 1942, which included reports about their patients, descriptions of the procedure, and theoretical explanations.

Freeman became discontent with inconsistent results of standard prefrontal lobotomy—particularly among schizophrenic patients who he felt were less benefited the longer their disorder progressed without psychosurgery. In 1946 Freeman performed the first transorbital lobotomy. Nonsurgical professionals could perform this procedure within a few minutes without anesthesia often during an office visit. The transorbital lobotomy involved inserting a sharp instrument resembling an ice pick through connective tissue between the eye and the orbital bones, and then thrusting the instrument upward to sever neural connec-

tions. After years together Watts split with Freeman over Freeman's characterization of transorbital lobotomy as a minor operation and eager use of the procedure. Freeman went on to perform or supervise approximately 3,500 transorbital lobotomies and train many others to perform them in a tour of state hospitals to popularize the procedure.

The use of lobotomy declined rapidly with the advent of drug treatments in the mid-1950s such as chlorpromazine to treat schizophrenia. Introduction of viable alternatives strengthened support for lobotomy's critics. Critics included Nolan Lewis, director of New York State Psychiatric Institute, who spoke at a psychiatric symposium in 1949 that included Freeman and Watts and challenged the validity of evidence in favor of lobotomy. Lewis claimed widespread underreporting of unsuccessful surgeries. He also questioned whether quieting the patient was really a cure or more a convenience to psychiatric caregivers. Patients were often described after surgery as emotionless zombies, impulsive, or lacking initiative. In a published critique in 1949, Jay Hoffman, chief of the Veteran's Administration's Neuropsychiatric Service, noted that results were typically deemed successful as long as patients showed improvement over their condition during hospitalization, but that family members were often unhappy with the results, as patients did not return to their prediagnosis, normal selves (Hoffman 1949).

Although technical improvements in psychosurgery allow more precise destruction of specific cells or neural circuits, ethical questions surrounding the irreversibility of these procedures have led to legal restrictions limiting psychosurgery to a treatment of last resort.

SEE ALSO *Ethics in Experimentation; Medicine; Neuroscience*

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Craig C. Jackson

LOCATION THEORY

SEE *Spatial Theory.*

LOCKE, JOHN

1632–1704

John Locke was an English philosopher who is often seen as the founder of liberalism and a major source of inspiration for the American founding. Born into a Parliamentarian family near Bristol, Locke attended the prestigious Westminster school in London and then Christ Church College at Oxford. In 1666 he became a friend and secretary of Anthony Ashley Cooper (1621–1683), later the first earl of Shaftesbury, a prominent Whig politician. After the arrest of Shaftesbury and a number of other Whigs for their opposition to royalism and Catholicism, Locke fled to Holland in 1683, returning to England only after the Glorious Revolution of 1688 expelled James II (1633–1701) and installed William of Orange (1650–1702) on the throne. While he had been working on what were to become his major writings for several decades, it was not until this time that they were published: *A Letter Concerning Toleration*, which advocated religious toleration and a separation of church and state, the *Two Treatises of Government*, which argued for limited government and private property, and *An Essay Concerning Human Understanding*, which advanced an empiricist view of human knowledge, were all published in 1689. While the former two works appeared anonymously, the latter was published under Locke's name and quickly made him famous. Other important works of his later life included *Some Thoughts Concerning Education* (1693) and *The Reasonableness of Christianity* (1695). By the time he died in 1704, Locke had become one of the most prominent and influential philosophers of his time.

The second of Locke's *Two Treatises of Government* is often regarded as the founding text of liberalism. In this work, he posits that there is no natural or divine source of legitimate political power and thus that government must be based on consent. In the "state of nature" that exists when there is no political authority, he claims, the law of nature (which obliges people not to harm others) tends to be inadequately obeyed and enforced, and so people agree to create a government through a social contract. The purpose of the contract and hence of government is to protect people's lives, liberties, and property, and to achieve this end Locke advocates a limited government with institutional safeguards such as separate legislative and executive branches, common judges, and standing laws that apply equally to everyone. Locke puts a special emphasis on the protection of property rights, as he claims this will encourage people to be industrious and thus to increase productivity and raise the society's standard of living. While people are understood to have tacitly consented to the government under which they live even if they were not a part of the original social contract, the people always remain supreme, and thus when the government violates

its trust the people can and should exercise their right to revolution. With his arguments for natural rights, government by consent, constitutionalism, private property, and religious toleration, Locke is one of the major sources of the ideology of the American founding and indeed of the modern world.

SEE ALSO *Enlightenment; Hobbes, Thomas; Labor Theory of Value; Natural Rights; Property; Rousseau, Jean-Jacques; Social Contract; State of Nature*

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Dennis C. Rasmussen

LOCUS OF CONTROL

Locus of control was the brainchild of psychologist Julian Rotter, who based his concept on the social learning theory idea that the generalized expectancies of people govern their actions. Rotter assumed that people vary in the degree to which they perceive the things that are happening to them as being under their own internal control or under the control of outside forces. Using this latter locus of control dimension, at one end of the continuum are the internal individuals who see themselves as being "captains of their own ships," whereas at the other end of the continuum are the external persons who see themselves as being ruled by powerful people or outside forces. In more technical psychological terms, the internal loci of control people believe that through their own behaviors, they have command over the reinforcements in their lives; conversely the external loci of control people see the reinforcements in their lives as being driven by causal sources that are independent of their own actions.

HISTORY OF CONCEPT

Since the publication of the 1962 article "Internal Versus External Control of Reinforcement: A Major Variable in Behavior Therapy" by Julian Rotter, Melvin Seeman, and Shephard Liverant, there have been more published papers on this construct than perhaps any other new idea in all of psychology. At the start of the twenty-first century there were literally thousands of studies that focused on locus of control. This surge of interest regarding locus of control probably stemmed from the fact that it represented a logical step as the field of psychology moved beyond the previous strict tenets of stimulus-response behaviorism. On this point Rotter believed that to understand the actions of higher order organisms such as human beings, people's expectancies about their behaviors being reinforced needed to be taken into account. Thus he reasoned that people use their personal experiences to develop expectations as to whether they can or will be rewarded for their actions. Beyond the inherent appeal of these underlying social learning and generalized expectancies ideas, another reason for the explosion of interest probably was the fact that Rotter produced a short and valid self-report instrument for measuring locus of control. That is to say part of this tremendous growth reflected the availability of a valid instrument for use by researchers.

RESEARCH EVIDENCE

In 1966 Rotter published what has come to be called the Rotter IE Control Scale. It contained twenty-three items (plus six fillers), each with a paired option. For each item the respondent is asked to select which of two options is most true of him or her. Thus consider item #2 on the Rotter IE Control Scale, where the respondent is asked to select from the following two choices: option A, "Many of the unhappy things in people's lives are partly due to bad luck," or option B, "People's misfortunes result from the mistakes that they make." In this item #2 option A represents a response indicating an external locus of control, whereas option B represents an internal locus of control. The more of the external items that the person selects as being most applicable to him or her, the more external is that person's overall score.

The IE scale has been shown to be reliable and valid. Likewise factor analyses have revealed that the items fall into two clusters, with one factor pertaining to a sense of mastery and a second factor tapping the degree to which citizens perceive that they can play significant roles in political institutions.

Along with Rotter's IE scale, the following other adult indices related to locus of control have been introduced and validated: (1) the Nowicki-Duke Locus of Control Scale; (2) the Crandall, Katkovsky, and Crandall Intellectual Achievement Responsibility Questionnaire; and (3) the Wallston and Wallston Health Locus of Control Scale. Additionally indices such as the Nowicki-Strickland Locus of Control Scale for Children have been developed for use with children of various ages.

From the outset Rotter suggested that an external locus of control was implicated in neurotic maladjust-

ment. In support of this general proposition persons with external as compared to internal loci of control have been shown to be more unhappy, depressed, and suicidal. Likewise those clients who do not improve over the temporal course of psychotherapy have loci of control scores that remain external, whereas those psychotherapy clients who improve over treatment have scores that have become more internal. Turning to achievement-related performances in school, external loci of control people repeatedly have done more poorly than internal loci learners. Furthermore studies consistently have shown that external more than internal loci of control people have disadvantages in physical health-related matters. Specifically compared to internals, the external loci of control persons have worse sleeping, exercise, and eating patterns, and they also are more prone to hypertension.

The counterproductive outcomes produced by external as compared to internal loci of control persons may relate to many externals' lack of belief in hard work, along with their unwillingness to expend high efforts. Also because externals believe that their lives are ruled by chance factors and/or powerful forces residing outside of themselves, they are quite passive and do not take protective measures when it comes to health matters (e.g., wearing seatbelts or sunscreen). They also tend not to be planful and future oriented because they do not see themselves as being capable of effective proactive behaviors. As such instead of taking a task-oriented "I can do something" approach to anticipate any stressors that they may encounter, external loci of control people are rather fatalistic about their coping skills in particular and their lives more generally. Moreover the externals relative to internals are not attentive to their surrounding environments, and they are not very knowledgeable about health-related matters. Accordingly the externals probably could not act in healthy ways even if they wanted to do so. Not surprisingly, therefore, externals greatly prefer avoidance behaviors rather than the problem-solving tactics used by internal loci of control people.

CRITIQUE OF LOCUS OF CONTROL THEORY

In spite of its huge influence in the field of psychology, the locus of control concept has been criticized. In one noteworthy critique, the 1995 publication *Judgments of Responsibility: A Foundation for a Theory of Social Conduct* by Bernard Weiner, the author reasoned that the concept of "locus of control" was misleading and, in fact, that locus and control should be considered as two distinct dimensions involving causality—locus (internal versus external) and control (controllable versus uncontrollable). On this point Weiner held that a person could have an internal locus, and yet believe that she or he either was or was not in control; similarly people could hold external loci, and yet believe that they either were or were not in control. Thus, for example, efforts and ability are both internal in their loci, but effort is controllable and ability is uncontrollable. Weiner's important point, therefore, is that there actually are two independent dimensions of causality, and that the Rotter theory may be incorrect in assuming that an internal locus always means that the person also is in control, and that an external locus always means that the person is not in control.

IMPLICATIONS

Locus of control may have been the most prominent new construct to appear in the interface of social, clinical, personality, and health psychology in the last three decades of the twentieth century. Loci of control scale scores have produced many robust correlations with outcome markers pertaining to psychological disorders, psychotherapy, school achievements, and physical health. Perhaps most importantly the locus of control concept solidified the importance of human expectancies in governing how people cope. As such locus of control facilitated the transition of psychology from an earlier emphasis on stimulus-response behaviorism to the twenty-first-century emphasis on cognitive and mental factors. Moreover locus of control has contributed to other theories such as learned helplessness, attributional biases, self-efficacy, hope, and optimism.

SEE ALSO *Attribution; Hope; Learned Helplessness; Optimism/Pessimism; Psychotherapy; Rotter's Internal-External Locus of Control Scale; Validity, Statistical*

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C. R. Snyder

LOGIC

Logic is the study of persuasive reasoning. As such, it concerns arguments that successfully convey credibility from a set of premises to a conclusion. Given this broad definition, there are many possible avenues of discourse and logicians have studied everything from formal inference patterns, to the logic of causation, possibility and necessity, obligation, and inference to the best explanation. Nonetheless, formal deductive and inductive logic are the most historically significant branches of logic, even for the social sciences.

The discipline of logic evolved as a prominent branch of philosophy from the time of Aristotle and marks the first time in history that anyone began to systematize the forms of good reasoning. This systematization was of great benefit to philosophers as they attempted to know the universe of knowledge—covering both nature and human relations—on the basis of intuitive thought, rather than empirical analysis. As the sciences eventually pulled away from philosophy (first "natural philosophy" as it evolved into physics in about the seventeenth century, and then the social sciences arguably following in the eighteenth century, as they too learned that knowledge could be formulated on an empirical basis), it is only natural that they would develop their own methods of inquiry, separate from those of philosophers. Nonetheless, the special relationship of logic to the earliest forms of scientific analysis has survived to the twenty-first century, and has had great influence over the modes of inquiry in economics, history, sociology, anthropology, political science, and psychology, that make up the social sciences.

Logic is logic, whether it is applied to the social sciences, or any other field of inquiry. There is no special type of logic that is particularly suitable to the social sciences, just as there is not one for the natural sciences. The principles of valid reasoning are the same no matter what the subject, and are expressible in symbolic notation that is concerned only with the form, rather than the content, of what is uttered. To say "if I have a dollar then I have some money" is no different, logically, than to say, "If one is president of the United States then one is an American citizen." The form of this type of "if, then" statement ($P \Rightarrow Q$) is known as a "conditional," and, along with "not," "or," "and," and "if and only if" ($-$, $\vee$, $\&$, $\Leftrightarrow$), it forms the backbone of logical syntax. The idea that it is then possible to devise more complex statements using these connectives, to formulate premises and then to draw a conclusion, is to present the form of a "valid" argument in deductive logic, which is one where the conclusion follows *necessarily* from the premises. As long as the relationship between the premises and conclusion is a deductive one—which is to say that if the premises are true then the conclusion cannot help but be true—then the conclusion follows inevitably from the premises, and does not require any sort of empirical data to support it.

If it is raining then the streets will be wet.

It is raining.

Therefore, the streets will be wet.

This is, however, a long way from saying that such an argument is "sound" (that is, both valid and true) and it is here that the first limit of logic is reached in the social sciences, for as practitioners of an empirical discipline, social scientists are concerned to know whether an argument is sound (for instance whether its premises are true), and not just whether its form is valid. Therefore, we need to gather data in the world to assess this. No matter how powerful the principles of logic, in modern social scientific inquiry logic cannot provide the sole means for testing a theory, since logic is concerned not with truth, but with validity, yet the truth of a theory depends crucially on its conformity with actual experience. Pure logic can be done in an armchair, but science needs to go out into the world (if not for experiment, at least for observation).

In his or her search for causes, it is therefore incumbent upon social scientists to dig deeper into the subject, and find some way to assess whether a statement like "if one uses the death penalty then crime will drop" is true, and this is a tricky business, which deductive logic, at least, cannot adjudicate. However, there is another branch of logic that deals with "inductive" inferences that is much more conducive to empirical inquiry, and which some have felt represents the very type of reasoning that is used in science. In contrast to deduction—which deals with moving from general statements to the particular conclusions that follow from them—with induction one moves from particular statements to a general conclusion, somewhat as if one is gathering data points to see if they form a pattern. This resembles, at least ideally, the form of reasoning that a social scientist uses when he or she is searching for a general regularity. For example, if one were to argue that:

Kennedy's tax cut in 1961 stimulated the economy

Reagan's tax cut in 1981 stimulated the economy

Bush's tax cut in 2003 stimulated the economy

Therefore, tax cuts always (usually, generally) stimulate the economy

one is engaging in a form of reasoning that is familiar to social scientists, who seek to make causal explanations and to formulate general theories based on historical evidence. The problem, however, is that this form of reasoning is

not valid, as has famously been shown by the Scottish philosopher David Hume. Specifically, the above argument has a hidden assumption (common to all inductive arguments), which is to think that there is a relevant similarity between the future and the past. But this assumption does not always hold. Moreover, even if this assumption is borne out in some cases, it is important to recognize that there is a distinction to be made between "causation" and "correlation" in the social sciences, such that, no matter how solid one's evidence may be, it is always possible that even the strongest correlation may represent only an accidental connection. Try as one might to obtain the sort of certainty that the "necessary connection" of deductive logic has provided, the social sciences have found this an elusive goal. This represents no particular flaw in the social sciences, for the natural sciences—or indeed any fact-based discipline—would also seem to suffer from this same difficulty.

Nonetheless, the social sciences have embraced the power of logic and have used it in various ways throughout their history to bolster their conclusions and to capitalize on the strengths of clear reasoning. The development of modern probability theory, and especially the invention of regression analysis in statistics, has been a very useful tool for social scientists to identify patterns in their data and to make sure that their hypotheses do not outrun them. The models of rationality that have been used throughout economics and political science—in particular those of rational choice and game theory—reflect another important way that the power of logic has had an impact on research design and model building in modern social science. In psychology, too, where experiments are designed to assess rational cognitive function by using thinly disguised logic games, one sees the influence of logic in social inquiry. Such reliance on logical modes of behavioral analysis, however, has come at a cost, for the new trend of "behavioral economics," and the more general movement toward more realistic and experimental models in the social sciences, have revealed limitations in some of the classic theories in social science. Assumptions about "rational economic man," for instance, may work ideally in our theoretical models, but break down when faced with the irrationality and fractured logic of everyday human experience that constitutes the subject matter of the social sciences.

In another avenue, however, the principles of logic have been unquestionably useful in the social sciences, and that is in research design, the formulation of hypotheses, and the analysis and synthesis of data and theory in social inquiry. Taking a page from the "scientific method" that is allegedly used in the natural sciences, some methodologists have argued that, as empirical disciplines, the social sciences should follow the "five-step method" of observation, hypothesis formulation, prediction, experiment (or learning from experience), and assessment. Despite the storied literature in the philosophy of science, provided by philosophers of science Karl Popper and Thomas Kuhn, that has rightly caused philosophers and others to rethink this simplistic model of scientific method, there is a nugget of truth in it for any discipline that cares to be empirical, which is to be ruthless about the comparison of one's theory to the data. If a theory tells an individual to expect something, and one does not find it, then there is an inescapable problem for the theory. In a statement attributed to American physicist Richard Feynman, "It doesn't matter how beautiful your theory is. If it doesn't agree with experiment, it's wrong." This form of reasoning is directly related to the "conditional" in our earlier consideration of valid arguments, for it is trivially true that every conditional statement (if P, then Q) implies (indeed, is equivalent to) its "contrapositive" (if not Q, then not P). Thus, if one's social scientific theory states, "If one is a thirteen-year-old boy then one has had an Oedipus Complex" and one finds a thirteen-year-old boy who has *not* had an Oedipus Complex, then the original theory is wrong. If a theory has even one exception, then it is not universally true and must either be discarded, or modified in some way to deal with this anomaly. As Popper demonstrated, here the power of logical certainty may be appreciated, since the contrapositive relationship is one of deductive, not inductive, reasoning and therefore may be relied upon as rock solid in its epistemological status.

The role of logic in the social sciences is a mixed one. As in the natural sciences one realizes that, if it is to explain the world, any empirical theory must go beyond the homilies of deductive reasoning and venture forth into the world of experience, with the chance of being wrong as the price of expressing a truth that is not trivial. Still, as we have seen, the power and benefits of logic have not been without value to the social sciences.

SEE ALSO *Game Theory; Hypothesis and Hypothesis Testing; Rational Choice Theory; Scientific Method; Theory*

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Lee C. McIntyre

LOGIC, SYMBOLIC

Symbolic logic is sited at the intersection of philosophy, mathematics, linguistics, and computer science. It deals with the structure of *reasoning* and the formal features of information. Work in symbolic logic has almost exclusively treated the deductive validity of arguments: those arguments for which it is *impossible* for the premises to be true and the conclusion false. However, techniques from twentieth-century logic have found a place in the study of inductive or probabilistic reasoning, in which premises need not render their conclusions certain.

The historical roots of logic go back to the work of Aristotle (384–322 BCE), whose *syllogistic reasoning* was the standard account of the validity of arguments. Syllogistic reasoning treats arguments of a limited form: They have two premises and a single conclusion, and each judgment has a form like "all people are mortal," "some Australian is poor," or "no politician is popular."

The discipline of symbolic logic exploded in complexity as techniques of algebra were applied to issues of logic in the work of George Boole (1815–1864), Augustus de Morgan (1806–1871), Charles Sanders Peirce (1839–1914), and Ernst Schröder (1841–1902) in the nineteenth century (see Ewald 1996). They applied the techniques of mathematics to represent propositions in arguments *algebraically*, treating the validity of arguments like equations in applied mathematics. This tradition survives in the work of contemporary algebraic logicians.

Connections between mathematics and logic developed into the twentieth century with the work of Gottlob Frege (1848–1925) and Bertrand Russell (1872–1970), who used techniques in logic to study mathematics. Their goals were to use the newfound precision in logical vocabulary to give detailed accounts of the structure of mathematical reasoning, in such a way as to clarify the definitions that are used, and to make fully explicit the commitments of mathematical reasoning. Russell and Alfred North Whitehead's (1861–1947) *Principia Mathematica* (1912) is the apogee of this project of *logicism*.

With the development of these logical tools came the desire to use them in different fields. In the early part of the twentieth century, the *logical positivists* attempted to put all of science on a firm foundation by formalizing it: by showing how rich theoretical claims bear on the simple observations of experience. The best example of this is the project of Rudolf Carnap (1891–1970), who attempted to show how the logical structure of experience and physical, psychological, and social theory could be built up out of an elementary field of perception (Carnap 1967). This revival of empiricism was made possible by developments in logic, which allowed a richer repertoire of modes of construction or composition of conceptual content. On an Aristotelian picture, all judgments have a particularly simple form. The new logic of Frege and Russell was able to encompass much more complex kinds of logical structure, and so with it, theorists were able to attempt much more (Coffa 1991).

However, the work of the logical positivists is not the enduring success of the work in logic in the twentieth century. The radical empiricism of the logical positivists failed, not because of external criticism, but because logic itself is more subtle than the positivists had expected. We see this in the work of the two great logicians of the mid-twentieth century. Alfred Tarski (1902–1983) clarified our view of logic by showing that we can understand logic by means of describing the *language* of logic and the valid arguments by giving an account of *proofs*. However, we view logic by viewing the *models* of a logical language, and taking a valid argument as one for which there is no model in which the premises are true and the conclusion false. Tarski clarified the notion of a model and he showed how one could rigorously define the notion of *truth* in a language, relative to these models (Tarski 1956). The other great logician of the twentieth century, Kurt Gödel (1906–1978), showed that these two views of logic (proof theory and model theory) can agree. He showed that in the standard picture of logic, validity defined with proofs and validity defined by models agree (see von Heijenhoort 1967).

Gödel's most famous and most misunderstood result is his *incompleteness* theorem: This result showed that any account of proof for mathematical theories, such as arithmetic, must either be completely intractable (we can never list all of the rules of proof) or incomplete (it does not provide an answer for every mathematical proposition in the domain of a theory), or the theory is inconsistent. This result brought an end of the logicist program as applied to mathematics and the other sciences. We cannot view the truths of mathematics as the consequences of a particular theory, and the same holds for the other sciences (see von Heijenhoort 1967).

Regardless, logic thrives. Proof theory and model theory are rich mathematical traditions, their techniques have been applied to many different domains of reasoning, and connections with linguistics and computer science have strengthened the discipline and brought it new applications.

Logical techniques are tools that may be used whenever it is important to understand the structure of the claims we make and the ways they bear upon each other. These tools have been applied in clarifying arguments and analyzing reasoning, and they feature centrally in the development of allied tools, such as statistical reasoning.

One contemporary debate over our understanding of logic also bears on the social sciences. We grant that using languages is a social phenomenon. How does the socially mediated fact of language-use relate to the structure of the information we are able to present with that use of language? Should we understand language as primarily *representational*, with inference valid when what is represented by the premises includes the representation of the conclusion, or should we see the social role of assertion in terms of its *inferential* relations? We may think of assertion as a social practice in which the logical relations of *compatibility* and *reason-giving* are fundamental. Once we can speak with each other, my assertions have a bearing on yours, and so logic finds its home in the social practice of expressing thought in word (Brandom 2000).

SEE ALSO *Aristotle; Empiricism; Logic; Models and Modeling; Philosophy; Social Science; Statistics in the Social Sciences*

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Greg Restall

LOGISTIC REGRESSION

The logistic regression model is used when the dependent variable is categorical. A categorical variable is one whose numerical values serve only as labels distinguishing different categories. When a categorical variable has only two mutually exclusive outcomes, the *binary* logistic regression model is used. The logistic regression model had its origins in the biological sciences of the early twentieth century (Berkson 1944) but has subsequently found wide applicability in many areas of social science. The logistic regression model can be used for all data types but is most commonly used for cross-sectional data.

There are three different ways to derive or view the logistic regression model. In the first approach, one assumes that there is an unobserved or latent variable related to the observed outcome. For example, an individual's decision to enter the labor force is made by comparing his or her unobserved reservation wage to the market wage. Only if the market wage exceeds the reservation wage does the individual enter the labor force. Secondly, the model can be viewed as a probability model for the dependent variable. Thirdly, the model can be derived from random utility theory or discrete choice model formulation (see McFadden 1974).

BINARY CASE

In the binary case, some event Y either occurs ($Y = 1$) or not ($Y = 0$). The linear probability regression model (LPM) is given by:

$$Y = X\beta + \epsilon \quad (1)$$

where $\beta X = \beta_0 + \beta_1 * X_1 + \beta_2 * X_2 + \ldots + \beta_k * X_k$, and ε is the random error term.

The set of independent variables X affecting the event Y can be either continuous or categorical. The LPM model is problematic. First, the dependent variable Y is not constrained to lie between 0 and 1, and thus may produce nonsense probabilities. Also, the linear assumption holds that for every unit increase in X, the probability of Y occurring increases by the same amount. In many applications this assumption is not tenable. For example, the effect of an additional child on the probability of a female entering the labor force is assumed to be constant. It makes more sense to assume decreasing marginal effects of the number of children on the probability of a female entering the labor force. Also, the effect of changes in a specific X on the probability of Y does not depend on the other independent variables. In most applications this is also an unrealistic assumption. In the example above, the effect of an additional child on the probability of a female entering the labor force is assumed to be independent of, say, her husband's income.

The logistic regression model was formulated to address these issues and can be written as:

$$\text{Ln}\,(P/1 - P) = X\beta + \epsilon \quad (2)$$

where P = Probability ($Y = 1$).

The dependent variable is the log of the odds ratio of the event Y occurring or the logit of Y. Since the probability is between 0 and 1, the odds ratio goes from 0 to ∞ and the logit (an increasing function of P) goes from $-\infty$ to $+\infty$. Thus, the dependent variable in the logistic model is not constrained. The logistic model uses the cumulative logistic probability function to constrain the probability P to be between 0 and 1. In theory, any probability distribution can be used, however the most popular choices include the normal, uniform, and the logistic distributions. The uniform distribution gives rise to the linear probability model, while the normal distribution gives rise to the probit model. In most binary applications, the logit and the probit models are very similar. Historically, for ease of computation, mathematical tractability, and ease of interpretability, the logistic model was the preferred choice. Solving for P in the logistic model, one obtains:

$$P = 1/(1 + \exp\{-X\beta\}). \quad (3)$$

The probability P is now nonlinear in X. The effect of changes in X on the probability P are the smallest at the extreme points of the variable X or when P is close to 0 or 1, which makes sense in most applications. In addition, the effect of a unit change in a specific X on P now depends on all of the independent variables X. The appropriate estimation method for the logistic model is the maximum likelihood estimation (MLE) method, since only Y and not P is observed. The MLE estimates are consistent and asymptotically normal and efficient. In addition, the standard likelihood ratio and Wald tests on the coefficients can be used. Since this is a nonlinear model, the marginal effect of X on Y can be estimated using either the point of means of the variables or by averaging the marginal effect over all of the sample observations. The standard measures of goodness of fit are overly pessimistic in this model, and other measures that are used include the *count R-squared statistic*, which gives the average correct predictions of the model over the two outcomes of Y, or the *pseudo R-squared statistic*, which is the likelihood ratio statistic comparing the general model with the restricted model where all of the slope parameters ($\beta_1 = \beta_2 = \ldots. \beta_k = 0$) are zero.

EXTENSIONS TO POLYCHOTOMOUS AND MULTIVARIABLE SITUATIONS

There are several approaches to modeling the polychotomous (more than two categories) case, including the *multinomial logistic model*. Similarly, the *multivariate logistic model* may be used in the modeling of two or more choice variables. Other relevant distinctions are made among ordered, unordered, and sequential choice variables. An individual choosing among no work, part-time work, or full-time work is facing an *ordered variable*. The choice of mode of daily transportation by car, bus, train, or bicycle is an example of an *unordered variable*. The decision of a high school graduate to attend college or not and then, if college is chosen, to decide on a major program is an example of a *sequential choice variable*.

A problematic feature of the multinomial logistic model is the property of independence from *irrelevant alternatives* (IIA). The IIA property states that the choice between any two alternatives is made independent of the remaining alternatives. In situations where there are close substitutes in the set of alternatives, this property is unlikely to hold true. In the mode of transportation example, adding a blue bus to the choice set affects all of the probabilities assigned to each category. Thus, by adding enough buses of different colors, one can make the probability of driving a car arbitrarily small. One can formally test for IIA in the multinomial logistic model or use other models, such as the *multinomial probit model*, which does not have this property. Unlike the dichotomous single variable situation, there are now major differences between the logistic and probit models and many more types of models to choose from.

SEE ALSO *Maximum Likelihood Regression; Probabilistic Regression; Probability Distributions; Regression; Specification Tests*

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William Veloce

LOGIT REGRESSION

SEE *Logistic Regression.*

LOG-LINEAR MODELS

Within the realm of regression modeling, the term *log-linear* is used in two distinct ways. In the first case, it refers to nonlinear model specifications that—following a logarithmic transformation—become linear and can be estimated using tools available for the classical linear regression model. Most importantly, they can be estimated using ordinary least squares when assuming that the error terms are independent and normally distributed with mean 0 and equal variance σ^2. The multiplicative or double-log model and the exponential or semi-log model are two such nonlinear specifications. The multiplicative model takes on the form

$$y_i = \beta_0 \prod_{j=1}^{m} x_{ij}^{\beta_j} \exp(\varepsilon_i), \qquad (1)$$

or, in its log-transformed equivalent,

$$\ln y_i = \ln \beta_0 + \sum_{j=1}^{m} \beta_j \ln x_{ij} + \varepsilon_i, \text{ with } \varepsilon_i \text{ i.i.d. } N(0,\sigma^2),$$

where $\ln y_i$ is the dependent variable for observation i, $\ln x_{ij}$ is the j-th covariate or predictor variable, $\beta_0,\ldots,\beta_m$ are parameters to be estimated and ε_i are the error terms. The multiplicative model implies that a 1 percent change in x (not $\ln x$) yields a β percent change in y. It is frequently used to model large-scale traffic flows and migration flows. A well-known application in economics is the Cobb-Douglas production function that links output to capital and labor in a double-log specification, and where the parameters are the associated elasticities. The exponential or semi-log model takes on the form

$$y_i = \beta_0 \exp\left(\sum_{j=1}^{m} \beta_j x_{ij} + \varepsilon_i\right),$$

or, equivalently,

$$\ln y_i = \ln \beta_0 + \sum_{j=1}^{m} \beta_j x_{ij} + \varepsilon_i, \text{ with } \varepsilon_i \text{ i.i.d. } N(0, \sigma^2).$$

The exponential specification is most well-known for modeling unlimited and rapid population growth over time, where the dependent variable y represents the population, and time is the only covariate. The parameter β associated with time is the population growth rate, and a one-unit increase in time is expected to change the population by 100β percent.

In the second case, the term *log-linear model* is used to refer to a particular class of generalized linear models (GLM), the so-called "Poisson models." GLMs share a common mathematical structure in which the expected value of the dependent variable is functionally linked to a linear predictor. Unlike the multiplicative and exponential model, the Poisson regression model cannot be transformed into a classical linear regression model for which the link function is the identity function. Instead, the dependent variable is a count variable with Poisson-distributed non-negative integers as possible outcomes, and the link function connecting the expected value of Y with the linear predictor is the natural logarithm. For a Poisson-distributed random variable, the probability of observing k occurrences is

$$P(Y = k) = (\lambda^k e^{-k})/k!$$

where $\lambda = E(Y)$ is the expected number of occurrences. A Poisson model stipulates a systematic relationship between the expected value and the predictor variables such that

$$\lambda = E(Y_i) = \exp(\beta_0 + \sum_{j=1}^{m} \beta_j x_{ij})$$

or, equivalently,

$$\ln \lambda_i = \ln E(Y_i) = \beta_0 + \sum_{j=1}^{m} \beta_j x_{ij}$$

for observations $i = 1, 2, \ldots, n$.

The parameters β_j are estimated iteratively from the maximum-likelihood expression, typically using the Newton-Raphson estimation procedure. Today, most statistical software programs include estimation routines for Poisson regression models. Several measures, including the most frequently used χ^2-distributed log-likelihood ratio, provide an assessment of the goodness-of-fit of the estimated model to the observed data. The estimates of the parameters can be tested for significance using a t-distribution. A broad range of phenomena are suitable to be modeled in a Poisson regression setting. Characteristic of such phenomena is the comparatively low chance of occurrence per fixed unit of time (or space). This applies to, for example, counts of the number of automobile fatalities per month, the number of disease incidents per week, the number of species found in an ecosystem, and the frequency of severe weather events per year. The oldest and probably most cited application is the study by Ladislaus Josephovich von Bortkiewicz (1868–1931) in which he analyzed the probability of a soldier being killed through the kick of a horse. In his now-famous book on the laws of small numbers, von Bortkiewicz showed that rare events follow a Poisson distribution. The book appeared sixty-one years after the French mathematician Siméon Denis Poisson (1781–1840) had published his famous treaty on the limiting distribution—which is now rightfully named the "Poisson distribution"—of the binomial distribution when the probability of occurrence is small and the number of trials is large.

Whereas the origins of regression models go back to the German mathematician and physicist Johann Carl Friedrich Gauss (1777–1855) and the French mathematician Adrien-Marie Legendre (1752–1833), extensions

from the classical model to GLMs were made primarily over the last forty years. Credit goes to the seminal 1972 article by the statisticians John Ashworth Nelder and Robert William MacLagan Wedderburn. Nelder's 1983 book—coauthored with Peter McCullagh—still serves as the authoritative reference on GLMs. Recent refinements of Poisson models allow for relaxing the equidispersion assumption (i.e., for a Poisson-distributed random variable the expected value equals the variance). Advances also include mixed Poisson models in which, for instance, normally distributed random effects are added, or an abundance of zero-outcomes is accounted for in a so-called zero-inflated Poisson model. Although these advances make the log-linear regression model more flexible and suitable for a wider range of phenomena, their applicability needs to be thoroughly scrutinized, especially in situations where the linearity may be inappropriate, where the dispersion changes over time (or space), or where the observations are not independent.

SEE ALSO *Linear Regression; Regression*

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Brigitte Waldorf

LOMBARD STREET (BAGEHOT)

In the second half of the nineteenth century, world financial activity was centered in London. Within the city, the core of the financial district was Lombard Street, named after the bankers and financiers from northern Italy who centuries before had established their businesses there. In 1873, Walter Bagehot, editor of *The Economist* magazine, published a book that explained the workings of the London financial market. He titled it *Lombard Street: A Description of the Money Market.*

Lombard Street quickly became the main resource for understanding the workings of the London financial industry, replacing Henry Thornton's *Enquiry into the Nature and Effects of the Paper Credit of Great Britain,* published seven decades earlier in 1802. In *Lombard Street,* Bagehot briefly surveyed the origins of the London market and the reasons for its existence before undertaking a detailed description of the functions of a host of financial market participants, both public and private.

Lombard Street examines both the technical workings of the market and the government's policy actions within the market, as determined by the chancellor of the Exchequer and the directors of the Bank of England. It describes the activities of joint-stock banks, private banks, and bill brokers, all of which was of great interest to large numbers of contemporary readers. But the signal contribution of *Lombard Street* is Bagehot's discussion of how the Bank of England should behave toward other banks, especially when the money market was under stress.

The Bank Charter Act of 1844 had separated the Bank of England into an Issue Department, which issued bank notes backed by gold reserves, and a Banking Department, which was free to behave like an ordinary commercial bank. Critics of the Bank Act, including Bagehot's father-in-law James Wilson, founder of *The Economist*, argued throughout the 1850s and 1860s that the Bank's support of the money market during commercial crises was crucial and that the Bank of England should hold larger reserves of gold to meet the increased demand for gold during such periods. However, none of the critics developed a well-rounded case for the Bank to act as a central bank before Bagehot wrote.

Bagehot recognized that, though the Bank of England had no legal obligation to act as the nation's central bank, it in fact had done so since before 1800. Because the Bank kept the gold reserve for the entire economy, it had no choice but to act as a central bank. This meant that the Bank of England had to meet the banking system's liquidity needs during crises and that the Bank should act as lender of last resort when the increased demand to hold gold by individuals threatened the ability of solvent banks to meet their commitments.

Although the principle that the Bank of England would act as the banking system's lender of last resort was widely accepted after 1873, the British government implemented no legislation requiring the Bank to do so. Rather, the government assumed that the Bank would conduct its business appropriately. The Bank in fact did not hold larger gold reserves after 1873; in relation to the size of the banking system, the Bank's reserve shrank. The absence of any major crises over the next four decades prevents historians from knowing how the Bank of England would have behaved during a crisis.

SEE ALSO *Economic Crises; Finance; Financial Instability Hypothesis; Financial Markets; Fleet Street; Lender of Last Resort; Wall Street*

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LONELINESS

Social scientists agree that loneliness stems from the subjective experience of deficiencies in social relationships and that these deficiencies are unpleasant, aversive, and exceptionally common. Objectively deficient social relationships (i.e., social isolation) do not necessarily correspond with feeling lonely. Thus, it is common to appear alone but not feel lonely, and to feel lonely within a seemingly rich social relationship network. This potential paradox highlights an important distinction between quantitative and qualitative aspects of social relationships.

MODELS AND MEASUREMENT OF LONELINESS

Theoretical perspectives on loneliness differ concerning the nature of loneliness, whether loneliness stems from internal or situational causes, and where such causes occur developmentally. Psychoanalysts view loneliness as a pathological result of internal factors rooted in childhood. Sociologists view loneliness as a normative event stemming from societal influences that occur throughout development. From cognitive perspectives, loneliness occurs when people perceive discrepancies between their desired and actual patterns of relationships, with desired patterns stemming from previous relationships and comparisons of one's own relationships to those of similar others (i.e., social comparison). Although different perspectives contribute uniquely to our understanding, the cognitive perspective serves as the dominant model for studying loneliness.

The measurement of loneliness depends inherently on theoretical conceptualizations of the construct. Unidimensional views of loneliness posit a common core of experience that varies in intensity regardless of the antecedents or causes of feeling lonely. Many unidimensional scales exist, but the UCLA Loneliness Scale is the most commonly used. This measure assesses loneliness via self-report without using the terms *lonely* or *loneliness*, thereby reducing social desirability influences. Extensive psychometric work indicates that it is a reliable and valid measure of loneliness.

Multidimensional measures involve assessments of perceived quality and quantity of social interaction across multiple domains such as romantic, friendship, family, and community relationships. Multidimensional views of loneliness have become more common in the research literature, spurring intensive psychometric work on these types of scales. Two multidimensional views of loneliness have received considerable research attention. The first breaks down loneliness into distinct components that reflect stable enduring traits or transitory states tied strongly to situation/context. Studies examining these components using specialized scales typically yield test-retest correlations that are higher (indicating greater stability) for measures assessing trait loneliness than for measures assessing state loneliness, suggesting that this distinction is valid. A second multidimensional view involves a distinction between social loneliness that results from a lack of relationships that provide a sense of belonging (e.g., friendships) and emotional loneliness that occurs when people lack relationships that foster deep connection or feelings of attachment (e.g., romantic relationships). Many scales designed to measure social and emotional loneliness exist, and research findings suggest that this distinction is also a valid one.

PERSONALITY, DEVELOPMENT, AND CONTEXT

Studies examining associations between personality characteristics and loneliness consistently show that extroverted people report less loneliness, whereas highly neurotic people often feel lonely. Low self-esteem, shyness, and pessimism also correspond to higher levels of loneliness. It remains unclear whether these personality traits lead to loneliness by limiting social contact and preventing the formation and maintenance of quality relationships, whether feeling lonely biases self-assessment of personality, or whether personality predisposes one to develop few relationships, and the subsequent lack of relationships reciprocally influences one's personality. There remains a need for continued research that delineates causal paths among personality characteristics and loneliness.

Most children understand that being alone does not necessarily mean one is lonely, and that people can feel lonely when they do not appear to be alone. Adolescents experience more loneliness than do other individuals due to necessary restructuring of social groups to include friendships and other social relationships outside of the family during transitions to elementary, junior high, and high school. Family environments also influence the development of relationships in that children surrounded

by parental conflict exhibit social anxiety and avoidance that contribute to loneliness.

Young adults face many contextual events, such as moving out of the home or going away to college, that require the development of new social ties. During these transitions, interpersonal difficulties may hinder the development of new social relationships, leaving one feeling lonely. Shy people who maintained a few high-quality relationships during high school may suddenly feel very lonely away at college when their shyness interferes with opportunities to make new friends. Although these types of life transitions often foster feelings of temporary loneliness that subside over time for most people, some individuals remain chronically lonely, suggesting that interpersonal difficulties or personality characteristics contribute to feelings of loneliness across the life span.

During adulthood, contextual transitions including college graduations and the establishment of careers present challenges to existing social networks and the need to form new relationships. New obstacles include individualistic or competitive work environments that make the formation and maintenance of satisfying relationships difficult. As adults, people place less emphasis on friendships than on intimate or romantic relationships. Although intimate relationships provide protection from loneliness, relationship quality is vital as adults in strained or unsatisfying relationships often report feeling lonely.

Elderly individuals face a number of challenges to maintaining their social networks, including the loss of relationships with coworkers through retirement, reduced contact with adult children, and the deaths of spouses or friends. Decreased functional mobility, cognitive impairment, and physical illness strain existing relationships and impede the establishment of new relationships. Despite these challenges, the elderly are less lonely on average than are college students, and increases in loneliness occur only among individuals eighty years and older. Married men and women report less loneliness than do elderly widows and widowers and men and women who are divorced or never married. Spouses in elderly couples provide functional support in addition to companionship and emotional connection, suggesting multiple ways in which marriage serves to protect against feelings of loneliness. For those without spouses, friendships with similar others provide more protection against loneliness than do relationships with adult children and neighbors.

LONELINESS, HEALTH, AND COPING

Consistent links between loneliness, life satisfaction, and anxiety exist, and loneliness is associated with depression independently of age, gender, physical health, cognitive impairment, network size, and social activity involvement. In addition, loneliness influences well-being and feelings of hopelessness independently of associations with social isolation and perceived social support. Loneliness also relates to physical health, as evidenced by its consistent associations with alcohol abuse, admission of the elderly to nursing homes, suicide, and mortality.

Although loneliness uniquely influences physical health, potential causes for these connections have received varying degrees of support. One view posits that loneliness affects health through maladaptive behaviors including smoking, drinking, poor exercise habits, and substandard dietary practices; however, lonely and nonlonely people rarely differ in the frequency of such behaviors. Alternative models argue that loneliness influences physical reactions to stress including cardiovascular activation, cortisol production, immunocompetence deficiencies, and sleep disruptions that link directly to development of cardiovascular disease, susceptibility to disease and infection, and diminished restorative processes that maintain overall resilience. Emerging findings provide initial support for these links, suggesting promising avenues for future research.

Strategies for coping with loneliness include changing actual relationships, expectations about relationships, or reducing the importance of relationships. Attempts to change one's social relationships are active coping strategies wherein feelings of loneliness motivate people to form new relationship ties. Changing expectations about social relationships involves cognitive restructuring of how people view the social relationships of others. Attempts to reduce the importance of social relationships or engage in diversionary activities are passive coping strategies that often do little to alleviate loneliness.

Researchers have begun to explore the success of intervention programs in reducing feelings of loneliness, and promising findings have emerged. Social skills training for children and young adults provide the tools needed to effectively initiate, develop, and maintain satisfying social relationships. College orientation, mentoring, and buddy-pairing programs provide social contact with similar others in hopes of fostering relationship development during a transitional period when loneliness is quite common. Finally, interventions that effectively reduce loneliness among older adults target specific groups (e.g., divorcées or widows) and provide social contact opportunities with similar others as well as information that is useful for maintaining established social relationships.

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LONELY CROWD, THE

The Lonely Crowd, published in 1950, was written by sociologist David Riesman (1909–2002) in collaboration with Reuel Denney (1913–1995) and Nathan Glazer (b. 1923). Initially expected to sell only several thousand copies, this study of the links between social structure and national character has sold over 1.4 million copies from its initial publication, making it the best-selling sociology book in the United States.

Writing in the post–World War II (1939–1945) period, Riesman sought to understand what kinds of character structures were being encouraged by the social institutions of modern society, including capitalist corporations, political institutions, and the mass media. He proposed three different character types. The *tradition-directed type* was the product of unchanging societies in which social patterns were rooted in the past. The traditional character was rigid, insular, and not open to innovation. The development of industrial society, however, required a new character type. The nineteenth century saw the rise of what Riesman called the *inner-directed type*. This character received its essential structure in its youth, through strong family and community socialization. Unlike the traditional type, the inner-directed person could change and develop, but only following the direction of his or her *inner gyroscope*, whose essential pattern had been determined in youth.

Riesman argued that in the mid-twentieth century the *inner-directed type* was being replaced by a new character type. Modern organizations demanded people who took their cues from what other people expected of them. These *other-directed* individuals used their *social radar*, rather than an inner gyroscope, to guide their values and actions. They preferred to be loved rather than esteemed. Their character was not shaped primarily by family or religion, but rather was strongly influenced by peer culture and the mass media.

When it was first published, *The Lonely Crowd* received many critical reviews, but nonetheless resonated widely in American society. Readers could appreciate the social changes within twentieth-century American society; they experienced firsthand the growing power of corporations and the greater presence of the media, including television, which was then in its infancy. They could—or thought they could—identify inner- and other-directed people among their relatives and friends, and detect differences between generations. Riesman himself, of course, proposed these terms as *ideal types*, with most people in modern society combining elements of the different character types.

The popularity of the book was also due to the clear, declarative writing style that artfully mixed interview data with evidence culled from magazines, movies, and even children's books. *The Lonely Crowd* was a jargon-free, wide-ranging analysis of the sort that sociology has largely since abandoned. To some extent, it is a period piece. Many of its assertions have since proved wrong, most notably a demographic hypothesis that tied the rate of population growth to national character type, a hypothesis that Riesman himself abandoned in the 1969 edition. But other hypotheses about the tenuous balance between the social conformity demanded by society and desires for autonomy among individuals continue to demand attention, even as the paradoxical phrase, "the lonely crowd," has entered into public discourse as an image of anomie within affluent society.

SEE ALSO *Alienation; Conformity; Glazer, Nathan; Intersubjectivity; Organization Man*

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LONGEVITY

SEE *Morbidity and Mortality.*

LONGITUDINAL DATA

SEE *Data, Longitudinal.*

LONGITUDINAL RESEARCH

SEE *Research, Longitudinal.*

LONGITUDINAL SURVEYS

SEE *Panel Studies.*

LONG MARCH, THE

SEE *Chinese Revolution.*

LONG PERIOD ANALYSIS

The forces that operate on economic processes are manifold and complex. In the eighteenth century philosophers of the Scottish and French Enlightenments, influenced in part by developments in the natural sciences (notably Newtonian mechanics) sought to identify the mechanisms that regulate social life. With the displacement of feudalism by a nascent market system as the dominant mode of material provisioning, an obvious question arose concerning whether the interactions of countless self-interested economic actors could generate benign social outcomes. Thomas Hobbes, in *Leviathan* (1651), had argued that a powerful state was necessary to contain the destructive potential of human nature. Mercantilist policies were partly grounded in the view that the market is an unreliable guarantor of the commonwealth's prosperity. In *The Fable of the Bees* (1724) Bernard Mandeville suggested that sentiments and behaviors commonly regarded as vices—envy, cupidity, gluttony, lust, pride—underpinned national economic well-being by stimulating demand for services and for the products of industry. Mandeville, who delighted in poking respectable opinion in the eye, had put his finger on a distinctive feature of capitalism: that markets to a significant degree generate order out of the self-interested behavior of atomistic agents. But he provided no scientific account of how markets coordinate the decisions of individual economic actors.

Market outcomes are not always benign. But capitalism is not chaotic. Somehow commodities get produced using sophisticated technologies that require the cooperation of many workers performing specialized tasks at different locations. The commodities are produced not in random quantities but in amounts that roughly match the demand for them. Resources get channeled from declining industries into expanding sectors. The process can be messy, and occasionally it falters. Yet the system manages to reproduce itself, to grow and to undergo structural and technological transformation. It is able to do all this without the intervention of a conscious coordinating hand.

ADAM SMITH'S FOUNDATION

Adam Smith is credited with providing the first systematic account of how markets generate order. His argument owes a good deal to Richard Cantillon's *Essai sur la nature du commerce en général* (1755) and to Anne Robert Jacques Turgot's *Réflexions sur la formation et la distribution des richesses* (1769–1770). Smith's argument is set out in book 1, chap. 7 ("Of the Natural and Market Price of Commodities") of the *Wealth of Nations* (1776). The chapter outlines a method of analysis that grounded theoretical economics until the middle of the twentieth century. That method, long period analysis, starts from the premise that in a market economy competition manifests itself as a tendency for profit rates to equalize across all lines of production. Smith drew a distinction between the natural price of a good and the market price. The natural price, which later generations of economists called the long period equilibrium price, is the price that would, if it obtained, be just sufficient to cover the commodity's cost of production, where cost is understood to include a normal rate of return for the owners of the capital invested in the enterprise. The market price of a good is the price that is actually observed. Smith argued that the natural price is a center of gravitation toward which market prices are pushed by the dominant and persistent forces operating in a market economy. Accidental and temporary circumstances may cause market prices to rise above or fall below the natural price, but "they are constantly tending towards it" (Smith 1776, book 1, chap. 7, p. 65).

The mechanism that pushes market prices toward their long period equilibrium levels is what coordinates the self-interested activity of the economy's participants. We may reasonably suppose that the owners of capital will prefer to invest it in enterprises that earn high rates of return rather than in enterprises that earn low rates of return. That is why, from the economist's point of view, a normal return on investment is an element of cost: The market prices of a good must, on average, be sufficient not only to cover labor costs, the costs of raw materials, and the cost of depreciation of physical equipment; if the price

is not high enough to give the owners of capital the same rate of return they could obtain in other lines of production, the owners will eventually transfer their capital to those other sectors. As capital flows into the high return sectors, the output of those sectors increases, and as the supply of those commodities becomes more abundant, their *market* prices fall, lowering the rate of profit in those sectors. In the sectors that are experiencing an outflow of capital, outputs decline, causing market prices and hence rates of return to rise. The overall tendency is for rates of return to converge, provided there are no impediments to the movement of capital, and for prices to move toward their natural levels, which are consistent with equalization of profit rates. (If there are barriers to the movement of capital, such as patents or monopolistic control of particular necessary resources, the mechanism nevertheless operates, but the long period position will then be characterized by profit rate differentials.) The flow of capital in pursuit of its highest return brings the structural composition of production capacity into line with the composition of demand. It is also the principal mechanism by which economic systems absorb new technologies and adjust to major changes in the regulatory or institutional framework or in the availability of natural resources. It is what Smith meant by the "invisible hand" (1776, book 4, chap. 2, p. 477).

CLASSICAL ECONOMICS AND NEOCLASSICAL THEORY

The adjustments just described take place over long stretches of time, as capital goods wear out and are replaced by new and usually different ones; hence the label "long period method." This method proved immensely useful for analyzing the determination of relative prices and the closely connected question of what determines the distribution of income among social classes. But the method makes no presumption about how the variables of the economy are determined. Historically two broad approaches to the explanation of prices and distribution may be identified—the surplus approach of Karl Marx and the classical political economists, in particular Smith and David Ricardo, and neoclassical supply and demand theory. The theories differ with respect to the data they treat as parametric in explaining prices. The classical economists and Marx took the social product, the real wage, and the technology of production as givens in their attempts to explain relative prices and the rate of profit. Perhaps the feature that distinguishes the approach most starkly from modern economics is its conception of the real wage as a socially and institutionally conditioned variable. (A later variation of the theory, associated with Piero Sraffa, treats the profit rate as the parametric distribution variable.) The marginalist or neoclassical theory that emerged in the last decades of the nineteenth century explains prices and incomes in terms of the interaction of price-elastic demand and supply functions derived from a somewhat different set of data: the preferences of economic agents, the economy's endowment of productive resources and the distribution of that endowment among the members of society, and the technology of production. The two frameworks arrive at different explanations of prices and distribution, but until the middle of the twentieth century they utilized the same long period method, in which market forces are understood to move the economy toward a fully adjusted position characterized by a uniform rate or profit across sectors.

In the twentieth century, however, mainstream neoclassical economics underwent a shift in method, in which long period analysis gradually gave way to models of temporary or intertemporal general equilibrium. These models drop the requirement that equilibrium be characterized by a uniform profit rate and instead define equilibrium entirely in terms of market clearing—the absence of excess demand. (Intertemporal equilibrium models assume the existence of complete futures markets—markets existing in the present, which reflect agents' beliefs about the probability distributions of all future contingent states of nature; in temporary equilibrium models, equilibrium occurs when agents' short-term expectations about prices and quantities are fulfilled.) The emergence and then ascendance of these approaches appear to be related to two considerations. First, they may reflect an attempt to avoid capital theoretic problems that are evident in long period versions of the neoclassical theory (the same problems may well be present in intertemporal and temporary equilibrium models, but in such models they are less transparent). Second, these models were in part motivated by a desire to move beyond the static analysis of the long period approach and to depict the patterns of change that every actual economy undergoes over time. But the models are themselves limited in their ability to depict actual economic processes: Complete futures markets do not exist, and short-period equilibria can explain the temporal sequence of prices and outputs only if the equilibria are *actually established* by market forces. A distinct advantage of the long period method is that the equilibrium values established by the theory need not be achieved in reality: The explanatory value of long period models lies in the supposition that the equilibrium positions established by such models are centers of gravitation for the actually observed values of the variable, which may deviate from the values predicted by the theory for any number of accidental or random causes.

The long period method has been the target of criticism as well. Among institutionalist economists there is a long tradition of skepticism toward equilibrium analysis. More troublesome perhaps is the fact that the stability of

long period positions is notoriously difficult to establish in both the surplus approach and neoclassical applications of the method. The stability of an equilibrium position refers to the position's status as a center of gravitation: Under what is it reasonable to suppose that an accidental disturbance of the system will set in motion a set of adjustments that move the economy back to toward the long period position? If the conditions necessary to ensure a return to the equilibrium are excessively strict, we cannot take it for granted that the long period position is a center of gravitation, and in that case the method's claims to capture real-world processes are weakened.

SEE ALSO *Cantillon, Richard; Capitalism; Economics, Classical; Economics, Neo-Ricardian; Economics, Post Keynesian; Equilibrium in Economics; Keynes, John Maynard; Long Run; Markets; Marx, Karl; Prices; Ricardo, David; Smith, Adam; Surplus; Turgot, Jacques*

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LONG PERIOD PRICES

SEE *Long Period Analysis.*

LONG RUN

The term *long run* entered economic analysis as economists started considering different time horizons in their analyses. All the consequences of economic events may not occur immediately, nor may they all happen at the same time. The concepts of long and short run were thus introduced in order to cope with these problems. In a long-run context, all consequences are assumed to be finished, whereas in the short run only some effects are taken into account.

CLASSICAL AND NEOCLASSICAL PERSPECTIVES

The term was explicitly used for the first time in the works of the Cambridge economist Alfred Marshall (1842–1924), who detailed a concept of long-run equilibrium that became broadly accepted and used in the scientific community. Implicitly, the classical economists of the eighteenth century, Adam Smith (1723–1790) and David Ricardo (1772–1823), already used the concept of a long-run equilibrium, as did Karl Marx (1818–1883) after them. The former focused attention on so-called "normal" or long-period positions of the economy in conditions of free competition and the corresponding system of "natural values" and a uniform rate of profits. These natural values guarantee the payment of wages, profits, and rents so that no extra profits occur. In contrast, "market values" are the observed prices that are influenced by all sorts of factors, both systematic and accidental, persistent and temporary. Market values do not necessarily converge to their natural values but are considered to gravitate around their natural levels. Marx had a similar view on the long-run position of the economy. The classical economists determined the rate of profits and relative prices in terms of given levels of output, given technical alternatives, and a given wage rate (or share of wages).

The neoclassical economists of the nineteenth century and early twentieth century used a related methodology. Their theories attempted to determine prices, income distribution, and quantities simultaneously in terms of given endowments, technical alternatives, and preferences. Their works led to the elaboration of general equilibrium analysis, which, in contrast to partial equilibrium analysis, focuses on the economic system as a whole. Among the neoclassical economists, Marshall in *Principles of Economics* (1890) made a distinction between four different types of equilibria: temporary, short run, long run, and secular equilibrium. In temporary or very short run equilibrium, supply is fixed, and the price is solely determined by demand. In the short run, supply itself is not fixed, but the production is constrained by a given plant and equipment. As a consequence, productive capacity is given in a short run. In the long run, supply can adjust perfectly to demand via an adjustment of productive capacity within the prevailing production technology. Finally, in the secular or very long run, technical knowledge may change. Although neoclassical authors developed the tools for handling short-run problems, the long-run analysis remained dominant.

EXTENSIONS AND CRITICISM

John Maynard Keynes (1883–1946) called for focused attention on short-run problems with his witticism in *A Tract on Monetary Reform*: "*In the long run we are all dead*"

(Keynes 1923, p. 65). An investigation of the impact of effective demand on output, given productive capacities, is at the center of Keynes's magnum opus *The General Theory of Employment, Interest, and Money* (1936). His conclusion is that the demand side of the economy is of crucial importance not only in the short run but in the long run as well. This argument is studied in terms of income and employment multipliers, which originally were suggested by the British economist Richard Kahn (1905–1989), who augmented Marshall's distinction of long and short run with a classification as regards cost. In the short period, firms face fixed costs, and windfall profits or losses might occur. By contrast, costs are entirely variable in the long run because all factors of production become flexible, at least in principle. Companies can freely enter and exit industries, which leads to a uniform profit rate throughout the economy. Contrary to previous authors, the U.S. economist Milton Friedman (1912–2006) defined the long period with regard to adaptive expectations. In numerous works he investigated the effects of monetary policies and discovered that they were moderate in the short run and practically nil in the long. He maintained that there is no long-term trade-off between inflation and unemployment because of the influence of expectations regarding inflation on the behavior of forward-looking agents. Exogenous shocks can only affect the economy in the short run, whereas they have no influence in the long run. In contrast to Keynes, Friedman stated that the long run is determined entirely by supply-side conditions and effective demand does not matter. An even more radical point of view, based on the theory of rational expectations, was established by the U.S. economist Robert Lucas (b. 1937). In his contributions to the theory of endogenous growth, he argued that the economy would converge to a balanced path, irrespective of short-run perturbations. This balanced path is considered to be a close approximation to any actual development, and thus the attention should focus on it.

The different types of long-run equilibria mentioned are also known as "stationary equilibria," "steady states," and "intertemporal equilibria." The relative importance of either long-run or short-run analysis has varied considerably over time. Whereas classical and neoclassical economists predominantly treated long-run problems, Keynes drew attention to the short run. In correspondence to the different problems at hand, the methods applied varied vastly, from micro to macro and from static to dynamic. A convincing unification of the long- and short-run points of view is not yet in sight. The time horizon and therefore the distinction between short and long run seem to remain crucial in economics.

SEE ALSO *Exchange Value; Expectations; Friedman, Milton; Kahn, Richard F.; Keynes, John Maynard; Long Period Analysis; Lucas, Robert E., Jr.; Marshall, Alfred; Marx, Karl; Ricardo, David; Short Period; Short Run; Smith, Adam*

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LONG RUN PRICES

SEE *Long Period Analysis.*

LONG-TERM MEMORY

SEE *Mood Congruent Recall.*

LONG WAVES

Since the beginning of the twentieth century, observers of the world economy have been analyzing long-term regularities associated with the behavior of the leading economies. Statistical analysis of more than a century of price behaviors and output series in the United States and Britain led Nikolai Kondratieff (1892–1938), a Russian Marxist economist, to conclude in the 1920s that boom-and-bust long-wave cycles exist and that their duration is between fifty and sixty years. The study of key growth indicators of industrial and world output between 1826 and 1968 by Ernest Mandel (1995) found that the periods 1826 to 1847, 1848 to 1873, 1874 to 1893, 1894 to 1913, 1914 to 1939, and 1940 to 1967 were marked with striking fluctuation in the average rates of growth, with ups and downs between successive long waves ranging from 50 to 100 percent. His analysis provided strong evidence of long waves in capitalist development.

In the 1930s the economist Joseph Schumpeter (1883–1950) endorsed the long-wave concept as a reasonable explanation of macroeconomic activity, and he named the pattern, after Kondratieff, *K-waves*. Schumpeter's own work focused on the clustering of innovations during the phase of economic depression (the *Winter phase*). He used the terms "swarms of technological progress" and "gales of creative destruction" to describe this phase. Innovations are hypothesized to cluster during the Winter phase because only then do firms resort to the highly risky strategy of introducing basic, new-to-the-world innovations. This phase is thought to be a key driver of new techno-economic paradigms or structural shifts in the economy. Societies' adjustments to the basic innovations take the form of S-shaped growth or learning life cycles and are accomplished in the latter three phases (Spring, Summer, and Autumn) of the long waves. Here, firms extract profit from the dominant technologies, rather than seeking new innovations.

Long waves are most often written about during periods of economic downturns and are viewed as a way out of an impending crisis. They receive considerably less press during times of prosperity because the long-wave theory would suggest the less popular hypothesis, namely, that the good times will not last.

ORIGIN

Long waves are not thought to be unique to the nineteenth and twentieth centuries. Some authors have traced them back in Europe over five hundred years, others have identified nineteen such waves dating back to printing and paper in 930, and others assert that they go back at least five thousand years. This entry, however, discusses only the last five such waves (between 1800 and 2025), which represent the industrialization of modern economies. Each appears to have a dominant technology driver, but technology is only one part of a much broader innovation system that is responsible for the long-wave phases. The transportation systems, communication modes, primary energy sources, manufacturing processes, corporate organizational structures, and public administration approaches appear to be unique to particular waves and provide the all-important context for the full depth and breadth of the technology to flourish for each long wave. Thus, long waves arise from the clustering of fundamental innovations that initiate technological revolution and that in turn create leading commercial and industrial sectors. (See Table 1.)

THEORY

According to Schumpeter, long waves are caused by the demand for solutions to new problems, and innovative firms supply these solutions. Each new wave has its own unique innovative character, its own identity, but it is composed of four common phases. The four phases, often described as seasons, are thought of as dramatic mood changes of the economy that can be anticipated by individuals and can influence their actions. As discussed previously, the Winter (depression) phase is characterized by a collapse of the price system, which forces the economy into a sharp period of retrenchment. A three-year collapse is followed by a fifteen-year deflationary work-out period where risky innovation takes place.

The Spring phase (the inflationary growth phase) requires approximately twenty-five years to complete and is characterized by wealth accumulation, new innovation, great upheaval and displacement, and significant social unrest. The exponential growth reaches its limit, inefficiencies build up in the system, and a Summer (stagflation, recession) phase is entered and lasts for twenty to

Long waves and critical drivers

Innovation domain	1st to 2nd wave 1800–1856	2nd to 3rd wave 1856–1916	3rd to 4th wave 1916–1970	4th to 5th wave 1970–2025
Key technology	Steam power	Steel, electricity	Oil	Information technology, microelectronics, biotechnology
Transportation modality	Railroads, steam engines	Automobiles	Aircraft	Spacecraft
Communication technology	Periodicals	Telegraph, telephone	Radio, television	Internet, World Wide Web
Global energy source	Wood	Coal	Oil	Natural gas
Process innovation	Factory	Scientific management, assembly line	Mass production, in-house research and development	Minimal inventory, flexible man
Corporate organization	Hierarchy	Division	Matrix	Network, virtual company
U.S. Public Administration	Jacksonian Populism	Merit-based Civil Service	New Deal	Deregulation
Wars	War of 1812	American Civil War	World War I, World War II	Vietnam War, Iraq War

SOURCE: Adapted from Devezas, Linstone, and Santos 2005.

Table 1

twenty-five years. The Autumn (deflationary growth, plateau) phase of seven to ten years follows with rapid rises in prices, selective industry growth, a strong feeling of affluence, and a general isolationist mood in the citizenry. Interest in long-wave theory waned in the 1940s, 1950s, and 1960s (and again in the 1990s) because predicting a downturn during boom times was not fashionable, but the theory resurged when a new group, known as neo-Shumpeterians, sought to explain the economic downturns of the 1960s, 1970s, and 1980s.

EMPIRICAL SUPPORT

Kondratieff was the first to use regression procedures to reveal long waves in economic time series data, and Jay Forrester's computer simulation of the macroeconomic process also reproduced long-wave patterns of roughly fifty years. While subsequent econometric research using time series data and equilibrium assumptions do not find unambiguous support for them, long-wave supporters argue that methodologies based on equilibrium assumptions are flawed because today's economy is structurally unstable and evolutionary in nature. They suggest long waves need to be measured by observations of physical events associated with the economy, like innovations, rather than traditional economic measures.

Robert Metz's study (2005) of over fifteen thousand innovations during the 1750–1991 period found innovation clusters peaking in 1840, 1890, 1935, and 1986, followed by an upswing in economic growth eighteen years later, thereby confirming the depression-trigger innovation hypothesis. At the beginning of a long-wave cycle, innovations usually center around one country and a few breakthrough technologies; however, the creation of a new techno-economic system, as shown in Table 1, requires sustained innovations in the related, complementary areas.

POLICY SIGNIFICANCE

If, as asserted above, long waves are a consequence of the inner dynamics of economic growth, then policy makers can put forth prescriptions during different phases of the economic cycle. For example, a government's policy would have its greatest impact on innovation during the Winter phase, for entrepreneurs need to be encouraged most then. During the Spring phase, governments have to keep a check on inflation to ensure that the economy does not overheat. During the Summer phase of stagflation or recession, the government can offer policies to stimulate the economy. The last prescriptive area is during the Autumn phase, when government policies should be most concerned about controlling inflation. Another interesting finding is that international political economists have studied the relationship between long waves and war and find that wars and revolutions are much more likely to occur during the economic-upswing phase.

LEGITIMATE CONCERNS

Some economists argue that long waves have less validity in a post–World War II (1939–1945) economy given the monetary and fiscal tools available to governments. They cite Federal Reserve Chairman Alan Greenspan's providing of massive liquidity after the dot-com bust of 2000 to prevent a Kondratieff Winter. Wave supporters counterargue that the resulting debt from this policy has become unsustainable and only temporarily postponed the pending Winter phase for a few years. As evidenced by the above arguments, the timing of each phase is critical to policymakers and economists. Unfortunately, long-wave theory lacks precision in this domain, particularly in the area of explaining the downswing at the end of the prosperity phase.

SEE ALSO *Business Cycles, Political; Business Cycles, Real; Business Cycles, Theories; Depression, Economic; Financial Instability Hypothesis; Lucas Critique; Panics; Recession; Say's Law; Shocks*

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LOOKING-GLASS EFFECT

The *looking-glass effect*, or the *looking-glass self*, may be defined as people's conceptualization of their own views of

self, based on how they perceive that others view them. The concept has provided a captivating theoretical springboard for social scientists from a broad variety of disciplines. Sociologists and psychologists have historically focused on this effect more than researchers in other fields, however, because of the effect's inherent focus on both society and the individual as critical shaping forces in the development of human identity.

The term *looking-glass effect* was coined by Charles Horton Cooley, a social psychologist, in his 1902 treatise entitled *Human Nature and the Social Order*. Cooley's assertion that people derive their attitudes about themselves based on how others perceive them drew on earlier works by William James and inspired the work of George Herbert Mead, founder of the school of thought known as *symbolic interactionism*.

Central to the existence of the looking-glass self is the presence of a social audience; to learn about themselves, people require others to provide self-relevant information. Gordon Gallup's work with chimpanzees highlighted the necessity of a history of social interaction to the existence of self-knowledge (Gallup 1977). In a series of investigations, Gallup and his colleagues demonstrated that chimpanzees that were reared in isolation from other chimpanzees responded to their reflections in a mirror in a very different fashion from their socially informed, nonisolated counterparts. Whereas nonisolates recognized themselves in a mirror and evidenced recognition of a researcher-induced change in their physical appearance, isolates never demonstrated knowledge that they were viewing a reflection of themselves in the mirror. Without a prior history of information about themselves gleaned from interactions with other chimpanzees, isolates were seemingly devoid of a concept of self.

Though Cooley's original notion of the looking-glass self implied that people imagine how others must view them and, as a result, develop self-attitudes based on these imagined evaluations by others, it did not detail whether or not these imagined evaluations were accurate. It assumed, rather, that people should be able effectively to learn about themselves from social feedback from others. Later work revealed, however, that people's self-evaluations may not be rooted in others' *actual* evaluations but in people's *beliefs* about how others evaluate them (Shrauger and Schoeneman 1979). So, in effect, people could misperceive others' attitudes about themselves and, correspondingly, report self-attitudes that did not align with others' real evaluations.

Findings that the looking-glass effect may not provide people with accurate self-evaluations challenged the informative utility of the effect but paved the way for future investigations concerning it. Much of this work has revealed that people's own feelings of self-worth, or self-esteem, play a role in how they think that others view them. People who have more positive self-evaluations tend to believe that others view them positively as well. Likewise, people who view themselves negatively are more likely to believe that others view them in the same negative light. As a result, a more nuanced definition of the looking-glass effect is people's evaluations of themselves based on their own self-attitudes and their perceptions, which are influenced by these self-attitudes, of how others view them (Tice and Wallace 2003).

SEE ALSO *James, William; Mead, George Herbert; Primates; Self-Concept; Social Influence; Social Isolation; Social Psychology*

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LORDE, AUDRE

SEE *Womanism.*

LOSS FUNCTIONS

The *loss function* (or *cost function*) is a crucial ingredient in all optimizing problems, such as statistical decision theory, policymaking, estimation, forecasting, learning, classification, financial investment, and so on. The discussion here will be limited to the use of loss functions in econometrics, particularly in time series forecasting.

When a forecast $f_{t,h}$ of a variable Y_{t+h} is made at time t for h periods ahead, the loss (or cost) will arise if a forecast turns out to be different from the actual value. The loss function of the forecast error $e_{t+h} = Y_{t+h} - f_{t,h}$ is denoted as $c(Y_{t+h}, f_{t,h})$. The loss function can depend on the time of prediction, and so it can be $c_{t+h}(Y_{t+h}, f_{t,h})$. If the loss function does not change with time and does not depend on the value of the variable Y_{t+h}, the loss can be

written simply as a function of the error only, $c_{t+h}(Y_{t+h}, f_{t,h}) = c(e_{t+h})$.

Clive Granger (1999) discusses the following required properties for a loss function: (1) $c(0) = 0$ (no error and no loss); (2) $\min_e c(e) = 0$, so that $c(e) \geq 0$; and (3) $c(e)$ is monotonically nondecreasing as e moves away from zero so that $c(e_1) \geq c(e_2)$ if $e_1 > e_2 > 0$ and if $e_1 < e_2 < 0$.

When $c_1(e)$, $c_2(e)$ are both loss functions, Granger (1999) shows that further examples of loss functions can be generated: $c(e) = ac_1(e) + bc_2(e)$, $a \geq 0$, $b \geq 0$ will be a loss function; $c(e) = c_1(e)^a c_2(e)^b$, $a > 0$, $b > 0$ will be a loss function; and $c(e) = 1(e > 0)c_1(e) + 1(e < 0)c_2(e)$ will be a loss function. If $h(\cdot)$ is a positive monotonic nondecreasing function with $h(0)$ finite, then $c(e) = h(c_1(e)) - h(0)$ is a loss function.

LOSS FUNCTIONS AND RISK

Granger (2002) notes that an expected loss (a risk measure) of financial return Y_{t+1} that has a conditional predictive distribution $F_t(y) \equiv Pr(Y_{t+1} \leq y | I_t)$ with $X_t \in I_t$ may be written as

$$\mathbb{E}c(e) = A_1 \int_0^\infty |y - f|^\theta dF_t(y) + A_2 \int_{-\infty}^0 |y - f|^\theta dF_t(y),$$

with A_1, A_2 both > 0 and some $\theta > 0$. Considering the symmetric case $A_1 = A_2$, one has a class of volatility measures $V_\theta = \mathbb{E}[|y - f|^\theta]$, which includes the variance with $\theta = 2$, and mean absolute deviation with $\theta = 1$.

Zhuanxin Ding, Clive Granger, and Robert Engle (1993) study the time series and distributional properties of these measures empirically and show that the absolute deviations are found to have some particular properties, such as the longest memory. Granger remarks that given that the financial returns are known to come from a long-tail distribution, $\theta = 1$ may be more preferable.

Another problem raised by Granger is how to choose optimal L_p-norm in empirical works, to minimize $\mathbb{E}[|\varepsilon_t|^p]$ for some p to estimate the regression model $Y_t = X_t\beta + \varepsilon_t$. As the asymptotic covariance matrix of $\hat{\beta}$ depends on p, the most appropriate value of p can be chosen to minimize the covariance matrix. In particular, Granger (2002) refers to a trio of papers (Nyquist 1983; Money et al. 1982; and Harter 1977) that find that the optimal $p = 1$ from Laplace and Cauchy distribution, $p = 2$ for Gaussian, and $p = \infty$ (min/max estimator) for a rectangular distribution. Granger (2002) also notes that in terms of the kurtosis κ, H. L. Harter (1977) suggests using $p = 1$ for $\kappa > 3.8$; $p = 2$ for $2.2 \leq \kappa \leq 3.8$; and $p = 3$ for $\kappa < 2.2$. In finance, the kurtosis of returns can be thought of as being well over 4, so $p = 1$ is preferred.

We consider some variant loss functions with $\theta = 1, 2$ below.

LOSS FUNCTIONS AND REGRESSION FUNCTIONS

Optimal forecasting of a time series model depends extensively on the specification of the loss function. *Symmetric quadratic loss function* is the most prevalent in applications due to its simplicity. The optimal forecast under quadratic loss is simply the conditional mean, but an *asymmetric loss function* implies a more complicated forecast that depends on the distribution of the forecast error as well as the loss function itself (Granger 1999), as the expected loss function is formulated with the expectation taken with respect to the conditional distribution. Specification of the loss function defines the model under consideration.

Consider a stochastic process $Z_t \equiv (Y_t, X_t')'$, where Y_t is the variable of interest and X_t is a vector of other variables. Suppose there are $T + 1$ $(\equiv R + P)$ observations. We use the observations available at time t, $R \leq t < T + 1$, to generate P forecasts using each model. For each time t in the prediction period, we use either a rolling sample $\{Z_{t-R+1}, \ldots, Z_t\}$ of size R or the whole past sample $\{Z_1, \ldots, Z_t\}$ to estimate model parameters $\hat{\beta}_t$. We can then generate a sequence of one-step-ahead forecasts $\{f(Z_t, \hat{\beta}_t)\}_{t=R}^T$.

Suppose that there is a decision maker who takes a one-step point forecast $f_{t,1} \equiv f(Z_t, \hat{\beta}_t)$ of Y_{t+1} and uses it in some relevant decision. The one-step forecast error $e_{t+1} \equiv Y_{t+1} - f_{t,1}$ will result in a cost of $c(e_{t+1})$, where the function $c(e)$ will increase as e increases in size, but not necessarily symmetrically or continuously. The optimal forecast $f_{t,1}^*$ will be chosen to produce the forecast errors that minimize the expected loss

$$\min_{f_{t,1}} \int_{-\infty}^\infty c(y - f_{t,1}) dF_t(y),$$

where $F_t(y) \equiv Pr(Y_{t+1} \leq y | I_t)$ is the conditional distribution function, with I_t being some proper information set at time t that includes Z_{t-j}, $j \geq 0$. The corresponding optimal forecast error will be

$$e_{t+1}^* = Y_{t+1} - f_{t,1}^*.$$

Then the optimal forecast would satisfy

$$\frac{\partial}{\partial f_{t,1}} \int_{-\infty}^\infty c(y - f_{t,1}^*) dF_t(y) = 0.$$

When we interchange the operations of differentiation and integration,

$$\int_{-\infty}^{\infty} \frac{\partial}{\partial f_{t,1}} c(y - f_{t,1}^*) dF_t(y) \qquad \mathbb{E}\left(\frac{\partial}{\partial f_{t,1}} c(Y_{t+1} - f_{t,1}^*) | I_t \right)$$

the *generalized forecast error,* $g_{t+1} \equiv \frac{\partial}{\partial f_{t,1}} c(Y_{t+1} - f_{t,1}^*)$, forms the condition of forecast optimality:

H_0: $\mathbb{E}(g_{t+1}|I_t) = 0$ *a.s.,*

that is, a martingale difference (MD) property of the generalized forecast error. This forms the optimality condition of the forecasts and gives an appropriate regression function corresponding to the specified loss function $c(\cdot)$.

To see this, consider the following two examples. First, when the loss function is the squared error loss

$$c(Y_{t+1} - f_{t,1}) = (Y_{t+1} - f_{t,1})^2,$$

the generalized forecast error will be $g_{t+1} \equiv \frac{\partial}{\partial f_t} c(Y_{t+1} - f_{t,1}^*) = -2e_{t+1}^*$ and thus $\mathbb{E}(e_{t+1}^* | I_t) = 0$ *a.s.*, which implies that the optimal forecast

$$f_{t,1}^* = \mathbb{E}(Y_{t+1}|I_t)$$

is the conditional mean. Next, when the loss is the check function, $c(e) = [\alpha - 1(e < 0)] \cdot e \equiv \rho_\alpha(e_{t+1})$, the optimal forecast $f_{t,1}$, for given $\alpha \in (0, 1)$, minimizing

$$\min_{f_{t,1}} \mathbb{E}\left[c(Y_{t+1} - f_{t,1}) | I_t \right]$$

can be shown to satisfy

$$\mathbb{E}[\alpha - 1(Y_{t+1} < f_{t,1}^*)|I_t] = 0 \text{ a.s.}$$

Hence, $g_{t+1} \equiv \alpha - 1(Y_{t+1} < f_{t,1}^*)$ is the generalized forecast error. Therefore,

$$\alpha = \mathbb{E}[1(Y_{t+1} < f_{t,1}^*)|I_t] = Pr(Y_{t+1} \le f_{t,1}^*|I_t),$$

and the optimal forecast $f_{t,1}^* = q_\alpha(Y_{t+1}|I_t)$ is the conditional α-quantile.

LOSS FUNCTIONS FOR TRANSFORMATIONS

Granger (1999) notes that it is implausible to use the same loss function for forecasting Y_{t+h} and for forecasting $h_{t+1} = h(Y_{t+h})$ where $h(\cdot)$ is some function, such as the log or the square, if one is interested in forecasting volatility. Suppose the loss functions $c_1(\cdot)$, $c_2(\cdot)$ are used for forecasting Y_{t+h} and for forecasting $h(Y_{t+h})$, respectively. Let $e_{t+1} \equiv Y_{t+1} - f_{t,1}$ will result in a cost of $c_1(e_{t+1})$, for which the optimal forecast $f_{t,1}^*$ will be chosen from $\min_{f_{t,1}} \int_{-\infty}^{\infty} c_1(y - f_{t,1}) dF_t(y)$, where $F_t(y) \equiv Pr(Y_{t+1} \le y|I_t)$. Let $\varepsilon_{t+1} \equiv h_{t+1} - h_{t,1}$ will result in a cost of $c_2(\varepsilon_{t+1})$, for which the optimal forecast $h_{t,1}^*$ will be chosen from $\min_{h_{t,1}} \int_{-\infty}^{\infty} c_2(h - h_{t,1}) dH_t(h)$, where $H_t(h) \equiv Pr(h_{t+1} \le h|I_t)$. Then the optimal forecasts for Y and h would respectively satisfy

$$\int_{-\infty}^{\infty} \frac{\partial}{\partial f_{t,1}} c_1(y - f_{t,1}^*) dF_t(y) = 0,$$

$$\int_{-\infty}^{\infty} \frac{\partial}{\partial h_{t,1}} c_2(h - h_{t,1}^*) dH_t(h) = 0.$$

It is easy to see that the optimality condition for $f_{t,1}^*$ does not imply the optimality condition for $h_{t,1}^*$ in general. Under some strong conditions on the functional forms of the transformation $h(\cdot)$ and of the two loss functions $c_1(\cdot)$, $c_2(\cdot)$, the above two conditions may coincide. Granger (1999) remarks that it would be strange behavior to use the same loss function for Y and $h(Y)$. This awaits further analysis in future research.

LOSS FUNCTIONS FOR ASYMMETRY

The most prevalent loss function for the evaluation of a forecast is the symmetric quadratic function. Negative and positive forecast errors of the same magnitude have the same loss. This functional form is assumed because mathematically it is very tractable, but from an economic point of view, it is not very realistic. For a given information set and under a quadratic loss, the optimal forecast is the conditional mean of the variable under study. The choice of the loss function is fundamental to the construction of an optimal forecast. For asymmetric loss functions, the optimal forecast can be more complicated as it will depend not only on the choice of the loss function but also on the characteristics of the probability density function of the forecast error (Granger 1999).

As Granger (1999) notes, the overwhelming majority of forecast work uses the cost function $c(e) = ae^2$, $a > 0$, largely for mathematical convenience. Asymmetric loss function is often relevant. A few examples from Granger (1999) follow. The cost of arriving ten minutes early at the airport is quite different from arriving ten minutes late. The cost of having a computer that is 10 percent too small for a task is different from the computer being 10 percent too big. The loss of booking a lecture room that has ten seats too many for your class is different from that of a room that has ten seats too few. In dam construction, an underestimate of the peak water level is usually much more serious than an overestimate (Zellner 1986).

There are some commonly used asymmetric loss functions. The check loss function $c(y, f) \equiv [\alpha - 1(y < f)] \cdot (y - f)$, or $c(e) \equiv [\alpha - 1(e < 0)] \cdot e$, makes the optimal predictor f the conditional quantile. The check loss function is also known as the *tick function* or *lil-lin loss.* The asymmetric quadratic loss $c(e) \equiv [\alpha - 1(e < 0)] \cdot e^2$ can also be considered. A value of $\alpha = 0.5$ gives the symmetric squared error loss.

A particularly interesting asymmetric loss is the *linex function* of Hal Varian (1975), which takes the form

$$c_1(e, \alpha) = \exp(\alpha e_{t+1}) - \alpha e_{t+1} - 1,$$

where α is a scalar that controls the aversion toward either positive ($\alpha > 0$) or negative ($\alpha < 0$) forecast errors. The linex function is differentiable. If $\alpha > 0$, the linex is exponential for $e > 0$ and linear for $e < 0$. If $\alpha < 0$, the linex is exponential for $e < 0$ and linear for $e > 0$. To make the linex more flexible, it can be modified to the double linex loss function by

$$c(e) = c_1(e, \alpha) + c_1(e, -\beta), \qquad \alpha > 0, \beta > 0,$$

$$= \exp(\alpha e) + \exp(-\beta e) - (\alpha - \beta)e - 2$$

which is exponential for all values of e (Granger 1999). When $\alpha = \beta$, it becomes the symmetric double linex loss function.

LOSS FUNCTIONS FOR FORECASTING FINANCIAL RETURNS

Some simple examples of the loss function for evaluating the point forecasts of financial returns are the out-of-sample mean of the following loss functions studied in Yongmiao Hong and Tae-Hwy Lee (2003): the squared error loss $c(y, f) = (y - f)^2$; absolute error loss $c(y, f) = |y - f|$; trading return $c(y, f) = -\text{sign}(f) \cdot y$ (when y is a financial asset return); and the correct direction $c(y, \hat{y}) = -\text{sign}(f) \cdot \text{sign}(y)$, where $\text{sign}(x) = 1(x > 0) - 1(x < 0)$ and $1(\cdot)$ takes the value of 1 if the statement in the parentheses is true and 0 otherwise. The negative signs in the latter two are to make them the loss to minimize (rather than to maximize). The out-of-sample mean of these loss functions are the mean squared forecast errors (MSFE), mean absolute forecast errors (MAFE), mean forecast trading returns (MFTR), and mean correct forecast directions (MCFD):

$$MSFE = P^{-1} \sum_{t=R}^{T} (Y_{t+1} - f_{t,1})^2,$$

$$MAFE = P^{-1} \sum_{t=R}^{T} |Y_{t+1} - f_{t,1}|,$$

$$MFTR = -P^{-1} \sum_{t=R}^{T} \text{sign}(f_{t,1}) \cdot Y_{t+1},$$

$$MCFD = -P^{-1} \sum_{t=R}^{T} 1(\text{sign}(f_{t,1}) \cdot \text{sign}(Y_{t+1}) > 0).$$

These loss functions may further incorporate issues such as interest differentials, transaction costs, and market depth. Because the investors are ultimately trying to maximize profits rather than minimize forecast errors, MSFE and MAFE may not be the most appropriate evaluation criteria. Granger (1999) emphasizes the importance of model evaluation using economic measures such as MFTR rather than statistical criteria such as MSFE and MAFE. Note that MFTR for the buy-and-hold trading strategy with sign $(f_{t,1}) = 1$ is the unconditional mean return of an asset because $MFTR^{\text{Buy\&Hold}} = -P^{-1}\sum_{t=R}^{T} Y_{t+1} \to -\mu$ in probability as $P \to \infty$, where $\mu \equiv \mathbb{E}(Y_t)$. MCFD is closely associated with an economic measure as it relates to market timing. Mutual fund managers, for example, can adjust investment portfolios in a timely manner if they can predict the directions of changes, thus earning a return higher than the market average.

LOSS FUNCTIONS FOR ESTIMATION AND EVALUATION

When the forecast is based on an econometric model, to the construction of the forecast, a model needs to be estimated. Inconsistent choices of loss functions in estimation and forecasting are often observed. We may choose a symmetric quadratic objective function to estimate the parameters of the model, but the evaluation of the model-based forecast may be based on an asymmetric loss function. This logical inconsistency is not inconsequential for tests assessing the predictive ability of the forecasts. The error introduced by parameter estimation affects the uncertainty of the forecast and, consequently, any test based on it.

However, in applications, it is often the case that the loss function used for estimation of a model is different from the one(s) used in the evaluation of the model. This logical inconsistency can have significant consequences with regard to comparison of predictive ability of competing models. The uncertainty associated with parameter estimation may result in invalid inference of predictive ability (West 1996). When the objective function in estimation is the same as the loss function in forecasting, the effect of parameter estimation vanishes. If one believes that a particular criteria should be used to evaluate forecasts, then it may also be used at the estimation stage of the modeling process. Gloria González-Rivera, Tae-Hwy Lee, and Emre Yoldas (2007) show this in the context of the VaR model of RiskMetrics, which provides a set of tools to measure market risk and eventually forecast the value-at-risk (VaR) of a portfolio of financial assets. A VaR is a quantile return. RiskMetrics offers a prime example in which the loss function of the forecaster is very well defined. They point out that a VaR is a quantile, and thus the check loss function can be the objective function to estimate the parameters of the RiskMetrics model.

LOSS FUNCTION FOR BINARY FORECAST AND MAXIMUM SCORE

Given a series $\{Y_t\}$, consider the binary variable $G_{t+1} \equiv 1(Y_{t+1} > 0)$. We consider the asymmetric risk function to discuss a binary prediction. To define the asymmetric risk with $A_1 \neq A_2$ and $p = 1$, we consider the binary decision problem of Clive Granger and Hashem Pesaran (2000b), and Tae-Hwy Lee and Yang Yang (2006) with the following 2×2 payoff or utility matrix:

Utility	$G_{t+1} = 1$	$G_{t+1} = 0$
$G_{t,1}(\mathrm{X}_t) = 1$	u_{11}	u_{01}
$G_{t,1}(\mathrm{X}_t) = 0$	u_{10}	u_{00}

where u_{ij} is the utility when $G_{t,1}(X_t) = j$ is predicted and $G_{t+1} = I$ is realized ($i, j = 1, 2$). Assume $u_{11} > u_{10}$ and $u_{00} > u_{01}$, and u_{ij} are constant over time; $(u_{11} - u_{10}) > 0$ is the utility gain from taking correct forecast when $G_{t,1}(X_t) = 1$; and $(u_{00} - u_{01}) > 0$ is the utility gain from taking correct forecast when $G_{t,1}(X_t) = 0$. Denote

$$\pi(X_t) \equiv \mathbb{E}_{Y_{t+1}}(G_{t+1}|X_t) = Pr(G_{t+1} = 1|X_t).$$

The expected utility of $G_{t,1}(X_t) = 1$ is $u_{11}\pi(X_t) + u_{01}(1 - \pi(X_t))$, and the expected utility of $G_{t,1}(X_t) = 0$ is $u_{10}\pi(X_t) + u_{00}(1 - \pi(X_t))$. Hence, to maximize utility, conditional on the values of X_t, the prediction $G_{t,1}(X_t) = 1$ will be made if

$$u_{11}\pi(X_t) + u_{01}(1 - \pi(X_t)) > u_{10}\pi(X_t) + u_{00}(1 - \pi(X_t)),$$

or

$$\pi(\mathrm{X}_t) > \frac{(u_{00} - u_{01})}{(u_{11} - u_{10}) + (u_{00} - u_{01})} \equiv 1 - \alpha.$$

By making a correct prediction, our net utility gain is $(u_{00} - u_{01})$ when $G_{t+1} = 0$, and $(u_{11} - u_{10})$ when $G_{t+1} = 1$. Put another way, our opportunity cost (in the sense that you lose the gain) of a wrong prediction is $(u_{00} - u_{01})$ when $G_{t+1} = 0$ and $(u_{11} - u_{10})$ when $G_{t+1} = 1$. Since a multiple of a utility function represents the same preference, $(1 - \alpha)$ can be viewed as the utility gain from correct prediction when $G_{t+1} = 0$, or the opportunity cost of a false alert. Similarly,

$$\alpha \equiv \frac{(u_{11} - u_{10})}{(u_{11} - u_{10}) + (u_{00} - u_{01})}$$

can be treated as the utility gain from correct prediction when $G_{t+1} = 1$ is realized, or the opportunity cost of a failure-to-alert. We thus can define a cost function $c(e_{t+1})$ with $e_{t+1} = G_{t+1} - G_{t,1}(X_t)$:

Cost	$G_{t+1} = 1$	$G_{t+1} = 0$
$G_{t,1}(\mathrm{X}_t) = 1$	0	$1 - \alpha$
$G_{t,1}(\mathrm{X}_t) = 0$	α	0

That is,

$$c(e_{t+1}) = \begin{cases} \alpha & \text{if } e_{t+1} = 1 \\ 1-\alpha & \text{if } e_{t+1} = -1 \\ 0 & \text{if } e_{t+1} = 0 \end{cases},$$

which can be equivalently written as $c(e_{t+1}) = \rho_\alpha(e_{t+1})$, where $\rho_\alpha(e) \equiv [\alpha - 1(e < 0)e]$ is the check function. Hence, the optimal binary predictor $G^\dagger_{t,1}(X_t) = 1(\pi(X_t) > 1 - \alpha)$ maximizing the expected utility minimizes the expected cost $E(\rho_\alpha(e_{t+1})|X_t)$.

The optimal binary prediction that minimizes $\mathbb{E}_{Y_{t+1}}(\rho_\alpha(e_{t+1})|X_t)$ is the conditional α-quantile of G_{t+1}, denoted as

$$\begin{aligned} G^\dagger_{t,1}(\mathrm{X}_t) &= Q^\dagger_\alpha(G_{t+1}|\mathrm{X}_t) \\ &= \arg\min_{G_{t,1}(\mathrm{X}_t)} \mathbb{E}_{Y_{t+1}}(\rho_\alpha(G_{t+1} - G_{t,1}(\mathrm{X}_t))|\mathrm{X}_t). \end{aligned}$$

This is a maximum score problem of Charles Manski (1975).

Also, as noted by James Powell (1986), using the fact that for any monotonic function $h(\cdot)$, $Q_\alpha(h(Y_{t+1})|X_t) = h(Q_\alpha(Y_{t+1}|X_t))$, which follows immediately from observing that $Pr(Y_{t+1} < y|X_t) = Pr[h(Y_{t+1}) < h(y)|X_t]$, and noting that the indicator function is monotonic, $Q_\alpha(G_{t+1}|X_t) = Q_\alpha(1(Y_{t+1} > 0)|X_t) = 1(Q_\alpha(Y_{t+1}|X_t) > 0)$. Hence,

$$G^\dagger_{t,1}(X_t) = 1(Q^\dagger_\alpha(Y_{t+1}|X_t) > 0).$$

where $Q_\alpha(Y_{t+1}|X_t)$ is the α-quantile function of Y_{t+1} conditional on X_t. Note that $Q^\dagger_\alpha(G_{t+1}|X_t) = \text{argmin}\ \mathbb{E}_{Y_{t+1}}(\rho_\alpha(e_{t+1})|X_t)$ with $e_{t+1} \equiv G_{t+1} - Q_\alpha(G_{t+1}|X_t)$, and $Q^\dagger_\alpha(Y_{t+1}|X_t) = \arg\min \mathbb{E}_{Y_{t+1}}(\rho_\alpha(u_{t+1})|X_t)$ with $u_{t+1} \equiv Y_{t+1} - Q_\alpha(Y_{t+1}|X_t)$. Therefore, the optimal binary prediction can be made from binary quantile regression for G_{t+1}. Binary prediction can also be made from a binary function of the α-quantile for Y_{t+1}.

LOSS FUNCTIONS FOR PROBABILITY FORECASTS

Francis Diebold and Glenn Rudebusch (1989) consider the probability forecasts for business-cycle turning points. To measure the accuracy of predicted probabilities, that is, the average distance between the predicted probabilities and observed realization (as measured by a zero-one dummy variable). Suppose we have time series of P probability forecast $\{p_t\}_{t=R+1}^{T}$, where p_t is the probability of the occurrence of a turning point at date t. Let $\{d_t\}_{t=R+1}^{T}$ be the

corresponding realization with $d_t = 1$ if a business-cycle turning point (or any defined event) occurs in period t and $d_t = 0$ otherwise. The loss function analogous to the squared error is Brier's score based on the quadratic probability score (QPS):

$$QPS = P^{-1} \sum_{t=R}^{T} 2(p_t - d_t)^2.$$

The QPS ranges from 0 to 2, with 0 for perfect accuracy. As noted by Diebold and Rudebusch (1989), the use of the symmetric loss function may not be appropriate, as a forecaster may be penalized more heavily for missing a call (making a Type II error) than for signaling a false alarm (making a Type I error). Another loss function is given by the log probability score (LPS)

$$LPS = -P^{-1} \sum_{t=R}^{T} \ln\left(p_t^{d_t}(1-p_t)^{(1-d_t)}\right),$$

which is similar to the loss for the interval forecast. Major mistakes are penalized more heavily under LPS than under QPS. Further loss functions are discussed in Diebold and Rudebusch (1989).

Another loss function useful in this context is the Kuipers score (KS), which is defined by

KS = Hit Rate – False Alarm Rate,

where the hit rate is the fraction of the bad events that were correctly predicted as good events (power, or 1—probability of Type II error), and the false alarm rate is the fraction of good events that have been incorrectly predicted as bad events (probability of Type I error).

LOSS FUNCTION FOR INTERVAL FORECASTS

Suppose Y_t is a stationary series. Let the one-period-ahead conditional interval forecast made at time t from a model be denoted as

$$J_{t,1}(\alpha) = (L_{t,1}(\alpha),\ U_{t,1}(\alpha)),\ t = R, \ldots, T,$$

where $L_{t,1}(\alpha)$ and $U_{t,1}(\alpha)$ are the lower and upper limits of the ex ante interval forecast for time $t+1$ made at time t with the coverage probability α. Define the indicator variable $X_{t+1}(\alpha) = 1[Y_{t+1} \in J_{t,1}(\alpha)]$. The sequence $\{X_{t+1}(\alpha)\}_{t=R}^{T}$ is IID Bernoulli (α). The optimal interval forecast would satisfy $\mathbb{E}(X_{t+1}(\alpha)|I_t) = \alpha$, so that $\{X_{t+1}(\alpha) - \alpha\}$ will be an MD. A better model has a larger expected Bernoulli log-likelihood

$$\mathbb{E}\alpha^{X_{t+1}(\alpha)}(1-\alpha)^{[1-X_{t+1}(\alpha)]}.$$

Hence, we can choose a model for interval forecasts with the smallest out-of-sample mean of the negative predictive log-likelihood defined by

$$-P^{-1} \sum_{t=R}^{T} \ln\left(\alpha^{x_{t+1}(\alpha)}(1-\alpha)^{[1-x_{t+1}(\alpha)]}\right).$$

LOSS FUNCTION FOR DENSITY FORECASTS

Consider a financial return series $\{y_t\}_{t=1}^{T}$. This observed data on a univariate series is a realization of a stochastic process $Y^T \equiv \{Y_\tau: \Omega \to \mathbb{R}, \tau = 1, 2, \ldots, T\}$ on a complete probability space $(\Omega, \mathfrak{F}_T, P^T{}_0)$, where $\Omega = \mathbb{R}^T \equiv x^T{}_{\tau=1}\mathbb{R}$ and $\mathfrak{F}_T = \boldsymbol{B}(\mathbb{R}^T)$ is the Borel σ-field generated by the open sets of $\mathbb{R}^T$, and the joint probability measure $P^T{}_0(B) \equiv P_0[Y^T \in B]$, $B \in \boldsymbol{B}(\mathbb{R}^T)$ completely describes the stochastic process. A sample of size T is denoted as $y^T \equiv (y_1, \ldots, y_T)'$.

Let σ-finite measure ν^T on $\boldsymbol{B}(\mathbb{R}^T)$ be given. Assume $P^T{}_0(B)$ is absolutely continuous with respect to ν^T for all $T = 1, 2, \ldots$, so that there exists a measurable Radon-Nikodým density $g^T(y^T) = dP^T{}_0/d\nu^T$, unique up to a set of zero measure-ν^T.

Following Halbert White (1994), we define a probability model $\boldsymbol{P}$ as a collection of distinct probability measures on the measurable space $(\Omega, \mathfrak{F}_T)$. A probability model $\boldsymbol{P}$ is said to be correctly specified for Y^T if $\boldsymbol{P}$ contains $P^T{}_0$. Our goal is to evaluate and compare a set of parametric probability models $\{P_\theta^T\}$, where $P_\theta^T(B) \equiv P_\theta[Y^T \in B]$. Suppose there exists a measurable Radon-Nikodým density $f^T(y^T) = dP_\theta^T/d\nu^T$ for each $\theta \in \Theta$, where θ is a finite-dimensional vector of parameters and is assumed to be identified on Θ, a compact subset of $\mathbb{R}^k$ (see White 1994, Theorem 2.6).

In the context of forecasting, instead of the joint density $g^T(y^T)$, we consider forecasting the conditional density of Y^t, given the information $\mathfrak{F}_{t-1}$ generated by Y_{t-1}. Let $\varphi_t(y_t) \equiv \varphi_t(y_t|\mathfrak{F}_{t-1}) \equiv g^t(y_t)/g^{t-1}(y^{t-1})$ for $t = 2, 3, \ldots$ and $\varphi_1(y_1) \equiv \varphi_1(y_1|\mathfrak{F}_0) \equiv g^1(y^1) = g^1(y_1)$. Thus the goal is to forecast the (true, unknown) conditional density $\varphi_t(y_t)$.

For this, we use a one-step-ahead conditional density forecast model $\psi_t(y_t; \theta) \equiv \psi_t(y_t|\mathfrak{F}_{t-1}; \theta) \equiv f_t(y_t)/f^{t-1}(y^{t-1})$ for $t = 2, 3, \ldots$ and $\psi_1(y_1) \equiv \psi_1(y_1|\mathfrak{F}_0) \equiv f^1(y^1) = f^1(y_1)$. If $\psi_t(y_t; \theta_0) = \varphi_t(y_t)$ almost surely for some $\theta_0 \in \Theta$, then the one-step-ahead density forecast is correctly specified, and it is said to be optimal because it dominates all other density forecasts for any loss functions as discussed in the previous section (see Granger and Pesaran 2000a, 2000b; Diebold et al. 1998; Granger 1999).

In practice, it is rarely the case that we can find an optimal model. As it is very likely that "the true distribution is in fact too complicated to be represented by a simple mathematical function" (Sawa 1978), all the models proposed by different researchers can be possibly misspecified and thereby we regard each model as an approximation of the truth. Our task is then to investigate which

density forecast model can approximate the true conditional density most closely. We have to first define a metric to measure the distance of a given model to the truth, and then compare different models in terms of this distance.

The adequacy of a density forecast model can be measured by the conditional Kullback-Leibler information criterion (KLIC) (1951) divergence measure between two conditional densities,

$$\mathbb{I}_t(\varphi: \psi, \theta) = \mathbb{E}_{\varphi_t}[\ln \psi_t(y_t) - \ln \psi_t(y_t; \theta)],$$

where the expectation is with respect to the true conditional density $\varphi_t(\cdot|\mathfrak{F}_{t-1})$, $\mathbb{E}_{\varphi_t} \ln \psi_t(y_t|\mathfrak{F}_{t-1}) < \infty$, and $\mathbb{E}_{\varphi_t} \ln \psi_t y_t|\mathfrak{F}_{t-1}; \theta) < \infty$. Following White (1994), we define the distance between a density model and the true density as the minimum of the KLIC

$$\mathbb{I}_t(\varphi: \psi, \theta^*_{t-1}) = \mathbb{E}_{\varphi_t}[\ln \psi_t(y_t) - \ln \psi_t(y_t; \theta^*_{t-1})],$$

where $\theta^*_{t-1} = \arg\min \mathbb{I}_t(\varphi: \psi, \theta)$ is the pseudotrue value of θ (Sawa 1978). We assume that θ^*_{t-1} is an interior point of Θ. The smaller this distance is, the closer the density forecast $\psi_t(\cdot|\mathfrak{F}_{t-1}; \theta^*_{t-1})$ is to the true density $\varphi_t(\cdot|\mathfrak{F}_{t-1})$.

However, $\mathbb{I}_t(\varphi: \psi, \theta^*_{t-1})$ is unknown since θ^*_{t-1} is not observable. We need to estimate θ^*_{t-1}. If our purpose is to compare the out-of-sample predictive abilities among competing density forecast models, we split the data into two parts, one for estimation and the other for out-of-sample validation. At each period t in the out-of-sample period ($t = R + 1, \ldots, T$), we estimate the unknown parameter vector θ^*_{t-1} and denote the estimate as $\hat{\theta}_{t-1}$. Using $\{\hat{\theta}_{t-1}\}_{t=R+1}^{T}$, we can obtain the out-of-sample estimate of $\mathbb{I}_t(\varphi: \psi, \theta^*_{t-1})$ by

$$\mathbb{I}_P(\varphi: \psi) \equiv \frac{1}{P} \sum_{t=R+1}^{T} \ln\left[\varphi_t(y_t)/\psi_t(y_t; \hat{\boldsymbol{\theta}}_{t-1})\right]$$

where $P = T - R$ is the size of the out-of-sample period. Note that

$$\mathbb{I}_P(\varphi: \psi) = \frac{1}{P} \sum_{t=R+1}^{T} \ln\left[\varphi_t(y_t)/\psi_t(y_t; \boldsymbol{\theta}^*_{t-1})\right] + \frac{1}{P} \sum_{t=R+1}^{T} \ln\left[\psi_t(y_t; \boldsymbol{\theta}^*_{t-1})/\psi_t(y_t; \hat{\boldsymbol{\theta}}_{t-1})\right],$$

where the first term in $\mathbb{I}_P(\varphi: \psi)$ measures model uncertainty (the distance between the optimal density $\varphi_t(y_t)$ and the model $\psi_t(y_t; \theta^*_{t-1})$, and the second term measures parameter estimation uncertainty due to the distance between θ^*_{t-1} and $\hat{\theta}_{t-1}$.

Since the KLIC measure takes on a smaller value when a model is closer to the truth, we can regard it as a loss function and use $\mathbb{I}_P(\varphi: \psi)$ to formulate the loss-differential. The out-of-sample average of the loss-differential between model 1 and model 2 is

$$\mathbb{I}_P(\varphi: \psi^1) - \mathbb{I}_P(\varphi: \psi^2) = \frac{1}{P} \sum_{t=R+1}^{T} \ln\left[\psi_t^2(y_t; \hat{\boldsymbol{\theta}}^2_{t-1})/\psi_t(y_t; \hat{\boldsymbol{\theta}}^1_{t-1})\right],$$

which is the ratio of the two predictive log-likelihood functions. With treating model 1 as a benchmark model (for model selection) or as the model under the null hypothesis (for hypothesis testing), $\mathbb{I}_P(\varphi: \psi^1) - \mathbb{I}_P(\varphi: \psi^2)$ can be considered as a loss function to minimize. To sum up, the KLIC differential can serve as a loss function for density forecast evaluation as discussed in Yong Bao, Tae-Hwy Lee, and Burak Saltoglu (2007).

LOSS FUNCTIONS FOR VOLATILITY FORECASTS

Gloria González-Rivera, Tae-Hwy Lee, and Santosh Mishra (2004) analyze the predictive performance of various volatility models for stock returns. To compare the performance, they choose loss functions for which volatility estimation is of paramount importance. They deal with two economic loss functions (an option pricing function and a utility function) and two statistical loss functions (the check loss for a value-at-risk calculation and a predictive likelihood function of the conditional variance).

LOSS FUNCTIONS FOR TESTING GRANGER-CAUSALITY

In time series forecasting, a concept of causality is due to Granger (1969), who defined it in terms of conditional distribution. Tae-Hwy Lee and Weiping Yang (2007) use loss functions to test for Granger-causality in conditional mean, in conditional distribution, and in conditional quantiles. The causal relationship between money and income (output) has been an important topic that has been extensively studied. However, those empirical studies are almost entirely on Granger-causality in the conditional mean. Compared to conditional mean, conditional quantiles give a broader picture of a variable in various scenarios. Lee and Yang (2007) explore whether forecasting the conditional quantile of output growth may be improved using money. They compare the check (tick) loss functions of the quantile forecasts of output growth with and without using the past information on money growth, and assess the statistical significance of the loss-differential of the unconditional and conditional predictive abilities. As conditional quantiles can be inverted to the conditional distribution, they also test for Granger-causality in the conditional distribution (using a nonparametric copula function). Using U.S. monthly series of real personal income and industrial production for income, and M1 and M2 for money, for 1959 to 2001, they find that out-of-sample quantile forecasting for output growth, particu-

larly in tails, is significantly improved by accounting for money. On the other hand, money-income Granger-causality in the conditional mean is quite weak and unstable. Their results have important implications for monetary policy, showing that the effectiveness of monetary policy has been underestimated by merely testing Granger-causality in mean. Money-income Granger-causality is stronger than it has been known, and therefore the information on money growth can (and should) be more widely utilized in implementing monetary policy.

SEE ALSO *Autoregressive Models; Generalized Least Squares; Least Squares, Ordinary; Logistic Regression; Maximum Likelihood Regression; Optimizing Behavior; Regression; Regression Analysis; Time Series Regression*

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Tae-Hwy Lee

LOST CAUSE

SEE *Vindication.*

LOTTERIES

Lotteries are most frequently government-sponsored alternatives to primarily illegal numbers games whereby the participants win cash prizes if they match a series of numbers or symbols. It can be argued that lotteries date back

to biblical times (the process of "casting lots") and there is considerable historical evidence of lotteries from the sixteenth century forward as a means by which municipalities raised funds for government finance. In the eighteenth and nineteenth centuries numerous lotteries raised very significant revenues to build roads, canals, courthouses, and so on, and in particular, to finance wars (Gribbin and Bean 2006). In the modern era of lotteries (presumed to have begun in 1964 with the initiation of the New Hampshire lottery in the United States), lotteries have generally not generated commensurately large revenues, but have served as an alternative revenue source that is politically expedient due to both participant and nonparticipant perceptions.

Lottery players generally cite the expected utility of a potential win as justification for playing, or at the least, the utility derived from thinking about what they would do with the money if they win. There is limited entertainment value in lottery instruments beyond these measures of expected utility, and no skill. Lottery players also recognize that even if they do not win, their money is designated for a generally desirable beneficiary group such as public schools, the elderly, or specific public works projects. Lottery commissions recognize the lack of entertainment value in their games and thus must constantly innovate to maintain player interest in participation.

Nonplayers appreciate that lotteries allow them to shift a portion of the municipal tax burden to those who do not understand or care about the long odds of winning. Their perception is the opposite of the advertising slogan, that is, "you cannot lose if you do not play." Legislative leaders understand lotteries for what they have become: tax revenue sources that are not perceived as such, that allow the government representatives to take advantage of fungibility to shift funds to whichever projects or groups they choose, while maintaining the perception of effective earmarking for a desirable recipient group (Borg and Mason 1988).

From a procedural standpoint, lottery games fall into two basic categories: instant games and lotto games. Instant games are mostly scratch-off instruments whereby the player uses a coin or some other means to remove a coating from areas on a card, attempting to match a particular series of like symbols to win a predetermined amount. These games represent a relatively minor portion of the revenue raised by lotteries, but the area in lottery administration that requires the most innovation to maintain player interest. Lotto games are closer to the illegal numbers games mentioned above, requiring the winning player to match from three to six numbers, most frequently printed on ping-pong balls drawn from a container. The payouts in these games are substantial, ranging from hundreds to hundreds of millions of dollars. Most of these lotto games reflect odds that follow simple mathematical combinations, for example ${}_{x}C_{6}$ is a standard for many U.S. state games, where x is 49 numbers, 53 numbers, or some other magnitude. The ${}_{53}C_{6}$ game implies that odds of winning are 1 in approximately 22 million. Longer odds are encountered in multistate games that also imply that the last ball drawn reflects a specific number (e.g., the "powerball").

Lottery games are generally available in a large number of retail locations including grocery stores, convenience stores, and other establishments that are licensed by the municipality to distribute the tickets. Ticket sellers receive a commission for selling the tickets (frequently around 5% of sales) and many also share in the good fortune of winners with extra compensation. Evidence suggests that play increases when ticket availability is found close to either one's home or workplace. Consequently, lottery ticket sales are frequently higher per capita in large cities as opposed to small towns and rural areas (Clotfelter and Cook 1989).

There are other significant demographic characteristics of lottery players that identify the implications of the tax inherent in lottery games. Consistently, researchers have discovered that lottery players tend to be older, and frequently members of racial and ethnic minority groups. Far more players come from large municipalities. There is significant crossover between states and countries whenever jackpots of the lotto games become large, and women tend to play lottery games slightly more than men. From an economic standpoint, the most significant demographic reality of lotteries is that while lottery play increases with income, it does so at a declining rate, suggesting that the routinely 50 percent tax rate inherent in lottery games is regressive (Clotfelter and Cook 1989, among many).

Among the other economic implications of lotteries, lotteries are inefficient from a tax standpoint. The responsiveness of demand for lotto games to price changes is often greater than one in absolute value, implying that taxes inherent in lottery games do not raise the same levels of revenue for the same cost as other tax sources. This reflects the luxury nature of lotto tickets in the player's market basket. The magnitude of this effect is mitigated whenever a municipality increases the frequency of lotto games during the week, so current trends have reduced this effect somewhat (Mason, Steagall, and Fabritius 1997). Lottery tax revenues are generally relatively small compared to other tax sources, and are not as stable given that their magnitudes frequently depend on rollovers, and the impact that they have on player frenzy. Earmarking of lottery revenues to specific recipients is a bait-and-switch process that motivates players to justify their involvement while legislative bodies shift funds away from the desig-

nated recipient simultaneously. Numerous studies have shown that designated recipients of lottery revenues, for example, public education, are often worse off after the creation of a lottery (see, for example, Gribbin and Bean 2006). As more states adopt lotteries, the competition for lottery player dollars becomes more intense while the attractiveness of playing lottery games wane. This makes it likely that future lottery revenues generated by all states will diminish.

In summary, lotteries are a means by which legislative groups motivate individuals to provide tax revenue that they do not perceive as such in exchange for minute chances of winning cash awards. The economic consequences of these lotteries are just as condemning. Perhaps the best perspective on lotteries is that "your odds of winning are almost as good if you do not play." The forty-one states in the United States and many municipalities around the world should learn this lesson to generate more stable and more conscientious government revenue generation.

SEE ALSO *Expected Utility Theory*

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Paul M. Mason

LOUIS XVI

SEE *French Revolution; Left Wing.*

LOVE CANAL

In 1894 entrepreneur William T. Love began building a canal to connect the Niagara River to Lake Ontario. The canal was to provide water and hydroelectric power for the city of Niagara Falls, New York. Some eighty-four years later, however, the canal became a symbol of the threat of toxic chemical wastes to human communities and the environment, and Love Canal became a moniker for a social movement whose advocates believe that all people are entitled to protection from such hazards.

Love sold his partially completed sixteen-acre canal at public auction in 1947. There was a nationwide depression that had left him short of funds, and the invention of alternating electrical current had rendered his hydroelectric project obsolete. Hooker Chemicals and Plastic Corporation (later known as Hooker Chemical Corporation, and more recently as Occidental Chemical Corporation or OxyChem) bought the site after determining it was isolated and sparsely populated at the time and had an impermeable clay substrate, which made it a good location for a chemical waste landfill. According to New York state officials, the city of Niagara Falls and some federal agencies (including the military) regularly dumped chemical and other wastes at the site, in addition to the approximately 21,800 tons of chemical wastes dumped by Hooker until 1952. The company sold the site for one dollar in 1953 to the Niagara Falls Board of Education, which intended to eventually construct a grade school and playground on it.

Subsequent events ignited controversy over who—Hooker or the Niagara Falls Board of Education—was legally responsible for the exposure of the public to the chemical wastes and the resulting illnesses experienced by families who resided in the area. Despite the restrictions and risk stipulations in the deed conveyed to the Board of Education by Hooker, the Board decided to develop the land above the fill site and its surrounding area. The Board authorized construction of an elementary school on the site in 1955, the city constructed a sewer line through the canal in 1960, and developers constructed homes and streets next to the site. The toxic chemicals stored there eventually seeped from their ruptured and deteriorated containers into the soil, basements, and storm sewers. In April 1978, Michael Brown, a reporter for the *Niagara Gazette*, wrote a series of articles on hazardous wastes in the Niagara Falls area. By August 1978, the New York health commissioner declared a state of emergency in the area, and 239 families were evacuated. Five days later President Jimmy Carter approved emergency financial aid to permanently relocate these families. In March 1980 the president declared a state of emergency at Love Canal and funded the permanent evacuation and relocation of an additional 780 families. Brown drew national attention to the disaster in his 1980 book *Laying Waste: The Poisoning of America by Toxic Chemicals*.

State and federal investigations into the conditions at the landfill identified 248 different chemicals and 82 chemical compounds, 11 of which were known carcinogens. These toxins included benzene, toluene, chloroform, carbon tetrachloride, lindane, and trichlorophenol that

was contaminated with the carcinogen dioxin. Residents exposed to these and other chemicals reported miscarriages, birth defects, cancer, and asthmatic, urinary, and convulsive disorders. Beginning in 1979, residents initiated a series of lawsuits against Hooker, the city, the Board of Education, and several public agencies. In April 1980 the State of New York filed a $635 million lawsuit against Occidental Petroleum (OxyChem's parent company) and its two subsidiaries, charging that the companies were responsible for the Love Canal disaster. The New York Supreme Court announced three years later a $20 million settlement of the 1,337 claims filed. Occidental Petroleum agreed in 1989 and later paid the Environmental Protection Agency $129 million for cleanup costs.

Epidemiological evidence of chemical exposure causing abnormal rates of acute and chronic illness has been controversial. Studies conducted by scientists and by the New York State Department of Health as recently as 1997 found that the residents who lived closest to the canal experienced rates of certain diseases (for example, liver disorders and lymphomas, leukemia, and several other cancers) that were no different from those of control groups who lived elsewhere in the county and in upstate New York. Other findings showed, however, that Love Canal residents had higher rates of spontaneous abortions, childhood disorders, lung and respiratory disorders, and female genitourinary cancers.

In 1988, based on its own five-year study and further investigation by the Environmental Protection Agency, the New York State Department of Health concluded that a segment of the canal area was again habitable and proposed to resettle the area. Lois Gibbs, who had organized the Love Canal Homeowners Association in 1978 and whose son had attended the contaminated elementary school, energized the public to fight against the state's effort to move families back to the canal area. In 1981 Gibbs founded the Citizens' Clearinghouse for Hazardous Wastes (later renamed as the Center for Health, Environment, and Justice).

The Citizens' Clearinghouse became a national resource that provided guidance and education to many of the grassroots groups and people of color who opposed chemical wastes and emissions in their communities and neighborhoods. These groups and their supporters helped define the early agenda of the American environmental justice movement, and they drew media and political attention to socioeconomic inequities (e.g., environmental racism) associated with waste facility siting, industrial emissions, and regulatory enforcement. Their collective efforts galvanized public awareness of these issues during the 1980s and 1990s and bridged other major social movements involving civil rights, feminism, and worker safety.

SEE ALSO *Disaster Management; Environmental Impact Assessment; Justice; Pollution; Racism; Toxic Waste*

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John K. Thomas

LOWE, ADOLPH

SEE *Economics of Control.*

LOWI, THEODORE J.

1931–

Theodore J. Lowi is known within the fields of political science, sociology, and law for his statement of interest-group liberalism, a theory of political power in the United States widely accepted (particularly in the 1970s and 1980s) as an alternative to the pluralist theory of political power advocated by Robert A. Dahl (b. 1915). In *The End of Liberalism* (1979) Lowi presumed that single-power-elite theories of U.S. politics are generally incorrect, in that Lowi described political power as wielded by different elites in different policy areas. But his interpretation of this research finding was very different from the pluralist interpretation. Lowi argued that such fragmented power leads to the control of most domestic policy areas by special-interest coalitions of interest groups, administrators, and legislative committee members, who are unresponsive to control by legislative and executive leaders, or by the judiciary. Lowi's use of the term *liberalism* in this theory does not refer to the political opinions of some Americans, but to the term's use in political philosophy, referring to those defining democracy according to some process of decision making, rather than to those referring to standards of justice in the substance of government action. Lowi argued that liberalism in the process sense had come to permeate the values of legislative, executive, and judicial decision makers in the United States, so that laws were written and interpreted without useful reference to clear standards of justice and administration. He argued that as a consequence, lower-level executive decision makers interpreted the practical meaning of legislation after a process of bargaining with organized interest groups, thereby forming a special-interest policymaking coalition specific to a particular area of public policy. To reform interest-group liberalism, Lowi advocated institutional changes to promote the statement of clear standards in legislation and administration of public policy, such as judicial prohibition of legislation lacking such clear standards.

In 1976 a survey of political scientists ranked Lowi as having "made the most significant contribution to the discipline" from 1970 to 1976 (Roettger 1978). During the 1970s Lowi's interpretation of power and policymaking was not effectively challenged by other scholars. The power-elite theory of C. Wright Mills had been discredited within political science by the criticisms of the pluralists, led by Robert A. Dahl (Mills 1956; Dahl 1961), although political scientists often apply a version of elite theory to foreign policy decisions. The more complex elitist theory of Thomas R. Dye (ranked third in the above survey) and L. Harmon Zeigler simply included Lowi's policy-area elites as a part of their description of a national policymaking elite numbering in the thousands (1975, pp. 274–276, 394). Faced with about twenty case studies of particular national policy areas tending to support Lowi's theory, the pluralists did not attempt a general criticism of Lowi's views. Instead, they directed their research at dealing with the question of control of the political agenda (Polsby 1980). Lacking much in the way of opposing argument, Lowi's views about power and policymaking were preeminent for about a decade. However, research by a later generation of pluralists found that many areas of domestic policymaking actually show numerous interest groups in contention with one another, thereby precluding domination of a policy area by a single coalition (Walker 1991). These neopluralist critics agreed that the pattern described by Lowi can be found in some areas, known as "policy niches."

The End of Liberalism is based on Lowi's previous delineation of three types of public policies: distributive, regulatory, and redistributive. (Lowi added a fourth, government reform, somewhat later.) Distributive policies encompass the distribution of particular benefits, usually material ones such as government contracts, grants, and construction projects. As interest groups cooperate to divide up such goods, distributive policies tend to exhibit little conflict and are characterized by interest-group liberalism. Regulatory policies regard the passage and enforcement of legal regulations such as labor law, civil rights law, environmental rules, and so forth. Such policy areas often show the politics of pluralist conflict among interest groups, unless the regulations set unenforceable standards, in which case interest-group liberalism prevails. Redistributive policies take wealth from the rich and give to the poor, and are characterized by class politics, uncommon in the United States. Lowi's contrasts among these three types of policies are now widely accepted by political scientists.

SEE ALSO *Elite Theory; Lynd, Robert and Helen; Networks; Social Movements*

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Andrew McFarland

LOWIE, ROBERT
1883–1957

Robert Harry Lowie, an Austrian-American anthropologist, was one of the leaders of Franz Boas's (1858–1942) first generation of students. Lowie was noted for his contributions to American Indian ethnography, social structure, and ethnological theory.

Born to a middle-class Jewish family in Vienna, Austria, Robert Lowie was the son of Samuel Lowie, a Hungarian-born businessman, and Ernestine Kuhn Lowie, the daughter of a Viennese physician. Immigrating with his family at the age of ten, he attended public school in New York City. In 1901 Lowie graduated with a BA in classics from the City College of New York. After teaching briefly in the New York school system, he enrolled in Columbia University, where he was soon attracted to anthropologist Franz Boas and his embodiment of German scientific ideals. Entering the doctoral program in anthropology in 1904, Lowie earned his PhD in 1908 with a dissertation on "The Test-Theme in North American Mythology."

Robert Lowie joined curator Clark Wissler (1870–1947) at the American Museum of Natural History, which sponsored Lowie's first field work in 1906 among the Lemhi (Northern Shoshone) of Idaho. The following year, Lowie officially joined the staff of the museum as an assistant, becoming assistant curator in 1909 and associate curator in 1913. During his tenure at the museum, Lowie carried out most of his ethnographic fieldwork, studying the Assiniboine, Northern Blackfoot, Chipewyan, Hidatsa, Southern Ute, Southern Paiute, Northern Paiute (Paviotso), Washo, and Hopi. Despite this wide range, Lowie's specialty was the Native peoples of the Great Plains, particularly the Crow of Montana. He first worked among them in 1907, returning every summer from 1910 to 1916, and again in 1931.

In most respects, Lowie's ethnography was thoroughly Boasian. Motivated by the "salvage paradigm," predicated on the disappearance of Native cultures, in his ethnography he focused on a general cultural survey that called for the mapping of cultures and languages. His fieldwork was also holistic and comprehensive, studying every aspect of a group's culture from artifacts to social organization to religion and mythology.

After spending a year teaching anthropology at the University of California, Berkeley (1917–1918), Lowie joined the faculty as an associate professor in 1921, becoming a full professor in 1925 and retiring in 1950. During the 1930s, Lowie developed a new areal interest: South America. He edited and translated the writings of Curt Nimuendajú (1883–1945), a German-Brazilian ethnographer of the Ge-speaking peoples of Brazil. These interests led to his planning and support for the *Handbook of South American Indians* (1946–1959), edited by his student Julian Steward (1902–1972).

Many of Lowie's books stemmed from his interest in summarizing the state of anthropological knowledge and communicating it to a broadly educated general audience; these included *Culture and Ethnology* (1917), *Primitive Society* (1920), *Primitive Religion* (1924), and *Social Organization* (1948). His interest in cultural critique, expressed in *Are We Civilized?* (1929) and other essays of the 1920s, led to his *Toward Understanding Germany* (1954), a detailed anthropological analysis of a European society.

In anthropological theory, Robert Lowie was known for his empiricism, inspired by youthful influences of Ernst Mach (1838–1916) and Ernst Haeckel (1834–1919). Lowie thought it important to emphasize facts and distinguish them from interpretation, amassing full and accurate evidence with an aversion to premature generalization. At the center of his interests was social organization, both in kinship and in voluntary associations such as Plains Indian military societies. *Primitive Society*, his major work on the subject, embodied the Boasian critique of Lewis Henry Morgan's (1818–1881) unilinear evolution. Lowie's famed characterization of culture as "a thing of shreds and patches" expressed the Boasian belief that while the sources of any given culture might be diverse, they were integrated in a unique pattern. Lowie extended this approach in his formulation of the method of controlled comparison. His interest in the philosophy of science revealed itself in his *History of Ethnological Theory* (1937), one of the first summaries of its kind. Like all his work, it was distinguished for its grasp of international scholarship.

In 1933, at the age of fifty, Lowie married Luella Cole (1893–1970), a psychologist; they had no children. In the course of his long career, Lowie received many professional honors, including service as the editor of *American Anthropologist* (1924–1933) and president of the American Folklore Society (1916–1917), American Ethnological Society (1920–1921), and American Anthropological Association (1935–1936). A socialist in his youth, he was a pacifist during World War I (1914–1918) and a passionate opponent of Nazism. Robert Lowie died of cancer in Berkeley; his papers are preserved

at the Department of Anthropology of the American Museum of Natural History and the Bancroft Library at the University of California, Berkeley.

SEE ALSO *Anthropology; Boas, Franz; Ethnography; Jews; Native Americans; Nazism; Observation, Participant; Pacifism; Socialism*

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Ira Jacknis

LOW-INCOME LIFESTYLES

SEE *Lifestyles.*

LOYALISTS

Loyalism is a form of group identity based on the idea of fealty to the political status quo. The status quo is typically an imperial order like the Spanish or British empires or the French *ancien régime*. Sometimes, as in the Spanish case, the term *royalist* is used, while at other times *counterrevolutionary* may be applied. What is significant from the point of view of nationalism and ethnic studies is that in some cases entire ethnic groups may define themselves through their loyalty to a monarch. In colonial situations, numerous ethnic groups like the Ambonese in Indonesia or Karen of Burma favored retention of the colonial tie and were "loyal" in this way. However, these groups did not rely on loyalty to the empire as a prop of identity. In historical terms, use of the word *loyalist* has therefore principally focused on those "British" peoples who defined themselves through their loyalty to the British Empire in North America and Ireland.

In the American colonies in the mid-eighteenth century, there was no movement for independence. The settlers, 98 percent of them Protestant and 80 percent deriving from the British Isles, were content to remain in the empire. They defined themselves as English-speaking Protestants who had won a victory for Britain in the Seven Years' War (1756–1763) against the Catholic French and their Indian allies in North America. The sphere of battle covered present-day Canada (Quebec, Ontario, Nova Scotia) as well as the United States (New York, Pennsylvania) in one undifferentiated whole. George Washington (1732–1799) played an important role on the British side.

Prior to about 1774, the identity of the American loyalists could well be described as dualistic. On the one hand, they saw themselves as "Americans" with a distinct geographical and cultural particularity. On the other hand, they identified with the British flag, language, and (Protestant) religion against the Spanish and French, as well as the British Empire and its mission (Colley 1992). Independence altered this calculus for roughly two-thirds of the colonists, but one-third remained loyal to the British Crown. Persecution—extending to tarring and feathering and land seizures—led most to downplay their allegiance or flee. Approximately 19,000 loyalists fled to present-day Canada, forming the United Empire Loyalists. These loyalists were the first major British Protestant settlers in Canada and largely laid down the dialect, ideology, and institutions of English-speaking Canada. In 1812 key loyalists like Sir Isaac Brock (1769–1812) and the Mohawk leader Joseph Brant's son John Brant played a role in rebuffing the American invasion of Canada. This became part of the mythology of the United Empire Loyalists, which was celebrated a century later by British Canadians, most of whom were not

descendants of the American loyalists, but of subsequent waves of American economic migrants and British immigrants (Kaufmann 1997).

At the time of Canadian confederation in 1867, roughly half the English-speaking population of Canada was of Scottish or Irish-Protestant extraction. The large-scale movement of Irish-Protestant settlers to Canada brought the other major "loyalist" ethnic group together with its Canadian soul mate. Protestants in Ireland were mainly the descendants of English and Scottish settlers from the early 1600s. The Anglo-Irish elite derived from a longstanding high-church Anglican population whose cultural life was centered upon Dublin. However, the bulk of the Protestant population was "planted" by the British Crown from Elizabethan times (post–1600), mainly in the nine northern counties comprising Ulster.

Irish loyalism was initially divided because Presbyterians and other dissenting sects experienced discrimination (such as the nonrecognition of marriages) from the Anglican authorities. Fired by Whig ideas, Presbyterians were in the forefront of both the American Revolution (1775–1783) and the uprising of the United Irishmen in Ireland in 1798. Both movements sought independence from Britain and were inspired by liberalism rather than anti-Catholicism. However, popular conflict at the everyday level between Protestants and Catholics was a reality upon which political entrepreneurs could draw. After all, there was a history of sectarian strife and bloodshed, especially around the English Civil War in the 1640s. As the United Irishmen began to seek support from the Catholic Defender movement, with its Catholic-rights agenda, a countermovement sprang up among the Protestants. This movement coalesced into the Loyal Orange Order, formed in 1795 near Portadown in County Armagh after a series of local sectarian skirmishes. Based on the structures of freemasonry, Orangeism rapidly spread throughout Ireland, where it espoused an ideology of loyalty to Protestantism and to the Crown, which served as the political defender of Protestantism in the British Empire (Haddick-Flynn 1999).

Orangeism was soon exported to Scotland and England (by 1810) and Canada (by 1820) with returning British soldiers and through Irish-Protestant emigration. In Canada, it was so successful that it surpassed the Irish organization in numbers soon after 1900. The late nineteenth century saw the emergence of a full-blown Britannic nationalism, an expression of pride in British ethnic origins and political achievements that spanned Britain, Ireland, Canada, Australasia, and South Africa (Cole 1970). This imperial sentiment colored loyalism in Canada and Ireland. But it never displaced the metropole-settler dualism that is the hallmark of loyalist identity.

The decline of the British Empire drove home the local (or settler) side of loyalist identity for Canadians (as well as Australians, Scots, and Newfoundlanders), leading to new expressions of local nationalism in these places. In Canada, loyalism died hard, as witnessed in the 1965 debate over whether to retain the Union Jack or adopt a new maple leaf flag (Buckner 2004). In Ireland, the home rule crisis of 1884 to 1886 proved the last time that the Irish Protestants could count on Unionist support from mainland Britain. After the second home rule crisis of 1912 to 1914, Irish Protestants began to militarily organize and mentally prepare themselves to go it alone in the six Protestant-majority counties in the northeast of Ulster. The Northern Ireland Act of 1922 recognized the Protestant-dominated Northern Ireland state, restoring the British loyalty of the Ulster-Protestants. However, this loyalism was tested again in the 1960s when agitation by the 35-percent Catholic minority led the British government to press loyalists to reform their system of local government and housing, and share power with Catholics. When such reforms were not forthcoming, the British stepped in to directly rule the province, but by then the Irish Republican Army (IRA) military and terror campaign was in full swing. Twenty-five years of bombing and violence ensued, as the British army and its loyalist auxiliaries (local police and defense regiments) tried to subdue the IRA.

With the IRA ceasefires in 1995 and 1997, and the Good Friday Agreement of 1998, some saw a new dawn for Northern Ireland. Catholics made gains toward economic and political parity with Protestants, but power sharing, premised on the inclusion of Sinn Fein/IRA in government, proved a nonstarter for most Protestants. By 2007, decommissioning of IRA weapons remained the main obstacle to peace, but changes within loyalism were also important. Loyalists have increasingly turned inward, shifting from being "loyal" to "rebel" Unionists (Kaufmann 2007). Skeptical of Britain for "selling us out," they have begun to celebrate their Scottish roots, their Ulster-Scots dialect, and their role in anti-British episodes like the American Revolution and even the United Irish uprising. Though most identify as "British," this label does not connote civic attachments to the British state, but rather an ethnic attachment to the Ulster-Protestants and their six-county homeland of "Ulster."

SEE ALSO *American Revolution; Colonialism*

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Eric P. Kaufmann

LSD

SEE *Drugs of Abuse; Hallucinogens.*

LUCAS, ROBERT E., JR.

1937–

Born September 15, 1937, in Yakima, Washington, Robert E. Lucas Jr. was the first child of the owners of the Lucas Ice Creamery, which did not survive the 1937–1938 downturn. After completing his BA in history at the University of Chicago in 1959, he enrolled in graduate school at the University of California at Berkeley, where he became interested in economic history and decided he needed more background in economics. This brought him back to the University of Chicago, where he became so interested in economics that he obtained his PhD in this field in 1964. Lucas worked at Carnegie Mellon University, originally known as the Carnegie Institute of Technology, until 1974, when he returned once again to the University of Chicago. In 1995 Lucas received the Nobel Memorial Prize in Economics "for having developed and applied the hypothesis of rational expectations, and thereby having transformed macroeconomic analysis and deepened our understanding of economic policy." Indeed he is often considered the preeminent macroeconomist of the last quarter of the twentieth century.

Lucas is one of the founding fathers of new classical macroeconomics, which contrasts sharply with the Keynesian insights that dominated macroeconomics through the 1960s. The new classical paradigm starts from the premise that economics has to account for the decisions made by firms and people in ways that are consistent with the idea of optimizing behavior, because ad hoc assumptions about their behavior are not compatible with the microfoundations of economic theory. At the same time Lucas criticized the typical Keynesian assumptions that markets do not clear and that economic agents do not always pursue optimizing strategies. In addition he challenged adaptive expectations economists for working with models that forecast better than agents, thereby leaving space for the non-neutrality of money in the short run. These insights are associated with, among others, Milton Friedman and Anna Schwartz. Instead, Lucas obliterated the distinction between the short run and the long run. Overall then Lucas may be viewed as replacing earlier ad hoc treatments with an approach squarely based on the microfoundations of incentives, information, and optimization.

Lucas has made contributions to a wide variety of fields, including financial economics, monetary theory, public finance, international economics, and economic growth. In the last he contributed the insights that human capital accumulation has significant external effects and that learning by doing plays an important role in the process of human capital accumulation. He is known especially for the so-called Lucas critique, according to which parameters of economic relationships are likely to change due to policy changes, rendering them unreliable for making policy recommendations. By overturning the basis for governmental fine-tuning, this transformed thinking on economic policy and inspired Lucas to develop powerful and operational methods for drawing conclusions from models that avoid this pitfall. In particular he is known for his efforts to embed theories in general equilibrium dynamics.

The attempts of Lucas and his colleagues to create microfoundations for macroeconomics ran into a major stumbling block in the shape of the Sonnenschein-Debreu-Mantel results, which established that the standard microeconomic model has almost no implications for macrobehavior. In response macroeconomists have turned to representative agent analysis (Kirman 1992) and endeavored to incorporate some kind of bounded rationality (Sargent 1993; Sent 1997). In some sense, this is moving them away from Lucas's original insights.

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Esther-Mirjam Sent

LUCAS CRITIQUE

In an extremely influential 1976 article, American economist Robert E. Lucas Jr. questioned the ability of econometric models to predict the effect of policy experiments. According to Lucas, reduced-form econometric models are not able to provide useful information about the outcomes of alternative policies because the structure of the economy changes when policy changes.

Lucas describes the economy in time, t, by a vector y_t of state variables, a vector x_t of exogenous forcing variables, and a vector ε_t of independent and identically distributed random shocks. One estimates the values of a fixed parameter vector θ, with the F function of behavioral relationships suggested by economic theory:

$$y_{t+1} = F(y, x, \theta, \varepsilon) \qquad (1)$$

With knowledge of F and θ, policy evaluation becomes straightforward. However, F and θ derive from (optimal) decision rules of the economy. It is the central assumption that once F and θ are approximately known, they will remain stable under arbitrary changes in the behavior of x_t. To assume stability of (F, θ) under alternative policy rules is to assume that agents' views about the behavior of shocks to the system are invariant under changes in the true behavior of these shocks. The empirical implication is that the estimated vector θ is not invariant but will change with policy interventions, which invalidates forecasts and policy predictions. Under (1), Lucas (1976) discusses in turn the aggregate consumption function, the investment function (reconsidered in Oliner et al. 1996), and the popular Phillips curves of the 1970s.

The reaction to the Lucas critique has been to formulate dynamic macromodels with rational expectations and optimizing foundations. Empirical evidence has suggested that price and real variables exhibit gradual responses to shocks. Given that forward-looking specifications with those desirable foundations do not replicate features from the data, reconsiderations have followed, such as Arturo Estrella and Jeffrey Fuhrer (2002) in macromodels and George Evans and Garey Ramey (2006) under adaptive expectations.

Other studies have delved into the framework in (1). Jesper Lindé (2001) examines money demand (MD) and consumption functions (CF) to see whether the θ-parameters are dependent on the monetary policy Taylor-rule (TR). There are two sets of observations [1, 2,…, T/2; and (T/2) + 1,…, T] under the assumption that TR changes unexpectedly after T/2 periods from one monetary policy regime to another. See also Richard Clarida et al. (2000) on shifting monetary policies at the U.S. Federal Reserve.

Estimating parameter vectors for all functions in both subperiods (θ^1 and θ^2), Lindé employs breakpoint tests to see whether the null hypothesis of equal parameters is rejected and concludes that the Lucas critique is quantitatively important in a statistical sense. It remains to be seen whether changes in the θ-parameters are sufficiently large to cast doubt on forecasting exercises. The methodology then tests, according to the Lucas critique, whether the null (H_0: $\theta^1_{MD} = \theta^2_{MD} | \theta^1_{TR} \neq \theta^2_{TR}$) is false. If the computed probabilities of rejecting parameter stability in MD and TR at the same time are low, the power of the test (defined as $1 - \beta$, where β is the type-II error or the probability of not rejecting H_0 given that H_0 is false) is low in small samples. Simulations in Lindé suggest this is indeed the case, although the tests are given the best possible environment for detecting regime shifts. This implies that the methodology used is not capable of detecting the relevance of the Lucas critique in small samples. This negative finding suggests further work along these lines seems warranted.

SEE ALSO *Economics, New Classical; Expectations; Expectations, Rational; Lucas, Robert E., Jr.; Policy, Fiscal; Policy, Monetary*

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Andre V. Mollick

LUCK

Luck exerts a dramatic influence over people's lives. It has the power to transform the improbable into the possible; to make the difference between life and death, reward and ruin, happiness and despair. But how do psychologists examine this elusive concept, and what has this work revealed?

Some researchers have examined why some people are consistently lucky while others encounter little but ill fortune. This work has employed a variety of methods, including interviews, diary studies, personality questionnaires, and laboratory-based research. The findings suggest that luck is not a magical ability or the result of random chance. Instead, although lucky and unlucky people have almost no insight into the real causes of their good and bad luck, their thoughts and behavior are responsible for much of their fortune. Lucky people tend to be skilled at creating and noticing chance opportunities, create self-fulfilling prophesies via positive expectations, and adopt a resilient attitude that transforms bad luck into good.

Take, for example, the notion of "lucky breaks." Lucky people consistently report encountering such opportunities whereas unlucky people do not. Researchers have conducted several experiments to discover whether this is due to differences in their ability to spot such opportunities. One such experiment involved giving both lucky and unlucky people a newspaper, asking them to look through it, and asking them to state how many photographs were inside. Participants were unaware that a large opportunity had been placed in the newspaper, in the form of an advertisement announcing: "Tell the Experimenter You Have Seen This and Win $250." The message took up half of the page and was written in type that was over 2 inches high. However, the unlucky people tended to miss the ad and the lucky people tended to spot it. Why was this the case?

Personality tests suggest that unlucky people are generally much more tense and anxious than lucky people, and research has shown that anxiety disrupts people's ability to notice the unexpected. In one experiment, people were asked to watch a moving dot in the center of a computer screen. Without warning, large dots would occasionally be flashed at the edges of the screen. Nearly all participants noticed these large dots. The experiment was then repeated with a second group of people, who were offered a large financial reward for accurately watching the center dot. This time, people were far more anxious during the experiment. They became very focused on the center dot and over one-third of them missed the large dots when they appeared on the screen. The harder they looked, the less they saw. And so it is with luck: unlucky people miss chance opportunities because they are too focused on looking for something else; lucky people are more relaxed and open, and therefore see what is there rather than just what they are looking for.

Another important aspect of the psychology of luck revolves around the way in which lucky and unlucky people deal with the ill fortune in their lives. Imagine an individual is chosen to represent his or her country in the Olympic Games. The participant competes in the games, does very well, and wins a bronze medal. How happy would the person feel? Most people would probably be overjoyed and proud of their achievement. Now imagine instead that the individual competes at the same Olympic Games a second time. This time he or she does even better, and wins a silver medal. How happy would the person feel now? Most people think that one would feel happier after winning the silver medal. This is not surprising. After all, the medals are a reflection of one's performance, and the silver medal indicates a better performance than a bronze medal. But research suggests that athletes who win bronze models are actually happier than those who win silver medals. And the reason for this has to do with the way in which the athletes think about their performance. The silver medalists focus on the notion that if they had performed slightly better, then they would have perhaps won a gold medal. In contrast, the bronze medalists focus on the thought that if they had performed slightly worse, then they would not have won anything at all. Psychologists refer to one's ability to imagine what might have happened, rather than what actually did happen, as counterfactual thinking.

Lucky people use a certain type of counterfactual thinking to soften the emotional impact of the ill fortune that they experience in their lives. In one study, lucky and unlucky people were presented with some imaginary scenarios and asked how they would react. For example, one such scenario involved the following:

> Imagine that you are waiting to be served in a bank. Suddenly, an armed robber enters the bank, fires a shot and the bullet hits you in the arm. Would this event be lucky or unlucky?

Unlucky people tended to say that this would be enormously unlucky and it would be just their bad luck to be in the bank during the robbery. In contrast, lucky people viewed the scenario as being far luckier, and often spontaneously commented on how the situation could have been much worse. Lucky people tend to imagine spontaneously how the bad luck they encounter could have been worse and, in doing so, they feel much better about themselves and their lives. This, in turn, helps keep their expectations about the future high, and, increases the likelihood of them continuing to live a lucky life.

People have searched for an effective way of improving the good fortune in their lives for many centuries. Lucky charms, amulets, and talismans have been found in virtually all civilizations throughout recorded history. Such beliefs represent people's attempts to control and enhance their luck. Research suggests the time has come for them to put their lucky charms away, and start to change the way they think and behave.

SEE ALSO *Magic; Miracles; Mysticism; Risk; Social Psychology*

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Richard Wiseman

LUCY

SEE *Johanson, Donald.*

LUDDITES

Few groups have been more misunderstood and have had their image and name more frequently misappropriated and distorted than the Luddites. The term *Luddite* has typically referred to an individual who is opposed to technological change, and is derived from various tales in the Midlands stocking trade about an apprentice named Ned or Edward Ludd who broke his frame or needles in response to his master's strict discipline. (No actual person named Ned Ludd has been identified.) The Luddites were not, as popularizers of theories of technology and capitalist apologists for unregulated innovation claim, universally technophobes. They were artisans—primarily skilled workers in the early-nineteenth-century English textile industry. When faced with attempts to drive down their wages through the use of machines (operated at lower wages by less-skilled labor) the Luddites turned to wrecking the offensive machines and terrorizing the offending owners in order to preserve their wages, their jobs, and their trades. These men objected not only to the threat to their wages, but also to the production of cheap, inferior goods, which they feared would damage the reputation of their trades. Machines were not the only, or even the major, threat to the textile workers of the Midlands and North, however. The Prince Regent's Orders in Council, barring trade with Napoleonic France and nations friendly to France, cut off foreign markets for the British textile industry. Even more importantly, high food prices required more of each laborer's shrinking wages. Machines and those masters who used them to drive down wages were simply the most accessible targets for expressions of anger and direct action.

LUDDITE DEMOGRAPHICS

The Luddites varied by region and profession. In the Midlands counties of Nottinghamshire, Leicestershire, and Derbyshire, the Luddites comprised (almost exclusively) workers in the framework-knitting and lace trades. Midlands Luddism began in 1811 and ended in 1817 with the executions of men convicted for their roles in the 1816 attack on John Heathcoat's Loughborough mill. Yorkshire Luddism centered on the woolen trade. Most Yorkshire Luddites were croppers (highly skilled artisans who cropped the nap off of woven woolen cloth to smooth it), but the croppers found support among other skilled workers, such as saddle-makers. Yorkshire Luddism began in early 1812 and ended with the executions of several convicted Luddites in York in 1813. Luddism in the Cotton Districts surrounding Manchester encompassed not only trade-based protest but also political agitation. Luddites there were made up largely of cotton weavers, supported at times by colliers and by women in no trade at all, but spinners also played an important role in Luddite riots in Manchester and Flintshire. In Manchester, north Cheshire, and north Derbyshire, Luddism was frequently joined to food rioting and agitation for political reform.

PRIOR HISTORY OF MACHINE-BREAKING

The Luddites were neither the first nor only machine wreckers. Because organized, large-scale strikes were impractical due to the scattering of factories throughout

different regions, machine-wrecking, which E. J. Hobsbawm calls "collective bargaining by riot," had occurred in Britain since the Restoration. For example, in 1675 narrow weavers in the area of Spitalfields destroyed "engines," power machines that could each do the work of several people, and in 1710 a London hosier employing too many apprentices in violation of the Framework Knitters Charter had his machines broken by angry framework knitters, also called stockingers. Even parliamentary action in 1727, making the destruction of machines a capital felony, did little to stop the activity. In 1768 London sawyers attacked a mechanized sawmill. Following the failure in 1778 of the stockingers' petitions to Parliament to enact a law regulating "the Art and Mystery of Framework Knitting," Nottingham workers rioted, flinging machines into the streets. In 1792 Manchester weavers destroyed two-dozen Cartwright steam looms owned by George Grimshaw. Sporadic attacks on machines (wide knitting frames, gig mills, shearing frames, and steam-powered looms and spinning jennies) continued, especially from 1799 to 1802 and through the period of economic distress after 1808.

THE COURSE OF LUDDISM

The first incident during the years of the most intense Luddite activity, 1811 to 1813, was the March 11, 1811, attack upon wide knitting frames in a shop in the Nottinghamshire village of Arnold, following a peaceful gathering of framework knitters near the Exchange Hall in Nottingham. In the preceding month, framework knitters had broken into shops and removed jack wires from wide knitting frames, rendering them useless without inflicting great violence upon the owners or incurring risk to the stockingers themselves; the March 11 attack was the first in which frames were actually smashed and the name "Ludd" was used. The grievances consisted, first, of the use of wide stocking frames to produce large amounts of cheap, shoddy stocking material, and, second, of the employment of "colts," workers who had not completed the seven-year apprenticeship required by law. Employers' violations not only of the law against hiring "colts," but of a number of other laws as well—such as the prohibition against the use of the gig mill and the limitation on the number of looms any weaver could possess—provided Luddites with justification for direct action against the employers. In probably the best example of such validation, the framework knitters, who launched the Luddite protests in Nottingham in 1811, justified their actions by referring to their own originary or constitutive charter, the 1663 Charter of the Company of Framework Knitters.

Frames continued to be broken in many of the villages surrounding Nottingham. The March 23, 1811, and April 20, 1811, *Nottingham Journal* reported several weeks of almost nightly attacks in the villages, all successful and carried out with no arrests. The summer of 1811 was quiet, but a bad harvest helped to renew disturbances in November, when, as the story goes, stockingers assembled in the wooded lands near Bulwell and were led in attacks on a number of shops by a commander calling himself Ned Ludd.

Midlands authorities' letters dated November 13 and 14, 1811, request that the government dispatch military aid because "2,000 men, many of them armed, were riotously traversing the County of Nottingham." In December 1811 public negotiations between the framework knitters and their employers, the hosiers, failed to result in the return of wages, piece rates, and frame rents to earlier levels or in any satisfactory improvement of the framework knitters' economic circumstances. Framebreaking continued in Nottinghamshire, Derbyshire, and Leicestershire through the winter and early spring of 1812. It resurfaced in 1814 and again in Leicestershire in the autumn of 1816.

The first signs of the spread of Luddism to the cotton-manufacturing center of Manchester and its environs in Lancashire, Cheshire, and Flintshire materialized in December 1811 and January 1812. Manchester Luddism centered on the cotton-weaving trade, which was suffering from the use of steam-powered looms, but Luddites there were active in defense of the spinning trade as well. In Manchester, unlike Nottingham, large factories housed the offensive machinery. Large numbers of attackers tended to carry out the Luddite raids in and around Manchester; these also often coincided with food riots, which provided crowds that were large enough to carry out the factory attacks. Luddite activity continued in Lancashire and Cheshire into the summer of 1812 and blended into efforts to establish larger trade combinations and into political reform, but the force of Luddism dissipated following the acquittal of dozens of accused Luddites in Lancaster later that year.

The factory owners and cloth merchants of the woolen industry in the West Riding of Yorkshire were the targets of Luddism in that county. Although West Riding Luddites represented a variety of skilled trades, the most active and numerous by far were the cloth dressers, called croppers, whose work was threatened by the introduction of the shearing frame. The croppers' work consisted of using forty- or fifty-pound handheld shears to cut, or crop, the nap from woven woolen cloth in order to make a smooth and salable article. They were threatened by two types of machines. The gig mill, which had been prohibited by law since the rule of Edward VI, was a machine that raised the nap on woolen cloth so that it might be sheared more easily. The shearing frames actually mechanized the process of shearing and reduced the level of skill

and experience necessary to finish an article of woolen cloth, even though the machines could not attain the quality of hand-cropped cloth. From January 1812 through midspring, Luddite attacks in Yorkshire concentrated on small cropping shops as well as large mills where frames were used. In April, Luddites began to attack mill owners and raided houses and buildings for arms and lead. Luddism began to lose steam after the failed attack upon Rawfolds Mill and the murder of mill owner William Horsfall by George Mellor and other Luddites. By the next winter, West Riding Luddism had run its course, even though after the January 1813 executions of Mellor and other Luddites a few more threatening letters were sent to public officials.

In all three regions, Luddites responded to the distressing concurrence of high food prices, depressed trade caused by the wars and by the trade prohibitions imposed under the Orders in Council, and changes in the use of machinery so as to reduce wages for the amount of work done. That machinery alone was not the primary cause of Luddite anger is evident in the cessation of Luddism. Luddite activities ended following the rescinding of the Orders in Council, some wage and usage concessions, and some reduction in food prices. While Malcolm Thomis (1970) has argued that Luddism was not a concerted agitation for political reform, but simply a common label applied to a range of unconnected protestors in different trades in different regions, it is perhaps more accurate that there were several Luddisms (see Randall 1991; Binfield 2004). Despite its brief run, Luddism ought to be understood, as J. L. Hammond and Barbara Hammond (1919) and E. P. Thompson (1963) have argued, as an important step in the formation of a class-consciousness and in the development of labor unions in Britain.

SEE ALSO *Machinery; Machinery Question, The; Technology; Technophobia*

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Kevin Binfield

LUDIC DIMENSION

SEE *Rituals.*

LUKACS, GEORG

1885–1971

Georg Lukacs was a Hungarian Marxist philosopher who was profoundly influential on leftist social thought and whose reputation has fluctuated in light of a long life of controversy and productivity. Like his early friend and contemporary, Karl Mannheim, Lukacs was originally trained in Neo-Kantian philosophy, especially Georg Simmel's formalist aesthetics. The theme of form overcoming matter through collective action, prominent in this period as an account of artistic schools, became a hallmark of Lukacs's generally realist aesthetic sensibility as well as his approach to revolutionary politics.

The turning point in Lukacs's life came in 1917 with the onset of the Bolshevik Revolution. As Lukacs himself put it, he became eager to play St. Augustine to Lenin's Jesus. He thus spent the rest of his life systematizing and justifying Communist ideology, including service as a high-ranking party official in both Moscow and Budapest. While often the dutiful apparatchik, Lukacs sometimes dissented and distanced himself from Leninist and Stalinist policies, more so after Stalin's death, albeit through the communist practice of "self-criticism." Here Lukacs may be compared with Martin Heidegger, who originally saw Hitler as his standard-bearer but then withdrew from Nazi politics once his own ambitions were thwarted—though never with a formal renunciation.

To his defenders, Lukacs's most enduring legacy is a scholarly recovery of the Hegelian roots of Marxism, otherwise known as "Marxist humanism." Instead of reading

Marx as a strict economic determinist or scientific materialist, as a focus on *Capital* might suggest, Lukacs stressed Marx's original training in dialectics as applied to the law. On this basis, Lukacs popularized the term "alienation" to express what he called the "reification" of social relations, whereby people come to be defined in terms of properties that are subject to exchange relations. Following Marx, the key human property for Lukacs is labor, which he understood more as an open-ended and dynamic "praxis" than a mathematical constant in a production function.

This rather existentialist conception of the Marxist project influenced the Frankfurt School's emphasis on culture in the 1920s and was revived as a distinctly post-Stalinist "Western Marxism" in the 1960s, which continues to underwrite most academic Marxist theory, especially in the humanities. However, Lukacs used his revisionist reading of Marx to idealize Lenin's practice of organizing a vanguard of intellectuals to consolidate class consciousness in the workers, rendering them a "proletariat" possessed of what Lukacs called the "objective possibility" of revolutionizing society.

The continuing allure of Lukacs's version of Marxism lies in its thoroughly formal characterization of the conditions for revolutionary politics, one that does not presuppose the success of any historic revolutions. That the first Marxist revolution occurred in Russia, not Germany as Marx had predicted, and that it lost many of its admirers after Lenin's death, did not deter Lukacs from developing the basis for what feminists nowadays call a "standpoint" theory oriented toward groups that combine centrality to and alienation from the means of production of society. Whichever group occupies such a position is potentially the party of revolution.

SEE ALSO *Alienation; Collective Action; Communism; Existentialism; Frankfurt School; Hegel, Georg Wilhelm Friedrich; Kant, Immanuel; Lenin, Vladimir Ilitch; Mannheim, Karl; Marx, Karl; Revolution; Russian Revolution; Stalin, Joseph; Stalinism*

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Steve Fuller

LULA

SEE *Integration.*

LUMPENPROLETARIAT

The word *lumpenproletariat* means literally "ragged proletariat." In the view of Karl Marx (1818–1883) and Friedrich Engels (1820–1895), the lumpenproletariat consists of people who subsist on the margins of society and scavenge a living from illegal or semi-legal activities, such as prostitution and petty thieving, and the underworld involved therein. The attitude of Marx and Engels to this group is extremely negative. In the locus classicus of the *Communist Manifesto* (1848), they are described as "the dangerous class, the social scum, that passively rotting mass thrown off by the lowest layers of old society" (McLellan 1977, p. 229). While such a group might be swept into joining the proletarian cause in a revolution, "its conditions of life," continued Marx and Engels, "prepare it far more for the part of a bribed tool of reactionary intrigue." And this description found empirical confirmation in the role that Marx conceived the lumpenproletariat to have played in the 1851 coup d'état of Louis Bonaparte (1808–1873) in France.

The reason for this negative assessment of the lumpenproletariat by Marx and Engels can be found in their conception of the role of classes in historical development. A class was defined by its relationship to, and potential control of, the means of production. In ancient society, the ruling class owned the slaves; in feudal society, the king and the barons owned the land; in contemporary society, the capitalists owned the factories and the proletariat owned (and was compelled to sell) its labor. According to Marx and Engels, as history unfolded, each new class was swept to power by its ability to gain control over the ever-changing forces of production. In their own society, they foresaw the decline of the bourgeoisie due to inherent crises in capitalism and the coming to power of the increasingly class-conscious proletariat who, as the majority of society, would be able to organize the productive forces with which they worked for the benefit of all rather than the few.

In this optimistic scenario, the lumpenproletariat had no positive role to play. This was because they had only a negative role vis-à-vis the forces of production. Whereas the proletariat was intimately involved in the forces of production in that industrialization made them more numerous, more cohesive, and more antipathetic to their exploitation therein, the lumpenproletariat, being essentially rootless and venal, could have no clear historical destiny.

This view found some confirmation in the 1851 coup d'état of Louis Bonaparte. It is in his analysis of the class context of this coup, titled the *Eighteenth Brumaire of Louis Bonaparte* (1852), that Marx most fully described his view of the lumpenproletariat. In a period of French history where neither the rising proletariat nor the declining bourgeoisie could attain political power, the lumpenproletariat could come to dominate by selling itself to

Louis Bonaparte, who was "an adventurer blown in from abroad, raised on the shield by a drunken soldiery, which he has bought with liquor and sausages and which he must continually ply with sausage anew" (McLellan 1977, p. 317). Louis Bonaparte could achieve this by relying on the army, which was itself "the swamp-flower" of the peasant lumpenproletariat.

Thus Marx's view of the "ragged" section of the proletariat is very different from *The Ragged Trousered Philanthropists* (1914) of Robert Tressell's (1870–1911) famous social realist novel. Being outside the process of production, the lumpenproletariat were not a class in the sense in which Marx and Engels usually used the term. Unlike the proletariat itself, the evolving industrial process subjected them to no revolutionary imperatives. They were either outside the process altogether or effectively counterrevolutionary in that they depended on the aristocracy or the bourgeoisie for their day-to-day existence.

The views of Marx and Engels are in sharp contrast with the anarchist tradition exemplified by, for example, their rival Mikhail Bakunin (1814–1876). For him, destruction was a precondition for building a new society and it was only those outside normal society who could be expected to have the necessary destructive urge that could go as far as terrorism and assassination. A more modern version of the view that salvation can only be found in the excluded was explored in the work of Herbert Marcuse (1898–1979), for whom the all-pervasive conformity of present society could only be disrupted by "the substratum of outcasts and outsiders, the exploited and persecuted of other races and other colours, the unemployed and the unemployable" (Marcuse 1968, p. 201). An advocacy of the revolutionary potential of the lumpenproletariat in the developing world can be found in Franz Fahon's *Wretched of the Earth*. From a more negative point of view there are obviously echoes of the views of Marx and Engels in contemporary discussions of the emergence of an "underclass."

SEE ALSO *Anarchism; Class; Class Consciousness; Communism; Marx, Karl; Marxism; Napoléon Bonaparte; Poverty; Proletariat; Working Class*

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David McLellan

LUMPY GOODS

SEE *McFadden, Daniel L.*

LUMUMBA, PATRICE

1925–1961

Patrice Lumumba was an outspoken African nationalist politician and first prime minister of the Democratic Republic of the Congo. He played a central role in the chaotic and hastily executed decolonization in the Belgian Congo in 1960. His assassination in 1961 by Belgian and American security services, who conspired with his Congolese political enemies, earned him a lasting place as an eloquent and courageous African champion against the excesses of Western governments and corporations.

Lumumba was born in 1925 in Kasai Province, in what was then the Belgian Congo. He completed primary school at a Catholic mission in 1943. He then worked as a clerk for a mining company before joining the Belgian Congo junior civil service as a postal clerk in Stanleyville. His life was typical of the *evolue* underclass of Western-educated and urbanized Africans, who kept the colonial system functioning. Despite his limited education, he was a good writer and brilliant orator.

The recession of the mid-1950s, which occurred as postwar Belgium sought to extract the maximum return from its investments in the Congo, led to high African urban unemployment and mounting discontent. In 1956 an *evolue* group in Léopoldville issued a manifesto calling for independence within thirty years. But both Lumumba, who led the *Mouvement National Congolais* (MNC), and Joseph Kasavuba, the leader of the rival *Alliance des Ba-Kongo* (ABAKO), called for immediate independence.

In response to urban riots in 1959, the Belgian government convened a conference in Brussels to determine the future of the Congo. Lumumba was placed under arrest and charged with inciting anticolonial riots, but when the MNC won a convincing majority at local elections, Lumumba was freed to attend the conference. Under pressure from the MNC, the Belgian government announced that general elections would be held in May 1960 for the newly created national and provincial assemblies, and for a national senate nominated by the provincial assemblies, with independence for the Congo on June 30, 1960. This would be the first experiment with democracy in the colony's history.

Lumumba and the MNC advocated a unitary state with a strong central government. However, parochial interests, with the support of Belgian colonial interests, led to a profusion of ethnic and regional parties. The

MNC emerged as the largest party in the national assembly, but it was unable to govern without a coalition. Parochial tribal-based parties dominated the provincial assemblies.

Following the election, Lumumba became the independent nation's prime minister, with Kasavubu serving as president. At the independence ceremony, Baudouin I, the king of the Belgians, praised Belgian colonialism, provoking Lumumba to a stinging impromptu critique of Belgian colonial rule and the exploitation of Western mining companies. In 1960, many in the West were shocked at an African publicly criticizing a European head of state. Coming in the midst of the cold war, it led the Eisenhower administration in America to view him as "pro-Communist."

Within days, the Congolese army, drawn from the poorest and most marginalized segment of the population, mutinied. With the support of Belgian mining companies, Katanga Province declared its independence under Governor Moise Tshombe. Lumumba appealed to the United Nations for support, but the Security Council divided along cold war lines.

In September 1960, President Kasavubu dismissed Lumumba's government, and Joseph Mobutu, the army chief-of-staff, arrested Lumumba. With the connivance of the U.S. Central Intelligence Agency and Belgian Security Lumumba was handed over to his enemies in Katanga, who murdered him on January 17, 1961.

The Lumumba legacy, like that of John F. Kennedy, has been shrouded by his untimely assassination in a mantle of unrealized promise. On one level, as the hapless victim of Belgian pride and American cold war paranoia, he was to be buried in the past and forgotten. Yet to many non-Europeans in America, the Caribbean, and Africa, the outspoken and charismatic African nationalist became a hero in the struggle against white racism and oppression, one of the martyrs of African liberation. His assassination and the widespread accusations (later confirmed) of American CIA involvement may have served as a warning to others in the anticolonial struggle, but to many ordinary black people, his murder was a confirmation of Western excess, duplicity, and racism. While Lumumba is a forgotten figure in the mainstream Western consciousness, to many black intellectuals his fate remains an indelible stain, a lasting reminder of Western neocolonialism.

SEE ALSO *Anticolonial Movements; Central Intelligence Agency, U.S.; Colonialism; Liberation Movements; Nationalism and Nationality; Neocolonialism*

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David Dorward

LUNDBERG, ERIK
1907–1987

The Swedish economist Erik Filip Lundberg was born in Stockholm into an academic family. His father, Filip Lundberg, was a famous insurance mathematician. After studying economics and mathematics at Stockholm University, Erik Lundberg spent 1931 to 1933 in the United States, where he came under the influence of Wesley C. Mitchell (1874–1948), founder of the National Bureau of Economic Research. Mitchell inspired in Lundberg an interest in empirical research and a certain skepticism toward theory.

Despite this influence, Lundberg wrote a theoretical PhD thesis titled *Studies in the Theory of Economic Expansion.* This thesis earned him an international reputation among economists, but it was his only theoretical work. Lundberg's thesis was completed in December 1936, a few months after the publication of John Maynard Keynes's (1883–1946) *General Theory of Employment, Interest, and Money.* The disposition of Lundberg's work was to some extent adapted to the then-current climate of discussion generated by the *General Theory*, but Lundberg was little influenced by Keynes's book in any other sense. Lundberg, unlike Keynes, discussed both the production side and demand side of the economy, though Lundberg's demand-side theory is similar to Keynes's.

The starting point for Lundberg and for the Stockholm school was to a great extent the Swedish economist Knut Wicksell (1851–1926), though Lundberg was also influenced by Eugen Böhm-Bawerk (1851–1914) and Friedrich August von Hayek (1899–1992), according to whom capital was perceived as time consumption. Prior to Keynes, capital in this sense—that is, the length of the production cycle from raw materials through semi-manufactured products, investment products, and final products—played a role in explaining the business cycle.

Lundberg developed these lines of reasoning, in the spirit of the Stockholm school, into a sequence analysis. The combination of the accelerator principle, which determined investment and the multiplier via consumption, analyzed in a sequence of periods, was shown to

cause instability in free market economies. This theory was dynamic in contrast with Keynes's *General Theory*. Keynes analyzed the equilibrium situations in the economy and compared them with one another, while Lundberg analyzed processes in disequilibrium, namely, the development of the economic system over time. Paul Samuelson (1939) later simplified Lundberg's theory in an elegant mathematical formulation.

After completing his doctoral thesis, Lundberg was drawn into analysis work and economic advisor tasks. He became head of the Swedish National Institute of Economic Research in 1946 and there developed inflation-gap analysis, based on his thesis. The inflation-gap hypothesis was measured, in a closed economy, as the difference between the aggregated effective demand and the production capacity at full employment. Lundberg's years of empirical work resulted in 1953 in his great *Konjunkturer och ekonomisk politik* (Business Cycles and Economic Policy). This is a rich book with retrospective references to economic developments and discussions during the period between the world wars. The book also deals with the conditions for stabilization policy and the efficiency of regulated and planned economies compared to free markets. The significance of free market prices for efficient allocation of resources is also an important theme, one that aroused considerable interest in Swedish economic policy debates.

Lundberg's *Produktivitet och räntabilitet* (Productivity and Rate of Return; 1961) studies the significance of capital formation for economic growth. Lundberg observed, for instance, that the small ironworks of Horndal in central Sweden had not made any net investment during a period of fifteen years, only investing in some maintenance work. Despite this, labor productivity increased by 2 percent a year. This is usually termed the *Horndal effect* and has since been studied under the label *learning by doing*.

Lundberg's final major work was *Instability and Economic Growth* (1968). One of the issues in this book concerns the relationship, if there is one, between instability and growth. Lundberg found no such relationship.

Lundberg ranks as Sweden's leading economist during the postwar period. He was chairman of the International Economic Association (1968–1971) and of the Nobel committee for economics (1974–1979). Because Lundberg was skeptical toward theory and worked eclectically, it is impossible to definitively establish his attitudes toward many social problems, apart from a deeply rooted economic liberalism. Lundberg had a pronounced sense of humor that could occasionally wound colleagues and students, but he was a good person and as a debater and advisor he epitomized integrity and honesty. He was not as successful as a teacher. His excess of approaches and ideas could easily confuse an inexperienced doctoral student, and few of his students continued on an academic path.

SEE ALSO *Stockholm School*

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Villy Bergström

LUXEMBOURG INCOME STUDY

The Luxembourg Income Study (LIS), a research center and microdata archive, was founded in 1983 by Timothy Smeeding, Lee Rainwater, Gaston Schaber, and a team of multidisciplinary researchers in Europe. With support from the government of Luxembourg, LIS and its staff became an independent nonprofit institution in 2002. LIS is organized as a consortium of countries with financing from the national science foundations and other funders in the participating countries, as well as from the Luxembourgian government. LIS operations are governed by a board whose members represent the countries that provide data and financing. Janet Gornick, a political economist and sociologist based in the United States, became overall director of LIS in September 2006. Markus Jäntti, an economist in Finland, took up the post of LIS Research Director in 2005.

LIS has four goals:

1. To harmonize cross-national data, thus relieving researchers of this task, relying on an expert staff

that carries out the harmonization work and provides support services for users.

2. To provide a method allowing researchers to access these data under privacy restrictions required by the countries providing the data.
3. To create a system that allows research requests to be received and results returned quickly to users at remote locations.
4. To promote comparative research on the economic and social well-being of populations across countries.

In 2006, LIS included data from thirty countries, mostly in Europe and North America, but also including Australia, Israel, and Taiwan. The database contained over 150 datasets, organized into five time periods (known as *waves*) spanning the years 1968 to 2002. Wave six is due to come online in 2007. The data can be accessed in multiple ways. Researchers can write programs (in SPSS, SAS, or STATA) and send them via electronic mail directly to the LIS server; results are returned to the researcher, with average processing time under two minutes. There is also a web-based tabulator that allows users to construct tables using keywords. The LIS website provides a set of country-level indicators (known as *Key Figures*), including measures of inequality and poverty for each LIS dataset.

Extensive documentation for each dataset details technical aspects of the original survey, a record of the harmonization process, and institutional information on tax and transfer programs corresponding to the microdata variables. The LIS website also houses a comparative welfare states database and a family policy database; both contain an array of country-level policy indicators. These policy databases are widely used by LIS microdata researchers, who often seek to link policy variables to microlevel outcomes.

Reports based on LIS data have appeared in books, journal articles, and dissertations, and are often featured in the popular media. Each completed study is made available in the LIS Working Paper series, which numbered more than 450 papers by Fall 2006. The LIS website offers a Working Papers search engine, a complete set of abstracts, and most of the papers in full text.

Beginning in 2005, LIS expanded by adding a wealth data project. The Luxembourg Wealth Study (LWS) established a network of producers of microdata on household wealth and has, like LIS, harmonized the country-specific data into a common template, including comparable measures of net worth and its components. The LWS project will help to set guidelines for wealth data producers, as the LIS project has with income data.

LIS conducts annual training workshops that introduce researchers to the database and to cross-national research on wages, income, employment, and social policy. Between 1988 and 2006, more than five hundred scholars attended the workshops. LIS publishes a newsletter twice yearly, which is mailed to over 1,400 scholars in thirty-five countries.

The LIS microdatasets include income, employment, and demographic variables at the person and household level. Since LIS's inception, these microdatasets have been used by more than a thousand researchers in many countries to analyze economic and social policies and their effects on outcomes including poverty, income inequality, employment status, wage patterns, gender inequality, family formation, child well-being, health status, immigration, political behavior, and public opinion.

One of the most fruitful uses of LIS is for the study of income distributions across the richest countries of the world. Figure 1, derived from LIS's Key Figures, summarizes income distributions in the LIS countries, using four measures of inequality (ratios of tenth and ninetieth centiles to the median; the 90–10 "decile ratio," and the Gini coefficient). This figure shows clearly that income distributions vary dramatically across countries, with variation seen at both the bottom and the top of the distributions. The figure also reveals loose clusters of countries, with lower levels of inequality in the Nordic countries, moderate levels in most of the continental European countries, and higher levels in southern Europe and in the English-speaking countries of Australia, Canada, Ireland, the United Kingdom, and, most especially, the United States. Notably, the former communist countries of eastern Europe report remarkably varied levels of income inequality.

LIS-based research has catalyzed changes in national policies—for example, British policy toward children, based on the work of Jonathan Bradshaw (Bradshaw and Chen 1997)—and has informed the United Nations, the Organization for Economic Cooperation and Development (OECD), and other major bodies about poverty, inequality, and employment outcomes across countries. Results based on LIS have been published in and lauded by *Science* (Butz and Torrey 2006), *The Lancet* (Lynch et al. 2001), and major academic journals in the fields of economics, political science, sociology, comparative public policy, and social measurement. A twenty-year anniversary volume, published by *The Socio-Economic Review* in 2004, further summarizes and explains the accomplishments of LIS (Smeeding 2004).

In 2006 LIS completed a comprehensive internal review of its data template and harmonization rules in order to improve the quality of the LIS data and to identify ways to increase cross-country comparability in response to changes in the previous two decades in the participating countries' social policies and survey content. This review also led to a restructuring of the pen-

Social distance and social exclusion

(numbers given are percent of median in each nation and Gini coefficient)

	P10 (Low income)	Length of bars represents the gap between high and low income individuals	P90 (High income)	P90/P10 (Decile ratio)	Gini coefficient(1)
Czech Republic 1996	59		179	3.01	0.259
Luxembourg 2000	57		184	3.24	0.260
Norway 2000	57		159	2.80	0.251
Sweden 2000	57		168	2.96	0.252
Finland 2000	57		164	2.9	0.247
Slovak Republic 1996	56		162	2.88	0.241
Netherlands 1999	56		167	2.98	0.248
Austria 2000	55		173	3.17	0.260
Denmark 1992	54		155	2.85	0.236
Hungary 1999	54		194	3.57	0.295
France 1994	54		191	3.54	0.288
Switzerland 2002	54		182	3.38	0.274
Germany 2000	54		177	3.29	0.264
Romania 1997	53		180	3.38	0.277
Slovenia 1999	53		167	3.15	0.249
Belgium 2000	53		174	3.31	0.277
Poland 1999	52		188	3.59	0.293
Taiwan 2000	51		196	3.81	0.296
Canada 2000	48		188	3.95	0.302
United Kingdom 1999	47		215	4.59	0.345
Estonia 2000	46		234	5.08	0.361
Japan 1992(2)	46		192	4.17	0.315
Australia 1994	45		195	4.33	0.311
Italy 2000	44		199	4.48	0.333
Spain 2000	44		209	4.78	0.340
Greece 2000	43		207	4.77	0.338
Israel 2001	43		216	5.01	0.346
Ireland 2000	41		189	4.56	0.323
United States 2000	39		210	5.45	0.368
Mexico 2002	33		309	9.36	0.471
Russia 2000	33		276	8.37	0.434
		0 50 100 150 200 250 300 350			
Average(3)	50		194	4.09	0.302

(1) Gini coefficients are based on incomes which are bottom coded at one percent of disposable income and top coded at ten times the median disposable income.
(2) Japanese gini coefficent as calculated in Gottschalk and Smeeding (2000) from 1993 Japanese Survey of Income Redistribution.
(3) Simple average.

SOURCE: Authors' calculations from the Luxembourg Income Study (http://www.lisproject.org/keyfigures.htm).

Figure 1

sion and family benefits data, an expansion of the person-level data, and a substantial increase in the number of labor market variables included in LIS. These revisions enabled the many researchers who use LIS primarily for employment research to go further in their comparative analyses.

Thereafter LIS anticipated adding new datasets for all of the participating LIS countries; the newest wave of data (LIS's sixth wave) was to include datasets from approximately 2004. In addition, LIS anticipated adding two new countries in 2007: South Korea and Japan. LIS also continued to work to bring in datasets from Portugal, New Zealand, and Turkey.

LIS's income surveys have mostly come from high-income countries, as classified by the World Bank. Of the thirty countries participating as of 2006, twenty-one are high-income and nine are upper-middle-income (Czech Republic, Estonia, Hungary, Mexico, Poland, Romania, Russia, Slovak Republic, and Taiwan). One of LIS's main priorities is to substantially increase the inclusion of middle-income countries. LIS intends to add microdata, at multiple points in time, from ten middle-income countries, including, for example, Brazil, Bulgaria, Chile, China, Indonesia, and South Africa.

SEE ALSO *Discrimination; Gini Coefficient; Inequality, Income; Poverty; Social Exclusion*

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Janet C. Gornick
Timothy M. Smeeding

LUXEMBURG, ROSA
1870 or 1871–1919

Rosa Luxemburg was a Polish Marxist revolutionary as well as the most relevant figure of the left wing of the German Social Democratic Party (SPD). Together with Leo Jogiches (1867–1919), she was the leader of the Social Democratic Party of the Kingdom of Poland. Breaking with SPD for its support of World War I (1914–1918), with Karl Liebknecht (1871–1919) she founded the Spartacist League (*Spartakusbund*), which became in 1918 the German Communist Party (KPD). Luxemburg was killed during the German Revolution of January 1919 by the paramilitary *Freikorps*, and by the order of the SPD chancellor Friedrich Ebert.

At Zurich University Luxemburg trained in law and economics. Indeed, many of her writings can be seen as an original and undogmatic reprise, critique, and development of Marxist critical political economy. By 1898 she was widely known for her trenchant and astute criticism of the mounting revisionism. In *Social Reform or Revolution?* (1899), the pamphlet she wrote against fellow SPD member Eduard Bernstein, Luxemburg strongly objected to the idea that capitalism was entering a phase of social and economic stabilization, with the end of class polarization and the attenuation of economic crises. Skeptical about the law of a tendential fall in the profit rate, she nevertheless defended "collapse theory," but with too generic a reference to the lack of demand for commodities. She also stressed the essential link between money and value, justifying Marx's notion of abstract labor as a real abstraction that actually comes into being with the unity of production and circulation.

She refined her argument after 1907 when she started teaching economics at the SPD party training center in Berlin. While preparing her lectures (which were posthumously collected in *Introduction to Political Economy*, 1921) she stumbled upon a difficulty in Marx. Luxemburg stressed what she called the "law of the tendential fall" of the "relative" wage—that is, of the share in the new value added that goes to workers—as the other side of relative surplus value extraction. In her view, though, the real wage may grow when the productive power of labor rises, the former always lagging behind the latter. Workers' consumption is thus decreasing. Hence the question: Can capitalist investments fill the gap, and guarantee the smooth development of capitalist extended reproduction? In the *Accumulation of Capital* (1913) Luxemburg attacked Marx's schemes of reproduction for promoting the illusion that in a "closed" setting capitalism can go on as "production for the sake of production," and only disproportional crises can occur. Imperialism is seen as the consequence of the need to find new markets in non-capitalist areas. In the end, collapse due to lack of effective demand was certain: To avoid slipping into "barbarism," socialist revolution was historically necessary.

She was fiercely attacked by critics who hit some blind spots in her formulation (which was written in haste in a few months) but missed the core of her position, stated most clearly in the *Anti-Critique* (written in jail in 1916–1917). Capital must be analyzed first of all as a macro-monetary circuit. Therefore, the issue at stake is that capitalists cannot recover from monetary circulation more than they injected into it, advancing either constant or variable capital. From this theoretical stance, the realization problem opens to the problem of finance as fundamental in a monetary production economy. This does not mean that Luxemburg's view was correct: She discarded the distinction between "financial" and "industrial" capital, so her question could not have an answer. But her approach was more farsighted than her critics understood because she opened a new problematic (Bellofiore 2004).

Two interpreters who clearly perceived this were Joan Robinson (1951) and Michal Kalecki (1967). Robinson saw that the key issue in Luxemburg was that accumulation depends on the incentive to invest. Kalecki extended her position, showing that capitalism can find effective demand not only through net exports, but also through state deficit spending financed by the central. However, it must not be forgotten that in the last instance, crises erupt because of relative surplus value extraction: Although it induces a fall in the wage share, it also systematically upsets the conditions of equilibrium for capitalist reproduction, and then provokes disproportions and leads to a general

"glut." Realization crises are failures to sell products at prices that recoup expected profitability due to inadequate aggregate demand. They are rooted in the dynamics of exploitation within the capitalist labor processes where valorization—that is, the production of surplus value starting from a given value—immediately occurs.

Customarily, Luxemburg's position is labeled as determinist and under-consumptionist (which is clearly wrong), and her political perspective is condemned as spontaneist. A convincing rebuttal of this reading was put forward by Norman Geras (1976). What is relevant is Luxemburg's opposition to Lenin. As Rossana Rossanda succinctly states, Luxemburg "never maintained that the masses could do without an organized vanguard which, for her, was identified with the party. However, the need for the latter was not derived from the absence of a *political* dimension of working class struggles as such, but from the objective fragmentation of these struggles, which a unifying strategy could alone overcome" (1970, p. 224).

In recent decades, interest in Luxemburg has shifted from discussion about her political, social, and economic thought to her pacifism, her love for nature, and her anticipation of some traits of contemporary feminism (Nye 1994).

SEE ALSO *Accumulation of Capital; Economic Crises; Feminism; Imperialism; Kalecki, Michal; Robinson, Joan; Socialism*

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Riccardo Bellofiore

LYING

People who are lying are trying to mislead others. If an attempt to mislead is conscious, entails misstatement of fact, and promises a payoff, it is usually considered a lie. Alongside its denotative meaning, *lying* is a pejorative term. In one investigation, college students rated the social desirability of 555 one-word descriptions of a person. According to these ratings, the most negative thing one can say about a person is not that the person is greedy, incompetent, prejudiced, or cruel. The most negative thing one can say is that the person is a liar.

Lying is related to other phenomena. Like deception, lying involves false communication. However, deception is a broader concept. Biologists have discussed deception by fireflies, possums, and plants, but few would claim that plants can lie. As lying is one type of deception, so are there many types of lies: lies of omission and commission, white lies, and high-stakes lies.

Lying has intrigued scholars for thousands of years. Theologians have debated the morality of deceit, and epistemologists have puzzled over apposite logical problems like the liar's paradox. Lying has been a recurrent literary theme. Novelists have dazzled their readers with fictional deception and counterdeception; playwrights have captivated audiences with both dramatic and comic lies.

Social scientists' interest in lying grew from a practical concern, the need to detect lies. In a 1917 *Journal of Experimental Psychology* article, Harvard doctoral student John Marston described his efforts to construct a lie detection technology, based on the premise that lying is accompanied by changes in blood pressure. Marston's work gave rise to the polygraph, an apparatus that monitors several indices of autonomic functioning. Once polygraphs came to be used in examinations for truthfulness, the accuracy of this lie detector became a matter of scientific debate. Reviewing evidence on both sides of this controversy, the U.S. National Academy of Sciences concluded in 2003 that the polygraph detects lies at rates that are better than chance but imperfect. In the National Academy's view, polygraph examinations are poorly suited for screening large populations of people that include only a small percentage of liars.

Soon after Marston's psychophysiological venture, Hugh Hartshorne and Mark May developed methods for measuring character. In their 1928 book *Studies in Deceit*, Hartshorne and May reported many character tests, including a test for lying in children. This written self-report instrument asked children about conduct that is socially approved but rare. Thus, the child was asked, "Do you always obey your parents cheerfully and promptly?" Across thirty-six such items, some children claimed that they were always good and never bad. The authors maintained that these children were lying, while acknowledging that some might get high "lie scores" because they were exceedingly conventional. Hartshorne and May's clever test inspired the inclusion of "Lie scales" on subse-

quent self-report instruments. These seek to identify individuals who are falsifying their self reports.

Inspired by these pioneering efforts, social scientists have illuminated several aspects of lying: the demography of deceit, deceptive behavior, and veracity judgments.

DEMOGRAPHY OF DECEIT

Lying is most likely universal. It has been found in all cultures ever studied. In a 2003 investigation, Lawrence Sugiyama and associates reported some relevant cross-cultural evidence: that farmers in a preliterate culture perform as well as Harvard students on difficult reasoning problems, so long as the reasoning would prevent them from being duped in a social exchange. These results suggest that cheating is a pan-cultural component of social life. Indeed, evolutionists have attributed the large size of the human brain to selection pressures imposed by the ever-escalating Machiavellian intelligence of our ancestors' scheming peers.

Psychologists have ventured estimates of the frequency of lying in everyday life. In one investigation, college students logged all the lies they told over a period of several weeks. Their records imply that the average student lies once or twice per day, once in every three to five social interactions. In another study, thousands of people from around the world were asked how many lies the typical person tells in a week. Their estimates varied widely, but the median estimate was that typical person lies seven times a week, or once a day.

Social scientists have analyzed deception at the institutional level. Historians have revisited large-scale military deceptions, like the Allies' duping of Nazi Germany before the Normandy landing in 1944. Political scientists have described constraints on the use of duplicity by the intelligence services of democracies. Financial analysts have noted international differences in institutional corruption. According to Transparency International, an anticorruption organization based in Berlin, the most corrupt countries in the world in 2005 were Bangladesh and Chad. The least corrupt were Iceland, Finland, and New Zealand. Economic factors help explain international differences in corruption. Highly corrupt countries are poor and pay their civil servants poorly by local standards. Psychological factors may also play a role. Controlling for differences in income, countries are more corrupt if they feature a collective culture, rather than an individualistic culture.

Researchers have documented socioeconomic, racial, and family differences in lying. Armed with the character tests they developed, Hartshorne and May reported in 1928 that students from a low socioeconomic background are more likely to cheat than those from a higher background. In 2002 sociologists Judith Blau and Elizabeth Stearns reported a discrepant finding: that white students of high socioeconomic status are most likely and black students are least likely to condone cheating. Perhaps socioeconomic differences in cheating have changed over the years. In any case, there are family influences on deception. In 1982, a team of investigators measured 54 different personality traits on each member of 415 families in Hawaii. The researchers found that family members resemble one another in personality. This was expected. However, the researchers also found that family members resemble one another in the tendency to lie. Indeed, family similarities proved to be stronger on Lie Scales embedded within the investigators' personality tests than on any of the other traits measured.

Social scientists have explored sex differences in lying. Although some have maintained that the sexes differ in the propensity to lie, it appears that a larger difference is in motives for deception. Women are more likely to lie to spare others' feelings, while men more often lie out of self-interest. Relative to women, men are more suspicious of what they hear. Although there is little evidence that the sexes differ in the ability to discriminate lies from truths, women are more willing than men to accept politely what others say. Perhaps these sex differences reflect differential socialization experiences.

DECEPTIVE BEHAVIORS

Do people act in distinctive ways when they are lying? Are there behavioral signatures from which lying can be inferred?

Certain behaviors appear to accompany deceit on certain occasions. Medical researchers Alan Hirsch and Charles Wolf analyzed a videotape of Bill Clinton during Clinton's August 17, 1998, appearance before a federal grand jury. While giving testimony that a judge later found to be false, Clinton displayed 20 of 23 putative signs of deception. Clinton, for example, made more speech errors when denying a sexual relationship with Monica Lewinsky than when answering perfunctory questions. While testifying about Lewinsky, Clinton showed a tendency to touch his nose—which the authors dubbed a "Pinocchio phenomenon."

Although Hirsch and Wolf's videotape analysis is certainly provocative, it reflects a single case. One wonders if the 20 behaviors that accompanied Clinton's suspect testimony accompany most lies. To address this issue, psychologist Bella DePaulo and colleagues analyzed research data on 158 potential deception cues from 120 independent samples of lie- and truth-tellers. They considered facial cues, bodily cues, vocal cues, and verbal cues, organizing the evidence around a series of questions.

None of the 158 behaviors these reviewers examined is a perfect indicator of deception, always displayed when

a person is lying and never otherwise displayed. Even so, some cues bear a statistical relationship to deception. Compared to truth-tellers, liars are less forthcoming. They sound distant, appear tense, and convey a negative impression. Invariably actuarial, cues to deception vary to a considerable extent across situations, across liars, and across lies. Attempts to conceal fear may, for instance, be exposed by inadvertent signs of fear.

For lie detection, it is best to assemble evidence from multiple cues. German psychologist Gunter Kohnken has advocated a multi-cue approach for assessing the truthfulness of statements. This so-called Statement Validity Analysis has been used in Europe to evaluate legal testimony, particularly the testimony of children who allege sexual abuse. As a component of Statement Validity Analysis, the witness's account of an event is checked against nineteen criteria presumed to be indicative of truthfulness. Criterion-Based Content Analysis (CBCA) deems as truthful, for example, witnesses who spontaneously correct themselves, admit a lack of memory, and recount events in a nonchronological order. Research studies corroborate the value of this content-based system, suggesting that CBCA can discriminate lies from truths with an accuracy of about 70 percent.

VERACITY JUDGMENTS

Alongside these research efforts are lay attempts to uncover deceit. Nonscientists make judgments of deception every day, and these judgments have consequences. Some business negotiations succeed and others fail because of the negotiators' judgments of one another's truthfulness. Some marriages end in a month and others last fifty years because of the partners' beliefs about one another's veracity. Lay judgments of deception have special significance in U.S. courtrooms, where jurors are the only lie detectors. Whenever witnesses give conflicting testimony, jurors must decide who is telling the truth. Thus under American law a defendant's fate can hinge on her (or his) demeanor, and those who appear guilty are often found guilty.

Social scientists have investigated lay theories of lying. As they have discovered, people share beliefs about behaviors that accompany deceit. In a 2006 investigation a global deception research team found that the most common stereotype in the world about deception is that liars avoid eye contact. Residents of 75 countries said that liars avoid eye contact, expressing this belief in 42 different languages. In response to the open-ended question "How can you tell that others are lying?" two-thirds of the respondents worldwide mentioned that liars avert gaze, and when they mentioned more than one way to tell when others are lying, they mentioned gaze aversion first.

Do people in fact avoid eye contact when lying? There is not much evidence to support this belief. In the findings reviewed by DePaulo and colleagues, people who are telling small lies show no tendency to avert gaze, and those who are telling bigger lies show only a weak gaze aversion. Even if there is a kernel of truth to the stereotype of the gaze-aversive liar, this belief is overdrawn. In a study by communications scholar Timothy Levine, college students were asked to rate the eye contact of peers they saw on videotape. When informed that the peers were lying, students perceived them to be averting gaze.

Apologists for the American legal system contend that jurors are good at spotting deception. Unfortunately, research suggests that they are not. In 2006 psychologists Charles Bond and Bella DePaulo reviewed results from hundreds of experiments on people's attempts to detect lies in real time with no special aids. Under these circumstances, people average 54 percent correct lie-or-truth judgments when 50 percent would be expected by chance. Although lie detection rates vary from study to study, much of the variation appears to be artifactual, and the highest accuracy achieved by any group to date barely exceeds 70 percent. People usually presume that their acquaintances are telling the truth. Most people appear honest even when they are lying, and a few appear dishonest even when they are telling the truth. Individual differences in social competence may underlie differences in apparent honesty, psychologist Robert Feldman has found. Although skills at feigning honesty continue to develop through middle childhood, even three-year-olds can dupe adults, researcher Michael Lewis reports.

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Charles F. Bond Jr.

LYNCHINGS

Lynchings, illegal killings performed by groups of people under service to justice, race, or tradition, are a phenomenon seen across human history, from ancient cultures through contemporary ones, in pre-modern and modern Europe, Asia, Africa, and the Americas. Across cultures and eras, mobs have perpetrated lynchings in order to punish what they have perceived as behavior that violates societal norms. The definition of deviant behavior varies widely across cultural contexts, but most commonly lynch mobs have collectively murdered those they have accused of transgressions such as murder, rape, theft, the crossing of racial boundaries, or witchcraft. Roberta Senechal de la Roche argues in "The Sociogenesis of Lynching" (1997) that lynchings are more likely to occur in times and places where great social distance exists between deviants and those offended by their behavior. Lynchings have meaning as performances of collective violence, with mobs resorting to varying degrees of ritual, such as selecting a site of symbolic significance for a mob execution, the desecration of a victim's body, or taking trophies or affixing signs to a victim's corpse. With such ritualistic punishment, mobs have sought to emphasize particular values and the cleansing of a community of a victim's alleged offense.

In the last several centuries, lynchings have arisen amid cultural conflict over changing legal systems, particularly when certain social groups have perceived themselves as alienated from or unprotected by the formal legal system. This was the case in the United States in the early to mid-nineteenth century, when lynching arose south and west of the Allegheny Mountains amid profound shifts in understandings of law and the criminal justice system. On the southern, midwestern, and far western frontiers of the United States in the 1830s, 1840s, and 1850s, white Americans seized upon lethal group violence unsanctioned by law—particularly hangings—to enforce mandates of racial and class hierarchy and to pull into definition tenuous and ill-defined understandings of social order and community. Collectively murdering Native Americans, Mexicans, African American slaves and free blacks, and working-class, nonlanded whites, white Americans rejected growing due-process legal reforms that offered the promise of fairness to the unpopular and powerless by protecting the rights of those accused of crimes. Invoking popular sovereignty, a notion stemming from the American Revolution that government was rooted in the people and could be reclaimed by them if their life, liberty, and property were threatened, lynchers imitated customary public punishments, the pillory and the gallows, even as reformers sought to abolish those institutions on grounds of humanitarianism and the maintenance of public order.

In the late nineteenth and early twentieth centuries, the ranks of lynchers included rural landholding elites and members of the rural and urban working classes. Significant numbers of lynchings occurred in the American West and Midwest. On the southwest borderlands of Texas, New Mexico, Arizona, and California, lynchers killed hundreds of Mexicans following the American conquest of those territories in the mid-nineteenth century and during the era of the Mexican Revolution in the 1910s. Beyond racial animosities, lynchings in the West and Midwest in the nineteenth and early to mid-twentieth centuries were motivated by criminal justice concerns and class prejudices revolving around the landed elite's protection of property on the range. For instance, in California between 1875 and 1947, lynch mobs killed thirty-five whites, fifteen Mexicans, nine Native Americans, three Chinese, and two African Americans. In Iowa during the same era, by contrast, lynchers murdered twenty-three white men and one Native American.

However, the vast majority of lynchings in the United States occurred in the South, where mobs killed at least 2,805 persons, 2,462 of them African American, between 1882 and 1930. Stewart E. Tolnay and E. M. Beck (1995) document the leading states for lynching as Mississippi (452 victims), Georgia (381), and Louisiana (274). In the South in the late nineteenth and early twentieth centuries, lynching became a dramatic and frequent means for whites to seek to assert racial hierarchy over African Americans. Lynchings were concentrated in Cotton Belt and Gulf Plain counties that had seen significant recent black in-migration and where African Americans composed from half to three-fourths of the population. Lynchings often stemmed from violent disputes in which African American laborers had resisted the authority of planter-class whites or the indignities of the emerging Jim Crow system that segregated blacks from whites in public spaces. In some Cotton Belt jurisdictions, such as Caddo, Bossier, and Ouachita parishes in Louisiana, whites completely abandoned formal criminal justice institutions in favor of rampant lynching violence that reaffirmed white supremacy. In another social setting that became conducive to lynching, the growth of towns and cities mixed whites and blacks from different parts of the South. In these novel urban locales, thousands of whites sometimes participated in highly ritualistic lynchings of African Americans, as for example in the mob execution of Jesse Washington in Waco, Texas, on May 15, 1916.

Lynchings waned in the early to middle decades of the twentieth century, as antilynching advocates such as Ida B. Wells-Barnett (1862–1931), the NAACP (National Association for the Advancement of Colored People), and Jessie Daniel Ames (1883–1972) protested the injustices of mob violence. During the same decades, a significant southern, white middle class developed that opposed lynching and placed its faith instead in formal law, espe-

cially the death penalty. The U.S. House of Representatives passed several antilynching laws, but these were defeated in the U.S. Senate (on June 13, 2005, the Senate approved a resolution apologizing to the descendants of lynching victims for its historical failure to enact antilynching legislation). Brief surges in lynchings in and outside of the South during World War I (1914–1918), the Great Depression, and World War II (1939–1945) raised fears that the practice could be reviving. However, lynching lost its public face in succeeding decades and went underground. In the latter decades of the twentieth century, small groups of whites murdered African Americans such as Emmett Till in northern Mississippi in August 1955; Michael Donald in Mobile, Alabama, in March 1981; and James Byrd Jr., in Jasper, Texas, in June 1998; as well as civil rights workers Andrew Goodman, Michael Schwerner, and James Chaney in Neshoba County, Mississippi, in June 1964.

In the late twentieth and early twenty-first centuries, lynchings occurred in such places as Latin America, sub-Saharan Africa, the Middle East, and the urban United States. In these locales, crowds of people have lethally punished alleged perpetrators of crime and have sought to explain their actions by citing ineffectual, distant, or corrupt criminal justice institutions.

SEE ALSO *Jim Crow; Race Relations; Wells-Barnett, Ida B.*

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Michael J. Pfeifer

LYND, ROBERT AND HELEN

Robert Stoughton Lynd was born on September 26, 1892, in New Albany, Indiana, and died on November 1, 1970, in Warren, Connecticut. In 1921 he married Helen Merrell, who was born on March 17, 1896, in LaGrange, Illinois, and died on January 30, 1982, in New York City. The two social scientists were best known for their community studies *Middletown* (1929) and *Middletown in Transition* (1937). During World War I, Robert, a Princeton graduate, turned to the ministry as the only institution working for spiritual values. After doing missionary work at a Standard Oil camp, he launched a muckraking attack on Standard Oil and John D. Rockefeller Jr. Both infuriated and impressed by Lynd, Rockefeller's chief aide for the social sciences, Raymond Fosdick, hired him to undertake a study on the church in a small city for the Rockefeller-funded Institute of Social and Religious Research. That work became the basis for *Middletown*.

THE *MIDDLETOWN* STUDIES

The Lynds began their study in Muncie, Indiana, in 1923 after choosing it as a representative American city. They quickly convinced the institute that one could not study the church in a vacuum but had to study it in an integrated fashion. They argued that one should study modern society as one would examine a primitive culture. Adopting the British school of functional anthropology, they concentrated on how the culture as a whole worked.

The Lynds split Middletown culture into six activities: getting a living, making a home, training the young, using leisure, engaging in religious activities, and engaging in community activities. Indebted most of all to Thorstein Veblen and his concept of pecuniary culture, the Lynds demonstrated how that culture dominated Middletown society. Everything followed from occupations and the consequent split into business and working classes. The way one earned a living dominated the culture from one's leisure time to one's church denomination.

Despite a lack of methodological training, the Lynds produced a sophisticated work of sociological research. They used well-conceived questionnaires for all organizations, interviewed representative samples of the population, and innovatively included the questionnaires in an appendix. Despite its methodological rigor, the institute refused the work because of its admitted biases and use of class perspective and for being, as William F. Ogburn noted, "too interesting to be science" (quoted in Lynd 1929).

As the Lynds attempted to gain control of the manuscript, Robert wrote the section on consumerism for inclusion in a book for the President's Committee on Social Trends, "Recent Social Trends." That piece followed the emphasis in *Middletown* on spending as dominating American life and used empirical techniques to argue for a change in society. The Lynds' works were among the first

not only to identify a consumer society but also to criticize it. After the release of the Middletown manuscript in 1928, it quickly became a best seller, winning praise from social scientists and the general public.

In 1935 the Lynds decided to restudy Muncie. They recognized that American sociologists had not conducted follow-up studies of communities and had paid insufficient attention to social change. Furthermore, they felt that the Great Depression would provide an excellent case study in how outside forces compel local areas to alter the status quo. They also realized that like most American social scientists of their time, they had overlooked the issue of social and political power.

In *Middletown in Transition* (1937) the coauthors discovered that Middletown in fact was not in transition. The most noticeable change, apart from the infusion of federal funds, was the total resistance of the community to change and the solidification of existing attitudes and institutions. In regard to power, the dominant Ball family had come to control even more of the economic and political structure. Producers of canning jars, one of the few products more in demand during the Depression, the Balls used their profits to buy up local bankrupt industries, contributed heavily to local charities, and controlled both political parties.

INFLUENCE AND CRITICISMS

Although the first Middletown book has had greater influence as a pioneering community study and historical source, the second volume also influenced later social scientists in the study of power. Although the concentration of power in one family in Muncie was not characteristic of larger communities, both Floyd Hunter's study of Atlanta, *Community Power Structure* (1953), and C. Wright Mills's *The Power Elite* (1956) saw power as being concentrated in small groups. Later pluralistic views such as Robert Dahl's 1961 examination of New Haven, *Who Governs?*, questioned the Lynds' results and biases.

The Middletown works represented the apex of the Lynds' influence, although both of them continued to produce important theoretical works independently. During the 1950s both Lynds were accused of being Communists, and the Middletown books were removed from United States Information Agency libraries around the world. Both Robert and Helen were committed social activists and students of Marxism. They were also extremely popular teachers, Robert at Columbia and Helen at Sarah Lawrence. As fear of communism increased in the United States, several congressional committees subpoenaed the left-wing faculty to testify before them. While Helen testified before the Jenner Committee and kept her job, Robert suffered a nervous breakdown from which he never recovered. Their son Staughton would go on to become one of the leaders of the new left academia during the 1960s and 1970s.

SEE ALSO *Case Method; Case Method, Extended; Community Power Studies; Dahl, Robert Alan; Hunter, Floyd; McCarthyism; Occupational Status; Political Science; Power; Sociology; Survey; Veblen, Thorstein; Working Class*

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Mark C. Smith

LYND, STAUGHTON
1929–

Staughton Lynd, historian, radical political activist, and labor lawyer, was born on November 22, 1929, to the sociologists Robert and Helen Lynd, best known for their path-breaking Middletown studies. Like his parents, whose socialist views strongly influenced their son, Lynd pursued an academic career, graduating from Harvard in 1951 and obtaining a PhD in history from Columbia in 1962. Staughton Lynd, however, acquired notoriety not as a scholar but as a civil rights and antiwar activist.

Lynd came from a Quaker background. He was inducted into the U.S. army during the Korean War as a noncombatant conscientious objector, but discharged for his leftist sympathies. After leaving the army, Lynd and his wife, Alice Niles, joined the Macedonia cooperative community in Georgia. While teaching at Spelman College in Atlanta, Lynd became involved in the civil rights movement and in 1964 he organized Freedom Schools for the Student Nonviolent Coordinating Committee (SNCC) during the legendary Mississippi Freedom Summer of

1964. In the fall of that year, Lynd moved on to become an assistant professor of history at Yale University, but his focus was on the fledgling movement against the war in Vietnam. He traveled to Hanoi in December 1965, along with fellow peace activist Tom Hayden and Marxist historian Herbert Aptheker. Lynd saw the trip as a mission to prevent the escalation of the war; it resulted in his passport being temporarily revoked by the State Department, though the federal government did not initiate criminal prosecution. The trip did, however, probably cost him tenure at Yale.

As an antiwar activist with the Students for a Democratic Society (SDS), he was involved in organizing mass demonstrations and providing support for income tax and draft resistance. When parts of the New Left embraced violence in the late sixties and early seventies, Lynd remained firmly committed to the ideals of nonviolent grassroots mobilization. In 1973 he enrolled in the University of Chicago law school, obtained a law degree, and in 1976 became a labor lawyer in Youngstown, Ohio, where he represented and helped organize steelworkers, sometimes in conflict with their unions. Legal strategies, in Lynd's view, needed to be devised in close contact with working people and bolstered by radical direct action. His fields of activity have included the rights of retired and disabled workers, the struggle against plant closings, and efforts to create interracial labor alliances.

Lynd's scholarly publications have always closely mirrored his interests and commitment as an activist, beginning with his 1962 dissertation on class conflict in the Revolutionary era. In addition, he has published books on slavery, oral histories of working-class activism, and, in 2004, an account of the 1993 prison revolt in Lucasville, Ohio. In 1998 Kent State University established the Staughton Lynd Collection, which includes materials from the 1930s to the year 2000.

Staughton Lynd has often been referred to as a Quaker influenced by Marxism. His socialism has always remained skeptical of dogma and tied to his strong belief in communitarian democracy, pacifism, and social justice. Not content to criticize American capitalism from the position of a middle-class intellectual, his life has been dedicated to helping empower poor people and minorities.

SEE ALSO *Activism; Civil Rights Movement, U.S.; Left Wing; Lynd, Robert and Helen; Marxism; Prisons; Protest; Slavery; Vietnam War; Working Class*

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Manfred Berg

M

MAALOUF, AMIN

SEE *Identities, Deadly.*

MACCOBY, ELEANOR

1917–

Eleanor Emmons Maccoby is a leader and innovator in theory and research on the social development of the child. The Barbara Kimball Browning Professor of Psychology Emerita at Stanford University, she received her BA from the University of Washington and her MA and PhD from the University of Michigan. After working at Harvard University for several years, she joined the Stanford faculty in 1958.

Maccoby's wide-ranging interests include theories of socialization, gender differences, and the effects of divorce on the child. She has examined the socialization process from early childhood through adolescence. With John Martin (Maccoby and Martin 1983) she has provided a virtually book-length review of the history of theories of child development within the family, relating these theories to current issues in socialization. In a highly influential early work, Maccoby and Carol Nagy Jacklin (1974) concluded that, contrary to popular conceptions, the evidence does not support the notions that girls, relative to boys, are more social, have lower self-esteem, are better at rote learning and repetitive tasks, are less analytic, are more affected by heredity, lack achievement motivation, and are more auditory. They did find preliminary evidence that girls have a greater verbal ability than boys, that boys excel in visual-spatial and mathematical ability, and that boys are more aggressive.

Basic to Maccoby's approach to socialization is the notion of interaction, taken in two senses: (1) face-to-face interaction in the process of socialization and (2) systemic interaction between biological factors and socialization. With respect to face-to-face interaction, Maccoby rejects the notion that socialization is a top-down process in which adults mold the essentially passive child. Rather, from the beginning there is true interaction between child and caregiver in the sense that each participant's actions are contingent, at least in part, on the actions of the partner. She expands significantly on the notion of bidirectionality most frequently attributed to Richard Bell (1968). The implication of bidirectionality is that the child is an active participant in his or her own socialization.

A second basic influence on socialization is the biological endowment of the child. In this context, Maccoby cites potential constitutional differences between boys and girls. These differences, in turn, influence the interaction of the child with others. An example would be the play separation of boys and girls in relatively unsupervised settings. Maccoby (1990) provides evidence that boys have a more rough-and-tumble style of play, termed a restrictive or constricting interaction style. This is aversive to girls, who have a more enabling or facilitating style (Leaper 1991). The result is play separation and contrasting socialization within these separated peer groups.

Maccoby and Robert Mnookin (1992) surveyed the effect of the current process of divorce on the child. They regard the institution of no-fault divorce as introducing a new social regime, the social and legal implications of

which continue to emerge. They conclude that, under the proper circumstances, the experience of divorce is not necessarily damaging to the child and that it is possible for life to proceed in a relatively normal fashion in these families.

SEE ALSO *Divorce and Separation; Gender; Gender Gap; Socialization*

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Starkey Duncan

MACHEL, SAMORA
1933–1986

Samora Machel was the first president of Mozambique following independence in 1975. He came to prominence in the 1960s during the struggle to end Portuguese colonial rule over Mozambique and was influential as a leader of the Mozambique Liberation Front, known as Frelimo for the Portuguese name, Frente de Libertação de Moçambique. Machel was born on September 29, 1933, to a rural family in southern Mozambique, and as a child he attended a Catholic mission school. He worked briefly as an orderly, trained as a nurse from 1952 to 1954, and was then employed as a nurse in the capital city, where he continued his nursing education. He and Sorita Tchaiakomo had a common-law relationship, and they had four children together. Machel married Josina Machel in 1969 during the armed struggle, and they had one child before Josina died in 1971. He married Graça Machel in 1975, and they had two children.

European nations began the process of granting independence to their African colonies in the 1950s and 1960s, but Portugal refused to end its colonial ties. As a result, the anticolonial movements in the Portuguese colonies, including Mozambique, were forced to operate clandestinely. Machel was greatly influenced by his experiences in the colonial medical services, where he witnessed racial divisions among workers and in the treatment of patients. He began attending secret nationalist meetings, and in 1961 he met and was deeply inspired by Eduardo Mondlane (1920–1969), who emerged as the leader of the Mozambican liberation movement. Within a year Machel had attracted the attention of the Portuguese secret police and had to leave Mozambique in 1963 when he joined Frelimo in exile in Tanzania. Machel joined the military sector of Frelimo and trained in Algeria. The first shots of the armed struggle were fired in 1964, and by 1966 Machel was the commander of the Frelimo army. His contribution to the development of Frelimo's politics included his perspective that the independence struggle was not a racial issue of black against white, but was a struggle for freedom from the colonial system, an issue that continued to be contentious for many years. He was also a strong voice for socialism within Frelimo. After Mondlane's assassination in 1969, Machel emerged as the leader of Frelimo and as president of Mozambique after the Portuguese fascist government was overthrown in 1974.

As president, Machel focused on unifying Mozambique and implementing an ambitious socialist program of reforms. Many enterprises were nationalized, education and health were dramatically expanded to serve ordinary Mozambicans, and new laws were introduced to support women, peasants, and others who had been marginalized under colonialism. But Mozambique was one of the poorest nations in the world, and it was difficult to sustain the planned changes. South Africa and Zimbabwe, both ruled by white-minority regimes in the 1970s, helped form and support an anti-Frelimo organization known as Renamo (for Resistência Nacional de Moçambique, Mozambique National Resistance). Machel found himself mired in an intractable guerrilla war as Renamo wrought extensive damage and destruction in Mozambique throughout the 1980s, ending with a peace accord in 1992.

Machel himself was a casualty of that war. In October 1986 he traveled to Zambia to participate in talks designed to bring an end to Renamo's attacks. As his plane returned to Mozambique on October 19, it crashed under suspicious conditions. The plane, a Tupelov 134, apparently followed a beacon that the Soviet pilots believed would bring them to their airfield in Mozambique. Instead they crashed into a low hill inside South Africa at Mbuzini. Samora Machel and twenty-four other passengers, including other members of the government, were killed. South African officials claimed that the accident was a result of pilot

error. Most Mozambicans and many others believe that the crash was orchestrated by the South African apartheid regime. Despite several investigations, including testimony as part of South Africa's postapartheid Truth and Reconciliation Commission, the exact circumstances of the crash have not been determined. More than twenty years later, President Armando Guebuza of Mozambique promised to further investigate Machel's death, saying the government "would not rest" until the events that led to the death of his predecessor were clarified.

SEE ALSO *Anticolonial Movements; Apartheid; Colonialism; Decolonization; Inequality, Racial; Liberation Movements; Pan-Africanism; Racism; Resistance; Socialism; Truth and Reconciliation Commissions*

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Kathleen Sheldon

MACHIAVELLI, NICCOLÒ
1469–1527

The Renaissance political thinker Niccolò Machiavelli shocked Christian Europe by declaring that success in politics both necessitates and excuses any means used to achieve it. Born in 1469 in Florence to a family of some prominence but modest means, Machiavelli probably received a humanistic education in his youth, enabling him to become head of the Second Chancery of the Florentine Republic in 1498. This office brought him into close contact with a number of Renaissance potentates, inciting his penetrating mind to form a stern, indeed, cynical view of politics. After the republic's fall in 1512, Machiavelli retired to his small landed property to study ancient writers and reflect on political affairs.

In 1513 Machiavelli wrote *The Prince*, a slender book in the traditional mirror-of-princes genre. His advice to princes, however, was far from traditional. Rather than exhorting them to practice the virtues, he encouraged them to "know how to enter into evil, when forced by necessity" (Chap. XVIII), on the grounds that "a man who wants to make a profession of good in all regards must come to ruin among so many who are not good" (Chap. XV). In particular, he argued that princes should not hesitate to use deceit and violence to maintain their state and secure their subjects. This advice transformed the European tradition of "reason of state" (Lat. *ratio status*, Fr. *raison d'état*). Whereas the medieval proponents of this tradition had considered the necessity to break moral rules for the common good to be exceptional, and thus reconcilable with a community of virtue, Machiavelli assumed necessary evil to be a regular aspect of politics, thus separating it from ethics. Machiavelli's pithy maxims to this effect inspired generations of writers who called for strong measures to build the modern state, such as Gabriel Naudé in France and Johann Gottlieb Fichte in Germany. His approach also legitimized the ruthlessness of many statesmen who constructed it, including Thomas Cromwell, Cardinal Richelieu, Napoleon, and Mussolini.

From roughly 1515 to 1520, Machiavelli belonged to a circle of educated Florentines who met in the Oricellari Gardens and whose political views reflected the civic strand of Renaissance humanism. Drawing on the Aristotelian and Ciceronian notion of citizenship, civic humanism advocated *vivere civile*, a life of intense involvement with public affairs, based on a humanistic education and framed by the institutions of a republic. Accordingly, they believed that men ought to deliberate wisely and serve capably in the offices of their city, while also practicing the virtues, fostering concord, upholding liberty, and attaining greatness. Machiavelli's exposure to this ideal prompted his major republican writings, the *Discourses on Livy* (c. 1518), the *Art of War* (1521) and the *Florentine Histories* (1525). In these works Machiavelli followed Renaissance fashion by taking the Roman republic as a model. According to Machiavelli, Rome maintained its liberty because it provided the commoners with a representative, the Tribune of the Plebs, who checked the tyrannical ambitions of the nobles with his power to veto any law and intercede with any action of the magistrate. Having this share in authority also made the commoners loyal enough to be armed for war in large numbers, enabling Rome to conquer a vast empire and attain unprecedented greatness. Moreover, Rome's superior institutions were brought to life by the "good customs" of its citizens, allowing nobles and commoners to conduct their struggles over wealth and power without bloodshed and settle them by compromise.

The fact that civic humanism formed Machiavelli's historical context has led a number of historians, most prominently J. G. A. Pocock (1975) and Quentin Skinner (1978), to conclude that Machiavelli was a civic humanist

himself. More penetrating analysis, however, reveals that Machiavelli's republican writings rest on the same premises on human nature and ethics as *The Prince*, and they consequently propose corresponding maxims of action: "As all those demonstrate who reason on a *vivere civile*, and as every history is full of examples, it is necessary to whoever disposes a republic and orders laws in it to presuppose that all men are bad" (*Discourses on Livy* I.3.1). To found, as well as to reform a republic, an autocrat must therefore kill all those opposed to equality before the law. The good customs of the citizens are not only acquired by habituation under threat of punishment, they also are continuously degraded by their natural ambition and thus must be constantly renewed by exemplary and excessive punishments. Republics can execute policies more effectively than principalities because the majority can easily crush the minority, regardless of the harm done to individuals. Republics wage aggressive wars because the citizens need to satisfy their ambition abroad in order to mitigate conflict at home, and because security rests on striking first and acquiring empire. In other words, the "reason of state" forms the core of Machiavelli's republican thought as well. He made this fact most explicit when he claimed that "where one deliberates entirely on the safety of his fatherland [i.e., republic], there ought not to enter any consideration of either just or unjust, merciful or cruel … one ought to follow entirely the policy that saves its life and maintains its liberty" (*Discourses on Livy* III.41).

Preference must therefore be given to the older view of Machiavelli as a bold, if not reckless, thinker who broke with civic humanism and the entire classical tradition by limiting political thought to what men do rather than what they ought to do. According to the German historian Friedrich Meinecke (1924), this impulse led Machiavelli to probe and reveal the full extent of the reason of state, while the philosopher Ernst Cassirer (1946) believed that it prepared the ground for the empirical approach of modern political science by making no distinction between legitimate and illegitimate states. According to the British philosopher Isaiah Berlin (1953), it led Machiavelli to undermine the Western belief in a cosmos unified by reason. The political scientist Sheldon Wolin (1960) noted that it made Machiavelli conceive of politics as a struggle between conflicting interests. The philosopher Leo Strauss (1963) observed that this impulse prepared Machiavelli to lower the ethical standards that human beings ought to follow. It was in these ways that Machiavelli lit the flame of modernity.

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MACHIAVELLIANISM

SEE *Machiavelli, Niccolò; Realism, Political.*

MACHINE FUNCTIONALISM

SEE *Functionalism.*

MACHINERY

The adoption of new machinery, as part of technological progress, is a very controversial issue in economic analysis. Many analysts consider technology, the diffusion of technology, and technological advancements, to be very effective in promoting and attaining economic progress. Others consider machinery and new technologies to be major factors in reducing employment and the de-skilling

of labor. These controversial views on machinery reflect the dual character of technology, which simultaneously creates and destroys labor positions.

Historically, the massive introduction of machinery in the production process took place with the advent of the capitalist economic system, and it was made possible by the subdivision and specialization of the labor process in the early stages of the capitalist mode of production. Adam Smith, in his famous example of the pin factory, showed very eloquently that the subdivision of the labor process into small consecutive tasks dramatically increases labor productivity and, more importantly, allows for the introduction of machines in the production process.

David Ricardo (1772–1823) was the first economist who discussed in detail the issue and consequences of technological progress in society. At first, he agreed with Smith that the mechanization of the production process is good for all social groups within an economy. The introduction of machinery increases productivity, lowers costs and, in competitive environments, lowers the prices of commodities. Eventually, all members of society benefit from the lowering of prices. Both the unemployment that is induced by technological change and the consequent substitution of capital for labor is only temporary, according to Say's Law, which guarantees full employment in the economy.

Ricardo later revised his position, however, arguing that the introduction of machinery in the production process may not benefit the working class, since it may create conditions for permanent unemployment. This could occur if the expenditures on machines are not financed out of savings (new investments) but through the transformation of circulating to fixed capital (simple replacement of labor with capital). If the latter takes place, unemployment will rise and be permanent, and society will suffer. In both cases, however, Ricardo was supportive of a public policy favoring the introduction of machines into the production process. He argued that entrepreneurs will either search for higher profits by increasing productivity through technological progress, or they will invest in profitable projects abroad, rendering the domestic working class doomed to unemployment. Thus, the mechanization of the production process in an economy increases productivity and lowers per unit costs rendering the economy competitive in the international environment.

In Ricardo's presentation of the question of machinery (as in James Mill's), a certain confusion exists. At one point he argues that the substitution of capital for labor generates unemployment, but at the same time he stresses the benefits of genuine cost-reducing improvements in techniques. The theory that technological unemployment automatically generates compensatory adjustments was introduced by John Ramsay McCulloch in the 1820s. According to this approach, all technically displaced labor will necessarily be absorbed in the making of the machines themselves. This approach rests on the idea that, under perfect competition, innovations result in price reductions and an expansion of output. If demand is elastic, total receipts rise and the employer will increase his expenditures on either consumption or investment. If, however, demand is unresponsive to lower prices, the purchasing power in the economy still rises and consumers can acquire goods from other sectors, alleviating the increase in their sectoral demand. Either way, directly or indirectly, labor-saving machinery entails the expansion of output in an economy, which eventually causes the reabsorption of those displaced by machines.

Knut Wicksell (1851–1926), drawing upon compensation theory, argued that in analyzing the effect of labor displacement due to the introduction of machinery in the production process, the fact that unemployment creates feedback and domino effects in an economy should be considered. For instance, an increase in unemployment due to the displacement of labor will decrease wages and increase in profits. This rise in profits then brings about more investment and, by extension, more employment opportunities. In addition, the technological process introduced by machines increases productivity, lowers costs and prices, and eventually increases an economy's demand and, most likely, employment.

An increase in labor productivity is important in the capitalist mode of production because the motive force of capitalism is the drive for profits. Quite simply, more profits can be attained if labor productivity rises. According to Marx, the inner nature of capital is its self-expansion (accumulation), which imposes on individual capitals a fierce competition for higher profits and survival. An increase in labor productivity leads to per-unit cost reductions. This allows the entrepreneur to act in the competitive arena according to the following two pricing options: (1) if the price remains the same, the capitalist can attain a higher profit margin and, eventually, more profits; (2) if the price declines, the entrepreneur can drive his competitors out of the market, thus enjoying the benefits of a higher market share. Hence, rising labor productivity becomes an essential condition for capital's survival. Labor productivity rises if the amount of value that a worker produces in a given time rises. In today's economies, with the existing physical and legislative barriers (labor laws) to workers employment, an increase in surplus value (which translates into potential profits for the capitalist) can take place primarily through the introduction of new machinery.

The introduction of machinery into the labor process has changed the nature of the labor process itself. These changes include the intensification of work, the introduction of methods that further promote the division of

labor, and the specialization and work rationalization that serve to simplify and standardize work so that it can be done in the least amount of time at the lowest cost to business. Technology is a particularly effective mode of getting workers to expend a greater amount of labor power while they are on the job. As a result, more output can be obtained by employing more capital and less labor. Prior to the 1960s, technology was applied primarily to industrial production and to manual work processes. These forms of mechanization reached their height in the automation of assembly lines and in "continuous-flow" processes, which raised industrial productivity enormously. The dominant form of new technology applied to work processes today is electronic technology, which allows a worker to operate several testing machines at the same time, thus serving exactly the same purpose as increasing labor productivity.

The introduction of machines in the production process has also changed the character of the labor process. Since the equipment makes all essential decisions, many skills are removed from the worker's task, making the worker perform more repetitive functions at a more productive rate. Labor is in this way intensely divided and de-skilled. With the division of work and the mechanization of the production process, the real subsumption of labor to capital takes place. Once a new technology is finally rationalized and prepared for mass production, in the long run it will de-skill most workers. Hence, mechanization and de-skilling are the logical outcome of capital's need to exploit living labor. However, there is no perfectly linear descent of skill levels of the labor force, because new technologies may also raise the skill level of certain groups of specialized laborers.

In the face of rapid technological change, workers have great difficulty in recognizing that changes in their jobs are caused by management's desire for greater profits, and not by the machinery itself. The famous movement of Luddites at the beginning of the nineteenth century shows the impotence of the working class to realize the real cause of jobless economic progress. At that time, British workers were against the introduction of labor-saving machines, and in many cases they destroyed factories and machines. The fact is, however, that the historical tendency of capitalism is the growth of surplus labor (as a reserve army of unemployed). Moreover, the more skillful the labor, the more they will be unemployed, since the way capitalism introduces machinery in the production process encourages unskilled labor.

SEE ALSO *Division of Labor; Labor, Surplus: Conventional Economics; Luddites; Machinery Question, The; Marx, Karl; Productivity; Relative Surplus Value; Ricardo, David; Say's Law; Surplus Population; Unemployment*

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MACHINERY QUESTION, THE

The "machinery question" was developed by the economist David Ricardo (1772–1823) in the chapter "On Machinery," he added to the third edition of *On the Principles of Political Economy and Taxation* in 1821. This question related, in his words, to the "influence of machinery on the interests of the different classes of society" and particularly to the "opinion entertained by the labouring class, that the employment of machinery is frequently detrimental to their interests" ([1821] 1951). Ricardo's argument was presented as a recantation of his "previous opinion" on this question and marks the beginning of a debate that is still going on. This argument is based on the example of "a capitalist" with a £20,000 investment and particularly on how that capital is used over three succeeding years.

During the first year, a fraction (£7,000) of this sum is "invested in fixed capital," the remaining part (£13,000) is "employed as circulating capital in the maintenance of labour." Under conditions of simple reproduction, the gross revenue emerging at the end of the year must be £15,000, of which a part (£2,000, if the profit rate is 10%) is the net revenue (profit) of the year. The remaining sum (£13,000) is put back into the operation as the circulating capital of the next year.

In the second year, a process of mechanization begins, and half of the laborers previously employed in producing the gross revenue (wage goods plus profit goods) are transferred to the production of new machinery. Thus, the gross revenue emerging at the end of the year is £7.500, of which £2,000 is retained as the capitalist's profit.

In the third year, the new machinery appears and is worth £7.500, or half of the gross revenue previously produced by the given number of laborers. Thus, the circulating (wage) capital of this year cannot be greater than £7.500 (half of the gross revenue produced in the previous year) minus the £2,000 profit, so that it actually falls to £5.500 from the £13,000 of previous years. Hence, the real wage rate (the wage goods given in exchange for one labor-year) falls to less than half of what it was initially.

Ricardo's argument cannot be understood without a number of qualifications. First, his "capitalist" is understood to be the only capitalist within a closed economy (a self-sufficient farmer or an industrial dictator) who cannot buy, but must produce, the new machinery. Ricardo's special assumption is that this production is realized without increasing the total capital employed—that is, without extra saving out of the capitalist's profit (which is unproductively consumed).

In addition, the "introduction of machinery" has two meanings. One refers to machinery *still to be built*, the other to machinery *already built*. While the former is the meaning adopted in the example above, the latter is adopted in other chapters of the *Principles* as well as in Ricardo's "previous opinion" which held that the introduction of machinery is beneficial to all classes of society. Since the two meanings reflect two equally legitimate assumptions, Ricardo's diverging conclusions in different phases of his life (as well as in different chapters of his principles) are not contradictory, so that his latest argument is an unnecessary recantation.

Ricardo's argument also requires that a distinction be made between national revenue (consumption goods) and national product (consumption goods plus instrumental goods), as well as between the consumption goods exchanged for productive labor (circulating capital in Ricardo's sense, or free capital in Jevons's sense) and the instrumental goods that assist labor in production (fixed capital in Ricardo's sense, or invested capital in Jevons's sense).

Ricardo's special assumption on savings as an unchanging magnitude is reflected in his idea that machinery be "suddenly discovered and extensively used." This assumption was designed to elucidate "a principle," not to explain current reality. This principle relates to the different role that capital plays in the demand for labor, depending on whether it is circulating (free) or fixed (invested). It also relates to the possibility that the gross revenue of a society (wages plus profits) may not increase—and may even fall—when its net revenue (profit) increases.

One interpretation of Ricardo's argument claims that what this is about, and what it warns against, is technological unemployment. This interpretation misses the change in the composition of national product (and of total capital) resulting from the (sudden) introduction of new machines and is focused instead on the impact on employment of a change in their technical coefficients. Ricardo's argument holds even if the new machines were identical to those already in use, provided they be produced without additional savings.

Another interpretation regards the "Ricardo effect"—by which "machinery and labor are in constant competition, and the former can frequently not be employed until labor rises"—as the core of Ricardo's argument. But the "Ricardo effect" deals with the causes, not the effects, of the introduction of machinery, and it is put forward, along with other qualifications, at the close of the machinery chapter in order to deny the "inference that machinery should not be encouraged."

Searching for episodes in economic history to confirm Ricardo's argument, the Nobel laureate John R. Hicks has alluded to the declining conditions of the working classes during the early phase of Britain's industrialization (1969). More properly, perhaps, Ricardo's argument could be used to explain the dramatic conditions of the working classes in the early phase of the Soviet Union's industrialization.

SEE ALSO *Change, Technological; Marx, Karl; Ricardo, David*

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MACMILLAN, HAROLD
1894–1986

Maurice Harold Macmillan was the prime minister of Great Britain from 1957 to 1963. A member of a famous publishing family, Macmillan was born in Brixton, England, on February 10, 1894. He was educated at Eton and Oxford University, and served in the British army during World War I (1914–1918). Macmillan was elected as a Conservative to the House of Commons in 1924. During the Conservative governments of Stanley Baldwin (1867–1947) and Neville Chamberlain (1869–1940), he criticized their appeasement policies toward Nazi Germany. During World War II (1939–1945), Macmillan served as a civilian official in the Ministry of Supply and later as a British liaison to American forces in North Africa and the Mediterranean. In this position, Macmillan developed a friendship with American general and future president Dwight D. Eisenhower (1890–1969).

From 1951 until 1957, Macmillan served in various cabinet positions under prime ministers Winston Churchill (1874–1965) and Anthony Eden (1897–1977). Appointed chancellor of the Exchequer in 1955, Macmillan succeeded Eden as prime minister in 1957. Eden resigned in part because his foreign policy strained British relations with the United States through his controversial military intervention in the Suez Canal and his effort to develop an independent nuclear deterrent.

Consequently, Macmillan was determined to develop a more cooperative, harmonious relationship with the United States in cold war foreign and defense policies. Both Republican president Eisenhower and Democratic president John F. Kennedy (1917–1963) valued Macmillan's advice and diplomatic support. Macmillan persuaded Kennedy to deliver Polaris nuclear missiles to Britain in 1962, advised Kennedy during the 1962 Cuban missile crisis, and helped to negotiate the 1963 Partial Nuclear Test Ban Treaty with the Soviet Union. Macmillan also oversaw the continuing dismemberment of the British Empire as such former colonies as Malaya, Kenya, and Nigeria became independent nations. He tried but failed to overcome French opposition to Britain's application for membership in the European Economic Community.

In domestic and economic policies, Macmillan pursued a moderate course. He assured working-class Britons that his Conservative government would not dismantle the Labour-initiated welfare state and would manage it more efficiently. He also promised to promote economic growth through tax cuts and fewer regulations on business. Macmillan's centrist yet reformist rhetoric and policies contributed to a sharp increase in the Conservative majority of seats in the 1959 parliamentary elections.

Disagreements among cabinet officials about how to solve Britain's problems with its balance of payments and Macmillan's unpopular wage freezes to control inflation contributed to the loss of Conservative seats in the by-elections of 1961 and Macmillan's decision to make major changes in his cabinet in 1962. The growing disunity of the Conservative Party and declining support for Macmillan's government were intensified by the Profumo affair of 1963. John Profumo (1915–2006), secretary of state for war, misled Macmillan and the House of Commons in March 1963 about his adulterous relationship with Christine Keeler, a showgirl who also had a relationship with the Soviet embassy's naval attaché. Labour members of the House of Commons asserted that such a relationship by the secretary of state for war endangered national security in the cold war.

In June 1963, Profumo publicly admitted his deceit and resigned from the cabinet, House of Commons, and Privy Council. Suffering from declining health and less credibility with the public and Parliament, Macmillan resigned as prime minister on October 18, 1963. He retained enough influence within the Conservative Party, however, to ensure that Sir Alec Douglas-Home (1903–1995), instead of Rab Butler (1902–1982), succeeded him as prime minister. Still tainted by the Profumo scandal, the Conservative Party lost its majority in the House of Commons in the 1964 parliamentary elections, and Labour Party leader Harold Wilson (1916–1995) became prime minister.

Macmillan retired from politics in 1964 and rarely commented on British politics publicly. During the 1980s, however, Macmillan was rumored to be displeased with some of Prime Minister Margaret Thatcher's more aggressive privatizing and monetarist economic policies. Busy with the chairmanship of the Macmillan publishing firm, Macmillan became a peer in 1984 as the earl of Stockton and died in Sussex on December 29, 1986.

SEE ALSO *Balance of Payments; Chamberlain, Neville; Churchill, Winston; Cold War; Colonialism; Conservative Party (Britain); Decolonization; Eisenhower, Dwight D.; Empire; Imperialism; Kennedy, John F.; National Security; Parliament, United Kingdom; Suez Crisis; Thatcher, Margaret*

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Sean J. Savage

MACROECONOMICS

The field of economics is divided into two subfields: macroeconomics and microeconomics. Macroeconomics is the study of the economy as a whole. It examines the cyclical movements and trends in economy-wide phenomena, such as unemployment, inflation, economic growth, money supply, budget deficits, and exchange rates. By contrast, microeconomics focuses on the individual parts of the economy. It studies decision making by households and firms and the interaction among households and firms in the marketplace. It considers households both as suppliers of factors of production (labor, land, capital, entrepreneurship) and as ultimate consumers of final goods and services. It also analyzes firms both as suppliers of goods and services and as demanders of factors of production.

Because the economy-wide events studied in macroeconomics arise from the interaction of many households and firms, macroeconomics is inevitably rooted in microeconomics. When economists study the economy as a whole, they must consider the decisions of individual economic actors. For example, to understand what determines gross savings (a macroeconomic issue), they must think about the intertemporal choices facing an individual—in response to a certain change in interest rates on deposits, whether to increase or decrease saving by decreasing or increasing consumption (a microeconomic issue).

Macroeconomic events and the state of the economy affect all members of society. Businesspeople forecasting the demand for their products and services should anticipate how consumers' incomes will grow. Pensioners and people living on fixed incomes have concerns about potential price increases that could affect the cost of living. Unemployed persons looking for jobs always hope that the economy will grow fast so that firms will increase their labor force. Even politicians are affected by the state of the economy, which could influence the outcome of presidential or congressional elections. For instance, in purely democratic societies, the popularity of political leaders currently in office could fade in the event of adverse macroeconomic conditions (e.g., high inflation and/or unemployment) because voters are keenly aware of such conditions and their potential impact. It is, therefore, no surprise that economic policy is always a primary issue of debate for candidates during campaigns.

MACROECONOMIC VARIABLES

Economists assess the success of an economy's overall performance by studying how it could achieve high rates of output and consumption growth. For the purpose of such an assessment, three macroeconomic variables are particularly important: gross domestic product (GDP), the unemployment rate, and the inflation rate.

Gross Domestic Product The GDP equals the total value of goods and services produced in a country during a year. Economic growth is, therefore, a sustainable increase in the amount of goods and services produced in an economy over time. However, *economic growth* is different from *economic development*. Noneconomists usually make little or no distinction between the two terms, using them interchangeably. Going further than GDP growth, economic development can be defined as "a multi-dimensional process of change focused on the betterment of the community, state, and/or country … and aimed at producing more 'life sustaining' necessities such as food, shelter, and health care and broadening their distribution, raising standards of living and individual self esteem, and expanding economic and social choice" (Todaro 2005, p. 4).

Development theories have started to look beyond GDP per capita as a sole measure of development and to consider other measures, such as health-care availability, educational attainment, equality of income distribution, and political freedom. GDP growth, though necessary, is not a sufficient condition for economic development. Modern theories try to explore other requirements for *sustainable* economic development, including the availability of sound government policies and institutions, infrastructure, lack of trade barriers, and fair judicial systems.

Capital accumulation is an essential factor for economic growth and development, which typically involve large-scale investments in infrastructure, industry, education, health, and financial sectors. Simon Kuznets (1901–1985) argued that levels of economic inequality can change as countries develop and, hence, accumulate more capital. Presumably, countries at early stages of development have relatively equal distributions of income because levels of per capita income and capital are low. As a country develops, more capital is accumulated and income distribution becomes unequal in favor of the owners of capital. Eventually, more-developed countries move

back to lower levels of inequality either directly, through social welfare programs and other redistribution mechanisms, or indirectly, through "trickle down" effects.

Macroeconomists usually try to evaluate the economy's growth and development performance either in comparison to other economies (cross-sectional analysis) or over time (time-series analysis). In other words, macroeconomists investigate why the economies of many developing countries in Asia, Africa, Latin America, and eastern Europe tend to grow at a slower rate than those of developed countries, and how the rate of economic growth for a certain country can be improved over time.

Although sustainable growth is always desired by economic policymakers, economies do not always grow steadily and sometimes undergo periods of slowdown or expansion. Slowdowns in economic growth are called *recessions*. Severe economic slowdowns are called *depressions* (e.g., the Great Depression). During recessions, aggregate incomes decrease, as does the demand for goods and services. As a result, firms realize less profit, more firms go out of business, and, therefore, job opportunities become scarce.

On the other hand, economies can sometimes grow unusually fast. These periods of rapid economic growth are called *expansions*, and particularly strong expansions are called *booms*. During an expansion, businesses witness increasing growth and, hence, profits; incomes are higher because more people get raises and promotions; and, as a result, the demand for goods and services increases, which causes firms to realize even more profits, and more job opportunities become available. Given their importance, macroeconomists have a keen interest in analyzing economic fluctuations and whether policymakers can (or should) do anything about them.

Unemployment Rate The second most important macroeconomic concept is the unemployment rate, which is a key indicator of the condition of the labor market. The unemployment rate is defined as the percentage of people willing to be employed at the prevailing wage rate, yet unable to find job opportunities. When the unemployment rate is high, work is not only hard to find, but also less rewarding as people already holding jobs might find it difficult to get wage increases or promotions. A low unemployment rate is an indication of good economic performance. Thus, keeping workers employed is always a chief concern of economic policymakers.

Inflation The third most important macroeconomic concept is inflation, which is an increase in the overall level of prices measured by the consumer price index. This index shows how the value of money changes over time. Inflation is one of the primary concerns of economists and policymakers because it imposes a variety of costs on the economy. When the inflation rate is high, the real value of money erodes. People on fixed incomes, such as pensioners who receive a fixed dollar payment each month, cannot keep up with the rising cost of living. Inflation also redistributes wealth among the population in a way that has nothing to do with merit. When there is a sustained period of inflationary pressure, lenders and workers lose while borrowers and employers benefit because many work and loan contracts in the economy are specified in terms of money. Another cost of inflation is that it discourages saving. The income tax treats the nominal interest earned on savings as income, even though part of the nominal interest rate merely compensates for inflation. This reduces the after-tax real interest rate, and hence makes saving less attractive.

International Trade Another major macroeconomic topic is international trade, which is the exchange of goods and services across international borders. Because modern economies are highly interdependent, macroeconomists often study the impact and desirability of free trade agreements. They also study the causes and effects of trade imbalances, which occur when the quantity of goods and services that a country sells abroad (its exports) differs significantly from the quantity of goods and services its citizens buy from abroad (its imports).

ORIGIN AND EVOLUTION

Until the 1930s, most economic analysis did not separate microeconomic behavior from macroeconomic behavior. The 1776 publication of *The Wealth of Nations* by the Scottish economist Adam Smith (1723–1790) marked the birth of classical economics. Along with Smith, the major representatives of this school of economic thought include David Ricardo (1772–1823), Thomas Robert Malthus (1766–1834), and John Stuart Mill (1806–1873).

Classical economists emphasized the optimization of private economic agents, the adjustment of relative prices to equate supply and demand, and the efficiency of free markets. The classical theory dominated economic analysis till the late 1920s. Its main presumption is that the economy works better when government intervention is kept at a minimum because the behavior of different economic agents tends to achieve self-interests that are consistent with the overall well-being of the economy. Classical economists believed that the market itself would correct for any economic imbalance or turbulence without the need for government intervention. Any disequilibrium in a single market would eventually result in an automatic correction via the interaction between the two sides of the market, supply and demand, with the help of price flexibility. This flexibility would always ensure that

macroeconomic equilibria in the national economy are a result of automatic equilibria (clearance) in single markets. Classical economists also believed that the utilization of more inputs of production can be translated into higher levels of national output and income.

The Great Depression that began in 1929 in the United States was the worst economic catastrophe in the country's history. During the depression, the United States experienced massive unemployment and greatly reduced incomes. This devastating period caused many economists to question the validity of classical economic theory, which seemed incapable of explaining the Great Depression. Classical economists believed that factor supplies and available technology determined the level of national income. However, real income in the United States decreased by 30 percent between 1929 and 1933 even though factors of production and technology remained unchanged. Therefore, many economists believed that a new theory was needed to explain such a large and sudden economic downturn and to identify government policies that might reduce the economic hardship so many people faced.

The British economist John Maynard Keynes (1883–1946) revolutionized the way economists think with his book, *The General Theory of Employment, Interest, and Money* (1936). It was pathbreaking in several ways. The two most important are, first, that it introduced the notion of aggregate demand as the sum of consumption, investment, and government spending. Second, it showed that full employment could be maintained only with the help of government spending.

Keynes proposed that low aggregate demand is responsible for the low income and high unemployment that characterize economic downturns. He criticized the classical theory for assuming that factor supply alone determines national income and that prices are flexible. In contrast to the classical theory, Keynes asserted that, in the short run, changes in aggregate demand rather than aggregate supply influence national income. Moreover, automatic economic equilibria are not necessarily ensured in the Keynesian world. In fact, economic balance can only occur by chance. Consequently, government intervention is sometimes sought in order to correct for economic instability.

The work of Keynes remains a central point of reference even today because all economic schools of thought label themselves in relation to the ideas initially developed by Keynes in his *General Theory*. Since the breakdown of the Keynesian consensus in the early 1970s, macroeconomics witnessed the emergence of a number of competing schools of thought consisting of economists who share a broad vision of how the economy as a whole works. Two "new" schools in particular have been highly influential: the new classical and the new Keynesian. These new schools share the view that macroeconomic theories should be based on solid microeconomic foundations.

Most economists use the term *new classical* broadly to describe the many challenges to Keynesian orthodoxy that prevailed in the 1960s. New classical economists advocate models in which wages and prices adjust quickly to clear markets. More recently, many new classical economists have turned their attention to *real business cycle theory*, which uses the assumptions of the classical theory—especially flexible prices—to explain short-run economic fluctuations.

New Keynesian economists, on the other hand, believe that market-clearing models cannot explain short-run economic fluctuations, and so they advocate models with sticky wages and prices. New Keynesian research is aimed at explaining how wages and prices behave in the short run by identifying more precisely the market imperfections that make wages and prices sticky.

Even though they sometimes reach differing conclusions, the various schools of thought are not always in direct competition with one another. It is unlikely that one of the current schools of economic thought perfectly captures the workings of the economy. Rather, each theory contributes a small piece of the overall puzzle.

THEORETICAL, EMPIRICAL, AND POLICY SIGNIFICANCE

Like all scientists, economists rely on both theory and observation. Macroeconomists usually try to explain the economic world as it is and consider what it could be. For this purpose, they use many types of data to measure the performance of an economy. They collect data on incomes, prices, unemployment, and many other economic variables from different periods and different countries. They then attempt to formulate theories that could help explain these data. They try to answer such questions as: Why do incomes increase over time? Why do some countries have high rates of inflation while others maintain stable prices? What causes recessions and how can economic policy be used to reduce their incidence and scale?

The goal of studying macroeconomics, however, is not just to explain economic events but also to improve economic policy. Macroeconomic policies are government actions designed to influence the performance of the economy as a whole. By understanding how government policies affect the economy, economists can help policymakers do a better job and avoid serious mistakes.

The policy goals that macroeconomists typically associate with the discipline include economic growth, price stability, and full employment. Policymakers always face three fundamental macroeconomic questions: (1) How can the rate of economic growth be increased and sus-

tained? (2) How can unemployment be reduced? (3) How can inflation be kept under control? To find answers to these questions, policymakers can implement the tools of three major types of macroeconomic policy: monetary policy, fiscal policy, and structural policy.

The term *monetary policy* refers to the management of the nation's money supply (cash and coins, although modern economies have other forms of money such as savings and time deposits and money market mutual funds). Most economists agree that changes in the money supply affect important macroeconomic variables, including national output, employment, interest rates, inflation, stock prices, and the exchange rate. In almost all countries, monetary policy is implemented by a government institution called the *central bank*.

Fiscal policy refers to decisions that determine the government's budget, including the amount and composition of government expenditures and government revenues. The balance between government spending and taxes is a particularly important aspect of fiscal policy. When the government spends more than it collects in taxes, it runs a *deficit*, and when it spends less, the government's budget is in *surplus*. There is a consensus among economists that fiscal policy can have an important impact on the overall performance of the economy.

Finally, the term *structural policy* includes government policies aimed at changing the underlying structure, or institutions, of the economy. The move away from government control of the economy and toward a more market-oriented approach in many formerly communist countries, such as Poland, the Czech Republic, and Hungary, is a large-scale example of structural policy. Many developing countries have tried similar structural reforms. Supporters of structural policy hope that by changing the basic characteristics of the economy or by restructuring its institutions they can stimulate economic growth and improve living standards.

POLICY DEBATE

Different analytical approaches lead to different policy conclusions. For example, a Keynesian approach would have governments run a surplus during the boom period of business cycles and a deficit during a recession. On the other hand, classical economists would prefer that the government not intervene to correct for short-term economic fluctuations; they believe this will distort the way free markets function. Others argue that using taxation as a macroeconomic policy tool has no effect on the economy; rational individuals tend to save when they receive tax cuts because they expect the government to raise taxes in the future to pay off its deficit.

As articulated in Mankiw (2004), there are three unresolved questions pertaining to monetary and fiscal policies, each of which is central to political debates: First, should policymakers try to stabilize the economy? Second, should monetary policy be made by rule rather than by discretion? Third, should the government balance its budget?

With regard to the first debate on whether monetary and fiscal policymakers should try to stabilize the economy, proponents argue that policymakers should take an active role in leading the economy to stability. When aggregate demand is inadequate to ensure full employment, policymakers should act to boost spending in the economy. When aggregate demand is excessive and there is a risk of inflation, policymakers should act to lower spending. Such policy actions put macroeconomic theory to its best use by leading to a more stable economy. Opponents argue that there are substantial difficulties associated with running fiscal and monetary policies. One of the most important problems is the time lag that often occurs with policy. Economic conditions change over time. Thus, policy effects that occur with a lag may hit the economy at the wrong time, leading to a more unstable economy. Therefore, policymakers should refrain from intervening in order to avoid doing any harm to the economy.

As for the controversy on whether monetary policy should be made by *rule* rather than by *discretion*, advocates assert that discretionary monetary policy does not limit incompetence and abuse of power. For example, a central banker may choose to create a *political business cycle* to help a particular candidate. One way to avoid such a problem is to force the central bank to follow a monetary rule that is flexible enough to allow for some unforeseen circumstances that could affect the economy. Critics of this view argue that discretionary monetary policy allows flexibility, which gives the central bank the ability to react to unforeseen situations quickly.

Finally, macroeconomists have long debated whether the government should balance its budget or run a deficit. Advocates of a balanced budget argue that future generations of taxpayers will be burdened by public debt if the government accumulates annual deficits in the present. Opponents of the balanced budget approach argue that the problems caused by government debt are overstated and that the future generation's burden of debt is relatively small when compared with their lifetime incomes. If public spending on education and health is reduced, for example, this could lead to lower economic growth in the future, which would certainly not make future generations better off.

SEE ALSO *Inflation; Involuntary Unemployment; Microeconomics; Natural Rate of Unemployment*

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MACROECONOMICS, STRUCTURALIST

Macroeconomics as taught in North American and European universities does not reflect the particular set of problems faced by most developing countries. Indeed, more than simply reflecting different stages of industrialization, underdeveloped—or developing—countries followed very different development paths altogether, characterized by foreign technology, independently of their production factors (excess workforce), structural heterogonous domestic production, and structural inflation. Structuralist macroeconomics in contrast addresses specifically the economic development of Latin America. Incidentally, "underdeveloped economies" is a term coined by *dependendist* theorists such as Mauro Marini (1975) and Dos Santos (1978), who were largely influenced by the work of Andre Gunder Frank. This theory states that backward countries could never fully develop since they lack a national bourgeoisie class that could lead the industrialization process. The Economic Commission for Latin America and the Caribbean (ECLAC), however, took a softer view, coining the term "developing countries," which eventually could "catch up" with industrial countries (Amsden 1989).

Structuralism finds its roots in ECLAC, a United Nations institution created soon after World War II to compensate Latin American countries for being left out of the Marshall Plan. One of the founding fathers of structuralism is Raúl Prebisch, an Argentinean who was executive director of ECLAC from 1950 to 1963. Prebisch was critical of various economic doctrines, including the critical views advocated by Keynes and Kalecki, that failed to consider the particularities of developing countries.

Prebisch was a university professor in Buenos Aires and a founding member and first governor of the Central Bank of Argentina, a post he held until 1943. Perhaps his most famous book, *The Economic Development of Latin American and Its Principal Problems* (1949), often referred to as the "manifesto" of Latin American development, propelled him into the position of ECLAC executive secretary. Prebisch held considerable influence over economists and policy makers. After leaving ECLAC, Prebisch became the first director of the United Nations Conference on Trade and Development (UNCTAD).

STRUCTURALISM IN THEORY

After the demise of the Bretton Woods system, there was an ideological movement in academic circles toward neoliberal ideology. This intellectual shift can be characterized by three principal ideas. (1) Public deficits were seen as the main cause of inflation because they increase demand over supply. As such, there was a movement against state intervention in the product and financial markets (Bielschowsky 1998). (2) Expansionary credit policies were seen as the main cause of interest rate increases. (3) Structural trade imbalances were considered to be the result of limited savings. Therefore, the principal way to eliminate the discrepancy is by opening up the financial markets to external finance.

This ideology, advocated in particular by the International Monetary Fund and the World Bank, spread through academic and policy circles in Latin America. These policies, known today as the Washington Consensus, were adopted by most governments with disastrous consequences, since they did not take into con-

sideration the specific set of economic problems facing Latin American countries.

Latin American economies are characterized by two overall macroeconomic problems: dependence on the external sector and technological backwardness. In turn, these can be expanded into the following six stylized facts (Pinto 1973):

1. Having been colonies, Latin American countries were open economies: They were subjected to certain external markets for which they produced specialized goods and services based on their comparative (absolute or relative) advantage: They supplied raw materials to capitalist economies and imported manufactured goods. They were prices takers, with terms favorable to industrialized countries, for which overvalued exchange rates are an important instrument (Kregel 2004).
2. Exports are not linked to the structure of domestic production. As a result, developing countries are highly dependent on imports according to the dominant mode of production (the primary export model before World War II; the import substitution model from the 1950s to the 1970s; the secondary export mode from 1980 until now).
3. There exists an imbalance in the structure of production: Industrial participation increased rapidly without a corresponding change in the agricultural sector or in the production of know-how and technology suitable for their factors of production.
4. There exists an imbalance between the productive sector and other substructures of the economy. The infrastructure was inadequate for industrialization, and the process of finance switched from the external to the internal markets, without developing a deep financial system.
5. The external dependence on imports induced higher income elasticities of imports and exports, and a highly price-inelastic demand for imports and exports, requiring overvalued exchange rates to reduce costs.
6. Exchange rate devaluations are an important transmission mechanism that induces inflationary pressures via magnified exchange-rate pass-through effects to prices, along with unequal income distribution that undermines the purchasing power of workers. Devaluations come with reductions in nominal wages (Noyola 1957).

Another important structuralist is Lance Taylor (1979, 1983, 1991), who believed that institutions and their behavior were the main determinants of resource allocation. Influenced largely by ECLAC, he approached development by first identifying stylized facts. First, "sectoral distinctions" are required in any analysis of development. In particular, Taylor argues that we must distinguish on the one hand between traded and home-goods production sectors, both highly dependent on imports, and between the agricultural (or traditional) and industrial sectors on the other. Second, financial markets tend to be underdeveloped. Third, distribution and class struggles are key components of the story of underdevelopment. In turn, these "centers of power" (Taylor 1991, p. 5) influence pricing and production decisions. Fourth, "unresolved distributional conflicts" are the source of inflationary pressures. Fifth, dependency on imports makes the economy dependent on foreign exchange.

MAIN ISSUES OF STRUCTURALISM

Given these facts, macroeconomic structuralists developed two important concepts. The first is "structural inflation" caused by factors unrelated to demand. In particular, given the openness of Latin American countries, there is a magnified pass-through effect from variations in the exchange rate to domestic prices. Latin American countries historically have had external current account deficits requiring external finance to cover the balance-of-payments deficit. External public borrowing, however, shifted toward external private borrowing (debt) and bond and shares issuance in the 1980s and 1990s.

The second concept concerned the unequal terms of trade, based on the price inelasticity of demand for imports and exports, and income inelasticity of demand. As a result, exchange rate movements do not induce equilibrium in the current account, which can be attained only through economic stagnation.

With respect to external financing, Prebisch and other structuralists were against relying on foreign direct investment (FDI) as well as foreign private credits, for two important reasons. First, while it is true that initially FDI was an important source of external capital (1940–1960), capital outflows soon were much higher than capital inflows, thereby exacerbating the existing fragile balance of payments. Second, while foreign investment increased, the imported technology was largely unsuitable for Latin America. Fajnzylber (1990) argued that FDI was less of a black box than an "empty hole."

As for external debt, there was not much concern in the 1970s when interest rates were kept low. However, once interest rates were pushed up in 1979, it had dramatic implications for Latin American countries. Initially, capital movements reversed (1980s) and exchange rates devalued, preventing Latin American countries from financing their balance-of-payments account. In the late 1980s, financial markets were liberalized, a process that

continued through the early 1990s. External financing shifted to the bond market, which induced the 1994 crisis and the Tequila effect, which increased foreign direct investment importance, although these were of a different nature. Now, foreign direct investments are principally in the form of cross-border acquisitions and mergers, proving equally as unstable as movements in the bond market.

STRUCTURALIST POLICIES

Given the above discussion, what are the principal structuralist policy proposals? While we can identify several, the more relevant and important ones include the following.

1. Following Keynesians, structuralists believe that the emphasis of policy should be output, growth, and employment. To achieve growth, however, structuralists believe that the state should play a vital role.
2. Growth can result only from placing the emphasis on the domestic, internal industrial economy rather than relying on the export sector. As such, policies aim at eliminating the countries' reliance on foreign demand for their primary exports (especially raw materials). As a result, import-substitution policies, such as government-imposed tariffs on imports, are seen as important policy elements.
3. Because of the technological backwardness of many sectors, an industrial policy of improving production technologies in lagging sectors is crucial.
4. End the perception of "old colonies" and reevaluate the role of developing countries and their relationship with other countries.

SEE ALSO *Balance of Payments; Development Economics; Economic Commission for Latin America and the Caribbean (ECLAC); Exchange Rates; Income Distribution; Interest Rates; Macroeconomics; Markup Pricing; North-South Models; Prebisch, Raúl; Prebisch-Singer Hypothesis; Singer, Hans; Taylor, Lance*

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MACROFOUNDATIONS

The macrofoundations of economic activity consist of institutions (rules, norms, laws, and conventions) that define the social context within which economic processes take place. These economic processes include individual decision-making, production, exchange, and the determination of aggregate output and employment. Note that macrofoundations as defined here are understood strictly as social structures that shape the processes responsible for generating both microeconomic and macroeconomic outcomes. This is not to overlook the fact that the latter, themselves, frequently provide a type of "macrofoundation" for the former. For example, the existence of involuntary unemployment creates a social context that can be expected to impact significantly on the behavior of individual workers.

Macrofoundations can differ between regions and over time. They play an important role in supplementing

the price mechanism as a means of coordinating economic activity.

FROM MICROFOUNDATIONS TO THE MACROFOUNDATIONS OF ECONOMIC ACTIVITY

Economists have long been interested in the microeconomic underpinnings of economic decisions and outcomes. This "microfoundations" project deems individual decision making to be the root source of all economic phenomena, and hence the basic "building block" of all economic theory. But an important oversight of this project is that, as much as individuals create the societies in which they live, so, too, does society shape and mold individuals—their preferences, habits, beliefs, aspirations, and so forth. For example, exposure to the customs and laws of North America causes individuals to habitually keep to the right when driving on the road, and to regard such behavior as normal. But exposure to the customs and laws of the United Kingdom would result in the same individuals habitually keeping to the left, and coming to regard this different behavior as normal. The macrofoundations project calls attention to the importance of the social context in which economic activity takes place, and the role of this social context as a determinant of economic decisions and outcomes.

In particular, the macrofoundations of an economy are understood to supplement the workings of the price mechanism as a means of coordinating economic activity. Keynesian macroeconomists have long doubted the capacity of the price mechanism to coordinate economic activity so as to automatically create full employment. The macrofoundations project goes further, pointing out that the price mechanism does not even suffice to ensure the orderly reproduction of the economy from one period to the next, at any level of economic activity. Hence the price mechanism alone cannot coordinate expectations if there is fundamental uncertainty about the future (including the future states of markets and the prices determined therein). Nor can it coordinate actions pursuant to conflicts of interest that occur outside the sphere of market exchange—for example, at the point of production. But the economy's macrofoundations can assist in the coordination of both expectations formation and conflict resolution. By specifying behavioral procedures of the form "in event of *x*, do *y*," they provide a source of information about likely future actions and outcomes, and hence a basis for forming expectations in what would otherwise be a world of behavioral flux. For example, it is easier for workers to predict their future income if their employer is committed to a convention of retaining employees on current terms regardless of trade fluctuations, than it would be if wages and employment were made contingent on the future state of the labor market.

Furthermore, macrofoundations can ameliorate conflict, by regularizing relations between parties with mutually exclusive interests. For example, the conventional authority that is vested in a production supervisor can be used to settle disputes amongst subordinate operatives that might otherwise create prolonged disruptions to a production process. (Note that this last example draws attention to the fact that institutions sometimes codify power relations. Some economists regard the latter—together with related concepts such as the class structure of capitalism and the associated unequal ownership of wealth—as also being part of the economy's macrofoundations.) In this way, the macrofoundations of economic activity have been likened to a computer's operating system, providing a stable macroscopic environment within which particular actions (in the case of a computer, tasks using specialized software; in the case of an economy, specific economic activities) take place.

THEORETICAL, EMPIRICAL, AND POLICY SIGNIFICANCE OF MACROFOUNDATIONS

The existence of macrofoundations poses several challenges for economic theory. First and most obviously, it raises questions about the level of aggregation at which economic inquiry should begin. Rather than starting with an isolated individual conceived *sui generis*, the existence of macrofoundations necessitates that consideration be given to the societal norms, conventions, laws, and so forth to which the individual is exposed if his or her decision making and behavior are to be understood. This, in turn, requires a search for the macrofoundations pertinent to different particular facets of economic activity (such as corporate behavior, the workings of the labor market, or the determination of macroeconomic outcomes). Some economists believe that what is necessary in this regard is appeal to stylized facts about the operation of actually existing economies. This means that the macrofoundations project can be associated with economic theory that is spatially and temporally contingent rather than universal.

The macrofoundations project has already had an impact on empirical inquiry, with studies suggesting that economic outcomes such as unemployment can be explained by means of exclusive reference to macroinstitutional variables. Finally, the concept of macrofoundations has important policy implications. It suggests that, rather than treating the economy as a given "state of nature," policymakers can (and do) contribute to the constitution of the economy by creating institutions that add to its macrofoundations. These include laws governing the limits to and operation of markets, and conventions (such as

the Taylor rule in monetary economics) that determine the objectives and pursuit of policy interventions.

SEE ALSO *Economics, Keynesian; Macroeconomics; Microeconomics; Microfoundations; Policy, Monetary; Taylor Rule*

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Mark Setterfield

MADISON, JAMES
1751–1836

James Madison was born in King George County, Virginia, in March 1751 and died at "Montpelier," his country estate, in June 1836. The fourth president of the United States, Madison was one of early America's most significant contributors to the developing social sciences, especially through his political and constitutional thought and writings.

Madison was born into a prominent Virginia family, the first son of James Madison Sr. and Nelly Conway. Madison's education began in King and Queen County, Virginia, where he was taught by Donald Robertson, a Scottish teacher who ran a school there. His education continued under the Reverend Thomas Martin, a private tutor who was a graduate of the College of New Jersey (now Princeton University), which Madison himself later attended, graduating in 1771. At Princeton, Madison was influenced in lasting ways by the college president, John Witherspoon (1723–1794), who had come to America in 1768 partly through the efforts of Benjamin Rush (1746–1813), who at the time was a young American medical student studying in Edinburgh. Madison stayed on at Princeton after the completion of his undergraduate degree to study with Witherspoon more closely. As his correspondence shows, by the time he left college Madison was clearly well acquainted with the major thinkers of Western political thought, including Plato (c. 428–347 BCE), Aristotle (384–322 BCE), Huigh de Groot (1583–1645), Thomas Hobbes (1588–1679), and John Locke (1632–1704), as well as the works of the Scottish Enlightenment, including David Hume's multivolume *History of England* (1754–1762). Madison also came away from Princeton—as did many of his classmates—a fiery supporter of the building Revolutionary cause and with a desire to promote religious freedom.

CHAMPION OF RELIGIOUS FREEDOM

From at least the early 1770s Madison was known to have championed religious freedom in his home colony of Virginia, a subject to which in 1785 he contributed "A Memorial and Remonstrance against Religious Assessments." There, Madison wrote:

> Torrents of blood have been spilt in the old world, by the vain attempts of the secular arm, to extinguish Religious discord, by proscribing all difference in Religious opinion. Time has at length revealed the true remedy. Every relaxation of narrow and rigorous policy, wherever it has been tried, has been found to assuage the disease. The American Theatre has exhibited proofs that equal and compleat liberty, if it does not wholly eradicate it, sufficiently destroys its malignant influence on the health and prosperity of the State. (Hutchinson 1956, pp. 302–303)

FATHER OF THE CONSTITUTION

While Madison is remembered in the early twenty-first century as a champion of religious freedom and for his support of the separation of church and state, he is even better remembered for his instrumental part in the deliberations at the Constitutional Convention held at the statehouse in Philadelphia in the summer of 1787. That convention resulted in the drafting of the U.S. Constitution, a document that showed Madison's imprint at many key points. It is for this that he is remembered as the "Father of the Constitution." Part of that legacy was the "three-fifths" compromise, whereby, for the purposes of taxation and representation, five blacks were considered equivalent to three whites. Like Thomas Jefferson and others of their generation, the slaveholding Madison was not able to reconcile—even in his own mind—the political realities of slavery in eighteenth-century America with the Enlightenment principles of freedom and liberty.

It is also on related constitutional issues that Madison is best known as a social science writer. Madison (with Alexander Hamilton and John Jay) was one of the three authors who under the pen name of *Publius* composed the *Federalist*, a collection of eighty-five essays first published in 1787 in New York newspapers. It was written with an eye to assuring ratification of the Constitution, and Madison is thought to have written twenty-nine of the *Federalist* essays. His most famous papers were *Federalist* No. 51, No. 39, and No. 10, an essay on the causes, nature, and remedies for the problem of factions. In that paper Madison merged his intimate knowledge of Scottish Enlightenment texts, including Hume's *History of England*, with his personal experiences of American social and political developments. Madison countered Charles-Louis de Secondat (Montesquiéu, 1689–1755) and other European and American political theorists, who argued in a civic republican vein that republican government could not long exist in a large country such as the United States. Madison wrote:

> Extend the sphere, and you take in a greater variety of parties and interests; you make it less probable that a majority of the whole will have a common motive to invade the rights of other citizens; or if such a common motive exists, it will be more difficult for all who feel it to discover their own strength, and to act in unison with each other. (Carey and McClellan 2001, p. 48)

Madison was also one of the principal framers of the Bill of Rights, the first ten amendments to the U.S. Constitution, which went into effect in 1791.

SEE ALSO *American Revolution; Aristotle; Bill of Rights, U.S.; Church and State; Constitution, U.S.; Federalism; Freedom; Hobbes, Thomas; Hume, David; Locke, John; Plato; Presidency, The; Slavery; Smith, Adam*

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Mark G. Spencer

MADNESS

Every society considers some of its members to be "mad," "crazy," "insane," or "mentally ill." Regardless of the particular term that is used, the core aspect of madness lies in its *incomprehensibility*. Universally, when social action seems to lack purpose, intent, or reason, observers are likely to apply labels of *madness* to it. To say that incomprehensibility is the major criterion observers use to classify madness is not just to say that they fail to understand or empathize with a person's motives. Rather, it implies that the behaviors of the mad seem beyond the realm of understanding. This lack of comprehensibility distinguishes madness from other types of behaviors that violate social norms. For example, murders that stem from recognizable motives such as jealousy, quarrels, or vengeance are not viewed as signs of mental illness. Someone who randomly kills a stranger without any possible motive usually cannot be placed in any socially recognizable category of murderer, and is likely to be viewed as mad.

Historically, labels of madness were reserved for people whose behaviors fell well outside the boundaries of normal social interaction. Beginning with the earliest written records, madness encompassed behaviors that appear to be "without reason." The ancient Greek philosopher Socrates (c. 470–399 BCE), for example, noted that the Greeks of his time "do not call those mad who err in matters that lie outside the knowledge of ordinary people: madness is the name they give to errors in matters of common knowledge" (Rosen 1968, p. 94). Since ancient times, societies have also recognized a second type of madness that features profound sadness and withdrawal that is not proportionate to the social circumstances of the sufferer. The eminent German psychiatrist Emil Kraepelin (1856–1926), writing at the turn of the nineteenth century, codified these two categories of disorder as *dementia praecox* or schizophrenia and manic-depressive or affective conditions, which remain as major types of disorders.

SOCIAL RESPONSES TO MADNESS

While the core meaning of madness as incomprehensibility is universal, the boundaries of this label, as well as the specific behaviors that fall within it, are culturally specific and highly variable. The social responses to people who are considered mad have diverged considerably across cultures and throughout time. The simplest social groups, where individuals are bound to a small number of kin and group members throughout their lives, typically respond to those they consider mad with sympathy and tolerance, and attempt to maintain them in the group with little stigma. The Yoruba of Ghana provide a typical example. "The majority of chronic schizophrenics in rural districts," according to M. J. Field in *Search for Security*

(1960), "are treated with such patient and sustained kindness by their relatives and tolerance by their neighbors that the prognosis for their recovery is probably better than it would be were they herded with other patients in understaffed mental hospitals" (p. 453).

With growing social complexity comes a lower tolerance for the aberrant behavior of the mad. Most Western societies have associated madness with unpredictability and violence and have shunned and excluded the mentally ill from social life. In ancient Israel, Greece, and Rome, for example, the mad often roamed through the countryside and were commonly mocked, ridiculed, and abused. Likewise, in medieval Europe, the mentally disordered did not participate in community life, were stigmatized, and often treated harshly. The French philosopher Michel Foucault (1926–1984), however, asserts in *Madness and Civilization* (1961) that before the seventeenth century madness was linked to wisdom and insight and "man's dispute with madness was a dramatic debate in which he confronted the secret powers of the world" (1965, p. xii). While Foucault probably exaggerates the respect shown to the mad during this period, it is true that no formal institutions existed to confine the mad and they were left to roam the countryside at liberty, provided that they did not create disturbances.

The breakdown of social cohesiveness in Western societies resulted in a more dramatic exclusion of those who were viewed as mad. Confinement in mental institutions arose between the sixteenth and nineteenth centuries in western Europe and at the beginning of the nineteenth century in the United States. This growing segregation reflected growing urbanization, geographic mobility, and immigration that contributed to the breakdown of cohesive communities.

In the United States, the initial mental hospitals of the early nineteenth century emphasized what was called moral treatment that provided individualized and sympathetic care within small residential facilities. By the middle of the nineteenth century, however, mental institutions had become much larger and more bureaucratic. Under such circumstances, moral treatment became more problematic. The new profession of psychiatry developed around these formal institutions, and nearly all early psychiatrists had positions in mental hospitals. These facilities served as the central institution devoted to the care of the mentally ill until well into the next century. By the beginning of the twentieth century, their residents were often elderly, from impoverished backgrounds, and members of disadvantaged ethnic groups. Many stays were long term, and often persons who entered these institutions ultimately died within them. But some individuals passed through them for short stays and may have benefited from their experience. To be sure, mental institutions had serious flaws, including their huge size, overcrowding, geographic isolation, involuntary confinement, depersonalization, and coercive and custodial treatment. Nevertheless, they provided the most seriously ill persons an integrated range of services—housing, food, symptom management, medical treatment, a place for social interaction, and respite from stressful community conditions—in one centralized location.

Beginning in 1955, the use of mental hospitals to confine the mad began to break down in the United States as the average number of residents in state and county mental hospitals started to decline from a peak of 550,000 to 370,000 in 1969 to about 60,000 in 1998. Taking growing population size into account, the number of residents in state and county mental hospitals fell from 339 per 100,000 persons in 1955 to 91.5 in 1975 and to only 21 in 1998. A variety of factors led to the steep decline in the use of traditional mental institutions. The introduction of psychotropic drugs in the mid-1950s, political and legal movements devoted to stiffening requirements for institutional commitment, the expansion of the civil rights of mental patients, and the growth of community treatment all played a role. But the development of government entitlement programs, notably Medicare, Medicaid, Social Security Disability Insurance, and housing supplements, were the most significant facilitators of community treatment.

EXPANDING DEFINITIONS OF MADNESS

Until the end of the nineteenth century, the category of madness was largely reserved for people who behaved in bizarre and incomprehensible manners. At that time, the boundaries of this category began to undergo a dramatic expansion. Stimulated by the rise of psychoanalysis, outpatient treatment developed as a parallel system to inpatient mental hospitals. In contrast to the generally impoverished, poorly educated, and socially marginal persons who resided in mental hospitals, outpatient clients were often financially well-off, highly educated, and intellectually sophisticated. Over the course of the century, the type of problems associated with outpatient psychiatric care expanded from severe and disabling disorders to encompass people with problems of living, such as troubled marriages, wayward children, and lack of purpose in life. In contrast to the declining population of public mental hospitals, treatment in outpatient mental health settings in the United States increased by over twentyfold between 1955 and 2000.

A major change in the response to the mentally ill occurred in 1980 when the psychiatric profession codified hundreds of different mental illnesses in the *Diagnostic and Statistical Manual* (*DSM*-III). This manual includes

not only the sorts of incomprehensible behaviors that have always been viewed as forms of madness, but also numerous forms of emotional, behavioral, psychophysiological, and many other disorders that extend well beyond the traditional boundaries of madness. It reflected the idea that mental illnesses, like physical illnesses, were specific disease entities that were likely to have biologically based causes. The *DSM*'s categories of mental illness have expanded to the extent that population surveys estimate that half of all Americans will experience some mental illness during their lifetimes, and over a quarter have some disorder at any given time. At the same time, there has been an explosive growth in the use of psychotropic medications. These medications, first introduced in the 1950s, have exponentially expanded to the point that 10 percent of women and 4 percent of men consume them in any given month. Indeed, three of the seven largest selling prescription drugs of any sort are now antidepressant medications.

MADNESS IN THE TWENTY-FIRST CENTURY

The concept of madness has simultaneously shrunk and expanded over the course of recent history. As *mental illness* has replaced *madness* as the term most likely to be applied to incomprehensible behaviors, fewer people experience exclusion, confinement, and stigma. The social distance between the mad and the normal has decreased with the growing emphasis on the similarities between mental and physical illnesses and on the perceived biological origins of mental illness. At the same time, this concept has expanded as more behaviors are regarded as signs of mental illness, more people are seen as suffering from this condition, and more individuals seek help from medical and mental health professionals.

The evolution of madness into mental illness has brought both benefits and costs. On the one hand, it has led to efforts to destigmatize the mentally ill and treat them less coercively, as well as to a growing understanding of the causes of and effective responses to these conditions. On the other hand, no adequate program has replaced the many services mental hospitals used to provide, and the most seriously ill do not receive adequate care in the community. In addition, the expansion of the boundaries of mental illness have medicalized many normal behaviors and led to an overconsumption of psychotropic medications. The responses to madness at the beginning of the twenty-first century are far better than for most of Western history, but still have much room for improvement.

SEE ALSO *Foucault, Michel; Mental Health; Mental Illness; Psychotherapy; Psychotropic Drugs; Schizophrenia; Stigma*

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Allan V. Horwitz

MAFIA, THE

The Mafia is an organized crime formation with Sicilian roots; branches in France, Tunisia, and the Americas; and a recent presence in Russia and Eastern Europe. Its historical successes vis-à-vis other criminal groups, particularly in the United States, have made the word *mafia* (whose origin has never been convincingly traced) a brand name for organized crime. Recently repressed on both sides of the Atlantic, the Mafia, as such, may be on the wane, although reduced vigilance could allow a resurgence.

Intrinsically secretive and violent, organized crime is best known through criminal investigations, yet police models, influenced by concerns of state, pose analytical problems for social science research. Early interpretations of the Sicilian Mafia—for example, Gaetano Mosca's article in the 1933 *Encyclopedia of the Social Sciences*—emphasized two aspects associated with Sicily's western provinces, historically dominated by quasi-feudal latifundia: a "mafiist" attitude valorizing self-help justice, as expressed through the concept *omertà* (silence before the law); and localized bands known as *cosche* (singular *cosca*) dedicated to animal rustling, extortion, and occasionally kidnapping for ransom. Although the menace of violence accompanied these activities, most murders resulted from inter- and intra-cosca rivalry for "turf." The surrounding "mafiist" attitude impeded investigations, as did the political connections of mafiosi who "made elections" as the suffrage expanded.

In the 1960s foreign scholars of Sicily, swayed by that decade's profound distrust of policing institutions, wrote about mafia with a small *m* and without the definite arti-

cle. Rather than an *associazione a delinquere* (criminal association) with boundaries, rules and goals, mafia was the sum of individual mafiosi wielding power through private violence. In the 1980s and 1990s, however, innovative Sicilian prosecutors, responding to the Mafia's assumption of a commanding role in trafficking heroin to the United States, "turned" several mafiosi into justice collaborators, eliciting ethnographically rich personal narratives. (Palermo-based Tommaso Buscetta was the first of these, offering testimony to the prosecutor Giovanni Falcone, who was assassinated in 1992.) This and a corresponding citizens' antimafia movement encouraged new research, much of it by Sicilian scholars, which revealed the Mafia to have a greater institutional capacity than had been imagined before.

Antecedents of the Mafia date to the late 1800s in Sicily, when a newly unified Italian state sought to transform feudal and ecclesiastical holdings into private property, impose taxes, and draft soldiers, but without building institutions that could govern the resulting banditry and chaos. Self-anointed "mafias" filled the breach, claiming to restore order while earning revenue from manipulating disorder. Enterprises of many kinds were extorted for a *pizzo* (a "beak full") as the price for protection, and pressed to distribute employment opportunities in ways that leveraged the racketeers' local influence. Using their electoral clout, mafiosi also insinuated themselves with local, regional, and national governments, receiving licenses to carry weapons and "fix" inconvenient trials. Older, established *capi* (bosses) rarely went to jail, whereas younger *picciotti* (henchmen and enforcers) experienced incarceration as no more than a perfunctory interruption of their affairs. When criminal convictions occurred, the cosca functioned as a mutual-aid society, taking care of imprisoned members' families. Prisons, in turn, were nerve centers of inter-cosca communication. (In contemporary accounts, generalized "mafiism," earlier defined as the integument of the Mafia, is downplayed as part of a racialized "myth of Sicily" and an obstacle to serious inquiry.)

The state's tolerant stance toward the Mafia was reversed by Benito Mussolini, but after World War II mafiosi reemerged to protect influential landowners from restive peasants, intimidating and even murdering their left-wing leaders. In addition, they offered electoral support to politicians of the newly constituted Christian Democratic Party—a cold war accommodation that enabled the penetration of modern domains such as urban real estate and construction, public works, and the administration of the land reform enacted in 1950. In the 1970s mafiosi with strong transatlantic connections—among them Gaetano Badalamenti, a resident of a town near the Palermo airport, and the above mentioned Buscetta—oversaw the shift from Marseille to Palermo of labs for refining heroin.

The audacity of the early narcotics traffickers was a provocation to the *Corleonesi*, an aggressive Mafia faction named for the fact that its leaders—Luciano Liggio, his protégé Salvatore (Totò) Riina, and Bernardo Provenzano (famously fugitive for forty years)—hailed from the interior town of Corleone. Allying with powerful capi in the Palermo region, this coalition raised capital for drug deals through kidnapping, which was normally disapproved of by the Mafia, and waged a murderous "war" whose victims—the *perdenti*, or losers—included many relatives and associates of Buscetta. The Corleonesi also advocated and carried out assassinations of public figures, among them Falcone.

The depositions of justice collaborators in the antimafia trials of the 1980s and 1990s, amplified by recent research, shed new light on the Mafia's social organization and culture. Territorially grounded, the cosca, or "family," is to some extent kin-oriented, with membership extending from father to sons, uncles to nephews, and through the fictive-kin tie of godparenthood. Yet, becoming a mafioso is also a matter of talent. Sons of cosca members believed to lack "criminal reliability" are passed over in favor of promising delinquents from unrelated backgrounds, and members seeking to induct large numbers of their own kin are viewed with suspicion. In effect, the word *family* is metaphorical—an evocation of the presumed solidarity of kinship. Mutual good will is further induced by idiosyncratic terms of address and linguistically playful nicknames. In a rite of entry inspired by Freemasons in nineteenth-century prisons, the Mafia novice holds the burning image of a saint while his sponsor pricks his finger and, mixing the blood and ashes, has him swear an oath of life-long loyalty and omertà, against the penalty of death. (1960s researchers doubted the existence of such a rite; Mosca's essay makes no mention of it.)

Within the cosca, senior bosses hold the elected leadership positions, distribute moneys accumulated through extortion, and are responsible for the behavior of those novices whom they have personally sponsored. The *picciotti* are expected to show deference, take greater risks, and funnel their earnings upward. Ambitious upstarts occasionally murder their patrons, however, and seize power. The gossip and treachery intrinsic to cosca politics are considered affairs of men; women are excluded not only from meetings, but also from banquets and hunting parties, where masculine identity is asserted and novices socialized into the practice of violence. Nevertheless, the Mafia wife is usually from a Mafia family, enjoys the refinements provided by her husband's money and status, assists in hiding fugitives, and willingly shelters his assets from the confiscatory power of the state. Most Mafia

women know far more than they are free to discuss, even with family and friends.

Breaking with the past, contemporary scholars dispute the cosca's autonomy. Similar to other fraternal organizations, multiple local chapters are shown to foster mutual recognition across a broad terrain—an asset for long-distance trafficking in cigarettes, narcotics, and, of late, clandestine sex workers and migrants. In the 1890s in the bandit corridor that straddled interior Sicily, mafiosi organized the theft and hidden slaughter of livestock for sale in urban markets (at one point, including Tunisia); in the orchards near Palermo, they controlled not only the protection of crops and water for irrigation, but also the movement of citrus fruit to the Brooklyn docks. Recent research further suggests a relationship between far-flung trafficking, generally more lucrative than neighborhood rackets, and the Mafia's felt need to create structures and lay down rules at a translocal level. One example is the *Cupola,* or "Commission," set up to coordinate groups in the province of Palermo, and then throughout western Sicily, in the 1960s through 1980s, to which intermediate districts sent representatives. At first considered derivative of a U.S. Mafia Commission dating to the 1930s, it is now believed to have had a forerunner in a similar Sicilian structure, the *Conferenza*, at the turn of the twentieth century.

Knowledge of the U.S. Mafia initially expanded with Estes Kefauver's Senate hearings in 1950 and 1951; the FBI's 1958 analysis following the spectacular if accidental 1957 raid of a secret meeting in Apalachin, New York; the McClellan Committee hearings on labor racketeering, prompted by the same event; and the probes of Robert Kennedy, chief counsel to John McClellan and then attorney general (until 1964). Under Kennedy, the Justice Department negotiated the terms by which a low-level mafioso, Joe Valachi, would testify about his experiences in the Mafia—testimony that exposed, among other things, the illusive term *cosa nostra.*

More or less sidestepping these state-centered sources, social scientists of the time analyzed organized crime in relation to the difficulties faced by early twentieth-century immigrants—Irish and Jewish as well as Italian—as they tried to earn a livelihood, benefit from corrupt political machines, and resist being criminalized by racism. (In the case of Italians, racial stereotyping included accusations of membership in a mysterious "black hand" organization, and numerous lynchings; eleven Sicilians were victims of the largest mass lynching in U.S. history in New Orleans, in 1891.) Images in print media, film, and television further complicate social analysis. The novel *The Godfather* (1969) and its film versions (1970s), produced by Italian Americans upset with racial stereotypes, romanticize their subject for outsiders. Other films such as Martin Scorsese's *Goodfellas* (1990), based on the 1985 book *Wiseguy* by journalist Nicolas Pileggi, and the television serial *The Sopranos* (in which Italian Americans have also been involved) dramatize a model of masculinity that combines a haughty attractiveness with a dangerous readiness to retaliate against any perceived offense with gratuitous violence.

In light of several new sources—autobiographies (albeit self-serving) like Joseph Bonanno's (1983); complex investigations pursued under the Racketeer Influenced Corrupt Organizations (RICO) statute of 1970; collaborative investigations with Italian authorities, unraveling, for example, the "pizza connection" network of heroin delivery to the East Coast and Midwest; telephone intercepts; and the impressive reporting of dedicated journalists—organized crime is now analyzed less in relation to impoverished immigrant communities and more in relation to New World opportunities attracting already experienced racketeers from abroad (who, in the case of Sicilians and southern Italians, made voyages back and forth, tending to affairs and, especially during the fascist period, evading surveillance). Underlying the opportunities was an American dynamic of race and class: As WASP elites enacted rigid laws to interdict "vices" associated with newcomers, vast black markets took shape—for drugs, prostitution, gambling, and most spectacularly, alcohol, prohibited from 1919 to 1933 by constitutional amendment.

Immigrant Italian communities were assets to the racketeers who came—a source of recruits for smuggling operations and easily conditioned to respect omertà. New York, with a million Sicilians and southern Italians by 1920 (not to mention the large number who worked on the Brooklyn waterfront), became the center of gravity for the U.S. Mafia. Yet the immigrant communities also suffered from having to harbor predatory entrepreneurs. Nor did they circumscribe figures such as Nick Gentile, who migrated from Sicily in 1905, joined a "family" in Philadelphia, sold fraudulent goods in Pittsburgh and Kansas City, trafficked heroin in New Orleans and Texas, and bootlegged liquor from Canada to Milwaukee and San Francisco. His close associates—Alfonse "Scarface" Capone in Chicago and, in New York, Joe "the Boss" Masseria and Charles "Lucky" Luciano—were also well-connected. A competing New York faction led by Salvatore Maranzano, the youthful Bonanno's patron, had especially strong links to Castellammare del Golfo, a Sicilian town with a history of Mafia involvement in citrus exports.

Following prohibition, the most telling instance of New World opportunities attracting Old World mafiosi developed out of the 1956 Narcotics Control Act. Concerned about mounting drug arrests—aware, too, of

the pending loss of Havana, Cuba, (playground of Jewish mobster Meyer Lansky and the Tampa mafiosi Santo Trafficante, senior and junior), as a point of entry—Bonanno led a delegation of American capi to Palermo where, at a strategic meeting at the Grand Hotel of the Palms in 1957, they franchised out to a select group of Sicilians the business of distributing heroin throughout the United States—a harbinger of Badalamenti's and Buscetta's audacity, and of the pizza connection.

Money earned from protecting and trafficking in illegal "vices" has helped American mafiosi colonize many fields: loansharking, especially to addicted gamblers; Las Vegas casinos and tourism; trash-hauling and construction companies; coin-operated slot machines and laundromats; and schemes for kickbacks, extortion, truck jackings, and cargo theft and no-show jobs at ports, airports, wholesale markets, convention centers, hotels, and restaurants. Quickly accumulated capital has also been important in bribing police and prosecutors; insinuating the Mafia into municipal politics; penetrating labor unions; and paying for first-class trial lawyers. However, with its heady possibilities for risk, vice-related crime takes a large toll in violence. During the Prohibition Era, Sicilian bootleggers and smugglers both allied with and warred against "outside" Irish and Jewish gangsters, near-outside Neapolitan gangsters, and their own compatriots. Al Capone's Valentine's Day massacre of a rival gang in 1929 in Chicago, and the bloody "Castellammarese war" between the Massaria and Mazarano factions in New York in 1930, are landmarks of American Mafia lore.

Significantly for social theory, such crises, and the unwanted attention they draw, prompt peacemakers to push for higher-level organizational innovations. Thus in 1931, Luciano negotiated the systematization of five Mafia "families" in New York, each with an elected capo, an appointed *consigliere*, several subgroups or "crews," and a ceiling on new initiates. (More could join only upon the death of existing members, which greatly enlarged the category of Mafia "wannabes.") The five heads, together with Capone of Chicago (the next-largest hub of Mafia activity, after New York) and Stefano Magaddino, a Bonanno relative in Buffalo, agreed to form an overarching Commission to rule on pending murders. Articulating territorial power with the far-flung entrepreneurial activities of individual mafiosi, this body pledged to meet with bosses from across the country every five years. (The Apalachin meeting took place during an off year, in part to assess the 1956 Narcotics Act.) This was the Commission that many believed inspired the Sicilian *Cupola*—perhaps via the 1957 meeting at the Palms—until the discovery of the much earlier *Conferenza*.

By the 1930s the U.S. Mafia had surpassed other, mainly Jewish and Irish, organized crime formations in both firepower and discipline, yet its very organizational coherence was a source of destabilizing leadership struggles, as illustrated by New York's Gambino family. Police investigators concluded, although without bringing charges, that in 1957 the family's namesake (not its founder) Carlo Gambino, together with Vito Genovese, arranged for the then-boss, Albert Anastasia, to be murdered while receiving a shave at his favorite barbershop. Anastasia is believed to have leveled his predecessor in 1951. Gambino died a natural death, but his anointed successor (and brother-in-law), Paul Castellano, was gunned down in 1985 on orders of the up-and-coming John Gotti—who, in turn, was "ratted out" by a coconspirator, Sammy "the Bull" Gravano, who turned state's witness in the context of intensified antimafia pressure in 1988. Similarly, in their brutal assault on the *perdenti,* the Corleonesi either ignored or manipulated the *Cupola*, carrying out numerous murders without its permission and with impunity, then took it over as an instrument of repression.

SEE ALSO *Cold War; Crime and Criminology; Drug Traffic; Ethnicity; Gambling; Immigrants to North America; Immigrants, New York City; Latifundia; Mussolini, Benito; Organizations; Prisons; Prostitution; Violence*

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Jane Schneider

MAGIC

In ancient times, the term *magic* referred to the doctrines and practices of the "magi," a Zoroastrian caste of priests centered in Persia. The term meant "gift of God" in its original language, but as individuals claiming to be magi contacted Mediterranean cultures, it came to mean any itinerant specialist in fortune-telling or other forms of the occult. Europeans looked positively upon the magi because in the New Testament the magi were celebrated in Matthew's account of the nativity of Jesus. But by 500 BCE the term magi also had a pejorative sense as many impostors made a living by pretending to possess supernatural powers gained in the mysterious East. The *ars magica*, or "the practices of would-be magi," usually meant the tricks of showmen, a sense that followed the word "magic" when it entered English. For this reason, in the most popular usage, a "magic" trick performed by a "magician" typically means an illusion performed on stage as contrived entertainment.

In a more objective ethnographic sense, however, the concept of magic is useful in describing a common form of vernacular belief, as well as an important emphasis in a variety of new religions. The twentieth century occult revivalist Aleister Crowley (1874–1947) defined magic in a quasi-objective sense as "the science and art of causing change to occur in conformity with will" (Adler 1986, p. 8). His practice, however, involved the use of rituals intended to "cause change" through the use of occult forces. Folklorists and anthropologists have likewise seen similar tendencies in a variety of cultures, and so magic could be defined more precisely as any traditional ritual that seeks to protect or benefit an individual through the private appropriation of supernatural forces.

During his research among Micronesian fishers (1914–1920), British anthropologist Bronislaw Malinowski found that magical practices were based on practical, utilitarian needs of those engaging in professions with high degrees of personal risk, particularly open-sea fishing. Malinowski argued that "where man can rely completely upon his knowledge and skill, magic does not exist," while in activities "full of danger and uncertainty, there is extensive magical ritual to secure safety and good results" (Malinowski 1954, pp. 30–31). Subsequently, ethnographers found similar practices among other cultures with a high degree of personal risk (such as fishing, mining, or lumbering) or where success is largely due to unpredictable factors (gambling, sports competitions, or the law).

Most common forms of magic are simple, including watching for omens of a lucky or unlucky venture, preparing and carrying amulets intended to bring fortune, or engaging in simple rituals at the start of an activity. Folklorist Don Yoder saw many of these as forms of "folk religion" and argued that they included any religious or quasi-religious practice observed but not positively prescribed by the institutionalized sect to which one belonged. However, more elaborate, privately maintained magic-religious traditions have also survived in ethnic communities alongside these common omens and rituals. These traditions are often termed "ceremonial magic," and involve complicated rituals and magical paraphernalia. The rituals are similar in structure to blessings and prayers carried out in religion, but as Malinowski noted, they are often pragmatic in intent, serving to ensure success in an individual's economic or private matters.

Practitioners of such rituals normally define their art as "natural" or "white" magic because the forces that they use are the same as those honored in their dominant religion and their functions are supportive of their communities' core ethics. In addition, as sociologist Hans Sebald found in a 1978 study of witchcraft traditions in Franconia (a region in southern Germany), magic often served as a convenient alternative in complex family disputes where calling in legal or religious officials would have caused a scandal. Nevertheless, such traditions are viewed with considerable suspicion by mainstream religious authorities.

The conventional distinction between "black" and "white" magic derives from this longstanding tension

between vernacular practitioners and the law. In fact, scholars agree that few explicitly "satanic" or explicitly evil magicians ever existed. Prosecutors of the early modern (1500–1700) witch trials obtained confessions describing explicit devil worship and evil magic, but these descriptions were certainly obtained by coercion and torture. Sound ethnographic studies show that virtually all practicing "magicians" claimed to be "white" witches whose rituals supported the religious and ethical values of their communities.

Jealous religious authorities considered all private magic rituals, however, to be unnecessary (the literal meaning of "superstitious"), foolish, and at worst, a potentially dangerous form of "black" magic. "There is Mention of Creatures that they call *White Witches*, which do only *Good-Turns* for their Neighbours," the Massachusetts Puritan minister Cotton Mather said shortly before the outbreak of the Salem Witch Trials (1692), adding, "I suspect that there are none of that sort; but … If they *do good*, it is only that they *may* do *hurt*" (Mather 1689, p. 4). To be truly divine, that is, the exercise of supernatural powers needed to be limited strictly to institutionally approved specialists. Any use of allegedly "good" magic outside of orthodox religion was often defined as "black" magic for that reason alone. In addition, magical rituals that cast misfortune on an individual, or which explicitly call on demonic powers are the most strongly proscribed as "dark arts" by mainstream religions and, at times, by civil authorities as well.

The more elaborate traditions involve a belief that an unexplained illness or misfortune could be explained in terms of a curse cast by another person, deliberately or inadvertently. Hence the magic user's first task was to diagnose the source of the inquirer's problem, then to conduct a ritual intended to remove its influence and frequently, turn the curse back against the one who cast it. Such magical specialists also fabricate and sell fetishes intended to protect its purchaser. Often these traditions are complex enough that they need to be preserved in writing, either privately maintained manuscripts passed down in a family or circle of practitioners, or in print editions available from specialists. Among these "magic books," the most notorious include the Germanic *Sixth and Seventh Books of Moses* and the Jewish qabbalist *Key of Solomon.*

A further development in magic occurred in England during the 1890s when a group of academics revived the medieval European traditions of ceremonial magic as a new religious movement. The Order of the Golden Dawn attracted many followers, chief among them the Irish poet William Butler Yeats (1865–1939), whose writings include frequent references to magical rituals that he performed. Crowley's Ordo Templi Orientis (O.T.O.) was another influential faction in this movement. Predictably, Crowley was repeatedly denounced by religious authorities as a "black" magician who dabbled in Satanism. Although Crowley, a vocal critic of orthodox Christianity, at times encouraged this image, the rituals he practiced were in fact not diabolical in nature or intent. Nevertheless, the popular image of an evil "black" magician whose powers are countered by a benevolent "white" magician has become a cliché in popular fantasy and children's literature.

More influentially, in 1954 Briton Gerald Gardner published a manuscript titled "Ye Bok of ye Art Magical," supposedly the record of rituals preserved by a secret coven of English witches. In fact, the manuscript was based on publications of the Golden Dawn circles, but Gardner's writings inspired the growth of a vigorous "Neo-Pagan" religious movement that has developed into a strong alternative religion in both Great Britain and North America. A number of ethnographic studies of contemporary witchcraft revival (particularly anthropologist Sabina Magliocco's 2004 study) show that the use of magic has had profound impact on its followers. Magic, Magliocco argues, is not simple make-believe but a powerful means of inducing spiritually transformative experiences.

The common perception of "magic" in terms of illusion or ignorance is therefore simplistic. Magical beliefs need to be seen in the larger context of their practitioners' social and religious worldviews. Only by seeing a magical tradition as an integral part of a culture's definition of reality can we understand why it attracts and maintains followers

SEE ALSO *Anthropology; Ethnography; Ethnology and Folklore; Luck; Malinowski, Bronislaw; Religion; Risk; Rituals; Taboos*

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Bill Ellis

MAGNA CARTA

Emerging as a thirteenth-century agreement between crown and aristocracy, the language of Magna Carta (literally, "great charter") proved pregnant with meaning for later generations. The charter came to be seen as representing wider legal and political principles, especially those of lawful and limited government.

The charter was drafted against a backdrop of complex political and military disputes. At the center of each was King John (c. 1167–1216), the Plantagenet ruler of England, Wales, Ireland, and much of northern France. A descendant of the Normans who had conquered England a century earlier, John would become the first to reside permanently in England. He was crowned king in 1199 and immediately faced competing claims on his French territories, not least those of King Philip II (1165–1223) of France. In a series of wars with Philip and his allies, John lost much of his continental holdings by 1204. The following years saw him invade successively—and more successfully—Scotland, Ireland, and Wales. To exacerbate these military demands, John fell foul of Pope Innocent II (d. 1143). In 1207 the king contested the pope's nominee for archbishop of Canterbury, Stephen Langton (c. 1150–1228). As a result, the pope placed England under an interdict on religious worship, excommunicated the king, and sided with Philip.

In attempting to pay for his military activities, John imposed increasing financial demands on the Anglo-Norman aristocracy. Combined with complaints about royal interference with the administration of justice, the result was rebellion against the king. In 1212 John acquiesced to the pope, agreeing to surrender his kingdoms to the papacy as feudal overlord and repurchasing them from him. An invasion of England was narrowly avoided the following year when the French fleet was destroyed. John then invaded France in 1214 in the hope of reclaiming his territories there. He suffered a major defeat at Bouvines, resulting in the loss of most of his remaining continental possessions.

John soon faced additional problems within England. Encouraged by Archbishop Langton, the Anglo-Norman barons there remonstrated against the king's financial demands and judicial interference. In May 1215 they took London by military force. A truce was sought and representatives met at Runnymede, a meadow west of London on the river Thames, in June 1215. After much discussion, they agreed to a document of compromises called the Articles of the Barons. This was superseded by the charter subsequently known as Magna Carta. Formally, Magna Carta was a royal letter written in Latin dealing with a wide variety of issues: the freedom of the church, feudal customs, taxation, trade, and the law. This was not the first attempt to limit political power by a written charter. In England, for example, the Charter of Liberties issued by Henry I (c. 1068–1135) predated Magna Carta by over a century. Magna Carta was also similar to contemporaneous continental charters and legislation. Many of its rules came from a common pool of European political and legal thought, not least the canon law of the church. In the short term, the most potentially radical element of Magna Carta was probably the provision for a commission of barons to ensure royal compliance. But this came to nothing. Contrary to subsequent interpretation, it had little to do with the lesser landholders or the vast peasantry of England.

John renounced Magna Carta almost immediately. The pope, too, issued a papal bull against the agreement because it had been imposed by force. Civil war returned. Numerous barons now aligned themselves with Louis (1187–1226), Philip's son and later Louis VIII of France, who invaded England in May 1216 with a significant army. Louis subsequently occupied London, where he was received enthusiastically by the barons and was proclaimed king of England. John made some military gains, but died of dysentery in October 1216. With his death, the barons' complaints were less pressing. John's nine-year-old son, Henry III (1207–1272), was seen as more politically malleable and was crowned English king. His regent, William Marshall (c. 1146–1219), one of the signatories of Magna Carta, revised and reissued the document in November 1216. Marshall was also able to convince most of the rebellious barons to renew their loyalty to the crown, ending the war. In 1217 a treaty was signed, and Louis left England. Another revision of Magna Carta that year separated the document into two sections: a brief Charter of the Forest concerning the royal forests, and the remaining text, the larger Magna Carta. Henry III reissued a still shorter version of Magna Carta in 1225. This version was confirmed by Edward I (1239–1307) in 1297.

The vague wording of Magna Carta, combined with changing social structures, meant that its text was continually reinterpreted. This is already evident in the fourteenth century. In general, the charter was largely ignored for centuries. By the seventeenth century, however, it took

on greater significance in conflicts between king and Parliament. Lord Chief Justice Edward Coke (1552–1634) was especially important in popularizing the belief in Magna Carta's wider constitutional principles. With parliamentary ascendancy in the late seventeenth century, it continued to play an important role in debates both in and out of Parliament. In the eighteenth century, Magna Carta served as a touchstone for American independence and constitutional government. In England, the nineteenth century brought a more balanced assessment of its historical meaning and the removal of most of its antiquated provisions from English law.

The document retains a deeply symbolic importance throughout the English-speaking world. The American Bar Association erected a monument at Runnymede in 1957. In May 2003 the Australian Parliament opened Magna Carta Place in Canberra. In the early twenty-first century, four copies of the original charter remain: two in the British Library and one each in the cathedral archives at Lincoln and Salisbury.

SEE ALSO *Democracy; Feudalism; Monarchy; Monarchy, Constitutional; Sovereignty*

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Seán Patrick Donlan

MAHATHIR MOHAMAD
1925–

Tun Dr. Mahathir bin Mohamad, to give him his formal Malaysian designation, was the fourth prime minister of Malaysia. He was in power from 1981 to 2003, more than twenty-two years. Mahathir, an ethnic Malay and a Muslim, was born in 1925 in Alor Setar in northwestern Malaysia. He was trained during colonial times as a medical doctor at the University of Malaya in Singapore, graduating in 1947. As prime minister, he was widely credited with the transformation of Malaysia into a prosperous, fully employed, newly industrialized country that became a magnet for illegal immigrants from Indonesia, Burma (Myanmar), and Bangladesh. He is best known in the West as an outspoken advocate of "Asian values" and a critic of Zionism and Western hypocrisy. Mahathir is also widely seen as an authoritarian leader who was prone to cronyism and not adequately respectful of human rights.

Mahathir is a member of the United Malays National Organization (UMNO), the party that with its ethnic Chinese and Indian allies has ruled Malaysia since independence from the British in 1957. Mahathir was elected to parliament in 1964, but lost his seat in 1969 and was expelled from the party after criticizing the prime minister, Tunku Abdul Rahman (1903–1990). After readmission to the UMNO, Mahathir was again elected to parliament in 1974. He then became minister of education and from 1976 served as deputy prime minister. Throughout his career, Mahathir was both a strong advocate for the advancement of the indigenous Malay majority and one of the most vocal critics of Malay stereotyping. He held a strong conviction that racial harmony in Malaysia (and elsewhere) requires all communities to stand at approximately equal levels of prosperity, and he became frustrated when some sections of the Malay community encountered difficulties in their attempts to advance economically, despite the strong preferences afforded to them by Mahathir's government.

During his twenty-two years in power, Mahathir was successful in creating a prosperous and sizable *Bumiputra* (literally, "sons of the soil," that is, indigenous) middle class. During the colonial period, commerce and industry had been dominated by the Chinese and the professions by ethnic Indians. With Mahathir in power, the Bumiputra came to dominate Malaysia's civil service, police, and military; they also gained a foothold in commerce, industry, and the professions. However, this progress was achieved at a substantial price. Quotas on non-Malay students in the universities, for example, prompted many non-Malay Malaysians to seek higher education in the United Kingdom, Australia, the United States, and elsewhere, and many never returned to Malaysia. In addition, emphasis on the national language in education led to a noticeable decline in the country's standard of English, which eventually resulted in the partial reversal of language policies in education.

During Mahathir's tenure, Malaysia evolved from a predominantly rural, low-income economy in the 1970s to a middle-income economy with full employment and social indicators similar to high-income economies. This was achieved through state-dominated capitalism, openness to foreign investment, and authoritarian political policies. Mahathir's economic policies were always nationalistic, although based on exports and guided capitalism. Following the 1997 Asian financial crisis, Mahathir rejected the advice of the International Monetary Fund (IMF) and imposed a fixed exchange rate and capital con-

trols. He was widely criticized for this move, but the results were much better in Malaysia than in neighboring countries that had followed IMF advice, and Malaysia weathered the crisis with relatively little damage to either growth or investment. However, the crisis did produce difficulties with respect to undocumented immigrants, who flocked to Malaysia because of its relative prosperity and high demand for labor. Officials have attempted to repatriate migrants, amid the complaints of private-sector firms, particularly in construction, plantation agriculture, and low-skill manufacturing, about the impact of this policy on their labor forces. Mahathir also promoted a number of large-scale pet projects aimed at modernizing the economy and turning it into a high-tech center for the region. Some of these projects were eventually cancelled, with others looking more and more like white elephants.

Mahathir is perhaps best known in the West for his strong views on Asian values and his rejection of Western moral leadership. He argues that Asian societies place more value on the community than on the individual, and he considers the guidance of an authoritarian government as necessary to ensure stability and rapid economic development in Asian societies. Mahathir has also been a fierce critic of Israel. His relationships with the United States and other Western governments, most notably the United Kingdom and Australia, have often been tense, with much criticism flowing in both directions. American vice president Al Gore, for example, endorsed reform in Malaysia in a speech delivered in Kuala Lumpur in 1998, a speech that Mahathir described as "rude." The Western critique centered on the authoritarian nature of Mahathir's rule, particularly the curtailment of the press and other freedoms, draconian internal security laws, political repression, and harassment of rivals, notably Anwar Ibrahim, the former finance minister and deputy prime minister who was jailed on corruption and sodomy charges. Anwar had led a reform movement emphasizing the dangers of corruption and nepotism under Mahathir. Mahathir has been highly critical of the 2003 invasion of Iraq by U.S.-led forces and of the U.S. policy of detention without trial for prisoners held at Guantánamo Bay and elsewhere.

Mahathir has remained outspoken and influential in Malaysia since his retirement from active politics in 2003. In May 2006 he described his handpicked successor, Prime Minister Abdullah Ahmad Badawi, as "gutless" and "kowtowing" after Abdullah abandoned a project to build a bridge to replace the causeway joining Malaysia to Singapore. Many Malays and moderate Muslims elsewhere regard Mahathir with great respect for the economic achievements of his administration and his willingness to state independent views with eloquence and force.

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James Cobbe

MAJORITARIANISM

Majoritarianism is a stark philosophical position defended explicitly by nearly no one but which many debates invoke rhetorically. Majoritarianism is more fundamental than majority rule, which is simply one of many possible political decision rules. Any democratic system obliges the government to respond to the desires of citizens. Any republican system requires that the people understand their obligations to each other and to the larger nation. Majority rule bridges the gap between the two systems of obligation in a particular way. Leaders and policies are selected by majority rule, and citizens have a duty of participation to ensure that choices are not made by minority factions of the population.

Majoritarianism, by contrast, if it were to be implemented fully, would require something closer to what Plato has Thracymachus tell us in *The Republic*: "Justice is the interest of the strongest." Any policy that thwarts or frustrates "the majority," by this notion, is inherently and intrinsically undemocratic and destroys the moral fiber of the nation.

In policy debates majoritarianism is most commonly invoked as a counterclaim to arguments for increased diversity or multicultural policies. The claims take the form of an identification of what "we," the majority, stand for: "we are a Christian nation" or "we are an English-speaking nation" are common majoritarian appeals. Other examples of asserted majoritarianism include Richard Nixon's "Silent Majority," for whom he claimed to speak, or Wilmot Robertson's book *The Dispossessed Majority* (1972). Robertson's is perhaps the most extreme and tendentious version of majoritarianism in the U.S. context, with its concern for the separation of ethnic groups because of the impossibility of true assimilation.

Though majority rule is not the same as majoritarianism, they are closely related. There are a variety of formal results regarding the potential for purely majoritarian institutions to produce just outcomes. On the negative side, Kenneth Arrow (1963) generalized the Marquis de Condorcet's finding, rediscovered by Duncan Black

(1958), that purely majoritarian choice will generally produce results that are either arbitrary (indeterminate) or imposed (dictatorial, so control of the agenda is tantamount to choosing the outcome). On the positive side, May's Theorem demonstrates that even simple majority rule has several desirable properties and can avoid the chaos of Arrow's result when there are only two alternatives.

Many political theorists point to John Rawls's *Political Liberalism* as the most important counterpoint to a philosophical majoritarian perspective. Rawls argues that no one conception of identity should dominate and so no one majority can be said have primacy. Instead, Rawls advances a conception of "overlapping consensus," with each individual committed to fair and respectful treatment of citizens who hold different conceptions of the good, whether it be political or religious.

SEE ALSO *Arrow, Kenneth J.; Condorcet, Marquis de; Democracy; Dictatorship; Majority Rule; Majority Voting; Nixon, Richard M.; Plato; Rawls, John; Separatism; Tyranny of the Majority*

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Michael Munger

MAJORITIES

Majorities are defined as proportions larger than 50 percent of the total. This concept is fundamental to the theory and practice of democracy because of the democratic principle of equal human worth. The moral equality of people suggests that deference often should be given to the opinions of the majority when political conflicts require a collective resolution.

BENEFITS AND ATTRACTIVENESS OF MAJORITIES

Several rationales can be used to justify this partiality toward majorities (Dahl 1989). First, it maximizes self-determination by allowing more people to live under conditions they prefer. Second, it maximizes average utility by benefiting the largest number of individuals. Third, it is likely to produce beneficial decisions because people are well informed.

Majorities commonly are treated with special consideration in many areas of the democratic political process. They exert their strongest influence on decision-making activities. Majorities usually have primary control over decision-making institutions and are generally in a position to dictate outcomes. Consequently, forming and maintaining majorities is an important feature of democratic politics.

The attractiveness of majorities for democratic decision making was demonstrated formally in 1952 by Kenneth May, who showed that in choosing between two alternatives, only majority rule satisfies four reasonable conditions for a democratic process: It produces outcomes that are decisive, anonymous, neutral, and positively responsive.

MULTIPLE ALTERNATIVES AND MINORITY INFLUENCE

When the choice set includes more than two alternatives, there may not be a naturally occurring majority winner. In these situations voting procedures can be used that still reflect the basic principles of majority rule. A runoff system, for example, involves a two-stage election. It begins with a preliminary election. If there is no majority winner, the two candidates with the highest vote totals advance to a head-to-head runoff in which majority rule can be used. An amendment procedure, which often is used in legislatures, also uses majority rule to choose among more than two alternatives. A winner is chosen through a series of pairwise votes decided by majority rule. At each stage the winning alternative advances to face a different competing option.

Variations of majority rule such as unanimity and supermajorities empower minorities in certain situations. The unanimity rule, which requires unanimous consent, effectively gives veto power to any individual voter. A supermajority rule, which requires a proportion greater than a simple majority, also leaves open the possibility of minority control over the outcome of a decision. Similarly, with the plurality rule a winner is chosen on the basis of receiving the largest proportion of votes. In this case an alternative can win with less than a majority.

TWO-PARTY AND MULTIPARTY SYSTEMS

The importance of the use of majorities for exerting political power in a democracy makes it a significant concern

for political actors. Political institutions and conditions, however, can affect the way political power is pursued. Two-party political systems, for example, provide unique strategic environments for parties, candidates, and voters. Competing parties and candidates have an incentive to make their platforms more appealing to centrist voters to maximize their vote totals (Downs 1957). Consequently, voters typically are presented with two relatively moderate alternatives. People who support third-party or independent candidates have an incentive to cast ballots strategically for one of the two major parties to avoid "wasting" their votes.

In contrast, multiparty systems often require the formation of coalitions among competing political parties to establish ruling majorities. Consequently, parties and candidates can achieve political power without having broad-based support. They can concentrate their platforms to appeal to more narrow constituencies that are large enough to secure political representation. Once seated, they can negotiate with others to create a majority coalition. Therefore, voters in a multiparty system often have a wider range of alternatives from which to choose and less motivation to vote strategically.

TYRANNY OF THE MAJORITY

Although majorities have certain normative advantages related to the principle of equal moral worth, they also present dangers in the form of majority tyranny. Political power in the hands of the majority leaves minorities susceptible to harm or exploitation. The criticism of democracy as a form of mob rule reflects the suspicion that an unconstrained majority will misuse its power.

The problem of majority tyranny often is addressed through political institutions in which majority rule is balanced with the protection of minorities. In the *Federalist Papers* the abuse perpetrated by majority factions is identified as a primary obstacle to political justice and the well-being of the American state. Consequently, certain institutional structures and principles were included in the American Constitution and the Bill of Rights, including federalism, the division of powers, checks and balances, and the freedoms enumerated in the First Amendment.

Majorities in a democracy can have an oppressive effect on private individuals in civil society. Alexis de Tocqueville observed that the thoughts and opinions of individuals in a democracy are susceptible to majority tyranny: "[A majority] uses no persuasion to forward its beliefs, but by some mighty pressure of the mind of all upon the intelligence of each it imposes its ideas and makes them penetrate men's very souls" (Tocqueville 2000, p. 435). This power over public opinion is due in part to the influence of the principle of equality. When individuals are considered equal, there is an inclination to view the greater number in a majority as providing evidence of superior thought. There is also a propensity for individuals to be ostracized socially when they publicly disagree with the majority opinion. These tendencies make a democratic society vulnerable to uniformity of thought and a dearth of new ideas.

The concept of majorities plays a critical role in democratic thought and practice similar to that of freedom and equality. It provides a general standard for structuring democratic decision making. It also influences the behavior of political actors, who must keep in mind the political advantages of being in the majority. The power that democracies give majorities may be justified normatively. However, it should be viewed with caution. The power majorities have to exert control over the political process allows them to sacrifice the interests of minorities.

SEE ALSO *Dahl, Robert Alan; Democracy; Majoritarianism; Majority Rule; Majority Voting; Minorities; Political Science; Politics; Tocqueville, Alexis de; Tyranny of the Majority*

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MAJORITY RULE

The principle of majority rule in elections and decision-making was introduced in medieval Germanic law and canon law as a consequence of failures to make decisions by unanimity. In fact, in any community, the formation of two or more factions or parties may lead to procedures requiring the counting of votes and the achievement of a majority threshold.

The majority principle has been praised for being the only system that satisfies the following criteria: (1) decisiveness, but only when there are no more than two alternatives (e.g., candidates, parties, or policy proposals) to choose from; (2) anonymity or voter equality; (3) neutrality with respect to issues, so the status quo or the largest

group does not have an advantage; and (4) monotonicity, or a positive response to changes in voter preference.

If there are only two alternatives along a single issue or ideological dimension, such as the left-right axis, majority rule tends to give the victory to the alternative closer to the median voter's preference. By definition, the median voter—that is, the voter whose preference is located in an intermediate position with less than half of voters on each of the two sides—is always necessary to form a consistent majority in a single dimension. Since the median voter's preference minimizes the sum of the distances from all other individual preferences, the winner by majority rule in a two-alternative contest minimizes aggregate distance and thus maximizes social utility.

However, this model relies on two strong assumptions: a single-dimensional issue space and only two alternatives. If the set of issues submitted to a majority decision is not bound, the introduction of new issues creating a multidimensional space can change the winner. In a multidimensional space, an alternative—such as a party or candidate's platform that includes a "package" of proposals on several issues—can make the majority winner unpredictable, depending on which issue takes higher salience in voter choice. In the long term, there can be a series of successive winners relying on different salient issues, with no foreseeable "trajectory."

When there are more than two alternatives, even in a single-dimensional space, majority rule can be indecisive and unable to produce a winner. Several procedures loosely related to the majority principle can then be adopted. With plurality or relative majority rule, the winner is the alternative that obtains a higher number of votes than any other alternative while not requiring a particular proportion of votes, a result that may imply minority support. Plurality rule has traditionally been used for political elections in the United Kingdom and in former British colonies, including the United States, Canada, and India. Majority runoff requires an absolute majority of votes in the first round of voting, while in a second round the choice can be reduced to the two candidates receiving the highest number of votes in the first round, so as to secure majority support for the winner. Such a system is used for presidential elections in France and in some other countries, including many in Latin America. A majority-preferential vote also requires an absolute majority of voters' first preferences, while successive counts of further preferences are made to find a candidate with majority support. This system is used in Australia.

With both plurality and majority-runoff or majority-preferential voting, the median voter's preference can be defeated or eliminated in the first or successive rounds. This implies that the nonmedian winner by any of these procedures might be defeated by another candidate by absolute majority if the choice between the two were available. Extreme minority candidates who are broadly rejected by citizens can paradoxically win by these procedures, based on the majority principle. Majority rule is, thus, dependent on irrelevant alternatives; it encourages strategies aimed at altering the number of alternatives, such as divide and win and merge and win, as well as nonsincere or strategic votes in favor of a less-preferred but more-likely-to-win alternative.

Even when majority rule is decisive and maximizes social utility, as in a single-dimensional space with only two alternatives, it can produce a tyranny of the majority, where one group always wins and there is a permanent losing minority. There has been a long history of concern with the perils of the tyranny of the majority for good democratic governance. Remedies include constitutional guarantees on individual and minority rights, judicial review of decisions made by a majority, mechanisms requiring supermajorities and consensual decisions, and separate elections for different issues, as can be provided by institutional frames of division of powers and decentralization. With separate elections, different majorities and minorities may emerge on different issues, thus creating a broad distribution of political satisfaction or social utility.

If a permanent minority subsists, it may try to secede and establish its own independent democratic system. A previous minority within a large country would then become a local majority and increase the total number of citizens identified with collective decisions and social utility. However, a consistently outvoted minority may not be able to secede because it lacks the military capability to do so or would have to accept resource-poor land or territory.

The major alternative to the principle of majority rule is proportional representation. This system implies representative government, that is, decision-making in two stages: election by voters and decisions made by elected representatives. If the two stages are decided by majority rule, the winner is "a majority of the majority, who may be, and often are, but a minority of the whole" (Mill 1861, chap. 7). In contrast, if the voters' election is held with proportional representation and the elected representatives make decisions by majority rule, typically by forming multiparty legislative and cabinet coalitions, the system will generally produce a close fit between electoral and legislative majorities. Nonmajority principles are, thus, necessary to guarantee majority government.

SEE ALSO *Democracy; Majoritarianism; Majority Voting; Plurality; Tyranny of the Majority; Utilitarianism*

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MAJORITY VOTING

In the majority voting system, voters cast their ballots for their preferred candidate and the winner of the election is the candidate who receives a majority of the votes, which is 50 percent plus one vote. When there are only two candidates in an election, majority voting is an attractive voting scheme. With more than two candidates, complications may arise.

Social choice theorist Kenneth Arrow, writing in 1951, lists some simple features of a fair and just voting system, and majority voting meets most of his criteria. Majority voting is what Arrow calls monotonic, or responsive. This means, simply, that one voter cannot cause candidate A to win by changing her vote from supporting candidate A to supporting candidate B. This may seem obvious: if candidate A loses support, that candidate ought to be less, not more, likely to win. Yet in many voting schemes this is not the case. Majority voting with runoff elections, a very popular voting scheme, violates monotonicity. This would occur in a three-candidate election, when candidate A could win a runoff election against candidate B alone, but not candidate C alone. Suppose A and C get the most votes, so move on to the runoff, where A loses. But now suppose a set of voters changes their votes from A to B in the first round of the runoff election, and that this means A and B now face off in the runoff. Despite having lost votes, A now wins the election. Arrow further specified that a fair and just voting system must count all votes equally, which majority voting does. No one voter is a dictator, and no group of voters gets more power than any other group. Similarly, majority voting is not biased toward any of the possible outcomes. For example, some systems name the status quo the winner in the event of a tie, thus introducing a bias for the status quo.

Majority voting has attractions beyond the properties Arrow points out. It is simple for voters. All they must do is select one preferred candidate, and they need do so only once. Provided there are only two candidates and an odd-numbered electorate, majority voting always results in elections with clear winners. By definition, one of the two candidates must get a majority of the votes cast. In elections with more than two candidates, majority vote winners accurately reflect the aggregate preferences of the group. If most voters prefer one candidate over all other candidates, that candidate wins. More technically, this means that majority voting always results in the selection of what social choice theorists call a Condorcet winner. This means that the candidate who wins is the candidate who would receive a majority of votes over any other candidate if the election were between only those two candidates. In other words, in an election among candidates A, B, and C, candidate A is a Condorcet winner if A could win an election against candidate B alone and also win an election against candidate C alone.

There is, however, one serious downfall to majority voting: Often where there are more than two candidates, no candidate will receive a majority of the vote. In this sense, majority voting is not decisive. If no candidate receives 50 percent plus one vote, there is no winner of the election. This means that in most cases, pure majority voting is not practicable. In response to this problem, electoral systems must provide a means of deciding elections when majority voting does not offer a winner. Two of the most popular variants are plurality voting and majority voting with runoff elections. In plurality voting, the winner is declared to be whichever candidate receives the most votes, regardless of whether or not that candidate receives a majority of the vote. In majority voting with runoff, the two candidates with the most votes run again in a second election. The candidate who receives a majority of the votes in the second election is then declared the winner.

These two variants on majority rule, unfortunately, often produce very different outcomes, a troubling contradiction to the concept of democracy: The voting mechanism used in the election, not the attitudes and beliefs of the electorate, may well be the deciding factor in determining who wins. Philosopher Jean-Jacques Rousseau believed that allowing the body politic to select its own government would supply a government that provides for the common good of all the voters, a concept he described in his 1762 work *On the Social Contract* as the general will. But if electoral outcomes rely at least as much on voting schemes as they do on the will of the body politic, the notion of democratic elections providing an infallible general will becomes suspect. In response to this problem, social choice theorist William H. Riker argues in his 1982 *Liberalism against Populism* that the outcome of all elec-

tions is thus dubious and that government ought, therefore, to be as limited as possible.

SEE ALSO *Democracy; Elections; Electoral Systems; Majoritarianism; Tyranny of the Majority; Voting; Voting Patterns; Voting Schemes*

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MALCOLM X
1925–1965

Malcolm X, a Muslim minister and Black Nationalist leader, was the most formidable race critic in American history. More effectively than anyone before or since, he exposed the moral and legal hypocrisy of American democracy and the ethical contradictions of white Christianity.

Malcolm Little was born in Omaha, Nebraska, to a Baptist preacher and a West Indian immigrant, both of whom were followers of Marcus Garvey (1887–1940), an early proponent of Black Nationalism. Malcolm's first introduction to white supremacy came in infancy, when the Ku Klux Klan drove his family out of town. The harassment continued in Lansing, Michigan, where the Little home was destroyed by arson, and where Malcolm's father was allegedly murdered by another white hate group. His mother had a nervous breakdown and had to be institutionalized, and her six children became wards of the state. After stints in various foster homes, Malcolm dropped out of school and landed in a juvenile detention facility. In his teens, he made his way first to Boston and then to New York, where as "Detroit Red" he became a fixture of the underworld. He dabbled in drugs, prostitution, numbers running, and armed robbery, and was arrested and convicted of the latter a few months shy of his twenty-first birthday.

While incarcerated, he experienced two major conversions. The first was intellectual: realizing that lack of education was a major contributing factor to black oppression, he set himself to read everything he could get his hands on. The second was religious: he became a follower of Elijah Muhammad's (1897–1975) Nation of Islam, a sui generis American religious sect that embraces the trappings of orthodox Islam while propagating a mythology and inverting white supremacist ideology to proclaim black supremacy instead. The Nation of Islam flourishes in prisons in particular, where its strict code of personal discipline helps many former substance abusers to become clean. It was at this time that Malcolm, in keeping with the Nation's custom, dropped his last name, bequeathed him by slave owners, and took an *X* in its place, to mark his lost African ancestry. Upon Malcolm's release in 1952, his brilliance, dedication, and charisma, along with the debating skills he had honed in prison, brought him to the highest ranks of the Nation's leadership. He became its national spokesperson, second only to Elijah Muhammad himself, and was appointed minister-in-charge of the prestigious Temple Number Seven in Harlem.

Malcolm X quickly distinguished himself as the most feared, controversial, and articulate race critic in the United States. Since the overt racist violence of southern conservatives was obvious, and was effectively exposed in the media by the Reverend Martin Luther King Jr. (1929–1968) and the civil rights movement, Malcolm focused his critique on the covert racist violence of northern liberals. His attack on these liberals was brutal and persistent. He exposed the responsibility they bore for the creation of the black ghetto, with its poverty, drugs, crime, unemployment, bad schools, and bad housing. While King praised white liberals for their support of the civil rights movement, Malcolm castigated them for their hypocrisy in opposing legal segregation in the South while maintaining de facto segregation in the North.

Although he was often accused of preaching hate and violence, Malcolm simply exposed what was already there. White America had always been hateful and violent toward blacks: 244 years of slavery had been followed by 100 years of segregation. Black America had tried and failed to "overcome" using the principles of love and nonviolence. Now it was time for righteous anger and "nonnonviolence." In other words, blacks needed to start defending themselves and their freedom, just as whites had always done. Only in this way could they affirm their humanity. Malcolm is often contrasted with King, and the latter, a frequent target of Malcolm's sharp tongue, kept a wary distance from him, but by the end of their lives each was moving closer to the other's position. King had become much more radical, and Malcolm much more universal in outlook.

In 1964 Malcolm X broke with Elijah Muhammad and converted to Sunni Islam, taking many of his followers with him. The year that followed marked the first time in Malcolm's career that he was free to think and speak for himself. It was a period of intense change and creativity, during which he abandoned the racist ideology of the Nation of Islam and tentatively began to reach out to whites and to the mainstream civil rights movement. After a pilgrimage to Mecca, Saudi Arabia, he took the name El-Hajj Malik El-Shabazz, and founded the Muslim Mosque Inc. and the Organization of Afro-American Unity—a religious and a political organization, respectively. He traveled widely, visiting countries in the Middle East, Africa, and Europe, explaining the black struggle for justice in the United States and linking it with other liberation struggles throughout the world. He also collaborated with the writer Alex Haley (1921–1992) on an autobiography. On February 21, 1965, Malcolm X was assassinated at the Audubon Ballroom in New York City, in front of a large crowd that included his wife and children. Three men connected with the Nation of Islam were convicted of the crime; it was widely suspected, though never proven, that Elijah Muhammad himself ordered the assassination.

There are many questions that arise out of Malcolm X's account of his life as told to Haley, especially the circumstances of his father's death, the timing of his conversion to Sunni Islam, who set fire to Malcolm's home, and Malcolm's sexual orientation. No one has raised these questions as sharply and as controversially as Bruce Perry in *Malcolm: The Life of a Man Who Changed Black America* (1991). Though his biography received much attention when published, it had little impact on the thinking about Malcolm X among most scholars, largely because Perry's sources have proven difficult to check.

In 1992 the Spike Lee film *Malcolm X* made *The Autobiography of Malcolm X* (1965) a best seller, and sparked a renewal of interest in Malcolm. In the early twenty-first century, he was more popular than ever in the African American community, especially among the young. His name, words, and face adorn T-shirts, buttons, and the covers of rap albums. His writings, books about him, and tapes of his speeches are sold by street vendors, at cultural festivals, and in bookstores. His two most significant speeches, "Message to the Grass Roots" and "The Ballot or the Bullet," were delivered in the last year of his life—one immediately before his break with the Nation of Islam, and the other soon after. In both of these speeches, he pushed the basic theme that he had sounded from the beginning of his career: black pride. It was by far his most influential notion, yielding Black Power, Black Theology, African American studies, and much else. This cultural philosophy was his lasting bequest to his people, whom he loved so deeply and for whom he died.

SEE ALSO *Black Power; Civil Rights; King, Martin Luther, Jr.; Nation of Islam*

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James H. Cone

MALINCHISTAS

The term *malinchistas* is used by Mexicans and Mexican-origin populations in the United States to refer to community members who "sell out," adopt the value system of the dominant culture, and implicitly accept the terms of their own subordination. These persons seek to prove themselves as exceptions and embody traits associated with the dominant culture, while they shun those associated with their own. *Malinchismo* may be defined broadly as the pursuit of the novel and foreign, coupled with rejection and betrayal of one's own culture.

This term is linked to the history and myth of a sixteenth-century indigenous woman named Malinalli Tenepali (Malintzin), popularly known as La Malinche or Doña Marina (c. 1502–1527). One of the most legendary figures involved in the conquest of Mexico, La Malinche was of Nahua origin and served as interpreter, guide, and concubine to Hernán Cortés (c. 1484–1547). Knowledge about La Malinche's life before meeting Cortés is derived from the biography that the Spanish soldier Bernal Díaz del Castillo (c. 1495–1584) provides when he recounts La Malinche's reunion in 1524 with her mother and half brother in his *La historia verdadera de la conquista de la Nueva España* (The True History of the Conquest of New Spain, written in 1568, published in 1632). Díaz del Castillo states that La Malinche was a born a Nahua to royal indigenous parents in Tenochtitlán, experienced the death of her father and the remarriage of her mother, and was banished by her mother and enslaved to the Chontal Maya from the coastal area of Tabasco, whose cacique, in turn, gave her to Cortés, along with other virgins for sexual and domestic services, as a welcoming gift. She

became Cortés's lover, gave birth to two mestizo sons, and served as an intermediary and translator between Cortés and Moctezuma (c. 1466–1520). She later married a Spanish soldier named Juan Jaramillo, and gave birth to a forgotten mestiza daughter. She died in 1527 at the age of twenty-five.

Many historians consider La Malinche's participation as crucial in enabling Cortés to defeat Moctezuma and topple the Aztec Empire in 1521. La Malinche's abilities in her native Nahuatl and her proficiency in Yucatán dialects proved indispensable to Cortés. La Malinche spoke both Nahuatl (her mother tongue) and other dialects of the Yucatán Peninsula, and, most importantly, she knew the conventions of a register of Nahuatl *tecpillatolli* (lordly speech), a difficult and indirect rhetorical style used among the Nahuatl-speaking elite. With these special skills, she was able to negotiate successfully for Cortés and counsel him about the intentions of the people with whom he was dealing.

The concept of *malinchismo* emerged in post-independence nineteenth-century Mexican nationalist historiography and literature. After her representations in Spanish and indigenous sources as a powerful woman commanding respect (for example, Spanish Christian interpretations tend to redeem Doña Marina through accounts of her heroism, religious conversion, and cultural assimilation), Mexicans began to condemn her treacherous role in the conquest of Mexico and focused on her sexuality. The depiction of La Malinche's "willful betrayal" centers on the events leading to the Spanish massacre of the people of Cholula prior to the Spanish occupation of Tenochtitlán in 1519. According to Francisco López de Gómara (c. 1511–1566) in his *La conquista de México* (1552) and Bernal Díaz del Castillo in the *Historia verdadera*, La Malinche was given the opportunity to leave the Spaniards for the protection of the Cholulans, even to the point of entering into marriage with a Cholulan nobleman, but she chose instead to inform Cortés of the Cholulans' plans to ambush the Spaniards. Her role in interrogating Cuauhtémoc (c. 1496–1525), the last ruler of the Aztecs, during his imprisonment and in interpreting his confession prior to execution during Cortés's expedition to Honduras is considered confirmation of her treachery. The acts have been considered acts of free and reprehensible choice. An analogue of La Malinche in African American culture is Uncle Tom from Harriet Beecher Stowe's 1852 antislavery novel, *Uncle Tom's Cabin*. Just as La Malinche has been stereotyped as an indigenous woman that sells out her people to the Spanish conquistadors, Uncle Tom has become the stereotype for an African American who is too eager to please whites. Both La Malinche and Uncle Tom "betray" their respective community of origin.

Numerous nineteenth-century Mexican novels depict La Malinche as Eve, the woman to blame for the fall of the Aztec Empire; the child doomed by birth prophecy; the indigenous woman desiring the white man; the ambitious schemer using men for her own egotistical ends; the whore; and the scapegoat for centuries of Spanish colonization. In the twentieth century, Octavio Paz's (1914–1998) essay "Los hijos de la chingada" (Sons of the Violated One) from his collection *El laberinto de la soledad* (The Labyrinth of Solitude, 1950) depicts La Malinche as *"la chingada"* (the violated one), lover, and mistress. La Malinche's redemption lies in her role as the mother of the first mestizos, though Mexicans remain alienated from their past and suffer as *hijos de la chingada.* In short, *malinchismo* portrays indigenous Mexicans as victims of Spanish aggression facilitated by Malinche's lasciviousness and treachery.

The notion of *malinchismo* is profoundly misogynistic. The elements of *malinchismo* were set in the twentieth century: La Malinche is perceived as cursed at birth, driven by an unbridled sexual appetite, unprincipled in pursuit of her own ends regardless of the incalculable price that others must pay for her actions, and culpable for bloody deeds carried out by Cortés and his soldiers.

La Malinche entered into the United States cultural lexicon under the influence of the Chicano movement of the 1960s and 1970s. During this period, Chicano (male) nationalists labeled Chicana feminists and Chicana lesbians as *malinchistas*. Chicana feminist and lesbian writer Cherríe Moraga engages these negative depictions in her essay "A Long Line of Vendidas" in the collection *Loving in the War Years: Lo que nunca pasó por sus labios* (What Never Passed Her Lips, 1983). Chicano playwright and screenwriter Luis Valdés in his play *Los vendidos* (1967) labeled *vendidos* (sellouts) or *malinchistas* those working-class Chicanos and Chicanas who become middle-class Mexican Americans closely aligned with mainstream, middle-class U.S. Anglo cultural values, while they deny their own Mexican working-class heritage. In the late 1970s and early 1980s, Moraga and other Chicana cultural critics and literary writers, however, began to recast the icon of La Malinche as a positive role model for women. They have sought to convert La Malinche into a woman of empowerment and to provide new liberatory potential for the myth. While La Malinche appears frequently as a traitor and scapegoat from the male point of view, feminists in the late twentieth century reclaimed her tale as that of a woman who played a central role in the Western Hemisphere's formation.

SEE ALSO *Latinos; Uncle Tom*

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Mark A. Hernández

MALINOWSKI, BRONISLAW

1884–1942

Bronislaw Kaspar Malinowski is one of the most charismatic personalities in the history of anthropology. Malinowski defined long-term ethnographic fieldwork as the hallmark of social anthropology. His functionalist approach dominated British social anthropology well into the 1950s. He was a powerful promoter of social anthropology as an academic discipline, both by teaching a whole generation of students and by securing research grants through appeal to the usefulness of ethnographic knowledge to projects of development. A European intellectual with wide-ranging interests, Malinowski was gifted at learning languages and was a brilliant writer. Much of today's fascination with Malinowski revolves around the circumstances of his pioneering fieldwork in Melanesia from 1914 to 1918: how he happened to choose his field sites; how he positioned himself toward the "natives," colonial administrators, and academic colleagues; how important the method of participant observation was in relation to other data collection techniques; and how different ethnographic experiences were expressed in different forms of writing.

Born in Krakow, Malinowski first studied physics and philosophy, receiving a doctorate from Jagiellonian University in 1908. His readings during this time were broad, with Friedrich Nietzsche (1844–1900) and the physicist-philosopher Ernst Mach (1838–1916) among his intellectual influences (*Early Writings* [1993]). He spent a further year at Leipzig University studying *Völkerpsychologie* (cultural psychology) with Wilhelm Wundt (1832–1920). In 1910 Malinowski traveled to Britain and started to study ethnology with Edward Westermarck (1862–1939) and Charles Gabriel Seligman (1873–1940) at the London School of Economics. He was to remain attached to the London School of Economics for most of his academic career, becoming a reader in 1923 and a professor in 1927. Just before the outbreak of World War II (1939–1945), Malinowski was on sabbatical in the United States and decided not to return to Europe. He became a professor of anthropology at Yale University in 1942, but died the same year.

Malinowski's writings cover a range of different regions (Australia, Melanesia, Mexico), but his most famous works are ethnographic studies of the Trobriand Islands in the southwest Pacific. In *Argonauts of the Western Pacific* (1922), Malinowski describes the *kula*, a system of ceremonial exchanges between a group of islands. In Malinowski's view, the *kula* is primarily about establishing reciprocal ties, whereas economic gain is only of secondary importance. Magic, religion, and myth are central themes in many of his works. For example, in *Coral Gardens*

(1935), Malinowski analyzes the function of magic spells in Trobriand horticulture. This work also presents most clearly the powers of Malinowski's linguistic approach. *Crime and Custom* (1926) is a pioneering work in legal anthropology. Showing that a society's ideals about proper conduct must be clearly distinguished from everyday reality, Malinowski carves out a distinctly anthropological perspective on law and society. A number of his works are concerned with Trobriand sexuality and family relations (e.g., *Sex and Repression* [1927]) and reflect Malinowski's enduring interest in Sigmund Freud's (1856–1939) psychoanalytic theories. His more theoretical works, such as *A Scientific Theory of Culture* (1944), have not preserved the same appeal as his ethnographies. Some of his wartime writings are devoted to a passionate defense of liberalism (*Freedom and Civilization* [1944]). His posthumously published fieldwork diary (1967) remains controversial because of racist remarks, but has also significantly deepened the understanding of his ethnographic oeuvre.

SEE ALSO *Anthropology, British*

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MALNUTRITION

Malnutrition describes the measurable impairment to individual health and well-being resulting from insufficient or unbalanced food intake relative to physiological needs. The term is often compared and contrasted with *hunger*, which refers to the subjective feeling of discomfort caused by lack of food, and *food insecurity*, which describes lack of access to nutritionally adequate food in a socially acceptable manner. Malnutrition usually arises in situations of national or regional *food shortage* (its acute form is *famine*), where geographic regions or nations lack adequate food supply, and *food poverty*, where households lack resources (*entitlements*) to produce or acquire adequate nourishment. But individual *food deprivation* also occurs when national and household availabilities are adequate but distribution is inequitable; in famine situations, some always eat well. *World hunger* is a composite term covering insufficient availability, access, and utilization of food at global, national, household, and individual levels.

The United Nations Food and Agricultural Organization (FAO) and the World Bank, working from national food production and trade statistics along with household income figures relative to the price of a minimum food basket, estimate that some 800 million people in developing countries are food insecure. This is despite aggregate increases in agricultural production and improvements in market infrastructure that, since the 1970s, have made it technically possible to feed everyone a nutritionally adequate basic diet. The largest proportions of food-insecure households and undernourished children exist in South Asia, where endemic poverty is high; numbers are growing also in sub-Saharan Africa, where political instability and HIV-AIDS interfere with food production, marketing, income generation, and intergenerational care.

Within households, pregnant and lactating women, adolescent girls, infants and young (especially weaning-aged) children, and elders are particularly vulnerable to malnutrition where they suffer intrahousehold discrimination in access to food and care relative to their nutritional needs. This vulnerability is further elevated by excessive workloads, infections, malabsorption syndromes, environmental contamination, and insufficient health services. Public health nutritionists study *nutrition over the life cycle*, beginning with gestational nutrition and breast-feeding, to identify these culturally specific age- and gender-related patterns of malnourishment and to institute more effective food and nutrition policies and practices.

Undernutrition includes both protein-energy (protein-calorie) malnutrition and specific micronutrient deficiencies. Manifestations include growth failure in children, underweight and weight loss in adults, extra burdens of disease, and functional impairments to physical activity, work performance, cognitive abilities, reproductive outcomes, and social life. From the 1930s through the

late 1960s, nutritionists working with the FAO, the World Health Organization (WHO), and the United Nations University (UNU) made prevention of protein deficiency (the "protein gap") the priority for interventions. In the 1970s emphasis shifted to energy (calories) on the reasoning that if nutritionally deprived children (or adults) could get sufficient quantities of their traditional balanced diet, protein would take care of itself. Increasing food energy also fit the agricultural-intensification agenda of the green revolution that was producing piles of rice, wheat, and to a lesser extent maize in Asia and Latin America but reducing protein-balanced cereal-legume crop mixes. Malnutrition, conceptualized as a factor in longer-term national economic growth and development, also became part of integrated national nutrition and rural development strategies. These strategies were promoted by the World Bank and other foreign-assistance agencies, which launched national maternal-child health and school feeding programs, targeted food subsidies, agricultural diversification and marketing programs as well as income generation and nutrition and health education efforts. *Basic needs* investments in education, health, clean water, and sanitation tried to address poverty alleviation and malnutrition together while contributing to longer-term economic growth.

In the late 1980s and early 1990s priorities and framing shifted yet again, this time to ending "hidden hunger." With UNICEF taking the lead, the World Summit for Children (WSC) in 1990 set goals to reduce—by half—mild to moderate energy-protein malnutrition, which had been implicated in more than half of child deaths in the developing world, and virtual elimination of vitamin A, iodine, and iron deficiencies as public health problems. By this time dietary diversification had practically eliminated beriberi (thiamin deficiency, associated with polished rice diets), pellagra (niacin deficiency, associated with maize), kwashiorkor (protein deficiency, associated with dependence on a starchy tuber or sap), rickets (associated with too little vitamin D and exposure to sunlight), and scurvy (vitamin C deficiency). The WSC initiatives combined nutrient supplementation, food fortification, and food-based strategies as strategies to end vitamin A deficiency blindness and impaired immune response, cretinism and goiter (associated with severe gestational and later deficiencies of iodine), and severe iron deficiency anemias. At the same time the WSC's goal was to correct more moderate deficiencies, which researchers showed could depress physical and intellectual development, work performance, and child survival.

Subsequently the World Food Summit (1996) and the Millennium Development Goals set additional targets and action plans for reducing world hunger numbers and proportions by half, along with their causes, by 2015. In follow-up, nongovernmental organizations (NGOs) and community-based organizations, collaborating with governments and international agencies, increasingly frame approaches in terms of *livelihood security* (income generation, microcredit, female education) and *rights-based development* or *the right to adequate food* (emphasizing government accountability and public-private-community partnerships and participation). NGOs also play a growing role in *humanitarian assistance*, including the SPHERE project, which disseminates principles, minimum technical standards, and best practices for responding to disasters. Although international *famine early warning systems*—and attendant obligations for food aid response—have eliminated most severe malnutrition apart from areas of political instability, active conflict, or oppression, seasonal and chronic malnutrition persist where people lack access to markets and government or international assistance and among those experiencing the immediate economic displacements of globalization. Local and global studies analyzing these contexts of malnutrition suggest that to reduce malnutrition and poverty everywhere, it is necessary to overcome the economic, political, and social exclusion of women by improving women's education, entitlements, livelihoods, and empowerment, especially across South Asia, and providing fairer access to land, water, infrastructure, and terms of trade.

Although conventionally through the 1980s *malnutrition* usually referred to *undernutrition*, caused primarily by poverty and improper diet, there has since been increased attention to overweight, obesity, and nutritional "diseases of civilization," including diabetes, coronary heart disease, and certain cancers associated with unhealthy diets and behaviors. These syndromes are on the rise also in developing countries, which are experiencing dietary transitions away from traditional, balanced local diets based on grains, legumes, oilseeds, and small amounts of animal protein plus fruits and vegetables toward modern, unbalanced, global diets characterized by more processed and "fast" foods that are higher in fats and simple sugars. Nutritionists studying the etiology of malnutrition now find overweight and underweight individuals residing in the same households, as both low- and higher-income people fill up on cheaper, calorie-dense snacks and sugary beverages. Genetically modified foods and corporate control over the global food system are additional contentious issues for the present and future.

SEE ALSO *Disease; Famine; Food; Green Revolution; Needs, Basic; Nutrition; Poverty; Public Health; Undereating; World Bank, The*

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Ellen Messer

MALTHUS, THOMAS ROBERT

1766–1834

Malthus is now a word, like *Luther* or *Marx* or *Darwin*, that connotes both much more and much less than the individual to whom it refers. The important social-scientific ideas associated with *Malthus* are:

1. the inevitability of population pressures in human societies,
2. scarcity as the central principle of economic analysis,
3. "spontaneous order" and the futility of political revolution,
4. Poor Laws and "welfare dependency,"
5. the theory of general unemployment, and
6. the struggle for existence.

Thomas Robert Malthus—always known as "Robert" or "Bob," never as "Thomas"—was born in Surrey, England, on February 13, 1766, the younger son of Daniel Malthus (1730–1800), a country gentleman. He died in Bath on December 29, 1834, and is buried in Bath Abbey. Educated first privately, then at Warrington Academy and at Jesus College, Cambridge, he graduated BA as Ninth Wrangler in 1788, residing at Cambridge for a further year to read divinity, then was ordained deacon in June 1789 and priest in 1791. Although elected a fellow of his college in 1793, he served a country curacy at Okewood in Surrey from 1789 until 1803, when he became rector of Walesby in Lincolnshire, relinquished his fellowship, and married. In 1805 Malthus was appointed first professor of history and political economy at the East India College, a position he held until his death. He also retained the benefice of Walesby as a nonresident, appointing a curate.

While still curate of Okewoood, Malthus wrote the book that made him famous: *An Essay on the Principle of Population* (1798). Though greatly enlarged in 1803 and appearing in four further editions during his lifetime, the first *Essay* contains the seeds of all "Malthusian" social-scientific ideas save possibly the theory of general unemployment.

HUMAN POPULATION: THE "RATIOS" AND THE "CHECKS"

The first *Essay* was written to show the unfeasibility of William Godwin's *Political Justice* (1796). Godwin (1756–1836) believed that humans are naturally "benevolent," and that the moral evil we perceive is caused by social institutions, which should therefore be dismantled. But if Godwin's "beautiful system of equality" is fully realized, all property equally divided, and marriage, wage labor, government, and law abolished, the economic and social constraints on procreation are removed and population can grow *geometrically* (exponentially) at first. As fertile land becomes scarce, food needed to support more people cannot be produced at the same rate. Malthus assumes "no limits … to the productions of the earth" (p. 26), but suggests that food can only be made to increase, at the utmost, *arithmetically* (linearly). Hence per capita income must fall. Long before it reaches the "subsistence" (zero population-growth) level, falling real income reawakens "the mighty law of self-preservation": Theft and falsehood undermine the mutual trust on which "benevolence" depends; "self-love resumes his wonted empire and lords it triumphant over the world" (p. 190); and the most able and powerful convene to institute "some immediate measures to be taken for general safety" (p. 195). Property rights reappear, together with sanctions for their violation, requiring the restoration of government. Wage labor is reintroduced to ration scarce food to the landless. Marriage comes back to assign responsibility for the feeding and care of children. Godwin's "beautiful fabric of the imagination vanishes at the severe touch of truth" (p. 189).

Malthus acknowledged that the "principle of population" was not new. That human populations multiply "like mice in a barn" (Cantillon [1755] 2001, p. 37) when unconstrained by resource scarcity was taken for granted by all eighteenth-century social theorists. Malthus's new wrinkle, occasionally hinted at by his predecessors and recognizably formulated by James Anderson in 1777, was an analysis of the effects of population growth with scarce land. When natural resources are limited, human fecundity makes population pressure inevitable. Rational individuals may and often do respond with some variety of the *preventive check*: measures to restrict procreation ranging from "moral restraint" (delay of marriage without "irregular gratification," Malthus's preferred solution) to contraception, as recommended by "neo-Malthusians" such as the young John Stuart Mill (1806–1873), but which

Malthus himself ruled out as un-Christian, and subversive of the work ethic. Failing any or enough of these, the real incomes of some must fall so low that the *positive check* will operate: Population will be arrested by famine, starvation and disease, high infant mortality, and shortened adult lifespan.

SCARCITY AND DIMINISHING RETURNS

Though the economists Richard Cantillon (1680–1734), François Quesnay (1694–1774), Adam Smith (1723–1790), and others were conscious of land scarcity, they did not integrate the concept into their economic analyses. For Smith, the brake upon economic growth was shortage of capital, not of land. Now a capital shortage can always be remedied by the "parsimony" of capitalists, and hence is not a necessary feature of economic analysis. But land scarcity is given by nature and is permanent.

Successive applications of labor and capital to a given supply of land result in ever-diminishing returns: at the extensive margin as lower-quality land is brought into cultivation; and at the intensive margin as each successive unit of the variable factor (labor-plus-capital) has less of the fixed factor (land) to work with. Between 1798 and 1815 the analytical implications of the first *Essay* gradually became clear to Malthus himself and to Robert Torrens (1814–1884), Sir Edward West (1782–1828), and David Ricardo (1772–1823). In the latter year each published papers expounding the so-called "classical" theory of rent: Land is cultivated up to the point at which the diminishing marginal product of labor-plus-capital is equal in value to the competitively determined factor cost; capitalist farmers divide the factor payment into profits and wages; and landlords get a surplus ("rent") equal to the excess value of intramarginal production over total cost of production.

Two years later Ricardo codified all this in his *Principles of Political Economy* (1817). Adam Smith's "chearful" study of the *Wealth of Nations* was replaced by a "dismal science" of scarcity, and "classical political economy" was born. Half a century later, economists in England, Austria, Switzerland, and the United States generalized diminishing returns to construct "neoclassical" production theory. All factors are substitutable, and the contribution of each and every factor is subject to diminishing returns when all other inputs are constant. When the production functions implied by this analysis are confronted with isomorphic utility functions, generalized resource scarcity implies the "budget constraints" of the latter, and economic theory becomes an investigation of constrained maximization by rational agents. The present-day view of economics as the study of the allocation of scarce resources between competing ends is a direct consequence of Malthus's *Essay on Population*.

"SPONTANEOUS ORDER" AND THE FUTILITY OF POLITICAL REVOLUTION

Edmund Burke's *Reflections on the French Revolution* (1790) rested on a view of civilized human societies as dynamically unstable systems. An exogenous dissolution of the social fabric producing anarchy causes society to collapse into a state of "tyranny," from which it can only be dislodged by successful counterrevolutionary action. Godwin's answer to Burke accepted the assumption of instability, but supposed that the effect of anarchy is to launch society upon a growth-path of never-ending progress toward the goal of human perfectibility. Malthus's decisive intervention in the debate undermined both Godwin's argument and Burke's. Anarchy may be morally superior to the status quo as Godwin believed. But the "laws of nature" then operate: first to produce a state of affairs *inferior* to the status quo; and because of this, eventually to restore the system to its original state. Political revolution is therefore costly, futile, and self-reversing.

Malthus's conception of human societies as dynamically *stable* systems is a corollary of the theory of "spontaneous order" attributed by F. A. Hayek to Scottish Enlightenment thinkers, in particular David Hume (1711–1776) and Adam Smith, each of whom Malthus had studied with great care. Things get to be the way they are not because anyone intended and planned the present state; rather, the status quo is the unintended consequence of countless private, self-regarding decisions in the past. It is stable in the sense that those now in a position to effect change prefer things as they are, and have strong incentives to restore equilibrium if it is exogenously disturbed.

This conception is of the highest scientific importance, for Burke's and Godwin's arguments are equally defective. By postulating instability of the status quo they leave unexplained and inexplicable the way society becomes what it is. Malthus's stable equilibrium model is not only central to all subsequent economic analysis: It is an essential feature of all present-day attempts to explain social phenomena as the outcome of rational choice by individuals.

THE POOR LAWS AND "WELFARE DEPENDENCY"

In 1798 and in all subsequent recensions of the *Essay on Population* (1803, 1806, 1807, 1817, 1826), Malthus criticized the Elizabethan Poor Laws then in force in England, first, because they tended to "increase population without increasing the food for its support" (1803, p.

358); and second, because any transfer to the indigent "diminishes the shares that would otherwise belong to the more industrious, and more worthy members" of the working class (1803, p. 358). The "more worthy" are those in whom "a spirit of independence still remains," and the "poor-laws are strongly calculated to eradicate this spirit" by lowering the cost to individuals of "carelessness, and want of frugality," and by weakening the incentive to postpone marriage and procreation (1803, p. 359). Because "dependent poverty ought to be held disgraceful," the poor laws, by removing that stigma, "create the poor which they maintain" (1803, pp. 359, 358). What is now called "welfare dependency" was clearly recognized by Malthus not as moral turpitude among the lower orders but as their rational response to a perverse set of incentives.

The incentives are perverse because it is through the preventive check alone that the working class can obtain higher wages and a larger share of national income. Malthus, following Smith, William Paley (1743–1805), and many others, saw that the "subsistence" wage is a cultural variable. If workers raise their sights and come to expect a higher real income before marrying, the aggregate labor supply will be reduced and the equilibrium real wage increased to match their expectations. In terms of the "classical" theory of rent, factor cost rises and the share of income going to both capitalists and laborers increases at the expense of rents. Welfare dependency, in contrast, reduces both the absolute and the relative income of workers.

THEORY OF GENERAL UNEMPLOYMENT

Like his eighteenth-century predecessors, Malthus saw economic activity as driven by "effectual demand." His *Principles of Political Economy* (1820), written partly to criticize Ricardo's value theory, attempted in chapter 7 to explain the post-1815 depression as a "general glut" in commodity markets. An increase in parsimony by capitalists diverts expenditure from "unproductive" to "productive" labor, thereby increasing the supply of goods while reducing the demand. Therefore, unless landlords and others of "the rich" can increase "unproductive expenditure" (personal services, luxuries, etc.) correspondingly, excess supply will drive down prices and profits, "check for a time further production," and throw labor out of employment (1820, p. 354).

Ricardo, James Mill (1773–1886), Jean-Baptiste Say (1767–1832), and most other contemporaries rejected the possibility of "general gluts" on the grounds that produced goods must count as expendable income for those who own them, therefore "supply creates its own demand." Malthus and Ricardo continued the debate in their celebrated correspondence, but Malthus's formulation was never sufficiently clear to convince the latter, and his theory—shared to some extent by Jean Charles Léonard de Sismondi (1773–1842) and Thomas Chalmers (1780–1847)—was treated by J. S. Mill and most later economists as a regrettable mistake.

John Maynard Keynes (1883–1946), however, was a lifelong admirer of Malthus, whom he called "the first of the Cambridge economists," and he abetted Piero Sraffa (1898–1983) in his recovery and edition of the Ricardo-Malthus correspondence. When in the early 1930s Keynes was beginning to construct his own quite different theory of demand-led aggregate production and employment he was inspired, if not exactly influenced, by Malthus's conscientious though flawed attempt to do justice to the whole of economic reality; and he averred that "the almost total obliteration of Malthus's line of approach and the complete domination of Ricardo's … has been a disaster to the progress of economics" (Keynes 1972, p. 98).

THE "STRUGGLE FOR EXISTENCE"

In October 1838, shortly after returning from the voyage of the *Beagle*, Charles Darwin "read for amusement Malthus's *Population*, and being well prepared to appreciate the struggle for existence … it struck me that under these circumstances favourable variations would tend to be preserved and unfavourable ones to be destroyed [implied in chapter 3 of the *Essay*, where the phrase "struggle for existence" occurs]. Here then I had at last got hold of a theory by which to work" (Darwin 1974, p. 71).

Modern biology is "Malthusian" in two analytically distinct ways. In the short run in which all genes may be taken as given, the science of ecology—a study of the general equilibrium of coexisting species in defined space—generalizes Malthus's partial equilibrium analysis of human populations to explain what J. S. Mill called "the spontaneous order of nature." In the long run in which there is genetic mutation and adaptation of species, the theory of organic evolution generalizes Scottish Enlightenment "conjectural history" central to Malthus's anti-Godwin polemic.

The dominance of scarcity in human affairs is never a welcome message. From the first, Malthus's work has provoked vigorous controversy, ranging from technical and sometimes cogent objections to details of his arguments by fellow economists to outraged vilification by Romantics, Marxists, Christian Socialists and advocates of the welfare state, few of whom seem to have read what Malthus actually wrote.

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Anthony M. C. Waterman

MALTHUSIAN TRAP

The Reverend Thomas Robert Malthus was born in Surrey in 1766 and died in 1834. He was the son of a clergyman and one of eight children. Malthus was educated at Jesus College, Cambridge, and later became a professor of history and political economy at the East India Company's College at Haileybury in Hertfordshire. His most famous work, the *Essay on the Principles of Population*, was published in 1798 when he was thirty-two. It has been interpreted partly as a reaction to the utopian thought of William Godwin (1756–1836) and others, as well as that of Malthus's own father. It is an extension and formalization of the work of the classical economist Adam Smith (1723–1790) and others who had laid down some of the basic ideas concerning the tendency of population to outstrip resources.

Malthus's theory, in brief, was that humankind is permanently trapped by the intersection of two "laws." The first law concerned the rate at which populations can grow. He took the "passion between the sexes" to be constant, and investigations showed that under conditions of "natural" fertility (with early marriage and no contraception, abortion, or infanticide), this would lead to an average of about fifteen live births per woman. This figure is confirmed by modern demography. Given normal mortality at the time, and taking a less than maximum fertility, this will lead to what Malthus called *geometrical growth* of one, two, four, eight, sixteen, and so on. Only thirty-two such doublings are needed to lead from one original couple to a world population of over six billion persons.

The second premise was that food and other resource production will grow much more slowly. It might double for a generation or two, but could not keep on doubling within an agrarian economy. Thus there could, in the long run, only be an arithmetical or linear growth of the order of one, two, three, four. Incorporated into this later theory was the law of diminishing marginal returns on the further input of resources, especially labor. Underpinning the scheme was the assumption that there was a finite amount of energy available for humans through the conversion of the sun's energy by living plants and animals. The conclusion was that humankind was *trapped*, a particular application in the field of demography of the more general pessimism of Adam Smith. Populations would grow rapidly for a few generations, and then be savagely

cut back. A crisis would occur, manifesting itself in one (or a combination) of what Malthus called the three "positive" checks acting on the death rate: war, famine, and disease.

After the publication of this theoretical account of the "laws" of the trap, Malthus undertook a great deal of empirical research, traveling through Europe and reading widely in history and anthropology. On the basis of this research, he published what is termed the second edition of *The Principles* (1803) but which is, in effect, a very different book. Basically, Malthus turned his laws of population into tendencies, likelihoods, or probabilities, to which there were exceptions. The trap became avoidable, for he had discovered in England itself, as well as in Switzerland and Norway, that there were what he called "preventive checks" that could act to suppress fertility to a level that would be in line with resource growth. He divided these checks into "moral restraint" (celibacy and delayed marriage) and "vice" (contraception of all kinds, abortion, and infanticide), of which he disapproved.

Malthus believed that the only force strong enough to overcome the biological drive to mate was a set of desires created in societies and cultures where people were affluent, unequal, and ambitious for social status, and thus willing to forgo the delights of large families for other goals. A mixture of human avarice and human reason could lead people to avoid the Malthusian trap.

Malthus's work was hugely influential at the practical level. He contributed to the discussion of the reform of England's Poor Law and to the ideas of how to run the British Empire, many of whose administrators he taught at the East India Company's College. He is also the only social scientist who has had a revolutionary effect in the biological sciences. His idea that humans normally suffer from very high mortality rates, that war, famine, and disease periodically cut swathes through historical populations, was seminal. Entirely independently, both Charles Darwin (1809–1882) and Alfred Russel Wallace (1823–1913) described how reading Malthus's *Principles* provided them with the key to unlock the secret of human evolution, that is, the principle of the survival of the fittest, random variation, and selective retention.

There have been a number of criticisms of the Malthusian framework. His predictions were not fulfilled, at least in the middle term. Malthus wrote before the huge resources of energy locked up in coal and then oil became widely available for human use. For a while, from the middle of the nineteenth century, it looked as if the Malthusian trap was no longer operative. A combination of science (in particular chemistry) and new resources had made it possible to more than double production in each generation. First England, then parts of Europe, Japan, and elsewhere, escaped from the trap. It appeared that Malthus's laws could be inverted: population grew slowly, resources exponentially.

Ester Boserup (1981) and others have suggested that Malthus mistook cause for effect. It is argued that human ingenuity will find solutions to population pressure and indeed that growth of population is one of the necessary spurs to technical innovation and the development of civilizations. For example, the transformations from tribal to settled peasant civilizations, and then from peasantries to advanced industrial societies, were propelled and made possible by the growth of population.

At a more abstract level, thinkers on the Far Left, such as Chinese Communist leader Mao Zedong (1893–1976), argued that Malthusianism was merely a capitalist philosophy, and that under communism, populations would automatically stabilize at the right level. This view is inverted and reflected by a number of Catholic writers who argue that since God has planned our lives, and since all forms of contraception are immoral, there is no need to worry about the so-called laws of population. There is no trap.

Others point out that there is no simple correlation between rapid population growth and economic advance. For example, since the mid-twentieth century, India has become richer and less famine-prone as its population has grown, while a number of sparsely populated areas in the Horn of Africa have suffered from the Malthusian trap. So there are clearly many intermediary variables.

Yet it is too early to forget Malthus, as the Chinese decided after a generation of the Communist experiment. In the early twenty-first century, as resources reach their limits and the external costs of the massive use of carbon energy become apparent in pollution and global warming, it appears that the ghost of Malthus has arisen again. Likewise, as we realize the ability of microorganisms to outpace human medicine, our ability to overcome disease in an increasingly crowded world seems at risk. Finally, the tensions that lead to war are further aggravated by shortages and crowding.

Malthus's realistic message that we can postpone the crises of war, famine, and disease but that they will almost certainly strike again in a much more serious way within an increased total population, again makes sense. His advice, that only by stabilizing and probably reducing total population levels through the rational control of fertility, seems ever more salutary. Like all traps, the Malthusian trap can be avoided. Yet it can only be circumvented if people remain constantly aware of its nature as specified by the lucid first theoretical exponent of the biological limits imposed by human nature and the physical world.

SEE ALSO *Malthus, Thomas Robert; Population Growth; Population Studies*

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Alan Macfarlane

MANAGEMENT

Management is a set of functions and tasks performed by individuals and groups for the purpose of enabling an organization to achieve its objectives. From one perspective, management consists of planning, organizing, staffing, directing, and controlling (Koontz and O'Donnell 1982). From another perspective, management is distinguishable from, yet operates in tandem with, leadership, which consists of envisioning, enabling, and energizing functions and tasks (Nadler and Tushman 1990). In short, leaders formulate organizational strategy, set direction, mobilize resources, and motivate people to perform, whereas managers execute organizational strategy by clarifying expected behavior, instituting measurements, and administering rewards and punishments (Kotter 1990).

The distinction between management and leadership is relatively new, largely because for much of the twentieth century the majority of industries in the United States and other nations were characterized by oligopoly (a few firms possess concentrated market power) or monopoly (one firm possesses sole market power). When a firm—an organization—possesses market power, it does not need much in the way of leadership because customers have little or no choice in terms of alternative products or services and because there are few or no rival firms that pose competitive threats. In such circumstances a firm needs only management to ensure that organizational objectives will be met.

Irrespective of the competitive structure of particular industries, traditionally managers and leaders of business (and nonbusiness) enterprises have maximized the objectives of those enterprises. Such maximizing behavior is consistent with the utility maximization principle that underlies both classical and neoclassical microeconomics (Marshall 1923) and with the optimization principle that is at the core of management science (Starr and Miller 1960). But when it comes to management, there is a plethora of concepts, evidence, and experience that indicates that management settles for second- or even third-best when it comes to organizational performance (Simon 1947). An especially influential example in this regard is the work of Frederick W. Taylor (1911), the father of scientific management, who early in the twentieth century showed that management consistently and systematically underperformed. Applying the principles of industrial engineering to the design of work, Taylor demonstrated how most jobs could be reconstructed to enhance productivity with no change in the quantity or mix of factors of production—land, capital, and especially labor. Taylor's work ultimately led to the development and widespread adoption of motion time management (MTM), or time study, whereby jobs were reengineered to maximize efficiency and standard times were set for workers to perform those jobs, with consequent pay rewards if workers overperformed and pay penalties if workers underperformed.

Taylor's conception of management was a single-minded one in which supervisors (and, by inference, managers) did the thinking and issued orders with which workers would presumably comply. But workers proved to be far more independent-minded, even obstreperous, than Taylor envisioned, and they often banded together to attempt to influence and change their terms and conditions of employment. A prime example of this was the industrial union movement of the 1930s, during which workers from a wide variety of companies sought official recognition in order to negotiate collective bargaining agreements with the managements of those companies. That these efforts were strongly resisted by company management is readily evident from historical accounts of labor violence during this period (Rayback 1966).

Ironically, the scientific management movement was followed by, and in significant respects supplanted by, the "human relations" movement, which was founded on the principle that workers are social beings rather than only or even primarily economic beings. The well-known work of Elton Mayo (1933) and his colleagues, which was conducted at the Hawthorne Works of the Bell Telephone System, showed that workers' job performance could be greatly enhanced if management paid close attention to workers' social needs rather than merely to their economic needs (Roethlisberger and Dickson 1939). This research was instrumental to the adoption by many companies of employee counseling and industrial welfare programs aimed at addressing workers' noneconomic needs. Yet at the same time companies strongly and in some cases militantly opposed workers' efforts to form independent unions and bargain collectively with their employers. Responding to these developments during the Great Depression, the U.S. Congress in 1935 passed the landmark National Labor Relations Act (NLRA), establishing

unionization and collective bargaining as labor policy for the private sector—a policy that was ultimately upheld by the U.S. Supreme Court.

As management thought and practice continued to evolve, more attention was paid to *external* and *internal alignment*. External alignment refers to the relationship of an enterprise to its external environment and involves the scanning of economic, political, legal, and social developments, the analysis of competitive opportunities and threats, the positioning of the enterprise in its particular sector or industry, and ultimately the formulation of a business strategy and specification of strategic objectives. Internal alignment refers to the linkages among and balancing of elements such as organization structure, reward systems, decision-making processes, human-capital skills and capabilities, and organization culture, all of which are key to the implementation of business strategy.

Each of these external and internal alignment dimensions is the province of specialized academic research; a leading example is Alfred Chandler's work on organizational structure. Chandler (1962) postulated that an organization's structure was fundamentally shaped by the organization's strategy, which meant (among other things) that there is no one ideal organization structure for all enterprises. Based on this reasoning, a classical functional structure aligned well with certain businesses' strategies, whereas product-based, geographical-based, and matrix structures aligned well with other businesses' strategies. From this work there developed a more robust contingency model of organizational structure, and similar contingency models were applied to other elements of internal organizational alignment. The main insight or message of such contingency models is that there is no one best way to operate a business in any of its key dimensions.

As the competitive advantage of business enterprises has come to lie more with human or intellectual assets (capital) than with physical assets (capital), much attention has been devoted to the management of human resources for competitive advantage. In this regard there is considerable empirical evidence that decentralized organizational structures and decision making together with team-based work lead to superior performance compared to hierarchical organization structures, centralized decision making, and individual-based work. In particular the notion that competitive advantage can be achieved through the "high-involvement" management of people has taken hold quite firmly in management circles (Pfeffer 1994); from this perspective, employees are managed as assets. But it is also the case that competitive advantage can be achieved through "low-involvement" management of people, most especially through outsourcing and short-term employment contracting, in which employees are managed as labor expense to be controlled (Lewin 2001). Both types of human-resource management practices can lead to positive economic returns to a business enterprise.

Finally, much attention has been devoted to the types of incentives systems that best harmonize the interests of business owners and employees, including management employees. The underlying concern, captured by the notion of agency theory, is that management and employees are agents of the principals or owners of a business and as such seek to maximize their own interests rather than those of the principals or owners (Jensen and Meckling 1976). To combat this problem, incentive systems that tie at least some of the pay of managers and employees to the performance of the business have been widely advocated. Such incentives include profit-sharing, bonuses, gain-sharing, productivity-sharing, commissions, stock ownership, and stock-option plans (Lewin and Mitchell 1995). What these plans have in common is that they pay off when a business does well and do not pay off when a business does poorly, which is analogous to what happens to the owners of a business, including shareholders.

SEE ALSO *Business; Competition; Corporations; Labor; Leadership; Management Science; Marshall, Alfred; Maximization; Organization Theory; Organizations; Principal-Agent Models; Profits; Simon, Herbert A.; Taylorism*

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David Lewin

MANAGEMENT SCIENCE

Management science is the experimental study and systematic application of a coordinated process for reaching individual and collective goals by working with and through human and nonhuman resources to continually improve value added to the world.

In historical non-Western civilizations, management topics were addressed by Egyptian pharaohs, Chinese mandarins, pre-Hispanic American chiefs, and Arabic scholars like Ibn Khaldun (1332–1406). However, in Western civilization after the Protestant Reformation, worldly prosperity achieved through hard work in this life became a sign of divine approval, and individuals became motivated to exercise self-discipline at work to earn eternal salvation. Adam Smith (1723–1790) provided the economic rationale for free trade and capitalism to increase individual, group, and national wealth—while critiquing the effects of the division of labor. During the Industrial Revolution, the technological development of steam power, railroad transportation, enormous factories, and production changes required new management skills to rapidly handle large flows of material, people, and information over great distances.

Frederick W. Taylor (1856–1915) was the first to develop a science of the management of others' work for controlled adaptation of labor to the needs of financial capital in his 1911 work, *The Principles of Scientific Management*. His model was the machine with its cheap, interchangeable parts, each of which does one specific function. Taylor attempted to do to complex organizations what engineers had done to machines, and this involved making individuals into the equivalent of machine parts. Just as machine parts were easily interchangeable, cheap, and passive, so too should the human parts be the same in the machine model of organizations.

This approach involved breaking down each task to its smallest unit to figure out the one best way to do each job. Then the engineer, after analyzing the job, would teach it to the worker and make sure the worker performed only those motions essential to the task. Taylor attempted to control each element of work and to limit human behavioral variability in order to increase productivity.

The results were profound. Productivity under *Taylorism* went up dramatically. New departments, such as industrial engineering, personnel, and quality control, arose. There was also growth in middle management as there evolved a separation of planning from operations. Rational rules replaced trial and error; management became formalized and effectiveness increased. Henry Ford (1863–1947) successfully applied scientific management processes in the mass production of inexpensive automobiles using the assembly line. He reduced car assembly time from 728 hours to 93 minutes and increased market share by 40 percent.

Of course, scientific management did not come about without criticism. First, the old-line managers resisted the notion that management was a science to be studied, not a status that was conferred at birth or by inheritance or acquired through an intimidating physical presence or force of personality. Second, many workers resisted the dehumanization of their work due to managerial overcontrol of the labor process in a way that ignored workers' conceptual and craft skills and deprived them of discretionary time-motion options and work design input. The industrial engineer with a clipboard and a stopwatch, standing over workers to control their task motions and work pace, became a hated figure and led to group resistance.

To counter and complement Taylor's emphasis on external control of labor, three major approaches have developed over the years, focusing on the following managerial emphases: internal flexibility, internal control, and external flexibility.

First, with respect to emphasizing the internal flexibility of managers, the human relations approach, based on the experiments of Fritz J. Roethlisberger (1898–1974) and William J. Dickson (1904–1989) described in *Management and the Worker* (1939), demonstrated that work is not merely a mechanical, physical act but an expression of multiple psychosocial needs requiring managerial flexibility. When managers give special attention to employees, productivity is likely to improve regardless of whether working conditions improve—the Hawthorne effect. In *The Functions of the Executive* (1938), Chester I. Barnard (1886–1961) reinforced this view of the organization as a social system requiring employee cooperation and acceptance of workplace authority. Kurt Lewin (1890–1947), in *Frontiers in Group Dynamics* (1946), further demonstrated that human work systems could not be understood—much less improved—without factoring in

the social-psychological impact of group dynamics in decision making and work performance.

Second, with respect to emphasizing the internal control of managers, Max Weber (1864–1920) maintained that efficient, impersonal coordination of standardized procedures by means of a hierarchy of formal authorities to ensure bureaucratic internal control of labor was the prototypical new role for managers in any organization. Herbert A. Simon (1916–2001) further demonstrated, in *The New Science of Management Decision* (1960), that the internal organization of firms was the result of decisions made by managers facing uncertainty about the future and costs in acquiring information in the present. Under decision theory, Simon claimed that managers have only "bounded rationality" and are forced to make decisions not by "maximizing" but by "satisficing," that is, setting an aspiration level that, if achieved, they will be happy enough with. If the aspiration level is not achieved, managers will try to change either their aspiration level or their decision to internally control labor.

Third, with respect to emphasizing external flexibility, Paul Lawrence and Jay Lorsch, in *Organization and Environment* (1968), maintained that the context of fast-paced uncertainty and global risks required modern managers to creatively adapt and acquire external resources to thrive. They argued that a rapidly changing external environment demanded a dynamic, open-systems approach to management with an organizational feedback structure more like an "adhocracy" than a bureaucracy. One of the first contingency theorists, Fred E. Fiedler, in *Leader Attitudes and Group Effectiveness* (1958), argued that managerial performance depended (was contingent) upon the manager's match with three situational factors: leader-member relations, task structure, and position power.

In summary, the four major approaches to management compete and complement each other, requiring both control and flexibility to demonstrate managerial excellence.

SEE ALSO *Labor; Management; Taylorism*

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Joseph A. Petrick

MANAGERIAL CLASS

The idea of a distinct managerial class with interests that diverge from those of both the capitalist class and the working class is associated with three broad theoretical agendas in the social sciences: (1) the explication of the historical and sociological significance of the rise to power of a layer of intellectuals and state bureaucrats in socialist (communist) countries ostensibly committed to achieving a "classless society"; (2) the analysis of a putative separation of ownership and control within the modern capitalist corporation; and (3) the attempt to delimit and more rigorously define a "middle class" occupying a mediating position between capital and wage labor in advanced capitalist societies. The concept is closely associated with the notion of a rising "new class" of technocrats and intellectuals whose class project is to subordinate modern society to the rules of bureaucratic rationality and the imperatives of science and technology. It is also linked to the idea of a "managerial revolution," which has rendered obsolete the Marxist theory of the centrality of the capital-labor struggle to the social dynamics of modern or postmodern societies.

Speculation regarding the global ascendancy of a "new" managerial class reached its high point during the early to middle phases of the cold war, finding expression in the thesis that modern, industrialized societies, whether nominally socialist or capitalist, were "converging" toward a unitary (technocratic) model of social and economic organization, one dominated by the requirements of efficiency, productivity, and social responsibility. According to this convergence thesis, the movement of Western capitalist societies toward greater government intervention in the economy and the expansion of the welfare state was no less inexorable than the economic and political liberalization and eventual democratization of the Soviet-bloc

countries. In East and West alike, these processes would be guided by an increasingly self-conscious class of technocrats and intellectuals seeking a middle ground between the freewheeling, individualistic capitalism of a bygone era and the stultifying authoritarianism of "actually-existing socialism."

The demise of "real socialism" in Eastern Europe and the Soviet Union in the 1990s and the growing influence in the capitalist West of neoliberal policies and ideological nostrums following the profitability crises of the 1970s called into question the continuing theoretical salience of the idea that capitalists and wage workers alike were being eclipsed by a rising new class of "managerial experts." Indeed, it is arguable that these developments have combined to reduce significantly the influence and relative weight of managerial and technocratic strata in the post-Soviet era, encouraging the revival of a more traditional capitalism, one that "can—and must—manage with a substantially smaller buffer between capital and labour than it did during the more economically prosperous, but also more politically perilous, days of the Cold War" (Smith 1997).

THE MANAGERIAL REVOLUTION

In *The Modern Corporation and Private Property* (1932), Berle and Means sounded an early alarm concerning the centralization of economic power in the hands of large-scale corporations and the usurpation of power within them by a class of professional managers whom they saw as increasingly unaccountable to shareholders and the general public alike. The immediate impact of this thesis in the crisis-ridden 1930s was to encourage the notion of a "managerial revolution" among many socialist intellectuals disillusioned by the experience of Stalinism in the Soviet Union. This idea found inchoate expression in Lewis Corey's *The Crisis of the Middle Class* (1935) and a more fully blown elaboration in Bruno Rizzi's *The Bureaucratization of the World* (1939) and especially James Burnham's *The Managerial Revolution* (1941). Theorists of a managerial revolution argued that capitalism was in the process of being replaced, not by working-class socialism, as Marx had anticipated, but by a new "collectivist" social formation ruled by a new class of bureaucrats and technocrats.

The Berle-Means thesis of a "separation of ownership from control" was to be given a decidedly positive inflection by many institutional economists and sociologists in the postwar era (notably Talcott Parsons, Neil Smelser, Ralf Dahrendorf, Daniel Bell, and John Kenneth Galbraith) who saw this separation as conducive to an attenuation of conflict between socially irresponsible capitalists and socialist-minded workers, as well as to the triumph of meritocratic, democratic, and technocratic principles over the prerogatives of property ownership.

MARXISM, THE MIDDLE CLASS, AND THE IDEA OF A MANAGERIAL CLASS

The revival of interest in Marxist class theory and socialist politics in the 1960s and 1970s brought to the fore a new set of concerns pertaining to the character and role of the professional, managerial, and other "middle" strata of the advanced capitalist countries. In Europe, in particular, concrete questions of socialist political strategy compelled many left-wing intellectuals to confront the issue of the numerical decline of the industrial working class and the class position of new layers of waged and salaried employees in corporate bureaucracies, service industries, and state apparatuses.

The specifically professional or managerial elements of these new strata were often seen as belonging to a "new middle class." Reprising in some ways the earlier ideas of Corey and Burnham, Alvin Gouldner (1979) suggested that a "New Class" of technical intelligentsia was arising in the bureaucratic organizations of such societies; but unlike the earlier theorists of "managerial revolution," he saw this class as in conflict with other bureaucratic elements and as comprising nonmanagerial intellectuals as well. For Gouldner, New Class intellectuals had come to monopolize the "culture of critical discourse," emerging as a somewhat flawed "universal class" with its own specific project of social reconstruction and domination.

Most Marxists, however, denied that the new middle class of unproductive but "socially reproductive" salaried workers possessed a determinate set of homogeneous interests or was capable of articulating a coherent class project distinct from the bourgeoisie and the working class. In one influential and controversial formulation proposed by Barbara and John Ehrenreich (1978), such elements constituted a "Professional-Managerial Class … consisting of salaried mental workers who do not own the means of production and whose major function in the social division of labor may be described broadly as the reproduction of capitalist culture and capitalist social relations." But this class was seen as extremely diverse, and the Ehrenreichs did not regard it as a truly independent factor in the class dynamics of modern capitalist or post-capitalist societies. Other Marxists denied that the professional and managerial strata constituted a class at all, insisting instead that they occupied "contradictory locations" within class relations (as in the formulation by Erik Olin Wright). It was commonly assumed that in the course of class struggle between capital and labor, this new middle class would tend to polarize in terms of their allegiances to the more fundamental social classes defining capitalist society.

Marxist theorists of this persuasion also typically denied that the ruling bureaucratic oligarchies within the communist states constituted a new managerial ruling class, regarding them either as remnants of the old class society within social formations in transition to classless communism or as a "state capitalist" ruling class. Many reasserted the thesis of Russian revolutionary leader Leon Trotsky in *The Revolution Betrayed* (1936) that the Stalinist oligarchy was a brittle and dysfunctional stratum lacking the attributes of a fully formed social class and destined to fragmentation as the Soviet Union either moved forward to socialism (through an international extension of the socialist revolution) or backward to capitalism (the inevitable result of a too-prolonged isolation of the Soviet "workers state" from the international division of labor).

THE FUTURE OF THE CONCEPT

The idea of an ascendant managerial class capable of exercising a class hegemony over advanced, industrialized societies lost favor in the new era of corporate downsizing, neoliberalism and capitalist globalization that opened in the 1980s. Nevertheless, the role of intellectual, managerial, and technocratic elements in assuring the continuous reproduction of capitalist culture and social relations remains a vital one. In particular, since the advent of Frederick Taylor's project of "scientific management," capital has been reliant on a special stratum of salaried "hired guns" to safeguard its interests against the demands and struggles of the wage-earning class. However, with the shift of radical social analysis from capital-labor relations to "identity politics," increasing attention has been devoted to the persistent obstacles to entry into the intellectual elites and upper management experienced by women, racial minorities, and others designated as "undesirables" (see, for example, Darity 1996). The intersections of class, race, and gender provide a rich new field of inquiry for a concept that has proven to be both resilient and acutely susceptible to the vagaries of ideological fashion.

SEE ALSO *Bureaucracy; Capitalism; Class; Class Conflict; Class Consciousness; Culture; Hierarchy; Institutionalism; Knowledge Society; Managerial Society; Marxism; Middle Class; New Class, The; Oligarchy; Parsons, Talcott; Socialism; Stalinism; Stratification; Trotsky, Leon; Union of Soviet Socialist Republics*

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Murray Smith

MANAGERIAL SOCIETY

SEE *Managerial Class.*

MANDEL, ERNEST

1923–1995

Ernest Mandel, a professor at the Free University of Brussels, was a renowned Marxist scholar and one of the best-known Trotskyists of the second half of the twentieth century. In the 1960s he emerged as a leading figure of one of several organizational contenders to the mantle of the Fourth International, the "world party" founded by the exiled Russian communist leader Leon Trotsky in 1938 with the dual aim of overthrowing world capitalism and combating the Stalinist "bureaucratic degeneration" of Russia's socialist revolution of 1917.

Mandel's commitment to achieving a worldwide socialist democracy profoundly influenced all aspects of his scholarship. He wrote some thirty books and about two thousand articles, including such major works as *Marxist Economic Theory* (1968), *From Stalinism to Eurocommunism* (1978), *Late Capitalism* (1975), *Trotsky as Alternative* (1995), and *Power and Money: A Marxist Theory of Bureaucracy* (1992).

Mandel's economic works were centrally concerned with demonstrating the continuing relevance of Karl Marx's critical analysis of the capitalist mode of production to both the postwar boom of the 1950s and 1960s and to the subsequent period of stagflation and declining profitability that had begun in the early 1970s. In *Late Capitalism*, he sought to show how the inexorable laws of motion of advanced capitalism must eventually result in severe economic crises, which in turn would give a major impetus to the global class struggle between capital and labor. While advocating a multicausal explanation of capitalist economic crisis, he also defended Marx's view that the average rate of profit was the key variable determining

the fortunes of capitalist societies and that its tendency to fall was largely due to technological innovations that displaced living wage labor (the sole source of surplus value) from the capitalist production process.

In his Marshall Lectures delivered at Cambridge University in 1978 (published in 1980 as *Long Waves of Capitalist Development*), Mandel expanded on an original argument, first advanced in *Late Capitalism*, that the history of the capitalist mode of production had been characterized not only by the short-term industrial cycles analyzed by Marx, but also by four successive "long periods" of development, each characterized by a particular form of productive technology. The duration of each period was approximately fifty years, and each could be subdivided into an initial long wave of accelerating economic growth, corresponding to generally high rates of profit, and a subsequent long wave of decelerating growth, marked by lower profit rates.

The argument owed something to the Russian economist Nikolai Kondratieff's theory of long cycles of economic development, but departed from it by insisting that an expansionist wave following a wave of stagnation is not due to a corrective mechanism inherent in the functioning of capitalism, but depends on strictly noneconomic factors such as wars of conquest and decisive victories by capital over labor in the class struggle. The issue of whether capitalism had passed from a wave of stagnation to one of expansion by the twenty-first century sparked controversy among those adhering to Mandel's theory of long waves.

Non-Marxists sometimes criticized Mandel for allowing his dedication to Marxist orthodoxy to constrain an otherwise creative and fertile intellect. Marxist critics complained about his theoretical eclecticism, historical objectivism, and political opportunism. Nevertheless, his writings and personal example left a deep impression on many scholars and activists shaped by the youth radicalization of the 1960s.

SEE ALSO *Capitalism; Economic Crises; Long Waves; Marx, Karl; Rate of Profit; Trotsky, Leon*

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Murray E. G. Smith

MANDELA, NELSON

1918–

Nelson Rolihlahla Mandela is South Africa's iconic elder statesman and winner of the 1993 Nobel Peace Prize. After almost fifty years of antiapartheid activism as a leader in the African National Congress (ANC), including over twenty-seven years in prison (1962–1990), Mandela became South Africa's first democratically elected president in 1994. Since stepping down from the presidency in 1999, he has continued to play a visible role in South African and international affairs.

Born into the royal Tembu family near Umtata in the Transkei, Mandela attended missionary schools prior to entering Fort Hare University College in 1939. Suspended for participation in student protests in 1940, he moved to Johannesburg, completing a bachelor's degree through correspondence in 1942. Working and studying part time, he qualified as an attorney through apprenticeship and passage of the qualifying exam in 1952.

His political career began in 1944, when he became a founding member of the Youth League of the ANC. He was prominent in efforts to galvanize the senior ANC to greater militancy that culminated in passage of the Program of Action in 1949. Dropping his opposition to collaboration with communists and Indian nationalists in the wake of their determined opposition to the relentless post-1948 implementation of apartheid, Mandela was at the center of the ANC-led Defiance Campaign (1952–1953), uniting Africans and antiapartheid volunteers of all races and ideological persuasions in nonviolent protest actions. Elected provincial president of the Transvaal ANC and deputy national president of the ANC in 1953, he was banned from political activity by the government and forced to resign. For the remainder of the decade, he concentrated on organizational activities behind the scenes. Only during the long-running treason trial (1956–1961) of 156 ANC members and their non-African allies was Mandela highly visible as lawyer, witness, and spokesman from the dock.

After the defendants in the treason trial were acquitted, Mandela went underground to organize support for unsuccessful mass protests in May 1961. Popularly dubbed the "Black Pimpernel," surfacing sporadically in South Africa and during a seven-month overseas trip, he evaded arrest and prison for seventeen months. While underground, he participated in clandestine meetings of the ANC (banned in 1960 under the Unlawful Organizations Act in the wake of the Sharpeville massacre) at which the ANC decided to end its policy of nonviolence. Mandela and other leaders of the banned ANC and its also proscribed ally, the Communist Party, then formed a unit called Umkhonto we Sizwe (Spear of the Nation) in mid-1961 to conduct sabotage and prepare for eventual guerrilla warfare. In August 1962 Mandela was apprehended by the police in Howick, Natal, and in November 1962 he was sentenced to five years in prison for incitement to strike and leaving the country illegally.

Subsequent to the separate arrest of nine other leaders at the underground Rivonia headquarters of Umkhonto we Sizwe in Johannesburg in July 1963, Mandela was brought from Robben Island prison to face trial with them on charges of sabotage. In the glare of worldwide publicity at the end of the trial, he delivered a dramatic final statement from the dock, concluding that "the ideal of a democratic and free society … is an ideal for which I am prepared to die."

Receiving a life sentence (instead of the death sentence that could have been passed), Mandela returned to Robben Island and became the world's most famous political prisoner. Despite South African efforts to black out news about him, the world increasingly became aware of his assertive demands that the government adhere to prison regulations and his leadership of fellow inmates across the political spectrum. Transferred to Pollsmoor prison on the mainland in 1982 and then to a cottage in Victor Verster prison in 1987, Mandela became the star of a deft and media-smart campaign for unconditional release from prison. Simultaneously, he conducted secret talks with government ministers to set the stage for negotiations to achieve majority rule.

Released unconditionally from prison on February 11, 1990, by the newly elected president F. W. de Klerk, Mandela immediately assumed the leadership of the ANC's negotiations with the Nationalist Party government. Against a backdrop of rising violence, he showed repeated willingness to compromise with former opponents without abandoning the goal of nonracial constitutional democracy based on one person, one vote. In November 1993 an agreement was reached on a constitution, and in December 1993 Mandela and de Klerk were jointly awarded the Nobel Peace Prize.

Victorious at the head of the ANC ticket in the country's first election open to all citizens, Mandela assumed the presidency of South Africa on May 10, 1994. During his five-year term, he won extraordinary respect at home and abroad for his advocacy and practice of national reconciliation. After completion of his presidency, he turned to international issues, successfully mediating ethnic strife in Burundi. He also spoke out strongly on HIV/AIDS, urging both the South African government and the international community to greater commitment. In June 2004, shortly before his eighty-sixth birthday, he announced his retirement from public life.

SEE ALSO *African National Congress; Apartheid; Colonialism; Mandela, Winnie*

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Sheridan Johns

MANDELA, WINNIE
1936–

Nomzamo Winifred Zanyiwe Madikizela was Columbus and Gertrude Madikizela's fifth child, born on September 26, 1936, in Pondoland Hills in Bizana (near Transkei), South Africa. Winnie's father encouraged her to complete a diploma at the prestigious Jan Hofmeyr School of Social Work in Johannesburg. She became the first black female social worker at Baragwanath Hospital. She would later complete a bachelor's degree in International Relations from the University of Witwatersrand. Winnie married political activist and leader of the African National Congress (ANC) Nelson Rolihlahla Mandela on June 14, 1958. Winnie and Nelson moved to Soweto and immediately began a life together fighting the oppressive apartheid regime of South Africa. Winnie became actively involved in the ANC Women's League and participated in protests against various obstructions to black South Africans' freedom, including the requirement for blacks to carry "passes" in order to travel within the country. Blacks that were caught without passes could be subjected to abuse and jail time. Nelson and Winnie were under tremendous scrutiny by the South African government. Nelson left the country to avoid being arrested for treason. He was arrested upon his return for inciting black South African workers to strike and for leaving the country without proper traveling documents. In 1962, Nelson would begin a twenty-eight year incarceration.

Winnie worked for the Johannesburg Child Welfare Society and was continually placed under numerous bans for her suspected affiliation with ANC. She was fired from various jobs due to repeated harassment of her employers by South African police. She also faced consistent bans inhibiting her ability to raise her two children, Zeni and Zindzi. In 1970, Winnie was detained for 491 days in Pretoria Prison before being released on house arrest. Frequent threats against Winnie's life, including a bomb explosion outside of her home, led her twelve-year-old daughter Zindzi to write a letter of appeal to the United Nations for her mother's protection. Winnie would be arrested and jailed two additional times, in 1974 and in 1976, after the Soweto student uprising against Bantu education led to the police beating and killing of many children. Winnie was viewed as an instigator and was

arrested under the Internal Security Act. Winnie became an executive member of the Federation of South African Women, the Black Parents Association, and continued supporting the efforts of the ANC. She inspired many black South Africans and was known as the "Mother of the Nation." After her release from jail in 1976, she was banished for nine years to a remote black township known as Brandfort. For a time, she lived with no heat, no toilet, and no running water in a three-room shack she shared with Zindzi. Her eldest daughter, Zeni, married Prince Thumbumuzi of Swaziland in 1978.

Winnie was linked with radical factions of ANC during the 1980s and her legacy became tarnished by several key incidents, which eventually led to her divorce in 1996 from then President Nelson Mandela. The incidents centered around a group of bodyguards she formed, known as the Mandela United Football Club. Winnie was implicated in the murder of fourteen-year-old ANC activist James "Stompie" Moeketsi and numerous other beatings and deaths associated with the Football Club. When she appeared before the Truth and Reconciliation Commission, Bishop Desmond Tutu (b. 1931) begged her to admit her mistakes and Winnie acquiesced with the words "things went horribly wrong." She was convicted on 43 counts of fraud in 2003 and is considered a leading anti-apartheid activist and controversial figure around the world.

SEE ALSO *African National Congress; Anticolonial Movements; Apartheid; Colonialism; Mandela, Nelson; Truth and Reconciliation Commissions*

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Kijua Sanders-McMurtry

MANIAS

The American Psychiatric Association (APA) defines *mania* as a period of unusually elated or irritable mood that is accompanied by at least three other symptoms (APA 2000). The symptoms of mania can include physical restlessness or overly active behavior; rapid speech or unusual talkativeness; racing thoughts; markedly diminished need for sleep (e.g., feeling rested after only a couple hours of sleep); inflated self-esteem; difficulty focusing attention; and excessive involvement in pleasurable activities without regard to undesirable consequences, such as reckless spending, sexual behavior, or driving. A manic episode is diagnosed if symptoms last for at least one week or lead to hospitalization, and if the symptoms are extreme enough to cause either distress or interference with social or occupational functioning. A person in a manic episode may feel invincible and enthusiastic, but family and friends may perceive manic activity as alarming.

The APA defines several other types of related episodes as well. *Hypomania* is milder than mania; it is diagnosed if the above symptoms are present for at least four days and produce noticeable changes in functioning without significant distress or impairment. *Mixed* episodes meet criteria for a full manic episode, but include concurrent depressive symptoms.

Bipolar disorders are defined based on the types of episodes experienced. Bipolar I disorder includes the presence of at least one lifetime manic or mixed episode. Bipolar II disorder is characterized by at least one lifetime episode of hypomania, along with at least one episode of depressive symptoms. *Cyclothymia* is defined by milder fluctuations of manic and depressive symptoms, which never meet the severity of full-blown manic or depressive episodes, but which are present at least 50 percent of the time for two years. The term *bipolar* reflects the fact that most (but not all) people with an episode of mania or hypomania will experience depressive episodes during their lifetime. No biological tests are used to diagnose bipolar disorder. Findings of large studies indicate that approximately 3.9 percent of people will meet diagnostic criteria for bipolar I or II disorders (Kessler et al. 2005), and that approximately 4.2 percent will meet diagnostic criteria for cyclothymia during their lifetime (Regeer et al. 2004).

Researchers have documented above-average rates of bipolar disorder among the world's most famous artists, authors, and composers (Jamison 1993). Unaffected family members of people with the disorder appear to be more creative than those affected by the disorder (Richards et al. 1988). In addition, family members of those with the disorder appear to have elevated levels of accomplishment in their careers (Johnson 2005).

Despite these intriguing correlates, bipolar disorders remain among the most devastating of psychiatric conditions. Suicide rates among people hospitalized for bipolar I disorder are twelvefold higher than those in the general population (Harris and Barraclough 1997). Most people

remain unemployed a year after hospitalization for mania (Keck et al. 1998). As a consequence, bipolar disorders have been projected to become a leading cause of medical disability worldwide (Murray and Lopez 1996).

What causes this disorder? Bipolar disorder is one of the most genetic of psychiatric illnesses. Twin studies comparing rates of disorder in identical and fraternal twins suggest that 60 to 85 percent of the variability in whether or not people will develop bipolar I disorder is explained by genes (McGuffin et al. 2003). About 10 percent of the children of a parent with bipolar I disorder will develop a bipolar disorder. It is likely that a set of genes, rather than a single gene, contributes to cause the disorder.

Although there is no cure for bipolar disorder, medications are considered the best form of treatment. Medications are typically recommended throughout the life course, as people with one episode of mania are at extremely high risk for further episodes. Treatment guidelines recommend lithium as the medication of choice. Lithium has been shown to help prevent relapses, to reduce severity of episodes when they do occur, and to decrease suicidality. Unfortunately, many people find the side effects of lithium difficult to tolerate. Other medications, such as antiseizure and antipsychotic medications, have been licensed by the U.S. Food and Drug Administration for the treatment of mania. These treatments are often supplemented with medications to treat depressive symptoms (although antidepressant medications are not recommended without a mood stabilizer because they can trigger manic symptoms).

Although medicine is the primary approach to treatment, stressors and sleep loss can trigger episodes of bipolar disorder. Given this, as well as the devastating consequences of the disorder, psychosocial treatments can be used to supplement medication. Psychoeducation and family therapy can help prevent hospitalization, and cognitive therapy, focused on changing self-critical thoughts, helps reduce the risk of depression (Miklowitz and Johnson 2006).

SEE ALSO *Madness; Psychotropic Drugs; Schizophrenia*

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Sheri L. Johnson
Christopher Miller

MANIC DEPRESSION

Many lay people use the name *manic depression* to refer to a disorder that is more formally called *bipolar disorder* within the diagnostic system of the American Psychiatric Association. In this formal diagnostic system, there are three forms of bipolar disorder. *Bipolar I disorder*, the most severe form, is defined by a single episode of *mania*. Manic episodes are characterized by a period of expansive, elevated, or irritable moods, along with such symptoms as diminished need for sleep, rapid speech, grandiosity, agitation or increased activity, racing thoughts, and increased engagement in pleasurable activities that have potential to cause trouble. The symptoms must last for at least one week and create severe impairment. *Bipolar II disorder* is a milder form of the disorder, defined on the basis of *hypomania* and recurrent depression. Hypomania is characterized by the same set of symptoms as mania, but symptoms must only last for four days and do not create severe impairment. *Cyclothymia* is defined by frequent ups and downs that are not severe enough to meet the criteria for hypomania or mania.

Two measures commonly used to verify diagnoses within research studies include Michael B. First and M. Gibbons's 2004 Structured Clinical Interview for *DSM*-IV (*Diagnostic and Statistical Manual of Mental Disorders*, 4th ed.), and Jean Endicott and Robert L. Spitzer's 1978 Schedule for Affective Disorders and Schizophrenia. No biological markers are available to aid with diagnosis.

About 1 percent of the population experiences bipolar I disorder; it was estimated in 2005 by Ronald C. Kessler et al. that bipolar II disorder also affects approximately 1 percent of the population. Cyclothymia may affect 4 percent of the population, according to a 2004 study by E. J. Regeer et al. The vast majority of people with a single episode of mania will experience another episode during their lifetime, many within five years, reported Michael J. Gitlin et al. in 1995. A 2002 report by Lewis L. Judd et al. said that mild symptoms lingering between episodes are common. The median time of onset for this disorder has been estimated at twenty-five years of age, according to the report by Kessler et al., but at least 25 percent of affected people report that episodes began by age seventeen.

It is well established that bipolar disorder is biologically based: heritability accounts for as much as 85 percent of whether people develop mania, according to a 2003 report from Peter McGuffin et al. Neurobiological research in 2003 by Craig A. Stockmeier suggests that a set of brain regions, modulated by dopamine and serotonin, are involved in the disorder. Psychosocial variables, including negative life events, negative cognition, and family hostility and criticism can increase the risk of depressive episodes within this disorder, per several reports (Butzlaff and Hooley 1998; Monroe et al. 2001; Alloy et al. 2000). Sleep loss and events involving goal attainment can predict increases in mania over time (Johnson 2005a, 2005b; Malkoff-Schwartz et al. 1998, 2000).

Historically, treatments for this disorder, including psychotherapy alone or hospitalization, were not very effective. The discovery of lithium's mood-stabilizing effects led to dramatic gains in outcome. The dominant treatment approach is mood-stabilizing medication. The first-line treatment recommendation remains lithium, but if side effects are difficult to tolerate, anticonvulsant medications are also useful mood stabilizers. Antidepressants are often added to combat depression, but not without a mood stabilizer because antidepressants can provoke manic symptoms when administered alone (Altshuler et al. 1995; Goldberg and Whiteside 2002). Antipsychotic medications can address psychotic or agitation symptoms. Research in 2004 by Sheri L. Johnson and Robert L. Leahy indicates that family or individual talk therapy can be helpful supplements to medication.

SEE ALSO *Depression, Psychological; Manias*

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MANIFEST DESTINY

SEE *Americanism; Annexation; Mexican-American War.*

MANIFOLDS

In mathematics, a manifold is a space that looks like a Euclidean space, locally around every point. Since a set is defined by its elements, two spaces can be seen as equivalent if there is a bijection (one-to-one correspondence) between them. There are different versions of this equivalence, depending on the structure of the bijection. When the two spaces are topological, the bijection is a homeomorphism if it is continuous and has a continuous inverse. If both spaces are Euclidean, the bijection is a C^K diffeormorphism if both it and its inverse are (or can be extended to be) of class C^K. A topological space is a J-dimensional topological manifold if for every point there exists a homeomorphism from some open subset of the J-dimensional Euclidean space to an open neighborhood of the point. If, in the Euclidean case, what one has is a C^K diffeormorphism, then the space is a C^K differentiable manifold.

A manifold has the property that, at every point, one can find a neighborhood that is just a transformation of a Euclidean space, preserving topological and/or differential properties. An example of this type of transformation is from a circle to an ellipse, whereas going to a number eight would not be bijective, to a line would violate continuity, and to a triangle would violate differentiability.

Differentiable manifolds are the natural objects for the application of calculus, and the study of that application, differential topology, has proved useful in economic theory. These techniques were introduced to economics in 1970 by Gerard Debreu's proof that, generically in the space of exchange economies (that is, in almost all of them), competitive equilibria are isolated from one another. The argument is an application of the Transversal Density Theorem of differential topology.

Later, Darrel Duffie and Wayne Shafer used Grassmanian manifolds (the sets of linear subspaces of a given Euclidean space) to show that in exchange economies subject to uncertainty and endowed with real assets (those whose payoffs depend on the prices of commodities), a competitive equilibrium generically exists. This application was necessary because the dependence of payoffs on prices makes the space of revenue transfers across states of nature variable. The idea of Duffie and Shafer was to break that dependence, effectively weakening the concept of equilibrium but allowing the use of the manifold structure of the Grassmanian to guarantee its existence, and then to show that, generically, the weaker equilibrium is indeed equilibrium.

Another remarkable application of techniques of differential topology in economics is the proof by John Geanakoplos and Herakles Polemarchakis that in a generic economy with uninsurable risks, just by changing their trade in assets, and then competitively trading in commodity markets, all individuals could be better off than at the competitive equilibrium allocation. This result was also obtained from the Transversal Density Theorem.

But perhaps the most visible application of the concept is the result, claimed by Yves Balasko, that in economies described by the preferences of the individuals, the set of pairs of profiles of endowments and associated competitive equilibrium prices is a differentiable manifold. After this result, the equilibrium set of an economy is usually referred to as equilibrium manifold.

SEE ALSO *Topology*

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Andrés Carvajal

MANKILLER, WILMA
1945–

Wilma Pearl Mankiller struggled successfully against male dominance, white privilege, and significant health problems to become the first female principal chief of the Cherokee Nation. Her accomplishments occurred in a social context of poverty, failed federal government relocation programs, and social protest movements for American Indians. Her ability to secure government funding for her tribe reflected movement toward assimilation and societal integration for women and American Indians. Mankiller's support for Indian and female empowerment included social movements, politics, and protest. Thus, her legacy may also be viewed through the prism of resistance to oppression and oppositional culture.

Mankiller was born on November 18, 1945, in Tahlequah, Oklahoma, the sixth of eleven children of Charley Mankiller and Clara Irene Sitton. Her father's family had endured the Trail of Tears, the forced removal of Cherokees in 1839 from the Tennessee Valley to Oklahoma, where they lived in severe poverty and had to conduct tribal ceremonies in secret. Despite these hardships, her family remained a source of comfort for her and taught her to be proud of her heritage and her family name, Mankiller, which was a Cherokee title given to a person who safeguarded a Cherokee village.

In 1956, her family was relocated to San Francisco, California, as part of the Bureau of Indian Affairs' Indian Relocation Program, which attempted to sever Native Americans' ties with their land and culture, thus helping the U.S. government avoid responsibility for the institutionalized oppression of American Indians. Despite facing poverty, prejudice, and discrimination, Mankiller found inspiration and support at the American Indian Center in San Francisco. As a young adult, she took a job at a financial company, married, and had two daughters.

Her activism was sparked by the 1969 to 1971 seizure of Alcatraz Island by Native Americans. She and others in her family took part in the protest as a way to draw attention to the plight of Native Americans. Through this experience, Mankiller met and befriended many of the leaders of Native American empowerment movements. Soon afterward, Mankiller was diagnosed with polycystic kidney disease. Despite the diagnosis, Mankiller directed the Native American Youth Center in Oakland and continued her involvement in social protest movements on behalf of American Indians. She helped the Pit River tribe regain tribal land from the Pacific Gas and Electric Company, which tried to assert ownership over their land. Mankiller worked for the tribe for five years, organized a legal defense fund, and researched treaty rights and international law to aid their cause.

More interested in activism than in being a housewife, Mankiller divorced her husband and moved back to Oklahoma with her children in 1977. She used her skills acquired in San Francisco to work for the Cherokee Nation of Oklahoma as an economic stimulus coordinator. In 1981, Mankiller founded and directed the Cherokee Nation Community Development Department, which received acclaim for rehabilitating the small Cherokee community of Bell, Oklahoma. She accomplished this despite recovering from a serious car accident that killed a friend and receiving treatment for systemic myasthenia gravis, a form of muscular dystrophy.

In 1983, she ran for deputy chief of the Cherokee Nation. She won the election and became the Cherokee Nation's first female deputy chief despite death threats because of her sex. She was appointed the first female principal chief of the Cherokee Nation in 1985 after the presiding principal chief was nominated to lead the Bureau of Indian Affairs. In 1987, she won a tough election and, while actively leading the Cherokee Nation, underwent a kidney transplant in 1990. In 1991, Mankiller was reelected principal chief with 83 percent of the votes cast. In 1995, she chose not to run again and instead accepted a fellowship at Dartmouth College.

During her term as Cherokee chief, tribal revenue increased, $20 million was secured for construction projects, an $8 million Job Corps center was created, and funding was secured for programs aiding women and children and to reform the Cherokee judiciary. She also developed economic and educational empowerment programs in which women and men worked collectively for community improvement under the Cherokee tradition of *gadugi,* which emphasizes gender equity. In 1996, she was diagnosed with lymphoma and received treatment while continuing to write, edit, and participate in community organizations. In 1998, she was awarded the Presidential Medal of Freedom.

Wilma Mankiller nurtured economic development for American Indians and paved new paths to leadership for women of color. She exemplifies greater economic and political assimilation for women and American Indians. Mankiller's significance also rests in resistance to institutional and cultural racism and sexism through embracing social protest and oppositional culture.

SEE ALSO *American Indian Movement; Cherokees; Native Americans; Protest; Resistance; Trail of Tears; Women and Politics*

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MANNHEIM, KARL
1893–1947

Karl Mannheim was a Hungarian philosopher and sociologist who is usually credited with having established the sociology of knowledge as an autonomous field of inquiry—as opposed to, say, an application of Marxist or phenomenological sociology. Mannheim's intellectual trajectory resembled that of his contemporary, Georg Lukacs (1885–1971), with whom he remained friends until the rise of Nazism. Whereas Mannheim fled to London, Lukacs fled to Moscow, and their politics diverged accordingly from their original common Marxist roots. Both were grounded in the philosophy of culture and were early influenced by Georg Simmel's (1858–1918) conception of sociology as the science of forms of life. Each tried to ground a conception of objectivity from the "relationist" epistemology common to Karl Marx (1818–1883) and Simmel. This produced an interesting contrast in privileged standpoints and, implicitly, the vanguard of progressive politics. In response to Lukacs's "proletarian standpoint," where workers were understood as integral to, yet alienated from, the means of production, Mannheim proposed a "free-floating intelligentsia," an increasing segment of the middle class whose alienation reflects its detachment from the means of production.

Mannheim's sociology of knowledge was refined through a series of debates in both the German- and English-speaking worlds. Prior to the publication of his major work, *Ideology and Utopia* (1929), Mannheim corresponded with the art historian Erwin Panofsky (1892–1968) over the sense of "historicism" required of cultural interpretation. In contrast to Panofsky's view of art as the unique synthesis of various ongoing traditions, Mannheim stressed art's ability to capture the common experience of a generation. Indeed, "ideology and utopia" referred to contrasting attitudes toward history that might be shared by a generation: the backward-looking (conservative) ideology and the forward-looking (progressive) utopia.

Over his career, Mannheim cast this perspective in increasingly normative terms, culminating in the proposal of new modes of political education and broadcast media capable of instilling social democratic attitudes in the generation entrusted with reconstructing post–World War II Europe. Here he crossed swords with both liberals and elitists, including fellow émigrés Michael Polanyi (1891–1976) and Karl Popper (1902–1994), as well as T. S. Eliot (1888–1965), with whom Mannheim maintained a friendly rivalry until his death.

Two seminal theses in the sociology of knowledge are due to Mannheim: (1) a knowledge practice's validity is relative to its capacity to confer legitimacy on a particular social order; and (2) the social conditioning of a knowledge practice that is valid according to standard methodological criteria can be demonstrated by showing how the practice helps to reproduce—and sometimes even constitute—the criteria by which it is judged valid. Both theses remain controversial because they imply that the sociology of knowledge can challenge the philosophical theory of knowledge, epistemology, on its own grounds. Mannheim's challenge was later taken up by "social epistemology."

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Steve Fuller

MANSKI, CHARLES

SEE *Identification Problem; Reflection Problem.*

MANU, CODES OF

SEE *Brahmins.*

MAO ZEDONG
1893–1976

Mao Zedong (previously Mao Tse-tung) is undisputedly the preeminent figure in modern Chinese history, and also

a commanding presence in the history of the twentieth century. The Mao-led Communist revolution in 1949 ended China's century of humiliation and laid the foundations of the rapidly developing nation of the early twenty-first century. But Mao also created much unnecessary social turmoil in the latter part of his political career; he did not know when to exit the historical stage gracefully. As a result, most Chinese today have a mixed view of Mao—a great leader who united and rejuvenated their massive country, but also one who left considerable human suffering in his wake. Mao is often compared to Qin Shihuangdi (259 BCE–210 BCE), the First Emperor of Qin, a brilliant but ruthless leader who created the first unified Chinese empire in 221 BCE.

Mao was a complex personality who was torn between admiration for China's past imperial glory and despair at its parlous condition in the closing decades of the nineteenth century, when he was born. As a young man, he struggled to reconcile the dichotomy in his mind (and in the minds of many others in his generation) between China's traditional civilization and the increasing demands of a modern world dominated by the advanced nations of Europe and North America. In Marxist-Leninist theory, Mao discovered a penetrating Western critique of the West, which enabled him to adopt many of its revolutionary premises (and promises) without abandoning China's own impressive cultural heritage. In direct intellectual descent from Mao, China's succeeding leaders continue to claim they are building socialism with Chinese characteristics, a somewhat ambiguous concept that has yet to be fully articulated, which (at least in the narrower area of economics) is often referred to as market socialism.

RISE TO POWER

Mao was born on December 26 into a moderately well-off peasant family in the village of Shaoshan in Xiangtan County, Hunan province, in south-central China, not far from the provincial capital of Changsha. He developed an early interest in political and international affairs, and his years at the First Provincial Normal School in Changsha, where he studied to be a teacher, brought him into contact with young men and women from all over the province. Seeking a wider stage after graduation, Mao set out for Beijing in 1918, where he studied and worked part-time in the library at Peking University, the nation's premier institution of higher education, and, at the time, a hotbed of radical political thinking among many of the faculty and students.

Mao took an active interest in the student-inspired May Fourth movement, which sparked off a country-wide nationalist upsurge directed against unwanted European and Japanese influence in China. Soon after, Mao declared himself to be a Marxist-Leninist, without actually undertaking a thorough study of either the revolutionary doctrine or the Russian Revolution in 1917. After a short period as an elementary school principal and political activist back home in Hunan, he became a founding member of the Chinese Communist Party, which was formally established in Shanghai on July 23, 1921.

Consolidating Power Mao's rural background gave him a special interest in the peasantry, and he was often at odds with his more urban-oriented colleagues. In early 1927, after an intensive study of rural conditions in his native province, Mao wrote his seminal "Report on an Investigation of the Peasant Movement in Hunan," in which he predicted that the peasant masses would soon rise up and sweep away the old, feudal system of land ownership that exploited and oppressed them. The Communists, he argued, should lead the peasants or get out of the way. Chiang Kai-shek's (1887–1975) bloody coup in the spring of 1927 effectively destroyed the Communist organizations in Shanghai and other major cities, forcing them to find refuge in Jiangxi province, in the mountainous hinterland in south-central China, adjacent to Hunan where Mao had been born and raised. Mao was elected chairman of the new Jiangxi Soviet (local Communist government) in this isolated base area, but soon lost power to the Returned Student group (a reference to their study in Moscow), which took over party leadership and pushed him aside.

Mao finally came into his own during the famous Long March in 1934 to 1936, when the Communists had to flee from Nationalist leader Chiang Kai-shek's fifth and finally successful military encirclement campaign to surround their base area and destroy them. At the decisive Zunyi conference in January 1935, in the early part of this arduous 6,000-mile trek, Mao was recognized as the political and military leader of the Communist movement. At the Communists' new base area in Yan'an, a small county seat in China's arid northwest region, Mao built an elaborate system of ideology, organization, guerrilla warfare, and rural recruitment that led quickly to the emergence of a powerful political movement, backed up by its own military forces (the Red Army). Both the party and the army grew rapidly during the war against Japan, which had invaded China in July 1937, and the Communists emerged as a formidable competitor for state power with the Nationalists.

By the end of the war in 1945, Mao was hailed as the Party's leading political and military strategist, and, coincidentally, its preeminent ideological thinker. What was now called Mao Zedong thought was said to represent the Sinification of Marxism, that is to say, the adaptation of Marxist theory to China's actual historical conditions.

Mao's thought, reinforced through a powerful personality cult and an oppressive rectification campaign to tame his critics, was to become the ideological foundation of the Chinese Communist movement in subsequent years.

SUCCESS—AND FAILURE

Despite unfavorable odds, the Red Army (renamed the People's Liberation Army) employed superior strategic tactics to defeat the Nationalists in the civil war (1946–1949). Mao wasted no time in consolidating Communist rule; he proclaimed the founding of the People's Republic of China on October 1, 1949, and moved decisively to consolidate its borders and occupy and reintegrate Tibet. His intention was not merely to rebuild the shattered nation, but also transform it, which, with a staggering population of over 400 million, was the world's largest. In late 1949 to early 1950, Mao traveled to Moscow (his first trip abroad) and signed an alliance with the Soviets; but Mao and Soviet leader Joseph Stalin (1879–1953) neither liked nor trusted each other and their relationship was to prove unstable. The Korean War (1950–1953) could not have come at a worse time for the new regime, but at great cost Chinese troops succeeded in repulsing the U.S. advance into the north, near the Yalu River on the Chinese border.

Despite these international concerns, Mao launched a wide-ranging program of reconstruction and nationalization in major industrial and commercial cities such as Shanghai and Guangzhou (Canton). In the countryside, land was confiscated from the landlord class, many of whom were summarily executed by makeshift tribunals, and land passed (if only briefly) into the hands of the ordinary peasants. A comprehensive range of social reforms was also launched, including marriage reform favoring the female; a crackdown on crime, drugs, and prostitution; and clean-up campaigns targeted at government and business corruption. Although U.S. intervention had placed Taiwan beyond their grasp, by the mid to late-1950s things had gone very well for the Communists, and for this much credit must go to Mao and his fellow party leaders.

But Mao had ever more ambitious plans. He wanted to speed up the pace of economic growth, based on industrial development and the collectivization of agriculture; and he wanted to emancipate China from the bonds of the Soviet alliance, which he found increasingly restrictive. Unfortunately it was at this juncture, in the late 1950s, that Mao's hitherto deft political touch began to fail him and he launched two disastrous political campaigns that convulsed the country and ultimately damaged his reputation. The Great Leap Forward in 1958, calling for the establishment of small backyard factories in the towns and giant people's communes (consolidated cooperative enterprises) in the countryside, resulted in an economic lurch backward. The consequent three bitter years (1959–1961) saw rural peasants perish in the millions due to harsh conditions for the very young, the very old, and the disadvantaged. Chastened, and under criticism from his more moderate colleagues, Mao agreed to step back from the forefront of leadership; he turned his attention to the growing ideological polemic marking the growing Sino-Soviet split and left it to others to repair the untold damage at home.

In his heart, Mao believed that the Great Leap Forward had failed largely because too many party officials (cadres) did not boldly implement his policies; disparagingly, he compared them to old women tottering about in bound feet. He decided to purge these revisionist (pro-Soviet) officials and others said to be taking the capitalist road (more open to Europe and North America generally) from positions of authority. Mao and his militant party faction (the Gang of Four) called upon the nation's youth (primarily high school and university students) to rise up and call the errant officials to account. The result was the Great Proletarian Cultural Revolution, which witnessed the unusual spectacle of the top Communist leader declaring war on his own party organization. Millions of inflamed students and others donned Red Guard armbands, and, waving the *Little Red Book* (1966) of selected Mao quotations, they proceeded to carry out their assigned mission. The campaign tore the country apart from 1966 to 1969, forcing Mao to call for military intervention to restore order, and it dragged on destructively until his death in 1976. Still, from the perspective of foreign policy, the Cultural Revolution's sharp anti-Soviet orientation succeeded in liberating China from its underlying dependency on the Soviet Union, and prepared the nation for a more independent role in international affairs in the years ahead.

A BEGINNING, AND AN END

Despite his miscalculations with the Great Leap Forward and the Cultural Revolution, Mao wisely decided to play the American card in order to counterbalance growing Soviet military power on the conflict-prone Chinese border. With the surprise invitation to a U.S. table tennis team then in Japan to visit China, Mao set in motion the ping-pong diplomacy that led to U.S. president Richard Nixon's state visit to China in February 1972, which culminated in the landmark Shanghai communiqué calling for a more constructive relationship between the countries. Mao and Nixon toasted each other cordially in the Great Hall of the People in Beijing, laying to rest a generation of bitter enmity and setting the stage for the remarkable flowering of Sino-American relations that has continued into the early twenty-first century. It was to be

Mao's final hurrah; already in declining health (possibly suffering from Parkinson's disease), he gradually faded from the scene and passed away peacefully at age eighty-two on September 9, 1976.

In an official assessment of his lengthy career, the Communist Party hailed Mao as an illustrious national hero who laid the foundations of the new China, but at the same time a tragic figure with all too human frailties. Mao is buried in a grand mausoleum in Tiananmen Square in Beijing and he enjoys considerable popular approbation despite his rather clouded historical record. But while many people revere Mao, many others revile him, as they do the First Emperor of Qin, who lived some two thousand years earlier. For most Chinese though, many of whom were born well after Mao's death, he remains the human embodiment of China's national regeneration and its reemergence as a great world power.

English historian Lord Acton (1834–1902), in his famous observation on power, concluded that "great men are almost always bad men," and, in the case of Mao, there is considerable truth to this. Mao was a romantic visionary who set himself seemingly impossible goals, but he had the necessary qualities of leadership, persistence, and ruthlessness to reach them, at least to a degree. In addition to his political and military prowess, he is also considered a talented calligrapher and poet in the classical style, and he left behind a small corpus of work that is generally well regarded. But he was also something of an uncouth peasant who lacked personal polish, could be vulgar in his choice of words, and (even in his declining years) overly enjoyed the company of young women. As he aged, he became increasingly out of touch with political reality, vainly attempting to force the entire nation onto the Procrustean bed of his own ideological convictions (ideological fantasies, some would say).

Will history remember Mao Zedong? Undoubtedly, for Mao occupies a historical position comparable to individuals such as Alexander the Great, Julius Caesar, Genghis Khan, Napoleon Bonaparte, and Qin Shihuangdi—these individuals were a frustrating mix of good and bad, but they all left a distinctive imprint on their own historical ages. Like playwright William Shakespeare's Caesar, they "bestrode the narrow world like a Colossus," and to this day their achievements and failures are enshrined in countless volumes for future generations to read and ponder. The same will quite likely be true of Mao Zedong.

SEE ALSO *Chinese Revolution; Communism; Little Red Book; Maoism; Nixon, Richard M.*

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Raymond F. Wylie

MAOISM

Maoism is an influential revolutionary ideology of the twentieth century. The term *Maoism*, despite its originating from the name of the People's Republic of China's former leader Mao Zedong, is used primarily outside of mainland China. The Communist Party of China (CPC) uses Mao Zedong Thought as its official ideology. Although Maoism is only a derivation of Marxism and Leninism, its impact has been worldwide. Maoism continues to inspire international Maoists everywhere—especially in Asia and Latin America—even as the Chinese have been moving increasingly away from it.

The crux of Maoism is a belief that Marxism and Leninism can be adapted to suit the conditions of developing countries in their struggle against capitalism and imperialism. According to Karl Marx, a Communist revolution will be organized by advanced productive forces, such as industrial workers, and is possible only in an advanced capitalist society. Chinese Communist leader Mao Zedong, however, believed that rural revolutions in a traditional society can become a stepping-stone for an advanced social revolution, and peasants can be allies of the industrial workers and thus should play a pivotal role in erecting socialism and communism. During the lengthy military struggle in the rural areas of China, Mao formulated his theory of New Democratic Revolution.

Mao's theory of revolution is based on the guerrilla war strategy, a disciplined Leninist party, and the united front. First of all, Mao believed that "political power comes from the barrel of a gun." He and his comrades developed the strategy of rural-based guerrilla warfare and fought the nationalist government in the countryside for two decades. This strategy provided a practical solution for a smaller and weaker revolutionary force to defeat a much stronger and powerful state power. During World War II (1939–1945), Mao further extended his theory into the strategy of the "protracted people's war," designed to mobilize a total, yet prolonged, war to figuratively bleed the Japanese invaders to death.

Second, Mao emphasized the importance of a disciplined, elitist political party with absolute control over a revolutionary army. He developed doctrines such as democratic centralism, mass line, and criticism and self-criticism. All of these doctrines have become operational principles of the CPC. Finally, while stressing the need for the leadership of the CPC, Mao embraced a corporatist strategy to extend the party control to other political parties and groups. His theory of united front appears to raise the status of many smaller parties from opposition to collaborative and participating parties, yet it denies these parties the right to become competitors with the CPC, and thus lays the groundwork for the corporatist party-state after 1949. For all these contributions, the CPC formally adopted Mao Zedong Thought as its official doctrine in the Seventh Party Congress of the CPC held in Yanan in 1945.

In his early revolutionary career, Mao was a populist practitioner of Marxism rather than a dogmatic follower. Mao's success in using his military strategy to seize political power in a big country such as China established Mao's charismatic legitimacy in China and throughout the developing world. In his later life, however, Mao became an ardent defender of Marxism after the death of Joseph Stalin. In his fight against the so-called revisionists, such as the Communist leader Nikita Khrushchev in the Soviet Union, Mao apparently became more dogmatic. He defended Stalin and was unremitting in his emphasis on the theory of "a continued revolution under proletarian dictatorship." Mao and his supporters believed that an important task of the revolution was to carry out the proletarian dictatorship and class struggle against old and new bourgeoisie.

Maoism also contains some utopian elements. Mao believed that industrialization and modernization could go hand in hand with socialist transformation. The ambitious Great Leap Forward program (launched in 1958) tried unrealistically to speed up the industrialization process, but suffered a major setback. Nevertheless, this did not stop Mao from launching another major political campaign, the Great Proletarian Cultural Revolution (1966–1976), to crush leaders "who are taking the capitalist road," and to transform political, social, and cultural superstructures that were considered to be unfitting with a socialist economy. Mao's quotation books (such as what became known in English as "The Little Red Book") became a spiritual guide for the millions of young students (Red Guards) who waged a war on the establishment. The subsequent chaos was eventually put to an end after Mao's death in 1976.

Although Mao Zedong Thought continues to be upheld as the CPC's official ideology, the radical and utopian elements have been discredited and revised. Worldwide, Maoism is still influential. The Maoist International Movement in the United States still supports a Maoist world revolution, and the Revolutionary Internationalism Movement continues to believe that the strategy of people's war is an effective means of Marxist revolution.

SEE ALSO *Chinese Revolution; Communism; Guerrilla Warfare; Imperialism; Khrushchev, Nikita; Leninism; Little Red Book; Mao Zedong; Marxism; Revolution; Socialism; Stalin, Joseph; Utopianism*

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Baogang Guo

MAQUILADORAS

Although the term *maquiladora* or *maquila* is often used interchangeably with *export assembly firm*, it refers to a company operating under a very specific tax regime initiated by the Mexican government in 1969, and it is applicable to only one type of export production first established in communities near the U.S.-Mexico border. The official definition of the maquiladora regime defines it as "temporary importation of goods necessary for the transformation, elaboration, or repair of products destined to be exported, without taxes [being levied] on these temporary imports" (de la O 2002, p. 200).

HISTORY OF THE MAQUILADORA

In September 1942, Mexico and the United States agreed to the Bracero Program in an attempt to alleviate wartime U.S. labor shortages in agriculture and other areas. Approximately 5 million Mexican men participated in this guest worker (bracero) program until it ended in 1964. With the mechanization of agriculture in the United States and the decrease in demand for Mexican labor, the Mexican government began planning alternate sources of employment. During a 1964 tour of the Far East, Minister of Industry and Commerce Campos Salas was introduced to the notion of export production zones. He envisioned this as an alternative for Mexico's economic development.

In December 1964, the United States unilaterally canceled the Bracero Program. As many as two hundred thousand braceros, comprising 40 to 50 percent of the

border population, found themselves without jobs, leading to a buildup of social unrest. In response, the Mexican government inaugurated the Border Industrialization Program (BIP), later known as the Maquiladora Program. The purpose of the BIP was to promote export-led industrialization in northern Mexico, encouraging foreign investment in Mexican maquiladoras. Corollary objectives included the creation of employment and increasing the income of the border population to foment a stronger local economy. The pillars of the BIP were proximity to the United States; use of favorable articles of the U.S. Tariff Code, which permits firms to import goods manufactured abroad with U.S. components to reenter the United States, paying duty only on the value-added, cheap labor; and a Mexican government friendly to investors. Campos Salas was quoted in the *Wall Street Journal* (on May 25, 1976) as saying, "Our idea is to offer free enterprise an alternative to Hong Kong, Japan, and Puerto Rico" (Bustamante 1983, p. 233). This translated into tax incentives for foreign firms, lax enforcement of environmental laws, and a blind eye to the breaking of labor laws.

Initially, maquiladora enterprises were allowed to settle in a 20-kilometer strip along the Mexican border. After four years, however, Mexican government officials were disappointed with the results. Two important objectives of the program had been: (1) having foreign firms make use of Mexican products and firms (known as linkages with the local economy), and (2) the transfer of technology and know-how to Mexican managers and firms. Neither goal was being met. In addition, maquiladoras experienced high turnover rates, as workers frequently changed jobs, seeking incentives and bonuses to complement low wages. As a result, in 1972, the Mexican government expanded the zone to include all of Mexico. To encourage further growth, the Mexican government provided additional incentives to foreign firms, including lowering the minimum wage in the interior of the country, easing the ability of foreign firms to form joint ventures with Mexican corporations, and, after 1983, granting maquiladoras the opportunity to sell up to 40 percent of their products in Mexico.

At the beginning of the BIP, United States companies trickled across the border. By the late 1970s, however, transnational corporations had taken over the border economy. Since the 1980s, maquiladoras have been the engine driving the Mexican economy, providing more than 1,200,000 jobs.

EVOLUTION OF THE MAQUILADORA PROGRAM

Most scholars of Mexican development agree that the Maquiladora Program has progressed through four stages or generations. Jorge Carrillo, Alfredo Hualde, and Cirila Quintero Ramírez denote these as the stages of inception, growth, consolidation, and crisis. During the inception stage (1965–1982), the border region truly operated as an industrial enclave. Under the program's special directives, products were assembled solely for export. The rest of the country was ruled by import-substitution industrialization, which levied high tariffs to discourage imports and promoted production for the national market.

Most of the firms that participated in the program's first stage were labor-intensive operations seeking cheap labor. However, the jobs created did not go to the male agricultural workers laid off in 1964 by the termination of the Bracero Program. Managers preferred to hire young women, creating a labor force segregated by age and sex. In 1974, 80 percent of the maquiladora labor force was female. Younger women, between the ages of sixteen and twenty-four, were more likely to work in electronics assembly, while older women tended to work in the lower paying textile and garment industry (see Fernández-Kelly 1983).

Women were the cheapest source of labor available, and they were thus the preferred workers in Mexico (as they had been in the export processing zones of East Asia). Lower wages were justified through the "feminization" of assembly work. That is, assembly was designated as "unskilled" work, and women workers were held to have traditionally feminine skills (such as knowing how to sew and embroider), which were considered useful for such employment. Managers construed women as being "docile, undemanding, nimble-fingered, and uninterested in participating in unions" (Sklair 1993, pp. 171–172). Crucial in this framing was employers' desire that women not demand higher wages. Moreover, although high percentages of women were the primary or sole providers for their families, they were paid lower wages than their male counterparts. Maquiladora management treated women as secondary and supplemental earners deserving of lower wages.

The second stage of growth (1983–1994) was marked by changes in three main areas: (1) There was a shift to export-oriented industrialization, (2) there was an increased participation of men in the labor force, and (3) there was a movement of firms toward the interior of Mexico. Mexico's inability to pay its foreign debt in 1982 signaled the end of import-substitution industrialization and the opening of Mexican markets to foreign goods and production. Export production was promoted as a crucial means of earning needed foreign exchange to pay the debt and fulfilling International Monetary Fund (IMF) loan deferment agreements. The Maquiladora Program blossomed, assisted by changes in regulations—such as the ability to sell 40 percent of production within the newly opened Mexican markets and the devaluation of the peso. With the devaluation of the peso, foreign companies' dollars stretched further, while national firms, who earned

pesos, struggled to compete as inputs, wages, and overhead costs increased overnight.

The ensuing economic crisis resulted in increased unemployment. Under these conditions, men's participation in the maquiladora labor force increased from 20 to 40 percent. This change did not signal an improvement in working conditions, but rather the precariousness of workers' situation. There was, however, a continued gender segregation of employment. A significant number of the new firms that settled in Mexico during this second stage were capital-intensive automobile and auto-parts maquiladoras. Because this was considered skilled work, men were preferred to women. These transplants, mostly from the United States, used a combination of old machinery, new computerized equipment, and selective implementation of flexible production techniques, such as teamwork, Just-in-Time (JIT) production, and Total Quality Management (TQM). However, they differed from the U.S. auto industry in a number of key ways. In particular, the selective adoption of work innovations was combined with low wages and heavy control of workers. Lastly, responding to high turnover rates and wages in the border region, there was a slight shift of firms to the interior of Mexico.

The third stage of consolidation (1995–2000) followed Mexico's signing of the North American Free Trade Agreement (NAFTA). Important changes in this stage included a strengthening of the Maquiladora Program, the rise of the "third generation maquila," and the geographical segmentation of firms. In effect, NAFTA regulations closely followed the Maquiladora Program tax regime, thus increasing the number of national and foreign firms taking advantage of these terms. Yet because of this similarity, the Maquiladora Program was slated to end in the year 2001. This would have ended the most important advantage of the maquiladoras, a 4 percent tax exemption on wages. In the end, however, the program was extended until 2007 due to the political clout of its lobby association. The future of the program continues to be debated at the highest levels of government.

NAFTA allowed U.S. and Canadian companies to move greater portions of their production processes (not only assembly, as previously allowed) to Mexico. In the garment industry, for example, this meant that design, cut, laundry, and trim operations could move south. New regulations also translated into a large number of Asian and some European firms moving to Mexico in order to take advantage of the all-important U.S. market. The number of firms joining the Maquiladora Program was also greatly enhanced by the devaluation of the peso that followed the signing of NAFTA, which cut wages again. However, wages in maquiladoras were now compared to those in East Asia, among the lowest in the world, and not those of the interior of the country.

The consolidation of maquiladoras was also related to geographical segmentation. Participation and competition in international markets drew more firms to Mexico based on low wages and geographical proximity to United States. Thus, the more labor-intensive firms seeking the lowest wages and costs of production (such as garments, footwear, and toy production) moved south, with the more capital-intensive sectors (electronic, automobile, and auto parts) remaining in the north of Mexico.

In the stage of consolidation, third-generation maquilas grew—those that moved beyond assembly to become highly productive, innovative, world-class firms. While most scholars agree these third-generation maquilas exist, there is great debate as to how widespread and complete the process of industrial upgrading has been. On the one hand, there has been enhanced participation of Mexican engineers and technicians, a crucial element of organizational learning. However, organizational innovations have occurred in only a few large automobile and auto-parts firms. Moreover, these innovations continue to be implemented selectively and in conjunction with low wages, worker control, and union marginalization, instead of the high wages and worker autonomy envisioned in the management philosophies. The result has been a hybrid system of greater productivity through the intensification of work. The majority of maquiladoras remain labor-intensive assemblers with a strong gender division of labor and little possibility for promotion.

The last stage in the development of the Maquiladora Program (2001–2006) was marked by the crisis brought about by the 2001 U.S. recession. Over 80 percent of Mexican production was destined for the U.S. market, so the U.S. recession sent shock waves throughout Mexico. All types of production facilities, including the important maquiladora industrial sector, saw a sharp decline in output and revenues. Many firms either shut down or moved to lower-wage countries, such those in East Asia and Central America, leaving the maquiladora sector in crisis.

GAUGING THE MAQUILADORA PROGRAM'S SUCCESS

In evaluating the performance of the Maquiladora Program, it is evident that the goal of development has not been completely fulfilled. The articulation of the local economy (through raw materials, components, and services) to maquiladora export production has been minimal with less than 3 percent of product components being from Mexico (see Carrillo, Hualde, and Quintero Ramírez 2005). Other than in the small number of third-generation maquilas, it is impossible to speak of technology transfer per se, but rather of technology relocation, since most of the technology used in maquiladoras is obsolete. However, in a smaller number of companies where

advanced technology is used, the number of Mexican technicians and skilled workers has increased.

Not only has the Maquiladora Program not solved the problem of male unemployment caused by the termination of the Bracero Program, it has accentuated it. Women have been drawn to the border region by employment in the maquiladoras, while men have remained mostly unemployed. Border infrastructure has been pressed to the maximum, as cities and towns have spread into the countryside without public services. Moreover, maquiladoras have routinely disposed of toxic waste by either dumping it into public canals that pass through worker communities or by abandoning drums of waste in the desert. One study found that 60 percent of maquilas did not return toxic wastes to the United States, as required by maquiladora regulations (see León Islas 2004). While the program did create an economic boom, with the maquiladora industry bringing in the second-largest amount of revenue for Mexico after oil, it has also exacerbated social inequalities and created ecological disasters along much of the border.

SEE ALSO *Borders; Corporations; Gender; Labor; North American Free Trade Agreement; Technology, Transfer of*

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Nancy Plankey Videla

MARBURY V. MADISON

SEE *Supreme Court, U.S.*

MARCUSE, HERBERT

1898–1979

Herbert Marcuse was a German American social theorist and activist who gained prominence in the 1960s as "the father of the New Left." Born in Berlin to a prosperous Jewish family, Marcuse served in the German army during World War I and then studied in Berlin and Freiburg from 1919 to 1922. After working as a bookseller in Berlin, Marcuse returned to Freiburg in 1929 to study philosophy with Martin Heidegger. Although he was enthralled with Heidegger's thought, he was deeply dismayed by his teacher's political affiliation with the Nazis. Though his habilitation, *Hegel's Ontology and the Theory of Historicity* (1932), was not accepted because of the rising influence of nazism, Marcuse joined the Frankfurt Institute for Social Research in 1933 and became associated with the neo-Marxist Frankfurt school of critical social theory. In 1934 Marcuse fled Nazi Germany and relocated to Columbia University in New York, receiving U.S. citizenship in 1940. He published *Reason and Revolution* (1941), which established him as an insightful interpreter of the Hegelian-Marxian tradition of dialectical thinking.

Wanting to aid the war effort against the Nazis, Marcuse joined the Office of Strategic Services as an intelligence analyst in 1943. After the war he worked for the State Department until he returned to academia in 1952 and eventually landed a position at Brandeis, where he taught from 1954 to 1965. In 1955 he published *Eros and Civilization*, which argues, contrary to Freud, that civilization is not inevitably repressive, but that the unconscious harbors an instinctual drive toward happiness and freedom that is evident in works of art and other creative cultural products. While a "basic repression" of drives is necessary for civilization, Marcuse criticizes contemporary society's "surplus repression," especially its exploitive economic organization and unnecessary restriction of sexuality. He outlines an alternative form of social organization in which labor is non-alienated and sexuality is free and open.

In 1964 Marcuse published his most influential work, *One-Dimensional Man*, which argues that the technology and consumerism of advanced industrial society enables it to eliminate social critique and conflict by assimilating traditional voices of dissent, for example, the voice of the working class. The result is "one-dimensional man," who cannot think critically about society because it integrates him by continually creating and satisfying "false needs." Genuine social critique must therefore come from nonintegrated, socially marginalized voices. Marcuse's supplemental essay, "Repressive Tolerance" (1965), argues that the liberal conception of "tolerance" blunts social critique by demanding tolerance for oppressive speech. He insists upon a discriminating tolerance that prevents certain forms of intolerance from being voiced. Although

criticized by Marxists, *One-Dimensional Man* was a seminal work of 1960s radical thought, and Marcuse began publishing articles, giving lectures, and advising student protest groups all over the world. He influenced such activists as Abbie Hoffman and Angela Davis, who was his student at Brandeis.

Marcuse died on a lecture tour in Starnberg, West Germany. Although his work has been criticized for its lack of empirical analysis, his provocative blend of Marxism and libertarian socialism has inspired much political activism and social critique.

SEE ALSO *Davis, Angela; Frankfurt School; Repressive Tolerance*

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William M. Curtis

MARGINAL COST

SEE *Average and Marginal Cost.*

MARGINAL PRINCIPLE

SEE *Marginalism.*

MARGINAL PRODUCTIVITY

A dominant theme in both the explication and legitimization of a market economy is that if individuals work hard and effectively, they will be appropriately rewarded. Typically understood as the Protestant ethic, the theme provides moral approval for hard work and asset accumulation, even though the terms *hard work, effectively*, and *appropriately* require technical specification and thereby a narrower meaning than the theme seems to offer at first glance. The moral injunction is transformed when translated into economic theory.

The foremost attempt to do so was by John Bates Clark (1847–1938) in the late nineteenth century. His ethical marginal productivity theory was an attempt to prove mathematically that people receive what they produce. Correctly formulated, the theory says something much less than that: namely, that the wage rate is only an element in an equilibrium equation and not a uniquely causal factor; indeed, that marginal productivity explains only the demand for labor and not the wage rate. The hold of the Protestant ethic is such that even though economists understand the more limited significance of marginal productivity, an inevitable tendency is for some economists to revert to Clark's ethical formulation.

That the marginal productivity theory is only a theory of the demand for labor is easily shown. Assuming (eventual) diminishing returns, the marginal product curve for a particular occupation slopes downward to the right. The wage rate is a function of the demand and supply of labor. The marginal product curve represents the demand for labor for the firm: As the wage rate falls, employers will hire more workers, and vice versa. The summation of the individual firms' marginal product curves yields the market-demand curve for labor. It, together with the labor-supply curve, determines the wage rate. In equilibrium, the intersection of the labor-demand and labor-supply curves will yield the amount of labor hired and the wage rate at which they are hired. The marginal productivity curve enters only into the determination of the labor-demand curve; to determine the wage rate (and employment) one must introduce the labor-supply curve. If, in a particular occupation, the supply of labor shifts to the right, there will be greater employment at a lower wage rate—even though workers are working as hard as before.

Another way of looking at the foregoing is to consider the downward-sloping curve as the value of the marginal product, constructed thusly: The marginal physical product, itself a result of technology, is the immediate cause of the downward slope; the marginal physical product must be multiplied by the price of the product, which is a function of the demand and supply of the product, all of which is separate from or external to the demand for labor. Workers may work as hard as they can, but at best this will only raise slightly the value of the marginal product curve; much more important is technology and the product price. The wage rate is governed largely by nonethical factors.

So, far from proving that people receive (the value of) what they produce, the theory, using the conventional assumptions, proves a tendency toward equal wages. Assume three occupations, each with its respective, negatively inclined marginal productivity curve. Let the three curves start at any three points on the vertical marginal

product axis (employment is on the horizontal axis) and let them decline at different rates. The language, "one occupation is more productive than another," is predicated neither on one curve starting higher than another on the vertical axis, nor on one curve declining less rapidly than the other. It asserts something stronger, something that is analytically false. Assume further a labor-supply curve for each marginal productivity curve; their three respective intersections yield three wage rates, one for each occupation. The conventional assumptions are competition and labor mobility. Labor in the lowest-wage occupations will move to the higher-paying ones. The labor-supply curve shifts to the left in the formerly low-wage occupation, thereby raising the wage; and vice versa in the formerly high-wage occupations. The process, under the postulated static conditions, continues in principle until the same wage rate prevails in all three industries. The theory produces the result, not that one industry has higher wages because it is more productive than another(s), but that there is a tendency toward equal wages. That the tendency is not reached is due to immobility of labor, noncompetitive conditions, wages as not the only remuneration in a job, and evolutionary and dynamic changes in technology, tastes, and so on.

At any rate, marginal productivity theory is only a theory of the demand for labor and is itself dependent in part on technology and on the demand (relative to the supply) of the product of labor. Other marginalist formulations, with the exception of marginal utility as a theory of value, have not been given ethical status: marginal cost, marginal disutility, marginal efficiency of capital or of investment, marginal propensities to consume and to save, marginal rate of substitution, marginal tax rate, marginal revenue, marginal utility of money, and marginal rate of transformation are important and nonethical categories. So too is the marginal productivity theory as a theory of the demand for labor and employment of labor; it is, however, neither a theory of wages nor the Protestant ethic in economic garment.

SEE ALSO *Capital; Human Capital; Marginalism; Market Economy*

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Warren J. Samuels

MARGINALISM

Marginalism is one of two types of approaches to studying economic and political processes. Each is both a technique of analysis and a view of how both individual economic agents and the economy as a whole function in reacting to change and in causing change, and therefore policy. Marginalism, or incrementalism, gives effect to the methodological individualist perceptions that the meaning of human action is best comprehended at the level of individuals, that change takes place along various margins and not in totals, that decision making/policy is made in a composite manner, as the sum of the results of independent but interacting agents and institutions.

The system comprising all of such agents and institutions moves as a result of marginal adjustments to changes originating within and outside the domain of each. Government, for example, is no single decisional unit; decision making is incrementally developed by a multiplicity of agencies. Systems analysis, on the other hand, gives effect to the methodologic collectivist perception that the meaning of any marginal adjustment, agent or institution is a function of the total system of which it is a part. Systems analysis thus facilitates the study of the totality of interacting agents and institutions, therefore of group processes, and how agents and institutions generate and respond to large-scale social forces, problems, and so on. The systems approach to policymaking centers on the study of the economic and political structures and processes within which individual behavior takes place, just as the incrementalist or marginalist approach focuses on the individual behavior putatively independent of systemic structures, processes, and forces. Uniting the two types of approach enables the combined study of the impacts of system upon individuals and of individuals upon system. Moreover, no single mode exists for modeling either parts or wholes, incremental or systemic change. The variety of schools of thought operating in each approach is enormous; and the range of models runs from the single individual to the world system.

Marginalism gives effect to important aspects of change. One aspect is that a change in a variable is not likely to be a change in its totality; that is, in all of it, but a small increase or a small decrease here and /or there, along one margin but not another. For example, a typical change of tastes does not involve now buying fish and no

longer buying pork, but a little more of one and a little less of the other. The change is said to take place at the margin. Another aspect is the impact of a change in one variable at its margin on another variable at its margin. The increase or decrease in purchases of fish may lead to a change in employment in the same direction, and vice versa for pork. The concept of elasticity, for example, relates proportionate changes in quantity to proportionate changes in price or income. A change in aggregate consumption spending will change income in the same direction and may also change investment in the same direction; but not every element comprising the total need change.

Another aspect of marginalism has to do with the tendency of an economy, or parts of it, to adjust so as to reach equilibrium. When consumption increases, leading to an increase in income, consumption further increases, though generally by an amount smaller than the initial increase, and investment also increases; eventually the increases in spending diminish to zero, which will be when spending equals income for one period and income equals spending for the next period; the economy is in equilibrium. As for that increase in investment, the increase in consumption and, with it, income tend to increase the expected rate of profit (marginal efficiency of capital, or MEC) not on all investment but on new investment; that is, investment at the margin; in the example, investment increases as the MEC increases relative to the interest rate, a proxy for alternative uses of money.

Still another aspect of marginalism is its use in optimization. If one defines optimization as when benefit equals cost, then an individual will optimize a line of expenditure at the point of purchase when the additional benefit of an increase in spending equals the cost so that there is no incentive to change spending. A firm will optimize its level of production when the marginal cost of a level of production equals the marginal revenue derived from its sale and when the marginal revenues of different periods and in different markets are equal. An agent is in both equimarginal equilibrium and optimization, when the last dollar spent on each line of spending equals the benefit derived from it, so there is no incentive to change the pattern of spending, given the pattern of tastes. In this simple model, equilibrium and optimization coincide. But, many production processes have increasing returns (marginal cost of another physical unit decreasing). If the good is priced equal to its marginal cost, the total production costs cannot be recovered. Pricing necessarily is an institutional matter of industry cost accounting and other conventions.

HISTORICAL PERSPECTIVE

Marginal analysis in economics originated in two initial forms. The English economist David Ricardo's theory of rent involved decreasing marginal returns in the form of food from additional increases in inputs so that rent was a differential. The returns are still positive, but decreasing, until they reach zero, eliciting no further increases in inputs. In the English jurist and philosopher Jeremy Bentham's utilitarianism, an activity is characterized by pain and pleasure, such that an activity will be conducted up so long as the pleasure exceeds the pain (perceived benefits are greater than perceived costs), to the point that the two are equal in magnitude. Whereas Ricardo's theory involves physical inputs and outputs, Bentham's theory involves subjective feelings of pain and pleasure.

In the late nineteenth century, albeit with many precursors, several economists used marginalism to construct a theory of value different from cost of production. In their view, the value of anything that is bought and sold is at the point where the marginal (last) buyer and seller agree as to the price of purchase and sale. The buyer derives marginal utility from additional acquisitions of the item. The level of marginal utility decreases as more is acquired. Tracking falling marginal utility is falling demand: Because marginal utility is decreasing, the individual buyer will purchase more only at lower prices. Sellers will sell more only if they receive more, due to increasing costs. This is the subjectivist, or Austrian, theory of value in which value is a function of scarcity, as opportunity cost meets subjective demands in the market.

All aspects of marginalist change have proven to be useful either as conjectural explanation, actual explanation, and/or a tool of analysis of how changes in variables occur and their consequences. In many interesting and important respects, the world changes at the margin.

LIMITATIONS

Marginalism, like all concepts and theories in economics, has its limits. One class of limits has to do with the identification of a margin. If one is going to make marginal comparisons, the arrays of margins must be specified. In some respects this is a matter of the physical monetary activity itself. But in other respects it depends on subjective identifications of the lines along which marginal change will be measured. This will depend in part on how firms and households are organized, on the cost accounting conventions adopted by firms and how they are applied, on legal requirements, and so on. The analysis of consumption usually centers on particular commodities or groups of commodities and may include attention to marginal adjustments between complementary goods and between substitutable goods. The analysis of production, undertaken by the typical multi-product firm, is more complicated. Here the assignment of costs between fixed and variable costs can take place along a variety of different identifications of margins and with numbers further

influenced by the identification of products and product groups and of block levels of production, instead of single units, in the construction of cost accounting. For nonrival goods, marginal cost of another user is equal to zero. If users are to be charged the cost of the unit they use, some could pay nothing, while others pay some share of the fixed cost of production. Who is designated the marginal user is an institutional matter. Thus, if marginal productivity is the incremental increase (decrease) in total output associated with an increase (decrease) in input by one unit (which may be a block of units), the calculation is dependent on the definitions of product line, input, output, and margin.

Another class of limits involves what some economists perceive to be a superficial rendering of human activity. The question is whether people act as they are portrayed in theory, whether the maximizing or optimizing behavior is more complex than, perhaps even different from, that described in marginalist accounts, whether tastes are given or stable, and so on.

A different class of limits involves the larger system of things in which change—marginal change—takes place. If people make marginal adjustments in their buying and selling and other economic activity, the question involved is, in part, what is the market in which this takes place and how is it formed. Markets are created as firms and governments exercise strategic behavior and attempt to form and structure markets to accomplish their goals. Beyond markets alone, the larger system involves the overall structure of power, the legal-economic nexus, the set of macroeconomic policies pursued by governments, and so on, in which marginal adjustments take place and have effects.

Closely related limitations derive from the specification of the unit of analysis. The unit may be a representative firm, a particular industry, or an element of a particular country or of a particular region, as well as the world system. These and other limits apply to both marginal and systems analysis.

Also closely related is the evolutionary dynamics of the larger economic system, a process of change which manifests in changes at the margin but also, and more importantly, swamps marginal adjustments. Further limitations are imposed by theories centering on asymmetric information, expectations, uncertainty, strategic behavior, corporate goal formation, bounded information, and so on. In practice, the various strengths and limits are trumped by the research interests of particular economists and their respective schools of thought.

SEE ALSO *Economics, Neoclassical; General Equilibrium; Substitutability; Trade-offs*

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Warren J. Samuels

MARGINALIZATION

Marginalization comprises those processes by which individuals and groups are ignored or relegated to the sidelines of political debate, social negotiation, and economic bargaining—and kept there. Homelessness, age, language, employment status, skill, race, and religion are some criteria historically used to marginalize. Marginalized groups tend to overlap; groups excluded in one arena, say in political life, tend to be excluded in other arenas, say in economic status. Concern with marginalization is relatively recent. As the advance of democratization and citizenship swell the ranks of those "included" in the social order, the plight of those with limited access to the franchise and without rights or at least enforceable claims to rights becomes problematic.

Our discussion focuses on two main issues. First, what are marginalizing processes and how do they operate? Second, why are so many of the same groups—women, ethnic groups, religious minorities—marginalized in a variety of situations and institutions? Major approaches to marginalization are represented by neoclassical economics, Marxism, social exclusion theory, and recent research that develops social exclusion theory findings.

Neoclassical economists trace marginalization to individual character flaws or to cultural resistance to individualism. Their explanations of poverty stress the notion of the *residuum*, defined as those "limp in both body and mind." This residuum—the term was made famous by the

Cambridge economist, Alfred Marshall—will only work when forced to do so. Generous social policies encourage its members to stay out of the labor force. To explain why some groups are found disproportionately in the residuum, economists sometimes cite the presence of a "culture of poverty," which although adapted to alleviate the worst effects of poverty in fact reinforces it.

In contrast, Marxists see marginalization as a structural phenomenon endemic to capitalism. For Marx, the "reserve army of the proletariat," a pool of unemployed or partially unemployed laborers, is used by employers to lower wages. Together with déclassé elements, the most impoverished elements from the "reserve army" form the bases for the lumpenproletariat—in Marx's time, a motley conglomeration of beggars, discharged soldiers, prostitutes, and vagabonds. Marx also noted the presence of ethnic minorities, such as the Irish, in the "reserve army." He attributed the composition of the reserve army of labor and thus the lumpenproletariat to capitalist efforts to divide the working class along ethnic lines.

Although strongly influenced by Marxism, contemporary social exclusion theory stresses the importance of social networks and symbolic boundaries. Studying the economic recovery of the late 1970s, French sociologists noted that some groups—particularly migrants and youth—benefited relatively little from renewed growth. They concluded that sustained unemployment leads to poverty, which in turn leads to social isolation, including the breakup of families and the financial inability to fully participate in popular culture. Shorn of kin ties and cultural associations, the unemployed have difficulty finding a job and eventually become unemployable.

Current research has led to modifications of social exclusion theory. States and kin networks can play a significant role in moderating the effects of prolonged unemployment. Generous Dutch and Danish welfare states keep the unemployed out of poverty. In Italy and Spain the tendency of all unmarried adult children, including unemployed adult children, to remain in households with members who have ties to labor markets moderates social isolation. Less generous welfare states and the relatively early departure of adult children from households leaves the unemployed in France, Germany, and the United Kingdom especially susceptible to social isolation. Everywhere, immigrant workers, who do not receive the full benefits of the welfare state and whose families are often not integrated into job markets, remain marginalized.

Recent work by American sociologist Charles Tilly further stresses the importance of economic structures and social networks to marginalization. For Tilly, capitalist control of jobs combined with included groups' monopolization of job niches help explain why adult, native, white men are privileged in many different hierarchies, whereas nonadult, migrant, nonwhite women are invariably among the excluded. He emphasizes that new job hierarchies within capitalist industry tend to be filled according to already existing social distinctions; employers use old distinctions to justify and buttress new workplace distinctions and maintain harmony by endorsing distinctions that already divide the labor force. In so doing, employers and included groups perpetuate existing social distinctions and reinforce them, creating durable inequality.

Increasingly, modern interpretations stress marginalization's collective character and the role of the state, elites, and entrenched groups in determining who is marginalized. But wherever it occurs, marginalization seldom begins afresh. Institutions typically fill new job hierarchies in line with existing social ranks. Groups marginalized in the past have the best chance of being marginalized in the future.

SEE ALSO *Education, Unequal; Inequality, Income; Inequality, Political; Lumpenproletariat; Marxism; Social Exclusion; Stratification*

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Michael Hanagan

MARIJUANA

SEE *Drugs of Abuse.*

MARITAL CONFLICT

In marriage, conflict occurs when the needs and desires of spouses diverge and are thus incompatible. Because spouses interact with each other regarding a number of issues important to their marriage over time, it is inevitable that conflict will occur to at least some degree in every marriage. It is not the existence of conflict in marriage per se that is detrimental to marital satisfaction or stability, but how spouses manage conflict when it occurs.

Conflicts can be settled positively through discussion, but in some cases may result in the escalation of arguing without resolution, or with each spouse ignoring the area of conflict in an attempt to prevent negative marital interactions. The quality of the marriage suffers when conflicts remain unresolved, and in some marriages the inability to successfully manage conflict can lead to physical abuse, sometimes with severe consequences. Understanding the causes and consequences of marital conflict has been the target of a growing body of empirical research, and the results of this research have been useful in developing therapeutic programs aimed at assisting spouses to manage conflict in a positive manner.

One influential model created by Caryl Rusbult and her colleagues to explain how spouses manage marital conflict is called the exit-voice-loyalty-neglect model (Rusbult and Zembrodt 1983). This model stipulates that spouses can respond to conflict in a positive or negative fashion, and in either an active or passive manner. Walking away from a partner during a conflict (exit), for example, reflects an active/negative way to deal with conflict, whereas ignoring the negative event (neglect) reflects a passive/negative way to deal with conflict. By contrast, openly discussing the conflict and attempting to resolve it (voice) reflects an active/positive way to deal with conflict, whereas hoping that the partner will work alone to solve the problem (loyalty) reflects a passive/positive manner of conflict resolution. In general, voice offers the best opportunity for resolving conflict, while the other options tend to prolong the conflict and erode marital quality.

A second influential model of understanding how spouses manage marital conflict has been developed by John Gottman (1994) over several years. In Gottman's original research, married couples that had reported being very happy or very unhappy with their marriage were asked to discuss areas of conflict in their marriage while being videotaped. Through careful observation of these interactions, it was found that unhappy spouses tended to frequently criticize each other, respond defensively to their partners' comments, treat their partners with contempt, and emotionally withdraw from the discussion. Gottman also found that the more spouses engaged in these four types of behaviors while managing conflicts, the more likely they were to experience declines in marital satisfaction and to eventually divorce.

When faced with marital conflict, certain people are more likely than others to engage in negative interpersonal behaviors. For instance, some people tend to be very anxious about how much their romantic partners love them, fearing that their partners may eventually abandon the relationship. When relationship conflicts occur, these anxious individuals are more likely to become very upset and to believe that their partners will leave them (Campbell, Simpson, Boldry, and Kashy 2005). Also, people that chronically feel less loved by their partners behave more negatively toward their partners in the face of marital conflict (Murray, Bellavia, Rose, and Griffin 2003). Ironically, although these people fear the loss of their spouse and relationship, when conflicts arise, they tend to behave in ways that have been shown to destabilize marriages.

IMPACT ON HEALTH

The inability to successfully manage conflict in marriage is also linked with declines in physical well-being. Research in the late twentieth century revealed that marital disagreement is related to increased blood pressure and heart rate, as well as with alterations in immune functioning. For instance, in a 1998 study of 93 newlywed couples, Janice Kiecolt-Glaser and colleagues found that hostile interactions observed while couples attempted to resolve a relationship conflict were associated with increased levels of epinephrine (adrenaline), norepinephrine, and growth hormone, as well as greater immunological change over the subsequent twenty-four hours. This pattern of results was replicated in a sample of older couples who had been married an average of forty-two years. Therefore, because stressful interpersonal events can result in immunosuppression, which leaves people more vulnerable to a variety of illnesses, couples that are not effective at managing marital disagreement expose themselves to increased physiological stress over time, which leaves them vulnerable to health problems.

In a 1993 article, Craig Ewart finds that the presence or absence of negative behaviors directed toward spouses while discussing relationship conflicts is more responsible for physiological changes than are positive behaviors. For example, hostile marital interactions produced significant increases in blood pressure among patients with hypertension, whereas neither positive nor neutral behaviors were associated with change. Kiecolt-Glaser and colleagues also found that negative, but not positive, behaviors were related to decreases in immune functioning in both short- and long-term marriages. Therefore, responding to marital conflicts with negative interpersonal behaviors is particularly bad for the stability of the marriage and for one's physical health.

MARITAL THERAPY

Therapeutic approaches to marital therapy have been greatly influenced by research on conflict resolution in marriage. Overall, it is agreed that therapy is most effective when both spouses participate. Some therapeutic approaches focus directly on altering the behavior of spouses during conflicts. Spouses are taught to identify their negative interpersonal behaviors during conflict, to

discontinue the use of these behaviors, and to engage in more positive forms of conflict resolution as suggested by the therapist. Alternatively, other therapeutic approaches assume that unhappiness with the marriage is directly related with negative conflict resolution behaviors, and thus focuses on the reasons why people are unhappy with their marriage.

Therapeutic approaches to marital conflicts operate on the premise that if spouses can understand the source of their marital unhappiness and work to make a better marriage, their behaviors in the face of marital conflicts will naturally improve. Both approaches are somewhat effective for improving conflict management in marriage.

SEE ALSO *Conflict; Disease; Divorce and Separation; Exit, Voice, and Loyalty; Hypertension; Infidelity; Marriage; Romance; Stress*

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Lorne Campbell

MARKET CLEARING

The concept of market clearing related initially to the capability of the aggregate economy to generate sufficient purchasing power to assure that the economy's aggregate output will find purchasers. When this is the case, the total value of the economy's output will be exactly equal to the total value of the economy's purchases. In short, the economy's aggregate demand will be the equivalent of aggregate supply so that a situation historically termed a *glut* of output will be nonexistent.

Concern about the possibility of a glut dates (at least) to late-eighteenth-century France, where production was directed by central authority toward luxury products intended for export (for example, tapestries, crystal, velvet) in order to increase the economy's ability to earn gold via trade. The fear that French purchasing power could become insufficient was quelled by the articulation of a generalization by Jean-Baptiste Say in 1803 that became known as "the Law of Markets." It maintained that, because the value generated by the process of production simultaneously generates an equivalent flow of factor payments, an insufficiency of purchasing power is impossible because "supply creates its own demand." The logic of Say's argument was introduced into England by John Stuart Mill in the mid-nineteenth century and continued to dominate academic thinking until the mid-1930s, as Ingrid Rima notes in her 2001 work. Traditional nineteenth-century thinkers concerned themselves primarily with the problems of value and distribution and the equilibration of competitive markets, although they also understood that monetary expansion could result in inflation. The argument that purchasing power in the aggregate economy might be deficient was largely the province of monetary reformers who were unaware that Say's Law was predicated on a barter interpretation of the aggregate economy so that money served simply as a convenience to facilitate exchange.

It was not until the depressed 1930s that attention was focused on the linkage between changes in monetary aggregates and changes in real economic activity. John Maynard Keynes wrote his *The General Theory of Employment, Interest, and Money* (1936) to challenge Say's Law on the ground that it is inapplicable to a monetary production economy: "Say's Law is not the true law relating the aggregate demand and supply functions" (p. 26), because in a monetary economy the aggregate demand function does *not* coincide with the aggregate supply function. In particular Keynes maintained that it is the part played by the aggregate demand function that has been overlooked (p. 89). Thus his theory focused on the components of aggregate expenditures, emphasizing the stable relationship between consumption and income and the great instability of investment expenditures in consequence of the inherent uncertainty of the marginal efficiency of capital (Davidson 1972) relative to the rate of interest paid for funds, whether these are borrowed or internally generated (Minsky 1982). The argument that followed was when aggregate effective demand falls short of the economy's resource capability (given the level of technical knowledge), the demand deficiency is evidenced principally in the involuntary unemployment of some part of its workforce (Keynes 1936;

Weintraub 1966). Thinkers who responded positively to Keynes's argument looked to fiscal policy, that is, reduced tax collections and increased government spending financed via bond sales to increase aggregate spending via the operation of the multiplier, which was expected to enable both commodity and labor markets to clear at a higher income level. The persuasiveness of the theory of aggregate demand culminated in the "Keynesian revolution," which shifted economists' perspectives to the behavior of the economy's macroeconomic magnitudes. The shift underscores the distinction between the market equilibrium of industry demand and supply curves and market clearing in the sense of equivalence of aggregate demand and aggregate supply, in which full employment was shown to be the economy's normal equilibrium state.

It is perhaps not surprising that the ink of *The General Theory* was hardly dry before John R. Hicks of Oxford University wrote "Mr. Keynes and the Classics: A Suggested Reinterpretation" (1937), in which he maintained that the criticism of indeterminacy that Keynes made against the classical theory of interest was equally the fault of his own liquidity preference theory. Hicks's reinterpretation suggested that by joining liquidity preference to abstinence theory, which he represented in terms of two new curves, the IS and the LM curves, it can be shown that savings are a function of both income and the interest rate. The intersection of the IS curve and the LM curve, which brings together the four variables of the interest rate problem, the savings function, the investment function, the system's monetary stock, and the liquidity preference function, will make the interest rate determinant. Thus Hicks and the Harvard professor Alvin Harvey Hansen (1953) integrated the general equilibrium approach introduced by Leon Walras in the 1870s to demonstrate mathematically that all markets are interdependent and simultaneously able to clear goods and factor markets via the guidance of an auctioneer through whom participants "re-contracted" until mutually satisfactory trades could be consummated. Thus began a counterrevolution against Keynes (sometimes called neo-Walrasianism) that reasserted the market clearing capability of an economy characterized by flexible wages and prices (Patinkin 1956). In a 1956 model that also incorporated the labor market, Don Patinkin maintained that Keynes did not adequately recognize the significance of price changes on the real value (that is, the purchasing power) of monetary balances and wealth as a mechanism for restoring commodity, bond, and labor market equilibriums with full employment. In effect the integration of Walrasian foundations onto Keynes's model, whose foundation is Marshallian, undermined the Keynesian revolution.

It was to address neo-Walrasianism challenges to Keynes's credibility that Robert Clower (1965) and Axel Leijonhufvud (1967) undertook reinterpretations of Keynes's *General Theory* as a disequilibrium problem attributable to information and coordination failures. They argued that markets clear when potential traders successfully make the adjustments needed for market clearing instead of lagging behind. The theoretical contributions of Clower and others underscored the inadequacy of the micro-foundations inherent in the so-called "Keynesian" framework. Their efforts encouraged an increasingly elaborate micro-approach to rationalize sticky wages and prices in efficiency terms (Barro and Grossman 1976). The essential research focus for many Keynesian economists thus became to identify the reasons for ongoing wage and price rigidities that impede market clearing and to explain the successes and failures of coordination or its absence (Weintraub 1979).

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Ingrid H. Rima

MARKET CLEARINGHOUSE

A clearinghouse is a third-party establishment that operates with stock exchanges to clear trades, collect and main-

tain margin monies, regulate delivery, and report trading data. All trades on an exchange go through the clearinghouse. Three million contracts trade each day on the Chicago Mercantile Exchange, and 1.5 billion shares change hands each day on the New York Stock Exchange (NYSE). If an exchange clearinghouse were to fail it would trigger a financial meltdown. When the stock market crashed in 1987 the Federal Reserve moved quickly to provide access to liquidity for exchange clearinghouses, and none failed.

The clearinghouse performs two principal functions: (1) accounting; and (2) contract guarantee. Accounting is a necessity, but it can be outsourced. The fundamental economic function of the clearinghouse is the contract guarantee, which makes large-scale anonymous trading feasible.

The accounting function is easy to understand and mechanically hard to complete. The clearinghouse keeps the books. At the end of the trading day (or on rare occasions during the trading day) the clearinghouse requires that traders balance their account. The guarantee function is harder to understand, but it is *the* reason for the clearinghouse. In any transaction a seller agrees to deliver at a price and a buyer agrees to take delivery at that price. But for transactions separated in time or space, payment and delivery are uncertain. The clearinghouse puts itself in the middle of each transaction. Technically, buyers buy from the clearinghouse and sellers sell to the clearinghouse. If the seller fails to deliver, he or she defaults to the clearinghouse. The clearinghouse delivers to the buyer. Traders on organized exchanges do not concern themselves with the creditworthiness of their trading partner because their trading partner is the clearinghouse.

In over-the-counter markets traders trade directly with other traders—there is no clearinghouse in the middle. In most over-the-counter markets trades take place only among principals (large financial institutions) that know each other very well.

The clearinghouse guarantee exposes the clearinghouse to default risk. Most traders operate on credit. The clearinghouse requires traders to post margins (collateral) on their accounts so that they have an incentive to perform, and if they do not perform the clearinghouse has immediate access to the collateral. Setting the correct margin involves walking a fine line: a margin too high pushes traders off organized exchanges, and a margin too low exposes the clearinghouse to excess risk.

eBay is an Internet auction site that bills itself as "The World's Online Marketplace." Traders meet virtually to agree on the terms of a trade for virtually any item. A big problem for eBay is that a few sellers do not deliver and a few buyers do not pay. If potential eBay traders do not have confidence in the performance of their trading partner, then they will not go to eBay for trades, and the exchange dies. eBay works hard to assure traders that their transactions will be consummated.

eBay bought PayPal, an electronic payments system, in 2002. Through PayPal, one can authorize credit card payments or electronic check transfers. PayPal provides eBay with an electronic accounting system, the first function of a clearinghouse. In addition, PayPal has begun to guarantee transactions. If one buys from a PayPal authorized seller using the electronic check payment method, then PayPal guarantees delivery of items that cost less than $1,000. PayPal also guarantees that the seller will receive payment.

In conclusion, exchanges provide an anonymous marketplace for traders in modern economies. Clearinghouses provide the assurance that delivery and payment occurs.

SEE ALSO *Financial Markets; Market Clearing*

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Roger Craine

MARKET CORRECTION

Market correction refers to a temporary reversal of an upward trend in security prices. Market corrections typically involve a drop of between 10 to 20 percent in security prices. Such declines are temporary secondary trends that are exhibited within a larger upward trend in security prices. Every asset class, including stocks, currencies, commodities, and real estate, has been subject to periodic episodes of corrections. History shows that a 20 percent correction occurs once every five years in the stock market.

The phenomenon of a correction can be understood better within a theoretical framework of an equilibrium asset pricing model. The prediction of a multifactor asset pricing model is:

$$\mu = \lambda_0 + B\lambda_K$$

where μ is a vector of expected returns to N securities, λ_0 is the risk-free parameter, B is a vector of factor sensitivities, and λ_K is a $(K \times 1)$ vector of factor risk premia. The equilibrium model predicts that changes in expected returns occur in response to changes in the risk-free rate,

or in factor premia. An increase in expected return should lead to a drop in prices, which is, in turn, reflected as a market correction.

Some of these theoretical predictions are upheld by the data. It is now well accepted that most market corrections are preceded by a sharp jump in short-term interest rates. An increase in the risk-free rate of interest is predicted by theory to increase the expected return, and hence to lead to a drop in current prices. Market corrections have also been driven by a decline in earnings momentum. The decline in earnings momentum leads investors to revise downward their expectation of future profitability. This, in turn, leads to a drop in current stock prices.

Revised beliefs about economic conditions, however, only partially explain why corrections occur. In a challenge to rational asset pricing models, fear and greed have been advanced as explanations for market corrections. It is believed that market corrections curb excessive investor optimism, also labeled as greed. Fear of further market declines keeps markets down thereafter. The situation reverses when rational investors step in to exploit the buying opportunity created by price drops. Proponents of this irrational behavior offer the short-lived nature of a typical correction as evidence to bolster their view. The average length of a market correction over the period from 1872 to 2004 has been about twelve months. Security prices return to their precorrection levels after this period and, in fact, continue to trend upward thereafter. Such a reversal is inconsistent with a theoretical asset pricing model since the underlying economic conditions that may warrant a market correction do not experience a similar reversal.

Whatever processes underlie a market correction, investors can expect to experience steep drops in security prices periodically. They should also expect every asset category to experience such corrections. Globalization of financial markets has meant that international markets are also not immune to such corrections. Emerging markets experienced a steep market correction of greater than 20 percent during May to June of 2006. Higher volatility in emerging markets makes them more susceptible to frequent market corrections.

Experienced investors are able to weather market corrections with appropriate risk management strategies, the simplest of which is diversification. Diversification across different asset categories protects an investor from steep drops in any one market. Diversification also imposes the discipline of reallocating a portfolio to restore optimal allocations to beaten down sectors of the market. It is these buying activities that have enabled markets to recover soon after a sharp correction.

SEE ALSO *Bubbles; Financial Markets; Globalization, Social and Economic Aspects of; Interest Rates; Rationality; Stock Exchanges*

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Padma Kadiyala

MARKET ECONOMY

A market economy is an economic system that allocates scarce resources based on the interaction of market forces of supply and demand. It is an economy that operates by voluntary exchange and is not planned or controlled by a central authority. A market economy, also called a free economy or free enterprise economy, is the conceptual opposite of a command economy, also known as a planned or government-controlled economy, where all goods and services are produced, priced, and distributed under government control. In the twenty-first century a market economy is most often associated with a capitalistic economy.

The market is a process in which individuals interact with one another in pursuit of their separate economic objectives. The basic principle under which the market functions is: If an individual has undisputed ownership of something and wishes to exchange it for another thing that is owned by someone else and the exchange is executed without violence, theft, or deception, then the individual becomes entitled to what the other person was previously entitled and vice-versa. Both parties to an economic transaction in the market benefit from it, provided the transaction is bilaterally voluntary and informed. In this way, through the market process everyone is able to escape coercion at the hands of any one buyer or seller by turning to another. The market prevents one person from interfering with another, allowing a high degree of autonomy. In addition, the society is able to reap the benefits from the division of labor and specialization and function.

The prices that emerge from voluntary transactions, which are motivated by separately self-interested individual behavior, generate a spontaneous order. Many economic theorists argue that these prices coordinate the activity of people in such a way as to make everyone bet-

ter off. An individual who intends only his or her own gain (profit) by producing goods and services at the same time is satisfying the needs of other people for these goods and services. According to the Scottish economist Adam Smith, individuals pursuing their own self-interest are led as if by an "invisible hand" to behave in a socially desirable way by satisfying people's needs for goods and services (1976).

The result of the operation of a competitive market, efficient scarcity prices, in the absence of market failure is indispensable to the operation of the market system. Scarcity prices perform three functions in organizing economic activity: first, they transmit information about the divergent preferences of the economic actors; second, they provide an incentive to adopt least cost methods of production; finally, they determine who gets how much of the product. Prices can perform these functions only if the market is able to function freely; that is, able to function without any discretionary intervention, which results in distorting prices producing the undesirable results of shortages, queues, and low quality, as occurred in the Soviet Union. Before the collapse of the government-controlled economy of the Soviet Union, prices were set by the government, not by the market, below equilibrium. As a result, enterprises did not have an incentive to satisfy consumer demand.

Market-based economies require at least limited government intervention, because a market requires appropriate laws and institutions including defined property rights that are respected and enforced and procedures for guaranteeing the execution of contracts. Markets are also characterized by market failure; that is, an allocation of resources that is not efficient. The market is not able to produce public goods (defense, law and order), it is not able to include the social cost or benefits of externalities (environmental pollution, education), and it creates monopolies and oligopolies. The state takes on the responsibility of producing public goods and subsidizing positive externalities funded through taxation, while restricting negative externalities, monopolies, and oligopolies.

SEE ALSO *Market Clearinghouse; Markets*

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MARKET FUNDAMENTALS

The *market fundamental* (or fundamental value) of an asset is the discounted present value of the stream of future cash flows attached to the asset. When asset prices are determined by market fundamentals, the value of the asset depends positively on future expected cash flows and negatively on the discount rate used to obtain the present value. Although some estimates of market fundamentals move together with market values, they tend to exhibit lower volatility. This evidence, especially in the case of the stock market, suggests that asset prices deviate from their fundamental values.

The cash flows obtained by the owner of a stock are the dividends distributed by the firm. Since the source of dividends is the earnings generated by the firm, investors must take into account the factors behind earnings when forming expectations concerning future dividends. The most important factors that determine the evolution of expected earnings are the future profitability of current operations and future investment projects.

The second component of the market fundamental of stocks is the discount rate used to obtain the present value of dividends. Given a fixed stream of cash flows, an increase in expected future returns implies that the market fundamental decreases because the discount rate is higher. Expected returns for individual stocks and for the stock market as a whole are not constant, and different financial and macroeconomic variables contain significant information to forecast returns. This evidence implies that changes in expectations of future returns (i.e., changes in discount rates) can produce fluctuations in market fundamentals. In fact, John Campbell (1991) shows that movements in the aggregate stock market prices are mainly driven by news about future expected returns. However, Tuomo Vuolteenaho (2002) shows that stock returns for individual firms are mainly driven by cash-flow news, and that cash-flow news is largely idiosyncratic, while expected-returns news is common across firms. By a diversification argument, the results of both authors are compatible. Historically, the average real return on the stock market is higher than the real return on treasury bonds. The difference between both returns is denominated as *excess return.* It is a reward for holding a risky security. Hence, we can decompose the fluctuations in expected returns into changes in the expected return on a treasury bond and the expected excess return. John Campbell and John Ammer (1993) show that stock returns movement can be attributed to news about future excess returns, and that news about the return on a treasury bond has little impact. Therefore the most important component in the discount rate is the excess return. Since it is a reward for risk, the factors that determine its magnitude are

investors' attitudes toward risk and the risk associated with the stock market. The variables that forecast excess returns are connected to macroeconomic activity. Returns forecasts are high at the bottom of business cycles and low at peaks.

Different valuation ratios have been proposed to anticipate the evolution of stock prices. The most common is the price-earnings ratio, which is computed as the quotient between the price of a stock and its earnings per share. Given the definition of market fundamental, the price-earnings ratio depends positively on future expected earnings growth and negatively on future expected returns. This ratio presents long cycles of approximately thirty years (for the U.S. aggregate stock market during the last century) together with shorter fluctuations. For the aggregate stock market, some authors argue that the price-earnings ratio incorporates significant information to predict future returns for long horizons (more than five years). This conclusion has been criticized mostly from a statistical point of view. John Cochrane (1992) argues in favor of the capacity of the price-dividend ratio to predict returns. The author shows that as the ratio is not constant, it must predict changes in dividend growth or changes in returns. He also provides evidence showing that almost all variation in the ratio is due to changes in returns forecasts.

The market fundamental of a house can be analyzed through similar arguments. It is the expected present value of future housing services. Because the value of housing services is not observable, some authors approximate this magnitude by the rental value of the house. This variable depends on a wide set of factors, such as the characteristics of the rental market or the evolution of the population. Different empirical studies emphasize the importance of the fluctuations in the discount rate in determining housing prices. Further, housing provides collateral services and allows for tax deductions. Intangible services and tax variables may also influence the value of the stock.

There are also other assets where the market fundamental may be hard to define. For instance, the exchange rate is the price of two currencies, and hence the relative price of two assets. Exchange rates may be influenced by the availability of international reserves, balance-of-payments deficits, and monetary and fiscal policies. These macroeconomic aggregates are usually referred to as market fundamentals. Economists build stylized models to evaluate the effects of these market fundamentals.

SEE ALSO *Bubbles; Business Cycles, Real; Discounted Present Value; Financial Markets; Market Correction; Ponzi Scheme; Rate of Profit; Risk-Return Tradeoff; Speculation; Stock Exchanges*

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MARKET POWER

SEE *Competition, Imperfect.*

MARKET PRICE

SEE *Exchange Value.*

MARKET PRICES

SEE *Spot Market.*

MARKET SOCIALISM

SEE *Socialism, Market.*

MARKETS

Several disciplines, among them economics, political economy, philosophy, ethics, and, as of the late twentieth century, sociology, anthropology, and geography, rely on the notion of a market to establish a nexus between those who wish to purchase a commodity and those seeking its sale at a mutually acceptable price or exchange value. While specialists in the latter three fields concern themselves with markets in the sense of trading places observable in the less developed economies of the world, modern economists are principally concerned with an explanation of pricing under different market conditions. For the philosophers of Greece, in particular Aristotle, exchanging an article for money was considered "unnatural." In *Politics* he observed that there is a double way of using

every article. "There is its wear as a shoe and there is its use as an article of exchange" (I.9, 1977, pp. 39–41). The "natural" use of an article is for consumption, while its exchange for money is an improper or "unnatural" use. Clearly, the distinction the philosophers made between value in use and value in exchange in a market is a reflection of the contempt they had for mercantile activities.

EARLY RELIGIOUS AND POLITICAL VIEWS

The influence of the Greek philosophers on intellectual thought and human behavior was eclipsed by the fall of the Roman Empire in 476 CE. Their teachings were not rediscovered until translations were made from Aramaic sources by early Christian scholars in the twelfth and thirteenth centuries. Church scholars (the Scholastics) reinterpreted Greek ethics and philosophy to meld them with the Catholic Church's doctrines, including that of the "just price" as the market outcome that results from the moral behavior of both buyers and sellers, so that the resulting exchange value serves the common good. The central role of the "just price" derives from the papal bull *Unam Sanctum* (1302), enunciated by Pope Boniface VIII, which not only reflects the authority of Christian doctrine, but also implies the political priority of the state, vis-à-vis the family and the individual. Throughout the Middle Ages the dominant perspective about human behavior was that it should be guided by the goal of salvation.

By the mid-sixteenth century Church doctrines were challenged by the rise of nation-states and divine-right monarchies in England, France, Spain, and Holland. Their belief was that a nation's stock of gold was an index of its wealth and power, which led several of their thinkers to a theory of foreign trade that identified a favorable balance of trade (i.e., an export surplus) as the cause of national wealth. Merchant activity in foreign trade was thus accorded social status above artisans and manufacturers, while agricultural labor placed last. Interest in trade also promoted quantitative concepts and techniques, such as William Petty's *Political Arithmetic* (1690), to explain social phenomena. The logic of explaining prices in terms of the physical costs of producing goods thus replaced the subjective perspective inherent in the medieval notion of just price and its counterpart, the "just wage." The rise of the European nation state is thus intimately related to the development of political economy, and ultimately of capitalism.

OPTIMISTIC AND PESSIMISTIC APPROACHES

The view of the market that followed in the eighteenth century originated in the Scottish Enlightenment and was envisioned as the outcome of multiple individual choices adapting to evolutionary changes to promote maximum happiness for the greatest number of individuals. This optimistic vision underlies Francis Hutcheson's (1694–1746) *System of Moral Philosophy* (published posthumously in 1755), whose teachings influenced David Hume's natural order philosophy, which explored its beneficence to human freedom and happiness that is fully manifested in a market economy. Hume's work greatly influenced Adam Smith, whose *Theory of Moral Sentiments* (1759) explores the complementarity between sympathy and self interest that is central to the functioning of a market economy: In *The Wealth of Nations* Smith observes, "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their self interest" ([1776] 1977 Vol. 1, p. 10). Thus, Smith viewed the functioning of markets as the outcome, on the one hand, of the innate capability of humans to engage in moral behavior socially, while also serving their self interest.

Smith's starting point in *The Wealth of Nations* (1776) was to link the functioning of the economy to the division of productive labor as the basis for economic progress in raising the economy's standard of living. Increasing division of productive labor (by which Smith means labor that results in a vendible product), favors the expansion of markets, encouraging still further division of labor, while promoting a larger proportion of productive workers in the population. The market price of every commodity oscillates in accordance with the proportion actually brought to the market. Thus, the market price tends to converge to a price that pays the wages of labor (at their natural or subsistence level, the profits of capitalists (which competition pressures toward zero), and the rent of land (which tends to increase as population growth necessitates the use of inferior soils). The increasing division of labor enhances productivity and thereby ensures economic progress, broadens markets, and enhances the well being of each of the three great social classes: laborers, capitalists, and landlords.

Notwithstanding the optimism inherent in the invisible hand doctrine, the thesis that market wage rates tend toward the subsistence levels anticipated the pessimistic worldview of the nineteenth century that led Thomas Carlyle (1795–1881) to describe political economy as the "dismal science" (*Critical and Miscellaneous Essays* 1849, p. 84). While Smith attributed downward pressure on wages to the relatively greater bargaining power of employers, many who followed him, the English Economist Thomas Robert Malthus among them, attributed the tendency toward subsistence wages to the combined effect of population growth and rising food costs in consequence of diminishing returns. Classical thinkers were thus fully cognizant that the market allocates income shares among

workers, capitalists and landowners, as well as goods among households. These forces led the English economist David Ricardo to offer the theory of comparative advantage to explain the gains inherent in international trade, which encourages improvements in productive technology and international division of labor, which will enhance worker productivity and the rate of profit, and help the working class to participate in the gains from trade.

The advent of the "marginal revolution" led by William Stanley Jevons in England, Carl Menger in Austria, and Leon Walras in Switzerland (who published almost simultaneously in the 1870s), introduced a subjective perspective as an alternate to the classical cost of production view of exchange value, which predicated values on the utilities that consumers placed on their purchase. Because it is their objective to maximize their total utilities, consumers reallocate their commodity holdings until they achieve a set of values that represents an equilibrium state from which no further improvement is possible. This is the vision that led subsequently, principally in the work of Leon Walras (1834–1910) and Vilfred Pareto (1848–1923), who jointly founded the Lausanne School in the twentieth century, that when viewing an economy in its entirety there is a tendency for all of its sectors to move toward simultaneous (i.e., general) supply and demand equilibriums in each of its commodity and factor markets. This is an outcome that lends itself toward representation in a group of simultaneous equations from which Walras demonstrated that it is possible to derive a mathematical solution for market outcomes, given the necessary data. In practice, of course, markets establish actual quantities and prices through the interaction of demand and supply.

PRINCIPLES OF ECONOMICS

An alternative to explaining market outcomes exclusively in terms of marginal utility, which built on the mature classical tradition of John Stuart Mill, and which is known as neoclassicism, emerged in England with the publication of Alfred Marshall's *Principles of Economics* (1890). Its distinguishing feature is its eclecticism, which joined marginal utility as underlying the demand side of market behavior (which he pioneered independently of the English economist and logician William Stanley Jevons [1835–1882]), with the classical cost of production explanation of the supply prices of output. By maintaining the interaction of demand (or utility) and supply (or cost or production) in determining prices, Marshall emphasized the central importance of the time periods during which competitive industries are able to make adjustments to consumer demands. In the short run, when inventory has already been produced, costs of production are relatively less important in setting prices than are consumer demands. The short run, during which investment in fixed plant and resources are in place, outputs can be varied by changing inputs of labor and raw material so that costs of production become equally important as demand in establishing prices. In this period the number of firms in an industry becomes expanded or contracted in response to profits or losses, so that in the long run, when all inputs are variable, competitive prices will tend toward equality with the costs of production incurred in response to consumer demands. Thus, Marshall's focus (unlike the French economist Léon Walras's [1834–1910] general equilibrium) for explaining prices was on "short causal chains" of partial equilibrium to explain what happens in commodity and factor markets.

With the publication of Marshall's eighth edition of *Principles of Economics* in 1920, the basic supply and demand framework for conceptualizing market behavior and outcomes, along with the vision of economics as a moral science, was established in the United Kingdom and the United States. The only important addition was the subsequent recognition by scholars Edward Chamberlin and Joan Robinson that the commodities sold in most markets are fundamentally differentiated from competing products via advertising, packaging, design, and sales locales. The latter give individual firms a degree of control over selling prices that renders their markets monopolistically competitive. In other industries, the increasing returns that are inherent in large scale production cause firms to expand so that a few large firms (i.e., oligopolies, many of which are multinational firms) dominate markets in which prices deviate from competitive cost of production prices in consequence of both product differentiation and competition among few (rather than many) large firms. Globalization and electronic communication, along with the apparent widespread political preference for privatization and profit driven decision making, suggests an emerging overlap in the behaviors and outcomes in markets worldwide.

There is, however, an important difference between economies that have become privatized since the decline of communism in 1989 in the former Soviet bloc, and American and Western European capitalism. The transition from collectivism to market-oriented decision making has been accompanied by reductions in output, increased unemployment, and rising prices.

SEE ALSO *Economics, Classical; Economics, Neoclassical; Market Clearinghouse; Market Economy*

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Ingrid Rima

MARKOWITZ, HARRY M.
1927–

Harry Max Markowitz was born in Chicago, Illinois, on August 24, 1927, the only child of Morris and Mildred Markowitz. While he grew up during the Great Depression, his parents, who owned a small grocery store, were more than adequately able to provide for him during some difficult economic times in the United States. During his high school years, Markowitz developed an interest in philosophy that continued throughout his college years. After completion of his bachelor of philosophy degree in 1947, however, Markowitz decided to study economics.

Markowitz was particularly drawn to the "economics of uncertainty" through works by John von Neumann, Oskar Morgenstern, Jacob Marschak, and Leonard J. Savage. He received his MA in 1950 and his PhD in 1954. While at the University of Chicago, Markowitz was selected to join the prestigious Cowles Commission for Research in Economics. Markowitz developed the basic concepts of portfolio theory while working on his doctoral dissertation at the University of Chicago. In his brief autobiography published by the Nobel Foundation, he noted that his basic ideas for portfolio theory came to him while reading John Burr Williams's *Theory of Investment Value* (1938). Markowitz introduced modern portfolio theory to the world with his paper "Portfolio Selection," which appeared in the March 1952 issue of the *Journal of Finance*. He later published a more extensive explanation of portfolio theory in his book *Portfolio Selection: Efficient Diversification of Investments* (1959).

Before Markowitz's research, investors focused on evaluating the risks and rewards of individual securities when creating their portfolios. The goal of portfolio management was to identify individual securities that offered the highest expected return for a given level of risk and then build a portfolio from these securities. Correspondingly, if pharmaceutical company stocks had good risk–reward characteristics, then an investor could infer that creation of a portfolio entirely from these stocks was optimal. Markowitz formalized the intuition, however, that this logic was flawed. Formulating a mathematics of diversification, he asserted that investors should select portfolios based on their overall risk–reward characteristics. From the entire universe of possible portfolios, the ones that optimally balance risk and reward belong to what Markowitz called an efficient frontier of portfolios. Specifically, a portfolio on the efficient frontier is one in which: (1) no additional diversification can decrease the portfolio's risk for a given expected return, and (2) no additional expected return can be gained without increasing the portfolio's risk. Markowitz proposed that investors should select portfolios from those that lie on the efficient frontier. This work is considered by many to be the first pioneering contribution in the field of financial economics.

An indirect but significant additional contribution by Markowitz to the theory of financial economics occurred through the use of Markowitz's portfolio theory as a basis for developing the capital asset pricing model (CAPM). Thus, Markowitz's work on portfolio theory is regarded by many as establishing financial microanalysis as a prominent research area within economics and finance. Markowitz's work is also consistent with the Modigliani-Miller theorem, which implies that it is not in the interest of investors for firms to reduce risk through diversification, because investors can achieve diversification through their own portfolio choices.

Markowitz's work is not without criticism. Many challenge his assumption that rational investors are risk averters. In the world of speculation in financial markets, market bubbles and herd behavior do occur. In these situations, investors often demonstrate behavior of seeking risk or ignoring risk or both. Markowitz's work is also in conflict with the efficient market hypothesis, which implies that portfolio management is of limited value.

Upon leaving the University of Chicago in the early 1950s, Markowitz concentrated primarily on the application of mathematics and computer methods to problems of business decisions under uncertainty. Markowitz spent ten years on the research staff at the Rand Corporation. He then held various positions with Consolidated Analysis Centers, Inc. (1963–1968), the University of California at Los Angeles (1968–1969), Arbitrage Management Company (1969–1972), and International

Business Machines Corporation's T.J. Watson Research Center (1974–1983) before becoming a faculty member of Baruch College of the City University of New York in 1982. His most notable work falls in the areas of portfolio theory, sparse matrix techniques, and the SIMSCRIPT programming language. In 1989 he was awarded the von Neumann Prize in Operations Research Theory by the Operations Research Society of America and the Institute of Management Sciences. In 1990 Markowitz shared (with Merton H. Miller and William F. Sharpe) the Nobel Prize for Economics for theories on evaluating stock market risk and reward and on valuing corporate stocks and bonds.

SEE ALSO *Efficient Market Hypothesis; Modigliani-Miller Theorems; Von Neumann, John*

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Vicki L. Bogan

MARKUP PRICING

The term *markup pricing* assumes that a hypothetical firm when setting a price makes it equal to average costs plus some reasonable profit margin that can be expressed as *cost times a markup*. There are different theoretical treatments of markup pricing, however. In the neoclassical theory of monopoly, the law of supply and demand is assumed and the markup is thought to be determined by the elasticity of demand. The post-Keynesian theory, on the other hand, assumes some monopolization of markets due to concentration, entry barriers, and collusion within or across industries and does not consider the law of supply and demand a relevant factor—that is, prices are not thought to respond to disequilibria in supply and demand. The markup is assumed to be determined by the degree of monopoly. Since the 1970s, theories of what is called *dynamic markup pricing* have also been developed.

NEOCLASSICAL THEORY OF MARKUP PRICING

The neoclassical theory assumes the existence of monopolies or monopolistic competition due to differentiated products. In a market for differentiated products, a large number of firms compete by selling similar products but they are not perfect substitutes for one another. A firm confronts certain limitations imposed by the nature of consumer demand—that is, the fact that consumers are more willing to buy products at lower prices than at higher ones. Thus, the firm's profit-maximization problem can be written as

$$\max_{y} p(y)y - c(y)$$

where $p(y)$ is the inverse demand function, and $c(y)$ the cost function.

The profit-maximizing condition is

$$p(y)[1 - \frac{1}{|\eta_D|}] = c'(y)$$

where $|\eta_D| \equiv |(p/y)(dy/dp)| > 1$ is the elasticity of demand in absolute value. Because consumer demand is inversely related to the price, η_D is never positive. The elasticity of demand must be greater than 1 in absolute value, or the condition is contradictory to nonnegative marginal cost, $c'(y) \equiv MC > 0$.

Rearranging the above, we obtain

$$p(y) = \frac{|\eta_D|}{|\eta_D| - 1} MC$$

or

$$\frac{p(y) - MC}{p(y)} = \frac{1}{|\eta_D|}.$$

The left side of the equation indicates the ratio of profit to price, while the right is the so-called Lerner index, which is inversely proportional to the elasticity of demand. The elasticity of demand $|\eta_D|$ is independently determined by consumer behavior. Hence, assuming that $|\eta_D| = 4$, we can see from the first formula that the price is equal to marginal costs times 4/3 times the marginal costs. In this theory, markup pricing is, therefore, an attempt by a firm to guess the market's elasticity of demand. Higher elasticity leads to a price closer to the competitive price.

POST-KEYNESIAN THEORIES OF OLIGOPOLISTIC PRICING

Theories of monopolistic and oligopolistic markets in post-Keynesian economics were developed based on the assumption that concentration, entry barriers, and collusion within or across industries prevent prices from responding to disequilibria in supply and demand. The markup is determined by the degree of the monopoly that gives the firm or entrepreneur the power to increase a markup on prime cost by raising price. This position is taken by post-Keynesian economists such as Michał Kalecki (1971), Maurice Dobb (1973), Joan Robinson (1965, 1971), Josef Steindl (1952), Paolo Sylos-Labini

(1969), Alfred S. Eichner (1973, 1976, 1980), Adrian Wood (1975), and Athanasios Asimakopulos (1975).

Kalecki (1971) holds the view that the different markups in different industries are determined by the degree of industrial concentration and that the different markups within one industry are determined by the distribution of power among the firms in the industry. This can be expressed as

$$p = mu + n\bar{p}$$

where u is the variable cost, $\bar{p}$ the weighted average price of all firms in the industry, and $m > 0$ and $0 < n < 1$ are coefficients that indicate the firm's position within the industry. The weighted averages, $\bar{m}$ and $\bar{n}$, which reflect the degree of industrial concentration, determine the average price in the industry and thus the average markup:

$$\bar{p} = \frac{\bar{m}}{1 - \bar{n}}\,\bar{u}$$
$$= (1 + \bar{\mu})\bar{u}.$$

whereby the factor before the $\bar{u}$ is the markup.

Target return pricing is a variant of markup pricing that is often found in post-Keynesian economics. Price is set to earn a profit margin that yields a target rate of return on capital at a standard volume of output:

$$p = ULC^N + UMC^N + \frac{\pi K}{x^N}$$
$$= (1 + \mu)(ULC^N + UMC^N)$$

where π is the target rate of return on capital, K the capital stock, x^N the normal output, ULC^N and UMC^N the unit labor and material costs respectively at a normal output, and μ the markup factor. The markup over variable cost $\mu VC = \pi K / x^N$ changes either because of changes in the target rate of return or in the capital-output ratio.

Studies by Robert F. Lanzilotti (1958), Wood (1975), and Eichner (1973, 1976, 1980) are concerned particularly with pricing decisions by large corporations. These economists maintain that prices are likely to be set so as to assure the internally generated funds necessary to finance a firm's desired rate of capital expansion:

$$p = VC + \frac{FC + CL}{CU^N}$$

where VC is variable cost, FC fixed cost, CL corporate levy (the desired internal funds to finance the investment expenditure), and CU^N normal capacity utilization. If variable and fixed costs are held constant, the markup is determined by corporate levy, though it may be limited by substitution, the entry of new firms, and government intervention.

Despite the fact that there are several accounts of the markup within post-Keynesian economics, post-Keynesian theories do nonetheless all share an assumption: that prices change primarily due to a change on the cost side (though this is less due to the law of supply and demand than would be the case for neoclassical theorists).

DYNAMIC MARKUP PRICING

According to dynamic markup pricing theorists, while firms can decide their own prices and markups, they are nonetheless guided by the need to build up customers in order to expand their future market shares. Firms also have to face competition with a few rivals in the oligopolistic market and threats from potential entrants into the market. Furthermore, customers may leave or switch to other firms. In this sense, the firms have restricted choice since their pricing decisions should be based on considerations of the current and future state of the market. In this dynamic framework, a firm's markup pricing is greatly dependent on other firms.

Economists such as Joe Staten Bain (1956), Sylos-Labini (1969), Franco Modigliani (1958), and David P. Baron (1973) have long argued that price and markup function as barriers to market entry set up by incumbents who wish to deter potential competition. This version of oligopolistic pricing is called *limit pricing* or *entry-preventing pricing*. Prices are set above the costs but below prices at which potential competitors could enter the market and earn positive profits. Pricing depends on many factors such as the degree of concentration, economies of scale, product differentiation, the absolute cost advantages of incumbents, and internal interdependence of oligopolistic firms.

Like other post-Keynesians, Nicholas Kaldor (1985) suggests that prices and markups are cost-determined, but he also takes the importance of customer relationships into account. In his view, a firm determines markup based on two opposing considerations: market-share expansion and capital expansion. On the one hand, each firm will choose a price and a markup as *low* as possible so that they can build up more customers to improve their market share. On the other hand, they also have an incentive to set their markup as *high* as possible to increase their own capital by means of *internal finance*. This is because firms want to prevent a situation in which they become financially constrained through excessive reliance on external finance. Note that the second point was usually neglected in the traditional neoclassical theories, in which internal and external finances are considered as near-perfect substitutes. Kaldor therefore views a markup merely as a residual between the cost and the price chosen after considering the market dynamics.

Edmund S. Phelps and Sidney Winter (1970) have provided the first rigorous theoretical analysis of this type of dynamic markup pricing theory. They point to customer-flow dynamics as a barrier to optimal markup pricing:

$$\frac{dn}{dt} = -\alpha(p - \bar{p}).$$

Here n is the number of a firm's own customers, p its own price, $\bar{p}$ the average price of all other firms in the industry, and α a positive constant. Therefore, if a firm charges a high price, it loses customers. They find that equality between marginal cost and price does not generally hold even in a stationary state. Thus an optimal markup is derived as the difference between those two.

IMPERFECT COMPETITION AND OLIGOPOLISTIC PRICING

More recent developments in oligopolistic pricing theory focus on *imperfect information* such as "judging quality by price" (Stiglitz 1984), "reputations" (Greenwald, Stiglitz, and Weiss 1984), and "search costs" (Stiglitz 1983) as the source of price rigidities and the markup.

SEE ALSO *Competition; Prices; Rate of Profit*

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MARRIAGE

Transformations in marriage during the twentieth century have inspired a large body of research. Marriage is both a social and legal institution. Although the criteria for who can be legally married vary cross-culturally, marriage is a conjugal state that generally has been reserved for two individuals of opposite sexes, of consenting age, and of no blood relation. Historically, the reasons for, function of, and frequency of marriage has varied by race or ethnicity, class, gender, and the social and economic structures of society. Regardless of such differences, the institution of marriage is viewed by social scientists as one of the most fundamental elements in the maintenance and reproduction of society itself.

Marriage differs in its relation to church and state, though both infer rights and obligations to members of the marital union. Religions often view marriage as a

sacrament that reaffirms religious commitment, whereas wedlock is the legal state of matrimony. Even if a marriage is recognized by the state, it may not be recognized as valid by the church. In practice, church weddings often provide both a legal and religious contract between marriage partners.

Although marriage is defined most often as a union between two opposite-sex individuals, some societies and religious traditions allow for marriage between multiple partners: *polygamy*. Two forms of polygamy exist. Polygynous unions, in which a man is married to more than one wife, are the most common. Polygyny is currently practiced in some West African countries, particularly among more traditional members of society. When less formal arrangements are included in the definition—such as a man simultaneously being legally married to one woman while engaged in formal consort relationships with other women that are also expected to produce children—the prevalence of polygyny increases substantially. This latter type of polygyny, for instance, is found among wealthier Chinese in China, Taiwan, and the Chinese diaspora in Southeast Asia and North America. Polyandrous marriages, in which a woman is married to more than one husband, are relatively uncommon. Polyandry in the form of marriages to fraternal cohusbands has been reported in some areas of India.

Over time, there has been a shifting focus toward the emotional aspect of marriage in European and North American countries. In the United States prior to the twentieth century, marriage was viewed as a legal contract by which individuals joined in a marital union for social and economic reasons. During this time, marriages were more likely to be arranged by persons not party to the union itself. Following World War I, Americans began to place a greater emphasis on the emotional nature of marriage, and the notion of romantic love in marriage became more important. Furthermore, married persons were expected to invest their emotional energy into the spiritual growth of their marriage partners. The concept of marrying for love varies by cultures today. More industrialized societies are more likely to view love as the primary reason for forming a marital union, whereas less industrialized societies sometimes practice arranged marriage.

Marriage has long been associated with various benefits, including increased health and longevity. Married men in particular are less likely to engage in risky behaviors such as alcohol and drug use. Emotional satisfaction and increased economic well-being are also associated with marriage. Married people are less likely to experience anxiety and depression. Some theorists argue that there is something unique about the institution of marriage that bestows these benefits on the married couple. For instance, a spouse may serve as a monitor of their partner's health. This is supported by findings that married men are more likely than unmarried men to visit the doctor on a regular basis. Other theorists, however, argue that the benefits of marriage are more a factor of selection bias—that is, people with higher socioeconomic status and better health and emotional well-being are more likely to marry, whereas those lacking these characteristics are more likely to have short-lived marriages that end in divorce, or to forgo marriage altogether.

DEMOGRAPHIC TRENDS IN MARRIAGE

Over time, demographic trends in legal union formation have included changes in legal age restrictions, an overall retreat from marriage in western societies, and women's increased investment in their own human capital.

Legal age restrictions on who is eligible to marry have varied over time, cultures, and ethnicities. Historically, marriageable age has been closely tied to puberty, and it remains so in many less industrialized countries today. Currently, most North American and European countries have a minimum age of marital consent, usually age eighteen. The U.S. state or jurisdiction allowing for the youngest age at marriage without parental consent is Mississippi at age fifteen for women and age seventeen for men, whereas Puerto Rico requires both genders to be at least twenty-one. However, most states do allow for parental consent, and other statutory requirements may override these minimum age requirements for marriage. For instance, in Massachusetts if parents consent, women can marry as young as age twelve and men as young as age fourteen, whereas other states such as West Virginia, Kentucky, and Louisiana maintain the relatively advanced age of eighteen even with parental consent.

The marriage rate has been in decline in the United States and Europe since the end of World War II. Although the vast majority of people still report a desire to be married (80% of women and 78% of men), and most will eventually do so, there is a continuing trend to delay this step in the adult life course. The median age of first marriage in 1970 was twenty-three for men and twenty-one for women; by 2003 the median age of first marriage had risen to twenty-seven for men and twenty-five for women. (As these figures imply, the age difference between husbands and wives in most developed nations—including the United States—is small.)

A primary factor thought to at least partially account for the decreasing prevalence of marriage in the United States is the increase in women's human capital. Specifically, women have increased their investment in education, participation in the labor force, and relative annual earnings compared to men. Currently, more women (and men) go to college, thus delaying their eco-

nomic stability and, subsequently, their transition to marriage. In 1970, 13 percent of American women aged twenty-five to twenty-nine had a bachelor's degree or higher, compared to 30 percent of women aged twenty-five to thirty-four in 2000.

The decline in marriage in more industrialized countries has accompanied an increase in female labor force participation. For instance, American women aged twenty-five to thirty-four increased their participation in the labor force from approximately 41 percent in 1970 to 70 percent in 2004. Marriage benefits also vary by gender. Despite their hours worked outside the home, women typically perform the majority of household chores—about 70 percent in the United States. Additionally, married men benefit in the job market more than married women do. Men (especially fathers) often have been afforded a "family wage"—that is, more money to support their families—because of their traditional role as family breadwinners. Women, too, have to deal with social norms, which often view the roles of wife and mother as incompatible with the role of worker. In many Western societies, women's increased participation in nonfamilial roles and investments in their own human capital has begun to close the gap in men's and women's contributions to family income. For instance, in 1987 only 24 percent of all married women earned more than their husbands, but by 2003 32 percent did.

THEORIES OF MARRIAGE

Different explanations exist as to how we select mates to form a unique marital bond. Social-exchange theories focus on the contextual characteristics of the larger marriage market, where individuals compare the assets and liabilities of prospective spouses. Mate selection criteria include income, wealth, home- versus labor-market production, and physical attractiveness. Once the benefits of marriage outweigh the benefits of remaining single for both partners, a legal union is formed. The specialization and trading model adopts a rational-choice perspective that views men and women as attempting to maximize personal gains through marriage. This model asserts that individuals exchange personal assets—be it income, wealth, home production, child rearing skills, or physical attractiveness—for a partner with the highest overall value on a related set of assets. Historically, men have specialized in and traded on their economic production, whereas women have specialized in and traded on their domestic production.

Career-entry theory is derived from job-search theory, which asserts that potential workers look for employment in the labor market until they find a job that satisfies the minimum qualifications necessary for acceptable employment. From the perspective of the worker, the sorting of individuals into jobs is maximized when the number of jobs available in the market increases. An analogous situation occurs during the process of spousal selection. A person wishing to form a marital union searches for a spouse in the marriage market. As with employment, individuals usually have a predetermined idea of the minimal characteristics necessary before a potential spouse is deemed acceptable. Once in the marriage market, individuals compete with others to find a spouse. High levels of human capital in women decrease the probability of marriage by extending women's marital search process and simultaneously raising their reservation wage for potential husbands. More importantly, from a career-entry perspective, men's economic volatility lowers the probability of marriage by creating long-term financial uncertainty for both men and the women who choose to marry them.

Psychodynamic theories often focus on how childhood experiences and family background influence partner selection. Individuals may model their potential spouses after their opposite-sex parents, or they may create images of the ideal spouse based on childhood experiences. Filter theory posits that we sift through potential mates based on predetermined criteria—often ascribed characteristics such as race and class. Homogamy filters include finding a potential mate that matches your characteristics such as propinquity, physical attractiveness, race, education, income, and religion. Propinquity is typically the strongest homogamy filter. Heterogamy filters include selecting a mate based on characteristics that are opposite such as gender.

Other researchers point to the historical roots of marriage in the system of patriarchy, which views wives as the property of their husbands. For instance, the tradition of wedding rings historically served to solidify a woman's status as the property of her husband. Until recently, legal views of rape and sexual assault within marriage supported the notion that wives were the property of their husbands. In 1736 the English chief justice Sir Matthew Hale stated that "the husband cannot be guilty of a rape committed by himself upon his lawful wife, for by their mutual matrimonial consent and contract the wife hath given up herself in this kind unto her husband, which she cannot retract" (cited in Russell 1990, p. 17). This statement, which came to be known as the "Hale Doctrine," was accepted by the U.S. legal system in 1857 under the *Commonwealth v. Fogarty* decision. Marital rape is now illegal in the United States and in all countries represented at the United Nations's women's conference of 1995. In the United States, however, current laws continue to treat marital rape as a crime less severe, with more lenient sentencing, than other forms of rape.

Nonwestern traditions also support the notion of women as property. The practice of paying a dowry is one

example of how women have been seen as property to be transferred from their parents to their husbands. Under the dowry system, women are an economic liability. To increase a woman's attractiveness to a male suitor, the family of the bride produces various gifts of economic value to the potential groom and his family. Although this practice is becoming less common under the global capitalist system, various cultures around the world still adhere to the dowry system.

Anthropologists such as Levi-Strauss also note that marriage has been used as a structural tool to form political or commercial alliances across groups. Referred to as *alliance theory*, it maintains that the universal incest taboo motivates exogamy in marriage through a series of intimate kinship group exchanges of women as the wives of men who are members of a different group. Through this type of generalized exchange a marriage alliance between the two groups is formed and reciprocity is expected. Alliance theory argues that groups' circulation of women through the practice of trading wives links various social groups together to form complex structures of kinship, and ultimately, society itself.

MARRIAGE ALTERNATIVES

The drop in the marriage rate and the trend in delaying marriage have been accompanied by an increase in alternatives to traditional marriage. Marital dissolution (divorce), cohabitation, nonmarital childbearing, and gay marriage have become increasingly evident in European and North American countries. Marital dissolution in the United States, for instance, increased steadily during the decades following World War II, and began to level off during the 1990s with one in two U.S. marriages ending in divorce.

Cohabitation also has become an increasingly prevalent form of union formation in more-developed counties. Increases in cohabitation rates have spawned public debate regarding social policies that support the traditional marital union of a husband and wife, and have implications for the popularity of marriage as a larger social institution. Although modern forms of cohabitation were relatively unheard of before the 1960s, by 2003 4.6 million U.S. households were comprised of unrelated opposite-sex partners who were not married. Cohabitation types vary from short-term arrangements, to precursors to marriage, to replacements for legal union formation that is condoned by both church and state. In Sweden, for example, approximately 85 percent of partnered adults aged twenty-five to thirty-four were cohabiting as opposed to living as married couples. In other countries such as the United States, cohabitation is often a short-term arrangement followed by marriage or dissolution of the union. For instance, approximately 70 percent of cohabiting American women marry their residential partner within five years of cohabitation. At the other extreme, 49 percent of cohabiting women dissolve their residential union during the first five years of cohabitation (this figure includes cohabiting women who both marry and divorce within the first five years of the original cohabitation).

As cohabitation has increased, some countries have begun to treat marital and cohabitating unions as legally equivalent. Legal rights inferred to cohabiting couples may include inheritance rights, alimony upon dissolution, retirement benefits for spouses, and streamlined adoption processes. Some other countries, including the United States, continue to distinguish marriage from cohabitation in social and legal policies. A bridge between cohabitation and marriage is available in some U.S. states: Certain states recognize common-law marriages. Under explicit (but varying) criteria—such as the length of time the couple has co-resided, whether they hold joint accounts, assets, and liabilities, and whether the partners refer to each other as "spouses"—cohabiting couples may be considered similar to legally married couples. However, allowances and the requirements needed to establish a common-law marriage vary from state to state.

Rates of childbearing outside of marriage also have been increasing, due in part to the more liberal acceptance of sex outside of marriage and increases in cohabitation and divorce. For instance, in Sweden most children are now born outside of marriage, mostly to cohabiting couples. In the United States, 5 percent of children were born to unmarried mothers in 1960 and this percentage increased to just fewer than 37 percent in 2005. Among non-Hispanic blacks nonmarital childbearing represents nearly 70 percent of all births. Social acceptance of premarital sex also has increased significantly since the 1960s. Despite these trends, people still report that marriage is the ideal situation in which to raise a child. In a survey of high school seniors in 1997 to 1998, only 8 percent of high school seniors stated that unmarried childbearing is a worthwhile alternative lifestyle.

Although marriage often is religiously and legally restricted to the union of two opposite-sex individuals, alternative expressions of intimate-adult commitment are increasingly common. One aspect of marriage that has been gaining public exposure during the twenty-first century is gay marriage. Although the United States generally restricts marriage to a union between opposite-sex adults, other countries allow for individuals of the same sex to marry. In 2001 the Netherlands became the first country to legalize same-sex marriage. Belgium and the Canadian provinces of Ontario and British Columbia followed suit in 2003. In 2004 Massachusetts became the first and only

state in the United States to grant marriage licenses to two persons of the same sex.

Another legal option available to some same-sex couples is the civil union, which is a marriage-like union available in some European countries and in some U.S. states. One example is Germany's Registered Life Partnership, which grants to same-sex couples legal rights such as sharing a surname, the ability to enter together into contracts regarding property and finances, the right to refuse to testify against your partner, priority in immigration consideration, and health benefits. In 2000 Vermont was the first state in the United States to allow civil unions. Some states (such as California, Connecticut, Hawaii, Maine, New Jersey, and Vermont) allow for domestic partnerships or joint tax returns for same-sex couples. However, many U.S. states have reaffirmed the historical and religious sacrament of marriage between only a man and a woman. Currently, twenty-seven U.S. states have banned same-sex marriage. Eighteen of these have also banned civil unions.

SEE ALSO *Childlessness; Children; Cohabitation; Divorce and Separation; Dowry and Bride Price; Family; Feminism; Fertility, Human; Marriage, Interracial; Marriage, Same-Sex; Reproduction; Rituals; Romance*

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MARRIAGE, INTERRACIAL

Marriage is an important social institution. In every society, family values and social norms are in place to proscribe appropriate behavior regarding mate selection. Mate selection follows the pattern of like marries like—people aspire to marry those of the same age, race and ethnicity, educational attainment, religion, or social class. But then, finding an exact match in every characteristic is difficult. Matching based on certain characteristics may become more important than on some others. In most societies religion and race are often the two most important criteria. Religious and racial group boundaries are most likely the hardest to cross in marriage markets. In the United States, religious boundaries are breaking down and interfaith marriages have become more common over recent generations. Marriages crossing racial boundaries, on the other hand, still lag behind. This is not surprising because American society has a long history of racial inequality in socioeconomic status as a result of racial prejudice and discrimination. Race boundary is the most difficult barrier to cross.

Nevertheless, the racial marriage barrier in the United States appears to be weakening as well, at least for certain groups. Americans have had more contact opportunities with people of different racial groups in recent decades

than in the past because increasingly, they work and go to school with colleagues from many groups. Because racial gaps in income have narrowed, more members of racial minorities can afford to live in neighborhoods that were previously monopolized by whites. Physical proximity creates opportunities to reduce stereotypes and to establish interracial connections and friendships. In addition, mixed-race individuals born to interracially married couples tend to help narrow social distance across racial groups because of their racially heterogeneous friend networks. The growth of the mixed-race population further blurs racial boundaries.

Attitudes toward interracial marriage have shifted over time as a result. In 1958, a national survey asked Americans for the first time for their opinions of interracial marriage. Only 4 percent of whites approved of intermarriage with blacks. Almost 40 years later, in 1997, 67 percent of whites approved of such intermarriages. Blacks were not asked this question until 1972; they have been much likelier to approve of intermarriage, reaching 83 percent in 1997. Social scientists take such expressions of attitudes with a grain of salt. Respondents who answer attitude questions in a survey may simply reflect their desire to fit in with the rest of society. Despite misgivings, people today may feel that it is inappropriate to express reservations about racial intermarriage. Many Americans, it appears, remain uneasy about interracial intimacy generally—and most disapprove of interracial relationships in their own families. Indeed, support for interracial marriage by white Americans lags far behind their support of interracial schools (96 percent), housing (86 percent), and jobs (97 percent). Still, such relationships are on the increase. Nationwide, interracial marriages have increased from only 310,000, accounting for .7 percent of all marriages in 1970, to about 1.5 million, 2.6 percent of all marriages in 2000. The actual number would be much greater if marriages between Hispanics and non-Hispanics were taken into account as well. The upward trend in intermarriage seemingly signals improved racial/ethnic relations, the incorporation of racial/ethnic minorities into American society, and the breakdown of racial/ethnic distinctions. Intermarriage, however, varies widely across racial groups.

RACIAL DIFFERENCES IN INTERRACIAL MARRIAGE

Who pairs up with whom partly depends on the population size of each racial group in the United States. The larger the group, the more likely group members are to find marriageable partners of their own race. The U.S. Census Bureau classifies race into four major categories: whites, African Americans, Asian Americans, and American Indians. Hispanics can belong to any of the four racial groups but are considered as one separate minority group. Although whites form the largest group—about 70 percent of the population—just 4 percent of married whites aged 20 to 34 in 2000 had nonwhite spouses. The percent of interracial marriages is much higher for U.S.-born racial minorities: 9 percent for African Americans, 39 percent for Hispanics, 56 percent for American Indians, and 59 percent for Asian Americans (who account for less than 4 percent of the total population). To be sure, differences in population size for each group account for part of the variation in interracial marriage. For example, the Asian population is much smaller than the white population, which means that one Asian-white marriage affects the percentage of interracial marriage much more for Asians than for whites. Also because of their numbers, although just 4 percent of whites are involved in interracial marriages, 92 percent of all interracial marriages include a white partner. Clearly, racial minorities have greater opportunities to meet whites in schools, workplaces, and neighborhoods than to meet members of other minority groups.

Given population size differences, comparing rates of intermarriage among groups can be difficult. Statistical models used by social scientists nevertheless can account for group size, identify to the extent to which any group is marrying out more or less than one would expect given their population group size, and then reveal what else affects intermarriage. Results show that the lighter a group's skin color, the higher the rate of intermarriage with white Americans. Hispanics who label themselves as racially "white" are most likely to marry non-Hispanic

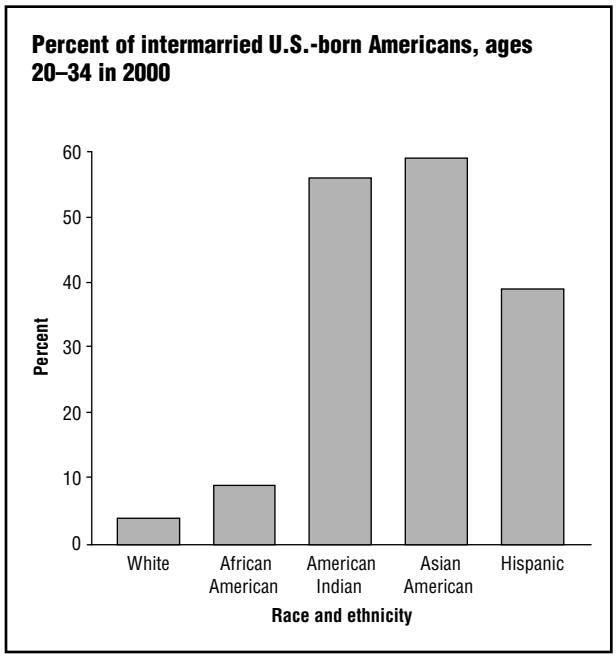

whites. Asian Americans and American Indians are next in their levels of marriage with whites. Hispanics who do not consider themselves racially white have low rates of intermarriage with whites. African Americans are least likely of all racial minorities to marry whites. Darker skin, in America, is associated with discrimination, lower educational attainment, lower income and residential segregation. Even among African Americans, those of lighter tone tend to do better both in the job market and in the marriage market.

EDUCATIONAL DIFFERENCES IN INTERRACIAL MARRIAGE

Highly educated minority members often attend integrated colleges, work in integrated surroundings, and live in neighborhoods that are integrated. Although they develop a strong sense of their group identity in such environments, they also find substantial opportunities for interracial contact, friendship, romance, and marriage. College-educated men and women are more likely to marry interracially than those with less education. The fact that Asian Americans attend college at relatively high rates helps to explain their high level of intermarriage with whites. The major exceptions to the strong effect of educational attainment on interracial marriage are African Americans.

Although middle-class African Americans increasingly live in integrated neighborhoods, African Americans still remain much more segregated than other minorities. College-bound African Americans often choose historically black colleges or colleges with a large and potentially supportive black student body. Their opportunities for contact with whites, therefore, are limited. After leaving school, well-educated African Americans are substantially less likely to live next to whites than are well-educated Hispanics and Asian Americans. One reason is that middle-class black Americans are so numerous that they can form their own middle-class black neighborhoods, while in most areas middle-class Hispanic and Asian American communities are smaller and often fractured by ethnic differences. In addition, racial discrimination against African Americans also plays a role. Studies demonstrate that whites resist having black neighbors much more than they resist having Hispanic or Asian American neighbors.

High levels of residential segregation accompanied by high levels of school segregation, on top of a pronounced history of racial discrimination and inequality, lower African Americans' opportunities for interracial contact and marriage. The geographic distance between blacks and whites is in many ways rooted in the historical separation between the two groups. In contrast, Hispanic and Asian Americans' distances from whites have more to do with their current economic circumstances. As those improve, they come nearer to whites geographically, socially, and matrimonially.

SEX DIFFERENCES IN INTERRACIAL MARRIAGE

Black-white couples show a definite pattern: About two-thirds have a black husband and a white wife. Asian American–white couples lean the other way; three-fifths have an Asian American wife. Sex balances are roughly even for intermarried couples that include a white and a Hispanic or an American Indian. Clearly, white men have disproportionately more Asian American wives while white women have more black husbands.

In the mid-twentieth century, Robert Merton (1941) proposed a status exchange theory to explain the high proportion of black men–white women marriages. He suggested that men who have high economic or professional status but who carry the stigma of being black in a racial caste society trade their social position for whiteness by marriage. Meanwhile, some social scientists argue that racialized sexual images also encourage marriages between white women and black men. Throughout Europe and the West, fair skin tone has long been perceived as a desirable feminine characteristic; African Americans share that perception. For example, black interviewers participating in a national survey of African Americans rated black women interviewees with lighter skin as more attractive than those with darker skin. But they did not consider male interviewees with light skin any more attractive than darker-skinned men. Other social scientists argue that the sex imbalance is associated with the legacy of slavery. During the plantation era, the miscegenation was mostly marked by white males' exploitation of slave females. The lingering effect of this legacy discourages African American women from marrying whites despite their low rates of in-marriage due to the low availability of marriageable African American men.

Asian Americans have a different pattern; most marriages with whites have a white husband. Some speculate that Asian American women tend to marry white men because they perceive Asian American men to be rigidly traditional on sex roles and white men as more nurturing and expressive. Asian cultures' emphasis on the male line of descent may pressure Asian American men to carry on the lineage by marrying "one of their own." But what attracts white men to Asian American women? Some scholars suggest that it is the widespread image of Asian women as submissive and hyperfeminine. On TV and in cinema, relationships between whites and Asian Americans, though still rare, almost always involve white men and Asian American women. Yet, this image does not explain a smaller but significant proportion of marriages involving white women and Asian American men. Indeed,

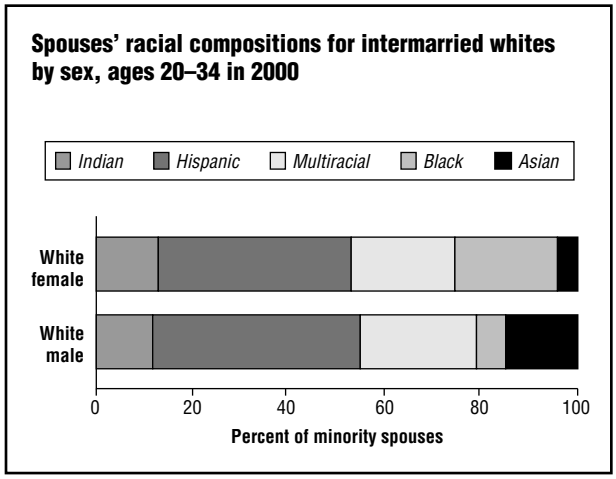

education may be part of the reason, given that Asian American men and women have more years of schooling and highly educated minorities are much more likely to marry whites than their less educated counterparts. Yet perceptions of Asian Americans in American society are important as well. Asian Americans are generally believed to be smart, even though the spouses of some whites are not as educated. The stereotype is consistent with the social construction of Asian Americans as a model minority. This belief may well be another reason for a relatively high level of interracial marriages involving whites and Asian Americans.

SEE ALSO *Family; Marriage; Miscegenation; Race Relations*

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Zhenchao Qian

MARRIAGE, SAME-SEX

Marriage is a vital social institution. The exclusive commitment of two individuals to each other nurtures love and mutual support; it brings stability to society. For those who choose to marry, and for their children, marriage also provides an abundance of legal, financial, and social benefits. In return it imposes weighty legal, financial, and social obligations (see *Goodridge v. Department of Public Health* 2003).

A growing number of jurisdictions around the world are according legal recognition to same-sex relationships. The types of recognition vary, some jurisdictions according all of the rights and obligations of marriage and others only according some. Similarly, some states within the United States have been expanding the rights and obligations accorded to same-sex couples, although others have acted to restrict or preclude the extension of rights and obligations to same-sex couples and their families.

BACKGROUND

Several countries have recognized that same-sex couples, like different-sex couples, both need and deserve to have their relationships accorded legal recognition. Some countries, such as Spain, the Netherlands, Belgium, and Canada, permit same-sex couples to marry. Other countries, such as France, Germany, Denmark, Norway, Iceland, Finland, Sweden, and Great Britain, offer many but not all of the rights and obligations of marriage.

Some of the differences among these countries include how they treat adoption (e.g., whether international adoptions are permitted), taxes, pension benefits, citizenship (whether at least one of the individuals entering into the relationship must be a citizen of the country recognizing the status), and the presumption of parenthood (whether a child born into the relationship will be presumed to be the child of both adults).

A separate issue is whether families involving same-sex couples will be recognized on a subnational level. Thus, relationships or incidents of relationships might be recognized in a particular city or region, even if they are not recognized nationally. For example, Buenos Aires recognizes civil unions, even though Argentina has not yet decided to do so, and New South Wales, Australia, has legislation regarding how property should be distributed upon the dissolution of a same-sex relationship, even though that is not true for all of Australia.

THE UNITED STATES

In the United States, the states differ greatly with respect to the ways that they treat same-sex relationships. Some states not only refuse to recognize same-sex relationships but also have passed state constitutional amendments pre-

cluding the legal recognition of same-sex marriage or same-sex unions more generally. These amendments have been open to a variety of interpretations. For example, the Ohio state constitutional amendment has been interpreted to preclude the extension of certain domestic violence protections to nonmarital couples, whether composed of individuals of the same sex or of different sexes.

Other states recognize same-sex unions but stop short of ascribing to those relationships all of the rights and obligations of marriage. For example, Hawaii recognizes reciprocal beneficiaries status, which permits both same-sex and different-sex couples to receive certain limited benefits specified by the legislature. California offers a much more robust array of benefits and responsibilities for domestic partners, although even this status is not the equivalent of marriage. Still other states, such as Vermont, accord to same-sex couples the rights and benefits of marriage, but call the relationship a civil union rather than a marriage. As of mid-2006, only Massachusetts recognized same-sex marriage.

Regardless of how the relationship is designated by the state, same-sex couples are not entitled to the numerous federal benefits that are accorded to different-sex married couples, because the U.S. Congress passed legislation in 1996 (the Defense of Marriage Act) specifying that only a marriage between a man and a woman will count as a marriage for federal purposes. The federal statute affects benefits in a broad range of areas, including social security, veteran's affairs, immigration, taxes, and bankruptcy, among others.

The Defense of Marriage Act was passed for a variety of reasons. Many of its supporters, whether or not they self-identify as part of the Religious Right, cite religious reasons as their justification—for example, by suggesting that God did not intend for same-sex couples to be able to marry. Other supporters worry that recognition of same-sex marriages would be too costly to the state or would somehow devalue different-sex marriage. Those asserting these arguments do not seem to appreciate that the same arguments have been or could be offered to justify preventing many types of marriages, including interreligious, interracial, or intergenerational marriage.

BENEFITS ON THE STATE LEVEL

While the Defense of Marriage Act precludes the extension of a substantial number of federal benefits, there are nonetheless a variety of matters of fundamental importance that are determined by state law. For example, there is no national law regarding adoption by same-sex couples—states determine that. There are at least two issues that should be discussed when adoption is being considered. Some states (e.g., Florida) prohibit those with a same-sex orientation from adopting, even if the state permits unmarried individuals to adopt. An individual who had been raising a child for over ten years as a foster parent might be precluded from cementing that relationship through the vehicle of adoption if the would-be adoptive parent is in a relationship with someone of the same sex.

Other states permit gays and lesbians to adopt as individuals. However, they do not permit both members of a nonmarital couple to establish parental relations with the same child, which can result in great difficulties should the adults' relationship end because of death or estrangement. Suppose, for example, that a lesbian or gay man has custody of a child and is living with a partner. Further suppose that no other adult has parental rights to that child. In many states, the partner will not be allowed to adopt the child, which means that should something happen to the biological or adoptive parent, the child and the partner might be treated as legal strangers to each other.

Refusing to permit both members of a same-sex couple to establish legal relations with a child can have negative consequences, both materially and emotionally. If the partner is not legally recognized as a parent, then the partner's employer might not recognize the relationship between the partner and the child, which might mean that insurance or other employment benefits would not be extended to that child. The partner might also have more difficulty functioning as a parent, whether when meeting with teachers, visiting the child in the hospital, or authorizing medical treatment. In addition, if the partner will not be recognized by the state as a parent, that individual may have less incentive to form strong bonds with the child, to the detriment of both the partner and the child.

The difficulties that may arise because of a lack of a formally recognized relationship between the partner and the parent's child can occur analogously if the partners themselves cannot have their relationship formally recognized. If same-sex partners are not permitted to marry, an employer might not recognize the relationship between the two adults, which would mean that insurance benefits might not be extended to the partner. A partner who might otherwise stay home with a child or elderly parent might not be able to do so because of that lack of insurance coverage. Basically, there are a variety of benefits provided by third parties, such as an employer or the government, that will not be available unless same-sex partners can have their relationships legally recognized.

The benefits of legal recognition are nonfinancial as well. For example, hospital visitation and the ability to have a say in medical decision making may depend upon one's being able to establish a familial relationship with the patient. Were the states to permit same-sex couples to marry, many of these difficulties would be averted.

Marriage is also important because of the protections that will be provided should the relationship end because of death or dissolution. When married couples divorce or one of the parties dies, the state has a system in place specifying how property will be distributed or, perhaps, whether one member of the couple will be ordered to provide support for the other. When same-sex couples are precluded from marrying, they are unable to avail themselves of this system. Perhaps they will make private agreements or other arrangements that will avoid some of the difficulties that are caused by not having access to this system. However, for those who do not make the necessary arrangements beforehand, there is a definite risk that one of the parties may be treated unfairly.

Marriage also has symbolic importance to the parties themselves, as well as to society at large. By precluding same-sex partners from making a public commitment, the state is removing one of the ways that individuals act to strengthen their relationships, which means that the state is removing one of the supporting pillars of long-lasting relationships. Certainly, individuals can remain in committed relationships without marrying, and individuals who do marry may not remain in a committed relationship, so the claim is not that marriage is a necessary or sufficient condition for the maintenance of a healthy or long-lasting union. Further, it may well be that the couple can marry within their faith tradition. That said, however, the state's recognition of same-sex unions helps add stability to those relationships. Marriage gives individuals security so that they are more willing to invest in and make sacrifices for their relationships, which helps the individuals themselves, their families, and society as a whole.

The refusal to permit same-sex couples to marry has other negative effects as well. It sends a message to society that certain individuals either cannot commit to marriage or, perhaps, do not deserve the opportunity to marry. It also provides a rationale for the imposition of burdens on a particular group that might otherwise be difficult to justify. For example, limitations on adoption and markedly different criminal sentences for sexual relations between adults and minors have been rationalized by appealing to the mere possibility that different-sex couples might marry.

Jurisdictions vary with respect to whether they will recognize same-sex unions and, if they do, whether they will accord those unions the status or the rights and obligations of marriage. When states refuse to accord legal recognition to same-sex relationships, same-sex couples and their families are disadvantaged, so the growing number of jurisdictions recognizing such unions is a development that might be expected to diminish many of the difficulties that such families face.

SEE ALSO *Gender; Marriage; Politics, Gay and Lesbian*

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Mark Strasser

MARRIAGE SQUEEZE HYPOTHESIS

SEE *Dowry and Bride Price.*

MARS

Since ancient times, the planet Mars has been seen as both a bright red light in the sky and an inspirer of aggressive behavior. Mars is the next planet out in the solar system from Earth, and its relative brightness in the night sky varies more than any other planet. Every two years and seven weeks, Mars changes its appearance from a dim spark to a bright red star. For this reason, Mars has represented a duality to humanity: It is both an inspiring astronomical object and the symbol of the God of War. It was Mars's variability and red hue which inspired, in the astronomers Nicolaus Copernicus and Johannes Kepler, an intense curiosity concerning its orbit, thus helping spawn the Scientific Revolution in the sixteenth century.

As the Scientific Revolution blossomed, this fascination with Mars continued and changed. Giovanni Schiaparelli's sighting of "canali," or canals, in the Martian landscape in 1877, followed by further reports of this phenomena by Percival Lowell, meant that Mars was the possible abode of extraterrestrial life and intelligence. The Lowellian concept of Mars as a dying planet was formed, and it came to be seen by some as a desert planet where a dead or dying civilization might be found. This spawned a host of fictional accounts of Martians, such as the *War*

of the Worlds by H. G. Wells and the tales of John Carter of "Barsoom" (Mars) by Edgar Rice Burroughs.

Mars also inspired rocket developers such as Robert H. Goddard, and the planet was finally reached successfully by probes, beginning in 1964 with the American Mariner 4, which found a frozen desert covered with water channels, suggesting a previous Earthlike epoch.

In 1976, in a place on Mars called Cydonia, what appeared to be a massive archeological complex was discovered. On two separate orbits of the Viking A probe, images showed kilometer-sized objects resembling a pyramid near what looked like a carved humanoid face. NASA dismissed the images as illusions, but two engineers, Vincent DiPietro and Gregory Molenaar, investigated the images digitally. One person intrigued by these images was Richard Hoagland, a science reporter formerly with CBS News who organized a team of scientists and engineers called the Independent Mars Investigation Team, which validated the provocative nature of the images. However, Hoagland was criticized by other scientists for sensationalizing the results of the investigation. This effort was motivated by both the compelling nature of the images and the Lowellian folklore of Mars, but it was also a product of the tense cold war atmosphere of the early 1980s. This tension made researchers sensitive to any suggestion of a dead humanoid civilization, fearing the same fate might befall the inhabitants of Earth.

Another aspect of interest in the Cydonia objects was the very humanoid form suggested by the images, which recalled the fascination with the human form of previous epochs. For this reason, the Cydonia images were not only disturbing for their implications but also reassuring in their validation of the human experience, suggesting it is part of something cosmic. Since the cold war ended, Cydonia has become a favorite target of satellite images, which show that the objects are highly eroded, and thus very difficult to characterize. However, despite their eroded character—and continued efforts to dismiss them as merely geological formations—the objects still provoke mystery.

Mars as a whole continues to be an object of intense scientific investigation, with strong suggestions of primitive microbial biology, past and present, and past Earthlike conditions. Thus Mars may yet provide the answer to the age-old question of whether or not humanity is alone in the cosmos. Mars has also become the stated target of human exploration and settlement. Therefore, it can be said that Mars has provoked more human intellectual activity than any other planet and may be the setting for its greatest advances in the future.

SEE ALSO *Space Exploration*

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John Brandenburg

MARSHALL, ALFRED
1842–1924

The economist Alfred Marshall was born on July 26, 1842, in London, the second son of William Marshall, a clerk at the Bank of England, and Rebecca Marshall, née Oliver. He was educated at Merchant Taylors School (1852–1861) and took the mathematical tripos (1861–1865) at Saint John's College Cambridge as "second wrangler," that is, second in the first class honours list. This achievement gained him a fellowship at Saint John's, where his interests shifted to the moral sciences, initially philosophy and mental science. Marshall became a college lecturer (1868) and from the early 1870s began concentrating on economics. In 1877 he married Mary Paley, forcing his resignation from his college positions as college statutes then in force prohibited fellows to marry. From 1877 to 1881 Marshall served as principal and professor of political economy at Bristol University College. In 1883 he became a lecturer in economics at Oxford. In 1884 Marshall succeeded Henry Fawcett (1833–1884) as professor of political economy at Cambridge, a post he retained until 1908.

During his professorship at Cambridge, Marshall published his most significant book: *Principles of Economics* (1890). He had earlier published *The Economics of Industry* (1879) with his wife and *Pure Theory of Foreign Trade and of Domestic Value* (1879). Marshall gave most of his evidence to official government inquiries, on monetary and financial topics, on the poor laws, on national income accounting, and on local government finance during the 1880s and 1890s; and served as a member of the Labour Commission (1891–1894), set up by the government to inquire into labor unrest and recommend solutions thereto accordingly.

Marshall greatly expanded opportunities for the study of economics at Cambridge, an effort that culminated in the establishment of an economics and politics tripos in 1903. The Cambridge School of Economics he created was consolidated by his student A. C. Pigou (1877–1959), who became Marshall's successor as chair.

Other prominent students included John Neville Keynes (1852–1949) in the 1880s, and John Maynard Keynes (1883–1946) in 1905–06. In addition, Marshall was instrumental in the formation in 1890 of the British Economic Association, which became known as the Royal Economic Society in 1902.

Marshall published two further books, *Industry and Trade* (1919) and *Money, Credit, and Commerce* (1923), before he died on July 13, 1924. He left his books and papers to create the Marshall Library at the Cambridge Faculty of Economics and Politics, which honored him in 1932 by establishing the Marshall Lectures. An undergraduate Marshall Society for discussing social questions was formed in 1927.

Marshall's writings, especially *Principles of Economics*, made major contributions to economic theory. Marshall's ideas were often succinctly presented in diagrammatic form, a method he pioneered. Facilitating the understanding of real economic problems was a key element in Marshall's economics, reflecting his desire "to be read by businessmen" and explaining why the *Principles* remained in use as a text until the early 1950s. As a trained mathematician, Marshall also used algebra and the calculus in his economics, visible in the Mathematical Appendix included with all eight editions of the *Principles*. According to him, this was its proper place, since such reasoning could not add anything significant in formulating economic propositions. His frequent use of diagrams in the *Principles* invariably took place in the footnotes, and not in the text.

A major feature of Marshall's economics was its *partial equilibrium* method, which enabled him to concentrate on the key variable that explained a particular concept, while holding other less important variables constant. For example, his exposition of demand theory is presented primarily as a function of price, other things being equal, including the purchasing power of money, money income, prices of related commodities (substitutes or complementary goods), the time element in the analysis, and tastes, habits, and fashions. This approach simplified functional relationships considerably. However, the complexity of what was impounded in "the pound of *caeteris paribus*" made the method difficult to use in practice, contrary to Marshall's intentions. Furthermore, its use gave rise to potential logical conflicts; for example, when prices of all other commodities are held constant together with the purchasing power of money, the price of the commodity whose demand is being analyzed needs to vary.

Marshall's economic analysis in the *Principles* is organized in terms of supply and demand. After two preliminary sections, the *Principles* discusses demand (dependent on price and utility), supply (founded on his theory of production), and their combination to explain value (commodity prices) and distribution (factor prices and factor incomes). Much of Marshall's analysis is presented in diagrams featuring the *Marshallian cross* of a falling demand curve (reflecting generalized diminishing marginal utility) and a rising supply curve (reflecting generalized diminishing returns), with price the independent variable and quantity (supplied or demanded) the dependent variable, producing the stability, generally speaking, of the resulting equilibrium. Marshall departed from this simple presentation when circumstances demanded, as he did, for example, in his treatment of constant and increasing returns in terms of horizontal and falling supply curves (Marshall 1920, p. 464). However, since economic agents could also make decisions about quantities—for example, how much additional tea to consume, how much additional capacity to install in a factory, which invariably influenced prices—this technique was quite appropriate for Marshall, and following him, Keynes.

Marshall divided supply-and-demand analysis into specific time periods (market, short, and long) reflecting the degree of responsiveness of supply pertaining to them. During the market period, time is too short for supply to alter; supply is unresponsive to changes in price in the short period except from movements in stocks because the period is too short to increase stock by additional production. New output is confined to long-period situations when supply becomes fully flexible from changes in production induced by price changes. These time periods, although measured in clock time, do not reflect clock time per se. They depend on the technical production possibilities for the commodity being analyzed. Marshall also used time analysis for generalizing rent theory to incorporate quasi rent as the income of old capital investments. Like rent, quasi rent is price-determined, but only in the short run, defined as the time required before capital investments can be replaced.

The responsiveness in supply and demand of a commodity to changes in price was classified by Marshall in terms of their degrees of *elasticity*. Where responsiveness is proportionately equal to the price change, *unitary elasticity* applies. When responsiveness is less than the price change, the function exhibits *inelasticity*; if greater, it is described as *elastic*. Elasticity was an important, novel, and enduring feature of Marshall's price analysis.

Application of Marshall's theory of value to welfare economics by means of consumer surplus was another enduring contribution. Marshall defined *consumer surplus* as "the excess of the price which a consumer would be willing to pay rather than go without a certain commodity over that which he actually does pay" (1920, p. 124). Consumer surplus provided a measure of the benefit gained by consumers from their environment when indi-

vidual consumer surpluses could be added. Marshall also noted that "a pound's worth of satisfaction" differed between people depending on their wealth and income levels, enhancing the difficulties in measuring consumers' welfare.

Marshall's theory of production carefully distinguished between the impact of scale and location on the cost of production. Size would generally elicit lower production costs over time. Marshall's discussion embodied static and dynamic elements, as well as factors incompatible with perfect competition, such as marketing and advertising expenses (Stigler 1941, pp. 77–83). Moreover, by dwelling on the locational advantages for firms as parts of industrial districts—the geographical concentration of industry—Marshall linked scale advantages to the size and concentration of an industry, as well as to the individual firm.

Marshall developed the *theory of the firm* as an important entity in economic decision making. This was implicit in his treatment of economies and diseconomies of scale, in his treatment of locational advantages, and in his analysis of monopoly and competition as specific market situations where competition meant monopolistic (imperfect) competition rather than an artificial construct of perfect competition. The pupils of Marshall's pupils, especially Dennis Robertson (1890–1963), Austin Robinson (1897–1993), and Joan Robinson (1903–1983), explicitly produced theories of the firm in their writings, including an innovative study of imperfect competition.

In *Money, Credit, and Commerce*, Marshall developed the *Cambridge cash balance equation* as his version of the quantity theory. This equation expressed the demand for money (the amount of income and wealth a person seeks to keep in the form of money) as follows: $D(M) = kPY + k'PW$, where k is the proportion of nominal income (PY) held in the form of money, and k'k' the proportion of nominal wealth held in this way. These *k*'s are the inverse of the respective velocities of circulation. Stating the quantity theory in this manner focused on individual demand for cash balances explicable in terms of transaction, precautionary, and speculative demands. Marshall's manner of looking at monetary relationships was also more amenable to statistical analysis.

Marshall's role in the history of economic thought is enormous. His *Principles* is the only nineteenth-century treatise still in wide use more than a hundred years later, even if, by modern standards, it is an unsatisfactory book (Blaug 1997, pp. 404–405). Marshall is the most important figure in economics from the formative decades of the 1890s to the 1920s, when marginalist economics became the dominant theory (Screpanti and Zamagni 1990, p. 177). Moreover, his theory accepts a general equilibrium framework but is presented in the more realistic and practical partial equilibrium form (Deane 1978, pp. 112–113). The centenary of Marshall's *Principles* in 1990 sparked many international celebrations, not only in England at Cambridge and the Royal Economic Society, but in Italy, Germany, France, North America, and even China. Close to 250 articles on Marshall's economics are collected in the eight volumes of John Wood's *Alfred Marshall: Critical Assessments* (1982, 1996). Marshall's writings clearly continue to be of use to students of economics.

SEE ALSO *Partial Equilibrium*

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Peter Groenewegen

MARSHALL, JOHN

SEE *Supreme Court, U.S.*.

MARSHALL, THURGOOD
1908–1993

In 1967 Thurgood Marshall, who was born in Baltimore on July 2, 1908, became the first African American appointed to the United States Supreme Court. Marshall's twenty-four-year tenure as a justice was marked by a strong interest in protecting the rights of criminal defendants (e.g., protection against illegal search and seizure) and opposition to the death penalty (*Furman v. Georgia,*

1972). Marshall's appointment to the Court was part of a successful career as an advocate for the protection of civil rights. Marshall dedicated his career to enhancing access to every arena of public life, with a particular focus on education, housing, employment, and voting. He believed that promoting equal rights under the law was essential to the proper functioning of democracy. According to Marshall, "equal means getting the same thing, at the same time and in the same place" (*Brown v. Board of Education*, 1954). Marshall's dedication created a lasting legacy that encompasses numerous aspects of American jurisprudence. He died in Bethesda, Maryland, on January 24, 1993.

EDUCATION AND LAW PRACTICE

Thurgood (born Thoroughgood) Marshall developed an early interest in education. A cum laude graduate of Lincoln University, he believed that education is the only assured means of promoting both individual and communal success. To Marshall and his contemporaries, education was a necessary means of reshaping the status of American race relations.

After graduating from Lincoln, Marshall enrolled in Howard University Law School, where he met and worked with his mentor, Charles Hamilton Houston. As dean of Howard's law school Houston inculcated in his students a commitment to equal justice and a desire to challenge both legal and extralegal segregation. Paramount to that commitment was an emphasis on overturning the 1896 *Plessy v. Ferguson* Supreme Court decision. That decision was significant because it created a legal doctrine known as separate but equal and provided the legal justification for segregation in many areas, including education and public accommodations. Marshall was influenced deeply by Houston's belief that he and other Howard graduates could force the United States to live up to its promise of equality for all Americans. Marshall graduated from Howard in 1933 and opened up a practice in Baltimore that focused on civil rights cases involving issues such as police brutality, civil disobedience, and housing discrimination. Marshall later assisted the Baltimore branch of the National Association for the Advancement of Colored People (NAACP) in its civil rights efforts.

In 1935 Marshall won his first major desegregation case, *Murray v. Pearson.* Together with his cocounsel, Charles Hamilton Houston, Marshall represented the African American student Donald Gaines Murray, who had been denied admission to the University of Maryland Law School on the basis of its separate but equal admissions policy. Although Murray was a graduate of Amherst College with an impressive academic record, the state of Maryland defended his exclusion, arguing that black students could attend other schools. Marshall had been denied admission to the University of Maryland Law School for the same reason five years earlier. In ruling against the state of Maryland the court of appeals argued that constitutional compliance could not be left to the will of the state. Marshall helped secure the first state-level victory toward overturning *Plessy.*

Murray became the first in a long line of successes for Marshall. As legal counsel for the NAACP he launched a comprehensive assault on the legally sanctioned practice of exclusion. In 1940 he won his first Supreme Court case, *Chambers v. Florida.* Over the course of his career Marshall argued thirty-two cases before the Supreme Court; winning twenty-nine, making him the most successful attorney to argue before the Court. As the U.S. solicitor general, appointed by President Lyndon Johnson, Marshall won fourteen of nineteen cases he argued before the Supreme Court.

Marshall successfully argued the 1944 case *Smith v. Allwright.* The case was significant because it overturned the "white primaries" that were prominent in the South. Marshall helped reduce the gap between the principle and practice of democracy by opening up the political process to all Americans. He continued to attack the separate but equal doctrine in cases such as *Shelley v. Kraemer* (1948) that struck down racially restrictive covenants. In two cases in particular, *McLaurin v. Oklahoma State Regents* (1950) and *Sweatt v. Painter* (1950), he fought against segregation in public education. *Sweatt* found that the state of Texas's creation of a separate law school for black students (now Texas Southern University) with inadequate facilities failed to meet the standard of substantive equality.

Although Marshall was successful in arguing the cases, he faced criticism from some black leaders who feared that his legal victories would jeopardize state funding for historically black colleges and universities. Marshall responded to the criticism by stating that "we are convinced that it is impossible to have equality in a segregated system, no matter how elaborate we build the Jim Crow citadel and no matter whether we label it the 'Black University of Texas,' 'The Negro University of Texas,' 'Prairie View Institute,' or a more fitting title, 'An Apology to Negroes for Denying them Their Constitutional Rights to Attend the University of Texas'" (*Sweatt v. Painter*, 1947).

BROWN V. BOARD OF EDUCATION

The 1954 case *Brown v. Board of Education of Topeka Kansas* was the culmination of Marshall's attack on the separate but equal doctrine. Unlike the prior cases *Brown* specifically outlawed racial segregation in American primary and secondary schools. Timing was critical for Marshall's agenda. Armed with his success in integrating

institutions of higher education, Marshall and his NAACP colleagues sponsored five cases affirming their view that separate educational facilities were inherently inferior. Led by Chief Justice Earl Warren, the Court reached a 9–0 decision affirming that "separate educational facilities are inherently unequal" (*Brown v. Board of Education of Topeka*, 1954). Although *Brown* did not result in the immediate desegregation of American public schools (see *Brown II* [1955], *Swann v. Charlotte-Mecklenburg Board of Education* [1971], and *Milliken v. Bradley* [1974]), it created a firm foundation for judicial support of the civil rights movement and its efforts to integrate all areas of public and private life.

Marshall's commitment to protecting the rights and freedoms of individuals was not restricted to the United States. He investigated allegations of racism in the U.S. armed forces in Japan and South Korea and later assisted in drafting the constitution of Ghana. Thurgood Marshall fundamentally redefined the relationship between citizens and their government by promoting equal rights under the law.

SEE ALSO Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Civil Liberties; Civil Rights Movement, U.S.; Desegregation; Education, USA; Houston, Charles Hamilton; Schooling in the USA; Separate-but-Equal; Supreme Court, U.S.*

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Khalilah L. Brown-Dean

MARTYRDOM

Martyrdom is defined as voluntary death for a cause, often for a religious purpose or as the result of persecution. The terminology of martyrdom varies from region to region. The term *martyr* comes from the Greek *martur,* which means "witness," as does the Arabic *shahīd* (pl. *shudadā*). Martyrs thus bear witness to their cause by sacrificing their lives as proof of its validity. Eastern cultures tend to use words closer to "sacrifice," focusing on the valor of the agent; e.g., *sati*, "immolation" after the eponymous Hindu widow who sacrificed herself on her husband's pyre.

Although martyrdom is historically conditioned, these voluntary deaths have structural similarities, being rooted in traditions of the warrior-hero and religious sacrifice. The noble deaths of kamikaze pilots, Christian martyrs, Indian widows in *sati*, the Jews who committed mass suicide at Masada in 72 CE, or Moslems on *jihad* are all sacrifices that transform and sanctify (or divinize) the martyr. Martyrs put their lives on the line, choosing to sacrifice their lives for a cause rather than submit to an opponent and betray their principles. In dying on their own terms, martyrs die heroically, like archaic warriors in battle, sacrificing their lives for the tribe. To their communities, martyrs are god-like in their honor, nobility, and glory. Like King Oedipus or Christ, martyrs are scapegoats and saviors, dying that others may live. Martyrdom is the ultimate and apocalyptic vindication of the martyr's cause and proof of his or her righteousness. After death martyrs become saints in Christian tradition, divine in Japanese traditions, and hallowed in all traditions.

Martyrdom joins politics and metaphysics. The martyrs' moral authority becomes a means of confronting an enemy's superior political and military power, as it did when Antiochus IV persecuted the Maccabees, when Romans persecuted early Christians, when Japanese pilots faced the Allies in World War II, or presently, when Palestinians confront Israel and the United States. Martyrs are marginal agents—crossing the numinous boundary of death, they seek to harness a spiritual power to their own advantage. Being unnatural, voluntary or self-inflicted death is shocking, awesome in the fear and wonder it inspires. Why did the martyr die? If the martyr chose to die, what is worth dying for? At what point is life so

unbearable that one is better off dead? What gave the martyr the strength to face death so bravely?

The power of martyrdom lies in its potential to change society: It forces an audience to think about ultimate questions (if only momentarily) and make moral judgments. These decisions can redress injustices and eventually change the world. Because the death of the martyr invests a cause with meaning, with numen or "weight," the cause is no longer ordinary. It has been sanctified with the offering of one life; perhaps it is worth the cost of many more. Martyrs draw public attention to the cause for which they died. Not only do they educate the audience, they strive to make their own views normative, converting (if not convincing) their critics. The propaganda value of martyrdom is so great that shrewd opponents avoid martyring their enemies, who are more dangerous dead than alive. In the Middle Ages, the cult of saints and the development of pilgrimage sites was of such political and economic importance that relics were stolen, traded, and even manufactured. Today, pilgrims still visit Karbala, Iraq, famous for its Shiite martyrs, and Rome for its early Christian martyrs. Historically, martyrs have meant economic prosperity, political authority, and social eminence.

The dynamics of martyrdom are unusually histrionic, as if the martyr's ordeal takes place in a transcendent, metaphysical arena or a universal courtroom of conscience that hears the martyr's case. As J. Huizinga's theory of play and his game theory suggest, opponents adopt strategies to win, but events unfold unpredictably and are subject to multiple interpretation. Martyrs feel deprived of what they deserve; they challenge existing authorities and offer their case to God and the world at large for judgment. Entrusted to Higher Powers, martyrs and their cause have moved into the realm of the sacred. But the ordeal is also public, a political spectacle in the here-and-now; at any one time, much is "in play," fluid, indeterminate, and ambiguous.

The martyr's power comes from holding the moral high ground of innocence and purity. Guilt and unworthiness must be pinned on the opponent. The spectacle of martyrdom is inherently biased in the martyr's favor insofar as endurance of suffering and death is taken as *prima facie* evidence that the martyr is in the right—that God is on the martyr's side. (Otherwise, how could the martyr face such terrible ordeals?) Even if death is clearly self-inflicted, the enemy is held responsible. He has forced the martyr to choose between life on the enemy's terms and death on the martyr's terms; he is the guilty persecutor. All martyrdom redounds ultimately to this choice between self-determination and submission to the will of another. Here, the warrior spirit affirms that death is preferable to subjection, dishonor, suffering, and the betrayal of beliefs; whether in Imperial Japan, Christian antiquity, or contemporary Islamic circles, an honorable death is preferable to a life of degradation and misery.

Martyrs seek vindication and retribution for their innocent suffering, some definitive judgment denied them by existing society. Viewed strategically, martyrdom obliges the audience to avenge the innocent or share the guilt of the wrongdoers. If martyrs can turn public opinion against their opponents, they can undermine their enemies' power. The assassinations of Gandhi, Martin Luther King, and Stephen Biko not only stunned the world at large, they were of such great political consequence that they broke the resistance of the enemy camp. Shifting public opinion often takes the form of boycotts. During the civil rights era boycotts such as the Montgomery bus boycott in 1955 added momentum to the movement for racial equality. In the 1980s, divestment in South Africa hastened the end of apartheid. Individual protests can take the form of hunger strikes (a kind of slow martyrdom), such as that undertaken by suffragettes in their struggle for the franchise, or that of Gandhi, who undertook over a dozen long fasts against the British, or the seventy-five prisoners protesting their illegal detention in Guantánamo in 2005–2006. Such lesser martyrdoms can tweak the conscience of the world audience.

Although the ordeal or spectacle of martyrdom is biased in the martyr's favor, part of the audience may reject the martyr's voluntary death, viewing it as "a waste," "irrational," and "tragic," the "pathetic suicide" of a "brainwashed fanatic" or a "selfish act" that disregards family and community. The dead are called "victims," as if they had not acted willfully, but instead succumbed to circumstances beyond their control. The deaths of such fanatics do not lend credibility to the cause, but discredit it even further, even as the deaths of prominent leaders (or the moral support of living celebrities) lend credibility to a cause.

The intrinsic worthiness of a cause is critical, but not determinative in distinguishing martyrs from fools or criminals. The worthiness of a cause, the social status and deeds of the martyr, the martyr's behavior under stress, the strength of the enemy, the resources of both sides, and the sequence of actions are all variables "in play." While dying for freedom is clearly different from dying for the sake of a lost shoe, a range of causes exists whose importance might change in the public eye were a sufficient number of martyrs to bear witness: global warming, animal rights, or the malfeasance of corporations (e.g., Enron). The deaths of martyrs invest a cause with meaning, and this is cumulative. When a cause builds up sufficient "weight," it earns a public hearing and triggers change. In 1963, the self-immolation of the Buddhist monk Thich Quang Duc

in Vietnam opened a flood of media coverage, facilitated by the letters of protest he left behind. Six other monks followed. The event is credited as the final turning point, the death knell of the Diem regime, which collapsed a few months later.

Martyrs lose their power when they lose their innocence, when the greater public rejects their cause and/or refuses to sanction their actions. Then martyrs become enemies (or persecutors themselves) engaged in open warfare with the rest of humanity. The cause must be worth the cost. Martyrs may gain attention and sympathy for their cause by offering their own lives, but they cross a line when others die. Martyrs have no right to deprive others of free choice, not to mention life itself. Belligerent nations in World War II (1939–1945) offer a clear example. Kamikaze pilots accepted that killing Americans was the price of vindicating the purity and divine purpose of their emperor and nation. Validating the cause, they also accepted the cost. But Americans and the Allies rejected the cause of Japan and called it "war." In the Middle East, the sides are of unequal power, but each has moral claims. To Israelis and their allies, Palestinian suicide bombers are terrorists who murder innocent bystanders, but Palestinians see themselves as victims of an occupation sanctioned by all Israelis and feel justified in fighting against that occupation. To them, Israeli bystanders are casualties in a war that has already cost the lives of many more innocent Palestinians.

Martyrdom operates within that indeterminate field where opinions change and variables are "in play." Affirmation and rejection are extremes of a continuum; advancement of the martyr's status depends on numerous contingencies. Sooner or later, the martyr's case gains public attention, but rational understanding of the martyr's grievances may not convert an audience driven by equally compelling drives. The audience's capacity for empathy is unpredictable. While historical conditions such as economic security or social similarity increase chances that the audience will identify with victims and feel compassion, studies of authoritarianism demonstrate that personality structure can diminish or even preclude empathy with others. No act of valor, no leader, no matter how august, can convert those who are deeply prejudiced.

What triggers empathy varies. The calculus of martyrdom favors elites, so that the death of one important leader outweighs the deaths of the innumerable nameless. Assassinated in 1980, only Archbishop Oscar Romero is honored as a martyr in the civil war in El Salvador, even though 30,000 others were exterminated by right-wing death squads between 1979 and 1981. The prestige of martyrs sacrificed lends authority to the cause, but the lack of martyrial "quality" can be addressed by an increase in "quantity" (the number of martyrs, the length and intensity of their suffering). All lives are not equal. Certain markers are more valuable than others. In 2003, a young American was killed by a bulldozer as she tried to prevent the Israeli army's destruction of homes in the Gaza Strip. A play based on her letters, "My Name Is Rachel Corrie," commemorates her life, as does a memorial Web site; she is the subject of various articles, media spots, etc. Corrie is not the first to die resisting the demolition of houses, but she is the first Westerner. Europeans and Americans can identify with such a young, attractive, and highly literate "peace activist," while Palestinians remain invisible. The less kinship the audience shares with martyrs, the more onerous the martyrs' suffering.

Examples of martyrdom or noble death are nearly universal. These include:

- *Judaism.* Kiddush Hashem (sanctification of the name) is found in Abraham's binding of Isaac; Rabbi Akiba, who was killed by the Romans in 135 CE; Hannah and her sons; and the killing of Jews in the Rhineland during the First Crusade. A dispute exists about the terminology used for those dying in the Holocaust. Traditionalists argue that Jews did not choose to die and therefore the term "martyr" is inappropriate. They are instead victims, murdered in war. But Yad Vashem (sponsor of the Holocaust Memorial in Jerusalem and the leader in Shoah research and education) calls itself "The Holocaust Martyrs and Heroes Authority." What matters to most people is that Jews were killed for no other reason than being Jewish.
- *Islam.* A spiritualized definition of martyrdom goes back to the Middle Ages and the distinction between the lesser *jihad*, the struggle against unbelievers, and the greater *jihad*, the struggle against evil. Martyrdom lies in intention; death on the battlefield is no guarantee of salvation. In present usage, any observant Muslim who dies gratuitously is a martyr. But martyrdom also has a militant side that goes back to Muhammad's grandson, Husayn ibn ʿAli, who was killed at Karbala in 680 in a battle against supporters of the caliphate for leadership of the community. Husayn's followers are Shiite and martyrdom is an honored goal; those of the caliphs, are Sunni. Also in this militant tradition are the Assassins (from *hashish*), a secret society of Nizari Isma'ilis (schismatic Muslims) who fought against European Crusaders in the Middle Ages. They called themselves *fedayeen,* meaning those "willing to sacrifice their lives," a term that survives in the second *intifada* (September 28, 2000, to the present).

- *Christianity.* Persecuted by Romans, early Christians, like Jews, saw themselves as "dying for God." Acts or passions record the martyrs' ordeals, many of which contain purported court records or eyewitness accounts. Protestants memorialized in *Foxe's Book of Martyrs* date from the sixteenth century, when Catholics persecuted Protestants in the Counter-Reformation. In Nagasaki, twenty-six Jesuit missionaries were martyred in 1597, and persecution continued under the Tokugawa shogunate costing several hundred lives. In 1981, members of the Irish Republican Army incarcerated at Maze prison went on a hunger strike in protest of the British government's refusal to grant them status as political prisoners (instead of ordinary criminals). Bobby Sands and nine others died and are widely commemorated in Ireland. In 1998, statues of ten twentieth-century Christian martyrs were unveiled at Westminster Abbey in London, among them, Martin Luther King Jr.
- *Hinduism.* The Hindu practice of *sati* was most frequent in western India from the tenth to nineteenth centuries. Outlawed by the British in 1829, it has survived sporadically up to the present. A new tradition borrowed from Christianity arose with the growth of nationalism in the nineteenth century and the struggle for an independent state in the twentieth century. While Gandhi is the most famous martyr, about a dozen others are deemed martyrs for the cause of Indian independence. While *satis* have altars and are treated as divine, of modern martyrs only Gandhi is occasionally commemorated at an altar.
- *Sikhism.* The Sikh theology of martyrdom (*śahīdī*) is first found in the Siri Guru Granth Sahib, scriptures compiled by the fifth master and first martyr, Guru Arjan Dev Ji (d. 1606), who called martyrdom "the game of love." Sikhs have suffered bitterly from persecutions by both Muslims and Hindus. Martyrdom is strongly associated with political resistance and the desire for political as well as religious autonomy, the Punjab being the possible Sikh homeland.
- *Buddhism.* The idea of dying for Buddha does not exist in Buddhism (which is atheistic); the notion of dying for something in the material world is similarly foreign, and Buddhism lacks a history of persecution. Nevertheless, the seven Buddhist monks who immolated themselves in Vietnam protesting the Diem regime's policies are deemed martyrs in both the East and the West. As with Hinduism, Sikhism, and Islam in modern times, in Buddhism the struggle for freedom and national identity can occasion martyrdom.

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Carole Straw

MARX, KARL
1818–1883

By identifying the rational core in the German philosopher Georg Hegel's writings, the German political philosopher Karl Marx not only clarified the essence of the human mind, but also conceptualized the relationship between Hegel's subjective and objective mind. Marx suggested that the objective mind had primacy over subjectivity. Identifying the sociohistorical essence of the mind (consciousness), Marx realized that the individual mind was a societal product and that the mind of a single individual was not just the mind of a single person, but that the individual mind was always and necessarily embedded in society and part of society. Marx and his colleague Friedrich Engels discussed the sociohistorical dimension of the mind extensively in their work *The German Ideology* (1932), in which they also suggested that language development paralleled the development of the mind, and that language developed historically from the need to interact with other humans.

Marx's sociohistorical conceptualization of the mind was part of his view on human nature, which states that the essence of human nature is its societal quality and thus humans should be understood in the context of the ensemble of societal relations. The idea that the mind is in its essence sociohistorical was not in contradiction to the notion of the era that the mind has a natural biological dimension. Marx in fact understood the English naturalist Charles Darwin's book on natural selection as the natural-historical foundation for his view. The difference between Marx, who regarded Darwin's theory highly, and Darwin was that for Marx it would be impossible to trans-

fer rules that govern animal behavior to the history of human societies.

According to Marx, because of the sociohistorical quality of the mind, it is exposed to power in contexts and relations of production. This means that the ideas of the ruling class are also the ruling ideas and the ruling ideas are the cognitive expression of the ruling material relations. Thus, morality, religion, and metaphysics cannot be independent. Marx used the metaphor of a camera obscura to describe ideology or false consciousness. Marx knew about psychological phenomena such as optical illusions, the invertive function of the eye, and technological applications such as the camera obscura. He came to the conclusion that the mind has distorted views of the world (optical illusions) and that the mind works upside down (camera obscura). In ideological theories humans and their relations appear upside down but in reality these theories arise from the historical life processes of humans. This metaphor also appeared in Marx's first volume of the *Capital* (1867) on the fetish character of the commodity. Relationships among human beings appear as relationships among produced things (commodities), and these commodities seem to possess supernatural powers.

Marx connected the mind with power and with labor, the material activities and practices of humans. An analysis of the psychology and philosophy of his time, when cognitive processes were disconnected from real-life activities, demonstrates its significance. Ideas and conceptions of the mind are interwoven with the material activity of human beings. Thus, Marx believed that imagination, thinking, the mental interaction of humans should be understood as the direct outcome of material behavior. The same applies to mental productions as represented in the language of politics, laws, morality, religion, and metaphysics. For Marx real active human beings are the producers of their ideas and they are determined by a particular developmental stage of the productive forces. This conceptualization of the mind led to the famous idea that life is not determined by the mind, but the mind by life. It is not the mind of humans that determines their being, but to the contrary it is the societal being of humans that determines their mind. Although Marx had no doubts about the sociohistorical quality of the mind, he also believed that the mind could be developed further than the zeitgeist, or the existing societal realities of a particular time.

Marx moved according to his philosophy with its emphasis on productive activity (labor), from an objective mind understood by Hegel as law, morality, and ethics, to viewing the objective mind as industry. Accordingly, one should be able to understand the nature of humans in the objectified products of human labor. For Marx the history of industry and the developing objective existence of industry was the open book of human psychology. In the course of this argument, Marx expressed one of the first criticisms of the content of modern psychology: "A psychology, for which this book, the sensuously most tangible and accessible part of history, is closed, cannot become a real science with a genuine content" (1968, p. 543).

In terms of methodology, Marx urged philosophers to study concrete individuals who live in concrete historical societies and not to reflect upon the abstract individual beyond history and society. He suggested a methodology that begins with active humans in order to understand their ideas and imaginations. Human existence and history starts with the fact that humans must be able to live, which includes eating, drinking, clothing, shelter, and procreation. History in its course also leads to the development of new needs and at a certain point in history humans did not only find their means of living but they produced them. Thus, the history of humankind and the history of the mind should be studied in relation to the history of production.

Contemporary psychologists assume more or less implicitly that functions or domains such as consciousness, reasoning, language, memory, or perception belong to an individual mind, and often base their theories and research practices on an individualistic concept of the mind. However, a few psychologists based their theories on Marx's sociohistorical conceptualization of the mind. His ideas inspired the Soviet philosophical psychologist Sergej Rubinstein (1889–1960), the cultural-historical school with its most influential thinker Lev Vygotsky (1896–1934), the French psychologist Georges Politzer (1903–1942), the German thinker Klaus Holzkamp (1927–1995), and various forms of critical psychology. It also can be demonstrated that Marx inspired early American social psychology. In addition, followers of the Frankfurt school merged his theories, yet not his psychological writings, with psychoanalysis, and developed a Freudian-Marxist field of research.

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Thomas Teo

MARX, KARL: IMPACT ON ANTHROPOLOGY

Karl Marx was born in the Trier of the German Rhineland in 1818. He studied law and philosophy in Bonn and Berlin, completing a doctorate at the University of Jena in 1841. His thesis, "The Difference between the Democritean and Epicurean Philosophy of Nature," explored the earliest materialist philosophies of the two Greek atomists, and demonstrates the inception of a nascent scholarly interest in crafting a sophisticated materialist critique of German idealism. Not surprisingly, his earliest writings, *The Economic and Philosophical Manuscripts* (1844), as well as the unpublished "Theses on Feuerbach" (1845) and *The German Ideology* (1845), all represent attempts to conceptualize a practice-oriented methodology for analyzing history and society. This "historical materialist" approach evidences the first engagements between Marx and the work of nineteenth-century anthropology, particularly the writings of Lewis Henry Morgan (1818–1881), Sir Henry Maine (1822–1888), and Johann Jakob Bachofen (1815–1887). Within archaeology, Marx and his frequent coauthor Friedrich Engels (1820–1895) had a profound impact on the cultural historical approach of V. Gordon Childe (1892–1957) in the early twentieth century. And Marx continues to have an important influence on a range of archaeological approaches today, including new structuralist approaches to class analysis (e.g., Saitta 1994). But within sociocultural anthropology, overt reference to Marx did not reemerge until the 1960s. Although much of the reluctance to engage Marx through the first part of the twentieth century can be attributed to a disciplinary reaction against evolutionary theoretical models (especially in U.S. and Canadian anthropology), by the 1940s and 1950s the omission was clearly the product of outright political and scholarly censorship during the "red scares" and McCarthyism of that period. This had the effect of suppressing and ideologically orienting the contributions of U.S. anthropology, which were becoming increasingly dominant globally. As David Price (2004) has shown convincingly, the FBI's intrusions into anthropology during this period were extensive, frustrating and dismantling careers of anyone with activist interests, particularly anthropologists concerned with racial equity and desegregation. Anthropologists with obvious Marxist influence (e.g., Julian Steward and his students, Leslie White, and many others) were not able to claim that influence until the civil rights movement of the 1960s, when broad populist concern with social justice and widespread public disapproval over U.S. actions in Southeast Asia ushered in a new era of social activism.

When Marx did reemerge as a prominent influence in anthropology in the 1960s, he did so in three social theoretical manifestations: through a discussion of the relationship or "articulation" between capitalist and precapitalist social forms (particularly within the French Marxist tradition); through an investigation of the mechanics and practice of politics and ideological and class formation; and finally through an interrogation of capitalist influence on non-Western settings (laudably within the cultural ecological and political economic traditions, especially in the United States).

PRECAPITALIST SOCIAL FORMATIONS

A common rejection of Marx stems from the critique that his historical approach was evolutionary and ethnocentrically focused on the socioeconomic experiences of Europe. As a result, many believe his method to be inapplicable to contemporary non-Western societies. Indeed, this explains why in the early twentieth century Marx had a more relevant impact on archaeology than on sociocultural anthropology, which had become frustrated with the unilinear evolutionary claims of nineteenth-century anthropology. In answering this charge, the French Marxist tradition has been particularly interested in the relationship between global and local socioeconomic systems, questioning the relevance of Marx to the study of non-Western societies, particularly in Marx's later works such as the first French editions of *Capital*, volume 1 ([1867] 1990a) and *Grundrisse* ([1857] 1978), as well as a long list of unpublished papers and notes. The 1964 publication of *Pre-Capitalist Economic Formations*, with historian Eric Hobsbawm's insightful introduction, provided Marx's notes from 1857 to 1858, framing his conceptualization of the development of economic forms in human history. French Marxist anthropologists drew upon Marx's

observations and their own studies of non-Western (principally African and Papuan) societies to query the analysis of societies without centralized political systems. In discussing such societies, where political relationships were based more on kinship or other traditional nonstate forms, they sought to develop a theory of materialism and structural analysis of modes of production that adequately explained transitions between various historical stages (instead of the transitions from feudalism to capitalism and capitalism to socialism and communism that Marx had primarily focused on). French Marxist anthropology is commonly seen as having followed two paths: one influenced by the philosopher Louis Althusser (1918–1990) and his reinterpretation of *Capital*, which attempted to apply Marxian analysis to all societies in an "overdetermined" fashion; and the other associated with Maurice Godelier (b. 1934), himself a student of the French structuralist Claude Lévi-Strauss (b. 1908), who advocated a more tempered incorporation of Marx's work that in fact rejected many of Marx's arguments about noncapitalist societies and economic determinism.

THE ANTHROPOLOGY OF POLITICS: CULTURE, IDEOLOGY, AND A THEORY OF PRAXIS

Marx's struggle to make sense of the mechanics of class and state formation through dialectics has been influential in the anthropology of politics. Marx's writing on the state were mostly confined to a series of case studies of France, including *The Eighteenth Brumaire of Louis Bonaparte* ([1852] 1964c) and *Class Struggles in France* ([1850] 1964b). Unlike his widely read but hastily composed populist pamphlet *The Communist Manifesto*, penned with Engels during the height of the European revolutionary events of 1848 (see Marx 1998), these political analyses were written retrospectively because he was forced from France, where he had been an active organizer and journalist, into exile in England. His other notable political analysis, *The Civil War in France* ([1871] 1933a), a rumination on the Paris Commune of 1871, was produced late in his life, along with his *Critique of the Gotha Programme* ([1875] 1933b), Marx's sole, if very vague, attempt to discuss the organization of communist society. Marx's "Theses on Feuerbach," in particular his famous eleventh thesis, "the philosophers have only explained the world, the point is to change it," is widely referenced for its emphasis on the importance of revolutionary practice. Beginning with the civil rights and other social movements in the 1960s, an increasing number of anthropologists became interested in social activism, prompting a thorough investigation of revolutionary politics and interrogation of the work of Marx and his intellectual progeny.

Marx's writings on politics and the state became influential in the early twentieth century among contemporaries concerned with developing strategies for revolutionary change, notably Antonio Gramsci (1891–1937) and Georg Lukács (1885–1971). Along with some members of the Frankfurt school, including Walter Benjamin (1892–1940), these scholars attempted to make sense of the role ideology and culture played in constraining or driving revolutionary change. Though decisively divergent from Marx's sociological emphasis on materialist philosophy and historical investigation of the category of labor, they do reflect Marx's lifelong preoccupation and frustration with the mechanics of socialist transition. The emphasis on culture and ideology has found currency, especially since the 1960s, with many anthropologists uncomfortable with the materialism of Marxian political economy, and often in reaction to the heavy-handed technological or environmental determinism of cultural materialists such as Marvin Harris. Michael Taussig and Jean and John Comaroff, with their concerns with investigating the symbolic organization of capitalist relations embedded in the politics of the state, fetishization, and cultural and religious institutions, are well-known for this kind of Marxian political tradition.

ANTHROPOLOGY, POLITICAL ECONOMY, AND GLOBALIZATION

Beginning in the 1940s and 1950s a group of scholars based in New York (including Elman Service, Stanley Diamond, and Julian Steward and his students, such as Eric Wolf and Sidney Mintz) spearheaded a new theoretical and methodological movement against a U.S. anthropology that for several decades had emphasized a more isolated approach to the study of individual cultures. Beginning with emphases on environment, ecology, and materiality, their approaches gradually evolved toward a sophisticated political economic analysis intent on assessing the impact of capitalism in non-Western societies, particularly in areas with a long history of entrenchment global processes, such as Latin America and the Caribbean. At the same time, anthropologists were influenced by numerous interdisciplinary studies of capitalism and development, including those by Andre Gunder Frank, Immanuel Wallerstein, Samir Amin, Walter Rodney, David Harvey, and others. There is a long list of anthropologists interested in the effects of capitalism on their subjects of study, some of whom have a more direct connection to materialist and cultural ecological approach than others. But regardless of their intellectual kinship, studies of political economy in anthropology from the early 1980s to the present can be divided, more or less, into two groups: one set of studies analyzing primarily the agency of subjects reacting to capitalist labor processes;

and the other focused on material objects (commodities) as entry points for understanding socioeconomic organization.

The first, subject-centered, track includes the many discussions of discipline, power, and alienation developed through the capitalist labor process, and typically they rely on Marx's more subject-oriented discussions of capitalism, such as his four-tiered typology of alienation in *Economic and Philosophical Manuscripts* ([1844] 1959). Since the 1980s anthropologists have produced a number of ethnographies analyzing capitalist power and discipline in global contexts, especially in the areas of industrial production and the exploitation of women and peasants, as well as rich analyses of flexibility in response to changing capitalist strategies of production. Aihwa Ong's 1987 discussion of Malaysian women factory workers and June Nash's 1979 study of Bolivian tin miners stand out as exceptional ethnographies that describe the structuring of and responses to labor transformation and alienation.

The second, object-oriented, variant of this political economic tradition relies more methodically on Marx's analysis of the commodity in *Capital* (1990a; 1990b). Sidney Mintz's groundbreaking study of the history of sugar production in Caribbean slave economies and its influence on the development of capitalism in Europe provides a model for this kind of political economic study (Mintz 1985). Focused on particular commodity objects and the global ordering of social relations that follows their cycles of production, exchange, distribution, and consumption, this "commodity biography" approach has proliferated not only in anthropology, but indeed across the social sciences (for summary, see Mantz and Smith 2006, pp. 78–80).

MARXIAN FUTURES?

Since the 1980s fewer anthropologists have been willing to claim identification with Marxism. The reasons are threefold. First, a disciplinary preoccupation with anthropology's colonial legacy has resulted in a reluctance to assert generalizable or lawlike claims about the cultural concept. Marxist approaches, as with other purportedly "grand narrative" approaches, have been decried in some circles as overly functionalist and even ethnocentric in their obsession with the global role of capital. Second, there was a general apathy toward the work of Marx following the end of the cold war. It is worth noting that the recent electoral victories by Marxist politicians throughout Latin America have no doubt contributed to a reenergizing of interest in Marxian scholarship in this area. Lastly, anthropologists appear to have embraced the more comfortable category of globalization as a way of understanding the wider net of capitalist influences around the world. Despite these ominous postscripts, this last point should be taken to demonstrate the indelibility of Marxian influence in spirit, if not in practice, throughout a discipline that can no longer see its subjects as removed from an increasingly relevant and pervasive global capitalist organization.

SEE ALSO *Marxism; Mintz, Sidney W.; Wolf, Eric*

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MARX, KARL: IMPACT ON ECONOMICS

Karl Marx's economic analysis is mainly contained in three books: the three-volume *Capital*, the *Theories of Surplus Value*, also in three volumes, and the *Grundrisse*. In his economic works Marx tries "to lay bare the law of motion of modern society," that is to say, to discover social regularities described mainly as long-run tendencies. Marx's method of analysis begins with the observation of empirical reality in all its complexity and concreteness. From this reality he derives abstract concepts (determinative relations and interpretive categories), and then through these concepts he ends up once again with the concrete, whose reproduction now is structured according to the internal connections established by the theory. The adequacy of the theory and concepts that have been created is judged by the degree of correspondence between the most concrete categories and data derived from empirical reality. A characteristic example of this methodological approach is the determination of market prices (the most concrete category) by another set of more abstract prices known as prices of production, that is, prices that incorporate the economy's general rate of profit. Prices of production are in turn determined by an even more abstract type of prices called labor values. All these prices can be subjected to empirical testing.

Marx observes that capitalism is a historically specific system characterized by generalized commodity exchange and so, naturally, the starting point of his inquiry is the analysis of the commodity whose exchange value aspect (and not its use value aspect) is the dominant one. Exchange value is the external measure of the intrinsic property of commodities, which he calls *value*, defined as the total amount of socially necessary abstract (i.e., undifferentiated) labor time embodied in a commodity. In the process of exchange, one commodity, due to its possession of a set of useful properties, is chosen to function as the universal commodity against which all other commodities are compared and exchanged. The commodity that historically has performed the function of universal commodity more successfully than any other is gold. The ratio of the value of a commodity to the value of gold gives the direct price of the commodity. If the value of gold decreases (e.g., because of discoveries of new gold mines and technological change) the general price level, other things being constant, increases—and vice versa. This rudimentary theory of money, which is derived from a straightforward generalization of the theory of value, can be expanded to include both monetary systems that are convertible to gold and those that are not, and thus becomes relevant for new developments after 1970. At the same time, Marx's theory of value (together with the use of mathematical analysis and input-output data) has been shown to rather accurately predict market prices, and thus could become a viable alternative to neoclassical price theory (Shaikh 1984).

The analysis of the universal commodity and money leads to an investigation of the capitalist process of production. This process is described by the circuit $M - C$ $(LP, MP) \ldots P \ldots C' - M'$, according to which capitalists invest an amount of money (M) in order to buy a set of commodities (C) consisting of commodity labor power (LP)—that is, the worker's capacity to work—and other means of production (MP), for the purpose of production (P) of a new set of commodities (C'), which when sold they expect to realize a sum of money greater than that of the initial investment, $M' > M$. This extra money is what really motivates the whole circuit of capitalist production as it is repeated on an expanded scale. The difference $M' - M > 0$, which Marx calls *surplus value*, stems from labor power, a special commodity characterized by its property of producing more value than the value of commodities that the worker buys with his money wage and consumes in order to reproduce his capacity to work. In contrast, the value of the means of production is either transferred to the final product all at once (as in the case of raw materials) or gradually through depreciation (as is the case with the plant and equipment) (*Capital I*). The distinction between *labor* and *labor power* is Marx's greatest discovery and contribution to political economy, because through this distinction the source of surplus value can be explained on the basis of equivalent exchanges. Marx argued that surplus value is created in the sphere of production by labor. The production sphere has primacy over the circulation sphere because the latter is supported by the surplus value produced in the former. Furthermore, the circulation sphere modifies and changes, within strictly specified limits, some of the results of the sphere of production. For example, surplus value in the sphere of circulation is redistributed to the various sectors of the economy in the form of profit according to its degree of capital intensity; however, the sum of the profits cannot exceed the amount of surplus value produced.

It is important to stress that there is no guarantee that the circuit of capital will necessarily be completed, as it can be interrupted at any stage by a number of unexpected factors. Thus, uncertainty and expectations are immanent in Marx's analysis of capitalism. Furthermore, the whole circuit begins and ends with money, a characteristic that allows the introduction of credit and also the hypothesis that savings may differ from investment, a difference that sets the stage for the development of an alternative to Keynes's theory of effective demand rooted in the process of capital accumulation.

According to Marx, the hallmark of the individual behavior of capitalists is the pursuit of profit as a purpose

in itself, which forces them into two kinds of competition: the first with workers in the labor markets over wages and conditions of work, and the second with other capitalists in the commodity markets over the expansion of market share at the expense of their competitors. Capitalists cope with these two types of competition through the introduction of more fixed capital. As a consequence, mechanization of the labor process is used to raise the productivity of labor. The introduction of fixed capital both increases the scale of operation needed for minimum efficiency and reduces the unit cost of production. The latter implies that by reducing their prices innovating firms are able to expand their market share at the expense of less efficient firms. Thus, the process of capital accumulation leads to a small number of top firms controlling an increasing share of the total market. This is the reason why concentration of capital is the expected outcome implied by the nature of capital and by the operation of competition, which by no means diminishes over time. On the contrary, the very cause of mechanization—the pursuit of profit—continues to exist even with fewer firms, as competition among them intensifies. Meanwhile, the ever-increasing minimum-efficiency scale of operation requires higher investment that firms, especially the small ones, cannot undertake on their own, and thus there is pressure to merge, in order to avoid becoming the target of a hostile takeover. The resulting growth in the scale of production through the amalgamation of capitals is called *centralization of capital* and is another aspect of the operation of competition (*Capital I*, *III*). If there is a grand prediction that has been historically validated it is Marx's law of increasing concentration and centralization of capital.

Another grand prediction by Marx, which is also consistent with the available historical evidence, concerns the law of the falling rate of profit. This law is derived from the very purpose of capitalist production, which is the extraction of profits as an end in itself. As mentioned above, the realization of this goal entails mechanization of the production process through the introduction of fixed capital. On the one hand, this raises both the productivity of labor and profits for the firms that remain following concentration; on the other hand, however, the increase of fixed capital relative to labor leads to a falling profit rate. Marx noted that the fall in the rate of profit exerts a negative effect on the mass of real profits and, at the same time, a positive effect through the accumulation of capital. So long as the positive effect exceeds the negative, the mass of real profits expands at an increasing rate in a long wavelike pattern. Because new investment is a function of the rate of profit, it follows that a falling rate of profit at some point will necessarily slow down the rate of growth of new investment, thereby slowing down the rate of increase in the mass of real profits. As this tendency continues there will be a point at which the two (positive and negative) effects will cancel each other out and the change in the mass of profits will become zero. This means that the investment of the previous period will not contribute at all to an increase in profits and thus capitalists will have no interest in new investment. This is the point of "absolute overaccumulation of capital" that marks the onset of economic crisis. Its consequence is a slowdown in investment and rising unemployment. As more and more firms are led into bankruptcies and real wages fall, one can also observe the creation of new institutions, the emergence of new methods of management, and the diffusion of technological change. The combination of these processes results in a rising mass of profit (and a temporarily rising rate of profit) and sets the course for the reestablishment of the necessary conditions for another wave of expansion and contraction. Thus capitalism is both a growth- and crisis-prone system, as has also been documented in the literature on long economic cycles (see Shaikh 1992).

Marx's impact on economic thought has not received the recognition it deserves due to his view of the historical character of capitalist society and his vision of socialism. Thus, unfortunately, when orthodox economists discuss aspects of Marx's work, they generally do so to point out its alleged weaknesses rather than its strengths.

SEE ALSO *Communism; Competition, Marxist; Labor Theory of Value; Marxism*

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MARX, KARL: IMPACT ON SOCIOLOGY

The ideas of Karl Marx (1818–1883) on alienation, historical change, class relationships, the capitalist system, and social revolution have had a lasting impact on sociology, though interest in his work has fluctuated and sociologists have not always agreed about its relevance. In the classical period, for example, Émile Durkheim's 1897 "Review of Antonio Labriola, 'Essais sur la conception

matérialiste de l'histoire'" (Essays on the Materialist Conception of History, 1896) argued that the materialist conception of history—which he believed Marx's *The Communist Manifesto* (1848) represented—was unproven and contrary to established facts. In "Bureaucracy," (1921) Max Weber offered a critical estimation of a socialist program's likelihood of success, while his *The Protestant Ethic and the Spirit of Capitalism* (1905) forwarded an idealist explanation of capitalism's rise to complement Marxist-materialist accounts.

Georg Simmel's *The Philosophy of Money* (1900) and Ferdinand Tönnies's *Gemeinschaft und Gesellschaft* (Community and Society, 1887) were also, in part, motivated by Marx's view of modernity as a unique historical experience. While these classical theorists approached Marx from a general sociological vantage point, later scholars adopted a Marxian perspective from which to consider sociological questions, including the influence of class structures on the state, the human sciences, and popular culture, as well as the dynamics of social stratification systems.

In early twentieth-century Europe, Italian Marxist Antonio Gramsci (*Selections from the Prison Notebooks*) inquired into how the ruling class's cultural "hegemony" can shape social institutions and thwart revolutionary spirit and action. In Germany, Georg Lukács similarly examined the relationship between *History and Class Consciousness* (1923). In his widely read and debated *Ideology and Utopia* (1929), Karl Mannheim (Hungarian born, schooled in Germany and France) tapped into Marxist ideas for research on the sociology of knowledge. Scholars at the Institute for Social Research—later known collectively as the Frankfurt school and including most notably Herbert Marcuse (*Reason and Revolution*, 1941; *One-Dimensional Man*, 1964), Max Horkheimer (*Critical Theory*, 1968), and Theodor Adorno (*Negative Dialectics*, 1966)—examined how commodity markets and bureaucratic planning shape science and popular culture (e.g., Horkheimer and Adorno 1972). Also in Germany, Jürgen Habermas adopted similar questions but further asked how ruling classes and their state representatives might suffer a *Legitimation Crisis* (1973), as well as how free communicative spaces can exist within the rubric of bureaucratic capitalism (*The Theory of Communicative Action*, vols. 1 and 2, 1981).

In France, Georges Canguilhem (*Ideology and Rationality in the History of the Life Sciences*, 1977) and Maurice Merleau-Ponty (*Adventures of the Dialectic*, 1955) appealed to Marx's ideas in their research on the human sciences. Their wider influence came through their students, most notably the structuralism of Louis Althusser (*For Marx*, 1965) and the poststructuralism of Michel Foucault (*The Archaeology of Knowledge*, 1969; *Discipline and Punish*, 1975). Later postmodern theorists such as Jacques Derrida (*Spectres of Marx*, 1993) and Ernesto Laclau and Chantal Mouffe (*Hegemony and Socialist Strategy*, 1985) were sympathetic to Marx's views for capturing the contemporary moment and animating political struggle, though they argued for incorporating nontraditional Marxist concerns such as racial, gender, national, and sexual identities into radical politics.

In England, historian E. P. Thompson's *The Making of the English Working Class* (1963) provided insight into class dynamics and historical social change, while Ralph Miliband (*The State in Capitalist Society*, 1969) debated Greek theorist Nicos Poulantzas (1969) on the relationship between social classes and the state—that is, "relative autonomy" versus "instrumentalist" theories. This dialogue inspired reexaminations of political power in Marxist terms, such as those found in Bob Jessop's *The Capitalist State: Marxist Theories and Methods* (1982). Also in England, Anthony Giddens adopted features of Marx's materialist approach in constructing *New Rules of Sociological Method* (1976) and his theory of "structuration" (Giddens 1984).

Outside the centers of European power, others picked up Marxian questions. African Marxist Frantz Fanon's *The Wretched of the Earth* (1961) offered a trenchant critique of French imperialism in Algeria. In Latin America, economist Raúl Prebisch's *The Economic Development of Latin America and Its Problems* (1950) examined relations of unequal exchange between "core" capitalist societies and those on their "periphery" in the world market. This perspective influenced dependency theory, whose main advocate was the German American scholar Andre Gunder Frank (*Capitalism and Underdevelopment in Latin America*, 1967). Frank argued that the "underdeveloped" conditions of many countries in the Americas resulted from economic and political exploitation visited upon them by capitalist powers. This perspective attracted the attention of Chilean president Salvador Allende and former Brazilian president Fernando Henrique Cardoso while in political exile.

In the United States, where Marx was generally eclipsed for the first half of the twentieth century, economist Paul Sweezy's works, *The Theory of Capitalist Development* (1942) and *Monopoly Capital* (1966), were influential in keeping a Marxist dialogue alive. The postwar period found sociologists such as C. Wright Mills using Marx's (and Weber's) work for a critical analysis of *The Power Elite* (1956), which was said to dominate political, economic, and military institutions. Adopting dialectics as his viewpoint, Bertell Ollman (1968) revealed the objective and subjective elements in Marx's approach to class and examined how the humanism in his early works shed light on the question of alienation (*Alienation: Marx's*

Conception of Man in Capitalist Society, 1971). Having previously fled Nazi Germany (Adorno and Horkheimer found a home at the New School for Social Research in New York City and Marcuse at the University of California, San Diego), Frankfurt school scholars and American Marxists, in combination with the U.S. political-cultural climate in the 1960s and 1970s, made conditions conducive for a new generation of scholars to rediscover Marx. Interest in Marx's humanism and alienation brought attention to the Frankfurt school's work on the culture industries and the mass media in the works of Douglas Kellner and Stuart Ewen. Other theorists of popular culture, such as Frederic Jameson, followed the postmodern lead to inquire about "the cultural logic of late capitalism."

Marx's impact on sociology advanced elsewhere on both theoretical and research fronts. Marx's political economy inspired Althusser's structural Marxism, which theorized the operation of social structures outside of human agency, and analytical Marxism, which placed the rational actor at the center of analysis (Elster 1985; Roemer 1986). One influential perspective sharing this latter approach was Erik Olin Wright's (1976) work on the "contradictory class locations" in advanced capitalism, as well as his studies of *Class, Crisis, and the State* (1978). Theda Skocpol's *States and Social Revolutions* (1979) advanced class analysis through a historical-comparative study of state formation, while Michael Burawoy (1990) examined how Marx's scientific commitments inform the history of political strategies of radical movements. Scholars outside of conventional Marxism, such as feminist theorists and researchers (Smith 1977) and criminologists (Richard Quinney), increasingly incorporated Marxist ideas in an intellectual climate that also brought renewed attention to the work on race relations previously done by W. E. B. Du Bois and Oliver Cox, each of whom Marx had influenced.

Perhaps the most influential strand of Marxist thought has been Immanuel Wallerstein's (1974–1989) *World Systems Analysis*. This perspective arose in dialogue with Russian theories about Asiatic modes of production, the French Annales school and its analyses of historical periods of the *longue durée* (Marc Bloch, Lucien Febvre, Fernand Braudel), and Latin American theorists of unequal exchange and other dependency theorists (*world-systems analysis*). After their introduction into the discipline, Wallerstein's models of core-periphery relations, the interstate system, long waves of capitalist development, the rise of antisystemic movements, and the transition out of the capitalist world economy have ever since shaped the work of world-systems analysts. Used in studies of development, social stratification (including race, class, and gender studies), and the sociology of knowledge, world-systems analysis arguably reached the status of a paradigm in itself by the late twentieth century.

Throughout the second half of the twentieth century, the number of journals devoted to Marxist studies proliferated, including the *New Left Review* (1960), *Capital & Class* (1977), *Thesis Eleven* (1980), *Praxis International* (1981), *Critical Sociology* (1987; formerly *The Insurgent Sociologist*, 1969–1987), *Rethinking Marxism* (1988), and *Historical Materialism* (1997). Not limited to sociologists, these journals provided a home for a wide variety of Marxist scholarship, something less in evidence in sociology prior to the 1960 to1970 period. Marxist scholars also increasingly found professional institutionalization within reach both in the university system and in sociology's major organizations. For instance, in 1975 the American Sociological Association officially incorporated a Marxist section.

Marx's political-economic, materialist, and dialectical thought continues to inform research programs in sociology. Control of productive resources is a source of social power in capitalist society, shaping the conditions of work, discourse in the mass media, and state policies worldwide. These relationships have grown in scope since Marx's day, as have attempts by antisystemic movements to find local autonomy, cross-national cooperation, and solutions to ecological crises. With capitalist society and how to study it as its central subject matter, Marx's work remains a source of insight for all sociologists interested in studying the origins, the structure, and the nature of the change within the capitalist system.

SEE ALSO *Communism; Marxism*

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Paul Paolucci

MARXISM

Marxism is a family of critiques, theories, and political goals loosely organized around the theories and criticisms formulated by Karl Marx (1818–1883) in the middle of the nineteenth century. Central to this body of theory are several key ideas: the view that capitalism embodies a system of class exploitation; that socialism is a social order in which private property and exploitation are abolished; and that socialism can be achieved through revolution. Revolutionary leaders and theorists, and several generations of social scientists and historians, have attempted to develop these central ideas into programs of political action and historical research. The challenges for Marxist political parties fall in two general areas: how to achieve revolutionary political change (the problem of revolution); and what the ultimate socialist society ought to look like (the problem of the creation of socialism).

Marx was an advocate for socialism and for the ascendant political power of the working class (Newman 2005). His analysis of the need for political action by the proletariat was most fully expressed in *The Communist Manifesto*, jointly authored with Friedrich Engels. He was one of the early leaders of the International Workingmen's Association (the First International), founded in 1864. However, Marx's economic and political writings provide very little concrete guidance for the design of a socialist society. Socialism was to be an order in which exploitation and domination were abolished; it was to establish an end to the dominion of private property; it was to create an environment of democratic self-determination for the proletariat. Marx's own definition of socialism might have included these elements: collective ownership of the means of production, a centralized socialist party, political power in the hands of the proletariat, and the view that socialist reform will require the power of a socialist state. Marx also emphasized human freedom and "true democracy"—elements that could have been incorporated into nonauthoritarian forms of democratic socialism.

Much of the political platform of twentieth-century Marxism took shape following the death of Marx through a handful of more authoritarian theories, including especially those of Vladimir Lenin (1870–1924), Joseph Stalin (1878–1953), and Mao Zedong (1893–1976). The most catastrophic ideological results of twentieth-century communism bear only a tangential relationship to Marx's writings; instead, they bear the imprint of such revolutionary thinkers as Lenin, Stalin, Leon Trotsky (1879–1940), and Mao. Perhaps the most crucial flaw within twentieth-century communist thought was its authoritarianism: the idea that a revolutionary state and its vanguard party can take any means necessary in order to bring about communist outcomes. This assumption of unlimited political authority for party and state led to massive violations of human rights within Soviet and Communist regimes: Stalin's war on the *kulaks* (rich farmers), the Moscow show trials, the Gulag, Mao's Great Leap Forward and its resulting famine, and the Chinese Cultural Revolution. The dramatic economic failures of centralized Soviet-style economies derived from a similar impulse: the view that the state could and should manage the basic institutions and behaviors of a socialist society (Kornai 1992).

It is possible to formulate a nonauthoritarian conception of socialism based on a democratic socialist movement and a theory of a democratic socialist society. Indeed, it is possible to find support for such conceptions within the writings of Marx himself. The most influential Marxist parties of the twentieth century took another avenue, however. These parties emphasized the "dictatorship of the proletariat," the need for the working class to seize power by force, and the conviction that the "bourgeoisie" and its allies would not tolerate a peaceful transformation of the defining property relations of capitalism. The Bolshevik seizure of political power in the Russian Revolution (1917), the failed Spartacist uprising in Germany in 1918, and the Chinese Communist Revolution in 1949 all embodied the assumption that only a disciplined central party, supported by the masses, would be able to exercise the power necessary to overthrow the capitalist ruling class; and only a disciplined Communist government would be capable of enacting the massive social changes required for the establishment of communist society once in power. The dominant political ideology of communist parties and states in the twentieth century was antidemocratic and ruthless in its use of violence against its own citizens. (One of the few examples of a socialist regime that willingly submitted itself to popular referendum, and accepted defeat, was the government of Daniel Ortega in Nicaragua in 1990.)

Soviet Communism represented the earliest and most pervasive ascendancy by a communist party. After the seizure of power in the Russian Revolution, Lenin and Stalin exercised political power to force the rapid transformation of Soviet society and economy, and to preserve the power and privilege of the Communist Party. There was deep disagreement among the party's leadership about the right course for Soviet Communism. How should the development of agriculture and industry be balanced? How rapidly should socialist transition be performed?

How should the forces of the market and the state be involved in socialist transition? One school of thought advocated a gradual transformation of the Soviet economy and system of production, permitting the workings of market institutions and the emergence of an industrial bourgeoisie that would advance Soviet industrial capacity. The other school was ideologically opposed to permitting a propertied class to acquire power, and advocated a state-directed and more rapid transition to socialism. The New Economic Policy (NEP) of 1921 embodied the former strategy, and it was decisively rejected by 1928. From that point forward, Stalin demonstrated his intention of using the power of the state to force social changes that would propel the Soviet system into its communist future. Stalin's determination to defeat "counter-revolutionary *kulaks*" during the period of collectivization of agriculture brought about the deaths by starvation of several million rural people in the Ukraine, as a deliberate act of policy (Viola 2005). The doctrine of "socialism in one country" led the Soviet-dominated Communist International to sacrifice other socialist parties (for example, during the Spanish Civil War) in favor of the interests of the Soviet system. Stalin's internal political and ideological struggles within the party led him to pursue a murderous campaign against other Communist leaders and ordinary people, resulting in show trials, summary executions, and the consignment of millions of people to remote labor camps. (See Smith 2002 for a good summary of these events.)

China's Communist Revolution was guided by Mao Zedong from its early mobilization in the 1920s, through civil war and anti-Japanese war in the 1930s and 1940s, to successful seizure of power in 1949 by the Chinese Communist Party (CCP) and the Red Army. Mao's Marxism was strongly influenced by Soviet ideology, but also incorporated the perspective of the role of the peasantry in revolution. Classical Marxism placed the proletariat at center stage as the revolutionary class, but Mao's urban proletariat strategy was destroyed in 1927 when the Republican army under Chiang Kai-shek (1887–1975) massacred the Shanghai Communist Party organization. This precipitated the Long March and Mao's regrouping around an ultimately successful peasant-based strategy for revolution. China's communist leaders too faced fateful policy choices: whether and how to implement "social ownership" of agriculture and industry, how to achieve rapid industrialization and modernization, how to create the political conditions necessary to sustain Chinese socialism and socialist identity among the Chinese population, and how to confront the capitalist world. China's history since 1949 has pivoted around these issues: the Great Leap Forward (1957), in which China underwent rapid collectivization of agriculture, and an ensuing famine that resulted in tens of millions of deaths; the Cultural Revolution (1966–1976), in which Red Guards throughout the country persecuted and punished teachers, officials, and others for political purity; the reform of agriculture toward the Family Responsibility system in the 1980s, resulting in a surge of productivity in the farm economy; and the rapid economic growth of the 1990s into the first part of the twenty-first century. Developments since 1980 reveal a more pragmatic and market-oriented approach toward China's development on the part of CCP leadership. At the same time, the Chinese government's crackdown on the democracy movement in 1990 at Tiananmen Square demonstrated the party's determination to maintain control of China's political system.

Anticapitalist politics of the early twentieth century were influenced by several strands of activism and theory that were independent of Marx's thought, and these strands found expression in the solutions and platforms of Marxist political parties and movements. Anarchist thinkers, such as Mikhail Bakunin (1814–1876) and Peter Kropotkin (1842–1921), put forward the radical view that all forms of state power were inherently evil. Anarchism and syndicalism had significant influence on radical labor unions in Europe and North America. Revisionist socialists, such as Eduard Bernstein (1850–1932), argued that revolution by force was not a feasible path to socialism and advocated instead for gradual change from within capitalism. Democratic thinkers emphasized the ability of groups of people to govern themselves, and to press their states to undertake radical reforms of current conditions. The British Labour Party and the main European social democratic parties fall within the tradition of democratic socialism, as opposed to Marxism-Leninism. European socialist parties in the twentieth century affiliated within the loose political organizations of the Second International (1889–1916), the International Working Union of Socialist Parties, and the Socialist International (Miliband 1982).

The twentieth century witnessed several important new developments within the intellectual architecture of Marxism. Western Marxism attempted to extrapolate Marx's ideas in new ways, extending treatment of issues having to do with humanism, dialectics, history, and democracy. Critical theory was an important intellectual elaboration of some of Marx's philosophical ideas, in the hands of such thinkers as Theodor Adorno (1903–1969), Max Horkheimer (1895–1973), Hans-Georg Gadamer (1900–2002), and Jürgen Habermas (b. 1929) (Geuss 1981; Wellmer 1971). In the 1960s Western Marxism developed a distinctive political standpoint on the issues of the day under the banner of the "New Left": economic inequality within capitalist countries, inequalities within a colonialized world, and struggles for independence by countries in the developing world. Partially shaped by a growing awareness of Stalin's crimes in the 1940s and

1950s, Western Marxists developed the strand of democratic socialism into a full intellectual and political program. Particularly important were contributions by Perry Anderson (b. 1938), E. P. Thompson (1924–1993), Ralph Miliband (1924–1994), and the *New Left Review*. This body of thought retained the critical perspective of classical Marxism; it gave greater focus to the world historical importance of imperialism and colonialism; and it aligned itself with the interests of developing countries such as Cuba and India.

MARXISM AS A BODY OF RESEARCH

The other important dimension of Marxism in the contemporary world is in the area of knowledge and theory. Marx's theoretical and scientific writings are primarily expressed in his economic writings in the three volumes of *Capital* and *Theories of Surplus Value*, and in his historical writings such as *The German Ideology* and *The Eighteenth Brumaire of Louis Napoleon*. Marx's theory of historical materialism maintains that large historical change proceeds as a result of dynamic interaction between the forces and relations of production (roughly, technology and property relations) (Cohen 1978). Marx identifies the economic structure of society (the forces and relations of production) as the key factor that constrains and impels historical transformation across large historical epochs (the slave mode of production, feudalism, capitalism). And he regards other institutions, including institutions of politics and culture, as part of the superstructure of society. These "superstructural" institutions are social arrangements that serve to support and stabilize the development of the economic structure. Another important element of the framework of historical materialism is the theory of class conflict as an engine of historical change. The central conflict in every society, according to Marx, is the economic conflict between owners of property and the propertyless: masters and slaves, lords and serfs, and capitalists and proletarians. Marx also offers a theory of ideology and mystification: the view that the ideas and beliefs that people have in a class society are themselves a material product of specific social institutions, and are distorted in ways that serve the interests of the dominant classes.

Materialism implies that the economic structure of society is fundamental to its historical dynamics. How does this theory work in relation to modern society? Marx advanced a multistranded analysis of the capitalist mode of production in his most extensive work, *Capital*. This account was intended to be rigorous and scientific (Little 1986; Rosdolsky 1977). Marx hoped to succeed in penetrating beneath the surface appearances of the English economy of the nineteenth century, to discover some "laws of motion" and institutional mechanisms that would explain its historical behavior. There are several independent strands of this analysis: a social-institutional account of the specific property relations (capital and wage labor) that defined the material and institutional context of capitalist development; a sociological description of some of the characteristics of the industrial workplace and the industrial city; a historical account of the transformations of traditional rural society that had created the foundation for the emergence of this dynamic system; and a mathematical analysis of the sources and transformation of value and surplus value within this economy. The mathematical theory based on the labor theory of value has not stood the test of time well, whereas the more sociological and institutional core of the framework continues to shed light on how a modern private-property economy functions.

There is no single answer to the question, "What is the Marxist approach to social science?" Instead, Marxist social inquiry in the twentieth and twenty-first centuries represents a chorus of many voices and insights, many of which are inconsistent with others. Rather than representing a coherent research community defined by a central paradigm and commitment to specific methodological and theoretical premises, Marxist social science in the twentieth century had a great deal of variety and diversity of perspectives. There is a wide range of thinkers whose work falls within the general category of Marxian social science and history: E. P. Thompson, Louis Althusser, Jürgen Habermas, Gerald Cohen, Robert Brenner, Nicos Poulantzas, Perry Anderson, Ralph Miliband, Nikolai Bukharin, Georg Lukàcs, Antonio Gramsci, and Michel Foucault. All these authors have made a contribution to Marxist social science, but in no way do these contributions add up to a single, coherent and focused methodology for the social sciences. Instead, there are numerous instances of substantive and methodological writings, from a variety of traditions, that have provided moments of insight and locations for possible future research.

THE TWENTY-FIRST CENTURY

Where do Marx's ideas stand in the early part of the twenty-first century? Several areas of limitation in Marx's social theories have come under scrutiny by theorists and social critics late in the twentieth century. (1) Feminist and cultural critics have argued that Marx's thought is too economistic and exclusively focused on issues of class—thereby ignoring other forms of oppression and domination that exist in modern society, including those based on gender, race, or ethnicity. (2) "Green" socialists have criticized Marx's theory of capitalist development and socialism on the ground that it is deeply pro-growth, in ways that are sometimes said to be at odds with environmental sustainability. (3) Democratic socialists have criticized

Marx's rhetoric of class politics on the ground that it gives too little validity to the demands of democracy; they have advocated for a much deeper embodiment of the importance of collective self-determination within socialist theory and practice. (4) Marx's critique of capitalist society emphasizes economic features to the neglect of cultural or ideological forms of domination. Theorists who consider the social role of communications media argue (reminiscent of Gramsci's writings) that the softer forms of oppression and domination that are associated with television, the Internet, and the instruments of public opinion are at least as profound in the contemporary world as the more visible forms of political and economic domination that Marx emphasized. Here the writings of Stuart Hall (Hall 1980, 1997) and Raymond Williams (Williams 1974, 1977) have been particularly influential.

Notwithstanding these areas of limitation in Marx's vision, the most central critical theory within Marxism is the demand for human emancipation from forms of exploitation, domination, and alienation that interfere with full, free human development. And these ideas give ample scope for twenty-first century debates and progress.

SEE ALSO *Materialism, Dialectical*

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Daniel Little

MARXISM, BLACK

An examination of black Marxism—the marriage between Marxism and "black radicalism"—illuminates the theoretical gaps in the Marxist canon as it relates to non-Western movements and non-Western liberation struggles that speak in the idioms of culture, nationalism, and race. Black Marxists have grappled with the contradictions that emerge when Marxist paradigms are the medium for the articulation of a path to transformation. While theorists have noted the "anti-bourgeois tendencies in black cultures" (Duran 2005, p. 1), many of the Eurocentric assumptions that pervade Marxism are a challenge to the formulation of a black Marxist theory (see Robinson 1983). Whereas Marxism focuses heavily on the activism of a vanguard proletariat, black freedom struggles have revolved around a collective, albeit contested identity shaped by racism. In reaction, black Marxist thinkers have argued for a position that emphasizes "materialism over idealism" and acknowledges the centrality of race in the black experience (Campbell 1995, p. 420).

Marxism is a method of analysis and a theoretical critique that sees capitalism as a system which fosters social divisions. A powerful class-consciousness, specifically among the working class, is considered vital to the oppositional upsurge that Marxism contends is essential to revolution. Cedric Robinson (1983) argued against the Marxist position that the "European proletariat" is the "revolutionary subject of history" (p. 4). He criticized Marxism's "dismissal of culture" and its theoretical myopia on the issue of race (p. 78). Furthermore, as A. Sivanandan (1977) explained, "Blacks are a class apart, an underclass, a subproleteriat" (p. 339). Thus, for many black intellectuals, race, rather than being an incidental dimension of class, provides a significant subtext for the theorizing of radical change.

Collaborations between Marxists and black radicals in the United States began in the 1920s and 1930s when African Americans became a focus of organizing by the Communist Party. Early black Communists like Harry Haywood helped to elucidate the "Negro Question" and struggled against the assignment of blacks to a "subsidiary position in the revolutionary movement" (Haywood 1978, p. 234). At the Sixth World Congress of the American Communist Party in 1928, resolutions were

passed on the American "Negro Question." They concluded that African Americans were an "oppressed nation which had the right to self-determination," and that the Southern "Black Belt" was prime for revolutionary activity (Haywood 1978, p. 268).

Robin Kelley (1990) charted the history of the connections between southern black resistance and the organizing of the Communist Party in 1930s Alabama. According to Kelley, historically black working-class resistance occupied the "margins of struggle," and even without a specific organizational context, southern African Americans always possessed a "rich culture of opposition" (p. 99). Communist organizers focused their recruitment on agricultural workers and sharecroppers in Birmingham, making the Communist Party in Alabama a "Southern working class black organization" (p. xii). Communists formed sharecropping unions, neighborhood relief committees, and unemployment councils for the city's poor. In Alabama, Communists "opposed race and class oppression as a totality under the banner of 'bread and freedom,' and through the newspaper, *The Southern Worker*" (Kelley 1990, p. xii).

Later, the Communist Party chose Harlem, New York, as another "concentration point" because it was the epicenter of black protest (Naison 1983, p. xvii). Early black radicalism in 1930s Harlem aligned itself with the traditions of black nationalism and black militancy. Some Communists considered "narrow nationalism" and "back to Africa" ideologies to be reactionary, although others viewed nationalism as a "legitimate trend in the Black Freedom Movement" (Haywood 229, p. 1978). Mark Naison (1983) documented Communist Party activism in Harlem and described how early black Communists were "race men and women" drawn from the ranks of nationalist organizations. In Harlem, Communists organized workers alliances, tenant unions, cultural groups, and legal defense organizations. Harlem was a rich political landscape, with organizations like the Urban League and the NAACP, and the ultranationalism of Marcus Garvey. Within Harlem, socialist ideas were spread through the work of A. Philip Randolph, president of the Brotherhood of Sleeping Car Porters union. His magazine, the *Messenger*, was accused by the U.S. government of promoting "Bolsheviki activities among Negroes" (Kornweibel 1998, p. 21). While in socialist and Communist circles the dominant view, shared by Randolph, was that "race was a strategic weapon to dissipate working class coherence," convergent race and class struggles dominated mass protests of this time (Henderson 1978, p. 148). Even at the height of the black power discourse of the 1970s, African American activists like Angela Davis—a member of the Communist Party also affiliated with the Black Panthers—continued to forge connections between class struggle and antiracism.

Within the African Diaspora, the dialectical method of Marxism proved a useful source of insights for those engaged in anticolonial and postcolonial struggles. Afro Caribbean intellectuals and activists such as Trinidadians C. L. R. James and George Padmore, Guyana native Walter Rodney, and Martinique-born Aime Cesaire merged the tenets of Pan-Africanism, nationalism, "Negritude," and Marxism. Padmore, a unionist and founder of the Pan-African Federation, remarked, "labour in white skin cannot free itself while labour in dark skin is branded" (Padmore 1945, p. 3). Cesaire, however, eventually became disillusioned and resigned from the French Communist Party, saying, "What I desire is that Marxism and communism should serve Black people, and not that Black people should serve Marxism" (Caute 1964, p. 211). C. L. R. James, a Trotskyite, lauded the independent and dynamic trajectory of black struggles in the United States. He believed that "the Negro people based on their own experiences approach the conclusions of Marxism" (Grimshaw 1992, p. 187). In the 1970s the historian Walter Rodney extolled "a working class oriented definition of Black Power" and contended that the extraction of labor from black people was a cornerstone of capitalism (Fontaine 1982, p. 16). Throughout the 1970s and 1980s, Marxism was an instrumental theory in African-based liberation movements in Angola, Mozambique, and Guinea Bissau. Amilcar Cabral, the revolutionary leader of Guinea Bissau, linked class struggle to anti-imperialism, demonstrating the necessity of "incorporating the proletarian project into the project of national liberation" (Magubane 1983, p. 25). Also, anti-apartheid ideologists in South Africa adopted aspects of Marxist dictum even as they emphasized national and racial identities (see Marx 1992).

Marxism continues to inform the spectrum of black progressive politics, even as Afro-Diasporic intellectuals argue for the autonomy of black liberation struggles and their "organic political perspectives" (James 1992, p. 183). Contemporary black intellectuals urge that a tripartite analysis, stemming from "the nexus of three crucial sites of struggles, community, class and gender, be at the center of Black liberatory projects" (Marable 1997, p. 8). If they adhere to this perspective, social justice movements constituted by black people can remain "avant-garde" formations of contiguous race and class struggles (Duran 2005, p. 3).

SEE ALSO *Black Nationalism; Black Panthers; Black Power; Marx, Karl; Marxism; Politics, Black*

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MARXIST COMPETITION

SEE *Competition, Marxist.*

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VOLUME 5

MASCULINITY–NYERERE, JULIUS

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MASCULINITY

Masculinity refers to the social roles, behaviors, and meanings prescribed for men in any given society at any one time. As such, it emphasizes gender, not biological sex, and the diversity of identities among different groups of men. Although we experience gender to be an internal facet of identity, the concept of masculinity is produced within the institutions of society and through our daily interactions (Kimmel 2000).

SEX VS. *GENDER*

Much popular discourse assumes that biological sex determines one's gender identity, the experience and expression of masculinity and femininity. Instead of focusing on biological universals, social and behavioral scientists are concerned with the different ways in which biological sex comes to mean different things in different contexts. *Sex* refers to the biological apparatus, the male and the female—our chromosomal, chemical, anatomical, organization. *Gender* refers to the meanings that are attached to those differences within a culture. *Sex* is male and female; *gender* is masculinity and femininity—what it means to be a man or a woman. Whereas biological sex varies very little, gender varies enormously. Sex is biological; gender is socially constructed. Gender takes shape only within specific social and cultural contexts.

PLURAL *MASCULINITIES*

The use of the plural—*masculinities*—recognizes the dramatic variation in how different groups define masculinity, even in the same society at the same time, as well as individual differences. Although social forces operate to create systematic differences between men and women, on average, these differences *between* women and men are not as great as the differences *among* men or *among* women.

The meanings of masculinity vary over four different dimensions; thus four different disciplines are involved in understanding gender—anthropology, history, psychology, and sociology.

First, masculinities vary across cultures. Anthropologists have documented the ways that gender varies cross-culturally. Some cultures encourage men to be stoic and to prove masculinity, especially by sexual conquest. Other cultures prescribe a more relaxed definition of masculinity based on civic participation, emotional responsiveness, and collective provision for the community's needs. What it means to be a man in France or among Aboriginal peoples in the Australian outback are so far apart that it belies any notion that gender identity is determined mostly by biological sex differences. The differences between two cultures' version of masculinity is often greater than the differences between the two genders.

Second, definitions of masculinity vary considerably in any one country over time. Historians have explored how these definitions have shifted in response to changes in levels of industrialization and urbanization, in a nation's position in the larger world's geopolitical and economic context, and with the development of new technologies. What it meant to be a man in seventeenth-century France or in Hellenic Greece is certainly different from what it might mean to be a French or Greek man today.

Third, definitions of masculinity change over the course of a person's life. Developmental psychologists have examined how a set of developmental milestones leads to differences in our experiences and our expressions of gender identity. Both chronological age and life stage require different enactments of gender. In the West, the issues confronting a man about proving himself and feeling successful change as he ages, as do the social institutions in which he attempts to enact those experiences. A young single man defines masculinity differently than do a middle-aged father and an elderly grandfather.

Finally, the meanings of masculinity vary considerably within any given society at any one time. At any given moment, several meanings of masculinity coexist. Simply put, not all American or Brazilian or Senegalese men are the same. Sociologists have explored the ways in which class, race, ethnicity, age, sexuality, and region all shape gender identity. Each of these axes modifies the others. For example, an older, black, gay man in Chicago and a young, white, heterosexual farm boy in Iowa would likely have different definitions of masculinity and different ideas about what it means to be a woman. Yet each of these people is deeply affected by the gender norms and power arrangements of their society.

Because gender varies so significantly—across cultures, over historical time, among men and women within any one culture, and over the life course—we cannot speak of masculinity as though it is a constant, universal essence, common to all men. Gender must be seen as an ever-changing, fluid assemblage of meanings and behaviors; we must speak of *masculinities*. By pluralizing the term we acknowledge that masculinity means different things to different groups of people at different times.

GENDER IDENTITY

Recognizing diversity ought not to obscure the ways in which gender definitions are constructed in a field of power. Simply put, all masculinities are not created equal. In every culture, men contend with a definition that is held up as the model against which all are expected to measure themselves. This "hegemonic" definition of masculinity is "constructed in relation to various subordinated masculinities as well as in relation to women," writes sociologist R. W. Connell (1987, p. 183). As Erving Goffman once described it,

> In an important sense there is only one complete unblushing male in America: a young, married, white, urban, northern, heterosexual, Protestant, father, of college education, fully employed, of good complexion, weight, and height, and a recent record in sports.… Any male who fails to qualify in any one of these ways is likely to view himself—during moments at least—as unworthy, incomplete, and inferior. (1967, p. 128)

Definitions of masculinity are not simply constructed in relation to the hegemonic ideals of that gender, but also in constant reference to each other. Gender is not only plural, it is also relational. Surveys in Western countries indicate that men construct their ideas of what it means to be men in constant reference to definitions of femininity. What it means to be a man is to be unlike a woman; indeed, social psychologists have emphasized that although different groups of men may disagree about other traits and their significance in gender definitions, the "antifemininity" component of masculinity is perhaps the single dominant and universal characteristic.

Gender difference and gender inequality are both produced through our relationships. Nancy Chodorow argued that the structural arrangements by which women are primarily responsible for raising children creates unconscious, internalized desires in both boys and girls that reproduce male dominance and female mothering (1978). For boys, gender identity requires emotional detachment from mother, a process of individuation through separation. The boy comes to define himself as a boy by rejecting whatever he sees as female, by devaluing the feminine in himself (separation) and in others (male superiority). This cycle of men defining themselves through their distance from and devaluation of femininity can end, Chodorow argues, only when parents participate equally in child rearing.

GENDER AS AN INSTITUTION

Although we recognize gender diversity, we still may conceive masculinities as attributes of identity only. We think of gendered individuals who bring with them all the attributes and behavioral characteristics of their gendered identity into gender-neutral institutional arenas. But because gender is plural and relational, it is also situational: What it means to be a man varies in different institutional contexts, and those different institutional contexts demand and produce different forms of masculinity. "Boys may be boys," writes feminist legal theorist Deborah Rhode, "but they express that identity differently in fraternity parties than in job interviews with a female manager" (Rhode 1997, p. 142). Gender is thus not only a property of individuals, some "thing" one has, but a specific set of behaviors that are produced in specific social situations. Thus gender changes as the situation changes.

Institutions are themselves gendered. Institutions create gendered normative standards and express a gendered

institutional logic, and are major factors in the reproduction of gender inequality. The gendered identity of individuals shapes those gendered institutions, and the gendered institutions express and reproduce the inequalities that compose gender identity. Institutions themselves express a logic—a dynamic—that reproduces gender relations between women and men and the gender order of hierarchy and power.

Not only do gendered individuals negotiate their identities within gendered institutions, but also those institutions produce the very differences we assume are the properties of individuals. Thus, "the extent to which women and men do different tasks, play widely disparate concrete social roles, strongly influences the extent to which the two sexes develop and/or are expected to manifest widely disparate personal behaviors and characteristics" (Chafetz 1980, p. 112). Different structured experiences produce the gender differences that we often attribute to people (Chafetz 1980).

For example, take the workplace. In her now classic work *Men and Women of the Corporation* (1977), Rosebeth Moss Kanter argued that the differences in men's and women's behaviors in organizations had far less to do with their characteristics as individuals than with the structure of the organization itself and the different jobs men and women held. Organizational positions "carry characteristic images of the kinds of people that should occupy them," she argued, and those who do occupy them, whether women or men, exhibited those necessary behaviors (Kanter 1977, p. 21). Though the criteria for evaluation of job performance, promotion, and effectiveness seem to be gender neutral, they are, in fact, deeply gendered. "While organizations were being defined as sex-neutral machines," she writes, "masculine principles were dominating their authority structures" (p. 241). Once again, masculinity—the norm—was invisible (Kanter 1975, 1977). For example, secretaries seemed to stress personal loyalty to their bosses more than did other workers, which led some observers to attribute this to women's greater level of personalism. But Kanter pointed out that the best way for a secretary—of either gender—to get promoted was for the boss to decide to take the secretary with him to the higher job. Thus the structure of the women's jobs, not the gender of the job holder, dictated their responses.

Sociologist Joan Acker has expanded on Kanter's early insights and has specified the interplay of structure and gender. It is through our experiences in the workplace, Acker maintains, that the differences between women and men are reproduced, and in this way the inequality between women and men is legitimated. Institutions are like factories, and one of the things that they produce is gender difference. The overall effect of this is the reproduction of the gender order as a whole (see Acker 1987, 1988, 1989, 1990).

Institutions accomplish the creation of gender difference and the reproduction of the gender order through several gendered processes. Thus, "advantage and disadvantage, exploitation and control, action and emotion, meaning and identity, are patterned through and in terms of a distinction between male and female, masculine and feminine" (Acker 1990, p. 146). We would err to assume that gendered individuals enter gender-neutral sites, thus maintaining the invisibility of gender-as-hierarchy, and specifically the invisible masculine organizational logic. At the same time, we would be just as incorrect to assume that genderless "people" occupy those gender-neutral sites. The problem is that such genderless people are assumed to be able to devote themselves single-mindedly to their jobs, to have no children or family responsibilities, and perhaps even to have familial supports for such single-minded workplace devotion. Thus, the "genderless" job holder turns out to be gendered as a man.

Take, for example, the field of medicine. Many doctors complete college by age twenty-one or twenty-two, and medical school by age twenty-five to twenty-seven, and then face three more years of internship and residency, during which time they are occasionally on call for long stretches of time, sometimes for even two or three days straight. They thus complete their residencies by their late twenties or early thirties. Such a program is designed for a male doctor—one who is not pressured by the ticking of a biological clock, for whom the birth of children will not disrupt these time demands, and who may even have someone at home taking care of his children while he sleeps at the hospital. No wonder women in medical school—who number nearly one half of all medical students today—began to complain that they were not able to balance pregnancy and motherhood with their medical training.

In another example, in a typical academic career a scholar completes a PhD about six to seven years after the BA, roughly by age thirty, and then begins a career as an assistant professor with six more years to earn tenure and promotion. This is usually the most intense academic work period of a scholar's life and also the most likely childbearing years for professional women. The tenure clock is thus set to a man's rhythms—not just any man, but one with a wife to relieve him of family obligations as he establishes his credentials. To academics struggling to make tenure, it often feels that publishing requires that family life perish.

Embedded in organizational structures that are gendered, subject to gendered organizational processes, and evaluated by gendered criteria, then, the differences

between women and men appear to be the differences solely between gendered individuals. When gender boundaries seem permeable, other dynamics and processes can reproduce the gender order. When women do not meet these criteria (or, perhaps more accurately, when the criteria do not meet women's specific needs), we see a gender-segregated workforce and wage, hiring, and promotional disparities as the "natural" outcomes of already present differences between women and men. It is in this way that those differences are generated and the inequalities between women and men are legitimated and reproduced.

"DOING" GENDER

There remains one more element in the sociological explanation of masculinities. Some psychologists and sociologists believe that early childhood gender socialization leads to gender identities that become fixed, permanent, and inherent in our personalities. However, many sociologists disagree with this notion today. As they see it, gender is less a component of identity—fixed, static—that we take with us into our interactions and more the product *of* those interactions. In an important article, "Doing Gender," Candace West and Don Zimmerman argued that "a person's gender is not simply an aspect of what one is, but, more fundamentally, it is something that one *does*, and does recurrently, in interaction with others" (1987, p. 140). We are constantly "doing" gender, performing the activities and exhibiting the traits that are prescribed for us.

Doing gender is a lifelong process of performances. As we interact with others we are held accountable to display behavior that is consistent with gender norms, at least for that situation. Thus consistent gender behavior is less a response to deeply internalized norms or personality characteristics and more a negotiated response to the consistency with which others demand that we act in a recognizable masculine or feminine way. Gender is not an emanation of identity that bubbles up from below in concrete expression; rather, it is an emergent property of interactions, coerced from us by others.

Understanding how we do masculinities, then, requires that we make visible the performative elements of identity, and also the audience for those performances. It also opens up unimaginable possibilities for social change, as Suzanne Kessler points out in her study of "intersexed" people (hermaphrodites, those born with anatomical characteristics of both sexes or with ambiguous genitalia):

> If authenticity for gender rests not in a discoverable nature but in someone else's proclamation, then the power to proclaim something else is available. If physicians recognized that implicit in their management of gender is the notion that finally, and always, people construct gender as well as the social systems that are grounded in gender-based concepts, the possibilities for real societal transformations would be unlimited. (Kessler 1990, p. 25)

Kessler's gender utopianism raises an important issue. In saying that we "do" gender we are saying that gender is not only something that is done *to* us. We create and recreate our own gendered identities within the contexts of our interactions with others and within the institutions we inhabit.

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MASCULINITY STUDIES

Masculinity refers most commonly to socially constructed expectations of appropriate behaviors, beliefs, expressions, and styles of social interaction for men in a culture or subculture at a given time. The substantive meanings associated with masculinity are culturally specific, and refer to social arrangements and institutionalized practices as well as individual actions and embodiments. Historically, these meanings have been premised on ideologies and symbolism that cast women as "opposite" and inferior to men, and that position some men as superior to other men. This is due, in large part, to the framing of gender expectations by dominant groups in ways that endorse dominant group practices—and the personal characteristics that presumably represent the embodiment of those practices—while at the same time devaluing the practices and characteristics of other out-groups. Evelyn Nakano Glenn (2002) and Eduardo Bonilla-Silva (2001) explain, for example, that Anglo or white men in industrialized Europe, North America, and other parts of the world support practices and social constructs that endorse their own position as superior to nonwhite men and men with little or no material resources.

Despite its complexity and relational character, popular conceptualizations continue to view masculinity narrowly as a unified set of personal characteristics, behaviors, and beliefs—including physical strength, assertiveness, emotional detachment, competition, and the belief that men are better suited than women for positions of leadership and decision making. Though unsupported by scientific evidence, many also believe that masculinity is derived from biology. The notion of essential differences between men and women, and corresponding notions of women's and men's different abilities and proclivities, has its origins in late nineteenth-century political movements in Western Europe and the United States. As more women joined the struggle for basic human rights, such as the right to vote and the right to own land, white male scholars focused increasing attention on notions of biological sex difference as a means for supporting ideologies of female inferiority (Carrigan, Connell, and Lee 1985; Fausto-Sterling 2000; MacInnes 2001). Men already in positions of power and privilege relative to women, men of color, men with fewer material advantages, noncitizens, and the disenfranchised, used ideologies of innate differences to justify discriminatory laws and practices (Glenn 2002).

The highly visible women's movement, as well as the loss of control and opportunity that many men—particularly white men—were experiencing as industrial work processes became more routine and competition for work from immigrants and migrant workers became more intense (Glenn 2002; Kimmel 1996; Roper 1994), also fed into a perceived "crisis of [white] masculinity" in both Europe and the United States at the beginning of the twentieth century (Chauncey 1985; D'Emilio and Freedman 1988). The perception of crisis added fuel to the search for biological evidence of male superiority and white racial superiority (Fausto-Sterling 2000, p. 156; hooks 2004).

Biologically based explanations for sex differences, notes François Nielsen (1994), were pervasive by the mid-twentieth century, and persist still. The logic behind these arguments is that evolutionary processes produce two distinct categories of humans, one that is more physically aggressive, competitive, emotionally independent, and instrumentally decisive, and another that is more passive, cooperative, interdependent, and nurturing. Persons categorized as male are assumed to fit the former, and those categorized as female to fit the latter. Scientific studies reveal many problems with the assumption that biology produces opposite sexes, that gender differences are derived from biology, and that males are innately superior to females. For example, the characteristics and traits that are supposed to differentiate women and men have much more in common than not (Fausto-Sterling 2000; Kemper 1990; Kessler and McKenna 1978).

EARLY VIEWS ON MASCULINITY AS IDENTITY

Not all scholars of the early twentieth century viewed masculinity as a direct function of biology. The foundations of masculinity as identity were established in the early 1900s with the work of Sigmund Freud (1905, 1923). Freud posited that the personality people most commonly associate with masculinity results from complex processes of unconscious conflict resolution and emotional development that start early in life. "The outcome of the differently structured Oedipal crises," explains Raewyn Connell, "are the bases of Freudian accounts of femininity and masculinity" (1987, p. 204). Freud's work has been variously elaborated by gender scholars. Nancy Chodorow (1978) focuses on how the division of labor within the family shapes how females and males process unconscious motivations and repressed desire. Given a gendered division of labor in industrial capitalist Western society, explains Chodorow, and a nuclear heterosexual family with a male primary wage

earner, young boys construct a sense of self in relation to a mother figure whose presence is consistent and intense, and a father figure that is more distant because of his role in paid labor. This arrangement leads infants to associate the mother with the fulfillment of desires. Boys' emotional attachment to the mother, however, transforms from one of oneness with her to a form of individuality-with-attachment that is intensely possessive. These possessive feelings for the mother lead the boy to view the father as a competitor for the mother's affections (Di Stefano 1991, pp. 45–48). The feelings of threat that the boy experiences in relation to the father (castration anxiety), along with the need to establish self and not-female, evoke ambivalence, which in turn requires that the boy identify with the father. And to develop a sense of self apart from mother, the boy seeks to establish himself as that which women/females are not (Chodorow 1978, pp. 96–97; Parsons 1964). Emotional detachment, competitiveness, and desire to control self and others become central to his identity (Gilligan 1982; Messner 1992).

Other theorists point out that psychoanalytic object relations views, such as Chodorow's, posit an overly unified concept of self and identity. Connell (1987, 1995) argues that Freud did not assert that processes of personality development produce two clear-cut, stable categories of personality characteristics. Connell agrees that fear of castration at the hands of the father leads boys to repress erotic feelings for the mother, to identify with the powerful father figure, to internalize prohibitions against desire for the mother, and to develop a strong superego, but argues that these are not fail-safe or immanent steps (Connell 1987, p. 204). Many contingencies and conflicts characterize these processes.

Building on existential psychoanalytic theory, Connell proposes the concept of gender projects, which views gender not as a fixed identity but rather as "a system of symbolic relationships" (1995, p. 20). From this view, past attachments, though often repressed, have consequences for future actions. The emotional contradictions and conflicts that arise as a boy goes through the pre-Oedipal and Oedipal stages produce a range of possible outcomes for the individual. The many conflicting emotions that a boy experiences in the development of his sense of self will influence how he projects himself into the future, and thus, the position he takes up in the symbolic order (Connell 1987, p. 211). Boys' and men's gender projects take many forms, some of which are consistent with dominant ideals of masculinity, and others of which are not. "The point," argues Connell, "is that no one pattern of development can be taken as universal even within the specific social context Freud studied" (Connell 1987, p. 206). Not all boys and men take up the same gender project (Chen 1999; Collinson 2003; Majors and Billson 1992; Messerschmidt 2000).

SOCIALIZATION THEORIES AND MASCULINITY AS GENDER ROLE

The most common social science frameworks for understanding masculinity since the mid-twentieth century have been sex role (later referred to as gender role) and socialization theories. The concept of sex roles was popularized in the work of Talcott Parsons (Parsons 1964; Parsons and Bales 1955). Underlying the logic of masculinity as a role is the assumption that significant differences separate men from women as social actors. According to Parsons, structural differentiation is a requirement of society, and the division of labor within the family between "instrumental" men and "expressive" women was necessary to ensure proper socialization of children. Boys are also taught within the family, peer groups, schools, and other social organizations and institutions the behaviors and traits that are considered appropriate for boys and men. Boys internalize gender-specific, "appropriate" personalities and behaviors as a result. Masculinity is the identity that corresponds with the position (or role) of man in societal structures.

Modeling behaviors and the rewards and punishments boys receive for their actions facilitate socialization processes. Cognitive approaches to gender socialization posit, further, that once boys embrace the male sex category for themselves, they actively seek activities, behaviors, and modes of presentation that facilitate feedback from others that affirm maleness (Kohlberg 1966). Social cognition models assume that in order to manage the wealth of information to which individuals are exposed in daily life, they look for ways to effectively prioritize the inputs to which they must pay the most attention, which in turn leads to the use of social categories for organizing the social world. Sex categories and corresponding gender schemas, or cognitive structures that allow individuals to organize social information about self and about groupings of people in society, shape what individuals pay attention to, remember, and expect of themselves and other people (Bem 1983, 1993). From this view, prevailing stereotypes about and expectations for men and women in society persist in large part because they provide cognitive road maps and a sense of ontological security for people (Howard and Hollander 1997, p. 88).

One critique of socialization theories is that they equate masculinity with that which men in the most powerful positions in society do (Howard and Hollander 1997; Smiler 2004). By assuming that "normal" males internalize "normative" masculinity, this perspective removes the issue of structural power from the analysis of gender (Connell 1987; Gerson and Peiss 1985; Lopata and Thorne 1978). Boys and men who fail to follow these prescribed paths are thus viewed as deviant (Schur 1984). Socialization is cast as an explanation without explicit dis-

cussion of the power struggles between differently empowered social groups (Howard 1988; Howard and Hollander 1997).

Socialization and role theories, in addition, reify the notion of gender dualisms, thereby minimizing and obscuring differences between men and other men, and between women and other women, and fail to address the intersections of social categories of difference and inequality—such as class, race, and sexual orientation—and how these shape negotiations of dominant masculinity imperatives (Chen 1999; Collinson and Hearn 1994; Martin 1996; Nonn 2004). The notion that masculinity exists as a "role" into which boys and men are socialized obscures how power structures mediate individual negotiations of identity and self.

Throughout U.S. history, for example, boys and men of color have resisted many of the practices and beliefs constructed by white and middle- to upper-class men as appropriate and ideal for "true" men, especially those practices and beliefs that cast men of color as inferior. Men oppressed by other men on the basis of race, ethnicity, and national origin have approached power hierarchies and the men whose positions of structural power enable them to mobilize resources in their own favor with what the American educator and writer W. E. B. Du Bois (1903) identified as "double consciousness." Double consciousness is born out of the experience of being constrained not by actual personal inabilities but by structures and practices constructed and reinforced by those who control material and symbolic resources. This two-sided consciousness allows members of systematically subordinated groups to understand the dominant group's constructions of status differences and related expectations for social behavior while at the same time resisting the dominant culture's construction of the subordinated group as inferior. The notion that masculinity exists as a role that boys and men fit to varying degrees, however, backgrounds the continual negotiations among men and between women and men over the actual meanings that constitute what is commonly referred to as masculinity.

MASCULINITIES, HEGEMONIC MASCULINITY, AND GENDER AS RELATIONAL

The limitations of identity and role theories of gender have led many late twentieth- and early twenty-first-century scholars to argue that masculinity does not consist of a single unified set of practices, beliefs, or characteristics. Rather, masculinit*ies* are multiple and exist not only as embodied practices, characteristics, and beliefs, but also as routinized and institutionalized practices and symbols. As such, masculinities are constructed and negotiated via discourse and material relations, and are the object of contestation by groups and individuals (Carrigan, Connell, and Lee 1985; Collinson and Hearn 1994; Hearn 1998; Whitehead 2002). This scholarship emphasizes the relational and hierarchical character of socially constructed genders (Connell and Messerschmidt 2005; Collinson and Hearn 1994; Martin 2001; Whitehead 2002).

Gender as a relational concept acknowledges that while bodies are sex-differentiated (i.e., they produce some different physiological needs), these differences do not determine the actual practices in which people engage. Instead, social embodiment transforms bodies (Connell 2002, p. 50). Masculinities and femininities are sets of practices constrained but not fully dictated by "the structure of social relations that centers on the reproductive arena" (Connell 2002, p.10). The reproductive arena refers not to a biological base for gender but rather an arena in which social processes occur. Practices exist as patterns of relationships that connect and separate individuals, and constrain the practices in which individuals engage.

Gender as a relational concept also acknowledges the "different material interests that groups have in an unequal society" (Connell 2002, p. 71). Men have less interest in changing the social structures that give them a collective advantage over women and are more invested than women in maintaining the category "woman" as the "other" against which men are defined because this distinction supports the illusion of gender difference and male/masculine superiority (Bordo 1993). Similarly, Anglo and middle- and upper-class men are more invested in maintaining the structures that sustain their collective advantage over oppressed race and ethnic groups, and over lower socioeconomic classes of men (Lewis 2003; MacLeod 1995; Majors and Billson 1992; Willis 1977).

Hegemonic masculinity, the conceptual framework used commonly to express gendered relations of domination and subordination, refers to "the configuration of gender practice which embodies the currently accepted answer to the problem of the legitimacy of patriarchy, which guarantees (or is taken to guarantee) the dominant position of men and the subordination of women" (Connell 1995, p. 77). Hegemonic masculinity is composed of practices that enable and sustain the status and power of men over women collectively (external dimension) and of some men over other men (internal dimension) (Demetriou 2001). All males (and those who pass as male; Halberstam 1998) are subject to prevailing expectations of hegemonic masculinity, though few actually live up to these expectations (Bird 2003; Dellinger 2004; Messerschmidt 2000; Messner 1992). Few men fit hegemonic ideals of masculinity for any extended period because these ideals and standards change over time and vary by social context, and because men's bodies and minds also change over the life course.

Supporting a family financially, exercising autonomy and authority in paid labor, and superior athleticism are all examples of practices that commonly align with hegemonic masculinity in many contemporary Western nations. Most men support the idea that these are practices that distinguish men as different from and superior to women (and lesser men), and confer legitimacy and status upon men who are exemplars of these practices (Chen 1999; Gerschick and Miller 1994; Henson and Rogers 2001). This is the case even though hierarchies of class, race, ethnicity, sexual orientation, gender expression, religion, and able-bodiedness ensure that not all men exercise the same level of power or status over women. Most men remain complicit with hegemonic masculinity because as long as the category "man" is constructed as distinct from and superior to the category "female," dominant as well as subordinated men will continue to benefit from the status of being male (Whitehead 2002).

Resistance to and even rejection of hegemonic masculinity imperatives does, however, exist (Gerschick 1998; Majors and Billson 1992). Thomas Gerschick explains, for example, that while some men with physical disabilities embrace fully ideals of masculinity that only fully able-bodied men can attain, others reject these ideals and construct meanings of their own. Whether and the extent to which one embodies hegemonic practices is partly a matter of having the resources to do so, partly a matter of being allowed to embody such practices, and partly a matter of wanting to embody them.

Research also shows, however, that while there are many forms of resistance to hegemonic ideals and imperatives of masculinity (Boyd 1997; Garcia 2004; Majors and Billson 1992; Mirandé 1997; Neal 2005), complete rejection of all elements of hegemonic patriarchal masculinity is rare (Carby 1998); hooks 2004; Neal 2005). Scholars including Hazel Carby, Anthony Chen (1999), Jerry Garcia (2004), bell hooks (2004), and Mark Anthony Neal demonstrate, for example, how African American, Latino, and Asian American men often adopt patriarchal sexism even as they are struggling against white men for racial and ethnic equality.

Since the 1990s, scholarship has examined the themes outlined above in a variety of contexts, including work organizations (Bird 2003; Britton 2003; Dellinger 2004; Kerfoot and Knights 1993, 1998; Martin 1996, 2001; Pierce 1995; Williams 1995), families (Adams and Coltrane 2005; Marsiglio and Pleck 2005), sports (Messner 1992, 2004), crime and violence (Messerschmidt 2000), the media (McKay, Mokosza, and Hutchins 2005), education (Ferguson 2000; Lewis 2003; McGuffey and Rich 1999; Swain 2005), and leisure settings (Bird 1996; Bird and Sokolofski 2005; Campbell 2000). Gender theorists have called for a greater focus beyond the level of organizations, institutions, and cross-cultural comparative ethnographies. Scholars, including Sikata Banerjee (2005), Wendy Bracewell (2000), Charlotte Hooper (1998, 1999), Joane Nagel (1998, 2005), Raewyn Connell (2005), and Sergei Zherebkin (2006), illuminate macro constructions of masculinity and the relationships between nationalism, imperialism, and globalization. Nations seeking to construct and/or sustain national unity, loyalty, and strength, especially military strength, draw upon the imagery, power relations, division of labor, and emotional relations associated with emerging global patterns of hegemonic masculinity. While Connell (2005) argues that an emerging global hegemonic masculinity focuses on transnational business practices, Hooper (1999) asserts that practices in the arena of international power politics are the basis for a global hegemonic masculinity. These and other scholars note the need for further collaborations across continents and nations in the study of masculinities (Committee for Research on Men and Masculinities in Europe 2005; Gutmann and Viveros Vigoya 2005; Morrell and Swart 2005; Taga 2005).

EVOLVING SCHOLARSHIP

In this brief overview, some of the key theoretical issues regarding the study of masculinities have been presented. During the twentieth century, scholarship moved away from theories that posit biological determinism and toward a greater understanding of masculinities as social constructs that exist not simply as personality characteristics but as practices that are variously taken up by individuals and, at the same time, are embedded in organizations, institutions, and global systems. Twenty-first-century scholars study multifaceted "masculinities" that, in conjunction with multifaceted "femininities," organize every aspect of social life.

SEE ALSO *Du Bois, W. E. B.; Femininity; Feminism; Freud, Sigmund; Gender; Gender, Alternatives to Binary; Gender Gap; Gender Studies; Men; Women's Studies*

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Sharon R. Bird

MASLOW, ABRAHAM
1908–1970

Abraham Harold Maslow, often referred to as the "father of humanist psychology," was born in Brooklyn, New York, on April 1, 1908. He was the first of seven children born to Jewish immigrants from Russia. Maslow completed his BA, MA, and PhD, all in psychology, at the University of Wisconsin. After graduating, he held various academic positions, spending the bulk of his career at Brandeis University in Waltham, Massachusetts. Maslow served as the chair of the Brandeis Psychology Department from 1951 until 1969. An avid researcher, lecturer, and writer, he published extensively, authoring more than thirty-one articles and eight books. Maslow died of a heart attack at the age of sixty-two on June 8, 1970. His work remains among the most influential in humanist psychology and enjoys continued recognition and application in myriad disciplines, including education, marketing, management, psychology, sociology, and communications.

Maslow is best known for his *hierarchy of human needs*, first proposed in 1943 in "A Theory of Human Motivation." In the original paper, Maslow concluded that humans have five sets of basic needs:

Physiological needs: These are the most basic of all human needs and include air, food, shelter, water, sex, and sleep.

Safety needs: This need category includes physical and psychological safety. Issues of personal safety and security of family, property, and employment are all included.

Love needs: Although Maslow originally labeled this as *love*, later interpretations expanded the notion and renamed it *belongingness*. Maslow stated that all individuals desire affection and a sense of belonging.

Esteem needs: Maslow argued that all individuals have a need for self-respect and the respect of others. This need category was divided into two subsidiary sets: (1) the need for strength, achievement, and adequacy; and (2) the desire for reputation and prestige, recognition, attention, and appreciation.

The need for self-actualization: Maslow described this as the need for individuals to do what they were meant to do, and argued that individuals could not be truly satisfied unless they became all that they were capable of becoming. He noted that a singer must sing and a poet must write if they are to be truly healthy and happy.

Maslow argued that these needs are arranged in a hierarchy of prepotency, and that individuals are motivated to fulfill lower-level needs before they are motivated to fulfill higher-level needs. For example, an individual experiencing thirst will be motivated to satisfy that need before other (higher) needs are considered. Once all phys-

iological needs are met, the individual will be motivated by safety needs. According to Maslow, the four lowest levels are deficiency needs, and the top level is a growth need.

Most modern-day depictions of Maslow's hierarchy place the five levels of needs in a triangle or pyramid formation, with the lowest level of needs (physiological) at the bottom and self-actualization at the top. In many texts, this is all we see of Maslow's work, and his name has become almost synonymous with the *motivation triangle*.

Despite the widespread use and adaptation of Maslow's hierarchy of needs, it is not without its critics. Much of the criticism lies in the lack of empirical support for the hierarchy. Other criticisms stem from the methods used in Maslow's research, citing small sample sizes and "pseudoscientific" methods. Maslow himself argued that his theories were overused and understudied. In his personal journals, he wrote about limitations of reliability, validity, and small sample sizes and urged people to replicate his research to address these issues. Despite these criticisms, the hierarchy still holds a prominent place in motivation theory and can be found in many university textbooks. Many new theories of motivation have been introduced since Maslow's work was completed. Although these theories claim better reliability and validity, and have more empirical support, Maslow's conceptualization of a needs-based theory of motivation lies at the core of many of the new theories.

The hierarchy of needs is but a small sample of Maslow's contribution. Although best known for his work on the hierarchy of needs, Maslow was much more concerned with moving members of society beyond the basic needs, through self-actualization, to a more enlightened existence that he called *eupsychia*. Maslow's work also offered insights into leadership theory, psychotherapy, organizational change, dominance and sexuality, and the meaning of work. Influenced by such great thinkers as Sigmund Freud (1856–1939), Karl Marx (1818–1883), Kurt Goldstein (1878–1965), Alfred Adler (1870–1937), Erich Fromm (1900–1980), and Karen Horney (1885–1952), Abraham Maslow's contribution to humanist psychology is undeniable. Indeed, many credit him with founding the "third force" of psychology, following on the heels of the behaviorism and psychoanalytic schools of thought.

SEE ALSO *Motivation; Needs; Psychology; Reliability, Statistical; Self-Actualization; Validity, Statistical*

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Kelly Dye

MASSIVE RESISTANCE

SEE *Brown v. Board of Education, 1955.*

MASTER-SERVANT RELATIONSHIP

SEE *Servitude.*

MATERIAL CULTURE

Material culture consists of any physical manifestation or product of culture. Culture as a conceptual category exists in opposition to material culture, with culture sometimes distinguished as *mental culture* or *nonmaterial culture*, although some scholars take issue with such a Cartesian distinction. Alternatively material culture can be taken as a subset of a primary category, culture. Following the gist of E. B. Tylor's ([1871] 1974) classic 1871 definition, culture, in social science usage, comprises a complex whole of patterned knowledge and behavior: that which is traditional but also emergent, cumulated, learned, and acquired by members of society. By the mid-twentieth century culture could be defined and understood in literally hundreds of ways (Kroeber and Kluckhohn 1952); by the late twentieth century the term had been deconstructed by some postmodernist thinkers as totalizing, hegemonic, essentialist, and an imagined figment. Tylor employed the term *material culture* as early as 1871, although he apparently neglected to define it (Reynolds 1987, p. 155; for a commentary on the concept, see Buchli 2002, pp. 2–8).

Culture resides in the mind and is shared across minds. Material culture renders culture manifest in physical, palpable, measurable form. For archaeologists, folklorists, historians, museum curators, and others, material culture evidences the cultural. Material culture includes what archaeologists typically refer to as *artifacts*, collectors as *relics*, and art historians as *objets d'art*. Artifacts include such objects as stone tools, potsherds, bottles, beads, but-

tons, fibulae, coins, clay pipes, paintings, and textiles. To this list of conventionally recognized artifacts one should add such large-scale examples of material culture as buildings, monuments, gardens, gravestones, watercraft, roads, bridges, tunnels, dams, irrigation ditches, fences, wharves, landfills, and landscapes—all part of the intentionally built environment. For some scholars, any modification of the environment resulting from cultural activity, deliberate or not, counts as material culture: trash middens, oil spills, crop marks, cultigens, particulate emissions, food bones, human skeletal remains, manuports (materials moved out of their original location by human agency, like moon rocks brought to earth), and ecofacts of all sorts and conditions (such as flower pollen in Neanderthal burials or oyster shells filling in a road pothole). All writing and symbolic expression, from pictographs, graffiti, iconography (Munn 1973), and tattoos to cuneiform tablets and comic books can be considered material culture. The anthropologist and archaeologist James Deetz has suggested that spoken language be thought of as material culture in its "gaseous state" (Deetz 1996, p. 36), because sounds physically set air in motion during speech, if only briefly. Whether or not one wants to go so far as to accept spoken language as material culture, one can certainly admit records, tapes, and DVDs.

Material culture—past and present, partial and entire, in situ at an archaeological dig, on or of the landscape, or cached in a museum—illuminates cultural phenomena in many ways. Material culture communicates, expresses meaning, conveys experience, disciplines, and exhibits agency. Just as material culture is various, so too the study of material culture reflects a broad array of perspectives, analytical stances, and underlying philosophical traditions.

DESCRIPTION

Description remains foundational to material culture studies. The anthropologist Franz Boas ([1888] 1964), in one of the first formal ethnographies, recorded material as well as nonmaterial culture by describing such items as igloos, harpoons, and dolls, which were illustrated with sketches. For archaeologists, time, space, and form constitute three important descriptive dimensions of material culture. It is essential to know how old an object is and when it was used, recycled, or discarded. Chronology supplies part of the crucial cultural context of material culture. Dozens of dating methods yield relative and absolute chronologies. Relative dating, which establishes that something is older than, newer than, or contemporaneous with something else, is exemplified by cross dating derived from stratigraphy and an examination of stylistic change. Absolute dating methods, which assign age in calendar years, include obsidian hydration, dendrochronology (using tree rings), and radiometric techniques such as radiocarbon dating.

It is also invaluable to know an object's spatial location—its point of origin or place of discovery. Provenance, like chronology, constitutes prime contextual data. Location might be variously logged as a cultural area, city, or country name, an archaeological excavation's grid/stratum designation, or a set of latitude and longitude points in a geographical positioning system. Lack of provenance is problematical because it means spatial context has been lost.

Form involves the attributes or characteristics of an object. Description of form entails acquiring and recording data concerning factors such as dimension, color, texture, chemical composition, and stylistic elements. Taxonomy, typology, or classification may draw on numerous methods, such as the type-variety concept, modal analysis, numerical taxonomy, and linguistic models. The widely applied type-variety approach identifies configurations of associated attributes to generate categories of types and varieties. In modal analysis, single attributes such as stylistic motifs can be traced through time and space. Numerical taxonomy codes for multiple attributes and tests for clustering or correlations by means of statistical routines. Typology based on linguistic models posits parallels to language, using either constituent units analogous to phonemes or morphemes or a set of grammatical rules for object construction. The results of typological analysis end up in such formats as exhibit catalogs, databases, museum labels, and archaeological site reports.

TECHNOLOGY AND FUNCTION

Considerations of technology and function are vital to material culture studies. Some typologies, such as the first ones developed in the second half of the nineteenth century to describe European Paleolithic assemblages, posit functions for stone tools, such as scraper, graver, and burin. The approach known as experimental archaeology (see Coles 1973; Reynolds 1979; Gould 1980; Ingersoll, Yellen, and Macdonald 1977) features rigorous testing of technology and function, applied to areas as diverse as flint-tool knapping and the experience of building and living in an Iron Age village. To discover aspects of technology or function, sophisticated laboratory analysis may be performed, as was the case with Arlene Fraikor et al. (1971), who showed that the copper in Hopewell earspools (Ohio, c. 100 BCE–550 CE) was shaped both by annealing and cold hammering. Thomas Loy and James Dixon (1998) contributed to the understanding of the function of 11,000-year-old Alaskan fluted projectile points when they identified species like mammoth, Dall

sheep, and bison from blood cell residues preserved in the tools' crevices.

DIFFUSION AND DISTRIBUTION

Some of the earliest material culture studies, conducted during the late nineteenth and early twentieth centuries, focused on the distribution of elements of material and nonmaterial culture. The British heliocentric diffusionist school of Grafton Elliot Smith and William J. Perry and the German/Austrian diffusionist school of Friedrich Ratzel, Fritz Graebner, Leo Frobenius, and Wilhelm Schmidt identified complexes or *culture circles* of material and nonmaterial culture traits and used migration and borrowing to account for cultural differences. Similarly the twentieth-century American anthropologists A. L. Kroeber ([1939] 1952), Clark Wissler (1914), and Harold Driver (1961) linked cultural traits—with material items figuring prominently—to geographical areas, yielding *culture areas*. Nonmaterial elements like kinship terminology and language were combined with material culture categories, such as housing types, crafts, and art, and were mapped across culture areas. Material items from the Arctic culture area, for example, might include igloos, kayaks, and ivory tools. The culture area approach still finds expression (Kehoe 2006) as an organizational principle for ethnological surveys. One notable continuation of diffusionist analysis is the early work of the folklorist Henry Glassie (1968), which, in the tradition of the geographer Fred Kniffen, traces the diffusion of vernacular buildings, musical instruments, and tools across the eastern United States. The focus on culture element distributions still finds representation in twenty-first-century cultural and material culture studies in the extensive ethnological and archaeological databases at Yale. Known as the Human Relation Area Files (HRAF), these were initially published in book form but are available on the Web by subscription (http://www.yale.edu/hraf/).

PROCESS

Part of a much larger system, material culture can be viewed as performing certain systemic functions, such as fulfilling human needs or adapting to environmental change. Early twentieth-century functionalism, largely descriptive and static, was somewhat displaced during the 1960s by positivist and processual approaches, often fortified by conflict theory and cultural ecology. Processual archaeology seeks, by means of the hypothetico-deductive approach, to explain relationships within specific cultures as well as the evolutionary record across cultures. In a pioneering study Sally Binford and Lewis Binford (1969) employed factor analysis to relate clusters of tools to climate and environmental change. Susan Kent (1984) compared spatial patterning of domestic activity areas in Navajo, Euro-American, and Spanish American sites in the Southwest. William Rathje and Cullen Murphy (1992) contrasted what people presume to be in urban landfills with what really is there by means of laboratory-based quantification.

HISTORY, ART HISTORY, ARCHITECTURE, AND AMERICAN STUDIES

Many material culture studies simultaneously examine art, folk art, history, and technology. For example, the Winterthur Museum and Country Estate has published numerous books and conference papers on material culture and the decorative arts, examining categories such as clocks, ceramics, glass, furniture, architecture, gardens, and silver. A collection of material culture studies edited by Ian Quimby (1978) illustrates this approach. J. Ritchie Garrison (1991) followed the approach of Fernand Braudel to the local, individual level when he tracked the development of wealth and social status in Franklin County, Massachusetts, through an analysis of crops, architecture, and farmsteads. Robert Thompson and Joseph Cornet (1981) combined field and informant-based data, study of museum collections, and documentary research to decipher the meanings and social context of *maboondo*, bottomless cylindrical vessels placed on some Ki-Kongo graves (in Zaire) to symbolize the wisdom of deceased leaders. The art historian Thompson finds echoes of this Ki-Kongo tradition in the seashells and mugs with broken-out bottoms found on some African American graves in the southeastern United States.

MATERIAL CULTURE AS COMMUNICATION SYSTEM

Material culture, even when it appears to us as mere technology, communicates. Whatever culture needs or aspires to communicate or signal can be represented or reflected in material culture. Consider material culture as an alternative to spoken language and gesture—a medium less flexible but more enduring (McCracken 1987). Expressions and symbols of social and cultural identity, affiliation, role, rank, wealth, status, age, gender, values, and beliefs constitute a major area of interest for scholars of material culture. Material culture, from this perspective, can be thought of as providing a parallel record of a culture's worldview, values, and beliefs. A study by the geographer Peter Hugill (1984) showed how material culture can communicate about and correlate with social indicators. Looking at the evolution of the landscape in the Cazenovia area of New York, Hugill revealed ways the old elite maintain status over the newly wealthy by means of a "full range of gestures in the 'aesthetic-historical-genealogical' complex" (Hugill 1984, p. 29). Among that

range of "gestures" are old homesteads infused with family history, something not readily attained by the newly wealthy. The creaky homes of the old elite proclaim a status beyond the purchasable.

Material culture systems may also be at variance with the nonmaterial, however. For example, language and material culture distributions do not necessarily predict each other (Welsch, Terrell, and Nadolski 1992); likewise, in traditional societies ownership of modern material culture may fail to correlate with values of modernity (Robbins and Pollnac 1974). Furthermore, although material culture exists in a sense as *doubly* cultural—first as a pattern in minds, second as material representation—not all material culture communications are intentional or even consciously understood. The plain, unadorned cross of the Southern Baptist church and the Christ on the cross of Latin American Catholicism symbolize, respectively, the ethereal (risen) Pentecostal Christ and the earthbound, suffering Christ (Richardson 2003, p. 122)—but few churchgoers consciously register these theological messages.

MATERIAL CULTURE AS MEANING AND COGNITION SYSTEM

One prominent approach to meaning in social science, structuralism, emphasizes patterned cultural meanings and central symbols and focuses on cultural abstraction or culture as knowledge system. By contrast, symbolic interactionism investigates the active behavioral processes of socialization and the realm of social actors. Each yields different pictures when applied to material culture. Inspired by the work of the structuralist anthropologist Claude Lévi-Strauss and the linguist Noam Chomsky, Henry Glassie (1975) analyzed vernacular Virginia houses and deduced a grammar of spatial proportion and function through which symbolic oppositions inherent in Western culture—such as natural/artificial and public/private—were expressed. The anthropologist Claire Farrer (1991) encountered expressions of the Mescalero Apache "base metaphor" throughout Apache culture, including in material forms, such as baskets, the tribal museum's layout, and the Holy Lodge. Sunwise directionality, circularity, sound and silence, harmony and disharmony, colors, gender, and the number 4 are among the integrated symbolic qualities of the Apache base metaphor. (See Hodder 1982 for a host of structuralist-oriented material culture studies by archaeologists.)

As for the social interactionist perspective, one can point to Rhys Isaac, who, influenced by the sociologist Erving Goffman, conducted a dramaturgical analysis of an eighteenth-century Virginia house "Sabine Hall" and of a diary from the 1760s written by Colonel Landon Carter. From these two sources, Isaac reconstructed webs of social relationships and daily rituals. Sabine Hall and its spaces appear as a stage with props, part of the material "definition of the situation" conditioning social action in eighteenth-century daily dramas. In a similar vein Miles Richardson (1987; see also Low 2000), influenced by the work of Goffman and the philosopher George Herbert Mead, contrasted the preliminary definitions of the situation and socially generated meanings of contemporary markets and plazas in Spanish America and then, guided by the concept of artifact as "collapsed act," outlined how archaeologists might rediscover the lost social world of a burial mound.

Akin to structuralism and symbolic interactionism is what is sometimes called cognitivism. For cognitivist archaeologists the question is: How did people of the past think? Through inferences drawn largely from the analysis of material culture, archaeologists reconstruct cultural thought processes. At Pincevent and other French sites of the Magdalenian age, C. Karlin and M. Julien (1994) found evidence of stages of "apprenticeship" in regard to lithic stone tool–making ability, which may reveal age and skill-level communication within a system of groups.

MATERIAL CULTURE AS COMMODITY SYSTEM

A universal category of human experience, *exchange*, incorporates material culture in both economic and symbolic ways. The work of two scholars, Igor Kopytoff and Daniel Miller, exemplifies the focus on exchange in material culture studies. If one follows their trajectories, things accumulate their own biographies just as people do, Kopytoff (1986) has suggested. One process Kopytoff has identified, *commoditization*, brings a wide range of objects into the orbit of one common exchange medium, such as money. But commoditization, as convenient and expansive as it tends to be, may threaten other social interests; hence some objects may undergo the nearly opposite process of *singularization* in order to be protected from commoditization. An artist's commoditized painting is bought and sold half a dozen times; after the artist becomes famous, the painting is purchased by a museum and becomes, at least temporarily, singularized.

For his part, Miller challenged the common assumption that globalization is an entirely homogenizing process. In his 1998 study of Coca-Cola in Trinidad, he observed that Coca-Cola furnished only one of several ways of preparing locally defined and preferred "black sweet drinks" (such as rum and Coke). The powerful locally owned distributor of Coca-Cola followed its own strategy—not Coca Cola's—when it came to marketing.

AGENCY AND POWER

Some analysts treat material culture as taken for granted or received (as with nonmaterial culture). Others, however, see material culture as imbued with the power to direct human thought and behavior or to reinforce class, gender, or other inequalities (McGuire and Paynter 1991). Inverting the Hegelian dialectic, Karl Marx set the stage for the materialist analysis of technology and material culture by proclaiming, "It is not the articles made, but how they are made, and by what instruments, that enables us to distinguish different economic epochs" (Marx [1887] 1967, p. 180). Marx incorporated the evolutionary scheme of Lewis Henry Morgan ([1887] 1985) to extend into prehistory the relations of modes of production, and in the process he provided an enduring model for Soviet archaeology, material culture studies, American cultural materialism (see Harris 1979), and of course numerous versions of conflict theory and critical theory. Continuing in this materialist vein and informed also by the work of Immanuel Wallerstein, Fernand Braudel ([1967] 1973, 1977) has traced the history of evolving relationships, on a worldwide scale, between economics and material culture categories, such as towns, housing, motive power sources (steam engines, water wheels, etc.), food, and money.

In his study of the material culture of seventeenth- through nineteenth-century Annapolis, the archaeologist Paul Shackel (1993) argued that clocks, scientific instruments, and items such as individual dinner plates, knives, forks, and spoons all enforce "discipline" and etiquette systems. At first only owned by the elite, clocks and scientific instruments such as telescopes served to "measure" time. Because it is measured, time can be made to appear as if it exists externally in nature rather than being a human construct; clocks then are used to set discipline parameters for everyday life, such as the beginning of a factory shift or a unit of pay (the hourly wage). Eventually all people come to possess clocks and to conceptualize time as located in nature.

Not all such analysis derives from conflict theory. In his evaluation of New York City public parks and plazas, the sociologist William Whyte (1980) documented the power of spatial layout and architecture to either invite or repel users. Places to sit, sun, shade, and water (in fountains and pools) invite human presence; fences, walls too high to sit on, immovable and uncomfortable benches, or threatening signs repel.

CONTESTED MATERIAL CULTURE

As mentioned in the above discussion of agency, analysts of material culture frequently draw on conflict theory and deconstruction theory (in anthropology the latter is sometimes referred to as post-structuralism). A collection of essays edited by Christopher Tilley (1990) explores ways the work of deconstructionists like Jacques Derrida and Michel Foucault might be applied to archaeology. Deconstruction places social power and systems of control front and center, and not surprisingly, material culture is very much taken into consideration. John Dorst (1989) detailed the properties of postmodern life represented by material culture found in the booths and exhibits of the annual Chadds Ford Days living history fair. As the visitors moved through the exhibits at the fair, observing and purchasing souvenirs, they marked or enacted difference and engaged the fair's "controlling image" of the late-eighteenth-century domestic sphere. At Chadds Ford the struggle to legitimize and represent the social order manifested itself at several levels: as a competition between the Brandywine River Museum, the Historical Society, and the Chris Sanderson Museum and on the landscape itself, where the projected nostalgic images of the Wyeth school wrestled with the suburban dream.

Courtney Workman (2001) documented the tortured politics surrounding a statue, *The Woman Movement*, designed by Adelaide Johnson in 1921 and portraying Elizabeth Cady Stanton, Susan Brownwall Anthony, and Lucretia Mott. On display briefly in the rotunda of the Capitol building, it was then removed to a basement closet, where it resided until 1997 in spite of numerous lobbying efforts over the years. The National Political Congress of Black Women sought to block relocation, demanding that Sojourner Truth first be added to an unfinished part of the monument. Even the way material culture is represented by archaeologists to archaeologists may be contested; for example, Janet Spector (1993) attempted to correct the underrepresentation of women's presence and activities in the archaeological record of a Wahpeton Dakota village.

"EXPERIENCE-NEAR" MATERIAL CULTURE

Material culture can also be presented in a way that is "experience-near," to use Clifford Geertz's term—that is, from the perspective of those who create it or experience it firsthand. Folklorist Simon Bronner helps one to encounter the "evidence of tangible things" (1986, p. 1) whether it's entering a house, making turtle soup, or carving gravemarkers. Henry Glassie's (1999) sensitive reporting allows one to enter into the mind of Hagop Barin, a Turkish Oriental carpet restorer working in Istanbul and Philadelphia. For Hagop, the good rugs evoke memories, create a mood and a feel. They are not just rugs but works of art with the hearts and thoughts of their creators woven into them.

CONCLUSION

Material culture can be analyzed from many perspectives. Its study is pursued by many disciplines both within and outside of the social sciences: anthropology, archaeology, architecture, art history, folklore/folklife, history, American studies, geography, cultural history, historic preservation, museology, and sociology. What is common to these perspectives and disciplines? For all, material culture serves as the principal source of data (Deetz 1977, p. 10). Material culture is habitually contrasted and related to nonmaterial culture. Space/time/culture boundaries are relaxed and transcended, such that material culture from any time, place, or culture becomes an object of interest. The focus is on comprehending material culture for its cultural and social significance, not on objects as things to be assessed, possessed, or appreciated. Material culture constitutes a "supercategory of objects," to apply differently a term employed by Victor Buchli (Buchli 2002, p. 6). Surprisingly, even as disciplines, schools, and perspectives proliferate, those studying that supercategory of objects, material culture, appear to readily cross disciplinary lines and read and cite each other's work (see Lubar and Kingery 1993; Miller 1998; Reynolds and Stott 1987; Richardson 1974; Schlereth 1982).

SEE ALSO *Anthropology; Anthropology, Linguistic; Archaeology; Architecture; Boas, Franz; Chomsky, Noam; Cognition; Culture; Ethnography; Goffman, Erving; Levi-Strauss, Claude; Marx, Karl; Materialism; Materialism, Dialectical; Mead, George Herbert; Meaning; Navajos; Symbols; Truth, Sojourner; Wallerstein, Immanuel*

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MATERIALISM

Materialism is a philosophical doctrine of existence that argues that human consciousness is determined either principally or exclusively by matter and its change or manipulation. This "primacy" of matter has its foundation in an early philosophical argument that while material being (or the body) can exist without the mind, the mind is unable to exist without corporeality. Because materialism in its most basic and unifying sense as a doctrine relies on the denial of the nonmaterial (and thus a mechanistic relationship between the nature and its manipulation), many view it as quite different from other conceptualizations of existence (or ontologies) that analyze the relationship between entities such as mind, body, and spirit. It is seen

rather as a philosophical assertion in juxtaposition to a doctrine of idealism, and in particular its invocation of the supernatural or disembodied existence. Later forms of materialism proved far less reductionist with respect to the mind and subjective experience; still, at its most basic, materialism implicitly denies the possibly of any Cartesian mind/body dualism, as processes of the mind are subordinated to the physical environment in which they must take place, and not to some disembodied realm of existence.

Questions of materiality are among the oldest of philosophical inquiries. Epicurus and Democritus, the Greek philosophers on whom the noted historical materialist Karl Marx based his doctoral thesis, were among the earliest thinkers to expound a metaphysical doctrine of materialism. Early forms of materialism sought to explain human experience in terms of how atoms interacted with one another in nature to manifest different objects. This type of thinking was opposed to that of some of their Hellenic contemporaries (notably Plato and Aristotle) who proposed the existence of immateriality. It is the implicit denial of a spirit or otherworldly embodiment of the mind in these early forms of materialism that has led many to argue that materialism is an intrinsically atheistic philosophy. This point about the tension between religion and intellectual inquiry is significant, because materialism's emergence as a significant doctrine occurred as a product of Enlightenment questions about the role of science and religion in social life.

MATERIALISM: SCIENTIFIC VERSUS DIALECTIC

Materialism has had a propensity for misrepresentation as teleological and deterministic philosophical doctrine, wherein critics warn of insinuations that matter is being afforded a kind of unmediated rationality in guiding action and history. This is in part attributable to a misunderstanding of the major philosophical and social scientific debates that have taken place since the introduction of the concept of dialectics in the nineteenth century. A common error, for instance, rests on characterizing Marx's *historical materialism* (a term in fact coined by Friedrich Engels) as such by referencing his introduction to his *Contribution to a Critique of Political Economy* (1859), in which he concludes that legal and political superstructures arise out of the economic base (infrastructure) of society. Of course, Marx had a lifelong engagement with Hegelian dialectics, and was more centrally concerned philosophically with trying to make sense of the social relations through a theory of praxis, not through a mechanistic determinism. And it is important to understand how such dialectical interventions emerging at that time engaged, and continue to engage, with materialist approaches unabashed in their determinism. The materialist anthropologist Marvin Harris once remarked that Marx's materialism would be palatable if he could just get the Hegelian monkey off his back (Harris 1979). An extreme position (and anticipatory of Harris's reductionist cultural materialism), it does however underscore a fundamental difference about what role ideas, beliefs, or immaterial states have to different kinds of materialists.

Scientific materialism emerged most notably in nineteenth-century Germany as a response to idealism and clerical domination over intellectual life. Ludwig Feuerbach (1804–1872), a student of Hegel best known as the inspiration for Marx's *Theses on Feuerbach* (1845), catalyzed a materialist movement that had important consequences for the future relationship between the sciences and religion. Materialists of this ilk believed that the rapid advances in science and medicine occurring at this time constituted evidence of the power of science to answer questions about the material and immaterial alike as reflections of biological, chemical, and physical processes. Such atheism worried many advocates of science and led to the caricaturing of evolution as an antireligious doctrine. The devoutly religious Charles Darwin (1809–1882) declined Marx's invitation to dedicate *Capital* (1867) to him because he feared further associations with materialism and social evolutionism.

Scientific materialism did anticipate further problems in philosophy. Indeed, claims about determinism and physicalism remain important to the *identity thesis* in materialist philosophy, the view that "there are no philosophical considerations that rule out the possibility that future scientific inquiry will show that *every mental state and event is identical with some material state or event*" (Rosenthal 2000, pp. 8–9; emphasis added). Eliminative materialism, for example, has been a subject of interest to some of the most important philosophers of the twentieth century (e.g., Richard Rorty, Paul Feyerabend, W. V. O. Quine, Paul Churchland, and Wilfrid Sellars) who have been concerned with the legitimacy of separating mental states apart from the physical state in which they take place.

Georgi Plekhanov and Vladimir Lenin are famous for developing the concept of *dialectical materialism*. In his *Materialism and Empirio-Criticism* ([1909] 1947) Lenin sought to develop a philosophy of materialism that relied less on the reductionist claims of nineteenth-century "vulgar materialism." He eschewed the trivializing analogies of the scientific materialists—such as that thoughts were to the brain as bile was to the liver—evoked to assert that nothing other than matter existed, in favor of a materialism that saw mental processes as emanating from material ones. Although also clearly influenced by Feuerbach, Lenin claimed that the material world (nature) was primary and the mind and spirit were secondary in a dependent relationship for the development of knowledge.

Some contemporary materialist philosophers remain wary of mind/body dualism generally, in particular of theories that "either deny causal interaction between the mental and the physical, deny causal efficacy to mental states, picture the mental and the physical as being two wholly distinct realms of being, or fail to give integrity to one term of the mind-body relationship" (Peters 1995, p. 8). Notwithstanding philosophical debates as to the efficacy of mental and material realms as categories of analysis, the legacy of materialist philosophy for the social sciences can be said to be twofold. First, materialism abjectly underscores empirical method and observation as essential for an adequate understanding of human societies. And second, it has legitimated the innovation and honing of viable methods for comprehending human action through an emphasis on materiality (and the manipulation thereof) as an entry point of social analysis.

MATERIALITY AND THE METHODOLOGICAL IMPORTANCE OF THINGS

To understand the significance of materialism to contemporary social science, it is necessary to identify the fundamental changes that the academy has undergone in the last two centuries toward the formation of sciences of social processes. In the nineteenth century Auguste Comte (1798–1857) authored a theory of "social physics," a primitive social science method based on an analogy to the physical sciences that had a profound influence on the development of positivism. The vitality of empirical and positivist theory during this period was aided by the derivation and development of empirical methods that proved successful in their capacity for establishing laws for social processes. The philosopher Ian Hacking (1990) has argued that the honing of techniques for prediction and the establishment of probability in both the physical and social sciences created conditions of possibility for contemporary ways of thinking about the knowability of the world. Among materialist scholars there remains much difference with respect to the degree to which the world is exhaustively knowable. Cultural materialism, for instance, rejects dialectics outright, prioritizing instead positivism, probability, and the primacy of human use of the environment for the understanding of social process. Still, materialist doctrine in the social sciences has become more of an operationalization of a particular positivist method than an outright philosophical account of human activity.

There are a number of methodical approaches to the study of materiality that have become increasingly popular in the social sciences, particularly as all of its disciplines have sought to make sense of social processes that are increasingly informed by global flows of information, communication, and technology. Economics for the most part has always remained unabashedly materialist, methodologically individualist, and positivist as a discipline. Cultural ecological approaches historically have been significant traditions in anthropology and geography. And long-standing subdisciplines such as economic sociology and economic anthropology have gained increased visibility as scholars throughout the social sciences have increasingly queried the meanings and impacts of globalization. Two relevant approaches to the contemporary study of materiality in the social sciences merit particular notice.

Since the mid-1980s there have been numerous studies devoted to the study of a single material object with the aim of understanding the complexities of human global relationships. These commodity biographies have traced the social and economic importance of various globally significant commodities, including tobacco, coal, potatoes, cod, bananas, and salt (see Mantz and Smith 2006, pp. 78–80 for summary). Some of these scholars were influenced by Arjun Appadurai's groundbreaking anthology *The Social Life of Things* (1986), and accordingly tend to orient themselves to discussions of how consumption of material objects frames political economic relationships. Others, emphasizing the importance of global production systems to the origination of political economic inequalities, originate their work in Sidney Mintz's *The Sweetness of Power* (1985), or more broadly in the cultural ecology and political economic traditions from which it came. Mintz's account shows how sugar played an instrumental role in building the economies of industrial Europe around extractive plantation production regimes in the Caribbean. A more recent study has attempted to understand how political economic structural inequalities developed under capitalism are taking on a parallel form in the digital age with the extraction of Congolese coltan, an ore essential to digital technologies such as mobile phones (Mantz and Smith 2006).

At the same time, a growing field of material culture studies has emerged with a specific interest in the consumptive dimensions of human social economic practice (e.g., Miller 2004). Though many of these scholars certainly would not recognize themselves or their approaches as materialist per se, the fact that their entry point remains largely concerned with the human use of material objects indicates their importance to the legacy of materialism in the social sciences. With influences from linguistics and semiotics, and a foundation that engages (at times both sympathetically and critically) with the Frankfurt school, this school of thought has been concerned principally with attempting to unravel the social meaning of objects. This tradition represents a radical break from the traditional domination of studies of the material by materialists. The departure is reflected in a philosophical heritage

indebted to the early-twentieth-century German sociologist Georg Simmel (1858–1918), as a purported alternative to the materialism of Marxian political economy. A number of the commodity biographies approaches likewise endeavor to move the focus of the study of objects away from their productive sites and instead into the consumptive realms in which they have discernible semiotic and sociological meaning.

There are a number of reasons why the study of material objects has moved away from the materialist philosophy in which it was once firmly ensconced. First, approaches having determinist legacies or "metanarrative" claims have become unpopular among a large number of social scientists, particularly given the influence of postmodernism in the late twentieth and early twenty-first centuries. Second, the end of the cold war has precipitated an increased discomfort with dialectical materialist approaches that were influential to the creation and development of Soviet socialism. At the same time, the scientific materialist approaches of the nineteenth century, as well as the more orthodox approaches of the twentieth century such as cultural materialism, have not been appealing to social scientists uncomfortable with their unwavering dedication to physicalism. And finally, a historic divide between the humanities and sciences—a rift separating what C. P. Snow referred as "two cultures" (1959)—remains unresolved and taxing for the development of a unified and truly interdisciplinary social scientific theory and method. Nonetheless, there remain dedicated approaches to political economy principally influenced by materialist philosophy and method that hold great possibility for unifying various approaches to the study of material objects in the social sciences.

SEE ALSO *Marx, Karl; Marxism; Materialism, Dialectical*

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Jeffrey Mantz

MATERIALISM, DIALECTICAL

Dialectical materialism was the name given by the doctrinaires and political stalwarts of the Communist Party of the Soviet Union (CPSU) to official Soviet philosophy. Others regarded it more as an ideology, but either way dialectical materialism was a constituent part of the major political innovation of the twentieth-century, official Soviet Marxism. Whether or not dialectical materialism was well formed enough to give adequate or appropriate support to the Soviet experiment is, of course, another question, and a much-debated one. Because CPSU officials and stalwarts were powerful enough to impose their definitions on a captive audience, dialectical materialism—which was commonly given the acronymic form DiaMat—enjoyed a remarkable shelf life during the mid-twentieth century. But, as a concept, its sell-by date is by now long past.

Dialectical was often confused with historical materialism. (In *Dialectical and Historical Materialism*, a book supposedly written by Joseph Stalin during the 1930s, it is unclear whether the author wishes to separate the two or run them together.) Their conflation was and is mistaken: Historical materialism's register is historiographical—it is a mode of historical and sociopolitical analysis—whereas dialectical materialism, whose register is philosophical and

scientific, throws nature and its laws, along with the supposed "laws" of thought, into the mix. One might say that whereas dialectical encompasses historical materialism, the latter can and did flourish among thinkers to whom dialectical materialism was an embarrassment—Western Marxists and critical theorists prominent among them. The addition of nature and thought, which was first and foremost the contribution of Friedrich Engels (1820–1895), did nothing to make DiaMat philosophically coherent. DiaMat was, rather, a hodgepodge of philosophy and science that confused the pursuit or advance of (mainly scientific) knowledge *in* the world with the attainment of truth *about* the world.

At a basic level, DiaMat regarded historical or social evolution as an aspect or facet of natural evolution, and as being subject to the same "laws" as those that govern natural evolution—laws that are said but not shown to be "dialectical" in character. (Engels was as uncomfortable as many other Victorian gentlemen with the aleatory, nonteleological character of Darwin's principle of natural selection.) When we ask who was the first to run together natural laws, historical laws, and the "laws" of thought, it is Engels, not Marx, who instantly snaps into focus. (Marx, for the record, never even used the term *historical materialism*, though he did not protest when Engels in a review designated Marx's method as an instance of "the materialist interpretation of history.")

While it was Georgi Plekhanov, "the father of Russian Marxism," who coined the term *dialectical materialism*, the concept was first authoritatively enacted by V. I. Lenin (1870–1924), who regarded Engels's and Plekhanov's legacy as giving intellectual ballast to the copy-theory of perception he advanced in *Materialism and Empirio-Criticism* (1908). In fact, Lenin's theory of perception

> involved a divergence from Engels's account, since materialism to Engels was not the same as epistemological realism. … [Engels's] medley of metaphysical materialism and Hegelian dialectics … was conserved by Lenin, but [Lenin's] own theory of cognition—which was all that really mattered to him—was not strictly speaking dependent on it. Matter as an absolute substance, or constitutive element of the universe, is not required for a doctrine which merely postulates that the mind is able to arrive at universally true conclusions about the external world given to the senses (Lichtheim 1974, pp. 70–71).

(As an aside, the contemporary philosopher Donald Davidson argues that the question whether an accurate representation of reality in thought is possible, let alone desirable—Lenin thought it was both—is undecidable and should be discarded from philosophy altogether.) The compatibility of Lenin with Engels (or Marx, for that matter) was in the event eclipsed by Russian Marxist notables' need to establish "orthodoxy," to produce a canon, a continuous, unbroken line of succession stretching from Hegel through Marx through Engels through Plekhanov through Lenin through Stalin (and whoever else was *à la page* at the time).

Engels of course could have had no foreknowledge of what Soviet stalwarts would do with his doctrine. His sights had been set, not on a nonexistent CPSU, but on German social democracy and, by extension, the Second International (1885–1914). Engels cannot be held directly responsible for the transformation of his speculations into a state dogma imposed on a captive audience. Even so, at a less direct level Engels has much to answer for. He did much to make the sorry Soviet sequence of DiaMat luminaries possible. These swiftly awarded Engels canonical status, and presented him as enjoying a status he had never claimed, as someone coeval and on an equal footing with Marx.

There can be no doubt that Engels's presentation of his intellectual partnership with Marx, "second fiddle" or no second fiddle, aided and abetted the spurious continuity between Marx and Stalin that DiaMat required. (This continuity was celebrated by cold warriors in the West as well as the East, for it provided the former with an easy—arguably, too easy—target). Such continuity depended throughout on an idea Engels encouraged after Marx's death in 1883: that in writing about (and conflating) the laws of nature, history, and thought, Engels was faithfully fulfilling his part in an agreed-upon division of labor, according to which Engels produced texts that were interchangeable with Marx's texts on some subjects and supplementary to, but always compatible with, and true to Marx's works on others. Without this supposition DiaMat would not and could not have taken the seamless form it took; but there is no evidence that the supposition itself could withstand serious, critical examination.

The disservice done to Marx by the later Engels was a disservice to philosophy at large: It turned Marxism at the official level into the kind of universal *weltanschauung* or worldview that Marx never intended to provide. Marxism-Leninism constructed around Marx's writings, to the extent that these were made available (and they were not rushed into print as Engels's were), a key to unlock every door, a grand theory concerned with the ultimate laws and constituents of the universe. Marx himself had maintained discretion on such cosmic questions. Naturalism and cosmology were domains distant from the critique of political economy that was Marx's lifework. Worse still, it was in a sense precisely because Marx had remained reticent on these issues that his self-styled Soviet epigones—to whom such silence seemed unnerving—felt the need to fill in nonexistent gaps and construct a coher-

ent, comprehensive system of materialist metaphysics. Marx's considered reticence, it could be (and was) argued, constituted not a failure of scholarly nerve but a well-judged reluctance to extend his arguments into areas where they could have no meaningful application.

Even though Engels's interpretation of Marxism is in significant respects at variance with what Marx had bequeathed him (and us), Engels took care to advance it in Marx's name. This immeasurably helped DiaMat set the tone for more than a generation of "official" Soviet Marxists. While DiaMat did not pass unquestioned in the West, particularly among Western Marxists and critical theorists, it ruled the roost and attained canonical status in the USSR, its satellites, and China. There was throughout its elaboration an inbuilt, fatal flaw: If nature is conceived materialistically, it does not lend itself to dialectical method, and if, conversely, the dialectic (a category that Hegel had confined within logic, and that was to be of no real use to Marx) is read back into nature, there is no real place or need for materialism. The misapplication of the dialectic into natural processes then either endows the structure of reality with a purposive, teleological striving (which would fly in the face of Darwin, if not of Darwinism), or it stretches the concept of dialectical change to the point of tautology: Anything that happens is said to be a "development" involving qualitative as well as quantitative change (see Lichtheim 1965, p. 254; cf. 247–248).

Paid positions for philosophers who accepted the precepts of DiaMat (or who said they did) came into existence as the fledgling Soviet régime consolidated itself. But, unsurprisingly, "between 1930–1955, philosophical discussions among (Soviet) Marxists were stifled, the publication of books and articles became virtually nonexistent, and the teaching of philosophy in the USSR was greatly reduced" (Loone 1993, p. 158). Engels's third law of dialectics (the negation of the negation) was unceremoniously jettisoned by Stalin, and Engels's first law (the transformation of quantity into quality) was relegated by Chairman Mao to the status of a special instance of Engels's second law (the interpenetration of opposites). These doctrinal modifications could be regarded as refinements, or as signs that DiaMat was beginning to collapse beneath its own weight—even before the political system it was said to uphold imploded at the institutional level. Lichtheim has called DiaMat an "intellectual disaster," and it is not hard to see why. It was also, after all, a kind of politically charged quodlibet for the philosophically tone-deaf.

SEE ALSO *Marxism*

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Paul Thomas

MATHEMATICAL ECONOMICS

In a narrow sense, mathematical economics, as represented by the *Journal of Mathematical Economics* or the North-Holland *Handbook of Mathematical Economics*, is the specialization within advanced economic theory using sophisticated mathematical techniques such as functional analysis and topology. In a wider, more general sense, mathematical economics refers to the application of mathematical methods within economics (other than the application of probability theory and mathematical statistics in economics, which has acquired separate disciplinary status as econometrics). The use of mathematics, together with emphasis on formal economic theory, has become increasingly pervasive in economics since World War II (1939–1945), as general equilibrium analysis, game theory, and operations research became prominent. Training in at least calculus, matrix algebra, and constrained optimization (as well as econometrics) is now indispensable for comprehension of articles in general economics journals, not just journals specializing in economic theory.

There were numerous early attempts to use mathematics to analyze questions in political economy before a receptive audience existed for such works (see Baumol and Goldfeld 1968 for selections from this literature). A few of these early efforts, notably Antoine Augustin Cournot's 1838 analysis of oligopoly, Francis Ysidro Edgeworth's 1881 study of bilateral exchange, and Louis Bachelier's 1900 dissertation on financial speculation and stochastic processes, have been rediscovered and reinterpreted in light of solution concepts developed much later (Cournot oligopoly being viewed by some as a special case of Nash equilibrium, Edgeworth's analysis being related to the game-theoretic concept of the core), but their contemporary readership and influence was slight. Alfred Marshall was educated as a mathematician (Second Wrangler at Cambridge, ranked behind only the physicist Lord Rayleigh) but, unlike his contemporary Edgeworth, he relegated mathematics to a mathematical appendix in his *Principles of Economics* that, in eight editions from 1890 to 1920, dominated the teaching of economics in English. Although he advocated mathematics as an aid to thought, Marshall distrusted mathematical economics that could not be translated into plain English, and worried about restricting attention only to those considerations that can be quantified. Similarly, as late as 1939, J. R. Hicks restricted formal mathematics to an appendix in his *Value and Capital*, which brought the continental European tradition of general equilibrium analysis associated with Léon Walras and Vilfredo Pareto in Lausanne to the attention of English-language economists. Along with Roy Harrod, James Meade, and others, Hicks (1937) took a leading role in translating John Maynard Keynes's theory of employment into a small system of simultaneous equations, which Hicks's accompanying diagrams (later modified by Alvin Hansen) turned into the trained intuition of two generations of economists. Keynes himself had made such a translation into a four-equation system in his Cambridge lectures in December 1933 (and the first two published versions of such a model were by David Champernowne and Brian Reddaway, who had both attended that series of lectures), but following Marshall's precedent, Keynes did not include such a formalized model in his *General Theory of Employment, Interest, and Money* in 1936.

The American economist Irving Fisher had proposed in 1912 the formation of an international society to promote the formal use of mathematics and statistics in economics, but it was only at the end of 1930 that the Econometric Society was founded with Fisher as president (succeeded by the French index-number theorist François Divisia). The Econometric Society's U.S. and European conferences, and its journal *Econometrica* (founded 1933), provided a forum for mathematical economics and econometrics, as did the closely associated Cowles Commission for Research in Economics (in Colorado from 1933 to 1939, and then in Chicago from 1939 to 1955). The publication of Paul Samuelson's *Foundations of Economic Analysis* in 1947 (based on his 1941 Harvard dissertation) was a turning point in general acceptance of formal, mathematical economic theory. Samuelson's restatement and extension of neoclassical comparative static and dynamic analysis, introducing a generation of economists to difference and differential equations, emphasized Walrasian general equilibrium analysis, in which all markets are linked through the budget constraints of individual agents. Following from work by John von Neumann and Abraham Wald in Karl Menger's mathematical colloquium in Vienna in the 1930s (see Baumol and Goldfeld 1968, Weintraub 2002), Kenneth Arrow, Gerard Debreu, and Lionel McKenzie provided formal proofs of the existence of general competitive equilibrium in the 1950s, but such works as the 1959 Cowles monograph *The Theory of Value* by Debreu could be read and understood by very few economists. Gradually, general equilibrium theory, requiring formal mathematics for its statement and application, came to dominate graduate courses in microeconomics (until challenged by game theory since the 1980s), with Marshallian partial equilibrium, susceptible to diagrammatic treatment, prominent only in undergraduate courses.

Military applications encouraged operations research in the United States (and operational research in Britain) during World War II, and postwar research in related fields was supported by the Office of Naval Research, the U.S. Air Force (initially the sole client of the RAND Corporation), and the U.S. Army through the Stanford Research Institute, later SRI (see Mirowski 2002). Discrete optimization (linear and nonlinear programming) was widely used in economics to implement the neoclassical paradigm of agents maximizing an objective function (expected utility) subject to budget and other constraints, as by Robert Dorfman, Paul Samuelson, and Robert Solow in their 1958 RAND study *Linear Programming and Economic Analysis*. Linear programming and related techniques were entrenched in business schools as operations research, management science, or decision science, and in the Soviet Union and other centrally planned economies as planometrics. Within economics, however, attention shifted from activity analysis (including linear programming) to game theory from the 1970s onward.

Game theory, the formal modeling of conflict and cooperation, emerged as a distinct field of study in applied mathematics and in economics and other social sciences with John von Neumann and Oskar Morgenstern's *Theory of Games and Economic Behavior* in 1944. This work built on the minimax solution for two-player, zero-sum games, whose existence von Neumann had proved in 1928 (with

a much simpler, non-topological proof provided by Jean Ville in 1938), and with John F. Nash Jr.'s equilibrium concept for n-player, general-sum games. Game theory stressed strategic interaction: the payoffs for each player depend not only on the strategy (a rule for selecting an action in response to a particular information set) chosen by that player, but also on the strategies chosen by all the other players (see "Strategic Games"). Nash equilibrium for a noncooperative game (one in which binding contracts, externally enforced, are not possible) requires that no player can gain from changing his or her strategy under the assumption that no other player changes strategy. Game theory, with its emphasis on strategic interaction among players, contrasts with general competitive equilibrium analysis, which assumes a single agent to be too small to affect market outcomes. In the 1950s and 1960s, game theoretic research, often published in the *Journal of Conflict Resolution* and some funded by the U.S. Arms Control and Disarmament Agency, focused on the understanding and control of arms races. Game theory is now pervasive in economics from industrial organization to trade policy and the credibility of macroeconomic policy, and is influential in other fields from political science and law to evolutionary biology.

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MATHEMATICS IN THE SOCIAL SCIENCES

Methodologically, scientists think that the social sciences differ from the physical sciences in degree but not in kind. The commonality among the sciences is best expressed by Paul A. Samuelson: "All sciences have the common task of describing and summarizing empirical reality.… There are no separate methodological problems that face the social scientist different in kind from those that face any other scientist" (Samuelson 1966, Vol. 3, p. 1756). Another common feature among the sciences is that they use mathematics as a language.

Joseph Schumpeter (1954, p. 955) asserted that in studying quantitative relationships, the knowledge of a handful of simple concepts in calculus—variables, functions, limits, continuity, derivatives, differentials, maxima, minima, system of equations, determinateness, and stability—change one's attitude to the problem. The applied interest of social scientists is piqued by advances in the frontiers of mathematics and includes, besides calculus, linear programming; information, game, and network theories; and Markov processes, which have industrial, political, social, economic, and military applications (Tucker 1963).

Some have identified stages in the development of mathematics in economics. According to John Hicks, "All through the first period of mathematical economics—the age of Marshall, of Pareto, of Wicksell, even that of Pigou and Keynes—the economist's main mathematical tool was the differential calculus.… Most economics problems were problems of maxima and minima" (Hicks 1983, pp. 247–248). As in the physical sciences, the approaches to mathematical modeling in the social sciences follow broad methodologies. One simple approach is reductionism, where the laws of one discipline are transplanted to that of another. The physicist Stephen Hawking abides by that rule (Hawking [1997] 2000, p. 169), and so does Samuelson (1966, Vol. 3, p. 1755).

In the social sciences, an abstraction from reality is made in the form of a model that can be expressed in mathematical form. Social scientists tend to divide into two camps in their fundamental belief in the use of mathematical models: Some build models that follow the principle that nature does not make any leaps, and others believe in a dialectical or chaotic process. In either case, a good grasp of the history, statistics, and theory required to function in the social sciences in turn depends on a good understanding of mathematics (Schumpeter 1954, p. 14). In editing mathematical models of the social sciences, James R. Newman (1956) selected classical contributions from the fields of psychology, economics, and sociology. A later book by Kenneth Arrow, Samuel Karlin, and Patrick Suppes (1960) tackles topics in economics, management science, and psychology.

MODELING IN PSYCHOLOGY

An early form of an inner observation model in psychology is Fechner's Law, after Gustav Theodor Fechner (1801–1887). This law is traced to the work of Ernst

Heinrich Weber (1795–1878), who had conducted several experiments giving subjects weights to hold and asking them to report when they sensed an increase in weight (sensation, S). Because sensations cannot be measured, Fechner proposed to observe noticeable differences in sensation. (The expressions that follow use the symbols of Edwin Boring [1956, pp. 1159–1160]). One can measure the stimulus, R, as so many pounds of weight, and then record the constant point, c, where the stimulus has created a noticeable difference as $dR/R = c$. This relationship takes the form $dS = c(dR/R)$. The implication here is that all changes in stimulus are homogeneous and can be aggregated. One can, therefore, integrate the equation to measure sensation. The integration constant can be approximated by choosing a threshold value of the stimulus, r, such that when $R = r$, then $S = 0$. This will yield the expression $S = c \log_e(R/r)$. By moving to a different base of logarithms and by measuring stimuli in units r, Fechner's Law is expressed in a more compact form as $S = k \log R$. The equation states that as stimulus multiplies in strength, such as in tripling (3×1), the corresponding perception will increase additively, say twice stronger ($1 + 1$).

By the use of combinatorial mathematics, Kenneth Arrow developed a possibility theorem to show that consistent voting behavior is impossible, even in a democracy. He was preceded by a long line of political theorists who were trying to aggregate individual preferences for a group or society. Attempts by Jean-Charles de Borda (1733–1799) and Marie Jean Antoine Nicolas Caritat (1743–1794) established that the law of transitive reasoning does not hold up when voting preferences are aggregated. A set of voters may choose the candidate A over B, and B over C, but not A over C. Arrow postulated a set of consistent axioms that cannot all be met in the aggregation of social preferences. Besides the transitivity axiom, he required that there be no dictator, that when two choices are ranked their outcome should not depend on the third choice, and finally, that if everyone prefers one outcome over another, the preferred outcome should dominate.

To illustrate Arrow's model, consider two persons, X and Y, who are voting on three candidates, A, B, and C. We can create thirty-six profiles of their ranking, because two persons can rank three outcomes in $6 \times 6 = 36$ ways. Of these thirty-six profiles, X and Y can make only six unanimous rankings, where their first, second, and third rankings can be {A,B,C}, {A,C,B}, {B,A,C}, {B,C,A}, {C,A,B}, and {C,B,A}. In many instances, however, X and Y will not be able to rank the candidates the same. Although they both may rank A first, X might rank B second, and Y may rank B third. The aggregation of these preferences will not, therefore, be unanimous, and this may require a benevolent dictator to pick the final candidate.

MODELING IN SOCIOLOGY

As an example of mathematical models from sociology, we take one developed by Arnold Faden (1977, p. 266) as in Alfred Lotka's predator-prey model, which explains how crime spreads. Loosely speaking, the density of crime at a location has a three-population functional relationship $f[v(s), c(s), p(s)]$, where v, c, p, s represent victims, criminals, policemen, and location, respectively. A particular explicit relation of this model can take the form of $f(v, c, p) = vce^{-p}$. One implication of the model is that a crime is possible when a potential victim meets a criminal, assuming no policing, $p = 0$.

From the game perspective, several implications can be modeled. Faden examined cases where victims and criminals follow their individual rationality, where they collude in the absence of police, and where the police and criminals collude, given the distribution of victims. Such modeling represents only the beginning of a complex social problem. The assumption about the size and distribution of the three populations, the functions that relate them, and their motivations can vary. For instance, if we focus on the struggle for existence between two populations, say victims and criminals, the increment of the former will add to the possibility of the latter, yielding a simple system of differential equations such as $(dv/dt)1/v = f(c)$ and $(dc/dt)1/c = f(v)$. As Samuelson pointed out (1972, p. 474), solutions for these types of equations can lead to perpetual movement in a circle around an equilibrium value. However, the potential for such modeling is on the increase. In the global economy, a country enforcing international trade law can represent the police variable. Consumers, countries, or agents may be the victims, and criminals may be engaged in international piracy of intellectual property rights.

MODELING IN ECONOMICS

The classical economists were concerned with how the economy is interconnected. Prices of commodities depend on cost of production (the price of inputs), and output is what is demanded at existing prices. Antoine Augustin Cournot ([1838] 1956, p. 1215) was the first to use calculus in determining both prices and quantities in his model. He formulated quantity demanded as a function of price $D = F(p)$, and foreshadowed the development of the Marshallian elasticity concept by advancing that $\frac{\Delta D}{\Delta p} < or > \frac{D}{p}$. Taking the differential of demand to yield $F(p) + pF'(p) = 0$, Cournot proceeded to analyze maximum problems.

Cournot has bequeathed a behavioral assumption that makes possible the solution of rivalry problems in modern economics. Each firm assumes that the other firms' output is fixed. The expected output of the other

firms now enters into the one firm's own demand curve. If costs are given, the calculus method can be used to find optimal price and output. Variations in demand and cost curves are prominent exemplars in intermediate microeconomics and managerial textbooks.

The founders of the marginal revolution in economics, Léon Walras, Stanley Jevons, and Karl Menger, were influenced by Cournot. They extended Cournot's model into the theory of the firm, consumer behavior, and general equilibrium analysis. Walras (1954, pp. 103, 110–111) indicated equilibrium where supply and demand curves cross. The markets are related because a change in price in one market affects changes in other markets. A general equilibrium is sought for all markets through the process of *tatonnement*—raising the price in cases of excess demand and lowering it in cases of excess supply until equilibrium is attained.

Paul Samuelson (1966, Vol. 1, p. 544) explained how stability in a Walrasian system can be achieved using differential equations. Solving the equation $dp/dt = H(q_D - q_s)$, the term on the left is the rate of change of prices, dp, with respect to changes of time, dt. Given that H is a proportional constant, q is quantity, S is supply, and D is demand, one can find the time path. Stability occurs when, as time goes to infinity, the solution of the differential equation breaks down, which in economic terms means that the supply curve must cut the demand curve from below. Solving for quantity in terms of price, one can also find the Marshallian stability conditions under which quantity adjusts to clear the market. Malthus's demographic model used differential equations to show stability. If a population, x, grows at an exponential rate, c, over time, t, then $dx/dt = cx$. If food supply, y, grows at a constant rate, k, over time, t, then $dy/dt = k$. Thus, the ratio of $y/x = (y_0 + kt)/(x_0e^{ct})$ will break down as t approaches infinity, implying misery (Hirsch 1984, p. 14).

Mathematical modeling in economics climaxed with the Arrow-Debreu theorem (1954). In this system, a fixed-point mapping method was used instead of counting equations and unknowns in the Walrasian system. The idea of a fixed point is that, in the process of transforming a rubber sheet, say by stretching it, one point will not move. It will be mapped onto itself. William Baumol (1965, p. 494) explained this process for the case of the demand and supply curves. Starting with demand and supply curves on two separate graphs, let Q_s be the quantity supplied, and Q_d the quantity demanded. Then, tracing up from the two-quantity axes to the demand and the supply curves, one finds two prices, say a supply price, P_s, and a demand price, P_d. If we can find a function, a map of $f(P_s) = P_d$ or $f(Q_s) = Q_d$, then we have a fixed point mapping for the equilibrium problem.

The application of the fixed point theorem to the Arrow-Debreu general equilibrium required that convex assumptions be applied on consumers' and producers' sets, as well as special ideas of continuity, and the idea of separating planes in Euclidean space. For instance, a commodity has spatiotemporal and physically differentiated characteristics, which can be represented by a point in space. If there are L amounts of commodities, one can imbed them in the Euclidian space, R^L. As Debreu put it, "By focusing attention on changes of dates one obtains … a theory of savings, investment, capital, and interest. Similarly by focusing attention on changes of locations one obtains … a theory of location, transportation, international trade and exchange" (Debreu 1959, p. 32). In his *Theory of Value* (1959) Debreu relied on a lemma of Hukukane Nikaido (1956) to prove equilibrium. The lemma assumes a referee that sets the price, P. Consumers will maximize their utility, $U_i(x)$, subject to $PX = PA$, where A is endowment and goods X is in space $E = (X|0 \leq X \leq C)$, C being an arbitrary bundle such that $C > A$. All acceptable bundles with respect to P are labeled $\varphi_i(P)$, the i^{th} individual demand function. Its sum is just $\varphi(P)$. If total demand, X, does not match total available bundles, A, the referee must make an adjustment. The difference is $X - A$. Its value is $P(X - A)$. The referee's objective is to pay a person a value PX that is greater than the endowment value PA. In other words, choose a price, Q, that will maximize the price-manipulating function $\theta X = (P|P(X - A)) = \max(Q(X - A))$ for all Q in S^k, where X is total demand lying in Γ. We now have the following demand function and a price-adjustment function:

$S^k \ni P \rightarrow \varphi(P) \subset \Gamma$ (Demand function)

$\Gamma \ni X \rightarrow \theta(X) \subset S^k$ (Price-manipulating function).

We want to choose (X, P) in this demand and price adjustment space, $\Gamma \times S^k$, such that $\varphi(P) \times \theta(X)$ is contained in $\Gamma \times S^k$. This is possible because the mapping is upper semicontinuous. Therefore, the equilibrium price exists.

Upper semicontinuity is easy to show for $\theta(X)$. Given $P_n \rightarrow P$ in S^k, $X_n \rightarrow X$ in Γ and $P_n \in \theta(X_n)$, then $P \in \theta(X)$. The proof is that, for any Q price-constellation, $P_n(X_n - A) \geq Q(X_n - A)$, and, for the whole sequence, as $n \rightarrow \infty$, we get $P(X - A) \geq Q(X - A)$. Therefore, the existence of $P \in \theta(X)$ is demonstrated.

A model developed by Karl Marx has been used as a material balance approach to modeling the economy. Total value is the sum of c = constant capital (depreciation), v = variable capital (wage bill), and s = surplus, and the cost price of total capital to produce the commodity is $c + v$. Assuming turnover rates of 1 for both c and v, let the total invested capital in one department be 100 units of capital distributed as $80c + 20v$, and $70c + 30v$ in the other. The average rate of profits is $s/(c + v)$, and the aver-

age rate of surplus value is s/v. For the first department, $80c + 20v$, $s/v = 20$, or 100 percent of variable capital, and $s/(c + v)$ is 20 percent. For the second department, $70c + 30v$, the rate of profit becomes 30 percent.

Because of competition, the sum of the profits, 20 + 30 = 50, will have to be distributed evenly across the two departments discussed above, in this case 25 each. Adding this average profit of 25 to the cost price of total capital ($c + v$) yields prices of $125 for each department. Adding s to the cost price of total capital yields values of 120 for the first department, and 130 for the second department. The price-value differences are $5 and $–5, respectively, whereas the total values and total prices are the same, each equal to 250. This difference between price and value has been called the "transformation problem" in Marxian economics. Tremendous efforts have been made to solve this problem, and to extend this model to show growth. All in all, the mathematization of the social sciences deepens their ability to probe the human condition.

SEE ALSO *Arrow Possibility Theorem; Arrow-Debreu Model; Economics; Economics, Marxian; Economics, Neoclassical; General Equilibrium; Hicks, John R.; Marginalism; Marxism; Models and Modeling; Psychology; Samuelson, Paul A.; Schumpeter, Joseph Alois; Social Science; Statistics in the Social Sciences; Walras, Léon*

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MATRIARCHY

Matriarchy is a complex and controversial term. It is emotionally and politically loaded, and has been seen as suppressed history (Walker 1996b), utopian theory (Perkins Gilman [1915] 1992), deluded fantasy (Marshall 1998), and dangerous degeneration or dysfunction (Frazier 1949; Moynihan 1965). Barbara Walker, citing Wolfgang Lederer's *Fear of Women*, argues that *Amazon* was a "Greek name for Goddess-worshipping tribes in North Africa, Anatolia, and the Black Sea area" whose women were "warlike" (1996a, p. 24). In Eurasian Scythia women were not only warriors, but also important in politics (Walker 1996a). Similarly, Lewis Henry Morgan's, whose work was a basis for that of Engel's, description of the Iroquois certainly points to women holding an important base of power in choosing the leadership and controlling resources, which are contexts of political control of a society (Engels [1884] 1972).

These are relative descriptions, made by those writing the history and/or anthropology of the Other. The fact that there are a variety of versions of mythological and popular renderings of, for example, the Amazons—that they removed a breast for better archery, that they disal-

lowed adult men from living with them, that they practiced infanticide on males—as well as actual evidence of women engaged in both war and politics outside of classical Greek society and ideals, suggests distortional bias. That both the Greeks and the Americans excluded women from soldier and politician roles would make any comparative society in which women were found in these roles on a regular and ordinary basis seem to us like the world turned upside down, and indeed monstrous.

The concept of matriarchy encompasses several component parts that delineate arenas of power and control granted to women. Matriarchy is of course based on motherhood, and how social relations are arranged—especially in terms of the distribution of resources—in relation to how motherhood (and thus fatherhood and other kin relationships) is understood. The two most important components of matriarchy are matrilineal descent or inheritance, and matrilocal living patterns.

If a group determines descent or distribution with a focus on the mother or the mother's kin network, we refer to this focus as *matrilineal*. If a group determines where a new couple or family will live with a focus on the mother or the mother's kin network, we refer to this focus as *matrilocal*. If these practices are determined with a focus upon the father, they are termed their opposite, *patrilineal* and *patrilocal*. Neither matrilineal nor matrilocal practices necessarily add up to matriarchy in the sense of woman-domination of politics, which brings us to the first dilemma in discussing matriarchy, wherein arguments over the meaning of social practices come to the fore. Why is evidence of patrilineal and patrilocal arrangements taken at face value to equal patriarchy (male-domination)? Why does evidence of their opposites (which are abundant) not equal matriarchy? Matriarchy is often discussed as nonexistent, with scholars insisting that there is "no evidence" of it, that it has never existed in any human society (Marshall 1998, p. 402).

In his synopsis of matriarchy, Gordon Marshall points to Friedrich Engels's reliance upon a notion of evolutionary progress from mother-right to father-right that is now out of favor (1998). Thomas Laquer argues this point from a very different perspective, arguing that patriarchy was embedded in valuing the idea over matter (the body)—historically, fatherhood was considered far more "factual" than motherhood. Thus materiality (bearing the child) does not always make for the logical understanding of connection, where "mother" is assumed as a natural fact and ontologically, whereas fatherhood is often an idea, and not understood as a physical connection (Laquer 1992, pp. 158–164). However, there is more to the Engels argument than Marshall discusses.

As noted above, Engels relied heavily on the anthropology of the Iroquois developed by the American anthropologist Lewis Henry Morgan ([1884] 1972). Morgan noted that Iroquois kinship and economy was organized matrilineally, and thus that the women held considerable political power, although they were by no means all-powerful. He interpreted this situation as a matriarchy comparable to the more familiar patriarchal male-domination in his own culture, and interpreted matriarchy as a universal stage that preceded patriarchy in the development in human civilization. Engels took this idea of stages of family development and connected it to the Marxist idea of progressive stages of economic development. Certainly, interpreting a contemporaneous social situation—the existence of women's political power in the Iroquois confederation—as evidence of a worldwide historical stage of evolutionary development in social structure is problematic. However, it is at least equally problematic to ignore what is certainly evidence of a very differently gendered system of distributing power and resources.

Although it is repeatedly stated by scholarly authorities that there are no matriarchal societies in the world today (and many argue there never were), Heide Göttner-Abendroth and the International Academy for Modern Matriarchy Studies and Matriarchal Studies contest this position. Göttner-Abendroth traces the discussion of matriarchal societies to J. J. Bachofen in 1861 (2004; see also Walker 1996). She argues that one of the root words of matriarchy—*arche*—has a double meaning in Greek: both "beginning" and "domination." She argues that *matriarchy* can thus mean "the mothers from the beginning." But Göttner-Abendroth also asserts that *patriarchy* is correctly translated as "domination of the fathers." Her interpretation seems to be a feminist understanding of woman's power that is always more benevolent than that of man's. She defines matriarchy as women "hav[ing] the power of disposition over the goods of the clan, especially the power to control the sources of nourishment," and distinguishes this actual distributive power from "mere" matrilineality or matrilocality (2004). Although in this situation women have this power—and men do not—Göttner-Abendroth and others define matriarchy as egalitarian or consensus-based (see also Walker 1996, and Perkins Gilman's fictional utopia *Herland*).

Göttner-Abendroth's outline of the criteria for a matriarchy is highly formal and detailed. She incorporates a fundamentally different diffusion of the power of women in these societies, one that is based upon consensus in which women are key, because "even the process of *taking a political decision* is organized along the lines of matriarchal kinship" (2004). She argues further,

> In contrast to the frequent ethnological mistakes made about these men, they are not the "chiefs" and do not, in fact, decide.… Therefore, from the political point of view, I call matriarchies *egalitar-*

> *ian societies* or *societies of consensus*. These political patterns do not allow the accumulation of political power. In *exactly* this sense, they are free of domination: They have no class of rulers and no class of suppressed people, i.e., they do not know *enforcement bodies*, which are necessary to establish domination. (2004; emphasis in the original)

Thus, according to a definition that takes into account matri-based kinship strategies, there have indeed been any number of matriarchal societies. According to this definition, there are contemporary matriarchal societies, but they are exceedingly rare, indeed endangered (Jacobs 2003).

Matriarchy and patriarchy are systems of distributing resources and arranging status. In writing about the African American family structure, Robert Staples asks an important question: "does the family determine the economic status of individuals, or does the economy determine the structure of a family?" (1999, p. 19). This emphasis on the relationship between the economy, the family, and the economic success or survival of particular families—and particular individuals in families—is useful. Staples's argument is problematic in that he labels the entire continent of Africa "patriarchal"—without ever defining the term—and never notes from where exactly on that continent the vast majority of African Americans came (West Africa, where there were and are several cultures that can be characterized as "matriarchal" at least in terms of matrilineal descent, and some in the more robust usage of Göttner-Abendroth; see especially Bergstrom 2002). Although critical of both racism and sexism, Staples's structural view of the situation tends to assume that the conventional patriarchal marriage pattern is the one deviants must adhere to, and assumes that pattern to be an inherently stable (read "normal") one, as did Talcott Parsons, Daniel Patrick Moynihan, and E. Franklin Frazier, among others.

When discussing matriarchy (or more accurately, female-headed families) as a deviation from the norm of patriarchy, Staples does not descend into labeling matriarchy as a dangerous degeneration or a pathology, but he compares the dictatorship of patriarchy to the democracy of gender equality—equality is here valued, but recognized as more of a struggle to maintain (1999, pp. 20–21; see also Frazier 1949 and Dill 1990). Although Moynihan's report "The Negro Family" also was in part an indictment of a racist system that deprived blacks of the normative family relations of their society, its language of pathology tended to normalize what many had already argued—and would continue to argue—was also a pathological social system—patriarchy itself (see Perkins Gilman [1915] 1992, Beauvoir [1949] 1972, and Friedan [1963] 1983).

It is possible to examine the arrangements of sexuality, procreation, management of land and resources, and other essentially political processes as they have existed in every group of people that is an ongoing concern (see Allen 2000). Although we can trace the historical (or even at times the prehistorical) development of particular practices among humans, it is a mistake to view history as inevitable evolution or progression. It is also a mistake to uncritically use one social standard as a measurement device for all others (see Dill [1979] 1990, Dilworth Anderson et al. 1993, and Allen 2000). In the end, both matriarchy and patriarchy may be overly polarizing ideal types that make it difficult for scholarly and everyday analysis of social, cultural, and political arrangements of power. Getting at the nuances of both systemic and individual-level arrangements of power is arguably what is needed here (see Genovese 1972 and Mann 1990 for a brief study that does this admirably).

SEE ALSO *Frazier, E. Franklin; Gender; Hierarchy; Patriarchy*

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MATRIX, THE

The Matrix (1999), a science fiction action movie written and directed by Larry and Andy Wachowski, has been called the masterpiece of "cyperpunk" cinema for the twenty-first century. Cyberpunk, a science fiction subgenre, deals with the adventures of rebellious hackers in the computerized realm of "virtual reality." The subgenre was founded in the early 1980s by a group of American science fiction writers, foremost among them the novelist William Gibson in his novel *Neuromancer* (1984). Gibson coined the terms "cyberspace" and "the matrix" to refer to virtual reality. *The Matrix* is a central film dealing with the philosophical issues concerning virtual reality: What is happening to the nature of the human within the new electronic universe humans have created? How can people tell the difference between the real world and a computerized reality? Which is preferable?

The Matrix is the first film of a trilogy about a hacker superhero called Neo who is prophesied to be the savior who will defeat the computers that have enslaved humanity. The film blends the old mythology of the coming of a messiah with the new mythology of virtual reality to create a new kind of religious hero. The first film is the origin story of Neo, who discovers he is living in a computer-constructed world, escapes to the real world, and begins to exercise his extraordinary powers against the agents of the machine. The first third of the film takes the form of a mystery: Both Neo and the audience are at first bewildered by fantastic events. As Neo slowly learns the truth about his world and the nature of his powers, so too does the audience. Gradually the audience realizes that it is 2199 and the surface of the earth has been destroyed in a war with artificially intelligent machines. Deep underground, human beings are bred as a source of energy for the machines and kept lifelong in an embryonic state, dreaming that they are living in an American city in 1999. The dream world of the Matrix is a computer simulation to keep the populace docile.

A few humans remain in Zion, the last human city. Morpheus, the rebel leader, and his crew rescue from the Matrix Thomas Anderson, by day an obscure computer programmer working for a large corporation, by night an outlaw hacker called "Neo." Morpheus believes Anderson is "the One" who it is foretold can defeat the agents of the machine. But first Neo must be extracted from the Matrix, reborn in the real world, reeducated, and trained.

Today, because of formidable technological obstacles, a program sufficiently complex to simulate real life, including all five senses, well enough to fool people does not exist. *The Matrix* assumes that in the future these obstacles have been overcome. Many commentators imagine virtual reality as a transcendent space better than ordinary reality, promising a utopian existence. And, in fact, in *The Matrix* the character Cypher knowingly chooses the Matrix over meager existence in the real world; however, Cypher is a villain who betrays and murders his comrades. Other contemporary critics argue that virtual reality, if it ever exists, would not be transcendent but merely a secondhand existence in a world of shadows, like life in Plato's cave.

Science fiction and other contemporary cultural concerns about virtual reality project fears and hopes about life inside the machine or life augmented by the machine in the cybernetic age. Humans live now in a new electronic age, not simply the postmodern but "the posthuman." As the boundary lines break down, people fear that

the human may be taken over by the machine, or, at the opposite extreme, hope that the human may be made transcendent by the machine. As critic David Porush (1996) says, virtual reality is "a new mythology" in which the new frontier is not outer space but the "inner space" of the computer and of the human mind and the interface between the two (p. 109).

In Gibson's novel *Neuromancer*, cyberspace is a transcendent realm that, for hardcore hackers, is better than drugs or sex. *The Matrix* taps into this new mythology but inverts Gibson's notion of cyberspace, creating not a New Jerusalem but a virtual prison, a cyber-hell. Instead, the film openly borrows the ideas of French philosopher Jean Baudrillard, one of the theoreticians of the new order of simulation or virtual reality.

Baudrillard's central idea is that, in the postmodern world, the real has been almost totally displaced by the simulated, or what he calls the "hyperreal" (1994, p. 1). The real, he believes, has been irretrievably lost, replaced by the electronic and other forms of simulation. Even if people wanted to, they could not distinguish anymore between the simulation and the real. America is in the vanguard of the hyperreal, and the future promises only more and more simulation, he claims.

According to philosopher Slavoj Žižek, *The Matrix* is not about the future but about the unreality of present-day America in the oppressive, all-enveloping world of virtual capitalism: "The material reality we all experience and see around us is a virtual one, generated and coordinated by a gigantic computer to which we are all attached" (2001, p. 25).

SEE ALSO *Cyberspace; Film Industry; Reality; Totalitarianism; Utopianism*

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MATRIX ALGEBRA

Real numbers can be used to convey one-dimensional information, such as a family's total expenditure in a month. However, if one wants to record the monthly expenditures of two families (indexed by 1, 2) on three items—food, entertainment, and health (indexed by 1, 2, 3)—then one needs to use a rectangular array of real numbers, or a matrix. A *matrix* (A) is defined as a rectangular array of numbers, parameters, or variables. The members of the array are referred to as the *elements* of the matrix and are usually enclosed in brackets, parentheses, or double vertical lines.

$$A = \begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \end{bmatrix}$$

The first row of matrix A provides information on the first family's expenditures on food, entertainment, and health, and the second row gives similar information related to the second family. For instance, a_{23} is the expenditure of the second family on health, and a_{12} is the first family's expenditure on entertainment. Matrix is a concept of linear algebra, and it has wide applications in many fields, including economics, statistics, computer programming, operations research, industrial organization, and engineering.

Like numbers, elementary operations such as addition and multiplication can also be performed on matrices. A typical element in matrix A is written as a_{ij}, which is the element located in row i and column j of the matrix. For instance, a_{13} is the element in the first row and third column, or the first family's expenditure on health in the first month. Matrix A is also written as $\{a_{ij}\}_{2\times3}$, which simply means that A is a matrix with two rows and three columns whose typical element is a_{ij}. The expenditures of the two families in the second month on food, entertainment, and health can be written as another matrix, $B = \{b_{ij}\}_{2\times3}$. Then, the *sum* of two months' expenditures for both families on all three items can be written in the form of a third matrix C, which is the sum of the corresponding elements of A and B; it is defined as:

$$C = \{a_{ij} + b_{ij}\}_{2\times3} = A + B$$

Let us now assume that in the third month the two families spend exactly the same amount of money on every item as they spent in the first month. In other words, the matrix of expenditure in the third month is the same as the matrix of expenditure in the first month. Then we can write a matrix D, which will tell us the total expenditure of the two families in three months on each of the three items as:

$$D = \{2a_{ij} + b_{ij}\}_{2\times3} = 2A + B.$$

2A is called *scalar multiplication* of a matrix, in which every element of A is multiplied by the scalar 2.

Multiplication of two matrices can be illustrated from *input-output* models used to illustrate producer theory in economics. Let us suppose that there are two firms, each producing three goods (indexed by 1, 2, 3) with two factors of production (indexed by 1, 2). Let $A = \{a_{ij}\}_{2\times 3}$ be the matrix of input-output coefficients. Thus, a_{ij} is the amount of factor i needed to produce one unit of good j. The first firm wants to produce X_1, X_2, X_3 and the second firm wants to produce Y_1, Y_2, Y_3 quantities of the three goods. Let us define a matrix of these outputs as:

$$Z = \begin{bmatrix} X_1 & Y_1 \\ X_2 & Y_2 \\ X_3 & Y_3 \end{bmatrix}$$

Then the *matrix multiplication* of A and Z can be written as:

$$AZ = \begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \end{bmatrix} \begin{bmatrix} X_1 & Y_1 \\ X_2 & Y_2 \\ X_3 & Y_3 \end{bmatrix}$$

$$= \begin{bmatrix} a_{11}X_1 + a_{12}X_2 + a_{13}X_3 & a_{11}Y_1 + a_{12}Y_2 + a_{13}Y_3 \\ a_{21}X_1 + a_{22}X_2 + a_{23}X_3 & a_{21}Y_1 + a_{22}Y_2 + a_{23}Y_3 \end{bmatrix}$$

It may be noticed that A is a 2×3 and Z is a 3×2 matrix. Their product will be a 2×2 matrix. The general rule is that if A is m×n and Z is n×q then their product will be a matrix of the order of m×q. The number of columns of A must be equal to the number of rows of Z. If this condition is not satisfied, matrix multiplication is not possible. The meaning of the product matrix (AZ) is very simple. Suppose labor and capital are the two factors of production. The first column of AZ gives the total quantities of labor and capital used by the first firm to produce all three goods, and the second column of AZ gives the amounts of all factors used by the second firm to produce these three goods.

The *transpose* of a matrix A^T is obtained by interchanging the rows and columns of A. The ith row of A is the ith column of A^T. For instance, the transpose of A, written as A^T, is:

$$A^T = \begin{bmatrix} a_{11} & a_{21} \\ a_{12} & a_{22} \\ a_{13} & a_{23} \end{bmatrix}$$

A *square matrix* is a matrix with an equal number of rows and columns. The equivalent of the number one is an identity matrix I, which is a square matrix with 1 in its principle diagonal and 0 elsewhere. The following identity matrix is of dimension 3×3:

$$I = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

Obviously, $I^T = I$, $AI = IA = A$, for any matrix A for which these products are defined. A *null matrix* (written as O) is a matrix whose elements are all zero.

Matrix operations satisfy certain mathematical laws:

1. A + (B+C) = (A+B) + C (associative law for addition)
2. A(BC) = (AB)C (associative law for multiplication)
3. A + B = B + A (commutative law)
4. c(A+B) = cA + cB, where c is a scalar (distributive law for scalar products)
5. C(A+B) = CA + CB, provided the products are defined (distributive law for matrix multiplication)

A crucial application of matrices is that matrix algebra can be used to solve a system of linear simultaneous equations of the form: AX = B. A is a matrix of order m×n whose elements are real numbers, X is an n×1 matrix of variables whose values have to be solved, and B is an m×1 matrix of right-hand-side constant terms of m linear equations. An example of these equations for the case m = n = 3 follows:

$$x + y + z = 4$$
$$3x + y - z = 6$$
$$x + y - 2z = 4$$

In the above system of equations,

$$A = \begin{bmatrix} 1 & 1 & 1 \\ 3 & 1 & -1 \\ 1 & 1 & -2 \end{bmatrix}; X^T = \begin{bmatrix} x & y & z \end{bmatrix}; B^T = \begin{bmatrix} 4 & 6 & 4 \end{bmatrix}$$

Something that is equivalent to division for real numbers is called *matrix inversion* in matrix algebra. Only a square matrix can be inverted. If A is a square matrix of order n×n, then its inverse, A^{-1}, is a matrix such that $A\,A^{-1} = A^{-1}\,A = I$. If there is a system of linear simultaneous equations AX = B, where A is n×n, X is n×1, and B is n×1, then the solution is $X = A^{-1}\,B$, provided A^{-1} exists.

SEE ALSO *Cholesky Decomposition; Hessian Matrix; Input-Output Matrix; Inverse Matrix; Jacobian Matrix; Linear Systems; Mathematical Economics; Programming, Linear and Nonlinear; Vectors*

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Monica Das

MATRIX INVERSION

SEE *Inverse Matrix.*

MATURATION

The term *maturation* comes from *maturatio*, a Latin word for ripening; thus, many dictionaries describe maturation as the process of "becoming ripe" or "mature," and being mature as "being ripe." In the social sciences, when we describe developmental changes as maturational, we are describing the change as having three characteristics: First, maturational change is an intrinsically teleological or end-goal oriented process. Second, maturational change is a systematic process. Finally, the end-goal of maturational change is an adaptive state. *Maturity* represents this goal-like apex of adaptive functioning, and *maturation* describes the systematic and time-consuming processes that achieve maturity. Consequently, maturity does not just "happen"; it is a time-consuming and organized growth process.

This definition of maturation is broader than it has been defined historically. For example, the Child Study Movement of the first half of the twentieth century sought to describe child development as a maturational process that is independent of experience and learning. The goal of much of early developmental psychology (e.g., the work of Arnold Gessell and Nancy Bayley) was to chart the course of average and atypical child maturation. This approach, while providing information on the "what and when" of child development, does not explain "why" children develop as they do. Subsequent research has shown that human development is never a purely biological process. For example, there is a documented decrease of about four years in the age of menarche (the onset of menstruation in girls) in Europe and North America over the last century. This is called a secular trend (a trend over a long period of time) and appears to have leveled off in developed nations. However, in the United States there is some evidence that breast development is occurring earlier, although average age at menarche (twelve and one-half years) is not declining. Age at menarche is typically half a year later in most parts of Europe (thirteen years). Age at menarche in nations currently struggling with high rates of disease and malnutrition can be as high as seventeen—where Europe was in the early 1800s. Environmental improvements in nutrition and disease control have the capacity to act on the genetically based timing of female reproductive maturation. Similarly, experiences such as paternal sexual abuse, chemical exposure, obesity, and ongoing stress can speed up pubertal development. On the other hand, severe caloric deprivation (e.g., an eating disorder or famine) can delay the onset of menarche, or even return an adolescent to prepubescent levels of hormonal functioning.

Development is multiply determined; genomes, physical environment, social environment, culture, adaptive history, and even our efforts to retain volitional control by the creation of meanings all contribute to the timing and expression of human development. Genetic code does not have sole control of even physical maturation; instead, the flexible capacity to act on the environment and be acted on by the environment is a core attribute of the human genome. It is increasingly apparent that no aspect of human psychological growth can be understood simply in terms of genetic input. In short, debates that push for allegiance to either nature or nurture no longer fit the data of human development.

Conceiving maturation as a purely biological process shares the same untenable assumption as nature versus nurture debates do; both assume that we can neatly untangle these forces. It is rather like trying to separate conjoined twins who share a brain or heart; each requires something owned by the other. Human development emerges out of dynamic interaction between forces inside and outside our bodies. Additionally, we must remember that there are also less deterministic players in the ring—for example, volition and the cognitive processes of meaning-making. "Purely biological" maturation is an impossibility. As Irving Gottesman and Daniel Hanson put it: "Everything that is genetic is biological, but not all things biological are genetic" (2005). We have probably underestimated the degree to which ever-popular nature-versus-nurture debates have blinded us to the profound and lively interaction of internal and external causes development. At best, these debates are artificial; at worst, they create a peculiar lens through which observations become myopic.

So where does this leave the word *maturation*? Social scientists still use it to draw attention to biological aspects of development, but few would say they are speaking of purely genetically driven development. Is this word a historical artifact—no longer precise enough for science? If we drop the "purely biological" restriction, does it become a simple synonym of development?

MATURATION VERSUS DEVELOPMENT

Although the term *maturation* is similar to the term *development*, from a lifespan perspective it is not synonymous

with *development*. Unsystematic changes and declines can still be developmental changes, but they do not have the goal-based character of maturational change. For example, entropic changes toward lesser functionality and greater chaos are developmental changes, but not maturational because they are not systematic and teleological. Lifespan development is quite inclusive; it can include trajectories of gain or decline, systematic or chaotic processes, goal-directed or random ends. If we drop the dysfunctional aspects of maturation's historic definition (i.e., excluding purely biological assumptions), maturation still includes only growthlike, purposeful, and maximally adaptive changes. For example, throughout a lifespan we find maturational growth in many domains of adaptation, but in the final years of life, nonmaturational developmental change increasingly overshadows maturational development. In contrast, maturational change dominates the pubertal, cognitive, emotional, and social developments of the first two decades of life. Declines of aging also have predictable developmental trajectories, but they less frequently include the systematic, goal-directed, adaptive changes characteristic of maturation. Ultimately death occurs because the organism, at all levels, can no longer maintain the goal-directed and systematic functions that preserve equilibrium.

CAVEATS ABOUT IDENTIFYING MATURATIONAL PROCESSES

When we designate a segment of development as a maturational change, we must remember that we have done just that—designated. Any dissection of human development into segments imposes onto it our own interests and timelines. In nature, maturation is an integrated whole, but when we describe maturation we would be overwhelmed if we did not focus on particular points of maturity within specific domains. For example, indicators of maturity and their maturational processes will differ depending upon whether one is looking at cognitive maturation, sexual maturation, or emotional maturation; each has its own "maturity" endpoint, yet in reality they are not as distinct as their separate titles would suggest. We may discuss them as separate maturational processes, but from the perspective of the developing organism (e.g., an adolescent), they are a single, dramatically integrated process.

A less obvious relativity is our choice of end goals or mature attributes. For example, the word *ripe* conjures images of fruit that has reached a stage of maturity we subjectively find delicious. Some say a mango is not ripe until it drops off the tree, because "sweet and juicy" is their conception of maturity. Others like mangos picked a little earlier because they prefer tangy mangos. A mango exporter defines maturity by factoring in shipping time and shelf life. The mango tree, if it could reflect on such things, might wonder at our fuss about its intact fruit; its goal is reproduction—rotting, sprouting, and such things. Reflecting back on human development, if we value maximally efficacious child development, then a mother is reproductively mature when she herself has reached an acceptable level of psychological maturity. If, however, we are only concerned with basic sexual reproduction, then human females generally reach reproductive maturity during the year following menarche. Similarly, if the maturity or "ripeness" being defined is wisdom, our descriptions of what constitutes maturity and the processes needed to achieve maturation may vary considerably across cultures, religions, and historical period.

MATURATION—AN EPIGENETIC PROCESS

Maturation is an epigenetic process because it involves the emergence of new structures and functions through bidirectional relations between all levels of biological and experiential variables. According to Gottlieb: "Individual development is characterized by an increase of complexity of organization (that is, the emergence of new structural and functional properties and competencies) at all levels of analysis (molecular, subcellular, cellular, organismic) as a consequence of horizontal and vertical coactions among the organism's parts, including organism-environment coactions" (Gottlieb 1991, p. 7).

Genetic determinants of behavior are not fixed or immutable; rather, they have the capacity to respond adaptively, to turn off and on as required by circumstances. More than one gene determines the expression of most attributes, and each gene is embedded in a maturational system that is determined by a multitude of other genetic and environmental inputs. For example, Eric Turkheimer and his colleagues (2003) have found that the genetic heritability of intelligence is influenced by socioeconomic status. In impoverished families, shared environment explained most of the IQ variability among seven-year-old twins and almost none was explained genetically. They found the opposite among affluent families; shared genes accounted for most of the variation in intelligence, while environment accounted for very little. Only bidirectional influence between genetic, experiential, and volitional inputs, or epigenesis, can explain this apparent effect of socioeconomic status on genetic expression.

MATURATION—TIMING AND SEQUENCE

The fact that maturational timing is highly variable, while process or stage sequence is generally invariant, is a fascinating characteristic of the first two decades of life. For example, the sequence of motor skills developed before an infant is able to walk is quite consistent across individuals,

but the rate at which infants learn to walk is quite variable. Similarly, pubertal maturation follows a predictable sequence of physical changes, but the rate of maturation is highly variable. One adolescent may start and finish pubertal development in a year, while another can take five years to go through the same sequence of change. The timing of female reproductive maturation is more sensitive to environmental and experiential inputs than is male reproductive maturation. This sequential regularity supports the inclusion of systematicity as a characteristic of maturation.

The timing of pubertal maturation has a significant impact on both male and female psychosocial adjustment. In Western cultures, girls who begin pubertal maturation ahead of their peers are more likely to experience depression, premature and exploitive sexual experiences, delinquency, low academic achievement, and school dropout. Because a heavier body type is associated with early pubertal maturation, these girls also experience more body image disturbances and eating disorders. However, early-maturing girls attending same-sex schools do not seem to experience these problems. Boys who mature early experience life differently; they tend to be given more leadership experience, have more success in sports, attract more positive female attention, and have more confidence. The downside of early male pubertal development is greater involvement in delinquent behavior and substance abuse. There is little negative impact of late development on girls. They tend to have the slimmer body type preferred in Western cultures, thus avoiding the body image problems of early developers. Their academic achievement is also significantly higher than that of their early-developing peers. Late-developing boys have more difficulty, with less confidence and more depressive affect, but they do tend to be more creative and achieve more in the end.

CO-OCCURRENCE OF MATURATIONAL PROCESSES

Maturational processes can be correlated or uncorrelated despite occurring during the same period of life. For example, pubertal maturation and the final stages of musculoskeletal and cardiovascular maturation generally co-occur. Other co-occurring maturational processes can be quite independent of each other. For example, the timing of pubertal maturation and adolescent cognitive maturation seem to be unrelated. Adolescent pubertal maturation and its influence on emotion processing (e.g., limbic system) can occur before, during, or after the prefrontal cortex maturation that underlies gains in abstract thinking and self-regulation. Consequently, adolescents whose pubertal maturation precedes their cognitive development are more vulnerable to risk-taking and poor social choices because they have the drives and emotions of puberty without the cognitive maturity to help control their expression.

LIFESPAN PERSPECTIVES ON MATURATION

Developmentalists also use maturation to describe the attainment of skills and capacities achieved later in life. For the adult, both the domains of maturation and the level of maturation reached become individualized. One adult may focus on attaining mature financial skills, while another may focus on attaining mature interpersonal skills or "wisdom." Experiential opportunities and demands do play a stronger role in adult maturation than they do in childhood, but genetic input is still substantial. Both genes and prior developmental outcomes contribute to cognitive and physical capacity, and choice of environments, experiences, and acquaintances. Another input that may grow in strength across adulthood is volition. The adult capacity for meaning making and thus control over choices creates maturational opportunities that are not available to the young. These opportunities increase individual differences in both areas of competence and the levels of skill (maturity) reached. These individual differences are part of the study of personality and the study of clinical and counseling applications. For all of these areas, maturity refers to maximally adaptive social, emotional, or cognitive functioning, and maturation is the process of achieving it.

SEE ALSO *Child Development; Children; Developmental Psychology; Malnutrition; Nutrition; Undereating*

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MAU MAU

The Mau Mau movement of Kenya was a nationalist armed peasant revolt against the British colonial state, its policies, and its local supporters. The overwhelming majority of the Mau Mau fighters and of their supporters, who formed the "passive wing," came from the Kikuyu ethnic group in Central Province. There was also represen-

tation in the movement from the Embu, Kamba, and Meru ethnic groups. In addition, available evidence shows that some individual members of the Luo, Luyia, and even Maasai ethnic groups participated in the revolt as well.

Most of the Mau Mau guerrillas were young men and landless peasants. Some of these peasants had lost land to corrupt chiefs and other "landed gentry" in Central Province, while others were victims of land appropriation carried out to enable European settlement. Repatriated African squatters from the white farms in the Rift Valley fueled the ranks of the guerrillas, as did the economically desperate and unemployed Kikuyu in Nairobi and the surrounding urban centers. During the post–World War II period, there was massive African unemployment in the urban areas of Kenya, along with very poor housing (or no housing at all) and high inflation.

Among the Kikuyu, the embrace of a radical political posture was symbolized by taking the oath of unity with and allegiance to the Mau Mau movement. This oath, initially administered at Kiambu in 1950, was supposed to "inject courage into those who were initiated" (Edgerton 1989). It was also supposed to be administered to as many Kikuyu as possible. By July 1952 a new oath, the *Batuni* oath ("platoon oath"), was introduced. This was a warrior oath and it marked a further radicalization of the Mau Mau, which still remained an underground movement. When the colonial government, in a panic, declared a state of emergency in October 1952, the Mau Mau were not yet prepared to launch an all-out armed revolt. This started in earnest only after the declaration of a state of emergency, and the arrest and detention of most of the major African political leaders, including Jomo Kenyatta, Fred Kubai, Bildad Kaggia, and Ramogi Achieng' Oneko.

Throughout the revolt, the Mau Mau guerrillas referred to themselves as the *land and freedom army*. This description indeed summarized the revolt's principal causes, which were both economic and political. Scarcity of land, especially in Central Province, remained a major African grievance against the colonial government and white settlers. Hence, the attainment of fertile land, which signified general economic welfare and prosperity for African families, was a major objective of the revolt. To this must be added the demand for vastly expanded opportunities in education, training, housing, and employment. Politically, the Mau Mau guerrillas remained steadfast in their demand for Kenya's political independence from Britain. The Mau Mau movement's political objectives and even its ideology did not differ from the aims and objectives of the mainstream political independence party, the Kenya African Union (KAU); both sought political freedom (*Uhuru*) and the restoration of African dignity. From 1944, when it was formed, until 1953, when it was banned, KAU was the preeminent African political organization in Kenya. Its formation represented the "first attempt at territorial nationalism," and also the most prominent "legitimate political outlet" for Africans (Maloba 1993, p. 51). Still, KAU's political agitation did not lead to any remarkable victories. By 1947 none of its leaders, including Kenyatta, expected Kenya to achieve its political freedom during their lifetime.

One of the distinguishing features of the Mau Mau is that it remains perhaps the only major nationalist revolutionary movement to have been led almost entirely by peasants, many of them illiterate. The movement had no external sources of political or material support. Even the British government arrived at this conclusion, having determined that the Soviet Embassy in Addis Ababa, Ethiopia, had not provided any help whatsoever to the revolt or even established any verifiable contacts. The movement also lacked any propaganda machinery to spread its message beyond Central Province. Together with the British government in London, the colonial government in Nairobi took advantage of this weakness, and launched a harsh and effective propaganda campaign against the Mau Mau and Kenyan nationalism. The revolt was portrayed as irrational, and as a reversion to primitive savagery by Africans traumatized by the stress of modern (Western) civilization. The British government firmly maintained the position that the revolt was not caused by economic conditions, but rather an organized criminal enterprise. In this propaganda offensive, a lot of emphasis was placed on the oaths taken by the supporters of the revolt; almost routinely, many of these oaths were described as "bestial." It is this image as a senseless, savage, murderous enterprise that would haunt the Mau Mau for many years to come. In the West, major newspapers and magazines carried stories on the Mau Mau that reinforced British propaganda. Robert Ruark's *Something of Value* (1955), a novel read widely in Britain and the United States, also echoed official propaganda by contrasting "white heroism" with "black savagery."

For four years from October 1952 to 1956, the Mau Mau guerrillas operated from the forests of Mount Kenya and the Aberdares. Although they were outgunned throughout the duration of the revolt, these guerrillas fought with singular courage and determination against the combined forces of the colonial government's army, British troops, and the Home Guards (paramilitary units of local Kikuyu/Embu/Meru people supporting the colonial government's military and political objectives against the Mau Mau fighters and their objectives). One of the most celebrated leaders of the Mau Mau was Dedan Kimathi, who was based in the Aberdares, and who sought, in 1953 and 1954, to establish some unity among the various guerrilla units operating in the forests. These efforts did not succeed, and as a result the Mau Mau never had an overall leader or commander.

In response to the revolt, the British government undertook a major rehabilitation campaign in Central Province in order to "remake Kenya" by defeating radicalism and reinforcing the power of the conservative Kikuyu "landed gentry" and the Home Guards. Members of these groups would emerge triumphant in the post-emergency period. The rehabilitation campaign was carried out in the detention camps and even in the Kikuyu reserve. Its objective was to get the detained and arrested Kikuyu to renounce the Mau Mau and its radicalism. Christian religious indoctrination, sanctioned by the colonial government, played a major role in the rehabilitation process.

Although defeated militarily, the Mau Mau revolt was clearly instrumental in forcing the British government to undertake immediate political reforms. These reforms included the reinstatement of African political parties in 1955, and then the promulgation of several constitutional reforms that eventually led to the attainment of political independence on December 12, 1963.

The legacy of the Mau Mau revolt in Kenya remains a very complex and controversial subject. The controversy revolves around the following issues: What role did the revolt play in the decolonization of Kenya? Did Mau Mau bring *Uhuru*? Who benefited from *Uhuru*, the Home Guards and their descendants or the actual Mau Mau supporters and fighters? Was the Mau Mau a Kikuyu affair or a national movement? And lastly, how should this very complex movement be remembered in Kenya?

SEE ALSO *Anticolonial Movements; Colonialism; Decolonization; Guerrilla Warfare; Kenyatta, Jomo; Kimathi, Dedan; Liberation Movements; Nationalism and Nationality; Peasantry; Propaganda; Protest; Resistance; Revolution; Terrorists; Violence; Violence, Frantz Fanon on*

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W. O. Maloba

MAUSS, MARCEL

SEE *Dance.*

MAXIMIN PRINCIPLE

The maximin principle is a principle for making choices when one is not sure of the outcome that will result from one's choice. The principle says to evaluate each option in terms of the worst possible outcome that could result from choosing that option, and to pick the option that offers the best worst outcome (the maximum minimum or maximin). Rational choice theory generally divides situations in which agents do not know for sure the outcome of their choices into three types: risk, uncertainty, and games. In situations of risk, the probabilities of various outcomes resulting from particular choices are known. In situations of uncertainty, those probabilities are not known, and in some cases the possible outcomes are also unknown. Games are strategic interactions, where the outcome that results from each player's choice is determined not merely by external—possibly random—factors, but by the play of other rational agents.

Maximin is both risk and uncertainty averse, because it minimizes the degree of risk or uncertainty faced by the agent. Many rational choice theorists argue that risk aversity is irrational, as it involves a kind of double counting, valuing the mere avoidance of risk over and above its effect on the expected value of the possible outcomes. Subjects in psychological tests display a fair range of attitudes toward risk, from positively valuing it to extreme risk adversity. Some rational choice theorists argue that aversion to uncertainty is more rational, and experimental results confirm that aversion to uncertainty is more widespread. Finally, in the case of games where the gains of one's opponents are one's own losses (so-called zero-sum games),

maximin strategies are more clearly rational. If player one's opponent, player two, is rational, and player two's maximizing behavior will have the effect of giving player one the minimal result that can arrive from the options that player one faces, then it is rational for player one to try to maximize over those minimums. Furthermore, if such games have what is called a pure-strategy equilibrium, it will result from all players adopting a maximin strategy.

The importance and notoriety of the maximin principle outside of rational choice theory is due in large part to its connection with John Rawls's *A Theory of Justice* (1971). Something resembling a maximin principle appears at two crucial moments in Rawls's argument for the conception of justice he calls justice as fairness. First, at the heart of justice as fairness are two principles of justice, part of the second of which is the so-called difference principle. The difference principle states that social and economic inequalities are to be arranged to give the greatest benefit to the least advantaged members of society. Because the difference principle requires maximizing the share of goods that go to those with the smallest share, it is often described as a maximin principle of justice. Rawls rejected that name, however, because of its tendency to be confused with the maximin principle of choice.

Second, Rawls's argument for the two principles, from what he calls the original position, is often thought to involve an invocation of the maximin principle. In the original position, artificial rational agents must make a unanimous choice about principles of justice for a society, and do so without any particular knowledge about the people they represent or their society. Rawls argues that in such a situation, purely rational agents would choose his principles of justice over utilitarian principles. Many have read that argument as resting on the claim that it would be rational to use the maximin principle for choice in the original position. Such critics as John Harsanyi then argue that because the maximin principle is not a rational principle for choice under risk, Rawls's argument fails. Defenders of Rawls's theory (including Rawls himself) have offered three sorts of replies: (1) Risk aversion in the original position is rational because of the stakes and finality of the choice; (2) the choice in the original position is really one under uncertainty, not risk, and aversion to uncertainty is a much weaker and thus more defensible assumption to make than aversion to risk; (3) the original position is best thought of as a game, whose players are looking for an equilibrium, and this justifies their adoption of the maximin principle. In his *Justice as Fairness: A Restatement* (2001), Rawls further clarifies the role of the maximin principle in his argument, arguing in addition that its role is limited to supporting the adoption of his first principle, which guarantees adequate liberties to all, rather than the second principle, which includes the difference principle.

SEE ALSO *Gambling; Game Theory; Justice; Justice, Distributive; Justice, Social; Maximization; Minimization; Rawls, John; Risk; Social Contract; Uncertainty*

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Anthony Laden

MAXIMIZATION

In modern economics agents are assumed to maximize, so naturally the structure of the maximization assumption has had a significant impact on the structure of modern economics. On one hand, the widespread use of maximization has given economics an intellectual unity not seen in most of the social sciences; on the other hand, the reliance on maximization threatens to halt empirical and theoretical progress in economics.

Nobel Prize winner Paul Samuelson should be credited with making maximization the foundation of modern economics. In his influential *Foundations of Economic Analysis* (1947), Samuelson demonstrates that consumer and firm behavior could be usefully modeled as solutions to what are now known, in mathematics, as classical programming problems.

In general, the classical programming problem takes the following mathematical form:

$$\text{Max}_{x_1, x_2, \ldots, x_n} F(x_1, x_2, \ldots, x_n) \text{ subject to:}$$
$$g_1(x_1, x_2, \ldots, x_n) = b_1$$
$$g_2(x_1, x_2, \ldots, x_n) = b_2$$
$$\ldots$$
$$g_m(x_1, x_2, \ldots, x_n) = b_m.$$

The n variables $x_1, x_2, \ldots, x_n$ are the instruments. The function $F(\cdot)$ is the objective function, and the m functions $g_1(\cdot), g_2(\cdot), \ldots, g_m(\cdot)$ are the constraint functions. The constants $b_1, b_2, \ldots, b_m$ are the constraint constants. Interpret the instruments as a representation of the choices available to the agent. Interpret the objective function as a representation of the agent's desires with respect to the choices. Finally, interpret the constraint functions and constants as a representation of the limits the environment imposes upon the agent's choices. Under these inter-

pretations, the classical programming problem becomes a model of constrained maximization by an agent. If certain mathematical assumptions are met, a solution to the classical programming problem exists (Intriligator 1971). The method of LaGrange multipliers can be used to find a solution. Once a solution is deduced, compare its characteristics against the agent's observable behavior. If there is a match, the agent's behavior has been explained. If not, change the mathematical structure and repeat the process.

It is important to recognize that although the classical programming version of constrained maximization was new to most economists at the time of Samuelson's *Foundations*, the idea of constrained maximization was familiar. Constrained maximization is merely a sophisticated version of what the philosopher Daniel Dennett (1987) calls the "intentional stance." The intentional stance is a strategy for prediction and explanation. The first step in taking an intentional stance toward something—call it *Z*—is to attribute beliefs, desires, and rationality to *Z*. Since *Z* is assumed to be rational, the attributed beliefs and desires ought to make sense in the context of *Z*'s circumstances. One can then predict (or explain) *Z*'s behavior by determining what is rational given *Z*'s attributed beliefs and desires. Since there is always leeway in the attribution of beliefs and desires, if a prediction turns out wrong, or an explanation does not impress, the intentional stance need not be questioned for we can always revise the beliefs and desire we attribute to *Z*. The intentional stance is practically irrefutable.

As Dennett notes, there is nothing particularly profound about the intentional stance. It is "folk psychology," "familiar to us since childhood and used effortlessly by us all every day" (Dennett 1987, p. 7). Yet when Samuelson merged the intentional stance with classical programming, he elevated this folk psychology to science. Think of Thomas Kuhn's (1962) definition of normal science as the relatively routine puzzle-solving activity of trained professionals. All can use the intentional stance effortlessly; few can do classical programming effortlessly, even with training.

Economic theorists at the research frontier quickly mastered the classical programming version of constrained maximization and began rapidly to transform the discipline. Mechanisms were created to select and reward mathematical skill. In one generation—the late 1940s to the late 1970s—the leading periodicals in economics, the leading economics departments in America, the minimal mathematical proficiency levels of American graduate students in economics, and the standards defining scholarly success in economics all changed. The mathematical goals of rigor, generality, and simplicity became widely shared imperatives in economics. The Nobel Prize winner Gerard Debreu uses the term: "the mathematization of economic theory" (Debreu 1991) to refer to this evolution.

To illustrate the nature of this evolution, consider the discovery of nonlinear programming by Harold Kuhn and Albert Tucker (1951). The nonlinear programming problem is similar to the classical programming problem described above; the only differences are that the constraint functions are inequalities ($\leq$) and the instruments x_i ($i = 1, 2, \ldots, n$) are nonnegative (≥ 0). However, surface similarities mask deep differences; mathematically, nonlinear programming is better than classical programming. Nonlinear programming imposes fewer restrictions than classical programming, and it is based on a less complex mathematical foundation (convexity) than classical programming (differentiability). Given the new emphasis on rigor, generality, and simplicity in economics, on the battlefield of economic theory, nonlinear programming wiped out classical programming. Yet empirically speaking there is no difference between the two types of mathematical programming. Not surprisingly, modeling with nonlinear programming did not lead to new empirical generalizations.

Once maximization opened the gate to mathematization, constrained maximization became even more entrenched as the preferred method of doing economics. If you like rigor, generality, and simplicity then you like mathematical programming. So after years of selecting and rewarding mathematical skill, by the late 1970s the field of economics had as much consensus in the National Science Foundation's peer review system as the fields of chemical dynamics and solid-state physics (Cole, Cole, and Simon 1981).

Of course the consensus is incomplete. One of the earliest and most profound critics of constrained maximization is the Nobel Prize winner Herbert Simon. In 1955 Simon proposed satisficing as an alternative explanation of economic behavior, and throughout his career he urged economists to take a more empirical approach to their science. For more than four decades Simon carefully observed agents making choices, created theories, and devised experiments and computer simulations to test his theories. His work helped create two brand-new disciplines: artificial intelligence and cognitive science. Further, the primarily empirical research produced by two cognitive scientists inspired by Simon—Daniel Kahneman and Amos Tversky—received one of the 2002 Nobel Prizes in economics.

The work of Simon, Kahneman, and Tversky is very different from the economics produced after mathematization. To explain the difference, let us return to Dennett. In developing his notion of the intentional stance, Dennett has often referred to a contrasting strategy for prediction and explanation; he calls this strategy the

	Price theory	Applications of price theory	Behavioral economics
Empirical	40	27	6
Theoretical	10	20	10

design stance (Dennett 1987, pp. 16–17). Simon, Kahneman, and Tversky can be interpreted as applying the design stance toward human beings, and the first step in taking this sort of design stance is to figure out "how the machinery which Nature has provided us works" (Dennett 1987, p. 33). Figuring out the human machinery and implementing the intentional stance on a system of mathematical objects are two tasks divergent in empirical content. In which direction will economics go? Will it remain on the deeply mathematical track of constrained maximization, or will it move toward Simon and become more empirical?

Pierre-Andre Chiappori and Steven Levitt (2003) categorized every microeconomics paper in three prestigious economics journals between the years of 1999 and 2001. Consider three of their categories: (1) *price theory,* which "refers to basic economic principles and techniques used by economists in the 1950s and before" (p. 152); (2) *applications of price theory,* which "refer to the testing of simple economic ideas … in domains outside the traditional purview of the field" (p. 152); and (3) *behavioral economics,* which gives us a rough indicator of research in the spirit of Simon, Kahneman, and Tversky. The table includes the percentages of the paper types that Chiappori and Levitt placed in these three categories.

The pattern displayed in the table invites the question: If a high proportion of the most talented current economists are exploring economic ideas that were well known a half century ago, and few seem inspired by the current revolutions in cognitive science and artificial intelligence, will economics continue to achieve empirical and theoretical progress?

SEE ALSO *Debreu, Gerard; Economics, Neoclassical; Kuhn, Thomas; Maximin Principle; Minimization; Optimizing Behavior; Programming, Linear and Nonlinear; Samuelson, Paul A.; Satisficing Behavior; Science*

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MAXIMUM LIKELIHOOD REGRESSION

Maximum likelihood is a methodology used to estimate the parameters of an econometric or statistical model. It was first proposed by Ronald Aylmer Fisher (1890–1962) and is now considered the workhorse of modern econometrics, not only because of its flexibility but also due to the availability of computer power, which has permitted the resolution of complicated numerical problems associated with this technique. *Maximum likelihood estimation* seeks to determine the parameters of a statistical process that have the highest probability of generating the observed sample of data.

Consider the following regression model: $Y_i = \beta_0 + \beta_1 X_{1i} + \ldots\ldots \beta_k X_{ki} + \varepsilon_i$ for $i = 1,2,\ldots\ldots n$. In the simplest case, one can assume that the error term ε_i is an independent and identically distributed (iid) normal random variable with variance σ^2; that is, $\varepsilon_i \rightarrow N(0, \sigma^2)$. It will be shown below that the assumption of a particular density function for ε_i is paramount to write the likelihood function. Under the assumption of normality, the probability density function of the error term is written as

$$f(\varepsilon_i) = \frac{1}{\sqrt{2\pi\sigma^2}} \exp\left(-\frac{\varepsilon_i^2}{2\sigma^2}\right).$$

Since $\varepsilon_i = Y_i - \beta_0 - \beta_1 X_{1i} - \ldots\ldots - \beta_k X_{ki}$, the assumption of normality of the error term is equivalent to the assumption of normality for the conditional probability density function of Y given X: $f(Y_i \mid X_{1i}, X_{2i}, \ldots\ldots X_{ki}; \beta_0, \beta_1, \ldots\ldots \beta_k, \sigma^2) \rightarrow N(\beta_0 + \beta_1 X_{1i} + \ldots\ldots \beta_k X_{ki}, \sigma^2)$—that is,

$$f(Y_i \mid X_{1i}, X_{2i}, \ldots\ldots X_{ki}) =$$

$$\frac{1}{\sqrt{2\pi\sigma^2}} \exp\left(-\frac{(Y_i - \beta_0 - \beta_1 X_{1i} - \ldots \beta_k X_{ki})^2}{2\sigma^2}\right).$$

The objective is to estimate the parameter vector $\theta \equiv (\beta_0,\beta_1,\beta_2,\ldots\ldots\beta_k,\sigma^2)'$. For a sample of size n, and because of the iid assumption, the joint probability density function of $\varepsilon_1,\varepsilon_2,\ldots\ldots\varepsilon_n$, is then the product of the marginal densities: $f(\varepsilon_1,\varepsilon_2,\ldots\ldots\varepsilon_n; \theta) = f(\varepsilon_1; \theta)f(\varepsilon_2; \theta)\ldots\ldots f(\varepsilon_n; \theta)$. The *likelihood function* $L(\theta; \varepsilon_1,\varepsilon_2,\ldots\ldots\varepsilon_n)$ is based on the joint probability density function of $\varepsilon_1,\varepsilon_2,\ldots\ldots\varepsilon_n$, where $\varepsilon_1,\varepsilon_2,\ldots\ldots\varepsilon_n$ is taken as fixed data and the parameter vector θ is the argument of the function: $L(\theta; \varepsilon_1,\varepsilon_2,\ldots\ldots\varepsilon_n) = f(\varepsilon_1; \theta)f(\varepsilon_2; \theta)\ldots\ldots f(\varepsilon_n; \theta)$. Note that $\varepsilon_1,\varepsilon_2,\ldots\ldots\varepsilon_n$ is a function of the data $(Y_i,X_{1i},X_{2i},\ldots\ldots X_{ki})$ through the regression model; that is to say, $\varepsilon_i = Y_i - \beta_0 - \beta_1 X_{1i} - \beta_2 X_{2i} - \ldots\ldots - \beta_k X_{ki}$.

Though the aforementioned regression model deals with a cross-sectional data set, the maximum likelihood principle also applies to time-series data and panel data. For instance, a time-series regression such as $Y_t = \Phi Y_{t-1} + \varepsilon_t$ for $t = 1,2,\ldots T$, with iid $\varepsilon_t \rightarrow N(0,\sigma^2)$, implies that the conditional density function of Y_t given Y_{t-1} is also normal, $f(Y_t \mid Y_{t-1}) \rightarrow N(\Phi Y_{t-1},\sigma^2)$, that is,

$$f(Y_t \mid Y_{t-1}) = \frac{1}{\sqrt{2\pi\sigma^2}} \exp\left(-\frac{(Y_t - \phi Y_{t-1})^2}{2\sigma^2}\right)$$

As before, the object of interest is to estimate $\theta \equiv (\Phi, \sigma^2)'$ and the likelihood function for a sample of size T is $L(\theta;Y_1, Y_2,\ldots Y_T) = f(Y_1;\theta)f(Y_2 \mid Y_1;\theta)\ldots\ldots f(Y_T \mid Y_{T-1}; \theta)$. This function requires the knowledge of the marginal density of the first observation $f(Y_1; \theta)$. When the sample size is very large, the contribution of the first observation is almost negligible for any practical purposes. Conditioning on the first observation (Y_1 is known) we define the *conditional likelihood function* as $L(\theta;Y_T,Y_{T-1} \ldots Y_2 \mid Y_1) = f(Y_2 \mid Y_1; \theta)\ldots\ldots f(Y_T \mid Y_{T-1}; \theta)$.

Mathematically, it is more convenient to work with the logarithm of the likelihood function. The *log-likelihood function* is defined as:

$$\lambda(\theta) \equiv \log L(\theta; \varepsilon_1, \varepsilon_2, \ldots\varepsilon_n) = \sum_{i=1}^{n} \log f(\varepsilon_i;\theta)$$

The *maximum likelihood estimator* (MLE) of θ is the value of θ that maximizes the likelihood of observing the sample $(Y_i,X_{1i},X_{2i},\ldots\ldots X_{ki})$ $i = 1\ldots n$. In estimating a regression model using maximum likelihood, the question is which value of $\theta \equiv (\beta_0,\beta_1,\beta_2,\ldots\ldots\beta_k,\sigma^2)'$, out of all the possible values, makes the possibility of occurrence of the observed data the largest. Since the log transformation is monotonic, the value of θ that maximizes the likelihood function is the same as the one that maximizes the log-likelihood function. The statistical inference problem is reduced to a mathematical problem, which under the assumption of normality, looks like:

$$\max_{\theta} \lambda(\theta) = \max_{\theta} \sum_{i=1}^{n} \log f(\varepsilon_i;\theta)$$

$$= \max_{\theta} \left[-\frac{n}{2}\log(2\pi\sigma^2)\right.$$

$$\left. -\frac{1}{2}\sum_{i=1}^{n}\frac{(Y_i - \beta_0 - \beta_1 X_{1i} - \ldots - \beta_k X_{ki})^2}{\sigma^2}\right].$$

Equating the first-order conditions (the score vector of first-order partial derivatives) to zero results in a system of $k + 2$ equations with $k + 2$ unknowns. The solution to this system is the maximum likelihood estimator. The solution is the maximum of the function if the Hessian (the matrix of second-order partial derivatives) is negative semi-definite.

For a linear regression model, the MLE is very easy to compute. First, we compute the solution for the system of equations corresponding to the parameter vector $(\beta_0,\beta_1,\ldots\beta_k)'$. This system is linear, and its solution is identical to the ordinary least squares (OLS) estimator that is, $\hat{\beta}_{mle} = \hat{\beta}_{ols} = (X'X)^{-1}X'Y$. Second, the maximum likelihood estimator of the variance is straightforward to compute once the MLE $\hat{\beta}_i$'s are obtained. The MLE $\hat{\sigma}^2$ corresponds to the sample variance of the residuals $\hat{\sigma}^2_{mle} = \sum_i \hat{\varepsilon}_i^2 / n$, which is a biased estimator of the population variance. The $\hat{\beta}_{mle}$ is identical to the $\hat{\beta}_{ols}$ when the likelihood function is constructed under the assumption of normality.

For a nonlinear regression model, the system of equations is usually nonlinear, and to obtain the MLE solution numerical optimization methods are needed. In addition, there is the possibility of heteroscedasticity. This is the case when the variance of the error term is not constant but it depends on a set of variables, for instance, $\sigma^2(X,\gamma)$. In this instance, there is an additional set of parameters γ to estimate. The system of equations will be nonlinear and the solution will again be obtained by numerical optimization. In nonlinear models, the system of equations may have several solutions, for the likelihood function may exhibit a complicated profile with several local maxima. In this case, the researcher needs to make sure that the global maximum has been achieved by either plotting the profile of the likelihood function (when possible), or by using different initial values to start the iterative procedures within the optimization routine.

The significance of the maximum likelihood estimator derives from its optimal asymptotic properties. In large samples and under correct model specification, the MLE $\hat{\theta}_{mle}$ is in most cases consistent, asymptotically efficient, and asymptotically normal. Among these properties, *maximum efficiency* (estimators with the smallest variance) is the most significant property of the ML estimator. Maximum efficiency is a very desirable property because it allows the construction of more powerful tests and smaller confidence intervals than those based in less efficient estimators.

Within the maximum likelihood framework and after obtaining the ML estimators, we can also perform hypothesis testing by comparing the value of the estimates with other fixed values. The *likelihood ratio test* assesses the likelihood that the data may have been generated by a different set of parameter values (those under the null hypothesis). The test compares the value of the likelihood function under the null hypothesis with that under the alternative. The test is computed as two times the difference of the log-likelihood functions and it is asymptotically distributed as a chi-square with as many degrees of freedom as the number of parameters under the null.

The maximum likelihood estimator is also known as a *full information estimator* because the estimation is based on the most comprehensive characterization of a random variable, which is the specification of its probability density function. In practice, it is not known what density function should be assumed, and a potential shortcoming of the maximum likelihood estimator is that one could write a likelihood function under a false probability density function. The consequences of this are severe, for the asymptotic properties will not hold anymore. However, one can still apply *quasi-maximum likelihood estimation* (QMLE). The QML estimator requires that the conditional mean and conditional variance are correctly specified. It assumes that the error is normally distributed, though this may be a false assumption. The quasi-maximum likelihood estimator is still consistent, though the maximum efficiency property is lost. The efficiency loss depends on how far the normal density is from the true density. In practice, estimation is done within the quasi-maximum likelihood framework, because a full knowledge of the density is rare. Other estimators can recover some of the efficiency loss but, these belong to the family of nonparametric and semiparametric estimators.

SEE ALSO *Linear Regression; Models and Modeling; Probability Distributions; Properties of Estimators (Asymptotic and Exact); Regression; Regression Analysis*

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Gloria González-Rivera

MAYANS

SEE *Pre-Columbian Peoples.*

MCCARTHYISM

The term *McCarthyism* refers to an accusatory campaign based on unfair allegations, fear tactics, innuendo, and sensationalized threats of guilt by association. *McCarthyism* was coined by political cartoonist Herbert Block (1909–2001) in a March 29, 1950, *Washington Post* cartoon lampooning the anticommunist campaigns of Senator Joseph Raymond McCarthy (1908–1957), a Republican from Wisconsin, in the 1950s. McCarthy was elected to the U.S. Senate in 1946 and rose to national prominence after newspapers reported on a speech he made in Wheeling, West Virginia, on February 9, 1950, in which he claimed to have a list of 205 State Department employees who were members of the Communist Party. McCarthy's list later shrunk to eighty-one, then fifty-seven, but McCarthy's facts mattered little to the press or his public.

When McCarthy became the chair of the Permanent Investigations Subcommittee of the Senate Committee on Governmental Operations in 1952, he used this position to investigate alleged Communists. In 1953 the committee identified "subversive" books held at American embassy libraries around the world. Books by authors such as Owen Lattimore (1900–1989), Lillian Hellman (1905–1984), Langston Hughes (1902–1967), and Dorothy Parker (1893–1967) were removed from libraries because of allegations that the authors were either fellow travelers or Communists. In late 1953 McCarthy investigated the U.S. Army after an army dentist was promoted despite his refusal to answer questions on a federal loyalty oath. McCarthy's inquiries soon led to investigations of a number of army officers.

Journalist Edward R. Murrow (1908–1965) broadcast a critical analysis of Senator McCarthy's tactics in March 1954 on the CBS program *See It Now*. This broadcast brought increased public scrutiny of McCarthy. In April 1954 the Senate began the Army-McCarthy hearings, investigating McCarthy's claims that the army was promoting Communists in its ranks. The hearings were nationally televised, allowing the nation to witness McCarthy's bullying and fabricating of evidence. On June 9, 1954, McCarthy's rapid descent began after a televised hearing

showed army special council Joseph Welch (1890–1960) rebuffing McCarthy for his scurrilous tactics. Welch berated McCarthy before the cameras for his reckless bullying, rhetorically asking, "Have you no sense of decency, sir, at long last? Have you left no sense of decency?"

The Senate censured McCarthy on December 2, 1954, by a vote of seventy-six to twenty-two. McCarthy remained in the Senate, but his power was greatly diminished. He died of sclerosis of the liver in 1957. For all his bluster and claims to hold secret evidence of American Communism, McCarthy never identified a single Communist spy.

The social impacts of McCarthyism were significant. Some victims of McCarthyism lost jobs, were blacklisted, were alienated from friends and associates, or committed suicide. McCarthyism generated a climate of self-censorship. President Dwight D. Eisenhower (1890–1969), members of Congress, intellectuals, celebrities, and everyday citizens muted criticisms of McCarthy out of fear of being called procommunist (Schrecker 1998).

The Federal Bureau of Investigation (FBI) had a symbiotic relationship with Senator McCarthy. FBI director J. Edgar Hoover (1895–1972) had conducted free-ranging investigations of the American political Left since the 1930s, and the FBI secretly and illegally provided Senator McCarthy with records and names of individuals.

Functionally, McCarthyism deadened what might have been a critical activist edge in American social science as those who fought for racial or economic justice or who studied social stratification were routinely interrogated by the House Un-American Activities Committee (HUAC) or subjected to FBI surveillance and harassment (Harris 1980; Keen 2004; Price 2004). Proponents of McCarthyism were not simply interested in exposing and destroying Communists. McCarthyism's outcomes were much broader and included attacking labor union leaders, as well as discrediting a wide range of social activists working for gender, racial, and economic equality.

Loyalty hearings made examples out of public figures associated with progressive causes. In 1952 playwright Arthur Miller (1915–2005) began work on his play *The Crucible*, set during the 1692 Salem witch trials. *The Crucible*, which opened in New York in 1953, used the past to examine the 1950s climate of fear, accusations by informers, guilt by association, and the right of communities to bring moral judgments.

McCarthyism's mechanisms of social control extend beyond the mid-twentieth century's "Red Scare." The use of fear, guilt by association, vague accusations, and claims that dissent is dangerously unpatriotic to generate silence and compliance is a recurrent instrument of social control employed in various societies before and since the 1950s (Garfinkel 1956).

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David H. Price

MCFADDEN, DANIEL L.
1937–

Daniel L. McFadden, a physics undergraduate who switched to behavioral science (economics) in graduate school, won the Nobel Prize in economics (Bank of Sweden Prize in Honor of Alfred Nobel) in 2000. McFadden's best-known economic contribution and the one that led to his winning the Nobel Prize was the theoretical development and econometric evaluation of discrete choices involving multiple outcomes.

Discrete choice outcomes had been a vexing problem in economic analysis. Typically, economic decisions have been framed as trade-offs between goods in which quantities of goods could be traded over relatively continuous ranges. Discrete choices, by contrast, are "lumpy": One choice precludes the possibility of choosing another option. For example, the same consumer cannot choose simultaneously to drive and to take the train to work on the same morning.

Modeling discrete outcomes requires a theoretical framework for discrete choice and empirical innovations that allow researchers to investigate the factors that influence the outcomes of choices. McFadden provided the theoretical linkage by adopting the basic precepts of a random utility model in which the agent is assumed to maximize utility but the researcher cannot observe the full set of factors that lead to the choice; the agent also cannot do this because of cognitive and information limitations.

The limited decision-making capacity of the agent, along with the limited information researchers have about the factors that lead to a decision, results in a set of determinants that are unobservable in the modeling process.

This insight implies that the errors associated with decision-making are especially important in estimating discrete choice models. The idea of unobserved preference heterogeneity serves as the theoretical foundation of McFadden's well-known multinomial logit model.

In a multinomial logit model McFadden assumes that there is a latent (unobserved) variable that represents the indirect utility (satisfaction) associated with each discrete choice. One set of independent variables measures the attributes of the choice. A second set of variables measures the individual attributes affecting tastes. A fundamental assumption of McFadden's discrete choice models is that current economic conditions affect the feasibility of a choice through the budget constraint but not the preferences of the individual. Thus, prestige goods, or "snob" goods, are not modeled adequately using McFadden's theoretical foundation.

Although the theoretical foundations for the multinomial logit model are complex, the empirical estimation of that model has become increasingly simple. Most of the empirical methods developed by McFadden, such as multinomial logit, conditional logit, and other nested models, have been standardized enough that they are easy to estimate. However, the interpretation of the results is less straightforward. Estimates are interpreted relative to the "base" category (often the most common choice), and every other outcome has its own set of parameter estimates. One consequence of this is that when there are many choice outcomes, interpretation of the results is difficult. In particular, neither the sign nor the magnitude of the parameter estimates indicates the direction of the influence of the independent variable on the outcome. Typically, marginal effects must be calculated for each variable of interest.

A second difficulty with the multinomial logit model is that the observed attributes of the choices must provide a systematic mapping onto the agent's preferences. If arbitrary attributes are used to categorize choices, the multinomial logit model will provide incorrect estimates of the effects of independent variables. This difficulty is known as the independence of irrelevant alternatives (IIA) problem. The issue of IIA points to the importance of understanding, classifying, and defining the choice set.

SEE ALSO *Choice in Economics; Economics, Nobel Prize in; Information, Economics of; Logistic Regression; Variables, Latent*

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Jeffrey B. Wenger

MCLUHAN, MARSHALL
1911–1980

In 1964, when Canadian educator and social theorist Marshall McLuhan's *Understanding Media* appeared, the terms *medium* and *media* were generally understood in the sense of intermediary or intermediate. The *media* were not recognized as a subject of study; reviewers and teachers cautioned that the word was obscure and needed definition. McLuhan's radical observation was that it is the medium (not the program content) that shapes and controls the scale and form of human association and action:

> The message of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs. The railway did not introduce movement or transportation or wheel or road into human society, but it accelerated and enlarged the scale of previous human functions, creating totally new kinds of cities and new kinds of work and leisure. This happened whether the railway functioned in a tropical or northern environment, and is quite independent of the freight or content of the railway medium. (McLuhan 1964, p. 8)

This is essentially a sociological outlook, though it has not been adopted by that field. Yet *Understanding Media* did serve to found the field of media study in North America and ultimately throughout the world.

Among its groundbreaking insights were that some media involve the user deeply ("cool media"), while others ("hot media") do not: The involvement takes place on the sensory level, below consciousness. For example, the movie viewer must supply all of the movement that occurs on the screen between frames while the screen is black. The television viewer or computer user supplies most of the mosaic image from moment to moment and nearly all of the color. These effects, which occur independently of the content or uses, shape the sensory preferences of the users and supply new perceptual biases that affect how they construe their cultures and societies.

McLuhan was the first to study advertising seriously: In his first book, *The Mechanical Bride* (1951), he called advertising the "Folklore of Industrial Man." This work applies then-new critical techniques (practical criticism, developed in England) for the first time to ads and other facets of North American popular culture. McLuhan followed it with *Culture Is Our Business* (1970), a companion study of advertising *after* television.

The Gutenberg Galaxy (1962) delved into the manner in which print and the press reshaped culture and sensibility in the centuries that followed their introduction and showed how to study the social-environmental actions of new media. *Take Today: The Executive as Dropout* (1972)

examined the effects of electric media on management practice and business culture.

Laws of Media: The New Science (1988), written with his son Eric, sought to place McLuhan's style of environmental media study on a scientific basis for the first time. In it, the authors proposed that four invariable laws govern the action of all media—and also of all human artifacts. Briefly, every human artifact extends or amplifies some process or faculty; obsolesces some established pattern; reinvigorates or retrieves some older, previously obsolesced form that now returns in a new shape or guise; and reverses its characteristics when pushed to its limit. The four laws exhibit an inner relation to each other as A is to B as C is to D.

During his life, McLuhan was a controversial figure, not least because his techniques of media study departed so radically from the established methods, which focused on content analysis and research into the desires and motivations of audiences. McLuhan, in contrast, approached media study from the angle of perception and changes in sensibility occasioned by media as forms and as extensions of the users' senses. Although McLuhan's work remains controversial, his techniques work as well now as they did in his time, to the chagrin of those who have tried to apply them superficially, without first understanding how perception is modified by media.

SEE ALSO *Critical Theory; Cultural Studies; Film Industry; Journalism; Media; Popular Culture; Television; Theater; Visual Arts*

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Eric McLuhan

MEAD, GEORGE HERBERT

1863–1931

George Herbert Mead was one of the core founders of pragmatism, a distinctively American philosophy. Mead was a professor of philosophy at the University of Chicago (1894–1931), but he had a powerful influence on both philosophy and sociology. He is also recognized as one of the originators of symbolic interactionism, an important discipline within sociology. In this regard, he is famous for showing the relationships between mind, self, and society: Our minds and selves are gifts we receive from society, though we can augment and alter mind, self, and society in countless ways (Mead 1934).

Mead and the other pragmatists argued that the scientific method is the most powerful tool humans have ever discovered for analyzing knowledge, and they applied empirical methods to all knowledge—including science, philosophy, government, religion, ideologies, and everyday life. Mead argued that we should treat all ideas as hypotheses that are open to analysis in terms of the consequences associated with using them. It is true that many religious people and ideologues are not used to thinking that their favorite ideas are hypotheses that can be tested by examining how well they work, but pragmatists treat all knowledge as tentative and open to investigation.

Any ideas that work well when we act on them are tentatively supported as useful and valid. On the other hand, ideas that lead to failures are identified as problematic. This is most obvious in the realm of science. A medical procedure that prolongs life without problematic reactions is seen as valuable, but a procedure with adverse side effects alerts researchers to either abandon the technique or rework it until the problems are overcome. Pragmatists treat all ideas in a similar manner. For example, many American professors defended Marxism and communism during the mid-1900s, and pragmatists are not surprised that some abandoned these theories after the collapse of the Soviet Union and the Communist nations of Eastern Europe. Even if an idea was once popular, pragmatists emphasize that a series of failures often leads people to abandon or revise prior views: Countless positive

claims about an idea are not as powerful as a succession of failings.

No theory can ever be proven so conclusively as to be completely above question and possible future revision. Pragmatists argue that tentative and flexible truths are in fact more useful than the dogmas or static "truths" that ideologues defend. Our physical, biological, and social worlds are in constant change; hence, it is wise to approach all knowledge as likely to need modification as we attempt to track our ever changing and evolving world.

Pragmatism has had major influences on philosophy, sociology, science, and many other domains of thought. Mead's version of pragmatism is highly nuanced because, as the youngest of the pragmatists, he benefited from the best ideas of his predecessors.

SEE ALSO *Philosophy; Philosophy, Political; Pragmatism; Science; Society; Sociology*

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John D. Baldwin

MEAD, MARGARET
1901–1978

Margaret Mead was an American anthropologist whose career as a social scientist and public intellectual spanned the greater part of the twentieth century. She was an indefatigable fieldworker whose ethnographic research focused primarily on the study of small-scale societies in the South Pacific and Bali, but she was also well known for her insights about and prescriptions for American society. Mead received her PhD in anthropology in 1925 from Columbia University, where she worked with Dr. Franz Boas and Dr. Ruth Benedict, two anthropologists well known for their work on race and cultural relativism, or the idea that no culture or racial group is inherently superior to another and that any cultural practice can be understood within the context of the larger social structure and cultural whole of which it is a part. Along with Benedict, Mead was a major contributor to the development of the school of culture and personality, a subfield of cultural anthropology that sought to understand the role that culture played in shaping the personality of individual members of a particular society. Influenced by neo-Freudian theory of the 1930s and 1940s, Mead sought to apply psychoanalytic concepts about the individual—especially the development of a child into an adult—to the study of socialization in non-Western societies. Although aspects of culture and personality theory have been disparaged, many of the topics that Mead first investigated formed the basis for today's subfield of psychological anthropology.

After Mead returned from her first field trip to Samoa in 1926, she became curator of anthropology at the American Museum of Natural History. She remained at the museum for the rest of her lengthy career. Mead's fame arose from her ability to write books that captured the general public's interest with their engaging prose and provocative and timely choice of topics. Beginning with her first book—*Coming of Age in Samoa*—published in 1928, Mead became a best-selling author and an increasingly well-known expert on the topics of primitive cultures, adolescence, gender and sexuality, education, child development, and culture change. While *Coming of Age in Samoa* established Mead's reputation as an anthropologist who studied sexuality, especially the sexual behavior of adolescent girls, subsequent books focused on education in so-called primitive cultures (*Growing Up in New Guinea*), gender roles and male-female relations (*Sex and Temperament in Three Primitive Societies* and *Male and Female*), acculturation (*The Changing Culture of an Indian Tribe*), the relationship between culture and the development of adult personality (*Balinese Character*), national character (*And Keep Your Powder Dry,* Mead's first anthropological book about American culture), *New Lives for Old* (about cultural transformation and the impact of Western development on traditional societies), and *Culture and Commitment* (Mead's analysis of the generation gap).

During World War II (1939–1945) Mead worked for the U.S. government, contributing studies on American food habits, morale building, and the interpretation of British and American culture for British civilians and American soldiers in the United Kingdom. After the war Mead shifted her focus to the application of anthropological methods to the study of American society, the Soviet Union, and the problems of development faced by newly independent nations. As a result of her increasing media presence on television, in popular magazines, and the radio, by the time she died Mead was famous worldwide and eulogized as "grandmother to the world."

In 1983, five years after Mead's death, Australian anthropologist Derek Freeman published a detailed critique of Mead's Samoan research, ultimately claiming that Mead's informants had duped her and that her conclusions about the relative freedom toward premarital sex she had claimed characterized Samoan society were false. Moreover, Freeman concluded that if Mead's Samoan

findings were false, so too was the larger claim she had made about the relative importance of nurturance versus biologically innate characteristics of human behavior. Although Mead was not able to respond to Freeman's critique herself, many anthropologists who had worked in Samoa, or who were proponents of the importance of cultural factors in shaping human behavior, came to her defense. They did so despite their acknowledgment of some factual errors in her Samoan research, which they claimed were of minor significance and the result of her youth and the infancy of anthropology as a social science. (For a detailed discussion of the critique of Freeman's argument and defense of Mead's work, see Caton [1990], Orans [1996], and Lapsley [1999]). In November 1983 the American Anthropological Association censured Freeman, citing inconsistencies and errors in his critique of Mead's Samoan research. However, although the media coverage of the Mead-Freeman controversy damaged Mead's public image, in 2001 the American Anthropological Association and the media honored Mead during her centennial year. This asserted her prominence as a public figure whose major contribution had been to apply anthropological methods and insights gleaned from the study of remote small-scale societies into the analysis of contemporary American society and the solution of problems that vexed complex modern societies in general.

SEE ALSO *Anthropology, U.S.; Benedict, Ruth; Boas, Franz; Psychoanalytic Theory*

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Nancy Lutkehaus

MEADE, JAMES
1907–1995

During his long career as an economist, James Edward Meade made major contributions to many fields, including national income accounting, economic growth, public finance, and welfare economics, as well as the two most important, for the discipline and for the world economy, macroeconomics and international economics (trade and finance). For his contribution to international trade and finance he was awarded the 1977 Nobel Memorial Prize in Economics jointly with Swedish economist Bertil Ohlin (1899–1979).

As an undergraduate at Oriel College, Oxford, Meade switched from the study of classics to economics, motivated by the serious unemployment problem in Britain in the 1920s. Upon graduation with first-class honors in 1930, he was appointed to a fellowship in economics at Hertford College, which first allowed him a postgraduate year at Trinity College, Cambridge. He swiftly became a member of the Cambridge "circus" of young economists—including Richard Kahn (1905–1989), Austin Robinson (1897–1993), Joan Robinson

(1903–1983), and Piero Sraffa (1898–1983)—whose criticism of John Maynard Keynes's (1883–1946) *A Treatise on Money* (1930) set Keynes on the path to *The General Theory of Employment, Interest, and Money* (1936). Meade returned to Oxford already a "Keynesian" in the modern (i.e., post-1936) sense, and published the first Keynesian economics textbook, *An Introduction to Economic Analysis and Policy*, in 1936. Throughout his career his main concern was with the contribution economic analysis can make to practical economic policy. One of several young Oxford economists advising the Labour Party in the 1930s, he was a "liberal socialist" who believed in using the market mechanism for egalitarian ends. He was also a convinced believer in international political and economic cooperation.

In 1937 Meade joined the Financial Section of the League of Nations and wrote two of its *World Economic Surveys* before World War II (1939–1945), when he returned to England to work for the British government. In government, he and Richard Stone (1913–1991) prepared the first modern double-entry social accounts for any country, published as *An Analysis of the Sources of War Finance and an Estimate of the National Income and Expenditure in 1938 and 1940*, accompanying the first "Keynesian" budget of April 1941. He then concerned himself with planning postwar macroeconomic policy. It was Meade who wrote, in March 1943, the first draft of what became the wartime coalition government's *Employment Policy* (1944). He was also a founding father of the GATT (General Agreement on Tariffs and Trade). To complement Keynes's "clearing union" plan for the postwar international currency system, Meade proposed an "international commercial union" to restore multilateral trade and remove trade restrictions after the war. The two plans formed the basis of the British contributions to wartime Anglo-American discussions on the postwar international economic order. Meade's ideas bore fruit in the Anglo-American *Proposals for Consideration by an International Conference on Trade and Employment* of December 1945, and he served on the preparatory commission for the conference that drew up the charter for an International Trade Organization. Although the charter was not ratified, its main principles were incorporated in the GATT, negotiated in Geneva in 1947.

Meade returned to academic life in 1947 as Cassel Professor of Commerce with special reference to international trade at the London School of Economics. There, as a direct result of his wartime work on economic policy, he was to make his most lasting contributions to economic theory when he began to write on international economic policy. He began by constructing a general-equilibrium comparative static model for an economy open to trade and capital flows, synthesizing Keynesian and classical theory and extending it in order to analyze the effects of different policy instruments and other variables on internal and external balance. The result, *The Theory of International Economic Policy*, Volume 1: *The Balance of Payments* (1951a), and its supplement containing the mathematical model (1951b), was the first systematic exploration of the relationship between domestic and international equilibrium. The model has become "part of the baggage of every economist" (Corden and Atkinson 1979, p. 529), the most important single influence behind the development of open-economy macroeconomics in the next four decades.

The equally pathbreaking second volume, *Trade and Welfare* (1955a, 1955b), made three major and lasting contributions to economics: a fundamental reformulation of the theory of economic welfare to make it both operational and more widely applicable; the use of this new theory to analyze controls on factor movements as well as controls of trade; and the extension of the analysis from two-country models to a many-country world, including its application to the theory of customs unions (1955c). He originally drafted much of the book on the basis of the "new welfare economics" of the late 1930s, but he rewrote it to utilize the work (1951) of his former wartime colleague, Marcus Fleming (1911–1976). "It was a brilliant feat of imagination … to realize … [Fleming's method] was capable of large-scale generalization into a powerful tool for welfare analysis of practical policy problems, and an act of great intellectual honesty and courage for him to scrap his existing draft and rework the whole problem on the new approach" (Johnson 1978, p. 73).

From 1968 Meade was based in Cambridge, first as professor of political economy in succession to Dennis Robertson (1890–1963), A. C. Pigou (1877–1959), and Alfred Marshall (1842–1924). He worked on the theory of economic growth (1961a) and income distribution for ten years before returning to macroeconomics to lead a major research project on *Stagflation* (Meade 1982; Vines et al. 1983). He concentrated on the reform of wage-fixing arrangements, in order to solve the problem of the dual function of the price mechanism: The prices of goods and factors of production that promote the most efficient use of resources may well produce an unacceptably unequal distribution of income. His consistent concern for both efficiency and equality is spelled out most clearly in *Efficiency, Equality, and the Ownership of Property* (1964), which he himself regarded as his best book. It was also a feature of two "Meade Reports," *The Economic and Social Structure of Mauritius* (1961b) and *The Structure and Reform of Direct Taxation* (1978), and his final book *Full Employment Regained? An Agathotopian Dream* (1995). An inveterate explorer of improvements in economic arrangements, he should be remembered for his practical contributions as well as for his theoretical achievements.

SEE ALSO *Economics, International; Economics, Keynesian; Economics, Nobel Prize in; Exchange Rates; General Agreement on Tariffs and Trade; Kahn, Richard F.; Keynes, John Maynard; League of Nations; Marshall, Alfred; Robinson, Joan; Sraffa, Piero; Trade*

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Susan Howson

MEAN

SEE *Descriptive Statistics.*

MEAN, THE

The mean is widely used throughout the social sciences and is the arithmetic average of a set of scores. It is simply the sum of all the scores of interest divided by the number of scores. In casual conversation this calculation is referred to as "getting the average." The capital letter M is commonly used in journal articles to represent the mean. The formula for the mean is quite simple: $M = \Sigma X/N$, where M is the mean, ΣX is the sum of all the scores of interest, and N is the number of the scores.

In general, what is sought is a single value that represents the location of the set of scores on some scale. The mean describes the central tendency of a distribution of scores. In other words, it describes where the scores tend to cluster together or the arithmetic middle point of the scores. This measure of central tendency is sometimes referred to as the index of location.

The mode and the median are also used to describe central tendency; they lack, however, the mathematical properties of the mean. These other measures are most useful when the distribution of scores is multimodal or skewed.

A simple example will illustrate the mean. Assume one has five scores: 6, 5, 4, 3, and 2. The sum of these scores is 20. The mean is 20/5, which equals 4. In this case the median is also 4 (it is the score that divides all the

scores in half). This is usually the case when the distribution of scores is symmetrical. This example can also illustrate an advantage of the mean over the median. The mean is sensitive to all the scores in the distribution, while the median is not. Look at what happens if the score of 6 is changed to a score of 16. The new sum of the scores is now 30, and the mean is 30/5, which is 6. But the median is still 4. The mean reflects the value of every score in the distribution. Of course, in the social sciences one often encounters distributions that are essentially normal, in which case all three measures of central tendency (mode, median, and mean) will be the same.

For many variables in the social sciences the mean is the standard descriptor of central tendency. For example, the mean may be used to describe a person's average grade in a course of study or a person's average weight over a given period. The mean is useful in describing groups as well. Demographic data are often presented as means (e.g., mean age, height, weight, number of children, or siblings). The average performance of a class of students, a school, a school district, a state, or the whole country may be reported on some measure of academic achievement. Even countries may be compared on average academic skills.

In research or evaluation the characteristics of a population of interest often need to be described. Populations, however, are typically very large (sometimes infinitely so) and impossible to measure completely. The truth about a population may only be inferred. For this reason a sample is collected from the population, with the intent of generalizing the results to the whole population. Once the sample scores have been obtained, the data need to be described in such a way as to communicate the essential characteristics and also allow inferences about the population—briefly but informatively.

The sample mean is an unbiased estimator of the population mean. It determines a center point of the set of scores that includes the value of every score in the set. Because the mean includes all the scores, it is the point of balance or center of gravity of the distribution.

Much research is concerned with trying to determine how different or how similar people or groups may be. The mean is used to do this. The measurement of how far individuals are from their group mean is taken, and also the measurement of how far group means are from the mean of all the samples. The resulting scores are called deviation scores, and are obtained by subtracting the mean from the individual score. These deviation scores can be used to calculate another average called the variance (because the sum of the deviation scores is always zero, they must be squared before being added together and dividing by the number). The square root of the variance is called the standard deviation. This average tells one about the amount of variability in a set of scores or among a set of means.

This property of the mean is critical because much research is concerned with examining how much sample means deviate from some point or from each other. If the means deviate from each other by a large enough amount, they are said to be "significantly different." This is the basis for significance testing between groups. These significance tests are commonly found in published research, although there is debate about which approach to use and how results should be reported.

The mean is arguably the most widely used measure of central tendency. It requires interval or ratio level of measurement, works best with distributions that are unimodal and roughly symmetrical, and is the basis for much statistical decision-making.

SEE ALSO *Decision-making; Population Studies; Standard Deviation*

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Samuel K. Rock Jr.

MEAN SQUARE EFFICIENCY

SEE *Properties of Estimators (Asymptotic and Exact).*

MEANING

In the social sciences, the concept of meaning has been understood theoretically in three different ways, which can be called the *mirroring*, *constructivist*, and *production* perspectives.

The mirroring perspective derives from the work of Max Weber (1864–1920), who called attention to the subjective interpretations that people create to describe or explain their social experience. Whether or not these meanings are conveyed to others, they are social to the extent that they are broadly characteristic of those who share a similar position within the structure of social relationships. For example, according to a study of television audiences in Israel, the meanings viewers ascribed to the

American television series *Dallas* had much more to do with ethnicity than with whatever meanings might have been intended by the show's scriptwriters and directors. Arabs saw the show as a moral drama exemplifying how American immorality inexorably led to chaos in interpersonal relationships, while Jews who recently immigrated from Russia saw it as a social drama portraying the evils of the capitalist system (Liebes and Katz 1990). Similarly, in the United States and United Kingdom, men and women have been repeatedly found to view corporate leadership roles differently. For most men, effective leadership means setting up a forceful and consistently applied system of rewards and punishments. For most women, it means showing others how to transform one's individual goals into group goals so that teams can work more effectively and harmoniously (Alimo-Metcalfe 1995). In the mirroring perspective, the social meanings that people are found to have about the social world are seen to stem from their differing experience of a social structure in which prestige, wealth, and power are unequally distributed. Although shared social meanings can foster a sense of shared identity, when viewed through the lens of the mirroring perspective, they are essentially epiphenomenal and close to irrelevant for explanatory purposes. For example, studies of corporate leadership styles have largely failed to demonstrate that these differing meanings are related to the style female leaders actually choose.

The constructivist perspective, in contrast, emphasizes how people employ agency in order to create and deploy social meanings within fields of social relations that are contentious, fluid, and imperfectly defined: a world of becoming rather than being. This perspective derives from a variety of 1960s theoretical innovations, including symbolic interactionism, phenomenology, sociolinguistics, anthropological linguistics, ethnomethodology, structuralism, social movement theory, pragmatics, and social constructivism. The constructivist perspective turns the mirroring perspective on its head: Social structure is seen as the *consequence* of the constant and contentious efforts people make to create meanings and, by means of communicative behaviors, to frame social situations in terms of those meanings. In its most radical forms, constructivists deny that what Émile Durkheim (1858–1917) would call "social facts"—objectively measurable patterns of social behavior that are external to individual motivations—have any a priori existence whatsoever. For example, medicine has struggled unsuccessfully for decades to define a "self-neglect syndrome" in objective, medical terms. If a self-neglect syndrome can be said to exist in an objective sense, it is only because, within the field of medical relations, some patients have emphasized "self-neglect" behaviors in order to frame the situation in light of their understanding of it; alternatively, a medical organization has identified certain patient behaviors as "self-neglect" in order to alter the patient's position and rights within a medical organization.

The production perspective, the most recent of the three, derives from the work of British sociologist Anthony Giddens (1993) and, more recently, the flourishing subfield of cultural sociology. It seeks to strike a balance between the mirroring and constructivist perspectives by emphasizing the dialectic between, on the one hand, social forces that really are larger than the individual (such as institutionalized discrimination), and, on the other hand, the attempts by individuals and groups to try to frame situations to their advantage. In order to do so, they draw on the stock of meanings at hand, but they also create new ones or repackage the old ones in new ways. From the production perspective, the interpretation of *Dallas* offered by Arab citizens of Israel is part of a broader meaning-formation strategy that is being pursued by Sunni Arab communities throughout the Middle East: It involves a rejection of the secularism and perceived immorality of Western societies in favor of a radically reformulated, fundamentalist version of Islam known as Wahhabism. In contrast to constructivist approaches, which almost invariably emphasize interpersonal interaction as the medium in which meanings are defined, the production perspective is equally attuned to the institutions, technologies, and media that meaning-producers appropriate as they attempt to frame the meaning of situations. For example, the rise of Islamic moral and religious fundamentalism in Sunni Arab communities is clearly related to Saudi Arabia's lavishly funded and influential system of religious schools and to the rise of Arabic media, including satellite television stations, that are independent of Western control and censorship.

SEE ALSO *Anthropology; Constructivism; Durkheim, Émile; Giddens, Anthony; Identity; Islam, Shia and Sunni; Linguistic Turn; Media; Phenomenology; Representation; Television; Weber, Max*

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Bryan Pfaffenberger

MEANS, RUSSELL
1939–

Russell Means, an Oglala Sioux, is one of the most lionized and controversial American Indians of the twentieth century. Means rose to national prominence as an American Indian Movement (AIM) spokesperson and negotiator during the 1973 Wounded Knee occupation on the Pine Ridge reservation in South Dakota. The occupation lasted seventy-one days, ending with two occupiers dead and two federal officials seriously injured. Means faced several charges stemming from the Wounded Knee occupation, but they were eventually dismissed.

Means was not a founding member of AIM, an American Indian civil rights organization started in Minneapolis in 1968, but he did establish a local chapter in Cleveland and became the group's first national director in 1970. His other political activities include a 1970 lawsuit against the Cleveland Indians baseball team over the Chief Wahoo mascot; the 1972 takeover of the Bureau of Indian Affairs (BIA) office in Washington D.C.; and protests against Columbus Day observances and parades in 1992.

His relationship with AIM became strained over the years, and he resigned in 1986. By 1993, AIM factions had officially split, with Means developing the International Confederation of Autonomous Chapters of the American Indian Movement; and fellow American Indian activists Vernon Bellecourt (b. 1931) and Clyde Bellecourt (b. 1939) heading up the American Indian Movement–Grand Governing Council.

Means admitted to criminal activity in his 1995 autobiography, *Where White Men Fear to Tread*; his legal troubles include several arrests and trials, a felony conviction for the 1974 Sioux Falls courthouse riot, and a 1975 murder charge. Although Means served one year in prison for the riot conviction, he was pardoned in 2002 by South Dakota governor Bill Janklow; he was acquitted on the murder charge.

In 1997 he was arrested on the Navajo reservation for assaulting his father-in-law. Scheduled to be tried in the Navajo Nation court system, Means argued that he was not subject to its jurisdiction. In 2005 the U.S. Court of Appeals for the Ninth Circuit ruled the Navajo Nation does have misdemeanor criminal jurisdiction over non-member American Indians, including Means. Critics contend that Means's effort to thwart Navajo jurisdiction was an attack on tribal sovereignty to further his own interests, whereas Means argues that he was attempting to uphold Navajo treaty rights with respect to jurisdiction over lawbreakers. The U.S. Supreme Court declined to hear the case.

Means has also made several attempts to work within the political system. He made three unsuccessful bids for the presidency of the Oglala Sioux Nation in 1974, 1984, and 2002. In 1984, Means was *Hustler* magazine publisher Larry Flynt's running mate in the latter's unsuccessful attempt to secure the Republican nomination for president of the United States. In 1988 Means lost his bid to be the Libertarian Party's presidential nominee. He entered the New Mexico gubernatorial race as an independent in 2002 but ultimately withdrew.

Means is also an actor, securing roles in *The Last of the Mohicans* (1992), *Pocahontas* (1995), and *Thomas and the Magic Railroad* (2000). Means prefers the term American Indian over Native American because he believes "anyone born in the Western hemisphere is a Native American" (Means 1998).

SEE ALSO *American Indian Movement; Indigenous Rights; Native Americans; Tribe*

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Elizabeth Arbuckle Wabindato

MEANS OF PRODUCTION

SEE *Forces of Production.*

MEASUREMENT

Measurement is the evaluation or estimation of degree, extent, dimension, or capacity in relation to certain standards (i.e., units of measurement). As one of the most important inventions in human history, the process of measuring involves every aspect of our lives, such as time, mass, length, and space. The Greeks first developed the "foot" as their fundamental unit of length during the fourth millennium BCE. The ancient peoples of Mesopotamia, Egypt, and the Indus Valley seem to have all created systems of weight around the same period. Zero, the crucial number in the history of measurement, was first regarded as a true number by Aristotle.

The ancient Egyptians first developed a systematic method of measuring objects, which they used in the construction of pyramids. During the long period during which their civilization thrived in northeastern Africa, they also cultivated the earliest thoughts on earth measurement: geometry. Euclid of Alexandria (c. 330–c. 275 BCE), a Greek mathematician who lived in Egypt and who is regarded as the "father of geometry," provided the proofs of geometric rules that Egyptians had devised in building their monuments. His most famous work, *Elements*, covers the basic definitions, postulates, propositions, and proofs of mathematical and geometric theorems. Euclid's *Elements* has proven instrumental in the development of modern science and measurement.

Another great mathematician who contributed to modern measurement was Karl Friedrich Gauss. He was born on April 30, 1777, in Brunswick, Germany. At age twenty-four, Gauss published a brilliant work, *Disquisitiones Arithmeticae*, in which he established basic concepts and methods of number theory. In 1801, Gauss developed the method of least squares in calculating the orbital component of the motion of celestial bodies with high accuracy. Since that time the method of least squares has been the most widely used method in all of science to estimate the impact of measurement error. He was able to prove that a bell-shaped, normally distributed error curve is a basic assumption of statistical probability analysis (Gauss-Markov theorem).

Among all science and social science disciplines, there are three broad measurement theories (Michell 1986, 1990). The first and most commonly used is the classical theory of measurement. Measurement is defined by the magnitudes of the quantity and expressed as real numbers. An object's quantitative properties are estimated in relation to one another, and ratios of quantities can be determined by the unit of measurement. The classical concept of measurement can be traced back to early theorists and mathematicians, including Isaac Newton and Euclid. The classical approach assumes that the underlying reality exists, but only quantitative attributes are measurable, and the meaningfulness of scientific theories can, and only can, be supported by the empirical relationships of various measurements.

The second theory, the representational approach, defines measurement as "the correlation of numbers and entities that are not numbers" (Nagel [1932] 1960, p. 121). For example, IQ scores can be used to measure intelligence, and the Likert scale measures personal attitudes based on a set of statements. The representational approach assumes that a reality exists and can be measured, and the goal of science is to understand this reality. However, the representational approach does not insist that only quantitative properties are measurable. Instead, measurements can be used to reflect differences at multiple levels.

Unlike the classical and representational approaches, the third approach, called the operational approach, avoids the assumption of objective reality. Instead, it emphasizes only the precisely specified operational process, such as the measurement of reliability and validity. The main concern of scientific theories is only the relationships indicated by the measurements rather than the distance between the reality and measures.

According to the different properties and relationships of the numbers, there are four different levels of measurement: nominal, ordinal, interval, and ratio. In nominal (also called categorical) measurement, names or symbols are assigned to objects, and this assignment is determined by the similarity of the to-be-measured values or attributes. The categories of assignment in most situations are defined arbitrarily, for instance, numbers assigned to individual marital status: single = 1, married = 2, separated = 3, divorced = 4, and so on, or to religious preference: Christian = 1, Jewish = 2, Muslim = 3, Buddhist = 4, and so on.

In ordinal measurement, the number assigned to the objects based on their attributes reflects an order relation among them. Examples include grades for academic performance (A, B, C …), the results of sporting events and the awarding of gold, silver, and bronze medals, and many measurements in psychology and other social science disciplines.

Interval measurements have all the features of ordinal measurements, but in addition the difference between the numbers reflects the equivalent interval of the attributes being measured. This property makes comparison among different measures of an attribute or characteristic meaningful and operations such as addition and subtraction possible. Temperature in Fahrenheit or Celsius degrees, calendar dates, and standardized intelligence tests (IQ) are a few examples of interval measurements.

In ratio measurement, objects are assigned numbers that have all the features of interval measurements, but in addition there are meaningful ratios between the numbers. In other words, the zero value is a meaningful point on the measurement scale, and operations of multiplication and division are therefore also meaningful. Examples include income in dollars, length or distance in meters or feet, age, and duration in seconds or hours.

Because measurement can be arbitrarily defined by the government, researchers, or cultural norms, it is socially constructed. The social construction of measurement is frequently encountered in social science disciplines. For instance, the U.S. Census Bureau has redefined the measure of race several times. Before the 1980 census, census forms contained questions about racial categories,

but the categories included only white, black, American Indian, and specified Asian categories. The census was based on the Office of Management and Budget's (OMB) 1977 Statistical Policy Directive Number 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting, defining four mutually exclusive single-race categories: white, black, American Indian or Alaska Native, and Asian or Pacific Islander. In addition, the standards also provided two ethnicity categories: Hispanic origin and Not of Hispanic origin. The 1980 and 1990 censuses were collected according to these standards.

By 1997, OMB modified the race/ethnicity measurement again by splitting the Asian or Pacific Islander category into two groups, creating five race categories: white, African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander. In addition, the 2000 census allowed people to identify themselves as belonging to two or more races. It also created six single races and fifty-seven multiple race categories. The ethnicity measure for Hispanic doubled the total number of the race/ethnicity categories to 126. However, such an extensive number of measures causes even more problems. Many Hispanics consider their ethnic origin as a racial category and therefore choose "some other race" on the census form, leading to over 40 percent of the Texas population reported as "some other race." The misconstruction of the categories of race and ethnicity in the U.S. census illustrates the fluid and subjective nature of measurement.

SEE ALSO *Econometrics; Ethnicity; Gender; Likert Scale; Mathematics in the Social Sciences; Measurement Error; Methods, Quantitative; Racial Classification; Regression Analysis; Sampling; Scales; Survey*

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Xi Chen

MEASUREMENT ERROR

Measurement error refers to a circumstance in which the true empirical value of a variable cannot be observed or measured precisely. The error is thus the difference between the actual value of that variable and what can be observed or measured. For instance, household consumption/expenditures over some interval are often of great empirical interest (in many applications because of the theoretical role they play under the forward-looking theories of consumption). These are usually observed or measured via household surveys in which respondents are asked to catalog their consumption/expenditures over some recall window. However, these respondents often cannot recall precisely how much they spent on the various items over that window. Their reported consumption/expenditures are thus unlikely to reflect precisely what they or their households actually spent over the recall interval.

Unfortunately measurement error is not without consequence in many empirical applications. Perhaps the most widely recognized difficulty associated with measurement error is bias to estimates of regression parameters. Consider the following regression model:

$$y = \beta_0 + \beta_1 \cdot x + \varepsilon$$

If y and x are observed precisely (and assuming no other complications), β_0 and β_1 can be estimated via straightforward linear regression techniques. Suppose, however, that we actually observe x^*, which is x plus some randomly distributed error v:

$$x^* = x + v$$

In terms of observed variables, our regression model now becomes

$$\begin{aligned} y &= \beta_0 + \beta_1 \cdot (x^* - v) + \varepsilon \\ &= \beta_0 + \beta_1 \cdot x^* + \varepsilon - \beta_1 \cdot v \\ &= \beta_0 + \beta_1 \cdot x^* + \zeta \end{aligned}$$

where $\zeta = \varepsilon - \beta_1 \cdot v$. From this setup, a problem should be immediately apparent. Because $x^* = x + v$ and $\zeta = \varepsilon - \beta_1 \cdot v$, x^* is correlated with the error term ζ, violating a central assumption of linear regression (that is, independence between regressors and the regression error) required to recover consistent, unbiased estimates of regression parameters. If one were to regress y on what we can observe (that is, x^*), the probability limit of the estimate of β_1, $\hat{\beta}_1$, would be

$$p\lim(\hat{\beta}_1) = \left(\frac{\sigma_x^2}{\sigma_x^2 + \sigma_v^2}\right) \cdot \beta_1$$

Using x^* thus does not yield a consistent estimate of β_1:

$$|p\lim(\hat{\beta}_1)| < |\beta_1|$$

If both v and ε are normally distributed or if the conditional expectation from the regression model is linear, then this holds even in small samples as an expectation (Hausman 2001):

$$E(\hat{\beta}_1) = \left(\frac{\sigma_x^2}{\sigma_x^2 + \sigma_v^2}\right) \cdot \beta_1$$

This is generally referred to as attenuation bias. While measurement error to right-hand side explanatory variables will also result in biased and inconsistent estimates in a multiple regression framework, the direction of bias is less clear and will depend on the correlations between the measurement errors of the various regressors. Similarly, biased and inconsistent estimates will obtain when the measurement error v is correlated with ε or x, although once again the sign of the bias will no longer be clear a priori.

Measurement error in left-hand side, dependent variables has a different consequence. To cleanly separate issues, imagine that x can now be observed perfectly but that we cannot observe the dependent variable y precisely, but only with a degree of error, as follows:

$$y^* = y + v$$

Here y^* is the observed variable. Thus we cannot observe y directly because of some measurement error v. Returning to our regression framework, we have

$$y = \beta_0 + \beta_1 \cdot x + \varepsilon$$

which, in terms of observed variables, yields

$$y^* - v = \beta_0 + \beta_1 \cdot x + \varepsilon$$

or

$$y^* = \beta_0 + \beta_1 \cdot x + \zeta$$

where $\zeta = \varepsilon + v$. Since x is still uncorrelated with the new regression error ζ, straightforward linear regression of y^* on x will still yield unbiased and consistent estimates of the regression parameters β_0 and β_1. However, the variance of ζ will in general exceed that of ε, implying more uncertain estimates (and hence higher standard errors and lower t-statistics for those parameters).

Because it is likely a ubiquitous condition (particularly with many variables typically found in microlevel data, often based on interviews at the household, firm, or individual level), many econometric remedies for measurement error have been proposed. Here we focus on the case of measurement errors in right-hand side explanatory variables x because it is errors in these that will actually lead to biased and inconsistent (as opposed to merely inefficient) estimates. While a variety of practical solutions has been proposed, in practice one has become particularly popular: instrumental variables.

In some sense the instrumental variables approach is rooted in part in the contributions of Vincent Geraci (1976, 1977), who explored identification and estimation of systems of simultaneous equations with generalized measurement error. Geraci established the necessary conditions for identification and efficient estimation under such circumstances. Of particular importance, his work stressed the need for prior restrictions sufficiently numerous to compensate for the additional parameters introduced by the measurement error.

Despite the rather elaborate work in the context of systems of equations by Geraci and others, in practice most instrumental variables estimation to surmount measurement error is carried out in a simple, two-stage setting. Once again, to isolate issues, let us assume that y is observed without error but that x is; specifically, assume that we actually observe x^*, where

$$x^* = x + v.$$

To implement the instrumental variables remedy for this sort of measurement error, one must have some variable z (an instrument) that is correlated with the true value x and not the measurement error v. Furthermore z must be correlated with y only through its correlation with x. (Following standard results for instrumental variables estimation, z can be correlated with other observed determinants of y; what it cannot be correlated with is the regression error $\zeta = \varepsilon - \beta_1 \cdot v$.) Once such an instrument has been identified, the standard two-stage least squares procedure can be adopted: Regress x^* on z, use the fitted model to predict x^*, and finally, regress y on the predicted x^*. For example, the case of mismeasured household consumption is often addressed through instruments such as household income (often measured in a separate survey module), local prices (which influence consumption, given income), and the like. What is required is a variable correlated with the true measure and not the error. All the concerns regarding the predictive power of instruments (see, for example, Staiger and Stock 1997) apply.

The result that mismeasured explanatory variables leads to biased and inconsistent estimates generalizes to nonlinear regression and limited-dependent variable models (such as logit and probit), although the instrumental variables solution discussed above is no longer effective. See Jerry Hausman (2001) for further discussion of the case of nonlinear regression and Douglas Rivers and Quang Vuong (1988) for solutions in the case of limited dependent variable models. Interestingly measurement error in dependent variables can lead to biased and inconsistent estimates of model parameters in limited dependent variable models. See Hausman (2001) for further discussion.

SEE ALSO *Descriptive Statistics; Distribution, Normal; Hypothesis and Hypothesis Testing; Instrumental Variables Regression; Probability, Limits in; Properties of Estimators (Asymptotic and Exact); Specification Error; Test Statistics*

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MECCA

Makkah al-Mukarramah, or "Mecca the blessed," as it is called by the government of Saudi Arabia, is the holiest city in Islam. Its unique status derives from its links to the rise of monotheism and the triumph of Islam in Arabia, and its role as a pilgrimage destination for all Muslims.

The pilgrimage to Mecca (*hajj*)—once in one's lifetime—is a religious duty for Muslims who can afford it. Pilgrimages to the vicinity predate the founding of Islam (there were evidently pre-Islamic pilgrimages to nearby Arafat and Mina, and the Kaaba was a religious site before it became a focus of worship for Muslims), but the Islamic Mecca hajj is more than 1,300 years old. Muhammad himself completed the pilgrimage in year 10 of the Muslim calendar (632 CE). In modern times, several million Muslims converge on Mecca each year during the last month of the Muslim calendar (Dhu al-Hijjah, literally "Lord of the Pilgrimage") to perform the necessary rituals, demonstrate and renew their faith, and seek forgiveness for sins. This huge annual gathering of believers from every continent is unique among contemporary religions. Located about 80 kilometers inland from the Red Sea in a desert valley, Mecca could be reached by pilgrims only after extraordinary travels and hardships before the rise of modern transportation in the twentieth century, but now it is serviced by an international airport at nearby Jeddah.

The experience of the pilgrimage combines obedience to prescribed rites, some unavoidable discomfort or even suffering, and, frequently, the exhilaration of religious renewal. As with all major historical pilgrimages, commerce and services have always flourished within and around the hajj. In the contemporary world the hajj also strengthens the sense among Muslims of a worldwide community of believers. The hajj is a leveler: men and women wear the same simple forms of clothing for the rituals (for men, two white cloths wrapped around the body; for women, a simple dress with a head covering). Differences of wealth and status are temporarily put aside as the worshippers submerge themselves in a sea of believers who are—as pilgrims—equal before God. In addition to wearing these simple white clothes, pilgrims must also refrain from anger, disputes, and sexual relations so that they may focus on obedience and devotion to God.

The specific rituals of the hajj cannot be understood without reference to ancient traditions about Ibrahim (Abraham), his wife Hagar, and his son Isma'il (Ishmael), the supposed progenitors of the peoples of Arabia. Some of the rituals reenact the struggles of Hagar and Isma'il to survive in the desert: for example, pilgrims walk and run seven times between the sites of two ancient hills near Mecca, as Hagar did to seek water for her son. The rituals also include stoning a pillar representing the devil, to commemorate Ibrahim's attempts to fulfill what he believed to be his mission to sacrifice his son. This sacrifice proved to be unnecessary, and Ibrahim was allowed to substitute the sacrifice of an animal. Subsequently, Ibrahim and Isma'il established a holy shrine in the desert that became the cubical structure known as the Kaaba, in Mecca. Although that shrine incorporated icons used for polytheistic worship in pre-Islamic times, these elements were removed after the conquest of Mecca by the Muslim army, led by Muhammad, in 630 CE.

Some elements of the hajj have been modernized. For example, the sacrifice of animals by small groups of worshippers in the traditional hajj (for piety and the sustenance of believers, as the Qur'an asserts, not as offerings sent to God) has been replaced by a sanitized industrial slaughter, after which the meat is packed and shipped to developing Muslim countries overseas. However, the hajj remains an extraordinary demonstration of adherence to ritual traditions as worshippers reenact and remember the struggles and piety of the founders of an ancient and still vibrant monotheism.

SEE ALSO *Muhammad*

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MECHANISM DESIGN

Mechanism design deals with the problem of how to design a "mechanism" or a game that has an equilibrium whose outcome maximizes some objective function, such as the maximization of social welfare, subject to certain constraints that depend on the specific problem.

Mechanism design begins with the assumption that each one of the agents for whom the mechanism is designed has access to a different piece of private information, and that elicitation of this information is important for achieving the desired objective. Mechanism design is thus all about incentives: about how to provide the agents with incentives to reveal their private information, and to act in accordance with the designer's objectives. Accordingly, the most important constraint in mechanism design is called "incentive compatibility," or IC. The IC constraint obliges the designer to take into account the fact that the agents will try to manipulate the mechanism to their advantage. For example, in one famous mechanism design problem the challenge is how to design an auction that maximizes the expected revenue to the seller under the assumption that the willingness of the potential buyers' to pay for the auctioned object is their private information.

The roots of the question of how to collect decentralized information for the purpose of allocating resources can be found in economists' early debates regarding the feasibility of a centralized socialist economy. These early discussions emphasized the complexity of the systems involved, but it soon became evident that any system for making decisions over the allocation of resources might be open to manipulation. One of the first to recognize the importance of incentives in this context was Leonid Hurwicz (b. 1917), who coined the term *incentive compatibility* in 1959.

Mechanism design was established as a field of study in the early 1970s as a result of Hurwicz's work on the possibility of attaining efficient outcomes in dominant strategy equilibria in "economic environments"; the investigation by James Mirrlees into optimal income taxation schemes; and the studies by Edward H. Clarke and Theodore Groves of efficient dominant strategy mechanisms for the provision of public goods, which are known as "Vickrey-Clarke-Groves," or VCG, mechanisms (William Vickrey studied such mechanisms in the 1960s in the context of his work on auctions). In the late 1970s Kenneth Arrow and Claude d'Aspremont and Louis-André Gerard-Varet showed that it was possible to obtain incentive compatible, efficient, and budget-balanced mechanisms. However, in 1983, in their research into optimal mechanisms for bilateral trade, Roger Myerson and Mark Satterthwaite showed that these earlier possibility results might break down if the agents were permitted to refrain from participation in the mechanism if it does not give them an expected utility that is larger than their reservation utility. In 1982 Myerson published a paper on optimal auctions that to this day serves as the model for implementing mechanism design. The literature on mechanism design continued to expand, and presently encompasses price discrimination, regulation, public-good provision, taxation, auction design, procurement, the organization of markets and trade, and more.

Mechanism design has not had the effect on policy anticipated by its early practitioners. This is probably because many of its main results are not robust against changes in the details of the underlying environment (as argued by Robert Wilson in the so-called Wilson Critique). It still remains to be seen whether the current work on "robust mechanism design" would make the theory more practicable.

SEE ALSO *Game Theory; Mixed Strategy; Multiple Equilibria; Nash Equilibrium*

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MEDIA

In conversation, the term *the media* generally refers to communication media or mass media, which are available to a plurality of recipients and are conceived collectively, as a single, all-encompassing and pervasive entity. Originally meaning an intermediary or a middle quantity, the word *medium* has been in use since the sixteenth century. By the 1700s, the term was used to refer to currency and a medium of exchange. In the nineteenth century, *medium* tended to indicate a material used in creative expression and a "channel of mass communication." Since the early twentieth century, *medium* has referred to "any physical material … used for recording or reproducing data, images, or sound" (Oxford English Dictionary Online). The term *media* carries different meanings in various fields. In the field of natural science, a *medium* is a substrate, whereas in the arts it is a material with distinctive physical properties. In media studies and other social sciences, *media* typically refer to "the means of communication" (print or broadcast media) or "certain technical forms by which these means are actualized" (books, newspapers, television, radio, film, and now the Internet and video games) (O'Sullivan et al. 1994, p. 176).

Each medium—from the newspaper to the telephone to the personal digital assistant—has its own formal properties and preferred content, arises from distinctive political, economic, and cultural matrices, and holds the potential to influence individuals and society in varying ways. There are obvious limitations to regarding media only as technical devices for delivering content to receivers or audiences. The functions and impact of the media can be sufficiently understood only if broader social dimensions of communication are taken into account.

MEDIA AND SOCIETY

Today there is widespread recognition that the media have had significant impacts—both beneficial and deleterious—on individuals and societies through all stages of their development, playing key roles in socialization and education. They have been variously charged with watering down political debate while also opening up new political forums, and with debasing popular discourse while also facilitating more democratic access to educational resources.

Throughout the history of communication, each era's predominant media have reflected the shape and character of the civilizations that created and made of use them. Harold Innis (1894–1952), a Canadian economic historian, regards media as "staples" allowing for the creation of monopolies of knowledge, and he explores the impact of the media on the spatial and temporal organization of power. Durable, or what he calls "time-biased," media, like stone and clay tablets, make a society or empire tend toward longevity (e.g., the Egyptian civilization), whereas light, portable, "space-biased" media, like papyrus, allow for territorial expansion, as with the Roman Empire. In the latter part of the fourteenth century, block printing techniques, first developed in East Asia, reached Europe, where, by the 1450s, metal printing was developed by Johannes Gutenberg. Printing technology revolutionized religion and education in Europe by bringing the word, printed in vernacular languages, to the public. Print culture has been essential to the development of such aspects of Western modernity as rational individualism, scientific knowledge, the nation-state, and capitalism. The emergence of radio broadcasting in the 1920s ushered in a new era in the development of electronic communication media. The ability of radio to reach, simultaneously, unprecedented numbers of people was soon exploited by totalitarian regimes. The rise of film necessitated the creation of a massive industry and new communal exhibition spaces, forged new relationships between media makers and politicians (e.g., the Committee on Public Information), and provided a new form for addressing timely social issues. In the mid-twentieth century, television, through both its form and content, reinforced postwar consumerism and a turn inward, to the private suburban home and the nuclear family.

THEORIES OF MEDIA

Not until recently have the media received sufficient critical attention in academic fields. Classical thinkers such as Karl Marx (1818–1883), Max Weber (1864–1920), and Emile Durkheim (1858–1917) neglected the role of the media in the development of modern societies. With industrialization, urbanization, and modernization, the growth of the media accelerated, as did scholars' interest in it. Communication studies programs began appearing in Western universities in the early twentieth century. These early programs tended to focus on the use of media in public address—during the war years, for propaganda—and on media's effects on its audiences. A critical analysis of the medium itself—and not on the process of communication or rhetoric—is a relatively new development, one that distinguishes media studies from communication studies. The various approaches to the media can be divided into three general categories, in accordance with their particular focus—though it should be noted that these are not mutually exclusive and are commonly applied in combination.

Media and Political Economics The political economics approach advanced studies of media in the mid-twentieth century. Walter Lippmann (1889–1974) studied the formation of public opinion through propaganda, while Harold Lasswell (1902–1978) conducted empirical analy-

ses of communication, commonly through content analyses of propaganda in the two World Wars. Yet this early work tended to focus on the effects of a medium's message on the audiences and paid little attention to the nature of the medium itself. Through his investigation of the transformation of the public sphere, Jürgen Habermas (b. 1929) critically examined the political role of the print media—such as the periodical press—during the transition from absolutism to liberal democracy in the late eighteenth and early nineteenth centuries. The conventional Marxist theory of the media is also one of the main schools of the political economic approach. More recent political economic media scholarship, including the work of Noam Chomsky (b. 1928) and Robert McChesney (b. 1952), focuses on ownership of media organization and argues that the consolidation of ownership in the hands of a few large media corporations limits the variety of ideas presented to the public. Theorists of this type also emphasize the institutional nature of media, focusing on the labor of media production (e.g., work in the newsroom or on the film set).

Media and Technology The technological approach focuses attention on the material substance of the media. This approach tends to examine the technological attributes, the form, of the medium, and the impact that those material qualities have on individual and social development. The famous dictum of Marshall McLuhan (1911–1980), "The Medium is the Message," illustrates the importance of the technical form of media irrespective of their content. Understanding media as extensions of the human body, McLuhan argued that media technologies encourage distinctive modes of thought and perception, which has profound social consequences. Print, for instance, encourages rational, linear thinking, and portable books, which can be read in private, tend to promote atomization. He also devised the concepts of "hot" and "cool" media to describe how particular media forms encourage more or less participation in the communication process.

Media and Culture The cultural approach to media tends to examine the interplay between cultural production, identity politics, media representation, and reception, often in quotidian settings and situation. The theorists of the Frankfurt school made significant contributions to the early development of cultural analysis of the media in the 1930s and 1940s. Max Horkheimer (1895–1973) and Theodor W. Adorno (1903–1969) critically investigated the ideological function of communication media as a tool of social domination. According to them, the culture industry, a central characteristic of a new configuration of capitalist modernity, ultimately induced compliance with dominant social relations by utilizing mass communication. Compared to their overly negative view of mass media, Walter Benjamin (1892–1940) put more emphasis on the positive role of the media. Benjamin argued that while communication technologies such as photography and cinema have tended to destroy the authentic and unique character of artwork, they have also created new forms of media culture that provide the modern masses with the opportunity for aesthetic experience and thereby stimulate their critical political consciousness. More recently, scholars like Raymond Williams (1921–1988), James Carey (1934–2006), and those of the Birmingham school have conceived of communication as *culture*, and have endeavored to combine media studies with cultural studies. They examine how dominant ideologies are embedded in, and produce meaning in, popular culture by virtue of mass media. Rejecting elitist perspectives that regard audiences as inert masses engaging in passive reception, these scholars emphasize that media consumers actively produce meaning by accepting, negotiating, or rejecting a medium's dominant meaning.

NEW MEDIA AND POSTMODERNISM

Electronic and digital media have indeed made their mark on contemporary societies around the globe, introducing new challenges and opportunities. Yet long-lived concerns, including the independence of media from government and corporate control, are extant not only in the postindustrial world, but particularly in developing nations. The role of the media, from the local to the international level, in contemporary political conflicts, from terrorism to political coups, has garnered much attention inside and outside the academy. Meanwhile, video games, often charged with promoting violence and encouraging sedentary lifestyles, are championed by some designers and educators as a revolutionary new tool for hands-on learning. Video cameras, when used as surveillance media, and Internet spyware have also raised political and ethical questions about the uses to which technologies are put: to protect children from potential sexual predators in online chat rooms, to monitor employees' business-related correspondence, or to track people traffic in urban public places. Personal media technologies such as cellular phones, digital cameras, and MP3 players—many of which come equipped with global positioning technology—shape users' conceptions of time and space, changing the way people schedule their daily activities, interact with friends and family, and navigate through space. These new media are influencing the way people learn, create personal identities and social networks, and engage in politics, and the way governments and economies evolve in response to global flows of capital and culture. Jean Baudrillard (1929–2007), a French philosopher, sees

the emergence of cyberspace and new media technologies as creating what he calls *simulation* and *hypperreality*. In the age of postmodern society, he argues, the new media-saturated culture becomes predominant over the "real" world, replacing conventional social relations grounded in political economics.

Media—regarded either as a collective, encompassing, mass entity or as individual technologies with distinctive forms and unique political, economic, and cultural characteristics—interact with individuals and societies in ways that have attracted attention both within popular culture and across academic disciplines. And in what is regarded as an increasingly mediated world, their influence will undoubtedly continue to be subjected to scholarly examination and critique.

SEE ALSO *Chomsky, Noam; Communication; Cultural Studies; Cyberspace; Frankfurt School; Habermas, Jürgen; Hall, Stuart; Information, Economics of; Internet; Journalism; Lasswell, Harold; Marxism; Medium Is the Message; Postmodernism; Public Sphere; Repressive Tolerance; Television*

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MEDIAN

SEE *Descriptive Statistics.*

MEDIAN, THE

SEE *Descriptive Statistics.*

MEDIATED STABILITY

SEE *Stability, Psychological.*

MEDICAID

The U.S. Medicaid program was enacted in 1965 as Title XIX of the Social Security Act. It is a federal-state program of health-care coverage for some low-income Americans, administered at the federal level by the Centers for Medicare and Medicaid Services. There are distinct Medicaid programs in every state, the District of Columbia, and the U.S. territories, but every program operates within guidelines set at the federal level. Medicaid is financed through federal and state general revenue funds using a formula (based on a state's per capita income) whereby federal dollars are matched to state dollars at a rate of between 50 and 77 percent. In fiscal year 2004, Medicaid served approximately fifty-two million recipients at a cost of $288 billion.

Medicaid is a highly complex program, in part because there is considerable variation among states. Federal law requires states to cover some populations, referred to as *categorically needy*, and some services, referred to as *mandatory*. States may also cover medically needy and special populations and optional services and still receive federal matching funds. The major categorically needy groups are pregnant women and children

under age six with family income at or below 133 percent of the federal poverty level (FPL); children ages six to nineteen with family income up to 100 percent of the FPL; and aged or disabled people who meet the income eligibility standards for the Supplemental Security Income program. Although there are many more recipients in the first two categories, the largest share of Medicaid dollars is spent on behalf of the third. Aged and disabled Medicaid recipients may also be eligible for Medicare, in which case Medicaid covers what Medicare does not.

Mandatory services for the categorically needy population comprise a comprehensive medical benefit, including inpatient and outpatient hospital, physician, prenatal, and postpartum care, as well as laboratory and x-ray, home-health, and nursing-facility services. Because Medicaid is a means-tested program vying with other state programs for general revenue funds, however, Medicaid reimbursement rates are typically substantially lower than those paid by Medicare and private insurers. Consequently, many Medicaid recipients have difficulty finding providers who will treat them for what the program will pay. Some states have addressed the access problem by requiring that Medicaid enroll recipients in managed-care organizations that contract to serve the program population in return for a yearly per capita payment. Managed care is also viewed as a cost-containment strategy.

Medicaid pays for almost half of all nursing-home care, compared with approximately 12 percent by Medicare and 8 percent by private insurers. Although Medicaid coverage is limited to low-income elders, program rules allow residents to qualify for nursing-home benefits by "spending down" their resources first and then turning to the program for assistance. Because Medicare covers only short-term and medically involved nursing-home stays and because private long-term care insurance is costly and time-limited, even middle-class elderly seek Medicaid benefits in a nursing home. In recent years, states have received federal waivers of some program requirements in order to provide comprehensive long-term care in recipients' homes.

SEE ALSO *Medicare; Medicine, Socialized; National Health Insurance; Poverty; Poverty, Indices of; Public Health; Welfare; Welfare State*

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MEDICARE

Medicare is the name given to public health insurance programs in Canada, Australia, and the United States. In Canada and Australia, the program covers the vast majority of health services for all citizens. The Canadian provinces administer medicare (with a lowercase *m*) for their inhabitants, and provincial health plans vary in some respects, but in both Canada and Australia, health-care coverage is universal and financed primarily through general tax revenues.

In the United States, Medicare is a public program that provides health insurance for people who are age sixty-five or older, considered disabled by the Social Security Administration (after a two-year wait), or diagnosed with end-stage renal disease. Medicare was enacted in 1965 as Title XVIII of the Social Security Act. In 2005, 42.5 million Medicare beneficiaries were covered at a cost of $330 billion. Despite its primarily elderly clientele, Medicare does not pay for long-term care, except for brief, medically involved stays in a skilled nursing facility.

Medicare is organized into parts A through D, each of which corresponds to a different service type with a different financing scheme. Part A is a program of inpatient hospital insurance available to all Medicare beneficiaries; there is no premium, although beneficiaries are required to pay deductibles and co-payments when they use covered services. Part A is financed through a payroll tax of 2.9 percent, paid half by employers and half by employees. Part B provides coverage for outpatient services, including physician visits, therapies, and laboratory tests. Enrollment is voluntary, and beneficiaries pay a monthly premium for coverage and deductibles and co-payments at the point of service. Part B is financed through premiums and general tax revenues. Part C concerns itself with managed care plans. Part D, passed in 2003, represents the largest expansion of Medicare benefits since 1965; as of January 1, 2006, it covers some of the cost of prescription drugs for beneficiaries who enroll. In a departure from earlier Medicare policy, enrollees receive Part D benefits through private insurance plans that offer coverage for different drugs (within limits set by the government) at different premium amounts. Like Part B, Part D is financed through premiums and general revenue funds. Medicare beneficiaries may also purchase private supple-

mentary, or Medigap, insurance policies to cover deductibles, co-payments, and uncovered services.

Medicare is administered at the federal level by the Centers for Medicare and Medicaid Services. The Medicare program's passage followed a decades-long attempt to enact national health insurance for all Americans. Medicare proponents hoped and expected that the program would be a first step toward that end; as of 2007, Medicare for all remained just one of many proposals for health-care reform.

Among other strengths, Medicare has substantially lower administrative costs than private insurers and has instituted innovative payment systems in the form of diagnosis related groups (DRGs) for hospitals and the resource-based relative value scale (RBRVS) for physicians. Under DRGs, hospitals are paid on a prospective basis to encourage efficiency. The RBRVS makes it possible to redress payment imbalances between generalist and specialist physicians.

SEE ALSO *Medicaid; Welfare; Welfare State*

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MEDICINE

In its broadest sense, medicine denotes ideas relating to diagnoses, causes, and cures of illness, as well as the practice of restoring and maintaining health, and the substances used in the treatment of disease. Medicine is both a domain of knowledge and the application of that knowledge. Medical ideas and practices as well as the social institutions relating to health compose a medical system. Medical systems include ways of classifying disease (cancer, a cold, soul loss, and spirit possession), health specialists (doctors, herbalists, and shamans), and therapies to end illness (pharmaceuticals, meditation, acupuncture, and divination).

Western medicine, or biomedicine, is currently the most widespread medical system, but thousands of others exist throughout the world. Although each tradition is different, diagnosis and treatment often consist of both magical and herbal components. For instance, many societies believe that ill health can be attributed to supernatural forces, which can be meted out by spirits, gods, ancestors, sorcerers, or witches. These forces are capable of causing both the body and the soul to become ill. To combat disease, patients and healers can also invoke magical substances, rituals, or supernatural beings. Another common method of healing is herbalism, using plants to treat illness. An immense variety of plant species are employed as remedies and include decongestants, pain relievers, and antiseptics. Plants in the Americas have been used to derive important drugs including aspirin, quinine, and novocaine. Although nonbiomedical traditions were once regarded as ineffective and superstitious, they are now acknowledged as providing new sources of medicinal plants as well as information regarding the social lives, environments, and experiences of humans.

Medical ideas and practices both constitute and are constituted by social and cultural beliefs and concerns. Arthur Kleinman notes that medicine is a cultural system "of symbolic meanings anchored in particular arrangements of social institutions and patterns of interpersonal interactions" (1990, p. 24). Illness dialogues, diagnoses, and treatments can express ideas regarding religion, morality, power, politics, identity, economics, and gender. Consequently, social scientists are able to examine medical systems and their components as one method of understanding societal norms, attitudes, and practices. For instance, in *The Birth of the Clinic* (1973) Michel Foucault examines what he calls the "clinical gaze," to show how medicine is linked to power. In *AIDS and Accusation* (1992) Paul Farmer explores how AIDS dialogues in the United States and Haiti reflect attitudes of colonialism, capitalism, and poverty. Social science research regarding the conceptions and use of medicine can focus on both local environments and global ones.

HISTORY OF MEDICINE

The purposeful treatment of illness has probably occurred throughout the entire span of human existence. However, without written records, it is impossible to know for certain what the earliest types of medical treatment were. The first written evidence of medical knowledge, including lists of symptoms, diagnoses, and treatments, comes from Mesopotamia and Egypt, dating to more than four thousand years ago. In ancient Mesopotamia 250 vegetable and 120 mineral drugs were documented (Magner 1992, p. 19). But it is ancient Egypt that can claim both the first real physician known by name, Imhotep (c. 2980 BCE), and later, the first formalized medical system, which included medical schools, medical insurance, sick leave, and registered physicians of both sexes. The ancient Mesopotamian and the Egyptian medical systems also

incorporated magical remedies. These were the first of a number of codified medical traditions that developed around the world.

The ancient medical systems of India and China were developed later than those of Mesopotamia and Egypt but they are still practiced today. In India, Ayurveda (the science of life) was intended to maintain health, not simply treat disease. Ayurvedic practitioners believe that health is the result of the balance of three *doshas* (elemental manifestations in the physical body) that govern body processes. Magner notes that ancient texts list more than one thousand diseases and almost one thousand drugs, and describe advanced surgical procedures including cesarean section, amputation, lithotomy, cauterization, tonsillectomy, and plastic surgery (p. 43). Like Ayurveda, traditional Chinese medicine also views disease as the result of an imbalance in the body, which is composed of *yin* and *yang* elements. Doctors often made diagnoses by studying the pulses of patients and were aware that the heart was responsible for circulating blood long before Europeans were. Chinese medicine employs a variety of treatments including more than five thousand medicinal herbs (such as ginseng), acupuncture (inserting needles into the body at specific points), and moxibustion (applying a burning tinder to the skin).

In classical Greece, Hippocrates (460–361 BCE), sometimes called the "Father of Medicine," wrote that health was the result of a balance between the four humors (basic bodily fluids) of phlegm, yellow bile, black bile, and blood. During the Roman Empire the humoral approach was used by many physicians, including Galen (130–200 CE). His writings were used as important medical texts throughout Rome, the Islamic world, and Europe for centuries. Islamic doctors further embraced and modified the Greek tradition and spread it from Spain to India. The medical writings of the doctor and philosopher Ibn Sina (Avicenna, 980–1037) became standard texts throughout the Arab conquests and Medieval Europe. In Europe it was not until the scientific revolution of the sixteenth and seventeenth centuries that the Greco-Islamic tradition was fully abandoned.

In 1628 William Harvey (1578–1657) challenged the Galenic tradition when he published what was then an unorthodox idea: that the pumping heart moved a continuous flow of blood through the body. Almost one hundred years later the Turkish and African practice of purposefully exposing individuals to mild strains of smallpox to achieve inoculation caught the attention of Europeans and Americans, leading to the development of the first vaccine. Nonetheless, it was not until the nineteenth century that advances in chemistry and medical technology led to the discovery of microbial sources of disease and their cures. This allowed researchers to isolate, treat, and create vaccines for diseases such as tuberculosis, tetanus, cholera, and rabies. The introduction of general anesthesia (1840s) and antisepsis (1870s) precipitated the growth of surgery and hospitals, but it was not until the twentieth century that significant advances were made.

MEDICINE TODAY

The product of a specific historic and cultural past, biomedicine is currently used around the globe. The biomedical system includes professional, scientific, educational, legal, financial, and ethical frameworks. Biomedicine can be characterized by a number of features. One is its almost exclusive use of science and technology to fight disease. Unlike many other traditions, biomedicine views disease as caused by only natural factors. Supernatural or magical sources of illness or treatments are absent. Most biomedical treatments involve the use of synthesized pharmaceuticals and some require hospitalization. Furthermore, the physical body, not the soul, is considered to be the only locus of illness. Given its early history, biomedical practitioners often have a tendency to look for and find a single cause of an illness (such as a microbe) and then to treat it with a single cure (such as antibiotics). Deborah Gordon (1988) notes that the scientific approach of biomedicine is not only a way to treat illness; it is also a way of conceptualizing the world.

The focus of biomedicine is illness and not health, which is often defined as the absence of disease. Critics charge that because biomedicine almost exclusively treats the body and disease, it lacks a holistic approach to well-being that engages with the social individual. Patients who feel that biomedicine is not meeting their needs have a number of other therapeutic options from which to choose. In developed counties such as the United States, complementary and alternative medicines are widely used. In 1998 Eisenberg et al. estimated that number of visits to alternative medicine practitioners exceeded the total number of consultations with primary care physicians in the United States. These therapies, which include herbalism, meditation, yoga, massage, acupuncture, aromatherapy, and chiropractic medicine, are used either in conjunction with, or as a substitute for, biomedical treatment. They are often provided by nonlicensed healers and can incorporate religious or non-Western traditions.

Throughout much of the world, the majority of medical consultations are still with traditional healers and not biomedical personnel. Nevertheless, indigenous and local healing traditions are often used in conjunction with biomedicine. For instance, in India and China, Ayurveda and traditional Chinese medicine, respectively, continue to play important roles in the public health care systems alongside biomedicine. Magner notes that in the 1960s acupuncture anesthesia was used in 60 percent of all sur-

geries in China (1992, p. 59). Australian Aboriginal people have the choice of going to a biomedical clinic, using local plants as remedies, or consulting local healers to cure spiritual sickness. In Africa herbalists and diviners, as well as doctors and nurses, are regularly consulted. Throughout our history, humans have employed a variety of techniques to treat illness, and this process continues today.

SEE ALSO *AIDS; AIDS/HIV in Developing Countries, Impact of; Anthropology, Medical; Disease; Magic; Medicaid; Medicare; Medicine, Socialized; Public Health*

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MEDICINE, SOCIALIZED

The *American Heritage Dictionary* (4th ed., 2001) defines socialized medicine as "a system for providing medical and hospital care for all at a nominal cost by means of government regulation." This leaves room for considerable craftsmanship in the construction of socialist systems. Indeed existing socialized medical systems in, for example, Great Britain, Cuba, Finland, and Switzerland conform to this definition, but are far from monolithic.

Because every aspect of a socialized health care industry is controlled and provided by the government—most doctors, nurses, medics, and administrators are government employees—the system, such as the National Health Service (NHS) in Britain, determines where, when, and how services are provided. Of course citizens may seek care outside the system, in the private sector.

Socialized medical systems are designed to eliminate the insurance industry and marginalize profit while providing health care for all. According to many recent studies, socialized systems outperform free-market profit-driven systems in terms of availability, quality, and cost of care. In addition a report from the Johns Hopkins University Bloomberg School of Public Health stated that the United Kingdom's socialized medical system outperforms the U.S. system in patient-reported perceptions (Blendon, Schoen, DesRoches, et al. 2003). In other words, the people with direct experiences report greater satisfaction with their health services under a socialized system than they do in a free-market system. These results must be considered along with the fact that the U.S. per capita health care expenditures ($4,887) are nearly triple those in the United Kingdom ($1,992). In the year 2000 the United States spent 44 percent more on health care than Switzerland, the nation with the next highest per capita health care costs. Nevertheless, Americans had fewer physician visits, and hospital stays were shorter compared with those in most other industrialized nations. The study suggests that the difference in spending is caused mostly by higher prices for health care goods and services in the United States.

The British system is probably the most instructive example for Americans to evaluate because of the similarities in economy and government structure between the two nations. According to the NHS Web site, the system "was set up on the 5th July 1948 to provide healthcare for all citizens, based on need, not the ability to pay" (National Health Service 2007). Originally conceived as a response to the massive casualties of World War II (1939–1945), the system survives and continues to evolve in the early twenty-first century. The NHS is funded by taxpayers and managed by the Department of Health, which sets overall policy on health issues. Individual patients are assigned a primary care center (with doctors, dentists, optician, pharmacist, and a walk-in center) managed by a primary care trust (PCT). The NHS explains its system of referrals this way: "If a health problem cannot be sorted out through primary care, or there is an emergency, the next stop is hospital. If you need hospital treatment, a general practitioner will normally arrange it for you" (National Health Service 2007).

The PCTs are responsible for planning secondary care. They look at the health needs of the local community and develop plans to set priorities locally. They then decide which secondary care services to commission to meet people's needs and work closely with the providers of the secondary care services to agree about delivering those services.

The NHS may be the world's most sophisticated socialized medical system, but the modern world's first

such system was established by the former Soviet Union in the 1920s. Whereas the NHS demonstrates that socialized medicine can exist within a capitalist economy, the failures of Soviet medicine demonstrated how corruption within a society can distort any system. China, Cuba, Sweden, and most of Scandinavia have successful and completely socialized health care systems.

Life expectancy and infant mortality rates are two of the best indicators of overall health. Average life expectancy in Great Britain was 77.4 years in 1998; in comparison, life expectancy for the U.S. population reached 76.9 years in 2000. Infant mortality in Finland is below 4 percent; in the United States it is 7 percent. Health services are available to all in Finland, regardless of their financial situations.

Single-payer systems such as Medicare are not socialized medicine. In socialized systems the government owns, operates, and provides every aspect of the health care services. Although it is true that in a single-payer system the government collects and disperses the capital for services rendered, its decision-making responsibilities end there. Even without socialized medicine's additional powers to limit corporate profits, studies by the U.S. General Accounting Office and the Congressional Budget Office show that single-payer universal health care would save $100 to $200 billion dollars per year while covering every currently uninsured American and increasing health care benefits to those already insured (U.S. Government Accounting Office 1991; Congressional Budget Office 1993).

Outside of the United States, health care in the twenty-first century is increasingly seen as a basic human right that deserves to be protected and provided at an affordable fee to all citizens of civilized societies. This idea—that medical procedures and health care in general should not be subject to or motivated by market forces—is one that, in the late twentieth century, evolved back into favor only after repeated experiments with the capitalization of health care led to systematic and catastrophic failures, resulting in grotesque profits on the supply side contrasted with the suffering of millions of disenfranchised patients on the demand side of the equation. Socialized medicine is an egalitarian system that addresses these iniquities.

SEE ALSO *Egalitarianism; Human Rights; Medicine; Morbidity and Mortality; National Health Insurance; Public Health; Socialism; Union of Soviet Socialist Republics*

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Eugene Straus

MEDICIS, THE

The story of the Medici family is closely associated with four historical developments of great interest to scholars in the social sciences: the history of Florence, Italy, and the Florentine "republic" in particular; the development of humanism and the attendant rise of a new association of humanist scholars and artists; the life story and scholarly career of Niccolò Machiavelli; and the history of the Roman Catholic Church.

The Medicis first arrived in Florence around 1200 CE from the Mugello region north of Florence. During the thirteenth century the city of Florence became increasingly famous and prosperous due to its success in the cloth and woolen trade, but also became increasingly divided between those who supported the pope, the Guelphs, and those who supported the German emperor, the Ghibellines. These developments provided the framework for two changes central to an understanding of Florentine history and to the rise of the Medici to power. Success in commerce and trade led to the creation of trade guilds, among which was the guild of bankers (*Arte del Cambio*), and the division between papal and imperial partisans continued to plague Florence well into the sixteenth century. The Medicis made their fortune and achieved their status in the banking business and within the greater guilds of Florence. And, for the most part, the Medicis aligned themselves with the interests of the papacy.

The first reference to the Medicis in the records of the city is to Ugo de Medici in the year 1280. He was banished from the city for disturbing the peace. Shortly after, in 1293, the city adopted the Ordinances of Justice, which

all but guaranteed that the most important guilds, the *Arti Maggiori*, would govern Florence. Most workers, the *ciompi* (wool combers), were ineligible for membership in these guilds and had no share in city governance. Following a revolt of the *ciompi* and a brief period of shared rule (1378–1381) the trade guilds reasserted control and came to be dominated by the Albizzi family, all in the name of a "republican" form of government. The Medici family, under the leadership of Giovanni di Bicci de Medici (1360–1429), emerged in the late fourteenth century as a challenger to the Albizzi, eventually replacing them as the dominant family in the republic. With the death of Giovanni, his son Cosimo assumed leadership of the family and the city of Florence.

For reasons having to do with excessive wealth and ambition, Cosimo de Medici (1389–1464) was exiled from the city in 1433 along with his younger brother Lorenzo. Largely due to his wealth and influence outside of Florence, however, Cosimo was able to have his exile decree lifted a year later, and upon his return to the city worked with the *signoria*, city executives, to encourage legal and political reforms to strengthen Florence's independence and free the city from outside threats. Within this more stable political climate, and for the next thirty years, Cosimo began to act as generous patron to the artists and scholars who began to gather in the city.

For his many contributions to Florence, Cosimo de Medici earned the honorific title *Pater patriae*, father of the country. Among his most notable deeds was his patronage of artists and scholars such as Leonardo Bruni (1370–1444), Sandro Botticelli (1445–1510), Poggio Bracciolini (1380–1459), and the famous Platonist Marsilio Ficino (1433–1499). Botticelli's *Adoration of the Magi* (c. 1476) depicts four generations of the Medici as models for characters at the birth of Jesus. Cosimo also funded the construction and filled the shelves of Europe's first public library, a library dedicated primarily to housing classical and early Christian manuscripts. Cosimo had two sons, Piero (1416–1469) and Giovanni (1421–1453). Piero suffered throughout his life with a severe case of gout and served as head of the family only briefly (1464–1469). It was Piero's son Lorenzo, however, who assumed leadership of the family from 1469 and who came to be called *il Magnifico*, the magnificent.

Lorenzo the Magnificent (1449–1492) was only twenty years old when he assumed his duties as both head of the Medici family and shaper of Florentine policy. Following his grandfather Cosimo's lead, Lorenzo dedicated himself to assisting the rising generation of young artists and scholars. Among the numerous recipients of his patronage were some of the leading creative spirits of the Italian Renaissance, including Michelangelo Buonarroti (1475–1564), Pico della Mirandola (1463–1494), and Leonardo da Vinci (1452–1519). As a young man in his teens, Michelangelo actually lived in the Medici house. He later sculpted the Medici tombs and designed the New Sacristy Chapel of San Lorenzo, which houses them. Lorenzo is also credited with establishing internal stability and external diplomacy to secure Florence's independence. Soon after Lorenzo's death, however, Charles VIII entered Florence with his French army, the Medici were banished from Florence, and the Dominican monk Savonarola (1452–1498) became the charismatic leader of the republic for the next three years. It would be another fifteen years before the Medicis returned in 1512. The years 1498 to 1512 are widely regarded as the period of the republic, though Florence had been nominally a republic from the late thirteenth century. The dominant figures during this period of Medici absence were Piero Soderini (1450–1513) and Niccolò Machiavelli (1469–1527).

Machiavelli is most famously associated with the Medici family for his dedication of *Il Principe* (*The Prince* ; originally *De Principatibus, About Principalities*) to Lorenzo (1492–1519), the Duke of Urbino, grandson of Lorenzo the Magnificent, and father of Catherine de Medici (1519–1589). Catherine, as wife of King Henry II, would serve as queen of France. According to a famous letter of December 10, 1513, Machiavelli originally intended to dedicate the work to Giuliano de Medici (1479–1516), but Giuliano died unexpectedly in 1516. So the dedication went to Giuliano's nephew instead. In either case, the dedication was intended to curry favor with the Medicis, who were back in control of Florence. Though Machiavelli never returned to a position of authority in Florence under the Medicis, he did go on minor diplomatic missions on their behalf, to Lucca in 1520, and to Carpi in 1521. He was also commissioned by the Medici to write one of his most famous works, the *Istorie fiorentine* (*History of Florence*). It is somewhat ironic that in the last years of Machiavelli's life, from 1523 to his death in 1527, Florence was for all practical purposes under the rule of Ippolito and Alessandro, the illegitimate sons of Giuliano and Lorenzo de Medici, the two dedicatees of *The Prince*.

The Medici family also played an important role in the history of the Roman Catholic Church. Indeed, Lorenzo the Magnificent's son, Giovanni, and nephew, Giulio, were elected pope. Giovanni de Medici (1475–1521), brother of Giuliano, for whom Machiavelli originally intended *The Prince*, became Pope Leo X in 1513. He is perhaps best remembered as the pope who excommunicated Martin Luther (1483–1546) in 1521. Giulio, who was a cardinal and close associate during his cousin's reign as pope (1513–1521), became Pope Clement VII in 1523. Pope Clement VII is the pope who famously refused to grant King Henry VIII (1491–1547) of England a divorce from Catherine of Aragon

(1485–1536), which prepared the ground for the establishment of the Church of England.

SEE ALSO *Banking; Enlightenment; Humanism; Machiavelli, Niccolò; Roman Catholic Church*

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MEDITATION

SEE *Buddhism.*

MEDIUM IS THE MESSAGE

"The medium is the message" is one of the most famous—yet controversial—statements in the field of media and communication studies. The Canadian literary scholar and pioneering media analyst Herbert Marshall McLuhan (1911–1981) coined the phrase after hearing the anthropologist Ashley Montagu (1905–1999) deliver a talk on science titled "The Method is the Message." McLuhan's expression refers to the significance of the form of communication media irrespective of its content; that is, the communication medium itself has the potential to influence the way a particular medium's content is perceived and to shape cultures dominated by particular media. This dictum, which is also the title of the first chapter of McLuhan's provocative book *Understanding Media: The Extensions of Man* (1964), encapsulates the central foundations of his broader analyses of the profound impact of communication technology on society, culture, and human senses.

Until the mid-1950s McLuhan's work primarily consisted of literary and cultural criticism that examined new forms of popular culture, with an emphasis on the increasing role of mass media in the emergence of consumerism, as well illustrated in *The Mechanical Bride* (1951). From the later 1950s on, McLuhan turned more attention to the technological properties of communication and the vast effects of the media on human cognition and sensation. Conventional communication studies, he thought, were preoccupied with analyzing media content, while taking for granted the medium as a mere technical device to deliver the message to the receiver. McLuhan, instead, privileged the medium over the message, or form over content; even content is form. He argued that the content of any medium is not only a message, but also, more importantly, always another medium. For instance, the written word is the content of print and, at the same time, the medium of speech. McLuhan defined *medium* broadly, regarding many cultural artifacts as media and arguing that their work as "media" extended beyond the mere conveyance of content. The electric light, McLuhan explained, functions as a medium, as it renders possible certain forms of human activities such as night football or brain surgery. These activities themselves are the "content" of the electric light because they cannot exist without it. In his terminology, the medium designates something that "shapes and controls the scale and form of human association and action" (McLuhan 1964, p. 9). As such, McLuhan extended the term *media* to mean any forms of technology that function to extend and widen the human senses and limbs by abolishing temporal-spatial limitations. For instance, the telephone is the extension of the ear, just as the wheel is the extension of foot and leg, and clothing is that of skin. McLuhan's approach sees media as including all technologically constructed artifacts such as buildings, roads, planes, automation, and so on.

Drawing on the work of his mentor, the economic historian Harold Innis (1894–1952), who in his work on the "bias of communication" examined the material substance of communication and its impact on the spatial-temporal organization of societies, McLuhan presented the history of communication as a history of the medium, rather than as a history of the message. McLuhan maintained that the major phases of civilization tended to accord with the introduction and rise to popularity of particular modes of communication technology and consequent changes of the human sensorium at a social level. With the rise of the printing press, social life shifted from a traditional society based upon oral communication to a modern, visual typographic culture that, because of its emphasis on literacy and uniformity, made possible the rise of rational individualism and western nationalism. Since then, electronic media pushed culture into an unprecedented, turbulent media revolution—a technocultural society in which communication technology itself has become the central nervous system. It is an age of global communication mediated through radio and TV (and the Internet), which has generated diverse and heterogeneous social relations and brought about the retribalization of the world—the "global village," as McLuhan famously characterized.

The startling new insight implicated in McLuhan's statement predated the postmodern turn in media studies, which is typified in the work of Jean Baudrillard (1929–2007). Some critics point out that McLuhan's technological determinist perspective ignores vital questions related to the functions of various media institutions and the ideological effects of the media on the audience. His erratic and poetic style of writing also makes it difficult to formulate a comprehensive theory of the media and society. Yet, the core aspects of his insight contributed to the development of "medium theory" and "media ecology," elaborated more systematically by later theorists.

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Jae Ho Kang

MEIJI RESTORATION

The Meiji Restoration of 1868 marked the beginning of Japan's revolutionary turn away from medieval and early-modern patterns of development, which had been characterized by samurai domination of virtually every aspect of society. Narrowly conceived, the Restoration amounted to little more than the coup d'état of 1868, which forced the resignation of the last Tokugawa (1600–1868) shogun and elevated Emperor Meiji (Mutsuhito, 1852–1912), then a teenager, to sovereign administrative rule. Viewed expansively, however, the Meiji Restoration was more than a mere regime change: It initiated a revolutionary transformation, achieved during the Meiji period (1868–1912), that was comparable in scope to the mid-sixth-century introduction of Buddhism and Chinese civilization. In the mid-nineteenth century, however, the new model for civilization came from the West. The Meiji Restoration brought about a revolution that led to the westernization of virtually all aspects of national life.

Meiji Japan's embrace of the West reflected its determination to remake itself so as to acquire the power of, and achieve recognition as an equal to, the Western nation-states that dominated it in the 1850s and 1860s. Indeed, the downfall of the last samurai regime, the Tokugawa, resulted largely from its inability to mediate, without internal upheaval, the imperialistic demands of nations such as the United States, made powerful by the Industrial Revolution and seeking trade and diplomatic exchanges with Japan. Until the 1850s the Tokugawa shoguns, fearing the kind of domination that occurred in the Philippines, had effectively minimized contacts with the West. The only Western power permitted to trade with Japanese merchants were the Dutch, and even they were restricted to the artificial island of Dejima, created in Nagasaki Bay to circumscribe the presence of Dutch traders on Japanese soil. As long as maritime technology depended upon the winds, this approach was relatively successful. With the development of steam-powered vessels carrying heavy cannon, Western nations—Great Britain and the United States in particular—were able to dominate East Asia at will, with little significant opposition.

Through the Dutch, the Tokugawa regime was informed of Britain's defeat of China in the Opium War (1840–1842) and the resulting Treaty of Nanjing (1842). When Commodore Matthew Perry's flotilla arrived near Edo (Tokyo) in 1852 demanding treaty relations providing for exchanges between Japan and the United States, the Tokugawa regime realized that it had little choice but to comply, despite the fact that doing so violated its raison d'être: defending the realm against barbarian incursions. The resulting Treaty of Kanagawa (1853), though a sensible accommodation, marked the beginning of the end for the Tokugawa insofar as it became the target of unrelenting critiques from anti-Tokugawa forces. Significant opposition emerged from the "outer" (*tozama*) domains of Chōshū and Satsuma, centers of long-standing animosities toward the Tokugawa.

Opposing the regime's strategy of negotiating with the foreigners rather than fighting them, anti-Tokugawa forces called on the shogunate to do its duty: "Revere the emperor and repel the barbarian" (*sonnō jōi*). When the Americans returned with demands for fuller diplomatic and trade relations, anti-Tokugawa forces intensified their opposition through terrorist attacks. Radical opposition was strong in Chōshū, which launched two military challenges to the Tokugawa in the 1860s. Although the first round of fighting resulted in defeat for Chōshū, in the second it was joined by forces from Satsuma and Tosa domains. The result was the military defeat of the

Tokugawa in 1866. Within two years, the last of the Tokugawa shoguns, Yoshinobu (1837–1913), had turned over administrative authority over the realm to Emperor Meiji and his backers.

The new regime, ostensibly led by Emperor Meiji, was dominated by opposition leaders from Chōshū, Satsuma, and Tosa who had played instrumental roles in the military strikes that had forced the Tokugawa into a state of collapse. Though often described as statesmen, they remained in significant respects revolutionary leaders, defining a radically new political course that resulted in the creation of a modern nation-state. Ironically enough, once the pro-imperial forces had forced the collapse of the Tokugawa shogunate, the rebels-turned-statesmen proceeded to throw the gates open to the West in a search for knowledge and power. By the end of Emperor Meiji's reign in 1912, this assimilation of Western knowledge had resulted in across-the-board achievements that impressed the world.

Socially, the imperial regime abolished the old hereditary social hierarchy that had been decreed by the Tokugawa. Economically, it created the yen, Japan's first national currency, and the Bank of Japan to regulate economic growth. The development of a modern, centralized economy amounted to a revolutionary transformation of earlier economic relations in which the only equivalent to a national currency had been the rice bushel. At the same time, the imperial state induced an industrial revolution by promoting the development of heavy industries such as mining, shipping, and rail transport. Politically, the new regime, under the leadership of Itō Hirobumi (1841–1909), created a representative, constitutionally defined political system. The Meiji government instituted compulsory elementary education at schools created nationwide and established a Western-style conscript force, developed by Yamagata Aritomo (1838–1922) to replace the now-abolished samurai estate. Modeled after the Prussian military, Meiji forces proved effective in defeating internal rebellions and the armies of much larger nations, as seen in the Sino-Japanese War (1894–1895) and the Russo-Japanese War (1904–1905). With the latter victory, imperial Japan finally received the kind of respect internationally that it had long sought. By the end of the Meiji period, Japan was recognized as the leading military and imperial power among East Asian nations.

Geopolitically, Japan was reconfigured during the Meiji period, first with the move of the imperial capital away from its home for over a millennium, Kyoto, to a new center, Edo, the capital of the Tokugawa shoguns, now renamed Tokyo. In the countryside, imperial prefectures replaced the old *daimyō* domains. Before the Meiji period had ended, the beginnings of an empire were evident in the acquisition of Taiwan in 1895, following the Sino-Japanese War, and the annexation of Korea in 1910, a consequence of the Russo-Japanese War. Japan became a strategic player in the world of military alliances with the Anglo-Japanese Alliance of 1902, in which both nations pledged to support the other in the event of multinational military aggression.

Though not billed in traditional historiography as a revolutionary movement, the Meiji Restoration entailed nothing less than a wholesale transformation of Japan. If there were flaws in the revolution that flowed from the restoration of imperial rule, they had to do with the extent to which military power was increasingly viewed as an expedient means to national power, prestige, and wealth.

SEE ALSO *Imperialism; Industrialization; Revolution*

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John Tucker

MEIR, GOLDA
1898–1978

Golda Meir was born Golda Mabovitz on May 3, 1898, in Kiev, Russia (now Ukraine). Due to terrible hardship, Golda's family immigrated in 1906 to Milwaukee, Wisconsin, where Golda graduated from a teachers' college and worked as a public-school teacher. She joined the Labor Zionist Party in 1915 and married Morris Meyerson in 1917. In 1921 they immigrated to Palestine, where they joined Kibbutz Merhavia. In 1956 she adopted the Hebrew name Meir ("to burn brightly").

Believing that Jews should make their "Just Society" through their own physical labor, Meir was a prominent socialist Zionist figure in the Histadrut (the Israeli Trade Union Congress) and the Jewish Agency, a Zionist organization founded in 1929 to provide services for Jewish immigration and assimilation into Palestine. Being proficient in English, Meir was sent to the United States in the

1930s on a mission to raise funds for building the state of Israel.

After the establishment of Israel on May 14, 1948, Meir played a central role in domestic politics as well as on the diplomatic front. In the same year, she paid a secret, yet unsuccessful, visit to Jordan to persuade its king, Abdullah (1882–1951), not to attack Israel. David Ben-Gurion (1886–1973), a leader in the struggle to establish the state of Israel and later the first prime minister of Israel, appointed Meir a member of the Provisional Government and then, in June 1948, ambassador to the Soviet Union. In 1949 she was elected to the first Knesset as a member of Mapai, the Israeli Workers Party. Meir served as minister of labor from 1949 to 1956, a period of high unemployment and social unrest that resulted from mass immigration. She served as foreign minister from 1956 to 1966. While in office, Meir sought to strengthen Israel's relationship with the United States, create bilateral relationships with Latin American countries, and provide African countries with Israeli know-how in nation building.

Meir became secretary-general of Mapai in 1966, before taking the helm of the newly formed Labor Party. After the death of Prime Minister Levi Eshkol (1895–1969), Meir was appointed prime minister; thus becoming the third female prime minister in the world (after Sirimavo Bandaranaike [1916–2000] of Sri Lanka and Indira Gandhi [1917–1984] of India). Reelected prime minister in October 1969, Meir proved highly successful in consolidating American political and financial support for Israel.

Meir took a rigid stance toward the Arabs. She also adopted the so-called open-door immigration policy, which encouraged thousands of people to leave the Soviet Union and other places to settle in Israel and the occupied territories. She believed that Israelis could not return the occupied territories because there was nobody to return them to. In a June 15, 1969, interview with the *Sunday Times* of London, she said, "There was no such thing as Palestinians … they did not exist," a statement that Arabs often quote to refer to what they think to be bias. Moreover, she wrote in *My Life*, her 1975 autobiography, that she did not believe that "the Jews 'stole' land from Arabs in Palestine," since "a lot of good money changed hands, and a lot of Arabs became very rich indeed" (p. 63).

The most critical event during her term was the 1973 Arab-Israeli War, when Egypt and Syria attacked Israeli forces in Sinai and the Golan Heights. Although she won the elections once more in December 1973, and despite the fact that the Agranant Inquiry Commission did not hold her responsible for the war, Meir's performance was widely criticized for overestimating Israel's preparedness and underestimating Arab power. Meir resigned in mid-1974 and withdrew from public life. She died in Jerusalem in December 1978.

SEE ALSO *Rabin, Yitzhak; Zionism*

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Abdel-Fattah Mady

MELTING POT

Amalgamation of settlers of diverse national origin has long been linked with the idealistic self-image of America as a new type of nation-state. The French-born immigrant J. Hector St. John de Crèvecoeur (1735–1813), in *Letters from an American Farmer* (1782), described America as a

country where "individuals of all nations are melted into a new race of men." Though the nationalities included in the early expression of the melting pot ideal were largely limited to northwestern Europe, the vision of American national identity as based on cross-ethnic amalgamation eventually came to include nearly all European nationalities. British writer Israel Zangwill's (1864–1926) early twentieth-century play *The Melting Pot* was the first to use the term as a metaphor of assimilation in the American context of mass immigration from Europe. The melting pot ideal was depicted in an illustration featured on the play's theater program, which shows many strands of people walking past the Statue of Liberty into a huge boiling pot. As an ideology of immigrant assimilation, the melting pot has persisted as an idealistic vision of the inclusive nature of assimilation in America.

The melting pot ideal is often referred to as an alternative conception of immigrant incorporation in a continuum of idealized conception of assimilation as a cultural belief. At one end of the continuum is *Anglo-conformity*, a belief associated with the normative requirement that individual members of immigrant groups adapt to the culture and institutions established by the early Anglo-Saxon settlers of colonial America. Milton Gordon in *Assimilation in American Life* (1964) interpreted *Anglo-conformity* to mean that immigrants and their descendants adopt the beliefs and norms of middle-class Anglo-American culture, which he maintained remained largely unchanged despite successive waves of immigration from Europe, except for minor changes in cuisine and place names. Anglo-conformity tacitly rules out the viability of intact Old World identities and cultural practices outside of the Anglo-American mold. It emphasizes the need for immigrants to "unlearn" their cultural traits in order to learn the new social practices necessary for acceptance. In the Anglo-conformity formulation, critics underline that this approach to assimilation tacitly assumes the superiority of Anglo-American culture. Anglo-conformity is often associated with the public policy of "pressure-cooker" Americanization during and immediately after World War I (1914–1918).

At the other end of the continuum is *cultural pluralism*, an ideology that conceives of American society as a quiltlike mosaic of diverse cultural traditions and ethnic identities that coexist as subcultures alongside a dominant Anglo-American mainstream. According to cultural pluralism, an ideology of immigrant incorporation first espoused by the philosopher Horace Kallen (1882–1974) in the early twentieth century, the strength and durability of American democracy stems from extending equality of rights, religious belief, and cultural expression to all citizens. The basic idea was that a society benefited when the ethnic groups retained cultural distinctiveness, contributing to the cultural richness and diversity of American society. Multiculturalism is the contemporary expression of this vision of civil society.

Sociological studies by Stanley Lieberson, Herbert Gans, Richard Alba, and Mary Waters of the "twilight of ethnicity" of descendants of mass immigration from eastern and southern Europe document that the melting pot ideal of amalgamation has conformed broadly to the historical experiences of white ethnics. Old World identities and cultural practices have become mostly a symbolic attachment for white ethnics as cross-ethnic social life increasingly blurred ethnic boundaries and identities. Cross-ethnic marriages among white ethnics have become so commonplace that many identify as "American" in ethnicity and no longer list the Old World ethnic identities in response to the decennial census questionnaire item on ethnic origin.

Whether conceived as the effects of the beliefs and norms of Anglo-conformity or the melting pot, assimilation has been the primary pattern of incorporation for the European groups that migrated to America. For the descendants of mass immigration from Europe in the late nineteenth century, however, it is likely that the social process of assimilation was a protracted process taking place through incremental changes across generations. The pattern of increasing cross-ethnic marriage within religious boundaries was first identified in analysis of quantitative evidence for the 1940s. Since the historic passage of the Immigration Act of 1965, more than twenty-five million immigrants have settled in expansive immigrant metropolises, greatly increasing the ethnic diversity of American cities. Nearly one out of five Americans are now either foreign-born or children of immigrant parents. The new immigration, largely from Latin America and Asia, has driven a rapid demographic transformation of major urban centers.

Skeptics of the applicability of the melting pot ideal to post-1965 immigrants have justifiably pointed to serious problems in the assumption of assimilation of new immigrants and their children. Although the post-1965 immigrants have often settled in mixed neighborhoods and established ongoing social relationships not only with members of their own ethnic group but also with individuals outside of their ethnic group, the sheer numbers of immigrants concentrated in inner cities suggests that much of the cross-ethnic social interactions are with members of other ethnic groups that are also part of the new immigration.

Post-1965 immigration is more diverse than that of the past, in terms of human and financial capital, race, and legal status. Members of some ethnic groups enter American society at a high level almost from the start because they bring wealth or educational and professional credentials that provide an initial advantage. These immi-

grants and their children are in a position to benefit from the opportunities open to minorities in the wake of the civil rights movement of the 1960s. It is not uncommon for the families of immigrant professionals and entrepreneurs to establish domicile in middle-class suburban communities and for their children to attend selective American schools and pursue professional occupations themselves. The melting pot ideal remains a compelling metaphor of assimilation for the children of immigrants from professional and entrepreneurial backgrounds. But intermarriage often takes place among native-born children of immigrant parents, similar to the pattern of intermarriage within religious groups observed for European Americans in the twentieth century.

The pattern of incorporation is different for the native-born children of labor migrants from the Caribbean and Central America. With low levels of formal schooling, labor migrants compete for positional advantage at the bottom rungs of the labor market. The reliance of labor migrants on ethnic-based social capital, moreover, leads to incorporation within immigrant ethnic enclaves where initial disadvantages in human capital are likely to be passed on to the second generation, increasing the risk of a melting pot experience that results in amalgamation with downtrodden domestic minorities in the inner cities. This bifurcation of the melting pot experience of children of advantaged human-capital immigrants and disadvantaged labor migrants is the focus of studies of *segmented assimilation*. However, the extent of downward mobility may be overstated in the segmented assimilation literature, as horizontal mobility even within the same occupational groups often leads to substantial socioeconomic gains for the second generation.

In conclusion, the melting pot ideal has a long history as a cultural belief in the viability of the amalgamation of diverse ethnic groups in the making of the American nation-state. With successive waves of immigration, the ideology of the melting pot has emphasized a hybrid vision of American society and culture stemming from intermarriage across ethnic groups and cultural mixing resulting from structural assimilation.

SEE ALSO *Assimilation; Conformity; Ellis Island; Ethnicity; Glazer, Nathan; Immigrants to North America; Immigration; Migration; Mobility; Moynihan, Daniel Patrick; Multiculturalism; Nationalism and Nationality; Whiteness*

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Victor Nee
Richard Alba

MEMÍN PINGUÍN

Memín Pinguín is one of the most popular fictional characters in Latin American comics. He is intellectually significant because he has inspired transnational polemics over racial identity, racism, and racial stereotypes in the region. The Mexican writer Yolanda Vargas Dulché (1926–1999) created the character in the mid-1940s in response to a request from the magazine *Pepín* for a children's comic strip. *Memín* is a contracted nickname for Guillermo, the name of Guillermo de la Parra Loya, who would become the writer's husband. One interpretation of Vargas Dulché's adoption of *Pinguín* is that it refers to a slang term for mischievous, but in some parts of Latin America the name's proximity to another slang word for penis meant that some editions of the comic book spelt the last name as "Pingüín," giving it a closer association with the Spanish word for penguin (*pingüino*).

It was largely due to the success of the Memín Pinguín series and other comic books that Grupo Editorial Vid (the company founded by the couple) was able to become established as one of the most successful publishers in Latin America. The company produced about 25 million comic books a month at the height of the popularity of the genre in the 1970s and 1980s. Grupo Editorial Vid produced 372 Memín Pinguín comic book stories over a period of over 30 years. Memín, the chief protagonist of the stories, is an elementary-school-aged child intended by his creator to be likeable and clever. His *cuatachos* (buddies)—Ernestillo, Carlangas, and Ricardo—partner him in mischief and adventures that are always resolved successfully by Memín by the end of each story.

Memín has phenotypically black features that are exaggerated by the artists to make him appear similar to a

monkey. The only other character in the stories with the Negroid phenotype is his mother. The Memín Pinguín series deployed archetypes derived from American minstrel shows, specifically the *pickaninny* (to depict Memín) and the *nanny* (to depict his mother, Eufrosina). It is specifically this dimension of the comic books that provoked American President George W. Bush and civil rights activists to denounce the Memín character as racist when the Mexican government issued a stamp to honor Memín in 2005. A substantial amount of empirical and theoretical research had been amassed at that time by such scholars as Marilyn Kern-Foxworth, Donald Bogle, and Jan Nederveen Pieterse to show not only the popularity of such archetypal depictions of blacks in the history of American popular culture, but also how such depictions are deployed to justify the dehumanization and exploitation of blacks.

Ironically, the creators of Memín Pinguín adopted a creative device that was developed in the United States and then disseminated to other parts of the world, including Mexico. The defense of these depictions in Mexico and several other Latin American countries, where such archetypal depictions of blacks are still quite common and popular, has been a range of arguments within a paradigm known as *mestizaje*. These arguments are most directly associated with the writings of the early twentieth-century Mexican intellectual José Vasconcelos, and they include the claims that malicious racial intent is not to blame because black communities are small or nonexistent in their countries, and that Latin American ruling classes cannot be racist because they themselves have a mixed racial ancestry. The fact that some Latin American countries have had heads of state of color is given as evidence that these societies have been more progressive on the issue of race than the United States. One problem with the *mestizaje* paradigm is its deployment of essentialized notions of race and racial hierarchy (with Europeans at the top and blacks at the bottom) as its basic intellectual premise. This point leaves Memín Pinguín and other Latin American pop culture icons that deploy racial archetypes as targets for activists within and outside Latin America who would like to see them eliminated.

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Mark D. Alleyne

MEMORY

Since the 1980s, collective memory has become an intensely studied topic across the social sciences. This sudden remarkable interest may be attributed to a rising preoccupation with dissolving collective identities in the face of new historical realities—globalizing economic and cultural trends, the reconfiguration of gender relations, and a media revolution with far-reaching implications for the organization of knowledge. The scholarly discourse about collective memory parallels another about the distinguishing traits of a "postmodernism" temper.

Serious efforts in the social sciences to understand the dynamics of collective memory, however, date from the early twentieth century in the research of the French sociologist Maurice Halbwachs (1877–1945). He contended that memory must be investigated within its social settings. The present attitudes, beliefs, and traditions of social groups determine the way memories are evoked, and these are continually remodeled as the interests and fortunes of such groups change. The strength of a collective memory is a function of the relative power of such social forces.

By placing his accent on collective memory, Halbwachs took issue with the Viennese neurologist Sigmund Freud (1856–1939), who a generation before had addressed the issue of memory as a task of exploring the workings of the individual mind. Freud believed in the autonomy of personal memory, and developed an analytical technique for recovering repressed memories from the unconscious psyches of his patients. His critics claim that he never worked out a plausible theory of collective memory. For Halbwachs, by contrast, all memory is socially conditioned in that personal memories are always evoked within specific social settings. Without these social props, personal memories tend to fade away.

In explaining the malleability of memory in the face of social forces, Halbwachs proposed that social groups—families, religious cults, political organizations, and other communities—develop strategies to hold fast to their images of the past through places, monuments, and rituals of commemoration. His *La topographie légendaire des évangiles en terre sainte* (The Legendary Topography of the Gospels in the Holy Land, 1941) was a pioneering case study of the way an imagined past is localized, conflated, and idealized over time in a commemorative landscape. In his theory, the ancient art of memory as a technique of mnemonic displacement was reinvented as a political strategy for anchoring cultural traditions.

For several decades, Halbwachs's theory of collective memory was largely ignored. But it was rediscovered during the 1970s, to become a working model for burgeoning scholarship in this field. The newfound interest in collective memory has had three principal venues of

research: the politics of memory; the changing uses of memory that followed from the invention of new technologies of communication; and a deepening meditation on the memory of the Holocaust.

THE POLITICS OF COMMEMORATION

This interest reflected an emerging critical perspective on modern traditions once naively honored as the remembered heritage of a commonly imagined past. In France, for example, a lively debate emerged during the 1980s about how, and even whether, to celebrate the bicentenary of the French Revolution (1789–1799), hitherto conceived as the enduring moral touchstone of modern French national identity. Many of these studies investigated the making of the identity of the modern state. The most influential was *The Invention of Tradition* (1983), an anthology edited by English scholars Eric Hobsbawm and Terence Ranger that explored the political uses of tradition in the construction of collective identity. They challenged the long-standing interpretation of tradition as a heritage that impinges on the present through its inertial power and argued that traditions are conceptions of the past invented in the present and periodically refashioned to serve reformulated political goals. Collective memory, they argued, is inspired by present circumstances, and calls into being a serviceable past. In like manner, the anthropologist Benedict Anderson wrote an influential study of the way "imagined communities" are constructed as public memories to give concrete affirmation to otherwise abstract ideals. From a somewhat different perspective, the sociologist Mary Douglas examined the workings of institutional memory, in which bureaucratic solutions to organizational problems are rapidly forgotten only to be invented anew.

By the turn of the twenty-first century, a vast scholarly literature had been produced on the politics of memory, extending investigations beyond commemoration into a wide range of institutional and cultural practices. Noteworthy among these are studies of the making of national identity by Pierre Nora, *Les lieux de mémoire* (Places of Memory, 1984–1992) for France; Michael Kammen, *Mystic Chords of Memory* (1991) for the United States; Yael Zerubavel, *Recovered Roots* (1995) for Israel; and Wulf Kansteiner, *In Pursuit of German Memory* (2006). All display intellectual sophistication in moving beyond commemorative rites to the many cultural forms in which collective memory is embedded. Over time, the study of collective memory has become an impressive strategy for interpreting cultural history.

THE USES OF MEMORY IN CHANGING TECHNOLOGIES OF COMMUNICATION

A parallel but independent line of scholarly inquiry has explored the cultural consequences of advances in the technologies of communication. This research was inspired by the media revolution of the late twentieth century, which stimulated curiosity about earlier thresholds in the process—notably from orality to manuscript literacy in antiquity, and the democratization of print culture during the eighteenth century. Contributors to this scholarship have been varied—classicists interested in Homer as a collective name for epic storytellers, anthropologists in the living oral traditions of Africa, intellectual historians in the emergence of the republic of letters during the Enlightenment, literary critics in the reflective autobiographical soul searching that print culture for the first time made possible. Less has been written to date on the effects of media on cultural memory, but J. David Bolter has pointed out the way electronic memory localized in the icons and Web sites of the computer screen mimics the organizational technique of the ancient art of memory in its images and places. Though contributions to this field were made by specialists, the cumulative effect has been to produce a sweeping new perspective on cultural history from antiquity to the present.

TRAUMA AND MEMORY

Somewhat apart are scholarly reflections on the painful process through which Holocaust survivors sought to deal with the trauma they had suffered. This topic reintroduced Freud's psychoanalytic approach in that it exposed the need for survivors to work through repressed memories of their ordeal before the historical meaning of the Holocaust could be adequately addressed. Beyond inventorying such living testimony, scholars raised the question of how these recovered memories might be historicized within the narratives of modern history. This scholarship provoked the "historians' controversy" of the mid-1980s in Germany about whether such an atrocity could be conveyed within the limits of historical representation. The Holocaust, initially viewed as one among the many horrors of World War II (1939–1945), came toward century's end to be reconceived as a singular experience whose memory needed to be processed collectively before an account of its nature could be integrated into any acceptable historical narrative.

MEMORY AND HISTORY

The debate about the limits of historical representation shows how the study of collective memory has unsettled the established conventions of historical narration. During the 1970s, the American scholar Hayden White

launched an inquiry into the strategies through which historians compose their interpretations, and so shifted historiographical interest from the evidentiary content of historical research to the rhetorical forms of historical writing. One consequence was to reveal the mnemonic character of historical narrative as a technique for selecting and ordering judgments about what is worth remembering out of the past. Challenging the "noble dream" of historical objectivity, historiographers such as Peter Novick turned to the task of exposing the bias, distortions, and omissions of the master narratives of modern history. Novick points out how American historians once naively presented a past they wanted to remember. From the founding of the American Historical Association in 1884 until well into the twentieth century, eminent historians tended to favor a patriotic view of American identity that denied the divisive realities of class conflict, racial and ethnic discrimination, and the diverse viewpoints of an expanding immigrant population.

As this historiography of patriotic consensus fragmented from the mid-twentieth century, a new generation of practicing historians sought to reclaim the forgotten past of women, African Americans, and other marginalized groups, while those with a theoretical bent proposed new categories of conceptualization to frame a more complex historical memory, notably through models for gender studies, the history of collective mentalities, and global history. In the process, they subverted the political identities previously highlighted by modern historiography. The conventional model of a directional modern history, originally conceived as a story of ongoing progress, became an uncertain guide to historical writing. This loss of direction coupled with a sense of accelerating time promoted by larger contemporary trends—advertising that incites the fads of consumerism, the ongoing technological innovations through which global communication approaches the instantaneous—led to the collapse of the future-oriented conception of historical time in favor of one that stresses the urgency of present-day problems. The French historiographer François Hartog has characterized this rethinking of the mnemonics of historical time as a "new regime of historicity," one that privileges present concerns over past intentions as a point of departure for historical inquiry.

Memory's subversion of the grand narrative of modern history has legitimized some novel approaches to historical interpretation—an encounter model in global history, a shift from history's story to history's topics in historical exposition, the genealogical reading of the past to point out its discontinuities vis-à-vis the present, and efforts to recapture "sublime" moments of historical experience through historical reenactment.

The scholarly discourse about memory across the curriculum in the late twentieth century reveals its essential paradox—the fragility of its representations of the past in relation to the durability of its resources to imagine that past anew.

SEE ALSO *Collective Memory; Freud, Sigmund; History, Social; Holocaust, The; Psychoanalytic Theory*

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Patrick H. Hutton

MEMORY IN PSYCHOLOGY

The creation of new memories is an ability that occurs minute to minute in human beings (and some researchers would argue millisecond to millisecond) as people go about their daily lives encountering new information. In fact, although people sometimes need to intentionally remember an appointment date or a phone number, many of life's everyday experiences are not intentionally rehearsed at the time for later remembering, but are created without intentional awareness. Human recall of certain events is not perfect, nor always detailed. This

transformation of past events is influenced by many factors relating to events occurring in one's environment and in the brain itself.

BRAIN/MEMORY RELATIONSHIPS

In 1968 Richard Atkinson and Richard Shiffrin were among the first researchers to propose that the formation of memories proceeds by passing through a series of stages. Information from the environment first flows through one's sensory organs (responsible for vision, hearing, smell, touch, and taste) into what Atkinson and Shiffrin termed the *sensory store*. Memories are considered to be stored very briefly in this processing step because the flow of information through the sensory organs leaves only a temporary trace of the information—this is why waving a sparkler at night gives the illusion of a light trail. If an individual pays further attention to the incoming information, it enters a short-term or working memory system that allows additional processing (e.g., analyzing the meaning of a letter one is reading). When one "thinks" or works through a problem mentally, one is using working memory. This working memory system is limited in capacity so that there is only so much information that can be processed at one time. Another important function of working memory is to transfer information to long-term memory, where an infinite number of memories are capable of being stored indefinitely.

The process of storing memories is ultimately dependent on biological brain structures. Although it is still unknown "where" personal memories are stored in the brain, it is clear that certain brain structures are critical for storing and retrieving memories. A structure in the medial temporal region of the brain called the hippocampus has long been known to be important for the development of new memories. Numerous case studies have demonstrated that damage to the hippocampus leads to profound memory impairment. The most famous case study is that of an epileptic patient, H.M., whose hippocampus was surgically removed, leaving him with the inability to form any new memories despite the fact that he could remember events that occurred before the surgery and otherwise had a normal intelligence quotient (IQ).

STORAGE AND RETRIEVAL OF MEMORIES

The ability to remember information is based on two fundamental processes, encoding and retrieval. During encoding, incoming information is transmitted to the brain and is consolidated and prepared in the hippocampus and surrounding medial temporal regions for long-term memory storage. Although these regions play a primary role in preparing memories for long-term storage, the memories themselves are not stored there, but are distributed throughout the brain in a network. Once information has been properly encoded and stored in long-term memory, recalling these past events relies, in part, on the frontal lobes of the brain, responsible for organizational and strategic processing of information. Neuroimaging research suggests that the fontal lobes play a key role in memory processes because both encoding and retrieval processes are inherently strategic. That is, when one remembers an event, one often must remember when the event occurred relative to other events, how individual details contributed to the overall meaning of the events, and where the event occurred. In 1994 Endel Tulving and colleagues reported that the left frontal lobe may play a more active role during information encoding, whereas the right frontal lobe may be more responsible for retrieval.

The distinction between encoding and retrieval processes is key because if either process fails, a memory cannot be experienced. In the case of H.M. encoding processes were impaired so that new experiences were not stored in long-term memory. Other forms of disease-related damage to medial temporal brain regions (e.g., Korsakoff's syndrome) also lead to an impaired ability to recall previously stored memories, often attributable to a retrieval, rather than an encoding, problem. Evidence from healthy individuals indicates that problems during encoding may be more responsible for memory failures relative to problems during retrieval. For example, it is common for a person to fail to remember the name of a recently met person, even though the introduction may have occurred only minutes before. When meeting someone new, one's attention is drawn to many aspects of the person other than the name—what the person looks like, whom he or she knows, whom he or she is with, and other details of the encounter. Because one's working memory is also engaged in these other processes, the specific name information may not be encoded sufficiently, so that no matter how hard one tries to later remember the name, that information is not accessible. In 1996 Fergus Craik and his colleagues substantiated these findings, showing that memory performance is much poorer when people are distracted when encoding information compared to distraction during retrieval.

In addition to conscious recollection of past experiences, memory can also be demonstrated subconsciously or automatically. The ability to ride a bike, type, read, and accomplish other familiar tasks relies on a memory of how to do these things. Psychologists in the past have used a number of terms to define the distinction between these learned skills and memories that are consciously recalled. In 1985 Tulving used the term *procedural memory* to describe these memories that were skill-based and learned through repetition over time. In contrast, Tulving used the term *episodic memory* to describe the conscious recollec-

tion of past events, and the term *semantic memory* to refer to memory of word meanings, facts, and concepts. Semantic and procedural memories have been shown to be more resistant to brain injury, disease, and aging than episodic memories. For example, although H.M. was unable to recall any new events that he experienced after his surgery, his vocabulary system was unaffected, and he was able to learn new complex skills as efficiently as others his age.

AGING AND MEMORY

As people age, they typically notice that their memory is not quite as strong as it used to be. One theory proposed by Lynn Hasher and Rose Zacks in 1979 states that remembering often requires the use of substantial working memory resources and effort, which may decline as people age. Thus, recalling one's new doctor's name may be relatively more difficult as one ages because doing so requires one to engage these limited mental resources. When memory tasks, however, place less of a burden on these mental resources, an older adult's memory performance is similar to that of a younger adult. For example, although one may have difficulty recalling a doctor's name without prompts, one may easily identify the name on a directory list at the doctor's health center. Research conducted in 1987 by Fergus Craik and Joan McDowd has confirmed that when presented with a list of words, young adults perform significantly better than older adults if required to later recall the words without assistance. The two age groups, however, often show similar memory performance when participants are later presented with the words and have to simply recognize those that were previously seen.

Hasher and Zacks proposed that this decline in working memory could be due to either a shrinkage in capacity with normal aging or to a difficulty inhibiting irrelevant information while remembering. Everyone has thoughts that drift in and out of consciousness during the day, but Hasher and Zacks believe that younger adults may be more efficient in inhibiting such thoughts when needed, leading to a less cluttered working memory space. In fact, in studies conducted by Zacks and colleagues in 1996, when told to purposefully forget information they had previously been instructed to remember, younger adults were more successful at this forgetting than older adults. Another theory of declining memory with age, put forth by Timothy Salthouse in 1996, suggests that brain cells (neurons) undergo the same degradation with age as the nerves in one's arms and legs that move the muscles associated with these areas. Consequently, Salthouse argued, declining memory processes are the result of a "general slowing," so that information in the brain is transmitted more slowly. In a sense, information can get backed-up and fade from memory before it can be used. Although there may be a gradual progression of general slowing as a person ages, other factors appear to either slow down or speed up memory declines. Educational status, social activity, exercise, cardiovascular disease, diabetes, and medications may all influence memory ability in old age.

AUTOBIOGRAPHICAL MEMORIES

Although older adults may have difficulty recalling more recently experienced events and information, they are nonetheless able to recall distant memories with clarity and detail. Psychological researchers typically refer to memories related to one's self as *autobiographical memories*. Autobiographical memories may be distinct from other types of explicit memories because autobiographical memories are rich with contextual or situational detail. For example, recalling one's wedding requires not just remembering information about the event (e.g., what food was served), but also recall of the time in one's life that it occurred. This time-tag on the memory may also serve to help one recall other events surrounding the event (e.g., remembering the date of the event can help one remember where the event happened). These memories are not just organized by time period, but may also be organized around themes (e.g., "that happened during my long-haired hippie days"). Perhaps the most critical component of autobiographical memories is that they contain information related to the individual person and his or her own sense of self. Research conducted in 1997 by Cynthia Symons and Blair Johnson showed that people exhibit better memory performance when they are required to learn a list of adjectives (e.g., assertive) by how well each adjective applies to their own personality compared to conditions where they remember other similar words without self-reference.

This latter finding may explain why a reminiscence "bump" is observed when older adults are asked to recall as many events as they can from their life. Although people tend to recall many events from the most recent year, the number of memories recalled declines the older the memories are except for a bump (or period) that occurs during the teenage years through the mid-twenties of which people recall a good deal of memories. Martin Conway and David Rubin believe that this pattern may exist because the adolescent and early adult years are a time when the self is formed and thus this time becomes a dominant theme in one's life resulting in more vivid memories of this period.

THE RECONSTRUCTIVE NATURE OF MEMORY

When studying autobiographical memories it is very difficult to establish whether a reported memory actually

occurred—usually there is no one available to confirm or deny the accuracy of the memory. Further compounding this problem is the fact that human memory is not exact, but reconstructive in nature. That is, one's recall of details surrounding an event is a combination of what actually happened and what one believes happened. These beliefs may or may not be true. Memory researcher Elizabeth Loftus has studied how people can come to "remember" events that never happened to them.

In 1978 Loftus and her colleagues first observed that participants' memory of an actual event can be contaminated and changed when they hear a different account of the same memory from someone else. Loftus termed this phenomenon the misinformation effect. Perhaps more troubling is the finding that not only can memory be distorted by post-event information, but through the power of suggestion people can come to remember things that never even happened to them. A 2004 review by Loftus notes that even in laboratory settings people can come to believe that as children they were attacked by an animal or almost drowned in a pool, and come to remember things that never could have happened, such as seeing Warner Bros.' Bugs Bunny at Disney World. Telling the participants that the following story they are about to hear came from a family member implants such memories. Participants then come to believe, with great confidence, that the story is true. Some therapists have been critical of Loftus's theory, concerned that it may minimize or discount truly recovered memories of abuse that may occur in therapy sessions. Loftus, however, did not suggest that all recovered memories are necessarily false, but rather that some people may remember some things that did not happen if questioned in a particular way.

Not all participants in such studies adopt false memories—the range being around 20 to 50 percent for false memory adoption, depending on other variables, according to Loftus. Further, some individuals appear to be more susceptible than others. Those who have more creative imaginations and those who are more prone to memory or attentional lapses appear most susceptible. Studies involving false memories have received considerable attention from the media due to their relevance to judicial cases involving childhood sexual abuse and rape. Based solely on the testimony of children, day care workers at the Little Rascals day care center in Edenton, North Carolina, in 1988 were accused, charged, and convicted of orchestrating a child sexual abuse ring. Higher courts eventually overturned the cases involving the staff because the children's accusations were the result of leading questions by investigators and therapists and were fueled by the children's imaginations.

The Little Rascals day care case reveals the fluid and malleable nature of memory, especially during childhood, and how it is often difficult to distinguish between what actually happened and what sounds familiar due to repeated and leading questioning. In 1993 Marcia Johnson and her colleagues suggested that such problems can be attributed to internal source monitoring, or difficulties identifying the source of internalized experiences (e.g., whether the experience was real or imagined). The ability to make these internal source distinctions appears to be more difficult for children and older adults, compared to younger adults. Human memories are thus a product of what an individual actually experiences (or sometimes does not actually experience), and intervening information received after the event. How a person reflects on these memories later in life can also come to influence and change the perception of memory.

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MEN

Open any newspaper, and you can see a pattern so widespread that it is rarely noticed: Almost all the "serious" stories are about men. In societies scholars label *patriarchies*, men dominate the most important public institutions, including law, politics, business, science, and the military; men also control economic and political decisions in more private realms, such as the family. Yet patriarchy is not universal, and the forms of masculinity that it perpetuates are neither natural nor inevitable.

CONSTRUCTING MANHOOD

According to sociocultural theories of gender, while sex (physical characteristics) is biologically inherited, gender (behaviors and attitudes associated with a given sex) is socially learned. What it means to be a man, or masculinity, varies both within and across eras and cultures by race, ethnicity, class, sexual orientation, occupation, education, age, geography, and other social characteristics (Kimmel and Messner 2004). For this reason, although biology interacts with the social and physical environment to produce these variations, scholars acknowledge that masculinity is predominantly learned rather than genetically inherited (Coltrane 1998; Connell 1995; Lorber 1994). Despite the many versions of masculinity in existence, scholars have identified common characteristics that distinguish masculinities in egalitarian societies from masculinities in patriarchal societies. In egalitarian societies, women tend to share in the control of property and political decision-making, and men are taught to be soft-spoken and nonviolent, taking part in child care while generally avoiding exclusively male initiation rituals and displays of masculine bravado and male superiority. As exemplified by select tribes in the South Pacific islands, the African rain forest, and the Amazon river valley, egalitarian societies have existed in every major region of the world (Coltrane 1992). Modern societies have adopted some egalitarian practices, as exemplified in the social policies of several Nordic countries.

Yet, partially due to colonial exploitation, the vast majority of societies assume a patriarchal form, ranging from ancient agrarian civilizations to modern industrialized nations. Patriarchal societies have existed around the world and on every major continent. Patriarchies, literally translated as "rule by the father," are defined by male control of resources and symbolic privileging of the masculine over the feminine (Coltrane 1992; Connell 2005; Gutmann 1997). In patriarchal societies, men rule by virtue of their power in family and kinship systems, and masculinity revolves around hierarchal male power. Beyond the family, men in patriarchal societies rule the public institutions by writing and enforcing the laws, controlling the political system, occupying the highest posts in government, running the businesses, monopolizing the highest paying jobs, shaping access to and the focus of science, and dictating funding and execution of war-related activities. Meanwhile, women are expected to perform household chores and provide child care, tasks that are rarely rewarded with financial or political power. In addition, men in patriarchal societies often treat wives as sexual property and tend to exploit the labor and sexuality of women who do not have male protectors (Barnett, Miller-Perrin, and Perrin 2005; Coltrane 1992; Coltrane 1996; Coltrane and Collins 2001).

Men not only dominate women in the public and private realms of these societies, but they also shun femininity. As such, feminine characteristics of nurturance and collaboration are treated by men as symbols of weakness to be avoided. Masculinity instead encourages men to focus on achieving power through independence, aggression, and violence (David and Brannon 1976; Maccoby 1998). Each of these gendered behaviors serves to help men maintain control of society at the expense of women. First, the disdain for anything feminine leads men in power to value the opinions of men over women. Second, the desire for power instilled in men and the desire for serving others instilled in women help men to obtain and hold positions of authority. Third, the masculine value of independence helps men take leadership roles as well as avoid sharing influence with women and less powerful men. Fourth, men use aggression and violence to control and intimidate women and less powerful men. For example, women are much more likely than men to be victims

of child sexual abuse, rape, and partner violence, and their abusers are almost always men (Barnett, Miller-Perrin, and Perrin 2005).

In patriarchal societies, men begin learning masculine styles of behavior at birth and continue to be reinforced for masculine traits and behaviors well into adulthood. For instance, in modern industrialized nations, experiments show that only after being notified of a baby's sex will children and adults tend to label baby boys as stronger, bigger, and noisier than girls (Coltrane 1998). By expecting that "boys will be boys," male offspring are treated as already embodying masculinity. They are given greater encouragement in sports and other whole-body stimulation while girls are given more verbalization, interpersonal stimulation, and nurturance. As boys grow into men, the people in their lives (parents, siblings, relatives, friends, teachers) continue modeling and teaching acceptable masculine behavior, rewarding compliance and punishing deviance by granting or denying social acceptance. Cultural influences (stories, media, schools, politics, religion, customs, and rituals) also illustrate and model acceptable masculinity and, in addition, provide arenas in which men can practice the gendered behavior they have been taught (Adams and Coltrane 2004). While gender is malleable in the sense that men can stray from it in small ways without retribution, deviations are not tolerated (especially when compared to "tomboy" behavior in girls). Eventually, men realize that their happiness and success depend upon their ability to demonstrate masculinity on their own, so they no longer require external incentives and reminders to enforce gendered behavior (Bem 1993; Coltrane 1998; Connell 1990). In reproducing masculinity, men are given the tools to maintain positions of power in patriarchal societies.

COSTS OF MASCULINITY

Both women and men experience the costs of masculinity. Despite increases in equality between men and women in the past century, most patriarchal societies, the United States included, still endorse the idea that men are naturally superior to women in public affairs and that they deserve authority over women in the home. As a result, being born a woman carries penalties in most societies. Furthermore, men in patriarchal societies are also harmed by the pressure to maintain high levels of masculinity. First, men take more risks than women, helping explain why men are far more likely than women to die in car crashes (Powell-Griner, Anderson, and Murphy 1997; National Center for Health Statistics 2006). Second, masculinity demands that men be physically strong, inhibiting them from acknowledging and addressing serious medical problems or following prescribed medical regimens (Courtenay 2003). In part because of this, men are more likely than women to die of heart disease, cancer, respiratory disease, and pneumonia (National Center for Health Statistics 2006). Third, masculinity confines and isolates men emotionally; they have higher suicide rates than women, and cross-national research shows that men report greater loneliness than women when without a romantic partner or children (Stack 1998; National Center for Health Statistics 2006). Fourth, masculinity encourages men to be violent, a leading reason men are more likely than women to suffer injury, commit violence, be the victims of violence, die from homicide, and have a shorter life span (Federal Bureau of Investigation 2004; Centers for Disease Control 2004; National Center for Health Statistics 2006).

PROSPECTS FOR CHANGE

Despite widely held beliefs that "boys will be boys" and that men are naturally violent and unemotional, comparative scholarship shows that manhood ideals are culturally conceived and that boys are turned into manly men through a combination of family, social, and personal processes. Perhaps taking a cue from past egalitarian societies, new models of masculinity in industrialized societies are emerging, with gradual recognition that women can be the equals of men and should enjoy similar public and private rights and obligations. Because masculinity itself is socially constructed, with time and effort, men can discard the negative aspects of masculinity that promote subjugation of women and deterioration of their own emotional and physical health.

SEE ALSO *Aggression; Alpha-male; Family; Fatherhood; Femininity; Gender; Gender Gap; Masculinity; Masculinity Studies; Militarism; Patriarchy; Sexual Orientation, Determinants of; Sexual Orientation, Social and Economic Consequences; Social Dominance Orientation; Violence*

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MENDACITY

SEE *Lying*.

MENDEL'S LAW

Gregor Mendel (1822–1884), an Austrian monk, conducted experiments on 28,000 pea plants in his monastery garden between 1856 and 1863. His results, outlined in his essay "Experiments on Plant Hybridization," were read to the Natural History Society of Brno (Brunn) in February and March of 1865 and were published in 1866 in the proceedings of the society. These experiments involved studying variations in peas across successive generations of true breeding plants in terms of their shape, size, and color. In simple terms, through close observation and good record keeping, he discovered that, for example, the size of a plant was passed on as a separate trait in a competition for the dominance between traits. These variations were caused by what Mendel called "factors" but what we now call "genes."

The results of these experiments were initially neglected, but then "rediscovered" in 1900 by three European scientists, Hugo de Vries, Carl Correns, and Erich von Tschermak. However, it was William Bateson (1861–1926) who promoted these research findings and who coined the key terms of modern genetic science, namely "genetics," "gene," and "allele." Genetics is that branch of biology that studies both hereditary and variation in organisms. It was Thomas Hunt Morgan (1866–1945) who would later integrate Mendel's theoretical model with the chromosome theory of inheritance. Morgan's experiments with the fruit fly showed that genes are carried by chromosomes, which are the mechanisms of hereditary. His account of hereditary particles created what is now referred to as "classical genetics."

Mendel's First Law, or Law of Segregation, states that members of a pair of homologous chromosomes separate during the formation of gametes such that every gamete receives only one member of the pair. The law can be broken down into four components: (1) alternative versions of genes account for variations in inherited characters; (2) for each characteristic, an organism inherits two alleles, one from each parent; (3) if the two alleles differ, then the dominant allele is fully expressed in the organism's appearance, while the recessive allele has no noticeable effect; and (4) the two alleles for each characteristic segregate during gamete production.

Mendel's Second Law, or Law of Independent Assortment, states that the emergence of one trait will not affect the emergence of another. For example, the eye color and height of a human are not necessarily connected but random.

These laws can only be fully understood in terms of the behavior of chromosomes in reproduction. A cell nucleus is composed of several chromosomes that carry genetic traits, and in a normal cell these chromosomes have two parts, or chromatids. A reproductive cell con-

tains only one of these chromatids, but when two cells (normally male and female) are merged, the genes are mixed and the new cell becomes an embryo. Mendelian laws explain how this new cellular life has half the genes of each parent, and also explain the varying dominance of different genes, resulting in the uneven distribution of traits across generations.

The reproductive advantages of Mendelian-type hereditary are that it creates greater evolutionary opportunities that are beneficial. For example, cell mutations can produce positive side effects such as disease resistance. It is also the case that mutation in a single gene can cause an inherited disease such as sickle-cell anemia or cystic fibrosis. However, this outcome can also be treated as consistent with Mendelian hereditary advantages. Whereas sickle cell disease is a crippling ailment, the sickle cell trait, more prevalent in populations that have a greater geographic likelihood of exposure to mosquitoes, is associated with some resistance to malaria.

Mendelian theories of hereditary have proved to be hugely controversial in modern society. For one thing, Mendelian genetic theories offered additional support to the theory of natural selection in the evolutionary science of Charles Darwin (1809–1882) in which human development was to be explained by secular causes such as the blind adaptation of species to the natural environment rather than by conscious or intentional design. In addition, following Francis Galton (1822–1911), Mendelian theories have become associated with eugenics, or the science that aims to improve the quality of the human stock by increasing "good genes." Eugenics, though, also became an arm of European fascism in which sterilization and selective breeding would improve the Aryan race. Mendelian laws also underpin the pressure from parents in affluent societies for so-called "designer babies," leading critics to fear the creation of a master race. Application of the findings of the Human Genome Project will give scientists increasing control over reproductive outcomes. However, these fears can be exaggerated, since genetic counseling is directed at the prevention of crippling disease (specifically Huntington's disease) rather than designing aesthetically pleasing or highly intelligent offspring. These fears of course are influenced by the accuracy of the content of the genetic counseling and on the impact and effectiveness of such counseling.

SEE ALSO *Eugenics; Galton, Francis; Genetic Testing; Genomics; Heredity; Phenotype*

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MENTAL HEALTH

Mental health has attracted considerable attention from social scientists. Poor mental health frequently creates personal distress for the individual and those around that individual; often has social causes; has significant social costs in the form of dependency, incapacity, and unemployment; and may also lead, on occasion, to social disturbance and disruption. Consequently social scientists have contributed to a series of related debates about the validity and boundaries of the concepts of mental health and illness, the social distribution and causes of mental illness, and the appropriate care and treatment of mental illness. To a more limited extent, social scientists have also added to discussions about the ways to facilitate and enhance mental health.

When defined positively, mental health tends to be described rather loosely as a state of psychological well-being or satisfactory psychological functioning. More frequently, however, much as with health generally, it is simply defined negatively as the absence of mental illness. Based on an analogy with physical illness, mental illness refers to mental functioning that is considered disordered and described in lay terms as mad, disturbed, or disruptive or as anxiety and unhappiness that is more extensive than usual. While the indicators of mental illness often take the form of behavior that seems inexplicable or unintelligible, the judgment made is of some pathology of mental functioning. In *Madness and Civilization* the social theorist Michel Foucault (1926–1984) argued that unreason is the defining characteristic of madness, although whether this applies to the full range of mental disorders that are now identified, which extends well beyond the narrower category of madness, is contested. In severe cases, mental illness impairs the individual's capacity to carry out some ordinary tasks of living, although symptoms are often episodic. Mental illness can also generate behavior dangerous to self or others, which may be used to justify legal powers of detention on the grounds of the person's lack of reason and the perceived threat to his or her own safety or that of the public. In less severe cases, it can lead to distress and suffering and difficulties with certain aspects of

daily living. Consequently satisfactory performance of normal tasks of living often becomes a key indicator of mental health.

CHANGING UNDERSTANDINGS

The use of the language of health and illness reflects the role doctors have played in offering care and treatment for psychological problems. In European and North American societies medical understandings, which draw on a range of scientific ideas, tend to be dominant and inform much lay discourse, especially about mental illness. However, in many contexts the term *mental disorder*, which has fewer medical connotations, is used. The impact of scientific ideas, as well as the ideas themselves, has varied historically and cross-culturally, and there have been times and places when the understandings have been magical or religious rather than scientific. Magical or religious ideas relating to mental illness have not entirely disappeared from lay understandings, such as when people think a mental or physical illness is a judgment of God or that health is a matter of luck and good fortune.

Modern-day medical ideas about mental illness have largely been developed in psychiatry, a medical specialty that emerged as a profession in the mid-nineteenth century from the associations of doctors working in charitable and public asylums that catered for "lunatics" and had powers of detention. In Europe a few institutions for lunatics were set up in the medieval period; these were followed first by small private madhouses in the sixteenth and seventeenth centuries and then, from the beginning of the nineteenth century, by charitable and public asylums. As the century progressed asylums became increasingly large-scale. They were mainly staffed by untrained attendants, with doctors usually the key figure of authority.

In the twentieth century asylum attendants were transformed into mental health nurses, and a range of other professionals (e.g., mental health social workers, psychotherapists, and clinical and health psychologists) started to contribute to the care and treatment of those with mental health problems and to understandings about mental health and illness. Mental health practice outside the asylum also expanded in the twentieth century. In the mid-twentieth century there was a move toward "community care," which is the provision of services within community settings, even for those with more severe disorders, with far fewer mentally ill admitted to a psychiatric bed (where compulsory powers of detention are frequently used). The extent and quality of community services have often been questioned.

The types of mental illness identified by psychiatrists are diverse, ranging from the relatively severe and less common, such as schizophrenia, to the less severe and far more common, such as mild forms of depression and anxiety. Classifications have varied enormously over time, and during the second half of the twentieth century there were major attempts to systematize and standardize mental illnesses in order to improve the reliability of psychiatric diagnosis. In the twenty-first century two major classifications were developed: the American *Diagnostic and Statistical Manual of Mental Disorders* (DSM) and the listing of mental disorders in *The International Classification of Diseases*. The two classifications do not group mental disorders in the same way.

An earlier distinction widely used in the early postwar decades was between psychoses and neuroses, a contrast between more and less severe disorders that linked to symptom differences and ideas about causation. Psychoses were held to be primarily disorders of thought (i.e., Foucault's unreason) and caused by biological factors. Psychoses were typified by the delusions and hallucinations of schizophrenia, the archetypical madness, associated with disturbed and sometimes difficult behavior. Bipolar disorder (formerly referred to as manic depression) is also placed in this category, as are usually disorders where there is clear brain pathology, such as the senile dementias. Neuroses, such as anxiety states and phobias, were considered primarily disorders of emotion (usually called "affect" or "mood" by psychiatrists) rather than thought and were held to have psychological causes. However, in its third edition in 1980, the DSM decided (not entirely successfully) to eschew etiology as a basis for classification shifting to a symptomatological categorization and excluding the term *neurosis*. Official classifications also include a range of conduct or personality disorders in which the main symptoms relate to behavior, such as "antisocial personality disorder," anorexia nervosa, and substance use disorders, including alcoholism and drug addiction. Comparison of the different editions of the DSM is salutary. According to Allan V. Horwitz, the number of mental disorders listed in the 1918 edition of the DSM was 22, whereas by the fourth edition in 1995 it was nearly 400. Such increases necessarily broaden the boundaries of mental disorder and narrow those of mental health.

PHYSICAL AND PSYCHOLOGICAL VIEWS

Consistent with medicine's interest in the body, psychiatry has developed a "biomedical" model of mental illness. The biomedical model focuses on physical causes and the provision of physical treatments, although psychiatrists often deploy a wider range of understandings in their practice. The search for physical causes has concentrated on inheritance, brain pathology, and biochemistry. While there is strong evidence of a genetic tendency for more severe mental disorders, there can be no doubt that envi-

ronmental factors play a part in causation, even with severe disorders, and are important to mental health. For instance, the evidence from a range of studies has shown that genetic factors play a role in the etiology of schizophrenia, but there is also evidence of environmental factors having a role. Biochemical processes in the brain have been shown to underpin some mental illnesses, most obviously conditions such as Alzheimer's disease. However, significantly data also indicate that social and behavioral factors, such as exercise (physical and mental) as well as diet and obesity, play a part in the complex etiology of Alzheimer's disease.

Biochemical changes in the brain are associated with other mental disorders. There is evidence, for instance, that serotonin levels play a role in depression. But in contrast to Alzheimer's, it is not clear that brain pathology is the cause of depression. The build up of serotonin may be a consequence of social and psychological experiences that are themselves better viewed as the cause of the depression. Such examples indicate that the causes of any mental illness are multifactorial and are not the same for one disorder as for another. They also indicate that debates about causation that have so vexed discussions of mental illness depend in part on the choice of which causes to examine. Psychiatrists have tended to focus on physical causes and to give them primacy, downplaying social and psychological factors.

Evidence of the importance of social and psychological factors to mental health comes from a range of studies. Many studies show that early childhood experiences affect mental health and that external stresses (stressful life events or ongoing difficulties, whether in childhood or later) can lead to mental disorder, although some would argue that in some disorders stress is more a precipitating factor than a cause. Data on the distribution of mental disorders across populations also display a marked social patterning. International studies show that a condition similar to schizophrenia is common across a wide range of societies. However, within any given society data indicate that schizophrenia is more common among groups with lower socioeconomic status and that this difference cannot be adequately accounted for by individuals with schizophrenia drifting down the socioeconomic scale. The link between socioeconomic status and mental illness applies to other disorders, such as depression. It has been argued that depression is due not only to the frequency of adverse life events but also to difficult circumstances and low levels of social support, which affect coping and its adverse vulnerability. There is also a marked patterning by gender. Whereas levels of schizophrenia are roughly the same for men and women, depression and anxiety are far more common in women than men, and personality and conduct disorders are more common in men. Part of this difference appears to be due to gender socialization and differing expectations as to appropriate emotions and behavior. There are also ethnic differences in the patterning of mental disorder. In the United Kingdom, for instance, a 1997 study by James Nazroo showed that schizophrenia is more commonly diagnosed in Afro-Caribbean men than in other social groups, though the reasons for this are not entirely clear.

Equally controversial have been related issues around the validity and boundaries of mental illness. A number of authors from different theoretical perspectives have argued that it is only reasonable to talk of illness when there is a clear physical pathology. For the psychiatrist Thomas Szasz, who famously argued in 1961 that mental illness was a myth, this meant recognizing that disorders such as senile dementia are diseases of the brain. Where there is no biological pathology, Szasz stated, psychological problems should be termed "problems in living" and not regarded as illnesses at all. From a rather different perspective, a range of sociologists has argued that mental illness, with its overtly behavioral symptoms, is best understood as a form of deviance (i.e., a behavior that breaks social norms) and not as illness. This position was developed by the psychotherapist T. J. Scheff in his well-known 1966 study *Being Mentally Ill*. These two positions reflect a long-standing contest between those who espouse the biomedical model of mental disorder and wish to appropriate psychological problems to the domain of physical illness—a process sociologists term medicalization and which is reflected in the expansion of psychiatric categories—and those who wish to appropriate mental disorder to the social (or psychological) domain of behavior considered unacceptable or difficult. Horwitz, in *Creating Mental Illness*, accepts that the boundaries of mental health and illness are set by society and tries to resolve the conflict between the two positions by stating that a condition is a valid mental illness or disorder if (a) it involves a psychological dysfunction that is defined as socially inappropriate, and (b) it is socially useful to define the dysfunction as a disease.

CARE AND TREATMENT

Given such disputes, not surprisingly a further major area of controversy concerns care and treatment. When charitable and public asylums were first established, the most influential therapeutic model was that of "moral treatment." This was a set of ideas about the importance for "lunatics" to live in a supportive, well-ordered, and well-staffed environment that built on the individual's capacity for self-control to facilitate his or her return to health. However, this social model, which was an important component of the pro-institutional discourse that underpinned the establishment of asylums, was resource intensive and difficult to implement in practice, especially when asylums

became large-scale. The challenges of asylums were among the reasons they were increasingly replaced by biomedical approaches. Treatments in the early twentieth century included drugs, such as morphine and chloral hydrate, and various forms of hydro and electrical therapy. In the late 1930s electro-convulsive therapy (ECT) and psychosurgery (which involves the cutting of certain brain tissues) were introduced, and from the mid-1950s a range of synthesized drugs began to be used starting with chlorpromazine, an antipsychotic. In the beginning of the twenty-first century psychotropic medications provide the dominant form of treatment for mental health problems, from the most to the least severe, although many professionals accept that the drugs control symptoms rather than provide cures. Some medications, notably the antipsychotics, have unpleasant side effects, and patients may be reluctant to take them except by compulsion; they are also often prescribed on a long-term basis, which increases the risks to patients. Yet a number of factors encourage the medical reliance on drugs: efficacy in controlling symptoms; the scope of doctors' expertise with its concentration on the physical at the expense of the psychological and social; pressures of time that make more intensive therapies seem harder to provide; and heavy marketing by the pharmaceutical industry.

Psychological theories and therapies have, however, played an important role in ideas about mental health and the treatment of the less severe forms of mental illness. In the first half of the twentieth century psychoanalysis had a major impact, and "talking cures" began to be used by trained psychoanalysts, especially for private patients (in the United States psychoanalysis had widespread acceptance within psychiatry). Psychological theories also informed child and educational psychology and the "mental hygiene" movement that flourished in the United States in the early decades of the twentieth century, in which the focus was on improving and sustaining mental health through education, early treatment, and public health.

However, some psychologists, highly critical of psychoanalysis, developed their own therapies based on the behaviorist ideas that swept academic psychology from the early decades of the twentieth century. Early behavior therapy excluded attention to thought and meaning but was gradually replaced by cognitive behavior therapy (CBT), which concentrates on the individual's ways of thinking and is seen by some as offering a relatively speedy and effective route to mental health, especially for less severe disorders. CBT has been influenced by "positive psychology," which is a set of ideas that seeks to encourage individuals to focus on what can give meaning in life, especially their strengths. Some also argue that CBT can be of value in treating psychosis. Yet psychological therapies such as physical remedies mainly concentrate on dealing with mental health problems that have already developed and not on mental health maintenance and prevention, the area to which social scientists have arguably more to contribute.

SEE ALSO *Cognition; Disease; Emotion; Foucault, Michel; Intelligence; Madness; Medicine; Mental Illness; Personality; Personality, Type A/Type B; Psychoanalytic Theory; Psychotherapy; Stress; Trauma*

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MENTAL ILLNESS

Mental illness is a global term for disorders of thought, mood, affect, and behavior that impair normal functioning, social relationships, and productivity. Worldwide, mental illnesses account for four of the ten leading causes of premature death or of disability in terms of lost years of healthy life. Major depression is the leading cause of disability worldwide, as measured by years of living with this disorder. Mental illnesses, including suicide, account for over 15 percent of disease burden, more than the burden from cancers, in established market economies such as the United States and Europe (National Institute of Mental Health 2006).

Mental illnesses such as schizophrenia and other psychotic disorders, mood disorders, anxiety disorders, and adjustment, identity, and personality disorders, are defined by discrete, clinically meaningful clusters of

behavioral symptoms. The German psychiatrist Emil Kraepelin (1856–1926) was the first to develop a unified classification of the psychoses. His emphasis on precision and objective behavioral criteria greatly influenced the current diagnostic system, the American Psychiatric Association's periodically updated and revised *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*-IV-TR, 2000). The *DSM* codes are fully compatible with those in the mental disorders section of the World Health Organization's *International Classification of Diseases* (*ICD*-10, 2005), with worldwide applicability. Patients are assessed on five axes:

Axis I—clinical disorders and other conditions that may be a focus of clinical attention;

Axis II—personality disorders and mental retardation;

Axis III—general medical conditions;

Axis IV—psychosocial and environmental problems; and

Axis V—global assessment of functioning.

Multiaxial assessment yields multiple domains of information that indicate possible comorbidities and permit comprehensive treatment planning.

Mental illnesses vary in severity, duration, and degree of incapacitation. Some specialists distinguish between acute reactive (brief nonrecurring) and chronic (long-term episodic) mental illness. The term *chronic*, disavowed by consumers (present and former psychiatric patients) as promoting hopelessness, has largely been replaced by "severe and persistent mental illness." This description typically applies to persons with major Axis I disorders who manifest long-term disability.

Despite increasing evidence that most major mental illnesses appear to be biologically based, vulnerability and prognosis seem highly sensitive to the social environment. Epidemiologic studies indicate that major mental illnesses such as schizophrenia, depression, and bipolar or manic-depressive illness are found in all cultures throughout the world. However, there is considerable variability based on immigrant and socioeconomic status, and on urban versus rural living. Studies in Great Britain have found significantly higher prevalence rates for psychotic disorders in immigrants, city dwellers, and black and ethnic minority groups than in white British natives (Kirkbride et al. 2006). Incidence rates for schizophrenia drawn from 158 studies of 32 countries were significantly higher for males, migrants, city dwellers, and individuals born in the winter months (McGrath 2006), the latter presumably because of greater exposure of fetuses and neonates to viral insults to developing brain structures. Internationally, female gender and income inequality are major risk factors for depression (Patel 2001). World Health Organization studies indicate that although the diagnostic criteria for schizophrenia are applicable cross-culturally, prognosis and recovery rates are significantly better in the developing world than in Western industrialized nations (Jablensky et al. 1992)

Prolonged hospitalization for mental illness has long been on the decline in the industrialized world. Most mental disorders currently are treated on an outpatient basis, with various forms of individual, group, and family psychotherapy and in most cases, psychotropic medications. These include antipsychotic, antidepressant, antianxiety, and antiobsessional agents, as well as mood stabilizers and psychostimulants. More disabling disorders may require brief hospitalizations and rehabilitative interventions such as supported housing, supported employment, social-skills training, and combined mental health and substance abuse treatment. There is increasing demand for research-supported evidence-based treatments. Among these, psychotropic medications, cognitive and behavioral psychotherapies, family psychoeducation, and rehabilitative interventions have yielded the most empirical validation. However, studies also suggest that the patient-therapist relationship may be more salient than particular therapeutic models. Some mental health systems are promoting the involvement of consumers as service providers in rehabilitation and in peer counseling. Persons in recovery are able to share experiences and coping strategies, provide role models, and help reduce self-stigmatization.

The concept of mental illness as a biomedical condition distinct from social context has been subject to extensive criticism by social scientists and by some psychiatrists. Prominent writers such as Michel Foucault (1926–1984), R. D. Laing (1927–1989), and Thomas Szasz (b. 1920) have disputed the validity of a concept based on cultural definitions of normalcy and often mediated by social and economic concerns. Every culture has some concept of "madness," defined as negatively perceived deviant behaviors that are distinguished from merely antisocial behaviors because they are incomprehensible within that cultural idiom. Despite transnational acceptance of *ICD* codes, the identification of a behavior or behavioral syndrome as denoting mental illness by ordinary citizens, as opposed to mental health professionals, is still to a considerable extent culture-bound. In certain individuals, religious delusions or hallucinations may be viewed as extraordinary gifts rather than symptoms. It is only when the symptoms impair role functioning and productivity that the person is labeled as mentally ill. Depression is sometimes manifested as somatization (diffuse bodily complaints) in some traditional cultures and is conceptualized by the sufferer as a physical rather than psychological condition. Stigmatization of mental illness is

ubiquitous, yet research shows that social factors may affect perceptions of deviance and subsequent labeling and discrimination. In many cultures stigma seems to be related to chronic dysfunction and dependency, or to assumed threat, rather than to bizarre behaviors.

There is also a substantial literature on culture-bound syndromes—seemingly unique patterns of disordered or psychotic behaviors that are manifested only in particular cultural settings. Whether or not these are unique syndromes or variant forms of universal diagnostic categories, the behaviors are locally perceived as mental disturbances with specific names. The *DSM*-IV-TR lists twenty-five culture-bound syndromes found in various parts of the world, most of which appear as temporary delusional or dissociative states in which the person acts out in culturally aberrant and sometimes self-harmful ways. Some culture-bound syndromes appear as anxiety states with paranoid ideation about external malevolence or sorcery, or possession by spirits, accompanied by debilitating somatic symptoms. Still others are manifested as panic reactions, sexual fears, or paralyzing phobias. Most culture-bound syndromes are time-limited and do not seem to engender stigma. If they prove to be ongoing or potentially life-threatening, remedies are sought primarily in traditional healing rituals rather than in Western medicine.

Despite local variants, there is compelling evidence of universality and genetic predisposition in major Axis I and some Axis II disorders. The literature on schizophrenia also offers proliferating research findings from neuroradiology, neuropathology, neurochemistry, hematology, and psychopharmacology, indicating biological parameters of what was once considered a psychogenic or sociogenic disorder. Depression is associated with catecholamine deficits or excess, and hormonal imbalance. Obsessive-compulsive disorders have unique neurological substrates. Lesions in the orbitofrontal cortex have been linked to the impulsivity and affective instability of borderline personality disorder and other disorders of impulse control. Many mental illnesses show abnormalities in the serotonin neurotransmitter system. The permanent effects of these biological anomalies is still in question. There is increasing evidence of recovery from disorders that were once considered lifetime disabilities with a deteriorating course. Three major long-term outcome studies of formerly hospitalized persons with schizophrenia in Europe and the United States indicated a recovery or mild impairment rate ranging from 50 percent to 66 percent (Harding 1988). Representing a heterogeneous body of behavioral symptoms varying widely in severity and potential for remission, the term *mental illness* remains a concept in flux and the subject of ongoing research.

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MENTAL LEXICON

SEE *Psycholinguistics.*

MENTAL RETARDATION

The U.S. Department of Education defines *mental retardation* as "significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period that adversely affects a child's educational performance" (34 C.F.R., Sec. 300.7[b][5]). The American Association on Mental Retardation (AAMR) defines it in a similar way: "Mental retardation is a disability characterized by significant limitations both in intellectual functioning and in adaptive behavior as expressed in conceptual, social, and practical adaptive skills. This disability originates before age 18" (AAMR 2002, p. 1). Finally, the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*-IV) of the American Psychiatric Association (APA) describes the disorder as "characterized by significantly subaverage

intellectual functioning (an IQ of approximately 70 or below) with onset before age 18 years and concurrent with deficits or impairments in adaptive functioning" (APA 2000, p. 37). Each of the three definitions has the inclusion of an impairment of adaptive functioning in common, while only the *DSM*-IV lists a specific intellectual quotient (IQ) score. Thus, the two major characteristics of mental retardation are limitations in intellectual functioning and limitation in adaptive behavior.

LIMITATIONS IN INTELLECTUAL FUNCTIONING

Intelligence refers to an individual's cognitive ability to think, reason, problem solve, remember information, learn skills, and generalize knowledge from one setting or situation to another. This ability level is often described using an intelligence quotient obtained from assessment with one or more individually administered standardized intelligence tests, such as the Wechsler Intelligence Scale for Children III or the Stanford-Binet Intelligence Scales (SB5). Significantly subaverage intellectual functioning is defined as an IQ of 70 or below (approximately two standard deviations below the mean). Regardless of IQ, individuals with mental retardation have impaired functioning in memory (especially short-term memory), generalization (transferring learned knowledge or behavior from one task to another or from one setting to another), and decreased motivation (which may result from repeated failures).

LIMITATIONS IN ADAPTIVE BEHAVIOR

Adaptive behavior refers to an individual's ability to perform successfully in various environments. Skill limitations occur in three primary domains as defined by AAMR (2002)—conceptual, social, and practical adaptive skills. Conceptual skills include self-determination, reading, and writing, while social skills involve taking responsibility and following rules. The individual with mental retardation will also have difficulty with daily living and employment skills. Age, cultural expectations, and environmental demands will all influence the individual's adaptive behavior.

CLASSIFICATIONS

Several classification systems have been developed to more clearly define the range of mental retardation. Each method reflects the attempts of a particular discipline (e.g., education or medicine) to explain the needs of the individual with mental retardation. Most classification systems are based on the necessary supports required by these individuals to function optimally in the home and community. Severity of condition is characterized in the *DSM*-IV (2000) as *mild*, *moderate*, *severe*, and *profound*, with *mild* describing the highest level of performance and *profound* describing the lowest level. Separate codes are provided for each level, as well as for *mental retardation, severity unspecified*.

Individuals with mild mental retardation have been termed educationally as *educable* in the past, with an IQ range of 50–55 to approximately 70. This constitutes the largest segment (about 85 percent) of the group of individuals with mental retardation.

Individuals with *moderate* mental retardation have an IQ range of 35–40 to 50–55, and were once referred to by the outdated educational term *trainable*. This term wrongly implies that these individuals can only be "trained" and will not benefit from educational programming. Approximately 10 percent of the population of individuals with mental retardation is classified in this range.

The group categorized as *severe* makes up 3 to 4 percent of the population with mental retardation, while those with *profound* mental retardation constitute extremely low numbers of individuals (1–2 percent). The IQ level for *severe* mental retardation ranges from 20–25 to 35–40, and the IQ range for *profound* mental retardation is below 20–25.

Mental retardation, severity unspecified is used most often when there is a strong indication of mental retardation, but the individual's intelligence is untestable using standardized assessments. This occurs when individuals are too impaired or uncooperative for testing.

EDUCATIONAL OPTIONS

Public education for students with mental retardation is a relatively new concept, particularly for those with the most significant disabilities. In the past, the emphasis on academic achievement (i.e., reading, writing, and arithmetic) in public school programs made access difficult for these students. With the passage in 1975 of the Education for All Handicapped Children Act, Public Law 94-142 (now called the Individuals with Disabilities Education Act, or IDEA), public schools were required to provide both access and an appropriate education for all students, including those with mental retardation. The U.S. Department of Education (2002) indicated that approximately 94 percent of students with mental retardation between age six and twenty-one attend general education school, with 14 percent being served in a regular class at least 80 percent of the time.

The 1986 amendments to the Education for All Handicapped Children Act provided services to preschool-age children with disabilities, while the 1997 amendments provided for programming for infants and

toddlers (birth to age two). Children with mild mental retardation may exhibit developmental delays when compared to their same-age peers. Intervention based on a developmental milestone approach is provided in either the natural environment (home-based intervention for infants and toddlers) or in preschool programs. Education focuses on assisting young children to develop, remedy, or adapt the skills appropriate for their chronological age.

Educational programs at the elementary level for children with mental retardation focus on decreasing the child's dependence on others and teaching adaptation to the environment. This generally includes facilitating the development of motor, self-help, social, communication, and academic skills. Students with mental retardation benefit from either basic or functional academic programs. A significant relationship exists between the level of retardation present and success in both reading and mathematics. The critical element is the teaching of functional academics that will aid the child's independence. For example, Diane Browder and Martha Snell describe functional academics as "simply the most useful parts of the three R's—reading, writing, and arithmetic" (2000, p. 497). *Useful* is defined on an individual basis, and is determined by that which will support the child's current daily routines, predicted future needs, and the priorities of the family.

The goal of programs for adolescents with mental retardation is to increase independence, enhance opportunities for participation in the community, prepare for future employment, and aid in the student's transition from school to adult life. Programming includes the development of skills in personal care and self-help, leisure activities, and access to community programs and supports. Employment preparation is undertaken with consideration of both functioning level and preference—the environment and tasks the individual enjoys.

DETERMINING THE CAUSES OF MENTAL RETARDATION

There are two categories of causes of mental retardation according to the American Association on Mental Retardation (2002, p. 126). One category involves *timing*, when the mental retardation occurred, and the other involves *type*, what factors were responsible for the mental retardation.

Timing is determined by onset of the disability—prenatal (before birth), perinatal (at birth), or postnatal (after birth). While research by Marshalyn Yeargin-Allsopp and colleagues (1997) showed that 12 percent of school-age children with mental retardation had a prenatal cause, 6 percent had a perinatal cause, and 4 percent had a postnatal cause, probable cause could not be determined for 78 percent of the children.

Type of cause is divided into four separate categories. *Biomedical* factors relate to biologic processes such as genetic disorders or nutrition. Down syndrome is a well-known genetic disorder for which mental retardation is characteristic. Mark Batshaw and Bruce Shapiro (2002) describe *social* factors that involve adverse influences related to social, behavioral, and educational areas, such as stimulation and adult responsiveness. *Behavioral* factors relate to behaviors with the potential to cause mental retardation, such as dangerous activities or maternal substance abuse. Finally, *educational* factors are related to the availability of supports that promote mental development. For example, mothers who lack information about prenatal health are more likely to have children with mental retardation. There is also a strong relationship between poverty and mental retardation. Of course, many of these factors evoke the age-old argument of "nature versus nurture" and whether ability is related more to sociocultural influences or genetics.

SOCIETAL STIGMA AND LABELING

There is considerable controversy about labeling and its consequences on both the individual and his or her family. Labels can be helpful in acquiring services, but the stigma attached to mental retardation can cause others to regard the individual as less than what they truly are. Stereotypical images of mental retardation are extremely difficult to change. People with mental retardation are at a higher risk of wrongful convictions for crimes. The label can also lead to segregation in educational placement, work, and the community. Because of the stigma attached to mental retardation, people with this disability often become adept at hiding it. Focus must be placed on the supports necessary for independence and success rather than on the individual's limitations.

SEE ALSO *Disability; Intelligence; Psychometrics; Scales; Stigma*

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Sally Roberts

MENTORING

Mentors produce mentees, or protégés, who ultimately become mentors and perpetuate a cycle that has long-term and lasting effects on generations to come. Flaws and imperfections as well as strengths in the mentor are often passed along to future generations by the products of mentoring, protégés. As such, and as with many other skills-based human behaviors, it is important to understand the history and process of mentoring to make it more efficient and produce better and more consistent human outcomes.

The term *mentor* describes a person who consciously and with purpose fosters a relationship between the target of such efforts, the protégé, and the mentor. Mentors typically are older or more seasoned and having a level of experience that allows them to provide guidance, support, and a frame of comparison for protégés to guide their behaviors, choices, thoughts, attitudes, and emotions.

It was not until the mid-1980s that social and cultural researchers began formally to study mentoring using scientific methodology. Research on mentoring has historically focused on the products of mentoring, or the protégé. The term *protégé* refers to the individual receiving advice and guidance from the more senior participant.

Characteristics such as openness in the protégé are associated with better outcomes. Much of the research on mentoring suggests that it has a positive impact on career development, including salary level, promotion rate, and job satisfaction. Although the consequences of mentoring in formal and informal settings are beginning to be understood, much remains to be learned about the process of mentoring.

It is known, for example, that in the mentor-protégé relationship the mentor has two primary functions: (1) goal attainment (academic, career, relationships, and so forth) and (2) psychosocial support. In the goal-attainment function, the mentor provides advice and models of success and management to help the protégé facilitate achievement of professional and personal goals. This function is designed to produce achievements and help the protégé focus his or her professional aspirations and attain targeted outcomes. Notably in this area we know the most about the outcomes and process of mentoring.

Less well understood is the psychosocial and support-related function. This function is more personally oriented and is based on such complex factors as friendship, power, mutual respect, authority, and admiration. Mentors often provide informal counseling and manage a wide range of emotional and cognitive sequelae (frustration, doubt, and the like) in the protégé associated with both success and failure.

Mentoring is best understood in two forms: informal and formal. Informal mentoring usually develops spontaneously and depends on individuals having some common interests. The protégé may need short-term guidance and support for academic, career, and other decisions, to include personal situations.

Formal mentoring is based on the organizational structure that dictates the relationship. Formal mentoring programs were established to compensate and provide resources to groups that historically have been excluded from informal mentoring relationships because of their gender, ethnicity, social status, or sexual orientation. For example, in corporate situations individuals with powerful positions are often less than willing or excited to mentor those who are perceived to be "different."

There are six primary characteristics of formal mentoring: (1) formal program objectives, (2) formal selection of participants, (3) matching of mentors and protégés, (4) training, (5) guidelines for meeting frequency, and (6) formal goal setting and goal monitoring. Regardless of the mentoring type, the key component of a successful mentoring relationship is that it must meet

the developmental needs, skills, and aspirations of both the mentor and protégé.

It is often the case that mentors may not be able to meet all the developmental needs of the protégé, thus requiring more than one mentor or the establishment of a mentoring network. This network of mentors can provide a variety of skills and knowledge and competently provide for the developmental needs of one or more protégés. In 2006 Tammy D. Allen, Lillian T. Eby, and Elizabeth Lentz developed a theoretical framework that incorporates a multimodal conceptualization of successful mentoring based on two key dimensions.

The first relates to the diversity of the social system. Individual mentors and networks are most effective when their characteristics can be matched to that of the protégé. The more diverse the social system in which mentoring occurs, the better the chance of getting the correct match. The second factor relates to the strength of mentoring relationships. Particularly in a mentoring network, when a protégé is having multiple contacts with a range of mentors, the strength of the relationships can vary greatly. This conceptualization of mentoring has received significant recent attention and may become critical as multidisciplinary mentoring becomes more common in business and academic settings.

Integrating and extending previous knowledge, the American Psychological Association Centering on Mentoring Presidential Task Force (2006) identified five critical stages associated with the mentoring process. The *initiation stage* is characterized by the initiation and emergence of the mentor–protégé relationship. During this stage protégés identify experienced and successful people to whom they can prove their worth. Ultimately both parties explore and evaluate the appropriateness of the mentor-protégé match. Next is the *cultivation stage*, where learning and development take place. During this stage the mentor provides advice and guidance to the protégé. Both the personal and professional relationship is developed and intensified during this time, and attainment and psychosocial goals are achieved. This is usually a positive stage for both participants and often results in the maturation of a strong friendship. The *separation stage* generally refers to the end of the mentoring relationship. This often signals that protégés want to establish their independence. At this stage problems may sometimes arise when only one party wants to terminate the mentoring relationship. A protégé may sometimes feel unprepared to venture out independently, or the mentor may feel betrayed when the protégé no longer seeks guidance and counsel. When both parties successfully matriculate separation, a *redefinition stage* can occur toward the development of a new and more parsimonious relationship. It is during this stage that protégés have established themselves as worthy colleagues and the focus of the relationship is no longer the protégé's development.

A few studies have examined factors that influence the nature and magnitude of the mentoring relationship (Ragins and Cotton 1999; Ragins 1997). For example, it is now known that gender may influence the interactions—and consequently mentoring outcomes—of mentors and protégés. Some have suggested that there may be more perceived similarity, greater identification, and intensified effects of role modeling in same-gender mentoring relationships. In partial contrast and certainly less well understood, both male and female protégés with a history of male mentors reported greater compensation in the workplace than those with female mentors (Ragins and Cotton 1999). Even with this finding, many advocate for female-female mentor-protégé relationships and suggest that the modeling of success and coping that they provide exceeds the benefit of increased salary.

Ethnicity is also an important consideration in mentoring outcomes. The benefits of formal mentoring, particularly for women and ethnic minorities, are significant and are often based on the premise of providing an equal opportunity to advance through perceived and real "glass ceilings." However, some sociocultural variables within the formal mentoring paradigm may ultimately put women and ethnic minorities at a significant disadvantage.

Lastly, a position of power appears to be an important variable for mentoring outcomes. The protégé may be more likely to respect and respond to a person who has perceived power and who gained that power through a process that led from where the protégé is currently positioned to where the mentor is currently positioned.

In conclusion, sufficient evidence supports the notion that mentoring is a powerful tool for the development of the protégé. Successful mentoring can often influence indicators such as compensation, promotion, exposure, and visibility. However, these outcomes are influenced by the strength and effectiveness of the mentoring relationship and psychosocial and sociocultural variables. The relationship is dynamic and changes to provide benefit to the mentor and protégé over time.

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MERCANTILISM

The term *mercantilism* designates a system of economic policy as well as an epoch in the development of economic doctrines, lasting from the sixteenth to the eighteenth century. It first appeared in print in Marquis de Mirabeau's *Philosophie rurale* in 1763 as *système mercantile*. The main popularizer of the "commercial system"—as he preferred to call it—was Adam Smith. According to him the core of the mercantile system consisted of the folly of confusing wealth with money. Despite the practical orientation of the mercantilist writers, they did propose a principle: the so-called *positive balance of trade* theory, which implied that a country must export more than it imported. According to Smith, the mercantile system was put into place by a mercantile special interest that would be able to profit from duties on imports, tariffs, and bounties.

From Smith onward, the view of the mercantile system, or simply mercantilism, as state *dirigism* and protectionism serving a special interest through the maintenance of positive balances of trade was developed further by classical political economy. During the nineteenth century this viewpoint was contested by the German historical school, which preferred to define mercantilism as state-making in a general sense. According to its view mercantilism as a system of theory was the rational expression of nation-building during the early modern period. An attempt to combine these two interpretations was made by the Swedish economic historian Eli Heckscher in his *Mercantilism* ([1935] 1994). A response to Heckscher's wide definition of mercantilism was to altogether reject the notion of a particular mercantilist system.

This latter position goes too far, however. It is certainly correct that mercantilism was not a finished system or coherent doctrine in the nineteenth- and twentieth-century sense. It is better described as a literature of pamphlets and books that mainly dealt with practical political economy, published roughly between the late sixteenth century and 1750. The underlying issue dealt with in this literature was the question of how to achieve national wealth and power. This general agenda can be traced in English, Italian, and French economic texts from the sixteenth century onward. From this point of view, Italian writers such as Giovanni Botero (1544–1617) and Antonio Serra (1580–?), as well as sixteenth-century Spanish writers such as de Vitorias, de Soto, de Azpilcueta, and Luis de Ortiz were perhaps the first "mercantilists." In England, the most well-known mercantilists in the middle of the seventeenth century were Thomas Mun (1571–1641) and Edward Misselden (1608–1654). Later well-known mercantilist writers include Josiah Child (1630–1699), Nicholas Barbon (1640–1698), Charles Davenant (1656–1714), Malachy Postlethwayt (1707–1767), and James Steuart (1713–1780) in England and Antoine Montchrètien (1575–1621) and Jean Baptiste Colbert (1619–1683) in France. Most of these writers shared the view that the increase of trade and manufacture could only be accomplished through state intervention, and that it was not possible to rely only on the self-equilibrating forces of the marketplace.

From Adam Smith onward the view has been repeated that the mercantilist writers confused money with wealth. However, recent research has shown that this conception of the mercantilists is highly questionable. For the bulk of seventeenth-century writers on economic and trade issues, the quantity theory of money was a standard presupposition. Moreover, there were very few price inflationists among the mercantilists. Instead, a majority agreed that high prices would cause lower exports—that is, they argued that the effect of elasticity of demand was considerable on most export markets. However, Mun as well as many others during this period seems to have feared that without a steady inflow of money originating from a favorable balance of trade, trade and industry would stagnate and the price of land would fall. To counter this shortage of bullion in circulation, a steady inflow of money through a net trade surplus was necessary.

However, most writers had abandoned the favorable balance of trade theory in its simple form by the end of the seventeenth century. Some argued that the principle was impractical as a policy goal, as it was impossible to account for a trade surplus in quantitative terms. Others found problems on more theoretical grounds—that is, they directly or indirectly admitted to the argument later known as the *specie-flow* argument. Instead, from the 1690s writers such as Josiah Child (1630–1699), Charles Davenant (1656–1714), and Nicholas Barbon (1640–1698) developed a new idea that alternatively has been called the theory of *foreign-paid incomes*, the *labor balance of trade* theory, or the *export of work* theory. Instead of holding on to the dogma that a country should

receive an inflow of bullion through the balance of trade, these authors stressed that a country should export products with as much value-added content as possible and import as little of such products as they could. The profit would come from the fact that the buyer—Spain, Portugal, or other countries—would not only pay England for its raw materials, but also for its laborers.

Hence, what makes it legitimate to speak of a specific "mercantile system" was its proponents' preoccupation with the question of how a nation could become rich, and thus also achieve greater national power and glory. In the broader sense of an ideology promoting economic protection in order to achieve domestic growth, the term *mercantilism* is not applicable only to the period before Adam Smith. Mercantilist ideas can also be found in modern forms of protectionism that have appeared since the nineteenth century. For example, the period between World Wars I and II was characterized by protectionism and economic nationalism; it was this that led to Heckscher's synthesis, which he intended as advocacy in favor of liberal and free-trade ideas. Despite Heckscher's insistence that mercantilism was a false ideology—free trade, he argued, was better for economic growth, at least in the long run—mercantilism was hailed as a form of popular economics of common sense. As such, it still exists to some degree, though it has reappeared most clearly during periods of economic crisis, such as the 1920s and 1930s. Mercantilist theory has found only a very few proponents among more modern schools of economics. Some economists inspired by institutional economics have referred sympathetically to mercantilist doctrines concerning population growth (for example Joseph J. Spengler), as have others inspired by radical development economics (for example, Cosimo Perrotta).

After World War II, mercantilist ideas have instead largely recurred in the form of neomercantilism and strategic-trade theory. From the end of the 1970s, strategic-trade theorists such as Lester Thurow, James Brander, Barbara Spencer, and Paul Krugman sought to replace the theory of comparative advantages with a theory of "competitive advantage." Their argument is that the pattern of international trade cannot be explained on the basis of comparative advantage or with the help of the simple Heckscher-Ohlin theorem. Instead, the flow of international trade is a consequence of scale and scope, economic muscle, and increasing returns to scale. The political implications of this were straightforward: Governmental support is appropriate when used to bring about a competitive advantage for an industry that would benefit its nation in the long term. Certainly, this was another way to defend the infant-industry argument, with clear implications for trade policy.

SEE ALSO *Beggar-Thy-Neighbor; Postlethwayt, Malachy; Smith, Adam; Zero-sum Game*

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Lars Magnusson

MERGERS AND ACQUISITIONS

SEE *Corporate Strategies.*

MERIT

At its most general level, merit is a value system that delineates qualities that are recognized and rewarded by societies. The most specific and significant reward under consideration in this system is the selection for public office on the basis of ability and character, rather than on the basis of class, caste, patronage, patrimony, ideology, or wealth. Such reward has profound implications for the structure of society and for the functioning of polities.

DEFINITIONS

The essential meaning of *merit* is generally underdefined, raising continuing questions about its content. In most political and administrative literature, merit is frequently discussed primarily in terms of its implementing mechanisms. Principles of merit are reasonably well documented and understood to include competitive examinations, protection from political influence, equal opportunity to compete for appointment, and fairness and equity in the treatment of civil servants.

In some recent literature, the term *meritocracy* is used as a synonym for the broader merit concept in its instrumental social and political connotations. Meritocracy was originally a pejorative term coined by Michael Young (1915–2002) in 1958 as a satirical indictment of a utopian system of rule governed by test results and devoid of human political impulse. More recently, the term has entered common discourse to denote any public or private employment system that makes job-related decisions on some calculation of character, ability, and potential.

A universal definition of merit is complicated by its apparent dependence on the mores, values, and accepted ethical standards in differing temporal, social, political, and cultural settings (Riccucci 1991, p. 88). Despite the relativistic argument, an approach to a universal definition may be found in the literature of philosophy, where merit is dually associated with concepts of ethics, morality, and justice, as well as with judgments regarding competent performance.

In the moral and ethical aspects of merit, Immanuel Kant (1724–1804) emphasized the importance of moral goodness, as stated in his lectures on ethics in 1793 and 1794: "[To] make myself worthy of honor … the dutifulness of action must be supplemented by moral goodness.… Toward men we realize more morality than is incumbent on us, and in this, therefore, lies at the same time the merit of our actions" (quoted in Guyer 2000, p. 328). This formulation gives no hint as to how moral goodness is to be measured as a basis for societal reward. The answer, deriving from Plato's *Republic* (c. 400 BCE) and practiced in many civil service systems throughout the world, has been through careful and comprehensive education and indoctrination in the regime values of the polity. This answer, however, raises questions regarding the eligibility of individuals from all strata of society. John Rawls (1921–2002) relates merit to justice only if every member of society has the opportunity and means to attain the requisite knowledge and abilities (1999, pp. 91-93).

Gregory Vlastos (1907–1991) identifies merit as a grading concept with judgment based on the measurement of valued qualities and performances (1969). The introduction of measurement and grading sharpens the definition. Vlastos, however, offers no help in defining the qualities and performances. Nor does he speculate on how measurement could be achieved. The conventional answer to this last question is found in the development and implementation of testing and performance appraisal processes; however, these processes raise serious questions as to their validity and effects (Cronbach 1980; Lemann 1999; Riccucci 1991).

A significant differentiation between two forms of merit has been provided by Amartya Sen. He identifies an internal conflict within the concept of merit, described as the tension between: "(1) the inclination to see merit in fixed and absolute terms, and (2) the ultimately instrumental character of merit—its dependence on the concept of 'the good' in the relevant society" (2000, p. 5). This differentiation is echoed by Hugh Heclo in his analysis of "substantive" and "instrumental" merit (2000).

The instrumental "good" is defined within every society primarily by historical and intellectual influences as interpreted and reinforced by the elite opinion makers of the society. The fixed and absolute idea of merit can be a subversive influence on established patterns of social and political hierarchy and status. The substantive concept of merit logically leads to the advocacy of an open society and some degree of democratic governance; however, it must be recognized that merit is not in itself a democratic concept. Its base is aristocratic in the Jeffersonian sense of being grounded in virtue and talent. The connection to democracy applies by linkage to the substantive, moral aspect of merit. Conversely, instrumental merit is a useful tool for achieving competence in government regardless of type of regime.

Societal definitions of merit through much of recorded history have been restrictive in terms of class and status and thus inimical to social movement. Since the latter part of the twentieth century, this has led to an antagonistic relationship of equal opportunity to merit-based employment systems because such systems are frequently viewed as discriminating against less-advantaged segments of society. If such discrimination does occur, then the opportunity that is implicit in merit theory is in fact not equal (Roemer 2000).

Nonetheless, the basic philosophical premise of merit is recognition of ability wherever found in the society. This is potentially regime changing and socially revolutionary as demonstrated by the development of merit-based systems in the United States, Great Britain, and France in the nineteenth century, and in Japan in the early twentieth century. The socially restrictive aspects of merit-based systems are due not to the basic premise of merit but, rather, to the hierarchical structure of societies and the rigidity and exclusionary nature of the implementing mechanisms.

ORIGINS AND EVOLUTION OF THE MERIT CONCEPT

The origin of the concept of merit in both Eastern and Western culture has ancient roots, preceding its dynamic emergence in the nineteenth century as a significant political and social force. In Asia, the origin of the merit concept is found in the *Analects* of Confucius (c. 551–479 BCE), and the subsequent interpretation of Confucian doctrine through centuries of dynastic change in China. Merit became institutionalized in traditional Chinese and Korean political cultures by the creation and implementation of rigorous examination processes for the selection of entrants into official positions; however, in practice, success in the examinations was almost entirely limited to upper-class candidates. Since 1950, the Peoples Republic of China has alternatively weakened and then strengthened the use of examinations for appointment to office. The turmoil has fostered a greater degree of political influence and greater inclusion of individuals with worker and

peasant backgrounds in the appointment process (Klitgaard 1986, pp. 10–32).

In Tokugawa, Japan (1603–1868), the Confucian merit concept was recognized, but access to official positions was confined to the samurai class. Within a few years after the Meiji restoration in 1868, the merit principle was instituted as the basis for office, and access to a competitive process was substantially broadened (Koh 1989). The erosion of social and economic barriers was a necessary component of Japan's successful impulse to modernization and industrialization.

In Western culture, the origin of the merit concept is found in pre-Socratic Greece with the early identification of valued virtues and excellences (*arete*) (Adkins 1960). The ideal of merit found expression in, among other texts, the funeral oration of the statesman Pericles (c. 495–429 BCE) as related by Thucydides (d. c. 401 BCE), in Plato's *Republic* and *Gorgias*, and in Aristotle's (384–322 BCE) *Politics*. The normative power of the concept was assumed by the Roman Republic and ultimately defined by Cicero (106–43 BCE) in his *De Officiis*, ironically as the republic was dissolving in chaos.

After the fall of the Roman Republic, merit as a primary political value declined and virtually disappeared for seventeen centuries. The values that predominated for government service became those of servitude and obedience to the ruler, as outlined by Niccolò Machiavelli (1469–1527) in *The Prince* (1513, chap. 22) and Thomas Hobbes (1588–1679) in *Leviathan* (1651, chap. 23). To be sure, ability remained a factor, but subservient to obedience. For example, Oliver Cromwell's (1599–1658) brief English Republic (1649–1660) did not change the royal practice of awarding office on the basis of the "unholy three P's—Patrimony, Patronage, and Purchase" (Aylmer 1973, p. 61). This practice continued in Britain until the mid-nineteenth century.

Beginning in the late eighteenth century, the merit concept reemerged and developed both as a moral imperative and as a practical necessity. The philosophy of the Enlightenment and the new production systems of the Industrial Revolution demanded rationalism in the staffing of governmental enterprise by demonstrably competent people. No longer would nepotism and patronage suffice. The endorsement and application of merit as a primary value in staffing governmental positions became a necessary condition for national modernization and commercial and social progress. By the mid-twentieth century, the merit concept, with its implementing processes, was dominant in developed societies around the world.

In recent years, the definition of merit has changed to meet current societal and political trends. In a new time of postmodernism and postindustrialism, the established value and practices of merit have been altered as political leadership in democracies around the world has attempted to secure greater control over public bureaucracies through politicization of the appointment process (Peters and Pierre 2004). In many ways, this is a regression to earlier formulations of the primacy of political obedience over the rationality and morality that is inherent in the concept of merit-based civil service. Once again, responsiveness and obedience have become primary values. Merit practices have remained viable in their instrumental meaning as continuing emphasis is placed on performance measurement; however, substantive merit is in decline (Heclo 2000; Lane and Woodard 2001). In the long view, these developments are not unprecedented, nor do they alter the fact that the merit concept is an enduring value grounded in the very origins of both Eastern and Western civilization.

SEE ALSO *Affirmative Action; Discrimination; Meritocracy; Stratification*

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MERIT GOODS

The concept of merit wants or merit goods was first proposed by Richard A. Musgrave (1910–2007) in 1957 in an article on budget determination in *FinanzArchiv* ; he revisited the concept in his *Theory of Public Finance* in 1959. For Musgrave, merit goods are goods that are "considered so meritorious that their satisfaction is provided for through the public budget, over and above what is provided for through the market and paid for by private buyers" (1959, p. 13; Musgrave 1998). Musgrave identified education, free school lunches, low-cost housing, and health care as important and common examples of merit goods.

While Musgrave coined the term *merit goods*, he was by no means the first to propose a role for the government in the provision of education. Adam Smith (1723–1790) was concerned in the *Wealth of Nations* (1776) with the dulling effect of the deepening division of labor on the intellectual faculties of the common people, and he promoted public provision of education as a remedy to the situation (Smith [1776] 1937, p. 737). Later, in the middle of the nineteenth century, John Stuart Mill (1806–1873) argued that:

> Any well-intentioned and tolerably civilized government may think, without presumption, that it does or ought to possess a degree of cultivation above the average of the community which it rules, and that it should therefore be capable of offering better education and better instruction to the people, than the greater number of them would spontaneously demand.… The case is one to which the reasons of the non-interference principle do not necessarily or universally extend. (Mill [1848] 1970, p. 318)

While seeking to justify government provision of education, Mill at the same time denied the legitimacy of government monopoly in education (Mill [1848] 1970, p. 320).

Merit goods have had a somewhat contested position in economics, but perhaps less so in policy practice. The traditional economic view of governmental tasks involving public good provision (later resource allocation), redistribution, and stabilization did not leave an easy niche for the provision of merit goods. Merit goods are "private goods" in the sense that their consumption is rival and exclusion from them is easy. Therefore, merit goods can be and often are privately provided on the market, which for many raises the question of why they should be provided publicly. The provision of merit goods also overrules consumer preferences and thus bypasses consumer sovereignty as a normative cornerstone of economic policy (McClure 1968). But this view sanctifies markets as the way to generate a social welfare function: Other ways to do so include collective decisions in representative democratic decision-making arenas.

One argument for the involvement of the government in the provision of merit goods is based on the view that, due to imperfect information, irrationality, or other reasons, people's preferences regarding merit goods can be ill-informed to serve their own best interests (Head 1966). In this light, overriding the preferences of, for example, deprived groups in the society may benefit them. A second argument treats the provision of merit goods as in-kind redistribution that expands the transfer recipients' consumption of goods that are identified as important by those who are funding the transfers. A third argument reconciles the notion of merit goods with standard welfare economics. It suggests that the consumption of certain goods involves positive (or negative) externalities, which justifies their subsidized (or taxed) provision in the name of maximization of social welfare (Culyer 1971). Yet another explanation, albeit not necessarily a justification, of merit goods is that their provision may enhance the utility of those who impose their "nosy" preferences on others.

A common criticism of public provision of merit goods is that they are inefficient public substitutes for goods that could be provided more efficiently privately. However, on this issue the jury seems to be out. Some studies have concluded that public provision of merit goods is substitutive (diminishing) of private provision of the same goods, while other studies have found that public and private provision are complementary (Fiorito and Kollintzas 2004). This means that public provision of merit goods increases the consumption of privately provided goods. Merit good provision accounts for a significant proportion of the gross domestic product (GDP) and

government expenditure in developed countries that have substantial welfare states. Many European countries spent about 9 to 15 percent of their GDP on the provision of merit goods in the 1990s. Merit good provision made up about two-thirds of government consumption, an element of government expenditure that excludes transfers, public investments, and interest payments (Fiorito and Kollintzas 2004). The rest was used to provide public goods. Education and health care are the most significant merit goods from an expenditure point of view. However, their public provision does not necessarily mean public production: Public provision can be based on private production. For example, nonprofit organizations such as the Church of England offer free primary education with state support in the United Kingdom. Similarly, in a number of countries, national health-insurance schemes rely in part on private health-care service producers.

SEE ALSO *Education, USA; Externality; Markets; Mill, John Stuart; Public Goods; Social Welfare Functions; Welfare Economics*

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Jouni Paavola

MERITOCRACY

Meritocracy refers to a social system in which individuals advance and earn rewards in direct proportion to their individual abilities and efforts. The term *meritocracy* was coined by British sociologist Michael Young (1915–2002) in his book, *The Rise of the Meritocracy, 1870–2033: An Essay on Education and Equality* (1958). The book is a satirical novel about a futuristic society in which elites and leaders ascend to positions of dominance and authority based on their scores on intelligence and effort tests (I + E = M, where I = intelligence, E = effort, and M = merit). In this imagined society, tests have been devised that accurately and precisely identify the most capable and competent individuals within the total population. Young's portrayal of a meritocracy is necessarily futuristic, because no such society has been realized anywhere in practice. In every known human society, nonmeritocratic factors such as seniority, inheritance, nepotism, favoritism, discrimination, and sheer randomness either wholly or partially determine who is in charge.

The neologism, meritocracy, created for Young an implicit juxtaposition with the term *aristocracy*. While aristocracy characterizes a system in which statuses are ascribed, meritocracy characterizes a system in which statuses are achieved. As societies industrialize, there is a gradual shift away from ascription toward achievement, however incomplete. Merit is widely seen as inherently fair, because under such a system individuals get what they deserve based on their contributions to society. Such a system is also seen as inherently efficient because it results in an optimum match between the collective tasks in society that need to get done and the available pool of talent needed to perform them.

While seemingly fair on the surface, Young portrays a system of meritocracy that ultimately degenerates into an oppressive regime. In Young's future meritocracy, elites become arrogant and ruthless in the pursuit of their own ends while remaining callous or indifferent toward the needs and suffering of those they dominate. Self-assured in their own sense of inherent superiority, the elite feel smugly justified in their subjugation of the masses.

In a later reflection in 1998, Young noted that he wrote *The Rise of the Meritocracy* based on the model of Aldous Huxley's *Brave New World*. *Brave New World* (1932) depicts a future eugenic "World State" in which individuals are bred into one of five castes that, in turn, are assigned tasks consistent with their programmed capacities. The World State functions in essence as a meritocracy, albeit a biologically engineered one. In this futuristic world order, war, poverty, and other social ills have been eliminated. With nothing to fight over or worry about, individuals are free to derive pleasure from promiscuous sex and recreational drug use. Doped and duped into submission and complacency, however, individuals are systematically deprived of both individual freedom and intellectual curiosity. As with Young's imagined meritocracy, there is a devastating price to pay for life in

Huxley's *Brave New World*—giving both novels an ironically dystopian quality.

EMPIRICAL DEBATE

These novels have drawn attention to the empirical debate about whether or not or to what extent meritocracy has been realized in advanced industrial societies. Several prominent books have since made the case for a rising meritocracy. In *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (1976), Daniel Bell contends that advanced industrial countries are moving beyond an industrial to a postindustrial stage of development. Postindustrial societies are characterized by a shift from goods production to service production, with an increasing premium on scientific and technical knowledge. Bell posits that a new knowledge class centered in universities is gradually replacing business and propertied elites that dominated in the industrial era. Similarly, in *The Bell Curve: Intelligence and Class Structure in American Life* (1994), Richard Herrnstein and Charles Murray suggest that barriers to mobility based on innate talent in advanced societies such as the United States have mostly been eliminated and that a new cognitive elite is emerging. Herrnstein and Murray argue further that intelligence is largely genetically inherited and differences in intelligence are principally responsible for differences in socioeconomic status. Others, such as Paul Kamolnick (2005) and Peter Saunders (1996), have made similar arguments.

Some critics (Arrow, Bowles, and Durlauf 2000; Breen and Goldthorpe 1999, 2002; McNamee and Miller 2004; Oliver and Shapiro 1995), however, have countered that nonmerit factors still largely determine social outcomes. These nonmerit factors include the influence of family background and economic inheritance, social networks, discrimination, the number and types of jobs available in society as a whole, and random luck. Economic inheritance, broadly defined as initial social class placement, is chief among these nonmerit factors. Nonmerit advantages are passed on in varying degrees to children from families with more relatively privileged backgrounds. Parents with the most resources can invest the most in securing their children's futures. To the extent that parents are successful in advancing the futures of their children through educational and other investments, meritocracy does not exist.

Discrimination in its varying forms is also antithetical to meritocracy. In an attempt to redress the effects of past and present forms of discrimination, various affirmative action initiatives have been adopted in advanced industrial societies. These measures, however, have themselves been labeled as reverse discrimination, to the extent that they are perceived as giving preferential treatment to so-called protected classes, especially women and racial minorities.

Central to this empirical debate is what is meant by merit and the extent to which merit factors are genetically innate or culturally acquired. It is generally acknowledged, for instance, that intelligence as measured by intelligence quotient (IQ) tests, reflects an interplay of both innate intellectual capacities and learned experiences. Beyond intelligence, other talents such as artistic creativity or athletic prowess are also probably the result of combinations of innate capacity and learned experience. Whatever innate talents or capacities that individuals have are of no use unless put into effect. And as Young initially noted, effort, apart from capacity, is also relevant to merit. In addition, social skills might in some circumstances be considered individually meritorious. Other acquired skills, knowledge, or experience could also be considered meritorious, even though the opportunity to acquire such traits is typically not equally available to all. Finally, merit has also been associated with particular attitudes or values such as diligence, perseverance, and willingness to take risks and defer gratification. It is not always clear, however, how these attitudes are acquired, how they might be causally linked to achievement, or how they interact with other factors in predicting outcomes.

The weight of the evidence suggests that both merit and nonmerit factors influence social and economic outcomes in advanced industrial societies. On the one hand, broad historical trends in industrialized societies toward a decline in overt discrimination and wider access to education have no doubt contributed to greater individual opportunity and prospects for mobility. On the other hand, the persistent and substantial influence of family background and economic inheritance, the effects of past and continued discrimination, social networks, randomness, and other structural barriers to individual mobility means that meritocracy is still far from being fully realized.

SEE ALSO *Affirmative Action; Discrimination; Equality; Meritocracy, Multiracial; Social Status*

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Stephen McNamee

MERITOCRACY, MULTIRACIAL

Singapore is unusual among developed capitalist countries because its social system and its system of governance rest on the twin principles of multiracialism and meritocracy.

Multiracialism in this context is not the same as multiculturalism as it is usually understood. In Singapore, multiracialism refers to the conceptual division of society into discrete communal groups and the conviction that the only way to ensure peace, stability, and fairness between and among these groups is through close government management of communal relations and affairs. It is presumed that without heavy-handed interference the Chinese (76.8% of the population) would oppress the minority Malays (13.6%), Indians (8.7%), and others (2.1%), and that the minorities—especially the Muslim community (14.9%, mostly Malays)—would be a disturbing, if not a seditious, influence. Concerns about racial harmony are reinforced by the undisputed existence of a racial hierarchy in educational, professional, and financial achievement, in which Chinese lead, followed by Indians and then Malays.

R. Quinn Moore argued in 2000 that the operation of multiracialism has itself perpetuated and reinforced the communal divides by insisting that people see themselves and operate as members of their ethnic communities. This is achieved through the operation of race-and-religion-based self-help groups, race-based quotas in public housing estates, and language-cum-race-based allocation of resources and places in education (with Chinese receiving most resources). Michael D. Barr and Jevon Low went further in 2005, arguing that since the beginning of the 1980s the operation of multiracialism has acted as a cover for a deliberate policy of privileging the Chinese majority. They also argued that since about 1978 the nation-building mythology has been increasingly based on a Chinese-centered ethno-nationalism that the minorities can only mimic from the sidelines, and that this has replaced racially blind civic nationalism as the social foundation of the country.

Multiracialism operates in close harmony with meritocracy, between them assuring the minority communities that the system is fair to all regardless of race, religion, language, or socioeconomic background. The Singapore system of "meritocracy" rewards people on the basis of their academic performance in school. The government claims that selection into the economic, administrative, and political elites in adulthood is based on a level, "meritocratic" playing field, but these claims do not withstand close scrutiny. The socioeconomic status of one's parents is of tremendous importance in determining success in school, and scholars such as Lily Rahim (1998) have demonstrated unequivocally that there is no level playing field across ethnic boundaries, with Chinese children enjoying immense advantages.

It would be misleading, however, to suggest that this program sets out to create an economic or social underclass of minority races. Alongside discrimination in favor of the majority Chinese, the minorities are cajoled and coaxed to become more "like the Chinese" and so to share more fully in the fruits of this prosperous society. They are not under pressure to adopt the outward manifestations of being Chinese (diet, religion, language), but they are pressured to adopt a set of supposedly superior values that are routinely identified with Singapore's Chinese population: being materialistic, concerned with education as measured by grades and certificates, obsessively concerned with social mobility and, above all, being *kiasu*—a Chinese word meaning "afraid to lose." Children are pressured to immerse themselves in these values from nursery and kindergarten onward. Indian and Malay children who succeed under the system of meritocracy and who are successfully assimilated are appointed in adulthood as leaders of their communities, ensuring that the minorities are led by people who have a stake in maintaining the status quo.

Yet the irony is that even members of minority communities who immerse themselves in these values still suf-

fer discrimination and marginalization because of their race, sometimes because of their ethnic dress (especially Muslim women wearing headscarves), and—most commonly—their language. Language is highly significant because this element arises as a direct result of the operation of multiracialism itself, whereby members of minority communities are generally not given an opportunity to learn Mandarin (the language of the dominant majority) in school and are forced to learn their racially ascribed mother tongue in an effort to reinforce their communal identities. These minority languages (Tamil and Malay) are of little economic value and make Indians and Malays vulnerable to social and economic exclusion from mainstream society (though the effects of this policy are diluted by the promotion of English as a lingua franca across the communal divide). Prime Minister Lee Hsien Loong, who took office in 2004, hoped to discourage discrimination in the workplace on the basis of race, dress, or language, but he was unwilling to consider an end to the language policies and the celebration of "Chinese values" that generated the problem in the first instance.

The Singapore example indicates how policies of assimilation and discrimination against ethnic minorities can be pursued in a modern capitalist society without either lapsing into overt persecution or provoking destabilizing reactions.

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Michael D. Barr

MERRIAM, CHARLES EDWARD, JR.
1874–1953

Charles E. Merriam Jr. was a key figure in the development of the political science profession. He combined groundbreaking analytic, systematic, and objective social science approaches to research concerning pragmatic national and community problems. Merriam was professor of political science at the University of Chicago from 1900 to 1940, and emeritus after, and his chairmanship of that department from the early 1920s to 1940 laid the foundation for the behavioral movement in political science. This movement developed theoretical approaches based on principles of observation, hypothesis testing, and measurement to study individual and group political activities. Further, these systematic approaches to government activities led to an enhanced study of public administration. Both of these political science research areas—behavioral movement and public administration—remain prominent in political science studies.

He held many leadership roles in the political science profession, including president of the American Political Science Association (1925), cofounder and president of the Social Science Research Council (1924–1927), and cofounder of the Public Administration Clearinghouse in the first quarter of the twentieth century. The latter two organizations brought together a wide range of public and private experts to address critical societal issues.

Merriam argued that political science research should connect academic and practical matters to solve problems stemming from democratic political systems. His initial foray was in the realm of political thought through a study of the theory of sovereignty since Jean-Jacques Rousseau and studies in the development of U.S. political thought. Merriam focused on dimensions of political power ranging from political party leaders to public and private governing systems. These ideas led him to promote and conduct research on progressive ideas during the post–World War I era, such as reforming urban political machines, urban and regional planning, and democracy based upon citizen participation. His focus on and participation in urban politics, especially the rough-and-tumble politics of Chicago, enhanced his research in several areas of political science, such as political parties in the United States, the role of politics in social change, and public administration. His systematic understanding of politics and political change, based on new developing social science methodologies, was the basis of his research and often led to progressive prescriptions for civic reform and social change.

Merriam was a regular participant in public affairs, both in Chicago and in key national commissions during the Hoover, Franklin Roosevelt, and Truman presidencies. In Chicago he was an alderman and served on several investigating commissions that attempted to develop responsible governmental approaches to social programs that would replace corrupt government practices. Merriam relied on his progressive politics in an attempt to become mayor of Chicago, but he was defeated in the

1919 Republican mayoral primary. He applied these participatory experiences to understand complex interactions in the political process, especially how public administration practices affect governmental outcomes. Merriam's national prominence was enhanced by his service on President Hoover's Research Committee on Social Trends, President Franklin Roosevelt's National Resources Planning Board, and President Truman's Committee on Administrative Management (the Brownlow Commission). The latter commission held key debates concerning executive office reorganization. This national commission service allowed Merriam to apply political science research to central national issues and social change. He also sought to connect university research to public administration practices.

Merriam conducted a career that combined the development of an academic political science discipline, active citizen involvement, and proposals to reform of municipal and national government. In 1975 the American Political Science Association awarded its first Merriam Award, for "a person whose work and career represent a significant contribution to the art of government and social science research."

SEE ALSO *Chicago School*

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Steven Puro

MERTON, ROBERT K.
1910–2003

Robert K. Merton was the founder of the sociology of science and one of the twentieth century's most influential sociological theorists. Born Meyer R. Schkolnick to poor Jewish immigrants in South Philadelphia, Merton was part of an extraordinary generation of sociologists whose work shaped the basic contours of the discipline in the mid-twentieth century.

Merton eschewed the building of grand theoretical systems in favor of what he called "middle-range theories," explanations that transcend mere hypotheses, are designed to guide and be improved by empirical inquiry, and are potentially compatible with multiple larger theoretical systems. Thus, extending the idea of reference groups, he showed restricted interpersonal comparisons to be basic to judgments on a variety of matters from job satisfaction to educational choices, and to be no more specific to functional analysis than to Marxism. Likewise, the theory of bureaucracy originally introduced by Weber could be advanced by either structural or functional analysis. Merton emphasized the distinction between "manifest" and "latent" functions to clarify the contrast between analyzing intentions and consequences and to make functional analysis more precise. He also integrated analysis of social conflict into structural-functionalist analysis.

As a student at Harvard, Merton joined Talcott Parsons's first sociology seminar and participated alongside Parsons (and George C. Homans, Joseph Schumpeter, Crane Brinton, and Elton Mayo) in Lawrence J. Henderson's famed Pareto reading group. Pareto's idea of "motivating sentiments" was an enduring influence. Merton's main mentors, however, were Pitirim Sorokin and George Sarton. Under their tutelage, he helped found the sociology of science.

Merton argued that science is misunderstood as the product of individual geniuses able to break free from conventions and norms. Instead, he stressed the "ethos of science," the normative structure specific to the field that encouraged productivity, critical thinking, and pursuit of continually improved understanding. His dissertation, published as *Science, Technology and Society in Seventeenth Century England* (1938a), also introduced the famous "Merton thesis." Narrowly, this was that "Puritanism, and ascetic Protestantism generally, emerges as an emotionally consistent system of beliefs, sentiments and action which played no small part in arousing a sustained interest in science" (Merton 1938a, p. 495). More broadly, Merton argued that social and cultural factors (including religion, economics, and military pursuits) shaped interest in science, scientific problem choice, and the public reception and influence of science. He resisted, however, the relativist conclusion that such external influences so shaped the internal content of science as to undermine its truth value.

Working with his Columbia colleague Paul F. Lazarsfeld, Merton studied a range of policy questions from housing integration to medical education. He also carried out studies of propaganda and mass communications during World War II and wrote the classic *Mass*

Persuasion (1946). Merton and Lazarsfeld also played crucial institutional roles, training generations of students at Columbia and helping found the Center for Advanced Study in the Social and Behavioral Sciences.

Merton's contributions shaped not only the sociology of science and the general perspective of structural-functionalism but also a range of specific empirical fields, including the analysis of bureaucracy, deviance, and social psychology. He showed how social structure produced anomic responses in individuals whom the social structure deprived of resources for more normatively approved action and analyzed deviance as the pursuit of normative objectives by normatively disapproved means. In the course of his simultaneously theoretical and empirical analyses, Merton coined such now common phrases as "self-fulfilling prophecy," "role model," and "the unanticipated consequences of purposive social action" (1968, 1936).

Merton not only coined but studied memorable phrases and the patterns of association and evocation in which they were passed on—not least as they informed scholarly reference and the development of reputations. One of his most famous books traced the sentence "If I have seen farther it is by standing on the shoulders of giants" through centuries of use. The phrase was most commonly associated with Sir Isaac Newton, but what Merton showed with dazzling erudition and more than a few entertaining digressions was that the aphorism originated with Bernard of Chartres in the twelfth century. This corrected not only those who cited merely Newton but those who credited the phrase to ancient authors, including apparently nonexistent ancient authors, perhaps thinking thereby to accord it greater dignity and impress readers with their Latin references.

Merton continued to address the relationship between the first appearances of ideas and the occasions when they begin to have more serious influence, noting how many basic scientific advances were anticipated by "prediscoveries" that failed to change the way scientists thought. The role of chance connections—serendipity—in scientific breakthroughs became another enduring focus for Merton's boundless curiosity and careful scholarship (Merton and Barber 2004). But Merton was ambivalent about the many offspring of one of his own most famous innovations. With Marjorie Fiske and Patricia Kendall (1956), he invented the "focused group interview" that gave rise to the now ubiquitous and not always systematic focus groups of political and market research.

From the 1970s, the sociology of science turned in large part away from the study of institutions and toward microsociology of scientific practice. Many in the field were critical of Merton's emphasis on the norms of science because they saw these often violated. More generally, structural-functionalism was challenged by a variety of perspectives placing greater stress on self-interest and conflict. Merton's work was often cited as emblematic of the now diverted "mainstream," though this was somewhat ironic because among leading functionalists he was particularly attentive to dysfunction, historical change, and conflict. Late in his life he worried that the approach of many in science studies was one-sidedly focused on debunking and sufficiently relativist that it made it hard to see the importance of the relative autonomy of science as a social institution.

SEE ALSO *Deviance; Functionalism; Lazarsfeld, Paul Felix; Pareto, Vilfredo; Parsons, Talcott; Persuasion; Propaganda; Role Models; Science; Social Science; Sociology*

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Craig Calhoun

MESMER, FRANZ ANTON

SEE *Psychotherapy.*

MESO-AMERICA

SEE *Pre-Columbian Peoples.*

MESTIZO/MESTIZAJE

SEE *Blackness; Identification, Racial; Racial Classification.*

META-ANALYSIS

The American educational psychologist Gene V. Glass (1976) coined the term *meta-analysis* to stand for a method of statistically combining the results of multiple studies in order to arrive at a quantitative conclusion about a body of literature. The English statistician Karl Pearson (1857–1936) conducted what is believed to be one of the first statistical syntheses of results from a collection of studies when he gathered data from eleven studies on the effect of a vaccine against typhoid fever (1904). For each study, Pearson calculated a new statistic called the *correlation coefficient*. He then averaged the correlations across the studies and concluded that other vaccines were more effective than the new one.

Early work on quantitative procedures for integrating results of independent studies was ignored for decades. Instead, scholars typically carried out narrative reviews. These reviews often involved short summaries of studies considered "relevant," with the operational definition of that term usually based on arbitrary and unspecified criteria. Scholars would then arrive at an impressionistic conclusion regarding the overall findings of those studies, usually based largely on the statistical significance of the findings in the individual studies. This latter aspect of narrative reviews is especially problematic. Given that the findings from individual studies are based on samples, it is expected that they will vary from one another even if the studies are estimating the same underlying population parameter. Often, however, scholars misinterpreted expected sampling variability as evidence that the results of studies were "mixed" and therefore inconclusive. In addition, scholars generally did not think to account for the power of the statistical tests in their studies. In the social sciences, statistical power is often not high, resulting in an unacceptably high rate of Type II errors (i.e., the failure to reject a false null hypothesis). In a collection of studies with typical statistical power characteristics, ignoring power can lead to the appearance that the intervention has no effect even if it really does.

Further, narrative reviews were usually not conducted with the same level of explicitness as is required in primary studies. For example, scholars were rarely explicit about either the decision rules invoked in a review or the pattern of results across studies that would be used to accept or reject a hypothesis. In addition, narrative literature reviews typically could not impart a defensible sense of the magnitude of the overall relations they investigated, nor did they adequately account for potential factors that might influence the direction or magnitude of the relations.

The explosion of research in the social and medical sciences that occurred in the 1960s and 1970s created conditions that highlighted another of the difficulties associated with narrative reviews, specifically that it is virtually impossible for humans to make sense out of a body of literature when it is large. Robert Rosenthal and Donald Rubin (1978), for example, were interested in research on the effects of interpersonal expectancies on behavior and found over three hundred studies. Glass and Mary L. Smith (1979) found over seven hundred estimates of the relation between class size and academic achievement. Jack Hunter and his colleagues (1979) uncovered more than eight hundred comparisons of the differential validity of employment tests. It is not reasonable to expect that these scholars could have examined all of the evidence they uncovered and made decisions about what that evidence said in an unbiased and efficient manner.

Meta-analysis addresses the problem of how to combine and weight evidence from independent studies by relying on *effect sizes* and on statistical procedures for weighting research evidence. Effect sizes are statistics that express how much impact an intervention had (e.g., the average increase on an achievement test), and as such, they give reviewers a way to quantify both the findings from individual studies and the findings aggregated across a body of studies. Effect sizes can also be standardized to allow for comparisons between measures of the same outcome with different scaling properties (e.g., two different math achievement tests).

Effect sizes with known distribution properties can be weighted to arrive at a better estimate of the population parameter when they are combined. The most common method involves weighting each effect size by the inverse of its squared standard error. Using this method, larger studies contribute more to the analysis than do smaller studies. As such, a study with one hundred participants contributes more to the overall analysis than a study with ten participants. The rationale for this procedure is that the study with one hundred participants estimates the population effect more precisely (i.e., has less random variability) and is therefore a better estimate of that population effect.

To carry out a meta-analysis, an average of the weighted effect sizes is computed. A confidence interval can be placed around the weighted average effect size; if the confidence interval does not include zero, then the null hypothesis that the population effect size is zero can be rejected at the given level of confidence. In addition, scholars usually conduct a statistical test to assess the plausibility that the observed effect sizes appear to be drawn

from the same population. If the null hypothesis of effect size homogeneity is rejected, then the reviewer has reasonable cause to conduct follow-up tests that attempt to localize the sources of variation. Generally, these correlational analyses attempt to relate variability in study outcomes to characteristics of interventions (e.g., intensity), as well as to study design, sampling, and measurement characteristics.

Finally, representing study results as weighted effect sizes allows scholars to conduct tests of the plausibility of *publication bias* on study results. Publication bias is the tendency for studies lacking a statistically significant effect not to appear in published literature. Therefore, these studies are more difficult to uncover during a literature search. All else being equal, studies that do not result in a rejection of the null hypothesis have smaller effects than those that do reject the null hypothesis. As such, failing to locate these studies at a rate similar to that of published studies means that the overall estimate arising from a body of studies might be positively biased. Several statistical methods (e.g., the trim-and-fill analysis) are available to help scholars assess the potential impact of publication bias on their conclusions.

SEE ALSO *Methods, Quantitative*

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Jeffrey C. Valentine

METAPHOR

SEE *Symbols.*

METAPHYSICS

SEE *Philosophy; Reality.*

METHOD VARIANCE

SEE *Self-Report Method.*

METHOD OF MOMENTS

Both the method of moments and its generalization, namely the generalized method of moments (GMM), have taken a prominent place in statistical inference in the social sciences and have been applied in almost every field of economics, including asset pricing, business cycle, commodity market, education, and labor market. The (standard) method of moments consists of estimating a parameter β by equating sample moments with population moments and solving these equations for β. This method was introduced at the end of the nineteenth century by the British mathematician Karl Pearson and was partly abandoned when the British biologist Ronald Fisher (1890–1962) showed that the maximum likelihood estimator (MLE) is more efficient than the method of moments estimator because its variance is smaller. Since its introduction by Lars Peter Hansen in 1982, however, GMM has been extremely popular in economics for three reasons. The first reason is that economic models are often too complex to be completely specified and an attempt to describe the full model is likely to yield misspecification errors. GMM provides a way to estimate partially specified models. The second reason is that, even if the model is completely specified, MLE may be too cumbersome to implement, whereas GMM provides a practical method to perform inference. Finally, GMM embeds many familiar estimation techniques as special cases, including the method of moments, ordinary least squares, instrumental variables estimation, and even maximum likelihood estimation.

THE ESTIMATION METHOD

GMM may be illustrated in a time series context where observations $x_1, x_2, \ldots, x_T$ are available. Assume that for a given function g, the moment condition $E[g(x_t,\beta)] = 0$ holds for a unique solution β. To solve this equation, the population mean needs to be replaced by the sample mean $g_T(\beta) = \frac{1}{T}\sum_{t=1}^{T} g(x_t,\beta)$. Two cases are distinguished, depending on whether the dimension of g is the same as or larger than the dimension of β. In the first case (just

identified), the equation $g_T(\beta) = 0$ can be solved to obtain the method of moments estimator of β. In the second case (overidentified), the previous equation does not have a solution and the standard method of moments needs to be modified. The GMM estimator is defined as the solution $b_T = \underset{\beta}{\operatorname{argmin}}\, g_T(\beta)' W_T g_T(\beta)$ where W_T is a positive definite matrix that attaches weights to moments. For any W_T, b_T is consistent, that is, it approaches the true value β as the sample size T grows. Additionally, the GMM estimator has minimal variance if W_T is an estimator of the inverse of the variance of $g_T(\beta)$.

In the overidentified case, $g_T(b_T)$ is not exactly equal to zero but should go to zero as T goes to infinity. This provides the basis for the overidentifying restrictions test. This test consists of rejecting the hypothesis that the moment conditions hold in the population if $Tg_T(b_T)' W_T g_T(b_T)$ is greater than the critical value given by a chi-square distribution with degrees of freedom equal to the difference in the dimensions of g and β.

GMM provides a framework that encompasses most estimation techniques used in economics. Instrumental variables estimation, although a predecessor to GMM, can be recast as a special case of GMM. Consider the regression

$$y_t = x_t'\beta + \varepsilon_t$$

where x_t is endogenous, that is, correlated with the residual ε_t. As a consequence of endogeneity, the ordinary least squares estimator is not consistent. A consistent estimator, however, may be obtained by using a vector of so-called instruments z_t. To be a valid instrument, z_t must be correlated with x_t but not with the error ε_t. Then, β can be estimated by GMM using $g(y_t, x_t, z_t, \beta) = (y_t - x_t'\beta)z_t$. The resulting estimator is called the instrumental variables estimator.

MLE itself can be interpreted as a GMM estimator because the expectation of the derivative of the log-likelihood is equal to zero, giving rise to a moment condition.

To overcome computational difficulties, Daniel McFadden (1989) and Ariel Pakes and David Pollard (1989) have proposed the method of simulated moments (MSM), which consists of replacing population moments with moments computed from simulated data.

MIXED POPULATION EXAMPLE

Consider a population where each subject is equally likely to be a male or a female. We observe a measure x (for instance, the weight) but not the sex and we wish to estimate the difference between males and females. This is particularly relevant in anthropology where most fossil specimens lack indicators of sex. Assume that observations are normally independently distributed with mean μ_F and variance σ^2 if the subject is a female and with mean μ_M and the same variance σ^2 if the subject is a male. The method of moments that matches the expectations of x, x^2, and x^4 with their sample counterparts permits to estimate μ_F, μ_M, and σ^2.

CONSUMPTION-BASED ASSET PRICING MODEL

Lars Peter Hansen and Kenneth Singleton (1982) explain how to apply GMM to estimate behavioral parameters of economic agents in a general equilibrium model, without having to describe the full economic environment. This approach may be used to study how agents allocate their spending. Consider an economy where a representative agent chooses consumption and investment plans so as to maximize $E\left[\sum_{i=0}^{\infty} \delta^i U(c_{t+i}) \mid \Omega_t\right]$, where c_t is consumption in period t, U is a utility function, δ is a discount factor, and Ω_t is the information at t. Maximization is performed under a budget constraint $c_t + p_t q_t = r_t q_{t-1} + w_t$ where w_t is the income, q_t the quantity of asset held at the end of period t, p_t the price of this asset, and r_t its return. The first order condition is

$$E\left[\delta \frac{r_{t+1}}{p_t} \frac{U'(c_{t+1})}{U'(c_t)} - 1 \mid \Omega_t\right] = 0.$$

Assume that $U(c_t) = (c_t^r - 1)/\gamma$. The parameter of interest $\beta = (\delta, \gamma)$ may be estimated by GMM using

$$g(r_{t+1}, p_t, c_{t+1}, c_t, z_t, \beta) = \left(\delta \frac{r_{t+1}}{p_t}\left(\frac{c_{t+1}}{c_t}\right)^{\gamma-1} - 1\right) z_t$$

where z_t is a vector of instruments. Any element of Ω_t may be used as instrument, for example the constant and

$$\frac{r_{t+1-j}}{p_{t-j}}, \frac{c_{t+1-j}}{c_{t-j}}, j = 1, 2, \ldots, L.$$

DISCRETE CHOICE MODEL

Consider a model where each individual has the choice among J alternatives (for example, occupations or means of transportation). The individual chooses the alternative with the greatest value. The value u_{ij} of occupation j for individual i depends on a set of observed variables x_{ij} (such as sex, race, age, and education) so that $u_{ij} = x_{ij}\beta^j + \varepsilon_{ij}$ where $\varepsilon_j = (\varepsilon_{1j}, \varepsilon_{2j}, \ldots, \varepsilon_{nj})$ is normally distributed with mean zero and covariance matrix Σ. We observe that individual i chooses alternative j, if $u_{ij} \geq u_{il}$ for $l = 1, \ldots, J$. The probability of choosing alternative j, denoted by P_{ij}, involves a $J-1$ dimensional integral. If J is large, this integral is cumbersome to compute and hence maximum likelihood estimation is intractable. By contrast, P_{ij} can be estimated using simulations. Let ε_j^r, $r = 1, \ldots, R$ be inde-

pendently drawn from a normal distribution with mean zero and covariance Σ, and let $u_{ij}^{\gamma} = x_{ij}\beta^{j} + \varepsilon_{ij}^{\gamma}$. Then, an estimate $\hat{P}_{ij}$ of P_{ij} is given by the proportion of cases where u_{ij}^{γ} exceeds u_{il}^{γ} for all l different from j. An MSM estimator of $(\beta^{1},\beta^{2}, \ldots, \beta^{J})$, is given by the solution to $\frac{1}{n}\sum_{i=1}^{n}\sum_{j=1}^{J} z_{ij}\left(y_{ij} - \hat{P}_{ij}\right) = 0$ where z_{ij} is exogenous (equal to x_{ij}, for instance).

SEE ALSO *Inference, Statistical; Instrumental Variables Regression; Large Sample Properties; Pearson, Karl*

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METHODOLOGY

The term *methodology* may be defined in at least three ways: (1) a body of rules and postulates that are employed by researchers in a discipline of study; (2) a particular procedure or set of procedures; and (3) the analysis of the principles of procedures of inquiry that are followed by researchers in a discipline of study. This entry will first discuss each of these definitions. It will then cover the debate among philosophers of science about general methodological assumptions. Finally, the entry will review some of the issues pertaining to the quantitative versus qualitative debate about methods.

A BODY OF RULES AND POSTULATES

Methodology refers to the behavior of scientists and scholars when examining phenomena relevant to their specific disciplines. The *American Heritage Dictionary* offers the following formal definition for *methodology:* "the theoretical analysis of the methods appropriate to a field of study or to the body of methods and principles particular to a branch of knowledge" (Pickett 2000, p. 2074). Methodology in the social sciences is usually characterized by the following: (1) it defines the information to be analyzed; (2) it provides the conceptual tools and procedures necessary to perform an analysis; and (3) it sets forth the limits of the analysis. Methodology necessarily encompasses the three facets of exploration, description, and explanation (Babbie 2001, p. 91).

When scholars undertake research projects, they usually follow a well-defined procedure known as the *research process.* The research process begins when a researcher determines his or her research topic and formulates the research question or questions. For example, the research question of a social scientist could be: Are minority children in the United States more profoundly effected by poverty than their white counterparts? Once the research question has been determined, it is necessary to construct a study design. This is where the researcher decides the type of research to be undertaken. In the social sciences, there are two broad types of research: quantitative and qualitative. The former relies on numerical and statistical techniques and data garnered through the analysis of large groups of subjects. The latter often involves in-depth interviews that are designed to probe and produce extensive information about small numbers of subjects. Inductive and deductive reasoning also come into play when the researcher decides to follow a predetermined framework for the duration of the project (deduction), or instead formulates the research question and allows the remainder of the research to unfold as it may (induction). Once the researcher has decided which method to use, the next step is to collect the data. Finally, the data are analyzed, interpreted, and put into a format accessible to others.

Many of the social science subfields (e.g., economics, psychology, sociology, etc.) have developed specific models for the collection and organization of knowledge. Economics and psychology were the first to develop mathematical models of inquiry. Many subfields have borrowed heavily from one another. Beginning around 1970, a general system of models for all the social sciences was developed following guidelines proposed by the Social Science Research Council (Hekman 1980). The social sciences have also borrowed heavily from statistics, as is evident in the quantification of information obtained in the research process.

A PARTICULAR PROCEDURE OR SET OF PROCEDURES

The social sciences use an assortment of research methods. These include, but are not limited to, experiments, surveys, field research, content analysis, analysis of existing data, comparative research, and evaluative research (Mouton and Marais 1988). Each of these types of analysis needs to be systematized.

The first and most important step in any methodology is the formulation of the research question. It is with this step that the researcher determines the direction and approach of analysis. This step involves exploration, is crucial to understanding the topic, gives an idea of the feasibility of the research, and identifies the methods to be used (Babbie 2001, p. 92).

Once the researcher determines what the research will entail, it is then necessary to address the study design. During this step, the *unit of analysis* is determined. The unit of analysis is often an individual or group of individuals that is sampled from the larger population to which the researcher wishes to generalize his or her findings. For example, if one's research were to focus on the above question concerning whether American minority children are more profoundly effected by poverty than white children, the appropriate unit of analysis would be the child, and a sample of children would be drawn from the larger population of minority and white children. In this example, the use of quantitative methods would be most appropriate and would enable the researcher to develop generalizations about the general population.

However, even if the researcher chooses to use inductive methods, it would still be necessary to address many of the above issues. The study design portion of the process would involve determining sample size, who or what should be studied, and how the study would be conducted. Researchers must create a framework for their study for a number of reasons, including the need to coordinate the activities of more than one researcher and to obtain funding, among other things.

The next step in the research process is the collection of the data. This is accomplished according to the framework that has already been prescribed. In a quantitative study, researchers will most likely use a survey or some other type of questionnaire. In qualitative research, a list of questions would probably be employed, along with less-structured interviews. An important function of scientific inquiry is description. Qualitative studies in particular enable the researcher to describe situations and events in detail.

After the research data have been collected and organized, it is necessary to undertake the analysis. This may include statistical analyses of data gathered via quantitative methods, or more straightforward descriptive analyses of data obtained via qualitative methods. The data are then interpreted and summarized so the results of the research will be more accessible and available to others. Explanation is the natural by-product of research, and researchers hope that their projects provide information that answers the original research question.

ANALYSIS OF PRINCIPLES

All methodologies include a system of analysis that is used as a backdrop for organizing, collecting, and interpreting data. Data are usually systematized through either inductive and deductive reasoning. In most research projects, the system of analysis is determined in the first step of the research process because the researcher must at that point choose how he or she intends to collect data. Deductive reasoning begins with the idea that the researcher has a predetermined framework and uses it as a model to guide the research (Mouton and Marais 1988; Babbie 2001). Inductive reasoning, on the other hand, allows the researcher to begin a project with a general question but without a clear outline or framework.

METHODOLOGICAL ISSUES IN THE PHILOSOPHY OF SCIENCE

One of the major issues when conducting social science research is validity. Some argue that the social sciences do not deal in empirical fact and as such are not as valid as the so-called hard sciences. It is believed that researchers are human and can therefore never be fully objective. Max Weber (1864–1920) argued for value-free sociology and urged researchers to contribute information free from subjective opinions (Mouton and Marais 1988; Weber 1962). This is a central debate in social science research. Many researchers strive to separate research from value judgments, and the idea behind quantification within the social sciences is a nod toward value-free judgments. In fact, the idea of creating a methodology with clear procedures and principles is the embodiment of the necessity to make the social sciences more objective in the eyes of the public.

Approaches to methodology in the social sciences generally fall into three categories: positivist, interpretive, and critical social science. William Neumann writes that the positivist approach is the most widespread and is based on the methods of the natural sciences. In the social sciences, this approach was first used by Auguste Comte (1798–1857) and was later expanded by Émile Durkheim (1858–1917) (Neumann 2003; Smith 1983). The positivist approach is most strongly linked to the quantitative realm of social science research and strives for objectivity. It is argued that only when the social sciences follow the models prescribed by the natural sciences can the findings be valid and reliable. According to Neumann, *positivism* as it relates to social science can be defined as "an organized method for combining deductive logic with precise empirical observations of individual behavior in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human activity" (2003, p. 71).

Interpretive social science originated with Max Weber and is focused on discovering the meaning behind social action. There are many facets of interpretivism, including hermeneutics, constructionism, ethnomethodology, and qualitative sociology. This school of thought argues that the social sciences cannot be analyzed using the methods of the natural sciences because they are inadequate for studying the meaning behind human behavior (Lee 1991). As stated previously, this approach focuses on meaning. As such, qualitative work is often considered an interpretive method. Neumann defines the interpretive approach as "the systematic analysis of socially meaningful action through the direct detailed observation of people in natural settings in order to arrive at understandings and interpretations of how people create and maintain their social worlds" (2003, p. 77).

Critical social science is associated with Karl Marx (1818–1883) and Sigmund Freud (1856–1939). Practitioners of this approach criticize the positivist approach for its inability to focus on meaning in the human context, and the interpretive approach for "being too subjective and relativist"(Neumann 2003, p. 81). Neumann defines this approach as "a critical process of inquiry that goes beyond surface illusions to uncover the real structures in the material world in order to help people change conditions and build a better world for themselves" (2003, p. 81).

QUANTITATIVE VERSUS QUALITATIVE ANALYSIS

Quantitative researchers are mostly concerned with measurement and sampling and often use deductive reasoning. In addition, it is important to identify facts and laws that can be used as predictive tools. In contrast, qualitative researchers tend to be more interested in content and use induction with more frequency (Neumann 2003). In this case, the meanings associated with human behavior are taken into consideration. Though quantitative and qualitative research differ in many ways, both types of research make important contributions that benefit the other. Quantitative research provides data in numerical form and allows for the manipulation of the data using statistical procedures. That information can then be combined with the descriptive data provided through qualitative research to provide more meaningful results.

Many social science researchers use both methods to provide fuller and more complete explanations. Indeed, since the 1980s, there has been a convergence of the two approaches, and many analyses use both methods (for examples in demography, see Massey 1987, 1990; and Knodel et al. 1987). The argument here is that qualitative research enriches purely quantitative research by filling in gaps created by the sole use of straightforward statistical methods. On the other hand, quantitative research can enhance qualitative work by providing validity in the form of numbers. And qualitative work can enhance quantitative work by providing detail in the explanation of certain trends that is not possible through a strict analysis of the numerical data.

Qualitative methods examine social data without quantifying the data. Qualitative researchers often examine the links between theory and analysis and seek to discover general patterns among and between their variables. Some of the methods involved in qualitative research include grounded theory, semiotics, and conversation analysis (Mouton and Marais 1988). Qualitative researchers more frequently use an interpretive or critical approach and are interested in allowing the meaning of their work to develop as they conduct more research. They are further interested in using their research to explain and predict. Their data usually take the form of words, rather than numbers, and such researchers most often reason via induction (Neumann 2003).

In contrast, researchers using quantitative methods seek to transform the collected data numerically so the data can then be analyzed using statistical methods. Quantitative researchers most often use a positivist approach because accuracy is an important requirement. The data are first described using measures of central tendency, such as the mean, median, and mode. In most cases, the quantitative researcher next moves to multivariate analyses that examine several variables simultaneously. Quantitative research begins with the formulation of a research question and then a hypothesis or hypotheses. The researcher then identifies and operationalizes the desired variables, creates a standardized data set, defines procedures with which to analyze the data, and finally undertakes analysis using the statistical methods described above.

SEE ALSO *Quantification; Scientific Method*

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METHODS, QUALITATIVE

Qualitative methodology is used by social scientists in the study of human behavior. This methodology may be used in addition to or in place of quantitative methods. The use of qualitative methods by social scientists allows the researcher to obtain a rich set of data that is not easily obtainable with the use of quantitative methods. Qualitative methods encompass a variety of methodologies, including observation, interviewing, document analysis, and archival document analysis.

OBSERVATION AND INTERVIEWING

Two key methods used in the social sciences are observation and interviewing. Observation involves the examination of research subjects in the natural social environment, with particular attention paid to the subject's behavior and actions. These observations are made firsthand by the researcher. An important element of observation is to study the subject's unmodified, natural behavior. Observational methods include several types of examination. Unobtrusive observation is one in which the researcher does not directly participate in the activities that are being observed. Unobtrusive measures are often used to prevent researcher influence on the subject's behavior. Participant observation allows the researcher to take part in the activities that are being observed and to gain familiarity with the subject's experiences. Researchers can become fully involved in the activities being observed or they may observe activities they are involved in themselves.

Adrian Holliday, in "What Counts as Data" (2002), creates a schema of the different types of data that may be collected and the methods in which they are collected. Data may include description of (1) behaviors, in which the researcher describes the subject's behaviors and verbalizations; (2) events, in which the researcher or the subject involved in the event describes the behaviors observed; (3) institutions, in which the researcher describes the rules, regulations, or rituals of the institution; (4) appearance, in which the researcher describes how the environment or the subjects in the environment appear; (5) research events, in which the researcher describes what subjects say or how they behave in the research setting, such as those occurring in interviews; and (6) settings, in which the researcher describes what is actually occurring in a particular setting. These types of data can be obtained through observation notes, research diaries, photographs, or video recordings.

The use of observation as a method of research is valuable for several reasons. Observation allows the investigator to study human behavior as it naturally occurs, with or without the researcher's influence on the behavior. In other words, human activity is observed without the filtering effects of the subject's interpretation of their interactions.

Interviewing involves direct interaction between the investigator and the research subject. The investigator speaks directly with the subject asking questions related to a specific topical area. Interviews are generally recorded utilizing audiotapes, videotapes, or written notations. Interviewing may take the form of structured or semi-structured interviews.

Andrea Fonatna and James H. Frey, in "The Interview: From Structured Questions to Negotiated Text" (2000), note that structured interviewing allows the researcher to ask targeted questions of the research subjects. This form of interviewing consists of a prepared series of questions asked of all subjects. The subjects' responses are limited, leaving little room for variation among the answers. The questions are directed at obtaining answers to specific topics of interest for the researcher. Semi-structured interviewing, by contrast, allows for more freedom of discussion with the subject and aims for a greater understanding of the subject. Questions are prepared to prompt topical areas of dialogue. The goal of these questions is to allow the subject to expand upon the question and reveal information that cannot be achieved with a structured interview.

Interviews have several benefits to research. They allow the researcher to discover the meanings of experience that subjects create in relation to the research topics.

Interviews provide richer understandings of human behavior by providing real-life examples.

METHODS OF ANALYSIS

Document analysis and archival document analysis are two additional methods utilized in qualitative analysis. Document analysis entails the study of photographs, diaries, newspapers, government documents, books, memorandums, and other written documents. Archival document analysis involves the study of historical documents, including historical examples of those listed above. Importance is placed on analysis of original documents, as opposed to photocopies or other reproductions. While this method allows access to difficult study subjects such as historical figures or societal elites, the study of documents does not allow the investigator to speak to the individual who has created the document. This may lead the investigator to theorize the meanings of the documents and the motivations underlying their creation. These types of studies require the researcher to hypothesize the relationship of the document to the social environment of the time.

The analysis of qualitative data includes a variety of methods, including grounded theory, narrative analysis, and computer-based approaches. As Kathy Charmaz notes in "Grounded Theory: Objectivist and Constructivist Methods" (2000), grounded theory involves an ongoing analysis of the data as it is collected. The data are coded as they are collected and categories begin to emerge. With these categories, theories begin to develop related to the data. These then guide further data collection.

Narrative analysis focuses on the narratives, or stories and experiences, of subjects. Through narrative analysis the researcher endeavors to understand the meaning attached to the experiences of the subject. The researcher may also analyze the specific words employed to describe these experiences.

Computer-based analytic approaches look to the burgeoning World Wide Web for new research subjects. Innovative research is being conducted on subjects found in a variety of Internet communities and through a variety of methods, including online chat rooms, online or e-mail based interviews, and document-type analysis of Web sites. These approaches allow the investigator to contact communities of individuals with similar interests and individuals located outside the investigator's region or around the world.

RESEARCH VALIDITY, RELIABILITY, AND ETHICS

The use of qualitative methods, however, can be challenging in several respects. As Valerie Janesick notes in "The Choreography of Qualitative Research Design" (2000), qualitative researchers have struggled to address issues of validity and reliability. These terms are used primarily in the interpretation of quantitative data, yet qualitative researchers too are called upon to adhere to these standards of research.

For research to be considered valid it must actually measure what it proposes to measure, and the results should reflect the activity being studied. In other words, the data should accurately reflect the topic being studied. The notion of validity as it relates to qualitative methodology differs from its understanding in quantitative methodology. As Janesick contends, validity in qualitative research asks whether the description and the explanation fit. In an effort to achieve qualitative validity, researchers may permit participants to review the data for accuracy or ask a fellow researcher to do so.

For research to be considered reliable it must yield similar results in subsequent tests. Quantitative reliability is achieved when results are found to be consistent in subsequent tests. Unlike qualitative studies, quantitative reliability is determined through the use of mathematical equations to determine reliability, such as the determination of alpha. Qualitative tests are considered reliable when similar findings are achieved in subsequent tests. However, some debate exists as to whether reliability is pertinent in conducting qualitative studies, particularly since qualitative studies target the meanings and interpretations of experience by the subject and may involve investigator bias. One argument made by some researchers, including Caroline Stenbacka, is that, owing to the nature of qualitative studies and their aim at understanding rather than explaining human experience, the reliability of qualitative research is difficult to assess. Other researchers, such as James F. Davis, Robert Hagedorn, Morton B. King, Jerome Kirk and Marc L. Miller argue that a form of reliability is achievable in qualitative research.

Ethical issues are a concern when using qualitative methods. The protection of the research subject is of the highest priority. Ethical concerns include whether or not the subjects should know they are being observed, how investigator involvement may influence the behaviors under study, how the investigator-interviewee relationship may influence research results, and the bias involved in interpreting qualitative data, as well as protection of subjects' identities.

In particular, the influence of the investigator on responses given by a subject in interview has been an ongoing concern. Subjects may provide answers they believe the interviewer prefers rather than providing their own unique answers. Subjects may construct answers due to a lack of knowledge of the topical area. Interviewers

may unintentionally influence the subject's answers through their body language, facial gestures, or other responses. As well as the information garnered from interviews is information that has been filtered and interpreted by both the subject and the researcher, calling into question the validity or reliability of the data obtained.

SEE ALSO *Ethnography; Methodology; Methods, Research (in Sociology)*

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METHODS, QUANTITATIVE

In the social sciences, quantitative research can be defined as any research that uses numbers as the basis for making inferences about the phenomenon under study. The hallmarks of quantitative research are control over extraneous influences (often involving experimental manipulation) and, more generally, statistical approaches to sampling, measurement, and data analysis. However, the simplicity of this general definition does not do justice to the full range of methodologies and data-analysis strategies that fall under the umbrella of quantitative research.

The goals of research represent a convenient way to discuss different types of quantitative research. Researchers employ a *descriptive research* strategy when they are interested in a numerical description of an object, event, or situation. For example, if a scholar were interested in the average class size of elementary schools in Spain, he or she might design a survey asking about the number of students and the number of classrooms (possibly among other variables) and send that survey to every elementary school in Spain. That researcher might also be interested in describing patterns of class sizes across different countries and parts of the world. Researchers employ a *relational research* strategy when they are interested in the extent to which two or more variables tend to cooccur. For instance, the scholar interested in class sizes may also be interested in the relationship between class size and the socioeconomic status of the neighborhood from which the students are drawn. One way to answer this question would be to survey schools and determine their average class size and the socioeconomic status of the surrounding neighborhood. The researcher could then compute a correlation coefficient that describes the magnitude of this relationship. Researchers employ an *experimental research* strategy when they are interested in causal relations. For example, a scholar might be interested in whether or not reducing class sizes will increase student achievement. One way to answer this question would be to randomly assign classrooms to be rather small or rather large, then measure student achievement after an appropriate interval of time. The performance of students in the smaller classes can then be compared to the performance of students in the larger classes.

A second useful distinction implied by the discussion above is between experimental and nonexperimental quantitative research. Experimental research is typified by the manipulation of a variable. For most questions that interest social scientists, the best way to explore the effects of manipulating a variable involves randomly assigning study participants to different levels of the variable, such as by randomly assigning a teacher to have a relatively large or a relatively small number of students. Nonexperimental research lacks this essential feature (and may not even involve a group comparison at all). In the social sciences, a common type of study known as a quasi-experiment bridges these two categories. The quasi-experiment shares many features with an experiment yet does not involve ran-

dom assignment of study participants. In the class size example, teachers may choose to teach smaller or larger classes, school principals may choose which teachers teach which classes, and so on.

A final distinction evident in quantitative research is between cross-sectional and longitudinal research. Cross-sectional research involves participants at one point in time (e.g., immediately before a political election). Longitudinal research involves participants at multiple points in time. An example of cross-sectional research is the political poll in which voters are surveyed for their preferences one time. In a longitudinal approach, researchers assess participants at multiple points in time. For example, researchers might identify likely voters one year before an election and track their expressed preferences one time a week until the election occurs. Cross-sectional research, therefore, provides a snapshot of participants at a single point in time, while longitudinal research allows for an analysis of change over time.

The branch of mathematics known as statistics is widely employed in quantitative research. Statistics is relevant to quantitative approaches to social science in three major ways. First, researchers rarely work with entire populations (e.g., all elementary students in a country), as these are generally too large to study. Instead, researchers work with samples, and statistics provides a way of quantifying the expected range of differences between a randomly drawn sample and the population. This is best illustrated in political polling, for example, when researchers telephone a random sample of households to assess voting intentions. Results are then reported in terms of the percentage of respondents who endorsed each candidate. They are accompanied by a "margin of error" that expresses the expected range of the differences between the actual sample of respondents and the population from which the sample was drawn.

A second major use of statistics in quantitative research is in group comparisons. In the effects of class size on academic achievement example above, the academic performance of students in small classrooms would be compared to the academic performance of students in larger classrooms. A statistical test (such as a t-test or an analysis of variance) could be conducted to assess whether the group averages differ more than would be expected if the groups differ only because of chance (that is, if class size does not affect student achievement).

A third major use of statistics in quantitative research involves statistical modeling of the interrelationships between variables. For instance, a clinical psychologist might be interested in how client personality, therapist personality and skill, and the quality of the relationship between the client and the therapist all work to affect the client's mental health. The psychologist might postulate a theoretical model involving these variables. Then, the psychologist would collect data on these variables and use techniques (such as structural equation modeling) to determine if the observed pattern of interrelations fits the theoretical model.

Quantitative research is often contrasted with qualitative research. The latter overlaps somewhat with descriptive approaches to quantitative research, but instead of resulting in numerical and statistical descriptions, qualitative research often is presented in narrative form. Historically, the distinction between qualitative and quantitative research created a rift among social scientists. At the extremes, quantitative social scientists have argued that a question is not truly scientific unless it can be formulated in mathematical or statistical terms, while qualitative social scientists have argued that quantitative approaches are too crude and can therefore never result in valid knowledge. Neither of these extreme views reflects the practice of scientists in other scientific disciplines (such as biology), and most modern social scientists believe that qualitative and quantitative methods can complement one another (Kuhn 1961). This recognition is reflected in the growing use of so-called "mixed method research," in which both qualitative and quantitative methods are employed in the same research study (see Tashakkori and Teddlie 2003).

SEE ALSO *Data; Data, Longitudinal; Experiments; Methodology; Methods, Qualitative; Methods, Research (in Sociology); Polling; Polls, Opinion; Regression; Regression Analysis; Social Science; Statistics; Structural Equation Models; Survey; Test Statistics*

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Jeffrey C. Valentine

METHODS, RESEARCH (IN SOCIOLOGY)

Various sociological methodologies are used when designing and executing research. Each of these methods, including comparative-historical sociology, ethnometho-

dology, ethnography, evaluation research, qualitative methods, and survey research, has strengths and weaknesses. While debate surrounds qualitative versus quantitative methods, the best sociological research often integrates both kinds of methods to test hypotheses.

COMPARATIVE-HISTORICAL SOCIOLOGY

Most nineteenth-century social scientists, including Emile Durkheim, Herbert Spencer, and Karl Marx, engaged in analyses of historical data and made cross-cultural comparisons in their studies of human society. The work of these early historical sociologists was guided by the belief that societies were evolving and that the western European societies were the most advanced. The premise was that societies progressed via evolution and that progress was good. Comparisons were used as a tool for the development of social facts based on cross-cultural and/or historical data. In modern times cross-cultural comparisons serve to provide a better understanding of the structures and institutions of different societies.

The primary strength of comparative-historical research is its use of an interdisciplinary approach. If the scope conditions are clear and the criteria are specified and defined, then this approach is an important method for obtaining "social facts."

Data available for cross-cultural and historical analyses face multiple hurdles. To illustrate, one must remember that information from a culture is embedded in the language, status sets, and expectations for the use of the data, as well as the time and place where the data were collected. There is always the issue of making sure that data sets are comparable and that the variables are equivalent. One primary limitation noted by Etienne Van de Walle (2005) is that although historical demographers have access to volumes of information, they are frequently limited by only including information on elite male populations with little or no information about females or the common man.

QUALITATIVE METHODS AND ETHNOGRAPHY

The primary qualitative methods sociologists use are ethnography interviews and direct observations. Interviews with research participants may range from open-ended interviews with flexible content directed by the interviewer to more structured questions asked by multiple researchers; in the latter case there is an obvious requirement for internal consistency so that all interviewers ask the same questions in the same way, and hopefully obtain comparable data. Researchers engaged in direct observations may have varying levels of participation, ranging from covert observation to participant observation where the researcher becomes an active member of the group.

Many ethnographers agree that to fully understand a complex social situation, one must enter into an unbiased observation or interaction with the society being studied. William Foote Whyte (1955) argued in his classic *Street Corner Society: The Social Structure of an Italian Slum*, that the only way to describe a society is to live in it, learn to speak the language, and participate in its social events and everyday life. Some of the most well known ethnographies have been guided by similar principles, for example, Elliott Liebow's *Tally's Corner* (1967), Margery Wolf's *The House of Lim* (1968), and Laud Humphrey's *Tearoom Trade* (1975), to mention only a few. A quantitative counting using preconceived survey questions only provides answers to the questions and could well be biased by the selection process as well as by the perceived social desirability of the responses by the researcher. In contrast, a qualitative analysis provides detailed description and information and new perspectives necessary for hypothesis development. An issue that should be addressed is the role of the researcher in the ethnographic research and whether or not an external observer can really study the internal workings of a society without bias. Also, a weakness of ethnographic field studies is generalization. But this weakness is often resolved by integrating the qualitative results of the fieldwork with quantitative results obtained in research in which a large population is systematically and randomly sampled and surveyed (see the work of Knodel, Chamratrithirong, and Debavalya [1987] as an example of such integration).

ETHNOMETHODOLOGY

The term *ethnomethodology* was first used in the 1960s by Harold Garfinkel (1967) in research determining how people make sense of their worlds. Garfinkel noted that for interactions to be smooth, everyday communication and interpersonal interactions have to be based on prior assumptions. Ethnomethodologists commonly study the normal through the use of techniques such as conversation analysis and breaching experiments, which force an examination of the usual, accepted, and unquestioned. The documented reactions of others to these experiments confirm which behaviors are normative (Cohen 2006).

The strength of ethnomethodology is that it permits the researcher to analyze the normal. For example, Allen Smith and Sherry Kleinman (1989) use narratives to demonstrate the patterns of discourse in conversations, which can be used to train medical personnel in the delivery of bad news and desexualizing gynecological exams. The weakness is that assumptions about what is normal and what is expected are in continual flux so that generalizability is sometimes limited.

EVALUATION RESEARCH

Organizational sociologists, following a long-standing positivistic agenda, often use evaluation research to determine whether the programs and routines of such groups as corporate organizations, social agencies, and educational institutions actually perform as planned. Evaluation research techniques involve formative research; setting the agenda, goals, and strategies for the organization; determining how these can be quantified and hence evaluated; and summative evaluation, determining if these quantifiable outcomes of both the steps and the goals meet the predetermined standards. Evaluation researchers usually use multiple techniques, including ethnography and survey instruments (see Rossi, Lipsey, and Freeman 2003). The strength of evaluation research is that it is used to minimize expenses while improving the quality of the accepted standards set by formative research. One weakness is that organizations have multiple systems and the research may not target the critical part of the systems. Organizations are in continual flux so that their evaluations must be ongoing and easily modifiable to respond to changing conditions.

SURVEY RESEARCH

Survey research involves the "systematic gathering of information on a defined social group" (Rapley and Hansen 2006, p. 616). The group is typically sampled from a larger population; information is obtained by asking standard questions about previously operationalized variables. One reason for the use of survey research is its simplicity; if one wants to know information, ask. Questions may be either closed-ended or open-ended. The strengths of the analysis and the generalizations from the findings are determined in part by the sample size and selection. Samples may range from small convenience samples to large randomized representative samples. Surveys may be administered via interviews, mailed questionnaires, telephone calls or online. Don Dillman (2000) argues that mail surveys using the "tailored design method," a detailed methodology of multiple contacts ensuring compliance, often have the greatest likelihood of being understood, completed, and returned; these are all characteristics necessary for the survey results to be truly representative of the population.

Surveys are usually used after one has developed hypotheses to be tested quantitatively. The best-known surveys have an efficient methodology and obtain accurate and current information about the population. Examples include the U.S. Current Population Survey, the World Fertility Surveys, and the U.S. National Surveys of Family Growth.

A strength of survey research, if done correctly, is its potential for strong and generalizable statistical analysis. However, the best surveys require randomization, adequate sample size, and a high completion rate. It must be remembered, however, that survey methods provide only a "partial description of complex social issues.… They are but one tool, of many, in the [social scientist's] armamentarium" (Rapley and Hansen 2006, p. 617).

SEE ALSO *Chicago School; Communication; Conversational Analysis; Discourse; Ethnography; Ethnomethodology; Hypothesis and Hypothesis Testing; Methods, Qualitative; Methods, Quantitative; Observation, Participant; Positivism; Sampling; Sociology; Survey; Tally's Corner*

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METHODS, SURVEY

A survey is a data collection instrument that generates data through the responses provided by respondents to survey questions. Some researchers connect the term *sample* with the term *survey*, arguing that the primary use of surveys is to draw inferences about a population from whom a sample of respondents have been surveyed. Surveys administered to relatively small, random samples permit the drawing of inferences about large populations.

HISTORY

According to Jean Converse's *Survey Research in the United States* (1987), historians generally believe the first surveys were used by governments in order to know who to tax and who to draft into military service. Later surveys were used to document conditions of poverty, using open-ended questions and convenience samples. In the early twentieth century, opinion polls were conducted by newspaper organizations; again convenience samples were employed.

As interest developed in measuring opinions and other subjective states, surveyors became interested in question wording. Since the 1930s, systematic efforts have been made to develop questions and answer choices on questionnaires that are relevant, understandable, and unambiguous.

Types of data collected by sample surveys include, for example: beliefs, attitudes, values, resource possession, socioeconomic status, time use, characteristics of members of social networks, and self-reports of behavior. Surveys frequently contain scales of items designed to measure concepts that are multidimensional. Many of these scales have been validated in prior research and have a solid track record in terms of reliability. Survey data also lend themselves to sophisticated types of statistical analyses.

All surveys, however, contain a certain amount of error. The term *measurement error* refers to those errors directly associated with the questions in the questionnaire. Two types of measurement error exist: systematic error (the respondent falsely reports drinking alcohol infrequently) and random error (a fatigued respondent mistakenly checks the wrong answer to a question).

TYPES OF SURVEYS

The variety of survey modes include: (1) self-administered questionnaires; (2) telephone and other communication-assisted interviewing surveys; and (3) personal or face-to-face interviews. These types differ in terms of the amount of motivation a respondent must have in order complete a given survey, cost, research staff requirements, and length and complexity. Personal interviews, for example, can be longer and more complex than self-administered questionnaires. Additional complexity is added to this picture by means of technological intermediary delivery devices, such Internet/Web site surveys and computer-assisted interviewing. In addition, mixed mode surveys, which use two or more survey types, are used to increase response rates across differing subpopulations and across differing data collection needs. Thus some respondents fill out questionnaires while others are interviewed by telephone or in person. Mixed modes can be used with the same respondents in which, for example, subjects are interviewed about their health and other topics and then those subjects are asked to maintain a time diary over a several-day period. Optical scanning technology permits wider-scale distribution of surveys because of the labor savings this type of survey represents.

The type of survey employed depends on factors such as: (1) cost; (2) goals of the survey; (3) length and complexity of the instrument; and (4) accessibility of the population (related to cost). Personal interviews require trained, well-paid interviewers. Such skilled labor is relatively expensive when compared with minimum wages offered student workers on college campuses, a frequent source of interviews for university surveys.

Surveys are conducted by individuals and research teams; often these surveys are conducted with a small sample, limiting generalization to larger populations. At the same time, federally funded national surveys have increased in number since the mid-twentieth century; these surveys are conducted across multiple points in time making possible longitudinal studies and panel studies. The General Social Survey (GSS) has provided data on key social issues since 1972. The Current Population Survey (CPS), an excellent data source regarding employment issues, has collected data each quarter of every year since 1937. A time expenditure recall has been added to the CPS in order to study trends in time use. Other surveys provide data on crime victimization (National Crime Victimization Survey), families (National Survey of Families and Households), and health (National Health Interview; National Health and Nutrition Examination Survey).

OPEN-ENDED QUESTIONS VERSUS CLOSE-ENDED QUESTIONS

Researchers are often unsure as to what answer choices to a given question provide the full range of possible valid answers. In addition, the provision of such answers by the researchers is thought by some to bias the answer chosen by respondents. Under such circumstances, open-ended questions are utilized. Such questions inquire but provide no guidance as to what the researcher considers an acceptable answer. The weaknesses associated with open-ended

questions include: respondents must be highly motivated in order to fully access their thoughts; and respondents may ask for assistance in order for them to provide an answer. At this point the interviewer is trained in probing, a technique designed to guide the respondent toward an answer. However, if the probing comes across in a directive manner, the respondent may be biased toward providing an answer that does not represent his or her answer. There is also debate over the issue of standardized interviewing, during which the interviewer is required to stick to the "survey text" as written, versus flexible interviewing, which permits the interviewer to diverge from the survey text and reword the question when respondents are unable to understand a given question.

LIMITATIONS

Early-twenty-first-century criticism observes that respondent attitudes often conflict with societal norms. One of the issues is the discrepancy between the liberal attitudes that respondents frequently express toward ethnic groups and the behavior shown by, for example, whites toward blacks. Social desirability bias may lead to this discrepancy. Equally plausible is the observation from social psychology that norms may conflict with attitudes unless those norms result from membership in a salient in-group, according to Katherine White and her colleagues in their 2002 study. Eduardo Bonilla-Silva, in his work *Racism without Racists* (2003), suggests the most important reason is that while it is less socially acceptable to express "prejudicial attitudes," whites discriminate against minority groups when their material interests are threatened. Other problems relate to cognitive issues such as memory; respondents typically have difficulty remembering details regarding mundane activities such as eating and remembering activities that have taken place over longer time periods. Much experimental work is taking place in universities and other research settings in order to reduce survey error, including enhancing memory and reducing social desirability bias. Other problems have to do with response rates: people are less willing than in the past to participate in survey research.

THE ISSUE OF CAUSALITY

Social scientists, including those who test hypotheses using survey data, are frequently accused of making causal claims inappropriately. Surveys are most often used in a cross-sectional setting; that is data is collected from the respondent at one point in time. In his research published in 2004, Andrew Abbott describes this in terms of "vision of causality quite dominant in U.S. quantitative research … arrays causes by their impact on that outcome, explicitly separating the immediate from the distant both in social time and social space" (Abbott 2004, p. 398). At the same time, survey data can be collected over time, which allows the study of change over time. A number of large-scale surveys, including the General Social Survey and the Current Population Survey, permit such studies.

Time (temporal process) and context are frequently not captured by survey instruments. However, certain aspects of time can be captured by having respondents maintain time diaries. The Current Population Survey includes a twenty-four-hour time recall. In addition, survey data may be supplemented with information from other data sources (observations made of groups and neighborhoods; secondary data sources such as the Census of Population) that describe the group, neighborhood, and societal context, as multilevel statistical models have demonstrated.

Surveys generally fail to tap issues that may be salient to the researcher's goals, but are not captured in the survey's questions. Qualitative methods including participant observation and open-ended interviewing offer a means for capturing those issues. In some studies, researchers begin with open-ended interviews and then use information (respondents' word choices; issues that are important to respondents) to construct a survey instrument. Surveys also fail to capture historical context. To some degree this problem can be alleviated by use of historical materials (including census and other surveys done in the past) to place survey findings in a broader context.

THE FUTURE OF SURVEYS

With the development of new national surveys designed to study socioeconomic circumstances and other aspects of society, the prospects for the availability of national level data, collected given time periods, are good. Survey methodology continues to reduce survey error, as Robert M. Groves and Don Dillman describe in their works. Other trends suggest problems for survey researchers: refusal rates to traditional types of surveys have increased over time. The technology-assisted techniques, while offering new avenues for obtaining data from hard-to-reach respondents, appear to have a poor track record in terms of response rate.

SEE ALSO *Data; Methods, Qualitative; Methods, Research (in Sociology); Survey*

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Wm. Alex McIntosh

METHUEN TREATY

SEE *Corn Laws.*

METONYM

SEE *Symbols.*

METROPOLIS

The term *metropolis* refers to a giant city, an urban center that supersedes its more provincial counterparts in population, economic strength, and political influence. One remarkable ancient model was Megalopolis, built in Arcadia between 371 and 368 BCE. The giant city, both as an urban form and an idea, runs through much of recorded history. The Babylon metaphor—known from the Old Testament and frequently applied to the "New Babylons" of the nineteenth and twentieth centuries—describes a place of total chaos and disorder. The persistence of the image indicates the relevance of the negative connotation attached to the notion of a metropolis; it is a "parasitic city," a dangerous entity that rules society without contributing to its wealth and stability. At the same time, throughout its historical existence the giant city has had an enormous—and beneficial—impact on the national or imperial area surrounding it. Often three, four, or even ten times larger than the second largest city in the state or empire, the geographers' "primate city" invariably becomes the driving force behind economic and cultural innovation. The European metropolises of the early modern and modern era in particular may end up exercising the same positive influence as did London in the sixteenth and seventeenth, Paris in the nineteenth, and Los Angeles in the twentieth centuries—by effectively shaping aesthetic taste and mass consumption patterns worldwide. This is precisely what happened when an urban center such as New York City after the Civil War became, in the words of Lewis Mumford, "an imperial metropolis, sucking into its own whirlpool the wealth and the wreckage of the rest of the country, and of the lands beyond the sea" (Mumford 1945, p. 28). The global influence, however, often goes hand in hand with negative consequences. A case in point is again New York, a financial force capable, in 1929, for example, of threatening the economic stability of the entire world.

The metropolis as a "primate city" gains its disproportionate size and enhanced importance by sharply separating itself from, and standing above, all other cities in the area. However, it maintains close ties with giant cities whose territories are even more extensive. The metropolises, seeing themselves as "world cities"—the term originated in nineteenth-century Germany—tend to form interregional and supranational communication networks. The idea of the metropolis as the physical representation of an entire universe (Jerusalem, Rome) has always been an important part of the way these centers are perceived and thought about. In the age of the Industrial Revolution, for example, the term *Industrial City* was generally applied to them. In spite of the unambiguous industrialization of many of these cities, they did their best to define their physical appearance more in opposition to the industrialization than in terms of its inevitable consequences. That is why the modern metropolis may also be perceived as a work of art, consciously conveying images of national or imperial glory. An additional frequent image is that of the chaotic place represented by American novelist John Dos Passos in *Manhattan Transfer* (1925) and Friedrich Anton Christian Lang's silent film, *Metropolis* (1927). Lang's science fiction vision, also inspired by New York City under the influence of German expressionism, depicts alike the magnificent and the dreadful sides of modernity. The world of the rulers is characterized by a cityscape with suspended streets, zigzagged buildings, and a bustling city; in contrast is the life of the repressed, poor people, who live underground and monotonously run the machines that keep the Metropolis in working order.

SEE ALSO *Architecture; Cities; Modernism; Modernity; Popular Culture; Urban Renewal; Urban Sprawl; Urban Studies; Urbanization*

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Gábor Gyáni

MEXICAN AMERICANS

Mexican Americans (also known as Chicanos and Chicanas) are one of the oldest population groups in the United States, and simultaneously one of the newest as a result of ongoing immigration from Mexico. Indeed, the immigration of Mexicans into the United States is considered the longest sustained migration of labor anywhere in the world. The 2005 mid-decade census counted 42 million Hispanics in the United States, representing 14.5 percent of the national population. Mexican Americans represent 64 percent of the total Hispanic American population, or 27 million people.

The historical background of Mexican Americans is complex due to the mixed heritage that was forged through *mestizaje*, or the process that fused Indians, Europeans, Africans, and Asians biologically and culturally during three hundred years of colonialism in the Americas. The indigenous background of Mexican Americans includes numerous groups from the Mexica (Aztecs), Maya, and Tarahumara, as well as many of the indigenous populations of the American Southwest. Long before the arrival of Europeans in the Americas in the late fifteenth and early sixteenth centuries, indigenous groups created magnificent societies that ranged from the Pueblos of the Four Corners region of the American Southwest to the Mayan culture of southern Mexico. This diversity created for Mexican Americans a multilayered identity based primarily on Spanish and indigenous culture.

EUROPEAN INVASION

The region known as Mesoamerica, or that area stretching from central Mexico to the borders of Central America, has been inhabited by numerous indigenous groups for thousands of years. Indeed, this region is considered one of the "cradles" of civilization, and saw the emergence of highly sophisticated and complex societies, such as the Olmecas, the Teotihuacán, the Maya, the Toltecs, and the Aztecs. European contact with the Americas began with the arrival of Cristóbal Colón (Christopher Columbus, 1451–1506) in 1492. The Spanish invasion and conquest of what is now Mexico began with the arrival of Hernán Cortés (c. 1484–1547) in the spring of 1519 in what is today Veracruz. During this period, the Aztec Empire controlled large areas of the Valley of Mexico. The Aztecs were under the control of an indigenous group known as the Mexica, who had migrated from a homeland known as Aztlán north of the Valley of Mexico. The arrival of Cortés and his conquistadores led to the downfall of indigenous control of the region. Initially, the Aztecs were able to repel the Spanish invasion, but when the Spaniards regrouped and returned to Tenochtitlán in 1521, they found the Aztec capital in the midst of an epidemic of smallpox contracted from earlier European visitors. The Aztecs' lack of immunity to European diseases decimated the population of the capital, and with the help of Indian allies, the Spaniards were able topple the Aztec Empire in August 1521.

EUROPEAN COLONIZATION

The Mexican American experience can be linked directly to the colonial period by the process of *mestizaje*. This process also included the mixing of Africans with Europeans and Indians. *Mestizaje* created not only multiple heritages, it layered the Mexican American experience with multiple identities. In conjunction with the mixing of various population groups, the colonial Spaniards developed racial hierarchies that were based on the concept of whiteness. Thus, those who could claim a so-called pure European ancestry were accorded special privileges and access to power. In its most basic form, this hierarchy had *peninsulares* (Spaniards born in Spain) at the top, followed by criollos (Spaniards born in the Americas), mestizos (those of mixed Indian and European descent), and indigenous people, with blacks at the bottom. This system was based on class, race, and stereotypes developed by the Spaniards about mestizos, Indians, and blacks. These positions were not static, and the Spanish colonial system allowed for movement up and down this racial hierarchy. This movement through the hierarchy occurred over time by the process of miscegenation where offspring could be "whitened" or the reverse. There are also recorded instances where colonial subjects paid officials for documents authenticating their "whiteness."

Mexican independence from Spain is connected with the political turmoil in Europe that emerged in the early nineteenth century. Although Mexico gained independence in 1821, the Republic of Mexico was not born until 1824. At the time, Mexico's territory stretched from the Pacific Northwest to northern Central America. As a newborn republic, Mexico faced many challenges from European and European American powers that coveted Mexican territory. Not long after gaining independence, Mexico found itself fighting for its sovereignty in a civil war in its northern territories in 1836, followed by a war against the United States from 1846 to 1848.

THE TEXAS-MEXICAN WAR AND THE NORTH AMERICAN INTERVENTION

With independence, Mexico became concerned with possible invasion not only by the United States but also by European powers seeking to colonize regions of what is now the American West. Another concern for Mexico was the various indigenous groups who were raiding Mexican settlements in Texas. During this period most Mexicans refused to settle in Mexico's northern territories because of the hostile environment and only a small population existed in Texas. Mexico addressed some of these worries by inviting European Americans to settle in the Texas territory in the early 1820s under the premise that an increase in population would create a buffer against the United States and other groups vying for Mexican territory. Under conditions of colonization European Americans that settled in Mexico agreed to become Mexican citizens and swore an oath of loyalty. U.S. citizens jumped at this opportunity, and by the 1830s more than twenty thousand Anglo settlers, primarily from the American South, were living in Mexico's Texas territory, along with about five thousand of their slaves. Mexican citizens in the same region numbered fewer than five thousand. Before long, Mexico became concerned with the growing Anglo population, and attempted to stem the flow by outlawing slavery in the Texas territory in 1829 and repealing the colonization law in 1830. When the central government of Mexico denied the Texas territory statehood, Anglos and their Tejano allies opted to fight for independence from Mexico.

The 1836 Texas-Mexican War lasted a few short months, but in the end Texas gained its independence from Mexico and for nine years was an independent nation. The Texas-Mexican War—in particular the battles at the Alamo, Goliad, and San Jacinto—led to a lasting animosity between Mexicans and Anglos. On April 21 at San Jacinto, Anglo forces crying "Remember the Alamo" massacred over seven hundred Mexican soldiers in retaliation for the earlier Anglo defeat at the Alamo. The defeat of the Mexican Army at San Jacinto and Texas's declaration of independence did not prevent Mexico from continuing to claim the Texas territory. When the United States annexed Texas in 1845, Mexico considered it an act of aggression and intervention.

The American government's annexation of Texas was part of a grand design of invasion, conquest, and movement toward the Pacific Ocean. This movement was imbued with the notion of manifest destiny, in which the United States and its citizens believed that God had given the nation a mission to spread democracy throughout North America. This concept also encompassed ethnocentric views of non-Europeans, and was thus inherently racist. When Mexico refused to sell California to the United States during this period, the American government, determined to gain this land, used a skirmish between U.S and Mexican troops along disputed territory in Texas as a pretext to declare war on Mexico.

The Mexican-American War (1846–1848) left thousands dead on both sides. The United States occupied the remaining northern territories of Mexico, and U.S. troops laid siege to Mexico City. The war ended on February 2, 1848, with the Treaty of Guadalupe Hidalgo, which gave California, Arizona, New Mexico, Colorado, Nevada, Utah, and parts of Colorado and Wyoming to the United States. More than 100,000 Mexicans remained in these conquered territories and became U.S. citizens. The treaty included a number of articles to protect the liberties of these new Mexican Americans, but like other treaties signed by the U.S. government, these provisions were mostly ignored or circumvented. Article X of the treaty, which would have protected all titles to land grants issued by the Spanish and Mexican authorities, was eliminated by the U.S. Senate. As a result of the war, Mexico lost approximately half of its territory to the United States, leaving a legacy of animosity between the two nations. The Mexican American experience within the confines of the United States begins during this period.

THE TRANSFORMATION

Between 1848 and 1910, the lives of Mexicans and their descendants in the conquered territories underwent a profound change. Mexicans lost millions of acres of land to the U.S. government, land speculators, railroads, industrialists, thieves, and squatters, whose efforts were abetted by the U.S. judicial system. This enormous loss of land created a Mexican American population that was displaced from the small farms where they made a subsistence living. By the beginning of the twentieth century, most had become day laborers.

Structural changes also occurred at the social level. As more Anglos arrived in the conquered territories, the culture and customs of Mexicans diminished, while those of the new Anglo settlers became dominant. Over time, the majority of Mexican Americans began to lose position in the social, economic, and political structure of the United States. However, a small elite class of Mexican Americans that resided in enclaves in Texas, New Mexico, and southern California was able to maintain its viability at all levels through strong economic interests.

Furthermore, as racial animosity and oppression increased, many Mexicans in the conquered territories resorted to resistance, which has often been labeled by Anglos as banditry. Such individuals as Josefa, who in 1851 became the first woman lynched in California, resisted oppression by defending herself against Anglo

aggressors, killing an attacker. Others, including Turbucio Vasquez and Juan Cortina and a group known as Las Gorras Blancas ("The White Caps"), resorted to armed resistance and rebellion to challenge Anglo hegemony in the conquered areas. State and territorial governments reacted by unleashing such units as the Texas Rangers to indiscriminately round up and kill Mexicans. Similar organizations were raised in Arizona and California. Anglo hegemony of the region included not only political control, but also an ideological philosophy that viewed all non-Europeans as inferior. The Mexican American experience in the second half of the nineteenth century was marked by racial strife.

CITIZENSHIP

Although the Treaty of Guadalupe Hidalgo conferred U.S. citizenship on Mexicans living in the conquered territories, Mexican Americans were often denied the rights of citizens. Like American blacks and indigenous groups, they were relegated to a second-class status. The government of California, for example, made attempts in the early twentieth century to reclassify Mexican Americans as Indians so they could be denied their legal rights.

It was counter to the prevailing ideology of the period to grant U.S. citizenship to individuals who were considered nonwhite. However, there was a question in the minds of the American public: Were Mexicans "white" or not? This question plagued Mexicans in the United States well into the twentieth century. The Mexicans that were incorporated into the United States in 1848 were not natural-born citizens of the country, and therefore did not fall under jus soli, a British common law used by the United States that stipulated that citizenship is granted to those born within the nation's jurisdiction. But this concept did not include racial minorities for the first one hundred or more years of U.S history, and jus soli did not become part of the organic law of the United States until after the Civil War (1861–1865) and the adoption in 1868 of the Fourteenth Amendment to the U.S. Constitution. The "whiteness" of Mexicans became an important legal question when Mexican immigrants began to enter the United States in larger numbers in the late nineteenth century. The Treaty of Guadalupe Hidalgo, as well as state and territorial constitutions, clearly included resident Mexicans as citizens. What remained unclear was whether or not Mexicans fit the legal definition of *white* in accordance with the 1870 Naturalization Act, which stipulated that a "white person" and "persons of African nativity, or African descent" could become naturalized citizens of the United States, but not others. This question was finally addressed in 1897 in a Texas federal court.

In the 1897 case, known as *In re Rodriguez,* Ricardo Rodriguez, who had resided in San Antonio, Texas, for ten years, petitioned the court to grant him naturalization. The court described Rodriguez using language typical of the day, pointing to various phenotypes to label him Indian or Asian, but not white. Rodriguez described himself as "pure-blooded Mexican," meaning neither purely Spanish nor purely Indian. One court brief characterized him as Asian by referring to the so-called Bering Strait hypothesis, according to which Indians originated in Asia and walked across an ice-bridge between present-day Russia and Alaska tens of thousands of years ago. Since Indians and Asians were barred from naturalization, attempts were made to categorize Rodriguez into one of those groups. In the end, the court relied on legal precedent, treaties that affirmed the citizenship of Mexican Americans, and various constitutions, such as that of the Republic of Texas, which conferred citizenship upon Mexicans in 1836. The court stated, "Citizens of Mexico are eligible for American naturalization, and may be individually naturalized by complying with the provisions of our laws." The court did not confer "whiteness" on Mexicans, but stated "if the strict scientific classification of the anthropologist should be adopted, he [Rodriguez] would probably not be classified as white." Thus, with reference to Mexicans and naturalization, the courts decided to use national origin, rather than race. However, despite the admission of Rodriguez to citizenship, Mexicans in the United States suffered considerable legal repression in the decades after the U.S. conquest and well into the twentieth century.

THE MEXICAN REVOLUTION AND MEXICAN IMMIGRATION

By the beginning of the twentieth century, the Mexican-descent population in the United States was estimated at between 380,000 to 560,000, with the majority living in the Southwest. The first four decades of the twentieth century had a profound effect on Mexican Americans and Mexican immigrants. The discontent of the Mexican population exploded into the first revolution of the twentieth century in 1910. By 1911 Mexican president Porfirio Díaz (1830–1915) was forced into exile and Mexico was plunged into a violent political struggle among numerous factions that continued for over a decade.

While Mexico was engaged in civil war, the United States was developing the Southwest. The impact of the Mexican Revolution and U.S. economic development of the Southwest resulted in: (1) more than 500,000 Mexicans immigrating to the United States as war refugees; (2) U.S. agricultural growers and other industries drawing Mexican laborers into such states as California and Arizona; and (3) an increase in the Mexican population along the border region, leading to the first large-scale exodus of Mexicans to other parts of

the United States, including the Midwest, the Rocky Mountain region, the Pacific Northwest, and as far east as Pennsylvania and New York.

By the early 1920s the Mexican population in the United States was estimated by the Census Bureau at 766,000. However, many sources consider this figure to be an undercount because the census only counted Mexican immigrants and the first generation of U.S.-born Mexicans. Overall, Mexicans accounted for roughly 2 percent of all immigrants entering the United States during the decade leading up to 1920. However, this period also saw a rise in nativism and the passage of legislation aimed at curtailing the arrival of "undesirable" immigrants. The categorization of "undesirability" can be traced to the eugenics movement of the early twentieth century, when groups of scientists and such individuals as Charles Davenport (1866–1944) and Harry Laughlin (1880–1943) promoted a theory of racial betterment that became known as *scientific racism*.

The height of the influence of the eugenics movement came with the passage of the 1924 U.S. Immigration Act, which essentially halted immigration from eastern and southern Europe. According to the views of eugenicists, these groups represented a pollutant to the gene pool of the United States, and their immigration needed to be restricted. Immigrants from the countries of the Western Hemisphere were not included in this legislation because of the U.S. need for a reliable and temporary workforce, primarily from Mexico. However, beginning in 1925, Mexican immigration became the next target of opportunity for exclusion. From this period until the end of the 1920s, numerous congressional hearings were held to determine the "desirability" of Mexican immigrants and whether an immigration quota should be attached to Mexico. By 1930 the Mexican-origin population in the United States had grown to approximately 1.5 million. The Great Depression of the 1930s brought to a temporary conclusion the discussion on Mexican immigration.

THE DEPORTATIONS OF THE 1930s

Regardless of the rationalization that has been used to explain the repatriation and deportation of Mexicans in the 1930s, the fact remains that 360,000 to 500,000 individuals of Mexican origin were deported or strongly encouraged to leave the United States. At least half of those deported or repatriated were U.S. citizens whose constitutional rights were thus violated. The 1930s were not an aberration: deportations of Mexicans had begun as early as the 1920s when the U.S. experienced a recession. Close to one million Mexicans may have been deported during the 1920s and 1930s.

Yet, not all Mexicans were victims of these deportations. In fact, as Mexicans in such cities as Detroit and Chicago were being deported, Mexican labor was badly needed to harvest crops in California, Idaho, and elsewhere. During the 1930s, Mexican Americans became heavily involved in U.S. labor issues, as exemplified by the efforts of activists such as Emma Tenayuca (1916–1999), who organized a strike in 1938 at the Southern Pecan Shell Company in Texas. Throughout the country, the Mexican American community resorted to insulation and mobilization as protection from the economic fallout of the Great Depression. The 1940s brought further change for the Mexican American community.

WORLD WAR II AND THE MEXICAN AMERICAN GENERATION

The entry of the United States into World War II (1939–1945) changed the lives of Mexican Americans dramatically. As the United States mobilized for the war, more than 500,000 Mexican Americans either were drafted or volunteered for service. Mexican American men and women served with distinction, earning the highest percentage of medals of honor of any minority group. Mexican nationals known as *braceros* ("those who work with their arms") also served with distinction on the home front. The Bracero Program was initiated in 1942 to fill a labor shortage in the United States. Although braceros came from such places as Puerto Rico, Haiti, and Newfoundland, the overwhelming numbers were Mexican nationals. The Mexican *braceros* worked primarily in the agriculture and railroad industries throughout the war period. Due to easy access to a supply of labor, growers petitioned the U.S. government to extend the bracero program beyond the war years. The U.S. government agreed, but after 1947 growers were responsible for the transportation to and from Mexico. Between 1942 and 1964 approximately five million Mexican braceros entered the country under contract for six to twelve months. When their contract expired they were returned to Mexico. Congress, under pressure from various groups and unions, allowed the program to expire on December 31, 1964. There is a direct correlation between the conclusion of the bracero program and the increase in undocumented immigration from Mexico. However, because the program brought in a temporary and cheap labor force, it continued to operate after the war, and lasted until 1964. In addition, Mexican Americans throughout the country were mobilized to work for war industries. Mexican American women were prominent in these industries, earning the moniker Rosita the Riveter.

However, as Mexican American servicemen and women were fighting for liberty and democracy, many Mexican Americans in the United States were not afforded basic civil liberties. Segregation was rampant and Jim Crow laws prevented Mexican Americans from entering

many establishments in the Southwest. During the war, intense racism against Mexicans became manifest in riots instigated in Los Angeles, California, between June 3 and 9, 1943 by U.S. military personnel. The primary targets of these riots were Mexican American youth wearing zoot suits, whose apparel was seen as not conforming to cultural norms. Large groups of U.S. sailors rampaged through barrios seeking Mexican American men and women to assault. When the riots ended on June 9, 1943, hundreds of Mexican Americans had been violated, but they were blamed by the police and media for starting the riots.

The end of the 1940s brought significant victories against the segregation of Mexican American schoolchildren. A 1948 district court decision, *Delgado v. Bastrop*, made it illegal to segregate children of Mexican descent in Texas schools. This and other accomplishments of the 1940s, plus the return of Mexican American war veterans, set the stage for additional civil rights struggles in the next decade.

THE MEXICAN AMERICAN CIVIL RIGHTS MOVEMENT

By the 1950s the Mexican population in the United States had reached approximately 2.2 million. Texas and California had the largest population of Mexican Americans, and although Mexican Americans were dispersed throughout the United States, the largest concentrations continued to reside in the five southwestern states. The small gains achieved by the Mexican American community during the 1950s were overshadowed by continuing residential segregation and a lack of housing, racism, job discrimination, segregation and disparities in education, attacks on Mexican American unions, and poverty.

Despite being oppressed, one of the singular characteristics of the Mexican American community has been its resiliency. Since the nineteenth century, Mexican Americans have resisted oppression at every opportunity. During the twentieth century, such organizations as the League of United Latin American Citizens (LULAC), La Confederación de Uniones de Campesinos y Obreros Mexicanos (the Confederation of Mexican Farmworkers and Laborers Unions, CUCOM), the American G.I. Forum, and the United Cannery, Agricultural, Packing, and Allied Workers of America (UCAPAWA) fought for the civil rights of Mexican Americans on a variety of fronts. Dennis Chávez Jr. (1888–1962) was elected a U.S. senator from New Mexico in 1936 and held the seat until his death in 1962. In California, Edward R. Roybal (1916–2005) became an influential politician at the grassroots level, and rose to national prominence when he was elected to Congress in 1962.

For a small segment of U.S. society, the 1950s represented a period of conformity, upward mobility, and security. But for others, including most Mexican Americans, the 1950s was characterized by government attacks on unions. Luisa Moreno (1907–1992), a Latina labor activist, was deported by the U.S. government in the 1950s for alleged ties to the Communist Party and so-called un-American activities. Furthermore, as civil liberties were diminished and "witch hunts" for suspected communists curtailed activism, Mexican immigrants were again rounded up and deported under a military action dubbed Operation Wetback. Despite the landmark court case of *Brown v. Board of Education* (1954), which called for the desegregation of educational institutions nationally, Mexican Americans continued to find themselves marginalized. In 1950 the average median education for Mexican Americans was 6.1 years, compared to 11.8 for European Americans.

In reaction to widespread racial discrimination, some Mexican Americans demanded to be classified as white. A number of civil rights organizations, however, sought legal relief from racial discrimination by petitioning the courts to classify Mexicans and Mexican Americans as ethnically and linguistically distinct and nonwhite (Martinez 2001, p. 76). The landmark case of *Hernández v. Texas* (1954) officially classified Mexican Americans as a distinct ethnic group, opening the way for lawsuits fighting racial discrimination under the Fourteenth Amendment.

Labor issues were another major concern for Mexican Americans during the 1950s, but gains were few. However, the 1950–1951 "Salt of the Earth" strike by the International Union of Mine, Mill, and Smelter Workers against Empire Zinc Company of Silver City, New Mexico, was a significant victory during a decade of union busting by the government. Mexican American political activists also became more visible during this decade. Groups such as La Alianza Hispano-Americana (the Hispanic-American Alliance), the Community Service Organization (CSO), LULAC, the American G.I. Forum, and an umbrella organization called the National Spanish-Speaking Council all continued to develop grassroots movements to bring about change within and outside of the Mexican American community.

According to the 1960 U.S. Census, there were approximately 3.5 million Spanish-surnamed persons in the United States, residing primarily in the Southwest. The per capita annual income for Mexican Americans at this time was $968, compared to $2,047 for European Americans. The median educational attainment for Mexicans was 8.1 years of education, compared to 12.0 for European Americans. Mexican Americans also had higher unemployment rates, higher poverty, and less access to adequate housing. The 1960s also saw discontent

among Mexican Americans with the increasing involvement of the United States in Vietnam and continued neglect at all levels of education. In addition, social and economic inequality continued unabated, and Mexican Americans struggled to make their voices heard in national politics.

It was during this period that a significant portion of the Mexican American community emerged to challenge the status quo. Along with a new approach to the issues faced by Mexican Americans, the labels of *Chicano* and *Chicana* were adopted when Mexican Americans sought to embrace their indigenous background. The Chicano civil rights movement that developed in the 1960s had its roots primarily in the early twentieth century. The 1960s represented a continuation of the struggle that had been fought for generations. Yet this decade also represented a different approach to the economic, social, and political issues facing Chicanos. This approach has been characterized as militant and confrontational as Mexican Americans began to assert their rights and demand equal treatment. Additionally, the Chicano movement contained strong elements of cultural nationalism as Mexican Americans began to embrace their indigenous past.

The movement included a variety of organizations and issues. The ending of the Bracero Program in 1964 had two effects: (1) an increase in the number of Mexicans entering the United States outside of proper channels; and (2) a lack of a steady form of cheap Mexican labor that enabled César Chávez (1927–1993) and Dolores Huerta to establish the National Farm Workers Association (NFWA) in 1962. With the help of Filipino workers and the Agricultural Organizing Committee (AWOC) Chávez and Huerta organized the first major strike in 1965 known as the Delano Grape Strike, which lasted five years. This organization championed the rights of agricultural workers throughout many regions of the United States. In 1966, the NFWA and AWOC merged to become the United Farm Workers and the symbol for the Chicano movement.

Reies López Tijerina founded La Alianza Federal de Mercedes (the Federal Alliance of Autonomous Land Grants) in 1962. Tijerina's objective was to reclaim land grants that were stolen by a variety of groups, organizations, and institutions in New Mexico after 1848. La Alianza used a variety of tactics that included occupying Carson National Forest in northern New Mexico, arresting game wardens, and confronting authorities who attempted to impede these actions. Tijerina was eventually arrested for inciting a riot and sentenced to three years in prison. However, his efforts in New Mexico brought national exposure to the Chicano movement, and other organizations emerged as a result.

Two other interrelated groups that emerged in the late 1960s had a profound influence on the Mexican American experience. In 1969 the Crusade for Justice, an organization established by Rodolfo "Corky" Gonzales (1928–2005), held the First National Chicano Youth Liberation Conference in Denver, Colorado. From this meeting came an important manifesto for self-determination, *El Plan Espiritual de Aztlán* (the spiritual plan of Aztlan), which described the American Southwest as the symbolic homeland of Mexican Americans. The manifesto took its name from the Mexica place of origin, Aztlán, and adopted the term *Chicano* as a symbol of resistance. During this period, La Raza Unida Party (LRUP) was established by Luz Gutiérrez and José Angel Gutiérrez in Crystal City, Texas. LRUP became an important political party in many regions of the American Southwest, winning a number of local and regional elections.

The Chicano movement reached its height with the August 1970 moratorium against the Vietnam War (1957–1975). The disproportionate number of Chicano casualties resonated throughout the community. Mexican Americans in the 1960s represented only 8 percent of the population of the Southwest, yet accounted for 20 percent of all casualties in Vietnam. Thousands of Chicanos and Chicanas from throughout the country marched in Los Angeles demanding policy changes ranging from a reduction in the number of Chicanos serving in Vietnam to the opening of higher education to more Mexican Americans. The moratorium, like the military riots of the 1940s, turned into chaos when police officers attacked the peaceful marchers. In the end, many Chicanos and Chicanas were injured, and *Los Angeles Times* reporter Rubén Salazar (1928–1970) was killed when Los Angeles Sheriff deputies fired a tear gas canister into a crowded bar hitting Salazar in the head. The brutality of the police left many of the marchers further disillusioned.

Overall, the Chicano movement had a lasting impact. Mexican Americans realized that the community could be mobilized, and important organizations, such as the student group El Movimiento Estudantil Chicano de Aztlán (the Chicano Student Movement of Aztlán), were created. Mexican American culture and history became more open and prevalent throughout the country. The UFW remains vital to agriculture workers in the contemporary period. LRUP remained relevant until the mid-1970s. The Crusade for Justice receded to Colorado, but continues its activism. And Tijerina's movement spawned lawsuits from Mexican American families to reclaim their land from the U.S. government.

THE CONTEMPORARY PERIOD

In 1980 the U.S. Census Bureau began to use the term *Hispanic* for Mexican Americans. The 1980 Census

counted 8.7 million Mexican Americans in the United States, and by 1990 that population had risen to 13.5 million. Between 1980 and 1990, the overall Hispanic population grew by 42 percent, approaching almost 10 percent of the nation's population. The unemployment rate for Hispanics was 11.9 percent in 1990, which was lower than the 16.5 percentage of 1980 but higher than the national average of 7.1 percent. According to census reports, 50 percent of Hispanics over twenty-five years of age had high school diplomas, compared to 82 percent of non-Hispanics of the same age. Furthermore, the median income for Mexican Americans remained lower and increased less than non-Hispanics during the 1980s.

Geographically, the number of Mexican Americans increased in regions outside of the American Southwest. In 1990 Washington state had the tenth-largest Mexican American population in the United States at 155,864. In the Midwest, states such as Illinois (623,688) and Michigan (132,312) had significant clusters of Mexican Americans. New York (93,244) and Florida (161,499) also saw sizeable increases in their Mexican American populations. These increases were largely the result of a dramatic rise in Mexican immigration to the United States between 1970 and 1990.

The Mexican-origin population in the United States saw a further surge between 1990 and 2000. By 2005, the Mexican American population in the United States had reached twenty-seven million, not including a sizeable number of undocumented Mexican immigrants, estimated at between ten and twelve million. This increase has resulted primarily from high immigration rates, but also from high fertility rates among the young Latino American population, whose median age is twenty-five years compared to thirty-six for white Americans. According to the 2000 U.S. Census this population increase has made Hispanics the largest minority group in the country and the second-largest labor force at 13 percent, after whites. However, 36 percent of the Hispanic labor force lacks a high school diploma, compared to fewer than 9 percent of non-Hispanic workers. This translates into Mexican Americans working in low-skilled jobs in areas such as private household services, construction, agriculture, forestry and fishing, and manufacturing.

The distribution of the Mexican population has reached virtually every region of the country. Some of the largest increases have occurred in the American South, where economic opportunities have drawn many Mexicans. States that saw rapid and sizeable increases were Oregon, Washington, Nevada, Georgia, North Carolina, Virginia, and Massachusetts. The fast growth of the Hispanic population has also increased the number of Hispanic schoolchildren in U.S. schools. By 2005 there was a noticeable increase in the number of Hispanics completing high school and enrolling in college; however, Latinos continue to lag behind white students at all key milestones of their educational journey (Pew Hispanic Center 2005, p. 3).

Since a large portion of America's Mexican-origin population is made up of either recent arrivals or first-generation citizens, assimilation is a factor in various economic indicators. The process of assimilation, whereby immigrants and their offspring adopt some of the values, beliefs, and behaviors more characteristic of mainstream U.S. culture, is not monolithic, and some individuals change more than others. Studies completed by the Pew Hispanic Center (2005) have shown that the attitudes of Hispanics who speak primarily English are much more like those held by non-Latinos than are the attitudes of Spanish-dominant Latinos.

The immigration debate in the United States has been a major issue since the 1980s, and Mexicans and Mexican Americans have felt the impact of increasingly restrictive immigration laws, including the 1986 Immigration Reform and Control Act, California's 1993 Proposition 187, and the 1996 Illegal Immigration Reform and Immigrant Responsibility Act. These were followed by post–September 11 hysteria over immigration and the 2006 Secure Fence Act. Latinos nationwide responded to this immigration backlash by holding large rallies that attracted millions in the spring of 2006, a demonstration that was dubbed "A Day Without a Mexican."

However, the long-established Mexican American community has made great gains in the political arena, and Mexican American politicians have become influential at the local, regional, and national levels. The ability of the community to mobilize and organize constituents was vital in electing Mexican Americans to office. There are 24 members of the 109th Congress of the United States out of 435 total members. In the House of Representatives there are nineteen Democrats and five Republicans of Hispanic origin, and two U.S. Senators of Hispanic descent (one Democrat, one Republican). In Texas, Mexican Americans hold 20 percent of state house seats and 19 percent of all state senate positions in 2007. In California, Mexican Americans hold over one-fourth of all Senate seats as of 2007. In the California Assembly, Mexican Americans hold 25 percent of the seats as of 2007. However, according to the current census figures, Hispanics comprise 35 percent of California's total population. California also has elected a number of Mexican American women into the U.S. Congress, including Loretta Sanchez, first elected in 1997. In 1999 California voters elected Cruz Bustamante as the first Mexican American lieutenant governor of the state since 1875, and in 2005 the city of Los Angeles elected Antonio

Villaraigosa as the first Mexican American mayor since 1872. Most of these politicians ran on Democratic Party tickets.

Since the 1980s the Republican Party has also made gains within the Mexican American community. However, George W. Bush's presidency, the wars in Afghanistan and Iraq, and the Republican Party's position on immigration has slowed any momentum the party may have enjoyed shortly after 2000. Overall, it is clear that people of Mexican origin are becoming a strong demographic and political force in the United States. The projected demographics indicate that Latinos will constitute 25 percent of the U.S. population by 2050, a population growth that should translate into stronger political power. Simultaneously, Mexican Americans will continue to face many of the challenges of the previous decades, but they will confront those challenges with the same resiliency that carried them through adverse conditions in the past.

SEE ALSO *Annexation;* Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Chávez, César; Colonialism;* Hernandez v. Texas; *Immigration; Latinos; Malinchistas; Mexican Revolution (1910–1920); Politics, Latino; Protest; Social Movements*

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Jerry Garcia

MEXICAN-AMERICAN WAR

The Mexican-American War commenced on May 13, 1846, after President James Knox Polk (1795–1849) pressured Congress for an immediate declaration of war on Mexico. The road to war with Mexico represents a complicated period in U.S. history. By late 1845 political upheaval between the Whigs and the Democrats had reached a crescendo in Congress. The most pressing political issue surrounding war with Mexico had been the potential expansion of slavery to the U.S. Southwest. Many prowar congressional leaders favored battle as a means by which they could increase the influence and lucrative potential of slavery; meanwhile other hawkish war supporters understood the conflict to be a moral struggle for the purpose of spreading freedom and liberty in the absence of servitude. Former president John Quincy Adams (1825–1829), an ardent antislavery advocate, became one of the few voices of dissent in the House of Representatives then dominated by congressmen arguing for war.

By 1803 Texas had become a disputed territory between the United States and Mexico. Many Americans loudly proclaimed Texas a part of the Louisiana Purchase brokered by President Thomas Jefferson on April 30, 1803. In 1821 Mexico achieved independence from Spanish control. Most of the Spanish leaders, pejoratively labeled *gachupines*, were deposed, and in their place native mestizo rulers assumed control of the government. (*Gachupines* were native Spaniards who oppressed, enslaved, and exploited indigenous Mexicans. This is a pejorative term referring to Spanish imperialists, similar to the word *gringo*.) The mestizos became known as *criollos*, most of whom demonstrated ineptitude due to their initial inexperience at governing, for under Spanish rule few indigenous citizens had achieved positions of power (Faulk and Stout 1973, p. xiii). Political turmoil and chronic factionalism followed the Mexican independence movement. Approximately thirty-six changes in leader-

ship occurred between 1833 and 1855. The military remained dominant in political affairs, a circumstance that facilitated the rise of Mexican general turned president Antonio López de Santa Anna (1794–1876), who was elected president of Mexico by a majority vote in 1833. Santa Anna began his military career in 1810 as a cadet under the command of Joaquín de Arredondo. Mexican historians differ on whether he was vulgar and corrupt or a brave and skillful leader.

Provoked by the aggressive movements of volunteer soldiers from Texas in 1836, the fiery Santa Anna set his sights on attacking Texan forces garrisoned at the Alamo mission in San Antonio. A bloody battle ensued at the Alamo. The most popular American interpretation of this incident depicts a small but death-defying American force of roughly three hundred soldiers led by Sam Houston and Davy Crockett pitted against Santa Anna's roughly eight thousand bloodthirsty attackers (Mexican historians present a significantly different version of the battle). The battle officially lasted for thirteen days, from February 23 to March 6, 1836. There is some debate as to whether the Mexican general ordered the execution of American forces surrendering peacefully or if the Americans chose to fight until the bitter conclusion. The undeniable historical result of this tragic event is that no Americans were left alive. Consequently Santa Anna became a virtual public enemy in the United States.

While the battle raged at the Alamo, a group of sixty councilmen representing the U.S. citizens of Texas gathered at the "General Convention" in the town of Washington and unanimously declared independence. All sixty signatories to the Texas Declaration of Independence (March 2, 1836), including Sam Houston, declared their independence from the "evil rulers" who brought "oppression" and removed even "the semblance of freedom."

Compassion among U.S. observers of the Texans' struggle further developed because of Mexico's Goliad campaign of 1836 (also referred to as the "Goliad massacre"). This event has taken second place to the Alamo in American memory. One of Santa Anna's commanders, General José de Urrea (1795–1848), succeeded in taking prisoner 230 American soldiers who surrendered voluntarily on March 20, 1846. Santa Anna betrayed Urrea's promise of their safety by ordering the execution of many of the unarmed Texas fighters. Their deaths were justified by Santa Anna, who labeled them "foreign pirates" who had attacked a sovereign government without legal cause (Faulk and Stout 1973, p. xv).

At the battle of San Jacinto on April 21, 1836, Santa Anna's forces suffered defeat at the hands of an outraged Texan army. Santa Anna sought to avoid capture and punishment by dressing in plain clothing and hiding in the fields. Eventually U.S. forces recognized and seized him. This battle for all intents and purposes secured Texan independence and halted Santa Anna's onslaught. In 1836 Anglo-Americans residing in Texas declared independence. Mexican leaders immediately recognized the danger in the United States receiving an unfettered pass to annex the former Mexican territory. Many feared the U.S. spirit of expansion would whet the appetite of expansionists in Congress and expedite the annexation movement.

Meanwhile, in order for Mexican leaders to maintain power, they had to continually promise embittered constituents a reconquest of Texas. Mexico refused to acknowledge Texas as an independent state and asserted both its claims to the disputed territory and its willingness to defend against U.S. violation of its sovereignty. Nevertheless, the U.S. government did not express an absolute commitment to sending military forces to defend Texas against an onslaught. This prompted volunteer soldiers, also known as "soldiers of fortune," to flood into the disputed region (Haynes 2002, p. 115). Despite promises to recover San Antonio and other lost territories, Mexico's promised assaults failed to materialize. In early 1845 the voters of Texas approved the Annexation Ordinance, which prompted a congressional authorization known as the Joint Resolution to Admit Texas as a State; this was subsequently signed into effect by President Polk on December 29, 1845. Northern abolitionists feared that the admittance of Texas into the Union would encourage the expansion of slavery and destabilize the nation. John R. Collins writes that "a small group of Whig abolitionists … viewed the war as a 'slavocracy conspiracy'" (Faulk and Stout 1973, p. 70).

Born in Mecklenburg County, North Carolina, in 1795, Polk became president of the United States in 1844. His political platform consisted primarily of a belligerent attitude toward Mexico's reluctance to relinquish the southwestern territories and an aggressive stance toward Great Britain, who refused to budge on the issue of sharing or relinquishing the Oregon Territory. As a candidate for president, Polk had promised both to reannex Texas and to occupy Oregon from the California boundary to the 54'40" latitudinal line. At this time the theory of manifest destiny was on the rise. The term, coined by the influential Democratic writer and strategist John L. O'Sullivan, addressed the right of the United States to spread freedom and liberty across the North American continent. Supporters of this ideology believed that God, or divine Providence, had empowered the American people with the ability to conquer the continent and thereby civilize and Christianize the world. Although not completely materialized by 1844, the spirit of manifest destiny, teamed with Polk's campaign promises, seemingly offered a mandate to the incipient president to engage those who stood in America's pathway to continental dominance.

The United States persisted in its assertion that the Rio Grande represented the legal southern border of Texas, despite the obvious lack of evidence to validate the claim. Polk dispatched minister plenipotentiary John Slidell (1793–1871) to Mexico with the express purpose of settling the border dispute in favor of the Rio Grande rather than the Nueces River, as demanded by the Mexican government. Slidell was also instructed to purchase New Mexico and California. At least two previous presidential administrations, those of John Quincy Adams and Andrew Jackson, had sent negotiators to purchase Texas and possibly the surrounding territories from Mexico; their offers were soundly rejected and seemed only to antagonize Mexican leaders. Polk offered $5 million to redraw the boundary of Texas to the Rio Grande and $25 million for the California Territory. The Mexican government repudiated Slidell and the offer. Consequently President Polk decided to station General Zachary Taylor (1784–1850) with U.S. forces along the Rio Grande. In turn Mexican general Mariano Arista (1802–1855) guarded the Mexican side of the river. Border provocations on April 24 and the refusal of the Mexican government to negotiate with the president's ambassador instigated war. After President Polk delivered a war message to Congress, the United States officially declared war on Mexico on May 13, 1846.

Combat had already commenced, with Colonel Stephen Kearny's Army of the West traveling to New Mexico and then to California to secure those territories for U.S. migration and General Zachary Taylor's army crushing the Mexican forces in battles at Palo Alto and Resaca de Palma. Kearny fully controlled Santa Fe by August 18, 1846. In California a group of American settlers, along with an exploring party led by John C. Frémont (1813–1890), joined Kearny in what became known as the "Bear Flag Revolution" (Brinkley 2003, p. 352). U.S. soldiers experimented with flying artillery at Palo Alto, and hand-to-hand fighting erupted at Resaca de Palma. The U.S. Navy seized control of Monterey and Los Angeles thanks to Commodore John Drake Sloat (1781–1867). During these tempestuous days of battle, the former Mexican general Santa Anna returned from exile to prepare an army of roughly twenty thousand men with the express purpose of fighting the invaders until any defense would become untenable. Enthusiasm for war in the United States led to 200,000 volunteers responding to the secretary of war's call to arms (Haynes 2002, p. 155).

U.S. forces entered battle outnumbered in almost every engagement with Mexico (Eisenhower 1986, p. 35). The most recognizable casualties of war were "Henry Clay, Jr., and Archibald Yell, former governor of Arkansas (both at Buena Vista), and Captain Samuel Walker of the Texas Rangers, at Huamantia" (Eisenhower 1986, p. 36). Volunteer forces received only a rudimentary training, and due to the sporadic popularity of the war, many of the soldiers, themselves from different states, never trained together. Many of the volunteers were not supplied with the bare essentials, and this led to sickness and disease. Statistically the greatest challenge to the army, and the most damage inflicted on it, was caused by outbreaks of disease. Of the approximately 100,182 soldiers who fought in the war, nearly 10,790 died from disease and exposure to inclement weather. A much smaller number, 1,548 volunteers, died on the battlefield. Generals George B. McClellan (1826–1885) and Winfield Scott (1786–1866) marveled at the destruction wrought on their forces by rampant diseases. The historian Thomas Irey asserts that nearly 10 percent of all "noncombat" deaths were caused by disease and infection (Faulk and Stout 1973, p. 110). President Polk's troubled relationships with generals Scott and Taylor further challenged the U.S. military's already troubled tactics (Haynes 2002, p. 152). On November 19, 1846, the president reappointed General Scott commander of the army, displacing Taylor.

On March 9, 1847, General Scott landed at Veracruz with ten thousand soldiers, finally entering Mexican territory to compel surrender. Scott eventually advanced 260 miles across the Mexican National Highway to Mexico City. This major amphibious assault was the first of its kind in U.S. history (Brinkley 2003, p. 352). On April 18 Scott's forces pushed forward at Cerro Gordo, flanking Santa Anna's forces and forcing his retreat, embarrassingly without his artificial leg. Some of the most famous future Civil War generals planned this mission, including Robert E. Lee (1807–1870), McClellan, Joseph E. Johnston (1807–1891), and P. G. T. Beauregard (1818–1893). At Churubusco on August 20, Scott's army defeated a Mexican defensive force of twenty thousand soldiers. The last major confrontation before Scott's forces marched on Mexico City was the battle of Molino del Rey, in which twelve thousand Mexican soldiers lost the battle and the overall struggle and Scott took Chapultepec, overlooking Mexico City. Nevertheless, by September 1847 many Americans had become frustrated by Mexico's refusal to accept terms of surrender (Davis 1999, p. 316).

In the summer of 1847 Mexico received Polk's special peace envoy Nicholas P. Trist (1800–1874). In July, Mexico stalled, then rebuffed the ambassador's offer. Although Polk recalled Trist and sought to demand more from Mexico, on February 2, 1848, the Treaty of Guadalupe Hidalgo was negotiated by the envoy. The treaty ceded to the United States 500,000 miles of Mexican territory that would become the U.S. states of New Mexico, California, Arizona, Nevada, Wyoming, and Colorado (Davis 2003, p. 192). Mexico also conceded that the Rio Grande would become the permanent border of Texas. The United States compensated Mexico with

$15 million in exchange for the lost territory and $3.25 million in remuneration. The Senate ratified the treaty by a vote of 38 to 14 on March 10, 1848 (National Archives 2003, p. 72).

More so than the Mexican-American War itself, the events that roused the bellicose passions of the American people have been captured in cinematic history. Walt Disney produced a three-episode television series about Davy Crockett that included *Davy Crockett at the Alamo* (1955), a romantic story depicting a group of outnumbered Americans surrounded by a marauding army waiting to pummel them. There also have been more than twenty major motion pictures produced about Crockett's famous execution after or death in battle at the Alamo. In 1960 John Wayne directed and starred as Crockett in *The Alamo*. In 2004 Billy Bob Thornton starred as Crockett in another film titled *The Alamo* alongside Dennis Quaid, who was cast as General Sam Houston. Most of the films on this subject depict a mythologized version of historical events.

Many political theorists point to U.S. imperialism and the insatiable southern drive to further the institution of slavery as the motivations for war with Mexico. Utilizing the writings of the then-congressman Abraham Lincoln, some political scientists assert that Mexican provocations led to the shedding of American blood to be sure but on the Mexican side of the border, thus negating the American claim that Mexico had trespassed on U.S. soil illegally, prompting the U.S. declaration of war. More traditional historians assert that the Mexican leadership believed their nation to be omnipotent because of their enormous success in expelling the Spanish leadership and that, given Britain's inclination to stir up trouble in the region in order to attain California and to retain the Oregon territories, Mexican leaders felt assured of their assistance should their own forces suffer serious setbacks. The British never offered such assistance.

According to the historian Kyle Ward, who examines changes in the content of textbooks on U.S. history, late-twentieth-century American political scientists portrayed the U.S. South in a detestable light, alleging that a plot existed to encompass all of Mexico's territory into their slavocracy (Ward 2006, p. 158). Following this line of logic, many historians believe that President Polk and his cohorts would have seized more territory and imposed a harsher indemnity on Mexico if there had not been such widespread domestic and congressional opposition to his policy of expansion. This is why, according to some, Polk never requested a straightforward yes or no vote on the war (Silverstone 2004, p. 198). In lieu of an up-or-down vote, the president asked for reinforcements and war materials for a war that had already been provoked and threatened to engulf the U.S. territory if Congress failed to act quickly and decisively.

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Jonathan A. Jacobs

MEXICAN REVOLUTION (1910–1920)

Scholars have long debated whether the Mexican Revolution was a social revolution, a civil war, a nationalist movement, a struggle for unrealized liberal ideals, or a meaningless rebellion. The revolution is quite universally seen as beginning with the 1910 issuance of Francisco Madero's Plan of San Luis Potosí, calling for free elections, but there is no universal agreement on its terminal point. Many of the revolution's demands were codified in a progressive 1917 constitution that for some marks the revolution's culmination. Those who view revolution as military warfare rather than ideology often view the cessation of fighting in 1920 as the endpoint. In either case, many of the promised social reforms were not realized until the 1930s, under the Lázaro Cárdenas government. The entrenchment of a conservative regime in 1940 largely ended revolutionary social policy, though not necessarily its rhetoric. In 1968 the massacre of protesting students at Tlatelolco in Mexico City demonstrated definitively that Mexico had left its revolutionary heritage

behind. The defeat of the ruling Institutional Revolutionary Party (PRI) in 2000 brought an end to the hegemonic institutional legacy of the early revolutionary leaders. Nonetheless, some contend that Mexico continues to be shaped by various legacies of the 1910 popular uprising against Porfirio Díaz's dictatorship.

PORFIRIO DÍAZ

General Porfirio Díaz's entrenched dictatorship, the *Porfiriato*, lasted from 1876 to 1911. Díaz rose through the political ranks as a liberal leader, but in contrast to the anticlericalism of most nineteenth-century liberals he developed close relations with the Catholic Church and relied on conservative and wealthy elites to assure his political survival. His feared police forces (the *rurales*) viciously suppressed dissent, but equally significantly Díaz used the mechanisms of a large (and expensive) government bureaucracy to gain popular support. This dual strategy of *pan o palo* (literally, "bread or the club," or "carrot or a stick") successfully eliminated any significant opposition. As Díaz acquired more power, elections increasingly became a farce. The result was one of the longest dictatorships in Latin American history.

FRANCISCO MADERO

In a 1908 interview with a U.S. journalist, James Creelman, Díaz indicated that Mexico was ready for a multiparty democratic system and that he would welcome opposition in the 1910 elections. Apparently the statement was only meant to improve his image abroad, but local dissidents jumped at the chance to remove Díaz from power. Francisco Madero, a wealthy landowner from the northern state of Coahuila who had studied in the United States and France, emerged as the leading opposition candidate. Hardly a revolutionary, Madero championed a liberal democratic ideology and pushed for open, fair, and transparent elections. Before the June 1910 elections, Díaz arrested and imprisoned Madero. As in previous elections, Díaz rigged the vote and won almost unanimously. The blatant fraud convinced Madero that the dictator could only be removed through armed struggle.

When released from prison after the elections, Madero fled north to Texas where he drafted his Plan of San Luis Potosí. The plan made vague references to agrarian and other social reforms, but mostly focused on political reforms. Most significantly, Madero declared the 1910 elections null and void, proclaimed himself provisional president, and called for free elections. With this plan in place, Madero returned to Mexico to launch a guerrilla war. After Madero's forces won decisive victories in May 1911, Díaz resigned the presidency and sailed for Europe. His reported parting words were, "Madero has unleashed the tiger; let's see if he can tame it." In 1915 the former dictator died peacefully in Paris at the age of eighty-five, the only significant figure in the Mexican Revolution not to meet a violent death.

Once in power, Madero faced pressure from both the Left and Right. He had stirred the passions of agrarian rebels who wanted the return of their communal *ejido* lands. In Morelos, south of Mexico City, Emiliano Zapata confiscated estates and distributed land to peasants. In the north, Francisco (Pancho) Villa also demanded deep social and political changes. Madero, responding to his elite class interests, opposed radical reforms and encouraged his rural supporters to regain their lands through legal and institutional means. Madero insisted that the guerrillas disarm, but they refused. In response, in 1911 Zapata issued his Plan of Ayala, which denounced Madero, called for agrarian reform, and introduced one of the revolution's most noted slogans, *Land and Liberty*.

VICTORIANO HUERTA

Madero's legalization of labor unions and inability to confine peasant revolts alienated conservatives. U.S. Ambassador Henry Lane Wilson, favoring political stability and economic development over democracy, threatened to invade to protect U.S. property. With Wilson's tactical approval and the support of Mexican conservatives, in February 1913 General Victoriano Huerta launched a coup against Madero. A ten-day battle (called the *Decena Trágica*) heavily damaged Mexico City and resulted in high civilian casualties, culminating in the overthrow and assassination of the former leader. Huerta's time in office ushered in a period of chaotic and extreme political violence, with the conflict assuming aspects of a civil war rather than an ideologically driven revolutionary struggle. In April 1914 the United States occupied Mexico's principal port of Veracruz, an act that drew widespread condemnation. New weapons, including machine guns, brought an unprecedented level of carnage to the battlefield. Various armies moved across the country drafting people and stealing food along the way. These great migrations broke through Mexico's provincial isolation, creating for the first time a national identity.

Wealthy landowner and former Madero supporter Venustiano Carranza merged the forces of Zapata, Villa, and Alvaro Obregón into a Constitutionalist Army against the new dictator. Together they defeated Huerta and forced him to flee the country. With a common enemy gone, the revolutionaries fought among themselves. Carranza felt threatened by his rival Villa, who proposed much more radical social policies. In October 1914 delegates representing Villa and Zapata met at Aguascalientes to unify their forces and drive Carranza from power. Under the impression that the United States

was supporting his enemy Carranza, Villa raided Columbus, New Mexico. In response, U.S. president Woodrow Wilson sent General John J. "Black Jack" Pershing into Mexico to capture Villa. Pershing's pursuit was a fiasco and Villa's popularity increased. Under Obregón's military leadership, however, Carranza gained the upper hand over Villa and Zapata.

1917 MEXICAN CONSTITUTION

Once in power, Carranza convoked a new constitutional convention that debated many key issues of the revolution, including the roles of the church and state, property rights, agrarian reforms, labor reforms, education, foreign investments, subsoil rights, and the political participation of Indians and women. Carranza wanted a conservative document, but delegates drafted a constitution embodying the aspirations of more radical revolutionaries that attacked large landholders, the church, and foreign capitalists. Even though many of its provisions were only slowly, if ever, implemented, it was a surprisingly progressive document that influenced subsequent social reforms in other Latin American countries.

The constitution codified much of the revolution's nationalist ideology. Article 27 claimed mineral rights for the state. In a reversal of policies under the Díaz regime, it tightly restricted foreign and church ownership of property and returned *ejido* lands to rural communities. In what some view as the high point of the revolution, in 1938 Lázaro Cárdenas used these provisions to nationalize Standard Oil and establish the state oil company Petróleos Mexicanos (PEMEX). Article 123 incorporated a labor code that instituted an eight-hour workday, set a minimum salary, abolished company stores and debt peonage, defended the right to organize and strike, outlawed child labor, and provided for generous pregnancy leaves. Article 130 provided for freedom of religion and separation of church and state. Other articles extended the constitution's liberal anticlericalism, including provisions outlawing religious control over education.

AFTERMATHS

Carranza assumed power under the new constitution as the first constitutionally elected president since Madero. In 1919 he rid himself of one of his primary enemies by killing Zapata. Carranza had moved significantly to the right by then, and attempted to manipulate the electoral apparatus to maintain himself in power. In response, Obregón, who had by then become more liberal, overthrew Carranza, who was then killed in an ambush. With Carranza gone, Obregón won the 1920 elections and made concessions that largely brought the ten years of fighting to an end. In 1923 Villa, who had retired to a comfortable estate in the northern state of Chihuahua, was assassinated in an attack that seemed to trace back to old feuds between revolutionary leaders. In the first peaceful transfer of power since the revolution began, Plutarco Elías Calles became president in 1924. His time in office witnessed increased conflict between the government and the Catholic Church hierarchy, leading to the 1926–1929 Cristero rebellion. In 1928 Obregón was once again elected president, but was then assassinated a few months later. Facing endless violence that seemed to be claiming the lives of all the revolutionary leaders, politicians devised a system that would assure their continued hold on power. In 1929 Calles formed the National Revolutionary Party, the forerunner of the PRI that ruled Mexico for the next seventy years. This opened the way for Lázaro Cárdenas (1934–1940), who not only implemented progressive agrarian and social reforms, but also consolidated control over the country.

By the time Cárdenas handed power to his conservative successor Manuel Ávila Camacho, the governing party had developed a corporate state that held more absolute control than had Díaz. Although the government introduced successful reforms in education and health care and created political stability, for many marginalized peoples the revolution had brought few changes. Although women participated massively in a variety of roles in the revolution—most notably as *soldaderas* who accompanied their husbands, providing domestic and other services—they ultimately gained little. Indigenous peasants were still confronted with authoritarian political structures and racial discrimination.

SEE ALSO *Civil Wars; Communalism; Coup d'Etat; Guerrilla Warfare; Land Claims; Land Reform; Partido Revolucionario Institucional; Politics, Gender; Socialism; Villa, Francisco (Pancho); Zapata, Emiliano*

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Marc Becker

MICHELS, ROBERT

1876–1936

Robert Michels was a German sociologist born in Cologne. His major work was *Zur Soziologie des Parteiwesens in der modernen Demokratie* (1911), published in 1915 in the United States under the name *Political Parties*. While Michels wrote hundreds more works (most of which are obscure articles published by various socialist groups during the early 1900s), only *Political Parties* is still highly regarded today. In this book, Michels formulated his famous "iron law of oligarchy."

During his early life, Michels came under the influence of French culture, which later seems to have had an impact on his writings. He was educated in Paris, Munich, Leipzig, and Halle, where he received his PhD. Around this time, he became involved with the German Social Democratic Party, which he joined in 1903. Because of his socialist activities, he was not allowed to teach history in German universities when he first began his career. Michels wrote close to two hundred articles between 1901 and 1907, many of which criticize the socialist parties to which he belonged. Michels argued that these parties were failing to accomplish the goals of socialism, and, while he was an active member at various points in his life, he felt that these shortcomings kept socialists from achieving any real change in society. Michels is characterized (as were most of his writings) as a syndicalist. In other words, he subscribed to the revolutionary idea that workers could seize both the economy and the government in order to further their interests. His beliefs were heavily influenced by Marxism, but also by Max Weber (1864–1920), with whom he corresponded regularly.

Near the end of his life, Michels became disillusioned with socialist politics and many of the foundational ideas upon which his works were written. Having resigned from both the German and Italian socialist parties by 1907, he continued to teach at the university level until 1928. Then, at the invitation of Benito Mussolini (1883–1945), he moved to Italy where he became an apologist for fascism. He died in 1936, after receiving chairs at the universities of Perugia and Rome.

Political Parties was first published in German in 1911. Within four years, it had been translated into French, Italian, and English. Michels's major theory in the book, the iron law of oligarchy, caused considerable scholarly debate because Michels failed to provide an exact definition of either the theory or the terms *oligarchy* or *organization*. On the most basic level, the theory holds that as groups begin to formally organize, they move toward oligarchy as a result of a number of technical and psychological factors. Oligarchy develops because organization prevents the masses from participating in decision making, and creates a need for specialized positions that not everyone is able to fill, as well as a leadership whose will and desires are easily fulfilled by the organization without input from others. Michels contends that this situation leads to a paradox because, although organization is necessary to achieve democracy, the organization that is essential to democracy also creates its antitype, oligarchy.

Political Parties had a significant impact on the research of social scientists, especially in the United States during the mid-1900s when Michels's book experienced a revival among political scientists. At the same time, however, this renewed interest outside the context of the original writing led to much debate over the book's original intent. Michels's writings cannot be divorced from his experiences with the socialist parties of Italy and Germany and his desire for them to achieve democracy in those two countries, as well as his eventual disillusionment with them.

SEE ALSO *Fascism; Mussolini, Benito; Oligarchy; Oligarchy, Iron Law of; Sociology, Political; Syndicalism*

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Thomas K. Bias

MICROANALYSIS

Microanalysis represents not only a distinctive methodology, but also a distinctive way of thinking about communication (Bull 2002). Of particular importance has been the belief in the value of studying social interaction through detailed analysis of film, audiotape, and videotape recordings. Indeed, the effect of the videorecorder has been likened to that of the microscope in the biological sciences. Through the use of recorded data that can repeatedly be examined and dissected in the finest detail, interpersonal communication has become an object of study in its own right.

But microanalysis did not develop simply as a consequence of innovations in technology. It also reflects fundamental changes in the way in which we think about

human communication (Kendon 1982). Microanalytic research has been conducted in a wide variety of academic disciplines, most notably social psychology, psychiatry, anthropology, linguistics, sociology, ethology, and communications. Within these disciplines, a number of distinctive approaches may be distinguished: in particular, conversation analysis (e.g., Sacks 1992), discourse analysis (e.g., Potter and Wetherell 1987), speech act theory (Austin 1962), ethology (e.g., Fridlund 1997), and the social skills approach (e.g., Hargie 1997). Despite substantial disagreements and differences, these approaches do also share a number of common assumptions. The key features of the microanalytic approach are:

1. Communication is studied as it actually occurs.
2. Communication can be studied as an activity in its own right.
3. All features of interaction are potentially significant.
4. Communication has a structure.
5. Conversation can be regarded as a form of action.
6. Communication can be understood in an evolutionary context.
7. Communication is best studied in naturally occurring contexts.
8. Communication can be regarded as a form of skill.
9. Communication can be taught like any other skill.
10. Macro issues (such as racism or politics) can be studied through microanalysis. (Bull 2002)

Not all of these features characterize all microanalytic research. For example, there are many studies that do not concern themselves with the evolutionary context of behavior. But an evolutionary perspective has played an important part in our understanding of the facial expressions of emotion (e.g., Ekman 2002).

Similarly, not all microanalysts concern themselves with macro issues. Indeed, microanalysts are open to criticism for ignoring larger structural factors that may influence behavior. But significant insights into macro issues can be gained through microanalysis. For example, according to interaction ritual theory (Collins 2004), it is social rituals that hold society together as a pattern of stratified and conflicting groups. Through the microanalysis of such rituals in situational context, Randall Collins argues that we can acquire a deeper understanding of macro issues such as social stratification and conflict at the societal or even global level. Again, according to expectation states theory, beliefs about how men and women differ in competence affect the emergence and exercise of social hierarchy and leadership (Ridgeway 2001). But through microanalysis, it may be possible to identify how those beliefs and expectations are manifest in behavior and affect social interaction. Thus, microanalysis is not incompatible with a macro perspective; indeed, our understanding of macro issues may be enhanced through the application of a microanalytic approach.

SEE ALSO *Individualism; Methodology; Microeconomics; Reductionism; Sociology*

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Peter Bull

MICROECONOMICS

Microeconomics refers to the behavior of individual actors, using economic reasoning. Economic reasoning refers to the specification of individuals as purposeful decision makers. In economics, observed behaviors are typically interpreted as the outcomes of decision problems. At this level of abstraction, such a conceptualization

of individuals is purely tautological. Microeconomic theories have content because of the way in which these decisions are specified; in other words, from the ways in which individuals are assumed to behave and from the description of the environment in which they function.

BASIC IDEAS

While the behavioral assumptions embodied in theoretical economic models vary widely, there are common elements that provide a heuristic description of individual decisions. First, agents are assumed to have preferences over the outcomes of their actions. By itself, this is again tautological until structure is placed on the preferences. In neoclassical economic theory, where preferences are defined over different commodity vectors, such as consumer durables to leisure, standard assumptions include: (1) completeness, the idea that an individual can compare all possible pairs of commodities and determine that which he or she prefers; and (2) transitivity, the idea that if an individual prefers commodity vector *a* to *b* and prefers *b* to *c*, then he or she will prefer *a* to *c*. These assumptions on preferences can, with certain technical assumptions, mean that individuals may be modeled as possessing utility functions; that is, that an individual acts "as if" there is a function that assigns numbers to different commodity bundles such that higher numbers are always preferred. While microeconomic environments typically start with utility functions, the reason for this is not a belief in their literal existence, but the fact that preference orderings may be represented by them.

Second, agents are assumed to face constraints. Simply put, an agent cannot choose the best of all possible outcomes. In the context of consumption, constraints are usually represented as a budget constraint, which requires that the expenditures required for a group of commodities are affordable. Constraints can be less transparent. In labor economics, when there is imperfect information about jobs, an unemployed worker can either choose among those jobs of which he or she is aware or alter the constraint by engaging in search.

Third, decisions are affected by an agent's beliefs. The preferences that an agent has over outcomes will be mediated by his or her beliefs as to how these outcomes affect him or her. For example, if an individual is deciding on whether to attend college or begin work after graduating high school, this decision will be affected by his or her beliefs as to the trajectories of earned wages under the two scenarios. An obvious reason why beliefs and realizations may differ is time, where decisions are made today before their future consequences are known. While the baseline assumptions on beliefs in economics are some form of consistent beliefs such as rational expectations, recent research has stressed various forms of learning and adaptation, such as the 2001 work of George Evans and Seppo Honkapohja.

EQUILIBRIA AND THE PRICE SYSTEM

Individual decisions are made in larger contexts. Traditionally the context for microeconomics was that of markets, in which buyers and sellers transact commodities. General equilibrium theory represents the apex of the market-based approach to microeconomics, in which the individual behaviors of buyers and sellers is simultaneously considered. In the classical environment studied by Kenneth Arrow, Gerard Debreu, and Lionel McKenzie, the key feature linking these decisions is the presence of a common price for all buyers and sellers in a given market. In general equilibrium theory, classic questions include whether an equilibrium exists (that is, whether there is a set of prices such that aggregate demand and aggregate supply are equated in every market) and whether the equilibrium is Pareto Optimal (that is, whether the allocation of goods at an equilibrium is efficient in the sense that there is no other allocation where everyone is equally well off and at least one person better off).

In classical general equilibrium theory prices do not convey information; no one learns from prices. The classical theory has been extended to include an informational role for prices. This is of great importance as it addresses the question of how information is aggregated in a decentralized economy. As Friedrich Hayek wrote in a classic statement, "How can the combination of fragments of knowledge bring about results which, if they were to be brought about deliberately, would require a knowledge on the part of the directing mind which no single person can possess?" (Hayek 1948, p. 54). Hayek's profound suggestion was that the price system aggregates information across agents in a way to produce collectively efficient allocations; modern microeconomic theory, pioneered by Sanford Grossman, has provided both a formalization and a description of the cases where this aggregation property does and does not hold. This is especially true for asset markets, where, as Grossman observed in 1989, a trader will wish to change his or her demand function for an asset evaluated at a particular price after observing that price cleared the market, in contrast to the standard formulation of a demand function in classical Walrasian general equilibrium theory.

Grossman's own work shows that the extension of classical general equilibrium theory to include the informational role of prices leads to: (1) results that show how equilibrium prices aggregate private information held by individual traders and renders key portions of it publicly available to all traders; (2) results that help resolve key information paradoxes in efficient markets theory; and (3)

results that show key distinctions between synthetic securities (e.g., those synthetic securities produced by program trading strategies) and real securities and the policy importance of this distinction. The importance of prices as conveyors of information originally arose in the context of debates, primarily between Hayek and Oskar Lange, on whether socialist economies could replicate the efficiency of capitalist ones; economists conjecture they are important in thinking about transition by postcommunist economies today.

In contrast to general equilibrium theory, game theory does not focus on the role of markets in adjudicating individual decisions or in the transmission of information in a world where agents take prices as given beyond their individual control, but rather examines how individuals choose strategies when others are also choosing strategies. In such environments, important institutional features include the specification of whether or not agents can communicate with one another and form contracts with one another. Game theory has proven particularly useful in understanding the consequences of imperfect competition; that is, cases where individual firms do not act as passive price takers.

APPLICATIONS

Virtually all forms of economic decisions have been studied using microeconomics, with particular attention to their implications for behaviors that are observed in equilibrium. One example of this is the analysis of decision making under uncertainty. In order to understand how, for example, financial markets price risk, it is necessary to specify how individual agents react to risk as well as the riskiness of assets that are available. When placed in an integrated general equilibrium framework that takes into account the informational role of prices, one has the basis for the theory of finance, which has provided a complete theory of how asset returns are interrelated. Celebrated results such as the capital asset pricing model, which describes how financial markets price risk and the Black-Scholes option pricing model, which relates the prices of a stock option to the price of the stock and the interest rate on risk free bonds, have proven to have great practical as well as scholarly value.

Much of the research in microeconomics since the 1970s has focused on the relaxation of the behavioral assumptions that are traditionally associated with neoclassical economic theory. A particularly important body of work is often referred to as information economics and explores the implications for imperfect and differential information for the functioning of market and nonmarket interactions. A classic example is George Akerlof's 1970 analysis of the market for used cars when some cars are known by their owners to be lemons. Two ideas that emerge from this literature that are standard in the study of insurance and related markets are adverse selection (the idea that certain market arrangements influence the composition of market participants such as individuals who privately know they are ill being more likely to seek medical insurance but vendors of such insurance are unable to observe the health of the individual) and moral hazard (the idea that market arrangements can lead to undesirable behaviors, such as an insured person taking more risks because he or she has the insurance).

The newly influential school of behavioral economics has challenged many of the rationality assumptions that agents face. Behavioral economists have attempted both to document how actual behaviors deviate from traditional notions of rationality as well as to understand how these deviations can explain phenomena such as investment behavior. Recent work on social interactions has attempted to expand microeconomics to incorporate substantive sociological perspectives. A recent survey of this type of work and the related empirical measurement problems is produced in William Brock and Steven Durlauf's article for the *Handbook of Econometrics* (2001).

In addition to efforts to expand the behavioral richness of microeconomics, research has attempted to apply microeconomic reasoning to new contexts; much of this was pioneered by Gary Becker. It is standard for economists to study decisions ranging from childbearing to religious behavior to crime using microeconomic reasoning. This work is sometimes regarded as "economic imperialism" but is perhaps better regarded as a recognition that purposeful decision making is not simply an economic concept but rather an important element of human nature. The notion of purposeful decision making that lies at the heart of microeconomics is compatible with the use of substantive ideas from psychology and sociology to enrich the specification of how these decisions are made.

An equally important development concerns the integration of microeconomics into macroeconomics. Modern macroeconomic theory, as exemplified in the work of Robert Lucas, Edward Prescott, and Thomas Sargent, has to a large extent been defined by the requirement that microeconomics provides the basis for macroeconomic modeling relationships. This integration has been of fundamental importance providing a coherent view of macroeconomic dynamics, including the role of expectations and intertemporal decision making in understanding the effects of macroeconomic policies. The integration of microeconomics and macroeconomics is not complete in the sense that issues of aggregation are typically ignored, but the importance of microeconomic reasoning in conditioning the modeling of macroeconomic relations is clear.

Finally, it is important to note that microeconomics has an extraordinarily active empirical side. Specific microeconomic theories are constantly being subjected to testing and evaluation. More generally, microeconomic reasoning has been used to strengthen the inferences drawn for what might appear initially as purely statistical questions, such as the effect of a job-training program on its participants. As exemplified in the work of James Heckman, microeconomic reasoning is required whenever one is interested in discussing causal aspects of individual behavior.

FURTHER READING

Neoclassical economic theory is comprehensively surveyed in Andreu Mas-Collel, Michael Whinston, and Jerry Green's *Microeconomic Theory* (1995). J. Darrell Duffie's *Dynamic Asset Pricing Theory* (2001) is a deep treatment of the modern theory of finance. Becker surveyed his fundamental contributions to the extension of neoclassical microeconomics to the study of the family and reproduced them in *A Treatise on the Family* (1993). Nancy Stokey, Robert Lucas, and Edward Prescott in *Recursive Methods in Economic Dynamics* (1989) and Thomas Sargent in *Dynamic Macroeconomic Theory* (1987) provide full coverage of the contemporary microfoundations of macroeconomics. Colin Camerer described the contemporary behavioral economics and contrasted it with more traditional approaches in his 2003 work. Heckman's 2001 article is an overview of his scholarship and is in many ways a summary of the achievements of modern microeconometrics. In their book *Microeconometrics* (2005), A. Colin Cameron and Pravin Trivedi describe many statistical methods that have been employed to evaluate microeconomic data.

SEE ALSO *Arrow-Debreu Model; Economics, Neoclassical; Game Theory; General Equilibrium; Macroeconomics; Microfoundations; Rationality*

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MICROELECTRONICS INDUSTRY

The global Internet economy had its origins in the microelectronics industry and the innovation of the microchip in its various versions. In the stages of optoelectronics, the use of electrical energy to generate optical energy or vice versa such as light-emitting diodes (LEDs), the microelectronic chip, as developed by Intel Corporation, assumed enormous importance for the world of information and telecommunications.

Since 1970, Moore's Law concerning the pace of technological innovation relative to cost gave significance to the power of the microchip and its contribution to all technological innovations, from the calculator to the computer, to voice and data over the Internet, and to the "magical" downloading of pictures from satellites onto the computer screen. Now known as *digital convergence*, most technological innovations in this sector originated from the microchip. The transformative innovation of the microchip led to the many innovations that emerged from Silicon Valley and other centers of technology in the United States, Europe, and Asia. Specifically, the microchip enabled computing and telecommunications to interlock in transforming data and information into digits that can be stored, processed, and transmitted over long distances instantaneously. The microchip has transformed manufacturing, health-care appliances, gadgets for domestic use, and tools and machines of every descrip-

tion. It has led to surges of wealth creation and employment, and it has transformed the ways in which people communicate, learn, and integrate across political borders.

Inevitably, the global Internet economy was the outcome of the transformative technology of the semiconductor. It enables the creation of new technologies in new sectors of the economy and in the daily activities of the population. In essence, the microchip is an extremely flexible technology capable of being customized to many different kinds of users and applications. As the United States witnessed the innovative dynamism generated by the microchip in the locality of Palo Alto, California, Sweden did as well near Stockholm, India in Bangalore, and Taiwan in Taipei.

PRODUCTS AND COMPETITION

The progress of the microchip industry led to the growth of multimedia services and operations. Due to this progress, the cost characteristics of the new technologies changed, and these technologies enhanced new economies of scope and reduced the economies of scale as miniaturization grew. Borrowing a term from William Gibson's novel *Neuromancer* (1984), *cyberspace* has changed the entire world and rendered many of the previously basic tools of strategy, planning, and information systems obsolete.

The newest innovations originated not in corporate headquarters but in consumer markets in which proprietary communication networks were built; these in turn were overtaken by the power of the Internet and its global connectivity. New electronic markets were exploding overnight and technology had become "not the solution, but the problem" (Downes and Mui 2000). In a process described by J. A. Schumpeter (1942) as "creative destruction," new technologies appearing in a capitalist society replaced old technologies, leading to the creation of new economies that added to the accumulation of wealth and prosperity. This change occurred under competition when the microchip became a "killer app" (application), and gave rise to the revolution in information technology and the transformation of the entire telecommunications industry.

As computing devices became smaller, less expensive, and more powerful, digital technology became the most disruptive force in modern society. Gordon Moore, who founded Intel, witnessed the decrease in the size of the product—the microchip—with each succeeding decade. He realized that as size decreases, power increases geometrically because more circuits can be placed on a single chip. Moore articulated the theory, which came to be known as Moore's Law, that processing power doubles every eighteen months, while cost holds constant. Moore's Law applies to many other aspects of digital technology, including memory and storage devices.

THE ROLE OF THE MICROPROCESSOR

Many aspects of the telecommunications industry, such as bandwidth, the speed at which data can be transmitted, the use of high-speed fiber optic cable, and satellite and wireless communications, rely on the microchip in one way or another. As of 2006, one gigabyte of storage could fit on a credit card–sized device that cost no more than $200.

Moore's Law is supported by Metcalf's Law, according to which the more users a particular technology draws, the more valuable the technology becomes. Robert Metcalf was the founder in 1979 of 3Com Corporation, a Massachusetts-based manufacturer of computer networking products, and the designer of the Ethernet protocol for computers. Metcalf calculated that the usefulness of a network is equal to the square of the number of users, an insight that led to the explosion of the Internet in the digital age and the development of multimedia firms and services.

As a result of the cost characteristics of new technologies based on greater economies of scope and reduced economies of scale, it became possible to place greater reliance on competition, which benefits economic activities, rather than regulation. In the new information economy, the rules of market pricing have changed as transaction costs are reduced and the concept of what constitutes public goods has changed. The power of information as a public good has radically altered its impact on consumers; information is no longer a proprietary good due to its availability in cyberspace. In the multimedia age, "content" is now a public good, but its distribution costs have an impact on competition and business models.

Although the term *multimedia* has no single definition, it covers three trends in communication products. One is the delivery by a single medium of different types of content, including text, video, sound, graphics, and data. The second trend depends on the way in which content is delivered, because digitization allows more information to be stored on the same chip and pushed through the same channels, either wire line or wireless. The third trend is determined by telecommunications and media companies, which are motivated to offer consumers integrated packages from a single vendor. In such a case, transaction costs dominate both the supply-side and the demand-side identities. Multimedia firms have an advantage in market competition in which the basic feature of their products—the microchip—gains greater power for both transmission and storage.

SMART CARDS

As the microelectronics industry advances, companies have introduced multifunctional *smart cards*. Such cards are used for the payment for services, public transportation, access to health and government services, public telephones, and so on. Using smart cards, electronic payments are made at point of sale, and through the Internet and home-banking sessions (Berkvens 1997). The data on the chip would include general information to be used by application providers and card acceptors. Data is stored on the chip, as well as in the back office of the card-scheme participants. Biometrics makes identification of the user on the chip even easier and more reliable.

THE ROLE OF THE CHIP IN TRADE

Microprocessor-related trade talks between the United States and Japan became critical in 1986 when Japan agreed to open up to 20 percent of its market to foreign supplies of microprocessors. It was initially difficult to make inroads into the Japanese market for computer chips, but by 1996, 80 percent of foreign chips sold in Japan were made in the United States (Cooper and Takahashi 1996). Renewal of the 1986 agreement was sought by the administration of President Bill Clinton ten years after the initial agreement was signed. By this time, however, Japanese companies had access to lower-cost capital and subsidies from the Japanese government, and they could produce better-quality chips. The American company Cray Research, then the largest producer of supercomputers, lost a bid against Japan's Nippon Electronic Corporation to build a weather-forecasting computer for the U.S. National Science Foundation in 1996.

The spread of the production of microprocessors in Japan, China, and Taiwan, and to some extent India, has "transformed Asia into a global factory for diverse goods including microelectronics, which has led to Asia's emergence as a location for innovation offshoring" (Ernst 2004, p. 3). According to William J. Baumol (2002), new actors from Asia are entering the global innovations race, and Taiwan has accumulated a competitive advantage in digital circuit designs. Intel remained the leading chipmaker in the world as of 2006; its chips direct the inner workings of most personal computers, and it is responsible for changing the function of the personal computer to an entertainment device. Intel began positioning its platform to provide online entertainment to the digital living room, and was prepared to expand its operations in India. Domestic firms in India can benefit from the rapid growth of the domestic information technology market.

THE ERA OF MOBILE COMMUNICATIONS

Wireless technologies, including Wi-Fi (wireless Internet connectivity), Blue Tooth, and 3G, provide faster and longer-range transmissions. Competing with them is a communication technology called *near-field system*, which fuses tickets, key cards, and cash with mobile phones. This device requires different types of microprocessors and may displace existing wireless technologies. By 2006, it had become possible to install a "contactless" chip and its reader into a mobile phone, thereby making possible such operations as using a screen and connecting to the Internet with a phone. Devices are in use in Hong Kong (Octopus cards) and Japan (DoCoMo) that offer wallet phones with a FeliCa chip. A FeliCa chip is a contactless card for an electronic wallet developed by Sony. From the word *felicity* the card cannot be forged and helps send and receive data at high speed and security.

These innovations are a consequence of a global production system based on vertical specialization in which many of the functions can be relocated to low-cost and low-wage regions. Beyond manufacturing, most of the production innovation in the electronics industry has given rise to the development of mass-production facilities in developing Asian countries. The models for chip design and manufacturing, for example, are developed in Korea, Taiwan, and Singapore, and then transmitted to other countries, such as Malaysia and China, as well as such eastern European countries as Hungary, Poland, and Romania.

The restructuring of global design chains has created wide-ranging links across countries, and these can vary between manufacturing-based innovation, product innovation, and infrastructure (Ernst 2004). Chip design has become strategically important for telecommunications and computer networking, mobile handsets and entertainment devices, and automobile electronics. In the past, chip design and manufacturing was considered the monopoly of the Japanese microelectronics industry, but Japan's innovation prowess failed in the software and biotechnology arena during the 1990s. Japanese researchers had better luck with robotics, aerospace technology, and other burgeoning technologies (Competing Through Innovation 2005, p. 65).

In order to regain its competitive strength, Japan aimed to innovate in its microelectronics industry. Japanese companies also began conducting research in the robotics sector with robots designed to enter the healthcare industry and search-and-rescue operations. Japan's position as a leading innovator in chip design is being challenged by other Asian countries, especially Taiwan, as well as countries in eastern Europe. In the early years of the twenty-first century, Japan continued to lead the

world in its investment in research and development, with approximately 3.2 percent of its gross national product devoted to research and development, compared with 2.6 percent in the United States and 2 percent in the European Union. Japan also leads other countries in obtaining patents in the electronics industry, but it lags in management skills and university research.

At the same time, India and China were racing to obtain foreign investment for chips manufacturing. In 2005 the California-based company Advanced Micro Devices (AMD) joined a consortium to build India's first semiconductor plant, as well as an assembly and testing plant in the Chinese city of Chengdu. In 2004 Lenovo, China's leading personal computer manufacturer, agreed to use AMD chips in its desktops. In addition, AMD agreed to open a chip-testing facility in India, gaining contracts from India's railways, schools, and government.

Intel also has a commanding market presence in both India and China. Intel aimed at developing a low-cost personal computer to be used in rural multimedia kiosks found across India. The product could also prove successful in China. Competition between AMD and Intel would keep down costs for rural applications. In addition, both India and China were making a push for the faster spread of broadband with affordable Internet applications and e-initiatives.

CHIP MANUFACTURE AND HEALTH CARE

There has been continuing opposition to the use of computing in health care, a prospect that involves far greater use of computers by the medical profession. Some critics argue that a systematic use of software to diagnose and care for patients could be disruptive. However, in *telehealth* projects, computing plays a vital role because diagnoses can be transmitted via the Internet to distant places through the use of satellites or even microwaves. The goal of this process is to use software that matches a patient's symptoms and health history against a catalogue of computerized medical knowledge. This idea has been supported and propagated by Dr. Larry Weed, who believes that doctors need technology to facilitate their absorption and retention of new medical information. As governments push for health-care automation, resistance to the use of information technology could finally crumble.

DISPERSION OF CHIP DESIGN AND MANUFACTURE

As chip design centers become geographically disbursed, the links between engineers and markets have to be established. Market demand for microelectronic chips is growing phenomenally because of the wide use of chips in consumer products and in the entertainment industry. New models of software development are leading to a new breed of knowledge workers, adding to the complications already inherent in chip design and innovation. As the number of knowledge workers grows in developing countries, there is a shift in production in the microelectronics industry, with product chains also growing in number and intensity. These developments have had a major impact on the telecommunications industry, as well as in mobile communications, automobile production, and the health sector.

The convergence of digital technologies has created a new environment—cyberspace—for transacting business, providing entertainment, forming links with customers, and creating and distributing wealth. The development of digital technology has been fueled by the conditions expressed in Moore's Law and Metcalf's Law, as well as the economic effects of the Schumpeterian process of creative destruction. As a consequence, the microelectronics industry has touched all lives, both real and virtual. A new generation of knowledge workers is entering cyberspace armed with the Internet and the ability to change the economic dynamics of the business world and markets worldwide. The ability to reach new frontiers in microelectronics research is no longer determined by geography, but by free computing power, free bandwidth, free software, and a society that values such an environment for its business interests and its livelihood.

SEE ALSO *Bubbles; Industry; Internet; Technology, Adoption of*

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Meheroo Jussawalla

MICROFINANCE

Microfinance, also termed microcredit, refers primarily to small, development-oriented loans made to low-income borrowers with the aim of helping them to develop commercial activities or start businesses.

The concept of microcredit originated with the economist Muhammad Yunus. He made a small loan to a woman in Chittagong, Bangladesh, who used it to increase her family's income by making and selling bamboo furniture. Established formal-sector banks were not interested in making loans of such small amounts, especially to borrowers who were highly risky because they lacked both collateral and business experience. Yunus founded the Grameen Bank in 1976 as a lending institution that specialized in loans of this type.

The Grameen Bank organized potential borrowers into small groups, and put them through a training program emphasizing both personal habits and enterprise-related skills. All members of the group made regular deposits; one member of the group would be selected to receive a loan. The next loan would be made to a group member only when the outstanding loan was repaid. In effect, the social pressure of the borrower group provided a form of collateral.

Pooling savings to facilitate rotating borrowing for in-group members is not unique to Grameen Bank; migrants and co-ethnics, in particular, often make such arrangements. What is distinctive about the Grameen approach is that these pooled savings are used to facilitate entrepreneurial activity, and that women are targeted. Indeed, this bank's design highlighted the problem of the exclusion of women from participation in markets, and the potential economic-development impact of fully engaging the resources, energy, and initiative of women once these women were freed to create their own enterprises.

Grameen's loan program quickly became well known and found global imitators and adaptors. Economic theorists have been fascinated by the Grameen Bank, as the design of its lending-saving mechanism has interesting aspects from the perspectives of game theory and information theory. And as the Grameen model spread to other nations, a critical academic discussion has ensued about the potential and limitations of this model. One debate, summarized by Dale Adams and J. D. Von Pischke in 1992, involves whether microcredit represents a new element in developing economies, and can serve as a stand-alone poverty-alleviation program. A related debate, expressed by Anne Marie Goetz and Rina Sen Gupta in 1996, discusses the net impact of Grameen-type programs on women, primarily because women-centered microcredit programs may have complex and unintended effects on gender relations, and specifically on intra-household power relations and resource and debt allocations.

These controversies notwithstanding, microcredit has been broadly embraced by many development agencies and governments. The United Nations (UN) declared 2005 the Year of Microcredit, recognizing and initiating microcredit programs in more than ninety countries. The World Bank set a goal of reaching "100 million of the world's poorest families by 2005." Microcredit programs have received strong support from national governments: for example, the Community Development Financial Institution program in the United States, initiated in 1996, channels money to microcredit; in 2003, Brazil's federal government began requiring all banks to set aside 2 percent of their assets for use in funding microcredit activities.

Microcredit has become a central element in the efforts of global, national, and local organizations to increase self-employment prospects for low-income people, and for providing access to credit. In October 2005, UN secretary general Kofi Annan stated that microfinance has "an untapped opportunity to create markets, bring people in from the margin, and give them the tools with which to help themselves." He called for "scaling up" microcredit practices "without losing sight of the poorest and most vulnerable members of our society" (States News Service 2005).

With this growing government and agency attention, and these shifting expectations about what microcredit can do, most contemporary microcredit programs have only a partial resemblance to Grameen's original program: the focus on female borrowers, on the very poor, and on extensive training of participants often disappears.

The combination of financial deregulation, proliferating publicly sponsored programs, and public officials' shifting expectations has blurred the line between microcredit and other financial markets for lower-income people. Microcredit sometimes denotes small-denomination loans made to very small businesses, or to businesses operating in informally settled areas such as Brazil's *favelas* (slums or shantytowns). In this usage, microcredit supports working-capital needs, not business creation as in the Grameen model. And in some nations, such as South Africa, the term microcredit refers generally to loan markets in which non-bank lenders provide credit to borrowers in unregulated or high-risk, low-sum credit markets. This multiplication of usages has led to the creation of a distinction between productive and nonproductive microcredit.

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Gary Dymski

MICROFOUNDATIONS

Microfoundations refers to a concept in economics associated with a research program that developed in the 1940s and which apparently became uninteresting to economists by the 1980s. If macroeconomics is associated with aggregate economic models, and microeconomics is associated with the individual behavior of households and firms, microfoundations was taken to be the demand that macroeconomic models have microeconomic foundations. That is, no macroeconomic model was to be deemed acceptable if it could not be derived from underlying individual choice behavior.

Though this seems unobjectionable, it in fact carried some intellectual baggage. In the 1940s, there were two strands of economics that vied for the attention of theorists: the first was the economics of John Maynard Keynes, associated with managing the economy as a whole. The second was general equilibrium theory, a view of the economy as built on the optimizing behavior of individuals and firms, which investigated whether all their independent decisions could possibly lead, as Adam Smith had suggested, to coherent social outcomes. General equilibrium analysis was part of the tradition of the Cowles Commission, then located at the University of Chicago. For Cowles's economists, Keynesian macroeconomic theory needed to be derived from the foundational work in general equilibrium theory else it would be an ad hoc theory. The neoclassical synthesis, the marriage of neoclassical general equilibrium with Keynesian macroeconomics, begun with Oscar Lange's *Price Flexibility and Unemployment* (1944) was further developed in Lawrence Klein's *The Keynesian Revolution* (1947), and was completed by Don Patinkin's *Money, Interest, and Prices* (1956). Keynesian models "fell out" as special cases of aggregated general equilibrium models with money.

In the 1950s and 1960s many Keynesians were opposed to general equilibrium analysis out of a belief that Keynesian economics was not a special case of rigidities and market failures in those models, and for them *microfoundations* became the code word for a desire to reconstruct microeconomics to support Keynesian macroeconomics. At the same time, anti-Keynesians like monetarist Milton Friedman began constructing equilibrium expectations models that ruled out the idea of the Phillips Curve trade-off between unemployment and inflation that then played a role in standard Keynesian models.

Microfoundations thus became part of the monetarists versus Keynesians debate of the 1960s, with the Keynesians asking for disequilibrium or Marshallian partial equilibrium microfoundations to be developed, and the monetarists asking that Keynesian analysis be reconstructed to accommodate rational expectations equilibrium models.

As is the case for most controversies in economics whose bases are oversimplifications of complex analytic positions, neither perspective on the microfoundations of macroeconomics made contact with much of what was actually going on in economic analysis. In the first decade of the twenty-first century, economists do not produce arguments about microfoundations as such. The reconstruction of macroeconomic analysis in the post–Robert Lucas period has resulted in the general acceptability, indeed general requirement, that macroeconomic models be based on optimizing behavior by (perhaps representative) economic agents. Microfoundations now gives only a residual hint of earlier foundationalist thinking, and merely suggests that the choice structure of any particular economic model be clear and well specified. To the degree that the term *microfoundations* has a meaning today, it is that agents' decisions and choices should not be based on ad hoc specifications.

SEE ALSO *Macroeconomics; Macrofoundations; Microeconomics*

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E. Roy Weintraub

MICROSOFT

The spread of computerization in the late twentieth century ushered in a new, third, industrial revolution, which redefined the environment and relationships of industrial capitalism. The computer hardware and software industries have been among the most dynamic and rapidly developing of any industries. The origins of the microcomputer industry are typically acknowledged as dating to 1975 with the release of the MITS/Altair in specialist hobby magazine *Popular Electronics*. It was for this computer that William (Bill) Gates, while still a student at Harvard, succeeded in writing an operating system (Langlois and Robertson 1985). Formed in 1975 by Gates and Paul Allen, with Steve Ballmer joining later, Microsoft Corporation became the world's largest computer operating system and software company. Annual turnover increased from $140 million in 1985 to over $2.7 billion by 1992 and more than $44 billion by 2006. Pretax revenue as a percentage of turnover was 37 percent in 2006 (Microsoft 2006). By the early 1990s, the firm had gained a dominant position in the market for computer software with 44 percent of sales (Wallace and Erickson 1992). The U.S. Department of Justice, however, brought an antitrust case in October 1998, arguing that Microsoft had succeeded in achieving a monopolistic position in the supply of computer operating systems with a market share of over 90 percent of Intel-based PC (personal computer) operating systems (U.S. Department of Justice 1999).

ORGANIZATIONAL CULTURE AND BILL GATES

The culture and organization of the company was synonymous with informality and openness to top management, despite its being an organization of over 76,000 employees. From the beginning, casual dress, group working, and a lack of hierarchy were its trademarks. The corporation's offices in Redmond, Washington, are arranged in a campus style, imitating a university where staff would feel a sense of familiarity and "belonging." The company actively sought to recruit bright and ambitious programmers and graduates from leading universities. This flat managerial structure and openness is, however, only one side of the coin. Microsoft employees were expected to work extremely long hours. Strong pressure existed to ensure employees were focused solely on the work they did for the company. More draconically, the company used a biannual peer review process whose result was the sacking of the worst performing 5 percent of staff in each review.

Gates's entrepreneurship, often discussed in Schumpeterian terms, highlights the importance of social networks and social capital. Born in Seattle in 1955 into a wealthy family with a father who was a successful lawyer, Gates attended Lakeside School, a prestigious private school, and later Harvard University with the aim of becoming a lawyer like his father. Gates was thus not simply an exceedingly bright student, he was also well connected. He was able, through his father, to gain contacts with leading lawyers and raise capital through venture capitalists.

COMPETITIVE ADVANTAGE: LICENSING IN OPERATING SYSTEMS AND SOFTWARE

Microsoft released its first disk operating system, called Microsoft Disk Operating System (MS-DOS), in 1981. The decision of IBM to adopt MS-DOS as its operating system for preinstallation on IBM computers proved crucial in allowing Microsoft to establish MS-DOS as the industry standard. MS-DOS was not the most technologically advanced product available in the early 1980s. Icon-based interfaces (using a graphical user interface), developed at the Xerox research labs and adopted by Apple Computer, Inc., were not matched by Microsoft until the release of Microsoft Windows in 1985. However, the superiority of the icon-based system encouraged Apple to maintain close proprietorial control over its operating system, resulting in the Apple operating system being only available on Apple Mac machines. Unlike Apple, Microsoft saw in licensing a commercial mechanism for the establishment of an industry standard, as well as a strategy and competitive advantage based upon the creation of positive externalities and the networking effects deriving from the establishment of an industry standard (Langlois and Robertson 1985, pp. 68–101). Thus the licensing and success of Microsoft Windows was such that by 1990 Microsoft had achieved a dominant position in the supply of operating systems running on Intel-based PCs.

Microsoft also found competitive advantage in closely monitoring and responding to new developments in the software industry. As a result, however, Microsoft has been continually accused—as with the antitrust case described above and in a lawsuit brought by Apple in 1988—of anti-competitive practices, copying and even stealing new developments. Microsoft developed close contacts with small innovative firms, only to release alternative versions of the small firms' software. Intuit, a producer of a money-management software package, claimed that after its software began outselling rivals by six to one, Microsoft approached the company in early 1990 to discuss a possible takeover or joint venture whereby Microsoft would produce the software, licensing the

Intuit brand name. However, by the end of 1990, Microsoft had abandoned all negotiations and announced the release of its own finance product, Microsoft Money.

Microsoft's practice of licensing software, and increasing the price to manufacturers for older versions of Microsoft software and operating systems, has been effective at encouraging the spread of the newest versions of its software, thereby reinforcing its market position. Microsoft's success brought it into conflict with the antitrust authorities in both the United States and Europe, where its monopoly power was subject to extensive government investigation. In the European case, Microsoft was fined €280.5 million in 1996, with another €497 million levied in 2004. European authorities also restricted Microsoft's ability to bundle software (Tran 2006).

As of 2007, the company is organized into three divisions—Microsoft Platforms and Services, Microsoft Business, and Microsoft Entertainment and Devices—reflecting the evolution of the company from its initial development of operating systems and software toward the provision of Internet, media, and entertainment services. By 2007 Microsoft had expanded its operations into ninety countries. However, this expansion has brought new regulatory problems, notably the Chinese government's demands that the company restrict access to Internet services and news. Thus Microsoft's expansion worldwide and into new markets is, almost uniquely, inherently interlinked with regulatory and competitive interaction between the company and host governments.

SEE ALSO *Computers: Science and Society; Digital Divide; Entrepreneurship; Globalization, Social and Economic Aspects of; Information, Economics of; Internet; Management; Networks; Organizations; Social Capital; Venture Capital*

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Carlo Morelli

MIDDLE CLASS

Class is perhaps the most crucial concept in the social sciences; class location affects everyone's life, and class struggles are at the core of social dynamics in all societies. Class can be viewed as a dichotomous system in which each class presupposes the other (e.g., there can be no masters without slaves and vice versa) or as a gradational system with a continuous ordering or ranking of people, from low to high, on the basis of income, skill levels, occupation, education, and so on (Ossowski 1963). The middle class can be identified on a purely descriptive, ad hoc basis, using a gradational approach to divide the population into aggregates sharing similar characteristics. The "middle class" is, then, the population aggregate that falls in the middle of the income, educational, and occupational profiles of a research sample, a given community, a region, or a nation-state. This descriptive approach yields only a superficial picture of the middle class, however. Theoretical analysis is required to identify the basis for the location of the middle class in the social and economic structures that, in turn, affect its economic, social, and political behavior and ideological commitments. Karl Marx (1818–1883) and Max Weber (1864–1920) set the foundations for the analysis of class. A discussion of their main ideas must precede consideration of more recent theories about the middle class.

MARX AND WEBER ON CLASS

Marx identifies two main classes in capitalist societies: the bourgeoisie or capitalist class (owners of the means of production), and the proletariat or working class (owners only of labor power or the capacity to work). Prior to capitalism, there was a "manifold gradation of social rank" (e.g., feudal lords, apprentices, serfs, etc.), and within each of these ranks there were "subordinate gradations" (Marx and Engels [1848] 1998, p. 2). In reply to the question, "What makes wage-laborers, capitalists, and landlords constitute the great social classes?" Marx offers a preliminary answer: "the identity of revenues and sources of revenues." He rejects this conclusion because it would lead to defining as a class any group whose income has the same origin. Marx gives the example of physicians and officials and ends by stating, "the same would also be true of the infinite fragmentation of interest and rank into which the division of labor splits laborers as well as capitalists and landlords" (Marx [1894] 1967, pp. 885–886). For Marx, a social class is not an income group, but a necessary and unequal relationship between people, mediated or shaped by their relationship to the means of production. The relationship between capitalists and workers is necessary (they presuppose each other), it is exploitative (capitalists appropriate the surplus value produced by the workers),

and it places the capitalist class in a position of power over the working class.

When examining capitalism theoretically, Marx uses a dichotomous concept of class. Empirically, he observed, classes do not appear in "pure form"; in England, for example, they were fragmented by the division of labor into "middle and intermediate strata" (Marx [1894] 1967, p. 885). The middle class, Marx's writings suggest, is a descriptive concept that refers to an empirically variable, heterogeneous set of strata located in an intermediate position between workers and capitalists.

Weber's concept of class is neither relational nor centered on exploitation. Weber's focus is the effect of class situation on life chances, that is, on an individual's economic and social opportunities. Classes are aggregates of individuals who, because they bring similar resources to the market (e.g., ownership of different kinds of property, different skills, etc.), they share similar life chances. "The term 'class' refers to any group of people that is found in the same class situation" (Gerth and Mills [1946] 1973, p. 181). In market exchanges, ownership of property gives power to owners over nonowners, that is, those who must sell their labor or goods made with their labor in order to survive. This is why " 'property' and 'lack of property' are … the basic categories of all class situations" (Gerth and Mills [1946] 1973, pp. 181–182). These categories, however, are extremely differentiated according to the kinds and quantity of property and the type of skills individuals bring to the market. Weber provides an elaborate taxonomy of propertied, commercial, and social classes. The middle classes are located between the "positively" and "negatively" privileged propertied and commercial classes—for example, small property owners, craftsmen, self-employed farmers, public officials, professionals, and credentialed and highly skilled workers (Weber 1978, pp. 302–307).

Weber theorized about classes at the level of what Marx called "the Eden of the innate rights of man" (Marx [1867] 1967, p. 176), meaning the market, where capitalists and workers meet freely as buyers and sellers of commodities. Marx focused on the level of production, where capitalists exploit workers. Both levels of analysis are important for the study of class.

TWENTIETH-CENTURY THINKING ABOUT THE MIDDLE CLASS

As capitalism developed in western Europe and the United States, it brought not only an increase in the size of the working class, but, especially during the first half of the twentieth century, a relatively greater increase in the number of nonmanual waged and salaried employees. Some of these "white-collar" workers were highly educated, well paid, and in positions of authority; others were poorly paid and differed from manual "blue-collar" workers mainly in the kind of work they did. Sociologist C. Wright Mills (1916–1962) referred to these workers as a "new" middle class, different in its dependent status and source of income (salaried work) from the economically self-reliant "old" middle class prevalent in the nineteenth century, composed of independent professionals, small farmers, small entrepreneurs, and property owners (Mills 1951). This new and growing intermediate strata or middle class, because of its heterogeneity in terms of occupation, education, income, and authority in the workplace, is difficult to categorize and identify.

Among Marxist analysts, the most important work has been done by Erik Olin Wright, who introduced complexity into the two-class schema by examining, in the context of concrete capitalist societies, variations in the extent to which the three dimensions of capitalist power—ownership and control over money capital, physical capital, and labor—coincide or not to form different kinds of class locations. There are, in light of this analysis, three "pure" classes: capitalists, the working class, and the petty bourgeoisie or owners of means of production who do not employ labor (Wright 2001, pp. 112–113). The middle classes are propertyless employees whose levels of skill and knowledge, and position in the authority structure, place them in "contradictory" class locations. As well-paid managers or experts, they are in a "privileged location within relations of exploitation" (Wright 1997, p. 22); they are exploited (as workers), while simultaneously sharing capitalist privileges that vary with their degree of authority and expertise.

A different criterion for separating the working class from the middle class is whether or not workers engage in productive labor, that is, whether they produce exchange values and, therefore, surplus value. Arguing that only productive workers are members of the working class, Nicos Poulantzas (1936–1979) considers all other wage and salary earners, those who only contribute to the circulation and realization of surplus value (i.e., those employed in banking, commerce, research, advertising, services, etc.), as unproductive workers: the middle classes are composed of such workers (Poulantzas 1973, pp. 30–31).

Today's neo-Weberian analysis of class has to focus on the relationship between class or market situation and life chances. Given the exceedingly large number of possible market situations, social scientists have to identify clusters of those positions that could be considered classes (Breen 2005, p. 35). Aage Sørensen, for example, defines classes as "sets of structural positions. Social relationships within markets, especially within labor markets, and within firms define these positions" (Sørensen 1991, p. 72; cited in

Breen 2005, p. 35). The nature of those positions and the number of classes that can be constructed vary.

POLITICS AND THE MIDDLE CLASS

Class location objectively determines people's economic and political interests and influences, not their subjectivity, political consciousness, beliefs, behavior, and so forth. But classes, as Weber observed, are not communities; they are not groups whose members share a sense of belonging and a set of objectives. Classes are aggregates of people in the same "class situation," and they become mobilized and politicized only under certain circumstances, such as, for example, interclass confrontations or rapid economic and technological change that undermines their life chances. The middle classes, like all classes in "contradictory" class locations, can vary in their political allegiances. Simultaneously placed in relations of subordination, domination, and relative autonomy, they are more likely to be motivated by ideological political commitments, values, beliefs, religion, and so on than by "objective" interests.

The paradoxical behavior of American voters who, despite their economic vulnerability, vote for a party that protects the interests of the capitalist class, illustrates the weight of politics, culture, and religion in shaping the political behavior of the middle classes (see, for example, Frank 2004). As long as the ruling classes continue to control the media and the production and dissemination of ideologies in harmony with the value commitments of the middle strata, these sectors of the population will most likely be swayed towards conservatism unless a sudden economic crisis, like the Great Depression of the 1930s, undermines their understanding of their real conditions of existence.

SEE ALSO *Autonomy; Black Middle Class; Blue Collar and White Collar; Bourgeoisie, Petty; Class; Gramsci, Antonio; Hegemony; Jacobinism; Managerial Class; Marx, Karl; Middleman Minorities; Middlemen Minorities; Poulantzas, Nicos; Professionalization; Professionals; Stratification; Voting; Voting Patterns; Weber, Max; Working Class*

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Martha Gimenez

MIDDLE CLASS, BLACK

SEE *Black Middle Class.*

MIDDLE WAY

Within the religio-philosophical traditions of Asia, the term *middle way* is associated with both Confucian and Buddhist teachings. In Confucianism, the *Doctrine of the Mean* (*Zhongyong*) advanced a vision of the goodness of human nature in terms of its "centeredness" (*zhong*) prior to the arousal of the feelings, and its harmoniousness (*yong*) when balanced after the feelings are aroused. Through "sincerity" (*cheng*) in thought and deed, the cen-

trality of this original state is preserved in a harmonious relationship to all things, making possible a mystic unity with everything between heaven and earth. However, the *Doctrine of the Mean* only came to be emphasized as a canonical text with the appearance of neo-Confucianism, a post-Buddhist development, during the Song dynasty (960–1279). Though the "mean" as the course of moderation and balance had been a part of the teachings of Confucius (551–479 BCE), the importance assigned to the *Doctrine of the Mean* can be viewed as an indication of the extent to which neo-Confucians felt compelled to respond to themes that had been more emphasized by the Buddhists. Mention of the "middle way" first and foremost brings to mind the teachings of Siddhārtha Gautama (563–483 BCE), the historical Buddha, and later Mahāyāna Buddhist philosophers such as Nāgārjuna (c. 150–250).

After having been raised in luxury, as the son of the king of the Shakya tribe, Siddhārtha Gautama left his family and embarked on a search for the meaning of life, one that involved him in a prolonged period of ascetic practice. Icons representing the extent to which Siddhārtha pursued this course depict him as an emaciated figure, sitting in meditation, with a taut layer of flesh binding his pronounced skeleton. Ultimately, however, Siddhārtha accepted a small portion of rice-milk from a goatherd, Sumedha. Though he continued his search for meaning, Siddhārtha abandoned extreme asceticism, as he had earlier abandoned his life of luxury, in favor of a "middle way," or a search for understanding and liberation based on balance and moderation.

Not long after taking up this middle course, Siddhārtha achieved enlightenment. In his first sermon, Siddhārtha praised the middle way as superior to both the life of luxury and that of asceticism. He then related his realization of the Four Noble Truths: that life is suffering; that there is a cause of suffering, desire and attachment; that there is a cure, elimination of attachment; and that the path to such elimination is the Eightfold Noble Path. The latter can be summarized as a way of life that flows from the practitioner's realization that there is no self (the absence of self is referred to as *anātman*), that all things lack self-nature, and that everything is transitory. With these insights into the meaning of life, Siddhārtha was able to achieve *nirvāna*, or liberation from the cycle of reincarnation through the "putting out of the flame" of existence. He thus became known as "the awakened one," or "the Buddha." The implication of the Buddha beginning his first sermon with praise for the middle way is that the entirety of his teachings should be understood as an expression of the course that steers clear of extreme practices that lead to rebirth and continued suffering. More particularly, however, the middle way, lauded as the source of wisdom, peace, and *nirvāna*, was identified with the practical way of the Eightfold Path.

The philosopher Nāgārjuna made the teaching of the middle way virtually identical with Mahāyāna Buddhism as it came to be understood metaphysically. Nāgārjuna's most famous work, the *Mūlamadhyamaka kārikā*, or *Treatise on the Middle Way*, explained "the middle way" (*mādhyamaka*) in terms of an eightfold process of negation systematically denying all theses and their antitheses. Nāgārjuna viewed both thesis and antithesis as extreme positions that could be mediated only by denial of both. Furthermore, he insisted that the denial of both thesis and antithesis be denied, as well as the affirmation of both thesis and antithesis. Ultimately, Nāgārjuna affirms the middle way as *śūnyatā*, or emptiness, the state of all aspects of existence that is midway between independent, self-sustaining existence and utter nonexistence. *Śūnyatā* properly understood is neither absolute existence nor absolute nonexistence, but instead the middle way that recognizes the dependent nature of any aspect of existence in relation to all other aspects of existence. Rather than being a negation of reality, *śūnyatā* makes possible the phenomenal world as we know it. Nāgārjuna's metaphysical interpretation of the middle way as applied to all categories and things—including time, space, causality, suffering, the self, *samsāra*, the Buddha, the Four Noble Truths, the Eightfold Noble Path, *nirvāna*, and so on—complemented the earlier practical interpretation of the middle path as an existential course of moderation, one avoiding the extremes of indulgence in luxury or excessive asceticism. Followers of Nāgārjuna's "middle way" teachings, known as *Mādhyamikas*, found comfort especially in knowing that suffering and *samsāra* are empty in the sense that they have no independent existence. Alternatively, they have found in the emptiness of the self, the Buddha, and *nirvāna* an absence of obstacles that might otherwise hinder their unity with them.

SEE ALSO *Buddha; Buddhism; Religion*

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John Tucker

MIDDLEMAN MINORITIES

The term *middleman minorities*, coined by Hubert Blalock (1967), refers to minority entrepreneurs who mediate between the dominant and subordinate groups. Their customers are typically members of marginalized racial or ethnic groups that are segregated from the majority group.

EARLY DEVELOPMENT OF MIDDLEMAN MINORITIES

Edna Bonacich's article "A Theory of Middleman Minorities" (1973) remains the seminal work on the topic. Bonacich offers an explanation for the development and persistence of middleman minorities as minority groups serving an intermediary position between the majority group and other segregated minority groups. She notes several commonalities among various middleman groups (e.g., Armenians, Indians, Chinese, Japanese, and Jews) in selected occupations (e.g., bankers, barbers, brokers, launderers, and restaurateurs). A key characteristic for Bonacich is the tendency of middleman minorities to be sojourners—people who intend to return to their country of origin.

Because they are sojourners and their migration is economically driven, middleman minorities are thrifty while amassing capital. Moreover, they maintain strong ties with their compatriots in the host and origin countries while remaining detached from the host society. In short, middleman minorities have little incentive to develop ties to the host society. Furthermore, they tend toward businesses in which assets are quickly accumulated and liquidated.

Due to their sojourner status and their strong in-group ties, middleman minorities develop a competitive business edge. In particular, these entrepreneurs minimize their labor costs through their reliance on family members and fellow ethnic workers willing to work long hours for little pay. These circumstances allow middleman minorities to establish positions of economic dominance.

Their success places middleman minorities in conflict with different sectors of the host society. Entrepreneurs from other groups cannot readily compete with the middleman minorities' cheap labor. Also, workers in the mainstream labor force view the workforce of middleman minorities as a threat to their own ability to negotiate higher wages and better working conditions. Finally, the minority clientele of middleman minorities resent them for not hiring members of their group and for not being vested in their communities.

Consequently, their success as entrepreneurs creates a paradox. Middleman minorities sometimes abandon their intentions to return to their country of origin, transitioning from sojourners to settlers. As settlers, they tend to become more integrated into the host society, a fate of many Jews, Chinese, Indians, and Japanese in the United States (Bonacich 1973). However, due to continued antagonism from the host society some middleman minority groups remain perpetual middlemen, maintaining their sojourner intentions and residential separation (Blalock 1967).

CULTURE, BLOCKED OPPORTUNITIES, AND MIDDLEMAN MINORITIES

Bonacich (1973) posits that the culture of the country of origin is important in the development of middleman minority. She asserts that the cultures of some groups tend to predispose them to the role of middleman minorities, regardless of location. Similarly, Thomas Sowell (1996) highlights the role that culture plays in the entrepreneurial activities of middleman minorities such as Chinese and Jews.

While culture may be an important ingredient in the formation of middleman minorities, blocked access to opportunity structures represents an equally—if not more—important component in the making of middleman minorities. Traditional middleman minorities have experienced discrimination and hostility in different parts of the world. For example, during the "coolie" period in the United States, segregation laws during the nineteenth century hindered Chinese immigrants from learning English and the dominant group's culture and norms (Wang 1991; Ha 1998). Sowell (1996) also describes the discrimination and violence directed against Chinese in gold rush communities. Chinese were also barred from immigrating to the United States and from becoming citizens. Due to virulent anti-Asian sentiment, Chinese clustered in enclaves where they fended for their survival. Even today, Asians fail to receive appropriate returns to their educational levels in the labor market, with many opting to become entrepreneurs, increasingly in black neighborhoods (Min 2002).

RECENT DEVELOPMENTS REGARDING MIDDLEMAN MINORITIES

The conceptualization of middleman minorities has some shortcomings today. For example, the term generally describes the experiences of certain immigrant groups historically. The extent to which the perspective can be fully applied to immigrant groups now is open to debate. Furthermore, the emphasis on sojourning requires some adaptation, as many middleman minorities in the United States have settled or intend to settle in this country while others are transnational migrants, maintaining ties in the countries of origin and destination.

Since the appearance of Bonacich's 1973 article, there have been shifts in immigration patterns to the United States, with some groups especially likely to become entrepreneurs (e.g., Cubans and Koreans). Due to the diverse experiences of such groups, other terms have emerged to capture their varying realities. For instance, *ethnic enclave* describes a geographic setting where ethnic groups are concentrated (see Portes and Rumbaut 1990). The term captures the economic, social, cultural, and language activities associated with ethnic concentrations. With respect to ethnic entrepreneurial activities, the main distinction between "ethnic enclave" and "middleman minorities" concerns the ethnic background of the clientele and the residence of ethnic entrepreneurs. Middleman minorities share neither an ethnicity nor a residential area with their clientele: they typically live outside of the neighborhoods where their segregated minority clientele live. In contrast, ethnic entrepreneurs in ethnic enclaves share an ethnicity and residential area with their clientele. Thus, ethnic entrepreneurs are members of the neighborhoods where their businesses reside. Two groups illustrate these concepts. Korean business owners serving predominantly African American areas in Los Angeles exemplify middleman minorities. Cuban business owners in predominantly Cuban areas in Miami illustrate ethnic entrepreneurs in ethnic enclaves. For further discussion regarding these terms see Feagin and Feagin (2003).

In sum, despite the changing nature of immigration and the context in which immigrants exist in the host society, the term *middleman minority* endures. An analysis of the entries in *Sociological Abstracts* suggests a general increasing usage of the term since its inception (1960–1969, 0.3 average annual entries; 1970–1979, 1.4; 1980–1989, 2.9; 1990–1999, 3.9; and 2000–2005, 2.8). The continued changing nature of immigration and racial/ethnic relations is likely to result in future modifications to the conceptualization of middleman minorities.

SEE ALSO *Ethnic Enclave*

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MIDDLETOWN

SEE *Community Power Studies; Lynd, Robert and Helen.*

MIDLIFE CRISIS

Psychologist Elliot Jaques has been given credit for coining the term *midlife crisis*, now heavily embedded in psychodynamic theory, in a 1965 article entitled "Death and the Midlife Crisis," written for the *International Journal of Psychoanalysis*. Jaques suggested that *midlife*, analogous to the top of the "hill" in the common saying "over the hill," is a time when adults retrospectively analyze their lives, project future autonomy, functionality, and life expectancy, and realize their mortality as an intimate reality.

This initial conceptualization highlighted two important implied points. The first was that a midlife crisis is part of a continuing developmental process of maturation and adaptation that characterizes aging. This suggests that the factors that precede, precipitate, and follow a midlife crisis may reoccur. The second point is that perceived proximity to decreasing functionality or mortality may be a more salient initiator of retrospective analysis than age alone. For example, there is evidence among populations

where lifespan is truncated by disease that factors associated with a midlife crisis may occur much earlier in life.

Carl Jung (1875–1961), in his extensive writings, identified five stages associated with an innate, normal, and expected midlife transition: accommodation, separation, liminality, reintegration, and individuation. In *accommodation*, a pretransition stage, individuals present adaptive characteristics (personae) that are based on environmental demands and expectations, and acquire definitions of self based on what is most adaptive. Using enormous mental energy, individuals engage in a continual attempt to balance their persona with fundamental preferences and desires. This stage is typically characteristic of younger years, when the expectations of others are a more significant influence on preferences and behavior.

For many, what is needed to be functional in a specific environmental context is in significant conflict with fundamental preferences. During a period of reevaluation, often occurring around midlife, individuals begin to challenge and slowly disassemble the persona and order their lives based on fundamental preferences. This process, known as *separation*, is filled with questions about underlying preferences and how closely they align with what has been presented to the world for the sake of adaptation. The greater the distance is between these innate motives and the external persona, the greater the tendency for this period to be defined as a "crisis" and for dramatic changes in overt behavior and preferences to occur.

In *liminality*, the next stage in cases where there is substantial distance between the adaptive persona and personal preferences, the previously adaptive persona is fully rejected, if only for a short period, and certain societal and cultural demands are largely ignored. Individuals often question their essence, lack a sense of self, and are much more reliant on new external sources—both property and people—for the definition of who they are, as they work toward the establishment of a new persona.

It is notable that the stages of separation and liminality are most associated with the modern era and with the developed countries. Symptoms of midlife crises in Western cultures may include increased boredom and self-doubt, compulsivity, major changes in the libido and sexual preferences, a change in the people, places, and things that define personal success, increased insecurity, increased rumination about past relationships and personal/professional decisions, restlessness, and an intense desire to make change without a clear sense of direction. For those with closely aligned persona and personal preferences, moderate changes in perception, priorities, and behavior may not necessarily be negative and can be associated with a productive realignment of resources and behavior congruent with age.

During the stage of *reintegration*, individuals adopt a new persona. For some, the new persona is congruent with previous roles and responsibilities; for others, it is in conflict. Uncertainty about self is reduced, but not always eliminated, and confidence about the direction of life is established. Individuals frequently achieve a new level of stability and functioning that is reflective of a better balance between the persona and personal preferences.

In the final stage of a midlife transition, known as *individuation*, individuals become increasingly re-aware of societal and cultural demands, and come to a clearer understanding of their recent choices. It is often during this stage that the financial, interpersonal, personal, and professional consequences of the previous stages are realized. This stage is also characterized by new attempts to maintain minimal distance between the persona and fundamental preferences.

There appears to be tremendous individual variability in the incidence and sequence of stages associated with midlife crisis. Jung's five-stage schema provides a conceptual context for understanding midlife transitions but does not imply a definitive sequence or timing of events. Individuals, as a function of a range of internal and external, environmental factors, may move back and forth from separation to liminality over a long period of time. Furthermore, successful movement through a stage does not preclude revisiting previous stages based on subsequent events. For example, introspection brought on by a job promotion or change in career may precipitate a sequence of separation, liminality, and finally individuation over a period of no more than a few days. In contrast, the death of a spouse or close friend may bring about a return to separation and liminality lasting months or even years. In other cases, sequential life changes can result in a healthy and painless reevaluation of priorities and resources, and a quick and successful movement to a new functional and a well-integrated persona.

Since the early psychodynamic attempts to grapple with midlife transitions, and certainly after Elliot Jacques's introduction of the concept of midlife crisis, several other conceptualizations have been put forth. For example, the midlife crisis has been conceptualized by more cognitively oriented professionals as an emotional state characterized by intense self-doubt and anxiety, occurring usually between the ages of thirty and forty years old. The crisis is either thought to occur naturally or to be precipitated by sudden and major change in status or life circumstance (job promotion, grandchildren, etc.) or a period of extensive introspection (brought on by loss of a job, shrinking interpersonal network as the result of morbidities or mortality, etc.). Other factors thought to precipitate crises include financial problems, the death of a spouse, parent, sibling, or friend, and diagnoses of potentially life-threat-

ening or lifestyle-altering age-related morbidities (sexual impotence, hypertension, obesity, diabetes, etc.).

Not all cultures respond to the midlife transition as a crisis, in part because of their more positive perceptions of aging. For example, in many Eastern cultures where advanced age is equated with experience and wisdom and aging increases status in the family and society, midlife transitions are thought of as a time of celebration, not crisis. In contrast, in Western cultures senior status is often equated with disability and lack of autonomy—hence it is no surprise that the midlife crisis appears to be much more prevalent in the West. In addition to differences in perceptions of aging, it has been suggested that cultural variations in the epidemiology of the midlife crisis may also reflect the greater distance between the persona and fundamental preferences in Western cultures.

Although the midlife crisis is frequently associated primarily with men, both men and women experience potentially difficult midlife transitions. For those men and women for whom transition rises to the level of crisis, the process lasts from approximately three to ten years among men and two to five years among women. The women who appear to be most likely to experience a midlife crisis are Westerners of childbearing age who are heavily engaged in their careers, and who have presented a persona for many years that is inconsistent with their fundamental preferences. In these cases, and sometimes in others initiated by menopause or a change in reproductive status, women often experience boredom and engage in a process of self-reflection through which professional and personal achievements are reevaluated and new priorities are established. Women may suddenly prefer younger sexual and interpersonal partners, may devalue established and ongoing personal and professional relationships, pursue changes in their career, experience increased affective disturbance, pursue substantial modifications to their appearance including plastic and cosmetic surgeries (breast implants, face-lifts, changes in makeup, etc.), or experience a sudden onset of maternal instincts including the desire to have a child.

The midlife crisis in men is most frequently characterized by a difficult and intense transition *process* involving the reassessment of expected longevity, the realization of death as intimate and an inevitable future event, the reevaluation of life priorities, values, and goals, and attempts to project future functionality and the quality of the second half of life. Onset is most often caused by decreased libido or work-related issues. Men may become concerned about their physical appearance and initiate a program of exercise and dieting; they may consider hair implantation if balding and hair coloring if graying; they may abuse alcohol and illicit substances, or engage in domestic violence, or seek the attention of younger friends, coworkers, and sexual partners to confirm their vitality and youth. Because men often define themselves through their career, and until recently mostly pursued only one career throughout their lifetime, feelings of being stuck in a single career with limited prospects for advancement frequently precipitates midlife crisis. One can only speculate what impact recent increases in the number of lifetime careers an employee is expected to have prior to retirement will have on the incidence of midlife crisis in the United States.

There is evidence that only between 8 and 25 percent of Americans over the age of thirty-five experience a midlife crisis, which suggests at the very least that the midlife crisis is not an inevitable and natural process. Indeed, some researchers suggest that the midlife crisis is a chimera, and occurs for self-serving reasons and not because it is a genuine crisis. It gives white middle class people in North America and Europe, who value leisure time, prosperity, and self-indulgence, permission to act out, ignore traditions, and pursue new self-indulgent directions later in life. Experiencing a midlife crisis allows them to sidestep societal expectations about age-appropriate behavior and life stages.

For the minority of individuals who experience a midlife crisis—"real" or not, and whatever the causes—managing behavioral symptoms and distress becomes important. This can be achieved through a process of introspection—alone or with the aid of friends or relatives—but in more extreme cases, the aid of mental health specialists and other professional care providers may be necessary.

In summary, the midlife crisis is perhaps best viewed as a special manifestation of a developmentally normal midlife transition that provides individuals a time to reevaluate expectations and make age-appropriate adjustments to roles and resources. For many, this transition is very productive and leads to needed decisions and changes, and to a focus on the value of interpersonal and intimate relationships. It can also be an opportunity to move beyond previously accepted boundaries and societal constraints.

SEE ALSO *Developmental Psychology; Jung, Carl; Maturation; Psychotherapy; Social Psychology*

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MIDWIFERY

Midwife, an Anglo-Saxon term meaning "with woman," aptly describes the role that women have long assumed as birth attendants. Throughout history and across cultures, women have traditionally provided direct assistance and support during childbirth; men were generally excluded. Attendance at birth has been suggested to be essential in facilitating mother-child survival as the physiology of birth changed during human evolutionary history. The upright stance necessary for bipedal locomotion made human birth more complicated than the births of other higher primates, whose quadrupedal locomotion allows a pelvis aligned for the direct descent of the fetal head, whereas the human infant must rotate as it descends through the pelvis, causing pain to the laboring woman. Immediately after birth primate babies can climb onto their mothers' backs and cling; human infants, born earlier in their developmental cycle because of their larger brains, are relatively helpless at birth and require immediate nurturance. These factors encouraged the evolution of birth as a highly social process; in few societies do women give birth alone and unaided. Indeed it is reasonable to assume that midwifery must have evolved right along with *Homo sapien* birth. The presence of other females would have enhanced the success of the birth process as they acquired such skills as turning the baby in utero, providing emotional support to the mother through the pain of labor, assisting rotation of the head and shoulders at birth, massaging the mother's uterus, and administering herbs to stop postpartum bleeding. Such skills typify the traditional midwifery of thousands of cultures throughout human history.

The birth attendant is not always a specialist, and some cultures do not have specifically delineated roles for midwives; in Nepal and Bangladesh, for example, family members are often the ones to care for the birthing mother. But thousands of traditional societies, and the vast majority of industrialized societies, do have a specific category of career that translates into English as *midwife*. Broadly speaking, a midwife is defined as a skilled practitioner who cares for the mother during pregnancy, birth, and the postpartum period and is recognized by her government or her community as such. In traditional societies midwives often serve additional roles as community healers, and in industrialized societies as specialists in primary health care, gynecological well-woman care, and sometimes also in complementary therapies such as homeopathy, herbalism, and nutrition.

According to the International Definition of a Midwife endorsed by the International Confederation of Midwives (ICM) and various development agencies, the midwife's sphere of practice generally includes supervision, care, and advice to the pregnant woman; attending births on her own responsibility; caring for the newborn and mother after birth; identifying risks or abnormalities; taking preventive measures; procuring medical assistance when necessary; and dealing with emergencies in the absence of medical help. She also takes an active role in counseling and education not only for women but also for families and communities. She may practice in hospitals, clinics, health units, freestanding birth centers, homes, or any place her services are needed. Her government, her community, insurance companies, or individuals may pay for her services; traditional midwives often barter for their care, accepting whatever the family might offer.

OBSTETRICS AND MIDWIFERY

Throughout the world, during the nineteenth and twentieth centuries, biomedical obstetrics took over much of the care and "management" of pregnancy and birth. Biomedical personnel tend to attribute the dramatic decline in maternal and infant mortality of the twentieth century, especially in developed countries, to medical and technological advances. Yet public health experts insist that much of this decline is due to public health measures such as improvements in sanitation and hygiene, better nutrition, higher education, and better working conditions for women. They note that in the developing world, clean water would do far more to promote maternal health than the expensive high-tech hospital. Nevertheless, biomedicalization equates to modernization, so such hospitals continue to be built in moderniz-

ing countries, and governments continue to encourage or insist that women give birth in them.

One direct result is that the rates of obstetrical intervention in birth are rising worldwide. For example, national cesarean rates in Taiwan, China, Brazil, Argentina, Chile, Mexico, and Puerto Rico are between 40 and 50 percent. In the United States, the cesarean rate has risen since the early 2000s from 23 percent to 29.1 percent; most European countries, Canada, and Australia have cesarean rates in the mid-20 percent range. Although professional midwives attend the majority of births in some of these countries, they are biomedically socialized and often overworked, and have been unable to stem the rising cesarean tide, which is largely obstetrician-driven. The exceptions include the Scandinavian/Nordic countries and Japan, where cesarean rates range from 12 to 17 percent; in those countries, both midwives and obstetricians have worked hard to preserve normal vaginal delivery.

Obstetrical dominance over birthing represents not a neutral substitution of one care provider by another, but rather a fundamentally different and opposing philosophical approach to birthing care—one that takes a mechanistic approach to birth, treating the laboring body as a dysfunctional machine unable to work properly without technological intervention. The high rates of unnecessary intervention in birth and the resultant iatrogenic damage to mother and child have spurred professional midwives around the world to develop, articulate, and practice a "midwifery model of care"—a woman-centered, humanistic, and physiological approach to birth based on respect and compassion for the woman, and on the large body of scientific evidence that demonstrates the much better outcomes that result when the woman is encouraged to birth in the place of her choice, to move about freely, eat and drink at will during labor, and give birth in upright positions. Application of this model has been shown in multiple studies to result in far less technological intervention in birth, greater maternal satisfaction, higher rates of breast-feeding after birth, and low rates of cesarean section and perinatal mortality.

In Europe and Australia, midwives have always been and continue to be the primary attendants at the majority of births, yet during the 1900s their education became heavily medicalized and their practices moved almost entirely into the hospital. In Canada and the United States, the obstetrical takeover of birth in the early 1900s resulted in the near-elimination of midwifery. In all these countries, home birth has become rare (around 1% of all births) in spite of much evidence demonstrating planned, midwife-attended home birth to be as safe as, or safer than, hospital birth for women without serious complications. Many professional midwives are engaged in a process of self-examination, attempting to reclaim the autonomy they lost with the obstetrical takeover of birth in the nineteenth and twentieth centuries, to return to attending out-of-hospital births at homes and in birth centers, and to work in nonhierarchical collaborative relationships with obstetricians.

NURSE- AND DIRECT-ENTRY MIDWIFERY

The early British combination of nursing and midwifery has long been the model for the profession of nurse-midwifery in many developed and developing nations, but many have come to critique this model because education in nursing first tends to heavily socialize midwives into the hierarchical, interventionist biomedical model of birth. Such critics have worked to generate or regenerate direct-entry midwifery, in which midwives are not first educated in nursing, but instead are educationally grounded in the midwifery model of care. The best-known example of this kind of midwifery comes from the Netherlands, where for centuries midwives have been trained in their own midwifery schools and have enjoyed full integration into the health care system as autonomous practitioners, maintaining in the 2000s a 30 percent home birth rate in their country. Since the 1970s midwives in Canada, the United States, Australia, New Zealand, Mexico, and other countries, inspired in part by the Dutch model, have developed new models of direct-entry education and autonomous practice for midwives based on the midwifery model of care. This reclaiming and revitalization of midwifery has resulted from alliances between activist consumers, midwives, public health officials, and many others working to humanize birth.

TRADITIONAL AND PROFESSIONAL MIDWIVES

There is a sharp distinction made in international literature and discourse between professional midwives and traditional birth attendants (TBAs). The definition created by the professional midwives of the ICM stresses the completion of prescribed course(s) of studies in midwifery and registration and/or legal licensing to practice midwifery.

Professional midwives who meet these criteria, including both nurse- and direct-entry midwives, are usually fully incorporated into health care systems. Traditional midwives, who still attend the majority of births in many developing countries, have no such formal education; they suffer multiple forms of discrimination within biomedical systems. The World Health Organization (WHO) does not recognize the traditional midwife as a midwife, but rather as a TBA—"the term TBA refers only to traditional, independent (of the health system), non-formally trained and community-based

providers of care during pregnancy, childbirth, and the postnatal period" (WHO 2004, p. 8). WHO suggests that TBAs are stopgap measures until more "qualified" personnel are available (and indeed, traditional midwives have been largely eliminated or greatly reduced in number and scope of practice in, for example, Thailand, Costa Rica, Venezuela, Argentina, Chile, and Brazil, with the exception of the Amazon region). Health authorities tend to accept this distinction, while social scientists reject or contest it, examining the social roles of definitions as tools of power to determine insiders and outsiders, and studying and documenting the vital roles traditional midwives still play in many societies.

Since the mid-twentieth century nongovernmental organizations, multilaterals, and bilaterals have invested heavily in professional midwife and TBA training in their efforts to reduce maternal and perinatal mortality in the third world. The social science of midwifery grew out of this trend, and reflects social scientists' roles in analyzing training programs for development organizations and the impact of new models on both quality of care and health outcomes. Social scientists find that women trained as professional midwives are usually young and have borne no children themselves. In developing countries, they are educated in an urban environment, usually in two-year programs, then sent out to serve in a rural village, where they wear the white coat and expect respect from the townspeople for their professional, educated status. They usually work in underfunded and understaffed government-built clinics, but for an extra sum of money will sometimes attend a home birth if they are called. Workloads and stress levels in such clinics are high, often resulting in maltreatment of women and early burnout on the part of the professional midwife.

Thus even though the governments of almost all developing countries have embarked on massive programs to bring birth into the clinics and hospitals under the care of professional midwives and obstetricians, many rural women resist because of inadequate and impersonal care. For example, women are forced to birth flat on their backs in very exposed positions, usually receiving an episiotomy to widen the vaginal outlet and speed the birth. To the apparent bewilderment of governments and biomedical personnel, many women in developing countries prefer the more nurturing and culturally appropriate care provided by the local traditional midwife/TBA, usually an older woman who has given birth several times and has earned the respect and trust of her community through years of midwifery practice.

Training courses intended to educate TBAs in how to identify risks and to improve their prenatal and maternity care have been strongly criticized. Designed by biomedical personnel, course content is often inappropriate to local circumstances and realities. Courses often assume access to material resources that are lacking locally, are taught in a style inappropriate to the literacy skills and learning styles of midwives, and fail to provide TBAs a respected and effective place within an integrated system of medicine. Additionally, TBA trainings emphasize transporting the woman to a hospital for a large number of risk factors, in places where transport is often unavailable and hospital care is inadequate. Traditional midwives take such courses to seek additional skills to cope with emergencies; in many countries, traditional midwives are very aware that their community-based care is the only viable alternative to an unnecessary cesarean and an unpleasant hospital experience.

In some places, professional midwives and physicians scorn and denigrate TBAs, treating them and their clients disrespectfully when they transport to a hospital or clinic. But sometimes professional midwives make a sincere effort to learn about and honor local customs and traditions, approach local people with an attitude of respect, and cooperate with traditional midwives; in such situations of mutual accommodation between the biomedical and traditional systems, TBAs and their clients are more willing to transport to the hospital in case of need, and birth outcomes improve.

It is important not to romanticize or demonize professional or traditional midwives. Both work under discriminatory biomedical systems and both usually try to give skilled and considerate care and remain, in many parts of the world, the only viable option for millions of women. Social scientists question the wisdom of dividing professional midwives and TBAs in a hierarchical manner that allows government agencies and development planners to support one group while trying to exterminate the other, suggesting that a "real midwife" may be recognized either by her government or her community as such, and that all midwives should have access to adequate, scientifically based, and culturally appropriate training.

Changes in midwifery in the developing world are intimately linked to debates over midwifery in the developed world, where professional midwives provide care for the majority of pregnant women. Their education is generally university-based and often postgraduate, giving them skills in research and publication unavailable to midwives in the developing world. They practice in hospitals that are usually well staffed, well funded, and replete with medical technologies. Their major dilemmas are ideological: they struggle both in thought and in practice with the tension between what they themselves call the "medical" and the "midwifery" models of care. Many professional midwives are working to support and sustain traditional midwifery and its future development. Many weave elements of traditional midwifery knowledge, such

as the use of herbs for aiding labor or stopping a postpartum hemorrhage, manual techniques for turning breech babies and facilitating the delivery of "stuck" babies, and upright positions for birth, into their practices.

In general, midwives spend more time than physicians with women during pregnancy, answering their questions and providing emotional reassurance, and know more about how to facilitate normal labor and birth without drugs or surgery than obstetricians. The vast body of epidemiological evidence demonstrating the benefits of midwifery care in many countries will prove key to midwives' maintenance of their roles and their identities as being "with women" in the new millennium.

SEE ALSO *Medicine; Natural Childbirth*

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MIGRANT LABOR

During the Dust Bowl migration, more than half a million people left the American Plains and migrated to the western United States. John Steinbeck's (1902–1968) novel *The Grapes of Wrath* (1939) describes vividly the large migration of poor whites from Oklahoma to California during the 1930s. His book captures how individuals were affected by dramatic changes in agriculture. "Now farming was an industry.… They imported slaves although they did not call them slaves: Chinese, Japanese, Mexicans, and Filipinos" (Steinbeck 1939, p. 298). This quotation from Steinbeck's novel points out that farming had changed. Industrialization in the United States in the late nineteenth century set the stage for changes in agriculture during the early twentieth century. Farm sizes grew across the United States, and farming became mechanized. Crops that previously required hand labor for harvesting, like cotton and beans, were being harvested by machines, which resulted in fewer jobs. These new mechanized farms were described as "factories in the fields." At the same time, the need for hand labor became increasingly seasonal, creating a high demand for migrant labor that could follow specialty crops, like berries and grapes.

Steinbeck's quotation also captures the racial and ethnic changes that farming in the United States experienced. Unlike the racial and ethnic composition of farm labor at the beginning of the twenty-first century, during the early twentieth century, farm labor was racially and ethnically diverse, and included whites and African Americans, as well as Mexican, Filipino, Japanese, Italian, and West Indian immigrants. Changes in U.S. laws regarding immigration and the impact of two world wars greatly affected the racial and ethnic composition of American farm labor. For instance, as World War I began in 1914 and as the United States attempted to halt immigration in the 1920s, the demand for farm laborers increased, and African American workers filled the need. Similarly, when the United States entered World War II in 1941, workers entered defense jobs and shipyards, which created a labor shortage in the fields. To fill this shortage, the United States created the Bracero Program, a temporary guest-worker program to recruit Mexican workers to the fields. The Bracero Program, instituted in the 1940s and ending in the 1960s, ensured that a large number of Mexican-origin people entered the agriculture industry in California as laborers. It is estimated that four million Mexican farm laborers began working in the United States during the program's twenty-two-year tenure. Even though the Bracero Program was meant to supply temporary employment, many *braceros* settled permanently in the United States.

In 2007 the majority of migrant laborers in the United States are of Mexican descent. Their poor treatment is compounded by racial/ethnic discrimination and xenophobic attitudes. Migrant workers are viewed by some as a drain on social services, even though they often do not use these services. At the same time, the demand for low-skilled labor has legislators ready to implement another guest-worker program. In March 2007,

Representatives Luis V. Gutierrez (D-Ill.) and Jeff Flake (R-Ariz.) introduced an immigrant worker visa bill in the U.S. House of Representatives, which allows foreigners to enter the United States legally to temporarily fill low-skill jobs, including agriculture and seasonal jobs. Guest-worker programs provide temporary labor without offering citizenship rights to workers. In essence, workers are expected to work and not create families or settle in the United States, but return home when their work visa ends. However, service workers, who work in hotels and restaurants, are not included in this provision, leaving them no way to work legally in the United States. The fear of another wave of settlement leaves undocumented immigration as the main alternative for workers, which ensures the denial of citizenship rights and makes them more vulnerable to exploitation.

Migrant farmworkers and their families are among the most vulnerable groups in society. Migrant workers face dangerous and poor working conditions. Basic necessities, like adequate drinking water, are not provided by employers, even though laborers may work in extreme heat. Many are forced to work without access to toilet or hand-washing facilities, even though washing hands regularly is important to avoid pesticide poisoning. Living conditions are also difficult for migrant farmworkers. Wages for farmwork have not kept up with inflation; consequently, it is difficult for families to afford basic necessities like housing, food, health care, and education for their children. In 2006 the United States Department of Labor findings from the National Farmworker Survey (collected in 1994 and 1995) reported that farmworkers have low individual earnings; the median annual income is between $2,500 and $5,000, and about three-fourths of all workers earn less than $10,000 annually.

The children of farmworkers are often found working with family members, despite laws outlawing child labor. Human Rights Watch (a nonprofit civil rights organization) estimates that there are between 300,000 and 800,000 child farmworkers in the United States. Children work an average of twelve hours a day, and during peak seasons as much as fourteen hours a day. Children report having difficulty getting paid minimum wages; some earn as little as $2 an hour. Children are routinely exposed to harmful pesticides, and report experiencing rashes, headaches, dizziness, nausea, and vomiting. In addition to the demanding physical conditions, the children of migrant laborers lack access to education. When children work in the fields, it is nearly impossible for them to attend school. Children who do not work but migrate with their families have their education disrupted because of the constant need to relocate.

For many years, farmworkers sought to form a union. The creation of United Farm Workers by César Chávez (1927–1993) and Dolores Huerta was the result of a long struggle to unionize farmworkers. The Agricultural Workers Organizing Committee (AWOC), founded by Huerta, and the National Farm Workers Association (NFWA), founded by Chávez, were the first groups that attempted to organize farmworkers. By 1965 both were successful in obtaining wage increases after staging strikes and walkouts, but the organizations had not received union recognition from growers. In the summer of 1965, AWOC led Filipino farmworkers on a strike in Delano, California. They approached the NFWA and asked the mainly Chicano workers to join the strike. The NFWA agreed, and with the new strength in membership they launched a strike, with several thousand workers leaving the field. The growers offered to raise wages, but the organizations also wanted a union. To aid the effort, Chávez called on the American public to boycott grapes without union labels. Millions of Americans responded and stopped buying grapes. The workers won the long strike and established a union-run hiring hall, a health clinic and health plan, a credit union, a community center, and a cooperative gas station, as well as higher wages. The two unions merged into the United Farm Workers Organizing Committee in 1966.

In 2004, the International Labor Office (ILO) estimated that eighty-six million migrant and refugee adults work across the globe. Migration affects countries around the world because nearly every country serves as either a place of origin, destination, transit, or sometimes all of these at once. Each country struggles with the government's role in regulating migrant workers and with the social and economic incorporation of such workers. Guest-worker programs are often used to attract and regulate low-skilled and high-skilled workers. But there are concerns about the social and economic consequences of migrant labor. Migrant laborers leave families behind in their home countries, creating fragmented families and communities. In addition, men and women face differing labor opportunities, with women sometimes limited to factory or domestic labor. The economic consequences of migration are severe in developing countries. Nearly 400,000 scientists and engineers from developing countries are employed in research and development jobs in industrial countries. This migration of highly skilled workers creates a "brain drain," leaving developing countries without highly skilled workers. Migrant workers face a risk to their human rights and fundamental freedoms, but this does not deter their migration; the hope of a better life ensures a steady flow of migrant laborers.

SEE ALSO *Agricultural Industry; Bracero Program; Brain Drain; Chávez, César; Citizenship; Labor; Migration*

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MIGRATION

Migration is a demographic process that has played an increasingly important role in the changing populations of many countries around the world. Much of the geographic shift in populations occurs from rural areas to urban areas, as well as from less developed countries to more developed countries. Since the mid-twentieth century, an expanding literature has been developed to understand migration. In particular, many scholars have focused not only on the forces encouraging people to migrate, but also on the impact that this migration has had on the migrants themselves and on their places of origin and destination. This interest in the topic of migration emerges not only from the increasing prevalence of people migrating, but also the relevance of migration in shaping demographic, social, economic, and political spheres worldwide.

DEFINING MIGRATION

Migration has been defined generally as a "permanent or semi permanent change of residence" (Lee 1966, p. 49). This definition places no restriction "upon the distance of the move or upon the voluntary or involuntary nature of the act, and no distinction is made between external and internal migration" (Lee 1966, p. 49). However, such a broad definition obscures the heterogeneous types of movements that exist based on geographical distance, as well as the factors involved in the different types of movements. For example, some people move within a community, others move across counties within the same state, others move across states, and others move across international boundaries. The U.S. Census Bureau collects information on the migration activities of people using the five-year migration question (location of present residence and location of residence five years earlier). Furthermore, the U.S. Census Bureau defines *movers* as those who lived in a different house but within the same county in the five-year period, *migrants* as those that moved at least across counties within the country during the period, and *international migrants* as those that were living outside of the United States five years earlier. The five-year migration question has numerous shortcomings, most notably that it is based on only two points in time. For instance, persons living in the same county in 1995 and 2000 but who lived in another county in the interim are classified as *nonmigrants*.

The process of accounting for the continuous movement of people has become complicated by technological advances in the areas of transportation and communications. For example, immigrants increasingly engage in *transnational migration*, which involves the continuous movement between the community of origin in the home country and the community of destination in the host country (Levitt 1998). This type of movement has important implications beyond the migrant's experience because it produces a variety of changes for both the sending and the receiving community.

THEORETICAL DEVELOPMENTS

The theorizing of explanations for the movement of people extends back to the late nineteenth century with geographer E. G. Ravenstein's (1834–1913) article "The Laws of Migration" (1885). Interest in the development of theoretical perspectives to explain migration resurfaced between the 1950s and 1970s with important works by William Petersen (1958), Everett Lee (1966), and P. N. Ritchey (1976). However, the changing nature of migration—especially the increasing prevalence of international migration—has seen the development of theoretical perspectives that place greater attention on immigration since

the 1960s (see Massey et al. 1993). This entry describes some of the most prominent perspectives.

World-Systems Perspective The world-system perspective is a structural-macrolevel perspective developed by sociologist Immanuel Wallerstein. This perspective views international migration as the result of the expansion of the market economy throughout the world, as capitalists from core countries make inroads into peripheral and semiperipheral countries (Brettell 2000; Massey and Espinosa 1997; Portes 1998; Sassen 2001; Wallerstein 1974). Accordingly, the flow of capital into peripheral and semiperipheral countries, such as Mexico, results in a countermovement of labor from such countries to core countries, such as the United States (Massey and Espinosa 1997). This perspective highlights the links between the movement of capital and the countermovement of labor. To a large extent, emigrants from periphery countries migrate to "global cities" (Sassen 2001), which are urban centers in which "banking, finance, administration, professional services, and high-tech production tend to be concentrated" (Massey et al. 1993, p. 447). However, by focusing exclusively on the macrolevel, the world-systems perspective ignores the microlevel factors that encourage people to migrate, while also neglecting the role of politics and the state in social and economic change (Brettell 2000).

Dual Labor-Market Perspective The dual labor-market perspective emphasizes the demands of advanced industrial countries for low-skilled and low-wage labor (Massey et al. 1993). This perspective suggests that immigrants fill jobs that natives shun due to low wages, lack of mobility ladders, lack of benefits, and the arduous and dangerous nature of such jobs. The dual labor-market perspective asserts that the movement of immigrants from less developed to more developed countries is driven by the constant demand for cheap labor in developed countries.

Neoclassical Economics Perspective The neoclassical economics perspective is characterized by attention to both the macrolevel and the microlevel. At the macrolevel, this perspective suggests that migration occurs as a response to a disequilibrium between labor supply and labor demand. Thus, some labor markets have a surplus of labor, which results in high levels of unemployment and low wages. Other labor markets have greater labor demands than the existing labor pool can supply, which results in low levels of unemployment and high wages. This perspective suggests that workers gravitate from labor markets with a greater surplus of labor toward those with a greater demand for labor.

In contrast, the microlevel form of the neoclassical economics perspective focuses on the cost-benefit calculations that individuals undertake when making decisions regarding migration. This perspective treats individuals as utility maximizers who attempt to obtain the highest wages in relation to investments. In considering migration, people weigh the costs of relocation against the benefits that they are likely to receive from moving. People are expected to migrate when the benefits outweigh the costs, whereas they are presumed to remain stable when costs outweigh benefits.

The New Economics-of-Migration Perspective The new economics-of-migration perspective shifts the context to the household and focuses on how such units organize themselves to maximize economic returns while minimizing risks (see Massey et al. 1993). In settings without readily accessible unemployment benefits, bank loans, and insurance to protect against potential failure (e.g., loss of crops due to weather), households are especially vulnerable to a variety of economic and physical calamities. The new economics-of-migration perspective suggests that household members are deployed to undertake a wide variety of employment activities to ensure that the household generates economic resources while minimizing risks. Thus, some household members may remain at home to conduct subsistence agricultural activities, while other household members work locally in the private sector, others migrate to urban areas within the country, and still others move abroad and send remittances to the household. Essentially, the new economics-of-migration perspective proposes that households diversify their investment portfolios to protect themselves against risks and uncertainties.

Social-Network Perspective The social-network perspective emphasizes the interpersonal ties linking potential migrants and former migrants, as well as the migrants' communities of origin and destination. In particular, the social-network perspective focuses on social relations that exist among family or community members, with special attention to social capital. Alejandro Portes notes that social capital is made up of "those expectations for action within a collectivity that affect economic goals and goal-seeking behavior of its members, even if these expectations are not oriented to the economic sphere" (1993, p. 1322). This perspective places primary importance on the social networks that potential migrants have with people who have previously migrated as the most important factor influencing people's decision to migrate (Massey and Espinosa 1997). Hence, social networks affect the decision of individuals to migrate based on interpersonal ties. Migration is facilitated by sharing information about destination communities, reducing the expected costs and

risks of migration, and increasing the expected benefits of migration (Rivero Fuentes 2003). In contrast to the neoclassical economics perspective, the social-network perspective recognizes the nonrational elements involved in people's migration decision. However, sociologists have also been careful to recognize the shortcomings of this perspective. For example, social capital may prevent the creation of new networks by excluding outsiders, restricting individual freedom, and promoting downward leveling norms (Portes 1998).

Cumulative Migration (or the Migration Syndrome) Perspective Closely connected to the social-network perspective is the cumulative migration (or migration syndrome) perspective. According to this perspective, originating from the social-movements framework, every act of immigration has the potential to facilitate the migration of other people by decreasing the cost of immigration (Massey et al. 1993). Carried to its fullest, migration becomes cumulative and natural when it becomes embedded in the culture of sending communities. In such instances, it is completely expected that certain segments of the population (e.g., the young in many parts of Mexico, especially males) will emigrate. In the case of Mexico, for example, many communities have relatively few working-age men because they have followed the trek of friends and relatives to the United States.

IMPLICATIONS OF MIGRATION FOR SENDING AND RECEIVING AREAS

While migration represents an important life-changing event for migrants, it also poses important demographic, social, economic, and political implications for sending and receiving communities. In demographic terms, international migration is responsible for changing the racial and ethnic composition of the communities of destination. For example, the American Latino and Asian populations have expanded tremendously through immigration into the United States since the 1960s (Alba 1999). In addition, with respect to the social implications of immigration, much discussion has focused on issues such as language and racial and ethnic boundaries as examined through the assimilation and multiculturalism models (Alba 1999).

Furthermore, migration has tremendous economic implications for communities, states, and countries around the globe. For example, Peggy Levitt and Rafael de la Dehesa (2003) have pointed out that much public policy on immigration is due to the recognition of migrants and their remittances as crucial elements in the state's economy. Because of this, many states are reinventing themselves by expanding the boundaries of citizenship and nationality, granting migrants the right to vote, establishing bureaucratic reforms, and making investments that allow states to become more efficient in aiding migrants within and across their own borders.

FUTURE TRENDS

As noted earlier, and as predicted by contemporary theoretical perspectives on migration, people generally move from less developed to more developed countries. The future points increasingly to this scenario. Of the 2.8 billion people that are projected to be added to the world's population between 2005 and 2050, nearly all (98.6%) are expected to be added to the populations of developing countries (Population Reference Bureau 2005). Developed countries, with increasingly aging populations and low fertility rates, are projected to account for only 1.4 percent of the world's population growth between 2005 and 2050. Given continued economic disparities across the developed and developing worlds, increasing global population shifts are likely.

SEE ALSO *Immigrants to North America; Migrant Labor*

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MIGRATION, RURAL TO URBAN

Rural to urban migration has historically been the most classic pattern of human migration. This form of migration began in preindustrial times and persists into the mid-2000s. Nevertheless, despite the movement of people to urban areas, there have been periodic exceptions over the last several decades.

Gideon Sjoberg (1960) provides an exceptional account of the formation of cities extending back to preindustrial times. He argues that such cities emerged because of an ecological base favorable to the development of agriculture, improved technology, and a complex social organization. Cities at this time represented the hub of social, economic, political, religious, educational, communication, and family activity. Sjoberg notes that preindustrial cities depended heavily on rural–urban migration for their growth.

Similarly, E. G. Ravenstein's (1885) laws of migration, drawn from analyses of the 1871 U.K. census, identify the prevalence of rural-to-urban migration and the influence of technology and economic factors on this movement. His laws of migration include the following: (1) migration takes place in steps, in short distance from remote areas toward the city; (2) long-distance migrants move to the centers of commerce and industry; and (3) urban inhabitants are less migratory than their rural counterparts.

CONTEMPORARY URBANIZATION

The movement of people from rural to urban areas has been re-created throughout the world beginning at varying periods alongside industrialization and economic development. Over the period from 1950 to 2005, the percentage of the world's inhabitants living in urban areas increased from 29 percent to 49 percent (United Nations 2006). Yet there is great variation in the degree of urbanization, with 74 percent of people in more developed regions (MDRs) living in urban locations in 2005 compared to only 43 percent of those in less developed regions (LDRs) and still fewer (27 percent) people in the least developed countries (LDCs) (United Nations 2004). As a whole, the most urbanized countries are located in the following regions: Australia/New Zealand (88 percent), northern Europe (84 percent), South America (82 percent), North America (81 percent), and western Europe (77 percent) (United Nations 2004).

The massive growth of urban areas has been associated with a variety of problems ranging from overcrowding, pressures on the environment (e.g., demand from natural resources, noise pollution, air pollution, and sanitation problems), lack of housing, and increasing inequality between different segments of the population. In addition, rural areas often lack social and economic infrastructures to support their dwindling populations.

THE RURAL TURNAROUND

Throughout most of the twentieth century the United States consistently witnessed the net movement of people from rural to urban areas. However, demographers and rural sociologists were surprised in the 1970s when this trend reversed. Indeed, during this period, rural areas were net importers of migrants while urban areas were net exporters (Brown and Wardwell 1980). Terms such as *rural renaissance* and *rural turnaround* were used to describe this unprecedented phenomenon. While the 1980s returned to historic migration patterns, the 1990s witnessed a new nonmetropolitan migration "rebound" with renewed migration gains in these areas (Johnson 2003).

Many explanations have been proposed to account for this anomaly (Fuguitt et al. 1998). Frey and Speare (1992) group these explanations into three main categories: period effects, regional restructuring, and deconcentration explanations. Common to these explanations are two types of underlying causes: restructuring of employment opportunities and changes in residential preferences. The most important cause of the rural turnaround appears to be the restructuring of industries, especially manufacturing, which brought jobs to rural areas during the 1970s (Hawley and Mazie 1981). The development of infrastructure and narrowing wage differences between rural and urban areas facilitated migration to rural areas during this period.

Furthermore, the rural turnaround also seems to be associated with people's continued romantic attachments to bucolic settings. It has been suggested that the overcrowding of large cities and concomitant social problems during the 1960s and 1970s drove people out of central cities, especially when transportation and communication technologies made it possible for them to realize their residential preferences (Campbell and Garkovich 1984). Moreover, migrants have consistently been attracted to rural communities in scenic areas, such as those located near mountains and bodies of water.

More recently, rural communities in the South and the Midwest have experienced significant growth associated with the movement of Latino immigrants. Jobs in such industries as meat processing and construction have attracted these newcomers to new destinations for Latinos (Millard and Chapa 2004; Saenz et al. 2003; Zuñiga and Hernández-León 2005).

TRENDS IN LITERATURE

There is a major and expanding literature on rural-urban migration. We conducted a literature search using the following combination of terms in *Sociological Abstracts*: "rural" or "nonmetropolitan" or "nonmetro"; "urban" or "metropolitan" or "metro"; and "migration." We identified 1,542 entries (based on journal articles, book chapters, dissertations, papers presented at professional meetings, and a few books) between 1950 and 2005. Yet, the first entry that we identified was published in 1934—an article titled "Rural-Urban Migration in the Tennessee Valley Beyond 1920 and 1930," which appeared in *Social Forces* (Hamilton 1934).

Interest in rural–urban migration increased significantly in the 1975–1979 period, reflecting the rural-turnaround era, when the number of entries (145) nearly tripled compared to those (54) in the 1970–1974 period. The overall upward trend in interest on the topic can be seen by examining the average number of entries across five-year periods (6 in the case of the 2000–2005 interval) beginning in 1950: 1950–1954, 4.2; 1955–1959, 11.8; 1960–1964, 6.0; 1965–1969, 10.2; 1970–1974, 10.8; 1975–1979, 29.0; 1980–1984, 19.0; 1985–1989, 32.0; 1990–1994, 40.8; 1995–1999, 58.2; and 2000–2005, 72.0. Two trends emerge from this literature review. First, nearly half (47%) of all entries appeared since 1995. Second, there has been a shift from works based almost exclusively on the United States toward a greater representation of international settings.

Economists have also made important contributions to the understanding of rural–urban migration. For example, Harris and Todaro (1970) developed a model—the Harris-Todaro model—to understand the flow of workers in tropical Africa from rural to urban locales. This movement challenged traditional thinking in economics because it involved the movement of rural workers to urban areas in light of the existence of employment in agriculture in rural settings and relatively high levels of unemployment in urban areas. The Harris-Todaro model points out that such migrants are behaving rationally because the expected wages in urban area—even in the presence of high unemployment—are higher than in rural areas. While the Harris-Todaro model focuses on individuals maximizing their utility without taking into account other members of their households, other economists have pointed out that migration is a household, rather than individual, decision. For example, in their study of rural-to-urban migration in Kenya, Agesa and Kim (2001) focus on the household unit maximizing its utility through various forms of migration. They observe that because of large households, including numerous dependents, the majority of rural-to-urban migrants engage in split migration. In this form of movement, the husband typically moves to an urban area initially without his family. The rest of the household joins him only after he has accumulated enough money to afford the move

SEE ALSO *Cities; Harris-Todaro Model; Migration; Urbanization*

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MILGRAM, STANLEY
1933–1984

Stanley Milgram was born on August 15, 1933, in the Bronx, New York, the second of three children of Samuel and Adele Milgram, who had both emigrated from Eastern Europe around the time of World War I. Samuel was a baker and cake decorator, and Adele assisted him in the bakery, in addition to being a homemaker.

Stanley's superior intelligence was already discernible in elementary school, and he graduated from James Monroe High School in only three years. While there, one of his extracurricular activities was working on stagecraft—an experience that helped him infuse his experiments with the dramatic elements that made them powerfully realistic experiences for his subjects. He obtained his BA in political science from Queens College. He continued his graduate education in the Department of Social Relations at Harvard University, where Gordon Allport (1897–1967), a leading figure in personality and social psychology, became his mentor and, later, the chairman of his doctoral dissertation, beginning a lifetime relationship of mutual admiration.

During the 1955 to 1956 academic year, Solomon Asch (1907–1996), a social psychologist who was already well known for his groundbreaking research on conformity, came to Harvard as a visiting lecturer, and Allport assigned Milgram to be Asch's teaching and research assistant. Several years later, in 1959 to 1960, Milgram worked for Asch again, helping him edit a book on conformity at the Institute for Advanced Study in Princeton. As a result of these repeated contacts with Asch, Milgram came to regard him as his main scientific influence.

Milgram was awarded his PhD in social psychology in the spring of 1960, and in the fall began his academic career as an assistant professor in the Department of Psychology at Yale University. It was there that he conducted his very first and most important experimental work—a series of experiments on obedience to authority.

Although a secular Jew, throughout his lifetime Milgram maintained a strong sense of connectedness to Judaism, which included an identification with the millions of his fellow Jews murdered by the Nazis during World War II. In the speech he wrote and gave at his bar mitzvah celebration in 1946, a year after the end of the war, he said: "As I come of age and find happiness in joining the ranks of Israel, the knowledge of the tragic suffering of my fellow Jews throughout war-torn Europe makes this also a solemn event and an occasion to reflect upon the heritage of my people" (quoted in Blass 2004, p. 8). Milgram's obedience experiments were clearly motivated by an attempt to shed new light on the horrors of the Holocaust.

In these experiments, conducted from August 1961 to April 1962, subjects were to teach another subject a list of adjective-noun pairs by punishing him with electric shocks of increasing voltage every time he made a mistake, by pressing one of thirty switches on a "shock machine." Each subsequent switch represented a 15-volt increase in shock intensity—ranging from 15 to 450 volts. What the volunteer subject did not know was that the realistic-looking shock apparatus was merely a prop that did not deliver

shocks, that the learner was an accomplice who gave right and wrong answers according to a predetermined schedule, and that the increasingly pitiful screams of the learner were actually scripted, prerecorded complaints. The result: more than 60 percent of the subjects went to the end of the shock scale—that is, ended up fully obedient to the experimenter's commands to keep increasing the punishment—even after the learner fell silent and, perhaps, lost consciousness. This was the central revelatory finding of the obedience studies—the extreme willingness of individuals to obey an authority who had no coercive means to enforce his commands, to commit acts that were in conflict with their moral principles. A secondary but also important finding was that the amount of obedience varied as a function of changes in the social situation. For example, in one set of experimental variations, Milgram gradually reduced the distance between teacher and learner, which resulted in a corresponding decrease in subjects' obedience. Altogether, Milgram carried out more than twenty different variations of the obedience experiment.

The results of the Yale experiments led Milgram to conclude that it was unnecessary to invoke sadism or psychopathology to explain the barbaric behavior of Nazi perpetrators and their allies during the Holocaust. They showed, he argued, that "ordinary people, simply doing their jobs, and without any particular hostility on their part, can become agents in a terrible destructive process.… A substantial proportion of people do what they are told to do, irrespective of the content of the act and without limitations of conscience as long as they perceive that the command comes from a legitimate authority" (Milgram 1974, pp. 6, 189).

Milgram's obedience experiments, whose consequences are still with us today, provoked a controversy that revolved around the ethical aspects of his research methods. Some critics questioned Milgram's right to expose his subjects to an intensive, stressful experience that they had not anticipated, and to deceive them into believing that they had inflicted painful shocks to, and perhaps had harmed, an innocent victim. In his defense, one can note that Milgram operated in an ethical vacuum; at the time, there were no formal rules about what was permissible in research with human subjects. Also, some months after their participation, Milgram sent his subjects a postexperimental questionnaire that included a question inquiring about their well-being, something which is rarely done in social-psychological research. About 84 percent of his respondents indicated that they were glad to have been in the experiment, and only 1.3 percent said that they were sorry to have participated (see Milgram 1974, p. 195). Nonetheless, during the experiment itself, as Milgram himself noted, "in a large number of cases the degree of tension reached extremes that are rarely seen in sociopsychological laboratory studies" (Milgram 1963, p. 375). The safeguards we have in place today to ensure the welfare of human research subjects, as embodied in the American Psychological Association's guidelines and federal regulations, can be traced to the concerns evoked by Milgram's obedience experiments, together with a handful of other ethically questionable studies from the same era.

In the fall of 1963 Milgram returned as an assistant professor to Harvard, where he became involved in two new areas of research. One, already begun at Yale, was the lost-letter technique, which became the most widely used unobtrusive measure of attitudes. The second was the creation of the small-world method (now commonly termed "six degrees of separation"), in which a group of "starters" in one part of the United States were asked to send mailings to a designated stranger in another part of the country, via a chain of acquaintances. Among the completed chains it took a surprisingly small number of intermediaries—about six—to reach the target.

In 1966 Milgram came up for tenure, and—after some lengthy and contentious deliberations by the committee evaluating him—he was turned down. Some committee members still held the ethical indiscretions of the obedience experiments against him. In the fall of 1967 Milgram accepted an offer to head a newly developing doctoral program in social psychology at the Graduate Center of the City University of New York (CUNY). There he turned his attention to the systematic study of city life, in particular the norms—the intangible, unspoken rules—that guide everyday social interactions. Among the studies he conducted was one that investigated subway riders' willingness to give up their seats when asked to (more than 50% did). Another set of studies compared city and small-town residents' willingness to help strangers.

With the urban environment now Milgram's "laboratory," the field experiment became his primary research tool at CUNY, and he contributed to the growth of field experimentation in social psychology by demonstrating how a wide diversity of everyday phenomena could be studied—even within the structural confines of the experimental method. Milgram died of heart failure at the age of 51 on December 20, 1984.

SEE ALSO *Authority; Conformity; Ethics in Experimentation; Experiments, Human; Experiments, Shock*

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Thomas Blass

MILITANTS

Militant, in contemporary academic, activist, and journalistic interpretations, refers to an individual (as a noun) or to a party, a struggle or a state (as an adjective), engaged in aggressive forms of social and political resistance. This aggression is demonstrated in a range of behavior: from oral abuse, to the threat of violence, to physical attacks on people and property. The word has its origin in the fifteenth-century Latin word *militare*, the latter signifying civilians acting as soldiers during war, conflict, famine, and other periods of crises. Militant was used in the English language to represent public activism, as an assertion of speech, ideas, and self-determination (for example, human rights activism, militant environmentalism); but the moderate meaning of the term has undergone substantial change. In popular usage, militants are described as people with an ideology who are forceful, energetic, and dynamic supporters of their collective principles. This ideology may be personal or political. The individual militant, however, is increasingly lost in the clamor of rising global violence.

More recent understanding of militants implies that they are forced or voluntary recruits in an organization/militia. Their methods of action rarely have similar patterns. Some militants may be rigorously trained for serving a particular cause, and may easily employ force as a form of offense. For example, the Liberation Tigers of the Tamil Eelam (LTTE), a militant secessionist movement in the north of Sri Lanka, help their recruits to acquire skills in guerrilla warfare against the state (Daniel 1996). Other militant groups may use the display of arms or antagonistic body language to sustain their movement. A depleted police force and rise in crime has given birth to militant citizens' organizations in urban Nicaragua. This form of vigilantism, endorsed by Nicaraguan youth, involves armed patrolling of neighborhoods at night (Rodgers 2006). This is an example of how militants manipulate notions of counterviolence and retaliation in pursuit of their cause, organizing their activities around the mere promise of violent action. Thus, militancy can also be a performance to contest the vast indeterminacies of everyday social life.

The definition of *militant* raises some vital questions. Do militants always rationalize overt or covert violence? Gandhi's resistance to colonial rule in India was described as militant nonviolence by scholars and administrators alike. So militancy may involve promoting intolerance, but the task of militants may be to collect in preordained spaces and take part peacefully in civil disobedience. Buddhist nationalism in Southeast Asia is also an example of passive resistance to oppressive state rule. Do militants remain within movements for ideological reasons? Many men within militant movements remain committed, not to the ideology, but to "violence as sport" (Tambiah 1996). Several scholars exploring the worlds of militant outfits show how the members get pleasure from indulging in violence for voyeurism, entertainment, and excitement. Further, loyalty to militant philosophies is usually a reflection of masculinity, especially in conflict-riddled societies where membership of warring factions is a rite of passage into manhood. In this context of gendered identity politics, who is the woman militant? During the moderate use of the term, feminist activists, right-wing and left-wing demonstrators, and campaigners for women's rights were known to be militant women. However, research into the changing nature of female militancy has shown that women are the new recruits into self-styled militia. Often entering the movement due to a shortage in manpower, women can even offer militant leadership. Statistics from United Nations (UN) surveys show that 40 percent of suicide bombers are women, affiliated with various national and international militant organizations (UN Report on Suicide Bombers, 2006). Most women militants can enter public places without raising suspicion, and their engagement in violence stems from a determination to display their equality with male counterparts. The final goal of all militants, however, is to assert or establish their own social and political worldview, whether by influencing state policies or taking over a government through force or passive resistance.

Changing alliances between world leaders and chaotic political events are transforming the flexible definition of the term *militant*. Before the attack on the twin towers of the World Trade Center in New York (September 11, 2001), terrorists were characterized as having covert collective missions, and they carried out indiscriminate, violent attacks on civilian targets. They could be placed across a broad spectrum of faiths and convictions, from white xenophobia to radical fundamentalism. However, the media nowadays readily use the label *militant* as synonymous with *terrorist*, suggesting that militancy in the modern world necessarily involves extreme forms of political action. The term *militant* is intricately tied to notions of international law, the Geneva

Convention, the human rights discourse and, of course, Islam. "The militant Muslim" is the new label being attached to nationalistic activities especially in Palestine, Iraq, and Afghanistan. While militancy could earlier be used to describe subversive activities by marginalized groups and "a weapon of the weak," to use Scott's celebrated phrase (1985), it has now developed a negative connotation in being reinterpreted in the context of the War on Terror. Sadly, this adherence to a static meaning relegates the broader concept to the fringes of scholarly debate.

SEE ALSO *Black Panthers; Black Power; Civil Disobedience; Liberation; Liberation Movements; Palestine Liberation Organization (PLO); Passive Resistance; Performance; Protest; Resistance; Revolution; Social Movements; Suicide Bombers; Terror; Violence; Women's Liberation; Women's Movement*

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Atreyee Sen

MILITARISM

Traditionally, militarism is a behavior or condition in which states resort quickly to the use of their armed forces in response to international or domestic threats or go to great lengths to mobilize people and resources for war. Militarism is also the belief that military responses are usually the best ones, and that the military is the most important institution in the state. However, *militarism* has different connotations depending on the era and field of scholarship. The traditional meaning of *militarism* is common in much of the standard international-relations literature and histories of Great Power wars. In feminist analyses, intellectual and cultural histories, or "bottom-up" historical accounts, militarism is a factor of inequality or an aspect of cultural hegemony. In the comparative politics field, militarism usually refers to interventionism in politics.

War has been the object of criticism since the time of the ancient Chinese, Hebrews, and Greeks, yet the term *militarism* did not come into common usage in the West until the latter half of the nineteenth century. As war-making became industrialized, and as states took on more and more nonmilitary functions, such as building economic infrastructure or providing social services, a growing chorus of political leaders and intellectuals began attributing war and social ills to militarism. These critics, often from a liberal or Marxist perspective, considered a state militaristic if its leaders dedicated a great deal of the government budget to the armed forces, employed a large proportion of the populace in the military or in military-related industries, and encouraged a martial spirit among its subjects. These antimilitarists worried that training so many in the methods of organized violence, along with arms races and naval competition, only increased the likelihood of war. All of those resources and people used up in the armed forces only meant less for dealing with the challenges and victims of drastic economic and social change. Moreover, given its authoritarian structure, a powerful military may be inimical to democracy. Militarism, then, from the start has been a pejorative term.

Twentieth-century Germany and Japan are oft-cited cases of militarism. Germany twice attempted to gain regional hegemony over Europe by force of arms—from 1914 to 1919 under the kaiser and the military, and from 1939 to 1945 under Adolf Hitler's (1889–1945) fascist regime. Japan's military government made a bloody bid for empire in Asia from 1931 to 1945. To attempt ambitious expansion, these two countries harnessed their economies and citizens to war-making, as well as the resources and peoples of captured lands. In doing so they wreaked staggering, irreparable harm on millions of people. Hence, for those who attribute—rightly or wrongly—these wars to militarism, the term is not just a pejorative, it is a pathology. For those averse to war on principle, such as strict pacifists, states are inherently militaristic.

When states mobilize for war, they depend on taxation, recruitment, and coercion to get enough resources and people to pay for and staff their armed forces. States must also convince their subjects of the necessity of preparing for or actually going to war. This is an aspect of state militarism particularly important in democracies. Watching the German Weimar republic crumble in the 1930s, or the U.S. government expand its security powers as it geared up for the cold war, or the impact of constant war or preparation for war on Israel's democracy, social scientists have long worried that war-making and accompanying militarism might weaken democratic government. Some scholars have envisioned a grim "garrison

state" in which experts on violence have more power than elected officials, and in which national security becomes more important than the safety, liberties, and rights of citizens. U.S. president Dwight Eisenhower (1890–1969) worried about this possibility. Just before leaving office in 1961, this former general warned the nation to "guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex," oddly anticipating the critique of American and European antiwar and student movements of the late 1960s and early 1970s, or the later "nuclear freeze" movement in the 1980s. Other scholars have debated this thesis, arguing that democracy by its nature has hindered militarism and prevented the rise of garrison states, even in places with large militaries, such as the United States.

President Woodrow Wilson (1856–1924) was not worried about garrison states, but he did blame war on militarism. In his famous Fourteen Points speech before the U.S. Congress in 1918, he argued that only through transparent diplomacy, mutual security agreements, and disarmament could the world hope to diminish the causes of war. Others have since then kept this liberal banner flying. Since 1957, for example, the interdisciplinary *Journal of Conflict Resolution* has been publishing research on military affairs and international relations, theorizing the conditions of war and peace. Other groups have compiled data on military employment and spending, armament levels, and the number and scope of armed conflicts to measure levels of militarism. Scholars in Sweden established the Stockholm International Peace Research Institute in 1966 and began publishing its annual yearbook on armaments, disarmament, and international security in 1969. A similar series, *World Military and Social Expenditures*, has been published since 1974.

Reactions to militaristic behavior or ideology are also easily found in literature and other arts. Erich Maria Remarque's (1898–1970) novel *All Quiet on the Western Front* (1929) remains a trenchant account of World War I (1914–1918) and of the militaristic creed underlying the violence. Pablo Picasso's (1881–1974) painting *Guernica* (1937) was an angry reaction to the Nazi German bombing of the city of Guernica during the Spanish Civil War (1936–1939), and it attributed the tragedy in part to militaristic elements in Spanish culture. The painting later became a symbolic reference for movements against U.S. involvement in the Vietnam War (1957–1975) and the U.S. war in Iraq that began in 2003. In the Stanley Kubrick (1928–1999) films *Dr. Strangelove* (1964) and *Full Metal Jacket* (1987), the military is but a step away from fascism. Kubrick's soldiers and officers, in facing dehumanizing treatment or the dehumanization of the enemy, run the risk of psychosis, if they are not already psychotic.

Not all studies link militarism to the state and war-making. Some see a predominant military and martial spirit as products of civil society or culture, or of particular social groups. The indicators of militarism, or "militarization" some insist, are the same, but its cause lies more in socialization or cultural institutions than in state officials. In short, civilians are to blame for militarism, not the state or its soldiers.

With postmodernism and the cultural turn in the social sciences, another variant of militarism has appeared. In some scholarship, militarism is not about war-making per se, but the replication of military organization and values in the society at large—not just to increase the capacity to wage war, but for some ulterior purpose, such as to maintain social order, promote economic development, or further national integration. This "social" militarism may be said to exist in nations in which the military is the primary institution responsible for integrating diverse ethnic populations, for training workers, or for spearheading colonization and other development projects. Some scholars also employ this definition to argue that the spread of military organization and values into society contributes to patriarchy, elitism, or other forms of social inequality.

A fourth kind of militarism appears in the field of comparative politics in the developing world. Militarism in this field often means military interventionism in politics, and social scientists are typically concerned with the amount of independence the armed forces has from civilian rule, the level of socioeconomic segregation (that is, how many more material benefits and privileges the military receives in comparison to civilians), and the number of responsibilities the armed forces have beyond national defense. As the military's independence, benefits, and responsibilities increase, so too does the likelihood of militaristic behavior or attitudes. The greater the military's stake in politics, the greater its willingness and ability to intervene in politics, whether through backroom pressure or a dramatic coup.

SEE ALSO *Authoritarianism; Civil-Military Relation; Culture; Fascism; Imperialism; Industrialization; League of Nations; Liberalism; Masculinity; Military; Military Regimes; Nationalism and Nationality; Patriarchy; Patriotism; Politics, Comparative; Postmodernism; United Nations; War; War and Peace; Wilson, Woodrow*

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Andrew J. Schlewitz

MILITARY

Scholars and practitioners in the social and behavioral sciences have studied military systems for over a century. Archaeologists and anthropologists have offered insights into the war making of prehistoric humankind as well as modern primary group dynamics (the ways soldiers develop their own methods of making sense of and appraising what they do) and the ways modern societies celebrate and memorialize warriors (Keeley 1996; Divale 1973; Mosse 1990; Ben-Ari 1998). Historians have explored the relationships between the social, economic, and geographic contexts of ancient and modern states and the military institutions they generated as well as the relationship between technological changes in weaponry and changes or the absence of change in the ways states and their military leaders prepare for and wage war (Mumford 1961; Mann 1986; Vagts 1959; Lynn 1984). Political scientists have delved into the relationships between political and military elites and the presence or absence of military coup making. (Finer 1988; Huntington 1957; Stepan 1971; Peri 1983; Karsten 1997; Feaver and Kohn 2001). Sociologists and social psychologists have asked how soldiers are recruited, trained, and motivated; how racial and gender integration is achieved; how morale is sustained or lost; what combat does to those who experience it; and how military institutions and personnel interact with the rest of society (Andrzejewski 1954; Janowitz 1960; Moskos et al. 2000; Stouffer 1949; Kindsvatter 2003; Gal and Mangelsdorff 1991; Cronin 1998). Geographers and economists have attempted to measure the costs and benefits of military institutions and warfare on regions, with their attendant impacts on domestic economies (Nef 1950; Melman 1985; Knorr 1956; Russett 1970; Rockoff 2005; Kirby 1992). Cultural studies/literary history scholars have mined the memoirs, poems, and novels of veterans (Wilson 1962; Fussell 1975; Fussell 1989; Lewis 1985).

THE MILITARY-SOCIETY SYMBIOSIS

For millennia organization for warfare has been one of the central activities of humankind. Military institutions, however simple they were in prehistoric times, were among the first social institutions. Bands of hunter-gatherers employed simple weapons and tactics in fights with other hunter-gatherers. The kinship-centered, cooperative propensities of earlier humankind coupled with the effective use of verbal communication offer better explanations of the combat effectiveness of early human communities than do studies relying solely on theories of aggressiveness (Bigelow 1969; Dawson 1986).

Simple, subsistence-level societies did not all wage war in the same manner. Resource availability and cultural differences among those societies were important factors in war making. The decision of some communities to house new couples in the wife's mother's community (matrilocality) as opposed to the husband's father's community (patrilocality) has been found to be associated strongly with a low level of local conflict as a result of the constant breaking up of extremely localistic war bands and a higher degree of effectiveness in longer-range warfare as a result of the creation of more cosmopolitan intercommunity trust and affiliation (Divale 1973).

Simple settled agricultural communities defended their fields with every-man-a-warrior militias. The first city-states tended to emerge in fertile alluvial valleys, where warlords dominated and fortified central market towns that had a surplus large enough to enable them to retain a professional military retinue. Those warlords centralized the acquisition and distribution of weapons, attacked and held nearby towns and cities, and extended their power into the pastoral hinterland. Virtually the entire budget of the first known warlord, Sargon of Akkad, the conqueror of Sumer, went to his army, but his military "pacification" also produced secure trade routes, law courts, uniform weights and measures, and a common coinage. (In later periods up to 70 percent of the budget

would go to the military, as in the cases of the Roman Empire, Charlemagne, Edward III, and Louis XIV.) In the process those warlords developed symbiotic relations with agrarian and mercantile elites. "Civilization" had arrived (O'Connell 1995; Mumford 1961).

In the Middle Ages the armies of city-states and monarchies served elites who in several areas ruled relatively decentralized feudal communities dominated by aristocratic lords with their own armed retinues. Eventually most of the nominal kingly leaders of those feudal states, utilizing new military technologies and "standing armies" paid for in innovative ways, defeated their aristocratic rivals and claimed a monopoly on military violence. Many of those monarchic rulers later yielded to revolutionary forces employing conscript armies. Most of those military forces reverted in time to the modern model of "all-volunteer" forces, and the more affluent of those states developed increasingly sophisticated weapons, strategic planners, and logistic systems (Redlich 1964–1965; Black 1998; Tilly 1992; McNeill 1982).

The early modern state emerged in areas where monarchs were able to overcome the medieval constitutional traditions of sharing their power with a parliament composed of the gentry and the aristocracy. As commerce, riches from the New World, and more efficient European farming techniques generated economic surpluses, those resources were taxed for military purposes. *Intendants* loyal to the French monarchy slowly bled power from the nobility to fuel royal ambitions throughout the seventeenth century. King Gustavus Adolphus successfully conscripted Swedes for the seven armies he threw against the Hapsburgs in the second quarter of that century, paying for the effort with the sale of war bonds and monopolies, the appropriation of farms, the rationing of food, and the debasement of the currency, all accomplished by a ruthless bureaucracy. As Charles Tilly put it, "War made the State, and the State made war" (Tilly 1992, p. 213).

In the Netherlands sixteenth-century Calvinist wool manufacturers and merchants organized the first modern professional army. The forces of their Spanish foe had been raised in the venture-capitalism fashion of most early modern forces: The crown paid a fixed sum to professional military entrepreneurs to raise regiments. However, the primary remuneration for those men in the course of the campaign was understood to be booty under the maxim *bellum se ipsum alet* ("war should feed itself"). The Dutch force was conceived differently. Its mission was defensive and of indefinite tenure. Its commanders tried to avoid the chaotic behavior characteristic of looting soldiers in order to maintain discipline. Hence its men were paid regular salaries and enjoyed the benefits of a fledgling commissariat. Its employers included some of the world's first assembly-line (woolen clothing) manufacturers. Thus it is not surprising that Dutch infantrymen were trained to present the enemy with a continuous and lethal series of musket volleys through the use of training manuals that offered a recruit dozens of by-the-number engravings of the steps that all the ranks of musketeers were to take simultaneously in a load-and-fire countermarch (Feld 1975).

THE ROLE OF TECHNOLOGY

Some technological innovations transformed both military methods and social and political structures. Bronze weapons were expensive. Thus Bronze Age armies were aristocratic, and their states were oligarchies. The advent of cheaper iron weapons meant that men of more modest means could bear arms. In ancient Greece this eventually resulted in more democratic polities. The stirrup enabled armored men to fight more effectively from horseback, but armor and large horses were expensive. Only an oligarchy could afford to field that type of force in Europe, Asia, or Africa.

By 1350, however, pikemen and crossbowmen had dealt the armored cavalry of feudalism devastating blows, and although the landed nobles resisted, their role as cavalry in military systems began to decline. The introduction of firearms into western Africa and Maori New Zealand significantly transformed the social and political structures of those peoples. In Europe and the Middle East firearms grew in significance as the rate and rainproof reliability of fire increased tenfold between the early sixteenth century and the late seventeenth century. By 1600 the ratio of infantry to cavalry in Europe had risen to almost 8 to 1. Military demands continued to influence and be aided by developments in the clothing industry, the metals trades, nautical technology, land transportation, and high finance (Vasillopulos 1995; Nef 1950; Van Creveld 1983).

The evolution and growth of military institutions appears to some to have followed a steady linear path from the simple to the sophisticated, but there were many exceptions. Indeed the European feudal and nineteenth-century Chinese warlord military systems were retrogressions from the more complex and effective armies of the Roman and Chinese imperial states that preceded them. Technological advances in warfare were not adopted readily by many military elites (Goldman 2006). Eighteenth-century and early nineteenth-century Mameluke warriors in Egypt clung to swordsmanship, sixteenth-century Japanese shoguns embraced firearms with great success but then abandoned and suppressed their use out of respect for the ethos of the elite class of samurai swordsmen, and medieval European aristocrats disdained

improvements in infantry weapons and tactics for similar reasons (Stone 2004).

Armies grew in size as well as complexity over the course of several centuries, but those increases were not driven by technological breakthroughs. They came about only when political leaderships decided that such increases were appropriate. Empire builders such as Louis XIV and Phillip II increased the size of their armies, whereas leaders in Poland, Britain, and the United States held back. The leadership of the fledgling state of Israel produced a military with a high participation ratio because of its sense that Israel was beleaguered. Revolutionaries such as those in the French Committee of Public Safety and the Chinese Kuomintang and the Chinese Communists opted for mass armies for political purposes. Political leaders decide to add weapons and manpower at times of opportunity or threat; they also decide to reduce their expenditures and forces when that seems to be the right course. Examples include the Swedish decision in the eighteenth century to reduce the national military and the decision by the Chinese Empire in the sixteenth century to withdraw its massive navy from the Indian Ocean (Lynn 1990; Stone 2004; Vagts 1959; Perrin 1979).

Conscription of Frenchmen in the 1790s for the revolutionary infantry advanced the role of the common soldier. The conscription act called on those with new rights to satisfy new obligations. However, that massive and recurring mobilization did not lead to greater democracy. The musket had not "made the democrat," in J. F. C. Fuller's formulation (Fuller 1961, p. 33), in revolutionary France any more than it had in early modern Japan, Russia, or Prussia. Although it ended the battlefield supremacy of the samurai and the knight, they reemerged as the officer corps of the new standing armies.

Although the intensity of warfare and the military participation rates of male citizens both increased throughout the nineteenth and twentieth centuries, the share of both the gross national product and the resources of the state devoted to military expenditures began to decline in the late twentieth century. Social welfare and other nonmilitary lobbies grew more effective at the expense of the military-industrial complex. Civilian experts and technicians provided an increasing number of services to military institutions as the "tooth to tail" ratio of support personnel to combatants grew. Those in technical military specialties became increasingly vital to the maintenance and functioning of increasingly sophisticated military equipment (Wool 1968). Private contractors began to replace some military personnel. The ratio of American contract personnel to military personnel in the Gulf War was 1 to 60; by late 2006 in the war in Iraq it was virtually 1 to 1 (Hemingway 2006).

THE RECRUITMENT PROCESS

Military personnel have been recruited as volunteers or conscripted by the state. At different times and in different places volunteers have had a variety of reasons for offering themselves for service, and nations have employed a number of philosophical and technical approaches to the recruitment process, ranging from a total reliance on volunteerism to the most brutal sort of compulsion, with a host of intermediate formulas (Levi 1996).

In the absence of conscription, individuals have chosen to serve for monetary rewards or economic security, adventure or glory, and religious or political idealism. The soldiers of ancient Greece and Rome, those of medieval and early modern magnates, and those of more modern armies of empire were motivated largely by economic considerations; in fact some were foreign mercenaries. However, those economic motives could be intermingled with more culture-driven ones. Many Irish, Sikhs, and Gurkhas in the service of the nineteenth-century and early twentieth-century British armed forces, for example, conceived of themselves as people with a warrior tradition, a self-image that was not lost on British recruiters (Karsten 1983; Enloe 1980). Similarly the Crow, Pawnee, and Shoshoni braves who volunteered to serve as scouts for the U.S. Army in the 1870s felt both the push of tribal need and the pull of a warrior tradition (Dunlay 1982). Some members of the untouchable caste (*harijan*) were recruited for British military service in India after the mutiny of elite Indian troops in the Bombay army in 1857. Untouchables saw military service as a vehicle for social mobility, and the thought of being used against Brahmins might have been appealing to some (Cohen 1990). Black Americans first volunteered largely for ideological reasons during the Civil War. Later many found military service to be a clear avenue for economic and social mobility, though they faced disappointment at the hands of racist recruiters and commanders until the second half of the twentieth century.

Within socioethnic communities that do not see themselves as warlike and in subcultures and families that are not impoverished, the individual act of volunteering in peacetime cannot be explained as easily. The first surge of wartime patriotic fervor in modern nation-states has led millions to enlist, but patriotic behavior also has been inspired by other motives. Many colonial New England recruits during the French and Indian War were younger sons who had not inherited land. Their response to offers of enlistment bounties consequently was informed by their desire to acquire a nest egg and personal independence from parental control. Most of those who served in the Continental army were more interested in the size of the bounty offered than in "the Cause" (Anderson 1984;

Lender 1986). Conversely, many Confederate volunteers who rode with the guerrilla commander William Quantrill in western Missouri and Kansas during the Civil War were the eldest sons of substantial slave owners, defending their world against what they perceived to be a serious threat to its survival (Bowen 1977).

In any event patriotism alone does not explain why many have selected the military calling in peacetime in a host of historical periods. The spirit of adventure and the martial spirit notwithstanding, economic security clearly has been the primary motive for peacetime enlistments in voluntary military institutions (with the exception of officer candidate academies) (Karsten 1982).

When the question of recruitment is approached from the perspective of the recruiter, there are clear correlations between policy and sociopolitical structure. Mercantilist reasoning led several early modern European states to seek foreign paid volunteers (mercenaries) to keep their subjects employed productively on their farms and at their trades. Machiavelli argued for a militia drawn from both the propertied classes and the masses to defend the liberty of a city-state, but that reasoning did not impress most seventeenth- and eighteenth-century rulers and their bureaucracies. Thus in 1776 Adam Smith maintained in his *Wealth of Nations* that militias were inefficient. Such a system drew people from their fields and trades to train and failed to bring them up to the standards of professional soldiers (Smith 1937, pp. 653–668). The solution was the creation of a professional military.

The modern nation-state rediscovered the power of local and regional loyalties in recruiting volunteers. Great Britain reorganized its regiments in 1873 by basing one of its two battalions permanently in locales with which they thereafter would be identified. The usefulness of that step for both recruitment and morale was proved quickly, and in the first two years of World War I the massive British volunteer army was raised largely through the private actions of committees and individuals drawing on "local pride," the "taproot of English nationality" (Simkins 1988, pp. 82, 97, 186). The National Guard Association of the United States, created in the 1870s, lobbied for volunteer units of the various states seeking resources from Congress. The regular U.S. Army, recognizing the recruiting and political power of the guard's local roots, drew on the same source in the local basing of its army reserve units in the twentieth century. Early twentieth-century Japanese military planners used the strong social bonds of village life to reinforce motivation in organizing army reserve units (Smethurst 1974).

Volunteerism was not always sufficient for raising military forces. Consequently Britain was subjected to a conscription of sorts during the Seven Years' War and the wars of the French Revolution and Empire. However, the English Militia Act of 1757 and its later English and Irish counterparts of the 1790s, like the American Union army drafts of 1863 and 1864, were designed essentially to spur enlistment by coaxing either service or the purchase of insurance to provide the required "commutation fee" or pay for a substitute. The conscription policies of other eighteenth- and nineteenth-century nations offered fewer options. The peasants of Russia, Hesse-Damstadt, Prussia, and some Latin American dictatorships were subjected to long terms of service.

Black Americans conscripted for segregated service in World Wars I and II faced both the fear and anger of southern whites and the distrust of white officers who regarded blacks as irresponsible and panicky. However, on the basis of their reading of massive surveys of the opinions of World War II soldiers, social psychologists advising the American military in the 1940s recommended the integration of black and white units to boost morale and improve performance levels. They were supported by white officer combat veterans who had developed respect for their men and had become confident in their ability, a phenomenon reminiscent of the experience of many white officers and their black troops in the Civil War. The integration of the services during the Korean War proved successful (Dalfiume 1969; Mandelbaum 1952). In the early 1960s the John F. Kennedy administration took the next step, requiring the desegregation of housing for military families near bases throughout the South.

WOMEN COMBATANTS

On rare occasions women have been used as combatants, as in nineteenth-century Benin and early modern Japan, and as guerrillas by the Soviet Union in World War II. More often they have served as auxiliaries in support, clerical, and nursing roles. In the late twentieth century and the early twenty-first century the armed services in the United States have recruited women more aggressively for a wider range of tasks, including combat support. Simultaneously women have been admitted to the nation's federal and state service academies. There was considerable resistance to this change, but academy leadership later began to crack down on sexual harassment and selective hazing (Alpern 1998; Sherrow 1996; Gelfand 2006).

TRAINING AND SOCIALIZATION

The process of socializing military inductees into the service's norms and mores while preparing them to perform their new duties always has had two dimensions: the goals and practices of the military and the impact of the process on the inductees. Certain features of the first dimension have been persistent and unmistakable. Discipline, collective action, the transmission of unit traditions, physical conditioning, and the acquisition of specific military skills

always have been objectives of those responsible for the integration of recruits into military forces.

Modern boot camps are assumed by some social psychologists to be sophisticated versions of this process of reorienting individuals into the regimen and mores of the warrior culture with its male bonding. However, a study of U.S. Marine Corps basic training at Parris Island, South Carolina, in the 1940s and 1950s established the fact that marine officers for generations had felt it best to leave the process entirely in the hands of drill instructor sergeants (DIs), who trained the next generation of DIs without formal manuals or officer-led instruction. As one officer put it: "Probably it's a good thing we don't know how it's done. If we knew, we might fiddlebitch and tinker with the process until we ruined it" (Fleming 1990, pp. 24–25; see also pp. 140–155).

The military always has reinforced training with disciplinary codes and leadership methods to ensure that missions are accomplished. Those codes and methods sometimes change, reflecting changes in the value system of the larger society or new demands within the military. The patterns of organizational authority in the modern military have changed since World War II. As the military became more technologically sophisticated, employing more specialists, the need to reenlist those specialists grew, but the specialists were often averse to arbitrary authority. Many former specialists indicated in the 1950s and 1960s that they had left the military because of its coercive ways (Wool 1968). Simultaneously soldier resistance movements, some developing into military unions, grew in the technologically advanced Western states in the 1960s and 1970s (Cortright and Watts 1991). Hence out of need, military elites slowly devised and provided less coercive forms of leadership than had prevailed before. The movement from coercion to persuasion accelerated in the United States when the draft was abolished in 1973 and the services had to rely entirely on volunteers.

MORALE AND MOTIVATION

From the time when the first group of hunters drew on their supportive habits to collaborate in a successful warband raid on their neighbors or in the defense of their village, the small-group camaraderie in military units has influenced the effectiveness of skirmishes, naval engagements, and pitched battles. Anything that disrupted that camaraderie was suspected of damaging military effectiveness. French revolutionary leaders in the Committee of Public Safety knew how to organize small squads of about fifteen men. When those men received their portions of stew in the evening, they often were provided with revolutionary broadsides or songs that they were expected to learn by the evening campfire. French revolutionaries understood the importance of patriotic fervor as well as what modern sociologists call the primary group (Lynn 1990). That induced bonding generally was successful. "A new comradeship and unity blossomed in our young lives," Emlyn Davies recalled of his early days in the Seventeenth Royal Welsh Fusiliers in 1914 (Simkins 1988, p. 302). The Canadian major George Pearkes wrote home in 1917 that "it always seems to me that I'm not fighting for King and Country but just for [my] company, which seems to be everything to me these days" (Pearkes).

In the 1950s U.S. Army researchers concluded that in battles between German and American units in World War II the German units generally appeared to have bested comparable American groups. In 1983 Martin van Creveld argued that this was the case in part because American policies with regard to unit formation and casualty replacement practices resulted in a fighting force with lower small group cohesion and trust than German units, in which cohesion was the conscious objective of commanders. Other research offers an additional explanation for German morale: the strength and depth of Nazi ideology and indoctrination (Van Creveld 1983; Bartov 1991).

Many Americans entered Vietnam with confidence in the rightness of their cause and the effectiveness of their weapons and leaders. That confidence often was reduced after months of heavy combat in steaming-hot terrain to what one veteran called "a war waged for survival in which each soldier fought for his own life and the lives of the men beside him, not caring who we killed … or how many or in what manner" (Lewis 1985, p. 118). Their plight was made more perilous by the high command's practice of cycling career officers through brief combat command tours of duty.

THE CONSEQUENCES OF MILITARY SERVICE

As the rate, range, and lethality of fire and the duration of exposure to it rose over five centuries, combatants experienced increasing stress (Keegan 1976). After prolonged periods of combat, the din of battle and the sight of dying friends produced "the shakes" and other symptoms of mental distress in many soldiers. In World War I their reaction was called shell shock; in World War II, battle fatigue. This phenomenon appears to have affected men in the American Civil War as well (Dean 1997).

The increasing lethality of combat might have been expected to lead to greater unwillingness to respond to orders under fire. However, although there is clear evidence of this among French forces in World War I (Smith 1994) and some evidence in other armies in the twentieth century, most troops have obeyed orders that placed them in "the killing zone." Most mutinies involve matters of pay or living and working conditions (Bushnell 1985; Rose 1982). Many combat veterans who suffered post-

traumatic stress disorder (PTSD) long after their years of service owed their distress to the trauma of combat, but not every veteran of heavy combat became a victim of PTSD (Card 1985).

Military service has both temporary and long-term effects. Some who appear to have been transformed by the experience are better understood to have possessed those propensities before entering the service or to have entered the service with traits or personalities that made them especially prone to experience the change. West German recruits who were given an "authoritarianism" questionnaire before entering basic training, again after completing eighteen months of service, and again two years after the completion of their service were found to have undergone a decline in their level of authoritarianism while experiencing it firsthand in the *Bundeswehr*. However, they then drifted back to the original higher level after they had put that experience behind them (Roghmann and Sodeur 1972). The process of self-selection into American airborne training and Green Beret service as a result of already possessed values proved to be more important than the training or duty assignments afterward in explaining post-training or post-service attitudes and values (Cockerham 1973; Mantell 1975). Thus the impact of training and efforts on transforming attitudes can be overstated. Militarization, if and when it occurs, often has been confused with the reinforcement of established values.

In some modern cases mobility opportunities in subsequent occupations improved as a result of military service, as was the case for minorities in the U.S. military in the 1950s and afterward (Browning, Lopreato, and Poston 1973). One's perspective on the world could be altered as well. Certain American Revolutionary War soldiers seem to have experienced a change in political perspective. Officers who served outside their own states tended to adopt more cosmopolitan political positions after the Revolution, as did some enlisted men. Others who had not left their state but were similar in age, nativity, religion, social class, and county affiliation (the sum total of these characteristics constitutes "background") to those who had left their state exhibited no such change. One group had seen more of the Confederation and its plight and had seen the need for stronger bonds in the form of a new Constitution (Benton 1964; Burrows 1974). Similarly French soldiers who had served in America during the war were more actively involved than others in attacks on the homes and records of French nobility during the early stages of their revolution (McDonald 1951). Service in the Prussian/German armies and navies appears to have made militarists of many veterans (Ward and Diehl 1975). In analyzing the interactions of the military and society, future scholars will continue to ask how military service may have affected those who served as well as how some military institutions have affected the societies they belonged to whereas others simply have reflected those societies.

SEE ALSO *American Revolution; Civil-Military Relation; Democracy; Feudalism; French Revolution; Gulf War of 1991; Iraq-U.S. War; Militarism; Military Regimes; Military-Industrial Complex; Monarchy; Motivation; Nationalism and Nationality; Nation-State; Nazism; Patriotism; Personality, Cult of; Post-Traumatic Stress; Selective Service; State, The; Subsistence Agriculture; Technological Progress, Economic Growth; Technological Progress, Skill Bias; Volunteerism; War; Weapons Industry; World War I; World War II*

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Peter Karsten

MILITARY-INDUSTRIAL COMPLEX

In his January 17, 1961, farewell address to the nation, departing president Dwight D. Eisenhower warned his fellow Americans of what he termed the "military-industrial complex." According to historian Stephen E. Ambrose, Malcolm Moos, a speechwriter for Eisenhower, invented the term when he helped the president prepare his speech. In the middle of his televised speech, Eisenhower stated, "In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist."

During his presidency from 1953 to 1961, Eisenhower was irritated and troubled by the increasingly strident demands of Democrats in Congress that he approve higher defense spending, especially for bomber planes, missiles, and nuclear submarines after the Soviets launched their *Sputnik* satellite in 1957. Eisenhower believed that these Democratic demands were politically motivated, fiscally irresponsible, and unnecessary for a strong national defense in the days of the cold war. Some of the most outspoken Democratic advocates of higher defense spending represented states that especially depended on defense spending for their economies. One of them was Senator Stuart Symington of Missouri, a state that included McDonnell-Douglas, a major airplane manufacturer. Symington unsuccessfully sought the Democratic presidential nomination of 1960. Another was Senator Henry "Scoop" Jackson of Washington, a

state that included Boeing, an aerospace manufacturer. Both Symington and Jackson were seriously considered for the vice presidential nomination of 1960.

As the 1960 presidential campaign progressed, Eisenhower was angered by Democratic presidential nominee John F. Kennedy's frequent contention that a "missile gap" existed to the advantage of the Soviet Union and that the Republican president had allowed this missile gap to develop. According to Kennedy's rhetoric, the missile gap was the most serious example of how the United States had fallen dangerously behind the Soviet Union in the cold war struggle during the Eisenhower administration. For Eisenhower and his supporters, it was unfair and absurd that liberal Democrats implied that a Republican president who was a retired general was weak on defense and oblivious to the military threat of the Soviet Union. Actually, it was Eisenhower who had previously emphasized nuclear deterrence, commonly known as "a bigger bang for the buck," as a way to reduce the size and expense of conventional military forces and the possibility of future "limited wars" like the Korean War.

The concept of a military-industrial complex was not commonly used until the late 1960s. By then, liberal and New Left opponents of the Vietnam War claimed that since World War II the United States had developed and become dependent on a warfare state, a permanent war economy, or a national security state. According to this perspective, both major political parties, every president, Congress, labor unions, corporations, Wall Street, the Pentagon, and elite research universities benefited from high defense spending and justified it by emphasizing militant anti-Communism in foreign policy, violating civil liberties in the name of national security, and supporting regular "limited wars" like those in Korea and Vietnam. These left-wing critics presented a more sinister, conspiratorial portrayal of the military-industrial complex than that conveyed by Eisenhower.

The idea of a military-industrial complex ruthlessly determined to permanently control American politics, government, economics, and foreign policy has also influenced American popular culture, especially political dramas in films and novels. In the novel and 1964 film *Seven Days in May*, an American president prepares to sign a nuclear disarmament treaty with the Soviet Union. After the economy plunges into a recession because of the expected drop in defense spending, the president becomes unpopular and controversial. A famous, right-wing general organizes a conspiracy to overthrow the president in order to reject the treaty. The 1991 film *JFK*, a fictional movie about John F. Kennedy's assassination in 1963, implies that Vice President Lyndon B. Johnson conspired with the Central Intelligence Agency and the Joint Chiefs of Staff to assassinate Kennedy so that Johnson as the new president could expand the American military effort in Vietnam.

In analyzing sharp increases in defense spending during the presidency of Ronald W. Reagan (1981–1989), journalist Hedrick Smith explained the existence of "iron triangles." For every new weapons system, such as the B-1 bomber and Divad anti-aircraft gun, there was a symbiotic, three-way relationship of Pentagon officials, defense contracts, and members of Congress who supported its development, authorization, and funding. Regardless of how excessively expensive, unnecessary, or ineffective a weapons system was, it was continued because of the economic, political, and career interests of the participants in each iron triangle.

The military-industrial complex perspective was updated and revived for the post–cold war era by critics and opponents of President George W. Bush's foreign and defense policies in Afghanistan and Iraq. They claim that long before the terrorist attacks of September 11, 2001, the Bush administration was planning to invade Iraq and overthrow its dictator, Saddam Hussein, partially for the purpose of protecting American oil interests in the Middle East, and was seeking a pretext for doing this. They also contend that it was no coincidence that Halliburton and other corporations associated with Bush administration officials, especially Vice President Richard Cheney, received major government contracts in Bush's global war on terrorism. These criticisms and perceptions of Bush's foreign and defense policies based on the assumption of a military-industrial complex are evident in the documentaries *Fahrenheit 9/11* (2004) and *Why We Fight* (2005). Like the fictional movie *JFK*, *Why We Fight* includes film footage of Eisenhower's farewell address.

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Sean J. Savage

MILITARY REGIMES

The study of military regimes rose to prominence within the social sciences during the latter half of the twentieth century, thanks in part to the presence during the 1960s,

1970s, and 1980s of a large number of military regimes around the globe. In 1979, fourteen military regimes held power in sub-Saharan Africa, nine in Latin America, five in the Arab states and North Africa, three in Southeast Asia, one in South Asia, and one in East Asia. No single social science discipline dominated the research into military regimes. Political scientists, economists, sociologists, and historians all devoted much time and energy to studying this form of government.

A military regime is a form of government wherein the political power resides with the armed forces. The military is the legitimate power-holding group that centralizes political and legal authority. Military regimes, however, cannot simply be classified as governments dominated by the military, because they are seldom purely military in composition. Civilian bureaucrats and politicians generally play a role in the government, but the military always has the final say. The presence of civilians in military governments shows that military elites do not necessarily organize military regimes. Nevertheless, a military regime is always governed by a military officer, active or retired, with the support of the military establishment, and the political structure includes routine mechanisms for high-level military officers to influence policy and political appointments.

Military regimes are generally held together by their egalitarian belief in equal political, economic, social, and civil rights for all people. Thus, military regimes emerge most often as products of political, economic, and societal crises to replace weak executives and governments. The most popular mechanism used to achieve this is the military *coup d'état*, wherein members of the armed forces remove a state's chief executive through the use or threat of force. Once the military regime is firmly in place, characteristic features of this form of government include an intact military hierarchy, and a militarily controlled security apparatus. Military regimes also include features that would characterize governments more generally. These include institutions for deciding questions of succession, and routine consultation between the leader and the rest of the officer corps.

Despite the fact that military regimes are generally egalitarian, historically a variety of ideologies have held them together. Military regimes have practiced authoritarianism and free market liberalism, for example, in the military government of Augusto Pinochet in Chile from 1973 to 1990. Avowedly socialist military regimes held power in Haiti from 1957 to 1994 and also in Peru for a short period. These variations can occur because military rule is fundamentally undemocratic. Democracies require self-expression and the questioning of authority. Thus, the ideology that holds democracies together is inherently antiauthoritarian. However, military regimes are grounded in the military model of giving and taking orders and absolute obedience. Therefore, depending on the ideology of the armed forces, variations among military regimes are inevitable.

Military regimes require unquestioned obedience to the leadership, which holds absolute power, to stabilize the government. This makes military regimes both authoritarian and autocratic, but the degree of authoritarianism varies from regime to regime. Once power is established, variations abound. Military regimes are shaped by a mixture of variables derived from specific conditions peculiar to particular countries, which complicates conceptualization even further. In the Middle East and Africa, for example, military regimes have often been autocracies led by a single military officer, whereas Latin American military regimes have frequently been ruled by a junta, a committee composed of several officers.

Despite these differences, however, most military regimes are variations on one of four basic types, described by Christopher Clapham and George Philip in *The Political Dilemmas of Military Regimes* (1985). The first is known as a veto regime, which pits the military against strongly organized civilian political structures. Veto regimes support the existing social order and their aim is to defend it. Consequently, these regimes are highly repressive. The second type, the breakthrough regime, seeks to attack a social order that threatens its plans for modernization. Breakthrough regimes attempt to radically reform government. As with veto regimes, a high degree of repression is likely.

A third type is the moderator regime. Highly professional militaries make up these regimes, which aim to clean up the mess made by civilian governments and then return power to the civilians. Found in societies at varying levels of social and economic development, moderator regimes tend to be highly unstable due to internal disputes over exactly when to relinquish power. Moderator regimes are not particularly authoritarian or repressive. The fourth type, factional regimes, are formed when military officers align themselves with civilian political actors and groups based on shared traits such as ethnicity or ideology. Like moderator regimes, factional regimes tend to be highly unstable and are not particularly repressive.

THE EMERGENCE OF MILITARY REGIMES

Although military regimes certainly existed prior to World War II, the modern military regime is distinctly and analytically a new phenomenon restricted to the developing and modernizing world. The impetus for military regimes is found in the changing nature of the military itself and in its role in the development and modernization of the society within which it exists. Protection against commu-

nist or revolutionary takeover was historically the most common objective of military regimes, especially during the 1960s and 1970s.

The early 1960s saw a rapid rise in military regimes, which led many scholars to conduct theoretical analyses of the phenomenon. These studies focused on military intervention in politics as an exceptional and negative departure from the norm of an elected civilian government. Analysts had previously assumed that economic and social modernization in developing countries would lead militaries to become more professional and modern. The hope was that this would prevent them from meddling in politics in favor of defending their countries against internal and external attack.

In practice, however, as John Johnson argued in *The Military and Society in Latin America* (1964), the military was frequently the most modernized and technically advanced sector of the middle class, which allowed it to make a special contribution to development, and especially democratization. His theory was validated by the mid-1960s, when militaries overthrew one government after another, especially where decolonization was in progress in Africa and Latin America. The research argues that in turbulent modernizing societies the armed forces are best suited to promote order, making them highly likely to intervene in politics.

Marxism heavily influenced a second set of analyses that emerged during this period. Scholars in this camp utilized dependency theory, which suggests that the wealthy nations of the world need a peripheral group of poorer states in order to remain wealthy. These scholars argued that that the dependency of poor states on wealthier states led to close ties between their militaries. This led to the premise that the armed forces were willing instruments of capitalism and its domestic class allies. In turn, the militaries of poorer states would do as wealthier states pleased. Consequently, wealthier nations advocated military intervention to safeguard their control over essential economic materials.

The theory of bureaucratic authoritarianism was also used to explain the abundance of military takeovers during the 1960s. This highly influential theory combines elements of modernization, dependency, and Marxist theory to argue that military takeovers may occur as one of the stages of industrialization. The theory posits that populist democracy initially fosters urbanization, popular participation in government, and trade union development. This is followed by a stage in which industrialization needs to deepen, and governmental control over the popular sector is seen as the way to maintain order and pursue policies that will attract foreign investors. Military takeover can be an efficient way to achieve this.

THE DECLINE OF MILITARY REGIMES

Beginning in the mid-1970s, many military regimes started to hand power back to civilians. In turn, theoretical analyses of military regimes began to ask why. In *The Military and the State in Latin America* (1987), Alain Rouquié argues that the military's lack of legitimacy due to unfulfilled promises of democratization precipitated the change. The disillusionment of the economic elite and the middle class due to the repressiveness and economic incompetence of military regimes was another contributing factor.

Policy performance also helps explain why military regimes declined in number. Early research failed to find lower levels of economic development or performance in countries with military regimes compared to countries with other forms of government; these studies, however, failed to establish any strong relationship between regime type and public policy performance. Karen Remmer, in her *Military Rule in Latin America* (1989), convincingly shows that the military is in fact not generally very successful as modernizers or as promoters of economic development. As far as social policy goes, the principle difference between military and civilian regimes is that the military spends more money on weapons and the civilians spend more money on social welfare. This inhibits public support for military regimes and ultimately forces them to turn power back over to civilians.

The number of military regimes around the globe decreased dramatically beginning in the 1990s. Their lack of international legitimacy and inability to rule successfully even when they were robust were the prominent factors in their decline. The end of the cold war and the collapse of the Soviet Union also made it more difficult for military regimes to use the threat of communism as a justification for their actions. Nevertheless, military regimes continue to hold power around the globe. Military regimes came into power in countries such as Fiji, Thailand, and Mauritania at the beginning of the twenty-first century. Military regimes in Libya and Myanmar, which came to power during the 1960s, are still thriving. In the end, although the number of military regimes has decreased dramatically around the globe, it appears unlikely that they will become extinct anytime soon. Understanding why is the challenge that social scientists now face.

SEE ALSO *Authoritarianism; Coup d'Etat; Democratization; Militarism; Military*

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David Mastro

MILL, JAMES
1773–1836

James Mill was a British political philosopher, economist, and historian. Born in Scotland, he was educated at the University of Edinburgh through the patronage of Sir John Stuart, where he attended the lectures of the philosopher Dugald Stewart (1753–1828) and specialized in philosophy, according to Alexander Bain's 1882 *James Mill: A Biography*. Mill moved to London in 1802 to pursue a career as a journalist, writing for several periodicals. He became closely associated with Jeremy Bentham (1748–1832) and was an ardent advocate of utilitarianism and of the Benthamite objective of achieving "the greatest happiness of the greater number" (Stephen [1900] 1968). The group of radicals around Bentham and Mill shared a set of policy objectives that included the abolition of Britain's Poor and Corn Laws, the extension of the franchise, and religious tolerance.

Mill wrote a pamphlet in 1804 in which he reviewed the history of the Corn Laws, calling for the removal of all export bounties and import duties on grains and criticizing Thomas Robert Malthus (1766–1834), among others, for defending them. As noted in Thomas Sowell's *Say's Law: An Historical Analysis* (1972), Mill's *Commerce Defended* (1808) reiterated his arguments against the Corn Laws and is credited with providing the first version in English of Jean-Baptiste Say's (1767–1832) law of markets, which states that "supply creates its own demand." In 1977 William Baumol pointed out that, for Mill, Say's law was not fundamentally about the impossibility of overproduction, but rather about the notion that productive consumption (investment), rather than consumption of luxuries, was the effective means to promote growth. David Ricardo (1772–1823), who became Mill's close friend, adopted Say's law in part as a result of Mill's influence.

Mill extended the utility principle to the science of politics in his essay titled "On Government" ([1820] 1967). For Mill, the aim of government was to increase human happiness, and only individuals could make the utilitarian calculation of pleasure and pain. Thus, Mill concluded that only representative democracy was compatible with the principle of utility, since it would prevent those in power from acting for their own advantage. According to Murray Milgate and Shannon Stimson, in a 1993 article in the *American Political Science Review*, the requirement for voting was the capacity to judge one's own interest; that is, knowledge, rather than birth or property, was at the center of Mill's political theory. In his *History of British India* (1817), which helped him secure a permanent position with the East India Company, Mill defended British rule in India, contradicting his own theory of political representation. In addition, his Eurocentric views on colonial rule reveal contempt for other cultures and societies.

Mill's 1821 book, *Elements of Political Economy*—written as lessons for his son John Stuart Mill (1806–1873)—were central in popularizing a certain version of Ricardian economics that included elements like the "wage fund" theory, which were extraneous to Ricardo's ideas, according to a 2004 article in *European Journal of the History of Economic Thought* by Sergio Cremaschi. Neil De Marchi (1983) contrasts the dogmatic Mill of the *Elements*, which simplifies and deduces everything from first principles, with the more open-minded thinker of previous works. Mill's defense of Ricardian economics and his commitment to utilitarianism led to a confluence of both strands of his thought, which would eventually come together within the marginalist school.

SEE ALSO *Corn Laws; Say's Law; Utilitarianism*

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Matías Vernengo

MILL, JOHN STUART
1806–1873

Defining the social sciences as encompassing "mental or cultural sciences that deal with the activities of the individual as a member or group" ("Social Science," *Merriam-Webster's Medical Dictionary* 2007) provides space for interpreting which subjects are appropriate for social scientific inquiry. However, in the case of John Stuart Mill, the British economist, moral and political philosopher, and administrator, it is difficult to argue that he is not the quintessential social scientist. Additionally he is someone others attempt to emulate in their intellectual work and philosophical beliefs.

During the early nineteenth century, Mill sought philosophical enlightenment, focusing on the common person. His investigations of moral and ethical thought began early, although they were published later in his life. Some believe that Mill did not fully explore some of his more radical beliefs, yet he left an indelible mark on democracy and law, economic trade, feminism and women's rights, labor theory, mathematics, political theory, poverty and welfare concerns, psychology, religion and theology, and scientific method and empiricism.

It is clear that Mill influenced African American economists, such as Abram Lincoln Harris Jr. (1899–1963). Harris, who chaired Howard University's Economics Department (1936–1945) and also served on the University of Chicago faculty (1946–1963), began as a Marxist but was influenced during the Great Depression by the moderately socialist—or at the very least liberal—writings of Mill. Harris finds his beliefs at home with Mill because both men believed that "justice would come from a class-based solution generated by social science objectivity and expertise" (Holloway 2002, p. xiv).

Harris suggested that a unified militant worker effort, organized along racial lines, could alleviate African American social and economic inequality. The racially and economically entrenched working class had historical and social reasons for continued divisive operations, but Harris and Sterling Spero, in *The Black Worker* (1931), argued that the problems were solvable through time and higher academic achievement by the next generation of African Americans. The historical basis for worker problems spawned from slavery and the fact that many African Americans led agrarian lifestyles prior to moving to urban, industrialized areas meant that they were unfamiliar with unions and organized worker movements. In addition the leadership of groups such as the National Urban League proffered an antiunion sentiment that appealed to many African Americans but led to additional racial stratification for the working class. Harris's book *The Negro as Capitalist* (1936) launches a savage attack on the impact of African American business people on the African American masses.

As a child John Stuart Mill, who was born in the London suburb of Pentonville, the eldest son of James Mill and Harriet Barrow, flourished and delved into classical writings. He was educated only by his father, who served as a leading member of philosophical radicals strongly linked to the utilitarian teachings of Jeremy Bentham (1748–1832). Though James Mill served as an East India Company administrator, he used Bentham's associationalist psychology to educate his eldest son, who knew both Greek and Latin by the time he was eight years old. Learning these languages allowed John Stuart Mill to read most of the classics by the age of fourteen. In addition he had a wide understanding of history, logic, mathematics, and economic theory.

Influenced by his reading of the philosophical radicals, Mill began to think of himself as a person seeking to improve the human condition but at the same time focusing on the interest of the individual. In 1826 Mill suffered a lengthy depression, which perhaps strengthened and elevated his philosophical convictions. He found some solace for his feelings in the poetry of William Wordsworth (1770–1850).

After his recovery, Mill began to question and revise his utilitarian views. Originally he worked from three defining characteristics of Bentham's teachings: the greatest happiness principle, universal egoism, and the artificial identification of one's interests with those of others. In 1828 he met Gustave d'Eichtahl (1804–1882), a follower

of Henri de Saint-Simon (1760–1825), and began to consider how social and cultural institutions shaped history and overall human development. Influenced by thinkers such as Auguste Comte (1798–1857) and Samuel Taylor Coleridge (1772–1834), Mill came to believe that British society was on the cusp of an organic period, when society would replace inefficient and bureaucratic institutions with better organizations. He also believed that British society needed him as a catalyst for change; otherwise society would stagnate.

Exploring Wordsworth's poetry was crucial also in Mill's relationship with Harriet Taylor (1807–1858), whom he met in 1830. Though Taylor was married at the time, Mill and Taylor formed a close friendship. In 1851, two years after the death of Taylor's husband, Mill and Taylor married, against the wishes of Mill's family, especially his father. James Mill supported Epicurean principles but practiced Scots Calvinism. In this sense Mill surpasses his father to have a richer understanding of the role of pleasure in human development and attributes that philosophical growth to Harriet Taylor. She convinced Mill that individuals were not maximizing the benefits in their lives and that a new theory of the human condition was necessary. Taylor died in 1858; however, one can see her influence over Mill's later works.

Although Mill still believed in utility and positivism, his position on how to present and implement social change differed from that of most of Bentham's followers. For Mill, new philosophical proclamations that demanded quick modifications must be avoided, and slow, gradual delivery of new thoughts were necessary for acceptance and integration with existing values. Examples of how Mill introduced new ideas slowly come from *On Liberty* (1859) and *The Subjection of Women* (1869). In *On Liberty*, Mill examined government formation and proclaimed that the success of government organization depends on "utility in the largest sense, grounded on the permanent interest of man as a progressive being" (Mill 2005 [1859], p. 224). A sharp criticism of government came from Mill in *The Subjection of Women*, where he stated: "Stupidity is much the same the world over. A stupid person's notions and feelings may confidently be inferred from those which prevail in the circle by which the person is surrounded. Not so those whose opinions and feelings are emanations from their own nature and faculties" (Mill 2004 [1869], p. 273). Each individual is responsible for his or her own happiness, but government is responsible for helping each person develop a path to happiness. Thus in his fight for suffrage rights for women, Mill felt that the Conservative Party was foolish in not responding to the will of the people in a manner that improved utility.

Mill reached beyond his roots in conventional politics to comment on the connection between logic and economic theory and political and social life. After declining to study at Oxford or Cambridge University, he worked for the British East India Company until 1858, then he was an independent member of Parliament from 1865 to 1868 and served as the lord rector of the University of St. Andrews during the same period. Trade and growth theory received particular attention from Mill, who at an early age had read the complete works of Thomas Malthus (1766–1834), David Ricardo (1772–1823), and Adam Smith (1723–1790). Much influenced by Ricardo and his father, Mill investigated taxation, wages and profit, competition, and the division of factors of production. In *Analysis of the Phenomena of the Human Mind*, published in 1869, Mill, accepting the human mind's importance to good decision making, revised and corrected his father's work, *Analysis of the Phaenomena of the Human Mind* (1829). James Mill believed that one derives an idea, no matter how complex, from its associated parts. Mill took his father's *associationism* conception one step forward and proposed that when considering pleasure one can have lower levels of pleasure that make up higher levels of pleasure. As a person builds pleasure upon pleasure, a new whole comes into being.

In political economy, researchers attribute social scientific investigative methodology to Mill. In later revisions of his text *Principles of Political Economy* (1848), Mill argued, rather radically, that progressive taxation was bad and akin to stealing, that the wage system needed to be abolished because it lacked equality, and that production was closely linked to social networks, thus making competition difficult. Maximizing human development and pleasure required freedom for the person to grow. Freedom in the economic marketplace, laissez faire economic policies and principles, framed only one part of the picture. Individuals must also have political freedom. His text is still used at Oxford University in the early twentieth century and continues to influence thought. For example, John Rawls, Robert Nozick, Bertrand Russell, Karl Popper, and Peter Singer have produced controversial yet honest social commentary similar to Mill's.

SEE ALSO *Bentham, Jeremy; Economics; Ethics; Harris, Abram L., Jr.; Liberalism; Mill, James; Morality; Philosophy; Radicalism; Social Science; Utilitarianism; Women and Politics*

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Raymonda Burgman

MILLENNIUM DEVELOPMENT GOALS

SEE *World Bank, The.*

MILLENNIUM ECOSYSTEM ASSESSMENT

SEE *Deforestation.*

MILLER, MERTON H.

SEE *Finance; Modigliani-Miller Theorems.*

MILLER, WARREN

1924–1999

Warren Edward Miller was a pioneering survey researcher and institution builder who helped transform the study of elections in political science.

Miller, who earned his doctorate at Syracuse University in New York in 1954, taught at the University of California, Berkeley, before arriving at the University of Michigan at Ann Arbor in 1956. At Michigan, Miller founded the Center for Political Studies (CPS) at the Institute for Social Research. The CPS's biennial election surveys, which began in 1948, created the first longitudinal source of scientific data on public opinion. In 1960 Miller published *The American Voter*, written with social scientists Angus Campbell (1910–1980), Philip Converse, and Donald Stokes (1927–1997), an instant classic that drew on CPS data to offer the first systematic analysis of electoral behavior. Miller and his coauthors then produced an acclaimed follow-up titled *Elections and the Political Order* (1966).

In 1962 Miller founded and began serving as director of the Inter-University Consortium for Political and Social Research (ICPSR), which was created in part to meet demand for scholarly access to CPS data. ICPSR subsequently became a central archive for quantitative social science data and methodological training, helping to further transform political science and its sister disciplines. Miller later served as director of CPS (1970–1981) and helped secure long-term support from the National Science Foundation for the biennial CPS election survey, which was renamed the National Election Studies (NES) in 1977.

During the 1960s and 1970s, Miller lent his expertise to the television networks as a consultant for their election coverage. He also served as president of both the American Political Science Association (1979–1980) and the Social Science History Association (1979). In 1982 Miller moved to Arizona State University in Tempe, where he continued to publish scholarly books and articles until late in his life, including *The New American Voter* (1996), cowritten with J. Miller Shanks.

Miller's work on the CPS/NES helped launch the "behavioral revolution" in political science, a movement that revolutionized the field. By creating the first nationally representative survey datasets, Miller and his colleagues allowed researchers to study the correlates of vote choice and political opinion. In addition, by repeating a common set of questions in each study, they made it possible for researchers to study changes in public opinion and voting behavior over time. A vast literature quickly emerged on both topics.

Over time, however, this approach to voting research faced criticism for its theoretical and methodological weaknesses. Its proposed model of voting behavior, which was known as the "funnel of causality," fell apart as researchers realized that the variables that were thought to influence vote choice were themselves affected by voter's preferences toward candidates—a problem known as endogeneity. As a result, political scientists later shifted toward mathematical models and experiments, two techniques that many think provide additional leverage for understanding political behavior.

Nonetheless, Miller will be remembered as a trendsetting quantitative researcher who revolutionized the field of election studies. In the introduction to their 1994 edited volume in his honor, M. Kent Jennings and Thomas E. Mann write, "Warren Miller and the study of elections are synonymous. It is impossible to account for the institutional and intellectual developments that have shaped post-World War II scholarship on voting without acknowledging his crucial role" (p. 3).

SEE ALSO *American National Election Studies (ANES); Divisia Monetary Index; Interest Rates; Monetary Base; Money; Money, Demand for; Policy, Monetary*

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Brendan Nyhan

MILLER, WILLIAM

SEE *Sanitation.*

MILLS, C. WRIGHT

1916–1963

The American sociologist Charles Wright Mills wrote about the growth in the size and scope of bureaucracies in the modern era. The resulting concentration of authority, he maintained, has dramatic effects upon such institutions as family, democratic government, science, education, and the economy. It also profoundly affects individuals, both those who wield the power and those who are subject to it. Mills forcefully chastised his colleagues about the proper role of social science in exploring and clarifying these and other central issues of the time.

EARLY LIFE AND EDUCATION

Mills was born on August 28, 1916, in Waco, Texas. His father was an insurance salesman and his mother a homemaker. From the age of seven the family began moving around Texas, and Mills experienced what he later described as a childhood of loneliness and isolation. He attended Texas A&M University in 1934–1935, but found the required regimentation and demands for deference toward professors and upperclassmen to be intolerable. In later years, Mills reflected on how these childhood and adolescent experiences caused him to focus on work as his "salvation," taught him to demand intellectual and social independence, and gave him both a tolerance and a preference for being a loner.

After a disastrous freshman year Mills transferred to the University of Texas, where he received a bachelor's degree in sociology and a master's degree in philosophy in 1939. He then went on to the University of Wisconsin, where he received his doctorate in sociology. By all accounts he was a brilliant though difficult student. His relations with his professors were often stormy; he was looked upon as arrogant and exceedingly ambitious. When defending his dissertation he refused to make revisions demanded by his committee; the dissertation was later quietly accepted without formal committee approval.

In 1941 Mills accepted his first academic appointment at the University of Maryland. It was here that Mills finished his dissertation on American pragmatism and collaborated with Hans Gerth, one of his professors at Wisconsin, on *From Max Weber: Essays in Sociology* (1946). This book has since become a classic, interpreting the German sociologist Max Weber as far more of a radical conflict theorist than the prevailing American view of the time. In 1945 Mills joined Columbia University where he taught and wrote for the remainder of his career.

In all of his writings, Mills interpreted the world through a theoretical perspective very much influenced by Weber. Like Weber, Mills's vision comprised a holistic view of entire sociocultural systems. His main body of work centers upon the theme of rationalization, the practical application of knowledge to achieve a desired end. Rationalization is a method of thought focused on total coordination and control over processes needed to attain whatever goal the individual or organization has set. It is the thought process behind the application of science, observation, and reason in the development of technology

to manipulate the environment. It is the thought process behind bureaucracy, social organizations specifically designed for the attainment of goals. It was Mills's contention that rationalization was increasing with modernity. Mills believed that because the social system is interdependent, the rationalization process has profound effects on human behavior, values, and thought.

WHITE COLLAR

Mills's first breakthrough came with the publication of *White Collar: The American Middle Classes* in 1951. According to Mills, the rise of white-collar work was due to the era's growth in bureaucracy caused by technological change and the increasing need to market the goods and services of an industrial society. The central characteristic of white-collar workers is that they are unorganized and dependent upon large bureaucracies for their existence. By their mass existence and dependence, Mills maintained, they have changed the character and feel of American life.

With the automation of the office and the increase in the division of labor, the number of routine jobs is increased, while authority and job autonomy become attributes of only the top positions. There is an ever greater distinction made in terms of power, prestige, and income between managers and staff. The routinized worker is discouraged from using his or her own independent judgment; decision making is in accordance with strict rules handed down by others. Job performance and promotion become based on following the bureaucratic rules and dictates of others, not on critical intelligence. The aim of schooling shifts from the creation of the "good citizen" to one of creating the "successful specialist."

In white collar society there is also a shift of social power from force and coercion to authority and manipulation. This form of power is founded upon the ever more sophisticated methods of control given elites by mass communication and the social sciences. This shift is from the overt to the covert, from the obvious to the subtle. Exploitation becomes the rule, depriving the oppressed from identifying the oppressor. This form of power effectively removes the check of reason and conscience of the ruled on the ruler.

THE POWER ELITE

In *The Power Elite* (1956) Mills demonstrated that the bureaucracies of state, corporations, and military have become enlarged and centralized, and are a means of power never before equaled in human history. These hierarchies of power, Mills argued, are the key to understanding modern industrial societies. Major national power resides almost exclusively at the top of these bureaucracies; all other institutions have diminished in scope and been pushed to the side of modern history or made subordinate to the big three.

The elite who run these organizations are closely related through intermarriage. Some of their coordination comes from an interchange of personnel between the three elite hierarchies, but a good deal of coordination also comes from a growing structural integration of the dominant institutions. As each of the elite domains becomes larger, its integration with the other spheres becomes more pronounced. But the major source of unity of the elite, Mills stated, is their common background—they are all from the upper social class, they attended the same preparatory schools and Ivy League universities, and belong to the same exclusive clubs and organizations.

The positions of the elite give them access to power that make their decisions (as well as their failure to act) extremely consequential. Mills believed these leaders are acting (or failing to act) with irresponsibility, thus leading the nation and the world to disaster. But this does not always need to be so; the enlargement and concentration of power into so few hands now makes it imperative to hold these men responsible for the course of events.

SOCIOLOGICAL IMAGINATION

Mills believed it is the task of social scientists to address how the concentration of power, and the resulting structural and historical issues, affect human values and behaviors. Mills's *Sociological Imagination* (1959) was a call to arms for social scientists to focus upon these substantive problems, to bring reason to bear on human affairs.

In this work, like Weber before him, Mills cautioned that a society dominated by rational social organization is not based on reason, intelligence, and good will toward all. Further, it is through rational social organization that modern-day tyrants (as well as more mundane bureaucratic managers) exercise their authority and manipulation, often denying the opportunity to their subjects to exercise their own judgment. One then has "rationality without reason. Such rationality is not commensurate with freedom," Mills said, "but the destroyer of it" (1976, p. 170).

Because of his abrasive personality, his insistence upon writing polemics for a broader audience, and his increasingly strident and critical views of the status quo and of the work of his colleagues, Mills became increasingly isolated as a sociologist. His personal manners and dress were far removed from the buttoned-down professional academics of Columbia. In 1963 Mills died of heart disease at the age of forty-five, virtually excommunicated from the mainstream of his profession. However, over the years his reputation has grown among those who take a critical view of modernity and its drift.

SEE ALSO *Blue Collar and White Collar; Bureaucracy; Bureaucrat; Military-Industrial Complex; Power; Power Elite*

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Frank Elwell

MILLS, EDWIN
1928–

Edwin Smith Mills is an emeritus professor of real estate and finance at Northwestern University in Evanston, Illinois. He was born on June 25, 1928, in Collingswood, New Jersey. After graduating from Collingswood High School in 1946, he served two years in the U.S. Army and was commissioned a second lieutenant in the Corps of Engineers. After obtaining his undergraduate degree from Brown University in 1951 and his PhD in 1956 from the University of Birmingham in England, he held faculty positions at Massachusetts Institute of Technology, Johns Hopkins University, Princeton University, and Northwestern University. Over almost five decades of teaching and research focused on real estate and urban economic development, Mills authored fifteen books and more than one hundred papers, served as an adviser to numerous domestic and foreign governments, and was a member of many national committees seeking solutions to urban and environmental problems.

Mills is best known for his undergraduate textbook *Urban Economics*, first published in 1972, as well as for founding and editing the premier academic journal in urban economics (*Journal of Urban Economics*) and for his research treatise on urban spatial structure (*Studies in the Structure of the Urban Economy*). The latter book, which was published in 1972, is considered to be one of three classics (the other two are William Alonso's *Location and Land Use* [1964] and Richard Muth's *Cities and Housing* [1969]) that established the core of what today is identified as the field of urban economics. This core consists of a model, commonly referred to as the *standard urban land-use model*, that explains urban spatial structure and how this structure has changed over time. Urban spatial structure refers to the location of alternative land uses (such as apartments, houses, offices, and manufacturing plants) within cities, as well as to the locations of alternative income groups. The usefulness of the model is multifold, providing answers to such questions as why offices are concentrated within the center of metropolitan areas, why high-income households tend to live farther from the center than low-income households, and why many households and firms have moved from the central city to the suburbs.

Besides his contributions to the theoretical development of the standard urban model, Mills has provided many of the most important empirical tests of the model. Within *Studies in the Structure of the Urban Economy*, he developed methods for estimating population density gradients, which show how population per square mile changes as distance increases from the center of the metropolitan area. These techniques were used by Mills in a series of papers and by other urban economists to study population suburbanization, which continues to be a major focus of urban scholars in light of recent concerns related to urban sprawl. Mills's research has shown that suburbanization is the result of both a natural evolutionary process resulting from higher real incomes and urban population growth and a flight from blight, as households and firms move from the central city to the suburbs to escape social and fiscal problems that are more severe within central cities.

While Mills is best known for his development and testing of the standard urban model, his writings have also expanded understanding of numerous urban problems (such as air and water pollution, housing segregation, and urban decay) and what might be done to solve them. His policy prescriptions have stressed the importance of allowing markets to work more efficiently without excessive government intervention.

SEE ALSO *Economics, Urban; Pollution; Pollution, Air; Pollution, Water; Segregation, Residential; Spatial Theory*

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Keith R. Ihlanfeldt

MILOSEVIC, SLOBODAN
1941–2006

Slobodan Milosevic was the president of Serbia from 1989 to 1997, and president of the Federated Republic of Yugoslavia from 1997 to 2000. Milosevic was born in Pozarevac, Serbia, the second son of a former Orthodox priest and a Serbian schoolteacher; both parents later committed suicide. In high school Milosevic met Mirjana Markovic, the daughter of prominent Yugoslav Communist Party members. They married in 1965 and had two children, Marija and Marko. Milosevic completed college at the University of Belgrade, studied law, and then became head of Technogas, the state-owned gas company, and, later, president of Beobanka, the United Bank of Belgrade.

In 1984 Milosevic entered politics as leader of the Belgrade Communist Party. Calling for a centralized federal political and economic system, Milosevic became a spokesperson for Serbian nationalist sentiments and the long-standing desire for the creation of a Serbian republic throughout former Yugoslavia. In 1987, while in the Albanian providence of Kosovo, Milosevic assured the Serbian minority population that Yugoslavia's non-Serbian populations would not extract concessions from the Serbians as they sought greater autonomy from the once-powerful Yugoslavian confederation. Soon afterward, Yugoslavia's fragile, multiethnic coalitions disintegrated into regional enclaves at war. In 1988, in a wave of Serbian nationalism, Milosevic was elected president of Serbia. By 1992–1993, Slovenia, Croatia, and Bosnia sought to secede from Yugoslavia to form autonomous governments. Milosevic directed the Serbian-dominated Yugoslav Army to wage war against these movements and protect the Serbian minority population from its non-Serbian secessionists. By arming Serbia's minority populations in the provinces, the goal of the war changed from a preservation of the Yugoslav confederation to an ethnic civil war, taking the lives of more than 250,000 people and displacing more than 2 million.

In 1995, in its first military operation against a European nation, the North Atlantic Treaty Organization (NATO) commenced air strikes against Serb targets in Croatia, bringing Milosevic into negotiations, which became known as the Dayton Peace Accord. In 1996 Milosevic was elected president of Yugoslavia and in 1997 Serbia was at war in Kosovo. In 1999 NATO again bombed targets inside Serbia, including Belgrade, until Serbian forces withdrew from Kosovo. In 2000 economic and international isolation created enough popular unrest in Belgrade to force Milosevic from power. In June 2001 Milosevic was arrested and extradited to The Hague for trial in the United Nations Criminal Tribunal. Milosevic was charged with three indictments: for his role in atrocities committed by Serbian forces during the Kosovo campaign, including the murder of more than 600 people and the deportation of 700,000; for breaches of the Geneva Conventions in Croatia, including the forced removal of 200,000 non-Serbians; and for crimes against humanity and genocide in Bosnia, namely the killing of thousands of Bosnian Muslims and Bosnian Croats.

The court held that as president of the Republic of Serbia, Milosevic exercised control over the participants in the conflict. After refusing to enter a plea or accept assistance from lawyers provided by the court, Milosevic elected to defend himself. The trial lasted five years and, with less than one month of deliberations remaining, Milosevic was found dead in his cell at the age of sixty-four. On March 14, 2006, his trial was officially terminated, without a verdict. Historians regard Milosevic's war of nationalism and ethnic cleansing as one of Europe's most destructive conflicts and human rights atrocities since World War II.

SEE ALSO *Genocide; Tito (Josip Broz)*

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James Freeman

MIMESIS

SEE *Representation.*

MIND-BODY DICHOTOMY

SEE *Knowledge; Psychoanalytic Theory.*

MINIMAX THEOREM

SEE *Zero-sum Game.*

MINIMIZATION

In his influential 1784 essay "Idea for a Universal History with a Cosmopolitan Intent," Immanuel Kant (1724–1804) defends his third thesis in the following terms:

> Nature does nothing unnecessary and is not prodigal in the use of means to her ends. Nature seems here to have taken delight in the greatest frugality and to have calculated her animal endowments so closely—so precisely to the most pressing needs of a primitive existence—that she seems to have willed that if man should ever work himself up … he alone would have the entire credit for it and would have only himself to thank. (Kant [1784] 1983, p. 31.)

This Leibnizian key to how Nature plans and attains its ends and objectives—approaches the principal-agent problem, if not a game, that it is confronted with—had already been identified by Leonhard Euler (1707–1783) at least forty years earlier:

> Namely, because the shape of the whole universe is most perfect and, in fact, designed by the wisest creator, nothing in all of the world will occur in which no maximum or minimum rule is somehow shining forth [nihil omnino in mundo contingint, in quo non maximi minimive ratio quapiam eluciat] (Euler [1744] 1952, p. 411).

It is in Paul Samuelson's 1947 *Foundations of Economic Analysis* that Lionel Robbins's (1898–1984) redefinition of economics as the "science which studies human behavior as a relationship between ends and scarce means which have alternative uses" (Robbins 1932, p. 16) is taken and squarely rooted into the "general properties of minimum systems" (the latter being one of the two section headings of Samuelson's 1964 foreward to the reprint of his book). The trajectory of the notion of *minimization*, and its mirror-image *maximization*, in the evolution of economic science and of the social sciences, insofar as they submit to the analytical lead of the former, is so well charted that the paired terms do not merit an entry in *The New Palgrave* (Eatwell et al. 1987; also see Samuelson 1971). Thus V. M. Tikhomirov begins *Stories about Maxima and Minima* with the blasé statement that in "daily life it is constantly necessary to choose the best possible (optimal) solution [and] a tremendous number of such problems arise in economics and in technology" (Tikhomirov [1986] 1990, p. ix). Pareto-optimal and core allocations, to take only two solution concepts pertaining to the collective level, can be seen, respectively, as the outcomes at the individual level of expenditure-minimization and of preference maximization problems at some suitably chosen set of prices. (For the precise definitions and assumptions underlying these results, see Lange 1942; Arrow 1951; and Debreu 1959 for the former; and Edgeworth 1881; Debreu and Scarf 1963; and Aumann 1964 for the latter.)

In conclusion, two points need flagging: an unfortunate tendency to single out calculus as the only key to problems involving minimization and maximization (Koopmans 1957; Dorfman et al. 1958; Debreu 1959; and Niven 1981 are vigorous antidotes) and, more controversially perhaps, a tendency (as in Euler, this entry and also possibly in Kant) to single out the principle of minimization (and maximization), and the consequent submission to quantification that it implies, as the only explanatory key to social science phenomena. A fuller elaboration of these postmodern demurrals is best left to longer entries.

SEE ALSO *Kant, Immanuel; Mathematical Economics; Mathematics in the Social Sciences; Maximization; Methods, Quantitative; Models and Modeling; Optimizing Behavior; Quantification; Rationality; Samuelson, Paul A.*

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M. Ali Khan

MINIMUM WAGE

Historically, the idea of a minimum wage was to allow a full-time worker to earn enough to buy the basic necessities of life. Following the Great Depression of the 1930s and World War II, watershed legislation established minimum wages around the world, most notably the Fair Labor Standards Act (FALSA) of 1938 in the United States and the Wage Council Act of 1945 in the United Kingdom. FALSA, for instance, established a minimum wage of 25 cents per hour when it was formed; that became $5.85 in 2007, and will increase to $7.25 by 2009. The value of this minimum, however, declines over time due to inflation or productivity growth. The problem with the minimum wage is its interference with the labor-market mechanism, creating ambiguous influences on employers, workers, and teenagers (and even more so on nonwhite teenagers) for whom the market-clearing wage is lower than the minimum wage. In the case of extreme poverty, the argument that policy authorities should pass a legal minimum wage through legislation is not in dispute, but disagreement over a minimum wage abounds in the areas of efficient allocation of resources, full employment, effect on income, and alternative ways to combat poverty (Stigler 1946).

Economists study the effect of minimum wages relative to the market equilibrium wages. If the demand for labor, N_d, is not equal to the supply of labor, N_s, then wages change. At equilibrium, the change in the wage rates, w, over time, t, is $dw / dt = f(N_d - N_s) = 0$. One implication of the equilibrium is that a laborer is paid a wage, w, equal to the marginal product of labor (MPL). If a minimum wage is binding, such as for the unskilled, young, less educated, and part-time workers, then the minimum wage would exceed the equilibrium wage, creating unemployment. The unemployed may transfer to industries that are not covered by the minimum wage, thus decreasing wage and productivity there. One possibility is that employers may then substitute more automation, or skilled labor for low-skilled labor as wages increase. Another factor is that competition between the covered and the uncovered sectors of the labor market tends to equilibrate the wages between the two sectors. Thus, the MPL of workers still employed in the covered industry will tend to rise to where $w = MPL$ (Hicks 1948, p. 179). As Martin Bronfenbrenner asserts: "If they were better fed and clothed and housed, and better cheered as well, by higher wages, their physical efficiency might rise in the same proportion as the wage rate" (Bronfenbrenner 1943, p. 82).

Economists emphasize empirical work to assess the net possible effect of minimum wages. Several studies by David Card and Alan Krueger held that minimum wages increase the employment in fast-food firms such as Burger King, KFC, Roy Rogers, and Wendy's. At the firm level, Card and Krueger (1994) studied the increase in minimum wages in New Jersey, the highest minimum wage in the nation as of April 1, 1992, against no change in the minimum wage in Pennsylvania. They found that employment increased in New Jersey by 0.6 workers, and declined in Pennsylvania by 2.1 workers, a difference-in-differences of 2.7 workers. Similar findings were made for firm-level data in Texas, and for state data in California (Card and Krueger 1995). An attempt by David Neumark and William Wascher (2000) to replicate the Card and Krueger finding used employment data reported by establishments rather than survey data. They found that the job gain in New Jersey could be zero or slightly negative. The technology of the fast-food firms suggests that employers may need a fixed number of employees per grill or cash register, and therefore will not reduce employment when

minimum wages increase, but that they may be discouraged from opening new franchises, thus lowering potential employment.

The analysis of the amount of the unemployment can be stated in elasticity of demand terms. If the elasticity is less than one, increase in wages will increase payroll, enhancing benefits to workers. The elasticity of –1 is the standard labor market assumption, which leads to the expectation that unemployment will fall in equal proportion to wage increases. Earlier empirical studies by Charles Brown, Curtis Gilroy, and Andrew Kohen (1982; 1983) indicated that the effect of minimum wages on employment was slightly negative or insignificant, indicating an elasticity of demand close to zero.

In the Keynesian world, "the customary treatment of involuntary unemployment and unemployment equilibrium frequently is based upon rigidity of money wage rate" (Darity and Horn 1983, p. 725). The post-Keynesians are well known for defending the wage-rigidity assumption. John Maynard Keynes's (1973, p. 54) correspondence with the classical economist Arthur Cecil Pigou revealed a rigid labor supply curve, indicating rigid wages for some level of employment. Keynes, however, eased up on the wage-rigidity assumption in chapter 19 of his *General Theory of Employment, Interest, and Money* (1936). According to Axel Leijonhufvud (1968, p. 37) the assumption of a minimum wage is maintained by Keynesians, who assume competitive conditions make wage rigidity into a special case for this model. Don Patinkin (1948, p. 545) argued that rigidity in the Keynesian system is possible under static modeling of Keynesian economics, but rigidity is not an essential Keynesian element in a more dynamic setting.

Modern macroeconomic discussion involves models dealing with wage-setting, where wages are set as a markup on expected price, and with price-setting, where prices are set as a markup on expected wages. Unemployment then depends on the solution of the joint equations Price Setter: $p - w^e = \beta_0 - \beta_1 u$, $(\beta_1 \geq 0)$, and Wage Setter: $w^e - p = \gamma_0 - \gamma_1 u$, $(\gamma_1 > 0)$, where w is money wage, u is unemployment, p is price, e is expected, and the Greek letters are parameters to be estimated (Layard, Neckell, and Jackman 1994, pp. 19–20). When price and wage expectations materialize, real wages can be analyzed against employment. Any factors that contribute to wage push, γ_0, such as the minimum wage, raise the unemployment rate.

SEE ALSO *Economics, Labor; Expectations; Markup Pricing; Poverty; Sticky Wages; Unemployment; Unemployment Rate; Wages*

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Lall Ramrattan
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MINING INDUSTRY

Mining is a site-specific economic activity creating wealth from the extraction of nonrenewable resources from land and sea. The boundaries of the mining industry are impre-

cise. It conventionally excludes oil, gas, and water, but coal and uranium are normally included. Bulk construction materials and stone are extracted in the same fashion as other minerals, and the volume of their output exceeds that of most other minerals, but they are usually excluded from definitions of the industry. The downstream boundaries are somewhat indeterminate, depending on processes, corporate structure and end uses. Mines usually produce ores that require further processing rather than finished products and the ores may contain one or several economic products. The usable materials are often a small proportion of the ore mined. There are various methods of mining, each suited to the specific circumstances of each mineral deposit, and each with different cost structures. Most minerals are either extracted from open workings in which the overburden is first stripped away to expose the economic ore, or from underground workings that access the ore through shafts or tunnels. Substantial volumes of waste are mined as well as ores, particularly in open pit mines producing base and precious metals.

GLOBAL FEATURES

Ore deposits are not evenly distributed around the globe, with different minerals concentrated in specific geological environments. Typically, deposits located near major centers of industry and population have been depleted and mines are increasingly concentrated in more remote regions. Transport costs are a major determinant of competitiveness, and reductions in shipping costs since the mid-twentieth century have internationalized the markets for many products, like coal and iron ore, that formerly served regional or local markets. The European Union, Japan, and the United States have become increasingly dependent on imports, either of mineral raw materials, or of semi-processed products, to supply their requirements. The fast developing countries of the Asian Pacific Rim are also heavily reliant on imports of minerals. Economic growth in the latter region, combined with rapidly rising demand from China, is putting renewed pressure on mineral supplies. China has by far the world's largest minerals industry, accounting for about 12 percent of global minerals turnover, excluding coal, and nearly 18 percent, including coal. Many, but by no means all, of its mines are antiquated, undercapitalized, small-scale operations with poor environmental and health and safety records.

Most minerals and their first-stage products are traded internationally at prices determined in global markets. Shifts in exchange rates and domestic economic policies thus influence an individual mine's ability to compete. The amount of usable product contained in ore, its ease of processing, and accessibility are the main endogenous determinants of competitiveness. Energy is a large element of costs, so that rising oil prices have an adverse impact. Economies of scale are important, and the typical scale of operations has risen considerably over the past fifteen years. Many small mines have closed down, and larger mines have expanded, so that the number of mining operations has contracted. Technical change and rising productivity have also driven down costs.

Labor costs are relatively unimportant in many mines, although U.S. companies are often burdened by large legacy costs. Organized mining accounts for much less than 1 percent of the world's workforce—fewer than 15 million people, with a further 11.5 to 13 million people working in small-scale mines. According to the International Labor Office, the total number of people relying on mining, both large and small, for a living, taking dependents into account, is about 300 million, of which up to one-third depend on small-scale mining. The numbers have fallen markedly since the 1980s with the closure of many small mines and improving productivity, especially in China. There is a growing global shortage of skilled and professional labor, because of a rundown in mining education and a lack of new entrants.

LABOR CONDITIONS AND STATE OF THE INDUSTRY

Mines are only located where there are viable ore deposits, and these are often in physically remote areas, far from major population centers. The modern tendency is for workers to commute to mine sites for extended shift periods of up to a month, from well-established communities with good infrastructure and social amenities. Before the development of low-cost air travel such commuting was seldom possible and dedicated mining camps were often established to house the workers, not always with their families. Such communities were natural breeding grounds for the social ills of alcohol abuse and prostitution. They also insulated workers from outside influences and fostered their solidarity. That was enhanced by the arduous and dangerous nature of mining, particularly when underground. Even minor grievances, real or imagined, could be blown up out of proportion. The conditions were ideal for periodic labor unrest and trade union militancy. Moreover, miners in rural areas could live cheaply, especially in the summer months when there were alternative agricultural, hunting, or fishing opportunities. That remains true in some regions, such as parts of Canada.

In practice union membership and militancy have not been significantly greater in most of the mining industry than in other sectors of economic activity. According to the Bureau of Labor Statistics, in the United States, for example, the 8 percent of workers in the mining industry that belong to a union compare with 7.8 percent for the private sector as a whole, 13 percent in manufacturing,

and 36.5 percent in government. When strikes did occur, however, they were often longer and more acrimonious than elsewhere. The cyclical nature of most mineral markets contributed in that regard, as it still does. Workers naturally seek to increase their earnings when markets are buoyant, as in 2005 and 2006, and are more prepared to strike than when markets are depressed. At such periods employers aim to reduce their labor costs. Today that will be achieved mainly through agreed redundancies. Historically, however, wages were cut, with or without prior consultation with employees. Some of the most bitter and most prolonged strikes resulted from such actions, for example in the U.S. and U.K. coal industries during the late 1920s and 1930s. In North America a tradition of labor contracts covering three- to five-year periods even today may prompt strikes at their renewal, in the copper and nickel industries for example. In neither sector has there been any to compare in recent years with those of the 1960s. Elsewhere, as in parts of Latin America, strikes may be used as a political weapon to achieve broad social and community goals that are more properly within the purview of governments than of the companies affected.

Mechanization and modern capital-intensive mining methods, often in open-pit mines, have greatly reduced the mining industry's historic need to attract a large pool of unskilled or semi-skilled workers. That has in turn altered the nature of the relationship between mining companies and their employees in many sectors of the industry. In South Africa the progressive abolition of apartheid from 1990 greatly enhanced this global process. Previously racial discrimination was legally enforced in the mines. Migrant workers, both from neighboring countries and from within South Africa, were subject to repressive labor laws. They were unable to live with their families but were housed in single men's hostels with their attendant social problems. Wages for unskilled workers were held very close to the poverty line. Over the past decade changing economic conditions have led to the closure of many mines and a substantial reduction in the numbers employed. The living standards and opportunities of the remaining workers have greatly improved. Legislation on black empowerment is also fast changing patterns of ownership.

Mining is a relatively small contributor to global output as well as employment. The world's minerals production was worth some $375 billion ex mine in 2004, excluding bulk construction materials, but including coal. This equalled around 0.7 percent of global gross domestic product (GDP). U.S. minerals output was $40 billion or 0.3 percent of U.S. GDP, with coal making up half the total. Mining is a much more important source of income in a few countries and of exports in many more. It provides over 8 percent of Chile's GDP, 5.7 percent of Australia's, and 1.7 percent of Canada's. In some small countries it is the major economic activity. In Namibia, for example it makes up 15 percent of GDP, and in Botswana 35 percent. Shares of total output understate the mining industry's true importance, as it provides the essential raw materials for most forms of economic activity. Mineral-based products include metals, ceramics, construction goods, and many chemicals and plastics. The total output of the mineral industries is growing, although many of its prices have been on a declining trend. Demand moves cyclically with economic activity. Prices, and to a lesser extent output, are consequently volatile. Individual mines are depleting even as total output grows. Different products have experienced different growth rates.

The industry's corporate structure has evolved with global political and economic change. There is a wide range of different types of organization involved in the industry. Multinational mining companies are less important than is suggested by the attention they receive. The concentration of ownership varies markedly from product to product. Foreign-owned mining companies were effectively unable to operate in most developing and centrally planned economies during much of the period since World War II. During the 1990s most countries liberalized their mining codes, privatized state-owned mineral projects, and became receptive to foreign investment. Some countries, particularly in Latin America, attracted a wave of foreign investment in export-based mineral projects. Political risk nonetheless remains high in many mineral-rich areas, limiting foreign involvement to high unit value products like gold and gemstones. In many countries there remains strong opposition to foreign exploitation of natural resources and this tends to emerge most strongly at the local level. Mining companies can then become a focus for popular discontent with national governments.

Mining necessarily has an impact on the local environment, and some mineral products, like asbestos and lead, create hazards to human health. Although the standards of modern large-scale mining are infinitely higher than those of earlier times, the scars and environmental blight of historic mining and a few well-publicized lapses and accidents influence public perceptions. Whereas mining was once universally treated as having a preeminent claim on land use, that is no longer the case. Tracts of land have been debarred to mining in many countries, and increasingly onerous environmental requirements have been imposed. Larger international companies tend to follow best practice, but the costs of meeting higher standards have risen. Where capital-intensive large-scale projects are developed in rural areas they can upset the social fabric, especially of indigenous peoples. Mines are no different in that regard from other modern industries, except that their location is dictated by the availability of

ore. Preserving good community relations is a major challenge for all mining companies.

Coal output of roughly 5 billion tonnes accounts for $105 billion of global turnover, with production for domestic sale in China, India, the United States and Russia accounting for the greater part. U.S. output was almost 1 billion tonnes, with a value approaching $20 billion. Some mines serve both domestic and export markets, but world trade is dominated by Australia, Indonesia, South Africa, Canada, and Colombia. Production for export from large-scale, mainly open-cast, modern mines makes up less than 15 percent of total coal output. Thermal coal for power stations comprises about 60 percent of world trade. The main export markets for coal are in Europe and Pacific Asia whose domestic output has become increasingly uncompetitive, and is often only sustained through subsidies and protection.

The value of global turnover of metal mining varies with prices. The bulk ferrous metals, led by iron ore, made up one eighth of 2004's sales. Domestic production in China and the United States contrasts with large-scale export-oriented output in countries like Australia and Brazil. The major nonferrous ores, of which copper is the most important, account for 15 percent of turnover. As the metal content of many ores is often low, metal mines are responsible for a much greater share of the world's ore and waste extracted than of turnover. Mines shipping concentrates for processing in industrial centers coexist with mines serving domestic smelters and refineries that produce metal for export or domestic use. Large international companies operate alongside state-owned companies like Chile's Codelco, and smaller domestic firms. Other metallic products, including uranium, make up 10 percent of turnover. Often they are produced as by-products of the major metals, being extracted at the smelting stage. Precious metals (gold, silver, and platinum group products) contribute one-ninth of turnover, and gem diamonds a further one-tenth. Platinum output is highly concentrated in Russia and South Africa but output of gold and silver is widely distributed. Large-scale modern mines, controlled by international companies, coexist with small-scale operations and artisanal workings. The bulk of diamonds is extracted by major companies in Australia, Botswana, Canada, Russia and South Africa, but small-scale workings persist in many developing countries. The health and safety and environmental conditions of the small-scale workings for gold and gems are often very poor. The remaining one-eighth of turnover comes from fertilizer and industrial minerals. Many are mined for domestic markets by local companies, or by companies from downstream sectors like chemicals or building products. In some instances, where only a few deposits are known globally, production tends to be dominated by large international companies.

SEE ALSO *Bauxite Industry; Copper Industry; Diamond Industry; Gold Industry; Industry; Natural Resources, Nonrenewable; Petroleum Industry; Silver Industry; Steel Industry*

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Phillip Crowson

MINORITIES

The term *minority* and how it is used and defined has changed over time. Typically, social scientists use the term to define a group's social, political, and economic power in a society. Historically, in society, the term has also been used to focus on physical traits such as phenotype in African Americans and other people of color (Parrillo 2006).

According to Joe Feagin and Clairece Booher Feagin, Louis Wirth defined minorities as "a group of people who, because of their physical or cultural characteristics, are singled out from others in the society in which they live for differential and unequal treatment and who therefore regard themselves as objects of collective discrimination" (Feagin and Feagin 2003, pp. 10–11). Vincent N. Parrillo explains that not everyone agrees with Wirth's definition:

> Richard Schermerhorn, for example, notes that this "victimlogical" approach does not adequately explain the similarities and differences among groups or analyze relationships between majority and minority groups. A third attempt to define minority groups rests on examining relationships between groups in terms of each group's position in the social hierarchy. This approach stresses a group's social power, which may vary from one country to another, as, for example, does that of the Jews in Russia and in Israel. The emphasis on

> stratification instead of population size explains situations in which a relatively small group subjugates a larger number of people (e.g., the European colonization of African and Asian populations). Schermerhorn adopts a variation on this viewpoint. He also viewed social power as an important variable in determining a group's position in the hierarchy, but he believes that other factors are equally important. Size (a minority group must be less than half the population), ethnicity (as defined by Wirth's physical and cultural traits), and group consciousness also help to define a minority group. (Parrillo 2006, pp. 15–16)

Social scientists hold a variety of views about what it means to be a minority. The anthropologists Charles Wagley and Marvin Harris listed five defining characteristics shared by minority groups throughout the world (Parillo 2006, p. 16):

- minority groups receive "unequal treatment";
- they are "easily identifiable because of physical or cultural characteristics," as in, for example, the phenotype of African Americans and other minorities of color;
- they tend to "share a sense of peoplehood—that each of them shares something in common with other members";
- "membership in the minority group has an ascribed status; a person who is considered a member of a particular minority group is born into it"; and
- they have a tendency to marry within their own minority group, either by choice or by necessity, because of the social isolation that they experience in their lives.

The term *minority* often is used to describe people who have "less power, are oppressed, or are a subordinate segment within a political unit" (Myers 2007, p. 42). A person can be classified as a minority based on his or her religious affiliation, age, disabilities, sexual orientation, or gender. And a person can belong to both a minority group and the majority group. For example, "An American Roman Catholic who is white belongs to a prominent religious minority group but also is a member of the racially dominant group" (Parrillo 2006, p. 17). Women are considered a minority group based on their gender and because they have been oppressed and controlled (Myers 2007), and women of color are often considered a minority within a minority. One can be born a member of a majority group and later become a member of a minority group (e.g., the elderly). People can be born with disabilities such as polio, blindness, and missing limbs, or disabilities can occur over the course of a person's life (Parrillo 2006).

Contemporary scholars hold that it is not accurate to classify a group as a minority based on the numerical representation of that group. "Scholars today consider it more accurate to use the term dominant group for the majority group and the term subordinate group for a minority group. This usage is appropriate because a majority group in this sense can be numerically a minority.… [I]f current trends continue, the white majority, in population terms, is likely to become a statistical minority in the United States by the middle of the twenty-first century" (Feagin and Feagin 2003, p. 11). But whites will still constitute the majority based on their economic and political power.

CIVIL RIGHTS

The struggle for equal rights has been an ongoing challenge for minority groups, which historically have been discriminated against in the United States. They have also been subject to stereotypes that are psychologically harmful and deny a people their humanity. Along with racial discrimination, the belief in stereotypes can affect the physical, economic, and life chances of minority groups (Feagin and Feagin 2003). "Negative stereotypes and images of African Americans and other Americans of color are constantly used, refurbished, played with, amended, and passed along in millions of white kinship and friendship networks, from one community to the next and one generation to the next" (Feagin 2006, p. 44). These "racial stereotypes and prejudices are useful for whites in explaining why certain people of color do not have as much or do as well as whites across multiple areas of the society" (Feagin and Vera 2001, p. 8). The stereotypes applied to different minority groups are remarkably similar. African Americans are depicted as lazy, violent, criminal, untrustworthy, and unintelligent. Latinos have been viewed as inferior, criminal, and uninterested in education or their families (Suarez-Orozco and Paez 2002). In contrast, Asian Americans have been stereotyped as the *model minority*, a term created by whites as an example of what other minorities groups should become—hardworking, intelligent, and docile (Feagin and Feagin 2003). Some might view this stereotype as positive, but others contend that "the model minority myth hurts Asian Americans" (Wu 2002, p. 67). It is a stereotype that pits other minorities and Asian Americans against each other, implying to African Americans, Latinos, and Native Americans that they too can have the American dream if they model themselves after Asian Americans. Native Americans have struggled for years with the stereotypes and racist images that portray them as savages; currently they are fighting the use of racist Native American images that are used for

sports mascots. Since the attacks of September 11th, 2001, Arab Americans have been battling stereotypes that depict them as terrorists, treacherous, and cruel (Feagin and Feagin 2003).

Minority groups, specifically African Americans, have been instrumental in fighting for the equal rights of all citizens in the United States. In the 1960s the Voting Rights Act and the civil rights movement led the way for minority groups of all ethnicities to receive equal rights in the United States. The success of the movement prompted other movements, such as the women's rights movement and, more recently, a movement to secure rights for undocumented immigrants in the United States.

MINORITIES IN POLITICS

The political voice of minority groups has changed over time. In the U.S. Senate in 2007 there was one African American, Barack Obama from Illinois; two Asian Americans, Daniel K. Inouye and Daniel K. Akaka, both from Hawaii; three Hispanic Americans, Ken L. Salazar from Colorado, Melquiades R. Martinez from Florida, and Robert Menendez from New Jersey; and no Native Americans (though Ben Nighthorse Campbell from Colorado served in the Senate from 1993 to 2005). In 2007 sixteen Senate seats were held by women.

In the United States, African Americans, Native Americans, Asian Americans, and Latino Americans are all considered minorities in society, based on their economic and political standing. Presently, these minority groups are still underrepresented in politics. However, in South Africa, black South Africans are the statistical majority but white South Africans, the statistical minority, control a majority of the land and much of the economic power. Some scholars would say that black South Africans are the minority group because they are the subordinate group. Furthermore, white South Africans are the majority group in this sense, even though they are numerically the minority, because they are the dominant group and control all of the economic power.

WHITES THE NEW MINORITY?

According to Marcelo Suarez-Orozco and Mariela Paez, "in a widely cited report, scientists at the U.S. Bureau of the Census concluded that by the year 2050, some 50 percent of the U.S. population would be members of ethnic minorities" (2002, p. 1). According to Dale Maharidge, "By 2050 Hispanics will make up about 21 percent of the American population, blacks 15 percent, and Asians and Pacific Islanders 10 percent" (Maharidge 1996, p. 13). According to a May 2007 U.S. Census Bureau press release, the minority population in the United States surpassed the 100 million mark in 2006. The report noted, "Hispanic remained the largest minority group, with 44.3 million on July 1, 2006—14.8 percent of the total population. [African-American] was the second-largest minority group, totaling 40.2 million. They were followed by Asian (14.9 million), American Indian and Alaska Native (4.5 million), and Native Hawaiian and other Pacific Islander (1 million).… [N]on-Hispanic whites who indicated no other race totaled 198.7 million in 2006." The U.S. census report also indicated that the District of Columbia, California, New Mexico, Hawaii, and Texas are "majority-minority." However, unless minorities gain additional political and economic power, they will remain minorities.

The report stated that the minority population is growing, but will this pattern continue as younger generations of Hispanic groups self-identify as *white* and racial boundaries shift? According to Jonathan W. Warren and France Winddance Twine, "In the 1990 census, more than half of the Hispanic population racially self-identified as white … and in 1992 that about 95 percent of Latinos self-identified as white" (Warren and Twine 1997, p. 213). According to Clara E. Rodriguez, "what Latinos say they are in standard U.S. racial terms is not necessarily what they are perceived to be by others" (Rodriguez 2000, p. 136). Ethnic minorities self-identify as white based on their age, education, socioeconomic status, citizenship, length of time in the U.S., and language (Rodriguez 2000). As immigrants self-identify as white, the white population will grow and they will most likely remain the dominant majority numerically, economically, and politically.

SEE ALSO *Affirmative Action; Ethnicity; Ethnocentrism; Intergroup Relations; Jingoism; Majorities; Model Minority; Nationalism and Nationality; Other, The; Racism; Subaltern; Whiteness*

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Ruth Thompson-Miller

MINORITY ENTERPRISE SMALL BUSINESS INVESTMENT CORPORATION (MESBIC)

SEE *Capitalism, Black.*

MINSKY, HYMAN
1919–1996

A dissenter from mainstream macroeconomics, Hyman ("Hy") Minsky became intellectually prepared from the University of Chicago's undergraduate teachings of Oscar Lange, Paul Douglas, Jacob Viner, Frank Knight, and Henry Simmons rather than the Harvard Keynesians. Minsky was born in Chicago in 1919 and attended public schools in Lima, Ohio, Chicago, and New York City before entering the University of Chicago in 1937 to study mathematics. He was drawn to economics, his BS degree in mathematics notwithstanding, after attending the integrated social science sequence course and the seminars taught by Lange, Knight, and Simmons at Chicago. Strongly influenced by his working-class family with its active involvement in the American socialist movement and his close relationship with Gerhard Meyer at Chicago, he decided to pursue graduate studies in economics. His graduate work at Harvard, where he was awarded the MPA (1947) and PhD (1954), was interrupted by a number of years in the U.S. Army with assignments in New York City and overseas during the mid-1940s. The interrelationships between market structure, financing investment, survival of firms, aggregate demand, and business cycles, advanced in his PhD dissertation in 1954 (published in 2005), were further sharpened and became the focus of his lifelong research agenda (Papadimitriou 1992).

After an initial appointment to the faculty at Brown University (1949–1955), Minsky moved to the University of California at Berkeley (1956–1965) and then to Washington University in St. Louis, where he remained until his retirement in 1990. He was then appointed Distinguished Scholar at the Levy Economics Institute of Bard College, a post he held until his death in 1996.

Minsky's earliest writings centered on the endogeneity of financial innovation that was dependent on profit-seeking behavior, the institutional prerequisites of ceilings and floors to the multiplier-accelerator model, and the importance of the initial conditions of financial positions that would determine the future of the economy—whether stable or unstable—beginning with robust balance sheets that over time would become fragile, resulting in economic conditions that might make a debt deflation such as that of the 1930s happen again (Minsky 1957a; 1957b; 1959). Addressing endogenous money, financial innovation that "stretched liquidity," behavioral changes induced by government policy, lender-of-last-resort activity, and market-driven, instability-enhancing behavior over the course of the business cycle, Minsky broke away from conventional macroeconomic canons (Papadimitriou and Wray 1998). These were all issues that occupied his research program during the 1960s. These issues helped him develop his financial instability hypothesis and focus on the examination of the workings of financial markets and institutions.

Minsky's main contribution in *John Maynard Keynes* (1975) is the "financial theory of investment" arising from the realization that in an advanced capitalist economy, there are two price levels determined from different relations and variables—one for "current output," the second for "financial and real assets." The price level of current output—dependent mainly on labor costs and a markup—ensures that production and distribution take place and that costs are recovered. The price level of "capital assets" is based on demand price—integrating uncertainty and prospective returns from ownership, and supply price—relating to production and finance costs of capital goods. In Minsky's words, expected returns "present views about the future, and therefore are prone to change as views about the future change" (Minsky 1975, p. 95). Thus, for investment to take place the demand price must exceed the supply price. Using Keynes's concepts of "borrower's risk" and "lender's risk," Minsky built into his model of "Financial Keynesianism" the concept that the demand price is downwardly adjusted to reflect the risk to the borrower of exceeding internal funds (borrower's risk) while the supply price is upwardly adjusted to

account for the increased risk to the lender (lender's risk) as the borrower assumes greater debt. When expectations are high, the demand price is also high in relation to the supply price, engendering investment and generating growth. Undertaking investment, in turn, is the main determinant of aggregate profit flows that at the end validate the optimistic expectations. Euphoria then sets in, decreasing lenders' and borrowers' risks, bringing about the lowering of margins of safety until expectations are revised or fall short. When aggregate investment falls, so do profit flows, thus invalidating past investment decisions. "A fundamental characteristic of our economy," Minsky wrote in 1975, "is that the financial system swings between robustness and fragility and these swings are an integral part of the process that generates business cycles."

Minsky's *Stabilizing an Unstable Economy* (1986) suggested a framework within which policy interventions could ameliorate this inherent instability. His agenda for policy reform addressed four areas—"big government (size, spending, and taxing), an employment strategy (employment of last resort), financial reform, and market power"(Minsky 1986, p. 295).

Hyman Minsky was an independent thinker, a real-world economist, and a persuasive policy advocate.

SEE ALSO *Bubbles; Business Cycles, Empirical Literature; Business Cycles, Political; Business Cycles, Real; Business Cycles, Theories; Casino Capitalism; Economic Crises; Economics, Post Keynesian; Financial Instability Hypothesis; Financial Markets; Keynes, John Maynard; Loan Pushing; Ponzi Scheme*

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Dimitri B. Papadimitriou

MINSTRELSY

The twelfth-century term *minstrelsy* designated a form of local entertainment originally performed by professionals paid by European lords. Later, these professionals became traveling entertainers, and the male roving minstrel connoted either a local or an itinerant performer. Minstrels often were hounded by church officials and town authorities during minstrelsy's heyday in Europe during the eleventh to fifteenth centuries. Walking from town to town with a harp or viol on their backs, the minstrels' brightly colored clothes, dance slippers, nonbearded faces, and close-shorn hair are said to be vestiges of the Teutonic bard and the mime of the Roman theater. An integral part of many gatherings, including those occurring in noblemen's halls, marketplaces, and along pilgrim pathways, minstrels sang stories about the Christian saints, the scriptures, and heroes. They accompanied themselves instrumentally and also danced and performed acrobatic stunts to further the entertainment value.

Some scholars believe medieval minstrels transmuted Roman theatrical practice into liturgical drama. This transfer of form and aesthetic occurred primarily in France. High-born minstrels (*trouvères* and *troubadours*) were said to practice a "gay science," and their poetry was considered the product of nobility. With this heightened social status, minstrels in Paris incorporated themselves, building their own church and hospital. However, as soon as the minstrels were economically successful and accepted by society, they came to be imitated by a lower class of performers. The low-culture minstrels in the medieval period imitated the high-culture minstrels through exaggeration. In the lower-culture version of European minstrelsy, the traditional bright costumes became garish, clever lyrics became bawdy, and the music was less lyrical.

Minstrelsy experienced a renaissance in the United States when, in a northern city around 1828, the white

actor Thomas Dartmouth Rice (1808–1860) imitated an African American slave whom he had seen dancing to a song known as "Jumpin' Jim Crow." Rice either bought or stole the black man's clothes. He performed the song and dance as an entr'acte, and legend has it that Rice became an overnight sensation. Rice performed the Jim Crow character for the rest of his career. His costume—a tattered coat and too-short pants, oversized shoes, and a felt hat, along with blackface makeup—became the look of the early American minstrel until 1840. At that time, the Virginia Minstrels formed in New York City. Made up of Dan Emmett, Billy Whitlock, Dick Pelham, and Frank Brower, the Virginia Minstrels' costumes and songs, accompanied by fiddle, tambourine, bones, and banjo, were more refined than those of Rice. The Virginia Minstrels began composing songs still familiar to this day, including "Old Dan Tucker" and "Jimmy Crack Corn." Blackface minstrelsy was extremely popular in the Bowery and the Five Points districts of New York City, particularly among young, recently urbanized men, and minstrel troupes began performing primarily in northern cities, eventually traveling to the West to mining camps and then into Australia and New Zealand. American blackface minstrels also traveled east to England, Scotland, Ireland, and even to parts of Africa.

Blackface minstrelsy in America became embroiled in local and national politics during the 1850s after performers found fault with the women's suffrage and antislavery movements. It was at this time that the well-known stereotypes of African Americans were cultivated and refined: the loud-mouthed plantation mammy, the overdressed male dandy, the sexually promiscuous light-skinned woman, and the compliant Uncle Tom. In the years after the Civil War (1861–1865), African Americans flooded the minstrel stage, creating a rivalry between white men who claimed authenticity as minstrel performers and black men who stated they were the more "legitimately" black and therefore better performers than the imitative blacks. Women, both black and white, also began performing in the 1870s, and they too had rivals from the ranks of female impersonators who had performed as part of the minstrel shows since the 1840s. By 1890 American minstrelsy became a primarily amateur activity on the popular stage, though vestiges of minstrelsy can be easily identified in vaudeville, musical revues, and American musical theater.

Minstrelsy did continue professionally in the United States on radio and in early television. The radio show *Amos 'n' Andy*, performed by two white men, Freeman Gosden (1899–1982) and Charles Correll (1890–1972), premiered in 1928. Gosden and Correll created two African American characters that based much of their situational humor on sketches born in the minstrel shows. In 1951 CBS introduced a television version of *Amos 'n' Andy* featuring African American actors—the first of its kind on American television. Though popular with white and black audiences, *Amos 'n' Andy*'s dependency on minstrelsy stereotypes and the NAACP's campaign against their perpetuation on television led to the canceling of the show in 1953, though it ran in reruns until 1966.

SEE ALSO *Blackface; Entertainment Industry; Jim Crow; Race; Racism*

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Annemarie Bean

MINTZ, SIDNEY W.
1922–

Sidney Mintz earned his bachelor's degree in psychology from Brooklyn College in 1943 and his PhD in anthropology from Columbia University in 1951. Starting in 1948 in Puerto Rico on a now-famous collaborative research project directed by Julian Steward, Mintz's historical ethnographic research in the Caribbean laid the foundation for significant contributions in anthropology and history. His wide-ranging oeuvre addresses and helped to stimulate research and debate in various topical areas, including plantation societies, slavery and rural proletarianization, race and colonialism, peasantries and internal market systems, life history, and the anthropology of food and eating. Writing against the habitual tendency to view social systems as relatively self-contained and internally coherent, Mintz's anthropology—influenced by the German political philosopher Karl Marx and global in its implications—underscores the dialectical interconnections between seemingly distinct regions and peoples in the modern world; between the rich and the impoverished. With ethnographic data from the Caribbean, Mintz has examined sociocultural dimensions of European colonial capitalist expansion and its consequences for both regions.

Mintz's study of sugar plantation agriculture in Puerto Rico, and the changes brought about by the consolidation of family-owned estates into capital-intensive, corporate-owned latifundia, contributed to shifting anthropology away from its near-exclusive focus on so-

called traditional societies and, correspondingly, helped establish the compelling need for the discipline to attend to the impact of European and North American power. One product of this research, *Worker in the Cane* (1960), is also celebrated as an early example showing the value of the life history in ethnographic writing.

Insistently comparative and historical in his approach, Mintz followed upon his Puerto Rico research with fieldwork in Jamaica and Haiti in the 1950s and early 1960s. His studies of rural small farmers and market women who traded these farmers' produce in local marketplaces led to various seminal contributions. Among them was the notion of the "proto-peasantry," a term Mintz coined to characterize the informal agricultural and marketing economy that grew up in the very teeth of slavery, laying the foundation for vibrant rural communities that developed after slavery ended in many Caribbean societies. A few of Mintz's choicest essays based on research in Puerto Rico, Jamaica, and Haiti are collected in his *Caribbean Transformations* (1974).

A hallmark of Mintz's scholarship, then, is its relational quality, that ability to show how seemingly distinct, sometimes distant, social worlds shape one another. For example, in *The Birth of African American Culture* (coauthored with Richard Price, 1992), the authors eschew conventional models prevailing at the time that posit relatively monolithic "African" and "European" cultures coming into contact, and the primacy of these prior cultural traditions in shaping their descendants' adaptations to the New World. Instead, Mintz and Price proposed a more dynamic model that emphasized the formative role social conditions in the Americas played in shaping complex processes of amalgamation and change Africans and Europeans underwent, with their vastly different access to power. Through their everyday, sometimes intimate interactions, blacks and whites *remade* each other. This and others of Mintz's generative contributions to the study of New World slavery relied on his grasp of the contradictions in the institution of plantation slavery itself, and his ethnographic appreciation for the determined inventiveness with which slaves exploited those systemic paradoxes to assert their dignity and humanity.

In his benchmark study, *Sweetness and Power* (1985), Mintz provided an expanded view of the complex, centuries-long, fundamentally transforming processes of capitalist globalization. There, the view from Caribbean cane fields that shaped Mintz's earlier work is joined with a corresponding examination of European workers, consumers, and owners who were mollified by and profited from the labor of Caribbean plantation workers. As one follows the profound changes that the colonial sugar economy brought about in diet, consumption habits, and social/cultural meaning in England and the Western world, customary antimonies between production and consumption, plantation slaves in the Americas and the European working class, the "West" and its Caribbean "Others" are called into question and undermined.

SEE ALSO *Anthropology, U.S.; Caribbean, The*

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Charles V. Carnegie

MIRABEAU, MARQUIS DE

SEE *Quesnay, Francois.*

MIRACLES

The idea of miracles was not invented by Christians; the terminology is endemic to theism and has always formed part of the language of religious discourse, in other religions and in paganism, meaning the wonder caused in man by events beyond his understanding. Since the Gospels contain accounts of miracles, an understanding of the miraculous is central to Christianity, but because of its use in other theistic contexts, it has always been a point of discussion. In the early twenty-first century the word "miracle" is given a limited meaning by dictionaries which generally describe a "miracle" as: "an event exceeding the known powers of nature owing to special intervention by a deity or of some supernatural agency." This is to stress the etymology of the English word "miracle," which derives its meaning from the Latin *mirare*, meaning "to wonder." Exclusive stress is thereby laid on that which causes wonder and amazement. Popular use of the word unfortunately

suggests that the more that is known about the laws of nature the less room there is for intervention by God. Miracle is then seen as opposed to nature, in terms of inexplicable wonder, but that is not the basic understanding of miracle within the Christian church. In the ancient world, the statement "the world is full of miracles" would not have meant "the constant infraction of the course of this world" principally because the notion of the law of nature was not used; it would have meant "everything created is a wonder issuing from the hand of God."

The ideas underlying the English word "miracle" are complex. In the Bible it translates more than one synonym in Hebrew, Greek, and Latin. In the New Testament, certain words and actions of Christ are called "miracles," and the same word is used at times in English translations of the Old Testament. But in Hebrew the words translated by "miracle" are *mopet* (a prodigy), *ot* (a sign), and *nipla* (a marvel), and in Greek these events are called by other names, such as *dunamis* (an act of power) and, most often of all, *semeon* (a sign). The Latin Bible did not use *miraculum* for any of these; they were rendered mainly as *signum*, though *virtus*, *mirabilia*, *prodigia*, or *portentum* were also used. The word *miraculum* entered Christian vocabulary from another source; its root, *miror*, "I marvel," was widely used in classical literature in describing any event that gave rise to this reaction, but the main word used both in Scripture and in the writings of the early church fathers was *signa*, "a sign," stressing theological meaning rather than psychological reaction. For the early church there is only one miracle, that of creation, with its corollary of re-creation by the resurrection of Christ. God, they held, created the world out of nothing in six days, and within that initial creation he planted all the possibilities for the future. All creation was, therefore, both "natural" and "miraculous." Everyday events—the birth of children, the growth of plants, rainfall—were all "daily miracles," signs of the mysterious creative power of God at work in the universe. But it was always possible that people would become so accustomed to these daily miracles that they would no longer be moved to awe by them and would need to be provoked to reverence by unusual manifestations of God's power. Such events were also within the original creation, hidden within the nature and appearance of things, which at times caused "miracles" that seemed to be contrary to nature but were in fact inherent in it. The most usual channel for these "hidden causes" to be made manifest was the prayers of the saints, living and dead, through whom the re-creating work of Christ was revealed. Events happened in nature or miraculously, but both were equally the work of God.

To pose only the question "How does this happen?" to any event need not exclude the older question "Why does this happen, what does it mean?" The "why" and the "how" questions about miracles can be equally useful. Miracles and nature were for centuries put on an equal footing as signs from God to man. However, in the twelfth century a distinction was found possible in the relationship between miracles and events of other kinds. While miracles were an accepted way in which Christians were in touch with the supernatural, other modes of supernatural contact to some extent were distinguished from miracles. Most of all, a distinction was made between miracle and magic. The "arts of magic" were consistently forbidden in the Christian church as being a manipulation and distortion of creation by mankind. Edicts of church councils and disciplinary directions in penitentials alike forbade magical practices to Christians throughout the Middle Ages. The church's teachings on magic did not change, nor did the disregard for those teachings at a popular level decrease. In fact, in the twelfth century the revival of learning, and the interest in how things happened rather than why, led to an increase in the amount of magic practiced, and discussion of the question of the mechanics of events began to predominate over the question of their significance.

Modern-day miracles are often connected with the saints, those who are thought to have most clearly embodied the love and power of God in their lives. Miracles are recognized as signs that God is able to work uniquely through those nearest to Him in charity, especially in healing sickness; such signs of this work of God will be seen both in the lives of saints and also after their deaths. This view is connected with the theology of Christ as the Second Adam, re-creating all the world in a redeemed form so that a new relationship is set up between redeemed humanity and God's mercy. Such a perspective is often seen in the stories about the new relationship of love and respect between the saints and the four elements of air, earth, fire, and water; the life of plants, animals and birds, as well as humans, were then seen to be miracles in both senses of the word. Miracles can then be understood as both natural and significant, as a normal part of redeemed creation.

SEE ALSO *Roman Catholic Church*

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Benedicta Ward

MIRANDA RIGHTS

SEE *Interrogation.*

MIRROR REPRESENTATION

SEE *Constituency.*

MISANTHROPY

Misanthropy refers to the tendency in people to focus on others' negative rather than positive characteristics and qualities. In social psychology, the tendency is reflected in people's inclinations to regard the positive behaviors of others as being caused by the circumstances a person is in (e.g., abiding by prosocial norms or as a result of ulterior motives), but to see others' negative behaviors as being caused by an individual's own personality. Thus, when one is misanthropic, one credits others for their bad behavior but explains away and does not credit others for their good behavior. This also has implications for how much information one is willing to take in before judging others (more for supposed positive qualities).

The word *misanthropy* has also been used to refer to a belief that people in general are not to be trusted because they are driven by selfish motives with little concern for the group or the greater society. The misanthropic theme can be seen in related constructs, such as anomie and alienation, in the sociology literature, and it is also reflected in social science research that deals with the study of negative attitudes, such as prejudice toward people from different cultural groups. However, *misanthropy* is generally used to refer to a dislike of all humans, not just those who are members of groups to which one does not belong.

The concept of misanthropy is also reflected in many classics in political and social philosophy—for example, Machiavelli (1469–1527) and Thomas Hobbes (1588–1679)—and in literature. A widely recognized example is the character Alceste from the comedic play *Le Misanthrope* (1666) by the French writer Molière (1622–1673). In the play, which takes place in seventeenth-century Paris, Alceste is disgusted by the corrupt and socially manipulative nature of human life. The play provides many details as to how Alceste has arrived at such attitudes and beliefs—namely, by being embroiled in lawsuits that are not judged in unbiased fashion and by his romantic interest, Célimène, a young widow who entices various suitors in addition to Alceste.

In Molière's play, Alceste's misanthropic attitude is the result of his negative life circumstances. In addition to such precipitating factors, a misanthropic attitude is usually thought to result from a person's inadequacies or insecurities or his or her negative mood or outlook. For example, research has shown that people who are temporarily led to feel good about themselves before learning about a person they do not know, remember more positive and less negative things about the person. However, control participants nevertheless display a misanthropic outlook in their perceptions of others.

Thus, based on recent scientific research in social cognition, it can be said that misanthropes are not necessarily unusual or rare. In a sense, most people have the capacity for negative and ungenerous perceptions about others. What may distinguish this general sense of misanthropy from that ascribed to specific, individual misanthropes is that misanthropes become known for their misanthropy. Most people, though, may not want to be known for having such thoughts or feelings about their fellow human beings. The question then is, why should most people have a tendency to be misanthropic?

Social cognition research has provided an answer to this perplexing question. In modern times, most societies and the smaller social systems within them are relatively stable, in that most of the behavior people enact tends to be neutral or of a *prosocial* nature. Given that there is a norm for behavior that supports the group or society, most people when trying to make sense of others around them cannot assume that others behave prosocially because of the type of people they are. Other people might be behaving as they are because they are conforming to the established prosocial norm. Consequently, this leaves people, as social perceivers, with a sense of social uncertainty about others' motives, thus laying the foundation for social vigilance and misanthropy. Thus, misanthropy may be taken to reflect a basic mental framework people use to make sense of others, with an eye to reducing interpersonal costs (i.e., assuming others are good and they turn out not to be). However, it is not impossible to change such views toward any one individual. People's suspicions of another's motives can be assuaged through more extended and positive social contact with that person. It might be that part of the basis for friendship rests in this process through which suspicions eventually give way to greater trust in others.

SEE ALSO *Misogyny*

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Oscar Ybarra

MISCEGENATION

Miscegenation is generally defined as an intimate sexual relationship between individuals of different races. In practice, however, it has mostly referred to relationships between whites and people of color. Because of its pejorative connotation, the word is not generally used today to refer to interracial relationships.

While the term *miscegenation* did not exist until the late nineteenth century, interracial sexual intimacy was a matter for concern soon after the first Europeans and Africans settled permanently in the Americas in the 1500s and 1600s. In North America, English colonists founded Jamestown, Virginia, in 1607. It was only seven years later that Pocahontas and John Rolfe celebrated their marriage, which was unusual and sensational but not legally questionable. The growing presence of African slaves, however, generated significant legal questions about status, family, and heredity. In 1662, Virginia's colonial assembly declared that a child's status as slave or free was based on the status of the mother, and in 1691 it passed the first law against sexual relations between free English or other white women and nonwhites (including both Native Americans and "negroes" or "mulattoes"). The 1691 statute also provided for the banishment of any white who contracted a marriage across the racial line. While Virginia was the first colony to act comprehensively to bar interracial marriage and control interracial sex, other colonies followed. Of the thirteen original colonies, nine had laws against interracial marriage in effect at the time of the Revolution. Racial categorization in the colonial era and early history of the United States increasingly moved toward a black-white dichotomy, and policymakers as well as the general white populace came to see individuals with significant African ancestry as black.

Chattel slavery was also prevalent in colonial Latin America, though Spanish and Portuguese colonies initially enslaved Native Americans. The use of Native Americans as slaves, however, was quickly overshadowed by the importation of Africans, particularly as the Native American population declined due to intentional extermination and widespread disease. In the mid-1500s, the Brazilian economy shifted away from reliance on forced Native American labor and toward black chattel slavery, and Portugal began to import slaves to Brazil in 1549. The Catholic Church opposed interracial marriage and procreation early in the colonial period, and European states echoed this condemnation in Brazil and elsewhere. Nonetheless, interracial sexual relations between Portuguese and Spanish men and African and Native American women, which was often coerced, took place extensively in the colonial period and produced a significant mixed-race demographic. During the 1700s and early 1800s, a complex racial hierarchy developed in Latin America, with mixed-race populations increasingly gaining specific recognition as distinct groups. The cultural permissiveness toward interracial sexual contact transitioned toward legal and institutional support during these years as well.

The term *miscegenation* was coined in 1863 in the United States in the context of the critical 1864 election. Editors of a New York-based Democratic newspaper secretly produced a pamphlet advocating the immediate legalization of interracial marriage as a natural and proper implication of emancipating the slaves. They created the word *miscegenation* to describe such relationships, combining the Latin words *miscere*, meaning "to mix," and *genus*, or "race." Though the Democrats certainly did not support the idea of interracial marriage, they planned to lure Republicans into openly agreeing with the ideas in the pamphlet. Thus, they sent copies of the pamphlet to prominent Republicans, hoping that some would endorse it and provide the Democrats with a campaign issue, but the Republicans ignored the pamphlet. While their gambit failed to link the Republican Party to a controversial endorsement of racial equality, it did ignite a national discussion among white elites about the dangers of interracial procreation. At the height of Reconstruction, a few individuals challenged emerging criminal prohibitions on interracial marriage, and they even secured a short-lived court victory in Alabama. Ultimately, however, the U.S. Supreme Court allowed the states to regulate freely against interracial relationships, and most southern and western states took up the invitation. While the southeastern states primarily focused on relationships between African Americans and whites, southwestern and western states also identified Mexicans, Malays, Hawaiians, Asians, and Native Americans as unsuitable marriage partners for whites. In the late nineteenth and early twentieth centuries, blackness increasingly became defined strictly in legal terms, and several southern states moved toward the position that any African ancestry rendered an individual black. Several states actively prosecuted men and women, both white and nonwhite, for crossing the racial boundary. Legal penalties ranged from defining interracial cohabitation as a more serious misdemeanor than intra-

racial cohabitation to Alabama's two-to-seven year terms in the state penitentiary for interracial marriage, adultery, or fornication.

With the exceptions of Brazil and Cuba, most Latin American nations eliminated slavery in the mid-nineteenth century; Brazil and Cuba emancipated their slaves in the 1880s. Brazil sought to change its national racial complexion by actively soliciting white immigrants and banning black immigration in 1890. In conjunction with this policy, the state endorsed a policy of "whitening" that actively encouraged individuals of mixed racial ancestry to intermarry with whites. Social, legal, and cultural incentives led to increasing proportions of the population choosing to identify themselves as mixed race or white. While informal and social modes of discrimination persisted, Brazil and other Latin American nations largely eschewed the legal-formalistic path of racial domination that the United States embraced, and race was largely understood more as a continuum than as a binary in formal terms. Even in the United States, however, the emerging legal binary masked a finer-grained racial hierarchy based upon the greater social and economic advancements available to individuals with lighter skin colors, even if these individuals were not able to "pass" for white.

The first steps to dismantling the modern formal prohibitions against interracial intimacy in the United States took place in the courts. California's high court invalidated the state's ban on interracial marriage in *Perez v. Sharp* in 1948, claiming that the main state interest that the ban served was the reinforcement of the illegitimate doctrine of white supremacy. A few western states removed their bans through legislative action in the 1950s, but the legal prohibitions in the South remained until the U.S. Supreme Court first struck down Florida's stricter punishments for interracial cohabitation in *McLaughlin v. Florida* in 1964. The Court finally invalidated Virginia's antimiscegenation law in *Loving v. Virginia* in 1967. Scattered litigation, however, was required in the late 1960s and 1970s to ensure that *Loving*'s rule was respected throughout the nation by justices of the peace and other governmental officials asked to provide marriage licenses to mixed-race couples.

Despite these rulings, a core of social opposition to interracial marriage persists in the United States. As recently as November 2000, 40 percent of Alabama's voters rejected a symbolic amendment to Alabama's constitution that removed the ban on interracial marriage, which had been legally unenforceable since the Supreme Court's ruling in *Loving*. Some evidence also suggests that even in the contemporary United States, many individuals with interracial backgrounds conceal or downplay their black ancestry, despite the emergence of a greater social and political consciousness among mixed-race people.

Recent studies of Brazil and Cuba have challenged the myth of racial democracy, a general impression that racial discrimination was never a core element in either nation's political development. In reality, racial hierarchies remained deeply embedded in Brazilian and Cuban economy and society throughout the twentieth century. While interracial relationships did not have to be legitimized as they did in the United States, mixed-race individuals remained in subordinated systems supported by governmental institutions that refused to acknowledge the social and economic meaning of color. In recent years, movements seeking racial solidarity and empowerment have begun the hard work of dismantling these hierarchies, with mixed-race individuals and groups playing important roles in the process.

SEE ALSO *Marriage, Interracial; Race Mixing; Race Relations; Racism*

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Julie Novkov

MISERY INDEX

The *Misery Index* is a simple objective measure of the economic condition obtained by summing the unemployment rate plus the annual rate of inflation.

Misery Index = Unemployment Rate + Annual Inflation Rate

This measure, initially known as the Economic Discomfort Index, was devised by Arthur Okun, who served as President Lyndon Johnson's chief economic adviser. As columnist Richard F. Janssen explained in

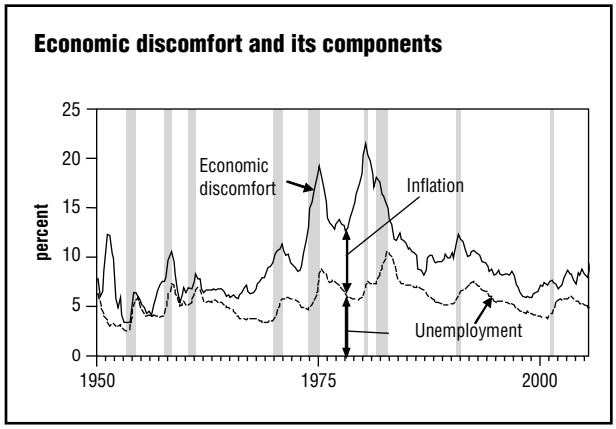

Figure 1

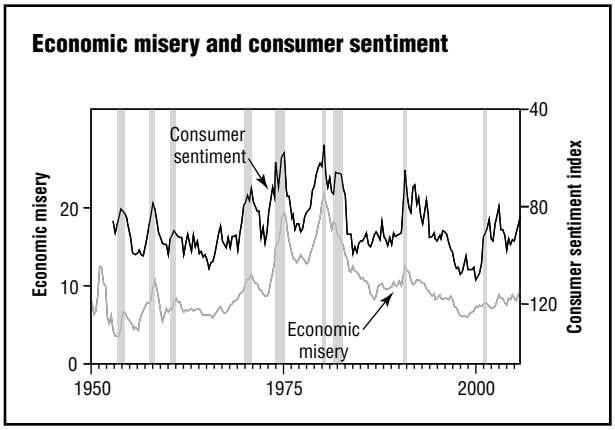

Figure 2

introducing the concept to readers of the *Wall Street Journal* in 1971:

> It is derived by simply lumping together the unemployment rate and the annual rate of change in consumer prices—apples and oranges, surely, but it is those two bitter fruits which feed much of our economic condition. The higher the index the greater the discomfort—we're less pained by inflation if the job market is jumping, and less sensitive to others' unemployment if a placid price level is widely enjoyed … (p. 1).

The dramatic way in which the index has fluctuated since the mid-twentieth century is revealed by Figure 1 (the vertical bands indicate recessions).

Politicians, in particular, have found the index useful. George McGovern invoked the Economic Discomfort Index in scorning opponent Richard Nixon's economic record during the 1972 presidential campaign. Jimmy Carter used it in disparaging Gerald Ford in 1976. Ronald Reagan, who renamed it the Economic Misery Index, employed it in castigating Carter in 1980. Walter Mondale invoked the index in deriding Reagan, and Bill Clinton used it in successfully unseating George H. W. Bush in 1992. Speech writers drop the term from their vocabulary when the index is low, as they did during the Clinton administration.

Although the Misery Index ignores the poverty rate, the degree of income inequality, and both the government and the balance of payments deficits, there is evidence that it captures much of the public's feelings about the level of economic wellbeing. As Figure 2 shows, it tracks fairly closely the path of the University of Michigan's Index of Consumer Sentiment, which is based on the answers provided by telephone respondents to several questions, including:

> "Would you say that you and your family are better off or worse off financially than you were a year ago?"
>
> "Now looking ahead–do you think that a year from now you will be better off financially, or worse off, or just about the same as now?" (University of Michigan Surveys of Consumers Questionnaire, p. 2)

Note from the graph's right-hand scale that the Index of Consumer Sentiment is plotted inversely because a high level of the index indicates that the public is thinking positively about the economy. A casual inspection of the graph suggests a rather remarkable link between the two measures, although the survey evidence suggests that in the early 1980s and 1990s the Consumer Sentiment declined more dramatically than the Misery Index.

Okun relied on his intuition in deciding that unemployment and inflation would receive equal weight in constructing his Economic Discomfort Index. The fact that the correlation between his index and the Index of Consumer Sentiment is r = –0.74 reveals that his index does better than he had any right to expect. However, the following regression suggests that inflation deserves a somewhat higher weight than unemployment:

$$\text{Consumer Sentiment} = 109 - \underset{(1.95)}{2.49}\ \text{Inflation Rate} - \underset{(0.35)}{1.87}\ \text{Unemployment Rate} + e$$

1953:1 – 2005:4 $\quad \bar{R}^2 = 0.607$

With the aid of hindsight, this regression implies that giving a 57% = 2.49/(2.49 + 1.87) weight to inflation and 42% = 1.87/(2.49 + 1.87) to unemployment might provide a slightly better measure of Economic Misery:

Economic Misery Revised = 42% Unemployment + 57% inflation

In their 2002 research Michael Lovell and Pao-Lin Tien provided more detail. It is reasonable to conclude that Okun's decision to give equal weight to unemployment and inflation was remarkably close to matching this retrospective regression.

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Michael C. Lovell

MISES, LUDWIG EDLER VON

1881–1973

The economist Ludwig Edler von Mises was born in Lemberg, Austria-Hungary (now L'viv, Ukraine). He entered the University of Vienna in 1900 and received a doctoral degree in law and economics in 1906. Appalled by the rise of more legislation governing capitalist economics, and of socialism and Marxism, Mises dedicated his life to a defense of freedom by integrating his version of Austrian economic theory into an imposing system of social philosophy that elucidates classical liberalism, socialism, and interventionism (a policy steering between liberalism and socialism).

From 1934 to 1940 in the storm haven of Geneva, Mises consolidated and added to the ideas in his earlier publications, producing his treatise *Nationalökonomie* (*Political Economy*) (1940). That year he fled Europe to New York City, where he revised the treatise, creating in English his magnum opus, *Human Action* (1949), and elaborated upon his system in books and essays until his death in New York in 1973.

Mises sought to ground his system in an epistemology based upon a physical-mental dualism, individualism, teleology, libertarianism, and subjectivism, and in rationality that flows perfectly into human action supporting a method able to yield *apodictic* truth. His method involves deduction from professedly a priori terms and propositions; methodological individualism to explain all social phenomena as unplanned outcomes of autonomous individuals' choices; abstraction from causal forces to create "imaginary constructions" used to explain "a contrario" the effects of that which has been abstracted; avoidance of mechanical analogies; and rejection of mathematical techniques. Empirical data, he contended, can neither confirm nor disconfirm his theory. His arguments that the empirical method and mathematical techniques are inappropriate in the field of social science conflicted with the trend of beliefs within the economics profession.

Liberalism, socialism, and interventionism agree on freedom, material prosperity, and peace as ends, differing only over the means to achieving them, Mises believed. He began with classical liberalism, reconstructing its foundations in sociology (which he renamed *praxeology*) and in economics (renamed *catallactics*). Starting with one isolated, egoistic individual, Mises's sociology explains that individuals choose to enter society: it is more profitable due to the greater productivity of division of labor and exchange, workable only, Mises insisted, given private ownership of the means of production. Social order arises because individuals choose to obey moral rules derived from human nature and the requirements of preserving social cooperation; named *praxeological laws* by Mises, they require private ownership, private contract without fraud, and pursuit of one's rational, "rightly-understood," long-run self-interest. Because not all people obey such laws, a state is necessary. Practicing laissez-faire by enacting only juristic laws to enforce the praxeological laws constitutes the pure, "unhampered," case of capitalism (renamed the *free market economy*).

Upon this sociology, Mises explicitly based his economic theory—which is more than a partial social science, he held—and his task was to work out the consequences of the praxeological laws. To construct his theory he at first abstracted from the influences of barter; exchange using money; entrepreneurs and the "market process;" savings, investment and capital accumulation; money credit, interest, and banking; and international trade in order to explain the economy of one isolated individual. He then built up his theory by restoring seriatim the influences he had abstracted from at first. His theory allowed him to reach several conclusions. Transitory monopoly may rarely arise, but generally no economic power exists; "financial pressure" occurs in markets, but not coercion (defined as deliberate human compulsion), hence freedom in the negative sense of absence of coercion is maximized, constrained only by juristic laws that enforce the praxeological laws. Harmony of interests exists because all interests are subordinated to "consumer sovereignty," effectuated by entrepreneurs (the consumers' "virtual mandataries") and by catallactic (not anticompetitive) competition. Efficiency and material prosperity are maxi-

mized. Under the gold standard and free banking, only small self-correcting trade cycles disturb stability. Eternal peace prevails.

Socialism establishes social ownership of the means of production, and from 1920 onward Mises defended his thesis that without private ownership of the means of production and without competition, market prices cannot come about, rendering rational economic calculation impossible. Socialist planning entails commands overriding consumer sovereignty, curtailing freedom and resulting in a loss of efficiency and material prosperity. Socialism does not promise peace.

Interventionism signifies a state that formally upholds private ownership, but intervenes in markets with the aim of curing short-run economic problems. All such policies, Mises demonstrated, are counterproductive. For example, interest rate policies to alleviate unemployment generate malinvestment and serious trade cycles. Persistent interventionism over the long run leads to a burgeoning state that broadens and deepens its controls, inexorably leading to socialism.

Thus, the only long-run policy alternatives, Mises concluded, are either laissez-faire liberalism or socialism. He argued that since the consequences of the former best satisfy ends sought by all, liberalism and its demands for private ownership and freedom are justified on utilitarian grounds.

Mises's work has stirred controversy over economic and philosophical issues. How, in precise philosophical terms, should his epistemology be classified? Can his method yield empirical truth? Can his praxeological laws be considered natural laws? Is his economic theory value-free? Mises's work remains an imposing system, a defense of freedom, and a riposte to socialism, Marxism, and interventionism.

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Richard A. Gonce

MISOGYNY

Deriving from the Greek *misogynia* (antiwoman), misogyny is an unreasonable fear or hatred of women. Misogyny differs from *male chauvinism.* The latter supports male political privileges and favors female subjugation in law; misogyny is an emotional prejudice based on phobia or dislike. Without specific political ends, misogyny has no formal ideological position other than to denigrate females.

Misogyny is by no means limited to modern Western civilizations. It occurs in many kinds of societies and at all levels of human social organization, including Stone Age cultures, and at all times in history. Studies by anthropologists and historians show that misogyny is, and always has been, widespread. Some examples of this prejudice among contemporary preindustrial peoples are described below.

In the highlands of New Guinea (Langness 1999), many tribesmen sleep apart from their wives, believing that women's bodies are, especially when menstruating, contaminating and even poisonous to males. In the Amazon rain forest of South America, many Native American men regard women as the work of the devil—not only intellectually inferior to men, but also scheming, destructive, even demonic (Gregor 1985). In many areas of sub-Saharan Africa, women's monthly flow is viewed with horror, and menstruating women are not allowed to appear in public. Many East African peoples practice clitoridectomy (surgical removal of the clitoris), a painful operation specifically designed to diminish a woman's sexual pleasure, which is considered immoral (unlike a man's).

In ancient Europe, the Greeks displayed an ingrained misogyny, often describing woman as one of the plagues inflicted upon man by the gods. Some Attic poets proposed that women were the source of *kakon* (evil) in the world. The ancient world was indeed populated with nefarious she-demons and sorceresses, such as the sinister Circe, who turned men into pigs, not to mention the Furies and the Harpies, foul-smelling half-human hags who persecuted men and boys. Classical antiquity was full of female monsters: sirens, maenads, nymphs, lamias, and the sea viragoes Scylla and Charybdis who drowned sailors off the coast of Sicily. The snake-haired gargoyle Medusa turned men to stone with a look. One of the earliest Greek poems,

"Woman" by Semonides (eighth century BCE), reviled females as being as stubborn as mules, as smelly as pigs, and as perilous to men as the untamed sea (see Coole 1988).

Many organized religions are highly misogynistic. The Christian Bible, the Muslim Koran, the Hebrew Torah, and the sacred Buddhist and Hindu texts frequently criticize women for various moral defects and condemn woman's body for the lust it inspires in men. Most religions blame woman for licentiousness and depravity and for committing original sin or its theological equivalent. In the Bible, for example, it is Eve, not Adam, who brings about the expulsion from paradise. Like the Greek Pandora, it is a woman who lets evil into the world. Many early Christian theologians—Thomas Aquinas (c. 1225–1274), Tertullian (fl. c. 200 CE), and Jerome (c. 347–419/20)—derided Eve and her descendants, calling woman "the devil's gateway" (Bloch 1989). The great writers of European literature, even William Shakespeare (1564–1616), bemoan woman's supposed tendency to gossip, to be shrewish, to dance with the devil, and to sway men from righteousness (Dijkstra 1996).

Many misogynists appear to be obsessed with female sexual anatomy, their fears centering on the vagina. In many cultures, women are even said to wear sharp teeth or knives in their sex organs, giving rise to the widespread motif of *vagina dentata*, the gnashing vulva. And wherever people believe in them, witches are primarily women (Brain 1996), and thousands of innocent women and girls have been burned at the stake as a result of this near-universal myth. Cultures throughout the world are full of pejorative mother-in-law and bad-wife jokes, but negative humor about fathers-in-law and husbands is rare. The evil-stepmother is a stock character in folktales around the world (e.g., Snow White), but evil stepfathers hardly appear.

As a sexual dogma or prejudice, misogyny appears to be virtually universal. Oddly, this gratuitous sex hostility was largely unreciprocated by institutionalized male-hatred among women until recent fulminations of a few radical feminists. For example, there is no word in English to describe female revulsion about men—no lexical obverse of misogyny. *Misanthropy*, which would be the semantic equivalent, simply means a dislike of humanity, not of males specifically. The one-sidedness of this prejudice is no less salient in preliterate cultures, and this fact in itself poses many questions about why so many men think so negatively about women in so many places. It also raises questions about the underlying ambivalence of male sexual desire, which seems so wedded to shame and guilt and thus with the need to scapegoat women. There seems to be something about being a human male that produces a conundrum in relating to women (as in the complaint, "can't live with 'em, can't live without 'em"). Misogyny then, is a frequent component of male psychology and of subsequent cultural representations, what might be called a male gender neurosis.

Can we identify the causes of misogyny? There are numerous theories, none totally convincing, as recent reviews (Gilmore 2001) show. Many theories rely upon the psychological concepts of ambivalence (contradictory love/hate feelings). One theory (Spiro 1997) holds that men are ambivalent about their own sexual impulses. They therefore experience mental stress, which is alleviated by denigrating the source of their desire—women. A second theory argues that men are conflicted about their powerful nonsexual needs for women (for food, caretaking, comforting, mothering). Thus, many men feel inferior to women and dependent upon them; many men cannot tolerate such imagined weakness in themselves, so they attack women as a way of restoring their damaged self esteem. Yet another theory (see Chodorow 1994) holds that all people are essentially bisexual and that many men are deeply disturbed by their own feminine side. Such conflicted men attack women as a way of denying or distancing their inner female. In various writings, Freud explained the universal male fear and disgust of menstrual blood as a product of castration anxiety: the flow of blood reminding men of the cut penis. Probably all of these factors play a role in misogyny, the causes of which are both cultural and psychological.

SEE ALSO *Gender; Inequality, Gender; Inequality, Political; Misanthropy*

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David D. Gilmore

MISSIONARIES

Missionaries are individuals sent out as representatives of their particular religious group to proselytize, teach, and preach among nonadherents. Though often associated specifically with Christian missions, throughout history a wide variety of religious traditions have utilized missionaries to spread their religious visions and religious practices. Although missionaries usually attempt to attract converts by means of persuasion and through philanthropic endeavors, coercive methods have also been used at times. Criticism of traditional missionary practices has grown especially since the early twentieth century, leading some religious leaders to redefine missionary activity solely in terms of social service or political activity.

Though not frequently associated with missionary activity, Eastern religious traditions produced some of the earliest known missionaries. Ancient tradition holds that the Buddha himself instructed his followers to spread the Noble Truths of Buddhism. By the beginning of the Common Era, Buddhist missionaries entered China and spread their message through the efforts of figures such as Bodhidharma (c. early fifth century) and Kumārajīva (350–409/413). During this same period, Hindus accompanied traders and merchants and helped spread Hinduism to Southeast Asia. Buddhism in particular possessed key traits that aided missionary efforts. For example, Buddhism moved away from Hinduism's emphasis on the caste system, which in turn gave its followers greater freedom in their interactions with others from different social classes.

Since the late nineteenth century, Hindu and Buddhist missionary activity has increased. Hindu missionaries have gained a significant number of converts in Western nations, especially the United States. Swami Vivekananda, for example, established the Ramakrishna Mission and famously introduced many Americans to Hindu beliefs and practices at the World Parliament of Religions in Chicago in 1893. Other key Hindu mission movements during the twentieth century include the International Society for Krishna Consciousness (ISKCON) as well as Paramahansa Yogananda's Self Realization Fellowship, which combined Hindu beliefs and practices with scientific and psychological concepts. Nichiren Shōshū, a particularly mission-oriented form of Buddhism, developed during the thirteenth century and has been reinvigorated during the twentieth century through the Sōka Gakkai organization. Similarly, in the mid-twentieth century the Indian politician Bhīmrāo Rām Ambedkar (1891–1956) established the Bharatiya Buddha Mahasabha organization in order to encourage Hindus to convert to Buddhism. Ambedkar viewed Buddhism as a solution to the social inequality associated with the Hindu caste system, and he gained a large following among fellow Dalits ("untouchables") who represented the lowest stratum of the caste system.

Judaism also is not usually associated with proselytism, yet there is evidence to suggest extensive Jewish missionary activity in the Roman Empire, especially during the first century CE. Following the Jewish revolts in 66–73 and 132–135, however, laws were passed prohibiting conversion to Judaism, which greatly diminished the number of converts. Since that time converts have entered Judaism mainly through marriage, though there is significant debate within contemporary Judaism over whether or not active proselytism should be encouraged to counter the impact of the increasing number of marriages of Jews to non-Jews.

From its inception, Christianity has demonstrated a strong missionary impulse based on Jesus' command that his disciples spread the Christian message to nonbelievers. Carried out initially by figures such as Saint Paul, missionary activity eventually was linked to territorial expansion and official state policy beginning in the fourth century, when Christianity became the official religion of the Roman Empire. Throughout the next several centuries church leaders of the Roman West and the Orthodox East encouraged missionary activity throughout Europe among Germanic and Slavic peoples. These efforts eventually reached as far east as China, and often were led by monks such as Boniface and members of religious orders such as the Dominicans and the Franciscans beginning in the thirteenth century.

Beginning in the sixteenth century Christian missionary activity spread rapidly with the colonial expansion of modern nation-states into the Americas, Africa, and Asia; during this same period missionary efforts were reinitiated in regions including China, Persia, India, and parts of Africa. Among Catholics, the Jesuits were especially well known for their missionary zeal and discipline. The Jesuits often adapted their message to the cultural symbols and practices of the host culture (*inculturation*); the efforts of Matteo Ricci (1552–1610) in China are a good example. This contrasted sharply with the mission practices of other groups, such as the Spanish Franciscans in the Americas, who saw Christianity as inexorably tied to Spanish customs and civilization. Missionary activity by Protestants accelerated beginning in the eighteenth century with the spread of evangelical forms of piety in Britain and the American colonies. Women also began to play a much more visible

role by the 1800s, accounting for half of the U.S. missionaries by the mid-nineteenth century.

Protestant and Catholic missionaries often brought with them knowledge of modern technical innovations and Western educational and medical ideas. By the twentieth century, in fact, some mission endeavors took on a solely philanthropic function as various twentieth-century religious leaders linked previous missionary efforts with cultural imperialism. But more conservative approaches that emphasized conversion continued to grow, as seen in the rapid global spread of Pentecostal forms of Christianity beginning in the twentieth century, as well as the growth of new religious movements such as Mormonism.

Historically, Islam also has had a strong missionary impulse. Although few Muslims throughout history have identified themselves specifically as missionaries, traditional Islam calls for the steady expansion of Islamic rule into non-Muslim regions, and indeed after the death of the Prophet Muhammad in 632 it spread rapidly across the Arabian Peninsula, Northern Africa, Spain, Persia, and Central Asia. Nevertheless, non-Muslims who are "peoples of the Book" (i.e., Jews and Christians) often have been allowed to maintain their faiths within Muslim societies, as was frequently the case during the Middle Ages—this despite the fact that Muslims believe the Jewish and Christian scriptures to have been corrupted over the years. Whereas traditional Islamic teachings enjoin Muslims to help spread Islam for the benefit of humanity, the Prophet Muhammad specifically repudiated conversion by force. Pagan groups usually did not have the same protected status as Jews and Christians in Muslim societies during the Middle Ages, and all non-Muslim subjects were expected to recognize Muslims' final authority in society.

In general, missionary activity has been criticized for its sometimes complicit role in the oppression of subjugated peoples and for its contribution to religious conflict. A sharp delineation between religious believers and nonbelievers, for example, often has served as an underlying justification for imperialistic colonial endeavors. Other critics insist that a focus on conversion distracts from the need for more practical reforms in social and political spheres, but missionaries often have often been at the forefront of educational and philanthropic efforts, and have sought to alleviate human suffering. Furthermore, their cross-cultural endeavors have initiated contact between different religious traditions and helped generate religious change and innovation.

SEE ALSO *Protestantism; Roman Catholic Church*

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Joseph W. Williams

MISSPECIFICATION TESTS

SEE *Specification Tests.*

MITCHELL, WESLEY CLAIR

1874–1948

Wesley Mitchell pioneered the empirical study of business cycles. A founder of the National Bureau of Economic Research, he was one of the major figures within the institutionalist movement in American economics.

Mitchell was born in Rushville, Illinois, and brought up in Decatur, Illinois. He entered the new University of Chicago in 1892, obtaining his AB degree in 1896 and his PhD in 1899. At Chicago he came under the influence of Thorstein Veblen and John Dewey, but it was J. Laurence Laughlin who supervised his PhD dissertation, published in 1903 as *A History of the Greenbacks.* In that year Mitchell moved to the University of California at Berkeley and then to Columbia University in New York in 1913. Except for a brief period at the New School for Social Research (1919–1922), which he helped to found, he remained at Columbia until his retirement in 1944. He was also director of research for the National Bureau of Economic Research (NBER) from its founding in 1920 until 1945 and a major figure in the founding of the Social Science Research Council (SSRC).

Mitchell wrote on many subjects, including rationality and economic activity (Mitchell 1910), the economics of the household (1912), the history of economics (1918), the distinction between making money and making goods (1923), and the links he saw between institutional and quantitative economics (1925), but Mitchell's major work was his 1913 book *Business Cycles.* Here Mitchell provided

an "analytic description" of the course of business cycles consisting of four stages, with each stage setting the conditions for the next, and the cycle as a whole growing out of the institutions of the "money economy" in the form of the interaction of business decisions based on profit expectations, the behavior of the banking system, and the leads and lags in the movement of wages and prices. The book also commented on the shortcomings of many of the existing theories of the cycle.

After 1922 Mitchell continued his own work on cycles through the NBER. The original plan was for two books, later expanded to three. The first, *Business Cycles: The Problem and Its Setting* (1927), discussed existing theories and statistics and laid out the research agenda. The project grew, and with it a vast number of studies of particular aspects of the cycle and an array of measurement issues relating to timing, amplitude, and rates of change across successive cycles. This eventually resulted in the development of the "NBER method" of specific and reference cycles (Morgan 1990, pp. 44–56), presented in detail in the second book, *Measuring Business Cycles* (1946), coauthored with Arthur F. Burns. The final volume, which was supposed to be a theoretical volume, was never completed, although a part was published after Mitchell's death as *What Happens during Business Cycles* (1951).

Measuring Business Cycles was sharply attacked by Tjalling Koopmans of the Cowles Commission for engaging in "measurement without theory" (Koopmans 1947, p. 161). Mitchell did of course use theories as a guide to what data should be collected and examined, but he was not enthusiastic about enamored econometric methods.

Mitchell's great contribution was in the development of empirical research in economics, not only through his own work but also through the work he promoted via the NBER and SSRC. As Jeff Biddle pointed out in 1998, for Mitchell, it was only through such research that economics could become a useful tool in the solution of economic problems.

SEE ALSO *Business Cycles, Real; Koopmans, Tjalling*

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Malcolm Rutherford

MIXED STRATEGY

In the theory of games a player is said to use a mixed strategy whenever he or she chooses to randomize over the set of available actions. Formally, a mixed strategy is a probability distribution that assigns to each available action a likelihood of being selected. If only one action has a positive probability of being selected, the player is said to use a pure strategy.

A mixed strategy profile is a list of strategies, one for each player in the game. A mixed strategy profile induces a probability distribution or lottery over the possible outcomes of the game. A (mixed strategy) Nash equilibrium is a strategy profile with the property that no single player can, by deviating unilaterally to another strategy, induce a lottery that he or she finds strictly preferable. In 1950 the mathematician John Nash proved that every game with a finite set of players and actions has at least one equilibrium.

To illustrate, one can consider the children's game Matching Pennies, in which each of two players can choose either heads (H) or tails (T); player 1 wins a dollar from player 2 if their choices match and loses a dollar

to player 2 if they do not. This game can be represented as follows:

	H	*T*
H	(1, −1)	(−1, 1)
T	(−1, 1)	(1, −1)

Here player 1's choice determines a row, player 2's choice determines a column, and the corresponding cell indicates the payoffs to players 1 and 2 in that order. This game has a unique Nash equilibrium that requires each player to choose each action with probability one-half.

Another example is provided by the Hawk-Dove game, which has been used by evolutionary biologists to model animal conflicts:

	H	*D*
H	(0, 0)	(4, 1)
D	(1, 4)	(2, 2)

In this game any strategy profile in which one player chooses *H* and the other picks *D* is in equilibrium. Hence, there are two pure strategy equilibria, (*H*,*D*) and (*D*,*H*). In addition, there is a mixed strategy equilibrium in which each player selects *H* with probability 2/3.

One feature of a mixed strategy equilibrium is that given the strategies chosen by the other players, each player is indifferent among all the actions that he or she selects with positive probability. Hence, in the Matching Pennies game, given that player 2 chooses each action with probability one-half, player 1 is indifferent among choosing *H*, choosing *T*, and randomizing in any way between the two. Because randomization is more complex and cognitively demanding than is the deterministic selection of a single action, this raises the question of how mixed strategy equilibria can be sustained and, more fundamentally, how mixed strategies should be interpreted.

In an interpretation advanced in 1973 by John Harsanyi, a mixed strategy equilibrium of a game with perfect information is viewed as the limit point of a sequence of pure strategy equilibria of games with imperfect information. Specifically, starting from a game with perfect information, one can obtain a family of games with imperfect information by allowing for the possibility that there are small random variations in payoffs and that each player is not fully informed of the payoff functions of the other players. Harsanyi showed that the frequency with which the various pure strategies are chosen in these perturbed games approaches the frequency with which they are chosen in the mixed strategy equilibrium of the original game as the magnitude of the perturbation becomes vanishingly small.

A very different interpretation of mixed strategy equilibria comes from evolutionary biology. To illustrate this, consider a large population in which each individual is programmed to play a particular pure strategy. Individuals are drawn at random from that population and are matched in pairs to play the game. The payoff that results from the adoption of any specific pure strategy will depend on the frequencies with which the various strategies are represented in the population. Suppose that those frequencies change over time in response to payoff differentials, with the population share of more highly rewarded strategies increasing at the expense of strategies that yield lower payoffs. Any rest point of this dynamic process must be a Nash equilibrium. In the special case of the Hawk-Dove game any trajectory that begins at a state in which both strategies are present converges to the unique mixed strategy equilibrium of the game. In other words, the long-run population share of each strategy corresponds exactly to the likelihood with which it is played in the mixed strategy equilibrium.

SEE ALSO *Evolutionary Games; Game Theory; Nash Equilibrium; Nash, John*

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Rajiv Sethi

MOBILITY

Social mobility describes the fluidity or rigidity of a stratified system, or the degree of openness of a society that determines the extent to which individuals or groups can and do change their relative position or social status within that society. An analysis of social mobility exam-

ines the extent to which an individual's life chances or social position is a function of his or her social origin (i.e., the social status of the individual's parents). Nineteenth-century theorists of social mobility grappled with the emergence of industrial societies whose social organization and social relationships were qualitatively different than their feudal and agrarian predecessors. Questions of modernity that were prominent at the time animated much of this inquiry as well.

The underlying logic rested on the idea that the social organization of preindustrial societies, where an individual's location in the social structure was almost entirely determined by birth (often by ascribed characteristics), would give way to a more open system in which an individual's abilities and characteristics would determine his or her fortunes. The increasing bureaucratization and rationalism characteristic of newly industrializing societies were expected to give rise to meritocracy, in which individual merit would dictate outcomes more so than social origin. With increasing education and technological developments, intergenerational mobility should increase. Furthermore, as success becomes more focused at the individual level, the impetus for class solidarity should decrease.

RESEARCH TRADITIONS

Early social mobility research can be divided along several dimensions. One of these encompasses two distinct threads: *intragenerational mobility* (class mobility during the life course, typically occurring during one's career years) and *intergenerational mobility* (a change in class status between parents and offspring from one generation to the next). In both threads the focus was on explaining the likelihood of a difference in one's destination (or outcome) compared to one's origin. Another distinction in early mobility research was an emphasis on either individual mobility (e.g., status attainment research) or class mobility and formation (e.g., the position and change in relative power of specific strata or classes). Karl Marx's (1818–1883) theory of class formation and power and Max Weber's (1864–1920) notion of class and status groups were central influences in the latter line of inquiry.

Social theorists of mobility contrasted the rigid mobility structures characteristic of social systems organized by castes and those under feudalism with the "new" social and economic structure emerging in nineteenth-century industrializing nations. Feudalism and caste social systems, which were marked by little social mobility, were archetypes against which newly emerging social systems, which were marked by increasing mobility, were compared. A *caste* is a "hierarchy of endogamous divisions in which membership is hereditary and permanent" (Berreman 1960, p. 120). Contact between members of different castes is limited and allocation to occupations is determined by an individual's caste membership. India's caste system was one of the most widely documented during the first half of the twentieth century. Though the subject of considerable debate, India's caste system was considered the most rigid of stratification systems, marked by its stability as the divisions were justified on religious principles to which almost everyone in the society subscribed.

From the eleventh through fifteenth centuries, feudalism, the chief social system explored in early writings about stratification, was the dominant mode of production in Europe that preceded capitalism. It was a hierarchical system with few strata, in which control of land and property granted social status and legal rights to rule. Power and social status were founded on ownership of land and control of peasants; membership in the noble class of lords, which was achieved primarily through birth or marriage, was necessary in order to exercise power. Feudalism was a relatively closed social system in which the distribution of goods and services was closely integrated with the hierarchy of the social status.

Following feudalism, the emergence of industrialization in the mid-eighteenth century and the changing economic and social system embodied in early capitalism allowed individuals in the merchant class to experience mobility not through birth or marriage but through their fortuitous role in creating markets for goods. Merchants played a key role in the expansion of markets for goods and in the production of goods that ushered in industrialization and early capitalism. They carried this out by developing and managing consumer markets, and by acquiring knowledge of consumer tastes, which allowed them to manage, fulfill, and profit from growing consumer demand. This class was a crucial force in shaping early capitalism, and merchants profited from their propitious position as the new economic system flourished.

As industrialization progressed during the first half of the twentieth century, social theorists such as Gerhard Lenski (1966) observed that mobility opportunities were beginning to increase steadily for a larger segment of society, namely workers in the industrial sector of the economy. This was especially true for those who had access to opportunities to become skilled at using emerging technology in the rapidly changing production process. European immigrants were absorbed rapidly into growing industries. Lenski argued that stratification (which he called a distributive system) was a function of the complexity and degree of technological sophistication of a society. The extent of inequality in a society varies with the amount of surplus in that society. Goods and services are distributed according to need when there is no surplus.

Within this framework, those who have control of the surplus of goods have more power.

A recurring theme throughout the mobility theories predominant at this time was the increasing role of technological advances in stratifying workers, allowing mobility for some and limiting it for others. Skilled workers were in an advantaged position relative to other workers to benefit from the new strata of higher-paying jobs created by these new technologies. Thus, mobility for certain groups of workers increased substantially during this period. Moreover, historians and social scientists document the strategies that both employers and white workers used to limit competition for these premium jobs by excluding blacks, Chinese, other racial and ethnic minorities, and white women from these burgeoning opportunities. Government subsidies aimed at increasing the education and training of workers (e.g., the GI Bill) were largely reserved for white men who took advantage of and benefited from these opportunities in substantial numbers, entrenching the widening gap between these workers and other marginalized workers.

Status attainment research became the chief lens with which to view this new opportunity structure during the 1950s. The principle assumption in status attainment research was that individual investments in education would allow for mobility of any worker, regardless of his social origins (many of these studies only involved men). In this tradition, status attainment research was concerned with the *allocation* of individuals into jobs or social positions (also referred to as *selection* in earlier work). Status attainment research examined an individual's position along a scale of occupational status. The emphasis was on determining the level of parental influence on the child's eventual occupational outcomes. The underlying idea was that parents with higher social status and good jobs can pass on to their children resources that aid them in the labor market—resources such as information about jobs and how to attain them, and access to networks, opportunities, and cultural capital.

Related to the status attainment paradigm is *human capital theory*, or its more recent variant, the *skills mismatch hypothesis*. Underlying all of these theories is the notion that the United States is largely an achievement-based society characterized by an open opportunity structure. The center of analysis in these theoretical frameworks is the individual and his or her corresponding traits; this focal shift stood in contrast to early stratification research in which the social structure of the society itself was the central focus. A critique of the status attainment and human capital approaches posits that they do not take into account important structural factors that may have an impact on the opportunity structure, and commensurately, the likelihood of mobility.

Proponents of a structural analysis of mobility turned their attention to assessing the influence of economic, political, and social forces on the opportunity structure and mobility opportunities. These contrasting approaches have also been situated within a supply/demand framework in which both the attributes individuals bring to the market and the demands of market institutions (e.g., which industries are experiencing growth or decline, which skills employers are seeking) are considered important factors bearing on opportunities for workers.

MOBILITY IN POSTINDUSTRIAL SOCIETIES

A large segment of social mobility research relies on comparative analyses of different countries, typically Western countries, because a society's stratification system is the implied unit of analysis in the paradigm's core theories (i.e., a central question is whether certain stratification systems enable more or less mobility). Robert Erikson and John Goldthorpe (1992) conducted an extensive cross-national comparison to address whether or not mobility was increasing in postindustrial nations. They found that the United States and Western European countries are not markedly different in mobility and that patterns of mobility were common over time, a pattern they described as a *trendless fluctuation*.

Large-scale structural changes of the later twentieth century, primarily deindustrialization and globalization, vastly changed the factors that mediate access to work and opportunity. Deindustrialization and the accompanying shift to a service, information, and technology-based economy created an increased demand both for higher-educated and skilled workers and for low-wage workers to fill the increasing number of service jobs that proliferated in the economy. An increasingly bifurcated workforce resulted. Higher-educated workers fared and continue to fare better in the labor market by all accounts. Thus, access to higher education became a determinative factor in an individual's labor market outcomes. Marked group differences (class, race, ethnicity) in access to education have always existed, but these disparities have greater consequence in the contemporary economy as the currency of education grows.

This inequality is further exacerbated by the dismantling of policies designed to enable equal access to higher education. Both lower-income and minority individuals have lower rates of college attendance and graduation; of those that do enroll in college, a smaller percentage actually finishes compared to white or middle-class students. The effect of school status on employment outcomes also contributes to this inequality given the difference in status of the schools that whites and minorities attend. This difference has been shown to contribute to differences in

earnings, occupational attainment, and so on among workers with college degrees. Furthermore, education explains only 25 percent of the race gap in wages. Although different studies reveal different numbers, none has entirely removed the effect of race. Education plays a determinative role and improves the relative position of everyone who is able to access it; however, increasing evidence reveals that it has not been realized as the equalizing force that had been anticipated.

Another structural change that figures prominently in questions of mobility in postindustrial societies is the emergence of a globalizing economy. The globalization of labor has tightened and changed opportunities for workers. As companies reduced their workforces, moved production overseas, and instituted flexible work arrangements to remain competitive, job stability and wages fell and advancement opportunities diminished for many workers, particularly for lower-wage and lower-status workers at the bottom of the scale.

LIMITED SOCIAL MOBILITY FOR RACIAL AND ETHNIC GROUPS

Mobility chances vary significantly across different social groups in the contemporary United States. Ample evidence demonstrates that access to opportunity continues to be mediated by race and immigrant status, among other factors. Given the ongoing currency of education and skills in the postindustrial economy, group differences in access to quality education play a sizable role in this inequality. Persistent patterns of school segregation resulting from residential segregation are a key factor underlying continuing labor market disparities between white and minority workers. School segregation among primary and secondary schools has regressed to the levels that existed at the time of the desegregation order resulting from the 1954 *Brown v. Board of Education of Topeka* decision by the U.S. Supreme Court. Minorities are segregated into schools with substantially fewer resources, and consequently they receive a poorer education. Poor white children, on the other hand, do not face significant class-based school segregation, and in fact are more likely to attend schools with middle-class children than are black middle-class children. In addition, the decentralization of companies from urban centers to outlying suburbs, a development that followed the mass suburbanization of most large cities beginning in the 1950s, created what some theorists call a *spatial mismatch* between jobs and minority communities. This further decreased access to work and to attendant mobility opportunities.

Another explanatory factor for racial mobility disparities is access to information about jobs. Researchers have found that job seekers tend to find out about and pursue jobs through social networks. The quality of the information in these networks varies widely; access to networks with higher-status individuals with better jobs yields better information and thus increased access to better jobs. Because the networks of most individuals are made up of the people with whom they regularly interact, these networks tend to be segregated by race. Additionally, mounting evidence points to the role of discrimination in the hiring process. Discrimination audit studies, in which equally qualified job applicants of different races apply for the same job, consistently reveal that employers are more likely to hire white applicants over equally qualified black or Latino applicants.

Even in the early years of the twenty-first century, the evidence supports the conclusion that an individual's origin continues to play a significant role in his or her eventual socioeconomic status. The expectation that this influence would decline in postindustrial nations has seemingly not come to bear to the extent that was anticipated; there does not seem to be a trend toward increasing mobility. There is an enormous debate over the subject; however, it has shifted to why and to what extent mobility has or has not increased. As societies and their economies evolve, transform, and become more complex, the number of factors to consider when determining an individual's chances of moving beyond his or her origins will continue to increase, demanding more complex models for understanding mobility.

SEE ALSO *Caste; Education, Unequal; Mobility, Lateral; Upward Mobility*

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Niki T. Dickerson

MOBILITY, LATERAL

The term *lateral mobility* refers to movement among occupational categories that does not result in an improvement in occupational status. An occupational category is a set of jobs that comprise essentially the same list of skills and activities—examples are waiter, computer programmer, and college professor. These detailed occupations are also grouped into broader, more generalized occupational categories. For example, a waiter is in the service category, a computer programmer is in the technical category, and a professor is in the professional category.

Occupational mobility is significant because movement among occupations can be a strategy to improve economic position, whether over a lifetime or from generation to generation. A worker starting out in a relatively low-skilled, low-paid occupation may acquire work experience, develop skills, or use the earnings to invest in further education or training in order to move to a better-paid occupation. Low-paid workers may also invest in their children's educations and training, allowing for improvement in occupational status over generations.

However, not all occupational mobility results in improved status. Occupational mobility may be vertical—either upward or downward—or it may be lateral. Upward mobility would indicate improving economic prospects, while downward mobility would indicate the opposite. Lateral mobility occurs when workers change occupations without substantially improving their economic prospects, or when succeeding generations of a cohort remain at the same occupational status. While this might be a benign state of affairs for well-paid occupations, it constitutes a serious quandary for workers—or for families generationally—who become mired in a low-wage job market in which change of occupation leads to no significant economic improvement. Workers may fail to achieve upward occupational mobility if the jobs they have access to provide limited development of marketable skills or lack well-established promotional ladders—both problems that have been observed, for example, for jobs in fast food restaurants.

Further, not all workers achieve the same level of mobility from a given occupation, nor do all families, generationally. Several empirical studies suggest that the experience of lateral, as opposed to upward, mobility may be affected by the class and racial-ethnic background of previous generations, as well as current workers' class and racial-ethnic profiles. William Darity Jr., Jason Dietrich, and David K. Guilkey (2001) introduced the concept of lateral mobility over generations in a study of the *intergenerational drag hypothesis*. This hypothesis suggests that past generations' experiences of discrimination and disadvantage may significantly impede the ability of subsequent generations to improve their economic position. Using data from the available U.S. decennial censuses between 1880 and 1990, Darity and his colleagues inquired whether the degree of economic advantage or disadvantage of different ethnic and racial groups affects the occupational mobility of their descendants. They posit the lateral mobility hypothesis: that the social status attained by the majority of first-generation migrants to the United States from a specific ethnic group will critically influence the social status of their children and grandchildren. Measuring social status by mobility among occupations, ranked by their median earnings, Darity, Dietrich, and Guilkey use various measures to show that mobility within immigrant groups over generations has a strong lateral element. They conclude that "turn-of-the-century, group-specific variables appear to have lasting effects on individual level economic outcomes a century later, even after important individual level socioeconomic characteristics are taken into account" (2001, p. 466).

Another study, by Marilyn Power and Sam Rosenberg (1995), uses data from the National Longitudinal Survey to compare occupational mobility by race for a cohort of black and white U.S. women who began their work lives as service workers, a relatively low-wage occupational category. Measuring occupational status by mean earnings for women who worked full time in the 1970 census, the study compares the women's occupational statuses in 1972 and 1988, and finds a significant difference in the experience of mobility. While a substantial majority of the white women experienced upward mobility, leaving service jobs for higher-paying clerical and professional occupations (albeit in the traditionally female professions), the majority of the black women experienced only lateral mobility, moving among service occupations or into similarly ranked blue-collar jobs. Power and Rosenberg conclude, "service jobs, even low-paid ones, may be more of a bridge to better positions for young white women and more of a trap for young black women" (1995, p. 46).

Starting in the last few decades of the twentieth century, the number of full-time, contract manufacturing jobs began to decline in the United States, while employment in low-skilled, often part-time service occupations increased. At the same time, the use of temporary or contingent (off-contract) workers grew across the economy. As a result of these changes, the possibilities for the development of job skills and seniority that could lead toward upward mobility have declined, particularly for low-skilled workers in service and operative jobs, who are disproportionately racial-ethnic minorities. The implication of these changes is that lateral mobility may be replacing upward mobility for an increasing number of the most vulnerable workers, leading to widening inequality of income and prospects across the labor force. This trend creates a serious challenge for public policies that emphasize labor market experience as the key route out of poverty.

SEE ALSO *Immigrants to North America; Intergenerational Transmission; Migration; Mobility; Occupational Status; Upward Mobility*

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Marilyn Power

MOBILIZATION

Mobilization refers to the deployment of resources for purposeful action to achieve a specific political or social goal. Important resources include people (e.g., troops and security forces, voters, social movements), shared identities (e.g., partisanship, class, ideology, religion), material support (e.g., money to maintain a standing army and weaponry, campaign donations), information (intelligence and strategic plans, campaign and movement issue statements), and organization (level of military professionalism, networks with other social or political groups, campaign volunteers).

Charles Tilly explained how revolutions and similar collective actions are an outcome of mobilization, which is "the process by which a group acquires collective control over the resources needed for action" (Tilly 1978, p. 7). Mobilization flows from organization and determines the level and success of collection action. This basic process also applies to political and military mobilization. Political scientists analyze voting and interstate war, whereas sociologists place greater emphasis on the social qualities of mobilization through social movements and protest.

SOCIAL AND POLITICAL MOBILIZATION

The level of institutional involvement distinguishes social from political mobilization. Mass social mobilization includes protest that pressures a government to institute or reverse a course of action. Rebellions, revolutions, and nationalist movements lie at the extreme end of popular social mobilization and seek comprehensive social and political change that usually is accompanied by violence (Snyder 2000). Those actions often are responded to with countermobilization efforts by government security forces and the military (Tilly 1978, Skocpol 1988). In contrast, political mobilization occurs in accordance with prescribed institutional rules (see Table 1).

Electoral mobilization refers to the basic process of popular participation in democratic politics or in some cases staged elections, as in the former Soviet Union. Partisans organize citizens into institutionalized actions to reelect or change political leaders. Political parties serve as conduits for providing voters with information about

Types of political and social mobilization

	Institutional	Extrainstitutional
Government (military and security forces)	War, domestic security actions (martial law, protest policing)	Coup d' etat, counterinsurgency
Popular (citizens, mass)	Electoral campaign, voting	Protest, rebellion, ethnic nationalism, revolution

SOURCE: Adapted from Claudia Dahlerus, *Do Targets Matter? Repressive Targeting in East Central Europe*, unpublished Ph.D. dissertation (University of Colorado, Boulder, 2001).

Table 1

where a party and its candidates stand on a range of issues. Parties are most active in the campaign stage of elections, recruiting supporters, disseminating information, and contacting voters to ensure that loyal and potential supporters turn out on election day (Verba, Schlozman, and Brady 1995).

Costs often are attached to electoral and protest mobilization. Thus, the dilemma for social scientists lies in explaining what influences mass mobilization in the first place. There are behavioral, structural, and cultural arguments that explain the causes of mobilization. For example, behavioral theories explain how political parties and interest groups are the main vehicles of voter mobilization because they minimize information costs. The role of social movements in mobilizing support for minor parties is also important, especially in times of heightened polarization. Although voting has costs (time, acquiring information about candidates and parties), protest adds the costs and risks of being injured, arrested, or labeled a dissident and a threat to the political status quo. These reasons are highlighted to explain the challenges of mobilizing people into social movement actions such as protests and demonstrations as opposed to electoral mobilization.

High levels of popular involvement in campaigns are associated with electoral success at the polls (Rosenstone and Hansen 1993, McCann, Rapaport, and Stone 1999). Recruiting supporters through phone banks, door-to-door campaigning, and, increasingly, the Internet is important in mobilizing people to support a party and get them to vote on election day. E-mail listservs and campaign Web sites have come to play a role in electoral mobilization in industrialized democracies such as the United States. Presidential candidate Howard Dean represented a major shift in campaigning in the 2004 U.S. presidential election. Much of his support was generated through his campaign Web site, which became an efficient and low-cost method for disseminating information, acquiring donations, and persuading people to get involved in the campaign.

Social movements are equally successful in using the Internet for getting their messages to the public, building networks, and mobilizing supporters. The continued growth of the Internet in developing countries increasingly allows parties and movements to exploit the low cost and expansive reach of the Internet for political and social mobilization.

MILITARY MOBILIZATION

Distinct from political and social mobilization, military mobilization involves actions directed externally in an offensive or defensive manner against other countries or occupying powers. War mobilization, for example, occurs when a government prepares to engage in hostilities with another country, as in the cases of World Wars I (1914–1918) and II (1939–1945). Internal military mobilization involves the use of security forces to bring about domestic order, as in martial law, and is used when the military stages a coup d'état and assumes the role of government, usually through a junta.

Military mobilization is often explained by reference to rational choice models such as expected utility models to predict whether a government will decide to mobilize its armed forces for outright war (Small and Singer 1982, Huth and Russett 1984). The initial onset of mobilization may be used as a deterrent tactic, as in the case of saber rattling.

Rationalist explanations of military mobilization privilege the role of elite decision makers, in particular a chief executive such as a president, prime minister, or monarch and that leader's close circle of military advisors. The decision to mobilize entails a cost-benefit analysis of the presence or absence of factors that predict the likelihood of a successful strike or invasion. Material resources such as troop size and weaponry figure prominently, as do support from allies and others in the international community (e.g., the United Nations) and domestic support in democracies.

ANALYSES OF MOBILIZATION

Social scientists interested in popular social mobilization approach military and government mobilization from a different analytical perspective. Theda Skocpol (1988) and Charles Tilly (1978), for example, explain government mobilization as a response or preemptive action that is an obstacle to social and political mobilization. In other words, mobilization of the police against protestors and counterinsurgency actions by security and military forces

are types of government mobilization that commonly are referred to as repression. In this sense mobilization is interactive. The military mobilizes against the populace, which may continue its protest and insurgency or curtail its mass mobilization. In some cases the military moves to thwart elections (popular political mobilization).

Mobilization also can be analyzed by tracing the chronological evolution of different emphases on key actors and actions. Analyses of World Wars I and II focus on specific qualities of troop mobilization and the weapons arsenals of the major adversaries, including Germany, the United States, and Great Britain (Small and Singer 1982). This practice continued through the beginning of the cold war between the Soviet Union and the United States, in which mobilization also included proxy wars in Korea and Vietnam and border skirmishes. Internal military mobilization received greater attention as civilian and postcolonial governments in Latin America and Africa were toppled by military coups from the 1950s through the 1970s.

Interest in electoral mobilization developed in the 1950s with the rise of the behavioral revolution in the social sciences and studies of democratic participation in the United States and Europe. At about the same time attention to popular mass mobilization was prompted by protests in democracies such as the United States and France and insurgencies in states beset by military coups in Latin America and many postcolonial states. Beginning in the 1990s, there were attempts to explain the sources of the democratic revolutions in Eastern Europe and the former Soviet Union, along with the outcome of the first elections in those fledgling democracies.

As democracies have continued to emerge, popular mobilization is used more frequently in the social sciences to describe movements that are intended to accomplish internal political change through protest along with voting. Increasingly, social movements are vehicles that press for change through both extrainstitutional and institutional collective action (Tarrow 1994). The broader term *collective action* may come to supplant *mobilization* in electoral and social mobilization studies.

Mobilization refers to a fluid set of social and political behaviors. Mobilization may be violent (war, insurgency) or nonviolent (demonstrations) and institutionalized (voting and formal military action) or extrainstitutional (rebellions). Social, political, and military mobilization takes place in these different manifestations in both democracies and authoritarian states.

SEE ALSO *Campaigning; Cold War; Collective Action; Democracy; Military; Political Parties; Protest; Resistance; Revolution; Social Movements; Social Science; Voting*

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Claudia Dahlerus

MOBUTU, JOSEPH
1930–1997

Mobutu Sese Seko Kuku Ngbendu Waza Banga (Joseph-Désiré) was born on October 14, 1930, at Lisala in the Mongala region, located in the province of Equateur, in what was then called the Belgian Congo. The child of Alberic Gbemani and Marie Madeleine Yemo, he belonged to a family that included three sons. He was baptized on December 2, 1930, and christened Joseph-Désiré. He began study at the Primary School of Saint-Anne in Léopoldville (Kinshasa) in 1937 but was forced to leave the school after the death of his father in 1938. He recommenced his elementary and intermediary studies at the School of the Christian Brothers in Coquilathville in 1946. He was dropped from this school in 1948 for having prolonged his scholastic vacations to Léopoldville without authorization.

This expulsion marked Mobutu's departure from school and the beginning of his career in the colonial army. Colonial rule required that students dismissed from school be incorporated into the colonial army, and

Mobutu entered the army in February 1950. He was sent to the École des Cadres in Luluabourg, where he was trained as a typist. He obtained his secretarial certificate in 1952 and joined the general staff of the colonial army in Léopoldville in 1953. He was promoted to sergeant in April 1954 but quit the army in 1955. He debuted in the journalism community in 1956 as a member of the editorial committee for the journal *Actualités africaines* and became the editor-in-chief several months later. In 1958 he made his first trip to Belgium, acting as a newspaperman at the Universal Exposition of Brussels. He returned to Belgium in 1959 as a professional apprentice to the Office of Information and Public Relations for the Belgian Congo and the Inforcongo. Mobutu also took classes at the Press House and at the Institut Supérieur d'Études Sociales, both in Brussels. Numerous observers have suggested that it was during this stay in Belgium that the Belgian secret service and the U.S. Central Intelligence Agency (CIA) first recruited him.

As a former sergeant in the colonial army, Mobutu was promoted to colonel and chief of staff of the new Congolese army in July 1960 by Patrice Lumumba. In January 1961 Mobutu was promoted to general major and major chief of state of the National Congolese Army. He became lieutenant general in November 1965, then marshal in December 1982. Despite his military achievements and the legend around the battle of Kamanyola, Mobutu and the Congolese army never achieved major military victories without the help of foreign troops. This was the case with the two wars of Shaba in 1977 and 1978, won with the combined help of Morocco, Belgium, and France. Abandoned by his allies in 1996, Mobutu was unable to stop the advance of rebel troops led by Laurent Désiré Kabila with the help of Rwanda and Uganda. As a result in May 1997 Mobutu was forced to flee to Morocco, where he later died of prostate cancer.

Mobutu's adherence to the Mouvement National Congolais (MNC; National Congolese Movement) in December 1958 marked the beginning of his political career. Starting in 1960 he was charged with the MNC-Lumumba in Belgium and represented this political party from April through May 1960 at the Conference of the Economic Round Table, charged with studying the economic terms of independence in the Congo. Named major chief of state in the new Congolese army in July 1960, he attempted his first military coup with a group of Congolese university students. This takeover not only removed Lumumba from power but also provided the impetus for his eventual assassination. Mobutu's motivations for seeking to overthrow and eliminate Lumumba were twofold. In 1960 Mobutu was considered a part of the *évolués*, that is, the Congolese elite who occupied an intermediary social position between the Belgians and the majority of the Congolese people. During this period each of the Congolese évolués vied for leadership. Second, it is important to place this conflict within the context of the cold war. The Europeans and Americans accused Lumumba of being a communist, and as an agent of both the Belgian and the American secret services, Mobutu contributed to his elimination. However, Mobutu did not take supreme control but instead left power in the hands of Joseph Kasa-Vubu as head of state. On November 24, 1965, Mobutu attempted his second overthrow and became president of the republic, establishing a military dictatorship. On May 20, 1967, Mobutu created the Mouvement Populaire de la Révolution (MPR; Popular Revolutionary Movement), the state party. Starting in October 1971 a new type of nationalism was implemented to purge the country of colonialist traces. The name of the country was changed from Democratic Republic of the Congo to Zaire, and the names of the cities, avenues, and former colonial places were rechristened with African names. In 1972 the people of Zaire were invited to reject their Christian first names and adopt authentically African names. Mobutu himself rejected his Christian first name (Joseph-Désiré) and took the name of Mobutu Sese Seko Kuku Ngbendu Waza Banga.

In a demonstration of his political agenda of authenticity and for his own personal prestige, Mobutu welcomed the Muhammad Ali–George Foreman heavyweight fight or "Rumble in the Jungle" in 1974. For African Americans, this fight in Africa symbolized a type of return to their roots. According to Ali, his trip to Kinshasa established a relationship between African Americans and Africans. In preparation for this fight, Kinshasa was embellished with new public works, most notably public lighting along the capital's major avenues. The MPR declared its nationalism "authentic," that is to say, "returning" to African cultural values. It proclaimed Zaire's nonaffiliation and rejected imported ideologies, capitalism as much as communism. In the course of its evolution, the MPR agenda was systematized. Its doctrine was "authentic Zairian nationalism;" its ideology, authenticity; its platform, the return to authenticity. Together these elements constituted "Mobutism," which was defined as the teachings, the thoughts, and the actions of the president-founder. This ideological construct made Mobutu the "inventor" of society. In his function as president of the republic, he was the "manager" of the entire Congolese state. This political schematic made the president-founder the primary organ of the party and thus of the republic as a whole. In keeping with this postulate, he became the living symbol for the nation's viability and the guarantor of its continuation. His was a lifetime mandate that could not be breached except in the event of insanity. Thus the concept of a "return to authenticity" furnished sufficient basis for the legitimization of Mobutu's power.

Mobutu's reign was characterized by a systematic pillaging of the country and a lack of any infrastructure developments, such as schools, hospitals, or viable roads. According to one estimate from the World Bank, Mobutu exploited about $15 billion in public funds for family and personal expenses. He placed this money in foreign accounts, and upon his death the new Congolese authorities attempted to reclaim the money. Some banks declared that there was nothing left in any of the accounts, and other banks claimed that there had been millions of dollars rather than billions. In truth the country had become weakened by a long civil war, and the government that succeeded Mobutu was neither strong enough nor organized enough to reclaim the money. Thus when Mobutu relinquished power in 1997, he left his country in enormous debt to the International Monetary Fund and the World Bank.

SEE ALSO *Ali, Muhammad (USA); Central Intelligence Agency, U.S.; Corruption; Decolonization; Liberation Movements; Lumumba, Patrice; Neocolonialism*

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MODE

SEE *Descriptive Statistics.*

MODE, THE

Of the three measures of central tendency, the mode is the simplest to calculate but is used less often than either the mean or the median. The concept of central tendency is widely used in everyday life as well as in academic research. For any kind of information, it is important to know what describes the typical case as well as the range of variation. The mode is the only measure of central tendency appropriate for nominal or discrete variables such as gender, ethnicity, or language. *The mode* can be defined as the category with the largest number, frequency, or percentage. The mode is not the frequency but the category. So, for example, the U.S. Census Bureau data for the year 2000 indicate that approximately twenty-eight million people in the United States speak Spanish, followed by approximately two million Chinese speakers and fewer numbers who speak other languages. Thus in this example, the mode of distribution of foreign-language speakers in the United States is "Spanish." To compute the mode, list all the values (or categories) in the distribution and tally the frequencies for each value or category. The category with the most is the mode.

If a distribution has two categories with equal numbers or proportions in it, then the distribution is said to be bimodal. Suppose that, in a survey of a group of 100 college students about their political views and party affiliations, it turns out that 20 of them are Independents, 10 are Green Party affiliates, 10 are Libertarians, 30 are Democrats, and 30 are Republicans. This distribution is bimodal, with Democrats and Republicans both being modes (figure 1).

The mode can also be used for other types of variables: ordinal, interval, and ratio. However, it has a limitation that other measures of central tendency do not. It takes into account only one or two categories, the biggest ones. The median, or fiftieth percentile, cuts in half a distribution that is ordered from low to high or high to low, but extreme values at either end of the distribution do not affect the median. The mean takes each and every value into consideration. Extreme values will affect the mean, making it higher than the median if the extreme values are at the high end of the distribution (such as Bill Gates's income in a distribution of average Americans) or lower than the median if the values are on the low end (perhaps a homeless person) of the distribution. The mode may be located anywhere in the distribution.

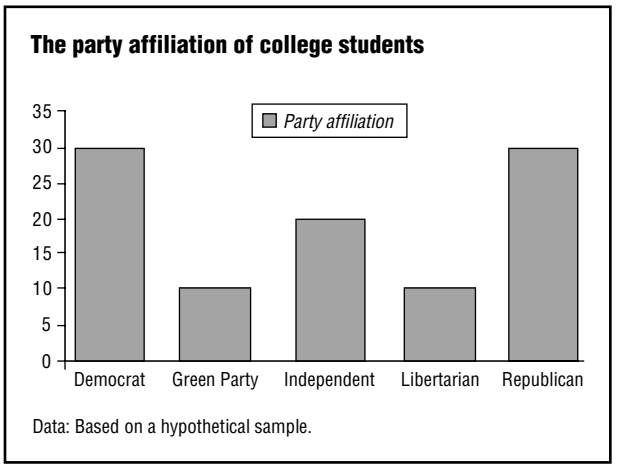

Figure 1

Occasionally researchers report a mode for grouped frequency distributions or for variables that may be collected at the ratio level, such as years of education, and collapsed into categories such as less than high school, high school, some college, and so on. If a researcher were to ask eleven people how many years of schooling they completed and got the following results, here is how the researcher could proceed.

Jaime	14
Gina	20
Jorge	10
Susana	11
Carlos	16
Angela	9
Cindy	12
Roberto	12
Gabby	13
Mando	16
Diana	16

First, the data indicate that there are three people with 16 years of education. There are more respondents in that educational category, so 16 years is the mode. Next, if the years are arranged in order, the result is: 9, 10, 11, 12, 12, 13, 14, 16, 16, 16, 20. The sixth number (13, corresponding to Gabby) is the median, because there are five cases on either side. To obtain the mean, all the years are added up (149) and divided by 11. That gives a mean of 13.5. If the years of education were collapsed into a table that showed categories, some information would be lost, but it would present the data in a way most people think about education.

Education Level	*Frequency*
< High School	3
High School	2
Some College	2
College or Higher	4

Judgments would have to be made, though, and in some cases that might be tricky. One would have to assume that people who reported fewer than 12 years of education did not skip any grades and that all people who reported 12 years actually received a high school diploma. Unless the question were asked, one would not know if someone obtained a GED. Similarly, one would have to assume that those people who listed 16 years of education received a college degree. The mode in this case would be college or higher.

SEE ALSO *Central Tendencies, Measures of; Mean, The; Standard Deviation; Statistics*

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MODE OF PRODUCTION

The term *mode of production* derives from the work of Karl Marx (1818–1883), and the concept has played a significant role in subsequent Marxist theory. Mode of production refers to the varied ways that human beings collectively produce the means of subsistence in order to survive and enhance social being. Marx believed that human history could be characterized by the dominant modes of production. In this sense the term refers to a specific economic system. Marx was interested in doing two things: providing an analytical framework for defining specific modes of production and locating those modes in terms of a theory of historical development. That being said, he never developed these two points in a consistent or systematic manner, and thus there are both ambiguities and contradictions contained in his writings (not unlike his treatment of social class). Nonetheless, the basic contours of what he was getting at are clear.

RELATIONS AND FORCES OF PRODUCTION

Any particular mode of production is the result of the distinctive articulation of a system that involves specific relations of production and forces of production. The relations of production define specific social relations predicated on the mode of appropriation of surplus labor and a specific institutionalized practice concerned with the distribution of the means of production. Social relations are primarily defined in terms of social classes, which form the basis of the structural system that regulates human relationships. These relations become codified in law and in more general terms legitimated by the hegemonic ideology. Forces of production define the labor process itself wherein raw materials are transformed into determinate products. Factors that affect the forces of production include raw materials, the personal activity of people (labor), and the instruments used to transform raw materials into products. Of particular note in assessing the level of development of the forces of production is the

nature of the technologies, machines, and scientific advances being deployed in the productive process.

While the forces of production and relations of production together constitute the economic structural base of a particular mode of production, the political and ideological institutional apparatus shapes its superstructure. One of the enduring problems in deciphering Marx's understanding of the relationship between the economic base and the superstructure is that at times he lends credence to both those who positively depict his theory of economic determinism and those who critically accuse it. These internal contradictions are reflected in the subsequent historical development of Western Marxism, where, for example, the leaders of the Third International offer a decidedly economistic version of Marxism while Antonio Gramsci (1891–1937), Georg Lukács (1885–1971), and members of the Frankfurt School accord considerable autonomy to culture. Marx devoted considerably more attention throughout his work to the economic base and comparatively less attention to the superstructure, which accounts in part for the difficulty in deciphering how he understood the relationship between the two. Despite these rather different emphases, few would object to Louis Althusser's (1918–1990) position, which accords relative autonomy to the superstructure while arguing that in the last instance it is economic factors that are most determinative in either perpetuating any particular mode of production or setting the stage for the emergence of a new mode of production.

HISTORY AND STAGES OF DEVELOPMENT

Marx used the concept of modes of production as a classificatory tool to describe and differentiate various economic systems in historical terms. He also used it, problematically as it turns out, to account for historical materialism's dialectical stages of development. As with his analyses of class structure, he did not offer a consistent portrait of the number of modes of production that can be found throughout human history. He employs different terminology in different passages and it is not always clear whether some terms are meant to be synonyms for, subsets of, or qualitatively distinct from other terms. Thus, one can find the following adjectives used at various places to describe modes of production: communal, simple property, independent peasant, state, slave, ancient, feudal, capitalist, socialist, and communist. That being said, most subsequent commentators have identified four modes of production that are the most developed in Marxist thought: Asiatic, slavery/ancient, feudalism, and capitalism. These are examples of class societies and as such need to be located in terms of Marx's threefold schema of history, which involves the movement from the pre-class societies characteristic of the earliest human societies that existed before recorded history to the class societies of which these four are the most significant, and leading in the future (whether Marx thought this was inevitable or merely a potentiality is open for debate) to a post-class society that was variously identified as socialism or communism. Of particular note is the fact that the Asiatic mode of production stands not simply geographically apart from the other types, which can be identified with stages of European history, but as a distinct civilization. Marx thought that the Asiatic mode existed in societies that were historically static, lacking the class consciousness and conflict necessary for development to occur. External factors would be required to effect change.

Marx's primary focus was on class societies, and in particular on capitalism. Indeed, it is fair to say that his major preoccupation, certainly during the mature period of his life that commenced when he settled in London, was on understanding the particular characteristics and contradictions of the capitalist mode of production. On the other hand, he had comparatively little to say about pre-class and post-class societies. Although both modes of production can be characterized as communistic, he differentiated them, referring to the former as primitive communism. The post-class mode of production he wished for did not entail a return to the former state of communism; rather, it represented a qualitatively new mode of production, but one that was indebted to the unleashing of industrial productive forces brought about by capitalism. In other words, in the general thrust of his work, it was clear that communism was only possible once the productive forces of capitalism had been unleashed and developed. For Marx, the difference between the two was that pre-class societies were defined in terms of an undifferentiated unity, while the communism of the future would find a new form of societal unity predicated on differentiation. What he had in mind was something akin to Émile Durkheim's (1858–1917) portrayal of the division of labor in society, with pre-class society being an instance of mechanical solidarity and post-class society a case of organic solidarity.

Marx, the advocate of communism, wrote very little about what such a mode of production would look like, contending that its particular contours would be the product of those who create it. His unwillingness to describe communism, aside from stressing that it entailed abolishing private ownership of the means of production, was in part intended to contrast his work to that of those he dubbed "utopian socialists." He faulted them for failing to see the historical connections between capitalism and communism and for simultaneously being inattentive to the significance of social classes and to class conflict.

In various works, Marx discusses the importance of class divisions in the Asiatic, ancient, and feudal modes of production. Marx accorded a privileged role to social classes, and in so doing downplayed the significance of other key divisions, such as gender and race. While any specific mode of production would be characterized by an ensemble of different social classes, in all class societies, two would be central: the economically dominant class that wields control and ownership of the means of production, and the class that most directly confronts the dominant class in an antagonistic relationship. Thus, at the introduction to *The Communist Manifesto* (1848) Marx and Engels depict all of (recorded) history as entailing class conflict, pitting master against slave in the ancient mode of production, lord against serf in the feudal mode, and capitalist or bourgeoisie against the worker or proletariat in capitalism.

Marx attempted, with rather limited success, to explain the transition from one mode of production to another. He saw two factors at work—the development of the forces of production and class conflict—but they are not adequately integrated into a coherent theory of social change. This is evident in his treatment of the transition from feudalism to capitalism, which generally fails to take into account the class struggle between the two key classes involved. Instead, he discusses such matters as population growth, the advent of European colonialism, and new techniques of warfare. Quite correctly, peasant revolts are not seen as a significant factor in the demise of feudalism. Neither is the development of productive forces.

CAPITALISM

The primary focus for Marx was capitalism itself, and he was less interested in explaining its rise than in offering an account of how it worked and where it was headed. In this regard, he argued that built into capitalist economies is a necessity on the part of capitalists to constantly revolutionize the means of production. In this regard, he viewed capitalism as a progressive, and indeed revolutionary, economic system. At the same time, however, it could only function by exploiting and alienating the worker, thereby creating an inherently conflict-ridden relationship. In this mode of production, the worker was not only perceived as oppressed by the capitalist, but was also seen as an agent of the social change that could lead to the emergence of the communist mode of production. This would occur only if a class-conscious proletariat organized successfully to challenge and overthrow the domination of capital.

As with his understanding of the dialectical character of historical change, Marx's claim that the proletariat was a universal class derived from his reinterpretation of Hegelian theory. According to Marx, what made the proletariat a universal class was that it had no interest in preserving itself as a class, and as such it had the capacity to act in the interests of society as a whole. When the proletariat acts in its own self-interest in challenging the capitalist class, it is not to strengthen its position within capitalism, but to eliminate itself as a class by eliminating the socially antagonistic or contradictory class relations that characterize capitalism.

More than a century after Marx's death, the emergence of a classless society has not been realized. Attempts to forge classless economic systems that arose out of societies that at the moment of revolution were not capitalist—Russia and China—failed in that attempt. Whether this means that Marx, despite his own efforts to resist it, actually succumbed to utopianism is an open question. What is clear is that at this particular historical juncture capitalism remains hegemonic. That being said, it is too early to determine whether the "new class" (composed of managers, professionals, and the intelligentsia) will challenge its hegemony and whether capitalism's crisis tendencies can in the long run be overcome.

SEE ALSO *Althusser, Louis; Anderson, Perry; Bourgeoisie; Capitalist Mode of Production; Class; Class Conflict; Conjunctures, Transitional; Exploitation; Feudal Mode of Production; Forces of Production; Frankfurt School; Gramsci, Antonio; Lukacs, Georg; Managerial Class; Marx, Karl; Marxism; New Class, The; Slave Mode of Production*

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Peter Kivisto

MODEL MINORITY

On January 9, 1966, sociologist William Petersen published "Success Story: Japanese American Style" in the

New York Times Magazine. Petersen asserted that by dint of their cultural resilience, Japanese Americans had saved themselves from the fate of "problem minorities." A few months later, *US News and World Report* weighed in with an article about Chinese Americans entitled "Success Story of One Minority in the US" (December 26, 1966). This latter article opened with an explicit comparison between different minority groups: "At a time when it is being proposed that hundreds of billions be spent to uplift Negroes and other minorities, the nation's 300,000 Chinese Americans are moving ahead on their own." As with Petersen's article, this one pointed to the importance of family values and Chinese cultural traditions, for "[s]till being taught in Chinatown is the old idea that people should depend on their own efforts—not a welfare check—in order to reach America's 'Promised Land.'" In 1971 *Newsweek* published "Success Story: Outwhiting the Whites" (June 21), which called to task not only non-Asian minorities, but also white Americans for their failure to keep up with Asian immigrants into the United States, whose cultural traditions more closely matched those that had historically pushed Northwestern Europe into world dominance. Not for nothing did *Fortune* label Asian Americans a "Super Minority" (November 1986).

In the century that preceded Petersen's article little augured the birth of the "model minority" stereotype. White supremacists routinely reviled Asians, who were seen alternatively as deviant (opium smokers and sexual predators) or as coolies (who would lower the wages of white Free Labor). In sum, as Lothrop Stoddard, the author of *The Rising Tide of Color against White Supremacy*, put it in 1920, the "obviously dangerous Oriental" had to be barred from entry into the United States because Asians posed "the greatest threat to Western Civilization and the White Race." This view was held not only by white supremacist elites, it was also the position of the leading trade union association (the American Federation of Labor or AFL) and its leader (Samuel Gompers). In 1882 the U.S. Congress passed the Chinese Exclusion Act, which was defended in 1902 by Gompers in a coauthored book, *Some Reasons for Chinese Exclusion: Meat vs. Rice; American Manhood against Asiatic Coolieism: Which Shall Survive?* Originally published by the AFL, the book was republished a few years later by the Asiatic Exclusion League. In 1905, at its 25th Annual Convention, the AFL argued that the "American workingman" had enough to deal with "without being required to meet the enervating, killing, underselling and under-living competition of that nerveless, wantless people, the Chinese." Such being the historical attitude toward the Chinese and Japanese, it is not a surprise that both peoples faced immense immigration restrictions after 1924 and that the latter were interned during World War II. From the birth of the American Republic to 1966, Asia's people represented a Yellow Peril, needed for its labor, but reviled.

What changed, then, in the mid-1960s? Between 1964 and 1965, the U.S. Congress passed three central pieces of legislation. After a century-long struggle, the civil rights movement achieved partial victories with the passage of the Civil Rights Act (1964) and the Voting Rights Act (1965). Both laws cut down Jim Crow segregation, but neither promised the fullness of freedom demanded by the movement. In his important *Report on the Black Family* (1965), President Johnson's assistant Daniel Patrick Moynihan registered the manner in which the movement digested its victory. Quoting the sociologist and Moynihan associate Nathan Glazer, the report asserted that the "demand for economic equality is now not the demand for equal opportunities for the equally qualified; it is now the demand for equality of economic results." Rather than simply seeking equality of opportunity, the disenfranchised had begun to demand "equality of results, of outcomes." A move in this direction threatened to undermine the hierarchy of class and the justification for its persistence in a liberal democracy. It would inevitably lead to uncomfortable questions: What makes some rich families remain rich, and why is it that the bulk of rich families are also white?

The third Congressional bill, the Immigration Act of 1965, enabled the emergence of a novel theory of persistent inequality. The U.S. Congress reversed the prohibitions against Asian immigration, and now welcomed thousands of people who had received advanced technical training in places such as India and China. The "state selection" of the 1965 Act that allowed only highly educated migrants to enter the country provoked a reconsideration of Asians on "natural selection" lines: If it was state policy that transformed the demography of Asian America, it was a stereotype of their culture that was used to account for their success. The new "model minority," the Asians, became a useful bludgeon against the "problem minorities." Inequalities within the Asian American community and racism faced by Asians disappeared from the frame of reference, just as the putative recalcitrance of Latinos and blacks became part of the Asian American story. In this way the myth of the "model minority" aided the perpetuation of racism in the post–civil rights era.

Asians were not the only ones represented as a "model minority." In December 1964 Nathan Glazer published an essay in *Commentary* entitled "Negroes and Jews: The New Challenge to Pluralism." Noting the "shift of Negro demands from abstract equality to group consideration, from color-blind to color-conscious," Glazer argued that the new demands of the civil rights movement are anathema not only to American values, but also to "model minorities" like the American Jews. Long reviled by the

U.S. power structure, Jews, like Asians, became acceptable as beneficiaries of the post–civil rights form of racism that lifted up the "model minorities" as a weapon against the "problem minorities." When conflict over community schools erupted in New York City in 1967, the concept of the exemplary Jewish American was used in much the same way as notions of the Asian model minority would later be used. Black and Puerto Rican students demanded to be taught not only by "white" teachers, but also by black and Puerto Rican teachers. As it turned out the "white" teachers in Ocean Hill-Brownsville were Jewish Americans, who in turn became pawns in a reconfiguration of Jewish liberalism that saw it shift toward neoconservatism.

In his 1964 article, Glazer argued that Jewish Americans benefit as the "model minority" because their interests "coincide with the new rational approaches to the distribution of rewards." In other words, so long as educational institutions are equally endowed, justice can be achieved through a color-blind system based on merit. Those minorities that can do well in such a system, because of family cultures that promote educational achievement, are model. In this conception, all historical advantages and disadvantages (such as those derived from immigration policy) are ignored.

Three ideological streams work together to absolve U.S. society from the perpetuation of inequality: multiculturalism (which promotes bureaucratic diversity and claims to value all "cultures" equally), colorblindness (which promotes individual advancement through merit), and the notion of the "model minority" (which demonstrates that some cultures are superior after all, and it is for this reason that certain "races" succeed in a colorblind merit system). Together these enable the reproduction of inequality and the perpetuation of the American ideology of "fairness" and "justice." The "model minority" myth, therefore, plays a crucial role in post–civil rights racism.

Of course, the social power of the "model minority" myth was strengthened when upwardly mobile Asians and Jews adopted its tenets to further their own advancement. As opportunities opened up, those with saleable skills and with modest amounts of capital mobilized the constellation of ideas around the myth to gain some leverage over a political economy still shaped by white supremacist cultural expectations. In other words, the myth was largely adopted by upwardly mobile sections of minority groups, who found it valuable in gaining entry into the higher rungs of the class structure. Scholars of those who are not able to ascend the ladder afford us with empirical proof of the fallacy of the model minority myth. They also demonstrate the ways in which the myth occludes the existence of working class Asians and Jews (Stacey J. Lee 1996). The myth also prevents us from fully grasping the interaction between Asian and Jewish small merchants and the African American and Latino working poor (Jennifer Lee 2002; Kim 2000; Prashad 2001).

SEE ALSO *African Americans; Assimilation; Civil Rights Movement, U.S.; Equal Opportunity; Equality; Glazer, Nathan; Hierarchy; Immigration; Jews; Jingoism; Migration; Minorities; Mobility; Mobility, Lateral; Moynihan Report; Moynihan, Daniel Patrick; Multiculturalism; Nativism; Orientalism; Race-Blind Policies; Racism; Stereotypes; Stratification*

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Vijay Prashad

MODEL SELECTION TESTS

Statistical inference and forecasting, widely used in all of the sciences, are usually based on a statistical model. Yet, the specification of an appropriate statistical model is a difficult problem that has yet to be satisfactorily solved. Model building is as much an art as a science. All statisti-

cal models are necessarily false, and their usefulness is their ability to provide the best approximation to the "true" model. A summary of the complementary approaches used in this important problem of model specification is provided below.

THEORY AND SAMPLE DATA

The *conceptual approach* is based on the use of subject matter theory in the specification of a model. However, there may be many competing theories leading to many alternative models. The many different macroeconomic models are an example. In other situations, theory may provide little, if any, information on model specification. For example, dynamic modeling theory typically provides little information on the dynamic relations among variables.

Another source of model specification is the data. Previously unknown relations between variables can be suggested from the data. An example is given by the Phillips curve relation in macroeconomics.

STATISTICAL APPROACHES: HYPOTHESIS TESTING

The problem of model specification can also be addressed using statistical hypothesis testing. In this approach, the comparisons are generally between two competing models. If the two models are nested—that is, one model can be obtained as a special case of the other by specifying appropriate restrictions—standard hypothesis tests can be used to choose between the two models. Although easy to implement, this approach can be problematic. First, the significance level of the test is an arbitrary choice that can affect the conclusion. Also, using the conventional 5 percent level of significance, the null hypothesis has an advantage over the alternative hypothesis.

In situations where two models are nonnested, an artificial compound model can be formulated that includes both rival models as special cases, and then the above nested testing procedure can be applied. Common examples include the *J*-test of Russell Davidson and James MacKinnon (1981) and the D. R. Cox test (1961). Both the *J* and Cox tests can be generalized to situations where there are more than two models. However, these tests include the additional possibility that one accepts or rejects both models. In the hypothesis testing approaches, the order of testing is important and can and usually does affect the final outcome. Thus, two different researchers with exactly the same models and data can arrive at different conclusions based on different orders of testing and significance levels.

SELECTION CRITERIA

An alternative statistical approach to model specification is to construct a metric M, which measures the deviation of the data from the model. Model selection criteria have been devised to help choose the "best" model among a number of alternative models on the basis of the sample information. Both nested and nonnested models can be compared, and all models are treated symmetrically. Model simplicity and goodness of fit are both taken into account in choosing a "best" model. The principle of parsimony is an important requirement in modeling and forecasting. It is only worthwhile to adopt a more complex model if that model does a substantially better job of explaining the data than some simpler model.

The most commonly used selection criteria are the *Akaike information criteria* (AIC) introduced by Hirotugu Akaike (1969); the *Schwarz information criteria*, also known as the *Bayesian information criteria* (BIC), introduced by Gideon Schwarz (1978); and the *final prediction error criteria* (FPE), introduced by Akaike (1970). All three criteria, along with the conventional adjusted R-squared criteria (written as a function of the S^2), can be written as;

$$S^2 = \left(\frac{SSE}{T}\right)\left(\frac{T}{T-k}\right) \tag{1}$$

$$\text{AIC} = \left(\frac{SSE}{T}\right) e^{2k/T} \tag{2}$$

$$\text{BIC} = \left(\frac{SSE}{T}\right) T^{k/T} \tag{3}$$

$$\text{FPE} = \left(\frac{SSE}{T}\right)\left(\frac{T+k}{T-k}\right) \tag{4}$$

$$\bar{R}^2 = 1 - ((T-1)(S^2)/\text{TSS}) \tag{5}$$

where *SSE* = the sum of squared residuals in the sample, *TSS* = the total sum of squares of the dependent variable *Y*, *T* = the sample size, and *K* = the number of parameters in the model.

The goal is to choose the model that minimizes the chosen criteria. The difference among the criteria is in the penalty factor, which multiplies the common goodness-of-fit term *SSE*/*T*. This penalty factor for model complexity is a function of the number of parameters *k* and sample size *T*. These criteria can be used for all data types; however, the sample period *T* must be the same for all models considered. In realistic samples ($T > 8$), the ranking of these criteria is $S^2 < \text{FPE} < \text{AIC} < \text{BIC}$. Thus, BIC penalizes complex models the most, while the adjusted R-squared statistic penalizes complex models the least. Unlike the other three criteria, the adjusted R-squared statistic is not based on the explicit consideration of a loss

function and is a poor choice, leading to models that are too complex.

Other selection criteria are available based on similar theoretical arguments, and in theory one can go on inventing new criteria indefinitely using this approach. If all the criteria achieve a minimum for the same model, then we have a unique choice for the "best" model. In situations where the criteria choose different models, one must proceed with caution. Of the four criteria described above, only the BIC criterion is consistent. For the BIC criteria, the probability of choosing the best approximation to the true model approaches 1 as the sample size becomes infinitely large. The other criteria will tend to choose models that are too complex in large samples. However, small sample property considerations imply that the BIC criterion tends to choose models that are overly simplistic in small samples. Both Monte Carlo evidence and small sample considerations have shown that the AIC is a better choice than the SIC. The amount by which the model selection criterion differs across models has no meaning, thus any monotonic transformation can also be used. A common choice is the logarithmic transformation. Generalized versions of these selection criteria are also available to compare multivariate models.

An alternative approach is to split the data into an in-sample and out-of-sample period and evaluate and compare the out-of-sample forecasting performance of the different models. This approach provides an independent check on the specification of the model suggested by the in-sample period. These different approaches to model selection serve only as an aid. Recall that one is choosing the best model in the set of models considered; thus a better model may exist outside of those considered. Also, in some situations it may be advisable to carry more than one model forward.

SEE ALSO *Distribution, Normal; Hypothesis and Hypothesis Testing; Instrumental Variables Regression; Loss Functions; Monte Carlo Experiments; Properties of Estimators (Asymptotic and Exact); Regression; Specification Error*

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William Veloce

MODELS AND MODELING

Social sciences rely increasingly on modeling as a result of their mathematization, the overall computerization of science, and the increase of available data. Once dubbed the "hermeneutic sciences," the social sciences now resemble more than before the natural sciences, in which model building, testing, and comparison occupy a central role. In this development, economists have undoubtedly been pioneers among the social scientists: Since World War II, model building has become the main practice of economists. What is more, the various modeling methods adopted and developed by economists have disseminated to other social sciences. Especially, political scientists have been inspired by the rational-choice style of modeling and the associated mathematical techniques used by economists (see Morton 1999). Sociologists have, however, preferred statistical modeling, being rather skeptical about modeling social phenomena in abstract mathematical terms (Edling 2002).

Interestingly, although social scientists use in their modeling activities the same kinds of mathematical and statistical tools that natural scientists use, they often see models in a different light than do natural scientists. Whereas for social scientists models tend to be highly abstract and even unrealistic depictions of their target systems, both natural scientists and philosophers have tended to appreciate the concreteness of models as opposed to the theory. This contrast between the attitudes of social and natural scientists is partly explained by the fact that with models, social scientists often refer to what they call "formal" or "mathematical models," which seem hopelessly plain and simple in comparison to the social phenomena they aim to explain. Although by "formal models" social scientists usually mean "mathematical models," a model need not be mathematical to be formal. Any model that is presented symbolically or diagrammatically, allowing one to manipulate the model in order to obtain different results or predictions, can be regarded as formal. A good example of formal but not mathematical models is provided by chemical formulas (such as H_2O for water).

Several philosophers, especially adherents to the semantic conception of theories (see below), distinguish between "abstract models" and the mathematical means used to express them. From their point of view, a set of mathematical equations, that is, what frequently is called a "mathematical model" by social scientists, actually should not be regarded as a model, but rather the abstract entity to which these equations refer.

Generally speaking, the most conspicuous feature of scientific models is perhaps the variety of the forms and functions they may take in scientific endeavors. The things called "models" in science make up a truly heterogeneous group: They can be diagrams, physical three-dimensional things, mathematical equations, computer simulations, model organisms, or even laboratory populations. Apart from explanation and prediction, models are used for heuristic purposes and as a tool for theory construction. Moreover, it is typical of modeling that models are often employed to explore the implications, dynamics, or internal consistency of multiple theoretical assumptions. Models can also be used as "proofs" of various theoretical possibilities.

Examples of well-known theoretical models in economics and political science include the Heckscher-Ohlin-Samuelson model, which is a general equilibrium mathematical model of international trade; the Hicks-Hansen IS-LM model, which summarizes some major features of Keynesian macroeconomics with the help of two curves; the Edgeworth-Bowley diagram, which is a geometric device defining efficient allocations in exchange situations; and the Hotelling-Downs model of two-party competition, which predicts that candidates converge to the policy preferred by the median voter. What is remarkable about these models (and is reflected, in fact, by their names) are the long histories during which they have been developed and extended by several authors. These examples exemplify also other typical features of models: their didactic value, for which the IS-LM model is especially famous, and the applicability of models as general templates to very different kinds of problems. For instance, the Edgeworth-Bowley diagram has been used for analyzing various kinds of situations in economics: consumers in exchange, production decisions of firms, welfare questions, and so on. The Hotelling-Downs model has in turn traveled from economics to political science, in which instance the original geographical dimension of the model has become merely metaphoric.

Theoretical models in the social sciences are tested either through experimentation or by estimating them by statistical methods. Often, though, the empirical models in the social sciences are based on informal theoretical reasoning, not having a formal model as a starting point. Apart from testing, integrating data, and guiding further observation and theory construction, empirical quantitative models are also constructed for predictive purposes. The statistical techniques used for predictive analysis can be grouped into different regression techniques widely used by econometrics and machine-learning approaches that originate from the research on artificial intelligence. Sharing characteristics of both theory and experiment, computer simulation offers an alternative to traditional mathematical modeling in that it allows theoreticians to experiment with more complex theoretical models than what is possible if the models are required to be analytically solvable. Moreover, the possibility provided by multiagent simulation models of exploring the emergence of macro-level behaviors from the interactions of micro-level entities in some environmental contexts seems attractive from the social science point of view.

Given the multiplicity of models and their uses in science, it has been difficult to explicate what kind of entities models are and how they give us knowledge. Two different philosophical approaches to models can be discerned in the literature. On one hand, there have been attempts to establish, within a formal framework, what scientific models are: The earlier, syntactic view of theories and the prevailing semantic approach to models are both attempts of this kind. According to the syntactic view, the task of a model was to provide an interpretation to a skeletal axiomatized theory "in terms of more or less familiar conceptual or visualizable materials" (Nagel 1961, p. 90). The syntactic view was contested by the semantic conception of theories, which replaced the syntactic formulation of a theory with a theory's models. According to the semantic conception, theories are not assemblages of propositions or statements, but rather assemblages of models, which are taken to be structures that are defined by the use of suitable logico-mathematical language.

On the other hand, issues such as scientific reasoning, scientific discovery, and theory change have prompted philosophers to focus on the role and place of models in scientific practice (see Hesse 1966). Continuing this line of work, Margaret Morrison and Mary Morgan (1999) have suggested that models should be understood as investigative instruments that mediate between theory and data because of their autonomous nature. The autonomousness of models is due to their heterogeneous construction: Apart from theoretical notions and empirical data, they may contain also analogies, mathematical techniques, stylized facts, and policy views (Boumans 1999). As Morrison and Morgan stress that through the work of constructing and manipulating models we learn from them, their approach provides a starting point for treating models also as productive things, instead of attributing their cognitive value only to representation (Knuuttila 2005).

Indeed, the epistemic value of models has traditionally been assigned to representation. It has been claimed that models give us knowledge to the extent that they represent accurately their target phenomena. This has proven problematical, especially for the social sciences, because we usually already have some kind of preunderstanding of the social reality—which may not match with the theoretical representations of it. Of all the social sciences, economics, whose mathematization started already in the nineteenth century, has been most ridden with this problem. The most persistent philosophical problem of economics has concerned the "realisticness" of economic theories and their basic assumptions. The issue has been whether such assumptions as utility maximization, perfect information, and perfectly competitive markets "are ('too') unrealistic or ('sufficiently') realistic," or whether that should matter at all (Mäki 1994, p. 236). Famously, the 1974 Nobel prize winner in economics, Milton Friedman, has claimed that the "unrealism" of the assumptions of economics does not matter because the goal of science is the development of hypotheses that give "valid and meaningful" predictions about phenomena (Friedman 1953). To economists themselves, however, the basic assumptions do seem to matter—being a subject of continued discussion—and thus the question is how to defend them.

Uskali Mäki has suggested that economists practice a "method of isolation," in which a set of elements is theoretically removed from the influence of other elements in a given situation with the help of idealizing assumptions (Mäki 1992). Consequently, a theory may be true even if it is partial and involves idealizations, if it has succeeded in representing the workings of the isolated causal factors in a right way. Robert Sugden (2002) denies that economic models are made by abstracting key features of the real world. He treats economic models as (more or less) "credible worlds" whose relation to the real world is established by inferential reasoning. Moreover, he claims that we compare model systems to real systems in much the same way as we compare two real systems to each other. What the two approaches have in common is that they both conceive of economic modeling as devising plausible causal mechanisms that might produce the observable phenomena.

SEE ALSO *Economics; Friedman, Milton; Game Theory; Heckscher-Ohlin-Samuelson Model; Ideal Type; IS-LM Model; Mathematics in the Social Sciences; Mundell-Fleming Model; Philosophy of Science; Positivism; Realism; Samuelson, Paul A.; Social Science*

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Tarja Knuuttila

MODERATES

In the broadest and most general usage, moderates are defined by their opposition to radicalism, extremism, and fanaticism. Moderates value calm, continuity, consensus, tolerance, and stability. They are satisfied with the present condition of society but may agree that specific areas are in need of improvement. Proposals for change disruptive to society, though, are to be avoided. Persons who take the middle position in politics do not consider themselves to be either left or right on the political spectrum, although some may identify themselves as either moderate conservatives or moderate liberals.

Called variously the political center, the middle-of-the-road, the mainstream, the middling way, or the *juste milieu*, moderation is an inherently provisional and problematical category of thought. Moderates profess no specific body of philosophical principles and pride themselves on making decisions based solely on pragmatic considerations. Their political positions, hence, tend to

follow the shifts in the political culture. A moderate stance on universal health care in socialist Sweden, for example, may be rejected as extreme in the more free market–oriented United States. Complicating even further the problem of definition is the fact that no intellectual histories of moderate thought, comparable to Russell Kirk's *The Conservative Mind* (1953) or Kenneth Minogue's *The Liberal Mind* (1963), have been written.

In moral thought, the moderate pursuit of one's pleasures is generally hailed as a virtue. Since Homeric times, the axiom "everything in moderation, nothing in excess" was a cardinal principle in Greek moral thinking. The "golden mean," Aristotle (384–322 BCE) taught, should be the guiding standard for one's conduct. The ethical life, he explained in his *Nicomachean Ethics*, "is a mean between two vices, the one involving excess, the other deficiency" ([c. 350 BCE] 1908, bk. 2, chap. 9). He did not believe, it must be stressed, that the individual should be average or mediocre nor split the difference between two competing vices. Nor did he imply that the mean is always the best. In calculating the mean, persons must consider what is appropriate for them within a particular situation. For example, a ten-dollar donation to a worthy cause might be considered too much for a poor person, but not enough for a wealthy individual. To achieve "what is intermediate in passions and in actions," Aristotle admitted, "is no easy task." Any person "can get angry—that is easy—or give or spend money; but to do this to the right person, to the right extent, at the right time, with the right motive, and in the right way, that is not for every one, nor is it easy; wherefore goodness is both rare and laudable and noble" (bk. 2, chap. 9). Moral virtues are not so much taught or learned as acquired by proper upbringing. Society itself amounts to a vast education project to teach its members how to live lives in the middle. Encouraged by the presence of good models and shared expectations, the *Spoudaios*, Aristotle's person of moral excellence, habitually chooses to pursue his or her pleasures in moderation.

Moderation in politics, on the other hand, is not always universally praised nor rewarded with success. Political parties attempting to stake out moderate positions during times of revolutionary upheaval often suffer at the hands of extremist groups. The Girondins and Feuillants, for example, voiced moderate republican views during the French Revolution (1789–1799) but were brutally suppressed during the bloody Reign of Terror by their more radical adversaries, the Jacobins. The Mensheviks envisioned a moderate bourgeois democratic revolution in Russia in which they would take part in a democratically elected socialist government. They were opposed by the more radical V. I. Lenin (1870–1924) and the Bolsheviks, who imposed the "dictatorship of the proletariat." After losing a power struggle for control of the party, the Mensheviks were declared illegal in 1921. Its members either fled Russia or were liquidated. As Vincent E. Starzinger notes in his *The Politics of the Center*, the politics of moderation "is least realistic where it is most relevant, and most realistic where it is least relevant." In societies torn by extreme political divisions, "the center will very likely be pulverized from both sides and driven to futile negativism. On the other hand, commitment to the center is likely to be a fairly realistic enterprise where the political left and right both stand within the same value consensus" (1991, p. 16).

Moderates are often condemned by their critics as trimmers, opportunists, or persons who lack the courage of their convictions. Leftists denounce moderates as defenders of the status quo who impede beneficial reforms for the poor and oppressed. Right-wingers, for their part, think that moderates and liberals are ideologically indistinguishable. Stung by relentless accusations of extremism during his campaign for the Republican presidential nomination, Senator Barry Goldwater (1909–1998) questioned whether moderation is always the best policy: "Extremism in the defense of liberty is no vice," the conservative candidate famously declared in his nomination speech to the 1964 Republican National Convention, "and let me remind you also that moderation in the pursuit of justice is no virtue."

Embracing extremism, though, is not generally regarded as a winning strategy in American politics. Especially in national and statewide elections, successful candidates typically tack toward the political middle. The Framers consciously designed the American Constitution to favor moderate outcomes. After noting in "Federalist No. 10" (1787) that the greatest danger to stability and order is "the violence of faction," James Madison (1751–1836) argued that among the many advantages of the Constitution were the institutional mechanisms it provides for controlling the harmful effects of factional strife. Madison hailed a system of functional checks and balances, federalism, and representative government as salutary remedies "for the diseases most incident to republican government." Madison favored an extended commercial republic covering a vast territory and population. "Extend the sphere," he argued, "and you take in a greater variety of parties and interests; you make it less probable that a majority of the whole will have a common motive to invade the rights of other citizens," or, in the event that such a motive exists, sufficient impediments would exist to block its realization.

Moderation, then, is not an ideology but a mentality, a temperament, a frame of mind, a strategy that one brings to the theory and practice of politics.

SEE ALSO *Left and Right; Philosophy, Political*

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W. Wesley McDonald

MODERNISM

It is helpful to distinguish between "modernism" and that which is "modern." What is known as "modern" is that which is in step with the times, or not so far out of step as to have vanished from cultural memory. A list of what is "modern" would surely include automobiles and paved roads, photography, electric lights, travel by rail and by air, mass transit and mass production, the telegraph and telephone and television, motion pictures, recorded sound, and so on, whereas a butter churn or reading by candlelight would not qualify.

Most of what is known as "modern" today had its beginnings in one brief historical period of Western culture. Although there is some dispute over exact dates, the "modern" period is generally held to extend from the third quarter of the nineteenth century to the beginning of World War II. During this timeframe there were overwhelming changes in American lifestyles. From the landing at Plymouth Rock until the 1920s, for instance, a majority of Americans had taken their living in one form or another from the land. By 1920 this had changed as American society became more industrialized and moved away from agrarian culture, changing into a mercantile and commercial society, not to mention a metropolitan one. The 1920 census reported that for the first time in history, more Americans were living in urban environments than were living beyond them. The census suggested as well that a new strata of society was well along in its making. A "modern" middle class was developing as people left the land and came to work in the industries of major metropolitan areas, and this was an important modification economically because they were one and all consumers. The majority of Americans were earning their livings from some form of mass manufacture, and their buying power was likely to increase because higher wages were available to those able to acquire the greatest industrial skills. This, in turn, provided the chance to rise out of the circumstances in which one was born, not just for a few, but for the majority. Never before had a promise of upward mobility been so widely extended. Never had the American Dream seemed so American.

But it was coming at a price. Urban life was isolating. Factory work was unfulfilling. Nothing seemed sacred anymore. The result was a greater level of unhappiness.

The term *modernism* refers to the responses to this period of turbulence and change. T. S. Eliot's essay "Tradition and the Individual Talent" (1919), for instance, articulated the central challenges for those setting foot in the modern era. Eliot warned the poets of his generation they would have to put aside traditional poetic forms and long-standing poetic techniques. Modern life was so far removed from what earlier generations had experienced, poets would have to abstract what was best from the past, then find new forms of their own making in which to articulate what it now meant to be human. Most immediately, Eliot was calling for a break with the nineteenth-century notion of metrics and rhyme. Still, the implications of his call are far-reaching, for "Tradition and the Individual Talent" also served as a challenge to verities about human experience that dated back to the seventeenth century, or, more specifically, to the Age of Enlightenment, when thinkers such as René Descartes (1596–1650) broke with the mysticism and superstition of the Dark and Middle Ages and held out the possibility that human reason could, over time, gain a full understanding of our world and our lives. Foregrounding the human capacity for reason—particularly the human capacity for inductive and deductive thought—the Age of Enlightenment posited a world that was subject to a matrix of fixed principles, many of which remain the core of the sciences today. If there were fixed principles to be found at the core of the sciences, it stood to reason that this was also true of all of human experience. Surely life was comprehensible if only we could grasp the causal relationships at its center, properly sequence related events, and so on.

But what if the world was not "fixed"? The modernists were suspicious. What if it was fluid, contiguous, ever-changing, always a step or two ahead of what anyone might grasp? What if we were losing our way? What if this overriding faith in ourselves had left us now with nothing to believe in? These were the questions modernist writers were posing in their novels, particularly Marcel Proust (1871–1922), James Joyce (1882–1941), and Virginia Woolf (1882–1941) in Europe, as well as Ernest Hemingway (1899–1961), William Faulkner (1897–1962), and F. Scott Fitzgerald (1896–1940) in the United States. None of these novelists rejected out of hand what Enlightenment thought had achieved. The periodic tables developed in the 1890s were valuable; clearly there were

ways in which the world was fixed and stable. What modern experience was proving was just that being alive was a more intricate matter than the Enlightenment had allowed, the powers of science be hanged; to draw from the Irish poet William Butler Yeats's famous "The Second Coming" (1920):

> Things fall apart; the centre cannot hold;
> mere anarchy is loosed upon the world …

The greatest novels of the modernist period are concerned with remembrance and reconstruction. Work as otherwise diverse as Proust's *Á la recherche du temps perdu* (1913–1927), Hemingway's *A Farewell to Arms* (1929), and Fitzgerald's *The Great Gatsby* (1925) all deal with protagonists who are trying to organize the confusion of their pasts into a coherent, viable text. They are doing their best to take fragments of experience and place them in a meaningful, causal sequence. That they can only make sense of their lives through a process sure to falsify or otherwise misrepresent some of what actually happened is a "given," but, for the modernist novel, that is the best one can do. Everything is approximate. Everything is relative. Meaning is in a constant state of flux, so, to make meaning out of our experience is to reconfigure life into forms simple enough to make sense of.

Proust's novel is best known in English by its earliest translated title, *Remembrance of Things Past*, but "In Search of Lost Time" is a closer approximation to what Proust seems to have had in mind. Both titles, though, speak to the modernist experience, a concern with organizing experience into spatial, temporal patterns so that they might be understood and appreciated. This is literally the case in Woolf's *To the Lighthouse* (1927), in which one of her protagonists, Lily Brisco, discovers that the ocean scene she means to paint is so mutable it alters before she can fix it on her canvas. To complicate matters, her perspective is mutable as well, she discovers. One can apprehend the scene, but never quite comprehend it before it changes, or, a more daunting thought still, before Lily changes herself.

For such modernists, this is true not just in art but in all of life. The human mind is no match for a world so contiguous and contradictory, so replete with fleeting images, sounds, and sensations. In an attempt to affix meaning, we actually *make* meaning. We are constantly recapitulating our experiences, making them simpler than we know them to be, forever fitting them into patterns of our own very personal design.

When Henry Ford (1863–1947) introduced the $5, 8-hour workday in 1914 for the workers on his assembly line in Michigan, he was recognizing the changes taking place in the social fabric of the country. This was to be an era of mass production, one in which more goods would be made available to more people than had ever been known throughout human history. But mass production meant that the aesthetics of what was desired would have to be carefully adjusted. For one thing, standardization of a product would have to be accepted in the marketplace as a virtue. Ford recognized that mass production was dependent upon mass consumption bringing about "mass taste." Modern business practice would have to create a consumer with predictable spending habits; it would have to find ways to compensate those it employed and socialize them to both the boredom and rigors of "routinized" labor, and a delicate balance would have to be struck between the nation-state, large capital, and labor organizations.

Modernist architects such as the Dutch Ludwig Mies van der Rohe (1886–1969) and the French Le Corbusier (1887–1965) realized that creating living and working space in the cities of their day meant accommodating the need for flexibility and easy modification. Architecture had to be responsive to an incredible variety of diverse experiences and ever-changing catalysts. But this would have to be balanced against a host of conflicting demands. Architects were being called upon by a powerful capitalist agenda to design in ways that signaled permanence, that were highly functional. If the freedoms and opportunities of urban living often made life seem formless, even chaotic, it was up to them to find new forms that might bring order to bear. The more fragmented and fractured and unstable life came to seem, the more they would have to design with an eye toward historical continuity and collective memory.

The French painter Marcel Duchamp (1887–1968) rocked the art world in 1913 when his painting *Nude Descending a Staircase* was displayed at the Armory Show in New York City. One saw neither a nude nor a staircase, but rather a dizzying series of fragments, one atop the other, suggesting body parts in sequential motion—yet, somehow, in no particular order. Other painters such as Georges Braque (1882–1963), Paul Klee (1879–1940), and Pablo Picasso (1881–1973) were working in a similar vein, defying convention, thwarting long-standing aesthetics of artistic representation. It would be a mistake to equate this with a rejection of the past, however. Much of this modernist avant garde actually owed a significant debt to "primitive" work from Egypt, Sumeria, China, and, in Picasso's case, to African art in general. Was it meaningful to speak any longer of divisions between the modern and the ancient, the East and the West, the avant garde and primitive?

Surely it is not coincidental that at much the same time Albert Einstein (1879–1955) was challenging Euclidian geometry, James Joyce was challenging how a novel should be written with his dizzying tour de force

Finnegans Wake (1939). Neither is it coincidental that in this same period, Béla Bartók (1881–1945), Alban Berg (1885–1935), and Arnold Schoenberg (1874–1951) were creating atonal musical scores that were calling into question precisely what "music" was in general, and a "modern" music in particular. Nor is it coincidental that in this same period economists such as John Maynard Keynes were creating new economic models to fit the peculiar demands brought about in the modern era as compromises were being struck between fixity and stability on the one hand, and the flux of global capitalism on the other.

All found themselves facing the overriding question of modernism itself: How does one respond to an era so unlike any other in the history of all humankind?

SEE ALSO *Alienation; Alienation-Anomie; Architecture; Colonialism; Critical Theory; Culture; Decolonization; Development; Keynes, John Maynard; Literature; Metropolis; Modernity; Modernization; Postcolonialism; Postmodernism; Relativism; Technological Progress, Economic Growth; Urbanization; Visual Arts; Work Day*

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Jay Boyer

MODERNITY

When Niccolò Machiavelli (1469–1527) undertook to promote "new modes and orders" unlike those that had previously existed, he was expressing a historical vision that came to define *modernity* (from the late Latin *modernus*, derivative of the classical Latin *modo*, meaning "just now" or "in a certain manner"). This vision was one shared in diverse ways by other founders of modernity such as Francis Bacon (1561–1626), Galileo Galilei (1564–1642), and René Descartes (1596–1650), as well as world explorers of the period and leaders of the Protestant Reformation. From politics and science to philosophy and religion, an influential cadre argued for the possibility of introducing an historical break as significant as any that had preceded it, although they also often made the case for this break as a kind of return to lost traditions of antiquity.

That Machiavelli is considered a founder of a new form of political science indicates the significance of this vision for the social sciences. Indeed, modernity gave rise both to the kinds of societies or social relations studied by the field as well as to widespread notions about what it means to practice science. Yet it is an ambivalent term. Modernity can denote different historical periods and phenomena, and it is celebrated and reviled for a variety of reasons. It has multiple meanings that inform debates about the human condition and the nature of the social sciences. This is especially true at the dawn of what many theorists describe as the "postmodern age."

GENERAL FEATURES OF MODERNITY

Three essential features of the modern era set it apart from premodern ways of life. First, modernity refers to radical societal changes, including the rise of democracies, the spread of religious pluralism and secularization, the European colonization of other parts of the world, the formation of the bureaucratic nation-state and market economies, increased social mobility and literacy, and the growth of industrial society with all the attendant changes in working conditions. Modernity is characterized by advanced technoindustrial society, which has brought gains in material well-being primarily to the developed (or modernized) parts of the world. Indeed, a central motif of modernity is the notion of unlimited progress. Yet it is also characterized by uniquely modern problems such as the environmental risks associated with technologies. Many social theorists argue that the emerging knowledge or information age constitutes a novel, postmodern society.

Second, modernity is characterized by a growing emphasis on reason and experience, which speaks to the rise of modern science and technology. Most importantly, modern science altered what it means to *know*. In the prologue to the never-completed work *The Great Instauration*, Bacon first made the radical argument that "human knowledge and human power meet in one." Complaining of the vain speculations of earlier philosophers, Bacon argued that knowledge should lead to "the conquest of nature for the relief of man's estate" (*Novum Organum*, 1620, LII). Unlike the ancients, for whom theory was about things eternal, modern thinkers promoted a more practical science concerned with altering the changeable. This alliance between knowing and changing the world is rooted in the modern subject/object dualism first articulated by Descartes.

Third, modernity ushered in new understandings of the human self and political community, which reflected and conditioned these social and cultural changes. Modern theorists such as Thomas Hobbes (1588–1679) and Immanuel Kant (1724–1804) conceptualized the self as a reflexive, autonomous, and rational will, freely choosing its ends and projecting its values onto an indifferent nature that is void of purpose. Political association is cast less as the common pursuit for higher ends (the "perfectionism" of ancient political theorists) than as procedures for adjudicating demands within a framework of individual rights and freedoms. C. B. Macpherson named this political aspect of modernity "possessive individualism" (1962).

SPECIFIC MEANINGS OF MODERNITY

Modernity should be set within specific contexts, insofar as it is used to describe different periods of history and aspects of life. Indeed, there are numerous features associated with "being modern," which have been developed in several fields of study. For example, "modern art" refers to works produced in the period from the late nineteenth century to the 1970s, a time characterized in part by the abandonment of earlier emphases on representationalism and religious iconography. A related term is *modernism*, which also has multiple meanings, but is often used to refer to cultural movements composed of "modernists" who embrace the features of modern life identified above. Bruce Lawrence, for example, characterizes many religious fundamentalists as modern because they take advantage of technological advances (Lawrence 1989). But they are not modernists, because they reject the fundamental philosophical underpinnings of modernity and refuse to wholly adapt their personal identities and social lives to the dictates of the modern world. At its extreme, this rejection of modernity has led to terrorist acts.

A few prominent uses of modernity from philosophy and social science indicate its multiplicity. Karl Marx (1818–1883) emphasized the alienation of humankind under modern capitalist systems and envisioned communism as an emancipating force. Indeed, alienation is one predominant motif in critical theories of modernity. For example, Friedrich Nietzsche (1844–1900) suggested that the essence of modernity is "the death of God." For Nietzsche, the modern worldview necessitates that "*the highest values devaluate themselves*. The aim is lacking: 'why?' finds no answer" (Nietzsche [1901] 1967, p. 9). He argued that each individual should mold his or her own values as the pure expression of selfhood, ignoring traditions about good and evil. In modernity, what was once thought of as transcendent and given becomes the unstable product of the human will. Marx summarized this radical historical contingency: "all that is solid melts into air" ([1848] 1994). Critical approaches to modern society thus often focus on securing personal orientation and meaning, frequently through spiritual or communal practices.

Auguste Comte (1798–1857) described the modern era as the culmination of a three-stage historical process, which is itself a characteristically modern interpretation of history in its linear, progressive outlook. The scientific or "positive" stage transcends the earlier "theological" and "metaphysical" stages. For Comte, the methods of the natural sciences provide the only route to certain knowledge. In a more pessimistic account, Max Weber (1864–1920) argued that the rationalization of life in modern society traps individuals in an "iron cage" of rule-based control. Similarly, Jürgen Habermas (b. 1929) criticized the modern notion of subject-centered reason by developing theories of communicative rationality. Peter Wagner explained such conflicting interpretations by arguing that modernity is ambiguous in presenting two counterposed metanarratives—liberation and disciplinization (1994). Michel Foucault (1926–1984) did much to highlight the latter dimension of modernity by arguing that modern society involves pervasive systems of control and surveillance, which has informed many theories critical of development and globalization. He argued that modernity possesses certain underlying conditions of rationality that constitute an understanding of the world and define what counts as truth. Similarly, Martin Heidegger (1899–1976) argued that modernity is a unique way of revealing and being in the world, which he called *Gestell* ("enframing"). For Heidegger, modern human existence is constituted by a technological approach to the world.

Work in feminist epistemology and the sociology of science has further refined critiques of modern rationality. Thomas Kuhn (1922–1996), for example, argued that scientific advance is not the steady polishing of the mirror of nature leading to a correspondence with reality "in itself." Rather, science is a community endeavor in which groups define common problems and standards. Kuhn's work ushered in a variety of postmodern approaches to science and theories of our linguistically mediated existence. Indeed, all of the thinkers mentioned here have spurred thought about various alternatives to modernity. In one of the most provocative of such accounts, Bruno Latour (b. 1947) argued that "we have never been modern," meaning that we have never been able to sustain the conceptual categories or the binary types, especially those of "nature" and "culture," posited by the modern worldview. The harder we try to purify our world into distinct, bounded domains, the more intermediary forms proliferate.

SEE ALSO *Comte, Auguste; Foucault, Michel; Globalization, Social and Economic Aspects of; Habermas, Jürgen; Kuhn, Thomas; Marx, Karl;*

Modernism; Modernization; Nietzsche, Friedrich; Postmodernism; Rationality; Science

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Adam Briggle

MODERNIZATION

Modernization was a theory of global social change, as well as an American political project. Articulated across several disciplines by American social scientists from the 1950s through the 1970s, the concept of modernization defined a universal, historical process through which *traditional* societies became *modern*. It proposed to map a global, evolutionary pattern in which cultural values, economic systems, and political institutions moved along an incremental, linear path toward the rational economy, liberal society, and democratic order that theorists identified most clearly with countries like the United States. In this approach, *tradition* and *modernity* marked endpoints of a common, historical scale. All societies, considered as integrated, organic wholes, moved from one point of historical equilibrium to another as they systematically abandoned institutions shaped by fatalism, family authority, local affinity, and religious constraints in favor of activist orientations, market economies, and liberal political institutions. Theorists believed, moreover, that this natural process could be decisively accelerated. Through a careful study of the traditional world, proponents of modernization hoped to identify the essential levers of social change. They also aspired to promote the diffusion of the advanced forms of knowledge, technology, and financial assistance necessary to promote a destabilizing yet necessary transition toward a democratic, capitalist endpoint. At the peak of the cold war, modernization embodied the highest aspirations of American liberalism. In addition to defining the historical course of global change, modernization also promised the tools necessary to direct it.

Rooted in Enlightenment models of progress, modernization theory first appeared in the work of American sociologists. Talcott Parsons (1902–1979) and Edward Shils (1911–1995) provided much of the inspiration for the concept by framing a holistic view of social systems. As they argued, values and cultural norms, transmitted through social institutions, played vital roles in regulating human behavior and ensuring individual action consistent with the social order. Societies, therefore, were integrated, functioning units. When institutions and cultural values distributed resources and mediated conflict in harmony with the needs of individuals, societies rested at points of balanced consensus. Different historical points of equilibrium, moreover, could be identified in the form of "pattern variables" that defined the dichotomy between "primitive" and "advanced" societies. "Primitive" societies functioned to meet individual needs, but they did so through institutions characterized by a reverence for ascribed status, particularism, diffuse roles, and an orientation toward the collective. "Advanced" societies, however, reflected values of achieved status, universalism, specific social roles, and self-orientation. In books like *The Social System* (1951) and *Structure and Process in Modern Societies* (1960), Parsons argued that if a society were under enough strain, then it would make the dramatic shift from one historical pole to the other. Modernization, sociologists insisted, was a global force, transcending all lines of culture or history. As Daniel Lerner (1917–1980) claimed in *The Passing of Traditional Society: Modernizing the Middle East*: "The same basic model appears on all continents of the world, regardless of variations in race, color, or creed" (1958, p. viii).

Modernization also proved attractive to political scientists searching for an overarching theory to analyze the changes of the postwar world. Scholars like Gabriel Almond (1911–2002), Myron Weiner (1931–1999), and Lucian Pye all adapted Parsons's functionalist assumptions. As they argued, specialists studying diverse regions could contribute to a more integrative approach by positing universal functions that all political systems needed to

fulfill. By correlating functions with specific political structures, they could map the overall, universal patterns of transformation. By applying that model, as Pye did in *Politics, Personality, and Nation Building: Burma's Search for Identity* (1962), political scientists sought to analyze the way that modern markets, values, and technologies awakened new aspirations among previously fatalistic, traditional peoples and spurred them to create new political forms.

Modernization also took hold among economists concerned with "development." For many scholars, poverty, high population growth, and lack of infrastructure made the problems of "emerging" countries so different from "advanced" ones that standard macroeconomic theory had to be modified by an approach stressing behavioral and cultural obstacles as well as structural ones. Walt W. Rostow (1916–2003), author of *The Stages of Economic Growth: A Non-Communist Manifesto* (1960), argued that compound interest and investment remained the primary engines for change, but he also emphasized that the passage from traditional fatalism and "pre-Newtonian science" through a "take-off" to the "age of high mass consumption" required new, activist attitudes toward the natural world, as well as habits of efficiency and advances in transportation and communications.

Theories of modernization were profoundly shaped by the cold war context. Many American policymakers and social scientists viewed the post–World War II (1939–1945) collapse of European empires with profound anxiety. Decolonization opened doors for progressive change, but it also appeared to accelerate what many theorists and policymakers called a "revolution of rising expectations" in the "emerging nations" of the world. Destitution, violence, and anticolonial politics, U.S. officials feared, created opportunities for Soviet expansion and subversion. Communists, Rostow and others warned, were "scavengers of the transitional process," opportunists that sought to derail the natural course of change. It was imperative, therefore, for the United States to accelerate the process of modernization and drive decolonizing societies through the dangerous window of instability toward progress. As the cold war moved into the "third world," theorists and policymakers began a symbiotic relationship. Many scholars moved from academia into government service to promote the use of foreign aid, technical assistance, propaganda, civil-service training, and military advising as key tools for managing the future of the "developing world." Rostow, for example, joined the State Department of President John F. Kennedy (1917–1963) and later became Lyndon Johnson's (1908–1973) national security adviser, while Pye advised the Agency for International Development. Government funding, in turn, flowed into social scientific research. The Central Intelligence Agency provided support for Massachusetts Institute of Technology's Center for International Studies, and the National Defense Education Act (1958) channeled federal funds into research on human behavior, area studies, and language programs.

In practice, however, modernization largely failed. Poverty turned out to be far more intractable than modernizers expected, and neither U.S. aid nor World Bank loans produced decisive economic "take-offs" in the 1960s. Agencies like the Peace Corps did promote gains in literacy, but because modernization tended to fold all matters of local politics and culture into its universal, linear model, theorists often ignored problems created by oligarchies that had little intention of promoting liberal reforms. From the mid-1950s through the final American withdrawal, the Vietnam War (1957–1975) was understood as a project in modernization. U.S. advisers aspired to create a new, modern South Vietnamese nation-state where one had never existed before, yet despite massive investments in economic aid, administrative training, and promises to build a Tennessee Valley Authority on the Mekong River, repressive regimes continued to alienate much of South Vietnam's population. Vietnamese culture also mattered in ways that the linear model of modernization failed to take into account as the historically rooted vision of an independent, united Vietnam prevailed over a government that, in the eyes of many, was simply the latest manifestation of foreign, imperial control. While modernization won few "hearts and minds" in Vietnam, its failure provided striking evidence that the "traditional" world was not so easily malleable after all.

By the early 1970s, modernization had largely collapsed as a scholarly paradigm. Conservatives like Robert Nisbet (1913–1996) and Samuel Huntington rejected it as a failed liberal dream, a naive vision of consensual reform. From the political Left, scholars like André Gunder Frank (1929–2005) and Immanuel Wallerstein challenged modernization with dependency and world-systems models. Instead of linear progress, they argued that contact between Western metropoles and Southern Hemisphere satellites produced patterns of exploitation and impoverishment. Other scholars attacked the ethnocentric tone of modernization, its resonance with imperial claims, its universal assumptions, and its tendency to favor consensus, authority, and order in ways that precluded a serious consideration of class conflict and power relations.

Many of modernization's underlying assumptions and aspirations, however, have continued to thrive in public policy and popular debate. The collapse of the Soviet Union in 1991 stimulated renewed claims that the world was indeed converging on a liberal, capitalist, democratic endpoint. After the attacks of September 11, 2001, calls for the United States to promote transformative "nation building" as part of a global "war on terror" also reflected

the durability of assumptions that America might chart the future of a "traditional" world.

SEE ALSO *Developing Countries; Development Economics; Liberalism; Modernity*

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MODIGLIANI, FRANCO
1918–2003

Franco Modigliani was an Italian-born Jewish-American economist. He fled the fascist and anti-Semitic regime of Benito Mussolini (1883–1945) in 1939 and migrated to the United States with a doctor of law degree (1939) from the University of Rome. He earned a doctorate in economics from the New School University in New York in 1944, writing his dissertation on the Keynesian liquidity preference. In his dissertation, he reworked the Hicksian IS and LM curves to present a new version of Keynesian economics. His Keynesian paradigm laid the foundation for the Federal Reserve Bank econometric model. In 1962 Modigliani joined the economics department of the Massachusetts Institute of Technology, where he stayed for the rest of his career.

Liquidity preference explains unemployment without wage rigidity. It posits a relationship of money to prices. The price of money is anything that can be exchanged for it. Money in the future is also a price with a discount rate $R_t = (1 + r_t)^{-1}$. Being flexible, the rate of interest will rise in tight money situations. People will raise cash by liquidating money instruments or through borrowing. Investment and savings will fall and be subsequently followed by a fall of income and employment. The demand for money will then fall to equal its supply. Essentially, Modigliani argued for a "rate of interest" to "output" adjustment consequent to a tight monetary policy, in contrast to classical economists, who argued for a "rate of interest" to "price of all goods" adjustment. By keeping policymakers on guard to supply an adequate quantity of money or to fix an appropriate interest rate, Modigliani made unemployment an equilibrating mechanism.

Modigliani rid the investment concept in corporate finance of its traditional utility and production analyses. The Modigliani-Miller hypothesis first argued that a firm trying to increase its value by moving from only equity to a mixture of debt and equity positions will encourage arbitrage among individual investors that would undo its actions, making value invariant to the debt/equity ratio. Second, the rate of return on equity is linearly dependent on the debt/equity ratio. If a firm's stock is $1,000, debt is $400, interest on debt is 0.05, and the expected rate of return is 0.1, then its return on equity will be $0.1+(0.1-0.05)\frac{400}{600}=0.1333$. Third, new investment opportunities are also independent of the debt/equity ratio. This three-part hypothesis abstracted from the effects of taxes and bankruptcy. The discussion was extended to a dividend invariance value model.

In Modigliani's second best-known hypothesis, the *life-cycle hypothesis of saving* (LCH), consumers receive income, Y, up to the end of their working life, N. They accumulate savings during their working year, and consume, C, uniformly during their lifetime, $L > N$. Since lifetime consumption must equal lifetime income, assuming no bequest, we can express $CL = NY$, or $C = (N \mid L)Y$, in which case the terms in parentheses represent the marginal propensity to consume. Fitting the LCH to labor income and net assets, A, the equation $C = .766Y + .073A$ reconciled some anomalies of the post–World War II (1939–1945) period.

For his contributions to investment and consumption theories, Modigliani received the Nobel Prize in economics in 1985. He also contributed to economic policy debates, evolving the NIRU (noninflationary rate of unemployment) concept through the Phillips curve, and Okun's unemployment versus the gross domestic product gap relationship, public deficits, and reinstated personal savings into the post-Keynesian debate on the equilibrium profit rate, creating the dual or anti-Pasinetti theorem.

SEE ALSO *Life-Cycle Hypothesis; Modigliani-Miller Theorems*

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MODIGLIANI-MILLER THEOREMS

The Modigliani-Miller (M&M) theorems, developed by economists Franco Modigliani (1918–2003) and Merton Miller (1923–2000) in a series of papers, represent a major milestone in corporate finance theory. Modigliani and Miller won Nobel prizes in economics in 1985 and 1990, respectively, in part for their contributions to what are often referred to as the *capital structure irrelevance* and *dividend irrelevance* theorems.

Contrary to financial theory of the time, which focused on institutions, the M&M theorems were among the first efforts by economists to bring rigorous analysis to the understanding of corporate finance issues. Corporate financial capital, the funds invested in a firm, consists of money borrowed from others (bonds and loans) and business owners' own money (stock). Lenders receive a stated rate of interest and have the first claim on corporate assets. Stockholders receive all remaining current and future profits of the company. Leverage represents the proportion of debt (bonds and loans) to stock. Modigliani and Miller (1958) presented the idea that, assuming perfect financial markets and in the absence of taxes, the value of a levered firm is the same as that of an unlevered firm if both firms represent the same investment opportunities. In other words, change in capital structure (the mixture of debt and stock) alone does not affect a firm's value. Their no-arbitrage proof stated that, if these firms have different values, investors will be able to replicate the higher-valued firm with the lower-valued firm plus their own borrowing or lending. Alternatively, management of the firm can change the capital structure of the firm to achieve its highest value. In a later paper, Modigliani and Miller argued that a firm's value is not affected by its dividend policy (payment to stockholders) because increased return in the form of dividends is offset by the reduction in the firm's assets.

The M&M framework and methodology had a major impact in shaping future research. In the decades that followed, the corporate finance literature was significantly enriched by attempts to relax various original M&M assumptions, such as no taxation and no bankruptcy costs. The no-arbitrage proof has also become part of financial economists' standard toolkit and was applied in many prominent works, such as the development of the put-call parity in option pricing theory.

Introducing corporate income tax into the model leads to the naive result that the firm should depend on debt financing alone to maximize the benefit of the tax shield. The reason that this is not observed in the business world is because the tax benefit for debt financing at the firm level is counterbalanced by unfavorable tax treatment at the household level. Dividends and bond returns are taxed annually, while taxes on unrealized equity returns can be indefinitely deferred. In most jurisdictions, corporations and households are subject to different tax rates. The risk of bankruptcy also limits the amount of debt a firm should use, since the cost of equity increases with leverage. Consequently, different tax situations and risk preferences demand firms with different kinds of capital structures. The fact that firms choose different tax structures attests to the validity of the capital structure irrelevance theorem, rather than discrediting it.

Relaxing the assumption that managers and shareholders have the same information about a firm's cash flow, researchers developed the signaling theory of dividends. Because managers tend to have information not yet available to shareholders, their action to increase or decrease dividends often reflects information not yet embedded in the stock price. This extension of the M&M

theorems explains why stock prices often react to changes in dividends.

SEE ALSO *Capital; Expectations; Expectations, Rational; Finance; Leverage; Market Fundamentals; Modigliani, Franco; Wealth*

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Shi Larry Cao

MOHAMMED

SEE *Muhammad.*

MOMENT GENERATING FUNCTION

The moment generating function of the random variable X, provided it exists, is $M_x(t) = E[e^{tX}]$ where $E[g(X)]$ denotes the expectation of the function $g(X)$. For example, if the random variable X follows the normal distribution with mean μ and variance σ^2, the moment generating function of X is $M_X(t) = e^{\mu t + \sigma^2 t^2 / 2}$.

The moment generating function has two main uses. First, as the name implies, it can be used to obtain the moments of a random variable. Specifically, the k^{th} moment of the random variable X, $\alpha_k = E[X^k]$, is given by $\alpha_k = M_X^{(k)}(0)$ where $M_X^{(k)}(0)$ is the k^{th} derivative of $M_X(t)$ evaluated at $t = 0$. For example, if X is normally distributed with mean μ and variance σ^2, and hence moment generating function $M_X(t) = e^{\mu t + \sigma^2 t^2 / 2}$, it follows that

$$M_X^{(1)}(t) = [\mu + t\sigma^2] e^{\mu t + \sigma^2 t^2 / 2}$$

and

$$M_X^{(2)}(t) = (\sigma^2 + [\mu + t\sigma^2]^2) e^{\mu t + \sigma^2 t^2 / 2}.$$

It follows that the first moment of X is μ and the second moment of X is $\mu^2 + \sigma^2$.

The second, and perhaps more important, use of the moment generating function derives from the fact that the moment generating function uniquely identifies the distribution function of a random variable. Thus, if $M_{X_1}(t) = M_{X_2}(t)$, then $Pr(X_1 \le x) = Pr(X_2 \le x)$. For example, if the random variable X has the moment generating function $M_X(t) = e^{\mu t + \sigma^2 t^2 / 2}$, then X necessarily follows the normal distribution. This property of the moment generating function can sometimes be used to determine the distribution of the limit of a sequence of random variables. Consider, for example, a sequence of random variables $\{Y_n; n = 1, 2, \ldots\}$ with distribution functions $\{F_n(y); n = 1, 2, \ldots\}$ and corresponding moment generating functions $\{M_n(t); n = 1, 2, \ldots\}$. If $\lim_{n \to \infty} M_n(t) = M(t)$, where $M(t)$ is the moment generating function of a random variable Y with distribution function $F(y) = Pr(Y \le y)$, then $\lim_{n \to \infty} F_n(y) = F(y)$. $F(y)$ is called the limiting distribution of the sequence $\{Y_n; n = 1, 2, \ldots\}$ and Y_n is said to converge in distribution to Y. For n sufficiently large, $F(y)$ provides a good approximation to the distribution of Y_n. For example, consider the sequence of sample means $\{\bar{X}_n; n = 1, 2, \ldots\}$ obtained from random samples of size n from a population with mean μ and variance σ^2. Under certain conditions, the standardized sequence $\{Y_n = \sqrt{n}(\bar{X}_n - \mu)/\sigma; n = 1, 2, \ldots\}$ converges in distribution to a standard normal random variable. This result, referred to as a central limit theorem for the sample mean, is typically obtained by showing that the sequence of corresponding moment generating functions $\{M_{\bar{X}_n}(t)\}$ converges to $M(t) = e^{t^2/2}$, the moment generating function of a normal random variable with mean zero and variance 1, that is, a standard normal random variable.

Closely related to the moment generating function is the so-called characteristic function. The characteristic function of the random variable X is $C_X(t) = E[e^{itX}]$ where $i = \sqrt{-1}$ and $e^{itX} = \cos(tX) + i\sin(tX)$. The advantage of the characteristic function is that it always exists whereas the moment generating function may not. If the moment generating function exists, the characteristic function is related to it by $C_X(t) = M_X(it)$. Thus, for example, the characteristic function of a normally distributed random variable with mean μ and variance σ^2 is $C_X(t) = e^{it\mu - \sigma^2 t^2 / 2}$. Like the moment generating function, the characteristic function can be used to obtain moments of the random variable. And since it uniquely identifies the distribution of the random variable, it can be used to obtain the limiting distribution of sequences of random variables.

Elementary mathematical treatments of the moment generating function are given in Donald A. Berry and Bernard W. Lindgren and John E. Freund. Intermediate treatments may be found in Robert V. Hogg and Allen T. Craig, and Lindgren and advanced mathematical discussion can be found in Harald Cramér and M. Loève. David attributes the first occurrences in print of the term *moment generating function* to Henri Poincaré (1912 in French) and Cecil C. Craig (1936 in English).

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E. Philip Howrey

MOMENTS

SEE *Descriptive Statistics.*

MONARCHISM

Monarchism is a belief in and advocacy of monarchy, one of the oldest forms of government, which typically consists of a single head of state who reigns over a sovereign territory and its people for life. Monarchism embodies the traditional values of heredity, class and clericalism, concepts antithetical to modern notions of popular sovereignty, egalitarianism, and secularism.

HISTORICAL BACKGROUND

Some of the earliest monarchs were well-known Hebrew kings of the Bible—Saul and Solomon—whose power derived from divine authority. These early monarchs often came from the ranks of judges, and in addition to ruling at the pleasure of the deity, served as guardians and interpreters of law and justice. The rulers of the Roman Empire were monarchs who derived their authority from the warrior and upper classes by acclamation and ruled over nearly every aspect of Roman society. Rome's emperors from Augustus (27 BCE–14 CE) to Constantine XI Palaeologus (1449–1453) ruled over vast swaths of land in Europe, Africa, and the Middle East for several centuries.

Throughout the Middle Ages, absolute monarchy was the dominant form of government in Europe, giving rise to a number of influential figures including Charlemagne (768–814), William the Conqueror (1066–1087), and King John of England (1199–1216). One of the earliest efforts to limit the monarch's power and establish a constitutional monarchy occurred with the signing of the Magna Carta in 1215. In 1649 King Charles I was overthrown and beheaded during the English Revolution, marking the first time in history that a monarch had ever been publicly executed. Despite these efforts to curtail the monarch's authority, absolute monarchy continued to be the dominant form of government in Europe until the French Revolution in 1789.

In France, the concept of popular sovereignty arose from the ashes of the French Revolution and the overthrow of the monarch, Louis XVI. The demise of the monarchy led to the emergence of imperial rule under Napoléon Bonaparte (Napoléon I) and the Napoleonic Wars throughout Europe. The French eventually restored the Bourbon Dynasty (Louis XVIII) to the throne following the abdication of Napoléon I. The ouster of Louis-Philippe in 1848 paved the way for the Second Republic and the ascendency of Napoléon III. Since then, royalists have attempted to restore the monarchy of France, but with little success. The entanglement of the French monarchy and the Catholic Church—the long-standing alliance between the "Throne and the Altar"—is largely to blame for the demise of monarchism in France and the development of the modern secular French state.

Since the mid-nineteenth century, monarchies have been dismantled in Russia, Germany, Italy, and Austria-Hungary, among other nations. Most monarchies have retained their royal families for traditional or symbolic reasons, as in the United Kingdom, Belgium, Luxembourg, Denmark, Norway, and Japan. Today, forty-five nations are considered to be monarchies in one form or another; sixteen of them fall under the common monarch of the United Kingdom. Those Commonwealth nations that continue to recognize the British monarch include Antigua and Barbuda, Australia, the Bahamas, Barbados, Belize, Canada, Grenada, Jamaica, New Zealand, Papua New Guinea, Saint Kitts and Nevis, Saint Lucia, the Soloman Islands, and Tuvalu.

FORMS OF MONARCHY

Monarchy can take a variety of forms, including absolute monarchy, elected monarchy, hereditary monarchy, and constitutional monarchy. In an absolute monarchy, the monarch possesses total power over the land and its inhabitants, and there is no authority or body of law above the monarch. Bhutan, Brunei, Kuwait, Saudi Arabia, and Swaziland are considered to be absolute monarchies today.

An elected monarchy is a form of government in which the king or queen is elected by the people or a select body of individuals. In this system, succession to the throne is determined by election, usually by a small group of people

or a council. In the Holy Roman Empire (800–1806) kings were elected by a council of nobles. Between the seventh and eleventh centuries the *Witenagemot* consisted of noblemen charged with the task of approving the succession of monarchs in Anglo-Saxon England. The twentieth century saw the election of monarchs to the thrones of Norway, Greece, Romania, and Bulgaria. At present, elective monarchies exist in Andorra, Cambodia, Kuwait, Malaysia, and Vatican City, where the pope is elected to a life term by the College of Cardinals. Most elective monarchies have been succeeded by hereditary monarchies.

In a hereditary monarchy the succeeding monarch comes from the same family or bloodline. A major advantage of this form of monarchy is that it ensures predictability and stability in the transition to power from one monarch to the next. Typically, an order of succession is established beforehand so that when a monarch dies or abdicates the throne, the crown is usually passed to a son or daughter, based on seniority. Throughout history, disputes over hereditary succession to the throne have led to numerous wars. Most of the world's existing monarchies today are hereditary monarchies in which the order of succession is determined by primogeniture. In most of these, the royal families act in a primarily ceremonial capacity, serving a symbolic role in society.

A constitutional monarchy is a form of government in which the monarch's power is limited by a separate branch of government. In this system, a parliament or legislative body usually acts on behalf of the state, and the constitutional monarch has little power in government, generally playing a symbolic role as the figurehead representing the nation and doing charitable work. Modern constitutional monarchies usually incorporate the separation of powers concept, with the monarch serving as the head of the executive branch in a purely ceremonial role, the parliament or legislature serving as the lawmaking body, and a high court interpreting and enforcing the law. Today, most constitutional monarchies are representative democracies. The English monarchy is the oldest continuous constitutional monarchy.

MONARCHIST GROUPS

Monarchism is defended and supported by a variety of groups who believe that monarchies serve an important symbolic role in society and provide an important link to a nation's past. For example, promonarchist movements in France support the revitalization of monarchy as the best way to restablish cultural and religious ties to the Catholic Church. Moreover, debates over the relevance of monarchy in Australia, Canada, and New Zealand serve as a driving force for these governments to maintain cultural ties to the United Kingdom. The traditional values of heredity, class, and clericalism embued in monarchical systems tend to clash with the more modern notions of democracy, egalitarianism, and secularism in different parts of the world.

Some of the more prominent organizations and political groups that support the retention or restoration of monarchy as a form of government include Action Française, the Monarchist League of Canada, the Monarchist League of New Zealand, Australians for Constitutional Monarchy, the National Alignment (Greece), the People's Monarchist Party (Portugal), the Legitimists and Orléanists (France), the Iraqi Constitutional Monarchy, the Vietnamese Constitutional Monarchist League, the Iranian Monarchists, the Southeast Asia Imperial and Royal League, and the International Monarchist League. These groups believe in the values and traditions embedded in the monarchical system of government and are committed to preserving these values and traditions in society.

SEE ALSO *Democracy; French Revolution; Monarchy; Monarchy, Constitutional; Sovereignty; Tradition*

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MONARCHY

Monarchy literally means "rule by one," and comes from the combination of the Greek words for "alone" (*mono*)

and "to rule" (*archein*). It is a form of government in which supreme authority is vested in a single person, the monarch, who is consecrated in office and whose right to rule is generally hereditary and lifelong. By contrast, a republic is a form of government that does not have a monarch. All but a few countries in the world are republics, as there were only twenty-nine sovereign monarchies at the beginning of the twenty-first century (Lesotho, Morocco, and Swaziland in Africa; Bhutan, Brunei, Cambodia, Japan, Malaysia, Nepal, and Thailand in Asia; Belgium, Denmark, Holland, Liechtenstein, Luxembourg, Monaco, Norway, Spain, Sweden, and the United Kingdom in Europe; Bahrain, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates in the Middle East; and Samoa and Tonga in the Pacific). A monarch typically reigns as a permanent head of state with varying formal and ceremonial powers. If the monarch is only a nominal ruler, then a regent will govern in his or her name. In contrast, the head of state in a republic is usually an elected president, who is chosen for only a limited period of time.

Monarchs have traditionally based their claim to the throne in terms of blood descent from a reigning or dynastic family, or even from a god (e.g., the kings of ancient Sparta claimed to be descended from the mythical Greek hero and demigod Hercules). Some European monarchs were originally elected by the ruling nobility (e.g., the Holy Roman Emperors), but in the early Middle Ages the elective principle was replaced by the purely hereditary principle and the ecclesiastical consecretion of the monarch as proof of godly sanction. Legitimacy was formally conferred by a solemn religious ceremony, the coronation, in which the monarch was given a crown as a symbol of office upon his or her succession to the throne. Hereditary monarchy was justified on the grounds of royal birthright, religion, history, and tradition. Today monarchy is more likely to serve as a symbol of national unity and continuity—with powers ranging from nominal to absolute. Most modern monarchies are constituted by tradition or are codified by law so that the crowned sovereign has little real practical authority, but in others the monarch holds considerable or even absolute power. But even where the monarch's will is law and the royal court is the acme of political power and prestige, the king or queen must still rule by custom.

In ancient Greece, the philosopher Plato (428–347 BCE) believed that a monarchy ruled by a sagacious philosopher-king was the best form of government. For Plato's pupil Aristotle (384–322 BCE), monarchy was a benevolent dictatorship, under which power is vested in a person of exceptional virtue and wisdom who rules for the benefit of the entire people. But Aristotle admitted that monarchy can degenerate into tyranny, a corrupt and unstable form of government, under which rulers exercise undivided power for the benefit of themselves alone, ignoring the will of the people.

Monarchy is the oldest form of government, whose origins can be traced to the primitive kingship of early tribal chiefs. The kingdoms of antiquity claimed divine descent for their monarch, who—as the embodiment or descendant of God—could do no wrong. The king of Babylon and the pharaoh of Egypt were each considered a living god with supernatural powers, and the pharaohs even married their sisters or daughters so that royal authority could remain within the sacred family. Other ancient monarchs, such as the "celestial" emperor of China or the Achaemenid "king of kings" in Persia, claimed to be the temporal representatives of God, ruling on Earth on behalf of the omnipotent deity. Later monarchs, such as the tyrants of ancient Greece, the Roman emperors, or the kings of the Franks, also claimed to be God's annointed, but derived their authority from the consent of the warrior aristocracy. As the chosen agents of God's will and defenders of the Christian faith, the medieval European monarchs were crowned by the church, but their power was still dependent on the nobles. Later European monarchs, such as Henry VIII of England (1491–1547), Louis XIV of France (1638–1715), Frederick II of Prussia (1712–1786), and Catherine the Great of Russia (1729–1796), became increasingly absolutist at a time when centralized nation-states were formed. They justified their total power with the doctrine of the "divine right of kings," developed in the sixteenth and seventeenth centuries, which claimed that the monarch was responsible not to the governed, including the church, but to God alone. The essence of monarchical absolutism was epitomized by the famous words of Louis XIV: "L'état c'est moi!" ("I am the state!").

With the democratic revolutions of the eighteenth and nineteenth centuries, absolute monarchy began to decline, and although many monarchs kept their life tenure and remained symbols of national unity and statehood, real power gradually passed to representative assemblies. Many of the countries retaining monarchy as a form of government turned into limited or constitutional monarchies—that is, a monarchy in which the central authority of the sovereign is limited by the provisions of a constitution and the acts of a legislature. The figurehead monarch is legally obligated to follow the advice of his or her government ministers and is always politically neutral. The first step in the movement toward constitutional monarchy was the incremental rise of parliamentary supremacy ("the king-in-parliament") in England, which imposed significant legal and political limitations on monarchical authority, and as a result of which no British monarch has challenged an act of Parliament since 1703.

After the French Revolution of 1789 most countries eventually abolished their monarchies and became instead presidential or parliamentary republics. Today many remaining monarchies are figurehead constitutional monarchies in which the monarchs have a largely symbolic and ceremonial role, such as those found in Europe. For example, although King Juan Carlos I has played an active political role since 1975, especially in restoring democracy in his country, Spain is officially a "parliamentary monarchy" under the constitution of November 1978. A popular referendum in 2003 empowered the regnant prince of Liechtenstein to dismiss the cabinet government at will, making him by far the most powerful constitutional monarch in Europe, but this probably temporary shift in constitutional authority could be easily reversed by another referendum. The British queen, Elizabeth II, also holds significant potential power as head of state, nominal head of the Anglican Church, and leader of the British Commonwealth of Nations, but like all titular heads of state, she only symbolically represents her nation—mostly by receiving foreign dignitaries, giving speeches on ceremonial occasions, and formally approving decisions made by elected officials. As in most limited monarchies, the head of government—the British prime minister, who is elected by parliament—is the real working executive responsible for the day-to-day operation of the cabinet government. But many constitutional monarchs retain certain important residual powers, under which they could potentially exercise considerable political influence. These so-called prerogative powers, which could be used in a political emergency to protect the constitution from abuse and partisan manipulation, include formally nominating the head of government, convening or dissolving the legislature, and signing enacted legislation into law.

In absolute monarchies, by contrast, there are no constitutional restrictions on the prerogatives of the autocratic ruler, who is theoretically above the law. Among the few remaining absolute monarchies at the beginning of the twenty-first century were Kuwait, Saudi Arabia, Oman, Qatar, Bahrain, the United Arab Emirates, Brunei, Bhutan, and Swaziland. In Jordan and Morocco, the king still wields substantial despotic power independently of his formal role within the constitutional framework. The traditional monarchies that survive today are probably doomed unless they can eventually transform themselves into limited monarchies. Failure to do so led to the overthrow of traditional monarchies and their replacement by radical revolutionary regimes in Egypt, Iraq, Libya, Ethiopia, Cambodia, and Iran during the second half of the twentieth century. After failing to crush a stubborn Maoist insurgency, the king of Nepal was forced to give up absolute rule and surrender all his powers as head of state to the prime minister in December 2006.

The monarchical institution is believed to have performed an integrative function, holding together diverse social groups during the difficult period of democratization. The traditional sectors of society—the clergy, the aristocracy, army officers, and big landowners—usually oppose democracy and may be tempted to carry out coups d'état to derail the process of democratization. But these sectors are also monarchist in orientation, and if the king or queen is seen to support democracy, the traditional sectors of society will also go along with it. The monarchy thus facilitated the transition from the traditional political system of the late Middle Ages to the democratic political system of today (Lipset 1981, pp. 65–66). For instance, King Juan Carlos I of Spain defeated an attempted military coup in 1981 when he went on national television to declare that he was defending democracy and expected the armed forces to do the same. Following his public rebuke, the rebellion collapsed for lack of military backing; even the staunchly antimonarchist Spanish Communist Party announced its support for the monarch. By proclaiming his loyalty to the new democratic institutions, the king united the fractious sectors of Spanish society in defense of democracy, including those that had previously been revolutionary and antimonarchist.

SEE ALSO *Aristocracy; Authoritarianism; Democracy; Divine Right; Monarchism; Monarchy, Constitutional; Nation-State; Referendum*

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MONARCHY, CONSTITUTIONAL

Constitutional monarchy is a system of government in which a monarch serves as the titular head of state but not the head of government and the monarch's powers are

strictly limited by the constitution. Constitutional monarchies emerged in seventeenth-century Europe as the outcome of the struggle of the landed aristocracy and merchant class to limit the power of absolute monarchs. A leading example is the Glorious Revolution of 1689 that made Parliament supreme in the English system of government but retained a significant role for the crown. These efforts to curb royal absolutism were inspired by the liberal political philosophy of the Enlightenment. In the nineteenth and early twentieth centuries, as monarchical liberal democracies became more fully democratic, kings and queens came to play primarily a symbolic, ceremonial role in government.

Constitutional monarchy is a feature of many, but not all, parliamentary democracies. In parliamentary democracies that are constitutional monarchies, the king or queen retains nominally very large powers as the titular head of state. Acts of government are carried out in the crown's name. The monarch is the head of the armed forces. Acts of parliament require the monarch's signature, and the monarch summons and dissolves parliament. But the monarch exercises all these powers on the advice of ministers who have a majority in the elected house of parliament.

In parliamentary democracies, the government is headed by a prime minister and cabinet ministers who are members of the parliamentary party or coalition of parties that have a majority in the elected house of parliament. In monarchical parliamentary democracies, the monarch formally appoints the prime minister. Normally, the monarch has no choice as to who should be appointed prime minister: the leader of the political party or coalition of parties that has a majority in the elected house of parliament must be appointed. However, in the unusual circumstances of a "hung parliament," when it is not clear which party or combination of parties has a majority, the monarch (or in Commonwealth countries, the governor-general who represents the queen) may play a more significant and discretionary role.

In exceptional situations where discretionary judgment is required, the monarchical head of state's objective is to ensure that it is the parliament elected by the people that is supreme, not the prime minister. This principle may mean that it is constitutionally appropriate for a monarch to reject a prime minister's advice and act independently. For example, if an incumbent prime minister refuses to accept the result of a general election that produces a parliament in which his or her party no longer has a majority, and if the prime minister refuses to resign or allow any other party leader to try to form a government, and instead asks the monarch to dissolve parliament and call another election, the monarch would be justified in rejecting the prime minister's advice. In these circumstances, it would be constitutionally correct for the monarchical head of state to dismiss the prime minister and invite another party leader to test the will of parliament.

Some parliamentary systems are republican rather than monarchical. In a republican parliamentary system, the head of state is a president elected directly by the people or indirectly by parliament. In republican parliamentary systems, presidential heads of state tend to have greater powers than monarchical heads of state in parliamentary systems. The powers of presidents in republican parliamentary systems are carefully delineated in written constitutions, whereas the position of constitutional monarchs is more the product of historical evolution and is largely governed by unwritten constitutional conventions.

Belgium, Denmark, the Netherlands, Norway, Spain, and Sweden are leading examples of constitutional monarchies in Western Europe. Most of the world's constitutional monarchies are member states of the Commonwealth of Nations. Queen Elizabeth II is either sovereign or head of state of sixteen of these states. Besides the United Kingdom, these states include Australia, Bahamas, Barbados, Belize, Canada, Grenada, Jamaica, New Zealand, Papua New Guinea, and the Solomon Islands. Five other Commonwealth countries—Brunei, Lesotho, Malaysia, Swaziland, and Tonga—have their own indigenous monarchies. Only in the United Kingdom are the powers and responsibilities of the crown exercised by the queen herself. In the other Commonwealth constitutional monarchies whose queen is Elizabeth II, a governor-general representing the queen discharges the crown's responsibilities. In most of these Commonwealth monarchies, the office of governor-general has been indigenized by having the queen appoint the governor-general on the advice of the prime minister of the country in which the governor-general will serve and by having a citizen of that country fill the office.

SEE ALSO *Aristocracy; Democracy; Government; Monarchy; Parliaments and Parliamentary Systems*

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MONARCHY, HEREDITARY

SEE *Monarchism.*

MONETARISM

Monetarism is an economic school of thought that emphasizes minimal government intervention into the marketplace and the importance of the money supply in explaining economic fluctuations. Modern-day monetarism, as advanced by the American economist Milton Friedman in the late 1940s and 1950s, was presented as a theoretical challenge to the emerging Keynesian paradigm that began to gain popularity in the aftermath of the Great Depression and World War II. Keynesians viewed the Great Depression as evidence that the prevailing classical school of thought in which all unemployment was voluntary and markets self-correct was considered seriously flawed. With the unemployment rate in the United States reaching a peak of 25 percent during the Great Depression, it became painfully obvious there was insufficient demand and involuntary unemployment was an issue for policymakers to address. Upon the recommendation of the English economist John Maynard Keynes in 1936, the Roosevelt administration undertook an aggressive expansionary fiscal policy approach in the implementation of the New Deal programs to promote spending in the United States. While Keynesians viewed the decline in consumption and investment as the cause of the Great Depression, Friedman thought it could be attributed to the Federal Reserve's inability to provide enough liquidity to the economy. Rather than restrict the money supply, the Federal Reserve should have increased the money supply especially given the deflationary environment.

In light of the Keynesian focus on the role of fiscal policy to remedy insufficient demand in the private sector, monetarism reestablished the importance of the quantity theory in explaining economic fluctuations. The monetarist position rests on several fundamental propositions with respect to the role of money and economic activity. First, the money supply is the most important factor in the determination of nominal income. In particular, changes in the money supply cause changes in nominal income whereby the money supply is determined largely by the central bank. Second, in the long run changes in the money supply only influence the price level and nominal variables whereas real variables are determined by labor, capital, and the level of technology with the economy operating at or near full employment output. Third, contrary to the long run impact of the money supply, changes in the money supply can influence real variables in the short run. Fourth, monetarists view the economy as relatively stable with government policies destabilizing the economy rather than stabilizing it.

QUANTITY THEORY OF MONEY

The quantity theory of money provides the theoretical underpinnings for the proposition that the money supply is the most important factor in the determination of nominal income. The basis of the monetarist approach begins with the equation of exchange $M \times V = P \times Y$, where M is the money supply, V is velocity of money (the turnover rate of the money supply), P is the price level, and Y is real output. As it stands, the equation of exchange is an identity; however, monetarists assume that velocity is stable in the short run and if this assumption is taken to the extreme fixed (stable) as well.

Hence, the equation of exchange is transformed to the quantity theory of money as follows: $M \times \bar{V} = P \times Y$, where $\bar{V}$ denotes velocity as fixed. The above equation states that changes in the money supply will affect nominal income, $P \times Y$. Moreover, monetarists would contend that changes in the money supply cause changes in nominal income.

With respect to the long run consequences associated with changes in the money supply, monetarists believe that the economy is always operating near or at full employment determined by the markets for labor, capital, and technology. Indeed, if the economy is operating at its potential, the quantity theory of money in the long run can be stated as follows: $M \times \bar{V} = P \times Y_P$, where Y_P denotes potential real output. Thus, the long run changes in the money supply will only affect the price level.

While the changes in the money supply will only affect the price level in the long run, changes in the money supply in the short run can have real effects. Monetarists assert that in the short run, changes in the money supply can influence real variables such as output and employment. The rationale stems from the rigidities in prices and wages. Prices and wages may not fully adjust in the short run due to the presence of wage and price controls, implicit contracting, and the degree of unionization. Therefore, changes in the money supply will affect both prices and real output in the short run.

FISCAL AND MONETARY POLICY

Unlike the Keynesian position that the private sector is inherently unstable, monetarists view the private sector as inherently stable. Well functioning markets in the private sector serve as a stabilizer, self-adjusting in response to the instability created by the destabilizing forces associated with government intervention. The instability generated by government intervention could be the result of discretionary monetary policy actions, wage and price controls,

or excessive bureaucratic costs and social programs, in which the price mechanism in the allocation of resources is disrupted. Thus, unlike the Keynesian view, monetarists do not look upon fiscal policy as a viable stabilizing force in the economy.

Contrary to the Keynesian view that both discretionary monetary and fiscal policies are useful in stabilizing the economy, the policy recommendations advocated by monetarists are rules oriented with minimal government interference. First, because monetarists believe that the money supply is the main factor in explaining nominal output in the short run and the price level in the long run, monetarists argue that monetary authorities should follow a rules oriented policy approach rather than a discretionary policy approach. This policy stance stems from the monetarist assertion that the economy is inherently stable, always adjusting toward full employment, and that discretionary monetary policy actions by the central bank will often times destabilize the economy. The money growth rate rule would have the central bank target the growth rate of money to equal the growth rate of real output. This rules oriented policy would ensure that the money supply would grow at the rate of real output and prevent inflationary pressures in the economy. With respect to fiscal policy, monetarists do not advocate government intervention in the marketplace, trusting instead the functioning of free markets and the operation of automatic stabilizers within the economy to minimize the impact of spending shocks on the economy.

LATE TWENTIETH-CENTURY EMPIRICAL EVIDENCE ON MONETARISM

The empirical support for the monetarist position has been rather mixed. In an attempt to control the accelerating inflation rate throughout the 1970s, the Federal Reserve embarked on what some economists called the "monetarist experiment" in targeting money growth from 1979 to 1982 under Federal Reserve chairman Paul Volcker. However, during the 1980s and into the 1990s the velocity of money became unstable. The instability in velocity severed the relationship between the money supply and nominal income. This instability was largely attributed to the deregulation of the banking industry and the increase in financial innovations, which induced instability in the demand for money. The stability of velocity was the cornerstone to monetarism's reliance on the quantity theory to argue that changes in the money supply explain movements in nominal output in the short run and the price level in the long run. Once the stability of velocity came into question, the monetarist paradigm also came under greater scrutiny.

Though monetarism has not regained its popularity, the monetarist view that the money supply is an important factor in explaining economic fluctuations has had an impact on the economics discipline. Rapid money growth beyond what is sustainable at full employment will lead to price instability and inflation. This observation is substantiated, for example, by the hyperinflation episodes in several European countries in the 1920s and the ongoing battle with inflation in several Latin American countries.

SEE ALSO *Banking; Economics, New Classical; Expectations; Expectations, Rational; Friedman, Milton; Inflation; Interest Rates; Money; Phillips Curve; Policy, Monetary*

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MONETARY BASE

In monetary economics, the *monetary base* is defined and measured as the sum of currency in circulation outside a nation's central bank and its treasury, plus deposits held by deposit-taking financial institutions (hereafter referred to as "banks") at the central bank. More generally, the monetary base consists of whatever government liabilities are used by the public to purchase and sell goods and services, plus those assets used by banks to settle interbank transactions. During certain specific historical periods, measures

of the monetary base have also included commodity monies such as gold and silver coin and bullion. The components—currency and deposits at the central bank held by banks—are often referred to as *base money*.

Some authors have defined the monetary base as currency held by the public plus the cash reserves of banks. This definition can lead to confusion and should be avoided, however. A correct definition must include all base money held by banks, not solely the portion held to satisfy regulatory reserve requirements.

MONETARY ECONOMICS

In monetary economics, the monetary base has several unique characteristics. First, its components include the assets issued directly by a nation's monetary authorities (the treasury and central bank) that are used by the private sector (the public and banks) to settle transactions. Transactions, of course, may also be settled through the exchange of privately issued bank deposits, but these have risk characteristics that differ from those of base money. Second, the size of the monetary base changes only if the monetary authorities take actions, actively or passively, to permit the change—the private sector cannot change the size of the monetary base without the cooperation of, and participation by, the monetary authorities. Hence, in monetary theory, the monetary base is the direct link between monetary policy actions and economic activity, including subsequent inflation. As a practical matter, no central bank seeks to control closely the size of its monetary base day-to-day, fearing that so doing would sharply increase the volatility of market interest rates.

SUPPLY AND DEMAND

Central banks control the supply of the monetary base by buying and selling assets. Purchases of assets, of any type, increase the monetary base when the central bank pays for such assets with currency or increased central-bank deposit liabilities. Similarly, central-bank sales of assets, of any type, reduce the monetary base when the purchaser surrenders currency or central-bank deposit liabilities in payment. So long as the public willingly holds additional base money, the central bank is able to purchase assets and expand its size. Historically, this has tempted governments with weak fiscal discipline to utilize the central bank as a purchaser-of-last-resort for government debt when private capital markets are unreceptive, often leading to hyper-inflation.

Demand for the monetary base includes the public's transaction demand for currency and banks' demand for base money to be used in their usual banking business and to satisfy statutory reserve requirements imposed on them by regulatory agencies.

Cross-country comparisons of monetary-base growth occasionally have appeared in international economics because central-bank interventions to affect exchange rates necessarily are conducted by the purchase and sale of assets, altering the size of the monetary base. When a central bank sterilizes the effects of its actions on the monetary base by offsetting the purchase or sale of one asset with the sale or purchase of another (buying, perhaps, a foreign-issued bond while simultaneously selling from its portfolio a domestically issued bond), such that the size of the monetary base remains unchanged, most studies have found little effect on exchange rates.

MONETARY POLICY

In all current economies, the growth of the monetary base is an endogenous variable—that is, it is a variable determined simultaneously with other variables, such as employment, output, prices, and market interest rates. In modern times, only the Swiss National Bank has included among its monetary policy objectives a growth rate for the monetary base, although the Bank of England maintained a monitoring range during the latter half of the 1980s. Most of the world's central banks conduct monetary policy by setting and manipulating the level of a short-term interest rate. In the United States, the Federal Open Market Committee implements policy by choosing a target level for the overnight federal funds rate (the interest rate charged by banks to each other for overnight loans of deposits at the Federal Reserve). The federal funds rate is maintained close to the target rate each day by increasing or decreasing the supply of base money.

Many empirical studies have examined linkages among the growth of the monetary base, the growth of broader monetary aggregates, and an economy's inflation rate. Over long periods of time, there is a clear positive relationship: absent significant structural or regulatory changes, prolonged inflation (especially hyperinflation) cannot continue without increases in the monetary base. In most historical cases, excessive growth of the monetary base has reflected a lack of fiscal discipline, not a failure of monetary policy. Sharp reductions in inflation such as occurred in the United States during 1979–1980, are typically accompanied by, and probably require, sharp reductions in the monetary base. There is substantive disagreement, however, regarding short-run relationships. While some studies claim to have found direct linkages between the growth of the inflation-adjusted monetary base and inflation-adjusted economic activity, other studies have found no reliable shorter-run connections. In 1988 the economist Bennet McCallum proposed a monetary policy rule in which the level of the federal-funds-rate target would be adjusted in response to the growth of the monetary base. After initial widespread attention, the rule's impact on monetary policy has diminished in recent years.

U.S. CURRENCY HELD ABROAD

In some countries outside the United States, large amounts of U.S. currency circulate freely and are used for the purchase and sale of goods and services. The question then arises as to whether measures of the monetary base in those countries should include the circulating U.S. currency. Common practice is to exclude it, including only domestically issued base money. It is common practice, however, for measures of the monetary base to exclude foreign-issued currency. This practice is not without controversy. To the extent that inflation is driven by total aggregate demand, the foreign currency that is used in transactions matters. To the extent that a country's long-run inflation is caused primarily, or perhaps exclusively, by increases in its own monetary base, however, foreign currency is properly excluded. Current empirical studies provide little guidance as to which is the more appropriate measure in these cases.

For the United States, one additional issue arises. Alone among the world's nations, a large proportion of U.S. currency (more than half, and perhaps as much as two-thirds) is held outside the United States. Should this currency be excluded from measures of the U.S. monetary base? While experimental measures have been constructed that do so, no such measure has gained wide acceptance, and none is currently published, despite Edward Nelson's finding in 2002 that such a measure of the domestically held U.S. monetary base has been more closely connected to economic activity than other monetary aggregates.

CHANGES IN RESERVE REQUIREMENTS

To be used as a longer-run measure of the stance of monetary policy, measures of the monetary base must be adjusted for the effect of changes in statutory reserve requirements. The resulting series is referred to as the *adjusted monetary base*. Increases in statutory reserve requirements, for example, tend to increase the quantity of base money demanded by depository institutions to satisfy the requirements, conditional on their level of deposits. If no offsetting action is taken by the central bank, this increase is economically equivalent to the central bank reducing the monetary base itself. To avoid sudden jumps in market interest rates due to changes in statutory reserve requirements, central banks have tended to match such increases in demand with increases in supply. (For a further discussion of this, see Anderson and Rasche 2003.)

THE FUTURE

Two developments that began during the 1990s portend a reduced future for the monetary base and a reduced demand for base money. First, central banks worldwide have reduced regulatory reserve requirements to very low levels, attenuating banks' demand for central-bank deposits. In the United States, although regulatory reserve requirements have not changed, banks have used retail deposit sweep programs to sharply reduce their holdings of base money. (In a retail deposit sweep program, a bank reclassifies a transaction-oriented deposit subject to a high reserve requirement as a savings-oriented deposit subject to a low requirement.) Most banks that have implemented such automated sweep systems have reduced their required reserves to a level small enough to be satisfied by the amounts of vault cash and deposits at Federal Reserve Banks that they hold for use in their ordinary business of making and receiving payments. In this case, regulatory reserve requirements cease to be a determinant of the demand for the monetary base. In other countries, regulatory reserve requirements have been replaced with payments-oriented requirements that generally allow banks to hold zero deposits overnight at the central bank. The European Central Bank (ECB) imposes a broad regulatory reserve requirement on most bank deposits at a 3 percent rate. This requirement must be satisfied solely with deposits held at the ECB; vault cash is not eligible.

The second continuing development is the growth of electronic payments. In the absence of binding regulatory reserve requirements, demand for base money is driven by the need of households, firms, and governments to initiate and settle payments. If electronic payments displace most currency and paper checks, then the demand for base money might fall to such a low level that central banks would find that the control of its supply was a weak lever with which to implement policy. The solution to this problem remains uncertain, but many economists have noted that tax payments play a central role. Most governments require that taxes be paid in base money. In the United States, for example, tax payments to the U.S. Treasury must be settled in deposits at the Federal Reserve Banks—payments from households and firms drawn on banks are accepted only to the extent that such payments are later settled by the banks on behalf of their customers in deposits at the Federal Reserve Banks. Economists as diverse as Sir John Hicks and Michael Woodford have argued that this tax-payment function will assure a long-term role for base money in the economy.

DATA AVAILABILITY

In the United States, both the Board of Governors of the Federal Reserve System in Washington, D.C., and the Federal Reserve Bank of St. Louis publish monetary-base data with and without adjustments for the effects of changes in statutory reserve requirements. Data and details of the calculations and adjustments are available from those institutions.

SEE ALSO *Monetarism; Money; Money, Demand for; Money, Supply of*

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Richard G. Anderson

MONETARY POLICY

SEE *Policy, Monetary.*

MONETARY PRODUCTION ECONOMY

SEE *Production.*

MONETARY THEORY

Money in some form has been around for at least five thousand years, with the earliest evidence of its use in the Fertile Crescent in Mesopotamia. In contrast even after three hundred years a theory of money has scarcely been developed.

There are several basic reasons why a theory of money has been long in coming. The number of properties that ideal money needs to possess is so large that it is easy for any author to develop a theory omitting several functions. Thus we have seen the development of many partially correct theories, each one emphasizing different properties relevant to the context of the times. The blending of history, context, and institutional understanding with abstraction and analysis is one that is rarely congenial to either institutionally or mathematically oriented scholars. Furthermore, because money and financial institutions are at the center of practical affairs, theory and practice, advocacy and understanding, have been dangerously mixed.

PRECURSORS

Although Plato noted in passing the use of money as a means of exchange, possibly the first person known to have considered seriously the meaning of money was Aristotle. He identified the uses of money as a means of exchange, a store of value and a numeraire. However, considerable damage persists even today from Aristotle's misunderstanding of the subtlety of the basic properties of economic systems utilizing money. Utilizing an unfortunate and simplistic analogy between the fecundity of the living and the sterility of inanimate objects, Aristotle's comments helped to lay the philosophical foundation for opposition to the charging of any rate of interest whatsoever on loans by the Catholic Church and by the Moslems.

The Romans had an advanced business economy and legal system that included the development of the corporation, but there is little evidence of an interest in economic theory. Nor is there any clear evidence of it in Chinese thought or elsewhere. Possibly the next glimmerings on theorizing about money and interest were the Catholic scholastic doctors as exemplified by Saint Thomas Aquinas (1225–1274).

Key themes developed from Jean Bodin (1530–1596) and Richard Cantillon (1680?–1734) onward have been the quantity theory of money and the credit or "bills only" view of financing. Another basic division in the development of monetary theory has been the development of microeconomic theory, where the control role of government is hardly alluded to, as contrasted with the macroeconomic approaches, where government and the control aspects of the economy are central. The work of John Maynard Keynes (1883–1946), his followers James Tobin (1918–2002) and Don Patinkin (1922–1995), and competitors such as Milton Friedman (1912–2006) exemplify a joining of theoretical studies and advocacy of policy.

TWENTIETH-CENTURY DEVELOPMENTS

Prior to the great work of Keynes, the early twentieth century produced significant works by Ludwig Edler von Mises (1881–1973), Joseph A. Schumpeter (1883–1950), and Knut Wicksell (1851–1926) that set the stage for the developments to come. In a class of its own, but of considerable importance to those who wish to appreciate the subtlety of money and financial institutions, is the work of Georg Simmel (1858–1918) dealing with the philosophy of money.

In the debate on macroeconomic control of the economy, Friedman and his followers, in contrast with Keynes and his intellectual successors, have stressed the importance of the quantity of money as key to control of the economy. Simon Newcomb (1835–1909) first wrote down the explicit equation to describe the quantity theory as $MV = PT$, where P is the average price level, M is the amount of money in the system, V is the velocity of circulation, and T is the number of transactions in the economy. Irving Fisher (1867–1947) provided the more sophisticated analysis. In its simplest form it is assumed that V and T are constants, thereby giving an equation where a change in the money supply directly changes the price level.

The observations by William Stanley Jevons (1835–1882) concerning the failure of the double coincidence of wants may be regarded as a precursor to much formal mathematical work on the microeconomic theory of money. The failure of the double coincidence of wants can be illustrated by three individuals trading in three commodities where no pair can improve directly by trade but all can benefit from monetary intermediation that enables pairs to trade.

The work of John Hicks (1904–1989) straddled general equilibrium theory and the macroeconomic theory of money. He also introduced the idea of calculating adjustments in multistage general equilibrium models with sticky or fixed prices. This was taken up by Jean-Michel Grandmont (1983) and Jean-Pascal Bénassy (1982).

Work on the microeconomic theory of money has grown considerably since 1960, perhaps given impulse by Gerard Debreu's *Theory of Value; An Axiomatic Analysis of Economic Equilibrium* (1959). This work, which established the general mathematical conditions for the existence of efficient market prices, was presented as an extension of the work of Léon Walras (1834–1910). Yet paradoxically it does not involve money except in the sense that the mathematical observation that prices are homogeneous of order zero implies the classical dichotomy that a homogeneous increase of money merely changes the price level.

Search and sequential binary trade models have been utilized as mathematical economic anthropology models to consider pre-market mechanisms of exchange that might lead to the emergence of markets and money. This includes the works of Ross M. Starr, Ariel Rubinstein, Douglas Gale, and others.

Frank H. Hahn raised the basic question of what supports the value of a paper money in any economy with a finite existence. Because all know the paper will be worthless at the end, by backward induction it can be shown that no one will take it at the start. How can this backward argument be avoided? It turns out that there are many different solutions to this problem depending on institutional and technical detail, such as terminal conditions, transactions costs, costs of producing money, policing trade, handling default, and enforcing contract.

Hahn, Mordecai Kurz, Duncan Foley, and several others have considered transactions costs. Seignorage and cost of production have been considered by Martin Shubik and Dimitri Tsomocos. Nobuhiro Kiyotaki and Randall Wright offered a formal model of three individuals producing and trading three commodities where the failure of the double coincidence of wants is overcome endogenously at equilibrium by consistent expectations that support intrinsically worthless money. Per Bak, Simon Norrelykke, and Shubik utilized a somewhat related model to consider the dynamics of adjustment.

David Cass and Karl Shell note that the presence of outside or exogenous uncertainties which would appear to have nothing to do with the functioning of a monetary economy can have a correlating influence on behavior generating what they term "sunspot equilibrium." In a monetary economy with many different independent agents the obtaining of coordination is critical for efficient behavior.

Maurice Allais (1946) and Paul A. Samuelson (1958) recognized the importance of the overlapping generation aspects of a human economy. Real property and financial assets are transferred across the generations as individuals are born and die. Samuelson showed the important role played by money acting as a store of value in this process.

A game theoretic approach to the theory of money and financial institutions has been developed by Martin Shubik (1999) and others. In particular the set of models known as Strategic Market Games (see Lloyd Shapley and Shubik [1977], Pradeep Dubey and Shubik, [1978], and Sylvain Sorin [1996]) make it possible to devise full process models that can be studied for their noncooperative equilibriums. A noncooperative equilibrium is an outcome that satisfies mutually consistent expectations; if all individuals expect that all others are going to take certain actions, there are some actions for which everyone's expec-

tations will turn out to be correct. These expectations are also known as *rational expectations*.

The key stress is on the game theory and the experimental gaming concept of a playable game as a device to make sure that a full process model is constructed. There are so many institutional possibilities in constructing process models that a concept of *minimal institution* is called for.

Parallel stochastic dynamic programs to study monetary phenomena was first introduced by Robert Lucas (1972); Lucas and colleagues have laid out a considerable program linking primarily representative agent, cash-in-advance microeconomic optimizing models to macroeconomic models utilizing solutions with rational expectations. They have utilized these models to address several of the major problems in macroeconomics. Some believe that it is premature to try to draw policy conclusions from models at this level of aggregation and low dimension.

In contrast Ioannis Karatzas, Shubik, and William Sudderth (1994) primarily have considered the behavior of individual agents. These models lead to the existence of equilibriums showing nonsymmetric income and wealth distributions caused by the random elements.

DEBATE ON THE NEUTRALITY OR NON-NEUTRALITY OF MONEY

Although new methods of parallel dynamic programming have been introduced and the mathematical models of process have evolved considerably since the writings of David Hume (1711–1776), the debate on the neutrality or non-neutrality of money is still present among economists in the early twenty-first century, although in a form somewhat different from the debate of the previous 250 years. Basically the argument has been that if money is of no intrinsic value, a doubling or halving of its supply will merely influence the price level and not the distribution of real resources. But if it does not influence the distribution of real resources it can be said to be neutral in its effect. This is a virtual tautology when comparing equilibrium states. However, when issue or withdrawal of money by the government is considered as a potential dynamic control variable, what may be a tautology in equilibrium may be false in a dynamic process.

Friedman offers a thought experiment in which a helicopter drops banknotes on a city. How do the prices and distribution of money change during this exercise? Patinkin discusses the classical separation of the monetary sector from the real economy. All of these writings deal with the same empirical problem. The key question is exactly how much the monetary and financial control mechanism actually controls the real economy. The followers of Schumpeter who are concerned with this equilibrium and uncertainty would say a great deal. The Keynesians, neo-Keynesians, Friedmanites, and neo-Friedmanites all perceive the same question but differ in the answer.

The microeconomists viewing the economy from the assumptions of general equilibrium theory can prove rigorously that the price system is homogeneous of order zero. This means, in plain English, that a doubling or halving of prices makes no difference to the real economy. The mathematics is rigorous, but the model is incomplete for the problem at hand. Modifications such as Hicks's temporary equilibrium studied by individuals such as Grandmont arrive at different conclusions. Other microeconomic theorists such as Pradeep Dubey, John Geanakoplos, Shubik, Charles Wilson, and William R. Zame introduce bankruptcy. The bankruptcy penalty links the value of paper money to the utility function, and if there are any limits to the supply of money and its velocity this implies that money is no longer neutral. Prices are defined on a finite closed interval.

The difficulties in defining and measuring near monies or other money substitutes and the empirical problems in measuring velocity make the forceful statements of Hume and the attractive simple price quantity equation of Newcombe and Fisher no longer generally tenable. We can say, "Given the assumptions of general equilibrium theory and its macroeconomic equivalents, in equilibrium, money is neutral in the economy." It is a matter of the appropriate modeling. In reality, with incomplete markets and time lags in reaction, money is not neutral in disequilibrium. It influences the distribution of real goods. How heavily non-neutral it is and how useful it is as a control mechanism over the economy is a matter of judgment concerning detailed economic observations and measurements. No matter what the economist's persuasion, the consensus in the early twenty-first century appears to be that the control mechanism of money over the economy is weakened by the growth of modern communications and the proliferation of money substitutes.

In spite of the considerable developments since the early twentieth century, many problems, especially those concerning the measurement of velocity and the understanding of how it changes, remain to be dealt with. A satisfactory theory of money must deal with financial institutions and with the nature and the relationship of government fiscal and monetary control. Much of the mathematical analysis of the theory of money leaves out innovation, expertise, and heterogeneous expectations. The straitjacket of the dynamic programming format together with representative agents with rational expectations forces a fixed velocity on most models. In contrast, the nonmathematical models of Keynes, Schumpeter, and

Hyman Minsky present a world with innovation and differentiation in both expertise and expectations. This gives room for a dynamics of control based not on the smooth noncooperative equilibrium of the dynamic programming approach but one with the government, banks, and financiers directing parts of the money supply selectively across the economy.

SEE ALSO *Finance; Macroeconomics; Money; Neutrality of Money; Policy, Monetary*

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Martin Shubik

MONEY

Money can only be defined adequately in the context of a dynamic economy with markets and other financial institutions existing in a society complete with its laws and customs. It is a network or system of public good of considerable complexity. Even if money is privately produced, in the sense that it always depends on network acceptance it is a public good.

A quick perusal of any standard textbook immediately specifies the key economic properties of money as: (1) a means of payment; (2) a store of value; and (3) a numeraire. There are also a host of physical properties that are desirable for an item that serves as money. A partial list includes: (1) transportability; (2) durability; and (3) cognizability.

Left off these two lists is the strategic and informational properties of money. In particular the rules of operation with money distinguish among economic agents. The powers of an individual with respect to the creation and destruction of money are different from those of commercial banks, the central bank, and the treasury.

Part of the basic financial control mechanism of any society is the ability of some institutions to control the money supply and influence the money rate of interest. Although it can be shown at a high level of abstraction that with a perfect clearing system all individuals could issue their own currencies, the degree of reputation, trust, and memory required for such a system to work is unreasonable. The financial institutions that have been invented have been designed to provide a viable system for imperfect individuals.

The informational aspects of the use of money are critical to a modern complex economy. Money is an information aggregating, disaggregating device. Given prices, any collection of diverse assets can be valued by a single number. Bets of almost any variety on the future deal not only with the changes in uncertain bundles of assets, but with how they will be evaluated in monetary terms.

Because people are almost always concerned with a dynamic economy in disequilibrium, money does not provide a constant standard of measure like a carefully measured standard meter. It is a somewhat flexible, crude, and changing store of value. The conditions required to guarantee that a unit of money is of the same value in each period are rarely if ever encountered. A strict specification of all of the conditions that must be specified to guarantee no inflation or deflation is such that it is rarely met in reality. However in a dynamic economy the fact is that money does not maintain a precise value throughout time but permits prices to change in a flexible manner. And, up to a point, this is a desirable property.

Given that there are many desirable properties for ideal money, the institutional manifestation of the ideal money is hard to come by as most actual financial instruments called money miss some of the properties.

ON THE ALLOCATION OF RESOURCES

Precisely when in history individuals switched over from direct trade, where commodity *A* was exchanged for commodity *B* with no intervening means of payment, is not known. The open market with prices is by no means the only way that society distributes its resources. Among the ways extant today are direct bargaining, bidding, the free market with a price system, the dictates of higher authority, force, fraud and deceit, custom including inheritance and other gifts, and last, but not least, chance. Most of these, like society itself, preceded the development of an organized law-enforcing economy utilizing money.

A dynamic economy is a living organism with many ways of achieving some of its goals. Even the most advanced economy will not transfer many of its resources only through markets. Government, alone, at its many levels will account for 20 to 40 percent of the reported monetary income of any society. Gifts will still be made; housewives, husbands, handymen, and gardeners will still produce a considerable nonmarket produce; bribes and theft are all present to contribute to the nonmarket or only obliquely market parts of the economy.

A BRIEF HISTORY OF MONEY

It is not clear whether the development of money preceded, succeeded, or happened simultaneously with the evolution of markets. Their functions are deeply intertwined. The knowledge of the existence of markets makes it easier for individuals to find what they want to buy and where they should go to sell. The existence of money and other financial instruments makes it easier for them to trade. Among the earliest known monies were barley and silver, both of which were used in Mesopotamia over four thousand years ago. A considerable variety of substances have been used as money. They can be usefully divided into storable consumables, such as barley, and durables such as silver. Consumable monies have included barley, rice, cocoa beans, salt, bricks of tea, and cigarettes. Durables have included cowrie shells, wampum, furs, and many metals, including gold, silver, copper, tin and platinum, as well as alloys.

Among the earliest portrayals of the use of a metal as money is a painting from the tomb of Mereruka at Saqqara, Egypt, dating around 2300 BCE, showing gold being weighed in a transaction. Before the invention of coinage, payments utilizing metals were made in dust or ingot form. The invention of coinage is attributed to King Andrys of Lydia around 630 BCE. When one views money and financial institutions it is helpful to adopt the viewpoint of an engineer. This dispels much of the mystery often associated with finance. In particular, the transactions technology is seen to be a part of the economic production process. The switch to coinage contrasts with using metal by weight as a means of exchange. Coinage provided standardization of both the weight and quality of the metal and came with the stamp of authority, providing for law and its enforcement.

In return for the services rendered by coinage the king took a payment termed a seignorage fee estimated at 3 percent. As is evinced by the association of Croesus with wealth, coinage by the king was a source of revenue. In the subsequent history of coinage permission for the operation of mints has often been granted to private entities, although the government has always played a role. The technology of the production of coins has progressed from slow crude hand striking to vast automation where machines can produce coins at the rate of 45,000 per hour. Coining is still a profitable occupation as is evinced by the profits that the U.S. Mint turns over to the U.S. Treasury. It is also an art form as is illustrated by the design by the renowned sculptor Saint-Gaudens of the double eagle gold coin.

Within a few hundred years the use of coinage stretched from England to China. Although historians are not certain, it appears that the Chinese might have invented coinage independently a little later than the West. The mere fact that coinage was quickly and broadly accepted, providing many services that payment in bullion did not provide, does not imply that all coins are accepted even if the issuer is trusted. Mixtures of law, custom, and even aesthetic appeal all come into play. An example is provided by the livre tournois in the thirteenth century, which dominated the use of the livre parisis of Paris, the official coin of the central government.

NOTES ON GOLD AND OTHER METALS

Gold is malleable, ornamental, inert, and easily alloyed. It is estimated that at the end of 2005, the stock of mined gold was approximately 171,000 tons, of which 64 percent had been mined since 1950. World production in 2005 was 2,770 tons. There is a considerable amount of gold in the ocean, but retrieval costs are prohibitive.

Various countries have employed gold, silver, and copper as currency simultaneously. A reason for doing so is to provide a fit for different levels of consumption: coppers for a glass of beer or newspaper; silver for a pair of shoes; and gold to buy a house. The size of a gold coin to buy a beer is too small and as Sweden's experiment with a copper currency demonstrated, buying a house with copper currency required cartloads of copper.

When one country bases its currency on gold and another on silver, any attempt by a country to fix an internal price between gold and silver will cause an influx or outflow of one of the metals. When the English physicist and mathematician Sir Isaac Newton (1642–1727) was master of the mint, in 1717 he overvalued gold in terms of silver sufficiently that silver went out of circulation as it could be sold for gold and the proceeds repatriated and converted at a profit.

PAPER MONIES, NEAR MONIES, AND THE MONEY SUPPLY

From the late seventeenth century onward starting with the formation of the Bank of England in 1694, the world switched more and more to the use of paper currencies. Each currency represents a claim by a national government that it can use its monetary strategic powers to help to control its economy. Monetary consolidations such as the introduction of the euro must be viewed in terms of politics as well as economics. Viewed purely from economics the currency union offers a considerable saving in transactions costs, but from the viewpoint of international politics it marks a considerable change in the strategic powers of individual nation-states.

The mixture of law, custom, and logic that produces a viable monetary system is sufficiently subtle that it is extremely difficult to produce formal models that adequately reflect the many functions of money and near monies. The phrase "near money" refers to an instrument that has many but not all of the properties of a money. For example, confining the observations to the transactions use of money, it should be acceptable in all markets. Nevertheless there may be financial instruments in existence, such as bank checks, which are accepted in almost all markets. For many purposes of analysis it makes sense to lump bank money with the issue of the government.

Because other financial instruments and real assets may have some, but not all, of the properties of money there is a considerable problem in defining a single simple measure of the amount of money there exists in any country. For example the property of being a store of value is present for assets such as land or houses as well as gold.

If a single number is required to measure the amount of money, the United States produces three different measures with many components. The three measures are aggregations called M1, M2, and M3. M1 is the sum of paper currency and coin that is held outside banks, traveler's checks, and checking accounts (but not demand deposits), minus the amount of money in the Federal Reserve float. M2 is the sum of M1, plus savings deposits, including money market accounts from which no checks can be written, time deposits less than $100,000, and retirement accounts. M3 is the sum of M2 plus the large time deposits, Eurodollar deposits, dollars held at foreign offices of U.S. banks, and institutional money market funds.

In the twenty-first century with the proliferation of computers and cheap communication together with data banks on credit evaluation, many new forms of payment, credit cards, debit cards, and e-money are coming into being. Groups of individuals who trade frequently and are well known to each other can set up their own clearing and credit systems without using banks.

MONEY AND CREDIT AND THE QUANTITY THEORY

One of the mysteries of fiat money and national income accounting is what backs fiat or paper money. Is it custom, the power of government, trust in the government, gold reserves and other government assets, the presence of taxation, expectations, the negative incentives of default punishment, or factors associated with insurance and inheritance? A tentative answer is all of the above, in part. The mix may vary through time and place. The ideal money is a symbol that serves as a substitute for trust. It is an abstract "trust pill." This ideal currency does not exist, but the currency of a stable noninflationary economy is hopefully an approximation to this trust pill. Fiat money is an asset like gold but it is an artificial or societally created virtual gold. Treating it as an asset has some paradoxical features. What does one receive on surrendering a one dollar bill to the Federal Reserve? One gets another new bill. Currently the average life of a dollar bill is estimated at twenty-two months; hence this activity is not merely symbolic but relevant. In their work *Money in a Theory of Finance* (1960), Jack Gurley and Edward Shaw made a distinction between "outside money" and inside money that stresses the role of government. Outside money is government fiat money against which a government debt exists. Inside money is fiat money held as an unencum-

bered asset by a private individual. A way in which the government can adjust the overall supply of fiat money held by private individuals is by selling to or buying from them, public debt. The basic difference between fiat money and credit is that money is a virtual commodity. It is a fictitious gold. It is the only financial instrument for which there is no operationally meaningful offsetting instrument on the other side of the balance sheet. The government maintains a fiction that it owes something to the individual who owns a dollar bill, but apart from obtaining a newer piece of paper from the bank it has no operational meaning. From the mid-eighteenth century until today there has been considerable interest in what has become known as the quantity theory of money. In his essay "Of Interest" (1752) the Scottish philosopher and historian David Hume (1711–1776) noted, "All augmentation has no other effect than to heighten the price of labor and commodities; and even this variation is little more than that of a name.… Money having chiefly a fictitious value, the greater or less plenty of it is of no consequence if we consider a nation within itself" ([1752] 1985, pp. 296–297).

In the modern terminology of Don Patinkin, Hume's concept of money shows a classical dichotomy illustrating that the amount of money does not matter. More money merely raises the level of prices. The classical dichotomy means that the structure of real economy in equilibrium is independent of the amount of money in the system. The latter only fixes the price level.

The conditions for the classical dichotomy between money and other goods are that there are absolutely no frictions in the speed of adjustment of the economy to the introduction of more money. This is counterfactual as can be seen by trying to build a playable game of the system.

EQUILIBRIUM OR DISEQUILIBRIUM

In the 2000s there are at least two major schools of thought, one deriving from Hume, the monetarists, exemplified by Milton Friedman and the other modern followers, and modifiers of the work of the English economist John Maynard Keynes. Both schools have skilled analysts. The key distinctions lie in basic assumptions and different interpretations of unclear evidence. Those following variants of the quantity theory appear to stress long-run equilibrium conditions playing down the influence of short-term adjustments and coordination problems as well as ignoring nonsymmetries in wealth, expertise, and decision-making abilities. The neo-Keynesians are more concerned with the influence of monetary policy on short-run adjustments and on problems in economic coordination. They tend to be more concerned with nonsymmetries among industry, the workforce, consumers, and government. More than the monetarists they appreciate the constant disequilibrium in the economic system.

A strategic and more biological view of money and financial institutions is that they represent the neural network and control system over the economic body of society. The government and the private financial establishment form a considerable segment of the economy. They are large enough to have considerable influence on the overall supply of money and credit. This alone places an upper bound on prices. The presence of default penalties and bankruptcy laws places a lower bound on prices. If there is enough deflation it pays a debtor to default unless the bankruptcy laws are changed at the same speed as the money supply. The laws of contract and the bankruptcy laws reflect a society's attitude toward risk. In a highly innovative society in constant disequilibrium, the laws of default and bankruptcy control the innovation rate or the speed of mutation of that society. Furthermore the ability of the government and banks to create money and the other parts of the financial system to direct where credit goes gives government and the financial system considerable control in directing the disequilibrium dynamics of a modern economy. In this structure money matters considerably. In a static equilibrium of a society without innovation the classic dichotomy appears and the importance of money and financial institutions is diminished.

The financial system and money provide the interfacing mechanisms between the economy and the polity. Human society, like an individual's body, is not an undifferentiated mass of independent individuals or cells. There is a complex organization, which in both instances requires a flow of information, control instructions, and nourishment to differentiated organisms that require coordination. The financial system provides for the flow of information and control and the economy provides the various physical forms of nourishment needed by the society.

SEE ALSO *Balance of Payments; Currency; Divisia Monetary Index; Exchange Rates; Monetary Theory; Money, Endogenous; Money, Exogenous; Policy, Monetary; Quantity Theory of Money; Trade*

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Martin Shubik

MONEY, DEMAND FOR

Money exists because there is a demand for it, and that demand creates its own value (like any other asset). The intrinsic value of money may be zero; still, the nominal value of money is equal to its face value. An intrinsically worthless paper acquires value because it performs the role of the medium of trade. People demand money because they believe that most people demand it. In other words, they know that they can exchange money for goods and services or other assets now or in the future. If people know that there will be no demand for money in the future, then nobody will demand it now, so there must be a belief system that money will be demanded in future for indefinite periods. Hence a medium of exchange necessarily becomes a store of value, though not every store of value is a medium of exchange. The liquidity of an asset makes it money. The degree of liquidity is defined as the easiness with which the asset is converted to any other commodity or service. If an asset can be exchanged seamlessly for another asset, then it fulfills the ideal definition of money. Similarly, if money is exchanged for another asset or goods or services and if no transaction cost is involved, then the money is perfectly liquid.

WHAT IS DEMAND FOR MONEY?

Demand for money is not exactly like demand for any other commodity. Money does not give any direct utility to a consumer, nor is it used as an intermediate good in the production process. However, it facilitates transactions in the processes of production, consumption, and distribution. Money has purchasing power whereby one can purchase any marketable good or service. Further in a sense money gives more utility than a set of goods or services of the same value because it provides a generalized purchasing power. An infinite set of choices of goods and services are possible if money exists. Hence demand for money is an indirect demand for goods and services, both in current and in future periods. If more money is chasing the same amount of goods or services, then value of money goes down; this is an inflationary situation. For the holders of money, it is the purchasing power—that is, the real money balances—that matters.

According to John Maynard Keynes, an asset possesses three properties: a yield, a liquidity premium, and a carrying cost. He defined money as an asset that has zero yield but a positive liquidity premium in excess of its carrying cost.

The most common form of money in the early twenty-first century world is the liabilities of central banks. The almost universal requirement that taxes be paid to the governments in the form of liabilities of a central bank ensures that there is a demand for such liabilities (see Jordan 2006).

THEORETICAL SIGNIFICANCE

Demand for money arises from medium of exchange and store of value functions. Because people need money to smooth transactions, they hold it for future needs. Money as a medium of exchange is a facilitator of transactions and hence an essential lubricant to the mechanism of exchange. In fact these two roles of money are interrelated. Unless money is a store of value, it cannot be a medium of exchange and vice versa. However, the transaction demand is more fundamental. There are other assets besides money that are competing and even better stores of value but no better medium of exchange. In developing countries, though, money's store of value role is particularly significant. Money generally serves as the unit of account and the standard of deferred payment because it is convenient as well as efficient. However, the medium-of-account role is not logically tied to the medium of exchange (Wicksell 1906).

Keynes in *The General Theory of Employment, Interest, and Money* (1936) identified three motives for holding money: the transaction motive, the precautionary motive, and the speculative motive. The transaction motive and precautionary motive relate to money's role as the

medium of exchange, whereas the speculative motive relates to money's role as a store of value. The transaction motive arises for exchanging money for goods and services, as it is extremely unlikely to have double coincidence of "wants," especially in a modern economy. It may not be possible for me to exchange a few pages of my research paper for a meal in a restaurant because my "want" and the "want" of the restaurant owner need not coincide. Holding money involves a trade-off between forgoing the interest that can accumulate with savings and bearing the inconvenience of not holding money for transaction purposes. People may hold money to meet future payments, which are uncertain; this is the precautionary motive for holding money (see Whalen 1966). Money is also held for speculative purposes, that is, to avoid the risk inherent in other assets, which may pay higher returns (see Tobin 1958).

Demand for money varies between developed and developing countries because the former have relatively advanced financial systems, states of technology, and degrees of enforceability of contracts. The volume of transactions also influences demand for money. In less developed countries cash is used more often for transactions; in more developed nations the use of credit cards reduces the demand for cash.

There are several economic variables that affect the demand for money, including gross domestic product (GDP), interest rates, inflation rates, financial innovations in the economy, degree of monetization in the economy, exchange rates, structure and level of external trade, and so on. Various theories explain the relationships between these variables and money. The original quantity theory of money (Fisher 1911) was followed by the Keynesian theory of liquidity preference (Keynes 1936) and later by more modern variants of both (Friedman 1956; Tobin 1956, 1958; Baumol 1952). The Keynsian approach makes interest rate an explicit determinant of the demand for money.

Technical progress in the financial sector introduces two competing influences on the trend behavior of velocity, each of which dominates a different stage of development in a particular country. During the first stage of development, the economy is characterized by increasing monetization and expansion of bank branches. Cash and demand deposits are increasingly used for transactions, replacing earlier reliance on barter trade. The income velocity of money falls. In the second phase of development, new securities are introduced as an alternative store of value. The change in technology and regulatory mechanisms in the financial sector and the resultant rapid transfer of funds across time, space, and economic agents economizes on money balances. This results in a rise in velocity, giving rise to a U-shaped function for the velocity with respect to time. Money has an inherent tendency to instability through the development process as the velocity varies (see Bordo and Jonung 1987).

EMPIRICAL SIGNIFICANCE

Money demand is one of the most extensively studied relationships in economic literature. Innumerable articles were published in the last decades of the twentieth century on empirical money demand estimations for numerous countries and time periods. Empirical research on the demand for money progressed as theory evolved, and econometric techniques improved in order to posit a plausible validation for the theoretical relationships (or lack thereof). The growing arsenal of time-series econometric techniques, such as cointegration and error correction, has permitted more sophisticated examinations of demand for money functions.

There is a vast amount of empirical literature examining the stability of demand for money. This is explained by the ever-changing technology, innovations, and regulatory mechanisms in the financial markets. Further the large fluctuations in the interest rates can render a large amount of instability to the velocity of circulation of money.

Markus Knell and Helmut Stix (2003) performed a meta-analysis of almost 500 empirical money demand studies to investigate whether different study characteristics might play a role in variations. They showed that the estimations for the income elasticity of money demand are systematically and significantly higher if broader definitions for monetary aggregates are used; the inclusion of variables such as wealth and financial innovation tend to be associated with lower estimates. The results for the use of different scale variables, the use of different econometric methods, and various additional details of the specification are less clear-cut. Surprisingly they also found that some of these results are similar to observations made in previous surveys, despite the facts that they use a completely different sample of papers and that in their sample most studies use modern cointegration techniques, whereas older surveys (see Laidler 1993) were dominated by partial adjustment models, and so on.

In an international sample of studies, income elasticities between –14.11 and 44.79 (or corrected for outliers between .01 and 2.46) were observed; sometimes substantial differences can be found even within the same country and time period (Knell and Stix 2003). Most surveys show divergence of empirical findings in terms of coefficient values. However, this is to be expected because macroeconomic environment varies across countries and across sample periods.

During the 1970s and 1980s most studies looked at Organization for Economic Cooperation and Develop-

ment (OECD) countries and particularly the United States and the United Kingdom, but since the 1990s a number of papers on developing countries have become available. The literature on developing countries suggests that the models on narrow money work better, reflecting weak banking systems and low financial sector development (Pradhan and Subramanian 2003). Automatic teller machines, for example, allow withdrawals from savings accounts, so the narrow money changes but not the broad money. Hence financial innovation has made narrow money relatively more unstable in advanced economies (see Hetzel and Mehra 1989; Hafer and Jansen 1991). Generally currency, demand deposits, and other checkable deposits constitutes the "narrow money"; "broad money" includes some more financial assets in addition to the narrow money.

Despite the numerous efforts to estimate the demand for money functions, there is little agreement among the authors of this literature. The range of estimated income and interest-rate elasticities is wide, and although some papers maintain that money demand is stable, others come to the opposite conclusion.

POLICY SIGNIFICANCE

The long-run relationship between real money balances, real output, and interest rate has immense policy implications. If demand for money is stable, then output and price level are predictable to a given supply of money. A monetary policy that seeks to limit the supply of money to its demand facilitates the task of macroeconomic management and tries to ensure price stability in the economy. The rate of growth of money supply should be in conformity to the expected growth rate of output in order to constrain the price level from rising to an unacceptable level. The relation between the demand for money balances and its determinants is a fundamental building block in most theories of macroeconomic behavior and is a crucial component in the formulation of monetary policy. This requires a stable demand for money. Furthermore if the growth of money supply increases at a much faster rate than the real GDP, then the currency becomes unstable; this works against the Hayekian requirement of a stable currency for a proper market economy (Jordan 2006). If the demand function itself is not stable, then generally the interest rate rather than the money supply is targeted.

We saw that stability of demand for money has implications for policy. One can see this through the famed IS-LM framework as well. An unstable money demand function generates an unstable LM curve, which renders the IS-LM equilibrium unstable, making the policy impact on income and interest rates unpredictable.

SHORTCOMINGS AND CRITICISMS OF THE CONCEPT

Stability of demand for money is one of the most important issues in macroeconomic policy analysis. However, money demand functions are found to be not robust. Stability and reliability of estimates of parameters of demand functions of money for many countries have been found wanting for various time periods. Unusual economic conditions, including severe bouts of inflation, record-high interest rates, and deep recessions, are responsible for instability of money demand function. This happens across countries due to business cycles. Also the adoption of floating exchange rates and substantial institutional changes brought about by financial innovation and financial deregulation create instability. These changes, which occurred earlier in developed countries, are now affecting many emerging market economies, such as India and China.

There are measurement problems relating to the determinants, such as transaction variable, opportunity cost variable, and wealth variable. In fact measurement and definition problems arise with respect to the money variable itself. What we call "money" also keeps changing across time and geography. Improving the specifications and/or using improved econometric techniques helps matters to an extent. In fact these developments provide opportunities to explore new relationships and to use modern time-series techniques of cointegration and error correction and beyond.

However, statistical techniques are only tools to summarize data; therefore, they cannot always answer difficult questions that need deeper economic insights. More explorations are needed on the conceptual aspects of demand for money.

SEE ALSO *Friedman, Milton; Interest Rates; Keynes, John Maynard; Liquidity; Liquidity Premium; Liquidity Trap; Money; Neutrality of Money; Quantity Theory of Money; Tobin, James*

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Basanta Kumar Pradhan

MONEY, ENDOGENOUS

Economists have disputed the nature of money since the dawn of capitalism. Two polar positions have evolved: the quantity theory (also known as *monetarism*) and endogenous money. The former emphasizes money's role as a means of exchange, and argues that the money supply is primarily controlled by the government. The latter emphasizes money as a unit of account, and argues that the supply of money is determined primarily by the credit operations of commercial banks. Each theory acknowledges that the total money supply is the sum of *fiat money* produced by the government and *credit money* produced by commercial banks, but the theories differ in their views of the hypothesized causal sequence.

The well-known quantity theory sees causation as running from fiat to credit money. The government determines the volume of *base money* (M_0) by printing currency and borrowing from the central bank. This is deposited with commercial banks, which then create credit money (M_2 minus M_0) via *fractional banking*, where they retain a fraction m (the money multiplier) of the deposits, and lend the remainder. The redepositing of this loaned fraction by borrowers amplifies the initial creation of fiat money, so that the total money supply (M_2) ultimately equals m times M_0. Deposits are thus needed to create loans, and credit money is created from fiat money via a time-lagged process. The quantity theory puts primary responsibility for the rate of inflation on the government, since it can manipulate the quantity of money via changes to M_0 and m. The ratio between the money supply and the volume of output in turn determines the price level.

In contrast, endogenous money asserts that credit money is created by commercial banks in response to the needs of predominantly large companies for working capital and investment finance. To ensure an adequate supply of working capital, large companies arrange lines of credit with banks that function rather like individual credit cards—in that the extent to which the line of credit is utilized is determined by the borrower, not the bank. Investment finance is only forthcoming if banks agree to issue loans, which enables them to ration credit to borrowers with poor credit ratings. However, banks compete to provide investment finance to highly rated corporations, so that in general the demand for money by corporations determines the supply of credit money by banks.

When a corporation utilizes its line of credit to pay a supplier, the firm's recorded debt to the bank increases, and simultaneously the supplier's account is credited with newly created credit money. When the corporation negotiates an investment finance loan, its debt to the bank increases and simultaneously an identical sum of credit money is deposited in its account with the bank. In either case, the bank loan instantly creates an identical deposit—the reverse of the causal relation between loans and deposits of the quantity theory, with no time lag.

Instead, there is a lag between the creation of new credit money by the commercial banks and the generation of new fiat money by the government. According to endogenous money theorist Basil Moore, the government's primary role is to ensure that the financial system does not experience crises like those that periodically racked the largely credit money system of nineteenth-century America—culminating in the Great Depression. It does this by providing sufficient currency to meet the public's need for "cash in hand," and by modifying the regulatory requirements on any bank that experiences a run to ensure that depositors' demands for cash can be met.

Endogenous money theory thus sees the government as largely captive to the needs of the corporate and finance sectors, and only able to influence the rate of credit creation at the expense of serious disruptions to economic activity by causing liquidity crises. The one aspect of the financial system that the government does control is the interbank interest rate, which then sets the floor for short-term commercial interest rates.

The quantity theory still dominates economics pedagogy in the form of the exogenous money supply of the IS-LM model, and economic theory in the form of rational expectations macroeconomics. However, the world's central banks subscribe to endogenous money theory, implicitly if not explicitly, in that they abandoned any attempt to control the supply of money after the monetarist-inspired experiments by the U.S. and British governments in the 1980s. While inflation was gradually reduced, economic activity was severely disrupted, and the central banks consistently failed to meet their money creation targets—normally by large margins.

These failed practical experiments were reinforced by empirical research in the 1990s, which found that changes in $M_2 - M_0$ preceded changes in M_0 by up to a year—a result that is consistent with endogenous money and contradicts the quantity theory. Though empirically confirmed, the theory of endogenous money is less well developed than its quantity/monetarist rival, and is still undergoing development.

Augusto Graziani's proposition that all exchanges in a monetary economy involve a single commodity and three parties—a seller, a buyer, and a bank that records payment as a transfer from the buyer's account to the seller's—clarified John Maynard Keynes's (1883–1946) argument that a monetary economy is fundamentally different from a barter economy, and therefore that the neoclassical model of a barter economy cannot adequately describe its behavior. However Graziani's attempt to analyze monetary circulation confused the issue of how monetary profits are generated from borrowed money. Endogenous money theorists also have yet to resolve how much influence banks have vis-à-vis firms in determining the money supply, with the subhypothesis that banks are completely passive being labeled *horizontalism* or *accommodationism*, while the alternative that banks have some control over the quantity and terms of money supply is known as *structuralism*. Other contributors to the debate argue that current disputes in endogenous money emanate from a confusion of stocks with flows, an argument made by Keynes in 1937 when outlining a distinctly endogenous view of money creation, in contrast to the predominantly exogenous perspective that dominated his *General Theory of Employment, Interest, and Money* (1936).

SEE ALSO *Banking; Central Banks; Money; Money, Exogenous; Money, Supply of*

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Steve Keen

MONEY, EXOGENOUS

Money is considered exogenous or endogenous depending on its relationship to the economy. If its existence and quantity are determined by the economy alone, money is considered endogenous. Conversely, if the existence and quantity of money are determined by forces outside the economy—most often by the state—money is considered exogenous. Since the inception of recorded monetary thinking, there has been an ongoing debate about whether money should be treated as endogenous or exogenous.

Much of this debate centers around the issues of (1) whether a royal or state authority should have the right to interfere in the monetary mechanism, and (2) whether the economy is better off with a growing money stock. For much of the medieval, Renaissance, and early modern periods, many writers argued that rulers should not be allowed to exercise their power over the monetary mechanism. This position was influenced by writers like Nicholas Oresme (c. 1320–1382), a French clergyman, mathematician, and economist, who argued that money belongs to the community and debasement was a violation of the people's rights, and the English merchant and financier Thomas Gresham (c. 1519–1579), who famously proclaimed that debased coins will drive out full-bodied coins—or more generally that bad money drives out good money.

During the sixteenth and seventeenth centuries, a general consensus emerged that the quantity of money was a significant factor in determining the amount of domestic commerce. This conjecture was based on the observation that the gold and silver inflow from the Americas coincided with the general economic prosperity of the sixteenth century, while the economic depression of the seventeenth century commenced around the same time that the flow of precious metals across the Atlantic began to abate. The formulation of the quantity theory of money as a conceptual framework, often credited to the French political philosopher Jean Bodin (c. 1529–1596), further clarified the relationship between the money stock, prices, and economic activity. As a result, many theorists proclaimed that the key to national economic prosperity was to find a way to expand the money supply. Hence, while many writers opposed royal manipulations of the money stock, in particular debasements, this position was problematized by the conviction that an increase in the money supply would generate economic prosperity. The question that was passed on to the next generation of monetary thinkers was whether the money supply should be increased from the inside or from the outside.

Before turning to the eighteenth-century view on this question, the perspective of these theorists on the broader relationship between money and the polity must be considered. One of the key debates among early modern thinkers concerned the role that money played in the formation of modern society. For the English philosopher John Locke (1632–1704), money served as an external force that sparked the transition from a state of nature to modern society, while for the Scottish philosopher and historian David Hume (1711–1776), money developed in conjunction with private property and markets. Hence, for some writers, money had an independent outside existence with the potential to transform the rest of society, while for others, money could only exist as an institution embedded inside society's social and economic configuration.

John Locke also engaged in two long-lasting arguments regarding the relationship between the state and money. One of these debates centered around whether money had to be composed of a commodity with intrinsic value or whether it was possible for the government to use its authority to create money through fiat. Locke suggested that it was indeed semiotically necessary for money to be composed of a precious metal because people would only trust a currency that was grounded in something outside the authority of the state. By anchoring money to something incorruptible, like silver, people could trust money without having to rely on the state to behave responsibly. Others, such as Locke's contemporary Nicholas Barbon (c. 1640–1698), argued the contrary position that the state can turn any object into money by its stamp of authority, as long as it is fully committed to keeping the money stock sufficiently scarce. Hence, for some writers, money functions best when it operates independently of the state, while for others, the state is responsible for the very existence of money.

The other debate that Locke was actively engaged in concerned whether the quantity of money should be determined by the economy or by the state—endogenously or exogenously. Locke opined, in agreement with some of his seventeenth-century mercantilist predecessors, that the quantity of money circulating in a nation should be dictated by the bullion flows between countries. That is, the only way to expand the nation's money supply was to engineer a favorable balance of trade, either by producing tradable goods more efficiently or by imposing trade

restrictions. Under such circumstances, the state had limited independent power over the quantity of money.

Others, such as the Scottish banker and monetary theorist John Law (1671–1729), proposed the establishment of a credit currency that could expand and contract in response to the amount of economic activity. Law proposed a credit currency backed by a tangible commodity, such as land, and administered by a bank that would only issue credit money to borrowers intending to use the money for legitimate investment projects. Law argued that a credit currency of this kind would allow the market to determine the proper amount of money—when the economy was prospering and the demand for money was high, the bank would be able to expand the money supply and thus facilitate the growth of the economy. As such, the quantity of money would be determined inside, or endogenously to, the economy.

The reality of the early eighteenth-century credit currencies, however, differed from Law's proposal. Over time, the issuance of credit money by state-chartered banks, such as the Bank of England and the Bank Générale, was determined more by the interest of the state than by the demands of the economy. Hence, the emergence of a credit currency increasingly allowed the state to control the quantity of money in the economy. However, since the note-issuing bank was forced to redeem its paper notes with silver or gold on demand, states did not yet have complete control over the amount of money issued. Toward the end of the eighteenth century, however, when the state-chartered banks started issuing fiat money—paper money that was no longer redeemable for gold or silver—the state acquired a more direct method to control the money supply. A fully exogenous form of money had now developed.

David Hume provided one of the eighteenth-century's most complete reflections on the difference between inside and outside, or endogenous and exogenous, money. He argued that money should always be organized and theorized as endogenous to the economy. Firstly, the origins of money occurred as part of an organic development of the economy, fully independent of the state. Secondly, the quantity of metallic money should always be determined by the specie-flow mechanism between countries, and the amount of credit money should be determined by the liquidity needs of the merchants and not the fiscal advantage of the state. Phrased within the quantity theory of money, Hume believed that the quantity of money was determined by the nation's price level and its level of output—when output was increasing the price level would fall, encouraging exports and an inflow of specie to the country. Any attempt by the state to try to expand the money supply and thus treat money as if it were exogenous would only lead to inflation and possibly even a destabilization of the economy.

Hume did not have the final word on the issue of endogeneity and exogeneity. The conversation continued throughout the nineteenth century between bullionists and antibullionists, the currency school and the banking school. Once Keynesian ideas on countercyclical monetary policy were implemented systematically after World War II (1939–1945) and the state consistently treated the money supply as exogenous, the debate over the actual and proper relationship between money and the economy resurfaced, continuing to this day. These debates have centered around the extent to which the money stock is determined by the price level, interest rate, and output level (endogeneity) or whether the causality runs in the opposite direction with the money stock controlling prices, interest rates, and output (exogeneity). Part of this controversy is sustained by an inability to agree on a definition of money: whether the money stock is primarily composed of money with intrinsic value, credit money, or fiat money.

This issue has become even more complicated in the post–Bretton Woods era, when the U.S. dollar ceased to be redeemable for gold at a fixed price. This period has also witnessed rapid financial developments that have further blurred the definition of money. Add to this the tendencies toward transnational currencies, most prominently exemplified by the European euro, and the adoption of other nation's currencies, such as the dollarization of Ecuador, and the issue of exogeneity and endogeneity becomes all the more complex. For example, the notion that the state is able to control exogenous money no longer holds. Nations that eliminate their own national currency in favor of the U.S. dollar clearly have an exogenously determined money stock, but one over which their own state cannot exercise any control.

In an economic world comprising many different forms of money and near-money, what dictates whether money is exogenous or endogenous is the level of abstraction of the inquiry. If the time horizon is long and the global economy is considered the unit of analysis, most forms of money appear to be endogenous. But if the time span is reduced and the focus is on a particular region, certain forms of money will be found to operate either with weak exogeneity or strong exogeneity. Hence, it is not just institutional features that determine whether money functions endogenously or exogenously; as important is the theoretical framework from which money is viewed.

SEE ALSO *Central Banks; Money; Money, Endogenous; Money, Supply of*

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Carl Wennerlind

MONEY, HIGH-POWERED

SEE *Monetary Base.*

MONEY, HOT

SEE *Hot Money.*

MONEY, NEUTRAL

SEE *Neutrality of Money.*

MONEY, SUPPLY OF

Central bank policy influences the supply of monetary services. The transmission mechanism is not the same in all countries, but commonly the procedure operates through open market operations, by which the central bank buys or sells domestic Treasury securities. Such purchases and sales alter the central bank's balance sheet and thereby *high-powered money*, also called the *monetary base*, defined to be the sum of currency and bank reserves. The resulting changes in interest rates and in bank balance sheets alter *inside money*, defined to be monetary services produced by banks and other financial intermediaries. How to measure the resulting change in the supplied monetary-service flow in the economy is a complicated matter that has been the subject of much debate.

The conventional measurement procedure is to add up the nominal balances of monetary assets. The resulting sum is called the *money supply*. Subtracting the monetary base from that sum produces what is commonly treated as inside money. Much of the modern literature on business cycles revolves around empirical work on the relative effects of inside money and outside money. But the usual measurement of inside money is unrelated to the theory of production and the ways in which that theory determines the output services produced by financial intermediaries.

HIGH-POWERED MONEY

During the Great Depression of the 1930s, the monetary base continued to rise in a normal manner as the supply of money in the economy collapsed. Why did this happen? Currency is dollar-for-dollar pure money. But reserves back demand deposits with a multiplier, k. For every dollar removed from demand deposits as the banking system crashed, currency increased by one dollar, while reserves declined by $1/k$ dollars, so that the monetary base changed by $1 - 1/k$, which is positive. Hence, runs on banks increased the monetary base at the same time that demand deposits were declining and banks were failing. As an instrument or indicator of policy, the monetary base is defective, since it adds together currency and reserves, which have very different effects on the economy.

INSIDE MONEY

According to the theory of production, there are two ways to measure the output of a firm. One way is to measure the gross value of the output *aggregator function, g*. The other way is to measure the net *value added* by the firm's production. By the most conventional and simplest accounting convention, called *double deflation*, value added subtracts from aggregate output the aggregate over intermediate factor inputs. Value added then depends only upon primary inputs, such as capital, land, and labor. In the obsolete labor theory of value, only the one labor factor was needed, since inputs were assumed to be employed in fixed proportions.

Consider the case of a bank that produces a vector of n monetary-asset balances, $m_t = (m_{1t}, m_{2t}, \ldots, m_{nt})'$, during period t and pays on those assets the nominal interest rates $r_t = (r_{1t}, r_{2t}, \ldots, r_{nt})'$, by employing the vectors of primary inputs, x_{1t}, and intermediate inputs, x_{2t}. If the bank's technology is described by the production function, f, with outputs separable from inputs, we can write $g(m_t) = f(x_{1t}, x_{2t})$, where the value of the output aggregator function is $M_t = g(m_t)$. For the most general procedure to measure value added in banking, see William Barnett (2000, pp. 92–93).

The special case of double deflation accounting requires two further assumptions. The first is the existence of aggregator functions, f_1 and f_2, over primary and intermediate inputs, so that $M_t = g(m_t) = f(f_1(x_{1t}), f_2(x_{2t}))$. The second is strong separability between primary and intermediary inputs, so that $M_t = g(m_t) = f_1(x_{1t}) + f_2(x_{2t})$. Value added then becomes $f_1(x_{1t}) = g(m_t) - f_2(x_{2t})$.

Under those assumptions, production theory tells us that the supply of inside money produced by a bank can

be measured by, $M_t = g(m_t)$, while value added in banking is $f_1(x_{1t}) = g(m_t) - f_2(x_{2t})$. Neither theoretical concept has any known relationship with the simple sum monetary aggregate, $\sum_{i=1}^{n} m_{it}$, provided by most central banks, or with inside money, as measured by the simple sum monetary aggregate minus the monetary base. In contrast, it has been shown in Barnett (2000) that total inside money services, $M_t = g(m_t)$, can be measured from the Divisia index over m_t, and that value added in banking, $g(m_t) - f_2(x_{2t})$, can be measured by subtracting from M_t the Divisia index over x_{2t}.

THE DIVISIA INDEX

The Divisia Monetary Index has user-costs as prices within the formula, since monetary assets are durable. So long as required reserves do not exist, the formula for the user-cost price of a monetary-asset supplied is the same as the formula for the user-cost price of a monetary-asset demanded. That formula is

$$\pi_{it} = \frac{R_t - r_{it}}{1 + R_t},$$

where the benchmark asset rate of return, R_t, for a financial firm on the supply side of money markets, is the rate of return on loans by the financial intermediary. But if noninterest-bearing required reserves exist, there is a regulatory wedge, requiring subtraction of the implicit tax on banks out of the formula. As shown in Barnett (2000, p. 57), the corrected user cost price becomes

$$\pi_{it} = \frac{(1 - k_i)R_t - r_{it}}{1 + R_t},$$

where k_I is the required reserve ratio on monetary asset *i*.

THE ECONOMIC STOCK OF MONEY

The Divisia demand-side index and the Divisia supply-side index both measure flows. Since the transmission mechanism of money is sometimes viewed as operating through a wealth effect, it is useful to know how to discount the present value of the service flow to find the economic capital stock of money. Because of the dependency of that capital stock on future expectations, measurement of that capital stock is one of the most challenging areas of this field of research. Since money is now a joint product producing both monetary services and investment yield, wealth effects must untangle the discounted present value of the monetary services flow from the discounted present value of the investment yield (see, for example, Barnett, Chae, and Keating 2006).

CONCLUSION

There is reason to be concerned about conclusions regarding policy reached using conventional monetary aggregates and conventional measures of inside versus outside money. The data provided by many central banks is unrelated to the relevant economic theory, unless all financial assets are perfect substitutes. With different interest rates being paid on different monetary assets, that implied assumption has been unreasonable for over a half century.

Although little research has been done using the relevant theory to measure aggregate money on the supply side, a few such empirical studies have been published and reprinted in Barnett and Jane Binner (2004, pp. 351–434) and Barnett, Melvin Hinich, and Warren Weber (1986).

SEE ALSO *Central Banks; Divisia Monetary Index; Federal Reserve System, U.S.; Friedman, Milton; Interest Rates; Keynes, John Maynard; Monetary Base; Money; Money, Demand for; Money, Endogenous; Money, Exogenous; Policy, Monetary*

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William A. Barnett

MONEY ILLUSION

The term *money illusion* was coined in the 1920s by Irving Fisher, who defined it as "the failure to perceive that the dollar, or any other unit of money, expands or shrinks in value" (1928, p. 4). As a matter of fact, *money illusion* refers to individual or aggregate economic behavior that consists in failing to distinguish transactions in terms of either nominal or real monetary values. This odd tendency is a direct consequence of the fact that money as a measure of value or unit of account, such as the dollar or

the euro, differs fundamentally from physical yardsticks such as miles, kilos, and ohms in that it is not an intrinsically fixed measure over time.

This failure of the public to recognize real and nominal monetary changes is primarily a psychological phenomenon. In economic theory, with its bias toward monetary neutrality, this often has been assumed away, so money illusion has been regarded with some suspicion because the basic assumption of its absence underlies the long-run neutrality property embraced by the quantity theory of money.

Authors such as Leontief (1936) and Haberler (1964) consider money illusion to be a violation of the homogeneity postulate of economic theory. This theory hypothesizes that the demand and supply functions are homogeneous of degree zero in all nominal prices; that is, that demand and supply depend on relative rather than absolute prices and thus are insensitive to relative price changes. Patinkin (1949, 1965) extended this to include monetary assets as cash balances. Consequently, Patinkin postulates the absence of money illusion on the basis of the zero-homogeneity property of net-demand functions in all money prices and the money value of initial holdings of assets. Operationally, this is equivalent to the assumption of rational behavior that predicts that a proportional change in all prices and monetary balances would leave money's purchasing power unaffected. It is this property that offers a yardstick for the assessment of money illusion in practice.

The absence of money illusion is the main assumption underlying neoclassical economic theory that cherishes David Hume's famous "money veil," denoting that money is only useful to exchange for other things which are unlike money of direct significance for economic welfare because, following Pigou (1941, pp. 20–27), money does not comprise any of the essentials of real economic life. Nevertheless, recognition of money illusion has a long tradition among economic heterodox and monetary economists. With his 1928 monograph *Money Illusion* Irving Fisher devoted an entire book to this topic, attempting to discredit the absence of money illusion in the real world on the basis of historical and statistical evidence from all over the world. To him, money illusion was an important explanation for business cycle fluctuations.

Nowadays, interest in the empirical validity of the assumption of money illusion is no longer anathema to the economics profession, firstly because the absence of money illusion helps to account for price stickiness and less than perfect economic adjustment processes, and secondly, because a lot of empirical or quasi-empirical evidence seems to support the occurrence of money illusion. Two kinds of evidence dominate. On the one hand, several well-designed psychological experiments at the individual level show a convincing bias toward nominal rather than real magnitudes, which according to these experiments results in considerable inertia (see Shafir et al. 1997; Fehr and Tyran 1997). On the other hand, recent experience also seems to provide clear-cut evidence for the existence of money illusion at the individual and aggregate levels. The most notable evidence is associated with the introduction of the euro in 2002. This operation offered a splendid opportunity for a real-life experiment to examine the occurrence of money illusion in the main western European countries. From a purely monetary point of view, the replacement of the national currencies of the Euro zone countries by a single currency merely amounted to a redefinition of prices through multiplication by a given and fixed number, for example 0.45 for the Dutch guilder. According to the homogeneity postulate—that is, the absence of money illusion—demand and supply conditions remain unchanged. However, this purely nominal operation resulted in an upward pressure of prices for particular commodities and especially services, affecting household expenditure, as national account statistics of Euro zone countries unambiguously show. This statistical observation, combined with ad hoc information on expenditure in several sectors of the economy in the relevant countries, point to some degree of money illusion. So, both economic experiments (with questionnaires on hypothetical situations allowing either nominal or volume variations) and actually observed expenditure behavior seem to violate the neutrality property of money. Hence, the empirical evidence indicates the existence of money illusion. Moreover, the difficulty of distinguishing between real and nominal exchange rates in daily economic activity provides additional empirical support for this conclusion.

Taken together, the occurrence of money illusion is quite likely in the real world and is, in fact, nothing but a particular manifestation of incomplete knowledge or economic frictions. These findings discredit monetary neutrality of neoclassical economic theory and the innocence of a nominal monetary reform in purchasing power such as the introduction of the euro in 2002.

SEE ALSO *Keynes, John Maynard; Sticky Prices; Unemployment; Wages*

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MONEY LAUNDERING

Money laundering, also known as "cleaning of money," is the practice of engaging in specific financial transactions in order to conceal the identity, source, or destination of money. Money laundering is a main operation of the underground economy. "Dirty money" is useless to organized crime because it leaves a trail of incriminating evidence. Criminals who wish to benefit from the proceeds of crime have to disguise their illegal revenues without implicating themselves. Therefore, money laundering is a process whereby the origin of funds generated by illegal means such as drug trafficking, gun smuggling, corruption, bribery, embezzlement, fraud, and extortion is concealed. The objective of the operation, which usually takes places in several stages, is to make illegally gained assets appear as though they are derived from a legitimate source. Money laundering is a dynamic process that requires three stages: *placement*, or moving the funds from direct association with the crime; *layering*, or disguising the trail to foil pursuit; and *integration*, or making the money available to the criminal once again with its occupational and geographic origins hidden from view. The consequences of money laundering are detrimental to business, economic development, government, and the rule of law. Money laundering increases the demand for cash, makes interest and exchange rates more volatile, and causes high inflation. The drainage of financial resources from ordinary economic growth is detrimental for the whole economy. Most importantly, money laundering empowers corruption and organized crime.

Money laundering is not a new phenomenon; it is as old as crime itself. However, the forms and dimensions of this type of crime have evolved and have become more sophisticated as a result of the rapid growth of globalization, integration, and economic liberalization, as well as dramatic developments in the provision of financial information, in technology, and in communications. Illegal money can be moved anywhere in the world with speed and ease. Tax havens (offshore centers) that offer stability, quality of service, and bank secrecy allow criminals to shield money in complex networks of shell companies. At the same time, the escalation of the drug market and the globalization of organized crime have led to an increased international awareness of the problem of money laundering. The International Monetary Fund (IMF) estimates that money laundering accounts for between 2 and 5 percent of the world's Gross Domestic Product (GDP), or about $600 billion annually.

While the term *money laundering* was once only applied to financial transactions related to organized crime, its definition has expanded. The term today covers any financial transaction that generates an asset or value as the result of an illegal act, including tax evasion or false accounting. Accordingly, in addition to members of organized crime, individuals, small and large businesses, government officials, and even national governments can be considered money launderers. However, the authorities have reacted primarily to the danger of abuse of the financial market by criminal organizations. Over the years, national and international agencies have created a new relationship between law enforcement authorities and those involved in the financial sector, allowing for a united fight against money laundering. In addition, since September 11, 2001, there has been a coordinated attempt, especially in the United States, to cut off terrorist financing. Through the aggressive pursuit of money trails, law enforcement hopes to identify and capture criminals and terrorists and to deny terrorist entities the funds necessary to finance further acts of terror.

SEE ALSO *Capital Flight; Corruption; Drug Traffic; Finance*

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Aristidis Bitzenis
John Marangos

MONEY MULTIPLIER

SEE *Multiplier, The.*

MONIZ, ANTONIO EGAS

SEE *Lobotomy.*

MONKEY TRIAL

SEE *Scopes Trial.*

MONOCENTRIC MODELS

SEE *Spatial Theory.*

MONOPOLY

Monopoly in its pure form is an extreme market form with complete lack of competition. A monopoly firm, or a monopolist, is the only seller, facing no competition in the marketplace for the good or service it is selling. The product in question is unique and has no close substitutes. An example is a single ferry service between two islands, or a pharmaceutical firm that is the sole manufacturer of a particular drug.

Pure monopolies, where there are no close substitutes for the product or service offered, are uncommon in the modern world due to the availability of substitute products and/or government mandates, but monopoly power is exercised by producers in various markets. *Monopoly power* is a broad term that refers to the ability of sellers to hike prices above costs. For instance, although the seller of a famous clothing label is not considered to be a pure monopolist, it has monopoly power to charge prices above those of less popular labels. Conversely, sellers facing many competitors (e.g., newspaper vendors) must price at or very close to costs, and have little monopoly power.

Less common variants of a monopoly include monopsony and a bilateral monopoly. A monopsonist is a single buyer facing many sellers: for example, the Department of Defense is the sole buyer of the wares of various defense equipment manufacturers. A bilateral monopoly is the special scenario where a single buyer faces a single seller. Exchange in a bilateral monopoly takes place depending upon the relative bargaining strengths of the buyer and seller. In the case of a natural monopoly structurally there is room for only one firm in a market. In such cases, a single firm's costs decline as it serves more customers. Hence, one firm can continue to lower costs by producing more, and competitors with small market shares are unable to survive due to higher costs. Public utility companies such as power and water companies are prime examples of natural monopolies.

The primary reason for the emergence and long-term viability of a monopoly is the presence of entry restrictions, or entry barriers, for new competitors (see Bain 1956). These entry restrictions include exclusive ownership of raw materials, patents, franchises (both public and private), and so on. Some entry restrictions may be natural or independent of the monopolist's efforts, whereas others may be deliberately created by the monopolist (e.g., lobbying to make entry more difficult for firms that follow by having them satisfy stricter environmental restrictions). Governments sometimes create artificial monopolies for limited periods by mandating entry restrictions. Patents are a principal example of this. A patent confers a monopoly upon the patent holder until its expiry. In certain instances, governments enter into business by themselves to ensure service and reliability, or for national security considerations.

The longevity of a monopoly depends on the strength and the height of entry barriers. A monopolist can continue to earn supernormal profits over the long term if entry barriers are successful at preventing the entry of competitors. A monopolist ferry operator can continue to earn supernormal profits if the transit authority does not award another ferry license over the foreseeable future. On the other hand, a monopoly will be eroded as competitors are able to circumvent entry restrictions over time. For example, successful innovations are often copied as time passes.

The measurement of monopoly power is essential before any government action can be undertaken to dismantle monopolies to promote competition. A common (and easy to calculate) measure is the concentration ratio. The concentration ratio is the percentage of industry sales accounted for by the largest firm(s) in question. A pure monopoly has the concentration ratio of 100 percent. Thus, the farther away (less than) the concentration ratio is from 100 percent, the more competitive (or less like a monopoly) a market is. Although concentration ratios have the advantage of ease of computation, their primary drawback lies in their inability to reveal the actual behavior of firms (e.g., are firms aggressive or passive competitors?). There are other measures of monopoly power that overcome these shortcomings, but they are relatively difficult to compute.

There are some common misperceptions about monopolies. First, it is not true that a monopolist can charge whatever price it pleases, including the highest pos-

sible price, because at the highest price for most goods, consumers either buy poor substitutes or do not buy at all. Second, a monopolist does not always make profits. In reality, monopolists initially might have to take losses as consumers are educated about their new product(s). This explains the losses of some Internet startup companies.

Economists have shown that compared to a competitive firm, a monopolist's price is higher and production is smaller (Intriligator, 1971). For example, a single airline serving a town will have higher fares and a less frequent schedule than if there were numerous airlines serving the same route. The monopolist's behavior with regard to other strategic variables such as advertising and research and development (R&D) is less clear; that is, it is not clear whether a monopolist would advertise more (or conduct more R&D) than would a competitive counterpart. On the one hand, a monopolist might not have an incentive to advertise because it has no competitors to take customers from; on the other hand, a monopolist might advertise if advertising were to expand the total market by bringing in new buyers. With respect to R&D, a monopolist has the resources to innovate but might not have the desire to introduce new products (Goel 1999).

Public policy in most countries is driven by a procompetitive, antimonopoly stance. Government regulators try to break up monopolies and make markets more competitive, though government tolerance of monopolies varies across nations. The recent antitrust proceedings against Microsoft Corporation and the earlier breakup of American Telegraph and Telephone (also known as AT&T or the "Bell System") are examples. The main criticism against monopoly is that it deliberately reduces production to raise prices. This quantity restriction shuts out some buyers who otherwise would have benefited from buying the product at the (lower) competitive price. Less significant criticisms of monopoly are that it promotes corruption (potential monopolists might be willing to bribe public officials to obtain exclusive contracts) and organizational waste (due to a lack of competition, a monopolist is likely to have a "fatter" organization than is essential to successfully conduct business). Taxation of a monopolist might also pose problems. Given a captive market, a monopolist might see a higher excise tax as an opportunity to raise the price of the product by more than the amount of the tax. This is in contrast to the behavior of a competitive firm, whose post-tax price increase is equal to or less than the amount of the tax.

Joseph Schumpeter (1942) provided the main redeeming grounds for a monopoly in arguing that monopolies were perhaps better at producing innovations because of their deep pockets (resources). Competitive firms with rather limited resources, in contrast, are less willing to undertake risky research projects. Empirical evidence on the advantage of monopoly firms over other (competitive) firms in producing innovations is inconclusive, however. The state-run patent programs in various countries are driven by the recognition that state-sanctioned monopolies granted by patents will spur innovation. Technology, therefore, has the potential to create as well as to dismantle monopolies. A successful new inventor receives a patent and establishes a monopoly. On the other hand, some technologies might create substitutes for existing monopoly products or services; an example of this is Internet companies creating online travel agents to compete with conventional travel agents.

Even for sellers, having a monopoly might not be such a desirable scenario when pricing decisions for a durable good are being considered (see Coase 1972). Durable goods are goods such as cars and washing machines that last a number of years. The dilemma facing monopolist sellers of durable goods is whether to lease them or sell them, and at what level of longevity (durability) to market the durable product. Relatively low initial prices for durable goods do not generate repeat business because the customers use durable goods for such long periods, and high selling prices encourage second-hand (used goods) markets that do not make any money for the monopolist. In contrast, there are no resale markets when a good is leased rather than sold, but complex lease clauses might scare some buyers away.

In sum, although monopolies are not very common in their pure form, monopoly power exists in many markets. Whereas government policy across the world continues to generally favor competitive markets, there are some redeeming features of monopolies. However, as new technologies emerge, we can expect more monopolies (at least in the short term) and destruction of existing ones.

SEE ALSO *Competition, Perfect*

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MONOPOLY CAPITALISM

Monopoly capital theory states that capitalism undergoes phases of evolution and transformation when some of its dominant institutions change significantly over time. It also states that historical changes toward greater concentration of industry need to be incorporated into the edifice of economic theory. It is not sufficient to simply assume high levels of competition, as the degree of monopoly is critical to the performance of capitalism in many ways.

Much of the debate about monopoly capitalism concerns the degree of concentration of industry; what forces control the large corporation; whether a tendency exists for stagnation due to effective demand failure; and whether a large amount of so-called waste is necessary for capitalism to periodically minimize demand problems.

THEORETICAL ORIGINS

The theoretical origins of monopoly capitalism include certain Marxist writers, and later post-Keynesians and institutionalists joined the debate. Karl Marx in volume one of *Capital* (1867) discussed the tendency for greater centralization and concentration of capital. Rudolf Hilferding in *Finance Capital* (1900) scrutinized an era of conglomerates along with the financial domination of industry. Paul Baran and Paul Sweezy in *Monopoly Capital* (1966) believed that managers of large corporations were often the largest shareholders and held control. Harry Braverman extended the analysis of monopoly capital to the labor process in *Labor and Monopoly Capital* (1974). Keith Cowling and Roger Sugden analyzed the implications of late-twentieth-century globalization and corporate expansion to monopoly capital theory in *Transnational Monopoly Capital* (1986).

CHANGING TRENDS

Up until the late 1800s relatively high levels of competition were characteristic of capitalism. Degrees of competition changed, however, over the business cycle and long waves of growth. With the development of the joint stock company in advanced nations, firms grew in size during the mid- to late 1800s. During the late 1870s to the 1890s overproduction led to periodic deep recessions and depressions. In response to this, around the turn of the twentieth century a major merger movement stimulated greater concentration, along with selling costs such as advertising, while globalization and imperialism expanded the market. This all led to higher profit and accumulation until World War I, as Thorstein Veblen showed in *Absentee Ownership* (1923).

By the 1930s a serious level of oligopoly and monopolistic competition became institutionalized in the major capitalist economies. Through the postwar boom of the 1950s until the early 1970s the dominant oligopoly sector controlled the major industries, while the weaker competitive sector survived through contracts and agreements with the dominant sector. During this time, monopoly capitalism was seen as based on big business, big unions, and big government.

TENDENCY TO STAGNATION

The term *monopoly capitalism* did not become popular until the publication of Baran and Sweezy's *Monopoly Capital.* The authors drew attention to the tendency for the potential economic surplus over necessary costs to rise as big companies benefit from economies of scale, research and development, and profit mark-ups. Problems exist, though, especially the tendency to periodic stagnation through insufficient effective demand or inadequate markets.

In 1965 Michel Kalecki published his *Theory of Economic Dynamics*, which explains that when the commanding heights of industry are controlled by oligopolies, the profit mark-up can increase through time. Those who receive income from profit have a higher propensity to save, leading to lower aggregate demand, unless investment rises, which is unlikely as investment depends on consumption. As productivity is greater than demand, capacity output utilization declines, leading to the tendency toward insufficient demand.

The tendency to stagnation creates anomalous solutions such as wasteful advertising and other selling expenses; destructive military spending; and global corporate dominance of the culture. Under monopoly capitalism, billions of dollars are wasted on conspicuous consumption and fashion to reinforce social distinction. Escalating managerial bonuses heighten class distinctions and expand inequality. Monopoly capital enterprises promote the degradation of work through skill fragmentation into tiny compartments of minor skills, according to Braverman. Workers are less master craftspeople and more mere appendages to the technical apparatus.

Credit creation may potentially enhance consumption to lessen aggregate demand problems. But without higher real wages this may stimulate excess debt and escalating speculative bubbles that lead to periodic deep recession, such as during the 2001–2003 recession in the United States. The problem of realizing the surplus continues while the needs of business and privilege outweigh the potential for egalitarian reform.

In *Transnational Monopoly Capital*, Cowling and Sugden detailed problems associated with transnationals spreading stagnation tendencies to the global economy.

Demand problems are worse when the power of labor is declining and governments are reducing productive social investments. While greater globalization seemingly raises competition, it can enhance the power of large corporations through lower costs and larger markets. They also emphasize the distributional conflict between managers and shareholders, and how managerial salaries are part of the economic surplus (rather than being a necessary cost).

CRITICAL QUESTIONS

Three critical questions can be raised about monopoly capital. The first is historical. The origins of monopoly capital were from 1900 to the 1940s, while the 1950s to early 1970s represent the Fordist long boom. Globalization from the 1980s to the 2000s has seen the emergence of many East Asian nations (especially China) as serious players in the world economy. New competitors in the global system also engage in cooperation through strategic alliances, joint ventures, and mergers and acquisitions. Although monopoly capital tendencies remain, a competitive-innovation dynamic has been actively at work. How this affects monopoly capital tendencies needs to be further researched.

Second, is stagnation linked purely to effective demand problems? Have changes in capitalism created new anomalous tendencies? For instance, outside of East Asia and a few other nations, long-term profitability, productivity, and gross domestic product (GDP) growth per capita have all been below par from the mid-1970s to the early 2000s (despite business cycle upswings). Perhaps excess competition, neoliberal governments, and financial dominance of industry have been the major players in this anomalous performance, along with inadequate demand, as Phillip O'Hara suggested in his *Growth and Development in the Global Political Economy* (2005).

Third, a central concept to emerge from monopoly capital theory is the economic surplus. The production, distribution, and reproduction of economic surplus are critical to the long-term performance of capitalism. And, as James Stanfield has suggested, it provides a potential (surplus) fund for democratic social change out of which a more progressive system may emerge.

SEE ALSO *Competition, Marxist; Economics, Post Keynesian; Institutionalism; Marxism; Primitive Accumulation*

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Phillip Anthony O'Hara

MONOPSONY

A competitive market has many buyers and sellers, none of whom can influence market price. By contrast, a market with many buyers and one seller who can influence price is termed a *monopoly*, whereas if there is only one buyer and many sellers we say that the buyer is a *monopsonist*. For example, a government may effectively compel farmers to sell to a state monopsonist (marketing board). Because the latter is the sole buyer, it may use this dominant position to lower the price it pays to sellers, thus generating monopsony profits (see Bonner 1988). A market with a small number of large buyers who have some monopsony power is known as an *oligopsony*, whereas a market with many buyers and sellers but where each buyer still has some monopsony power is said to have *monopsonistic competition* (see Bhaskar, Manning, and To 2002 for a discussion).

Joan Robinson (1932) first used the term *monopsony* in a discussion of the labor market (see Thornton 2004 for a discussion of the origin of the term). While there may be monopsony power in any market, its application to the labor market has dominated the literature. The standard early monopsony model was the "company town model." The idea is as follows: In a relatively isolated town, an employer may be large enough to affect the market wage in that town. If the employer lowers/raises employment, the market wage will fall/rise. If the town is relatively isolated, travel costs will prevent other companies from competing for workers. However, in recent decades, as both labor and capital have become more mobile, it has become less credible that an employer could pay less than the competitive wage without other firms moving to town and competing away the lower wage, or workers availing themselves of higher wages elsewhere.

More recent models such as Burdett and Mortensen (1998) or Bhaskar and To (1999) can be used to rationalize monopsony power in modern labor markets. If there are search costs associated with either workers finding jobs or employers finding workers, or if workers have preferences for particular employers, firms may have some monopsony power that allows them to pay a wage below the competitive wage. The source of monopsony power here is that a worker may accept a relatively low wage offer from an employer if continuing to search for a better offer is costly. In these models, there is monopsonistic competition in that there may be many employers, but each has some monopsony power.

Manning (2003) discusses the implications of such models for a wide range of important labor market topics. For example, in a monopsony model, the impact of minimum wages or trade unions on employment and efficiency are ambiguous, in contrast to more traditional competitive models of the labor market where minimum wage or unions typically lower employment and are inefficient. Monopsony/search models also provide a rationale for frictional unemployment and wage discrimination against women if women are less mobile across jobs than men.

Monopsony models, such as the job-search models referred to earlier, also provide a plausible way of understanding observed features of labor markets that are difficult to rationalize in other models. For example, if it is costly and time-consuming for workers to search for jobs, a search model predicts that there will always be some frictional unemployment even when the economy is doing well. Another long-standing puzzle in labor economics is the large differences in observed wages between similar workers doing similar jobs. Monopsony models provide a rationale for these observed wage differences. More traditional competitive models of the labor market, on the other hand, deal inconsistently with these differences in wages (see Mortensen 2003 for a discussion of this issue).

SEE ALSO *Competition, Imperfect; Discrimination, Price; Monopoly; Robinson, Joan*

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Frank Walsh

MONOTHEISM

The term *monotheism* derives from the Greek words *monos* ("single," "only") and *theos* ("god"). It refers to the belief that there is only one God. Although various forms of monotheism can be traced to ancient times, the term itself is relatively modern. After the Irish freethinker John Toland (1670–1722) published *Christianity Not Mysterious* (1696), the term *pantheism* was applied to his concept of the divine. Eventually, it became necessary to distinguish traditional monotheism, which understands God as transcendent or distinct from the universe, from pantheism and other forms of theism.

VARIETIES OF MONOTHEISM

As the study of religions developed in the 1800s and 1900s, further distinctions were made between traditional *monotheism* (belief in a single, transcendent God who communicates by revelation), *polytheism* (belief in multiple or many gods), *deism* (belief in God as a transcendent being or power who does not intervene in history), *henotheism* (exclusive adherence to one God without denying the existence of other gods), and *pantheism/monism* (affirmation of an identity between the universe and God or the affirmation of a single, ultimate reality of which the multiple existing things are only parts or extensions).

Traditional monotheism, as developed principally within Judaism, Christianity, and Islam, understands the one divine being not only as transcendent but also as the almighty creator and sustainer of all things, and, therefore, as distinct from and exalted above the created universe. Because everything that exists has been created by and depends on the one God, human beings owe this sublime being complete obedience, submission, and adoration. Moreover, God is understood as infinite, omnipotent, and endowed with all perfections. Although God is transcendent and mysterious, human beings know the divine will by means of supernatural revelation, mediated variously

through God's interventions in human history (e.g., sacred covenants, inspired writings, prophets, and, in the case of Christianity, the incarnation of God's Word). Traditional monotheism, therefore, looks upon God as a personal being who oversees and guides human affairs.

Various types of monotheism can be found in the world. *Deism*, as developed during the 1600s to 1700s, understands God within the bounds of reason rather than revelation. Deists see the divine as the ultimate source of creation and order in the universe rather than a personal God who intervenes in history with prophecies and miracles. Many scholars consider *pantheism*, insofar as it affirms one divine reality, to be a form of monotheism—even though it does not distinguish God from the universe. *Pan-en-theism*—which believes God is both above the universe and within it (as a dynamic principle or life-force)—is another type of monotheism. Some even believe that monotheism can incorporate polytheism when the multiple gods are conceived as manifestations of an underlying divine unity (as in many forms of Hinduism).

ORIGINS OF MONOTHEISM

Scholars differ as to when monotheism first emerged. The German anthropologist and Catholic priest Wilhelm Schmidt (1868–1954) maintained that monotheism was the primordial belief of human beings. In his twelve-volume work *Ursprung der Gottesidee* (Origin of the Idea of God, 1912–1954), Schmidt argued that the "High God" found in many primitive cultures pointed to an original monotheism (subsequently obscured by devotions to lower spirits and gods). Many anthropologists, however, believe polytheism is more primordial and monotheism the result of a higher cultural development.

The origins of monotheism often have been linked to Judaism and the biblical tradition. Abraham (c. 1800 BCE) is understood as the unifying figure of the three monotheistic or *Abrahamic* religions of Judaism, Christianity, and Islam. Some scholars, however, believe Abraham was not a full-fledged monotheist but a henotheist (i.e., one who pledges exclusive devotion to one God without denying the existence of other gods; from the Greek, *heis* [one] *theos* [god]). Exegetes point to the use of the plural, "gods" (*elohim*; see Gen. 1:26; Exod. 12:12), and to several biblical names (e.g., *el-elyon*, Gen. 14:19; *el shaddai*, Gen. 17:1) that might have referred to distinct gods worshipped by the early Hebrews.

Some, however, argue that the plural, *elohim*, is used in a royal sense or as an intensive use of the plural to show that the one God embodies all the qualities of the divine. These same scholars maintain that names such as *el shaddai* refer exclusively to the one God; thus, for them, there is no evidence of biblical polytheism or henotheism.

Other biblical exegetes find layers of tradition in the Pentateuch or Torah (the first five biblical books), which manifest a gradual move from henotheism to true monotheism. By the time the Pentateuch acquired its final edited form (c. fifth century BCE), authentic monotheism was certainly in force (see Deut. 32:39: "See now that I, even I, am he, and there is no god beside me"). In chapter 45 of Isaiah (c. 539 BCE), the God of Israel proclaims: "I am the Lord, and there is no other" (Isa. 45:6) and: "There is no other god besides me" (Isa. 45:21).

Many scholars, though, find evidence for early forms of monotheism not influenced by the Hebrew biblical tradition. The consensus, therefore, is that monotheism cannot be traced, in a unilinear manner, to a single historic source. Instead, the concept of a single God emerges from an underlying perception of unity or the postulation of an original cause of the cosmos. Monotheism, therefore, is understood as a natural structuring of reality by the human mind rather than a concept demanding supernatural revelation.

THE ABRAHAMIC RELIGIONS

The monotheism of the Abrahamic religions (Judaism, Christianity, and Islam) requires the exclusive worship of the one God. Thus, the Jewish sage Maimonides (c. 1135–1204 CE) numbered among the basic articles of Judaism the necessity of worshiping God alone who is the one, eternal, and incorporeal Creator.

Although some contemporary Jewish scholars acknowledge strands of early biblical polytheism, Judaism, as a whole, has been tenacious in affirming authentic monotheism. Thus, references to the Lord's dominion over the "gods" (see, for example, Prov. 58:1–2 and 82:1) are rarely interpreted in a polytheistic manner. Instead, such passages are read either as a statement of God's power over all pretenders to divinity or as an affirmation of the Lord's authority over created spirits or angels. Similarly, the "Angel of the Lord" (see Gen. 16:7 and 22:11 and Exod. 3:2,6, and 13) is perceived as a manifestation of God's own self and not a separate divinity. The other angels mentioned in the Bible are understood as messengers and servants of God; they are not in any way thought of as separate "gods."

Christianity emerged out of Jewish monotheism, but its belief in the divinity of Jesus and the Holy Spirit led to the doctrine of the Trinity: three eternal Persons (Father, Son, and Holy Spirit) as hypostases or subsistences of the one divine essence. Although some see the Trinity as a compromise of authentic monotheism, Christian creeds and councils reject the view of the Trinity as "three gods" and affirm the unity of the divine essence. The Christian councils of the fourth and fifth centuries proclaimed Jesus as the eternal Word of God who assumed a human nature

and not a creature to whom divinity was subsequently ascribed.

Some people regard the devotion to the saints in Catholic and Orthodox Christianity as a form of "functional polytheism." In Catholic and Orthodox theology, however, the saints are not considered deities; instead, they are sanctified human beings who pray for the living from heaven (see, for example, Rev. 5:8). The saints are "divinized" in the sense that they come to share in the divine nature (see 2 Pet. 1:4). They are sometimes called "gods" (John 10:34; Prov. 82:6)—not because they are uncreated deities—but because they participate in the grace of divine life bestowed upon them by God.

Various Protestant Christians likewise consider devotion to images of the Blessed Virgin Mary, the angels, and saints as a form of "idolatry." Catholics and Orthodox, however—following the teaching of the Second Council of Nicea (787 CE)—distinguish between the worship (*latreia* or *latria*) due to God alone and the veneration (*dulia*, *proskunesis*) given to the holy images (ikons) of Mary, the angels, and the saints.

There is, though, evidence of crypto-polytheism in Afro-Caribbean religions such as Santeria that blend the Yoruba deities of Africa with the Catholic saints. Also, the Mormons (the members of the Church of Jesus Christ of Latter-Day Saints) are sometimes considered polytheists because of their understanding of the Trinity and other doctrines. In spite of these examples, Christianity, as a whole, has been strictly monotheistic.

Islam claims to be the primordial religion of humankind, because all the prophets, since the time of Adam, have taught the same doctrine of God's unity proclaimed by Muhammad (570–632 CE). The Qur'an, revealed through Muhammad, is seen as the final revelation of God (Allah), which corrects the corruptions that had entered into earlier revelations (such as the Torah, revealed through Moses, and the Gospel, revealed through Jesus).

Islam rejects the Christian doctrines of the Trinity and the divinity of Jesus. Allah is the one and only God, who "begets not, nor is He begotten, and there is none like unto Him" (Qur'an 112:3–4). For Muslims, the greatest sin is *shirk*, the idolatry of associating something other than Allah with Allah.

Islamic monotheism influenced the religion of Sikhism, which emerged in India under the guru, Nanak (1469–1538). The Sikhs incorporate certain Hindu teachings, but their concept of God is completely monotheistic. Bahai, which originated in Iran in the nineteenth century, likewise grew out of Islam, and is entirely monotheistic.

MONOTHEISM IN THE NON-ABRAHAMIC RELIGIONS OF THE WORLD

The religion of ancient Egypt was polytheistic, but in the fourteenth century BCE the pharaoh, Amenhotep IV (reigned c. 1364–1347 BCE), changed his name to Akhenaten (servant of Aten) and affirmed Aten (or Aton) as the one true God, symbolized by the solar disk. Akhenaten suppressed the cults of other Egyptian gods, and he referred to Aten as the "sole God, other than whom there is no other."

Akhenaten's endorsement of monotheism, though, did not persist. After his death, devotion to the other Egyptian gods was restored. In his 1939 book *Moses and Monotheism*, Sigmund Freud (1856–1939) theorized that Moses (c. 1300–1200 BCE) borrowed his monotheism from Akhenaten. Most scholars, though, dispute this claim.

The religions of ancient Greece and Rome were polytheistic, but some signs of monotheism emerged. Plato (427–347 BCE) referred to a supreme spirit (*psyche*) as the source of motion and order in the universe (see Book 10 of the *Laws*), but he seemed to believe that universal Ideas, like the Good, actually transcend the cosmos governed by the supreme Spirit. Aristotle (384–322 BCE) affirmed the existence of an eternal and immutable "unmoved" or "prime mover" who is "self-thinking thought" and "pure act." This concept of the divine, however, was closer to deism than traditional monotheism because the "prime mover" is completely transcendent and not concerned with the affairs of human beings or the universe.

The Greek and Roman Stoics affirmed a supreme ordering principle in the universe known as Reason (*Logos*). For the most part, however, this Reason was not distinct from the material universe but an active principle within it. This was a form of pan-en-theism or pantheism rather than traditional monotheism.

Plotinus (c. 205–269 CE) developed a mystical-philosophical form of monotheism. He believed in a supreme, transcendent reality known as the One out of which all other things emanate in descending, hierarchical order: from the Intellect (*nous*), to the Soul (*psyche*), and finally to matter.

The Persian religion of Zoroastrianism, named after the prophet Zoroaster (or Zarathustra; c. 900s–800s BCE), was monotheistic in its original form. Ahura Mazda, the Wise Lord, is the supreme Creator of the material world, and from him came forth the twin spirits: Spenta Mainyu (the Holy Spirit who chose the good) and Angra Mainyu (the Evil Spirit who chose "the lie"). The "Holy Immortals" (e.g., Good Thought, Immortality, etc.) are not other gods but eternal forms or attributes of Ahura Mazda.

The original monotheism of Zoroastrianism, however, was obscured by the rise of the cult of Mithra (c. second century BCE) and by the later tendency to depict Ahura Mazda and Angra Mainyu as competing gods. Zoroastrianism, however, completely rejected the matter/spirit dualism taught by Mani (c. 216–276 CE).

Hinduism originated as a polytheistic religion with virtually millions of gods (*devas*). As the tradition developed, some hints of monotheism or monism emerged. Even in the early Hindu scriptures known as the Vedas (c. 1200–900 BCE), there was the recognition that: "The real is one, though the sages name it variously" (Rig-Veda I, 169). By the time of the mystical writings called the Upanishads (c. 800–500 BCE), some Hindu thinkers began to understand the many gods as expressions or manifestations of the one supreme reality known as *Brahman*. When the Hindu sage Yājñavalkya (c. 800s BCE) was asked how many gods there really are, he answered, "One."

Hindu monotheism, however, sometimes lapsed into monism when *Brahman* was considered the only true and permanent reality. By contrast, devotional Hinduism tended to concentrate all the attributes of the divine into one personal manifestation of *Brahman*. Thus, in the Bhagavad Gita (c. 200s BCE), Krishna states: "By me, unmanifest in form, this whole universe was spun: in me subsist all beings, I do not subsist in them" (IX, 4).

Although differing forms of monotheism or monism can be found in Hinduism, the many gods mentioned in the Vedas could never be denied without repudiating the authority of the Vedas themselves. Thus, in Hinduism, polytheism on a popular and mythological level has continued to coexist with various forms of mystical monism and philosophical monotheism.

In original Buddhism, the focus was on achieving detachment from craving in order to reach a state of liberation called *nirvāna*. In later Mahayana Buddhism, the ultimate reality was identified variously as emptiness (*śūnyatā*), consciousness, or the Buddha-nature. There was, therefore, a single absolute reality.

In some forms of devotional Buddhism, the Buddha became deified, and there emerged the doctrine of the three "bodies" or aspects of the Buddha: (1) the *Transformation Body*, which was the body of the Buddha on earth; (2) the *Bliss* or *Enjoyment Body* assumed by the various celestial Buddhas; and, (3) the *Truth-Body*, which is the ultimate reality of the Buddha-essence. Devotional Buddhism, therefore, developed a belief in a unified supreme reality behind all things, which can be understood, at least analogously, as a form of monotheism.

Ancient China was originally polytheistic, but aspects of monotheism emerged in the concept of Heaven (*T'ien*), taught by Confucius (c. 551–479 BCE), and in the *Tao* of the Tao Te Ching, the mystical treatise attributed to Lao-Tzu (c. sixth–fifth century, BCE). In his Analects, Confucius speaks of Heaven as the transcendent source of order and morality, a reality somewhat analogous to a personal God.

The *Tao* also is analogous to God, because it is "the mother of the myriad creatures" (I, 2) and "the genesis of all things" (I, 4). As the all-pervasive source of things, the *Tao* is like a divine principle guiding the universe (i.e., a type of pan-en-theism).

Native American religion is multifaceted, and various gods or spirits are acknowledged. There is, however, a deep sense of a "Great Spirit" who pervades nature and is expressed in the numerous powers of animal and human life. In a certain sense, the universe is the dwelling place or body of the Great Spirit, and, therefore, a form of pan-en-theism is present.

CONCLUSION

The religions of the world incorporate different forms of monotheism: from the strict monotheism of Islam to the mystical monotheism of Hinduism (coexisting with popular polytheism). Because Christians and Muslims combine to make up over half of the world's population, a case can be made that monotheism resonates well with basic human needs for order, meaning, and direction.

SEE ALSO *Atheism; Christianity; Church, The; Hinduism; Islam, Shia and Sunni; Judaism; Polytheism; Religion; Roman Catholic Church; Theism*

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MONROE, JAMES

SEE *Monroe Doctrine.*

MONROE DOCTRINE

The Monroe Doctrine is a principle of American foreign policy in the Western Hemisphere that was announced by President James Monroe (1758–1831) on December 2, 1823, in his annual message to Congress. The Monroe Doctrine was intended to discourage and prevent further colonialism and military intervention by European powers, especially Britain and Russia, in the Western Hemisphere and any attempts by European powers to exploit or endanger the growing independence of Latin American countries from the Spanish empire. The major tenets of the Monroe Doctrine are that, first, the Western Hemisphere has a political existence that is separate from Europe. Second, the United States would regard further European efforts to colonize or extend political and military influence in the Western Hemisphere as hostile actions against American national security. Third, the United States would not interfere with existing European colonies or political matters.

The Monroe Doctrine was particularly influential in American foreign policy toward Latin America during the late nineteenth and early twentieth centuries. In 1895, the United States cited the Monroe Doctrine in a boundary dispute between Venezuela and Britain. In 1898, the United States relied on the Monroe Doctrine to justify its war against Spain in Cuba and its later intervention in Puerto Rico and the Dominican Republic. The application of the Monroe Doctrine to Cuba was strengthened by the Platt Amendment of 1902. This amendment to the Cuban constitution specified that the United States retained the right to intervene militarily and politically in Cuba. In 1904, President Theodore Roosevelt (1858–1919) announced the Roosevelt Corollary to the Monroe Doctrine. The Roosevelt Corollary stated that the United States has an obligation to prevent political and economic instability in Caribbean nations.

Until 1934, the Monroe Doctrine was used to justify American military intervention in Haiti, Nicaragua, and the Dominican Republic. In 1934, however, President Franklin D. Roosevelt (1882–1945) rejected the Roosevelt Corollary in announcing his Good Neighbor policy toward Latin America. The principles of this policy included that the United States would respect Latin American governments as diplomatic equals, that the Platt Amendment would be repealed, and that the United States would refrain from intervening in Latin American domestic affairs. The Good Neighbor policy improved cooperation and diplomatic understanding between the United States and most Latin American governments during the 1930s and 1940s, but American economic domination and exploitation of Latin America continued.

During the cold war, the United States revived the use of the Monroe Doctrine to legitimize military intervention because of its concern that communism would develop and expand in Latin America, especially after Cuba became a Soviet ally. American presidents made public or private references to the Monroe Doctrine to justify the U.S. naval blockade of Cuba in 1962 and the American invasions of the Dominican Republic in 1965 and Grenada in 1983. The end of the cold war and greater economic development and democratization in Latin America made it less likely that the United States would invoke the Monroe Doctrine.

SEE ALSO *Cold War; Colonialism; Communism; Cuban Revolution; Foreign Policy; Imperialism; National Security*

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Sean J. Savage

MONT PELERIN SOCIETY

Directly after World War II (1939–1945), a group of thirty-six scholars—mostly economists, with some historians and philosophers as well—were invited by the economist Friedrich von Hayek to Mont Pelerin, a Swiss Mountain resort, to discuss the state of classical liberalism. They feared that Western society was in danger and liberty was being threatened by totalitarianism and other forces. After ten days of deliberations, the Mont Pelerin Society was founded on April 10, 1947.

Hayek's hope in founding the Society was to create "an international academy of political philosophy" with the aim of "regenerating the ideas of classical liberalism in order to refute socialism" (Hartwell 1995). His aim was educational, and he hoped to influence political structures through ideas, not through direct political involvement. Because of this, the organization does not form or align itself with any political party or parties, nor does it conduct propaganda. Instead, the Mont Pelerin Society is a forum for free discussion aiming "not to spread a given

doctrine, but to work out in continuous effort, a philosophy of freedom" (Hartwell 1995).

The Mont Pelerin Society is decentralized. It has no office, no paid staff, nor any central organization other than a Web site. All discourse and discussion of ideas occurs through meetings, which are organized, funded, and run by local ad-hoc committees. Since 1947 the Society has held thirty-three General Meetings, twenty-seven Regional Meetings, and a number of Special Meetings. These have occurred in Europe, Central and South America, the United States, Asia, Australia, and Africa. Because of its decentralization, and because it does not act as one body, the Society's influence is difficult to quantify.

The Society is composed of persons who see dangers in the expansion of government, not least when it leads to the welfare state, in the power of trade unions and business monopolies, and in the continuing threat and reality of inflation. Membership is exclusive and anyone seeking to join must be nominated by current members. Current and past members include eight Nobel Prize winners in economics, various heads of state and other high-ranking government officials, business leaders, and established scholars. The membership of the Society has risen from under 50 members in 1947 to over 550 members in 2007, representing more than fifty countries. Some of the most well-known current and former members include Friedrich Hayek, Ludwig von Mises, Milton Friedman, George Stigler, Ronald Coase, Karl Popper, Ralph Harris, Vernon Smith, Gary Becker, Vaclav Klaus, and Mart Laar.

SEE ALSO *Austrian Economics; Freedom; Friedman, Milton; Hayek, Friedrich August von; Liberty; Smith, Vernon L.; Welfare State*

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Ed Feulner

MONTAGU, ASHLEY
1905–1999

The anthropologist Ashley Montagu was born as Israel Ehrenberg into a poor Russian Jewish immigrant family in the East End of London. He was a precocious schoolboy, and with the encouragement of a kind schoolteacher, he took a skull found on the banks of the Thames to the anthropologist Sir Arthur Keith (1866–1955), and peppered the great man with questions. As a result of Keith's encouragement, he was admitted as a diploma student to University College London at the age of seventeen, and studied physical anthropology with Grafton Elliot Smith (1871–1937) and statistics and psychology with Karl Pearson (1857–1936) and C. E. Spearman (1863–1945). He was, at the same time, Bronislaw Malinowski's (1884–1942) first student in social anthropology at the London School of Economics.

Israel Ehrenberg immigrated in 1927 to the United States, where he changed his name to Montague Francis Ashley-Montagu (he was an admirer of Lady Mary Wortley Montagu [1689–1762]). He explained that this name opened doors that were at that time closed by anti-Semitic prejudice. He completed a PhD with Franz Boas (1858–1942) and Ruth Benedict (1887–1948) at Columbia University (1937) and taught at various universities and medical colleges, but he largely supported himself independently through writing and lecturing. He became, with Margaret Mead (1901–1978), one of the most effective communicators in anthropology, becoming a regular guest on *The Tonight Show*.

Montagu's sixty books cover an enormous range and vary from technical tracts on human genetics and Australian Aboriginal reproductive beliefs, to more popular accounts such as *The Elephant Man* (1971), which became the basis for the play and film of that name. In all his work he emphasized the interplay of genetic and environmental factors in producing human behavior. Two books in particular had tremendous influence: *Man's Most Dangerous Myth: The Fallacy of Race* (1942) and *The Natural Superiority of Women* (1953). The former stemmed from his work for UNESCO in its "Statement on Race" (1950), but he had long opposed the orthodox view of the existence of discrete races, and his position that "race" was not a scientific category but a "social construction" has become, in turn, its own orthodoxy. The matter is still in dispute however, and proponents of the "reality" of racial differences are making a comeback. His position on women was prescient, but his argument that their superiority was based on their quality as nurturers of the young caused him to be attacked by early feminists.

Montagu saw himself as carrying out the Malinowskian program of understanding culture in terms of human needs, and this required a detailed knowledge both of culture and of human evolutionary biology. He championed the idea of *neoteny*—the retention of infant traits into adulthood—as the basis of human sociability, with a consequent stress on playfulness, creativity, curios-

ity, and love. Love he saw as the basic human attribute, rooted in the mother-child relationship, and our failure to capitalize on it as our greatest danger. Human neoteny was biologically rooted, but it gave us an astonishing flexibility and the opportunity to create cooperative societies. Montagu's vision of a unified anthropology that would use knowledge of our evolutionary past to illuminate the possibilities of a peaceful future was perhaps his greatest gift to science and to humankind.

SEE ALSO *Anthropology; Race*

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Robin Fox

MONTE CARLO EXPERIMENTS

Monte Carlo experiments consist of statistical resampling techniques usually employed on computers to provide approximate solutions to a variety of mathematical problems. These techniques apply both to deterministic as well as to stochastic problems. The resampling methodology was first introduced in 1908 by William S. Gosset, who used the pseudonym Student in his publications. It was Stanislaw Ulam who thought of automating the procedure by means of the first fast electronic calculators in 1946. Subsequent work with Nicholas C. Metropolis and John von Neumann produced the first algorithms for computer implementations. The technique is named after the city of Monte Carlo, renowned for its casino, because it is based on a random number generator, as in the game of roulette.

A typical example of the application of Monte Carlo techniques in statistics concerns the evaluation of the properties of an estimator in cases when the exact distribution is difficult or impossible to calculate, or when the asymptotic approximations are either not very good or not applicable (i.e., in small samples). For example, the analyst may be interested in evaluating the bias of an estimator $\hat{\theta}$ when estimating a parameter vector θ_0, or the efficiency of an estimator $\hat{\theta}$ compared to alternative estimators of θ_0.

The methodology is based on resampling, that is, on replicating the real world M times, calculating M different estimates, one for each replication. The empirical distribution of these estimates approximates the true distribution of the estimator object of the study.

The implementation of a Monte Carlo experiment is intuitive, although generally computationally intensive. First, the investigator has to choose a distribution for the variables included in the model characterized by the vector of parameters θ_0. Once the artificial values for θ_0 are set, an N-dimensional sample is drawn and an estimator computed from the sample. This procedure is iterated M times, obtaining a set of estimates $\hat{\theta}_m$ with $m = 1,\ldots, M$. At that stage it is possible to assess the properties of the estimator, for example, calculating the sample mean and variance.

Good practice suggests varying the value of θ_0, the sample size N, and the number of iterations M. The methodology is then computationally expensive, for it requires calculations in different scenarios, all possibly characterized by a large N and a large M.

One limitation of Monte Carlo studies is that the analyst must completely specify the statistical model. This includes making assumptions about the form and parameters of the distribution of the error term, usually assumed independent of the explanatory variables. The results of the experiment depend, therefore, on these assumptions, with a great deal of loss of generality.

In constructing a Monte Carlo experiment, the analyst faces strategic issues such as the choice of a distribution, the degree of variation of the parameters of interest, a trade-off between accuracy and flexibility, the choice of the number of iterations M, and the sample size N. In addition, the results usually involve the production of a large number of tables that need to be well organized for the experiment to be meaningful for the reader.

The standard error of a Monte Carlo analysis decreases with the square root of N. However, a larger N may require increasing computational complexity. Less computationally expensive methods are variance-reducing techniques. These involve, for example, the use of common random numbers, that is, the use of the same pseudo–random numbers when evaluating different strategic choices. This is likely to induce positive correlations between the estimators compared in the experiment, and therefore to reduce the variance of estimated differences.

Given the nature of the typical Monte Carlo experiment, it may be unclear to the analyst if the results apply to a specific population of interest. In that case, the bootstrapping methodology helps in refining the inference on a particular sample in alternative to asymptotic approximations. It simply consists of a Monte Carlo experiment where a specific data set is considered as the population. In each iteration b, with $b = 1,\ldots, B$, a random sample is

drawn with replacement from the data set. Then, an estimate is computed on each iteration and the usual Monte Carlo procedures apply.

Applications of Monte Carlo techniques in economics include the investigation of the properties of stochastic models, for example, in the real business cycle literature. An example of applications of Monte Carlo methods to deterministic problems is the computation of multidimensional finite integrals. In this case, the integral can be interpreted as the expected value of the integrand function applied to a random vector uniformly distributed on the region of integration. This can be approximated by means of the usual resampling technique.

SEE ALSO *Properties of Estimators (Asymptotic and Exact); Student's T-Statistic*

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Luca Nunziata

MOOD

The systematic study of mood has received attention from a broad variety of social scientists. For example, social, personality, cognitive, and clinical psychologists have reasons for working to understand how people develop, experience, and respond to certain moods. Social psychologists may be interested in investigating how good or bad moods influence social interaction patterns. Personality psychologists may be interested in investigating how certain personality types may predict people's tendencies to experience certain moods. Alternately, cognitive psychologists may be more interested in examining how mood influences decision-making processes. Clinical psychologists may, in turn, be more interested in studying how mood disorders are manifest. Due to the wide appeal of investigation of people's moods, the study of mood has enjoyed a long and productive history. The subdomains of psychology approach the study of mood as well as its causes, effects, and correlates in different ways. Social psychologists have typically studied moods through laboratory manipulations, which induce short-term state changes. Personality and clinical psychologists typically explore mood-related phenomena through the use of self-report instruments, interviews, and observational methods designed to assess both state variations and trait-anchored propensities.

Mood may be conceptualized along several dimensions: dimensions of valence, negative to positive; strength, weak to strong; and arousal, not aroused to aroused. Examples of moods include happiness, sadness, excitement, nervousness, and calmness. A given mood may persist for short amounts of time (e.g., a few hours) to relatively long amounts of time (e.g., a few weeks). Mood differs from related psychological experiences, such as affect, attitude, emotion, and temperament, in several key ways. Affect refers to people's "good" or "bad" cognitive appraisals of attitude objects. Emotion and mood both exist as affective states, "by-products" of positive or negative appraisals of experiences or objects. However, mood differs from emotion in that mood is usually experienced as a diffuse state that is often not readily perceived as attributable to any given attitude object. In contrast, emotion is most often perceived as the result of a discrete experience. For example, a person might not be aware that he or she is in a good mood because the person anticipates receiving a paycheck the following day. This same person might also be acutely aware that he or she is, potentially at the same time, experiencing the emotion of happiness due to a recent engagement for marriage.

Whereas emotion and mood are most often the results of affective responses, attitude and temperament influence affective response patterns. That is, attitude and temperament play a role in how people evaluate events or objects whereas emotion and mood result from these evaluations. Though attitude is more readily distinguished from mood, how people evaluate attitude objects most assuredly differs from the mood that they may experience as a result, the distinction between mood and temperament is less clear. For example, it may be difficult to determine whether or not a person is merely in a sad mood or whether he or she is clinically depressed. Both the mood and temperament of depression, or dysphoria, may have similar symptoms to the observer (i.e., lethargy, crying, irritability). Accordingly, the most useful rule of thumb may be to conceptualize temperament as a lasting, relatively stable personality trait and mood as a shorter-lived, more dynamic psychological state.

MOOD AND COGNITION

Though a given mood might not persist for a very long time, it influences how people perceive and make sense of

the world around them. An impressive body of research suggests that people who are in positive moods may be more likely to use cognitive shortcuts, relying on general and idiographic heuristics, than people who are in negative moods. Alternately people who are in negative moods may be more likely to use information in their environment rather than rely on heuristics to make their decisions. Interestingly, as a result, people in positive moods may be more susceptible to persuasive appeals and more likely to engage in stereotyping than people in negative moods.

Additionally mood may influence people's memories for certain situations. More specifically, being in a particular mood (e.g., surprised) may prompt a person to recall other times during which he or she experienced the relevant mood strongly (e.g., a surprise birthday party). Correspondingly, being in or recalling a situation that evoked strong affective responses (e.g., watching the September 11, 2001, terrorist attacks on television) may evoke associated moods, such as fear.

Furthermore mood may provide people with information concerning how they should manage or respond to cues in their environments. For example, a popular theory of self-esteem, sociometer theory, posits that negative mood may signal to a person that he or she is being excluded or rejected. An increase in negative mood may alert the rejected person that he or she is being devalued in a social interaction and that he or she should do something interpersonally (e.g., flatter the rejector) or intrapersonally (e.g., artificially inflate reported self-evaluations) in order to maintain positive self-worth.

MOOD, PHYSIOLOGY, AND BEHAVIOR

In addition to its influences on cognition, mood is also associated with certain patterns of physiological responding. Brain imaging studies have revealed that, though affective and nonaffective centers in the brain share common components, differences between these areas exist, indicating that structures associated with affective responding are distinct from those not associated with affective responding. Moreover, positive affect and negative affect may share neural processes indicating that people may have the capacity to experience both positive and negative affect at the same time.

Although the possibility that one can simultaneously experience, for example, pleasure and pain, exists, the bulk of research examining the influence of mood on physiology and vice versa suggests that positive and negative moods are associated with distinct patterns of brain activation and corresponding arousal and behavior patterns. More specifically, good mood is associated with varying levels of positive arousal whereas bad mood is associated with varying levels of negative arousal. Stated differently, positive mood fosters approach behaviors, whereas negative mood fosters withdrawal behaviors.

The experience of negative mood may be so aversive that, not only do people seek to avoid it, they may also take potentially harmful behaviors in an attempt to overcome it. People who are in bad moods are more likely to make decisions that are self-serving in the present rather than the future, making riskier decisions than people in better moods.

In contrast, being in a good mood is associated with a variety of more positive behaviors. For example, people in positive moods are more inclined to help others. They are also more likely to respond to tasks and problems with more creative approaches than people who are in bad moods.

SUMMARY

Mood exists as a response to the processing of internal and external affective stimuli. The study of mood draws the intellectual attention of a variety of social scientists. Correspondingly, research has revealed that mood influences both cognition and behavior. Moreover, there are both biological and neurobiological correlates of mood. In general, people in good moods evidence a variety of positive outcomes and behaviors relative to those who are in bad moods. Being in a good mood may come with some costs, however. Most centrally, people who are in good moods may be less likely than those who are in bad moods to critically process persuasive information.

SEE ALSO *Attitudes; Emotion; Temperament*

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Jorgianne Civey Robinson

MOOD CONGRUENT RECALL

Mood congruent recall refers to the observation that people tend to remember more information that is consistent or congruent with their mood at the time that they were exposed to that information. Being in a particular mood can cause people to pay more attention to information that matches their mood and to think more about or elaborate that information (Bower and Forgas 2000). These cognitive processes lead to better memory for the information. For example, a person in a happy mood may pay more attention to the happy scenes of a movie and elaborate the scenes by relating them to happy events in his or her life. As a result, weeks after seeing the movie, the person may remember more of the happy scenes than the sad scenes.

Mood congruent recall differs from *mood dependent recall*—the observation that the information a person attends to while in one mood is better recalled later if the person is in the same mood (regardless of its emotional quality). For example, Eric Eich, Dawn Macaulay, and Lee Ryan (1994) directed university students to read familiar nouns (e.g., ship, street), then describe an autobiographical event that came to mind for each noun. A happy (or sad) mood was induced in students by having them entertain elating (or depressing) thoughts while listening to lively (or languid) music. Participants described a range of happy, sad, and neutral events in response to the nouns. Later, they recalled the autobiographical events either in the same or opposite mood. Participants recalled more positive, negative, and neutral events when they were in the same mood than in the opposite mood.

Several approaches have been proposed to explain mood congruent recall (see Eich and Forgas [2003] for a review of these approaches). Gordon Bower (1981) suggested that a person's long-term memory is characterized by an associative network of concepts whereby emotions become associated with thought processes and concepts of things and situations encountered in daily life. When an emotion is aroused, it spreads activation to concepts and thought processes that are associated with the emotion. This knowledge guides a person's interpretation of the current context in a way that is congruent with the emotion.

According to the *affect as information* view, people make judgments by implicitly asking themselves, "How do I feel about it?" (Clore et al. 2000). For example, when people were asked about their reaction to a happy or sad film that they had just watched, they showed strong mood congruence, with happy filmgoers recalling the film to be much more positive than the sad filmgoers (Schwarz and Clore 1983).

The *affect infusion model* attempts to explain the conditions under which mood congruence occurs or fails to occur by examining the different kinds of cognitive processes that are involved (Forgas 1995). For example, people may be *motivated* not to act in a mood congruent way (as when a person really wants a job at a company and ignores negative feelings toward some of the interviewers). However, mood congruence occurs when people engage in relatively elaborate processing, such as trying to form an impression of someone with an unusual combination of attributes—for example, a surfer who likes Italian opera.

Research on mood congruence highlights the important interplay between emotions and cognition. For many years, scholars tended to neglect emotion or consider it detrimental to judgment and decision-making. However, the interplay between emotions and cognition appears to be ubiquitous, and can even be beneficial.

SEE ALSO *Cognition; Decision-making; Emotion; Memory; Mood; Motivation*

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Edward Wisniewski

MOOD DEPENDENT RECALL

SEE *Mood Congruent Recall.*

MOORE, BARRINGTON

1913–2003

Barrington Moore was a major sociologist who used history to wrestle with the philosophical dilemmas of justice and liberty. He saw all society and the maintenance of all values as inherently repressive, and he thought gradualism was far too accepting of the pain and death associated with injustice. Yet, he was convinced that those dedicated to drastic transformation were highly intolerant and repressive.

Moore built on the work of three great scholars—Max Weber, Karl Marx, and Sigmund Freud. He agreed with Marx about the inequality in modern democratic society, with Weber about the restrictions on freedom created by bureaucracy and rational-technical values, and with Freud about restrictions imposed by all societies on individual spontaneity, especially in the sexual realm.

After World War II (1939–1945) Moore focused on the Soviet Union and the impact of the pressures of efficiency emphasized by Weber. His *Soviet Politics: The Dilemmas of Power* (1950) examined how the imperatives of successful industrialization had led Josef Stalin to repudiate many central tenets of Marxist and Leninist ideology, particularly the values of equality and a nonhierarchical society. In *Terror and Progress USSR* (1954), published immediately after Stalin's death, Moore looked to the future and discussed how bureaucratization and governance through rules could and probably would limit the power of party leaders in the post-Stalin society. These two books influenced a generation of scholars and graduate scholars at the Russian Research Center at Harvard University to see the Soviet Union in terms of long-term social forces rather than simply the ideology of those at the top. Yet, Moore himself never studied the post-Stalin period.

Instead, Moore spent a decade exploring why some countries become more or less democratic and others adopt various types of dictatorship, studying particularly the histories of Britain, France, Germany, Japan, India, and China. This type of comparative work became his most enduring contribution to sociological methodology. The result was Moore's most famous book, *Social Origins of Democracy and Dictatorship: Lord and Peasant in the Making of the Modern World* (1966), which was published during the Vietnam era. The book's focus on peasant revolutions, its negative treatment of bureaucracy, its pessimism about gradualism and the repression of modern society, and its use of many Marxist categories but without Marx's universal pattern of history spoke directly to a generation of students.

Moore saw democracy as dependent on a vigorous bourgeoisie and on landlords being ready to accept commercialization of agriculture. He believed commercialization of agriculture was necessary both to break up traditional peasant organizations and to set the stage for a landlord-bourgeoisie alliance against the bureaucracy. The absence of that alliance doomed democracy. But without commercialization of agriculture, the traditional peasant organizations were not destroyed. Moore believed that this left dictatorships highly susceptible to peasant revolt, except in rare cases such as Japan, where these organizations were coopted. He explained the Communist revolutions in China and Russia as this type of peasant revolt. Yet, Moore thought peasants were attracted to doctrinaire and intolerant leaders who were highly repressive. Tragically, these leaders were perhaps most repressive of the peasants themselves.

Moore wrote seven books in the last thirty years of his life. The titles of six of them reflect the moral dilemmas that obsessed him: *Reflections on the Causes of Human Misery* (1972), *Injustice: The Social Bases of Obedience and Revolt* (1978), *Privacy: Studies in Social and Cultural History* (1984), *Authority and Inequality under Capitalism and Socialism* (1987), *Moral Aspects of Economic Growth and Other Essays* (1995), and *Moral Purity and Persecution in History* (2000). Many of them were based on detailed comparative work of diverse societies that included preliterate society, the peoples of the Old Testament, Greece, and India.

The last phase of Moore's work was not as influential as the earlier two. He continued to believe that informal norms and values are inevitable but restrictive of freedom, that the prospects for a free and natural society are bleak in the world's leading societies, and that radical solutions are usually the most intolerant and repressive of all. He

called only for a more tolerant and egalitarian society. Most of the time, this combination of views is not psychologically satisfying. Yet, anyone desiring to explore the moral dilemmas of, for example, the current Middle East in broad historical perspective can find no place better to begin than Moore's work.

SEE ALSO *Authoritarianism; Bureaucracy; Democracy; Dictatorship; Egalitarianism; Freud, Sigmund; Justice; Liberty; Marx, Karl; Peasantry; Revolution; Sociology; Stalin, Joseph; Tolerance, Political; Totalitarianism; Union of Soviet Socialist Republics; Weber, Max*

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Jerry Hough

MORAL DOMAIN THEORY

Moral domain theory has proposed that individuals acquire moral concepts about fairness, others' welfare, and rights (the "moral" domain) beginning in early childhood, and that this knowledge develops during childhood and adolescence. In contrast to global stage theories outlined by Lawrence Kohlberg, in which morality is viewed as a series of hierarchical stages, moral domain theory proposes that moral reasoning is distinct from other forms of social knowledge, such as societal and psychological knowledge. In his book *The Development of Social Knowledge: Morality and Convention* (1983), Elliot Turiel outlined three domains of knowledge: the moral (principles of how individuals ought to treat one another), the societal (regulations designed to promote the smooth functioning of social groups and institutions), and the psychological (an understanding of self, others, and beliefs about autonomy and individuality). Beginning in early childhood, children construct moral, societal, and psychological concepts in parallel, rather than in succession, as is proposed by global stage theory (in which children are first selfish, then oriented to familial and societal regulation, and then formulating principled morality in adolescence). According to moral domain theory, the morality includes concepts of physical harm, psychological harm, the distribution of resources, freedoms, and rights.

Since the 1980s extensive empirical research has demonstrated the multiple ways in which children, adolescents, and adults evaluate social events using these categories of knowledge. Researchers have identified social knowledge domains using a set of criteria that define each domain and justifications that reveal the underlying reasoning about issues within the domain. For the moral domain, for example, for the issue of physical harm, an interviewer could ask a child whether it would be okay to hit if a teacher did not have a rule against hitting (authority jurisdiction), whether the rule could be changed (alterability), whether the rule applies in other settings (generalizability), whether it is wrong to hit someone if there is no punishment (punishment avoidance), and whether the act was wrong if there was no rule about it (rule contingency). Children as young as three and a half years of age use these criteria to evaluate moral transgressions. In addition, moral domain methodology involves analyzing the types of reasons individuals give for their evaluations of acts and transgressions. Extensive empirical observations have been conducted to examine the types of responses children, peers, and adults use in response to transgressions.

Studies have demonstrated how individuals apply the moral domain to complex issues, such as those involving cultural expectations, rights, exclusion, parent-adolescent conflict, autonomy, environmental issues, bullying, and emotions. In straightforward situations, children and adolescents give priority to morality; in complex situations, individuals weigh a number of considerations that take different priority depending on the salience and associated informational assumptions.

In her review chapter in the *Handbook of Moral Development* in 2006, Judith Smetana reports the types of age-related changes within the moral domain that

researchers have documented. Very young children understand that hitting is wrong because this act involves negative intrinsic consequences to others. This is a concrete, observable concept that children acquire through a process of experience, abstraction, and evaluation. By the preschool years, children understand why it is important to share objects (toys), referred to as the fair distribution of resources. Distribution of resources is more complex than issues about physical harm because there are a number of factors to weigh, such as legitimate claims, ownership, and methods of distribution. During middle childhood, children understand the wrongfulness of teasing and exclusion. By early adolescence, exclusion, fairness, and rights take on a more elaborated form, in which issues surrounding the intergroup context as well as governmental and societal laws become quite salient.

Culture is influential in how individuals acquire moral concepts and the types of experiences that lead them to make moral judgments. There is extensive research documenting that individuals in many cultures use the same criteria to identify moral issues (justice, others' welfare, and rights), and that these concerns are distinct from conventional regulations and traditions. While cultural traditions and customs may embody moral codes (e.g., "Do not harm others"), moral principles are not defined by consensus or agreement but by reference to an independent set of maxims about how individuals ought to treat one another. Understanding cultural and moral norms is essential for children to achieve the goal of becoming full members of communities and societies.

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Melanie Killen

MORAL HAZARD

The term *moral hazard* describes a situation in which two or more parties voluntarily interact, but the value of this interaction to one or more of the parties can be adversely affected by actions the other party may take for personal benefit. This phenomenon is particularly troublesome in instances in which the affected party can neither (contractually) control nor perfectly monitor these actions (directly or indirectly).

While many examples exist, perhaps the most common and compelling ones come from the insurance industry. Consider, for example, theft insurance, in which the owner of some valuable items contracts with an insurance carrier that in the event of the theft of the property, the insurance company will pay the owner the entire value of the property. The insured party, in most instances, can carry out actions that will lower the probability that the property will be stolen—for example, installation of a security system, hiring guards to protect the property, installing better locks on doors and windows, and so on. Each of these actions is costly, but some of them are likely to nonetheless be worthwhile investments. Specifically, if

the decrease in the expected loss from theft is greater than the cost of the action, then the investment is socially desirable (not taking into account the utility of the thief). However, if the lost property is fully covered by the insurance policy, the owner has little reason to expend these resources. What triggers the problem is the shifting of the risk from the party that can most efficiently protect the property to a party that cannot. If this problem cannot be overcome, the cost of the insurance policy will be such that the insurance company can cover its expected cost given that the desired precautions will not be taken, and there may even be market failure, whereby the insurance premium is so high that the parties cannot reach agreement.

The theoretical underpinnings of this problem are attributed largely to a series of articles written by J. A. Mirrlees in the early to mid-1970s, with one of the most influential not being actually published until 1999 (although completed in 1975). Recognition of the problem predates these writings, going back to Mark Pauly (1968), Kenneth Arrow (1971), and Richard Zeckhauser (1970), who was the first to model the phenomenon. The idea of moral hazard has been shown to have implications for a large variety of fields in economics, including banking, environmental economics, health economics, international trade and lending, regulation, and growth. Most central, however, is the development of optimal-contracts literature, which has its roots in the moral hazard literature.

To this end, consider, once again, the insurance problem. In some instances, steps can be taken, either contractual or other, to attempt to overcome the moral hazard problem. For instance, the insurance company may try to control the problem by refusing to insure the property unless some of the steps mentioned are taken, or the insurer can condition payment of a claim on proof that the steps were carried out. Unfortunately, such contracts are unlikely to guarantee optimal behavior on the insured party's part. This is because: (1) theft can occur even if the desired steps are taken, so there is no (indirect) way to be sure that the desired precautions were not taken; and (2) it is unlikely that the company will be able to (directly) perfectly check the level of security given by the system, the number and quality of guards hired, or the quality of the locks installed, and even if it can, it is likely to face difficulties in proving these things in a court of law.

Alternatively, the insurance company may try to shift some of the risk back to the property owner by, for example, selling a policy with a large deductible or only paying a percentage of the loss, thus better aligning the interests of the insured party with those of the insurance company. This, however, lowers the value of the insurance policy, and does not allow for the pooling of risks that are at the base of the insurance industry. As another possibility, the insurance company could provide its own security (and charge for it), but the insurance company is almost certainly not as well situated as the insured party to provide such services or to ensure that they are carried out as desired. Thus, it seems almost inevitable that the moral hazard problem will persist in such markets.

The issue of optimal contracts has been well developed in *principal-agent* settings, of particular importance in the accounting literature. Consider a situation with two parties—a principal (the owner of a firm or manager) and an agent (worker). The agent is hired to carry out some task, and the level of success depends upon the level of effort invested by the agent. The agent prefers to exert himself as little as possible, but the principal desires that the agent put in a large amount of effort in order to maximize the principal's expected return. The agent, left to his own, is likely to exert as little effort as he feels he can get away with, and the principal, therefore, is interested in finding a way to align the worker's interests with his own. If the effort can be observed directly, either through observation of the agent's working habits or by the fact that there is a one-to-one relationship between effort and output, then the principal can write an employment contract that will have the effect of causing the agent to choose to exert effort (assuming there are no other problems with this solution, such as a requirement to prove the effort level in court). However, if effort cannot be directly observed, and the outcome of the worker's effort is uncertain, so that the output level can be low even in the face of great effort, then the principal is faced with a more difficult situation because the worker can always say that he exerted effort, but was unlucky.

In some circumstances, writing a contract that shifts the risk from the principal to the agent can eliminate this problem. If successful, such a contract has the effect of making the agent take direct consideration of the effects of his effort, and causes him to exert the optimal amount of effort. However, this is not always possible; if, for instance, the agent is risk-averse and the principal is risk-neutral, it may be the case that the worker will be unwilling to bear risk that is actuarially worthwhile for the principal.

There are those who feel that the importance of the moral hazard concern is overstated. Specifically, they feel that in instances in which the interaction between the principal and the agent is of a repeated game nature (long-term employment), this problem may disappear. Even if not, if reputation is important to the agent, he is unlikely to slack even when the principal cannot prove bad faith.

SEE ALSO *Information, Asymmetric; Insurance; Insurance Industry; Principal-Agent Models*

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Avi Weiss

MORAL PHILOSOPHY

SEE *Philosophy, Moral.*

MORAL SENTIMENTS

The field of economics developed out of political economy, which in the early twenty-first century would be thought of as an interdisciplinary combination of economics, political science, sociology, history, and moral philosophy. Prior to that evolution, political economy was part of the curriculum of "expediency," a subfield of moral philosophy. Adam Smith, for example, was a professor of moral philosophy, and not until Thomas Malthus is political economy itself deemed worthy of a sole professorship. Smith, often considered the "father of economics," was the author not only of *The Wealth of Nations* (1776) but also of *The Theory of Moral Sentiments* (1769). While there was long a debate over whether the two works were consistent with one another, the consensus in the early twenty-first century is that the two works are generally (if not entirely) compatible.

In the *Theory of Moral Sentiments* (TMS), Smith addressed the question of whether a society of perfect liberty, in other words, a society freed from the fetters of feudal and ecclesiastic authority, could attain moral order. In the *Wealth of Nations* (WN), Smith asked the same question but about economic order. The link was to be a third work on the institutional and legal framework ensuring this perfect society, which Smith never was able to complete but which is outlined in his *Lectures on Jurisprudence* (LJ). TMS is about the socialization of the individual, and WN is about the economic outcomes of the behavior of socialized individuals in the legal and institutional context of LJ (Macfie 1967; Heilbroner 1982).

In TMS, Smith introduces "sympathy" (what in the early twenty-first century would be called *empathy*) as the social cement of society. Sympathy is not pity but is rather fellow feeling of any kind. Our approval or disapproval of the behavior of others is determined by our imagining how we would feel and how we would respond if we were in a like situation—thus the importance in Smith of the role of the imagination. We ask whether the person's response is appropriate to the situation and then about the effects of the response. If we sympathize, we approve; if not, we disapprove. We judge our own behavior in a similar way. Here Smith introduces his idea of the "impartial spectator"—we imagine ourselves in someone else's shoes observing our own behavior and evaluating it in a like manner. The judgment of the impartial spectator requires more than sympathy—it also requires reason. Sympathy, when joined with reason, becomes "sympathetic reason" or "rational sympathy," the "best head joined to the best heart." Over time the many judgments we are all making result in social codes of conduct, some of which may become law, others unwritten but no less strict codes of morality. Self-deceit or excessive self-regard can intrude, however, and if untamed may result in us justifying or rationalizing behavior we know to be wrong. Here Smith looks to "self-command" (self-control) and a "sense of duty" (commitment to society) to ensure individuals will generally obey the social rules of society.

Interestingly in TMS Smith identifies two levels of prudence. The lower level includes what we think of as economic activities, whereas the higher level concerns valor, benevolence, justice, and the like. The former is only worthy of "a certain cold esteem," and it is only the latter, higher level that is truly and properly called *prudence*. Thus it can be said that, in Smith, *proper* self-regard—self-interested behavior moderated by self-command and a sense of duty as well as the socially responsible adherence to social rules and obligations—can be socially beneficial under certain conditions. It is not the higher level of prudence, but it is a kind of prudence. In no way can it be said that Smith subscribed to the notion that "greed is good." Economic order requires not only the proper institutions but also the moral sentiments, without which Smith's society of perfect liberty would be impossible (Rothschild 2001, pp. 236–246 and *passim*).

SEE ALSO *Liberty; Philosophy, Moral; Smith, Adam*

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Mathew Forstater

MORAL SUASION

Moral suasion is a discursive strategy that references a set of principles to pressure individuals, groups, or nation-states to change their policies. Moral suasion strategies have been used by various actors and organizations for diverse purposes throughout history. It tacitly assumes that most (but not all) humans are reasonable, flexible, and have capacities for conceiving an agreed-upon sense of justice. It therefore takes a rather progressive view of human history, in that barriers to human freedom can be "broken down" through persuasive dialogue that uses universal principles as the basis for its truth claims. Moral suasion is a nonviolent form of influence, and therefore the groups and organizations that use it have themselves prohibited the use of violence to further their political goals. For instance, the King Center, a nonprofit organization founded by Coretta Scott King, lists *moral suasion* in its "Glossary of Nonviolence." Moral suasion strategies historically have been and continue to be used by a myriad of organizations.

In the late eighteenth and early nineteenth centuries certain U.S. abolitionist organizations used moral suasion to seek an end to slavery. Abolitionists such as William Lloyd Garrison (1805–1879) used this strategy in their published writings and public speeches. These groups based their discourse in a faith in (what they viewed as) universal values of human equality and freedom. The scholar Tunde Adeleke wrote that "moral suasion … reflected the enduring character and impact of … the Enlightenment. Late eighteenth-century Enlightenment culture prioritized rationalism, secularism and a utilitarian conception of government" (Adeleke 1998, p. 128).

Certain U.S. civil rights organizations, beginning especially in the 1950s and 1960s, used moral suasion for purposes similar to those of the abolitionists: Leaders such as Martin Luther King Jr., along with both secular and religious organizations, sought to bring about desegregation in the U.S. South. These movements combined moral suasion with other tactics, such as nonviolent resistance and civil disobedience, to secure the rights of African Americans during this time.

Economists have recently used the term *moral suasion* to reference the tactic used by financial authorities (such as the Federal Reserve and the International Monetary Fund) to pressure financial institutions to adhere to monetary or fiscal guidelines. It is driven morally by the assumption that these guidelines will improve the economic well-being of a regional, national, or international society, including their individual members.

Most recently, humanitarian nongovernmental organizations such as Human Rights Watch and Amnesty International have used moral suasion to criticize global human rights abuses and to pressure the international community to systematically act to stop these abuses. These groups legitimate their moral language by referring to conventions that have been ratified by a majority of the international community (e.g., the Convention on the Prevention and Punishment of the Crime of Genocide, and the Geneva Convention), but they also seek to effect action from influential nation-states by referencing those nation-states' traditions of human rights: "The moral arguing here is mainly about identity politics, that is, Western governments and their societies are reminded of their own values as liberal democracies and of the need to act upon them in their foreign policies" (Risse and Ropp 1999, p. 251).

SEE ALSO *Civil Disobedience; Desegregation; Enlightenment; Gandhi, Mohandas K.; Human Rights; King, Martin Luther, Jr.; Passive Resistance; Persuasion; Slavery*

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Brent J. Steele

MORALITY

Morality (Latin neuter plural: *moralia*) is a multifaceted term. It is commonly used to describe the behavioral teaching and practical lessons of literary and artistic works. As a descriptive term about the cultural and social realms, *morality* signifies the habits and norms of behavior that establish right and wrong conduct for individuals in particular societies. Normatively, morality is the systematic and principled reflection concerned with determining what ought to be the standards of conduct and duties for

particular agents and communities and how these standards are reproduced in members of society. In this sense, morality thus specifies the proper practice of individual and communal life and prescribes what constitutes the "good life" and how it is to be attained. In doing so, moral reflection draws upon the cultural, religious, and theoretical worldviews and values of particular societies in determining the proper standards of behavior.

MORALITY AS A DESCRIPTIVE CATEGORY

Morality is a term of social theory used to "describe" the range of acceptable human behaviors, that is, the norms that structure and guide proper, intentional behavior for a particular community. In this sense, morality describes the customs and principles that particular societies use to determine what is right or wrong for behavior in that social order. At the external level, morality can merely signify the customs and common practices that tell a member of society how to act within interpersonal relationships and social circumstances. These practices and customs generally rest upon a theoretical and ideal foundation, sometimes called a *worldview*, that expresses the internal beliefs and values of the society. Émile Durkheim (1858–1917) called this the "collective or common consciousness" and defined it by stating, "The totality of beliefs and sentiments common to the average members of society forms a determinate system with a life of its own" ([1893] 1984, pp. 38–39). Such a worldview system provides the horizon of values and stock of norms and duties within which individuals and social groups determine courses of intentional action. Individual and communal actions are judged according to their conformity with or deviation from these duties. This horizon of beliefs and values functions to reinforce desired behaviors, reproduce norms in succeeding generations, and impose implicit and explicit sanctions for deviant behavior.

MORALITY AS A NORMATIVE CATEGORY

Morality also describes the process of judgment whereby people determine what actions to undertake. As opposed to anthropological descriptions of social and individual behaviors (e.g., what *is* the behavior of this set of peoples?) or judgments that are narrowly *customary* (e.g., should I send a thank-you note to the host of the dinner?), *aesthetic* (e.g., does this new building fit into the city skyline?), or *political* (e.g., how do we shape the democratic will of the people to adopt this particular policy?), *moral* judgments specifically inquire into what behavior or action one *ought* to undertake. This view of morality, most commonly studied in moral philosophy and moral theology, denotes a set of inquiries that purport to describe and analyze human behavior through determining "what ought to be the case" from some "objective" perspective that goes beyond descriptive accounts of actual behavior or mere instrumental achievement of prudential goals. How do humans learn these norms and standards of behavior that specify what duties and obligations they must respond to?

Moral judgments draw upon the *mores* of a social group to specify proper behavior. Moral norms are based upon the stock of principles and values contained in the worldview that set duties and obligations for human action and behavior. These standards may come to be known by means of external revelation; by referring to the traditions, practices, and behaviors determined by protocol or exemplars in one's community; by reference to internal emotional sentiments shaped through character development and habituation; or by rational determinations carried out through the agent's own cognitive capacities.

Many early societies (e.g., Hebrews, Babylonians) believed that norms were revealed by divine beings through a special dispensation of knowledge by the deity. This tradition continues today in some religious moral reflection, commonly called *divine-command ethics*, wherein the norms of behavior for the religious group are thought to emerge through revelation (i.e., through the text of the Bible or the law given through a religious authority) that shapes the authoritative traditions and rituals of religious communities.

The customs, habits, and traditions of social groups can also serve as the primary source of norms for setting standards of behavior. The authority of the norms rests on their continuity with the community's past practices and its own standards of the ideal member. The customs might be implicit and known to the individual only through informal means. For instance, communal and familial expectations can place pressure on individuals to act in certain ways or follow a particular life course. These customs may also be codified in formal codes, such as moral proverbs, narratives, or codes of conduct. While communal customs still inform and undergird positive laws in many modern social orders, modern legal systems have increasingly divorced the legitimacy of law from mere custom or historical practice.

Some accounts of the role of custom and habit in the moral life (i.e., those by Scottish philosophers Francis Hutcheson [1694–1746] and David Hume [1711–1776]) hold that the knowledge of right and wrong arises from sensorily perceiving that an action produces sentiments of moral pleasure or displeasure. In this view, humans are constitutively feeling creatures, and right or wrong action gives rise to distinctively *moral* pleasure or displeasure. Reason, while helping to discern what ought to be done, cannot motivate an agent to act on its own. The motivat-

ing force, rather, is the pleasure produced through the moral action. The moral norms of a community are customs and habits that reflect these moral sentiments, reproducing proper character of community members by rewarding proper actions and sanctioning illicit behavior.

The utilitarian theories of Jeremy Bentham (1748–1832) and John Stuart Mill (1806–1873) extend this view of seeking pleasure but require a duty for the human to maximize societal benefit. While humans are motivated to action by the desire for pleasure and avoidance of pain, reason is used to determine what course of action will maximize pleasure. This calculus is based on the principle of utility—the agent must always act so as to maximize the greatest happiness for the greatest number in society. Utilitarians thus submerge the individual's moral desires under the overall outcome of the well-being of the community.

Some moral theory privileges the role of reason as the source of the moral norms. The Stoic philosophers, as well as thinkers in the Christian natural law tradition, held that rational capacities allow human beings to discern the purpose of life from perceiving the order of nature and rationally comprehending the role and structure of human life within the cosmos. The modern emphasis on the autonomy of the will, shaped by the Protestant emphasis on individual conscience and unmediated relation to the divine, was articulated by modern philosophers like John Locke (1632–1704) and Immanuel Kant (1724–1804). In this strand of moral thought, the human is thought to be a rational agent who reflectively engages in determining what should be the proper course for his or her action. For Kant, the freedom of individuals using their own reason to determine the best course of action and set ends for themselves is the basis of the possibility of the moral life. The norms of action are determined through universalizing the proposed action and determining whether the action, if it were to become a universal law, could be rationally consistent as a duty for all agents. The "good will" is not, therefore, merely one that *acts* in a way that conforms to the custom of the society. Rather, the "good will" is one that is motivated by pure respect for the moral law: to act upon one's rationally prescribed duty, not merely to achieve instrumental outcomes or gain advantage. The moral life is self-imposed, not derived from obedience to external sources. In this way, Kant thought that humans stood out from their natural, animalistic aspects, and at the same time the individual could never legitimately be made subject to another's arbitrary will. This sentiment reflected and heralded the liberal, democratic political ideals of his age.

In general the moral life is the process of applying these norms in practical circumstances to achieve desirable—or good—ends, thereby fulfilling one's duties and obligations. What constitutes these good ends, and the corresponding moral obligation that thereby arises, depends upon the source of the norms applied. The agent who lives in a manner that is responsive to these moral obligations acts over time in ways that inculcate good habits. These habits are said to produce a virtuous agent if the moral actions cause the agent to develop predispositions to act in ways that fulfill his or her duties. Likewise, those who fail to respond to obligations, and develop predispositions to act contrary to moral duty, are said to act immorally and may, over time, develop vicious character traits.

Ethics in the Greco-Roman and early Christian traditions tended to focus on the agent's character in relation to society. The moral life revolved around shaping character so as to develop habits of virtue that led to the good life, a state of happiness, or well-being (*eudaimonia*). Thinkers in the Aristotelian tradition conceived of moral education as a process of transforming the agent's character so that his or her desires were inclined toward the virtuous "mean" of possible courses of action. If one's habits inclined the agent to flee a dangerous situation where one's assistance was required to save another (cowardice) or to wantonly intervene without regarding the complexity of the situation (recklessness), virtuous agents, instead, would be properly habituated so their instincts, emotions, and habits would allow them to intervene in a cool and calculated way, not withering in the face of the danger (courage).

Under pressures from modernization, the traditional patterns and norms of the moral life have become more disoriented in contemporary society. Industrialization and urbanization have upended small-scale communities and transformed social bonds; historical, scientific, and technological understanding is more predominant, disrupting traditional explanations for value origins and compromising their explanatory legitimacy (disenchantment); globalization has decentered community and national identity through a growing recognition of the basic diversity of worldviews; and the social and political order is increasingly instrumentalized and bureaucratized, leading to coordination and steering problems for building political will. In the wake of the upheaval of traditional societies, professional ethics (especially in law, business, and medicine) have arisen as a mode of moral regulation that set standards of behavior whose legitimacy derives from consensus among members of the profession. In society at large, traditional moral norms are felt to be decreasingly persuasive or authoritative, and the charge is often levied that contemporary society has become increasingly individualistic and relativistic. In reaction to this decentering, some thinkers such as Alasdair MacIntyre have charged that traditional moral categories, while still commonly used, are uncoupled from their worldview contexts and

their resulting use is often considered to be confused, shallow, and contingent.

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Michael Kessler

MORALITY AND INEQUALITY

Often public discourse on class and racial inequality is reduced to discussions of the lack of morality among minorities and the poor. The disadvantaged social position of these frequently demonized groups is blamed on their immorality. This essay will challenge this tendency by presenting the argument—consistent with research findings of Michelle Lamont, Eduardo Bonilla-Silva and others—that political and racial contestation creates not one static morality but rather multiple and fluid moralities. The emphasis here is that minorities and the poor often are embedded in structural contexts that shape their moralities. Before examining how the process of moral development takes place in various contexts and institutions, the meaning of morality must first be considered.

DEFINITIONS OF MORALITY

For some, morality has a religious base and is therefore a static concept emphasizing the "moral community." In this view, political reform is "occasionally equivalent to moral reform in accord with God's law" (Williams 1995, p. 130). Others believe the definition of morality depends on the context in which individuals live. Lamont states that "vice is not defined in clear opposition to virtue when 'decent' and 'street' people live side-to-side and have to learn to accommodate each other" (Lamont 1999, p. 7). Some definitions of morality emphasize collective elements such as solidarity and generosity, while others focus on individualistic characteristics such as responsibility, hard work, self-reliance, and protection of the family. Researchers have found that whites tend to stress the latter and minorities the former (Lamont 1999; Richardson 1999). The difference likely contributes to the demonization of minorities and the poor in a public discourse shaped by the dominant ideology of whites. The evolution of mainstream explanations for racial inequalities reflects the impact of this dominant ideology.

OPPOSITIONAL CULTURE THEORY

When explaining educational inequality, consider the "culture of poverty" thesis that argued that the poor, and therefore minorities, had a flawed culture characterized by a propensity toward violence, lack of deferred gratification and general immorality. As Oscar Lewis pointed out in 1966, the relative educational failure of these groups was seen as inevitable because of their immoral culture, regardless of exposure to greater educational and occupational opportunity. This highly individualistic view of educational inequality was refined in the 1970s with the development of oppositional culture theory. As laid out by John U. Ogbu in 1978, this theory argues that involuntary minorities, or racial groups incorporated as a result of slavery, colonization, or conquest—such as blacks, Mexicans, Native Americans and Puerto Ricans—perceive limited occupational opportunity relative to whites. This promotes pessimism and resistance to school values: Schooling is associated with whiteness and is therefore viewed as inappropriate for these minorities. Oppositional culture theory assumes that high-achieving individuals are put-down, or sanctioned, by their minority peers when they achieve school success (Fordham and Ogbu 1986).

Despite the acknowledgment of structural causes of student resistance, Lundy has criticized oppositional culture theory for essentially reverting to the culture of poverty position by emphasizing improvements in school-related attitudes and behaviors of involuntary minorities

rather than addressing the limited opportunities they face (Lundy 2003). In 2000 John McWhorter stripped the oppositional culture position of its structural foundation and focused on the immorality of blacks as the root cause of their educational failure. He argued that blacks adhere to cults of victimology, separatism, and anti-intellectualism. Therefore they are solely responsible for their plight. Such emphases on blacks' immorality as the cause of their educational failure ignores James Ainsworth-Darnell's and Douglas Downey's research showing that blacks actually have more positive school-related attitudes than do whites (1998). In fact, subsequent responses to oppositional culture theory—including those of Karolyn Tyson, William Darity Jr., and Domini R. Castellino in 2005 and Prudence L. Carter the same year—argue that blacks highly value education. Rather than explaining poor educational performance as an immoral cultural response, these researchers emphasize structural disadvantages and discrimination.

NEGATIVE MORAL JUDGMENTS VERSUS STRUCTURAL INEQUITY

This pattern of mainstream ideology pointing to the immorality of blacks and the poor as the main cause of inequality (with social researchers responding by emphasizing structural disadvantages and discrimination) is repeated in literatures discussing several institutions, including the judicial system and the family.

Specifically, high crime rates among the poor and minorities are often explained by their "poor work habits, inadequate skills, and a preference for joining predatory gangs to accepting low-wage jobs" (Wilson 1992, p. 92). Many researchers, including Rachel Gordon, Benjamin B. Lahey, and Eriko Kawai, simply conclude that poor minorities join gangs and commit crimes without consideration of the structural causes of such choices (2004). Likewise, Bill Bush and Max Neutze view drug use and addiction as morally sinful, without the discussion of the broader context in which drug use takes place (2000). Alternatively, Suhir Alladi Venketesh argued in 1997 that gang activity must be viewed in relation to the structural context and social organization of the larger community. He found that economic success often leads gangs to embrace the community in a moral way. That is, gangs provide informal social services in impoverished communities. This calls into question the moral judgments often made of poor and minority criminals.

Other research shows that the widespread emphasis on the immorality of minorities and the poor can have profound effects on the treatment and outcomes they face in the justice system. George S. Bridges and Sara Steen found in 1998 that parole officers were more likely to explain crimes committed by blacks as a result of intrinsic personal characteristics of the offender. Similar crimes committed by whites were explained away as young men caught up in the wrong situation. Similarly, Steen, Rodney L. Engen, and Randy R. Gainey found in 2005 that white drug offenders faced harsh treatment only when they closely resembled the stereotypical dangerous drug offender. In contrast, black offenders avoided harsh treatment only when they clearly did not resemble minority or poor stereotypes. Several other studies echo this pattern of blacks facing harsher punishments (Graham and Lowery 2004), lower likelihood that judges withhold the adjudication of guilt (Bontrager, Bales, and Chiricos 2005), greater likelihood of being drug tested (Gee et al. 2005), and a greater likelihood of being confined in a secure detention facility (Leiber and Fox 2005).

Negative moral judgments are also used to make sense of the high teen pregnancy rates and common single-parent family structure among minority populations and the poor. Patricia K. Jennings claimed in 2004 that the dominant imagery suggests that welfare dependency leads to out-of-wedlock births and that both are major characteristics of the "underclass" culture. According to this view, single mothers are seen as lacking the "appropriate" orientation toward work and mainstream family values. Contrary to this dominant ideology, Jennings found that having children seemed to spark a desire to participate in socially valued roles and encouraged responsibility. In short, young black mothers acknowledged the negative, welfare queen image and acted against being labeled as such. In Carolyn E. Cocca's view (2002), the conflation of nonmarital adolescent reproduction and poverty and the definition of this relationship as a moral affront to "traditional" American values furthers a conservative political agenda that limits broader discussion of social inequalities. In short, a focus on morality limits the scope of the debate and pushes structural considerations to the background, a point also discussed by Judith Stacey in 1996.

Overall, minorities and the poor are often vilified in the dominant public discourse and blamed for their own failures. The mainstream ideology compares them to the rest of society without consideration of their structural disadvantages and concludes that they have family lives and work habits that do not conform to mainstream morals, norms, and values. Many researchers turn to the moral development of these classes of people as the appropriate focus for policy reform. But this perspective addresses symptoms or a mirage rather than the true structural causes of racial and class inequality. Until policy makers and researchers stop focusing on the moral decay of the minority poor and start considering structural causes, such as poverty, residential segregation, and discrimination, discussion of class and racial inequality is destined to remain flawed and fruitless.

SEE ALSO *Benign Neglect; Culture of Poverty; Norms, Social; Values*

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MORBIDITY AND MORTALITY

Morbidity, meaning illness or frailty, is currently defined as a diagnosis with a specific disease listed in the International Classification of Diseases, Tenth Revision (ICD-10). The language of ICD-10 was adopted by the World Health Organization (WHO) so that disease and mortality data could be compared globally. Morbidity rates are measured as the number of cases of a disease divided by the midyear population times 100,000. Morbidity reporting of specific contagious diseases is an important aspect of public health. The WHO and the U.S. Centers for Disease Control and Prevention (CDC) require the reporting of infectious diseases (e.g., AIDS, bubonic plague, malaria) in order for localities to contain and manage these diseases. Morbidity may be further delineated by a measure of adaptive functioning, or the ability of a person to take care of personal needs or live independently.

Mortality, or death, is usually defined by cause of death. Similar to morbidity, the WHO recommends using the ICD-10 as the diagnostic nomenclature for cause of mortality. Internationally, vital statistics include death cer-

tificates with standardized information, such as date of birth, date of death, and cause of death.

Mortality is measured by the crude death rate (CDR), which is defined as the number of persons in a population who died in a specific year per one thousand members of the midyear population. The age-specific death rate (ASDR), which measures the number of persons in a specified age group (typically given in five-year intervals) within a population who died in a one-year period, is another useful rate, since persons of all ages do not die at the same rate. Sex-specific death rates and disease-specific death rates can also be calculated. Since those at the most advanced ages have greater risks of mortality, nations with younger populations tend to use crude death rates. International comparisons of the crude death rate must therefore take the age structure of the countries into consideration, converting each country's CDR into a standardized death rate by comparing both populations to the age structure of a standardized population.

Another method of measuring mortality is through the use of life tables. The Englishman John Graunt (1620–1674) began the scientific study of mortality by analyzing published lists of those who died in London and noting that mortality followed definite patterns. Some of his observations, such as the longevity of females over males, continue to be true today. He used these analyses to develop life tables, used today to determine life expectancies. Life tables begin with a population of 100,000 at age 0, and then subject the population to the mortality probabilities of each age group up until all the members of the population have died. Life tables are used to determine either life expectancy at birth or life expectancy at a specific age. Life expectancies have increased dramatically in the modern era. "In 2001 the average life expectancy at birth in the United States was 77 years. Japan had the world's highest expectancy—81 years. The lowest life expectancy estimates for the early 2000's were in HIV/AIDS-plagued countries in sub-Saharan Africa: 34 years for Mozambique and 37 years for Botswana and Lesotho" (McFalls 2003, p. 11).

HISTORICAL TRAJECTORY OF MORBIDITY AND MORTALITY

Historically, humans evolved around 200,000 years ago in Africa. Early humans were hunter-gatherers, and they lived as nomads with high fertility and high mortality. Estimates for most of human history give the life expectancy at birth at approximately ten to twelve years of age. Infant mortality (the number of infants who die prior to one year of age), stood at around 500 per 1,000 live births (Haub 1995). Multiple factors contributed to high mortality, including infanticide (infants were a liability for nomads); a scarcity of food; and the risks involved in hunting large mammals with primitive weapons. By about 8,000 years ago, just prior to the development of horticulture or agriculture, the human population of the Earth was approximately 5 million. According to the evolutionary biologist Jared Diamond, by the time agricultural development began, nomadic humankind had migrated to all of the globe's continents.

Agriculture occurred independently in nine areas through the domestication of wild plants and animals: Southwest Asia, China, Mesoamerica, the Andes of South America, the Eastern United States, the Sahel zone of Africa, West Africa, Ethiopia, and New Guinea. Agricultural societies had decreased mortality and increased fertility because they increased their food availability. Humans could now remain in a stable location and store food, leading to a decrease in starvation. Agriculture was also less risky than hunting large mammals. In an agricultural society, children were valued as laborers, so there was greater fertility. However, this was matched with high mortality, and population growth was slow. Agriculture also allowed for the development of permanent settlements. Initially, the move to settlements, and later to cities, led to higher mortality because concentrations of humans allowed diseases to be spread more easily. Yet improved nutrition in agricultural societies led to increased life expectancies, so that by the time of the Roman Empire life expectancy had increased to around twenty-two years. By the Middle Ages it had grown to over thirty. In the first approximately 10,000 years of agriculture, the population of the world grew from 4 million to 629 million in 1750.

Infectious diseases were a primary cause of mortality in premodern times. Epidemics caused the mortality to ebb and flow, thus maintaining minimum population growth. Livi-Bacci (1992) noted that infectious diseases are continually evolving. Three forms of the plague—bubonic, septicemic, and pneumonic—became pandemic, causing millions of deaths. The bubonic form of the disease—the most common type and spread by fleas—has symptoms of high fever, swollen lymph glands, and cardiac failure, with a 67 to 75 percent mortality rate. The septicemic form also has symptoms of fever, chills, headache, and gastrointestinal issues with a 30 to 50 percent mortality rate. The pneumonic form, spread by coughing or sneezing, has symptoms of spitting blood and is usually lethal (Dohl 1979). "The epidemic may have begun about 542 A.D. in Western Asia, spreading from there. It is believed that half the Byzantine Empire was destroyed in the sixth century, a total of 100 million deaths" (Habu 2006). Perry and Fetherston (1997) described three pandemics. The first was the Justinian Plague, which occurred in cycles, about every decade, from 541 to 622 CE. It began in Ethiopia and spread through North Africa, Europe, and most of Asia, killing

an estimated 50 to 60 percent of the population. The second pandemic, called the Black Death, began in Central Asia and spread along trade routes, in two- to five-year cycles, killing 10 to 40 percent of the population (mortality was increased by the co-occurrence of epidemics of other diseases such as smallpox, influenza, and syphilis). The third pandemic started in China in 1855 and spread through Africa, Australia, Europe, India, Japan, and North and South America. Although declining, this third pandemic continues. "WHO reported an average of 1,666 plague cases per year worldwide" (Perry and Fetherston 1997, p. 56).

Throughout the world, infectious diseases became endemic, with cycles of reoccurrence. Survivors became resistant, however, so that the severity of reoccurrence lessened in the next generation. This cycling continued until there was an eventual adaptation of the disease to a less virulent strain. Yet infectious diseases, which were benign in an area where the population had adapted to the pathogens, could devastate a virgin population. This was evident when diseases such as measles, smallpox, and influenza, which had transformed into less virulent strains in Europe, reached America and caused widespread mortality. From 1500 to 1800, the population of Native Americans in what is now the continental United States decreased from 5 million to 60,000. Similar declines occurred among the inhabitants of other lands explored by Europeans, including Tasmania, Australia, and Tierra del Fuego.

Although decreases in mortality occurred with modernity, there is a debate as to whether these were due to medical advances or public health measures. The argument for public health is that mortality declines began prior to the development of medical advances. There is agreement that the effects of modernity led to rapid decreases in mortality in the eighteenth century. By the 1800s, life expectancy in the United States was about forty years. Food supplies increased with advances in technology. But diseases such as malaria, dysentery, smallpox, and typhoid fever could spread rapidly, especially in closely confined settlements, and effectively kill off a local population. In Europe, Louis Villermé (1782–1863) proved that crowding and unsanitary conditions led to the spreading of diseases. In the eighteenth century, medical advances, such as inoculations against smallpox, combined with widespread public health vaccinations and inoculations, led to the management and containment of lethal diseases. Public health measures, such as safe water supplies and sewage systems to dispose of waste products, controlled disease and immediately improved infant survival rates. Other public health measures designed to confine and contain the spread of diseases aided in controlling pandemics that followed trade and immigrants routes. Life expectancies continued to improve: In the United States, the life expectancy increased from 47 in 1900 to 77 in 2001 (McFalls 2003).

"Doubling time," the number of years it will take a population to double its size, is used to describe population growth. In 1,000 CE, the population was 311 million and the doubling time was 1,000 years (Weeks 2005). In modernity, the population grew rapidly with doubling times decreasing. Joseph McFalls summarizes the historical population growth in increments of billions. Globally, the human population was under one billion from the Stone Age, one million years ago, until 1800. Two billion was reached in 1930, three billion in 1960, four billion in 1975, five billion in 1987, and six billion in 1999. A population of seven billion is projected for 2015.

KEY DETERMINANTS OF MORBIDITY AND MORTALITY

Morbidity and mortality are caused by a combination of factors, including disease, senescence (the physical deterioration that leads to increased vulnerability and susceptibility to diseases), and socioeconomic and political conditions. Mortality by infectious and parasitic diseases was the primary cause of mortality and morbidity in premodern societies. In modernity, the leading causes of mortality and morbidity are chronic and degenerative diseases such as cancer, cardiovascular disease, and diabetes. However, infectious diseases such as pneumonia, influenza, and HIV/AIDS, along with homicide, suicide, and accidental death, all rank high on the list of leading causes of death. The leading causes of mortality in the United States, Mexico, and Canada in 2001 were cardiovascular disease and cancer; but accidents, pneumonia, and influenza ranked in the top ten causes of mortality (Weeks 2005).

Morbidity and mortality are affected by biological, social, and socioeconomic conditions. In their 2005 article "Adult Mortality," Richard Rogers and colleagues break these causes down into three categories: demographic characteristics (age, sex, and race and ethnicity); distal causes (socioeconomic status, social relationships, geographic factors, and environmental or human hazards); and proximate factors (health behaviors such as smoking and drinking, health condition, and physiological influences such as height and genetic markers).

Age is perhaps the factor most closely associated with mortality: The youngest and the oldest are the most likely to die. In 2005, Japan had the lowest infant mortality rate (IMR), 3 per 1,000, and Afghanistan had the highest, 154 per 1,000 (Weeks 2005). Infant mortality is also influenced by race and ethnicity: The higher socioeconomic segments of society have lower IMRs. The exception, known as the "Hispanic Paradox," is that Hispanics in the United States, who have a generally lower socioeconomic

status, have IMRs similar to non-Hispanic whites and Asians, revealing that family social support and lifestyles issues influence IMR. Humans are more likely to die as they age due to senescence. In 1825, Benjamin Gompertz presented a mathematical formula demonstrating the relationship between aging and death.

Gender has an effect on mortality, with females generally living longer than males. James Carey notes in his book *Longevity* (2003) that although females hold the longevity records across species, female mortality advantages are contextual. Females face greater risks during reproduction, especially in premodern societies. Females at the oldest ages also experience greater morbidity from chronic and degenerative diseases. With modernity, the gender gap in mortality is decreasing. In the United States, the greatest difference in death rates between sexes is for males aged fifteen to twenty-four, who are three times more likely to die than females of the same age. This increased mortality is due to accidents from risky behaviors, suicides, and homicides.

Socioeconomic status affects mortality in numerous ways. Minorities with lower socioeconomic status generally have higher mortality, and education level is inversely related to mortality. Infant mortality is greatly influenced by basic education about hygiene, eating a nutritious diet, and drinking unpolluted water. A higher level of educational attainment is generally indicative of higher socioeconomic functioning, and those with higher education attain higher income, have access to better housing, and have healthier lifestyles. Combining the effects of education and minority status, in the United States, black males with low educational attainment have a 19.9-year lower life expectancy than more educated whites (Seeman and Crimmins 2001).

Lifestyle choices, including physical fitness, exercise, limiting alcohol use, and maintaining a balanced diet, are related to lower morbidity and mortality. A pioneer longitudinal study begun in 1965 identified seven health habits, commonly called the "Alameda 7" that can improve morbidity and decrease mortality due to chronic diseases. The identified habits are: "engaging in regular physical activity, never smoking, drinking less than five drinks at one sitting, sleeping 7 to 8 hours a night, maintaining desirable body mass, avoiding snacks, and eating breakfast regularly" (Rogers et al. 2005, p. 271).

Sociopolitical causes of mortality include war, terrorism, and starvation. According to James Riley, the author of *Rising Life Expectancy* (2001), the leading causes of mortality in the twentieth century were war, famine, and disease. World War I led to an estimated 19 million deaths; the influenza epidemic of 1918–1919 caused over 40 million deaths; World War II caused about 52 million deaths; China's Great Leap Forward in 1959–1961, which resulted in a politically caused famine, led to between 14 million and 26 million deaths, and UNAIDS reported in 2006 that the AIDS epidemic had caused 25 million deaths since 1981.

MORTALITY THEORIES

Malthusian theory represents one of the initial explanations of mortality and population growth. In 1798, Thomas Robert Malthus suggested that because population increased geometrically while the food supply could only increase arithmetically, population would be stabilized by positive checks, such as war, disease, and starvation, and preventive checks, such as controlling births (with the preferred method being moral restraint or abstinence, rather than contraception and abortion). Karl Marx and Freiderich Engels challenged this theory. While they agreed that the population was growing, they asserted that population growth was good, and that science could increase food supplies to such an extent that, at least in a socialistic society, poverty and starvation could be eliminated.

Changing conditions of modernity have also challenged Malthusian theory. While rapid global population growth has occurred, the stable food supply has increased along with the population base. The current Malthusian position, as presented by Paul and Anne Ehrlich in *The Population Explosion* (1990), is neo-Malthusian, for it accepts the use of abortion and birth control to control population size, contrary to Malthus. Neo-Malthusians argue that continued population growth will be catastrophic. They argue that the dramatic increases in food production that occurred in the past, through the use of chemicals and new technologies, cannot continue. The earth's resources are finite, nonrenewable, and being depleted by continuing population growth, placing mankind at risk of annihilation.

Demographic transition theory explains the mortality changes that have occurred with modernity. In a premodern society there is high infant mortality and a short life expectancy with high mortality. Modernity drastically improved life expectancy through changes in public health practices, the most important being the availability of fresh sanitary water, sewerage systems, adequate diets, and modern medicine. Prior to the development of modern medicine, public health practices also managed the spread of contagious diseases through containment and isolation. The most dramatic improvements in mortality rates were made initially through decreasing infant mortality. In the transition phase, the sharp drop in mortality rates precipitated an immediate rapid increase in the population, as those who would previously have died in infancy survived and lived an extended life span (Weeks 2005).

The epidemiological transition theory, hypothesized by Abdel Omran in 1971, suggests there were three stages of epidemiological modernization. The first stage was the Age of Pestilence and Famine, which lasted from premodern times until around 1875 in developed societies. The primary causes of mortality in this stage were influenza, pneumonia, smallpox, tuberculosis, and other related diseases, resulting in high infant and childhood mortality and a life expectancy averaging between twenty and forty years. The second stage was the Age of Receding Pandemics, which lasted from around 1875 to 1930 in developed countries. In this second stage there was a decline in mortality due to improved standards of living, sanitation, and public health. The third, current, stage is the Age of Chronic and Degenerative Illnesses. In this stage the causes of mortality are the chronic degenerative diseases (heart disease, cancer, and stroke), and life expectancy at birth exceeds seventy years.

S. Jay Olshansky and A. Brian Ault (1986) have proposed a fourth stage—the Stage of Delayed Degenerative Diseases. In this stage, diseases are influenced by individual behavior or lifestyle choices, and deaths are due to social pathologies such as accidents, alcoholism, suicide, and homicide, as well as lifestyle issues such as smoking and diet. Jean-Marie Robine (2001) suggests a fifth stage, called the Age of the Conquest of the Extent of Life, as it is now possible for humans to live between 110 and 120 years. James Vaupel notes that after about the age of 95, mortality decelerates and actually plateaus. This would support a compression of mortality, with those surviving to be the "oldest old" having either lesser or later onset of chronic and degenerative diseases.

Another theoretical explanation for mortality is the "rectangularization of the mortality curve" that occurred with modern health practices. In 1825 Benjamin Gompertz developed a mathematical formula, which he called a "law of mortality," depicting mortality rates as a sloped graph, with rates of mortality increasing with age. He argued that there is a biological limit to the human life span, with a life expectancy of around age eighty-five or ninety due to senescence. So even if there are medical advances in curing cancer or treating heart disease, those who survive one specific disease will be frail, raising the risk of morbidity through other disease processes. Although there have been dramatic increases in life expectancy during demographic transitions, the greatest strides were in mortality in infancy, childhood, and early adult life. Olshansky and colleagues (2001) argue that the only way to have another similar increase in life expectancy would be to increase the life span of those over age seventy, which will be more difficult than the earlier reduction of infant mortality.

THE HUMAN LIFE SPAN

Longevity experts question the existence of a definite human life span. The longest known life span is 122 years and 5 months, based on the life span of a single human, Jeanne Calment, who died in 1997. This record could be broken by one person who lives to 122 years and 6 months. Vaupel notes that prior to the nineteenth century only a few scattered individuals survived past 100. There were countries where over one million people live but that had no documented centurions or supercenturions (aged 110 and over). However, at the beginning of the twentieth century, there were over 100,000 documented centurions. Beginning with the first documented supercenturion, Katherine Plunket, who died at age 111 in 1932 in Northern Ireland, experts began to verify the age validity of supercenturions, which requires collaborative documentation (see Vaupel 2001; Vaupel et al. 1998).

Dennis Ahlburg and James Vaupel (1990) argue that current projections for life expectancy are based on conservative forecasting. They argue that mortality rates have declined at a rate of 1 percent to 2 percent per year in developed countries, especially the mortality rates of those age 65 and over. They assume that if this mortality decrease continues at a 2 percent progression, in 2080 the expected life expectancy would be 100 years for females and 96 for males.

If life expectancy was approaching a biological limit, one would assume that the mortality rates of the oldest old would tend to be higher in countries with higher rates of the oldest old. However, Vaupel has found that countries with the oldest old, such as France, Japan, and Sweden, show a slowing of the mortality rates in the oldest old. Vaupel, the director of the Max Planck Institute for Demographic Research, argues that life expectancy has been rising at a linear pace over the last 160 years at a rate of almost three months per year. Shiro Horiuchi and John Wilmoth reported in 1998 that mortality in the elderly goes through three stages: a deceleration of mortality after age 80, a mortality plateau between ages 80 to 105, and an actual decline in mortality in the highest ages (over 110). Manton and colleagues argued in 1991 that even with the interdependence of diseases, as we progress in treating specific diseases we are altering senescence.

SEE ALSO *AIDS; Death and Dying; Demographic Transition; Demography; Disease; Population Studies; Psychosomatics, Social; Public Health; Sanitation; Suicide*

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Mary Ann Davis

MORENO/A

Racial classifications in Latin American and Caribbean countries are complex and inevitably reflect relations to skin color, or colorism, which were established and are maintained as a result of structured racial hierarchies. Throughout the Americas there are variations in racial terminology and a certain amount of fluidity in the identification of racial categories. The variations in racial identifiers in these societies are a product of colonialism and the relations among persons of white European, African, and indigenous ancestries. One commonly used racial term in Latin American and Caribbean societies is moreno/a.

Moreno, and morena, the grammatical feminine form of the term, is frequently used in colloquial speech throughout Latin America and the Caribbean. The term denotes skin color and literally means brown or brunette. Moreno/a's connotation to skin color unavoidably designates placement in recognized racial hierarchies within societies that were established as a result of colonization by white Europeans. The term's bond to African ancestry, and its close association to the term *negro*, or black, also

points to this relationship. The term has a historical connection to whiteness and white supremacy in societies throughout the Americas, which reflects its use by some people as a racial identifier. Some people, for instance, use moreno/a as a form of whitening if they are "on the dark end of the racial continuum" (Telles 2004, p. 98). Edward Telles notes in *Race in Another America* that in Brazil, "The ambiguity with the term moreno allows persons who might not have the option of calling themselves white to escape the more stigmatized nonwhite categories" (2004, p. 98).

Moreno/a is used to indicate connections to whiteness and blackness, as well as relations to indigenous ancestry. The term is used in several ways to denote nonwhite racial categories throughout Latin America and the Caribbean. For instance, moreno/a often denotes brown-skinned or black-skinned individuals as well as dark-haired individuals (Twine 1998; Stephens 1999). Several studies indicate that differences in the use of the term occur according to locality (Stephens 1999). Historically, the term referred to a subcaste of free blacks, for example, in Puerto Rico (Kinsbruner 1996). In addition, moreno/a has been used in recognizing persons of mixed ancestry. This is reflected in the use of the term in identifying people of mestizo origin in Mexico (Stephens 1999). Moreno/a has also identified the progeny of mulatto and white European or white Spanish individuals (Stephens 1999). In addition, the term's racial ambiguity is further evidenced by its use for identifying white individuals. Moreno/a is used in Brazil in identifying sunburned Europeans. Likewise, white individuals use the term for referencing brunettes of predominate European and/or indigenous descent (Twine 1998). The term is also often coupled with adjectives that identify hair texture (Stephens 1999). This is the case in the use of *morena alisada*, which translates into "smooth brunette" and is used in identifying women who use straightening agents in their hair (Stephens 1999).

There remains particular ambiguity in the use of the term as a racial identifier because people use the term fluidly, and identification often depends on individual observers (Telles 1995). Overall, the term's racial evasiveness reflects racial consciousness and issues of racial hierarchy influenced by colonialism and white supremacy. People may make distinctions in their use of moreno/a by using a light-to-dark continuum. For example, within the racial continuum are light or fair, medium, and dark qualifiers used with the term in referencing varying degrees of pigmentation. This is the case with *morena/o clara/o* for light brown, *morena/o oscura/o* for dark brown, or *morena/a escura/o* for dark brown, which is used in Brazil.

Furthermore, augmentative and diminutive forms of the term are frequently used in everyday discourse. The augmentative form is *morenote*, meaning "big, dark one." The common use of the diminutive suffixes *-ito* or *-ita* may also be used for affective purposes. The terms *morenito* and *morenita* refer to people as "little" or "small, dark one." The all-encompassing use of the term is also reflected in its use as a euphemism. Since the term Negro, in reference to black, is recognized as demeaning in some Latin American countries, moreno/a offers individuals what would be considered a polite substitution for dark-skinned or black as a racial identifier (Kany 1960; Telles 2004). Moreover, the historic use of *moreno/a esclavo/a* for black slave and *moreno/a libre* for free black or mulatto (Stephens 1999) reference the subjugation of enslaved blacks by whites in the Americas. This historic association to the enslavement of blacks by whites may, in some instances, facilitate the use of the term as a pejorative.

The use of racially stigmatized terms may challenge established racial ideologies and assist in the efforts toward reclaiming blackness, or negritude, in the Americas. For instance, this is illustrated by the actions of black social movements in Brazil that have sought to reclaim the long-stigmatized term *negro* (Telles 2004). As a result, in some cases the use of moreno/a may challenge the established history of white supremacy in societies throughout the Americas because it embraces diverse ancestries. However, moreno/a may also prove symbolic of the traditional views of racial democracy, which fail to defy established racial ideologies and colorism in Latin America and the Caribbean (Telles 2004).

Moreno/a demonstrates the complexity of racial identification and categorization in Latin American and Caribbean societies. Its many uses provide evidence of the association between racial categorization and skin color, or colorism, within these societies. Likewise, the permanence and evasiveness in racial terminology, whether state sanctioned or informal, reflects an established legacy of colonialism throughout these societies.

SEE ALSO *Blackness; Colorism; Hierarchy; Identification, Racial; Latinos; Mulattos; Negro; Pardo; Race; Racial Classification; Stratification; Whiteness*

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Aurelia Lorena Murga

MORGAN, LEWIS H.

SEE *Communism, Primitive.*

MORGENTHAU, HANS

1904–1980

Born in Coburg, Germany, in 1904, Hans Joachim Morgenthau became the greatest contributor to the theory of realism in the field of international relations. Until his death in New York in 1980, Morgenthau actively influenced generations of scholars and policymakers, and his writings continue to do so today. Morgenthau's writings reflect his antipathy toward liberalism and idealism, arguing that the influence of international law, norms, and organizations were minimal at best. Along with E. H. Carr (1892–1982) and George F. Kennan (1904–2005), Morgenthau is known as a founder of the field of international relations.

Before immigrating to the United States, Morgenthau studied law and diplomacy at the universities of Frankfurt and Munich and taught public law at the University of Geneva. In 1937 he fled to the United States due to his Jewish identity and the growing Nazi power in Germany. Morgenthau taught at several universities for short periods before ending up at the University of Chicago, where he taught political science from 1943 to 1971. After his retirement, he taught at City College of New York and the New School for Social Research. In addition to teaching and writing, Morgenthau worked as an adviser and consultant to the U.S. departments of State and Defense in the 1940s and 1960s.

Morgenthau's first book, *Scientific Man versus Power Politics*, published in 1946, outlined his belief that human nature is truly selfish and humans have a natural longing to dominate each other through power. By applying his realist philosophy of human nature to politics, Morgenthau argued that all politics was merely a struggle for power. His most seminal work, *Politics among Nations: The Struggle for Power and Peace*, published in 1948, provided an empirical basis for the theory of realism, the most influential theory in international relations. The theory of realism argues that power is the primary interest of all states in the international community and therefore, policies and actions taken by governments are merely means to achieve or maintain power relative to other states.

Politics among Nations argued that all states in the international community would pursue foreign policies that sought to maintain or achieve relative levels of power and that international politics was therefore about the competition of states to seek power. A major contribution to realist theory was the idea of balance of power, in which Morgenthau claimed that the most powerful states would attempt to balance each other by pursuing certain foreign policies to either gain more relative power or suppress the relative power of another state. Unlike political scientist Kenneth Waltz, who later argued that bipolarity was the most stable type of power balance, Morgenthau was skeptical that the balance of power between the United States and the Soviet Union was stable. Rather, Morgenthau argued that there should be a larger number of great powers in order to achieve stability in the international system. In addition to *Politics among Nations*, Morgenthau published many other books and hundreds of articles about power politics, diplomacy, U.S. foreign policy, cold war politics, and U.S. relations with the Soviet Union.

SEE ALSO *Cold War; Diplomacy; Realism; Realism, Political; Waltz, Kenneth*

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Krista E. Wiegand

MORTALITY

SEE *Morbidity and Mortality.*

MORTALITY SALIENCE

SEE *Salience, Mortality.*

MOSES, ROBERT

1888–1981

Robert Moses is known as the "master builder" of New York. After receiving his BA from Yale, MA from Oxford, and PhD from Columbia, Moses officially began an extraordinary career in public service in 1924. His career ended in 1968 after he had served under seven governors and five mayors. He held several city and state offices, often simultaneously, including commissioner of the New York City Department of Parks and coordinator of construction, as well as chairman of the New York State Power Authority and chairman of the State Council of Parks. His close friend and mentor was the legendary Al Smith, Democrat and four-term governor of New York. Moses never held elected office, although in 1934 he ran unsuccessfully as a Republican for governor.

Moses's public projects in New York City include seven major bridges, 658 playgrounds, seventeen public swimming pools, 416 miles of highway, and over two million acres of parkland and other works throughout the state. He was also an important force in the construction of 1,082 public-housing buildings. The cost of only those projects for which he was directly responsible, from conception to completion, was roughly equivalent to what NASA spent in the 1960s to land a man on the moon. Moses mastered the art of using federal funds and was a pioneer in the development of the "public authority," in particular the Triborough Bridge and Tunnel Authority, the financial base of his planning empire.

Author of 102 articles in national and regional publications, Moses published little of a theoretical nature. Yet there are parallels between his planning philosophy and that of Le Corbusier, the hypermodernist urban designer (although there is no entry for Le Corbusier in either Robert Caro's 1974 *The Power Broker* or Hilary Ballon and Kenneth T. Jackson's 2007 *Robert Moses and the Modern City*). Both viewed averages and aggregates as starting points for understanding cities. Both discounted the role of face-to-face, street-level interactions and the complex social orders that spontaneously emerge from them that for urbanist Jane Jacobs, Moses's great nemesis, are the life of a city. And both promoted "efficient" cities and massive urban reconstruction, especially for the automobile, at the expense of traditional neighborhoods. Unlike Le Corbusier, however, Moses acquired the political clout to "get things done."

Both supporters and detractors describe him as visionary, brilliant, tireless, driven, and ruthless. Thanks largely to Caro's 1974 book, the latter have tended to outnumber the former, although over time the pendulum will swing surely in both directions.

Many believe that Jacobs is chiefly responsible for Moses's decline from power, but other factors are also important. First, Moses was approaching his eighties when his defeats began to accumulate in the 1960s. Second, this was also when New York City began facing chronic economic and financial problems that for long afterward soured public opinion against expensive large-scale public projects. Third, the status of Le Corbusier–style modernism was waning among influential intellectuals. His decline coincided with, and probably helped hasten, the rise of so-called "participatory planning," in which formal public hearings are an essential part of the planning process.

Thus, not only at his height but also in the wake of his fall, Moses exerted a deep and lasting influence on urban planning.

SEE ALSO *Architecture; Cities; Jacobs, Jane; Metropolis; Modernism; Planning; Public Goods; Regions, Metropolitan*

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Sanford Ikeda

MOSSADEGH, MOHAMMAD

1882–1967

Born in Tehran in 1882 into a prominent family of notables, Mossadegh was educated in Tehran, France, and Switzerland, where he gained a doctorate in law. Returning to Iran in 1914, he taught at the School of Political Science, wrote on significant legal, financial and political issues, and engaged in party political activity. He opposed the abortive Anglo-Iranian Agreement of 1919, aimed at formalizing British tutelage over Iran. Assuming various high-ranking, including ministerial, positions, he gained prominence as a nationalist and constitutionalist member of the 5th and 6th Parliaments (1924–1928). His opposition to the autocracy of Reza Khan (later Shah)

Pahlavi resulted in his exclusion from political life and virtual house arrest from 1936 onward.

Following the Anglo-Soviet occupation of Iran in 1941 and Reza Shah's abdication, Mossadegh returned to the political scene to represent Tehran twice in the Parliament, receiving the highest number of votes cast in the capital. He advocated a neutralist foreign policy, and in the wake of aggressive Soviet demands for an oil concession, sponsored a bill banning the granting of concessions to foreigners. He also advocated reform of the electoral laws. The National Front, formed in October 1949 and led by Mossadegh, advocated free and fair elections, freedom of the press, and an end to martial law. It also challenged Britain's entrenched position in Iran, which rested on its control over Iranian oil. The failure of negotiations to revise the British oil concession eventually resulted in the nationalization of the Anglo-Iranian Oil Company. The oil issue became the rallying cry for a popular movement that linked national self-determination—as symbolized by the nationalization of oil—with popular sovereignty. The leadership of Mossadegh in this process led to his premiership in late April 1951.

Determined to subvert the government of Mossadegh, the British imposed an embargo on the sale of Iranian oil and resorted to extensive covert activities. The shah also quietly sought to undermine him, refusing to embrace the role of a constitutional monarch as demanded by Mossadegh. The machinations of pro-British and royalist elements and the shah's attitude resulted in Mossadegh's resignation in July 1952, but a popular uprising returned him to power a few days later. Mossadegh's difficulties persisted, however; the Tudeh (Communist) Party continued to harass his government, while enabling its opponents to invoke a communist threat. The army and security forces would not readily accept prime-ministerial control, and some of Mossadegh's less committed supporters joined his active opponents. Despite Iranian willingness to pay equitable compensation, the British and the Americans refused to accept the nationalization of the oil industry in Iran. From early 1953, the Anglo-American secret services, aided by Mossadegh's domestic opponents, intensified their efforts to engineer his downfall, eventually succeeding through a coup d'etat in August 1953.

Following the coup, which established royal autocracy, committed Iran to the West, and revoked the substance of oil nationalization, Mossadegh was tried by a military tribunal, accused of having violated the constitution, and condemned to three years of imprisonment. Subsequently, he was confined to his country home away from the capital until his death in 1967. He did not abandon his opposition to autocracy or efforts to galvanize his supporters, whose endeavors were thwarted by the royalist government. A secular democrat and a civic nationalist, dedicated to promoting representative democracy and national sovereignty, Mossadegh enacted many reforms, did not lose faith in democratic values, was averse to violence, and relied on international law to further Iran's case against British imperialism. He also maintained an enduring reputation as a man of conviction and integrity.

SEE ALSO *Anticolonial Movements; Central Intelligence Agency, U.S.; Coup d'Etat; Nationalization; Neutral States; Petroleum Industry; Sovereignty*

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Fakhreddin Azimi

MOTHERHOOD

The term *motherhood*, which began to be used at the end of the nineteenth century, refers to the state or condition of being a mother. Motherhood is usually distinguished from the term *mothering* in that mothering is the set of activities or practices concerned with nurturing and caring for children. While mothering entails a focus on the everyday practices associated with being a mother and looking after children, motherhood is a social institution and is thus characterized by specific meanings and ideologies. The two terms are, however, inextricably linked in that the practices of mothering in any society are performed and experienced in the context of the meanings and ideologies of motherhood.

The difference between mothering and motherhood has consequences for understandings of both mothering and motherhood. For example, the focus on mothering as performance of the tasks essential to child rearing meant that those who studied child development in the 1970s and 1980s extended the term *mothering* to include child rearing done by men who nurture children. This usage of mothering has diminished as the importance of fathering and the need to understand better what fathers do with children gained increased emphasis beginning in the 1990s. In contrast, motherhood is associated only with women since the state of motherhood has a direct impact on women's lives, regardless of whether or not they become mothers. In most societies a central feature of motherhood is that it should ideally occur within a het-

erosexual relationship where a man and a woman are cohabiting (and preferably legally married). The rearing of children is supposed to be the major task of this unit, which is idealized as bound together through mutual ties of affection, common identity, and relationships of care and support. This model is often assumed to be the natural and normal (as well as ideal) form of social organization and to be stable over time.

A focus on motherhood arose from feminist work on gender relations as a key aspect of recognition that motherhood is central to women's lives—whether or not they become mothers. For example, in 1975 the sociologist Jesse Bernard suggested (in *The Future of Motherhood*) that there is a tension between the idealized image of the selfless mother and many mothers' experiences of hard, repetitive work that is socially devalued and unfulfilling. In the 1970s Bernard and other feminists in Europe and North America, such as Adrienne Rich, argued that the institution of motherhood was oppressive in making most women feel that they should become mothers and stay at home in segregated gender roles rather than, for example, pursuing employment and careers. At the same time researchers such as the sociologist Ann Oakley pointed out (in *Becoming a Mother*) that the idealized image of motherhood is unattainable and causes women to feel guilt, unhappiness, and anxiety about their failure to measure up to the ideal in their everyday practices.

MOTHERHOOD IS CHANGING

While it is often assumed that motherhood is historically stable, it has changed a great deal. For example, Linda Nicholson, a historian of ideas, suggests that it was only in the economic boom of the 1950s that it became possible for working-class women in Western countries to stay at home with their children as many more privileged women had been doing (although working-class mothers did not have servants to do the housework and look after the children). As the technology for housework and cooking became more sophisticated, motherhood came to be idealized as the institution responsible for entertaining and ensuring the optimal development of children—morally and academically. Ann Dally argues in *Inventing Motherhood* that also in the 1950s women in the affluent Europe and North America could be relatively confident each pregnancy would lead to a live birth and to the baby's survival. As researchers have pointed out, this situation still does not pertain for poorer women in countries where there continue to be high rates of maternal and child mortality as well as higher birthrates. Access to efficient contraception and abortion in the more affluent countries led to markedly decreased birthrates from the late 1950s, with a few exceptions, and mothers have been expected to devote more time and effort to caring for and developing their children.

Since the 1950s, motherhood—the condition in which women mother—has changed markedly and become more complex in many societies. In particular, as Fiona Williams makes clear in *Rethinking Families*, demographic changes in many societies mean that women in the early twenty-first century are more likely to be single mothers than previously and to live in reconstituted, blended families or stepparent families with children sometimes being shared across households. Mothers in European and North American society and affluent mothers in any society are likely to be older when they have their first child and to have fewer children. There has also been an increase in the number of affluent women who have only one child or no children and an increasing number who give birth through assisted reproduction techniques or as surrogates for other women. In addition governments frequently intervene (directly or indirectly) in motherhood to limit or increase population size or to attempt to guarantee the quality of the population. Examples include the Chinese one-child policy instituted in the twentieth century and pronatalist policies designed to encourage reproduction (e.g., in France and the former Soviet Union).

In modern times it is common for mothers to be employed outside the home, and there is ideological commitment to equality between women and men with expectations that child care and housework will be shared between employed parents. Motherhood within one society is therefore as differentiated as is motherhood between societies. Idealized images of motherhood have adjusted to accept that women may be employed outside the home and even that they may cohabit without being married. Images of motherhood have not, however, changed sufficiently to accommodate the demographic and social changes. As Estella Tincknell points out in *Mediating the Family*, media representations frequently accommodate some changes but reassert the ideal of the white, middle-class nuclear family. Ideologies of motherhood continue to suggest implicit disapproval of many categories of mothers, including those who are single, aged under twenty, and either out at work for long hours each day or unable to make economic provision for their children. In practice there is often less sharing of household and child care work between mothers and fathers than might be expected. As a consequence there is a marked discrepancy between the expectations of motherhood and the experiences of mothering, with the result that motherhood is painful and disappointing for many women. This discrepancy points to the fact that motherhood is not naturally occurring but is socially constructed in ways that suggest that there is an essence to motherhood.

EXPECTATIONS AND EXPERIENCES OF MOTHERHOOD

Despite the changes in motherhood, most women in all societies still become mothers. The oft-reported unhappiness of those who find that they cannot have children provides an indication of how psychologically important it can be for women to become mothers. To some extent this is because motherhood is socially constructed as an essential part of adult femininity so that women who do not become mothers (for whatever reason) can be made to feel that they are not proper women. In addition many women share the idealized view of motherhood common in many societies so it is not the case that they are coerced into having children. Many women choose to become mothers, and whether or not they do, their identities are partly negotiated in relation to motherhood. It is therefore important to consider women's desires in relation to motherhood (conscious and unconscious) as well as the contexts in which they mother. In other words, motherhood requires psychosocial (both psychological and social) understandings.

One benefit of feminist work on motherhood has been its focus on women's expectations and experiences of it. While many women want to become mothers and subscribe to social constructions of motherhood as natural, blissful, and something with which they should be able to cope, women frequently feel conflicted about how they will be able to manage as mothers. In the early twenty-first century the sociologist Tina Miller conducted a study of motherhood that used cultural scripts from Bangladesh and the Solomon Islands to contextualize experiences of motherhood in the United Kingdom. Miller found that women often said they were worried and frightened about becoming mothers. Miller suggests that this is related to cultural messages about the right way to be a good mother and the moral context within which motherhood occurs.

After birth, almost all women learn the tasks associated with successful mothering. However, it can take time for women to feel comfortable with their identities as mothers. The British sociologist Stephanie Lawler suggests that this is partly because women have to negotiate a contradiction between a belief in autonomy as a central part of adulthood and a perception that autonomy is lost with motherhood. Women therefore have to develop practices and narratives that allow them to inhabit identities as mothers. Experience of the contradictions of motherhood do not, however, lead mothers to feel solidarity with other mothers. The psychologist and anthropologist Meryle Kaplan points out: "Instead of questioning what has been called an institution of motherhood, these modern women most frequently question other mothers and resist affiliating themselves with other women" (Kaplan 1992, p. 202). This self-differentiation between mothers is one reason why motherhood is differentiated among mothers.

Motherhood is also expressed differently over time and varies by social class, race, ethnicity, and culture. For example, in *Janani: Mothers, Daughters, Motherhood*, Maitreyi Chatterji says:

> Motherhood may have been pitched to an exalted position, but the ground reality for Indian mothers is an entirely different matter. India's maternal mortality rate and chronic malnutrition makes a mockery of motherhood myths … yet we find women legitimize motherhood through acts of immense sacrifice. Indian mothers eat last or not at all.… Women go through multiple pregnancies to continue the male family line or risk abortions if the fetus is female. (*Bhattacharya* 2006, pp. 36–37)

It is important, however, to recognize that there are marked differences between mothers within each country because social class, ethnicity, and culture all intersect to position women in different ways. Yet as the sociologist Terry Arendell reported in 2000 after a decennial review of U.S. literature, although the United States is diverse, little is known about the meanings and practices of motherhood for minority ethnic women, who are frequently used only as comparisons when white U.S. motherhood is being reified. This is also the case within other European and North American societies.

The enormous changes in the conditions under which motherhood occur demonstrate that motherhood is not an essentialist concept. Instead, it is diverse and practiced in different ways according to the social, economic, and psychological contexts in which women live. Nonetheless, ideologies of motherhood continue to idealize and romanticize motherhood in ways that make ideal motherhood unattainable and a source of anxiety for most women as they forge motherhood identities. For this reason, many motherhood researchers argue that it is important to expand the range of narratives around mothering and to challenge the pervasive myths of motherhood.

SEE ALSO *Children; Family; Family Structure; Fatherhood; Feminism; Gender Gap; Inequality, Gender; Parent-Child Relationships; Parenthood, Transition to; Parenting Styles; Work and Women*

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Ann Phoenix

MOTIVATION

The history of motivation research from the prescientific era to the present has seen a radical diversity in conceptualizations of motivation, and subsequently a vast range of perspectives on the domain of motivational explanation (Bolles 1967). Perhaps the most comprehensive way of characterizing motivation is as a state or process that determines the direction, intensity, and persistence of behavior and thought. Motivational states generally have distinctive activation and deactivation conditions (e.g., hunger and satiety), but their duration can range broadly from a momentary urge to the drive of a super-marathon runner to the indefinite toiling of an author in the completion of a novel. Some motivational states express one's capacity for self-control, whereas others are seen as lapses of will or compulsions. Across the social sciences, motivated beings have been regarded as agents with needs to control themselves and their environments, as agents with motivational dispositions constitutive of their personality profiles, and as agents with preferences governed by the temporal proximity of benefits.

Substantial effort has been devoted to understanding the relationship between beliefs about one's capacity for control and the motivation to control a given phenomenon, be it the self, other people, or some environmental process. One assumption underlying research into personal control is that humans are intrinsically motivated to explore their capacities and master their environments (Gecas 1989). Common tools for measuring personal control include the Rotter I-E scale and the Pearlin personal mastery scale.

The Rotter I-E scale consists of twenty-three questions used to determine where an individual locates the causes responsible for experienced reinforcements and outcomes. An internal locus of control is a source of causal efficacy within an individual, whereas an external locus of control is attributed to social and environmental forces, including luck. Each question on the Rotter I-E scale consists of two generalizations. One statement suggests that a person or group's circumstances are to be explained via an appeal to an external locus of control, the other an internal locus of control. The respondent is instructed to pick the most agreeable statement. Higher scores suggest that a respondent is a more external individual. Effective applications of the Rotter I-E scale account for individual differences in risk-taking behavior, where lower scores signal lower risk aversion. Several variations on the Rotter I-E scale have been proposed (Lefcourt 1991).

The Pearlin personal mastery scale was developed to study coping strategies in commonplace stressful situations (Pearlin and Schooler 1978). Mastery is the extent to which one judges that opportunities fall under one's own control, a concept Leonard Pearlin and Carmi Schooler contrasted with fatalism (which is comparable to external control). Coping in this framework is construed as any behavior aimed at reducing, avoiding, or controlling emotionally distressing environmental circumstances (often social situations in particular). A higher self-rating of personal mastery was found to predict a lower rating of emotional distress in a personally meaningful circumstance.

The scale itself consists of seven statements with four response categories specifying how strongly the respondent agrees or disagrees. Such statements include "There is really no way I can solve some of the problems I have" and "I can do just about anything I really set my mind to." Higher scores indicate that the respondent has greater confidence in having mastered an environment. Pearlin

and colleagues (1981) found that challenges in the workplace affect job stress through personal mastery.

Questions linger concerning the relation between locus of control, personal mastery, and related concepts such as self-efficacy (Bandura 1980), all of which generally fall under the heading of personal control. It may be that the locus-of-control concept subsumes personal mastery (Lefcourt 1991), but this point is debatable (see Pearlin and Pioli 2003).

Research suggests that the connection between personal control and stress is culturally variable. Jaya Sastry and Catherine Ross (1989) studied the relation between personal mastery self-assessments and stress in Asian (Japanese, South Korean, Chinese, and Indian) and Asian American populations. Their finding was that Asians and Asian Americans report lower levels of perceived control than non-Asians. However, lower perceived control has less of an effect on distress. The authors attribute the difference to contrasting individualistic and collectivist value systems. Other work on self-efficacy suggests significant differences between Asian and European or North American populations. For example, Hazel Markus and Shinobu Kitayama (1991) found that subjects in the United States attribute poor academic performance to lack of ability, whereas Japanese subjects attribute such performance to lack of effort. Markus and Kitayama suggest that such differences stem from divergences between Asian and Western self-conceptions.

Setting aside cultural differences, individual differences in motivation may be attributable generally to trait differences beyond personal control. For example, the five-factor model defines distinct dimensions of affective tendencies, such as openness, conscientiousness, extraversion, agreeableness, and neuroticism. In the model, neuroticism is constituted by a spectrum leading from a calm, contented, and unemotional disposition to an anxious, emotional, and moody disposition (John 1989). The actualizations of these affective tendencies are sensibly regarded as responses toward the status of one's goals (see Lazarus 2001). Goals, the direction-determining component of motivational states, are then related to action selection and persistence via traits. For example, Gerald Matthews (1999) notes that nonanxious individuals maintain task performance better when lack of environmental controllability and severity of threat otherwise tend to discourage task focus (see also Lazarus and Folkman 1984). Thus the perceived capacity for control interacts with personality in determining task motivation within an individual.

Research on personal control largely assumes that beliefs concerning one's capacities combine with needs in order to determine behavior. Such needs may be regarded as the determinants of a preference ranking over plans for action. Abraham Maslow (1954) famously proposed a hierarchy of needs, where needs themselves were prioritized. In a related vein, goal theory countenances an explicit ranking of goals, where a goal whose achievement has a higher perceived difficulty tends to outrank a goal whose attainment poses a lesser challenge. One explanation of the ranking is that such goals are associated with more profitable outcomes (Locke and Latham 1990). How to taxonomize the goals that figure into a hierarchy remains a contentious issue (see Chulef, Read, and Walsh 2001).

In assessing needs and goals, we recognize greater and lesser urgency modulating action preferences. In learning theory, the matter is framed in terms of the balance between preferences for smaller, temporally proximal rewards and preferences for greater but temporally distant rewards. The classic economic representation of these aspects of motivation is found in the discounted utility (DU) model of intertemporal choice. In the DU model, agents are expected to employ the same discount factor consistently when weighing future benefits at varying temporal intervals from the present. Appeal to an agent's discount factor has been used to explain addictive consumption and self-defeating behavior. For example, when an agent selects an action with a low short-term expected benefit and high long-term expected cost (e.g., indulging a cocaine addiction), the choice of the indulgence over abstinence is attributed to the agent's setting immediate benefits (e.g., withdrawal relief) at a much higher priority than distant benefits (e.g., the greater net benefits from sobriety). Both this kind of explanation and the DU model have undergone sustained attack regarding agents' consistency in temporal discounting (Bickel and Marsch 2001; Ainslee 2001).

Researchers have attempted to coordinate economic and psychological approaches to motivation with the methods of neuroscience in a field called "neuroeconomics" (Camerer, Lowenstein, and Prelec 2005). Early results indicate that distinct neural circuits encode estimated value functions, that is, contingencies between actions and benefits summed over a temporal interval (Montague and Berns 2002). Neuroeconomics synthesizes the optimization assumptions of expected utility models and self-regulation approaches to motivation with the parallel processing concepts of computational neuroscience and the attention to bounded rationality prominent in behavioral decision theory (see Carver and Scheier 1998). Greater cross-disciplinary collaboration in motivation research can be expected in the future.

SEE ALSO *Diathesis-Stress Model; Guttman Scale; Locus of Control; Maslow, Abraham; Neuroeconomics; Overachievers; Rationality; Rotter's Internal-External*

Locus of Control Scale; Scales; Stress; Stress-Buffering Model; Underachievers

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MOVEMENTS, ANTICOLONIAL

SEE *Anticolonial Movements.*

MOVING AVERAGE MODEL

SEE *Autoregressive Models.*

MOVING EQUILIBRIA

SEE *Social System.*

MOVING TO OPPORTUNITY

The U.S. Department of Housing and Urban Development's (HUD) Moving to Opportunity (MTO) for Fair Housing Demonstration was intended to rigorously explore the ways that neighborhood environments affect the life chances of very poor families, by testing the effects of helping public housing families who lived in areas of *concentrated poverty* (neighborhoods where more than 40% of the households are poor) to move to better neighborhoods. Researchers and policy makers hoped that these moves would enable these residents to find jobs and their children to succeed in school.

The MTO demonstration grew out of a body of research on how neighborhood environments affect life chances (c.f. Wilson 1987). There was increasing evidence that living in high-poverty neighborhoods was related to a

range of problems such as poor school performance, teen pregnancy, delinquency, drug use, weak labor-force attachment, and poor health (Ellen and Turner 1997; Ellen, Mijanovich, and Dillman 2001; Leventhal and Brooks-Gunn 2000). Among the most destructive communities were central-city public-housing developments, where residents endured miserable living conditions and horrific rates of violent crime and drug trafficking (Popkin et al. 2000a).

THE GAUTREAUX PROGRAM

MTO was modeled on Chicago's Gautreaux program, which was the result of a landmark desegregation lawsuit filed against the Chicago Housing Authority (CHA) and HUD. In *Hills v. Gautreaux* (1976) the courts found that the CHA and HUD had discriminated against black tenants, concentrating them in large-scale developments located in poor, black neighborhoods. The court ordered relief in the form of 7,100 Section 8 vouchers—subsidies that were to be provided to current and former CHA residents to use in neighborhoods *that were less than 30 percent black* (Polikoff 2006). Section 8 (Housing Choice) vouchers permit low-income households to rent private market units; recipients pay up to 30 percent of their income for rent and the local housing authority pays the rest. The Gautreaux program also provided mobility counseling to participants to help them find housing in predominantly white communities.

Research on the program seemed to indicate big gains for participants who succeeded in moving to predominantly white suburbs. Adults were more likely to be employed (Popkin, Rosenbaum, and Meaden 1993) and children more likely to stay in school, to be employed after graduation, and to go on to four-year colleges or universities (Kaufman and Rosenbaum 1992; Rubinowitz and Rosenbaum 2000). But Gautreaux participants self-selected into the program and were heavily screened, undergoing home visits and credit checks; most of the families (about 80%) that came through the program never moved; and the research relied on a retrospective design (Popkin et al. 2000b).

MTO DESIGN

The MTO demonstration was designed as a true random experiment. There was a critical difference between Gautreaux and MTO: MTO used poverty rather than race to define "opportunity neighborhoods." Between 1994 and 1998 more than 4,600 low-income families from high-poverty (more than 40% poor) public housing developments enrolled in MTO in Baltimore, Boston, Chicago, Los Angeles, and New York. Participants were randomly assigned to one of three groups: (1) an experimental treatment group that received counseling and received vouchers they could only use in a low-poverty (less than 10% poor) census tract; (2) a "regular" Section 8 comparison group that received vouchers with no special counseling and no neighborhood restrictions; and (3) an in-place control group that continued to live in public housing (Goering and Feins 2003).

MTO families were surveyed at baseline, before random assignment. HUD then funded several single-site studies one to three years after families moved to get preliminary data on how families were faring (Goering and Feins 2003). An interim evaluation was conducted in 2002, including analysis of administrative data on employment, welfare recipiency, and arrests; in-depth qualitative interviews of parents and youth; surveys of parents, children, and youth; blood pressure measurement for adults; and educational testing of youth.

Findings from the interim evaluation showed dramatic gains in quality of life for MTO participants, especially in terms of neighborhood safety and sense of security; these gains persisted, even though many families made subsequent moves to higher poverty communities (Orr et al. 2003). Adult women and adolescent girls experienced significant improvements in mental health; adult women also experienced declines in obesity relative to the control group. Boys did not experience these improvements in mental health; and boys in the experimental group had higher arrest rates for any crime, especially property crimes, and significant increases in smoking, although not in other types of risky behavior. Finally, there were no measured effects on employment or academic achievement for either adults or adolescents.

There are a number of possible explanations for these findings. First, unlike Gautreaux families, most MTO families did not move to white suburban neighborhoods, but to predominantly minority city neighborhoods that grew poorer between 1990 and 2000; few MTO families moved out of their original urban school districts. Second, because of welfare reform and the booming economy of the 1990s, employment rates increased dramatically for all three treatment groups; these trends may have masked any smaller treatment effects. Third, MTO families were significantly more disadvantaged than the Gautreaux families, and may not have been as able to take advantage of new opportunities. Fourth, MTO was a housing assistance program; it did not include any job training or other employment services; further, expectations that neighbors in low poverty would serve as role models and provide information about jobs may have been unrealistic. Finally, it simply may be that not enough time had elapsed to see significant effects on employment and education. The final evaluation, scheduled for 2007, will address the long-term effects of MTO.

MTO has shown that it is possible to use housing mobility as a tool for improving poor families' life circumstances. The improvements, including a sense of security and mental health for adult women and girls, are substantial, and may well have long-term implications for families' economic well-being. But the MTO findings also highlight the limitations of using poverty rather than race to define opportunity communities, as well as the need for more supports to help profoundly disadvantaged public housing families.

SEE ALSO *Gautreaux Residential Mobility Program; Poverty; Social Experiment*

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MOYNIHAN, DANIEL PATRICK

1927–2003

Born in Tulsa, Oklahoma, Moynihan grew up in a poor neighborhood in New York City, shining shoes to earn money. He served on active duty as a gunnery officer on the USS *Quirinus.* He went on to graduate from Tufts University, receiving three graduate degrees from the Fletcher School of Law and Diplomacy. He was a Fulbright fellow at the London School of Economics. A member of Averell Harriman's New York gubernatorial campaign in 1954, he served for four years on the governor's staff and became a Kennedy delegate at the 1960 Democratic National Convention. During the Kennedy and Johnson administrations he was an assistant secretary of labor and was influential in formulating national policy that came to be known as the War on Poverty.

In developing his views on the position of the black community in American society, Moynihan was influenced by Stanley Elkins's *Slavery: A Problem in American Institutional and Intellectual Life* (1959), which argued that the dependency of black Americans on society was produced by slavery and that slavery had, like the Nazi concentration camps, produced a psychological infantilism. Moynihan supported the idea of affirmative action to counteract the historical legacy of slavery. Moynihan was impressed by the fact that, while unemployment was declining, more people were joining the welfare rolls, and these welfare recipients were typically families with children with a lone parent (invariably the mother).

In 1963 he coauthored *Beyond the Melting Pot* with Nathan Glazer, claiming that intermarriage was not common and that ethnic divisions were resulting not in a "melting pot" but a "salad bowl." His internal memorandum with regard to black families was leaked to the press. Subsequently known as the Moynihan Report, it identified a "tangle of pathology" in the dysfunctional black family, resulting in welfare dependency. Critics saw the report as a case of "blaming the victim"—the title of William Ryan's 1971 book taking issue with white liberalism in general and Moynihan in particular. Moynihan's views were appropriated by racists who seized upon press coverage, focusing on the fact that many black children were being born out of wedlock. In the Aid to Families

with Dependent Children program, the "man out of the house rule" was said to encourage lone parents not to cohabit because otherwise their welfare entitlements would be jeopardized. Joining Richard Nixon's White House staff, Moynihan supported Nixon's commitment to a guaranteed annual income, which he discussed in *The Politics of a Guaranteed Income* (1973). He became notorious for a memo to Nixon in 1969 recommending that "the issue of race could benefit from a period of benign neglect" (DeWitt 2005). Moynihan's critics have argued that his influence on the Nixon administration meant that the cause of black emancipation was curtailed by lack of attention to the social and economic issues confronting black Americans.

After a brief spell as director of the Joint Center for Urban Studies at Harvard University and the Massachusetts Institute for Technology, he had major appointments as ambassador to India (1973–1975) and as U.S. representative to the United Nations. He controversially ensured that the UN Security Council took no action against the illegal annexation of East Timor by Indonesia in 1975 on the grounds that Indonesia was a cold war ally of the United States.

Moynihan remained a controversial figure by opposing President Bill Clinton's proposal to expand health care coverage to all American citizens. Moynihan took the view that there was no health care crisis, and he supported a ban on partial-birth abortions, which he saw as close to infanticide. Having chaired the Commission on Government Secrecy, he published *Secrecy: The American Experience* in 1998, arguing that suspicion and lack of information created unnecessary political schisms.

While the *Almanac of American Politics* described him in 1994 as "the nation's best thinker among politicians since Lincoln and the best politician among thinkers since Jefferson," his critics have argued that his views on the black family had damaging consequences for black Americans, that his opposition to health care coverage was regressive, and that his strategy toward East Timor resulted in thousands of civilian deaths.

SEE ALSO *Benign Neglect; Culture of Poverty; Glazer, Nathan; Moynihan Report*

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MOYNIHAN REPORT

In early 1965 Daniel Patrick Moynihan (1927–2003), then assistant secretary for policy planning and research at the Department of Labor, completed a report that was eventually published as *The Negro Family*. In the report Moynihan had identified certain anomalies in U.S. employment data; for example, by the early 1960s the unemployment rate for minorities was going down while the dependency rate (or rate of welfare payments) was going up. This paradox came to be known as "Moynihan's scissors." He also observed that the black out-of-wedlock birth rate was climbing steeply. Moynihan's departmental paper on these empirical findings on the black family came to be known as the Moynihan Report. It argued that the single-parent family in the ghetto was becoming more common, and that these single-mother families were not the product of unemployment, but the legacy of black slavery. A similar argument had been put forward by the black sociologist E. Franklin Frazier (1894–1962) in his *The Negro Family in the United States* (1939). Moynihan described the crisis (what he called the "tangle of pathology") in the urban ghetto in terms of criminality, unemployment, educational failure, and fatherlessness. The unraveling of the black family was associated with the fact that with growing rates of teenage pregnancy, young parents failed to complete school and find employment. Fathers were largely absent from the home, and single mothers often became welfare dependents.

There were in fact two components to Moynihan's argument. One was the presence of cultural norms (of dependency, family organization, and crime) in the black community that were the long-term legacy of slavery. The second was the high incidence of unemployment among black men that reduced their desirability and practicability in the marriage market. This second feature received relatively little attention in the public debate about female-headed households.

The substance of Moynihan's report was influential in U.S. politics. Lyndon Johnson referred to it in his commencement address at Howard University in June 1965, focusing on the alleged dysfunctions of the black family and ignoring the issue of male unemployment. The empirical basis of the report also influenced academic research. James Coleman (1926–1996) published with several colleagues *Equality and Educational Opportunity* (1966) in which they demonstrated that the best predictor of a child's educational achievement is not the material conditions within schools but the family background of the child. Welfare dependency and child poverty in black ghettoes remained stubbornly high, and by 1990 around 65 percent of all black children were born to unmarried mothers.

Moynihan's report became an important aspect of "the politics of controversy" in postwar America. Some days after the report was leaked to *Newsweek*, riots broke out in Los Angeles's Watts ghetto on August 11, 1965, and Moynihan's critics argued that the report was used by the administration as an explanation for the riots. William Ryan, an activist in the Congress of Racial Equality and a clinical psychologist at Boston College, published his *Blaming the Victim* (1971), which claimed that the Moynihan report was racist in suggesting that the problems of the ghetto were the consequence of black male promiscuity: Because whites had better access to contraception, abortion, and adoption, their behavior was not regarded as licentious. Attacking black sexuality masked the failure of American society to deliver social justice. The report also was criticized by the black feminist and academic Joyce Ladner, who claimed in *Tomorrow's Tomorrow: The Black Woman* (1971) that the report did not challenge the myths surrounding the white middle-class family. Feminists criticized the nuclear family as oppressive and defended the black single-parent family as a foundation for the socialization of children.

On joining President Richard Nixon's White House staff, Moynihan supported Nixon's commitment to a guaranteed annual income, which he analyzed in *The Politics of a Guaranteed Income* (1973). Moynihan subsequently became notorious for a memorandum to Nixon recommending that the question of race could benefit from a period of benign neglect. However, the issue of racial injustice remained on the social science agenda. In 1987 William Julius Wilson published *The Truly Disadvantaged*, in which he described the social pathology of the ghetto, criticizing liberals for failing to address black social problems. Sara McLanahan and Gary Sandefur in *Growing Up with a Single Parent* (1994), summarizing the social science data on family life, concluded that children in single-parent homes did not do as well as other children on a range of indicators. Kay Hymowitz argued in *Liberation's Children* (2003) that opposition to Moynihan has to be seen in the context of the rebellious climate of the 1960s.

There are other, substantive criticisms of the report. Firstly, although Moynihan praised the Nation of Islam ("black Muslims"), he ignored the extensive network of black churches, the Urban League, black fraternities and sororities, the Masons, the National Association for the Advancement of Colored People, and black colleges, all of which contribute significantly to civil society. Secondly, the historical evidence from 1915 to 1960 showed that the rate of black births out of wedlock remained relatively unchanged, and that from the early 1960s the African American birth rate began to decline, especially among married women. Thirdly, the real "family issue" is not the number of unmarried women having too many children, but the declining prevalence of marriage as such. Clearly, female marriage rates are closely associated with male marriageability. The decline in marriage rates is in part a consequence of the dramatic increase in the educational achievement of African Americans. In 1940 African Americans in the age group 25 to 34 years had a median of 6.9 years of completed schooling; by 1960 this had increased to 10.3 years; and by the 1970s the figure was over 12 years. The gap between white and black Americans in terms of education declined steadily during this period. As high school graduation and postsecondary education became the norm between 1960 and 1975, African American men and women delayed entry into marriage, and there was a corresponding decline in fertility. In addition, adverse labor market conditions—declining real wages and labor force participation, and earnings instability—resulted in male marginalization, further contributing to the decline in marriage rate.

The critical response to the Moynihan Report essentially revolved around the idea of the pathological family in which men are absent and lone mothers dominate. This view is not unrelated to Frazier's earlier description of these families as a "matriarchate." An alternative explanation, which was pioneered by researchers such as Andrew Billingsley in 1968, is that the extended, matriarchal black family was an effective adaptation to the socioeconomic difficulties that African Americans confronted in racially divided society. The black family was in fact an appropriate structural response rather than a social pathology.

SEE ALSO *Black Middle Class; Female-Headed Families; Moynihan, Daniel Patrick; Slavery; Unemployment*

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MUGABE, ROBERT
1924–

Robert Mugabe, the president of Zimbabwe, was born in rural Rhodesia (the country's earlier colonial name), and spent his adult life struggling for the independence of Zimbabwe. He has led the country since 1980, first as prime minister and then as president. The son of Gabriel and Bona Mugabe, he managed to gain admission to South Africa's Fort Hare University, which was then one of the few institutions reserved for non-white higher education in apartheid South Africa. He began to develop his political consciousness at the university and returned to Rhodesia in 1960, immediately joining Joshua Nkomo's Zimbabwe African People's Union (ZAPU), but he deserted Nkomo three years later to help establish the rival Zimbabwe African National Union (ZANU). The two men conducted an uneasy rivalry, with periods of conditional cooperation, right up to Nkomo's death in 1999.

This sort of political maneuvering characterized Mugabe's rise to pre-eminence within ZANU itself, and rivals were either eclipsed or mysteriously died. At the foundation of ZANU, however, the radical demeanour of the party so alarmed Ian Smith's white minority government that Mugabe was imprisoned without trial in 1964 and remained incarcerated for ten years. When, a year later in 1965, Smith declared unilateral independence from Britain rather than permit black majority rule, it was a sign to the imprisoned Mugabe that democracy and black rights would require armed struggle.

Mugabe studied intensely while in prison and acquired a list of degrees from the universities of London and South Africa, including two master's degrees. His intellectual acuity has always been one of his hallmarks.

Mugabe was released from prison in 1974 and went to Zambia. While there he became president of ZANU, deposing another of his veteran rivals, Ndabaningi Sithole, and in 1975 the predominant figure in ZANU, Herbert Chitepo, was assassinated. Mugabe and many of his allies were immediately arrested in Zambia, but they were released a month later and made their way to Mozambique, where they fostered the armed insurrection against the Smith regime, using Mozambique as a base for their operations into Rhodesia. The war became sufficiently fierce and bloody for a series of international peace efforts to be launched from both Britain and the United States.

In 1979 the pressures of both war and international diplomacy led to negotiations among all parties under the chairmanship of the British foreign and commonwealth secretary in London, and it was agreed that a British governor would take charge of Rhodesia and conduct elections leading to independence under the name of Zimbabwe. Mugabe's ZANU scored a comprehensive electoral victory. He increased the sense of surprise by immediately issuing a call for reconciliation and cooperation. Although he and Nkomo had negotiated jointly in London, Mugabe declined to form a coalition with Nkomo, but did provide him with a place in government.

The early years of rule astounded the international community with its moderation and liberalism, although it was only in the 1990s that full appreciation was gained of a secretive conflict in western Zimbabwe from 1982 to 1987. There, dissident supporters of Nkomo were ruthlessly crushed by Mugabe's armed forces, with tens of thousands of innocent civilians killed. His pride and political capacity crushed, Nkomo was thereafter fully subordinate to Mugabe, but the outside world was prepared to turn a blind eye to a protracted episode where violence had replaced democracy.

Beginning in 1992, however, Mugabe began speaking intensely of land reform and redistribution. By far the majority of Zimbabwe's arable land was still in white ownership, and political independence had not been accompanied by majority ownership of land. Even so, it took until 1997 when, after a bitter quarrel with British prime minister Tony Blair, Mugabe began to speak violently about seizing land without compensation.

Mugabe had won all of the elections held after independence. Although the 1990 elections occurred with much violence in the east of the country, Mugabe garnered legitimate electoral victories in all of them. In 1999,

however, a formidable opposition party, the Movement for Democratic Change (MDC) emerged under Morgan Tsvangirai. The MDC inflicted a first defeat on Mugabe in February 2000, at a referendum over constitutional changes. In March, Mugabe unleashed the veterans of the liberation war to invade and take over the land of white farmers and to reassert violence into the political landscape. Since then, the economic and political travails of Zimbabwe have spiralled out of control.

Without a productive agri-industrial base, inflation in Zimbabwe had soared to 1600 percent by February 2007. The MDC suffered defeat at successive elections, and it is clear that Mugabe had resorted to rigging in order to ensure his victories. Political suppression increased as the economic meltdown of the 2000s continued.

Mugabe is now in his eighties and there is a debate as to his posterity. In the West, he is seen as the violent guerrilla leader who merely cloaked his ruthlessness for many of the years of his rule, but who has shown his true character in deliberately plunging his country into turmoil. Some view him as reasserting his early Maoist ideology in a Zimbabwean Cultural Revolution. Many in Africa, however, see him as the last great nationalist who, perhaps belatedly, was determined to assert the meaning of black majority rule in terms of ownership of land. Here he takes his place alongside such intellectual nationalist leaders as Amilcar Cabral and Kwame Nkrumah. This more sympathetic view suggests that, in the long term, Mugabe's accomplishment will be recognized as a final, if messy, breakthrough to full nationalism. In the meantime, the messiness has gripped Mugabe's land and people with catastrophe and deprivation.

SEE ALSO *Autocracy; Cabral, Amilcar; Colonialism; Decolonization; Guerrilla Warfare; Land Claims; Land Reform; Liberation Movements; Nkrumah, Kwame*

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Stephen Chan

MUHAMMAD

c. 569–632

In the Islamic tradition, Muhammad is a messenger of God and the "seal of the prophets." Muslims consider the prophethood of Muhammad as the final act of a monotheistic God's revelations to humanity, which had earlier been transmitted through the biblical prophets, including Jesus and Moses.

According to classical Islamic sources, Muhammad was born in Mecca around 569. His family belonged to the Hashemite branch of Quraysh, the dominant tribe in Mecca, then a major site of pagan pilgrimage in Arabia as well as a major center of caravan routes. The city's dominant religion was Arab paganism, although some monotheists influenced by Abrahamic traditions also resided there. His father, ʿAbdullah, died before Muhammad was born, so the infant was placed primarily in the care of a foster mother in addition to his grandfather and his mother, Amina, both of whom died within his eighth year, leaving the care of the orphan to his uncle.

Muhammad's first forty years of life were relatively undistinguished. He reportedly made a living as a merchant and participant in Mecca's long-distance caravans, and his most profitable missions were carried out on behalf of an older female employer, Khadija, whom he eventually married. While before the revelations he was never recognized as anything but an ordinary member of the community, as a merchant he developed a reputation for honesty and integrity. At age forty, following years of periodic seclusion and meditation, Muhammad received his first revelations from God through the archangel Gabriel, the medium through which, according to Muslim tradition, the entire Qur'an was revealed to Muhammad.

Several years of proselytizing in Mecca generated a small number of recruits to the new faith, but Muhammad's claim to being a messenger of God was rejected by the city's larger pagan community. Muhammad's teachings had a clear affinity to Jewish and Christian ideas permeating Arabia at that time, his main nemesis being the dominant pagan religion. Around 622 Muhammad and his band of followers, seeing no more prospects in Mecca and being subject to increasing harassment, migrated to Medina (then Yathrib), where they established the first self-governing Muslim community. That community consisted at first of two distinct groups: the Meccan Muslims who came with Muhammad, or *al-muhajirun* (the emigrants); and a larger group of local Medinian faithful who had been Islamized before Muhammad's migration to the city, known as *al-ansar* (the backers). Medina became Muhammad's headquarters until his death. The mosque of Medina, built around his tomb, is the second-holiest shrine for Muslims worldwide.

Muhammad's migration (*Hijra*) to Medina allowed him not only to establish an independent Muslim community but also to elaborate further features of such a community. In Medina it became increasingly evident

that Islam was becoming a trans-tribal religion, and Muhammad frequently found himself acting as a trans-tribal statesman and arbitrator as well as prophet. Hostility to Mecca is evident in that part of his biography, since his home city had, according to the Qur'an, rejected a faith that was intended to safeguard it from danger in the world. Many skirmishes and battles are recorded throughout that period between the Muslims of Medina and the pagans of Mecca. Under Muhammad, the Muslims, especially *al-muhajirun*, sought to undermine Mecca's trade routes and also gain access to Mecca's *haram* (sanctuary), which was holy to all pagan Arabs but also to Muslims, who traced its construction to Abraham and saw it as integral to the history of monotheism.

During the Medinian part of Muhammad's life Islam was spreading in Arabia, but Muhammad remained focused on Mecca until he conquered the city in 630 in a bloodless campaign. He confirmed the holy status of the now-Islamized city. The originally pagan *haram* of Mecca was sanctified as a Muslim sanctuary and a Muslim pilgrimage site, and the pagan objects of worship within it were destroyed.

Muhammad died in Medina in 632, shortly after performing his last pilgrimage to Mecca, and at a time when Muslim communities had sprung up throughout Arabia. He left no instructions as to how the community should be ruled after him, leaving the task to the elders of the community. After deliberations they chose Abu Bakr, Muhammad's close companion and one of the earliest believers, as the first caliph in Islam.

Muhammad counts as one of the most influential men in history. In the Qur'an he is presented as a mere human person with no divine qualities and no supernatural powers, and he is not credited with miracles. His role is presented as one of bearing witness to his people and as a conveyor of God's final and true revelation; with the teachings of Muhammad, God acquires a highly abstract character. The tradition further highlights Muhammad's illiteracy, which in the context of the highly refined, poetic language of the Qur'an establishes all the more the book's divine origin.

Muhammad combined in his career several roles—prophet, statesman, warrior, legislator—and through that combination managed to establish an enduring trans-tribal community in Arabia that, after his death, became the model for a universal Muslim community. The corpus of sayings attributed to him, or hadith, along with the traditions around his life, constitute the sunnah, which is generally considered second to the Qur'an as source of Muslim tradition and also provides Muslims with an exemplary model of proper Muslim life and composure.

The basic teachings of Muhammad emphasized Islam as a trans-tribal fellowship, a harmonious community whose inner peace was safeguarded through regulated legal relations that closely mirrored the contractual outlook of the merchant class. Muhammad also mandated and expanded earlier techniques of wealth redistribution through elevating almsgiving to a religious duty. While presenting Islam as the last chapter in the history of monotheism, Muhammad also operated in a territory that was far removed from imperial or great power centers. Central western Arabia in Muhammad's time was becoming increasingly connected to world trade routes, but being situated deep in the desert, remained independent of the great powers of the time. The context in which Muhammad operated, therefore, provided for the emergence of a new type of political community, one that was not based on imperial politics but rather on overcoming and reworking Arab tribal traditions and integrating various classes and social groups under the banner of a new religion that gave them a sense of common and universal identity, binding contractual relations, and solidaristic practices and attitudes.

SEE ALSO *Islam, Shia and Sunni; Muslims*

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Mohammed A. Bamyeh

MUHAMMAD, ELIJAH
1879–1975

Elijah Muhammad was born on or about October 7, 1879, in Sandersville, Georgia, as Elijah Poole into a family with thirteen siblings. In his late teens or very early twenties he married Clara Evans, with whom he had eight children. He moved to Detroit, Michigan, in 1929 or 1930 to find employment, as did many blacks during the Great Migration from the South to the North during and after the stock market crash of 1929. In Detroit Clara Poole first heard of a "peddler/preacher" named Master Fard Muhammad who was preaching a different religious message—"the oneness of God," and that "blacks needed to embrace the religion of their ancestors"—Islam. Intrigued, Elijah went to investigate both the man and the message, and soon was Fard Muhammad's favored student. The community the Poole family joined was

recorded as the Nation of Islam (NOI), founded by Fard Muhammad.

An ardent and trustworthy student, Poole was first given the surname Karriem and then Muhammad as he matured from student to minister to Supreme Minister. By 1934 Fard Muhammad had left active participation in the NOI and Elijah Muhammad was appointed its leader, which enabled him to put what he had learned into action. His enduring task was to teach black people that their history written by white people was not true, to enlighten them about who they actually were in creation and the civilization of the world, and to maximize their potential as productive human beings working to better their spiritual, moral, and economic lives in a hostile, evil society. With a truncated U.S. education (ended at about the fourth grade) and a highly developed intellect accompanied by firm belief, Elijah Muhammad built a small but concrete empire. The Nation owned land, farms, schools, grocery stores, a national newspaper, clothing factories, and an international fish shipping company.

Muhammad used a multipronged, basic approach in his community. This was to engender moral and spiritual cleanliness (inwardly and outwardly); to instill the notion of seeking knowledge; to understand the command to work for self and the betterment of the black community by building and sustaining an economy, eating right, and nurturing strong families; and to avoid those things that would hamper any of the above, such as drinking alcohol, eating pork, gambling, and so on. This approach resulted in greater land and building ownership and the establishment of import-export businesses, clothing and grocery stores, and savings plans, and the publication of numerous texts as well as a newspaper that is now more than seventy years old.

The "Muslim Program" of the Nation of Islam has always been characterized as being divided between what Muslims want and what they believe. Simply summarized, Muhammad recognized that the United States had engineered a genocidal program against its ex-slaves that included regular lynchings, beatings, segregation, and racial discrimination. His response was to call for the establishment of a separate state where blacks could prosper. Members of his community believe in the oneness of God (Allah), the Holy Qur'an, and all the revealed scriptures—the Torah, the Bible—with the same qualifications as Sunni and Shi'a Muslims (for example, they do not believe that Jesus is God). They also believe that the so-called "Negroes" in America are God's chosen people.

The main goal for this community has always been the same: to uplift the black community to take a place in world leadership, moving away from dominion over others to cooperative living. With this in mind, members of this community have conscientiously objected to military service through several European wars and the United States's aggressions overseas. Their points were most ardently made by one of the most outspoken of the NOI's members, El-Hajj Malik Shabazz (Malcolm X). Shabazz was introduced to the teachings of the Nation of Islam while in prison in the 1950s, and upon his release he met Muhammad and became his student. Shabazz's intellect and charisma propelled him quickly through the ranks of the NOI to become one of its most visible spokespersons, until his assassination in 1963. Shabazz had publicly questioned the integrity of Muhammad, revealing that he had affairs with several of his secretaries, producing children. It is widely suspected that these public revelations, as well as jealousy engendered by Shabazz's high public profile, provoked his assassination; the men arrested for the murder were associated with the Nation of Islam. Muhammad lived until 1975, when leadership of the Nation of Islam passed to another student, Louis Farrakhan, until 2006; the leadership at that point transferred to a board.

SEE ALSO *Black Nationalism; Islam, Shia and Sunni; Malcolm X; Nation of Islam; Nationalism and Nationality; Religion; Rituals*

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Aminah Beverly McCloud

MULATTO ESCAPE HATCH

Brazil and the United States were the two largest slaveholding societies of the New World. However, differing racial dynamics characterized each context during those years and continue to do so. Carl Degler offered an explanation for the contrasts in his 1971 book *Neither Black nor White: Slavery and Race Relations in Brazil and the United States*. He posited the existence of a "mulatto escape hatch" in Brazil, or a space ceded to mulattos amounting to an intermediate social position between whites and blacks. In his words, "In Brazil the mulatto is not a Negro, whereas in the United States he is" (p. xviii), a distinction that provides "an escape from the disabilities of blackness for some colored people" (p. 178). This position challenges traditional views of Brazil as a racial democracy, that is, where there is no discrimination

against persons of any degree of African ancestry. On what historical grounds did Degler base his theory of the mulatto difference in Brazil and what were and are its supposed consequences?

The possible existence of an escape hatch in Brazil rested on the recognition of intermediate categorization for persons of mixed racial heritage, in contrast to the gradual adoption of the "one-drop rule" in the United States (i.e., where any "noticeable" African ancestry means assignment to the black race category). Degler's explanation for these diverging developments included more frequent racial intermixing in Portuguese America. This dynamic resulted from both the imbalanced sex ratios among Europeans in Portuguese America (where European women were scarce) in comparison to British America (where many early settlers came as families) and the higher social position of European women in British America that afforded them more control over the sexual exploits of their husbands. In addition, Degler noted that manumission rates were higher in Brazil than in the United States, especially for mulattos. These factors meant that whereas in the United States the boundary between free and slave populations was more generally coterminous with that between whites and blacks, in Brazil the free versus slave distinction was crosscut more significantly by skin tone. Hence, the all-encompassing and caste-like definition of blackness in the United States was made more difficult in Brazil.

The contrasting definitions of blackness were further strengthened in the nineteenth and twentieth centuries. Whereas both colonial societies practiced slavery, de jure racial discrimination ended in Brazil with slavery's abolition in 1888. In contrast, in the United States, after the abolition of slavery in 1865, the nation moved toward a re-entrenchment of de jure race-based discrimination that lasted into the 1960s. Color distinctions gradually became obsolete in a U.S. society ruled by black codes and Jim Crow segregation. The all-encompassing one-drop rule strengthened its hold as the twentieth century progressed and was even officially adopted by the U.S. census at least from 1930 to that century's end. In contrast, the Brazilian census has employed intermediate or mixed-race categorization since its inception in 1872.

As to the consequences of a racially intermediate category in Brazil, Degler presents evidence that there may have been some mulatto advantage in colonial years (e.g., higher manumission rates). Some research also suggests a modest amount of advantage for lighter-skinned individuals among those of African ancestry in contemporary Brazil in terms of select socioeconomic indicators (Telles 2004), although others argue that there are no real differences among Afro-Brazilians (Silva 1985). If a space of relative privilege does characterize some mulattos in Brazil, however, it is a space much closer to that occupied by blacks than by whites (Telles 2004). Interestingly, Edward Telles further argues that the advantage of lighter skin tone for persons of African ancestry is much more clearly the case in contemporary U.S. society than in Brazil. Earlier, Verna Keith and Cedric Herring revealed the same, positing that lighter-skinned blacks in the United States not only received some relative privilege compared to darker-skinned blacks during the years of slavery (e.g., higher manumission rates), but that patterns of relative advantage continue today in terms of education and income. Importantly, they claim that the present-day disadvantage of darker-skinned blacks is not a historical artifact, but results from continuing "greater discrimination against darker blacks" (Keith and Herring 1991, p. 775).

Despite some findings of a lack of evidence for significant mulatto advantage in Brazil, a preference for intermediate categorization continues among a large majority of Brazilians of some African ancestry. That preference may reflect a symbolic escape from the stigma of blackness. That is, the *actual* existence of the mulatto escape hatch may be less important in Brazil than the *belief* in its existence.

As to other consequences of intermediate categorization in Brazil, researchers hold that it hampers the construction of ethnic consciousness and solidarity among Brazilians of varying degrees of African ancestry that might otherwise be mobilized against racialized inequality. The U.S. African American community is surely the counterexample. An emphasis on individual strategies for social mobility (as opposed to collective) may further condition that solidarity in Brazil. Additionally, class identities in Brazil may be more central in the minds of poor Brazilians of all colors, further challenging the mobilization of clear racial divisions. Lastly, intermediate categorization may be implicated in the continuing stigma that is attached to blackness, resulting in a type of psychological trauma for mulattos whose disadvantage flows in part from their nonwhiteness but who adopt nonblack identities.

Traditions of intermediate categorization (and perhaps many of their consequences) are predominant in other countries of Latin America that have significant African-descent populations, including Venezuela, Colombia, Cuba, and the Dominican Republic. As Degler and others have pointed out, the United States may be the exceptional case in terms of its historic adoption of the "one-drop rule" for categorizing individuals of African ancestry. However, racial classification patterns are in flux in both the United States and Brazil. Ironically, for example, the United States institutionalized a type of multiracialism in its 2000 census with the "mark one or more races" option, while Brazil is discarding multiracial catego-

rization for the identification of Afro-Brazilian beneficiaries of its new affirmative action strategies in higher education.

SEE ALSO *Democracy, Racial; Mulattos*

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Stanley R. Bailey

MULATTOS

The term *mulatto*, referring to an individual of mixed white and black ancestry, has been in use for centuries. The sociologist Edward B. Reuter (1918) and the historian Joel Williamson (1995) generally use the term to include all people of mixed "white blood" and "black blood," without consideration for the degree of mixture. Early twenty-first-century social scientists of course view such notions of "blood" and "race" as social constructions, not as biological realities. However, an important issue related to the social construction of the term *mulatto* is its racist basis. The historian Patricia Morton argues that "mulatto is a Latin term for the mule and in a popular 'muleology' linked the mule and the mixed 'blood.' The mule was the hybrid product of the mating of a horse and a donkey, and, supposedly like the mulattos, had no parents of its own breed and no descendants since it could not produce offspring. Similarly, mulattoes were perceived as the product of an unnatural union" (Morton 1985, p. 111). The tragic mulatto character that frequently appears in American media and literature depicts "mixed-bloods as a visible symbol of lust and what the culture deemed, pejoratively, miscegenation" (Morton 1985, p. 111).

THE EMERGENCE OF THE MULATTO

From the inception of the continental slave trade through the era of legal segregation, mulattos have been a constant reminder of the historical raping and coercion of black women. In some instances the unions between white men and black women, as well as those between white women and black men, were thought to be consensual. However, the majority of unions were a result of violent sexual coercion by whites in an effort to enforce the racial oppression of blacks. The raping and sexual coercion of black women by white men prompted governments to enact antimiscegenation laws throughout the southern United States. These laws were not constructed to protect black women from rape or to discourage white men from having sexual relations with black women; rather, the laws ensured that the children of these forced unions could not claim rights to inheritance or freedom. Antimiscegenation laws varied from state to state, but the main objective was to protect the institution of slavery and wealthy landowners' inheritance.

According to Stephan Talty (2003), enslaved black women were regularly raped and then witnessed the selling of their mulatto children who, in most instances, looked too much like their masters to keep them on the plantations. However, there were instances when "wealthy landowners freed their … mulatto children" (Talty 2003, p. 63). The mulatto population grew rapidly during the slavery era; in the 1860 census mulattos in the South represented over 10 percent of the slave population and nearly 37 percent of the free black population (Toplin 1979). It became increasingly difficult for white slave owners to sell slaves who looked as white as or whiter than the person purchasing them. However, because of their lighter complexions, when mulattos were sold, they were purchased for a higher price than that paid for dark-skinned slaves.

In addition to the mixed race population that resulted from the raping of African women in the United States, there was a large infusion of mixed-race people from Haiti into southern Louisiana. The connection between Haiti and Louisiana became reinforced "in the 1790's when the French, driven out of Haiti by mulatto revolutionaries, transplanted island culture to lower Louisiana …. There also rose a free mulatto population of some size and, at the top, of impressive wealth.… Nowhere in America did mulattoes rise so high as in lower Louisiana" (Williamson 1995, pp. 20–21).

In New Orleans free mulatto women and white men frequently engaged in interracial relations that became "institutionalized in quadroon balls" (Williamson 1995, p. 23). In New Orleans white men would choose a mulatto woman and seek permission from her parents to establish *placage*, an arrangement in which the man agreed to establish a house for the woman, provide for her economically, and care for any children she conceived with him without the benefit and security of marriage. In some *placage* situations, the man would eventually marry a

white woman who understood that he had a concubine (Williamson 1995).

Enslaved mulatto women were frequently purchased as concubines for single, married, and widowed white men. According to Williamson, mulatto women were often referred to as "fancy girls" (Williamson 1995, p. 69), and it was understood that though they were trained for domestic work, they were primarily used as concubines. There was a great demand for mulatto women in New Orleans, and some of these women were sold on the auction block to prominent men. White women hated the competition presented by mulatto women: "It was not, after all, the lower classes—the laborers, the plain farmers and tradesman—who paid fancy prices," it was prominent men in the community who did so (Williamson 1995, p. 70). However, these mulatto women were still enslaved, and many suffered the same deplorable and harsh treatment as darker-skinned men and women. This was particularly true because many southern white women failed to acknowledge the power and responsibility of white men in these relationships and held great animosity toward mulatto women who engaged in sexual relations with white men.

During the slavery period, a growing number of mulatto men and women became educated, were granted inheritances from their rich landowner fathers, and were freed. Many whites in both the South and the North gave preferential treatment to mulattos over darker-skinned blacks, whether they were slaves or not. According to the historian Robert Toplin, "whites frequently made invidious comparisons between Negroes and mulattoes and claimed that the admixture of white blood gave mulattoes special qualities" (Toplin 1979, p. 194).

Indeed mulattos often held leadership positions and were trusted by both whites and blacks. As a result some mulattos internalized this attitude of superiority, buying into the white racist structure that privileged whiteness. Many newly freed mulattos moved to the North, and abolitionists used them to gain white support against slavery by noting the physical similarities between mulattos and whites to invoke outrage at the institution of slavery. Some mulattos relied on their white features to win inheritance cases in court. According to Charles Robinson, "petitions for freedom actually came before the county magistrates from biracial offspring prior to … 1662" (Robinson 2003, p. 3). Mulattos would buy their freedom and the freedom of their family members. During the Reconstruction era in the United States, after slaves had been freed, the majority of black leaders in politics, economics, and education were mulattos.

PASSING FOR WHITE

After slavery ended, the need to discourage interracial unions increased as concerns about maintaining racial purity moved to the forefront for southern whites. Robinson argues that "mixed-race people could and did pass as white and successfully join white society by dint of marriage. Southern whites became increasingly alarmed about the potential of 'invisible' blackness to infiltrate white society" (Robinson 2003, p. 102). Robinson further notes that "in 1924, the state of Virginia passed the first anti-miscegenation statute that firmly embraced the one-drop rule" (Robinson 2003, p. 101): Citizens of the state were required to register their racial identities, and anyone with any degree of black ancestry was required to register as black.

The United States was not alone in providing special privileges for mulattos. In Brazil, which had a large mulatto population, mulattos were advantaged because there were so many of them. The historian Carl Degler argues for the importance of examining universal attitudes in reference to mulattos: "There are only two qualities in the United States racial pattern: black and white. A person is one or the other; there is no intermediate position" (Degler [1971] 1986, p. 102). However, others argue that in the United States, as in many other parts of the world, including Brazil, there are a variety of degrees for what people consider to constitute white, black, and mulatto.

In the United States research provides compelling data that the darker the skin hue of an African American, the more racism and discrimination he or she will experience in economic life, health care, and sentencing outcomes for criminal punishment (Goldsmith et al. 2006; Eberhardt et al. 2006; Carter 2007). Elizabeth Klonoff and Hope Landrine found that "67% of subjects who experience frequent discrimination were dark-skinned and only 8.5% were light-skinned. Dark-skinned Blacks were 11 times more likely to be in the high discrimination group than their light-skinned counterparts" (Klonoff and Landrine 2000, p. 336).

Arthur Goldsmith, Darrick Hamilton, and William Darity Jr. found that "among black males there was a substantial wage advantage (on the order of 7 percent) for having light skin" (Goldsmith, Hamilton, and Darity 2006, p. 245). In cases where black defendants are accused of killing whites, Eberhardt and colleagues suggest that "jurors are influenced not simply by the knowledge that the defendant is Black, but also by the extent to which the defendant appears stereotypically Black" (Eberhardt et al. 2006, p. 385). In Mississippi and some other states the darker the skin hue, the broader the nose, and the fuller the lips, the more likely a defendant will be convicted of a crime and, when applicable, sentenced to death (Eberhardt et al. 2006; Gyimah-Brempong and Price 2006).

SEE ALSO *Colorism; Moreno/a; Pardo; Passing; Phenotype; Race; Race Mixing; Racism; Rape; Slave Trade; Slavery; Whiteness*

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Ruth Thompson-Miller

MULTI-CITY STUDY OF URBAN INEQUALITY

The Multi-City Study of Urban Inequality (MCSUI) is composed of a set of related surveys, funded by the Russell Sage Foundation and Ford Foundation and available from the Inter-university Consortium for Political and Social Research, that focus on how the relationship between race, employment, and housing generate and perpetuate urban poverty and racial inequality. Four household surveys, using standardized sampling frameworks and similar questions, were conducted between April 1992 and August 1994 in four metropolitan areas: Atlanta, Boston, Detroit, and Los Angeles. Complementing these surveys were thirty-minute phone interviews of about nine hundred business establishments in each of the four metropolitan areas. Almost 1,200 of the employer surveys were conducted with employers identified in the household survey as the current or last employer of the respondent. In addition, in-depth, face-to-face follow-up interviews were conducted in each city with about forty-five employers identified by household respondents holding jobs requiring no more than a high school education.

The MCSUI is the work of a large interdisciplinary team of researchers. It started with conversations among researchers at the University of California Los Angeles and the University of Michigan who had written on various aspects of urban inequality. The original plan was to conduct a two-city comparative survey expanding on the 1976 Detroit Area Study, which addressed racial attitudes and residential segregation. The objective of the MCSUI project was to create a database that could be used to explore how racial attitudes and stereotypes, labor market dynamics, and residential segregation interact to create urban inequality. The project expanded to four metropolitan areas, the household surveys adopted a much broader focus, and employer surveys were added. (Alice O'Connor [2001] provides a detailed history of the development of the MCSUI.)

The MCSUI has many unique features. First, the surveys are very extensive, both in terms of the number of households interviewed and the breadth of the interviews. Completed household interviews number 1,529 in Atlanta, 4,025 in Los Angeles, 1,543 in Detroit, and 1,820 in Boston. These in-person interviews averaged about ninety minutes, with approximately six hundred questions being asked. The number of completed employer interviews is 3,510. Second, the household sample includes approximately an equal number of each racial-ethnic group and an oversampling of low-income households, which provides for more detailed analysis than allowed for by most surveys. Third, linking the household and employer surveys is a unique and perhaps unprecedented feature, allowing analysis of both the supply and the demand side of the labor market. Fourth, the surveys contain much more detailed information than most social and labor market surveys. The household survey gathered information well beyond a standard set of demographic characteristics to include the respondents' views about neighborhood and community issues; attitudes about integration, racial stereotypes, and discrimination; and the nature of social networks.

Questions on labor market dynamics incorporate a standard set of variables, as well as more nuanced variables such as length of time on job, size of employer, instances of harassment and discrimination, use of networks, requirements regarding wage levels and commute times, access to knowledge about job opportunities, and job search activities. Employers were queried about characteristics of their firm, including composition of the firm's labor force, vacant positions, the person most recently hired, educational qualifications, and the firm's recruiting methods, as well as demographic information for the respondent, job applicants, customers, and labor force.

Fifth, while the MCSUI provides for much finer detail than can be found using typical national-level data, it still allows for comparative analysis across metropolitan areas. Household survey questions were asked in at least two of the four survey cities, and most questions were asked in all four cities. Comparisons are aided by the contrast between the four metropolitan areas, which represent different regions of the country, different economic conditions, different population growth rates, and different racial/ethnic makeup.

Six books that rely on the MCSUI were published by the Russell Sage Foundation. The first book explored issues that were informed by the employer surveys. Each of the metropolitan areas was the focus of a book, while a sixth book used the surveys to explore issues in a multimetropolitan framework. The MCSUI has also been the basis for a number of dissertations and dozens of journal articles.

Given the richness of the MCSUI, the research that has used the data spans a wide range of topics across many disciplines. The following provides a flavor of what has been learned. Several papers explore how the mismatch between residential location and employment opportunities results in negative labor market outcomes for low-skilled minorities. The role of information about jobs, access to job opportunities, job discrimination in the suburbs, fear of being poorly treated in suburban locations, and job search strategies have been found to be associated with worse employment outcomes for central-city minorities. Using questions concerning the specific skills required for jobs, it was determined that jobs requiring lower levels of skill are more likely to be found in the suburbs. A comparison of the results from MCSUI with the 1976 Detroit Area Study found a substantial increase in willingness of whites to live in integrated neighborhoods.

Racial stereotypes are widespread and influence the way minorities view one another, and the factors that determine perceptions of discrimination differ by race. Researchers have found that racial discrimination, stereotypes, and economic disparities all contribute to maintaining residential segregation. The employer survey shows that employers use an applicant's neighborhood as a signal that affects the employer's hiring decision, and that new jobs require not only "hard" skills (i.e., those associated with computers, math, and writing) but also "soft" skills (those involving behavioral and personal interactions). Researchers have found that job search methods are bundled differently by race and ethnicity and that reliance on different social networks leads nonwhites to lower-status, lower-wage, racially segregated jobs.

The MCSUI can be used to explore many of the existing single-factor explanations of urban inequality, but the richness of the MCSUI data allows for investigations of more complex explanations and of alternative hypotheses and for research that delves beneath what other data, such as census data, can tell us. The MCSUI has advanced urban poverty research and has the capacity to further our understanding of how urban poverty and racial inequality are generated and perpetuated.

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David L. Sjoquist

MULTICOLLINEARITY

A multiple regression is said to exhibit multicollinearity when the explanatory variables are correlated with one another. Almost all multiple regressions have some degree of multicollinearity. The extent to which multicollinearity is a problem is widely misunderstood. Multicollinearity is not a violation of the classical statistical assumptions underlying multiple regression. Specifically, multi-

collinearity does not cause either biased coefficients or incorrect standard errors. For this reason, while identifying multicollinearity can be helpful in understanding the outcome of a regression, "corrections" to reduce multicollinearity are rarely appropriate.

In the regression model

$$y_i = b_1x_{i1} + b_2x_{i2} + \ldots + b_kx_{ik} + e_i$$

there is multicollinearity if the x variables are correlated with one another, as is usually the case. The consequence of such correlation is that the estimates of regression coefficients are less precise than they would be absent such correlation. For example, in the regression $y_i = a + b_1x_{i1} + b_2x_{i1} + e_i$ with n observations, the variance of the estimated coefficient $\hat{b}_1$ can be thought of as

$$\text{var}\left(\hat{b}_1\right) = \frac{\text{var}(e)}{n \bullet \text{var}(x_1)} \times \frac{1}{1 - \text{corr}(x_1, x_2)^2}.$$

When x_1 and x_2 have a high correlation, corr(x_1, x_2), the uncertainty about b_1 will be large. Because the formulas for reporting standard errors reflect this, such uncertainty will be correctly reflected in the reported regression statistics.

Fundamentally, a regression estimates the effect of one explanatory variable holding constant the other explanatory variables. If one or more variables tended to move together in the available data, in which case the data will be *multicollinear*, then very little evidence is available about the effect of a single variable, as is reflected in the variance formula above.

The only "cures" for multicollinearity are (1) to find data with less correlation among the explanatory variables, or (2) to use a priori information to specify a value for the coefficient of one of the correlated variables, and by so doing avoid the need to separately estimate the effect of each variable.

If one explanatory variable equals a linear combination of other explanatory variables (for example, if $x_1 = x_2 + x_3$) the regression has *perfect multicollinearity*. Perfect multicollinearity makes it impossible to estimate the regression model, as indicated by the infinite variance in the formula above. However, perfect multicollinearity almost always indicates an error in specifying the model. One common error is the *dummy variable trap*, in which a complete set of dummy variables and an intercept, or more than one complete set of dummy variables, are included in a regression. For example, including a variable for female gender (coded 1/0), a variable for male gender, and an intercept would cause the regression to fail.

Because of limits on the numerical accuracy of computer arithmetic, a high degree of multicollinearity can lead to numerical, as opposed to statistical, errors in computing regression results. This is rarely a problem with modern software, which typically includes internal checks for such errors.

One indication of significant multicollinearity is that individual coefficients are insignificant but sets of coefficients are jointly significant. For example, a set of indicators of underlying socioeconomic status (e.g., mother's education and father's education) may be jointly significant even though no single indicator is significant. In such situations, investigators sometimes drop all but one indicator. While not strictly rigorous, such a procedure is not harmful so long as the coefficient on the retained variable is interpreted as a proxy for the entire set of socioeconomic indicators rather than being the effect of the specific variable that was retained. (One might retain only mother's education, but interpret the effect loosely as "parent's education.")

Another indication of multicollinearity that is sometimes used is a high *variance inflation factor* (VIF), which measures the increase in variance of $\hat{b}_i$ due to correlation between x_i and the other explanatory variables. In the example above, the VIF is $1/(1 - \text{corr}(x_1, x_2)^2)$.

SEE ALSO *Least Squares, Ordinary; Principal Components; Properties of Estimators (Asymptotic and Exact)*

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Richard Startz

MULTICULTURALISM

Multiculturalism is the notion that people in a given society should coexist with one another, without having to fear or resent that their cultural identity will be not be accepted if it does not fit in with the normative cultural climate of that society. Scholars have also defined multiculturalism as an attempt to preserve a "cultural mosaic" of separate ethnic groups. While the term *multiculturalism* originated in Sweden in 1957, Canada was the first country to recognize that multiculturalism was integral to its national identity and adopted it as its national policy in 1960. Originally the term made explicit reference to racial and ethnic groups living within a particular nation. Soon the term spread to most of the Western world, as democracies grappled with increasing competition along racial, ethnic, linguistic, and religious lines. With time, and increasing awareness of difference, gender and sexual orientation, age, and disability, issues of geographic origin and immigration were also folded into the general con-

struct of multiculturalism. As such, multiculturalism came to be seen as an official policy to manage and ensure diversity.

Multiculturalism emphasizes diversity and social cohesiveness by recognizing that previous programs of assimilation or absorption not only distorted but also in many ways served to destroy individuality. Therefore diversity, rather then being perceived as problematical, is presented as the model. The notion of strength through diversity is in direct contrast to previous assimilation or absorption models that held sway in countries such as Canada, the United States, Australia, and England. Multiculturalism encourages all to fully participate in the social processes of a nation while being free to maintain and perpetuate individual group identities. Therefore multiculturalism fostered concerns for race relations, social justice, and civic participation. Multiculturalism as a social movement aims at minimizing conflict, encouraging inclusion, and celebrating the differences, which are represented by various identity groups that comprise a pluralist society. Multiculturalism, so defined, can be discussed in terms of historical (factual), ideology, policy, and critical discourse.

MULTICULTURAL IDEOLOGY

Ideologically, multiculturalism refers to a set of ideas, which attempt to explain, justify, or promote diversity, cultural awareness, and inclusiveness. As a consequence associated with multicultural ideology are values, attitudes, and perspectives that are intended to define interaction among diverse populations.

Within the United States, the growth and spread of multicultural ideology is associated with the increased agitation for civil rights of African Americans and the increased immigration of Asian and Hispanic Americans during the mid- to late 1960s. In the 1970s and 1980s feminists provided the necessary critical mass to which the intellectual and educational elite responded. As magazine articles and books began exposing the multicultural ideology the media and political elite began discussing the issue as well. By the mid-1980s, the ideology of multiculturalism became the dominant expression of liberal values, and the target for conservative attacks.

MULTICULTURAL POLICY

Multicultural policy refers to the political apparatus established to institutionalize and normalize cultural diversity within a multicultural society. Such policy attempts to create environments that value cultural diversity, encourage tolerance for difference, promote cultural awareness, and create systems of inclusion. Within such a framework, cultural groups are encouraged to preserve their distinctiveness by asserting their right to be different. While multicultural policies vary across nations, several distinctive features seem universal to include: official acceptance of linguistic differences in the media, schools, and public conveyances; support of cultural festivals and holidays; support of religious and cultural differences in the military, schools, and other major institutions; support of alternative artistic expressions; and support of cultural diversity in political offices, business practices, and educational offerings.

MULTICULTURALISM AS CRITICAL DISCOURSE

Challenging a historical past dominated by "dead white men" in almost every avenue of education represents the critical discourse of multiculturalism. Prior to this discourse, few educators challenged the dominance of white males in classics, theory, music, art, literature, and politics. Beginning in the late twentieth century, the critical discourse of multiculturalism argued for a more inclusive academic canon that looks at history from a female and multicultural perspective. Educational institutions have witnessed the creation of academic departments in women's, gender, and queer studies, African American and black studies, Latin and Hispanic studies, and Jewish and Muslim studies, to name a few. Even with this proliferation and othering of the academic discourse many argue that rather than encouraging inclusion these academic programs have fostered divisiveness and balkanization.

MULTICULTURAL PROBLEMS AND THE CONSERVATIVE BACKLASH

Many on the Right, both in politics and education, perceived the advance of multiculturalism as a direct threat to Western values, history, and culture. Even before author Nathan Glazer declared "we are all multiculturalists now" in 1997, a full-scale assault was levied. Ignoring that this book represented Glazer's personal misgivings regarding multiculturalism, there has been a constant assault upon multiculturalism. This assault, taking both scholarly presentations and political movements, has been vociferous and constant since the mid-twentieth century. Under the rubric of political correctness, attacks made in the early twenty-first century utilize the arguments of freedom and inclusiveness to attack multiculturalism. Accordingly, multiculturalism is described as a misguided policy and ideology, which victimizes cultural, gendered, racial, and ethnic groups while demonizing primarily white males. Thus, it is argued that rather than leading to greater individuality and freedom, multiculturalism has become another vicious form of bias. Critics of multiculturalism, citing such movements as black English, bilingualism, affirmative action, feminism, and gay marriages, point to what they perceive as the ethnic and racial balkanization

of American society into identity groups, riots, and increased conflict, and the advancement of extreme liberal/homosexual/feminist agendas at odds with the core values of America.

The debate over multicultural education engenders such passion because it is about more than adding other voices to a reading list or determining whether waving a confederate flag is deemed hate speech. At the center of the issue of inclusiveness are questions of what constitutes knowledge and whose knowledge should be valued. Allan Bloom's *Closing of the American Mind* (1987) eloquently speaks to these issues. Bloom blamed technology, the sexual revolution, and the introduction of cultural diversity into the curriculum at the expense of classics for producing students without wisdom, values, or morality. In an academic universe where multicultural perspectives are explored the question of whose voice is heard becomes more difficult to decide.

SEE ALSO *Diversity; Ethnicity*

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MULTIDIMENSIONAL INVENTORY OF BLACK IDENTITY

As defined by Robert M. Sellers and colleagues in the Multidimensional Model of Racial Identity (MMRI), racial identity is the significance and qualitative meaning that individuals attribute to being black in their conceptualizations of self (Sellers, Smith, Shelton, et al. 1998). The significance component of racial identity is referred to as *racial centrality*, and the qualitative meaning of racial identity is referred to as *racial ideology* and *racial regard*. The MMRI outlines four ideologies that reflect African Americans' views on what it means to be black: (1) a nationalist ideology; (2) an oppressed minority ideology; (3) an assimilationist ideology; and (4) a humanist ideology. Additionally, African Americans vary in their affective and evaluative judgments of their racial group (private regard) and in their beliefs about others' affective and evaluative judgments of African Americans (public regard).

The Multidimensional Inventory of Black Identity (MIBI) is a measure that assesses the dimensions of racial identity outlined by the MMRI (Sellers, Rowley, Chavous, et al. 1997). Participants indicate their agreement with various statements on a scale from 1 (strongly disagree) to 7 (strongly agree). The MIBI is composed of seven subscales. The centrality scale consists of items measuring the extent to which being African American is central to the respondents' definition of himself or herself (e.g., "Being black is important to my self-image"). The regard scale is composed of two subscales, private and public regard. The private regard subscale consists of items measuring the extent to which respondents have positive feelings toward African Americans in general (e.g., "I feel good about black people"). The public regard subscale consists of items measuring the extent to which respondents feel that other groups have positive feelings toward African Americans (e.g., "Overall, blacks are considered good by others"). The ideology scale of the MIBI has four subscales. The assimilation subscale consists of items measuring the extent to which respondents emphasize the relationship between African Americans and mainstream America ("Blacks should try to work within the system to achieve their political and economic goals"). The humanist subscale consists of items measuring the extent to which respondents emphasize the similarities among individuals of all races ("Blacks would be better off if they were more concerned with the problems facing all people rather than just focusing on black issues"). The minority subscale consists of items measuring the extent to which respondents emphasize the similarities between African Americans and other minority groups ("The same forces which have led to the oppression of blacks have also led to the oppression of other groups"). Finally, the nationalist subscale consists of items measuring the extent to which respondents emphasize the uniqueness of being African American ("White people can never be trusted where blacks are concerned"). The factor structure and convergent validity have been established in samples of college students (Sellers, Chavous, and Cooke 1998), and all subscales of the MIBI have been shown to have adequate internal consistency in studies with adults (Rowley, Sellers, and Smith 1998; Sellers, Chavous, and Cooke 1998) and older adolescents (Chavous, Bernat, Schmeelk-Cone, et al. 2003).

The MIBI differs from other widely used measures of racial or ethnic identity in that it does not assess mechanisms for identity development. Jean S. Phinney's 1992 model assesses the extent to which the individual has searched for information regarding their ethnic group and

the extent to which he or she has committed to that identity. Thomas A. Parham and Janet E. Helms's Racial Identity Attitude Scale (1981) measures individuals' movement from problack, antiwhite beliefs to an achieved identity that includes tolerance for other groups and ingroup pride. In contrast to these other models, the MMRI is primarily concerned with the significance and content of an individual's identity at a specific point in time.

The MMRI has made significant contributions to research on African Americans. The MMRI and MIBI have been used in research regarding African American adults' and adolescents' experiences with discrimination (Sellers and Shelton 2003; Sellers, Caldwell, Schmeelk-Cone, et al. 2003), adolescents' academic beliefs and achievement (Rowley 2000; Sellers, Chavous, and Cooke 1998), and family dynamics and substance abuse (Caldwell, Sellers, Bernat, et al. 2004). The MMRI provides a vehicle for understanding the diverse experiences of African Americans in the United States.

SEE ALSO *Identity; Ideology; Race*

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MULTIDISCIPLINARY RESEARCH

SEE *Research, Trans-disciplinary.*

MULTIFINALITY

The term *multifinality* refers to a condition in which the same cause leads to different outcomes. Although the concept of multifinality may seem trivial at first glance, it has posed serious challenges to the concept of causality that happens to lie at the heart of science. In fact, the concept of causality is so important that scientists work tirelessly throughout their lives to identify the causes of important outcomes (conflict, aggression, anger, etc.). Of course, scientists are not unique in their preoccupation with causal relationships. Indeed, most people work tirelessly throughout their lives trying to figure out the factors that cause a range of important outcomes, from the desired affection of a potential love interest to success in the boardroom. From a practical standpoint, the ability to understand causal relationships carries enormous benefits because knowing the factors that cause important outcomes provides the key to predicting and controlling those outcomes. For example, the knowledge that X (parenting skills) causes the outcome Y (childhood achievement) can be used to manipulate X (through training in parenting skills) to cause changes in the outcome of Y (increased childhood achievement).

Although the exact criteria for assuming a causal relationship between two variables has long been a subject of debate, most scholars agree that at least three important criteria must be met to assume that one variable causes another. First, the two variables must covary such that changes in the first variable correlate with changes in the

second variable. Second, the variable assumed to be the cause (e.g., poor parenting skills) must precede in time the observation of the outcome or effect variable (e.g., low childhood achievement). Third, all alternative explanations (e.g., low socioeconomic status, unstable home environment, genetic factors, etc.) must be ruled out before concluding that the proposed causal variable X (poor parenting skills) did cause the outcome Y (low childhood achievement). Assuming these criteria are satisfied, one can tentatively assume that X causes Y.

Although the concept of causality may appear straightforward, closer inspection reveals that what may seem to be a straightforward causal relationship can actually be quite complex in real life. Particularly in the social and behavioral sciences, multifinality and the related concept of equifinality qualify the ability to assume a direct causal relationship between a single cause (X) and a single effect (Y): Multifinality recognizes that sometimes the same cause (X) produces many different outcomes (Y_1, Y_2, Y_3), whereas equifinality recognizes that, at other times, different causes (X_1, X_2, X_3) produce the same outcome (Y).

More specifically, equifinality recognizes that different causes may, nevertheless, arrive at a common outcome. Stated otherwise, many roads lead to the same end. For example, in developmental psychology, research suggests that the different developmental experiences (poor parenting skills versus low socioeconomic status) can lead to the same outcome (low childhood achievement). As noted earlier, multifinality is unique in its recognition that similar, or even seemingly identical, causes may lead to different outcomes. In developmental psychology, research suggests that sometimes the same developmental experiences (child abuse) can lead to different outcomes (high childhood achievement versus low childhood achievement). In addition, goal psychologists have shown that the same behavior (working out at the gym) can result in the satisfaction of many different goals (goal 1: improve fitness; goal 2: meet new people). As these examples illustrate, the concept of multifinality describes a case in which a single road can lead to many different destinations.

So, what does the concept of multifinality mean for the goal of identifying causal relationships between variables? Multifinality (as well as the sister concept of equifinality) poses a serious challenge to science because it reduces the ability to confidently conclude that one causal variable (X) always leads to a second outcome variable (Y). That is, multifinality ultimately makes it difficult to confidently conclude that a particular outcome (Y) is, and always is, the result of a particular causal condition (X). Although adding complication, the awareness of multifinality has enriched rather than invalidated the scientific pursuit of identifying causal relationships. Scientists have simply had to adjust the discourse and terminology they use when addressing the concept of causality to account for multifinality. Specifically, multifinality (and the sister concept of equifinality) has forced scientists to abandon attempts to discuss causal relationships between variables as statements of fact. Instead, scientists have refined their claims to present and discuss proposed causal relationships in the language of probability rather than fact. That is, scientists realistically incorporate a measure of error into their causal statements to account for multifinality, and to suggest that X is *likely* to cause rather than *always* causes Y, and that Y is *likely* rather than *always* caused by X. In this sense, the concept of multifinality has only prompted scientists to face the cold hard fact that, however probable, there is no such thing, including a causal relationship, that is absolutely certain in life.

SEE ALSO *Causality; Regression; Regression Analysis; Social Science*

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MULTILATERALISM

The simplest definition of *multilateralism* focuses on numbers: that is, an agreement or alliance among three or more members. Yet multilateralism also has a qualitative dimension. In this sense, it refers to rule-governed behavior in which states restrain their pursuit of immediate goals, presumably in order to achieve long-run interests through cooperation. As John Ruggie writes, "multilateralism is an institutional form which coordinates relations among three or more states on the basis of 'generalized' principles of conduct … without regard to the particularistic interests of the parties or the strategic exigencies that may exist in any specific occurrence" (1992, p. 571).

In particular, three normative principles constitute the institution of multilateralism. First, *indivisibility* refers to the notion that all actors are equal participants in the cooperative endeavor. It is illustrated by the concept of *collective security*, where an attack on any state is seen as an attack on everyone. Second, *nondiscrimination* implies

that any benefit received by one state must be available to all, as exemplified in the most-favored-nation principle of the World Trade Organization. Finally, *diffuse reciprocity* refers to the idea that concessions and rewards balance out over the long run and states do not need to insist upon a strict tit-for-tat exchange (specific reciprocity).

While multilateral cooperation often occurs through formal organizations, it need not. Kenneth Abbot and Duncan Snidal (1998) have pointed out the efficiency and legitimacy that such organizations can bestow, though Charles Lipson (1991) has argued that the flexibility and low political profile of informal cooperation may sometimes make this a preferable means of acting multilaterally.

The concept of multilateralism is not new. An early example was the Concert of Europe, in which the great powers of nineteenth-century Europe coordinated their management of the international system by moderating their own behavior and consulting with one another over any territorial changes. Alliances such as the North Atlantic Treaty Organization and collective security organizations such as the United Nations represent other examples of multilateral cooperation designed to protect security.

Multilateralism is also prominent in economic relations. Much of the controversy over regional trade agreements stems from the conflict between the principle of multilateralism (and especially its nondiscrimination norm) and the preferential treatment that members of regional trade blocs receive from one another. In this context, multilateralism is seen as valuable not only because it facilitates liberalization, but also because it prevents political rivalries and alignments from interfering with economic exchange and thus diminishing both the economic effects and the political benefits of interdependence.

While multilateralism provides states with many advantages, it raises challenges as well. This is particularly true when states with differing levels of power coordinate their behavior. Large states often accuse small states of free-riding, while the latter see powerful states as undermining the principles of multilateralism by seeking to further narrow interests. Yet, states still see multilateralism as an effective way to achieve their interests. Very often, it is simply too costly or even impossible for states to go it alone.

This is true even for a hegemon like the United States, which rediscovered the value of multilateral institutions during the second term of President George W. Bush when Washington sought the legitimacy provided by UN approval in order to advance its goals in such places as Iraq, Iran, and North Korea.

SEE ALSO *Bilateralism; Internationalism; Napoleonic Wars; Trilateralism; Unilateralism; United Nations; World Trade Organization; World War I; World War II*

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Jonathan Crystal

MULTIPARTY SYSTEMS

Electoral competition among a high number of parties and the formation of multiparty coalition governments are typical features of most democratic regimes. In contrast, two-party systems producing single-party governments are characteristic of a few of the oldest, institutionally frozen democracies, including the United Kingdom of Britain and the United States of America. In the past, two-party systems were considered a sound formula for effective and stable government. But the expansion of suffrage rights and the diffusion of democratic regimes, not only in continental Europe but also across the rest of the world, has confirmed Robert Dahl's early intuition: "It might be reasonable to consider multiparty systems as the natural way for government and opposition to manage their conflicts in democracies, while two-party systems, whether resembling the British pattern or the American, are the deviant cases" (1966, p. 334).

The degree of multipartyism can be measured not only by the absolute number of parties in the system, but also by their relative size. For this purpose, several indices of fractionalization, including the "effective number" of parties, have been proposed in which each party is weighed by its proportion of either votes or seats (depending on the electoral or legislative focus of the analysis). A conventional estimate is that multiparty systems exist when there are at least three *effective* parties. In other words, there is still a two-party system, even if there are more than two parties in the assembly, if two of the parties are sufficiently large (as happens, for instance, in the British House of Commons). About three-fourths of more than eighty democratic countries with more than one million inhabitants at the beginning of the twenty-first cen-

tury have multiparty systems, that is, more than three effective electoral parties.

MULTIPARTY ELECTIONS

In any complex society, multiple parties can be formed on the basis of the politicization of new issues if political entrepreneurs take the initiative to introduce policy proposals alternative to the status quo. Potential issues to be politicized include defense, security, taxes, freedom, trade, school, property, family, welfare, the environment, race, and so on. The corresponding parties raising new policy alternatives have historically been called conservatives, liberals, radicals, socialists, Christians, agrarians, greens, ethnic, regionalists, and many other labels. In two-party systems, the agenda can be manipulated by shifting salience to only one or a few issues at a time, which usually produces high polarization between the two parties. In multiparty systems, by contrast, multiple policy issues can be given salience by different parties at the same time, thus broadening the public agenda and the opportunities for citizens' choice.

There has been some discussion over the propensity of multiparty systems to promote either "moderate" or "polarized" electoral competition. Polarization indices capture the degree of party concentration of votes or seats and the relative distance between various parties' policy positions. Obviously, polarization is minimal when there is only one, internally compact party—that is, when all voters prefer the same policy, which is indeed a rare occurrence in a democratic regime. But polarization is maximal when the number of parties is two, they have similar size, and are located at a great distance from each other. In countries with more than two parties, the higher the number of parties, the lower their relative distances (because intermediate, relatively close positions emerge), and the lower the degree of polarization in electoral competition among them.

A traditionally illustrative case is Switzerland, where there are a high number of parties and a high degree of policy consensus among them. Systematic analyses have shown that, in general, high fractionalization, that is, a high number of parties, is associated with low polarization.

In fact, most democratic party systems have moderate degrees of both party fractionalization and party polarization. At the beginning of the twenty-first century, multiparty systems exist in democratic countries such as Argentina, Belgium, Brazil, Costa Rica, the Czech Republic, Denmark, Finland, France, Germany, Indonesia, Israel, Japan, the Netherlands, New Zealand, Norway, Poland, Sweden, Switzerland, as well as in the European Parliament and many other institutions.

MULTIPARTY COALITIONS

In multiparty assemblies, decision-making usually requires the formation of majority multiparty coalitions. In most parliamentary regimes, cabinets are formed with more than one party. In regimes with separate powers, multiparty coalitions are also frequently formed both for legislative decisions and in support of presidential cabinets.

When parties form coalitions, they usually prefer partners with relatively close policy and ideology positions in order to maintain consistency with their own positions and win voters' credibility. As a consequence, majority coalitions typically include the median legislator's party, which can be located around a centrist, moderate position. If there is proportional representation, the median party corresponds to the median voter's choice. As the median voter's position minimizes the sum of distances from all the voters, this outcome can be considered relatively socially efficient. In contrast, in a two-party system with a majoritarian electoral rule, a single party may receive a majority of seats in the parliament on the basis of a minority of popular votes, which does not necessarily include the median voter. On average, multiparty coalition cabinets based on proportional representation are substantially closer to the median voter's position than are single-party cabinets based on plurality or majority rules.

In multiparty cabinets, the distribution of offices among parties may follow two criteria. On some issues of general interest, such as economic policy and interior and foreign affairs, the parties in the coalition tend to compromise on intermediate and moderate policies. Over time, even if some partners of the successive governmental coalitions change, there is a significant degree of consensus and continuity on major policies, in contrast to frequent policy reversals when single-party governments alternate. On other issues, separate portfolios are allocated to different parties according to the issue on which they are most prominently defined—such as finance for liberals, education for Christians, labor for socialists, agriculture for agrarians, environment for greens, culture for regionalists, etc.—which may satisfy people with intense issue preferences.

LARGE ELECTORAL RULES

The formation of multiple parties promotes the choice of inclusive political and electoral institutions. In general, if there are only one or two large parties they prefer small assemblies and single-member electoral districts with plurality rule, that is, institutions able to exclude others from competition. In contrast, multiple small parties prefer large assemblies and large electoral district magnitudes (that is, high numbers of seats per district), the latter using proportional representation rules, able to include them in the system.

But the pressures from multiparty systems to adopt inclusive electoral rules work differently in countries of different size. In large countries, a large assembly with the number of seats positively correlated to the country's population can be sufficiently inclusive. In the United States, for instance, the ideological range of Congress members, in spite of belonging formally to only two parties, is similar to that of typical multiparty systems in Europe, including conservative, Christian-democratic, liberal, and social-democratic positions. This derives from the fact that each representative is elected by the rather homogeneous population of a small territory in a very large and heterogeneous country. The two parties are large umbrellas for varied representation.

By contrast, in small countries in which small assemblies do not create large room for political variety, the development of multiple parties favors more strongly the adoption of inclusive, large multimember districts with proportional representation rules. A relevant development is that the average size of democratic countries decreases as a consequence of the fact that the number of countries and the number of democracies in the world increase. As the number of parties also increases within each democratic country, more and more countries tend, thus, to adopt electoral systems with rules of proportional representation.

All in all, traditional two-party systems, which reflected early political developments in relatively simple societies with limited suffrage rights, have been associated in recent times with high electoral polarization, adversarial politics, socially biased, minority governments, and policy instability. In contrast, multiparty systems, which result from widespread and continuing initiatives for policy and ideology innovation in democratic countries, are associated with inter-party competition and cooperation, broad public agendas, coalition governments with majority social support, consensual and relatively stable policy-making, and inclusive political institutions.

SEE ALSO *Democracy; First-past-the-post; Party Systems, Competitive; Plurality*

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Josep M. Colomer

MULTIPLE BIRTHS

Aristotle long ago aptly noted that multiple births are "*praeter naturam*," that is, "outside nature's normal course." Being outside the normal, their reception in society is also different than that afforded to the single child. In many parts of the world, they are seen as good luck and have become absorbed into the local mythology. This was the case in ancient Rome and Greece, for example, and also in Mesoamerica. In other parts of the world, as was often the case in some but not all parts of Africa, they were not welcomed, being seen as evidence of maternal marital infidelity.

The fact that Aristotle's dictum remains correct centuries later is based on two inescapable facts: First, all multiple births are high-risk pregnancies in contrast to singletons (single births), and second, as the human female is genetically programmed to have a single child, both mother and child suffer these risks. This latter statement relates to the facts that under normal circumstances 98 percent of human pregnancies deliver one child only and that the distensibility of the human uterus is clearly limited. This reality is probably the greatest reason that higher-order multiples deliver preterm.

Twins are the most common form of multiple pregnancies, followed by triplets and then the rare occurrences of quadruplets and quintuplets. Prior to modern technologies for assisted reproduction, the incidence of twins was 1 in 89 deliveries, of triplets 1 in 89^2, and of quadruplets 1 in 89^3. All that changed after 1975 when clomiphene citrate became available; even more drastic changes followed post-1985 with the introduction of in vitro fertilization and embryo transfer. The rate of twin births has more than doubled, while that of triplets has tripled. U.S. trends were duplicated in many other localities that have access to modern treatments for infertility.

Twins are either *identical* or *fraternal*, though neither term is correct in that identical twins, derived from a single fertilized ovum, are never truly identical at the molecular genetic level, and fraternal twins, derived from two fertilized ova, may be female as well as male. More precise terms are *monozygotic* (MZ), meaning "one-egg," and *dizygotic* (DZ), meaning "two-egg," which both refer to embryological origins. Natural twins, the most frequent form of multiples, occur most commonly in Africans and

least commonly in Asians, with the Euro-American Caucasian population in-between. The exact reasons for this have never been clarified, but it is known that the majority of twins in African populations are dizygotic, whereas the majority in Asian populations are monozygotic. In Caucasians, approximately two-thirds of naturally occurring twins are DZ and one third are MZ. In Africans, DZs far outnumber the MZs, presumably because of frequent double ovulation. In Asians, MZs predominate due to the relative scarcity of double ovulation. These racial variations have always been regarded as fact within the literature on multiples and have never been interpreted as signs of racial superiority/inferiority.

A third type of twins is the so-called Siamese or conjoined variety, named after the twins Eng and Chang, from Siam (now Thailand). These occur in somewhere between 1 in 50,000 and 1 in 100,000 births. Their cause is due to partial division of one zygote after thirteen days post fertilization. Female conjoined twins are more common than males in a ratio of 1.6:1, for reasons that are not entirely clear. It has been suggested that when conjoined twinning occurs at the embryonic plate, it is more lethal in males, though this has not been proven.

The prime cause of morbidity and mortality among all multiples is preterm delivery and low birth weight, which go hand in hand. Whereas the normal gestational length for singletons is forty weeks, the median gestational length is thirty-seven weeks for twins, thirty-three weeks for triplets, thirty-one for quadruplets, and twenty-nine for quintuplets. The increased numbers of preterm multiples raises U.S. rates of cerebral palsy by at least 7 percent. Mothers of multiples face five risks: anemia, postpartum bleeding, PIH (high blood pressure), polyhydraminos (excess water in one of the amniotic sacs), and preterm labor.

SEE ALSO *Twin Studies*

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Louis Keith

MULTIPLE EQUILIBRIA

Derived from the Latin, the word *equilibrium* means "equal weight" or "balance" as illustrated by an equal-armed scale. Physically, a body acted upon by two or more forces in a state of equilibrium maintains a stationary position. This state is known as *static equilibrium*, as distinct from *dynamic equilibrium*, in which the body's position may change over time but maintains a state of static equilibrium at any given instant. The orbital motion of planets exemplifies dynamic equilibrium. Along with the notion of equilibrium comes that of *stability*, the tendency of a system to return to an equilibrium position after experiencing small perturbations of parameters influencing its prior equilibrium state. In the late nineteenth century, these concepts were adapted to economics and later game theory. In economics, the aim was, in part, to address the central question of prices that coordinate supply and demand.

DEFINITION OF MULTIPLE EQUILIBRIA

For the most part, economic equilibria are studied through the development, analysis, and application of mathematical models. The values of interest are solutions of systems of equations and inequalities. Economists distinguish between *general* and *partial* equilibrium theory. Partial equilibrium theory differs from general equilibrium theory by having a specific set of variables held constant for the analysis. The French economist Léon Walras (1834–1910) is credited with being the father of general equilibrium theory. His great seminal work, *Elements of Pure Economics* (1874), sets forth his conception of the subject in increasing levels of completeness and detail. In dealing with a pure exchange economy with multiple markets, he developed a mathematical model in the form of a system of simultaneous equations having exactly as many unknowns as equations; a solution of the system would presumably yield an equilibrium. As it happens, neither the existence nor the uniqueness of a solution to the formulated system is guaranteed on the grounds of having as many equations as variables. Moreover, even if a solution exists, there is no guarantee it will be nonnegative (or even real).

Walras's system was first rigorously addressed in the mid-1930s by Abraham Wald (1902–1950), a doctoral student (and participant in the Mathematical Colloquium) of Karl Menger (1902–1985). Between the work of Walras and Wald there appeared a series of significant contributions. Gustav Cassel (1866–1945) simplified some of Walras's writings. Independently, Frederik Zeuthen (1888–1959), Hans Neisser (1895–1975), and Heinrich von Stackelberg (1905–1946) emphasized the importance of modeling some or all constraints with inequalities rather than equations. Around this time, Karl Schlesinger (1902–1985) introduced the notion of *complementary slackness*, which says that if a resource is not fully utilized, then its price must be zero, and if a price is positive, then the corresponding inequality constraint

must hold as an equation. These advances culminated in Wald's existence proof of competitive equilibrium. This, however, was to be superseded almost twenty years later by the work of Kenneth Arrow and Gerard Debreu (1921–2004).

ORIGIN AND STATUS OF THIS CONCEPT

It is difficult to pinpoint the discovery of multiple equilibria. On the history of general equilibrium analysis, Arrow and F. H. Hahn remark, "in general, there is no need that equilibrium be unique, and examples of non-uniqueness have been known since Marshall" (1971, p.15). In fact, in section 64 of his *Elements*, Walras points out that in a two-commodity exchange problem there could be no solution, and in section 65 he notes that there could be multiple equilibria. Irving Fisher's (1867–1947) 1891 PhD thesis contains an equilibrium model for an exchange economy and an ingenious hydraulic physical model for computing equilibrium prices and the resulting distribution of endowments. More recently, William Brainard and Herbert Scarf have elaborated this work and simulated the capability of Fisher's device to compute equilibrium prices and even to find multiple equilibria.

If an economy has multiple equilibria, their number may be finite or infinite. Debreu argues that "such economies still seem to provide a satisfactory explanation of equilibrium as well as a satisfactory foundation for the study of stability provided that all the equilibria of the economy are locally unique. But if the set of equilibria is compact (a common situation), local uniqueness is equivalent to finiteness" (1970, p. 387). He gives sufficient mathematical conditions for the existence of finitely many equilibria. This line of investigation employs the concept of a *regular economy*, a detailed exposition of which is beyond the scope of this entry. The key concept involves the rank of the Jacobian matrix of the excess supply mapping. An economy is *regular* if this Jacobian is of full rank at every equilibrium point. Taking this a step further, if the determinant of the Jacobian at an equilibrium point p is positive (negative), define $i(p) = 1$ ($i(p) = -1$). The sum of $i(p)$ over all the finitely many equilibria is 1. This implies that the number of equilibria of a regular economy is finite odd. Hence if $i(p) = 1$ for every equilibrium point p, then there can be only one of them. Conditions for local uniqueness have received considerable attention in literature. Michael Allingham (1989) gives a readable account of the subject.

THE SIGNIFICANCE OF MULTIPLE EQUILIBRIA

The possibility that a general equilibrium model can have multiple equilibria presents challenges on a variety of fronts. Timothy Kehoe (1998) gives necessary and sufficient conditions for uniqueness of equilibrium. But, as he concedes, "useful conditions that guarantee uniqueness of equilibrium are very restrictive.… The problem is that translating these mathematical conditions into easy-to-check and interpretable economic conditions, they lose their necessity" (1998, p. 38). Kehoe identifies the crux of the matter saying "it may be the case that most applied models have unique equilibria. Unfortunately, however, these models seldom satisfy analytical conditions that are known to guarantee uniqueness, and are often too large and complex to allow exhaustive searches to numerically verify uniqueness" (1998, p. 39).

The size of models can require aggregation and therein lies another problem. A type of result separately discovered by Hugo Sonnenschein, Rolf Mantel, and Debreu implies that aggregate excess-demand functions do not inherit all the properties known to be sufficient for proving uniqueness of equilibrium. In short, there could be more than one price vector at which excess demand is zero. This finding is sometimes called the *anything goes theorem*.

Franklin Fisher (1983), among many others, has emphasized the importance of *disequilibrium analysis*, the study of the process by which prices change when the economy is not in equilibrium. This is made all the more complicated by the presence of multiple equilibria.

In addition to dynamics, critiques of the Arrow-Debreu general equilibrium theory have signaled the need to consider features such as uncertainty, (asymmetric) information, money, and taxes. Some of this is addressed in Stephen Morris and Hyun Song Shin (2001) and Fabio Petri (2004). It has been said that there is a role for public policy in the reconciliation of cases where there are multiple equilibria in applied problems.

SEE ALSO *Equilibrium in Economics; General Equilibrium; Jacobian Matrix; Nash Equilibrium; Partial Equilibrium; Prisoner's Dilemma (Economics); Walras, Léon*

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Richard W. Cottle

MULTIPLE GENDERS

SEE *Gender, Alternatives to Binary.*

MULTIPLE INTELLIGENCES THEORY

Among various theories of intelligence are some that view intelligence as a system. The overarching assumption in these theories is that intelligence is not a single entity but a multifaceted structure. Correspondingly, traditional definitions of intelligence were called excessively narrow, and the quest for definitions and theories reflecting the variety of ways humans think, learn, and adapt to their environments began in the early 1980s in the United States. Among such systemic theories of intelligence are, most notably, Howard Gardner's theory of multiple intelligences and Robert Sternberg's triarchic theory of intelligence. Another relevant example is the theory of emotional intelligence, initially presented in the scientific literature in 1900 by Peter Salovey and Jack Mayer and popularized by Daniel Goleman in his 1995 best-selling book.

Gardner's theory of multiple intelligences (also referred to as MI theory) assumes the presence of a number of distinct forms of intelligence. Individuals possess these types of intelligence in varying degrees, which establishes their unique cognitive profiles. The theory arose based on the argument that traditional definitions of intelligence do not capture the wide variety of abilities humans display. While presenting and defending this argument, Gardner analyzed cases of individuals with unusual talents, neuropsychological evidence supporting the idea of specialization of certain brain areas on processing particular types of information, evolutionary evidence, and psychological studies of intelligence. According to Gardner, there are eight primary forms of intelligence:

linguistic (manifested in dealing with spoken or written words);

musical (demonstrated in dealing with rhythm, music, and hearing);

logical–mathematical (invoked while reasoning inductively or deductively and dealing with abstractions and numbers);

spatial (engaged in vision and spatial judgment);

bodily-kinesthetic (required for movement and doing);

interpersonal (needed for interactions with others);

intrapersonal (manifested in dealing with self);

naturalistic (demonstrated in dealing with nature, nurturing, and classification).

The addition of a ninth type—existential (descriptive of the capacity to raise and consider existential questions) intelligence—is under consideration. Because of its humanistic approach to acknowledging and promoting the value and contributions of each and every student, the MI theory has been embraced and supported by the educational community around the world.

A number of schools and many teachers claim to use MI theory as the fundamental framework for their pedagogies. Yet the theory has been widely criticized as well. It has been argued that the theory is based primarily on Gardner's intuition and observations rather than evidence, that there are no or limited empirical data to support the evidence, that the separation between the constructs of multiple intelligences and personality types is blurry, that the assumption that all students are gifted in something might lead to intellectual relativism, and that there has been no systematic evaluation of the value of the theory in the classroom.

The MI theory has many implications, among which the following four are stressed. First, because individuals possess different degrees of varying intelligence, it is important to identify "dominant" intelligences early and try to enhance these intelligences. Yet teaching for all types of intelligence is important because students need help developing the intelligences in which they demonstrate weaknesses. Second, dominant intelligences also represent dominant learning modalities, and teaching should match the pattern of dominant abilities. Thus schools should offer education that is centered on individuals and their profiles of intelligence. Third, because many intelligences exist, there should be many assessments, not only those that traditionally focus on linguistic and logi-

cal-mathematical intelligences. Fourth, of importance is the realization that different cultures differentially treat various intelligences. Thus what might be viewed as "preferred" intelligence in one culture might not be such in another culture.

Sternberg's theory of triarchic intelligence was developed at the same time as Gardner's theory of multiple intelligences. Being a part of the same quest against traditional narrow definitions of intelligence, Sternberg defined intelligence as mental activity central to one's life in real-world environments and aimed at adaptation to, selection, and shaping of these environments; thus the main premise is that this mental activity is relevant to success in real life. Correspondingly, in the late 1990s Sternberg changed the name of the theory to the *theory of successful intelligence*. As per its original name, the theory consists of three parts: *analytical* (also referred to as componential), *practical* (also referred to as contextual), and *creative* (also referred to as experiential). Analytical intelligence is evoked while analyzing, evaluating, criticizing, reasoning, and judging. Practical intelligence is used while implying, implementing, and using. Creative intelligence is manifested while discovering, inventing, dealing with novelty, and creating. Based on the prediction of the theory, intelligent people are expected to identify their strengths and weaknesses and make the most of their strengths and compensate for their weaknesses. Individuals are not restricted to excelling in only one of the three intelligences; both integrated and uneven profiles of intelligences are possible. This theory has also been widely accepted by both educators and psychologists. Unlike the MI theory, Sternberg's theory has a large body of empirical research associated with it. From a practical point of view, it has influenced U.S.-based practices of college admission, pedagogies across all levels of schooling, and the identification of gifted and talented students. Although the theory has numerous critics, over the years of its existence it has strengthened its empirical and theoretical grounds.

Intellectually, the theory of emotional intelligence is associated with Gardner's (through intra- and interpersonal intelligences) and Sternberg's (through practical intelligence) theories. Emotional intelligence is typically referred to as an ability, capacity, or skill to perceive and register, judge and assess, and manage and act on the emotions of self and others, yet there is currently no consensus definition for this term. The roots of the theory are in the use of the term *social intelligence* by the American psychologist Edward Thorndike, who used this term to refer to the skill of getting along with other people. The term *emotional intelligence* is associated with the PhD dissertation work of Wayne Payne (1986). The field of emotional intelligence is relatively new, and a number of psychologists and educators are continuing to work on the definition, assessment, and predictive power of this concept.

SEE ALSO *Creativity; Cultural Relativism; Intelligence; Intelligence, Social; IQ Controversy; Personality*

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Elena L. Grigorenko

MULTIPLE PERSONALITIES

Multiple personality disorder, now labeled "dissociative identity disorder" (DID), is a psychological condition characterized by the presence of two or more distinct personality states that reflect an inability to integrate various aspects of identity, memory, and consciousness into a single coherent identity. The latest edition of the *Diagnostic and Statistical Manual of Mental Disorders* requires the following conditions for diagnosis:

1. multiple distinct identities
2. recurrent control of the person's behavior by at least two identities
3. an inability to recall important personal information
4. the absence of a general medical condition or substance use that could otherwise explain the dissociative symptoms (American Psychiatric Association 2000)

According to publications by Frank W. Putnam (1989) and Richard P. Kluft (1984), identities are considered entities with a coherent sense of self that respond to certain stimuli with a consistent pattern of behavior and feelings. Many argue, pointed out Colin A. Ross in *Dissociative Identity Disorder: Diagnosis, Clinical Features, and Treatment of Multiple Personality* (1997), that the distinct identities—"alters," "subpersonalities," or "personality states"—that characterize DID are not separate personality states per se but "fragmented parts of one personality" that individuals create to adapt to painful life experiences (Ross 1997, p. 144). Reports on the number

of alternate identities vary considerably from two to several hundred with the average between thirteen and fifteen. The most common alters reported, according to Ross, are those of children, "protectors," "persecutors," and alters of the opposite sex. In addition often a host alter appears to control the body the majority of the time. Support for the notion of distinct personality states come from research suggestion differences in vocal patterns, handedness, respiration, and brain wave activity between alters; however, Scott O. Lilienfeld and Steven Jay Lynn (2003) have criticized this work because of naturally occurring variability among these factors and lack of controlled studies.

Epidemiological studies estimate that 6 to 12 percent of the U.S. inpatient psychiatric population and 1 to 3 percent of the general population meet DID criteria (Ross 1997). DID is consistently reported to occur more often in females, perhaps due to the increased rate of females seeking inpatient treatment. Individuals diagnosed with DID often meet criteria for mood and anxiety disorders. In particular there is a high comorbidity between post-traumatic stress disorder and DID (Ross 1997). J. Douglas Bremner and Elizabeth Brett confirmed this in their 1997 study when they found that dissociative symptoms occur more often in individuals with post-traumatic stress disorder.

Reports of DID in the United States have increased since the mid-1980s, although the cause of the increase is subject to speculation. Some, such as David Gleaves in his 1996 article "The Sociocognitive Model of Dissociative Identity Disorder: A Reexamination of the Evidence," attribute the rise in reported cases to increased awareness and understanding of the disorder. Others, like Nicholas Spanos in his 1994 article "Multiple Identity Enactment and Multiple Personality Disorder: A Sociocognitive Perspective," claim the rise in DID is the result of misdiagnosis, fabrication, or suggestibility through the use of questionable therapeutic techniques and media portrayal of DID. Nonetheless, research demonstrates that DID is reliably diagnosed across clinicians and settings (Ross, Duffy, and Ellason 2002; Latz, Kramer, and Hughes 1996). However critics question this reliability claiming that DID is reported by a small number of specialized clinicians.

The cause of DID is debated. The posttraumatic model was articulated by David Gleaves (1996), although several predecessors had connected DID and trauma by the early 1980s (Coons 1980; Greaves 1980; Spiegel 1984). Gleaves hypothesizes that DID is a posttraumatic condition in which dissociation functions as a coping strategy in response to overwhelming psychological pain brought about by childhood maltreatment. The high rates of self-reported physical and sexual abuse and/or post-traumatic stress disorder among those diagnosed with DID support this theory. Conversely the sociocognitive model introduced by Spanos (1994) posits that DID is a socially derived condition produced by therapeutic suggestion and sociocultural influences, such as the media. It is hypothesized that DID can occur in the absence of childhood abuse and that alters are role enactments created and maintained by social reinforcement. For example, role-playing studies, such as the 1985 report conducted by Nicholas P. Spanos, John R. Weekes, and Lorne D. Bertrand, demonstrate that features of DID can be elicited from participants without the disorder through subtle cues or suggestions. This evidence supports arguments that features of DID are known to the public and may be easily induced (Lilienfeld et al. 2003). Finally, some theorists combine these two positions, proposing that the cause of DID cannot be entirely iatrogenic or trauma induced and that multiple pathways should be considered (Ross 1997, p. 92).

Regardless of the cause, DID continues to be categorized as a major psychological disorder. Most agree that DID symptoms exist and cause significant distress regardless of origin. Continued research may provide clarification regarding factors that contribute to the development of DID, prevention, and intervention. Further it may be essential to consider that both models provide important information about the development and maintenance of DID that could lead to a more complex conceptualization of the disorder in the future.

SEE ALSO *Anxiety; Mental Illness; Mood; Neuroticism; Personality; Post-Traumatic Stress; Psychotherapy*

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MULTIPLEX

SEE *Symbols.*

MULTIPLIER, THE

In macroeconomics, the multiplier is the ratio of a change in the equilibrium level of national income (or of aggregate employment) to the change in autonomous spending (or in employment on public-works projects) that brought it about. As early as Walter Bagehot's *Lombard Street* in 1871 and Alfred and Mary Marshall's *Economics of Industry* in 1879 (and arguably even in an oration by Pericles, as reported by Plutarch), it has been recognized that an initial round of spending in one sector caused successive rounds of spending as the recipients of each round of income spent that increase in their income in ways that created more income for others.

John Maynard Keynes and Hubert Henderson invoked this long-held belief in their 1929 pamphlet *Can Lloyd George Do It?,* in which they endorsed the pledge by Liberal leader (and former prime minister) David Lloyd George to eliminate Britain's interwar unemployment through public-works spending that would indirectly generate more jobs than just the direct employment on public works. The problem with winning acceptance for that argument was that it was unclear why the process would be finite, why employing one person on public works would not push the whole economy to full employment. The crucial advance was not recognition of successive rounds of spending but the analysis of the leakages from each round of spending that led to the multiplier having a finite value. If a fraction of each round of income is not spent on domestic output, the geometric series of rounds of spending sums to a finite value (just as, about the same time, it was shown that in a fractional-reserve banking system, a change in the monetary base leads to a finite change in the money supply because of leakages into currency and required reserves).

The successive contributions to this analysis by Ralph G. Hawtrey, Lyndhurst F. Giblin, Richard Kahn, Jens Warming, J. M. Keynes, Michal Kalecki, and John Maurice Clark from 1928 to 1935 are reprinted in Dimand (2002) (see Hegeland 1954; Wright 1956; Davis 1980; Kahn 1984; Dimand 1988, 1994). Keynes's 1933 pamphlet *The Means to Prosperity* and his *General Theory* (1936), crediting Kahn (1931), used such a finite-valued spending multiplier to analyze how expansionary fiscal policy could increase output and employment in an economy operating below full employment, with the difference that while Kahn (1931) analyzed successive rounds of employment, Keynes (1933, 1936) considered successive rounds of spending. Davis (1980) argues that, in addition to the influence of Kahn (1931), Keynes was also influenced by correspondence with Hawtrey. Translated from changes in income and autonomous spending to their levels, the multiplier analysis led to the IS goods market equilibrium condition of the IS-LM model. However, understanding of the multiplier process and the goods market equilibrium condition need not imply support for activist fiscal policy. Hawtrey, the British Treasury economist who provided early numerical examples and algebraic analysis of the finite-valued multiplier, held that fiscal expansion would simply crowd out private investment because he considered the demand for money not responsive to the interest rate (in later terminology, a vertical LM curve).

The Keynesian spending multiplier k represents the change in equilibrium income and expenditure (Y) resulting from a change in autonomous investment (I) or government spending (G), $\Delta Y = k\ \Delta I$ or $\Delta Y = k\ \Delta G$, assuming that the price level, money wage rate, and interest rate do not change. It can thus be best viewed as the amount by which the IS curve (the goods market equilib-

rium condition) shifts horizontally at a given interest rate in the Hicks-Hansen IS-LM diagram (which is drawn for given prices and money wages) rather than as a change in the ultimate equilibrium of a complete model. The aggregate demand curve, on an aggregate demand/aggregate supply diagram with the price level and income on the two axes, would shift by as much as the IS/LM intersection shifted. In a footnote at the start of the very first multiplier article, Kahn (1931) promised a second article showing the results carried through even if fiscal expansion increased money wages, but that article never appeared and the footnote is not in the reprint in Kahn (1972). The Keynesian spending multiplier k, long the workhorse of introductory macroeconomics courses, is $1/(1 - z)$, where z is the marginal propensity to spend. If there were no taxes or imports, the marginal propensity to spend would equal the marginal propensity to consume out of disposable income, c. With an income tax rate, t, and a marginal propensity to import, m, the marginal propensity to spend $z = (1 - t)\, c - m$. Since the marginal propensities to consume and save out of disposable income add to 1 ($s + c = 1$), the denominator of the multiplier, $1 - z$, is equal to $s\,(1 - t) + t + m$. The larger the leakages from spending on domestic output into taxes, saving, and imports, the smaller the multiplier for a small open economy. (The multiplier for a large open economy would have to recognize that an increase in imports has a multiplier effect on equilibrium income in the rest of the world, which causes the rest of the world to import more from the home country.)

Because a change in taxes affects disposable income rather than spending in the first round, its effect will be proportionally smaller than that of a change in government spending. If there were only lump-sum taxes, with (for simplicity) no proportional taxes and no marginal propensity to import, the multiplier for a change in government spending would be $1/(1 - c)$ and that for a change in taxes would be $c/(1 - c)$. Notice that for a balanced budget increase in government spending, with lump-sum taxes increased by as much as government spending, the balanced budget multiplier would $(1 - c)/(1 - c)$, which is 1.

The empirical importance of the simple Keynesian multiplier was diminished by the permanent income and life-cycle theories of consumption, which argued that the marginal propensity to consume out of a change in current income (and hence also the value of the multiplier) is much smaller than had been assumed. The importance, and presumed size, of the multiplier was further diminished by the theory of Ricardian equivalence or debt neutrality, which argued that a deficit-financed increase in government spending causes consumers to save in anticipation of the future tax liabilities implied by the government borrowing, so that any change in government spending, whether financed by current taxes or by borrowing against future taxes, will only shift the IS curve by the amount of the balanced budget multiplier effect. The multiplier continues to be a central feature of introductory macroeconomics courses but in more advanced courses is subsumed in the goods market equilibrium condition represented by the IS curve. The multiplier is used in regional and urban policy analysis to analyze the effects on a local economy of a public-works project such as a new sports stadium.

SEE ALSO *Economic Growth; Economics, Keynesian; Full Employment; Involuntary Unemployment; Kahn, Richard F.; Keynes, John Maynard; Macroeconomics; Propensity to Consume, Marginal; Propensity to Import, Marginal; Underemployment; Unemployment*

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Robert W. Dimand

MULTIRACIAL MERITOCRACY

SEE *Meritocracy, Multiracial.*

MULTIRACIAL MOVEMENT

The American multiracial movement is best known for its advocates' efforts throughout the 1990s to add a "multiracial" category to the 2000 census. By the end of that decade, the federal government, along with a number of state governments, had not only devoted substantial resources to investigating the issue; eventually it also agreed to document race in a new way. Although a multiracial category was *not* added to the census in 2000, for the first time ever a "mark one or more" (MOOM) option—allowing individuals to identify officially with as many groups as they saw fit—appeared on the form.

The Office of Management and Budget (OMB) is responsible for coordinating the activities of all federal statistical agencies, including the Census Bureau. Responding to ongoing criticism of the census and to rapid change in the racial and ethnic makeup of the country, the OMB conducted a comprehensive review of the racial categorization system from 1993 to 1997. While a variety of issues were considered, the review eventually focused on the multiracial category proposal. Before the review, identification with more than one race was not allowed. After the review, the OMB gave everyone the option to identify with as many races as they wished.

The experience of parents registering children from the growing number of interracial unions for school loomed large in the OMB decision. Many of these parents felt that a monoracial census forced unacceptable and avoidable decisions on individuals and families to identify with one parent and deny the other. The issue of multiracial recognition on government forms helped to galvanize the multiracial movement, which started with a handful of groups that formed on the West Coast in the late 1970s and early 1980s. In 1988 a number of these local adult organizations joined forces to create the Association of MultiEthnic Americans (AMEA), whose political objective was to push the OMB to add a multiracial category on government forms.

Soon after the establishment of the AMEA, two other organizations claiming national memberships and networks also came to the fore: Project RACE (Reclassify All Children Equally) and A Place For Us (APFU). The three groups' orientations and goals were divergent from the beginning; however, they shared the conviction that it was inaccurate and improper to force multiracial Americans into monoracial categories. On this basis, the groups often worked together during the 1990s. AMEA took the position that multiracial people should have the right to claim their entire heritage and embrace their total identity. One means to that end, AMEA maintained, was multiracial recognition on the census. For Project RACE, the main objective was to get a multiracial classification on all school, employment, state, federal, local, census, and medical forms requiring racial data so that multiracial children would not have to suffer the adverse consequences of being regarded as "Other." Finally, APFU viewed the "support and encouragement of interaction between anyone involved with interracial relationships" as their purpose and a "color-blind society" as their goal. Together the three represented the backbone of the multiracial category effort. In the mid-1990s, during the height of the movement's activity, there were thirty active adult-based multiracial organizations across the United States and approximately the same number of student organizations on college campuses.

Over the course of that decade, civil rights groups increasingly came to perceive the multiracial movement as a threat. The civil rights community feared that a multiracial category would dilute the count of minority populations, and—although in actuality this prospect triggered different concerns for different civil rights organizations—their shared position was that a multiracial identifier would undercut existing civil rights safeguards. Multiracial advocates, however, saw compulsory single-race categories as an outdated response to a growing multiracial reality and maintained that their recognition would come at no adverse civil rights cost.

In MOOM and related stipulations, the OMB tried to strike a balance between capturing increasing diversity and providing the statistics necessary to measure discrimination and enforce the nation's civil rights laws. Even so, the implications of MOOM remain unclear and the circumstances invite further challenge. For instance, in order to distinguish those persons who selected a single race—say Asian—from those who selected Asian and another race, groups were reported in ranges from minimum to maximum sizes: This created alternate—yet official—counts of racial groups. As a result, the denominator is debatable. Moreover, allowing people to mark more than one race resulted in a total of fifty-seven possible multiple-race combinations in 2000. Add to that the five official single-race categories plus a sixth option, "Some Other Race," and the tally increases to sixty-three racial categories. Because each racial category is also divided by a question asking respondents if they are Hispanic, the constellation of race/ethnic mixtures swells to a universe of 126 possibilities. As a result, the proliferation of categories could itself complicate civil rights enforcement efforts. The decision to allow people to identify with multiple racial heritages has introduced new data, questions, and controversies into an already volatile debate on race-conscious public policy.

SEE ALSO *Civil Rights Movement, U.S.; Identification, Racial; Marriage, Interracial; Minorities; Mulattos;*

Multiracials; Politics, Identity; Race; Race Mixing; Race-Conscious Policies; Racial Classification

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Kim M. Williams

MULTIRACIALS IN THE UNITED STATES

The 2000 U.S. Census provided the first opportunity for persons to self-identify with more than one race. More than 6.8 million Americans, representing 2.4 percent of the U.S. population, marked two or more races in the 2000 Census. Of these self-identified persons of multiple races, 2.2 million reported just two categories: white and "some other race," representing the largest category, or 32.32 percent of multiple-race combinations; and white and American Indian, 15.86 percent of the multiracial population. The next largest categories reported combinations of white and Asian, or 12.72 percent of the multiracial population, and white and black, or 11.50 percent of the multiracial population. In other words, nearly three-quarters of the multiracial population reported two races, combining white with something else (Social Science Data Analysis Network 2000). Hawaii and Alaska are the states with the largest multiracial populations (21.4 percent and 5.4 percent, respectively). In the continental United States, California and Texas have the largest number of counties with multirace populations that exceed 5 percent (Besl 2001).

The 2000 Census method of counting multiracial populations may yield under estimates of the total numbers of persons who identify as multiracial. Analysis of the National Longitudinal Study of Adolescent Health, a panel that includes multiple indicators of race, shows that contextual factors influence responses to the multirace question. For example, whereas 3.6 percent of all (non-Hispanic) respondents reported multirace identification when interviewed in a home setting, 6.8 percent reported multirace identification in a self-administered school interview (Harris and Sim 2002).

Alternative methods of counting multiracials would permit persons to identify as multiracial or biracial, a position advocated by multiracial advocacy groups such as Project RACE and the Association of MultiEthnic Americans (Rockquemore and Brunsma 2002), groups that have mobilized various constituencies to identify persons of mixed race as a separate category (Farley 2002; Childs 2004). Some believe that this method of counting multiracials would result in a larger count of multiracials and a lower count of single-race persons, particularly blacks (Farley 2002).

At various points in U.S. history, persons of mixed racial heritage have been documented and counted within single racial categories. In early censuses racial categories included free whites, slaves, free colored (nonwhites), and all other persons, excluding Indians not taxed (see U.S. Census Bureau 1821, p. 14). Persons of multiple races were included as slaves, free colored, or "all other persons." Rules evolved to assign mixed-race persons to specific single-race categories; a common one in most U.S. states was the "one-drop rule," whereby persons with even a small amount of black blood were assigned to the Negro category (Hunter 2005). American Indians of mixed heritage were classified by a different rule. In the 1870 census Francis A. Walker, superintendent of the census, reported that "[T]he principle that has governed in the classification of persons of part-Indian blood in the present census has been as follows: Where persons reported as 'Half-breeds' are found residing with whites, adopting their habits and life and methods of industry, such persons are to be treated as belonging to the white population" (U.S. Census Bureau 1871, p. xiii).

In the 1850 census Negroes were designated for the first time as either black or mulatto (Daniel 2002, p. 40). Mulattos accounted for 24.8 percent of the black population in the North and 11.2 percent of the black population overall (Daniel 2002, p. 40). The 1890 census categorized mixed-race Negroes into further groups. Of the 62,622,250 persons counted in the 1890 census, 7,638,366 were reported to be colored, and of those, 7,470,049 were classified as "of Negro descent." Persons of Negro descent were further classified as Negroes, mulattos (one-half black), quadroons (one-quarter black), and octoroons (one-eighth black). Negroes accounted for 6,337,980 of those classified as persons of Negro descent, and mixed-race persons of Negro descent represented about 15 percent of the black population.

In New Orleans and Charleston, mixed-race persons were middlemen between the black and white communities, justifying a codification that made a distinction between Negroes determined by the one-drop rule and

multiracial persons with separate identities, social organizations, and networks (Daniel 2002, pp. 55–60). However, this status was threatened by *Plessy v. Ferguson* (1896), which solidified the one-drop rule and denied octoroons rights held by whites (Daniel 2002, p. 79). The allegation that persons of mixed race have social and economic advantages has been challenged in recent research, although lighter skin color seems to confer educational and income advantages to African American women (Hunter 2005, p. 48).

In 1977 the Office of Management and Budget (OMB) Statistical Policy Directive 15 established four racial classifications for use in federal statistics and administrative reporting: (1) white, (2) black, (3) Asian or Pacific Islander, and (4) American Indian or Alaskan Native. These classifications, along with two ethnicity categories and the category "some other race," provided the basis for reporting and data collection. After considerable lobbying by multiracial groups and following public hearings and a workshop hosted by the National Academy of Sciences, the OMB issued new regulations in 1997. The revised standards stated that the minimum categories for racial classification would be: American Indian or Alaska Native; Asian; black or African American; Native Hawaiian or other Pacific Islander; and white. Respondents to federal questionnaires or surveys would be able to select one or more races. The 2000 census included a sixth racial category, "some other race" (U.S. Census Bureau 2000), and the OMB provided further clarification on collecting and reporting multiracial data for federal civil rights monitoring and enforcement (Office of Management and Budget 2000).

During the 1990s a vocal group of multirace advocates unsuccessfully lobbied for the inclusion of a specific Census category called multiracial. Although such a category can be inferred from the 1997 OMB standards, it did not achieve the political ends its advocates desired. Kim Williams, a leading analyst of the multirace political movement, concluded that advocates want the multiracial designation to help improve the self-esteem of children of mixed race backgrounds. The multirace political movement is seen as an alternative to traditional civil-rights approaches focusing on single races (Williams 2005; 2006).

SEE ALSO *Marriage, Interracial; Miscegenation; Multiracial Movement; Race Mixing*

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Samuel L. Myers Jr.

MULTISECTOR MODELS

Economists use models to understand different aspects of the economy. A *multisector model* is used primarily to study the allocation of resources across different economic activities. A multisector model, however, has more uses than simply the study of the distribution of resources. Some of the most exciting work being done with multisec-

tor models is in the economic theory of growth and development. This work originates in the observation that as an economy grows its production activities and employment shares move from agriculture to industry and services, with services eventually claiming the vast majority of the country's employment potential. So, if economists can understand what causes these shifts in sectoral employment shares, they might understand what makes countries grow; conversely, if they can understand what makes countries grow, they might understand how the workforce allocates its time across economic sectors.

What is an economic sector? The United Nations has produced a system of activity classifications—the ISIC (International Standard Industrial Classifications), designed to help classify economic sectors across countries in a comparable way. Using the ISIC, one can define sectors as one-digit, two-digit, three-digit, and so on, depending on the detail required. For example, agriculture, industry, and services are one-digit sectors, whereas textiles and vehicle manufacture are two of the many two-digit sectors within manufacturing.

Economists, however, find that a more useful way of defining a sector draws from the objectives of the multisector model in hand. Examples of multisector models can be found in the fields of economic growth, development economics, labor economics, international trade, spatial (geography) economics, business cycles, and others. In each case, the definition of the sector may differ, and the challenge facing the applied economist is to find the correspondence between the way the sector is defined in the model and the ISIC classification. For example, a multisector model may define sectors according to whether the goods produced within a sector are primary, secondary, or tertiary; agricultural, industrial, or service goods; tradable or nontradable; and public or private. In addition to matching the sectors in the model to the ISIC classification, for other purposes a multisector model may define sectors according to whether the goods are traditional or modern, rural or urban, produced in a formal or informal business environment, and produced at home or in the market.

Multisector models in economic development have added to our knowledge of how an economy leaves the stagnant agricultural state and enters modern growth. An important example is the multisector model by Gary Hansen and Edward Prescott (2002). Their model has a traditional sector and a modern sector. Both sectors produce the same goods but with different technologies. Land is a fixed factor that is used only in the traditional sector but not in the modern sector. Modern technology has a higher rate of productivity growth than traditional technology. Both technologies have diminishing marginal return to their inputs. Hansen and Prescott show that, initially, resources are devoted only into the traditional sector, but as the technology of the modern sector improves, more resources shift into it.

A related class of multisector models has enriched our understanding of the declining share of agriculture, the rise and fall of industry, and the rising share of services observed in most countries that have experienced modern growth. L. Rachel Ngai and Christopher Pissarides (2007) show that when sectors produce goods that are complements of each other, resources move from the sector with high productivity growth to the sector with low productivity growth. Since agricultural and manufacturing sectors experience, on average, faster productivity growth than the services sector, resources are shifted away from agriculture and into manufacturing and services. As the agriculture sector shrinks, eventually resources also shift away from manufacturing and into service production.

So far, the examples of what defines a multisector model are based mainly on *technology*, but there are other definitions, such as those that are based on *preferences* and *institutions*. Addressing the same issue of the decline in agriculture and the rise of services, Piyabha Kongsamut, Sergio Rebelo, and Danyang Xie (2001) present a multisector model that is based on preferences. In their model, agriculture produces an inferior good and services a luxury good; then, as incomes rise, demand shifts from agriculture to services. As a result, resources shift from agricultural to service production.

A third class of multisector models relies on an institutional definition. One class of institution-based multisector models is motivated by the fact that official statistics only report formal market activities. However, there are plenty of studies that show that a large fraction of resources is allocated to informal activities and activities at home. These studies are based on the time-use surveys conducted by individual countries, such as the United Kingdom and the United States, and on a cross-country survey conducted by the World Bank. The production activities at home and in the informal sector can all potentially be produced in the formal market sector, which will then enter the official statistics. The economic activities at home include child care, cooking, cleaning, and so on. If the child is sent to a day-care center, its care will be recorded as part of GDP (gross domestic product). Home production is substantial in most of the time-use surveys. For example, it took up as much time as market production in the United States during the 1990s. The economic activities in the informal sector in general refer to activities that evade government regulation, including tax evasion. This is a more common phenomenon in developing countries.

There are many reasons why economists care about whether a certain activity is done in the formal market sector or in the informal or home sector. Two intuitive and important reasons concern accurate measurement of

economic activity and the formulation and implementation of public policies that will increase social welfare. Knowing what fraction of the economy's resources are devoted to the formal market sector is important for understanding and interpreting measured GDP, especially when comparisons are made across countries. Second and perhaps more importantly, it might have different policy implications not only for welfare but also for measured economic activities.

A good example is the multisector model by Stephen Parente, Richard Rogerson, and Randall Wright (2000). In their model, goods can be produced in the nonmarket sector or in the market sector. They show that distortionary policy that affects capital accumulation has a larger impact on measured GDP in their multisector model than in the usual one-sector model. This improves our understanding of the reasons that cross-country income differences are so large. Models with home and market sectors are also used for explaining the dynamics of labor supply. Taxes on the market sector play an important role in these models as they shift production from the formal market to the home or informal sector.

SEE ALSO *Economic Model; Input-Output Matrix; Models and Modeling; Social Accounting Matrix; Structural Transformation; Two-Sector Models*

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MULTIVOCALITY

SEE *Symbols.*

MUNDELL-FLEMING MODEL

The Mundell-Fleming model integrates international trade and finance into macroeconomic theory. This approach was developed in the early 1960s by the Canadian economist Robert Mundell (winner of the 1999 Nobel Prize in economics) and the British economist J. Marcus Fleming (1911–1976). In this period, both authors were members of the International Monetary Fund's Research Department, where they independently extended the traditional Keynesian model to an open economy setup in which the capital and goods markets are internationally integrated. The resulting research constitutes the original version of the Mundell-Fleming model (Mundell 1963; Fleming 1962).

The Mundell-Fleming model shows that, under a flexible exchange rate regime, fiscal policy does not have any power to affect output, while monetary policy is very effective. The opposite is true if the exchange rate is fixed. The assumption that international capital markets are completely integrated plays a crucial role in determining these results.

FLEXIBLE EXCHANGE RATE CASE

Since a monetary expansion tends to decrease the interest rate, this policy also encourages an outflow of financial capital as domestic investors seek higher returns by purchasing foreign bonds. Investors need to buy foreign currency to acquire foreign bonds. Accordingly, the supply of domestic currency increases to purchase the foreign currency needed to acquire foreign bonds. The domestic exchange rate depreciates; that is, more units of domestic currency must be exchanged for each unit of foreign currency. This makes domestic goods cheaper compared to foreign goods, thus improving the trade balance (purchases of imports decline and sales of exports increase) and stimulating domestic output and employment. The domestic money demand therefore increases, bringing the domestic interest rate back in line with the world interest rate. In the equilibrium that emerges after the monetary expansion, the interest rate is unaltered while output is increased proportionally to the increase in the money supply.

In the case of a fiscal expansion, the initial increase in domestic government spending creates an excess demand for goods and tends to raise output, employment, and income. This, in turn, raises the demand for money and the level of the interest rate. The fact that the domestic interest rate is now higher than the world interest rate causes an inflow of capital, which causes an appreciation of the domestic exchange rate (fewer units of domestic currency must be provided for each unit of foreign currency). In this case, therefore, domestic goods become more expensive compared to foreign goods, and the trade balance deteriorates (more imports are purchased and fewer exports are sold), depressing domestic output, employment, and income. A new equilibrium is reached

in which the trade balance is worsened while output and the interest rate are restored to their original levels.

Free capital mobility and trade integration therefore determine the ability of monetary policy to stimulate the domestic economy but frustrate the effects of fiscal policy when the exchange rate is flexible.

FIXED EXCHANGE RATE CASE

The results illustrated above are reversed in a pegged exchange rate regime. With pegged interest rates, the central bank increases or decreases the money supply as necessary so as to maintain a fixed rate of exchange of domestic currency for foreign currency. In this case, the pressure for exchange rate depreciation that follows a monetary expansion is neutralized by central bank intervention in the foreign exchange market, with no final effect on domestic output. Similarly, the central bank intervenes to neutralize the domestic exchange rate appreciation that follows a fiscal expansion. This allows the fiscal policy shock to raise the level of domestic output. The central bank commitment to a given exchange-rate level therefore implies high effectiveness of fiscal policy.

REAL WORLD RELEVANCE OF THE MODEL

Some of the underlying assumptions and policy options of the Mundell-Fleming model, such as international capital market integration and the possibility of permitting the fluctuation of the exchange rate, were not predominant features of the world economy in the early 1960s. Restrictions to trade assets and foreign exchange were widespread, and the majority of currencies were fixed within the Bretton Woods system. In this regard, the Mundell-Fleming model is, to a large extent, more appropriate for describing the global economy as it developed after the collapse of the Bretton Woods system, which is characterized by high financial integration and floating exchange rates, than the economic reality of the times in which the model was originally developed. This prophetic trait of the analysis, as well as the success of the theoretical predictions in matching empirical facts (such as the effects of U.S. macroeconomic policies in the 1980s), help explain the influence of the Mundell-Fleming model among both academics and policymakers. The model has nevertheless not been immune to criticisms, some of which have stimulated further research.

CRITICISMS AND EXTENSIONS

One important criticism of the model is that the assumption of perfect capital mobility might be extreme. Mundell (1963) was well aware of this limitation and recognized that the assumption should not be taken literally. Introducing imperfect capital mobility into the model implies that a fiscal expansion can play a role in affecting output under a flexible exchange rate and monetary policy can have a role under a fixed exchange rate, but the results on the relative effectiveness of the two policy instruments still hold.

Several other shortcomings of the Mundell-Fleming model have also been emphasized. In particular, the model is completely static and therefore not able to address issues related to the long run, as well as to the transitional dynamics of private wealth and government finance. In order to address this limitation, Rudiger Dornbusch (1976) introduced more sophisticated, "rational" (rather than static) private agents' expectations into the model. This extension implies an "overshooting" result: following a monetary expansion, the exchange rate depreciates more in the short run than in the long run.

Furthermore, in the Mundell-Fleming model the relations between economic variables are not explicitly derived from a microfoundation of agents' behavior. This prevents an analysis of the welfare impact of macroeconomic policies based on a utility measure. Because of this, any welfare consideration in the Mundell-Fleming model is necessarily limited to the effects of output movements, neglecting the welfare implications of such variables as consumption and leisure time. Several researchers are therefore attempting to move beyond the Mundell-Fleming model (see Obstfeld 2001) by developing a new framework for the analysis of macroeconomic interdependence, which is explicitly based on microeconomic foundations and intertemporal optimizing behavior. This field of research aims at introducing a more rigorous analysis of the welfare impact of macroeconomic policies. Whether the new framework will ultimately succeed in supplanting the Mundell-Fleming model remains to be seen. The fact that the researchers active in this area still consider the Mundell-Fleming model as the relevant benchmark against which to compare their results is, in any case, a testimony to the model's lasting influence.

SEE ALSO *Balance of Payments; Exchange Rates; IS-LM Model; Macroeconomics; Trade*

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The opinions expressed are personal and should not be interpreted as reflecting any view of the International Monetary Fund.

MUNDIAL UPHEAVAL SOCIETY

SEE *Wolf, Eric.*

MÜNSTERBERG, HUGO
1863–1916

The science of psychology in the United States dates from the early laboratories of the 1880s, yet it quickly spread beyond the laboratory into several applied fields in the early twentieth century. Arguably, no figure in American psychology was more identified with the promotion of applied psychology than Hugo Münsterberg. By 1916 he had published influential books on forensic psychology, educational psychology, psychotherapy, industrial psychology, and the psychology of motion pictures. Münsterberg was born June 1, 1863, in Danzig, Germany. According to biographer Matthew Hale Jr., when Münsterberg died on December 16, 1916, in Cambridge, Massachusetts, "he was arguably the best-known psychologist in America and the most prominent member of America's largest minority, the German-Americans" (1980, p. 3).

Münsterberg's roles as public psychologist and German nationalist defined his years in the United States. He earned his PhD in psychology in 1885 at the University of Leipzig under Wilhelm Wundt (1832–1920), usually acknowledged as the founder of scientific psychology. Münsterberg's experimental work there was principally on the subject of the will. In 1887 he earned a medical degree from the University of Heidelberg, and then began his academic career in that same year at the University of Freiberg. Münsterberg's research showed that the will was not directly experienced, but was the result of the perception of changes in muscles, joints, and tendons. That finding was in opposition to Wundt's ideas about voluntary control, a controversy that brought attention to Münsterberg's work. One admirer was William James (1842–1910), who invited him to come to Harvard University in 1892 to direct the psychology laboratory. Münsterberg accepted Harvard's invitation for a three-year period, but then returned to Germany. He hoped to secure a position in one of Germany's more prestigious universities, but when that was not forthcoming he returned to Harvard in 1897. He remained there for the rest of his career.

The laboratory did not hold Münsterberg's interest for long. His first book in English, *Psychology and Life* (1899), was based on a series of articles in the popular press. It gave him a taste of the role of psychological expert and seemed to lure him into a greater public presence. *On the Witness Stand* (1908), also based on popular articles, delved into the accuracy of memory, eyewitness testimony, false confessions, lie detection, and jury deliberations. It is considered the pioneering book in forensic psychology. In 1913 he published his most influential work, *Psychology and Industrial Efficiency*, a book that was popular with American managers seeking to increase efficiency. Münsterberg was interested in matching worker abilities to job requirements. He believed that psychology possessed the tools to create that match by determining the psychological traits required for any job and using mental tests to identify suitable workers. In a time in which efficiency was the watchword for American business, Münsterberg's book promoted opportunities for psychologists in the business world, especially in advertising and employee selection.

Münsterberg also served as a spokesperson for German culture in the United States, a task he carried out in books, magazine articles, letters to editors, and public speeches. His defense of Germany's aggression in the early years of World War I (1914–1918) made him despised by most Americans, including his Harvard colleagues. He lived the last few years of his life as a social outcast, the stress of which perhaps contributed to his death at age fifty-three.

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Ludy T. Benjamin Jr.

MURDER

Roughly 1 in 15,000 people is murdered in the United States each year (Stolinsky and Stolinsky 2000). Computed over a seventy-five year life span, this equates to a 1 in 200 chance of being murdered at some point in an American's lifetime (Ghiglieri 1999). Homicide rates vary predictably from culture to culture (Wilson and Daly 1997). In the United States the rates of killing are much higher than in many industrialized nations, exceeding those in Canada, many western European nations, and Japan. In many other countries, including Venezuela, Colombia, and South Africa, homicide rates exceed those in the United States by as much as a factor of ten (United Nations 1998). Among those nations that currently exhibit low homicide rates, murder rates were much higher in the recent past, suggesting that the relative absence of homicide is a fairly new societal invention (Ruff 2001; Dower and George 1995). All of these within-culture rates of homicide do not include casualties of warfare or genocide.

The homicide rates in industrialized nations are much lower than in many non-industrialized cultures. Homicides account for roughly one in ten deaths of adult men among the Huli of Papua New Guinea; one in four deaths among the Mae Enga also of Papua New Guinea; and one in three deaths among the Dugum Dani of the Highlands of West New Guinea and the Yanomamo of central Brazil (Chagnon 1988). In a 1993 study Douglas T. Kenrick and Virgil Sheets found that homicidal fantasies among people in the general population are even more frequent than actual killings.

Despite the fact that tens of thousands of murders are committed worldwide each year, the psychology of homicide is not well understood. For our understanding of homicide to be complete, we must explain, for example: (1) why men are vastly overrepresented among murderers (87 percent); (2) why men are also overrepresented among murder victims (75 percent); (3) why women commit some kinds of homicide more than men (e.g., infanticide of own children); (4) why people kill in qualitatively distinct conditions, leading to predictable motives for murder; and (5) why people experience murder fantasies in circumstances that turn out to correspond closely to the contexts in which people actually commit murder.

The majority of theories that have been used to explain homicide were not designed specifically for that purpose. They are general theories of behavior regarding all crimes, or all violent crimes. For this entry these explanations will be considered as they apply to murder specifically. Unfortunately space limitations prevent an exploration of all relevant theories of murder.

CULTURAL AND SOCIAL THEORIES OF HOMICIDE

Different theories of homicide need not be competing. They often address different levels of explanation and are often complementary, capable of contributing unique insight to the explanation of why a person commits murder.

According to 1973 and 1977 studies by Albert Bandura cultural and social theories of homicide rely on fundamental principles of learning theory. These theories propose that learning from the social environment is responsible for differences in homicide rates between groups, including differences in men's and women's propensities to kill. The specific environmental source identified as the causal force behind murder differs from theory to theory (Cullen and Agnew 2006; Walsh and Ellis 2006). For example some theorists suggest disorganized communities lead to crime (Bursik and Grasmick 1993; Sampson 1993; Shaw and McKay 1969); others argue that crime is learned through differential association with deviant peers (Akers 1973; Sutherland and Cressey 1978; Sykes and Matza 1957); while others argue that the gap between desires for a better lifestyle and lack of legitimate means to fulfill them creates strain that fuels crime (Cohen 1965; Cloward and Ohlin 1960; Merton 1938; Messner and Rosenfeld 1994). Each of these theories argues that murder is the product of learning by normal people. Other theories propose that homicide is the result of psychological dysfunction.

PATHOLOGICAL THEORIES OF MURDER

Pathology theories of murder propose that people commit murder when their thinking is abnormal. The causes of cognitive malfunctions vary, as do the forms of abnormal cognition they produce. For example suboptimal arousal theory is based on the observation that some people have a preference for intense environmental stimulation. Those who feel most starved for arousal are presumed to be more likely to engage in highly arousing thrill seeking and risk taking activities (Ellis 1987). Criminal behaviors including murder may be committed more often by those who are suboptimally aroused.

Seizuring theories of crime are based on research into the causes of epilepsy. Not all seizures lead to convulsions. If subconvulsive seizures are located in the limbic system, argued Dan Mungas in his 1983 article "An Empirical Analysis of Specific Syndromes of Violent Behavior," they may have significant effects on emotions, sometimes resulting in criminal behavior.

Other pathology explanations, such as the one offered by R. J. Lueger and K. J. Gill in their 1990 study "Frontal-Lobe Cognitive Dysfunction in Conduct

Disorder Adolescents," have argued that failure of the frontal lobes to function properly may disinhibit violent behavior. Frontal lobe damage is associated with increased impulsivity and lack of planning ability that may contribute to some murders.

Another pathology theory is rooted in the observation that one male out of every 700 to 1,000 is born with an extra Y-chromosome, and one male out of every 500 is born with an extra X-chromosome (Hoffman 1977). Both genetic abnormalities result in males who score lower on standard intelligence tests (Horgan 1993) and show an increased likelihood of criminal behavior, including murder. However these genetic abnormalities are likely to explain only a tiny fraction of the homicides committed, since males with an extra chromosome only constitute 1 to 2 percent of the total prison population (Witkin, Mednick, Schulsinger, et al. 1976).

PERSONALITY DIFFERENCES AND MURDER

Explanations of murder have not been limited to individual differences so extreme they are considered disordered. Individual differences in personality also have been proposed to contribute to the likelihood that an individual will commit murder. For example people who score high on measures of antisocial personality, low in conscientiousness, high in neuroticism, and low in intelligence have been shown to be more likely to engage in criminal activities, including murder (Plomin, DeFries, McGuffin, and McClearn 2000; Hodgins 1992; Monahan, Steadman, Silver, et al. 2001).

Individual differences in personality may also lead to the differential activation of cognitive mechanisms that produce homicidal tendencies in other ways. Personality leads people to experience the same environments differently, seek out different environments, and be excluded from a certain subset of social environments (Rowe 1994; 1996). People with personalities that lead them to occupy environments characterized by high levels of interpersonal conflict may be more likely to encounter contexts that predictably lead to murder.

Another group of explanations for murder propose that individual differences may make homicide more adaptive for some people in terms of evolutionary fitness. Cheater theory argues that two alternative reproductive strategies have evolved in human males. One type of male is law abiding and loyal. Male cheaters, conversely, are argued to adopt strategies of criminality, including murder, in contexts of social exchange to obtain resources and short-term mating strategies in mating relationships.

David Rowe's alternative adaptation theory points out that criminals typically devote more effort to mating than they do to parenting (Rowe, Vazsonyi, and Figueredo 1997; Rowe, Vazsonyi, and Flannery 1995). Furthermore Rowe argued that criminality is a strategy that can only thrive when there are others to exploit. As the number of criminals in a population increases, the effectiveness of criminal strategies like murder will decrease.

Conditional adaptation theory attempts to integrate adaptive individual difference theories and learning theories. It proposes that everyone has the same genetic potential to exhibit criminal behavior at birth, and early life experiences cause individuals' potentials to change. Children who witness poor, unstable relationships between their parents and live in relatively resource-scarce environments are argued to be more likely to adopt short-term, opportunistic mating strategies as adults and riskier strategies for obtaining resources, including theft, violence, and murder (Belsky 1997). While the preceding adaptive individual difference theories suggest that murder may be adaptive for some people, other explanations propose that homicide is not evolutionarily adaptive for anyone.

According to Martin Daly and Margo Wilson in their 1988 publication *Homicide*, homicide may be considered an over-reactive mistake, the by-product of evolved, functional psychological mechanisms (adaptations) designed for nonlethal outcomes. For example the behavior of a teenage mother who abandons her newborn in a dumpster to die may be explained by the failure of her psychological mechanisms for parenting to engage. Despite their contention that murder is a maladaptive by-product of psychological adaptations, Daly and Wilson did emphasize that an evolutionary account of homicidal behavior is extremely important.

The previous explanations of homicide are able to predict some characteristics of who is likely to become a criminal and identify some broad features of situations that may trigger criminal behavior. However they share many of the same weaknesses, including: (1) no comprehensive explanation of the patterns of homicide; (2) no predictions about when homicide, instead of some other criminal behavior, is likely to occur; (3) no explanation for a large number of the observed patterns of homicide; (4) failure to provide an explanation for why people who are not pursuing a general strategy of criminality would ever commit homicide; (5) an inability to explain why the majority of ordinary people report experiencing homicidal fantasies; and (6) failure to explain the prevalence and patterns of people's homicidal fantasies.

David M. Buss and Joshua D. Duntley proposed a new theory that humans possess adaptations for murder that addresses these weaknesses. Although some researchers have suggested the possibility of adaptations for homicide (Ghiglieri 1999; Pinker 1997) and others, such as Napoleon A. Chagnon in his 1988 article "Life

Histories, Blood Revenge, and Warfare in a Tribal Population," have argued that humans may have an instinct to kill, no other theorists have gone into depth in exploring the likely design of adaptations for homicide (see a notable exception dealing with warfare entitled *The Evolution of War and Its Cognitive Foundations* by John Tooby and Leda Cosmides).

Homicide adaptation theory (HAT) proposes that natural selection could have favored murder to solve some of the ancestrally recurrent problems that lead to conflict with others. Homicide is unique from nonlethal solutions to conflict because a dead competitor cannot inflict costs on or influence the environment of his killer in the future. According to HAT, natural selection has built in psychological processes that lead us to fantasize about murder and, rarely, kill others when we encounter contexts of conflict that were successfully won by homicide in the evolutionary past.

Homicide adaptation theory does *not* imply that homicide would have evolved to be the preferred strategy for each or any adaptive problem in all situations. In most sets of circumstances the extremely high costs of committing murder would have outweighed its benefits. The theory does propose that homicidal behavior was sometimes the best of available solutions for rare *combinations* of adaptive problems and circumstances, which provided selection pressure for the evolution of homicide adaptations.

SEE ALSO *Bandura, Albert; Crime and Criminology; Culture; Death and Dying; Morbidity and Mortality; Neuroscience; Punishment*

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Joshua Duntley

MURRAY, CHARLES

SEE *Underclass.*

MUSEVENI, YOWERI

1944–

Yoweri Kaguta Museveni, president of Uganda, was born "among the Banyankore Bahima nomads of south-western Uganda in about the year 1944" (Museveni 1997, p. 1). In 1970 he graduated with a BA in political science from Tanzania's University of Dar-es-Salaam. While there, Museveni enjoyed the tutelage of the pan-Africanist scholar Walter Rodney (1942–1980) and the Trinidadian American civil rights leader Stokely Carmichael (1941–1998). Museveni's early Marxist inclinations evolved during this period, although he is more of a nationalist cum pragmatist than an ideologue. When the dictator Idi Amin (c. 1924–2003) took power in Uganda in 1971, Museveni joined the anti-Amin movement. After Amin was overthrown in 1979, Museveni occupied several ministerial portfolios in two interim governments in Uganda before a rigged general election in 1981 resulted in a second government for Milton Obote (1924–2005). Museveni and his National Resistance Movement (NRM) and National Resistance Army (NRA) then launched a protracted guerrilla war against Obote that ended in 1986 with Museveni's takeover as president.

Upon assuming power Museveni was faced with two daunting challenges: a collapsed state and a subsistence-level economy. The NRM initiated several reforms geared toward the reconstruction of the state: the institutionalization of local councils (LCs), general elections for parliament and president, constitutional reform, the construction of a national army, the resuscitation of civil society, and a crusade against the HIV/AIDS pandemic. By 1996 Museveni had reestablished statehood, security, and relative peace, but his nineteen-year ban on political party activity and his role in the constitutional repeal of presidential term limits have constrained political competition and blocked the much-heralded transition to

democracy. Political corruption among top government officials including cabinet ministers has tarnished the image of the NRM government at home and abroad. Most notably, scandals such as the "ghost soldiers" debacle, through which military officers were paid for nonexistent staff, and the importation of defective helicopters from Belarus in 1997 earned Uganda the ignominious rank of 113 in the Transparency International's corruption index. Finally, Uganda has received a lot of criticism for its counterinsurgency tactics against the Lords Resistance Army (LRA), a rebel group that has destabilized northern Uganda and brutally massacred thousands.

Museveni revolutionized Uganda's economy by enacting liberal reforms in monetary and fiscal policy and paving the way for a free-market economy; in particular, the Uganda shilling was devalued and floated against other currencies, and forex bureaus facilitated foreign exchange. Government subsidies and state controls were removed. Through privatization, parastatals were sold and social expenditures cut. Finally, trade was liberalized, deficits minimized, and inflation kept in check. However, over 50 percent of Uganda's recurrent expenditure is serviced by donors, and notwithstanding the poverty-reduction programs such as *Entandikwa, Bonna Baggaggawale* and Universal Primary Education (UPE), unequal wealth distribution and poverty continue to be major challenges. A small, politically well-connected clique has emerged that is adept at rent-seeking and wealth accumulation, and with a per capita income of about $170, in 2007 Uganda ranks among the poorest countries in the world.

In the mid-1990s Museveni was hailed as one of a new breed of African leaders, but his exploits in neighboring Democratic Republic of Congo (DRC), Rwanda, and Sudan have harmed his status. Uganda's incursion into the DRC in 1998, ostensibly conducted to rout out anti-Uganda rebels, became a pretext for exploiting Congo's wealth. In December 2005 the International Commission of Jurists ruled that Uganda had violated Congo's sovereignty and plundered its natural resources, and it identified top Ugandan military officers, including the president's brother, Salim Saleh, as culprits. Relations between Uganda and Rwanda deteriorated as the two sought control over the mineral-rich area of eastern Congo. Until recently, Uganda has perennially accused Sudan of providing safe haven to the LRA. Sudan in turn has blamed Uganda for supporting the Sudan Peoples Liberation Army (SPLA). Thus the off-and-on relations between Kampala and Khartoum have been shaped by these cross-border conflicts.

Museveni has been at the vanguard of reestablishing the East African Community (EAC). Although the EAC is still in its infancy, he can be credited for providing strong leadership by speaking to the virtues of an expanded and integrated regional market. The jury is still out with regard to the success of the EAC, and only history will determine the achievement of Museveni's statesmanship in the region.

SEE ALSO *Amin, Idi*

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Joshua B. Rubongoya

MUSIC

The study of music from a modern social scientific perspective has a distinguished history, reaching back to Jean-Jacques Rousseau's 1781 *Essay on the Origin of Language* (1998). Major advances include the development of comparative musicology by nineteenth- and early-twentieth-century scholars such as Erich von Hornbostel, Alexander Ellis, Carl Stumpf, and Curt Sachs; Max Weber's path-breaking work on musical "rationalization" during the emergence of European capitalism in *The Rational and Social Foundations of Music* (1921); the close attention paid to music (both "classical" and "popular") and to the mass mediation of music by Theodor Adorno and other associates of the Frankfurt School of critical theory; and the development of ethnographic musical anthropology (often wrongly subsumed under the history of ethnomusicology in contemporary intellectual histories) by George Herzog, Melville Herskovits, David McAllester, John Blacking, Alan Merriam, and Steven Feld from the mid-twentieth century onward. Sociological approaches to music have proliferated in many national traditions in the twentieth century, and include such distinctive disciplines as ethnomusicology, ethnographic musical anthropology, the sociology of music, folkloristics, the psychology of music, popular cultural studies, and so-called "new" (his-

torical) musicology; even the discipline of music theory has begun to grapple with cultural and social perspectives on sound structure and musical meaning. And music has become an important focus for cultural analysis in disciplines such as comparative literature, working-class studies, sociology, media studies, performance studies, gender and sexuality studies, race and ethnic studies, and many area studies traditions.

Given the heterogeneity of these approaches and disciplines, it is challenging to summarize a paradigmatic contemporary view of music as such—that is, as an object of specifically sociological inquiry. Even limiting consideration to the approaches prevalent in the Euro-American academy in the early twenty-first century would require separate considerations of approaches from anthropology (see Feld and Fox 1994), ethnomusicology (see Ellingson 1992), popular cultural studies, historical musicology, and psychology. A survey of the broad claims and premises of these approaches, however, suggests important points of consensus.

Chief among these is that music is not only, or even primarily, a sonic phenomenon that can be considered apart from human social action. Most modern approaches to music as an object of social inquiry begin with the premise that the object of such inquiry must be what musicologist Christopher Small (1998) calls *musicking*—that is, the active making of musical sound and interpretation by socially situated agents. Whether this active process is viewed as a behavioral or mental phenomenon, or as primarily mediated by language, the sociological study of music broadly rejects a central principle of elite Western musical aesthetics that long dominated the humanistic study of music. This principle asserts the autonomy of (specifically, "art" or "classical") music from social life, and typically entails the hypostatization of the "work" of musical art, often represented by a written text ("score") that describes a phenomenologically specific sonic musical "structure," unrelated to the social organization of its creators' lifeworlds, or the music's social "context," and distinctive from any actual instantiation of the musical work in performance. In the traditionally humanistic music disciplines, as in the traditionally natural scientific ones, musical structure has been primarily explained in terms of principles of human neurobiology and cognition, or abstract mathematical models of formal systems, or histories of stylistic influence that are described as largely independent of social or cultural determinations, or in terms of particular individualistic (or conversely, aculturally universal) psychological characterizations of composers, performers, and listeners.

In contrast, the core premise of almost all sociomusical approaches is the claim that there must be *determinate relationships* between music as sound structure and the "social structure" of musical activity in particular, or more generally the social structure of the human communities in which particular idioms and genres of musicking take place. The anthropologist John Blacking famously and influentially described this relationship as one between "humanly organized sound" and "soundly organized humanity" ([1974] 1995), while anthropologist Alan Merriam offered a succinct and widely cited model for the sociological study of music as the mediation of "concept, behavior, and sound," with all three abstractions rooted in a "cultural context" of community-specific functional values (1964). Merriam described the aims of musical anthropology as "the study of music *in* its cultural context," which he later revised to become "the study of music *as* cultural context" (1964, 1977). Alan Lomax developed a systematic approach to the study of formal patterns of relationship between "folk" music "song structure" (broken down into codified descriptions of performance techniques and aesthetic ideals) and social structure (defined as a bundle of functional traits characteristic of particular forms of social organization, such as egalitarian or hierarchical political structures) (1962).

Interpretive and phenomenological traditions of theorizing "culture" reshaped Euro-American sociomusical scholarship in the 1970s and 1980s, influenced by developments in cultural Marxism and popular cultural studies, interpretive anthropology, semiotics, folkloristics, and linguistic anthropology. Most contemporary sociomusical scholars tend to describe principled relationships between abstracted sonic and social structures in terms of *mediation* rather than in terms of *correspondence*, *homology*, or *determination*. Steven Feld (1984a, 1984b, 1988) and Thomas Turino (2001), among others, have stressed the complexity of this mediation, applying semiotic and communication theory to characterize the principled relationships that might obtain between sonic and social structures.

But despite this diversity of approaches, the key problem in sociomusical scholarship has been, and remains, the question of music's social essence: How does musical practice, understood as comprising sonic, conceptual, and behavioral dimensions, either reflect, determine, or mediate social life? What kind of analytic purchase does music provide on "sociality" or "culture" that is not provided by analyzing language or other modalities of human practice and communication? And how might the social functions, meanings, and values enacted in specific forms of musical practice be understood as providing the basis for a general social theory that would explain why it is a fact that *all* humans make music? These are ultimately comparative questions that presume a universal basis for a diverse range of human practices, the boundaries of which remain poorly understood or even described, especially when

compared with the massive advances in addressing these same questions for language in linguistic theory.

Several major empirical and methodological foci have been central to the efforts of ethnomusicologists, musical anthropologists, and other sociomusical scholars to address such questions systematically. Among these foci, the most important have been the mutual embeddedness of music and language in *song* (see Feld and Fox 1994); the inextricable association between music and emotional or affective dimensions of culture; and the nexus of music and ritual (also generally understood to include dance, poetic language, and other forms of the patterned communicative embodiment of social experience and ideology). A final major focus that has emerged as central in recent years is a questioning of the adequacy of conceptual distinctions between "folk," "art," and "popular" musics, with the last category grounding an increasingly forceful critique of the investment of Western musical disciplines in an ideologically narrow conception of musical meaning and value. Beyond that, the turn to popular music as not only a legitimate object of sociomusical inquiry, but as perhaps the most important musical expression of "modern" societies has reshaped contemporary sociomusical thought profoundly.

Many contemporary sociomusical scholars challenge the longstanding ideological and analytic delimitation of "folk" musics as functional and communal and fundamentally face-to-face and oral forms of expression detached from the political and economic logics of capitalist modernity, a delimitation bound up in the nationalist projects of nineteenth-century folkloristics (an important ancestor of contemporary ethnomusicology, which remains very much concerned with questions of culture as a symbol of political identity, rather than culture in the anthropological sense of a way of life or system of values). Increasingly, many sociomusical scholars also challenge the delimitation of "art" musics—and their partial exemption from sociomusical study—as autonomous and individualistic idioms unrelated to the functions of folk and popular musics. Many contemporary sociomusical scholars, including an increasing number of musicologists concerned primarily with interpreting the Western "art" musical canon, as well as ethnomusicologists and anthropologists who write about non-Western "art" musical traditions such as Hindustani music (Neuman 1990), increasingly describe "art" musics not in terms of their transcendence of mere social function or cultural symbolism, but in terms of specific systems of elite patronage and labor organization that arise when wealthy and cosmopolitan classes and societies are able to support music as a specialized form of economic activity and leisure practice, and thus to support the making of music as a profession. Such a characterization, which eschews the idea that "art" musics are distinguished from other musics by their degree of autonomy from social life, makes the distinction between "art" musics and "popular" musics largely one of degree, because "popular" musics are generally understood primarily as products of a commercial process of mass mediation and economic exchange in the service of such non-aesthetic social functions as symbolizing ethnic, generational, and nationalistic political identities, earning a profit (the industrial apparatus of popular music production has been extensively studied since by sociologists in recent years), and providing a pleasurable leisure experience.

Conversely, many sociomusical scholars have been concerned to show the high levels of artistry and individual expressive genius characteristic of "folk" and "popular" musics, increasingly with the aid of music theorists now attempting to describe the particular dimensions of complexity and aesthetic significance in "popular" musics, which are often refractory to theoretical models designed to elucidate the structural complexity of (especially Western) "art" musics. But the overwhelming thrust of contemporary sociomusical scholarship has been to breach the wall separating the study of music as an elite "art" and the study of music as a fundamental human activity, which in modern societies has come to mean an activity imbricated with commerce and modern social functions.

Recent developments in sociomusical scholarship, heavily influenced by popular music studies, have advanced the enormous significance of modern musical and communications technologies for a vast range of contemporary musical practices, focusing on the diverse ways technological mediation shapes and is shaped by commercial, aesthetic, political, and cultural imperatives. Ethnomusicology in particular has focused on the emergent category of *world music* and, in turn, the central modern social scientific subject of cultural, economic, and political globalization, a focus that brings together perspectives on "art," "folk," and "popular" musics under the umbrella of a broader theory of cultural modernity and the global circulation of musical commodities and styles (see Stokes 2004). This turn has engendered a strong critique of the ideological history of established *sociomusical* concepts (as much as musicological ones), such as the premise of a universal human musicality or the premise of an "authentic" or "unmediated" mode of human musical experience that is not determined by particular social histories and cultural systems.

Inarguably, the sociological study of music, despite a long history of systematic work, is still in its theoretical infancy, and remains a less widely institutionalized tradition of thought than parallel humanistic and natural scientific traditions. However, the influence of sociomusical theory on those traditions has grown substantially since the mid-twentieth century, and increasingly it has become fundamental to contemporary interdisciplinary musical

thought, in the process sharply revising many deeply entrenched ideologies of musical value and assumptions about music's essential sociality.

SEE ALSO *Bluegrass; Blues; Calypso; Classical Music; Distinctions, Social and Cultural; Ethnology and Folklore; Ethnomusicology; Hip Hop; Jazz; Music, Psychology of; Popular Culture; Popular Music; Reggae; Rock 'n' Roll; Rousseau, Jean-Jacques; World Music*

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Aaron A. Fox

MUSIC, PSYCHOLOGY OF

The psychology of music is a field of scientific inquiry studying the mental operations underlying music listening, music-making, dancing (moving to music), and composing. The field draws from the core disciplines of psychology, cognitive science, and music, and music-related work in the natural, life, and social sciences. The most prominent subdiscipline is music cognition, in which controlled experiments examine how listeners and performers perceive, interpret, and remember various aspects of music.

The field traces its origins to experimentation with musical instruments in ancient Greece and China. Aristoxenus (364–304 BCE) argued that one should study the *mind* of the listener, not merely the collection of sounds impinging on the ear. Descartes, Galileo, and the eighteenth-century French composer Jean-Philippe Rameau, among others, were interested in musical scales and questions of consonance and dissonance (i.e., pleasant/unpleasant sound combinations). In the late 1800s, the German physicists Hermann von Helmholtz and Gustav Fechner, and the German psychologist Wilhelm Wundt, applied modern scientific methods to study musical experience. The Gestalt psychologists (e.g., Christian von Ehrenfels and Max Wertheimer) asked how a melody retains its identity under transposition, that is, with all component pitch or duration values changed but their relations preserved. In the early twenty-first century, music psychology is experiencing a renaissance, with an exponential increase in scholarly activity over the preceding century (700 papers were published in 2006). This surge of interest follows increasing communication across scholarly disciplines, the emergence of cognitive psychology in the 1960s, and new technologies that facilitate the preservation, presentation, and manipulation of sound (e.g., magnetic tape, hard disks, computers, digital signal processing).

Prominent lines of research include: (1) perception and cognition (e.g., perceptual thresholds—the smallest perceptible differences in pitch, loudness, etc.; memory for musical attributes such as melody, rhythm, timbre, etc.; attention and perceptual organization including fusion/separation of voices and instruments); (2) development (how music behaviors change across the life span); (3) performance, motor planning, and the attainment of expertise; (4) assessment and predictors of musical ability; (5) the role of music in everyday life; (6) disorders of music processing; (7) cross-cultural similarities and differences; (8) the impact of music training on nonmusical domains; (9) education (how best to teach music); and (10) the biological and evolutionary basis of music. Scholars in the field have taken increased interest in musi-

cal emotion, music-language comparisons, and neural substrates of musical behaviors, the assessment of the latter in particular having been made possible by advances in neuroimaging.

The media-promoted notion that passive exposure to classical music (especially Mozart) enhances intelligence is exaggerated. The original research suffered from inadequate controls, with the effect being attributed to arousal; and equal short-term benefits have been seen from listening to books on tape or performing any mentally stimulating task prior to taking cognitive tests. Modest long-term benefits on academic performance have been linked to systematic or formal music training, perhaps because such training incorporates components of school-based learning. Some studies—and some anesthesiologists—have noted that listening to music reduces pain and stress (probably by distraction effects or by increasing endorphins and dopamine) and increases feelings of well-being and social relatedness.

A central controversy is music's historical and neuroanatomical relationship to language. Some cross-cultural similarities in the structure of music (e.g., octaves, scales) and in music processing probably arise from cognitive constraints; these remain to be identified, but cross-species studies are revealing innate constraints.

A long-standing problem affecting public policy (and the distribution of educational opportunities) is how to identify musical aptitude, or the potential to acquire musical expertise. Some scholars contend that genetic variations primarily underlie musical ability or talent, whereas others dispute this, arguing instead that high levels of music achievement are primarily attributable to the combined effects of motivation and effort. Impediments to progress on this issue include difficulties defining musical talent, quantifying performance for component skills (rhythm, pitch, melody, harmony), and their manifestations in complex domains such as performance, interpretation, and composition.

Much of the neural basis for music perception and cognition remains obscure, particularly at the level of the cerebral cortex. The stability of pitch over large dynamic ranges, how multiple instruments and voices are separated, the creation and violation of musical expectancies, and how melodies are recognized under transposition, remain unsolved.

Comparatively little work has been conducted outside of Western musical contexts. The relation between music and culture, and the evolutionary origins of music, remain relatively understudied. Prominent ongoing inquiries concern the social psychology of music—the influence of peer groups, music and ritual, trance states, and automatic (machine) recognition of music and style; and identifying the neural substrates of musical behaviors.

SEE ALSO *Classical Music; Cognition; Culture; Education, USA; Music; Neuroscience; Popular Music; Social Psychology*

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Daniel J. Levitin

MUSLIMS

Muslims are the second-largest religious group in the world, after Catholics (Saenz 2005). The group is racially and ethnically diverse, but the Muslim identity has taken on racial connotations at various points in U.S. history, most recently after the terrorist attacks on the World Trade Center in New York City and the Pentagon building near Washington, D.C., on September 11, 2001. Although the racialization of a religious identity is not a new phenomenon—for example, Jews experienced an identity change during and after the Holocaust—the impact of this transformation and increased "otherization" of Muslims and Muslim Americans has profound implications for a group that is seen as both a religious and a cultural threat to the mostly white, Christian U.S. population.

BELIEFS AND PRACTICES

Currently, over a billion Muslims live in Europe, Asia, Africa, and North America. There are roughly forty-four Islamic countries in the world today. Although Muslims vary in their particular religious practices and cultural beliefs from region to region, the majority follow the same basic tenets of Islam (Esposito 1998).

Islam is one of three Abrahamic religions, along with Christianity and Judaism, that trace their communities back to the biblical Abraham. The basic teachings of Islam were said to have been revealed to Muhammad (c. 570–632), the final prophet, and collected and recorded in the Qur'an. Muslims rely on the Qur'an for the fundamental Islamic teachings and guidelines for their lives. Aside from the teachings in the Qur'an, Muslims also believe that Muhammad led an exemplary life that all Muslims should attempt to emulate. These examples can be found in the hadith, the documented reports of the prophet's life, which Muslims also rely on for spiritual and practical direction.

In addition, every Muslim is required to follow the five pillars of Islam—obligatory practices outlined in the Qur'an (Nasr 2003). The first of these is the profession of faith, where a Muslim declares, "There is no god but God and Muhammad is the messenger of God," emphasizing the monotheistic nature of the religion (Esposito 1998, p. 68). In making this declaration, a person becomes a Muslim. The second pillar is prayer, or *salat*. Muslims are instructed to pray at specific times, five times a day. Prayers begin with the *azan*, the call to prayer, followed by an ordered series of recitations from the Qur'an in conjunction with bowing and prostrations toward the direction of Mecca. *Zakat*, the third pillar of Islam, is a religious tax required of those who have enough money to give to the poor and needy. Giving of alms is not voluntary, but rather a duty defined by *sharia*, or Islamic law. Fasting during Ramadan is the fourth pillar of Islam. Every year, Muslims are required to fast from sunrise to sunset during the Islamic month of Ramadan, based on the lunar calendar. According to John Esposito (1998), this is a time for Muslims to reflect on their spiritual beliefs and gratitude for good health and wealth, and to remember their duties toward those who are less fortunate than themselves. The final pillar of Islam is pilgrimage, or hajj. During the twelfth month of the Islamic calendar, Muslims who are physically and financially able are required to perform the pilgrimage to Mecca; this needs to be done only once in a person's lifetime. Once in Mecca, Muslims perform a series of rituals such as circling the Ka'ba (House of God) while reciting verses from the Qur'an. According to Seyyed Nasr "hajj signifies a return both to the spatial center of the Islamic universe and to the temporal origin of the human state itself" (Nasr 2003, p. 95).

ISLAMIC CIVILIZATIONS

Islamic civilization grew rapidly after the death of Muhammad in 632. Over the course of the century beginning around 600 CE, an Islamic Empire spread to occupy what was once known as Arabia, Central Asia, North Africa, and parts of Europe. Throughout the next few centuries, Islamic imperialism had a profound effect on the arts, sciences, and philosophy. Many scholars note that during this time Islam advanced beyond predominantly Christian Europe in many areas, including trade and commerce, exemplified by the urban centers that popped up all across the Islamic Empire (Turner 1995; Esposito 1998; Nasr 2003). Islamic scholars greatly contributed to the progress of math and science, expanding on Greco-Roman geometry and advancing algebra and trigonometry. Universities and academies flourished in Islamic countries. Nonetheless, although Islamic contributions were significant, they are often overlooked in Western cultures. The Enlightenment brought about a positivist view of the world that refuted religious explanations, ignoring the contributions of Islamic civilizations while promoting eurocentric scientists and artists.

SECTS OF ISLAM

Islam has never been a homogenous or unified religion. During the era of Islamic imperialism there were vast differences in Islamic practices and the development of Islamic cultures. The best known sects today are Sunni Islam, Shiism, Sufism, and the Nation of Islam.

Sunni and Shiite Islam Sunni Muslims constitute the majority of the roughly one billion Muslims in the world today; Shia comprise the second-largest Islamic sect. After Muhammad's death a schism occurred over who should be the next caliphate, or leader of the Muslims. Abu-Bakr became the first caliphate after Muhammad, followed by Umar, Uthman, and then Ali (the son-in-law and cousin of Muhammad). The Shia believe that Ali should have been the first caliphate because of his blood relation to Muhammad. Sunnis practice a more decentralized version of Islam than the Shia, which does not require one religious authority, but relies instead on a community of learned religious scholars and the standard religious texts. Thus, Sunnis are more literalist than Shia when interpreting the Qur'an and hadith. Shia follow the Qur'an too, but they rely on imams, religious leaders, who they see as divinely guided by God to help them interpret the Qur'an. Thus, they follow a more authoritarian form of Islam compared to Sunnis, who are more communitarian in their practice.

Sufism Sufis follow a very different version of Islam than Sunnis and Shia. Whereas Sunnis are more literalist in their interpretation of the Qur'an, the Sufis' interpretation is more symbolic and allegorical, and their religious practices are often described as mystic. Sufism developed out of a desire to return to a purer and more spiritual version of Islam as a reaction to the corruption that Sufis felt had became rampant during imperialist Islam. Hence, Sufis embrace an ascetic way of life and reject materialism in an attempt to return to the lifestyle of Muhammad's time. Sufism focuses particularly on God's love and meditation.

The Nation of Islam The Nation of Islam is a newer sect of Islam, introduced to African Americans in the 1930s through Wallace D. Fard (1891?–1934?) and then made popular in the United States by Elijah Muhammad (1897–1975). Fard took passages from both the Bible and the Qur'an and preached a religion that encouraged black liberation, using messages from Islam about brotherhood and social justice to encourage African Americans to reject the domination of their white oppressors. Elijah Muhammad took over leadership of the Nation of Islam after Fard disappeared in 1934. He claimed that Fard was Allah (the Arabic word for "God"), and that he was his messenger. It was during Muhammad's leadership of the Nation of Islam that the sect welcomed the most conversions, due to the popularity of one of Elijah's disciples, Malcolm Little, or Malcolm X (1925–1965), and the racially charged climate of the 1960s in the United States. As the civil rights movement gained momentum, the Nation of Islam offered an alternative to African Americans who lived in mostly poor urban areas and who felt that their immediate issues and needs were not being addressed by the leaders of the mainstream movement. The Nation of Islam lost members in 1964 after the split with Malcolm X and the passage of the Civil Rights Act, and suffered a further decline in membership after the death of Elijah Muhammad in 1975. Elijah Muhammad's son Warith Deen Muhammad (b. 1933) succeeded him and converted to Sunni Islam, taking many leaders with him and leaving the Nation of Islam under the leadership of Louis Farrakhan (b. 1933).

MUSLIMS AFTER SEPTEMBER 11, 2001

The events of September 11, 2001, had an impact on Muslims around the world. Since then, both Afghanistan and Iraq have been invaded by the United States with the support of a number of allies. In the Euro-American media, anti-Muslim rhetoric demonstrates a simplified and reductionistic understanding of Islam and its followers rather than depicting the various political and cultural particularities of Muslims from different Muslim countries. Moreover, Muslims are often portrayed as a homogenous group fanatical in their religious beliefs, and either participants in, or supporters of, terrorism. Muslims in the United States face increasing racism through racial profiling and the perpetuation of negative stereotypes in the media. Jack Shaheen's *Reel Bad Arabs* (2001) identified roughly 900 American movies from the 1900s through the early 1990s in which Muslims and Arabs have been negatively stereotyped. Because these images are so long-standing, they s eem to Americans to be "normal," "natural" attributes of Muslims, and this has led to public and political support for the creation and implementation of racist laws and policies such as the U.S. Patriot Act, which has curbed the civil rights of Muslims in the United States and spurred military action against Muslim-majority countries.

The United States is not the only country where Muslims face racism and persecution due to misunderstanding of their culture and religious beliefs. In France, Muslim girls are forbidden from wearing the *hijab* (headscarf), and in 2005 a Danish newspaper published a political cartoon that depicted Muhammad as a terrorist. Acts of violence by Muslims are stripped of their political motivations and reduced to religious fanaticism; images of Muslims as violent terrorists perpetuate an already anti-Muslim ideology that Islam is a threat to both modernity and a democratic world. In truth, Islam is not a monolithic religion; Muslims vary in their cultural makeup, political views, level of religiosity, and in the type of Islam that they choose to practice.

SEE ALSO *Enlightenment; Fundamentalism, Islamic; Islam, Shia and Sunni; Jihad; Muhammad; Mysticism; Orientalism; Pan-Arabism; Racialization; Racism; Religion; September 11, 2001; Stereotypes; Terrorism*

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MUSSOLINI, BENITO
1903–1945

Universally recognized as the founder of fascism, Benito Mussolini remains an enigmatic figure about whom historical interpretations differ. He was born in Predappio, Italy, on July 29, 1883, and died in Mezzegra on April 28, 1945. Before 1935 world opinion viewed him as the person who had saved his country from communism and revived its fortunes, and Italian fascism had many imitators. After World War II Mussolini's reputation changed from that of a savior to that of an inept and brutal dictator, if not a clownlike figure. From the historiographical viewpoint it took until the 1970s for more serious interpretations to emerge.

THE EARLY YEARS

The son of a socialist blacksmith and a devout Catholic schoolteacher, Benito Mussolini was born in the Romagna. He exhibited violent tendencies as a youth and alternated between social interaction and withdrawal. In an attempt to impart discipline to her son his mother sent him to a Catholic boarding school, but Mussolini rebelled against the harsh discipline and resented the discrimination against the poorer students.

Even at that early age Mussolini called himself a socialist, and it was through his socialist contacts that he found a teaching position in 1902, which he had to leave because of a scandalous love affair. He spent time in Switzerland and Trent writing for Italian socialist newspapers. He avoided the draft at first but later fulfilled his military obligations and spent several years teaching.

Between 1906 and 1912 Mussolini established a national reputation as the leader of the Socialist Party in Forlì and as a journalist. During that period the Italian Socialist Party was split between reformists and revolutionaries such as Mussolini who believed in violence. In 1911 Italy declared war on Turkey over Libya. Mussolini was arrested and jailed for blocking troop transports. At the Congress of Reggio Emilia in 1912 he successfully proposed the expulsion of old and respected reformists. He later became editor of *Avanti!*, the socialist daily newspaper, infusing it with a violent tone, greatly expanding its circulation, and increasing party membership. In June 1914 his calls for revolution seemed to come true with a serious revolt in the Romagna known as Red Week. However, when the movement collapsed, Mussolini lost his belief in a revolution driven by Marxist principles but retained his faith in revolution as a goal in itself.

POLITICAL ASCENDANCY

When World War I broke out, Mussolini supported the Italian Socialist Party position favoring neutrality but soon changed his mind because he thought the war would produce a revolution. The party expelled him, and Mussolini accepted financial support from industrialists to found his own newspaper, *Il Popolo d'Italia*, leading socialists to charge that he had betrayed their cause.

Mussolini participated in the conflict as a corporal and was wounded. After the war he created a movement that he considered both socialist and nationalist. The new movement took the name *fascist* from a meeting of his supporters organized as the *fasci di combattimento* in Milan on March 23, 1919.

The fascists presented themselves in the 1919 elections with a radical program but did not elect anyone. In 1919 and 1920 violence by leftists advocating a revolution divided Italy. Nationalist groups fought the leftists in the streets, and fascist squads, known as the Black Shirts because of their distinctive uniform, distinguished themselves for their violence. They gained support in rural areas, where returning peasant soldiers who had been promised land threatened large landholders. In the cities strikes and fighting raged as the country struggled to return to a peacetime economy amid unemployment and business crises. The fascists received support from moneyed interests and abandoned their 1919 program.

In 1921 and 1922, leftist influence in the country declined and the Socialist Party split into three major groups—revolutionaries, reformists, and communists—that were unable to resist the fascists. In that situation of political instability traditional politicians refused to lead the country. On October 28, 1922, the fascists marched on Rome and King Victor Emanuel III refused to sanction martial law because he feared civil war. He offered the post of prime minister to Mussolini, who promised to bring stability and peace to the country.

Mussolini's first government included fascists in the most important posts and received a vote of confidence even though the parliament included only thirty-five fascist deputies; the majority assumed that it could vote the government out. In the 1924 elections the fascists received a majority as a result of widespread intimidation. Giacomo Matteotti, a socialist deputy, denounced the violence and called for new elections but was murdered. That event caused a crisis in the country that the opposition

could not exploit because Mussolini retained the king's support. Between 1925 and 1929 Mussolini altered Italian institutions and successfully set up a dictatorship.

Known as the Duce, Mussolini established a one-party state, brooked no political opposition, and created a secret police, although he controlled the country through the established police forces. Many Jews supported his regime, and there was no official anti-Semitism until 1938, when, to the surprise of many people, racial laws were enacted. In the economic sphere Mussolini followed traditional policies until the Great Depression. Later he worked through nonfascist economists to establish an innovative state holding company (IRI) that rescued failing companies to save the economy. The fascists also established a corporate state, which divided the national economy into sectors run by institutions in which employers and employees were represented; in practice, however, employers had control. Both strikes and lockouts were prohibited.

In foreign policy Mussolini talked tough but was too weak to act unilaterally. In 1934 he stopped Hitler from absorbing Austria. The failure of the Allies to provide what he considered a proper reward led him gradually to support Hitler because he believed that he could exploit the balance of power that was emerging in the interwar period. His invasion of Ethiopia and intervention in the Spanish Civil War enmeshed him with Hitler, and he later proved unable to resist Hitler's embrace. Under Mussolini's leadership and against the advice of his foreign minister, Italy entered into the "pact of steel" with Germany on May 22, 1939. This agreement assumed that war would break out in three years and obliged both countries to coordinate their military action and economic production.

THE OVERTHROW

When World War II broke out before three years had passed, Mussolini declared Italian neutrality but then, convinced that Germany would win, entered the war on its side despite Italian military unpreparedness. The poor performance of his nation in the conflict and the invasion of Sicily in 1943 led to the overthrow of the Duce. Mussolini was imprisoned but freed in a daring German rescue. The Germans brought him to northern Italy to head the Italian Social Republic as the Allies fought their way up the Italian peninsula. He tried to flee with the retreating Germans at the end of the war but was recognized by Italian resistance fighters, handed over by the Germans, and shot. His body, along with that of his mistress, was hung by its heels at a gas station in Milan and exposed to mob violence.

A small Italian neofascist party survived the war. That movement later became more moderate, shed its extremist elements, and participated in the parliamentary structure of the Italian republic that replaced Mussolini's regime.

SEE ALSO *Authoritarianism; Colonialism; Dictatorship; Fascism; Hitler, Adolf; Left and Right; Personality, Cult of; Revolution; Socialism; Spanish Civil War; World War I; World War II*

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Spencer M. Di Scala

MUTH, JOHN

SEE *Efficient Market Hypothesis; Expectations, Rational.*

MUTUALLY ASSURED DESTRUCTION

SEE *Retaliation; Deterrence, Mutual.*

MYERS-BRIGGS TYPE INVENTORY

SEE *Equilibrium in Psychology; Jung, Carl.*

MYOPIA

SEE *Farsightedness.*

MYRDAL, GUNNAR

1898–1987

Gunnar Myrdal, a Swedish economist and 1973 Nobel Prize winner for his early work on monetary theory, made major contributions to macroeconomic theory, international economics, development economics, economic methodology, and social and economic policy. He was a

critic of mainstream neoclassical economics and a proponent of institutionalist economics.

Myrdal's early work on money was theoretical in nature. As a leading contributor to the Stockholm school, he followed Knut Wicksell's (1851–1926) cumulative process analysis, in which cumulative inflation occurs when banks hold the loan rate of interest below the natural rate of interest (at which saving out of full-employment income is equal to investment), resulting in a high level of investment demand. In a 1931 work (published in English in 1939 as *Monetary Equilibrium*), Myrdal examined the implications of banks maintaining a high loan rate, which results in low investment, low aggregate demand, and unemployment. This analysis is sometimes seen as a precursor of Keynesian analysis. However, it focuses more on expectational issues and dynamics rather than on equilibrium with unemployment, which is arguably central to Keynesian analysis.

Following this, Myrdal and his wife, Alva, became actively involved with politics and policymaking, playing a major role in the creation of the Swedish welfare state in the 1930s. In the 1940s Myrdal served in the Swedish parliament, as chairman of the Planning Commission, as minister of Trade and Commerce, and as executive secretary of the United Nations Economic Commission for Europe.

Following his purely theoretical work on money, his scholarly contributions became increasingly critical of mainstream neoclassical economics, leading him to adopt what may be called the institutionalist approach. In addition to giving real-world institutions a central role in his analysis, Myrdal's approach emphasized the role of values and the importance of noneconomic factors. He saw an interdependence between economic and noneconomic factors, and criticized the neglect of noneconomic factors by most economists. In addition, he was critical of the tendency of many economists to hide their values under the guise of objectivity, and he argued that economists should make their value premises explicit; his own values emphasized equity and concern for the poor and the underprivileged, in addition to efficiency. Although these aspects of his writings mark a departure from his earlier work, his emphasis on cumulative processes and dynamics, in contrast to the static equilibrium analysis of neoclassical economics, reveal continuity.

In his *An American Dilemma* (1944), Myrdal applied the cumulative causation approach to the study of race relations in the United States, explaining discrimination and the poor conditions of African Americans in terms of the interplay of low opportunities, low incentives, and hence low effort (for instance, in obtaining a better education). In *Economic Theory and Under-developed Regions* (1957), he examined the problem of inequality among nations, and explained increasing international inequality in terms of cumulative causation. He pointed out that although there are spread effects from rich to poor countries—due, for example, to economic expansion in the former increasing the demand for products from the latter—backwash effects, involving increasing returns and external economies leading to a high level of profitability in rich countries and the siphoning of capital from poor countries, tend to outweigh them. While the cumulative causation concept provides a fruitful approach to analyzing vicious circles and rising inequality, it is problematic because it does not distinguish between unstable cases and situations in which the cumulative process converges to a stable equilibrium.

Myrdal's monumental three-volume *Asian Drama* (1967) provides an excellent example of the institutionalist, interdisciplinary approach to the study of the problems of less-developed countries. Among the many contributions of this work are: the analysis of the implications of dysfunctional land tenure systems, such as sharecropping, on agricultural productivity and growth; the crisscrossing of interest groups based on caste, religion, and economic status, which stands in the way of organizing the poor in favor of land reforms; and the concept of the "soft" state that is unwilling to employ coercion to implement its declared policy goals, reflecting the power structure and the gap between the declared and real intentions of the state (rather than its gentleness).

Myrdal's analysis of economic problems caused him to question the ability of the market to produce equitable growth and development. This view, and his concern for economic and social justice, made him a strong advocate of interventionist government policies and planning. He was also in favor of applying the concept of the welfare state to the world as a whole, for instance, through increases in foreign aid to poor nations. However, his discussion of soft states and his criticism of foreign aid because of its diversion to corrupt politicians suggest that he was not blind to the problems of the interventionist approach.

SEE ALSO *American Dilemma; Cumulative Causation; Stockholm School*

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Amitava Krishna Dutt

MYSTICISM

It is a major premise of the mystical traditions that it is possible for humanity to come into direct contact with the one God, the one Goddess. These traditions can be found in many places and in many eras. This entry provides a brief introduction to this profound area of human experience.

One such tradition can be found in the Holy Kabbalah, which embodies the mystical, esoteric teachings of the Jewish faith. Its primary glyph is the tree of life, which is a complex symbol that represents both the microcosm and the macrocosm (the symbol of which is the Star of David—a hexagram uniting two triangles). The tree is composed of ten emanations of God, called *sephira*, and twenty-two connecting paths that correspond to the twenty-two letters of the Hebrew alphabet. Each *sephiroth* is associated with a different vision experience. The two greatest of these visions are the vision of God face-to-face and the vision of union with God. It is interesting to note that even Moses, who received the Ten Commandments on Mount Sinai, was denied the vision of God face-to-face. He was only allowed to see his "hind parts." The vision of union with God was experienced by several prophets in the Old Testament, including Elijah. Christians refer to this experience as being "translated." Once one experiences this vision, in accord with Kabbalistic teachings, one is taken from the earth. A relatively modern manifestation of these teachings can be found in the writings of the Hermetic Order of the Golden Dawn, an organization that only lasted about twenty years but was composed of such important figures as William Butler Yeats (1865–1939), Dion Fortune (1890–1946), and Israel Regardie (1907–1985). Offshoots of this group can be found today.

The Holy Kabbalah is the centerpiece of a larger body of knowledge referred to as the Western esoteric tradition. It included such people as the Swiss physician Paracelsus (c. 1493–1541), Nostradamus (1503–1566), and Isaac Newton (1642–1727). These alchemists, in their search for the philosopher's stone, sought the hidden truths by which they could successfully engage in a process called the *great work*. This process entails transforming all that is lead or dross within one's nature into pure gold. These transformational processes allow one to transcend ordinary human limitations and bring one into contact with the higher powers and the beings through whom these powers flow. This approach is referred to as *process theology*, which is in close harmony with mystical traditions. This process is often described as being "on the path" or as one's "personal journey." Perhaps the best known example of this is the story of Saul who was blinded for three days and nights on the road to Damascus. There he met a holy man by the name of Ananias who aided him in his spiritual transformation by which he became Paul, the Apostle.

The mystical tradition exists within Christianity as well, although it has been historically suppressed. The founding fathers, such as Origen (c. 185–254 CE), placed much more emphasis on the inner Christ than is true of most of Christendom today. The Gnostic movement in the early church promoted this approach by developing practices by which one could experience the Christ principle found deep within the consciousness of all people. This gave it a universalistic thrust that would appeal to mystics of all ages. Mahatma Gandhi (1869–1948) stated, when asked what religion he was, that in his true essence he was a Christian, in his true essence he was a Hindu, in his true essence he was a Buddhist. Implied in this answer, is that all world religions flow from the same source. It is their concrete expressions that give rise to dogmatism and social conflict. Were all people to adopt this perspective, religious strife, bigotry, and arrogance would come to an end.

The centerpiece of Buddhism is the achievement of nirvana or enlightenment. That experience is so powerful that it releases one from the wheel of rebirth. This event happened in the life of Prince Siddhartha (who became an enlightened one) when he sat under the banyan tree 2,500 years ago and declared unto humanity that all is sorrow. He had what the Kabbalah describes as the vision of the sorrow of the world. He then gave us the noble eightfold path by which one can experience the ineffable bliss. This process entails the raising of the kundalini fire up the spinal chord, vivifying each chakra along the way until it reaches the thousand-petal lotus located within the crown chakra. Each petal of the lotus represents a different spiritual power. Thus, an enlightened one is born. Successful completion of this process frees one from the wheel of rebirth.

Native American spiritualism provides yet another fine example of mysticism. Wankan Tanka, the Lakota term for the Great Spirit, suggests the awe one experiences when one draws near these primal forces. Lakota culture, like many Indian tribal cultures, emphasizes the harmony ethos in which tribal members are encouraged to place their lives in harmony with these powerful forces found in nature. Such rites as sweats, crying for a vision, and the most sacred of all Lakota rituals, the sun dance, aid one in this process, termed the *medicine path*. The focus here is to come into an understanding of who one is and the spir-

itual purpose for which one has been placed on earth. Native culture is about being. Anglo culture is about doing.

Modern psychology also contains traditions that speak to these exalted states of consciousness. William James (1842–1910), the father of psychology, wrote *The Varieties of Religious Experience* (1902), which provides descriptions of these experiences. More recently, transpersonal psychologists have devoted considerable effort to better understand these phenomena. The American psychologist Abraham Maslow (1908–1970), a forerunner of this tradition, described these events as peak experiences that can have great meaning for those who experience them. Regardless of the tradition to which one subscribes, all agree on the premise that it is possible to come into contact with God.

SEE ALSO *American Dilemma; Buddhism; Christianity; Cox, Oliver C.; Gramsci, Antonio; Hegel, Georg Wilhelm Friedrich; Ideology; Judaism; Lukacs, Gyorgy; Marx, Karl; Marxism; Myrdal, Gunnar*

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Paul R. Newcomb

MYSTIFICATION

The obfuscatory dimension of human reason has been a subject of Western philosophical investigation since Aristotle, and the term *mystification* has been deployed in various ways to explain how deception, disguise, and dissimulation play a role in driving human behavior. It has relevance throughout the social sciences—for example, in experimental psychology, with game theory in political science and economics, and in sociological analyses of propaganda and mass action—as both a methodological approach for testing behavioral subjects and as an explanatory paradigm for rationalizing human action. For the purposes of this article, discussion is principally limited to the most developed employment of mystification as a category of theoretical analysis originating in the Marxian political economic tradition. When reference is made to mystification in Marx, one of three processes is potentially being referenced: a mystification of the consumptive and productive processes that underlie the commodity; a mystification of historical truth through the promulgation of narratives sympathetic to the structural position of dominant classes; or a philosophical mystification of the important role practice plays in driving history through the relativization of ideological positions over material reality.

MYSTIFICATION OF THE COMMODITY

Karl Marx's discussion of commodities in volume 1, part 1, of *Capital* famously differentiates between use and exchange values, where

> as use-values, commodities differ above all in quality, while as exchange-values they can only differ in quantity.… if we make abstraction from its use-value, we abstract also from the material constituents and forms which make it a use-value [in particular, the labor embodied in its construction]. It is no longer a table, a house, a piece of yarn or any other useful thing. *All its sensuous characteristics are extinguished* (Marx 1990a, p. 128; emphasis supplied).

He suggests that labor time expenditures, though obscured in the exchange of its product, are calculable, while value in exchange derives socially, thus making the commodity more "mystical," "abounding in metaphysical subtleties and theological niceties" (p. 163). Thus through their exchange, commodities "appear as autonomous figures endowed with a life of their own, which enter into relations both with each other and with the human race," a process Marx regards as "fetishism which attaches itself to the products of labour as soon as they are produced as commodities, and is therefore inseparable from the production of commodities" (p. 165). Marx's writings concerning fetishism have been extensively referenced and syncretized with other categories of analysis within the social sciences and humanities, particularly with respect to the concept of consumption (not only of commodities, but also of ideas, literature, art, and so on). In Marx and his more orthodox interpretation, however, fetishism's meaning (with respect to the production commodities on the one hand and capital on the other) is quite specifically economistic.

Volume 3 of *Capital* contains an exhaustive cost accounting of the mystification of the productive process, in which Marx provides a very thorough econometric differentiation between profit and surplus value and differentiates his method from that of classical economics. Marx

concludes the volume with a critique of the classical economic "Trinity Formula" of "capital-profit (or better still capital interest), land-ground-rent, and labour-wages," wherein he argues that

> this economic trinity [and its itinerant] connection between the components of value and wealth in general and its sources completes the mystification of the capitalist mode of production, the reification of social relations, and the immediate coalescence of the material relations of production with their historical and social specificity: the bewitched, distorted and upside-down world haunted by Monsieur le Capital and Madame la Terre, who are at the same time social characters and mere things (Marx 1990b, pp. 968–969).

While this cost-accounting antidote to mystification continues to enjoy some popularity among Marxist economists, the thrust of this intervention in contemporary social science can largely be found in the proliferation of commodity studies increasingly popular since the mid-1980s. There is also an extensive body of work in cultural studies, beginning most prominently with the critical theory of the Frankfurt School, which, rather than focusing on an accounting or analysis of production, theorizes the commodity principally in terms of consumption, through studies of media such as advertising, art, and literature. The contemporary literature on fetishization (of everything from commodity fetishization to the fetishization of the state) in fact stems very much from these particular theoretical developments.

HISTORICAL MYSTIFICATION

Capital, volume 1, part 8, on "So-Called Primitive Accumulation," presents an alternative history of the rise of capitalism focused on political economic inequities arising out of a history of exploration and conquest by the West. In it, Marx argues that the bourgeoisie has mystified the development of capitalism by reifying the birth of capitalism as a story about the saving and hard work of Europeans. "So-called primitive accumulation" is thus simply "the historical process of divorcing the producer from the means of production" (1990a, p. 875). He argues here that in fact the resources accumulated in the West for its massive capitalist expansion emerged from centuries of brutally extractive and exploitative relationships with the non-West, particularly with expedition and colonialism in the Americas.

Marx's intervention inspired a large body of work in the social sciences and economic history devoted to discussing the dominance of capitalism in world historical terms and the matrices of its relationship with the non-West, most conspicuously with the work of Andre Gunder Frank, Samir Amin, Immanuel Wallerstein, and Walter Rodney. At the same time, reactions against Marx's theory of capitalist development have emphasized its cultural dimensions, beginning notoriously with Max Weber's *The Protestant Ethic and the Spirit of Capitalism*, which argues the success of modern capitalism as having derived from the asceticism of European Protestantism and the moral values placed on saving and accumulation.

While the Marxian analysis of historical mystification provides a useful backdrop for understanding how knowledge is produced and politicized, claims of mystification in historical representation more generally have had an active scholarly life outside the Marxian tradition. This is evident in the historical debates about the emergence and development of modern racism. Denying any connection to Marx, the sociologist Oliver C. Cox criticized many of his peers, such as Robert Park and Gunnar Myrdal, as well as anthropologists (notably Ruth Benedict), for suggesting that racial inequality was based on institutionalized marginalization or ethnocentrism. He argued conversely that racism was historically contingent upon class inequalities and programs of global capitalist expropriation and colonialism that prompted racial antagonisms. Cox even suggested that Myrdal's famous Carnegie studies of race (which, following W. Lloyd Warner, suggested an analogy between race and caste) were "mystical." Critics maintained Cox's assertions were mystical themselves, ignoring a long history of racial antagonisms that predated capitalism. The debate highlights competing concerns about the predominance of global capital institutions against charges that economic reductionism inheres in such an approach.

PHILOSOPHICAL MYSTIFICATION

The final dimension of Marx's discussion of mystification relates to his insistence on developing a materialist theory of praxis. A student of Georg F. W. Hegel, Marx was concerned with adapting Hegel's *Grundilinien der Philosophie des Rechts* (1821; Eng. trans., *Elements of the Philosophy of Right*, 1991) for a historical approach grounded less in thoughts and ideas and more in the reality in which they are performed. The postface to the second edition (1873) of *Capital* contains Marx's most relevant criticism of the obfuscatory power of philosophy as complicit in the practical building of power relationships:

> the mystification which dialectic suffers in Hegel's hands by no means prevents him from being the first to present its general form of motion in a comprehensive and conscious manner. With him it is standing on its head. It must be turned right side up again, if you would discover the rational kernel within the mystical shell. (Marx 1990a, p. 103)

Marx's tempered criticism of Hegel (he refers to him in the same breath as a "mighty thinker") sees his own dialectical method as "exactly opposite," where "the ideal is nothing but the material world reflected in the mind of man" (1990a, p. 102). Marx thus sees himself standing steadfast against the complicity of a German idealist legacy that abetted the legitimacy of the state and empire: "in its mystified form, the dialectic became the fashion in Germany, because it seemed to transfigure and glorify what exists" (1990a, p. 103).

Marx's materialist legacy continues to be a subject of much debate in the social sciences. Regardless of its merits or shortcomings, there is an extensive tradition of scholars (beginning prominently with György Lukács, Antonio Gramsci, and here also with elements of the Frankfurt School) concerned methodologically with outlining the development of ideology through theories of practice. Scholars such as Gramsci (and later Michel Foucault) maintain that mystification enables forms of domination based on social and cultural institutions that inculcate and naturalize inequitable social relations, rather than domination legitimated by force. Of course, such works tend to be more critical and radical in their approach but nonetheless recall writings by Émile Durkheim, Weber, and others on religion and the origination and maintenance of social order. Others are unabashed in their appreciation of the benefits of mystification. The American political-philosophical movement known as neoconservatism (fomented mostly through the work of Leo Strauss) extols the virtues of mystifying a self-destructive public through articulated deception (a "noble lie") by a vanguard elite. Still, among the vast majority of social scientists, mystification remains a troublesome social process around which conversations about deception, hegemony, and social justice occur.

SEE ALSO *American Dilemma; Cox, Oliver C.; Gramsci, Antonio; Hegel, Georg Wilhelm Friedrich; Ideology; Lukacs, Gyorgy; Marx, Karl; Marx, Karl: Impact on Anthropology; Marxism; Myrdal, Gunnar*

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Jeffrey Mantz

MYTH AND MYTHOLOGY

In educated circles, myths or mythical materials can be concepts, images, symbols, and narratives. They may be regarded variously by different persons, within specific sociohistorical contexts, as being more or less important at different stages of biosocial development. Accordingly, adolescents may deconstruct mythic heroes during the transitions from the sixth to the twelfth grade.

Myths have often been labeled as "sacred," or at least as essential parts of the religio-ritual-scriptural complexes of religious institutions. This has been the dominant position within myth studies, as represented in the title of a collection of essays edited by the American folklorist Alan Dundes (1934–2005), *Sacred Narrative: Readings in the Theory of Myth* (1984). Dundes begins his introduction on page one of this collection: "A myth is a sacred narrative explaining how the world and man came to be in their present form," which now seems as at least a doubly limiting definition, linking the sacred to a creation myth.

The concept of "the secular" is established precisely as "the profane" (literally *outside* the temple walls) in highly religious societies. Yet increasingly, less-religious Western peoples have begun to notice that "the religious" actually represents, at most, some selective enclaves, and that "the secular" (the term means, etymologically, only "of this age, contemporary") is the primary source of experience for most people in our era. And it has become all too obvious that quite apart from holding "sacred" status, hundreds of hardly religious mythic figures and images are more influential today than traditional religious ones: Pop culture has become the major source of experience in our societies, one in which the ironically self-named singer Madonna or rappers such as Eminem are referred to far more frequently than figures and stories from traditional religious repertoires.

Of course, myths remain "sacred" within explicitly religious organizations. Recent decades have witnessed strong growth of fundamentally restrictive puritanisms, and there, to be sure, "mythical" connotes false, sacrilegious, or heathen. Even highly educated persons may equate myth with any religious institution's attitude that they oppose. Demonstrations of the problems that primitive Christians had with their Jewish compatriots and forebears (the New Testament has several equations of "myth" with "Jewish concepts") generally help more neu-

tral audiences to understand some of the hostility that led to early-Christian burning of the great Alexandrian collection of all remaining Greek manuscripts because they were mythic and hence "anti-Christian."

OTHER CLASSIFICATIONS OF MYTH

Modern and contemporary anthropological evaluations of the mythic include Bronislaw Malinowski's (1884–1942) emphasis upon myth as an active social force and Claude Lévi-Strauss's proposals that myths represent attempts to resolve philosophical dialectics between—ultimately—being and nonbeing. Yet it is perhaps an open question whether or not myths really resolve the ancient Zoroastrian dichotomies reflected in the Hebraic prophetic contrast between human inclinations toward good or evil. The issue was posed by the Talmud no less than in the Christian Didache's ethical teaching about the "Two Ways"—itself an echo of the Greek image of Herakles at the crossroad having to choose between plain-Jane virtue and gorgeous vice. What is more obvious than resolving this particular ethical-intellectual dichotomy is that mythic orientations can be understood as ultimately responsible for long-range positions that can lead to military aggression and racism or, on the other hand, to utopian planning, multiculturalism, and pacifism.

At some point in the development of mythological studies (mythography), issues of form/structure versus content/ideological dimension appeared. Formally, many myths (although certainly not all, as assumed repeatedly) seemed to be strongly related to rituals, especially those associated with life transitions and communal festivals. And likewise it has become evident that myths ought to be less readily regarded as coherent narratives than as fragments, whether in ordinary discourse or in displayed works of art (see especially Danser 2005, pp. ix–x, p. 14, and chap. 3).

Alive within a mythological universe, then, myths are less scriptural monoliths than segments of memories, portions of wholes that may or may not cohere as "religious" systems, yet have a flavor of mythicity that identifies "the American dream," the Western hero monomyth, rock and roll, or a political plank. "Mythicity" usually seems naively natural, although it is certainly difficult to parse in technical language; we may be least aware of those mythological perspectives through which we cipher importance and significance in culture.

Myths reinforce ancient educative values, as Plato (c. 427–347 BCE) notably realized. But one might look also at contemporary Navajo myths that, in their entirety, project an amazingly exact geographical gazetteer of their native nation's boundaries. Such mythological performances (and later texts) are also evocative scenarios—the metaphors by which societies elect to follow this or that projected sociopolitical choice as well as various hermeneutical-interpretive-moral alternatives.

Here the mythological and the ideological-political spheres overlap, because myths model moral choices (positively or negatively). They are often ways the individual learns how to adjust to social roles and statuses—one's own and those of peers with whom one chooses to associate. Mythological materials can be seedbeds of new metaphors for comprehending and changing societies, providing perspectival ways of seeing that are constantly changing images of possible realizations of communal, artistic, and individual growth and fulfillment. Martin Luther King's 1963 "I have a dream!" speech, for example, had a powerful mythico-political force.

FORWARD-LOOKING MYTH

Notably, myths can fund prospects for the future derived from the traditions of the past, as they lubricate the transitions and initiations that fine-tune social interactions and provide the symbols of communication. It is easy to note their afterlife in language, as is seen in English-language adjectives originating from the Greeks: hermetic, mercurial, Apollonian, Dionysian, narcissistic, oedipal.

Many of these figures reflect the central roles of creativity and development that somehow always recur as an important dimension of the mythological. Such a dimension represents various options in cultures that are seldom still regarded today as formative and revisionary, yet continue to ferment like dreams and visions, revolutionary modes of imaging. Hence, there are so many instances of mythical stories of transformations and changes, metamorphoses and apocalyptic endings, as well as recourses to originary energies of beginnings, the recountings of which still have the affective-effective power to motivate and stimulate change.

TRADITIONAL CATEGORIES OF MYTHS

Two important categories of myths that remain very much alive in American schools are those from classical Greece and Rome, and world mythologies. The former were simply part of the worldview and diction of antiquity, not at all a matter of coherent pantheons, as it would appear from modern textbooks and lists of mythical symbols, but instead a situation where deities and heroes were respected primarily as the powerful figures of specific cities or locales. Any one of them had various ritual epithets, according to how the figure had manifested locally (the Zeus of such and such a town). Later handbooks and catalogues appeared only as earlier Greek culture was waning and Roman adaptations of many of the Greek figures threatened to replace them. The polished, famous

accounts of Apollodoros (c. second or first century BCE and Ovid (c. 43 BCE – 17 CE) become the models for medieval and Renaissance rediscoveries of long-latent mythological resources.

Thanks to Plato and then subsequent movements within Greek thought, the two basically identical terms for "word, saying"—*logos* and *mythos*—were differentiated. The "mythical" came to be considered less important than the "logical," and the history of Western science was off and running with Aristotle (384–322 BCE). In the Roman period, largely due to excesses of allegorical interpretation, *mythos* had become so disdained that the Latin equivalent of the Greek *mythos*, *fabula* (as in *fabula fictiva*), named such traditional mythological stories—and then later the Christian apologists sought to show that the Christ myths were superior to the traditional Western stories (even though their artists repeatedly created early Christian images using the traditional heroic models).

Certainly biblical folklore and mythology presents a third most important source of Western mythological traditions, but today "world mythology" has become yet more central in most educational contexts, even at the United States Military Academy in West Point, New York, where the English department is responsible for the humanities education of the plebes. The Academy has found world mythology to be an excellent way to inculcate tolerance and receptivity to other world cultures (primarily using one of the many widely available collections, such as Donna Rosenberg's *World Mythology* [1999]).

NEW MULTIDISCIPLINARY FOCUS

Mythological studies in itself provides a convenient canvass of the history of scholarship: the study of myths and rituals has become a focus of many analyses in literature, anthropology, and religious studies. Attitudes toward the mythological today are less "monotheistic" than in the past—but few scholars would argue for earlier models that presumed that myths merely constituted primitive attempts at science, or reflected interpretations of astrological models. Rather, a multidisciplinary approach acknowledging several factors is widely accepted: psychological functions, sociological applications, even philosophical dimensions are now considered relevant.

Myths and mythologies are like the lenses in our now variously tinted spectacles: we see through them. Even today, we code our universe with mythic figures and stories, and our psyches still echo them at night. In popular culture, ideological implications arise when myths are reified in such ways as to reinforce political or religious values, or when certain sets of mythological figures are considered a society's primary models for gender or power relationships.

In such monocultures, whole bodies of mythology may be suppressed or ignored; it is remarkable how few of the general U.S. population today are aware of the complexity of American Indian or African American mythologies, or how uncritically people regard stories about or from other times and cultures.

COMMUNICATING AND INCULCATING CULTURE

Yet, beyond the aesthetic beauty of stories, myths have important communicative functions as they are put to corporate use in shaping communities or individually in forming self-identity. Hence Plato's concern that the primary stories (myths) told to young Greeks were told by their uneducated childhood nurses; but, on the other hand, he was quick to devise his own mythical stories to convey sophisticated philosophical teachings (Brisson 1998 and 2004 are exhaustive in their scope).

Particularly when myth is employed in politics or for inculcating religious moralities, it readily assumes claims of being a "truth" that would never be attributed to other types of stories. While secondary or tertiary mythical influences may not excite the faithful, the primary myths soon attain canonical or scriptural force, and may even be considered absolute, closed to analysis or criticism. Monotheistic "literal" interpretations have become suspect in a postmodernist world, due to the fact that they are naïve and untheorized.

Beyond romantic effusions of admiration, contemporary appreciations of myth can at last include ancient appropriations while realizing that they garner ancient wisdoms at their own risks—even while developing contemporary realizations and reapplications of what seem to remain long-lasting (one may no longer say "eternal" or "universal") cultural inheritances. Myths and mythologies resurface repeatedly because of the long history they trail as representing important sociocultural values, seldom figured explicitly in popular culture expressions, yet all too often lodged beneath the glitz and glamour of popular films, television shows, and advertisements.

SEE ALSO *Magic; Religion*

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William G. Doty

N

NADER, RALPH

1934–

Ralph Nader has been one of the most important and enduring figures of the American Left since his emergence on the national stage in 1965 with the publication of *Unsafe at Any Speed*. In this work, Nader argued that the American automobile industry paid insufficient attention to safety. The book sparked public outrage and congressional action, including the creation in 1966 of the National Highway Safety Bureau (now the National Highway Traffic Safety Administration) and passage of many car safety regulations. Perhaps more enduringly, Nader persuaded the public to give more weight to safety concerns when purchasing cars. With his far-reaching advocacy work over the decades, Nader has firmly established his place in the radical American tradition as a critic of the concentration of corporate power. Nader views corporate power as a threat to consumer rights and health, the environment, government integrity, and, most importantly, a well-functioning democracy.

The son of immigrant parents from Lebanon who owned a modest restaurant in a small Connecticut town, Nader earned his undergraduate degree at Princeton University and a law degree at Harvard. His years after law school were spent traveling, dabbling in journalism, and practicing law in Connecticut. He relocated to Washington, D.C., when his work on auto safety caught the attention of policymakers, and he quickly established himself as the most effective "policy entrepreneur" of his generation.

The 1966 to 1976 period marks the height of Nader's influence in American politics. With an innate talent for conducting exhaustive policy research, generating public attention, and manipulating the press, Nader's advocacy pushed such legislation as the Wholesale Meat Act, the Wholesale Poultry Products Act, the National Gas Pipeline Safety Act, and the Radiation Control for Health and Safety Act through to passage in the late 1960s. His stature in Washington grew to such proportions that Democratic presidential nominee George McGovern invited Nader to consider joining his ticket in the 1972 election.

Building on his successes and public acclaim, Nader established a consumer advocacy group in Washington, the Center for the Study of Responsive Law, in 1968. Staff lawyers, publicists, and grassroots activists, dubbed "Nader's Raiders" for their proclivity to challenge the Washington and corporate establishment, investigated patronage practices at the Federal Trade Commission, special interest pressure in Congress, and the safety of the nuclear power industry, among other issues. Over the years, Nader would create a long list of not-for-profit advocacy groups, including the Public Interest Research Group, Public Citizen, and Democracy Rising.

Nader's career, however, has been marred by his inability to accept compromise as the price of democratic politics. His intransigence derailed the effort to create a federal department of consumer affairs. He also turned against many of his protégés who served in the Jimmy Carter administration (1977–1981) because, in Nader's view, they were too quick to compromise on matters of corporate regulation. Nader lost battles, allies, and influence as a consequence of his ideological purity.

By 1980 a concerted effort by American business to counter Nader's consumer rights movement by increasing

corporate lobbying paid off. Conservative Ronald Reagan (1911–2004) won election as president, and Congress and the country moved in a more conservative direction. Throughout the 1980s and 1990s, Nader and his allies fought to hold the advances in regulatory policy that they had made in the 1960s and 1970s.

Locked out of the newly conservative Washington establishment, Nader traveled and lectured throughout the country, seeding small citizen projects at the state and local level. Unhappy with the centrism of the Bill Clinton Democrats in the 1990s, Nader ran for U.S. president four times: in 1992 as a write-in candidate for the Democratic nomination in the early primary states; in 1996 as the Green Party nominee; in 2000 as the candidate of the Association of State Green Parties; and in 2004 as an independent candidate. Nader argued that both major parties were beholden to corporations, and he promised to enact campaign finance reform, limit free trade agreements, and extend government regulation of the environment and the economy. In all of his runs, Nader would win no more than 3 percent of the popular vote (in 2000).

The move into electoral politics embittered many former Nader's Raiders, who thought that Nader's run for the presidency jeopardized the Democratic Party's chances. In 2000 these critics were proved right when Nader siphoned likely voters for the Democratic nominee, giving Republican candidate George W. Bush a narrow margin of victory in the state of Florida, a victory that provided Bush with enough electoral votes to win the presidency.

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NADER'S RAIDERS

The first Nader's Raiders were seven law students and recent graduates assembled by the consumer advocate Ralph Nader in the summer of 1968 to undertake a study of the Federal Trade Commission (FTC). The group investigated the agency's activities with great thoroughness. The journalist William Greider, then a *Washington Post* reporter, gave the group its name, and the label stuck. Although Nader initially complained that the name rang of the "cult of personality," he later admitted that it brought the group valuable publicity.

The Raiders' 185-page report issued in January 1969 spared no one. It called for a total revamping of FTC practices and personnel and received extensive press coverage. President Richard Nixon asked the American Bar Association (ABA) to appraise the performance of the FTC; ultimately the students' report—and the ABA appraisal that followed—sparked a congressional investigation and a major overhaul of the agency.

The success of the group established a pattern for subsequent teams that would work with Nader on similar projects. In 1969 about a hundred undergraduate and law students, most from Ivy League schools and many from affluent families, were hired to investigate an array of areas of government and corporate abuse, including mine safety, the health hazards of air pollution, and the oversight of the food industry by the Food and Drug Administration.

Although the Raiders earned only modest pay, competition for those jobs quickly grew fierce. By 1970 more than three thousand students had applied for two hundred summer jobs. In subsequent summers new investigations examined worsening water pollution and the lack of an effective response from the federal government, the indignities and frauds practiced by nursing homes, the dangerous use of pesticides in agriculture, and bureaucratic mismanagement under the Community Mental Health Centers Act.

Charged with researching the performance of key government agencies and previously ignored social problems, those task forces produced reports that forced the federal power structure to take notice. The Raiders' impact can be measured by the fact that their first four reports had combined sales of over 450,000. By 1972 the Raiders had completed seventeen books. Their practice of providing both particulars and meticulous documentation made their reports hot copy. The fact that they were largely students exposing instances of government foot-dragging, special-interest collusion, corporate malfeasance, and outright corruption made the reports compelling. Reflecting later on revelations of environmental pollution and government scandal in the Nixon and Reagan administrations, Nader commented that in hindsight the reports were "quite understated" (Bollier 1991, Chap. 1).

Nader used the proceeds from the settlement of an invasion of privacy lawsuit he filed against General Motors in 1970 to extend the Raiders' size and reach. He funded a network of consumer groups that provided training grounds for political activists and lawyers. After their work with Nader some Raiders went into private law prac-

tice, where they represented the interests of injured consumers and workers, helping to generate an increase in tort lawsuits in the 1970s and 1980s. Many of those lawsuits redressed real wrongs, for example, by recovering damages for victims of the Ford Pinto, which became notorious for exploding and burning when rear-ended. Businesses claimed, however, that many of those lawsuits were filed on unjustifiable grounds, clogging the courts and leading to outrageous verdicts, particularly when they involved punitive damages.

SEE ALSO *Consumer Protection; General Motors; Interest Groups and Interests; Nader, Ralph; Privacy*

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Alexandra Cooper

NAEP, THE

SEE *National Assessment of Educational Progress.*

NAFTA

SEE *North American Free Trade Agreement.*

NANOTECHNOLOGY

Nanotechnology, or nanotech, is a collective term for several dozen related techniques that manipulate and manufacture molecules that are measured by the nanometer (one-billionth of a meter, or 10^{-9}m, in scientific notation). Instruments invented in the early 1980s now enable scientists to observe and rearrange molecules and atoms as never before, thereby enriching our knowledge of the world of the nanoscale. Viruses and atomic surfaces, for example, are understood much better than before, while carbon atoms are arranged into new shapes, including spheres and tubes. Because of its ability to rearrange the building blocks of matter, nanotech has great potential to affect medicine, information technology, materials science, the environment, and other areas. Developments in medical diagnostics and therapeutics, along with smaller, faster computers, are especially exciting, while toxicity and threats to privacy are uncertain but worrisome. Social scientists are interested in nanotech because it also affects economic, cultural, social, and political conditions.

While the scientific basis of nanotech is many decades old, the policy framework emerged in the late 1990s and early 2000s as governments organized public-sector funding and encouraged private-sector investments. Some social scientists began to study nanotech at that time. Many had previously studied biotechnology or information technology, so they brought mature research methods and sophisticated insights to nanotech. Their work consisted not only of observing the emergence of a new technology, but also of trying to influence its direction before society became locked into an unfortunate trajectory of technological determinism. Furthermore, the status of the scholarly literature has been dynamic. Commentaries on nanotech in the sciences, the humanities, or the social sciences become outdated very quickly.

HISTORY AND HYPERBOLE

Four kinds of issues are especially prominent in social science research on nanotech. First there are several contested histories of nanotechnology. One version says that nanotech began with a prescient talk in 1959 by Richard P. Feynman (1918–1988), the 1965 Nobel laureate in physics. Another points to the invention of the scanning tunneling microscope by IBM scientists Gerd Binnig and Heinrich Rohrer in 1981. A third narrative emphasizes the vision popularized by K. Eric Drexler in his 1986 book *Engines of Creation*. A fourth indicates that the underlying science was well established but intellectually diffuse until January 2000 when President Bill Clinton gathered many strands into one agenda called the National Nanotechnology Initiative (NNI).

In weighing these narratives, the critical perspectives of the social sciences reveal an ideological landscape of explicit and implicit discourses, with much competition to establish definitions, iconic images, and authoritative meanings, not to mention priorities for government funding. The Feynman origin theory appeals to quantum physicists and some people in the California Institute of Technology community, where Feynman taught for more than thirty years. The account that begins with the scanning tunneling microscope is preferred by the IBM community and most nanoscientists other than quantum physicists. The Drexler story is more credible outside of scientific circles than within because it delivers limitless promises of technological salvation, although several sci-

entists credit Drexler for inspiring their scientific work. Finally, the NNI version demands that nanotechnology produce tangible products quickly, which justifies generous government support for science and technology, plus government cheerleading for private-sector developments. It also draws upon a sense of economic nationalism: The NNI is a way for the United States to maintain economic and technological leadership. This story has parallel versions elsewhere, particularly in a series of European Union plans to unify European nanotechnology.

A second set of issues involves the power and consequences of hyperbole, both for and against nanotechnology. Nanotech evokes some intense interpretations of culture and technology: The so-called nano visionaries describe a magical set of tools that will transmute matter, end death, and perform other amazing changes, while their counterparts on the other end of the ideological spectrum preach that nanotech leads to the end of humanity, the end of our environment, and other evils.

These forms of hyperbole cause one to wonder whether they are grounded in the scientific and technical realities of nanotech. Or, do they express hopes and fears unrelated to nanotech reality, but gratuitously superimposed on nanotech? Another question is the changing relation between the technology and the hyperbole. Is the antinano hype discredited when beneficial applications come into our lives? Is there a nanophobic backlash: Do policymakers and nonexperts feel deceived by extravagant promises that turn out to be unrealistic? Social scientists have been tracking these questions of hope and trust. Furthermore, changes in relations between the technology and the hyperbole do not necessarily constitute a victory of one form of hype over another. They can also take the form of centrist positions displacing either form of hype.

DEMOCRATIC AND MORAL RESEARCH

The third cluster of questions appeals to the conscience of the social sciences, for these are the issues of justice and the common good. Nanotechnology has consequences for power, wealth, privacy, trust, discrimination, and other moral questions that animate social scientists. One topic is especially salient, namely, the longstanding problem of how a democratic society uses democratic processes to make science policy. The philosopher and educator John Dewey (1859–1952) argued that when a democratic society makes science policy, it needs many citizens who are well informed about science. Jon D. Miller pursued this by measuring civic scientific literacy beginning in the early 1980s, and he found consistently that it was dreadfully low. In a parallel development in the United Kingdom in 1985, a program for public understanding of science took the form of a simplistic agenda in which scientists talked and nonscientists listened and then passively internalized what they had been told. This is entirely unrealistic.

At the same time, however, social scientists in the United States observed stakeholder democracy in which the general population may be uninterested and inert about scientific policy, but those who see themselves as being affected by a given policy will take an active interest. Participatory democracy is the label for the activism of nonexperts who take part in making science policy. Case studies include AIDS activists playing constructive roles in clinical trials, or environmental disputes in which nonexperts become important actors, or laypersons serving on advisory committees for the National Institutes of Health. The ideas of stakeholder democracy and participatory democracy are corroborated by observations that show that nonexperts can acquire, understand, and deploy technical information when they have to. Meanwhile, social scientists in the United Kingdom advocate something similar called *upstream public engagement* in nanotechnology policy. This is meant to be an antidote to the simplistic plan of public understanding of science.

Nanotech is not necessarily more suitable to participatory democracy and upstream engagement than other technologies, but it gained attention among nonexperts at the same time that these discourses matured. And so, by historical coincidence, nanotechnology became a platform for experimenting with mechanisms and processes by which nonexperts have active and constructive roles in the creation of science policy. This is likely to be among the most important forms of social science activity concerning nanotechnology.

The fourth area of interest is a soul-searching debate about the moral value of a program named SEIN, which stands for "societal and ethical implications of nanotechnology." This is a priori problematic. *Implications* usually suggests that when the new technology arrives, it changes the society, and the consequences are understood after the fact. But if one wants to advocate one policy or another before nanotech causes major disruptions, it is necessary to revise the meaning of SEIN. Societal interactions with nanotech suggests that society coevolves with the technology, in which case stakeholders can make decisions about nanotech before technological change becomes a fait accompli.

This leads to an argument about the connection between SEIN and ELSI, the program to study the "ethical, legal, and societal implications" of the Human Genome Project. ELSI was generally recognized as a successful effort to describe and communicate those topics from the Human Genome Project, but many social scientists felt that ELSI constituted an uncritical acceptance of the agenda of the project. If SEIN is a child of ELSI, does this mean that social scientists are censoring themselves when they receive government funding to do SEIN research?

The U.S. Congress had ELSI in mind as a model when it included a program for SEIN in the Twenty-first Century Nanotechnology Research and Development Act of 2003. For this reason, some social scientists conclude that SEIN is not meant to raise social or ethical questions in government-funded nanotechnology research. They say that SEIN is intended to lubricate popular acceptance of nanotech, that is, to eliminate the social frictions that frustrate technological determinism.

The U.S. government's programmatic documents on nanotechnology often reveal a spirit of technological determinism, but that does not necessarily mean that there is a coherent plan for SEIN that conforms to that spirit. SEIN is very vaguely described in the 2003 act and related documents. Furthermore, the idea of participatory democracy for nanotech—that nonexperts will have active and constructive roles in nanotech policy—is at least as credible among those who are doing government-funded SEIN work as the manipulative view of SEIN. One reason is because much of nanotech is meant to lead to tangible consumer products, and it would be a major disaster for industry and government to misread consumer concerns and values, especially after investing billions of dollars to create those products.

This is not to claim that government science bureaucrats have become leftists. The point rather is that the future and the value of SEIN research are far from determined. There is neither documentation nor experience to conclude that SEIN is intrinsically corrupt for social scientists.

Nanotechnology derives from multiple strands of scientific work, some of which are many decades old. It also evokes numerous everyday issues concerning economy, culture, society, and power, and it is strongly shaped by visions of what will happen in the near future. To a social scientist, this is worth noting: a culture whose past, present, and future are interesting and problematic.

SEE ALSO *Microelectronics Industry*

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Chris Toumey

NAPOLÉON BONAPARTE

1769–1821

Napoléon Bonaparte was born in Ajaccio, Corsica, to a noble family of modest means, the second of eight children of Carlo and Letizia Buonaparte. He studied at a military school at Brienne in France, then at the École Militaire in Paris, and became a second lieutenant in an artillery regiment (1785). Following the outbreak of the French Revolution, he returned to Corsica and served in the Corsican National Guard. Sharp disagreements with Pasquale Paoli, the elder Corsican leader, forced him to flee to France with his family in 1793. The revolution opened the higher military ranks to talent, allowing Napoléon to advance rapidly. France also needed new officers to fight the revolutionary wars after numerous noble officers had fled the country. In 1793, Napoléon participated in the siege of the port of Toulon, which had revolted against the Republic with the help of the British fleet. Napoléon's artillery expelled the enemy fleet, and he was promoted to general. In 1795, his guns dispersed a royalist insurrection against the government in Paris; subsequently, he rose to major-general and was appointed commander of the interior. In March 1796, Napoléon married Josephine de Beauharnais.

Soon, Napoléon invaded northern Italy, where he defeated the Austrians in numerous battles, including Lodi, Arcole, and Rivoli (1796–1797), and forced them beyond the Alps. He then negotiated the Treaty of Campo Formio with Austria, which left most of northern Italy under France and ended the War of the First Coalition. Only Britain remained at war, and so Napoléon sailed to Egypt to strike at British trade. He defeated the Mamelukes and occupied Egypt (1798) but was left stranded after the British admiral Nelson destroyed his fleet at Abukir. Meanwhile, scholars who accompanied him explored Egypt and in effect launched the field of Egyptology. Napoléon returned to France, and with the help of Abbé Sieyès and Lucien Bonaparte, he overthrew the corrupt and unpopular Directory in the coup of Brumaire (November 9–10, 1799) and became First Consul.

The new Constitution of Year VIII, approved by a plebiscite, endowed Napoléon with extensive power. In 1800, he secured his position by defeating Austria at Marengo and signing the Treaty of Luneville (1801), thereby ending the War of the Second Coalition. In 1802, he signed the Treaty of Amiens with Britain. Soon, he became consul for life.

Napoléon betrayed the original ideals of the French Revolution by establishing a dictatorship. He eliminated free speech and outlawed any form of opposition. He created the first modern police state, forming a powerful police force under Joseph Fouché to secure law and order and suppress criticism of his government. Fouché set up a network of spies to suppress dissent. An attempt on Napoléon's life in December 1800, the "machine infernal," gave him an excuse to crush the remaining Jacobins. Pro-Bourbon royalist revolts were also suppressed and their leaders executed. Napoléon purged the legislative branch of liberal critics and emptied it of any power. He established strict censorship, closing down numerous newspapers.

During the same years, Napoléon also launched significant reforms designed to consolidate his power and create a more efficient state. He established a more effective state bureaucracy and appointed the prefects, subprefects, and mayors who ran its eighty-three departments and cities. He continued the revolution's principle of making careers "open to talent" by appointing officials based on merit rather than birth. Napoléon increased public revenues by adding new taxes and improving tax collection.

Napoléon signed the Concordat of 1801 with Pope Pius VII, which shored up Catholic support and sanctioned continuing state control over the French church. Catholicism was recognized as "the religion of the vast majority of French citizens" but not as the state religion. Napoléon nominated new bishops, while the pope invested them with spiritual authority. The pope also acknowledged the new owners of pre-1789 church properties.

In 1804, Napoléon's most important legacy, the Civil Code, known also as the Code Napoléon, took effect. Possessing a simple, concise, and coherent style, it laid the foundations of France's legal unity. It confirmed important revolutionary principles, such as legal equality, freedom of occupation, and the right of private property. It also sanctioned a strong, patriarchal family structure and subordinated the wife to the husband. Napoléon believed that obedience to the father would extend to submission to the head of state. The code allowed divorce on three grounds: ill treatment, criminal conviction, and adultery.

Napoléon constructed a system of national education characterized by uniformity, hierarchy, and state control. He aimed at turning students into loyal citizens and training them as efficient bureaucrats. His most lasting legacy was a system of secondary schools, the *lycées*, with a standardized curriculum and strong discipline. A new administrative body, the Imperial University, ran the national education system and licensed teachers.

In 1804, Napoléon crowned himself emperor at the Notre Dame Cathedral, with Pope Pius VII present, thus terminating the Republic. He created an imperial court and nobility, appointed his relatives as top military officers and civil servants as nobles, and endowed them with fiefs and privileges, although most of his nobility was based on merit. Napoléon wished to imitate great Greek and Roman leaders such as Alexander, Caesar, and Augustus. Imperial Rome fascinated him and was his point of reference. He assumed the title of consul, adopted the eagle as one of his symbols, built the Arc de Triomphe to celebrate his victories, and gave his son the title of King of Rome. Jacques-Louis David, the main exponent of neoclassical art and Napoléon's court painter, glorified him in some unforgettable paintings, most notably *Napoléon Crossing the Great Saint Bernard* and *Sacre de Joséphine*, which recorded the coronation ceremony.

Napoléon also reversed the revolutionary laws on slavery. In 1794, the Convention had ended slavery, following a massive slave insurrection in Saint-Domingue (Haiti), France's most profitable colony. Toussaint Louverture, an ex-slave, emerged as the leader of that revolt. Following emancipation, he joined the French army and, in 1801, became the colony's governor. In 1802, however, in response to demands of plantation owners, Napoléon restored slavery and dispatched General Charles Leclerc to reoccupy Saint-Domingue. The French faced stiff resistance, however. Leclerc summoned Toussaint to a meeting, arrested him, and dispatched him to France, where he died in jail in April 1803. Still, the French failed to defeat the rebels, and in January 1804, leaders of the rebellion established an independent state, which they named Haiti. The loss of Haiti

convinced Napoléon to abandon his colonial plans and sell Louisiana to the United States (1803).

While his colonial plans failed, Napoléon repeatedly defeated his enemies in Europe and established a large empire there. He achieved these goals by means of a formidable Grande Armée based on an improved conscription system initiated by the revolutionary regime and introduced throughout his empire. The Grande Armée was, in effect, a European army, consisting of Poles, Italians, Germans, and people of other nationalities aside from French. The emperor stressed effective organization, training, discipline, morale, and good use of weapons, most notably artillery, and he promoted officers on the basis of merit. Napoléon introduced no innovations in weapons and tactics, inheriting these from the Old Regime and the revolution, respectively. Napoléon's principal military innovation was making the corps the standard unit, replacing the division, which became subordinate to the corps. A corps numbered 20,000–30,000 troops, comprising infantry, cavalry, artillery, engineers, and support units. It was usually commanded by a marshal and able to wage a battle on its own.

Napoléon's aggressive foreign policy caused the resumption of hostilities with Britain in 1803. At Boulogne, he prepared an army to invade his archenemy but never carried out that attack. In 1805, Russia and Austria joined Britain, forming the Third Coalition. However, Napoléon defeated the Austrians at Ulm and an Austrian-Russian army at Austerlitz, his greatest victory, later that year. In the Treaty of Pressburg, Austria ceded substantial territories to France and her German allies. In early 1806, the French occupied southern Italy and expelled the Bourbons from Naples; they then routed Prussia at Jena and Auerstädt. In Berlin Napoléon declared the Continental Blockade, intended to seal off Britain from trade with Europe and force its surrender. In 1807, he inflicted a severe defeat on the Russian army at the Battle of Friedland. In the subsequent Treaty of Tilsit, Tsar Alexander I recognized Napoléon's domination in western and central Europe and the newly created Duchy of Warsaw, and agreed to join the blockade. Napoléon's only defeat during these years came at sea, when the British navy under Nelson destroyed the French navy at Trafalgar (October 1805), eliminating any hopes Napoléon had of invading Britain.

In 1807, Napoléon occupied Portugal briefly before being expelled by the British. In 1808, he toppled the Spanish Bourbons, replacing them with his brother Joseph. The Spanish revolted, and Napoléon led an army to quell it. But Spanish armies and guerrillas, with sizable British military support, persisted in their resistance, and after five years forced Joseph to evacuate Iberia. The "Spanish Ulcer" exacted a huge price in human lives and expense, contributing to Napoléon's downfall.

In 1809, the Austrians suffered their fourth defeat by Napoléon, this time at Wagram. In the Treaty of Schönbrunn, they surrendered still more lands, which became the Illyrian Provinces. In 1810, Napoléon married Marie-Louise, an Austrian princess, after divorcing Joséphine, who had borne him no heir. Marie-Louise soon gave birth to a son, who never rose to power, however. Meanwhile, Pope Pius VII refused to join the blockade of Britain, and Napoléon annexed Rome and the Papal State to his empire and exiled him to France (1809).

Napoléon expanded his empire continuously. Aside from his imperial title, he assumed other titles: the Mediator of the Swiss Confederation (1803), the King of Italy (1805), and the Protector of the Confederation of the Rhine (1806). He appointed his brothers as rulers of his satellite kingdoms: Joseph in Naples and later Spain, Louis in Holland, and Jerome in Westphalia. Eugène de Beauharnais, his stepson, became viceroy of the Kingdom of Italy, and Murat, his brother-in-law, received the Kingdom of Naples after Joseph left. Napoléon also annexed lands to France, which by the end of 1810 spread over an area of 293,000 square miles and consisted of 130 departments. Among these territories were Piedmont, Liguria, Tuscany, Rome, the Rhineland, the Netherlands, Hamburg, and Lübeck.

Napoléon's imperial rule possessed a Janus face, combining reforms, modeled on the French system, with exploitation. In his subject states he introduced constitutions, efficient bureaucracies based on merit, legal equality, property rights, termination of the seigneurial system, reduction of church power, and an advanced school system. At the same time, Napoléon exploited the fiscal resources of these lands and drafted their young men into his army.

The Continental Blockade failed to force the British to capitulate, and in 1810 Russia resumed trade with Britain. Napoléon's Grande Armée, 600,000 strong and comprising at least ten nationalities, invaded Russia to force Alexander I to return to the blockade. Napoléon reached Moscow, but the tsar refused to negotiate with him. Napoléon had no choice but to retreat in disarray, losing most of his troops.

He now faced a formidable European coalition as Austria and Prussia resumed hostilities. His defeat at the Battle of the Nations at Leipzig in October 1813 forced him out of Germany; shortly thereafter, he lost the rest of his empire. In April 1814, he abdicated and was exiled to Elba, while Louis XVIII assumed the throne.

In March 1815, Napoléon escaped from Elba, landed in southern France, and marched unopposed to Paris. This time he ruled for only 100 days, proclaiming a new

constitution and gathering a new army to fight against the European powers. In June 1815, his last campaign ended at Waterloo, where he was defeated by the British and Prussian armies led by Wellington and Blücher.

Waterloo marked the end of the Napoleonic Era. The British exiled Napoléon to the remote island of St. Helena in the south Atlantic. At St. Helena, Napoléon dictated his memoirs to Emmanuel de Las Cases and talked with other persons who recorded their conversations, thereby helping to create the myth of an emperor who governed for the benefit of the French and other European nationalities. Napoléon died in May 1821.

SEE ALSO *Authoritarianism; Constitutions; Dictatorship; French Revolution; Haitian Revolution; Militarism; Napoleonic Wars; Toussaint Louverture; War*

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NAPOLEON COMPLEX

As a colloquial term used occasionally in psychology, psychiatry, and psychoanalysis, the Napoleon complex refers to a specific type of inferiority complex associated with short people, and especially with short men. It is also sometimes called the "Napoleon syndrome" or the "short-man complex." Individuals with this disposition are claimed to overcompensate for their short stature by being excessively belligerent, hostile, or quarrelsome in their interpersonal relationships. A fictional example is depicted in John Steinbeck's *Of Mice and Men* : The character Curley was a "shorty" who always felt obliged to prove his worth by picking fights with bigger men. However, the Napoleon complex is said to motivate other forms of behavior besides interpersonal violence and aggression. Most innocuously, a short male might make himself feel taller by placing home wall hangings a little lower than normal. Or he might wear shoes with slightly thicker heels.

In contrast, such persons may be driven to ameliorate their supposed low self-esteem by pursuing highly ambitious goals. In fact, the eponymic source for the term is Napoléon Bonaparte, whose military and amorous conquests have been attributed to the desire to compensate for his diminutive size. Nevertheless, this attribution lacks merit insofar as Napoléon was actually a bit taller than the average Frenchman of his day. His alleged shortness derived from a commonplace misunderstanding of the contemporary French inch (which was 7 percent longer than the modern English inch) as well as a mistranslation of his nickname *le petit caporal* into "little corporal" (when *petit* indicates affection rather than dimension). Thus, ironically, Napoléon is not a genuine example of the Napoleon complex. Indeed, the fact that he surrounded himself with an elite guard of soldiers who were all at least six feet tall suggests that he was not at all defensive about his own height.

The Napoleon complex is often associated with the name of Alfred Adler, a former associate of Sigmund Freud and the founder of Individual Psychology. A key concept in Adler's theory was the *inferiority complex*. Although this psychological condition may take many forms, an especially crucial one is the sense of *organ inferiority* with respect to some physical trait. This conception may have been partially inspired by Adler's own experiences as a sickly child, including a bout with rickets that prevented him from walking until he was four. Under special circumstances, the individual may respond to organ inferiority by directly overcompensating for the disability. An illustration is Wilma Rudolph, a victim of debilitating childhood polio who later became the first American woman to win three track-and-field gold medals at the Olympic Games. Other times overcompensation will adopt a more oblique or symbolic form. Hence, because short persons cannot easily make themselves physically taller, they may act to appear psychologically taller—more dominant, assertive, even antagonistic or arrogant. For some individuals of potential genius, the solution may be an extraordinary need for power that takes the guise of military conquest. Accordingly, the Napoleon complex can be viewed as a particular implication of Adlerian psychology.

Even so, Adler himself did not invent the term. Despite identifying numerous "complexes" of various

kinds, the Napoleon complex was not included among them, nor was Napoléon used to illustrate overcompensation. Moreover, the complex does not constitute a recognized personality disorder in the *Diagnostic and Statistical Manual of Mental Disorders* published by the American Psychiatric Association, and the term is seldom granted an entry in encyclopedias and dictionaries devoted to psychological science and practice. In addition, the Napoleon complex is almost never the explicit subject of scientific research in the professional journals of psychology, psychoanalysis, or psychiatry. In the main, it represents a pseudoscientific term that is popular among journalists who want to provide an apparent explanation for the behavior of politicians, entrepreneurs, and other celebrities who happen to be shorter than average. It has also become a mainstay of folk psychology, the expression at times being evoked to explicate the odd behavior of a friend or acquaintance.

Yet, somewhat surprisingly, the Napoleon complex has recently been introduced as a scientific concept in a totally unexpected discipline, namely, evolutionary biology. In animal species that feature male competition for reproductive opportunities and resources, it is sometimes the smaller rather than the larger male who most likely initiates aggressive behavior. This phenomenon has been subjected to cost-benefit analyses that indicate the conditions under which such seemingly maladaptive behavior is most likely to be selected. Nonetheless, it is clear that this usage departs significantly from the original meaning of the term. This novel application may therefore not revive the Napoleon complex as a technical term in the social sciences.

SEE ALSO *Inferiority Complex; Overachievers; Personality; Personality, Authoritarian; Psychoanalytic Theory; Psychology; Self-Esteem*

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NAPOLEONIC WARS

The Napoleonic Wars (1803–1815) were fought between the French emperor, Napoléon Bonaparte (Napoléon I; 1769–1821) and the European powers of Britain, Austria, Russia, and Prussia. Ultimately, the wars extended to all corners of the European continent, profoundly affecting European politics, society, and culture. The wars encompassed eight separate military campaigns divided into three broader periods: 1803 to 1807, the ascendancy of Napoleonic power in Europe; 1807 to 1812, the height of Napoléon's Grand Empire; and 1812 to 1815, the decline and fall of Napoléon's empire.

Napoléon became ruler of France in November 1799 when he participated in a coup d'etat, overthrowing the Directory. He immediately inherited the war of the Second Coalition, the last of the wars of the French Revolution. Within months of coming to power he declared the French Revolution ended, and defeated the Second Coalition led by Austria and England. Napoléon concluded the Peace of Lunèville with Austria in 1801. He created satellite republics in Italy (the Cispadane and Cisalpine Republics) in 1796 and 1797, but consolidated them into the Italian Republic in 1802. England signed the Peace of Amiens in 1802 after losing their continental allies. The peace was an expedient, and neither Britain nor Napoléon trusted the other. In May 1803 Britain declared war on France, inaugurating the Napoleonic Wars.

In January 1805 Spain joined France in an anti-British alliance. Napoléon prepared an invasion force to be ferried and protected by a combined Franco-Spanish fleet. Britain sought allies to tie the French to the continent. By summer 1805 England, Russia, and Austria formed a Third Coalition against France. Napoléon's policies in Germany and Italy prior to 1805 alienated Austria and Russia, leading to the formation of the Third Coalition in July 1805. Napoléon, however, capitalized upon his favorable relations with the princes of Germany to gain their support against Austria. The campaign of 1805 was Napoléon's most successful. In October he achieved a dramatic victory over the Austrian army at Ulm in Bavaria. Napoléon invaded Austria, taking Vienna by the end of November. At Austerlitz on December 2, 1805, Napoléon soundly defeated the combined Russo-Austrian army under the eyes of Tsar Alexander I and Kaiser Franz I.

Victory over the Third Coalition enabled Napoléon to make sweeping changes to the map of Europe. The Holy Roman Empire (Germany) was abolished in the summer 1806 and replaced by the Confederation of the Rhine, with France as its protector. Austria and Prussia were excluded from this new German entity. The number of German territories was substantially reduced through secularization and mediatization from 120 to 37. The Italian Republic, a kingdom after 1804, annexed Venetia, nearly doubling its size.

In February 1806 a French army occupied the Kingdom of the Two Sicilies, giving Napoléon the entire peninsula. He then isolated Great Britain by instituting an

economic blockade embodied in the Milan and Berlin decrees, often referred to as the "Continental System."

Tensions between Prussia and France culminated in September 1806 in the second campaign of the Napoleonic Wars. The Prussian army was destroyed in two battles, Jena and Auerstadt (October 14, 1806), and the kingdom was overrun. The belated arrival of a Russian army in Poland extended the war into the winter and spring of 1807. Napoléon fought the Russians to a draw at Eylau in February, but decisively defeated them in June at Friedland. The victory over Russia virtually completed Napoléon's conquest of Europe. Tsar Alexander I met the French emperor at Tilsit and agreed to a continental alliance.

Shortly after Tilsit, Napoléon authorized the invasion of Portugal, a British ally. Spanish support for Napoléon's endeavors was lukewarm after the destruction of its fleet at Trafalgar in October 1805. The Spanish king, Carlos IV, and his first minister, Manuel de Godoy, wanted to extricate themselves from the French alliance. Napoléon distrusted the Spanish and in spring 1808 overthrew the Spanish monarchy and occupied Spain. He placed his elder brother Joseph on the throne, which generated enormous popular resistance. The Spanish feared the revolutionary anticlericalism of France, and the imposition of a foreign king. Formal Spanish military resistance gave way to a guerilla war that continued until 1814. Napoléon led a second army into Spain in October 1808, reestablishing French control, but Portugal was lost to the British earlier in the year. Napoléon kept more than 250,000 French and allied troops in the Iberian Peninsula for the next four years. The Peninsular War tied down military resources, and provided Britain with a theater of war on the European continent.

The British army in Portugal in 1809 was led by General Arthur Wellesley, later the Duke of Wellington. He used the small kingdom to conduct offensive operations into Spain, and played a "cat and mouse" game with King Joseph and the French army through 1810. French military power, tied down by Spanish guerillas, was insufficient to retake Portugal. In 1812, as Napoléon invaded Russia, Wellington launched an invasion of Spain supported by the Portuguese and Spanish. Between 1812 and 1813 Joseph and the French Imperial army were forced back to the Pyrenees, and in 1814 Wellington crossed into southern France, finally ending the Peninsular War.

Napoléon returned to Paris in January 1809 to face a new threat from Austria. The Austrians believed that with Napoléon occupied in Spain they stood in a good position to regain control of the German and Italian states. In April 1809 Austrian armies invaded the Confederation of the Rhine, the Kingdom of Italy, and the Grand Duchy of Warsaw—the Napoleonic satellite state of Poland. A combination of Napoléon's military skill, and more significantly the strength of his alliances with the German princes and Russia, enabled him to defeat Austria. By mid-May Napoléon sat in Vienna. Although he was repulsed at Aspern-Essling, he attacked again in July and defeated Archduke Charles at Wagram.

Napoléon extended the borders of imperial France in 1810 to include Holland, northwest Germany, Tuscany, and the Papal States. The expanding imperium led to confrontation with Tsar Alexander I of Russia. In June 1812 Napoléon invaded Russia with a French Imperial army of 500,000 men. By the end of September Napoléon had defeated the Russians at Borodino and captured Moscow. Tsar Alexander and his generals evacuated the capital and withdrew east of the city, refusing to surrender or negotiate. Napoléon withdrew from Moscow in the middle of October with no prospect of a clear victory. During both the advance and retreat, his army suffered far more from desertions and disease than from battle casualties. In December the army that returned to central Europe was reduced to 120,000 men. The enormity of the French losses led Tsar Alexander to continue the pursuit and liberate Europe. In March 1813 Frederick William III, the king of Prussia, joined the coalition against France.

Napoléon had rebuilt the French army by the spring 1813 and defeated the Russians and Prussians at Lutzen and Bautzen in Saxony. All sides agreed to a temporary armistice through the summer. During this time Austria joined the coalition against France. The armistice expired in August, and Napoléon found himself under attack from three directions—Prussia, Poland, and Austria. German princes defected from their French alliances, and in October Napoléon was soundly beaten at Leipzig, forcing him to abandon Germany.

Prussian forces crossed the Rhine at the end of December. Coalition armies moved into France from Spain, Germany, and Belgium. Napoléon initially held the Prussians and Russians at bay, but was ultimately overwhelmed by numbers. Napoléon abdicated in April 1814, and went into exile on the island of Elba. Louis XVIII, the brother of the former French king, was restored to the throne.

Napoléon returned to France in February 1815 and was welcomed by the army and the French population, who had lost their taste for kings. The coalition, meeting in Vienna, committed itself to his utter defeat. Napoléon assembled an army and invaded Belgium. In June 1815 he was defeated at Waterloo by British and Prussian armies. He abdicated a second time and was taken prisoner by the English. The former French emperor spent his remaining days on the island of St. Helena in the south Atlantic. He died in 1821.

The Napoleonic Wars transformed the European continent, reshaping the borders of Germany and Italy.

Napoléon purposely fostered Italian nationalism in order to strengthen his satellite states, but in Germany and Spain, nationalism emerged in reaction to French military occupation. Liberalism, the desire for constitutional government, also manifested in Western and Central Europe. The Napoleonic Wars also led to the creation of a European international system established at the Congress of Vienna (1814–1815), which was based upon the principles of balance of power and territorial compensation. The congress system called upon the monarchical powers to suppress revolutions to prevent another crisis like the one that had affected Europe for the previous twenty-five years.

SEE ALSO *Borders; Constitutions; Empire; Imperialism; Liberalism; Monarchy; Monarchy, Constitutional; Napoléon Bonaparte; Nationalism and Nationality; Revolution; War*

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NARCISSISM

Narcissism refers to a personality trait that includes grandiosity, vanity, and self-love. Narcissistic individuals are often described with such adjectives as arrogant, self-centered, cocky, or conceited. The term *narcissism* is derived from the ancient Greek myth of Narcissus. According to the myth, Narcissus was a handsome young man who was in search of his ideal romantic partner. One day he fell in love with his own reflection in a pool of water. Narcissus died while gazing at his reflection, and on that spot a flower (a narcissus or daffodil) grew.

The British sexologist Havelock Ellis (1859–1939) was the first to suggest the character of Narcissus for describing a psychological state. It was Sigmund Freud (1856–1939), however, who made narcissism into a central concept in psychology. In the early twenty-first century the concept of narcissism can be found in several branches of the social sciences. Most frequently narcissism is used in psychology, where it refers to both a personality trait and a personality disorder. Narcissism is also used in fields such as sociology, political science, and criminology.

In personality psychology narcissism is considered to be a continuously distributed, "normal" personality trait. Narcissism appears to have three core characteristics: First, narcissism is associated with an inflated view of the self. Narcissists see themselves and their actions in an overly positive light. This often includes a sense of uniqueness and entitlement (e.g., "I deserve special treatment"). Second, narcissism is associated with interpersonal relationships that lack warmth and emotional intimacy. Third, narcissism is associated with a pattern of behaviors that maintain the inflated, grandiose view of the self. Examples of such behaviors include bragging, showing off, and blaming others when things go wrong. Narcissism and high self-esteem are often confused. Both traits are associated with feeling positively toward oneself. With narcissism, however, those positive feelings are linked specifically to their perceived standing on so-called *agentic* traits, such as social status, intelligence, confidence, and physical attractiveness. Narcissism is not associated with positive feelings on what are called *communal* traits, such as caring, warmth, and compassion. In contrast, individuals with self-esteem feel positively about themselves on both agentic and communal traits.

In clinical psychology and psychiatry narcissism is described as a personality disorder (i.e., *narcissistic personality disorder*, or NPD). A personality disorder is a relatively stable and fixed pattern of thinking, feeling, and behaving that leads to emotional suffering and functional impairment (e.g., problems in love or at work). According to the *Diagnostic and Statistical Manual of Mental Disorders* (1994), NPD involves a pattern of grandiosity, a need to be admired, and a lack of empathy; the disorder is assessed using nine specific criteria, including arrogant behavior, a sense of entitlement, and fantasies of success and brilliance.

In sociology and social history narcissism has been used to describe culture or a cultural movement. A narcissistic culture is one where values like self-promotion, individualism, and self-centeredness are central and where narcissistic individuals are common. The most well-known example of this cultural perspective on narcissism is the historian Christopher Lasch's *The Culture of Narcissism* (1978). Lasch argues that American culture is becoming increasingly narcissistic.

In political science the concept of narcissism is used in the study of leadership. Some leaders, especially dictators and despots (e.g., Adolf Hitler, Joseph Stalin), have been described as narcissistic. In addition narcissism has been examined as a potential factor in political terrorism.

In criminology narcissistic personality traits are thought to predict criminal behavior, including murder, rape, assault, spousal abuse, and white-collar crime. Narcissism is also a key feature of a psychopathic personality, which is perhaps the most important personality profile for predicting serious criminal behavior.

Several significant issues remain unresolved in the scientific study of narcissism. First, there remains debate over the definition of narcissism. While there is strong agreement on key features of narcissism like grandiosity and low empathy, there is disagreement about the link between narcissism and feelings of depression or unhappiness. Some theorists argue that narcissism contains a component of depression or low self-esteem; others argue that narcissism is related to positive emotions. Still others argue that narcissism is linked to negative emotions and self-perceptions but that these feelings are experienced only at an unconscious level. Second, while there are several theories about the development of narcissism in individuals, there is no firm conclusion about its etiology. Some researchers argue that narcissism results from permissive parenting, while others argue that narcissism is a reaction to cold, controlling parents. Finally, the role of culture in maintaining narcissism is not well understood. Some researchers and theorists have identified a rising tide of narcissism, but the cause of this remains unclear.

SEE ALSO *Freud, Sigmund; Individualism; Leadership; Neuroticism; Obsession; Personality; Political Science; Psychology*

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NARRATIVES

Whether defined in literature, law, philosophy, or the social sciences, narrative has generally been understood as a form of accounting or representing events in language, whether these are real or fictitious, and in a manner that suggests a causal relation between each event. Two of the earliest theories of narrative occur in Plato's *Republic* and Aristotle's *Poetics*, both philosophers being concerned with the role of narrative in mimesis. Where Plato (c. 427–347 BCE) distinguishes between mimesis and diegesis, with the latter requiring the poet to speak in his own name rather than in another's voice, Aristotle (c. 384–322 BCE) identifies narrative itself as a mode of mimesis—the other mode being direct representation, as in drama.

At the heart of both philosophers' discussion is the relationship of narrative to actuality. Plato condemns mimesis in poetic and visual art. However, he also asserts the necessity of tales that model virtuous thought, as opposed to those that invite the imitation of others' emotions. Plato thus turns to a narrative form, allegory, to explicate the relationship between language and the things it ostensibly names.

Aristotle, by contrast, treats mimesis as a faculty natural to humans. According to Aristotle, we learn through imitation because it affords observation and inference. More importantly, the vehicle of this learning is catharsis. Plato condemns mimesis and narrative catharsis on the grounds that they invite false and dangerous emotion in an observer.

Aristotle's emphasis on the affective function of narrative has been a persistent theme throughout Western philosophy. In the twentieth century, it was taken up most notably in the work of Sigmund Freud (1856–1939), who defined catharsis as the release of abnormal affect, and deployed it in trauma therapy while defining trauma as a state characterized by an incapacity to narrate. He thereby normalized narrative in psychological terms.

The tension between an impulse to narrate and the effect of narrative has continued to play itself out, not only in psychology, but also in the social sciences. Thus, one hears the echo of Aristotle when Hannah Arendt (1906–1975) remarks that the distinguishing characteristic of the human is not only the capacity to discern events in history, but also to narrate these events. Arendt emphasizes the political element of storytelling in a manner that anticipates Jürgen Habermas. She stresses the communicative and deliberative processes essential to the formation of a public sphere through speech and action.

Walter Benjamin (1892–1940) likewise writes of the "art of storytelling" as that which enables intergenerational social relations. Benjamin's focus on the immediacy of traditional storytelling as opposed to the information-bearing function of the novel or newspaper has been criticized for its nostalgia. However, it resonates strongly with those theories of sociality in eras and contexts that have not been dominated by technologized forms of print and electronic

media. Moreover, his emphasis on the ethics of listening has found sympathy in the fields of anthropology, sociology, folklore studies, and the like, which have taken as their primary object of analysis the speech of others.

In their analysis of the difference between myth and novelistic narrative, Theodor Adorno (1903–1969) and Max Horkheimer (1895–1973) arrive at a theory of the latter's relation to the development of bourgeois modernity's self-mythologizing impulses. This conclusion is outlined in *Dialectic of Enlightenment* (*Dialektik der Aufklärung*, 1947), where they engage the political consequences of a shift from the atemporality of myth to the novelistic narrative that accompanies the rise of capitalism. They thus see the temporalizing effect of narrative as the basis of individuation and the cultural ground of bourgeois subjectivity.

The development of narrative studies was nonetheless interrupted by structuralism and its focus on binary oppositions. In this, structuralism tended to elide both the Aristotelian and the Platonic emphases on sequentiality, temporality, and causality. By the mid-twentieth century, however, counterdiscourses had emerged. Their proponents were historians led by Hayden White, Carlo Ginzberg, and Natalie Zemon Davis. Informed by Northrop Frye's (1912–1991) analysis of narrative structure, White argues that historians employ the same strategies of emplotment as fiction, the exception being chronicles and annals that are not concerned with emplotment and are therefore, for White, nonnarrative. The task of metahistory is, then, to interrogate the presuppositions within which these narratives are produced.

Much of the turn to narrative studies was inspired by a rereading of Mikhail Bakhtin (1895–1975). In conversation with Georg Lukács (1885–1971), Bakhtin identifies the novel form as the space characterized by the reciprocity and simultaneity of many voices and discourses. Their interplay suggests, for Bakhtin, a resistance to formula. Lukács's Marxist reading posited the novel as a bourgeois form of narrative and an antithesis to the closed atmosphere of the heroic Greek epic world. For Bakhtin, the novel is heteroglossic. It resists the drive to totalization because its language bears the history of use by people of different classes and origins. The imperative in his work becomes an ethical one, and insists upon attending to those voices that have yet to be heard by the dominant. Underpinning this theory is a concept of historical time that rolls forward incessantly as each unheard voice comes to be heard.

In their approach to narrative, the twentieth century can be understood in part as a conflict between materialists and structuralists. Among the most influential structuralists, along with Roland Barthes (1915–1980) and Tzvetan Todorov, Gérard Genette drew upon linguistics to analyze the underlying structures of narrative, and to ask what we mean by the term *narrative*, and, thereby, to engage discourse embedded within discourse. Narratology, as he practices it, addresses the typology of narrators—here, continuing questions about who or what narrates and at what level—to identify classes of narrators according to their points of view or their diegetic or extra-diegetic roles. Accordingly, Genette considers narrative time in terms of duration and frequency (that which is iterative).

This question of time is taken up by Paul Ricoeur's (1913–2005) three-volume interdisciplinary *Time and Narrative* (*Temps et Récit*, 1984/1988). Ricoeur argues that all human experience is temporal and that narrative, being more than the mere creation of the individual, is the understanding and orderly mimesis of this lived time. He thereby liberates the study of narrative from purely literary considerations. For this reason, his work has exercised enormous influence on Hayden White, Clifford Geertz (1926–2006), and others. White draws upon Ricoeur in his arguments on mimesis and claims that narrative coherence is far more imaginary than actual. As an interpretivist anthropologist, White argued that story—as the irreducibly mediated text within which experience becomes available to the analyst—must be treated in its narrativity and not merely as the receptacle of information.

Mieke Bal extended the work of Genette and Ricoeur by introducing the question of point of view as part of her argument against the extreme formalism of structuralism. She revisits narratological structure, offering a theory of focalization. Her reading of biblical texts returns to them the narrative elements that structuralists such as Mary Douglas had explained away in the interest of finding such primal oppositions as those between the pure and the impure, the clean and defiled. In renarrating these biblical myths, Bal also insists that the traditions of reading narrative perform ideological work and that the reading of any given story tends to be conducted within the terms of socially privileged metanarratives. It was this analysis that resonated so well within social sciences.

Renewed and wider interest in narrative grew in the social sciences in the mid-1980s. Reasons for this interest came from different spheres, including postcolonial, gender, and critical race theorists. Among formalist analysts of narrative, feminist critic and film theorist Teresa de Lauretis returns to Russian formalism—particularly to semiotician Yuri Lotman (1922–1993)—to analyze metanarrative structure in terms of patriarchal logics, noting that the climax/catharsis in most Western literature and cultural texts is achieved in the moment that a masculine subject possesses or traverses or passes through a feminine obstacle. De Lauretis's feminist critique of the viewing structures in cinematic texts asks—like such theorists as Barbara Johnson, Annette Kolodny, Shoshana Felman,

and Mary Ann Doane—questions of point of view. Doane, Johnson, Felman, and Kolodny question metanarratives within psychoanalysis.

In postcolonial and subaltern studies, for example, Edward Said (1935–2003) took up narrative theory to consider the discursive possibilities for third-world subjects vis-à-vis the Western philosophical and ideological hegemonies. Linked to anticolonial and postcolonial assertions of narrative forms and voices that had been discredited by hegemonic master narratives, critical race theory also draws upon anthropology, sociology, history, philosophy, and politics. In critical legal studies, legal scholar Patricia Williams announced in *The Alchemy of Race and Rights*, "My words are my only valuables" (1991, p. 211) thus signaling the manner in which critical race theory would distance itself from mainstream legal discourse. Williams, Richard Delgado, Derrick Bell, Mari Matsuda, Kimberlé Crenshaw, Kendall Thomas, William Tate, and others challenged the neutrality of the law, particularly with regard to race. Bell's direct, narrative criticism epitomized the stylistics of critical race theorists, although Crenshaw, Thomas, and others retained their legalistic styles. All assert the value of a narrated personal experience in tandem with the principles and precedents of legal thought.

The notions of social construction and the reality of race and discrimination are ever-present in the writings of contemporary critical race theorists, who also draw upon pioneers in the field, including W. E. B. Du Bois (1868–1963), Frantz Fanon (1925–1961), and Max Weber (1864–1920). In *Black Skin, White Masks* (1952), Fanon—a student of Aimé Césaire, founder of the négritude movement—gave a first-person account of experiencing the embedded mechanisms of racism. This insertion of direct experience would be found in the narrative critique of colonialism and its legacies in the work of fiction writers as well as theorists of colonialism and anticolonialism. Fanon, like Du Bois at the turn of the twentieth century, showed how one's *weltanschauung* was shaped by social and ideological factors. Interest in Fanon was renewed in the late 1980s and 1990s as postcolonial theorists like Homi Bhabha sought a language that would enable a more effective understanding of the legacies of colonization. Cultural anthropologists, having collected narratives and treated them as signifiers of the world, joined literary theorists in attending to narrative's role in pointing to more than a simple pattern of oppressive/oppositional violence between colonizer and colonized.

SEE ALSO *Arendt, Hannah; Aristotle; Du Bois, W. E. B.; Ethnography; Ethnology and Folklore; Fanon, Frantz; Fiction; Freud, Sigmund; Habermas, Jürgen; Linguistic Turn; Lying; Plato; Postcolonialism; Psychoanalytic Theory; Racism; Reality; Said, Edward; Storytelling; Structuralism*

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Yvette Christiansë

NASH, JOHN

1928–

In a few short papers between 1950 and 1953, John F. Nash Jr. formulated two major concepts of game theory: the Nash bargaining solution and Nash equilibrium. His formulation of noncooperative equilibrium was one of the greatest conceptual breakthroughs in social science. Nash then turned his focus to mathematical analysis and made important contributions to the theory of manifolds. His work was tragically interrupted by mental illness after 1960. Decades later, his recovery and return to active work was widely celebrated in the field of economics, where his ideas had triumphed even in his absence. (See Sylvia Nasar's biography *A Beautiful Mind: A Biography of John Forbes Nash Jr.* published in 1998. A popular movie in 2001 presented a fictional version of Nash's life.)

The Nash bargaining solution (1950a, 1953) is a general theory of efficient and equitable outcomes for two-person bargaining problems. A bargaining problem is characterized by a convex set of allocations that are feasible for the players, where each allocation is a pair of numerical payoffs, one for each player. Letting 0 represent the payoff that a player could get without any cooperative agreement, we assume that the allocation (0,0) is in the feasible set.

In simple examples where both players' payoffs are measured in transferable units of money, a reasonable solution would divide equally the amount that they can earn by cooperating. But Nash argued that when payoffs are not transferable, a reasonable solution should remain invariant when the scale in which a player's payoffs are measured is multiplied by a positive constant or when feasible alternatives other than the solution are eliminated. Remarkably, Nash proved that these properties are satisfied by a unique solution, which maximizes the multiplicative product of the players' gains. Nash's bargaining solution has become the cornerstone of the theory of cooperative games without transferable utility.

Nash equilibrium is a general solution concept for games in strategic form. A strategic-form game is defined by specifying the set of players, the set of strategies for each player, and the payoff that each player would get from every possible combination of strategies that the players could choose. A Nash equilibrium is a combination of strategies such that no player can increase his or her expected payoff by choosing a different strategy, when the other players' strategies are held fixed. Nash (1950b, 1951) proved that any finite game has such noncooperative equilibria, when randomized strategies are admitted, and he argued that noncooperative equilibrium analysis should be a general methodology for analyzing games of any kind. In 1953 he worked to show how his cooperative bargaining theory could be based on equilibrium analysis of noncooperative games in which players independently choose their bargaining strategies.

The importance of Nash equilibrium is manifested when we consider any question about reforming any economic, political, or social institution. To reform an institution is to change the rules of the game that people play in this institution. A case for reform must depend on some predictions about how people would behave in this institution, with or without the reform. If a case for reform depended on a prediction that was not a Nash equilibrium, it could be undermined by an individual who recognizes that behaving differently would earn a better payoff. Such difficulties are avoided by analyzing and comparing Nash equilibria of different institutions.

Nash equilibrium formalizes basic economic assumptions concerning the intelligence and rationality of individuals. The assumption of payoff-maximizing individual behavior has been common in economic analysis since Augustin A. Cournot (1838). But Nash equilibrium also assumes the independence of individual decision-making, which was viewed as a restrictive assumption until John von Neumann (1928) presented a broader concept of strategic decision-making, in which a strategy is a complete plan of actions for a player in all possible contingencies (Myerson 1999). This concept of strategy was used in Nash's argument that any dynamic bargaining process can be studied as a noncooperative game in which players plan their strategies independently before bargaining begins.

Later work in noncooperative game theory has refined and extended the equilibrium concept to take fuller account of sequential decision-making and communication in games. These developments broadened the analytical power of noncooperative game theory, which has transformed the scope of economics. Before Nash, many economists accepted a narrow definition of economics as being principally concerned with production and allocation of material goods. But noncooperative game theory provides a general framework for studying competition in any arena, and so economists have come to define their field more broadly, as being concerned with analysis of incentives in all social institutions. Thus by accepting game theory as a core analytical methodology alongside price theory, economic analysis has returned to the breadth of vision that characterized the ancient Greek social philosophers who gave economics its name.

SEE ALSO *Equilibrium in Economics; Game Theory; Nash Equilibrium; Noncooperative Games; Strategic Games*

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Roger B. Myerson

NASH EQUILIBRIUM

Nash equilibrium is a fundamental concept in the theory of games and the most widely used method of predicting the outcome of a strategic interaction in the social sciences. A game (in strategic or normal form) consists of the following three elements: a set of players, a set of actions (or pure-strategies) available to each player, and a payoff (or utility) function for each player. The payoff functions represent each player's preferences over action profiles, where an action profile is simply a list of actions, one for each player. A *pure-strategy Nash equilibrium* is an action profile with the property that no single player can obtain a higher payoff by deviating unilaterally from this profile.

This concept can best be understood by looking at some examples. Consider first a game involving two players, each of whom has two available actions, which we call *A* and *B*. If the players choose different actions, they each get a payoff of 0. If they both choose *A*, they each get 2, and if they both choose *B*, they each get 1. This "coordination" game may be represented as in Figure 1, where player 1 chooses a row, player 2 chooses a column, and the resulting payoffs are listed in parentheses, with the first component corresponding to player 1's payoff. The action profile (*B,B*) is an equilibrium, since a unilateral deviation to *A* by any one player would result in a lower payoff for the deviating player. Similarly, the action profile (*A,A*) is also an equilibrium.

As another example, consider the game "matching pennies," which again involves two players, each with two actions. Each player can choose either heads (*H*) or tails (*T*); player 1 wins a dollar from player 2 if their choices are the same, and loses a dollar to player 2 if they are not. This game is shown in Figure 2 and has no pure-strategy Nash equilibria.

In some cases, instead of simply choosing an action, players may be able to choose probability distributions over the set of actions available to them. Such randomizations over the set of actions are referred to as *mixed strategies*. Any profile of mixed strategies induces a probability distribution over action profiles in the game. Under certain assumptions, a player's preferences over all such lotteries can be represented by a function (called a *von Neumann-Morgenstern utility function*) that assigns a real number to each action profile. One lottery is preferred to another if and only if it results in a higher expected value of this utility function, or expected utility. A mixed strategy Nash-equilibrium is then a mixed strategy profile with the property that no single player can obtain a higher value of expected utility by deviating unilaterally from this profile.

The American mathematician John Nash (1950) showed that every game in which the set of actions available to each player is finite has at least one mixed-strategy

	A	*B*
A	(2,2)	(0,0)
B	(0,0)	(1,1)

Figure 1

	H	*T*
H	(1,−1)	(−1,1)
T	(−1,1)	(1,−1)

Figure 2

	C	*D*
C	(2,2)	(0,3)
D	(3,0)	(1,1)

Figure 3

equilibrium. In the matching pennies game, there is a mixed-strategy equilibrium in which each player chooses heads with probability 1/2. Similarly, in the coordination game of the above example, there is a third equilibrium in which each player chooses action *A* with probability 1/3 and *B* with probability 2/3. Such multiplicity of equilibria arises in many economically important games, and has prompted a large literature on equilibrium refinements with the purpose of identifying criteria on the basis of which a single equilibrium might be selected.

Nash equilibria can sometimes correspond to outcomes that are inefficient, in the sense that there exist alternative outcomes that are both feasible and preferred by all players. This is the case, for instance, with the equilibrium (*B,B*) in the coordination game above. An even more striking example arises in the prisoner's dilemma game, in which each player can either "cooperate" or "defect," and payoffs are as shown in Figure 3.

The *unique Nash equilibrium* is mutual defection, an outcome that is worse for both players than mutual cooperation. Now consider the game that involves a repetition of the prisoner's dilemma for *n* periods, where *n* is commonly known to the two players. A pure strategy in this repeated game is a plan that prescribes which action is to be taken at each stage, contingent on every possible history of the game to that point. Clearly the set of pure strategies is very large. Nevertheless, all Nash equilibria of this finitely repeated game involve defection at every stage. When the number of stages *n* is large, equilibrium payoffs lie far below the payoffs that could have been attained under mutual cooperation.

It has sometimes been argued that the Nash prediction in the finitely repeated prisoner's dilemma (and in many other environments) is counterintuitive and at odds with experimental evidence. However, experimental tests of the equilibrium hypothesis are typically conducted with monetary payoffs, which need not reflect the preferences of subjects over action profiles. In other words, individual preferences over the distribution of monetary payoffs may not be exclusively self-interested. Furthermore, the equilibrium prediction relies on the hypothesis that these preferences are commonly known to all subjects, which is also unlikely to hold in practice.

To address this latter concern, the concept of Nash equilibrium has been generalized to allow for situations in which players are faced with incomplete information. If each player is drawn from some set of types, such that the probability distribution governing the likelihood of each type is itself commonly known to all players, then we have a *Bayesian game*. A pure strategy in this game is a function that associates with each type a particular action. A *Bayes-Nash equilibrium* is then a strategy profile such that no player can obtain greater expected utility by deviating to a different strategy, given his or her beliefs about the distribution of types from which other players are drawn.

Allowing for incomplete information can have dramatic effects on the predictions of the Nash equilibrium concept. Consider, for example, the finitely repeated prisoner's dilemma, and suppose that each player believes that there is some possibility, perhaps very small, that his or her opponent will cooperate in all periods provided that no defection has yet been observed, and defect otherwise. If the number of stages *n* is sufficiently large, it can be shown that mutual defection in all stages is inconsistent with equilibrium behavior, and that, in a well-defined sense, the players will cooperate in most periods. Hence, in applying the concept of Nash equilibrium to practical situations, it is important to pay close attention to the information that individuals have about the preferences, beliefs, and rationality of those with whom they are strategically interacting.

SEE ALSO *Game Theory; Multiple Equilibria; Noncooperative Games; Prisoner's Dilemma (Economics)*

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Rajiv Sethi

NASSER, GAMAL ABDEL
1918–1970

Gamal Abdel Nasser, who served as president of Egypt from 1956 to 1970, was born on January 15, 1918, in the small village of Bani Mor in the Egyptian province of

Assiut, where he lived for eight years. He came from a humble and poor background to become one of the most prominent and influential leaders in the Middle East and the third world. His father worked as a mail carrier in the Egyptian Ministry of Communication, a position that required him to move with his family from Bani Mor to Alexandria and finally Cairo, where Nasser lived for ten years. In his memoirs, Nasser spoke proudly of his humble origin. His poor background might have been behind his socialist tendencies and his commitment to improve the living conditions of Egyptian peasants and workers.

During his high school years, Nasser participated in student demonstrations against the British occupying forces. After receiving his high school diploma in 1937, Nasser entered the Egyptian Royal Military Academy, which started admitting sons of lower-income families in 1936. A year later, he joined the Egyptian army, where he met several of his future colleagues, including Anwar el-Sadat (1918–1981) and Zakaria Mohyi El Deen, both of whom served as his vice presidents, and Abdul Hakeem Amer, who became a minister of defense. In 1942 Nasser was transferred to Sudan, where he and other officers founded the Free Officers, a secret revolutionary organization. The Free Officers was a secular nationalist movement that was opposed to the British occupation of Egypt, the "corrupt" royal family, and the domination of Egypt's economy and parliament by a small landowning class. In 1948 Nasser was a member of the Egyptian army that along with other Arab armies was sent to Palestine to thwart the establishment of Israel. The humiliating defeat of the Arab armies in the 1948 war raised his awareness of the Palestinian problem and the inefficacy of the existing Arab governments.

On July 23, 1952, Nasser and his Free Officers seized power and deposed the king. A year later, the Revolutionary Command Council of the Free Officers promulgated a new constitution, abolished the monarchy, and declared Egypt a republic. Though General Mohammad Naguib (1901–1984) served as the head of the government from 1952 to 1954, Nasser held the real power through his control of the Revolutionary Command Council. In November 1954 Nasser placed Naguib under house arrest, accusing him of knowing about an attempt by a member of the Muslim Brotherhood to assassinate Nasser.

In 1956 Nasser was elected president of Egypt, a position he held until his death in 1970. As president, Nasser created an authoritarian police state, banning political parties and suppressing political opposition, including the local communists and members of the Muslim Brotherhood. He ruled the country through the Arab Socialist Union, a government-controlled party.

Between 1956 and 1966, Nasser introduced several socialist measures, including the nationalization of various industries, private companies, and banks, and he expanded the public sector significantly. He also introduced agrarian reform, including the confiscation of 2,000 square miles of cultivable land from wealthy landowners, which he distributed to Egypt's poor peasants. The aim of these socialist measures was to improve the living conditions of the country's peasants and workers. Nasser contended in his book *The Philosophy of the Revolution* (1955) that Arab socialism was a prerequisite for Arab unity and freedom and for surmounting the social and economic legacy of colonialism.

In addition to his domestic socialist reforms, Nasser adopted an anti-Western and anticolonial foreign policy. Initially however, he tried to secure arms from Britain and the United States, and it was only after the two countries declined his request that he acquired such weapons from the Soviet Union and Eastern Europe. Along with Prime Minister Jawaharlal Nehru (1889–1964) of India and President Sukarno (1901–1970) of Indonesia, Nasser also founded the nonaligned movement.

Nasser tried to obtain Western funding to build a dam on the Nile (the Aswân Dam) that would provide electricity to neighboring villages and towns and increase the amount of cultivable land available to peasant farmers. Though at first the administration of U.S. president Dwight D. Eisenhower (1890–1969) expressed an interest in financing the construction of the Aswân Dam, it rescinded its offer to protest Nasser's anti-Western policies and his rapprochement with the Soviet Union, Eastern Europe, and Communist China, as well as his nonalignment policy. In reaction, Nasser nationalized the Suez Canal Company with the hope of using the income generated from tolls levied on ships crossing the canal to finance the construction of the dam. The Suez Canal Company was seen as a symbol of Western colonialism and hegemony.

In response to the nationalization of the Suez Canal Company, Britain, France, and Israel invaded Egypt and occupied Sinai in late 1956. Under pressure from the United Nations and the United States, however, the invading armies were forced to withdraw and UN peacekeeping troops were deployed into the Sinai. The invasion of Egypt intensified Nasser's opposition to Western influence and military alliances in the Middle East, and made him a strong advocate of Arab nationalism and freedom from colonial control. The Suez crisis also significantly increased Nasser's popularity in the Arab world. Likewise, his message of social justice at home and anticolonialism abroad inspired millions of Arabs, who formed political parties to bring about Arab unity and socialism.

In response to a request from the Syrian military and civilian leaders for a merging of Syria and Egypt, Nasser created in 1958 the United Arab Republic as the first step

toward Arab unity. The union ended in 1961; Syrian military officers and civilians resented Egyptian domination of Syrian politics, the secret police's harsh repression of Syrian opposition, and nationalization of the Syrian private sector. In 1962 Nasser sent his army to Yemen in support of the military coup that overthrew the monarchy. Egyptian military intervention in Yemen, which lasted for five years, was costly.

In May 1967 Nasser incited the June War (the Six-Day War) when he requested the withdrawal of the UN Emergency Force from Sinai and closed the Gulf of Aqaba to Israeli ships. In reaction, Israel launched a surprise attack on Egypt and occupied the Sinai Peninsula. In the aftermath of the humiliating defeat of his army, Nasser resigned from office, but he rescinded his decision in the wake of massive popular support for his rule. However, Nasser never regained his previous stature, and his government became increasingly dependent on military and economic aid from the Soviet Union.

Nasser died of a heart attack on September 28, 1970. Five million Egyptians attended his funeral, making it the largest funeral in history. His legacy has been the subject of intense debate. Some criticize his autocratic rule and his suppression of political opposition. Others criticize his aggressive and militaristic foreign policies, including his incitement of the 1967 June War and his military involvement in Yemen. Such military ventures tainted his legacy and caused severe difficulties for Egypt and the Arab countries. In contrast, others commend his struggle against Western colonialism, his restoration of Arab dignity, and his embodiment of the dream of Arab unity and nationalism. Still others commend Nasser's role in modernizing Egypt's educational system and making it free to the poor, as well as his strong support of the arts, theater, film, music, and literature.

SEE ALSO *Arab League, The; Arab-Israeli War of 1967; Arabs; Nationalism and Nationality; Pan-Arabism; Suez Crisis; United Arab Republic*

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Emile Sahliyeh

NAST, THOMAS
1840–1902

Thomas Nast both drove and commented on the most pressing questions of his age through evocative engravings and cartoons. Highlighting nationalism, political corruption, and urban poverty, Nast launched a new means of communication that appealed to and touched an entire nation.

Nast gained fame with *Harper's Weekly* magazine, where he worked from 1859 until 1886. Reflecting his emotional responses to the carnage he saw as a war correspondent, Nast's engravings went beyond reporting and into the realm of the visual editorial. Vivid engravings of the battles of the Civil War (1861–1865), the patriotic sacrifice needed to preserve the Union, and the harsh realities of slavery made the war real to the average citizen and inspired them to service. One of his most representative images shows Columbia weeping as a tattered Union amputee shakes the hand of a refined Southern soldier. Called "Compromise with the South," this use of allegory and warnings against the sacrifice of right in the name of expediency became a powerful tool for the Republican campaign to re-elect President Abraham Lincoln.

As the war ended, Nast turned to immigration, political corruption, and free silver as ripe ground for his images. Moving from commentary to activism, Nast's work unmasked the political corruption behind the "party boss" system and helped imprison New York's infamous Boss Tweed. In a series of cartoons from 1869 to 1872, the artist openly accused Tweed of rigging elections and accepting bribes, all while giving a moral slant to the subject that turned the public against the iron-fisted leader. The power of Nast's imagery is best expressed by a quote attributed to Tweed himself: "Stop the damned pictures … my constituents can't read, but, damn it, they can see pictures" (Fischer 1996, p. 2). In this age of immigration, emotional images appealed to an urban citizenry that was often illiterate yet anxious to make their way in a new country.

Nast aptly demonstrated the role of political cartoons in electoral campaigns. In 1872 his visual barrage of cartoons contributed to the defeat of Horace Greeley's run against Ulysses S. Grant. By 1876, his support for Rutherford B. Hayes propelled the candidate to the presidency. The power of Nast's aura is undeniable: His candidates won seven consecutive presidential elections and his images of the elephant and donkey battles have currency in the twenty-first century.

Depicting a clear line between good and evil, Nast's style was pedantic, explicit, and expressed a definitive right-wing stance. His harsh black-and-white lines and crosshatchings for *Harper's Weekly* stood in stark contrast to

the more subtle irony in his competitors' illustrations for *Puck* magazine. Nevertheless, Nast's methods redefined the political cartoon medium. Instead of relying on the talking bubbles of the eighteenth century, he liberally incorporated labels and allegory to emphasize the character and ideas of his subjects. His ultrarealistic style instantly made a point without requiring lengthy analysis from his audience, a quality still admired in cartoonists in the early twenty-first century. Through Nast's efforts, the political cartoon stepped out of the shadow of commentary and into the realm of activism, where it remains today.

SEE ALSO *Cartoons, Political; Media; U.S. Civil War*

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Rita B. Trivedi

NATION

The term *nation* connotes a broad community of individuals, whose members consider themselves linked on the basis of shared long-standing cultural practices, ethnicity, history, memories, or traditions, who are typically associated with a specific geographical homeland, and who are predisposed to make political claims of autonomy, sovereignty, or other assertions of rights on the basis of their membership. Though nations are abstractions, in practice they are quite real to those who believe they belong to one. The idea that nations are real and legitimate forms of social organization is a fundamental assumption in ideologies of nationalism and national self-determination.

While in vernacular and economic use *nation* is often synonymous with *country* or *state*, the historical and sociological understanding of the term does not demand the existence of government or recognized statehood. Despite this difference, *nation* and *state* are often used interchangeably. For example, the United Nations is in fact an assembly of states, not nations, much as *international relations* actually refers to relations between *states*. To further confuse matters, citizens of states are often described as having that state's *nationality*. However, states grant citizenship to recognize rights in the political community of the state, whereas nationality solely describes one's membership in the nation. *Nation* is also commonly used as a synonym for an *ethnic group*, which may in some cases overlap in practice, though the term is analytically distinct.

Core disputes in theories of the nation include the very nature of nations' existence: Are they real? Is it natural for humans to organize themselves into nations? Are these organizations based on natural differences, or are these differences social constructions? How long have people felt themselves part of nations? Is membership voluntary or ascribed?

Eighteenth- and nineteenth-century theorists believed that all people were born as members of a nation, with an inherent national character endemic to their group. Philosophers such as Johann Gottfried Herder (1744–1803) argued that nations were naturally occurring linguistic and cultural communities, real and hereditary expressions of an eternal essence, generally unchanging over time, which deserved self-determination due to their differences from other groups. This school of thought has come to be known as *primordialism*. While contemporary scholarship has generally rejected this view, it lives on in the rhetoric of nationalist leaders, and in some representations of nations in popular media, particularly during times of war, when conflicts may be portrayed as ancient hatreds with no identifiable beginning and no possibility for resolution.

Refining the primordialists' belief that nations are natural and real, *perennialist* scholars emerged in the mid-twentieth century to describe the robustness of nations without reliance on nature. Authors such as Anthony D. Smith suggested that nations may have a birth moment in the past, rooted in unique cultural practices and traditions that could be described as *ethnic*. However, once established, these characteristics of the nation become entrenched to the point of permanence, perennially reiterated in subsequent generations. Tales of "golden ages" or ancient battles with other national groups are passed down to younger generations, told and retold to cement the new generation's links with its past.

Against this view of nations as ancient or eternal, so-called *modernist* theorists such as Ernest Gellner and Benedict Anderson examined the process of nation formation and argued that nations resulted from economic advances and industrialization. These authors grow out of a social constructivist tradition, which argues that no human enterprise can be understood as innately natural or "real." From this perspective, nations are invented or imagined, and only gain legitimacy through broad public acceptance, not a priori existence. Anderson, perhaps the most famous representative of the modernist or *constructivist* school, argued that nations were "imagined political

communities," in which individuals came to believe that they were connected through cultural and political bonds to others whom they had never met, even the dead or not-yet-born. According to Anderson, these beliefs were disseminated as a byproduct of modern inventions such as the printing press, which, in combination with the capitalist desire to sell books and newspapers, helped standardize language and information dissemination across wide territories. "Print-capitalism" increased the scope of communities, but also defined their boundaries. As information spread, images of both the in-group and the out-group were constructed.

Modernists also highlight the role of the state in constructing the nation, through common symbols such as flags and holidays, common institutions such as public education and national museums, and through activities that cemented the community's boundaries and limits, such as maps and censuses. The modernist paradigm has created a vast research program into the history of nations, asking how particular nations developed and how belief in these nations was manifested. Furthermore, it has opened up new perspectives: Once a nation is seen as imagined or constructed, it becomes possible to conceive of alternatives. This raises the questions of whether membership in the nation is a choice, either at the individual or the group level, and whether nations can be based on civic values, such as political principles, rather than ethnic traditions. In turn, *postmodernists*, writing since the mid-1990s, have argued that nations can never be fully constructed, that their content is subject to "discursive" redefinition and change, and that nations continually undergo reconstruction and reproduction.

As their name suggests, modernists also argue that the nation is a recent phenomenon. Many authors point to the French Revolution as a critical historical moment in the spread of the idea. When revolutionaries called for government to represent the people, they referred to the nation, instead of a particular class, religion, or region. This arguably had the effect of making illegitimate those forms of government that did not claim to represent the nation. Simultaneously, the ideology that states should represent nations, and that nations should have their own states, potentially hides other divisions that might exist within a society, for example, gender or class disparities. Postmodern and Marxist scholars have critiqued the "hegemony" of the nation as an organizing principle of political life.

A country whose borders coincide with a perceived national homeland is called a *nation-state*. However, this is an ideal type, and with the growth of immigration and globalization the idea of a homogeneous nation-state is arguably losing relevance. On the other hand, political leaders may nonetheless rule as if their state were an uncontested nation-state, and accordingly may enact policies on behalf of "their" nation, thereby keeping the nation a part of political life. As Rogers Brubaker suggests, the nation cannot be written off; even if its meaning cannot be pinned down, the idea of a nation remains useful as a "category of practice."

SEE ALSO *Citizenship; Ethnicity; Identity; Nationalism and Nationality; Revolution; Society; Sovereignty; State, The*

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NATION OF ISLAM

In his classic work *The Black Muslims in America* (1961), religion scholar C. Eric Lincoln (1924–2000) argued that originally the Nation of Islam was less a religious movement than a protest movement against centuries of racial oppression. Founded in 1930 by W. D. Fard (pronounced *Far-rod*), the Nation of Islam borrowed heavily from the teachings of Marcus Garvey's (1887–1940) United Negro Improvement Association and Noble Drew Ali's (1886–1929) Moorish Science Temple. Built around Islamic symbolism and a philosophy that challenged white supremacy, the Nation of Islam encouraged members to work toward economic and social independence from the white community. Far more radical than protest organizations including the National Association for the Advancement of Colored People (NAACP), the Urban League, the Southern Christian Leadership Conference (SCLC), the Congress of Racial Equality (CORE), and the Student Nonviolent Coordinating Committee

(SNCC), the Nation of Islam espoused racial segregation as a solution to institutional racism.

The Nation of Islam began in Detroit, Michigan. W. D. Fard, a peddler possibly of Arab descent, began teaching small gatherings of "so-called Negroes" about the glorious history of "Afro-Asia." Fard warned his followers that ignorance of their past weakened them to the "tricknology" of whites, namely white supremacy. Fard argued that ignorance of history produced in the "Asiatic" community a sense of intellectual and moral inferiority. Education, he reasoned, preceded liberation, and therefore it is the responsibility of black men and women to seek knowledge and then to use that knowledge to inform daily practices. Fard, for example, admonished blacks to live and eat as their ancestors had in order to reclaim their birthright and to reestablish a system of equality, justice, and freedom. Fard also instituted Muslim Girls Training Classes, which taught girls and women the domestic arts, and the Fruit of Islam, which was a form of military training for men. These gender-segregated programs were designed to promote a sense of dignity, self-discipline, and social order.

Fard chose Elijah Muhammad (1897–1975), formerly Elijah Poole, as his lieutenant in the Nation of Islam. Born in Sandersville, Georgia, Poole was the son of William, a pastor, and Mariah, a domestic servant. With his wife Clara, Elijah Poole joined the great migration north in 1923 to flee the racial violence, poverty, and the boll weevil infestation that had destroyed crops in the South. The Pooles settled in Detroit with their two children (three more children would follow). In Detroit, Elijah Poole became a devoted follower of Fard, and eventually cast away his "slave name" to become Elijah Karriem and eventually Elijah Muhammad in 1933. Following Fard's disappearance from Detroit in 1934, Elijah Muhammad fought to maintain his position as *the* Minister of Islam. In his capacity as leader, Elijah Muhammad deified Fard as the embodiment of Allah. This decision effectively positioned Fard as the last Prophet of Allah, a heretical notion for Sunni and Shiite Muslims. After serving three years at MCI Prison for failure to register for selective service during World War II (1939–1945), Elijah Muhammad resumed leadership of the Nation of Islam in 1946. Following his release, Muhammad continued to reach out to black prisoners.

While serving time at Norfolk Prison Colony in Massachusetts, Malcolm Little (1925–1965) was introduced to the teachings of Elijah Muhammad. Malcolm Little identified strongly with the idea that his past behavior was the result of having been brainwashed by white supremacy. In response, Little spent his time in prison studying history, philosophy, and religion. He also maintained an ongoing correspondence with Elijah Muhammad, and eventually converted and changed his name to Malcolm X. Following his release from prison in 1952, Malcolm X began a journey that would eventually lead to his becoming the most articulate, powerful, and controversial spokesman for the Nation of Islam.

Unlike the other protest organizations at the turn of the century that fought for the full benefits of citizenship in an integrated United States, the Nation of Islam espoused a philosophy that whites were "blue-eyed devils" created by an evil black scientist named Yacub. Slavery, de jure segregation, the epidemic of lynchings, and institutional racism were offered as proof by followers that even if whites were not devils, they acted like devils. The militant and antiwhite rhetoric of the Nation of Islam made the organization unpopular even within the black community, and until the 1960s the philosophy appealed almost exclusively to southern migrants living in the urban Northeast and Midwest. Membership levels grew and shrank from 1930 to 1942, probably never rising above one thousand. In the 1950s, membership in the Nation was possibly as high as five thousand. With a large recruitment drive in the 1960s, Nation membership most likely reached its highest level of about twenty thousand. The number of members is not, however, indicative of the influence of Elijah Muhammad's and Malcolm X's teachings. There were thousands of African-Americans who sympathized with the Nation's philosophy of self-sufficiency and Afrocentrism, and with the Nation's declared willingness to physically defend their community.

There were two major tensions within the Nation of Islam following Malcolm X's rise as the organization's most charismatic spokesman. The first tension surrounded the relationship between Nation of Islam philosophy and "orthodox" Islam. With greater media attention came greater scrutiny, and a number of Sunni Muslims were more than willing to highlight the differences between Nation teachings and traditional Islam. In the press, Elijah Muhammad was characterized as a phony by Sunni Muslims who knew that the leader's beliefs were a syncretic blend of Christianity and black nationalism layered with Islamic symbolism. By the 1960s, Elijah Muhammad's son Wallace Muhammad and Malcolm X were pushing their leader to adopt traditional Islam, but Elijah Muhammad held firm to the original tenets of his organization. The second tension had to do with the question of race. The Nation of Islam was characterized in the press as a black supremacist organization that preached hate. Black leaders including Martin Luther King Jr. (1929–1968) and NAACP attorney Thurgood Marshall (1908–1993) castigated the organization. The Nation's anti-integration stance and tolerance of self-defense was seen as a threat to the current gains of the civil rights movement. Beyond the political repercussions, many blacks thought that the philosophy of the nation was cynical and untenable.

Major changes occurred in the Nation of Islam in the 1960s. Scandals surrounding Elijah Muhammad, integration following civil rights legislation, and the assassination of Malcolm X (renamed El-Hajj Malik El-Shabazz before his death) all contributed to the slow delegitimization of some of the beliefs and practices of the Nation of Islam. When Elijah Muhammad died in 1975, he passed leadership to his son Wallace Muhammad. Wallace Muhammad subsequently dismantled the Nation of Islam and built the World Community of Islam in the West, now the American Muslim Mission. The American Muslim Mission continues to promote Sunni Islam within the African American community. In 1977 Minister Louis Farrakhan rejected the leadership of Wallace Muhammad and rebuilt the Nation of Islam in order to continue the teachings of Elijah Muhammad. While still focused on the mission of black empowerment, Louis Farrakhan's Nation of Islam continues to incorporate traditional Islamic practices.

SEE ALSO *Black Power; Civil Rights Movement, U.S.; Islam, Shia and Sunni; King, Martin Luther, Jr.; Malcolm X; Muhammad, Elijah; National Association for the Advancement of Colored People (NAACP)*

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NATIONAL ADVISORY COMMISSION ON CIVIL DISORDERS

SEE *Kerner Commission Report.*

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

The National Assessment of Educational Progress (NAEP) was mandated by Congress in 1969 to provide accurate measurement and reporting of levels and trends in academic achievement of U.S. elementary and secondary students. NAEP has met this goal through regular testing of students in selected subjects and most often at the fourth, eighth, and twelfth grades. For most NAEP reporting, student achievement in the most recent assessment is compared with student achievement in previous years in the same subject and grade to identify changes and trends.

NAEP provides a continuing assessment of the core subjects of reading, mathematics, writing, and science. National and state assessments in reading and mathematics are conducted every other year, and every four years in science and writing. NAEP also tests achievement in other subjects that are widely taught in the schools, such as U.S. history, civics, geography, economics, and the arts, but they are assessed less often and sometimes at only one grade. In addition NAEP conducts special studies on topics such as long-term achievement trends, the influence of course-taking on outcomes, assessment results in urban schools, and the effects of educational technology.

NAEP policy setting, administration, and implementation are conducted by several organizations. NAEP policy is set by the National Assessment Governing Board (NAGB), whose members are appointed by the secretary of education. Members include governors, educators, school administrators, state legislators, and the public. NAGB selects the subject areas for assessment, develops the general objectives and specifications for the assessment, prepares guidelines for reporting, and is responsible for making all policy decisions. NAEP administration is the responsibility of the National Center for Education Statistics (NCES), which oversees assessment development and scoring. NAEP implementation is carried out through contracts, grants, and cooperative agreements with qualified organizations and individuals. They define the material to be assessed within each subject and at each grade level, prepare the assessment instruments, select the school and student samples, score student responses, analyze the data, and write the NAEP reports.

The most important part of the assessment process is the development of a content framework. It defines what students should know and be able to do at each assessed grade level, how assessment items should be written to address that content, and what should be reported. The framework is prepared from the work of many content experts, teachers, curriculum specialists, policymakers,

and public representatives. It is then given final review and approval by NAGB.

The assessments include multiple-choice items and constructed-response items that require students to give short or extended written responses. NAEP also collects background data through questionnaires completed by the students, their teachers, and school administrators. Some data, for example student demographics such as gender, race and ethnicity, and region, are standard for all NAEP assessments. Background information is also obtained on factors that may influence academic performance, such as time spent on homework, instructional practices, and teacher background. Additional questions may directly relate to the subject being assessed. For example, in economics, students might be queried about whether they have had a course in economics in their high school careers.

NAEP uses probability sampling to select a representative group of students to participate in the assessment. The sample size for each state averages one hundred schools and three thousand students at each grade level and within each subject. The sample is sufficiently large so it can produce reliable and valid results at the national level at each grade level and for subgroups of students defined by specified characteristics such as gender, race and ethnicity, eligibility for a lunch subsidy, and region. State-level results are also reported for reading, mathematics, writing, and science.

NAEP assessments also use item sampling of subject matter content. In item sampling, each student is only given a sample of all the test items. This design means that NAEP can administer a large number of items, and because the assessment blocks are linked, valid and reliable achievement results can be constructed for representative samples of students in each subject area and grade level. By law, only the overall results for a representative sample of students are reported. Given this sampling, it is impossible to report individual student results.

Subject-matter results are reported by averages and percentiles and by achievement levels. The primary means of reporting are three achievement levels defined by NAGB. Students at the *basic* level "demonstrate partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade." Students at the *proficient* level "demonstrate solid academic performance for each grade assessed. These students demonstrate competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter." Students at the *advanced* level "demonstrate superior performance."

The scores and achievement levels are developed independently for each subject; thus the results cannot be compared across subjects. In general, however, the results for subjects show that most students score either below or at the basic level, far fewer score at the proficient level, and very few score at the advanced level. For example, the 2005 twelfth-grade science assessment reported the following results for students: below basic, 32 percent; basic, 39 percent; proficient, 26 percent; and advanced, 3 percent.

NAEP results, including scale scores and achievement levels for subgroups of students as well as background data that relate to student achievement, are used for research in a wide variety of studies. The NCES provides training on their use for primary or secondary education analysis and, in combination with other student and school data sets, makes the NAEP data available to researchers. Studies have been conducted on how student achievement is affected by the prior academic work of students, student experiences outside of school, class size, and teacher characteristics. In addition, student, teacher, and school factors have been investigated to identify their effects on achievement levels of ethnic, gender, and regional groups.

NAEP is not without critics despite the money and effort expended to develop accurate measures of achievement. Levels of understanding, but not trends, may be understated because of the voluntary nature of the assessment and the lack of student motivation to score well, especially when it is administered to graduating seniors. The measures are aggregate ones for the national or state level; no individual or school-specific results are reported. NAEP may also create incentives for establishing a national curriculum in the schools.

SEE ALSO *National Family Health Surveys; National Longitudinal Study of Adolescent Health; National Longitudinal Survey of Youth; Panel Study of Income Dynamics; Surveys, Sample*

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NATIONAL ASSOCIATION FOR THE ADVANCEMENT OF COLORED PEOPLE (NAACP)

The National Association for the Advancement of Colored People (NAACP) was incorporated in 1910 as an

organization dedicated to mobilization on behalf of racial justice. The founding of the organization occurred through the discourse and several meetings among black and white intellectuals, business persons, educators, and professionals who, over a number of years prior to the NAACP's founding, laid the groundwork to mobilize efforts to fight racial discrimination against African Americans. Many of the leaders and participants of these precursory efforts reached a consensus on developing a major organization that would fight racial discrimination, and eventually, the NAACP was established.

One meeting that contributed to the development of the NAACP was held in Niagara Falls, New York, in 1905; this meeting marked the founding of the Niagara Movement. At the meeting, the participants discussed their opposition to the accommodationist policies of Booker T. Washington (1856–1915). They supported black progress by way of higher education in cultural and scientific studies, economic development, and integration within the formal political structures with full citizenship rights, the franchise, and civil rights.

By the time of the second annual Niagara Movement meeting in 1906, several members were alarmed by the continuing brutality, lynching, and loss of property, among other oppressive conditions, facing blacks at that time. This led white leaders Mary White Ovington (1865–1951) and Oswald Garrison Villard (1872–1949), grandson of abolitionist William Lloyd Garrison (1805–1879), along with W. E. B. Du Bois (1868–1963), to convene a meeting, referred to as The Call, to discuss the "Negro question." On February 12, 1909, the one-hundredth anniversary of the birthday of Abraham Lincoln (1809–1865), fifty-three signatories (who comprised the membership of the National Negro Committee) called for a national conference to be held on May 30, 1909.

By the time the second national conference was held in May 1910, the National Association for the Advancement of Colored People was incorporated by five people: Du Bois, Villard, Ovington, Walter E. Sachs (1884–1980), and John Haynes Holmes (1879–1964). The Niagara Movement, from which the NAACP was an outgrowth, eventually dissolved. Many of the movement's members, however, were also members of the NAACP. Continuing many of the concerns of the Niagara Movement, the NAACP proposed to address the social and political equality of African Americans. A 1911 NAACP program declared that its objectives were to sponsor meetings and lectures on questions about race, political representation, foreign affairs, antilynching policy, disfranchisement, educational inequities, discrimination in employment, crime, and public accommodations.

THE ORGANIZATIONAL STRUCTURE

The organization's leadership consisted of a National Board of Directors that was elected from a slate of candidates chosen by the NAACP Nominating Committee. Members of the National Board of Directors had the power to establish committees, departments, bureaus, branches, and college chapters. The National Board of Directors consisted of the president (an ex officio member), vice president, treasurer, chairman of the board (the most powerful officer of the association), and the executive secretary. Other NAACP members made up youth councils, college chapters, and various branches within states.

Some notable former members of the NAACP Board of Directors include the political scientist Ralph Bunche (1904–1971) and Eleanor Roosevelt (1884–1962), wife of President Franklin D. Roosevelt (1882–1945). Other famous members include Du Bois, who acted as the director of publicity and research and who, for a number of years, acted as editor of the association's chief publication, *The Crisis*. Ida B. Wells-Barnett (1862–1931), a strong advocate of antilynching policy in the early twentieth century, was also a member. James Weldon Johnson (1871–1938), known for writing the lyrics to "Lift Every Voice and Sing," the "Negro national anthem," was a national organizer of membership, and he later became executive secretary of the organization.

NAACP membership was (and continues to be) open to all people, regardless of race. Much of the leadership in the early organization consisted of whites. Since 1932, when Louis T. Wright (1891–1952), a black man, was appointed to the Board of Directors, African Americans have been more central to the association's leadership. Today, the organization is structured similarly to its past organization, comprising a National Board of Directors, several departments, state branches with regional offices, youth councils, and college chapters. Julian Bond, a long-time civil rights activist, became chair of the Board of Directors in 1998. In 2005 Bruce S. Gordon became NAACP president, replacing Kweisi Mfume, a civil rights activist and former Maryland representative of the U.S. House of Representative who had served as NAACP president since 1996.

Despite its sound leadership, strong following, and prior financial stability, the NAACP faced both financial difficulties and leadership woes during the early 1990s. During this time, the NAACP experienced alleged financial malfeasance, a budget deficit, and a sex scandal that involved its president, Benjamin F. Chavis Jr. (now known as Benjamin F. Chavis Muhammad). The controversy surrounding Chavis's leadership led to his being asked by the National Board of Directors to resign from the presidency.

Mfume is credited with leading the organization out of its troubled period.

In 2006 the NAACP comprised over two thousand local chapters and more than 500,000 members. It faces the challenge of increasing its membership among a younger generation of political activists. Financial support comes mostly from individuals and corporate donors. Prior to the separation of the NAACP Legal Defense and Educational Fund, Inc. (LDF, also known as the "Inc. Fund") from the main organization, the association benefited financially from tax-exempt donations made to the Inc. Fund. The NAACP also has tax-exempt charitable status, which was initiated via the NAACP Special Contribution Fund in 1964.

POLITICAL INVOLVEMENTS

NAACP political activism consists of policy reviews, political lobbying, political protests, political mobilization, and legal challenges. The organization's early policy concerns were related to African Americans acquiring civil rights. The NAACP compiled and disseminated information to members and other blacks about senators' and representatives' votes on policies that affected civil rights. This information served as a public record of official support for antiblack policies and as a means by which support could be galvanized for NAACP policy concerns.

The NAACP lobbied U.S. presidents and members of Congress for support of civil rights policies, and openly opposed President Woodrow Wilson's (1856–1924) initiation of segregation in the federal government. Early pressure from the NAACP in the 1940s contributed to President Franklin Roosevelt's implementation of Executive Order 8802, which desegregated the American defense industry. Such pressure on the executive branch also resulted in President Harry S Truman (1884–1972) implementing Executive Order 10308, which created a committee to enforce the prohibition of racial discrimination in employment.

In 1930 the NAACP successfully galvanized support in Congress to block the confirmation of Judge Robert Parker of North Carolina (an opponent of black rights) to the U.S. Supreme Court. Similar tactics have been used by the association in more recent years to acknowledge support or nonsupport of various nominations to government posts.

In the early twentieth century, Walter White (1893–1955), former NAACP executive secretary, and James Weldon Johnson lobbied Congress to secure the passage of the Dyer Anti-Lynching Bill, but the bill failed due to a lack of support in the Senate, despite its passage in the House of Representatives. Thereafter, the NAACP decreased its attention to antilynching policy and adopted a focus on other policy interests. Important legislative victories—the Civil Rights Act of 1964, the Voting Rights Act of 1965, and the Fair Housing Act of 1968—occurred as a result of the efforts of NAACP leaders Roy Wilkins (1901–1981) and Clarence Mitchell (1911–1984).

In international affairs, the NAACP denounced African colonization, calling international conferences on the subject in 1919, 1921, 1923, 1927, and 1944. The Pan-African Congress (under the direction of DuBois) specifically asked the U.S. president to take a stand against colonialism and the exploitation of black people around the world.

Political protests by NAACP members also challenged segregated environments. Rosa Parks (1913–2005), an NAACP member, ignited protests across the South when she refused to give up her seat on a segregated bus in 1955 in Montgomery, Alabama. Moreover, sit-ins by NAACP Youth Council members in Greensboro, North Carolina, in 1960 led to nonviolent protest strategies that challenged and eventually desegregated lunch counters.

One of the most effective strategies for fighting racial discrimination consisted of the NAACP litigating Jim Crow laws in the South and eventually in other regions of the country. Charles Hamilton Houston (1895–1950), special counsel for the NAACP and dean of Howard University Law School, launched the NAACP's litigation campaign.

In 1939 Thurgood Marshall (1908–1993), an NAACP attorney who was later appointed to the U.S. Supreme Court, formalized the litigation strategy within the NAACP when he developed the NAACP Legal Defense and Educational Fund (LDF). Becoming a formal entity within the NAACP in 1940, the LDF fought cases that challenged restrictions against blacks voting in primary elections (*Smith v. Allwright*, 1944); restrictive covenants (*Shelley v. Kraemer*, 1948); and educational segregation and discrimination (*Brown v. Board of Education of Topeka*, 1954). These LDF efforts effectively changed the second-class citizenship status of African Americans. The landmark decision in *Brown* declared that the "separate but equal" doctrine established in *Plessy v. Ferguson* (1896) was unconstitutional.

Upon the separation of the LDF from the NAACP in 1957, Robert Carter (NAACP general counsel) continued the NAACP's litigation strategies through the NAACP Legal Department. Under Carter's counsel, the NAACP won a decision in *Gomillion v. Lightfoot* (1960), in which the Supreme Court acknowledged the concept of "one person, one vote."

The NAACP was one of the leading civil rights organizations of the modern civil rights movement, along with the Congress of Racial Equality (CORE, founded in 1942), the Student Nonviolent Coordinating Committee

(SNCC, founded in 1960), the Southern Christian Leadership Conference (SCLC, founded in 1956), and the National Urban League (founded in 1910). These organizations mostly supported nonviolent, direct action strategies (sit-ins, marches, picketing, and especially litigation) to protest racial discrimination.

By the mid-1960s SNCC (whose membership comprised many of the black youth in the movement) and CORE became more radical and militant as members became frustrated with the violent and mostly unmoved opposition of many white Americans to black progress. SNCC leader Stokely Carmichael (1941–1998) expressly supported the notion of "Black Power" as a new objective of black protest. The commitment of the NAACP and other organizations to integrationism (integrating blacks in white society) contrasted with the increasingly nationalistic sentiments of activists like Carmichael and other black youth, as Black Power and black nationalism garnered more support among the black masses.

The national executive director at that time, Roy Wilkins, publicly denounced what he perceived to be the racially separatist and antiwhite orientation of Black Power ideology. The Black Panther Party, at that time a prominent black nationalist organization and a leading proponent of Black Power, disagreed with a political strategy that focused on integrating blacks with whites in society. Instead, the Black Panthers emphasized building the black community (without white resources or integration) to address race and poverty. The party supported building a "black nation."

The Black Panther Party criticized the NAACP as being a mainstream, passive, and bourgeois civil rights organization that represented older, outmoded views about the position of blacks in American society. Moreover, the Black Panthers disagreed with the NAACP's strategy to address racial discrimination without self-defense and without critical opposition to class oppression. In contrast, the Black Panther Party supported more militaristic tactics to protest racial discrimination and violence by whites, and it focused on implementing programs that addressed the overwhelming poverty of black Americans. Although the NAACP supported pacifist resistance and protest movements on a national level, some local chapters and members—in particular, Robert F. Williams (1925–1966), president of the Monroe, North Carolina, chapter of the NAACP—supported self-defense tactics that were akin to the black nationalist tenets of the Black Panther Party.

The vanguard leadership of the NAACP also differed generationally and ideologically from the Black Panther Party, which was comprised mostly of black youth. This generational difference translated into what members of the Black Panther Party perceived to be the desire of older activists to assimilate into white society, as opposed to appreciating black culture as distinct from white influence. The Black Panther Party ushered in an increasing embrace of black pride among black youth and the black masses—a transformation of African American identity that also emphasized less reliance on white resources and more appreciation for black self-determination. As support for black pride became more popular among the black masses, the NAACP became more supportive of black consciousness and black community-building. As always, however, the NAACP was prejudicial about racial separatism.

Over the years, the NAACP has continued to address issues related to race and discrimination. It has also incorporated into its political agenda more programs focusing on economic inequality. Such issues as disparities in education, redistricting and vote dilution, fair housing, criminal justice, and environmental racism now form part of the NAACP's commitment to fighting racial discrimination. The NAACP has also protested apartheid in South Africa, sponsored voter registration drives, encouraged increased voter turnout, challenged negative images of blacks in the media, promoted economic empowerment, and advocated improved healthcare regardless of race. NAACP activism has been extended to address the discrimination of various racial and ethnic minorities, while still focusing on the conditions of African Americans.

SEE ALSO *African American Studies; African Americans; Black Panthers; Black Power;* Brown v. Board of Education, 1954; *Civil Rights; Civil Rights Movement, U.S.; Du Bois, W. E. B.; Integration; Jim Crow; Race; Segregation*

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NATIONAL CENTER ON FATHERS AND FAMILIES

SEE *Fatherhood.*

NATIONAL COMORBIDITY SURVEY

SEE *Smoking.*

NATIONAL DEBT

A national debt is generated when a government runs a budget deficit for consecutive fiscal years; hence its expenditures (for administration, defense, welfare programs, and so forth) exceed its revenues (taxes). In such cases, the government seeks to finance its deficit by borrowing money either from internal sources or from abroad. The "national debt" is the sum total of all the outstanding obligations (bonds, bills, and notes) issued by the Treasury. Consequently, much of the concern about public deficits arises from their cumulative effect on the national debt.

Nowadays, most countries, regardless of their level of development, face persistent deficits and increasing national debts, which in many economies (such as Latin America, Southeast Asia, and Europe) have reached alarming proportions in relation to their GDP, which is the basis for appraising the size and the safety of national debts. To cite examples, for the United States this ratio is approximately 65 percent; for Italy, 120 percent; for France, 75 percent; and for Belgium, 100 percent. Most contemporary economic policies have as a major target the reduction of the national debt, and most governments follow stabilization policies that reduce their public deficits through cutting their expenditures. But what is the burden of a public deficit and by extension of a national debt?

A major burden of national debt on an economy comes from interest payments, which, however, should not burden an economy if the payment does not involve a leakage of income to foreign holders of the debt (external debt) or if it does not impose severe distortions in the way income is distributed among various groups. In general, as long as growth continues and the debt's relation to GDP remains the same, there is no reason why a national debt cannot increase indefinitely. Is there, then, no burden to a debt? If debt remains a constant fraction of the GDP, we should experience no burden because tax revenues would provide the needed interest. If debt increases, it should still pose no burden as long as the economy grows fast enough to provide the additional tax revenues needed for additional interest.

Critics of budget deficits often argue that the burden of deficits eventually falls on future generations because deficits cause the "crowding-out effect" that results from the intense competition for capital funds between private and public investors. The outcome of this search for funds is an increase in interest rates, which eventually reduces growth in the business sector and the income stream of future generations. Furthermore, the increase in interest rates attracts foreign investors and leads to foreign indebtedness; as a result, the externality of the debt creates increasing leakages from the domestic income stream.

Is the debt too large? Is the deficit a danger to an economy? These questions cannot be answered without taking into consideration many aspects of the economic policy a government is pursuing. Deficits can be useful in promoting growth by generating demand (the Keynesian perspective), or they can be dangerous as they generate excess demand (the monetarist and new classical perspectives). The general consensus among economists and policy makers, however, is that there is no absolute magnitude that separates a useful debt from a dangerous

one. A deficit that is mainly incurred to promote public growth-producing services such as education, health, and infrastructure (productive activities) will definitely have an impact on the development process of an economy that is different from a deficit incurred to promote activities such as administration and defense (nonproductive activities). The reason is that growth-promoting state activities generate future income activities and tax revenues to repay the debt, whereas the second case is just a form of income leakage.

SEE ALSO *Aggregate Demand; Government; Macroeconomics; Policy, Fiscal*

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Persefoni V. Tsaliki

NATIONAL DEFICIT

SEE *National Debt.*

NATIONAL ECONOMIC ASSOCIATION

The National Economic Association was founded in 1969 as the Caucus of Black Economists (CBE). At that time, fewer than three score African Americans in the United States were identified as holding a PhD in economics. Most were employed as faculty or administrators in historically black colleges and universities (HBCU). A small number held faculty positions at major research universities throughout the country. Others held professional positions in the federal government in agencies including the Department of Labor, Agriculture, Treasury, and Housing and Urban Development, and in the Federal Reserve system. The great majority of black economists were men, but the first African American known to earn a PhD in economics was a woman, Sadie T. M. Alexander, a member of an old Philadelphia family. She received her degree from the University of Pennsylvania in 1921. The most prominent African American woman in economics in 1969 was Phyllis A. Wallace, who had earned her PhD from Yale University in 1948 and was then director of technical studies at the U.S. Equal Employment Opportunity Commission.

Given the gender mix of African American economists when the NEA was founded, it is important to note that an increasing number of African American women have completed doctoral degree programs and entered the field since 1969. The narrowing gender gap among black economists might reflect the black female/male imbalance in higher education, where many institutions show a ratio of two or more black women enrolled for every black man. (A similar gender gap is seen in the greater proportion of African American women than men entering the medical and legal professions in recent years.)

GENESIS OF THE NEA

Economists are organized around fields of topical interest, such as the American Economic Association (AEA), American Finance Association (AFA), Econometric Society (ES), Labor and Employment Relations Association (LERA), and others. In 1969 there were seven such organizations; by the end of the twentieth century there were fifty-one. Most economists hold membership in two or more such groups. Each year, economists from the various fields gather together at the Allied Social Sciences Association (ASSA) meetings to present and discuss new research, debate economic policy issues, and address other matters of interest to the profession. Many African American economists hold memberships in the organizations, and attend the annual meetings. But in 1969, few African Americans were invited to present papers or act as discussants on research panels and in policy forums.

The 1960s was a period of increased black assertiveness, as reflected in the emergence of the civil rights movement, the black power movement, and organizations like the Black Panther Party and the Nation of Islam. Black members in mainstream professional organizations began to organize affinity groups to address issues of particular interest to black people in those fields. In that climate, a group of black economists gathered together during the 1969 ASSA meetings in New York City to organize the Caucus of Black Economists.

Leading the organizational effort was a group of black economists who were affiliated with major academic institutions. The key organizers were Charles Z. Wilson, professor of economics and vice chancellor of UCLA, and Professor Marcus A. Alexis, University of Rochester. Joining them were Professor Thaddeus Spratlen, University of Washington; Professor Karl Gregory, Oakland University, Michigan; Richard F. America, lecturer, the Business School, University of California, Berkeley; Robert S. Browne, president of the Black Economic Research Center in Harlem, New York; and

Assistant Professor Bernard E. Anderson, the Wharton School, University of Pennsylvania.

The purpose of the Caucus, as expressed in its mission statement, was to "increase the supply of black economists, and to promote research and publication on economic issues of importance to the black community." The consensus view among the organizers was that the economics profession suffered from both the paucity of black people in the profession and the lack of research and analysis by black economists on economic issues affecting the black community. The new organization was committed to encouraging black college students to study economics and choose economics as a career, and to supporting research and publication by black economists and gaining recognition for their work.

Members of the dues-paying organization selected a twelve-person executive board to serve three-year staggered terms. Officers are the president, president-elect, immediate past president, secretary, and treasurer. Membership is open to all who support the mission of the organization. While most members are African American, Caribbean, or African, all racial and ethnic groups are welcome to join, and some white economists have done so.

One of the goals of the CBE was to gain recognition by ASSA as an affinity group authorized to sponsor panels at the annual ASSA meetings. Groups like AEA, AFA, and LERA are allocated a number of time slots for panel sessions they organize on topics of interest to their members. Additional time slots and other accommodations are granted for organizational events such as luncheons, business meetings, and receptions.

In 1971, ASSA recognized the Caucus, and granted time and space for two sessions. That allocation was later expanded to six, including a joint session with AEA. Under the rules of the ASSA, however, only the papers presented in joint AEA sessions were published. The Caucus acquired a publication vehicle of its own when Robert S. Browne, founder of the *Review of Black Political Economy*, transferred its ownership to the new organization. Papers presented at the annual meetings and other research on race and economics is regularly published in the *Review*, a refereed journal published continuously since 1970.

By 1974, the spirit of protest expressed by black professionals in the 1960s receded as mainstream organizations became more sensitive to the importance of racial concerns within the social and behavioral sciences. In response, the CBE leadership agreed to change the name of the organization to the National Economic Association.

The major professional associations had dropped their racially exclusionary membership requirements by the mid-1970s and admitted black members. The American Economic Association had never barred black economists from membership, but few other than those with appointments to the economics departments of research universities joined. When racial exclusion ended, black professionals saw much value in maintaining dual membership in both the mainstream and race-oriented groups in order to assure that the special interests of the African American community continued to receive appropriate attention.

EDUCATIONAL PROGRAMS

In 1970 the NEA sponsored a summer workshop on economics at Washington University in St. Louis in an effort to promote African American students' interest in economics. A small group of black undergraduates and first-year graduate students met with faculty members for a week to discuss economic affairs and recent economic research, as well as the challenges and opportunities for graduate study in the field. The NEA's goal of increasing the supply of black economists was advanced significantly when the American Economic Association organized the Committee on the Status of Minorities in the Economics Professions. The committee was charged with promoting minority students' interest in economics as a profession and enhancing opportunities for graduate study. That goal was pursued in part through support for the AEA's Summer Program in Economics for Minority Students.

The AEA Summer Program was designed and organized by Professor Marcus Alexis, one of the founders of the NEA. The program was hosted by Northwestern University, where Professor Alexis held an appointment in the Economics Department. Supported by a three-year grant from the Rockefeller Foundation, the five-week program included courses in price theory, macro theory, quantitative methods, and public policy. Guest lectures by prominent black and other economists explained what economists do, how they do it, and the impact economists have on public policy and economic affairs. Participants in the Summer Program who chose to continue on toward graduate studies in economics were eligible to apply for a doctoral fellowship/internship program developed by the Federal Reserve Board.

The Summer Program has continued in regular session since 1974, and in addition to Northwestern has been hosted by Temple University, Philadelphia; the University of Texas, Austin; and Stanford University, Palo Alto, California. Since 2003 it has been hosted by Duke University in Durham, North Carolina. In response to national developments in affirmative action policy, participation in the program has been broadened beyond African American students to include Hispanics, Native Americans, and others, including a small number of white students.

Many of the students who have participated in the Summer Program since its inception have gone on to earn graduate degrees in economics, including doctorates from some of the elite graduate programs in the field. Some completed graduate and professional studies in other fields, including business and finance, law, and public administration. A few became entrepreneurs. Most who remain in the economics profession now hold faculty positions at a variety of colleges and universities. But as a matter of fact and concern, 90 percent of university economics departments in the United States do not have and have never appointed an African American to their faculty.

PROMOTING RESEARCH

In 1969, black economists had produced little published research on race and economics. Swedish economist Gunnar Myrdal had published the major work on the subject, *The American Dilemma*, in 1944. Other relevant work in the field included a theoretical analysis by Professor Gary Becker of the University of Chicago, *The Economics of Discrimination*, published in 1957.

Most studies of black economic conditions by black scholars were conducted by non-economists. Notable among that work was W. E. B. Du Bois's classic 1899 study *The Philadelphia Negro*. Du Bois also conducted a series of studies while he was affiliated with Atlanta University. Other black scholars, including historians Carter G. Woodson and Charles Wesley, wrote books on black business and black labor. The most prominent work by a black economist in the first half of the twentieth century was a study coauthored by University of Chicago professor Abram Harris, *The Black Worker* (1931).

In addition to the scholarly work, there were occasional studies of local economic conditions in the black community conducted by the staff of advocacy organizations like the National Urban League and the NAACP. Overall, however, there was little published work by professional black economists before 1970. In that year, under the leadership of Charles Z. Wilson, the Caucus of Black Economists obtained a Ford Foundation grant to organize a research collaborative which would provide financial support through competitive grants to encourage black economists to conduct research on topics related to the economic status of the black community.

The Research Collaborative awarded grants to a team of agricultural economists at Virginia State University to study land loss among black farmers in the South and to the Black Economic Research Center to support studies on the economics of discrimination. The grant was also used to support workshops and seminars where black economists and others discussed their research. Faculty from the historically black institutions were especially encouraged to participate. The goal was to promote cross-fertilization among scholars in the major research universities and others in smaller institutions who shared a mutual interest in race and economics. Meetings were held in Washington, D.C., New York City, and at Virginia State University. In 1972, a conference on economic development in Africa was cohosted by the NEA, and held at Atlanta University.

Overall, however, the Research Collaborative proved to be an ineffective device for promoting economic research by black economists. Several institutional factors explain the difficulty. Because only small awards could be made, most of the applications received by the Collaborative were for funds to "top off" research that was already underway. Also, in the early 1970s many black economists were faculty members at historically black colleges and universities (HBCUs), where the emphasis was on teaching and not research. Only a few HBCUs, including Howard University, the Atlanta University complex, North Carolina A&T, and one or two others had economics departments where faculty were regularly engaged in economic research.

Black economists affiliated with non-HBCU research universities typically received research support through those institutions. The leadership of the Collaborative preferred not to use the limited resources from the Ford Foundation four-year grant to embellish support for those who, in their view, had access to other funds. In short, the Research Collaborative, while an innovative initiative, was a flawed device for promoting academic research by black economists. Support for the Collaborative was not renewed by the Ford Foundation when the grant expired in 1974 and the NEA never attempted to revive the project.

RECOGNITION AND HONORS

Over the years, the NEA developed several initiatives to recognize and celebrate the achievements of black economists, including the Samuel Z. Westerfield Award, the Rhonda M. Williams Doctoral Dissertation Award, and the Sir Arthur Lewis Memorial Lecture. They are conferred only when a suitable and appropriate candidate is identified to receive the honors.

The Westerfield Award The first award developed by the NEA was the Samuel Z. Westerfield Award, which is conferred periodically on an economist with a distinguished record of scholarship, teaching, and public service. The award is named in honor of Samuel Z. Westerfield (1919–1972), who earned a PhD in economics at Harvard, taught economics and was dean of the School of Business at Atlanta University, and served as deputy assistant secretary of the U. S. Treasury Department, assistant secretary of state for Africa, and U.S. ambassador to Liberia.

The first Samuel Z. Westerfield Award was conferred posthumously upon Westerfield in 1972. Since that time, seven economists have received the Westerfield Award, the NEA's highest honor: Marcus A. Alexis, Phyllis A. Wallace, Andrew F. Brimmer, Clifton R. Wharton Jr., Samuel L. Myers Sr., Bernard E. Anderson, and David H. Swinton.

The Rhonda M. Williams Doctoral Dissertation Award To encourage and recognize excellence in graduate study, the NEA established the NEA Doctoral Dissertation Award in 1992 to recognize outstanding dissertations written by minority doctoral candidates, selected by a committee of NEA scholars. In addition to receiving the award, the recipient is given the opportunity to publish a revised version of the dissertation in the *Review of Black Political Economy*.

In 2001, the award was renamed in honor of Rhonda Williams, a black economist and professor at the University of Maryland, who succumbed to cancer in 2000. Professor Williams earned her PhD in economics at the Massachusetts Institute of Technology, and held faculty positions at Yale and the University of Texas, Austin, before her appointment at Maryland. She was widely recognized as one of the brightest young economic theorists in the field. The first dissertation award was presented to William Rodgers of Harvard in 1993, who went on to hold a full professorship at Rutgers University.

The Sir Arthur Lewis Memorial Lecture One of the most celebrated members of the NEA was Sir W. Arthur Lewis, a Nobel laureate in economics and professor of economics at Princeton University. Professor Lewis was a world-renowned scholar on economic development theory and practice. To recognize and encourage work on that topic, the NEA initiated the Sir Arthur Lewis Memorial Lecture, which is presented during the ASSA annual meeting. An economist who has produced seminal research on economic development or made a significant contribution to economic development through public service may be selected to present the Lewis Lecture. Since 1985, Lewis Lectures have been presented by Lance Taylor, Donald Harris, Charles Kindelberger, Ronald Findlay, Irma Adelman, and Paul Streeten.

SEE ALSO *American Economic Association; Black Sociologists; Discrimination; Lewis, W. Arthur; National Association for the Advancement of Colored People (NAACP); Professionalization; Race; Racism*

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Bernard E. Anderson

NATIONAL EDUCATION LONGITUDINAL STUDY

The National Center for Education Statistics (NCES) sponsored the National Education Longitudinal Study (NELS). The purpose of the NELS was to collect information that would help social scientists to determine the factors that affect the educational, social, and personal outcomes of children. The NELS is known for having exceptional measures of family background, characteristics of schools, and measures of educational attainment.

The study started with the survey of a nationally representative sample of eighth-graders in 1988. The survey was made nationally representative by first choosing a representative sample of schools (1,052) and then by randomly sampling students in each of the schools. One of the advantages of the NELS versus other social science datasets is that the NELS contains information from student questionnaires, teacher questionnaires, parent or guardian questionnaires, and school administrator questionnaires. The original survey contained information from 24,599 students, 5,193 teachers, 22,651 parents, and 1,052 schools (Curtin, Ingels, Wu, et al. 2002). Follow-up surveys of the students in the original survey were conducted in 1990, 1992, 1994, and 2000. Since there was attrition in the follow-up surveys, the NELS also surveyed some new students who were not in the

original survey in order to maintain a nationally representative sample of students in each of the years. In addition to the information contained in the questionnaires, the NELS also contains transcript information, test scores, and zip code information.

Prior to the NELS, the NCES conducted the National Longitudinal Study of the High School Class of 1972 (NLS-72) and the High School and Beyond Survey (HS&B). Many of the components of the NELS were designed to facilitate comparisons between the surveys.

MAJOR STUDIES AND FINDINGS

Hundreds of social science studies have used the NELS to evaluate educational outcomes, social outcomes, and personal outcomes. What follows is a discussion of a few strands of research where the NELS has proven to be extremely beneficial.

The literature on school choice has benefited a great deal from the availability of the NELS. Caroline Hoxby (2000) used the NELS to evaluate whether school choice improves school quality. She evaluates the effects of school choice by measuring the effects of Tiebout choice. Tiebout choice is the process by which individuals choose where to live based on the public-good characteristics of the area. She finds that increases in the amount of Tiebout choice leads to increased productivity, higher achievement, and less spending. Her results have recently been criticized by Jesse Rothstein (2005). She replied to these criticisms in Hoxby (2005).

The NELS has also been used as a resource for evaluating private-school enrollment. Robert Fairlie and Alexandra Resch (2002) use the NELS to evaluate enrollment in private schools and test whether private-school enrollment is related to the fraction of minority students enrolled in the local public school. They use several unique features of the NELS, in particular the information on the student's zip code and information on the racial attitudes of the respondents. The authors find some evidence of "white flight" from public schools to private schools when the public schools enroll a large proportion of minority students.

Given the rich amount of information available on family background in the NELS, several studies have measured the effects of particular family characteristics on educational outcomes. Gary Painter and David Levine (2000) use the NELS to test whether divorce or remarriage of the student's parents affects educational attainment. The authors found that divorce increased high school dropout rates and also affected out-of-wedlock births for young women.

The NELS has also been used to evaluate whether teacher characteristics affect student learning outcomes and student evaluations. Ronald G. Ehrenberg, Daniel D. Goldhaber, and Dominic J. Brewer (1995) used the information in the teacher questionnaires to analyze whether the match between the teacher's demographic information and the student's demographic information influenced the amount the student learned in the classroom or the teacher's evaluation of the student. The authors found that there was little correspondence between the teacher's demographics and learning outcomes but that there appeared to be a relationship between the teacher's demographics and the teacher's evaluations of demographically dissimilar students. Thomas Dee (2005) revisited the information in the teacher questionnaires and found that teachers who were demographically dissimilar to the student being evaluated were more likely to rate the student unfavorably.

The NELS has also been used to document the extent of drug usage by teenagers. Philip DeCicca, Donald Kenkel, and Alan Mathios (2002) used the NELS to evaluate the extent of teenage smoking and the effects of cigarette taxes on teenage smoking. After utilizing the panel nature of the NELS, they found that taxes were not strongly related to teenage smoking. Thomas Dee and William Evans (2003) used the information contained in the NELS to document the amount of teenage drinking and the correlation of teenage drinking to educational attainment.

FUTURE STUDIES

The most recent and final wave of the NELS was conducted in 2000. The 2000 data include information on family formation, educational attainment, and earnings. Future studies will most likely analyze the data included in the most recent follow-up and compare the outcomes of respondents of the NELS to the outcomes of the respondents to the HS&B survey and the NLS-72 survey.

Future studies may also use the large amount of information on educational outcomes available in the NELS. In particular, studies will most likely consider the determinants of whether a student attends college, whether the student persists in college, whether the student graduates from college, and what types of curriculum the student chooses to study in college. In addition, these studies will also most likely analyze the effects of these educational attainment measures on earnings.

In the future, we might also see studies that investigate how characteristics of the student's family and area where the student grew up affect where the student chooses to live and work as a young adult. The one limitation of the NELS is that there are no other planned follow-ups, so the ability to measure the effects of factors during childhood on outcomes in adulthood will be limited to only those outcomes that are observed when the individual is approximately twenty-five years old.

SEE ALSO *Acting White; Data, Longitudinal; Drugs of Abuse; Education, USA; Public Goods; Research, Longitudinal; Sample Attrition; School Vouchers; Schooling; Social Science; Surveys, Sample*

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NATIONAL ELECTION STUDIES

SEE *Pollsters.*

NATIONAL FAMILY HEALTH SURVEYS

India's National Family Health Surveys (NFHS) are designed to provide key information about population and health conditions and the needs of the country's women, men, and children. Information is collected from nationally representative samples of households throughout the country. The surveys, which are part of the global Demographic and Health Surveys program, collect information on such topics as reproductive health, child health, immunizations, family planning, HIV/AIDS, nutritional status, women's status, population growth, and household living conditions.

Since the early 1990s, India has conducted two National Family Health Surveys and a third is being implemented in 2005–2006. The surveys are conducted under the stewardship of India's Ministry of Health and Family Welfare (MOHFW). The International Institute for Population Sciences in Mumbai (formerly Bombay) has been the coordinating agency for all three surveys. The first two surveys were funded by the United States Agency for International Development (USAID), with additional funding from the government of India, and with some supplementary funds from the United Nations Children's Fund (UNICEF) for the second survey. Macro International, USA, and the East-West Center, USA, provided technical assistance to the first two surveys. The third survey is funded by USAID, the U.K. Department for International Development, the Bill and Melinda Gates Foundation, UNICEF, the United Nations Population Fund, and the government of India. Macro International is again providing technical assistance to the third survey.

The NFHS surveys collect individual, household, and community-level information by conducting face-to-face interviews and by measuring key biomarkers. The interviews and measurements are conducted using well-developed and tested survey instruments and rigorously trained survey personnel. Survey questionnaires have been translated into more than twenty languages, and interviews are conducted in the predominant local language of the respondents. Participation in the surveys is completely voluntary. Informed consent is obtained from all survey respondents before questions are asked and before blood specimens are collected. Stringent quality control measures are employed in all aspects of survey planning and implementation, including sample design, the development and field-testing of survey instruments, the training of survey personnel, and the supervision of data collection and data processing.

The first National Family Health Survey (NFHS-1) was conducted in 1992–1993 in about 90,000 households and covered all states of India except Sikkim. The first survey was aimed at strengthening the research capabilities of

India's network of eighteen population research centers (located mainly in universities and semiautonomous research institutions throughout the country), which is supported by the MOHFW. India had resisted conducting a World Fertility Survey or a Demographic and Health Survey for many years, but became interested in the NFHS when it was suggested that this would be the ideal mechanism through which to upgrade the survey capabilities of its population research centers. The first survey proved to be a major landmark in the development of a comprehensive demographic and health database for India.

The second National Family Health Survey (NFHS-2), conducted in 1998–1999 in about 90,000 households in all Indian states, expanded this database by providing time-trend information and including additional information on postpartum care, the quality of health and family-planning services, reproductive health problems, and domestic violence. The second survey also tested hemoglobin levels in the blood of women and young children and tested household salt to see if the salt was iodized.

The third National Family Health Survey (NFHS-3), which is being implemented in 2005–2006, builds on the strengths and successes of NFHS-1 and NFHS-2 by maintaining continuity in core content and coverage, while adding new dimensions. In response to new and emerging health and demographic data needs, NFHS-3 has an extended size and scope. In addition to ever-married women age fifteen to forty-nine, NFHS-3 is collecting data for the first time from never married women age fifteen to forty-nine, and both married and unmarried men age fifteen to fifty-four throughout India. NFHS-3 is additionally collecting blood samples from adult women and men for HIV testing. NFHS-3 aims to interview about 240,000 women and men and to take blood specimens for about 280,000 anemia tests and 135,000 HIV tests.

The findings from the NFHS surveys have been used extensively for evidence-based decision-making. The information gathered in the surveys has been instrumental in bringing about a number of major policy and program changes in India, and the survey data are being used to monitor the progress of various population and health programs.

NFHS data have been used extensively in the development and implementation of India's Five-Year Plans. For example, the Tenth Plan (2002–2007) has set national and state goals of increasing exclusive breastfeeding, achieving timely complementary feeding of children, and reducing severe undernutrition based primarily on the findings of NFHS-2. The survey findings of serious health conditions among scheduled castes, scheduled tribes, and other disadvantaged groups formed the basis for revising and refocusing India's National Health Policy in 2002 to better address the health needs of the poorest segments of society. The survey findings on unmet need for contraception were instrumental in facilitating a complete overhaul of the country's family welfare program.

The NFHS data have also been used extensively for policy and program purposes at the state level. For example, based on the NFHS findings of serious nutritional deficiencies among very young children, the government of Gujarat developed an action plan to refocus its nutrition programs on children under three years of age. NFHS data were also instrumental in galvanizing the Tamil Nadu state government to mount a more aggressive campaign to deal with the spread of HIV/AIDS.

The NFHS surveys have also greatly increased India's capacity to undertake and analyze first-rate demographic and health surveys. The surveys are considered the "gold standard" in survey-taking and a source of the most reliable information on major population and health indicators in India. Data gathered in the surveys have resulted in hundreds of research and policy publications in professional and scientific journals and have been the subject of numerous Ph.D. dissertations around the world. In addition, the results of the surveys have received extensive media coverage. In response to NFHS-2 alone, there were some three hundred newspaper articles, TV broadcasts, radio shows, and Internet articles based solely on the survey findings.

Important limitations of these surveys should also be recognized, however. First, the survey samples are not large enough to collect reliable information on certain important but relatively rare health conditions or events, such as maternal mortality. Second, the surveys do not provide the much needed district-level population and health indicators, again due to inadequate sample sizes. Third, the data collected on several health indicators in the surveys are self-reported, making them not as reliable as clinical data. And finally, the cross-sectional designs of the surveys limit their usefulness for causal analysis and understanding reasons for change.

In spite of these inherent limitations, there is overwhelming evidence that the NFHS surveys have provided valuable information on key population and health issues, and have been instrumental in building India's research capacity.

SEE ALSO *National Assessment of Educational Progress; National Longitudinal Study of Adolescent Health; National Longitudinal Survey of Youth; Panel Study of Income Dynamics; Survey; Surveys, Sample*

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NATIONAL GEOGRAPHIC

The National Geographic Society was founded in January 1888 in Washington, D.C., to support "the increase and diffusion of geographical knowledge." In October of that year, the society published the first issue of what was originally called *The National Geographic Magazine*, which was considered a way to fulfill the society's educational mission. The generally bland and often technical articles that characterized the magazine's early issues (which contained no photographs) scarcely hinted at the style that was to transform the journal into one of the most widely read magazines in the United States.

The National Geographic Magazine, issued erratically for its first eight years, became a monthly in January 1896. In this era, the magazine was edited by committee and had limited appeal, but November 1896 marked the appearance of something that would later become a hallmark of the magazine: a photograph of a bare-breasted ("native") woman.

Frustrated by the magazine's struggles to gain readership, the society turned to a young Gilbert H. Grosvenor (1875–1966), who joined the magazine's staff in 1899 as its first full-time employee at the rank of assistant editor. Under Grosvenor's leadership, the magazine's circulation grew to more than five million by the time of his death in 1966. The keys to the popularization of the magazine were to be found partly in Grosvenor's editorial principles, which included timelines, "absolute accuracy," "permanent value," an "abundance of beautiful, instructive, and artistic illustrations," eschewing topics of a "partisan or controversial character," and steering clear of anything "unpleasant or unduly critical" (Pauly 1979, p. 528). But most of all, it was the magazine's visual presentation that cemented its status in American popular culture.

It was through the magazine's famous photographs that Grosvenor achieved the goal of combining scholarship and entertainment. Public response to the images was strong, and an unprecedented eleven-page layout of photos from Tibet in 1905 helped to increase society membership from 3,400 to 11,000 by the end of the year. *National Geographic* photographs were intended to present an unproblematic, unmediated view of reality, readily accessible to the average reader. In the 1930s, natural color photographs came to dominate its pages, enhancing the magazine's realism; as a result, the photographs served as both evidence and spectacle. The color photographs boosted the magazine's entertainment value at the same time that they reinforced the sense that it was truly delivering the world as it really was to its readers.

The assumptions about the production and dissemination of visual representations that underlie the magazine's approach would later be criticized by scholars. Those who view the production of knowledge as fundamentally shaped by power relations have argued that *National Geographic*'s articles reinforce a sense of Western superiority through the juxtaposition of "backward," timeless, native cultures with a more "advanced," progressive Western civilization. The photos and text do not simply and unproblematically convey geographic information; rather, they create geographic knowledge according to an identifiable set of cultural norms. Likewise, the regular appearance of bare-breasted "native" women in the magazine encourages a masculinized sense of access and control to "exotic" cultures that depends on and reproduces unequal power relations between those being represented and those consuming the representations.

Such criticisms have not diminished *National Geographic*'s global appeal; in addition to its millions of readers in the United States, the society publishes international editions in about two dozen languages. Well into its second century of publication, the magazine is still a cultural force with few, if any, peers.

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NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

SEE *Research, Cross-Sectional.*

NATIONAL HEALTH INSURANCE

Health is described as a state of complete physical, social, and mental wellbeing. In order to ensure that the population of a given nation remains at or achieves a good health status, health expenditures must be financed. Health care expenditures are the total amount of spending for personal health care, administration, research, construction, and other expenses that are directly related to patient care. Although insurance coverage is not the sole determinant of health, timely access to quality care does play a key role in maintaining and improving health. Many developed nations have a system of national health insurance to finance health care for their citizens. Though these plans vary, all provide national health insurance and take into account the political, historical, and social factors of the given society. Variations in national health insurance plans may relate to the organization of the health care system in a given country, or to the provisions of the plan. Many plans guarantee minimal national health insurance to all constituents; others provide insurance to all who meet low income standards, and yet others provide national health insurance with provisions that allow citizens to purchase supplemental private insurance. Countries that have national health insurance plans include Australia, Japan, China, Sweden, Russia, the United Kingdom, Germany, the Netherlands, Austria, Sri Lanka, Chile, and Canada, to name a few.

These national health insurance plans have limitations and differing levels of effectiveness. The Canadian national health insurance plan is one of the most impressive and historically established plans among developed nations. Initially developed in 1968, this plan is funded by federal and provincial tax revenues, as well as insurance premiums paid by all taxpaying citizens. Consequently, Canada ranks high on indicators that suggest the health of a society. Infant mortality, for example, is low in Canada, and the life expectancy of Canada's citizens is high. Despite this success, some have criticized Canada's system for a decrease in the professional authority of physicians and the rationing of health care. Critics of Canada's national health care system argue that in theory the system provides everyone with health care, but not necessarily superior health care.

In contrast, Sri Lanka, a peripheral or developing nation, instituted a national health insurance plan in 1992. The Sri Lankan government provides health care to its civilians mostly free of cost. The Sri Lankan government split the management of health care between provinces and administrative divisions. Provincial levels of government are responsible for the management of all health care institutions; divisions, which include medical officers, are responsible for administering health care. Though the national health insurance plan of Sri Lanka is not as well established as Canada's, health indicators for this country are good. Like Canada, Sri Lanka boasts a relatively low infant mortality rate (59.6 per 100,000 births), and life expectancy has been increasing. Although it is too early to assess the limitations of Sri Lanka's national health insurance plan, the plan includes provisions for development and change. The Sri Lankan Ministry of Health is responsible for the formulation of health policy; the ministry monitors the performance of the country's health organizations, and moderates and changes policy when necessary.

The United States stands as one of the world's developed nations that does not have a comprehensive national health insurance plan. Despite the lack of such a plan, the United States spends a larger percentage of its gross domestic product (the nation's total economic output) on health care expenditures than any other country, including countries that provide national health insurance coverage. Many American citizens have no insurance. The American health care system can be characterized as heavily influenced by such political action committees (PACs) as the American Medical Association (AMA), the American Hospital Association (AHA), the American Pharmacists Association (formerly the American Pharmaceutical Association, APA), and other special interest groups. The American health care system is also based upon a profit incentive, and health care expenditures are funded through numerous sources. These factors have contributed to vast inequalities in who receives health insurance and health care. These factors also explain why there is no national health insurance system in the United States, and the emergence of categories of Americans who are characterized as *underinsured* and *uninsured*.

The U.S. medical-industrial complex—the rapidly growing industry that supplies health care services for profit—is the result of the AMA's and APA's professional and political efforts during the nineteenth century to establish accredited medical training and unfavorable views of holistic medical practices. These historical efforts led to a great increase in the power of these and other special interest groups associated with American health care. While changes to existing insurance standards and policies are the responsibility of the U.S. government, the corporations that make up the medical-industrial complex employ PACs to influence congressional decisions regarding health care. Failures in efforts during the 1990s to implement a national health insurance system illustrate the strength of the influence of the medical industry. In November 1993 the administration of President Bill Clinton announced a national health insurance plan called *managed competition*. This plan would have provided national health coverage and was designed to account for problems related to both access to and the cost of health care. But the aforementioned special interest

groups opposed this plan, voicing reservations about new forms of bureaucracy and cost controls. The AMA and AHA opposed the proposed limits placed on physician fees and hospital charges, while the APA opposed cost controls on the production of drugs. Ultimately, the Clinton plan was not implemented.

Corporate managed care represents an evolutionary process in the American health industry that started in the 1970s when prepaid *health maintenance organizations* (HMOs) were introduced. Ideally, the purpose of managed care is to provide appropriate health care, including preventive services, thereby reducing costs while maintaining, even improving, quality. In practice, such plans typically compete for subscribers by offering the lowest possible cost for health care. Health care is generally organized into plans that consist of an insurer who administers the plan and who has numerous contracts with physician groups, clinics, laboratories, and so on. Since the inception of corporate managed care, *preferred provider organizations* (PPOs) and *point-of-service* (POS) plans have been developed in addition to HMOs. However, many contemporary managed care corporations operate on a for-profit basis, which can lead to controversy. The primary issue is that the provision of health care is pitted against the pressure on corporations to make profits; the mission of offering access to care runs contrary to the incentive of financial gain.

Health insurance in the United States is provided through a mixture of private (individual, employers, family) and public (federal, state, and local government) insurance programs. In 1965 Title XVIII of the Social Security Act created both the Medicare and the Medicaid insurance programs. These programs were the first and remain among the few federal insurance programs established in the United States. Medicare is designed to provide health insurance to persons over the age of sixty-five, permanently disabled workers and their dependents, and persons with end-stage renal disease. Medicaid is a jointly funded federal and state program that is designed to provide health insurance to the poor, with stringent eligibility requirements. State Child Health Insurance Programs (SCHIPs) are a more recent initiative to provide public health insurance in the United States. These programs allow states flexibility in planning and implementing health insurance for low-income children under the age of eighteen.

Most U.S. health care expenditures are covered through private insurance programs. Private insurance is funded largely by employers with employee subsidies. In addition, many Americans own family or individual policies. Nonetheless, in 2004 approximately forty-five million Americans were uninsured and did not have any private or public health care coverage. Many of the uninsured are poor working-class Americans who may work only part-time. There are others who are considered *underinsured*. They have jobs that provide minimal health care coverage, or insurance policies with major loopholes that are often costly to the consumer.

The profit motive and the influence of the medical-industrial complex are not solely responsible for the lack of national health insurance in the United States. The culture of the United States is based heavily on the principles of individualism, capitalism, and laissez-faire. For many Americans, the notion of government-run national health insurance seems un-American. Alternative versions of national health insurance that are being promoted in the United States include *single-payer* and *pay-or-play* insurance plans. Proponents argue that these alternatives are less socialistic and would promote capitalism. Although Americans do not agree on the solution, most public health officials, health care providers, and U.S. citizens agree that a more inclusive type of health insurance should be developed.

SEE ALSO *Health Economics; Insurance; Insurance Industry; Medicaid; Medicare; Mental Health*

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NATIONAL HEALTH SERVICE

SEE *Competition, Managed; National Health Insurance.*

NATIONAL INCOME ACCOUNTS

The national income accounts are an internally-consistent matrix of statistics on a national economy's income, consumption, production, foreign trade and asset accumulation. National income accounts have two central roles: the measurement of economic activity and the measurement of economic well-being, or progress. In an important sense, these two roles are one, as economic activity derives its rationale from its social benefit.

According to British economist A. C. Pigou (1877–1959), whose work set forth the basic framework for welfare analysis in economics, national income is a measure of the part of social welfare that can be "brought directly or indirectly into relation with a money measure" (1932, p. 31). Pigou's definition is limited to those elements of welfare that can be measured by money, but it does not draw a fixed line between what can and cannot be measured. In practice, that boundary has evolved over time.

The limited but highly practical achievement of this measurement task has been one of the great accomplishments of economics, and supports the claim that economics is an empirical science. A nation's national income accounts have grown to include analytical detail on consumption, production, income, and foreign trade, as well as integrated statistics on saving and investment and their relation to stocks of physical capital and financial assets and liabilities. These statistics are central to economic and political evaluation and planning throughout the world.

The British economist Richard Stone (1913–1991) received the 1984 Nobel Prize in Economics for establishing the framework for the United Nations' System of National Accounts (SNA), which is the international standard for national income accounting. Its principles are subscribed to by virtually all nations. Indeed, almost all countries now prepare national income accounts; more than two hundred countries have accounts published in the United Nations' national accounts statistics.

Why are national income accounts so important to economies and to governments? First, they provide an excellent approximation of a nation's available economic resources and actual output. This is invaluable for setting government fiscal and monetary policy, and for evaluating the impact of governmental policies. Second, national income accounts provide a precise understanding of the current state of national economic demand, supply, and inflation. This creates a sound basis for current business and financial decisionmaking. Third, the national income framework has proved to be a useful basis for long-term forecasting of economic activity for business and government planning at multiyear horizons. Finally, the statistics are used for international and interregional cost sharing and aid agreements.

National income accounts can only fulfill these roles because they have been widely accepted as good measures of economic activity and well-being. They are not now and are unlikely ever to be ideal measures of either. Economists and national income accountants persistently attempt to widen and sharpen national income measurement, including creating *satellite accounts* (statistics provided by national income accountants but not included in the official accounts) that provide data on additional items not yet of high enough quality or on the same theoretical footing as those already measured.

MEASURING WELFARE WITH MONEY MEASURES

In accepting the measuring rod of money, we accept limitations on our welfare measure both in concept and in scope. The measure is largely plutocratic, as wealthy households command more consumption than poor ones. As such, it is a measure that is comfortable with the existing structures of economic power. As the American economist and 1971 Nobel laureate Simon Kuznets (1901–1985) stressed, changes in income distribution across households should be a crucial component of the evaluation of national income, but as of 2006 income distribution was not included in national income accounts.

Monetized activity sets the general boundary for national income measurement. Household production—the use of household time and energy in tasks such as studying, cooking, and cleaning—is generally not included in consumption because it is unpriced. One exception is that owner-occupied housing is treated as if the household were renting from itself; otherwise the shift from tenancy to owner-occupation in many countries would appear as a decline in consumption of shelter services. Another exception, important in many countries, is owner-consumption of farm products.

Production has two objects: consumption and accumulation. This entry will turn first to consumption expenditures, which form the core of measured welfare benefits.

Consumption Comparisons Over Time As prices and money, or *nominal* expenditures, change, is it possible to quantify the degree to which consumers are better off in one period compared to another? Within limits, yes. In two periods, the consumer buys two different baskets of goods and services. Now suppose the items bought in the first period could have been purchased in the second period for less than the items actually purchased in the second period. Then we can argue that the consumer must be better off, for the alternative was freely chosen. If the second-period consumer pays 2 percent more than the first-period basket would have cost, *real consumption*

expenditures are said to have risen by (at least) 2 percent. While this does not amount to 2 percent more happiness, it does imply that the consumer could have remained as well off using 2 percent less of the products and thus 2 percent less work and capital (assuming constant returns to scale), so it is a meaningful quantification.

So one measure of price increase, or the *inflation rate*, between two periods can be constructed by pricing out the first period's basket in both periods. This price index, called a *Laspeyres* price index, gives, if anything, an overestimate of the rate of inflation. We can go the other way around. A price index constructed by pricing out the second basket in both periods, called a *Paasche* price index, creates an underestimate of inflation.

Before the 1980s, which of the two methods was used did not make a great deal of difference. However, very rapid declines in the prices of computers and other electronics caused large gaps between the two methods. The solution was to construct *Fisher ideal indexes* averaging the two inflation rates over each pair of consecutive quarters (precisely, the two price index ratios are multiplied and the square root is taken).

Subtracting the inflation rate from the nominal growth rate, a process called *deflation*, gives the real growth rate of output. Similarly, we can calculate real output at disaggregated levels by final product or by industry. Unfortunately, these subindexes do not sum up exactly to their aggregate counterparts, because the averaging of growth rates has a nonlinear impact on levels. National accounts often include tables that show the contributions of final product components to the movement of total gross domestic product in a way that does add up.

These price index methods assume that there are no new goods or services (products that cannot be found in the earlier period). As the rate of new-product introduction has accelerated, price statisticians have turned to methods (called *hedonic methods*) that attempt to price product *characteristics*, so that a new product can be evaluated as a new bundle of existing characteristics whose prices can be found in the previous period. The notion is roughly that if consumers are willing to pay 10 percent more for a computer that operates 20 percent faster, we can use that fact to estimate what a 20-percent-faster computer would have cost last period, even if it was not sold then.

When consumption expenditures are made by governments or nonprofit institutions on behalf of consumers, the Fisher ideal method does not apply, because there is no market price paid by the consumer. Instead, we can deflate output using the average cost of the inputs (for example, labor costs by wage inflation) or by the prices of similar products sold privately.

Cross-Border Comparisons When we compare the consumption of two countries, we face the problem that they have different currencies. One solution would be to compare the incomes based on the currencies' exchange rates. However, many countries control the exchange rates of their currencies, so that the exchange rate is not market-based. Where the exchange rate is not controlled, it is often highly volatile, rendering these comparisons unreliable.

To solve this difficulty, national statisticians construct measures of *purchasing power* by pricing similar baskets of goods in different countries. This is inevitably a cruder calculation than intertemporal comparisons, because there are two worse problems: (1) the location of consumption affects its desirability, and (2) many products are available in some countries and not in others.

MEASURING OVERALL ECONOMIC PROGRESS: PRODUCTIVITY MEASURES

To consumption, we now add investment. To capture overall economic progress, the rate of *net investment*—gross investment less the loss of existing capital due to depreciation, called *capital consumption*—provides an idea of how much more production could have been devoted to consumption without running down the capital stock, and at the same time of how rapidly the economy is likely to grow, since more net investment today implies more capital input for tomorrow's production.

Mainly for historical reasons, gross domestic product (GDP, product without deducting capital consumption) has been the featured measure of real economic activity. Consumption of fixed capital is about 10 percent of net domestic product in countries as different as the United States and India. *Net domestic product*, GDP less capital consumption, would be more exact as a measure of progress, but GDP is easier to measure in detail.

One way to measure real investment in terms comparable to real consumption could be to deflate nominal investment growth by the consumption inflation rate, a measure showing the quantity of consumption that is given up to provide investment. The alternative, the method actually employed in national income accounting, is to measure the change of prices of these investment goods themselves, combining them into Fisher ideal indexes. This measure is the appropriate one for measuring the contribution of the new investment to the stock of capital assets.

More recently, it has been recognized that *intangible* assets can also be accumulated and have been rising in importance. The 1993 revision of the United Nations' System of National Accounts called for the recognition of investment in software, mineral exploration (such as drilling and surveys), and the creation of expressions, such

as entertainment, literary works, and original art. Deliberately omitted were firm research and development expenditures, which were relegated to a satellite account, although the long-term value of these expenditures, about 2 percent of U.S. GDP, has been well documented. When long-lived investments are misclassified as expenses, output is underestimated, as are assets. As a consequence, future measured output growth and profitability may be underestimated. Investments in human capital—education and on-the-job experience—are also omitted from national income accounts.

Output Per Person and Productivity For many comparative purposes, it is sensible to measure economic progress relative to growth in population, hours worked, or total input of labor and capital services. Angus Maddison (1995) used *real gross domestic product per capita* (following in Kuznets's footsteps) to assess total world economic growth and inequality between regions. His statistics showed that between 1500 and 1820, world real GDP per capita rose only about 15 percent, while from 1920 to 1992, it rose 700 percent. His statistics also showed that the richest regions had roughly three times as much per capita income in 1820 as the poorest, while in 1992 the richest regions had fifteen times as much income per capita, so that this period of industrialization was one of substantial income divergence overall.

The main household time cost of economic activity is employment. For this reason, an alternative measure of economic efficiency is output per hour worked, also called *labor productivity*. Because Europeans work fewer hours per year than Americans, the U.S. economy fares better on GDP per capita measures, while Europe looks better on labor productivity measures.

The American economist and 1987 Nobel laureate Robert Solow (1957), noting that from 1909 to 1949 output per hour in the United States expanded 1.5 percent annually, argued that roughly one-eighth of this growth was due to increased capital per worker, and the remainder was due to overall advances in the techniques of production, or *total factor productivity*.

Solow used rather crude measures of labor and capital. Labor hours are not equal in economic value due to differentials in talent and training (formal or informal) reflected in differences in compensation rates. The services available from capital also vary; computers and fiber optics, for example, are more efficient than mechanical calculators and copper cable. The current state of the art in national income is to carefully adjust capital and labor for these quality differences when constructing measures of total factor productivity.

Dale W. Jorgenson, J. Steven Landefeld, and William D. Nordhaus (2005) have argued that gross domestic *income* should be deflated so as to reflect these real input services. That is, labor income would be deflated by the change in compensation for a given quality of labor services, averaged over the various types of labor in the economy. Similarly, capital income would be deflated to reflect the cost of capital services of various qualities. Under their proposal, *nominal* income and expenditure would remain equal, but *real income*, deflated by input prices, and *real expenditure*, deflated by output prices, would grow at different rates, with the difference being the growth of total factor productivity. The growth rate of quality-adjusted labor depends on demographics and on measures of human capital production and accumulation that are not yet in the national accounts.

A BRIEF HISTORY OF THE DEVELOPMENT OF THE NATIONAL INCOME ACCOUNTS

The first estimates of national income were made in England by the politician and economist Sir William Petty (1623–1687) in the seventeenth century. Petty, whose aim was tax reform, estimated total expenditure as 40 million British pounds. He estimated capital income as 15 million pounds, obtaining labor income as a residual 25 million pounds. Towards the end of that century, Gregory King (1648–1712) made more systematic estimates for the income, saving, and expense of England for the year 1688. In the late seventeenth and early eighteenth century, the French economist Pierre de Boisguillebert (1646–1714), also a tax reformer, developed crude estimates of income and consumption in France, followed by more careful estimates by Sébastien Le Prestre de Vauban (1633–1707), a military engineer and advisor to the king, in 1707.

These early isolated estimates were based on comprehensive notions of production and output without the benefit of formal economic theorizing. As economic theory emerged, it unfortunately advocated overly limited estimates. The French physiocrats believed that only land produced net output over and above costs, which influenced the chemist Antoine-Laurent Lavoisier's (1743–1794) estimates of France's income in the late eighteenth century, made while a commissioner of the public treasury. The classical economists, beginning with Adam Smith (1723–1790) and continuing through Karl Marx (1818–1883), distinguished the potential for labor to produce material wealth and thus emphasized the production of goods as opposed to services. National income estimates in much of the nineteenth century placed their main reliance on commodity production data, which also dominated the material product accounting of the Soviet-bloc countries in the twentieth century.

In 1921 it was possible to count nine countries that had comprehensive national income estimates for the year 1914, almost all prepared by scholars rather than government officials; of these only four could be judged to be within a probable error of 10 percent. Since that was the year World War I (1914–1918) broke out, governments often did not know their economic ability to mobilize for total war.

Official Estimates National income estimates, it became clear, were useful in anticipating the potential for income taxation and for estimating the potential for national defense production in times of war. The interwar depression offered new reasons for national income estimation: gauging the course of the economic crisis and measuring the relative "pump-priming" impact of government expenditure.

Beginning in 1925 in Canada and Russia, national governments began to support ongoing production of official estimates of national income. Simon Kuznets, whose article on "National Income" in the 1933 edition of the *Encyclopedia of the Social Sciences* set forth a highly influential conceptual framework and justification for national income accounting, inaugurated the U.S. official annual estimates in 1934 with the publication of *National Income, 1929–1932*. This publication included not only careful definitions of the concepts used but also line-by-line derivations of the text tables, with sources and methods.

The publication of *General Theory of Employment, Interest, and Money* (1936) by the British economist John Maynard Keynes (1883–1946), which emphasized the relationships among consumption, investment, and employment, added further impetus to the development of national income statistics, particularly given Keynes's active role in government. In England, Colin Clark's (1905–1989) *National Income and Outlay* (1937) laid the statistical foundations for the modern manifold accounting framework by bringing together estimates of income, output, consumption, government revenue and expenditure, capital formation, saving, foreign trade, and the balance of payments. By 1939 official estimates were prepared in nine countries. Richard Stone in the 1940s put together the integrated system of accounts much as we have them today.

THE CIRCULAR FLOW OF ECONOMIC ACTIVITY AND THE LOGIC OF THE SNA

This entry will now explore the underlying logic that Stone brought to bear in constructing the SNA, beginning from the long-recognized fact that monetized economic activity is essentially both circular and two-sided, as illustrated in the highly simplified economy depicted in Figure 1.

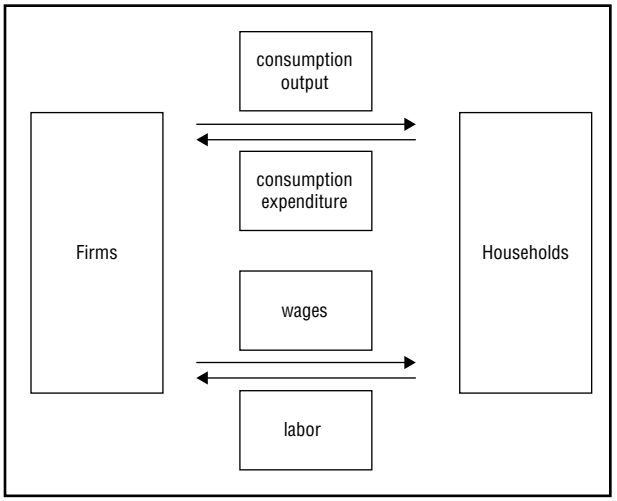

Figure 1. The circular flow of economic activity, as adapted from Hulten (2005).

The Circular Flow Once monetized, economic activity is necessarily circular. Households, in their role as employees, supply labor to firms who demand it, and receive wages. Firms use labor to supply consumption goods and services, which households buy using their wages.

Two-sided Flow The fact that each transaction has two equal sides—a purchase and a sale—is a fundamental source of the interlocking character of the national accounts. Wages appear as an *expense* of firms and as an *income* of households. Consumption expenditures are an income of *firms* and an expense of *households*.

Were there no other economic actors or activities, we would have the simple accounts in Table 1. Because entries appear twice in the table, each set of accounts appears as a check on the other. Each of these tables matches *resources* (also called income or supply) and *uses* (also called expenses).

Now let us add capital to the firm's accounting framework, arriving at Tables 2a and 2b, still highly simplified. The production of investment goods takes its place alongside consumption goods in firm resources. The portion of investment goods used up in production, that is, capital consumption, appears as a use. The expenditure on investment is instead an immediate contribution to capital and appears in the change-of-capital account. Given these definitions, the firm's resources and uses table is balanced by *operating surplus*.

The change-of-capital account resources are firm income (called *operating surplus* or, in the corporate account, retained earnings after deducting payouts to shareholders) and capital consumption, and the *use* is capital investment. Capital investment may not equal

Firm income and expense

Firm	Uses	Resources
	Employee compensation	Consumption expenditure

Table 1a.

Household income and expense table

Household	Uses	Resources
	Consumption expenditure	Employee compensation

Table 1b.

Firm income and expenses	Uses	Resources
	Employee compensation	Revenues
	Capital consumption	
	Corporate income taxes	
Balancing item	Operating surplus	

Table 2a.

Change-of-Capital account	Uses	Resources
	Gross capital investment	Operating surplus
		Capital consumption
Balancing item	Net lending (or *less* net borrowing)	

Table 2b.

internal funds, and the item *balancing* the account is net lending or borrowing. The change-of-capital account links to the capital stock account because gross investment less capital consumption equals the increase in capital stock. Net borrowing or lending similarly equals the change in net financial assets. (Both these statements hold in principle rather than fully in practice, due to revaluations of assets.)

The national income accounts track all these transactions, not only for domestic firms and households, but also for governments, nonprofit institutions, and the rest of the world (foreigners as they interact with nationals through trade, investment, or transfers, such as foreign aid). Taxes and transfers, transportation costs, interest and dividend payments, and a host of the messy details of actual economies must be carefully inserted and measured. Each of these five groups of transactors has a current income and expense account (labeled *resources* and *uses* in the SNA), change-of-capital accounts, capital stocks, and financial assets and liabilities. This entry will not cover all these details, but their flavor can be discerned from the following account of gross domestic product.

THE FORMAL CONSTRUCTION OF GROSS DOMESTIC PRODUCT

The SNA begins from the broader concepts of *total supply* and *uses* of goods and services in the economy. Total supply can be produced domestically (domestic output) or purchased from abroad (imports). Domestic output, in turn, includes both *final products* and *intermediate products* that are consumed in production, such as flour baked into bread. Uses include intermediate consumption (equal to intermediate production), final consumption, gross capital investment, and exports. The two sides of the accounts form an equation: Supply (total output plus imports) equals uses (intermediate consumption plus final consumption plus gross capital investment plus exports). Included in final consumption are expenditures of governments and nonprofits on behalf of households.

Total supply is a consistent, measurable aggregate of economic activity, but it is not as good a measure of domestic economic activity because it includes imports (produced by foreigners) and because it counts activities that are early in the supply chain more than once. Subtracting imports and intermediate consumption from both sides, we arrive at gross domestic product as defined from the product side.

Nominal gross domestic product (Table 3) is defined as the market value of all *final* goods and services produced within a country in a given period of time (typically a year or a quarter year) measured in units of currency. From the expenditure side, as we have just shown, this includes consumption, investment, net exports (exports less imports), and government expenditures. Real gross domestic product is this quantity made comparable over time by adjusting for inflation.

THREE APPROACHES TO CONSTRUCTING GROSS DOMESTIC PRODUCT

Gross domestic product can be measured from three aspects: by expenditure on final product, by industrial origin, and by income. Under good statistical practice, the three sides are measured in large part independently and the closeness of the independent estimates forms a measure of the size of statistical errors and omissions.

Three measures of gross domestic product

1. Output	*defined as*		
	Output of all units gross of intermediate production		
Less	*defined as*		
2. Intermediates	Materials and services consumed during production		
Equals	*defined as*	*also equal to:*	*and equal to:*
3. Gross Domestic Product	4. Expenditure on final product equals sum of:	5. Output by industrial origin equals sum of:	6. Gross domestic income equals sum of:
	4a. Private Consumption plus	5a. Gross value added by industry plus	6a. Compensation of employees
	4b. Government expenditure plus	5b. Net taxes on product	6b. Taxes, less subsidies, on production and imports plus
	4c. Gross Investment plus		6d. Operating surplus and mixed income, gross
	4d. Net exports		

Table 3.

Expenditures on Final Products To obtain estimates of final products, government statisticians survey firms that sell final products: retailers, service providers such as hotels, equipment manufacturers, and construction companies. Government expenditures are obtained from governmental budget statistics and net exports from customs data.

Industrial Origin The contribution of an industry to gross domestic product is its gross value added, that is, the industry's output less purchases of products and services from other industries (Table 3, column 3). These data are typically obtained from establishments, defined as units that produce output at a given location (a farm, a factory, a store) rather than firms, the legal entities that control establishments, which supply income data.

Input-output tables that show which industry supplies inputs to each industry enable analysts to calculate the ultimate resources—raw materials, labor, and capital—required in each industry's final products. Such tables, developed by the 1973 Nobel laureate Wassily Leontief (1906–1999), a Russian-born American economist, permit the forecasting of the impacts of large fiscal projects on the nation's and the world's resources.

The revenues of establishments do not include taxes applied to the product. A consumer might spend 10 euros, but if sales tax is 5 percent, the store's revenues are only 9.50 euros. Thus when output is measured as *industry gross value added at basic prices*, the government's share, *taxes less subsidies on products*, must be also added in.

For a complex, industrial society, measuring industry value added is harder than measuring expenditures on final products because it requires data on intermediate inputs as well as revenue, and on all establishments, not just those selling final products. On the other hand, this estimate is not dependent on the accuracy of foreign trade statistics. And in developing countries where agriculture remains a large part of the economy, farm surveys are a means of measuring output with reasonable accuracy. In such countries, wholesale prices (called *basic* prices) may be used to evaluate this output.

Income When we turn to measuring income, we can no longer ignore the possibility that foreigners may own part or all of firms located domestically, or may have lent money to nationals. *Domestic product* measures output from activities located within the borders of a nation, regardless of whether the income accrues to nationals or foreigners. Gross *national* income measures the income of nationals, and must be adjusted for income earned abroad on foreign investment, less income foreigners earn domestically (Table 3, column 4). Converting to this basis permits us to calculate domestic income and saving.

In principle, the national accounts make a sharp distinction between firm capital income and household employment income, but in practice, such business units as sole proprietorships and partnerships mix employment and capital income, and are called *mixed income*. The precise treatment of this boundary necessarily varies from country to country.

Although households, nonprofits, and governments are clearly domestic, there are many income transfers among them, and with foreign entities. These include social welfare, education, medicine, and foreign aid. Determining exactly where to place such payments is to a certain extent arbitrary. The SNA includes a secondary income account to accommodate most of these transfers.

Included in the income account, for example, are government expenditures on behalf of consumers, which become final consumption of households in the secondary account.

The data obtained from tax filings on individuals and businesses are natural sources for estimates of income. These data are available with some lag, so they are supplemented by employment surveys, corporate reports, and sales data. Moreover, taxed income may be underreported. For example, in the United States, the bulk of proprietors and partnership income is estimated to go unreported in tax records.

Reconciliation There are inevitably discrepancies between the three measures of gross domestic product arising from their separate sources of data. Some countries, such as the United Kingdom, produce a final measure by averaging the three. Others, such as the United States, anoint one side of the accounts as being likely the most accurate (final product), and show a statistical discrepancy in the others.

National income accountants often produce tables that provide the details of how they transform the underlying data (say, corporate reports) in preparing their national income counterparts. These sectoral reconciliation tables help analysts understand the precise meaning of the national income statistics, and also can help in forecasting tax reports or corporate earnings reports.

Accuracy, Timeliness, and Revisions National income account statistics are revised as new data become available, and as new theory and empirical analysis improve our understanding of how to measure economic activity.

Initial official estimates of a given quarter's economic activity in advanced economies are made available within a few weeks of the quarter's end, when economic reports for the quarter are incomplete. National accountants generally prepare one or two revisions in the months immediately following, then annual revisions as tax statistics become available, and *benchmark* multiyear revisions when economic census or other occasional data become available. It is usually during benchmark revisions that new concepts and different methods are incorporated.

Because economic decisions are taken in the light of available statistics, some economic theories need to be tested in the light of national income statistics as they appeared when the decisions were taken. In the wake of work by Dean Croushore and Tom Stark (2001), the collection of *real-time* data—the preservation of economic statistics as they appeared at different dates, referred to as *vintages* of data—has become a responsibility accepted by some national income accountants.

CAPITAL AND FINANCIAL ACCOUNTS

This entry will not discuss the many complexities of capital and financial accounts, beyond a few important limitations to their measures.

In principle, net investment in domestic assets should equal the increase in domestic wealth. However, these book values of assets may differ widely from their market values. National income accountants have agreed not to include capital gains on assets—for example, increases in market value of corporations that are not reflected in retained earnings—as part of income. Doing so would make income highly volatile, and would largely separate movements in income from movements in economic activity. Excluding capital gains creates difficulties in measuring the output of financial institutions. Changes in capital gains are reflected in the financial asset accounts as changes in assets, but are not otherwise linked to the accounts.

Capital assets in the national accounts are divided into produced and nonproduced assets. In particular, land and mineral rights are considered nonproduced assets that do not change over time in real terms. Statistically, real additions to residential land have been small; in the United States they have been estimated to be less than 1 percent of GDP annually. Mineral depletion is not deducted from net domestic product.

CRITIQUES AND SATELLITE ACCOUNTS

The large gap between ideal national income accounts and actual income accounts has been partially filled by scholarly studies that fashion alternative measures, and by satellite accounts prepared by national accountants but considered too inaccurate, too controversial, or insufficiently important to be included in the standard accounts. The literature here is too vast to be cited, but the pioneering work of American economist Gary Becker, the 1992 Nobel laureate, must be acknowledged.

Household Production Accounts A longstanding concern about the valuation of the national income accounts is the productive activity that occurs within the household. To fill this void, nations are increasingly engaging in surveys of household time use, in which individuals diarize a day in five- to fifteen-minute intervals. By adding how the diarists feel during these activities, worklike activity might be differentiated from leisure activity.

Worklike activities can be priced either by opportunity cost (the wage the individual is foregoing) or by replacement cost (the cost to hire someone else to do the activity or to buy the output). Diaries also supply a measure of study time (to measure the creation of human capital).

Human Capital Accounts What are our investments in labor quality? In the national accounts, the costs of private and public education are considered household- and government-consumption expenditures, respectively. An unrecorded input is the time cost of the student or the worker. Reclassifying education as investment would involve both a reclassification of consumption items as investment and an addition to output due to inclusion of student work time and on-the-job training.

Health Accounts Health is produced through a combination of household production, environmental impacts, and medical production. One such quantification is quality-of-life years, where the average effect on the quality of life of a given disease is measured either based on capability or subjective reports.

Relative to labor, health can be linked to human capital, evaluating the cost of disease as a diminution of human capital. Or, more directly, health may be evaluated when law courts value loss of life or pain and suffering in civil trials.

Environmental Accounts Economists have long been aware that economic activity can have externalities, byproducts—either desirable or undesirable—that affect other economic agents. Economic impacts may be quantifiable, for example, as costs incurred, when one firm's pollution raises the cost of another firm's activity or reduces the value of another firm's land. Or a price may be placed on the type of pollution either directly via a tax (an SO_2 tax) or through a market in which polluters must buy the right to pollute a certain amount (SO_2 rights). More broadly, environmental satellite accounts can include the land, mineral rights, biota, and so forth.

Distribution The distribution of consumption and income is part of the economic welfare of a nation. Some of this difference may be due to economic choices, reflecting differing preferences and talents. Yet most observers believe that for a given level of average per capita income, a more even distribution of incomes is preferable to a less even one.

In principle, it is possible to estimate how much consumers are willing to pay to avoid declines in wealth, and therefore to provide a direct measure of consumer valuation of income distributions. This is an active and controversial area of research. As Kuznets suggested, it would be desirable at a minimum for national income accounts to include estimates of income distribution to aid in evaluating economic welfare.

SEE ALSO *Gross Domestic Product; Gross National Income*

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NATIONAL INSTITUTES OF MENTAL HEALTH

SEE *Ginzberg, Eli.*

NATIONAL LABOR RELATIONS ACT

SEE *Labor Law.*

NATIONAL LABOR RELATIONS BOARD

SEE *Labor Law.*

NATIONAL LIBERATION MOVEMENTS

SEE *Liberation Movements.*

NATIONAL LONGITUDINAL STUDY OF ADOLESCENT HEALTH

The National Longitudinal Study of Adolescent Health (Add Health) is an ongoing study of a nationally representative sample of more than 20,000 individuals that began with in-school questionnaires administered to adolescents in grades seven to twelve in the United States in 1994 and 1995. The in-school survey was followed by three waves of in-home interviews in 1995, 1996, and 2001–2002, with a fourth wave planned for 2007–2008 when the sample will be aged twenty-four to thirty-two.

Add Health was developed in response to a mandate from the U.S. Congress to fund a study of adolescent health and was designed by a nationwide team of multidisciplinary investigators from the social, behavioral, and health sciences. The original purpose of Add Health was to understand adolescent health and health-related behavior with special emphasis on the forces that reside in the multiple contexts of adolescent life. Toward that goal, innovative features of the research design provided independent measurements of the social environments of adolescents, including contextual data on the family, neighborhood, community, school, friendships, peer groups, and romantic relationships.

The Add Health cohort has been followed over time as research questions turned to how adolescent experiences and behaviors were related to social, behavioral, and health outcomes in early adulthood. Across all interview waves, comprehensive data on health and health-related behavior were collected, including diet, physical activity, health service use, morbidity, injury, violence, sexual behavior, contraception, sexually transmitted infections, pregnancy and childbearing, suicidal intentions and thoughts, substance use and abuse, and delinquency. Data were also collected on such attributes as height, weight, pubertal development, mental health status, and chronic and disabling conditions. Achievement and academic progress were updated in each wave, including school performance, school problems, relationships with students and teachers, self-esteem, self-confidence, and future expectations for education, health, and family formation.

STUDY DESIGN AND DATA

Add Health used a school-based design in which a stratified sample of eighty high schools was selected from a sampling frame of all high schools in the United States. Schools were stratified by region, urbanicity, school type, ethnic mix, and size. For each high school selected, a feeder school was identified and recruited with probability proportional to its student contribution to the high school, yielding one school pair in each of eighty different communities. Overall, 79 percent of the schools contacted agreed to participate in the study.

During the 1994–1995 school year, in-school questionnaires were administered to over 90,000 students in selected schools. The in-school questionnaire provided measurement on the school context, friendship networks, school activities, future expectations, and a variety of health conditions. An additional purpose of the in-school questionnaire was to identify and select special supplementary samples of individuals in rare but theoretically

crucial categories. School administrators also completed a questionnaire in the first and second waves of the study.

In a second stage of sampling using the school rosters of selected schools, adolescents and their parents were selected for in-home interviews constituting the Wave I (WI) in-home sample. To form a core sample, students were stratified in each school by grade and sex, and approximately 200 adolescents were sampled from each pair of schools. From answers provided on the in-school survey, supplemental samples were drawn based on ethnicity (Cuban, Chinese, and Puerto Rican adolescents), genetic relatedness to siblings (twins, full sibs, half sibs, and unrelated adolescents living in the same household), adoption status, and disability. Add Health also oversampled African American adolescents with highly educated parents. Finally, a special "saturated" sample was included in WI by selecting all enrolled students from two large schools and fourteen small schools for in-home interviews. Complete social network data were collected in the saturated field settings by generating a large number of romantic and friendship pairs for which both members of the pair have in-home interviews. The core sample plus the special samples produced a sample size of 20,745 adolescents in WI. The WI in-home sample is the basis for all subsequent longitudinal follow-up interviews. A parent also completed an interviewer-assisted interview at WI. Over 85 percent of the parents completed the parental interview.

In 1996 all adolescents in grades seven through eleven in WI (plus twelfth graders who were part of the genetic sample and the adopted sample) were followed up one year later for the Wave II (WII) in-home interview (N=14,738). Response rates for the in-home interviews are 79 percent for WI and 88 percent at WII.

The in-school and Waves I and II in-home interviews constitute the adolescent period in Add Health and contain unique data about family context, school context, peer networks, spatial networks, community context, and genetic pairs. School context data come from the in-school surveys based on the census of students in each school, as well as from school administrator questionnaires. Peer network data are obtained from the in-school questionnaire where adolescents nominated their five best male and five best female friends from the school roster such that links to friends' survey responses can be made. Spatial data indicating the exact location of all households were collected using Global Positioning System (GPS) devices, and used to merge with extant data describing the neighborhood and community contexts in which adolescents are embedded. Finally, the "genetic pairs data," based on more than 3,000 pairs of adolescents who have varying degrees of genetic relatedness, represent a fully articulated behavioral genetic design and are unprecedented for a national study of this magnitude.

At Wave III (WIII), all original WI in-home adolescent respondents were reinterviewed from 2001 to 2002 with a response rate of 77 percent. This interview captured the Add Health cohort during their transition to adulthood when they were aged eighteen to twenty-six. In WIII, quota samples of 500 partners each in married, cohabiting, and dating couples were recruited by Add Health respondents, resulting in the partner sample of 1,507. Spatial data were again attached to the WIII individual-level data using the geocodes of the home residence. New data on family formation, college attendance and context, mentoring, and civic participation were collected at WIII. Also new at WIII was the collection of several biospecimens. Urine and saliva were collected to test for STDs and HIV, and buccal cell DNA was collected from the twins and full siblings in the genetic sample. The Web site supported by the Carolina Population Center of the University of North Carolina provides information about Add Health's design and data availability.

Add Health has been funded over the period 1994–2010 by the National Institutes of Child Health and Human Development (P01 HD031921), with cofunding from seventeen other federal agencies. Add Health has an enlightened dissemination policy in that the scientific community is given access to the data at the same time as are project investigators. As a result, Add Health has become a national data resource for over 3,000 Add Health researchers who have obtained more than 200 independently funded research grants and have produced hundreds of research articles published in multidisciplinary journals and research outlets.

ADD HEALTH RESEARCH

Add Health research has exploited its unique design to explore the role of social contexts in the lives of adolescents, including the importance of family, peer, school, and neighborhood context as factors influencing adolescent development, behavior, health and well-being, and outcomes in the transition to adulthood. Ground-breaking research is identifying the social contexts that facilitate genetic expression in health behaviors, including substance use, sexual behavior, and delinquency and violence. Add Health has also made possible important new research on the health status and health behaviors of special populations such as disabled youth, adopted youth, youth living with surrogate parents or relatives, multiracial youth, youth with same-sex romantic attractions or relationships, and adolescents in immigrant families.

Add Health has also been an ideal data set for conducting health disparities research. Large and persistent racial, ethnic, and socioeconomic disparities in health exist across the life course in the United States. The reduction and ultimate elimination of health disparities has

been identified as a major public health goal, exemplified by *Healthy People 2010*, the nation's promotion and disease prevention strategy for the first decade of the twenty-first century. Add Health tracks longitudinal trends in race and ethnic disparities in the leading health indicators from *Healthy People 2010* across multiple domains from adolescence to young adulthood. The interdisciplinary design of Add Health has resulted in a multidisciplinary user base of researchers in sociology, economics, human development, public health, biomedical sciences, and related fields who are exploring social, behavioral, and biological factors in developmental and health trajectories from adolescence into young adulthood.

LIMITATIONS OF ADD HEALTH

The school-based design of Add Health misses high school dropouts in the initial in-school survey, although dropouts after this point are followed in all subsequent interviews. Research from 2003 by J. R. Udry and Kim Chantala, examining the impact of this potential bias of missing high school dropouts, reports minimal impact. In addition, because Add Health is an omnibus study, many standard sociometric scales for various measures are included in shortened forms. Thus, although the breadth of topics covered in the Add Health instruments is comprehensive, the depth may not be present for all topics.

SEE ALSO *National Family Health Surveys; National Longitudinal Survey of Youth; Panel Study of Income Dynamics; Sample Attrition; Sampling; Survey; Surveys, Sample*

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NATIONAL LONGITUDINAL SURVEY OF YOUTH

The National Longitudinal Survey of Youth (NLSY) is a set of panel surveys in which the same respondents are interviewed periodically about various aspects of their life experiences. Sponsored and largely funded by the U.S. Bureau of Labor Statistics, the NLSY data do not primarily contribute to official government statistics; instead the microdata are available to researchers for basic research on the life course. By 2006 the bibliography of publications from these data included over four thousand items on topics such as transition from school to work, job mobility, youth unemployment, educational attainment and the returns to education, welfare recipiency, the impact of training, and retirement decisions. The Center for Human Resource Research at Ohio State University carries out much of the content planning, and the National Opinion Research Center at the University of Chicago carries out the interviewing, either in person or by telephone.

The precursors of the NLSY are two cohorts of the National Longitudinal Survey of Labor Market Experience (NLS), 5,000 each in the Young Men cohort, aged fourteen to twenty-four in 1966, and the Young Women, aged fourteen to twenty-four in 1968. The young men were interviewed biennially until 1981; the young women continue to be interviewed as of 2006.

Interviewing of a new cohort comprising a 12,686-member probability sample of the age-specific U.S. population of young men and young women aged fourteen to twenty-two started in 1979 with broadly expanded survey instruments. Interviews with the NLSY79 cohort were annual through 1994 and biennial thereafter. This sample originally included military members (dropped in 1985) and an oversample of disadvantaged youths (dropped in 1991). So the eligible sample after 1991 consisted of just fewer than 10,000 respondents. The twenty-second round of interviewing took place in 2006. Interviewing of a further cohort of 8,984 young men and young women aged twelve to sixteen at the time started in 1997 and continues biennially as NLSY97.

All children born to the women in NLSY79 become members of the cohort called Children of the NLSY79, from which data have been collected biennially since 1986; as these children reach age fifteen they graduate into a separate young adult sample, begun in 1994 and also fielded biennially. The child sample and the young adult sample do not represent probability samples of their age groups in the United States, as children born to women who immigrated after 1979 and children born to women not in the age cohort fourteen to twenty-two in 1979 are excluded from the sampling frame; but they do represent a sample of all children born to women in the age cohort.

Data (without identifiers) are available as public use files, either for analysis online or for downloading, at the Web site supported by the Bureau of Labor Statistics. NLSY questions concentrate on labor force behavior but also ask about education and training, income and assets,

health conditions, alcohol and substance abuse, and marital and fertility histories. There are also linked data of scores on the Armed Services Vocational Aptitude Battery, which includes measures of cognitive development. Also linked are data on the secondary schools attended by respondents. In the child sample, mothers are asked about pregnancy and prenatal care; children are given cognitive assessments at ages four and fourteen and are interviewed about family life between ages ten and fourteen. Members of the young adult sample are administered interviews similar to the NLSY79 interview itself.

Because of the longitudinal nature of the data, analyses are possible on a wide variety of topics in economics, sociology, and other areas. For example, one can trace not only entrances into and exits from the labor force, but also marital history, family formation, and the impact of such changes on labor force participation. The cognitive test information is useful for controlling for varying inputs in investigations of individual attainment. The longitudinal nature of the data also assures that the first criterion of causality—that the putative cause be temporally prior to the putative effect—has been met, in a way that cannot be achieved in a cross-sectional survey.

As in all longitudinal data, attrition from the sample can detract from the value of the data. In the original cohorts, if a respondent missed two consecutive interviews, that person was dropped from further follow-up. Hence the sample became less representative as time went on. In the 1979 cohort, however, efforts are made to contact all respondents at each round, with some success in recovering lost respondents (a response rate of 80 percent of the living original respondents for the 2002 round [Pierret 2005]). Further, a major innovation of the 1979 and 1997 cohorts is the elicitation of life histories. Respondents not only report about their current status on such variables as employment and marital status, but also report and date any changes in these statuses since the previous interview. Thus if a respondent misses one or more biennial interviews, longitudinal data for that respondent are nevertheless available from the retrospective reports given in the life history. This further ameliorates the problem of attrition, although possibly at some cost in accuracy if respondents' memories are faulty.

SEE ALSO *National Assessment of Educational Progress; National Family Health Surveys; National Longitudinal Study of Adolescent Health; Panel Study of Income Dynamics; Research, Longitudinal; Sample Attrition; Survey; Surveys, Sample*

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NATIONAL ORGANIZATION FOR WOMEN

Founded in 1966, the National Organization for Women (NOW) has approximately 500,000 contributing members and roughly 550 chapters across the United States. NOW maintains a diverse policy agenda and tactical repertoire. It has employed legal, legislative lobbying, electoral, and protest tactics, leading campaigns not only for the legal equality of women and for the equal rights amendment but also against sexual harassment, for the maintenance of women's access to abortion clinics and against clinic violence, against domestic violence and rape, and for poor women's rights.

Many individuals contributed to the organization's founding, including activists in the union movement and the civil rights movement as well as men and women working within the federal bureaucracy. They shared a common concern that the newly created Equal Employment Opportunity Commission (EEOC) was refusing to enforce Title VII of the Civil Rights Act of 1964, which prohibited discrimination against women in the workplace. Women's rights advocates like Richard Graham and Aileen Hernandez, both EEOC commissioners, sought a spokesperson to lead an organization similar to the NAACP, an advocacy organization for African Americans, that would be dedicated to women's equality issues.

Betty Friedan was one individual recruited to take on this role. A freelance writer who often wrote on women's and labor issues, Friedan had gained significant media attention as a result of *The Feminine Mystique*, published in 1963. NOW was formed after members of the National Conference of the Commission on the Status of Women (and Friedan, who attended with a press pass) attended a frustrating annual meeting in 1966 where attendees were stymied in their attempts to pass resolutions demanding changes at the EEOC. Twenty-eight women and men constituted the original founders, and Friedan became NOW's first president. She and Pauli Murray wrote the organization's original statement of purpose, which said in part that the purpose of NOW was "to take action to

bring women into full participation in the mainstream of American society now, exercising all the privileges and responsibilities thereof in truly equal partnership with men" (Carabillo, Meuli, and Bundy Csida 1993, p. 47). From NOW's inception its leaders were determined that the organization would operate independently from established political institutions, such as political parties, which they believed had paid only lip service to women's equality. They also insisted that the group must be an activist rather than an educational organization. Organizationally speaking, NOW is among the most democratic of progressive social organizations. All members are eligible to become voting delegates to vote for national board members and officers at national conventions and to vote on resolutions pertaining to NOW's goals and strategies.

NOW's earliest actions centered on pressuring the EEOC to uphold Title VII. Drawing largely on the resources and talents of the organization's founders, NOW initially focused on attracting media attention and on lobbying executive agencies and legislators on this issue. Soon, however, the group's members (now including members of the women's liberation movement) and some leaders argued that these tactics—long used by organizations like the NAACP—had failed to produce results. Consequently over the course of its founding period (1966–1971), NOW began to incorporate mass mobilization and protest activities into its tactical repertoire along with legislative lobbying, the campaign to ratify the equal rights amendment, and electoral activism. NOW also began to focus on broader goals, including abortion rights and lesbian rights.

The campaign to ratify the equal rights amendment (ERA) is one of NOW's best-known endeavors. NOW's leaders were not immediately successful in convincing members to participate in this challenge, however, and as a result the organization did not focus intently on the measure until 1978. The ERA was not ratified by its 1982 deadline, falling short by only three states. The campaign nevertheless proved a potent mobilizing force, swelling NOW's ranks to over 200,000 members and exposing members and leaders to multiple tactics, including lobbying, protest, state-level politics, electoral politics, mobilization, and fund-raising, that for many were their first experience in politics.

Among the longest-serving of NOW's presidents is Eleanor Smeal, who was elected three times and presided from 1977 to 1982 and from 1985 to 1987. Smeal led the organization during the latter stages of the equal rights amendment campaign and spearheaded NOW's increased investment in electoral politics, coining the term *gender gap*. She founded the Feminist Majority Foundation in 1987. Patricia Ireland led NOW for ten years (1991–2001) and extended the organization's involvement in elections, most notably during the 1992 Year of the Woman. She also led campaigns against sexual harassment and in 1996 worked against the revocation of welfare benefits for poor women. Ireland's priorities also included lesbian and gay rights. In 2001 Kim Gandy became president of NOW.

SEE ALSO *Friedan, Betty; Women and Politics; Women's Liberation; Women's Movement*

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Maryann Barakso

NATIONAL SAMPLE SURVEY (INDIA)

The National Sample Survey (NSS) is one of the oldest continuing household sample surveys in the developing world. The survey is conducted on a regular basis by the National Sample Survey Organisation (NSSO), India's premier data collection agency. Since 1972, the NSSO has fallen under the Ministry of Statistics and Program Implementation of the Government of India (GOI).

The role of the NSS must be seen in the broader context of Indian economic development. At independence and through much of its early development, the country was faced with a subsistence production structure (mainly in agriculture) characterized by mass poverty and hunger. Systematic data on the extent, magnitude, and patterns of poverty, as well as on household consumption patterns and trends, were not readily available for informed policy interventions. To remedy this, the GOI launched the NSS to gather nationally representative information on household structure, consumption, and production.

The first NSS round was conducted in 1950–1951 and included information on land utilization, prices of essential commodities, and daily wages of skilled and unskilled laborers at the village level. At the household level, data was obtained on demographic characteristics as well as land ownership, cultivation, and utilization. In

addition, detailed data was gathered on monthly and weekly consumption, as well as on entrepreneurial activities, from a subset of the sampled households. The first round was based on a random sample of only 1,833 villages out of a total of 560,000.

Since that first round, more than sixty NSS rounds have been conducted. Naturally, both the organization and the surveys have undergone many changes since then. At the organizational level, the technical wing of the NSSO was divested from the Indian Statistical Institute and placed under the direct control of the GOI. The field operations group was placed under the guidance of a governing council headed by an eminent academic and members drawn both from government and academia since 1970; it now functions as a full-fledged wing of the GOI.

Important changes also occurred in the surveys themselves. With increased demand for more disaggregated information, the sample size of the rounds has expanded significantly, from 1,833 villages in the first round to more than 14,000 rural villages and urban blocks in more recent rounds. With the large increase in sample size, a decision was made (beginning with the 1973–1974 round) to split the rounds into two: quinquennial (or "thick") rounds done at approximately five-year intervals on a large sample of households (about 120,000) and "thin" rounds undertaken during intervening periods on smaller samples (approximately 35 to 40 percent of the thick-round samples). The expansion of the sample size, especially for the collection of data on consumption expenditure and employment, has allowed NSS estimates to be representative at the below-state (but not district) level. The NSSO is representative at the level of regions—collections of several districts grouped together on the basis of broadly similar agro-climatic conditions. Regions are not administrative units. The NSS has delineated a total of seventy-eight regions in the country.

The coverage of the NSS varies over the different rounds. Each round always obtains information on consumption and employment; however, the rounds also cover other subjects, such as health, schooling, or disability, in the form of additional modules. Thus, for instance, the fifty-eighth round focused on disability, housing conditions, village facilities, and urban slums, while the sixtieth round covered morbidity, health care, and conditions of the elderly. Since its inception, the NSS has covered some fifty different subjects in its surveys, such as household debt and investment, literacy and culture, health, schooling, and village-level infrastructure.

Until 1998 the unit record data from the NSS was not available to the public. This restricted considerably the wider use of the surveys by researchers. Indeed, only a few studies were based on the NSS data, including the measurement of poverty and unemployment and the construction of price indices, such as those by Ahluwalia (1978), Bhattacharya et al. (1980), Jain and Tendulkar (1989, 1990), and Minhas et al. (1987, 1988). In 1998 the GOI made the NSS unit record data, retrospectively from the thirty-eighth round of 1983, available in the public domain at a modest fee. Since that time, numerous researchers have used the data to address a number of issues, such as health, nutrition, schooling, disability, small-scale industry, and food subsidies (Borah 2006; Deolalikar 2005; Gupta 2003; Subramanian and Deaton 1996). Poverty and, to a smaller extent, unemployment remain the two top issues that are explored by researchers with the NSS data (e.g., Datt 1999; Deaton and Dreze 2002; Dubey and Gangopadhyay 1998; Sen 2000; Sundaram 2001a, 2001b; Sundaram and Tendulkar 2001).

The NSS has sometimes changed its data collection methodology midstream, and this has affected the comparability of NSS estimates over time. This was particularly the case in the fifty-fifth round, when the NSS adopted a different reporting period for certain types of consumption expenditures, rendering consumption and poverty estimates from that survey noncomparable to those from earlier periods. Another weakness of the data is that, unlike some other national socioeconomic surveys (notably the National Socio-Economic Household Survey, or SUSENAS, of Indonesia), there is no fixed rotation schedule for the special-interest modules that are attached to the core consumption-employment module of the NSS. As a result, it is difficult to obtain nationally representative data on important topics such as health and education on a regular, ongoing basis. For instance, the NSS included a health-care module in the fifty-second round conducted in 1995–1996, but this was not repeated until the sixtieth round in 2004. Likewise, the topic of rural assets and indebtedness was covered in the forty-eighth round in 1992 and only revisited in 2003 in the fifty-ninth round. It would be helpful if a regular rotation schedule were established whereby important topics such as health, schooling, and assets could be covered every three or four years.

SEE ALSO *National Family Health Surveys; National Longitudinal Survey of Youth; Panel Study of Income Dynamics*

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NATIONAL SECURITY

Although central to studies across social science disciplines like political science, national security is a dynamic and contested concept. This entry surveys its history, definition, and entailments.

National security seems a simple concept with familiar resonance and clear articulations through history. Nation-states from their inception have sought security from external and internal threats and employed many means to survive. As the English philosopher Thomas Hobbes wrote in *The Leviathan* (1660), security is the raison d'être of the Westphalian state: keeping domestic peace and safeguarding people and property against civil and foreign threats. Traditionally, external threats are highlighted, including those involving other states and matters of territory, population, and military/economic/political competition. Interstate wars, grand strategies, armaments, and alliances are emphasized. However, the internal dimension is also important; whether the time or place was early modern Europe, colonial America, Imperial Japan, or postcolonial Africa, Asia, and Latin America, issues of taxation, conscription, constitutional design, royal succession, class relations, religion, rights and liberties, food supply, and public health have all to varying degrees affected domestic stability and probabilities of conflict internally and externally.

Despite ordinary usage, the term *national security* is difficult to define. National security is security of the nation-state, but this means little without defining the

terms *nation-state* and *security*. While there are competing conceptions, the nation-state is commonly understood as a political-legal entity possessing a monopoly on legitimate use of force within its territory. The state includes—in political scientist Barry Buzan's formulation—physical (territory, population), institutional (rules, norms, governing apparatus), and ideational (nationalism, state legitimacy) elements. The state also possesses varying types and degrees of sovereignty. Security is more ambiguous. The scholar David Baldwin suggested the concept is "confused or inadequately specified" (2000, p. 12), and Buzan concluded security is "essentially contested," eluding general definition (1991, p. 7). The problem, Baldwin argued, is not positing a general definition but the many particular specifications of that definition possible. For example, most definitions of security center on the idea of freedom from threat. This is vague and requires further specification: What constitutes freedom? How much is necessary? Who and what constitute threats? Who and what need to be protected? Is threat subjective, objective, or both; what does this mean for security? Depending on answers, widely different specifications result. Moreover, most specifications include other contested terms. Political scientist Arnold Wolfers's classic definition of security as "absence of threats to acquired values … [and] absence of fear … such values will be attacked" (2000, p. 485) and Baldwin's modification, "[L]ow probability of damage to acquired values" (2000, p. 13), both rely on acquired values. However, as scholar Bernard Brodie argued, values and vital interests are fundamentally debatable with no single, objective meaning.

What then is national security? National security is freedom from threat to the nation-state. Because national security absorbs confusion from the term security, it requires further specification. If the nation-state involves physical/institutional/ideational components, which components need to be secured? If trade-offs are involved in securing different components, how are preferences over components determined? How do variations along different components (e.g., different regime types or cultural-historical backgrounds) alter conceptions of national security? Who and what threaten the nation-state? If absolute security is unattainable, how much security is necessary? Without specifying these dimensions, national security is ambiguous and subject to political manipulation.

Selected definitions show possible variations. The influential journalist and political commentator Walter Lippmann said national security means a state need not sacrifice core values in avoiding war and can maintain them by winning in war. Scholars Frank Trager and Frank Simonie maintain national security is policy seeking favorable national and international political conditions for protecting and extending vital interests. Professor Richard Ullman finds national security is threatened by anything that can drastically and quickly degrade citizen quality of life or significantly narrow state or nongovernmental entity policy choices. Scholar David Lake said national security is the ability to use wealth as a polity sees fit. Most definitions include policy objectives like providing defense, preserving sovereignty over population and territory, protecting citizens' lives and property, preventing external interference, maximizing wealth and/or power, protecting economic opportunities and quality of life, promoting national values, seeking international prestige, and securing policy flexibility and leverage. Interestingly, state survival in the strictest sense of maintaining Westphalian statehood is mostly a consideration only for weak or failed states. Overall, each specification of national security, knowingly or not, imply different worldviews about the meaning of security and the nature of world politics and, therein, different understanding of threats to be guarded against and values to be maximized.

Different definitions of national security preference different strategies and policy instruments. Traditional views emphasize maintaining national defenses; ensuring resilience/redundancy of critical infrastructure; gathering accurate intelligence to assess threats; and skillfully using diplomacy and cryptodiplomacy to protect against military threats from other states (conventional and unconventional weaponry delivered via land, sea, air, or space). Domestic threats are downplayed. External strategies may vary. Realism identifies national security with state power and ability to secure national interest, however defined. Security is achieved by maintaining self-reliance through internal balancing (strengthening national resources and military might). External balancing (alliances) is used to maintain a balance of power among states (e.g., nineteenth-century Europe) so no hegemony or coalition can predominate. Liberalism identifies national security with states applying reason and ethics to collectively and peacefully lead international relations. National security is not just state security but individual and global empowerment. Liberalism advocates international law and institutions, collective security arrangements, and disarmament (e.g., League of Nations, Kellogg-Briand Pact). Neoliberalism also sees global strategies like promotion of free markets, international law/institutions, and transnational relations as key to national (and international) security. Neorealism, traditionally the dominant perspective on national security, identifies security (especially military security) as the prime motivation of states. Like realism, neorealism advocates internal and external balancing. Developing during the cold war, though, neorealism takes international structure into greater account. Understanding that efforts to increase security might paradoxically decrease it (e.g., arms race), neorealism developed more nuanced theories of coercion, or the limited or threatened use of force to induce an adversary to behave

in some way. Coercion includes deterrence (discouraging actions detrimental to coercer's interests by making perceived costs outweigh benefits) and compellence (changing target behavior by manipulating costs and benefits). Conventional and nuclear coercion and coercion short of force (e.g., sanctions) are thus key policy instruments. Last, nontraditional views of national security broaden and deepen the concept to put greater emphasis on third world security, the constructed nature of security, non military issues (e.g., human rights, economic/political development, the environment, demographics, public health, gender), nonstate actors, and nonmilitary policy instruments.

SEE ALSO *Arms Control and Arms Race; Defense; Defense, National; Deterrence; Intelligence*

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Erika Seeler

NATIONAL SERVICE PROGRAMS

In his 2002 State of the Union address, President George W. Bush called on American citizens to donate four thousand hours to community service—the equivalent of two working years—over their lifetime. The U.S. government has supported volunteering and community service in various ways since the 1930s. One of the ways is to establish national service programs that engage citizens in helping other people. The term *national service* traditionally refers to a nationwide program of public/community work in which citizens, mostly young people, serve for one or two years at a subminimum wage to help the community as well as themselves (Gorham 1992; Moskos 1988). In countries such as Israel, Korea, Austria, Singapore, and Turkey, young people (mostly male) are required to serve in the military. In other countries, for example, Germany, (male) citizens may choose whether they want to serve in the armed forces or participate in alternative national service programs. In the mid-1960s, many programs in the United States began to engage a broader array of the population, including students and senior citizens, in a variety of activities.

HISTORY OF NATIONAL SERVICE

The first large-scale national service program in the United States was developed during the Great Depression of the 1930s. In March 1933 President Franklin D. Roosevelt created the Civilian Conservation Corps (CCC). The CCC essentially was an employment/welfare program that provided basic education and income for young, unemployed people. The program employed over three million participants until 1942, when capable young men were no longer available because of the advent of World War II (1939–1945) (Perry 2004). The Roosevelt Administration also created the Works Progress Administration in May 1935, offering work to more than 3.4 million of the unemployed by the next year (Indiana University 2006).

National service in the United States reached an early peak under the administrations of Presidents John F. Kennedy and Lyndon B. Johnson in the 1960s. The early success of the Peace Corps in rallying support for public service contributed significantly to the development of later service programs, such as Volunteers in Service to America (VISTA; the so-called domestic Peace Corps), as well as Foster Grandparents, Senior Companions, and the Retired Senior Volunteer Program, the latter three of which have been administered by the Corporation for National and Community Service (CNCS) since 1993. The goal of all of these programs was to enact changes in the ways institutions addressed issues of poverty and community empowerment.

In the 1970s, the focus of national service programs shifted from institutions to individuals. New programs, such as the Youth Conservation Corps in President Richard M. Nixon's administration, sought to change individuals, rather than to alter institutions (Perry 2004). However, the efforts of President Ronald Reagan's administration to shrink the size and breadth of the federal government also led to the downsizing of federal support for many national service programs (Perry 2004).

The 1990s witnessed renewed interest in national service in the United States. President Bill Clinton's National and Community Service Trust Act of 1993 expanded the National and Community Service Act of 1990 by creating a new agency called the Corporation for National and Community Service (CNCS) to house all domestic national service programs. The Clinton administration also established AmeriCorps, which provides full- and part-time community service opportunities to individuals in education, public safety, the environment, and human needs. In the wake of the tragic events of September 11, 2001, the second Bush administration launched the USA Freedom Corps, an umbrella agency with responsibility for coordinating volunteer programs across all federal agencies, and increased AmeriCorps programs, sponsored by CNCS.

NATIONAL SERVICE PROGRAMS, POST-2005

As mentioned, CNCS houses all domestic national service programs: national and state AmeriCorps programs, AmeriCorps VISTA, AmeriCorps NCCC (National Civilian Community Corps), Senior Corps, and Learn and Serve America. In 2005 the CNCS sponsored and managed about 3.7 million volunteers, with a budget of about $927 million. Citizen Corps, a vital component of Freedom Corps administered by the Department of Homeland Security, represents five programs that provide opportunities for Americans to participate directly in security efforts: Citizen Corps Councils, Community Emergency Response Teams, Medical Reserve Corps, Neighborhood Watch, the Fire Corps, and Volunteers in Police Service. In 2006 the Peace Corps program enrolled 7,810 volunteers in seventy-five countries, with a budget of $318.8 million (Peace Corps 2006).

CHALLENGES

National service programs in the United States face difficult challenges, including financial, social, and legitimacy.

Funding Challenge Funding national service programs has been a continual and critical issue. For example, many AmeriCorps programs have undergone budget cuts. Continuing concern about the management of the National Service Trust Fund, which is dedicated for educational awards to AmeriCorps participants, and budgetary cutbacks by the federal government have forced the program to decrease the number of enrollments (Schwinn 2003; Wilhelm 2003).

Social Challenge National service programs can impose a social challenge by widening the split between the middle class and the underprivileged, rather than narrowing it. As Charles C. Moskos argued in his 1988 book, *A Call to Civic Service*, American national service can be seen as having a "two-tier" system: Elite programs such as the Peace Corps attract highly educated college graduates. Ninety-six percent of Peace Corps volunteers have at least an undergraduate degree, and 13 percent have earned graduate credits or degrees. By contrast, the large national service programs such as AmeriCorps attract primarily entry-level workers by offering a stipend and college education awards to participants.

Legitimacy Challenge A third issue confronting national service is the legitimacy challenge. In this case, legitimacy means that the overall benefits of these programs must exceed their costs, or that the benefits would not occur in the absence of the program. For example, if as survey research demonstrates, a sizable percentage of Americans (26.7 percent in 2006) volunteer apparently on their own volition (Bureau of Labor Statistics 2007), the justification for subsidizing these efforts through national service appears suspect. William F. Buckley Jr. (1990) maintains that there is no point in taxing citizens if the purpose is to give back the same amount. Of course, national service programs offer a variety of nonmonetary benefits, for instance, skill development, civic responsibility, and greater knowledge and awareness. These benefits, however, are not readily measurable, and consequently, demonstrating the legitimacy of these programs remains critical.

PROSPECTS

Despite the promotion by recent presidents of voluntary national service, marshalling sufficient monetary resources for this purpose is likely to remain an issue. One way to augment funds for national service is through partnering with private and nonprofit organizations, as well as attempting to recover a portion of related costs from them, a strategy pursued increasingly by AmeriCorps.

One of the significant changes in national service programs is increased inclusiveness. Traditionally, national service programs mainly targeted youth; more programs have been created to engage diverse populations, such as older people. These efforts can help to alleviate the socioeconomic gap in national and community service.

Finally, studies of broader scope can be conducted to address the legitimacy challenge confronting national service. Analysis of costs and impacts of these programs—not only for affected communities but also for national service participants—may demonstrate greater benefits, improve current programs, and increase public support.

SEE ALSO *Great Society, The; Johnson, Lyndon B; Kennedy, John F.; Military; New Deal, The; Volunteer Programs; Volunteerism*

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NATIONAL SOCIALISM

SEE *Nazism.*

NATIONAL SURVEY OF BLACK AMERICANS

The Program for Research on Black Americans (PRBA) at the University of Michigan's Institute for Social Research is the longest-running social science research project devoted to the collection, analysis, and interpretation of survey data based on international, national, and regional probability samples of black populations. The findings from analyses of the original 1980 National Survey of Black Americans (NSBA) and over twenty subsequent studies continue to be of major scientific value and relevance to public policy. Both the quality and the precision of the original national cross-section, panel, and three-generation family samples, as well as the numerous subsequent studies, make the results of immense importance to social scientists and policymakers.

The 1980 NSBA adult cross-section study is notable because, using novel sampling techniques, it permitted for the first time national estimates of the statuses and life situations of black Americans across the entire range of socioeconomic and other demographic groupings in the population. The inclusion of policy-relevant questions revealed individual and group opinions and feelings that fully represented the breadth and diversity of black people located in all walks of life across the entire United States.

One more recent national study, the 2003 National Survey of American Life (NSAL), includes a very large, nationally representative sample of African Americans (3,600), permitting an examination of the heterogeneity of experience across groups. The NSAL also includes the first nationally representative sample of Caribbean blacks (1,650). As a result, the data from this project permit the identification of differences among various important demographic groups often lumped together within the black American population. A related international study of black multigeneration family members in the United States and the Caribbean, as well as large regional adult samples in Jamaica and Guyana, was completed in 2006.

These types of data are critical due to changing immigration patterns and the major changes in living patterns and conditions, family structure, and social circumstances that have occurred among black populations since 1980. The NSAL successfully employed new methods to ascertain the methodological and substantive influences of structurally missing members of black households (e.g., young men in prisons and lockups) on sampling and social, psychological, and health estimates. Finally, all respondents (including the 1,006 whites) in the NSAL were selected from the targeted geographic segments in proportion to the African American and Afro-Caribbean population. Thus, questions related to neighborhood characteristics, service use, and risk and protective factors, for example, will make for important and novel comparisons not possible with prior studies.

In sum, nearly thirty years of PRBA's large probability studies of political participation, perceived and reported discrimination, religion, physical and mental health, and life-course development in population-based black samples have emanated from the original, path-breaking 1980 NSBA thirteen-year, four-wave, longitudi-

nal panel survey. PRBA research continues to make major contributions to understanding how social, cultural, and other contextual factors relate to the ways in which racial status and racialized treatment affect the behaviors, physical and mental health, attitudes, and values of blacks in the United States and the larger African diasporas.

SEE ALSO *African Americans; Demography; Discrimination; Employment; Inequality, Racial; Occupational Status; Race; Racism; Unemployment; Wages*

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James S. Jackson

NATIONALISM AND NATIONALITY

Nationalism is one of the most potent political forces on the world stage today. Fusing the intractability of cultural politics with the power of the state, nationalism organizes individuals into cohesive political communities that are unique, exclusionary, and wedded to mythologized histories. Nationalism sometimes inspires violence and xenophobia, but it also supplies the wellspring for sentiments such as patriotism and self-sacrifice. The deep emotions that nationalism taps into make it a powerful tool in the hands of demagogues, who manipulate nationalist sentiments for political gain. Scholars offer several competing explanations of nationalism and nationality; this entry highlights where they overlap while indicating some of the range of scholarship that exists on the topic.

DEFINITIONS AND ORIGINS OF NATIONALISM

To understand nationalism and nationality, one must first have a working definition of the terms *nation* and *state*. A *nation* is a self-identified cultural group that regards itself as distinctive in some fundamental and significant way. There is no particular attribute that a group must have in order to qualify as a nation, but language, ethnicity, and religion are the three most common bases of national identity. *Nationality* is the aspect of identity that derives from one's membership in a nation. Typically, members of a nation imagine themselves to share a common history that binds them both to one another and to a given territory, and this sense of mutual attachment feels natural even if its objective bases are sometimes exaggerated or even invented. Despite the subjective origins of national identities, they possess an objective status that shapes how individuals regard themselves and are treated by others. Most scholars regard nationalism as a modern phenomenon due to its explicit association with states, which are a product of modern European history. *States* are the territorially based political units that structure global politics today; their provenance is conventionally attributed to the Peace of Westphalia (1648). During the period spanning the age of imperialism in the latter half of the nineteenth century through the years of decolonization in the mid-twentieth century, all of the world's territory and peoples came to be organized politically as states. As statehood emerged as the fundamental mode of political organization during these years, nationalism became the standard means of legitimating state authority, with extant political communities reconceived as nationalities.

Nationalism exists when a nation seeks to fuse its identity with the administrative apparatus of a state. Ideally, coordinating the boundaries of a nation and a state will yield a neatly delineated nation-state, but this outcome is almost impossible as a practical matter and is rarely approached in reality. All states are to some degree multinational, and most states also include segments of their populations that could one day evolve from subcultures into nationalities. Throughout the world, nationalism influences social and political relations in important ways for three related reasons. First, nationality has become a universal component of identity; everyone belongs to a nation. Second, nationalist sentiments are emotional and thus less amenable to rational compromise than are most other political interests. For example, disputes over land that is deemed to possess nationalist significance, as in Israel/Palestine, cannot be solved easily through bargaining, because the nations involved regard their identities to be tied deeply to the land itself. Third, the way that state boundaries were historically drawn often resulted in the division of nations into multiple states, the aggregation of several nations within a single

state, or, most commonly, some combination of the two. Insofar as nationality issues are politically salient in these circumstances, the possibility for violence is increased, as demonstrated for example in the numerous conflicts that plague central Africa. Taken together, these three factors promise a pervasive and often disruptive role for nationalism in world politics for the foreseeable future.

Nationalism originated in Europe. Its roots are most commonly traced to the Napoleonic Wars of the late eighteenth century, although some identify Henrician England or even the medieval era as the actual period when nationalism first emerged. Scholars who focus on the way groups have described themselves or others using the vocabulary of nationality tend to place the origins of nationalism in the earlier periods, whereas those who stress its role in political mobilization and legitimation point to the Napoleonic era as marking the true birth of nationalism. Either way, the widespread acceptance of nationality as a marker of identity and of nationalism as a mode of political legitimation depended on the existence of technological and administrative capacities that could enable geographically dispersed individuals to imagine themselves as belonging to a community larger than the village or town; the invention of the printing press and the gradual consolidation of Europe into unified states thus provided essential foundations for the spread of the national idea.

Nationalism as a social construct has thrived by giving meaningful form to the basic human tendencies to categorize and to distinguish the self from others. The positive and negative features of nationality both issue from this source. On the one hand, nationality confers status on the self by defining an individual as belonging to a higher, meaning-bearing collectivity, which in turn inspires loyalty and pride in one's national identity. On the other hand, nationality is an essentialist characteristic—you either have it or you don't, and the status of minority nationalities within states is often one of vulnerability and marginalization. By asserting its special nature and history, in other words, each nation implicitly provides a rationale for excluding those who are not full members of the national community.

Nationalism legitimates political authority by grounding it in the will or "essence" of the community over whom sovereignty is exercised. As a result, when rulers do not share the national identity of a territory's population, as with colonialism or cases of one group's domination of a multinational state, nationalism provides a way for the population to articulate why it regards the rule of the community by "others" as being illegitimate. It is not coincidental that nationalism and democracy took root together, because both reflect variations on the theme of popular sovereignty. Despite their similar foundations in the primacy of the people, however, democracy and nationalism follow very different logics and are often mutually exclusive in practice, because democracy is blind to the cultural characteristics of the individuals who participate in its processes. Nationalism, by contrast, seeks to empower the group—the nation—without necessary regard for either the individuality of its members or the rights and interests of individuals of different nationalities.

Within Europe, the blossoming of nationalism as a political force was spurred by resistance to Napoleon's imperial ambitions—hence the widespread identification of his reign with the birth of nationalism. Because Napoleon was clearly an "other" in the eyes of the populations in the territories that he conquered, leaders of those states, particularly in Central Europe, rallied their people partly on this basis. In addition, the Napoleonic Wars also marked the start of the modern era, when the creation of citizen armies first gave ordinary people a perceived stake in the chessboard warfare of their rulers. After Europe subsequently conquered the rest of the world, nationalism in turn supplied a rationale that the world's peoples could hold against the Europeans themselves. Although nationalism was not necessary to challenge the Europeans as being illegitimate exercisers of sovereign authority in their colonial possessions, its vocabulary was adopted by political entrepreneurs among the colonized. These leaders, including Mohandas K. Gandhi in India and Kwame Nkrumah in Ghana, recognized that nationalism was a construct that could inspire their conationals to pursue independence, even as it provided a justification for their efforts that Europeans could understand. A growing consensus holds that the colonial era ended only after Europeans accepted that the norm of self-determination trumped their own interests.

CONTEMPORARY MANIFESTATIONS OF NATIONALISM

As a political force, nationalism can take several forms. First, as just described, nationalist sentiment can lead a nation to seek control of a government that is dominated by nonmembers of the nation. This process was most obvious during the decolonization period of the mid-twentieth century, when the peoples living in what are now the states of Africa and Asia gained independence from European imperialism, and it was repeated in the 1990s, during the most recent wave of nationalist awakening, after the Soviet Empire relinquished control of many of its subject nations, which became states such as Ukraine and Kazakhstan. During these episodes, nationalism seems to be a positive force—who can argue against decolonization?—but the fissiparous tendencies thereby

unleashed can sometimes spiral out of control. For example, after Georgia separated from the USSR and became an independent state, the South Ossetians almost immediately sought to gain independence from Georgia, and the Abkhazians achieved autonomy within Georgia that they have since sought to convert into sovereign independence. Considerable bloodshed has accompanied both efforts, and neither situation appears to be close to resolution. This sort of fractiousness, and the impossibility of distinguishing legitimate from illegitimate cases of nationalist aspirations, has made self-determination on the basis of national identity deeply problematic.

A second common manifestation of nationalism occurs when one segment of a state's population seeks to align the state's policies and identity with the nation's values or cultural preferences, without regard for the values of minority nationalities. For example, after Yugoslavia split into smaller states during the 1990s, Serbian nationalists and Bosnian nationalists fought a vicious civil war whose purpose was to establish the identity of the emerging Bosnian state as "belonging" to one or the other nation. This episode was extreme in several respects, including the efforts of the Serbs to "ethnically cleanse" the territory of non-Serbs in order to create a nationally homogenous territory that could then be united with Serbia. A less dramatic example is the reassertion of Russian national identity after the fall of the Soviet Union. Among the manifestations of renewed Russian nationalism during this period were the renaming of Soviet cities according to their original Russian designations, with Leningrad becoming Saint Petersburg once again, and the reestablishment of the Russian Orthodox Church as the state religion of Russia. (The church had been marginalized under Communism's official policy of atheism, but it always remained a potent source of identity and pride for the Russian people.)

A third expression of nationalism is irredentism, which relates to the relationship between a nation-state and the members of the nation who live in other states. A currently prominent example is the status of ethnic Germans who live in Poland. After World War II, when the eastern border of Germany was moved westward for geopolitical reasons, the German population living in the ceded territory were simply transferred to Poland along with the land on which they lived. So far, no major problems have resulted from the status of the German minority community in Poland, but both states seem to agree that the situation calls for a neater resolution than is realistically possible. Like many nationalist issues, this case reflects how rarely political line-drawing has historically taken account of the distribution of the national populations within the territories. The lack of fit between national identities and state borders has been the cause of considerable tensions, and is currently responsible for instability in, for example, China, central Africa, and Kashmir, among other places.

Other representative examples of nationalism shaping politics in the world include: whether Northern Ireland will remain a province of the United Kingdom or rejoin with the Republic of Ireland; the recurring debates in the United States over immigration, which have always included clear ethnic overtones, especially during the late nineteenth century, when Chinese nationals specifically were prohibited from coming to the United States; the hyper-nationalism of Nazism and Italian fascism; the failed efforts of Gamel Abdel Nasser to unite the Arabs of the Middle East under a pan-Arabic umbrella; the dispersion of Kurds in Turkey, Iraq, Syria, and Iran; and intermittent efforts of Basques in Spain to establish themselves as an independent state. All of these examples, which can be multiplied practically without end, demonstrate how nationalism evokes fundamental questions about who is, should be, or can be a member of a political community. Insofar as this question is answered on the basis of nationality, one should expect the recurrence of inter-national tensions and conflict, both within and between states. Then again, it is not clear that the underlying function that nationalism serves in constructing political identities can be replaced with a less conflict-inducing alternative. In the final analysis, the central role of nationalism in modernity's cognitive structure guarantees it a long life in social and political affairs, for good or ill.

SEE ALSO *Borders; Colonialism; Culture; Ethnocentrism; Fascism; Gandhi, Mohandas K.; Identity; Ideology; Immigration; Jingoism; Land Claims; Nasser, Gamal Abdel; Nation; Nation-State; Nativism; Nazism; Nkrumah, Kwame; Other, The; Pan-Arabism; Patriotism; Self-Determination; Sovereignty*

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Paul T. McCartney

NATIONALIZATION

Goods and services can be provided by private or by publicly owned producers. Some, such as the postal service or defense, have historically, though not invariably, been provided by states. The concept of expropriating other forms of wealth or activity from private hands into common ownership began to appear in the eighteenth century. The idea that private ownership of land—then still the main source of wealth—vested both economic and political power in a narrow elite led the English radical Thomas Spence (1750–1814) to call for land to be owned by local parishes instead. This was, however, a form of municipalization, not nationalization. In the later nineteenth century calls for state ownership of land, as the most obvious of natural monopolies, were heard in socialist circles. Land nationalization also appealed as an apparent means of coping with the periodic bouts of unemployment experienced in maturing industrial societies. However, land's diminishing economic importance and the rivalry of Henry George's (1839–1897) concept of taxing land values ensured that this idea—notwithstanding continuing practice in communist societies—faded in western Europe and North America by the early twentieth century.

Meanwhile the idea of common ownership of other forms of economic capital or activity was gaining support. Earlier it had been assumed that competition was sufficient to secure the public interest. The high fixed costs of new utility industries, however, meant that in some places, such as Belgium, the very development of railways was from the beginning a state activity. In France private unwillingness to invest meant that the state built and maintained the rail network, while private companies ran the trains until the entire system was nationalized in the 1930s. Nationalization was thus a means of providing public goods when the market failed to do so. But it was not just in utilities that nationalization was felt to be beneficial. In a number of countries perceived market failure in investment also led to bank nationalizations in the twentieth century.

Nationalization could thus be seen either as a way of directing investment or of ensuring uniform provision of services. Some utilities were seen as natural monopolies, and nationalization was felt to be both more efficient and less susceptible to private rationing of services to maximize profits. Private telegraphy providers in Britain before nationalization in 1868, for instance, were accused of restricting services and charging excessive prices. It was also argued that competition was itself wasteful. Nationalization could rationalize assets to achieve economies of scale in the coal industry, for instance, that markets had failed to deliver. In other cases the decision was forced upon sometimes reluctant governments, as in the creation of the Canadian National Railways after World War I (1914–1918), when the government of Canada took over a variety of struggling companies in order to save the service from bankruptcy.

Nationalization was promoted as much for political as economic reasons. In Communist countries, the nationalization of a wide range of assets was seen as a way of controlling the means of production and securing a fairer distribution of social goods. Nationalization of some industries—notably the drink trade—was widely seen as desirable on moral or health grounds in the early twentieth century, and parts of this industry remain nationalized in Finland. And cultural nationalism was a key factor in the development of broadcasting along nationalized lines in interwar Europe. Similar considerations, as well as strategic communications, were to influence the development of European airlines as nationalized "flag carriers" in the middle years of the twentieth century. Security concerns have meanwhile led to the nationalization of a range of industries, from oil to the Transportation Security Administration in the United States in the wake of 9/11.

State control reached its greatest extent in Europe in the years following World War II (1939–1945). This did not stop angry reactions when European assets were taken over by third countries, as occurred, for instance, with the nationalization of the Suez Canal by Egypt in 1956. For Egypt, this was a way of accessing ready revenues for the state.

By the 1970s and 1980s, however, criticisms of nationalization were growing. The failure of state control in Communist systems to distribute goods efficiently was apparent. Evidence in the mixed economies of western Europe was more varied. A plethora of nationalized airlines undoubtedly contributed to overcapacity and inefficiency in that market. Political interference could, though it by no means invariably did, lead to overmanning or inappropriate investment by nationalized industries. More importantly at the popular level these industries could be portrayed as huge faceless organizations more responsive to their unions than to public demand. The rising cost of maintaining subsidies to nationalized industries by the 1980s also made states increasingly unwilling to shoulder this burden.

Privatization, popularized in Margaret Thatcher's Britain in the 1980s, had two significant consequences. The rhetoric may have been about competition; in practice most of the privatized entities remained monopolistic. The result was the development of a network of regulatory authorities. Meanwhile financial liability for those industries has been transferred. So has the political pressure to use that control to, for instance, mop up unemployment by expanding the jobs available in the nationalized industries. Both the financial risk and the political opprobrium

have been shifted to the private sector, while a degree of control has been maintained through regulation.

Some countries, like Britain, Germany, and various eastern European states, have undergone large-scale privatization; the process has been less marked in other countries, such as France. In some cases privatization has been reversed, not least in Vladimir Putin's Russia, where the state has reacquired a number of assets in, for instance, the oil industry since 2000. Meanwhile in Latin America privatization has failed to fulfill expectations either in terms of economic growth or of poverty reduction. Instead, it was felt to leave major assets, such as the oil industry, largely in foreign hands. It is to tackle this, in the hope that it will prevent capital extraction in an increasingly globalized world economy, that nationalization has made a comeback as a political panacea since 2000 in Latin America.

SEE ALSO *Communism; Dependency Theory; Monopoly; Nationalism and Nationality; Planning; Privatization; Public Goods; Railway Industry; Revolutions, Latin American; Socialism; State Enterprise; State, The; Washington Consensus*

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Peter Catterall

NATION-STATE

The term *nation-state* is frequently used but less often carefully defined or theorized, and conceptual confusion is exacerbated by the fact that social scientists use the word in quite varied ways. Agreement is limited to general observations such as that it describes at least some modern states that claim to represent a distinct people called a nation. Indeed, it is possible to identify at least three more or less distinct meanings of the term, the first of which is associated with long-dominant theories of international relations (IR) where it typically denotes any sovereign state. A narrower view of the nation-state as a particular type of sovereign state characterizes the other two uses of the term, one of which focuses on the historical processes by which this type of polity is created and maintained and a second that emphasizes the distinct ethno-national composition of its population.

A VIEW FROM ABOVE: THE MODERN SOVEREIGN STATE

A widespread assumption that the terms *nation* and *state* are practically synonymous underlies much of the popular discourse about the nation-state in world politics and interstate relations. Names of intergovernmental organizations like the League of Nations and the United Nations suggest that their member states are all nations, and phenomena like terrorism or environmental pollution are labeled transnational because they cut across state borders. Not even the academic study of relations between states has been immune to this conceptual ambiguity, as the very name of the discipline *international relations* reveals. This may in part be explained by the influence of IR scholars in the realist tradition, who often used the terms *nation* and *state* interchangeably, to set the research agenda for the U.S. leg of the discipline in particular.

Despite the title of Hans J. Morgenthau's canonical realist text, *Politics among Nations* (1948) primarily discussed politics among states, not nations. While acknowledging that the two are distinct, Morgenthau justified the practice of treating them as synonyms with the observation that in modern international relations "a nation pursues foreign policies as a legal organization called a state" (p. 116). By implication, the term nation-state simply describes the coincidence of nations and states as actors in modern world politics. Accordingly, later realists would frequently use the term synonymously with words like state, nation, and—colloquially—country. Indeed, neorealist or structural realist writers like Kenneth Waltz were even less inclined to use terms such as *nation-state* to differentiate between types of state, given the neorealist assumption that the anarchical structure of the international system—that is, the lack of a world government—socializes sovereign states into becoming functionally similar units.

A dramatic resurgence of substate separatist nationalism and intra-state ethnic conflict in the decade after the end of the cold war prompted some neorealists to revisit the question of the relationship between nation and state. Few ultimately severed the ties between the two, as illustrated by John Mearsheimer's analysis of what he called hypernationalism, which echoed Morgenthau's argument that nationalism primarily functions to strengthen citizens' identification with and support for the state. These reconsiderations thus generally did not result in any major changes in how the term nation-state is used in neorealist writing.

Much of the work in IR since Morgenthau can be seen as contributing to an enduring debate about core realist and neorealist assumptions regarding the primacy of the sovereign state and the inadmissibility of its domestic characteristics in explanations of interstate conflicts. Nevertheless, even realism's opponents usually accept the basic connotation of the term *nation-state* as it is used in the realist tradition. David Held and other scholars have argued that the increasing interdependence brought on by globalization may be causing the decline or even death of the nation-state, a development that would be incompatible with the key realist assumption of the sovereign state as the primary actor in world politics. In these debates, however, critics of realist theory usually accept their opponents' use of the term nation-state to denote all modern sovereign states, and like Held primarily focus their critique on the supposition that the latter is actually sovereign.

However, the preoccupation with the state as nation-state in IR has come under fire by the growing number of IR scholars who—like the contributors in Yosef Lapid and Friedrich Kratochwil's appropriately titled edited volume—advocate *The Return of Culture and Identity in IR Theory* (1996). Lapid and Kratochwil insist that "a serious reengagement with the 'national' is imperative" considering "how costly the failure of a clear analytical distinction between 'nation' and 'state' is for studies of contemporary world politics" (pp. 105, 123). In *National Collective Identity* (1999), Rodney Bruce Hall agrees and asserts that "a more coherent theory of international politics must be predicated, in part, on an adequate theory of the nation-state." Hall's historical examination of the emergence of nation-states represents one of two major alternatives to the traditional view of the nation-state in IR.

A HISTORICAL PERSPECTIVE: THE NATION-BUILDING-STATE

Historical studies of nationalism and the formation of modern states typically distinguish nation-states from other contemporary types of state and from premodern forms of sociopolitical organizations such as empires, medieval fiefdoms, dynastic states, and the territorial-sovereign states in Europe after the Treaty of Westphalia (1648). Rodney Bruce Hall focuses on the unique legitimizing principles of earlier types of polities as their defining and distinctive features. Hall's account of the emergence of what he called "national-sovereign states" in nineteenth-century Europe reflects a view common among students of nationalism, according to which enlightenment ideas championing the people as the only legitimate source of a state's power gradually replaced earlier dynastic legitimizing principles. Unable to adapt in the face of the popular and nationalist revolts that followed the French and American revolutions, the autocratic European states were ultimately transformed into states whose regimes appealed to the new legitimizing concept of popular sovereignty.

However, the notion that rulers were legitimate only to the extent that they represented the people raised an explosive question: Who were the people? Traditional practices of defining the people from above—for example, as the ruler's subjects—were clearly incompatible with the idea that the power of the ruler emanated from below, from the people. Popular sovereignty was based on the assumption that the people were prior to the ruler, not the other way around. In the end, nationalism provided the definitive answer to the question: The people—as a single, unified entity—was the nation. Popular sovereignty thus implied national self-determination, most famously championed in Woodrow Wilson's Fourteen Points. There are many variations of this historical narrative but to most students of the history of nationalism and state formation, the emergence of nation-states is intimately associated with the spread of nationalist ideas of self-determination across Europe and the Americas from the late eighteenth to the early nineteenth centuries and across Africa, the Middle East, and Asia during the anticolonial movements of the twentieth century.

The definitions of the terms *nationalism* and *nation* are also hotly contested, but a common view among experts holds that the former is an ideology premised on the belief that, as Johan Gottfried Herder put it in *Outlines of a Philosophy of the History of Man*, "[t]he most natural state … is *one* nation, with one national character," which sees national self-rule as the only legitimate form of governance (1966, p. 249). A nation is often described as a politically mobilized people whose members are conscious of their unity as a nation and of their distinctiveness from other nations on the basis of cultural, historical/mythical, linguistic, and/or ethnic criteria. Whereas nationalists aim to create the complete concordance between state and nation boundaries, most students of nationalism and state formation heed the advice of scholars like Hugh Seton-Watson and Walker Conner to clearly distinguish between the two entities, understanding a state as the legal, territorial polities in which nations reside. Only by keeping the two concepts analytically separate, they argue, can we properly understand the dynamics of nationalism and its most important institutional manifestation: the nation-state.

In *The Nation-State and Nationalism in the Twentieth Century* (1996), Montserrat Guibernau defined the nation-state by situating it in its historical context as:

> a modern phenomenon, characterized by the formation of a kind of state which … seeks to unite the people subjected to its rule by means of homogenization, creating a common culture,

> symbols, values, reviving traditions and myths of origin, and sometimes inventing them. (p. 47)

On this historicized view, the nation-state is a nation-building state—one pursuing the nationalist and therefore necessarily modern goal of creating a nation that coincides with its borders. An important additional element of such nation-building projects is captured in Hall's criteria that a "national-sovereign" state seeks legitimacy by claiming to represent a single nation that is presumed to include the people living within its territory. Considering Guibernau's processual definition, such a project does not have to be fully and successfully completed—it seldom is—or the claim entirely justified for the state to qualify as a nation-state. In the eyes of most students of nationalism and state formation, however, the existence and persistence of sizeable or numerous minority groups that resist and loudly contest such nation-building policies may so undermine a regime's claim to represent the nation that it can no longer legitimately portray itself as a nation-state.

In a variation on this view, the term nation-state denotes any state that with some success promotes a common national identity among its citizens, even if the latter is based only on solidarity toward shared political symbols, institutions, or ideals. This use potentially defines most if not all modern states as nation-states, including many culturally and ethnically diverse states that are said to have created a unified civic or contractual—as opposed to ethnic or cultural—nation, a distinction inspired by Hans Kohl's analysis of differences in the historical development of Western and Eastern nationalisms. This view is embraced by proponents of liberal nationalism, such as Ross Poole, who in his article "The Nation-State and Aboriginal Self-Determination" advocates the creation of what he calls "multi-nation nation-states" (Seymour 2004, p. 95). Poole reconciles the seemingly contradictory elements of this notion with the presumption that a multicultural/multiethnic state can forge a stable, unified civic nation while respecting the diversity and integrity of its cultural or ethnic nations.

Scholars like Bernard Yack have criticized this distinction on the basis that, as Rogers Smith argued in *Stories of Peoplehood* (2003), "[m]ost if not all senses of nationhood or peoplehood invoke an account of unchosen, inherited, usually quasi-ethnic identity" (p. 65). Even someone as sympathetic to the broader aspirations of liberal nationalists as Will Kymlicka has pointed out that many states pursuing supposedly civic nation-building projects are in fact imposing a dominant culture on national minorities in the manner described by Guibernau. Hence, while they may be (actual or aspiring) nation-states, they are seldom civic nation-states. On the other hand, these critics argue, if states like Switzerland do explicitly recognize and respect different cultural/ethnic nations within its borders, they ought not to be described as nation-states. Leaders of such multinational states may speak of the "national interest" or "national unity" and refer to the state rather than any one of its nations when doing so, but the pervasive terminological confusion of state with nation is merely evidence of the extraordinary success of nationalist rhetoric portraying the nation-state as the ideal form of political organization. It does not mean that all states are nation-states.

A VIEW FROM BELOW: THE SINGLE-NATION-STATE

In fact, students of ethnic conflict maintain that an underlying source of many violent conflicts in modern history is the fact that, despite the power and prevalence of the one nation—one state ideal, few nations are in reality coterminous with state borders. This suggests a third major view of the nation-state that is also evident among nationalism scholars who, like Anthony D. Smith, emphasize the durable quality of nations and the ethnic and cultural ties that underlie them. Smith prefers to call the type of nation-building state described by Guibernau's processual criteria national state, and his own definition of a nation-state in *Nations and Nationalism in a Global Era* (1996) focuses on the actual concordance of boundaries between given entities:

> Strictly speaking, we may term a state a 'nation-state' only if and when a single ethnic and cultural population inhabits the boundaries of a state, and the boundaries of that state are coextensive with the boundaries of that ethnic and cultural population. (p. 86)

The most important element in Smith's definition is the first criteria, which demands that nation-states are ethnically and culturally homogenous internally. (Not all writers in this third group embrace the second criteria as it would exclude internally homogenous states like the two Koreas, given that the Korean nation is dispersed over two states.) The nation-state is here distinguished not from premodern forms of state, but from contemporary states populated either by multiple nations or by a single nation that also extends into other states. Studies of ethnic conflict typically focus on the latter two types of states because they tend to be more unstable than the ethnically homogenous nation-states, which therefore often figure in these studies mainly as part of a typology of states or as the exception that proves the rule of its more numerous and potentially volatile multinational counterparts.

Research by students of ethnic conflict like Ted Gurr suggests that conflict in multinational states is often associated with an erosion of the legitimacy of the state in the eyes of marginalized nations, which may have been precipitated

by a dominant nation's use of state institutions to impose its culture on all citizens. Members of nations who do not perceive that the state represents the interests of their nation are likely to make demands for greater autonomy or even secession, and sometimes take up arms to achieve such goals. In light of the fact that so many of the world's national groups straddle state boundaries, these kinds of international dynamics within states often cause neighboring states to get involved and are therefore important for a proper understanding of world politics as interstate relations.

The reverse is also true: Interstate politics may affect intra-state relations between national groups, and rules and norms of the world state-system such as a sovereign state's right to freedom from outside interference in domestic affairs, define the conditions under which, for example, secessionist movements have to operate. In light of these observations, a natural conclusion suggests itself: A more complete understanding of the nation-state would combine insights from theories of interstate relations with knowledge from studies of intra-state ethnic relations, and the tendencies of both to reify either state or nation could be mitigated by adopting the processual focus of historical approaches to nationalism and state formation.

SEE ALSO *Nation; Nationalism and Nationality; Sovereignty; State, The*

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Paul T. Levin

NATIVE AMERICANS

Though referring properly to anyone born in America, the term *Native Americans* has referred to American indigenous peoples since the eighteenth century. Its use became popular in the 1970s as part of a movement to advance indigenous political and legal rights by emphasizing the aboriginal status of pre-Columbian peoples. The choice to use *Native American* rather than *Indian*, the term Christopher Columbus (1451–1506) gave and the other term commonly used in the United States, remains a matter of political debate in some indigenous communities. *Aboriginal peoples of the Americas* is more accurate, but unfamiliar. Further, it does not, strictly speaking, refer to Arctic peoples, sometimes known as *Eskimo*, *Inuit*, and other names pertaining to particular geographic groups, since the ancestors of these peoples arrived millennia after the ancestors of the people known as *Indians*. *Indigenous* has been criticized on the grounds that it means "originating in," and all human beings originated in the Old World. *Native American* finds wide usage only in the United States, and for this reason this entry focuses on the United States. Moreover, *Native American* usually does not include aboriginal Alaskans, widely and officially known as *Alaska Natives*. Canadians usually use the term *First Nations Peoples* (French: *première nations*), *aboriginal peoples* (French: *autochtone*), *Inuit*, *Native Canadians*, *natives*, or *Indians*. In Latin America, the terms *indigenous peoples* (Spanish: *pueblos indígenas*; Portuguese: *povos indígenas*), *Indians* (Spanish: *indios*; Portuguese: *índios*), and sometimes *aborigine* (Spanish: *aborigen*) are used. There, the term *pre-Columbian peoples* (Spanish: *pueblos precolumbinos*; Portuguese: *povos pré-colombianos*) refers to aboriginal people prior to 1492, not to anyone alive today. Most autonyms simply mean "(the) people."

ORIGINS

Archaeological data suggest that the first people probably arrived in North America from Asia approximately 15,000 years ago, although this date remains controversial. Numerous physical features are common to American Indians and East Asians, and unknown or unusual among Europeans and Africans: a brachycephalic (relatively wide) skull; Mongoloid spot (a greenish-blue birthmark above the coccyx which disappears within a few years); shovel-shaped incisors; dark, coarse, straight hair; little body hair; dry earwax; and others.

Prehistory The ancestors of modern American Indians spread out over the Americas rapidly. About 11,200 to 10,900 years ago, hunters developed the beautiful fluted Clovis point and played an important role in the extinction of many animal species, including mammoths, mastodons, giant sloths, horses, and several species of

camel. The Ice Age ended 11,600 years ago, and with it the Paleolithic life of large-game hunting. Neolithic peoples hunted smaller animals and gathered wild plant foods. One exception includes the Maritime Archaic peoples in the extreme Northeast, who subsisted on deep-sea fish. With the exception of the alpaca, vicuña, and llama in South America, the turkey in Central America, and the dog everywhere, pre-Columbians had no domesticated animals. Beans, squash, and most importantly maize for the energy it supplies were all domesticated in Central America before 7,000 years ago. Maize probably originated from selective breeding of a grass called *teosinte*. Maize first arrived in the southwestern United States around 3,500 to 3,000 years ago. Around 1,300 years ago, a new variety called *northern flint* or *maiz de ocho* appeared, and with its larger kernels and much shorter growing season it spread throughout eastern North America, occasionally as far north as southern Canada.

Cultures The cultures and societies of the original peoples of North America represent an astonishing range of diversity. While some lived in a city of tens of thousands (Cahokia, in present-day Illinois), others living in parts of the Great Basin and subarctic regions never met more than two hundred people their entire lives. People who adopted maize tended to become sedentary and developed food surpluses, concentrations of wealth and political power, and larger, denser populations. In North America, maize production frequently correlates with matrilineality and matrilocal residence, whereas primary dependence on hunting often correlates with patrilineality and patrilocal residence. When maize first arrived in an area, women probably cultivated it, since women already gathered plant foods while men hunted. As maize became more important in the diet over time, women's increasing contribution to the economy brought them greater political power and the most valuable types of property, in some cases including the society's political offices, often descended from mother to daughter. Even where men later ended up doing most or all of the farming, matrilineal social structure and inheritance often remained. An example of this latter case is the Hopi, arguably the most matrilineal people on earth—so much so that what we think of as "normal" sex roles are sometimes reversed: men traditionally wove and women did most of the house construction. The Crow, once matrilineal farmers, later moved out onto the plains, where men provided most of the food through bison hunting. Crow men after a time began to argue for patrilineal social structure.

Some two hundred to five hundred different languages were spoken in North America, and there were at least sixty-two language families and isolates. While immense differences exist between the various languages of North America, they all share the characteristics of polysynthesis and agglutination, meaning that they can bring together subject, object, verb, tense, adjective, adverb, mood, and so on in one word. For example, the Micmac word *ketulmieyap* means "I wanted to go home."

CULTURE AREAS

It has long been recognized that peoples in various parts of North America share more cultural similarities with peoples of the same geographic area than with peoples of other geographic areas. Although controversy persists in identifying exact culture area boundaries, one can say much about the general locations of these areas and the general characteristics of the peoples inhabiting each area.

California Most California peoples subsisted on fish and game, but especially on acorns, an abundant food that made them, like the peoples of the Northwest Coast, capable of sedentary life in permanent villages, and thus nearly unique among all hunting-and-gathering peoples. Here, great wealth meant concentrations of both wealth and power, and peoples such as the Yurok developed a sharply defined nobility. Yurok *pegerks* owned great wealth, especially money, heirlooms, and even prehistoric antiquities. They lived at named elevated locations, served as priests and judges, wore distinctive clothing, ate foreign foods, employed aides, gave gifts and feasts at ceremonies, spoke foreign languages, traveled extensively, and used ornate speech. Most societies have moieties, and some have ambilateral social structure in which each individual had the choice to join the father's group or the mother's group; often individuals chose the group with the most resources. Some southern California people also raised maize, beans, and squash.

Great Basin This intermontane region of Nevada, Utah, and adjoining areas was home to some of the most mobile and dispersed populations of hunters and gatherers in the world. Due to the difficulty of survival, which affected all parts of life, bands were small, often the size of a nuclear family, with fluid membership, and kinship was largely bilateral with little or no emphasis on lineages, which would confer no benefits to such dispersed people. People hunted and collected seeds and roots. Because of the rigorous conditions and sexual division of labor, marriage was essential to survival; people married early, and they married people living at a distance to create kinship links over a wider area. In some places, the sororate and levirate were legally required and both polygyny and polyandry were practiced. Warfare was almost unknown, cooperation was so essential for survival. In places, giving birth to twins was considered unlucky—in a few places, one of the pair was killed.

Northeast From Maine to Wisconsin and south to Virginia and Kentucky, people depended partially on maize, beans, and squash, which the Iroquois named "the three sisters," but also upon hunting, gathering, and fishing. As swidden horticulturalists, people had to move their villages every decade or so as soil lost fertility, weeds encroached, and firewood and game became scarce. The Iroquoisian peoples are matrilineal; elsewhere social organization is patrilineal. Warfare for the purpose of revenge occurred frequently, and villages were often palisaded.

Northwest Coast The coastal region of Oregon to southern Alaska has some of the most distinctive cultures in the world. These people traditionally subsisted on the immensely abundant salmon, making them the wealthiest in North America and leading them to build permanent villages. Their cultures reflected this: fine arts and theater were developed, people (slaves) were considered a measure of wealth, and the rich gave lavish feasts known as *potlatches*, which because of the wealth acquired through trade with Europeans, grew to titanic proportions in the nineteenth century, involving the giving away and destruction of what would be millions of dollars in today's money. Warfare, including raiding for slaves, was common, and many villages were palisaded. Many groups had an elaborate system for ranking individuals, and for those in high positions, marriage to someone of equal rank was the only possibility. Both men and women were wealthy, owning various types of corporeal and incorporeal property, which was inherited both matrilineally and patrilineally.

Plains The Plains consists of two smaller areas, the high plains (short-grass prairie) to the west of the hundredth meridian where mobile people hunted, and the prairie-plains (tall-grass prairie) to the east where people lived as horticulturalists and hunters. Though many associate the High Plains culture with that of North American Indians generally, High Plains culture is unique in most respects in North America. What we have come to know as High Plains culture did not exist until recent times, because few people could manage to live on the high plains: the region is dry, inhospitable to agriculture without a steel plow, and the prolific denizen of the plains, the bison, was very difficult to find and kill reliably. But the European introduction of the horse allowed people to find and kill sufficient quantities of bison so that entire societies could live by hunting alone on the high plains, encouraging people from all surrounding culture areas to live there, developing within two hundred years what we know as Plains culture. Due to Euro-American hunger for land, this culture disappeared even more quickly. The High Plains Indian culture represents an almost unique case in human history of people leaving farming to become hunters. Because of the extreme mobility of high plains life in which individuals and families moved from one band to another, lineal groups were rare.

Plateau From southeastern British Columbia and eastern Washington and Oregon, east to Montana, were people who, like the peoples of the Northwest Coast, subsisted primarily on salmon. However, the fish sometimes did not migrate in large numbers so far inland, and thus the people of the plateau region had to depend upon other foods, particularly various roots such as the camas bulb. Therefore, semipermanent villages were usually located at prime fishing spots, but the populations of those villages tended to be fluid as resources determined. Some groups took to raiding Plains peoples after the horse came, and combined into confederacies to repel Plains raiders. Kinship structure is bilateral, sometimes with emphasis on the patriline, and the kindred was important.

Southeast In the Southeast, warm temperatures, abundant rainfall, fertile soil, and maize all combined to produce far more food than was necessary, and commonly large and fast-growing populations, concentrations of wealth in the hands of a few in stable classes, cities (often palisaded), priestly classes, large armies frequently built by conscription, fine arts, monumental earthworks, leaders holding the power of life and death over followers, celebration of the annual Green Corn Ceremony (emphasizing renewal), playing of the ball game (a lacrosse-like game with two sticks), and wars often due to rivalries between leaders. Many villages and cities were permanent, since maize fields were planted on floodplains that were refertilized each spring with silt. Probably because of the importance of maize, all the peoples here are matrilineal. This is the one part of North America for which arguments have been made for the existence of state societies. In many of these societies, male leaders held offices, but which because of the matrilineal social structure were passed through the female line.

Southwest The Southwest is a complex area because its range of environment supported a number of subsistence strategies. The area was dominated on the one hand by the Puebloan peoples, sedentary matrilineal maize farmers who live in permanent villages and who sometimes had to run for dozens of miles to tend distant maize fields. The other dominant peoples are the Apache and Navajo, two closely related matrilineal Athabaskan-speaking migratory peoples who hunted, gathered, raided, and farmed and whose ancestors arrived in the Southwest from the western subarctic in the 1400s. Numerous other populations include the patrilineal Piman and bilateral Yuman peoples.

Subarctic Stretching from Alaska to eastern Canada lies a territory too far north to grow any kind of crops in premodern times. In this cold and wet land, small groups of people had to depend almost entirely on the large game and fish that men acquired. Thus, a patrilinealizing influence pervaded this region, fully evident among the Algonquian speakers of the eastern half. In the western half, the traditionally matrilineal culture of the Athabaskans competes with this influence, to produce cultures that are nominally matrilineal or have bilateral kinship. Mostly migratory, most groups had summer gathering places. Here, people sought the hardest workers as spouses.

INDIAN-EUROPEAN RELATIONS

Major European colonial powers differed in their relationships with Native Americans. Britain and the United States sought a more formal legal relationship, and used treaties recognizing American Indian groups as politically independent entities, while maintaining social and cultural separation. The Spanish and French did not recognize Indians as separate legal entities, but rather intermarried with and assimilated them to a greater degree. Both the English and the Spanish sought control over conquered territories, whereas the French had more interest in establishing strategic trading venues than in controlling territories.

European invasion brought alcohol, increased warfare, and diseases (including typhoid, cholera, typhus, smallpox, measles, influenza, and malaria) to which aboriginals had little resistance, killing 10 to 80 percent of each population, and destroying entire societies. We shall never know about the cultures of many peoples or even the size of the population of the Americas before Columbus.

Initial aboriginal reactions to the European invasion varied greatly. The Iroquois, for example, had long dominated their political environment by warring with other Indian peoples, walking as far as Wisconsin, Georgia, and Nova Scotia to do so. The Iroquois for a time cooperated with the Dutch and later the English to control the fur trade in the Northeast, benefitting both parties at the expense of their neighbors, Indian and European.

Having endured military losses, alcohol, and disease, as well as the loss of land, freedom, and game, many native peoples became dispirited. When conditions change and people feel that their culture no longer serves them ideally in their new circumstances, it often happens that a leader with an idea for cultural revitalization appears. This occurred numerous times among native North Americans, and one of the most famous of these cultural revivals took place in the latter half of the nineteenth century in the West. A Paviotso man named Wovoka (c. 1856–1932) had a vision—a direct connection with a supernatural being in which many American Indians place great faith—taking him to the other world, where he saw a great spirit, and there all the people who had died were young and happily engaging in traditional pursuits. The great spirit's message was that he go back and tell his people that they must dance, be good, live in peace with white people, work, be honest, and give up war. If they obeyed him they would be reunited with those who had died and no one would grow old or die; from this resurrection of the dead came the name *Ghost Dance*. As time went on, many Indian people in much of the West accepted this message as a ray of hope. But as the Ghost Dance traveled orally, it began to change. A new message arose stating that white people would vanish, while the technological advancements they brought would remain.

Still later, the idea of the Ghost Dance shirt, allegedly providing invulnerability to the white man's bullets, was added. The altered message became popular among some of the Sioux of South Dakota in 1890. The Sioux had been militarily defeated, crowded into guarded camps, largely disarmed of their rifles (though not revolvers or clubs), experienced the assassination of their leader Sitting Bull (c. 1831–1890) by hostile Indian police, and suffered violations of every treaty that they had signed, most importantly the one guaranteeing them sufficient food (beef) to survive the winter. One irate adherent of the Ghost Dance, perhaps believing the message of invulnerability, fired on the U.S. cavalry, igniting a melee that killed the Sioux warriors present as well as a number of cavalrymen, and enraging the remaining cavalrymen, who themselves were still angry over the cavalry's obliteration at Little Bighorn in 1876, to the point that they then retaliated against any Sioux they could find, including women and children. This fight became known as the Sioux outbreak of 1890 and later as the Wounded Knee massacre. Following the demonstrated ineffectiveness of the Ghost Dance shirt, many Sioux became interested, temporarily at least, in Christianity.

Although rarely by design, European influences have sometimes benefited aboriginal peoples. Pacification, for example, ended indigenous warfare. The United States freed Hopi from the attacks of the Navajo, and the United States, by defeating the raiding Apache and purchasing their wheat and cotton crops, helped the Pimas (Akimel O'odham, "river people") become wealthy farmers in the second half of the eighteenth century. Technological introductions eased many of life's difficulties, and the imposition of the English language provided Indians with their first true lingua franca.

In 1969 Vine Deloria Jr. (1933–2005) published *Custer Died for Your Sins*, which argued that most of the types of information about Indians that interested schol-

ars were unimportant. Deloria called upon scholars, particularly anthropologists, as well as missionaries, government workers, and others, to work toward the betterment of the living conditions of North American Indian people. His message was well heeded in academia, where two important effects can be noted. The first was a multiplication of programs of American Indian and Native American studies at North American universities, a development intended to increase the numbers of Native American college students. Another effect has been to discourage American Indian students from pursuing academic interests in anthropology, something that American Indian anthropologists have decried.

LEGISLATION

Although often framed in terms positive to Indian interests, most significant nineteenth-century U.S. legislation aimed to dispossess Indians of their lands for the benefit of non-Indians. For example, the 1830 Indian Removal Act promised southeastern Indians ownership of land in Indian Territory (now Oklahoma), but those who did not accede to its terms were rounded up (some escaped) and forced to walk to Indian Territory, causing thousands of deaths. Even when aboriginal peoples agreed to cede lands, it was usually under intense pressure from non-Indians, often including both a military presence and payments to treaty signers. Moreover, the resulting reservation lands were often whittled away by official measures and encroachment. In addition, treaty provisions for food and medicine were often poorly enforced. As one-sided, deceptive, and coercive as the treaty process was, it at least recognized indigenous peoples as separate and capable of making their own decisions, and therefore gave them power to negotiate terms. The 1871 Indian Appropriation Act ended the power of Indians to make treaties, although it did give legal protection to those already made. In the same year, rules preventing Indians from leaving reservations ended.

In 1887 the U.S. Congress passed the General Allotment Act (also known as the Dawes Act), breaking up 118 reservations into individual parcels allotted to each family. The primary goal was to free up land for white settlers, since lands above and beyond those needed for each family allotment were considered "surplus" and were taken from the Indians and sold off. Native Americans lost 34,800,000 hectares, or 62 percent of reservation lands. The secondary goal was to assimilate Indians and acculturate them as farmers. Predictably, the first goal was met admirably, since in addition to the taking of lands, many Indians sold their lands or lost them due to their inability to pay the taxes on them. The second goal was rarely met. Indian poverty and misery both increased, due in part to the allotments' effects on social unity and the loss of resources. Because the Dawes Act made no provision for later generations, many people had no land of their own.

The 1934 Indian Reorganization Act encouraged U.S. Indians to adopt a federally prescribed means of choosing leaders and forming governments to ensure democratic elections and governments where sometimes none had previously existed. This arrangement was accepted by approximately three-quarters of all U.S. Indian groups. Although representing an advance in democracy, it must be said that this measure also represented a change of the culture and a step back from independence. The question of what is best for a people is not clear-cut, and often this exact question divides communities. This legislation and other rules also created administrative units for American Indian governments based upon the concept of a tribe, a concept that despite popular opinion applies to few Amerindians. What people think of as a "tribe" is usually only a class of people speaking the same language. To call these "tribes" is comparable to thinking of all U.S. citizens, New Zealanders, South Africans, and so on as a single group because they all speak English. Traditional means of dealing with social frictions became useless in these new larger "tribes." Nowadays, these groups possess more political power as a result of their greater size.

In 1953 and 1954 the U.S. Congress voted to terminate federal controls over many American Indians, prompting considerable outcry from Native Americans and others. As much as Native Americans dislike and distrust the federal government, they realize that they benefit from its oversight, financial assistance, and protections, and many groups split apart as a result of this program.

The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) grants Indians in the United States rights over some human remains of ancestors and religious and culturally central objects. This legislation has allowed Indian peoples to reacquire many of these objects from federally funded institutions such as museums, as well as to gain legal standing to do such things as challenge the treatment of Kennewick Man, an ancient skeleton found in 1996 near the Columbia River in Kennewick, Washington.

From the 1970s onward, Congress chose to support tribal autonomy by encouraging and financing tribal courts. For many types of offenses, both the federal government and the tribal government have jurisdiction. Tribal courts decide many issues pertaining to disputes between Indians on the reservation, but cannot deal with the most serious crimes. These courts also have jurisdiction over disputes involving contracts between Indians and non-Indians on the reservation, which has led many non-Indian entrepreneurs to avoid doing business with

Indians on reservations, and which therefore must be considered a reason for poor economic development there. Unfortunately, the Bureau of Indian Affairs, which is accountable for the operation of these courts, has not always ensured that the courts operate according to the principles of procedure and justice upheld elsewhere in the United States.

The 1990s began to see U.S. courts interpret treaty rights liberally in favor of Indians. In *Minnesota et al. v. Mille Lacs Band of Chippewa Indians et al.*, 526 U.S. 172 (1999), the U.S. Supreme Court decided that even though the Mille Lacs Chippewa in their 1855 treaty with the United States relinquished "all" of their interests in Minnesota lands, this did not include their rights to hunt, fish, and gather.

Although American Indians are among the poorest people in the United States, conditions are improving. Unemployment, domestic crowding, and poverty rates are dropping, educational levels are rising, and incomes are increasing at three times the rate of the general U.S. population. And whereas more than half of the American Indian population in the United States lived in cities in the 1980s, by 2000 people were moving back to the reservations in large numbers. Even Shannon County, one of the country's poorest, which lies in Pine Ridge Reservation in South Dakota, saw its population rise by more than a fourth between 1990 and 2000. One of several reasons for this growth is the employment opportunities accompanying newfound wealth deriving from the more than four hundred Indian casinos in twenty-eight states. In 2005 these casinos earned profits of $20 billion. While some Native American communities have become very wealthy because of their casinos, many other American Indian groups, particularly the poorest rural ones, have lost money with their casinos, and many of these have closed. And despite the fact that Indians acquired the right to operate casinos because of their "limited sovereignty," states can still prevent and regulate casinos within their borders. Utah, for this reason, has no Indian casinos. Those groups with profitable casinos have used the money to build houses, fund education, create employment, and buy influence; in 2004 Indians gave $8.6 million to political candidates.

Cultural retention remains important to many Indians. Partly for reasons of pride in themselves, their people, and their history, many Indians are careful to teach their children about their traditions, language, and values both at home and in some reservation schools, partly as a way to counter the influences of Euro-American culture in schools, off the reservations, and especially on television. Others wish to retain culture for political reasons, now that most aboriginal North Americans dress the same way other Americans do, live in the same kinds of houses, and so on. Some worry that non-Indian Americans will argue that Indians do not differ from other Americans, and therefore do not deserve special rights. But on this matter, like all matters pertaining to the future of Indian people in North America, there are as many opinions as there are Native American individuals. Some Indian parents, even ones whose first languages are indigenous, go out of their way to speak to their children in English, believing that success in English is paramount to economic success in the United States and that knowledge of an Indian language represents an impediment. Although culture loss is lamentable, the fact that aboriginal peoples are attempting in myriad ways to succeed in this changing modern world must be viewed positively.

SEE ALSO *American Indian Movement; Burial Grounds, Native American; Cherokees; Indigenous Rights; Inuit; Iroquois; Navajos; Sitting Bull; Trail of Tears*

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NATIVES

The term *native* refers to "a person … by nature, innate, inherent, [and] natural to" a place, an environment, or condition (*Concise Oxford Dictionary* 1982, p. 674). One meaning is "of one's birth, where one was born; [and] belonging to one by right of birth"; another "found in a pure or uncombined state"; and another "born in a place (esp. of non-Europeans), indigenous, not exotic; of the natives of a place …" (*Concise Oxford Dictionary* 1982, p. 674). The term developed in tandem with the historic rise of colonialism and colonialism's incumbent discourse, and was shaped by a system of regulation set to incorporate those native people within boundaries and jurisdictions rather than forcing them into diaspora. *Native* carried a pejorative meaning in the Americas, New Zealand, and Australia—especially in former colonies of the British Empire when colonist settlers spoke of and to indigenous populations. A variety of terms arise from the concept of native: *Indian* came into use within the context of Spanish imperialism, *savage* in New France, and *aborigine* specifically in the Australian context. Any indigenous person who became a colonial subject was often referred to as a "native" by colonial settlers, and slavery was simply another dimension of control, but for indigenous peoples in the Americas this had only limited effectiveness. (See Forbes 1988 for extensive discussion of the language Europeans have historically used to designate shades of skin color and other constructed racial markers.)

Prior to the popularization of the term *indigenous* in the 1980s, *native* was often used to describe peoples who claimed to originate from a particular geographic location. Two basic perspectives, often contrasted with each other, are primordial and contructionist orientations (Lawrence 2004, p. 1–16).

When a society has occupied a territory for a period before the subsequent arrival of others, the first group, conscious of its primordial claim that they are native to a region, perceives its historic occupation as centrally tied to its identity as a native people. This nativity concept, "from birth," contributes to the group's understanding of its origins. Residing on the same lands as one's ancestors gives the group an understanding of its origins and nativity similar to that of previous generations. Boundaries for these regions are either delimited or undefined, but the group locates its nativity as a fixed place, and this nativity is often chartered by a rich oral tradition or written history that has a specific ethnographical knowledge of how a people are native.

In contrast, a constructionist orientation of nativity is based upon a group's perception and assertion that its claim is an original or immemorial right. Such claims often emerge when groups are threatened by new immigrant populations competing for resources and survival. In these cases, the historic sources for a consistent and continuous heritage of occupation, be they archaeological, ethnographic, or textual, are often incomplete, or may be open to competing interpretations. This "nativism" or "indigenism" becomes as much a political as a cultural construct. This reality means that claims being made are open to scrutiny based upon a wider range of considerations. The United Nations Declaration on the Rights of Indigenous Peoples (1994), and the decades-long political struggle to see its adoption, epitomizes this fact.

The geographic connection of a people to their homeland is strengthened when a group either seeks or achieves sovereignty. Often, sovereignty is conceptualized in terms of a group's origins and the maintenance of the group's identity over time. The identity of many groups is not straightforward; rather, it is complicated by vagaries of a given group's cultural history. Consequently, the degrees of recognition that any identity receives is often either affirmed or denied as much as it is asserted by outsiders. State-sanctioned status for native groups may even be extended from the recognition of a group as a minority to a denial of a specific identity in exchange for another.

For example, the term *native* in Canada has been applied to the Métis—who, before the 1982 Constitution of Canada, had no recognition—as well as to nonstatus Indians, non-Métis mixed-bloods, and other aboriginals living off-reservation, often in cities. The term *native* often has been used by these unrecognized, unofficial aboriginals to refer to themselves, but also by outsiders to refer to them. With the introduction of the term *aboriginal* in the Canadian Constitution as an all-encompassing term for Indian, Métis, and Inuit, *native* has been replaced in many contexts in favor of *aboriginal*. However, many aboriginal groups prefer their ethnocultural names for themselves. And although a number of academic programs are still called "Native Studies," the parlance has shifted in favor of *indigenous* instead of *native*.

In the United States, recognition is accorded to the members of federally recognized Indian tribes, and then specifically to members who are minimally one-quarter in blood quantum; no recognition is accorded to others of native heritage, nor to anyone not a member of a recognized tribe. The term *Native American* was in use for several decades, but because of its confusion with native-born Americans as opposed to immigrant Americans, the term is rarely used, having been dropped in favor of *American Indians*; most American Indian groups prefer to call themselves by tribal designations. In Australia, the term *native* is used in the larger society to refer to anyone descended from Aborigines or Torres Strait Islanders. Most groups refer to themselves by their own names for themselves, reflecting their linguistic or geographical location names, and the use of "native" is also made in refer-

ence to their struggle for legal title to their traditional territories.

SEE ALSO *Colonialism; Gaze, Colonial; Indigenismo; Indigenous Rights; Native Americans; Nativism; Other, The; Racism; Self-Determination; Sovereignty*

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NATIVISM

Nativism is a recurring social and political movement characterized principally by hostility to supposed foreigners. While the attitudes and dynamics that distinguish nativism have developed and continue to develop in many countries, the term itself has been elaborated primarily by sociologists and historians in studies of nineteenth- and twentieth-century American politics and social relations. Nativism, as a form of ethnic discrimination, is closely related to racism but may be distinguished by its emphasis on language and the privileges of citizenship as the bases of its politicized rhetoric.

In the United States nativism led to the formation of influential political parties beginning in the 1830s and declining in the years before the Civil War, when slavery became virtually the exclusive issue of political contention. The most important of these parties was the Know-Nothing Party of the 1850s. The Know-Nothings began as the Order of the Star-Spangled Banner, a secret fraternal organization whose members allegedly claimed to "know-nothing" whenever queried about the group. The efforts of the members were directed toward stopping the immigration of Catholics who were arriving principally from Germany and Ireland. Officially registered as the American Party, the Know-Nothings asserted in their party platform of 1856 that "*Americans must rule America*" (emphasis in original); that is, naturalized citizens—whose national allegiance and devotion to the principal of the separation of church and state were considered suspect—were not considered eligible to hold government office.

As John Higham described in his seminal study of American nativism, *Strangers in the Land* (1955), during the periods of economic crises in the late nineteenth century nativists became increasingly concerned with the political rather than the religious beliefs of recent immigrants. It was deemed that American institutions were imminently threatened by radical socialist ideas and movements that had periodically toppled European regimes. Elements of economic nativism also characterized nationalist labor unions, where leaders such as Samuel Gompers argued that open immigration policies lowered wages and degraded the condition of the native-born American worker.

Nativism surged again in the early decades of the twentieth century, when the retrospectively pseudoscience of eugenics manifested widespread fears of racial degeneration. This most explicitly racialized nativism embraced simplified notions drawn from evolutionary science to elaborate a paranoid vision of imminent national and even human catastrophe. These nativists—well represented by Madison Grant, author of *The Passing of a Great Race* (1933)—argued that Anglo-Saxons were the pinnacle of human evolution. Open immigration, particularly of what were described as the degraded peoples of southern and eastern Europe, threatened Anglo-Saxon racial purity and thus the very future of the American nation. It was in fact such racial nativism that led to the passage of National Origins Act of 1924; the act severely limited immigration of people from southern and eastern European countries.

Nativism is again a force in American politics and society. After the September 11, 2001, terrorist attacks, it became increasingly difficult for Arabs to immigrate to the United States, and anti-Arab sentiments and policies were employed with virtual impunity for political gain. However, ethnic Arabs are a small minority population in the United States; nativists in the early twenty-first century contended over the matter of the status of legal and illegal Hispanic immigrants.

In 1994 the passage of Proposition 187 in California marked a watershed moment in American nativism. No longer was it possible to consider nativism a movement of the past; furthermore Proposition 187 clearly demonstrated that the principal issues around which nativists rallied had once again shifted, though arguably to a refined form of economic nativism focused on social services. Proposition 187 called for the denial of public education,

health care, and other social services to illegal immigrants, most of whom, in California, came from Mexico and other parts of Latin America. Nativists, such as the members of Americans for Immigration Reform, consider social services for illegal immigrants an unreasonable cost burden for taxpayers. Though Proposition 187 was eventually overruled in federal courts, efforts to pass restrictive legislation persisted, including President George W. Bush's 2006 immigration reform bill.

Exclusivist movements that share the dynamics of nativism have grown rather than ebbed throughout the world alongside increasing globalization, which many scholars once thought would put an end to such movements and conflicts. Versions of nativists' attitudes have achieved (sometimes violent) social and political expression in virtually every European nation since the late twentieth century, and what might fairly be called nativist policies are taken for granted in many Asian and African countries. In the United States nativism endures as a remarkable contradiction to the powerful myths of American egalitarianism and opportunity, including the notions that the United States embraces and prospers from the diversity of its peoples.

SEE ALSO *Citizenship; Identity; Immigration; Nationalism and Nationality; Natives; Naturalization; Other, The; Race Relations; Racism; September 11, 2001; Social Exclusion; Xenophobia*

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NATO

SEE *North American Free Trade Agreement.*

NATURAL CHILDBIRTH

The term *natural childbirth* refers to a group of approaches to managing childbirth that share the common aim of facilitating childbirth without medical intervention. A variety of techniques may be used to achieve this aim. Although there have been, and there still are, wide variations in cultural practices surrounding childbirth, the dominant trend in Western industrialized societies has been to medicalize birth. This means that birth has become increasingly attended and managed by medical professionals in medical settings such as hospitals. Natural childbirth approaches stand in contrast to the medicalization of childbirth, and indeed developed in response to it. From early in the twentieth century there was concern amongst obstetricians that Western civilization had impeded women's ability to labor with the brevity and ease of their less "civilized" sisters. One response was to treat childbirth as a risky, pathological process requiring medical intervention and management: in particular, to anesthetize the birthing woman and to use episiotomy and operative delivery such as with forceps. Hence the popularity in the United States from 1914, when the New England Twilight Sleep Association was formed, into the 1940s of administering scopolamine and morphine to induce "twilight sleep," which meant that women were barely conscious through their deliveries, and had no memory of the event. Proponents of natural childbirth took the opposite view, arguing that obstetrics was becoming too mechanistic, indeed "veterinary," and that its orientation needed to broaden to include psychological, social, and spiritual aspects of childbirth as well as the biomechanical. One means of achieving this was to involve women in antenatal physiotherapy and exercises to prepare for childbirth. The most influential response, however, came from Dr. Grantly Dick-Read in his 1933 analysis of labor pain, *Natural Childbirth*. In it he argued that fear of childbirth in Western society had produced physiological responses in birthing women that prolong labor and make it more painful. He developed an approach to foster the active involvement and conscious cooperation of birthing women that empowers them and makes them less fearful of birthing. The potential advantages of minimizing medical intervention and maximizing women's control over their bodies in natural childbirth included shorter labor, less pain, a more satisfying birth experience, and a more alert (and hence healthier) baby because of lack of exposure to morphine and other drugs in utero. As a result of both mother and baby being conscious and alert at delivery, affective bonds between mother and child could also develop immediately and naturally from the moment of birth. Opponents of natural childbirth cite the risks associated with birthing, including maternal and neonatal mortality, as justification for using medical interventions preventatively or in immediate response to potential problems.

A number of different techniques for natural childbirth have evolved in Europe, the United States, and elsewhere. They are associated with practitioners such as

Fernand Lamaze, Frederick Leboyer, Michel Odent, and Frances Vaughan, who stress different aspects of childbirth such as the setting (e.g., quiet, dark, water births) or positions that facilitate natural childbirth (e.g., squatting). In the United States, Robert A. Bradley developed Dick-Read's approach and expanded it from the 1960s to include fathers in the antenatal preparation and the coaching of their partners through childbirth (the "Bradley method"). In more recent years this has been further expanded to include other support persons for the birthing woman; these may include friends or family members, or a paid "doula." In most Western societies birth attendants must be licensed to practice and generally include only doctors and midwives. The practice of most midwifery, particularly for autonomous or independent midwives, is premised on the understanding of birth as a normal, holistic, physiological, emotional, and social process, and hence encourages natural childbirth approaches. Many women's and consumer groups are also supportive of natural childbirth approaches.

SEE ALSO *Children; Midwifery; Motherhood*

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NATURAL DISASTERS

A natural hazard is an extreme natural phenomenon that threatens human lives, activities or property, or the environment of life. Natural disasters are the destructive consequence of extreme natural hazards, and globally there are more than 700 of them each year. Floods are the most common natural disaster. Together with earthquakes and cyclonic storms they are the most destructive of such manifestations.

Natural phenomena may be transformed into hazards either by excess or by dearth. For example, too great a discharge of water may give rise to flooding, whereas too little may cause a drought. A situation becomes hazardous when the physical forces or environmental stresses at work exceed the ability of human social, economic, cultural, or health systems to absorb, resist, or avoid the resulting negative impact. In this respect, natural hazards are defined not only by the natural forces that induce them, but also by the vulnerability of human systems. Vulnerability is defined here as the susceptibility of people or things to harm.

The threat of a natural hazard is either constantly present or is subject to fluctuations. Many hazards are cyclical; for example, earthquakes of a certain size will occur on a given fault when enough tectonic stress has been accumulated to overcome the frictional resistance of the rock mass to slipping, a process which will probably occur with a definable time interval because of the gradual build-up of strain on the fault. Other hazards, especially meteorological ones, may be seasonal.

Generally, the vast majority of hazards are subject to a rule of magnitude and frequency in which the higher the magnitude, the lower the frequency of occurrence. Some hazards, such as volcanic eruptions, may operate on a geological timescale that is much longer than the scale of human lives. In such cases it can be very difficult to justify the allocation of resources to prepare effectively for events that have a low probability of occurrence during a single human lifetime.

In other cases, the repetitiveness of a hazard may be a problem. For instance, the solvency of the U.S. National Flood Insurance Program (NFIP) depends as much on reducing the instance of repeated claims as it does on anticipating and reducing the impact of large, infrequent events. In a small number of cases, claims have been made for reimbursing damage to a single property up to five times in a decade. Such problems must be abated by reducing either the hazard or the vulnerability to it.

In everyday situations the product of hazard and vulnerability is risk, which can be defined as the probability or likelihood that an event of a given kind and size will occur in a given interval of time and with an anticipated set of negative consequences. Engineers tend to define risk by calculating numerical values of the probability, while social scientists may be more interested in how risk is perceived and how some of the intangible features of human behavior affect it. In any event, paradoxically, risk is a hypothetical quantity (though no less important for that). It materializes as impact, which should lead to an emergency response that reduces the harm done as much as possible. Hence:

$$\text{Hazard} \times \text{Vulnerability} [\times \text{Exposure}] = \text{Risk} \rightarrow \text{Impact} \rightarrow \text{Emergency Response}$$

Exposure to natural hazards becomes an issue when an item (such as a person, a community, a building, or an economic activity) is not constantly at risk. Despite temporal variations in strain upon Earth's crust, to all intents and purposes we may consider earthquake risk to be fairly constant, especially as it cannot accurately be predicted in

the short term. However, predictable hazards such as hurricanes, which can be monitored and tracked before they make landfall (i.e., arrive at a coast), may allow a forecast to be turned into a warning that stimulates an organized response on the part of the threatened community. Generally, where it is feasible, evacuation is the most effective means of reducing the exposure of people to death or injury in high magnitude events.

The question of exactly what phenomena should be classified as natural hazards has long been debated by students of the field. The core phenomena consist of geophysical events from the atmosphere, hydrosphere, and geosphere (the lithosphere), and to a lesser extent from the biosphere. Earthquakes, landslides, and subsidence of the ground are geospheric hazards of the first order; tropical cyclones (also known as hurricanes and typhoons), tornadoes, and windstorms are the leading examples of meteorological hazards; and drought and floods are the principal threats from the hydrosphere, with subdivision of the latter into riverine, rain-fed, coastal, and glacial outburst forms.

By convention, though not necessarily on the basis of any very robust theoretical reasoning, disease outbreaks in humans, animals, and plants (i.e., epidemics, epizootics, and epiphytotics) are not usually classified as natural hazards. However, locust infestations are often included.

A further definitional problem occurs when disasters have mixed natural and human-induced (anthropogenic) causes. For example, destructive floods can result from dam bursts, which can in turn result from excessive river flows, earthquakes, or rapid landslides or snow avalanches that cause water waves in the reservoir, if not from failure of the materials or design of the dam itself. In point of fact, *natural hazard* and *natural disaster* are convenience terms. Whatever one's religious convictions, responsibility for damage and destruction cannot be shrugged off by referring to unpredictable "acts of God," as they stem from failure to mitigate forms of human and environmental vulnerability that are well known and understood.

In conceptual terms, serious study of natural hazards began in the 1920s with the development of the "human ecology" field. From 1945 onward the Chicago school founded by Harlan Barrows (1877–1960) and taken forward by Gilbert Fowler White (1911–2006) gradually revealed the human perceptual and social processes of adjusting to hazards. White and his students found a rich source of study in the struggles of U.S. Great Plains farmers to adapt to varying patterns of drought and flood. By and large, research in many other parts of the world has confirmed the findings of the U.S. human ecologists and geographers, despite some variations due to cultural differences. Thus, the "hazardousness of place" is tempered by the choice of adjustments that people who inhabit zones of hazard are able to employ.

The Chicago school was motivated to explain why structural responses had not solved the problem of natural hazards. For example, a century of canalization and levee building by the U.S. Army Corps of Engineers on the Mississippi River ended in 1993 with the worst and most prolonged flood on record. Clearly residents, developers, and planners on the floodplain had made some false assumptions about the infallibility of structural flood defenses.

With some success White and his colleagues advocated an approach based on a mixture of structural and nonstructural protection. It may still be necessary to build barriers to stop flooding, or to strengthen buildings so that they resist earthquakes, but it is equally necessary to tackle such hazards with organizational methods. Hence the nonstructural solutions include evacuation (where feasible), emergency planning, land-use control, and public awareness campaigns.

Unfortunately, despite the best efforts of mitigation specialists, the world has not become less susceptible to hazards over the last half-century. For example, Hurricane Katrina, which made landfall in Louisiana and Mississippi on August 29, 2005, killed 1,848 people, seriously damaged or destroyed 78,000 homes, and left more than half of the population of New Orleans without shelter. As Hurricane Ivan had narrowly missed crossing the city a year previously, the scenario for a major storm impact was well known. Despite this, the heights and state of maintenance of levees were insufficient, as were evacuation and recovery plans. Failures of coordination between local, state, and federal levels of government led to a relief debacle. Rebuilding will probably take eight to eleven years and, due to the phenomenon of geographical inertia (the reluctance of long-term residents to relocate their homes and businesses), will necessarily require considerable investment in major yet fallible structural defenses.

The relentless rise in global population, polarization of wealth between rich and poor, marginalization of vulnerable communities, and the prevalence of about twenty-five complex humanitarian emergencies have all contributed to the increasing toll of natural disasters. So has the increasing complexity and interdependence of modern society, and so, no doubt, will global warming and climate change, as more extreme, if not more frequent, meteorological phenomena are likely to occur.

The average annual death toll in natural disasters is about 140,000, but there is very considerable variation from one year to another. In fact, after five years in which the death toll averaged about 58,000, the Asian tsunami of December 26, 2004, took at least 230,000 lives. Despite the irregularities, there are discernible upward trends in the number of people directly affected by natural disasters (at least 250 million a year) and the cost of

disasters (well in excess of US$100 billion a year), although improved protection has had some effect in stemming the rise in mortality.

Despite much debate and many good intentions, global vulnerability to natural hazards remains unacceptably high. Critical facilities—schools, hospitals, essential lifelines—remain heavily at risk in many countries (for example, in the Kashmir earthquake of October 5, 2005, schools frequented by 48,000 children collapsed). More money continues to be spent on responding to disasters than on reducing the risks of future ones. Although vulnerability and poverty are not precisely synonymous, in both rich and poor countries they are very closely linked. Hence natural disaster impacts involve serious questions of equity. Natural hazard impacts need to be mitigated by a mixture of prevention, avoidance, and sustainable development: In short, sustainable disaster reduction is required.

SEE ALSO *Disaster Management; Shocks*

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NATURAL EXPERIMENTS

Most empirical tests in the social sciences are motivated by the desire to estimate a potentially causal effect of an independent variable on a dependent outcome. For example, one might want to know whether a policy intervention, such as a training program for unemployed individuals or an additional year of schooling, has an effect on the outcome of interest, such as earnings or the likelihood of finding a job. To make any causal inference, a researcher must compare the outcome of individuals in a treatment condition with the outcome of individuals in a control condition. The two groups should differ only in that the former group has been subjected to an intervention and the latter has not. This is particularly important if one is concerned that a third, omitted factor may influence the outcome, or that the treatment group is a special selection of people.

Controlled experiments in which people are randomly assigned by the researcher to be part of a treatment condition are rarely possible in the social sciences. Natural experiments represent a second-best way to make causal inferences. A natural experiment does not rely on randomization initiated and controlled by the researcher; instead, it uses observational data involving transparent, naturally occurring random or pseudo-random variations in the treatment and control condition assignments. The treatment group and the control sample should be equivalent before the treatment. The randomization can then take care of any confounding factors (e.g., omitted variables or selection issues). For the natural experiment to be valid, the assignment must be uncorrelated with the measured outcome.

Previous studies have relied on various types of natural experiments. One group of studies uses random changes in public policy. These studies might analyze, for example, how the introduction of a higher minimum wage affects state-level employment, by comparing employment in one U.S. state that has raised the minimum wage with employment in a neighboring state that has not and is (assumed to be) otherwise equal. A second group of studies uses random biological or climate-related events, such as birth dates or weather conditions. These natural experiments are appealing, because the assignments are more plausibly seen as being uncorrelated with the outcomes to be explained than are the assignments in the first group. A third group uses naturally occurring random assignments to treatment and control groups. For example, a lottery might determine—randomly—whether people receive a sudden boost to their disposable income, are eligible to participate in a program, or are required to enter military service. The outcomes of individuals who "win" (treatment condition) can then be compared with those of individuals who participate but do not win (control condition).

Though controlled experiments have a long tradition in medicine and psychology, in the late twentieth century natural experiments became more prominent in the social sciences as a means of increasing the internal validity of empirical research. Indeed, the use of natural experiments has been extended to empirically test hypotheses where causality may be initially confusing. For example, it is not clear whether additional education leads to higher earnings or whether individuals who will earn a lot in the future seek additional education for other reasons. Natural experiments can disentangle these two lines of causality. One could measure the effect of schooling on earnings more generally by using the variation in years of schooling that is not directly correlated with earning but

comes from the variation in the natural experiment, for example the date of birth or winning of a lottery.

Natural experiments, however, have limitations with respect to both internal and external validity. In experiments driven by policy changes, for example, the randomness of the intervention is often questionable, but hard to test. Changes in policy may be driven by political factors associated with the outcome. If this is the case, the change in policy is not independent of the outcome and cannot be assumed to be exogenous. What is labeled a natural experiment may then yield results no closer to true causal inference than would a simple observational study. Further, the source of the natural experiment may make it difficult to judge its external validity. The winning of a lottery to participate in a particular program may affect both the losers and the winners. The former may substitute another activity if they fail to win. This would bias the estimated effect of the treatment, even though assignment had been random. Nevertheless, natural experiments are still the best, and often the only, method available to obtain causal inferences in empirical studies in the social sciences when the researcher cannot control treatment assignment.

SEE ALSO *Case Method; Experiments; Social Experiment*

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NATURAL PRICE

SEE *Exchange Value; Long Run.*

NATURAL RATE OF UNEMPLOYMENT

The natural rate of unemployment is a concept that was developed by the economists Milton Friedman and Edmund Phelps in the late 1960s, and it has been extremely influential in shaping the way that the economics profession views the economy. The notion of a natural rate of unemployment represents a return to the classical pre-Keynesian economics that ruled before and during the Great Depression, and many of the arguments are clearly anticipated in David Champernowne's 1936 discussion of monetary unemployment. The theory was especially influential on policy in the 1970s and 1980s. However, its influence began to wane in the 1990s for a variety of reasons, including the emergence of new ideas and the recognition that the theory has significant operational difficulties when used for policy.

The natural rate is also referred to as the NAIRU (nonaccelerating inflation rate of unemployment). According to the theory, inflation will be steady at the NAIRU, but attempts to lower the unemployment rate further will ignite ever-accelerating inflation. The policy implication is straightforward: do not push unemployment below the natural rate.

The core idea is that the levels of employment and unemployment in an economy are determined by the supply of and demand for labor, which also jointly determine the real value (i.e., purchasing power) of wages. Unemployment arises because of "frictions" and "rigidities" in the economy that prevent the smooth operation of labor markets. How much so-called natural unemployment there is depends on the extent of labor-market frictions and rigidities.

Examples of frictions are imperfect information among workers as to where jobs are, and imperfect information among firms as to which workers want jobs. This gives rise to "search" unemployment, whereby unemployed workers seeking jobs are unable to match up with job vacancies. Examples of rigidities are the minimum wage and trade unions, which are argued to cause unemployment by setting wages too high, thereby reducing labor demand and employment.

According to Friedman and Phelps, the minimum wage and trade unions raise the natural rate of unemployment. This conclusion follows from their description of the labor market in terms of supply and demand. As such, natural rate theory has provided political conservatives with a justification for opposition to the minimum wage and trade unions on the grounds that they prevent the labor market from operating efficiently. From a natural rate perspective, the only way to lower the equilibrium rate of unemployment is to eliminate wage protections, improve matching arrangements between employers with vacancies and unemployed workers, change incentives and attitudes toward work, and change the demographic composition of the workforce. That is fundamentally different from Keynesian economics, which also emphasizes aggregate demand management.

A second important implication concerns policy toward inflation. In the 1960s economic policy was dominated by the idea of the Phillips curve, which claimed that there was a negative relationship between inflation and unemployment. That implied that policymakers could lower unemployment by slightly increasing inflation. The theory of the natural rate of unemployment challenged this claim, and argued that increasing inflation would have no effect on the long-run rate of unemployment. Any increase in the rate of inflation would just be matched by an increase in wage inflation.

Once again, the economic logic follows from the supply-and-demand model of labor markets. Workers supply labor in return for real wages that determine how much they can purchase. Likewise, firms hire workers because of the output they produce, and they pay workers a wage based on the value of that output. The implication is that labor supply and demand are unaffected by inflation. If prices double, then wages will also double, leaving employment and real wages unchanged.

One caveat to this conclusion is so-called unexpected or surprise inflation. Suppose workers see wages rising, but they are unaware that prices are also rising. In this case, they will think the real value (purchasing power) of wages has gone up and workers searching for jobs will accept jobs they would not previously have taken. Employment will therefore rise and unemployment will fall. However, workers will soon learn that prices are also rising so that real wages have not increased. When that happens, they will quit these jobs, and employment will fall back again and unemployment will rise.

This conclusion has had a major impact on monetary policy. In the 1960s and early 1970s, central banks (such as the Federal Reserve) thought that if they kept interest rates low and allowed a little higher inflation, they would lower unemployment. The theory of the natural rate of unemployment contradicted this belief, and instead said there would be no long-run effect. This has ushered in a new era in which policy emphasizes low inflation. The argument is that since inflation cannot reduce unemployment, the Federal Reserve should aim to keep inflation low.

Additionally, the Federal Reserve should aim to keep inflation predictable and stable. Though surprise inflation can temporarily reduce unemployment, such surprises are undesirable. The argument is that workers are being tricked into accepting jobs because they do not realize that prices have also gone up. Workers are therefore making decisions based on incorrect information, and this is a form of economic inefficiency.

The theory of the natural rate is now being challenged. With regard to the relationship between inflation and unemployment, some economists believe that low inflation acts as a form of "grease" that helps adjustment in labor markets, giving rise to a Phillips curve. The economic logic is as follows. Workers will always accept wage increases from their employers, but they will resist wage cuts. This is because workers cannot distinguish whether a wage cut is warranted because business conditions have deteriorated or the firm is just trying to exploit them. Under these conditions, inflation can help reduce unemployment. Prices and money wages will rise at firms where business conditions remain healthy. However, they will remain unchanged at firms where business conditions are weak. Consequently, relative prices and the purchasing power of wages at these weaker firms will fall, thereby shifting demand to them and raising employment at them. The net result is that higher inflation will raise employment and lower unemployment, as predicted by the Phillips curve.

Another reason for the diminished influence of natural rate theory concerns operational policy difficulties. The natural rate is not an observed unemployment rate. Instead, it must be estimated. However, empirical estimates have proven highly variable, and for the U.S. economy they have varied between 4 and 8 percent. This makes it of little use for guiding policy.

When it comes to the minimum wage and unions, these institutions may be needed to correct imbalances of power in labor markets. The supply-and-demand model of labor markets assumes that neither firms nor workers have any labor-market power. When it comes to jobs and the employment relation, power is assumed to be completely absent. However, if this is not the case, the supply-and-demand model is wrong. If the labor market naturally favors firms (since they have greater financial backing and do not have families to feed), then firms will have greater wage-bargaining power. In this case, workers may need minimum-wage laws and trade unions to equalize bargaining power and prevent exploitation.

The equalization of bargaining power can improve the distribution of income and thereby create demand for firms' output. A mass production economy needs mass consumption. Keynesian economics maintains that free market economies may not automatically generate enough demand to ensure full employment, as exemplified by the experience of the Great Depression in the 1930s. In this case, unions and minimum wages can be seen as economic institutions that create a pattern of income distribution that generates sufficient consumption demand to ensure full employment. This Keynesian view of the economy contrasts with the natural rate's labor supply-and-demand model that claims the economy automatically reaches full employment via wage adjustment.

If the natural rate of unemployment is so problematic, why did it become so popular in the 1970s and 1980s? Here, politics and history are important. Natural

rate theory is a revival of classical laissez-faire economics that opposes institutions such as the minimum wage and trade unions. Classical laissez-faire economics also opposes Phillips curve policies that encourage a little inflation to stimulate higher employment. Political conservatives never accepted these institutions and policies, and natural rate theory gave them new grounds for opposition. When the national political climate became more conservative in the 1970s, this created a favorable environment for the spread of natural rate thinking.

Additionally, the 1970s were a period of great economic disruption owing to OPEC (Organization of Petroleum Exporting Countries) oil shocks. This disruption caused the economy to underperform, and it also created a new type of energy price inflation in which inflation rose but unemployment did not fall. Conservatives opportunistically interpreted this oil shock inflation as evidence confirming natural rate theory and rejecting Phillips curve theory.

The history of the natural rate of unemployment provides two critical lessons. The first is that theories depend on their assumptions. In the case of natural rate theory, its conclusions about unions, minimum wages, and the employment effects of inflation stem from its description of labor markets in terms of demand and supply. If this is an inappropriate description of how labor markets operate in the real world, then the theory of the natural rate of unemployment is wrong. The second lesson is that the spread of economic ideas is influenced by what is happening in society. When society drifts left, economic ideas will likely drift left. And when society drifts right, economic ideas will likely drift right. Like everyone else, economists live in society. That means they too are influenced by what is happening in society.

SEE ALSO *Adaptive Expectations; Economics, New Classical; Expectations; Expectations, Rational; Friedman, Milton; Long Run; Market Clearing; Monetarism; Phillips Curve; Sticky Wages; Unemployment; Wages*

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Thomas I. Palley

NATURAL RESOURCES, NONRENEWABLE

It is common to subdivide natural resources into the nonrenewable and renewable categories, respectively. The former, predominantly metals and fossil fuels, are derived from a limited stock, whose ultimate size is unknown. The supply of the latter, primarily of biological origin, relies on regeneration that can be repeated in perpetuity. This difference leads to frequent assertions that sustainability requires more reliance on renewables, to avoid, or at least delay, an impending and unavoidable depletion of nonrenewable resources.

The differences in the conditions of long-term supply between the two categories are often exaggerated. Everything being equal, the supply of both tends to become more costly with expanded use, for that necessitates the employment of more meager mineral deposits and more marginal soils. Everything is not equal, however, and technological progress has more than compensated for this upward push, so that the real cost of mineral as well as agricultural output has tended to fall over time. Furthermore, examples of dramatic exhaustion are easier to quote from the renewable category. Witness how the forests disappeared in antique Italy and in seventeenth-century England, or the virtual extinction of cod in the world's oceans in the late twentieth century.

The fear of depletion of exhaustible resources is almost as old as humankind, but the available experience suggests that painful scarcity is less of an immediate threat than ever in history. Despite impressive growth rates in usage, which have raised present world consumption to many times that of the early or mid-twentieth century, the reserves of virtually all metal minerals and fossil fuels have expanded at even faster rates, through a combination of discovery and subsequent appreciation of the newfound deposits. Extraction costs show a falling trend in real terms, and the prices of most exhaustible resources have declined in parallel. All this is counter to the predictions of a dire future made by the Club of Rome in the early 1970s. These predictions completely missed the point, primarily because they neglected technological progress in exhaustible resource exploration and exploitation. There

are no indications that the benign trends caused by technological innovation are in the process of reversal.

Though in most cases, declining costs have resulted in falling prices, there are important exceptions. The price of oil has followed an upward trend in real terms ever since the Organization of Petroleum Exporting Countries (OPEC) took effective command of the oil market in the early 1970s. The cartel has been able to exercise market management to its advantage because its members control the world's largest and most economical reserves, those in the Middle East. The most potent tool for maintaining monopolistic pricing in the oil market has been a virtual arrest since the late 1970s in the cartel's expansion of capacity to exploit this resource wealth. The prices of petroleum have spilled over to other fossil fuels, since the latter can substitute for oil in many cases. Monopolistic market conditions are likely to be maintained so long as the cartel remains in charge.

The prices of virtually all primary materials, exhaustible as well as renewable, rose impressively in the first half of the 2000s. The price of oranges and rice increased by 50 percent between 2002 and 2005, coffee went up by 68 percent, and rubber by 95 percent. The price of oil doubled while the prices of nickel and copper increased by even more. This was the third powerful and general commodity boom since World War II (1939–1945). As was the case with commodity booms during the time periods between 1950 and 1951 and between 1973 and 1974, this boom was triggered by a sudden and sizable demand expansion at a time when inventories were small and no slack capacity existed to satisfy the surge. As on previous occasions, the rising prices were temporarily decoupled from the costs of production.

The demand shock centered on 2004 was primarily due to a very fast growth in world gross domestic product (GDP). The new phenomenon was that the economies of several large developing countries, notably China and India but also Brazil and Indonesia, expanded at voracious rates, and contributed strongly to the global boom. The successful growth performance in those nations was primarily due to the economic liberalization measures implemented during preceding decades. An intensified participation in the integration of the global economy was a key factor behind these countries' impressive growth rates. At the present stage of their economic development, involving industrialization, urbanization, and the build-up of infrastructure, these economies are very intensive resource users. This accentuated the demand shock in the raw materials markets.

Normality will likely return to these markets before the end of the 2000s, just as it did a few years after the outbreak of the earlier commodity booms. The year 2004 was exceptional in terms of global growth, unlikely to be repeated in the near future. The profitability of the natural resource industries at the prevailing prices is exceedingly high, so the incentive to invest in capacity expansion is strong. Sizable investment efforts are also under implementation. Building new capacity will take several years to complete, but once that capacity becomes operational, and the supply can increase, prices are bound to fall, to reflect once more the cost of production. Oil is an exception in this regard. The cartel's efforts to keep capacity constrained may permit it to continue extracting monopolistic prices.

Successful globalization could well result in higher world economic growth than was attained in past decades. But there is no reason to believe that this will compromise the nonrenewable natural resources availability. The world is still very far from the bottom of the barrel of the resource wealth, and with continued cost-reducing technological progress, it is uncertain whether that bottom will ever be seen. Faster growth in the demand for natural resource commodities can easily be accommodated by a more speedy supply expansion, but producers must be given a sufficiently early warning of what to expect in order to adjust their production capacity. Successful globalization brings prospects for a speedier increase in the incomes of the poor in this world, which should be seen as a blessing and not a resource threat.

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Marian Radetzki

NATURAL RESOURCES, RENEWABLE

SEE *Natural Resources, Nonrenewable; Resources.*

NATURAL RIGHTS

John Locke's natural rights theory is derived from what is called *natural law*. It maintains that individuals enter society with basic rights, such as the right to life and liberty, which cannot be abrogated by government. According to

this ethical theory, the moral standards that govern human behavior are, in some sense, objectively derived from the *nature* of human beings. *Naturalism* is thus a philosophical position that attempts to explain all phenomena and account for all values by means of strictly natural categories, as opposed to supernatural categories (i.e., God).

According to Locke, the state of nature can be understood properly as men living together according to reason. This differs from Thomas Hobbes's conception of the state of nature, which is characterized in *Leviathan* (1651) as chaos and "war of all against all." For Locke, "reason, which is the law, teaches all mankind who will but consult it, that, being all equal and independent, no one ought to harm another in his life, health, liberty or possessions" (1690). This natural moral law is the recognition of individuals' value and their virtue as God's creatures.

The philosophical implication of Locke's state of nature is a set of natural laws—the law of opinion, civil law, and divine law. The law of opinion is society's reflection of natural standards for happiness. As Locke outlines in *Two Treatises of Government* (1690), through nature or reason we discover moral rules mirroring God's law. Because the natural world is created by God, and because God associates actions with pleasure ("good") or pain ("evil")—touching fire, for example, causes pain—the study of nature allows us to learn morality and to understand "the good." Through an analysis of *a priori* morality and of "justice," the commonwealth sets civil law, enforced by police and courts, and supplements nature with a rational law-based social theory. Locke defines ethics as involving voluntary conformity to or disagreement with rational rules or moral law; conformity is known as *virtue*. Divine law reveals what to do, or avoid doing, to achieve success in the afterlife. It is the standard for all law, and is revealed through reason or revelation. Its importance is that unlike the law of opinion or civil law, it provides a basis for individual morality.

Locke's natural law implies natural rights with associated duties. Individuals have rights, and their duties are defined as protecting these rights, as well as the rights of others. One natural right that concerned Locke was the right to own private property, a right grounded in moral law. Here, Locke was concerned with relations of body (self), labor, and property. Locke's position, derived from Hobbes, was that private ownership's jurisdiction was granted through labor, as property is conceived of as the self in its extended form in the material world. When labor is applied to common property, the laborer came to own this property via their labor. Through this mixing of self and its interactions with the environment (i.e., a plowed field), the body's acts are revealed, leaving traces on the material world. Through the combination of labor and common property, private property emerges. Consequently, property comes to include lives, liberty, and estates.

Moreover, Locke was concerned with freedom to worship and to have one's voice heard in the government. Locke wrote about human rights' inalienable character and argued that a political society rests on the individual's consent to having laws made and enforced by society, as ruled by the majority. Through consent we assume the responsibilities and duties of citizenship. Additionally, Locke located the sovereign in the legislature—the representatives of the majority of people—and in a system based on divisions of power. Thus, property's preservation and inalienable human rights become the impetus behind social laws and government, and subsequently, civil government and political society.

One of the main natural-rights arguments made today is the argument for a "right to life." This holds that at a minimum level, the individual should be free from any coercion (or "harm") that might hinder this right (such as murder). The position is based on both beneficence and a respect for human worth and dignity. Additionally, the right to control one's property is invoked, especially when property rights are defined as including the right to one's own body. However, the "right to life" and the "right to property" can be seen as contradictory, particularly when the latter is used to justify abortion.

Critiques of natural rights are found within discussions of individual liberty. The argument that a right exists that coincides with the nature of human beings to be free was challenged by utilitarian theories, which advocate that individuals should be free because their freedom is somehow useful for society. Émile Durkheim also presents a critique of natural rights, arguing that rights are granted by society.

SEE ALSO *Civil Rights; Human Rights; Locke, John; Naturalism; Property Rights*

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Ryan Ashley Caldwell

NATURAL SELECTION

Natural selection is the central process of evolutionary theory, presented by Charles Darwin (1809–1882) in his 1859 book *The Origin of Species*. Darwin's theory of natural selection is really a simple idea. It states that (1) if there is variation among members of a species in their hereditary traits and (2) some of those traits are more conducive to survival and reproduction than others, then (3) the frequency of individuals carrying those traits will gradually increase in the population. The result is that the species' total pool of hereditary traits will gradually change over generations, so long as environmental conditions do not dramatically change. Thus, natural selection is crucial to how a species adapts to its environment. Evolutionary theory describes how these functional, problem-solving adaptations originate and are maintained.

Theorists and researchers in the social sciences have increasingly applied the concept of natural selection to their explanations of human individual and social behaviors. A major impetus was the writings of twentieth-century evolutionary biologists and sociobiologists such as George Williams, Robert Trivers, Edward O. Wilson, and Richard Dawkins. The 1980s and 1990s saw many social scientists, particularly psychologists, incorporating the theory of natural selection into accounts of human behavior. This effort has led to a new approach in psychology, called evolutionary psychology (EP).

NATURAL SELECTION APPLIED TO HUMAN BEHAVIOR

Unlike sociobiologists, who use natural selection to explain the behavior of social animals, evolutionary psychologists (EPs) focus primarily on how certain human behaviors may have evolved, how they are interrelated, and how or why they survive in the population. Whereas behavior geneticists are interested in how individual differences in human behavior can be explained by differences in genes, EPs are more interested in the evolved neural architecture that is shared by all humans, much of which may be outside of conscious awareness.

In 1992 anthropologist Jerome Barkow, psychologist Leda Cosmides, and anthropologist John Tooby edited *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*. This book energized the EP field. It helped to popularize the idea that humans evolved distinct brain circuitry or information processing modules adapted to solve problems faced by our hunter-gatherer ancestors. Researchers have proposed brain modules for speech and language, facial recognition, the recognition of emotional expressions, social reasoning, and many other aspects of information processing. A popular EP description of the brain is that it is analogous to a Swiss Army knife with its various specialized modules, a reflection of successful problem-solving adaptations during human evolutionary history.

EPs have applied the theory of natural selection to human behavior in several ways. These scientists argue that the majority of human "cultural universals," including social traditions, laws, religions, and ethical positions arose out of the "reproductive imperative" to reproduce and leave behind as many offspring as possible. EPs argue that humans are neurologically predisposed to develop certain phobias (e.g., snakes, enclosed spaces, heights) that were presumably tied to the greatest dangers present in ancient ancestral environments, rather than developing fears toward the dangers of current technologically advanced society (e.g., guns, automobiles, electric sockets).

A good example of the EP application of selection is in the controversial area of gender differences. EPs have suggested that sexual selection (processes relating to how males and females compete for mates) has played an important role in human patterns of mate selection and jealousy. With regard to mate selection, these researchers argue that men have lower overall parental investment in offspring than women. If men are more interested in reproducing than in investing parental resources, then they will tend to find the reproductive potential of a prospective partner to be particularly attractive. Because they have greater parental investment, women will find a partner's potential for providing resources and protection for offspring to be relatively more attractive. This analysis has been used to account for men's greater emphasis on their resources, such as occupation or income, and women's greater emphasis on factors related to their ability to reproduce, such as their age or appearance, when trying to attract a prospective mate.

With regard to jealousy, EPs argue that whereas women are always sure they are the mothers of their offspring (due to internal gestation), men can have doubts about fathering offspring. The implication of such differences in "parental certainty" is that males are more likely to take steps to make sure their investment of resources is legitimate. Thus, they will be more concerned with possible sexual rivals and place a high value on the chastity of a prospective mate. Male "parental uncertainty" predicts that men will attempt to coercively control female reproductive capacity by showing vigilance, mate concealment, violence, derogation of competitors, and threats to others.

CRITIQUES OF NATURAL SELECTION IN HUMAN BEHAVIOR

There are many criticisms of the application of the theory of natural selection to human behavior. One of the main criticisms is that EP is overly deterministic in its focus on biological or genetic "destiny." Much human social, group, and cultural behavior is thought to have emergent

properties that cannot be traced back to the evolved structure of individual brains. Thus, culture and socialization may be better explanations for gender differences than natural selection.

Critics argue that natural selection did not necessarily create human brain specialization for any adaptive purpose. Many aspects of modern human behavior can be described as non-adaptive side consequences of natural selection. Critics of the EP approach also argue that empirical evidence is not only lacking but is often impossible to obtain for many of its claims. Because researchers cannot recreate the evolutionary forces that affected ancient human ancestors (what EPs call the "environment of evolutionary adaptation"), these claims become nothing more than "just-so stories" telling us that "people are this way because they are this way."

Another area of controversy concerns the rate and extent of natural selection when applied to humans. Several lines of research suggest that natural selection in humans can occur quite rapidly. For example, researchers have identified increases in recent gene variants related to brain development and size, resistance to HIV infection in parts of Africa, lactose tolerance (i.e., the ability for humans to digest milk sugars), intelligence increases among certain ethnic groups (such as Ashkenazi Jews), and salt retention and hypertension among African slave descendants. In these cases advocates of rapid selection propose a relatively recent appearance of genetic changes or rapid proliferation of those changes throughout the human population. However, the possibility of rapid selection has been questioned by epidemiologists and evolutionary biologists. Critics argue that in many cases the relevant genetic mechanisms or variants that can account for such rapid evolutionary changes have not been identified. Rather, environmental, cultural, or more complicated biocultural influences may account for the observed changes.

Some social scientists argue that natural selection has decreased in importance for humans. Rapid cultural, medical, and technological changes are thought to be more strongly linked to contemporary human survival and reproduction than genetic factors. For example, improvements in public health mean that newborns are much more likely to survive to reproductive age today than they were 500 years ago. Such improvements are thought to neutralize the process by which less adaptive genes are removed from the population. In addition, successful scientific efforts to manipulate the human genome are likely to replace or compete with natural or sexual selection pressures in the future.

The application of the theory of natural selection to the social sciences has made great strides since the 1980s. A good deal of social, political, and scientific controversy and criticism has accompanied social scientists' efforts. Establishing whether and to what extent natural selection applies to human behavior is an ongoing and difficult process. Whether the criticisms will hold up or merely reflect the growing pains of a new discipline remains to be seen.

SEE ALSO *Darwin, Charles; Darwinism, Social; Determinism; Determinism, Biological; Durkheim, Émile; Enlightenment; Evolutionary Psychology; Functionalism; Hypertension; Nature vs. Nurture; Popper, Karl; Racism; Slavery; Sociobiology; Teleology; Weber, Max*

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NATURALISM

Naturalism is a term that stands for a family of positions that endorse the general idea of being true to, or guided by, "nature," an idea as old as philosophy itself (e.g., Aristotle is often called a "naturalist") and as various and open-ended as interpretations of "nature." Since the rise of the modern scientific revolution in the seventeenth century, nature has come to be identified increasingly with the-world-as-studied-by-the-sciences. Consequently, naturalism has come to refer to a set of positions defined in terms of the scientific image of nature or the methods of scientific inquiry. This brief article focuses upon explicating three versions of this modern *scientific* naturalism: (1) naturalism in the arts, especially literature; (2) philosophical naturalism; and (3) naturalism in the social sciences. These different naturalisms involve different ways of appealing to science, whether it be adopting a scientific stance toward human and social life, or a broadly empirical approach to inquiry in some area, or a scientific worldview, or some combination of these.

NATURALISM IN THE ARTS

Naturalism in the field of the arts refers to art that depicts everyday subjects in a "realistic" manner, free from stylization, idealization, and academic convention. Although naturalism has been used to describe a style of painting since the late seventeenth century (e.g., Caravaggio's), it only became an important term of art criticism in the nineteenth century when it was applied to painters such as Gustave Courbet (1819–1877). Naturalism as a literary category was first applied to a genre of French fiction exemplified by the writings of Émile Zola (1840–1902), which built on the antiromantic "realist" fiction of Gustave Flaubert (1821–1880) and Honoré de Balzac (1799–1850), writers who deliberately adopted a scientific—that is, detached and objective—approach to human life. The vision of the human depicted in naturalist literature owed much to a picture of the world suggested by Charles Darwin's theory of evolution: a purposeless, Godless world of competitive striving where free will is an illusion. Under these historical and ideological influences, American literary naturalism arose in the 1890s as a reaction to the "realist" fiction of middle- and upper-class life of the 1870s and 1880s—for example, the novels of Henry James (1811–1882). Its chief exemplars include Stephen Crane (1871–1900), Theodore Dreiser (1871–1945), Jack London (1876–1916), and Frank Norris (1870–1902). The American school is typified by an anti-individualist view of humans as largely determined by environmental forces, frank and animalistic depictions of sex and violence, and an unflinching treatment of the harsh realities faced by immigrants and the working-class in modern industrialized U.S. cities.

It is important to note, however, that not all appeals to nature are to be understood in terms of an allegiance to naturalism. For example, the writings of Ralph Waldo Emerson (1803–1882) and Henry David Thoreau (1817–1862)—memorably, Thoreau's *Walden* (1854)—reveal a vision of nature that challenges the assumptions of naturalism, particularly the idea that the objective is a matter of excluding the subjective. Although Emerson and Thoreau accepted that nature is everything that is distinct from one's own consciousness, they were interested in a larger reciprocity and interdependence of mind and nature that bears the influence of German philosophers such as Immanuel Kant (1724–1804) and F. W. von Schelling (1775–1854). Another example of an antinaturalist appeal to nature is the tradition of thinking about human conduct and law in terms of natural rights, or the related, but older, idea of natural law. Here the appeal to nature refers to principles or rules of conduct that are given as opposed to humanly constructed. In this tradition what is naturally given is typically understood as a matter of God's law. Naturalism, of course, is strongly opposed to theism.

PHILOSOPHICAL NATURALISM

Modern philosophy recognizes two basic strains of naturalism: ontological naturalism and methodological naturalism. Ontological naturalism takes the subject matter of the natural sciences as its model of the genuinely real. A leading advocate, David Armstrong, holds "that reality consists of nothing but a single all-embracing spatiotemporal system" (1980, p. 149). He is representative in thinking that this implies a conception of nature as a single unified causal order. This ontological outlook is primarily meant to exclude supernatural entities such as the Christian God, demons, spirits, and souls—none of which are the subject matter of a natural science. Naturalism can accommodate religion, however, but only to the extent that it is interpreted as a certain kind of experience which can be understood without any commitment to the existence of supernatural entities or events (e.g., angels, miracles).

It is important to note that ontological naturalism comes in more or less reductive forms depending upon one's attitude to the social (or human) sciences. Typically, naturalists favor a reductive form—because they tend to share a skeptical attitude to the social (or human) sciences—claiming that the natural world is nothing but the world posited by the explanations of the natural sciences exclusively (e.g., physics, chemistry, and biology). This, in turn, leads to a sharp contrast between the scientific image of the world and the manifest image of everyday human experience. Consequently, contemporary metaphysicians ask how we can "place" items in the manifest image (e.g., reasons, meanings, moral goodness, and aesthetic values) within the scientific image. Such debates within naturalism are often conducted in a semantic key. That is, the question is one about how we are to interpret the core concepts of a target nonscientific discourse given a scientific view of nature. For instance, how are we to account for or refer to anything in nature? If not, are the sentences in which it occurs true or false, for our thought and talk about moral goodness? Does the term *good* refer to anything in nature? If not, are the sentences in which it occurs true or false, or do they play a nonfactual role? The semantic project of accounting for the function of nonscientific concepts in this way is called naturalization. Just how revisionary of ordinary ways of thinking this project is depends upon two important questions: whether there are irreducible and indispensable nonscientific forms of understanding, and whether one accepts the legitimacy and distinctiveness of the social sciences.

The second strain of philosophical naturalism is methodological naturalism, which takes scientific methods of inquiry as its model. It holds that nature as a whole is properly studied by the same empirical methods as those employed by the natural sciences. Because human

beings are a part of nature, this implies that the study of human nature is continuous with the study of nonhuman nature. It also implies that knowledge is, properly speaking, scientific knowledge. W. V. Quine draws the radical conclusion that there is no a priori knowledge, thereby undermining traditional philosophy (see especially Quine 1964 and 1969). The question whether philosophy has any autonomy in relation to science has subsequently become an important topic of dispute.

NATURALISM IN THE SOCIAL SCIENCES

Naturalism in the social sciences is usually understood as a form of skepticism about the legitimacy of the social sciences or, less drastically, the doctrine that the posits of these sciences are reducible in principle to the posits of paradigmatic natural sciences such as physics. However, there is nothing in naturalism itself that requires this dismissive or reductive approach to the ontology of the social sciences, and not all naturalists share it (e.g., pragmatists such as John Dewey). Notwithstanding, most writers in the social sciences understand naturalism primarily as a methodological doctrine: the view that the methods of inquiry of the natural sciences (e.g., the attempt to discover laws or law-like regularities, empirical testing and corroboration, a clear distinction between facts and values) are no less applicable to man than to nature—that is, to the study of people, society, morality, politics, and culture. Such methodological naturalism is often coupled with a rejection of the influential idea defended by Wilhelm Dilthey (1833–1911), Max Weber (1864–1920), and others that there is a fundamental difference between the scientific understanding of nature (*Erklären*) and the sort of empathetic understanding of human beings that involves seeing things from the subject's point of view (*Verstehen*).

An important debate in philosophy and the social sciences is whether we should follow the naturalistic identification of nature with the scientific image of the world. John McDowell, for example, has argued that it is a metaphysical prejudice to treat the "disenchanted" world of the natural and social sciences as exhausting our conception of nature. What it arguably leaves out of account is a richer conception of the world revealed to critical human thought and experience, one that includes sui generis normative phenomena such as reasons, meanings, and values.

SEE ALSO *Atheism; Industrialization; Kant, Immanuel; Modernization; Natural Rights; Philosophy; Realism; Science; Scientific Method; Secular, Secularism, Secularization; Theism; Thoreau, Henry David*

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David Macarthur

NATURALIST VS. NOMINALIST PERSPECTIVES

SEE *Disease.*

NATURALIZATION

Naturalization is the means by which a person of foreign birth is made a full citizen. Naturalization is a process always complicated by race, gender and sexuality, religion, ethnicity, class, and the structural and political choices societies and their members make with regard to assimilation, acculturation, and boundary making.

Neither *jus soli* (citizenship by birth in a particular place) nor *jus sanquinis* (citizenship by descent) encompass purposeful choice-driven naturalization by an individual. The seemingly sharp demarcation between natural events and naturalization is actually fuzzy as official procedures for denoting citizenship can divest membership from those with a natal/descent claim, and invest it in those most recent arrivals deemed most worthy of citizenship status. Several historical and contemporary examples bear this out.

In the United States, the process of naturalization was explicitly set out in the 1790 Naturalization Act, and the caveats of gender, class, and race were made more or less explicit. For example, naturalization was limited to those defined as "free white person[s]." One could claim natural citizenship if one was born to U.S. citizens outside the geographic limits of the nation, "Provided, That the right of citizenship shall not descend to persons whose fathers have never been resident in the United States" (Takaki 1993, p. 80).

In the United States, the caveats of race and ethnicity with regard to naturalization were complicated by various combinations of birth, descent, and residence. Members of indigenous groups were not covered by the Naturalization Acts, as they were not white—however, "taking on the habits of white men" and leaving the reservation could suffice to entitle an Indian to citizenship (Cohen 1971, p. 24). Although African Americans were quite purposefully naturalized in practical terms by the Fourteenth Amendment, they had up to that point been systematically denied both *jus soli* and *jus sanquinis*, and this state of affairs would continue in both cultural understanding and law to varying degrees at least through the 1960s.

For non-white voluntary immigrants and their descendants, the lines between race, ethnicity, birth, residence, and naturalization have been murky and addressed through a variety of Supreme Court decisions on a piecemeal basis, most often on the impetus of these nascent citizens themselves, with widely varying outcomes (*U.S. v. Bhagat Singh Thind*, 1923; *U.S. v. Wong Kim Ark*, 1898; and *In re Halladjian*, 1909). The 1965 Immigration and Nationality Act dismantled the United States' older racial/ethnic/nationality-based quota system, but the preference for family members of current U.S. citizens preserved an extant preference for those groups already in the country ("An Act to Amend the Immigration and Naturalization Act," 1965). However, the migration patterns had by that time drastically shifted from Europe, and new migrant groups could then put their citizenship to work for their family ties.

Gendered understandings of naturalization have also been quite prominent. Until 1922 in the United States, only women who married noncitizens lost their citizenship, and the equalization of citizenship (vis-à-vis nationality, not specific areas of rights) was not completed until the 1930s (Freeman 1989). According to several scholarly works documenting naturalization procedures in the late twentieth century, such gendered naturalization practices continue to be widespread (Cook 1994; Beyani 1994; Al Nuaimi 2001).

In the United States, class was far more explicit in the discussion leading up to the implementation of the 1790 Act than in its final product; read, for example, the discussion of "those likely to become chargeable," and "the common class of vagrants [and] paupers," and those who worried about the merchant class who would "remain so long as will enable them to acquire a fortune, and then they will leave" (*Gales and Seaton's History of Debates in Congress* 1790, pp. 1148, 1152, 1156). Class is of course implicated when workers are invited in to fill economic vacancies, but explicitly not invited to take part in the process of immigrant-to-citizen (Walzer 1983). This is shown in early Chinese immigration to the United States, the Bracero Program for Mexican workers in the United States, and the guest worker system in several European nations (Walzer 1983).

Practices that incorporate *jus sanquinus* far beyond one's parents raise the question of just what counts as "natural" in terms of membership. In Ireland one may have preference in applying for citizenship if, for example, at least one grandparent was Irish-born (termed "Citizenship by Application"). Israel's Law of Return extends the offer of naturalized citizenship to "every Jew who has expressed his desire to settle in Israel" (as expressed in its Law of Return and "Acquisition of Israeli Nationality"). Although others eligible to naturalization must wait from two to five years, for Jews under the Law of Return the naturalization is instantaneous upon arrival ("Acquisition"). In 1970 this law was extended to "include the child and the grandchild of a Jew, the spouse of a Jew, the spouse of a child of a Jew, and the spouse of a grandchild of a Jew. The purpose of this amendment is to ensure the unity of families where intermarriage had occurred." These sorts of practices highlight a perspective that understands all citizenship as a process of naturalization because the concept is a human one based upon stories of belonging. Denaturalization is the flip side of the process.

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Sarah N. Gatson

NATURE, HUMAN

SEE *Nature vs. Nurture.*

NATURE VS. NURTURE

One of the goals of the social sciences is to explain human behavior. Nature, which may be defined in terms of inheritance, biological background, and genetic makeup, must be taken into account, along with nurture, which may be defined in terms of experience and learning.

Historically, nature and nurture represented a dichotomy. The ancient Greeks, for example, debated the role of nature and nurture as influences on character and human nature. Since that time, nativists have argued that human personality, intelligence, and capabilities are tied to a person's biological background. Empiricists have countered with arguments that each person is a *tabula rasa*, or a blank slate, and experience determines who humans are and what they can do. Learning theories that developed during the 1950s through the 1970s were sometimes radically empiricist; some theories suggested that any individual is capable of just about anything, if the experience is optimal.

In the first half of the twentieth century, the nature and nurture debate focused on personality and intelligence. Scientific methods were brought to bear on the topic, and there was a shift away from "nature or nurture" to a discussion over the role played by each. One of the key concepts resulting from this work, known as a range of reaction, captures the possible interaction between nature and nurture. In particular, a range of possibilities is genetically determined, and environment and experience determine how much of the potential is fulfilled. For example, certain individuals might have the genetic potential to be anywhere from 5 feet 6 inches to 5 feet 11 inches tall, but their experience (for example, exercise, nutrition) determines the height within that range to which they eventually grow.

A genotype is defined as the genetic constitution (and potential) of an individual. A phenotype, in contrast, is the observable characteristics resulting from the interaction of nature and nurture. Nature and nurture may interact such that experience operates within the potentials set by the genotype, as implied by the range of reaction. But nature and nurture may also interact such that genetic potentials influence the environment. In simple terms, a child may inherit a particular talent, but the talent is immature; it is mere potential. Parents, teachers, or coaches may recognize the potential and do what they can to support it. In this case, the genetic potential actually determines which experiences will be provided. Nature and nurture interact in a bidirectional fashion.

The interplay of nature and nurture has been studied extensively in behavioral genetics. Twins are often studied by behavioral geneticists. Monozygotic twins are genetically identical; they developed in utero from one fertilized egg cell. Fraternal or dizygotic twins, in contrast, developed from two egg cells and are consequently only 50 percent similar genetically. Knowing the precise genetic contributions allows researchers to make inferences about the impact of nature and nurture. In the clearest case, monozygotic twins who have been reared apart (for instance, separated before the age of six months) are, later in life, compared in terms of IQ or various personality traits. If genes play a significant role, the twins should be very similar, even though they had different experiences. The magnitude of the genetic contribution is calculated with a correlation, known as the heritability index. Empirical results suggest that monozygotic twins have the highest heritability, sometimes as high as .70, even when reared apart. Other siblings, including dizygotic twins, have much lower heritability indices (usually below .50).

Similar support for a genetic contribution to IQ comes from adoption studies. The logic parallels that of twin studies, only here the comparisons are between biological parents and their children (who share 50 percent of their genetic makeup) and foster or adoptive parents (who are dissimilar genetically to their adopted children but share the same environment with them). As with twin studies, the genetic contribution is quite apparent in adoption studies. Biological parents tend more often to have IQs that are similar to their children than do foster or adoptive parents.

The most ambitious investigation into the nature/nurture debate is the U.S. Human Genome Project. The project started in 1990 with the general objective of identifying all the genes in human DNA. There may be 25,000 such genes, with literally billions of chemical sequences. In addition to investigations of human DNA, the project examined mice, fruit flies, and even bacteria. The project was considered to have been completed in 2003 although research of the data is ongoing.

There are numerous political ramifications to the study of nature and nurture. Francis Galton (1822–1911), a cousin of Charles Darwin (1809–1882), believed strongly in the inheritance of ability and promoted the advantages of eugenics, or the strengthening of desirable characteristics using selective mating. Although eugenics is contrary to an appreciation of diversity and equality, various factions nonetheless support it. There is, for example, one well-known sperm bank in California that only deals with highly able donors and recipients. The implications of genetic research for medicine and clinical treatments are likely to have more practical importance.

In most cases, traits and capabilities are polygenetic; that is, more than one gene is responsible for them. Great headway has been made with the identification and even engineering of various genes and gene combinations. Modern genetics is increasingly precise about the contributions of nature and the biological influences on human behavior, and the inferences of behavioral genetics are no longer necessary. Alcoholism, autism, creative potential, and many other human tendencies have been examined and the influence of specific genes determined. Addiction, for example, seems to be strongly tied to the presence of a gene allele called D2R2, which is responsible for dopamine reception. Only about 20 percent of the population has that allele, and thus a proclivity toward addiction. Clearly, some of the most important implications of research on genetics are those within medicine.

SEE ALSO *Determinism, Biological; Determinism, Genetic; Flynn Effect; Heredity; IQ Controversy*

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Mark A. Runco

NAVAJO-HOPI LAND DISPUTE

SEE *Navajos.*

NAVAJOS

The Navajo, who in 2007 numbered approximately 290,000 people, the majority of whom occupy a thirteen-million-acre reservation that spans parts of Arizona, New Mexico, and Utah, understand themselves to be a chosen people living within a sacred geography. A rich oral tradition documents the travails of their ancestors as they traverse a series of three or four underworlds, each of which is portrayed in some state of chaos and disorder resulting in the need for migration upward into the next world. The oral tradition also documents the preparation of this world and the creation of the Navajo people and establishes tenets for living. In the last underworld, First Man and First Woman—the first beings with humanlike form—were created; they and their progeny flourished until lust led to a conflict between First Man and First

Woman, which resulted in an event now referred to as the "separation of the sexes." While men and women lived apart, libidinous desires led women to masturbate with quills, cacti, antlers, stones, and bones. The men relieved their longing with mud or the flesh of freshly slain game animals. Eventually the men and women agreed to rejoin and live as one group.

Shortly after the reunion, circumstances necessitated their escaping upward through a great female reed. Their journey culminated on the earth's surface at the Hajiináí, or "the place of emergence." There First Man and First Woman built a sweat house in which to think and sing the Navajo universe into existence. By some accounts, this world was first conceived in thought, after which its form was projected onto primordial substance through the compulsive power of speech and song. The newly created world was said to be in a state of "natural order" in which all living things were in their proper relationships with all other living things. This orderliness was disrupted as a result of the sexual aberrations and excesses of the last underworld. The women who had masturbated with foreign objects gave birth to twelve misshapen creatures that grew into monsters and preyed on healthy children, pushing Navajo ancestors to the brink of extinction. The Holy People resolved this dilemma by arranging for Changing Woman to be found, grow in a miraculous way, and give birth to warrior sons who slew the monsters. It is she who created the original Navajo matrilineal clans and turned the world over to them.

As with Native Americans across North America, complex changes have occurred in Navajo society since their initial contact with Spaniards, Mexicans, and Americans. At the time of European contact, the Navajo subsisted on hunting and gathering supplemented by some agriculture. Extended family units, generally centered on matrilocal residence and the strength of their clan system, lived in widely dispersed settlements. Spanish Franciscans first attempted to convert Navajo people when they built a mission along the Rio Grande in 1627; it was soon abandoned. Subsequent efforts over the next two centuries met with little success.

Upon the introduction of livestock into the region, a herding economy based on sheep and goats developed. The Navajo population and their area of settlement gradually expanded as new crops, animals, and technological innovations were added to their subsistence base during the Spanish and American periods. In 1848 the United States defeated Mexico in war and through the Treaty of Guadalupe Hidalgo assumed political jurisdiction over most of what is known as the American Southwest. Members of an 1849 American military expedition into Navajo country were impressed by the size of the Navajo sheep and goat herds as well as the well-nourished and healthy condition of tribal members.

Westward expansion resulted in frequent clashes between Navajos and outsiders, leading to American military intervention. The general good health noted in the 1840s was undermined when Kit Carson (1809–1868) and his troops, with scorched-earth tactics, rousted nearly 9,000 Navajos from their homeland and forced them to walk several hundred miles to Hweeldi, "the place of suffering," where they were incarcerated from 1863 to 1868. At Fort Sumner in New Mexico, the Navajo suffered under difficult living conditions, some of which hastened or exacerbated the spread of disease. In addition unfamiliar foods and alkaline water led to gastric upset and other problems.

Since their capture and internment at Hweeldi and the establishment of a reservation on a portion of their homelands in 1868, the Navajo have been in a relationship of constant domination and control by the larger American society. The colonial assault was repeated at different points in time through repression of the native language and traditions, enforcement of boarding school attendance, impediments to religious freedom, and threats to Navajo land and resources by stock reduction in the 1930s and 1940s, timber harvesting, and coal and uranium mining. These concerns developed alongside a gradual shift to wage-work economics among the Navajo, a recession in the 1970s and 1980s, resource depletion, unsuccessful attempts to preserve sacred sites, Navajo job-preference problems, deaths from improperly regulated uranium mining, radioactive waste spills, continuing poverty for many, and land disputes.

In what is known as the Navajo-Hopi land dispute, Navajo individuals were forced to move off land partitioned by the Navajo-Hopi Land Settlement Act of 1974. This political drama stems from President Chester A. Arthur's (1829–1886) executive order of 1882, which granted 2.5 million acres of land around the Hopi mesas to the Hopis and "such other Indians as the Secretary of the Interior may see fit to settle thereon," ignoring the Navajo families who had lived in this area for centuries. Attempts were made to reconcile boundary conflicts between Navajo and Hopi families by legal means on numerous occasions between 1891 and 1962, when a federal court ruled that 1.8 million acres of the 1882 reservation were jointly owned. This legislation led to mandatory livestock reductions beginning in 1972 and land partition in 1974. The latter mandated the relocation of all members of either tribe living in the area granted to the other, slating over 10,000 Navajos and 100 Hopis for compulsory relocation. Despite the commitment of enormous amounts of time and money toward resolution by all parties, this dispute remains unresolved.

By the last decades of the twentieth century, the Navajo had moved toward political self-determination and cultural renewal. But many Navajo families have been shattered due to complex social and health problems, including economic underdevelopment and chronic unemployment. Thousands of Navajos are gainfully employed in the fields of health care, education, government service, and commercial farming or resource-extraction industries. Yet reservation unemployment rates far exceed national norms, resulting in the need for many Navajos to work off the reservation in construction or other fields to support their families.

Changes in mode of production and diet have had grave consequences on Navajo health. Diabetes mellitus is more prevalent among Navajos than in the general U.S. population, and clinical diagnoses are rising. As a consequence, the Navajo have the highest lower-extremity amputation rate in the world. American Indians and Alaskan Natives have a 3.5 times higher prevalence of end-stage renal disease (ESRD) than white Americans, and due to its skyrocketing rate of diabetes mellitus, the Navajo population has an even higher rate of ESRD. Alcohol abuse contributes to these complex health concerns. It is within this context of rapid cultural change, health crises, and fragmentation that members of the Navajo Nation have searched out new sources of spiritual and curative powers, including those available from biomedical technologies and Christianity, especially fundamentalist forms and the Native American Church.

SEE ALSO *Confiscation; Land Claims; Native Americans; Religion; Spirituality*

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NAZISM

Nazism is a convenient abbreviation for the ideology of National Socialism, which flourished, principally in Germany, in the period 1920 to 1945. In this context, *National* meant "nationalist," and *Socialism* a doctrine that preached equality between all members of the nation. The National Socialist German Workers' Party was founded on January 5, 1919, in Munich, Bavaria, as the German Workers' Party. Its official program, adopted on February 24, 1920, signaled the change of name and announced its aims: uniting all ethnic Germans in a single state; acquiring new land, or "living space," for Germans to rule; revoking the 1919 peace settlement that had reduced Germany's territory, restricted its armed forces in size and equipment, and imposed a huge financial penalty on Germany; replacing democratic institutions by a dictatorship; and denying Jewish Germans fundamental civil rights.

ORIGINS

The Nazis synthesized a variety of strands of extremist political thought that had developed in Germany and Austria in the late nineteenth century. Racist anti-Semitism had evolved out of old traditions of Christian anti-Semitism during the economic depression of the 1870s, as demagogues drew upon new racial theories to argue that supposedly Jewish characteristics were racially inherited, independently of religious adherence. In this view, the Jews were a parasitic, conspiratorial race that

undermined German civilization. In the 1890s extreme nationalists in Germany began to argue that the unification of the country achieved in 1871 under Otto von Bismarck (1815–1898) was incomplete. These "pan-Germans" demanded the annexation of other German-speaking areas of Europe and the conquest of a colonial empire both within Europe and without. At the same time, Social Darwinists and eugenicists in Germany began to argue that the German, "Aryan," race had to be strengthened for this task by improvements in health, an increase in the birth rate (which was starting to decline), and the elimination—by forced sterilization or even killing—of the weak, the criminal, the hereditarily unfit, and the disabled.

These ideas were brought together in 1919 by Adolf Hitler (1889–1945), a former frontline soldier born in Austria. Hitler believed, like other ultranationalists, that Germany's defeat in World War I had been caused by Jewish-led revolutionaries within Germany who had administered a "stab in the back" to the supposedly undefeated German armies. For Hitler, war and revolution legitimized the use of violence for political ends. The threat of communism, seen by the Nazis as part of the worldwide Jewish conspiracy against Germany, justified for them the use of extreme force in the defense of German racial interests. In 1920 members of the Nazi movement founded a paramilitary wing, which by 1924 had become the Stormtrooper Organization. It was designed to inflict maximum violence on the Nazis' opponents. By the mid-1920s the Nazi movement had adopted the "leadership principle" by which the commands of Hitler, known as the *Führer* ("Leader"), were transmitted down through the ranks and had to be obeyed without question.

RISE AND TRIUMPH TO 1933

Nazism owed a good deal to the example and inspiration of Italian Fascism, from which it borrowed the Fascist salute, the cult of the "leader," the use of violence, the glorification of youth, and the relegation of women to the primary function of childbearing. Imitating Benito Mussolini's mythical "March on Rome" in 1922, which had led to the appointment of the Italian Fascist leader as Italy's prime minister, Hitler staged a putsch in the Bavarian capital, Munich, on November 9, 1923, the anniversary of the outbreak of the 1918 German Revolution. He marched on the city center with the intention of taking it over and then marching on the German capital, Berlin, but he had failed to win the support of the army, the police, or business and political elites, and the putsch was dispelled in a hail of gunfire. Hitler was tried for treason and briefly imprisoned.

On his release, Hitler reorganized the Nazi movement and gained new supporters. The movement now focused on winning votes. In the national election of 1928, however, it won only 2.6 percent of the vote. In 1929 the Wall Street crash caused the withdrawal of U.S. loans to German businesses, leading to bank failures and bankruptcies on a huge scale. By July 1932 over a third of the German workforce was unemployed. Those without jobs flocked to the Communist Party, which rapidly increased in strength. Alarmed, the middle classes turned to the Nazis, who seemed the only party ruthless enough to stop a revolution. Campaigning with ceaseless energy, the Nazis also won over many first-time voters, many previously unorganized workers, and numerous Protestant peasants. In the elections of July 1932 the Nazis won 37.4 percent of the vote, becoming Germany's largest party. Only the Catholic Centre Party, the Social Democrats, and the Communists retained significant electoral support in the face of the Nazis' popularity.

THE NAZI SEIZURE OF POWER

By this time, democratic government in Germany had collapsed under the strain of social conflict during the Depression, and the country was being led by a succession of men who wanted to destroy the democratic system and impose authoritarian rule in order to defeat the Communists and revive Germany's international fortunes. But they needed popular support. On January 20, 1933, the Nazis were co-opted into a national government headed by Hitler but with a majority of non-Nazi conservatives who hoped to use them for their own ends.

Over the following months Hitler outmaneuvered them completely. On February 28, 1933, following the burning down of the Reichstag (the national parliament building), Hitler persuaded President Paul von Hindenburg to issue a decree suspending civil liberties. Thousands of Communists were arrested and thrown into hastily erected concentration camps, where they were soon joined by many Social Democrats and trade unionists. On March 23, 1933, Hitler persuaded members of the Reichstag by a mixture of threats and promises to pass the Enabling Law, which allowed the cabinet to pass laws without parliamentary or presidential approval. Murder and intimidation forced the remaining political parties to dissolve themselves by the summer of that same year.

NAZISM AND WAR

Hitler called his state the *Third Reich*, connecting it to the First Reich (*the Holy Roman Empire*), founded by Charlemagne in the year 800 and lasting a thousand years, and the Second Reich (*the German Empire*), founded by Bismarck in 1871. Many new laws were introduced, making opposition a capital offense, "coordinating" the media

under the new propaganda ministry, dismissing political opponents and dissenters, and above all, depriving Jewish Germans of their rights and their livelihoods. Hitler began immediately preparing Germany for a war of conquest in the east. In 1936 German troops marched into the Rhineland, an area established as a demilitarized zone by the 1919 peace settlement. In March 1938 Germany annexed the German-speaking state of Austria. Then, in September 1938, using the threat of war, Hitler secured an international agreement to annex the German-speaking part of Czechoslovakia. In March 1939 German troops marched into the rest of the country, making it clear to all that the Nazis were aiming not just to revise the peace settlement, but also to conquer eastern Europe and achieve European domination. When the German army invaded Poland in September 1939, Britain and France declared war.

Nazism had sought before 1939 to drive German Jews out of the country to prevent a repeat of the "stab-in-the-back" of 1918. After invading Poland, the Nazi administration forced the country's large Jewish population into ghettos, where many starved. Following the invasion of the Soviet Union, further emigration of Jews from Germany was banned. The Nazi belief in a worldwide Jewish conspiracy to undermine Germany culminated in the conviction that the United States—which entered the war informally in summer 1941 with its decision to supply Germany's enemies with raw materials and armaments—was working with the Soviet Union and Britain to destroy the Third Reich.

By the end of 1941 the decision had been made to transport all European Jews to specially created camps in the occupied parts of eastern Europe where they would be killed, thus inaugurating what later became known as the *Holocaust*. Many people thought to be undermining the German war effort or the values of Nazism—including homosexuals, gypsies, Jehovah's Witnesses, African Germans, petty criminals, and "asocials"—were also exterminated. In addition, up to 200,000 German inmates of mental hospitals and institutions were killed, nearly half of them by gassing, the rest by starvation or lethal injections. Finally, a "General Plan for the East" envisaged the death by starvation of up to 30 million Slavs, and as a start, at least 3.3 million Soviet prisoners of war were left to die of hunger and disease in German camps.

DEFEAT AND AFTERMATH

Nazism's ambition for the racial reordering of Europe could not be fulfilled. The combined strength of the Soviet Union, the British Empire, and the United States inflicted total defeat on Germany, many of whose towns and cities had been destroyed by bombing by the time peace was signed on May 8, 1945. Hitler and many other leading Nazis committed suicide. The others were tried for war crimes by the International Military Tribunal at Nuremberg, setting an important precedent. Many were found guilty and executed or sentenced to long terms of imprisonment.

There was no serious resistance to the Allied occupation of Germany; Nazism's support, dependent on the charismatic force of Hitler and seduced by the belief that might is right, vanished when Hitler died and Germany was defeated. The genocidal crimes of Nazism were widely publicized. Since 1945, neo-Nazism has everywhere been a fringe, extremist movement, despite gaining some support in times of economic depression, and neo-Nazis have been forced to deny the reality of the Holocaust, even while claiming that Jews have too much influence in the modern world. Neo-Nazi movements are illegal in many countries, and the major focus of racist extremism today is against racial minorities in postcolonial Europe. White supremacists in the United States and neo-Nazis in Eastern Europe often express admiration for Hitler, but they have to confront the fact that Nazism led to the extermination of millions of Slavs and other Europeans.

SEE ALSO *Anti-Semitism; Aryans; Authoritarianism; Civilizations, Clash of; Concentration Camps; Ethnocentrism; Eugenics; Fascism; Genocide; Great Depression; Hitler, Adolf; Holocaust, The; Mussolini, Benito; Nationalism and Nationality; Personality, Cult of; Racism; Totalitarianism; White Supremacy; World War I; World War II*

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Richard J. Evans

NDEMBU, THE

SEE *Turner, Victor.*

NECESSITIES

Necessities may be defined as imperative needs that motivate wants and desires. Survival necessities such as food and water motivate intense wants and desires, so intense that people may struggle to the death to satisfy them. However, humans live "not by bread alone," and they may go on hunger strikes for what they see as higher imperatives than survival. This essay deals with both survival necessities and "higher" necessities.

Survival necessities may be divided into physical, social, and psychological. *Physical necessities* include air, food, water, shelter, warmth, excretion, and exercise.

Social necessities include sex, reproduction, and caretaking of children. Reciprocally, children must have caretakers and require constant attachment figures. Sexual and caretaking necessities require families, and families have been the core of evolutionary survival groups. Such groups comprised clans and tribes consisting of up to hundreds of people. These survival groups in turn had two necessities: territory and organization. Territory provided a defensive perimeter and sources of shelter and food. Organization provided specialization of roles and a hierarchy of leaders and followers. A well-functioning group could now compensate for human biological vulnerability to predators and natural disasters. It could coordinate hunting and defense, distribute resources down a hierarchical line, regulate sexuality, and care for its offspring.

Psychological necessities are sensations and emotions of satisfaction and pleasure that signal and regulate fulfilment of physical and social necessities. Dissatisfactions and displeasures signal lack of fulfilment of such necessities. Examples of pleasurable and unpleasurable opposites are satiety and hunger, security and fear, sexual satisfaction and frustration, and belonging and being alone. The intensity of the quest for satisfactions and avoidance of displeasures reflects the importance of the necessities that sensations and emotions regulate.

Humans share with other social animals the necessities examined thus far. "Higher," exclusively human, necessities reflect evolution of ever-newer platforms of organization in the human brain and within the mind. Once basic survival necessities are satisfied, fulfilments of ever-higher levels of necessities take over the insistent motivation of earlier necessities. Though higher necessities appear to fulfill purely human desires and motivations, they are ultimately connected to survival needs, and assume their urgency.

Aristotle noted progression of human desires from the body to reason or soul. In modern times, Abraham Maslow described a hierarchy of human needs, ranging from physiological needs through needs for safety, love and esteem, to actualization of potentials. Both Aristotle and Maslow maintained that once basic needs were satisfied, higher needs took over their urgency.

Divergence from animal necessities to purely human ones may be seen in moral necessities. Some animals, such as dogs, exhibit primitive guilt, but only humans have complex moral necessities that align individual and group survival needs. Moral necessities include positive external judgments (of virtue, worth, and justice) and a corresponding praiseworthy conscience (that one is good, lovable, and righteous). Negative judgments of badness, worthlessness, and injustice evoke guilt, shame, and a sense of wrongdoing.

The level above morality is that of ethics. It includes ideals of proper behavior and codes of conduct, values such as honor and human dignity, and principles of justice such as human rights. These concepts subsume survival needs such as space, territory, and distribution of resources, but go beyond them. Even so, the abstract concepts and ideas maintain the original motivations and urgency. For instance, people may risk survival in struggles for justice, freedom, and dignity, or kill themselves if they feel that they have lost their honor.

The level of beliefs, religions, and ideologies encompasses all prior levels and in addition provides theories of causation of the world and its disasters, and blueprints for action that bring imminent earthly solutions, or resolutions in the next world. This level also includes evolution of symbols that stand for complex issues. For instance, a flag may symbolize patriotism, which itself symbolizes the whole path back to tribe and territory and defense against enemies. Symbols can assume the intensity of their precursors. People may die for the flag or the cross, or an idea such as democracy. This level and subsequent ones fulfill necessities that have been called spiritual.

The next level contains the necessity to be part of a sensible universe in which one has a significant niche. Such a universe provides answers to questions of life and death, order and chaos, good and evil, beginnings and endings, times and connections. It provides a sense of awe and sacredness, of mystical consciousness, of the numinous and the sublime.

With the evolution of self-consciousness, humans developed a need to see themselves as significant identities who subsumed all prior levels, but now in addition to those levels required existential meanings and purpose. Without them, people could feel that their lives were pointless. It became necessary for people to be self-consciously content and happy, fulfilling their human capacities at all levels and in all forms of loving and satisfying relationships. In addition, meaningful self-awareness involved creativity, ranging from procreation to creation within different art forms and in science. Helping others

to feel secure and fulfilled and providing comfort and beauty for others could also be existentially meaningful.

Finally, humans have a need to know and understand the truth about themselves and their universe. This necessity is expressed variably as the need to discover the face of God, the human soul, beauty, reason, wisdom, or truth. They may be necessities for the completion of a full, wholesome life.

Because fulfilment necessities derive from survival ones, and because survival necessities may vary and be contradictory according to circumstances, fulfilments at higher evolutionary levels may also display conflicts and contradictions. For instance, sometimes it is noble to kill; at other times it is evil. Even wisdom can reflect contradictory survival experiences, as seen in the sayings "You reap what you sow" and "The good die young." Understanding strategies of survival (caretaking, attachment, goal achievement, goal surrender, fight, flight, competition, cooperation) and their ramifications may provide a framework for understanding the intricacies of necessities at different levels. Understanding survival necessities may help people both to survive better and to fulfill their higher human necessities.

SEE ALSO *Competition; Cooperation; Ethics; Food; Homelessness; Maslow, Abraham; Morality; Needs; Needs, Basic; Nutrition; Symbols*

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Paul Valent

NEED FOR COGNITION

In 1982 the American psychologists John T. Cacioppo and Richard E. Petty proposed that people differ with respect to their tendency to engage in and enjoy effortful cognitive activity. People high in need for cognition are characterized as having a propensity toward seeking out, acquiring, and thinking critically and carefully about information in order to make sense of the world around them. In comparison, people low in need for cognition are characterized as being more likely to rely on low-effort heuristics or rules of thumb (e.g., "what do the experts say?") to achieve such understanding.

Considerable research attests to the validity of this distinction between individuals high and low in need for cognition. It has been repeatedly found that people higher in need for cognition (as measured by the Need for Cognition Scale) remember more of the information to which they are exposed. This result is consistent with the basic memory literature, which demonstrates that thinking about and elaborating on information improves its subsequent recall. When they encounter events that are unexpected, individuals high in need for cognition tend to spontaneously generate explanations to account for such events. Individuals low in need for cognition, on the other hand, generally lack the motivation to engage in such effortful explanatory processing.

Their willingness to exert themselves cognitively can often help people high in need for cognition avoid some common judgmental biases. Research indicates that a higher need for cognition can assist individuals in overcoming the fundamental attribution error—the tendency to attribute another's behavior to dispositional causes (i.e., to his or her unique qualities) even when clear situational factors were present that would have caused most people to behave similarly. The fundamental attribution error is known to be most severe when people fail to deliberately and effortfully consider the role of the situation in generating explanations for the behavior of others. Because they are more disposed to engage in this kind of processing, those high, as compared to low, in need for cognition will make attributions that more appropriately reflect the influence of situational variables.

The factors that lead people to change their attitudes seem to depend heavily on their need for cognition. Individuals high in need for cognition respond best to strong arguments that are cogent and backed up with compelling evidence. They scrutinize and reflect carefully on the presented arguments, and to the extent that their thoughts about the message are on balance favorable, they will modify their attitude in accordance with the message. Because assessing argument quality requires considerable cognitive effort, people low in need for cognition rely instead on more heuristic cues, such as the expertise of the communicator or the source of the message, to help them decide whether to agree or disagree with the message.

It should be noted that these differences in need for cognition can be moderated by the demands of the situation. When a situation strongly calls for effortful cognitive processing, people low in need for cognition are quite capable of matching the quality and quantity of thinking exhibited by people high in need for cognition. Similarly, some situations require minimal cognitive engagement to negotiate; in such instances, even individuals high in need for cognition may refrain from cognitively exerting themselves.

SEE ALSO *Attitudes; Persuasion*

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G. Daniel Lassiter

NEEDS

Human needs are advocated, rejected, or problematized by different groups of scholars. This essay deals only with the first group. For surveys of "rejectors" and "problematizers" see Doyal and Gough (1991) and Springborg (1981), respectively. Human needs are grounded in human nature as Williams (1987, p. 101) and Gasper (2002, section 6.3) argue. Márkus (1978) systematizes Marx's views: Human beings distinguish themselves from animals as their vital activity, work, is oriented toward need satisfaction through mediations (*tool-making animal*), a view confirmed by modern paleoanthropologists (e.g., Leakey 2001). Through work humans become *universal natural-historical beings* capable of transforming all natural elements into objects of their needs and activities and of developing their *human essential forces* (needs and capacities) and creating themselves. Through work, which breaks the animal subject/needs-object fusion and makes human conscience and self-conscience possible, humans become a *universal conscientious being*, as conscience expands with work objects. In work the conditions of humans as *social universal beings* are given. Work is always social: Men and women work for each other using inherited means and capacities. Lastly, human beings are *free beings* who can actualize, by their conscious decision, the objective possibilities created by social evolution.

According to Maslow ([1954] 1987, chapter 4), human needs are *instinctoid* as men and women only inherit the impulse but have to learn the other two elements of instincts (object, activity). Fromm ([1955] 1990, p. 23) argues that at a certain point of evolution, life became self-aware and action ceased to be determined by instincts. This rupture in the dominion of life by instincts is the same implied in work as a mediated activity, as tool making is not instinctual and means a huge liberty leap.

Marx ([1857] 1973) conceives needs (except biological original needs) as produced in a similar sense as products and capacities are produced. Production creates not only consumption objects but also consumption modes, consumption impulses, and the consumer himself. The historical character of human needs expresses itself in the *humanization of biological needs* and in the *creation of new needs devoid of biological roots* : for example, aesthetic and cognitive needs. Marx's conception contrasts with neoclassical economics' instrumentalist view of production at the service of the sovereign consumer and his preexistent preferences, not needs (Rothenberg 1974).

Wiggins (1998) distinguishes needs from desires/wants and defines rigorously needs and the needed object. In the following three paragraphs his ideas are explained and other viewpoints are incorporated.

Distinguishing needs from desires/wants. Needs are not strong or unconscious desires (or preferences):

> Unlike desire, or want, then need *is not evidently an intentional verb*. What I need depends not on thought or the workings of my mind (or not only on this) but on the way the world is. Again, if one wants something because it is F, one believes or suspects that it is F. But if one needs something because it is F, it must really be F, whether or not one believes that it is. (Wiggins 1998, p. 6)

Doyal and Gough (1991, p. 42) distinguish between *objective needs* conceived as goals universally associated with *prevention of serious harm* and *subjective wants*, which are not.

Need and human harm. The special force of the term *need* and the normative character of noninstrumental but categorical/absolute needs come from the *noncontroversial character of its purpose, avoiding human harm or human flourishing* (Wiggins 1998, pp. 9, 13). Doyal and Gough (1991, pp. 2, 39) adopt the similar concept of serious harm ("significantly impaired pursuit of goals") or flourishing but also define needs as *universal*, with which Fromm ([1955] 1990, chapter 3) and Max-Neef, Elizalde, and Hopenhayn (1986, p. 27) agree: If all human beings have the same capacity to suffer serious harm or to flourish, all have human objective basic needs conceived as universalizable goals, Doyal and Gough argue. Fromm and Maslow identify the serious consequences of unsatisfied needs as physical or mental disease: For example, Fromm ([1955] 1990, pp. 30–36) identifies *narcissism* (which in its extreme forms is equivalent to insanity) as the consequence of the insatisfaction of the need for intimate relations.

On the definition of the needed object and needs. Wiggins defines the object needed: "A person needs x (absolutely) if and only if, whatever morally and socially acceptable variation it is … possible to envisage occurring within the relevant time span, he will be harmed if he goes without x" (1998, p. 14). He also defines needs as "*states of dependency (in respect of not being harmed)*, which have as their proper objects things needed" (1998, p. 16). This distinction of satisfiers and needs is made by many

authors, and Max-Neef et al. (1986, pp. 41–43) also distinguish satisfiers from goods as different analytical spaces in the sense of spaces developed by Amartya Sen (1983, p. 335). Orthodox economists, and paradoxically Sen (1985), usually restrict satisfiers to goods and services, whereas Lederer (1980) identifies objects, relations, and activities as satisfiers and Boltvinik (2007), on the base of Márkus's description of Marx's conception of human nature and of Max-Neef's satisfiers and needs matrix, has identified seven types of satisfiers: goods; services; activities; relations; information, knowledge and theories; capacities; and institutions.

Needs constitute what is called "thick ethical concepts," speaking of which "factual description and valuation can and must be entangled" (Putnam 2002, p. 39). To use this term "with any discrimination one has to be able to identify imaginatively with an evaluative point of view." Needs, poverty, and Sen's capabilities are entangled terms in which description depends on evaluation (Putnam 2002, pp. 62–63). The entanglement thesis defeats many frequent criticisms addressed to scholars on the grounds that they incorporate values, and we can illustrate this with Fitzgerald's criticism of Maslow. When Fitzgerald (1977, p. 49) states, "Speaking on the need of self-actualisation is either tautological or unequivocally normative" (that is, it is not synthetic or falsifiable), he adopts the logical positivists tripartite classification of all judgments, which constitutes the expression of the fact/value dichotomy: (1) synthetic or falsifiable; (2) analytical (false or true by the rules of logic only, and thus tautological); (3) without cognitive meaning (ethical, metaphysical, and aesthetic judgments). He thus states that speech on the need for self-actualization is located in categories 2 or 3.

Poverty (usually defined as economic incapacity to satisfy needs) is a central field of application of the concept of needs and is dominated by economists who are advocators of the fact/value dichotomy and rejectors of the concept of needs. As they conceive that rationality cannot be present in matters of values, they assume, and insist on it all the time, that the definition of the poverty threshold (highly charged with values) is an arbitrary act by the researcher, promoting a total void on this topic and making it easy for all those who want to minimize the extent of poverty to use thresholds that deny most human needs. They are impoverishing poverty studies in the same way that they impoverished welfare economics, as Putnam (2002, chapter 3) describes.

SEE ALSO *Development Economics; Ethics; Fromm, Erich; Functionings; Marx, Karl; Maslow, Abraham; Needs, Basic; Poverty; Sen, Amartya Kumar; Universalism; Want Creation; Wants; Welfare; Welfare Economics*

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Julio Boltvinik

NEEDS, BASIC

People's basic needs include the requirements for survival, health, and fulfilment: food, water, warmth and, shelter at one extreme and self-expression and self-actualization at the other. However, questions of how to understand, identify, and meet basic needs remain somewhat contested.

Sigmund Freud (1856–1939) proposed two primal, biologically based instincts: self-preservation and fulfilling the sexual drive to procreate (Rickman 1937, p. 85), distinguishing the need for life from the death wish, or the aggressive drive to destroy or even self-destruct (Freud 1933, pp. 133–144). Carl Jung (1875–1961) transcended Freud's individualistic notion of instinct, incorporating historical and cultural factors that externally impel the person (Progoff 1953, pp. 33–39). Jung proposed that in later life a psychologically healthy person shifts from fulfilling more basic needs to a focus on self-realization, and this informed Henry Murray's ideas about self-actualization (1938).

Abraham Maslow (1908–1970), influenced by Murray, developed his hierarchy of needs in the early 1940s (Maslow 1943), based on a five-level pyramid from people's most basic physical "deficiency" needs to the most fulfilling "growth" needs, the satisfaction of each making possible the progression to the next. While deficiency needs leave the individual at rest when met, growth needs persist, continuing to motivate the person. The pyramid includes: (1) biological and physiological needs, for air, food, drink, sleep, shelter, warmth, and sex; (2) safety needs, for protection and security boundaries; (3) affection and belonging needs, for loving relationships in the family and satisfaction at work; (4) esteem needs, for appreciation by others, status, reputation, and recognition of achievements; and (5) self-actualization needs, for personal development and fulfilment. Three more levels of growth needs were added in the late 1960s (Maslow 1999), their precise origins being uncertain, however. These included (6) cognitive needs, for knowledge and understanding; (7) aesthetic needs, to create or appreciate beauty and harmony; and (8) transcendence needs, enabling other people to achieve self-actualization.

Maslow drew on anthropologist Ruth Benedict's application of the concept of synergy in cultures where cooperation was rewarded to everybody's benefit, applying this concept to work organizations to increase motivation, functioning, and production. He studied how to achieve synergy—that is, convergence—between the interests of the commercial organization and its employees through enlightened management based on humanistic theories about meeting people's needs.

Maslow's optimistic view of human nature and the satisfaction of needs informed Douglas McGregor's Theory Y (1960). McGregor proposed two contrasting managerial theories about human nature: theory X, that people meet their basic needs by expressing their fundamental selfishness and laziness; and theory Y, that they meet their needs by expressing fundamental tendencies toward being cooperative, hardworking, and productive.

From an economic perspective, John Maynard Keynes (1930) distinguished basic or absolute needs—for food and drink, for example—which are limited because they disappear once a person is satisfied, from relative needs—for advancement and superiority over other people—which are insatiable. However, more affluent people's needs to enjoy eating and drinking beyond satisfying basic appetites are widely recognized. Also, there are many further reasons why both absolute and relative needs are insatiable, such as the desire to improve one's quality of life.

Perspectives on responding to basic needs have widespread application beyond psychological work with people, including social policy, counseling, health care, social care, and education. Jonathan Bradshaw (1972) distinguishes four categories of social need: *normative*, judged according to a predetermined norm or standard; *comparative*, specified in relation to the needs of other people; *felt*, or wants experienced by people rather than judged by others; and *expressed*, as stated by people in the light of their experience. The strengths perspective developed by Dennis Saleeby (2002), involves assessing people's needs from their strengths and potential rather than simply deficits, building on their existing knowledge, skills, and resources to enable them to cope with challenges and difficulties. Person-centered assessment involves keeping individual needs at the center throughout the process of assessment and ensuring that the person's perception of his or her basic needs is always taken into consideration at every stage. In these terms, analysis of basic needs is more holistic, assessing the needs of whole person: the stage of the life course reached, the capacity of relatives, partners, and careers to respond to needs, and the resources available in the family, neighborhood, and wider environment.

Conceptions of basic needs not only cross disciplinary boundaries but also have transnational currency, although the ways these are presented may foster an illusion of global consensus rather than reflecting the reality of the contested nature of proposed responses, including those based on human rights. Basic needs derive not just from what are held to be physical or psychological imperatives but also from socially and politically constructed statements, some of which cross cultural and national

boundaries. The 1948 UN Declaration of Human Rights asserts that all people share rights and freedoms, irrespective of their age, race, birth, or other differences. Many such statements of rights translate directly into statements of human need. Thus, in Article 3, "Everyone has the right to life, liberty and security of person," the words "basic need for" could be substituted for "right to." Similarly, the 1990 UN Convention on the Rights of the Child implies that children, from prebirth to adulthood, have needs and rights over and above those of adults. Many children are more vulnerable to their basic needs not being met through poverty, homelessness, neglect, abuse, their own or their parents' disease or poor health, and lack of access to education and justice.

Needs are often presented as though they are absolute, whereas in reality their social construction differs according to countries and cultures. In the late 1970s, Frances Stewart (1985) and Paul Streeten et al. (1981) developed the Basic Needs Approach (BNA) adopted by the World Bank, aiming to benefit developing countries, conditional on introducing fiscal policy changes and tax reforms—the principle of conditionality. The Capability Approach to understanding poverty has much in common with the BNA, both going beyond the possession of commodities and acknowledging that subjective experience may be at variance with people's physical circumstances (Sen 1985, pp. 82–83).

SEE ALSO *Benedict, Ruth; Conditionality; Culture; Development; Functionings; Keynes, John Maynard; Maslow, Abraham; Needs; Want Creation; Wants; World Bank, The*

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Robert Adams

NEGATIVE INCOME TAX

A negative income tax (NIT) provides an income guarantee to families without other sources of income, but taxes away that guarantee as the family's earnings increase. An NIT is thus usually specified in two parts: (1) the guaranteed income for families with no other income; and (2) the marginal tax rate on earnings. It is a negative tax in the sense that low-income families receive a tax credit from the government rather than paying taxes to the government.

The idea of an NIT is often credited to Milton Friedman and James Tobin, who conceived it in the 1960s as a unified alternative to the complex array of means-tested cash and in-kind assistance programs that were available (and continue to be available) in the United States. They envisioned an NIT that would be administered by the U.S. Treasury as part of the overall tax system, thus eliminating much governmental bureaucracy in providing assistance to low-income families. The NIT was intended to ensure that families had adequate income regardless of their earnings while encouraging work with a lower marginal tax rate than under other means-tested programs.

Versions of the NIT were studied in four large-scale randomized experiments in the United States and one in Canada beginning in 1968. The experiments were conducted because of concerns that the income guarantee would discourage some adults from working and because of concerns about the costs of an NIT. The findings generally confirmed the expectations that higher levels of guaranteed income would reduce work effort and that lower marginal tax rates would encourage work. The results were especially strong among married women. However, the labor supply response in the NIT experiments was modest compared to prior nonexperimental estimates. Perhaps the most surprising result—and one of the most controversial

and disputed—was that the NIT encouraged married couples in Seattle and Denver to break up.

Although the NIT in its original form has not become policy, the idea and the randomized experiments inspired a number of similar policy changes and additional randomized experiments. The Earned Income Credit in the United States is similar to the NIT but aims to reduce work disincentives by providing a refundable income tax credit only to families with earnings and by increasing the tax credit with earnings up to a certain point. Two Canadian provinces tested what was essentially an NIT with a work requirement that subsidized only those who worked 30 hours or more per week. Earned income disregards in many welfare and other systems use the NIT's basic notion that reduced tax rates will encourage work by slowly reducing means-tested benefits when earnings increase. In Germany a Targeted Negative Income Tax has been designed to encourage work among the long-term unemployed.

SEE ALSO *Income Maintenance Experiments*

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Charles Michalopoulos

NEGATIVE REINFORCEMENT

SEE *Reinforcement Theories.*

NEGOTIATION

Resolving a family dispute, concluding a business deal, settling a lawsuit, or agreeing to end hostilities all involve negotiation. Negotiation is a common technique for resolving disagreements and conflicts that arise between individuals, businesses, or nation-states. It is particularly important in the political arena, where violence has been and continues to be used as a way to reconcile competing values and interests. Negotiation is a nonviolent method of regulating political competition and resolving conflicts that competition inevitably creates. It is a prominent feature of democratic political systems and the democratic norm of bounded competition. Likewise, negotiation in international politics is a technique of regulated argument between nation-states seeking to arrive at a mutually acceptable outcome on an issue or issues of common concern. It is an important function of diplomacy and central to the functioning of the international system.

Negotiation is a process of communication between two or more parties whose interests in an issue or issues overlap or conflict. As a process, it provides a channel for identifying common or conflicting interests and reaching agreement on collective action or compromise. The negotiation process can be either competitive (there are winners and losers as a result of negotiations) or collaborative (the outcome of a negotiation is one of mutual gain or "win-win"). Negotiations that are primarily competitive in approach are often conceptualized as a game or strategic contest like chess or checkers. The fundamental objective of the participants in this kind of negotiation is to prevail over their opponent within mutually accepted rules and procedures. Positional bargaining is the tactic commonly associated with this approach. Negotiations that are collaborative in approach emphasize common interests as the basis for a dialogue. The goal of the participants in this kind of negotiation is to achieve a result that is minimally acceptable to all involved. The tactic identified with this approach is called interest-based bargaining. While the competitive approach to negotiations is the most prevalent, the collaborative approach is considered to produce better and more lasting outcomes. Whether a negotiation is competitive or collaborative depends on a number of contextual and situational factors, such as the negotiation environment or setting, the issues and actors involved, and the strategies or bargaining tactics employed.

It is common to think of the negotiation process in terms of stages or phases. There are a variety of ways of dividing the negotiation process into its component parts. One popular framework divides the process into three stages—the prenegotiation stage, the formula stage, and the detail stage. Another divides the process into five phases—preparation, beginning, middle, end, and implementation. In any case, negotiations are predicated on recognition that an issue under contention is negotiable. For negotiations to take place, the parties in conflict must agree on the possibility that a negotiated settlement may prove advantageous to all concerned. This aspect of the preparatory or prenegotiation stage is perhaps the most difficult, particularly in conflicts where the stakes are high. Once the need and willingness to negotiate is established, two other matters are then taken up—the agenda and the procedures. Setting an agenda and establishing the procedures for talks can also be very difficult and contentious though less so in matters of low importance or if the stakes are low. After the agenda (what issues are to be discussed and in what order) and the procedures (the format, venue, the level and composition of delegations, and

timing) have been settled, the formal negotiations commence. In this stage of the process, the parties through designated negotiators engage in the give-and-take of the negotiation process. In many cases, negotiators will initially try to agree on the broad principles of a settlement (the formula stage) followed by negotiations on the details of the agreement (the details stage). Ostensibly the negotiation process ends when an agreement (e.g., a contract, treaty, protocol) is signed, though it is argued that the process often extends to a postnegotiation or implementation stage.

Although the negotiation process in the international arena displays many of the same characteristics and operates according to many of the same rules developed 300 years ago, it has become much more complex as the international system has evolved. Today, international negotiations, which are predominantly multilateral and conducted within established international institutions, such as the United Nations, the World Trade Organization, and the International Monetary Fund, address a host of contentious global issues (e.g., climate change, human rights, HIV/AIDS) beyond the traditional military-security concerns (e.g., arms control, Arab-Israeli conflict) and involve a vast number of nonstate actors (e.g., nongovernmental organizations, networks of experts or specialists—so-called epistemic communities, multinational or transnational corporations) active in the international arena. These and other situational factors have altered the dynamics of international negotiations, making an already complicated, arduous, and time-consuming process even more so. At the same time, new and innovative negotiation forums have developed—so-called track two negotiations in which individuals or nongovernmental organizations rather than government officials are the negotiators—that supplement or complement traditional "official" international negotiations.

SEE ALSO *Civil Society; Conflict; Diplomacy; Foreign Policy; Game Theory; Government; International Monetary Fund; International Relations; Legal Systems; Nation; Nongovernmental Organizations (NGOs); North Atlantic Treaty Organization; Partition; Peace; Peace Process; Secession; Settlement, Negotiated; United Nations; World Trade Organization*

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James P. Muldoon Jr.

NEGRITUDE

SEE *Pan-Africanism; Socialism, African.*

NEGRO

The term *Negro* emerged as a social and political marker for Africans south of the Sahara in the fifteenth century. In its earliest usage it generally referred only to color and could be applied to anyone viewed as black, nonwhite, or non-European. *Negro* derives from the Latin *niger*, meaning "black," and became *Negro/a* in Spanish and Portuguese. (The letter *a* signifies the grammatical feminine form of the word.) When the Portuguese began to enslave Africans in Portugal in the 1440s, the term became synonymous with "slave" and was used by the Spanish as they carried slaves from West Africa to New World societies at the beginning of the sixteenth century.

The meaning of the term was modified by the histories of slavery in the New World, and as it entered other languages its meanings percolated through the social realities of each society. That is to say, while the denotations were similar, the connotations varied over time and space. However, the creation of mixed-race populations through miscegenation required new labels that connoted different statuses, particularly for those who were free.

By the beginning of the seventeenth century, *Negro* was synonymous with "slave" in Latin America. By the nineteenth century, however, the number of free blacks and mixed-race groups was so great that a *régimen de castas* (caste regime) was enacted to govern blacks and mixed-race groups. These laws restricted them to an inferior legal status, reserving social and economic mobility for whites. New terms allowed different groups to distance themselves from the negative implications of *Negro/a*, which came to signify poverty, crime, and many forms of degeneration. The term *prado/a* referred to mixed-race or brownness. There was also a long list of other terms such

as *mulatto*, *mestizo*, or *moreno* that identified a nonwhite heritage but in a diluted form.

The meanings of these terms cannot be uncoupled from the struggle over citizenship that came to most of these societies in the late nineteenth century and early twentieth century. However, the leaders and intellectuals in these countries believed fervently in racial determinism and "had no doubts that the historical trajectories of individuals, nations, and peoples were irrevocably determined by their 'racial' ancestry" (Andrews 2004, p. 118). In spite of the claims of universal citizenship that took hold after slavery, the *Negro/a* or black had to either disappear or be transformed into an insignificant entity. Most of these nations therefore embarked on a campaign of whitening through immigration to create "white republics" rather than mixed-raced ones. These campaigns failed, but the effort to dilute blackness through narratives of brownness or *mestizaje* ("race mixing") continues. But for the black population, the effort to claim racial identity and push for acceptance into the larger society found expression in labor struggles but also resulted in an ambivalent relationship to the term *Negro/a* or blackness. For example, in Brazil and Colombia organizations have emerged that celebrate blackness, and efforts are in place to develop political representation based on race. Yet blacks struggle over their desire to be accepted as citizens, and as blacks some embrace *mestizaje* as a way to avoid dilemmas associated with the term *Negro/a*. One example of the tensions that remain over blackness is in the use of the diminutive form *negrito/a*. This is a term of endearment and affection in societies where the term *Negro/a* is a pejorative label.

In North America the term *Negro* migrated into English from Spanish and Portuguese and was used to identify African people both slave and free. By the mid-eighteenth century the term was synonymous with "slavery" even though many blacks were free. By the nineteenth century *Negro* was corrupted to the even more sinister slur *nigger*. According to the historian Michael Gomez, the term *Negro* was not accepted by Africans, who generally continued to use the term *African* or their memory of specific ethnic terms such as Ibo or Yoruba. Though these practices varied in degree from place to place, evidence suggests that blacks effectively resisted a racial classification until around 1830, when a black consciousness emerged in response to the continued degradation of slavery and the attempt to send free blacks back to Africa. At this moment of history blacks embraced the term *colored* or *Negro* instead of *African* as an effort to claim their citizenship and push their demand for an end to slavery.

By the latter half of the century, after slavery's demise, the term *Afro-American* competed with *Negro* for most blacks as a term of both citizenship and a global identity. The debate over naming was shaped by the massive denigration of African people and the poverty and powerlessness of Africa in the colonial age. The term *colored* was rejected in favor of *Negro*, which was a term of validation for many. Alexander Crummell, his political pupil W. E. B. Du Bois, and the intellectuals in the American Negro Academy campaigned to have the term capitalized. Black nationalists pushed for the term *Anglo-American*, while many women's organization registered a preference for *Afro-American*.

In the first half of the twentieth century disenfranchisement, lynchings, and segregation became codified in law and in practice. In the context of the apartheid system of the South known as Jim Crow, other nonwhites were also labeled as *Negro*. These included Chinese, Native Americans, Asian Indians, and Japanese, all of whom were subjected to the same Jim Crow laws as African Americans. These practices were challenged in the courts and in the culture.

By mid-century the political climate shifted with the rise of the civil rights movement, and with this shift the term *Negro* fell out of favor. For the postwar generations it became a term of conservatism and complacency. The civil rights movement embodied a sense of black pride, and with the rise of decolonization in Africa, the desire to claim both blackness and an African identity shaped the battle over name. In the early twenty-first century *Negro* is generally used by blacks to reference a person who is politically unacceptable, and most, though not all, insist upon *African American*, rejecting the more racially charged *Negro*. But ambivalence over hyphenated terms remains as well as discomfort and confusion over the term *African*. An increasing minority rejects the African designation and insists on only the term *American*. Almost no one uses the term *Negro*.

SEE ALSO *Blackness; Civil Rights Movement, U.S.; Jim Crow; Moreno/a; Mulattos; Racial Slurs; Racism; Slavery; Whiteness*

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Tiffany Ruby Patterson

NEHRU, JAWAHARLAL
1889–1964

Born in November 1889, Jawaharlal Nehru would become India's first prime minister.

Nehru's ancestors were Kashmiri Brahmins who had settled in Allahabad, in northern India. His father, Motilal Nehru, was a successful barrister and a prominent figure in the Indian National Congress (INC), which was established in 1885.

In 1905 Nehru was sent to England, studying first at Harrow, then at Cambridge University, and finally joining the Inner Temple and passing the Bar examinations. By 1905 the INC had begun to shift from a gradualist "moderate" politics to a more "extremist" anti-colonial stance as evinced by Bal Gangadhar Tilak (1856–1920) among others. Jawaharlal, unlike his father, found himself more in sympathy with this militant position. Nevertheless, during the years following his return to India in 1912, Nehru entered the legal profession through his father's chambers. By 1917 he joined the Home Rule League movement guided by the "extremist" Tilak and the theosophist Annie Besant (1847–1933).

But it was events in 1919 that drove Nehru into deeper political involvement with congress's politics under the leadership of Mohandas Karamchand Gandhi (1869–1948). First, the colonial government decided to continue wartime ordinances into peacetime under the Rowlatt Act, which would allow the British to hold Indian political agitators without trial. Gandhi launched an all-India civil disobedience campaign in protest. Second, while support for the campaign was uneven, General Reginald Dyer's orders on April 13 to fire without warning upon an unarmed crowd of villagers galvanized Indian opposition. The villagers, ignorant of martial law regulations, had assembled to hear speeches in the city of Amritsar. Although Dyer was dismissed from the army, the House of Lords virtually exonerated him when it passed a motion in his favor. For Nehru, this was a sign that it was time for a more assertive struggle to achieve freedom.

Nehru became an avid supporter of Gandhi and joined the non-cooperation movement launched by him in 1920. In February 1927, on a personal visit to Europe, Nehru attended the International Congress against Colonial Oppression and Imperialism held in Brussels. Here he encountered the Marxist and socialist ideas of other delegates and a few months later he was invited to the Soviet Union to join in the tenth anniversary celebration of the Bolshevik Revolution. The socialist reforms Nehru witnessed left a profound impression on him and convinced him that as another largely agrarian country with an impoverished and mostly illiterate population, India could usefully emulate the Soviet experiment.

Returning with an arsenal of ideas, Nehru urged a more comprehensive struggle against the British. His ideas involved supporting an increasingly radical peasant agitation; a distancing from the conservative landlord and industrial supporters of the congress; and reforms such as the abolition of landlordism, socialization of the land, planned economic development, and state acquisition of key industries for the future. These ideas, however, brought Nehru into disagreement with Gandhi, who feared the class struggle they would provoke might fracture Indian unity. While they continued to diverge on many of these issues, Nehru desisted from openly challenging Gandhi's political leadership in the interests of maintaining a consolidated anti-colonial movement.

With the British "transfer of power" on August 15, 1947, Nehru became India's prime minister. Assuming power amid the devastating violence of the partition of British India into the nation-states of India and Pakistan, Nehru left the imprint of his political ideals as he sought to steer the new country into calmer political seas. Among Nehru's most significant legacies was to set India on the path of democracy in that elections rather than military coups produced changes of governments. Another of Nehru's bequests was the Indian state's adoption of the ideal of secularism, defined not as a "separation of church and state" but as the commitment by the government to treat every religion equally. There was little resistance to this principle in the aftermath of the religious violence surrounding partition and Gandhi's assassination at the hands of a Hindu supremacist on January 30, 1948.

However, Nehru is also credited with perpetuating the colonial government's over-centralized state structure that he had so vociferously criticized. Nearly 200 articles of the British-instituted Government of India Act of 1935 passed into the constitution of independent India. The imbalance of power between the central and provincial (called states in independent India) governments, in favor of the former, was retained as was the bureaucracy, the empire's "steel frame." The Gandhian ideal of a non-party government with a weak center and power devolved to "village republics" was discarded in substance.

On the economic front, although Nehru had compromised earlier with Gandhi, he now sought to apply many of his socialist ideas. However, as prime minister, he also had to take into account the wide variety of demands on the state as well as India's pre-existing capitalist economic framework. While still adhering to his principle of planned development Nehru opted for a mixed economy in which the government would only control its capital goods and strategic industries. Through a series of five-year plans, heavy industry was given priority over con-

sumer goods manufacture, and import substitution policies were pushed to attain self-sufficiency. But these measures took their toll in that the drive for self-sufficiency further isolated India's economy and pushed up consumer prices. State-owned industries were maintained despite their often demonstrated inefficiency while large Indian capitalists, although firmly regulated, monopolized the domestic market, often dumping substandard consumer goods on it.

With regard to land reform too, Nehru's success is ambivalent. Among his first measures was to abolish landlordism and set land ceilings in the early 1950s. Yet the large dispossessed landlords were given compensation, and although land reforms were administered not from the center but by the states, prosperous peasant groups who dominated the Congress party at the provincial level increased the maximum acreage that could be held, to their advantage in many instances. Moreover, by exploiting loopholes in the legislations, many landlords transferred portions of their estates into the hands of family members or retainers. In the end, landless laborers benefited little from the agrarian reforms despite Nehru's commitment to removing the economic inequity of the colonial era.

The new nation-state of India was also pulled into a world of other nation-states. Nehru's achievements here, gaining him international renown, lay in steering India between the Scylla and Charybdis of the cold war blocs led by the United States and the Union of Soviet Socialist Republics through the principle of "Non-Alignment." A term coined by Nehru, non-alignment was a principle put into international play along with leaders such as Gamal Abdel Nasser (1918–1970) of Egypt and Josip Broz Tito (1892–1980) of the former Yugoslavia. However, although advocating principled neutrality, Nehru's policies were often viewed with suspicion by many political leaders and observers, especially those aligned with the Western bloc—and especially when he refused to condemn the Soviet invasion of Hungary in 1956.

Perhaps Nehru's gravest political crisis was his country's defeat in the 1962 Sino-Indian war provoked by border disputes emanating from the colonial past. The conflict itself was an embarrassing repudiation of a "friendship" that purportedly began when India became the first country to recognize Mao Zedong's People's Republic of China established in 1949. Nehru was not only brutally disappointed by China's "aggression," but for the remaining two years of his life some of Nehru's domestic policies produced challenges to his leadership in parliament until his death on May 27, 1964.

SEE ALSO *Anticolonial Movements; Chinese Revolution; Cold War; Congress Party, India; Decolonization; Democracy; Gandhi, Indira; Gandhi, Mohandas K.; Indian National Congress; Industrialization; Land Reform; Landlords; Mao Zedong; Neutral States; Partition; Planning; Secular, Secularism, Secularization; Socialism*

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Mridu Rai

NEIGHBORHOOD EFFECTS

Researchers employ the concept of neighborhood effects to explore the causes of social pathology among the urban poor and minorities in terms of the spatial dynamics caused by segregation, deindustrialization, and government neglect. In its various forms, including the "culture of poverty" (Lewis 1961), "the urban underclass" (Wilson 1987), and "culture of segregation" (Massey and Denton 1993), research on neighborhood effects demonstrates (1) how structural factors and racism explain the formation of poor neighborhoods, and (2) how these neighborhoods become the basis for an urban subculture that further marginalizes the poor. This research makes assumptions about the interrelations of structural factors (e.g., jobs and housing markets) and culture that under closer scrutiny raise more questions than answers. In addition, this research tends to homogenize the "culture" of urban poverty rather than exploring its complexities and constitutive role in producing both popular and dominant cultures.

As Catherine Garner and Stephen Raudenbush (1991) note, the first question that one must ask when

looking at neighborhood effects is, "What constitutes a neighborhood?" How does one compare a vibrant "neighborhood" such as Harlem with a marginalized African American community in another city (Newman 1991)? In developing statistical analyses of segregation many researchers, such as Douglas Massey and Nancy Denton (1993), rely mainly on census tract data. Massey and Denton are careful to mention the limitations of analysis based on census tract information. However, in terms of defining the impacts of neighborhood on "culture," a qualitative approach that takes into account the specific history, politics, and race relations that define neighborhoods is needed. This does not mean, however, that qualitative research alone can provide an accurate understanding of urban culture.

Based on research in Mexico, Puerto Rico, and Cuba (primarily during the 1950s and 1960s), Oscar Lewis sought to understand how urban poverty generated a series of social pathologies among the poor, including sexism, fatalism, and an inability to plan for the future. In their well-known 1970 refutation of the application of the culture of poverty theory, Edwin Eames and Judith Goode argued that many of the characteristics Lewis associated with poverty, including matrifocal families and mutual aid, are rational adaptations. The continuing prevalence of poverty, they stated, must be understood in terms of restricted access to and attainment of job skills. Studies that pathologize the poor have received justified criticism for privileging middle-class values, being vague about the overall characteristics of poverty and their interrelations, and viewing matrifocal households as a cause rather than a result of poverty. As Katherine S. Newman (1991) pointed out, matrifocal households also may be seen as part of a larger strategy of maintaining large networks of kinship ties in order to alleviate economic insecurity. Following the lead of Carol Stack's path-breaking book *All Our Kin* (1974), Newman emphasized how social actors are not only adapting but also creating notions of family and community that both alter and reproduce traditional middle-class ideals of the nuclear family.

This point about family structure is crucial because William Julius Wilson (1987) attributed many of the characteristics of the culture of the "urban underclass" to the prevalence of female-headed households. These households, according to Wilson, are in turn the result of the lack of job opportunities for African American men. Their high rate of unemployment due to deindustrialization, combined with the departure of the African American middle class from the inner city, has created a subculture of poverty that generates single-parent families with no middle-class role models. Poor African American neighborhoods are now "hermetically sealed" from the middle-class values that can lead to prosperity. This argument, however, must be subject to closer scrutiny that questions the mechanical relationship between economics and culture (again, compare Harlem to a more "isolated" neighborhood). Does the presence of middle-class families, for example, provide positive role models? Indeed, studies have shown that in many cases the middle-class disdain their poorer neighbors. And what about the kinship, work, recreational, educational, and other ties that connect urban neighborhoods? How do we account for the strength of churches in many poor neighborhoods?

In another statistically based analysis, Massey and Denton (1993) argued that segregation has led to a subculture of linguistic isolation (black English), low school achievement, and an overall oppositional stance towards the dominant culture. The authors critiqued Wilson's work by arguing that segregation, not joblessness, is a stronger causal factor in the creation of an urban underclass. For example, Wilson emphasized that between 1967 and 1987 Chicago lost about 60 percent of its manufacturing jobs. Massey and Denton argued that deindustrialization alone does not explain residential patterns. The authors showed that the spatial aspects of poverty must be understood in terms of the increase, from 1970 to 1980, in African Americans living in geographically concentrated neighborhoods. Massey and Denton's study is powerful in demonstrating how housing discrimination, poor job opportunities, and the lack of public services has severely affected the urban poor. Like Wilson, they then attempted to show a causal relationship between these factors and the formation of an urban subculture. However, one could argue that the formation of an oppositional culture (a common feature among youth of any class) is a response to a number of factors, including the production of popular cultures. Indeed, many elements of inner-city culture, including music and dance, exist in a complex relationship with dominant cultures.

Research by Wilson, Massey, and Denton is persuasive in exploring the structural factors that lead to joblessness and segregation. For all of these authors, however, the notion of culture is undertheorized. Like Lewis with his "culture of poverty" theory, these authors attempt to articulate a mechanical relationship between economics and poverty that does not do justice to the richness of the urban experience. What is needed is fine-tuned ethnographic research that can better understand the variety of ways in which the urban poor have survived and thrived in U.S. cities.

SEE ALSO *Anthropology, Urban; Culture; Culture of Poverty; Economics, Urban; Ethnography; Female-Headed Families; Industrialization; Lewis, Oscar; Oppositionality; Pathology, Social; Popular Culture; Poverty; Role Models; Segregation, Residential; Sociology, Urban; Underclass; Urban Studies*

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Miguel Diaz-Barriga

NEIGHBORHOODS

The concept of neighborhood is widely used throughout the social sciences as a geographical unit of analysis, and internationally as a planning concept. Neighborhoods can be diverse, containing a mix of ethnic and socioeconomic status groups; or they can be extremely homogenous, ranging from low-income minority areas to gated communities denying entry to undesired visitors.

Neighborhoods are residential districts located in urban areas. Historically, neighborhoods tended to have developed in an unplanned fashion. Throughout the twentieth century there have been increasing efforts to plan neighborhoods as cohesive residential areas that contain basic services, parks, shops, schools, and other amenities. Although the term *neighborhood* is typically used to identify self-contained or socially cohesive areas, it is often difficult to determine neighborhood boundaries for the purposes of research. Residents themselves often harbor very different ideas about the precise boundaries of their neighborhood, and the character of their neighborhood. In the U.S. and Canadian census, units that approximate neighborhoods are called census tracts.

Much contemporary thinking about neighborhoods in the social sciences is shaped by and offers criticism of the Chicago school, a group of sociologists who worked at the University of Chicago during the early twentieth century; earlier work, by Friedrich Engels (1892 [1845]) on working-class slums in England, has also been influential. In North America social scientists have traditionally focused on the segregation between neighborhoods according to race, ethnicity, and socioeconomic status. In 1988 the sociologists Nancy A. Denton and Douglas S. Massey illustrated that segregation can be statistically measured across five different dimensions: evenness, exposure, concentration, centralization, and clustering. Each dimension emphasizes a different characteristic of segregation. Today, countless international studies exist that examine segregation across neighborhoods by race, ethnicity, class, language, religion, and other categories.

Social scientists have mixed perspectives on segregation. Ceris Peach (1996), for example, uses the terms *good* and *bad segregation* to distinguish between processes of discrimination and violence against minorities, and voluntary residential association. On the one hand, discrimination by real estate agents and financial institutions can segregate minorities into neighborhoods with inferior schools, housing stock, infrastructure, public services, and shopping opportunities. In addition, more affluent residents and members of the majority population sometimes decide to move out of the neighborhood once a critical mass of minority population has moved in—a phenomenon known in the United States as "white flight." The so-called spatial mismatch hypothesis further suggests that living in inner-city neighborhoods denies many members of racial minorities access to an increasingly suburban job market, resulting in high levels of unemployment. On the other hand, their concentration in particular neighborhoods can offer social and emotional support for minorities, facilitating the establishment of ethnic and institutional networks. Sometimes these positive developments are the result of people, living in segregated conditions, making the best of those circumstances. Compared to the classical model described by the Chicago school, segregation of African American and Latino minorities in the United States after around 1950 tends to be more permanent. In the case of newly arriving immigrants, spatial concentrations can help newcomers integrate into society. In North American cities of the twentieth century such immigrant reception areas were typically located in inner cities. Today, an increasing number of immigrant neighborhoods are located in the suburbs of large metropolitan areas.

In North American cities, neighborhoods tend to undergo a typical life cycle. When initially established they contain new housing stock, state-of-the-art infrastructure, and high-level services, and are inhabited by relatively well-off families. As housing stock and infrastructure age, the socioeconomic status of neighborhoods also declines. At the low point of the cycle there is severe decay and property abandonment, at which point some neighborhoods gentrify, that is, they regenerate through the investments made by relatively affluent groups. Gentrification usually is initiated by individuals (often artists) who renovate cheap housing stock, give

their neighborhood a fashionable image, and thereby attract more wealthy groups. Recent scholarship has recognized, however, that gentrification is not part of a natural cycle, as implied by some research that followed the Chicago school, but rather a social process. Over the last few decades, governments and development agencies have attempted to actively facilitate and plan the gentrification of inner-city neighborhoods. A consequence of gentrification can be the displacement of poorer residents, the homeless, and other vulnerable groups. Processes of gentrification also assume very different characteristics and have different social and economic consequences in different parts of the world.

A body of research suggests that the social contexts of neighborhoods themselves shape the behavioral norms and attitudes of the residents. These so-called "neighborhood effects" are responsible for the persistence of inner-city social problems, including crime, drug abuse, teenage pregnancy, dropping out of school, and poor labor-market performance among youths. Researchers theorize that negative neighborhood effects operate through three distinct mechanisms: local teenage peer groups, negative adult role models, and local schools and other institutions that fail to provide adequate support to residents. To diminish negative neighborhood effects, social scientists have advocated mixed-income housing and housing-dispersal policies, which enable poor and minority families to locate outside of segregated neighborhoods. However, the neighborhood effects theory has been criticized for neglecting processes of social and cultural exclusion that affect individuals and neighborhoods alike. It may be that dispersal and mixed-income policies diminish social isolation only because they stimulate social assimilation to "mainstream" cultural practices. In addition, quantitative research on neighborhood effects has been criticized for making speculative inferences of causality based on statistical correlations, whereas qualitative research has been criticized for making unsubstantiated cultural claims based on specific cases and few actors.

Recent work by social scientists has emphasized the cultural construction of neighborhood identity. Kay Anderson's pathbreaking work *Vancouver's Chinatown* (1991) illustrates how that neighborhood has assumed different cultural identities throughout history based on the changing role and status of the Chinese minority in Canadian society. Contemporary research shows how struggles between social groups over the space and the aesthetical appearance of a neighborhood can facilitate the racialization of social groups and inflame ethnic tension and social conflict. Cultural representations of neighborhoods can also lead to the social exclusion or privileging of residents. According to this research, the construction of race, ethnicity, and other cultural identities are deeply entangled with neighborhood processes.

SEE ALSO *Lewis, Oscar*

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Harald Bauder

NEOBEHAVIORISM

SEE *Tolman, Edward.*

NEOCLASSICAL GROWTH MODEL

The neoclassical model of long-run economic growth, introduced by Robert Solow (b. 1924) and Trevor Swan (1918–1989) in 1956, analyzes the convergence of an economy to a growth rate set by exogenous population increase and, as added the following year by Solow (1957), an exogenous rate of technical change. Earlier growth models by R. F. Harrod (1900–1978) in 1939 and Evsey Domar (1914–1997) in 1946 (both reprinted in Stiglitz and Uzawa 1969) had assumed fixed coefficients in products, which the Solow-Swan neoclassical model generalized to allow for substitution between capital and labor. The term *neoclassical* reflected the model's concern with long-run equilibrium growth of potential output in a fully employed economy, abstracting from short-run Keynesian issues of effective demand.

The neoclassical growth model assumes the existence of an aggregate production function $Y = F(K, N)$, where Y is aggregate output, K is the capital stock, and N is the number of workers. The production function has constant returns to scale (if K and N change in the same proportion, Y will also change in that proportion), with positive but diminishing marginal products of capital and labor. Dividing by the number of workers N, output per capita $y = Y/N$ is a function of the capital/labor ratio $k = K/N$:

$$y = f(k)$$

and y = c + i, where c = C/N is consumption per capita and i = I/N is investment per capita. The per capita consumption function is assumed to be c = (1–s)y, where s is the marginal propensity to save and (1–s) is the marginal propensity to consume. In equilibrium, (desired) investment is equal to saving, i = sy = sf(k).

In the steady-state equilibrium, per capita output (y) and the capital/labor ratio (k) do not change, and total output Y grows at the rate n, the exogenous growth rate of the population and labor force (N). Required gross investment in the steady state will be just enough to cover depreciation (replacement investment) and to equip each new worker with the same amount of capital that existing workers have. Required investment per capita in the steady state is thus (n + d)k, where n is the rate of population growth and d is the depreciation rate. The steady state equilibrium capital/labor ratio k* will be given by sf(k*) = (n + d)k* and steady state output per capita will be y* = f(k*). Because f, the rate of change of output per capita with respect to a change in the capital/labor ratio, is positive but decreasing (an increase in the capital/labor ratio raises output per worker, but not by as much as the previous increase of the same size), if k is initially less than k*, investment and saving will exceed the investment needed to keep k constant, and the capital/labor ratio k will increase until it reaches k*. If k is initially greater than k*, investment and saving will be less than the investment needed to keep k constant, and k will decrease until it is equal to k*.

Solow allowed for neutral technical change by writing the production function as Y = A(t)F(K, N), where A(t) is an index of total factor productivity at time t. By calculating how much growth was due to growth of capital and labor inputs, and subtracting these estimates from the observed growth rate, Solow (1957) obtained a measure of the rate of change of A (the Solow residual), an implicit measure of technical change. Later studies adjusted for improvements in the quality of capital and labor inputs (such as better educated and trained workers), and thus reduced Solow's high original estimates of how much economic growth was due to technical change.

In the neoclassical growth model, the growth rate is independent of the savings rate, and depends only on population growth and technical change, both taken as determined exogenously outside the model. A higher propensity to save leads to a higher level of output per capita in the steady state, but not a higher steady state growth rate. Faster population growth reduces per capita output and consumption in the steady state.

Neoclassical growth theory was sharply criticized by the Cambridge school, building on works on capital accumulation and income distribution by Joan Robinson (1903–1983) and Nicholas Kaldor (1908–1986), both published in 1956 (see Harcourt 1972 on the Cambridge capital controversies between Post-Keynesians at Cambridge University and neoclassical economists, such as Solow, at Massachusetts Institute of Technology). The Cambridge theorists objected to explaining the return on capital by differentiating an aggregate production function with respect to the capital stock K, measured as so many identical machines. They denied the existence of an aggregate production function, and argued that since capital goods are heterogeneous, there is no physical measure of aggregate capital that is independent of prices and rates of return, hence of income distribution (see papers by Robinson, Kaldor, Richard Kahn, and David Champernowne reprinted in Stiglitz and Uzawa 1969).

Beginning with Kaldor's and James Mirrlees's technical progress function and with Kenneth Arrow's "learning by doing," which makes total factor productivity depend on cumulative past investment (both reprinted in Stiglitz and Uzawa 1969), economists have tried to dispense with the exogeneity of technical change in neoclassical growth theory. Unlike the neoclassical growth model, endogenous growth theory ("new growth theory"), pioneered by Paul Romer, models improvements in productivity as depending on investment in research and development and, through education and health care, in human capital.

The neoclassical growth model implies that, if the same technology is available to all countries, every country will converge to a growth rate that differs from that of any other country only by the difference in their rates of population growth. Whether such convergence of growth rates has been observed is controversial. Endogenous growth theory, by dropping the assumption of diminishing returns to investment, does not follow the neoclassical growth model in predicting convergence (see the symposium by Romer et al. 1994).

Criticisms of the Solow-Swan neoclassical growth model, whether directed at the aggregate production function with a single capital good or at the exogeneity of technical change, view the model as an oversimplified parable. It was, however, the simplicity of the neoclassical growth model that kept it tractable, and made it so useful and influential as a framework for organizing thinking about economic growth.

SEE ALSO *Cambridge Capital Controversy; Golden Rule in Growth Models; Growth Accounting; Immiserizing Growth; Optimal Growth; Saving Rate; Solow Residual, The; Solow, Robert M.; Technological Progress, Economic Growth*

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Robert W. Dimand

NEOCOLONIALISM

The term *neocolonialism* came into use in the 1960s as former European colonies in Africa were gaining their independence. It describes a continuing relationship between Western countries and former colonies that is said to offer the Western world many of the advantages of colonial rule without many of the costs. Kwame Nkrumah (1909–1972), the first president of Ghana, was apparently the first person to use the term in print, in his 1965 study *Neo-colonialism: The Last Stage of Imperialism*. Nkrumah was particularly concerned about the economic relationship between former colonial masters and their African dependencies, and focused on the role of the mining industry. Nkrumah's analysis is also more frankly Marxist than other, later critics who use the term.

The term has come to cover a broad range of relationships—for example, those between the United States and Latin American countries and those between regional powers, such as France, in Africa and countries that were never their colonies. It also has come to be used by analysts from a wide range of theoretical backgrounds, though at its core the idea owes a great deal to Marx. The historian Immanuel Wallerstein, for example, gave the idea a broad theoretical basis in his book *The Modern World System*, first published in 1974. Wallerstein offered a general theoretical structure governing both the rise of colonialism and its decline and replacement with new, but still exploitative, forms of international relationships. Wallerstein's ideas were drawn from neo-Marxist theory and were also influenced by the French Annales school and its foremost proponent, Fernand Braudel. Wallerstein has in turn stimulated a series of collaborators and followers, including Andre Gunder Frank and Charles Tilly. Another strand of neocolonial theory comes from the Latin American Dependency school economists, also somewhat influenced by neo-Marxist ideas. The Egyptian political scientist Samir Amin has updated the concept in his work since the turn of the twenty-first century, focusing on the political economy of international relations between wealthy and poor nations.

Neocolonialism is a controversial term, implying that the objective of the wealthier partner is to keep the poorer country dependent and poor. Generally used by people on the political Left, the term has also enjoyed a vogue among far-right critics of internationalism in the United States. Use of the alternative term *neoimperialism* makes clear that the speaker believes that the wealthy nation intends to establish an empire through economic means, whereas *neocolonialism* leaves open a more classical Marxist dialectical interpretation of the process.

ECONOMIC RELATIONSHIPS BETWEEN NATIONS

Neocolonialism as a concept focuses on economic relationships between wealthier and poorer countries. Wealthier countries are said to use various mechanisms—political and military as well as strictly economic—to keep within their national economies as much as possible of the value added in any productive process with international components, while relegating the more laborious and less valuable parts of the productive process to poorer countries. Wallerstein suggests that the world (or that part of it in regular, economically significant contact) at any point in time is divided into three zones: a core zone, in which the most profitable production takes place and where control over the whole system resides; the semi-periphery, where valuable forms of production take place under the supervision of the core; and the periphery, where less valuable forms of production take place. The peripheral areas under the control of any given core increase; the exploitation and even force that marks the relationship between the core and the peripheral areas grow, as the core gets more efficient at production and at governing itself. Semi-peripheral areas share more in the fruits of their labor and are a reasonably favored class of countries. Indeed, when the system changes and a new set of core countries come to power, they generally come from the semi-periphery (as, for example, when the United States supplanted or joined the United Kingdom in the early twentieth century).

The relationship between countries can be seen as an analogy to the relationship between people in classical Marxist economic analysis. The core countries are like the capitalists: They do not generally produce much themselves (though they might have some productive functions), but they exercise control over production by

controlling money. The semi-peripheral countries are like the professional or technical elite of an industrial society: They produce very valuable things, and are pampered as a result, though they have little control. The peripheral countries are like the working class: They are exploited as aggressively as possible. Some development theorists have noted that many areas in the periphery are actually for the most part outside the world system and equate these "fourth world" countries or failed states to Marx's *lumpen-proletariat*. Other writers following up on Wallerstein's ideas have suggested that subdividing the world beyond the level of the nation-state might be more productive. Regions or cities may be better units of analysis. New York, London, Berlin, and Tokyo are the core cities of the modern world economy, whereas, say, Seattle, Canberra, Bangalore, Dubai, Singapore, and Beijing are semi-peripheries and rural West Virginia might be nearly as peripheral to the world economy as rural Inner Mongolia (though perhaps not quite so far away from the core as rural Congo).

CLASS DIVISIONS

Wallerstein points out that the societies of core and peripheral countries are marked by very sharp class divisions, with a few very wealthy people ruling over many poor. Meanwhile, the semi-peripheries are often places of relative class harmony. One sign that a country (or region) has moved out of the semi-periphery and into the core is the rise in class tensions there. Wallerstein detects this pattern at work in Renaissance Europe; similar changes have taken place in American society since World War I. In the peripheral countries, the class divisions often result in the creation of a ruling class tied to the interests of foreign capitalists. The dependency school economists in Latin America made this point when describing the economic relationship between their countries and the United States in the mid-twentieth century. Their signal contribution to the understanding of neocolonialism was to show not only what happened but also how it happened.

Even though in most cases Latin American countries (outside the Caribbean) had ceased being formal colonies by the middle of the nineteenth century, they had not evolved toward greater economic independence but instead toward greater dependence on the core countries of the world-economy—Britain until World War I and then the United States. British and American business interests either owned most of the means of production or controlled the terms of trade such that local owners had to do business on their terms. Country after country found its mineral or agricultural products moving into a world market at a price just barely above that which producers needed to stay in business, with the ensuing profits and well-paying jobs in transformation industries remaining in North America and Europe. Latin American observers felt the local ruling class was acting in the interests of North American and European capitalists rather than their own countrymen. They deduced from this that, as Marx had suggested, class solidarity trumps national identity. Just as the German and American worker have more in common with each other than either has with their own country's capitalists, the Venezuelan oil magnate or Argentine rancher has more in common with the New York banker or Texas oilman than he does with Venezuelan or Argentine workers. Thus it was the "enemy within the gates" who ensured that the relationship between poor and wealthy countries was exploitative.

MECHANISMS OF CONTROL

The mechanisms by which the core exerts control over its peripheries have changed over time. In classical colonial rule in the nineteenth century, the colonial masters ruled with the assistance of a large cadre of local officials, recruited through an elitist educational system and often made more loyal by careful exploitation of ethnic loyalties. France ruled its huge west African colony, comprising seven modern nations with tens of millions of inhabitants, with about fifty thousand French civilians of all descriptions and a few thousand French soldiers. They employed more than a million African officials who fulfilled functions from the most humble to some very prestigious positions. When formal colonial rule ended in Africa and Asia after World War II, these local elites became the ruling class of their new countries. As Nkrumah pointed out, in country after country the educational systems and ethnic political divisions continued to alienate the ruling classes from their own people and give them a sense of common identity with the international business and development bureaucratic class from the core countries. The sharp distinction between the lifestyle, attitudes, skills, and ambitions of the ruling classes of developing countries and those of their humbler countrymen stands in sharp contrast to the relatively homogenous societies of semi-peripheral countries such as Sweden, Singapore, or Dubai. (In the latter two cases, natives of peripheral countries are brought in as an oppressed and permanently alienated servant class so that social equality between citizens can be maintained.) On the other hand, an increasing distinction exists between the lifestyle, outlook on life, attitudes, ambitions, and values of the wealthiest Americans and those of ordinary people.

Military force was the final buttress of traditional colonialism. Neocolonialism cannot rely as much on force but has not abandoned it entirely. France still maintains significant garrisons in its former colonies in Africa, and those troops intervene regularly in such places as Rwanda, Ivory Coast, Chad, and Congo to defend French interests.

U.S. interventions have been legion since the end of the nineteenth century. When an intervention goes badly, neocolonial interests around the world suffer. For example, when the U.S. intervention in Somalia in 1993 ended in failure, Haitian opponents of the American-led peace process were emboldened to attack the American election monitor mission and drive them out of the country.

Political means have been used to strengthen the control of wealthy countries over poor ones. One of the best-known and most controversial in the first decade of the twenty-first century is the use of international financial institutions, particularly the International Monetary Fund (IMF) and the World Trade Organization (WTO), to force peripheral countries to grant favorable terms of trade on primary products. They do this by requiring privatization of state enterprises and free trade in primary products, which strengthens the control of core-country capital over the most productive sectors of the peripheral-country economy. Another effect of IMF-mandated economic restructuring has been to sharpen class divisions in the peripheral countries by forcing governments to reduce investment in rural development and education. Peripheral country elites have cooperated because continued contact with the world economy is essential for them to preserve their lifestyle; that contact would be imperiled if their country lost its IMF certification and could not be a member of the WTO. In countries where IMF coercion has been less successful, like Mexico, bilateral free-trade agreements with core countries, which bring substantial benefits for the peripheral country's bourgeois, have served as the key to chain those economies to their dominant partners.

SEE ALSO *Amin, Samir; Anticolonial Movements; Apartheid; Colonialism; Decolonization; Dependency; Dependency Theory; Empire; Exploitation; Frank, Andre Gunder; Imperialism; International Monetary Fund; Liberation Movements; Neoimperialism; Nkrumah, Kwame; Postcolonialism; Wallerstein, Immanuel; World Trade Organization; World-System*

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NEOCONSERVATISM

Neoconservatism is a term that emerged in the 1970s to describe a set of positions on U.S. domestic and foreign policy developed by a somewhat amorphous but identifiable group of political journalists and social scientists who previously had identified with the political left, often with the Trotskyist left, but had subsequently moved to the right as a reaction to the political and cultural struggles of the 1960s. The conversion of many of these figures from left to right is one of the senses of *neo*. By the time of the presidency of George W. Bush (2001–2009), neoconservatism, by then into its second generation and detached from its leftist origins, had become identified primarily with foreign policy, particularly with respect to the administration's response to the terrorist attacks of September 11, 2001, and to the motivations behind the decision to go to war with Iraq.

Although the label is said to have originated with the American social democrat Michael Harrington, who used it as a term of opprobrium, the first prominent self-described neoconservative was Irving Kristol, who had been the cofounder, with the English poet Stephen Spender, of the liberal anti-Communist (and, it turned out, surreptitiously Central Intelligence Agency–funded) journal *Encounter*. Along with the sociologist Daniel Bell, Kristol in 1965 founded the journal the *Public Interest*, which established what would become the neoconservative tone on domestic politics. This consisted largely of empirical and theoretical criticisms of government programs, grouped under the heading of President Lyndon Johnson's Great Society, aimed at alleviating racial discrimination and poverty. In 1985 Kristol founded another journal, the *National Interest*, which signaled the increasing neoconservative interest in and influence upon foreign policy. Over time neoconservatives also became well entrenched in Washington, D.C., think tanks, most notably the American Enterprise Institute, where Kristol became a fellow in 1988.

The budding neoconservatives first distinguished themselves from traditional conservatives by their application of social science methods to the criticism of government policies that they deemed partly misguided in intent and wholly detrimental in consequence. Their principal themes were determined by reactions to the turmoil, and

increasing militancy, of the civil rights movement in American society at large and campus unrest over civil rights, educational policies, and the Vietnam War in particular. Neoconservatives came to see the U.S. system as on the cusp of a crisis generated by the affluence produced by a successful capitalism. That affluence threatened to undermine itself by eroding its implicit, generally overlooked moral foundations, including the virtues of deferred gratification and self-discipline. Predominantly the products of immigrant families and of public education, the neoconservatives balked at the perceived decline in individual initiative born of strong family encouragement and what they saw as the loss of civic consciousness and civilized behavior in a self-indulgent, permissive culture. Government programs aiming at economic redistribution through such practices as minority quotas, preferential hiring, and welfare payments only aggravated the problems where they did not directly contribute to them.

Whereas traditional conservatives and libertarians emphasized the need to cut back on government programs in general and to exercise fiscal responsibility in balancing the federal budget, the neoconservatives tended to support expansive government action on two fronts: domestically, in an aggressive assault on what they deemed to be the pernicious moral decline in the United States; and externally, in a muscular foreign policy predicated upon the expansion of U.S. military power and ideological warfare. Moral values, as they understood them, thus stood at the center of both policy dimensions and tended to overshadow, where they did not replace, specific policy proposals. While they shared conservatives' demands for tax cuts, neoconservatives were much more tolerant of budget deficits than their predecessors. They also categorically rejected traditional American conservatism's disdain for foreign involvements, pushing instead for an aggressive foreign policy previously associated with anti-Communist liberals. These differences constitute the second sense of *neo*. Neoconservative thought, with its emphasis on social morality, is thus distinguished from Thatcherism as well as the broader trend in neoliberalism to extend market relations into all aspects of political and social life. It is also obviously opposed to libertarianism, with its "anything goes" attitude toward individual desires. But these differences also explain how neoconservatives, who were predominantly of Jewish origin, found common cause with Christian fundamentalists on some issues such as marriage and pornography, because the two groups shared the view that government should place morality at the center of its purposes and programs.

The first notable political evidence of neoconservative influence could be seen in the administration of Ronald Reagan (1981–1989), particularly in Reagan's rejection of the policy of détente with the Soviet Union and emphasis on challenging the USSR through a military buildup and the promotion of anti-Communist insurgencies worldwide. Most famously, Reagan's characterization of the Soviet Union as an "evil empire" often has been ascribed to the neoconservative emphasis upon introducing moral language into foreign policy. It was the alleged success of Reagan's foreign policy in bringing the Soviet Union to its knees that inspired the second generation of neoconservatives, led by Irving Kristol's son, William Kristol, founder and editor of the *Weekly Standard*, to challenge the foreign policy positions taken by George H. W. Bush and Bill Clinton for embracing a form of moral relativism and realism rather than the forceful assertion of American values as a fundamental aspect of U.S. national interests. Underlying the neoconservative challenge was the idea that reviving a moral language in foreign policy would reverberate domestically. This challenge bore fruit in the younger Bush's policies and rhetoric after September 11.

By time of the 2006 midterm elections, the neoconservative project of asserting American values in the Middle East had been seen largely as a disaster because of the war in Iraq, though various neoconservative figures who had been in or around the administration blamed the failures on the execution of the war by others, including President Bush and his secretary of defense, Donald Rumsfeld, rather than on the merits of the neoconservative policy behind it. But the identification of neoconservatism with a failed moralizing foreign policy may ultimately prove to be neoconservatism's Achilles's heel.

SEE ALSO *Bush, George W.; Central Intelligence Agency, U.S.; Conservatism; Foreign Policy; Fundamentalism; Fundamentalism, Christian; Great Society, The; Iraq-U.S. War; Liberalism; Militarism; Neoliberalism; Reagan, Ronald; September 11, 2001; Terrorism; Thatcher, Margaret; Union of Soviet Socialist Republics; Welfare State*

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Nicholas Xenos

NEOIMPERIALISM

Whereas imperialism is typically characterized by conquest and rule, and colonialism by migration and residence in the conquered territory, *neoimperialism* is domination and sometimes even hegemony over others primarily by way of formally free legal agreements, economic power, and cultural influence. One of many designations for the form taken by U.S. political power and economic domination in the twentieth century, especially during and after World War II, *neoimperialism* is a name with serious faults. Other, clearer, and more vivid designations include *informal empire*, *imperialism without empire*, *empire of liberty*, and *Pax Americana*. But *neoimperialism* is the most common term, and therefore will be used here. The United States is not history's only neoimperialist power, and neoimperialism is not exclusively a phenomenon of the twentieth and twenty-first centuries. However, the United States is history's most predominant and creative deployer of neoimperial power strategies, as opposed to directly colonial or imperial strategies. And the second half of the twentieth century is the period in which neoimperialism became the predominant mode of global political power.

Neoimperialism became a significant topic of discussion after the end of the cold war. Journalists and opinion-makers, poets and scholars, made efforts to measure and evaluate neoimperialism, and to advise the United States in its role as the world's "indispensable nation" (as U.S. Secretary of State Madeleine Albright once put it). In the wake of the attacks of September 11, 2001, discussion of the ways and means of U.S. power intensified and took new turns as the United States became far more explicitly aggressive militarily, and returned to doctrines of nation-building and democratization through military intervention. But U.S. neoimperialism is not merely about use of military force, and did not begin after the cold war.

In fact, to understand U.S. neoimperialism, it might even be necessary to reconsider the foundations of the United States itself, as a republic in a world increasingly dominated by European empires. The British public first embraced the idea of a British Empire, an empire to rival or even exceed Rome's famous empire, after victory in the Seven Years' War in 1763. When the rebellion that began in 1776 freed the British Atlantic colonies from royal rule, the former colonists used a Roman and Whig political vocabulary to form a republic that emphasized democracy, equality, citizenship, freedoms, and strict legal limitations on governmental power. The new United States built a military apparatus primed more for intervention than conquest. This was partly out of weakness and necessity, rather than principle, and the United States showed little hesitation in using force to take land from Native Americans. However, early in the new country's political history, the United States also developed its interventive military style and professed ideology of anti-imperialism, in the essentially defensive War of 1812 and most notably, in the Monroe Doctrine of 1823. Thereafter the United States combined its insistence on the New World's political independence and distance from Europe with a developing pattern of political interventions in the Americas, a pattern that might be summarized as willingness to overthrow but not to conquer and colonize the societies that were, derisively, dubbed *banana republics* by the U.S. media.

In the late nineteenth century, Alfred Thayer Mahan's arguments for the importance of developing naval power and global reach led to the main exceptions to this developing pattern of U.S. military deployment. The United States provoked a war with Spain that enabled it to take possession of the Philippines, Guam, Cuba, and Puerto Rico, and more enduringly, to build naval bases in Manila Bay, in Guam, at Guantánamo Bay, and in Puerto Rico. While the United States did not pursue colonization on a Dutch, French, or British scale, abjuring opportunities to conquer China or even Mexico, it did avidly continue to collect naval bases that would sustain continuing global military power projection. These included the strategically crucial Pearl Harbor and eventually the rest of Hawaii, and also the only island suitable for a coaling station along the steamship route from Hawaii to Guam, an island the United States fortified and renamed "Midway."

By the end of World War II (1939–1945), the United States had achieved global military domination, and after the war it found itself in a position to direct most of the terms of peace. The new world order largely shaped by the United States was dubbed *Pax Americana*. Collective memory of the establishment of Pax Americana is dimmed by the nearly immediate onset of the cold war, a mushrooming set of diplomatic conflicts and wars by proxy, as the Soviet Union resisted and contested the new world order planned and instituted under U.S. leadership at the new United Nations. But the logic and reality of Pax Americana is the key to U.S. neoimperialism, which has largely achieved its main criterion, "making the world safe" and keeping global peace, despite the stresses of the long cold war. Whereas between 1850 and 1900 a world population below two billion suffered over twenty million war deaths, and between 1900 and 1950 a world population under three billion suffered over sixty million war deaths, from 1950 to 2000, there were only around ten million war deaths for a world population that grew to well over five billion. Pax Americana is thus very real, and should be understood as a reaction to a history of European imperial rivalry and recurrent warfare—using ever more deadly military technologies—beginning in the eighteenth century and culminating in World War II. The key to neoimperialism, and its difference from older imperialisms, is the limitation of political will. In the

United Nations era, no conquest of states by other states, or nations by other nations, is tolerable. The new United Nations and a growing network of global economic regulatory organizations oversaw the largely peaceful breakup of the European empires, including finally the Soviet Union, into what became the only legitimate political form, the nation-state. UN membership grew from 50 members in 1945 to over 150 in the 1970s and over 175 by the early 1990s.

That this Pax Americana is a U.S. neoimperialism has become clearer again after 9/11 and more especially, in the wake of the troubled, and troubling, U.S. overthrow of Saddam Hussein and occupation of Iraq. Is the United States really, in the last analysis, another imperial power? While some "realists" suggest that the problems and behaviors of all Great Powers are essentially similar, it is important to notice consequential differences. As Frantz Fanon once observed, it was always important to European colonizers to stay different from the colonized, to maintain an imagined superiority of race and civilization, and to imagine that their true society and history was that of their European "homeland," even when they lived their whole lives in Africa or Asia. The European ideology of the "civilizing mission" created an illusion of the cultural superiority of "civilized" Europeans over allegedly backward natives. In the era of the United Nations, a far different ideology developed and was instituted. In this ideology, all nations are formally equal, free, territorial, and sovereign, and every nation-state becomes a "melting pot," rather than the essentialist "homeland" of any particular racial or ethnic group. Economists and economic modeling, not historians and cultural education, are thought to be vital to the explanation and eradication of poverty and inequality.

While in the UN era the political will and reach of nations and states have been limited for good reasons, less has been done to trim the sails of the "other Leviathans," the large corporations. On occasion, wealthy and powerful nation-states do legally restrain, and rarely even break up, corporations (from Standard Oil to Microsoft) whose power comes to threaten state sovereignty. But no similar leverage is afforded the smaller and economically weaker states, which are greatly pressured to take whatever global markets offer. Similarly, the poor states cannot stop the United States, Europe, and Japan from writing unequal and self-serving tariff rules into global trade agreements. Thus it is no surprise that in the era of Pax Americana, the rich nation-states have tended to get richer, and wealth gaps generally increase almost regardless of the internal economic policies of poor countries.

Other social and political developments in the era of Pax Americana have been more surprising, and unforeseen by the planners of this new world order. Elites in poor countries increasingly migrate to wealthier centers, creating unprecedented elite diasporas. These elite diasporas from poorer countries to centers of wealth are often actively encouraged by the governments of poor countries, and increase the "multicultural" character of centers of wealth. Many ex-colonial nation-states abandon democracy, temporarily or perduringly, with army leadership claiming to represent the nation better than ideologically driven and divisive political parties can, a pattern that perplexes planners who expect nations always to behave democratically. And the states in some nation-states collapse altogether, creating complex and violent situations that are rarely resolved through direct military intervention by "peace-keepers."

U.S. neoimperialism certainly resembles the European imperialism of prior generations in its political manipulation, economic domination, and willingness to resort to military force. But there are also major differences. Through decolonization, many former colonial subjects gained formal rights and freedoms as citizens of new states. Yet nation-states created new, specifically postcolonial predicaments. Ironically, nation-states created by decolonization limit the political reach of the world's poor to the boundaries of their own nation-states. At the same time, nongovernmental organizations (NGOs) dedicated to uplift are more responsible to their donors than to their clients. It is unlikely that the entrenched problems of neoimperialism will be solved by new and further intervention by wealthy and powerful states into the political and economic affairs of poorer states. Inequalities will continue to grow until, one way or another, the globe's poorest citizenries find means to intervene into, influence, and reorient economic and social policies in the centers of wealth.

SEE ALSO *Cold War; Colonialism; Decolonization; Empire; Imperialism; Nation-State; Neocolonialism; Neoconservatism; Neoliberalism*

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John Kelly

NEOINSTITUTIONALISM

Neoinstitutionalism (at times also termed *state-centered theory* or *historical institutionalism*) is a nebulous set of social scientific theories that emphasize the role of institutions as important variables for explaining social phenomena. Of particular importance within economics, sociology, and political science, neoinstitutionalism rose to prominence in the 1970s and 1980s as a response to the perceived society-centric character of the social sciences. It continues as a prominent component within social science today, many of its basic points having been accepted into various popular theoretical approaches—but it has also come under attack from competing traditions within each social science discipline.

Obviously, the study of institutions is nothing new, but this is not the defining characteristic of institutionalism. The term *old institutionalism* usually refers to the formalist scholarship of the late nineteenth and early twentieth centuries that produced descriptive accounts of institutions and laws. By 1950, this institutionalism had largely been replaced by behaviorist and functionalist social science, as developed by such theorists as Talcott Parsons and David Easton. From the point of view of neoinstitutionalism, behaviorist social science and its main competitor, Marxism, were society-centric in that they failed to allow for the causal roles that institutions played in society. It was argued that institutions and the state had been reduced to a "black box": Everything they did was understood as little more than an outcome of the preferences and actions of social actors. Thus, neoinstitutionalism took shape in the attempt to overturn the perceived social reductionism of the main approaches of the day. Two interrelated characteristics differentiate this "new" institutionalism from the "old" one. First, the new institutionalism is analytic in character, not descriptive; it wants to explain things, not just describe them. Second, it does not seek to understand institutions as such but, rather, to understand the role(s) they play in the production of social phenomena (such as public policies, economic development, democracy, and so on).

Neoinstitutionalism can be divided into two general tendencies: the view of institutions as autonomous actors, and the view of institutions as constraining or enabling structures. Within the first tendency, the less common of the two, key examples include works by Theda Skocpol, Charles Tilly, Fred Block, and Margaret Levi. In this conception of institutions as actors, often originating in selective readings of Max Weber, it is assumed that individuals who occupy positions within the state bureaucracy come to share a "bureaucratic rationality"—that is, they come to think and act in accordance with and in support of the institutional interests of the bureaucracy. In this way, this branch of neoinstitutionalism understands institutions, and the state as a whole, as being "autonomous" from society. This tendency treats state institutions as self-interested agents who, at times in opposition to and at times in alliance with various social actors, seek to maximize revenues, power, legitimacy, and so on. Understanding the complex interactions between these institutional actors and other (social) actors thus becomes the key, for those within this tradition, to understanding such phenomena as revolutions, the rise of the welfare state, taxation policy, and war-making.

The second, and more common, tendency within neoinstitutionalism understands institutions to be structures that limit, condition, and/or direct social agency. Key figures include Douglas North, James March and Johan Olson, and Walter Powell and Paul DiMaggio. There are a great many variations on this approach, but most focus on the task of trying to understand the problem of structure and agency within particular fields of inquiry. In large part, neoinstitutionalism has meant that approaches such as neoclassical economics, rational choice theory, systems theory, or pluralism have been augmented by considerations of the impact of institutions upon actors. Some versions of this tendency have a very broad definition of *institutions*, as being rules of conduct and

routines within cultural as well as political and economic fields. In this very broad context, the term *institutions* basically refers to social structures, and the key question typically concerns how these sets of rules or practices structure the thinking and preferences of actors, producing what is often referred to as "bound rationality." Neoinstitutionalism within economics usually holds this broad understanding of institutions and the key question becomes how this ensemble of formal and informal arrangements and rules structures social behavior by virtue of the "transaction costs" they involve. Thus, economists such as Ronald Coase, Oliver Williamson, and Douglas North have attempted to augment neoclassical economics by showing how, given the reality of transaction costs, institutions structure and direct social behavior by making it more or less costly to engage in certain types of social actions. In more narrow versions, characteristic of neoinstutionalism within sociology and political science, the term *institutions* may refer to the mode of organization of a political regime (corporatist, coalitional, single-party, etc.), or serve simply to designate self-identified bureaucratic organizations (ministries, state agencies, corporations, labor unions, and so on). Typical of this vein of neoinstitutionalism are examinations of the ways in which the internal organization of these institutions affects the capacity of various actors and interests to realize their goals through or within them. Also typical is a focus on understanding how inter-institutional relations and structures may help shape such phenomena as political conflicts, public policies, and markets.

Neoinstitutionalism has been critiqued by some on the grounds that there is little, if anything, "new" about it: Institutions, critics claim, were always taken seriously within social science. It could be argued, however, that being "new" is not the goal of neoinstitutionalism. More pointedly, neoinstitutionalism has often not lived up to its name: By studying social structures or types of political regimes, for example, it has shed little light on the specificity and dynamics of actual institutions. The tendencies of neoinstitutionalism discussed here have also failed to supersede the structure/agent dualism of the theories it critiqued. Regardless of the relative attention given to agents and structures, neoinstitutionalism has remained bound within the dualistic thinking that typifies behaviorism, rational choice theory, and systems theory. By comparison, the radical materialism of so-called "structuralists," such as Louis Althusser and Pierre Bourdieu (with whom neoinstitutionalism is sometimes conflated), understands "agency" and "structure" as being synchronic with each other. Whereas structuralists have developed new concepts for understanding how agents are produced in modern societies (the concepts of *habitus* and *interpellation*, for example), neoinstitutionalism of all stripes has stayed within the older model in which "agents" are assumed to be external to "structures."

SEE ALSO *Institutionalism; State, The; Structuralism*

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NEOLIBERALISM

The term *neoliberalism* is used to describe a political and economic doctrine as well as a set of economic policies that have become hegemonic in the last quarter of the twentieth century. Originally coined by its proponents, the term today is usually employed by neoliberalism's critics to refer to a set of policy prescriptions that includes an emphasis on free markets, deregulation, conservative monetary policies, the lowering of tariffs, and the privatization of state assets and services.

HISTORY AND INTELLECTUAL TRADITION

The term *neoliberalism* was first used in the 1930s and 1940s in a context in which the crisis of laissez-faire economics as well as the rise of socialism and fascism had marginalized earlier liberal projects. At a 1938 Paris meeting of concerned liberal intellectuals including figures such as Friedrich August von Hayek, Ludwig von Mises, and Wilhelm Röpke, it was argued that the rise of statism and planned economies needed to be counterpoised by a new liberal project that would reassert the values of individual and economic freedom perceived to be under siege. Following on from this meeting and inspired by Hayek's influential anticollectivist treatise *The Road to Serfdom* (1944), in 1947 an international liberal think tank, the Mont Pelerin Society, was founded to further the production and dissemination of neoliberal thought. However, the neoliberal program remained marginal and overshad-

owed by the dominance of Keynesian economics for decades, and it was not until the 1970s, in a context of global economic crisis, that neoliberal thought gained a wider currency.

Neoliberalism is defined by a diversity of positions, including most prominently the Austrian school of economics associated with the economists Hayek and von Mises, the Chicago school strongly influenced by Milton Friedman's 1962 doctrine of monetarism, and the German Ordoliberals, who were central in the construction of Germany's postwar social market economy. Despite the variety of traditions, most neoliberals share key basic assumptions such as a methodological individualism, a skepticism of centralized state planning, and a belief in the greater efficiency of the market. Neoliberal thought draws on the classical liberal tradition associated with the Scottish Enlightenment and in particular on Adam Smith's 1776 critique of mercantilism (*An Inquiry into the Nature and Causes of the Wealth of Nations*) to provide a critique of twentieth-century Keynesian interventionist economic paradigms. Key to neoliberal theories is a skepticism towards the state's ability to know, and hence to intervene in and direct, economic life. One of the most influential neoliberal thinkers, Friedrich August von Hayek, grounds his critique of state intervention in the limits and fallibility of human reason, and hence of knowledge of society as a whole. For Hayek, this necessitates a noninterventionist state and a reliance instead on a "spontaneous order" based on disaggregated and practical forms of knowledge (Hayek 1952, 1973). The market in Hayek's framework becomes both the test and the corrective for the evolutionary development of order in society. However, unlike the classical liberal tradition, which regarded the market as a natural entity guided by an "invisible hand," neoliberal thinkers suggest that the role of the state should be the establishment of conditions favorable to the development of a free-market economy and the avoidance of monopolies.

NEOLIBERALISM AS A POLITICAL PROJECT

Neoliberal thought found its practical application in the early 1970s when an economic crisis in the form of "stagflation" increasingly cast doubt on the basic premises of the Keynesian paradigm, leading to a rethinking of received ideas regarding the relationship between the state and the economy. Starting with the neoliberal experiments in Chile in the mid-1970s by the "Chicago Boys," a group of economists educated at the University of Chicago, and the elections of U.K. Prime Minister Margaret Thatcher and U.S. President Ronald Reagan in the late 1970s and early 1980s, neoliberal thought gained hegemony and often direct influence in policy circles. Policies associated with the welfare state and Fordist emphasis on domestic mass production and consumption were increasingly replaced by monetarist approaches, the restructuring of state services, and severe measures against trade unions. In the postcolonial world, state-led development paradigms were increasingly succeeded by "structural adjustment" policies often introduced through loan conditionalities imposed by the World Bank and the International Monetary Fund (IMF). Policies such as fiscal austerity, trade liberalization, the privatization of state functions, and deregulation became staple ingredients of policy advice from international donor agencies and the increasingly influential supranational trade and financial institutions such as the World Trade Organization (WTO), the World Bank, and the IMF. With the end of the cold war, this convergence of neoliberal policy agendas of Washington-based financial institutions became known as the "Washington Consensus." Since the late 1990s, the hegemony of the Washington Consensus has been challenged by severe financial crises, the rise of social movements, and the elections of a number of governments with explicitly antineoliberal stances in Latin America.

CRITICS OF NEOLIBERALISM

Scholarly as well as nonscholarly critics argue that neoliberal policies produce increasing inequality and lead to a reduction in democratic accountability. In one of the earliest and most influential critiques, Karl Polanyi argued that economic liberalism is a utopian project that seeks to disembed and superimpose the economy in relation to society, which is henceforth seen as merely an "adjunct to the market" (Polanyi 1944). Most contemporary critiques of neoliberalism similarly take as their target the social consequences of neoliberal policies. Pierre Bourdieu argued that neoliberalism destroys the social solidarities associated with the welfare state and thus leads to permanent state of existential insecurity (Bourdieu 1998). One of the most influential critiques from a Marxist perspective has been provided by David Harvey, for whom neoliberalism is a project of the reorganization of capitalist accumulation in a context of economic crisis (Harvey 2005). Neoliberal policies of privatization, Harvey suggests, turn ever increasing spheres of life into new loci of capital accumulation that are ultimately in the service of the restoration of the power of economic elites. Foucauldian analyses of neoliberalism have pointed to the ways in which neoliberal projects are not simply defined by the removal of state intervention, but rather inaugurate new indirect forms of power that seek to extend the enterprise form to all spheres of life and encourage the production of self-governing individuals (Foucault 2004; Barry et al. 1996).

Neoliberalism also has been subject to critique and protest outside the realm of the academy. Movements

against "neoliberal globalization," organized in groups such as the World Social Forum, gained in strength since the 1990s. These critics argue that the globalization of neoliberalism through organs such as the WTO is undemocratic and increases global inequality through the institution and promotion of unfair trading regimes.

SEE ALSO *Conservatism; Empire; Globalization, Social and Economic Aspects of; Liberalism; Liberalization, Trade; Neoconservatism; Privatization; Washington Consensus*

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NEONATAL BEHAVIORAL ASSESSMENT SCALE

SEE *Brazelton, T. Berry.*

NEO-WALRASIAN SYNTHESIS

SEE *Patinkin, Don.*

NERVOUSNESS

SEE *Anxiety.*

NESTED HYPOTHESES

SEE *Hypothesis, Nested.*

NET WORTH

SEE *Wealth.*

NETWORK ANALYSIS

Network analysis is a cluster of methodological techniques for the mathematical description and investigation of networks. It has applications across both the natural and the social sciences. Electronic networks, river networks, etymological networks, epidemiological networks, and networks of economic transactions have all been subjects for network analysis. In the social sciences, the concern is with the investigation of social networks. A *social network* is any articulated pattern of connections in the social relations of individuals, groups, and other collectivities. Social networks include friendship and kinship networks, interorganizational networks, communication networks, scientific citation networks, and policymaker networks. Social network analysis, then, deals with relational data in all areas of social life. It handles the contacts, ties, and connections, group attachments, and meetings that relate one person or group to another and that cannot be reduced to the properties of the individual agents themselves. Such relational data are central to the building of models of the structures through which action is organized. Social network analysis is not limited to small-scale and interpersonal structures, and there have been many applications to such phenomena as global trading relations in world systems.

Social network analysis developed independently in the social anthropology of small societies and the social psychology of small groups. Anthropologists such as Alfred Radcliffe-Brown (1881–1955) pioneered a view of social structure as a "web" of social relations and an idea of actions "interweaving" and "interlocking" through such a network of connections. Anthropologists in this tradition began to investigate the "density" of these social networks and the "centrality" of individuals within them. Small group researchers in the Gestalt tradition developed ways of investigating the pattern of relations within the "life space" of social groups, the most influential example

of this being Jacob Moreno's (1892–1974) sociometric studies of schoolroom friendship choices. The study of "group dynamics" developed rapidly from the 1950s with more formal applications of the network idea.

Contemporary network analysis grew markedly from the early 1970s, when a group of students and researchers working with Harrison White began to explore the use of more formal mathematical models for the analysis of small group and anthropological data and began to extend these investigations to wider sociological phenomena. A landmark study from this burgeoning work was Mark Granovetter's *Getting a Job* (1974). Granovetter showed that people's chances of getting information about job opportunities depended not on the formal methods of job search that they used but on their location in informal social networks. Counterintuitively, he also showed that having a small number of "weak" ties was far more important than having many "strong" ties: information came from "acquaintances" rather than close "friends" and relatives. This group of researchers used algebraic models from set theory and ideas from the mathematical theory of graphs, along with methods of multidimensional scaling. Together, this cluster of methods established a framework of network analysis that spread rapidly across sociology and into the other social sciences.

The basic idea in social network analysis is that a social network can be modeled as a set of "points" connected by "lines," the points representing the individuals and groups, and the lines representing their social relations. The simplest applications involve drawing a graph of points and lines to represent a social network and then visually examining the pattern of lines for its structural properties. When dealing with more than a small number of points, however, more abstract methods are necessary, and the mathematical methods allow the points and lines to be recorded in a matrix ready for mathematical processing. This has allowed the investigation of such structural properties as the density of relations, the centrality of agents, the formation of cliques and components, and the assessment of social distance. A measure of density, for example, assesses the proportion of all possible relations that actually exist in a network and is an important indicator of solidarity and cohesion. *Cliques* are subnetworks into which networks may be divided and that may comprise groups capable of independent action. Centrality concerns the strategic positions that actors may hold in the overall pattern of connections and the consequent flow of influence, support, or power.

Important applications of network analysis have been undertaken in many areas of the social sciences. Claude Fischer (1982) and Barry Wellman (1979) investigated community networks in cities with high levels of geographical mobility, and they explored the increasing reliance that people have placed on electronic methods and virtual channels of communication for maintaining interpersonal cohesion. The work of Robert Putnam was influential in advocating the idea that people's networks of social relations could be regarded as forms of social capital. This view has been elaborated in the competing approaches of Nan Lin (2001) and Ron Burt (2005). Lin stresses individual investments in social relations and the rational actions that are involved in the accumulation of social capital. Burt has looked at processes of brokerage and social closure—rooted in measures of centrality and prominence—for the creation of social capital.

Jim Bearden and various coworkers have explored structures of interlocking directorships in business, examining the nature and significance of bank centrality within financial networks (Mintz and Schwartz 1985). David Knoke has pioneered methods for studying networks of political connection and influence, leading to numerous studies of policy networks and the role of power in the policy process (Knoke et al. 1996). Peter Bearman (1993) is one of a number of researchers who has demonstrated the uses of network analysis for historical data on stratification and power relations. Many important studies have been undertaken on organizational networks in business, and these have been extended into work on knowledge management by Rob Cross (Cross and Parker 2004) and David Snowden (Kurtz and Snowden 2005). Important methodological work includes that of Linton Freeman on approaches to network visualization, using methods of pictorial display for the analysis of large social networks. These have been used in his own study of the development of social network analysis (Freeman 2004).

Applications of social network analysis have tended to be both descriptive and static, leading many to ask whether network analysts are doing anything more than producing pretty pictures and arbitrary numbers. This has been reinforced by the incursions of many physicists into the area of network analysis. These physicists have argued—often in ignorance of what work has actually been undertaken by social network analysts—that their methods have far more to offer in the analysis of social relations (Watts 2003). What is clear, however, is that these discussions have begun to shift social network analysis toward a greater concern for explanation, rather than simply description, and toward the investigation of dynamic processes in social networks.

The need to combine network analysis with agent-level models has been emphasized by Mustafa Emirbayer and his colleagues (Emirbayer 1997; Emirbayer and Goodwin 1994), who stress the interdependence of cultural, structural, and agency analyses. Network analysis must be combined with an awareness of the culturally formed subjective motivations and commitments of

actors, whose intentional actions produce, reproduce, and transform network structures. This model of the structuration of social networks stresses the iterative nature of rule-governed actions. This is echoed in the growth of agent-based computational methods of network analysis that propose ways of linking microlevel decision making with macrolevel structural change (Monge and Contractor 2003).

SEE ALSO *Networks*

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John Scott

NETWORKS

Social networks are social relationships between two or more people (known as nodes) who have developed some kind of tie with each other (Wasserman and Faust 1994). "The social network perspective focuses on relationships among social entities; examples include communications among members of a group, economic transactions between corporations, and trade or treaties among nations" (Wasserman and Faust 1994, p. i). People use social networks to acquire new information, exchange information, find jobs, learn about new opportunities, and exchange new ideas, among other purposes. Individuals can acquire social ties in a number of social settings such as jobs, social organizations, religious organizations, political organizations, sports groups, a group of friends, and so on.

Wasserman and Faust (1994, p. 4) argue that the social network perspective should take into account the following:

- Actors and their actions are viewed as interdependent rather than independent, autonomous units.
- Relational ties (linkages) between actors are channels for transfer or "flow" of resources (either material or nonmaterial).
- Network models focusing on individuals view the network structural environment as providing opportunities for or constraints on individual action.
- Network models conceptualize structure (social, economic, political, and so forth) as lasting patterns of relations among actors.

In general, social networks are seen as providing individuals or larger groups or social entities with positive outcomes as a result of the information and social support the

individuals who belong to a specific social network receive. Those who belong to a social network enjoy the advantages of social capital. The concept of social capital (Loury 1977; Bourdieu 1986; Coleman 1988) has been used to account for the advantages that network members accrue as a result of their inclusion.

According to the organizational literature, the position of the actors in a network or the network structure in which those ties are embedded would in most cases dictate the extent to which belonging to a social network can provide individuals with new information and opportunities that can help them perform better in society or facilitate their upward socioeconomic mobility. For example, central actors can influence how information gets distributed to other members in the network, referred as network *centrality* (Wasserman and Faust 1994). Also, a key actor could control the information that flows between two independent groups, a situation known in the organizational literature as *structural holes* (Burt 2001). Also, network homogeneity or *structural equivalence* (if ties are similar), or network heterogeneity (if ties are different), can influence the kinds of advantages or disadvantages network members might experience as a result of their membership in the network (Wasserman and Faust 1994).

Besides the structure and/or the position in the network, tie strength could also dictate the network's effectiveness. Mark Granovetter, first in his work *The Strength of Weak Ties* and later on in his book *Getting a Job*, revolutionized the organizational literature by introducing the concept of the "strength of weak ties" (Granovetter 1973, 1995). He argues that belonging to an open network and having access to weak ties (or acquaintances) can provide individuals with new valuable information that can help them get better jobs. Even though one might not have a strong relationship with those individuals, they are able to share new knowledge and important information that otherwise would not be available in a closed network with mostly strong ties. Those who belong to closed networks with mostly strong ties are considered to be at a disadvantage given the limited amount of information shared by the members of such networks. Studies on racial segregation (Massey and Denton 1993) have suggested that members of closed networks or cliques have less chance to learn about new important information and that the information that flows in those networks tends to be redundant and inefficient.

According to Granovetter (1982), strong ties and closed networks could be advantageous only for those who face risk and high levels of uncertainty. However, studies of entrepreneurial networks among Asian immigrants in the United States have shown that for certain immigrant groups, having access to strong ties in a closed network of highly educated or high status individuals who share high levels of socioeconomic status tend to receive the social support necessary to be successful as new entrepreneurs (Light, Sabagh, Bozorgmehr, and Der-Martirosian 1994).

Also, the distinction between kin and nonkin ties is fundamental to the understanding of how social networks operate (Adams 1967; Fischer 1982). While individuals can pick their neighbors, friends, or coworkers, they cannot pick the members of their kin (Wierzbicki 2004). In addition, kin ties are everlasting, while any other kind of ties can be dropped at any time (Wierzbicki 2004). Kin ties can be extremely important because they can provide assistance in times of crises, while any other kind of tie might not.

Neighbors can also be important ties in social networks depending on the relationship between neighbors. According to Fischer (1982), neighbors tend to be similar in race and socioeconomic status, and the individual has the freedom to develop or avoid strong ties with neighbors. Proximity is the most important factor in ties between neighbors. Such proximity can become important because it allows for social interactions that could be more difficult to achieve with other kinds of ties.

Today, technological advances such as the development of personal computers, Internet access, e-mail, and cell phones has provided advantages and disadvantages to the development of social ties. While individuals can communicate more often through e-mail and share more information, physical contact has become less frequent. People who are far from each other, even on the other side of the planet, can be in touch every day through the Internet, while those who work together next to each other can also communicate through the computer, limiting their physical and social contact.

Organizational and management literature also uses social networks as the basis for the distribution of information, which could lead to the spread of ideas and innovations and the development of new enterprises (Coleman, Katz, and Menzel 1957; Burt 1987).

Several topics have been studied using the social network perspective approach, including occupational mobility (Breiger 1981, 1990), networks of friends in urban cities (Fischer 1982), the world political and economic system (Snyder and Kick 1979), markets (Berkowitz 1988; White 1981), six degrees of separation (Watts 2003), social networks and international migration (Wierzbicki 2004), and the networks of elite Americans and politicians (Domhoff 1998), among many other. Most people around the world are now aware of the power of social networks and how knowing someone or meeting someone could change one's future. Advances in technology are helping this task, greatly facilitating communication among actors from any part of the world.

SEE ALSO *Bureaucracy; Crony Capitalism; Network Analysis; Networks, Communication; Organization Theory; Organizations; Social Capital*

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Nadia Y. Flores

NETWORKS, COMMUNICATION

A communication network is a set of individuals (or *nodes*) connected by communicative interaction. For example, an organizational communication network could consist of those seeking advice from others within the organization, and those giving the advice. Communication networks are social networks and are analyzed using the many theories, techniques, and procedures developed in the field of social network analysis. Though the earliest studies of social networks date from the 1930s, the modern study of communication networks originated in the 1950s with studies of how workgroups function (see Freeman 2002). For example, Alex Bavelas conducted studies in which small workgroups were given a task to complete, and then communication structure was altered to determine if a change in workgroup structure would affect task performance (it did) (Bavelas 1951).

Communication network study did not progress very much in the ensuing decades, because social scientists concentrated on taking random population samples that disconnected people from their social and communication networks (Rogers and Kincaid 1981). There was little research centered on how a person's relationships, as measured by their communication patterns or partners, affected their behavior. Gradually, however, a science of social networks has emerged, using two different research methodologies: *local* and *global*.

Local network research is conducted by asking people to name others they are close to or talk to about important matters (Burt 1985). The names provided (and they can be first names only or initials) comprise what is known as an *egocentric network*; the respondent is then asked for information about each of the persons named. Typically, the list is confined to five or six network part-

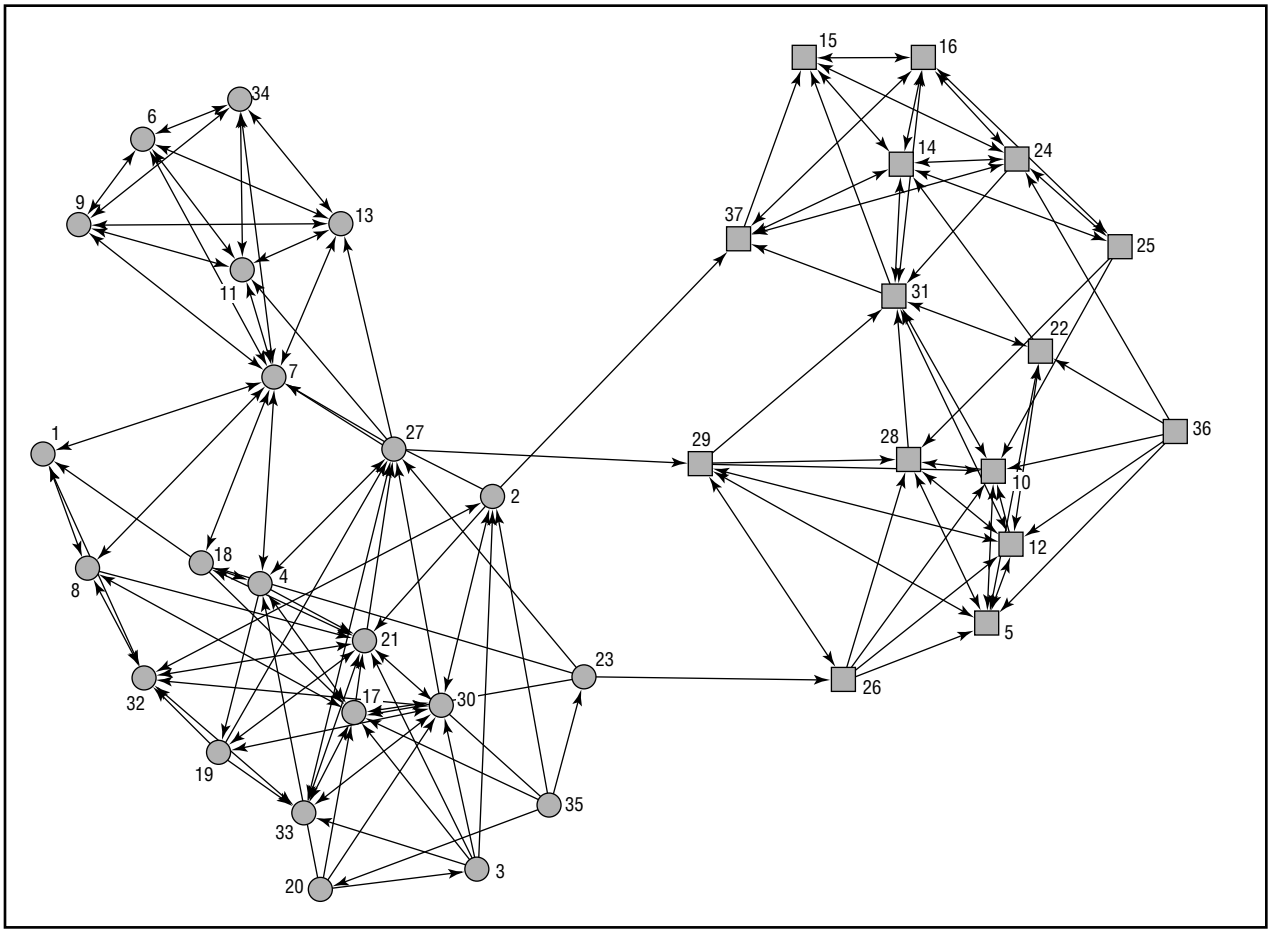

Figure 1.

ners. Researchers can then describe respondents based on the characteristics of their egocentric network. For example, respondent networks can be characterized according to the number or percent of males, people of the same religious affiliation, or people living near or far from the respondent. Importantly, one can also measure the behaviors exhibited in the network, by, for example, considering whether each network partner provides social support, expresses opinions, or engages in behaviors relevant to the respondent or study.

Global network research is conducted by defining a boundary around a set of respondents and asking everyone to name others in the network they talk to or seek advice from (the researcher can also provide a roster for the respondent to refer to). Full names or other identifying information are provided so that the researcher can draw a map (see Figure 1) of the relations within the network. This so-called *sociometric* or census approach is the most powerful network methodology. The network data are used to describe individuals and/or the entire network (Scott 2001; Wasserman and Faust 1994).

Individual network indicators include a person's *centrality*, defined as: (1) how many choices they are given by others in the network; (2) how close they are to everyone else in the network (defined as the average number of steps in the linkages to others); or (3) the degree to which they lie on paths connecting others in the network. Network analysis has developed over a dozen methods of identifying central nodes in a network. At the individual level, factors considered include, in addition to the ones mentioned above, whether a person is a member of a group, whether their ties are reciprocated, and whether they span different groups. Factors measured at the group or network level include the density of the network (the number of ties as a percent of the number of possible ties), centralization (whether the ties are concentrated around one or a few members), and clustering (whether connections between two people imply a connection to a third).

A significant finding of communication network analysis is the importance of peer influence: An individual's likelihood of engaging in a behavior increases with the percentage of their peers who engage in the behavior.

At the same time, some researchers have discovered that individuals' *network thresholds*—that is, the degree of peer influence needed to change their behavior—vary according to their personal characteristics (Valente 1995). In some cases, being integrated into a network puts one in a privileged position with regard to access to information, but in other settings it may be deleterious, for example by putting some at risk (Valente et al. 2005). Research has shown that so-called *opinion leaders* serve as important filters and conduits for information and its diffusion by influencing the adoption decisions of others. The influence of opinion leaders may depend on group norms, however, as leaders adopt innovations early if the behavior is compatible with group norms. Denser and more centralized networks may accelerate diffusion by creating more and more efficient pathways for information to flow through, but may also hinder diffusion when the density is so great that it reduces the community's access to outside information (Granovetter 1973).

Network analysis has been suggested as a methodology useful for measuring *social capital*. Social capital is defined both as the social resources available to a person via their social contacts (Lin 2001), and as a perception by the community that a person is trustworthy and civically engaged (Putnam 1995). Social network measures can provide a direct assessment of individual and communal social capital (Borgatti et al. 1998).

The tools and technology used to analyze communication networks have improved considerably in their ability to handle large datasets (such as the Internet). The field of network analysis continues to grow rapidly, aided in part by the International Network for Social Network Analysis (INSNA), which provides a Web site for access to more information.

SEE ALSO *Communication; Network Analysis; Networks; Social Capital*

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Thomas W. Valente

NEUMANN, FRANZ
1900–1954

The German-born political theorist Franz Leopold Neumann was prominent in the cohort of exile scholars who brought the contested legacy of German social theory to American social and political science after 1933, especially in the study of modern democratic and dictatorial states.

Neumann was born to a Jewish family on May 23, 1900, in Kattowitz in Silesia (now Katowice, Poland). After completing his doctoral dissertation and his qualification for legal practice, he apprenticed with the leading Social Democratic labor lawyer, Hugo Sinzheimer (1875–1945), in Frankfurt. In the last years of the Weimar Republic, Neumann, in practice in Berlin, served as lead counsel for the building trade union, as well as for the Social Democratic Party. His name was reputedly high on the National Socialist (Nazi) arrest list, and he left for London in May 1933. There, he studied at the London School of Economics with Harold Laski (1893–1950) and Karl Mannheim (1893–1947), and he earned a second doctorate with a political theory dissertation on "The Governance of the Rule of Law," directed above all against the national socialist jurist Carl Schmitt (1888–1985), who had earlier intrigued him. In 1936 he came to Max Horkheimer's (1895–1973) Institute of Social Research in New York, initially as a legal advisor and eventually as a collaborator in the research program. Between 1943 and 1947, impelled by a contraction of the Institute's activities and the less-than-perfect fit between his political focus and the philosophical preoccupations of the Institute's

core, he was—somewhat uncomfortably—in U.S. government service, involved above all in vainly planning a reformed social-democratic future for Germany. In 1949, after two years as a visitor, he became a professor in the Department of Public Law and Government at Columbia University in New York City. Neumann died in an automobile accident on September 2, 1954.

Neumann's publications may be divided into three periods, and key writings from all three phases have been variously retrieved by later generations of scholars in Germany, Italy, and the United States. During his years as a labor lawyer in Weimar Germany, following a methodological dissertation designed to permit a critique of German socialism's failure to move beyond its pre–World War I (1914–1918) tactical individualism in matters of criminal law, Neumann published several important articles, as well as a book, on the place of labor law in the scheme of the Weimar constitution, with labor law being taken, following Sinzheimer, as a body of socially initiated law that runs progressively against the liberal property law foundations of the civil code. The collective efforts of organized labor were an integral presupposition of this laborist approach, and the Weimar constitution was understood as a composite of democratic majoritarian parliamentary rule and a pluralistic social bargaining regime.

In the first years of exile after 1933, in his well-known *Behemoth* (1942), as well as in his posthumously published second dissertation—both of which harshly criticized in the light of events his own earlier assumptions about organized labor—Neumann offered a diagnosis of National Socialism as a political malformation arising from the legal and political order of monopoly capitalism, which neither liberalism nor laborism can comprehend. His structural analysis led him to deny the view, not alien to some of his Institute associates, that the regime should be understood as a brutally overdeveloped state with an all-encompassing bureaucracy. The Fascist slogans of "corporatism" and "totalitarian state" were mere ideological cover for a condition of incoherent conflict, according to Neumann. Nazi Germany was not to be likened to Thomas Hobbes's *Leviathan* (1651) but to his *Behemoth* (1682), the account of civil war and "confusion."

Notwithstanding the Marxist sociological tools he applied to its structure, Neumann's critique focused on the absence of a rational state in Nazi Germany and the dynamic destructive consequences of the unresolvable power struggles that constituted the system of rule. Expansionary and exploitative war without limit was the only way for such a regime, and such overreach cannot achieve a settled victory. The frame of Neumann's argument recalls the reading of G. W. F. Hegel (1770–1831) advanced at nearly the same time by his friend Herbert Marcuse (1898–1979) in *Reason and Revolution* (1941), but Neumann lacked Marcuse's philosophical interests and he placed the weight of his work on the conjunction of his political theses with his detailed and authoritative analyses of current social, political, and economic information from German sources. It was the latter aspect that won him the greatest recognition from the dozen or more academics that reviewed *Behemoth*, but the more conjectural frame fascinated younger political writers, such as C. Wright Mills (1916–1962), who welcomed the work as an inspiration for a fresh, unhackneyed start for leftist diagnosis of trends whose dangers were not limited to Germany. Mills's influential *Power Elite* (1956) applies the analytical features that he most appreciated in Neumann's study to the American conditions of the 1950s. Neumann's mix of high humanistic ideals and tough-minded acceptance of stubborn facts recurrently intrigue a constituency on the independent Left, notably in Germany.

Neumann's writings after his years of wartime government service were constructive in aspiration, notwithstanding his occasional evocations of the critical theory formulas of the Institute of Social Research; but the work remained inconclusive. On balance, it represented an attempt to develop a theory of liberal democracy that would be responsive to the social and cultural concerns of the radical thinkers he took as his models, but that would, at the same time, support a secure constitutional order. The distinguishing feature of his work throughout is the conviction, first, that law is a mode of power and, second, that not all power in legal form is simply reducible to domination by force or fear. In its aspect as a pattern of guaranteed rights, the rule of law has a minimum ethical function beyond its ideological and economic roles; in its character as rule by democratic enactment, it has the possibility of transforming society. Neumann's central puzzle was how a political force, subject to the logic of power and confronted with the totalitarian threat immanent in all advanced societies, could serve the objectives implicit in the idea of a free and rational humanity.

SEE ALSO *Corporatism; Frankfurt School; Hegemony; Imperialism; Mills, C. Wright; Nazism; Power Elite; Totalitarianism; World War II*

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David Kettler

NEUROECONOMICS

Neuroeconomics is a new and emerging approach in the social sciences that integrates theories, methodologies, and ideas from neuroscience, economics, and psychology to study how individuals make economic decisions. Typically, research in this field involves observing neurological activity in experimental tasks and situations, through brain imaging in humans (which monitors electrical activity or blood flow in clusters of neurons) and single neuron measurements in animals (which monitors individual neurons firing via tiny electrodes inserted into an animal's brain). By linking observed behaviors with the neurons and brain regions that activate during such actions, neuroeconomic researchers seek to discover not only the functionality of various brain regions, but also the underlying processes that occur in decision-making as different neural systems interact. While the full benefits of this new interdisciplinary approach are still unclear, neuroeconomics has generated excitement due to its potential to advance the existing behavioral theories of its contributing disciplines. Particularly, as neuroscience and psychology are closely related fields, neuroeconomics strongly supplements behavioral economics, a subfield that seeks to integrate psychology into the rational-choice framework of neoclassical economics. Indeed, by providing a window into what was previously regarded as the "black box" of the brain, neuroeconomics can improve the accuracy of our existing decision-making models and generate new insights into the basis of economic behavior.

One illustration of the potential insights derived from neuroeconomics can be found in the neuroscientific version of the classic two-player "ultimatum game" from game theory. In the traditional game, the first player is asked to decide how much of a sum of money he wishes to keep for himself and how much he wishes to offer to a second player. The second player can either accept this offer, in which both players receive the amount allocated to him by the offer, or reject it, in which neither party receives any money. While economic theory suggests that the second partner will rationally accept any nonzero offer, in behavioral economic experiments the second player typically rejects low offers (e.g., two dollars, when the other player receives eight dollars). When the experiment is conducted using functional magnetic resonance imaging (fMRI), brain scans of participants who face unfair offers indicate heightened neural activity in two competing brain regions: the bilateral anterior insula, a region associated with the emotions of anger, distress, and disgust, and the dorsolateral prefrontal cortex (dlPFC), a region associated with reasoning and deliberation. Interestingly, when insular activation exceeded dlPFC activation, participants typically rejected low offers, whereas when dlPFC activation exceeded insular activa-

tion, participants typically accepted these same offers. This finding expands our knowledge of decision-making in the traditional game theory experiment by revealing the presence of multiple, competing processes in the brain (in this case, representing affect versus cognition) that directly determine the subject's final choice.

Neuroeconomics currently faces some criticism from skeptics in its parent disciplines who are uncertain about the utility that can be gained from combining such dissimilar approaches to decision-making and behavioral analyses. Some neuroscientists question the usefulness of research involving fMRI—the most common neuroscientific technology employed in the field—because such techniques only capture images of the brain every few seconds (while neural activity occurs in milliseconds) and cannot detect activity that is less than 3 millimeters long (while neural activity can occur at 0.1 millimeters). Even among supporters of this new field, there are general inconsistencies in the perceived goals and purpose of neuroeconomics. Within this field, some neuroscientists apply the most basic elements of rational choice theory to explain neural activity—emphasizing findings such as the existence of neurons in monkeys that calculate physiological or expected utility—while some economists use neuroscience to expand upon rational choice theory and incorporate non-orthodox perspectives of economic behavior (e.g., from psychology and sociology). Overall, neuroeconomics is a new interdisciplinary field with many questions still left to answer. With likely advances in neuroscience technologies in the future, we may soon know much more about how useful the neuroeconomic approach is to decision-making research, and how individuals truly arrive at the economic decisions that they make.

SEE ALSO *Decision-making; Economics; Economics, Behavioral; Game Theory; Neuroscience; Psychology; Rationality*

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Jeffrey K. Lee

NEUROMANCER

SEE *Matrix, The.*

NEUROSCIENCE

The field of neuroscience reflects the interdisciplinary effort to understand the structure, function, physiology, biology, biochemistry, and pathology of the nervous system. From a social science perspective, however, neuroscience primarily refers to the study of the brain. Of interest is how the brain gives rise to learning, cognition, and behavior. The research of neuroscientists crosses many levels of analysis, ranging from molecular studies of genes to the study of social and ethical behavior. Within psychology, for example, behavioral neuroscientists use animal models to gain a better understanding of how genetic and brain processes influence behavior. Since the late 1980s, there has been a dramatic rise in the field of cognitive neuroscience, which combines cognitive psychology, neurology, and neuroscience to examine how brain activity gives rise to cognitive abilities (for example, memory, emotion, attention, language, consciousness).

Most recently, social neuroscience is an emerging field that uses the methods of neuroscience to understand how the brain processes social information. It involves scholars from widely diverse areas (for instance, social psychology, neuroscience, philosophy, anthropology, economics, sociology) working together and across levels of analysis to understand fundamental questions about human social nature. Social neuroscience merges evolutionary theory, experimental social cognition, and neuroscience to elucidate the neural mechanisms that support social behavior. From this perspective, just as there are dedicated brain mechanisms for breathing, walking, and talking, the brain has evolved specialized mechanisms for processing information about the social world, including the ability to know one's self, to know how one responds to another, and to regulate actions in order to coexist with other members of society. The problems that are studied by social neuroscience have been of central interest to social scientists for decades, but the methods and theories that are used reflect recent discoveries in neuroscience. Although in its infancy, there has been rapid progress in identifying the neural basis of many social behaviors (for reviews, see Adolphs 2003; Heatherton et al. 2004).

METHODS OF NEUROSCIENCE

The principles of how cells operate in the brain to influence behavior have been studied with great progress for more than a century, but it is only since the late 1980s that researchers have been able to study the working brain as it performs its vital mental functions. Brain activity is

associated with changes in the flow of blood as it carries oxygen and nutrients to active brain regions. Brain imaging methods track this flow of blood to understand which areas of the brain are most active for a given task. Positron emission tomography (PET), the first imaging method developed, involves a computerized reconstruction of the brain's metabolic activity by using a relatively harmless radioactive substance that is injected into the blood stream. A PET scanner detects this radiation and therefore can be used to map out brain activity in real time, which is a direct measure of blood flow. The use of radioactive substances, however, places an inherent limitation on the number of trials that can be conducted in a PET study, a potential limitation that is not present in functional magnetic resonance imaging (fMRI). Like PET, fMRI measures brain activity, but it is noninvasive (that is, nothing is injected into the blood stream). The fMRI process employs a strong magnetic field to assess changes in the oxygen level of blood at particular sites after they have become active, which is an indirect measure of blood flow.

Another set of techniques for assessing brain activity involves measuring electrical activity in the brain using an electroencephalogram (EEG). As a measure of specific mental states, an EEG is limited because the recordings reflect all brain activity and therefore are too noisy to isolate specific responses to particular stimuli. A more powerful method involves averaging together many trials and measuring the brain activity evoked for the brief periods of time following the start of the trial, resulting in measurements known as event-related potentials (ERPs). ERPs have proven to be especially useful for assessing the time course of cognitive processes, such as which aspects of a stimulus are processed first. A related method, magnetoencephalography (MEG), measures magnetic fields produced by the electrical activity of the brain. Both EEG and MEG provide excellent temporal resolution (that is, timing), yet limited spatial resolution (that is, the precise location of the activation). Brain imaging methods, such as fMRI and PET, provide much better spatial resolution than EEG or MEG, but at the cost of temporal resolution (that is, blood flow changes occur over several seconds following brain activity).

APPLICATIONS OF NEUROSCIENCE TO THE SOCIAL SCIENCES

The use of brain imaging techniques has allowed scientists to discover a great deal regarding the neural correlates of mental activity. For instance, cognitive neuroscientists have used these methods to better understand which brain regions are involved in memory, attention, visual perception, language, and many other psychological processes. More recently, neuroscience methods have been used to study topics of interest across the social sciences, such as political attitudes and decision-making, moral judgments, cooperation and competition, behavioral economics, addiction, and social cognition. For example, social psychologists have long been interested in understanding whether stereotypes reflect automatic (unconscious) or controlled (conscious) processes. Thus, social neuroscientists have begun to examine how various brain regions respond when people are making judgments of other people from various racial groups or people who possess various forms of stigma (such as status, class, disfigurement). A common finding is greater activity in the amygdala (a brain region associated with fear-based emotional responding) in response to observing faces of different races for people high in racial bias than for people low in racial bias (Eberhardt 2005).

Research within social neuroscience has often focused on the trade-off between primitive emotional responses and higher-level cognitive control. The latter reflects unique human capacities for self-reflection, understanding the minds of others, and engaging in self-control; each of these capacities ultimately depends on the intact functioning of the frontal lobes. It is likely that the methods of neuroscience will expand throughout the social sciences to address questions at a new level of analysis. As such, these methods can augment the traditional methods used to understand social behavior.

SEE ALSO *Altruism; Depression, Psychological; Dopamine; Drugs of Abuse; Generosity/Selfishness; Hallucinogens; Happiness; Memory; Neuroeconomics; Semantic Memory; Sex and Mating*

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NEUROSCIENCE, SOCIAL

Social neuroscience is an interdisciplinary field that considers the mutual implications of neuroscience and social science for understanding of social and affective aspects of behavior. Specifically, social neuroscience determines the biological mechanisms underlying social processes and behavior, considered by many to be one of the major

problem areas for the neurosciences in the twenty-first century, and uses biological concepts and methods to develop and refine theories of social processes and behavior in the social and behavioral sciences.

Contemporary work has demonstrated that neuroscientific theory and methods can constrain and inspire hypotheses, foster experimental tests of otherwise indistinguishable theoretical explanations, and increase the comprehensiveness and relevance of behavioral theories. Several principles from social neuroscience suggest that understanding social behavior requires the joint consideration of social, cognitive, and biological levels of analysis in an integrated fashion. The principle of *multiple determinism*, for instance, specifies that a target event specified at one level of organization, but especially at molar or abstract (e.g., social) levels of organization, can have multiple antecedents within or across levels of organization. For instance, one might consume a considerable quantity of pizza in an effort to either remedy a low blood-sugar condition (biological determinant) or win a food-eating contest (social determinant).

The principle of *nonadditive determinism* specifies that properties of the whole are not always readily predictable from the properties of the parts. In an illustrative study, the behavior of nonhuman primates was examined following the administration of either an amphetamine or a placebo. No clear pattern emerged until each primate's position in the social hierarchy was considered. When this social factor was taken into account, the amphetamine was found to increase dominant behavior in primates high in the social hierarchy and to increase submissive behavior in primates low in the social hierarchy. A strictly physiological (or social) analysis, regardless of the sophistication of the measurement technology, may not have unraveled the orderly relationship that existed.

Finally, the principle of *reciprocal determinism* specifies that there can be mutual influences between microscopic (e.g., biological) and macroscopic (e.g., social) factors in determining behavior. For example, not only has the level of testosterone in nonhuman male primates been shown to promote sexual behavior, but also the availability of receptive females influences the level of testosterone. That is, the effects of social and biological processes can be reciprocal.

One important implication of these principles is that comprehensive accounts of human behavior cannot be achieved if the biological, cognitive, or social level of organization is considered unnecessary or irrelevant.

In sum, throughout most of the twentieth century social and biological explanations were cast as incompatible. Advances in recent years have led to the development of a new view synthesized from the social and biological sciences. The new field of social neuroscience emphasizes the complementary nature of the different levels of organization spanning the social and biological domains (e.g., molecular, cellular, system, person, relational, collective, societal) and demonstrates how multilevel analyses can foster understanding of the mechanisms underlying the human mind and behavior.

SEE ALSO *Determinism, Nonadditive*

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NEUROTICISM

Neuroticism (N) is one of the broad dimensions or traits of human personality. Individuals with high levels of N are emotionally sensitive and more likely to experience psychological distress and negative emotions, such as sadness, worry, or fear. They find it difficult to cope with stress and to control their emotions. In contrast, individuals who score low on N are characterized by low levels of emotional arousal. They are described as emotionally stable. Even when faced with stressful situations, they remain calm and relaxed and report low levels of negative emotions.

The concept of N emerged from the lexical tradition of personality research that used statistical techniques to identify the basic underlying dimensions of personality descriptions found in everyday language. Although most researchers agree that N is one of the core personality dimensions, there are some differences in its conceptualization across theoretical frameworks.

The five-factor model of personality considers N (together with Extraversion, Openness to Experience, Agreeableness, and Conscientiousness) as one of the "Big Five" dimensions of normal personality. According to Robert McCrae and Paul Costa (2003), N is composed of six facets: Anxiety, Angry Hostility, Depression, Self-Consciousness, Impulsiveness, and Vulnerability. Hans Eysenck and Sybil B. G. Eysenck (1976) identified N, together with Extraversion and Psychoticism, as one of three major dimensions of personality.

N is typically measured by asking individuals to indicate their agreement with a list of self-descriptive statements. Observer ratings obtained from peers, relatives, or medical professionals may be used as well. Two commonly used questionnaires are the Eysenck Personality Questionnaire—Revised (EPQ-R; Eysenck, Eysenck, and

Barrett 1985) and the Revised NEO Personality Inventory (NEO PI-R; Costa and McCrae 1992). The EPQ-R consists of 100 items and provides separate scales for N, Psychoticism, and Extraversion. The NEO PI-R consists of 240 items that measure each of the 5 personality domains. Scores for the six facets that define each domain are provided as well.

N is a genetically influenced (Bouchard and Loehlin 2001; Pilia et al. 2006), stable characteristic that manifests itself consistently across age groups, gender, and cultural contexts. An adult's level of N remains fairly constant across time, but there are gradual declines in N across the adult life span (Roberts, Walton, and Viechtbauer 2006). N and its facets can be sharply increased by adverse life conditions and medical disorders, though it is quite responsive to various treatment strategies as well.

Although N acquired its name through its close association with the traditional diagnosis of neurosis, N is a dimension of normal personality. Even extremely high scores on the N scale do not necessarily indicate the presence of psychopathology, and even people with low levels of N may have psychiatric disorders. That being said, high scores on N are nevertheless related to a range of problems in living. Especially in combination with low extraversion, high N is associated with lower life satisfaction and greater risk for clinical depression and other psychiatric disorders. People high in N are also prone to use maladaptive strategies (e.g., self-blame) when coping with stressors. In combination with low conscientiousness, N is also a risk factor for smoking and abuse of alcohol and drugs.

SEE ALSO *Anxiety; Depression, Psychological; Personality; Psychopathology; Self-Consciousness, Private vs. Public*

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NEUTRAL POLICIES, RACE

SEE *Race-Blind Policies.*

NEUTRAL RATE OF INTEREST

SEE *Interest, Neutral Rate of.*

NEUTRAL SOCIAL SCIENCE

SEE *Social Science, Value Free.*

NEUTRAL STATES

As long as states (or statelike entities) and warfare between them have existed, there have been states that did not participate in a current war and thus displayed *neutral* behavior (derived from the Latin *ne-uter*, "neither of the two"). The modern tradition of neutrality dates back to the development of the state system in the sixteenth and seventeenth centuries. The interaction of state practice, scholarly thought, and international treaties crystallized into an institution of international law.

One can distinguish at least three or even four types of "neutral" behavior of states. The first is *occasional* neutrality, a state's neutrality in a particular war between other states. Its legal rules were codified in 1907 at the second Hague Peace Conference. *Permanent* neutrality under customary international law commits a state to neutrality in all present *and* future wars and obliges it to avoid such peacetime ties and policies as would make its neutrality in war impossible. *Conventional* neutrality without an international legal basis is followed by states that tend to call their foreign policies neutral. They follow a more or less neutral course in practice, but fail to commit themselves to permanent neutrality under international law. Whereas these three types of neutrality have been practiced mostly by European states, a distant fourth variant, *nonalignment*,

evolved above all in countries that during the cold war wanted to avoid entanglements in the conflict between the United States and the Soviet Union. These countries formed the *nonaligned movement*.

The Hague Conventions require the *occasional* neutral state to prevent the use of its territory, including its airspace and waters, by belligerent states; the neutral must not allow the passage of troops, munitions, or supplies through its territory. The neutral state has to refrain from any support for belligerents and may not deliver war materials or extend loans for military purposes. In contrast, the neutral is not bound to prevent private persons and companies from exporting war materials to belligerent states. If the neutral regulates trade with military goods, these provisions must treat the belligerents equally and be implemented without discrimination.

These rules originated in the liberal era when it was seen as feasible to keep apart public space (the state) and private sphere (the economy). But during the twentieth century, this distinction became more and more blurred. In addition, many armed conflicts like internal wars, guerilla wars, and massive terrorist attacks are not the type of interstate wars that are the subject matter of the international law of neutrality. Enforcement measures by the United Nations Security Council (UN Charter, chap. VII) are regarded as "police operations" and also not relevant to neutrality.

The rules for the behavior of *permanently* neutral states have never been codified. In 1815 Switzerland's status of permanent neutrality was recognized by the powers of the Congress of Vienna. As comparable buffers between France and Germany, Belgium and Luxembourg agreed to legally based permanent neutrality in the first half of the nineteenth century, but abandoned it in the aftermath of World War I (1914–1918).

The customary rules of permanent neutrality include three basic duties in peacetime: (1) not to begin a war; (2) to defend the status of permanent neutrality; and (3) to do everything to avoid being drawn into a war and to abstain from any action that could lead to involvement in a war. The range of this last set of duties, the "antecedent effects" of permanent neutrality, have been controversial. In the 1950s the Swiss authorities interpreted these duties to encompass a prohibition against concluding any treaty that would oblige it to wage war (like a military alliance). Switzerland would also not be allowed to conclude any customs or economic union with any other country because it would thereby relinquish its political independence and thus could not credibly forestall participation in a future war. As a quid pro quo for ending the four-power occupation installed after World War II (1939–1945), Austria in 1955 assumed the status of permanent neutrality according to the Swiss model.

About the same time, after the Soviet Union relinquished its naval base at Porkkala near Helsinki, Finland started to practice neutrality in its foreign relations. Sweden had followed this type of neutrality policy since the first half of the nineteenth century. Ireland had adhered to a limited "military" neutrality since World War II. These *conventional* neutrals rejected all legal obligations during peacetime, but followed a foreign policy similar to that of the permanently neutral states.

The European neutrals did not join the European Economic Community (EEC), founded in 1957, although Austria and Sweden, for example, had close economic ties with its members. During the years of détente between East and West, these neutral countries played a role in moderating international conflicts through their "active neutrality." Ireland joined the EEC in 1973. In the late 1980s and early 1990s, economic difficulties forced the other neutrals to rethink their position vis-à-vis the European Union (EU). The end of the cold war and a less-strict interpretation of permanent neutrality helped Austria, Sweden, and Finland finally join the EU in 1995. Together with Ireland, they refused a military assistance clause, as foreseen in the Constitutional Treaty of the EU. But otherwise, the foreign policy behavior of the neutral states is similar to that of the other members of the EU. They fully participate in the Common Foreign and Security Policy of the EU. In situations where military force is used without a UN Security Council mandate, their positions can become awkward, as the 1999 Kosovo crisis showed. Austria regarded the NATO bombing of Serbia as "necessary and warranted" in the EU context, but at the same time refused the overflight of NATO war planes on their way from the U.S. bases in southern Germany to the Balkans. The status of permanent or conventional neutrality has lost most of its functions at the beginning of the twenty-first century. But since neutrality is still favored by their populations (as numerous public opinion polls show), the governments of the neutral states are reluctant to change this status.

SEE ALSO *European Union; Nation-State; North Atlantic Treaty Organization; State, The; United Nations; War; War and Peace*

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NEUTRALITY, POLITICAL

Political neutrality is a position a nation-state adopts regarding a particular conflict. Politically neutral countries maintain a neutral stance toward warring parties for the duration of a conflict, although certain countries, such as Sweden and Switzerland, and Belgium until 1914, extend neutrality to all conflicts so that such stances become permanent over time. Political neutrality has its basis in international law and common principles of international society, but it is termed political in the sense that it is influenced by domestic political factors, and as a chosen policy serves a country's national interests.

Politically neutral parties are not indifferent to conflict (they may still provide humanitarian assistance or other forms of nonmilitary aid to needing parties). For instance, while many countries did not provide military assistance in any form to the recent American-led Iraq War, several neutral countries have provided (and continue to provide) large amounts of bilateral humanitarian assistance. Furthermore, politically neutral countries are not necessarily pacifist in principle, as they still maintain armies for protection and they will fight for reasons of self-defense, as Belgium did in World War I when Germany invaded in 1914.

INTELLECTUAL TRADITION, INTERNATIONAL LAW, AND PRINCIPLES SERVING "NEUTRALITY"

In order for neutrality to be viable, it must be granted and respected by other states. This assumes that nation-state behavior is rule-governed. As an intellectual approach to international politics, the Grotian tradition (named after Hugo Grotius, a seventeenth-century jurist) assumes that rules and principles operate within international politics. Also termed the international society tradition, and developed by scholars such as Hedley Bull, Martin Wight, Adam Watson, R. J. Vincent, Robert H. Jackson, and Nicholas Wheeler, this perspective still assumes that states operate within anarchy—or the lack of a central, overarching political authority that can adjudicate grievances. Additionally, the Grotian tradition does not assume that these rules will inevitably abolish interstate conflicts. Yet it asserts that in certain contexts (both spatial and temporal), nation-states hold in common certain values and interests that are binding upon members of the international society. Political neutrality is one such recognized common interest.

While many international principles have informed how neutrality has been understood in international politics, three are noteworthy. First, states that are neutral toward the internal conflict of another nation-state (civil wars) do so out of respect for the sovereignty of that country. Sovereign states have exclusive political authority throughout the geographic regions they occupy. A second and related principle is pluralism, or that there are multiple conceptions and ways of life (rather than one universal) that any state may wish to pursue. Third, there is the principle of *pacta sunt servanda*, which translates, "pacts must be respected." This principle assumes states keeping their promises. Agreements among states can only be binding if there is the assumption that, once entered, states will maintain those agreements through time.

The most explicit example of international recognition for neutrality, the Second Hague Convention (1907), grew out of what Grotian scholar Bull termed a European international society in his *Anarchical Society* (1977, pp. 31–36). Throughout the eighteenth, nineteenth, and early twentieth centuries European countries developed a body of international settlements and laws that were expressed in certain institutions (such as the Concert of Europe). At the Second Hague Convention, neutral countries such as Belgium, Sweden, and Switzerland were granted formal recognition in Articles V (The Rights and Duties of Neutral Powers and Persons in Case of War on Land) and XIII (Naval War). These articles declared, most importantly, that the land of neutral countries was "inviolable." The Second Hague Convention is still recognized law and the most important statement recognizing the rights of neutral countries.

REASONS FOR, AND FORMS OF, POLITICAL NEUTRALITY

While international recognition is important for a nation-state's political neutrality to be viable, there are many domestic influences that pressure states into neutrality (either permanently or temporarily). Three key sets of reasons for political neutrality include:

Instrumentalist Neutrality is the most cost-effective position a country can take regarding a conflict. A nation-state remains uninvolved in a dispute because the dispute is unpopular with and costly for nationally important eco-

nomic and political interest groups. In instrumentalist situations, one or more warring parties may try to induce countries out of neutral positions by providing economic incentives that would therefore make political neutrality no longer cost-effective. In other words, when such material incentives successfully induce neutral countries into conflicts, an instrumentalist set of influences was probably most responsible for the original politically neutral position.

Isolationist Neutrality is based upon both a cultural and economic component that influences a country's conception of its national interest. Isolationists assert that their country should have only limited interaction with other countries. This stance has been especially popular with certain domestic interest groups that benefit from protectionist economic policies, but it also permeates the fabric of a country's larger political culture. Isolationism prevailed in the United States, for example, during the interwar period (1919–1941). This particular form of isolationism was based in the concept of American exceptionalism, or the belief that the United States held a unique place in the world and that, therefore, America could remain neutral toward, and removed from, the balance of power politics underpinning European conflicts.

Normative Neutrality is chosen as a policy because there is no position for a country to take that would not threaten its own national vision. Normative political neutrality was the British policy toward the United States during the American Civil War (1861–1865). While the British had recognized the Confederacy as a legitimate "belligerent" party, and many Brits identified with the aristocratic landholders of the American South, the Emancipation Proclamation redefined (in British society) the American Civil War as a war over slavery. Even though neutrality proved materially very costly to Britain's strategic and economic interests, the British could not side with the Confederacy as such an action would have engendered British anxiety over slavery.

In certain cases, like Switzerland, Sweden, and Belgium until 1914, neutrality is inherited as a political attribute that serves to define its social identity as a state. Belgium, from independence in 1830 until World War I, declared itself a "perpetually neutral" country. In this case political neutrality informs all decisions a state makes, during times of peace and war, and determines even the legal basis for whether and how to resist invading armies.

While neutrality seems to carry no guarantees, it should be noted that the territories of most neutral countries have been respected through time. Even in cases where neutrality has been compromised, the offending party often incurs widespread international condemnation for such a violation, as Germany did following the invasion of then-neutral Belgium in 1914.

SEE ALSO *Neutral States; Neutrality of Money*

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NEUTRALITY OF MONEY

The (classical) quantity theory of money represents a central organizing principle for macroeconomic analysis. It goes back hundreds of years, to the writings of David Hume (Hume 1970) and Irving Fisher (Fisher 1922).

The theory posits that one-time permanent shifts in nominal variables have no effect on real variables in the long run. The simplest quantity-theoretic proposition, known as the *long-run monetary neutrality proposition*, specifies that a permanent, stochastic, (that is, purely random) shock to the money supply has a one for one effect on prices and a zero effect on real output in the long run. Another quantity-theoretic proposition is that of long-run monetary superneutrality, specifying that a permanent change in the rate of growth of nominal money (that is, money measured in current dollar magnitudes) has no long-run effect on the level of real output. In sum, changes in the money supply affect the price level (inflation) but have no effect on relative prices, the volume of employment, output, or real income (purchasing power).

Over the years, the long-run monetary neutrality propositions have been investigated in a large number of studies (McCandless and Weber 1995). However, as Lucas (1996, p. 661) puts it in his Nobel lecture, "so much thought has been devoted to this question [of proving long-run neutrality] and so much evidence is available that one might reasonably assume that it had been solved long ago. But this is not the case." In fact, Fisher and Seater (1993) and King and Watson (1997), using state-of-the-art advances in the field of applied econometrics, have shown that meaningful long-run neutrality tests can only be constructed if both nominal (measured in current dollar magnitudes) and real (measured in units of commodities) variables satisfy certain nonstationarity conditions (regarding, for example, variance, trends, and

seasonal patterns) and that much of the older literature violates these requirements.

In the spirit of Fisher and Seater (1993) and King and Watson (1997), Serletis and Koustas (1998) provide international evidence for the long-run neutrality and superneutrality propositions. Using the eclectic approach of King and Watson (1997) and the Backus and Kehoe (1992) data, consisting of over one hundred years of annual observations on real output and money for ten countries—Australia, Canada, Denmark, Germany, Italy, Japan, Norway, Sweden, the United Kingdom, and the United States—they show that the data are generally supportive of monetary neutrality.

In a similar study testing the long-run neutrality of money and using the King and Watson (1997) methodology, Serletis and Koustas (2001) pay particular attention to the gains that can be achieved by rigorous use of microeconomic- and aggregation-theoretic foundations in the construction of money measures. To address disputes about the relative merits of different monetary aggregation procedures, they make comparisons among simple-sum, Divisia (named after the French economist Francois Divisia), and currency-equivalent money measures for the United States, obtained from the monetary services indices (MSI) database, maintained by the Federal Reserve Bank of St. Louis as a part of the bank's Federal Reserve Economic Database. The results show that the hypothesis of long-run monetary neutrality finds support in the United States data, irrespective of how money is measured.

Finally, another long-run neutrality proposition is the Fisher relation. According to the Fisher equation, $R = r + \pi$, where R is the nominal (dollar) interest rate, r the real interest rate (the rate that determines the growth over time in the real value of assets), and π the inflation rate, the Fisher relation states that the nominal interest rate moves one-for-one with inflation in the long-run, meaning that a permanent change in the rate of inflation has no long-run effect on the level of the real interest rate. The Fisher relation holds in models in which the real interest rate is determined by a relation like the modified golden rule (according to which the marginal product of capital in steady state equals the sum of the rate of time preference and the population growth rate) and therefore does not depend on monetary variables (Sidrauski 1967). It is violated, however, in models in which the Tobin (1965) effect applies; in such models, an increase in the inflation rate results in a decrease of the real interest rate and therefore in a less than one-to-one increase of the nominal interest rate (this is known as the Tobin effect).

Koustas and Serletis (1999) have investigated the Fisherian link between inflation and nominal interest rates using postwar quarterly data for eleven countries—Belgium, Canada, Denmark, France, Germany, Greece, Ireland, Japan, the Netherlands, the United Kingdom, and the United States—and the King and Watson (1997) methodology. Their results are consistent with most of the existing literature on the Fisher effect, which mostly shows that fully anticipated inflation has less than a unit effect on the nominal interest rate, and thus reduces the real interest rate even in the longest of runs. In view of the inability to reject long-run monetary neutrality by examining the effects of money shocks on real output, we are thus left with a puzzle that needs to be addressed by future theoretical and empirical work.

SEE ALSO *Economics, Keynesian; Economics, New Classical; Interest Rates; Monetarism; Monetary Theory; Money; Money, Demand for; Policy, Monetary; Quantity Theory of Money*

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NEW CLASS, THE

The New Class is a term made popular by Milovan Djilas's book *The New Class* (1957), which describes the privileged ruling group of top government bureaucrats and party functionaries that typically arises in all Stalinist "party-states." The idea of a new technocratic and nonproletarian ruling class in Communist societies has been used to criticize the centralized social-welfare state of Soviet-type socialism. But it is also linked to the notion that a new influential class of skilled intellectuals, technocrats, and managers has emerged in modern capitalist societies to reshape the traditional class conflict between capital and labor, as well as to the proposition that the rise of such a technocratic-managerial class signals the emergence of a new, post-capitalist social order.

In the first half of the twentieth century, neo-Marxist theories of a new social stratum of managers, engineers, and other technocrats—sometimes called the "intellectual proletariat"—became popular among left-wing intellectuals, especially in Western Europe. In his famous novel *Nineteen Eighty-Four*, George Orwell predicted that this new social stratum "would control this world.… The new aristocracy was made up for the most part of bureaucrats, scientists, technicians, trade-union organizers, publicity experts, sociologists, teachers, journalists, and professional politicians" (1984, p. 169). Anarchists, anarcho-syndicalists, Left Communists, Trotskyists, and other leftist critics of Soviet-style socialism associated this technocratic meaning of the term with the "new class" of top government and party bureaucrats, industrial managers, professional propagandists, and so forth, that had emerged to dominate the Soviet Union under Stalin's system of state capitalism.

A very similar notion of a new ruling class was advanced by Milovan Djilas (1911–1995), a dissident politician in post–World War II (1939–1945) Yugoslavia. Djilas was purged from the Communist hierarchy in 1954 for advocating democratic and egalitarian ideals, which he believed permeated the original theories of Marxism, socialism, and communism, but ran counter to the dominant Stalinist dogma and practice of his day. Djilas observed that the leading government and party officials in all Stalinist regimes assumed the role of a new ruling class—a heretical idea that was at variance with the ideological claims of the governing Communists, who argued that the Communist revolution had resulted in the extinction of the dominant capitalist class and its replacement by the "dictatorship of the proletariat." He claimed that the new class exercised collective political control over the means of production as a new form of "monopoly ownership," which allowed capitalist-style relations of inequality, domination, and exploitation to persist even in the absence of a hegemonic capitalist class and its private ownership of economic production. Djilas's "new class" thus overlaps with the so-called "*nomenklatura* class," a term used in other critical descriptions of the governing bureaucracy in the Soviet Union (see Voslensky 1984).

A somewhat similar claim has been made about the "three-way polarization" of advanced capitalist societies between the capitalist class of private corporate owners, the working class, and an influential "new class" of college-trained technocrats, which Barbara and John Ehrenreich called the "Professional-Managerial Class" (PMC). This wage-earning technocratic class is generally hostile to the capitalist socioeconomic order over the issue of private ownership and control of the means of production, as well as over the unequal and unfair distribution of the fruits of material production. This anticapitalist hostility has turned the PMC into "an enduring reservoir of radicalism"—from Progressivism and the Socialist Party to the New Left (Ehrenreich and Ehrenreich 1979, p. 42). But there are also tensions with the blue-collar workforce due in part to the interest of the highly educated "new class" in extending its cultural and technological hegemony over the working classes. Their mutual antagonism has been "over the issues of knowledge, skills, culture" (Ehrenreich and Ehrenreich 1979, p. 45)—that is, over the PMC's elitism and patronizing attitude vis-à-vis working-class people. Without the pivotal assistance of the PMC, however, the ruling capitalists cannot effectively dominate the working classes, nor can the latter resist being controlled and exploited by the capitalist class.

In *The Future of Intellectuals and the Rise of the New Class* (1979), neo-Marxist sociologist Alvin Gouldner similarly challenged the central political and theoretical premise of Marxism—namely, the historical class conflict between the bourgeoisie and the proletariat—by claiming that a "New Class" has emerged under modern capitalism, comprising intellectuals, managers, and the technical intelligentsia. The New Class is not a ruling class yet and is also internally riven by important tensions between the technical intelligentsia and the humanistic intellectuals. But as an embryonic new "universal class," these bearers of specialized knowledge are the best hope for social progress in contemporary capitalist societies given the historical failure of the traditional working class (or the "industrial proletariat") to bring about a social revolution and progressive change. A basic strategy of the New Class is to cultivate an alliance with the mass working class in order to undermine and supplant the ruling capitalists and their hegemonic position in the old social order.

In like manner, Robert Reich (who served as secretary of labor under President Bill Clinton) has suggested the idea of a new class consisting of what he calls "symbolic analysts"—engineers, attorneys, scientists, university professors, business executives, journalists, consultants, and

other "knowledge workers," who engage in processing information and manipulating symbols for a living. These well-educated individuals occupy a privileged position in society because they can sell their valued professional services in the global economy. According to Reich,

> Symbolic analysts solve, identify, and broker problems by manipulating symbols. They simplify reality into abstract images that can be rearranged, juggled, experimented with, communicated to other specialists, and then, eventually, transformed back into reality. The manipulations are done with analytic tools, sharpened by experience. These tools may be mathematical algorithms, legal arguments, financial gimmicks, scientific principles, psychological insights about how to persuade or to amuse, systems of induction or deduction, or any other set of techniques for doing conceptual puzzles. (1991, p. 178)

Given the worldwide drift toward "laissez-faire cosmopolitism," Reich believes that only "symbolic analysts"—because of their more advantageous position in the globalized economy—can be confident of being the "winners" of twenty-first-century capitalism.

SEE ALSO *Anarchism; Bahro, Rudolf; Bourgeoisie, Petty; Bureaucracy; Bureaucrat; Capitalism, State; Class; Communism; Credentialism; Democracy; Egalitarianism; Elite Theory; Left Wing; Managerial Class; Marxism; Meritocracy; Middle Class; Oligarchy; Power Elite; Professionalization; Socialism; Stalin, Joseph; Stalinism; Syndicalism; Totalitarianism; Trotsky, Leon; Union of Soviet Socialist Republics*

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Rossen Vassilev

NEW DEAL, THE

The term *New Deal* refers collectively to the sweeping economic reforms and government programs pushed by President Franklin D. Roosevelt and enacted by Congress to combat the Great Depression and relieve its impacts on wide swaths of American society. The New Deal comprised two major waves of reforms: the First New Deal (1933–1934) and the Second New Deal (1935–1936). The First New Deal was more experimental and focused on relief efforts; the Second New Deal was more focused on class conflict. Together, they permanently changed the relationship between government and business and promoted government as an agent of the common good, a role not widely accepted before 1933. The New Deal also fundamentally reorganized the contours of American politics, erasing Republican dominance and creating a majority coalition for the Democratic Party that would last a generation.

1929–1933: THE STOCK MARKET CRASH, THE DEPRESSION, AND THE HUMAN TOLL

The 1928 election produced victory for Herbert Hoover and his Republican Party—the party's third presidential election win in a row. Hoover's first year in office, 1929, saw continued economic prosperity for the business and manufacturing sectors of the economy—but distress for the agricultural economy. The October 1929 stock market collapse brought the prosperous era of the 1920s to a crashing end and raised doubts about Republican claims of being "the party of prosperity." As eminent New Deal historian William E. Leuchtenburg notes:

> In the three years of Herbert Hoover's presidency, the bottom had dropped out of the stock market and industrial production had been cut more than half.… [S]teel plants were operating at a sickening 12 percent of capacity, with "an almost complete lack" of signs of a turn for the better. In three years, industrial construction had slumped from $949 million to an unbelievable $74 million.… By 1932, the unemployed numbered upward of 13 million. Many lived in the primitive conditions of a preindustrial society stricken by famine. In the coal fields of West Virginia and Kentucky, evicted families shivered in tents in midwinter; children went barefoot. In Los Angeles, people whose gas and electricity had been turned off were reduced to cooking over wood fires in back lots. (Leuchtenburg 1963, p. 1)

Leuchtenburg's account further documents the massive human toll of the Depression: famished children; at least one million men wandering the country in an often fruitless search for work; "Hoovervilles," or large settlements

of makeshift shacks of boxes and scrap metal, housing hundreds or more in many American cities; children kept out of school because they had nothing to wear. Conditions in rural America were also desperate owing to falling crop prices and a breakdown of transportation networks for farm products. Farm foreclosures and evictions of farm families were widespread. As Leuchtenburg notes (1963, pp. 23–24):

> As farm income dipped sharply while taxes and mortgage obligations remained constant, thousands of farmers lost their land for failure to pay taxes or meet payments.… [O]n a single day in April 1932, one-fourth of the entire area of the state of Mississippi went under the hammer of auctioneers.

By early 1933, unemployment reached 25 percent, with fifteen million out of work. Five thousand banks had folded, wiping out nine million savings accounts. The venerable U.S. Steel Corporation saw its full-time workforce collapse from 229,000 in 1929 to 0 in 1933.

Presidential elections are often, in part, a referendum on the national economy. The 1932 election was very much so, creating conditions ripe for a Democratic victory—a rarity during the Republican-dominated era since 1896. In November 1932, Herbert Hoover was defeated decisively, and Democrats gained a Senate majority as well, after already having won a House majority in the 1930 congressional elections. Franklin D. Roosevelt would begin his first term working with sizable Democratic majorities in both houses of Congress.

1933–1934: THE FIRST NEW DEAL

Roosevelt entered office March 4, 1933, at a time of almost wartime crisis. The collapse of banks and the rush of depositors had prompted bank holidays nationwide. The first priority was a banking bill to reopen the banks. During Roosevelt's first 100 days in office, Congress passed fifteen major pieces of legislation, including what some critics derided as an "alphabet soup" of new government agencies and programs. The First New Deal was pragmatic: It met demands from and benefited many sectors of society, such as bank depositors, bankers, farmers, opponents of Prohibition, the unemployed, organized labor, and business interests. The most important legislation was the business-supported National Industrial Recovery Act (NIRA, 1933), which authorized companies to form cartels and created provisions for the president to regulate businesses to promote fair competition, raise prices and wages, and create jobs for the unemployed. NIRA also included the first federal minimum wage and maximum workweek, which remain today. Though struck down by the Supreme Court in 1935, NIRA's provisions for collective bargaining were reinstated in the Wagner Act (1935).

The First New Deal also offered something for farmers: the Agricultural Adjustment Act (AAA, 1933). This program provided federal subsidies to farmers to leave some of their land idle. The effect was to reduce crop surpluses and raise crop prices, ultimately providing greater economic stability for farmers. Since the agricultural season was already under way in May 1933, the program began with the controversial large-scale destruction of crops and slaughter of livestock, overseen by the Agricultural Adjustment Administration. Some southern farmers were asked to plow under one-fourth of their cotton crop, again to raise prices. Federal farm programs in the mid-2000s still embodied the AAA's underlying principle of preventing crop overproduction that can cause severe price drops.

Given the rash of bank failures in early 1933, protecting bank deposits from being wiped out was a major priority. The First New Deal, then, included creation of the Federal Deposit Insurance Corporation (FDIC), a federal agency that guarantees checking and savings deposits in the event a bank folds. The FDIC remained in place into the twenty-first century, insuring deposits up to $100,000.

To provide large-scale relief to the unemployed, the First New Deal also included the Public Works Administration (PWA), an agency that contracted with private firms for, and funded, construction of large public projects such as airports, bridges, hospitals, schools, streets, and highways. The PWA encouraged contractors to hire the unemployed. Another work relief program was the Civilian Conservation Corps (CCC), which put young men to work planting trees, building trails and logging roads, erecting fences, raising telephone and power lines, and completing projects to prevent soil erosion. Similarly, a government corporation, the Tennessee Valley Authority (TVA), was established to provide flood control, economic development, and hydroelectric power to many of the southern states—a largely agricultural and impoverished region at the time. Congress also repealed Prohibition in 1933.

1935–1936: THE SECOND NEW DEAL

The 1934 congressional elections strengthened Democratic control of Congress, providing Roosevelt with additional political capital to pursue further reforms. The Second New Deal, more openly prolabor and antibusiness than the First New Deal had been, fostered more class conflict. The Second New Deal included three major legislative acts: the Social Security Act, the National Labor Relations Act (Wagner Act), and the Works

Progress Administration. The first two of these remain today.

The Social Security Act (1935) created a social insurance program, funded through a payroll tax paid by workers and employers alike. The program provides benefit payments for retirement, disability, death (i.e., for widows and survivors), and unemployment. Social Security established the framework for the social welfare state in the United States and provided philosophical support for the Great Society programs in the 1960s.

The National Labor Relations Act (Wagner Act, 1935) was passed following a wave of tumultuous strikes in major cities, as well as years of labor unrest in southern textile mills, including a massive general strike in 1934. The act established workers' right to collectively bargain with employers—that is, to establish and join labor unions. The Wagner Act granted workers the right to strike, declared certain employer actions as prohibited "unfair labor practices," and established procedures for lodging complaints and determining whether or not workers wish to join a union. Later, Congress amended the Wagner Act to extend the prohibition against unfair labor practices to unions.

The Works Progress Administration (WPA, 1935) was a federal program to provide jobs and income for the unemployed. Although most jobs provided construction work, the WPA included programs for writers, artists, and musicians and provided some work for women as well. A component program, the National Youth Administration, provided job training and employment for teenagers. The WPA was disbanded in 1943 during World War II, an era of nearly full employment. The Rural Electrification Administration (REA) provided electricity to remote and rural areas, especially in the more agriculture-dominated South and Plains states.

Overall, the New Deal overturned, for most Americans, prevailing notions of limited government and laissez-faire economic policies by creating government programs and agencies on an unprecedented scale. New Deal defenders argued that new rules, and a vast expansion in the size and scope of the federal government, were necessary to address an economic crisis and attendant human misery that were equally unprecedented.

DEBATES SURROUNDING THE NEW DEAL

The New Deal did have its critics, particularly because it represented a massive change in prevailing ideas of limited government, minimal regulation of business, and emphasis on state, local, and private charity for the needy. Before and during the 1920s, the "old economic order" of most wealthy Americans, financiers, industrialists, and railroad and banking interests, among others, allied with the probusiness Republican Party and argued against major government relief efforts to combat poverty and unemployment. Government relief was thought to reward laziness and discourage individual initiative. Before 1933, the prevailing philosophy of Social Darwinism held that wealth indicated virtue (hard work, initiative, and energy), and poverty indicated moral failings (lack of thrift, laziness, or both)—both individual characteristics, not remediable by government action. The "old order" also resisted government regulation, including the Wagner Act, fearing that government was openly siding against businesses and with workers in labor disputes. Before 1933, federal government policy also often reflected Social Darwinist thinking: Business regulation was limited, government was small in size, agencies were few in number, and preferred policies emphasized free markets and a hands-off, laissez-faire government that should not hinder market competition. (However, earlier Progressive-era reforms included a ban on child labor, food and drug safety laws, and prohibited direct corporate contributions to federal election campaigns.)

Ideological opposition to the New Deal, then, derived from prevailing notions of the proper relationship between government and business. New Deal advocates responded by noting the massive human costs of the depression, coupled with a conviction that the old rules could no longer work. One analysis, by A. A. Berle Jr., notes the rise of large economic organizations (corporations) that could, absent government restraint, use their economies of scale to squeeze out competition. According to Berle:

> The old economic forces do still work and they do produce a[n economic] balance after a while. But they take so long to do it and they crush so many men in the process that the strain on the social system becomes intolerable. Leaving economic forces to work themselves out as they stand will produce an economic balance, but in the course of it you may have half the entire country begging in the streets or starving to death.
>
> The New Deal [is] a recognition of the fact that human beings cannot indefinitely be sacrificed by millions to the operation of economic forces … [producing a] shocking toll on life and health and happiness. (Berle 1933, pp. 4–9, 19)

Berle summarizes the New Deal as an effort to "counterbalance the effects of organization gone wrong, to make sure the burdens of readjustment are equitably distributed, and that no group of individuals will be ground to powder in order to satisfy the needs of an economic balance." Historical accounts, too, often characterize the New Deal as an effort to restore balance to the economic system. Leuchtenburg (1963) characterizes New Deal the-

orists as seekers of balance: "the best society was one in which no important element held preponderant power" (p. 35) But New Dealers were especially worried about the "disproportionate power wielded by business in comparison to that possessed by agriculture" (p. 35). In addition, as the labor unrest of the 1920s and 1930s showed, the imbalance between the political and economic power of business versus that of organized labor was also a concern. This informed the Wagner Act (1935) and its provisions guaranteeing rights for workers seeking to organize or join a union.

While not the focus of much philosophical debate, one additional innovation of the New Deal era is noteworthy: the major infusion of scientific and academic experts into government. Roosevelt relied heavily on a "brain trust" of professors, including Raymond Moley, Rexford Tugwell, Harold Ickes, and other experts in formulating and justifying New Deal policies and in serving in senior cabinet positions. The emphasis on scientists and experts in government was a novelty at the time but rested on then-emerging doctrines of "neutral competence" in public administration.

THE NEW DEAL'S LEGACY AND IMPACTS

It is not clear whether New Deal policies "lifted" the nation out of the Great Depression, but the political impacts are clearer. It both reorganized the relationship between federal and state governments and triggered a political realignment that made the Democratic Party the majority party in American politics for a generation.

Economic Impacts of the New Deal Economically, the country hit "rock bottom" in March 1933, when the banking crisis had brought the financial system to the brink of collapse, even shutting down Wall Street and the Chicago Board of Trade by Roosevelt's Inauguration Day. Economic indicators tended to recover from mid-1933 to 1937, but then a second recession hit, worsening conditions again. Full economic recovery would wait until the United States entered World War II in 1941. In other respects, the New Deal did fundamentally transform the economic system. The New Deal swept away the "old economic order" of business domination over government policy and minimal government intervention in economics and business. The New Deal's critics feared the United States was moving toward a socially engineered economy, with some comparisons to communist planned economies appearing. New Deal supporters, however, argued that the new rules meant that government would not dominate the economic system but only become a partner with business, agriculture, and labor in fostering economic growth and prosperity. What is certain is that the New Deal era institutionalized expectations of more active government intervention in the economy than was previously considered tolerable. Although some individual New Deal programs (NIRA, CCC, WPA) no longer exist, some others do (Social Security, FDIC, the National Labor Relations Act, the minimum wage). The notion that government properly is a partner in promoting economic health and growth is now widely accepted, and a return to strictly laissez-faire economic policy is effectively outside the boundaries of political acceptability. Likewise, the notion that government should shrug off assistance or protection to most of society's most vulnerable members was discredited during the New Deal era, resulting in Social Security.

Minimal Impacts: The New Deal and American Blacks However, New Deal advocates did not always extend the philosophy of aiding the disadvantaged to one especially vulnerable group: black Americans. The New Deal had very little to offer blacks, considering the widespread racism, forced segregation, and discrimination and denial of voting rights they faced around the country, but especially in the South, where most blacks lived. For example, the New Deal encouraged the formation of labor unions, but most unions refused to admit blacks. New Deal programs benefited farmers and the jobless, but their benefits focused on the white jobless; racial discrimination in employment sometimes meant blacks would benefit little from jobs programs. Furthermore, Roosevelt refused to support both federal antilynching legislation and racially egalitarian voting laws. Thus, the New Deal left the festering problems of civil rights and rampant racial discrimination, especially in the South, virtually untouched. As nearly all white southerners were a key, and thoroughly racist, component of the Democratic majority coalition, any effort to push the Democratic Party toward favoring civil rights for blacks would certainly prompt a furious backlash. Later events, such as the Dixiecrat walkout at the 1948 Democratic Party's national convention and the white southern backlash to President Lyndon Johnson's support for civil rights laws in 1964–1965, showed how readily fears of white southern backlash would become reality. Given the New Deal's near total failure to address the desperate circumstances facing southern blacks (then comprising a large majority of blacks nationwide), the transformation of blacks into a solidly Democratic voting bloc during the 1930s seems puzzling.

Historian Nancy Weiss (1983) focuses on the economic benefits the New Deal provided to lower-income Americans, regardless of race. Her analysis indicates that despite Roosevelt's poor record on racial issues and the glaring racial inequalities built into the administration of many New Deal programs, blacks still perceived the Roosevelt administration as more friendly to their inter-

ests than any since that of Ulysses S. Grant (1869–1877). Another historian, Patricia Sullivan (1996), studied the rise and fall of a liberal movement in the South, the nation's most racially repressive region. She concluded that while a southern liberal movement, centered in the Popular Front, flowered in the 1930s and 1940s, it eventually collapsed by 1950 under the combination of racist and anti-Communist ideologies. The southern Popular Front movement, which attracted both black and white support, coincided with the growing visibility of a notably racially progressive wing of the Democratic Party, as historian David L. Chappell notes in reviewing Sullivan's work (1999). In the Roosevelt administration, the liberals were represented by Interior Secretary Harold Ickes, National Youth Administration director Aubrey Williams, and First Lady Eleanor Roosevelt, among others. While the liberals' impact on national racial policies was limited, they did provide hope and a sense of having "friends in high places" to millions of black Americans.

In short, explanations of why blacks moved into the Democratic Party vary. Weiss's account focuses on the New Deal's economic benefits for the poor, white and black, while Sullivan's account focuses on a bond of emotional solidarity between many blacks and the Democratic Party. The 1936 election made clear that black partisan loyalties had shifted from majority Republican to majority Democratic. During the civil rights era (1960–1968), the national Democratic Party's strong embrace of federal civil rights laws further cemented this alliance. Since 1964, blacks have been the most overwhelmingly Democratic voting bloc in American politics.

Political Impacts of the New Deal Politically, the New Deal had two major impacts: a reorientation of the proper relationship between the national and state governments and a political realignment that established the Democratic Party as the new majority party in national politics.

The New Deal changed the relationship between the national and state governments. Before 1933, the system of "dual federalism" prevailed; the national government was responsible for defense, currency, and post offices, for example. The state governments were responsible for education, social welfare, law enforcement, voting, and elections, among other things. Under dual federalism, the federal government provided little financial assistance to the states. And the policy spheres of the federal and state governments were generally separate and distinct.

The New Deal's programs meant the federal government would assume a much greater role in social welfare and economic regulation than it had previously. The PWA and other works programs marked a dramatic increase in federal aid to the states. Future programs would be based on this new philosophy: that the federal government should financially assist states and communities. Thus, the size and scope of the federal government grew dramatically, and the federal government would provide assistance to the poor and unemployed.

In partisan politics, the effects of the New Deal were profound. In many Americans' minds, the Great Depression had destroyed the Republican Party's credibility as being the "party of prosperity." While President Herbert Hoover had taken some steps to combat the economic crisis, other actions fostered impressions that Hoover little understood the human costs of the Depression or was actively callous to human suffering. In 1932, Hoover deployed soldiers to evict an encampment on the outskirts of Washington, D.C., of "bonus marchers"—World War I veterans seeking payment of long-delayed war pensions. The images and news reports of troops rousting nonviolent squatters from the Anacostia Flats, forcing them out of their shacks at gunpoint, and burning the settlements to the ground incensed many Americans. This action was probably a major contributor to Hoover's defeat that fall. Roosevelt had offered few specifics during the 1932 campaign but displayed pragmatism and a willingness to experiment once in office. The New Deal was not initially conceived as an ideological program; it was an effort to "try out" potential solutions to the crisis.

That said, Roosevelt also projected a very appealing public persona. Although he had been stricken with polio in 1921, his disability was usually not visible to the public because television did not yet exist. Roosevelt excelled in communicating with Americans by radio. In the first of his "fireside chats," or radio addresses, Roosevelt set out to calm public fears: "The only thing we have to fear is fear itself." During his first 100 days in office, Roosevelt persuaded Congress to approve fifteen major pieces of legislation—a feat unprecedented at the time and never duplicated since.

Therefore, Roosevelt hardly needed to convince Americans that he was taking concerted action in a time of economic crisis. Roosevelt excelled at soothing Americans' fears and convincing them he understood their concerns and trials.

While Roosevelt's persona endeared him to many, his New Deal programs fundamentally realigned American politics, largely along social-class lines and in the Democratic Party's favor. In 1934, Democrats gained more congressional seats; it is unusual in a midterm election for the president's party to gain strength in Congress. In 1936, Roosevelt won a landslide reelection over Republican Alf Landon, winning 61 percent of the popular vote and carrying every state except New Hampshire and Maine. Although Democratic strength in Congress would drop

sharply after the 1938 midterm election, Roosevelt won four consecutive terms as president (in the elections of 1932, 1936, 1940, and 1944). In April 1945, Roosevelt died, and his vice president, Harry S. Truman, became president. The strength of Roosevelt's political coalition was apparent even in 1948, when Truman, defying virtually all predictions, defeated Republican Thomas Dewey, extending Democratic control of the presidency to five consecutive terms (twenty years). Not until 1952 would a Republican again win the White House. Democrats also controlled Congress continuously from 1932 to 1946, with huge Democratic majorities after the 1934 and 1936 elections. Republicans, the dominant party from 1896 to 1932, were now the clear minority party in American politics and would remain so until 1968.

Roosevelt's "New Deal coalition" consisted of three major groups of voters: white southerners, urban ethnics and immigrants, and working-class Americans. White southerners had long-standing loyalties to the Democratic Party and hostility toward the Republican Party, both dating from the Civil War and Reconstruction eras. Urban ethnics and immigrants, many of them Catholic, swung decisively toward the Democratic Party between 1928 and 1936, partly because of anti-Catholic sentiments apparent in some elements of the Republican Party, partly because "white ethnic" groups such as Polish, Irish, German, and Italian Americans tended to reside in cities where largely Democratic political machines held sway, exchanging favorable votes for city jobs or other favors, and partly because their communities gained valuable public works projects from the PWA and other programs. Also, many white ethnics were also members of labor unions or worked in blue-collar jobs, making Social Security, jobs programs, and federal labor protections attractive policies. Finally, working-class Americans were strongly attracted by Roosevelt's public criticisms of financiers and corporate executives and by his policies that supported organized labor, minimum wages, maximum hours, and jobs programs for the unemployed. A major political effect of the New Deal, then, was to position Democrats as a party friendly to working-class Americans and committed to fairness for many (but rarely for blacks): jobs for the unemployed, decent wages and working conditions, the right to organize collectively, and benefits for vulnerable Americans such as the elderly and disabled. Blacks also supported Democratic candidates when and where they could vote—but most blacks lived in the South, where they faced brutal repression and near total voting discrimination in much of the region.

Meanwhile, Democrats portrayed Republicans as a party of and for the richest Americans, bent on canceling or cutting New Deal programs and reverting to laissez-faire economic policies. During the 1936 election, voting was very strongly structured along social class lines: Republicans won majorities of the vote among the wealthiest Americans, but Democrats won lopsidedly among those with lower incomes—and in 1936, there were many more lower-income than higher-income Americans. Political scientists James Sundquist (1983) and Walter Dean Burnham (1970) both identify the 1932–1936 period as a "critical" or realigning period in American politics, in which a previous Republican majority was replaced by a Democratic majority.

Overall, the New Deal fundamentally changed the relationship between government and business in the United States, from minimal regulation to selective regulation; expanded the federal role in assisting people buffeted by economic forces beyond their control, and wrought a new era of Democratic Party dominance in national politics. The New Deal era brought great challenges and great changes to the political and economic systems, along with many new government programs to face those challenges.

SEE ALSO *Banking; Business Cycles, Real; Democratic Party, U.S.; Economic Crises; Economics, Keynesian; Federalism; Great Depression; Inequality, Racial; Politics; Politics, Black; Politics, Southern; Racism; Republican Party; Roosevelt, Franklin D.; Social Welfare Functions; Supreme Court, U.S.; Welfare State*

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Fred Slocum

NEW IMMIGRANT SURVEY

The *New Immigrant Survey* (NIS) is a new plan for nationally representative, longitudinal studies of immigrants to the United States and their children that promises to provide new kinds of data that will help answer many of the important questions about migration and its impacts and also shed light on fundamental aspects of human development. The basic design calls for taking representative samples of cohorts of new legal immigrants and following them over time, with new cohorts selected every four or five years or whenever developments in U.S. immigration policy or conditions worldwide warrant. The sampling frame for each cohort is based on the electronic administrative records compiled for new immigrants by the U.S. government, formerly through the U.S. Immigration and Naturalization Service (INS) and now through its successor agencies, the U.S. Citizenship and Immigration Services (USCIS) and the Office of Immigration Statistics (OIS). It consists of all adult immigrants admitted to legal permanent residence during a specified period and two types of child immigrants who would not, or might not, be found in the households of adult immigrants. The sampling frame thus includes both new-arrival immigrants—immigrants arriving in the United States with immigrant documents acquired abroad—and adjustee immigrants—immigrants who are already in the United States with a temporary nonimmigrant visa (or, in some cases, illegally) and adjust to lawful permanent residence.

Interviews are conducted with sampled adult immigrants and their spouses and with the sponsor-parents of sampled child immigrants and the spouses of the sponsor-parents; sampled children and other children (both foreign-born and U.S.-born children) in the households of both sampled adult and child immigrants are interviewed or given assessments based on an age-eligibility schedule. Two key elements of the design are that interviews for the baseline round are conducted as soon as possible after admission to legal permanent residence and that respondents are interviewed in the language of their choice (e.g., eighty-six languages were used in the baseline round of the first full cohort, NIS-2003).

Information obtained in the interviews covers a wide range of topics, including health, schooling, marriage and family, skills, languages and English-language skills, labor force participation, earnings, financial help given to and received from relatives and friends, use of government services, networks, travel, and religion. In successive rounds, the instruments will track changes over time. A large component of the NIS survey instruments is comparable to instruments used in the major U.S. longitudinal surveys, thus facilitating comparisons of immigrants and the native born. Special attention is paid to immigrant children and the children of immigrants, including assessment of their academic abilities, skills, and achievements. As well the instruments seek immigrants' ideas about the migration and incorporation process, including assessment of the helpfulness of various sources of information.

New rounds of data collection will be conducted regularly for each cohort. The design calls for reinterview every three to five years (e.g., round 2 of NIS-2003 was in the field in 2007).

The design of the New Immigrant Survey was sharpened in discussions among immigration researchers and policy makers over a period of many years. Successive panels and workshops in both the public and private sectors developed the idea of a multiple-cohort, longitudinal survey of immigrants and their children, obtaining both retrospective and prospective data and including child assessments as well as information on extended family members. Because the NIS design, based on sampling named individuals from administrative records, with its attendant challenges of locating the immigrant and providing instruments and interviewers in several languages, had never been tried before, a pilot—the NIS-P—was carried out in 1996. The pilot both confirmed the soundness of the design, highlighted the importance of contacting sampled immigrants as soon as possible after admission to permanent residence, and provided new information on immigrants never before available (Jasso, Massey, Rosenzweig, and Smith 2000a, 2000b, 2003).

Both the pilot (NIS-P) and the first full cohort (NIS-2003, rounds 1 and 2) were investigator-initiated projects submitted to the National Institutes of Health (NIH) for support and were peer reviewed. Principal investigators are Guillermina Jasso, Douglas S. Massey, Mark R. Rosenzweig, and James P. Smith. Support has been provided by NIH, via the National Institute for Child Health and Human Development (NICHD) and the National Institute on Aging (NIA), the National Science Foundation (NSF), and the INS and its successor agency USCIS. Additional support for NIS-2003 has been provided by the assistant secretary for planning and evaluation (ASPE) in the Department of Health and Human Services and by the Pew Charitable Trusts. The data are available for public use at http://nis.princeton.edu. A growing number of researchers worldwide are using the data (approximately 700 as of April 2007).

New data—and the possibility of further new data—are a catalyst for scientific imagination. Thus not only is there a reinvigorated and rigorous attack on the classical questions about immigration (e.g., selectivity and skill transferability) and incorporation (e.g., emigration, naturalization, and language acquisition) but also new themes are emerging. These include (1) a deeper exploration of

the migration process, including lost documents and visa stress and their aftermath; (2) the physical and social effects of illegality; (3) the transition to English, a dynamic and democratic language; (4) shedding the habits of illegality; (5) shedding the habits of elitism; (6) a richer understanding of health changes, taking into account the separate effects of visa stress, migration stress, and the physical and social environment; and (7) the impacts of immigration on the American stratification structure.

For example, it will be possible to assess the effects of immigration on economic inequality (via the inflow both of very low-skilled and very high-skilled individuals), on racial inequality (via the inflow of highly accomplished black African immigrants, which may overturn associations of skill with race and color and ensuing stereotypes), and on gender inequality (depending on the gender gap in skills among new immigrants and within new immigrant couples). As well in the years ahead it will be possible to gain new insight into the fabled phenomenon of "falling in love with English," as new immigrants and their children discover a language free of (grammatical) gender and formal-familiar distinctions (such as *tu-vous* in French) and limitlessly flexible. Future rounds of the New Immigrant Survey will provide a window into the twenty-first-century version of processes that built the United States, making it possible to learn how immigrants and natives increase the positive impacts of migration and mitigate its negative impacts.

SEE ALSO *Colorism; Immigration; Naturalization; Phenotype; Surveys, Sample*

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Guillermina Jasso

NEW INTERNATIONAL ECONOMIC ORDER

SEE *International Economic Order.*

NEW JEWEL MOVEMENT

SEE *Grenadian Revolution.*

NEW SCHOOL FOR SOCIAL RESEARCH

The *New School for Social Research* was founded in New York City in 1918 by a group of prominent Columbia University scholars—Charles A. Beard (1874–1948), James Harvey Robinson (1863–1936), Wesley C. Mitchell (1874–1948), and John Dewey (1859–1952), among others—in conjunction with a wider circle of dissident intellectuals, such as *New Republic* editor Herbert Croly (1869–1930) and iconoclastic economist Thorstein Veblen (1857–1929), who were dissatisfied with the state of the social sciences and academic freedom in the United States. With donations from well-wishers in liberal circles, the New School opened for classes in the spring of 1919 in a set of rented row houses in the Chelsea district of New York.

The founders envisaged an institution of higher learning simultaneously capable of serious independent research, accessible to the intelligent lay public, and engaged in progressive social and political reform. But the founders held distinct visions of how to apply this in practice. Disagreements led to a sharp crisis in 1922 that culminated in a spate of resignations that nearly ended the school. The reins fell into the lap of Alvin S. Johnson (1874–1971), a former academic economist and editor of the *New Republic*, who set the New School's focus on the "continued education of the educated," bringing in a host of leading lecturers from the social sciences, arts, and other fields. At a time when "adult education" was narrowly thought of as the teaching of basic education or technical skills, the advanced academic fare the New School offered was a novelty for the American public. By 1929 the New School was back on sound footing and moved to new facilities on 12th Street.

Johnson maintained the necessity of revitalizing the New School's roots as an academic research center and had launched the *Encyclopedia of the Social Sciences* in 1927 with this in mind. In April 1933, the Nazi Party began its purge of the German academia. Johnson, who was familiar with many of the scholars through the *Encyclopedia*, helped form a rescue committee to place the expelled academics in U.S.

universities. But the response from American institutions was lukewarm, so Johnson decided to have the New School host the scholars itself. It seemed natural: The Weberian emphasis in the German academic tradition on the unity of the social sciences and the willingness to engage the adult public and promote policy and reform echoed the philosophy of the New School's own creation. Working closely with the Berlin economist Emil Lederer (1882–1939), Johnson created the University in Exile, soon renamed the Graduate Faculty of Political and Social Science. The first wave of scholars assembled for the Graduate Faculty's opening in the fall of 1933 included the economists Eduard Heimann (1889–1967), Gerhard Colm (1897–1968), Karl Brandt (1899–1975), and Arthur Feiler (1879–1942); the sociologists Hans Speier (1905-1990) and Albert Salomon (1891–1966); the jurist Hermann Kantorowicz (1877–1940); and Gestalt psychologist Max Wertheimer (1880–1943). As the 1930s progressed, more displaced scholars found their way to the New School, including jurists Arnold Brecht (1884–1977) and Erich Hula (1900–1987); economists Hans Staundinger (1889–1980) and Fritz Lehmann; political scientists Hans Simons (1893–1972) and Max Ascoli (1898–1978); philosophers Felix Kaufmann (1895–1949), Alfred Schütz (1899–1959), and Leo Strauss (1899–1973); and Weimar dramatist Erwin Piscator (1893–1966).

The outbreak of World War II (1939–1945) prompted the New School and the Rockefeller Foundation to launch a vigorous, coordinated rescue plan to secure the immediate entry of a hundred European scholars into the United States, their permanent academic positions to be determined later. In all, it is estimated that between 1933 and 1945 the New School actively helped over 183 displaced European scholars and artists find their way to the United States (Krohn 1993).

The refugee scholars continued the continental tradition of interdisciplinary research, and a general seminar and journal, *Social Research*, were launched in 1934. The fall of France led to the formation of the École Libre des Hautes Études (free school of advanced studies), a French-language division of the New School chartered by Charles de Gaulle (1890–1970), which housed prominent French thinkers such as Jacques Maritain (1882–1973) and Claude Lévi-Strauss. The New School also transplanted virtually the entire Kiel school of economists—Adolph Löwe (1893–1995), Jacob Marschak (1898–1977), Hans Neisser (1895–1975), and Gerhard Colm. Their Weltwirtschaftsinstitut was recast under the New School as the Institute of World Affairs in 1941, and they resumed their distinct research program on structural growth, business cycles, and long-run economic policy.

This period also saw the gradual separation of the Graduate Faculty from the New School adult division. In 1943 the New School had been reorganized and undergraduate degree programs introduced. But increasing academic specialization in the 1950s meant that fewer Graduate Faculty professors were willing or able to cross the lines from research to adult education. So the New School adult division organized its own curriculum, offering lecture courses delivered by giants like Erich Fromm (1900–1980) and Karen Horney (1885–1952) in psychology, Sidney Hook (1902–1989) and Ernest Nagel (1901–1985) in philosophy, Margaret Mead (1901–1978) in anthropology, Max Lerner (1902–1992) in contemporary politics, Robert Frost (1874–1963) in literature, Seymour Lipton (1903–1986) in the plastic arts, and John Cage (1912–1992) in music. In 1962 the New School established the Institute for Retired Professionals, the first major effort by an institution of higher learning on behalf of senior students and, in 1964, the J. M. Kaplan Center for New York City Affairs, the first to focus on a single metropolitan area.

As the 1960s arrived, the Graduate Faculty struggled to transform itself into a regular American graduate school without losing the distinctiveness of its continental legacy. In psychology, Wertheimer's Gestalt program was upheld by the appointments of Solomon Asch (1907–1996), Rudolf Arnheim, and Mary Henle. In economics, the torch was passed from Löwe to Robert Heilbroner (1919–2005). The New School's philosophy department catapulted to distinctive prominence with the appointments of Aron Gurwitsch (1901–1973) and Hans Jonas (1903–1993) and, in 1967, Hannah Arendt (1906–1975), thereby cementing the school's continued emphasis on continental philosophy and theory.

In 1970 the New School acquired the Parsons School of Design (originally founded by painter William Merritt Chase [1849–1916] in 1896) and, in 1975, created a fourth academic division, the Milano School of Management and Urban Policy. In 1978 the New School established a full-time undergraduate liberal arts division, renamed Eugene Lang College in 1985. It established two music divisions, the School for Jazz and Contemporary Music (founded in 1986) and the Mannes College of Music (founded in 1916, acquired in 1989). In 1994 the Actor's Studio joined the New School to form a new master's program in theater, which laid the groundwork for the establishment of the New School for Drama in 2005.

The rapid expansion of the New School into areas beyond "social research" prompted a search for a new name consistent with its multiple divisions. The first rebranding attempt in 1995 yielded the unfortunate New School University. This was dropped in 2005 in favor of merely The New School, with the divisions renamed accordingly. Since 2005 the term New School for Social Research has been limited to the former Graduate Faculty.

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Gonçalo Fonseca

NEW SCHOOL UNIVERSITY

SEE *New School for Social Research.*

NEZ PERCE

SEE *Chief Joseph.*

NIAGARA MOVEMENT

SEE *Civil Rights Movement, U.S.*

NICENE CREED

SEE *Church, The.*

NICOTINE

SEE *Smoking.*

NIETZSCHE, FRIEDRICH

1844–1900

Friedrich Nietzsche was born into a family of Lutheran pastors but later repudiated the Christian faith. He entered Bonn University in 1864 as a theology and philology student. His interests turned more to the latter, concentrating on classical and biblical texts. He read David Strauss's skeptical *Life of Jesus* (1835–1836), discovered Arthur Schopenhaur's atheistic philosophy, and became friends with Richard Wagner, leading to a stormy relationship.

Nietzsche became a professor in classical philology in Basel, Switzerland, in 1869. His university career lasted ten years. He resigned in 1879 for health reasons. His final decade of sanity produced his major works, including his attacks on Christianity, Wagner, traditional morality, and most aspects of the European philosophical tradition and its greatest icons, such as Socrates, Plato, and Immanuel Kant (strangely, he said little about Aristotle).

While he despised Christianity, Nietzsche admired Jesus himself, or at least the historical Jesus who, Nietzsche thought, the church had distorted. As a classical philologist he developed theories about the origin of tragedy (from music) and of ethics in ancient Greece. The latter led him to contrast Apollonian and Dionysian lifestyles, aristocratic and slave moralities, and life-affirming, ascending values versus life-denying, descending values. He shares with Max Weber the credit (or blame perhaps) for switching ethical discourse from virtues to values. Nietzsche went mad in 1889 and died in 1900.

NIHILISM, CHRISTIANITY, AND THE ÜBERMENSCH

Nietzsche's philosophy is mostly based on three components: his ontology, his theory of ethics, and his views on intellectual history. His ontology includes his best known saying, "God is dead"; truth is subjective; the will to power; and eternal recurrence. His ethics involve a preference for aristocratic values over slave morality, the Übermensch, and the claim that we create our values. Contrary to traditional religious and philosophical ideas, we do not discover them or receive them from God or nature, reason, conscience, intuition, or a moral sense. The last point leads to the problem of nihilism. *Nihilism* (from *nihil*, Latin for nothing) can be defined as consisting of three main components, atheism, moral skepticism, and the claim that life has no meaning.

From this one might conclude that therefore "anything goes." While Nietzsche clearly endorsed all three of the above, he is best classified as an aesthetic, amoral atheist. He did not accept the apparent corollary of nihilism that Fyodor Dostoyevsky (among others) claimed followed from its premises. Instead, it is our task to create or invent our own values and also to create the meaning of life for ourselves, a view repeated in the twentieth century by philosophers as diverse as Karl Popper and Jean-Paul Sartre.

Nietzsche's first book proposed an instinctual, amoral, Dionysian creative energy that has been submerged and repressed by an Apollonian force of logic and sobriety (an anticipation perhaps of subsequent work on the left brain versus the right brain). He rejected several

ideas he saw as intrinsic to European philosophy, such as self-consciousness, free will, and either/or thinking. However, some may claim that his own thinking often exhibits either/or thinking: life-affirming or life-denying, ascending or descending, Apollonian or Dionysian, slave versus master morality.

Nietzsche certainly went counter to the main trends of both nineteenth-century and twentieth-century political thought, making it rather curious why so many left-wing thinkers were so enthused about him. He challenged the moral idea that exploitation, domination, injury to the weak, destruction, and appropriation are universally evil behaviors.

Nietzsche argued in *The Anti-Christ* (1895) that noble values in Roman society were corrupted by the rise of Christianity, and he discussed many of its main figures, concluding that Christianity is a religion for the weak and unhealthy whose effect has been to undermine the healthy qualities of more noble peoples. This is in striking contrast to Karl Marx's opposite argument (made by many leftist thinkers) that the real problem is that the church has taken the side of the powers that be, sanctifying their exploitation of the weak and vulnerable members of society.

Nietzsche's Übermensch idea can be misunderstood if it is taken in a collectivist rather than a radical individualist sense. It has been translated as both "superman" and "overman." The former is highly misleading and the latter unclear. The best term might seem to be "superior man." But this also is misleading. It is neither racist nor nationalist nor class nor genetically based. Nietzsche had ambiguous attitudes toward Charles Darwin and definitely was not a social Darwinist. It is arguable that everyone, or at least anyone, could be an Übermensch, a person who mastered her or his passions and became a creator rather than a creature. It is used basically as a this-worldly alternative to traditional piety.

Übermensch is related to both the weakest points in Nietzsche's philosophy, lack of systematic, logical argument, and the strongest point, his brilliant critique of egalitarianism, especially anarchism, socialism, and democracy. But again this must not be confused with later Nazi or other racial, anti-Semitic, nationalist, genetic based theories of group superiority. While it is unfair to see him as a precursor of National Socialism, he can be seen as a precursor of postmodernism and theories of social construction with their subjectivist theories of truth. In addition nothing in his theories seems to rule out racist, fascist, or even Communist ideologies (unlike Kant, utility, that is, all the theories he despises).

SCHOLARLY RESPONSES

Many Nietzsche scholars respond to criticism about the unsystematic and even contradictory nature of his ideas by claiming he was not propounding a system but proposing ideas and hypotheses. This would explain his method of aphorisms, bald assertions, and diatribes without argument and also why his twentieth-century appeal was to such a wide variety of literary and philosophical figures of differing views, from far right to far left. Many would say the same about Plato, who is also contentiously associated with twentieth-century totalitarian ideologies.

However, it can then still be asked, "If it is true that we invent our values then we invented the perverse one such as slave morality, human equality, Platonism. Thus, one can ask of preferences for affirming life versus denying life, why is the former preferable?" What is the basis for this other than Nietzsche's own opinions? Why cannot revenge, resentment, and hatred be noble under some circumstances if people create their own values? This is a problem not unique to Nietzsche because it rests on the fact-value distinction Weber and Nietzsche helped formulate.

There is also a question of the coherence of his critique of Christianity. In his ultimate critique of Christianity, *On the Genealogy of Morals* (1887), he argues that Christian morals have emerged from revenge, resentment, hatred, impotence, and cowardice. He may well be correct about this and claims that Paul or the church or someone else distorted the original message of Jesus, but perspectivism and subjectivism regarding truth rule out any argument that this is correct. Finally, it is arguable that his compatriot, Gottlob Frege, father of modern mathematical logic, had an effective critique of subjectivist theories of truth.

SEE ALSO *Atheism; Christianity; Epistemology; Ethics; Knowledge; Morality; Philosophy; Plato; Popper, Karl; Subjectivity: Overview; Weber, Max*

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Calvin Hayes

NIHILISM

SEE *Nietzsche, Friedrich.*

1984

SEE *New Class, The; Personality, Cult of.*

NINTENDO

SEE *Video games.*

NIRVĀNA

In the fifth century BCE a thirty-year old Indian prince called Siddartha (c. 566–486 BCE) abandoned royal status, family life, and all the comforts of civilization. For six years he wandered through the forests of what is today northern India, living as a celibate ascetic and seeking a solution to the problem of human suffering, which he framed within the endless round of being born, growing old, and dying, only to be reborn once again. This cycle is known in Sanskrit as *samsāra* (transmigration). Prince Siddartha wanted to know if there was a way out—*nirvāna* ("extinction")—of *samsāra* (for an extensive discussion of *nirvāna* and its synonyms, see Collins 1998, pp. 191–233). He sought a solution by studying with various ascetic teachers, none of whom could fully satisfy his questions, and by meditating and practicing severe asceticism, such as eating only one sesame seed, one grain of rice, and one juniper berry a day. His determination attracted five male disciples who looked after him.

The world of the forest recluse was predominantly male. A significant part of what Prince Siddartha had rejected in leaving city life was contact with women. Gender has been a contested issue since the earliest days of Buddhism, with many denying that women can achieve *nirvāna*, asserting they must first reincarnate as men. Ironically, as Siddartha sat meditating and wasting away, a woman, his dead mother, Queen Māyā, appeared and reminded him of the prediction at the time of his birth that he would achieve *nirvāna*, which was in jeopardy because of his continued austerities. He reassured her that he would attain his goal, and she returned to heaven. It is at this point that Prince Siddartha began to change his regimen, began to turn back toward the world and, indeed, began his reconciliation with women.

Realizing that his body was too weak to achieve *nirvāna*, he decided to eat solid food. His five male disciples, believing he had abandoned asceticism, deserted him. But some young village women came and offered him a dish of rice and milk, which he accepted. Several other women, human and divine, also helped to restore his strength so that he could take his seat under the Bo tree where he would achieve *nirvāna* (Young 2004, pp. 1–19).

He then proceeded through a series of ever-deepening states of meditation throughout the night. It has long been debated exactly what he experienced on that night (Collins 1998, pp. xiii–xiv; Spiro 1982, pp. 56–59; Welbon 1968, passim), but its outcome, his achievement of *nirvāna*, is a defining principle of Buddhism that changed the religious face of much of Asia. After this experience he was given the title of *Buddha*, the "awakened" or "enlightened one."

Two points need to be made: First, when the Buddha achieved *nirvāna* he became an enlightened being, and second, when he died he achieved *parinirvāna*, meaning he would never be reborn. This understanding postulates that *samsāra* and *nirvāna* are two different kinds of existence, one ruled by desire and the other a realm where desire is extinguished. This is the general view of Theravāda Buddhism. A later tradition, Mahāyanā Buddhism, postulates instead that these are radically different states of mind. Whatever the metaphysical nature of *nirvāna*, its social reality was and remains structured by a celibate, male hierarchy that seeks *nirvāna* while being supported by a lay community for whom they perform various religious and educational tasks.

Theravāda Buddhism has received the most anthropological attention, beginning with Melford Spiro in 1970 dividing it into Nibbanic (nirvanic) and Kammatic (karmatic) Buddhism. Nibbanic Buddhism is practiced by some monks—in Max Weber's terms the "religious virtuosi"—who renounce the world in order to seek *nirvāna*, and Kammatic Buddhism is practiced by most monks and members of the laity who follow Buddhist precepts and practices in order to improve their karma and be reborn in a better situation for pursuing *nirvāna*. A third category, apotropaic Buddhism, offers protective practices against adversity and promotes well-being (Spiro [1970] 1982, pp. 9–12). All three types are of necessity interrelated. Richard Gombrich in 1971 published similar findings for Buddhist Ceylon (present-day Sri Lanka) (pp. 16–17 and 214–224). Both Spiro and Gombrich were interested in how pivotal religious ideas, such as *nirvāna*, are maintained and yet also reinterpreted by those unable to live up to them. Spiro contrasted what the canonical text contained with actual practices. Gombrich contrasted what people said they did with what they actually did.

The main point, though, is that most Buddhists are pursuing *nirvāna* in their various ways, and a significant number of them are living celibate lives either permanently or as temporary monks. Steven Collins has drawn

out the economic advantages of an agrarian society that delays or limits marriage and thus the population, thereby creating surplus food production (Collins 1998, pp. 92–93). In his analysis the ideology of *nirvāna* created an *imaginaire* that produced a hope for salvation that shaped social and economic realities. In other words, Collins repositioned *nirvāna* as central to all forms of Buddhist practice (Collins 1998, pp. 116–117).

The achievement of *nirvāna* is believed to be accompanied by omniscience and magical powers, and it raises an individual's esteem as well as that of his religious followers and his religious community. Powerful and famous people come to visit an enlightened monk, seeking his advice and blessing as well as to establish themselves publicly as devout Buddhists, especially around election time. Stanley Tambiah's study of the cult of amulets among Thai Buddhists reveals that the most esteemed amulets were those blessed by enlightened forest saints, monks who had withdrawn from village life to pursue *nirvāna* (Tambiah 1984, pp. 3, 135–136). Similarly, in Mahāyanā Buddhism those monks believed to be enlightened attract more followers and receive far greater contributions than other monks. Consequently, many of those believed to have achieved *nirvāna* wield wealth and influence.

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Serinity Young

NIXON, RICHARD M.
1913–1994

Richard Milhous Nixon, U.S. representative and senator, vice president, and thirty-seventh president of the United States, was an influential, but flawed political figure in American politics. Born in poverty in Yorba Linda, California, Nixon was a diligent student who graduated from Whittier College, then Duke Law School. He was ambitious and felt, at an early age, a strong desire to prove himself, a personality trait that some scholars think contributed to his downfall.

Nixon's political career began in 1947 when he defeated five-term incumbent Democrat Jerry Voorhis to become U.S. representative. After winning reelection, Nixon achieved national prominence as chair of the Un-American Activities Committee by relentlessly questioning Alger Hiss for purportedly being a communist spy while working for the U.S. State Department. In winning election to the U.S. Senate in 1950, Nixon successfully branded his opponent Helen Gahagan Douglas a communist (calling her the "Pink Lady") and cemented his national reputation as a staunch anticommunist. His reputation as an anticommunist crusader early in his career undoubtedly helped Nixon achieve political and international prominence. It secured him a place on the Republican Party presidential ticket in 1952 and gave him the credibility to support China's admission to the United Nations in October 1971 and open relations with China when he visited it—the first president to do so—in early 1972.

As the sitting vice president of popular president Dwight D. Eisenhower from 1953 to 1961, Nixon was the early favorite to become the thirty-fifth president of the United States in a campaign against the Democratic but little known junior senator from Massachusetts, John F. Kennedy. Nixon was clearly the more experienced, especially in foreign affairs. But presidential politics was becoming less about experience at the beginning of the television age, and more about perception and style. Although Nixon won the first televised presidential debate among radio listeners, he did not look as "presidential" as his opponent, who won the debate among television viewers. Nixon narrowly lost the 1960 presidential election to Kennedy by less than 120,000 popular votes.

Eight years later, Nixon was elected president in another close contest against sitting Democratic vice president Hubert Humphrey, on a campaign of ending the war in Vietnam and courting moderate Republicans on civil rights and law and order. Nixon achieved numerous domestic policy successes with the Clean Air Act of 1970 and omnibus crime legislation. But his major successes related to his expertise and his life-long interest in foreign policy.

Despite being raised as a Quaker, Nixon rejected the Quaker principle of pacifism and was decidedly hawkish in his foreign policy positions. He criticized the Truman administration for being too passive in its handling of the Korean War, disagreed publicly with Truman's decision to fire General Douglas MacArthur, and, as president,

expanded the war in Vietnam by sending Marines into Laos and bombing Cambodia.

In a blow to the presidency's unilateral foreign policy authority, Congress overrode Nixon's veto of the War Powers Act, which attempted to limit presidential war power in the face of mounting public and congressional opposition to the war in Vietnam by insuring that "the collective judgment of both the Congress and the President will apply to the introduction of United States Armed Forces into hostilities." Nixon and subsequent presidents argued that the War Powers Act is an unconstitutional violation of separation of powers, in part because it requires presidents to consult with Congress before U.S. armed forces engage in military hostilities and remove forces from conflict if Congress has not declared war or issued a resolution authorizing the use of force within sixty days.

Nixon was the consummate politician, a fighter for office and for his own political survival. This aggressive style assisted Nixon, at times, but did not endear him to his political opponents. He fought for his political career early—to remain Eisenhower's running mate in 1952—when he responded to charges that he had a campaign slush fund to defray personal expenses in the so-called "Checker's Speech." He admitted to having the fund, but only to pay political, not personal, expenses save one: a cocker spaniel he accepted as a gift for his daughter, Tricia. Eisenhower praised Nixon afterward and kept him on the ticket. This shrewd political maneuvering could not save him when he failed to win the presidency in 1960, to become governor of California in 1962, or to overcome the largest scandal of his political career: Watergate.

Rejected by the White House as a "third-rate burglary attempt," the arrest of five members of the Committee to Reelect the President (CREEP) at the Democratic Party Headquarters at the Watergate Hotel in Washington, D.C., "Watergate" evolved into a president-led cover up, which resulted in the first and only resignation of a sitting president in U.S. history. The extent of Nixon's involvement became evident after revelation in House judiciary committee hearings of a secret taping system in the White House. Nixon claimed executive privilege and refused to submit the tapes to Congress. But the U.S. Supreme Court, in *US v. Nixon* (1974), rejected this claim, precipitating Nixon's resignation less than three weeks later.

On August 9, 1974, Nixon was succeeded by Gerald Ford, who had replaced Nixon's elected vice president, Spiro Agnew, who had resigned in October 1973 and pleaded no contest to tax evasion in a plea-bargained deal for charges of accepting bribes while governor of Maryland and vice president of the United States. Ford was the first unelected vice president in U.S. history, in compliance with the Twenty-Fifth Amendment to the U.S. Constitution. In September 1974 he pardoned Richard Nixon for "all offenses against the United States which he … has committed or may have committed or taken part in" while president.

Although Watergate damaged the president, Nixon overcame its physical and mental tolls and became a respected leader abroad after his presidency. During and after his political career, Nixon was also a prolific writer and author. Beginning with his account of his early political career, including the Checker's Speech and Alger Hiss affair, Nixon wrote *Six Crises* (1962). Along with his presidential memoirs (1978), after his resignation he wrote several other books, including *No More Vietnams* (1985) and *1999: Victory without War* (1988), that confirm his personal interest in foreign affairs and attempts to shape and frame popular discourse on American involvement in international conflicts.

SEE ALSO *Eisenhower, Dwight D.; Kennedy, John F.; Khrushchev, Nikita; Vietnam War; Watergate*

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Matthew Eshbaugh-Soha

NKRUMAH, KWAME
1909–1972

It is an unquestionable fact that the political leader with the most profound impact on Africa in the twentieth century was Kwame Nkrumah, the founder and first president of the independent nation of Ghana. He was born on or about September 21, 1909, in Nkroful in the southwest part of the Gold Coast, now Ghana. The force that impelled his behavior and unleashed his energies was the ideology of pan-Africanism, which took root in him through his discipleship of Marcus Garvey (1887–1940)

during his student days in the United States from 1935 to 1945. The ideology's core objective was to break the African universe away from the powerlessness and degradation that had accompanied five centuries of slavery, colonialism, and other forms of domination suffered by Africans universally at the hands of Western capitalistic imperialism. Returning to his native Gold Coast in 1947, Nkrumah soon proved himself, as the African nationalist Amílcar Cabral (1924–1973) observed, "the strategist of genius in the struggle against classical colonialism" (Davidson 1973, p. 13), bringing the British colony to independence in 1957. From then on, he made the liquidation of colonialism in Africa and the unification of the emergent states into a federal union the primary goals of the new Ghanaian state. In this schema, the freeing of Ghana from colonial rule remained always "the servant" of the second goal of Africa's total liberation and unity. He tirelessly proclaimed this credo: "I will commit all the resources and energies of Ghana towards achieving Africa's independence and unity" (Legum 1962, p. 44).

With a federal continental government, he proclaimed, Africa would be able to tackle every emergency, every enemy, and every complexity. This is not because Africans are a race of supermen, but because "we have emerged in the age of science and technology in which poverty, ignorance, and disease are no longer the masters, but the retreating foes of mankind. We have emerged in the age of socialized planning, where production and distribution are not governed by chaos, greed and self-interest, but by social needs" (Nkrumah 1973, p. 240). Above all, he continued, Africans had emerged at a time when a continental land mass such as Africa was "necessary to the economic capitalization and profitability of modern productive methods and techniques" (Nkrumah 1973, p. 240).

In a campaign based on, in the words of Colin Legum, a "passionate, informed and urgent advocacy," (Gardiner 1970, p. 53) Nkrumah assailed the gradualist, incrementalist, economistic, region-bound approach to integration, making it clear that African unity was, in the last analysis, "a political kingdom" that could only be gained by political means—that the social and economic development of Africa would come only within the political kingdom, not the other way around.

Nkrumah's single-minded challenge and overthrow of imperial power in Ghana (as the Gold Coast was renamed in 1957) greatly stimulated the forces of nationalism across Africa. The West answered back by creating the appearance of political liberation in diverse African places to hide the reality of the maintenance of old colonial relationships. This way, the West continued to rule and control Africa's economic destiny surreptitiously, using puppet regimes suitably dressed in the counterfeit trappings of sovereignty. Nkrumah characterized this new phenomenon *neocolonialism*, and he went on to castigate it as the most irresponsible form of imperialism in the sense that, for those who imposed it, it meant "power without responsibility," whereas for those victimized by it, it meant "exploitation without redress" (Nkrumah 1965, p. xi).

There was no denying the reality of neocolonialism. Certainly, as Rupert Emerson noted, the territories left behind following the deliberate breakup by France of the French West Africa and French Equatorial Africa Federations seemed "hopeless experiments in endowing with life" artificial political entities that had no prospect of economic and political viability and stability (Emerson 1962, p. 286). And yet, Nkrumah was deemed "to have offended against all international proprieties" by making a battle against neocolonialism his "daily preoccupation," and by writing a book on its dangers (Bing 1968, p. 32) entitled *Neo-Colonialism: The Last Stage of Imperialism* (1965). The British prime minister, Alex Douglas-Hume, called the concept a slander, and the U.S. State Department officially summoned the Ghanaian charge d'affaires in Washington, D.C. to formally protest the publication of the book in the United States. In the end, Nkrumah's crusade for genuine decolonization and pan-African unification resulted in a foreign-instigated overthrow of his government. In the categorical statement of Jeffrey Sachs, "The CIA had its hand on the violent overthrow of President Kwame Nkrumah of Ghana in 1966" (Sachs 2005, p. 190).

Nkrumah linked pan-Africanism (as a movement for one United Africa that could countervail imperialism, and as an ideology of egalitarianism committed to the creation of opportunities for the development and uplift of all African people) with socialism: "At the core of the concept of African unity," he wrote, "lies socialism and the socialist definition of the new African society. Socialism and African unity are organically complementary" (Nkrumah 1968, p. 28). Because colonial rule precluded the accumulation of capital among the colonial subjects, a postcolonial system based on private enterprise would result in the overwhelming foreign capitalist domination of the national economy. On his postulate that capitalism "is but the gentleman's method of slavery," he insisted that pan-Africanism needed to harness the "scientific," "abiding," and "universal" principles of socialism to contain it (Nkrumah 1968, p. 29; Nkrumah 1970[b], p. 26). Among these principles are the public ownership of the means of production geared toward "the fulfillment of the people's needs," and recognition of the reality of the class struggle.

Nkrumah's heroic role in the decolonization struggle in Africa, and his enormous importance as the symbol of Ghanaian national unity in an ethnically fragmented land, produced a wave of oftentimes irrational adulation around

him, reminiscent of the uncritical hero-worship that Americans once heaped on George Washington as the first president of the incipient American republic. In effect, a personality cult nourished by Nkrumah's own penchant for flamboyant style sought for him the same kind of legitimacy rooted in history, religion, and ancestral spiritual practices that was afforded his powerful rival, the Asante King. But, when all is said and done, it was Nkrumah's grand vision of a united African superstate, much like what animates and drives the European Union today, that drew the racist accusation of megalomania from the West, and not anything to do with his supposedly inflated sense of personal grandeur or fondness for adulation.

Following his ouster, Nkrumah took up residence in Conakry, Guinea, at the invitation of President Ahmed Sékou Touré (1922–1984) and spent a good deal of his time reading and writing, polishing his speaking French, and holding heated discussions on salient African issues with visiting companions-in-arms such as Cabral and Kwame Ture (Stokeley Carmichael, 1941–1998). He made several radio broadcasts to Ghana drawing attention to the neocolonial character of the February 1966 military coup, all as part of a spirited effort to rally support for his return to power. Astoundingly, during this hectic period he also managed to publish several significant books, among them *Challenge of the Congo* (1967), *Dark Days in Ghana* (1968), *Handbook of Revolutionary Warfare* (1968), *Class Struggle in Africa* (1970), and *Revolutionary Path* (1973), all of which he dedicated, characteristically, to the "African Nation That Must Be." Nkrumah died on April 27, 1972, in Bucharest, Romania, while receiving treatment for skin cancer.

Even though his dedication to the pan-African vision entailed the sacrifice of some short-term Ghana national interests, it is still the resounding verdict that the most impressive economic, social, and political achievements in Ghana to date took place during his leadership. And although he failed to achieve the goal of African political unification, what gave Nkrumah his lasting importance "is that he failed in trying to reach the right goal, and not, like many of his time and later, in trying to reach the wrong one" (Davidson 1973, p. 207). After all, this is a historical juncture "when policies aimed at … unity can alone solve Africa's problems, so that all other alternatives can be no more than temporary diversions from the pathway to those aims" (Davidson 1973, p. 37).

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Opoku Agyeman

NOBEL PEACE PRIZE

The *Nobel Peace Prize* is an annual award established by Alfred Nobel and, according to his will, given to "the person who shall have done the most or best work for fraternity among nations, for the abolition or reduction of standing armies and for the holding and promotion of peace congresses." Nobel gave the Norwegians the exclusive task of selecting each year's recipient, as opposed to the Swedes, who award each of the other Nobel Prizes. The Nobel Committee consists of five members selected by the Norwegian parliament (known as the "Storting"). Since the prize's inception, all committee members have been Norwegian nationals. Prize recipients, therefore, generally share the liberal internationalist ideals of the Norwegian Nobel Committee.

Over the years prizes have been given to a wide range of individuals and organizations that promote a variety of

peace and human-rights issues. Recipients of the prize have included government officials, dissidents, nongovernmental organizations, and intergovernmental organizations. Between 1901—when the first prizes were awarded to Henry Dunant, founder of the Red Cross, and Frédéric Passy, founder and president of the French Peace Society—and 2006, there have been 112 Nobel Peace Prizes awarded to ninety-three individuals and nineteen organizations. The International Committee of the Red Cross has received the prize three times (1917, 1944, and 1963). Branches and leaders of the United Nations as well as individuals and organizations that have worked toward conventional and nuclear disarmament have been frequent recipients of the prize.

Nobel Peace Prize recipients

1901 – Henry Dunant (Switzerland), Frédéric Passy (France)
1902 – Élie Ducommun (Switzerland), Charles Albert Gobat (Switzerland)
1903 – William Randal Cremer (United Kingdom)
1904 – Institute of International Law
1905 – Bertha von Suttner (Austria)
1906 – Theodore Roosevelt (United States)
1907 – Ernesto Teodoro Moneta (Italy), Louis Renault (France)
1908 – Klas Pontus Arnoldson (Sweden), Fredrik Bajer (Denmark)
1909 – Auguste Beernaert (Belgium), Paul Henri d'Estournelles de Constant (France)
1910 – Permanent International Peace Bureau
1911 – Tobias Michael Carel Asser (the Netherlands), Alfred Hermann Fried (Austria)
1912 – Elihu Root (United States)
1913 – Henri La Fontaine (Belgium)
1914 – No prize given
1915 – No prize given
1916 – No prize given
1917 – International Committee of the Red Cross
1918 – No prize given
1919 – Thomas Woodrow Wilson (United States)
1920 – Léon Victor Auguste Bourgeois (France)
1921 – Karl Hjalmar Branting (Sweden), Christian Lous Lange (Norway)
1922 – Fridtjof Nansen (Norway)
1923 – No prize given
1924 – No prize given
1925 – Sir Austen Chamberlain (United Kingdom), Charles Gates Dawes (United States)
1926 – Aristide Briand (France), Gustave Stresemann (Germany)
1927 – Ferdinand Buisson (France), Ludwig Quidde (Germany)
1928 – No prize given
1929 – Frank Billings Kellogg (United States)
1930 – Nathan Söderblom (Sweden)
1931 – Jane Addams (United States), Nicholas Murray Butler (United States)
1932 – No prize given
1933 – Sir Norman Angell (United Kingdom)
1934 – Arthur Henderson (United Kingdom)
1935 – Carl von Ossietzky (Germany)
1936 – Carlos Saavedra Lamas (Argentina)
1937 – Robert Cecil (United Kingdom)
1938 – Nansen International Office for Refugees
1939 – No prize given
1940 – No prize given
1941 – No prize given
1942 – No prize given
1943 – No prize given
1944 – International Committee of the Red Cross
1945 – Cordell Hull (United States)
1946 – Emily Greene Balch (United States), John Raleigh Mott (United States)
1947 – Friends Service Council (United Kingdom), American Friends Service Committee (United States)
1948 – No prize given
1949 – Lord Boyd Orr (United Kingdom)
1950 – Ralph Bunche (United States)
1951 – Léon Jouhaux (France)
1952 – Albert Schweitzer (France)
1953 – George C. Marshall (United States)
1954 – Office of the United Nations High Commissioner for Refugees
1955 – No prize given
1956 – No prize given
1957 – Lester Bowles Pearson (Canada)
1958 – Georges Pire (Belgium)
1959 – Philip J. Noel-Baker (United Kingdom)
1960 – Albert John Lutuli (South Africa)
1961 – Dag Hammarskjöld (Sweden)
1962 – Linus Pauling (United States)
1963 – International Committee of the Red Cross, League of Red Cross Societies
1964 – Martin Luther King Jr. (United States)
1965 – United Nations Children's Fund
1966 – No prize given
1967 – No prize given
1968 – René Cassin (France)
1969 – International Labour Organization
1970 – Norman E. Borlaug (United States)
1971 – Willy Brandt (West Germany)
1972 – No prize given
1973 – Henry A. Kissinger (United States), Le Duc Tho (North Vietnam)
1974 – Seán MacBride (Ireland), Eisaku Sato (Japan)
1975 – Andrei Sakharov (Soviet Union)
1976 – Betty Williams (United Kingdom), Mairead Corrigan (United Kingdom)
1977 – Amnesty International
1978 – Mohamed Anwar al-Sadat (Egypt), Menachem Begin (Israel)
1979 – Mother Teresa (India)
1980 – Adolfo Pérez Esquivel (Argentina)
1981 – Office of the United Nations High Commissioner for Refugees
1982 – Alva Myrdal (Sweden), Alfonso García Robles (Mexico)
1983 – Lech Walesa (Poland)
1984 – Desmond Tutu (South Africa)
1985 – International Physicians for the Prevention of Nuclear War
1986 – Elie Wiesel (United States)
1987 – Oscar Arias Sánchez (Costa Rica)
1988 – United Nations Peacekeeping Forces
1989 – The Fourteenth Dalai Lama (Tibet)
1990 – Mikhail Gorbachev (Soviet Union)
1991 – Aung San Suu Kyi (Burma)
1992 – Rigoberta Menchú (Guatemala)
1993 – Nelson Mandela (South Africa), Frederik Willem de Klerk (South Africa)
1994 – Yassir Arafat (Palestine), Shimon Peres (Israel), Yitzhak Rabin (Israel)
1995 – Joseph Rotblat (United Kingdom), Pugwash Conferences on Science and World Affairs
1996 – Carlos Filipe Ximenes Belo (East Timor), José Ramos-Horta (East Timor)
1997 – International Campaign to Ban Landmines, Jody Williams (United States)
1998 – John Hume (United Kingdom), David Trimble (United Kingdom)
1999 – Médecins Sans Frontieres
2000 – Kim Dae-Jung (South Korea)
2001 – United Nations, Kofi Annan (Ghana)
2002 – Jimmy Carter (United States)
2003 – Shirin Ebadi (Iran)
2004 – Wangari Muta Maathai (Kenya)
2005 – International Atomic Energy Agency, Mohamed ElBaradei (Egypt)
2006 – Muhammad Yunnus Bangladesh

Controversy has surrounded some selections, as the committee has tried to balance between complying with Nobel's will and using the prize to promote Norwegian interests and values. The awarding of the 1906 Peace Prize to Theodore Roosevelt is one early example of this balance. Roosevelt was the first head of state to be so honored. While the prize was given because of his involvement in the mediation of the Japanese-Russian war, the former Rough Rider enjoyed a rather bellicose reputation. Nevertheless, Roosevelt was chosen in part because Norway, which had just received its independence from Sweden in 1905, was, as one Norwegian newspaper put it, in need of a "large, friendly neighbor." In addition, the prize signaled the willingness of the committee to at times award prizes based on specific actions rather than the overall "peacefulness" of the person in question. Prizes to such figures as Henry Kissinger and Le Duc Tho (1973), Yasir Arafat (1994), and Anwar Sadat and Menachem Begin (1978) similarly reflect this tendency.

The Nobel Committee has also used the prize to punish, rather than reward, behavior. For example, the 1935 prize was given to Carl von Ossietzky, a German journalist and dissident who wrote scathing articles against the Nazi Party for which he was sent to a German concentration camp. The prize was given to Ossietzky as much to condemn German behavior as it was to honor Ossietzky. Other cases in which the committee has used the prize to highlight atrocities being carried out by specific governments include Shirin Ebadi of Iran in 2003, Carlos Filipe Ximenes Belo and Jose Ramos-Horta of East Timor in 1996, Aung San Suu Kyi of Myanmar (Burma) in 1991, Desmond Tutu of South Africa in 1984, Lech Walesa in 1983, Martin Luther King Jr. of the United States in 1964, and Albert Lutuli of South Africa in 1960.

SEE ALSO *Arafat, Yasir; Bunche, Ralph Johnson; Carter, Jimmy; Gorbachev, Mikhail; Microfinance; Peace; Rabin, Yitzhak; Truth and Reconciliation Commissions; War; War and Peace*

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David R. Andersen

NO CHILD LEFT BEHIND ACT

SEE *Accountability; Education, Unequal.*

NO FAULT DIVORCE

SEE *Divorce and Separation.*

NODE, STABLE

If all the paths of equilibrium noncyclically converge to it, the equilibrium is a *stable node*. The conditions for the equilibrium to be a stable node are a function of the system being evaluated, in particular, whether the issue of concern involves discrete versus continuous change or is a linear versus nonlinear system. If the dynamic system is discrete and linear,

$$\dot{y} = ay + b$$

The equilibrium is stable if and only if $a > 0$.

For continuous linear dynamic systems, an equilibrium is defined as a stable node if the slope of the differential equation in the neighborhood of the equilibrium is negative. For nonlinear discrete or continuous dynamic systems, the Taylor expansion about x_i^*, a nonzero equilibrium, must satisfy the following for x_i^* to be stable: $|f'(x_i^*)| < 1$. The concept of a stable node can be extended to simultaneous systems of discrete or continuous equations. The condition for a stable node is the same for discrete and continuous simultaneous systems of equation. If $|\lambda_i| < 0$, where λ_i are the eigenvalues that solve equation, then λ_i is stable. If the eigenvalues are complex, the real part must be negative for the eigenvalues to be stable.

The concept of a stable node is used to describe the dynamics of (1) an oligopoly—stability of a Cournot solution; 2) the IS-LM—stability after monetary and/or fiscal shocks; (3) the model of inflation and unemployment—stability of fiscal or employment policies; and (4) population models—stability of growth. The characterization of a node as stable is most useful in the qualitative analysis of differential equations using phase diagrams, which describes the paths of a system in and out of equilibrium.

SEE ALSO *Matrix Algebra*

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NOISE POLLUTION

SEE *Pollution, Noise.*

NOMENCLATURA

SEE *New Class, The.*

NOMINAL INCOME

Many societies strive to improve the well-being of their members by increasing incomes. The statement "Canadian household incomes have increased," may give an immediate impression that these households are better off. However, this may not necessarily be the case if nominal income is considered because inflation may completely erode any nominal income gains.

Nominal income is income that is not adjusted for changes in purchasing power, the amount of goods or services that one can afford with the income, owing to inflation. Adjusting nominal income for inflation is important because inflation decreases the amount of goods or services that one can afford with a given amount of nominal income. To see how inflation can erode nominal income gains, suppose that nominal income rises by 50 percent this year over last year. An individual is, in fact, better (worse) off if prices rise by less (more) than 50 percent over the same period, since the amount of goods or services that person can afford with the higher nominal income is more (less). Since nominal income is not adjusted for changes in the cost of living due to inflation, it is not a fully satisfactory measure of well-being. Fortunately, nominal incomes (e.g., wages, pensions) can be successfully adjusted to avoid loss in purchasing power due to inflation, provided that inflation is correctly anticipated.

Problems may arise when making international comparisons of nominal incomes. Suppose that the nominal income of a U.S. resident rises by $1 and that of a Ugandan resident also rises by the same amount. If the amount of goods or services that one can afford with the $1 is higher in Uganda than in the United States, then the $1 received in Uganda should be considered to be the higher income. Therefore, for international comparisons of nominal incomes (and other variables expressed in monetary terms), adjustments for purchasing power differences among countries are necessary. It is therefore not surprising that, for poverty comparison purposes, the World Bank (2005) reports the percentage of the population living on less than $1 a day after adjusting for purchasing power parity (PPP).

Even if nominal income is successfully adjusted for inflation (or PPP), some philosophical issues exist surrounding the appropriateness of nominal income as a measure of well-being. For example, according to the Capabilities Approach attributed to Amartya Sen, winner of the 1998 Nobel Prize in economics, functional capabilities (i.e., what a person can do or can be) are more important than income improvements.

The concept of nominal income is also commonly used in national income accounting to refer to nominal gross domestic product (GDP), the nominal value of all goods and services produced within a country's borders during a given time period. In evaluating nominal GDP, the output for a given year is evaluated using that year's prices. The practice of using nominal income to refer to nominal GDP is reflected in the vast literature on nominal income targeting, including the work of Henrik Jensen.

SEE ALSO *Gross Domestic Product; Gross National Income; Inflation; Money Illusion; Nominal Wages; Real Income*

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Tomson Ogwang

NOMINAL RATE OF INTEREST

SEE *Interest Rates, Nominal.*

NOMINAL WAGES

Nominal wages, or "money wages," are pay rates unadjusted for inflation. In contrast, "real wages" are adjusted for inflation. When real wages increase, recipients can buy

more with them. When nominal wages increase less than do price levels, recipients can buy less with them.

Classical economists believed that economic behavior is rational in the sense that it responds to real rather than nominal values. In labor markets, this implies that workers interpret a given decrease in real wages identically whether it was caused by a rise in inflation or by a fall in nominal wages. One of the key departures of John Maynard Keynes in his *General Theory of Employment, Interest, and Money* (1936) was that "a situation where labour stipulates (within limits) for a money-wage rather than a real wage, so far from being a mere possibility, is the normal case. Whilst workers will usually resist a reduction of money-wages, it is not their practice to withdraw their labour whenever there is a rise in the price of wage-goods" (p. 9). Nominal wages matter because nominal cuts typically occur in piecemeal fashion, which, in turn, alters any single group of workers' relative wage position. Thus, resistance to nominal wage cuts is a defense of one's relative wage position. If money wages could be lowered universally by the same percentage, Keynes's analysis suggests that there would be no more resistance on the part of labor than to the effects of a general inflation.

Early evidence of the downward nominal wage rigidity, or "sticky wages," was found in observed macroeconomic relationships. Increasing real wages during the Great Depression was attributed to falling prices combined with downward nominal wage rigidity. The post–World War II Phillips curve—the negative relationship between nominal wage changes and unemployment rates—was also explained by sticky wages, as was the nonneutrality of money supply, whereby money supply cuts caused recessions. Later studies have countered this "evidence" with alternative explanations—not based on nominal wages—that predict the same relationships.

Beginning in the 1980s, evidence of downward nominal wage rigidity has been sought in the time patterns of wages of individual workers within companies. This research has found many people with exactly zero nominal wage changes and very few whose nominal wages decrease, in contrast to no workers with exactly zero real wage changes and many whose real wages decrease. This holds true for low and moderate inflationary environments.

Different theoretical explanations of downward nominal wage rigidity assume different amounts of worker rationality. Many economists model nominal wage rigidities as rational responses to unanticipated shocks combined with imperfect information or costly wage changes. For instance, if workers can observe their own wage increases or decreases but not others' wages and not general inflation levels, they may temporarily erroneously interpret a nominal wage cut as a negative signal (of the match quality or of the company's health) rather than a response to an economy-wide decline. It may take time for firms to be certain that their economic situations warrant wage responses, particularly when information arrives intermittently. Both time and administrative costs may be required to both gather the relevant information and implement changes in nominal pay levels, leading to infrequent, staggered wage adjustments. Any of these factors can have major macroeconomic implications. Many theories predict these implications to last only for a short run, although some models imply pervasive stickiness.

Downward wage rigidities have also been attributed to efficiency wages—that is, paying higher than market-clearing wages to increase productivity or worker quality—or to insider-outsider theories—where insider workers have bargaining power within firms. However, both of these explanations generate real rather than nominal rigidities, unless coupled with misperceptions or costly adjustments.

An intermediate view assumes "near-rationality." Humans have finite cognitive capacity and must edit out minor factors by using simple, unvarying rules of thumb. In environments of low inflation, individuals bear few costs if they assume that prices and nominal wage structures are constant. If many workers and/or firms behave in this way, however, it creates slowdowns that can persist.

Other psychologically based explanations emphasize that workers often infuse their nominal (money) wages with independent psychological meanings. Opinion surveys and experimental evidence have shown that many people's self-esteem or sense of self-worth depends on the level and changes of their nominal wages, particularly in comparison to the nominal wages of others within their firm. Many workers believe it unfair if employers violate social norms by decreasing nominal wages, even in response to a weak labor market. Finally, individuals have been shown to place more weight on avoiding losses than achieving gains. In this context, decreases in nominal wages lower morale, which can lead to reduced productivity and/or turnover. Given this, rational employers are reluctant to lower nominal wages, preferring to let real wages fall as prices rise.

SEE ALSO *Happiness; Inflation; Keynes, John Maynard; Money Illusion; Nominal Income; Relative Income Hypothesis; Wages*

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Shulamit Kahn

NON-ALIGNMENT

Non-alignment is a philosophy for the conduct of international relations that was introduced into the diplomatic and scholarly vocabulary in 1961 with the founding of the Non-Aligned Movement (NAM). It was a product of the cold war, and its founders declared that they would not be aligned to either of the two competing political camps, led by the United States and the Soviet Union. The key intellectuals of Non-alignment philosophy have been Josip Tito, Fidel Castro, Julius Nyerere, Jawaharlal Nehru, Amilcar Cabral, and Léopold Senghor. The two central ideas of Non-alignment are the freedom to conduct an independent foreign policy and the eschewing of alliance politics. However, because the leading states of the NAM during its early years—such as Cuba and Yugoslavia—were closer to the USSR than to the United States, the movement has had the reputation of not promoting independent foreign policies. It has not been taken seriously in the academic power centers of international relations in North America and Europe. However, the NAM has been one of the most durable mechanisms of rhetorical mobilization for most of the former colonies of the world, and particularly powerful at the United Nations General Assembly, where the nonaligned bloc has been able to put on the agenda initiatives that the great powers would rather not debate, including, most prominently, proposals for a New International Economic Order and a New World Information and Communication Order.

It is useful to see Non-alignment as one of a variety of political strategies used by states to pursue their interests and survive in international politics. In contrast, the "power politics" strategy deployed by the most powerful states in the international system involves promoting alliances and placing military concerns ahead of economic and social development as objectives of foreign policy. In its early years (1961–1971), Non-alignment was seen as a form of neutrality, a philosophy of foreign policy conduct that eschewed international alliances of all types, even membership in the United Nations. However, the death knell of formal neutrality came with Switzerland's joining the United Nations in 2002. In contrast, Non-alignment has been durable, and its use of UN structures to pursue the collective foreign policy aims of its members is evidence of its attractiveness and viability as a "third way" of international relations. However, it is important to note that Non-alignment is not a revolutionary philosophy in international politics, because it adheres to the principle that the state is the primary actor in international affairs and it promotes the continued viability of the United Nations. The so-called "cultural turn" in international relations may mean that Non-alignment will be increasingly studied for its insights into identity construction in international politics.

SEE ALSO *Alliances; Castro, Fidel; Diplomacy; International Economic Order; Nation-State; Negotiation; Nehru, Jawaharlal; Neutral States; Nyerere, Julius; State, The; Tito (Josip Broz); United Nations; World War II*

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Mark D. Alleyne

NONBLACKS

Although racial and ethnic minority groups in the United States have been afforded many opportunities, they have also experienced a great deal of oppression over the course of U.S. history. Native Americans lost thousands of acres of land to early American settlers, and a large percentage of the Native population died in the process. In the mid- to late 1800s, individuals of Chinese descent were welcomed to the country to help build railroads, only to be excluded from citizenship and naturalization once the task was completed. Thousands of innocent Japanese-Americans were interned in the name of national security following the bombing of Pearl Harbor, resulting in the loss of billions of dollars worth of land and personal property. Blacks in America suffered the peculiar institution of slavery, the failure of reconstruction, and the insults and violence of Jim Crow. They also endured violence and bloodshed during the fight for civil rights, and they continue to address the backlash against affirmative action. Hispanics, likewise, have faced discrimination. They have been exploited for their labor and marginalized based upon their race, country of origin, and the continued use of their native tongue. Collectively, these groups are referred to as nonwhites.

Whites in America are the dominant racial group, and as such have historically had greater access to property, power and prestige than other racial groups. There have

historically been large socioeconomic differences between whites and nonwhites, particularly in regard to wealth, income, educational attainment, and occupational opportunity and prestige. These differences have been most apparent between whites and blacks. Variations have also been observed between blacks and other racial and ethnic minority groups, and there has been an emergence of a "black" versus "nonblack" dichotomy. There are political as well as methodological implications for this distinction.

The designation "black" is used to describe a group of individuals that share not only similar phenotypical characteristics, such as skin color. Even more significantly, those labeled "black" are similar in that they are likely to receive unequal treatment compared to whites. The classification of "black" and "nonblack" persons is problematic, however, because the latter term often includes groups that may not be identified as black but have nonetheless had experiences comparable to that of blacks in terms of social and economic injustice. Cubans, Puerto Ricans, and Dominicans, for example, have suffered discrimination and unequal treatment in many arenas.

Moreover, the use of these terms to refer to various groups in quantitative analyses may provide support for the belief held by some about the inherent pathology of black culture, while also helping to mask the role of structural barriers in limiting upward social mobility among blacks and other minority groups. Instead of addressing the structural barriers that contribute to observed black-white disparities, efforts to eliminate the "black" category have emerged.

Some have questioned the usefulness of the black-nonblack dichotomy, given the successes of the multiracial movement in the late twentieth century. In 2000, for example, the U.S. Census Bureau allowed individuals to identify with more than one race. The use of this dichotomy is also deemed by some to have little use politically, given what can be described as the "Latin Americanization" of American racial norms. American society, in other words, can be seen as moving from a biracial classification system to a more complex multiracial or multicultural classification system. But the political successes associated with the multiracial movement do not render the black-nonblack dichotomy, or other racial classification scheme, empty. Instead, they highlight the fact that such classifications are multilevel and multidimensional—and often politically contested.

SEE ALSO *Minorities; Whites*

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Lori Latrice Sykes

NONCOMPETING GROUPS

The concept of noncompeting groups—labor that is sheltered from market competition—has a controversial history that parallels the evolution of labor markets during industrialization. Since the mid-nineteenth century, noncompeting groups have been variously defined in terms of occupation, social class, unionization, gender, race, and economic disadvantage. More recently, the microeconomic foundations of noncompeting groups have also been a topic of study.

NONCOMPETING GROUPS AND INDUSTRIALIZATION

Noncompeting groups were largely peripheral to labor market analysis at the time of the Industrial Revolution. Adam Smith (1723–1790), for example, emphasized the importance of "a competition among masters, who bid against one another in order to get workmen" when labor demand is growing and among workers who "bid against one another" when labor supply exceeds demand (Smith [1776] 1937, bk. 1, chap. 8, p. 71).

It was the Irish economist J. E. Cairnes (1823–1875) who coined the term *noncompeting groups* as applied to broad occupational categories—artisans and small retailers, highly skilled producers, and professionals (Cairnes 1874, p. 68). Cairnes saw entry into these groups as limited by law and custom, nontransferable skills, and the constraints of poverty (p. 62). Foreshadowing subsequent analysis of noncompeting groups by social class and race, John Stuart Mill (1806–1873) perceived these barriers as "so complete … as to be almost equivalent to a hereditary

distinction of caste" (Mill [1848] 1909, vol. 1, bk. 2, chap. 14, p. 480), but he also saw education and training as a source of intergenerational mobility between "grades" of labor provided that rules of social custom could be relaxed.

The turn of the century, however, lessened the importance of noncompeting groups (Fishback 1998), and English economist Alfred Marshall (1842–1924) saw technological change and the growth of mass production as reducing skill barriers to mobility and favoring transferable workforce attributes such as "sagacity and energy" and the ability "to accommodate oneself quickly to changes in detail of the work to be done" (Marshall [1890] 1930, bk. 4, chap. 6, secs. 2–3).

THE REEMERGENCE OF NONCOMPETING GROUPS

The growth of unions after World War II (1939–1945) focused attention on the role of labor market institutions, such as unions, in contributing to noncompetitive elements in labor markets and wage determinations (Dunlop 1958; Lewis 1986; Hirsch and Addison 1986). At the microlevel, these distinctions translated into the "balkanization" of labor markets (Kerr 1954) and a "new industrial feudalism" (Ross 1958). At the microeconomic level, entry into occupations was sometimes controlled by unions and licensure, hiring by firms was limited to entry jobs, and wage-setting was insulated from competitive forces by entry barriers and bargaining power (Reynolds 1951).

As unions and collective bargaining diminished and new social concerns emerged during the 1960s and 1970s, barriers to employment affecting "noncompeting" groups defined by gender, race, and class began to receive attention. Theories of discrimination reflecting segregated labor markets were developed (Becker 1957; Arrow 1972); persistent earnings differentials by race, gender, and class were identified (Blau and Kahn 2000; Cain 1987); and there was renewed interest in "dual economy" models of labor market segmentation (Lewis 1979; Doeringer and Piore 1971; Gordon, Edwards, and Reich 1982; Darity and Mason 1998). However, the importance of these noncompetitive elements in labor markets remains controversial (Cain 1976; Wachter 1974; Dickens and Lang 1993; Gordon, Edwards, and Reich 1982).

THE MICROFOUNDATIONS OF NONCOMPETING GROUPS

A parallel stream of analysis exploring the microeconomics of noncompeting groups has also flourished since the 1960s. Economists extended the 1950s research on employment practices within firms by developing the concept of internal labor markets in which long-term employment matches were formed that favored "internal" over "external" labor mobility (Doeringer and Piore 1971; Williamson, Wachter, and Harris 1975).

The legacy of this research on internal labor markets as noncompeting groups is a new focus on organizational efficiency as a response to various failures of competitive labor markets—firm-specific skills, poor information on the productive qualities of workers and the adverse aspects of jobs, principle-agent conflicts arising from difficulties in monitoring worker productivity, and the difficulty in writing employment contracts that could fully anticipate future contingencies. This approach was initially articulated in Oliver Williamson's *Markets and Hierarchies* (1975) and has been refined under the rubric of the "personnel economics" (Lazear 1999).

In this new incarnation, the limited entry, job hierarchies, and wage premiums found in internal labor markets were seen as improving the efficiency of imperfect external labor markets. Firm-specific skills led employers to offer *efficiency wages* (pay premiums above market rates for productive worker attributes) and promotions as incentives to reduce quits among trained workers; the threat of discharge from high-wage career jobs provided incentives for motivating productivity and reducing shirking; and implicit contracts providing high wages and secure employment markets were an efficient response to economic uncertainty (Katz and Summers 1989; Lang, Leonard, and Lilien 1987).

IMPLICATIONS FOR INEQUALITY AND ECONOMIC PERFORMANCE

Early theories emphasized the market distortions caused by noncompeting groups, as did subsequent work on labor markets segmented by unions, race, gender, class, and the employment practices of firms, as did much of the postwar research on the microfoundations of competing groups. In contrast, the new microeconomics of internal labor markets has tended to focus on the role of organizational efficiency in improving the economic performance of firms, and a large literature is emerging on the productivity gains to be made from sharing these efficiency gains with workers through higher wages, promotion opportunities, and participation in management decisions (Doeringer, Terkla, and Evan-Klock 2002, chap. 1).

The institutions of organizational efficiency, however, can also contribute to the ability of noncompeting groups within firms to increase their share of these gains in ways that may have adverse consequences. For example, firm-specific investments in training and labor market information, as well as unionization, can endow "insiders" with bargaining power that can be used to raise wages and limit job access by "outsiders" (Solow 1985). High wages can contribute to unemployment (Yellen 1984), and can also result in large pools of job applicants that make it easier to

use race and class as exclusionary hiring criteria, while job ladders that provide efficient training can also become barriers to internal mobility by gender and race (Osterman 1979). In effect, noncompeting efficient internal labor markets can be both sources of productivity growth and enclaves of empowered insiders.

SEE ALSO *Discrimination; Ethnic Conflict; Ethnic Fractionalization; Ethnicity; White Supremacy*

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NONCOOPERATIVE GAMES

Strategic games model conflict and cooperation, with the payoff to any player depending on the choice of strategy (a rule for selecting an action given each possible information set) not only by that player, but by all players. Strategic games can either be cooperative games, where some external authority exists that could enforce an agreement among the players, or noncooperative games, where no such external enforcement of agreements is available. Only self-enforcing agreements are possible in noncooperative games. Because binding agreements cannot be made, players in a noncooperative game may end up in a Pareto-inferior outcome, as in prisoner's dilemma (q.v.), because a strategy combination that would produce a better outcome for all players would leave at least one player with an incentive to deviate. Most game theory emphasizes noncooperative games, because there is no consensus about how to choose among the various solution concepts proposed for cooperative games (such as the core, kernel, nucleolus, and Shapley value). Noncooperative game theory builds primarily upon refinements of one solution concept, Nash equilibrium.

A Nash equilibrium is a strategy combination for which no player has an incentive to be the only player to switch to another strategy. John Nash, in articles from 1950 and 1951 and his 1996 volume of essays, proved that any strategic game with a finite strategy space and arbitrarily many players will have at least one equilibrium point, provided that players are allowed to choose mixed strategies (strategies that assign probabilities to the possible pure strategies, so that a player's action at a particular decision node cannot be predicted with certainty). Nash equilibrium has been interpreted as a generalization of A. Cournot's analysis of duopoly in 1838, where each of two mineral water suppliers chooses its profit-maximizing output as a best response to the other's output, taking the other firm's quantity as given, and equilibrium occurs where their reaction functions intersect and neither firm can profit by being the only one to change its quantity produced. However, Robert Leonard, in his 1994 article, suggests that this view reads too much into Cournot. The minimax mixed-strategy solution for two-person zero-sum games, whose existence was proved by John von Neumann in 1928, is a special case of Nash equilibrium for n-person, general sum games. Nash equilibrium need not be unique, and so refinements have been introduced to eliminate as unreasonable some of the Nash equilibria in a game with multiple equilibria, such as considering as reasonable only those Nash equilibria that are subgame perfect. A subgame perfect Nash equilibrium is a strategy combination that would still be a Nash equilibrium if the game was started at any decision node (even one that would never be reached in equilibrium), so that players make only credible threats (that is, a player does not adopt a strategy implying that, if he or she were ever to be at particular off-equilibrium point, the player would do something that would decrease the player's expected payoff). For a game with multiple subgame perfect Nash equilibria, the concept of trembling hand equilibrium, where a player attaches a small probability to another player making a mistake, permits further restriction of the equilibria admitted as reasonable.

Because a Nash equilibrium is self-enforcing (no player can gain from being the only one to deviate), it is widely accepted as a plausible solution concept when there is preplay communication among players (especially if the Nash equilibrium is unique). As David G. Pearce's 1984 article argues, if players cannot talk, or cannot reach agreement on which of multiple Nash equilibria to select, other strategy combinations that are Nash equilibria may be rationalizable. A strategy is rationalizable if there exists a consistent set of beliefs about the strategies and beliefs of all the other players for which that strategy is optimal, with each player maximizing his or her expected payoff subject to his or her subjective beliefs. However, rationalizability greatly extends the range of admissible solution concepts (as the possibility of binding agreement does for cooperative games), so that players, and game theorists analyzing the games they play, may fall back on Nash equilibrium as a focal point. Nash equilibrium, together with its refinements (especially subgame perfection in multistage games), remains the workhorse of noncooperative game theory, which in turn is the most developed and most widely influential form of game theory, spreading across disciplinary boundaries.

SEE ALSO *Evolutionary Games; Game Theory; Nash Equilibrium; Nash, John; Prisoner's Dilemma (Economics); Strategy and Voting Games; Subgame Perfection*

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NONDECISION-MAKING

Peter Bachrach and Morton Baratz (1970) first introduced the concept of *nondecision-making*, contesting the dominant explanation of the use of power in decision-making by asking how issues are suppressed and the scope of decision-making restricted. This was a challenge to Robert Dahl's conceptualization of power, which tended to focus on how decisions are made. Bachrach and Baratz suggested that to fully understand power, researchers should also consider decisions that are not made—nondecisions. Nondecision-making involves suppressing challenges to the status quo and suppressing the addition of new issues to an agenda. Issues are excluded from an agenda because they are threatening in some direct way, or because of the competition for the limited space for agenda items.

The concept of nondecision-making is best understood in relation to the concept of decision-making. Nondecision-making differs from decision-making in that direct and even tacit confrontation is avoided. Prior to the introduction of nondecision-making, power often was conceptualized as a conflict relationship—that is, a "power over" relationship. Traditional conceptualization of power, as suggested by Dahl, among others, posits that *A* gets *B* to do what *B* would not otherwise have done. Nondecision-making focuses not on such direct use of power, but on its indirect manifestations. As such, power can be exercised in the absence of a direct and overt threat. For example, assume that *A* gets *B* to engage in action *X*. As a consequence of *B*'s engagement in action *X*, it becomes unlikely that *C* will get *B* to engage in action *Y*; this is an indirect conflict relationship because *A* and *C* are not engaged in direct competition. What this suggests is that power relations can be both direct and indirect, and that they can involve the use of threats or not.

A primary function of nondecision-making is to maintain a *mobilization of bias*. Mobilization of bias represents a dominant set of beliefs, values, and institutional processes and procedures that work to privilege some groups in relation to others. This is in direct contrast to the pluralist view, which suggests that the marketplace of policy ideas is relatively open and accessible to various groups. Pluralists further argue that due to competition, the various groups possess the opportunity to influence the policy agenda, provided there has been sufficient political mobilization. Thus, groups hoping to influence policy decisions will not necessarily succeed in all of their attempts to influence policy, but neither will they be systematically denied access to influence the decisionmaking process. On the contrary, the theory of nondecision-making suggests that through a mobilization of bias, some groups are systematically denied access to the decision-making process. There are multiple forms by which the privileging of some can be achieved through nondecision-making; the threat of sanctions is one such form. Norms, rules, routines and procedures, values, and myths are often employed in the threat of sanctions. Nondecision-making can also employ the use of force. Another form of nondecision-making involves the use of the "rule of anticipated reactions": Anticipated reactions result from situations where *B*, who has relatively less power than *A*, decides not to make a demand upon *A* in an effort to avoid confrontation, or out of the fear that such behavior would result in *A*'s invoking sanctions against him or her.

The result of nondecision-making is that certain persons, perspectives, issues, or conflicts are excluded or suppressed. Consequently, the scope of the debate is limited and contained to include issues perceived as "safe." However, it is possible to challenge the mobilization of bias: To do so involves expanding the scope of participation of the decision-making process, and this requires enhancing the knowledge of participants. Community development corporations and progressive coalitions, among other groups, can all play a key role in expanding the scope of the democratic process.

SEE ALSO *Game Theory; Power; Power, Political; Schattschneider, E. E.*

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NON-EXPECTED UTILITY THEORY

The expected utility/subjective probability model of risk preferences and beliefs has long been the preeminent model of individual choice under conditions of uncertainty. It exhibits a tremendous flexibility in representing aspects of attitudes toward risk, has a well-developed analytical structure, and has been applied to the analysis of gambling, games of strategy, incomplete information, insurance, portfolio and investment decisions, capital markets, and many other areas. This model posits a cardinal utility function over outcomes (usually alternative wealth levels) and assumes that an individual evaluates risky prospects on the basis of the expected value of his or her utility function. In situations of objective uncertainty (e.g., roulette wheels), this expectation is based on the objective probabilities involved. In situations of subjective uncertainty (e.g., horse races) likelihood beliefs are represented by the individual's personal or subjective probabilities of the various alternative occurrences. First proposed by the Dutch mathematician Daniel Bernoulli in 1738 as a solution to the well-known Saint Petersburg paradox, the expected utility model has since been axiomatized under conditions of both objective and subjective uncertainty. Many consider these axioms and the resulting model to be the essence of rational risk preferences and beliefs.

In spite of its flexibility, the expected utility/subjective probability model has refutable implications, and beginning in the 1950s, psychologists and economists have uncovered a growing body of experimental evidence that individuals do not necessarily conform to many of the key axioms or predictions of the model. One well-known example, first demonstrated by the French economist Maurice Allais in 1953, consists of asking subjects to express their preferred option from each of two pairs of objective gambles. The majority of subjects express preferences that are inconsistent with expected utility, and they directly violate its primary empirical axiom, the so-called independence axiom. Although initially dismissed as an isolated example, the Allais paradox has been replicated by numerous researchers and found to be a special case of at least two forms of systematic violations of the independence axiom. Such departures have also been replicated using real-money gambles.

Starting in the early 1960s, researchers have also uncovered a class of systematic violations of the subjective probability hypothesis. The most well-known example, offered by Daniel Ellsberg in 1961, consists of an urn with ninety balls, thirty of which are red, with the remaining sixty being black or yellow in an unknown proportion. Subjects are asked to select from each of two pairs of bets on this urn, and they typically select in a manner inconsistent with well-defined likelihood beliefs in regard to obtaining a black versus a yellow ball. This finding was also originally dismissed, but the phenomenon has since been replicated by many researchers in a number of different examples. Choices in such experiments reveal a general preference for betting on objective rather than subjective events, a phenomenon that has been termed "ambiguity aversion."

In response to these empirical violations, researchers have developed, axiomatized, and analyzed a number of alternative models of risk preferences and beliefs, most of which replace the expected utility formula with alternative formulas that individuals are assumed to maximize. The earliest of these models, proposed by Ward Edwards in the 1950s and adopted by Daniel Kahneman and Amos Tversky in the 1970s as part of their well-known "prospect theory," was found to generate implausible predictions (namely that individuals would select some gambles with lower payoffs than other gambles). Economists have since developed and axiomatized non-expected utility models of risk preferences that avoid these difficulties, are consistent with the broad class of Allais-type violations of the independence axiom, and are capable of formal analysis and application to economic and other decisions. The most notable of these is the "rank-dependent expected utility model" of the Australian economist John Quiggin.

Researchers have also developed models of preferences over subjective prospects that are consistent with both Allais-type departures from expected utility risk preferences and Ellsberg-type departures from probabilistic beliefs. One such model, long informally discussed in the literature, axiomatized by Itzhak Gilboa and David Schmeidler, and known as "maximin expected utility," posits a utility function and a set of subjective probability distributions over events. It assumes that individuals evaluate each bet on the basis of its minimum expected utility over this class of distributions. Another important model, again axiomatized by Gilboa and Schmeidler and known as "Choquet expected utility," posits a utility function but replaces the classical (i.e., additive) probability measure of subjective expected utility with a nonadditive measure over events. It also replaces the standard expected utility formula with an alternative notion of expectation in respect to this nonadditive measure. Both models have been successfully applied to economic decision-making.

SEE ALSO *Expected Utility Theory; Probability; Probability, Subjective; Prospect Theory; Rationality; Risk; Uncertainty*

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NONGOVERNMENTAL ORGANIZATIONS (NGOs)

The term *nongovernmental organization*, or *NGO*, refers to a vast range of nonprofit organizations that are not a part of any government. They vary in size from a few people operating on a shoestring budget to huge globe-spanning organizations. Highlighted below are some crucial questions and controversies that are salient in shaping the political economy of NGOs as social actors, particularly in relation to their often assumed status as expressions of civil society; their relationship to social movements; and the ways they both constrain and enable progressive social change.

The number and visibility of NGOs have expanded dramatically since the 1970s, in part because neoliberal policies have reduced the role of the state in many areas. NGOs commonly work in numerous fields, including humanitarian and other social services; research, monitoring, and information provision; and advocacy around particular issues, such as the environment, health, the empowerment of marginalized communities, human rights, and the status of women and minorities. Many NGOs contract with states and intergovernmental organizations to provide services. During the early decades of NGO growth, they were celebrated as efficient providers of services and deliverers of empowerment. As a result, they became consultants to governmental and international agencies, particularly as representatives of the "grass roots."

NGOs are sometimes called *voluntary organizations*, highlighting a presumption that social values, rather than profit or political power, are the primary motivators in the functioning of such organizations. These notions of values and voluntarism have led observers to see NGOs as expressions of civil society, similar to social movements, and to interpret their increased visibility as a strengthening of the influence of civil society in the affairs of the state and the economy.

QUESTIONS AND CONTROVERSIES

Since the mid-1990s, the popular perception that NGOs are potential agents for diffusing development and enabling empowerment has increasingly been subjected to critical scrutiny in academia and in the community spaces where NGOs operate. Critics have pointed out that it is incorrect to assume that NGOs are automatically accountable to the "target groups" in whose name they work. Indeed, some pseudo-grassroots, or "astroturf," NGOs have been set up by business or political interests to provide a misleading impression of grassroots action to advance their own agendas. Often astroturf groups try to hide their status as a vested interest.

More generally, the NGO form itself can blunt its potential for social activism for several reasons. First, NGOs commonly have an organizational hierarchy with paid staff and offices, so they must raise funds, either from donors or through contracting to provide services. This financial dependency frequently renders NGOs accountable to their funders. It also promotes a tendency toward professionalization. These factors often create tensions with movement-based models of social change that rely on mass mobilization.

Second, when NGOs rely on donors for funding, it becomes difficult for them to support alternative visions and local initiatives. For instance, David Hulme and Michael Edwards, in *NGOs, States and Donors* (1997), ask whether the interests, values, methods, and priorities of NGOs have become so tied with those of northern-government donors and "developing country-states" that they have now been "socialized" into the development industry. Have NGOs gained so much leverage, Hulme and Edwards wonder, because "they now have the social grace not to persist with awkward questions and the organizational capacity to divert the poor and disadvantaged from more radical ideas about how to overcome poverty?" (p. 3).

Third, NGO structures and project funding often lead to increased standardization and constrain the spaces for NGOs to learn in response to local concerns, leading to major gaps between advocacy and practice. As states increasingly outsource their functions to them, NGOs find themselves in a race "to do" rather than to "reflect." As David Lewis and Tina Wallace put it in *New Roles and Relevance* (2000), "Finding ways of becoming learning organizations—as well as finding ways to increase accountability at all levels—largely continue to evade NGOs, yet the successful search lies at the heart of NGOs' ability to respond in ways that are truly relevant" (p. xiv).

These processes, through which organizations working at the grassroots level lose their connection with their prime constituency and support base, have been called "NGOization." There is thus an implicit or explicit critique that NGOs and their ties with the state are signifi-

cantly reshaping, or even replacing, community-based activism. For Arundhati Roy, such "NGO-ization of politics threatens to turn resistance into a well-mannered, reasonable, salaried, 9-to-5 job. With a few perks thrown in" (Roy 2004).

NGOization is by no means confined to the "Third World." For example, Sabine Lang argues in "The NGO-ization of Feminism" (2000) that the NGOization of German women's movements brought with it: (1) a structural emphasis on professionalized but decentralized small-scale organizations; (2) a turn from antihierarchical to more hierarchical structures; and (3) the partitioning of a complex feminist agenda of emancipation and equality into specific single issues with a state-oriented politics. While feminist movement-building prioritized the making of a new democratic counterculture, new feminist NGOs have aimed for issue-specific intervention and pragmatic strategies that have a strong employment focus.

On a global level, "gender mainstreaming" and "poor women's empowerment" have been important features of NGOization, with issues such as violence against women, adult literacy, HIV/AIDS, and microcredit being addressed (in isolated forms) as significant priorities. At the same time, issues that had been prominent in women's movements in the prestructural-adjustment era, such as price inflation of basic foods, women's unions, and land reforms, have been pushed aside. Thus, the structure and social location of NGOs can situate them as diffusers of the hegemonic values, ideologies, and knowledge to people at the grass roots, rather than as challengers of existing hierarchies of power that advance broader visions of social change.

NGOs WITHOUT "-IZATION"?

In a context in which NGOs have increasingly been called upon to help manage the problems produced by neoliberal policies and to pacify those who have been hardest hit by such policies, many small movements have found it impossible to exist without engaging with donor agencies or local and national NGOs in one form or another. The challenge before such organizations is to find creative ways to support their political work while also maintaining their accountability and transparency before the people they work for and work with. Despite the countless challenges, resistance to NGOization continues in many small organizations.

SEE ALSO *Accountability; Feminism; Human Rights; International Nongovernmental Organizations (INGOs); Marginalization; Microfinance; Minorities; Organizations; Poverty; Resistance; Third World; Volunteer Programs; Volunteerism; Women's Movement*

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NONLINEAR REGRESSION

A brief discussion of linear regression is essential in understanding nonlinear regression. One of the assumptions of the classical linear regression model is linearity of the functional form. A linear regression model can be written as:

$$Y = \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_k X_k + \varepsilon,$$

where Y is the dependent variable, X_1, X_2, …, X_k are the explanatory variables, and ε is the error term. A popular statistical technique to estimate the value of the parameters of this model is the classical linear regression where the optimization algorithm applies the least squares errors method to find the best fit. Given the classical assumptions, according to the Gauss-Markov theorem, the least squares coefficients are the best linear unbiased estimator (BLUE) of the population of regression coefficients.

Some regression models are intrinsically nonlinear in their parameters; therefore, application of linear regression estimates generates biased results. Nonlinear regression is an extension of the linear least squares regression for a much larger and general class of functions where the relationship between dependent and independent variable is not linear. As a result, the first-order conditions for least squares estimation of the parameters are nonlinear functions of the parameters. A general form of nonlinear regression equation is:

$$Y_i = f(\mathbf{x}_i, \theta) + \varepsilon_i,$$

where $\mathbf{x}_i$ is a $(N \times 1)$ vector of independent variables, θ is a $(K \times 1)$ parameter vector, and ε_i is an additive error term. A common example of intrinsically nonlinear functions is the Cobb-Douglas production function:

$$Q_i = \alpha L_i^{\beta_1} K_i^{\beta_2} \varepsilon_i,$$

where Q_i is the output of firm i, L_i is the labor input, K_i is the capital input, and ε_i is a multiplicative error term. Parameters of β_1 and β_2 are the elasticities of output with respect to labor and capital. Another example is the consumption function:

$$C_t = \alpha_t + \beta_1 Y_t^{\beta_2} + e_t,$$

which reflects the uncertainty with respect to the way income affects consumption expenditures. In these examples, the terms in the models cannot be rearranged to apply the linear least squares.

Pioneers such as Jennrich (1969) and Malinvaud (1970) have advanced the econometric theory for nonlinear statistical models, while development of computing technology in the last few decades has allowed application of nonlinear models to statistical analysis of complicated relationships between variables. When the nonlinear functions cannot be transformed into linear form, econometricians use two common methods, the nonlinear least squares or the maximum likelihood, to estimate the parameters of the model. These approaches essentially search for a solution to the nonlinear optimization problem by minimizing the sum of squared errors or maximizing the likelihood function. Although there are very few limitations on the functional form of nonlinear regression, the parameters of the model are conceptually estimated in the same way as the linear least squares.

However, reaching a solution to a nonlinear optimization problem is a difficult task. A number of computational methods are available. The Gauss-Newton algorithm, a special case of the more general Newton-Raphson algorithm, is a popular method that linearizes the regression model by approximating $F(\theta)$ from a Taylor series expansion around an initial θ to minimize the residual sum of squares function. In the iterative linearization process, the nonlinear least squares method typically begins with guessed starting values for the parameters and computes the corresponding sum of squared residuals to reach a global minimum. Although the Gauss-Newton algorithm is more efficient in reaching a global minimum, it is less likely than the Newton-Raphson algorithm to locate the global minimum instead of a local one. Of course, since nonlinearity of the functional form violates the classical assumptions, the Gauss-Markov theorem does not apply to the nonlinear regression.

Econometricians typically ignore the possibility that the new error term created in the process of linearization may not meet the classical linear regression model assumption. Also, the nonlinear least squares method can become computationally expensive when the number of parameters to be estimated exceeds two. Since desirable properties of classical linear regression do not necessarily remain in the nonlinear least square estimator, the maximum likelihood estimator is often preferred. In fact, the two techniques are computationally similar.

In selecting functional form, several factors must be considered, including theoretical consistency, applicability, flexibility, computational difficulty, and factual conformity (Lau, 1986). While the underlying theoretical relationship between variables is important, various statistical techniques are used to allow the data to determine the appropriate functional form. In spite of its problem with the log of zero and negative values, the most popular technique for testing nonlinearity is the Box-Cox transformation method, which tests restrictions on a more general functional form. Some nonlinear equations, however, can be transformed into classical linear form, which would facilitate the estimation of their parameters through the classical least squares procedure. For example, taking the natural log of the Cobb-Douglas production function results in the following function, which is linear in parameters:

$$\ln Q_i = \alpha + \ln \beta_1 L_i + \ln \beta_2 K_i + \ln \varepsilon_i.$$

In this case, the least squares estimates of the transformed variables would have the traditional desirable properties.

Nonlinear regression models are sometimes more consistent with the true relationship between variables and have found many applications in models such as the random parameter, continuous regime switching, and time-varying random parameter. Also, in spite of an overidentification tendency in the nonlinear models, the General Method of Moments (GMM) provides a mechanism to arrive at consistent parameter estimates without the normality assumption requirement. However, the use of nonlinear regression models has a few disadvantages. First, estimation procedures for nonlinear models are more complicated because of minimization of sum of square errors, especially when the number of parameters is large, because of minimization of sum of square errors and difficulty of finding the starting values for the iterative linearization process. Second, some measures of goodness of fit, such as the t-statistic and the F-statistic, are not directly compatible and cannot be used or require modification. Compatibility of other measures of goodness of fit such as the R^2 is debatable. Third, there is more ambiguity in the interpretation of the coefficients in nonlinear models because the derivatives of the regression are usually a function of θ rather than being constant. Overall, although the parsimony rule suggests that computationally more demanding estimators do not have better statistical properties, nonlinear maximum likelihood estimators tend to have better finite sample properties than simple alternatives.

SEE ALSO *Econometric Decomposition; Linear Regression; Linear Systems; Nonlinear Systems; Regression; Regression Analysis; Statistics*

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Akbar Marvasti

NONLINEAR SYSTEMS

All real world systems are nonlinear: Straight lines cannot, in practice, go on forever, nor can forces and interactions in natural or social systems. Nonlinearity arises in real economic systems both from human behavior—for example, wage demands varying as a function of the rate of employment—and from the interaction of economic variables—for example, the multiplication of wage rates by the number of workers to calculate the wage bill. Any model that omits these nonlinearities, either by assuming linear behavioral functions or by assuming that a variable remains constant in order to avoid interactive nonlinearities, necessarily reduces its capacity to model the actual economy.

Idealized linear systems can be hypothesized, and the mathematical analysis of these is long established, well-known, and generally results in closed-form symbolic solutions in which the system state at any point in time is a function of the system's parameters. Moreover, in the vicinity of an equilibrium, the linear component of a system, which can be extracted from a mathematical model by a polynomial expansion, dominates the nonlinear components. Thus if a system is stable about an equilibrium, or can be constrained to remain in the vicinity of an equilibrium, its dynamics can be modeled using linear methods.

The mathematical analysis of nonlinear systems, on the other hand, is a recent development, and in general does not result in symbolic solutions. Instead, a nonlinear system must be numerically simulated, and in the subsets classed as either chaotic or structurally unstable, the time path of a system depends upon its initial conditions. Scientists in general therefore had a strong incentive to remain in the linear realm.

Since many real world systems did not meet the conditions for linear analysis, nonlinear analytic techniques were gradually developed, leading to what was initially called chaos theory and is now known as complexity theory. Nonlinear methods play a major role in most sciences today, but their uptake in economics has been noticeably more limited.

NONLINEAR ECONOMICS

Nonlinear economics began in the 1940s, when Hungarian economist Nicholas Kaldor (1908–1986) made the prescient observation that a model with linear ex-ante investment and savings functions could not explain the trade cycle. With savings and investment modeled as linear functions of employment, if the savings function were the steeper of the two, the model displayed "*more* stability than the real world appears, in fact, to possess." On the other hand, if the investment function were steeper, then the system "would always be rushing either towards a state of hyper-inflation with full employment, or towards a state of complete collapse with zero employment, with no resting-place in between" (Kaldor 1940, p. 80). Since neither result could be justified, Kaldor surmised that "we are left with the conclusion that the $I(x)$ and $S(x)$ functions cannot both be linear, at any rate over the entire range" (Kaldor 1940, p. 81).

The adoption of nonlinear methods in economics after this insight was very limited, and Kaldor later argued that this was because economics took for granted "that the economy always approaches, or is near to, a state of equilibrium" (Kaldor 1972, p. 1239). Economists therefore tended to rely upon comparative statics methods, even when the relevant linear model was unstable under reasonable parameter values—as in the case of the linear model of supply and demand, which is unstable under the realistic condition that the price elasticity of supply exceeds that of demand.

While Kaldor pointed out the need for nonlinear analysis in economics, the main pioneer of nonlinear models in economics was Richard Goodwin (1913–1996). Drawing his inspiration from the French mathematicians Henri Poincaré and Philippe Le Corbeiller (b. 1911), Goodwin developed many nonlinear models, with his signature contribution implementing Karl Marx's class-struggle cycle model as a predator-prey system—in which technically, the capitalists were the prey and workers the predators.

There is now a substantial research tradition in nonlinear dynamics within economics that overlaps with the application of chaos, complexity, and evolutionary theories, and fractal analysis to economics. There are numerous nonlinear dynamical models of macroeconomics, microeconomics, and finance market phenomena, including the aggregate business cycle, the individual market cobweb cycle, and stock market crashes. Many econometric methods to test economic time series for nonlinear data structures (e.g., the Hurst exponent, the Brock–Dechert–Scheinkman (BDS) statistic, Smooth Transition Auto-Regression) exist, though their robustness at determining whether nonlinear causal structures exist in noisy linear time series is limited.

There are journals devoted to nonlinear economic analysis—such as *Studies in Nonlinear Dynamics & Econometrics*, and *Nonlinear Dynamics, Psychology, and Life Sciences*—as well as others where nonlinear analysis features frequently—such as the *Journal of Economic Dynamics and Control*, *Macroeconomic Dynamics*, the *Review of Economic Dynamics,* and *Structural Change and Economic Dynamics*. Most contributions from the developing field of econophysics could be characterized as essentially nonlinear, including those applying nonextensive statistical mechanics to the analysis of financial market data.

Despite this flowering, nonlinear analysis in economics is hampered by two dilemmas. The first, peculiar to economics, is that the dominant pedagogic and research tendency in economics is to model economic processes as equilibrium phenomena. The second, generic problem is best captured by John von Neumann's (1903–1957) apocryphal aphorism that a general theory of nonlinear phenomena is akin to "a theory of non-elephants": While linear analysis is well defined, the variety of nonlinear phenomena is so enormous that it bedevils systematic analysis (Bak and Paczusku 1995, p. 6690).

SEE ALSO *Linear Systems*

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Steve Keen

NONPARAMETRIC ESTIMATION

Nonparametric estimation is a methodology for estimating density functions or conditional moments of distributions without making any prior assumptions about functional forms. The data are allowed to speak for themselves in determining the shape of the unknown functions (Silverman 1986).

NONPARAMETRIC DENSITY ESTIMATION

In parametric estimation, if the underlying distribution is known to be normal, the data are used to calculate the mean μ and variance σ^2 of the distribution, substituting them into the formula for the normal density. Suppose

X is a continuous random variable, $f(x)$ is the probability density function, and $F(x)$ is the cumulative density function when $X = x$. With h as the width of a bin or interval, the nonparametric naive estimate of $f(x)$ is $\hat{f}(x) = \lim_{h \to 0}\left[\frac{\left(F(x + h/2) - F(x - h/2)\right)}{h}\right]$ = $1/h^*$(probability that X belongs to the interval $[x - h/2, x + h/2]$) = $1/h^*$(probability that $(X - x)/h$ belongs to the interval $[-1/2, 1/2]$).

In other words,

$$\hat{f}(x) = \frac{1}{nh}\sum_{i=1}^{n} I\left(\frac{X_i - x}{h}\right) \qquad (1)$$

where,

$$I(.) = 1 \text{ if } -\frac{1}{2} \le \left(\frac{X_i - x}{h}\right) \le \frac{1}{2}$$
$$= 0 \text{ if otherwise}$$

Alternately,

$$\hat{f}(x) = \frac{1}{nh}\sum_{i=1}^{n} K\left(\frac{X_i - x}{h}\right) \qquad (2)$$

The graph of the estimated density function (Figure 1) from equation (1) is not a smooth curve. Thus the weight function I(.) is replaced by a kernel density function K(.) that satisfies the condition $\int_{-\infty}^{+\infty} K(x)\,dx = 1$. The revised nonparametric estimate of the density function is expressed in equation (2). Alternative choices on the kernel density function are provided in equations (4) through (6). The graph of a density function using kernel density weights is smooth and differentiable as illustrated by Figure 2.

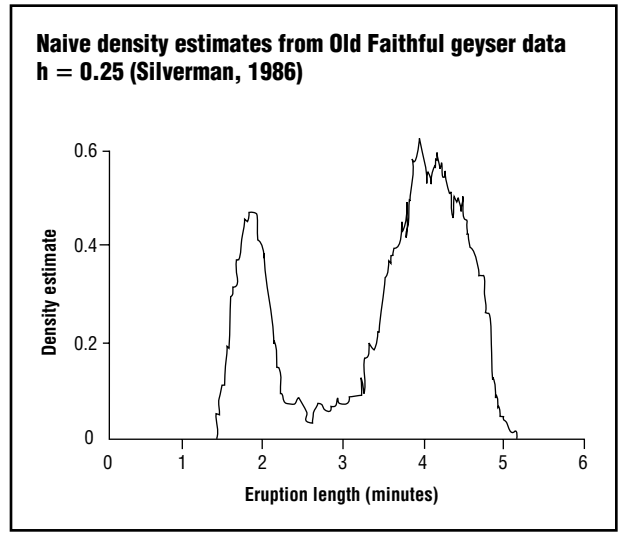

Figure 1

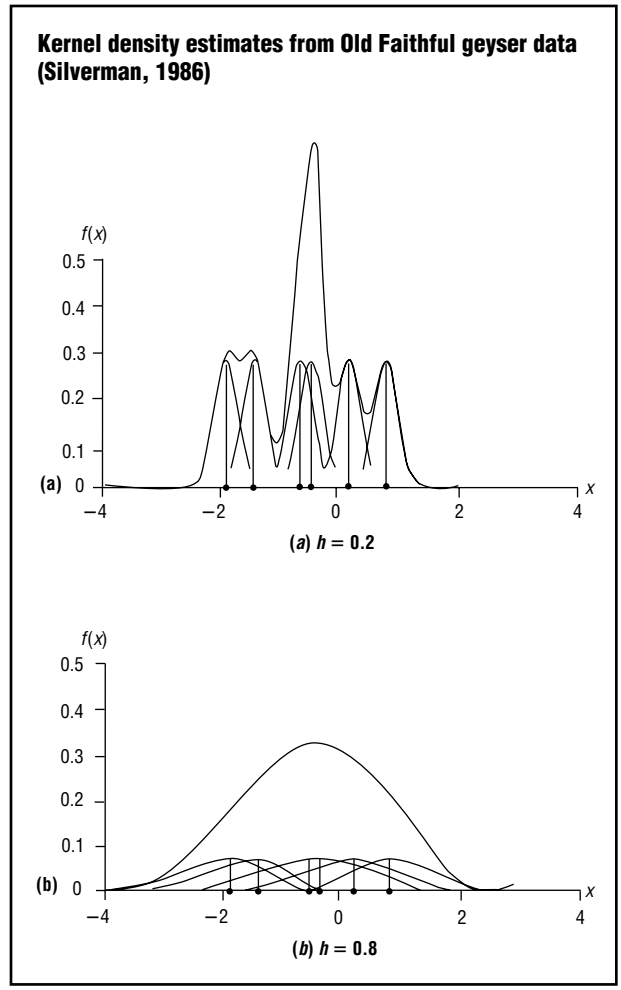

Figure 2

NONPARAMETRIC REGRESSION

A *regression function* is an equation that explains and predicts movements in one variable (the *dependent* variable) as a function of movements in another variable or a set of other variables (the *independent* or *explanatory* variables). Having observed the independent variable X_i, the regression function provides an average or expected value of the dependent variable Y_i. For a set of n data points $\{(X_i, Y_i)\}_{i=1}^{n}$ the regression function can be modeled as

$$Y_i = E(Y_i \mid X_i) + \varepsilon_i = m(X_i) + \varepsilon_i \qquad i = 1, \ldots\ldots, n \qquad (3)$$

In equation (3), m is the unknown regression equation and ε represents unknown stochastic disturbances. The aim of regression analysis is to estimate the regression function m. The *parametric* approach assumes that the regression function has some prespecified functional form (such as logarithmic, inverse, quadratic, or cubic).

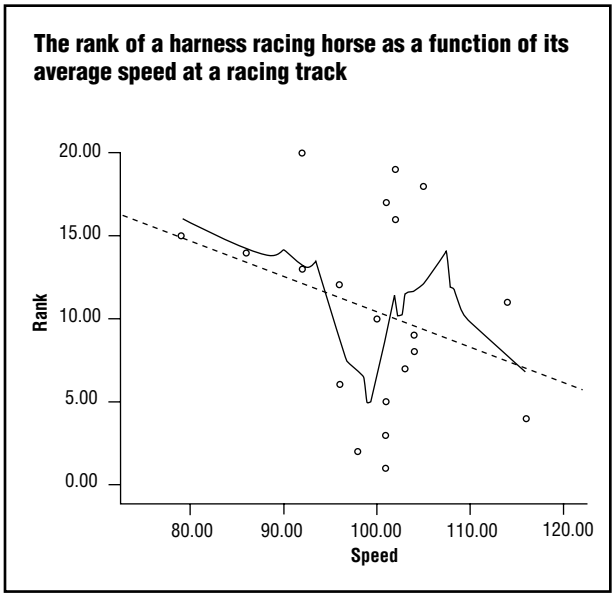

Figure 3

Nonparametric econometrics estimates the regression function m without assuming any specific form.

An example of the two different approaches is illustrated by Figure 3. The straight, negatively sloped, dotted line represents a linear parametric function, while the other curve is a nonparametric estimate. Both curves model the rank of a harness racing horse (1 being high and 20 being low) as a function of its average speed at a racing track. The linear model is unable to represent a U-shaped regression relationship between the rank and speed of racing horses for certain ranges of horse speed.

The assumption that the estimate of the regression function is linear, that is, $m(X_i) = \beta_0 + \beta_1 X_i$, implies certain assumptions about the underlying data-generating process (Pagan and Ullah 1999). For example, if $\{X_i, Y_i\}_{i=1}^{n}$ is a bivariate normal density, then it can be shown that the mean of the conditional density of Y_i given X_i is $E(Y_i \mid X_i) = \alpha + \beta X_i$, where $\alpha = EY_i - \beta(EX_i)$ and $\beta = (\text{Var}(X_i))^{-1} \text{Cov}(X_i, Y_i)$. Thus, the linear specification for the regression function is valid only if the underlying data-generating process is normal. If the true distribution is not normal, then the true functional form of $m(X_i)$ is not linear, and least square estimates of the same, assuming a linear functional form, may be *biased* and *inconsistent.*

The question of which approach should be taken in data analysis was a key issue in a bitter feud between the statisticians Karl Pearson (1857–1936) and Ronald Aylmer Fisher (1890–1962) in the 1920s (summarized by Tapia and Thompson 1978). Fisher pointed out that the nonparametric approach gave generally poor efficiency that increased with the number of explanatory variables, thus giving rise to the well-known *curse of dimensionality* and requiring large data samples for accuracy. Moreover, the size of the required sample increases rapidly with the number of explanatory variables. At the same time, Pearson pointed out that the price paid for pure parametric fitting is the possibility of gross misspecification resulting in high model bias. The parametric and nonparametric estimation techniques support two different and yet very interesting viewpoints. The *semiparametric estimation* technique combines the two. Here, the relationship governing Y_i is expressed as a linear function of some explanatory variables and a nonlinear function of remaining explanatory variables where the nonlinearity is unknown. The coefficients of interest are the slope coefficients of the linear part. P. M. Robinson (1988) shows that it is possible to construct estimators of the linear part that exhibit $\sqrt{n}$ consistency.

The basic principle behind the nonparametric estimation technique is to fit a window h around every observation of the dataset and estimate the relationship or moment of interest in each window. A kernel density function $K(.)$ is used to give high weights to data points close to the window and low weights to data points far from the window. Thus the regression relationship is estimated, piece by piece or window by window, as shown in Figure 4. One of the advantages of nonparametric estimation is that it estimates the regression coefficients at every data point. For example, if the researcher is interested in estimating the relationship between a firm's size and its export intensity, the nonparametric estimation technique will provide an estimate of the *slope coefficient* for every firm at every time period, thus giving a broader picture for analysis. Both parametric and nonparametric techniques share a common foundation. Parametric estimates are obtained by minimizing the sum of squares of residuals (SSR). Nonparametric estimates are obtained by minimizing the SSR weighted

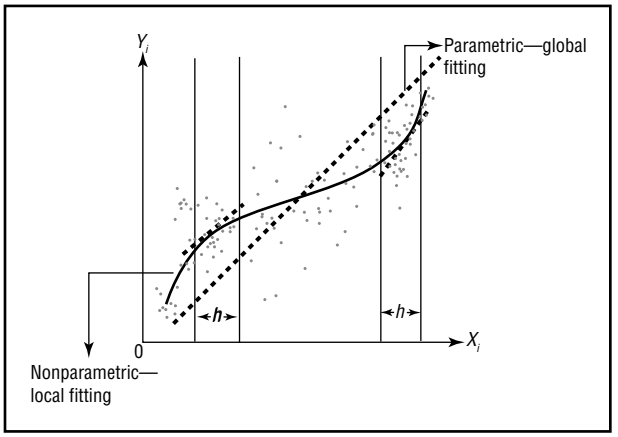

Figure 4

by the kernel density function at every data point. That is the reason why parametric estimates are a product of global fitting, while nonparametric estimates are obtained by local fitting. The conditional mean at point x is a weighted average $\sum_{i=1}^{n} w\left(X_i; x\right) Y_i$ of n data points, where $w = \sum_{i=1}^{n} K\left(X_i - x/h\right) / \sum_i K\left(X_i - x/h\right)$. The weights $w(X_i; x)$ depend upon the kernel density function, the window width, X_i, and the point x at which the conditional expectation is evaluated.

CHOICE OF KERNELS AND WINDOW WIDTHS

Some examples of kernels commonly used in the literature (Silverman 1986) are:

Epanechnikov:
$$K(t) = \frac{3}{4}\left(1 - \frac{1}{5}\, t^2\right) \Big/ \sqrt{5} \quad \text{for } |t| < \sqrt{5}$$
$$= 0 \qquad \text{otherwise} \tag{4}$$

Gaussian:
$$K(t) = \frac{1}{\sqrt{2\pi}} \exp(-(1/2)t^2) \tag{5}$$

Rectangular:
$$K(t) = 1/2 \text{ for } |t| < 1 \tag{6}$$
$$= 0 \quad \text{otherwise}$$

It is well known in the literature that the choice of kernels does not influence significantly the efficiency of estimates. The choice of window width is, however, crucial. Small values of h cause oversmoothing and high values lead to undersmoothing of the estimates. The optimum h is the one that minimizes the integrated mean squared error of $m(x) = \int_{-\infty}^{+\infty} \left(\hat{m}(x) - m(x)\right)^2 dx$.

SCOPE OF NONPARAMETRIC ESTIMATION

The scope of applications for the nonparametric estimation technique is endless (Härdle 1990). It is particularly useful in time series applications, in treatment of extreme observations known as *outliers*, and in smoothing the gap of missing data by interpolating between adjacent data points. In general, nonparametric econometrics provides a versatile method of exploiting a general relationship between two or more variables without reference to a fixed parametric model.

SEE ALSO *Functional Form; Properties of Estimators (Asymptotic and Exact); Semiparametric Estimation*

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Monica Das

NONPARAMETRIC REGRESSION

A regression model may be written generally as

$$y_i = m(x_i \mid \theta) + \varepsilon_i \tag{1}$$

where the subscript $i = 1, \ldots, n$ indexes observations, ε_i is a random error term, uncorrelated with the regressor x_i and with zero expectation, and θ represents a vector of parameters. Given $E(\varepsilon_i) = 0$, $E(y_i \mid x_i) = m(x_i \mid \theta)$; consequently, the function $m(x_i \mid \theta)$ is often called the *conditional mean function.*

In ordinary least squares regression, the parameter vector is assumed to be of length $K < \infty$ and the conditional mean function is assumed to be linear in parameters, e.g.,

$$m(x_i \mid \theta) = \theta_1 + x_{i2}\,\theta_2 + \ldots + x_{iK}\,\theta_K.$$

Moreover, in small samples the errors are typically assumed to be normally distributed in order to facilitate inference. With maximum likelihood estimation, the parameter vector is again assumed to be of finite length K, and a particular form is assumed for the conditional mean function, although linearity in parameters is not necessary. In addition, the errors are assumed to come from a particular family of distributions (e.g., normal, beta, gamma, etc.); with independent sampling, the likelihood function can then be derived as a product of marginal probability density functions, each evaluated at one of n sample observations.

Nonparametric regression involves using one of several techniques to avoid the need to assume specific functional forms for the conditional mean function as well as the distribution of the error terms in (1). By making fewer assumptions, one avoids the risk of mis-specifying either the conditional mean function or the distribution of the errors, which can lead to biased and inconsistent estimation. Moreover, with nonparametric regression techniques, the underlying, true model that is estimated can itself be viewed as nonparametric, in the sense that it can-

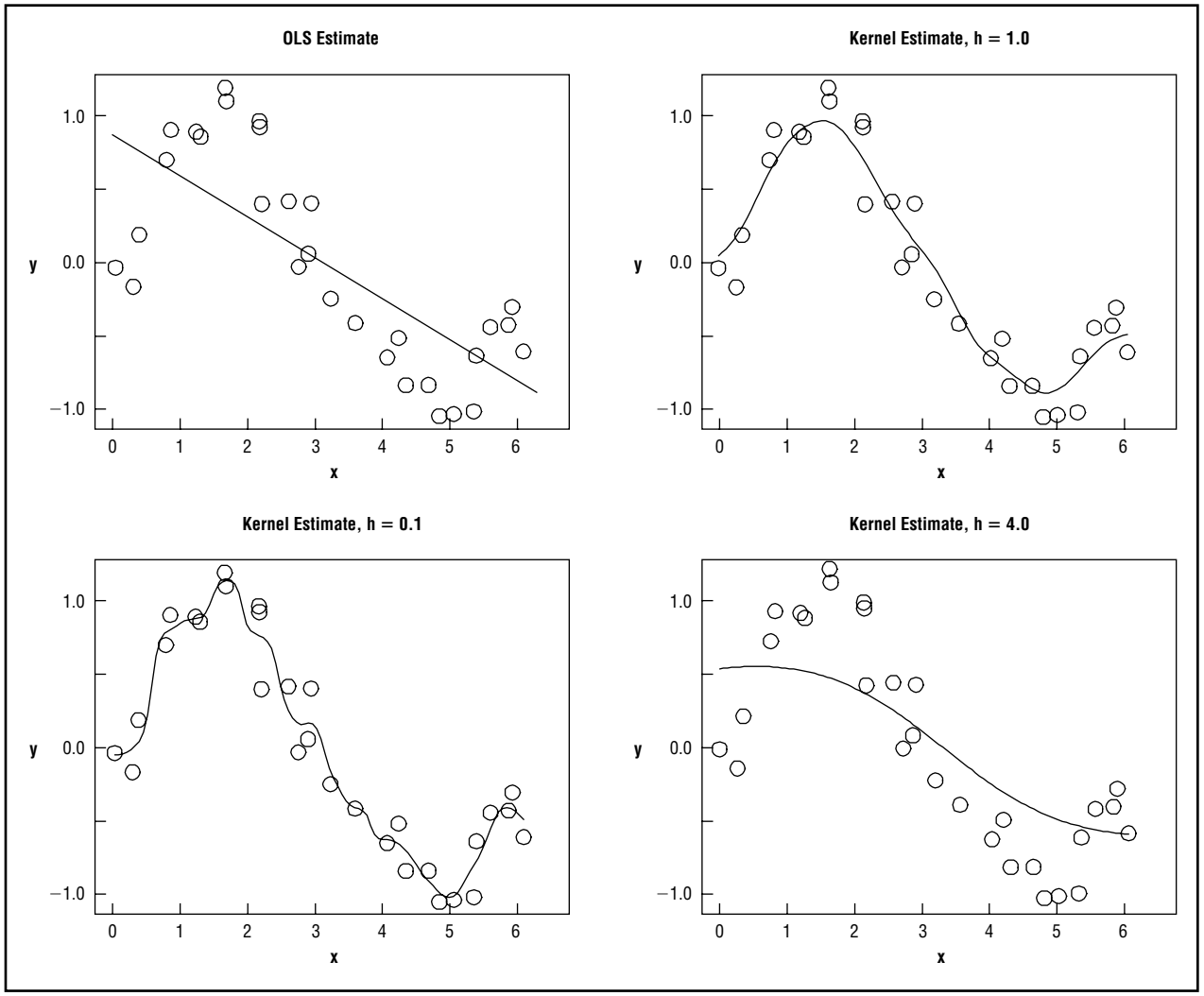

Figure 1

not be represented by a function involving a finite number of parameters. In other words, the parameter vector θ can be assumed to have an infinite number of elements. Consequently, the variety of shapes of conditional mean functions that can be estimated by nonparametric regression methods is far greater than what is possible with more conventional parametric estimation methods such as ordinary least squares or maximum likelihood. However, the increased flexibility comes with some costs; in particular, inference is often more difficult, computational burdens are greater, and rates of convergence are slower with nonparametric methods than with parametric methods.

Several nonparametric regression estimators have been developed. One of the most widely used is the Nadarya-Watson estimator (Nadarya, 1964; Watson, 1964) given by

$$\hat{m}_h(x) = \sum_{i=1}^{n} K_h(x - X_i) Y_i / \sum_{i=1}^{n} K_h(x - X_i), \qquad (2)$$

where h is a smoothing parameter or bandwidth and $K_h(\cdot) = K(\cdot/h)$ is a weighting, or kernel, function that is symmetric and integrates to 1; i.e., $K(-t) = K(t)$ and $\int K(t)\,dt = 1$. A wide variety of functions satisfy these conditions; for example, any symmetric probability density function can be used as a kernel function, as well as any even-order polynomial over some interval from $-\zeta$ to $+\zeta$ with coefficients chosen so that the polynomial integrates to 1 over this interval.

Although researchers using the Nadarya-Watson estimator (as well as other nonparametric estimators) must choose both a kernel function and a value for the smoothing parameter, the choice of kernel function is less impor-

tant in determining estimation error than the choice of a value for the bandwidth. The bandwidth h determines the degree of smoothness of the estimator. As $h \to 0$, bias of the estimator diminishes but variance increases; as $h \to \infty$, bias increases while variance decreases. A number of data-driven techniques have been developed to optimize the choice of h with respect to one of several criteria; for example, cross-validation methods can be used to choose a value for h that minimizes either mean integrated square error or asymptotic mean integrated square error; see Pagan and Ullah (1999) for details. Alternatively, less computationally burdensome plug-in procedures proposed by Sheather and Jones (1991) can be used to choose an optimal value for the bandwidth.

Figure 1 provides an example illustrating the Nadarya-Watson estimator. With the same data displayed in each panel of Figure 1, estimated regression lines are shown for the ordinary least squares (OLS) estimate of the model

$$y_i = \theta_1 + \theta_2 x_i + \varepsilon_i \qquad (3)$$

and Nadarya-Watson kernel estimates of (1) with the standard normal density function used as the kernel function and with three different values of h: 0.1, 1.0, and 4.0. The data clearly follow a nonlinear pattern, which the OLS estimator of (3) cannot replicate. With $h = 1$, the kernel estimator captures the pattern of the data nicely, providing a reasonably smooth estimate of the regression curve.

When the bandwidth is reduced to 0.1, the kernel estimate becomes jagged, while increasing the bandwidth to 4.0 results in an estimated curve that is much flatter than the estimates obtained with smaller bandwidths. The two panels in the bottom row of Figure 1 illustrate the tradeoff between bias and variance associated with larger or smaller values of h as discussed above.

The Nadarya-Watson estimator, when evaluated at an arbitrary point x, is simply a weighted average of values Y_i in a neighborhood of x; the size of the neighborhood and the weights given to each Y_i are determined jointly by the kernel function $K(\cdot)$ and the bandwidth h. Local polynomial estimators, by contrast, estimate the conditional mean function by fitting locally a p th-order polynomial to the data. This approach offers several advantages over the earlier Nadarya-Watson estimator, as discussed by Fan and Gijbels (1996). Setting $p = 1$ yields a local linear estimator, which has less bias but no greater variance than the Nadarya-Watson estimator. In addition, while the Nadarya-Watson estimator is inconsistent near boundaries of support for x, local polynomial estimators remain consistent near such boundaries. While estimation of regression derivatives is possible using modifications of the Nadarya-Watson estimator, estimation of derivatives is straightforward with local polynomial estimators. As with the Nadarya-Watson estimator, a number of techniques have been developed to optimize the choice of bandwidth when local polynomial estimators are used, as discussed by Fan and Gijbels (1996).

SEE ALSO *Data; Econometric Decomposition; Frequency Distributions; Linear Regression; Ordinary Least Squares Regression; Regression; Regression Analysis; Statistics*

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Paul W. Wilson

NON-PROFITS

SEE *Social Economy.*

NONPROLIFERATION TREATIES

SEE *Arms Control and Arms Race.*

NONTRADED GOODS

SEE *Goods, Nontraded.*

NONVERBAL COMMUNICATION

By virtue of a series of discoveries and conceptual departures in the social sciences, our understanding of the process of human communication has been expanded to include nonverbal communication. In the words of Ashley Montagu and Floyd Matson in *The Human Connection* (1979): "It is not merely a hidden dimension or a silent

language that has been uncovered by the new wave of scientific explorers; it is more like a neglected universe of discourse and intercourse. We are becoming aware that the verbal domain is only the tip of the iceberg of communicative experience—that there is more, much more, to human dialog than meets the ear" (p. xiii). This entry discusses key ideas from the vast research literature on nonverbal communication (NVC).

Nonverbal behavior (NVB) is usually divided into several categories. One category is *paralanguage*, which refers to the content-free vocalizations and pauses associated with speech. Research conducted by Starkey Duncan and Donald Fiske (1979) shows how paralinguistic behaviors serve as regulators of social interaction. Another category is *facial expressions*. Paul Ekman's research has shown how expressions indicate primary emotions (for example, see his 1992 article). A third category is *kinesics* or *body language*. The research reported by Ray Birdwhistell in *Kinesics and Context* (1970) is an example of the value of detailed recording of gestures and bodily movements. A fourth category is *visual behavior*, which includes gazing. Michael Argyle's research, reported in *Bodily Communication* (1975) and elsewhere, has elucidated the meaning of and social functions served by various patterns of eye contact between people. The study of spatial behavior or *proxemics* is another aspect of NVB research. Edward Hall's categories of interpersonal distance influenced the study of communication and culture (see *The Hidden Dimension*, 1966). Georg Simmel's writing about spatial relations throws light on how space can reflect a group's social standing as being dominant or marginal in a society (see Allen, 2000). The synergistic effects of these categories are illustrated by Albert Mehrabian's multiple-channel research summarized in his 1972 book *Nonverbal Communication*.

Each of the nonverbal channels is understood in terms of both interpretation—referred to as *decoding*—and communication, known as *encoding*. These functions are related: The interpretive function leads observers to infer the communicator's intentions; the communicative function is used to influence the observers' attribution of intentions. The knowledge generated by research provides a tool for agents of influence such as advertising executives and politicians. Certain NVBs have been shown to provide a window into emotions and intentions: For example, in her 2006 article, Christine Harris shows the NVBs and muscle activations that indicate the feeling of embarrassment (in succession—eyes down, smile control, head away, gaze shifts, face touch); and, in their 1982 book on *Nonverbal Communication*, Daniel Druckman, Richard Rozelle, and James Baxter show that deceivers displayed more frequent leg movements, less time looking at the interviewer, and more fidgeting with objects than honest and evasive role-players in their experiments. These are some of the cues that can be used to diagnose psychological states and lying (referred to as decoding); they are also the cues that can be used to disguise one's feelings or intentions (referred to as encoding).

It would seem then that the research findings provide useful information for managing impressions. However, the research also suggests that the process may be more difficult than it seems. In a 1985 chapter, Bella DePaulo and her colleagues review evidence on the impact of controlling NVBs in order to perpetrate a lie. Pointing to a phenomenon referred to as *leakage*, these findings show that when certain nonverbal channels, such as facial expressions, are orchestrated to hide an intention, other channels, subject to less conscious control, can be revealing. Words and facial expressions have been found to be easier to control than body movements and such paralinguistic behaviors as tone of voice. These researchers also show that highly motivated liars may be easier to catch than their less motivated counterparts: When the stakes for pulling off a lie are high, more-difficult-to-control nonverbal channels are more revealing than verbal clues; less motivated liars are more likely to give themselves away with words. Thus, both context and channel are important for diagnosis. Likewise, they are important for the communicator's attempts to create certain impressions.

Another issue is the extent to which the findings are universal. Culture has been shown to influence expressions: Based on a review of the research, Randall Gordon and his colleagues concluded that "the events that elicit emotions vary from culture to culture, but the particular facial muscle movements triggered when a given emotion is elicited may be relatively universal" (2006, p. 85). Cultural influences are referred to as *display rules*. These rules serve to control expressions that would be inappropriate in certain settings. Numerous studies have found differences among cultures in each of the NVB channels: Many of these studies focus on preferences for spacing or interaction distances; some show differences between cultures in gazing behavior, while others examine paralinguistic behaviors. (See, for example, Michael Argyle's 1986 article on display rules dealing with intimacy.) However, while the cross-cultural comparisons are informative, the studies provide limited insight into the situations that arouse such feelings as guilt, shame, or stress within cultures. Cultural interpretations of situations—for example, as social transgressions—are central to the idea of display rules and have implications for the way we diagnose leaked NVBs.

Professional cultures also influence expressions and their interpretation. For example, when considering the field of international politics, four questions can be asked: What is the state of the leader's health? To what extent do the statements made by national representatives reflect

actual policies? How committed are representatives to the positions put forward? How secure is the representative's political status? Clues about what to look for are provided by NVC studies. A furrowed brow and raised eyelids together with change in vocal tone and heightened pitch suggest pain; deviations from baseline NVBs may indicate deception; an increase in the amount of NVBs expressed in several channels may signal strong commitment; and spatial behavior may provide clues to political status. These indicators direct attention to relationships between nonverbal channels, abrupt changes in expressions, and the intensity of nonverbal displays. They provide a structure for focusing attention on relevant details—that is, they suggest where to focus attention and what to look at. But they can also be misleading. Professional politicians are adept at masking intentions and feelings, particularly in the channels that are easier to control (facial expressions, spatial behavior). For this reason, knowledge about professional socialization and norms provides a broadened appreciation for the meaning of communication. (For more on NVC in the context of international politics, see the 2006 chapter by Gordon and his coauthors.)

SEE ALSO *Communication*

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Daniel Druckman

NON-WALRASIAN ECONOMICS

SEE *Barro-Grossman Model; Patinkin, Don.*

NONWHITES

Social scientists often classify and study individuals and groups based upon shared characteristics. A racial group is comprised of individuals who share similar physical characteristics including skin color. The U.S. Census uses the following racial categories: American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; White and Some Other Race. There are also two minimum categories for ethnicity: Hispanic or Latino and Not Hispanic or Latino. Hispanics and Latinos may be of any race. The labels as well as the definition for the aforementioned racial groups have changed over time. For decades, individuals could only identify with one racial group. A historic change took place with Census 2000 that permitted individuals to identify with more than one race. This change to the enumeration questionnaire is indicative of how definitions about race can change over time and that these changes are often politically contested. Collectively, individuals identifying themselves as multiracial, Asian, black, Native American, or "other" are referred to by sociologists as "nonwhites." This typology has its strengths and weaknesses, particularly for conducting research.

Research has shown that nonwhites have relatively less access to wealth, status, and power and thus fewer life chances, relative to whites that in American society are considered the dominant racial group. It is for that reason that sociologists as well as other social scientists, in conducting research, study these populations and changes over time jointly. Yet the categorical grouping together by social scientists of all minority groups often fails to recognize the diversity within and between racial groups.

For example, while blacks, Native Americans, Asians and "others" are relatively disadvantaged when compared with their white counterparts, all nonwhites are not

equally disadvantaged. On selected social and demographic indicators some Asian ethnic groups, for instance, fare better than individuals who the U.S. Census would consider white. Still other nonwhites such as blacks and Native Americans have been shown to be relatively disadvantaged when compared with their white counterparts. These findings have been observed consistently on selected social and demographic variables including on educational attainment, homeownership, housing values, income, and occupational prestige.

Various Asian ethnic groups, for example, are not equally advantaged relative to whites nor are blacks or Native Americans equally disadvantaged relative to whites. While Asians with Indian ancestry may have relatively high levels of education, Asians of Vietnamese descent may have relatively low levels of education. Similarly, blacks with recent ancestry in Africa or in the Caribbean may have higher incomes relative to native-born blacks. Consolidating individuals who do not possess physical characteristics that are similar to those of the dominant group also means that certain ethnic groups within the larger racial classifications are understudied due to their relatively small population size.

The term nonwhite can also be used to describe a group of people whose skin color is distinctive from the dominant racial group in America, despite the contention by scholars that there are no pure races. Social sciences tend to view racial categories not as purely biological rather as socially constructed. Nonwhites, therefore, share distinguishing physical characteristics that are the basis for the unequal treatment they may experience.

The term nonwhite highlights the relative disadvantages experienced by individuals with less power over their lives than the dominant group. At the same time, the term nonwhite ignores both subpopulations and within group differences on various social outcomes.

SEE ALSO *Assimilation; Minorities; Negro*

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Lori Latrice Sykes

NONZERO-SUM GAME

In game theory, *nonzero-sum games* (more precisely known as *nonconstant-sum games*) include many examples in which the sum of the payoffs to the players varies according to the strategies chosen. These cases are often more relevant to issues in social science and public policy than are *zero-sum* (and more generally *constant-sum*) games. From a mathematical point of view, however, they raise problems of solution that do not arise when the sum of payoffs is a constant.

An example arises in the case of *public goods*. Suppose that two agents acting independently can each earn payoffs of ten. However, each has the option of contributing three units from his wealth to produce two units of a "public" good that benefits both players equally. The strategies then are "contribute" or "do not contribute," and the game can be summarized in tabular *normal* form as shown in Table 1.

The Table is read as follows: Agent 1, by choosing his strategy, chooses the row, and Agent 2 chooses the column. In the chosen cell, the first payoff is to Agent 1 and the second to Agent 2. For example, at the top left, both agents contribute, leaving seven units each of private wealth, but four units of the public good are produced, adding four additional units of benefits for each of the two agents.

A game of this sort admits two broad classes of solution: *cooperative* and *noncooperative*. Cooperative solutions allow for the possibility that the agents may form a *coalition* and enter into a binding agreement to choose a joint strategy. In this case, it seems likely that they would both choose to contribute, because this choice makes both better off, while each would refuse to contribute if the other does not. Noncooperative solutions assume instead that there are no trustworthy commitments to joint action. In the case of the public goods dilemma, each agent can reason that he is better off choosing not to contribute, whatever the other may do, and moreover that the other player can reason in the same way. As a consequence, it seems that each would choose not to contribute. Therefore, "do not contribute" is the *equilibrium* of the game. The fact

		Agent 2	
		contribute	do not contribute
Agent 1	contribute	11,11	7,12
	do not contribute	12,7	10,10

Table 1. Public Goods Dilemma

that each agent has an unconditional motive to choose the equilibrium makes this game an instance of a *social dilemma*. In addition to public goods, noncooperative equilibrium concepts are applied to competition in industry, international rivalries, population dynamics in evolutionary biology, and many other issues.

In cooperative solutions of larger and more complex games, questions may arise with respect to bargaining and the division of the benefits from the common strategy and the stability of coalitions and agreements, leading to a number of alternative concepts of solution. Among noncooperative solutions, the equilibrium concept is dominant, but ambiguities can arise with respect to information and learning, and some alternative solution concepts have been explored.

A half-century of experimental work in social psychology, political science, and economics has indicated that both cooperative and noncooperative solutions influence human behavior, but also that real human beings often reason less carefully than the hypothetical agents of game theory.

SEE ALSO *Equilibrium in Economics; Game Theory; Nash Equilibrium; Nash, John; Public Goods; Von Neumann, John; Zero-sum Game*

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Roger McCain

NORM OF RECIPROCITY

SEE *Reciprocity, Norm of.*

NORMAL ACCIDENT THEORY

SEE *Accidents, Industrial.*

NORMAL PROBABILITY DENSITY FUNCTION

SEE *Probability Distributions.*

NORMAL SCIENCE

SEE *Paradigm.*

NORMALIZATION

The issue of normalization arises when the nature of an economic model is unaffected by a vector of structural parameters (coefficients) that can be arbitrarily scaled. This scaling is formally defined as *normalization*. A primary example is the simultaneous-equation framework of money supply and money demand:

$$\alpha_M M_t + \alpha_R R_t = \epsilon_t^S \quad \text{(Money Supply)} \qquad (1)$$

$$\beta_M M_t + \beta_R R_t = \beta_Y Y_t + \beta_P P_t + \epsilon_t^D \quad \text{(Money Demand)} \qquad (2)$$

In equations (1) and (2), M_t stands for money stock, R_t for the nominal interest rate, y_t for real output or real income, and P_t for the price level. All variables are expressed in log value. The money-supply and money-demand shocks, $\boldsymbol{\epsilon}_t^S$ and $\boldsymbol{\epsilon}_t^D$, are random variables with zero mean and are independent of each other in probability distribution.

It has been long recognized that the parameter αs and βs in equations (1) and (2) can be normalized (scaled) in any way, with no consequence on economic interpretations of this equation. The conventional rule is to normalize the supply equation (1) as

$$R_t = \tilde{\alpha}_M M_t + \tilde{\epsilon}_t^S \qquad (3)$$

with $\tilde{\alpha}_M = -\dfrac{\alpha_M}{\alpha_R}$ and $\tilde{\varepsilon}_t^{\mathrm{S}} = \dfrac{\varepsilon_t^{\mathrm{S}}}{\alpha_R}$, and to normalize the demand equation (2) as

$$M_t = \tilde{\beta}_R R_t + \tilde{\beta}_Y Y_t + \tilde{\beta}_P P_t + \tilde{\epsilon}_t^D \qquad (4)$$

with $\tilde{\beta}_R = -\dfrac{\beta_R}{\alpha_M}, \tilde{\beta}_y = \dfrac{\beta_y}{\alpha_M}, \tilde{\beta}_P = \dfrac{\beta_P}{\alpha_M}$, and $\tilde{\varepsilon}_t^{\mathrm{D}} = \dfrac{\varepsilon_t^{\mathrm{D}}}{\beta_R}$. The coefficient $\tilde{\alpha}_M$ is often interpreted as an interest elasticity of the money supply, $\tilde{\beta}_R$ as an elasticity of demand for money, $\tilde{\beta}_y$ as a money-demand elasticity with respect to changes in output or income, and $\tilde{\beta}_P$ as an elasticity of demand for money with respect to changes in the price level. The following analysis for this example applies to any supply-demand framework in which M_t is replaced by the *quantity* of a commodity under consideration, R_t replaced

by the *price* of this commodity, and y_t and P_t replaced by any variables that affect supply but not demand.

In the 1970s econometricians began to recognize that how the supply or demand equation is normalized affects the estimator of the supply or demand elasticity ($\tilde{\alpha}_M$ or $\tilde{\beta}_R$) when the two-stage least squares (2SLS) approach is employed. The quality of this estimator is sensitive to the strength of instruments used in the 2SLS estimation, which in turn depends on whether the price variable or the quantity variable is normalized to be on the left-hand side of the supply or demand equation, as in (3) or (4). There are other methods that one can use to estimate the supply and demand equations. One dominating alternative is the full-information maximum likelihood (ML) approach. This approach used to be computationally infeasible for many practical problems. As computing technology improves over time, the ML approach has become more feasible to implement. One advantage of the ML approach over the 2SLS approach is that the economic meaning of the ML estimates will *not* be affected by normalization.

Not until the 1990s, however, did it become known that normalization matters to small-sample statistical inference about the ML estimates. Likelihood-based small-sample inferences are affected because normalization governs the *likelihood shape* around the ML estimates. A poor normalization can lead to multimodal distribution, disjoint confidence intervals, and very misleading characterizations of the true statistical uncertainty.

Related to this discovery, in the Bayesian econometric literature there have been theoretical results showing that normalization can lead to ill-behaved posterior distributions when a flat or symmetric prior is used. The empirical and policy significance of these results has been largely unexplored until very recently. Daniel Waggoner and Tao Zha (2003) and James Hamilton, Waggoner, and Zha (2007) show that normalization can alter economic interpretations of dynamic responses of the variables M_t and R_t to a supply or demand shock ϵ_t^S or ϵ_t^D in the above example. They use this and other examples to demonstrate that inadequate normalization may confound statistical and economic interpretations.

There are a variety of economic applications in which normalization plays an important role in likelihood-based statistical inferences. Unfortunately, there is no mechanical way to implement the best normalization across different models. As a practical guide, therefore, it is essential to report the small-sample distributions of parameters of interest rather than the mean and standard deviation only. Bimodal and wide-spread distributions are the first clue that the chosen normalization may be inadequate. Carefully chosen normalization should follow the principle of preserving the likelihood shape around the ML estimate. A successful implementation of this principle for normalization is likely to maintain coherent economic interpretations when statistical uncertainty is summarized.

SEE ALSO *Bayesian Econometrics; Demand; Econometrics; Matrix Algebra; Maximum Likelihood Regression; Regression Analysis; Simultaneous Equation Bias*

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Tao Zha

NORMATIVE SOCIAL SCIENCE

Early in the educational process, the novice social science student is typically introduced to two kinds of research: positive and normative. Positive social science is allegedly about what is—the unbiased, objective facts of the world, untainted by value judgments of an ethical, political, or aesthetic sort. By contrast, normative social science is about what ought to be. Apparently unlike positive science, normative social science admits to bias, subjectivity, the moral taint. Much confusion has arisen from the alleged positive/normative distinction, a distinction that is known in philosophy circles as the fact/value dichotomy.

Advanced students of social science, excluding some students of sociology and most students of anthropology, are not encouraged any more than are beginners to clarify the nature of the confusion. Most philosophers, but to repeat, only a few social scientists, reply that this is because the distinction between positive and normative, facts and values, what is and what ought to be, cannot be clarified; they are inextricably entangled.

The word *normative* descends from the Latin *norma*, meaning a carpenter's T-square, a rule, or a prescription. In ordinary English, a norm is what is expected, what is customary, what is habitual. In mathematics, the norm is a standard unit. In economic discourse, ever since John Neville Keynes (1852–1949) published his influential *On the Scope and Method of Political Economy* (1891), *normative* conflates the Latin *norma* and the ordinary English *norm*, yielding something like, as Keynes put it, a "regulative science … a body of systematized knowledge discussing criteria of what ought to be." Like his muse, David Hume (1711–1776), Keynes (father of the great

economist John Maynard Keynes [1883–1946]) believed that "confusion between [positive and normative] has been the source of many mischievous errors" and urged "a distinct positive science of political economy" (Keynes 1891, quoted in Friedman 1953, p. 3).

NORMATIVE SOCIAL SCIENCE AND NOVELTY IN ECONOMICS

While contemporary social scientists take a liking to Keynes's prescription and the allure of the distinctly positive, historians and philosophers have settled on something like the exact opposite: they argue that the failure to acknowledge the normative element in the allegedly positive social sciences has been the source of mischievous errors.

The distinguished economist and philosopher Amartya Sen provides an example of such an error. For much of his career Sen (the 1998 Nobel laureate in economics) has been preoccupied with four areas of research: social choice, preference theory, capabilities, and the economics of poverty and famine. For example, in *Inequality Reexamined* (1992), he brings attention to a contradiction in "positive" preference theory, an error with ethical and political ramifications. Sen observes that economists and an increasingly large number of sociologists and political scientists accept "individual choice" and "revealed preference" to be foundational concepts in their positive science. Therefore, they argue, statistical measurements of income and consumption, and even the data from social surveys, are capable of extracting the parameters of "desire" or, to use the utilitarian term, of "happiness" achieved at various levels. Utility functions themselves cannot be observed. But the choice set of a rational economic actor is, by the logic of choice, relative price, and revealed preference, de facto observable, and so (indirectly) is a person's desire. But, Sen observes, impoverishment and deprivation can so reduce a person's desire and self-worth that what they say and do about their own desire is far below—and different from—what they would actually do (let alone what they "should" do) were they in fact flourishing at normal levels. According to Sen:

> The problem is particularly acute in the context of entrenched inequalities and deprivations. A thoroughly deprived person, leading a very reduced life, might not appear to be badly off in terms of the metric of desire and its fulfillment, if the hardship is accepted with non-grumbling resignation. In situations of long-standing deprivation, the victims do not go on grieving and lamenting all the time, and very often make great efforts to take pleasure in small mercies and to cut down personal desires to modest—"realistic"—proportions.… The extent of a person's deprivation may not at all show up in the metric of desire-fulfillment, even though he or she may be quite unable to be adequately nourished, decently clothed, minimally educated, and properly sheltered. (Sen 1992, quoted in Putnam 2002, p. 59)

As the philosopher Hilary Putnam puts it, " 'Capabilities,' in Sen's sense, are not simply value functionings"; that is, they are not continuous utility functions derived from a preexisting and exogenously given preference ordering. They are "freedoms to enjoy valuable functionings"; that is, they are social and economic preconditions for performing a job well, keeping a clean house, casting a democratic vote, or reading a book by Adam Smith (Putnam 2002, p. 59). Social scientists disagree about what counts as a value functioning, and, importantly, on how one would go about measuring them in a capabilities approach. For example, will an annual income of $20,000 (in constant 2008 dollars) suffice, by Sen's standards, for a family of four living in the United States? Or is income level alone a lame metric of deprivation? What, if anything, should society do to help expose and heal any wounds of deprivation? The point of the example is not to answer a policy question; it is to suggest that normative judgments reside deep in the heart of the neoclassical preference-theoretic approach.

Thomas Schelling, Albert O. Hirschman, and other economists have found it easy to identify other mischievous errors in economics caused by an unexamined faith in positive analysis. For example, in "Against Parsimony: Three Easy Ways of Complicating Some Categories of Economic Discourse" (1984), Hirschman, working in a vein similar to his Princeton colleague, the philosopher Harry Frankfurt, shows that metapreferences—preferences over preferences—are a proper object of economic analysis, more realistic, more humane, but also capable of some prediction.

Metapreferences are about the kind of self one would like to be in the future, not the self one is today, at current prices and budget constraints. Metapreferences require reflection, the ability to step back and evaluate the spiritual and material constitution and direction of one's life. Bigots, for example, may find on reflection that they prefer human equality and the Golden Rule; party animals may decide on reflection that they are better off sober (or at least drinking less and at home with family and friends rather than in expensive nightclubs with strangers). If the metapreferences differ from the actual, Hirschman notes, then eventually, of course, one could expect to observe a preference change. How to observe a preference change is a matter of usual scientific debate and invention (Hirschman 1982 [2002]; Kuran 1995). But the main point here is that reflection about one's future self is itself a value judgment, even if one does not change one's preferences. So if an economist assumes in an economic model,

following the positive approach of Milton Friedman (1912–2006) and Gary S. Becker, that people have, for instance, a "taste for discrimination" (Becker [1957] 1971) or excessive partying or nationalism, then at minimum economists are obliged to state that they are examining the wanton, and not the reflective, side of human life. But that move, Hirschman and Sen would probably agree, reveals a normative judgment in positive economics. It makes transparent the assertion of human wantonness.

Normative and positive continue to figure prominently in social science discourse and education. But the distinction rests on the so-called fact/value dichotomy, long collapsed.

SEE ALSO *Ethics; Methodology; Positive Social Science; Social Welfare Functions*

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Stephen Ziliak

NORMS

Social scientists invoke the concept of norms to explain a broad range of human behaviors. No universally agreed-upon definition of *norms* exists, but many definitions share three components (Horne 2001, pp. 3–5). First, norms are rules that prescribe or proscribe a behavior or set of behaviors. Second, norms are enforced by external sanctions (rewards and punishments furnished by a source other than their target). These sanctions can be material (e.g., financial bonuses or fines) or symbolic (e.g., expressions of approval or disapproval). Third, norms are consensual, group-level phenomena. Group members recognize the existence of norms and feel entitled to enforce them. Some debate remains over whether norms, once established, are unconditional, clear, and generally followed (as in many rational choice theories), or conditional, unclear, and constantly negotiated (as in many symbolic interactionist theories) (Hechter and Opp 2001, pp. 394–396).

This definition distinguishes between norms and similar concepts, such as *values* and *attitudes*. Norms differ from values in that they are enforced by external sanctions, whereas values are enforced only by internal sanctions, such as feelings of pride or shame (Hechter and Horne 2003). Norms differ from attitudes in that norms are consensually held and legitimated by the group, whereas attitudes are a property of individuals. Norms also differ from *laws* in that a central authority (such as the state) formally creates and enforces laws, while people informally create and enforce norms. Some scholars distinguish between norms and *conventions*, the primary difference being that the direction of conventions is arbitrary (Coleman 1990). For example, it does not matter whether people drive on the left or the right side of the road, so long as everyone follows the convention of driving on the same side.

Norms shape social behavior by constraining action, and may be beneficial or harmful. Beneficial norms make society possible by protecting people from exploitation. Humans existed for thousands of years without the protections of a formal legal system (de Quervain et al. 2004), and the actual exercise of law remains limited due to resource constraints (Ellickson 1991). In the absence of law, norms regulate behavior and prevent people from routinely using force and fraud for private gain (Ellis 1971). Such norms include those that ensure that people look after their neighbors' children or livestock, punish laziness at work, respect cease-fire and arms-control agreements, reciprocate favors, help strangers, and otherwise contribute to a stable society.

Harmful norms may constrain individual achievements. Such norms include *leveling norms* that prevent advancement by members of disadvantaged ethnic groups (Portes 1998, pp. 15–18), or norms mandating that women confine their activities to domestic pursuits and forego the labor market. Norms can also sustain harmful practices that a majority of the group opposes, including

informing on one's neighbors in repressive regimes and binge drinking on college campuses (Centola et al. 2005). Some norms also encourage dangerous practices such as dueling (e.g., Axelrod 1986, p. 1095).

Norms constrain the behavior of corporate actors as well as individuals. Firms sometimes adopt rules or structural changes that conform to norms in order to enhance their legitimacy, even when these practices run counter to market pressures (Meyer and Rowan 1977). Territories gain recognition as states in part by conforming to international norms defining the requirements for statehood. Failure to do so can result in loss of statehood and the attendant privileges (Meyer et al. 1997).

Given the widespread use of norms as an explanatory device, an important task for the social sciences is to explain the conditions under which norms emerge, change, and persist. Early functionalist explanations of social norms argued that norms arise because they benefit society, but this view has been discredited and generally abandoned. Because actors enforce norms through sanctioning, a number of theories seek to understand why actors sanction particular behaviors.

Structural features of situations can influence norm emergence. Conformity tends to increase as the size of the majority in favor of the norm increases (Asch 1951). Such factors as low levels of trust and a high risk of exploitation motivate the creation of norms that reduce the risk of exploitation (Yamagishi 1988). Network density may help coordinate sanctioning (Coleman 1990), and the threat of collective punishment can produce norms that mitigate that risk (Heckathorn 1988). In addition, actors with greater structural power possess greater ability to create, enforce, or undermine norms that serve their own interests at the expense of vulnerable actors (Coleman 1990).

People also follow and enforce norms in order to gain approval and signal that they are trustworthy interaction partners, thus encouraging others to profitably exchange with them (Homans [1951] 1992; Horne 2004). People increasingly enforce metanorms (by rewarding those who sanction deviants) as the direct and indirect benefits of exchanging with others increases (Horne 2004). Enforcing norms to gain approval can backfire, as when people enforce norms that the majority privately disdains because they falsely believe the norm to be popular (Centola et al. 2005).

Norms may also develop through a process of cultural evolution in which a norm, once established, provides greater average benefits to those who follow the norm than those who do not (Axelrod 1986; Bendor and Swistak 2001). Similarly, people may also learn to support norms via trial and error (Macy 1993).

Affective processes motivate norm enforcement. Emotional responses lead people to punish theft, walk away from profitable but unethical business deals, and help strangers in need, even when these actions contradict their short-term material interest (Frank 1988). Neurologically, people experience greater levels of activation in a reward center in the brain when they punish people who have behaved in an untrustworthy manner (de Quervain et al. 2004).

A number of important questions regarding norms remain. Broadly, it is important to continue to develop explanatory theories and empirical tests of norm emergence. Other pressing questions include how norms acquire content (Hechter and Opp 2001), how harmful norms emerge (e.g., Centola et al. 2005), and how norms and laws interrelate. Answers to these and related questions will deepen our knowledge of this fundamental but often opaque concept.

SEE ALSO *Culture; Lay Theories; Social System; Values*

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Stephen Benard

NORTH, DOUGLASS
1920–

The American economist Douglass Cecil North shared the 1993 Nobel Memorial Prize in Economic Sciences with Robert W. Fogel, "for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change" (Nobel Foundation 1993). North's work spans decades of inquiry into American economic history, European economic history, and economic development. His most recent research explores the intersection of economics and cognitive science.

North was born on November 5, 1920, in Cambridge, Massachusetts. He graduated from the University of California, Berkeley in 1942 and, following a stint in the merchant marine, he received his PhD from Berkeley in 1952. He started his career at the University of Washington in 1950, where he remained until 1983, when he moved to Washington University in Saint Louis. The influence of his colleagues, such as Yoram Barzel and Stephen N. S. Cheung, is apparent in North's emphasis on property rights, transaction costs, and culture.

North has also held visiting positions at Cambridge University, Rice University, and Stanford University's Center for Advanced Studies in the Behavioral Sciences. He currently holds an appointment as the Bartlett Burnap Senior Fellow at Stanford University's Hoover Institution. A former president of the Economic History Association and the Western Economic Association, North has also served as a member of the board of directors of the National Bureau of Economic Research and as editor of the *Journal of Economic History*.

North helped found two influential professional organizations: the Cliometric Society in 1983 and the International Society for New Institutional Economics (ISNIE) in the 1990s. The field of cliometrics, which applies quantitative methods and neoclassical economic theory to history, was at first controversial among traditional historians. North followed the 1991 Nobel Laureate Ronald Coase as the second president of ISNIE, which focuses scholarly attention on the role of institutions in economic development.

North shifted his focus away from insurance and toward American economic development in the mid-1950s. His research on the U.S. balance of payments, conducted under the auspices of the National Bureau of Economic Research in 1956 and 1957, formed the basis for his first two books on the history of the American economy.

North's first studies of institutions assumed that institutions—which he defines as "formal rules," "informal norms," and "enforcement characteristics" that define a society's property rights—are efficient. His research on Western ascendancy, however, showed him that narrowly applied neoclassical economic theory, which also assumes efficient institutions, is an inadequate framework for understanding economic change. He thus spent the 1970s studying the emergence of inefficient institutions. This culminated in his influential 1981 book, *Structure and Change in Economic History*.

North's major contributions in the 1980s included estimates (with his student John Wallis) that an increasing share of the gross national product was devoted to the cost of transactions and research, suggesting that changes in institutions and property rights may lead to economic growth. North refined his theory, and in 1989 he published an influential study in which he and coauthor Barry Weingast argued that certain institutional arrangements may solve what is called the "sovereign debt problem." First analyzed by Jeremy Bulow and Kenneth Rogoff, this problem suggests that any state strong enough to win a war is quite likely strong enough to renege on its promises (including loans), while any state so weak that it cannot successfully renege is also unlikely to last. North and Weingast showed how institutional change emanating from the Glorious Revolution of 1688 provided a partial solution to this problem.

In 1990 North published one of his most influential studies, *Institutions, Institutional Change, and Economic Performance*, which offered "a political-economic framework to explore long-run institutional change." This contribution began to explicitly incorporate questions of

culture and ideology into a more general social-scientific framework.

North's ideas have attracted a certain amount of criticism. For example, one of his most important works, *The Rise of the Western World* (coauthored with Robert P. Thomas), was criticized for basing a theory of institutional change on a Malthusian model in which resource scarcity leads to alternative bargains for property rights. His ideas have endured, however, and they continue to shape research in economic history and development. The breadth of North's influence is perhaps most apparent through the distinctive mark it has left on widely cited research in development economics. North continues to push the frontiers of social science in his quest to understand why some people are rich and other people are poor, and it is perhaps most appropriate to close with a quote from his prologue to a 1997 collection of essays published in his honor:

> We still have a long way to go. I believe that an understanding of how people make choices, under what conditions the rationality postulate is a useful tool, and how individuals make choices under conditions of uncertainty and ambiguity are fundamental issues that we must address in order to make further progress in the social sciences. But we are making progress. (*Frontiers of the New Institutional Economics* 1997)

SEE ALSO *Cliometrics; Coase, Ronald; Development Economics; Economics, Nobel Prize in; Institutionalism; Neoinstitutionalism; Property Rights; Transaction Cost*

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Art Carden

NORTH, OLIVER

SEE *Sandinistas.*

NORTH AMERICAN FREE TRADE AGREEMENT

On January 1, 1994, the North American Free Trade Agreement (NAFTA) went into effect, creating the largest free-trade area in the world. Many view NAFTA as a major policy victory for the architects of a new era of trade liberalization and economic globalization. Yet proponents of this view did not go unchallenged. NAFTA's departure from several traditional trade concerns opened political opportunities for challengers to ally across borders and overcome longstanding political divisions, making it the most contentious trade policy initiative to date (Dreiling 2001).

NAFTA AS A POLITICAL AND ECONOMIC PROCESS

At the most explicit level, NAFTA is a treaty designed to liberalize trade and investment activity in North America. The trade agreement sets timetables for significant reductions in duties and a steady elimination of tariffs between

the three trading partners (Canada, the United States, and Mexico). Partly as a result of these reduced transaction costs, trade between the three countries has increased significantly. According to International Monetary Fund (IMF) data, the three NAFTA countries traded over $620 billion in goods and services in 2004, nearly doubling total trade volume in the ten years since NAFTA was implemented. Combined, the three countries produced over $12 trillion in goods and services in 2004 and, with more than 425 million people, constitute a major economic bloc in the world economy.

Literature on globalization portrays NAFTA as one of three distinct trading blocs in the world economy (Dicken 2003). The concentration of trade flows studied by sociologists, geographers, and economists reveals a growing tripolar configuration of world trade relations and policy agendas of leading states. This research suggests that NAFTA and the Maastricht Treaty on European Union (1992) were driven by global economic forces as well as strategic political responses to globalization. NAFTA, seen from this perspective, reflects a trade-policy response to the regionalization of capitalist competition at a global level. Content rule, tariff reduction schedules, and other NAFTA provisions are designed to favor North American capital. Premised on an improved capacity to export commodities produced under low-cost conditions in Mexico into the high-price consumer markets of North America, western Europe, and Japan, NAFTA is an attempt to reclaim economic power in a capitalist world system. James Petras and Morris Morley argue that "NAFTA is the centerpiece of a new economic strategy … which Washington hopes to use as a springboard for its reemergence as a more competitive player in the world market" (1995, pp. 128–129).

During the debate over NAFTA, considerable attention was addressed to the question of "jobs." Ross Perot's presidential bid and famous claim of an impending "giant sucking sound" helped frame the political debate, but also alluded to important economic trends in all three countries. Prior to the conclusion of NAFTA, a steady erosion in manufacturing employment in the United States, coupled with a rapid increase of manufacturing employment by U.S. multinational corporations operating in Mexico, aroused fears of a decline of American industrial supremacy. Economists, such as Robert Blecker and William Spriggs (1992), showed how these patterns would likely continue with NAFTA, particularly in the *maquila* sector. The maquiladoras—literally meaning "twin plants"—generally refer to export industries along the U.S.-Mexico border, though the term is also used in reference to export processing industries in El Salvador, Guatemala, and elsewhere in Central America. After NAFTA's ratification, the increase in manufacturing employment in Mexico by U.S. multinationals certainly did not create a "giant sucking sound," but the movement of industrial-sector jobs has continued.

In a policy context, NAFTA represents an economic integration plan that extended the deregulation and free-market agendas of governments in the United States, Canada, and Mexico. Administrations under presidents Ronald Reagan and George H. W. Bush in the United States, Prime Minister Brian Mulroney in Canada, and President Carlos Salinas in Mexico initiated national reform agendas where market principles supplanted other institutional goals and organization. Known as *neoliberalism*—where market forces are believed to be the most efficient and least costly mechanism for allocating all societal goods—this ideological context all but guaranteed a free-market approach to North American integration. In this way, NAFTA emerged as a neoliberal counterpart to Europe's more social democratic Maastricht Treaty.

NAFTA extends and accelerates market deregulation and trade liberalization efforts across the continent by creating supranational institutions and binding agreements between signatory governments. For example, one feature of NAFTA contained in Chapter Eleven prevents governments from discriminating against cross-border investors—all North American capital is to be treated as domestic capital, eventually. These provisions also establish an investor-state arbitration system that permits companies from one NAFTA country to seek monetary damages for actions or policies of another NAFTA government (national, state/provincial, or local). One often-cited case began in 1997 when the Ethyl Corporation, a U.S. company, challenged Canada's environmental ban of a known carcinogenic gasoline additive, methylcyclopentadienyl manganese tricarbonyl (MMT)—a chemical made by Ethyl. In July 1998 the arbitration panel ruled against Canada, forcing Canada to reverse its environmental ban on MMT and pay $13 million in damages and legal fees to Ethyl. As of 2005, five Chapter Eleven cases have settled in favor of investors, leaving critics wary of NAFTA's bias in favor of capital at the expense of national sovereignty and environmental protection. From an analytical standpoint, the neoliberal framework of NAFTA helps investor rights trump environmental or national rights.

Neoliberal defenders of NAFTA, and free markets more generally, praise this "deepening and widening" of markets in the hemisphere, calling for an extension of NAFTA to Central America and throughout the Western Hemisphere as envisioned in the Free Trade Area of the Americas. Elaborate hemispheric plans for subregional and continental integration are discussed among elite policy organizations, from the Council on Foreign Relations to the highly influential Business Roundtable (Dreiling 2001). May 2005 discussions by elite supporters of

NAFTA alluded to a new "security perimeter" around North America, known as the North American Initiative.

THE IMPACT OF NAFTA

Migration from Mexico to the United States has risen significantly under NAFTA. Growing rural unemployment in Mexico and the instability of small farming in Mexico stem in part from NAFTA's liberalization of trade in agricultural goods. With cheaper corn and grains imported from Canada and the United States into Mexico, small, often indigenous farmers are hurt economically. Worries persist that these pressures will also hurt peasant communities throughout Central America with the adoption of the Dominican Republic-Central America Free Trade Agreement in 2005. While pressure to migrate has increased, anti-immigrant politics persist in the United States, and the number of people found dead along the U.S.-Mexico border rose to a peak in 2003. Other U.S.-Mexico border problems were compounded by NAFTA. Mexico's environment and urban infrastructure remain inadequate to support the growing population and heavy concentrations of export-oriented industry. The number of labor-intensive, export-processing factories along the border in Mexico increased by about 73 percent between 1993 and 2000, putting strain on both the environment and the mostly female workforce in those factories.

The expectation that greater wealth and income growth in Mexico would increase political pressures to limit environmental pollution remains unrealized. Arguments that refer to the environmental Kuznets curve—that pollution increases with per capita gross domestic product (GDP) at lower levels of national income while pollution decreases with per capita GDP at higher levels of national income—suggest that increased trade, and hence increased wealth pollution, will decrease in Mexico (Grossman and Krueger 1993). More research is needed to address this important question about the relationship between trade, economic growth, and political pressure to improve and enforce environmental regulations in Mexico and elsewhere.

Perhaps the most significant impact of NAFTA flowed not from the agreement itself, but the conflicts that arose in NAFTA's wake. NAFTA, like its close relative and successor, the World Trade Organization (WTO), significantly departed from the direction of previous multilateral trade initiatives and inadvertently opened political opportunities for challengers to question neoliberal trade policy. Advancing new language on investment protections, institutionalizing language and protocols for protecting *trade related intellectual property rights* (TRIPs), and promoting a series of policy shocks to liberalize trade in agriculture, NAFTA drew a line that subsequent conflicts over trade policy would brave. These three concerns remain pivotal dividing lines within the WTO and in the ongoing discussions for a Free Trade Area of the Americas. Confrontations over patents on seeds and other "intellectual property," nontariff agricultural subsidies in richer countries, and investment rules have, for example, stalled agendas at the WTO ministerial meetings in Seattle in 1999 and in Cancun, Mexico, in 2003. NAFTA anticipated and presaged these same divisions, prompting conflict both prior to and following its implementation.

The conflict over NAFTA catalyzed a mobilization of forces for and against the agreement. For over two years, the NAFTA negotiations faced challenges and changes, from a legal decision at a U.S. district court that required an environmental impact statement on NAFTA (which was subsequently appealed and overruled) to negotiations for two-side agreements on labor and the environment. Critics nearly stopped the passage of NAFTA. By the time that NAFTA went public in 1991, a broad spectrum of groups—from farmers to human rights organizations—began meeting to develop both national and international strategies to stop NAFTA in its tracks. Three years later, voices against NAFTA had developed a transnational movement, providing a supportive, if not encouraging, backdrop for the armed insurgency in Chiapas, Mexico, that initiated its mobilization with deliberate intent on January 1, 1994, NAFTA's birthday.

Beyond the contentious interests mobilized for and against NAFTA, the agreement and the historical stage it set caught the eye of scholars. NAFTA, at a social scientific level, came to represent a triumph of markets, a continentalization of economies, and a window into the political struggles over globalization. As Jeremy Brecher and Tim Costello argued (1998), this neoliberal "globalization from above"—via free trade and corporate-sponsored multilateral institutions—is being resisted not only by "older" nationalist and protectionist foes of free trade, but also by a "globalization from below." NAFTA helped set this stage.

SEE ALSO *Barriers to Trade; Liberalization, Trade; Quotas, Trade; Tariffs; World Trade Organization*

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Michael Dreiling

NORTH AMERICAN FREE TRADE AREA

SEE *North American Free Trade Agreement.*

NORTH AND SOUTH, THE (GLOBAL)

The terms *the North* and *the South*, when used in a global context, are alternative designations for "developed" and "developing" countries. Together, the North and South constitute virtually the entire global population. As terms, *the North* and *the South* emerged during the 1970s, probably simultaneously, and in contrast with each other. This article thus discusses these two terms together.

While the countries that make up *the North* and the countries that comprise *the South* share broadly similar economic and historical characteristics with the other countries in their category, there is no precise definition of either term. Two generations ago, the North could have been approximately defined as Europe and its offshoots (such as Canada, the United States, Australia, and New Zealand), but Japan has also, clearly, been a developed country for many years. Several other East Asian countries, including Singapore, South Korea, and Taiwan have shifted into the North in recent decades. While there are no recent examples of countries that have moved in the opposite direction (i.e., to the South from the North), the economic position of Argentina shifted from being one of the richest countries in the world, a century ago, to its middle-ranked position today.

Precise categorization is difficult for several contemporary nations, such as Russia and Saudi Arabia. Russia was recently admitted to the G-8 (previously the G-7), whose other members (the United States, Canada, France, Germany, Italy, the U.K., and Japan) are the richest and most economically powerful nations on earth. In contrast, Russia has a comparatively low life expectancy, which has fallen in recent decades. It also has limited political freedom and transparency in comparison to most countries in the G-8, and the North more generally.

The North and South have other names. No name is perfect, and neither *the North* nor *the South* is geographically precise. Several countries in the South are entirely in the Northern hemisphere (e.g., India, Nigeria), while Australia and New Zealand, each in the geographic South, are part of the global North, as evidenced by their long-standing membership of the Organisation for Economic Co-operation and Development (OECD). Such geographic imprecision is not unique. For example, *the West* (another synonym for developed countries) now includes Japan, as well as Australasia.

As terms, *the North* (also called *the First World*) and *the South* emerged during the 1970s in recognition of the greater economic and political power of the Third World, and in reaction to growing dissatisfaction with earlier terms, which were increasingly seen as pejorative. (This is discussed further below.) Although the South has long been home for the majority of the global population, its fraction of the global population is rising, as fertility rates have declined by a greater amount in the North. Reflecting this, the South is now sometimes called *the majority world*.

THE ORIGINS OF THE *THIRD WORLD* CONCEPT

In 1940 Colin Clark published "Conditions of Economic Progress," which showed the world to be, as one reviewer commented, "a wretchedly poor place." Two centuries earlier, almost the whole world had been "wretchedly poor," and it is unlikely that the concept of "developing countries" would then have been much appreciated. The world had largely been divided into several empires, each of which possessed a "civilized" center and peripheries that were more or less considered primitive or even "barbaric." Before the 1940s it is unlikely that the citizens of what would later be described as the North would have given much thought to the inhabitants of what was to become known as the South. When they did, most would have considered these peoples to be inferior in some way, by virtue of being non-white, less educated, or even "primitive." Many people in the Third World were subjects in European colonies, living far from the global sources of economic, political, and military power. It is even less likely that the subjugated inhabitants of these Third World lands, many of whom were illiterate, would have

been aware that, even then, they formed a substantial part of the world population.

But such an awareness was growing among leaders within these poor countries, many of whom had been educated, at least partly, in Europe or America. This awareness and exposure to Western culture raised expectations and hopes, and inspired many Third World leaders to try to improve colonial living conditions and win political independence. Opposition to domination by the First World was also fed by increasing migration and travel, which had been stimulated by the two World Wars. Many troops who had participated in these wars, particularly on the allied side, were from the South. In addition, many Europeans served in Asia, and their exposure to conditions in the colonies probably helped erode the resolve of the colonial powers to keep their empires unbroken.

As the twentieth century progressed, the global decolonization movement strengthened, empowered by each country that achieved independence. An increasing number of countries in the South developed a national identity. The newly formed United Nations, born in the period of comparative hope and idealism that briefly flowered following World War II (1939–1945), also provided a forum for developing countries to share ideas and to argue their position before a wider audience.

The term *the Third World* was coined in 1952 by the French demographer, anthropologist, and economic historian Alfred Sauvy, who compared it with the *Third Estate*, a concept that emerged in the context of the French Revolution. (*First Estate* refers to the clergy and the monarch, *Second Estate* to the nobility, and *Third Estate* to the balance of the eighteenth-century French population—as much as 98 percent.) *The Third World*, as a phrase, also achieved acceptance because it usefully contrasted the poor countries to the First World (the non-Communist, high-income, "developed" countries) and the Second World (Communist countries, which though not as wealthy as those of the First World, were then characterized by greater order, higher incomes, and longer life expectancies.)

The decades that followed saw many attempts to form coalitions of Third World countries, to counter the vastly superior power of the "developed" First World countries. With hindsight, it is clear that these were only partly successful.

In 1955 Egypt, Indonesia, Burma, and the three powers of the Indian subcontinent (India, Pakistan, and Sri Lanka) organized the Asian-African Conference, held in Bandung, Indonesia. Twenty-nine countries, representing over half the world's population, sent delegates—including the charismatic Chinese premier, Zhou Enlai—to Bandung. At this meeting, Indian Prime Minister Jawaharlal Nehru explicitly rejected both sides in the ongoing cold war between the United States and the USSR, expanding on the principles of *non-alignment*, a term he is credited with coining and first using in 1954. The meeting led to the development of the Non-Aligned Movement (NAM), which held its first formal meeting in 1961. Five charismatic Third World leaders—Nehru, Yugoslavia's Marshal Tito, Indonesia's Sukarno, Egypt's Gamal Abdel Nasser, and Ghana's Kwame Nkrumah—are credited with its establishment. China, despite its Communist ideology, has also been a member of the NAM at times.

In 1960, parallel to these developments, five other developing countries (Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela) founded the Organisation of Petroleum Exporting Countries (OPEC), at the Baghdad Conference. Soon after, OPEC was enlarged to include Nigeria and several smaller and poorer African states. Indonesia, the only NAM founder with substantial oil reserves, also joined OPEC.

In 1964 another coalition of developing nations was formed, called the Group of 77. India was instrumental in the formation of this group, which was also joined by Brazil, the most populous and economically powerful South American country and never part of the Non-Aligned Movement. The Group of 77 now has over 130 members. Although the People's Republic of China has never been a formal member, it has been loosely affiliated since the 1970s.

THE EMERGENCE OF THE TERM *THE SOUTH*

The 1970s was a period of foment in the developing countries. Many improvements in living standards and life expectancy rates had been achieved in the 1950s, but by the 1970s these advances were stalling. Impatience in the Third World was growing. In 1973 OPEC substantially raised the price of oil, triggering the first global oil crisis. This had a major adverse economic effect upon the non-oil-exporting countries of the Third World, and revealed a lack of solidarity within the Third World overall. Parallel to this, the developed countries (prior to the discovery and development of the North Sea oil fields) were becoming increasingly dependent on the Third World for energy, due to the decline of U.S. oil reserves. These factors increased the economic power of part of the Third World. In 1974 the first UN-hosted population mega-conference was held in Bucharest. At this meeting the Group of 77 refused to accept responsibility for their poverty, instead blaming colonialism and ongoing Western exploitation. Famously, the Indian delegation called development "the best contraceptive." This rebellious spirit was also reflected in calls from the Third World for a New International Economic Order (NIEO).

It is unlikely to be coincidental that the terms *the South* and *the North* were first widely used around this time. These terms appear to have entered common usage as an alternative to the long-standing geographical and cultural partition of the world into West and East. The new names avoided the stigma associated with the term *the Third World*, and created the hope that a new world order—one in which the North would be fairer to the South—was underway.

REASONS FOR THE PERSISTENT DISADVANTAGE OF THE SOUTH

However, new terms alone were insufficient to bring about fundamental change. Despite the aspirations and efforts of many people, in both South and North, most of the population of the South remains terribly poor. The reasons for this are complex, but several important interlocking factors can be identified. They include the South's historical legacy of disadvantage, much of it stemming from the colonial system. Also significant are the economic and development costs associated with enduring and fighting various diseases, especially malaria, tuberculosis, and HIV/AIDS, all of which affect a substantial number of adults, who would otherwise be more productive. High levels of Southern indebtedness, poor governance, and corruption are also important causes.

Other factors warrant mention as well. One is the comparatively high fertility rate in most developing countries, especially those that are the poorest. This leads to a proportionately large number of children and young adults, many of whom are poorly educated, un- or underemployed, and vulnerable to disease and economic exploitation. Another point is that, on the whole, populations and governments in the North have shown little interest in the social and economic fate of the South. For example, while for several decades many countries in the North have pledged to increase development aid to the South, very few large countries (and none of the members of the G-7) have followed through on these promises. In fact, Northern countries have behaved collectively as though it is just and proper that the economic and social privileges of Northern populations be enhanced by Southern poverty.

Also significant is the great diversity of the countries of the South. They are united by comparative disadvantage and poverty, but divided by differences in culture, language, religion, fertility rates, and stocks of oil and other natural resources. The two most populous nations in the South—China and India—have fought two wars with each other, and have had a continuous border dispute since the early 1960s. India is a secular democracy, which aspires to be a permanent member of the UN Security Council, a status long granted to its great rival China. Totalitarian China for its part seems as preoccupied with Russia and the United States as with the issues of the South. The South has also been divided by the policies of OPEC, a cartel whose richest countries have shown little interest in promoting the broader interest of the South.

SEE ALSO *Dependency Theory; Globalization, Anthropological Aspects of; Globalization, Social and Economic Aspects of; North-South Models*

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Colin D. Butler

NORTH ATLANTIC TREATY ORGANIZATION

The North Atlantic Treaty Organization (NATO) is one of the longest-running alliances in history. It has been one of the fixed points in international relations since 1949

and is the most influential of the regional security organizations sanctioned under the United Nations Charter (Article 51). While to most casual observers it is a military arrangement, its founders' prime purpose was political. They intended the alliance to provide an appearance of collectivity and strength that would both deter the enemy (the Soviet Union) and strengthen the determination of individual members to resist Soviet subversive infiltration. Members retain national control of armed forces but are prepared to submit them to command by foreign supreme commanders and command organizations manned by foreigners, and cooperate closely on usually sensitive issues such as security and intelligence.

The essentially intergovernmental nature of the alliance means that such military cooperation necessitates a high level of political cooperation. The central forum for this is the North Atlantic Council (NAC). The NAC is staffed by permanent ambassadorial representatives. It is chaired by the secretary-general, who acts as the spokesman for the alliance and is effectively its chief executive. The essentially intergovernmental nature of NATO is maintained by twice-yearly meetings of foreign ministers. These meetings make the large policy decisions, which the secretary-general is then required to implement, with the NAC acting as a channel of communication. Since 1952 the NAC has developed permanent and ad hoc subcommittees dealing with a range of issues. The most important is the Military Committee, whose relation to the NAC is a little anomalous in that while it reports to the NAC, it is also directed by biennial meetings of NATO defense ministers. In addition, sitting atop the whole structure are summits of heads of government when deemed necessary.

The North Atlantic Treaty (signed in Washington, D.C., on April 4, 1949) pledged that an attack on one of the twelve signatories—the United States, Canada, Iceland, Denmark, Norway, Belgium, Netherlands, Luxembourg, France, Britain, Portugal, and Italy—was an attack on all and would lead them to take whatever measures they deemed necessary, including armed action. Effectively it placed the European members under American nuclear protection. While military planners were initially skeptical of the defensive capabilities of the alliance, for the politicians the main point was to increase the Western European sense of security.

The emphasis changed during the early 1950s as a result of the Korean War. With the fear that Korea would quickly be followed by a Soviet attack in Germany, the overtly military aspect of the alliance was moved to the foreground, where it was to remain until the cold war ended. Supreme Headquarters, Allied Powers Europe (SHAPE) was established in 1951 in France. NATO has three commands, Atlantic, English Channel, and Europe, but the commander of Europe (SACEUR) is the senior. Greece and Turkey, which had been under NATO guarantees, became members in 1952. Most significantly, West Germany was admitted in 1955 and was allowed to contribute forces under the command of the West European Union.

NATO's function and structure came under scrutiny in the 1960s. Some in the United States believed that since Western Europe had recovered economically, it should shoulder a greater share of its own defense. American advocacy of "flexible response" also caused problems with the allies, who feared the expense of competing with the Soviets in conventional forces and who felt the American nuclear guarantee was being compromised. Moreover, French president Charles de Gaulle saw NATO as an instrument of Anglo-American hegemony, and in 1966 France left NATO's military structures. NATO headquarters had to relocate to Belgium.

Against the background of these developments, the Belgian foreign minister produced the Harmel Report, *The Future Tasks of the Alliance* (1967). While committing NATO to engage actively in the process of détente—reducing tensions with the Warsaw Pact—it also stated firmly that NATO was an organization serving the security needs of its members rather than a purely defensive military alliance whose existence was dependent on a specific threat.

Détente gave way to increased tension during the early 1980s, and NATO deployed intermediate-range nuclear weapons (INF) and cruise missiles in some European countries. Relations between NATO and the Warsaw Pact warmed once Mikhail Gorbachev came to power in the USSR, and in December 1987 the United States and the USSR agreed to eliminate all land-based INF missiles.

In 1982 NATO added its sixteenth member with the accession of newly democratic Spain. In 1990 the reunification of Germany moved NATO's frontiers significantly eastward. In 1991 the Soviet Union ceased to exist, and some in the West felt that NATO should follow suit, arguing it no longer had a purpose. However, NATO supporters were able to point to the Harmel Report and depict NATO as an organization to promote general security through stability and collective action. At Rome in 1991 a new Strategic Concept declared that instability was often caused by the activities of nationalist or terrorist groups. The North Atlantic Cooperation Council was set up, with sixteen NATO countries and nine others, becoming in 1997 the European Atlantic Partnership Council with forty members (forty-six by 2001). At Brussels in 1994 the Partnership for Peace was formed to promote defense cooperation.

The first test of the reality of NATO's ability to manage instability in Europe was the long crisis as Yugoslavia

disintegrated. NATO proved to be hesitant and divided. It was not until 1997 that the implications of NATO's new role were properly addressed, using the forum of the Partnership for Peace. NATO began to make significant contributions to UN peacekeeping efforts, beginning with missions to the former Yugoslav republics. The partnership also made possible the NATO-Russia Founding Act signed in Paris in 1997, establishing the NATO-Russia Permanent Joint Council (PJC). This reduced Russian hostility to NATO expansion, easing the accession of Poland, Hungary, and the Czech Republic in 1999. Through the PJC, Russian troops took part in peacekeeping forces in Bosnia. Tensions remained with the Russians, especially when the crisis flared up in Kosovo in 1999 and the Russians remained cautious about NATO's role.

There was a show of solidarity by NATO members after the September 2001 terrorist attacks on the United States, but this was undermined by the unilateralism of the Bush administration. NATO did agree to operate out of area—for the first time—taking control in August 2003 of the International Security Assistance Force in Afghanistan, following American and British operations against the Taliban. Germany and France, however, disliked Bush's approach and opposed the attack on Iraq in 2003. This became a NATO issue when they vetoed American requests to strengthen Turkey in advance of the attack. Pessimists predicted NATO's immediate demise. The solidity of NATO's permanent structures, however, meant that it survived this crisis. Thus, although as an intergovernmental alliance it had become somewhat dysfunctional, ironically, its extensive multilateral structures proved a binding force, if only out of inertia and the practical difficulties of untangling integrated military structures, especially regarding intelligence. Indeed, NATO continued to expand, with seven new members joining formally in 2004—Bulgaria, Estonia, Lithuania, Latvia, Romania, Slovakia, and Slovenia.

SEE ALSO *Alliances; Coalition; Cold War; Communism; Deterrence; Genocide; Nationalism and Nationality; Taliban; Terrorism; Terrorists; Union of Soviet Socialist Republics; Weaponry, Nuclear*

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Martin H. Folly

NORTH-SOUTH MODELS

The large difference in the levels of economic development between the countries has made many view the world as being divided between the rich North and the poor South. North-South models divide the world economy along these lines and examine the interaction of the two regions through trade and other economic relationships.

The classical economists, including Adam Smith (who discussed the importance of increasing productivity due to the division of labor as economies grew) and David Ricardo (who examined the role of trade in postponing the arrival of the stationary state in rich countries by enabling cheap food imports and in having the opposite effect for poor countries), discussed North-South issues. Subsequently, Marxist writers on imperialism and dependency theorists, and development economists more generally, stressed the role of the South in providing markets and investment outlets for the North, and examined the problems of surplus transfers from the South, the deterioration of the southern terms of trade, and of uneven development.

MODELS WITH STRUCTURAL ASYMMETRIES

More mathematically explicit North-South models emerged from the early 1980s. In a 1980 article for the *American Economic Review*, Ronald Findlay examined capital accumulation in a global economy with the North growing with full employment and the South with unlimited supplies of labor at a fixed real wage. In 1983 Lance Taylor allowed for unemployment in the North as well, assuming that effective demand determines northern growth. These and other models can be thought of as special cases of a general framework, in which the northern good is a consumption-cum-investment good, and the South a consumption good. The models embody specific behavioral and institutional assumptions for the North and the South, thereby highlighting their structural differences. They have been used to examine the effects of changes in such things as technology, consumption expenditure patterns, and savings rates. Of particular interest are results which demonstrate that southern growth depends on northern growth (which is determined inde-

pendently of the South), the relationship between the southern terms of trade and southern growth, and the possibility of uneven development (reflected by a rise in the relative size of the North) due, for instance, to technological change and changes in consumer preferences. Some of these mechanisms of uneven development have been endogenized to model processes of cumulative causation due to factors such as the income-inelastic demand for southern products, international demonstration effects, and endogenous technological change, as expressed in Amitava Krishna Dutt's book *Growth, Distribution, and Uneven Development* (1990). These results confirm some of the informal ideas of earlier writers on uneven development, but they depend on some of the specific assumptions made about the structures of the northern and southern economies.

The basic trade models have also been extended in several directions. For instance, international capital movements from the North to the South in search of higher profits have been shown to exacerbate uneven development, due to a fall in the price of the southern good because of increases in southern production, and to profit repatriation to the North, although under certain circumstances foreign direct investment, by making possible the production of the northern good in the South, can result in greater North-South equality.

The models stressing structural asymmetries between the North and the South do not explain why such asymmetries arise. Implicitly they assume that events in the past, such as the Atlantic slave trade or colonial domination, create and lock in these structural differences. Models which assume identical structures for the two regions have also been developed to show how small historical events can make one region (the North) end up exporting manufactured goods exhibiting increasing returns to scale, while the other region (the South) becomes more agriculturally oriented, so that there is uneven development.

NEOCLASSICAL MODELS

The models discussed so far can be seen as reactions to the dominant neoclassical Heckscher-Ohlin-Samuelson (HOS) trade models, which contain optimizing agents, are usually static in nature, and assume that markets clear so that labor and other resources are fully employed everywhere. However, the neoclassical approach has also contributed to the development of North-South models. For instance, environmental factors have been introduced into them to examine how stricter pollution control in the North can lead to a movement of "dirty" industries to the South, thereby exacerbating southern environmental problems, as seen in Brian Copeland and Scott Taylor's 1994 article for the *Quarterly Journal of Economics*. Most of the North-South models from the neoclassical perspective, however, have followed the contributions of new growth theory, which emphasize the role of increasing returns and externalities in the growth process; this can be seen, for example, in William A. Darity and Lewis S. Davis's 2005 article for the *Cambridge Journal of Economics*.

Many new growth theory models imply economic divergence between rich and poor countries due to economies of scale along Smithian lines even without any interaction between the two. These results often carry over to models with North-South trade. For instance, trade can increase (reduce) the wage of skilled labor, the abundant factor in the North (South), thereby increasing (reducing) the incentives for education, labor productivity, and growth. This is not a necessary outcome, however; the increase in the wage of skilled labor may slow down research and development and hence technological change and growth in the North and increase it in the South.

Neoclassical models have also been used for examining North-South technology transfers. It may be supposed that if knowledge is something that all countries can share, the South will eventually catch up to the North. However, those who have studied the process of technology transfer recognize that it is not very easy to transfer technology and it requires southern countries to build up technological capability to be able to learn from, and adapt to, foreign technology. Moreover, the protection of international property rights (IPR) can serve as a barrier to technology transfers. The protection of IPR has been a major source of conflict between the North and the South, and it has been claimed that the lack of such protection will slow down innovation in the North and hence the world. A number of models, however, suggest that weaker protection of IPR will not only speed up technology transfers, but also accelerate innovation in the North as northern resources are devoted more to innovation activity than to production.

North-South models are useful for understanding the nature and consequences of the interaction between rich and poor countries, and to address key issues concerning international inequality and global growth. They can be criticized for downplaying the differences within rich and poor countries, and the possibility that poor countries may grow and join the ranks of the rich. However, two-region models have been extended to include a third, consisting of newly industrialized countries, to explore the causes of its growth and to analyze whether its growth results in the end of uneven development or the exacerbation of the gap between the rest of the South and the North.

SEE ALSO *Development; Economics; Heckscher-Ohlin-Samuelson Model; Trade; Trade, Anglo-Portuguese; Unequal Exchange*

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Amitava Krishna Dutt

NOUVEAUX RICHES

Nouveaux Riches translates literally to "new rich," and it refers to individuals or families who have recently risen to higher economic standing but have not gained full social acceptance by members of the established upper class or elite. While the nouveaux riches do possess substantial economic wealth, they are regarded as lacking the prerequisite cultural skills and dispositions to fully become members of society's elite. To signify their membership in elite status groups, the nouveaux riches may mimic the cultural consumption of the established upper class; however, these efforts are often not entirely successful. Pierre Bourdieu in *Distinction* (1984) describes the new bourgeoisie as possessing a similarly large degree of economic capital but less cultural capital relative to the old bourgeoisie.

The Industrial Revolution played an important role in the rise of the nouveaux riches, notably through the expansion of a highly educated, urban middle class with considerable time and resources for leisure activities. These upwardly mobile, wealthy individuals then worked to legitimize their elite status by adopting the styles and tastes of the established upper class.

For much of British history, for example, "old money" has been gentrified and titled, with large estates and hereditary seats in the House of Lords. The nouveaux riches mimicked the old aristocracy to an extent by buying estates and sending their children to the same elite boarding schools. However, they also developed their own, often indulgent, sense of style that was in contrast to the more refined sensibilities of the established elite (Crook 1999). In his critical analysis of the late-nineteenth-century American upper classes, Thorstein Veblen in *The Theory of the Leisure Class* ([1899] 1932) finds that the nouveaux riches worked to emulate European aristocratic families by engaging in "conspicuous consumption." However, they were considered by "old money" to lack taste, manners, and discretion:

> Many a gentleman of the old school has been provoked to remark regretfully upon the under-bred manners and bearing of even the better classes in the modern industrial communities; and the decay of the ceremonial code … among the industrial classes proper has become one of the chief enormities of latter-day civilization in the eyes of all persons of delicate sensibilities. (p. 46)

More recently, in the former Soviet republics a class of nouveaux riches emerged, largely composed of former Communist Party bureaucrats who made fortunes during the transition to market capitalism and privatization (Brucan 1998, pp. 69–94).

While in previous eras the nouveaux riches were considered to demonstrate a distinctive set of artistic tastes, attitudes toward culture, political views, and the like, it appears that many of these differences have reduced over time. As Max Weber in *Economy and Society* ([1922] 1968) describes, while status groups do often draw on cultural attributes to achieve social closure and advance their own interests, ultimately "at some point economic conditions become causally important and often decisive" (p. 341). Over time, the common economic conditions and shared class interests of the new and old rich may serve to overcome social differences and create a unified elite class.

SEE ALSO *Aristocracy; Bourdieu, Pierre; Class, Leisure; Culture, Low and High; Distinctions, Social and Cultural; Elites; Gentility; Industrialization; Stratification; Upward Mobility; Veblen, Thorstein; Weber, Max*

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Nathan D. Martin

NOZICK, ROBERT

SEE *Justice, Distributive.*

NUCLEAR PROLIFERATION

SEE *Proliferation, Nuclear.*

NUREMBURG TRIALS

SEE *War Crimes.*

NURSERY RHYMES

Although popular collections of nursery rhymes were widespread from the eighteenth century on, and academic collections have been published since the nineteenth century, their academic study really began in the twentieth century. Several approaches have been taken by scholars over the past four or five generations, and these have been largely determined by the academic climate of their day. One such early tack was the expounding, or even invention, of a rhyme's "history" trying to answer the question deriving from adult wonder about children's lore: Where does it come from? Contemporary folklorists have been more likely to try to understand the meanings of folklore in use than to plumb its history; centuries of looking closely at the phenomena of folklore have taught them that folklore—including children's rhymes—is so fluid and changeable, while by dint of its orality being so undocumented in the written record, that the search for its history can at best be quixotic.

The English term *nursery rhyme* covers a somewhat larger group of folklore than a simple reading of the term would suggest. Although many thus-categorized rhymes are indeed used in the nursery (that is, with children under, say, four years old as audience), a much larger number of them are used by adults with somewhat older children, by children themselves no matter their age, and by adults. Nonetheless, the term *nursery rhyme* has great utility and has been retained by most authors.

Twentieth-century approaches to nursery rhymes have included attempts to understand variation, to read rhymes as expressions of psychosexual maturation, to show how they introduce children to the tools of language and intellectual thought, and, most recently, to see them as agents of empowerment for children and vehicles of cultural conservation. All of these approaches have attracted many authors and have been fruitful.

Despite academic findings to the contrary, it has often been claimed that earlier generations' nursery rhymes were "originally" coded messages about political events and historical eras. Such interpretations may be seen as the "folklore of folklore" and most often can be dismissed as modern *euhemerism.* (Euhemerus was a fourth-century BCE Greek who claimed that myths of the gods were actually transformed stories about real historical people.) Euhemerist traditions about nursery rhymes have circulated, especially in the educated classes, for a hundred years, floating around like migratory legends and—also like legends—localizing from time to time.

It is understandable that such interpretations arise. It is popularly known that much folklore is "old." Interested and creative people look for ways to show how old it is. New folklore grows as easily as old folklore did, and now it finds itself an explanation of the older folklore. Folklore items have a text (their words or other formal shape), but they also often carry a more variable set of traditional beliefs and understandings as a kind of corona around the text. These secondary texts can take the form of localized legends explaining the "history" of the item.

The Humpty Dumpty rhyme is a good example of this process; in its euhemerist form, Humpty Dumpty has become a local legend in at least a half-dozen places, mainly in Great Britain. In Gloucester, Humpty Dumpty has come to represent a siege ramp built in 1643 by Charles I's forces to cross the River Severn and take the city from Cromwell. But the ramp, according to the euhemerist tradition, collapsed under the cavalry's weight:

> Humpty Dumpty sat on the wall,
> Humpty Dumpty had a great fall,
> All the king's horses and all the king's men,
> Couldn't put Humpty together again.

Similar readings have been attached to, among others, the English kings James I, King John, and Richard III, the last because of his hunchback (= Humpty).

Likewise "Pop Goes the Weasel" is interpreted as being about a piece of nineteenth-century textile equipment, or a cobbler's bench. All folklore varies by text, and the different texts of this rhyme—"carpenter's bench," "vinegar bush," "vinegar jug," and so on—produce different euhemerist readings. One reading has it in a pawnbroker's shop and provides a foundation legend for some

Salvation Army followers. Often the rhyme's own words are given as examples of now-obsolete slang that seems to "prove" the truth of the legend. All of these readings are attempts by modern people to connect to historical figures that which would otherwise appear to be "mere" children's nonsense. But modern texts are commonly used in these attempts to come up with "older" readings.

Interpretations sometimes have contemporary political undertones. In early 2000, in England, Birmingham's city council banned "Baa Baa Black Sheep" from local schools because, the council said, "the history of the rhyme … is offensive to black people due to the fact it originates from slavery." In fact, as the research by Peter and Iona Opie has shown, it is most likely not related to slavery, but simply an amusing, and largely nonsensical rhyme. Children, in any era, are amused by nonsense.

The euhemerist belief that "Ring around the Rosie" comes from one of the great plagues seems to have arisen in the 1960s, and was given greater weight by academic promulgations. The claim gained popularity in a 1961 biology textbook about rats and the plague, James Leasor's *The Plague and the Fire*. Leasor did not consult folklorists but, based on folklore from his own relatives, assumed the rhyme was known centuries before it was. More recently, Norman Cantor, a historian of the plague, did the same in his *In the Wake of the Plague* (2001). There are two main regional forms of the rhyme: "Ring a Ring of Rosie," which is mainly British, and "Ring around the Rosie," which is mainly North American. The two traditions are not entirely separate; examination of historical texts shows a great deal of overlap. Kate Greenaway's text (in her little book *Mother Goose*) was the first in print, appearing in Britain in 1881. William Wells Newell published a second version in North America several years later, in an academic collection of children's rhymes. He said it dated back to the 1790s but he does not say who his informant was, or how he knew that fact. This is Newell's "earliest" text, using the now-British form of the first line:

> Ring a ring a rosie,
> A bottle full of posie,
> All the girls in our town
> Ring for little Josie.

Newell included another more contemporary version, probably circulating in Massachusetts in the 1880s or 1890s:

> Round the ring of roses,
> Pots full of posies,
> The one who stoops the last
> Shall tell whom she loves the best.

This text represents very clearly a typical "forfeits" game with an "all fall in" section in the third line. The lack of plague references is apparent here, as in all the pre-twentieth century texts. Only in the mid-twentieth century do the "Ashes ashes" (or "A tissue!") forms start to appear; such late texts are the "evidence" (clearly inadmissible) of being about the plague.

In the late twentieth and into the twenty-first century, the rhyme grew in symbolic value, giving a human face to plagues. HIV-AIDS groups in the United States used the rhyme to bring attention to the need for research into AIDS and support for HIV+ people. Rock musician Dave Matthews used it in his popular song "Gravedigger" to indicate how disillusioned a child is when she learns her childhood song is "about death." In an interview in *Rolling Stone* in February 2004, he said, "It's the classic of classics about dying." Not just for activists and artists, it had become a symbol of plague, of death, disease, and the corruption of flesh.

Children's folklore is a rich area for contemporary scholarly study partly because it continues to pick up traditions and generate symbols. But symbol is not history. The history of "Ring around the Rosie" is much shorter than the plague interpretation would have it. The symbols are modern, not "old," folklore—but they also show nursery rhymes to be living, contemporary culture.

SEE ALSO *Children; Death and Dying; Ethnology and Folklore*

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Philip Hiscock

NUTRITION

Nutrition is a vital physiologic process necessary for the development and maintenance of the human body, its organs, and its physiological processes. In order to maintain good health, individuals require daily intake of protein, fat, and carbohydrates—nutrients that provide energy, vitamins, minerals, and water. Nutrition provides necessary nutrients that are not produced by the body. The daily requirements of these nutrients vary depending on individuals' age, sex, and physiologic state (that is, pregnancy).

In the United States dietary guidelines are updated every five years and are the basis for the Food Guide Pyramid. These guidelines are issued by the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (HHS). The Food Guide Pyramid groups foods into major categories (fruit, vegetable, dairy, grain, meat, and bean) and recommends serving sizes and the number of servings needed to achieve balanced nutrition and health. In 2005, to address the dramatic rise in obesity, the USDA modified the Food Guide Pyramid to emphasize lower energy intake and more physical activity and provide an individualized approach. The USDA promotes nutrition based on the fact that certain dietary patterns may place individuals at risk of chronic diseases, such as cardiovascular disease, diabetes, and cancer. Diets rich in saturated fat and low in fruits and vegetables are associated with heart disease, cancer, and diabetes, while diets rich in fruits and vegetables may protect individuals from these conditions.

The balance between energy intake and energy expenditure determines weight maintenance or weight gain and loss. When regular energy intake is greater than the expenditure, the body stores the surplus of energy as extra body fat or adipose tissue. Energy expenditure is a result of the basal metabolic rate, the thermic effect of food (energy spent in processing food), and the energy spent in physical activity. The contribution of physical activity to energy balance is small compared to food intake. Energy intake and dietary patterns are influenced by hormonal mechanisms and psychosocial factors. People eat in response to hunger signals that the body creates, such as changes in blood glucose levels. Hunger can also be experienced in response to sensory cues, such as the smell or sight of favorite foods.

Satiety is regulated by a complex hormonal signaling system with input from proteins secreted by the brain, the gastrointestinal tract, and the liver. In the brain the hypothalamus secretes small proteins called neuropeptides. The neuropeptides inhibit food intake after receiving input from hormones and proteins synthesized in the stomach and intestines. Ghrelin, which is synthesized predominantly by the stomach, stimulates feeding. In the fasting state ghrelin levels are high, and levels fall after eating. The intestine releases cholecystokinin (CCK) after a meal, which stimulates gut motility, the contractions of gastrointestinal muscles that enable food to move along the digestive tract and ensure absorption of nutrients and inhibits food intake by signals to the brain. Other organs and hormones are also involved in the regulation of food intake and satiety. After a meal, the pancreas secretes insulin, which in turn signals the brain to inhibit feeding. Leptin is a hormone synthesized in adipose (fat) cells, and its secretion is regulated by the obese (ob) gene. Leptin levels are low during starvation and high when nutrients are plentiful and in obesity. High levels of leptin signal the brain to reduce appetite. In obesity people are resistant to the effects of leptin. The hormone adiponectin is secreted by adipose cells, and its secretion is stimulated by food restriction. Adiponectin is also a factor that increases energy expenditure, and low levels may contribute to the development of obesity.

The body seems to tolerate positive energy balance, that is, when energy intake is higher than expenditure. The mechanisms described above strongly defend from weight loss but not from weight gain because of an evolutionary process that favored intake of nutrients when food was easily accessible and in preparation of times when food was scarce. This evolutionary perspective can explain in part the obesity epidemic that emerged during the last decades of the twentieth century when, in developed countries, there was abundance of food without periods of scarcity.

Nutrition is not only influenced by biological factors. Environment, culture, and social factors also play impor-

tant roles in nutrition. The environment determines the type and quality of foods accessible to individuals and communities. A diet rich in refined sugars, carbohydrates, and fat is related to increased availability of fast foods, sugared beverages, and low-nutritional value snacks and decreased access to produce (fruits and vegetables). A positive energy balance in turn is caused by increasing calorie intake, especially when reinforced with a sedentary lifestyle. Social factors, such as low income and low socioeconomic status, are associated with less healthy dietary patterns with higher saturated fat intake and lower intake of fruits and vegetables possibly due to the facts that low-income individuals are more likely to live in communities with less access to healthy foods and that healthier food items are proportionally more expensive that unhealthy ones. Industrialized societies eat a diet rich in meat and saturated fat and lower in fiber compared to agrarian societies, who consume more fruits, vegetables, and grains. Research indicates that immigration changes dietary patterns of individuals, who over time adopt the diet of their host country.

In people with excess weight, a diet restricting calories but maintaining balanced nutrient composition can achieve healthy weight loss and reduce the risk of diabetes and cardiovascular disease, which are conditions associated with obesity. However, when the calorie restriction is severe and the diet does not allow for sufficient amounts of essential nutrients, dieting can lead to metabolic and heart problems and even death. The psychological factors that are associated with nutrition are best exemplified by obesity and eating disorders. Obese individuals frequently have low self-esteem and depression. Whether these are causes or consequences of obesity is still under debate. Some individuals may increase their food intake in response to feelings of stress, loneliness, and anxiety, which place them at risk of overweight and obesity. Eating disorders include anorexia, characterized by being severely underweight from excessive food intake restriction, and bulimia, characterized by purging. Either disorder may also have periods of binge eating. Eating disorders, especially anorexia, are associated with body image dissatisfaction, depression, and low self-esteem.

SEE ALSO *Body Image; Depression, Psychological; Disease; Food; Malnutrition; Obesity; Overeating; Self-Esteem; Stunted Growth; Undereating*

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Carmen R. Isasi

NUYORICANS

The term *Nuyorican* refers to Puerto Ricans born or raised in New York City, or more broadly in the mainland United States, as distinguished from those from the island of Puerto Rico. Indeed, the word in a range of other spellings—"neorrican," "neorrriqueno," and "newyorquino," among others—was first used by those from the island, notably in the glossary of Guillermo Cotto-Thorner's early novel about Puerto Rican life in New York, *Trópico en Manhattan* (1952) and, in more direct anticipation of the usage familiar today, in Jaime Carrero's long poem *NeoRican Jetliner* (1965). But in those early, island-based occurrences the term often carried a derogatory or at least derisive connotation. It signified cultural inauthenticity and evoked a paternalistic sympathy for the cultural loss, or even blame for the betrayal involved in the migrants' adaptation to North America. It also could imply significantly negative qualities in terms of class (usually very poor and lazy), sometimes described with the idea of "lumpen" (proletarian), and race (generally identified as black, perhaps tainted with the proximity of African Americans). Many were the young New York Puerto Ricans who experienced painful rejection and discrimination on occasions of their temporary or permanent return to their ancestral homeland, especially in the 1970s and more recent decades.

Nuyorican in its present spelling and usage emerged in the early 1970s in part as a reaction to this negative characterization. The founding of the Nuyorican Poets' Café on New York's Lower East Side in 1973 and the publication of the anthology *Nuyorican Poetry* in 1975 were the major events in this historical emergence, in both cases resulting from the collaboration between writers Miguel Algarín and Miguel Piñero. But it was rapidly adopted by many other writers, artists, and other New York–born youth of Puerto Rican extraction. It became the name of a vibrant poetic and artistic movement of those vibrant

years of ethnic awakening, capturing as it did the zeitgeist of the Puerto Rican community in the 1960s and early 1970s, and featuring such poetic talents as Victor Hernández Cruz, Sandra María Estevez, and the quintessential Nuyorican poet Pedro Pietri. Algarín and Piñero both recount the indignities they endured at the hands of members of the island's cultural elite, and how they then took the negative term and threw it back at them with a sense of cultural pride, much as African Americans did in those same years with the word *black*. A dramatization of this act of resignifying occurs in the more recent film *Piñero* (2002), in a vivid scene depicting Piñero's encounter with that elite on his visit to the island in the mid-1970s. Though another Loisaida (Lower East Side) cultural institution of the times, the New Rican Village, may be considered an even more significant center of experimental expression in those same years, it was the word *Nuyorican* spelled in that idiosyncratic way that has continued as the identifying cultural nomenclature for subsequent generations of Puerto Ricans in the U.S. diaspora. In its combination of Spanish and English phonetics, its semantic mix of "newness" and geographical location, and its intertwining of the New York and the "Rican" reference, that spelling has turned out to be ideally appropriate to epitomize a fully hybrid, bicultural field of personal and group identity, corresponding to the term *Chicano* among Mexican American youth of the same period.

In more recent times some objections to the usage have emerged because of the dispersal of U.S.-based Puerto Ricans and the emergence of significant communities in other places, notably Philadelphia, Chicago, Florida, and other cities in the Northeast such as Hartford, Connecticut; Jersey City, New Jersey; and Springfield, Massachusetts. Though no new word has arisen to replace the geographically specific *Nuyorican*, some writers and others have toyed with such neologisms as *diasporican* and *AmeRican*, the latter a signature poem by well-known writer Tato Laviera. Terms clearly modeled after Nuyorican, such as *ChicagoRican* and *PhillyRican*, have also cropped up, as has nomenclature such as *Dominican Yorks* and *MexYorks* to name newer Latino groups in New York City. In more recent times, change is also evident even in Puerto Rico, where the concept first emerged in its less sanguine usage: The diaspora cultural experience has gained greater acceptance, receiving frequent coverage in the media and cultural institutions, though often still in reluctant or paternalistic terms. Among the youth on the island, many of whom are from families of return migrants who were raised on the mainland, *Nuyorican* has come to be a term of strong admiration and even emulation. Significantly, Old San Juan now boasts the Nuyorican Café among its cultural nightspots. In the days of hip hop, reggaetón, and spoken-word poetry, the long-standing gap between island and diaspora cultural realities has finally come to narrow, and the ironic, deeper meaning of the highly charged expression *Nuyorican* to come full turn.

SEE ALSO *African Diaspora; Blackness; Boricua; Culture; Immigrants, New York City; Latinos; Nationalism and Nationality; Natives; Politics, Identity; Popular Culture; Protest; Race; Racism; Radicalism; Resistance*

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Juan Flores

NYERERE, JULIUS
1922–1999

Julius Kambarage Nyerere, the first president of the East African country of Tanzania, was born on April 13, 1922, in a town called Butiama, located on the eastern shore of Victoria Falls. His father, Nyerere Burito, was the chief of the Zanaki tribe and had twenty-five other children. Being raised in such a large family allowed Julius to experience directly the benefits and costs of "communal living"—an idea later made central to his political philosophy. Life in such a family structure also affected the development of his educational philosophy, in which Nyerere sought to combine the epistemologies of Africa and Europe. From Europe, where he studied at Edinburgh University, Nyerere absorbed the socialism of the British Fabians. From Africa, where he combined his early communal life with a Catholic primary school education, Nyerere developed a philosophy not unlike that of the American William James in terms of an emphasis on pragmatics. These experiences constituted the foundation of his personal philosophy, perhaps best epitomized in the pamphlet "Development is for Man, by Man, and of Man" (1978): "Man does not develop himself in a vacuum, in isolation from his society and his environment. And he certainly cannot be developed by others. Man's consciousness is developed in the process of thinking, and deciding, and acting. His capacity is developed in the process of doing things."

Nyerere thus challenged the idea that a scholar should not get involved in the practical affairs of politics. As a com-

mitted activist, he had a number of critics, both European and African. The former were upset because Nyerere was a leader of the African liberation movement that sought to remove the injustices inherent in the British colonial system. The latter were upset because they feared that Nyerere was an example of yet another African whose body was in Africa but whose mind was conditioned in Europe and whose ultimate loyalties were therefore suspect.

Nyerere's political decisions were not, however, entirely predictable. He was not an ideologue, although he was an unabashed socialist and his plans for land redistribution did not endear him to Western powers. His support of the overthrow of Uganda's President Idi Amin was condemned by many African political observers as a cave-in to the demands of the American/Israeli interests rather than African interests. Yet the decision was cheered by the European/Western press, which described it as a noble act of gratitude for foreign economic assistance to Tanzania. The same set of observers winced when Nyerere offered unconditional support for the armed struggle to free Southern Africa. Some observers have minimized this militaristic side of Nyerere's presidential reign and have instead focused on his pragmatic embodiment of the nonviolent spirit of India's Mahatma Gandhi.

The Gandhian influence was also reflected in Nyerere's support of the unification of the offshore island of Zanzibar with the mainland, as well as in other personal efforts of reconciliation between the East Indian immigrants and the indigenous African communities.

Nyerere did not take his African constituency for granted. He championed the incorporation of the local language, Kiswahili, into every facet of Tanzanian life. One legacy of that decision is the appearance of the Kiswahili language in the widely celebrated holiday of Kwanza among African Americans in the United States today.

Like many other post-independence leaders, Nyerere's exposure to Western education was both a blessing and a curse. Its blessings were evident in that it equipped him with the skills necessary to negotiate the treacherous waters of independence from Britain, and a curse because it sometimes tied him too closely with the oppressors of his people.

Nyerere's handling of the ever-present duality was reflected in his early support of both the Commonwealth (of former British colonies) and the OAU (Organization of African Unity). The support of both required a considerable degree of deftness because the organizations' goals were often incompatible. Such political deftness earned Nyerere the respect and admiration of many world leaders. His decision, in 1985, to relinquish the presidency and to retire to his farm for a life of reflection and international peace-making activities—a role later played by South Africa's first president, Nelson Mandela—further enhanced his international reputation.

South African leader Nelson Mandela was one of several future leaders whom Nyerere nurtured as president of Tanzania. Robert Mugabe, whose own efforts at land redistribution resembled Nyerere's, was another who was given refuge as a leader in the liberation struggle of Southern Africa.

Julius Nyerere died in London on October 14, 1999, after a short battle with leukemia. He left behind a wife and seven children and a well-deserved legacy befitting the title *Mwalimu* (teacher).

SEE ALSO *Amin, Idi; Commonwealth, The; Decolonization; Development; East Indian Diaspora; Fabianism; Gandhi, Mohandas K.; James, William; Liberation Movements; Mandela, Nelson; Organization of African Unity (OAU); Pan-African Congresses; Pan-Africanism; Socialism, African*

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Carolyn Murray

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VOLUME 6

OAXACA, RONALD–QUOTAS, TRADE

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OAXACA, RONALD

1944–

Ronald Oaxaca is the McClelland Professor of Economics and faculty associate at the Economics Science Laboratory at the University of Arizona. Best known to many economists as the developer of the Oaxaca wage decomposition technique for examining wage differentials, he has conducted research and published extensively since the 1970s on topics such as labor economics, applied econometrics, and applied microeconomics including sex, union, and race differentials and discrimination; unemployment and unemployment insurance; and the minimum wage.

Oaxaca is perhaps best known for developing one of the most important methods used in the field of labor economics to study wage discrimination based on sex and race known as the wage gap decomposition, which he outlined in his 1973 article "Male-Female Wage Differentials in Urban Labor Markets." Also influenced by economist Alan S. Blinder, the wage gap decomposition provides a means for identifying residual differences between observed and predicted wages that are not accounted for by characteristics associated with productivity, such as education and skill, and can thus be attributed to labor market discrimination and other omitted variables. The seminal method has since been refined and elaborated upon to add other elements of analysis, such as the use of alternative wage structures as reference points for comparison; selectivity bias; comparative analysis across countries and time; the explanation of penalties associated with motherhood; and analysis of discrimination across the income distribution rather than using means. Oaxaca has also continued to utilize and improve upon the wage decomposition, notably with Michael R. Ransom in two studies conducted in 1994 and 1999 (as mentioned in Yana van der Meulen Rodgers's 2006 article "A Primer on Wage Gap Decompositions in the Analysis of Labor Market Discrimination"), further refining methods for developing the nondiscriminatory wage structure and emphasizing the importance of the reference group for estimating the unexplained or discriminatory portion of the wage gap.

More recently Oaxaca has focused on topics such as the influences of ability and family background on optimal schooling levels; the effects of dual job holding; statistical discrimination; and consistent estimators of linear probability models. His continued study of gender differentials in wages includes work to examine the impact of technology and to compare trends in the United States and Denmark. Further he is conducting research on such disparate subjects as determinants of faculty salaries, the production of engineering degrees, optimal sick pay schemes, gender bias in the criminal justice system, and measurement error in work experience. He currently serves as the coeditor of *American Economic Review*, and he is on the editorial board of the *Journal of Economic Inequality*. From 1986 to 1989 he was on the editorial board of the *Journal of Urban Economics*, and he previously coedited *Economic Inquiry*. To date he has published over seventy articles, working papers, and book reviews.

Oaxaca is also a teacher who has been a member of over seventy thesis committees since 1978. He joined the faculty of the University of Arizona in 1976 (after teaching at the University of Massachusetts from 1973 to 1976) and has been a visiting professor at a number of institutions, including Smith College (1975); Princeton

University (1982); Stanford University (1983–1984); New Mexico State University (1991), where he was a Distinguished Visiting Professor; the University of Aarhus in Denmark (1997); and ERMES at the University of Paris II (2003). He is an active member of the Association for Hispanic Economists.

Oaxaca was a fellow of the Udall Center at the University of Arizona from 1995 to 1996 and since 2001 has been a research fellow at the Institute for the Study of Labor (IZA) in Bonn, Germany. In 2005 *Hispanic Business* magazine selected Oaxaca to appear on the list of the 100 most influential Hispanics.

Oaxaca earned a bachelor's of science (summa cum laude with honors) from California State University at Fresno (1965) and a master's (1969) and doctorate (1971) in economics from Princeton University.

SEE ALSO *Blinder-Oaxaca Decomposition Technique; Econometric Decomposition*

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Elizabeth Nisbet
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OBEDIENCE, DESTRUCTIVE

Obedience is the act of compliance to the commands of a legitimate authority. In destructive obedience the acquiescence is to a command to harm another person. The phrase was first introduced into the social sciences in 1963 by Stanley Milgram in his article "Behavioral Study of Obedience" in the *Journal of Abnormal and Social Psychology* describing the first of a series of experiments on obedience he conducted at Yale University from 1961 to 1962.

In those experiments the subject was told to teach a learner a series of word pairs, using increasingly painful electric shocks—up to 450 volts—as punishment for each error. Although the shocks were fake and the learner was an actor who feigned his suffering, the experiment was stressful for most of the subjects. Sixty-five percent of the subjects were fully obedient to the experimenter's commands, progressing to the maximum shock. The unexpectedly high rate of destructive obedience was the central and most dramatic finding in Milgram's experiments. While we did not need Milgram to tell us that people tend to obey authorities, the sheer power of that finding was revelatory: that ordinary people would act contrary to conscience and hurt an innocent person at the bidding of an authority without coercive means to enforce his or her commands.

Milgram conducted over twenty different variations in his series of experiments on destructive obedience. A second important insight is provided by a subset of those variations. In that series Milgram varied the distance between the teacher and the learner. As the distance was reduced, so was the percentage of obedient subjects. The morality of shocking an innocent victim did not change from condition to condition, but the tendency to obey the destructive orders did, demonstrating that the immediate situation can have powerful effects on behavior even at the expense of the subject's personal inclinations.

Milgram undertook his research to shed light on the Holocaust in an attempt to explain how normal people could become complicit in carrying out the murderous commands of Nazi leaders. Although early twenty-first century regulations in the United States and other countries make it virtually impossible to replicate Milgram's experiments, experiences in real life continue to affirm his findings.

For example, in 2004 two male students at a Georgia high school obeyed their teacher's orders to throw an unruly female classmate out the window. Real-life events also have broadened the scope of destructive obedience in several ways. For instance, it is known that destructive obedience can take place even when the self is the victim. A review of airplane accidents between 1978 and 1990 found that in about 25 percent of cases the first officer's reluctance to correct an error made by his or her captain was a contributing factor. Also the power of destructive obedience when the action is damaging in a nonphysical manner is as strong as or stronger than is the case when the obedient act is physically destructive, strong enough to override a person's moral or ethical principles. As a teaching exercise, a University of San Diego law professor, Steven Hartwell, had his students advise a client on how best to present her side of a rent dispute in court. Hartwell told them to advise the client to lie under oath and say that she had paid her rent. Twenty-three of twenty-four subjects complied and told the woman to perjure herself.

SEE ALSO *Authoritarianism; Authority; Conformity; Holocaust, The; Milgram, Stanley; Nazism*

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Thomas Blass

OBESE EXTERNALITY

In the late 1960s, the social psychologist Stanley Schachter (1922–1997) proposed that obese people eat (and overeat) not because of hunger, stress, or boredom, but in response to external (i.e., environmental) food cues, which drive eating in the obese until those cues are removed (or consumed). External food cues include the sight or smell of palatable food and other salient cues in the situation indicating that eating is appropriate. When external cues are absent, the obese are not motivated to eat, even if they are substantially food-deprived. This focus on internal and external cues is often seen as originating in Schachter's earlier research on emotion, although a close reading reveals significant differences in Schachter's analyses of these two domains.

Schachter's obese-externality theory achieved widespread attention because it challenged long-standing ideas about the causes of obesity by means of several innovative and dramatic experiments. These experiments showed that obese people's food intake is less affected by manipulations of food deprivation and distress than is that of normal-weight people. Obese individuals, for instance, are less disturbed by time-zone changes or by the requirements of religious fasting, as long as food cues are not prominent. These clever studies, written with great flair, were complemented by studies demonstrating that obese people are differentially affected by manipulations of external cues, ranging from varying the visual prominence of food cues (by, for example, altering the lighting or providing nuts either shelled or unshelled) to doctoring a clock (so that dinnertime arrived either early or late) to offering experimental subjects either one or three sandwiches to eat. These studies fascinated the research community, even if the data were not always robust.

Schachter's research was correlational, showing that obesity is associated with externality. He assumed that externality (in an environment rife with food cues) causes obesity. But what is the source of externality? Schachter postulated that impairment of the brain's ventromedial hypothalamus (VMH) was responsible; rats with VMH damage behaviorally resemble obese humans. This line of reasoning was extended by Schachter's student Richard Nisbett (1972), who argued that suppression of VMH functioning was a consequence of weight suppression by dieting or other means, which is common among the obese. This proposal led in turn to research by C. Peter Herman and Janet Polivy (1980) on restrained eating (dieting), which hinged on the notion that even normal-weight people who suppress their weight ought to be especially external. Work on restrained eating, however, quickly turned away from questions of internal versus external. The Eating Disorders Inventory contains a scale concerned with interoception, the perception of one's own internal states, which is weak in those with eating disorders; but again, the eating disorders literature pays scant attention to Schachter's internal/external distinction.

Challenges to the obese-externality theory include the argument that internal and external cues reciprocally influence each other and are thus inseparable. Research shows that external cues (such as social influence and portion size) exert such a powerful influence on food intake in everyone that it is misleading to identify external responsiveness exclusively with the obese. Still, Schachter's original proposal has not been disproved so much as superseded by subsequent formulations, all of which owe a debt to his groundbreaking demonstrations of how eating may be studied experimentally and creatively.

SEE ALSO *Nutrition; Obesity; Overeating; Schachter, Stanley*

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C. Peter Herman

OBESITY

Obesity results from chronic energy intake that exceeds energy expenditure and is characterized by "excessive" body fat. The precise assessment of an individual's body fat is an expensive and complicated procedure. Instead, body mass index (BMI), though somewhat controversial, is used commonly because it is easy to assess and correlates highly with body fat. BMI is calculated by taking an individual's weight in kilograms and dividing it by that individual's height in meters squared (kg/m^2). For adults a healthy BMI is between 18.5 and 24.9. A BMI of 25 to 29 is classified as overweight, obesity is defined as a BMI of 30 to 39, and clinically severe obesity is defined as a BMI of 40 or more. Because of the pervasive social stigma associated with the term *obesity*, it is avoided for children; *at risk for overweight* and *overweight* are the recommended terms. To account for normal age and sex differences in children's body fat, at risk for overweight is defined as a BMI at or above the 85th percentile and overweight as a BMI at or above the 95th percentile of the sex-specific BMI-for-age growth charts.

PREVALENCE OF OBESITY

Health statistics for the United States reveal a dramatic upsurge in obesity prevalence during the early 1980s, and the rates have continued to rise. U.S. national health statistics in 2007 estimated that 34.1 percent of adults were overweight, 32.2 percent obese, and 4.8 percent clinically obese; 17.1 percent of children and adolescents age six to nineteen were estimated to be overweight, and 16.5 percent were at risk for overweight. Sociodemographic risk factors for obesity include being of a racial/ethnic minority and being of low socioeconomic status.

CONSEQUENCES OF OBESITY

Obesity is associated with high morbidity and mortality rates. The medical sequelae of obesity include type II diabetes, coronary heart disease, stroke, osteoarthritis, sleep apnea, and some cancers, including breast and colon cancer.

Among the most insidious and common adverse effects are the socioemotional consequences of obesity. Obese individuals are significantly more likely to experience social stigmatization and discrimination in all domains, including education, employment, social relationships, and health care. Also, obesity is associated with low self-esteem, body image disorders, anxiety, and depression. Associations between BMI and body satisfaction vary with race/ethnicity and gender. African Americans have a higher mean BMI than do European Americans but tend also to have greater body satisfaction. Generally, females report significantly lower body satisfaction than do males regardless of race/ethnicity.

ENVIRONMENTAL EXPLANATIONS

The escalating rates of obesity since the 1980s are attributable to a complex interaction of environmental, sociocultural, behavioral, and biological/genetic factors that is not well understood. At a macrosystemic level, U.S. food policy is fundamentally at odds with the goal of healthful eating. Food is overproduced, and as a result of the abundant supply, food companies must compete aggressively for market share. Cheap, palatable, and accessible energy-dense foods are mass-marketed and offered in portions vastly disproportionate to individuals' caloric needs. A marked shift toward away-from-home and prepared food consumption probably has resulted from time constraints caused by a rise in dual-career and single-parent working families. In 1977, 9.6 percent of meals were eaten at restaurants and fast food outlets; by 1996 that proportion had risen to 23.5 percent.

Over roughly the same period consumption of high-fructose corn syrup (HFCS) increased 1000 percent or more. HFCS is used instead of sugar (glucose) as a caloric sweetener in many foods and all soft drinks; however, it is digested, absorbed, and metabolized differently than glucose is. Fructose, unlike glucose, distorts levels of insulin, leptin, and ghrelin, the hormones that act as key signals in food regulatory processes and body weight, making dietary fructose a prime suspect in the obesity epidemic.

A sedentary lifestyle is an important contributing factor, especially in light of the fact that decreased energy expenditure has been accompanied by increased energy consumption. A sedentary lifestyle is a natural consequence of a built environment characterized by urban sprawl that necessitates travel by car or mass transit and time-consuming commutes. Technological advancement that reduces energy output, low-energy office occupations, and leisure preferences such as television viewing and computer use increase the probability of a physically inactive lifestyle.

EARLY PSYCHOLOGICAL THEORIES

Two classic psychological theories of obesity predate the onset of the obesity epidemic. To explain differences in the eating patterns of obese and normal-weight individuals, in 1968 Stanley Schacter proposed the internal-external theory of obesity and in 1972 Richard Nesbitt proposed the set point theory. Schacter hypothesized that obese individuals are more likely to be responsive to cues from the external environment such as the sight and palatability of food, whereas normal-weight individuals are more likely to eat in response to internal physiological cues. Nesbitt countered with the hypothesis that each individual has a unique, biologically determined ideal weight, with obese individuals having an above-average set point. He theorized further that societal ideals of thinness

cause obese individuals to restrain their intake and eat below their set points, essentially causing a chronic state of deprivation and hyperresponsiveness to external food cues. These models of obesity have faded in importance because of a lack of empirical support. However, the derivative construct of dietary restraint and its effect on individuals' eating patterns continues to generate much research and some controversy.

DIETARY RESTRAINT

Dietary restraint is defined as the deliberate and persistent restriction of food to promote weight loss. Restraint theory proposes that restrained eaters may develop disordered eating patterns as a result of the stress inherent in chronic appetitive self-control. Although research has supported a relationship between dietary restraint and disinhibited eating, the validity of the restraint measurement scales is at issue and further work on more definitive construct measurement and the role of dietary restraint in disordered eating is warranted.

BIOLOGICAL EXPLANATIONS

Obesity also is explained by reference to biological processes. Research indicates that neuroendocrinological processes, most centrally the hypothalamic-pituitary-adrenal (HPA) axis, figure prominently in obesity. The HPA axis, which consists of the hypothalamus and the pituitary and adrenal glands, is a key player in stress regulation as well as in physiological processes such as digestion, energy use, and mood. Stress, which is inherent in the daily demands of the twenty-first-century environment, causes elevated cortisol secretion by the HPA axis. Protracted stimulation of the HPA axis results in a flood of neuroendocrine-endocrine disturbances that in turn cause insulin resistance and visceral (abdominal) obesity. Visceral obesity carries the highest risk for comorbidities.

Genetic research is still in its early stages. There is substantial heritability of individual differences in BMI. However, more than twenty genes, hypothesized as working in conjunction with a wide range of environmental factors, have been linked to obesity: Clearly, obesity is causally very complex. Equally clearly, however, obesity is an urgent health problem that will continue to be a challenge for the foreseeable future.

SEE ALSO *Body Image; Body Mass Index; Disease; Overeating*

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OBJECT-RELATIONS THEORY

SEE *Psychoanalytic Theory.*

OBJECTIVE FUNCTION

In an optimization problem, there is a (real-valued) function that is to be maximized or minimized. This function is frequently called the *objective function,* a term that seems to have arisen in the realm of planning and programming, particularly linear programming, through the work of mathematician George Dantzig (1914–2005). Prior to 1947, when Dantzig invented the linear programming problem and the simplex method for its solution, military logistical plans, called "programs," involved large-scale decision-making based on ground rules. Dantzig created mathematical models to capture the conditions that needed to be satisfied and a criterion for choosing one feasible solution over another. This made a significant contri-

bution to a vital sphere of activity. Dantzig ushered in a new era in decision-making and brought forth the term *objective function* as a numerical mathematical expression for the *objective* that was to be achieved by the program.

Thus, an objective function measures the "goodness" of a feasible vector, that is, a vector whose coordinates satisfy all the imposed side conditions, if any. To illustrate, in a linear programming problem,

$$\begin{aligned} &\text{maximize} && p_1x_1 + p_2x_2 + \cdots + p_nx_n \\ &\text{subject to} && a_{11}x_1 + a_{12}x_2 + \cdots + a_{1n}x_n \leq b_1 \\ & && a_{12}x_1 + a_{22}x_2 + \cdots + a_{2n}x_n \leq b_2 \\ & && \vdots \qquad\qquad\qquad\quad \vdots \\ & && a_{m1}x_1 + a_{m2}x_2 + \cdots + a_{mn}x_n \leq b_m \\ & && x_j \geq 0, \quad j = 1, 2, \ldots, n \end{aligned}$$

the objective function is the linear form $p_1x_1 + p_2x_2 + \ldots + p_nx_n$, which might, for instance, measure the total revenue resulting from sales in the amounts $x_1, x_2, \ldots, x_n$ at unit prices $p_1, p_2, \ldots, p_n$. The inequalities in this illustration represent side conditions (or constraints) on the variables $x_1, x_2, \ldots, x_n$.

This is not to say that all objective functions (or all constraints) are of this type. They may be linear or nonlinear, depending on how goodness is defined in the applied context. The function being minimized in a parameter estimation by the "least-squares" criterion is an example of a nonlinear (actually quadratic) objective function. In problems of this sort, the "variables" in question may be "free" (unconstrained) or constrained. In the nonlinear case, convexity (or lack of it) becomes an important issue from the optimization-theoretic standpoint.

The underlying concept of an objective function—under a different name or no name at all—had existed for centuries before Dantzig introduced this particular terminology. One has only to recall the method of multipliers devised by Joseph-Louis Lagrange (1736–1813) for equality-constrained optimization problems. Many synonymous terms are in use. Among the more abstract ones are *maximand* for maximization problems and *minimand* for minimization problems. These terms can be used in the respective optimization problems no matter what the application may be. In applied areas such as econometrics, one finds the term *criterion function*. Still others with an obvious connection to economics are *social welfare function*, *economic welfare function*, *loss function*, and *profit function*. Further examples coming from other fields are *distance function* and *flow value*; the point being that the term used in place of *objective function* might refer to what it is measuring.

SEE ALSO *Koopmans, Tjalling; Maximization; Preferences; Preferences, Interdependent; Principal-Agent Models; Programming, Linear and Nonlinear; Rationality; Representative Agent; Social Welfare Functions; Utility Function*

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OBJECTIVE PROBABILITY

SEE *Probability.*

OBJECTIVE VALUE

SEE *Value, Objective.*

OBJECTIVISM

Objectivism is the philosophy enunciated by the Russian-born American novelist and philosopher, Ayn Rand (1905–1982).

Rand's philosophical system begins with a realist premise: Reality is what it is, independent of what people think or feel. The concept of "objectivity" is central to Rand's theory of knowledge. A knowing subject can acquire objective knowledge of reality only through reason, a distinctively human faculty, which integrates the inductive evidence of the senses, in accordance with logical principles.

Because reason is a basic means of acquiring human knowledge and, hence, a basic tool of human survival, Rand places it at the center of her conception of ethics. In Rand's view, reason enables human beings to discover those principles and practices necessary to their sustenance as rational animals. Rand's ethical egoism proclaims the "virtue of selfishness," that it is morally right for individuals to pursue their own rational self-interests, voluntarily exchanging spiritual and material values.

Rand argues that the only social system consonant with this "trader principle" is laissez-faire capitalism, wherein individuals constitute free-market relationships. These relationships depend upon a structure of individual rights to life, liberty, property, and the pursuit of happiness. Rights can only be violated, Rand maintains, if an individual or group of individuals initiates force against others.

Rand supports a libertarian nonaggression principle that allows for the retaliatory use of force against those who initiate it. This principle informs Rand's defense of government as an institution with a monopoly on such retaliatory uses. In keeping with a classical liberal or libertarian conception of politics, Rand restricts government institutions to the role of defending individual rights, through the police, the armed forces, and the judiciary.

RAND'S LIFE AND WORK

That such a defender of capitalism and limited government was born and raised in Russia during the period in which the Bolsheviks came to power is ironic. Rand would publicly reject what she saw as the mysticism of Russia's religious culture and the collectivism and statism of its politics. But some scholars have argued that aspects of her approach to philosophical and social problems echo some of her early Russian influences. Born Alissa Zinovievna Rosenbaum in Saint Petersburg to a middle-class family, Rand witnessed a reign of Communist terror that led her to a virulent rejection of totalitarianism in all its forms. She was educated, however, during a cultural period known as the Russian Silver Age. Central to Silver Age thought, and to Rand's thought as well, is a rejection of conventional dichotomies: mind versus body, fact versus value, theory versus practice, and so forth. During this period, the influence of Friedrich Nietzsche (1844–1900) was also substantial; Nietzsche's writings had a significant effect on the young Rand's early thinking. Having graduated from the University of Leningrad in 1924, Rand had been exposed additionally to the teachings of prominent professors in both the dialectical idealist and Marxist traditions—those who emphasized, like Rand, the importance of grasping the full context of any problem as a prerequisite to its resolution.

In 1926 Rand immigrated to the United States, fully committed to pursuing a career as a writer. Her first novel, *We the Living* (1936), details communism's violent subjugation of social life. Rand said that this novel was as close to an autobiography as she would ever write. Its focus is on the individual versus the state, that is, how an oppressive state ultimately creates an "airtight" environment that must destroy individual human lives. The novel was later adapted by Italian filmmakers, who produced an unauthorized, though largely faithful, film version during World War II (1939–1945).

Rand also wrote a novella called *Anthem* (1938) that projects a primitive collectivist society of the future in which personal pronouns—and independent thinking—are prohibited. Despite that society's best efforts to stamp out individual identity, the protagonist (known as Equality 7-2521) rediscovers the "I" and, in so doing, heralds the rebirth of individualism.

In *The Fountainhead* (1943), Rand tells the story of architect Howard Roark, a trader, entrepreneur, and creator, who is a man of integrity struggling mightily against the collectivist culture and statist politics of the age. The novel enabled Rand to explore the soul of the individualist, those qualities of rationality, productiveness, independence, and authenticity that are essential to people's survival and flourishing. Adapted for the screen in 1949, directed by King Vidor (1894–1982), and starring Gary Cooper (1901–1961) as Roark, the novel was Rand's first major commercial success.

But it was in *Atlas Shrugged* (1957) that Rand first presented the philosophy of objectivism. With three parts named after the Aristotelian laws of logic—it was Aristotle (384–322 BCE) whom Rand credited as having had the greatest impact on her thought—the novel is an epic mystery, part science fiction, part fantasy. With the world on the verge of collapse, strangled by political interference with economic and social life, the productive "men of the mind" go on strike. By refusing to sanction their own victimization, and by withdrawing from the world, the strikers bring down the system of exploitation. It is only with their return to the world that a free society becomes possible.

In this novel, Rand presents her image of ideal men and women, people who are "new intellectuals," men and women of thought, who are also men and women of action. Such individuals reject the mind-body dichotomy and all of its insidious consequences—reason versus emotion, thought versus action, morality versus prudence—which fragment human existence.

This stand on the integrated individual also underlies much of the work that Rand wrote during her years as a public philosopher. Her nonfiction works, such as *The Virtue of Selfishness* (1964) and *Capitalism: The Unknown*

Ideal (1966), repudiate all modernist "false alternatives," including idealism versus materialism, rationalism versus empiricism, religious conservatism versus welfare liberalism, fascism versus communism, anarchism versus statism, and so forth. Though her political stance is libertarian, insofar as it rejects any government intervention in the economy or in people's personal lives, Rand was profoundly critical of contemporary libertarianism because many of its adherents focused on economics without regard for the larger philosophic and cultural context that would nourish the triumph of human freedom. In Rand's view, though human freedom entails free trade, it can only be fully achieved when people are free to think and to act on the basis of their own rational, independent judgment. This requires their psychological and moral liberation from exploitative ideologies that demand human sacrifice. As Rand argues in *For the New Intellectual* (1961), "*intellectual* freedom cannot exist without *political* freedom; political freedom cannot exist without *economic* freedom; *a free mind and a free market are corollaries*" (p. 25).

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OBJECTIVITY

Objectivity in the sciences, especially the social sciences, is paired implicitly or explicitly with its opposite, subjectivity. Less obvious yet commonplace pairings with the term *objectivity* are *partiality*, *relativity*, and *the arbitrary*. This entry deals primarily with objectivity in opposition to subjectivity. Subjectivity is associated with the modern concept of the self. The shift to the notion of the modern self occurred concurrently with the scientific revolution of the seventeenth century.

DESCARTES AND HIS CRITICS

René Descartes (1596–1650), who is considered the father of modern philosophy, claimed to be able to doubt systematically the existence of anything except the fact that he was doubting. Because doubt is a species of thought, he asserted, "*cogito ergo sum*," which usually is translated as "I think therefore I am" or "I think therefore I exist." Even Descartes's body did not survive his systematic doubt; only his mind—"a thinking substance"—did. He argued that upon this rationally defended certainty rested all other claims regarding the existence of objects outside the mind. In that absolute divide the mindful inside became the subjective state and anything on which the mind exercised its cognitive power was an object. Thus, objectivity came to refer on the one hand to the subject's ability to consider or represent external objects without being influenced by subjective feelings, opinions, or prejudices and on the other hand to the description of those mind-independent objects. Despite Descartes's many detractors, modern philosophy made bringing subjective thought into concordance with objects of external reality its signal challenge.

Descartes's critics in his day and soon afterward could be divided into two camps: the idealists and the empiricists. Despite their differences, they held in common with Descartes the idea that the senses play a part in objectivity. The idealists described sensation variously as a species of thought but one that is unclear and indistinct, inferior, and unreliable or merely as confused thinking. Among those critics were Benedict Spinoza (1632–1677) and Gottfried Wilhelm Leibniz (1646–1716).

Conversely, British empiricists reinstated the sensory perception of objects in experience as the source of all reliable knowledge and the basis of objectivity. Thomas Hobbes (1588–1679) described thought as merely the faint remains left behind by sense impressions, and John Locke (1632–1704) argued that all ideas about the external world arise from sensation and reflection; if not for the sensory input made available by the senses in experience, the mind would be a blank tablet. For David Hume (1711–1776) thought was nothing but the faint copies of "impressions" left behind by the senses. In Hume's under-

standing, claims to objectivity are based not on reason but on habits of expectation that are developed from accumulated sense experiences.

CRITICAL PHILOSOPHY

The response to the early British empiricists can be seen as twofold: critical philosophy on one hand and the philosophy of science on the other hand. The origin of critical philosophy most commonly is identified with Immanuel Kant (1724–1804). Kant did not see objectivity-subjectivity as a proportionately inverse relation. They were distinct, and so one could not be considered an inferior form of the other or vice versa even though only together could they make objectivity possible.

Kant's concept of the object, however, was very subtle, and he used three different terms for it: *Ding, Gegenstand*, and *Objekte. Ding* referred to the metaphysical thing-hood, as in *ding an sich,* the unknowable thing in itself, making the question of objectivity moot. For even minimal experience to be possible, the contents of experience ("sensory data") must be ordered and limited in certain ways. These ways are not determined by what is given to the senses but by the synthetic activity of the faculty of intuition that possesses certain principles of form—space and time—that constitute the synthetic unity of sensory apperception. For what is given is, as Hume held, nothing but a flux of sensations and images. The synthesis of this manifold of sensory data is an a priori and necessary feature of experience and not empirical. This object of appearance that is experienced in this synthesis is the *Gegenstand.* The *Gegenstand,* this experience of appearance as object, is only a re-presentation. It is transformed into an object of recognition, thought, or knowledge by virtue of it being subsumed by the universal categories of understanding, and thereby it becomes an *objekt.* Kant described the *objekt* as "that in the concept—of the understanding—of which the manifold of a given intuition is united." (Kant [1787] 1965, p. B137). It is this *objekt* of knowledge about which the subject of the experience can make judgments that are true or false. By objectivity, then, Kant meant the object of a true judgment. However, this is not the judgment of an individual subject but that of a transcendental subject.

In the triumvirate of the great sociologists of the nineteenth and early twentieth century, Max Weber (1864–1920) is the most (neo-) Kantian of the three.

PHILOSOPHY OF SCIENCE

Whereas critical philosophy was a reaction to British empiricism, the philosophy of science was its progeny. Among the many strands in the history of the philosophy of science, positivism has been the most conspicuous. Auguste Comte (1798–1857), who invented the term *positivism*, was an admirer of Hume and with Hume held that there is no objectivity beyond human objectivity. However, unlike Hume, he did not begin with an empiricist account of the contents of the mind but instead with a history of human development. According to that history, inquiry begins with theology, which is transformed into metaphysics, which is replaced by positive science.

For Comte objective science and observational science were near synonyms. Science, he held, should restrict itself to the observation of appearances and stop looking for or speculating about hidden "causes." He believed that hypotheses must be based only on phenomena that can be grasped by the cognitive and sensory faculties and be open to positive verification; this alone could guarantee objectivity. Comte saw the social world as unified with the physical and subject to laws that were identifiable by natural observation, hence sociology, the science of society. Émile Durkheim (1857–1917), the French sociologist and precursor of structuralism, considered his sociology to be in the positivist tradition and antipathetic to Kantian metaphysics, which nevertheless saturated his most important work, *The Elementary Forms of the Religious Life*.

In the twentieth century the prioritization of the sensory was channeled into logical positivism with its focus on language and logic. In logical positivism the objective world is considered a world not of things but of facts. Objectivity describes the capacity to express verifiable facts—the truth or falsity of which can be determined—in meaningful sentences. A meaningful sentence is seen as one that in some way can be related to a foundational sense experience or analytically true statements. Bertrand Russell (1872–1970) thought that he could derive the world from experience by means of symbolic logic. Rudolph Carnap (1891–1970) was determined to prove the world's verifiability, even though Ludwig Wittgenstein's (1889–1951) *Tractatus* clearly signaled the ultimate failure of that attempt. However, logical positivism persisted until it ran its course almost a decade before Carnap's death in 1970.

Georg W. F. Hegel (1770–1831) led Kantian insights even further from empiricism. For Hegel, objectivity was a matter of degree and an integral part of knowledge in which the subject is confronted with two types of objects: the external thing it desires to know and its own consciousness. In the *Phenomenology of Spirit* ([1807] 1977) Hegel's aim is to show that all claims to knowledge are best understood as historically and socioculturally situated. Empiricists hold that not only is objective knowledge—that is, knowledge that is independent of social practices—possible but that it is the only form of knowledge worthy of its name. The candidates that are proposed as being able to secure such knowledge, independent of any historically specific social practice, are "sense-cer-

tainty," "perception," and the "force of understanding," in that order. Hegel demonstrates that all three fail to provide, on their own terms, the kind of knowledge that their proponents' claim for them. In fact, under the "force of understanding" the reader is forced to acknowledge that it is our recognition of a thing that makes it real. But who is this subject that does the recognizing? While it is true that both Hegel and Kant presuppose a unified self or subject that is capable of knowing, for Kant such a self is a given, whereas for Hegel it is *we* who presuppose or construct this self. But how do we construct a self without recognizing it? This is where the "other" becomes necessary, for it is only the other who can recognize and construct one, and thereby makes one real. Moreover, the other must not take me to be a mere object of his or her self-consciousness but as a self-conscious knowing subject in my own right. It is at this point that Hegel uses his, by now famous, master-slave parable to begin the dialectical argument of why the objects of our knowledge are inter-subjectively and socioculturally constructed and known. Thus a reflective socialized and historicized self-consciousness works its way dialectically through reason and spirit, toward absolute knowledge in an ever-expanding and increasingly shared point of view that leads toward a universal point of view, which would at least theoretically serve as the standpoint from which pure objectivity, both moral and epistemological, would be possible.

Hegel was the first philosopher to historicize objectivity and chart its growth in the dialectic of history. Unlike Kant, he did not base objectivity on the abstract analysis of its conditions but on the human sociohistorical subject. Even so, Karl Marx (1818–1883) accused him of positing a method of coming to know, which lost its way in the clouds of ideas and ideologies. If human history is to be seen in its reality, Marx claimed, it is necessary to look at human labor and relations of production and domination. This is the road to objectivity in history. Paradoxically, Marx may be considered to be the closest to Hegel among the great sociologists, even if the object and the objective are viewed materially rather than ideally by Marx.

OBJECTIVITY IN TWENTIETH-CENTURY PHILOSOPHY

The influence of Kant's and Hegel's understandings of objectivity are vast and varied, sometimes reemerging under different labels. In the pragmatism of the American philosopher Charles Peirce (1839–1914), Kantianism, Hegelianism, and British empiricism are modified and compounded. Here experiences are more than what the senses report; they include anything that is forced upon one's acknowledgment, real or ideal, including sensory and cognitive surprises. Experiences are only perceptual judgments and therefore can be true or false but never infallible; they are authoritative only because people are compelled to accept them, if not in the short run, then in the long run.

For Peirce, the so-called outer and inner worlds are only vicinities with no boundaries. Therefore, neither metaphysical theses nor so-called analytic statements are immune from empirical evidence; their truth, and hence their objectivity, depends on their ordinary observable consequences, not on their experiential origins. A correspondence theorist of truth would hold that a proposition or belief is true only if it corresponds to a mind-independent reality and as a corollary would insist that a hypothesis can be true even when its truth has no consequences for belief. A pragmatist would hold that such a view, insofar as it has no consequences, is spurious. Objectivity must be connected with the hypothesis that will survive the test of inquiry, experiment, experience, and life. As for truth, it is nothing more than the best inquiry can do.

Inquiry must begin against a background of beliefs held with or derived from a community, and therefore its objectivity can be fixed only by a community of inquirers committed to its truth, a truth that is capable of having consequences. In Peirce's theory of the Sign, the object is one of three correlates that constitute the Sign, the other two being the *representamen* and the *interpretant.* Objectivity is a significant act of which the interpretant (of which the interpreter is a subset) is an indispensable component.

The view of knowledge as human understanding that was initiated by Hegel's dialectic of self-consciousness admitted "interpretation" into the human sciences in a major way. If in Edmond Husserl's (1859–1938) early Cartesian writings there appeared aspects of sensory objects that an empiricist or positivist could have recognized as such, by the time he wrote his last work, *The Crisis of European Sciences and Transcendental Phenomenology*, consciousness had become his prime, if not sole, object of inquiry. In his phenomenology of human experience in the world Husserl saw no way of getting around the fact that consciousness is always someone's consciousness, and so he proposed that the process of investigating human capacities and faculties had to begin with the rigorous self-examination of one's self. Husserl called this the standpoint of transcendental solipsism. This methodological solipsism, however, leads one to the recognition of intersubjective communal grounding of the knowing activity as well as the ethical dimension of that intersubjectivity, how the "I" stands in the "we." He came to see objectivity as the achievement of intersubjective confirmation and acceptance in the "life-world," a pre-theoretically experienced world. The influence of Husserl's phenomenology in sociology can be seen mainly in the writings of Alfred Schutz (1899–1959), who com-

bined that phenomenology with the interpretive sociology of Max Weber.

Among the philosophers considered thus far, objectivity was seen as possible because objects are re-cognizable. Heidegger, Dilthey, and later Gadamer became interested in understanding the unique and unrepeatable—and hence unre-cognizable—in history and culture. Wilhelm Dilthey (1833–1911) held fast to the possibility of scientific objectivity with the proviso that the method for achieving objectivity in the human sciences was different from that employed in the natural sciences. Both Weber and Dilthey had a strong influence on the interpretive anthropology of Clifford Geertz (1926–2006). Heidegger and Gadamer rejected the very notion of objectivity and the subject-object model as a vestige of Cartesianism. Hans-Georg Gadamer (1900–2002) saw understanding as an aesthetic experience of history and as being quite different from but no less valid than that of the natural sciences. Indeed, the natural sciences were no less value-free in his opinion and no less free of the art of interpretation.

NIETZSCHE AND FOUCAULT

Friedrich Nietzsche (1844–1900) spoke about objectivity in a manner that was consonant with all the historical-hermeneutic sciences. He believed that to understand objectivity as a "contemplation without interest" was nonsensical and absurd. "[L]et us be on guard," he cautioned:

> against the dangerous old fiction that posited a "pure, will-less, painless, timeless knowing subject"; let us be on guard against the snares of such contradictory concepts as "pure reason," "absolute spirit," "knowledge in itself." … There is only a perspective seeing, only a perspective "knowing"; and the more affects we allow to speak about a thing, the more eyes, different eyes, we can lend to the thing, the more complete will our "concept" of this thing, our "objectivity," be. But to eliminate the will altogether, to suspend each and every affect, supposing we were capable of this, what would that mean but to castrate the intellect. ([1887] 1967, p. 119)

In this view, if Hegel's hope for an absolute knowing that could synthesize a range of perspectives must come to naught, the rejection of objectivity by Heidegger and others who employ the hermeneutic method is premature:

> "Objectivity" [ought to be understood] as the ability to have one's For and Against under control and to disengage them, so that one knows how to employ a variety of perspectives and affective interpretations in the service of knowledge. ([1887] 1967, p. 119)

Nietzsche's subject is embodied and governed by desire and passion more than by thought, but it is still Cartesian in that it is the arbiter of being and value. Nietzsche's influence has been especially strong in the writings of Michel Foucault (1926–1984).

SEE ALSO *Empiricism; Geertz, Clifford; Hegel, Georg Wilhelm Friedrich; Hume, David; Intersubjectivity; Kant, Immanuel; Knowledge; Locke, John; Nietzsche, Friedrich; Objectivism; Phenomenology; Philosophy; Philosophy of Science; Positivism; Pragmatism; Science; Social Science; Social Science, Value Free; Subjectivity: Analysis; Subjectivity: Overview; Weber, Max*

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E. Valentine Daniel

OBOTE, APOLLO MILTON
1925–2005

Apollo Milton Obote became the first prime minister of Uganda when the country gained independence in 1962. He later served as Uganda's president from 1966 to 1971 and 1980 to 1985. Obote was born in the village of Akokoro in northern Uganda, and received his education in his home district of Lango, at Gulu High School in Busoga, and at Makerere University College in Kampala. Over time, Obote developed into an astute and progressive Ugandan nationalist. Overthrown by Idi Amin (1925–2003) in a military coup in January 1971, Obote went into exile for eight years in Tanzania. But he returned to Uganda in 1980 and was elected for a second term as president, only to be overthrown in yet another coup staged by Ugandan military officers Tito Okello (1914–1996) and Bazilio Okello (1929–1990) in July 1985. Obote again went into exile, this time in Zambia, where he died in October 2005 at the age of eighty. Obote's demise brought to an end a long, colorful, and controversial political career spanning nearly half a century.

During his first term as Uganda's leader, Obote supported domestic nation-building, a concept he understood to include a quickened pace of progress toward national unity in the face of Uganda's deep social cleavages. Obote also called for economic and social transformation to uproot what he saw as the evil trinity of poverty, ignorance, and disease. On the international scene, Obote stood for East African cooperation, Pan-Africanism, and Uganda's active participation in world affairs.

Obote managed Uganda's external relations successfully, with the exception of a falling out with the United Kingdom in 1971 over Britain's sale of military arms to apartheid-era South Africa. During Obote's tenure, Uganda became not only a respected, albeit small, member of the community of nations, but the country also benefited from its membership in numerous international institutions and the acquisition of new trade and development partners. But in the domestic sphere, Obote's performance was mixed. He began well, with a remarkable record of achievements in education, health, agriculture, and the building of infrastructure. In general, government was managed on a pluralist or multiparty basis, with keen constitutional oversight, as evidenced by the numerous challenges to government actions that were presented to the courts.

The situation began to deteriorate with Obote's handling of the so-called Lost Counties of Bunyoro, a part of Uganda that Britain had handed over to the kingdom of Buganda at the beginning of its period of colonial rule. Following a referendum, Obote returned these regions to Bunyoro, despite stiff opposition from Edward Mutesa (1924–1969), Uganda's ceremonial head of state and the *kabaka* of Buganda. After a furious confrontation that culminated in the Battle of Mengo in May 1966, Mutesa fled into exile in the United Kingdom. Triumphant, Obote moved forward with a radical overhaul of the country's political system. He abolished monarchism and federalism under his new republican constitution of 1967. Shortly thereafter, he declared what has been called his "move to the Left" by introducing socialist principles and work methods to guide the country's development. Finally, he declared that his party, the Uganda People's Congress (UPC), was the only legitimate party. In the course of this overhaul, however, Obote failed to give adequate attention to the army, and in the end it was his military commanders, first Idi Amin and later Tito Okello and Bazilio Okello, who booted him from power.

In his second term as president, Obote was an older and more mellowed politician, made perhaps wiser by the trials and vicissitudes of life in exile. He left behind the political excesses of his first term, including his commitment to socialism and to a one-party system, and he accepted the aid of the World Bank and the International Monetary Fund toward the recovery of Uganda's economy, which was left shattered after the reign of Idi Amin. By the time the two Okello generals staged yet another military coup, positive results had begun to be registered. Nevertheless, during Obote's second administration, the country's sharp social cleavages, particularly between the Bantu and Nilotic ethnicities and north/south regionalism, became politically relevant, and led to civil war.

Obote's management of this conflict has been a major blot on his record, not just for his inability to resolve it quickly but because of the large number of civilian deaths and the human rights abuses that occurred. Rendered helpless as an exile in Zambia, the blame for all of these issues was laid at his feet by his chief antagonist during the conflict, Yoweri Museveni, who became president of Uganda in 1986. Obote died just as he was shaping his response to these accusations. Obote is survived by his political party, the UPC, and a large body of supporters in Uganda and elsewhere, who will, no doubt, contribute to a more profound appreciation or critique of his long political career.

SEE ALSO *Amin, Idi; Kenyatta, Jomo; Museveni, Yoweri*

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A. G. G. Gingyera-Pinycwa

OBSCENITY

Throughout history, people have represented sexuality in literature and art. However, pornography, in the early twenty-first century use of the term, did not emerge as a mass industry until the late 1950s. It eventually broke into mainstream distribution outlets and had grown to a business estimated at $12 billion a year in the United States by the end of the twentieth century, with increasing acceptance in U.S. culture. While still proscribed by law in a variety of ways and considered unacceptable in many circles, pornography is used more openly, while at the same time pop culture has adopted many of the conventions of pornography.

State and federal laws in the United States uses the term *obscenity*, rather than *pornography*, to describe sexual material that can be regulated. Obscenity prosecutions in the United States were infrequent and uncontroversial in the eighteenth century and early nineteenth century. After the Civil War, obscenity became a more public issue, largely due to the work of Anthony Comstock and other conservative religious crusaders. Obscenity became increasingly politicized in the United States in the twentieth century, particularly when literary works such as James Joyce's *Ulysses* (1922) were kept out of the country.

In 1957 in *Roth v. United States*, the Supreme Court first stated clearly that obscenity was outside the protection of the First Amendment, kicking off a string of cases in which the Court wrestled with how to define and regulate obscenity. In the 1973 *Miller v. California* decision, the Supreme Court established a three-part test for identifying obscenity, defining it as: (1) material that appeals to the prurient interest; (2) material that portrays sexual conduct in a patently offensive way; and (3) material that does not have serious literary, artistic, political, or scientific value. Further the Court identified contemporary community standards as the measure of evaluation. In decisions since *Miller*, the Supreme Court has upheld the constitutionality of zoning ordinances that restrict adult theaters and the use of racketeering statutes against businesses that sell obscene materials.

A separate category is child pornography, which comprises material that is either made using children or, in the digital age, made through the use of technology that makes it appear that the sexual activity portrayed involves children. The former is illegal (under *New York v. Ferber*, 1982); the status of the latter remains uncertain (see *Ashcroft v. Free Speech Coalition* [2002], in which the Court ruled that the section of the Child Pornography Prevention Act of 1996 that banned "virtual" child pornography was unconstitutional, calling it too broad in its scope).

Indecency, a term from radio and television broadcasting, defines a broader category that can be regulated. Indecent material is defined as language or material that, in context, depicts or describes sexual or excretory organs or activities in terms patently offensive as measured by contemporary community standards for the broadcast medium. The Federal Communications Commission administers indecency regulations.

Obscenity laws tend to be enforced in places where there is political support from citizens. This prosecutorial discretion means that material for sale openly in one jurisdiction may not be available in another. However, the availability of mail-order and computer pornography means that graphic, sexually explicit material can now be obtained easily anywhere in the United States. As the enforcement of legal prohibitions has lessened, a formerly underground industry with ties to organized crime has become a routine business with its own trade magazine, *Adult Video News*.

The term used most often in the public debate over sexually explicit material is *pornography*. This term is not rooted in law and has no commonly accepted definition. It is sometimes used as a generic term for commercially produced, sexually explicit books, magazines, movies, and Internet sites, with a distinction commonly made between soft-core material (nudity with limited sexual activity that does not include penetration) and hard-core material (graphic images of actual, not simulated, sexual activity including penetration). In other contexts the term is juxtaposed to *erotica*, defined as material that depicts sexual behavior with mutuality and respect. Pornography, in contrast, is material depicting sex involving domination

or degradation. In laboratory studies of pornography's effects, three categories of pornography have been created: overtly violent, nonviolent but degrading, and sexually explicit but neither violent nor degrading.

Up until the 1970s, debates over pornography pitted liberal advocates of sexual freedom against conservative proponents of traditional sexual morality. That dynamic changed with the feminist critique of pornography, which emerged out of the larger struggle against sexual violence during the second wave of the women's movement in the 1960s. Feminist critics argued that discussions of the issue should focus not on questions of subjective sexual mores but on the harm to women. Pornography, they claimed, harmed all women, not just those used in pornographic material.

SEE ALSO *Censorship; Eroticism; Feminism; Profanity; Regulation; Sexuality; Supreme Court, U.S.; Violence*

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Robert Jensen

OBSERVATION, PARTICIPANT

Participant observation was introduced into anthropology at the beginning of the twentieth century when Bronislaw Malinowski (1884–1942) challenged the traditional paradigm of researchers conducting their studies from the veranda of a missionary station, by taking accounts from individuals rather than observing situations firsthand (Wax and Cassell 1979). He exhorted his colleagues to conduct fieldwork in situ, using participant observation. This technique was used by Malinowski in his studies of the Trobriand Islands (Malinowski 1922, 1935, 1948) "to grasp the native's point of view, his relation to life, to realize *his* vision of *his* world" (Malinowski 1922, p. 25, emphasis in original). Participant observation involved a field trip of one or two years, working in the native language as a member of the community being studied. Yet Malinowski's diary illustrates the difficulties in living up to his own demands as he had identified the ideal conditions in which to conduct participant observation, while many problems needed to be resolved in the field (Malinowski 1967).

This observational approach was taken up by many anthropologists in classic studies including E. E. Evans-Pritchard (1902–1973) on the Nuer (1940) and Margaret Mead (1901–1978) in New Guinea (1977). Since the 1960s, anthropologists have "come home" to research their own societies using participant observation to examine urban settings. Harry Wolcott (1973, 1982) studying elementary schools perceived the principal as if he were the chief of a small tribe. Sociologists have taken a similar approach, studying schools (Ball 1981; Burgess 1983), factories (Pollert 1981; Beynon 1973), hospitals (Roth 1963), and new religious movements (Barker 1984, 1987; Zablocki 2001). In sociology, the work of Robert E. Park (1864–1944) and the Chicago school (Park 1952) used observational methods to study homeless men, street-corner gangs, and delinquents. Like the social anthropologists, the Chicago sociologists were strangers in their own society; they were involved but also detached. An observational approach was also used in community and locality studies in the United States and in Britain (Lynd and Lynd 1929, 1937; Warner and Lunt 1941, 1942; Warner 1959; Frankenberg 1957; Stacey 1960; Kluckhohn 1940).

The hallmarks of participant observation involve the researcher living in the community being studied, participating with individuals, observing and talking with them and interpreting the situations observed. The researcher is the main instrument of data collection, and shares in the lives and activities of those being studied by learning their language and interpreting their behavior (Becker 1958). Participant observation involves examining social behavior as it occurs rather than as it is reported through interviews and questionnaires.

Much has been written on the roles used by the participant observer (Adams and Preiss 1960; Bryman and Burgess 1999; Gans 1999). Participant observation can be formal or informal, concealed or revealed, and can involve complete participation and complete observation. These ideal types have been extended by R. Gold (1958) and Buford Junker (1960) into four major roles: (1) the complete participant, (2) the participant as observer, (3) the observer as participant, and (4) the complete observer.

The *complete participant* rarely reveals that research is being conducted because the researcher does not wish to influence the conduct of the activities being studied (Festinger et al. 1956; Humphreys 1970; Homan 1978). However, in these circumstances it is difficult for the participant observer to pose questions. This puts the researcher in the role of spy and makes it impossible to distinguish everyday roles from research roles. There is also a danger of "going native" by failing to question the

activities observed (Murray 2003). Because this role infringes the principle of "informed consent," it is rarely used. The *participant as observer* role involves researcher and researched being aware that their relationship stems from research activity (Roy 1970). The researcher is involved in the social situation but also detached (Cohen 2000). This role is most frequently used. The *observer as participant* consists of the observer making the research purpose clear from the start of the investigation, but there is no intense relationship with those researched (Schatzman and Strauss 1973; Hong and Duff 2002). Finally, the *complete observer* role entirely removes the researcher from any form of participation so that the purposes of the research are not revealed. All four roles are used interchangeably and can assist or impede data collection.

The role of the participant observer is influenced by his or her membership characteristics (Delaney 1988). Age and gender will influence access to groups (Whyte 1955; Patrick 1973). Gender, ethnicity, and social class will also influence the perspective from which data are collected and in some instances access will be granted to, or withheld from, certain individuals in a social setting (Golde 1970; Wax 1979; Roberts 1981; Easterday et al. 1977; Liebow 1967; Bell 1999). Participant observation also involves selection (Arcury and Quandt 1999). Many participant observers use informants in their studies to take them into social situations, explain the context in which observations occur, and provide a perspective on the social world (Casagrande 1960; Gallmeier 1988). Participant observers need to consider how informants are selected as they influence data collection (Cohen 2000).

Participant observers record data and keep detailed field notes (Lofland 1971, 1974; Schatzman and Strauss 1973; Burgess 1982, 1984). Substantive field notes provide a record of the observations, conversations, and interviews that take place (Humphreys 1970). Methodological field notes illustrate the research process and record the personal impressions of the researcher (Geer 1964; Murray 2003), the impact of roles upon data, the selection of informants and relationships with them, and an analysis of research experience. Analytic field notes record concept development throughout an investigation and contribute to data analysis and the written narrative that constitutes the article or monograph produced (Glaser and Strauss 1967; Glaser 1978; Atkinson 1990; Ashworth 1995).

Several problems have been identified when conducting participant observation. Researchers must always remember that they are located in a social setting for the purposes of social science. They are involved and yet detached. This will help them to overcome the risks of overidentifying with other participants and "going native" in the setting by no longer questioning the actions and activities that are observed. The researcher needs to collect data that are reliable and valid (Shaffir and Stebbins 1991). Ethical problems are also frequently raised for the researcher through being placed in a marginal role with the result that stress and anxiety have to be managed throughout a study. This is frequently the case in covert studies where the researcher is unable to take notes or to use a range of other methods of research and often violates principles of informed consent, privacy, and confidentiality (Burgess 1989; Lauder 2003). The participant observer therefore needs to manage the study by being aware of the problems encountered in the research process by engaging in critical self-reflection of the research experience (Bourdieu 2003) and by bringing the study to a successful close.

SEE ALSO *Anthropology; Evans-Pritchard, E. E.; Malinowski, Bronislaw; Mead, Margaret*

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Robert G. Burgess

OBSESSION

The term *obsession* is used quite liberally in current popular vernacular to indicate an intense interest in or preoccupation with a subject. Despite the prevalence of this connotation, psychologists generally use the term to indicate a more severe disturbance in cognition. As defined by the American Psychological Association's *Diagnostic and Statistical Manual of Mental Disorders*, obsessions are "recurrent and persistent thoughts, impulses, or images that are experienced … as intrusive and inappropriate and that cause marked anxiety or distress" (2004, p. 457). This definition indicates that obsessions are identified in part by their effect on the thoughts and feelings of afflicted individuals. That is, obsessions are cognitive in content and result in negative emotions. Furthermore, obsessions are involuntary in nature and may intrude into one's consciousness unexpectedly. Therefore, true obsessions exert a measure of control over the individual that nonpathological obsessive thoughts do not. Obsessions can have a profound impact on one's ability to form and nurture interpersonal relationships and can lead to conflict with friends, coworkers, and family.

Delineations between normative behavior and abnormal obsessions can be somewhat difficult to ascertain. Showing an enthusiastic interest in a particular activity, topic, or person need not reflect psychopathology. Likewise, persistent worries about realistic problems do not qualify as obsessions. However, when such a thought occurs at a very high rate and is associated with significant distress to oneself or others, it is more likely to be considered an obsession. Differentiating obsessions from normative behavior also requires that one consider the developmental stage of the individual. For example, although it is not uncommon for young children to develop intense preoccupations with or fears of specific objects or interests, such behavior would be more worrisome in older individuals. Landmark studies by researchers in the 1970s and 1980s demonstrated that many people experience intrusive thoughts in the absence of any psychological impairment (e.g., Rachman and de Silva 1978). Therefore, the presence of unwanted thoughts alone neither qualifies as obsession nor confers a risk factor for mental disorder. Furthermore, marked emotional distress must accompany the thoughts in order for them to be considered obsessions. These emotional reactions can range, though many people report feeling anxious when confronted with obsessive thoughts.

Among the psychiatric disorders most relevant to obsessions are obsessive-compulsive disorder (OCD), body dysmorphic disorder (BDD), eating disorders, and delusional disorder. Individuals with obsessive-compulsive disorder usually have both obsessions and behavioral symptoms called *compulsions*, though an obsession-only subtype exists as well. Compulsions are ritualistic actions performed to neutralize the anxiety and distress created by obsessions. For example, a patient with obsessions about contamination may exhibit compulsive hand washing, and a patient with obsessions about harm may exhibit compulsive checking behavior. Individuals with body dysmorphic disorder have persistent unwanted thoughts about a perceived defect in their physical appearance. Common obsessions include concerns about parts of one's body being misshapen, abnormally sized, or otherwise unattractive. Like obsessive-compulsive individuals, people with BDD also exhibit compulsions, such as repetitive grooming behavior. Researchers have linked obsessions to psychotic disorders such as schizophrenia and delusional disorder. A key feature of such disorders is that the afflicted individual suffers a severe impairment of his or her ability to experience rational thoughts and perceptions. If these irrational thoughts become intrusive and persistent, then one can be said to be experiencing obsessions. Eating disorders have been associated with obsessions, in that afflicted individuals often have persistent uncontrollable thoughts about food, dieting, body image, and exercise.

Obsessions can also affect one's propensity to pursue and maintain social relationships via maladaptive means, such as stalking. Stalking is defined as the deliberate following and harassing of others, and victims are most commonly former intimate partners or celebrities. Although many individuals experience a desire to maintain contact following the dissolution of an intimate relationship, those who do so by threatening means or who act on uncontrollable thoughts about the loved one may meet criteria for stalking behavior.

The treatment of obsessions differs based upon the specific disorder in which the obsessions are couched.

Psychotherapeutic techniques are often augmented by medication, as in the case of OCD and BDD, or may serve as a primary means of treatment, as in psychotic disorders. For individuals with OCD, cognitive-behavioral therapy has proven to be more effective than other forms of talk therapy. The primary technique used in this therapy as it pertains to OCD is called *exposure and response prevention*. In this method, individuals are exposed to stimuli that raise anxiety and provoke obsessions. They are instructed to tolerate this anxiety and distress without performing any neutralizing compulsive behaviors. Although patients may experience a greater deal of distress at the onset of treatment, over time obsessions wane as individuals learn that they can tolerate the anxiety without performing a compulsion. Ideally, the obsessions themselves lose potency and become less impairing. This technique is also used to treat BDD in that patients are exposed to their obsessive body concerns and prevented from performing behaviors that combat anxiety. For example, one might be prevented from applying makeup, checking mirrors, or skin-picking if these are repetitive and anxiety-reducing strategies used by the patient.

Much of the research on the biology of obsessions has been conducted by examining individuals with OCD. Basal ganglia abnormalities are the most commonly reported structural correlates of the disorder. More specifically, the head of the caudate nucleus and the orbital gyrus may play a prominent role in the dysfunction. These structures are deep below the cerebral cortex and are implicated in the regulation and coordination of movement. In terms of neurotransmitter dysfunction, both the serotonin and dopamine systems have been implicated in OCD. Pharmacological treatments for obsessions include drugs that target the serotonin system and increase the amount of this neurotransmitter available in the brain. Serotonin reuptake inhibitors, such as clomipramine or fluoxetine, have been associated with both symptom reduction and improved quality of life for patients with both OCD and body dysmorphic disorder (McDonough and Kennedy 2002; Phillips 2002). About 40 to 60 percent of obsessive-compulsive patients report significant improvement from using a drug of this type. Combining these drugs with antianxiety drugs or neuroleptics may also be beneficial for patients, depending upon the initial response to serotonin reuptake inhibitors.

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Amy Mariaskin

OBSESSIVE-COMPULSIVE DISORDER

Obsessive-compulsive disorder (OCD) is an anxiety disorder characterized by recurrent and intrusive obsessions and/or compulsions that are excessive or unreasonable, are time-consuming, and cause marked distress for the individual and/or significant impairment in global functioning. *Obsessions* are defined as recurrent and persistent thoughts, impulses, or images that are intrusive and inappropriate. *Compulsions* are defined as repetitive behaviors or mental acts that are performed in response to an obsession or according to rigid rules in order to prevent or reduce distress.

Common obsessions seen in individuals suffering from OCD are fear of contamination from germs, dirt, and environmental toxins; doubts about safety—having harmed the self or others; the need for symmetry, exactness, and order—having things "just right"; fear of making mistakes and acting socially inappropriate; intrusive sexual thoughts or urges; excessive religious or moral doubts—having "forbidden thoughts"; and the need to tell, ask, or confess. Common compulsions include washing and cleaning, checking, ordering and arranging, hoarding and collecting, repeating, touching, praying, counting, reassurance seeking, making mental lists, and retracing past memories.

People with OCD are sometimes overwhelmed by their disturbing obsessions, which seem uncontrollable and cause intense anxiety. To reduce the discomfort generated by the obsessions, an OCD sufferer avoids the feared situation and/or engages in compulsions repeatedly and ritualistically, which may relieve the discomfort but only temporarily. This pattern eventually develops into a vicious cycle of obsessions and a complicated web of compulsions. However, not all people with obsessions perform compulsions.

About 2 to 3 percent of Americans, as many as seven million people, have OCD at some point in their lives. OCD can happen to anyone and usually begins in adolescence or early adulthood, but the disorder can also occur

in children. Seventy-five percent of those who develop it show symptoms by age thirty. OCD starts earlier in boys than in girls. In adults, men and women are affected in equal numbers. In some cases, OCD begins after a trauma. Cases involving the interplay of OCD and post-traumatic stress disorder (PTSD) precipitated by trauma need to be treated by addressing both disorders. OCD may co-occur with conditions such as Tourette's syndrome, attention deficit disorder, other obsessive-compulsive spectrum disorders, and other anxiety disorders. Depression is often a secondary symptom to OCD.

Like many psychiatric disorders, OCD appears to result from a combination of biological and psychological factors. Some people may have a biological predisposition to experience anxiety. Research suggests that abnormal levels of the neurotransmitter serotonin may play a role in OCD. Brain scans of OCD sufferers have revealed abnormalities in the activity level of the orbital cortex, cingulated cortex, and caudate nucleus. OCD tends to develop when these biological factors are combined with a psychological vulnerability to anxiety. Some individuals may have learned that the world is a potentially dangerous place over which one has little control. This learned belief of danger is then overvalued and misattributed to one's lack of control over the environment.

OCD can have disabling effects on a sufferer's life. Individuals with severe cases of OCD may need hospitalization to treat their obsessions and compulsions. People with OCD must allow a great deal of extra time to complete seemingly routine tasks. Individuals may avoid going to certain places or engaging in certain activities due to their own embarrassment about their compulsive behavior. Furthermore, family members of individuals with OCD may feel anger, frustration, and/or guilt when the sufferer's compulsive behaviors interfere with family functioning. OCD is a chronic illness that, like other psychiatric illnesses, has periods of exacerbation followed by periods of relative improvements, though a completely symptom-free interval is generally unusual. With appropriate treatment, most sufferers show considerable improvements.

Exposure and response prevention (ERP), a form of cognitive-behavioral therapy, is the most effective type of psychotherapy for OCD. Essentially, OCD sufferers are repeatedly exposed to those anxiety-provoking thoughts and situations that they fear, but are prevented from engaging in their compulsive rituals and avoidance behaviors. The basis for ERP allows an individual the opportunity to learn that simply tolerating the obsessions without avoidance or compulsions will gradually lead to reduction in anxiety and extinction of obsessive fears. In turn, the occurrence of obsessions is reduced, and the vicious cycle eventually dissipates. Intensive ERP alone is often effective enough for many individuals with OCD.

OCD treatment using certain medications may be beneficial, but generally is not as effective as intensive ERP. Medications considered for the treatment of OCD are usually antidepressants known as selective serotonin reuptake inhibitors (SSRIs), which are often effective without severe side effects. These SSRIs, which include fluvoxamine (Luvox), fluoxetine (Prozac), sertraline (Zoloft), and paroxetine (Paxil) increase the serotonin available in the brain. Clomipramine (Anafranil), a tricyclic antidepressant, is another Food and Drug Administration–approved OCD medication that is more effective than SSRIs but has unpleasant side effects. In more resistant cases of OCD, an SSRI and clomipramine may be combined. Finally, although psychotherapy using ERP is commonly integrated with the use of medication, this treatment combination has not been established as generally superior to intensive ERP alone.

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Eda Gorbis

OCCAM'S RAZOR

Occam's Razor (Ockham's Razor) is also known as the Law of Economy, the Law of Parsimony, or the Principle of Parsimony. It says "entities are not to be multiplied beyond necessity" (*Entia non sunt multiplicanda praeter necessitatem*). Another form of the principle is "plurality should not be posited without necessity" (*Pluralitas non est ponenda sine necessitate*).

The principle claims that to explain something, all competing explanations should be "shaved" away until only the simplest remains. When applied to the construc-

tion of theories explaining a phenomenon in the event that competing hypotheses provide contradictory explanations, the one that uses the least theoretical assumptions is probably the more accurate. If a detective is reconstructing the facts of a murder, the "theory" of the crime will be the one that best fits the facts and is usually the simplest hypothesis. This principle agrees with the philosophy of science's understanding that nature's character is simple.

The idea of parsimonious simplicity is found in limited form in the works of Aristotle. It was championed by William of Ockham (c. 1280–1349), after whom the term "Occam's Razor" was named. It was also used by Galileo Galilee (1564–1642) when discussing the data describing the orbits of the planets in support of the Copernican model.

Opponents of Occam's razor proposed anti-razors which say where fewer entities do not suffice, posit more. For example, in biblical textual analysis, if a scholar is faced with variant readings from different manuscripts the problem is which variant is the one closest to the original autograph of the biblical writer? The general rule, in the absence of evidence to the contrary, is to choose the more complicated reading. The reason is that a few scribes and others who copied the thousands of surviving manuscripts sometimes tried to "correct" an apparently unclear, complicated reading by "simplifying" it.

Occam's razor is used in philosophy, learning theory, econometrics, public policy choices and other disciplines. In public policy choices the principle is used by analysts to show that self-interest motivates voters and that the desire for reelection motives legislators, both of which are the simplest explanations for voter and legislator behavior.

Econometrics uses Occam's razor in labor economics, financial operations studies, resource allocations, and other areas as an aided method for discovery, problem solving, or learning. It is applied as the principle that what works well and is simple will probably work best in decisions concerning poverty funding for the developing world.

Currently Occam's razor is a characteristic of alife (artificial life) studies of ecological systems. Alife uses computers, simulations and other techniques in an information systems "bottom up" approach to study the ecology associated with living organisms and how they interact with their environment.

Some anti-razorists reject Occam's razor as inadequate to explain complicated phenomena. The facts of experience tell them that a complicated model may require a complicated explanation, while at other times simplicity is the most effective.

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Andrew J. Waskey

OCCSCORE

SEE *Occupational Score Index (OCCSCORE).*

OCCULT, THE

Properly speaking, *the occult* refers to a body of traditions concerning religious practices preserved and practiced outside of organized religions. It includes alternative means of inducing religious ecstasy, contacting supernatural beings, healing, and foretelling the future. The word itself derives from a Latin term *occultus*, meaning something "covered over" or hidden from ordinary view. In this sense, it has long been used in the sciences—for example, to refer to symptoms not easy to detect, as in *occult carcinoma*. In the 1500s the term was first extended to abstract ideas that were difficult for the uneducated mind to grasp. By the mid-1600s, it had come to refer to esoteric practices, such as alchemy and astrology (the *occult philosophies*). The term *occult* soon came to imply a body of knowledge, including mastery of magical rituals, passed down in secret by a select group of masters.

In modern usage, the term is often linked to or even confused with the term *cult*, which is (as popularly understood) a group that practices a potentially dangerous religion. However, the terms are not etymologically related: *cult* is derived from the Latin verb *colere*, meaning to plant and care for crops (whence the related terms *cultivate* and *culture*). Nevertheless, even in ancient times occult religions were often defined as dangers to the state, and their followers liable to persecution.

For instance, when the Bacchanalia, a Greek mystery religion, was introduced into Italy in the second century BCE, the Roman Senate responded with an investigation. According to Livy's *History of Rome* (Book 39), they learned that its agenda was to entice large numbers of adolescents from noble families to engage in "secret and nocturnal rites" of promiscuous sex and debauchery, then use them to overthrow the state. Its secrecy was maintained, supposedly, by murdering those members whose loyalty was suspected, in some cases so discreetly that "not even

the bodies could be found for burial." Similarly, in the second century CE, the early Christian church was persecuted because it was suspected of holding ritual sex orgies and baby sacrifices, motifs that have remained part of contemporary legends about "the occult" to this day.

In the seventeenth century, the rise of fraternal organizations such as the Rosicrucians and Freemasonry led to a widespread interest in esoteric mystical traditions among intellectuals. A series of pamphlets published in German from 1614 to 1616 described the "Rosicrucian Fraternity" as an occult organization, founded by one Christian Rosencreutz, who had allegedly obtained mysteries of nature and the gift of curing diseases from Arabian magi. The original pamphlets may have been a hoax; nevertheless, from this point on many groups emerged, offering mystical knowledge and access to superhuman powers to those willing to undergo initiation. The British historian Frances A. Yates (1899–1981) located a reference to such a group in a Scottish poem dated 1638:

> For what we do presage is not in grosse,
> For we be brethern of the Rosie Crosse;
> We have the Mason Word and second sight
> Things for to come we can foretell aright.
>
> (YATES 1972, P. 211)

This is the earliest known reference to the fraternal organization of Freemasonry, which claims to maintain occult knowledge about the nature of God and the universe, deriving from the architects of Solomon's Temple in biblical times. Certainly one of its early claims was the ability to give "second sight," or the gift of divining the future. In any case, the Masonic movement that developed during the next century cautioned its initiates to keep its secrets with a solemn oath, inspiring many sinister legends about their true practices.

Such fraternal secret societies inspired many social panics from the 1600s onward, but they also influenced the revival of esoteric magic in the nineteenth century. Spiritualism, originally based on rural folk practices of divination, became a popular phenomenon among intellectuals in the mid-nineteenth century. This practice, along with the rituals of Masonry, influenced the turn-of-the-century Order of the Golden Dawn. This group, a loose association of academics and seekers in Great Britain, attempted to reconstruct the practices of earlier ceremonial magicians from scattered historical records and details of Masonic and Rosicrucian rituals. The Golden Dawn participants, who included A. E. Waite (1857–1942), the Irish poet William Butler Yeats (1865–1939), and, for a time, Aleister Crowley (1875–1947), published widely on their occult theories.

A generation later, Gerald Gardner (1884–1964) and a circle of friends created a system of rituals based on these speculations that led to the neo-pagan revival, one of the most rapidly growing new religions in the Anglo-American world. A growing body of self-help books published by modern pagans has reintroduced a general public to practices based on these and other occult traditions.

Those aligned with traditional religion have always been antagonistic to such practices, seeing them as spiritually dangerous or even satanic in nature. Naive contact with such powers, many fundamentalist Christian authors warn, could expose practitioners to demonic influence, and could even make them susceptible to cult leaders. However, there is little evidence that the rituals taught by occult movements are, in fact, much different from similar ones preserved in folklore or by non-Western religions. Anthropologist Sabina Magliocco, herself an initiate into a neo-pagan religion, has argued that the occult is a powerful, affirming means of reclaiming "traditional ways of knowing that privilege the imagination" (2004, p. 97). Occult ritual allows the participants to generate and control extraordinary experiences, she concludes.

The occult can best be characterized as a tendency within religious expression that values individual spiritual experience over theology or self-discipline. Often based on a nativistic perspective, it expresses a longing to rediscover an imaginative realm with which contemporary religion has lost touch. The result permits the worshiper to participate directly in the mythological world. Occult practices appeal to those who are bored by the tendency of mainstream religions to channel religious power vicariously through trained specialists. Paradoxically, religions often revive themselves by incorporating elements of the occult into their own practice. In fact, many contemporary charismatic factions within Christianity promote an experience-centered faith that contains elements of divination, spirit possession, and magical healing similar to those taught within occult movements.

SEE ALSO *Magic*

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Bill Ellis

OCCUPATIONAL HAZARDS

Dictionaries as well as legislation generally define occupational hazards in terms of risks that are inherent in certain types of employment or workplaces such as deep-sea diving, cutting timber, mining, high-rise steel construction, high-voltage electrical wiring, using pesticides, and painting bridges. From the perspective of the social sciences, however, occupational hazards are less an issue of inherent dangers in certain types of work than an issue of the dangers that arise from (1) structural conditions, in particular power imbalances between employees and bosses (2) poor working conditions, such as double shifts or overcrowding (3) inappropriate demands made on unsuitable employees, such as children (4) insufficient monitoring of workplace safety.

Work-related risks and illnesses throughout time have been shaped by the forces that shape the nature of work itself. Changing modes of production, shifting economic powers, and demographic changes in the workforce all impact who is injured at work, how and why the injury occurred, and to what extent—if at all—the injury is recognized and acknowledged.

Considering that almost all humans work either inside or outside the home for most of their lives, the field of occupational health has received relatively little attention from the medical profession. Occupational physician Michael Gochfeld notes that medical writers as early as Hippocrates (c. 460–c. 370 BCE) and Galen (c. 129–216 CE) sporadically acknowledged links between health problems and specific occupations (typically mining). The emerging public health movement in the mid-nineteenth century addressed the overall unhealthy living and working conditions of immigrants and slum dwellers. It was only with the rise of labor unions in the early twentieth century that significant legislative and medical notice has been given to occupational hazards.

Throughout the twentieth and into the twenty-first centuries, definitions of, responses to, and compensation for occupational injuries continue to be highly contentious. In the United States, for example, the Occupational Safety and Health Administration (OSHA), the federal agency charged with enforcing safety and health legislation, is considered by many to be underfunded and understaffed (employing less than 2,200 inspectors for over 7 million workplaces). According to industrial hygienist Lisa Cullen, OSHA is as likely to protect the "corporations responsible for maiming and sickening workers" as it is to protect the workers themselves.

In the United States, foreign-born workers increased 22 percent from 1996 to 2000, while fatal injuries among foreign-born workers increased by 43 percent, according to a 2004 analysis published in *Monthly Labor Review.* Oftentimes, the injuries sustained by foreign-born workers are not reported by employers who wish to avoid paying workers compensation benefits. Injuries may also not be reported by workers who are unaware of American policies concerning injuries on the job or fear deportation in the case that they are undocumented. Vernon Mogensen (2005) shows that pursuant to free-market globalization, "The outsourcing of jobs from high-wage to low-wage locales has the effect of transferring relatively safe jobs from developed countries, where safety standards and trade unions are well-established, to more dangerous locales like China, where bonded-, prison-, and child labor is abundant, but both safety and health enforcement and free-trade unions are virtually nonexistent."

As economies have shifted from industrial to post-industrial and from local to global, public and legislative notions of occupational hazards have not kept pace. A popular tendency to focus on dramatic occupational hazards such as coal mining or sky-scraper construction may obfuscate the many occupational settings that are permeated by illness-inducing substances (e.g., chemical pollutants) or job tasks that demand repetitive motions that can cause injury over time. The perils involved in long days spent looking at computer monitors and typing are not the stuff of cinema heroics, but they have become among the most common hazards of the post-industrial workplace. Injuries and illnesses resulting from work in the rapidly expanding service sector are good examples of occupational hazards that rarely merit financial compensation. Nurses' aids often suffer back injuries as a cumulative result of lifting patients, telemarketers experience stress and depression from the steady stream of insults from people they are assigned to call, and the growth of all-night businesses means that more workers are exposed to the hazards of disrupted sleep cycles. For the most part, these conditions are not recognized either via workers' compensation legislation or in the public eye as "official" occupational hazards.

The definition of what constitutes a "workplace" is far from uncontested. Anthropologist and historian Harriet Rosenberg argues that all three aspects of women's domestic labor—housework, motherwork, and wifework—contain potential risks ranging from heavy lifting to lack of sleep and marital rape, yet illness and injury aris-

ing from domestic labor are rarely compensated for or even recognized as injuries on the job.

SEE ALSO *Labor Law; Labor Union; Occupational Regulation; Occupational Safety; Time-and-a-Half; Wages, Compensating; Workplace Relations*

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Susan Sered

OCCUPATIONAL REGULATION

Occupational regulation refers to state approved standards for either being listed as qualified or being licensed to perform certain tasks or jobs prescribed by the government. Standard forms of occupational regulation include licensure, certification, and regulation.

The most restrictive form of occupational regulation is *licensure*. The nonprofit Council on Licensure, Enforcement and Regulation (CLEAR), which is affiliated with the Council of State Governments, refers to licensing as the "right-to-practice," and under such laws it is illegal for a person to practice a profession without first meeting state standards (Brinegar and Schmitt 1992). Licensing standards usually involve detailed educational requirements, statements of good moral character, and a test.

A less restrictive form of occupational regulation is *certification*, in which states grant title (occupational "right-to-title") protection to persons meeting predetermined standards. Those without certification may perform the duties of the occupation, but may not use the title.

The least restrictive form of occupational regulation is *registration*. This form of regulation usually requires individuals to file their names, addresses, and qualifications with a government agency before practicing a specified occupation. The requirements may include posting a bond or filing a fee. The regulation of occupations in the United States and other nations falls under this continuum of less restrictive to highly restrictive forms of government regulation.

In the United States, occupational licensing is a fast-growing form of regulation. During the early 1950s, about 5 percent of the labor force was covered by licensing laws at the state level. By the 1960s, the number of persons working in licensed occupations had grown to more than 10 percent of the U.S workforce, with an even larger number if city and county licenses for occupations are included. The number and percentage of licensed occupations has continued to grow, and data from the Occupation and Employment Survey and the 2000 Census show that approximately 20 percent of the workforce in 2000 was employed in occupations licensed by states (Kleiner 2006).

In 2003 the Council of State Governments estimated that more than 800 occupations were licensed in at least one state, and more than 1,100 occupations were either licensed, certified, or registered. However, only about fifty occupations were licensed in all states. Universally licensed occupations range from doctors, dentists, lawyers, and teachers to barbers and cosmetologists. Occupations that are licensed in some states but not in others include loan officers, respiratory therapists, and electricians. However, cities and counties represent a fast-growing venue for occupational regulation. Local governments regulate many of the construction trades, such as plumbers and electricians, even though state or federal statutes often do not regulate them. There is large variation among the states in licensing occupations. For example, California licenses almost 180 occupations, whereas Kansas licenses fewer than fifty. There are similar variations in the percentage of the occupational workforce that is regulated.

During much of the nineteenth century, few U.S. states required government permission for individuals to work in an occupation. With urbanization and the increasing complexity of tasks, however, occupational affiliation became the dominant association for many workers. Evidence from the academic literature suggests that the quality of services improved when lower-quality purveyors were excluded. Demand for services grew as consumers perceived the regulated services to be of higher quality. Over time, as members of the occupation came to dominate many of the licensing boards, entry requirements tightened and mobility between states and coun-

tries was restricted. Prices for licensed services increased and earnings for practitioners became higher than for comparable occupations with similar levels of human capital investment and experience. For consumers who could afford licensed services, quality rose. One of the major controversies in the area of occupational regulation is whether such regulations in fact raise quality or simply restrict competition.

In most cases, the available empirical evidence shows that licensing causes a rise in prices, but its impact on the quality of services rendered is unclear (Cox and Foster 1990). For practitioners of the service, licensing leads to a rise in wages. For example, switching to a licensed occupation from an unregulated occupation raises wages 17 percent in comparison to switching to an unregulated occupation from a regulated one. On average, working in a regulated occupation raises the wage premium approximately 10 to 12 percent relative to similar unregulated occupations. This value is at the lower end of the range of the union wage impact in the United States. Working in the same occupation in a state that requires licensing raises wages 4 percent relative to an unregulated state. Statistical estimates of the costs of licensing show that this form of occupational regulation reduces output in the United States by less than one-tenth of 1 percent of total consumption expenditures annually. Some argue that this is a small price for the potentially enhanced quality that is generated by occupational regulation.

Regulation of occupations in the European Union focuses on restrictions following entry into an occupation to a greater extent than occurs in the United States (Garoupa 2004). In the European Union, occupational regulations generally limit prices and regulate the structure of organizations of licensed workers. Most occupational entry restrictions also regulate the number of individuals who are admitted to schools that train workers for the regulated specialty. The results from statistical estimates show that licensing has a smaller impact on earnings in the European Union than in the United States. Unlike the United States, nations such as Germany are deregulating many of their previously licensed occupations, suggesting that the practice of occupational regulation can be reversed in response to public pressure.

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Morris Kleiner

OCCUPATIONAL SAFETY

Highly publicized job accidents, such as mining disasters, create the impression that occupational safety is a haphazard enterprise. Although accidents are random events, occupational safety levels are governed by a variety of social institutions and display systematic patterns across time and across different types of industry. Thus, the probability of occupational injuries and illnesses varies in a quite predictable manner even though the occurrence of particular accidents usually cannot be foreseen.

From the standpoint of economic analysis, firms provide specific safety levels by striking a balance between the costs to the firm of accidents and the costs of providing greater safety. The differences across industries in the costs of providing safety account for the higher risk levels of industries such as mining and construction, where eliminating risks is very costly, as compared to safer industries such as banking. Firms will incur these costs to promote safety if they have a financial incentive to do so. The chief sources of the financial incentives that lead firms to provide a safe workplace are wage premiums that they pay to workers on risky jobs, workers' compensation costs, and government health and safety regulations.

The economic analysis of occupational safety dates back to Adam Smith. Workers require higher pay, or compensating differentials, to be attracted to dangerous jobs. This wage premium usually is not in the form of hazard pay but rather is part of the higher overall pay package required to attract workers to risky jobs. In the United States, these wage premiums totaled $229 billion in 2000, or about 5 percent of all worker wages. Studies have documented similar but lower wage premiums throughout the world in countries ranging from India and Taiwan to the United Kingdom.

A useful shorthand puts these wage premiums in perspective: Suppose that the average worker faces an annual occupational fatality risk of 1 in 20,000 and receives about $350 for facing that risk. Put somewhat differently, if there were 20,000 workers facing a comparable risk, there would be one expected death in the group and $7

million paid in wage compensation for risk. Thus, the total wage compensation per expected death is $7 million, which economists often refer to as the value of statistical life (VSL). This $7 million figure is the average VSL estimate based on U.S. studies.

Estimates of the VSL only pertain to the tradeoffs workers make between very small job risks and the wages they require to accept these risks. They do not imply that a worker would be willing to accept certain death for a payment of $7 million, or that a worker would have the resources to pay that amount to avoid the certainty of a job-related death.

Although the incentives that wage premiums for risk provide are often substantial, market forces may not be adequate. Market incentives will fall short if inadequate knowledge of health and safety risks impedes worker decisions. Market incentives also do not capture society's broad altruistic concerns with worker health. Finally, wage premiums alone do not address the insurance needs of injured workers.

As a result, several modes of government intervention have been developed to address these shortcomings. Since the early twentieth century, states have instituted workers' compensation plans that compensate workers for accidents irrespective of where fault lies. The workers' compensation premiums that firms pay totaled $32.9 billion in 2003. These costs create powerful incentives for safety, as firms with better safety records pay lower insurance premium rates. This linkage of premiums to accident-prevention performance is particularly strong for large firms. Statistical estimates indicate that worker fatality rates would be one-third higher than they are now in the absence of these safety incentives.

Beginning with the passage of the Occupational Safety and Health Act of 1970, there has been direct federal regulation of workplace safety in the United States. These regulations have largely taken the form of standards that either specify safe workplace technologies or set maximum limits on exposures to dangerous chemicals. In addition, there are also important informational requirements, such as standards governing the proper communication of hazards associated with various chemicals. Firms are subject to inspection to ascertain if they are meeting regulatory standards, and those firms out of compliance incur fines. The magnitude of these financial penalties has been modest but rising over time, with total fines in fiscal year 2002 equaling $149 million. Most published studies indicate an effect on occupational injury rates on the order of a 2 to 4 percent reduction in the frequency of job injuries, but the increase in penalty levels since the 1990s may generate greater effects on safety.

The net effect of these different societal mechanisms to reduce risk has been a tremendous improvement in occupational safety. The workplace fatality rate has declined steadily over the past century. The workplace fatality risk was ten times greater in 1928 than in 2003, and the 2003 figure represents a 25 percent decline over the preceding decade, though some of that improvement may be due to changes in data reporting practices.

Two contributors to this long-term improvement in safety are noteworthy. First, the rise in societal wealth has increased the value workers and society more generally place on risk reduction. This increased wealth boosts the wage premiums firms must pay to attract workers to risky jobs, thus leading firms to introduce safer workplace conditions to reduce these costs. Greater societal wealth also increases public support for government regulation, which tends to be less pronounced in less advanced economies. Second, technological improvements over time have led to the production of safer technologies and improvements in safety equipment. Consequently, the costs of promoting safety have also declined so that firms can strike a balance between the costs of safety improvements and the costs of a risky workplace that leads to lower risk levels.

These differences in wealth and technologies also contribute to differences in safety levels across countries. International differences in workplace safety levels and regulatory regimes are to be expected given differences in societal wealth. Less advanced countries also may lack access to modern, safer technologies. However, increased affluence and economic progress in these developing countries is likely to increase their safety levels over time.

SEE ALSO *Occupational Hazards; Occupational Regulation; Risk; Workplace Relations*

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W. Kip Viscusi

OCCUPATIONAL SCORE INDEX (OCCSCORE)

The Occupational Score Index (OCCSCORE) is a measure of occupational reward that is available across decennial census datasets from 1850 to 2000. It was developed at the Minnesota Population Center as part of the

Integrated Public Use Microdata Series (IPUMS). The index is based on 1950 occupational classifications. As a first step in constructing the index, occupation codes for each decennial census dataset were re-categorized into the 1950 classification structure. This yielded one, common occupational classification across all decennial censuses. The IPUMS staff then quantified this common occupational structure using median total income for each occupation as reported in a 1956 *Special Report* published by the Census Bureau. The values for OCCSCORE are presented in hundreds of 1950 dollars. As an example, if median total income for economists was $20,000 in 1950, OCCSCORE would equal 20 for economists in all decennial census datasets.

OCCSCORE has two major uses. First, it provides a proxy for income in decennial censuses prior to 1960 that lack individual income data. Second, it provides a consistent measure with which to compare labor market outcomes from 1850 to 2000. However, OCCSCORE has four major shortcomings. First, it does not account for changes in occupational hierarchy across time. For each decennial census dataset, OCCSCORE conveys the rank ordering of occupations by income in 1950. However, the actual rank ordering of occupations likely changes over time. Second, the index does not account for variation in income within occupations. For example, in a given decennial census year, two individuals working in the same occupation have the same OCCSCORE value. However, based on items such as tenure and education, individuals with the same occupation may have very different incomes. Third, the index does not account for cost of living differences. An individual working as an economist in San Francisco, California, has the same OCCSCORE as an economist in Omaha, Nebraska. However, their respective purchasing powers are clearly different. Finally, although the IPUMS staff has taken great care when constructing OCCSCORE, re-categorizing occupations into the 1950 classification is problematic. New occupations evolve over time, and the U.S. Census has periodically changed the occupational classification system.

The primary alternative to the OCCSCORE is a set of prestige indices. Prestige indices are typically based on regression models where income and education are used to predict responses to an occupational prestige survey. The predicted values from these models are then used to predict the prestige of an occupation. Unlike prestige indices, OCCSCORE only measures the monetary return to occupations, not status or prestige. Overall, prestige scores have been more widely used in social sciences research, because occupation augmented by information on income and education is thought to be a better indicator of socioeconomic status than just the monetary return to occupation. One disadvantage of prestige indices is uncertainty about models' predictions of prestige.

Overall, OCCSCORE is a useful measure of occupational reward for research using censuses prior to 1960. For research focused only on 1960 or later, however, individual income measures are superior.

SEE ALSO *Socioeconomic Status*

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Jason Dietrich

OCCUPATIONAL SEGREGATION

SEE *Crowding Hypothesis.*

OCCUPATIONAL STATUS

Occupational status is a fundamental measure of social standing that reflects the distribution of power, privilege, and prestige associated with positions in the occupational hierarchy, and is a key measure of socioeconomic status (SES). Occupational status is a popular measure of SES because it can be measured reliably in surveys, is more stable over time than economic measures of SES such as individual income, and better reflects social position over the life course than educational attainment, which typically is achieved in early adulthood (Hauser and Warren 1997). Occupations are defined in the United States by the Bureau of the Census, forming a classification of several hundred categories that is modified each decade to incorporate labor market changes. Various measures of occupational status generally are linked to these census occupation categories.

EMPIRICAL MEASURES OF OCCUPATIONAL STATUS

Key empirical measures of occupational status include occupational prestige scales and socioeconomic indices. Occupational prestige measures are generated from the rankings of occupations by survey respondents on the basis of their relative "prestige" or "social standing" and have shown high consensus among individuals from different social positions, across societal contexts, and over time (Blau and Duncan 1967; Hodge, Siegel, and Rossi

1964; Treiman 1977). An early occupational prestige scale was based on Cecil North and Paul Hatt's National Opinion Research Center (NORC) survey in 1947, but it covered only ninety occupational titles. In 1971, Paul Siegel constructed a prestige scale for the entire U.S. Census occupational classification in 1960, based on surveys conducted between 1963 and 1965 by Peter Rossi and Robert Hodge. An international occupational prestige scale was developed by Donald Treiman (1977) several years later. The U.S. General Social Survey (GSS) used the Siegel prestige scale until a 1989 GSS module designed by Robert Hodge, Judith Treas, and Keiko Nakao was used to construct a new prestige scale for the 1980 census occupational classification (Nakao and Treas 1994).

The Duncan Socioeconomic Index (SEI) and later iterations of the SEI are in greater use today than occupational prestige scales because they are more highly correlated with other variables of interest and better describe socioeconomic differences between occupations (Featherman, Jones, and Hauser 1975). The initial SEI was constructed by Otis Dudley Duncan by regressing the percentage of "good" or "excellent" prestige ratings for forty-five of the 1947 NORC prestige scores on age-adjusted percentages of men in the occupation who completed high school or more and who reported at least $3,500 in 1949 income. Resulting regression coefficients were used as weights to construct an SEI score for each U.S. census-defined 1950 occupation category, with scores ranging from about 2 (ship- and boat-building laborers) to 96 (dentists). Updates to the original Duncan SEI have been constructed for the 1960 (Blau and Duncan 1967), 1970 (Stevens and Featherman 1981), 1980 (Nakao and Treas 1994), and 1990 census occupation categories (Hauser and Warren 1997), and a Standard International Socioeconomic Index of Occupational Status (ISEI) has been developed (Ganzeboom, de Graaf, and Treiman 1992).

Empirical research has shown that in general, race/ethnicity is a stronger determinant of occupational status than gender. Traditional women's jobs have a lower average status than male-dominated jobs, but few women work in extremely low-prestige jobs, resulting in similar average prestige scores for men and women (Acker 1980). By contrast, while some Asian Americans meet or exceed average white SEI scores, African Americans, Hispanics, and American Indians have significantly and persistently lower occupational status (Hirschman and Snipp 1999). Nonetheless, while men and women tend to be found in occupations throughout the occupational status hierarchy, there is more segregation between the occupations done by men and women than between the occupations done by blacks and nonblacks in the United States (Treiman and Hartmann 1981).

CRITIQUE OF OCCUPATIONAL STATUS SCALES

The use of continuous scales of occupational status to measure social standing has been criticized by social-class theorists, who classify individuals or households on the basis of their membership in one of a small number of discrete and broad social classes. The Marxist tradition divides individuals into classes based on their ownership of productive assets in the economic sphere, while Weberian approaches also incorporate dimensions of social honor within status groups and other aspects of lived experience outside the productive sphere, rather than viewing social standing as a product of one's attained education and income. Social-class theorists from across these traditions argue that continuous occupational status scales do not capture the crucial sources of power and conflict that divide social classes (e.g., owners of factories and workers in those factories), or the sense of shared class membership that could lead to collective action (Parkin 1971; Poulantzas 1975). Modern social-class typologies such as Eric Olin Wright's (1977) neo-Marxist model are used to assess how membership in a particular social class, determined on the basis of ownership of productive assets, authority on the job, and skill and training assets, influences key social outcomes such as earnings, attitudes, and life chances. However, recent research maintains that continuous and hierarchical measures of occupational status may be better predictors of these key outcomes than broad social classes in capitalist countries such as the United States and Japan (Schooler and Schoenback 1994). A further addition to the debate are the "new class maps" created by Grusky and his colleagues (Grusky and Sorenson 1998; Weeden and Grusky 2005) that employ disaggregated occupational groupings as a measure of social position preferable to either the traditional "big social classes" or continuous occupational status scales.

SEE ALSO *Blue Collar and White Collar; Employment, White Collar; Occupational Score Index (OCCSCORE); Socioeconomic Status*

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Sarah A. Burgard

OEDIPUS COMPLEX

Sophocles, one of the great Greek playwrights, is best known for his Oedipus trilogy based on the tragic myth of the king of Thebes, who unknowingly slew his own father and married his own mother. When he learns of the truth of his deed, great tragedy befalls him. Some 2,500 years later, Sigmund Freud, the father of psychoanalysis, shocked the scientific world with his then radical ways of treating mental illness through a "talking cure." This cure was based on a theory of personality in which people were driven by sexual and aggressive desires, which were clearly evident in young children. In his early case histories of Anna O, Dora, and Little Hans, for example, he discerned a clear pattern—little children seemed to have sexual feelings toward the opposite-sexed parent and feelings of jealousy and hostility to the same-gender parent that he or she would like to replace. But these children often felt guilt over both the erotic and aggressive feelings that might prompt later neurotic symptoms. Freud framed his theory of neurosis as the "Oedipus complex," named after the fabled story of King Oedipus. Freud would claim that all neuroses were based on this early "family romance," which he claimed was universal.

In Freud's theory of the stages of psychological development, in which the social intersected with the developmental, he postulated that children went through an "oral stage" of dependency and attachment to the caretaker(s) via sucking the breast, an "anal stage" of learning self control, and an "Oedipal stage" in which the young child felt erotic desire for the opposite-sexed parent and resentment to the parent of the same sex whom he or she aspired to replace. Girls felt angry toward their mothers who denied this wish and were thought to have castrated the little girls, who then suffered "penis envy," which today is understood more as based on male status and power than genitalia. Little boys feared that their sexual feelings to the mother would be greeted by a violent expression of paternal revenge, castration, and were left with enduring anxiety over their masculinity. In both cases, the turmoil of the Oedipus complex eventually resolved when the child identified with its parents as role models for its personality and mediators of society's values, which were then internalized as one's conscience—the superego. Henceforth, the child would submit to the internalized voice of authority, repress its desires, and renounce the desire for the opposite-sexed parent. Thus, for Freud, the Oedipus complex was the basis of (1) the superego (conscience) and the guilt upon which civilization depended, (2) the foundation of gender identity, (3) later choices of a mate, and (4) the central core of neurosis.

Freud has been significant for social theory because of his concerns with the emotional side of socialization and development and the applications of his theory to important aspects of social life. In common with many Enlightenment thinkers who embraced a "social contract theory," he saw that passions and desires needed to be restrained in order for people to live together in relative harmony. In his early story of the origins of the Oedipus complex that were evident in primitive incest taboos, he theorized that people once lived in "primal hordes" ruled by a powerful patriarch who monopolized sexual access to the women of his group, including his daughters. When the sons reached puberty, they were excluded from the

group. But, sexually deprived and outnumbering him, they banded together, overthrew and slew the father, and ate his body to incorporate his power. But soon they felt remorse over the deed and henceforth vowed to repress their desires for the sake of joint living. In Freud's theory of civilization, the Oedipus complex was the psychological foundation of civilization. Socially required constraint was maintained by the repression of desire through fear of punishment from within. People experienced this fear as guilt, as much about unconscious wishes as about actual conduct. Renunciation—at the cost of suffering—was the price of civilization that enabled collective adaptation.

Freud saw similar dynamics operating in religion, which he considered an illusion of an all-powerful, benevolent father who gratifies frustrated wishes and provides people with the happiness that actual fathers, and real-life circumstances, typically deny. His theory of group psychology suggested that people were likely to submit to the authority of a father figure to gain his love and recognition. Moreover, the common attachment to the same leader fostered unconscious attachments between group members.

Freud's theories were controversial from the start. He was attacked on scientific as well as moral grounds. His theories have been difficult to test, especially by the "objective" methods typical of social sciences. One of the earliest to examine of the Oedipus complex was anthropologist Bronislaw Malinowski ([1927] 2001), who claimed that among the Trobriand Islanders, where the maternal uncle rather than the father disciplined the (male) child, Oedipal resentment was directed to him, not to the father who had sexual access to the mother. More recent studies shed doubts on Malinowski's findings. Recent French theories such as those of Michel Foucault and Jacques Lacan have recast the theory in terms of internalized discipline mediated through language, while Gilles Deleuze and Félix Guattari suggested that the Oedipus complex is fostered by capitalism to sustain its power.

Today, the Victorian family, with the father as breadwinner and mother as sole, full-time homemaker, has practically disappeared. So, too, has the classical Oedipus complex been rethought. (See Young 2001 for a recent review of the concept.) Many families consist of single parents and children, second marriages with step-siblings, and other configurations. As with any major theoretical framework, over time psychoanalysis underwent changes in theory and practice. For example, the work of Karen Horney, Erich Fromm, and Harry Stack Sullivan stressed social life and interaction. The British "object relations" theories and the "self psychology" of the Chicago school paid more attention to earlier stages of development, with concerns about early attachments and the adequacy of early caretaking and/or the extent to which the infant's emerging self is given empathic recognition. Thus, children need to separate from symbiotic ties with caretakers, which can overwhelm and stifle, while separation and individuation—being on one's own—brings anxiety and uncertainty. Clinicians are more likely to look at how early attachments, resentments, and identification with each parent based on such issues as their desired, if not envied, power. Thus notions of "penis envy" or "womb envy" that are salient in early childhood tend to be based less on anatomy than on the social roles and power of mothers and fathers.

For a number of reasons, psychoanalysis and sociology have been separate realms of theory and practice, though some people have worked at the intersections of the social and the personal; Freud himself offered various speculations. Today, however, those who do work at these junctures are more likely to work within the frameworks of object relations theory or self psychology. For example, Nancy Chodorow (1999) has looked at early gender differences in separation-individuation from early attachments to the mother. Young boys are able to make a more complete separation. Young girls are more likely to retain an attachment and identification with their mother, and thus "mothering is reproduced" in the shaping of their character. Jessica Benjamin (1988) has focused more on the need for recognition of self. Young girls deprived of recognition early in life are likely to seek it at any costs and are prone to masochism and humiliation to gain recognition from a man.

The most important legacy of Freudian theory in general and the Oedipus complex in particular has been to look at the emotional side of child development in general and gender socialization in particular. More sociological theories of socialization and personality development were influenced by Georg Simmel's theory of dyads and triads in which the family structure alone gave rise to tensions and conflicts in which one party, the child, might foster conflict between parents, play off one parent against the other, or join one to gang up on the other. Much of what Freud observed was a result of the emotional aspects of the family structure. Charles Cooley, George Herbert Mead, and the symbolic interactionist traditions looked at language, play, role taking, and institutional aspects of socialization that fostered the "social self," the active "I," and the socially expected "me." These approaches, however, often ignore the very powerful role of feelings and passions in the development and motivation of behavior. While few sociologists have tried to frame the major questions of civilization in terms of the Oedipus complex, some have considered some of the implications of Freud's insights on gender, desire, and morality. For Philip Slater (1970), the repression of erotic desire to the mother, frustrating basic needs for dependency and community, has fostered a lonely society prone to aggression. Philip Rieff ([1966] 1987), on the other hand, felt that Freudian the-

ory undermined the morally based repression that society required to maintain civility and its high culture. More recently, Lauren Langman (2006a, 2006b) has suggested that the macroeconomic consequences of globalization, often experienced as "castration" (powerlessness), have inspired various compensatory strategies such as religious fundamentalisms, which privilege patriarchy and celebrate male aggression.

The nature of the Oedipus complex still fosters lively debate, which will continue as long as people have children whose personal development involves ties to parents and intense feelings, emotions, desires, defenses, and ambivalence, all of which impact the nature of their adult personality.

SEE ALSO *Adolescent Psychology; Attachment Theory; Child Development; Crime and Criminology; Culture; Developmental Psychology; Dictatorship; Foucault, Michel; Freud, Sigmund; Gender; Malinowski, Bronislaw; Maturation; Sexuality; Social Movements; Stages of Development*

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Lauren Langman

OFFSHORE BANKING

The term *offshore banking* has no precise definition and thus means different things to different people. In part, confusion arises because the term is applied to two separate yet related phenomena. The generally accepted view is that offshore financial markets consist primarily of the various segments of the euromarkets, a "wholesale" or interbank market that is used primarily by commercial banks. The most important characteristics of offshore banking markets are their relative freedom from direct regulation and their specialization in wholesale banking transactions. Collectively these markets tend to function as a distribution mechanism for shifting funds from lenders to borrowers or deficit spending units on a global scale. Therefore, the economic rationale for offshore banks is that they perform this distribution function efficiently.

DESCRIPTION AND TERMINOLOGY

The offshore financial market is fully integrated, internally coherent, and global in reach yet is not literally offshore. It is situated in and between different types of financial centers, all of which are in major onshore cities such as London and Tokyo or in tax havens, some of which are called offshore financial centers (OFCs). That has led to some confusion. Intergovernmental bodies such as the International Monetary Fund (IMF) and the Bank for International Settlements (BIS) apply the term *offshore banking* in a more restrictive sense to describe financial activities that take place in an offshore banking sector of an OFC, or a tax haven in colloquial usage, such as the Bahamas and the Cayman Islands. However, only some countries employ the term *offshore sector* to describe a portion of their financial sectors. Two of the best known tax havens, Switzerland and Luxembourg, for instance, do not use that term. Intergovernmental bodies thus apply the term only to those countries. Academic scholars use the term more broadly to refer to all financial activities that take place in the unregulated offshore financial market.

The offshore financial market is not entirely unregulated: It is subject to so-called self-regulation based on market principles by the banks and other financial actors that use that market. The best known among a series of self-regulating agreements was the capital adequacy agreement, or the Basle Concordant of 1988, which was followed by Basle II, whose final accord was issued in 2004. In addition, for the sake of convenience, clearing goes through New York, giving the U.S. government some control over the market.

Transactions usually are thought to be offshore from the perspective of the host country even though the banks that conduct those operations are onshore. Among the reasons for this are the following:

- Some attempt usually is made to separate offshore from onshore banking activities and the rest of the domestic financial system by means of exchange control, regulation, tax incentives, separate accounting procedures, and the like.
- The institutions in the market tend to be classified as nonresident for balance of payments purposes.
- Transactions in these markets have a significant nonresident component. In some cases transactions are restricted specifically to nonresidents, but in other cases resident access to the market is permitted to varying degrees.
- Transactions in the offshore market are restricted primarily to foreign currencies.

SPONTANEOUS OFFSHORE BANKING SITES

There are three routes by which offshore centers are set up: the so-called spontaneous offshore sites, such as London and Hong Kong; international banking facilities (IBFs) such as New York and Tokyo; and tax havens, which include over seventy states. The offshore center in the city of London originally was called spontaneous because it allegedly was created accidentally as a result of attempts by the British government to reestablish London as the center of global financial activities after World War II.

The exact origins of the offshore financial market are in dispute, but it appears to have emerged in a set of fortuitous events. In late 1956, during the Suez Canal crisis and the ensuing run on the British pound, the British government attempted to defend the currency from devaluation by imposing restraints on sterling credits on countries that engaged in third-party transactions in the sterling area and by raising the bank rate from 5 percent to 7 percent. As a result, a number of second-tier merchant banks, such as the Bank of Latin America, that specialized in third-party international loans were faced with complete cessation of their business. In response, they began actively to solicit dollar deposits to use in trade credits to replace sterling credits. They have argued that the British government's rulings explicitly prohibited the use of sterling credits in third-party loans but said nothing about other currencies, specifically American dollars. The British government allowed and perhaps encouraged the merchant banks to turn to American dollars; otherwise they would have gone out of business.

The little-known understanding between the Bank of England and the merchant banks produced a subtle but important reinterpretation of the purview of British sovereignty: It placed dollar transactions, along with all other third-party currency transactions, outside exchange rate regulation, reserve regulation, and any other regulation by the British state. However, because those transactions took place within the territorial boundaries of the United Kingdom, they were sheltered from the regulation of other states; they therefore were, de facto, under no state regulation, or "offshore."

The new understanding was applicable only to third-party transactions, that is, cases in which British banks served as intermediaries between two non-British nationals using dollars or other foreign currencies. To ensure the legality of those transactions, British banks, who soon were joined by branches of American and other foreign banks in London, kept two sets of books: one for onshore financial transactions in which at least one party to the transaction was British and the other for offshore transactions when both parties were non-British.

INTERNATIONAL BANKING FACILITIES

An IBF is a more restricted type of offshore center in which, in contrast to spontaneous offshore centers, companies must apply for a license to trade. The first IBF was the Asian Currency Units (ACUs) set up in Singapore in 1968. The better known IBFs are situated in the United States.

The first New York IBF came about as the result of prolonged and complex battles between the U.S. Treasury, the Swiss government, and a number of Caribbean tax havens. The United States government had tried hard to reregulate the euromarkets in 1979. Failing that and with the active encouragement of the New York banking community, particularly Citibank and Chase, the U.S. Treasury concluded that rather than fight the onset of offshore centers, the United States stood to gain more by encouraging the formation of its own offshore centers. A swift about-face took place, culminating in the establishment on December 3, 1981, of a New York offshore market: the New York International Banking Facilities. A decade later more than 540 IBFs had been established across the United States to take advantage of those cost and tax benefits. New York had the largest number (over 250); California had 100 IBFs, and Florida had 80. However, as a result of their restrictiveness compared with other offshore centers, interest in IBFs waned. The New York IBF spawned the creation of the Tokyo IBF. In 1982 the Hosomi plan was put forward in imitation of the New York IBF to spur domestic liberalization in Japan.

TAX HAVENS

The third category of offshore financial centers is tax havens, of which there were seventy in the first decade of the twenty-first century. Tax havens are centers that offer an array of tax and regulatory incentives for nonresident investors and complete flexibility in the management of foreign assets. There are as many varieties of tax haven

laws as there are jurisdictions, but it is common practice to distinguish among four classes of tax havens: countries where there is no income tax and where foreign corporations pay only license fees; jurisdictions with low taxation, such as Liechtenstein and Jersey; countries where taxes are levied only on internal taxable events but not at all or at very low rates on profits from foreign sources; and jurisdictions that offer special tax privileges to certain types of companies and operations. Crucially, most tax havens maintain strict bank secrecy laws and prevent banks located in their territory from revealing the identity of account holders even to the tax haven government. Many tax havens have created provisions for trusts and other financial entities whose ultimate owners are difficult to identify. For these reasons tax havens are used not only for tax evasion and avoidance, but also for money laundering purposes and other criminal financial activities.

Tax havens are employed by the banking community for a number of interrelated reasons: avoiding current tax, preserving wealth, securing secrecy, avoiding regulation, and gaining easy access to the euromarkets. Banks tend to register high-volume, lucrative wholesale financial transactions through offshore subsidiaries as the financial equivalent of transfer pricing to reduce their tax bill. More important, tax havens are employed to help wealthy clients reduce current tax or preserve wealth or to secure secrecy. In addition, banks are able to avoid domestic regulation by diverting certain activities to their offshore subsidiaries. U.S. banks, for instance, employed offshore subsidiaries in the 1970s and 1980s to access other lucrative financial sectors, such as insurance and mortgages thus avoiding U.S. financial regulations.

Tax havens provide a cheap and easy way for resident companies or individuals to masquerade as nonresidents for euromarkets purposes; hence, a strong symbiotic relationship has evolved between tax havens and the euromarkets. In addition, tax havens permit companies to syndicate their profits worldwide in jurisdictions with zero or nearly zero regulation. Tax havens thus are used to accumulate dividends, interest, and other income. They also are used by multinational enterprises as central points for handling paperwork and preparing and processing trade documents. Many companies depend on tax havens for passage of title to goods to minimize red tape.

For all these reasons, tax havens have been an enormous success. On average 50 to 65 percent of all international banks' net external liabilities were routed through tax havens between 1980 and 2004; approximately 27 percent of all foreign investments by multinational corporations are routed through tax havens. Havens such as the British Virgin Islands (6.7 percent) and the Cayman Islands (2 percent) are among the most important "foreign" direct investors in China; they were second and seventh, respectively, in 2004.

TYPES AND USES OF OFFSHORE FINANCIAL MARKETS

Regardless of the historical and juridical origins of the different financial centers, they tend to be closely linked, with a division of labor among them. The literature distinguishes four types of offshore financial centers: Primary centers such as London and New York serve worldwide clients and act as international financial intermediaries for their market regions; booking centers such as Nassau and the Cayman Islands are used by international banks primarily as the location for "shell branches" to book both eurocurrency deposits and international loans; funding centers such as Singapore and Panama play the role of inward financial intermediaries, channeling offshore funds from outside their markets toward local or regional uses; and collection centers such as Bahrain engage primarily in outward financial intermediation. This hierarchy indicates the degree of specialization and interdependence among offshore centers.

The offshore financial market in the first decade of the twenty-first century included several markets: eurocurrency deposits, eurocurrency bank loans, euro notes, eurobonds, euro equities, and foreign exchange markets. The eurocurrency market grew very fast. According to the BIS, the gross size of the eurocurrency market increased from $US 12.4 billion in 1963 to $US 149.9 billion in 1972, $US 1,517.4 billion in 1982, $US 6,197.7 billion in 1992, and $US 24,026 billion in 2006. According to a BIS survey, average daily turnover in traditional foreign exchange markets is approximately $1,880 billion. Approximately 80 percent of all international financial transactions take place in this offshore financial market (BIS, Locational Banking statistics, 2006).

EFFECTS ON THE WORLD ECONOMY

The offshore financial market is therefore a secondary space for financial operations that has accelerated the transnationalization of the world economy. The development of offshore banking operations should be considered in the broader context of the general process of internationalization of economic activities involving trade. Because offshore financial markets have widened the access of companies to loan markets, it has been argued, they have brought down borrowing costs relative to the underlying level of interest rates. As a result of reduced costs, competition from offshore financial markets has forced the liberalization of onshore markets. As a result, only the imposition by some central banks of non-interest-bearing reserve requirements on domestic bank

deposits remains as a major domestic regulation that favors eurocurrency transactions. Because costs have fallen, companies can borrow in whatever market is most advantageous to them and swap the proceeds for the currency they need.

The apparent lack of regulation and control raises concerns about whether these markets have a capacity to create credit or money beyond the domestic banking systems and the extent to which they have diffused domestic monetary controls. To what extent have they contributed to currency instability? Although offshore finance is distinguished by a relative lack of state regulation and monitoring, there are degrees of regulation and monitoring. Besides the variations among financial centers that were noted above, several agreements reached by various standing committees that meet at the BIS under the aegis of the Governors of the Group of Ten have proved to be successful. The Basle Committee on Banking Supervision is the best known of those committees, and the Euro-currency Standing Committee is the oldest, having been set up in the early 1960s to monitor and assess the implications of the newly established eurocurrency markets.

The most important long-term impact of offshore finance may have occurred elsewhere. The term *offshore* evokes images of the high seas, of a world beyond borders. However, offshore financial transactions are very much onshore, conceived, organized, and handled in the traditional financial centers of London, New York, and Tokyo. Offshore banking therefore is not outside the state system but is a juridical realm marking the differential degrees of intensity by which states apply regulation and taxation. Offshore banking therefore denotes the bifurcation of the juridical space of sovereignty into mutually dependent relative spaces.

SEE ALSO *Banking; Banking Industry; Capital Controls; Capital Flight; Corruption; Drug Traffic; Finance; Financial Markets; Globalization, Social and Economic Aspects of; Money Laundering; Tax Evasion and Tax Avoidance; Taxes*

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Ronen Palan

OGBU, JOHN U.
1939–2004

John Ogbu, one of the United States's foremost educational anthropologists, studied the educational attitudes of marginalized youth, particularly highlighting the underachievement of African American students. Ogbu depicted blacks as being the victims of their own defeatist attitudes that have evolved over years of oppression. His work was and remains controversial.

Born to a farming family in a small village in Nigeria in 1939, Ogbu completed his BA (1965), MA (1969), and PhD (1971) all at the University of California at Berkeley. He was hired into the university's department of anthropology and was promoted to professor in 1980. He died August 20, 2004, at the age of 64.

Ogbu was not the first to stress a victim blame analysis, but his theoretical propositions, written with such sophistication, elegance, and clarity, were easily translated into researchable hypotheses, and this explains why his ideas continue to generate research that both affirm and contest his stance. To Ogbu, low-income and privileged black youths shared a resistance to high achievement that is a result of the legacy of slavery as well as the racial oppression that was particularly acute up to the 1954 Supreme Court *Brown v. the Board of Education of Topeka, Kansas* decision calling for the desegregation of public schools. With the expanding opportunities achieved by blacks as part of the civil rights and black power movements of the 1960s and 1970s, Ogbu saw black resistance turn into an anachronistic coping mechanism (Ogbu 1995a; 1995b). He did not deny the effects of ongoing racism, but he felt blacks should recognize they were misreading the now more open and less oppressive U.S. society. Eschewing notions of genetic inferiority, Ogbu argued that the larger society and the black community itself had to work to help turn black educational attitudes from disengagement to an active pursuit of excellence and hope.

Because Ogbu's theories touched on educational disadvantage found across the globe, his books, chapters, and articles were translated into Spanish, Mandarin, Italian, French, German, and Croatian. Although his analysis

placed heavy emphasis on the educational attitudes of individual children and their parents, his overall perspective was ecological, and he demonstrated that educational attitudes held by children were the result of complex, daily interactions within the family, neighborhood, community, workplace, and nation. Overall, his work reflected strong structural-determinism themes. His *Minority Education and Caste: The American System in Cross-Cultural Perspective* (1978) argued that the same kinds of social divisions between white and black societies in the United States are replicated in caste-society interactions across many cultures. His work with Signithia Fordham (1986) helped popularize concepts such as the burden of "acting white" and "black oppositional identity," and his career culminated with a stunning text, *Black Americans in an Affluent Suburb: A Study of Academic Disengagement* (2003), in which he showed that both low-income and middle-class black youths are hesitant to embrace academic achievement.

Much of Ogbu's research was grounded in small-scale ethnographic studies covering a limited number of participants and a constrained number of research sites. Using large samples collected in schools across a wide range of sites, other researchers have failed to find empirical support for Ogbu's key premises (Ainsworth-Darnell and Downey 1998; Cook and Ludwig 1998; Spencer et al. 2003). Even Ogbu's attempt to link contemporary trends in black education with a "legacy of slavery" has been shown to have no basis in historical fact and research (Anderson 1988; Spencer et al. 2003). It has been suggested that the small scale of Ogbu's research exaggerated the significance of educational attitudes held by only a fraction of black students while overlooking or dismissing attitudes held by the overwhelming majority of students that undercut his pejorative thesis (Foster 2004). To the very end, though, Ogbu held true to his perspective, and he accused his critics of the worst kind of cultural romanticism (2003), although he never produced findings from any large-scale study that refuted his critics' charges. Although the trend in the empirical literature is to move away from Ogbu's theorizing, figures in the popular debate about black achievement attitudes—such as the comedian-turned-social-critic Bill Cosby and the celebrated radio-television commentator Juan Williams—continue to accord Ogbu's work considerable credence (Williams 2006).

SEE ALSO *Achievement Gap, Racial; Acting White; American Dream; Americanism; Anthropology; Culture; Education, Unequal; Inequality, Racial; Oppositionality; Schooling in the USA; Underachievers*

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William E. Cross Jr.

OHLIN, BERTIL

SEE *Heckscher-Ohlin-Samuelson Model; Stockholm School.*

OIL SECTOR

SEE *Petroleum Industry.*

OKUN'S LAW

In 1962 the Council of Economic Advisers (CEA) to U.S. president John F. Kennedy (1917–1963) was trying to persuade him to stimulate an underperforming economy. Council members explained that the actual output of the economy was far below its potential or full-capacity output level. As a result, unemployment was excessive. An economy with high unemployment was not only socially unjust and oppressive, but also wasteful and inefficient. The unemployment rate was only the tip of the iceberg of a depressed economy troubled by enforced part-time work, lost overtime and promotion opportunities, discouraged job seekers, greater poverty, declining productivity, and rising government deficits. While there appeared to be a strong case to persuade policymakers of the benefits of reducing unemployment, there was only conjecture about the magnitude of the likely output and income gains. A more precise estimate of these gains was needed to clinch the argument.

The CEA settled on 4 percent unemployment as consistent with potential output. The issue was then how to use this unemployment figure to work out the value of the gap between actual and potential output that needed to be closed. The economist Arthur Okun (1928–1980), then working for the CEA, found a good shorthand approximation for the complicated interaction between employment and output: there was a three-to-one link between output and the unemployment rate so that each extra percentage point in the unemployment rate above 4 percent was associated with a 3 percent fall in output (or real gross domestic product [GDP]). This then yielded the following relationship:

$$P = A\,[1 + 0.03\,(U - 4)].$$

So if unemployment (U) = 4 percent, then potential GDP (P) equaled actual GDP (A). If U = 5 percent, the estimated gap between what the economy was capable of producing and what it was actually producing was 3 percent of GDP. This then provided an estimate of how much extra output and income needed to be generated to get the economy healthy again.

The relationship between unemployment and output that Okun had discovered was called *Okun's law*. The economist James Tobin (1918–2002) regarded it as "one of the most reliable and important empirical regularities of macroeconomics" (Perry and Tobin 2000, Preface), and it provided a major part of the empirical justification for Kennedy's tax cuts to stimulate the economy (Prachowny 2000). Okun's law did not have precise theoretical underpinnings. It was a widely used rule of thumb. Okun had tried alternative ways to estimate the relationship but always got roughly the same answer, and he was delighted how well it stood up over time.

THE REACTION TO OKUN'S LAW

High-output growth is typically associated with a fall in unemployment as firms hire more workers to produce output. However, output growth must at least cover the natural increase in the labor force and the increased productivity of labor to prevent unemployment from rising. Output needs to grow in excess of this rate in order to reduce unemployment. Yet there may be lags in the relationship so that even if output growth rises, firms may delay new hiring until they are certain that the increased growth will persist. Furthermore, the nature of the unemployment will determine how easily it can be absorbed into new work opportunities. If it is cyclical unemployment (associated with temporary layoffs), then it will be absorbed more rapidly than structural unemployment (associated with jobs permanently relocated elsewhere in other industries or with a different skill mix). Even then an increased labor force participation rate, from those formerly outside the labor force, will mean that unemployment may not immediately fall. The relationship then is a very complicated one, and Okun's law is only a rough forecasting tool.

Okun's relationship will vary from country to country and over time. Empirical studies suggest that the Okun's law coefficient increased over the 1981 to 2000 period compared to the 1960 to 1980 period. International comparisons find that the coefficient varies considerably across countries, with Japan in particular being an outlier, reflecting the different labor market arrangements in that country. Research has also focused on getting better estimates of the relationship using more sophisticated econometric techniques and alternative empirical specifications, and correcting for various biases in the estimation. Other studies have concentrated on breaking the relationship into its component parts or have used different measures of unemployment, such as the constant weighted unemployment rate, to account for differences in the composition of the labor force. Various lagged output measures have often been used. Some studies claim that the output-employment ratio is asymmetric; in other words, cyclical unemployment is more sensitive to falls in output growth than increases. There are even skeptics who dismiss concepts such as potential output, the output gap, and the full-employment target altogether and argue that governments should not be in the business of actively managing the economy.

Paul Samuelson acknowledged Okun as the wisest and most creative economic policy adviser of his time. Edmund Phelps called him the foremost practitioner of macroeconomics in the United States. Okun attempted to translate theoretical ideas and concepts into operational guides or computational shortcuts that would be of direct use to policymakers. His widely used rule of thumb has

remained one of the most enduring stylized facts in macroeconomics. It continues to attract the interest of applied researchers and features in most macroeconomics textbooks, and it is through this "law" that generations of students come across Okun's name.

SEE ALSO *Productivity; Unemployment*

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John Lodewijks

OLIGARCHY

The term *oligarchy* refers to a form of government in which political power is in the hands of a small minority. The word *oligarchy* derives from the Greek word *oligarkhia* (government of the few), which is composed of *oligoi* (few) and *arkhein* (to rule). This definition does not necessarily distinguish oligarchy from other forms of government. Autocracy, for example, can be viewed as a form of oligarchy in which "the few" refers to a single individual, though autocracies, especially when they take the form of dictatorships, have commonly been associated with greater use of coercion. Democracy, some argue, is also characterized by a "rule of the few" because most political decisions are made by a small section of society. The key factor differentiating oligarchy and democracy is the fact that in democracy political decisions are made by representatives who can be voted out of office by the citizens in regularly scheduled elections. Direct democracy, where the people decide on policies without the intermediation of representatives, is an exception. Therefore, it can be useful to think of the different types of government as being located along a continuum that runs from autocracy to direct democracy. Furthermore, oligarchies are not confined to national politics; oligarchies can also emerge in local government (e.g., Hunter 1953) or in other organizations, such as labor unions.

THE IRON LAW OF OLIGARCHY

The most influential treatment of the politics of oligarchy is *Political Parties* (1911) by German social scientist Robert Michels (1876–1936). The focus of Michels's work was the German Social Democratic Party, but his analysis had clear references to other types of social institutions, including national government. Michels's conclusions were highly pessimistic from a democratic point of view. He argued that the necessity of organization for any large-scale social institution would sound the death knell for democratic governance. Famously, Michels went so far as to state, "Who says organization, says oligarchy" (1962, p. 365). The need for organization concentrated political power in the hands of a select few whose position at the apex of the organization served to solidify their standing. In Michels's view, the advantages conferred upon the leaders of the organization eliminated the possibility of democratic control through leadership elections. These advantages included greater access to information, greater ability to communicate with the organization's members, and the opportunity to develop political skills. Combined with the "incompetence of the masses," evidenced by a lack of participation by ordinary members, which Michels saw as being due to the members' lower degree of education, the division of labor, and organizational obstacles, the political power of the leadership was ensured.

Differences in knowledge and education also gave the appearance that the division between the leaders and the led was natural. If democratic government is defined as a form of government that serves the interests of its members, rather than being defined in procedural terms, nothing thus far suggests that democracy is impossible. However, the final component of Michels's theory was that the interests of the leaders and the members would inevitably diverge. As the heads of the organization, the leaders' interests become identified with their institutional position rather than the interests of the organization's members. The leaders' primary concern becomes protecting their position and serving their own ends using the organization as their means.

Despite Michels's pessimistic conclusion about the prospects of democracy, it appears that relatively few governments identified as oligarchic in the literature followed the route he described. Instead, oligarchies have appeared as a consequence of, for example, the devolution of monarchical rule (e.g., in England under King John in the thirteenth century) or the concentration of economic influence (e.g., in Florence around the turn of the fifteenth century and in Chile in the 1830s).

RESEARCHING OLIGARCHY

Since Michels's seminal contribution, there have been few systematic studies of the politics of oligarchy. There are

several reasons for why this has been the case. First, many of the issues raised by Michels are not specific to oligarchy as such but have far wider applicability. Representative government has been analyzed extensively in the context of democratic governments. Similarly, whether ordinary members can control their leaders is taken up in the literature on principal-agent theory. Both issues are at the core of Michels's argument. Second, while the term *oligarchy* is commonly used, there exists no clear, universally accepted definition of *oligarchy* in the literature (Payne 1968; Leach 2005). Most scholars agree that oligarchy involves the concentration of political power in the hands of a minority, but this form of government has few other universally accepted defining characteristics. Third, because oligarchy is not necessarily seen as incompatible with (free) elections, the line between oligarchy and democracy becomes blurred. The most frequently cited factor distinguishing oligarchy from democracy is that admission into the class of oligarchs is restricted in some manner to a subset of the citizenry. The Greek philosopher Aristotle (384–322 BCE) classified oligarchies on the basis of types of restrictions on participation in government, where participation depended on property qualification or heredity (Whibley 1896). South Africa during the apartheid era, where the majority was disenfranchised on the basis of race, serves as an example of another possible type of restriction.

The failure to settle on a definition of *oligarchy* means that comparative studies, such as *The Logic of Political Survival* (2004) by Bruce Bueno de Mesquita, James Morrow, Randolph Siverson, and Alistair Smith, provide perhaps the most general insights into the politics of oligarchies. Rather than classifying governments as autocratic, democratic, or oligarchic, Bueno de Mesquita and his coauthors instead focus on the size of the group that has a say in the selection of the government or leader and the size of the coalition that the government needs to stay in power. Bueno de Mesquita and colleagues find, for example, that the characteristics associated with oligarchies (i.e., smaller coalitions) tend to reduce economic growth and government expenditures but to increase corruption.

The issue of membership in the governing class also looms large in accounts of the decline of oligarchies. J. Mark Ramseyer and Frances Rosenbluth's (1995) account of Japan's Meiji oligarchy highlights two problems an oligarchy must solve to survive: it must prevent the membership from being expanded, and, at the same time, it must provide for rules of succession. Ramseyer and Rosenbluth show that oligarchies may be vulnerable to competition for political influence among the oligarchs, which may induce them to mobilize previously excluded sections of society. For the same reason, oligarchs may be unable to agree on institutions that govern succession within the oligarchy. In the Soviet Union, by contrast, the Communist Party provided institutions that checked the actions of the oligarchs, although the rules guiding succession were somewhat ambiguous (Hammer 1990).

SEE ALSO *Aristocracy; Aristotle; Democracy; Elites; Elitism; Power, Political; Republic*

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OLIGARCHY, IRON LAW OF

Coined by the German sociologist Robert Michels in his 1911 monograph *Political Parties*, the *Iron Law of Oligarchy* refers to the inbuilt tendency of all complex social organizations to turn bureaucratic and highly undemocratic. According to Michels, even the left-wing parties of Western Europe in the pre–World War I era, which were programmatically committed to mass democracy, popular participation, and equality within their ranks, tended to become *de facto* oligarchies. In spite of their revolutionary manifestos and formally democratic constitutions, the labor parties of his day were dominated by demagogic ruling cliques with an interest in the perpetuation and growth of the organization itself rather than in its proclaimed ideological aims. As an especially ironic example, he noted that in a fundamentally democratic

organization such as his own German Social-Democratic Party (SPD)—just as in the traditional conservative parties—only a few people in executive positions actually held power and made all the important decisions. The SPD leaders, Michels argued, came to value their own prominent status and social-mobility rewards more than any commitment to the official goal of emancipating Germany's "industrial proletariat." Inevitably, their actual policies became more conservative and accommodationist seeking parliamentary compromise with the imperial authorities of Wilhelminian Germany in order to preserve the party, rather than endanger it by any confrontation in the streets. Eventually, the SPD leaders gained real legislative power and public prestige, but instead of serving the collective will of the mass membership, they were in fact dominating and directing it. For the numerically small party elite, the SPD as an organization became an end in itself, rather than a means to a revolutionary end: "It is organization which gives birth to the domination of the elected over the electors, of the mandatories over the mandators, of the delegates over the delegators. Who says organization, says oligarchy" (Michels [1911] 1968, p. 365).

Michels based his fatalistic theory on empirical observation. First of all, the day-to-day administration of any large-scale, differentiated bureaucratic organization such as the SPD by the rank-and-file majority was impossible. Given the "incompetence of the masses," there was a need for full-time professional leadership and top-down guidance. In theory, the SPD leaders were subject to control by the rank-and-file through delegate conferences and membership voting, but in reality they were firmly in command. The simple organizational need for division of labor, hierarchy, and specialized leadership roles meant that control over the top functionaries from below was "purely fictitious." The elected leaders had the experience, skills, and superior knowledge necessary for running the party and controlling all formal means of communication with the membership, including the party press. While proclaiming their devotion to the party program of social democracy, they soon became part of the German political establishment. The mass membership was unable to provide an effective counterweight to this entrenched minority of self-serving party officials, who were more committed to internal organizational goals and their own personal interests than to radical social change. Michels also felt that these inevitable oligarchic tendencies were reinforced by a mass predisposition for depending upon and even glorifying the party oligarchs, because the rank-and-file had a basic psychological need for hero-worship: "Though it grumbles occasionally, the majority is really delighted to find persons who will take the trouble to look after its affairs. In the mass, and even in the organized mass of the labor parties, there is an immense need for direction and guidance. This need is accompanied by a genuine cult for the leaders, who are regarded as heroes" (Michels [1911] 1968, p. 88).

The Iron Law of Oligarchy was thus a product of Michels's own personal experiences as a frustrated idealist and a disillusioned social-democrat. His *Political Parties* was based upon an empirical study of the SPD and a number of affiliated German trade unions. He observed firsthand that the ordinary members of these working-class organizations were practically excluded from the decision-making process, which was effectively in the hands of the more experienced and skilled leadership cadres. This sociological analysis made Michels increasingly pessimistic about the possibility of mass democracy, until he eventually embraced the "elite theory" of his Italian contemporaries Vilfredo Pareto (1848–1923) and Gaetano Mosca (1858–1941). In a total break with the past, he also adopted Italy as his new homeland and Italian fascism as his political ideal, becoming one of Benito Mussolini's academic acolytes and favored ideologues.

Democratic theorists have ever since questioned whether the oligarchic tendencies described by Michels's overdeterministic model are indeed so universal, inevitable, and immutable to be labeled an "iron law." Michels's theory has been applied to modern-day labor unions, trying to demonstrate how, as bureaucratic organizations, they have become ends in themselves rather than a means to an end. Critics, however, have rejected Michels's message that "organizational parties" destroy democracy and turn it into oligarchy. The eminent Italian political scientist Giovanni Sartori, for one, argues that Michels may well have formulated an iron law of bureaucracy, but only a "bronze law" of oligarchy, mistakenly seeking "democracy in structures, not in interactions," and ignoring the real difference between democracies and nondemocracies (Sartori 1987, pp. 149–151). In contrast, students of post-Communist politics have noted that too many respondents in public-opinion surveys claim to have the same or even less influence on government today than under Communist rule. In this empirical sense, the Iron Law of Oligarchy is difficult either to confirm or to refute decisively.

SEE ALSO *Bureaucracy; Bureaucrat; Communism; Democracy; Elite Theory; Elites; Fascism; Left Wing; Michels, Robert; Mussolini, Benito; Oligarchy; Organizations; Pareto, Vilfredo; Political Parties; Power Elite*

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OLIGOPOLY

SEE *Competition, Imperfect; Strategic Behavior.*

OLMECS

"Olmec" is the name used to designate an archaeological culture centered on the lowlands of the states of Veracruz and Tabasco on the Gulf Coast of Mexico. Olmec culture, which flourished from 1200 to 400 BCE, was the first complex culture with monumental art and architecture in ancient Mesoamerica (Mexico, Guatemala, and Belize). Later Mesoamerican cultures such as the Aztec, Maya, and Toltec built on the achievements of the earlier Olmec, especially in the areas of social organization, monumental artistic expression, and religious thought.

The hot, humid lowlands of Veracruz and Tabasco had been little explored in the 1930s when archaeologists began to uncover signs of a complex archaeological culture in the area. The initial trait that set Olmec culture apart was the presence of stone monuments that proved to be the earliest examples of monumental art in Mesoamerica. Shortly after these discoveries, archaeologists found examples of monumental architecture in the form of the Mesoamerican truncated pyramid. An early example, from the site of La Venta, rose to a height of 98 feet and was one of the largest buildings in Mesoamerica at the time. Work from the 1960s through the 1990s at the site of San Lorenzo revealed monumental sculpture together with early evidence of a residential palace, complete with a stone drainage system and massive stone columns at the entryway. Major stone monuments also survive at Laguna de los Cerros, a little explored Olmec center. Access to stone in a region with few stone resources must have been a sign of prestige, and the presence of an elaborate palace structure demonstrates that Olmec society was clearly stratified.

Later Olmec also treated access to jade as a principal elite marker. The Olmec traded for the material across a major portion of Mesoamerica, as most Olmec jade is thought to originate in the highlands of Guatemala. While the physiognomy of the colossal heads is sometimes cited as proof of transatlantic contacts, there is no clear archaeological evidence that the Olmec traded with or were contacted by Africans or any other peoples outside of Mesoamerica and Central America.

The iconography of Olmec monumental stone sculpture is varied but may be characterized by its interest in portraying rulership. Colossal stone portrait heads of the rulers were set up in the center of Olmec cities, while the earliest stelae bear the image of humans performing rites clearly associated with rulership in later Mesoamerican cultures. Massive stone thrones also point to the close relationship between monuments and rulership. A particular interest in the depiction of infants is evidenced in both small-scale ceramic and monumental stone sculpture. Other motifs and a set of supernatural beings were shared with peoples all over Mesoamerica from the earliest Olmec times. The Olmec developed hieroglyphic writing before other literate Mesoamerican cultures such as those of Monte Albán or the Maya.

Olmec centers, the largest of which held perhaps 3,000 inhabitants, were based on the highly productive agriculture possible around the waterways of Veracruz and Tabasco. Control of this land may have lead to early stratification, and the presence of extensive waterways eased travel and trade in an area that had no beasts of burden. San Lorenzo, the earliest Olmec center (flourished 1200–900 BCE), as well as its successor, La Venta (flourished 900–400 BCE), fit this pattern.

SEE ALSO *Anthropology; Anthropology, Biological; Archaeology; Pre-Columbian Peoples*

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OLYMPIC GAMES

The Olympic Games are an international sporting event held quadrennially in different venues. The date of inception remains a point of conjecture among historians, but it is generally accepted that the Olympic Games found their genesis in Olympia, Greece, in 776 BCE and survived

in attenuated form until 393 BCE. Inspired by the ancient Greek festival, the modern Olympic Games were revived in 1896 by Baron Pierre de Coubertin, a French nobleman who envisaged that the Games would foster a religion of patriotism by directing the new power of national identity into constructive and peaceful channels. Initially, only amateur athletes were permitted to compete in the Olympics; professional athletes were not allowed to compete until the 1970s when the amateurism requirements were extracted from the Olympic Charter. The revival of the Olympic Games was held in Athens, Greece. The Games attracted a relatively small competitive field, with about 240 athletes competing in 43 events.

In the early years of the twentieth century, the International Olympic Committee encountered an array of difficulties with the hosting of the Games. The subsequent two celebrations that followed the Athens Games failed to command popular support, partly because they were crossed with, and effectively eclipsed by, the World's Fair Exhibitions in Paris (1900) and Saint Louis (1904). The 1908 Games, though originally awarded to Rome, were held in London. The majority of the competing countries selected national teams to participate in the London Games, and the athletes were paraded by nation at the opening ceremony. The Olympic Games had institutionalized the "nation" in international athletics. After the 1912 Olympic Games, held in Stockholm, the Olympic movement entered a period of upheaval. De Coubertin may have seen the Olympics as an agent of international peace in a world moving inexorably toward war, but the ideal of the Olympics as an event that could prevent war proved ill-founded. The Games scheduled for Berlin in 1916 were abandoned because of World War I, and two other Olympiads passed without Games in 1940 and 1944 as a result of World War II.

In the aftermath of World War I, the 1920 Games were awarded to Antwerp as a mark of respect for the Belgian people after the anguish that had been inflicted on them during the war. The 1920 opening ceremony was notable for the introduction of the Olympic flag, the release of doves as a symbol of peace, and the presentation of the athletes' oath. The introduction of the flag, representing the unity of the five continents, and the symbolic release of doves also reflected the idyllic vision of the Olympic movement as standing for international peace and unity.

However, it was also in the interwar period that Olympic sport became symbolic of national struggle, with participants as representatives of their national groups. Throughout the twentieth century, John MacAloon argues, "a nascent athletic nationalism was already undermining the Olympic ideal" (1981, pp. 258–259). A notable instance of this was Adolf Hitler's use of the 1936 Olympic Games to enhance his control over the German populace and legitimize Nazi culture. The opening ceremony designed for those games was a shrewdly propagandistic and brilliantly conceived charade that reinforced and mobilized the hysterical patriotism of the German masses. The Berlin Games have also become closely associated in the popular imagination with the African American athlete Jesse Owens. Against a background of Nazi efforts to manipulate the Games to demonstrate the racial and athletic superiority of the Aryan race, Owens won four gold medals at the first Olympic Games to be broadcast on a form of television. The Berlin Games demonstrated how the hosting of the Olympic Games could be manipulated to provide a benign and uncritical backdrop for the parade of national identity.

Another political incident involving African American athletes occurred at the 1968 Summer Olympics in Mexico City. Two African American track-and-field athletes, Tommie Smith and John Carlos, bowed their heads and raised a black-gloved power salute on the victory podium during the playing of "The Star-Spangled Banner." USA Olympics officials asserted that the athletes should not have used the Games as a platform to air their political grievances, and the two athletes were immediately suspended from the U.S. team and banned from the Olympic Village. Politics was also to cast its shadow over the 1972 Summer Olympics in Munich, West Germany, when members of the Israeli Olympic team were taken hostage by the Palestinian terrorist organization Black September. The terrorists killed eleven Israeli athletes and one German police officer in an event that is conventionally referred to as the Munich Massacre.

The 1980 Olympics in Moscow were arguably the most political in the history of the Games and reflected the extremes of nationalism that had emerged as a result of the renewed cold war struggle. In 1980 the United States and sixty-four other Western nations refused to compete at the Moscow Olympics that year because of the Soviet invasion of Afghanistan. The boycott reduced the number of nations participating to only eighty, including only sixteen Western nations—the lowest number of nations to compete since 1956. The Soviet Union and fourteen Eastern bloc countries (Romania was the exception) retaliated by boycotting the Los Angeles Olympics in 1984.

In the Olympic arena, encircled by flags of various nations, the political symbolism of sport is most evident. Young nations make use of the nationalist symbolism of sport to gain recognition on the world stage; established nations do so to demonstrate their strength and prowess. The media make use of sport to construct a "battle" among nations, giving individuals a public spectacle at which they can cheer on their compatriots. The central

role of the Olympics as a forum where new nations can gain acceptance is also clear from the number of nations taking part. In Antwerp in 1920, twenty-nine nations competed; by the Athens Olympics of 2004, that number had risen spectacularly to 201. The importance of the Olympic Games to cultural unity and national identity lies not only within the event as staged but in the sporting occasion as an international spectacle. Beyond the demonstration of physical strength and skill, Olympic sport as collective ritual, highlighting concepts of leadership and heroism, has become part of the language of nationalism.

SEE ALSO *Aryans; Black September; Entertainment Industry; Hitler, Adolf; Nationalism and Nationality; Nazism; Racism; Sports; Sports Industry; Union of Soviet Socialist Republics*

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ONE-BIRTH POLICY

SEE *Population Growth.*

ONE-PARTY STATES

One-party states, or single-party states, are nation-states where only one specific political party has the monopoly of political power. One-party states are autocratic and nondemocratic political regimes. Examples of one-party nation-states are North Korea, Cuba, and China. In these countries the Communist Party has the legal monopoly of representing the whole of society in politics on the basis of a Communist constitution. Non-Communist one-party states can be found mainly in Africa, but these political systems are mostly linked with weak or failing states, whereas Communist single-party states are combined with a strong state apparatus and a highly centralized bureaucracy.

The main difference between a one-party state and a dominant party state is that one party has the monopoly of political representation of society in the former and a strong party is dominating within a multiparty system in the latter. A single-party nation-state is always a nondemocratic political regime. A dominant party state can be either a democratic regime or a hybrid regime, combining elements of democratic and autocratic political systems. In a dominant party state there is one strong, major political party, which dominates several small and minor political parties. Historical examples of democratic dominant party states are Italy and Japan after 1945 and India after gaining independence from the British Empire in 1947. An example of a hybrid dominant party state with democratic as well as autocratic elements is the Russian Federation under President Vladimir Putin (2000–2007), with "United Russia" as the dominant political party.

One-party states are characterized by one single party representing the whole of society, assuming that there are no particular social interests, only a general and unified political will, representing a dominant and supposedly superior social class, the working class. Communist one-party states like North Korea, Cuba, or China are characterized by long-term autocratic and charismatic leaders such as Kim Il Sung (1912–1994) in North Korea, Fidel Castro (1926–) in Cuba, and Mao Zedong (Tse-tung) (1893–1976) in China. For many decades the one-party regime in all three countries had leaders with a cult of personality, and the nations displayed gigantic portraits and statues to create a larger-than-life public image for their rulers. In the mid-2000s North Korea and Cuba were examples of unchanged Communist regimes with a centrally planned economy. China represents a Communist one-party state, which is changing the economic system from a Communist command economy to a capitalist market economy. One positive aspect of one-party states is the centralization of political power, which facilitates structural changes of the economy toward a free market economy, like in contemporary China. Negative aspects of single-party states are the lack of democratic and human rights as well as the absence of social liberties and political freedom. One-party states can be—due to the lack of democratic checks and balances—irrational actors in international politics, when their autocratic leaders decide

a certain course of foreign policy. The end of the rule of the current dictators in Cuba and North Korea might be a chance for social forces and social movements in these remaining Communist states to commence a transformation toward democracy and a free market economy. China is already on a long march toward a capitalist economy with an uncertain future of its current one-party state.

SEE ALSO *Autocracy; Castro, Fidel; Mao Zedong; Nation-State; Party Systems, Competitive; Personality, Cult of; Totalitarianism*

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ONG, WALTER

SEE *Popular Culture.*

OPEC

SEE *Organization of Petroleum Exporting Countries (OPEC).*

OPEN MARKET OPERATIONS

Open market operations are purchases and sales of securities between a central bank (for example, the Federal Reserve in the United States, the Bank of England in the United Kingdom, and the European Central Bank in most of Europe) and the banking system. These securities are usually government-issued (mostly bonds on government debt), although they can include private and foreign securities, and gold. When the central bank buys a security from a bank it increases the bank's asset position with respect to the central bank. This allows the bank to make more loans to its clients, thus increasing the overall amount of money available to the public. By contrast, a central bank sale of securities has the converse effect.

Banks holding excess asset positions with the central bank can loan these surplus funds to banks with deficit positions. These trades are usually in the form of overnight loans at an interest rate negotiated individually between the parties of the agreement. For example, in the United States such loans are called *federal funds* and the volume weighted average of the interest rate charged is called the *federal funds rate*. In addition, most central banks have standing deposit and lending facilities so that banks that cannot find favorable counterparties can trade with the central bank instead. Standing facilities therefore limit the variability of the overnight rate charged in bilateral trades between banks.

Open market operations allow the central bank to modify the banking system's overall asset position and, hence, to control the average interest rate charged on these overnight loans. This overnight rate then serves as a reference rate for loans at longer maturities. For example, to make a borrower indifferent to the choice between a two-day loan and a one-day loan that is rolled over the next day, the loan rate charged on the two-day loan should be an average of the rates charged on the two one-day loans. Similar arbitrage arguments (with some adjustments for risk and uncertainty about the value of one-day loans in the future) link interest rates at different maturities (often referred to as the *term structure*) with the overnight rate that the central bank manages through open market operations. Ultimately, fluctuations in longer-term interest rates affect investment decisions and the future level of economic activity.

In most modern economies, independent central banks are commissioned with two main responsibilities: (1) the conduct of monetary policy, broadly meant as managing the amount of money in the economy so that it is compatible with price and exchange rate stability, and economic growth; and (2) regulation of the banking and financial systems. The central bank is the banking system's banker (as well as the government's). Its ability to conduct open market operations and modify the overall asset position of the banking system allows the central bank control over the economy's money supply and the overnight interest rate. Insofar as high levels of economic activity can generate inflation and overnight rates are linked through arbitrage to long-term rates (which ultimately determine investment and the overall level of economic activity), open market operations are the main vehicle by which a central bank implements its monetary policy objectives.

SEE ALSO *Banking; Banking Industry; Central Banks; Federal Reserve System, U.S.; Interest Rates; Money, Supply of; Policy, Monetary*

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Òscar Jordà

OPEN SHOP

SEE *Labor Law.*

OPERANT CONDITIONING

Learning is an important topic for the social sciences. It can explain much of development, for example, and can be used in many applied settings (such as educational or clinical). There are various perspectives on learning. One of the most useful involves operant conditioning.

An operant is a voluntary behavior that is used in order to obtain a reinforcer or avoid a punisher. Operant Conditioning uses reinforcement and punishment systematically to facilitate learning. Its unique foci include, first, its focus on voluntary behaviors ("operants"), and second, its emphasis on the consequences of behavior. Other learning theories emphasize antecedents rather than consequences and involuntary behaviors, or reflexes, rather than operants. The Classical Conditioning perspective, for instance, focuses on antecedents and reflexes. The founder of Classical Conditioning, Ivan Pavlov, used a bell as an antecedent stimulus in his well-known research with dogs. These dogs salivated after the ringing of the bell had been repeatedly associated with meat powder. Salivation is of course a reflex. Though this emphasis on reflexes implies that Classical Conditioning may not be as useful as Operant Conditioning, it did influence the development of the Lamaze birthing technique and has been adapted to the systematic desensitization of phobias and other problems that involve physiology and reflexes.

Another perspective, called Social Learning theory, is more consistent with Operant theory than is Classical Conditioning. It emphasizes modeling and observational learning but it recognizes the impact of consequences. A child might observe a hero on television, for example, who is richly rewarded for some altruistic behavior, and although the child watching the television is not reinforced, the child imitates the hero. Observational learning of this sort is sometimes described as "vicarious reinforcement."

Reinforcement makes operant behavior more likely to occur in the future. Punishment makes operants less likely to occur. Reinforcement can be used in an operant procedure known as shaping. Here reinforcement is given to behaviors that increasingly resemble a target behavior, and gradually the individual will in fact display that target behavior. It is sometimes called the Method of Successive Approximation. Fading involves reinforcing one behavior simultaneously with prompts or assistance of some kind. The assistance is gradually withdrawn, or faded, until the behavior is emitted without any prompts. Undesirable behaviors can be eliminated from behavioral repertoires by punishing them. Alternatively, it is sometimes more appropriate to identify the reinforcers that are supporting the undesirable behavior and simply eliminate them. In this fashion, punishment is unnecessary. If behavior is not supported by reinforcement, it becomes extinct. This is the rationale for time-outs; individuals are placed in a setting that does not allow them to receive reinforcement, nor support inappropriate behaviors.

Consequences are not always effective in controlling behavior. Indeed, one of the most important steps when using operant procedures involves the accurate identification of reinforcers and punishers. There are many idiosyncrasies; what controls the behavior of one person often has no impact on another. The effectiveness of consequences is in part determined by the type and amount given, but also by deprivation (hunger), the gradient (the interval between the behavior and the consequence), and the schedule (the number of behaviors that must be emitted to earn a reinforcer). In general, a shorter interval ensures that consequences are maximally effective. Early on it is also important to use a continuous schedule, with a one-to-one ratio (every single instance of the behavior earns the consequence). Larger ratios are useful to program generalization and maintenance. It is typically best to start with a continuous schedule, but then thin the schedule such that the individual may emit two, then three, then five, then ten behaviors to earn one reinforcer. Similarly, variable schedules can be used to ensure that behavior is resistant to extinction. In a variable (or intermittent) schedule the ratio of behaviors to reinforcers fluctuates (3:1, then 5:1, then 2:1, then 7:1, and so on). B. F. Skinner demonstrated each of these operant concepts using highly controlled laboratory experiments, typically with subhuman species.

At one point Skinner drew from operant principles to develop a highly controlled crib for his own daughter. It kept her environment at an ideal temperature, with controlled lighting and visual stimuli. This reflects Skinner's emphasis on environmental control. The environment sometimes influences behavior in ways that one does not even notice, such as visual distraction or temperature, and sometimes the environmental influence takes the form of

obvious consequences to one's actions, such as reinforcers and punishers. Skinner felt that one could retain free will only if one maintained an awareness of the environmental and experiential influences on one's behavior. The apparatus just described is sometimes called a Skinner Box, though that name is also sometimes used to describe the operant chamber in which rats are trained via reinforcement. Operant chambers automatically monitor and reinforce particular behaviors (for example, pressing down on a bar). They provide a high level of experimental control, which was typical of Skinner's work. He felt that objectivity and experimental control were necessary if psychology was to be scientific. He once stated that sciences are only valid if they can "predict and control."

Additional research by Skinner and others has demonstrated that operant conditioning is highly effective when used systematically in educational or clinical settings. In fact, according to Skinner, operant conditioning also occurs spontaneously in the natural environment. Parents, for example, may reinforce or punish behavior without really intending to do so (or at least without relying on operant theory to make their decisions). Skinner's 1948 novel, *Walden Two*, describes a segment of the population that employs operant principles in a kind of utopia. The key idea is that consequences dramatically influence behavior and, as noted above, in order to exercise free will, people should be aware of operants' effects and use them in a systematic and beneficial fashion.

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OPERATION BOOTSTRAP

Operation Bootstrap was a development policy implemented in Puerto Rico after World War II (1939–1945) that achieved rapid industrialization of the island's economic structure. Critics, though, contend that the policy brought about steep agricultural decline and dislocation, large-scale emigration, and increased economic dependency.

Puerto Rico, a colony that the United States took from Spain during the 1898 Spanish-American War, had until World War II an agricultural economy plagued with severe unemployment and poverty. Teodoro Moscoso (1910–1992), the first director of Puerto Rico's Economic Development Administration (popularly known as Fomento), and Luis Muñoz Marín (1898–1980), Puerto Rico's first elected governor, concluded that the best solution to the island's development problems was to promote industrial investments from the United States.

They proposed using tax exemptions, approved by Puerto Rico's legislature in 1947, to entice American corporations to set up factories on the island. Further attractive conditions for corporate investment were low labor costs, laws allowing products to enter the United States duty free, and the security of operating in an American-controlled territory.

Muñoz Marín first used the name *Operation Bootstrap* in 1949 in testimony before the U.S. House of Representatives Committee on Public Lands. "We are trying to lift ourselves by our own bootstraps," he stated. The name, though, was a disingenuous misnomer, in that it metaphorically implied endogenous development when the plan in reality relied upon foreign investment. The more accurate translation for the program's name in Spanish, *manos a la obra*, is "let's get to work."

In order to further its campaign to attract U.S. industrial investments, Fomento employed American advertising agencies, including one headed by David Ogilvy (1911–1999), to create a positive image of Puerto Rico and the idea that the island was undergoing a renaissance. American corporations responded quickly. In its first phase, which lasted up to the 1960s, Operation Bootstrap attracted low-wage, labor-intensive industries, particularly in textiles and clothing. The subsequent second phase attracted more capital-intensive industries in petrochemicals, oil refinement, and pharmaceuticals.

At the high point of Operation Bootstrap's tax-exemption policy in the 1960s, U.S. corporations could operate on the island completely exempt from all federal and local taxes and could repatriate profits tax-free to the mainland. In addition, they were exempt from federal minimum-wage requirements. Both of those conditions have since been modified. Federal minimum-wage requirements were instated on the island in 1976, and in 1996 the U.S. Congress began a ten-year phaseout of Section 936 of the Internal Revenue Code, which gave corporations credits for federal taxes paid on profits gained in Puerto Rico. Thereafter, Operation Bootstrap could only offer corporations exemption from local taxes.

Many officials saw Operation Bootstrap as transforming Puerto Rico into a showcase for what American development policy could do for Latin American countries and therefore as a model or prototype that other Latin American countries should adopt as well. Bootstrap's

importance as a model for other countries became evident in the Cold War 1960s when nearby Cuba adopted an alternative socialist development model. Operation Bootstrap, by sticking to a capitalist strategy that relied upon private investment from the United States, directly countered the Cuban socialist strategy, which relied on state investment and sought independence from traditional American economic domination. That Teodoro Moscoso became the first director of John F. Kennedy's (1917–1963) Alliance for Progress, which was established in 1961 in large part to counter Cuban influence, underscores Bootstrap's importance as an early model for American development policy for Latin America.

Operation Bootstrap's basic proposals of relying on foreign, particularly American, investment and opening up economies to free trade were components of the Caribbean Basin Initiative promoted by the Ronald Reagan (1911–2004) administration in the 1980s as an answer to the 1979 Sandinista revolution in Nicaragua and revolutionary movements in El Salvador and Guatemala. They also became basic principles of the 1994 North American Free Trade Agreement (NAFTA) and attempts to develop a free trade agreement for the Americas.

More than a half century's experience, however, indicates that Operation Bootstrap has had mixed results for Puerto Rico. There is no question that within decades the profile of its labor force changed to approximate that of the United States and other developed countries with proportionately few workers remaining in agriculture, many more in industry, and the majority in services. There is also no question that Puerto Rico's living conditions improved, though they are still far from being at a par with those in the United States.

But Operation Bootstrap also increased the economic dependence of Puerto Rico on the United States, undercutting development of a self-sustaining economy and economic sovereignty. One of the policy's political consequences may well have been to undercut support for political independence, with substantial numbers of Puerto Rican voters believing that the island absolutely needed continued U.S. control for economic survival.

Operation Bootstrap never accomplished one of its promised objectives: to reduce unemployment to tolerable limits. Official unemployment figures remain much higher on the island than in the United States. Because Puerto Rico's labor-force participation rate is comparatively low, hidden unemployment is even higher. Support for the island's unemployed population requires significant transfer payments in the form of food stamps and other welfare aid from the United States. The seeming progress Bootstrap made in lowering official unemployment figures required exporting great numbers of the unemployed to the mainland United States.

As Bootstrap-stimulated industrial investments increased, labor-intensive agriculture declined. Because of improvements in transportation technologies, including air freight, brought on by World War II necessities, it became easier for American farmers to export their surpluses to the island, sell them at low prices, and thereby take markets away from Puerto Rican farmers.

The decline of Puerto Rican farming swelled the ranks of the already large unemployed population, and the growth of unemployment outpaced the creation of Operation Bootstrap's new industrial jobs. A significant proportion of the unemployed then migrated to the United States in search of work. In 1940, before the advent of Operation Bootstrap, 96 percent of all Puerto Ricans lived on the island. That percentage declined steadily as Operation Bootstrap–induced industrialization and agricultural decline progressed. By 1960, it had fallen to 72 percent; by 1980 to 61 percent; and in 2004 the line was crossed with a majority of Puerto Ricans living off the island, the vast majority in the mainland United States. The architects of Operation Bootstrap believed that the island was absolutely overpopulated and actively encouraged this emigration as a safety valve to keep unemployment from being higher than it otherwise would be. For the migrants though, life in the United States has proved to be problematic. Despite having on average higher incomes and less poverty than their island counterparts, their economic conditions remain among the lowest of ethnic groups in the United States, in large part owing to considerable discrimination and ethnic and racial prejudice.

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James W. Russell

OPIUM WARS

Opium Wars is a term referring to two wars that Britain fought against imperial China in the middle of the nineteenth century, presumably over the attempts of the Chinese authorities to stop the growing influx of foreign-

produced opium. The real cause of the first Opium War (1839–1842), also called the "Anglo-Chinese War," was Chinese resistance to Britain's free-trade demands and practices, of which the unrestricted trade in opium was only the most controversial example. Seeking to end high Chinese import duties and other restrictions on foreign trading, the British found a pretext for war when China prohibited the importation of the drug and then confiscated a British shipment of opium.

Opium had long been used in China to treat some ailments, but in the seventeenth and the early part of the eighteenth centuries millions of Chinese from all social classes began to use it recreationally. Britain's East India Company was shipping large quantities of Indian-grown opium to China, which it traded for Chinese tea and other local products. The imperial government was so concerned at the growing number of Chinese opium addicts that in 1799 it forbade its import trade and even decreed the death penalty for illicit trafficking in opium. Despite this legal prohibition, the opium trade continued to thrive, as private traders from Britain and other Western countries, including the United States, made huge profits from selling the extract to Chinese "opium eaters." By the late 1830s foreign merchants were importing into China an estimated 5 million pounds of the illegal drug annually. Opium smuggling had so upset China's balance of trade that its backward economy seemed to be on the verge of collapse. The alarmed imperial authorities made opium possession illegal in 1836 and began to close down the numerous opium parlors.

In 1839 Chinese customs officials seized a shipment of opium that British merchants were planning to market in the seaport city of Canton. In response, Britain rejected the legitimacy of China's opium ban and threatened to use military force if the confiscated opium was not returned to its British owners. When China refused, the British navy shelled Canton and occupied the coastal areas around it, including Hong Kong. The war continued until China was forced to accept the humiliating terms of the 1842 Treaty of Nanking and compensate British merchants for their lost opium. The opium trade continued and even expanded under the generous import-license privileges that the Treaty of Nanking had granted to British merchants. This first of the so-called "unequal treaties" with China also ceded Hong Kong to Britain, opened five coastal cities, including Canton, to British rights of residence and trade, and imposed a very low tariff on British imports under the "most-favored-nation" principle. In 1844 the French and the Americans pressured China into granting them the same trading rights as the British.

The second Opium War (1856–1860) is sometimes called the "Arrow War" because the British, incensed by what they felt were clear treaty violations, used as a pretext to renew hostilities the boarding and seizure of the British ship *Arrow* and the arrest of its twelve crew members for opium smuggling and piracy. This time France joined the British in launching a punitive expedition inland after an initial British attack had been repelled by the Chinese. A combined Anglo-French military raid into China's hinterland led to the signing of the 1858 Treaty of Tientsin. The Chinese imperial court refused to accept the onerous terms of this second "unequal treaty" until another joint Anglo-French expedition captured the capital Peking in 1860 and forced China's total surrender. The Treaty of Tientsin allowed foreign embassies in Peking, a closed city at that time, opened eleven more coastal cities to foreign trading, and completely legitimized the opium trade. It also allowed westerners to travel in the Chinese interior, gave Christian missionaries the right to proselytize and hold property throughout China, and lowered even further import duties on British goods. In 1860 similarly imposed treaties were signed with France, the United States, and Russia.

The Opium Wars marked the beginning of China's century-long subjugation and servitude to foreign powers. The defeated Chinese were forced to legalize the importation of opium, accept unfair and unbalanced terms of foreign trade, open up China's seaports and the Yangtze River to foreign commercial penetration under the so-called "treaty port" system, and exempt westerners from China's local laws and national jurisdiction. So severely curtailed was China's independence in that period that the Chinese still view the Opium Wars as a national disgrace.

SEE ALSO *Colonialism; Drugs of Abuse; Imperialism; Protected Markets; Protectionism; Sovereignty; Trade*

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Rossen Vassilev

OPPORTUNITY COST

The opportunity cost of an economic decision is the value or benefit of the next best alternative to that decision. For example, if a community decides to use part of its budget to reduce classroom size in schools, it cannot use that same money to achieve another priority, such as improving the aesthetics of the downtown area. Meeting concerns of parents and having better educated residents has clear benefits, but the opportunity cost is a more pleasing downtown drawing in tourism or new business. In opting for the former, the town must sacrifice the latter, at least until the town budget expands and there are more resources to accomplish alternative goals.

The concept of opportunity cost is a core element in the field of economics, particularly within the marginal theory of value, where economic decisions are based on maximizing benefits subject to resource constraints. Consumers are said to "maximize utility," choosing the combination of goods that leads to the highest amount of satisfaction possible. However, the choices are limited by the consumer's budget, and the consumer must choose a combination available within the budget constraints that exist. If the consumer wishes to see another movie, two chocolate bars must be given up. The benefit or pleasure obtained from eating the two chocolate bars is the opportunity cost of going to another movie. Similarly, workers are assumed to maximize utility, choosing a mix of income from labor and enjoyment from leisure time that best meets their individual desires, given time constraints. Firms maximize profits by selecting what to produce, how much to produce, and how to produce, subject to resource constraints.

Whole societies also face trade-offs. Existing amounts of land, labor, and other resources, as well as the current state of technology, limit how much can be produced and therefore consumed. If the society chooses to produce and consume more of one good, it must trade off some amount of another good. The opportunity cost of having more of one good is the benefit of consuming the alternative.

Opportunity costs are different from accounting costs, for which only price is considered. A student may view the cost of attending school as the monetary value of tuition and fees, but the tuition and fees are the accounting costs. The opportunity costs include the loss of income and experience of full-time employment, as well as the benefit of other items the tuition and fees could have bought. However, if the parents of the student decide to support her studies by paying her the income she would have earned in full-time employment, the forgone income is no longer an opportunity cost for the student. Instead, the parents may have sacrificed a world tour or a new boat in order to support their child, essentially assuming at least part of the opportunity costs unto themselves.

Opportunity costs include both private and social costs, but individual and collective decisions may not necessarily reflect the social costs. For example, if a firm chooses to invest in a new product line rather than expand its existing line, it is basing its decision on which choice will bring in the most profits given the costs of inputs. If manufacturing the new product results in more air pollution, social costs exist that are born by the larger community. These costs, which may include additional spending on health care and pollution mitigation, are opportunity costs of the firm's decision, even if the firm did not consider them or pay them. The calculation of an opportunity cost is not the sum of all alternatives. If the consumer is watching more movies but eating less chocolate, the opportunity cost is only the pleasure that would have been derived from the chocolate, not the chocolate and the licorice and the popcorn, or any other choice that was not considered. Also, if something is not an option, it cannot be an opportunity cost. If the consumer wants to buy some hunting land that is not for sale, the hunting land cannot be the opportunity cost of deciding to buy a new car.

The concept of opportunity cost is frequently used in public policy debates. A favorite textbook expression of this is the "guns versus butter" debate. A society can choose more guns (i.e., more military spending), but in the context of limited resources, it must give up butter (i.e., spending on meeting human needs). During the military build-up and wars of the George W. Bush administration, many argued that the additional military spending had large opportunity costs. The money could have been used, for example, to provide health care for the uninsured, invest in greater energy efficiency, or a number of other alternatives. The opportunity cost of the spending is the benefit that could have been achieved from the most valued of these alternatives.

SEE ALSO *Choice in Economics; Choice in Psychology; Economics; Marginalism; Microeconomics; Social Cost; Trade-offs; Utility, Objective; Utility, Subjective*

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Anita Dancs

OPPOSITIONALITY

There is a long tradition in the social sciences of examining oppositional behavior. In particular, this work has focused on the ways adolescents act in opposition to a range of authority figures, social institutions, and expected norms of behavior. Whereas much work in psychology focuses on the individual causes and consequences of oppositionality, research in sociology and education tends to characterize oppositionality as a collective cultural response to a structural condition. Debates in these fields focus on whether, as a form of resistance, oppositional culture is productive or constraining.

In one of the classic examples from this field, Paul Willis's *Learning to Labor* (1977) examined how "working class kids get working class jobs" and in particular, what role working-class "lads' " oppositional culture played in the process of social reproduction. Willis (1977) argued that working-class nonconformity and open opposition to the school's achievement ideology, rules, and authority structure functioned both as a critique that reflected lads' understanding of the limited possibility of their being upwardly mobile and simultaneously made such mobility even less likely (1977). *Learning to Labor* highlighted the central paradoxes that have been echoed in related literature in the years since: that oppositionality in various forms can be characterized as resistance and that it reflects a critique of constrained structural conditions (Giroux 1983; Macleod 1995; Weis 1990), while at the same time, youths' oppositional behavior often contributes to the reproduction of their own subordinate racial or class status.

In a related articulation of the idea of oppositionality, Douglas Massey and Nancy Denton (1993) outline what they call a "culture of segregation" that is created by external structural conditions. They write, "An alternative status system has evolved within America's ghettos that is defined in opposition to the basic ideals and values of American society" (Massey and Denton 1993, p. 167). Similar to Willis, oppositional culture here is a rational adaptation to social and economic conditions, albeit one that may also have dysfunctional consequences for the communities in question.

In recent years oppositionality often has been discussed in reference to the work of John Ogbu and Signithia Fordham (Ogbu 1978, 1987, 1990, 1991; Fordham and Ogbu 1986). Focused in part on explaining racial differences in academic achievement, Ogbu argued that discussions of racial minorities in U.S. schools need to differentiate the experiences of involuntary from voluntary minorities. Involuntary minorities are those who have been forcibly incorporated into the United States through colonization and slavery, whereas voluntary minorities are those who have come to the United States through immigration or other voluntary means. Voluntary minorities tend to compare their prospects in the United States to those in their country of origin and thus have positive estimations of U.S. institutions and their prospects within them. In contrast, involuntary or subordinate minorities view their status in comparison to whites, and understand that they face many social, political, and institutional barriers to success. Ogbu hypothesized that, out of their understanding of structural constraint, involuntary minorities would develop an oppositional culture, disengaging from mainstream institutions and limiting the effort they put forth to succeed in them.

Since the 1990s a number of critics have challenged the oppositional culture thesis, arguing, for example, that black students neither possess an oppositional orientation toward education nor reject school as a "white thing" (Ainsworth-Darnell and Downey 1998; Carter 2005; Horvat and O'Connor 2006; O'Connor 1997, 1999; Tyson 2002). For example, James Ainsworth-Darnell and Douglas Downey (1998) use national data to show that African American students frequently report optimistic educational expectations and demonstrate more "pro-school" attitudes than their white counterparts, and that high-achieving students are more likely to be viewed as "popular" among peers. The authors conclude that African American students do not exhibit the habits and styles that are rewarded in school primarily because they do not enjoy the same structural conditions as their white counterparts. Prudence Carter (2005), Karolyn Tyson (2002), Garvey Lundy (2003), and others have suggested that this theory has not given enough attention to the ways that social institutions construct and produce oppositionality, and thus has put too much emphasis on the need for students to change their behaviors rather than focusing on the need for real change within social institutions and social arrangements more generally. In many ways this recent work continues to highlight the key questions within the field: Does oppositionality represent an accurate critique of and resistance to fundamentally unequal social arrangements? Or is oppositionality better understood as a dysfunctional cultural adaptation? These are not merely theoretical questions, because discussions of oppositional culture are central to debates about how to address a whole range of pressing social problems. Should the focus of change efforts be on social institutions and on social inequality more generally, or on the oppositional behavior of certain groups of adolescents?

SEE ALSO *Achievement; Achievement Gap, Racial; Acting White; Authority; Conformity; Culture; Norms; Ogbu, John U.; Protest; Resistance; Social Movements; Values; Working Class*

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OPPOSITIONALITY, SCHOOLING

Oppositional identity refers to any attitudes or behaviors intended to challenge schooling. These attitudes and behaviors range from mild opposition, such as not doing homework or becoming the class clown, to more disruptive opposition, such as defying and striking teachers or walking out of class. The most extreme form of opposition is dropping out of school. The high dropout rates and low academic achievement of racial and ethnic minority and lower-class students is often explained as a result of their adoption of an oppositional identity.

An oppositional stance to school develops because students believe that education will not lead to social mobility or because school requires behaviors that are deemed incompatible with their racial, ethnic, or class identity. Historically, racial and ethnic minority and low-income students have been subjected to discriminatory practices that deny them opportunities for social mobility through education. Knowing that schooling does not lead to social mobility shapes their attitudes toward and responses to school. Since there are scant opportunities for social mobility, they develop an oppositional stance toward school that leads to disengagement and low achievement (MacLeod 1987; Ogbu 1978; Willis 1977). Oppositional identity is a form of cultural inversion in which minority and lower-income students regard certain attitudes and behaviors as "white" or "middle class" and thus inappropriate for their group. Signithia Fordham and John Ogbu (1986) identified speaking standard English, listening to white music and white radio stations, going to the opera, getting good grades, doing volunteer work, going camping, and being on time as "white" behaviors. While subscribing to these behaviors may lead to school success, it also constitutes cultural or racial suicide because it entails the rejection of their culture in favor of white culture (McLaren 1994).

Ogbu refers to the "burden of acting white" as the price that black students pay when they assume these "white" behaviors and do well in school. Fueled by peer-group pressure, fear of being accused of disloyalty, fear of losing friends, and fear of not being accepted by whites,

black students engage in oppositional behaviors that lead to underachievement (Fordham and Ogbu 1986). High achievers run the risk of being perceived as "acting white" or as being "sellouts." Peer chastising can include verbal taunting, ostracism, and physical aggression. To avoid peer harassment, high-achieving students must mask their accomplishments by engaging in some form of opposition, such as hiding or downplaying their grades, clowning or acting crazy, pretending to put little effort into school, or having friends who can protect them. A more socially costly alternative, and one that can lead to social isolation, is to assume a raceless persona, disassociating and disidentifying from their group (Fordham 1988).

Many scholars argue that the effects of the "burden of acting white" may be overstated (Lundy 2003; Flores-Gonzalez 2005). Many students manage to maintain a racial, ethnic, or class identity while being academically successful. Some develop dual identities that enable them to meet peer demands at school and in their neighborhood or to act differently with different peer groups (Mehan, Hubbard, and Villanueva 1994; Horvat and Lewis 2003). Others are immersed in peer networks or academic tracks that foster academic achievement. Furthermore opposition to school is not necessarily the result of peer pressure to underachieve but of structural factors that make schooling a painful and identity threatening experience for racial and ethnic minority and low-income students (Flores-Gonzalez 2005). Discrimination ensures that these students attend highly segregated schools that are usually overcrowded, understaffed, and underfunded. There they are subjected to subtractive schooling, the practice of devaluing the students' culture by administrators and teachers who sort, select, and reward students based on their proficiency with dominant "white and middle-class" culture (Carter 2003; Valenzuela 1999). Students who display minority culture are believed by the staff to be opposing school, which leads to their being further marginalized into the lower tracks and labeled as dumb or troubled and to their punishment (detention, suspension, expulsion) for their lack of knowledge and display of the dominant culture. Prudence Carter (2003) adds that while minority students possess and make use of both dominant and nondominant culture, they often experience difficulty enacting dominant culture. It is their inadequate display of dominant culture that is found problematic and inappropriate by teachers, leading to their negative appraisals. Furthermore one must differentiate between behaviors that are truly oppositional and are intended to challenge or resist some aspect of schooling and behaviors that may be expressions of power or triggered by other issues such as sexism or racism (Giroux 1983).

Adopting an oppositional identity almost always leads to negative consequences, such as low academic performance, grade repetition, detention, suspension, expulsion, and dropping out of school. Yet it can also protect a student's sense of self. Michelle Fine (1991) shows that students who conform to school tend to be more depressed, less politically aware, less assertive, and more conformist than those who take on an oppositional stance. In a stratified schooling system where opportunities are structured to lead most students to failure, developing an oppositional identity may shield students from the negative effects of schooling on their sense of self and may also reinforce their sense of collective identity.

SEE ALSO *Achievement Gap, Racial; Acting White; Conformity; Education, Unequal; Identity; Ogbu, John U.; Racism; Resistance; Sexism; Stratification*

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Nilda Flores-Gonzalez

OPTIMAL GROWTH

Optimal growth theory occupies a central part of modern capital theory and dynamic models of planning, macroeconomics, exhaustible resources, natural resources, development economics, finance, and dynamic games. It originated with a classic 1928 paper by the mathematician Frank Ramsey, who investigated what kind of savings policy (equal to investment) would realize the largest social welfare, defined as the sum total of utilities from current and future consumption flows. Since the choice of capital stock at any point in time can only be based upon the consumption streams the stock can yield in the future, the problem necessarily takes an open-ended form with no finite terminal date for the planning horizon.

A brief and abstract statement of the typical mathematical problem in optimal growth theory follows. Let t denote time in discrete units, $t = 0, 1, 2 \ldots$, k_t the stock of goods at t, and T_t the technology set known at t, composed of pairs of vectors (x,y) such that from stocks x at t it is feasible to reach the stocks y at $t + 1$. A function u_t: $T_t \rightarrow R$ provides the maximum utility $u_t(x,y)$ that is achievable, consistent with the transition of stocks from x to y. Let $\underline{k}$ denote the historically given initial stock. A path from $\underline{k}$ is an infinite sequence $\{k_t\}_{t=0}^{\infty}$ satisfying $k_0 = \underline{k}$ and $(k_t, k_{t+1}) \in T_t$ for each $t \geq 0$. Loosely speaking, a path is optimal if it maximizes $\Sigma_{t=0}^{\infty} u_t (k_t, k_{t+1})$ over the set of all possible paths from $\underline{k}$.

The reduced-form model stated above, developed by David Gale (1967) and Lionel McKenzie (1968), is flexible enough to allow for changing technology and tastes with very liberal interpretations of stocks, including environmental factors, fixed resources, and unfinished goods in process, to name a few. A substantial part of the literature concentrates attention on the quasi-stationary model where technology and utility is time independent; that is, there is a set T, a function u: $T_t \rightarrow R$, and a constant discount factor δ, where $0 < \delta \leq 1$, such that $T_t = T$ and $u_t(x,y) = \delta^t u(x,y)$. A special case is the extensively studied one-sector neoclassical growth model, with one consumption cum capital good, the output of which is given by a production function f, and $T = \{(x,y) : x \geq 0, 0 \leq y \leq f(x)\}$. A utility function w is defined directly over consumption $c = f(x) - y$; so, here, $u(x,y) = w(c)$. It is noteworthy that the general reduced-form formulation may allow for direct stock effects over and above the effect of consumption on utilities and is a much richer framework.

Ramsey studied the one-sector model with time as a continuous variable and the infinite sum accordingly replaced by an integral. He obtained a remarkable rule governing the optimal savings rate at each point of time, essentially the Euler equation in the calculus of variations. Ramsey focused primarily on the undiscounted case, that is, $\delta = 1$; much later Tjalling Koopmans (1965) and David Cass (1965) treated the discounted case, that is, $\delta < 1$ thoroughly. The undiscounted case presents the problem that the welfare sum may not converge. Ramsey circumvented the problem by assuming that, due to constraints on tastes or technology, there is an upper bound on the achievable level of utility, and he sought to minimize the divergence of the utility level along paths from this bliss level. This problem received much more careful and rigorous attention later, employing variants of Carl C. von Weizsäcker's (1965) overtaking criterion, which provides only a partial ranking over paths but can still yield a workable notion of optimality. Simultaneously, following Gale and William Brock (1970), existence of an optimal program was explored carefully in multisector models. The so-called golden rule program or optimal stationary state, where the per period utility along constant feasible programs is maximized, plays a role analogous to that of the bliss level in Ramsey.

TURNPIKE THEORY

A 1945 paper by another mathematician, John von Neumann, on a general equilibrium model primarily stressing production, which established the existence of a balanced growth path with a maximal rate of expansion and associated present value prices at which the activities employed are profit maximizing, led to the turnpike property first explicated in 1958 by Robert Dorfman, Paul Samuelson, and Robert Solow. Several authors followed with rigorous proofs of turnpike theorems, which showed that planning paths, with long horizons and terminal stock accumulation as the goal, would tend to take advantage of the maximal rate of growth of the balanced path, the turnpike, by orienting stocks to those of the turnpike for most of the horizon.

In the context of optimal growth models, Roy Radner's (1961) value-loss method was adapted by authors such as Gale and McKenzie (1968) to show that the optimal stationary state plays the role of the turnpike and optimal programs converge to the golden rule, albeit with some interesting qualifications when linearities are present in the model in an essential way. This convenient property is, in general, limited to the undiscounted case. José Scheinkman (1976) showed that for large discount factors the turnpike property holds; however, for small discount factors Jess Benhabib and Kazuo Nishimura (1985) showed that optimal cycles are possible. Later

Michele Boldrin and Luigi Montruchhio (1986) showed that chaotic optimal paths are possible. These papers gave rise to the literature on the possibility of nontrivial business cycles in deterministic macromodels with a representative agent carrying out the infinite horizon optimization. Also, the effect of variations in parameters, especially of the discount factor, on the optimal policy function became a topic of considerable interest following a remarkable 1992 paper by Gerhard Sorger (in this connection, see also Mitra et al. 2006).

Following Paul Romer (1986), models allowing aspects of externalities or public goods in production, which may have many equilibrium paths, gave rise to the literature of the indeterminacy problem surveyed in Nishimura and Alain Venditti (2006). Integration of turnpike theory with general equilibrium theory began with Robert Becker (1980) who, following up on Ramsey's conjecture, investigated the long-run wealth distribution that arises in a Ramsey-type general equilibrium model with several infinitely lived agents and related it to the discount factors of the agents.

DUALITY THEORY

Since Edmund Malinvaud (1953), the well-known connection between the static theory of price and efficiency went through a major evolution in the context of efficient allocation of resources in infinite horizon models. In the context of optimal growth models, McKenzie (1986) provides a transparent version of Martin Weitzman's 1973 proof of the existence of present value prices at which in each period myopic profit maximization takes place, with utility treated as an output. These are likened to familiar individual decision rules in competitive equilibrium, and the optimality conditions are usually called the *competitive* conditions. The distinctive feature of the infinite horizon aspect of the problem is that, in general, these need to be supplemented by a transversality condition, which requires that an appropriate limit condition be satisfied by the value of stocks, a condition that cannot be interpreted as a myopic decision rule. There has been some success at obtaining alternate price characterizations of optimal paths that require only period-by-period conditions to be verified by myopic agents; that is, the optimal path is "decentralizable" (see Majumdar 1992). Indeed, in a fairly wide class of production models satisfying a reachability condition, the competitive conditions alone characterize optimality (see Dasgupta and Mitra 1999a).

Duality theory played a significant role in grounding and extending the familiar macroeconomic concept of *national product*, based upon explicit welfare considerations in dynamic models. Weitzman (1976) observed that in a continuous-time framework, national income at any time along an optimal path is a proxy measure of the hypothetical level of constant consumption that, if possible to maintain forever, provides the same level of welfare found along the optimal path. While the same is not necessarily true for competitive equilibrium paths in general, in some models involving exhaustible resources, it is possible to extend such results to paths that are not necessarily optimal but satisfy the competitive equilibrium conditions only (see Dasgupta and Mitra 1999b). The interpretation of stocks in Weitzman is very general and may include exhaustible resources, environmental factors, and the like, leading to this literature developing a strong connection with the concept of "green" national income accounting. Connections with sustainable consumption paths have also been explored following Solow (1986).

Convexity is essential for the necessity side of duality theorems. Nonconvexity arises in many models, such as those with natural resources. The qualitative properties are significantly different (see Majumdar 2006). Nonconvexity is also of importance in endogenous growth models following Romer (1986).

Optimal growth allowing uncertain technology, changing technology, and so forth have been studied. With uncertainty, the possibility of ensuring long-run survival may temper optimality considerations in interesting ways (see Olson and Roy 2006). The additive-separable form of the welfare function is a severe restriction, and the literature on recursive utility functions seeks to address that (see Boyd 2006). Introducing population growth as a control variable raises interesting questions about appropriate forms of the welfare function.

An assessment is needed of the implications, the importance, and the weaknesses of the manifold developments in optimal growth theory, especially of the literature on cycles, chaos, and indeterminacy in the context of macrodynamics and business cycles, bearing in mind that the phenomenon of excess capacity does not appear in these models. An assessment is also needed of the models' practical significance for planning, bearing in mind that practical planning is expected to be finite horizon in nature and to rely on decentralized mechanisms for its implementation. This may yield more productive directions for future research.

SEE ALSO *Economic Growth; Golden Rule in Growth Models; Maximization; Neoclassical Growth Model; Optimizing Behavior; Social Welfare Functions*

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Swapan Dasgupta

OPTIMISM/PESSIMISM

People differ in how they approach the world. Some individuals are optimistic and tend to be positive in their outlook and expectations for the future, whereas others are pessimistic and tend to have more negative expectations. Furthermore, these individual differences appear to be stable across time and context. The construct of optimism is in many ways rooted in folk wisdom, but scientific approaches have linked the concepts of optimism and pessimism to expectancy models of motivation. The optimism construct is therefore also grounded in decades of theory and research on motivation and on how such motivation is expressed through behavior.

One of the most recognized contemporary theories of optimism assumes expectancies to be dispositional, and refers to generalized expectancies that apply more or less across a person's entire life span. Michael F. Scheier and Charles S. Carver developed the dispositional optimism concept in 1985, as well as one of the most popular measures used to assess optimism and pessimism, the Life Orientation Test (LOT). The LOT and its revised version, the LOT-R, contain items measuring both positive and negative expectancies (e.g., "In uncertain times, I usually expect the best" and "If something can go wrong for me, it will"). Both of these measures therefore provide the most direct assessment of optimism and pessimism as people usually understand these constructs.

Another approach to optimism, separate from the dispositional optimism approach, assumes that expectancies are based on individual interpretations of previous experiences. Often referred to as attributional or explanatory style, this approach is based on Martin E. P. Seligman's work on learned helplessness. To account for human variation in responses to uncontrollability, the attributional reformulation of learned helplessness specifically focused on people's explanations for events. Optimists interpret bad events as temporary, limited in scope, and not resulting from personal fault. Pessimists on the other hand, are more likely to interpret bad events as long lasting, pervasive in scope, and due to their own fault. Optimists' tendency to attribute negative events to unstable, specific, and external causes contributes to their resiliency to negative experiences and helplessness.

Attributional style is measured with the Attributional Style Questionnaire (ASQ), which Chris Peterson and colleagues developed in 1982. The ASQ consists of six negative event items and six positive event items. For each event, the person gives one major cause for why the event occurred and rates the internality, stability, and globality of the cause. Attributional style can also be assessed through spoken or written material, using the content analysis of verbatim explanations (CAVE) method Peterson and colleagues developed in 1983. In this method, good and bad events are rated along three dimensions (internal, stable, global) using a seven-point continuum. On both of these scales, a person considering positive events to be happening due to internal, stable, and global events is considered to have an optimistic explanatory style. If a person considers negative events to be happening due to internal, stable, and global events, this individual is considered to have a pessimistic explanatory style.

Differences between optimists' and pessimists' attributional styles can account for different expectancies. In attributing causes to their own behavior rather than to external factors, optimists believe in their ability to influence event outcomes. On the other hand, pessimists often judge events as being caused by external factors and see no opportunity to influence the outcomes. When these attributions are stable and global, as they often are for pessimists, helplessness results.

Whereas attributional styles are generally based on interpretations of previous experiences, the construct of dispositional optimism arose from a general self-regulatory framework. Because optimists see positive outcomes as attainable, they are more likely to invest continued effort in order to achieve their goals, instead of disengaging and giving up, as pessimists might do. This tendency of optimists to expect positive outcomes and remain engaged in challenges creates a self-fulfilling prophecy in which positive outcomes and success can be actualized. For pessimists, on the other hand, the tendency to expect negative outcomes and give up on challenges creates a self-fulfilling prophesy of failure.

One of the mechanisms by which dispositional optimism and attributional style translate into better adjustment is through coping with stressors. Optimists appear to cope in active ways that help them adjust better to stressful situations. Optimists' resilience to helplessness and effortful behaviors has been found to be positively associated with approach coping strategies aiming to eliminate, reduce, or manage stressors, and negatively associated with avoidance coping strategies aiming to avoid, ignore, or withdraw from stressors. High optimism may therefore led to approach coping, which again may lead to better adjustment to stressors.

Positive outcome expectancies and optimistic explanatory styles may also be protective factors contributing to resiliency, both psychologically and physiologically. For example, high dispositional optimism has been associated with less distress, anxiety, and depression in women with breast cancer and has been found to be protective of distress in women coping with in vitro fertilization failure. Pessimistic attributional style has also been associated with depression and distress. As for physiological well-being, dispositional optimism has been associated with a faster rate of physical recovery from coronary artery bypass surgery and has been linked to lower changes of rehospitalization for cardiac patients. Dispositional optimism has also been linked to longer survival in cancer patients and to better recovery and resistance to postsurgical infection in transplant patients. Optimistic attributional style has also been positively correlated with vigorous immune reaction to an antigen challenge as well as longer survival. Clearly, the link between positive outcome expectancies and well-being is pervasive.

Carver and Scheier's pioneering research on generalized outcome expectancies and Seligman's groundbreaking work on learned helplessness have led to an enhanced

understanding of the significance of positive outcome expectancies. The positive psychology movement, initiated in 1998 by American Psychological Association president Seligman, emphasizes the focus in research on positive aspects of human behavior, such as dispositional optimism. The movement highlights the importance of studying not only the negative side of human experience such as disease and distress, but also recognizing the positive aspects of human behavior such as strength and virtue. Positive psychology focuses on people's satisfaction with various aspects of their lives, and considers building positive qualities as equally important to mending the worst in life. Researchers in this area address questions relating to happiness, well-being, and human potential, among others. The positive psychology movement aims to advance the understanding of how human traits can serve to buffer against not only psychological, but also physical, ailments.

SEE ALSO *Attribution; Depression, Psychological; Expectations; Positive Psychology; Psychoneuroendocrinology; Stress*

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OPTIMIZATION

SEE *Optimizing Behavior.*

OPTIMIZING BEHAVIOR

In mathematics, optimization refers to the general ideas of choosing some element of a set to maximize a function that is defined on the set. Abstractly, if one defines a function f (which is typically indexed by some set of parameters θ) from some general set S to the real numbers S, the function $y = f(s, \theta)$; optimization is typically nothing more than asking which element of S produces the largest value of y. Notice that the set can contain complicated objects, including infinite sequences, or functions.

In economics, the notion of optimization has been used to model individual behavior. Indeed, neoclassical economic reasoning is typically predicated on the assumption that individual actors optimize in the sense that, subject to a set of constraints and beliefs about the consequences of their actions, agents choose actions that are optimal relative to their preferences. In a classic microeconomics problem, a consumer is assumed to choose a bundle of consumption goods to maximize utility subject to a budget constraint. This problem produces a relationship between relative prices and the marginal utilities of different goods. A more complicated version of this problem can ask what consumption/saving rules maximize a lifetime notion of utility in the presence of uncertainty about the future (cf. Brock and Mirman 1972). Under appropriate convexity assumptions, this type of stochastic growth model can be used to represent intertemporal general equilibrium in an economy with a representative consumer by the device of support prices constructed from the optimization problem. This approach has been fruitful in macroeconomics.

The notion that individual agents optimize is controversial from the perspectives of other social sciences. A gross simplification of this controversy is that sociologists focus much more on how social structures influence individual preferences and beliefs whereas psychologists emphasize empirically based descriptions of individual decisionmaking which can incorporate cognitive errors and limitations in the processing of information as well as what, from the perspective of the neoclassical economic theory of choice, are inconsistencies in preferences.

These alternative perspectives have become part of current economic reasoning. Herbert Simon was an early pioneer of work on bounded rationality, which emphasized limits to the ability of individuals to optimize. Simon advocated the alternative idea that individuals satisfice, that is, make acceptable rather than optimal

actions. Simon's views did not affect most economic practice. Rather, experimental research pioneered to a great extent by psychologists Amos Tversky and Daniel Kahneman created a strong case that the standard optimization assumptions in economics were flawed for many contexts. There is a rich literature that attempts to both empirically identify (again, via experiments) and formally model individual decisionmaking that accounts for limits to human reasoning in economically interesting environments. Efforts also exist to expand the formulation of preferences to account for social context and social preferences such as altruism, although this work seems less a challenge to the notion of optimization than a reconsideration of the objectives of individuals. Together, this work is known as behavioral economics.

An alternative approach to relaxing the standard optimization paradigm is to ask whether, in dynamic environments, individual behavior will evolve toward optimality. This question, which is a major theme of evolutionary game theory, does not admit a simple answer, as different models produce different results. But interesting environments have been identified where this convergence does occur.

Perhaps the appropriate lesson is that the appropriateness of optimization assumptions depends on contexts. For example, the empirically well established absence of arbitrage opportunities in financial markets suggests in modeling individual traders, they are optimizing to the extent that for the market as a whole, all such possibilities are eliminated. Also one should not underestimate the capacity of optimization models to explain seemingly irrational behaviors, as demonstrated by the Gary Becker and Kevin Murphy (1988) model of rational addiction. Efforts to move economic models away from optimization assumptions have yielded many valuable insights, but it is hardly the case that the optimization paradigm no longer has a key role to play in economic analysis.

A user-friendly introduction to mathematical methods of optimization relevant to economists is Rangarajan Sundaharam's book *A First Course in Optimization Theory* (1996). Herbert Simon's views are well summarized in his *Reason in Human Affairs* (1983). Colin Camerer's *Behavioral Game Theory* (2003) provides an overview of behavioral approaches to economics. Drew Fudenberg and David Levine's *The Theory of Learning in Games* (1998) is a standard text on learning and dynamics.

SEE ALSO *Decisionmaking; Economic Model; Evolutionary Games; Maximization; Minimization; Partial Equilibrium; Satisficing Behavior; Theory of Second Best*

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ORAL TRADITION

SEE *Storytelling.*

ORDINALITY

The concept of ordinality belongs to the broad issue of utility, preferences, and measurement of pleasure or consumer satisfaction. Economists and social philosophers have always aimed at explaining how to overcome the omnipresent scarcity that nature imposes upon humans, and thus to achieve a state of higher satisfaction. The concept of utility was developed to mean the quality that makes a commodity—through whose consumption the satisfaction can be achieved—desired. It has always been recognized that utility is a subjective matter, because the outside observer cannot know much about why and to what extent a commodity is desired, but originally it was believed (by early utility theorists such as H. H. Gossen, W. Stanley Jevons, and Léon Walras) that utility is measurable and additive—that is, that numbers can be attached to each intensity of satisfaction (cardinal utility theory) and can be summed up to get a "total utility." In criticizing this idea, two points were made: first, that utility is nonadditive and fundamentally unmeasureable within an individual (and much less across two individuals); and second, that one actually does not even need to assume cardinality in order to make use of utility theory in economics (though cardinal utility still may exist). It came to be understood that there is an alternative approach, represented by the concept of ranking of avail-

able options that satisfy consumer preferences—ordinal utility theory. This is done in two different ways.

The first of them was based on the principle of indifference. In a standard model, the consumer maximizes her satisfaction by spending her limited budget on two goods. Any combination of the quantities of the two goods yields the same satisfaction (level of utility) to the consumer, which is why she is indifferent in her choice between these combinations. Considering all such combinations gives rise (under certain assumptions) to an "indifference curve"—a tool widely used in twentieth-century microeconomics. A set of such curves for different levels of satisfaction is an "indifference map." Similarly, considering all combinations of the two goods that can be purchased with the same limited budget gives rise to a "budget constraint." With these tools at hand, whether the cardinal utility exists or not is immaterial for the problem of decision making, because what matters is satisfaction ranking of all the ways in which the given budget can be spent on the two goods. Thus, when seen on a graph, the best use of the budget utility-wise is the combination of the two goods represented by the intersection of the budget constraint and the indifference curve, signifying the greatest possible satisfaction (which will typically be the one that is just "touched" by the budget constraint). This approach is associated with the work of Robert Edgeworth, Vilfredo Pareto, John Hicks, and Roy G. D. Allen, among others.

In the second approach to ordinal utility, every acting person can make a ranking of his alternative ends according to his values. This ranking, rooted in the process of subjective valuation, brings about the construction of an individual preference scale. In every action a choice is made and a part of the preference scale is demonstrated, so that the external observer can get "data" about other people's utility ranking. For example, we can see that an individual who is buying a book ranks the $20 he is spending lower than he ranks the book on his preference scale, whereas a seller of the book has a reverse preference ranking—that is, she values the money more than the book, and therefore she is willing to sell. Value scales can be used to formulate the theory of exchange and build up a price theory and the whole of microeconomics. This approach was elaborated by Carl Menger and Eugen von Böhm-Bawerk and their followers of the so-called "Austrian school"—the Czech economist Franz Cuhel, the Austrian economists Ludwig von Mises and Friedrich Hayek, and their American followers Israel Kirzner and Murray Rothbard.

There is no doubt that utility theory is the cornerstone of the theory of consumer behavior, and yet there seems to be no general consensus on the underlining issues related to the nature of utility. On the one hand, defenders of value scales are criticized by those using indifference curves that working solely with ranked units of goods hinders the use of more sophisticated mathematical analysis and model building. Users of indifference curves are criticized on the other hand because indifference cannot be demonstrated in action—that is, an actor always prefers in his action A over B, so when observing actual behavior, the "data" we see is preference, not indifference. Thus, indifference should not then be a category of economics, but of psychology. Some argue, however, that utility theory needs more psychology, to provide more input into economics because actual preference ranking may be biased or uninformed. Lastly, some authors argue, the dichotomy between ordinality and cardinality is mostly artificial and does not play any significant role when policy implications are discussed.

SEE ALSO *Austrian Economics; Consumer; Consumption; Hayek, Friedrich August von; Hicks, John R.; Opportunity Cost; Pareto, Vilfredo; Scarcity; Utilitarianism; Utility Function; Utility, Subjective; Walras, Léon*

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ORDINARY LEAST SQUARES REGRESSION

Ordinary least squares (OLS) regression is a statistical method of analysis that estimates the relationship between one or more independent variables and a dependent variable; the method estimates the relationship by minimizing the sum of the squares in the difference between the observed and predicted values of the dependent variable configured as a straight line. In this entry, OLS regression will be discussed in the context of a bivariate model, that is, a model in which there is only one independent variable (X) predicting a dependent variable (Y). However, the logic of OLS regression is easily extended to the multivariate model in which there are two or more independent variables.

Social scientists are often concerned with questions about the relationship between two variables. These include the following: Among women, is there a relationship between education and fertility? Do more-educated

women have fewer children, and less-educated women have more children? Among countries, is there a relationship between gross national product (GNP) and life expectancy? Do countries with higher levels of GNP have higher levels of life expectancy, and countries with lower levels of GNP, lower levels of life expectancy? Among countries, is there a positive relationship between employment opportunities and net migration? Among people, is there a relationship between age and values of baseline systolic blood pressure? (Lewis-Beck 1980; Vittinghoff et al. 2005).

As Michael Lewis-Beck notes, these examples are specific instances of the common query, "What is the relationship between variable *X* and variable *Y*?" (1980, p. 9). If the relationship is assumed to be linear, bivariate regression may be used to address this issue by fitting a straight line to a scatterplot of observations on variable *X* and variable *Y*. The simplest statement of such a relationship between an independent variable, labeled X, and a dependent variable, labeled Y, may be expressed as a straight line in this formula:

$$Y = a + bX + e, \qquad (1)$$

where a is the intercept and indicates where the straight line intersects the Y-axis (the vertical axis); b is the slope and indicates the degree of steepness of the straight line; and e represents the error.

The error term indicates that the relationship predicted in the equation is not perfect. That is, the straight line does not perfectly predict Y. This lack of a perfect prediction is common in the social sciences. For instance, in terms of the education and fertility relationship mentioned above, we would not expect all women with exactly sixteen years of education to have exactly one child, and women with exactly four years of education to have exactly eight children. But we would expect that a woman with a lot of education would have fewer children than a woman with a little education. Stated in another way, the number of children born to a woman is likely to be a linear function of her education, plus some error. Actually, in low-fertility societies, Poisson and negative binomial regression methods are preferred over ordinary least squares regression methods for the prediction of fertility (Poston 2002; Poston and McKibben 2003).

We first introduce a note about the notation used in this entry. In the social sciences we almost always undertake research with samples drawn from larger populations, say, a 1 percent random sample of the U.S. population. Greek letters like α and β are used to denote the parameters (i.e., the intercept and slope values) representing the relationship between X and Y in the larger population, whereas lowercase Roman letters like a and b will be used to denote the parameters in the sample.

When postulating relationships in the social sciences, linearity is often assumed, but this may not be always the case. Indeed, a lot of relationships are not linear. When one hypothesizes the form of a relationship between two variables, one needs to be guided both by the theory being used, as well as by an inspection of the data.

But given that we wish to use a straight line for relating variable Y, the dependent variable, with variable X, the independent variable, there is a question about which line to use. In any scatterplot of observations of X and Y values (see Figure 1), there would be an infinite number of straight lines that might be used to represent the relationship. Which line is the best line?

The chosen straight line needs to be the one that minimizes the amount of error between the predicted values of Y and the actual values of Y. Specifically, for each of the i th observations in the sample, if one were to square the difference between the observed and predicted values of Y, and then sum these squared differences, the best line would have the lowest sum of squared errors (SSE), represented as follows:

$$SSE = \sum (Y_i - \hat{Y})^2 \qquad (2)$$

Ordinary least squares regression is a statistical method that produces the one straight line that minimizes the total squared error.

Using the calculus, it may be shown that SSE is the lowest or the "least" amount when the coefficients a and b are calculated with these formulas (Hamilton 1992, p. 33):

$$b = \left[\sum (X_i - \bar{X})(Y_i - \bar{Y})\right] / \sum (X_i - \bar{X})^2 \qquad (3)$$

$$a = \bar{Y} - b(\bar{X}) \qquad (4)$$

These values of a and b are known as *least squares* coefficients, or sometimes as *ordinary least squares* coefficients or OLS coefficients.

We now will apply the least squares principles. We are interested in the extent to which there is a relationship among the counties of China between the fertility rate (the dependent variable) and the level of illiteracy (the independent variable). China had 2,372 counties in 1982. We hypothesize that counties with populations that are heavily illiterate will have higher fertility rates than those with populations with low levels of illiteracy.

The dependent variable, Y, is the general fertility rate, GFR, that is, the number of children born in 1982 per 1,000 women in the age group fifteen to forty-nine. The independent variable, X, is the percentage of the population in the county in 1981 aged twelve or more who are illiterate.

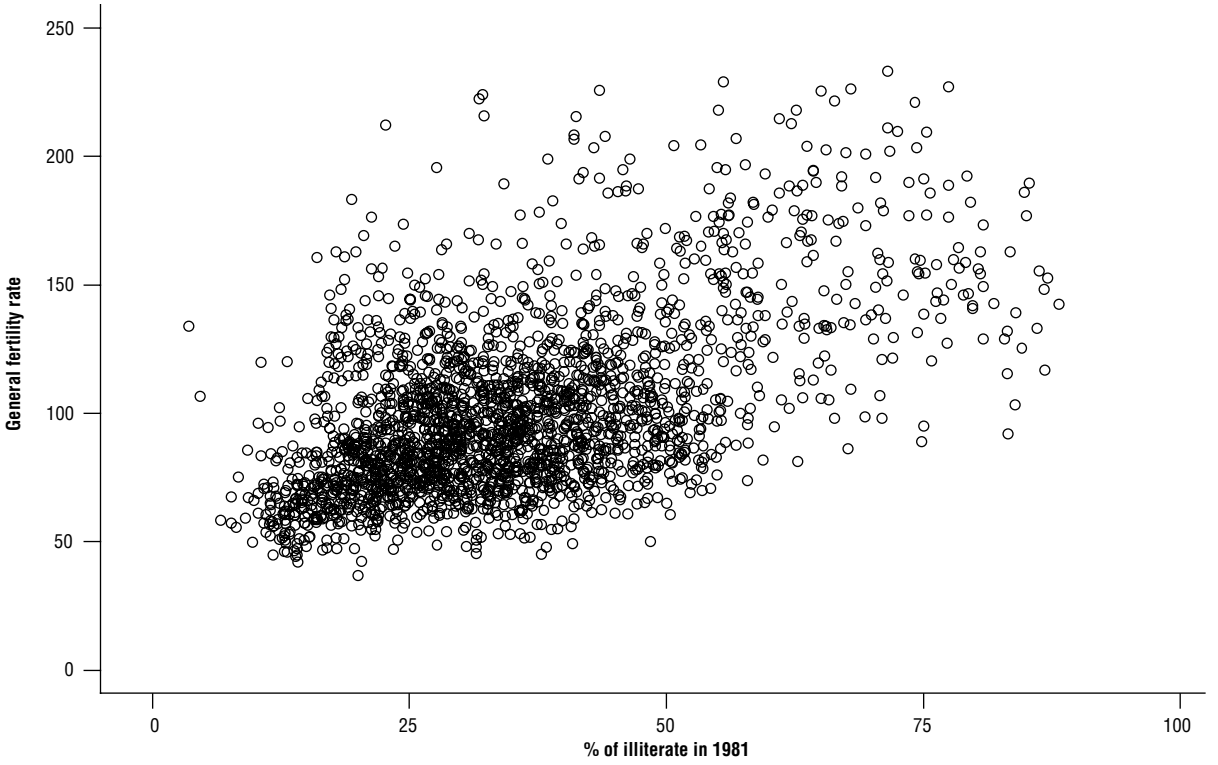

Figure 1

The relationship may be graphed in the scatterplot in Figure 1. The association between the GFR and the illiteracy rate appears to be linear and positive. Each dot refers to a county of China; there are 2,372 dots on the scatterplot.

Equation (1) may be estimated using the least squares formulas for a and b in equations (3) and (4). This produces the following:

$$\hat{Y} = 57.56 + 1.19x \qquad (5)$$

The OLS results in equation (5) indicate that the intercept value is 57.56, and the slope value is 1.19. The intercept, or a, indicates the point where the regression line "intercepts" the Y-axis. It tells the average value of Y when $X = 0$. Thus, in this China dataset, the value of a indicates that a county with no illiterate person in the population would have an expected fertility rate of 57.6 children per 1,000 women aged fifteen to forty-nine.

The slope coefficient, or b, indicates the average change in Y associated with a one-unit change in X. In the China example, $b = 1.19$, meaning that a 1 percent increase in a county's illiteracy rate is associated with an average GFR increase, or gain, of 1.19 children per 1,000 women aged fifteen to forty-nine.

We would probably want to interpret this b coefficient in the other direction; that is, it makes more sense to say that if we reduce the county's illiteracy rate by 1 percent, this would result in an average reduction of 1.2 children per 1,000 women aged fifteen to forty-nine. This kind of interpretation would be consistent with a policy intervention that a government might wish to use; that is, a lower illiteracy rate would tend to result in a lower fertility rate.

The regression line may be plotted in the above scatterplot, as shown in Figure 2.

It is noted that while in general the relationship between illiteracy and fertility is linear, there is a lot of error in the prediction of county fertility with a knowledge of county illiteracy. Whereas some counties lie right on or close to the regression line, and therefore, their illiteracy rates perfectly or near perfectly predict their fertility rates, the predictions for other counties are not as good.

One way to appraise the overall predictive efficiency of the OLS model is to "eyeball" the relationship as we have done above. How well does the above OLS equation correspond with variation in the fertility rates of the counties? As we noted above, the relationship appears to be positive and linear. A more accurate statistical approach to address the

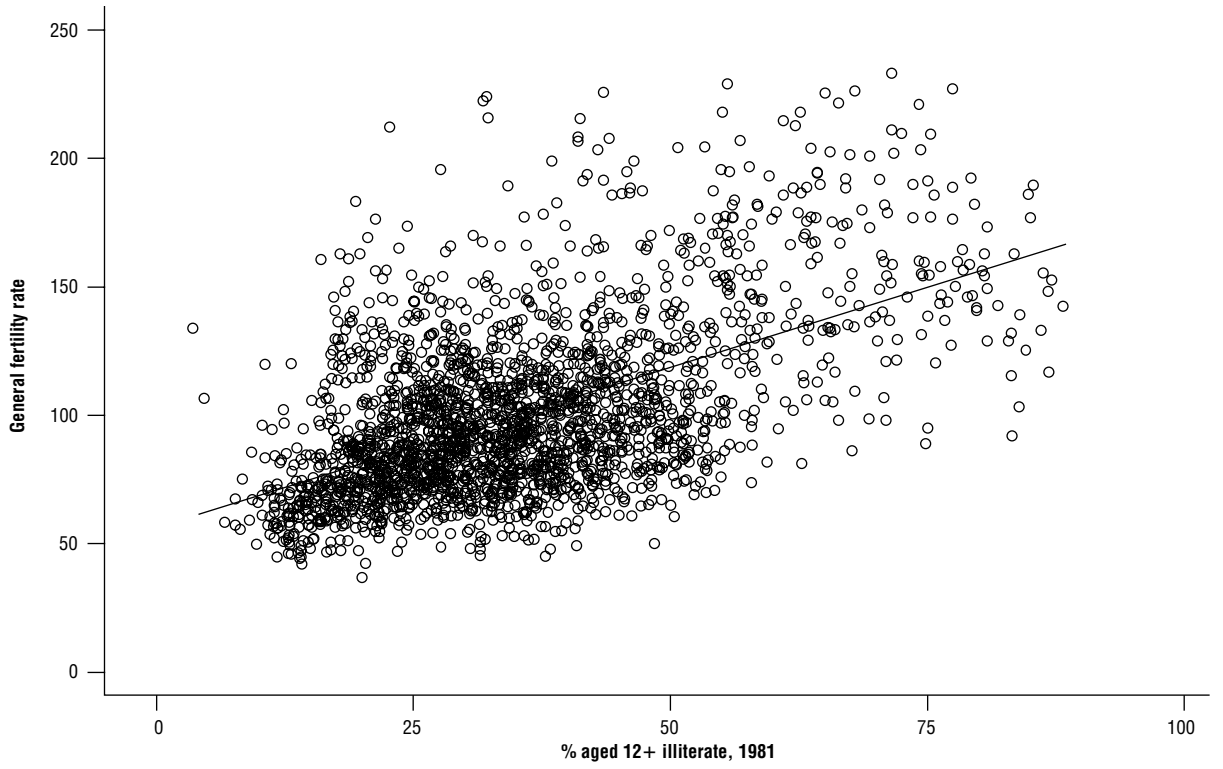

Figure 2

question of how well the data points fit the regression line is with the coefficient of determination (R^2).

We start by considering the problem of predicting *Y*, the fertility rate, when we have no other knowledge about the observations (the counties). That is, if we only know the values of *Y* for the observations, then the best prediction of *Y*, the fertility rate, is the mean of *Y*. It is believed that Carl Friedrich Gauss (1777–1855) was the first to demonstrate that lacking any other information about a variable's value for any one subject, the arithmetic mean is the most probable value (Gauss [1809] 2004, p. 244).

But if we guess the mean of *Y* for every case, we will have lots of poor predictions and lots of error. When we have information about the values of *X*, predictive efficiency may be improved, as long as *X* has a relationship with *Y*. "The question then is, how much does this knowledge of *X* improve our prediction of *Y*?" (Lewis-Beck 1980, p. 20).

First, consider the sum of the squared differences of each observation's value on *Y* from the mean of *Y*. This is the *total sum of squares* (TSS) and represents the total amount of statistical variation in *Y*, the dependent variable.

Values on *X* are then introduced for all the observations (the Chinese counties), and the OLS regression equation is estimated. The regression line is plotted (as in the scatterplot in Figure 2), and the actual values of *Y* for all the observations are compared to their predicted values of *Y*. The sum of the squared differences between the predicted values of *Y* and the mean of *Y* is the *explained sum of squares* (ESS), sometimes referred to as the *model sum of squares*. This represents the amount of the total variation in *Y* that is accounted for by *X*. The difference between TSS and ESS is the amount of the variation in *Y* that is not explained by *X*, known as the *residual sum of squares* (RSS).

The coefficient of determination (R^2) is:

$$R^2 = \text{ESS/TSS} \qquad (6)$$

The coefficient of determination, when multiplied by 100, represents the percentage amount of variation in *Y* (the fertility rates of the Chinese counties) that is accounted for by *X* (the illiteracy rates of the counties). The R^2 values range from +1 to 0. If $R^2 = 1.0$, the *X* variable perfectly accounts for variation in *Y*. Alternately, when $R^2 = 0$ (in this case the slope of the line, *b*, would also equal 0), the *X* variable does not account for any of the variation in *Y* (Vittinghoff et al. 2005, p. 44; Lewis-Beck 1980, pp. 21–22).

SEE ALSO *Cliometrics; Least Squares, Three-Stage; Least Squares, Two-Stage; Linear Regression; Logistic Regression; Methods, Quantitative; Probabilistic Regression; Regression; Regression Analysis; Social Science; Statistics in the Social Sciences; Tobit*

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ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)

SEE *Public Assistance.*

ORGANIZATION MAN

This concept was made famous in mid-1950s America with the publication of William Hollingsworth Whyte's *The Organization Man* (1956). Sponsored by *Fortune Magazine* to do extensive interviews with chief executive officers of major companies such as General Electric, Whyte (1917–1999) studied white-collar employees of large, successful corporations in the heyday of the Eisenhower administration. These men did not simply work for the corporate world; they *belonged* to the Organization. This new stratum of American society was no longer driven by the spirit of individualism that had characterized the early Protestant settlers, the frontier, and nineteenth-century capitalism. A code was emerging that Whyte called the "social ethic," which involved a new, all-embracing fealty to the corporation. This ethic, which was associated with the growing professionalization of management and a commitment to practical expertise rather than abstract knowledge, emphasized belief in the social group as the fountain of creativity and the importance of "belongingness" for the individual. Whyte's ethnographic study was a bestseller intended for a nonacademic audience, but it had a serious purpose, which was to argue that the Protestant ethic—the ascetic individualism and sense of calling made famous by the German sociologist Max Weber—was in decline and America was changing profoundly as a result.

Weber, who visited the United States in 1904, recognized a connection between the ascetic sects of American frontier society and the European Reformation, a comparison he outlined in 1905 in *The Protestant Ethic and the Spirit of Capitalism.* Weber was impressed by the vibrant nature of local religious communities and the obvious connections between American capitalism and the asceticism and individualism of the sects. In contrast to the culture that Weber had observed, the new corporate culture, Whyte argued, did not reward thrift, hard work, and self-reliance. The organization man spent his working day in a committee and was rewarded as an administrator for working "through others for others" (p. 22). The principal influence over corporate culture was not Protestantism, but the pragmatism of John Dewey (1859–1952). Whyte's analysis formed an important social critique of corporate America, and suggested that the prospects for an energetic entrepreneurial culture were significantly diminished by the social conformism of corporate executives and their managers.

The social ethic of organization men, Whyte claimed, spilled over into their private lives. Personal saving had lost its moral imperative, and young couples in the new corporate culture saved for specific items—houses, cars, or schooling—that would give their lives more security and stability. The organization culture of 1950s suburbia created what came to be called a "lifestyle," in which couples progressed from a two-bedroom court apartment to a three-bedroom house, and subsequently to a ranch house, a split-level home, and finally, as retirement approached, back into a two-bedroom apartment. These suburbanites chose their friends from a limited social milieu, principally consisting of their suburban neighbors. Church attendance and the education of their children was key to achieving stability and security in lives that were characterized by transience, due to frequent postings to new branches of an organization. The conformist values of the organization also had implications for gender relations. Company wives were expected to be pretty but not sexy, and ambitious, but not too overtly materialistic. Even women's physical appearance expressed corporate values, which put a premium on female slenderness: As their husband's income went up, women's waistlines went down.

Whyte's ethnography now looks socially obsolete. Organizations at the beginning of the twenty-first century offer not life-long employment but short-term project-based careers, and company downsizing has produced a survival-oriented mentality among employees. Whyte's picture of the happy wives of organization men carefully managing their suburban households is also historically dated. The stability of life-long commitment to the company has collapsed in the face of intense economic competition in a global economy.

SEE ALSO *Bureaucracy; Organizations*

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Bryan S. Turner

ORGANIZATION OF AFRICAN UNITY (OAU)

The Organization of African Unity (OAU) was postcolonial Africa's first continent-wide association of independent states. Founded by thirty-two countries on May 25, 1963, and based in Addis Ababa, Ethiopia, it became operational on September 13, 1963, when the OAU Charter, its basic constitutional document, entered into force. The OAU's membership eventually encompassed all of Africa's fifty-three states, with the exception of Morocco, which withdrew in 1984 to protest the admission of the Saharan Arab Democratic Republic, or Western Sahara. The OAU was dissolved in 2002, when it was replaced by the African Union.

The process of decolonization in Africa that commenced in the 1950s witnessed the birth of many new states. Inspired in part by the philosophy of Pan-Africanism, the states of Africa sought through a political collective a means of preserving and consolidating their independence and pursuing the ideals of African unity. However, two rival camps emerged with opposing views about how these goals could best be achieved. The Casablanca Group, led by President Kwame Nkrumah (1909–1972) of Ghana, backed radical calls for political integration and the creation of a supranational body. The moderate Monrovia Group, led by Emperor Haile Selassie (1892–1975) of Ethiopia, advocated a loose association of sovereign states that allowed for political cooperation at the intergovernmental level. The latter view prevailed. The OAU was therefore based on the "sovereign equality of all Member States," as stated in its charter.

AIMS AND OBJECTIVES

Article 2 of the OAU Charter stated that the organization's purposes included the promotion of the unity and solidarity of African states; defense of their sovereignty, territorial integrity, and independence; and the eradication of all forms of colonialism from Africa. Member states were to coordinate and harmonize their policies in various areas, including politics and diplomacy, economics, transportation, communications, education, health, and defense and security. Article 3 of the OAU Charter included among its guiding principles the sovereign equality of all member states, noninterference in the internal affairs of states, respect for sovereignty and territorial integrity, the peaceful settlement of disputes, and the emancipation of dependent African territories. Although the organization's primary motivation initially was the liberation struggle and the defense of the independence and territorial integrity of African states, the OAU later expanded its scope of activities to encompass economic cooperation and the protection of human rights.

PRINCIPAL INSTITUTIONS

The OAU's Assembly of Heads of State and Government was the organization's supreme organ. It normally met once a year, in a different capital city, although it could also meet in extraordinary session. Although each state had one vote, the assembly tended to operate by consensus. Except for internal matters, its resolutions were nonbinding.

The Council of Ministers, composed of government ministers (usually foreign ministers), normally met twice a year or in special session. Subordinate to the Assembly of Heads of State and Government, the council's principal responsibility was preparing the assembly's agenda. The council implemented the assembly's decisions and adopted the budget. In practice it emerged as the OAU's driving force.

The General Secretariat was headed by a secretary-general, appointed by the Assembly of Heads of State and Government. The secretariat was responsible for the administration of the OAU. The secretary-general was initially envisaged as an apolitical administrator, but over time the office assumed a proactive role, including acquiring the power under the Mechanism for Conflict Prevention to resolve disputes. The General Secretariat became mired in controversy in 1982 when the decision was taken to admit the Saharan Arab Democratic Republic to the organization. Morocco challenged the legality of this decision as it claimed that the Saharan Arab Democratic Republic was not a state. Since 1975 Morocco had occupied most of Western Sahara, a former

Spanish colony, and was engaged in a war against the Polisario Front, which had declared the Saharan Arab Democratic Republic an independent state in 1976 and was fighting for its liberation. The United Nations is still trying to settle this dispute.

The Commission of Mediation, Conciliation, and Arbitration, established as the OAU's dispute settlement mechanism, had jurisdiction over disputes between member states only. Member states, the Assembly of Heads of State and Government, and the Council of Ministers could refer disputes to the commission, but only with the prior consent of the states concerned. The commission never became operational because African governments were distrustful of third-party adjudication.

ADDITIONAL INSTITUTIONS

The African Commission on Human and Peoples' Rights, established under the African Charter on Human and Peoples' Rights (1982), became operational in 1987. Based in Banjul, Gambia, and composed of eleven individuals, the commission is a treaty monitoring body with the specific mandate of promoting and protecting human and peoples' rights. Particularly important is its competence to hear complaints from individuals and nongovernmental organizations concerning alleged violations by parties to the Charter on Human and Peoples' Rights. After an uncertain beginning, the commission is becoming a more effective defender of human and peoples' rights. The commission now functions under the auspices of the African Union and shares responsibility for the protection of human rights with the African Court on Human and Peoples' Rights.

The African Court on Human and Peoples' rights was established under a protocol to the Charter on Human and Peoples' Rights in 1998 that came into force in 2004. The court's jurisdiction over human rights treaties is broad in scope. The Commission, African Intergovernmental Organizations, and participating states can submit cases to the Court, as can individuals and nongovernmental organizations with the permission of the accused state. Its judgments are binding, but it can also give advisory opinions.

The Mechanism for Conflict Prevention, Management, and Resolution was founded in 1993 with the task of finding political solutions to disputes between OAU member states. Its primary objective was the anticipation and prevention of conflicts, with emphasis on the adoption of anticipatory and preventative measures, especially confidence-building measures. The mechanism operated subject to the fundamental principles of the OAU, especially with regard to the sovereignty and territorial integrity of member states and the principle of noninterference in their internal affairs. The mechanism's role was therefore subject to the consent and cooperation of the warring parties. The mechanism was able to mediate in various civil conflicts and participate in election monitoring, but it never acquired the capacity to provide peacekeeping forces.

EVALUATION

The OAU had a mixed record. Its greatest success was in relation to decolonization. Other achievements included making significant contributions to the development of international law, especially in the fields of refugee law and human rights law, where several important treaties were adopted under OAU auspices, although in practice progress was slow and uneven. A court of human rights was envisaged, but the OAU was dissolved before it was established. Efforts were made to promote economic cooperation, and in 1991 it was decided to set up an African economic community, which in time was intended to lead to a customs union, a common market, and African monetary union. Little progress was made.

Overall, the failures of the OAU outweighed its successes. Arguably, its major failing was its inability to bring peace, prosperity, security, and stability to Africa. The OAU was found wanting in its responses to the tyrannies and kleptocracies ruining Africa, a deficiency that undermined its credibility. Its powers were too weak and its influence inadequate to deal with the internal and external conflicts, poor governance, human rights abuses, poverty, and underdevelopment from which much of Africa suffered. The OAU was also considered incapable of meeting the challenges of globalization. By the end of the century, reform so comprehensive was required that it was decided to start afresh with a new organization, the African Union, devoted to the political and economic integration of Africa based on respect for democratic values, good governance, the rule of law, and human rights.

SEE ALSO *Darfur*

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Gino J. Naldi

ORGANIZATION OF PETROLEUM EXPORTING COUNTRIES (OPEC)

Throughout its history, the Organization of Petroleum Exporting Countries (OPEC) has indirectly influenced oil prices in response to sharp volume fluctuations resulting from geopolitical tensions. However, as of 2006 OPEC's effect on the market, which affords member states political leverage, has changed dramatically relative to the late twentieth century, because member states now have far less excess production capacity (see Figure 1).

OPEC had more excess oil capacity in the 1980s, when crude oil prices reached close to $80 a barrel, than it did by 2006, during which prices reached as high as $75 a barrel (Figure 2). Minimal surplus capacity limits OPEC's ability to soften the blow of the high price of oil via increasing supply to meet the immense demand.

The Organization consists of eleven developing nations whose economies rely heavily on oil export revenues. OPEC seeks to maintain stable international oil prices via quotas on oil production and pursue petroleum policies that serve the national and collective interests of its members. In 2002 OPEC agreed that a fair price on crude oil should be set between $22 and $28 a barrel. Three years later, member states agreed to cap their crude oil production at 28 million barrels per day (MBPD). By 2006 Qatari Energy Minister Abdullah Attiyah maintained that a fair market price for crude oil should be in the range of $50 to $55 a barrel. However, during the

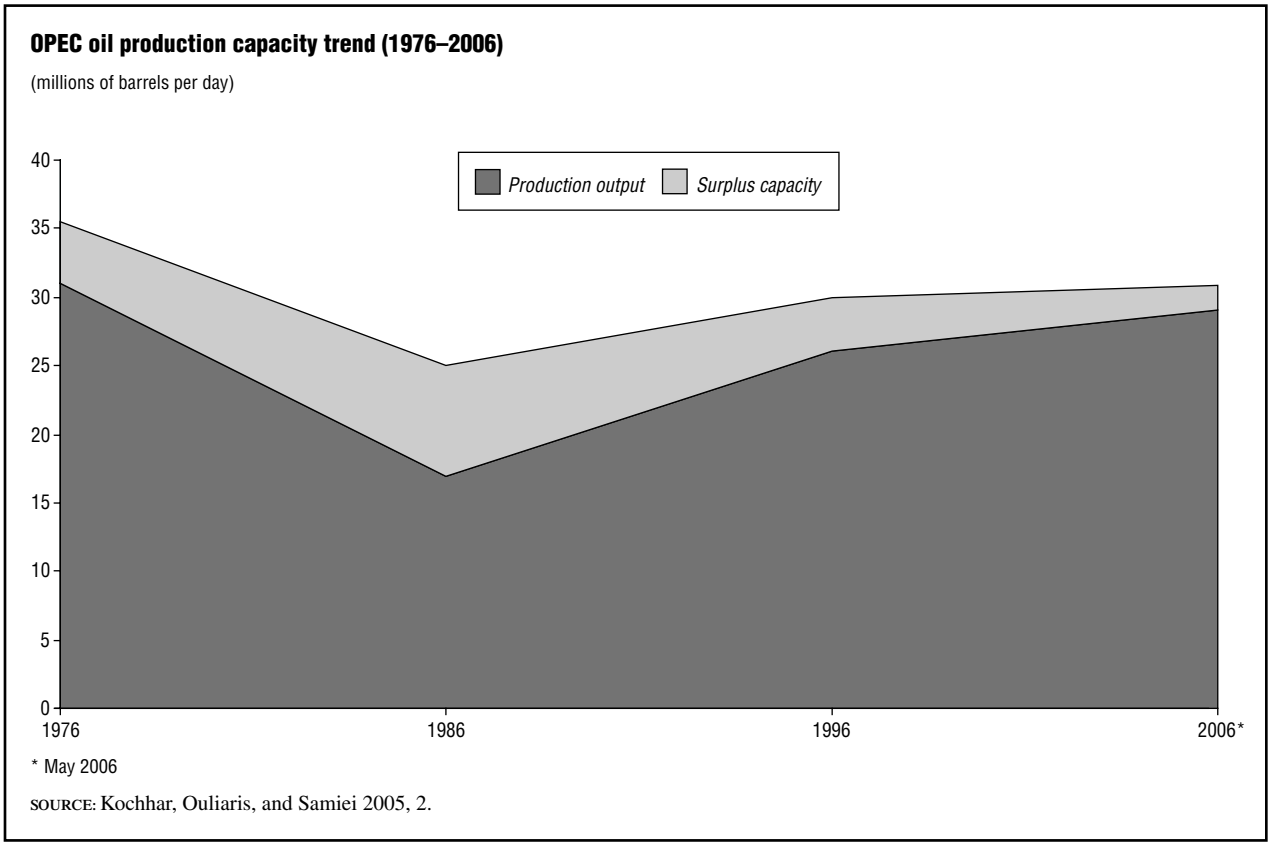

Figure 1

Crude oil prices per barrel (1960–2006)

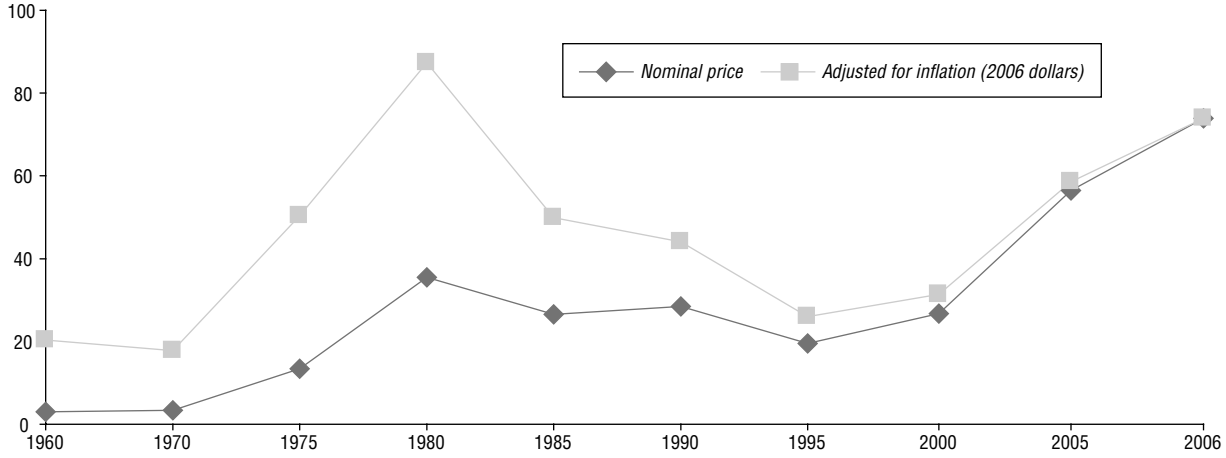

SOURCE: Energy Information Administration, WTRG Economics, Alhajii and Williams.

Figure 2

same year, crude oil prices reached over $70 a barrel, and some OPEC countries often surpassed their production quotas by 2 MBPD.

Prior to OPEC, the so-called Seven Sister Companies dominated the crude oil market. Those seven companies included Esso (which later became Exxon, and is now known as Exxon Mobil), the Anglo-Iranian (previously Anglo-Persian) Oil Company (later British Petroleum, and currently known as BP), Royal Dutch Shell, Gulf Oil (most of which became a part of what is today known as Chevron), Standard Oil of New York (which became Mobil, and later merged with Exxon), Texaco, and Standard Oil of California (now part of Chevron) (see Table 1). Crude oil prices remained stable, with a range from $2.50 to $3.00 a barrel during the late 1940s through the 1960s, or $21 to $22 a barrel when adjusted to 2006 dollars.

The Seven Sister Companies remained dominant by restricting oil output and minimizing internal conflict. But competition from other world suppliers would eventually break up their control over the international oil market.

OPEC was created at the Baghdad Conference on September 10–14, 1960, by Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela. Eight more countries later joined the Organization—Qatar (1961), Indonesia (1962), Libya (1962), United Arab Emirates (1967), Algeria (1969), Nigeria (1971), Ecuador (1973), and Gabon (1975). OPEC set up a secretariat in Geneva, Switzerland, which moved to Vienna in 1965. The OPEC Statute states that countries that apply for membership must maintain "a substantial net export of crude petroleum" and "have fundamentally similar interests to those of Member Countries" (OPEC Statute, p. 3). The formation of OPEC resulted in a shift in influence over the oil market away from the Seven Sister Companies toward OPEC.

OPEC's dominance became fully evident during the 1970s as its Arab member states limited oil shipments and cut production at a time when demand was high, which resulted in a spike in oil prices. The Arab countries imposed an embargo on oil shipments to the United States

Shares in the international market of major oil companies (1946)

Seven Sister Companies	Production (%)
Esso	28
Anglo-Iranian Oil Company	22
Royal Dutch Shell	21
Gulf Oil	9
Standard Oil of New York	5
Texaco	3
Standard Oil of California	2
Total	**90**

SOURCE: Moran 1987, p. 585.

Table 1

Proven oil reserves 1991—OPEC, Saudi Arabia vs. non-OPEC

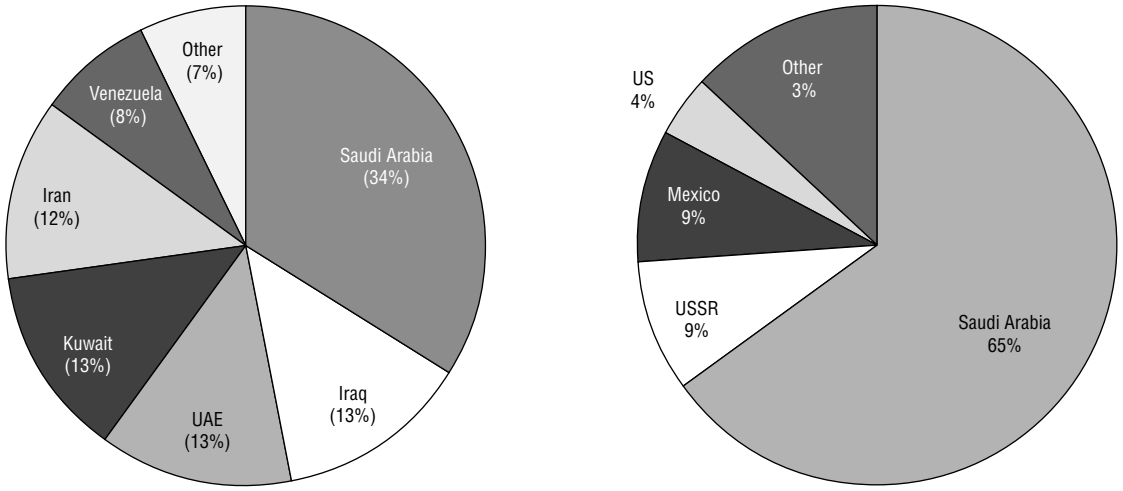

SOURCE: Lieber 1992, 161.

Figure 3

and any other country that condemned Egypt and Syria's attack on Israel in 1973, which was significant considering that OPEC exports accounted for 85 percent of world oil trade at the time (Mikdashi 1974, p. 4). According to data from the *Middle East Quarterly* and *WTRG Economics*, the nominal price of oil escalated by more than 300 percent at the end of 1974 compared to prices a decade earlier. OPEC validated its authority and gained political leverage by reducing oil supply to the world market.

During this same period, Libya became a more prominent member of OPEC. Libya had undergone a regime change a few years earlier as the result of a military coup led by Colonel Muammar al Qadhafi, and had officially become known as the Great Socialist People's Libyan Arab Jamahiriya. Qadhafi encouraged Arab-nationalist and socialist policies. Many analysts have credited the new Libyan regime with shaping OPEC's measures to increase oil prices, enforce embargoes, and gain control of oil production (Anderson 1999, p. 4). For example, according to a 1973 *Time Magazine* article, Qadhafi took advantage of the high global demand for oil by forcing oil companies to increase Libya's oil royalties over 100 percent from $1.1 billion in 1969 to $2.07 billion in 1971 ("The Arab World," p. 2). Libya's influence played a partial role in OPEC's enhanced political strength on the world stage.

OPEC's reaction to the scarcity of oil supply resulting from the Iranian Revolution in 1979 and the Iraqi invasion of Iran in 1980 further illustrated its strength. The new regime in Iran, which was the second largest OPEC oil exporter following Saudi Arabia, curbed oil exports to the world market driving prices upward. By 1979 Iran produced less than 1 MBPD, which was down from over 6 MBPD a year earlier ("Iran and Oil Prices," *Washington Times*, January 17, 2006; Phillips 1979, pp. 1–2). Iraq's invasion of Iran in 1980 sparked a reduction in the combined production of both countries to only 1 MBPD and a jump in prices from about $14 per barrel by early 1979 ($43.48 in 2006 dollars), to $35 per barrel by 1981 ($77.97 in 2006 dollars), according to *WTRG Economics*. Other countries within OPEC were able to offset Iran and Iraq's lower oil production by increasing their output while also maintaining a substantial amount of excess capacity. Saudi Arabia alone utilized three-quarters of its production capacity in order to make up for reduced output. Additional output from the other OPEC members helped crude oil prices to fall.

However, increased OPEC crude oil supply resulted in an oil price collapse by the mid-1980s. A Brookings Institution report entitled "Lessons from the 1986 Oil Collapse" (1986) notes that Saudi Arabia increased its market share after many of its OPEC partners failed to abide by their production quotas, thus oversupplying the market. Consequently, in 1986 crude oil prices declined from over $20 to as low as $12 a barrel ($22.17 in 2006 dollars).

Lack of cohesion among member states presented a challenge to the effectiveness of OPEC during this period.

By the early 1990s, the price of oil began to creep upward with the Iraqi invasion of Kuwait and the resultant threat of a Persian Gulf war. Saudi Arabia possessed the most oil reserves regionally and internationally (see Figure 3).

Saudi Arabia increased production by more than 3 MBPD during the Gulf War of 1991 (Lieber 1992, p. 155). This increased output to offset shortages created by the Gulf War of 1991 resulted in the stabilization of prices shortly after.

As the twenty-first century began, many geopolitical tensions further limited OPEC's oil supply and raised prices. The 2002 strike by state-owned Petroleos de Venezuela caused Venezuelan oil production to plunge so low that Venezuela still has not been able to regain its peak output capacity of 3.5 MBPD. In addition, the international military action in Iraq in 2003 caused Iraqi output to plummet to less than 1.5 MBPD. In 2006 Iran's threat to slash oil exports during its dispute with the United Nations over its nuclear missile program kept oil prices high at over $70 a barrel.

OPEC's ability to offset price increases in the early part of the twenty-first century pales in comparison to its clout during political conflicts thirty years earlier because there is far less additional oil supply in OPEC countries, including Saudi Arabia. The U.S. Energy Information Administration reported Saudi Arabia's excess capacity as being around 1.3 to 1.8 MBPD in May of 2006. Other OPEC members have zero surplus capacity in a world that consumes around 80 MBPD (see Figure 4). By the first half of 2006, oil prices jumped from $50 a barrel to a little more than $70 a barrel. Although the price per barrel is a few dollars shy of that in 1981 ($77.97 in 2006 dollars), the peak production capacity of OPEC is far less than that of the early 1980s, thus reducing OPEC's ability to manipulate the market.

OPEC's impact on the international crude oil market will continue to wane with such a tight supply. High crude oil prices have led to discussions about the possibility of tapping new oil reserves in non-OPEC countries and expanding alternative sources of energy, such as ethanol, in order to meet high demand at a much lower cost.

SEE ALSO *Energy; Energy Industry; Energy Sector; Qadhafi, Muammar al*

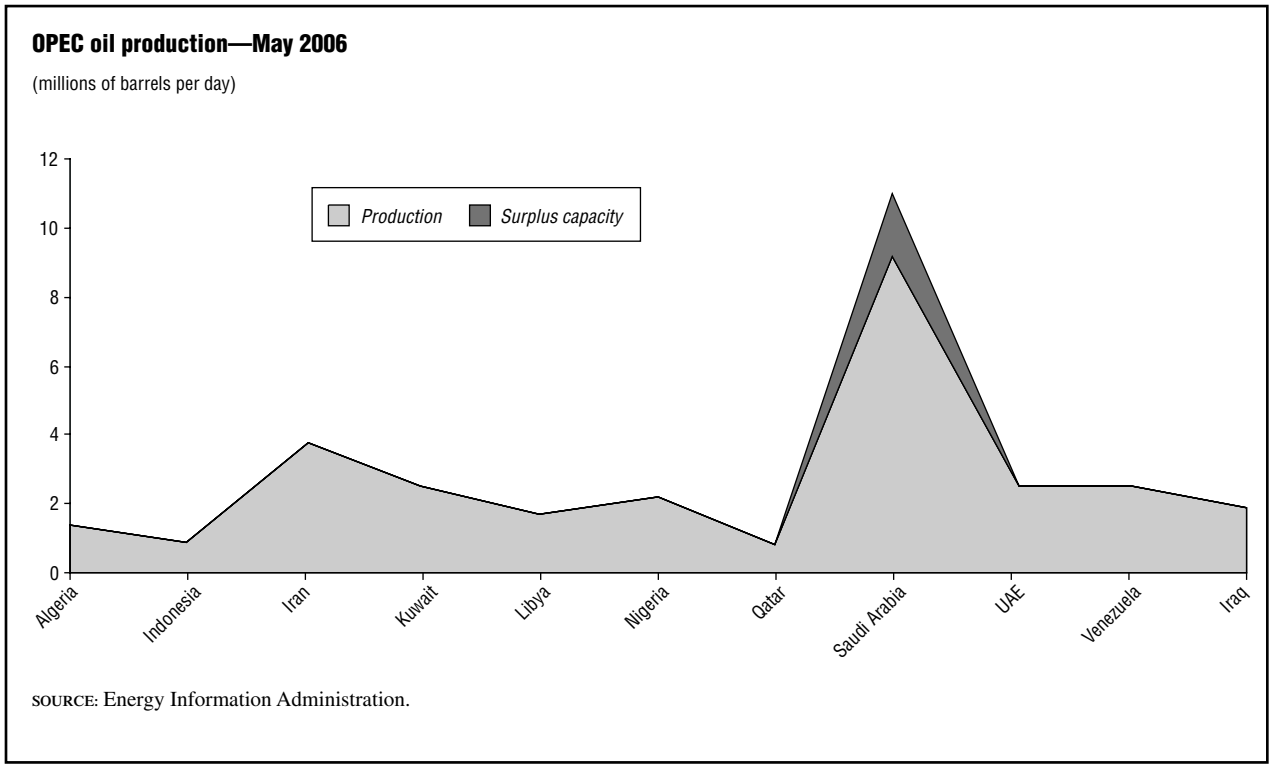

SOURCE: Energy Information Administration.

Figure 4

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Sarita D. Jackson

ORGANIZATION THEORY

Organization theory is a theoretical perspective which conceives of organizations as complex social actors and investigates how the structures they adopt affect their behavior. The field takes a broad view of the term "structure" including not only formal structure, but also informal and network relationships and cultural and cognitive aspects of the organizations. As such, it addresses broad questions of how and why organizations come to be, take the forms they do, behave as they do, and survive or fail. With its focus on organizations as a collective entity, organization theory complements *organizational behavior*, which focuses on individuals and small groups within the larger field of *organization studies*.

BACKGROUND AND ORIGINS

Organization theory was derived from several fields, including sociology, economics, anthropology, and political science. Many scholars in these fields have influenced organization theory, including Émile Durkheim, Karl Marx, Adam Smith, and Max Weber. Of these, Weber most directly influenced organization theory with his work on authority and bureaucracy.

Writing around the turn of the twentieth century, Weber identified two sources of authority that dominated previous social organization: *traditional authority*, vested in established patterns of behavior passed down through generations, and *charismatic authority*, vested in an individual's powers of attraction and influence over others. He also identified a third form, *rational-legal authority*, in which authority is vested in individuals selected based on rules and legally binding processes designed to identify those best qualified to exercise it. This rational-legal authority is the basis of Weber's *theory of bureaucracy*, in which he posited that organizing in this manner could generate remarkable social advances comparable in magnitude to the economic advances of the Industrial Revolution. Furthermore, Weber's ideal view of rationality comprised two types: *substantive rationality*, which determines what a social group's goals, values, and ideals should be, and *formal rationality*, which governs how a social group allocates resources and measures progress toward those goals and ideals. In an oft-quoted passage he warned that formal rationality without substantive rationality could lead to a dehumanizing "iron cage." While some critics suggest that early English translations of Weber did not sufficiently reflect the true spirit of his work, Weber has nevertheless provided a foundation upon which much of organization theory has been built.

Building on Weber and others, more recent organization theorists have generally emphasized two primary per-

spectives on the nature and function of organizations, which have been elaborated into a number of influential theories of organizations. The first of these perspectives considers organizations as rational and efficient solutions to various problems associated with cooperation, complexity, and uncertainty. The second perspective considers organization not on the basis of its rational structure and function but rather on the basis of its social meaning and value.

ORGANIZATIONS AS RATIONAL SOLUTIONS TO SOCIAL PROBLEMS

Some of the earliest theories of organizations emerged in the wake of the Industrial Revolution and were characterized by the search for universal organizing principles. Influential among these early theorists were Frederick Taylor and Henri Fayol, whose work can be characterized as the application of mechanical and industrial engineering principles to the management and control of human labor. However, in the 1960s organization theorists turned attention from universal organizing principles to theories that argued that ideal organization structures were not one-size-fits-all, but instead contingent on various factors within the organization and its environment.

In 1967, Paul Lawrence and Jay Lorsch introduced *contingency theory,* which claimed that the best way to organize depends upon the characteristics of an organization's environment. Lawrence and Lorsch argued that organizations' environments vary widely and that organizations come to reflect this variety by rationally adopting structures best suited to their environments. They showed that the degree of volatility and uncertainty in an organization's environment affects things like the formalization of an organization's structure, the centrality of its decision making, the time horizon upon which it focuses, and how it divides itself into departments and its tasks. Lawrence and Lorsch's emphasis on contingencies proved influential, and several other contingency-based theories of organizations emerged in the 1970s. Among these are *agency theory*, *transaction cost economics*, and *resource dependence theory*.

Agency theory focuses on the fact that, in organizations, one person (the *agent*) acts at the behest of another (the *principal*). This principal–agent relationship exists in organizations between stockholders and managers and between managers and employees. Agency theorists assume that both agents and principals have self-interests and that these interests frequently diverge. This creates a need for principals to monitor the agents, which is difficult and expensive since agents often have more expertise than principals and cannot be continuously and directly observed. Agency theorists therefore depict organizational structures as rational attempts to establish complex yet efficient systems of cooperation, which differ from organization to organization and task to task depending on the information asymmetry between principals and agents.

Transaction cost economics (TCE) is closely related to agency theory, but instead of emphasizing how organization structures govern internal principal–agent relationships, TCE emphasizes that organizations are rational and efficient solutions to managing the relationship between itself and other organizations in its environment. Oliver Williamson, who introduced TCE in the mid-1970s, argues that small-scale transactions (i.e., simple and immediate exchanges of goods and services) do not require organizations; however, as transactions become more complex and uncertain, organizations are needed to monitor and limit the liabilities of these risks. TCE also explains organizational boundaries on the basis of transaction costs: Functions for which the costs of external transactions are too great are brought inside the organization, while those available for less total cost elsewhere are performed externally.

The resource dependence view of organizations, like TCE, emphasizes an organization's relationship to other organizations but focuses on how an organization's structures are contingent on the nature and scarcity of the resources it needs to operate rather than on the complexity and uncertainty of its transactions. More so than the other contingency-based theories, the resource dependence view emphasizes the role of management in negotiating the dependencies resulting from an organization's resource needs, and specifies a number of strategies that firms may undertake to do this under different dependency conditions.

The rational/efficient assumptions within contingency-based theories of organizations also underlie the theories of *population ecology* and *co-evolution*, which conceptualize the environment shared by organizations in the same or related fields as an ecosystem. These theorists employ ecological and evolutionary mechanisms, (e.g., variation, selection, specialization) to explain how organizations come to be and survive or fail. In this stream of research, organizational success, failure, and form are contingent upon environmental adaptation, fit, and population density.

ORGANIZATIONS AS EMBODIMENTS OF VALUE AND MEANING

Another approach to addressing the questions of how organizations come into being and why they take the forms they do is based on the conception of organizations as embodiments of value and meaning. Many of these theories can be traced to Peter Berger and Thomas Luckmann's *The Social Construction of Reality* (1966), in which they suggest that, in the context of social science,

"knowledge" and "reality" are subjectively created rather than objectively discovered. Theories based on this approach shift their emphasis from identifying efficient ways of organizing to understanding the purpose or meaning derived from organizing a particular way. The shift was essentially a move from Weber's formal rationality to substantive rationality, which critics held had been slighted by modernist social science and its natural preference for formal rationality.

One example of this branch of organization theory comes under the generic heading of *institutional theory*, which grows out of the concept of social institutions. While diverse definitions of institutions abound, reflecting the evolution and variety of theories under this rubric, common to all of them is the idea of stable patterns of social interaction that over time become vested with value and power. Within organization theory, institutions were first associated with the processes by which leaders infuse organizational structures or processes with value beyond their technical requirements, resulting in their reproduction and stability. In this stream of research, sometimes termed *old institutionalism*, the focus is on creating meaning and infusing values from within the organization.

This is contrasted with *neo-institutional theory*, or *new institutionalism*, which focuses on how external aspects of the context in which organizations exist affect their structures and processes. In a seminal piece from 1983, Paul DiMaggio and Walter Powell suggested the similarity among organizations in a field was the result of their common environment, which comprised three distinct forces for conformity: *coercive forces*, such as a common regulatory environment; *normative forces*, such as professionalization and standardized professional education (e.g., accounting); and *mimetic forces*, in which organizations copy visible or successful others when facing uncertainty. The idea that processes and structures result from passively adapting to external pressures contrasted directly with old institutionalism, which theorized they were actively infused with value from within. Later, in response to criticisms that neo-institutional conceptions of organizations were too passive and static, neo-institutionalists highlighted *institutional change*, where organizations dynamically adapt to changing institutional environments, and *institutional entrepreneurship*, where actors actively shape the institutional environments in which they exist. These advances, along with the concept of *institutional work*, have blurred the distinctions between old and new institutionalism.

These blurred distinctions are also evident in *organizational culture* and *organizational identity*, both of which focus on how organizations enact meaning within their social contexts. Organizational identity theorists address the issues of "who we are" as an organization and show a similar focus on the reproduced social meaning (i.e., what is enduring, central, and distinctive) within an organization, and how that affects the structures and processes of organizations. Work on organizational culture focuses directly on the meaning systems of organizations at three levels: *artifacts*, the rituals and symbols employed in an organization; *values*, the conscious beliefs about what should or should not be; and *assumptions*, the deeply held and often unconscious beliefs that guide how members make sense of an organization. Consistent with the work on the social construction of reality, this suggests that organizational action flows from values about what should or should not be, but is constrained by assumptions about what is or can be.

SEE ALSO *Authority; Bureaucracy; Culture; Durkheim, Émile; Industrialization; Institutionalism; Marx, Karl; Models and Modeling; Modernism; Organizations; Peace; Principal-Agent Models; Rationality; Smith, Adam; Taylorism; Transaction Cost; Values; Weber, Max*

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ORGANIZATIONS

Formal organizations are ubiquitous in modern society. Most people work in organizations, join organizations, and interact with organizations in their daily lives. The study of organizations includes an examination of the relationship between individuals and organizations, organizations and their external environments, and how corporations and other constellations of organizations exercise power and influence public policy.

INDIVIDUALS IN ORGANIZATIONS: CONTROL OVER DECISION MAKING

Organizational theorists maintain that the emergence of modern large-scale bureaucracy is an outcome of the increased application of formally rational means (e.g., written laws, rules, and regulations) to achieve the substantively rational goals (i.e., large-scale capitalism, democracy) associated with modernity. Although large-scale organizations can be used to increase the productive capability of capitalism and extend democracy to more spheres of social life, they also provide means for elites who control them to exercise power and advance their political and economic interests (Weber [1921] 1978). Scholars who examine organization control have shown that at the turn to the twentieth century capitalists hired scientific managers to experiment with techniques to increase control over the labor process. These scientific managers collected information from workers and centralized it in planning departments where engineers used it to establish formal rules to control the labor process (Braverman 1974).

In the middle decades of the twentieth century, decision-making theorists demonstrated that the capacity of elites to control managers in large and complex organizations is constrained by bounded rationality: limits on rationality that are affected by unclear preferences, limited information, and the cognitive abilities of individual decision makers (Simon 1957). These decision-making theorists showed that superordinates attempt to overcome bounded rationality and increase their control over subordinates by establishing premise controls, which limit the search for alternatives in the decision-making process (March and Simon 1958). Other organizational researchers point out that bounded rationality cannot be completely eliminated and that premise controls and other formal controls have unintended consequences (Perrow 1972; Burawoy 1979). Research in this tradition shows that formally rational controls caused widespread inefficiencies in the decision-making process in corporate American during the middle decades of the twentieth century. In response to the capital accumulation crisis in the 1970s and early 1980s, like the earlier period when elites increased their control over the labor process, capitalists and their top managers implemented scientific management principles to increase control over the managerial process. They hired engineers and other technical experts to collect information from production managers, centralize that information into computerized information processing systems, and use it to develop premise and other formal controls that limited the discretion of lower and middle-level managers (Prechel 1994).

ORGANIZATIONS AND THEIR ENVIRONMENTS

Another line of research in organizational sociology examines the relationship between the internal organizational structures and the environment. There are two distinct types of organization-environment theories. The "weak form" of the organization-environment hypothesis stresses how organizations respond to environmental forces. Organizational ecology, which borrows from the biological model of natural selection, conceptualizes organizational populations as aggregates of organizations that are alike in some respect (e.g., newspapers). Organizations are considered part of a larger system that must adapt in order to survive. This perspective stresses the importance of structural isomorphism, which denotes a fit between the organization and its environment (Carroll and Hannan 1995). However, organizational adaptation is limited by inertia, which includes internal politics and increased age, size, and complexity. In the absence of adaptation to the environment, organizations will cease to exist.

Neoinstitutional theory also represents the weak form of the organization-environment hypothesis. This perspective examines organizational fields: a recognized area of institutional life with key suppliers, resource and product consumers, regulatory agencies, and other similar organizations (DiMaggio and Powell 1983). Once an organizational field is established, three mechanisms cause organizations to become homogeneous. First, mimetic behavior occurs when organizational technologies are poorly understood, when goals are ambiguous, or when the environment creates symbolic uncertainty. When these conditions exist, organizations model themselves on the dominant organization in their field. Second, normative behavior entails professionalization, which includes efforts by practitioners of an occupation to define the conditions and methods of their work, control the supply of new producers, and establish a cognitive base and legitimation for their occupational autonomy. Third, coercive pressures emerge from political and cultural influences. This neoinstitutional perspective assumes that an autonomous state creates public policies and laws (e.g., antitrust, product safety) and is capable of making corporations and other organizations comply with those laws.

In contrast, the "strong form" of the organization-environment hypothesis suggests that corporations and other organizations are capable of influencing public policies that are designed to control and regulate them. Resource dependence theory maintains that the environment constrains organizations, and organizations depend on other organizations for resources (Aldrich and Pfeffer 1976; Pfeffer and Salancik 1978). This perspective also maintains that the key to survival is the ability to acquire and maintain resources from other organizations in the environment. To reduce dependencies that limit their prospects for autonomous action and survival, organizations set up strategies to manage their environments.

ORGANIZATIONS AND PUBLIC POLICY

The strong form of the organization-environment hypothesis is consistent with research by political sociologists who show that business elites use networks of organizations to influence public opinion and public policy (Domhoff 2006), and economic sociologists who maintain that the behavior of individuals and organizations can only be understood by examining the social relations in which they are embedded (Granovetter 1985). Other researchers maintain that the universalizing assumptions in many social theories can be misleading and that the strong form of the organization-environment hypothesis is historically contingent (Prechel 1990). Historical contingency theory of corporate political behavior maintains that although elites are always politically active, the level of elite political activity varies over time. When the condition of economic uncertainty is high (e.g., periods of low or unstable profits), corporations become more politically active, and they pressure state managers to implement policies to attain economic stability and predictability and to preserve the social relations in capitalist society (Prechel 2000). Although capitalists and their top managers do not always have a coherent conception of the relationship between their economic goals and the means to achieve those goals, they engage in political behavior to transform public policies in order to create the conditions that better advance their profit-making agendas.

Historical contingency theory explains the three major corporate form changes in the largest U.S. firms between the 1880s and 1990s. First, in the 1880s and 1890s, business elites lobbied states to pass formal laws to give industrial corporations the right to use the joint-stock holding company. This corporate form holds the majority of the stock (i.e., more than 50 percent) of legally independent subsidiary corporations. The embeddedness of the holding company in an environment with little regulatory control created opportunities for capitalists to consolidate many independent companies into giant companies such as AT&T, General Motors, and U.S. Steel Corporation. By the 1920s, stock overvaluation and other forms of malfeasance were widespread in many holding companies (Berle and Means 1932). To reinvigorate and sustain capitalism after the Great Depression, the Franklin D. Roosevelt (1882–1945) administration set up public policies to limit the use of this corporate form. These policies included a tax on the transfer of capital between subsidiary corporations and the holding company. By increasing the cost to operate the holding company, this capital transfer tax contributed to the deinstitutionalization of this corporate form. After this legislation was passed, corporations began to restructure into a *multidivisional form* where product lines are organized as divisions inside a single corporation. By 1960, the multidivisional form prevailed in corporate America (Chandler 1962).

In response to the capital accumulation crises of the late 1970s and early 1980s, corporate America mobilized politically to replace the institutional arrangements that were established during and after the New Deal. These market-driven neoliberal policies included: (1) redefining antitrust regulations that prohibited large corporations from merging with others operating in the same market; (2) eliminating the tax on capital transfers from subsidiary corporations to parent companies; and (3) dismantling regulatory control over the banking and financial industry. Now, corporations were allowed to engage in behaviors that were previously illegal or not viable, including using new forms of financing to merge or acquire other large corporations and organize their new and existing corporate entities as subsidiaries in the *multilevel-subsidiary form.* This multilevel-subsidiary form has a parent company at the top of the corporate hierarchy that operates as a financial management company, with two or more levels of legally separate subsidiary corporations embedded in it (Prechel 2000, p. 12). By 1993, 65 percent of the one hundred largest U.S. industrial corporations used this corporate form (Prechel 2000, p. 244). As occurred during the late nineteenth and early twentieth centuries, this multilevel-subsidiary form provided a means to create giant corporations such as Exxon-Mobil, Chevron-Texaco, and ConocoPhillips. The embeddedness of this corporate form in these new institutional arrangements also created opportunities to overvalue corporate stock and to conceal financial malfeasance (Prechel 2000, p. 265).

CORPORATE CRIME

Following the 2001 bankruptcy of Enron Corp., civil and legal investigations showed that Enron's management used the multilevel-subsidiary form to transfer capital between legally independent corporate entities and manipulate its financial statements (Prechel 2003). Self-interest-seeking with guile was not limited to managers in the few corpo-

rations that the media focused on. Between January 1995 and May 2005, the Commodity Futures Trading Commission, the Department of Justice, and the Securities and Exchange Commission filed 457 allegations against 151 (i.e., 30%) of the 500 largest U.S. corporations. In 2005 alone, the Federal Bureau of Investigation pursued 405 corporate fraud cases that resulted in an additional 317 convictions (FBI 2005). However, many executives who engaged in corporate malfeasance were not accused of wrongdoing or held responsible for misleading the public because deregulation made many social acts legal that were previously illegal or not viable.

Unlike in the 1920s, when most stock was owned by the upper classes, the expansion of mutual funds created means for the working classes to invest their retirement and savings into corporate securities. As a result, the working classes lost billions of dollars due to corporate chicanery and malfeasance in the 1990s. Estimates suggest that $2.1 billion was wiped out from the employee pension plan at Enron alone and that $40 billion was lost from employee pension funds in general.

ORGANIZATIONS AND INEQUALITY

Political mobilization by corporations and wealthy individuals was not limited to deregulating corporations. During the same period that public policy was changed in ways that created opportunities for corporate malfeasance, elites financed political action committees, think tanks, and lobbying organizations to transform public policy in ways that lowered taxes on wealthy individuals and corporations. This policy shift also included a reduction in social programs for the poor.

By 1990, family income inequality increased to the highest level since 1947, when the U.S. government began compiling these data, and continued to increase into the twenty-first century. The very rich benefited most in this redistribution of income and wealth. Whereas the top 1 percent of American income earners received 9.3 percent of the total income in 1979, this group received 17.8 percent of the total income in 2000 (Mishel et al. 2005, p. 62). Although the rich have always held a large percentage of the wealth in American society, wealth inequality also increased during the 1980s and 1990s. Whereas the wealthiest 1 percent of the population held 33.8 percent of the nation's total net worth in 1983, it had increased to 38.1 percent by 1998 (Mishel et al. 2005, p. 282).

SUMMARY

The strong form of the organization-environment hypothesis suggests that the power of elites is derived, in part, from their capacity to control organizations and to use organizations to change their environment. Beginning in the 1970s, corporations and wealthy individuals used their wealth and power to decrease government regulation, increase corporate property rights, and extend free markets. These new institutional arrangements resulted in a historic turning point characterized by reduced regulatory oversight, lower taxes on corporations and wealthy individuals, higher rates of corporate chicanery and malfeasance, and increased inequality.

SEE ALSO *Organization Theory*

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Harland Prechel

ORGANIZATIONS, PEASANT

Peasants—and peasant organizations—exhibit enormous diversity across time and space. Since the origin of state societies, smallholders, tenant farmers, sharecroppers, squatters, and landless laborers have participated in local organizations—some formal and others informal—to coordinate planting, cultivation, and harvesting; to administer irrigation systems; to exchange labor; to acquire inputs and market harvests; and to demand from those in power fairer prices, lower taxes, and access to land and other resources. In many parts of the world, peasant insurgencies against elites and colonial powers involved thousands or even millions of rebels drawn from among the rural poor. Twentieth-century peasant wars—such as the Mexican and Chinese revolutions and the Vietnam War (1957–1975)—brought massive social upheavals and reshaped geopolitics at the world level. In the late twentieth and early twenty-first centuries, organizations of peasants and small farmers helped to stall global trade negotiations and to reformulate policies in such areas as poverty alleviation, genetically modified crops, agrarian reform, and environmental sustainability.

Peasant and farmer cooperatives have existed in Europe and the Americas since at least the late nineteenth century. Most have been organized around the production and marketing of particular commodities, but many have involved machinery services, input purchasing, savings and credit, transport, and retail businesses. Cooperatives in most countries are barred from political advocacy activities, but many national- and international-level cooperative federations attempt to work for their members' interests in governments and multilateral institutions.

Peasant and farmer associations that lobby or employ pressure tactics to defend their members' interests are found virtually everywhere, including in developed countries where only a small portion of the economically active population works in agriculture. Unions of agriculturalists in France, the United States, and Canada exercise substantial political influence. In poorer countries, such as Ecuador and Bolivia, peasant and indigenous movements contributed to toppling national governments in the early twenty-first century. Even in China, where the government does not tolerate independent political organizations, rural unrest is widespread and has led to major administrative reforms, such as reductions in the taxes agriculturalists pay to local governments.

Scholars and activists have long debated the role of outsiders in forming peasant organizations. While rural people have had improved access to education in recent decades, through either government programs or nongovernmental organizations, a broad consensus exists that effective peasant associations usually require some outside leadership, at least in their initial stages. At the same time, it is now widely recognized that many rural people are increasingly cosmopolitan, with experience in urban areas and abroad that equips them for organizing and leading peasant movements.

Social scientists once distinguished between *farmers*, who had a commercial orientation, employed hired labor, and operated with advanced technology, and *peasants*, who were subsistence-oriented and used family labor and rudimentary technology. These ideal types have proven problematical as the rural poor adopt modern technologies, as agriculturalists in developing and developed countries collaborate around issues of common concern, as rural residents migrate to cities, and as peasants and farmers themselves emphasize their commonalities and downplay differences. Moreover, in many languages the terms equivalent to *peasant*—the French *paysan* or the Spanish *campesino*, for example—are more inclusive, meaning simply "people from the countryside" and including many farmers.

Transnational peasant organizations have a long history. The Farmers' Institutes extension program originated in Canada in the 1890s and spread to the United States and Britain. Following World War I (1914–1918), peasant political parties—termed "the Green International"—held power in several eastern European countries. The Associated Country Women of the World was founded in 1933 and claims a membership of nine million in 365 participating societies in seventy countries. The Paris-based International Federation of Agricultural Producers, formed in 1946, includes many organizations of large

farmers and some peasant associations. The global farm crisis of the 1980s, marked by plummeting commodity prices and skyrocketing prices for fossil fuel–based inputs, sparked a new wave of cross-border peasant organizing, much of it directed against the General Agreement on Tariffs and Trade (GATT) and later the World Trade Organization (WTO). The Vía Campesina, or Peasant Road, a militant international peasant and farmer organization that emerged in the early 1990s, has been in the forefront of campaigns to take agriculture out of the WTO and to implement "food sovereignty" policies. The Vía Campesina has nearly one hundred member organizations in Asia, Europe, Africa, and the Americas. These include the Brazilian Landless Movement, the U.S. National Family Farm Coalition, the National Farmers Union of Canada, the Peasant Confederation of Peru, the Assembly of the Poor in Thailand, the Nepal National Peasant Women's Association, and the European Farmers Coordination.

SEE ALSO *Peasantry*

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Marc Edelman

ORGANIZED CRIME

SEE *Kefauver, Estes; Mafia, The.*

ORICHAS

SEE *Santeria.*

ORIENTALISM

Orientalism refers principally to the academic study during the eighteenth, nineteenth, and early twentieth centuries of the peoples, languages, and cultures of North Africa, the Middle East, and, to a lesser degree, South Asia. In art history, the term refers to a school of European painters of the nineteenth century who took the peoples of these regions as their primary subjects. Since the publication of Edward Said's (1935–2003) widely influential study titled simply *Orientalism* (1978), the term has become pejorative, suggesting a critical orientation or mode of representation that privileges the Western over the Eastern or idealizes the East in a manner that reflects European desires and political and economic interests.

What is called, after Said, *orientalist discourse*, developed during the era of most active European colonialism, from the early 1800s to World War I (1914–1918). Among the first important works accurately called *orientalist* were those produced by figures associated with colonialist endeavors in North Africa and the Middle East, including the massive, twenty-four-volume *Description de l'Égypte*, produced by approximately 160 scholars who accompanied Napoléon Bonaparte (1769–1821) on his ultimately failed expedition to conquer Egypt in 1798. The *Description*, completed in 1829, is typically orientalist in, on the one hand, the idealization of Egyptian people and places in its many beautifully rendered images, and, on the other, its overall concern with defining and classifying all the cultural and physical aspects of Egypt toward the ultimate objective of controlling its people and natural resources.

The nineteenth century can rightly be called the *orientalist era* in the arts, as works across the spectrum of literature and painting drew on the myth of the Orient that was being produced by the functionaries of colonialism and the scholars of philology. While French painters such as Eugène Delacroix (1798–1863) and Jean-Léon Gérôme (1824–1904) are widely regarded as the preeminent orientalists in the visual arts, the movement was widespread and included Frederick Arthur Bridgman (American, 1847–1928), Frederick Goodall (British, 1822–1904), Louis-Joseph Anthonissen (Belgian, 1849–1913), Ludwig Deutsch (German, 1855–1935), and Leopold Carl Müller (Austrian, 1834–1892). Orientalist literary artists include Rudyard Kipling (1865–1936), Edgar Allan Poe (1809–1849), Joseph Conrad (1857–1924), and Arthur Rimbaud (1854–1891), to list only a very few.

Muslim women were a particular focus of orientalist artists. The "slave market," "harem," and "bath" received seemingly endless treatments. Gérôme's images characteristically give the impression of the voyeur who has lifted or pulled back the "veil" to reveal the hidden mystery of the Orient. Women's bodies are erotically on display, often, in fact, under examination by some Arab buyer or slave trader. The precise response of a European audience to such images is difficult to ascertain, but generally the

erotic construction of an Arab "other" appealed to a patriarchal sense of superiority and interest in control.

The matters of the European sense of superiority and interest in control can also be seen in orientalist scholarship. Non-Western societies were described as backward and barbaric, fundamentally incapable of social, political, or technological modernization. An important point is that the works of orientalist scholars were often not intentionally or explicitly motivated toward the interests of Western power. The assumptions of superiority and control were embedded in the scholarship, often despite the fact that an individual scholar might regard his or her subject very sympathetically. However, it is certainly true that whatever the disposition of the orientalist scholar, his or her work was a critical part of the general body of knowledge that facilitated and justified the control and exploitation of colonized peoples.

The publication in 1978 of Said's study unleashed a fierce and continuing debate. The debate is wide ranging and contains multiple positions, though it can be roughly divided between two groups. Some believe Said's work has overly politicized the academic study of non-Western peoples and unfairly characterized the work of devoted scholars. Others, particularly the generation of scholars who pursued their graduate work in the later 1980s and 1990s, hold that Said's work is a particularly valuable contribution to the broad examination of the ideological assumptions and effects of intellectual works that purport to be disinterested.

Whatever the multiple positions in this rich debate, the influence of Said's volume has been tremendous. *Orientalism* has been translated into at least thirty-six languages, including Hebrew and Vietnamese, gone through multiple editions, and is certainly one of the most cited works in the humanities and social sciences since 1978. The critique of orientalist work is at the center of entire new disciplines, such as postcolonial studies, which is concerned with the struggle of non-Western peoples to meaningfully represent themselves and their social, political, and cultural concerns to both Western and non-Western audiences and institutions.

SEE ALSO *Colonialism; Gaze, Colonial; Imperialism; Other, The; Postcolonialism; Racism; Representation in Postcolonial Analysis; Said, Edward*

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Stephen A. Germic

ORIGINAL SIN

SEE *Sin.*

O-RING THEORY

Michael Kremer formulated the O-ring theory in 1993. His article, "The O-ring Theory of Economic Development," published in the *Quarterly Journal of Economics*, presents a production function in which production consists of many tasks, all of which must be successfully completed for the product to have full value. Mistakes can be extremely costly reducing the product's value. The name O-ring comes from the accident of the space shuttle *Challenger* that exploded because one of the components, the o-rings, failed.

The production function has two crucial assumptions. The first is that workers must be sufficiently imperfect substitutes for each other; that is, it is not possible to substitute several low-skill workers for one high-skill worker. Skill is defined as the probability of a worker successfully completing a task, q. The second assumption is that there are strong complementarities among inputs; that is, if there are n tasks, output, y, is given by multiplying the q-values of each of the n tasks together. Assuming that firms are risk-neutral, labor is supplied inelastically and labor markets are competitive, production is given by:

$$E(y) = y = k^{\alpha}(\Pi_{i=1}^{n} q_i)\eta B$$

where k is capital and B is output per worker with a single unit of capital if all tasks are performed perfectly. Profit maximizing firms choose a level of capital, k, and the skill of each worker, q_i, facing a wage schedule $w(q)$ and a rental rate, r. The first-order condition associated with each of the q_i is

$$\frac{dw(q_i)}{dq_i} = \frac{dy}{dq_i} = k^{\alpha}(\Pi_{j \neq i} q_j) nB$$

Thus, the increase in output a firm obtains by replacing one worker with a slightly higher skill worker, leaving everything else constant, must equal the increase in its wage bill necessary to pay the higher skill worker. Thus the wage schedule is a function of worker skill.

As the derivative of the marginal product of skill for the i*th* worker with respect to the skill of the other workers is positive, $\frac{d^2 y}{dq_i d(\Pi_{j \neq i} q_j)} = k^{\alpha} nB > 0$, firms with high q workers in the first $n - 1$ tasks place the highest value on having high-skill workers in the n*th* task, so they bid the most for these workers. As a result workers of the same skill are matched together in firms.

Kremer stressed that this production function is consistent with many stylized facts such as: (1) wage and pro-

ductivity differentials between rich and poor countries are enormous; (2) firms hire workers of different skill and produce different quality products; (3) there is a positive correlation among the wages of workers in different occupations within firms; (4) firms only offer jobs to some workers rather than paying all workers their estimated marginal product; and (5) income distribution is skewed to the right. Assuming sequential production in which the highest q workers are allocated to the later stages of production it is possible to show that: (1) poor countries have higher shares of primary production in gross national product (GNP); (2) workers are paid more in industries with high value inputs; and (3) the effects of efficiency wages, bottlenecks, and trade restrictions are magnified. When the number of tasks, n, is endogeneized it is possible to show that: (1) rich countries specialize in complicated products; (2) firms are larger in rich countries; and (3) firm size and wages are positively correlated. Finally, when skill is endogeneized as the product of investment in education or effort Kremer showed that there is some level of education subsidy that improves welfare. Although many of these predictions of the model may be due to a variety of causes, together they suggest that O-ring production functions are empirically relevant.

Kremer stressed that if strategic complementarity is sufficiently strong one may have multiple equilibria and each may be inefficient. Therefore, there is room for public policies to move the economy to a preferred equilibrium. According to Michael Todaro and Stephen Smith's 2003 work, one of the limitations of the model is that it falls short on practical policy implications.

The applications of the O-ring theory are wide. In 2006 Charles Jones adapted it to study the role of knowledge in the theory of economic development. Alberto Dalmazzo's 2002 work combines the O-ring production function with efficiency wages; the workers employed in a firm with a more complex production process should earn higher wages than identical workers that work on identical tasks in firms with less complex production processes. Tuomas Pekkarinen's 2002 estimates for the Finnish metal industry find evidence supporting this hypothesis.

In the O-ring theory productivity is associated with the job rather than with the worker, which raises questions about how workers get access to the higher productivity jobs. Peter Doeringer and Michael Piore's 1971 work shows that internal labor market analysis promotions have the role to allow workers to get access to the higher productivity jobs and firms to extract the maximum effort from workers. The economy may be characterized by dual labor markets in which one sector offers high wages, stability, and good working conditions and the other sector offers low wages, high turnover, and poor working conditions, pressing one back to the structuralist analysis.

Kremer acknowledged that his paper combines Sherwin Rosen's 1981 analysis of multiplicative quality effects with Gary Becker's 1981 analysis of matching in marriage markets. However, some of Kremer's ideas were advanced by the theory of stratification formulated by Kingsley Davis and Wilbert Moore in 1945 and developed by Arthur Stinchcombe in 1963 and Stinchcombe and T. Robert Harris in 1969. According to Davis and Moore, stratification in all societies was viewed as an unconsciously evolved device by which societies assured that the most functionally important positions would be filled by the most capable persons. Stinchcombe, focusing upon organizational rather than social stratification, hypothesized that the more complementary are individual contributions to total production, the greater will be the inequality of rewards. Stinchcombe and Harris anticipated the production function presented by Kremer in which the case of interdependence of activities in production is modeled as the product of the probability that every worker will be working.

SEE ALSO *Coordination Failure; Development Economics; Enterprise; Inequality, Income; Labor Market Segmentation; Productivity; Wages*

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ORTEGA, DANIEL

SEE *Sandinistas.*

ORTHODOXY

The concept of orthodoxy is variously used as: (1) a historically specifically located term; (2) a descriptive-analytic term to describe traditions or writers that may not describe themselves by that term; and (3) a titular self-description in various religious communities (e.g., Modern Orthodox Judaism, Greek Orthodox Church). Often, *orthodoxy* is juxtaposed with *orthopraxy*, whereby orthodoxy would apply more appropriately to *cognitivist* traditions, such as Christianity and its emphasis on faith and theology, rather than to traditions that define themselves along behavioral lines, such as Judaism and Islam with their emphases on religious law. This juxtaposition is artificial, however, since Judaism and Islam, as well as Christianity, develop discourses of orthodoxy and authenticity.

The historical origin of the concept of *orthodoxy* (from the Greek word for correct or normative faith) as the antonym of *heresy* (Greek, "faction") can be traced back to early Christian literature. Conceptually, *orthodoxy* emerges as a by-product of the early Christian practice of heresiography, whereby the two antonyms were aligned with other oppositional pairs, such as, importantly, truth and its perversions. To a large degree, the heresiographers opted to define orthodoxy by what it was not—namely, the aberrant heresies—rather than to formulate what orthodoxy actually entailed. First-century writers such as Josephus (37–c. 100 CE) could still employ the term *heresy* in the sense of "school of thought," as in his description of the various schools of thought in first-century Judaism (Pharisees, Sadducees, Essenes, and potentially Zealots). Hence, this first-century phenomenon is most often described as *sectarianism* rather than as a struggle for orthodoxy. To Josephus, none of these groups constituted an orthodox versus a heretical version of Judaism, or an exclusionary normative Judaism from which the others were to be excluded as deviant marginal groups. What distinguishes the heresiographical texts of the second half of the second century and onward from first-century writers such as Josephus is precisely this shift in meaning from *heresy* as a school of thought, still subsumed under the umbrella of the larger category term of Judaism (in Josephus's case), to *heresy* as a deviant aberration from the true religion, hence to be excluded from its boundaries of identity. Only the latter allows a notion of orthodoxy as the true, authentic version of Christianity (and subsequently Judaism) to emerge.

It may be debatable as to the degree to which the early Christian leader Paul already engaged in a heresiographical practice in his epistles without resorting to the concept of *heresy* when in his Epistle to the Galatians (1:6–7) he denounced his opponents as those preaching "another gospel" and thereby "perverting the gospel of Christ." However, it appears that the first author of what turned into the genre of Christian heresiography was Justin Martyr (100–165 CE) with his *Refutation of all Heresies*, a text that is no longer preserved. Subsequently, Irenaeus's treatise *Adversus omnes haereses* (Against All Heresies, 185 CE) drew on Justin's work, and from then on heresiographies present a distinct genre of Christian literature and theology. Around the same time, Jewish writers, such as the authors of the earliest Rabbinic text, known as the *Mishnah* (c. 200 CE), began to adopt heresiographical practices.

The early Jewish and Christian debates were carried out in a context in which the writers lacked the support of institutional or political authority. A case may be made that these strategies of self-representation contributed to, if not entirely caused, the institutional consolidation of the Catholic Church, ultimately backed by the political authority of the Roman Empire, and the rabbinical leadership of the Jewish community at the end of the late antique period.

The heresiographers employed a number of strategies to render persuasive their notion of the true and therefore authoritative or normative version of theology and practice. One strategy to establish authenticity was to attribute historical or chronological priority to their norms. For example, the early rabbis claim that their traditions or their "oral Torah" was already given to Moses on Sinai (Mishnah Avot 1:1), and the Christian heresiographers attribute their teachings to the first apostles and ultimately Jesus himself. The historical priority of authentic traditions is subsequently secured by chains of traditions that lead from the source to each respective heresiographical author. Heresies then are represented as groups ("them") that split off from the normative tradition and perverted it, versus the projected "us" who continue the authentic and original tradition. This classic strategy of self-representation is employed in various other religious contexts, often in order to disguise innovative practices and beliefs. In the case of early Judaism and Christianity, this strategy was so successful that modern historians have often assumed such claims to be descriptive rather than recognizing them for their rhetorical work.

Another strategy of the heresiographers was to adduce and at the same time reduce the origin of what they wished to portray as false belief to a founding figure whose name would give the denounced faith its name. Paul juxtaposes the idea of following Christ with merely following Paul, Apollo, or Cephas (Peter) in his argument against divisions in the early church communities (1 Cor. 1:12).

Subsequently, heresiographers provide lists of named and supposedly nameable groups who may not have described themselves by those names, as Justin Martyr does in his *Dialogue with Trypho* : "Some are called Marcionites, some Valentinians, some Basilideans and some Saturnalians, and some others by other names" (Martyr 1930, p. 70), just not the name Christians. This strategy allows for contrasting these marginalized categories of groups with the universal unnamed category employed to promote the appearance of authenticity, whether that is represented by terms like *orthodox* and *catholic* (Greek, "universal") in the Christian case, or "Israel" versus groups such as Sadduceans and Boethusians in the early Rabbinic case. Both these strategies—the attribution of historical priority to that which is promoted as authentic, and the reduction of opponents to marginal movements contrasted to one's own universality—are repeated in numerous other conflicts, mostly of a religious nature.

While the concepts of orthodoxy and heresy have specific historical origins, and are mostly used in the contexts of religious practices and religious studies as well as in sociology of religion, they have come to be used more broadly in various other disciplines and subject matters. Any established tradition or symbolic order perceived as truth, as the law, or as political consensus can be described as orthodoxy, and anyone diverging therefrom as heterodox or heretic. A discipline of study may be legitimated by one normative methodology, leading to a perception of innovative approaches as heterodox or heretic.

In the social sciences, Pierre Bourdieu (1930–2002) elevated the concepts of orthodoxy and heresy to methodological principle in his analysis of social behavior, accompanied by a third concept, *doxa*. In his classic work *Outline of a Theory of Practice* (1977), he defines orthodoxy as "a system of euphemisms, of acceptable ways of thinking and speaking the natural and social world, which rejects heretical remarks as blasphemies" (Bourdieu 1977, p. 169). Hence, orthodoxy is always a social fiction, a socially established convention in the realm of discourse. *Doxa*, on the other hand, refers to the "pre-verbal taking-for-granted of the world that flows from practical sense" (Bourdieu 1990, p. 68). At times, Bourdieu maps all three terms on class distinctions in that *doxa* is the product of a system of domination. Accordingly, he defines *doxa* as the viewpoint of the dominant, which disguises itself as universal, neutral, or objective, and which the dominant classes have an interest in defending, whereas the dominated have "an interest in pushing back the limits of *doxa* and exposing the arbitrariness of the taken for granted" (Bourdieu 1977, p. 169). *Doxa* is a stronger tool of domination because it is "an ensemble of fundamental beliefs which do not even need to affirm themselves in the guise of an explicit dogma, conscious of itself" (Berlinerblau 2001, p. 346), that is, orthodoxy. Hegemony and orthodoxy are interchangeable. The heretic then is the person, a prophet or *homo academicus*, who discovers some unrecognized belief about the world that supplies the means of thinking the unthinkable.

Bourdieu is not the first to translate the concepts of orthodoxy and heresy or heterodoxy, originally coined in a religious context, into analytic vocabulary for sociological and political analysis, but his is the most influential to date.

SEE ALSO *Bourdieu, Pierre; Christianity; Galbraith, John Kenneth; Hegemony; Judaism; Kuhn, Thomas; Religion; Revolutions, Scientific; Roman Catholic Church; Science*

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Charlotte Elisheva Fonrobert

ORTHOPRAXY

SEE *Orthodoxy.*

ORTIZ, FERNANDO

1881–1969

Fernando Ortiz was a public intellectual known for his interdisciplinary studies of Cuba's popular cultural traditions, particularly Afro-Cuban culture and its multiethnic African heritages. Recognized as the founder of the social sciences and specifically of anthropology and ethnomusicology in Cuba, he was born in Havana on July 16, 1881, but spent his youth in Minorca, Spain. After completing high school in Barcelona, he returned to Cuba in 1895 to study law at the University of Havana. Within three years he decided to complete his studies at the University of Barcelona because of the turmoil from the war of independence against Spain. Upon earning his bachelor's degree in law in 1900 and a doctorate in law from the University of Madrid in 1901, he returned to Cuba where he agreed to serve the newly established republic by accepting a three-year term as a diplomat. While in Italy, he met Cesare Lombroso (1835–1909) and Enrico Ferri (1856–1929), positivist criminologists who, along with Spanish scholars (e.g., Rafael Salillas, Manuel Sales y Ferré, Bernaldo de Quirós, and Dorado Montero), influenced his early thinking on crime.

Following his diplomatic service, Ortiz taught law at the University of Havana. Even before this academic appointment began, he investigated Cuba's criminal underworld, particularly African- and to some extent Chinese-descended criminals. His first book, *Hampa afro-cubana: Los negros brujos* (Afro-Cuban Underworld: The Black Wizards, 1906), was a "criminal anthropology" of the deviance that constituted *la mala vida* (the evil life). Ortiz's study of Havana's criminal underworld, particularly *brujería* (witchcraft) and the notorious ritual murders of white children purported to be a part of it, was grounded in the Spencerian evolutionism and biological determinism advanced by Lombroso, who wrote the book's preface. Ortiz's treatise reinforced the racist notion that lawlessness and social disorder were attributable to those of African origin, whose savagery impeded national development.

In later work, Ortiz shifted to a perspective contesting the idea that Afro-Cuban culture was inconsistent with modernity. He moved beyond a criminological approach to an ethnographically informed anthropological framework for understanding the cultural integrity of the multiple religions that were homogenized and confused with antisocial "black" magic. This important shift was, in part, the result of influence from the Haitian-descended ethnographer Rómulo Lachatañeré (1909–1952), who pushed Ortiz to use a more culturally appropriate lexicon for Afro-Cuban religions and ritual specialists.

Ortiz developed a methodology that stressed the significance of culture and history. In *Hampa afro-cubana: Los negros esclavos* (Afro-Cuban Underworld: The Black Slaves, 1916), he began to clear the ground for an analysis that would eventually lead to the elaboration of a theory of *transculturation*, his major contribution. He introduced this neologism in *Contrapunteo cubano del tabaco y el azúcar* (Cuban Counterpoint: Tobacco and Sugar, 1940), a watershed book establishing him as Cuba's leading social scientist dedicated to illuminating the complex dialectical interplay between culture, history, and political economy. Coined as an alternative to acculturation, the more conventional concept in U.S. and British cultural and social anthropologies, transculturation elucidated the "complex transmutations of culture" (Ortiz [1947] 1995, p. 98) and the ongoing interchanges, reciprocities, and tensions in a national context in which diverse peoples have experienced "loss or uprooting" (p. 102), as well as the accomplishment of creating new cultural forms and a social system for ordering the lives of both the dominant and the dominated. Transculturation was invoked in conjunction with the analogy Ortiz often made between Cuban national identity and *ajiaco*, an always-changing stew. The centrality of Africa's contributions to that stew was a key insight discernible even in his earlier work.

Misrepresented as functionalist in Bronislaw Malinowski's (1884–1942) introduction, *Cuban Counterpoint* was an innovative work written in an allegorical style. At once a cultural and an economic history, the book interpreted Cuba's development in terms of the oppositional and mutually constituted agency of its two major commodities, sugar and tobacco. Through the poetic deployment of these entities as metaphors, he offered a holistic analysis of these paradigmatic commodities as both material objects and socially constructed historical actors in a world shaped at once by human practice and the wider structural forces that constrain it. Critical of reductionist interpretations of Cuba's colonial and neocolonial experience, Ortiz's contrapuntal method offered an alternative to the dominant canons of anthropology and history as established within the Northern Hemisphere.

Ortiz's far-ranging contributions included laying the foundations for the progressive reform of Cuba's criminal justice system, writing on the indigenous origins of Cuban culture, and serving as a Liberal Party representative in congress. The bulk of his contributions to Cuba's intellec-

tual life and public culture stemmed from his seminal research on all aspects of Cuba's African-influenced, orally transmitted traditions. He validated the use of *Afro-Cuban* as an analytical construct while insisting that Afro-Cuban cultural forms were integral to a unified Cuban national identity. He also addressed the problem of racism and the workings of race as a social rather than biological category. Major publications in his later life included *La africanía de la música folklórica de Cuba* (The Africanity of Cuba's Folkloric Music, 1950), *Los bailes y el teatro de los negroes en el folklore de Cuba* (Black Dances and Theater in Cuba's Folklore, 1951), and the five-volume work, *Los instrumentos de la música afrocubana* (Instruments of Afro-Cuban Music, 1952–1955). These mature works reflected the comparative method Ortiz used to treat "the processes of social contact, their impact on the historical effects of the slave trade, and different African ethnic groups and their transculturation" (Font and Quiroz 2005, p. 250). Throughout his career, much of which was based at the University of Havana, he founded a number of journals, associations, and institutions to provide outlets and support for research on Afro-Cuban culture and other components of Cuban national identity. He died in Havana on April 10, 1969.

SEE ALSO *Anthropology; Crime and Criminology; Determinism; Determinism, Biological; Ethnomusicology; Functionalism; Malinowski, Bronislaw; Modernism; Racism; Slavery Industry; Sugar Industry; Tobacco Industry*

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Faye V. Harrison

OSCEOLA

1804–1838

Osceola (ah-see-oh-la) was a warrior and chief of the Seminole Indian tribe during the Indian removal from Florida to unsettled U.S. territory in the West during the early 1800s. His significance in the academy and the social sciences is linked to issues related to Native American identity and the political relationship between Native Americans and the U.S. government. Significant as well is his historical relationship to African slaves and contemporary African Americans' tenuous relationship to Native American tribes—the Seminoles in particular, but also the Choctaw, Creek, Cherokee, and Chickasaw, who were removed from their original homelands in the southeastern United States to their present, primary home in Oklahoma.

Osceola is seen as a major figure in securing the rights of Seminoles and other native peoples during the colonial period—not through signing agreements and treaties with agents of the U.S. governments, as some tribal leaders had done, but through guerrilla warfare tactics that kept the U.S. military at bay for a long time and so slowed the removal of Seminoles and the taking of Seminole lands. Osceola has also been viewed as a symbol of the ancestral mixture that formally and informally linked African peoples to the Indian tribes, a link that fuels contemporary claims to tribal government benefits.

The Seminoles in Florida were remnants of other Indian tribes that fled to Florida and established a lifestyle, culture, and politics that were indigenous and

self-governing. Osceola strenuously objected to the United States's offer to buy Seminole Florida lands in exchange for removal and settlement to open territory west of the Mississippi. Though his position differed from those of many of his tribal brethren, he found allies among another group of wanderers who had fled to Florida—free Africans and fugitive slaves who had several years before merged with the Florida Seminoles. These freedmen and fugitives—referred to by the Seminoles as *Estelusti*—joined the faction of Seminoles led by Osceola in opposing relocation, fighting alongside them in the Seminole Wars.

Although these "Black Seminoles" were loyal to the Seminole tribe, adopting many of their customs, intermarrying, and settling with them in the new Indian Territories in Oklahoma, Texas, Louisiana, and other surrounding states, neither the Seminoles nor whites during that period recognized them as official tribe members. Later, when the Dawes Act of 1887 required a census of Native American tribal members, Black Seminoles—referred to as Freemen—were counted as part of the tribal role, and received allotments of tribal lands. As a result of Jim Crow laws enacted after Oklahoma statehood, Black Seminoles were physically separated from their Seminole tribal brethren and their legal status as official tribal members was called into question. The ensuing controversy lasts until the present, in large part due to the refusal of the Bureau of Indian Affairs to grant official certificates of Indian blood to Black Seminoles not originally on the Dawes rolls. Blacks were officially enrolled as tribe members and recognized as such by the federal government. In 1991 the federal government awarded the Seminoles $56 million for their Florida lands, but nonblack members of the tribe claimed that the black members had no claim to share in the award. This prompted black members of the tribe to file suit in federal court; in one argument, they pointed to the original relationship their ancestors had with Osceola (and one of his wives who was African descent) and their loyalty in fighting with him as a reason that they should be recognized as full tribal members.

SEE ALSO *African Americans; Guerrilla Warfare; Indigenous Rights; Land Claims; Native Americans; Reparations; Resistance*

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OSCHNER, ALBERT

SEE *Sterilization, Human.*

OTHER AMERICA, THE

SEE *War on Poverty.*

OTHER, THE

The term *other* is used in a variety of contexts. In the most basic sense, the other is used with a small *o* to depict the manners or processes by which perceptions of others are attained. This is the subject of much research in psychology, neurology, cognitive science, and philosophy of mind. Psychologists, particularly childhood psychologists, postulate that perceptions of the other proceed inter alia from processes of contrast, comparison, and analogy through which the self sets itself apart from, first, those who are close—mother, father, and other kin—and, second, outwardly to distant "strangers" (Klein 1964; Erikson [1950] 1993). It is thus understood that consciousness of the self depends upon processes that affect distinct characteristics to others.

Often in the social sciences and humanities the other is signified by a capital *O*. For instance, following in the footsteps of Georg W. F. Hegel ([1807] 2003) and Edmund Husserl ([1929] 1999), continental European philosophy investigates the question of otherness in conjunction with the tendency of the self to conceive all things after one's own likeness. This tendency results in the desire of the ego to "feel at home" in any philosophical speculation or scientific inquiry and yet separate or above the process of inquiry. The Other emerged in this context with either a transfigured or disfigured essence, no longer a reflection of itself and unaware of itself. This "Other" is a product of the self or at least only knowable first because of one's awareness of the self.

Post–World War II existentialists such as Jean-Paul Sartre sought to "transcend" the subjugated position of the Other by examining the role that self-consciousness plays in any inquiry (Sartre [1943] 2001). Then, from Russia and eastern Europe, Mikhail Bakhtin, Emmanuel Levinas, and Julia Kristeva brought to the terms *other* and *otherness* different inflections and connotations (Bakhtin [1986] 1993; Levinas 2000; Kristeva 1994). These authors founded their theories of the Other on personal or collective experiences in more or less cosmopolitan contexts of heterogeneous mixes of disparate languages and cultures in Europe. They stressed their own otherness based on difference, that is, either individual characteristics of persons or systematized identities of classes of peo-

ple. For Levinas, the Other is the very condition of one's own existence. The Other is not any particular person, but instead an entire category that he calls "Otherness," which makes being and self or "I" possible, thus reversing the presupposition of phenomenologists such as Husserl and other continental thinkers who began all philosophical inquiry with the self. This line of argument has also concerned feminist thought, accepting the problem of the Other as the first philosophical question (Butler 2005) but insisting on the re-examination of the highly gendered notions of the ego, desire, subjectivity, and ethics (Beauvoir [1949] 1989).

The Other has not always been an interlocutor or object of reciprocal engagements. Karl Marx, Friedrich Nietzsche, Michel Foucault, and others have indicated difficulties involved in transcending the immediacy of the self in ideology or inquiry into social, political, and economic relations (Marx [1844] 1998; Nietzsche [1901] 1967; Foucault 2005). Anticolonialists and postcolonial theorists have constructed similar arguments that posit that the colonial enterprise was guided by an ideology that degraded the markers of culture, arts, and science in non-European societies to the status of folklore, myths, shamanism, and the like. Then, the colonized other was not merely different. Placed under the sign of the native (the secular equivalent of infidel), the other was deemed inferior and variably educable according to race, geography, and culture (Said 1979). It is now widely accepted that colonialists projected their own inadequacies or fears onto the colonized (Trouillot 1997). Even today, political discourse is rife with notions of rogues, failed states, and doctrines of democratic peace that assume inherent differences based on region, religion and culture, and race.

However, the stereotyping of the other(s) remains intractable because it seems to be integral to thought processes. It has benign or deadly consequences, depending on intent and circumstances, extending from simple acts of discrimination to ethnic cleansing and other crimes against humanity. As a result, neuroscientists and other specialists of the brain have undertaken inquiries on the nature of the brain, particularly how the brain generates and processes perceptions of self and the other. Indeed, scientists continue to wonder about the extent to which the brain and the mind can be made to transcend self-consciousness and affect to relate differently to desire, interest, and their pathos (Damásio 2000). For social scientists, the question of self and other centers on the means to a higher order of politics, where all might feel at home aided by scientific practices that ensure human survival (Connolly 2002).

SEE ALSO *Foucault, Michel; Marx, Karl; Marxism; Said, Edward*

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Siba Grovogui

OTTOMAN EMPIRE

The Ottoman Empire (c. 1290–1922) provides a vivid example of durable and successful state building in world history. A late medieval creation, the Ottoman state achieved world empire status in 1453 because of its conquest of Constantinople. During the surrounding several centuries, it was among the most powerful states in the world. Although geography and luck played roles, the success of the empire mainly derived from pragmatic and flexible Ottoman policy-making and considerable open-

ness to innovation, including military technology. At its peak, the empire covered parts of Asia, Africa, and Europe. Its extent is suggested by this partial list of successor states: Albania, Bosnia, Bulgaria, Egypt, Greece, Iraq, Israel, Jordan, Kuwait, Lebanon, Montenegro, Romania, Saudi Arabia, Serbia, Syria, and Turkey.

Expansion slowly faded into memory and territorial contraction began thanks partly to developments elsewhere in the world, notably the rise of capitalism and industrialism in Europe and then elsewhere, and to the New World wealth that poured into Europe. As wealth flowed elsewhere, the Ottoman Empire was unable to compete and lost its preeminent position; by about 1800 it had become a second-class economic, military, and political power. Within the empire innovation faded, partly because entrenched bureaucrats, statesmen, and military personnel acted to protect their children's positions and closed entry to newcomers.

During the nineteenth century a successful series of programs measurably strengthened the state and its military. The bureaucracy grew both in size and in the scope of its activities, now not merely collecting taxes and providing security but also taking responsibility for the health, education, and welfare of its subjects. Yet, the empire fell defeated in World War I (1914–1918) and was partitioned by the Great Powers, notably Great Britain and France.

In its domestic polity, the Ottoman state underwent continuous change. The Ottoman ruler, the sultan, began as one among equals, but between about 1453 and 1600, sultans ruled as true autocrats. Thereafter until about 1826, sultans reigned, but others in the imperial family and other inhabitants of the palace—often in collaboration with provincial elites—maintained real control of the state. Then, bureaucrats and sultans vied for domination of the state apparatus. In sum, the sultan presided over the imperial system for all of Ottoman history, but actually personally ruled for only portions of the fifteenth, sixteenth, and nineteenth centuries. Also, political power almost always rested in the imperial center and, depending on the particular period, extended into the provinces either through direct military and political instruments or indirectly through fiscal means.

A combination of religious and secular laws regulated the lives of Ottoman subjects. Under Ottoman state authority Muslim, Christian, or Jewish judges presided over the legal affairs of their respective communities. Often, however, subjects of all religions used the Muslim courts because rulings from such courts might have greater weight than those from Christian or Jewish sources. In addition to this religious law, the state routinely passed its own, secular, ordinances, often with lip-service adherence to Islamic principles. In the nineteenth century, when a flood of ordinances and regulations marked the presence of an expanding bureaucratic state, even the lip service frequently fell away in favor of scientific management.

This was an agrarian empire that, again, changed considerably over time. Most Ottoman subjects were and remained cultivators, raising a wide variety of different crops for subsistence and for sale. The particular mix of crops changed over time. Cereals remained dominant throughout the Ottoman period, but important new crops emerged at different times, for example, tobacco in the seventeenth century. In theory, the vast majority of land was owned by the sultan, but in practice, generally, land users enjoyed security of tenure. Sharecropping was widespread and the major vehicle by which goods came to market; most holdings were small. Commercialization of agriculture considerably developed in the eighteenth and nineteenth centuries. Ottoman manufacturing, for its part, remained largely small-scale and handcrafted, with some late mechanization. During the seventeenth and eighteenth centuries foreign markets for Ottoman manufactures fell away, but producers continued to enjoy a vast domestic market for their wares; in the nineteenth century export markets emerged for Ottoman rug makers and silk spinners, who usually were women working outside their homes. In transportation and communication there were important technological breakthroughs during the second half of the nineteenth century, including steamships, railroads, and the telegraph.

Ottoman intercommunal relations are hotly argued, and many popular stereotypes persist around the "terrible Turks" who slaughtered Ottoman Christians. For nearly all of Ottoman history, this stereotype is not true. For most of its duration, the Ottoman Empire can be characterized fairly as a tolerant political system. At times, the Ottoman state led the way in extending tolerance to minorities. For example, at the end of the fifteenth century Ottoman sultans welcomed the large Iberian Jewish population that the new Spanish monarchs were expelling from their own kingdom. More generally, the key to Ottoman success and a major reason for its longevity lay in the tolerant governmental treatment of those who did not share its professed religion. This tolerance was based both in practical politics and in the dictates of Islam. Until the 1870s the majority of Ottoman subjects were Christians and the state's official religion was Islam, which required that the Muslim state protect the religious rights of its Christian and Jewish subjects. The Ottoman Empire, for nearly all of its history, was a multinational, multireligious entity that did not seek to impose Islam on its subjects. This fact often has been forgotten in the confusion surrounding the end of the empire and the emergence of the Ottoman successor states, but it remains true nonetheless. Overall, the Ottoman system recognized dif-

ference and protected those differences so long as subjects rendered obedience and paid taxes. Until the eighteenth-century era of the Enlightenment, minorities in the Ottoman world likely were treated better than in Europe. Atrocities did occur, but they were exceptions in the rule of a generally admirable record of intercommunal relations over the 600-year life span of the Ottoman Empire.

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Donald Quataert

OUGHT SELF

The ought self is a particular type of self-guide. Broadly, self-guides are representations of the self. Proposed by E. Tory Higgins (1987), self-guides are involved in self-regulation such that they provide standards for the self. The ought self is a self-guide attached to ideas about who persons feel they should be or should become. These selves are typically concerned with safety and responsibility. In contrast to the ought self is the ideal self, which represents who individuals want to become and is generally concerned with hopes and wishes.

Particular self-guides are associated with different affective experiences. Individuals who perceive a large discrepancy between their actual selves and their ought selves are more likely to experience an agitation-related affect, such as anxiety and guilt, while individuals who perceive their actual selves to be more proximal to their ought self–guides experience a relief-related affect, such as calmness.

Individuals may also differentiate between various sources of their self-guides. They may construe that their self-guides represent their own ideas of who they should become or that they represent their ideas of whom others think they should become. Regardless of the source of the guide, discrepancies involving the ought self are associated with an agitation-related affect.

The experience of discrepancy from an ought self incites a negative affect. This negative affect is unpleasant, and individuals generally want to avoid it. Consequently they will self-regulate or attempt to bring their actual selves more in line with their self-guides. In this way they reduce the perceived discrepancy between their actual selves and their ought selves. When the discrepancy is reduced, a less negative affect is experienced. In their 1994 study E. Tory Higgins, Christopher R. J. Roney, Ellen Crowe, and Charles Hymes found that individuals concerned with ought selves tend to use avoidance strategies in the process of self-regulation.

Individuals may differ in the extent to which they tend to use ought selves as self-guides. In his 1997 article, Higgins considers those who are more likely to use the ought self to be prevention-focused. That is, they are more likely to pursue goals that are related to safety and responsibility. In contrast, individuals who are more likely to use ideal selves as a self-guides are referred to as being promotion oriented.

Developmentally, parental factors may be associated with using ought selves in self-regulation. In 1998 Nanmathi Manian, Timothy J. Strauman, and Nancy Denney investigated the relationship between recollections of parental styles, temperament, and tendencies to use ought versus ideal selves. They found that individuals who recall their parents behaving in ways they perceived as rejecting were more likely to possess discrepancies between their actual selves and their ought selves. The researchers attribute this finding to an increase in the salience and usage of negative outcomes for these individuals. Additionally they found that both negative and positive temperament characteristics predicted actual and ideal discrepancies, while only negative temperament characteristics predicted actual and ought discrepancies.

SEE ALSO *Emotion and Affect; Parenting Styles; Personality; Self-Representation; Temperament*

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Michelle Sherrill

OUT-GROUP BIASES

SEE *Identity, Social.*

OUTSOURCING

Outsourcing is a process whereby an organization contracts with an outside entity to perform some business function previously done "in-house." Practically any function can be outsourced, from manufacturing labor to customer service. The spatial distance between the core firm and the contractor can vary greatly. *Offshoring* denotes an outsourcing of business functions to a contractor located in a foreign country. Domestic outsourcing occurs within a single country, and can even involve two firms located directly adjacent to one another. The temporal relationship between core and contractor firms can also vary, from a decades-long partnership to temporary services rendered for a single day. Due to the complex nature of the phenomenon and the inadequacy of existing data, no precise metric is available with which to quantify the extent of outsourcing or its growth over time. Those interested in the issue of measurement should consult Robert C. Feenstra (1998). Social scientists generally agree, however, that outsourcing has proliferated globally since the 1970s.

To explain this proliferation of outsourcing, scholars situate it in relation to the larger phenomenon of economic globalization. In this view, the mid-twentieth century was dominated by large oligopolistic firms catering to regional markets within the nation-state. These firms were vertically integrated; that is, they controlled both supplier and distributor firms. They located their headquarters and production facilities proximate to supplier and consumer markets. Work was organized to achieve economies of scale and to maximize the volume of goods produced. Workers were in turn offered job security and generous wages.

Commencing in the 1970s, several major changes to the organization of economies and states dramatically transformed ideas of how a successful business should be designed. Business leaders now sought to "pare down" their organizations, by outsourcing all but a small core of essential functions. These streamlined firms would then be integrated into a web of strategic alliances with other firms around the world. But what were the changes that led to the emergence of what Manuel Castells (2000) calls a "network society"? First, firms experienced increased competition due to a deregulation of business relationships and the removal of barriers to trade across nations. Second, the ownership structure of firms underwent a transformation, as institutions purchased large portions of corporate stock. While individual shareholders are typically passive, institutional investors actively demand that managers maximize short-term profits. Third, advances in communications and transportation technology (especially personal computers and Internet access) enabled the coordination of production across great distances.

Intensified competition, a shareholder conception of control, and new technology increased the feasibility and attractiveness of outsourcing. As Paul Osterman (1999) documents, outsourcing decreases labor costs insofar as contracting firms pay on average lower wages and offer fewer benefits. Outsourcing also relieves the core firm from the responsibility of ensuring that working conditions meet state regulations. In the United States, for example, should a contracting firm be found to have forced employees to work overtime, it and not the core firm would be found culpable. More generally, outsourcing is believed to maximize flexibility. Temporary workers may be contracted to meet seasonal fluctuations in business activity, and production processes can be quickly reengineered to match changes in consumer demand, while relationships with suppliers can be terminated should production schedules be altered.

The proliferation over the past three decades of offshoring and domestic outsourcing has invoked considerable debate within nations. It is important to consider the points of view of two main parties: states and workers. Governments of states targeted by firms as sites of outsourcing can take a range of positions. At one extreme is a developmental state actively encouraging investment. At the other is staunch opposition to outside investment, most likely when the outsourced activity is perceived as vital to national security. For example, in April 2006 plans to outsource the inspection of incoming containers at U.S. ports to a Dubai-based company were canceled after U.S. Congressional leaders protested over potential security risks.

When confronted with proposals by domestic firms to offshore production, governments may accuse firms of behaving greedily or unpatriotically. This is especially the case when the outsourcing will entail plant closings, or when the domestic firm is outsourcing not for economic survival but to achieve a higher rate of return on investment overseas. Politicians may even pass legislation to discourage foreign investment by domestic firms. Such protectionism, however, represents what Robert Reich labels "vestigial thought" (1992, p. 154), insofar as it remains wedded to a vision of unitary firms producing and selling goods within a single nation-state. In fact, managers, when deciding to offshore production, are merely responding to the shifting rules of the larger game of global capitalism. Governments intent on protecting domestic jobs would be wiser to cooperate to reshape the rules of this game rather than demonizing individual players.

Like states, workers in existing core firms may view outsourcing as against their interests. After all, the flexible

labor markets required by global capitalism entail the replacement of secure jobs offering middle-class incomes with insecure jobs and low wages. The competition among states to attract investment capital is in fact often labeled a "race to the bottom." Yet workers and their unions are hampered in their capacity to take action against individual firms, since strikes or work stoppages may only quicken the pace at which work is outsourced. As Jeffrey Sallaz (2004) has documented, unions lack the means to influence the rules of the game at a national or global level, and so fight to slow the pace at which work is outsourced from core facilities to allow older workers time to adjust to the "new economy."

To conclude, as competitive global capitalism has eclipsed oligopolistic national capitalisms, outsourcing has emerged as a strategy used by private firms to cut labor costs and increase flexibility. Of immediate interest to social scientists in the coming years will be the question of how the economic trend toward outsourcing is affected by political developments involving the global "war on terror," heightened border security, and resurgent nationalisms.

SEE ALSO *Globalization, Social and Economic Aspects of; Trade*

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Jeffrey J. Sallaz

OVERACHIEVERS

The motivational basis for human-achievement behavior has interested psychologists for decades. Research has linked basic psychological theory to applications in education, business, and industry where achievement is critical. Striving for success pervades social interaction in the classroom, in the corporate boardroom, on the playing field, and even within families and friendships. Those who achieve success are viewed as productive members of society worthy of admiration and respect.

To some extent, practical concerns, such as the need to motivate children to set satisfactory goals in school and to address underachievement, generated scientific interest in achievement issues. Historically, underachievement (and overachievement) has been defined in objective terms according to the match between expectations and life outcomes, and psychologists have usually been concerned with these objective terms. Specifically, expectations for one's performance are based on relatively objective criteria. For instance, people set expectations of their potential based on past performances or on the evaluations of significant others (e.g., parents, teachers). In Western society, standardized tests (e.g., the SAT) are common as a practical and seemingly objective basis for expectations of future performance. When someone performs below (e.g., grade point average) the level expected (e.g., by aptitude scores), that is underachievement. When underachievement is identified, educators marshal effort to help people realize their full potential.

Educators have paid little attention to the mirror image of underachievement: overachievement. When someone performs better than predicted in school (or anywhere else), that is overachievement. Overachievement presents no real problem to solve. Doing well is highly regarded, so it is not surprising that educators have neglected to study it. When someone outstrips objectively based predictions of their performance, prevailing wisdom suggests reason to celebrate, not to intervene.

This traditional emphasis on objective achievement suggests that people might be expected to work tirelessly to ensure success. Yet, everyday observation reveals that people approach achievement in their everyday lives in many ways. Some people strive mightily, but others seem lazy and disengaged; still others take credit for outcomes that they appear not to have earned, and sometimes people flee from tasks when the prospects of failure or embarrassment become too great.

Social psychologists have studied the subjective experience associated with underachievement and overachievement. Findings show that there is a great deal to be learned about these experiences. In particular, the subjective experience of overachievers may be highly stressful and unpleasant and marked by anxiety, but uniquely defined by self-doubt. Specifically, the subjective experience of chronic self-doubt, coupled with intense performance concerns, appears to inspire overachieving behavior. Overachievers may expend heroic effort to cope with their chronic doubts.

One social psychologist coined the term *John Henryism hypothesis* to describe the psychological stress associated with the social and economic challenges faced by African Americans. The research links an increased risk of hypertension and other health problems among African

Americans to the stress of persistent, effortful coping in the face of socioeconomic challenges, a parallel to the experience of the fictional character John Henry, who outpaced the steam drill but died soon thereafter from the exertion. Like John Henryism, the stress of everyday overachieving may also have adverse health implications.

Ironically, overachievement can serve to enhance rather than diminish self-doubt in one's natural talent. The effort of overachievers provides an alternative explanation to natural ability for any success they achieve. Moreover, these shaky assessments of ability generalize to shaky expectations of future potential. Sadly, overachievers may reap success beyond objective expectations but still doubt their own ability to reproduce success without enormous effort. Overachievers may ultimately enter a vicious cycle in which they cope with self-doubt by, once again, expending heroic effort to ensure that they can perform successfully again and again. High achievement and overachievement in the context of a group might even enhance self-doubt about an individual's personal contribution, and produce shaky judgments about one's individual talent and personal value to the group. The increased pressure to perform successfully in a public arena has been shown in research many times.

Some individuals experience high self-doubt without having the intense concern over performance that characterizes the overachiever. At a behavioral level, the lower concern with performance leads these individuals to employ a very different strategy than overachievers. These individuals may cope with self-doubt by employing the seemingly paradoxical strategy of deliberately sabotaging, or handicapping, their own performance. Like the overachiever, self-handicappers experience chronic self-doubt. Unlike the overachiever, however, self-handicappers are more concerned about the implications of failure as it relates to judgments about their ability; they worry that failure will be an indication (to themselves or others) that they lack ability. Thus, whereas the overachiever will expend heroic effort to avoid failure, the self-handicapper is willing to embrace failure (i.e., withdraw effort) to protect a basic perception of personal competence. They undermine their own performance in order to make the cause of their (perhaps failing) behavior ambiguous. Examples include alcohol use and abuse, procrastination, laziness, and any other behavior that could excuse failure.

Though speculative, the distinct psychological style of subjective overachievers can be traced to their early learning history. The budding overachiever may come to internalize the parental message that only successful performance can guarantee continued love and support. These early beliefs may lead overachievers to assign higher significance to successful outcomes than to exploring their actual talents.

Subjective overachievement has been distinguished in research from high achievement motivation (people show the same concern over successful performances, but seek achievement for personal satisfaction), perfectionism (people display intense preoccupation with successful performance, but do not necessarily experience self-doubt), and the imposter phenomenon (where self-doubt is present, but success is seen as unearned or illegitimate because it is due to luck, not effort).

SEE ALSO *Achievement; Underachievers*

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OVER-ATTRIBUTION BIAS

The over-attribution bias, also known as "correspondence bias," occurs when people attribute human behavior to whichever causal factor is most available to them. Behavior often "engulfs the field," and people draw dispositional inferences that correspond to the behavior. When a person freely expresses a certain attitude, others assume that the person believes it. The same inference is biased, however, when observers know that a powerful other asked the person to express that attitude. The bias is most striking when it is the observers themselves who constrain the respondent's behavior.

The common interpretation of the correspondence bias is that it constitutes a "fundamental attribution error"

(Ross 1977). This interpretation holds that people fail to fully discount the influence of a person's internal disposition as a cause of behavior. The error interpretation has been influential in social psychology because it implies that people are incapable of understanding the power of the typical social-psychological experiment, which is to demonstrate that subtle changes in a person's situation can dramatically change behavior.

Upon review, the idea that people fail to appreciate the power of social situations needs to be tempered. The correspondence bias reverses, for example, when people who know a person's disposition are asked to judge the strength of the situation. They continue to attribute behavior in part to the situation even when the behavior is freely chosen. Hence, the correspondence bias is generic rather than purely dispositional. People attribute behavior firstly to whichever causal factor they happen to be focused on, be it a property of the person or the situation, and then modulate this inference by considering the other, less salient causal factor. Because the former process is likely intuitive and automatic, whereas the latter is deliberate and controlled, the bias is larger when people are unmotivated or unable (e.g., because of distraction) to process all available information.

Most models of causal attribution are hydraulic in that they regard the total causal force directing behavior as a zero-sum quantity. As one causal factor is being favored, another one must yield. On this view, the correspondence bias reflects a failure to fully discount the primary and salient cause when the secondary cause is sufficient. For the explanation of everyday behavior, the hydraulic model is sometimes inadequate. For example, people often attribute aggressive behavior to an aggressive disposition. To do so, however, they require the presence of a facilitating stimulus, such as an insult or a threat. Whereas a hydraulic model suggests that inferences about an aggressive disposition should be stronger in the absence of provocation, an interactionist model recognizes that a situational cause (provocation) is necessary for a dispositional attribution. On this view, theories of personality that seek to capture individual differences by merely counting trait-related acts are likely contaminated by the researchers' correspondence biases.

The common tendency of attributing correspondence bias to people's dispositional failure to think logically may itself be an example of the very same bias. Correspondence biases are, after all, experimentally evoked when investigators limit the salience of the situational causes of behavior. Hence, it may be sufficient to attribute respondents' preference for dispositional inferences to the nature of the experimental situation.

SEE ALSO *Attribution*

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Joachim I. Krueger

OVER-CONTROL

SEE *Farsightedness.*

OVEREATING

Overeating is a relative term, defined as food consumption that exceeds energy expenditure. Chronic overeating typically results in obesity and is not uncommon. In fact, obesity is at epidemic proportions for all age groups, and is seen as a growing health threat not just in Western societies but also in much of the world. Risk for obesity increased markedly during the 1980s, an increase that is attributable to a complex combination of environmental, sociocultural, genetic, and behavioral factors.

Overeating can be either active or passive. Active overeating is largely the consequence of a convergence of sociocultural factors that most notably include aggressive mass marketing of energy- or calorie-dense foods (foods high in fat, refined carbohydrates, and sugar) and disproportionately large portions of food relative to individuals' actual caloric needs. Not coincidentally, such foods are easily accessible, widely available, relatively affordable, and highly palatable. Unsurprisingly, society has fallen prey to marketing influences, and consumption of such foods is on the rise. It is noteworthy that, as of 2006, the highest rates of obesity and obesity-related disorders in the United States are found in lower-income groups for whom the marketing of energy-dense, low-cost foods is most pervasive.

Active overeating is also part of the symptom complex of conditions such as bulimia nervosa and binge eating disorder. With bulimia, individuals experience a sense of being unable to control what and how much they eat, and they engage in recurrent episodes during which they very rapidly consume an abnormally large quantity of

food. This symptom is also a defining characteristic of binge eating disorder. A key distinction between bulimia and binge eating disorder is that with bulimia, individuals engage in dangerous methods of weight control (e.g., purging, fasting, and vomiting), whereas with binge eating disorder, individuals do not engage in such weight control efforts and, in fact, may be obese. Active overeating may also result from hypothalamic dysfunction, either due to genetic defects (e.g., Prader-Willi syndrome), physical injury, or pharmacological agents.

Although active overeating accounts for a substantial proportion of the high rates of obesity, passive overeating may best explain prevalence rates. There are several aspects to consider in passive overeating. First, as is perhaps obvious, individuals with an energy-dense diet who consume food equal in quantity to individuals with a lower-energy diet have an overall greater energy intake. Second, lower-energy diets are most satiating, whereas energy-dense diets are least satiating: Consumption of a greater quantity of energy-dense foods is required to achieve equal levels of satiety. Thus, passive overeating is the unintentional, but inevitable, consequence of a diet that is energy-dense. Given that it is also a prime factor in the energy balance equation, physical inactivity compounds the issue. Technological advances promote an increasingly sedentary lifestyle that, in combination with active or passive overeating, further subverts the energy equation, resulting in ever-rising obesity rates.

Although research on pharmacological interventions to treat obesity is ongoing, lifestyle changes are likely to remain central features of any intervention. It may, however, require major macrosystemic social change to effect significant improvement in our nutrition and physical activity.

SEE ALSO *Nutrition; Obese Externality; Obesity; Schachter, Stanley*

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OVEREMPLOYMENT

Little is as damaging economically, socially, and psychologically as depriving people of income and job opportunities, from unemployment and underemployment. Overemployment, however, refers to depriving the employed of desired time. Individuals are defined as *overemployed* when they are prepared to sacrifice income proportionally for a given reduction in their work hours but cannot do so at their current job or a suitable comparable job. For example, an overemployed individual would like to work no more than forty hours per week (including overtime), but he or she is forced by the employer to work fifty hours per week.

The conventional microeconomic model of individual labor supply assumes that workers desire to work a certain number of hours per week based on their expected wage rate, nonwage income, and preference for nonwork uses of time. Insightful models have incorporated the possibility that at least some workers are often not able to realize a preference for fewer work hours because of constraints that are imposed by employers or the labor market (Dunn 1996; Feather and Shaw 2000; Altonji and Oldham 2003). Employers face a variety of incentives and pressures that may lengthen the hours of work demanded from each employee (Rebitzer and Taylor 1995; Contensou and Vranceanu 2000). Whenever hours demanded exceed workers' desired number of hours supplied to their job, workers supply "surplus" hours (Lee and McCann 2004). This condition may persist indefinitely when the alternative job with shorter hours actually results in relatively lower levels of utility than working surplus hours (Kaufman and Hotchkiss 2006). Hours mismatches or inconvenient hours do not create compensating wage differentials for working (Altonji and Paxson 1992; Reynolds 2004). Overemployment becomes a wider social problem to the extent that it creates symptoms of "overwork," such as fatigue and stress, which heighten the risk of workplace accidents, illnesses, and work-family time conflict.

As with unemployment, there are cyclical, frictional, and structural macroeconomic sources of overemployment (Altman and Golden 2004). Further, measuring the overall rate of overemployment has proven tricky. The estimated rate is sensitive to the wording of survey questions and response options. Estimates range from 6 percent to over 30 percent of the U.S. workforce (Bell and Freeman 1995; Altman and Golden 2004), lower than the rate in comparable countries (Bielinski, Bosch, and Wagner 2002). Moreover, the overemployment rate may diminish with time if preferences are "endogenous." Workers unable to "get what they want … eventually want what they get" (Schor 2005, p. 46). The distribution of overemployment is highest among women with preschool children, those in professional and technical health occupations, and those with long workweeks (Golden 2005). Overemployment may take the form of an unfulfilled wish to switch from longer to standard or part-time hours or to decline mandatory overtime work.

Conventional economists discount overemployment for two reasons. One is the suspicion that stated preferences for shorter hours would actually be acted upon. In addition, the rate of overemployment is a low priority because it is dwarfed by the rate of underemployment (Kahn and Lang 2001). However, a proactive approach would favor regulatory incentives that compel employers to shift the excess hours of the overemployed toward the underemployed within their workplace or industry.

SEE ALSO *Inflation; Underemployment*

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Lonnie Golden

OVERFISHING

Overfishing occurs when the stock (*biomass*) of a fish species has been subjected to a rate or level of fishing mortality (usually from commercial fishing) that has reduced it below its capacity to maintain an established fishing (*harvest*) yield. This yield is usually specified as the *maximum sustainable yield* (MSY), defined as the maximum amount of fish that can be removed from the biomass on a sustained basis while maintaining the same stock level, given the stock's biological growth function (*dynamics*). Overfishing is inherently a biological concept, although it is fundamentally tied to economic behavior because it involves fishing pressure or intensity beyond an optimum level. The model used to evaluate it is thus called a *bioeconomic* model.

To more specifically define overfishing it is necessary to determine what fishing level would be optimal in terms of the biological stock, or not constitute overfishing. The first step is to define the biological growth function, which is generally attributed to Milner B. Schaefer (1954; see also Anderson 1986). Given his assumption of a logistic growth equation, a sustainable yield curve can be drawn as a parabola, expressed in terms of either the biomass stock (S) or fishing *effort* (E), as shown on the left and right hand side of Figure 1, respectively.

In an unexploited state (no mortality from fishing) the fishery is in a biological equilibrium where growth is zero, at the left-hand extreme of both curves in the figure. If fishing then begins, defined in terms of increasing fishing effort (days, or boat/crew), the fish stock falls (a movement to the right on the horizontal axis in both panels). The biomass (fish) growth that may be harvested (caught) on a sustainable basis rises, however (as indicated by the increasing yield on the vertical axis with a move up the

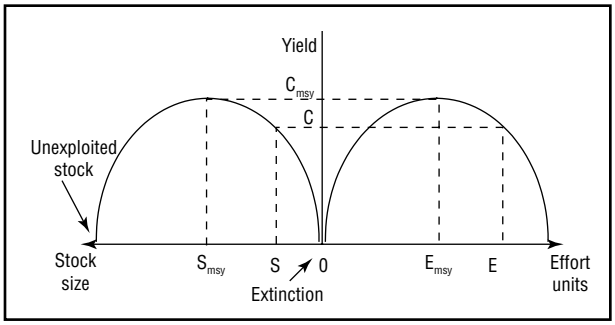

Figure 1: Sustainable yield curve

curves), because the stock will be regenerating toward the biological equilibrium.

The maximum possible sustained yield is attained at the very top of the curve(s), which shows the MSY fish stock (S_{msy}), the effort required to harvest that stock on a sustained basis if no shock changes the curves (E_{msy}), and the maximum catch attainable in that state (C_{msy}). If more fishing effort than E_{msy} is applied to harvesting, however, the stock and thus sustainable catch decline (a movement down the right hand sides of the curves), because reproduction is not proceeding fast enough to counteract the exploitation. This is a state of *overfishing*, represented by the lower sustained yield (or mortality) than possible (such as at $C < C_{msy}$). The stock is thus *overfished*, characterized by a lower stock than at the MSY point ($S < S_{msy}$), and the fishery is *overcapitalized* ($E > E_{msy}$).

Overfishing is the likely outcome in an unmanaged fishery because it is *common property* or *open access* (no one owns the fish), so fishers will keep fishing as long as they find it profitable. Such overuse is generally expected for common property or *common pool* resources, a problem often called "the tragedy of the commons" (see Hardin 1968). That is, *overexploitation* of the stock occurs because without property rights fishing will continue until the average rather than marginal benefits of harvesting are equal to marginal costs. In the standard bioeconomic model this results in an effort level on the right hand side of effort curve.

A primary goal of fishing management is thus to counteract the incentive to fish the stock down to an overexploited or overfished state. This can be accomplished by command and control polices such as limits on the total allowable catch or days at sea. Such policies still do not provide incentives for fishers to maximize the economic value of the fishery, which is best accomplished by conferring property rights on fishers to approximate a socially optimal outcome. Such programs can be difficult to implement, however, due to distributional and political issues about who is allowed to fish, how much revenue each fisher receives, and how such rights should be conferred (e.g., for free or auctioned off with the proceeds going to the public or to support fishery management).

SEE ALSO *Coase Theorem; Externality; Tragedy of the Commons*

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Catherine J. Morrison Paul

OVERLAPPING GENERATIONS MODEL

Like other economic models, an overlapping generations model (or as it is widely known, an OLG model) is a simplified theoretical representation of complicated economic processes through a set of identities and equations that describe the behavior of various agents interacting with each other. The most distinguishing feature of an OLG model lies in the way it captures the changing behavior of consumers over different phases of their lives. Since consumers in an OLG model are modeled as individuals who live for n periods ($n \geq 2$), people born in n different periods (or n different generations) coexist in any given period t. While consumers die at the end of n periods, reproduction assures that there will be an infinite succession of consumers, each living for n periods.

At the beginning of their economically active lives, individuals are endowed with a labor power that they can sell to firms (and may have goods or assets they inherit from the previous generation). They work when young and spend part of their labor and asset earnings on present consumption, saving the rest for financing their consumption when they are old. Thus, their old-age consumption is financed through savings they made while they were young and any returns to assets they acquired by using those savings. In other words, individuals must spread their income from the wages they earn by supplying their labor power to firms and the return on their assets over their lifetime such that they can continue to consume even after they are too old to work (or after they retire).

Consumers just starting their economic lives make their decisions on how much to spend on consumption and how much to save within each period ahead of them so as to maximize their lifetime utility. Profit-maximizing firms produce an output by employing labor supplied by young workers and capital supplied through their savings invested in physical capital. In essence, capital is part of the current output set aside to be used in production of the next period's output. Thus, the more individuals save for future consumption, the higher the expansion in the capital stock and, hence, the higher the rate of economic growth will be. As such, OLG models extend standard growth models by relating capital accumulation to savings that young adults make out of their earnings for the purpose of financing their old-age consumption. Within this framework, the long-run equilibrium (or the steady state) will be reached after the growth rate of the total capital stock in the economy has become equal to the population growth rate (or equivalently, after capital stock per worker has stopped changing over time).

Suggested first by French economist Maurice Allais in 1947, the concept of an OLG model was further developed in a 1958 article by Paul A. Samuelson (Samuelson and Allais won the 1970 and 1988 Nobel prizes in economics, respectively). While Peter A. Diamond also made a significant contribution to the OLG modeling literature through a 1965 article, the growth of this literature remained slow until the mid-1980s. The growing concerns over the upcoming burden of the retirement of baby boomers born in the 1940s and the 1950s on social security systems of industrial countries starting from the 1980s led to the realization that extending previous OLG models to incorporate social security was relatively easy, as they realistically captured the changing consumption and savings behavior of individuals before and after retirement. This development has revived interest in OLG models and attracted the attention of economists to the long-term economic effects of demographic developments.

In addition to purely theoretical models, a book by Alan Auerbach and Laurence Kotlikoff published in 1987 popularized the use of numerical solutions to large-scale OLG models with several generations in studying issues related to social security and the evolution of fiscal policy in different countries with different demographic structures. Numerous applied models were constructed thereafter to investigate the implications of changes in age profiles of populations for labor supply, savings, and fiscal balances, as surveyed by David Miles (1999). The realism of applied models has increased with the introduction of additional production sectors that produce distinct goods by employing capital and labor. (Elaborate theoretical grounds for two-sector OLG models that allow the consumption goods to be distinguished from investment goods were laid out in an article by Oded Galor published in 1992.)

Theoretical as well as applied OLG models have since proved particularly popular in analyzing the long-term economic consequences of the gradual aging of nations, a demographic process characterized by the increasing population share of the elderly due to declining fertility rates and increasing life expectancies during a country's demographic transition. As demographic projections pointed to the continuation of this trend in the decades ahead, modeling of demographics within the OLG framework became increasingly realistic. (According to the United Nations, the world's population, standing at less than 7 billion in 2006, will reach 9.3 billion by 2050. The number of people aged sixty or over is projected to more than double to nearly 2 billion during the same period. Furthermore, the elderly population itself is aging, with the eighty-plus age group making up the fastest-growing segment of the population.)

Despite variations in its timing and speed across countries, this demographic transition is expected to have important implications not only for future balances of the social security system and the time paths of age-specific public expenditures such as education and health care in a country, but also for the evolution of the supply of labor and capital. In most of the industrial countries where demographic transition started earlier than developing countries, the population shares of people older than the retirement age have already reached critical levels that signal financial trouble for publicly managed retirement systems. Likewise, the declining share of working-age population in these countries raises concern about contractions in domestic labor supply. Furthermore, because the elderly tend to spend more and save less, industrial countries are also expected to face changes in the ratio of savings to consumption in their national income, as well as in the composition of consumption.

These demographically induced developments are certain to affect not only investment and growth patterns of industrial economies but also the global allocation of resources by creating incentives for migration and by affecting the patterns of international trade and capital flows. They must, thus, have implications also for developing countries, even though these countries' own demographic transition processes lag behind industrial nations. The growing awareness of this situation prompted renewed interest in the OLG works of the early 1980s, such as the articles by Joel Fried and Willem Buiter studying issues related to trade or capital flows between nations. Oded Galor and Shoukang Lin made important contributions to the theoretical analysis of international trade using OLG models. Such authors as Andrew Mountford and Emily Cremers showed in different articles that

dynamic trade equilibrium in an OLG framework may not always imply welfare gains for trading partners, contrary to predictions of static trade models. In a particularly interesting 2001 article based on results from an applied OLG model developed to study trade between a middle-income country at the beginning of its demographic transition and a group of high-income countries with aging populations, Turalay Kenc and Serdar Sayan showed that trade and capital flows serve as a channel for the middle-income country to import the effects of population aging in its trade partners ahead of time.

SEE ALSO *Insurance; Macroeconomics*

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Serdar Sayan

OVERLENDING

Overlending describes the behavior of creditors that extend loans to borrowers that are unable or unwilling to repay the debt on its original terms. The borrowers may be individuals, firms, or sovereign countries. Creditors span the range of public and private-sector institutions, although much of the analysis of overlending focuses on the lending patterns of banks. Overlending can lead to unsustainable debt burdens for the borrower and financial losses, both for the lenders and the broader economy, particularly in cases where disruptions of debt service lead to financial crisis.

Theoretical explanations for overlending often cite imperfect information and moral hazard as factors contributing to unsustainable lending booms. Imperfect information about the borrower or economic conditions contributes to uncertainty in assessing credit risk. Moral hazard, where the existence of insurance or guarantees encourages greater risk taking, may also contribute to overlending. Overlending can also take place when excess liquidity and competitive pressures between lending institutions contribute to loosening of credit standards. Obvious profligacy, including loans to insiders, corrupt businesspersons, or relatives where the loan may be made with no expectation of repayment, may also take place in the absence of strict credit standards.

In the United States, the government has crafted policies to inhibit overlending. Bank supervision aims to contain the moral hazard associated with deposit insurance and prudential standards prohibit the most egregious lending practices. Nevertheless, the savings and loan crisis, which lasted from the late 1970s through the 1990s, included elements of overlending. While structural problems related to restrictions on lending rates and the resulting interest-rate mismatch were underlying causes of the crisis, some thrift institutions had large loan losses attributed to insider loans or to lending in riskier markets. The policy solution to the savings and loan crisis therefore involved an enhanced supervisory structure as well as an infusion of funds to recapitalize troubled thrifts institutions.

By the early 1980s, the Latin American debt crisis was vying with the savings and loan crisis as the most significant financial calamity. In a paper presented at a World Bank symposium, Jack M. Guttentag and Richard J. Herring argued that competitive pressures on banks and

overoptimistic assessments of borrower capacity contributed to unsustainable levels of lending. In their book *The Loan Pushers* (1988), William A. Darity and Bobbie L. Horn pointed out that while competitive pressures can lead to overlending, moral hazard might also have played a role since commercial bankers may have viewed the International Monetary Fund (IMF) and other public-sector actors as guarantors that would orchestrate a bailout. Darity and Horn also detailed factors that might have contributed to imprudent borrowing, but recognized that policies to prevent future financial turmoil must be based on a clear understanding of the roles that creditors as well as borrowers played. Institutional weaknesses would require institutional reform.

Despite efforts at such reform, international debt service problems reemerged in the mid-1990s. These problems involved bond holders as well as banks, and came after a rapid expansion of credits to firms and sovereign borrowers in Latin America and Asia. International financial institutions also increased their lending to the least developed countries, and by the end of the 1990s many poor countries, especially in Africa, were carrying unsustainable debt burdens. There has been a concerted policy response to the events of the 1990s: debt relief, a greater share of aid in grants, and promoting compliance with international financial standards and codes. All of these policy interventions are aimed at preventing the re-emergence of overlending.

SEE ALSO *Economics; Financial Instability Hypothesis; Financial Markets; Hedging; Leverage; Liquidity; Loans; Moral Hazard; Ponzi Scheme; Wealth*

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OVERPOPULATION

When laypersons speak of overpopulation, often they are referring to exceeding the carrying capacity of the Earth. Carrying capacity is an often-used term with many definitions, a common element of which is the number of people able to sustain life within the limits of the earth's environment. A definition of overpopulation should go beyond carrying capacity per se and take into account the state of the environment—whether the condition of the natural world allows for a comfortable existence and whether the current generation will leave the Earth inhabitable for the next generation.

An issue in assessing the dynamics of overpopulation is how best to create a reliable parameter for its measurement. What level of comfort among the various alternatives—the American, the Guatemalan, the Japanese—should be the ideal? The answer to this question determines the relevant issues of the environment to be considered and the number of people who may be sustained. Consider the amount of meat in a typical diet, the culturally defined idea of personal space, or the number of comfort goods that need to be produced and the resources involved in their production. The United States is the world's biggest consumer of natural resources, though its population makes up only 5 percent of the world's population. If the world were held to the American standard, the Earth's carrying capacity would soon be exceeded.

The concern with overpopulation is not new. During the eighteenth century Thomas Robert Malthus declared that overpopulation was bound by nature to occur. He assumed that, if left unchecked, populations tend to increase geometrically and food and sustenance arithmetically. Malthus advised moral, that is, sexual restraint and late marriage as preventive checks to prevent population increase. He also noted that such positive checks as wars, pestilence, and famine would keep the death rate high, also resulting in a slowing down of population growth. In 1968 Paul Ehrlich made similar predictions in his popular book *The Population Bomb*. Unlike Malthus, he gave special attention to the degradation of the environment by humans. Ehrlich's solutions were much more dramatic. He reasoned that billions of people must starve to death for there to exist an equilibrium between population and the environment. Neo-Malthusianist concerns continued into the 1970s with the Club of Rome's report on *Limits to Growth* and E. F. Schumacher's influential 1975 book *Small Is Beautiful,* which spawned a counterculture with the same name. Benjamin Friedman noted in his 2005 study that portions of these themes are reflected presently in the anti-globalization movement.

Is the world overpopulated? The world's population in the year 2006 was estimated to be over 6.5 billion strong and growing. These growth dynamics need to be considered in any discussions about overpopulation. The Population Reference Bureau projects a world population in 2050 of 9.3 billion people (Population Reference Bureau 2006). The United Nations reports that before 2050 more than 80 percent of the world will have below-replacement fertility (U.N. 2002), and their medium population projections for 2050 are very similar to the PRB's projection.

Around 3.5 billion people were added to the world's population between 1950 and 2000; this was the fastest rate of population growth in recorded world history (UNPD 2002). By mid-century the world is expected to add another 3 billion to its population. Though the absolute number of people in the world in 2050 will have increased, its rate of growth will have slowed. There are now forty-four countries with fertility rates below the replacement level; their populations are projected to diminish in the next forty-five years. Most of the growth in the world will occur in the less developed regions of the world. Families will be smaller all over the world; indeed there has already occurred a marked decrease in average family size in most of the countries of the developing world.

If the planet is already overtaxed by 6.5 billion people, then coming decades will likely be a time of disquiet and suffering over much of the world. When considering overpopulation, one must weigh the well-being of the individual against that of all of Earth's inhabitants. Rights that form the base of many nations, such as the rights to property, reproductive rights, and economic rights, will likely be less well defined in a situation where the issue of overpopulation is paramount. The right to purchase and use land may need to be regulated in order to protect the environment. Families may be forced to limit their numbers, and individuals may have to decrease their consumption to conserve natural resources and protect the environment.

It is difficult to construct the parameters of overpopulation. Considering the health of an entire world versus a single nation seems contrary to much of human history. Population projections for the rest of the century are subject to much variation depending on fertility patterns, thus further complicating the issue. As the world competes for limited resources, it is quite possible that the issue of overpopulation will be an issue of concern in many countries.

SEE ALSO *Birth Control; Club of Rome; Demography; Depopulation; Limits of Growth; Malthus, Thomas Robert; Malthusian Trap; Natural Resources, Nonrenewable; Population Control; Population Growth; Population Studies*

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OVERPRODUCTION

Say's law of markets is commonly understood, by friends and foes alike, to deny the possibility of general gluts. Overproduction theories are one of the ramifications of the opposition to this view; they evolved through direct confrontation with the proposition they were denying, in its various interpretations. These criticisms share the general standpoint that crises (or cycles) are to be explained in terms of some systematic divergence between production and consumption. Whereas Say's law only admitted accidental disequilibrating causes (such as wars or exceptionally abundant or scarce crops) or temporary imbalances (due for instance to entrepreneurial miscalculations), the dissenters insisted on the general character of market gluts and pointed at causes intrinsic to the working of the system. Where dissenting views diverge is on the specific causes of disequilibrium. Overproduction theories of crises and business cycles emphasized troubles arising from the side of production, whereas the underconsumptionists instead attributed the disharmony to lack of effective demand, often stressing distributional factors determining lack of purchasing power or excessive saving. (The first representative of the latter view was J.C.L. Simonde de Sismondi; other prominent writers in this tradition include J. A. Hobson, William Trufant Foster and Waddill Catchings, and some Marxists). The distinction, however, is somewhat artificial, for there is a certain complementarity and overlapping between the causes identified by overproductionist and underconsumptionist writers.

Say's law emerged as the winner of the "gluts debate" after the Napoleonic wars. David Ricardo's argument, that production is only undertaken with a view to sell and sales

only made with the intention of purchasing other goods thereafter, with its implication that disequilibria can only be temporary states of affairs resulting from exogenous events or miscalculation, gained wide acceptance. Thomas Robert Malthus's contrary opinion, that the system's development could be hindered, and unemployment would ensue, if the accrued production were not distributed in such a way as to "occasion the most effective demand for future production," was only accepted by a minority of heretics (Malthus 1952, p. 10). From the 1840s onward, however, a growing number of writers questioned the validity of Say's law. A first step (taken by John Stuart Mill, Karl Marx, and Wilhelm Roscher) consisted in rejecting the assumption that exchange was essentially equivalent to barter, by pointing out that money separates the acts of buying and selling and thereby makes crises possible. But this is only an abstract possibility. At the time, most authors believed that the factors turning this possibility into an actuality were linked to credit and speculation. Later, processes like hoarding, liquidation, and repayment of loans were added.

Marx's theory of crises was the starting point of a number of overproduction approaches. His reproduction schemes showed that while harmonious growth is a logical possibility, it is not a necessity. One of the points on which Marx insisted was that advances in technology and organization imply an increase in productivity, and therefore diminish the value of wage-goods. If, in the short term, workers obtain increases in their real wages, the profit rate decreases below what capitalists considered customary, and production has to be stopped. The German-language branch of overproduction theories emphasizing producers' losses (prominently represented by Arthur Spiethoff) built on this view. The American counterpart of this approach grew out of the distinction between "absolute" and "relative" overproduction: While it was admitted that there cannot be overproduction with respect to human needs, it was pointed out (by David A. Wells, Uriel H. Crocker, Arthur Twining Hadley, and Constant Southworth) that production can be in excess to demand to the extent that the price is not sufficient to cover costs inclusive of a remunerative or ordinary profit—although the notion of "ordinary" profits was questioned (by Thorstein Veblen).

A second group of overproduction theories stemming from Marx's schemes of reproduction emphasized that there is no logical necessity that productive sectors grow proportionately and that maladjustments tend to amplify and spread to the whole system (M. I. Tugan-Baranovsky). Along this line we also find writers (Hans Neisser, L. V. Birck) who stressed the implications of technological progress, pointing out that when the vertical structure of production is altered, the preservation of the correct proportions becomes increasingly difficult and is likely to be disrupted by several minor causes. Another group of writers insisted instead on the fixity of fixed capital: Having acquired expensive machinery requiring maintenance costs even if not used, entrepreneurs find it rational to keep producing even at a loss (Crocker, Wells). In this view, overproduction is not so much an excess of goods as of productive capacity (William Smart, Scoville Hamlin).

Several other authors considered systematic impediments to the establishment of a stable equilibrium between supply and demand. Time lags, in particular, were invoked in this connection by Albert Aftalion and Mentor Bouniatian. They argued that a divergence between supply and demand would generate price differences inducing an adjustment, but that as production lags behind demand due to the time required to build plants, prices send the wrong signals and induce overproduction crises.

When such a view was incorporated into formal dynamics in the 1930s (in particular by Michael Kalecki), the business cycle came to be seen as resulting from the dynamic properties of the system and the need to stress overproduction gradually faded. The other contemporary business-cycle theories—the equilibrium and the real business cycle approaches—focus on equilibrium and thus dispense with an essentially disequilibriumist concept altogether.

SEE ALSO *Business Cycles, Theories; Marx, Karl; Say's Law; Underconsumption*

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Daniele Besomi

OVERSHOOTING

Overshooting is a term used in macroeconomics and international finance to describe the behavior of the exchange rate after the economy is hit with a shock (i.e., an unanticipated event of sufficient magnitude such that it affects aggregate income, the general level of prices, or the aggregate volume of employment). Further, overshooting is a theoretical concept and is not always observed in the data. This concept was introduced into the economics literature by Rudiger Dornbusch (1942–2002) in his 1976 article "Expectations and Exchange Rate Dynamics," which is the most-cited professional article in international macroeconomics.

Overshooting describes the fact that before the exchange rate gets to its new long-run value in response to a shock, it may initially move past or "overshoot" the new level to which it will eventually settle.

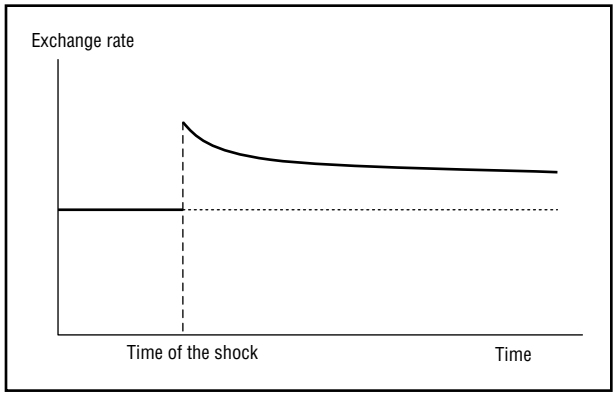

Figure 1

Figure 1 represents the response of the exchange rate (measured in U.S. dollars per euro) to an increase in the U.S. money supply. As one can see, in the short run the exchange rate overshoots (moves to a point higher than) its long-run value.

Theoretically, overshooting arises in an economic model that assumes: (1) exchange rates are flexible; (2) uncovered interest parity holds (i.e., the difference between interest rates in the U.S. and euro zone is equal to the expected rate of U.S. dollar depreciation); (3) money demand depends on interest rate and output; and (4) prices are fixed in the short run but they fully adjust to offset monetary shocks in the long run. Thus, in the long run, an increase in the money supply would be fully reflected in an increase in the price level, including the price of foreign currency, the exchange rate.

Since prices are sticky in the short run, they cannot adjust immediately, and therefore an increase in money supply would instead lower the interest rate in the United States. For the uncovered interest parity to hold, people should now be expecting the U.S. dollar to appreciate. At the same time, we know that in the long run the dollar exchange rate will converge to a more depreciated value; thus, immediately after the shock, the dollar has to depreciate by more than in the long run and then start appreciating, as shown in Figure 1.

The overshooting phenomenon is common to many modern theories in international macroeconomics that assume sticky prices in the short run. Thus, it is a necessary component of any macroeconomic forecast, as well as of the analysis of possible responses of the economy to monetary policy changes. Nevertheless, not all models, and not even all sticky-price models, predict overshooting in the behavior of the exchange rates.

The concept of overshooting helps explain an important empirical regularity—the fact that exchange rates are much more volatile than price levels or interest rates. Indeed, while prices adjust slowly and monotonically to their new long-run levels, exchange rates "bounce around." In a world with numerous economic shocks, this leads to a high volatility of exchange rates and a much smaller volatility of prices.

The concept of overshooting does not help much in predicting exchange rates. This is partly due to the fact that one of the main assumptions of the model, the uncovered interest parity, is not borne out by the data. On the other hand, other models do not do a better job in predicting exchange rates than the overshooting model.

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Galina Hale

OVERTIME

Overtime work is a historical, legal, sociocultural, and economic construction. It typically refers to instances where an employee is working hours of labor in a given week (or per day or month) beyond some "standard," "regular," or "normal" hours. Overtime may be defined in terms of either national laws or workplace culture. The notion of overtime has changed over time, as these standards or norms have themselves changed. Indeed, laws place pressure on conventional norms and on the actual number of working hours (and vice versa). This explains why the connotation of overtime differs by country, time period, workplace culture, type of job, and employment contract.

In the United States, overtime work became codified as part of the 1938 Fair Labor Standards Act (FLSA). The FLSA was enacted both to counter the Depression era's prolonged unemployment and the long, grueling workdays and workweeks for wage workers that predominated during the industrialization phase of capitalism prior to the 1930s. Unlike European countries' statutory limits, the United States and other Anglo countries tend to apply only monetary incentives, the time-and-a-half pay premium requirement for hours worked by employees in excess of forty in a given week period to enforce the standard.

About one in five workers in the United States works extra hours for extra pay. Where there is no legally required pay premium for hours beyond forty hours, for those in exempt managerial, administrative, and professional jobs, the definition of what constitutes overtime work becomes hazier. About three in ten workers work longer than forty hours per week. More than one in five employees work extra hours because it is required by their employer. According to Juliet Schor's *The Overworked American: The Unexpected Decline of Leisure* (1993), there is evidence that the long-run trend toward shorter average workweeks reversed course in the mid- to late-twentieth century in the United States. In 2000 Ronald Hetrick found that overtime hours in manufacturing among hourly workers has risen. However, average hours have not so much risen as hours have polarized. A greater proportion work either fifty or more hours at the same time as a rising proportion works short hours. In addition, in 2005 Jared Bernstein and Karen Kornbluh found the rise in working hours has occurred more within families or dual-income households than among individuals. According to an article published by Daniel Hamermesh in *Industrial and Labor Relations Review* (2000), longer hours cannot be attributed to a steady replacement of hourly paid with salaried jobs.

Any trends in overtime work may be traced to the economics of labor demand and labor supply. Employers' demand for longer hours is driven by their response to economic incentives and market pressures to drive down labor costs per hour. Employers will substitute hours for employees when the fixed costs of hiring, training, and employee benefits escalate. Rising hours will be reinforced if workers prefer to allocate more time toward paid work activities because of the net income effects of falling real hourly wages, rising job insecurity, or rising consumer debt. In addition, the diminished presence, weakening, and changing priorities of the labor movement has removed an institutional pressure that once leaned against rising work hours. Unionized or not, overtime for hourly workers has often become a rationed privilege, where the legal or contracted pay premium has become an incentive to supply more hours of labor.

Nevertheless, the repercussions of overtime—usually unpaid hours for salaried workers—take its toll not only on individuals, but also on families, workplaces, and society. Studies confirm that overtime work is a dual-edged sword, providing additional income but also adverse repercussions due to the heightened risk of injury, illness, accident, and work-family time conflict, via fatigue and stress. Such risks are often magnified when overtime is imposed rather than voluntary. Early-twenty-first-century controversies in research involve the appropriate degree of annual averaging of work hours and the extent to which curbing overtime would spur employment. Policy propos-

als that attempt to alter the framework for regulating or enforcing overtime laws, in the United States and elsewhere, become controversial. This includes the scope of which jobs are to be covered by the FLSA's overtime pay premium, limiting mandatory overtime work, and whether compensation for overtime hours should be in the form of future promised compensatory time off rather than immediate pay.

SEE ALSO *Capitalism; Labor; Leisure; Work Week; Working Day, Length of*

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Lonnie Golden

OVERWEIGHT

SEE *Obesity.*

OWN RATE OF INTEREST

SEE *Interest, Own Rate of.*

OXYTOCIN

SEE *Oedipus Complex.*

P

PAASCHE INDEX

SEE *Price Indices.*

PACIFISM

The term *pacifism* is a neologism that was coined in the early twentieth century. It was invented by the French notary Emile Arnaud, who used it in a newspaper article in 1901. According to Karl Holl, Arnaud wanted to stress the peculiar determination and common ideological orientation of those who were not only "peaceful" or "peacemakers," but "pacifists," and he therefore formed an "ism" similar to other political currents, such as socialism or liberalism. The new concept was meant to incorporate all previous goals of the bourgeois peace movement—including arbitration, disarmament, and a European confederation—under a new label. The term was also meant to suggest parity with other political movements, and to play up the theoretical pretense of this current. The last point was particularly important for central European pacifists such as Alfred Hermann Fried. Older terms such as *peace movement*, *mouvement pacifique*, or *Friedensbewegung* were not fully displaced by the neologism.

It has been suggested that an analytical distinction be made between pacifism, a position that rejects both war and support for war, and "pacificism," which aims to reform the international system and rejects aggressive wars, but which also underlines the justification of military defensive against a foreign aggressor (Ceadel 1987, p. 5). This distinction is problematic, however, because it disregards most of the early proponents of pacifism, including most of the peace societies of nineteenth century Europe. These groups were sympathetic to the idea of national defensive warfare and promoted what the historian Sandi Cooper has called a "patriotic pacifism" (Cooper 1991). The distinction also focuses too much on the ideological ramifications of peace activism, thereby neglecting forms of agitation and group sociability as key angles for a historical interpretation.

The strength of pacifist groups in the period from 1810 to 1945 depended particularly on their ability to lay claim to a respected position within the political culture of the respective countries. The capacity for pacifist mobilization was strongest in countries with a substantial pietist community and related cultural traditions, such as the United Kingdom, Germany, Switzerland, the Netherlands, and the Scandinavian countries. The pietist mentality, with its moralistic language and its commitment to salvation for a sinful world (based on the consciousness of the individual), fed into the dominant semantic patterns of pacifist activism and its often intense moral dichotomies. Even in the predominantly Catholic country of France, most of the founding members of the Association de la paix par le droit (ADP, Association for Peace through Law) in 1887 were Huguenots and members of the Reformed Church (Ingram 1991, p. 27).

HISTORY

Religious motives (particularly from the historic peace churches of the Quakers and Mennonites in England and the United States) engendered the first peace societies in New York (1815) and London (1816), while philanthropic motives led to similar societies in Paris (1821) and

Geneva (1830). In both Europe and the United States, nineteenth-century pacifism relied on a homogeneous stratum of middle-class supporters and their characteristic patterns of sociability and associational life. International contacts between peace activists intensified in the last quarter of the nineteenth century, and these contacts were institutionalized through the International Peace Bureau in Bern, Switzerland, founded in 1892. The outbreak of war in August 1914 betrayed pacifist hopes that a growing network of international relations would prevent war. It also compromised most bourgeois pacifists, who demonstrated their readiness to support a national war effort. In a response to this perceived moral bankruptcy of "patriotic pacifism," pacifist organizations with a more radical approach emerged in various countries, including the Union for Democratic Control in the United Kingdom and the *Bund Neues Vaterland* (New Fatherland League) in Germany.

European pacifism in the 1920s and early 1930s was characterized by the coexistence of a liberal current on the one hand and a more radical or integral current on the other. The former was represented by the ADP in France, the League of Nations Union in Britain, and the liberal current in the *Deutsche Friedensgesellschaft* (German Peace Society, DFG). The latter was exemplified by groups such as the *Ligue internationale des combattants de la paix* (LICP) in France and the Peace Pledge Union (PPU), founded by the Anglican clergyman Dick Sheppard, in the United Kingdom. Toward the end of the 1920s, ideological conflicts between the two wings hardened, and sectarianism and organizational fragmentation prevailed. This was due not only to individual idiosyncrasies and the growing militancy of many radical pacifists. It also reflected the fact that the political and cultural cleavages between liberal dignitaries, with their characteristic patterns of sociability, and radical democrats, socialists, and anarchists, which represented a broader cross section of society, could no longer be reconciled.

The Italian invasion of Abyssinia in 1935, the remilitarization of the Rhineland by the Nazi government in 1936, and particularly the Spanish Civil War from 1936 to 1939 undermined the moral and political foundations of European pacifism. The tendency of the PPU to grant concessions to Nazi Germany, along with the apparent failure of the British appeasement policy, compromised its moral grounds. Italian and German military intervention against the Spanish Republic called for a revocation of a principled nonviolent stance, as powerful critics such as George Orwell argued. And with the Nazi seizure of power in 1933, German pacifists were forced into exile or became subject to police persecution. Soon, pacifists in countries such as Norway or France would have to decide whether they would participate in violent resistance against the German occupation.

In both historical and sociological perspective, pacifism ceased to exist as a major political current after World War II. In terms of sociability and mobilization, the permanent but small associations of middle-class dignitaries were transformed into the more fluctuating single-issue campaigns of peace movements, with their ability to attract highly volatile mass support. In terms of ideology and the support of nonviolent methods, some of the former pacifist impetus shifted toward an engagement in human rights campaigning. Yet since 1945 a strictly nonviolent, pacifist orientation has still consistently been displayed by organizations such as the War Resisters' International (WRI). Since its foundation in 1921, the WRI has promoted nonviolent direct action and supported conscientious objectors. It has emerged as a major transnational network of radical pacifists, with branches in various European countries, the United States, and other parts of the world.

SEE ALSO *Peace; Peace Movements*

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Benjamin Ziemann

PAGANISM

SEE *Infidels.*

PAIN

SEE *Psychosomatics.*

PAIRED COMPARISON METHOD

SEE *Scales.*

PALEONTOLOGY

SEE *Archaeology; Johanson, Donald; Leakey, Richard.*

PALESTINE LIBERATION ORGANIZATION (PLO)

The Palestine Liberation Organization (PLO) is an umbrella political organization founded in 1964 to deal with the problems of the Palestinian Arab refugees. The 1947 United Nations Partition Plan for Palestine (UN General Assembly Resolution 181 of November 29, 1947) had divided the ex-British mandate territory of Palestine into a Jewish state and an Arab-Palestinian state, with the Greater Jerusalem area, including Bethlehem, placed under international administration. But the first Arab-Israeli war (1948–1949) led to a three-way partition of Palestine and the problem of the so-called occupied Palestinian territories. Egypt took the Gaza Strip, the kingdom of Transjordan (later Jordan) took the West Bank (of the River Jordan), and the rest of Palestine was incorporated into the newly formed State of Israel, prompting the exodus of hundreds of thousands of Palestinian Arabs who were dispersed to refugee camps all over the Arab world. The PLO emerged from the angry despair of the homeless and impoverished Palestinian refugees and their desire to establish an independent Palestinian state in the "occupied territories."

The PLO is governed by a legislative body called the Palestinian National Council (PNC), which elects an executive committee to assume leadership of the organization between its sessions. The PNC meets every two years and passes resolutions by a simple majority with a two-thirds quorum. The first PNC, composed of 389 nominated representatives from Palestinian diaspora communities in Jordan, Gaza, Egypt, Syria, Lebanon, Kuwait, Iraq, Qatar, Libya, and Algeria, met in East Jerusalem, Jordan, on May 29, 1964, and adopted the Palestinian National Covenant (Palestine's constitutional charter). It established the PLO as the political voice of the Palestinian people and elected Ahmad Al-Shuqeiry (1908–1980) as the first chairman of the PLO Executive Committee.

Fatah, an Egyptian-backed guerrilla movement led by Yasser Arafat (1929–2004), joined the PLO in 1968. It was followed by other Palestinian guerrilla groups (*fedayeen*) such as the pro-Syrian As Saiqa, the Marxist-oriented Popular Front for the Liberation of Palestine (PFLP), and the leftist Democratic Front for the Liberation of Palestine (DFLP), among others. The PLO's military wing, the Palestine Liberation Army (PLA), began staging acts of guerrilla warfare against military and civilian targets inside Israel, as well as Jewish targets in third countries; the Israeli government has branded these acts "terrorism." Arafat became PLO leader in 1969 and declared himself the only legitimate spokesman for the Palestinian people. For much of its history, the PLO regarded Israel as an illegitimate foreign presence in Palestine, because neither the local Palestinian Arabs nor any neighboring Arab country have ever agreed to the creation of a Jewish state in their midst. The PLO leadership has accused Israel of illegally occupying the Arab lands in Palestine, especially the Gaza Strip and the West Bank, including East Jerusalem, which were captured by Israel during the Six-Day War of June 1967. The PLO has also insisted on the "right to return" to their ancestral homes for hundreds of thousands of Palestinian refugees (and their descendants) who were forced into exile in 1948.

The PLO was expelled from its guerrilla bases in Jordan after a bloody confrontation with the army of Jordanian King Hussein I (1935–1999) in September 1970 (which became known as "Black September" because as many as 3,400 Palestinians were killed in the conflict). The defeated PLO relocated most of its fighting force to refugee camps in Lebanon and Syria. In 1974 the Arab League proclaimed the PLO the "sole legitimate representative" of the Palestinians, with Jordan and Egypt giving up their claims to the West Bank and Gaza, respectively. In the same year, Arafat called for a democratic, secular Palestinian state, and the United Nations recognized the PLO as the government-in-exile responsible for all Palestinian affairs, according it the status of a permanent observer to the UN. Since then, more than 100 non-Arab states have also extended diplomatic recognition to the PLO as the legitimate representative of the Palestinian people. The PLO was granted full membership in the Arab League in 1976.

The PLO became embroiled in the first phase of the bloody Lebanese Civil War (1975–1977), but suffered defeat at the hands of the Syrian army, which in 1976 invaded Lebanon in support of the Christian-dominated government in Beirut. Arafat rejected the Camp David Accords of 1977 and accused Egyptian president Anwar Al Sadat (1918–1981) of betraying the Palestinian people and all other Arab nations, but at the same time called for diplomacy to resolve the Palestinian problem. The PLO suffered another setback in 1982 when the Israeli invasion of Lebanon forced some 8,500 of its fighters to leave their stronghold in West Beirut and resettle in other Arab countries, such as Tunisia and Syria. In 1985 the Israeli air force bombed the PLO headquarters in Tunisia, inflicting significant losses of life, but missing Arafat. The PLO was caught by surprise by the first Palestinian intifada (1987–1993), and while it was trying to help and direct the anti-Israeli uprising from abroad, the local radical Islamic groups Hamas and Islamic Jihad challenged its leadership position within the occupied territories. The

PLO also lost financial support from wealthy Arab Gulf states for backing Iraq during the First Gulf War (1990–1991).

With U.S. support, Israel refused to negotiate with the PLO, insisting that it would only talk to Palestinian representatives from the occupied territories, which complicated and delayed the peace process. In reaction to the intifada, the PLO unilaterally declared an independent "Arab state of Palestine" at the nineteenth PNC session held in Algiers in 1988. Arafat expressed support for a UN Security Council resolution calling for a two-state settlement on the pre-1967 borders (which had been vetoed by the United States in January 1976), with Israel and Palestine living side by side, provided that East Jerusalem became the capital of the Palestinian state and Palestinian refugees were given the right to return to their pre-1948 homes in Israel. On September 13, 1993, after months of U.S.-brokered back-channel negotiations, Arafat signed an historic peace agreement with Israel in Oslo, Norway, even though such an accommodation was vehemently opposed by radicals within the PLO's own ranks and by irreconcilable Palestinian groups such as Hamas and Islamic Jihad. The agreement, known as the Oslo Accords, involved mutual recognition, with security guarantees to and from Israel, and the gradual introduction of Palestinian self-government and autonomy in Gaza and parts of the West Bank until a final peace settlement was signed. A year later, Arafat appointed a provisional government, the nineteen-member Palestinian Authority, to administer the areas of Palestinian self-rule. He was elected president of the Palestinian-controlled territories in 1996. The PLO convened a PNC session in Gaza in April 1996, which voted with 504 votes in favor and 54 against to recognize Israel's right to exist.

Mahmoud Abbas (b. 1935), a moderate Fatah politician, was appointed Palestinian prime minister in 2003 in the midst of the second intifada (2000–2006). In the same year, Palestinians and Israelis agreed to new negotiations based on the U.S.-proposed "roadmap to peace," although this failed to stop the daily violent attacks and reprisals. However, Abbas soon resigned after clashing with Arafat over control of the PLO's security forces. Following Arafat's death in November 2004, Abbas succeeded him as PLO leader and was elected Palestinian Authority president in January 2005.

In an unexpected blow to Abbas, Hamas swept the Palestinian parliamentary elections in January 2006 and formed a Hamas-led Palestinian Authority cabinet that promised to rid Palestinians of the rampant corruption, mismanagement of foreign aid, and endemic abuses of power under Fatah's rule. The result was an escalating conflict between President Abbas and Palestinian prime minister Ismail Haniyeh (b. 1963) of Hamas over many issues, including Hamas's retaliatory missile attacks on Israeli territory and Abbas's plan to hold a referendum to force Hamas to recognize Israel. To end sporadic armed clashes between Hamas members and the Fatah-controlled security forces, a Hamas-led coalition government with the participation of several Fatah-supported ministers was formed in March 2007. But the Hamas-Fatah coalition collapsed in June 2007 when a military confrontation between the two rival groups led to Hamas's victory and takeover of Gaza. Without the consent of the Hamas-dominated Palestinian parliament, Abbas dissolved the coalition government and appointed an emergency cabinet led by pro-Fatah prime minister Salam Fayyad (b. 1952) on June 17, 2007, signaling a newly divided Palestine ruled by the Iranian-backed Hamas in Gaza and the American-backed Fatah in the West Bank.

SEE ALSO *Arab-Israeli War of 1967; Arafat, Yasir; Intifada, The; Palestinian Authority; Palestinian Diaspora; Palestinians; Peace Process*

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Rossen Vassilev

PALESTINIAN AUTHORITY

The establishment of the Palestinian Authority (PA) in 1994 was a culmination of a process dating back to the Madrid Conference of October 1991 when Israelis and Palestinians engaged in official direct negotiations for the first time. The Declaration of Principles (DOP), which was officially signed by Israel and the Palestinian Liberation Organization (PLO) in September 1993 in Washington, D.C., gradually led to Palestinian self-government in about 42 percent of the West Bank and the whole Gaza Strip.

THE ESTABLISHMENT OF THE PALESTINIAN AUTHORITY

The DOP, also known as the Oslo Accords, are the first sustained effort sponsored by the international community led by the United States and Russia to find a peaceful solution to the Israeli-Palestinian conflict on the basis of United Nations resolutions 242 and 338. The marginalization of the PLO after the first Gulf War and the impacts of the first intifada (a Palestinian uprising directed against Israel) on Israeli perceptions of the Palestinians made both sides more willing than ever to directly negotiate with each other. The DOP was based on the Israeli recognition of the PLO as the legitimate representative of the Palestinian people in exchange for the PLO's recognition of the State of Israel.

The DOP envisioned the creation of Palestinian autonomous government in Gaza and the West Bank as a three-stage process in five years. The Cairo agreement between Israel and the PLO in 1994 established Palestinian self-rule in Gaza and the West Bank city of Jericho. The second stage was initiated with the signing of the "Oslo 2 Accord" in September 1995 when Palestinian self-rule was extended to the West Bank, which was divided into three zones. PA would control all civilian and security affairs in Zone A, which would cover cities populated by the Palestinians. Zone B would consist of Palestinian villages, and Israel would have final authority in external security in this zone. Zone C would include Jewish settlements, strategic roads, and sparsely populated areas (which made up 70 percent of the West Bank) and would remain under Israeli control. There were no restrictions on the further expansion of Jewish settlements in this zone. While the PA gained control of about 30 percent of the West Bank, only 3 percent of this area was in Zone A.

The Oslo Process continued with additional agreements in the 1990s. The Hebron Agreement in January 1997 divided the city of Hebron into two and resulted in the redeployment of Israeli soldiers to a smaller section of the city. In October 1998 Israel and the Palestinians signed the Wye Memorandum that called for further redeployment of the Israeli military in the West Bank and the PA to fight against terrorism against Israel. The third and final stage was originally scheduled to take place in 1999 and would have led to a peace treaty solving all core issues, such as the status of East Jerusalem, Jewish settlements, refugees, security arrangements, and water rights. While Palestinians consider East Jerusalem as the capital of their future state, Israel, which annexed East Jerusalem, refused to relinquish its sovereignty over the city. Israel and the Palestinians reasserted their commitment to the resumption of permanent status negotiations by signing the Sharm el-Sheik Memorandum in September 1999. However the outbreak of the second intifada in September 2000 ultimately derailed the process.

The creation of the PA was a major step toward the fulfillment of Palestinian national aspirations. However the PLO's recognition of Israel and the Oslo Process did not enjoy universal approval among Palestinians. A rejectionist front that included Hamas and Islamic Jihad denounced the Oslo Process. Terrorist attacks by militant Palestinian groups and Israeli retaliations undermined the process and fueled the mutual suspicions between Israel and the Palestinians. Furthermore, the Palestinian support of diplomatic negotiations with Israel was not sustainable. The partial Israeli withdrawal from Gaza and the West Bank did not necessarily translate into independence, security, freedom of action, and economic well-being for the Palestinians. The PA was not sovereign and was highly dependent on Israeli cooperation for its survival. It had no control over its external borders, customs, airspace, water, and minerals. Israel collected the PA's custom duties, taxed Palestinian citizens working in Israel on behalf of the PA, and remained the market for its export and the source of its imports. Foreign assistance made a substantial portion of the PA's budget. From the Israeli perspective, the main task of the PA was the establishment of order and security in the Palestinian territories and the end of attacks against Israeli military and citizens. From the Palestinian perspective, the Oslo Process would ultimately result in the establishment of a Palestinian state in Gaza and the West Bank. By 2000 neither side achieved its goals.

1996 ELECTIONS AND THE STRUCTURE OF THE PA

The DOP specified that free and general elections should be organized in the West Bank and Gaza to enable the Palestinians to govern themselves according to democratic principles. The elections for the Palestinian legislative council (PLC) and the presidency took place in January 1996 after Israeli military withdrew from Zones A and B in December 1995. Yasser Arafat (1929–2004), who was the leader of both Fatah (the Palestinian National Liberation Movement, a branch of the PLO) and the PLO, was elected president by capturing around 88 percent of the vote. Fatah dominated the legislative council elections, which was boycotted by Hamas, by capturing a majority of the seats.

Despite having popular legitimacy, the PA was characterized by authoritarian practices. Power was personalized in the hands of Arafat who thwarted the PLC's attempts to make him more accountable and to end his ruling by decree. While the PLC ratified the Basic Law in 1997, which was intended as an interim constitution, Arafat did not ratify it for five years. He populated senior positions mostly with comrades from Fatah who had been in exile

for decades at the expense of local leaders and grassroots organizations. The tension between "outsiders," who did not participate in the intifada, and "insiders," who had public support, fostered discontent with the PA. Public positions were distributed according to personal connections, histories, family relations, and patronage considerations. Distinction between personal and public budget blurred and the administration was beset by widespread corruption and incompetent management. The establishment of multiple layers of security forces facilitated the suppression of dissent. The PA's intimidation of the Palestinian press contributed to the rise of self-censorship. The PA entered into strategic alliances with local notables by co-opting and assigning them positions in the administration. All these practices diminished the prospects for a vibrant civil society and eroded the rule of law.

The PA's obligations to Israel and the Palestinian people were hardly compatible. On the one hand, Israel demanded the PA to prevent security threats to Israeli civilians and military from the areas it controlled. On the other, Palestinians expected that the establishment of the PA would stop Israeli incursions, blockades, and expansion of settlements. The PA's performance in combating attacks against Israeli targets was not satisfactory for Israel and the latter continued its policies of retaliation and intimidation against the Palestinians. As a result both Palestinian and Israeli support for the PA diminished.

THE SECOND INTIFADA AND THE COLLAPSE OF THE OSLO PROCESS

The official deadline for conclusion of Israeli-Palestinian formal settlement negotiations passed on May 4, 1999. It appeared to all parties that the Oslo Process was reaching a dead end. In July 2000 U.S. president Bill Clinton invited Arafat and Israeli prime minister Ehud Barak to a summit at Camp David to achieve a breakthrough. However, the summit was terminated without an agreement. After the Israeli Likud leader Ariel Sharon visited the Temple Mount, sacred for both Muslims and Jews, in September 2000, Israeli Arabs and Palestinians in the West Bank rioted. Younger generation Fatah members created Tanzim, an armed wing of Fatah, and confronted the Israeli military. The Oslo Process was in shambles. The conflict escalated to a new level in April 2002 when Israel conducted "Operation Defensive Shield" and reoccupied the parts of the West Bank and Gaza it had previously withdrawn from. Arafat was surrounded in his compound in Ramallah, in the West Bank. Israel accused Arafat of igniting the intifada and sponsoring terrorism and demanded his dismissal. In the same year, Sharon who won the Israeli elections in 2001, began constructing a barrier intended to separate the Palestinian West Bank from Israel and stop suicide terrorism employed by the militant Palestinian groups. As a result of Israeli operations and blockades the PA was in crisis. Unemployment skyrocketed among the Palestinians and the economy collapsed. Meanwhile, U.S. president George W. Bush declared that he would conditionally support the establishment of a Palestinian state in June 2002. His conditions included a comprehensive reform of the PA, the replacement of Arafat, and Palestinian agreement to a ceasefire. In 2003 the PLC amended the Basic Law as part of the reform initiative. A post of prime minister was created and the number of seats in the PLC was increased from 88 to 132. Arafat appointed Mahmoud Abbas as prime minister and gave away some of his extensive powers to him in March 2003. However, Abbas resigned in October complaining about his lack of power.

THE ROAD MAP AND TRANSITION OF POWER IN THE PA

Bush's declaration ultimately resulted in the Road Map for Peace, which was released in April 2003. The Road Map was issued by the Quartet—the United States, the European Union, Russia, and the United Nations—and was intended to end the Israeli-Palestinian conflict by 2005. It required the PA to make democratic reforms and end its support of terrorism. The conditions seemed positive for progress toward peace negotiations as two developments in 2004 abated the level of violence. In February 2004 Sharon announced that Israel would unilaterally withdraw from Gaza, and in November 2004 Arafat died. Following Arafat's death, presidential elections were held in January 2005. Hamas boycotted the elections and Marwan Barghouti, who was a popular leader of Tanzim, retired from the race several weeks before voting was to occur. Consequently, the Fatah candidate Abbas easily won the elections with 62 percent of the votes cast. Abbas's election to the presidency led to a thaw in relations with the United States and Israel. A month after his election, he met with Sharon and they both declared their commitment to work together to end the violence. In May Abbas visited the White House and received Bush's support for an independent Palestine and promise of direct aid in exchange for the PA's crackdown on terrorism. In August Israel dismantled the Jewish settlements and disengaged from Gaza.

The second Palestinian presidential and parliamentary elections were originally scheduled for 2001; however, the elections were indefinitely delayed after the outbreak of violence. After the death of Arafat in November 2004, Palestinian factions met in Cairo, Egypt, in March 2005 to discuss how to replace him. Fatah consented to have elections, and Hamas agreed to a ceasefire with Israel. After the adoption of a new electoral system the same month, the parliamentary elections eventually

took place in January 2006. This time Hamas did not boycott the elections and defeated Fatah by capitalizing on public discontent with the PA's past ten-year performance. Hamas captured 74 of the 132 seats to Fatah's 45 seats in the PLC. Hamas formed a new cabinet in March and Ismail Haniya became the prime minister. The relationship between Hamas and Fatah remained tense and skirmishes took place between militants in October 2006.

Hamas, which does not officially recognize Israel, isolated the PA in the international arena and ended the thaw between the PA and Israel. The U.S. administration refused to deal with Hamas until it renounced its terrorist tactics and recognized Israel's right to existence. Both the United States and the European Union cut all aid to the PA, and Israel declined to hand over tax receipts it had collected on behalf of the PA. As a result the PA was unable to pay the salaries of its civil servants, which had disastrous consequences for Palestinian society. In June 2006 Israeli military reentered Gaza following an attack that killed two Israeli soldiers and abducted one. Israel detained Hamas members including ministers and PLC representatives. This most recent conflict further undermined the prospects for diplomatic negotiations between the PA and Israel.

SEE ALSO *Arab-Israeli War of 1967; Arabs; Arafat, Yasir; Bush, George W.; Colonialism; Jews; Palestine Liberation Organization (PLO); Palestinians; Peace Process; Sharon, Ariel*

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PALESTINIAN DIASPORA

There is an increasing literature that describes as diasporic the twentieth-century dispersion of the Palestinian people from their historical homeland in the Middle East. However, the question arises whether celebrating the hybridity and the challenge to notions of nation-state and the dominant culture inherent in diaspora cultures does not detract from legitimate political claims to the homeland that was lost. This is particularly obvious in the case of the Palestinians. Thus, the literature on Palestinian diaspora communities and their experiences of dispersal and uprootedness demonstrates some unease in using the term *diaspora* precisely because it implies the possibility of permanence and the denial of return. The terms *exile* and *refugee* are more prominent in the discourses on Palestinians and in the Palestinians' own usage. Both terms put a much stronger emphasis on the forced nature of the dispersal and the intent to return to the homeland, however symbolic or realistically impossible such a return may be. Using the term *diaspora* for the Palestinian experience can, on the other hand, allow comparison with other communities in order to contextualize the Palestinian experience in a global political, social, and cultural framework.

The term *diaspora* has historically been linked exclusively to the experience of the Jewish people and their dispersal from the "promised land." The Greek word means "the scattering or sowing of seeds." More emotionally charged for Jews than *diaspora* is *exile*, linked to suffering, displacement, and physical distance from the homeland, while the term *diaspora* can connote the potentially beneficial scattering of seeds and thus the possibility of growth and improvement.

It is only in the later twentieth century that the term *diaspora* came to be used more widely for other groups of migrants with a history of dispersal and global networks of communities. In this more recent usage, it has come to denote a specific field of migration studies, namely *diaspora studies*. Within this field the exact meaning of the term has been subject to debate concerning the criteria that define a diaspora. The emerging consensus requires the following features: interconnected communities in at least two places in the world; a shared collective attachment to the homeland; and a sense of collective history of displacement or expansion, a common identity combined with a more or less uneasy relationship with the host societies. Some scholars insist that the cause of the dispersal has to be related to force or to another form of trauma; others argue that this would limit the definition too much. Arguably, many of these characteristics can be found in the history and present situation of the Palestinian people.

HISTORY OF PALESTINIAN MIGRATION

Palestinian migration from the area of historical Palestine can be traced to the beginning of the twentieth century. Palestine had been one of the remote provinces of the Ottoman Empire, economically underdeveloped but politically touched by ideas of Arab nationalism, which resulted in the emergence of a sense of Palestinian identity parallel and overlapping with other local identities and awareness of being Ottoman subjects. Between the world wars and after the collapse of the Ottoman Empire, Arabs emigrated from Palestine to Europe and the Americas in search of better employment and fortune, or they sought higher education after being introduced to Western ideas and education through missionary schools.

Regional migration, as well as economic exchange and trade between Syria, Lebanon, Palestine, and Jordan, was unrestricted, as the area was considered the unified region of Greater Syria. The first major event that caused a larger emigration movement was the 1936–1939 Arab revolt. In their protest against the British mandate and the increasing numbers of Jewish immigrants (supported by Britain), Palestinians were involved in armed clashes and subject to British persecution, while the economic situation deteriorated further and led especially younger males to seek employment, education, and fortune outside of the Middle East.

The war of 1947 to 1948 and its result, the creation of the State of Israel, simultaneously experienced as *An-Nakba* (the catastrophe) for Palestinians, created the Palestinian refugee problem, turning approximately 750,000 Palestinians (75 percent of the Palestinian Arab population) into refugees. Many of them fled their villages in fear of massacres and battles; others were forcibly evicted or barred from returning to their homes. Ultimately, most of them were prevented from returning to the territory that became the State of Israel. They took refuge in the West Bank (which was controlled by Jordan during the war and declared Jordanian territory in 1950) or in the Gaza Strip under Egyptian control. Many others fled to Lebanon and Syria.

In 1949, in response to the desperate humanitarian situation and the growing needs of the Palestinian refugees, the United Nations founded the UN Relief and Works Agency (UNRWA) with the mandate to administer aid to the Palestinian refugees in Jordan, Syria, Lebanon, the West Bank, and Gaza. Refugee camps under UNRWA control were set up, for the most part physically separating Palestinian refugees from the surrounding host societies. Arab countries and Palestinians shared political agreement in their refusal to permanently resettle Palestinians in any country other than Palestine.

During the 1950s and 1960s Palestinians left Israel, as well as the West Bank and Gaza, in search of employment. The economic situation was extremely depressed, further complicated by political oppression in Israel, where Arab towns and villages stayed under military control. Palestinians also went from Gaza to Egypt for education, while others sought employment in the Gulf states, where the discovery of oil demanded skilled laborers and professionals. On the political level, the Palestine Liberation Organization (PLO) was founded in 1964 by Palestinians outside of Palestine, in the diaspora.

The Six-Day War of 1967, in which Israel occupied the West Bank, East Jerusalem, and Gaza, turned many Palestinians into refugees for the second time. An estimated 250,000 West Bank residents and 75,000 residents of Gaza were driven from their homes between June 1967 and December 1968. They fled to Jordan, Egypt, Lebanon, and Syria, often moving several times. The rate of emigration slowed between 1969 and 1974 when a strong sense of holding on to the land based on the ideology of *sumud* (steadfastness) emerged and the Palestinian liberation movement, which had consolidated its organizational structure outside of Palestine, instilled a renewed sense of political pride and Palestinian identity.

Relatively steady numbers of Palestinians left the Occupied Palestinian Territories from the mid-1970s onward. They responded to Israeli policies of political and cultural oppression and land confiscation. Family and chain migration, as well as the immigration policies of potential host countries, became important factors for Palestinian patterns of temporary settlement in countries throughout the world. Major political events, such as the first Intifada (from 1987) and the second Intifada (from 2000), and their negative effects on safety, the political climate, the economy, and education, forced more Palestinians to leave the Occupied Territories and prevented many others from returning.

Palestinians living in Arab countries, however, developed their own patterns of migration, closely linked to political developments inside and outside the region. On one level, such population movement was caused by changes in the relationship between Arab host governments and the Palestinian leadership. In addition, PLO cadres and their families followed the PLO leadership to various Arab countries or were sent to other countries for organizational purposes.

At other times, Palestinians in Arab countries were caught up in larger political and military conflicts, such as the Lebanese Civil War (1975–1990) and the first Gulf War (1991). The civil war in Lebanon and the forced removal of the PLO and its military units from Lebanon in 1982 after the Israeli invasion was a major cause of migration. During the war, Palestinians who sought safety

and wanted to escape the volatile situation were accepted by Western countries as refugees or asylum seekers. In the wake of the 1982 events, PLO officials, their staffs, and their families left for Tunisia, where the PLO had reached an agreement with the government to temporarily establish its headquarters.

The Gulf War of 1991 resulted in the expulsion of a large number of Palestinians and their families from Kuwait, mainly as punishment for the Palestinian support for Iraq during the war. Many attempted to settle into a difficult life in Jordan after losing their livelihood and savings in Kuwait. Some held the necessary documents to return to the Occupied Territories, and others sought a new life elsewhere in the world.

The fall of Iraqi president Saddam Hussein in 2003 and subsequent developments in Iraq have contributed to the deterioration of the situation of Palestinians in Iraq who were politically favored by the Iraqi regime. They have experienced severe hardships and marginalization, and many have reportedly attempted to leave Iraq permanently.

PALESTINIAN DIASPORA COMMUNITIES

In 1947 the Arab population of historical Palestine numbered approximately 1.3 million people. In 2000 estimates of the number of Palestinians in the world ranged from 7.7 to 9 million. In the absence of a Palestinian state to issue passports, Palestinians in Palestine and the diaspora carry refugee travel documents or, where available, passports of current or past host countries. Thus reliable data on Palestinian demographics is scarce. Nevertheless, demographics play an important role in the political discourse on the Palestinian refugee problem and its possible solutions, and thus carry tremendous symbolic weight.

Four main groups of Palestinians can be distinguished according to location: those living in Israel, in the West Bank and Gaza, in Arab countries, and in Western countries. The reason that some of those living in the territory of historical Palestine are included in this overview is the fact that many who were internally displaced during the wars perceive their lives as shaped by a sense of inner diaspora, a temporal and special dislocation from their place of origin. This is a sentiment that should not be discounted and that has shaped various expressions of Palestinian national and cultural identity.

The Palestinians inside Israel number less than one million people and constitute approximately 20 percent of the total population of Israel. A significant number of the Palestinians in Israel are internally displaced and consider themselves internal refugees. Many of them have repeatedly attempted to return to their villages or resettle in close proximity to their place of origin; they live in unrecognized villages without access to Israeli health care, education, or social welfare services.

Palestinians in the West Bank and Gaza are divided into refugees and nonrefugees. In June 2005 the total refugee population of the West Bank (registered with UNRWA) was 690,988 with 26 percent (or 182,191) living in nineteen official refugee camps. In the Gaza Strip, UNRWA offered assistance to 969,588 refugees, 49 percent of whom lived in the eight official refugee camps. The number of refugees who need UNRWA assistance has dramatically increased since the beginning of the second Intifada, which led to the Israeli reinvasion of Palestinian territories, economic isolation, and political violence. Since 2000, unprecedented numbers of Palestinian refugees in the West Bank and Gaza have been pushed into poverty.

The largest of the Palestinian diaspora communities is situated in Jordan and numbers approximately 2.6 million. UNRWA reported 1,795,326 registered refugees in Jordan as of June 2005, 16 percent of whom lived in the ten official refugee camps. They are refugees from both the 1948 and 1967 wars and their descendants. A significant number of Palestinians in Jordan carry Jordanian passports, have the right to vote and hold office, enjoy full rights to public services such as higher education, and can work in the government sector. The legal, economic, and social situation of Palestinians in Jordan can be considered far better than in other countries, and some scholars even speak of a virtual merge of Palestinian and Jordanian identity. The Palestinians in Jordan are widely expected to stay in Jordan, even if the right of return may be achieved during future negotiations. Generally, it is assumed that return to a Palestinian state established in the West Bank and Gaza will be a more likely option for the 1967 refugees, while many of the 1948 refugees insist on the literal right of return to homes and villages now in Israel.

The number of Palestinians in Lebanon is widely debated and the only numbers available are limited to registered refugees (401,071) and the camp population (53%). Palestinians in Lebanon face the harshest socioeconomic conditions: their Lebanese travel documents are not recognized by most countries in the world, and they must obtain work and travel permits issued by the Lebanese authorities and are not allowed to work in the public sector and a long list of other professions. Changes in existing laws are closely linked to Lebanese domestic politics. Lebanon has with very few exceptions rejected any permanent settlement or naturalization of Palestinian refugees.

The exact number of Palestinians in Syria is unknown, but 426,919 Palestinians are registered as refugees, 27 percent of whom live in the ten UNRWA administered camps. Most refugees enjoy rights similar to

those of Syrian citizens, but they are not allowed to vote, hold office, or carry Syrian passports. The travel documents issued by the Syrian government are not recognized by most states.

Palestinian refugees living in other countries of the Arab world, such as Saudi Arabia, the Gulf states, Libya, Egypt, and Iraq, are not assisted by UNRWA. Many of these Palestinians are work migrants who relocated after leaving their initial country of refuge in hope of finding better education and employment.

Palestinians in Western countries are divided into European communities and those in the Americas. The estimated numbers vary widely, but less than 6 percent of the Palestinian people live in Western diaspora communities. Many countries, such as the United States, Canada, and Australia, have, because of their status as immigration countries, over the years provided Palestinians with work and residency permits and also citizenship. Others have been accepted as refugees and asylum seekers. European countries tend to accept refugees at times of acute crises, but do not generally favor integration or naturalization of refugees.

PALESTINIAN DIASPORIC IDENTITIES AND CULTURES

A distinct feature of diaspora communities is a sense of collective identity, often linked to the events surrounding the loss of the homeland and the hardships of living separated from its territory and culture. The Palestinian diaspora is characterized by strong intercommunity networks on many levels, such as family ties, global communication, frequent migratory moves, organizational structures, and cultural exchange. These connections facilitate the preservation and negotiation of Palestinian national identities.

On one hand, scholars celebrate the emergence of new hybrid intellectual and cultural dimensions of diaspora communities. Palestinian communities have both features. Case studies of Palestinian diaspora communities in different parts of the world indicate that the more Palestinians are allowed to integrate into a host society on political, social, economic, and cultural levels, the more their Palestinian identity becomes part of a hyphenated set of identities. On the other hand, many Palestinian refugees in Lebanon or Iraq have no other identities to choose from; thus they remain in a sense more strongly Palestinian. The same correlation can be detected for integration and return wishes. The right of return is subject to heated political debate among Palestinians and internationally, and will have to be resolved as part of a final settlement of the Palestinian-Israeli conflict.

Discussion of the Palestinian diaspora is not complete without mentioning the importance of Palestinian cultural and intellectual production throughout the world and the significance of commemorating the events (in particular the 1948 war) that led to the expulsion of the Palestinians from their homeland. In the absence of national museums, school textbooks, and a state, these collective memories have been shaped by memoirs, oral history, and artistic expression. Palestinian writers, visual artists, musicians, and poets have contributed to Palestinian national culture and the cultures of their respective host countries. Palestinian intellectuals and scholars have not only shaped or challenged the field of Palestine studies but have also contributed to many areas of the social and natural sciences without denying their Palestinian diasporic identities. Such identities are by definition in flux, in a constant state of redefinition and adjustment, and one can argue that future generations of Palestinians will have to renegotiate how, where, and to what extent they want to be part of the Palestinian diaspora.

SEE ALSO *Intifada, The; Palestinians*

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PALESTINIANS

Historically, the term "Palestinian" has been associated with the inhabitants of the south of ancient Syria west of the Jordan River between Lebanon and Sinai. The name "Palestinian" is related to the "Philistines," an Indo-European group that invaded the southern coast of ancient Syria from the sea in the fourteenth century BCE. The Palestinians, however, are descendants of the Canaanites, a Semitic group that migrated from the Arabian Peninsula between 3000 and 2500 BCE and settled the coastal areas of Palestine. The Arabic language and Islamic religion spread among the Palestinians with the Arab migrations from the Arabian Peninsula between 630 and 650 CE. Throughout four hundred years of Muslim Ottoman rule, Palestinians maintained an Arab identity and included Muslim, Christian, and Jewish communities. At the turn of the twentieth century, the Palestinian population was composed of a Muslim Sunni majority and minority populations of Christians (10 percent) and Jews (less than 5 percent).

After World War I (1914–1918), the Palestinians were provisionally recognized as independent under a British mandate that was supposed to provide advice and maintain their status quo until self-rule. The British, however, began to resettle European Jews in Palestine as a way of supporting the Zionist solution to the Jewish question created by the anti-Semitism of Europe. The increase in the European Jewish population from 4.8 percent in 1882 to 28 percent in 1936 created economic hardships for the indigenous population because the lands purchased were in the arable, coastal, and urban centers of Palestine. Moreover, the uneven economic policies of the British that favored the Jewish sector increased Palestinian unemployment, rural outmigrations, landlessness, and thus a cheap labor force. Palestinian discontent culminated in a general strike and protests between 1936 and 1939, which were brutally suppressed by the British army and the Jewish militia.

Palestinian lives have been shaped since mid-twentieth century by two main events, their repercussions, and the attempted solutions: Al Nakba (Arabic for "the catastrophe") of 1948, which marked Palestinian dispossession and exile coinciding with the establishment of the Israeli state; and Al Naksa (Arabic for "the tragedy") of 1967, which marked the beginning of the Israeli occupation in the West Bank, the Gaza Strip, and East Jerusalem. Al Nakba caused the exodus of 750,000 Palestinians from the land on which the state of Israel was established into the nearby Arab countries of Jordan, Lebanon, and Syria, as well as into the West Bank and the Gaza Strip; and Al Naksa created an additional 350,000 refugees who fled to Jordan, of whom 15,000 were allowed to return. The indigenous Palestinian population that remained on the land under Israeli control was put under military rule until 1966 and was later incorporated into Israeli society as a minority with citizenship but not equality.

After 1948 Palestinian society emerged divided between the West Bank, a kidney-shaped area of approximately 2,270 square miles whose population doubled with the arrival of refugees, and the Gaza Strip, a tiny strip of land of approximately 140 square miles absorbing a refugee population that outnumbered its inhabitants. Between 1948 and 1967, the Palestinians in the West Bank, annexed then by Jordan, could get Jordanian passports listing their citizenship as Jordanian, while the Palestinians in Gaza, under Egyptian rule, were given Egyptian travel documents listing their nationality as undetermined.

The Palestinians in both the West Bank and the Gaza Strip were united after 1967 through their status as occupied subjects sharing a history under Israeli occupation while struggling against its oppressive conditions. The contention included a guerrilla resistance in the first couple of years of occupation in the refugee camps of Gaza. It was suppressed when the camps were subjected to martial law. Sporadic protests took place in the 1970s and 1980s, a mass uprising took place in 1987, and a second uprising began in 2000.

Under occupation, all aspects of Palestinian life were subject to the Israeli military authorities' approval, from economic activity to the right of movement, and monitored through a hierarchically ordered color-coded identity card system—to be carried at all times—differentiating Palestinian residents of East Jerusalem (blue), the West Bank (orange), and the Gaza Strip (red). The Palestinians of East Jerusalem, which was annexed by Israel after the 1967 war while remaining integral to the West Bank, were assigned the status of residents, situating them hierarchically above occupied subjects but lower than citizens. Nonetheless, the mid-1990s uncovered their shaky status when the Israeli government demanded that East Jerusalemites prove that the center of their activities continued to revolve around the city if they wanted to keep their residency rights. The residency status of close to two thousand East Jerusalemites was revoked.

The Palestinian economy, underdeveloped on the eve of the 1967 war, deteriorated under the Israeli occupation policies of control of mobility of Palestinian labor and commodities and confiscation of land for building and expanding Israeli Jewish settlements in the occupied territories. By 1993, a survey of living conditions found that Palestinian households in the territories are mostly dependent on wage labor. Moreover, Palestinians preferred to work in Israel because of higher wages even as they are paid less than the average wages of the Jewish workers. Under a general exit system in 1967, Palestinians

could cross the border to work as day laborers but were not allowed to stay after sunset. Thus, Palestinian chances for making a living in the territories largely have depended on Israeli border policies since 1967.

Peace negotiations between Palestinians and Israelis to end the occupation started in 1993 yet coincided with Israel closing its border and imposing a permit policy restricting Palestinian movement with repercussions for Palestinian livelihood. Although the peace process brought a Palestinian National Authority to Gaza and Jericho and redeployed the Israeli military from main Palestinian towns, it did not end Israeli control. Israel retained 59 percent of the West Bank lands and 20 percent of the Gaza Strip, and maintained security control over most of the West Bank. In the years following the arrival of the Palestinian Authority to the territories in 1994, Palestinians faced more mobility restrictions—between Gaza, the West Bank, and East Jerusalem, within the West Bank. Additionally, the construction of a wall between the West Bank and Israel has had significant consequences for Palestinian social life.

SEE ALSO *Arab League, The; Arab-Israeli War of 1967; Intifada, The; Islam, Shia and Sunni; Muslims; Palestine Liberation Organization (PLO); Palestinian Authority; Palestinian Diaspora; Peace Process; Suicide Bombers*

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Mary Hovsepian

PAN-AFRICAN CONGRESSES

Pan-African congresses is the name given to seven international meetings planned by W. E. B. Du Bois between 1919 and 1929, of which four actually materialized, and another meeting in 1945 in which he participated only peripherally in planning and organizing, but over which he presided. At the 1945 congress, he called for another to take place nine years later. This materialized only in 1974, after his death. Another congress took place in 1994, with another proposed a few years later.

THE ORIGIN OF THE TERM *PAN-AFRICAN*

Pan-African was coined, it is claimed, by the Trinidadian lawyer Henry Sylvester Williams in an 1899 letter concerning the Pan-African Conference of 1900. It appears, however, that Du Bois had a much greater claim to the term. It is plausibly derived from the Pan-Slav, Pan-German, and Pan-American movements, of which the most influential for residents of the Western Hemisphere would logically be the Pan-American movement.

Du Bois is the only major participant to link explicitly in print all four of these pan-movements. In 1888 he gave as his valedictory address at Fisk University a speech titled "Bismarck"; Du Bois said that Otto von Bismarck, the German chancellor, was his hero because of his feat in organizing the reunification of Germany. While at the University of Berlin from 1892 to 1894, Du Bois wrote a PhD dissertation in economics under the Pan-German Gustav von Schmoller. Heinrich von Treitschke, whom Du Bois described as a "fire-eating Pan-German," was the philosophical leader of the Pan-German League, and discussed its tenets in class. During this period, Du Bois also traveled to Pan-Slav centers in Prague, Bohemia; "the borders of Russia"; and Krakow, Poland. The movement held a demonstration in Prague in 1898. Du Bois wrote of these travels in his letters from Europe to the *New York Age*, a weekly newspaper, from 1892 to 1894 and in his 1940 and 1968 autobiographies. Also in his autobiographies, Du Bois wrote of James G. Blaine, the U.S. secretary of state in 1881 and from 1889 to 1892, and the architect of the U.S. government's Pan-American policy. Thus, Du Bois mentioned in published writings the individuals or sites associated with all three prior pan-movements. The European pan-movements differed from the American movement, which was based on the unity of independent territorial states only, without regard to language or ethnicity.

By contrast with Du Bois, Williams used the term *Pan-African* only in one unpublished letter and in the documents promoting the 1900 conference. For him, there is no indication of the provenience of the term.

Three other aspects of Pan-African conferences/congresses are considered in this entry: (1) the participants; (2) the public resolutions and other documents; and (3) the organizations established to continue the movement.

CONFERENCE PARTICIPANTS

It should be noted that continuity from congress to congress was guaranteed, because each of the meetings from

1919 to 1974 was organized by participants from previous meetings. Du Bois, as stated, participated in every meeting between 1900 and 1945. C. L. R. James, Amy Ashwood Garvey, T. Ras Makonnen, and Adam Clayton Powell Jr. provided direct links between the 1945 and 1974 congresses. However, the Seventh Pan-African Congress, held in Kampala, Uganda, in 1994, had no participants from previous congresses.

PUBLIC RESOLUTIONS, MANIFESTOS, AND MESSAGES

The documents produced by the Pan-African meetings through 1945 include:

- 1900: "Address to the Nations of the World"
- 1919: the Du Bois "Memorandum" and the "Resolutions of the Pan-African Congress"
- 1921: the "Manifesto of the Second Pan-African Congress" and "The Pan-African Association Declared the 8 December 1921 Statutes"
- 1923: "Resolutions"
- 1927: "Announcement of the Fourth Pan-African Congress," "About the Pan-African Congress," and a press release on the resolutions
- 1945: a "Memorandum to the U.N.O." and "Resolutions"

Du Bois wrote most of these documents. Several themes in them stand out. Perhaps most striking is his use of the term *Africa for the Africans*, which appeared from 1921 to 1927. Second, Du Bois always began with a demand for self-government in the African colonies. Third, with the exception of 1919, he always addressed the plight of those of African descent in the Americas, and elsewhere in the African diaspora. Brazil, however, was addressed only in 1921 and 1923. In 1927 his horizons extended beyond Africa to China and India. The 1945 documents contained no reference to the plight of the African diaspora, but in his own speech, Du Bois did stress that theme repeatedly. Fourth, he always spoke of the plight of black labor, and of black access to land and capital.

The "General Declaration" of the 1974 congress acknowledged the need to "consolidate the unity between the peoples of Africa and of African descent," as had Du Bois. That congress's "General Statement on Economics" declared that the purpose of economic development was "the liberation of our people at home and in the diaspora." The "Resolution on Democratisation of International Institutions," also from the 1974 congress, recommended that African regional and subregional organizations permit the participation of "counterpart organizations in the Caribbean and North America."

CONTINUING ORGANIZATIONS

The international Pan-African meetings held between 1900 and 1945 established four organizations intended to be permanent. These were the Pan-African Association, 1900–1902; the International Pan-African Association, 1921–1925; the New York Pan-African Congress Committee, 1923–1927; and the Pan-African Federation, 1944–1947. The headquarters of these four organizations were located in the very capitals of the colonial countries the conferees wished to displace: London, Paris, and New York.

POST-MANCHESTER CONGRESSES

Between 1945 and 1974 most Pan-African activity took place on the African continent. The 1945 congress was organized by George Padmore and Kwame Nkrumah, the latter of whom was inspired by black nationalist Marcus Garvey. A native of Trinidad, Padmore was a former law student at Howard University who became an important official of the Communist International. Nkrumah, who graduated from Lincoln University and the University of Pennsylvania, became the first president of an independent Ghana in 1957, the foremost advocate of Pan-Africanism during this period, and the principal founder of the Organization of African Unity (OAU) in 1963. The Sixth Pan-African Congress resulted from the long-term actions, sometimes in concert, but often not, of three men: Julius K. Nyerere (1922–1999) of Africa, Adam Clayton Powell Jr. (1908–1972) of North America, and C. L. R. James (1901–1989) of the Caribbean. At the Cairo summit meeting of the Organization of African Unity (OAU) held in July 1964, which was attended by Malcolm X, Nyerere, then president of Tanzania, introduced and negotiated to passage a resolution recognizing the Afro-American struggle as a concern of the OAU. In an October 17, 1967, address titled "After the Arusha Declaration," Nyerere invited foreigners, including African Americans, to come to Tanzania to assist in nation building. In the late 1960s Nyerere went to Harlem and issued an invitation to African Americans to come to Tanzania to assist in building a socialist African state. As a result of these efforts, the number of African Americans in Tanzania increased rapidly to about eight hundred in 1974. Among the most important for the Sixth Pan-African Congress were Sam Dove and Bill Sutherland. Dove served as a consultant to the Tanzanian government on the sixth Pan-African congress. Sutherland was the founder of the Congress of Racial Equality (CORE), a founder of the American Committee on Africa (ACA), a consultant of President Nkrumah, and a liaison between

the Tanzanian government and the African American community in Tanzania. Also resident in Dar es Salaam at this time was Walter Anthony Rodney, a Guyanese.

The Black Power Conferences were initiated in Washington, D.C., in 1966 by Powell, a U.S. congressman who had participated in the 1945 Manchester congress. The Newark Black Power Conference of July 1967 resolved to sponsor "an International Black Congress." Chairing the economics workshop was Robert S. Browne of Fairleigh Dickinson University. The Philadelphia Black Power Conference of the late summer of 1968 resolved to thank the government of Tanzania for its invitation to hold the Fourth Black Power Conference in Tanzania. This could not be arranged, however, and so at the Bermuda Black Power Conference of July 1969, C. L. R. James chaired a workshop on "Politics," including a subworkshop on "Pan-Africanism." His closing address to the conference advocated a new Pan-African congress. James, a Trotskyite socialist, was a professor at the Federal City College and Howard University, both in Washington, D.C., from 1966 to the mid-1970s, and from this base he began preparing a new congress in 1970.

James formed an entirely new group consisting of the principal survivors of the Manchester congress, or their widows and ex-wives, and some of his students. Most important of the veterans were T. Ras Makonnen, Amy Ashwood Garvey (1897–1969), and Shirley Graham Du Bois (1907–1977), who lent their names as sponsors of the new congress. James's students included Walter Rodney; Courtland Cox, formerly of the Student Nonviolent Coordinating Committee; and Marvin Holloway. The organizing group, based in Washington, D.C., styled itself the Provisional Secretariat for a Sixth Pan-African Congress.

The group organized itself into regional committees for North America, the Caribbean and South America, and Africa. European, Asian, and Pacific organizations and individuals were recognized by the secretariat on an ad-hoc basis. In 1972 the organizing committee issued a "call" to the Sixth Pan-African Congress, written largely by James, Rodney, and Cox. Two years later it issued a briefing paper. Rodney contributed a paper, "Toward the Sixth Pan-African Congress: Aspects of the International Class Struggle in Africa," which was distributed by the organizers in April 1974. A 1945 Du Bois speech, "The Pan-African movement," was reprinted and issued by the organizers, also in 1974.

Three regionwide meetings took place in North America—at Kent State University, at the Center for Black Education (CBE) in Washington, D.C., and in Atlanta. The Temporary Organizing Committee for a Sixth Pan-African Congress was established, with headquarters in Washington. Cox of the CBE was elected international secretary-general by acclamation. Sylvia Hill of the CBE was elected secretary-general for North America, and Julian Ellison of Columbia University and the Black Economic Research Center (BERC) was elected associate secretary-general for North America. This trio was denominated the Temporary Secretariat. James Turner of Cornell University accepted a Secretariat invitation to head the actual North American delegation, which had not yet been selected. At a regionwide meeting in Atlanta, Cox, Hill, and Ellison were formally elected as permanent officers. Cox then left for Dar es Salaam, taking with him several staff workers, including Geri Stark, who served as information officer.

North American delegates included "Queen Mother" Audley Moore, Julianne Malveaux of the Massachusetts Institute of Technology, Gay McDougall of Yale University, William Sales of Columbia, Matthew Meade of Yale, Carroll Clarke of Brooklyn College, Wentworth Ofuatey-Kodjoe of the City College of New York, Barbara Britton of BERC, Owusu Sadaukai of Malcolm X Liberation University, Amiri Baraka of the Congress of African Peoples, Haki Madhubuti of Black Books Bulletin, and Oba T'Shaka of San Francisco State University. At a final meeting of the delegates at Columbia University on June 9 and 10, Clarke and Ellison finalized drafts of North American position papers.

In March 1974 the Caribbean and South American Regional Steering Committee elected Eusi Kwayana chairman, with Tim Hector and Maurice Bishop among those selected as delegates. However, no official nongovernmental delegation from this region was finally permitted.

The Sixth Pan-African Congress opened on June 20, 1974, in Nkrumah Hall at the University of Dar es Salaam. In the first order of business, Nyerere was elected president of the congress by acclamation. Conducting the opening plenary session as co-masters of ceremonies were Cox and Aboud Jumbe, the vice president of Tanzania. A taped message from Ahmed Sékou Touré, president of Guinea, was played. Papers were presented on the three major issues of the congress—politics, science and technology, and economics—the last of which Ellison persuaded the Secretariat to add. Two speeches, by Samora Machel and Peter Onu, deputy secretary-general of the OAU, were devoted to politics. The economics paper was by D. M. Nomvete of the United Nations Economic Commission for Africa. The congress proceeded with daily plenary sessions followed by simultaneous sessions of committees A, B, and C, for political; economic development; and African science, technology, education, and culture, respectively.

The Seventh Pan-African Congress convened in April 1994 in Kampala, Uganda. The organizers, led by Naiwu

Osahon of Lagos, Nigeria, included no one who had participated at the Dar es Salaam or earlier congresses.

THE AFRICAN UNION

In 2002 the OAU was replaced by a new organization, the African Union (AU), which was a more politically and economically integrated confederation of African states. By this time, all former colonies on the continent, as well as South Africa, were ruled by Arab or black governments, as were all colonies in the Caribbean except those of France. The AU represented the near accomplishment of the dream of Williams, Du Bois, Marcus Garvey, George Padmore, James, and Kwame Nkrumah.

SEE ALSO *Black Nationalism; Black Power; Colonialism; Decolonization; Du Bois, W. E. B.; James, C. L. R.; Malcolm X; Marxism, Black; Nyerere, Julius; Pan-Africanism; Rodney, Walter*

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Julian Ellison

PAN-AFRICANISM

Pan-Africanism is a political, ideological, and cultural movement centered on the liberation of Africa and Africans both on the continent and in the diaspora. The primary tension in the history of the movement has been the precise nature and relative importance of race and class, and their relation, in this struggle (Allen 1969).

There are many definitions of Pan-Africanism, and even debate about when it began and what actors and actions constitute the movement. These different conceptions hinge largely on whether one is referring to an organized historical movement self-identified as "Pan-Africanism" that began in the late nineteenth century and continues into the twenty-first. The alternative is a "general sentiment of international black kinship" (Weisbord 1973, p. 7n), sometimes written with a lowercase *p* (i.e., "pan-Africanism"; cf. Shepperson 1962), identified as existing as far back as ancient Egypt (Nantambu 1998), including slave revolts and (inter)nationalist tendencies in the Caribbean and Americas in the eighteenth and nineteenth centuries associated with such names as Nat Turner, Paul Cuffee, Denmark Vesey, Toussaint-L'ouverture, Joseph Cinque, Martin Delaney, David Walker, Edward Blyden, and many others. The remainder of this entry focuses primarily on the first, the contemporary organized movement, though their predecessors have always been explicitly recognized and honored.

The first Pan-African conference, held in London in 1900, was organized by Henry Sylvester Williams, a Trinidadian barrister, and attended by W. E. B. Du Bois. The group had previously formed under the title of "African Association" but changed it to "Pan-African Association" and committed to a conference every two years, the next to be held in the United States (Esedebe 1994, p. 44). The movement, a response to racism and colonialism, promoted civil and political rights for and cooperative development among all those of African descent—on the continent and in Europe, the Caribbean, and the rest of the Americas (Legum 1962).

Du Bois organized and led the second conference, often regarded as the "first" Pan-African *Congress*, in 1919,

followed by congresses in 1921, 1923, and 1927. The nineteen years between the first and second meeting were not without activity, however. Debates between those who did and did not support repatriation, between those who saw the issue primarily in racial terms and those who gave more weight to economic considerations, and between conservative accommodationists and liberal or radical liberationists were all lively, and included not only Du Bois but Marcus Garvey and Booker T. Washington. But the period from the end of World War I to the end of World War II marked an important and intensive growth of the organized movement, with its concerns reflecting developments worldwide. This activity included, but was not limited to, a number of important publications by leading Pan-Africanists, such as C. L. R. James (*The Black Jacobins*), Jomo Kenyatta (*Facing Mount Kenya*), and George Padmore (*How Britain Rules Africa*).

Many participants and observers alike have remarked on the changes that came with the first post–World War II Congress, the Fifth Pan-African Congress, held in Manchester, England, in 1945. As Kwame Nkrumah emphasized, for example:

> For the first time, there was strong worker and student participation, and most of the over two hundred delegates who attended came from Africa. They represented re-awakening African political consciousness; and it was no surprise when the Congress adopted socialism as its political philosophy.... Two declarations were addressed to the imperial powers, one written by Du Bois, and the other by myself. Both asserted the right and the determination of colonial peoples to be free, and condemned capitalism. (Nkrumah 1973, pp. 42–43)

At the same time, the interwar period had been one in which the Communist Party attacked Pan-Africanism as "petit bourgeois nationalism," while official U.S. and European governments and the media portrayed the movement as completely under the control of Moscow and the Communists. The Fifth Congress, then, was seen as the end of the "coming-of-age" period of Pan-Africanism, whose leaders and proponents were now consciously "seeking a way of achieving national liberation and economic emancipation without allying themselves with the Communists" (Padmore 1971, p. 130). The formation and mobilization of colonial liberation movements in the postwar period led to Ghana's independence in 1957, when "Pan-Africanism moved to Africa, its real home, and Pan-African Conferences were held for the first time on the soil of a liberated African state" (Nkrumah 1973, p. 43).

In the period of decolonization that began with Ghanaian independence, a growing continental Pan-Africanism in which continental political and economic unity was envisioned was strongly promoted by Nkrumah (1963), Cheikh Anta Diop ([1960] 1978), and others. One of the issues hotly debated in this period regarded the relation of North Africa to sub-Saharan Africa. Continental Pan-Africans viewed the North as African, while "sub-Saharan" Pan-Africanists, concerned with Pan-Negroism versus Pan-Arabism, did not include the North in their proposals. This debate also overlaps with and touches on many issues relevant to cultural Pan-Africanism, in which all Africans—continental and diasporan—are seen as sharing many cultural and even linguistic characteristics that distinguish them from other non-Africans, especially Europeans (Marah 1998, p. 80). Some of the divisions were represented on the continent by the rivalry between the Brazzaville and Casablanca groups, which resulted in a "compromise" with the creation of the Organization of African Unity (OAU) in 1963. In the diaspora, these divisions were reflected in the debates between cultural nationalists (some who eventually embraced Afrocentricity) and political (or revolutionary) nationalists, including those coming out of the civil rights and Black Power movements, such as Stokely Carmichael (Kwame Ture).

But the tradition of continental and diasporan alliance was continued as Malcolm X, founder of the Organization of Afro-American Unity (OAAU) attended the OAU's Cairo Summit in 1964, where he spoke in favor of the inseparable connections between Africans "at home" and abroad that could not be ignored, and author Richard Wright attended the Bandung Conference in 1955. These developments were also played out in the rise of black studies courses and curricula in the 1960s, including the establishment of the Afro-Asian Institute at Temple University in Philadelphia in 1969, later reorganized and renamed the Department of Pan-African Studies (including its Pan-African Studies Community Education Program, or PASCEP) in 1972. Bandung, the Non-Aligned Movement, and the Afro-Asian Institute are examples of what Mazrui identified as the growing "Global Pan-Africanism" uniting not only continental and diasporan Africans but other colonized or previously colonized peoples of ASIA and the Americas (Mazrui 1977). Malcolm X's experiences in Mecca and elsewhere and Martin Luther King Jr.'s position on Vietnam later in life, even the haiku and tanka poetic forms of Richard Wright and Sonia Sanchez, were all manifestations of global Pan-Africanism.

In the twenty-first century, the Pan-African notions of African political unity and continued discussion of the relation and relevance of racism and capitalism remain alive. With the fall of the apartheid government in South Africa, political independence has been achieved, but neocolonialism remains alive and gives no indication of with-

ering away on its own. In the diaspora, although there remains tremendous racial residential segregation and strong evidence of ongoing discrimination, those of African descent have obtained positions of authority and power in the political and economic spheres, resulting in what might be viewed as "domestic neocolonialism." In the face of all these developments, Pan-Africanists such as Shivji are promoting "an alternative Pan-Africanism of the People, rooted in anti-imperialism and liberation. In other words, the nationalism of the twenty-first century is Pan-Africanism rooted in anti-imperialism" (Shivji 2006).

SEE ALSO *African Diaspora; African Studies; Anticolonial Movements; Black Power; Caribbean, The; Civil Rights; Civil Rights Movement, U.S.; Diop, Cheikh Anta; Du Bois, W. E. B.; Garvey, Marcus; Haitian Revolution; James, C. L. R.; Kenyatta, Jomo; Malcolm X; Nationalism and Nationality; Nkrumah, Kwame; Organization of African Unity (OAU); Pan-African Congresses; Pan-Arabism; Pan-Caribbeanism; Rastafari; Turner, Nat; Vesey, Denmark*

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Mathew Forstater

PAN-ARABISM

Pan-Arabism is a Western term for the ideological and political project Arabs refer to as *Arab nationalism*. This project's central premise is that all those who speak Arabic, from Iraq in the east to Morocco in the west, share a common history, heritage, and culture, and are therefore members of a single nation whose destiny it is to overcome the artificial boundaries imposed by colonialism and achieve independence and unity.

Like all nationalisms, Arab nationalism claims ancient roots but is actually of relatively recent origin. The term *Arab* was used by neighboring peoples to designate an ethnos based in the central and northern Arabian Peninsula from well before the emergence of Islam in the seventh century CE, and among Muslims the Arabs enjoyed a distinctive status as the people to whom God chose to send his final and most complete revelation, transmitted by an Arab prophet, Muhammad (c. 570–632), in the Arabic language. But in the later Ottoman period, the term was often used by literate urban folk to denote the uncultured nomads of the desert. Premodern identities in what is today called the Middle East were generally framed in religious, kinship, tribal, occupational, and local or regional terms, or in terms of one's loyalty or subjection to a particular ruler or state, such that before the nineteenth century no one in what is now referred to as the Arab world would have considered oneself an Arab in the modern national sense of the term.

Arab nationalism was a product of the social, cultural, and political transformations that the predominantly Arab provinces of the Ottoman Empire underwent in the second half of the nineteenth century and the first decades of the twentieth century. These transformations included the disruptive effects of the region's growing integration into a Europe-centered world economic and political order; efforts by the Ottoman ruling elite to centralize power and create a modern state that could withstand European encroachment and counter separatist movements among its subject Christian peoples; the spread of modern schools; and the complex encounter with European ideas, institutions, and practices, disseminated and mediated largely through new print media. These processes helped

foster what would come to be called the *nahda*, the Arab cultural "renaissance" that was centered in Ottoman-ruled geographic Syria (encompassing the present-day states of Syria, Lebanon, Israel/Palestine, and Jordan) and in Egypt, which opened the way to a protonational and largely cultural "Arabism."

After the Ottoman constitutional revolution of 1908, politically active Arabs (largely from the educated upper and middle classes) tended to advocate greater autonomy for the Ottoman Empire's Arab provinces while remaining loyal to the Ottoman framework, seen as the only bulwark against European colonial domination; only a few marginal groups and individuals went so far as to call for Arab independence from Ottoman rule. But after the outbreak of World War I in 1914, Ottoman repression and centralization, as well as wartime hardships, alienated many Arabs from Ottoman rule. Meanwhile the British, seeking local allies against the Ottomans, established secret links with Husayn (c. 1854–1931), the quasi-autonomous ruler of the holy city of Mecca, who hoped to escape Ottoman control and carve out a state for himself and his Hashemite clan, and through him with Arab nationalist activists in Syria. In 1915, bolstered by Britain's promise to support postwar Arab independence under Hashemite rule and equipped with British weapons, money, and advisors, the Hashemites and their allies revolted against Ottoman rule in the name of "the Arab nation" and participated in the Allied military campaign that eventually defeated the Ottoman forces.

It was only with the end of Ottoman rule over the Arab provinces that significant numbers of their inhabitants began to see themselves as Arabs in a new national sense, though that identity was never uniform, uncomplicated, or uncontested. Arab nationalist hopes for independence and unity were soon frustrated as the victorious Allies reneged on their wartime promises and instead divided the former Ottoman Arab provinces into several new states ruled by Britain or France as "mandates," which their new subjects accurately perceived as a thinly disguised form of colonialism. Arab nationalists held fast to their vision of a unified Arab nation; yet over time distinctive national identities (Syrian, Lebanese, Iraqi, Palestinian, and so on) took root in these new states, often in tension with a widespread and persistent but contingent sense of common pan-Arab identity. This tension was further complicated by the fact that many of the new "Arab" states contained substantial minorities that were either non-Arab (e.g., the Kurds in Iraq) or non-Muslim (e.g., Christians in Lebanon), or came to be dominated by minority groups (e.g., the Alawites in Syria, the Sunnis in Iraq).

As the eastern Arab lands won independence from colonial rule in the 1930s and 1940s and many Egyptians began to see their country as part of a wider Arab world, the question of Arab unity came to take center stage. The League of Arab States, established in 1945, proved ineffectual, and in the 1950s the cause of Arab unity was championed by a new pan-Arabist movement based in Syria and Iraq (the *Ba'th*, from an Arabic term for "renaissance") and by the new regime in Egypt led by Gamal Abdel Nasser (1918–1970). Despite the rhetorical commitment of key Arab leaders to pan-Arab unity, however, the only real experiment in unification—the merger of Egypt and Syria into the United Arab Republic in 1958 under Nasser's leadership—foundered after just three years. Israel's victory in the June 1967 Arab-Israeli War was a major defeat for the radical Arab nationalism espoused by both Nasser and his Ba'thist rivals. Thereafter, Pan-Arabism as a political project went into decline, sidelined by authoritarian regimes (whether monarchical or republican) concerned mainly with their own survival and rejected by the Islamist movements that emerged as those regimes' main opposition.

Nonetheless, thanks to transnational migration, the spread of literacy and mass communications, and more recently pan-Arab satellite television broadcasting, many Arabic speakers today participate in a common cultural-political field in which the same cultural products are consumed and what are perceived to be common problems are addressed, including autocracy, economic underdevelopment, social inequality, the plight of the Palestinians, and U.S. hegemony and intervention. As a result, despite the continuing salience of separate state nationalisms, distinctive local forms of spoken Arabic, the deep divisions within the Arab world, and its failure to achieve even a modicum of equitable economic integration, much less pan-Arab political unity, a variable and contingent but nonetheless significant sense of common Arab identity (and sometimes solidarity) persists.

SEE ALSO *Nationalism and Nationality; Pan-Africanism*

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PAN-CARIBBEANISM

The emergence of Pan-Caribbeanism—a movement dedicated to regional economic and political integration—can only be understood in the context of the Caribbean's history, from plantation system and slavery, to anti-colonialist struggles and eventual independence. The attempt to integrate the region economically and politically dates back to the eighteenth century, when British colonial authorities sought confederation of the Leeward Islands. Other attempts occurred in the late nineteenth century and early twentieth century, but met with no success. Indeed, no serious consideration of West Indian Federation was made until the mid-1940s.

Some scholars suggest that the idea of the West Indian Federation originated with colonial officials and that federation was thought of as a way of reducing the cost of governing the colonies. Other analysts believe that the plan was hatched by West Indians living in the region and abroad, and was intended as a transitional phase leading to independence. Whoever was behind the idea of the British West Indies Federation, it was conceived as an attempt to centralize the economy and political administration of the region. Prominent West Indians, including businessmen, union leaders, and local politicians, saw the plan as a viable solution to the challenging economic situation facing the region. It was not, however, until the Montego Bay conference of 1947 that serious consideration was given to federation. A combination of factors contributed to Britain's stronger interest in the plan. First, between the two World Wars, Great Britain had experienced a series of setbacks that had forced the reorganization of its empire and the loss of some of its colonies. Independence movements in Australia, Canada, New Zealand, the Union of South Africa, India, and other British colonies were exerting pressure on the home government. Second, the West Indian colonies had seen widespread disturbances and rebellions by workers during the 1930s, and labor union leaders were becoming increasingly militant. West Indian workers' demands included better working conditions, better salaries, universal suffrage, self-government, and federation. British colonial officials saw these demands as necessitating changes in colonial policy.

West Indian leaders, however, were suspicious of British intentions. As a result, it took several meetings over a ten-year period for all concerned parties to even agree on an agenda. These meetings and dispatches from West Indian leaders and British colonial officials reveal the frustration and ambivalence of many of the proponents of federation. The Moyne Commission report of 1940 exposed the persistent economic neglect experienced by the British West Indies, but argued that the islands were not ready for economic federation. Indeed, federalism was never presented as a viable path to the economic and political development of the region; it was simply a way to cover up for failed colonial policy. It was also perceived by West Indians as a British attempt to sabotage the decolonization process.

In 1956 a conference was convened in London in which it was debated whether the federation would facilitate the eventual achievement of the islands' self-government. Some argued that if Britain accepted the idea of a federation, it would surrender its imperial authority. Despite the debate, a federal constitution was drafted. It established that the unit members of the federation would be under the mandate of a governor-general appointed by the crown. The government would consist of a prime minister, a cabinet, a council of state, a house of representatives—in which the number of representatives from any given island would be based on that island's population—and a senate. Trinidad was selected as the federal capital.

The West Indian Federation took effect in 1958. It included the islands of Antigua and Barbuda, Barbados, Dominica, Grenada, Jamaica, Montserrat, Saint Kitts-Nevis-Anguilla, Saint Lucia, Saint Vincent, and Trinidad and Tobago.

From its conception to its implementation, the West Indian Federation was destined to fail. Some analysts observe that the federation of fifteen scattered islands, separated by hundred of miles, was an inherently difficult process. These islands' leaders also had to overcome insular attitudes and regionalism. More importantly, the real test of the federation was whether the larger islands were prepared to help the smaller islands escape their desperate economic plight. Unfortunately, the weak economy of the smaller islands became a burden for Jamaica and Trinidad. Some have suggested that federation failed because narrow nationalism prevailed over Pan-Caribbeanism. The call for federation emerged at a time when some of the islands were caught up in intense nationalist fervor. For example, achieving national independence dominated the agenda of Jamaica's People's National Party (PNP), despite party leader Norman Manley's support for federation. As a result, neither the PNP nor the Jamaican people embraced federalism. Nationalism also exacerbated tensions between Trinidad and Jamaica. The Jamaicans expressed their discontent with the federal constitution and with representation in the federal parliament. Jamaica, with a population of 1.5 million, held seventeen seats—whereas Trinidad, with 750,000 inhabitants, held seven seats, and Barbados, with 230,000 inhabitants, had five seats. Nationalist fervor in Jamaica pushed the Jamaica Labour Party, led by Alexander Bustamante, to call for a referendum, and in 1961 Jamaicans decided to leave the federation. Inevitably, with Jamaica's withdrawal from the

federation, Trinidad decided there was no reason for it to remain either at a time when its economy was taking off.

The withdrawal of the largest islands from the federation stalled progress for the rest of the islands. Economic integration was achieved by the creation of a less ambitious organization called the Caribbean Free Trade Area (CARIFTA), which later was transformed into the Caribbean Community (CARICOM). In 1962 the West Indian Federation was dissolved. After its dissolution, there was some discussion of creating an Eastern Caribbean Federation, with Trinidad as the leading country. Arthur Lewis, then the vice-chancellor of the University of West Indies, led discussions with Trinidadian Premier Eric Williams, British colonial officials, and the rest of the leaders of the islands involved about forming this new federation. However, when the scheme was welcomed in London, Williams decided to take Trinidad out of the proposed federation.

The West Indian Federation lasted for less than four years, but despite its brief existence it strengthened West Indians' yearning for political independence. The dissolved federation triggered a movement toward independence in the British West Indies, including the separation of the University of the West Indies from the University of London. Regardless of whether the West Indian Federation was an attempt to paper over the shortcomings of British colonial policy or a failed attempt to create regional cooperation, it helped lead to the decolonization of the Caribbean.

SEE ALSO *Caribbean, The; Federalism; Lewis, W. Arthur; Nationalism and Nationality; Williams, Eric*

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PANEL STUDIES

A panel study is a type of nonexperimental longitudinal study design that samples (using random or stratified random methods) a population to identify a set of respondents, then recontacts the *same* respondents repeatedly over time. A traditional panel study differs from a trend study in that a trend study samples the same population repeatedly but with *different* respondents at each time point. A panel study is similar to a traditional epidemiologic cohort study in that a sample or cohort is followed over time. However, the purpose of following participants in a traditional cohort study is to allow enough time to be able to observe a particular outcome and determine how exposure to a certain variable is associated with the outcome. In contrast, the purpose of following participants in a panel study is typically to observe changes on a particular variable over time to potentially relate those changes to an outcome of interest or explain what factors may lead to the changes in the variable over time. Thus, a panel study often includes multiple measurements of variables, usually at regular intervals, over a circumscribed period of time.

Compared to other nonexperimental study designs such as case-control or cross-sectional studies, a carefully conducted panel study can strengthen the case for inferring causation because temporality (i.e., the cause precedes the effect in time) is more accurately preserved. In panel studies, a researcher is also able to determine the strength of an association between an explanatory variable and an outcome. However, specificity or the degree to which a cause leads to a single effect is not as high as it is

in a randomized controlled trial or experimental study. Thus, in panel studies statistical controls for group nonequivalence are often employed. A further advantage of panel studies is that they allow for complex statistical modeling of dynamic phenomena (e.g., latent growth modeling and other types of trajectory analyses) that may more accurately reflect reality.

One primary disadvantage of panel studies is the problem of selective attrition over time. Participants who remain in the panel over time may be qualitatively different from the participants who are lost to follow-up due to relocation, lack of interest, or death. Another disadvantage is that panel studies can be quite costly as they require measurements at multiple time points, and tracking highly mobile respondents can be a challenge. Panel studies are strengthened when the measurement protocol or instrument remains the same over time. However, this can be difficult to maintain because of emerging technological advances in instruments or measurements or the difficulty in measuring the same phenomena during developmentally different phases of life. A change in the measurement protocol or instrumentation makes it difficult to determine if an observed change in the data is the result of measurement protocol changes or of actual changes. Finally, panel surveys can also be fatiguing to participants, leading to selective attrition, or participants may become primed to the instrument or measurement protocol, leading to atypical responses. Large scale, well-conducted panel studies include the Panel Study of Income Dynamics, National Longitudinal Surveys, the Health and Retirement Survey, the National Longitudinal Study of Adolescent Health, Coronary Artery Risk Development in Young Adults, and the Framingham Heart Study.

SEE ALSO *Data, Longitudinal; Data, Pseudopanel; National Education Longitudinal Study; National Longitudinal Study of Adolescent Health; National Longitudinal Survey of Youth; Panel Study of Income Dynamics; Sample Attrition; Survey; Surveys, Sample*

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PANEL STUDY OF INCOME DYNAMICS

The Panel Study of Income Dynamics (PSID) is a longitudinal study of a representative sample of U.S. individuals and the families in which they reside. The PSID emphasizes the dynamic aspects of family economics, demography, and health. Data have been collected since 1968, making the PSID the longest running panel on family and individual dynamics. It has consistently achieved response rates of 95 to 98 percent, and as of 2005, 8,041 families were currently participating in the survey. Over the years, the PSID has collected information on nearly 70,000 individuals spanning as much as thirty-seven years of their lives.

Through multiple waves collected over long time periods, these data are the only data ever collected on life course and multigenerational health, well-being, and economic conditions in a long-term panel representative of the full U.S. population. The PSID has collected data on employment, income, housing, food expenditures, transfer income, and marital and fertility behavior annually between 1968 and 1997, and biennially between 1999 and 2005. Additionally PSID collects data on health status, health behaviors, health care utilization, health insurance, and philanthropy. Beginning in 1985 comprehensive retrospective fertility and marriage histories of individuals in the households have been assembled.

The PSID sample, originating in 1968, consists of two independent samples of the U.S. population: a cross-sectional national sample and a national sample of low-income families. The Survey Research Center (SRC) drew the cross-sectional sample (known as the "SRC sample"), which was an equal probability sample of households from the forty-eight contiguous states designated to yield about 3,000 completed interviews. The second sample came from the Survey of Economic Opportunity (SEO) conducted by the Bureau of the Census for the Office of Economic Opportunity. In the mid-1960s, the PSID selected about 2,000 low-income families with heads under the age of sixty from SEO respondents. The PSID core sample combines the SRC and SEO samples.

From 1968 to 1997 the PSID interviewed individuals from families in the core sample every year, whether or not they were living in the same dwelling or with the same people. Adults have been followed as they have grown older, and children have been interviewed as they advance through childhood and into adulthood, forming families of their own. In 1997 the PSID changed from every-year interviewing to every-other-year interviewing. Moreover, a sample of 441 immigrant families was added to enhance the representativeness of the sample.

In 1997 and again in 2002, the PSID supplemented its main data collection with information on PSID parents and their children in order to study the dynamic process of early life experiences. The supplement, called the Child Development Supplement (CDS), included a broad array of development measures, including: (a) age graded assessments of cognitive, behavioral, and health status of children obtained from the caregivers and the child/youth; (b) a comprehensive accounting of parental/caregiver time inputs to children as well as other aspects of the ways in which children and adolescents spend their time; (c) teacher-reported time use in elementary school; and (d) other-than-time use measures of additional resources, for example, the learning environment in the home, teacher reports of school resources, and decennial-census-based measurement of neighborhood resources. In 1997 CDS-I collected data on 3,563 children aged zero to twelve in 2,394 families. Five years later, CDS-II re-interviewed 2,021 of the CDS-I families, providing data on 2,907 CDS children and youth.

In calendar year 2005 alone over 5,500 unique users (i.e., unique IP addresses) downloaded more than 32,000 data sets from the PSID Data Center. The PSID Web site received over 1.6 million hits in 2005. Since its inception, over 2,000 journal articles, books, book chapters, and dissertations have been based on the PSID, and today a paper is published in a peer-reviewed outlet roughly every four days. The study was named one of the National Science Foundation's (NSF) "Nifty Fifty," the most notable NSF-funded inventions and discoveries in NSF history, 1950–2000.

It is difficult to briefly summarize the scientific impact of the PSID. Additional detail is provided on the PSID Web site. Areas of significant contribution include intergenerational transmission of economic status, children's time use, the dynamics of poverty and economic status, resource sharing among extended family members, the interconnection between well-being and marriage and fertility, and neighborhood effects on individual social and economic outcomes.

SEE ALSO *National Assessment of Educational Progress; National Family Health Surveys; National Longitudinal Study of Adolescent Health; National Longitudinal Survey of Youth; Survey; Surveys, Sample*

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PANIC

The term *panic* is used with a vast variety of meanings by the population at large, as well as by professionals and research scientists in different disciplines. For example, economists talk of financial or stock market panics, scholars of popular culture discuss moral panics or widespread public anxieties about deviant behaviors, and journalists sometime refer to certain kinds of hoarding or buying activities as an expression of panicky behavior. However, this entry confines itself to the two major usages of the term in the scientific and professional literature, which have little to do with the examples just given.

Even the two major usages differ. Along one line, there is an identification of panic with certain kinds of overt behavior by a number of people, such as rapid physical flight from a situation perceived as highly and personally dangerous to individuals in the collectivity involved. Sociologists have primarily used the term this way, and to a lesser extent so have psychologists. The other use of the term has reference to a mental state characterized by a sudden and extreme anxiety attack, with the person being unable to perceive any obvious reason for the reaction. Psychiatrists and other mental health professionals, who have been the primary students of this phenomenon, call it *panic disorder.*

Apart from using the same term, *panic*, there is otherwise very little in common between the two approaches. Interest in and study of the phenomena have had radically different origins and have involved different kinds of research by different specialties. In addition, the end goal of the research has differed. Those looking at panic disorder have increasingly come to believe that the mental problem can be dealt with through therapeutic and other measures. Those interested in flight behavior initially thought that understanding such behavior would be useful for disaster planning and crisis management purposes. However, as more empirical studies of disasters have been undertaken, many researchers have increasingly argued that the very concept of panic should be abandoned as a useful concept for scientific research. They argue that what occurs can be much better understood through other concepts, such as social roles and social relationships.

PANIC AS A SUBTYPE OF ANXIETY DISORDER

Panic disorder involves unexpected and repeated episodes of intense anxiety attacks accompanied by physical symptoms that may include chest pain, shortness of breath, heart palpitations, abdominal distress, trembling, dizziness, and a sense of unreality. An attack generally peaks within ten minutes, although some symptoms may last much longer. Many of those suffering from the disorder develop intense anxiety between episodes because they worry when and where the next one will strike. Routines of everyday life can be totally disrupted.

According to the U.S. National Institute of Mental Health, in any given year 1.7 percent of the American population will have a panic disorder. Females are twice as likely as males to develop panic disorders. Panic disorder usually occurs in early adulthood. Roughly half of all people who have panic disorder develop the condition before the age of twenty-four. Such statistics ought to be treated with caution, however; panic attacks are sometimes misdiagnosed and missed because many of the symptoms resemble heart attacks. Also, not everyone who experiences a panic attack will develop panic disorder; people can experience one attack but never have another.

What exactly causes the disorder is unknown. Heredity is probably involved, since the disorder seems to run in families. But there is also evidence that very stressful life events are a factor.

Fortunately, two types of treatment are available for panic disorder. There are medications that can keep symptoms under control as long as the prescribed medication is used. There are also specific kinds of psychotherapy that can teach sufferers how to view panic attacks differently, as well as ways to deal with the anxiety between attacks. Reports on success rates vary considerably, but it appears that a majority of those treated are helped. However, since panic disorder often coexists with other disorders and physical ailments, restoration to a less stressful life is also dependent on treatment of these other problems. Information on panic disorder and its treatment is available on the Internet, but care should be taken to insure that such reports are from legitimate medical sources.

PANIC FLIGHT AS A FORM OF COLLECTIVE BEHAVIOR

In the 1920s, sociologists interested in the study of collective behavior (which looks at nontraditional or emergent behavior) began discussing instances of panic in certain risky situations, such as a fire in a crowded theater. The prevailing idea was that panic involved extreme and groundless fear that spread in a contagion-like way, resulting in irrational flight behavior, with individuals trampling one another. This view of panic is still commonly depicted in disaster movies and television shows.

However, the emergence of systematic disaster studies in the mid-twentieth century led to some reformulations about the nature of panic and the conditions necessary for its emergence. Research has shown that panic flight, while not unknown, is extremely rare in disasters and similar kinds of crises. The notion that panic behavior spreads through contagion has been widely discredited. The behavior is not irrational from the viewpoint of those involved. There is no evidence that certain kinds of people are more likely to flee in panic. At worst, panic is asocial rather than antisocial in that people do not regress to an animal-like response.

Panic flight also occurs only under specific conditions. Potential participants must believe that there is an immediate and certain risk to their own life. Contrary to stereotypic views, flight will not be attempted if there is a belief that one is completely trapped. In other words, there must be hope that escape is possible. Persons who break in panic know what they are afraid of, and they are moving away from a specific location (in contrast to a stampede, which involves convergence). It is fear, not anxiety, that prevails. Finally, what others are doing around a person is crucial. This social interaction can work both ways, but usually reinforces a tendency not to flee.

SEE ALSO *Anxiety; Psychotherapy; Psychotropic Drugs*

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PANICS

Panics are social-psychological reactions to fear. Financial panics occur when investors react to the fear of capital losses by dumping assets, thus causing the collapse of a financial institution or financial market. *Moral panics*, as Stanley Cohen (1972) coined the term, are situations in which the public expresses not fear but righteous indignation in opposition to a deviant activity of a subgroup, perceived to threaten society and its values. As either social-psychological reactions or financial events, panics are commonly thought to evoke irrational escape-mob behavior—such as stampeding to escape a threatening situation—when rationally one would have less chance of injury with an orderly exit.

Exits in financial panics involve the mass conversion of real or less-liquid financial assets into liquid (or more-liquid) assets, typically money instruments. A sudden high volume of selling—as investors scramble to escape further anticipated capital losses—can abruptly depress or cause a "crash" in the price of illiquid assets. Financial panics known as *bank runs* entail the mass withdrawal of bank deposits precipitated by a fear that the bank may be unable to meet such a demand in the future. The bank run may be either a *lobby run*—with retail depositors lining up to convert bank deposits into cash—or it may be an attempt by wholesale and other institutional depositors to transfer funds out electronically. Such fears of illiquidity can, by forcing a distress sale of assets to meet liquidity demands, cause illiquidity and insolvency. As in all financial panics, a fear that the event will happen motivates action that increases the likelihood of the feared event occurring.

A run on a bank that forces insolvency and the suspension of credit facilities, or a market crash that impedes the operation of a significant financial market, heightens the risk of an economic crisis. The breakdown of a market or the sudden withdrawal of credit can adversely affect, on a large scale, the day-to-day commercial operations of organizations in the nonfinancial sectors of the economy. As Milton Friedman and Anna Schwartz (1963) suggest in their explanation of the Great Depression of the 1930s, financial panics can precede, both temporally and causally, economic crises in employment, production, and trade—crises that may extend well beyond the boundary of the original panic. The possibility exists, however, that causality runs instead from economic activity out to money and credit, as Peter Temin (1976) suggests. The historical evidence is sufficiently ambiguous to leave scope for much debate.

Theories of panics as the manifestation of a "crowd mind" turn on whether the observed collective behavior is contagious, convergent, or emergent. Theories of financial panics parallel loosely these psychosocial theories of panics, though such links most often appear only in motivational narratives.

The idea of a distinct crowd mind was introduced in 1895 by Gustave Le Bon with his psychological law of mental unity. Le Bon posited a view of the crowd as distinctly different from the individuals composing it. Through contagion—the spread of behavior from one participant to another—a distinct and distinctly irrational collective mind is formed. Special characteristics of crowds include "impulsiveness, irritability, incapacity to reason, the absence of judgment and of the critical spirit, the exaggeration of the sentiments, and others besides" (Le Bon 1896, bk. 1, chap. 2, p.17). In contagion theories of panics, the "individual" is lost, transformed into a member of a "herd," acting irrationally in the commonsense meaning of the term articulated above.

Douglas Diamond and Philip Dybvig (1983), in the tradition of Friedman and Schwartz, model bank runs as an equilibrium outcome of random withdrawal and contagious panic. In their model, a sufficiently large withdrawal of bank deposits can threaten bank liquidity, spark a fear of insolvency, and thus trigger a bank run that in the absence of deposit insurance or some other means to ensure reimbursement will yield the feared outcome.

Rejecting Le Bon, Floyd Allport (1924) posited that the crowd mind was simply the aggregated, possibly intensified, feelings of individual participants subjected to the same external stimulant. Like-minded people converge to a crowd rationally in the sense that the crowd mind is wholly consistent with independent individual preferences. Unlike contagion theories, no transformation takes place, and observed similarities across crowd participants cause the collective, not vice versa.

Some authors have attempted to explain financial panics as the result of rational convergent behavior on the part of individuals who fear bank-system insolvency because of some external financial shock. Charles Calomiris and Joseph Mason (1997), for example, suggest that when depositors can observe a financial shock that threatens bank portfolios but cannot identify which banks are at risk, they run collectively on all banks. This asym-

metric information theory of bank runs as financial panics is, like Allport's symbolic convergent theory of crowd minds, "rational" in the sense that the collective run on banks is nothing more than prior shared motivations resulting in the clustering of like-minded depositors acting similarly.

As a third explanation of the crowd mind, the emergent norm theory of Ralph Turner and Lewis Killian (1987) permits convergence insofar as similarities draw people together. But Turner and Killian suggest that there is then the emergence of distinct collective features when unusual situations challenge traditional norms and social interactions shape crowd behavior.

Brenda Spotton Visano (2006) explicitly links the emergent norm theory of crowd mind to a socioeconomic explanation of financial panics. In a framework that adopts a credit theory of the business cycle similar to that which grounds Charles Kindleberger's (1989) historical study of manias and panics, the panic emerges in a demoralized environment created by the combination of prevailing financial distress and a sudden actual loss of liquidity.

All agree that financial panics involve a substantial and typically abrupt change in asset liquidity. All agree as well that the beliefs of depositors motivate behavior that is self-fulfilling. The debate is over which theory best explains a given financial panic, with history again sufficiently ambiguous, leaving the question wide open for debate.

SEE ALSO *Banking; Bubbles; Economic Crises; Great Tulip Mania, The; Manias*

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Brenda Spotton Visano

PAPACY

SEE *Vatican, The.*

PARADIGM

A *paradigm* is a template, model, or framework. Paradigms can be used to create new objects, just as templates can be used as patterns when outlining or designing something new. In fact, the word *paradigm* has its roots in the Greek term for a side-by-side comparison. Within the philosophy of science, a paradigm is a general but distinct worldview or theory. The history of science is characterized by paradigm shifts.

The seminal work on paradigm shifts is that of Thomas Kuhn (1922–1996). His 1962 monograph, *The Structure of Scientific Revolutions*, described what is essentially a form of nonlinear progress within the sciences. Put simply, during phases of what Kuhn called "normal science," individuals working in a scientific field share assumptions, perspectives, and methods, and knowledge accumulates in a linear fashion. There is progress, but all of the knowledge and information is constrained by the same set of premises and assumptions. It is in this sense that it is conceptually linear. Eventually the assumptions are brought into question and the inadequacies and limitations of the theories being used are recognized. At that point one or more assumptions may be questioned, and new empirical results may be difficult or impossible to explain. It is not just one theory or method that is inadequate; instead, the fundamental assumptions of a field are brought into question. A bit later an alternative perspective or paradigm is introduced that is so dramatically different from what came before it that the shift is clearly not just an extension of what came before, but a fundamental and overarching change within the field. Examples of major paradigm shifts underscore the magnitude of these paradigm shifts: Einstein's theory of relativity is enormously different from the Newtonian physics that preceded it; Copernicus initiated a revolution of a similar magnitude; Darwin changed the way biologists thought about the Homo sapiens, and stimulated modern reconsideration of humanity's role within nature.

In his review of paradigm shifts in the 1999 *Encyclopedia of Creativity*, Thomas Nickles suggested that research produced within a paradigm is highly convergent, whereas that produced when a shift between paradigms is occurring is highly divergent. Convergent thinking is not very original nor creative. It involves finding conventional or correct answers and solutions to fairly well-defined questions and problems. Divergent thinking, in contrast, is often original and creative. It involves exploring new options; the thinking moves in different and often original and unconventional directions. Various theories of divergent thinking are also described in the *Encyclopedia of Creativity* (Runco 1999).

Kuhn (1963) also referred to the convergent and divergent thinking involved in normal science and in paradigm shifts. He felt there was "an essential tension" between them, and one that stimulated creative thinking as well as paradigm shifts. Kuhn wrote: "Something like convergent thinking is just as essential to scientific advance as is divergent. Since those two modes of thought are inevitably in conflict, it will follow that the ability to support tension that can occasionally become almost unbearable is one of the prime requisites for the very best sort of scientific research" (1963, p. 342).

Paradigm shifts introduce new rules and new problem-solving techniques. In fact, they often introduce new problems as well as solutions. This may sound odd, but such problem discovery is distinct from problem solving, and is an important part of the creative process. Psychologists studying creativity even include problem-finding skills as part of the creativity complex. There is more to paradigm shifts: They also introduce new taxonomies, new classifications of the phenomena under study, and new ideas. Significantly, much of the new thinking that characterizes new paradigms is preconscious. Indeed, many of the differences between paradigms (e.g., Newton's and Einstein's) reflect assumptions, which of course are by definition not consciously processed.

Nickles used two tree metaphors to describe the reclassifications that occur during normal science and those that occur during paradigm shifts. The former can be viewed as branching, where new findings and ideas suggest additional specific branches to the tree of knowledge (or perhaps remove an old branch). The research on creative thinking can itself be used as an example. At one point, creative thinking was equated with problem solving. That was the tree, so to speak, and new theories merely identified new kinds of problem solving. Then behavioral scientists realized that thinking is often the most creative when the individual actually identifies a new problem, rather than merely solves an existing problem. Nickles referred to this kind of breakthrough as "tree switching" because an entirely new tree—not just a new branch—is introduced. In dramatic paradigm shifts such as Einstein's, the old tree is completely dismissed. Nickles gave Mendeleev's theory of the periodic table of elements and Darwin's theory of evolution as examples of tree switching and true paradigm shifts.

Kuhn himself described normal science as progressing by working with exemplars. The basic idea here is that problem solving during a period of normal science depends on identifying similarities among problems and questions; and once the similarity is identified, a solution (which is itself analogous to previous solutions) is suggested. Kuhn even applied this to science education, where instruction and the curriculum rely on exemplars, analogies, and similarities. Paradigm shifts, in contrast, involve what Kuhn called "new disciplinary matrices." This was Kuhn's way of describing tree switching and entirely new perspectives within the sciences.

Note that disciplinary matrices are, for Kuhn, within the sciences. Indeed, Kuhn's theory of paradigm shifts initially focused on the hard sciences. The example above, concerning problem-solving and -finding extends this to the social and behavioral sciences. But the concept of paradigm shifts is now used much more broadly, even outside the sciences. The idea of paradigm shifts and the suggestion of questioning assumptions and nonlinear progress has proven to be very useful in organizational theory and management, for instance, and a large number of articles and programs outlined in business periodicals tie paradigm shifts to innovation. According to Nickles (1999), political debates and advertisements also regularly refer to paradigm shifts. Whether or not these meet the criteria presented by Kuhn is dubious, but the assumption that dramatic shifts of some sort are useful for creativity and innovation is obviously quite useful.

Criticisms of the theory of paradigm shifts underscore the retrospective and even post hoc method used by Kuhn, as well as the implication that normal science relies so heavily on analogies and "acquired similarity relations" (exemplars). Critics often note that normal science is much more inventive and creative than the original theory of paradigm shifts allowed. Alternative conceptions of scientific progress include the evolutionary perspective whereby changes do occur but they are more linear, perhaps the result of a natural selection process. If this is accurate, progress—even highly creative advance—is more gradual and less sudden than described by paradigm shifts. Of course, the interesting thing here is that the evolutionary perspective is itself an analogy, taken from the biological sciences. Still, it is no doubt useful to recognize that paradigm shifts themselves represent one theoretical framework and one set of assumptions. The theory is enormously useful, but not the final word on progress. If

it was the final word, the theory of paradigm shifts would, in a manner of speaking, refute itself.

SEE ALSO *Discourse; Epistemology; Foucault, Michel; Kuhn, Thomas; Mannheim, Karl; Philosophy of Science; Revolutions, Scientific; Science*

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Mark A. Runco

PARADOX OF VOTING

The most common form of the paradox of voting refers to a situation where the outcome of majority-rule voting over a discrete set of candidates produces no clear winner, even though each individual voter has a clear and transitive rank ordering of preferences over the alternative options. The paradox is that although individual preferences are transitive, the preferences of the majority are cyclical. Thus, although each individual voter has a most preferred candidate, a "reasonable" majority-rule method of voting produces no clear winner.

To see the paradox at work, consider this example. Adam, Bala, and Chen are three candidates for a position on the school committee. There are three voters, whose preferences are as follows:

First Voter: 1. Adam, 2. Bala, 3. Chen;

Second Voter: 1. Chen, 2. Adam, 3. Bala;

Third Voter: 1. Bala, 2. Chen, 3. Adam.

Who should be declared the winner if each voter declares their rankings? Two out of three voters (First Voter and Second Voter) prefer Adam over Bala. Similarly, two out of three voters (Second Voter and Third Voter) prefer Chen over Adam. Should Chen be declared the winner? Not quite. Two out of three voters (First Voter and Third Voter) prefer Bala over Chen, thereby leading to no clear resolution.

The potential for such a paradox was first noted by the marquis de Condorcet (1743–1794), the French mathematician, philosopher, and social scientist, in his *Essai sur l'application de l'analyse à la probabilité des décisions rendues à la pluralité des voix* (*Essay on the Application of Analysis to the Probability of Majority Decisions*, 1785). The voting method used in the example is the so-called Condorcet method, which can be summarized as follows: First, rank each candidate in order of preference (tied ranking is allowed), and then compare each candidate with every other candidate and find a winner for each pair-wise comparison. The candidate that tallies the biggest wins across all pair-wise comparisons wins the election; however, as suggested by the term *paradox*, there is no guarantee of a winner.

Since Condorcet, other scholars have discussed the paradox and its broader implications, most notably Kenneth Arrow in his seminal work *Social Choice and Individual Values* (1951). Arrow postulated five "rational" and "ethical" criteria that any social-welfare function must meet, and showed that there is no method of aggregating individual preferences over three or more alternatives that satisfies these criteria and always produces a fair and logical result. Much of the work on social choice theory that has followed Arrow's results either validates his conclusions or attempts to find a way around them.

Subsequent authors have attempted to resolve the original paradox of voting in various ways, including one that involves using the Condorcet method first, and if it produces no resolution, then using an alternative such as the "Borda count." In a Borda count, each voter assigns points to candidates in order of his or her preference: If there are n candidates, each voter gives n points to his or her top ranked candidate(s), $n - 1$ points to the second ranked candidate(s), and so on. There are different formulae for assigning points to each voter's preferences, with higher points being assigned to higher ranked candidates. The candidate with the highest number of points aggregated across all voters wins.

Other approaches involve taking a multistage approach to finding a winner. In the first stage, if there is no clear winner, a second voting method is used whereby the candidates are restricted in some way, for example with the smallest set such that every candidate in the set beats all candidates not included in this restricted set (the "Smith set"). Other approaches involve the farsightedness of voters. Ariel Rubinstein (1980) introduced the "stability set," which produces a winner when voters not only make pair-wise comparisons, but also think one step ahead. Yet, Bhaskar Chakravorti (1999) has shown that this notion is itself limited, and if voters do not ignore farsightedness on the part of other voters and are "consistently" farsighted (that is, they can consider comparisons

arbitrarily far ahead in the chain), then the paradox returns.

Many alternative voting systems have been proposed to ensure a fair resolution in most practical situations. Common alternatives include run-off elections; approval voting, where voters cast a vote for all the candidates of whom they approve; and the Borda count.

A second version of the paradox of voting is attributed to Anthony Downs (1957). According to Downs's construct, a rational voter will refrain from voting because the costs of voting usually exceed the expected benefits. The probability of casting an election's decisive vote is too small to make the benefits worthwhile, whereas the cost of going out to vote and forgoing other activities is positive and quite tangible. The fact that voters do, indeed, participate in elections to vote is paradoxical, given such a rational calculation. Various theories have been put forward to resolve or explain the Downs paradox. Some have suggested that voters consider factors other than the private cost-benefit analysis to decide whether or not to vote. Some vote because they consider it a responsibility and a social duty, whereas others vote to gain satisfaction from the fact they have registered their preferences in some way, even if it is not decisive, and derive utility from participating in a democratic process.

SEE ALSO *Arrow Possibility Theorem; Arrow, Kenneth J.; Condorcet, Marquis de; Public Choice Theory; Voting*

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Bhaskar Chakravorti

PARANOIA

Paranoia is a term commonly used to describe people who are preoccupied with the idea that others are "out to get them" or "talking about them." This common usage of the term by the lay public reflects a key feature of the concept in the social and behavioral sciences, particularly in the mental health literature. Constant worry about harm to the self is self-referential thinking. Self-referential thinking is a major feature of the paranoid condition. A paranoid person is also mistrustful, suspicious, and has an exaggerated sense of self-importance. These are the basic elements of paranoid thinking. The various ways that paranoia is discussed in the social and behavioral science literature include psychiatric classification, causal theories, and symptom-level approaches.

PSYCHIATRIC CLASSIFICATION

The fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*, or DSM-IV (American Psychiatric Association 1994), defines *paranoia* as a symptom of mental illness. The DSM-IV includes three types of mental illnesses or syndromes of which paranoia is a significant symptom: paranoid personality disorder, delusional disorder, and paranoid schizophrenia. Paranoid personality disorder involves strong feelings of suspiciousness, jealousy (in romantic relationships), and defensiveness without justification or evidence, but the individual does not have a psychotic illness such as schizophrenia. Delusional disorder is more severe and involves psychotic thinking, but the themes of the delusions are not bizarre. Instead, the themes of the paranoid delusions involve situations that can occur in real life such as a spouse cheating, being poisoned, or contracting an infectious disease. Finally, paranoid schizophrenia is the most severe form of mental illness in this category. The delusions are more bizarre, such as the belief that other people can read the patient's thoughts or take them out of his or her head.

Attempts have been made to conceptualize paranoid personality disorder, delusional disorder, and paranoid schizophrenia as reflecting a continuum from mild to severe psychopathology, respectively. This perspective assumes that the type of delusional symptom defines the relationship between the different types of psychiatric disorders. Genetic studies of patients with delusional disorder using the family history method are one line of research that does not support the continuum perspective (Kendler, Masterson, and Davis 1985; Schanda et al. 1983). Schanda et al. (1983) found that risk for "atypical psychosis" was higher in the first-degree relatives of delusional disorder patients than in those of patients with paranoid schizophrenia. Kendler et al. (1985) found that paranoid personality disorder may have a stronger familial link to delusional disorder than to schizophrenia. These two findings are at odds with the notion that there is greater genetic vulnerability among patients with schizophrenia. Thus it may be more useful to consider paranoid symptoms apart from diagnoses.

CAUSAL THEORIES

Causal theories of paranoia fall into three basic categories: biological, psychological, and social. Biologically, Strider et al. (1985) claim that various neuropsychological impairments such as memory problems and hearing loss

associated with brain injuries or the cognitive decline that accompanies old age may engender paranoia because individuals may attribute their inability to find misplaced objects and inaudible conversations to the deliberate attempts of others to keep things from them. Moreover, both clinical and experimental data indicate that injury to the right hemisphere of the brain is more likely to produce paranoid thinking because of the inability verbally to label sensory and emotional experiences (Strider et al. 1985). Thus paranoid thinking may be manifested as a result of damage to the brain.

There may also be a genetic component to paranoia. Genetic studies of patients with delusional disorder using the family history method indicate that the percentage of first-degree relatives (i.e., parents, siblings, or offspring) with schizophrenia ranges from 0 percent to 3 percent and affective disorder ranges from 3 percent to 6 percent (Kendler, Masterson, and Davis 1985; Schanda et al. 1983). Bentall et al. (2001) argued that because diagnoses include multiple symptoms that involve multiple genes, heritability estimates may be higher for diagnoses than for paranoid symptoms alone. Taken together, these findings suggest that paranoid conditions have very limited inheritability, which may manifest differently in various forms of psychopathology.

Classical and modern psychological theories view paranoia as a defense against threats to the self. The classical theory of Freud defines paranoia as an unconscious defense against repressed homosexuality, chronic problems of self-esteem regulation, and sensitivity to narcissistic injury (Bone and Oldham 1994). The idea that paranoia protects against threats to self-esteem is the only aspect of Freudian theory that survives in modern theories of paranoia. Bentall et al. (2001) propose an attribution–self-representation model of persecutory delusions (i.e., paranoia). In their model, individuals make attributions for positive or negative events based on available self-representations stored in memory, which, in turn, influence future attributions in an ongoing cycle. Paranoia occurs when the individual attempts to engage in self-esteem regulation after experiencing a negative event, where the cognitive search does not yield a negative self-representation to explain the event, resulting in a shift to external-personal causes (Bentall et al. 2001). In other words, the person maintains a positive view of the self because those self-representations could not account for the negative event.

Social theories of paranoia emphasize that it is a reaction to threatening environments or inadequate resources (Mirowsky 1985; Marcus 1994). Marcus (1994) extends the psychoanalytic perspective to paranoid tendencies expressed by social groups in organizational contexts. He considers the paranoid reaction in social groups and organizations a manifestation of a survival instinct when there are behavioral constraints on members because of unequally distributed resources that are hidden or protected (Marcus 1994). Mirowsky (1985) proposes a similar theoretical explanation for paranoia in social groups. It is a form of self-protection from exploitation and oppression among social groups that are powerless. He demonstrated that paranoid beliefs in the general population are the product of interactions between feelings of mistrust and exposure to social environments that are threatening (Mirowsky 1985). This may be why paranoia appears to be more common among individuals in the lower social classes and among ethnic/minority groups (Mirowsky 1985; Whaley 1998). Self-protection is a theme that links biological, psychological, and social theories of paranoia. In this way, paranoia may be a coping response that is adaptive. However, extreme paranoia as evidenced in paranoid schizophrenia with no basis in social reality is dysfunctional.

SYMPTOM-LEVEL APPROACHES

Paranoia is not an all-or-none condition. It is best to think of paranoid symptoms as falling on a continuum of severity, with the mild end being represented by suspiciousness, mistrust, and self-consciousness and the severe end represented by delusions of persecution often involving hallucinatory experiences (Fenigstein 1996; Whaley 1998). Both mentally ill patients and normal persons have these types of paranoid tendencies, and the difference between them is a matter of degree or severity (Fenigstein 1996). Whether a person recovers from a mental illness depends more on the diagnosis (e.g., paranoid personality disorder versus schizophrenia) than on the presence of paranoid symptoms. The notion "once paranoid—always paranoid" is not correct; people with paranoid conditions can recover (Retterstol 1991). Finally, the types of cultural experiences that people have may influence whether they exhibit paranoid behaviors.

Immigrants are at increased risk for developing paranoid responses (Kendler 1982). Social groups that have been oppressed or discriminated against such as African Americans also develop paranoid-type coping responses (Whaley 1998). The social and psychological theories of paranoia provide some insight into why this may be the case (Bentall et al. 2001; Marcus 1994; Mirowsky 1985). Under these circumstances, the responses to real threats in the environment or adjustment to new experiences may appear similar to conditions of clinical paranoia, but these expressions often are normative and not pathological. Understanding that paranoia falls on a continuum from mild to severe, as opposed to a symptom that is either present or absent, allows us to appreciate that just because

someone is paranoid does not always mean that the person's reaction is sign of mental illness.

SEE ALSO *Coping; Mental Illness; Psychotropic Drugs; Schizophrenia*

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Arthur L. Whaley

PARAPRAXIS

SEE *Psychoanalytic Theory.*

PARDO

Pardo is a Brazilian Portuguese term that translates as the color "brown." It is an official census category used by the Brazilian Institute of Geography and Statistics (IBGE) to refer to all individuals who either self-identify or have been classified by interviewers as not "white" (*branco*) and not "black" (*preto*). It is a term that is not typically heard in speech or social interactions. *Pardo* is an umbrella term that can include all individuals of mixed or multiracial ancestry. It is also a synonym for the term *moreno*, a racially ambiguous term that can refer to all individuals who have black or dark brown hair. Self-identification as *pardo* can reflect ancestry, culture, wealth, education, and socialization.

Pardo is a term used by individuals to "whiten" or "darken" themselves when self-reporting on government census forms. France Winddance Twine (1998) has referred to this practice as "white inflation." *Pardo* is a racially ambiguous term that can be employed by dark-skinned individuals of visible or predominant African ancestry who possess forms of educational, social, or economic capital to avoid being classified as black (*preto*). The term *pardo* can also be used by all individuals of predominant or exclusive European ancestry to "darken" themselves. Consequently, individuals who would otherwise be classified as white based on ancestry or appearance but who possess little or no education, wealth, or social capital may self-identify as *pardo* rather than as *blanco* (white).

Terms that indicate color or race have been employed on the Brazilian census since 1940. In 1970 the Brazilian military decided that race was not statistically meaningful, so data related to color or race was not reported for this year. In contrast to the United States and South Africa, the criteria for inclusion in specific racial or color categories has not been legally defined in Brazil. This absence of legal classifications to precisely define race in Brazil facilitates discrepancies between how individuals are classified by appearance and how they may self-identify by race or color on the census and how others would racially classify them in local communities. In statistical analyses of the Brazilian national surveys that involve the self-reporting of race, U.S. sociologist Edward Telles (2002) found that consistency in racial classification varies from 20 to 100 percent depending on age, level of education, sex, and local racial composition. Inclusion in the category *pardo* is based on a combination of physical characteristics such as hair texture, nose shape, lip size and shape, and skin color, as well as achieved social characteristics such as education, occupation, and wealth.

SEE ALSO *Blackness; Colorism; Moreno/a; Negro; Race; Racism; Trigueño; Whiteness; Whitening*

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France Winddance Twine

PARDO, ITALO

SEE *Anthropology, Urban.*

PARENT-CHILD RELATIONSHIPS

Of all the interpersonal relationships humans develop across their life spans, none is more enduring or important than the parent-child relationship. The nature of the parent-child relationship is a primary factor underlying one's personality, social, and cognitive development. Although there is little debate among family researchers regarding the importance of the parent-child relationship to later adult life, the attributes of a good parent-child relationship are still debated.

HISTORICAL VIEW OF PARENT-CHILD RELATIONSHIP RESEARCH

Throughout most of human history, parents have been concerned primarily with their children internalizing parental values and cultural norms. Thus, parenting was heavily focused on teaching children to be obedient to parental authority and the social and religious order through strict discipline and harsh punishments for disobedience. Most parent-child relationship research has focused on explaining the ways in which parents achieve these goals.

Behaviorists in the early part of the twentieth century argued that children learn how to behave in a culturally normative way through a series of punishments for unwanted behaviors and rewards for desired behaviors. These reinforcers were posited to lead to the development of behavioral habits in children. The major behaviorists of the time instructed parents not to show too much affection to children because they would develop habits of dependence and weakness. Behaviorists admonished parents who did not maintain firm control and a strict regiment of rules and structure.

Many schools of thought emerged that directly challenged these ideas of emotional distance and harsh punishment. For example, psychodynamic theory was based on the idea that children are born with innate drives and impulses for pleasure and self-fulfillment that may conflict with parental goals. Psychoanalysts suggested that parents learn to channel the energy from children's unmet desires instead of repressing them. This led to the idea that parents should be less rigid, more accepting of children's behavior, and emotionally available to children.

Based primarily on psychodynamic thought, Benjamin Spock (1903–1998) wrote the most influential parenting book in history, *The Common Sense Book of Baby and Child Care* (1945). In it, Spock advocated unconditional love, allowing children freedom to explore their surroundings, and limited use of parental authority. Spock, as well as other psychodynamic theorists, stressed increasing disciplinary reasoning and reducing parental power assertions such as spanking.

The research by Kurt Lewin (1890–1947) in the 1930s on group atmospheres was also influential to later ideas of effective parenting. In one of the most important studies, Lewin and colleagues examined the effects of autocratic, laissez-faire, and democratic leadership styles on preadolescent boys' motivation and behavior. Autocratic leaders were trained to have a rigid structure in which they made all the decisions with little input from group members. Laissez-faire leaders were trained to not provide any structure or direction: The boys had complete freedom to work on their group projects as they saw fit. The democratic leaders were taught to provide structure, make suggestions, and list the goals, but seek input from the boys for most decisions. The results showed that the boys in the democratic group were more motivated and more cooperative, they produced a better final project, and they were more likely to work in a constructive manner when the leader left the room. The boys in the autocratic group produced an adequate final project, but when the leader left the room, chaos ensued. Those in the laissez-faire group produced the worst group project and displayed little interaction or cooperation.

Alfred Baldwin later applied these ideas to parents in the 1940s. In a longitudinal study, Baldwin found that parents he described as emotionally warm and who allowed their children a great deal of freedom had children with the best intellectual development. He argued that emotionally detached, authoritarian parenting was detrimental to children. Separate research into the authoritarian personality around this same time echoed these same concerns.

Probably the most ardent opponents of the behaviorist approach to child rearing were the attachment theorists. Based on ethology, cybernetics, and psychodynamic principles, the groundbreaking theory developed by John Bowlby (1907–1990) and Mary Ainsworth (1913–1999) in the 1950s and 1960s made it explicitly clear that the best parent-child relationship is one in which there is mutual trust, respect, and an emotional bond. Furthermore, the attachment theorists argued that a mother's degree of responsiveness to her infant's needs and demands dictated the nature of the relationship. Highly responsive mothers tended to have infants who formed secure attachments with them. Less responsive mothers tended to have infants with ambivalent, avoidant, or disorganized attachments. A large body of research has shown that those with secure attachments to their primary caregivers tend to have better relationships with others, perform better in school, and are on the whole better adjusted than those with nonsecure attachments.

These different strands of research and theory on authoritarian parenting, psychodynamic theory, attachment theory, and other influential work in humanistic psychology all came to the same basic conclusion—the best parents are emotionally responsive to their children's needs and desires. This new trend in parenting led to the common belief that parents should be less concerned with discipline and child obedience and instead focus on the emotional climate of the relationship, accepting children for who they are, and not stifling their individuality. Although Spock and other psychodynamic theorists warned against spoiling children by avoiding disciplinary encounters and even picking up crying infants too much, and Lewin clearly warned against laissez-faire leaders, many in the general public took this to mean that punishment should give way to unconditional acceptance of child behavior.

This new focus on parental responsiveness and child freedom was in stark contrast to the behaviorist and religious fundamentalist focus on structure, order, and firm discipline. At the heart of this controversy were differing socialization goals. The authoritarian's goals were to have children comply with rules of existing social structures, as well as develop an emotional resiliency that would allow them to handle the challenges of life. Those who focused on parental responsiveness were more concerned with developing children's self-esteem and agency, as well as their cognitive development. Thus, they were fearful of stifling children's potential, whereas authoritarians were fearful of creating emotionally fragile and disobedient children. The political controversies surrounding these opposing views remain as virulent today as ever. However, the influential research on parenting styles by Diana Baumrind and similar models have helped to rectify much of the controversy in mainstream research.

PARENTING STYLES

Probably the most influential research-based parenting theory to date, Baumrind's authoritative model revolutionized the study of parenting when it was first proposed in the 1960s. Based on several studies, principles from behaviorism, psychodynamic theory, attachment theory, Lewin's leadership styles, and critical theoretical contributions from Eleanor Maccoby and John Martin (1983), Baumrind argued that there were four dispositional parenting styles, distinguished by their levels of parental demandingness and parental responsiveness.

According to Baumrind, parental demandingness refers to the degree to which parents facilitate structure in their children's lives, have control of the parent-child relationship, monitor children's behavior and whereabouts, use firm and consistent discipline, set high maturity demands for their children, and are willing to confront noncompliance by children. Based on concepts from attachment theory and psychodynamic theory, Baumrind defined parental responsiveness as the degree to which parents are warm, emotionally connected, and supportive of their children, as well as the amount of freedom and decision-making they allow children, their use of disciplinary reasoning, and their tendency to acquiesce to their children's needs and demands. Baumrind examined both major parenting dimensions simultaneously in defining the authoritarian, permissive, authoritative, and neglectful parenting styles.

Authoritarian parents are defined as being high on demandingness but low on responsiveness. Thus, authoritarian parents attempt to maintain firm parental control by confronting disobedience and restricting the amount of decision-making and general freedom a child has. Authoritarian parents do not usually reason with children or explain the rules, believing that a child should accept the rules without necessarily understanding them. Many have equated this style with certain behaviorist and religious fundamentalist views of parenting.

Permissive parents represent the antithesis of the authoritarian parents. They are low on demandingness and high on responsiveness. They attempt to be emotionally connected and have a warm relationship with their children, and they tend to be accepting of children's impulses and behaviors. Permissive parents also assert very little direct power to get their children to comply with their authority. Instead of direct confrontation, permissive parents often use various forms of psychological control as a means of getting their children to comply. Many have equated the permissive style with Spock's model of optimal parenting.

Authoritative parents essentially combine the best attributes of the authoritarian and permissive parenting ideas. They are high on both demandingness and respon-

siveness. They value independence in their children, but maintain firm control. Authoritative parents attempt to achieve the goals of behavioral compliance as well as psychological autonomy and agency by judiciously allowing freedom and decision-making in their children, and by giving them age-appropriate maturity demands and structure.

Neglectful parents are low on both demandingness and responsiveness, and they have chaotic and dysfunctional relationships with their children. Whereas the other parenting styles develop primarily from parents' child-rearing goals and philosophy about what is best for children, the neglectful parents' behavior is more a consequence of social circumstances than of philosophy. Neglectful parents tend to have the most children, the least income and education, and more mental health problems than other parents. Consequently, most of their parenting can be explained by dire social circumstances that prevent them from fulfilling their parenting duties.

As Baumrind predicted, European American youth with authoritative parents are more competent, well-adjusted, and high achieving, and less likely to use illicit drugs or engage in risky behaviors compared to those with nonauthoritative parents. In authoritarian homes, boys tend to be aggressive, and girls tend to be low in independence and dominance. Those with permissive parents tend to have problems with self-confidence, impulse control, and achievement. Not surprisingly, those with neglectful parents are at risk for virtually every negative outcome researchers have measured.

CULTURAL DIFFERENCES IN PARENTING STYLES

The research on parenting styles has shed much light on the most effective parenting strategies for European American youth, but the research on other groups is less clear. For instance, European Americans are more likely to have authoritative parents than Asian Americans, and Asian Americans are more likely than European Americans to have authoritarian parents, even though Asian Americans have higher overall academic achievement. Furthermore, some studies in the 1980s and early 1990s found no relation between parenting style and African American youth's academic achievement. Others found that authoritarian parenting was not as detrimental to Asian American and African American youth as it was for European American youth.

Based on these findings, many suggested that the effects of parenting styles could only be understood in a specific cultural context. Often referred to as the "cultural specific model," its proponents argue that African American youth may do better with authoritarian parenting because firm parental control is adaptive in the more dangerous inner cities. Similarly, Ruth Chao (1994) proposed the idea that Baumrind's authoritative model was not a good description of the optimal parenting strategies for Asian American youth because it did not take into consideration the important cultural traits of filial piety, communalism, or other beliefs about expressions of emotion. The basic premise of the cultural specific approach to parenting styles is that the cultural context gives parenting behaviors meaning, so it is not the specific behaviors that matter, but the meaning that youth ascribe to the behaviors.

Counter to this perspective, the cultural equivalence model suggests that the effects of parenting styles are consistent across cultural groups. According to this model, all children, regardless of their ethnic background, gender, or other demographic factors, have the need for warmth, support, connection to others, structure, and autonomy. Consequently, the authoritative parenting practices such as reasonable behavioral control, provisions of emotional support and warmth, and psychological autonomy are important for all children. More recent studies in Asian countries and with African Americans lend support to this idea, finding that those Asian and African American youth with authoritative parents perform better in school and in other areas compared to those with other types of parents.

In conclusion, the study of parent-child relationships has changed dramatically since the beginning of the twentieth century, but many of the same controversies remain. Ultimately, the parenting goals of the authoritarian and the permissive groups are both desirable. Modern parents must find a balance between getting children to conform to parental authority and control their impulses and encouraging them to develop a sense of independence, agency, and critical thinking abilities. However, the empirical evidence is strikingly clear: Both the traditional authoritarian and more modern permissive methods for achieving those goals are limited. A combination of demandingness and responsiveness is best for achieving most pro-social parental goals. Although differences among cultural groups might lead to some variation in effective strategies for rearing children, given children's universal needs for both affection and direction, authoritative parenting is most likely an optimal strategy for rearing all children.

SEE ALSO *Ainsworth, Mary; Attachment Theory; Authority; Baumrind, Diana; Behaviorism; Bowlby, John; Child Development; Children; Developmental Psychology; Leadership; Lewin, Kurt; Norms; Parenthood, Transition to; Parenting Styles; Peer Influence; Spock, Benjamin*

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PARENTHOOD, TRANSITION TO

In many cultures, the transition to parenthood takes place within a traditional marital relationship: When a woman becomes pregnant, she and her husband (or significant other) begin to prepare for the arrival of their new baby. Different cultures and ethnic groups sanction different means and timetables for such preparations, and evolving technologies and changing social norms have diversified the family structure. First-time parents may be single or attached to a same-sex partner; they may be adopting or conceiving using various reproductive technologies or with the help of a surrogate mother. However the child arrives and whatever the parents' age, family structure, socioeconomic status, or ethnicity, new parents face a complex and vital transition into a novel, challenging, and ultimately rewarding life role.

Defining this new role and identifying the principal factors that contribute to a smooth transition can be elusive. Family-systems models identify multiple influences on the adaptation to parenting, including an individual's biological, psychological, and sociological characteristics and those of family members, as well as the relationship between the new parents, between the parents and their extended families, and between the parents and the child. Levels of anxiety or confidence, for example, might be influenced by the new parents' culture, their own parents' parenting styles, and their infant's temperament.

Social support from partners and friends appears to be one key variable in the successful transition to parenthood, particularly for new mothers. New parents must adjust not only to a set of novel responsibilities pertaining to child care, but also to challenges to many aspects of their personality and intelligence, including self-efficacy and personal control, patience and understanding, and problem solving and decision-making. The type of social support available to new parents frequently reflects the contributions of their own families as much as their community and culture. Social support systems function as critical sources of information about parenting and child development.

Parents generally begin the search for information long before the arrival of a baby; information gathering on labor and child care tends to increase in the second and third trimesters of pregnancy. New parents often struggle with anxiety or postpartum depression; education and strong parent partnerships both help to alleviate parental stress. Gathering information about parenting and child development helps new parents gain an understanding of "normal" development and set realistic expectations for their children. Understanding child development also helps improve parent performance and augments parental satisfaction. Information gathering helps individuals prepare psychologically for the coming responsibilities of child care and define their identity as a parent.

Relationships between partners change with the arrival of a child: While satisfaction with the level of emotional support between parents often improves, general marital satisfaction usually declines following a birth. Couples who adopt children rather than bear biological children suffer less deterioration in marital satisfaction, perhaps due in part to the additional preparation and planning that accompanies adoption. Satisfaction with participation in and effectiveness of child care increases as men become comfortable in the role of father and a healthy co-parent partnership develops.

In some couples, maternal and paternal roles follow traditional patterns. This is less common if both parents are employed, and these couples need to arrive at a stable division of labor in the family. Not all parents make the transition well. Adolescent parents in particular have not fully matured themselves and are less likely to have a realistic grasp of child development, further complicating their already demanding transition to parenthood.

Historically, evaluations of parenting have been biased toward the positives of parenthood, sometimes leaving aside the realities of parental feelings of guilt and failure after (inevitable) negative parenting experiences. Parents must continually adjust their parenting; as a child develops, the parent–child relationship changes continually as well. Acknowledging parenthood's challenges and negative aspects signifies a positive change in social attitudes about parenthood. Only full awareness allows adults to prepare properly for the transition.

SEE ALSO *Child Development; Family Functioning; Maturation; Parent-Child Relationships; Parenting Styles*

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PARENTING STYLES

Parenting or child rearing styles are parents' characteristic, consistent manner of interacting with their children across a wide range of everyday situations. Research on parenting styles has demonstrated their influence on children's developmental outcomes, including academic skills and achievement, aggression, altruism, delinquency, emotion regulation and understanding, moral internalization, motivation, peer relations, self-esteem, social skills and adjustment, substance abuse, and mental health.

CLASSIFICATION SYSTEMS

Researchers have developed three primary ways of classifying parenting styles. In the late 1950s and early 1960s, Earl Schaefer and Wesley Becker proposed circumplex models of parenting. Their models have in common two independent dimensions proposed as important in understanding parenting style (see Figure 1). One dimension involves parents' emotional or affectionate attitude toward the child; the other, parents' exertion of control over the child's behavior. Because each dimension forms a continuous measure, parents' individual styles may be mapped anywhere within the circumplex.

The system developed by Jeanne Humphries Block in the mid-1960s is multifaceted. Block noted that the structure of parenting or childrearing styles may vary across groups of parents; thus, defining a universal set of parenting dimensions may be neither desirable nor possible. Nonetheless, like Schaefer and Becker, Block's work has identified dimensions related to parental control or restriction of children's behavior, and to parents' emotional attitude or responsiveness to the child. Additionally, Block noted that the degree to which parents find childrearing to be satisfying and are involved with their child, among other dimensions, may be important in understanding parenting styles and their influence on children's outcomes. In the late 1980s, William Roberts and Janet Strayer conducted further work with Block's measurement system that suggested five dimensions: (1) parents' warmth and closeness rather than coolness and distance; (2) parental strictness and use of punishment; (3) parental encouragement of children's boldness and maturity; (4) parents' enjoyment of and involvement in parenting; and (5) parents' encouragement or discouragement of children's emotional expressions. Composition of these dimensions differed somewhat between mothers and fathers.

In the late 1960s, Diana Baumrind formulated a typology including three distinct parenting styles: authoritative, authoritarian, and permissive. These parenting styles vary according to parents' demand that their children meet standards for behavior and their responsiveness to their children's needs. Authoritative parents are high in both demand and responsiveness. They communicate to their children about expectations and standards in a warm and responsive manner. Authoritarian parents are highly demanding but are neither warm nor responsive to their children's behavior. Their expectations and demands are communicated with little to no rationale or warmth. Permissive parents are moderate in responsiveness and warmth and low in demand, tending to accept children's

Circumplex models of parenting style, with four types located (Maccoby & Martin, 1983, p. 39).

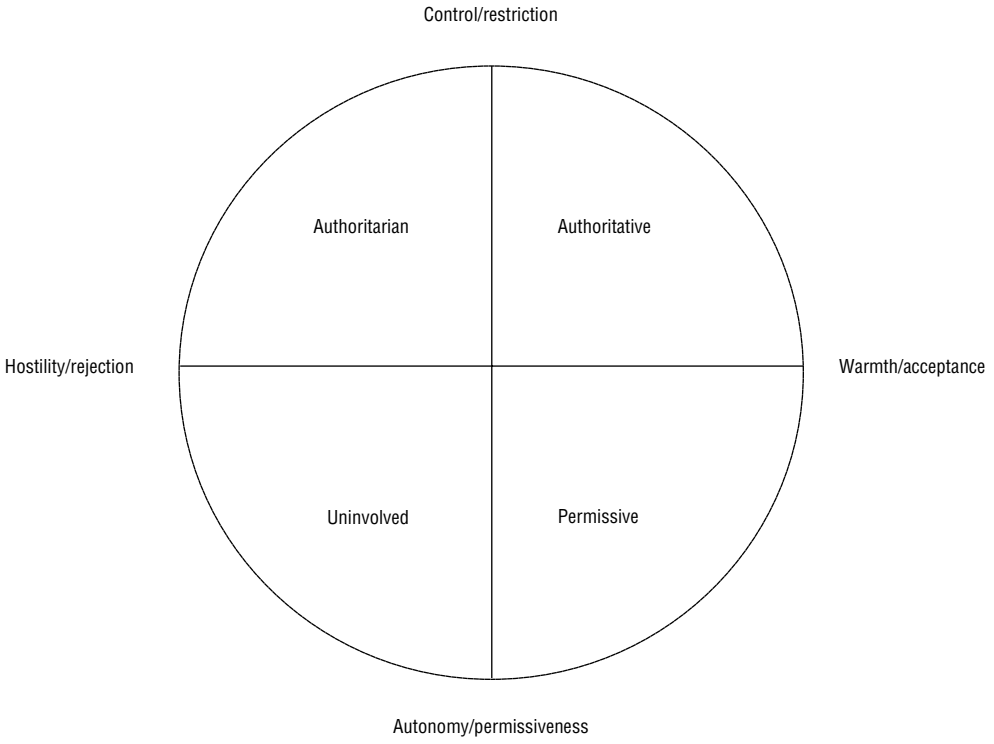

Figure 1

impulses. There is an absence of parental enforcement of expectations or standards for children's behaviors.

In 1983 Eleanor Maccoby and John Martin integrated extant theory and research and proposed four parenting styles, differing along the two dimensions of control or demand and warmth or responsiveness that are held in common in all three preceding systems and incorporating parental involvement into those dimensions. Maccoby and Martin's reconceptualization proposes three styles similar to Baumrind's typology, and in addition a fourth style, uninvolved or neglectful parenting, which is characterized by both a low degree of parental demand that the child meet behavioral expectations and by low warmth and responsiveness to children's needs (see Figure 1). These parents may appear distant and uninterested in their children, or may respond to children in a manner designed only to end children's requests rather than to help their child develop. These four parenting styles are generally used.

ASSESSMENT METHODS

Parent and child self-report and naturalistic observations have been used to assess parenting style. Q sort tasks, in which parents or outside observers (i.e., researchers, teachers) divide a set of statements into piles according to how characteristic they are of the parents' typical style, have been popular in measuring parenting or childrearing style because they may reduce some self-report or observer bias. One area of controversy in measurement is whether parents should be assigned to mutually exclusive categories (typological approach) or whether parents' extent of using each parenting style or dimension (dimensional approach) should be measured. For example, using the typological approach, a parent would be described as authoritative if most of his or her parenting behaviors fit that style, even if he or she showed frequent authoritarian and occasional permissive behaviors. Using the dimensional approach, the same parent would receive scores for each parenting style, high for authoritative, moderate for authoritarian, and low for permissive, reflecting the extent to which they were used. In 1994 Laurence Steinberg and colleagues described the typological approach as most appropriate for assessing short-term child outcomes because parents' predominant style is emphasized. Conversely, because the dimensional approach includes measurement of all parenting styles, in their 1989 work Wendy Grolnick and

Richard Ryan noted the advantage of investigating independent and joint effects of parenting styles on children's outcomes.

RELATIONS TO CHILDREN'S DEVELOPMENTAL OUTCOMES

Parenting styles are often used in investigating diverse developmental outcomes, such as academic competence, achievement, self-esteem, aggression, delinquency and substance abuse, moral reasoning, and social adjustment. Research suggests that authoritative parenting is conducive to optimal development. Specifically, children reared by authoritative parents demonstrate higher competence, achievement, social development, and mental health compared to those reared by authoritarian or permissive parents. Negative effects of authoritarian parenting on children's outcomes include poorer self-esteem, social withdrawal, and low levels of conscience. Permissive parenting has been related to negative outcomes such as behavioral misconduct and substance abuse. The worst outcomes for children are associated with neglectful parenting. This lack of parenting is associated with delinquency, negative psychosocial development, and lower academic achievement. Longitudinal research by Steinberg and colleagues supports these concurrent associations such that children raised by authoritative parents continued to display positive developmental outcomes one year following measurement of parenting style, whereas those raised by neglectful or indifferent parents had further augmented negative outcomes.

From Baumrind's framework, in authoritative homes children's adaptive skills are developed through the open communication characteristic of parent-child interactions. Parents' clear expectations for children's behavior and responsiveness to children's needs provide an environment that supports children's development of academic and social competence. Authoritative parenting does seem to be robustly associated with positive outcomes across ethnically and socioeconomically diverse populations, though the strength of the association varies.

Less clear is whether permissive and authoritarian parenting styles have negative effects on children's development in varying contexts. In 1981 Catherine Lewis questioned whether the positive outcomes associated with authoritative parenting were due to the combination of demand and responsiveness, or rather to the warm and caring parent-child relationship. When a parent-child relationship has few conflicts, and therefore there is little need for parents to exert control over children's behavior, permissive parenting might be as effective as authoritative parenting. Indeed, from an attribution theory framework, parents' absence of controlling children's behavior would be expected to lead to children's internalization of behaviors and values. Research in the United States and in China in the 1990s and 2000s suggested that the combination of greater parental warmth or support and less parental control or punishment is related concurrently or retrospectively to positive outcomes such as self-esteem, prosocial behavior, socioemotional skills, and family harmony.

Lewis proposed that the firm but not punitive control characteristic of authoritative parenting might be more reflective of children's willingness to obey than of parents' style. In 1994 Joan Grusec developed a theoretical model that elaborated children's role in accurately perceiving and choosing to accept or reject their parents' communication of behavioral standards through disciplinary practices and parenting style. Few researchers have investigated such bidirectional child effects on parenting styles. An exception is Janet Strayer and William Roberts's 2004 research, in which they statistically tested whether children's anger elicited parents' control and lack of warmth and found greater evidence for parenting style leading to children's anger and thereby impacting children's empathy.

Some research indicates a lack of negative or even positive outcomes for children whose parents are highly strict and authoritarian, depending on the family's ethnicity (e.g., African American, Clark et al. 2002; Palestinian-Arab, Dwairy 2004). In 2004 Enrique Varela and colleagues found that it was not ethnicity per se (nor assimilation, socioeconomic status, or parental education), but rather ethnic minority status that was related to greater endorsement of authoritarian parenting by Mexican immigrant and Mexican American families living in the United States compared to both white, non-Hispanic families living in the United States and Mexican families living in Mexico. Varela and colleagues have called for research to examine ecological influences on parenting style and on the effects of parenting style on children's outcomes.

Finally, reminiscent of Block's perspective, some research suggests that additional or redefined parenting styles and dimensions may be necessary to understand parenting cross-culturally. Filial piety and individual humility, which involve emphasizing family or group obligations, achievements, and interests over individual goals and expressions, are two parenting values that have been identified in Hong Kong and mainland Chinese families. Peixia Wu and colleagues (2002) cautioned that, despite seeming similarities between Chinese parenting dimensions such as directiveness and maternal involvement and the demand and responsiveness characteristic of authoritative parenting, the meaning of the dimensions and their relations to one another seem to vary considerably between Chinese and American mothers. Thus, although parenting style may provide a useful framework for under-

standing developmental outcomes, it is critical to consider the meaning of parenting practices and styles within the family's cultural context.

SEE ALSO *Attachment Theory; Child Development*

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Pa Her

PARETO, VILFREDO
1848–1923

Vilfredo Pareto was born in Paris on July 15, 1848, the son of Raffaele (a marquis originally from Genoa, republican political exile, and hydraulic engineer) and Marie Metenier, the daughter of a winegrower from Moulins, a small city in the department of Allier in central France. Vilfredo was therefore perfectly Italian-French bilingual. He could also read English but did not know any other modern language, although he had a good knowledge of ancient Greek and Latin (and their respective cultures).

He studied in Turin, where in 1867 he obtained a degree in mathematics, and in 1870 a degree in engineering. From his university studies he derived not only an up-to-date mathematical and technological preparation but also his scientific method: the logical-experimental method. It is likely that he acquired this method from Dutch physiologist Jakob Moleschott (who in that period was teaching at the University of Turin), and then refined it by studying John Stuart Mill's *System of Logic* in its French edition (1866).

Pareto thought that the explanation (that is, the theoretical reproduction) of reality can never be perfect but can always be improved by drawing the hypotheses of the theory from the observation of reality, by developing them with the help of mathematics, and by obtaining in this way some propositions that must then be compared with reality (through statistics and history). From the discrepancies that one inevitably finds, one can deduce some refinements for the starting hypotheses, and so on.

From 1873 until 1890, Pareto managed one of the first Italian ironworks, situated in San Giovanni Valdarno near Florence. After resigning in 1890 because of differences with the owners, he devoted himself to journalism as a vehicle for his views in favor of pacifism and free trade.

Through Maffeo Pantaleoni and above all Léon Walras, he became interested in mathematical economics, which he initially intended to use to provide economic liberalism with new theoretical foundations. Pareto was offered the chair of political economics at the University of Lausanne, where he replaced Walras, who had resigned for health reasons. There he taught, albeit with increasing irregularity, from May 12, 1893, to June 9, 1909. From Walras he only took the concept of General Economic Equilibrium (GEE) because of its methodological property of encompassing the whole of economic phenomena. He developed it by applying it to reality and above all by giving it a new foundation in the theory of choice, which seemed to him more compatible with his methodology than the theory of utility, a concept that could not be easily measured and was therefore unbearably metaphysical.

In the same framework Pareto places his well-known definition of economic optimum as an allocation of resources such that if, as one moves away from it, the ophelimity, or economic satisfaction, of at least one individual increases and the ophelimity of at least one other individual decreases. The sources of this definition are

Walras's demonstration of the optimality of free competition and some criticisms by Pantaleoni and Enrico Barone about a first tentative Pareto's treatment of the subject.

The failure of European economic liberalism at the end of the nineteenth century did nevertheless reinforce his idea that economic theory was unable to explain the whole of social reality. Many more concepts were required for that, and Pareto took them from sociology. In this way he integrated GEE in a general social equilibrium whose main elements, alongside interests, are: passions (which he called residues); the diversity of human beings, which generates the division of every society into a majority of dominated people and a minority of dominating people, that is, the elite, with the elites following one another in power in rather rapid succession; and derivations (that is, the pseudological motivations that human beings give for actions—and they are the majority of all actions—that are in fact only inspired by passions). The main criticisms of Pareto regard the static nature of his systems of general (economic and sociological) equilibrium, and his idea that human nature cannot be modified. In the last months of his life Pareto sympathized with fascism, as many Italian liberals did at the time, since in it he saw the timely restorer of Italian public order, which had been disrupted by the local supporters of bolshevism. On the other hand, he noticed and condemned the first authoritarian trends of Mussolini's regime.

Pareto died in Céligny, Canton Geneva, Switzerland, on August 19, 1923.

SEE ALSO *Authoritarianism; Elites; Fascism; Free Trade; Lausanne, School of; Liberalism; Marginalism; Mathematical Economics; Mill, John Stuart; Pacifism; Pareto Optimum; Sociology; Utility Function; Walras, Léon*

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PARETO OPTIMUM

In further developing French economist Léon Walras's 1874 demonstration of the optimality of free competition, at first Italian economist Vilfredo Pareto studied the problem of optimal allocation of resources in terms of maximization of utility for a representative agent, which he described in his 1892 article "Considerazioni sui principi fondamentali dell'economia politica pura." In a later article titled "Il massimo di utilità dato dalla libera concorrenza.I" (1894a), he re-analysed the question by determining the production coefficients that maximize the utility of a collectivistic society and demonstrated that they are exactly those of free competition (this is the real origin of the story of the second theorem of economic welfare). It was only at an even later stage, and as a consequence of some criticisms by Italian economists Maffeo Pantaleoni and Enrico Barone, that this theorem was redemonstrated by Pareto in 1894 and 1909. To reconfirm his theorem, Pareto started from the hypothesis of the incomparability of individual ophelimities, in flagrant contrast with his methodological position according to which every science—and therefore economics as well—is a science of averages. From this there directly ensues the proposition that an allocation of resources is optimal (i.e., it is a pareto optimal point), if, as one moves away from it, the ophelimity of at least one individual increases and the ophelimity of at least one other individual decreases. On the other hand, this proposition cannot obviously be made operational from the point of view of economic policy, because the entire availability of resources of a society can be allocated in an infinite number of Pareto optimal points (described by the contract curve), from which the *maximum maximorum* (i.e., the best of the pareto optimal points) cannot therefore be extracted. Pareto more or less understood this difficulty and resolved it by stating in a 1913 article that if one wishes to give indications in terms of economic policy, one has to move into the realm of sociology, where the optimal allocation of resources can be univocally identified starting from a comparison between personal ophelimities arbitrarily carried out by the government.

The question of the economic unclassifiability of Pareto optimal points was authoritatively tackled in later years. As a solution, John Hicks and Nicholas Kaldor both published articles in 1939 that proposed a criterion of compensation that is conceptually similar to Pareto's sociological criterion. Abram Bergson in his 1938 article "A Reformulation of Certain Aspects of Welfare Economics" and Paul Anthony Samuelson in his 1947 publication *Foundations of Economic Analysis* attempted to solve the problem by maximizing a social well-being function that was constructed, however, starting from cardinal individ-

ual functions of utility made comparable by resorting to value judgments.

While giving rise to outstanding formal analyses by such economists as Aldo Montesano (1990), Maurice Allais (1989), and Mark Blaug (1992), the subsequent literature developed around the theme of the either positive or normative nature of the Pareto optimum. While P. Hennipmann in his 1976 article "Pareto Optimality: Value Judgement or Analitical Tool" and G. C. Archibald in his 1959 article "Welfare Economics, Ethics, and Essentialism" defended the thesis that Pareto's postulates do not reflect value judgments, Alan T. Peacock and Charles K. Rowley, in their 1972 and 1974 articles, weakened it by differentiating between economic liberalism and Pareto optimality, even though they attempted to portray the latter as a simple tool of economic reasoning. The normative thesis was taken to its extreme and—considering Pareto's unwavering political-intellectual militancy—paradoxical consequences by Amartya Sen in 1970 and 1971 in articles where he demonstrated that in order to be logically consistent social choice cannot at the same time be liberal (respect of other people's preferences, once one's own have been reaffirmed) and Paretian (incomparability of individual preferences and therefore necessary unanimity of social choices). Sen has been criticized in the literature for his too narrow definition of liberalism. By relaxing it, the compatibility between Pareto's principle and liberalism would be restored. On the other hand, it should be pointed out that no ordinalistic theory of economic welfare based on a definition different from Pareto's has yet been developed.

SEE ALSO *Income Distribution; Pareto, Vilfredo*

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Fiorenzo Mornati

PARIS PEACE CONFERENCE

SEE *Interwar Years.*

PARK, ROBERT E.
1864–1944

The American sociologist Robert Ezra Park was a leading figure in the "Chicago school" of sociology. He was born February 14, 1864 in Harveyville, Pennsylvania. His

mother, Theodosia Warner, was a schoolteacher and his father, Hiram Asa Park, was a soldier in the Union army. Soon after the Civil War the family moved to Red Wing, Minnesota, where Park grew up.

Park attended the University of Michigan and received a Ph.B. in philosophy in 1887, studying under the young John Dewey (1859–1952). From 1887 until 1898 he was a reporter on daily newspapers in Minneapolis, Detroit, Denver, New York, and Chicago. In 1894 Park married Clara Cahill, and they had four children: Edward, Theodosia, Robert, Jr., and Margaret (Raushenbush 1979).

In 1899 Park entered Harvard University, where he studied under William James (1842–1910) and Josiah Royce (1855–1916). He then took his family to Germany, where he studied with Georg Simmel (1858–1918) and took the only formal course on sociology he ever had. He completed his Ph.D. in 1904 at Heidelberg with his dissertation, "Masse und Publikum" (The Crowd and the Public). He returned to Harvard for a year, but soon became bored with academic life and accepted the position of secretary of the Congo Reform Association. He later met Booker T. Washington (1856–1915) and worked for seven years at Tuskegee Institute studying the American Negro.

At the invitation of W. I. Thomas (1863–1947), Park joined the faculty at the University of Chicago in 1914 and remained there until he retired in 1929. Between 1929 and 1932 he traveled extensively, researching race relations in other countries and teaching. He was a guest professor at Yenching University in Peking and at the University of Hawaii. From 1936 until his death in 1944 he lectured at Fisk University in Nashville, Tennessee (Hughes 1968).

Park was not a prolific writer, but he produced several books and numerous articles. His articles have been published in three volumes by his students as *The Collected Papers of Robert Ezra Park*, vol. 1: *Race and Culture* (1950), vol. 2: *Human Communities: The City and Human Ecology* (1952), and vol. 3: *Societies* (1955). Perhaps his most influential publication was the pathbreaking *Introduction to the Science of Sociology*, published with Ernest W. Burgess in 1921, which has been described as the most influential sociological textbook ever produced in the United States (Martindale 1960; Coser 1971).

In Park's view, society is best seen as the interactions of individuals controlled by traditions and norms. Park was keenly interested in social psychology, and his favorite topics were collective behavior, news, race relations, cities, and human ecology (Raushenbush 1979). Park defined sociology as "the science of collective behavior," which suggests the need for analysis of social structures with the study of more fluid social processes (Coser 1971, p. 358). These processes are divided into four major categories: competition, conflict, accommodation, and assimilation. Park held that "competition is the elementary universal and fundamental form of social interaction" (Park and Burgess 1921, p. 507). It is as universal and continuous in human society as it is in nature, and it assigns persons their position in the division of labor. Conflict is intermittent and personal. Competition determines the position of the individual in the community; conflict fixes his place in society (Coser 1971, p. 359). Accommodation is a cessation of conflict that is fragile and easily upset. Assimilation "is a process of interpenetration and fusion in which persons and groups acquire the memories, sentiments, and attitudes of other persons and groups, and, by sharing their experiences and history, are incorporated with them in a common culture" (Park and Burgess 1921, p. 735). Then when assimilation is achieved it does not mean that individual differences are eliminated or that competition and conflict end, but that there is enough unity of experience so that a "community of purpose and action can emerge" (Coser 1971, p. 360). Social distance refers to "the degree of intimacy that prevails between groups and individuals. The degree of intimacy measures the influence which each has over the other" (Park 1950, p. 357). The greater the social distance between individuals and groups, the less they influence each other.

Although Park's theory fit with the prevailing assimilationist view of his time, there are several criticisms of his race-relations cycle: (1) Park did not set a time frame for the completion of the assimilation process—making it essentially untestable; (2) Park could not cite any racial group that had passed through all four stages of his cycle—instead, he and other assimilation theorists explained the lack of assimilation as the result of interference in the process, resulting in a tautological theory that can neither be proved nor disproved; (3) Park did not describe the assimilation process in much detail (Healey 2007; Parrillo 2005).

Park described sociology as the "abstract science of human nature and experience" that included the "applied science" of his four social process to analyze "those modifications in human beings that are due to the human environment."

> The same social forces which are found organized in public opinion, in religious symbols, in social conversation, in fashion, and in science … are constantly recreating the old order, making new heroes, overthrowing old gods, creating new myths, and imposing new ideals. And this is the nature of the cultural process of which sociology is a description and an explanation (Park and Burgess 1921, quoted in Raushenbush 1979, p. 82).

Park's sociology "always focused analytical attention on those processes or situations which foster the emergence of novel forms that upset or render obsolete previous adjustments and accommodations" (Coser 1971, p. 366).

Although Park has sometimes been accused of making racist remarks, his interest in the problem of race relations stems from a desire for a deeper understanding of the human situation. In a letter to Horace R. Cayton, another Chicago school sociologist, Park elaborated on his work with Negroes, demonstrating his broader analytical views of the problems involved:

> Democracy is not something that some people in a country can have and others not have, something to be shared and divided like a pie—some getting a small and some getting a large piece. Democracy is an integral thing. If any part of the country doesn't have it, the rest of the country doesn't have it (quoted in Raushenbush 1979, p. 177).

Park stimulated his students to learn from their own experiences and observations: "Park's teaching always gave the sense of something in the making" (Raushenbush 1979, p. 184).

> There is no better testimony to the impact of Park's teaching than the imposing roster of his students. Everett C. Hughes, Herbert Blumer, Stuart Queen, Leonard Cottrell, Edward Reuter, Robert Faris, Louis Wirth, and E. Franklin Frazier all became presidents of the American Sociological Society. Helen McGill Hughes, John Dollard, Robert Redfield, Ernest Hiller, Clifford Shaw, Willard Waller, Walter C. Reckless, Joseph Lohman and many other students of Park became leading social scientists. It is hard to imagine the field of sociology without the contribution of the cohort of gifted men whom Park trained at Chicago. What higher tribute can be paid to a teacher? (Coser 1971, p. 372).

Charles S. Johnson, one of Park's students, noted that "his mind never ceased to work with ideas and he had not lost his zest for life and work and the still uncharted frontiers of human behavior even when, in his final illness, he could no longer speak" (Raushenbush 1979, p. 176). Park died at his home on February 7, 1944, seven days before his eightieth birthday.

SEE ALSO *Assimilation; Blumer, Herbert; Chicago School; Cox, Oliver C.; Drake, St. Clair; Frazier, E. Franklin; Park School, The; Sociology, American; Sociology, Urban*

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Larry R. Ridener

PARK SCHOOL, THE

The concept of a school includes having "a central figure around whom the group is located, who is an inspiring and effective leader, whose school it essentially is, and without whom the school eventually begins to break-up" (Harvey 1987, p. 3). Robert Ezra Park (1864–1944) was that essential figure during his tenure in the Sociology Department at the University of Chicago. Park had been a newspaper journalist prior to becoming a sociologist. He brought the practice of immersing oneself into a situation as a participant observant to his new field and taught his students to do the same (Harvey 1987). A great deal of Park's work was undertaken in conjunction with Ernest W. Burgess (1886–1966), Park's colleague and friend. Park's sociology, which includes his reliance upon field research as well as much of the novel theory that he and Burgess espoused coupled with Park's ability to attract quality graduate students, is often referred to as the Park school of thought or the "Park School."

HUMAN ECOLOGY

One of Park and Burgess's major contributions to sociology is the use of ecology in the study of human groups. Borrowing from animal ecology and economics, Park

hypothesized that, much like plant and animal life, human groups carve out niches for themselves based on competition for space (Park 1950). For example, key tenets of Burgess and Park's concentric zone theory are that businesses need a central location and that communities build around these business districts to form biotic or mutually interdependent relationships. Additionally, the zones are populated and repopulated via a cycle of invasion and succession much like that found in plant life (Coser 1971).

The social or moral order differentiates human and plant or animal negotiation of the ecological system. Human society is composed of both the biotic (interdependence) and the culture that encompasses the ability to communicate. Humans engage in collective action to create a society that is composed of a common will. Population, material culture, nonmaterial culture, and natural resources interact to create a social hierarchy or social order that maintains biotic balance and social equilibrium. Park's race relations theory is a human ecology theory that exemplifies social order in transition or social change (Park 1950).

Park posits that there is a cycle of events that repeats itself in every initial encounter or contact between racial groups. The cycle includes four stages: contact/conflict, competition, accommodation, and assimilation. He identified contact as the first stage, while other researchers use contact and conflict interchangeably (Park 1950). Although Park assumed that each minority group would eventually fully assimilate into the dominate group, he theorized that each group could possibly go through a series of accommodations first.

Borrowing from Georg Simmel and preceding Emory Bogardus's social distance scale, Park suggested that social distance is the level of intimacy experienced between diverse racial groups or the etiquette of knowing one's group's place in the social order (Coser 1971). Compromised social distance etiquette or conflict between groups for space and life's rewards disturbs the moral order or ecological equilibrium. Social change readjusts the balance in three stages: dissatisfaction, social unrest and mass movements, and finally a new accommodation (Coser 1971). The new accommodation, which is often assimilation, is a social change (Park 1950).

Through his students, Park's influence extends further than his individual contributions to the discipline. Eight of his students became president of the American Sociological Association. Many more of his students became leading sociologists and took Park's work in many directions (Harvey 1987). Clifford Shaw's work with concentric zone theory birthed theories of criminology of place as well as social disorganization theories; E. Franklin Frazier expounded on that line of research to develop subculture theory; and Louis Wirth's research contributed to the foundation of twentieth-century urban sociology. Similarly, Park's critics span the generations as well.

CRITICS AND THE DECLINE OF THE SCHOOL

In her 1988 book, Mary Jo Deegan suggests that human ecology theory is a pathological marriage between sociology and Darwinism. Others posit that human ecology theory ignores the influence of the social environment and does not consider the impact of human diversity (Brown 2006). Park's contemporaries, including many University of Chicago sociology scholars, criticized his resistance to the use of quantitative methods (Harvey 1987). Although Chicago also always had quantifiers, Chicago never lived Park's qualitative reputation down. Despite the criticism, Park's retirement was a big factor in the decline of the department. No one else could inspire students like Park, nor was anyone else as devoted to their intellectual and research success as was Park (Harvey 1987). In addition, to outsiders, sociological research done at Chicago was the sociology *of* Chicago or the "Park School." Without Park, the research ethos was lost. Finally, while Chicago would never dominate sociology again, no other department ever held the dominance that the University of Chicago held during Park's tenure (Harvey, 1987).

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PARLIAMENT, UNITED KINGDOM

The United Kingdom Parliament has one of the longest histories of any representative assembly in the world and is often referred to, mistakenly, as the "mother of parliaments." The modern U.K. parliament consists of representatives from the four countries of England, Northern Ireland, Scotland, and Wales and is located in the Palace

of Westminster in central London, England. Hence, it is commonly referred to as the Westminster parliament.

After the 2005 U.K. general election there were 646 elected members of Parliament: 529 representing English constituencies, 18 from Northern Ireland, 59 from Scotland, and 40 from Wales. The U.K. parliament is bicameral. In addition to the elected members who sit in the lower chamber, the House of Commons, there are also some 700 members of the upper chamber, the House of Lords, who are known as "peers." The numerical composition of both houses of Parliament had been subject to change as a result of the constitutional reforms of the post-1997 Labour governments. The creation of a devolved parliament in Scotland in 1999, alongside representative assemblies in Northern Ireland and Wales, led to a reduction in the size of the House of Commons from 659 to 646 in 2005; whereas the abolition of hereditary peers, under the provisions of the House of Lords Act 1999, virtually halved the total membership of the upper chamber from 1295 to 695. After the implementation of this act, some 80 percent of the members of a new "interim House" were "life peers" who were appointed for their lifetimes, 4 percent were bishops or archbishops of the established Church of England, 4 percent were law lords, and 12 percent were "elected hereditary" peers. The 92 elected hereditary peers were to be removed after the second phase of reform, and the law lords and their associated judicial functions were to be removed upon the creation of a separate supreme court in 2008. Following the changes to the composition of the House of Lords, an independent public body, the House of Lords Appointment Commission, was established in May 2002 to scrutinize nominations made by political parties and to recommend nonpolitical appointees to the Queen. Formally, life peers are appointed by the monarch on the advice of the prime minister.

In addition to the two chambers—the Commons and the Lords—the monarch is also part of Parliament and, in fact, the legally precise institutional term for the body is the *Crown-in-Parliament*. Indeed, the history of the U.K. parliament reflects the changing relationships between monarch, political executive, and legislature, and between the constituent nations of the United Kingdom.

HISTORY

The origins of the English parliament can be traced back to the eleventh and twelfth centuries in the institutional forms of the Anglo-Saxon *Witenagemot*, a national assembly of freemen, and the medieval king's court, the *Curia Regis*. In the thirteenth century, monarchs became more reliant for the consent and authorization of their policies, particularly taxation policies, upon intermittent meetings of the feudal magnates, the great earls and barons (who controlled private armies), the archbishops, bishops and abbots (who represented the church as the major landowner of the time), and eventually, between 1265 and 1295, representatives of urban citizens and commercial classes. In 1265 the Simon de Montfort parliament (named after the most powerful baron) met for the first time in Westminster Hall, in the Royal Palace of Westminster. In 1295 the "model parliament," summoned by King Edward I, extended the base of representation formally to members of the "Commons." Initially representatives of the Commons were not allowed to speak in the presence of their more powerful feudal superiors and, for this reason, began to meet separately from the Lords, and after 1377 elected a "Speaker" to speak on their behalf to the monarch. Importantly, the principles of consent and representation were invoked at the time in support of, and not as a challenge to, strong monarchical (executive) government. Parliamentary government in Britain has historically been conceived, and functioned, as a means of legitimating executive power.

The inversion of the power relationship between the Crown and Parliament eventually came during the civil war in the seventeenth century and reflected a wider transformation of economic, social, and political forces in the English state. Attendant upon these wider economic and social transformations came institutional change. These changes found confirmation, eventually, in the Constitutional Settlement of 1689. After 1689 legal supremacy rested in Parliament rather than in any other state institution—whether monarch or law courts. The boundaries of legitimate state power were thus marked out. The subsequent history of parliamentary development in Britain (in 1707 the Act of Union merged the separate English and Scottish parliaments into a single parliament of Great Britain) saw Parliament retained at the center of the state but, inevitably, it was not to be sustained as *the* central institution of state decision making—which became focused upon the prime minister, cabinet, and executive.

MODERN FUNCTIONS

The U.K. parliament is a multifunctional institution. As a representative body Parliament has served the functions of providing consent, legitimation, and authorization for executive actions. Modern governments derive their authority from their majority party position within a democratically elected House of Commons. Conventionally government ministers are recruited primarily from the Commons, but may also be members of the Lords. Parliament serves, therefore, to recruit ministers and also to hold them accountable by requiring them to explain and defend their actions. A key role of Parliament, therefore, is to examine government policy and administration and to inform the public about what the government is

doing and why. A variety of procedures are available to perform these scrutiny and informing functions: debates; questions; and committees—"standing committees" that process legislation and "select committees" that scrutinize and investigate executive actions more broadly. Although the U.K. parliament is a legislature, its primary legislative role is to scrutinize, amend, improve, and authorize laws proposed by the executive. Each house has a similar five-stage legislative process, and all laws have to be agreed by both houses. Although the Lords actively proposes and makes legislative amendments, ultimately, the final decision rests with the government in the House of Commons. Under the Parliament Act of 1949, if the Lords does not approve a bill it can only delay its passage into law for up to one year. Given the control of the majority party in the House of Commons, the average success rate of government proposals becoming law is some 95 percent. The final stage of the legislative process in Parliament is the royal assent, whereby legislation is accepted with the symbolic words "*La Reyne le veult*"—"the queen wills it." These words underline the continued significance of "the Crown-in-Parliament" and point to the institutional complexity of the United Kingdom as both a parliamentary democracy and a constitutional monarchy.

SEE ALSO *Magna Carta; Participation, Political; Political Parties*

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David Judge

PARLIAMENTS AND PARLIAMENTARY SYSTEMS

Parliaments are representative institutions that link political decision makers with citizens affected by the decisions taken. Representative institutions have a variety of names in different countries—Parliament (a term usually associated with the United Kingdom and often adopted in its former colonies, for example, in Australia, Canada, and India); Congress (for example, the United States, Argentina, Brazil, China, Mexico); Assembly (for example, Cuba, Slovenia, and the Russian Federation); Cortes (Spain); Diet (Japan); Folketing (Denmark); Sejm (Poland); and Storting (Norway)—and are often subsumed under the generic term "legislature." In total, throughout the world in 2006, the Inter-Parliamentary Union listed 189 national parliaments with over 44,000 members. These ranged in size from the 2,980 members in the Chinese National People's Congress to 15 members in the Parliament of the Tuvalu Islands in the South Pacific. Seventy-five parliaments were bicameral, having an upper house or a senate alongside a lower house or representative assembly. In addition, there are also a large number of regional or subnational parliaments, with seventy-four in western Europe, thirty in India, and fifty in the United States. At a supranational level the European Parliament, after January 1, 2007, had 785 members representing over 375 million voters from twenty-seven member states in the European Union.

Yet not all parliaments in the twenty-first century are democratic institutions—in the sense that their members are chosen through the processes of free and competitive elections. In 2006, the United Nations Development Programme identified only 140 countries in which competitive multiparty elections were held for national parliaments.

ORIGINS AND HISTORIC PRINCIPLES

The Icelandic Althingi has a claim to be the oldest parliament, as it met for the first time around 930 CE and served as a general assembly of the most powerful leaders, where legislative acts were made and justice was dispensed. Other parliaments emerged in Europe in the twelfth and thirteenth centuries, when monarchs convened meetings of representatives of the most powerful sections of feudal society to authorize specific royal policies and taxes. The English Parliament, the Spanish Cortes, the French States-General or Estates-General, and the Scandinavian parliaments all trace their roots back to such medieval advisory bodies. Although the subsequent institutional trajectories of these parliaments differed markedly, and while most parliaments were in abeyance for long periods, nonetheless, the principles of authorization and representation marked the common and continuing hallmarks of parliamentary institutions. By the beginning of the twentieth century most western European countries had parliamentary systems, and such systems proved to be resilient. Even those countries that endured authoritarian regimes at some stage in that century (Germany, Italy, Greece, Portugal, and Spain) subsequently reestablished parliamentary systems.

In their contemporary forms, parliaments still institutionalize the principles of representation and authorization, but now these ideas are normally associated also with the electoral principle and notions of accountability. In turn, elections and accountability invoke ideas of "representative and responsible" government—where decision makers are representative of those for whom decisions are to be made and are responsible to those affected by the decisions. In this sense, parliaments occupy pivotal institutional positions in the linkage between citizens and governors. Indeed, parliaments face in two directions: first, toward the "people," the "represented," or the "governed"; and, second, toward the "government" or the "political executive." In this pivotal position, parliaments can be seen as part of an institutional nexus of government—as a "parliamentary system."

PARLIAMENTARY SYSTEM

Like any other system, a parliamentary system is a complex whole that comprises of a set of connected parts. Frequently, parliamentary systems are defined in contrast to presidential systems and categorized by the distinctive institutional configurations that link the electorate, the legislature, and the executive. In a parliamentary system the electorate votes for representatives who, when assembled together, collectively constitute the representative institution of parliament. In turn, the political executive, or government, is then derived from the representative institution. Viewed as an ideal-typical process of delegation, a parliamentary system thus enables citizens to delegate decision-making capacity, through the medium of elections, to their representatives. In this process representatives, as the "agents" of electors, are authorized to act on behalf of citizens as "principals" (in the terminology of delegation theory). From this single direct act of delegation to representatives in parliament flows a sequential and serial process of delegation, whereby representatives in parliament then delegate the routines of decision making to a related institution—the political executive—which acts as the agent of the "principal" of parliament. In turn, the political executive (whether termed "cabinet" or "government" and normally headed by a chief executive known as a "prime minister") delegates further to other "agents" in the institutional form of the bureaucracy or civil service. In contrast, in a presidential system, citizens elect and directly authorize both a political executive, either through elections or through an electoral college, and representatives in a legislature. In presidential systems, therefore, the electorate has two agents. Moreover, in presidential systems there is a separation of powers between the legislature and the executive, whereas in parliamentary systems there is a fundamental fusion of parliamentary and executive institutions.

LEGISLATIVE–EXECUTIVE RELATIONSHIPS

In a parliamentary system political executives are authorized by parliaments. This can take the form of a formal investiture vote before an executive takes office (Germany, Hungary, Greece, Ireland, Portugal, Spain, and Sweden) or immediately after an executive assumes office (Belgium, Italy, and Luxembourg). The outcomes of such votes are heavily dependent upon bargaining among political parties. In other parliamentary systems, executives are deemed to be authorized tacitly unless the executive loses the confidence of parliament (for example, in Australia, Austria, Denmark, Finland, France, Iceland, Japan, the Netherlands, New Zealand, Norway, and the United Kingdom). Using the concept "authorization" avoids using notions of the "selection" or "emergence" of executives from parliaments. In practice, few parliaments actively select leaders from their ranks, and in several states membership of the executive is incompatible with membership in parliament (for example, Austria, the Netherlands, Norway, and Sweden). Only in the UK and Ireland, among western European parliaments, are cabinet members required to be members of parliament.

In a parliamentary system executives are also accountable to parliament; in turn, parliaments are accountable to citizens. In the twenty-first century, ideas of parliamentary accountability are rooted predominantly in free competitive elections. In the strongest sense, executives are accountable to parliaments insofar as there are "no-confidence" procedures by which cabinets or governments can be collectively dismissed by parliament. In a weaker sense, executives may be held to account in terms of "informing" parliament and "explaining" their actions through oversight procedures such as questions, debates, and statements and by providing evidence to parliamentary committees. In an intermediate sense, executives may also be accountable where ministers are prompted by parliamentary scrutiny to accept culpability and to consider remedial action or redress.

The reciprocal relationship of accountability finds further reflection in the dissolution powers normally conferred upon prime ministers individually or cabinets collectively. In most countries the no-confidence procedures in parliament are counterbalanced by the executive's capacity to invoke a confidence vote or to dissolve parliament directly. In all western European states since 1945 (as well as, for example, in Japan and Canada) executives have, on at least one occasion, dissolved parliaments before completion of the full electoral term. In Denmark, Greece, and Ireland some two-thirds of modern parliaments have been dissolved early. Upon dissolution, parliaments and political executives then face their ultimate accountability to the electorate.

PARLIAMENTARY SYSTEMS AND LEGITIMATION

As noted earlier, the terms *parliament* and *legislature* tend to be used synonymously and interchangeably. Yet few parliaments are legislatures in the literal sense of "lawmaker" (derived from the Latin words *legis*, meaning "law," and *lator*, meaning "carrier" or "proposer"). The formulation of legislative proposals in most parliamentary systems is conducted largely beyond parliaments, in executives operating in broader institutional networks of organized interests and political parties. In this case, the prime role of parliaments in the legislative process is the authorization of laws. Legislative outputs are legitimated through procedures of parliamentary deliberation, scrutiny, amendment, assent, and, ultimately, monitoring. Through processes of representation, the opinions and interests of wider civil society—variously in the form of individual constituents, territorial electoral districts or constituencies, political parties, or civil society associations—are brought to bear in the parliamentary processing of legislation. And, through these processes, popular authorization and legitimation of legislative outputs is secured. Indeed, in some systems, supreme legislative authority is deemed to reside in parliament (as in the concept of "parliamentary sovereignty" in the UK). In most parliamentary systems, however, the people are held to be "sovereign"—with authority delegated temporarily and contingently to representatives in parliament.

Much has been made in academic writings of a distinction between "deliberative assemblies"—with an emphasis on debate (linguistically the term *parliament* derives from the French verb *parler*, meaning "to talk")—and "working assemblies"—with the emphasis on legislative functions. The former type of assembly is commonly associated with parliamentary systems and the latter with presidential systems. In practice, however, such distinctions are of restricted value. A more effective way of identifying and categorizing parliaments is encapsulated in the notions of "representation," "authorization," "accountability," and "legitimation." In linking citizens with their government, parliaments serve, in the first instance, to represent "the people" (however constituted in different countries) and also, indirectly, to authorize executive action. In the second instance, however, parliaments hold executives accountable for their actions and so provide an institutional mechanism for the public control, and ultimately, the legitimation, of government.

SEE ALSO *Authority; Bicameralism; Democracy; Democracy, Representative; Elections; Government; Knesset, The; Parliament, United Kingdom; Participation, Political; Political Parties; Voting*

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David Judge

PARNES, HERBERT
1919–2006

Herbert Saul Parnes was a consummate social scientist, though his official title was professor of economics. Educated at the University of Pittsburgh (BA and MA) and Ohio State University (PhD), he spent most of his distinguished career as a labor and human resources economist at Ohio State, studying and teaching others about the experiences of people in American labor markets. His career also involved visiting professorships at Princeton and the University of Minnesota, a stint as an Organization for Economic Cooperation and Development (OECD) consultant in Paris, and three years at Rutgers following his retirement from Ohio State. Later, he returned to Ohio State as a National Institute on Aging grantee to continue his study of the labor market experiences of the elderly. His legacy as recounted below relates only to his substantive research, his pathbreaking contributions to the field of empirical labor market analysis, and his emphasis on a multidisciplinary focus. However, it must be noted that there are scores of economists and other social scientists to whom he was a teacher and mentor and whose own work bears witness to the significance of his scholarly contributions.

Parnes began his academic life as a political science major, and he never strayed from the idea that understanding human experiences in labor markets was valuable not only for its own sake but also for what it could contribute to the sensible formation of public policy. He was never a devotee of pure theory and recounts in his memoir, *A Prof's Life* (2001), several instances when he undertook jobs and occupations to acquire a solid understanding of how workers really interacted with their jobs, coworkers, and employers. Although he acknowledged in the preface to *PEOPLEPower: Elements of Human Resource Policy* (1984) that his appreciation for the value of microeconomic theory grew during his career, he always believed that only the collection and analysis of data could

provide the understanding needed to undergird policy recommendations.

The signal accomplishment of his career was initiating and overseeing the single largest labor market research project ever funded by the U.S. Department of Labor, the National Longitudinal Surveys of Work Experience (NLS). It began in 1966 and has continued in modified forms into the twenty-first century. Literally thousands of scholarly articles, monographs, theses, and dissertations have been completed using what in the earliest years were known as the *Parnes data*. Parnes authored or coauthored more than fifty of those during his prolific career. Before that, he had published several significant works. In *Research on Labor Mobility: An Appraisal of Research Findings in the United States,* he synthesized everything known empirically to that point (1954) about worker mobility in American labor markets. He updated that synthesis a decade and half later in *A Review of Industrial Relations Research* (1970). His collaboration with other social scientists began early in exploring the economic, psychological, and sociological elements of a critical aspect of human decision-making in "Occupational Choice: A Conceptual Framework" (1956). This belief in the importance of multidisciplinary approaches carried over into the research team that he assembled at Ohio State's Center for Human Resource Research to design and analyze the NLS data, which dismayed critics who believed it resulted in an underemphasis on economic theory.

Attesting to the policy importance of the NLS-based research are many studies of race and sex discrimination in labor markets, the salient factors related to the changing labor force participation of adult women, the impacts of schooling and training on the labor market success of various age-sex groups, and the correlates of changing retirement behavior among adult American men. Critical to the ability to offer policy recommendations on these and related issues is the longitudinal and detailed microeconomic character of the data that comprise the NLS. Furthermore, the collection of data on attitudes and a variety of schooling and training experiences enable testing of hypotheses about which only speculations were possible before the NLS existed. Among the attitude measures in which Parnes had profound scholarly interest were questions designed to tap into mobility as a propensity to move (by changing employers or occupations or geographic locations) as a predictor of later actual movement. This was, in part, born of his skepticism of the standard theoretical assumption that all workers are always seeking to improve their position in the marketplace and are always searching for information to enable such improvement. Though he coauthored several published studies using the data from these questions, many opportunities to exploit them exist for newer generations of social scientists, thus adding to Parnes's contribution to our understanding how people really behave in labor markets and what social policies might be invoked to improve their well-being and the effectiveness of the economy in allocating and utilizing scarce human resources.

SEE ALSO *Economics; Economics, Labor; National Longitudinal Survey of Youth; Occupational Status; Social Science; Work*

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Andrew I. Kohen

PARODY

Parodic practices carry implications for the study of social institutions and cultural frameworks because, especially when allied with satiric critique, they can lead to the clearing away of older modes of thought, and the opening up of alternate paradigms of cultural understanding. Not all forms of parody accomplish this skeptical questioning, emptying out, or overturning of an official perspective; normative parodies attack dissidents and divergences from the dominant cultural ideology and enforce established values. But parodies that reverse accepted hierarchies of value can serve as indicators of or even contributors to cultural change.

Parody—from the Greek *para*, "beside," and *odos*, "song" or "derived from another poem"—involves both the repetition and inversion of some elements of an established work or genre, usually so as to lower what has been elevated or respected. Aristophanes, the first great parodist

in the tradition, implies conservative cultural allegiances in his comedies (written between 427 and 385 BCE), which parody the style and thought of Euripides, the last of the great Athenian tragedians, the philosopher Socrates, and the Sophists, the new, professional teachers of rhetoric.

The *Satyricon* of Petronius (early 60s CE) probably constitutes the best example from the ancient world of the use of satiric parody to empty out established canons of value. The longest surviving episode of this novel, "Trimalchio's Feast," satirizes the vulgar pretensions and mangled learning of the immensely rich former slave Trimalchio. But the dinner conversation of Trimalchio's guests, who are obsessed with money, mortality, and the passing of the good old days, also parodies the dinner conversation of the aristocratic Athenians in Plato's dialogue, the *Symposium*. Contrasting the honest vulgarity and materialism of Trimalchio and his guests with the corruption and hypocrisy of the educated narrator and his friends, Petronius achieves a portrayal of the lowborn, newly rich class that is neither caricatural nor condescending, and implicitly places them on a level with Plato's high-minded Greeks.

In *Gargantua* and *Pantagruel* (first two books, 1532 and 1534), François Rabelais satirically parodies as illogical, ungainly, and repetitive the scholastic learning of the medieval universities that was authorized by the Catholic Church, and proposes by contrast the graceful, thoughtful, and persuasive eloquence of students trained in the new humanistic model of education. Where Rabelais criticizes a system buttressed by religious authority, Miguel de Cervantes, like Petronius, achieves in *Don Quixote* (Part 1, 1605; Part 2, 1615) a satiric critique of a previously dominant aristocratic culture, through parody of the romance epics of the Middle Ages and the Renaissance. Cervantes adopts the episodic structure of such works and their concerns with love and adventure; however, by making Don Quixote, the reader who believes in the literal truthfulness of these romances, repeatedly collide with contemporary social reality, he suggests the inadequacy of this narrative form in the more commercial world of his own time. He thus opens up a cultural space for the development of the new genre of the modern novel. In *Gulliver's Travels* (1726), Jonathan Swift parodies travelers' tales in general and Daniel Defoe's *Robinson Crusoe* (1719) in particular to satirize the arrogance of Englishmen and of Europeans in relation to the inhabitants of other parts of the world they were encountering through their voyages of discovery, commerce, and empire. In a similar way, *Ubu Roi* (1896), Alfred Jarry's parody of the high genre of tragedy, and particularly of Shakespeare's *Macbeth*, produces an acidic critique of middle-class intellectual and artistic culture that opened the way to such twentieth-century movements as dadaism and absurdism. Finally, to take a contemporary example, Thomas Pynchon's novels from *V.* (1963) to *Mason & Dixon* (1997) consist almost entirely of parodic reworkings of established genres and discourses—from travel guides and spy novels to captivity narratives—to suggest a radical skepticism toward received understandings of history, technology, and power in the modern world.

Satiric parody has also affected cultures through popular media such as comics and television in the last half-century. *MAD* magazine made a mark in American culture during the 1950s and 1960s, puncturing pretensions by means of its irreverent parody of hit films and television shows. It was joined in doing so by a new form, the weekly satiric television news program, first with *That Was The Week That Was* (U.K., 1963; U.S., 1964–1965), then with "Weekend Update" (beginning in 1975 as a regular feature of *Saturday Night Live*). The latter lasted longer, but was more limited formally, consisting largely of comic anchors reading items based on stories in the news. The next most significant instances of parodic satire of politics and journalism in America consist of *The Daily Show* with Jon Stewart, followed by *The Colbert Report* with Stephen Colbert, which appear back-to-back four nights a week on Comedy Central. Stewart usually maintains a smile as he reports, often verbatim, the statements of newsmakers, spokesmen, journalists, and commentators; only occasionally does he let outrage show. By contrast, Colbert's adoption of the persona of a hard-right cable talk-show host enables him to say what others find impossible to express: by zealously criticizing even the most well-grounded skepticism of government officials, their policies, and their bullying manipulation of mainstream media, he makes clear what the authorities believe but do not say, and allows the commonsense criticism to be expressed along the way.

In a famously controversial argument first published in 1984, Fredric Jameson maintained that in the postmodern period parody had become divorced from satiric critique. For Jameson, all that remained of parody was pastiche, a toothless, complacently unhistorical mixing of incongruous fragments from earlier styles. A year after Jameson's essay, Linda Hutcheon by contrast argued that twentieth-century parodic forms do not possess a fixed and unfluctuating ideological persuasion: parody can be conservative or transgressive, or can even combine the two in an authorized transgression. Although, as Hutcheon and others have pointed out, the thought of Mikhail Bakhtin could be utopian in its emphasis on the possibilities for inversion and renewal through parody, most critics would agree that Bakhtin's works (written from the 1930s through the 1960s) constitute the essential and seminal reflections on the renovating cultural work performed by satiric parody from the ancient world to the present.

SEE ALSO *Satire*

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Frank Palmeri

PARSIMONY

SEE *Occam's Razor.*

PARSONS, TALCOTT

1902–1979

American sociologist Talcott Parsons, the youngest of five children, was born in Colorado Springs in 1902. His father was a Congregational minister, professor, and university president, and his mother was a progressive and a suffragist. Parsons completed his undergraduate studies in biology at Amherst College in Massachusetts. He also attended the London School of Economics, where he studied with Bronislaw Malinowski (1884–1942), inheriting his view of society as a system of interrelated parts. In 1926 Parsons attended the University of Heidelberg, where he studied the theories of Max Weber (1864–1920). He translated Weber's *The Protestant Ethic and the Spirit of Capitalism* (1904–1905) into English in 1930. Parsons was initially an instructor of economics at Harvard University, where he was mentored by Pitirim Sorokin (1889–1968), then became an inaugural member of the sociology department. In 1945 Parsons established Harvard's Department of Psychology and Social Relations, an interdisciplinary collaboration in the behavioral sciences and economics. He served as chair of the department until its dissolution in 1972. He continued teaching as a visiting professor upon his retirement in 1973 from Harvard. Parsons died in May 1979.

Parsons was the major American social theorist until about 1969, and some claim that social theory since then has been in conversation with Parsons. Parsons attempted to develop a "grand theory" of society that explains all social behavior, everywhere, throughout history, and in all contexts, with a single model called *structural functionalism*. This approach considers values to be the core of culture, because values give meaning to what people do, direct people's lives, and bind people together. These "cultural traits" thus function for the operation of society (Parsons 1966). Parsons believed that all lasting social systems strive for stability or equilibrium with a strong sense of social order and institutional interdependence. Influenced by Sigmund Freud (1856–1939), he was interested in how actors choose goals and means in relation to internalized norms and values, and argued for an objective external world that is understood empirically with concepts created by the ideas, beliefs, and actions of those under study. This is a modernist approach because it assumes an absolute developmental process.

Parson's early theorizing on social action, influenced by Weber, focused on active, creative mental processes that have an important subjective component. In *The Structure of Social Action* (1937), Parsons developed his empirical approach of analysis based on observation, reasoning, and verification, and explored the difference between the concepts of behavior (a mechanical response to stimuli) and action (an inventive process and analysis of the subjective aspect of human activity) (Ritzer 2000). For Parsons, the basic unit of study is the *unit act*, which involves the following criteria: an actor/agent motivated to action; an end toward which action is oriented and means to reach this end; a situation where the action takes place; and norms and values that shape the choice of means to ends. Actions consist of the structures and processes from which humans are motivated to form meaningful intentions (through available goal-attaining means) that are put into practice within the social system (Parsons 1966). Parsonian "action" is considered from all of the following perspectives: culture (values), society (norms), personality (source of motivation), and organism (source of energy). For Parsons, people cannot choose goals and means without society in the background, and they cannot make sense of agency or action without enforced or expected social norms. This means people must have an intention and awareness of society's norms, and they cannot escape these norms. Parsons is sometimes criticized for this position because he cannot account for social change.

Parsons was concerned with the integration of structure and process, and defined a social system as comprised of the interactions of many individuals within a situation, where the system itself includes commonly understood cultural norms. These cultural norms are within a system of generalized symbols and their associated meanings (Parsons 1951). These social systems have parts, or subsystems of varying complexity, that represent organizational structures. Additionally, social structures have social functions, which are the consequences of any social pattern for the operation of society as a whole. For Parsons, society is a complex system whose parts work together to promote solidarity and stability (they strive for equilibrium), and

hence he defines the social structure as any relatively stable pattern of social behavior. An analysis of the social system is thus a consideration of ordered processes of change in the interactive patterns of actors within a structure (the norms behind the goals and means). Actors have status roles or positions within the structure itself, and in relation to other actors via interactions. However, these statuses and roles are units of the social system, and are not qualities of the actors themselves.

Parsons and Robert F. Bales (1916–2004) apply this analysis of status based on hierarchy and power to the family (a small social unit) with Parson's notions of feminine-expressive and masculine-instrumental leadership roles. For Parsons, men assume through socialization a more technical, executive, and "judicial" role, and women a more supportive, integrative and "tension-managing" role (Parsons and Bales 1955). These stereotypical views result in a narrow and limited view of gender.

Parsons later developed pattern variables that categorize expectations and relationship structures that allow for understanding universal social action. These are: how much emotion to invest into any social phenomena (affectivity-affective neutrality); whether to orient oneself to part or all of a social phenomena (specificity-diffuseness); how to judge a social phenomena, either in terms of emotional or general standards (universalism-particularism); whether to judge a social action by its intentions or results (ascription-achievement); and whether to pursue self-interest or the interest of the collectivity (self-collectivity).

Additionally, Parsons claimed that for any given system of action, there were four functional components that were necessary for a system to exist, function, and maintain equilibrium: a social system must adapt and be able to exist in a changing environment; must have clearly stated goals; must involve actors within a subsystem of a greater organizational system; and must define and maintain a set of norms and values, which in turn legitimates action within the system itself.

C. Wright Mills (1916–1962) mocked Parsonian theory in his book *The Sociological Imagination* (1959), and postmodernists disagree paradigmatically with Parsons and his "grand theory" approach to understanding an ordered society.

SEE ALSO *Culture; Family; Femininity; Functionalism; Malinowski, Bronislaw; Masculinity; Mills, C. Wright; Norms; Postmodernism; Psychology; Sociology; Sociology, Parsonian; Structuralism; Values; Weber, Max*

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Ryan Ashley Caldwell

PARTIAL AUTOCORRELATION FUNCTION

SEE *Time Series Regression.*

PARTIAL EQUILIBRIUM

With the publication of the first edition of his *Principles of Economics* in 1890, Alfred Marshall developed partial equilibrium analysis as a method for turning economic theory into a form that could be used to formulate policy and aid in the analysis of actual problems. He wanted economics to be "an engine for the discovery of concrete truth" (Hausman 1992, p. 152). In partial equilibrium each market or section of the economy is considered as a separate entity, and so its interdependence with other markets is not considered. This often is described as *ceteris paribus*, that is, other things do not change. To bring some order and understanding to an extremely complex world in which everything affects everything else, partial equilibrium concentrates on key relations, holding the rest constant (Hausman 1992). It is not that these factors are believed to be unchanging but that they are held in the ceteris paribus "pound." As Marshall stated in 1922:

> The forces to be dealt with are however so numerous, that it is best to take a few at a time: and to work out a number of partial solutions.… Thus we begin by isolating the primary relations of supply, demand and price in regards to a particular commodity. We reduce to inaction all other forces by the phrase "other things being equal": we do not suppose that they are inert, but for the time being we ignore their activity.… In the second stage more forces are released from the hypothetical slumber that had been imposed on them. (Marshall 1922, pp. xiv–xv)

Marshall suggested that, in each stage of the analysis, more factors could be allowed to vary.

> The element of time is a chief cause of those difficulties in economic investigations which make it necessary for a man with limited powers to go step by step; breaking up a complex question, studying one bit at a time, and at last combining his partial solutions into a more or less complete solution of the whole riddle. In breaking it up, he segregates those disturbing causes, whose wanderings happen to be inconvenient, for the time in a pound called *Cæteris Paribus.* The study of some groups of tendencies is isolated by the assumption *other things being equal.…* With each step more things can be let out of the pound. (Marshall 1922, p. 366, emphasis in original)

INTERDEPENDENCE IN PRICES AND MARKETS

Marshall was fully aware of the interdependence between most markets and prices in the economy, as is apparent from notes XIV and XXI of the Mathematical Appendix to his *Principles*, where he outlined the basis of a general equilibrium system. However, he realized that attempting to analyze that interdependence would render the economic problem so complex that the main causal factors could not be isolated. Hence he regarded partial equilibrium analysis and the use of ceteris paribus as important approximations that allow casual inferences to be made and real-world problems to be studied.

In particular Marshall concentrated on the role of price in individual markets as the main determinant of the quantities supplied and demanded. To illustrate this, one can examine the demand for oranges (D_0), which will depend on their price (P_0), all other prices in the economy (P_1, …, P_n), the income of all individuals in the economy (Y_1, …, Y_m), the weather, people's tastes, international factors, and so forth:

$D_0 = f(P_0, P_1, \ldots, P_n, Y_1, \ldots, Y_m$, weather, tastes, etc.).

Some of these factors, such as weather and tastes, are not economic variables, and so they normally are considered exogenous. This does not mean that it is assumed that they do not change but that their changes cannot be explained within economics, and so they are unlikely to be influenced significantly by economic variables. What is left is the general equilibrium demand function for oranges in terms of all prices and incomes in the economy. Clearly this is extremely complex because in general equilibrium everything affects everything else. Therefore it is difficult to use the theory to make meaningful statements about policy or causality.

In partial equilibrium analysis each market is considered in isolation. When each market is concentrated on individually and when part of the economy is broken off and relations within that part are considered, causal inferences can be made. In addition it is assumed that demand and supply are separable and can be represented as independent curves, with price determined as the balance of those forces. To calculate the partial equilibrium demand function for oranges, the price of oranges is considered as the main determinant, other things being equal. In other words, all variables that are not determined within that market, particularly all other prices and incomes, are assumed for the analysis to be given and constant. This leaves the partial equilibrium demand curve for oranges:

$$D_0 = f(P_0)$$

MARSHALL'S FOUR TIME PERIODS

According to Marshall, the question of which factors are left in the ceteris paribus pound depends on the time allowed for those factors to respond to changes in the market. In particular the length of time that is allowed for supply to respond to changed conditions will exert an important influence on the operation of the market. Accordingly Marshall distinguished four time periods that are appropriate for economic analysis, determined on the basis of which factors are held constant in each situation. The first is the very short run, or the market period in which it is assumed that goods are already at market and must be sold, so that supply cannot vary and price is determined mainly by demand. In the short period, quantity supplied is allowed to vary as a result of variations in production through changes in the variable factors, but the quantity and structure of fixed capital goods cannot be varied. As plants are fixed, firms can neither enter or exit the market, and so a supernormal profit can be made even in competitive industries. In the long period, plants can be varied, and firms can enter or exit from the market, and so all factors are variable. In this case no supernormal profit can be sustained in a competitive market. Finally, in what Marshall referred to as the "secular long period" knowledge, population, technology, and tastes all can vary.

APPLICATIONS AND PROBLEMS

Clearly, in evaluating partial equilibrium it is not relevant to consider the question of whether the underlying assumptions are realistic. As approximations, they are intended to focus on key relations, intentionally abstracting from secondary ones, which are held constant in the ceteris paribus pound. Demand and supply are determined by more than just the price of a commodity. However, in evaluating assumptions it is necessary to look at whether they capture the key aspects of any relationship, whether what is assumed away is as important as what is included, whether the variables that are assumed to be constant vary systematically with the variables included in the analysis, and whether the variables that are assumed to be independent, in this case supply and demand, are in fact interdependent.

As a result of these considerations, partial equilibrium can be applicable only to commodities that are relatively unimportant in terms of household budgets and that have neither close substitutes nor complements. If a commodity has close complements or substitutes, changes in its price will lead to changes in demand conditions in other markets, which will lead to changes in prices in those markets. This means that the variables that are being held constant will change as a result of changes in the endogenous variables. This contradicts the ceteris paribus clause because ceteris are not paribus. Any change in price will lead, through its effect on other markets, to a shift in the demand curves in the market that is being considered. The things that are being held constant vary systematically with the ones being looked at, and this undermines the basis of partial equilibrium. In addition if the commodity was an important part of the household budget, changes in its price would lead to changes in the household's real income, thus changing another of the variables that have been held constant. In other words, for partial equilibrium it must be assumed that the income effect of a price change is very small. This means that the partial equilibrium framework is relevant only for goods on which only a relatively small proportion of the household budget is spent and for which there are no close substitutes or complements.

Further problems arise when the partial equilibrium framework is utilized to determine prices and outputs in competitive industries. A competitive industry will produce at that price for which aggregate demand for its output is equal to aggregate supply. In a partial equilibrium framework supply and demand must be independent of each other. The individual firm is assumed to face a U-shaped cost curve, and in perfect competition it faces an infinitely elastic demand curve. In long run equilibrium, price will cover costs exactly so that there are no economic profits.

In 1926 Piero Sraffa published an article that showed that there are severe logical problems in the use of the partial equilibrium framework for the analysis of perfectly competitive industries. He demonstrated that some elements of the analysis are inconsistent with partial equilibrium analysis and other elements are inconsistent with perfect competition.

Also, there are the standard problems associated with partial equilibrium analysis, specifically, the fact that demand and supply are often interdependent rather than independent and that the analysis is relevant only for unimportant markets. In other words, it is rare that one can break away part of the economy and assume that the interdependencies between it and the rest of the economy are negligible. Nevertheless, partial equilibrium analysis remains important in macroeconomics, particularly the distinctions between the short period, the long period, and the secular long period.

SEE ALSO *Equilibrium in Economics; General Equilibrium; Market Clearing; Markets; Maximization; Minimization; Optimizing Behavior; Prices*

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Peter Kriesler

PARTICIPANT OBSERVATION

SEE *Observation, Participant.*

PARTICIPATION, POLITICAL

Sidney Verba and Norman Nie define political participation as, "those activities by private citizens that are more or less directly aimed at influencing the selection of government personnel and/or the actions they take" (1972, p.

2). This definition is broad in that it takes into account many activities beyond voting in elections, including being active in organizations, working on campaigns, contacting officials, attending political meetings, and being a member of a political organization (Verba and Nie 1972, p. 31). Other scholars adopt broader definitions. For example, Lester Milbrath (1965) incorporates passive behavior (i.e., taking part in ceremonial activities), some psychological orientations (i.e., becoming informed about politics), and protests and demonstrations. Scholars of nondemocratic systems include legal and nonlegal participation and mobilized participation, as well as activities more appropriate to these contexts, such as complaining through bureaucratic channels (Friedgut 1979; Huntington and Nelson 1976; Shi 1997).

Milbrath (1965) was the first to argue that political participation follows a hierarchical structure in that individuals who engage in activities at the top level also engage in activities at lower levels. The bottom rung includes those who do not engage in any type of activity. The "spectator" level consists of activities such as voting, exposure to political stimuli, and talking to others about politics. The "transitional" level includes attending meetings, donating money, or contacting an official. And the "gladiator" engages in activities such as running for office, soliciting funds, and working on a campaign.

Another way to look at the various types of participatory actions is with respect to the level of input required from citizens, the type of information the act conveys to leaders, and how much pressure they place on policymakers to pay attention (Verba and Nie 1972; Verba et al. 1995). Working on a campaign and directly contacting officials requires a great deal of initiative, while activities like voting do not entail as much time or energy. Direct contact sends a clear message to leaders about a citizen's preferences, whereas voting only conveys an ambiguous message. Finally, activities vary with respect to the pressure they put on leaders, with voting exerting a high degree of pressure since electoral support is necessary for reelection.

WHO ENGAGES IN PARTICIPATORY ACTIVITIES

A prominent finding in the early literature, especially in the United States, was that socioeconomic factors, such as income and education, have the strongest effects on increasing the likelihood of turnout (Campbell et al. 1960). With respect to a broader range of participatory activities, those higher in socioeconomic status (SES) are also more likely to engage in the more difficult and time-consuming participatory activities (Milbrath 1965; Verba and Nie 1972), including nonconventional forms of participation such as demonstrations (Barnes et al. 1979). However, Verba, Nie, and Jae-On Kim (1978) find that the relationship between SES and voting is not as strong across all countries, which they attribute to differences in institutions and social cleavages. Furthermore, in authoritarian regimes, individuals higher in SES are actually more likely to abstain from political participation, since abstention can be a form of protest (Shi 1997).

One of the problems with the SES explanation is that it does not explain why those lower in SES do participate in politics. Verba, Kay Schlozman, and Henry Brady (1995) provide answers to this puzzle in their *civic volunteerism model*. They argue that participation is a function of three factors—resources, psychological engagement, and recruitment—with resources being further divided into time, money, and civic skills. Civic skills are "the communications and organizational abilities that allow citizens to use time and money effectively in political life" (Verba et al. 1995, p. 304) and that can be obtained on the job, in nonpolitical organizations, and in church. It is especially in this latter domain that individuals lower in SES obtain civic skills. The authors find that civic skills play the biggest role in time-based participatory activities, such as contacting officials, while they are not as important for other participatory activities, such as voting, in which SES and psychological engagement play a more important role.

Steven Rosenstone and John Mark Hansen (1993) propose mobilization as another factor that can help resolve the puzzle of why those low in SES may be inclined to participate. They argue (and find) that direct contact by political elites, such as direct mail or door-to-door canvassing, has a positive influence on the likelihood of turnout, and that this effect is more pronounced among those least likely to vote, since mobilization offsets the costs of participation. Rosenstone and Hansen also find positive effects of mobilization with respect to working on a campaign, donating money, and trying to persuade others to vote a certain way. Many scholars have subsequently demonstrated that direct contact increases the likelihood of turnout among minority groups (Leighley 2001) and is more effective than other types of mobilization, such as mailings and phone banks (Gerber and Green 2000).

IMPLICATIONS OF POLITICAL PARTICIPATION

Normatively, political participation has a long tradition of being considered important to the concepts of legitimacy and authority in democratic political systems. Whether one assumes an authorization view of representation, in which a leader is accountable to those who selected or appointed him or her, or an accountability view, in which the representative is bound to a free public, the standards

for achieving both in a democracy are free and fair elections (Pitkin 1967). Thus, a political system is considered legitimate only given the participation of citizens in the voting booth. One problem with this conceptualization is that it tends to consider democracies as the only political system that provides legitimate representation (Rehfeld 2006). Participation is still relevant to the legitimacy of nondemocratic regimes, since citizen support is often necessary for the proper functioning of the system (e.g., Davis 1976; Friedgut 1979; Shi 1997).

Empirically, participation is important for the quality of representation in democratic systems: "democratic responsiveness depends on citizen participation, and equal responsiveness depends on equal participation" (Verba 1996, p. 2). Thus, inequality with respect to who participates can lead to biases in representation (Lijphart 1997). For example, scholars find that counties with higher turnout rates receive more appropriations from Congress (Martin 2003), and states with higher levels of upper-class representation have lower levels of welfare spending (Hill and Leighley 1992). Finally, Senator roll-call votes are responsive to the ideology of voters in a state, but not to nonvoters (Griffin and Newman 2005).

SEE ALSO *Autocracy; Citizenship; Democracy; Electoral Systems; First-past-the-post; Parliament, United Kingdom; Parties, Political; Pluralism*

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Jennifer Merolla

PARTICULARISM

Particularism is a philosophical position that, in brief, claims that reasoning can be rational and noncapricious without being structured using principles. (*Noncapricious* in this context means that we do not decide on a whim that a case is of a certain sort; there has to be consistency between it and other cases.) The opponents of particularists, *generalists*, deny this claim in various ways. Particularism has commonly been applied to reasoning concerned with what people should believe (epistemological reasoning) and how people should act (moral and prudential reasoning). It has attracted much attention, and the debate is carried out at a high level of abstraction. This has led to some splintering of the position; so much so that the definition given in this entry's opening sentence is a controversial formulation. Jonathan Dancy has been the leading exponent of particularism.

Imagine that any element of a possible course of action—for example, that an *action* is a stabbing; that it

would be performed on a Tuesday—is a *feature*. *Situations* are collections of features. The debate raised by particularists concerns the nature of the contribution that features make to the value of the situations of which they are a part. Is it true that stabbings are always wrong, as crude generalists argue? According to particularism, sometimes stabbings are permissible, even obligatory, as in the case of self-defense. Even so, is it true that stabbings are always *wrong-making*, as more sophisticated generalists hold? That is, does the fact that an action is a stabbing always count against performing it, even though sometimes there are enough reasons to justify the action? Particularists deny that this has to be the case. By employing various arguments, distinctions, and examples, they argue that it is possible for the type of reason generated by a feature to change from situation to situation depending on the other features with which it is conjoined. Sometimes stabbings can be *right-making*. Particularists borrow a term from chemistry and claim that features can change their *valency*. (Some particularists make this claim about such features as justice, kindness, and the like.) If particularists are right, it means that there are no true moral principles apart from those with vague caveats such as "stabbing is often wrong-making." (Particularists are trying to understand how such caveats work.) In other words, particularists think that reasoning can still be consistent, but this consistency is not captured by principles.

Particularism is not relativism. Particularists claim that the valencies of features can alter, while the reason generated by a feature on any occasion is an absolute, nonrelative matter.

Particularism has important implications beyond abstract philosophy. If the particularist view is true, how does it affect our interpretation of the reasoning practices of judges in legal contexts? And should it alter how ethics are taught to various groups of people, such as those in the medical profession?

SEE ALSO *Ethics; Relativism*

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Simon Kirchin

PARTIDO REVOLUCIONARIO INSTITUCIONAL

The Partido Revolucionario Institucional (PRI; Institutional Revolutionary Party) had been an imprint in Mexican political life for more than seven decades when the Partido Acción Nacional (PAN; National Action Party) swept into power in 2000 and again in 2006. During its seventy-one years in political power, the PRI's ideology rested with revolutionary nationalism and state-led economic development. The party also encouraged a welfare state, anticlericalism, land reform, and autonomy from the foreign-policy influences of the United States (Russell 1994, pp. 77–78). The divergence of the PRI's undemocratic practices from the party's democratically ideological platform became the tool that ripped through its veil of political domination. Consequently the PAN victory in 2000 represented a historically significant moment for Mexico in which the true nature of democracy in terms of fair elections, candidates winning based upon popular vote, and a government led by other political parties besides the PRI had finally been realized. This illustration of democracy continued with the PAN's slight victory over the Partido de la Revolución Democrática (PRD; Democratic Revolutionary Party) in 2006. So the question remains as to what future role the PRI will play in Mexican politics.

HISTORY, SUCCESSES, AND CHALLENGES OF THE PRI

The PRI began in 1929 under Mexican president Plutarco Elías Calles, who served from 1924 to 1928. Calles founded what was known as the Partido Nacional Revolucionario (PNR; National Revolutionary Party) in an effort to organize the political elite and establish an institutional mechanism ensuring the smooth transition of authority from one president to another. Prior to the PNR, a number of presidents who were also leaders of the Mexican Revolution, such as Francisco Madero, Venustiano Carranza, and Álvaro Obregón, were murdered by opponents. Thus Calles, who also actively participated in the Mexican Revolution, found it necessary to "replace individuals with institutions" (Fuentes 1996, p. 70). That institution would exist in the form of one leading political party. Calles also pushed for a constitutional amendment that eliminated presidential reelections. It was the long-running abuse of power by one president—Porfirio Díaz—for over three decades that ignited the Mexican Revolution, which left Mexico in political and economic chaos and instability. The ultimate goal was to end the violent struggle for power between individuals of the Mexican Revolution.

The new system succeeded in shifting the struggle for power away from the use of bullets toward the use of the newly devised electoral system. However, the system also produced a more authoritarian regime. Electoral fraud became characteristic of the one-party system from the beginning. For example, the 1929 election between PNR candidate Pascual Ortiz Rubio and opposition candidate and Mexican educator Jose Vasconcelos, who received support from the Christeros, or followers of Christ, was plagued with blatant acts of ballot-box stuffing and intimidation among other fraudulent activities that led to Ortiz's victory (Castañeda 2000, p. xii). The Mexican novelist Carlos Fuentes described the stolen presidency as the result of "the first superfraud of the government party" (Fuentes 1996, p. 70).

By 1938 the PNR became known as the Partido de la Revolución Mexicana (PRM; Party of the Mexican Revolution) under President Lázaro Cárdenas, who ruled from 1934 to 1940. Cárdenas advanced upon Calles's efforts to create a more peaceful transfer-of-power process by establishing the mechanism that allows Mexican presidents to choose their successors while also discouraging them from staying in power for longer than one six-year term. Naturally the party leader would choose a successor from within the party, which perpetuated the long cycle of one-party rule in Mexico's political history.

This form of presidential succession became a point of controversy for the party. Although presidential elections took place in Mexico every six years, the process failed to fit the mold of a democratic political system. The journalist Philip Russell wrote, "The PRI maintains the fiction of democratic candidate selection" (Russell 1994, p. 76). Unlike the democratic system in the United States, for example, Mexico did not include primaries in which the public selected presidential candidates for each party prior to the national elections. Therefore the presidential succession mechanism allowed the incumbent president from the dominant party to wield more influence than the populace on the outcome of presidential elections.

Moreover the PRM underwent a structural transformation under Cárdenas known as corporatism. The new structural system was an alliance between the party and three other sectors—peasant, labor, and popular. Scholars have argued that this system of state-structured interest groups played a key role in determining political and economic results (Collier and Collier 1979). The three sectors functioned to keep the party in power by advancing the objectives of and voting for the party in return for special benefits for its members.

The influence of each corporatist branch under the leftist populist regime evolved over time. The peasant sector carried the most weight because of its large numbers. However, the sector's clout declined as Mexico's urban population surpassed that of the rural poor. The demographic shift enhanced the role of labor unions. As a result the party later relied upon the Mexican Federation of Workers to carry out its labor policies. Finally, the popular sector has been viewed as the most influential of the groups (Russell 1994, p. 79). The popular sector, which consisted of a broad range of groups from trade unions to slum organizations to professional organizations, had a large population and was organized under the National Confederation of Popular Organizations in 1943. Cárdenas envisioned that the three sectors would continue to carry out the revolutionary policies of the party and strengthen the alliance between them and the state. As a result the separation of powers in Mexico was more symbolic than actual.

State influence under the corporatist structure also spilled over into other areas of Mexican political life, thus threatening the democratic principles of checks and balances. The legislative and judicial branches as well as the media all followed the president rather than the rule of law and ethics most of the time (Castaneda 2000, pp. xii–xiii). The PRM dominated both the house and the senate because the president chose for congress PRM candidates who remained loyal to the party. The president along with the attorney general also selected judges who pledged allegiance to the presidential head of the party. The media outlets remained controlled and limited by the state until the late 1990s, even though newspapers and radio and television stations were mostly independently owned. The corporatist system became less effective as the country later moved away from a state-led government and economy toward a more liberal political and economic ideology.

Although the democratic nature of the Mexican political structure under Cárdenas remained questionable, Cárdenas also implemented successful social reform programs to ensure the equal treatment of all Mexican citizens. Fuentes described this period, stating, "And even if the upper and middle classes were favored, the working and peasant classes also received larger slices of the national pie than they ever had before or ever have had since" (Fuentes 1996, p. 71). Cárdenas carried out agrarian reform by returning to the Indian and peasant communities land that they had lost prior to the Mexican Revolution under the Spanish-controlled hacienda system. (Haciendas had been part of Mexico's colonial economy since the sixteenth century. They were large pieces of land upon which the Spanish employed workers, predominantly of Indian origin. The Indian workers depended on the land for their survival. They lived and worked on the haciendas and were usually paid low wages.)

Cárdenas also promoted health, education, and other reform programs with the objective of alleviating poverty

among Mexican citizens, including the Indian population, which often faced discrimination and suffered from inequality. The history of the PRI is not completely mired in corruption and failure.

Moreover in 1938 Cárdenas nationalized Mexico's strongest export sector—oil—which contributed to the country's economic success for a substantial period. The state control over Mexico's petroleum protected the economy from the competitive forces of the global market for another four decades. Cárdenas's approach contributed to 6 percent annual growth for the next forty years and increased salaries and purchasing power (Fuentes 1996, p. 71; Castaneda 2000, p. xv). Mexico was successful, relative to the rest of Latin America, at maintaining social peace and political stability. As a result the party under Cárdenas was characterized as promoting both social justice and economic growth while lacking in political democracy.

The party name changed to PRI and underwent another structural change under President Miguel Alemán Valdés in 1946. Alemán served as president from 1946 to 1952. Whereas the party under Cárdenas mostly emphasized social change, the new PRI's dominant focus shifted toward economic development. By the mid-1950s until the late 1970s the Mexican state controlled the economy and instituted mechanisms to protect domestic producers from foreign competition. The goal of aligning social justice with economic development began to fade, and the gap between the wealthy and the poor continued to widen thereafter. The populist aspect of industrial development disappeared while the role of the state in the economy grew even more. The state's alternative development goal included advancing the interests of private investors, both domestic and foreign (Walker 1995).

The departure from the measures put in place during the 1940s showed an even uglier side of the Mexican political system under the PRI. Social injustice and human rights abuses became even more overt by the late 1950s and continued well into the 1960s and 1970s. The alliance that civil society groups enjoyed with the state disintegrated. For example, workers' movements were confronted, strikes were broken, labor leaders were incarcerated, civil society leaders were murdered, and student groups were attacked. Some cases include the murder of agrarian leader Rubén Jaramillo and the killing of students in the Tlatelolco Square massacre in 1968 right before the Mexico City Olympics.

Electoral fraud by the PRI did not continue only at the executive level. Rather, corruption plagued legislative elections as well. For instance, Félix Salgado Macedonio, opposition candidate for deputy in the second electoral district of the state of Guerrero and representative of the Frente Democrático Nacional (FDN; National Democratic Front), the antecedent of the PRD, exposed the fraud associated with the 1988 national elections before the congress. Macedonio presented the congress with a large number of ballots marked in his favor that authorities had partially or wholly burned, costing him an electoral victory over PRI candidate Filiberto Vigueras (Fuentes 1996, p. 60). The congress eventually allowed Salgado to take his well-deserved seat while offering Vigueras another congressional position.

THE DAWNING OF THE OPPOSITION POLITICAL PARTY

By the end of the twentieth century Mexico had experienced a profound change in its political system that demonstrated a move toward a more representative democracy. President Ernesto Zedillo of the PRI pushed for the first primary in Mexico starting with the 1999 elections. Zedillo's break from political tradition, which kept the PRI in power at all levels of government, set the stage for other parties to have a fair opportunity and the people to have a real voice during national elections. As a result of these changes, a candidate from PAN was voted into the presidential office in fair, democratic elections. Many Mexicans compared the election to the fall of the Berlin Wall (Kaye 2000).

Vicente Fox Quesada, a former Coca-Cola business executive and former governor of the Mexican state of Guanajuato, won the Mexican presidency in 1999. He surpassed Francisco Labastida Ochoa, who was chosen to represent the PRI during the primary, with 43 percent of the vote to 37 percent. Cuahtémoc Cárdenas Solórzano, the candidate for the PRD and son of former Mexican president Cárdenas, followed with only 17 percent of the popular vote. Fox's message of addressing the failures of the previous administration under Zedillo, such as resolving the conflict in the southern Mexican state of Chiapas and cracking down on drugs, resonated well with voters who had vivid memories of the problems under the PRI. For example, the 1990s were plagued with charges of corruption, political ties with powerful drug lords, the collapse of the Mexican peso, and an economic recession. PAN, in the words of the Mexican foreign minister Jorge Castañeda during an interview, served as the party "of prosperity, of modernization, of democracy, of respect for human rights" (Kaye 2000). The ideas of modernization and prosperity did not stray too far from the efforts of Mexican president Carlos Salinas de Gortari of the PRI during the early 1990s. Salinas pushed Mexico into a different direction economically by opening the country's market and substantially reducing state involvement in the Mexican economy through the signing of the North American Free Trade Agreement (NAFTA) with the United States and Canada in 1994.

The PRI suffered an even more embarrassing defeat in the 2006 national elections. The PRI candidate Roberto Madrazo Pintado garnered only a little over 20 percent of the vote. However, the majority of the popular vote was split between two other opposing parties. The PAN candidate Felipe Calderón won the election by an extremely small margin relative to the PRD candidate Andres Manuel Luis Obrador, with 36 percent and 35 percent respectively. Most analysts anticipated that Manuel Luis Obrador would win the election with his left-wing populist ideology, which emphasized social improvement, since early poll numbers showed him leading the national election. His campaign did not sound very different from the policies of Cárdenas fifty years before. It must be noted that Manuel Luis Obrador was a member of the PRI under the Mexican president Luis Echeverría's administration from 1970 to 1976, but he left after being frustrated with the party's inability to produce change (Castañeda 2006).

FUTURE OF THE PRI

Although the PRI lost the presidential elections in 1999, it continued to govern seventeen out of Mexico's thirty-one states and dominated the congress. Under President Fox, the PRI still maintained a significant amount of authority in both houses of congress. The PRI was able to stall a number of Fox's reform initiatives and even blocked one of Fox's trips to the United States in 2002 (Peters 2002).

The PRI merely tried to remain afloat in Mexico's political waters after badly losing its grip in both houses of congress in 2006. The party lost the majority of its seats in congress for the first time since its founding. PAN dominated both the executive and legislative branches of Mexican government as of 2007.

The future of the PRI remained bleak as the party suffered from internal turmoil. For the party to remain important in Mexican political life, it would have to redefine itself, emphasize coalition building, and establish a clear ideology and focus. In that the Mexican populace has become divided along the lines of left and right ideology, some analysts have even presented the possibility that the PRI, which is also divided along left and right ideological lines, may split into two separate political parties (Grillo 2006).

SEE ALSO *Corporatism; Mexican Revolution (1910–1920)*

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Sarita D. Jackson

PARTIES

SEE *Political Parties.*

PARTITION

To paraphrase Winston Churchill, partition is the worst solution to political conflict, perhaps, except all others. Partition is an inadequate political tool whose time always comes when other solutions seem to be lacking. Often employed to resolve conflict and restore stability, partition frequently tends to exacerbate that which the division was intended ameliorate. In light of the tendency for partition to rise to the top of a list of options and the unintended

consequences of partition, consider: What is partition, when does it succeed, and when does it fail?

Partition is the political division of territory. It is usually employed to resolve violent ethnic or religious strife. By physically separating conflicting groups, those who advocate partition stress its conflict-resolution benefits and downplay its unforeseen costs. It is most often precipitated by armed conflict, which in several notable cases has invited some manifestation of international intervention. However, partition is not a panacea and often tends to increase rather than ease tensions.

Partition succeeds when the following occur: (1) both sides accept (albeit sometimes grudgingly) the division; (2) violent conflict has been permanently suspended; and (3) stability is restored, and a lasting peace can be guaranteed. All these factors considered, however, partition is often an inappropriate and unsuccessful method of conflict resolution. Indeed, partition may intensify differences, inflame ethnic rivalries, damage domestic infrastructure, and be accompanied by forced mass migrations. The desire to separate warring groups or factions to avert further violence may appear to be a rational response, but history has demonstrated that partition is an imperfect solution. Perhaps with the exception of the comparatively peaceful "Velvet Divorce," in which the former Czechoslovakia was split into separate, homogenous, mutually consenting Czech and Slovak nations, one would be hard-pressed to locate an example of a truly successful partition (see Kumar 2003).

Partition fails when the following occur: (1) a partition agreement fails to meet the demands of opposing sides; (2) violence is not significantly diminished or eliminated (i.e., a permanent ceasefire has not been reached); 3) relations between opposing groups are not improved but rather deteriorate, culminating in renewed conflict. In this respect, partition has proven an ineffective political instrument. Conflicts are aggravated, rivalries are intensified, and in some instances violence continues uninterrupted. To explore why partition fails, consider its historical applications.

The partition of Palestine, while not only one of the most controversial territorial divisions in contemporary history, demonstrates the degenerative effect partition can have on ethnic violence. The eruption of violence between Jewish settlers and indigenous Arabs convinced the international community of the need to establish two independent states within the territory of Palestine: one Jewish and the other Arab. The partition was reluctantly accepted by the Jewish Agency but rejected by Arab leaders, who believed their right to national self-determination had been unjustly abrogated.

Following the 1948 war, Israel seized more land than had been provided under the United Nations Partition Plan, and as a result, hundreds of thousands of Palestinian refugees were displaced. The partition did little to mitigate the subsequent Arab-Israeli conflict; the division inflamed tensions, leading to several wars between Israel and its Arab neighbors. The occupation of Palestinian territory by the Israel Defense Forces followed the 1967 war. The occupation led to the emergence of Palestinian extremism, which in its various phases has waged a nearly interminable terrorism campaign against Israel. Although the partition of Palestine resulted in the establishment of an independent state of Israel, violence between Israel and Palestine, while abated by intermittent periods of calm, has continued almost without pause since partition.

Partition was not only the rage in Palestine; it was also the proposed British solution to the question of India. Two authors, Larry Collins and Dominique Lapierre, offer insightful examinations of both the partition of Palestine and partition of India in *O Jerusalem* (1988) and *Freedom at Midnight* (1997), respectively.

Like the partition of Palestine, the partition of India was both promising and problematic. To relieve itself of its colonial responsibilities in India, which had become increasingly onerous because of growing civil unrest and the high costs of maintaining a large colony, the British initiated the process of partitioning India into distinct, homogenous Hindu and Muslim nations. While the 1947 partition created independent Indian and Pakistani states, the division also resulted in a large-scale migration and widespread violence, displacing and killing multitudes of civilians.

The legacy of the partition of India has contributed to several long-term problems. These include myriad border disputes and the seemingly interminable conflict over the predominantly Muslim but Indian-controlled region of Kashmir. As of the end of the twentieth century, both states were in possession of nuclear weapons. This situation not only conjures up ever more nightmarish scenarios of Indo-Pakistani wars but has also served to attenuate stability on the subcontinent.

In other cases, partition was used by regional and global powers to create "spheres of influence" (Samaddar 2003). New states were suddenly being carved out and molded in the political and ideological image of more dominant states. Partition, therefore, is not only an instrument of conflict resolution but also a means of securing greater influence and political leverage in geostrategic regions of the world. On the Korean peninsula, the Soviet Union and the United States created proxies in North and South Korea. On Cyprus, an intense rivalry between Greece and Turkey split this tiny island into a modern Greek-supported state and a fledgling Turkish one, recognized only by the government in Ankara. And while armed conflict has not occurred in these areas for some

time, the prospect of another Korean War or Greco-Turkish conflict remains. The Demilitarized Zone between the two Koreas is the most heavily fortified border in the world, and Greece and Turkey continue to devote significant portions of their national budgets to defense expenditures.

Partition is also a potential solution to the ongoing conflict in Iraq, in which the country would be divided into separate Kurdish, Sunni, and Shiite governments. At the center of the discussion are commentators such as Leslie Gelb and Senator Joseph Biden (Delaware), who have proposed decentralizing Iraq into autonomous ethnically homogenous Kurdish, Sunni, and Shiite federations. The plan assumes that fundamental ethnic differences, particularly between Iraqi Sunnis and Shiites, are what is fueling the insurgency and pushing Iraq perilously close to total civil war. Gelb and other proponents of this plan argue that by allowing each group to control its own affairs, sectarian conflict would diminish and U.S. forces would be allowed to withdraw and redeploy in smaller numbers to avoid a long-term American military commitment in Iraq.

But like most partition plans, the Iraqi partition plan is both promising and problematic. Partition may succeed in separating warring groups and reducing sectarian strife, but the creation of independent Kurdish, Sunni, and Shiite states presents a host of other problems. A Kurdish state is guaranteed to upset Turkey, which has been engaged in an ongoing struggle against Kurdish separatists; a Sunni state would likely be a source of further tension as very little oil is located in the area, which would be allocated to Iraq's Sunnis; and finally, a Shiite state has the potential to become a radical theocracy aligned with Iran. Again, there are benefits to the solutions but there are also very dire and troublesome costs.

In the absence of more effective solutions, partition is often the only viable remedy remaining. Partition, though, is usually an insufficient method of conflict resolution because rather than reduce or eliminate conflict, it tends to exacerbate tensions. The purpose of conflict resolution, of which partition is a method, is to formulate a solution whose principal objective is to facilitate the cessation of further hostilities. Partition aims to resolve conflicts by separating opposing groups or factions that have demonstrated that they are incapable of coexisting within the same borders. But the employment of political division does not eliminate these problems as the architects of partition intend, but in many cases amplifies them.

SEE ALSO *Communalism; Conflict; Decolonization; Ethnic Conflict; Ethnic Fractionalization; Ethnocentrism; Nationalism and Nationality; Negotiation; Peace; Secession; Separatism*

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PARTY SYSTEMS, COMPETITIVE

Competitive party systems can be defined in two ways. They may be defined as all party systems in democratic countries, where competition among parties is at least theoretically possible. Alternatively, they may include only those party systems in which elections involving actual competition among two or more parties routinely takes place. For the sake of a broader focus of competitive party systems, the alternative definition is more encompassing and defined further in this entry. Competitive party systems differ from one-party systems primarily in terms of the number of parties that are able to seriously compete for power during elections. In one-party systems, a single dominant party routinely wins elections by a wide margin while all other parties receive quite small vote shares. In competitive party systems, by contrast, two or more parties generally receive substantial numbers of votes during elections. Hence, there is the possibility of alternation in power, in which the party that governs the country at the point of the election loses to an opposition party.

Because one or more opposition parties can meaningfully threaten the governing party with removal from power, elections in competitive party systems can serve as contests among various visions for the future of the country. Anthony Downs, in *An Economic Theory of Democracy* (1957), showed that, under certain conditions, the competitive nature of elections causes party systems to become extremely responsive to the ideological and policy desires of the electorate. If elections are decided primarily on the

basis of parties' alternative platforms and proposals, then, competitive party systems may outperform one-party systems in terms of representation.

Elections in one-party systems are often thought to be characterized by patronage politics; that is, gifts of goods or services from the political party to voters. However, patronage politics play an important role in competitive party systems, as well; parties may use patronage to win voters who prefer another party's ideology or policy proposals. At the extreme, elections can become a contest to see which party can offer more patronage to a larger number of voters, with ideology and policy issues entirely neglected. Hence, patronage threatens to undermine the advantage that competitive party systems have over one-party systems in terms of representation.

The majority of party systems in democratic countries throughout the world are competitive rather than one-party systems. Democratic one-party systems have proven viable for long periods of time in several countries, such as Japan, Botswana, and Sweden. In other countries, such as Mexico and Singapore, maintenance of a one-party system depended on the ability of the government to impose restrictions on democracy. However, most party systems in democratic Europe and in the Western Hemisphere have been competitive, as have the party systems of some democratic countries in other regions.

KINDS OF COMPETITIVE PARTY SYSTEMS

The most common approach to differentiating among kinds of competitive party systems is to distinguish by the number of parties that have a meaningful chance of winning elections. By definition, competitive party systems contain at least two important parties, but they sometimes have many more. Hence, the simplest distinction to make is between two-party and multi-party systems. Giovanni Sartori's *Parties and Party Systems* (1976) extends this typology, dividing multiparty systems into limited pluralist systems with three to five important parties and extreme pluralist systems with more than five significant parties. Two-party and limited-pluralist systems lead political parties to moderate their ideologies and policy proposals in order to win the support of centrist voters during elections. Extreme pluralist systems, by contrast, are said to encourage parties to radicalize their proposals in order to differentiate themselves from the many competitors within the party system.

Since the publication of Sartori's work, discussion has focused on a quantitative classification of the number of effective parties in a competitive party system, typically denoted as N. Because N is a continuous measure of the number of meaningful parties in a system, it allows precise descriptions of differences in party systems across countries and over time. If S_i represents the vote share of the ith party in a given election, the formula for N in that election is:

$$N = \frac{1}{\sum_i S_i^2}$$

Other analysts have proposed that competitive party systems be distinguished according to their degree of institutionalization. A highly institutionalized party system is one in which the same set of specific political parties persists across elections, the parties have well-developed organizational and psychological connections to the electorate, and party leadership succession is handled by well-specified intra-party procedures. By contrast, a weakly institutionalized party system consists of parties that appear and disappear as organizations on a relatively regular basis; parties form only weak, temporary ties with voters; and party leadership is intensively concentrated in specific individuals, creating a major party crisis each time that a new leader is needed. Most party systems in developed countries are relatively institutionalized, whereas many party systems in less-developed countries and in the post-Soviet world are more weakly institutionalized.

CAUSES OF DIFFERENCES IN PARTY SYSTEMS

What factors determine the kind of competitive party system that a democratic country will have? Scholars have offered two major explanations of observed divergences in the number of parties within a party system: the number of major divisions within society, and electoral rules.

In their essay "Cleavage Structures, Party Systems, and Voter Alignments: An Introduction" (1967), Seymour Martin Lipset and Stein Rokkan argued that European party systems have been profoundly shaped by the resolution that each society has found to a series of shared challenges, each of which encourages a new segment of voters to form a lasting attachment to some specific political party. For example, if the society resolves debates over the proper relationship between church and state early on by allowing religious liberty, then the party system is likely to lack political parties based on divides among religious denominations. If, however, state sponsorship of one particular church persists, then political parties may be expected to form along religious divisions in order to either contest or protect the established church's privileges. A major implication of this idea is that societies with a larger number of major social divisions will have more political parties than societies that are divided along fewer important social lines.

Maurice Duverger's *Political Parties, Their Organization and Activity in the Modern State* (1954) explains

differences in the number of political parties within a competitive party system in terms of electoral rules. He argues that electoral systems in which only one candidate per electoral district can win produce two-party systems. On the other hand, electoral systems that allow multiple winners per district result in multi-party systems. Hence, decisions about electoral rules are one of the major tools that societies have for managing the kind of competition that emerges among parties within a party system.

To date, no meaningful consensus has emerged about the factors that cause party systems to become institutionalized. Scholars have argued that greater length of democratic experience and higher levels of economic prosperity may encourage the institutionalization of competitive party systems, but these arguments are understood to be at best partial explanations of the phenomenon of institutionalization among competitive party systems.

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Jason Seawright

PASINETTI, LUIGI

1930–

Luigi Lodovico Pasinetti was born in Zanica, Italy (near Bergamo), on September 12, 1930. Since 1962 he has been a professor of economic analysis at the Catholic University of Milan, where he had obtained his degree in economics in 1954 under the tutelage of Francesco Vito (1902–1968) and Siro Lombardini (b. 1920).

Pasinetti moved to Cambridge University in 1956. He completed his PhD there in 1962 and later became a reader in economics. Study at Cambridge, with research visits at Oxford, Cambridge (Massachusetts), and elsewhere, allowed him to gain access to the top economic journals. His early paper on Ricardian economics (Pasinetti 1960; Pasinetti 1974) remains a classic.

Pasinetti's own research is, first and foremost, an inquiry into the dynamic theory of economic growth and income distribution. His doctoral dissertation, "A Multi-Sector Model of Economic Growth," developed into a well-known piece of analysis (Pasinetti 1965), which would further develop into his 1981 book *Structural Change and Economic Growth* (see also Pasinetti 1993). His entire body of work, in a characteristic Cambridge fashion, is explicitly rooted in classical economic analysis. Pasinetti, who has always felt a deep attachment to Cambridge, became the senior heir of the Cambridge post-Keynesian school (Pasinetti 2006). He was closely associated, in particular, with Richard Kahn (1905–1989), Nicholas Kaldor (1908–1986), Joan Robinson (1903–1983), and Piero Sraffa (1898–1983). From 1976 onward, Pasinetti turned full-time to his Milan Chair at the Catholic University, where he was elected dean of the faculty of economics. A dedicated teacher, he is also the author of a well-known textbook on the theory of production (Pasinetti 1977).

During the 1960s Pasinetti's theoretical hits were outstanding and surprising. His 1962 theorem (also in Pasinetti 1974) on the *Cambridge equation* would soon become famous and give rise to a vast literature. This equation is a long-run equilibrium relationship between the rate of profit and the rate of growth, usually given as $rs_c = n$, where r is the rate of profit, n is the rate of growth of the population, and s_c is the rate of savings of capitalists. Pasinetti's contribution demonstrated that, surprisingly, the workers' rate of savings has no effect whatsoever on the equilibrium rate of profit. Pasinetti's creative insight thus provided a correction and an intriguing generalization of the Kaldor model of growth and distribution. This theorem has also been called the *Pasinetti paradox*. Thereafter, it became customary to speak of the Kaldor-Pasinetti model of growth and distribution. Mauro Baranzini and G. C. Harcourt (1993, pp. 12–17) discuss in detail the various strands of analysis to which the Pasinetti paradox has given rise.

Pasinetti was an important participant in the Cambridge capital controversies. In 1965 David Levhari, a student of Paul Samuelson, published a paper that sought to demonstrate that some of the paradoxes in capital theory that had emerged in the literature and had been brought into full light in 1960 by Sraffa only had limited validity. However, Pasinetti proved conclusively that there were no grounds for such an attack on Sraffa and the Cambridge view. Pasinetti's paper was first presented in 1965 in Rome at the First World Congress of the Econometric Society. The following year it opened a special issue of the *Quarterly Journal of Economics* (Pasinetti

1966), where Levhari's theorem was acknowledged to be false by the author and by Samuelson himself. It was an impressive showdown that honors the economic profession and has since given rise to a full range of insights in the theory of capital (Pasinetti 1969).

Pasinetti's scientific contributions focus on two main issues: (1) the critique of the neoclassical system; and (2) the completion of the Keynesian system and its extension to distribution and growth. Pasinetti's most significant contribution on both accounts is found in *Structural Change and Economic Growth* (1981), one of the outstanding achievements in economic dynamics. Along with his dissatisfaction with aggregate dynamic models and the deceiving character of a number of disaggregated models (e.g., John von Neumann's model), it is the historical fact of the widespread unevenness of development processes—Pasinetti himself argues—that provides the drift to structural dynamics.

Pasinetti's contribution to economic growth theory has a special place: His system provides the only theory focusing on the conditions under which an economic system will reach and maintain full employment and full capacity utilization in the long run when the system is subject to structural change. Classical economic analysis, here again, provides the foundation to his framework. But Pasinetti has no interest in establishing a canon or dogma on value and distribution: Rather, by building on the open and innovative side of the classical tradition, his schemes of structural economic dynamics focus on technical progress and human learning and form a pathbreaking contribution to growth theory.

SEE ALSO *Cambridge Capital Controversy; Pasinetti Paradox*

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Pier Luigi Porta

PASINETTI PARADOX

The Pasinetti Paradox arises in a model of an idealized economy inhabited by two distinct classes: workers who save a fraction of their wages and of any profit income (also called interest) earned by their past savings; and capitalists who live exclusively off the profits generated by their wealth, saving a fraction, s_c, of their profit income. All wealth is held in the form of capital, and the ratio of profit to capital is called the rate of profit (or the rate of interest by some writers), r. The growth rate of capital is equal to the growth rate of the labor force, n, so that the economy remains in a state of full employment. Under these conditions, Luigi L. Pasinetti showed that a very simple equation describes the long-run (or steady state) relationship between the rate of profit and the rate of growth: $r = n/s_c$. This remarkable equation implies that the rate of profit is determined by the rate of growth and the saving rate of the capitalists, independently of the saving of workers or the underlying technology of the economy, which constitutes the Pasinetti Paradox. It has been at the center of a lively controversy between two different schools of economic thought since its discovery.

One might find it paradoxical that an increase in the saving rate of workers would have no effect on the rate of profit since this, by making capital (e.g., machines and factories) more abundant in relation to labor, might bid

up wages and drive down the rate of profit. Pasinetti (a leading classical or neo-Ricardian economist) showed that this effect will not persist into the long run. The rate of profit will decline temporarily, but that would reduce the income of capitalists, allowing the share of wealth owned by workers to increase. Because workers are, by assumption, less thrifty than capitalists, this redistribution will eliminate the need for any change in the rate of profit in the long run. Profits thus have a privileged status in the classical theory of income distribution, for capitalists receive a rate of profit that is just high enough, after deductions for their own consumption, to support the saving necessary for sustained full employment; wages emerge as a kind of residual.

The neoclassical economists find it paradoxical that the rate of profit is not in some way determined by technology, as this seems to refute their marginal productivity theory of income distribution. Paul Samuelson and Franco Modigliani (leading neoclassical economists) pointed out that the Paradox only applies to an economy in which the workers' saving rate is low relative to the capitalists' saving rate. When workers save so much that their wealth grows permanently faster than the capitalists' wealth, the system will tend toward a one-class economy in which the capitalists' share of wealth becomes vanishingly small. This discovery led to an ongoing controversy about whether the two-class or one-class model better describes existing capitalist economies. While the early debates were often tied up with the validity of the marginal productivity theory, it has become evident that even when marginal productivity theory fails, it is usually possible for an economic model to have two possible outcomes, depending on whether the workers' saving propensity exceeds or falls short of some well-defined threshold value.

SEE ALSO *Cambridge Capital Controversy; Economic Growth; Income Distribution; Modigliani, Franco; Neoclassical Growth Model; Pasinetti, Luigi; Samuelson, Paul A.; Solow, Robert M.*

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PASSING

Passing refers to a person changing his or her racial or ethnic identity. The term entered the common vocabulary under Jim Crow—the regime of racial segregation in the United States that emerged in the late nineteenth century and lasted into the 1960s. During this time period, many U.S. states and communities adopted the "one drop rule," which held that a person with any African ancestry whatsoever—no matter how remote—would be classified as "Negro." Under Jim Crow, many people with "one drop of black blood" chose to identify as white to evade racial discrimination. Numerous novels and films of this period portrayed the phenomenon, usually in the form of a tragedy.

Two types of individual passing occurred under Jim Crow. In "situational passing," a person of color presented a white identity only in certain situations—for example, to obtain employment in a white-only workplace or to gain entry into a white-only public facility such as a theater or train car. The situational passer retained his or her minority identity at home. The temptation of situational passing was generally understood and tolerated among the African American population.

Some people engaged in full-time passing, commonly referred to as "crossing over" or "passing over." A person who permanently crossed over the color line into a white identity cut most social ties with African American family members and friends. Avoiding contact with other blacks was necessary to prevent arousing suspicions within a new, white social milieu. Because people who crossed over were lost to the African American community, this type of passing was widely condemned by black editorialists and political activists.

In the United States, the Jim Crow–era conception of "passing" implied some degree of subterfuge, in which the person who passed was seen as an impostor who deceived his unsuspecting audience. This conception of passing emerged in the historical context of scientific racism and the one-drop rule, which made the color line seem a rigid boundary based on science rather than a social construction.

In other times and places, changing racial-ethnic identity was commonly done out in the open, often in the court system or as part of a public appeal. Caribbean and Latin American countries did not develop the rigid, one-drop conception of nonwhiteness that existed in the United States under Jim Crow. The saying "money whitens" is a bit of folk wisdom that observes the conflation of class with race, that a rich man is more likely to be accepted as an honorary white than a poor man. In the Spanish colonies, it was possible to purchase through the court system a *cédula de gracias al sacar*—an expensive document that was valuable because it officially removed

legal disabilities from the document's bearer, such as illegitimate or multiracial birth status.

Such "passing by permission" was possible in situations where the color line was less clearly defined and thus more permeable. Passing by permission was occasionally available in the United States prior to the Jim Crow era. Some courts granted status as an honorary white to individuals of sufficiently light complexion and sufficiently respectable social status. However, this type of passing became rare in the post–Civil War era. By the early twentieth century, as the one-drop rule gained sway, passing by permission was mostly defunct in the United States.

Although individuals could not pass by permission in the United States under Jim Crow, "group passing by permission" did occur. In rural areas of the southern Atlantic seaboard, communities of mixed ancestry who had been free before the Civil War were occasionally permitted to convert to an American Indian identity and given a slightly higher status than freed slaves (Berry 1963). The motivation for the white community was to pretend that racial mixing between whites and slaves had never occurred by recategorizing the offspring of such unions as Indians. Another motive for conservative white politicians prior to black disfranchisement was that they were able to co-opt lighter-complected voters by making them honorary Indians, thereby gaining support for Jim Crow from a portion of the nonwhite population.

As the Jim Crow era ended in the 1960s, racial-ethnic identities became seen more as an option that each individual could choose for him or herself (Waters 1990). For people of mixed ancestry, self-identification became an acceptable standard, replacing the rigid one-drop system to some extent. As a consequence, reports of African Americans passing as white have mostly disappeared today.

By the late twentieth century, a new phenomenon had emerged—"reverse passing"—in which people raised with a white identity would claim a minority identity to benefit from minority set-asides in business, education, or government. For example, a federal court determined that the Malone brothers of Boston had falsely claimed to be African American to gain employment in the city's fire department under affirmative action criteria (Ford 1994).

More common is the phenomenon of the white "wannabe" passing as American Indian. In one notable case, a former white segregationist politician named Asa Carter adopted a new identity as Forrest Carter and achieved best-seller status as a Cherokee author. In the academy, Ward Churchill was exposed as having falsely claimed to be enrolled in the Keetowah Cherokee Nation in order to advance his career as an ethnic studies professor at the University of Colorado. Genealogical research revealed no evidence of Churchill's claimed American Indian ancestry. After complaints by a group of American Indian professors in the early 1990s, some universities now require that applicants must show proof of tribal enrollment when requesting affirmative action review as American Indians. However, racial-ethnic self-identification remains the de facto standard in most workplaces today, which makes passing mostly a thing of the past.

SEE ALSO *Acting White; Blood and Bloodline; Race; Whiteness*

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PASSION

SEE *Eroticism.*

PASSIVE RESISTANCE

Passive resistance commonly refers to actions of nonviolent protest or resistance to authority. The central feature is the conscious choice by the actors to abstain from a violent response even in the face of violent aggression. The term came into common use during the independence struggle in India between the 1920s and 1948. It has been used widely by groups who lack formal authority or position and has sometimes been called the "weapon of the weak."

The term is misleading, however, in that it implies passivity. In fact, passive resistance can be thought of as an active, but nonviolent, mode of struggle in a social conflict. The actions that fall under the term *passive resistance* include many forms of civil disobedience and noncooperation—such as sit-ins, boycotts, blockades and occupations of buildings, tax refusal, and alternative publications

and media. More active forms of passive resistance include strikes, walkouts, protest marches, theatrical protests, and hunger strikes.

Passive resistance is rooted in a relational view of political power that sees the rulers of a community or nation as dependent on at least the acquiescence of those who are ruled. Thus, even a dictator's power rests to an important extent on some level of cooperation by the population. This view was articulated by Étienne de la Boétie (1530–1563) in the sixteenth century, as well as by John Locke (1632–1704). The premise that governance derives its legitimate authority only from the consent of the governed is the foundational idea of modern democracy.

One of the foremost contemporary scholars of the political perspective of passive resistance is Gene Sharp. Sharp argues that nonviolent struggle may reflect a moral commitment to pacifism by leaders or activists in a movement (Mohandas Gandhi [1869–1948] and Martin Luther King Jr. [1929–1968] are prominent examples), but pacifism is not a necessary condition. Passive resistance can be explicitly calculating, practical, and strategic and used effectively by those with no moral commitment to pacifism. In the long view of history, it is likely that very few practitioners of passive resistance have been moral pacifists. Arguably, the social power wielded through passive resistance also is democratizing, because it disperses power broadly in society. Like moral pacifism, however, nonviolent struggle does not depend on democracy to be used.

Seen in this broad scope, passive resistance has a long and varied history. Techniques of passive resistance are evident in Aristophanes' play *Lysistrata* (411 BCE), where the women refuse to have sexual relations with their husbands until the men cease their war making. During the War of Independence (1775–1783) in the United States, colonists refused to obey British demands for stamp taxes or for the billeting of troops. Henry David Thoreau (1817–1862) famously articulated his call for civil disobedience with his act of tax refusal during the Mexican War in the 1840s. Suffragists held demonstrations in major cities in the United States and Great Britain in the early years of the twentieth century; a few participated in hunger strikes.

Examples of passive resistance are easily found in many societies in the late twentieth and early twenty-first centuries. Student protestors occupied Tiananmen Square in Beijing in 1989. Nonviolent movements across Eastern Europe brought down Communist governments in the same year. In 2000 a nonviolent movement in Serbia ended the dictatorship of Slobodan Milošević (1941–2006). Civilians on both sides of the Israeli-Palestinian conflict have periodically employed the technique. Indigenous peoples forced the collapse of the government in Bolivia in 2005 with protests and work stoppages.

The most important development of the concepts of passive resistance came from Mohandas Gandhi and the Indian campaigns for independence. As a young lawyer in South Africa at the turn of the twentieth century, Gandhi organized Indians to resist discrimination and unequal treatment. Claiming their rights as citizens of the British Empire, they refused to carry passes and held public acts where they burned the government-issued passes. Out of these experiences, Gandhi developed his idea of *satyagraha*, which is often translated as "soul force" or "truth force."

One of the key principles of Gandhi's use of passive resistance was to find opportunities to publicly confront unjust laws or authority. Protestors, or *satyagrahis*, defied the laws, but sought to maintain a posture that treated the agents of authority with respect and even compassion. Gandhi argued that the means of struggle must be morally compatible with the ends being sought. Protestors often submitted to arrest and even violence, but did not resort to violence themselves. In a protest march to the gates of the saltworks in Dharsana in 1931, for example, protestors willingly walked up to the waiting police, who beat them brutally.

Passive resistance gained a broad public recognition in the United States as the civil rights movement exploded in the 1950s and 1960s. Throughout the movement years, techniques of passive resistance were used both to assert a moral position about rights and equality and to apply economic and political pressure. Martin Luther King Jr. drew on Gandhi and his own Christian tradition to formulate a strategy of nonviolence. Like Gandhi's *satyagrahis*, civil rights activists marched peacefully and publicly in Birmingham, Alabama, in Selma, Alabama, and elsewhere. They also accepted upon themselves the costs of their actions, including discomfort, arrest, beatings, and even death.

Nonviolent actions often also exerted economic and political leverage. Boycotts of busses and department stores pressured private business to end their policies of exclusion. Sit-ins at segregated lunch counters disrupted business until owners relented. Defiant demonstrations often led to mass arrests, which encumbered the police and judicial systems. Provocations of the police to brutality gained national and international political sympathy for the movement.

In the late twentieth and early twenty-first centuries, the uses of passive resistance in many conflicts around the world became more overtly strategic and less concerned with the moral character of the tools. Passive resistance, one of many forms of nonviolent action, provides a source of power to those disenfranchised from traditional poli-

tics. When used as part of broader strategy, it has contributed to powerful movements for social change.

SEE ALSO *Civil Disobedience; Civil Rights; Civil Rights Movement, U.S.; Gandhi, Mohandas K.; King, Martin Luther, Jr.; Mexican-American War; Morality; Protest; Resistance; Thoreau, Henry David; Violence*

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PATH ANALYSIS

Path analysis is a widely used technique for modeling plausible sets of causal relations among three or more observed variables. In the social sciences path analysis has been widely used especially in sociology, and also in psychology (most notably in areas of child or lifespan development or other longitudinal research); elsewhere, it has proven useful in biology, particularly in genetics (including behavioral genetics).

PATH DIAGRAMS

Path models are typically represented in the form of path diagrams, but can also be modeled as a set of regression equations. A path model can include any number of independent (or exogenous) variables, any number of dependent (endogenous) variables, and any number of intermediate variables, which are both dependent on some variables and predictive of others. In a path diagram, each variable is represented. The hypothesized links among variables are shown by arrows, representing predictive or correlational relations.

In most cases all of the exogenous variables are modeled with all possible correlations among them represented. A failure to include such a correlation would in effect be a hypothesis that that correlation equals zero, which is rarely applicable to measured variables. Endogenous variables (those with predictive arrows, or *paths*, leading to them) cannot be included in correlational relations. Typically each endogenous variable will have one additional path leading to it from an unspecified source, representing all sources of variance in the endogenous variable that are not already modeled, called the residual or the disturbance. The absence of this arrow indicates a hypothesis that all of the variance is accounted for in the model which, again, is rarely the case. These residual variance sources are unmeasured exogenous variables that can be correlated with each other or with observed exogenous variables.

MODEL ESTIMATION

When the path model has been established, the next step is to estimate the path coefficients. In conventional multiple linear regression, two or more independent (or exogenous) variables are modeled as predicting one dependent (endogenous) variable. The coefficients derived in multiple regression are partial regression coefficients: the regression of the dependent variable on each independent variable, holding the other independent variables constant. Path analysis is much the same. Each path coefficient is a partial regression coefficient: again, the regression of the specified endogenous variable on the specified "upstream" variable, controlling for the other variables that have paths leading to the endogenous variable. And thus the path coefficients are interpretable as partial regression coefficients: the change in the downstream variable per unit change in the upstream variable, holding all other variables constant. Certain hypotheses involving the path coefficients can be tested as in regression, such as the null hypothesis that the path coefficient equals zero, which is tested by the ratio of the coefficient to its standard error. In fact, if the path model is a recursive system, such that the predictions of downstream variables from upstream can be depicted in a block triangular matrix (where the matrix elements are the effects of the upstream variables [columns] on the downstream variables [rows]—i.e., no variable is both upstream and downstream of a given other variable), then the path analysis can be completely conducted as a series of sequential ordinary least squares regression analyses. In more complex models, other algorithms such as maximum likelihood are needed.

More commonly the path model is estimated in software for structural equation modeling. Structural equation modeling is an extension of path analysis, in which the paths of interest are typically among latent (unmeasured) variables, or factors, with an explicit measurement model linking the factors to observed variables. As a special case of structural equation models, path models can easily be fit in the more sophisticated software.

An important benefit of such software is that it calculates a number of indices of fit of the model. A fitted path model allows for the calculation, from the various path

coefficients and estimated variances, covariances, and residual covariances, of a model-implied variance/covariance matrix of the original variables—that is, a covariance matrix that is consistent with the fitted model. Broadly speaking, the fit of the model is an assessment of how well the model, with its estimated coefficients, implies a covariance matrix that matches the original matrix from the data. If there is no significant discrepancy, as measured by a chi-squared statistic, then it may be concluded that the path model is consistent with the data. Note that this does not necessarily indicate that the model is an accurate depiction of causation in reality, but only that it is not inconsistent with reality as indicated by the covariance matrix.

There has been, however, much debate over the utility of the chi-squared statistic. It is widely agreed that a non-significant chi-squared results in a failure to reject the model. However, there may be cases where the chi-squared statistic is sensitive to small deviations between the actual and implied covariance matrices that are not of practical importance to the researcher; this is especially true when the sample size is large. As a result, numerous statistics have been developed to assess approximate or close fit. Among the more prominent of these are the Comparative Fit Index, the Tucker-Lewis Index, and the Root Mean Squared Error of Approximation.

HYPOTHESIS TESTING

The test of model fit is one of the primary results of fitting a path model. Other hypotheses of interest in path analysis frequently involve constraints on the path coefficients: for example, that two path coefficients are equal to each other, or that a set of three coefficients are all equal to zero. These can readily be tested in structural equation modeling software by the estimation of nested models. In this situation the fit of a full model (without the constraints) is compared with a restricted model (with the constraints applied in the estimation process). Two such models are nested if the restricted model can be created strictly by imposing constraints on the full model. If the full model fits the data well, then the difference between the chi-squared statistics for the two models is itself distributed as a chi-squared, with degrees of freedom equal to the number of constraints applied. A significant chi-squared statistic indicates that the restricted model fits significantly less well than the full model.

APPLICATIONS

Path analysis has found utility in a number of areas of the social sciences. Two areas in which it is most prominently featured are behavioral genetics and longitudinal research. In behavioral genetics, one of the most common tools for evaluating heritability is the ACE model, a path model which allows partitioning of variability in twin studies into additive genetic effects, common (shared) environmental effects, and non-shared environmental effects. In child development or lifespan development—or any longitudinal study—path analysis is well suited as the causal direction between variables is typically unambiguous: The hypothesized causation is from the temporally prior variable. Finally, path analysis can be especially useful in intervention studies to identify mechanisms that may mediate the effects of the intervention on the outcomes.

SEE ALSO *Research, Longitudinal; Structural Equation Models*

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PATHOLOGY, SOCIAL

Social pathology is a concept developed in modern social science to refer both to aspects of social structures and to the behaviors and values attributed to particular social categories. Definitions of *social pathology* are particular to specific times and reflect the dominant moral concerns of the era. This concept fits within the ideas of anthropologist Mary Douglas. In *Purity and Danger* (1966) she examines the universality of cultural explanations of things considered "out of order" as polluting and dangerous. These cultural constructions emerge in specific contexts. Regarding social pathology, prior to the Enlightenment in Europe, social transgressions (pathologies) were attributed to supernatural forces exerted by spirits (e.g., possession) or evil humans (witchcraft). As the Enlightenment focused on human reason and scientific understanding of the natural world, early social scientists began to objectify what they defined as natural laws of "society" that explained undesirable human behaviors as transgressions of natural law.

Modern social science developed during a period of rapid social change produced by expanding industrial capitalism and colonialism. Such processes created increased migration and a growing wealth gap between, on the one hand, colonial nations and colonized territories, and on

the other, wealthy industrialist/financiers and European working classes. These social changes produced dislocations and inequalities that led to fears among established groups of moral and social danger. In the nineteenth century, following parallel developments in the advancing science of biology, social theory often used either biology (e.g., racial types) or biological analogies to the physical body and biological processes to explain the social system.

Émile Durkheim, a French sociologist, created the foundation for the modern sociological study of society by focusing on social facts, structures, and systems rather than individuals. His profound ideas generated many concepts and laid the basis for many fields of study. Like other foundational social theorists confronting rapid change, he privileged solidarity and cohesion as normal. Durkheim introduced two analogies for a smoothly functioning social order characterized by solidarity: the machine (mechanical) and the body (organic). He envisioned society as a system seeking equilibrium with norms for behavior. *Anomie* was a pathological condition of moral breakdown at the societal level.

Throughout the early twentieth century, this emphasis on social equilibrium or structural functionalism, further developed by such thinkers as Talcott Parsons, dominated U.S. social theory. In defining equilibrium and stasis (status quo) as desirable, it was implied that change and disorder were abnormal and threatening. These pathologies were not attributed to the differential nature and value of individuals but rather to aspects of structure. Nonetheless, such ideas emphasized the value of returning to the status quo over change.

The idea of declaring the behavior of individuals in particular social categories as socially pathological followed a different trajectory. In the post-Darwin nineteenth century, Darwin's theories of evolutionary change were applied loosely in ways that misinterpreted his theory. Particular social categories or populations were seen as having an essential, innate, and immutable behavioral inferiority leading to criminal and dangerous behaviors. While Darwin saw natural selection occurring in a random, purposeless way with no implied hierarchy of worth, Social Darwinism saw different classes and races as arrayed in terms of inferiority and superiority.

The development of race studies occurred as new nation-states were restructured from former European imperial monarchies, creating a need to build national unity and loyalty among diverse citizens. This led to preoccupations with the dangers of difference and an interest in the scientific study of race. Throughout the new nations of Europe and in the United States, nascent disciplines emerged such as the now-repudiated anthropological "science" of race and the racially tinged science of criminology, which used race to predict and explain criminal behavior and justify policies of "social hygiene." In the twentieth century, the racial ideas of scientific racism and criminology continued, especially in Germany. There they culminated in Nazi racial theory, which advocated a removal of categories of people defined as biologically debased, such as Jews, Gypsies, and homosexuals.

As such racial thinking was repudiated in the twentieth century, concepts of culture and cultural relativism, as well as concepts related to the self, psychic states, and personal identity, developed. Behaviors viewed as pathological for society relied less on innate racial attributes. While they continued to be associated with specific social categories, the new link between populations and pathology emphasized cultural learning and personal experience rather than biology. While biological attributes retained explanatory power for differences between genders and sexualities (e.g., homosexuality), behavioral pathologies were more associated with improper values, choices, and psychological states.

Ideas such as the culture of poverty first promulgated by Oscar Lewis blamed poor people for perpetuating their condition through inappropriate values and "weak ego structures." A whole series of "social pathologies," from dependence on welfare to substance abuse and inner-city gang violence, were linked to having learned improper values through substandard parenting in single-parent households. Yet these explanations, which blamed specific populations for social pathology, merely replaced racial determinism with cultural determinism.

Because stability and order are privileged as natural and normal and the profound and rapid social changes of recent decades are relegated to the sphere of the abnormal and dangerous, people who are the most disadvantaged and excluded in dominant ideologies and representations, such as single mothers ("welfare queens"), nonwhites, and nonheterosexuals, are blamed for their own situations. They also function as popular scapegoats for broader social problems and "moral decline." In this way, they carry the weight of social problems not only through their personal circumstances of material and political deprivation but also through their symbolic representation as stigmatized and despised people.

Social science critiques of the culture of poverty examine ways to represent poor people as varied individuals with competence and awareness who cannot be categorized in terms of innate biology or culture. Particular behaviors of the poor can be analyzed in terms of the extremely constrained options of disadvantaged social positions, as rational strategies, or as political opposition rather than social pathology.

Moreover, in the second half of the twentieth century U.S. sociologists such as C. Wright Mills and William Ryan began to point out the role that dominant elite

interests play in defining normalcy and pathology as the status quo as well as the way this masks the relationship between structural relations of power and the social production of inequality. Blaming the victims (stigmatized and disadvantaged groups such as the poor) was shown to not only hide the effects of power and privilege but also to stifle recognition of a need to address social problems through sociopolitical change. Late-twentieth-century European social theories developed by such thinkers as Michel Foucault, Pierre Bourdieu, and others have brought issues of differential power and inequality to the fore. After continued world wars and the cold war as well as social movements advocating anticolonial independence, socialism, feminism, and civil and human rights, these ideas have emerged and have led to reexamining the ideological uses of social pathology as a way of reinforcing current inequalities in the social order.

SEE ALSO *Benign Neglect; Bourdieu, Pierre; Crime and Criminology; Culture of Poverty; Darwin, Charles; Darwinism, Social; Determinism, Cultural; Durkheim, Émile; Foucault, Michel; Inequality, Gender; Inequality, Income; Inequality, Political; Inequality, Racial; Inequality, Wealth; Lewis, Oscar; Mills, C. Wright; Morality and Inequality; Neighborhood Effects; Poverty; Social Science; Sociology*

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Judith Goode

PATINKIN, DON
1922–1995

Don Patinkin was born in Chicago on January 8, 1922, to Russian Jewish immigrants, and he died in Jerusalem on August 6, 1995. His main contribution was the integration of the theories of value and money developed in *Money, Interest, and Prices*, the most influential book on monetary macroeconomics in the 1950s and 1960s. That book grew out of Patinkin's PhD thesis, submitted to the University of Chicago in 1947 after an academic year as research assistant at the Cowles Commission for Economic Research, where he interacted with well-known economists such as Lawrence Klein, Kenneth Arrow, Trygve Haavelmo, and Jacob Marschak, among others. In 1949, after a brief period as assistant and associate professor at the Universities of Chicago (1947–1948) and Illinois (1948–1949) respectively, Patinkin moved to Israel to take up a position as lecturer in the newly created department of economics at the Hebrew University, where he stayed until the end of his life. Apart from his academic appointments at the university (as full professor after 1957 and emeritus after 1989), Patinkin also served as the first director of the Maurice Falk Institute for Economic Research in Israel from 1956 to 1972.

REAL BALANCE EFFECT

Patinkin's 1956 book may be regarded as the most important contribution to the neo-Walrasian synthesis (named after French economist Léon Walras)—that is, the attempt to build the theoretical framework of macroeconomics on a developed general equilibrium system—after John Hicks's 1939 *Value and Capital*. The process of adjustment to equilibrium was firmly grounded by Patinkin on the "method of successive approximation," Walras's theory of *tatonnement*, which had been largely neglected in the literature. Together with Paul A. Samuelson's stability analysis, the *tatonnement* provided the backbone of Patinkin's discussion of how the market solves the excess-demand equations. He criticized traditional "classical" monetary analysis for assuming that the equations of excess demand for goods determine relative prices (called the "homogeneity postulate"), while the price level is determined by the equation of exchange in the market for money. Partly motivated by the work of his former Chicago teacher Oskar Lange, Patinkin showed that this "dichotomization" of the economy into real and monetary sectors was logically inconsistent. In particular he was the first to realize that if the demand for money depended on the price level then—because of the budget constraint of agents—the demand for goods also depended on that level. Logical consistency required that the equations of excess demand for goods include real money balances as an argument in the individual utility functions, named "real balance effect" by Patinkin. The invalid dichotomization described above should be, according to Patinkin, distinguished from the "valid dichotomy" between the real and monetary sectors, expressed by the quantity theory of money as formulated

in his book: Under the assumption the agents are free of money illusion, changes in the quantity of money affect only nominal variables and leave the equilibrium value of real variables unaffected (i.e., money is neutral in the long-run).

Although the stabilizing effect of changes in the price level on real balances and, therefore, on aggregate demand had been discussed before, specifically by Gottfried Haberler in his 1937 book *Prosperity and Depression* and by A. C. Pigou in his 1943 article "The Classical Stationary State," they did not work out its implications for the integration of monetary and value theory. According to Harry G. Johnson in his 1962 article "Monetary Theory and Policy," Patinkin's criticism of classical monetary theory sparked off a debate about the accuracy of his historical account and the import of his theoretical claims, known as "the Patinkin controversy." A few years later, Frank Hahn argued in his 1965 article "On Some Problems of Proving the Existence of an Equilibrium in a Monetary Economy," that Patinkin left unsolved a fundamental problem of monetary theory: to prove the existence of a general equilibrium with a positive value for money.

DISEQUILIBRIUM MACROECONOMICS

Patinkin's second main theme was the contrast between the Keynesian model (named after British economist John Maynard Keynes)—where markets do not clear and quantities respond to quantities—and the Walrasian system, which assumes that trades are only made at a market-clearing price vector. According to Patinkin, unemployment is a disequilibrium phenomenon that should be understood as the result of the effect of aggregate demand constraint on the behavior of firms and workers. Patinkin's disequilibrium analysis of the labor market, with both firms and workers off their respective labor demand and labor supply curves, was later complemented by Robert W. Clower's analogous interpretation of consumption as a function of income in the goods market in his 1965 publication "The Keynesian Counter-Revolution: A Theoretical Appraisal." In their 1971 article "A General Disequilibrium Model of Income and Employment," Robert J. Barro and Herschel I. Grossman combined Patinkin's and Clower's analyses in a fixed-price model that quickly became the most influential exposition of disequilibrium macroeconomics. It was largely thanks to the Barro-Grossman model—which may be regarded as an outgrowth of chapter 13 of *Money, Interest, and Prices*—that Patinkin's approach to unemployment finally penetrated the macroeconomic literature. After this theoretical contribution to Keynesian economics, Patinkin became engaged in the 1970s and 1980s in an extensive investigation of the historical development of Keynes's thought. He concluded that the "central message" of Keynes's macroeconomics was the role of changes in aggregate income in bringing the goods market to less than full employment equilibrium, based on the assumption that the marginal propensity to consume is less than one.

PATINKIN'S IMPACT

Patinkin's search for the microfoundations of macroeconomics has had a deep impact on economic theory. His contribution to the money-in-the-utility-function approach has become part of modern monetary theory mainly through the work of Miguel Sidrauski (1967). Although the real balance effect has lost space to substitution effects in monetary economics—its acceptance nowadays depends on the theoretical assumption that the intertemporal utility function is not separable in consumption and money balances, and on the empirical evidence about its size at business-cycle frequencies—according to Richard J. Sweeney (1988) and Peter N. Ireland (2005) it still plays a role as part of the broader wealth effect in models with specified intertemporal budget constraints and forward looking agents. In the same vein, despite the diminishing interest on disequilibrium macroeconomics since the late 1970s, Patinkin's pathbreaking search for the compatibility of macroeconomics and microeconomics has left its mark on the research agenda of Keynesian and neoclassical economists alike.

SEE ALSO *Arrow, Kenneth J.; Barro-Grossman Model; Economics, Classical; Economics, Keynesian; Economics, New Keynesian; Equilibrium in Economics; General Equilibrium; Hicks, John R.; IS-LM Model; Klein, Lawrence; Macroeconomics; Market Clearing; Microeconomics; Microfoundations; Tatonnement; Walras' Law; Walras, Léon*

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PATRIARCHY

Patriarchy is a social structural phenomenon in which males have the privilege of dominance over females, both visibly and subliminally. This phenomenon is manifested in the values, attitudes, customs, expectations, and institutions of the society, and it is maintained through the process of socialization. Some societies are more patriarchal than others, but virtually all are characterized by the phenomenon in one form or another. Patriarchy is a function of male physical, social, economic, and political power. Females and children, along with any individuals with a nontraditional gender identity, suffer from subordination to men.

The term *patriarchy* comes from the Latin *pater* (father) and *arch* (rule). Historically, "rule of the father" was the more appropriate definition of patriarchy. Valentine Moghadam has written that under classic patriarchy, "the senior man has authority over everyone else in the family, including younger men, and women are subject to distinct forms of control and subordination" (2004, p. 141). Furthermore, property, residence, and descent all proceed exclusively through the male line. Today, however, this definition may be considered an overly simplistic description because the phenomenon has evolved substantially over time.

As already mentioned, to varying degrees, patriarchy is nearly universally prevalent. Although, as Gerda Lerner (1986) has noted, anthropologists have found societies in which sexual differences are not associated with practices of dominance or subordination, patriarchy does exist in the majority of societies. Often, *patriarchy* is associated more strongly with nations characterized by religious fundamentalism. Yet male domination and female subordination are salient features of social structure in virtually all societies, regardless of the race, ethnicity, class, or religion of the members. Most patriarchal societies have adopted characteristics associated with male domination, namely, aggression and power, as well as the consequences of these characteristics, namely, war and destruction.

Because the subordination of women to men is a feature in the majority of all societies, patriarchy is often argued to be due to biology, such as women's principal role in childbearing. However, many scholars today hold that patriarchy is a social construction. Lerner has written that there are indeed biological differences between men and women, but "the values and implications based on [those differences] are the result of culture" (1986, p. 6).

The existence of patriarchy may be traced back to ancient times. Lerner has stated that the commodification of women's sexual and reproductive capacity emerged at about the same time as the development of private property, thus setting the stage for patriarchal social structures. The Bible is sometimes cited as exemplifying the original

"father-rule" form of patriarchy in many of its stories. An example is the Adam and Eve story of creation, in which Adam is created first, followed by all the animals. Then Eve is created from part of Adam so that, in a sense, he may be considered her parent (Pateman 1989, p. 451). As such, Adam is clearly in the dominant position. This is consistent with Lerner's explanation that "men learned to institute dominance and hierarchy over other people by their earlier practice of dominance over the women of their own group" (1986, p. 9). The sexual subordination of women was subsequently written into the earliest system of laws, enforced by the state, and secured by the cooperation of women through such means as "force, economic dependency on the male head of the family, class privileges bestowed upon conforming and dependent women of the upper classes, and the artificially created division of women into respectable and not-respectable women" (Lerner 1986, p. 9).

The classic form of patriarchy decreased in its prevalence during the seventeenth century. The transition to what Teresa Meade and Pamela Haag have described as a broader fraternal-right patriarchy or "domination of society by the 'brotherhood of men' " (1998, p. 92) is often associated with the rise of "capitalist rationalism" because the prior standard of fathers ruling over sons was not compatible with the demands of capitalism. Meade and Haag also note that "the defeat of classic patriarchy in the Enlightenment era meant that the father's absolute power over sons was lost and patriarchy moved to the broader civil society" (1998, p. 92). This transformation occurred to the detriment of women whose work in the home was suddenly separated from what was considered to be the larger economy.

Modern patriarchy is structural, meaning that it underlies the foundations of all of society's institutions. In most societies, any accomplishments in the direction of gender equality must be made within a larger patriarchal structure. This is one reason why women are at such a constant disadvantage socially, politically, and economically. In the world today, the vast majority of leaders are men. Moreover, Laura Bierema has noted that while women make up over half the workforce, they fall far short of men in terms of pay, promotions, benefits, and other economic rewards. She has also observed that those women who are successful economically often reach their goals by emulating men, thus reproducing the masculine traits and characteristics that are associated with success. By doing so, the patriarchal systems "that discriminate against women and people of color" are reinforced (Bierema 2003, p. 3). Those women who actually become world leaders or advance to high positions in the business world tend often to do so on terms that accommodate the needs and characteristics of males, hence necessitating the need for them to make significant sacrifices (e.g., having a family versus a career). Otherwise they would be viewed as distinctly different from their male peers, and this would be disadvantageous.

SEE ALSO *Gender; Power*

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PATRICIANS

The word *patrician* is an adjective derived from the Latin word for "father," which was also a term for a senator. In the later republic of the second and first centuries BCE, certain families were recognized as patrician by their distinctive clothing and the reservation of certain priesthood positions for them. The Roman historical tradition (formed in the third and second centuries BCE) held that patricians consisted of families granted this title at various times during the Roman kingdom and that these families had a monopoly on political office at the start of the republic. There ensued a long political conflict known as the Struggle of the Orders, in which non-patricians, known individually as the plebeians and collectively as the plebs, sought to attain the redress of economic grievances and the right to hold office. The upshot was that in the period from c. 367–c. 287 BCE the patrician monopoly of office holding was broken. The wealthy plebeian families then fused with the patricians to form a ruling class known as the nobility.

Examination of the list of the earliest chief magistrates of the republic (the consuls) shows that the traditional story of the origin of the patricians cannot be true. For the first half century of the republic (starting c. 509 BCE), a number of families that were later of plebeian status appear among the consuls. It is only from around 450 BCE onward that patricians tend to monopolize the office, and this monopoly seems established by the end of the

400s. It is a phenomenon attestable elsewhere (e.g., the city-states of Archaic Greece and the free cities of late medieval Germany) for the office-holding families of a given period to establish for themselves a legal monopoly on office, a situation that eventually breaks down as some of the monopolizing families fall into economic decline while new families attain wealth and wish to end the monopoly.

While some Roman patricians eventually sank into obscurity, a number of the most prominent senatorial families of the mid- and late republic were of patrician status, and this status conferred great prestige. The patricians suffered many deaths during the civil wars that saw the decline of the republic (88–31 BCE) and ushered in the autocratic form of government known as the Roman Empire. There were not enough patricians to fill the priesthood positions reserved for them. Both Julius Caesar (c. 100–44 BCE) and his adopted son Augustus, the first emperor (ruled 27 BCE–14 CE), were authorized to create new patrician families (from prominent senatorial families of plebeian status). As part of his effort to conceal his power by restoring some of the forms (but not the substance) of the old republican government, Augustus promoted the careers of the remaining patricians. The old patrician families continued their decline as they died out naturally and fell victim to prosecution under the Julio-Claudian emperors, and the emperors continued to create new patricians. Men with this status enjoyed swifter advancement in their careers, but the status died out in the third century.

SEE ALSO *Class; Heredity; Hierarchy; Stratification*

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PATRIOTISM

The word *patriotism* derives from the Latin *patria,* meaning "country." Patriots are citizens joined by a love of country and a readiness to sacrifice, perhaps even die, for their country. Such patriotism was emphatically characteristic of the Spartans of classical antiquity. They were citizens in the strict sense of the term: They shared an identity with others to whom they were related by nationality, as well as by blood, and a sense of belonging to a community for which they bore responsibility. In a word, they were public-spirited.

The Spartans' sense of public-spiritedness did not develop by accident. Spartan boys were trained, almost from birth, to be soldiers, and Spartan girls were required to exercise naked (in public), with a view to producing sons capable of being soldiers, as well as daughters capable of giving birth to them. Their readiness to fight (and perhaps give their lives) for their country is best exemplified by the legendary King Leonidas and the three hundred Spartan soldiers who fought the Persians and died at Thermopylae in 480 BCE. For good reason, then, the word *Spartan* has come to be associated with *patriot.*

In one respect at least, it was easy for Spartans to be patriots, easier than it would prove to be for later generations of Greeks, or Europeans generally. Spartans could be *for* their city without reservation or equivocation, because there was nothing else in Sparta to be for: no gods other than the city's gods, and no life other than the life in and provided by the city. As George Grote suggests, the subordination of the individual to the state has had no parallel in the history of the world.

The likes of Sparta were surely not to be found anywhere in the West after the advent of Christianity. By effecting a separation of the "things that are Caesar's" and the "things that are God's," Christianity made it more likely that a person's loyalties would be divided, and sometimes come into conflict.

Such conflict became even more likely after Martin Luther (1483–1546) launched the Reformation. Before Luther, there had been one church, but now there were several: Lutherans and Calvinist, as well as Roman Catholic. This development had political consequences. Could a devout Roman Catholic such as Thomas More (1478–1535) obey his sovereign, Henry VIII (1491–1547), after the sovereign broke with the papacy in Rome? Could the Calvinist (or Presbyterian) Scots obey their king, Charles I (1600–1649), who commanded them to worship according to the Anglican Book of Common Prayer? Not likely and, in the event, impossible; the pious More preferred the scaffold and the stubborn Scots a civil war.

The seventeenth century was not a propitious time for the making of patriots. Almost everywhere in Europe, the rulers were princes and the people subjects, not citizens. This may explain why the first recorded use in English of the word *patriotism* did not occur until 1726, when it was defined as "public-spiritedness." Generally speaking, only citizens (not subjects) could be expected to be public-spirited.

Thus, patriotism became linked with the rise of popular sovereignty. This development, in turn, depended on the discovery or pronouncement of new universal and revolutionary principles respecting the rights of man—see, for example, Thomas Hobbes's *Leviathan* (1651) and John Locke's *Two Treatises of Government* (c. 1690). From these new principles came new governments—first in America, then in France—and with them a new understanding of patriotism, or an understanding other than the sort of filial piety associated with Sparta.

Alexis de Tocqueville (1805–1859) was the first to recognize this new form of patriotism, or at least to speak of it. In his *Democracy in America* (1835–1840), Tocqueville argued that this patriotism was more rational than the simple love of one's native land; this patriotism, he said, was "born of enlightenment" and grows with "the exercise of rights." Abraham Lincoln (1809–1865), in his 1852 eulogy on the American statesman Henry Clay (1777–1852), declared that Clay "loved his country partly because it was his own country, but mostly because it was a free country; and he [worked zealously] for its advancement, prosperity and glory, because he saw in such the advancement, prosperity and glory of *human* liberty, *human* rights, and *human* nature" (Lincoln [1852] 1989, p. 264). There is nothing parochial about this patriotism; Lincoln made that very plain. Clay is praised not so much for loving his country, but rather for loving the *idea* of his country, or its principles. Those principles are scientific and, therefore, universal principles. Any country might adopt them.

This was of particular concern to Edmund Burke (1729–1797), the Anglo-Irish statesman and political theorist. He understood that the French Revolution (1789–1799) was something new and (to him) something alarming, especially because its principles appeared to be readily exportable; those abstract, scientific, and universal principles, if exported—and unleavened by the unique experiences or traditions of a country—would reduce not only the French but the people of all Europe to "one homogenous mass."

Something like this did in fact begin to happen, but the French Revolution, and what Pierre Manent has called the enormous Napoleonic enterprise, "unleashed a contrary movement of particularization and national separation" (Manent 1998, p. 187). In a word, the attempt to export these universal principles gave rise to the glorification of the nation, which is to say, nationalism and a politics of ethnicity, where what matters is blood, not the political principles associated with patriotism. "I speak *for* Germans simply, *of* Germans simply," said the philosopher Johann Fichte (1762–1814) in 1807, a sentiment repeated by many another Europeans (Fichte 1807, p. 3).

Since then, in intellectual circles, the very idea of the nation—as well as that of patriotism—has been discredited. This process began in 1848 when Karl Marx (1818–1883) declared in *The Communist Manifesto* that "working men have no country" (Marx and Engels [1848] 1932), and they would refuse to fight for country. This proved not to be true when World War I broke out in 1914. Then, after World War II (1939–1945), Europeans set about the task of divesting themselves of their sovereignty in favor of the European Union. It remains to be seen if the citizens of the European Union will love it, let alone fight for it.

It seems that patriotism has become unfashionable among some intellectuals. One prominent American university professor, Martha Nussbaum, suggests that the times require that people get rid of patriotism and, to that end, become citizens of the world and lovers of humanity. But humanity does not have a government, and there is no reason to believe that, if it had a government, it would be lovable.

SEE ALSO *Citizenship; Nationalism and Nationality*

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PATRONAGE

The term *patronage* describes the practice of distributing public sector posts in exchange for political support. In the absence of binding civil service rules, a party boss

(patron) rewards loyal partisans (clients) by providing them with public sector employment. Patronage therefore can be included among a broad range of clientelistic political practices in which parties use public resources to deliver private and club benefits to particular groups of voters in order to maximize electoral support. Different from other types of clientelistic practices, patronage provides the client with a steady source of income whose stability depends on the reelection of the patron.

To successfully develop a patronage system requires: (1) the selection of political leaders through elections, (2) mass adult suffrage, (3) a high degree of electoral competition within or between parties, and (4) weak civil service rules. The first three requirements—elections, mass political participation, and party competition—lead to increasing demands on political elites by their core constituency. In the absence of civil service rules, the distribution of public sector posts becomes an appealing strategy that ties the survival of the voter (client) to the survival of the party boss (patron).

Because patrons can only sustain a limited number of clients, two crucial functions of the patronage exchange are the selection and monitoring of clients. In selecting clients, patrons seek to either maintain their vote or to expand it. For maintaining their vote, patrons target loyal voters. For expanding their vote, patrons target swing voters and invest considerable more resources in monitoring the patronage exchange. The practice of patronage is intimately connected to the rise of political machines specialized in organizing and allocating political influence by controlling the supply of public sector jobs and by monitoring the vote of large constituencies. Because the cement that binds the patron and the client is not ideological, political allegiance to the machine is based on the distribution of particularistic, material rewards over different types of political personnel.

A widespread political phenomenon, patronage is also known in the United States by the term *spoils system*, where the "spoils" of the political system go to the "victor" of the electoral contest. The spoils system that emerged during the Gilded Age was eventually dismantled by the enactment of the Pendleton Act in 1883 and the creation of the Civil Service Commission, which introduced meritocratic rules for the recruitment and promotion of public service employees. The introduction of these rules significantly reduced the available pool of public jobs that political machines could allocate to voters. Such reforms also weakened the political grip of party bosses, such as William M. "Boss" Tweed in New York, Huey P. Long Jr. in Louisiana, and Edward H. Crump in Chicago. Since the late twentieth century, as an increasing number of countries have democratized, comparative scholars have emphasized the negative consequences of patronage for the development of an independent citizenship capable of holding politicians accountable for their performance in office.

SEE ALSO *Political Parties*

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PATTERN MATCHING

SEE *Campbell, Donald.*

PAVLOV, IVAN

1849–1936

Ivan Petrovich Pavlov, a Russian physiologist, received a Nobel Prize for his experimental studies of the interactions of gastrointestinal secretions with the activities of the pancreas and other glands. His observations on the role of the nervous system led him to explore what he called "psychic reflexes"—secretions of stomach acids elicited not by food itself but by stimuli such as the smells or tastes preceding food ingestion. He is best known for this discovery of conditioned, or conditional, reflexes and his subsequent experimental analyses of them. He created preparations using the salivary glands of dogs in which he could conveniently measure salivation elicited by metronomes or other arbitrary stimuli presented in various temporal relations to subsequent food deliveries.

Research inspired by Pavlov's work has been extended to applications such as the modification of emotional responding through behavior therapies. Pavlov was a principled scientist and an outspoken critic of the Soviet system in Russia, and it is unfortunate that brainwashing and other coercive methods have sometimes been attributed to his influence. These attributions are inappropriate and inaccurate because such methods are neither procedurally nor historically derivative of Pavlov's scientific contributions.

PAVLOV'S LIFE

Pavlov was the son of a parish priest. Some personal characteristics appeared early and remained with him throughout his life: a passion for physical work (especially in the garden), a love of books and learning, and an unshakable integrity. His experience in working with his hands stood him in good stead later in the speed, efficiency, and delicacy of his surgical skills. His readings led him to chemistry and biology, and he came to regard as two of his intellectual heroes the physiologist Ivan M. Sechenov (1829–1905), for construing conscious as well as unconscious activity as reflexes of the brain, and the naturalist Charles Darwin (1809–1882), for his theory of natural selection. Pavlov attended a religious seminary but in 1870 dropped theology in favor of physiology and then a medical degree in Saint Petersburg. In 1881 he married Seraphema (Sara) Vasilievna. They raised two sons, Vladimir and Vselvolod, and a daughter, Vera (a third son, Mirchik, died as a child). Sara was both devout and devoted to Pavlov, and he envied her religious faith.

After completing his dissertation, Pavlov studied in Germany and then began independent research on cardiac physiology in the Saint Petersburg laboratory of the physiologist Sergei P. Botkin (1832–1889), who soon entrusted the direction of his laboratory to Pavlov. This allowed Pavlov to devote all of his time to research. He involved himself thoroughly in all details of an experiment and even in his earliest experimental work regarded it as essential to work with the intact organism in order to maintain as far as possible the natural conditions of the physiological systems he chose to study. He had no patience with people with motives other than knowledge, such as those who saw research as a way to satisfy nonscientific agendas. The motto in Pavlov's laboratory was "Observation and observation," and he meant the direct observation of nature itself, not what someone had written about it.

Pavlov received his Nobel Prize in 1904. By the time of the Russian Revolution in 1917, his international reputation protected him from external intrusions on his research. Though he did not study the nervous system directly, he interpreted his findings in terms of changes in the irradiation of brain areas and attempted to extend his thinking to theories of language and of psychiatric disorders such as psychoses. In contrast to his contributions in physiology and conditioning, these theories did not fare well.

Pavlov maintained regular schedules of activity throughout his life, including outdoor exercise in the form of games and swims. Even during Joseph Stalin's purges, he was outspoken in his denunciation of the Communist system, going so far as refusing admission to his laboratory to the Communist commissar of education and writing a letter of criticism to Stalin. Pavlov worked in his Saint Petersburg laboratory until shortly before his death of pneumonia in February 1936.

PAVLOV'S WORK

The term *conditioned*, from the Russian phrase for "conditioned reflexes," might better have been translated as "conditional," because the name was applied to reflexes conditional upon relations among stimuli. In respondent conditioning, one stimulus, the conditional stimulus (CS), signals the presentation of another, the unconditional stimulus (US). The responses respectively elicited by these stimuli are the conditional response (CR) and the unconditional response (UR). Pavlov's conditioned salivary reflexes provide the prototypical example. When an originally neutral bell repeatedly signals food in the mouth of a hungry dog, it becomes a CS as salivation begins to be elicited by this signaling stimulus as well as by the US, the food itself.

Ironically, Pavlov may never have used a bell in his experiments; his rare mention of bells occurs only in later work, where it probably refers to electrically operated devices. The ubiquitous references to Pavlov's bell probably originated with a common example of a conditioned reflex in popular writings about Pavlov's research: a dinner bell eliciting salivation in those called to the table (Pavlov's own bell was kept on his desk, presumably for summoning servants).

Pavlov's conditioning procedure has been called "respondent," "Pavlovian," and "classical conditioning," distinguishing it from procedures studied especially by the American psychologists Edward L. Thorndike (1874–1949) and later B. F. Skinner (1904–1990). In Pavlov's procedure the important features are the relations between two stimuli, whereas in Thorndike's and Skinner's instrumental or operant procedures they are the relations between a stimulus and the response that has produced it.

Pavlov arranged various temporal relations between the CS and the US. For example, in both trace and delay conditioning, a relatively long time elapsed between CS and US; they were distinguished by whether the CS turned off or remained present in the interim. In both types conditional responding began shortly after the start of the CS, but with successive trials it gradually moved closer to the time of the US. Trace conditioning acquired its name from Pavlov's assumption that the CS had to leave some trace in the nervous system to be effective.

Attention to Pavlovian conditioning followed from how easily it could be related to the concept of association, a learning principle with substantial precedent in philosophy and psychology. Learning was said to take place through associations of ideas, and conditional

reflexes seemed to represent a primitive example of their formation. In a kind of mental chemistry, ideas were thought to be associated through such properties as having common elements or occurring together in time. Thus conditioning was regarded as at the root of all learning.

During Pavlov's lifetime, conditioning was seen as a sort of stimulus substitution in which, through CS-US pairing, the CS acquires power to elicit the UR. But it is now clear that this account misrepresents what happens in at least three ways. First, conditioning depends not on CS-US pairings but rather on whether the CS predicts the US. If the CS is as often followed by no US as by the US, the two are often paired, but conditioning does not occur because the CS does not predict a US delivery. Second, in many preparations the CR differs in form or other properties from the UR. For example, with an intravenous opiate as the US, the CR is a diminished pain threshold, whereas the UR is a heightened pain threshold; the CS does not substitute for the US (similarly, if a metronome becomes a CS, the dog does not try to eat it). Third, preparations in which the typical latency between US and UR is long enough that a CS can be presented after the US but either before or after the UR show that conditioning depends on the CS-UR rather than the CS-US sequence. Conditioning occurs as long as the CS precedes the UR, so the relation of the CS to responding is more important than its relation to stimuli.

SEE ALSO *Classical Conditioning; Empiricism; Operant Conditioning; Psychology; Skinner, B. F.; Thorndike, Edward; Union of Soviet Socialist Republics*

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PAX BRITANNICA

Usually applied to the era between the end of the Napoleonic Wars in 1815 and the start of World War I in 1914, the term *Pax Britannica* has both geopolitical and economic connotations. That period, in contrast to preceding and subsequent periods, was comparatively free of military conflict between major powers (with notable exceptions: the Crimean War, the Franco-Prussian War, the Spanish-American War, and the Russo-Japanese War). It was also relatively free of full-blown trade wars. Britain was unquestionably the strongest country, militarily and economically. But there is no consensus among international relations scholars and economists over the extent to which British power and statecraft should be credited with the century-long "pax."

The idealized picture of Pax Britannica features nineteenth-century England as a benign global hegemon, providing the international public goods of peace and unrestricted commerce primarily through the instrumentality of its superior navy and (after the repeal of the protectionist Corn Laws in 1832) its policy of international free trade. The realist version roots the policies of naval superiority and global free trade in the self-interest of an industrializing island country dependent on a far-flung empire of raw-material producers.

Successive British governments employed the navy and the country's economic power to intimidate, if not coerce, nations—not only in the British Empire but also sovereign states—to open up their ports and domestic markets to British goods and investors. Nor was Britain willing to tolerate challengers to its ability to "rule the waves." Determined to maintain a fleet capable of defeating the combined fleets of any two countries, London took umbrage at Berlin's decision in the 1890s to significantly augment the German navy in order to support the kaiser's growing imperial appetite. In response, Britain entered into spheres-of-influence agreements with France to preempt German ambitions in Africa and elsewhere.

In theory, not only did Britain's free trade policy require the peace (which the Royal Navy was supposed to enforce), but also unrestricted global commerce, as conceptualized by Adam Smith (1723–1790), David Ricardo (1772–1823), and their disciples, would itself advance world peace. Free trade would deepen the interdependence of nations—each of which, according to the principle of comparative advantage, would specialize in producing most efficiently products that would advance the commonweal. But by the start of the twentieth century, with other major powers seeking, like Britain, to comprehensively industrialize and to modernize their militaries, mercantilistic rivalries again became the order of the day, and Pax Britannica was now widely castigated as a cover for unbridled British imperialism.

SEE ALSO *Colonialism; Imperialism*

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PEACE

Peace is a key concept in the social sciences and a central concern in the field of international relations. There is much focus on peace in the world with many entities working to promote or to protect peace. At the same time, there are many disagreements surrounding it. Definitions of peace, traditional explanations of peace between states, intrastate wars, reconciliation, and the role of third parties are discussed below.

DEFINITIONS

Peace is often defined as the absence of violence. However, there is considerable disagreement over what forms of violence need to be absent. This disagreement is reflected in the list of winners of the Nobel Peace Prize, which includes statesmen, such as U.S. secretary of state Henry Kissinger (the 1973 laureate along with Le Duc Tho of Vietnam); spiritual leaders, such as the fourteenth Dalai Lama, Tenzin Gyatso (the 1989 laureate); and various international organizations. These actors have made vastly different contributions to world peace, and their recognition as Nobel laureates demonstrates the diversity of opinion on what peace is and how it is promoted.

In the social sciences, some scholars of peace, such as Johan Galtung of Norway, maintain that peace needs to encompass equality, socioeconomic factors, and social justice. In fact, there is a growing interest in the role of nonviolent social movements, particularly in struggles for equality in domestic political situations, in achieving and maintaining peace. A more minimalist definition of peace focuses on the absence of physical, primarily military, violence between political entities, particularly states. This latter definition lies at the heart of the criticism seen in some circles for the choice of Kenyan Wangari Maathai as the 2004 Nobel Peace Prize laureate for her work in sustainable development and environmentalism.

For the most part, social science research has focused on the absence of military violence when discussing peace. This is particularly true for international relations scholars who were influenced by the tone of the cold war and the major interstate wars of the twentieth century.

TRADITIONAL SCHOOLS OF THOUGHT

Liberalism and realism, the dominant schools of thought in peace studies and international relations, both accept that anarchy (which is defined in international relations as the lack of a central government) is a major concern for states. However, these schools diverge on the implications of this situation on interstate cooperation and conflict. Peace studies also encompasses various lines of thoughts, with such emphases as Marxism (capitalism), feminism (gender), and constructivism (identity and meanings).

One finding that has received much attention is that democracies do not go to war with each other. Researchers trace this argument back to the views of the German philosopher Immanuel Kant (1724–1804) in his essay "Towards Perpetual Peace" (1795), and today it is identified with the liberal school of thought. This type of "democratic peace" has received much support in countless empirical studies, as well as consideration from policy circles, particularly in the West. A democratic country is essentially in a state of stable peace—that is, military violence against another democracy is removed as an option from the mindsets of leaders. In some parts of the world, this status extends to entire regions, as illustrated by pluralistic security communities such as exist in contemporary western Europe. Developments in western Europe, specifically the formation of the European Union, highlight other important elements that are identified with Kant's vision of what it takes to attain peace, such as economic development, economic ties with other countries, and international organizations.

There is another school of thought where the focus is on the role of alliances, threats, and power. This approach falls primarily within the power politics or "realist" school in international relations. Thus, in the case of western Europe, external threats and powerful opponents, particularly the Soviet Union, contributed to the coming together of European countries after World War II (1939–1945). In this view, peace emerges when there is a balance of power. That is, power deters power and in the process maintains the peace. Some have even argued that

a world in which more states possess nuclear weapons might result in less bloodshed.

WARS

As shown above, the traditional schools of thought have much to say about interstate peace and war. Although some scholars suggest that interstate wars are becoming obsolete, states continue to justify the need to use violence for survival as seen in interactions between developed and developing countries. In contrast, there is little expectation that intrastate wars—that is, civil wars—may become obsolete.

Intrastate wars are more common than interstate wars, and they result in greater devastation. Civilians are particularly vulnerable in intrastate wars, and the international system has been more averse to intervening in such conflicts. Periods of respite after such wars are short, as many actors involved in intrastate conflicts return to fighting because wars leave people with few options. For this reason, there are growing calls for attention to development and institution building after intrastate wars.

Conflicts over control of governments and territory tend to play central roles in warfare. In a positive development, the international community since the end of World War II has generally not recognized territorial aggrandizement attempts. However, international norms change over time and there is no guarantee that this situation will last. Disagreements among major powers over the "rules" of the game are of particular importance because considerable global violence may occur when powerful countries are no longer satisfied with the rules and act more unilaterally.

LEVELS OF PEACE AND RECONCILIATION

There is an increasing focus on improving relations following hostility between political units. In this regard, it is useful to identify varying levels of peace. A "low level" of peace between former belligerents describes a situation where there is little more than a halt to fighting—that is, a "frozen war." In contrast, a "high level" of peace encompasses institutionalization of relations and mutually beneficial interactions between former opponents. This approach is related to the topic of reconciliation, which involves the study of how harmonious relations come about after extensive violence.

Particularly important in reconciliation is the willingness of former opponents to improve their relations. In this regard, leadership plays a crucial role. Leaders who would rather rally the public against a former foe for domestic political gain certainly do not contribute to the improvement of relations. Leaders in democracies face a tougher atmosphere because domestic opposition can be particularly fierce and hard to ignore. As such, former warmongers have sometimes played important roles in improving relations with an opponent because their credentials lead to the belief that they will defend vital interests. One of the potential reasons for this change in heart toward a former foe is the presence of a greater security threat.

Postwar relations are influenced by the war itself and may set in motion a cycle of violence. Existing empirical research suggests that the contents of the terms of peace treaties influence the prospects for future violence. This is true for both interstate and intrastate wars. However, an important difference between interstate and intrastate wars is that forgiveness and truth-seeking play a more central role in contributing to intrastate reconciliation.

This difference brings to the forefront the positions of morality and power. Can there be peace without justice? Can peace be imposed? The lack of an international tribunal with significant authority limits what can be expected. Justice has been a major issue following intrastate wars, where public trials may occur. Yet the fear of going back to war, weak judiciaries, and the complicated task of determining culprits has resulted in the generous distribution of amnesty, and societies often seem willing to accept less than full justice. After interstate wars, justice is even more tied to power, as the defeated are the only ones on trial. This situation generally arises when one side is able to impose its will on the other, and in some contexts such impositions have been followed by the attainment of high levels of peace between states, as occurred following World War II. Yet an imposition of peace by an imperial force, a party in a civil war, or an international force is generally associated with a low level of peace and an eventual return to arms.

THIRD PARTIES

There is a considerable role for third parties. Some countries have contributed to United Nations peacekeeping operations, which have traditionally acted to keep belligerents away from each other after a cease-fire without taking sides and generally with the prior consent of the opposing parties. Third-party military (and police) deployment is particularly important after intrastate war situations where there is much suspicion and where former belligerents are likely to interpret the moves of the other as hostile and take actions to increase their security that are likely to make the other side fear them, a situation known as a security dilemma. While peacekeeping is fairly uncontroversial, such actions have had mixed records. Other third-party efforts, such as peace enforcement, are more hotly debated because they involve coercing the opposing sides to stop fighting through the use of massive

force. Most of the time, third-party military involvement occurs after considerable violence has already taken place, but since the 1990s there has been a shift toward preventive diplomacy. Such efforts include the United Nations Preventive Deployment Force in Macedonia, which was deployed in early 1993 before a breakdown into chaos emerged.

Not all third-party efforts involve military might. Nongovernmental organizations play a role in socioeconomic development and in strengthening institutions and building ties before and after violence. In addition, while many entities work out their differences through bilateral means, there are other options, including adjudication and mediation. Yet, as with many other aspects that characterize attempts to foster peace, mediation does not guarantee success, given the array of elements to consider, such as timing and leverage.

Thus, the study of peace continues. Much more is understood about peace as the absence of military violence. At the same time, there is still much to be done in the area of reconciliation and in efforts to formulate a broader definition of peace.

SEE ALSO *Nobel Peace Prize; War*

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Reşat Bayer

PEACE MOVEMENTS

In scholarly literature and public discourse, the term *peace movement* is often used as a synonym for pacifism. But in discussing peace movements, it is helpful to differentiate between the periods before and after 1945. Since World War II, peace movements have had distinctively new patterns of mobilization and organization, and many of them have been protests against certain wars or armaments, but not necessarily against violence or the military per se.

In sociological terms, peace movements can be defined as social movements that aim to protest against the perceived *dangers* of political decision-making about armaments, military alliances, and war. They stress the possibly violent fallout from these decisions (which the decision makers perceive as mere *risk*), and advocate nonviolent solutions. For these purposes, they use a variety of communication media and public performances of both an instrumental and a symbolic nature. It is one of the distinctive features of peace movements in the contemporary media society that their capacity for mobilization depends to a large degree on their resonance in public opinion and in the mass media, and that many of their protests are primarily calculated with regard to public reaction. As social or protest movements, peace movements evolved at least since the 1960s together with environmental and women's movements, often including considerable overlap and cross-fertilization in terms of aims, ideologies, institutional networks, and individual supporters.

SOCIOLOGICAL APPROACHES

According to Thorsten Bonacker and Lars Schmitt in their 2004 study, both historical and sociological research on peace movements reflects the conceptual changes within the "social movement"-approach from the 1970s to the present. Frank Parkin's 1968 study was one of the first interpretations of the British Campaign for Nuclear Disarmament (CND). Here he analyzed it in terms of its social constituency as a form of "middle class radicalism." This focus on the social characteristics of protest actors ties in with the concept of a value change from materialistic (i.e., working-class) to post-materialistic (i.e. middle-class) values as a key prerequisite for peace movement mobilization. The empirical validity of this concept has been repeatedly challenged.

During the 1980s many studies relied on the "resource mobilization" concept and tried, with a focus on the organizational capacities of protest elites, to identify the successes or failures of peace movement mobilization. Much historical research in this fashion tended to conceptualize the history of armaments and warmongering in the simplifying dichotomy of "doves" and "hawks," and to exaggerate the impact of peace protests on decision-making processes, without putting this issue under careful scrutiny. Peace movements since 1945 have, in fact, yielded their most substantial results not in opposition against any particular war, but in turning forms of civil unrest and nonviolent disobedience into a legitimate means of political mobilization. They have thus broadened, together with the feminist and environmental

movements, the scope of democratic participation in American, European, and some Asian societies.

Since the 1990s constructivist approaches have gained currency in both sociological and historical research on peace movements. These concepts do not focus on the social resources of collective actors or on the political system as an external variable for movement mobilization. Rather, they stress the importance of the protests themselves as communicative events and the capacity of these events to construct reasons for protest through the attribution of possible dangerous consequences to political decisions. According to Michael S. Foley in his 2003 book *Confronting the War Machine: Draft Resistance during the Vietnam War*, characteristic elements of peace movements are in this perspective performative forms of protest, particularly those that use the bodies of the protesters to display their personal commitment and consternation, as in the draft resistance movement against the Vietnam War.

Another important feature is the moralistic codes of protest communication with its stark, sometimes eschatological or bleak dichotomies, which accentuate the difference between risk/danger, either/or. Constructivist approaches stress the importance of frames—collective semantic patterns that provide a coherent interpretation of social reality—for the transformation of latent conflicts into manifest peace protests. In a 1992 article Jürgen Gerhards and Dieter Rucht differentiate between *diagnostic* frames (what is the problem?), *prognostic* frames (how can it be solved?), and *motivational* frames, which trigger and channel the protest communication. According to this approach, "masterframes" are necessary to make the identity of protest communication plausible and visible and to determine its place in the context of society.

PROTESTS AGAINST NUCLEAR WEAPONS DURING THE 1950s AND 1960s

Peace mobilization after 1945 was mainly triggered and influenced by the dangers and the unprecedented destructive potential of nuclear technology, unleashed for the first time in the atomic bombings of the cities of Hiroshima and Nagasaki in August 1945. Particularly during the first postwar decade, mobilization against atomic armaments fell prey to the emerging cold war confrontation between the military blocs in the East and West. Communist parties worldwide were quick to seize the opportunity. The World Congress of Intellectuals for Peace met in the Polish city of Wrocław in August 1948 and was the first in a string of carefully orchestrated meetings meant to demonstrate the genuinely peace-loving policies of the socialist countries and to launch vitriolic attacks against the United States.

Toward the end of the 1950s, non-aligned protest movements against the possession, proliferation, testing, and employment of nuclear weapons gained momentum in various Western European countries. CND was founded in February 1958 by leading left-wing intellectuals such as the philosopher Bertrand Russell (1872–1970) and the historian A. J. P. Taylor (1906–1990). Its basic tactic was to renew the pressure on the parliamentary Labour Party to advocate unilateral disarmament with the means of extra-parliamentary public protest. From the early 1960s CND also adopted the aim of Britain's exit from the North Atlantic Treaty Organization (NATO, a military alliance of countries in Europe and North America). CND and subsequent movements in other countries professed a concern for peace as a global issue and for "humanity" as its subject. But in its rhetoric and commitment, the respective nation state remained the focal point. Antinuclear peace activism was thus an international, but not a strictly transnational, movement, as were later the campaigns against the Vietnam War and the Euromissiles.

CND invented and employed an annual march from the nuclear weapons facility in Aldermaston, England, to London during the Easter weekend as the major form of public protest. This example was subsequently added to the symbolic repertoire of peace movements in various European countries, as was the symbol of a circle encompassing a broken cross, representing the semaphore signals for the *n* and *d* of "nuclear disarmament." The tactics and symbols of CND were copied and emulated in many Western European countries, but also in southern Europe, for example in Greece.

THE ANTI-VIETNAM WAR MOVEMENT

Both Catholic and Communist circles in France had already protested against the attempts of the French military to regain control over the Democratic Republic of Vietnam (which was founded in 1945 in the northern part of the former French colony) since 1946. But the fate of the Vietnamese people became a focal point for massive antiwar mobilization in western European countries, Japan, and the United States only after the U.S. army had started massive attacks against the operations of the communist guerrilla NFL in South Vietnam and a systematic aerial bombing of North Vietnam in 1964 and 1965. The Norwegian Solidarity Committee for Vietnam established in December 1965 was among the first concerted efforts to organize material support for the people in North Vietnam and to call for a peaceful solution of the conflict. As similar committees and movements in other countries, it demanded an immediate stop of the American aerial bombing and the strict application of the Geneva Accords

of 1954, which had divided Vietnam with a demilitarized zone around a demarcation line along the seventeenth degree of latitude. Whereas these aims could still be supported by pacifist groups such as the War Resisters International, they remained distant from the subsequent radicalization of antiwar protests, particularly its relation to the use of violence. With a peak during the years from 1967 to 1970, the anti-Vietnam War movement attracted a large, but also highly volatile, group of followers particularly among the student population in Europe, Japan, and the United States, which was involved in parallel protests against the system of higher education, the "establishment," and the anti-Communist postwar consensus in their respective countries and U.S. "imperialism" in the Third World.

The radicalization of the movement made its position with regard to the use of violence ambivalent. A growing number of antiwar protesters not only supported a military victory of the NFL, but showed also a readiness for the use of violence in clashes with the police during rallies. More generally, confrontational tactics and the calculated use of spectacular protest forms such as sit-ins, the locking of persons to buildings, or the burning of national flags were almost without precedent in the history of peace activism. Only the Committee of 100, a group of radicals that had separated itself from CND in 1960, had already practiced spectacular sit-downs of protesters in Whitehall, England, or at missile sites and had attracted a lot of media coverage with these actions. With the trend toward only loosely coordinated and more disruptive forms of public protest, the mobilization against the Vietnam War indicated a major shift in the organizational patterns and tactics of peace movements in the United States, Europe, and Japan. It thus marked a major change in the history of peace movement mobilization.

PROTESTS AGAINST EUROMISSILES DURING THE 1980s

In December 1979 NATO finalized its "double track solution" for intermediate range nuclear missiles, which combined an offer to the Soviet Union to negotiate a reduction or elimination of nuclear missiles in Europe with the announcement to deploy cruise missiles and Pershing II missiles in five Western European nations in the autumn of 1983. This decision offered, paradoxically, an unprecedented window of opportunity for peace movement mobilization, which gained momentum in all Western European countries by the spring of 1981. France was the only exception, due to the domestic consensus about the need to maintain its own nuclear weapons arsenal. The protests against the Euromissiles were not organized or orchestrated by some of the established or freshly mushrooming organizations of peace activists—according to an estimate about 2,300 local, national, and international groups in 1982—but only loosely coordinated in a network structure. A major attempt for transnational coordination on the European level was European Nuclear Disarmament (END), founded by the historian E. P. Thompson and other veteran members of the British peace movement in April 1980. Mobilization against the Euromissiles reached its peak between June 1982 and October 1983, when the movement organized protest marches with several hundred thousand participants each in various European capital cities. Even during this climactic period, though, the peace movement was not able, with the one exception of Greece, to gather a majority of the population behind its major aim, a unilateral nuclear disarmament of NATO.

The tactics of the Euromissiles movement included two distinctive features. In contrast to the antinuclear protests of the 1950s and 1960s, this wave of mobilization did not so much employ famous novelists or intellectuals as popular figureheads and symbolic icons, but brought a new generation of experts from the sciences to the forefront. Physicians and physicists in particular briefed the mass media about the dangers of nuclear weapons and about their environmental consequences. This gradual shift from a moral to a more cognitive approach went together with a policy orientation of the Euromissiles movement. More than earlier peace movements, these new activists tried to engage in a dialogue with the respective governments about possible alternatives to existing defense policies. The public discourse of the Euromissiles campaign was highly gendered and contrasted the "male power craziness" of "Reagan-Haig-Weinberger" (then the U.S. president and two of his leading cabinet members) with the need for a more feminine empowerment in favor of peaceful solutions, encapsulated in the slogan "Petting instead of Pershing." Both as a cultural current and a political aversion, anti-Americanism provided a masterframe for the peace movements of the 1980s in Western Europe and Japan. American peace movements since the 1950s made, on the other hand, much effort to describe their activities as the embodiment of the genuine progressive tendencies of American identity and popular culture, to avoid accusations of being "un-American."

Starting in the late 1970s, an independent peace movement emerged also in the Warsaw Pact countries (those in Eastern Europe), although only on a limited scale and in constant fear of police repression. Groups such as the Moscow Trust Group in the Soviet Union, Charter 77 in Czechoslovakia, and the Protestant peace groups assembled behind the slogan "swords into ploughshares." They organized meetings and distributed unauthorized literature. Their basic aim was to restore elements of an unregulated civil society by nonviolent means and to foster a "détente from below," after the Helsinki

Agreement on Security and Cooperation had ratified *détente*, or an easing of tensions, between the Eastern and Western bloc countries in 1975.

SEE ALSO *Colonialism; Diplomacy; Disarmament; Imperialism; Left and Right; Militarism; Pacifism; Passive Resistance; Peace Process; Protest; Radicalism; Social Movements; Vietnam War; Weaponry, Nuclear*

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PEACE PROCESS

A peace process is a series of persistent diplomatic and political initiatives to negotiate a resolution to a protracted conflict between political entities. The term was first used consistently during the 1970s to describe the efforts to negotiate peace agreements between Israel and its Arab neighbors. Its use has spread since, both geographically and across social categories. *Peace process* today, thus, can refer to an interstate conflict (e.g., India and Pakistan); to a conflict between a state and some politically defined group within it, such as an ethnic (e.g., South Africa and its black population), religious (e.g., Sudan and its Christian south), or ideological movement (e.g., Guatemala and the Guatemalan National Revolutionary Unity); or to a conflict between two such opposing groups within a state (e.g., Catholics and Protestants in Northern Ireland).

Aside from the protagonists, other actors are often involved, in various roles, in peace processes. Third parties in peace processes can be divided into two types. The first are weak and, at least ostensibly, neutral actors. These actors could be states (e.g., Norway in its role in the Oslo Accords between Israel and the Palestine Liberation Organization, as well as in the negotiation between the Sri Lankan government and the Tamil Tigers), nongovernmental organizations (e.g., the International Committee of the Red Cross, which is often involved in negotiations, though usually with regard to cease-fires and interim measures, not comprehensive peace agreements), or even some individuals (e.g., former U.S. president Jimmy Carter and former South African president Nelson Mandela). Although such actors are not necessarily devoid of self-interest (in boosting their prestige, for instance), they are usually perceived as nonpartisan, and therein lies their strength as peace facilitators. Weak and neutral third parties are most likely to succeed in cases where the main task involves coordination of the protagonists and supply of "good offices" (i.e., the venue for talks, facilities needed, and the diplomatic channels).

Weak actors, however, are limited in their ability to foster peace when the protagonists' positions are far apart and where mere coordination is not enough. In such cases, the involvement of the second type of mediator—a global or regional power—is often needed to enable a successful peace process. The role of the United States in the Egyptian-Israeli peace is a good example of a global power involvement, and Syria's centrality to negotiation of the 1989 Taif Accord among the warring factions in Lebanon is an example of the role a regional power has played in peacemaking. A power-wielding international organization can also play a similar role, although it usually requires the backing of strong states in such an effort. NATO in the Balkans and the Organization of American States in El Salvador have both played such a role.

Powerful third parties usually have more tools at their disposal than do weaker ones when it comes to peace negotiations, because they can bring to bear their own resources and power in order to pressure the sides towards agreement and, if necessary, to enforce their compliance with the agreements (by creating, funding, or manning verification mechanisms, or by involving their own prestige and supplying security guarantees for the agreement's

implementation). To be sure, global or regional powers are less likely to be neutral in conflicts, as their more immediate self-interests are more likely to come into play, but neutrality is not always a necessary condition for successful third-party mediation. Instead, it is very important that third parties are willing to invest time, energy, prestige, and sometimes money in the peace process. They also should be willing to pressure both parties, including their allies, to make compromises and comply with agreements.

A peace process typically involves four phases. The first phase, prenegotiation, often held secretly, deals with setting the agenda for the negotiation. The second phase usually involves a cease-fire and perhaps other acts of good will, such as prisoner exchange or a return of forces to a status-quo-ante position. The third phase is the negotiation phase, which, ideally, ends in a formal peace accord. In the last phase, the parties to the agreement are required to implement their share. Although this schedule is useful for analytical purposes, the reality, of course, is much more complicated. Phases are often mixed or overlap. Whereas the Egyptian-Israeli peace process more or less followed this classic program, for instance, the Palestinian-Israeli process has a more complex structure, with many phases of negotiations and interim agreements.

Time is a crucial factor in a peace process, as the gradual pace of the process allows for construction of "confidence building measures" in order to increase mutual trust. It also allows both parties to climb down from their war-inciting rhetoric and start educating their people about the possible dividends of peace. In practice, however, the record of success of peace processes is not too encouraging: At least as many processes fail as succeed, and it is hard to distinguish a success from a temporary truce.

In a sense, this relatively poor success rate for peace processes is to be expected. Most of the cases in which a peace process is tried are very protracted and complex conflicts that are, by definition, hard to solve. There are also reasons intrinsic to the idea of the peace process that make it vulnerable to failure. First, the mere term *peace process* raises expectations in the protagonists' populations, and when progress is slow (e.g., if violence continues or the economic dividends of peace are not forthcoming), it can be difficult to secure the support of a frustrated population. Second, in order to gain approval for the process in their respective communities, leaders often exaggerate the benefits and gloss over the pitfalls of the process. Finally, another major reason for the failure of peace processes is the role of "spoilers," those actors in the two opposing camps who see peace as a threat to their positions or their interests. Spoilers are able to sour the peace process by playing on the public's frustrations. Moreover, the structure of negotiations, especially in cases that postpone the final accord to the end of the process, is such that the leaders often have strategic incentives to cooperate with their own spoilers as a way of pressuring their opponents to give up more concessions.

None of these problems should suggest that peace processes should be abandoned altogether, but just that they should be approached carefully, with caution not to raise expectations too high, and with a structure that minimizes the opportunities for the spoilers. One option would be to establish an accord about the final shape of the peace early on in the process, while designing a gradual and verifiable implementation to allow for trust to rebuild.

SEE ALSO *Diplomacy; International Nongovernmental Organizations (INGOs); Peace Movements; United Nations*

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PEACEFUL COEXISTENCE

During the cold war the Soviet Union and China developed the concept of peaceful coexistence as a mechanism for communist states to coexist with capitalist states and, in the case of China, with regional powers. It was in direct contrast with theories of mutual antagonistic aggression that supposed the two regimes could not live in peace. However it was applied differently by the Soviet Union and the People's Republic of China and debates over differing interpretations of peaceful coexistence contributed to one aspect of the Sino-Soviet split in the 1950s and 1960s. Since the end of the cold war, peaceful coexistence has been used to describe proposed solutions to the Arab-Israeli conflict in the Middle East, Wall Street's view of regional instability following the Asian financial crisis of the late 1990s, relations between the West and Islam, relations between Jews and Christians and Muslims, and relations among the different Christian churches. The

concept of peaceful coexistence has been adopted by many international documents and has become a widely accepted norm of international relations.

THE INTERPRETATION OF THE SOVIET UNION

Vladimir Lenin, revolutionary leader, head of the Communist Party, and first premier of the Soviet Union, first put forth the concept of peaceful coexistence after the Bolshevik Revolution in Russia in 1917. At that time he issued a Decree on Peace that called for World War I (1914–1918) participants to immediately open negotiations for peace. Leon Trotsky, the people's commissar of foreign affairs, followed this decree by proclaiming an official doctrine of peaceful coexistence with all peoples. However, in the early years of the Soviet Union the doctrine of world revolution was also proclaimed, especially by Lenin. The two policies, peaceful coexistence and world revolution, would appear to conflict for several decades.

In 1943 Joseph Stalin dissolved the Comintern and disbanded the Communist International, a Moscow-based organization of communist parties around the world that promoted revolution. This action was an attempt to appease the Western allies during World War II (1939–1945) and secure a wartime pact, but was ultimately a precursor to the formal adoption of peaceful coexistence as a part of Soviet foreign policy. In 1949, still under Stalin's leadership, the Soviet Union founded the World Peace Council to organize a global peace movement to promote the concept of peaceful coexistence internationally. This was meant to assuage Western concerns that the Soviet Union was driven by world revolution, as had been advocated by the Bolsheviks.

Nikita Khrushchev first fully enunciated peaceful coexistence following the Twentieth Congress of the Soviet Communist Party when he denounced crimes committed by Stalin. As Soviet premier, beginning in 1953 Khrushchev promoted the concept of peaceful coexistence as a way to ease tensions between the Soviet Union and the United States in light of the possibility of nuclear war. Beginning in 1956 peaceful coexistence was proclaimed the cornerstone of Soviet foreign policy. For the Soviet Union peaceful coexistence had one main assertion: that the United States and the Soviet Union and their respective ideologies could co-exist together without war. It had three elements: socialism in one country (the total commitment of Soviet resources in the home country, first introduced by Stalin in 1924); the Iron Curtain (sealing off the people of the Communist world from the people of the capitalist world); and the arms race (with military might substituting for political struggle). Khrushchev argued that while socialism would eventually triumph over capitalism this would occur without war, which was neither necessary nor inevitable.

Khrushchev explained the doctrine of peaceful coexistence as early as 1957 in a speech at the Albanian Embassy. In 1960 in an address to the United Nations General Assembly, Khrushchev underlined the policy: "The peoples of the Soviet Union and the Soviet Government are striving unremittingly to have the principles of peaceful coexistence firmly established in relations between States.… The policy of peaceful coexistence assumes a readiness to solve all outstanding issues without resort to force, by means of negotiations and reasonable compromises." The reasoning behind the policy was Khrushchev's aim to "catch up and overtake" the West in economic development, and thereby prove the superiority of the Soviet system. In a speech to the Supreme Soviet on October 31, 1959, Krushchev explained that conflict between the two systems, communist and capitalist, must be resolved, and that peaceful coexistence was a real method to this end based on human society.

In a 1959 article in the prominent American journal *Foreign Affairs* Khrushchev offered American readers a detailed exposition of the Soviet viewpoint, and maintained that the Soviet Union professed a policy of peaceful coexistence since its creation following the revolution in 1917: "From its very inception," Khrushchev argued, "the Soviet state proclaimed peaceful coexistence as the basic principle of its foreign policy. It was no accident that the very first state act of the Soviet power was the decree on peace, the decree on the cessation of the bloody war" (Khrushchev 1959, p. 1). Khrushchev tried to demonstrate his commitment to peaceful coexistence by participating in international peace conferences such as the Geneva Summit, and by traveling internationally, such as visiting Camp David in the United States in 1959.

The Soviet Union applied the concept of peaceful coexistence to its relations with industrialized countries, particularly its relations with the United States and relations between member countries of the North Atlantic Treaty Organization (NATO) and Warsaw Pact member countries (also termed the Communist Bloc in Eastern Europe).

THE INTERPRETATION OF THE PEOPLE'S REPUBLIC OF CHINA

During the 1960s and 1970s China applied the concept of peaceful coexistence to its relations with nonsocialist countries in the developing world while arguing that a belligerent attitude should be maintained toward "imperialist" capitalist countries. In the early 1980s China extended its interpretation of the concept of peaceful coexistence to include its relations with all countries, including capitalist countries.

In December 1953, during negotiations with India over Tibet, Chinese premier Zhou Enlai (1898–1976) proposed the Five Principles of Peaceful Coexistence. These were written into the Agreement Between the People's Republic of China and the Republic of India on Trade and Intercourse Between the Tibet Region of China and India signed in April 1954 by Zhou Enlai and Indian prime minister Jawaharlal Nehru following the Sino-Indian War in Tibet. The Five Principles were reiterated by Zhou in 1954 in joint declarations issued with the prime ministers of India and Myanmar during Zhou's visit to the two countries in June 1954, and again at the Bandung Conference of 1955, the first conference of Asian and African countries, where they were incorporated into the conference declarations. In 1982 the Five Principles were written into the Constitution of the People's Republic of China as applied to all sovereign nations. The Five Principles of Peaceful Coexistence as promoted by China are:

- Mutual respect for sovereignty and territorial integrity (government free from external control)
- Mutual nonaggression
- Noninterference in each other's internal affairs
- Equality
- Mutual benefit

There are three notable consequences of the Chinese concept of peaceful coexistence, as differentiated from the Soviet concept of peaceful coexistence. First, the Chinese concept includes the expansion of free trade. Second, the Chinese concept emphasizes national sovereignty, territorial integrity, and noninterference in internal affairs; thus American moves to promote democracy and human rights are seen as hostile actions. Third, the concept precludes support of Communist insurgents in other countries. One major consequence of this policy was that China would not support Communist insurgencies in Southeast Asia, particularly Indonesia and Malaysia, and would distance itself from overseas Chinese in those nations. The Chinese concept of peaceful coexistence does not extend to Taiwan, which is considered a part of China and thus an internal affair in which other nations, particularly the United States, should not interfere.

The concept of peaceful coexistence remains a part of Chinese foreign policy in the beginning of the twenty-first century. On September 3, 2005, Chinese president Hu Jintao called for promoting peaceful coexistence of different civilizations to draw upon each other's strengths.

SEE ALSO *Cold War*

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Anastasia Xenias

PEANUT INDUSTRY

Peanut (Latin, *Arachis hypogaea, Fabaceae*), often referred to as groundnut, is a leguminous plant that produces fruit below ground. The growth habit of the peanut is indeterminate, indicating that vegetative and reproductive growth occur simultaneously on the same plant throughout a significant period of the plant's life cycle. Peanut gynophores, which ultimately produce kernels enclosed by pods, are born above ground and move to the soil due to physiological processes where development and maturation occurs. Three botanical classifications of peanuts include Virginia, Spanish, and Valencia, which vary in vegetative and reproductive morphology. Pod and kernel size of peanuts belonging to these botanical classifications influence utilization and marketing.

Peanuts originated in South America in the region of northern Argentina, Bolivia, and Paraguay. Domestication of peanuts occurred slowly, in a manner similar to that of many other crop plants. During the early colonial period peanuts moved from South America to other areas, and they are now grown in many regions of the world, most notably Argentina, China, India, Indonesia, numerous countries in Africa, and the United States. Production per unit land area varies considerably across regions, and is affected by climate; soil and natural resources; production, pest management, and storage technology and capacity; management skills; and stability of governments and key infrastructure.

Peanut kernels contain 35 to 55 percent triacylglycerols (fresh weight) and 21 to 36 percent protein. Carbohydrate constitutes approximately 15 percent of peanuts, and key vitamins including ascorbic acid, niacin, riboflavin, and thiamin are found in peanuts. In addition to the positive attributes of peanut nutrition, peanuts act as an allergen in some segments of the human population.

The nutritive value and possible allergic reaction influence peanut utilization and marketing.

The primary use of the peanut is for oil production. Peanuts are also used for human consumption in pastes and peanut butter, snack foods including a component in candies, and direct consumption with little to no additional processing after harvest. In developing countries, peanuts often are consumed directly or used as a component in local diets. In countries with intricate marketing systems, peanuts are often shelled, blanched, roasted, and in some cases salted. Components originating from these processes are also used in nonfood categories. However, its uses as oil and in products for direct human consumption are by far the most important uses of peanuts around the world.

The noted scientist George Washington Carver (c. 1864–1943) was responsible for an explosion in the number of uses for peanuts while he worked at the Tuskegee Institute in the United States. Over his distinguished career, Carver developed numerous uses and products derived from or containing peanuts. Perhaps the most notable product he helped introduce to a large segment of the population was peanut butter, which accounts for approximately half of peanut utilization in the United States. These products were important in establishing markets and supporting rural farming communities, and in combating poverty around the world, especially with respect to child development and health.

Production practices vary considerably around the world. In many regions of Africa, peanuts are produced at subsistence levels, yielding less than 1,000 kg/ha, using slash-and-burn techniques. In other regions, peanut yields can exceed 6,000 kg/ha when managed with intensive fertility and pest-management programs using modern machinery, and scientifically based principles and technology. Peanuts are susceptible to a wide range of insect and disease pests, nematodes, and weed interference, and they require essential elements, most notably calcium, and fertile soils with adequate drainage, to optimize yield. Because peanuts are consumed directly by humans, with limited post-harvest processing, it is important that peanut farmers develop strategies to minimize human and environmental exposure to pesticides.

Because peanuts are considered a staple in many regions of the world, the nutritive value of peanuts offers the possibility of its cultivation as a cash crop for local, regional, national, and international trade. In many countries, especially the United States, peanuts are grown primarily for domestic consumption. In contrast, some countries such as Argentina export a high percentage of peanuts produced domestically. Government legislation and farm programs, as well as regional agreements such as the North American Free Trade Agreement (NAFTA) and more inclusive agreements such as GATT (General Agreement on Tariffs and Trade), affect domestic and export marketing of peanuts. Relationships between the three major segments of the peanut industry—farmers, shellers, and manufacturers—can be complex and at times strained in free-market economies.

Peanuts have long been a key component of human diets around the world, especially with respect to providing oil and essential protein and vitamins, and they continue to be a staple food source, especially in rural regions of developing countries. Ensuring that final peanut products do not contain aflatoxin, a mycotoxin caused by the organism *Aspregillus flavus*, is important to protect human health. Additional research and education designed to minimize the negative effects of peanut allergens are also important in the utilization and marketing of peanuts. Increasing technology development and transfer to increase yield, improve quality, and minimize storage loss will continue to be important as human populations rise and concerns over environmental impacts increase. Developing fair-trade agreements and arrangements between major peanut-producing countries, especially those with export potential, is a continuing challenge.

SEE ALSO *Agricultural Industry; Food; Industry; Third World*

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PEARL HARBOR

In the 1920s and 1930s, Americans had become strongly isolationist, many believing that America's involvement in World War I (1914–1918) had been a political mistake. Moreover, the Great Depression focused people's attention on the economy. Against this backdrop, the U.S. Congress had passed neutrality acts in 1935 and 1936. The tipping point that rallied public opinion toward involvement in World War II (1939–1945) came on December 7, 1941.

The Japanese leadership had sought to drive U.S. and U.K. forces out of Asia. To Japan, the attack on Pearl Harbor was seen as merely a "strategic necessity"—part of the grand strategy to secure the Pacific for oil shipments to fuel the empire's efforts to dominate Asia. However, as history has shown, the plan backfired.

In the attack, 21 American ships were sunk or badly damaged, 188 planes were lost, and 155 planes were damaged. In addition, 2,403 American lives were lost and 1,178 persons injured. Fortunately for the U.S. Navy, no aircraft carriers were in port. While the attack produced a substantial military loss, the main effect of the attack was to crystallize Americans' public opinion against the Axis Powers. On December 8, 1941, the United States declared war on Japan.

Prior to the attack on Pearl Harbor, President Franklin Delano Roosevelt had battled with Congress to expand American support for England's struggle against Germany. But once Americans saw themselves as victims, resistance to entering the war melted away. German führer Adolf Hitler's declaration of war against the United States on December 11, 1941, provided the linkage necessary to associate pro-war sentiment generated by Pearl Harbor to Germany, and the United States declared war on Germany and Italy on the same day.

Public sentiment toward Japanese Americans was low prior to the attack at Pearl Harbor, as evidenced by the 1924 Immigration Act that halted Japanese immigration. The attack on Pearl Harbor sparked war hysteria. In 1942 Roosevelt signed Executive Order 9066, which authorized the internment of 120,000 individuals of Japanese ancestry, two-thirds of whom were U.S. citizens. These people were removed from their homes along the West Coast and relocated to inland camps.

President Roosevelt declared December 7 "a date that will live in infamy." As a term, "Pearl Harbor" has come to represent foreign treachery, the perils of U.S. isolationism, and of potential vulnerability of American military forces. The specter of Pearl Harbor helped to fuel the nuclear arms race between the United States and Union of Soviet Socialist Republics during the twentieth century. But Pearl Harbor also constrained U.S. power. Robert Kennedy persuaded his brother, President John F. Kennedy, not to execute a surprise air strike against Cuba during the 1962 Missile Crisis because it would appear to the world as "Pearl Harbor in reverse."

In Japan, the attack is sometimes viewed as the mistake that awoke a "sleeping giant." Others associate it with a dishonorable period of aggression in the nation's history.

Though Pearl Harbor happened more than sixty years ago, the incident carries a great deal of weight in American political rhetoric. Political analysts and media personnel compared the terrorist attacks on the United States of September 11, 2001, to Pearl Harbor. While similar in some respects, the Pearl Harbor analogy, along with other thinly veiled language such as "axis of evil," permitted President George W. Bush to build support for the War on Terror by framing it in terms reminiscent of World War II.

SEE ALSO *Hitler, Adolf; Roosevelt, Franklin D.; World War II*

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Todd L. Belt

PEARLIN PERSONAL MASTERY SCALE

SEE *Motivation.*

PEARSON, KARL
1857–1936

Karl Pearson was one of the principal architects of the modern theory of mathematical statistics. His interests ranged from mathematical physics, astronomy, philosophy, history, literature, socialism, and the law to

Darwinism, evolutionary biology, heredity, Mendelism, eugenics, medicine, anthropology, and crainometry. His major contribution, however, by his lights and by posterity's, was to establish and advance the discipline of mathematical statistics.

The second son of William Pearson and Fanny Smith, Carl Pearson was born in London on March 27, 1857. In 1879 the University of Heidelberg changed the spelling of his name when it enrolled him as "Karl Pearson"; five years later he adopted this variant of his name and eventually became known as "KP." His mother came from a family of seamen and mariners, and his father was a barrister and Queen's Counsel. The Pearsons were a family of dissenters and of Quaker stock. By the time Carl was twenty-two he had rejected Christianity and adopted "Freethought" as a nonreligious faith that was grounded in science.

Pearson graduated with honors in mathematics from King's College, Cambridge University in January 1879. He stayed in Cambridge to work in Professor James Stuart's engineering workshop and to study philosophy in preparation for his trip to Germany in April. His time in Germany was a period of self-discovery, philosophically and professionally. Around this time, he began to write *The New Werther*, an epistolary novel on idealism and materialism, published in 1880 under the pseudonym of Loki (a mischievous Scandinavian god). In Heidelberg Pearson abandoned Karl philosophy because "it made him miserable and would have led him to short-cut his career" (Karl Pearson, Letter to Robert Parker, 17 August 1879. Archive reference number: NW/Cor.23. Helga Hacker Pearson papers within Karl Pearson's archival material held at University College London). Though he considered becoming a mathematical physicist, he discarded this idea because he "was not a born genius" (Karl Pearson, Letter to Robert Parker, 19 October 1879. Archive reference number/922. Karl Pearson's archival material held at University College London). He stayed in Berlin and attended lectures on Roman international law and philosophy.

He returned to London and studied law at Lincoln's Inn at the Royal Courts of Justice. He was called to the bar at the end of 1881 but practiced for only a very short time. Instead, he began to lecture on socialism, Karl Marx, Ferdinand Lassalle, and Martin Luther from 1880 to 1881, while also writing on medieval German folklore and literature and contributing hymns to the *Socialist Song Book*. In the course of his lifetime, he produced more than 650 publications, of which 400 were statistical; over a period of twenty-eight years he founded and edited six academic journals, of which *Biometrika* is the best known.

Having received the Chair of Mechanism and Applied Mathematics at University College London (UCL) in June 1884, Pearson taught mathematical physics, hydrodynamics, magnetism, electricity, and elasticity to engineering students. Soon after, he was asked to edit and complete William Kingdom Clifford's *The Common Sense of Exact Science* (1885) and Isaac Todhunter's *History of the Theory of Elasticity* (1886).

THE GRESHAM LECTURES ON STATISTICS

Pearson was a founding member of the Men's and Women's Club, established in 1885 for the free and unreserved discussion of all matters concerning relationships of men and women. Among the various members was Marie Sharpe, whom he married in June 1890. They had three children, Sigrid, Helga and Egon. Six months after his marriage, he took up another teaching post in the Gresham Chair of Geometry at Gresham College in the City of London (the financial district), which he held for three years concurrently with his post at UCL. From February 1891 to November 1893, Pearson delivered thirty-eight lectures.

These lectures were aimed at a nonacademic audience. Pearson wanted to introduce them to a way of thinking that would influence how they made sense of the physical world. While his first eight lectures formed the basis of his book *The Grammar of Science*, the remaining thirty dealt with statistics because he thought this audience would understand insurance, commerce, and trade statistics and could relate to games of chance involving Monte Carlo roulette, lotteries, dice, and coins. In 1891 he introduced the *histogram* (a type of bar chart), and he devised the *standard deviation* and the *variance* (to measure statistical variation) in 1893. Pearson's early Gresham lectures on statistics were influenced by the work of Francis Ysidro Edgeworth, William Stanley Jevons, and John Venn.

Pearson's last twelve Gresham lectures signified a turning point in his career owing to the Darwinian zoologist W. F. R. Weldon (1860–1906), who was interested in using a statistical approach for problems of Darwinian evolution. Their emphasis on Darwinian population of species, underpinned by biological variation, not only implied the necessity of systematically measuring variation but also prompted the reconceptualization of a new statistical methodology, which led eventually to the creation of the Biometric School at University College London in 1894. Earlier vital and social statisticians were mainly interested in calculating averages and were not concerned with measuring statistical variation.

Pearson adapted the mathematics of mechanics, using the *method of moments* to construct a new statistical system to interpret Weldon's asymmetrical distributions, since no such system existed at the time. Using the method of moments, Pearson established four parameters

for curve fitting to show how data clustered (the mean), and spread (the standard deviation), if there were a loss of symmetry (*skewness*), and if the shape of the distribution was peaked or flat (*kurtosis*). These four parameters describe the essential characteristics of any empirical distribution and made it possible to analyze data that resulted in various-shaped distributions.

By the time Pearson finished his statistical lectures in May 1894, he had provided the infrastructure of his statistical methodology. He began to teach statistics at University College in October. By 1895 he had worked out the mathematical properties of the *product-moment correlation coefficient* (which measures the relationship between two continuous variables) and *simple regression* (used for the linear prediction between two continuous variables). In 1896 he introduced a higher level of mathematics into statistical theory, the *coefficient of variation*, *the standard error of estimate*, *multiple regression*, and *multiple correlation*, and in 1899 he established *scales of measurement* for continuous and discrete variables. Pearson devised more than eighteen methods of correlation from 1896 to 1911, including the *tetrachoric*, *polychoric*, *biserial*, *and triserial correlations* and the *phi coefficient*. Inspired and supported by Weldon, Pearson's major contributions to statistics were: (1) introducing standardized statistical data-management procedures to handle very large sets of data; (2) challenging the tyrannical acceptance of the normal curve as the only distribution on which to base the interpretation of statistical data; (3) providing a set of mathematical statistical tools for the analysis of statistical variation, and (4) professionalizing the discipline of mathematical statistics. Pearson was elected a Fellow of the Royal Society in 1896 and awarded its Darwin Medal in 1898.

Pearson's ongoing work throughout the 1890s with curve fitting signified that he needed a criterion to determine how good the fit was. He continued to work on improving his methods until he devised his *chi-square goodness of fit test* in 1900 and introduced the concept of *degrees of freedom*. Although many other nineteenth-century scientists attempted to find a goodness of fit test, they did not give any underlying theoretical basis for their formulas, which Pearson managed to do. The overriding significance of this test meant that statisticians could use statistical methods that did not depend on the normal distribution to interpret their findings. Indeed, the chi-square goodness of fit test represented Pearson's single most important contribution to the modern theory of statistics, for it raised substantially the practice of mathematical statistics. In 1904 Pearson established the *chi-square statistic* for discrete variables to be used in contingency tables. Pearson published his statistical innovations from his Gresham and UCL lectures in a set of twenty-three papers, "Mathematical Contributions to the Theory of Evolution," principally in Royal Society publications from 1893 to 1916. He established the first degree course in statistics in Britain in 1915.

PEARSON'S FOUR LABORATORIES

In the twentieth century Pearson founded and managed four laboratories. He set up the Drapers' Biometric Laboratory in 1903 with a grant from the Worshipful Drapers' Company (who funded the laboratory until 1933). The methodology incorporated in this laboratory involved the use of his statistical methods and numerous instruments. The problems investigated by the biometricians included natural selection, Mendelian genetics and Galton's law of ancestral inheritance, crainometry, physical anthropology, and theoretical aspects of mathematical statistics. A year after Pearson established the Biometric Laboratory, the Worshipful Drapers' Company gave him a grant to launch an Astronomical Laboratory equipped with a transit circle and a four-inch equatorial refractor.

In 1907 Francis Galton (who was then eighty-five years old) wanted to step down as director of the Eugenics Record Office, which he had set up three years earlier; he asked Pearson to take over the office, which Pearson subsequently renamed the Galton Eugenics Laboratory. Pearson had, by then, spent the previous fourteen years developing the foundations of his statistical methodology. His work schedule was so demanding that he took on this role only as a personal favor to Galton. Because Pearson regarded his statistical methods as unsuitable for problems of eugenics, he further developed Galton's actuarial death rates and family pedigrees for the methodology of the Eugenics Laboratory. The latter procedure led to his twenty-one-volume *Treasury of Family Inheritance* (1909–1930). In 1924 Pearson set up the Anthropometric Laboratory, made possible by a gift from his student, Ethel Elderton. When Galton died in January 1911, his estate was bequeathed to UCL and he named Pearson as the first professor of eugenics. The Drapers' Biometric and the Galton Eugenics laboratories, which continued to function separately, became incorporated into the Department of Applied Statistics.

Although Pearson was a eugenicist, he eschewed eugenic policies. For him and his British contemporaries (e.g., Herbert Spencer, George Bernard Shaw, H. G. Wells, Marie Stopes, and Virginia Woolf), eugenics was principally a discourse about class, whereas in Germany and America the focus was on racial purity. The British were anxious that the country would be overrun by the poor unless their reproduction lessened; the middle classes were thus encouraged to have more children. In any case eugenics did not lead Pearson to develop any new statistical methods, nor did it play any role in the creation of his statistical methodology.

His wife, Marie Sharpe, died in 1928, and in 1929 he married Margaret Victoria Child, a co-worker in the Biometric Laboratory. Pearson was made Emeritus Professor in 1933 and given a room in the Zoology Department at UCL, which he used as the office for *Biometrika*. From his retirement until his death in 1936, he published thirty-four articles and notes and continued to edit *Biometrika*.

SCHOLARSHIP ON PEARSON

Pearson's statistical work and innovations, his philosophy and his ideas about Darwinism, evolutionary biology, Mendelism, eugenics, medicine, and elasticity have been of considerable interest to innumerable scientists and scholars for more than a century. Throughout the twentieth century, many commentators viewed Pearson as a disciple of Francis Galton who merely expanded Galton's ideas on correlation and regression. Consequently, a number of scholars have falsely assumed that Pearson's motivation for creating a new statistical methodology arose from problems of eugenics. Among writers who have taken this view are Daniel Kevles, Bernard Norton, Donald Mackenzie, Theodore Porter, Richard Soloway, and Tukufu Zuberi. However, using substantial corroborative historical evidence in Pearson's archives, Eileen Magnello (1999) provided compelling documentation that Pearson not only managed the Drapers' Biometric and the Galton Eugenics laboratories separately but also that they occupied separate physical spaces, that he maintained separate financial accounts, that he established very different journals, and that he created two completely different methodologies. Moreover, he took on his work in the Eugenics Laboratory very reluctantly and wanted to relinquish the post after one year. Pearson emphasized to Galton that the sort of sociological problems that he was interested in pursuing for his eugenics program were markedly different from the research that was conducted in the Drapers' Biometric Laboratory.

Juxtaposing Pearson alongside Galton and eugenics has distorted the complexity and totality of Pearson's intellectual enterprises, since there was virtually no relationship between his research in "pure" statistics and his agenda for the eugenics movement. This long-established but misguided impression can be attributed to (1) an excessive reliance on secondary sources containing false assumptions, (2) the neglect of Pearson's voluminous archival material, (3) the use of a minute portion of his 600-plus published papers, (4) a conflation of some of Pearson's biometric and crainometric work with that of eugenics, and (5) a blatant misinterpretation and misrepresentation of Pearsonian statistics.

Continuing to link Galton with Pearson, Michael Bulmer (2003) suggested that the impetus to Pearson's statistics came from his reading of Galton's Natural Inheritance. However, Magnello (2004) argued that this view failed to take into account that Pearson's initial reaction to Galton's book in March 1889 was actually quite cautious. It was not until 1934, almost half a century later, when Pearson was 78 years old, that he reinterpreted the impact Galton's book had on his statistical work in a more favorable light—long after Pearson had established the foundations to modern statistics.

The central role that Weldon played in the development of Pearson's statistical program has been almost completely overlooked by most scholars, except for Robert Olby (1988) and Peter Bowler (2003), who gave Weldon greater priority than Galton in Pearson's development of mathematical statistics as it related to problems of evolutionary biology. Weldon's role in Pearson's early published statistical papers was acknowledged by Churchill Eisenhart (1974), Stephen Stigler (1986), and A. W. F. Edwards (1993). In all her papers, Magnello addressed Weldon's pivotal role in enabling Pearson to construct a new mathematically based statistical methodology.

Norton (1978a, 1978b) and Porter (2004) argue that Pearson's iconoclastic and positivistic *Grammar of Science* played a role in the development of Pearson's statistical work. However, Magnello (1999, 2005a) disputed this and argued that while *The Grammar of Science* represents his philosophy of science as a young adult, it does not reveal everything about his thinking and ideas, especially those in connection with his development of mathematical statistics. Thus, she maintains, it is not helpful to see this book as an account of what Pearson was to do throughout the remaining forty-two years of his working life.

Although long-standing claims have been made by various commentators throughout the twentieth and early twenty-first centuries that Pearson rejected Mendelism, Magnello (1998) showed that Pearson did not reject Mendelism completely but that he accepted the fundamental idea for discontinuous variation. Moreover, Philip Sloan (2000) argued that the biometricians' debates clarified issues in Mendelism that otherwise might not have been developed with the rigor that they were to achieve.

Additionally, virtually all historians of science have failed to acknowledge that Pearson's and Galton's ideas, methods, and outlook on statistics were profoundly different. However, Bowler (2003) detected differences in their statistical thinking because of their different interpretations of evolution, and Stigler acknowledged their diverse approaches to statistics in his *The History of Statistics* (1986). Magnello (1996, 1998, 1999, 2002) explained that whereas Pearson's main focus was goodness of fit testing, Galton's emphasis was correlation; Pearson's higher level of mathematics for doing statistics was more mathe-

matically complex than Galton's; Pearson was interested in very large data sets (more than 1,000), whereas Galton was more concerned with smaller data sets of around 100 (owing to the explanatory power of percentages); and Pearson undertook long-term projects over several years, while Galton wanted faster results. Moreover, Galton thought all data had to conform to the normal distribution, whereas Pearson emphasised that empirical distributions could take on any number of shapes.

Given the pluralistic nature of Pearson's scientific work and the complexity of his many statistical innovations twinned with his multifaceted persona, Pearson will no doubt continue to be of interest for many future scholars. Pearson's legacy of establishing the foundations of contemporary mathematical statistics helped to create the modern world view, for his statistical methodology not only transformed our vision of nature but also gave scientists a set of quantitative tools to conduct research, accompanied with a universal scientific language that standardized scientific writing in the twentieth century. His work went on to provide the foundations for such statisticians as R. A. Fisher, who went on to make further advancements in the modern theory of mathematical statistics.

SEE ALSO *Chi-Square; Regression Analysis; Statistics*

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M. Eileen Magnello

PEASANT MOVEMENTS

SEE *Peasantry.*

PEASANTRY

Peasantry refers to peoples and communities who are peasants. The modern English term *peasant* comes from French and Latin terms referring to residents of an administrative district. In modern times the term has come to refer primarily to small-scale agriculturalists who live in villages and small towns in rural areas. Peasant communities are typically based economically on the cultivation of grains and other high yielding plant foods. Wheat, barley, and oats were first domesticated in the area where Syria, Palestine, and adjacent areas of Northern Iraq are now located and the first peasants appeared in Ancient Mesopotamia (present day Iraq).

The basis of peasant agriculture began with varieties of rice and wheat in Asia, corn and beans in what is now Southern Mexico, and potatoes in the Central Andes (Peru). The grains of Mesopotamia spread into Europe; rice spread into other areas of Asia; the cultivation of corn and beans spread north and south from their centers of origin; and potatoes and some grains domesticated in the Central Andes spread throughout the Andean region. These areas became the bases for the growth of peasantries. Peasants typically produce their crops with simple technology in which the work is done by human labor and the use of farm animals. Unlike farmers who usually employ some hired labor to cultivate large crops primarily for sale in markets, peasants are typically small-scale producers who consume much of each crop that they produce.

The rise of the first civilizations and the economies of most urban areas throughout history were primarily dependent in three ways on rural peasantries. The first way was for food. Due mainly to market systems and taxation, surplus peasant production was typically transferred from rural production areas to towns and cities where food was consumed by non-peasants. The second way in which urban areas were dependent on peasants was demographic. Prior to the development of modern public health practices in the nineteenth century, more people tended to die in cities than were born in them. Throughout history peasants have tended to have relatively high death rates, but have offset their death rate by an even higher birth rate. But due mainly to the inability of peasant communities to economically support growing populations, some percentage of every generation typically migrated to cities and maintained urban populations or caused them to grow. The third form of urban dependency on peasants was for labor. When peasants migrated into cities, they usually occupied the lowest rungs of the social order and provided much of the cities' manual labor and menial services.

CLASS AND CLASS RELATIONS

An essential component in the sociology, economics, and politics of peasants is the way in which they are positioned in relation to non-peasants. In terms of social class relations, peasants tend to be at or near the lower end of socioeconomic hierarchies and related to non-peasants by forms of uneven exchange whereby they render up more economic value to non-peasants than they receive in exchange. One of the basic features that make possible such uneven exchange between peasants and non-peasants is land tenure. The political importance of land tenure to peasants is expressed in the slogan of the Mexican Revolution, "Tierra y Libertad," which signals that access to land (tierra) takes precedence over liberty (libertad).

Because they make their living as small-scale cultivators, peasants must have access to land on which to grow crops and raise animals. There is wide variation in the legal, political, and economic aspects of land tenure. The concept of private property, in which land can be bought and sold in a real estate market, is a modern concept. Throughout history it has been common for peasants to live on and work land that is controlled by non-peasants and to whom the peasants are politically subordinate. In non-capitalist state societies the land is typically controlled by a central government that levies taxes on its rural communities. In many other societies, peasant lands are controlled by landlords who charge rent.

State governments also extract surplus from peasants in a number of ways. One of the most common ways is taxation on the crops that the peasants produce or on the land that they use. But taxation of peasants also takes other forms. For example, the monumental architecture of ancient societies, such as the great pyramids of Egypt and Mexico, were built mainly by peasants who had to work on them, typically without pay or other compensation. In feudal societies, peasants may have labor obligations to their lords, whereby they are required to work so many days each year on their farmland or render other services to their landlords. Sharecropping is another form of rent, whereby peasants are given access to land controlled by a landlord, who then receives some fraction of each crop that the peasants working that land produce. In economies with well-developed markets, the peasants may sell part of their harvests to raise money to pay their rents or taxes. In some societies, peasants are required to work lands of the government and also possibly render other services. Also, until recently, peasant conscripts were required to do military service in the armies of kingdoms and states, and of feudal lords. Indeed, until modern times, most of the rank and file members of armies have been of peasant origin.

POLITICS AND THE FUTURE OF PEASANTRIES

Peasants periodically rise up against the lords and governments that impose taxes and rent and other forms of

uneven economic exchange on them. However, the potential for peasant rebellions and political organizing in general is often weakened by internal competition and distrust, which is a result of struggle for scarce resources within peasant communities. Indeed, it was these characteristics that moved German revolutionary Karl Marx (1818–1883) to refer to peasants as like "potatoes in a sack" ([1852] 1972) implying that they were too individualistically oriented to organize as revolutionaries.

But peasantries have on a number of occasions been involved in large-scale regional and national rebellions and revolutions. For example, from 1524 to 1526 German peasants in Franconia, Swabia, and Thuringia joined with impoverished town dwellers (many of whom were no doubt of peasant origin) to mount the "Peasant War," to redress exploitive relations with non-peasants. This movement was largely unsuccessful, but peasants have been major actors in other major conflicts that have had varied outcomes in the twentieth century, such as the Mexican and Russian Revolutions, the formation of contemporary China, and the Vietnam War of independence against France and the United States.

Until the mid-twentieth century, most of the world's population could be characterized as peasant, but since that time peasant communities have tended to become more complex, due largely to ever increasing rates of permanent and circular migration from agricultural communities to urban areas. It became common for many formerly-peasant households to be largely dependent on seasonal migration of some of their members who seek salaried work or self-employment. Much of this migration is across national borders, typically from areas and nations of lesser to higher levels of economic development. Such high rates of migration have increased social, economic, and cultural complexity in formerly peasant communities.

SEE ALSO *Agricultural Economics; Agricultural Industry; Common Land; Dual Economy; Land Claims; Land Reform; Landlords; Lewis, W. Arthur; Maximization; Subsistence Agriculture*

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Michael Kearney

PEDAGOGY

At the present time, more is known about how people learn than ever before in human history, and breakthroughs in research are occurring with increasing frequency. The social sciences have contributed enormously to this body of theoretical knowledge, but the diffusion of pedagogical innovations remains problematic. New theories and practices usually do not completely displace existing pedagogies but are simply added to teachers' instructional repertoire. Moreover, the translation of theory into classroom practice depends heavily on how well individual teachers understand the theories they were taught and how they put them into practice.

During the twentieth century psychologists and educational theorists developed a wide variety of models to explain how humans learn, and it is clear that ongoing basic research has begun to have an impact on pedagogical practice at all levels of the educational system. Recent research in neuroscience has also added a biological dimension to our understanding of the learning process, although the pedagogical implications of this research are still not clear.

Several important themes have emerged from this body of research. For example, there is substantial agreement that in order for deep learning to occur, learners must construct new knowledge themselves, through experience, reflection, and integration. Learners also must build on what they already know and believe, so they must reconcile existing knowledge with new knowledge and correct mistaken beliefs. Metacognitive skills, such as critical thinking and problem solving, are primary goals of learning, but mastery of factual knowledge is also essential to critical thinking. Factual knowledge is best learned within conceptual frameworks that organize it in meaningful ways, and since subject disciplines use different frameworks, students need to learn a variety of approaches for organizing their knowledge.

These theories suggest that students must engage in learning tasks that require inquiry, experimentation, and active engagement in real-world problem solving. Group-based activities and projects are commonly used teaching methods in this paradigm, since cooperation and collaboration seem to facilitate the desired outcomes. The teacher's content expertise is still important, but it is used in novel ways. Questioning and dialogue largely replace

lecturing, and the teacher becomes an instructional coach who designs learning activities, facilitates discussion, and guides students through the process of learning.

With various adaptations, these principles can be applied at all levels of instruction, from early childhood to adult education. For example, in an elementary school, students use models of the sun, the earth, and the moon, and a bright lamp to conduct an experiment to explain the phases of the moon. At the end of the exercise, they write up their conclusions and take a test on the essential astronomical concepts. In a college biology course, student groups are presented with a case study on stream pollution. They work collaboratively to pool their biological knowledge, pose researchable questions, develop a learning plan that includes readings for the group, conduct an investigation of the questions, and finally produce scientifically defensible solutions. The product of their work is evaluated on the accuracy of their knowledge, the thoroughness of their research, and the quality of their scientific reasoning.

Although empirical research clearly supports the effectiveness of these pedagogical approaches, only the most progressive educational institutions promote and support them as the primary mode of instruction. Typically, selected activities and projects occur only sporadically within the context of traditional didactic instruction. The reasons these theories have not been more pervasive in education are related to some of the fundamental problems of translating theory into practice.

Beyond the difficulties of mastering new instructional methods and techniques, teachers often find it hard to abandon the role of expert didact and the instructional paradigm of drill and practice under which they were taught. Indeed, educational researchers have found that the intuitive beliefs of teachers about learning have a greater impact on their instructional practices than theoretical models derived from research. Outside the academy, parents and school boards often do not understand these new approaches and may resist their incorporation into their schools. In some cases, state education standards and curriculum guides may contradict new pedagogical models suggested by research. Finally, governments and school systems increasingly require standardized end-of-grade tests as part of school accountability, and teachers can find that "teaching to the test" is more important to their career success than considerations of effective pedagogy.

It is not sufficient for social scientists to demonstrate the effectiveness of new teaching methods and techniques, since pedagogical change requires attention to the gamut of social, cultural, and political forces that mitigate the translation of theory into practice.

SEE ALSO *Curriculum; Education, Unequal; Freire, Paulo; Hegemony; Neuroscience; Schooling; Teacher Expectations; Teacher-Child Relationships; Teachers*

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Edward M. Neal

PEER CLIQUES

Friendships can foster important psychological and social growth. During late childhood and early adolescence, friends start to gather in a loose-knit collection of members called a *peer group*. Within these larger peer groups are smaller, tightly organized peer *cliques*. Peer cliques consist of a small group of close friends, about three to ten, whose members typically resemble one another in family background, attitudes, and values (Ennett, Bauman, and Kock 1996). Cliques, by their likes and dislikes and social status, for example, often constitute "the popular" and "unpopular" groups. Cliques provide a context for acquiring new social skills and for experimenting with values and social roles in the absence of parental monitoring.

Cliques formed early in childhood typically consist of same-sex members; they later begin to diversify, with an increase in mixed-gender cliques in middle and later adolescence (Dunphy 1963; Hartup 1996). Dexter Dunphy's classic study of Australian adolescent cliques suggests that cliques prepare adolescents for the heterosocial world. Cliques vary in size, but remain small enough to allow frequent interaction among members. Researchers have identified different membership positions within a clique, including a member who affiliates exclusively with the group and a liaison who connects with various other cliques (Ennett and Bauman 1994). Organized around activities, ethnicity, or self-selected friendships, cliques appear to remain stable; instead of dissolving as members leave, cliques replace old members with new members who uphold the group norms (Brown and Klute 2003). Paul Zisman and Vernon Wilson found that when cliques were more tightly organized, they are less likely to include multiple ethnic groups (1992). In most peer cliques a group leader (or leaders) emerges to exercise authority over the group and enforce group norms (Adler and Adler 1995; Dunphy 1963).

A peer clique can be a powerful socializing agent. In a seven-year study of peer cliques of middle-class, European American fourth, fifth, and sixth graders, Patricia and Peter Adler found that clique leaders ridiculed and belittled outsiders and low-status group members, and encouraged other members to act in a similar manner (Adler and Adler 1995). Likewise, Jay Macleod's 1987 observation of late adolescent boys revealed similar teasing and ridicule of outside members. Group norms and socialization become more precarious when they are marked by homogenous aggressiveness and delinquent behaviors (Cairns and Cairns 1994). Research has demonstrated that antisocial behavior is associated with involvement in deviant peer cliques from early to middle adolescence (Stormshak et al. 2005). Young adolescents form groups based on their similarities in terms of deviance and delinquency.

Importantly, not all cliques are negative or socialize children to act aggressively. Some research suggests that cliques can be a significant predictor of adolescents' psychological well-being (Hansell 1985; Gauze, Bukowski, Aquan-Assee 1996; Ladd, Kochenderfer, and Coleman 1997). According to researchers, friendships and peer acceptance into the larger group can provide social and emotional support and create a sense of connectedness to the group. Thus, social development and well-being, apparent in factors such as decreased loneliness, are enhanced in positive peer relations. According to Jeffery Parker and Steven Asher, children benefit from being accepted by the group (1993).

SEE ALSO *Acting White; Peer Relations Research*

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Pa Her

PEER EFFECTS

Although researchers have studied children's peer relationships since the 1930s (Ladd 2005), the end of the twentieth century marked a flurry of psychological inquiry into the impact of peers on development and behavior. Traditionally, adults, especially parents, were considered the primary socializers, responsible for assimilating the child into society. However, according to developmentalists like Jean Piaget and Willard Hartup, children grow up in two distinct social worlds characterized by different types of relationships—the world of adults and the world of peers. Adult-child relationships are hierarchical, with power residing largely with the adult, whose greater experience and knowledge are essential for socializing the child as a new member of society. Yet peer relationships are also critical, though organized quite differently. Contemporary peer relationships are between age-mates of roughly equal power, operating at similar developmental levels, both cognitively and physically. The egalitarian nature of peer relationships makes them unique contexts for developing

skills like negotiation, perspective-taking, cooperation, problem solving, and so on.

Peers can serve as socializers in the *absence* of adults, as shown in Anna Freud and Sophie Dann's (1951) studies of peer rearing among children during World War II (1939–1945) and in Stephen Suomi and Harry Harlow's (e.g., 1972) studies of nonhuman primates. Even when adults are available, however, peer influences are now understood to be significant. Judith Rich Harris has questioned traditional notions of the socialization process, emphasizing the impact of peers and community in her *group socialization theory* (GST). Using behavioral genetics research that attempts to specify the relative influence of hereditary versus environmental influences, Harris points out that about 40 to 50 percent of one's personality is attributable to genetics, but only 10 percent or less can be attributed to family and parenting factors, leaving about 40 percent to environmental influences that are unique to each individual. Harris proposes that the peer group is a significant contributor here, challenging us to consider socialization forces beyond the family.

In understanding peer effects, researchers like Wyndol Furman and Philip Robbins (1985) distinguish between the role of dyadic friendships, which fulfill one's need for intimacy, affection, and reliable alliance, and relations within the peer group, which meet one's need to belong in a larger social context. Both friendships and peer group acceptance contribute to development across the life span, though their impact may differ. For example, Catherine Bagwell, Andrew Newcomb, and William Bukowski (1998) found that children's friendships were associated with better attitudes toward family relationships, greater self-esteem, and lower risk for depression more than a decade later in early adulthood. Being accepted by the peer group also predicted later adjustment associated with higher educational aspirations, better school performance, and job success.

At the dyad level, research by Hartup and others has shown that children and adolescents who have friends are more socially competent, report more positive well-being, and exhibit fewer psychosocial problems than children without friends. Having friends seems particularly important in school adjustment, as the presence of friends facilitates initial school entry (Ladd 1990), helps students navigate later academic transitions (e.g., Berndt et al. 1999; McDougall and Hymel 1998), and impacts students' school engagement and motivation (e.g., Kinderman et al. 1996; Ryan 2000).

The impact of friends can be positive or negative, depending on who those friends are, or rather how they behave. Young people whose friends exhibit antisocial or problem behavior are far more likely to exhibit negative behaviors themselves (e.g., Brendgen et al. 2000). Thomas Dishion and colleagues (1999) have shown that peer "deviancy training" happens subtly, not just through modeling, but through conversational and behavioral rewards (e.g., laughing when peers describe deviant acts they committed). For children who are already at risk for antisocial behavior due to socioeconomic disadvantage or poor family functioning, the likelihood of going down this path appears to be increased by association with deviant friends (e.g., Ary et al. 1999; Fergusson et al. 1999; Kim et al. 1999). In addition, research by Frank Vitaro and colleagues (e.g., 2001) shows that the success of interventions for high-risk youth is enhanced by *less* association with deviant peers and *more* association with nondeviant peers who provide alternative role models and support socially acceptable behavior.

In understanding peer effects, it is important to move beyond popular thinking about "peer pressure" as stemming from power based on *coercion* (e.g., threat of punishment for noncompliance) or *rewards* (e.g., influencing behavior by controlling rewards). Peer influences can also be indirect, based on *referent* power (French and Raven 1959), affecting young people's attitudes and behaviors simply because others admire them and want to be like them or affiliated with them. As Harris suggests, peers do not just "push"; they also "pull."

Perhaps the strongest evidence for peer effects comes from research on peer rejection. Since the 1930s, studies have compared individuals who experience good peer relations with those who are disliked or rejected by peers. This research shows that peer rejection predicts later maladjustment in academic (e.g., poor achievement, school dropout), externalizing (e.g., aggression, criminality), and internalizing (e.g., loneliness, depression) realms (McDougall et al. 2001). To explain the effects of peer rejection, Jeffrey Parker and Steven Asher (1987; see also Parker et al. 1995) propose that deviant social behaviors (e.g., aggression, social withdrawal) often lead to peer difficulties and peer rejection, which in turn places a child at serious risk for a host of poor adjustment outcomes, not only because of opportunities for peer-deviancy training, but also because of missed positive peer-socialization experiences that promote healthy development.

Peer group rejection has also been linked to both poor achievement and school dropout (see Juvonen and Wentzel 1996; McDougall et al. 2001), although the process begins in the early years of school. When Eric Buhs, Gary Ladd, and Susan Herald (2006) followed children through elementary school, they found that early peer rejection affected later school engagement and, in turn, achievement. Children rejected in kindergarten were more likely to avoid school and participated less in class over time, but the outcome depended on the peer treatment received. Rejected children who were abused by

their peers were more likely to avoid school. Those who were excluded by peers were less likely to participate, which in turn lead to lower achievement. A critical challenge for educators (see CASEL) as well as parents (see Rubin 2002) is to recognize the interface of peer relationships on academic and life success.

SEE ALSO *Achievement; Adolescent Psychology; Child Development; Depression, Psychological; Deviance; Friendship; Loneliness; Piaget, Jean; Schooling; Social Isolation; Socialization*

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PEER INFLUENCE

The study of peer influence has an important place in the social sciences, particularly in social psychology and developmental psychology. In a now classic series of studies conducted in the 1950s, Solomon Asch (1907–1996), a Polish-born American social psychologist, showed groups of eight to ten college students a set of three lines that differed clearly in length and asked them to indicate out loud which of the three lines was the same length as a fourth line. Only one of the group members was an actual experiment participant; the other group members were associates of the experimenter who were trained to respond incorrectly about the length of the line. In scenarios when the other group members provided unanimously incorrect responses, the experiment participants voiced the same opinion as the other group members one-third of the time. When they were later asked why they responded as they did, the experiment participants generally stated that they knew the group members were wrong in their choice of the matching line but said that they did not want to be ridiculed, ostracized, or thought peculiar by the rest of the group if they gave an opinion that went against the majority view. The many variants of Asch's experiments have been taken as evidence that peers exert considerable influence on the behavior of one another.

One of the difficulties that studying peer influence has encountered is the question of whether peers actually do influence one another or whether individuals who are similar to one another simply seek each other out. Although there is evidence that young people who engage in deviant behaviors seek out peers who also engage in deviant behaviors, studies that have been able to control for the effects of peer selection have shown that once deviant peers are together in a group, they do incrementally increase one another's engagement in deviant behavior (e.g., Matsueda and Anderson 1998).

NEGATIVE PEER PRESSURE AND POSITIVE PEER INFLUENCE

When thinking of peer influence, what comes readily to mind for most people is negative peer pressure. For example, parents, teachers, and other adults worry that adolescents will be pressured by their peers to smoke cigarettes, drink alcohol, have sexual intercourse, or engage in risky behaviors. Indeed, peers can and do influence one another to behave in more deviant ways. In several studies, the best predictor of whether an adolescent will engage in antisocial behavior has been found to be whether he or she affiliates with peers who engage in antisocial behavior (see Pratt and Cullen 2000).

On the other hand, peer influence can also be positive. For example, adolescents can study together, encourage each other to join an extracurricular activity, or provide a fun peer context that does not promote using drugs or engaging in risky behaviors. In fact, the premise of peer mentoring programs is that being paired with a well-adjusted peer can be a positive influence on a youth who is at risk for behavioral or psychological problems.

MECHANISMS OF PEER INFLUENCE

Several influential theories have attempted to explain how peers influence one another. Reinforcement theories emphasize that peers exert influence because they control (consciously or not) rewards that are meaningful. Individuals will behave in ways that are likely to maximize their rewards. Therefore, if an individual perceives that engaging in behavior promoted by peers will result in desired outcomes (e.g., acceptance by the group, high status, access to material possessions), he or she will be more influenced by peers.

Psychologist Thomas J. Dishion's work on deviancy training has led to a better understanding of the mechanisms through which peers reinforce one another's behavior during social interactions. Adolescent boys were observed with their best friend in a laboratory setting. The interactions were coded for whether one boy provided positive responses (such as laughter) when the other boy talked about deviant behavior. Boys whose interactions

were characterized by this process of deviancy training were found to engage in subsequently higher levels of substance use, violence, and delinquency, even controlling for previous levels of problem behaviors (e.g., Dishion et al. 1996). Nondeviant boys typically ignored rather than reinforced deviant talk.

Modeling is another mechanism that has been proposed to explain how peers influence one another in either positive or negative ways. Peer mentoring programs often count on this mechanism as mentors model prosocial behavior in the hope of eliciting prosocial behavior from their mentees. On the other hand, observing others engage in deviant behaviors might lift an adolescent's own inhibitions against behaving deviantly. For example, if adolescents observe that many of their classmates drink alcohol or skip school, a given adolescent may feel that social barriers against his or her own drinking or skipping school have been lifted. Fads in clothing or music preferences can also be explained through the mechanism of modeling, which can occur not just between individuals but also at the level of entire schools or neighborhoods.

INDIVIDUAL DIFFERENCES IN SUSCEPTIBILITY TO PEER INFLUENCE

Not all individuals are equally susceptible to peer influence. Age is a key factor that relates to individuals' susceptibility to peer influence. Peer influence begins in the preschool years and increases in importance over time, generally peaking in early adolescence before decreasing as individuals enter later adolescence. Not only does the power of peer influence change with development, the outcomes that peers influence are likely to change as well. For example, peer influence has been found to affect aggression among preschoolers, aggression and covert antisocial behavior among children in elementary school, and substance use and sexual behaviors among adolescents.

In addition to age, other individual differences may contribute to susceptibility to peer influence as well. For example, youth who have a history of being rejected by their peers are more susceptible to later negative peer pressure than are youth who have a history of being accepted by their peers. Youth who have positive, supportive relationships with adults are also less susceptible to influence by their peers than are youth who are not positively connected with adults. Temperamental characteristics, such as the ability to self-regulate, may also contribute to one's susceptibility to peer influence. Research suggests that youth who have already begun to experiment with deviant behaviors are the most susceptible to peer influence toward further deviance. In contrast, youth who are already heavily involved in deviant behavior likely do not need additional peer influence to keep them on this path, and youth who are strongly oriented against deviant behavior may be able to resist negative peer pressure. Social contexts can also alter the extent to which peers exert influence on one another. For example, in social situations that are unstructured and unsupervised by adults, adolescents are more susceptible to peer influence than they are in more structured and supervised contexts.

To summarize, despite the ability of peers to influence one another in negative ways, peers can also influence one another positively. Mechanisms through which peers influence one another include reinforcement, deviancy training, and modeling. Furthermore, not all individuals are equally susceptible to peer influence. This entry has focused on peer influence during adolescence because it is at this age when individuals are the most susceptible to peer influence; however, as Asch's pioneering work demonstrated, peer influence persists into adulthood and can lead individuals to act in ways contrary to how they would be expected to behave in the absence of peers.

SEE ALSO *Adolescent Psychology; Asch, Solomon*

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PEER PRESSURE

SEE *Peer Influence.*

PEER RELATIONS RESEARCH

Peer relations research examines the types and quality of social interactions among same-aged peers. Researchers typically focus their investigation on the quality of each individual's peer interactions within a given social unit.

The particular social unit under investigation can range from a dyadic relationship (e.g., best friendship) to a small group (e.g., clique) to a large peer group. Dyadic relationships are characterized as close, intimate, bidirectional social relationships where the peers choose to interact with one another. In contrast, a peer group is loosely defined as a large set of peers who interact with one another as a matter of opportunity (e.g., all students in fifth grade). Cliques are small groups within a peer group whose membership is typically based on perceived areas of similarity. Cliques include both a network of bidirectional relationships as well as a group identity (e.g., *nerds*, *jocks*).

Within a given social unit, researchers have examined a wide variety of dimensions that typically fall within one of three broad categories: social behavior; social support; and liking. Antisocial interactions (e.g., aggression), prosocial interactions (e.g., cooperation), and social connectivity (e.g., withdrawal) are commonly assessed social behaviors. For example, researchers may measure the amount of conflict that occurs within a friendship or how socially isolated a child is within a peer group. In contrast, social support research focuses on the functional attributes of a relationship, such as trust, intimacy, and aid. For example, researchers may examine the degree to which members of a clique provide companionship and advice for one another.

Numerous studies have been devoted to assessing the level of liking within a social unit. In large part, this emphasis is based on evidence that the experience of liking versus disliking significantly impacts social behavior as well as a broad array of functional outcomes ranging from self-esteem to delinquency to use of mental health services. In a cyclical fashion, liking, social support, and social behavior influence one another over time. For example, poor social skills interfere with the formation of social support networks and decrease liking within the peer group that, in turn, decreases opportunities to practice social skills with peers and exacerbates social behavior problems.

Traditionally, four sources of information have been used to study peer relations: (1) *observation*; (2) *self-report*, where persons evaluate the state of their own peer relations; (3) *other-report*, where key, non-peer adults (e.g., parents, teachers, counselors) evaluate the state of another's peer relations; and (4) *peer-report*, where peers evaluate the peer relations of members of the same social unit. With observation methods, social interactions of interest (e.g., cooperative play) are observed (in real-time or via taped archives) within a targeted environment (e.g., playground). The observer is an impartial third party who is trained to evaluate the interactions along dimensions of interest (e.g., frequency, duration, quality).

Self- and other-reports are commonly gathered through paper-and-pencil questionnaires with descriptive items (e.g., troublemaking friends) rated along some scale (e.g., five options ranging from Never to Always). In addition to rating scale questionnaires, sociometrics are a common peer-report methodology through which members of a peer group nominate those peers who match specific social descriptors (e.g., fights a lot). The number of peer nominations received for a particular item is totaled for each member and standardized across the nominating group. Thus a given member's social functioning is assessed relative to that of the entire peer group (e.g., highly aggressive). Sociometrics have the advantage of increased reliability and validity due to multiple informants as well as increased sensitivity to variations within a specific group context.

A unique feature of sociometrics is the ability to assess peer group structure. By comparing liking and disliking nominations, researchers can distinguish a member's place within the social structure, including salience within the peer group (i.e., Social Impact = liking + disliking nominations) and degree of acceptance versus rejection across peers (i.e., Social Preference = liking – disliking nominations). Further John Coie and his colleagues' (1982) sociometric algorithms identify distinct social status groups: (1) Average = some liking and disliking nominations, but no extreme level of either; (2) Popular = many liking and few disliking nominations; (3) Controversial = many liking and disliking nominations; (4) Neglected = few liking or disliking nominations; and (5) Rejected = few liking and many disliking nominations. Social status is highly predictive of patterns of adjustment over time. In particular, rejection is a significant risk factor for maladjustment across social, emotional, and behavioral areas of functioning.

Development, gender, and group-level factors also need to be considered in the study of peer relations. Peers provide different social functions at different stages of life. Males and females have different social needs and interaction styles. Reputational biases within the peer group can also serve to exacerbate particular social patterns.

SEE ALSO *Peer Cliques; Socialization; Soft Skills*

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PEIRCE, CHARLES SANDERS

SEE *Semiotics.*

PENETRATION, EXPORT

SEE *Export Penetration.*

PENETRATION, IMPORT

SEE *Import Penetration.*

PENIS ENVY

SEE *Oedipus Complex.*

PENN WORLD TABLE

The Penn World Table (PWT) evolved from the International Comparison Program (ICP), which was begun in 1968 at the University of Pennsylvania under the auspices of the United Nations Statistical Office. The ICP benchmark comparisons were built up from 150 expenditure headings related to gross domestic product (GDP), for which detailed price comparisons were made for about three to six items per basic headings. These benchmark comparisons permitted estimates of purchasing power parities (PPPs) for the heading levels and aggregates such as food, government, and all of GDP. The initial benchmark comparisons were for 10 countries in 1970 and 34 countries in 1975. These numbers increased to 65 in 1985 and 150 in 2005. Between 1985 and 2005, the European Union countries moved to annual benchmark comparisons, while the OECD (Organization for Economic Cooperation and Development) and associate countries went to three-year benchmarks.

The early ICP comparisons developed a framework and methods but covered relatively few countries. Because there was a strong interest both in wider coverage and estimates over longer periods, the group at Penn, led by Irving Kravis, began to experiment with reduced information methods to extend the estimates to nonbenchmark countries. Robert Summers and Sultan Ahmad developed an early short-cut method to move to more countries, and in 1978 Kravis, Summers, and Alan Heston elaborated the method and published estimates for 100 countries (referring to 1970). The basic method applied the relationship between per capita income and prices for benchmark countries to estimate PPPs of nonbenchmark countries. Summers and Heston took this effort still further, developing estimates for benchmark and nonbenchmark countries that extended forward and backward in time. By the early 1980s the original relationship among the PPP, exchange rate, and per capita income became much less reliable as countries moved to free up exchange rates. In response, Summers and Heston developed an estimating equation based on alternative price sources (e.g., post-adjustment allowances) and per capita income that improved estimates of nonbenchmark countries. PWT version 6.2 covers 178 countries for some or all the years from 1950 to 2004, with 2000 used as the base year. All of the expenditure estimates are expressed in international dollars, which have the purchasing power over GDP of the U.S. dollar.

The level of detail in PWT includes consumption, investment, government, and the net foreign balance. Estimates are provided in current and constant prices, with both chain, Laspeyeres, and terms-of-trade-adjusted GDP series. Per capita, per worker, and per equivalent adult comparisons are provided, along with comparative price levels for GDP and the major components. In PWT 5.6, estimates of the physical capital stock were provided, and this will be resumed in 2007 using an improved methodology.

PWT is widely used as both a research and a teaching resource in development and econometric courses. However, the OECD provides PPP estimates that are more reliable for their member countries than PWT. The main advantage of PWT is that it covers a wider range of countries for a longer time period. The World Bank also provides PPP estimates each year in their *World Development Report*, but it is only at the GDP level and is not a time series. In PWT, quality grades are provided depending on the number of benchmark comparisons in which a country has participated, and on the consistency of their estimates over previous versions of PWT.

The wide use of PWT reflects the fact that the use of PPPs for the conversion of national currency expenditures to a common currency has proved a more reliable explana-

tory variable in many applications than the alternative converter, the exchange rate. Over time it has been used in a number of cases—such as the appreciation of the Japanese yen and the more recent appreciation of the Euro against the U.S. dollar—when there have been no underlying changes in PPPs or real income levels. The implication is that conversions at exchange rates would have greatly overstated changes in the GDP levels in Japan and the Euro countries relative to the United States. Thus, while PPP conversions were first thought to be an improvement because they better captured differences in real product across countries, it turns out that they are also more desirable for changes over time.

Another advantage of PPP conversions is that they take account of differences in relative prices across countries. The importance of this frequently shows up in comparisons of shares of expenditures in national currencies. There is a systematic tendency for the national currency share of investment of GDP to be overstated for low-income countries and understated for more affluent countries, compared to comparisons at international prices where relative prices of investment to GDP have been taken into account. One consequence is that it appears that low-income countries get less additional output from their investment at exchange rates compared to PPPs.

Similarly, energy consumption in physical units like BTUs, as a ratio to GDP from PWT, provides a much more acceptable measure of energy efficiency than if exchange-rate-converted GDPs are used. This has important implications for the projection of energy consumption and fossil fuel emissions for fast-growing low income countries like China and India. PWT has also been widely used in growth studies testing the hypothesis that per capita incomes of countries will converge over time.

Researchers have used PPP-converted GDP from PWT measures of both production and welfare, but it is an imperfect measure of both. As an indicator of well-being, it is but one important element, and researchers look to other variables as well, such as climate, crime rates, and air and water quality. The United Nations uses literacy and health measures in addition to per capita GDP for its Human Development Index of the Human Development Report of the United Nations Development Programme. Productivity comparisons based on PWT can only be carried out at the GDP level, whereas much greater interest attaches to productivity in sectors of production like manufacturing, retail and wholesale trade, or agriculture. The Groningen Growth and Development Centre (GGDC) has carried out such PPP-based productivity comparisons by sector for a significant number of countries, and in PWT 7.0 (for 2008 or 2009) there will be an attempt to integrate their estimates on a consistent basis with the PWT aggregates.

PWT 7.0 will also undergo a major revision as it integrates the 2005 ICP benchmark comparison. It will provide more expenditure detail, such as actual household consumption, including government-provided health and education expenditures. Alternative methods of aggregation will also be explored, and there will be a more detailed treatment of the net foreign balance, so as to distinguish between production and income of a country. This version of PWT will involve collaboration between other centers, including GGDC and the International Data Center at the University of California at Davis.

SEE ALSO *Exchange Rates; Purchasing Power Parity*

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Alan Heston

PEN'S PARADE

SEE *Probability Distributions.*

PERCEPTION, PERSON

Person perception has been variously assigned such labels as social perception, interpersonal perception, social inference, person cognition, and ordinary personology (Bruner and Tagiuri 1954; Gilbert 1998). Person perception refers to how people perceive and make inferences about other people. Perception differs from sensation in that sensation is the feeling that results from sensory receptors, whereas perception is the interpretation of what is sensed. Person perception also differs from object perception or nonsocial perception because human beings are not invariant and inanimate objects. As targets of our perception, peo-

ple are dynamic entities endowed with emotions, motives, and complexity (Heider 1958).

Person perception is influenced by the characteristics of (1) the perceiver, (2) the situation, and (3) the target person (Jones 1990). Research on perceiver characteristics shows that perceivers are not objective observers of their social world but are active agents whose cognitive and motivational biases color their interpretations of others. Knowledge structures, such as schemas, scripts, or stereotypes, assist perceivers in processing information efficiently. Overreliance on these cognitive structures, however, may create bias and lead to errors in person perception. With knowledge structures providing convenient summary expectations and beliefs about others, perceivers may reach hasty and incorrect judgments, or they may ignore information that disconfirms their expectations (Snyder and Swann 1978). Perceivers do not search thoroughly for information to form impressions of others (Gilbert 1998). Moreover, expectations about a target person can lead perceivers to engender behaviors from the target that confirm perceivers' initial expectation (i.e., self-fulfilling prophecy) (Rosenthal and Jacobson 1968). In addition, a perceiver may be motivated to form judgments of others that protect the perceiver's sense of self-worth (Klein and Kunda 1993).

Characteristics of the situation are often overlooked by perceivers when they form judgments of target persons. Perceivers have a tendency to underestimate the importance of situational influence and to overestimate the importance of dispositional factors when they interpret the actions of other people. This tendency is called the *fundamental attribution error* or *correspondence bias* (Ross 1977; Gilbert 1998). Perceivers also tend to see that their own failure is caused by external circumstances, while their own success is internally caused. But they are less likely to show this bias when interpreting the success or failure of others, a phenomenon known as the *self-serving bias*. Person perception research has also focused on the dynamic interpersonal perception between a perceiver and a target person (Kenny 1994) and the cultural influences on these interpersonal processes (Markus and Kitayama 1991).

Certain target-person traits (e.g., the central traits of *warm* and *cold*) have more impact than other traits (e.g., the peripheral traits of *polite* and *blunt*) on perceivers' impressions of others (Asch 1946). Negative information also tends to be more heavily weighted in person perception because of information diagnosticity (Skowronski and Carlston 1989). Research has shown that perceivers have implicit personality theories about others, such that an interferential relationship is assumed by perceivers to exist, regarding which target traits seem to co-occur to form a coherent whole (Schneider 1973).

Inferences in impression formation occur not only intentionally but also unintentionally (Anderson and Glassman 1996; Bargh 1997; Uleman 1999). Person perception includes nonverbal communication as well as cognitive inference processes (attribution or social cognition). Representative nonverbal cues are facial expression, voice tone, gaze, interpersonal spacing, touch, and gesture (DePaulo and Freidman 1998). Current work on person perception is also aimed at exploring the implicit associations perceivers have between traits and stereotyped groups.

SEE ALSO *Attribution; Jones, Edward Ellsworth; Prototypes; Schemas; Self-Serving Bias; Stereotypes*

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PERESTROIKA

SEE *Glasnost; Gorbachev, Mikhail.*

PERFORMANCE

Performance, as understood in the context of the social sciences, is a process by which individuals (actors) display for others (the audience) the meaning of their social situation. During the last decades, the term *performance*, which originates from the theatrical context, has become extremely prevalent in various fields and disciplines such as art, literature, and the social sciences. In the United States it has even developed into a specific field of scholarly work, with departments specializing in performance studies. However, performance remains a highly contested concept, one that raises disagreements and divides among scholars.

HISTORICAL DEVELOPMENT

The idea that all social behavior is at least partially a performance is hardly new. It has been with us since the time of the ancient Greeks and the Greek theater, reemerging as a central motif during the Renaissance and the Baroque periods. One of the most famous speeches in William Shakespeare's play *As You Like It* reflects this understanding, opening with the words:

> All the world's a stage,
> And all the men and women merely players;
> They have their exits and their entrances,
> And one man in his time plays many parts.

This insightful metaphor was developed into an academic subject of study during the second half of the twentieth century, mainly by the fields of anthropology and sociology. The subject of "cultural performance" (a term coined in 1959 by Milton Singer) became a matter of increased interest among anthropologists during the 1960s. Victor Turner stands out as the anthropologist who probably made the most important contribution to the convergence of culture and theater, with his concept of *social drama*. This concept, based on the early-twentieth-century work of anthropologist Arnold Van Gennep, expanded the use of drama as a metaphor for nontheatrical cultural manifestations. Working closely with Turner, Richard Schechter, who came from a theatrical background, called for an infusion of theater theory with the work of the social sciences and suggested that traditional drama tends to echo the stages of social drama. Other prominent anthropological contributions to the field were made by Clifford Geertz, who suggested a distinction between "deep play" and "shallow play" in performance; and by Dwight Conquergood, who represents a shift from the anthropological preoccupation with the performer and the performative act to a greater consideration of the audience, the reporter, and the social and political implications of the performance.

ERVIN GOFFMAN AND DRAMATURGY

Sociological interest in the application of theatrical concepts to social life emerged in the second half of the twentieth century. While not the first to write on the theatrical aspects of everyday life (Nikolas Evreinoff, for example, published in 1927 a book named *The Theatre in Life*, and Kenneth Burke has also importantly written on the subject), it is the work of sociologist Erving Goffman that has really paved the way for the study of social performance. In his seminal and still highly influential book *The Presentation of Self in Everyday Life* (written in 1956 and reprinted in 1959), Goffman expands many of the ideas discussed by his predecessors. He organizes these ideas into a coherent and well-written dramaturgical analysis of social life in its entirety as a theatrical performance. In this view, we are all actors, playing a role on changing stages in front of various others, who themselves serve simultaneously as our audience and as actors who play a role, to which we are audience. Goffman takes the metaphor of the theater even further. He claims that, as in the theater, social life is guided by scripts and is divided into "front-

stage," where one performs in the presence of others, and "back-stage," where the individual practices his act.

This presentation of things begs a subsequent question: Why are we all acting instead of just "being ourselves"? To this Goffman offers a clear answer: It is in our interest to perform in a way that guarantees that others will assess us favorably. In other words, we are constantly working on what Goffman calls impression management, in which we seek to influence the collective definition of the situation by convincing others to accept a positive impression of ourselves. Furthermore, according to Goffman, the self (or rather selves) is shaped and constructed through interactions with others and the various roles one plays in these interactions.

While the dramaturgical perspective seems to convey the idea that people are constantly seeking to deceive others, Goffman does not hold such a position. Rather, he believes that there is nothing inherently fake or inauthentic about the roles we play. In fact, in his view these roles are often part of who we really are. Moreover, the acting itself is not always conscious. People convey impressions both knowingly and unknowingly, and the fact they are always acting does not mean that they are always aware of their act (in fact, all too often they are not). Since there is a mutual dependency between actors and audiences, it is the goal of both sides to protect the performance and maintain its integrity, not to expose its failure.

In later writings (mainly in his 1974 book, *Frame Analysis*) Goffman expands his analysis, introducing the concept of frames—principles by which the social world is organized, which constrain and limit the possible range of performances and definitions of the situation. By this Goffman expresses the understanding that people cannot simply choose whatever performance they wish and fashion it according to their whim, but are rather constrained by the social context and their position in the social world.

RECENT DEVELOPMENTS

The writings of Turner and Goffman still offer the foundations of performance studies in the social sciences. But other scholars have suggested criticisms and extensions to their pioneering analyses. Most notably, Turner and Goffman were both criticized for focusing on the point of view of the actor and neglecting that of the audience (a challenge that was partially met by the work of Dwight Conquergood and of semiotic perspectives, most notably those of Umberto Eco). Goffman was also criticized for not expanding his theory enough to macrosociological domains and to the mass media. Scholarly work has since attempted to confront some of these challenges and expand the usage of performance ideas in the social sciences. (For example, Jeffery Alexander in a 2006 co-edited volume, *Social Performance*, offers an innovative cultural analysis of social performance.)

Turning to other disciplines, the contribution of Judith Butler emerges as an original break from former work of Goffman and other sociologists. In her well-known book *Gender Trouble* (1990) and in subsequent writings, Butler, who takes Goffman as her point of departure, uses the ideas of performance to explore the issues of gender and sexuality. Rejecting naturalistic notions of inherent sexual or gendered essences, Butler argues that the distinctions between homosexual and heterosexual and those between female and male are no more than social constructions. Since they are not based on a real essence, these distinctions are always at risk of disruption and subversion and must be maintained through recurring sexual and gender performances. In other words, rather than simply *being* a girl or a boy, people constantly act these parts and maintain the distinctions through repetitive performances. Unlike Goffman, Butler emphasizes the discursive parts of performance rather than the actions of individuals. For her there is no self or ontological body, which precede the performance. Thus, in her analysis she uses the term *performativity*, rather than performance.

The ideas of social performance were also stretched to the study of racial identities and constructions (Majors and Billson 1992), to the study of organizational and political behavior, and to other fields. Many of these accounts reveal an important aspect of social performance—through performance, previously silenced individuals and groups may receive a voice and become visible. As the study of performance continues to evolve, such issues will surely remain at the heart of the debate.

SEE ALSO *Anthropology; Anthropology, Linguistic; Communication; Essentialism; Ethnicity; Geertz, Clifford; Gender; Goffman, Erving; Identification, Racial; Identity; Linguistic Turn; Literature; Media; Race; Script Models; Self-Presentation; Sexual Orientation, Social and Economic Consequences; Social Constructionism; Social Constructs; Social Science*

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PERFORMANCE STUDIES

SEE *Performance.*

PERIOD EFFECTS

Researchers who investigate human development or social trends face the difficulty of disentangling various effects that lead to change. In such analyses, scientists note that change may occur for three reasons. The first type of change involves social and environmental forces related to the passage of time. These changes are termed secular effects; in this context, *secular* simply refers to the passage of time and does not imply a contrast with religion or a lack of religion. The second type of change is due to age effects, reflecting physiological changes in individuals. The final type of change relates to cohort effects, the macro conditions that birth cohorts experience over the life span. Because of the close interconnection between age, period, and cohort effects, researchers have noted the importance of teasing apart the relative contributions of these effects. Each effect can contribute independently to change, and there may be interactions among the effects that are not predictable from age, period, and cohort effects individually.

Scientists have developed a number of approaches to identifying the varying causes of change. In some research, investigators may ignore one effect (e.g., age), instead focusing only on the other two (e.g., cohort and period). The obvious drawback here is that one cannot always safely assume that the effect being ignored has not influenced the outcome measure. In other cases, the investigators may examine two of the three effects successively, one effect being temporarily ignored. In this approach, one can identify the relative contribution to an outcome measure by noting whether an effect's absence in one of the models changes the adequacy of a prediction of the outcome.

One frequent topic associated with age, period, and cohort effects is the prevalence of suicide. An example of such research that reveals the importance of period effects, differentiated from age and cohort effects, compared suicide rates in Australia, the United States, and Canada. John Snowdon and G. E. Hunt (2002) identified an increase in suicide rates for successive cohorts in the United States and Canada in the mid- and late twentieth century. A change in Australian legislation limiting the availability of sedatives led to a different pattern. The historical change regarding therapeutic drugs, a period effect, is important in understanding suicide rates in the population. When such period effects were taken into account, estimates of suicide rates among certain cohorts were comparable in the three countries.

In much of the research, the cohort identified is the birth cohort. Some research creates different categories within the birth cohort. Studies of suicide are again instructive in this regard. In the United States blacks have traditionally been at relatively lower risk for suicide than some other groups in the United States (e.g., whites). Since the early 1980s, however, the rate of attempted and completed suicide has risen among blacks. Research has revealed a higher rate among younger black cohorts, as compared to older cohorts perhaps, as Sean Joe (2006) suggests, because of changing religiosity and greater acceptance of suicide.

With any complex social dynamic, however, period effects are not sufficient to characterize all aspects of a phenomenon. For example, in assessing alcohol consumption across the life span, researchers have documented that drinking decreases as people get older. Some of this effect is attributable simply to age. At the same time there is also evidence that cohort effects are important because of socialization factors. Finally, period effects emerge as important; relevant factors can include, as Mary Gilhooly (2005) notes, availability of alcohol, changes in drinking age, the extent of discretionary time in which to drink, and price.

Psychological and sociological studies have used age-period-cohort analysis, but other disciplines also consider these effects. For instance, research has revealed a cohort-period interaction in the voting patterns of citizens of countries formerly part of the Soviet Union. The data showed that, with the fall of communism, older voters tended to resist change, voting for candidates from the old regime. Younger voters, in contrast, embraced a more liberal approach in their voting. In this case, the period effect related to the introduction of a new economic system. Age as a factor was important, but only, as Sara Schatz (2002)

shows, as it interacted with different macro experiences of the various birth cohorts.

Ann Crouter and A. E. Pirretti (2006) observe that in this type of research there are inevitable methodological concerns involving validity of data. Most researchers rely on secondary analyses, using existing datasets. As such researchers studying age, period, and cohort effects have to rely on questions that may not be ideally worded for a given project. Furthermore slight changes in wording across time may have notable effects on results. For instance, in studies on happiness by the Gallup organization, respondents answered a question whose three responses included "very happy," "fairly happy," and either "not very happy" or "not at all happy." When the final response was "not at all happy," respondents chose "fairly happy" more frequently than when the third alternative was "not very happy." People were more comfortable declaring that they were "not very happy" but more reluctant to assert that they were "not at all happy." Such dynamics, as Norval Glenn (2005) notes, complicate the long-term study of behaviors in age, period, and cohort research.

SEE ALSO *Alcoholism; Data, Longitudinal; Pollsters; Public Health; Religiosity; Research, Longitudinal; Socialization; Stages of Development; Suicide; Survey; Voting; Voting Patterns*

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PERIODIZATION

Periodization is an intellectual process that seeks to divide a continuous time interval into parts. Periodization is most frequently used in the social sciences and humanities, especially in such disciplines as economics, sociology, history, and literature. There are two ways to proceed when forming a periodization. One is to divide an entire era into smaller periods that share some homogeneity within them. This is the most common procedure in history periodization, but it is also found in economics and other social sciences. The second procedure is to identify cycles in a historical era, then break the era into phases that can be considered a full cycle. This approach is common in economics.

The origin of the idea of periodization is rooted in the old philosophical principle that there are possible quantitative variations in most concepts associated with social phenomena. Such quantitative variations can lead to qualitative changes in some features of social reality that can be used to define different periods. For example, in a particular period, a given society can be composed mainly of peasants and landlords, but it can also have a small number of artisans. The state in such a society could be controlled by landlords, and most laws would favor the ownership of land and the relationships prevailing in rural areas, with low taxes on land and so on. If the number of artisans grows, they can end up seizing state control. Then, all laws and order could change and become biased to support artisanal production. In this example, a quantitative change in the number of artisans in the society led to a qualitative change in the structure of power and institutional order. A simple periodization in this case would be to divide the history of this society into two parts: One covers the period when political power was under the control of landlords; the second covers the period when political power was controlled by artisans.

More rigorously, suppose that social reality is composed of two sets: One is a set of beings and the other is a set of relationships among them. Any being can potentially be measured, so the relationships among them define relations among quantities of the beings involved. These relationships or beings can have threshold values that change their nature. For example, one being can have two measurable dimensions, A and B; so that $A = 0$ for $B \leq B_1$, where B_1 is a specific threshold value. If $B > B_1$, A can jump so that $A = 1$. This rupture of behavior clearly creates the possibility for identification of two periods.

In economics, there is an additional notion of periodization that does not necessarily involve qualitative changes. If some economic variable presents a cyclical behavior, such as a cosine function, it is possible to identify a full cycle as a period, and a periodization emerges from such a procedure. In this case, the moment identi-

fied as the beginning of any cycle is totally arbitrary. Often the date identified as the end of a period, even when the beginning is defined, is also arbitrary, as economic variables are not well behaved. Their stochastic nature jeopardizes the simplicity of cycle identification.

The idea of arbitrariness that arises from the discussion of periodization in continuous variables, which are not subject to qualitative changes, can be extended to social phenomena that contain variables subject to discontinuous behavior. Suppose that there is a set of n variables and m relationships defining a social reality, so that $n > 3$ and $m > 3$. If all the variables are subject to noncontinuous variations, any particular variable or combinations of them may be taken as parameters to define ruptures that could characterize change in periods. Therefore, different researchers could take distinct variables or their potential combinations to identify periods, and distinct periodizations would emerge.

In addition to the imprecision resulting from the selection of different criteria for the identification of periods, it is also possible for disputes to emerge concerning the moment in which one criterion exhibits enough change to lead to a period break. Measurement of many social variables is not easy, and most of the time variables have a stochastic component that makes it difficult to identify the moment they actually reached the relevant value that generated the qualitative period change.

Periodization also tends to be historically determined, as each culture and each era has its own set of most relevant social phenomena that normally serve as the basis from which to draw criteria. Such difficulty in establishing a periodization, along with the other problems discussed above, have caused some researchers to condemn the practice of periodizing history.

SEE ALSO *Economic Model; Economics; Models and Modeling; Social Science*

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PERMANENT INCOME HYPOTHESIS

The permanent income hypothesis (PIH), introduced in 1957 by Milton Friedman (1912–2006), is a key concept in the economic analysis of consumer behavior. In essence, it suggests that consumers set consumption as the appropriate proportion of their perceived ability to consume in the long run. Wealth, W, is defined as the present discounted value of current and future total income receipts, inclusive of income from assets. Under the assumption that the household is infinitely lived, *permanent income* can be defined as that level of income which, when received in perpetuity, has a present discounted value exactly equal to the wealth of the household. Equivalently, permanent income, denoted y^P, may be regarded as the amount it is believed possible to consume while maintaining wealth intact; it is therefore expressed as equal to the "annuity value of wealth," $y^P = rw$, where r is the real interest rate (assumed fixed).

More specifically, the PIH decomposes *measured* total disposable income, y, into a *permanent* component, y^P, and a *transitory* component, y^T. The permanent income component is deemed systematic but unobservable, reflecting factors that determine the household's wealth, while the transitory component reflects "chance" income fluctuations. Similarly, measured consumption, c, is decomposed into a permanent component, c^P, and a transitory component, c^T. Assuming these relationships to be additive, for simplicity: $y = y^P + y^T$ and $c = c^P + c^T$. It is also important to note that the PIH defines consumption in a "use sense," through the enjoyment or destruction of consumer goods by use, rather than the expenditure upon them, so that consumption is regarded as a service flow.

In giving the hypothesis empirical substance, Friedman assumes the transitory components to be uncorrelated across consumption and income, and with their respective permanent components. The second of these assumptions follows from the definitional decomposition and the nature of transitory components. The first implies that *irregular* income will not result in unplanned consumption. Friedman defends this assumption by arguing that transitory income changes are likely to be reflected in changes in asset holdings. Further, since the consumption definition includes only the flow of services from goods, transitory income disbursed on durable goods may still be classified as unplanned savings. Moreover, zero correlation implies only that the *average* association is zero, and positive associations in some instances may well be offset by negative associations in others.

The formal relationship between consumption and income is derived from a standard intertemporal utility-maximizing framework under the assumptions of infinite life, perfect capital markets that permit borrowing and lending of unlimited amounts (subject to solvency) at the same real interest rate, and the condition that the utility function is homogeneous of positive degree in consumption for current and all future periods, such that an expansion in the feasible budget set (arising from increased

income in any period) leads to an equal proportionate change in present and planned future consumption. As a consequence, at the level of the household, permanent consumption is a proportionate function of permanent income. That factor of proportionality is dependent on tastes, age, and the real interest rate (and, with allowance for uncertainty, on the ratio of financial assets to permanent income, on the basis that financial assets provide more substantial collateral than "human wealth" in the form of discounted unearned future income). The aggregate consumption function then depends on the distribution of these factors across households. If it is further assumed that the distribution of households by income is independent of their distribution by these factors, then aggregate permanent consumption obeys a simple proportionate relationship to aggregate permanent income: $c^P = q\,y^P$.

This proportionate relationship between the permanent components of consumption and income is readily reconciled with the nonproportionate aggregate relationship typically observed empirically in cross-sections and short-run aggregate data studies. This is as a consequence of low-income brackets including a greater proportion of households with negative transitory income, and high-income brackets including a greater proportion of households with positive transitory income. However, without any impact on consumption, which is still proportionate to the permanent income of those households, the observed consumption-income relationship is shallower than the underlying proportionate relationship between the permanent components (see Figure 1). More specifically, for zero mean transitory components and a random transitory income distribution, the cross-section average income group consumes cross-section average permanent income. For the above-average "high" income group, transitory income will typically be positive but not reflected in consumption, though assets will be accumulated. Similarly, below-average "low" income groups are more likely to have experienced negative transitory income, which reduces income below the permanent income level, associated with negative changes in asset holdings. Thus, the asymmetric incidence of transitory income generates an observed consumption-income relationship that is disproportional and lies away from the underlying proportionate behavioral relationship. Note that the exact shape of this observed relationship will depend on the actual distribution of transitory income in practice, while its positioning in the diagram will depend on the true cross-section average transitory income and transitory consumption values, which may not be zero as illustrated. Over time, as aggregate average permanent income grows

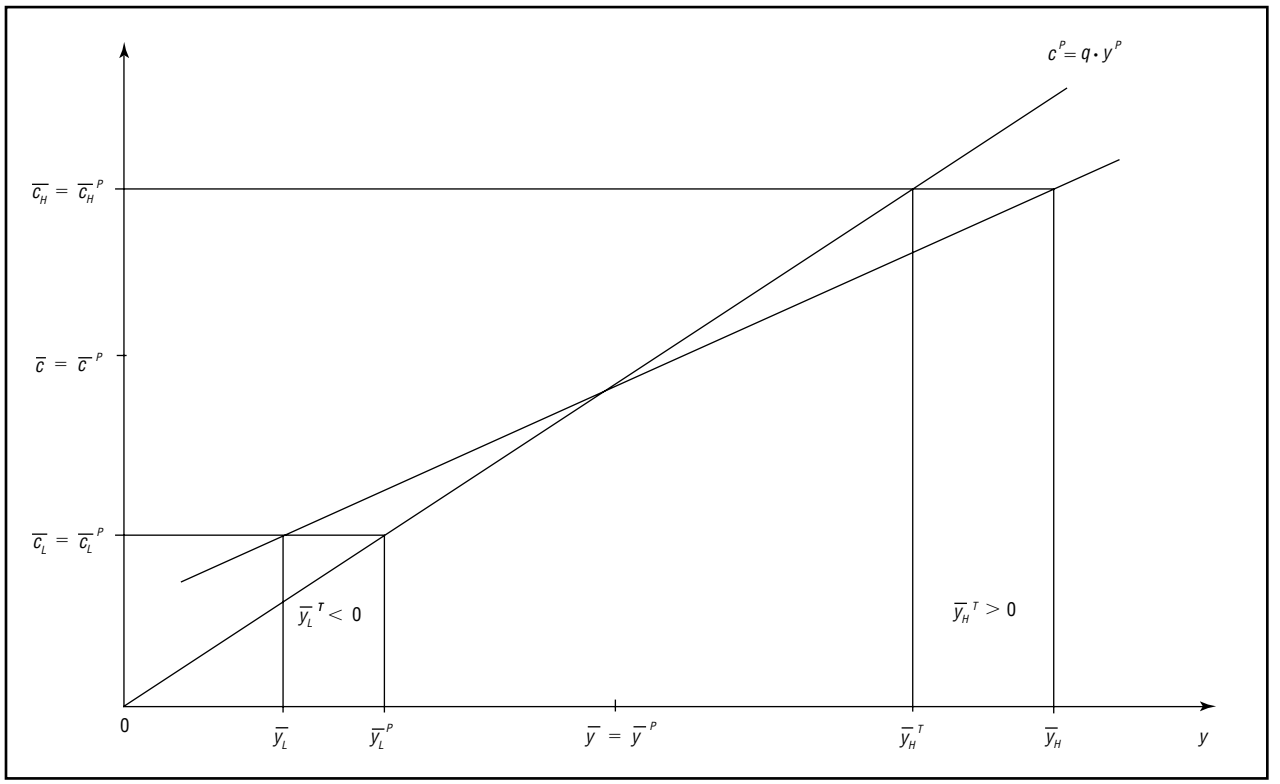

Figure 1: The cross-section representation of the permanent income hypothesis.

along trend, the cross-section consumption function shifts up, tracing out a long-run time series of aggregate average consumption and income that exhibit a constant ratio with respect to each other.

A major difficulty in attempting to test the PIH empirically is that permanent income is not observable. This necessitates the use of some proxy or means of estimating permanent income. In the empirical implementation of the permanent income hypothesis using time-series data, Friedman utilized an adaptive mechanism to relate permanent income to current and past measured income, with the greatest weight attached to current income and declining weights attached to income further in the past. That is, permanent income is represented by an exponentially weighted average of all observed measured incomes, with the weights summing to unity. This approach, with some truncation of the influence of past incomes, enabled Friedman to estimate the weight attached to current income in contributing to permanent income at around one-third (and therefore far less than unity, as would be implied by the *absolute income hypothesis*) and to demonstrate the long-run proportionality of consumption and income, as implied by the PIH.

It is also of some note that the infinite distributed lag formulation of permanent income may also be expressed equivalently in terms of a finite *adaptive expectations* representation for permanent income, such that if current measured income exceeds the previous period's estimate of permanent income, then the estimate of permanent income for the current period is revised upwards, the extent of the adjustment depending on the size of an adjustment parameter in the adaptive expectations mechanism. Algebraically, taking the infinite distributed lag formulation of permanent income, making use of the *Koyck transformation* and the definition of permanent consumption as the difference between measured and transitory consumption, it is then possible to express current measured consumption as a function of current measured income, measured consumption in the previous period, and an error term. However, this time series representation is "observationally equivalent" with the implications of alternative theories of consumption, such as the *relative income hypothesis*, thus weakening the distinctiveness of the permanent income approach (though it should be noted that this criticism is less damning to tests of the cross-sectional implications of the PIH noted above).

An ensuing criticism of the PIH is centered on the assumption of an adaptive relationship between permanent and measured income, which implies an underlying adaptive expectations mechanism, as discussed above. This criticism hinges on the observation that such expectations are entirely "backward-looking," in the sense that expectations are only revised in response to past movements in income, and such revisions are in general sluggish, which suggests the possibility of systematic expectation errors. However, it is not a tenable proposition that rational economic agents, who are assumed to be optimizing subject to constraints in all other regards, would not seek to revise their expectation formation mechanism, and the information on which it draws, in such circumstances. The essence of the *rational expectations hypothesis* (REH) is that agents should utilize all relevant and available information in avoidance of systematic error, and the incorporation of the REH into the PIH therefore has considerable ramifications. Predominant amongst these is the implication that consumption should follow an approximate *random walk*, such that knowledge of previous values of any variable other than the immediately preceding level of consumption should have no predictive power for consumption, since all information available in the previous period should have been incorporated in determining the previous level of consumption. However, the available empirical evidence is not generally supportive of this proposition in its strict form, and the ensuing debate has reinforced the view that the validity of the results of tests of the PIH depend as much on the method used to represent permanent income, and in particular the relationship between current and expected future income, as on the validity of the PIH itself.

From a policy perspective, the PIH asserts that current income plays only a minor role in consumption determination, as just one element of the entire spectrum of current and expected future income, and emphasizes the assumed desire of consumers to smooth consumption flows in the face of variable income flows. In particular, conventional Keynesian demand-management policy, as might be conducted through countercyclical fiscal policy in the form of temporary income tax changes, will lead to little or no change in consumption and be relatively ineffective, since only changes perceived by households as leading to revisions in their permanent incomes will impact significantly on their consumption. Thus, transitory income movements are largely reflected in saving changes. Moreover, the economic system is consequently inherently more stable in that the income-expenditure multiplier effects of exogenous changes are reduced, so that the change in national income following a temporary change in private investment or government expenditure, for example, is correspondingly much smaller than when consumption is directly responsive to current income alone, as is the case under the Keynesian absolute income hypothesis.

However, a caveat to the preceding policy discussion is warranted in that it must be remembered that the PIH is concerned with consumption as a flow of services, as distinct from the implications for consumer expenditure, which includes expenditure on durable goods, and it is

this latter concept that is important in income-expenditure analysis. Thus, while transitory income movements are reflected in savings and asset changes under the PIH, such assets include durable goods, and the potential for a sizeable multiplier effect to operate is opened through the relationship between current income and durable-good expenditures. Moreover, to the extent that capital markets are imperfect and consumers do not have good short-term lending and borrowing opportunities, the tendency toward holding transitory income in durable goods is strengthened. The issue of countercyclical policy effectiveness then becomes one of determining what form asset accumulation and associated expenditures take, and what factors influence those expenditures.

Perhaps most critically, the PIH embodies the assumption that capital markets are perfect in the sense that lenders are prepared to extend credit on the basis of repayments financed out of future income yet to be received, at a fixed rate of interest irrespective of loan size, and equivalent to the loan rate payable to deposits. However, where consumers are unable to borrow freely on perfect capital markets, possibly as a result of *adverse selection* and *moral hazard* under limited and asymmetric information, *liquidity*, as the ability to finance consumption, and *liquidity constraints*, involving limitations on the volume of borrowing as well as divergences between rates of interest on borrowing and lending, become paramount. In such circumstances, increases in current income are likely to be used to finance increased consumption, thus accentuating the observed consumption-income relationship, particularly where lenders select current income as the credit rationing device from among the observable characteristics conveying information on ability to repay debt.

SEE ALSO *Absolute Income Hypothesis; Consumption Function; Life-Cycle Hypothesis; Relative Income Hypothesis*

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PERÓN, EVA

SEE *Peronism.*

PERON, JUAN

SEE *Peronism.*

PERONISM

Peronism is the name of the most important political force in contemporary Argentina. It emerged from the first and second presidencies of Juan Domingo Perón, who was democratically elected in 1946 and, after winning elections in 1952, was overthrown by a military coup in 1955. Beyond being a political party, Peronism has been a social and political movement firmly entrenched in the organization and political identity of Argentine society, and has given birth from the 1970s to the 2000s to different political factions with conflicting ideologies and programs.

Perón's election to the presidency in 1946 represented a reaction to the economic and industrial changes introduced by military regimes following an oligarchic restoration (1930–1939). Peronism emerged as a working- and lower-class movement, and survived an eighteen-year ban on the party, the exile of its leader (1955–1973), decades of repression, and the 1974 death of Perón, then serving his third presidential term.

Even though there is general agreement that the changes implemented by Perón transformed Argentine society, politics, and culture forever, the true character of Peronism has been widely disputed. While it has been presented as one of the paradigmatic cases of Latin American populism (De la Torre 1992), it has also been seen as a political movement with certain affinities with fascism, due to the dictatorial style of Perón's government and Perón's open admiration for Benito Mussolini. Peronism has also been studied as a strategic alliance of the working classes with the state (Murmis and Portantiero 1971), among other interpretations.

According to Daniel James (1988), one of the constitutive elements of Peronism was a belief in the essential virtue of the people. Perón considered the organization of labor vital for the success of the state in asserting workers' rights against the interests of the oligarchy. Peronism was associated with the achievement of higher wages, the generalization of a system of collective bargaining, greater levels of unionization, and better living conditions for the working classes and the poor. Peronism represented an expanded notion of the meaning of citizenship, and challenged the accepted forms of social hierarchy and traditional symbols of authority.

At the same time, Peronism was characterized by nationalism and corporatism, an emphasis on class harmony and the central role of the leader, and the overwhelming presence of a paternalistic state. Industrialization was one of the most important goals of Perón's government (Rock 1987).

The impact of Peronism on the working classes' organization was ambiguous, and thus did not have a single meaning for those classes. As James notes, the Peronist state made great efforts between the late 1940s and the

mid-1950s to institutionalize and control the workers' movement, whose demands Perón had earlier encouraged, and to absorb it into the framework of a new state-sponsored orthodoxy. From this perspective, Peronism can be seen as a demobilizing force encouraging passivity among workers, who were limited in their actions by a powerful and controlling state. However, efforts to control the unions from above did not prevent the emergence of a strong oppositional culture among workers, which was the foundation of "rank-and-file resistance to the post-1955 regimes and became the basis for the reassertion of Peronism as the dominant force within the Argentine workers' movement" (James 1988, p. 40). As a political movement, Peronism drastically changed the way in which the Argentine working classes behaved politically, and how they related to other groups. Most workers saw in Peronism the promise and possibility of a better society in which they would have a vital role.

More than fifty years after its emergence, Peronism remains linked to the image of Perón, and his second wife, Eva Perón, known as Evita. Although both Perón and Evita were strong, charismatic leaders, Evita played a particularly important role in gaining the devotion and unconditional loyalty of the working classes through her speeches and actions. Her direct distribution of aid to the poor is still remembered among Argentines, and her image serves as a model for many women politicians.

Peronism not only divided Argentine society in two groups—namely, Peronists and anti-Peronists—it also has divided itself into many "Peronisms," with competing ideological perspectives, including socialist, nationalist, and conservative tendencies. Drawing rhetorically on Peronist ideals, symbols, and myths, and counting on the organizational support of the Peronist party, Carlos Menem—president of Argentina from 1989 to 1999—shaped a neoliberal project that was in fact antithetical to the original Peronism. In contrast, in 2003 Néstor Kirchner became president following a campaign based on the same kind of Peronist themes, but set out to establish a completely different political and social program, probably closer to the original Peronist ideals.

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PERRON-FROBENIUS THEOREM

SEE *Eigen-Values and Eigen-Vectors, Perron-Frobenius Theorem: Economic Applications.*

PERSON MEMORY

The term *person memory* came into common usage around 1980 in conjunction with the advent of the contemporary field of *social cognition*, with the two labels sometimes used interchangeably. As described by Reid Hastie and colleagues in their 1980 book, person memory is an attempt to "extend accounts of the formation, representation, and retrieval of first impressions of other people" (p. 1) by borrowing extensively from the field of cognitive psychology. From the beginning these extensions have relied heavily on cognitive concepts such as the *information processing* model, *schemas*, and associative network models of memory representation and retrieval.

The information processing model distinguishes stages of attention, perception, memory storage, retrieval, and judgment. Prior to 1980 researchers in social psychology had developed an extensive literature on person perception and attribution, which focused primarily on the earliest of these stages, the formation of impressions, without much regard for issues relating to memory representation or retrieval. Consequently, the term *person memory* came to apply principally to post-1980s work that extended impression formation work to the later stages of information processing.

The earliest research in person memory demonstrated that people's impressions of others comprise separate trait and episodic representations, and that these affect each other in complex ways. For example, researchers suggested that inferred traits serve to organize behavioral episodic representations, and that this actually facilitates recall for behavioral information. Subsequent research examined the effects of a variety of processing goals on the way that impressions and memories are organized and retrieved from memory.

Other person memory work examined an implication of schema theory, that people ought best to recall behav-

ioral episodes that are congruent with their trait impressions. Person memory researchers actually found the opposite, with recall being best for episodes that contradicted prior trait impressions. Applying associative network models popular in that era, theorists suggested that as perceivers attempt to reconcile incongruent evidence with their trait impressions, they create a rich network of interconnections among these episodic memories, facilitating their ultimate retrieval. Of course, as the amount of incongruent information increases, it becomes more likely that perceivers will eventually abandon their initial trait impression. However, research indicates that first impressions tend to have persisting effects even in the face of substantial contradictory evidence.

Later work in person memory suggested that because of the incongruity effect and other such memory processes, people's memories of their trait impressions will not always correspond exactly with their memories for relevant facts and events. In fact, such correspondence is to be expected primarily when people actually base their trait impression on recalled facts and events, which is most likely when they failed to form an impression as those facts and events were initially encountered. Contemporary research on social cognition continues to examine issues surrounding the way that impressions are represented in memory, with some additional interest in the spontaneity of impression formation and the degree of conscious awareness that people have of their impressions.

SEE ALSO *Attribution; Memory; Network Analysis; Networks; Perception, Person; Schemas; Self-Schemata; Social Cognition; Social Information Processing; Social Psychology*

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PERSONAL CONSTRUCTS

According to *personal construct psychology*, developed by the American psychologist and personality theorist George Alexander Kelly (1905–1967), individuals create *personal constructs* to organize ongoing experience and anticipate future events. A personal construct is a *bipolar* mental template, consisting of something and its perceived opposite. For example, one person might develop the personal construct dimension of "safety versus adventure," in which safety is seen as objectionable and boring. Another person might develop a personal construct of "safety versus terror," in which safety is desirable and soothing. Clearly, these two people mean different things when they report feeling safe. Personal construct psychology contends that in order to organize experience coherently and understandably, each person develops a set of unique personal constructs. One's personal construct system is structured hierarchically, with some constructs more central and influential to how the world is understood than others. Accordingly, people often construe the same circumstances in vastly different ways. This reflects personal construct theory's notion of *constructive alternativism*, which holds that there are an infinite number of personal constructs available. People often mistakenly believe their manner of construing things is the only correct way, when all situations can be construed in countless ways.

Kelly most fully developed personal construct psychology in a two-volume work, *The Psychology of Personal Constructs*. Originally published in 1955, the volumes present personal construct psychology in a formal manner intended to be least offensive to the professional sensibilities of 1950s psychology. Kelly presented his theory as a fundamental postulate and eleven corollaries. The fundamental postulate states that people organize their psychological experience in ways that help them most effectively anticipate events. Kelly stressed *viability* over *validity* in personal construct psychology. Because people only access the world indirectly through their personal constructs, they can never be certain that their constructs match reality; the validity of constructs can never be fully established. However, people can know whether their constructs work adequately and help them to successfully navigate life. Thus, the viability of constructs takes center stage in personal construct psychology.

Kelly's eleven corollaries explain how people's personal construct systems function. For example, the *individuality corollary* maintains that each individual creates a unique set of personal constructs, while the *fragmentation corollary* contends that different subsections of one's personal construct system may be contradictory—after all, in different areas of their lives, people are often inconsistent. The *choice corollary* holds that people choose the poles of constructs that they think will be most likely to help them make productive sense of new situations. Once people choose to apply certain constructs to anticipate a situation, the *experience corollary* explains how they judge the effectiveness of the constructs they applied. When constructs are not found to be effective, people often revise them. As a final example, the *sociality corollary* asserts that when two people construe each other's construction processes, they can come to understand one another and form a close relationship—which Kelly referred to as a *role relationship*.

Clinically, Kelly developed a psychotherapy technique called *fixed-role therapy*. In fixed-role therapy, the therapist asks the client to adopt a different identity for a two-week period. The client is asked to act the part of someone whose constructions and behaviors are significantly different from the client's. Because the client is only playing a role, any threat that might occur as a result of violating one's own personal identity are minimized. After all, the client is simply playing a part. However, in so doing the client experiments with alternative ways of construing and behaving that may produce personal growth.

Personal construct psychology has become associated with theories of constructivism, which emphasize that people know the world indirectly through constructed understandings. *Radical constructivism* views the person as a closed system, one in which a person's internal psychological structure determines experiential reality. One's structure is only sensitive to specific kinds of stimulation from the external world. People do not experience the world as it is, but rather experience it only in the ways their internal structure allows. On the other hand, *social constructionism* deemphasizes individual knowledge construction and instead stresses that human understandings spring from ongoing relationships. Through discussion and interaction with each other, people negotiate and reach consensus about what is real and true. Discourses, defined as ways of talking about reality, shape human experience. As people use discourses in novel ways over time, shared constructions of reality evolve. Whether individually or socially focused, constructivist theories stress human involvement in knowledge construction, maintaining that people can only know the world indirectly via their constructions.

SEE ALSO *Constructivism; Personality; Psychoanalytic Theory; Psychotherapy; Terror*

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PERSONALITY

Personality most commonly refers to the psychological features that distinguish one individual from another—regularities in the way an individual thinks, feels, and behaves. Although other characteristics may also distinguish individuals (for example, hair color, nationality, or job title), it is the psychological differences that fall under the umbrella of personality. These differences may be broad in nature, such as whether a person is outgoing or shy, emotional or calm, or they may be narrower in scope, reflecting finer grained patterns of beliefs, attitudes, and behaviors that may emerge only in certain situations. A person's total collection of these characteristics defines his or her personality.

Personality also refers to a separate subfield of psychology that uses the scientific method to investigate people's defining characteristics—what the characteristics are, how best to measure them, and the consequences for individuals who embody them. The young field of personality psychology was influenced by several early movements of the nineteenth century, starting with the European and North American philosophical tradition of individualism. Personality psychology emerged most prominently in the 1930s with the publication of the highly influential 1937 textbook *Personality: A Psychological Interpretation*, written by the psychologist Gordon Allport (1897–1967). The first personality inventory was conceived during World War I to predict who would be more emotionally fit for warfare. Since that time personality psychology has continued to emphasize sound measurement to capture a variety of aspects of human personality.

LEVELS OF PERSONALITY

Given the multitude of psychological differences among people, it is helpful to organize these differences into levels. For example, the psychologist Dan McAdams (b. 1954) has organized personality at three levels.

Traits At the broadest level, individuals differ in what are called *dispositional traits*. Traits outline the coarsest differences among people and reflect the most general and enduring orientations on the world.

Although different traits have been proposed throughout history, the earliest of which subdivided individuals into groups based on prominent bodily fluids or "humors" like blood (sanguine), yellow bile (choleric), black bile (melancholic), and phlegm (phlegmatic), in the early twenty-first century there appears to be some consensus on a trait taxonomy, commonly referred to as the "big five." The big five personality traits are: extraversion (social, outgoing, energetic, and able to experience positive emotions), agreeableness (yields to and trusts others), conscientiousness (productive and follows through on

tasks in an organized fashion), neuroticism (high anxiety, emotional instability, and hostility), and openness to experience (willingness to explore and engage in novel ideas, experiences, and feelings). These traits are continuous rather than categorical, with fewer people on the extremes and most people falling in between these extremes. Traits are controversial because they do not always predict how a person will behave or feel in a given situation because situations often constrain behavior. Instead, traits are more like statements about the probability that a person will behave in a certain way. Traits do predict important outcomes over longer periods of time, however. For example, extraversion predicts the time it takes people to develop a network of friends in a new environment. Likewise neuroticism is a risk factor for cardiac problems. Traits also have a strong genetic component, with evidence that about half of the variability in personality traits derive from genetic factors (that is, heritability quotients of 40 to 50 percent for most of the big five traits).

Consensus regarding the big five comes after decades of research, beginning in the 1930s with a painstaking search for terms in *The Oxford English Dictionary* that could be used to describe individuals. This task, undertaken by the prominent early personality theorists Gordon W. Allport and Henry S. Odbert, was guided by the principle that all of the important ways of characterizing people will be encoded in natural language use. Using this word list as a starting point, personality researchers like James Cattell and Hans Eysenck reduced the list into a smaller and more manageable number of categories using statistical techniques like factor analysis. In analysis after analysis, five personality dimensions consistently emerged, which came to be known as the big five. Other taxonomies have been proposed, for example, Eysenck focused on the big three, extraversion, neuroticism, and psychoticism (a combination of agreeableness and conscientiousness). Since the big five was developed, taxonomic analyses have yielded fairly good cross-cultural consistency in the five dimensions.

Other popularly known personality traits include type A and type B personalities. Type A individuals are typically driven, impatient, competitive, aggressive, and hostile, whereas type B individuals are the opposite—they are relaxed, patient, noncompetitive, and less hostile. The A/B distinction originated in the 1950s with a team of cardiologists who observed fast-paced aggressive behaviors in patients with coronary heart disease. Studies have subsequently confirmed type A as a cardiovascular risk factor—an association that appears driven by the hostility component and its negative physiological effects on blood pressure. Perhaps because of its intuitive appeal, "type A personality" moved into popular jargon fairly quickly. Fortunately the popular understanding of type A appears fairly true to the original concept.

Other related personalities include the controversial type C or "cancer prone" personality, which is characterized by emotion suppression. The associated type C coping style is characterized by denial of distress in spite of physiological evidence of distress. Evidence linking these characteristics to the incidence and recovery from cancer is mixed, however. Lastly, there is type D or distressed personality, characterized by negative emotionality, an inability to express emotions, and social isolation, which has been linked to greater cardiovascular disease and increased mortality.

Characteristics Adaptations At the next level of personality differences are mid-level *characteristic adaptations*, which comprise nuanced differences among people. Unlike traits, many of these adaptations are learned through experience, are readily influenced by culture, and reflect a dynamic interplay between people's current contexts and situations. It is at this level that conditional theories of personality emerge as alternatives to trait theory.

One of the issues with defining personality solely as traits is that traits lead us to expect people will behave in a regular way across all situations. Yet empirical data do not show this. Typically the correlation between traits (as measured by standard trait questionnaires) and behaviors measured across situations is relatively modest—with correlations of .30. This observation, made by the personality psychologist Walter Mischel (b. 1930) in his influential 1968 text *Personality and Assessment*, sparked a decades-long debate in personality known as the person-situation debate. This debate threatened the field of personality because it undermined the influence of personality traits on behavior and elevated the influence of situations on behavior, a perspective favored by social psychologists. One consequence of the debate is that it stimulated a more contextualized and conditional approach to personality, exemplified in Mischel's research with his colleague, the psychologist Yuichi Shoda. From their perspective, personality emerges as *situation-specific behavioral signatures*—regularities in behavior that manifest in certain situations, not in all situations. Thus two people who are similar at the trait level (for example, high in neuroticism) may manifest different behavioral signatures. One person may react with hostility when confronted by authority, and another may react that way when confronted by a subordinate.

Central to a conditional approach to personality are people's interpretations or *construals* of their immediate environments. This theme derives from a social-cognitive perspective on personality, which emphasizes the operation of acquired beliefs and expectations about the world in personality functioning. Within this social-cognitive perspective, there are several other types of individual dif-

ferences that contribute to people's behavioral signatures. Of particular importance are people's beliefs regarding their *self-efficacy*, whether they believe they are capable of achieving desired outcomes through their actions. Formalized in theory by the psychologist Albert Bandura (b. 1925), self-efficacy beliefs are shaped from people's experiences in the world and influence motivation, expectations, and the explanations people give for their outcomes. Self-efficacy and other human strengths, such as optimism, wisdom, and empathy, have received increased focus among personality and social psychologists. Also important are our *implicit theories* about the rigidity versus mutability of self-attributes. Some individuals, referred to as "entity theorists," view their attributes, such as intelligence, as fixed and unchangeable, whereas others, "incremental theorists," view their attributes as more malleable and able to be cultivated. These personal theories, which are heavily influenced by parenting, set up characteristic styles for how people approach and respond to challenging tasks, with incremental theorists being more likely to persist at tasks requiring effort.

Mid-level differences also include motives and drives. Within each culture, individuals differ in several *higher-order motives*—whether they are driven to achieve, affiliate with others, or have power over them. At the individual level, a person may also have his or her set of *personal strivings*—the idiosyncratic ways in which an individual tries to implement his or her goals in everyday life. For example, a person with strong affiliation motives might regularly get together with friends. A person with strong achievement motives might work long nights to achieve professional goals. Individuals may not always be aware of what motivates them. "Unconscious motives" are quite common and occur when a person regularly exhibits behaviors consistent with a motive but is unaware of having this motive. In these circumstances an external observer can often see these patterns more clearly than can the person.

Other mid-level aspects of personality, not just motives, can operate at an unconscious level. It is known that individuals possess considerable knowledge about themselves and their past experiences that they cannot verbalize or represent in consciousness but that shapes their feelings and behaviors. Such knowledge is often associative in nature and measured indirectly in ways that bypass self-report (for example, using computerized tasks adapted from cognitive psychology). This knowledge may be different from other reflective forms of self-knowledge that people can verbalize and report using questionnaires. Understanding the functions and interplay between associative and reflective components of personality appears to be among the major tasks of twenty-first-century science in personality. Another example of unconscious personality processes is found in defense mechanisms, which reflect patterns of thinking that minimize conscious awareness of threatening thoughts or feelings. With repeated and frequent use, defense mechanisms can become part of a person's characteristic style of thinking.

Personal Narratives In addition to traits and characteristic adaptations, individuals differ in their *integrative life narratives*. Life narratives are the unique person-specific stories people create about their experiences to provide coherence and meaning to their lives. A life story encompasses who a person is, how this person came to be, and what the future holds. Although each story is unique, common themes do emerge—despair, resurrection, and triumph—that are often culturally bound. Narratives also have important psychological consequences, as evidence suggests that writing about a traumatic experience in a way that gives the experience coherence and meaning speeds recovery and improves mental and physical health.

PERSONALITY DEVELOPMENT AND CHANGE

Change depends on whether personality is conceived of as traits, characteristic adaptations, or life narratives. Traits exhibit the most stability and are the hardest to change, which is consistent with traits being partly heritable and rooted in infant temperament. Early learning environments can play some role in shaping the expression of traits, however. For example, temperamentally introverted children who are exposed to intensive social environments early in life, such as day care, evidence less introversion later in life, but they may never be as outgoing as children who exhibited extraverted behaviors prior to socialization.

Traits crystallize between ages twenty-one to thirty, after which they show consistency through older adulthood. Of course people are dynamic, and they can change across their lifetime. Such changes, however, appear to occur at the level of characteristic adaptations and life narratives. Indeed therapy is often targeted at changing people's beliefs, motivations, coping strategies, and life stories rather than changing enduring dispositions. Personality also changes through adult maturational stages characterized by decreasing impulsivity, maturing defenses, changing identities (for example, parenthood), and a shift in orientation from self to other.

BIOLOGICAL SUBSTRATES OF PERSONALITY

Personality psychologists have begun to understand the neurobiological underpinnings of traits such as extraversion and neuroticism. For example, extraversion and its associated qualities of impulsivity and sensation seeking appear most strongly linked to the behavioral activation system (BAS), which consists of dopamine-transmitting pathways in the brain and neural structures that modulate

the extent to which people feel pleasure in response to cues for reward. By contrast, neuroticism appears most strongly linked to the behavioral inhibition system (BIS), a set of neural structures and processes involved in anxiety and the processing of aversive outcomes such as punishment.

New avenues of research in molecular genetics hold promise for investigating links between genes and personality. For example, emergent research suggests that variation in a gene related to dopamine function (DRD4) is associated with personality differences in novelty seeking, just as variation in a gene related to serotonin function (5-HT transporter) has been linked to differences in neuroticism. The mechanisms of action between genes and personality are complex and not yet known, however. Research in genetics will likely yield important advancements in the years to come, particularly with respect to multiple gene contributions to personality, mechanisms of action, and gene-environment interplay.

DISORDERED PERSONALITY

Personality disorders appear to represent the extremes of normal variation in broad personality traits. Many of the personality disorders described in the 2000 *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition text revision (DSM-IV-TR), correspond to extreme variants of the big five personality factors. For example, borderline personality disorder—characterized by impulsivity, self-destructive behavior, and emotional instability—may be a maladaptive form of the anger and hostility subfacets of neuroticism; obsessive-compulsive disorder may be related to extreme conscientiousness, with an extreme focus on order, perfectionism, rules, and structure; and paranoid personality disorder may be related to extremely low agreeableness, reflecting a wariness and mistrust of others.

SEE ALSO *Allport, Gordon; Bandura, Albert; Individualism; Mental Illness; Neuroscience; Obsessive-Compulsive Disorder; Optimism/Pessimism; Psychology; Self-Defeating Behavior; Self-Efficacy; Temperament; Trait Theory*

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PERSONALITY, AUTHORITARIAN

The rise of fascist ideology and virulent anti-Semitism in Europe during the 1930s posed important questions for social scientists. Psychologists suggested explanations that drew on both psychoanalysis and Marxism. Wilhelm Reich (1897–1957) proposed that capitalism and sexual repression produced sadomasochistic personalities blending aggression toward the weak and vulnerable with deferential submission to power and authority. Abraham Maslow (1908–1970) and Erich Fromm (1900–1980) also described broadly similar authoritarian personalities whose basic needs attracted them to fascism. The most theoretically developed and empirically based of these explanations was proposed in 1950 by Theodor Adorno (1903–1969), Else Frenkel-Brunswik (1908–1958), Daniel Levinson (1920–1994), and R. Nevitt Sanford (1909–1995) in a monumental book, *The Authoritarian Personality* (1950). This book reported a program of research that began with the aim of explaining anti-Semitism, but culminated in a far more ambitious theory, which for a time dominated social scientific inquiry into the psychological bases of prejudice and ethnocentrism.

Their first major finding was that anti-Semitic attitudes were not held in isolation, but were part of a broader ethnocentric pattern involving a generalized dislike of out-groups and minorities, excessive and uncritical patriotism, and politically conservative attitudes. Their research suggested that this pattern of attitudes seemed to be an expression of a particular personality syndrome consisting of nine tightly covarying traits. These were:

1. Conventionalism (rigid adherence to conventional middle-class values).

2. Authoritarian submission (submissive, uncritical attitudes toward authorities).
3. Authoritarian aggression (the tendency to be on the lookout for, condemn, reject, and punish people who violate conventional values).
4. Anti-intraception (opposition to the subjective, imaginative, and tender-minded).
5. Superstition and stereotypy (belief in mystical determinants of the individual's fate, and a disposition to think in rigid categories).
6. Power and toughness (preoccupation with the dominance-submission, strong-weak, leader-follower dimension; identification with power; exaggerated assertion of strength and toughness).
7. Destructiveness and cynicism (generalized hostility, vilification of the human).
8. Projectivity (a disposition to believe that wild and dangerous things go on in the world; the projection outward of unconscious emotional impulses).
9. Sex (exaggerated concern with sexual "goings-on").

Psychometric questionnaire items were developed in order to assess each of these traits, and these culminated in the famous F ("fascist") scale, which was used to measure this "authoritarian personality" dimension. Research did indeed show that that the F scale was powerfully correlated with measures of prejudice, ethnocentrism, conservative attitudes, and extremist right-wing politics.

Adorno and his colleagues theorized that authoritarian personalities originated from childhood socialization characterized by strict, punitive parental discipline and conditional affection. This creates an inner conflict between resentment and hostility toward parental authority and a fearful need to submit to that authority, which culminates in identification with, and submissive idealization of, parental authority, and by extension all authority. This aggression is repressed and displaced onto targets sanctioned by authority. These psychodynamics are expressed in the nine surface traits of the authoritarian personality, the pattern of ethnocentric, conservative, chauvinistic social attitudes, deference to established authority, and pervasive hostility and prejudice against out-groups, minorities, and other socially deviant targets.

This theory attracted enormous attention initially, and the F scale became widely used. Critics, however, noted methodological flaws in the research, and pointed out that the theory ignored authoritarianism of the Left. The F scale was found to have serious psychometric flaws, most notably the all positive formulation of its items so that scores were heavily contaminated by the response style of acquiescence (the general tendency for people to agree rather than disagree). When this was corrected, the items of "balanced" versions of the F scale lacked internal consistency, and so could not be measuring a single unitary syndrome or dimension. As a result of this, and other nonsupportive findings, interest in the theory and the F scale largely collapsed during the 1960s.

Since the mid-1980s, however, interest in the issue has revived with the identification of two distinct "authoritarian" individual difference dimensions that seem to underlie prejudice, intolerance, and ethnocentrism. First, in the 1980s Bob Altemeyer showed that three of Adorno and colleagues' original traits—conventionalism, authoritarian aggression, and authoritarian submission—did constitute a unitary individual difference dimension, which he named *right-wing authoritarianism* and characterized as "submissive" authoritarianism. Second, in the 1990s Jim Sidanius and Felicia Pratto identified a second, "dominant," authoritarian dimension, seemingly relating to Adorno and colleagues' original traits of power, toughness, destructiveness, and cynicism, which they called *social dominance orientation.* The idea that these might be personality dimensions, however, has been challenged, and it has been argued that they seem better viewed as ideological attitude or value dimensions that are influenced by personality, but are not in themselves personality dimensions.

SEE ALSO *Anti-Semitism; Dictatorship; Fascism; Frankfurt School; Fromm, Erich; Jingoism; Leadership; Marxism; Maslow, Abraham; Nativism; Patriotism; Personality; Personality, Cult of; Psychoanalytic Theory; Scales; Social Dominance Orientation; Social Psychology*

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PERSONALITY, CULT OF

Cult of personality is a pejorative term implying the concentration of all power in a single charismatic leader within a totalitarian state and the near deification of that leader in state propaganda. Totalitarian regimes use the state-con-

trolled mass media to cultivate a larger-than-life public image of the leader through unquestioning flattery and praise. Leaders are lauded for their extraordinary courage, knowledge, wisdom, or any other superhuman quality necessary for legitimating the totalitarian regime. The cult of personality serves to sustain such a regime in power, discourage open criticism, and justify whatever political twists and turns it may decide to take. Among the more infamous and pervasive cults of personality in the twentieth century were those surrounding Hitler, Mussolini, Stalin, Mao Zedong, Francisco Franco, Chiang Kai-shek, Ho Chi Minh, Kim Il Sung, Juan and Evita Peron, Pol Pot, Augusto Pinochet, Kim Jong Il, and Saddam Hussein. The term is occasionally—if idiosyncratically—applied to national leaders who did not seek similar godlike adulation during their lifetime or term in office but have been later glorified by the government or in the national mass media. Examples might include George Washington, Napoléon Bonaparte, Abraham Lincoln, Vladimir Lenin, Mustafa Kemal Atatürk, Charles de Gaulle, Ronald Reagan, Margaret Thatcher, and others.

A cult of personality differs from Thomas Carlyle's "hero worship" in the sense that it is intentionally built around the national leader and is often used to justify authoritarian rule. In one of the more idiosyncratic usages, it is sometimes applied by analogy to refer to the public veneration of famous leaders of social movements such as Karl Marx, Mahatma Gandhi, Martin Luther King Jr., Che Guevara, Malcolm X, Nelson Mandela, and others. In fact, the term itself derives from Karl Marx's critique of the "superstitious worship of authority" that had developed around his own personality, acclaimed merits, and contribution to the work of the First Socialist International in the latter half of the nineteenth century.

Historically, numerous rulers have promoted their own cults of personality. Absolute monarchies were the prevalent form of government for much of recorded history, and most traditional monarchs were held in public awe and adoration. For example, pharaonic Egypt, Imperial China, and the Roman Empire accorded their crowned sovereigns the status of revered god-kings. The doctrine of the divine right of kings claimed that absolutist monarchs such as Henry VIII, Louis XIV, or Catherine the Great sat on their thrones by the will of God. The democratic revolutions of the eighteenth and nineteenth centuries made it increasingly difficult for traditional autocrats to retain their divine aura. However, the development of the modern mass media, state-run public education, and government propaganda has enabled some more recent national leaders to manipulate popular opinion and project an almost equally extolled public image. Cults of personality developed around some of the most notorious totalitarian dictators of the twentieth century such as Hitler, Stalin, and Mao, who at the peak of their personalistic power were lionized as infallible, godlike creatures. Their portraits were hung in every private home or public building, while the country's artists and poets were expected to produce works of art idolizing the hero-leader.

Many lesser known autocrats have engaged in similar self-glorification, subordinating nearly all aspects of national life to their fickle vanity, megalomania, and conceit. In post-Soviet Turkmenistan, for instance, the late president-for-life Saparmurat Niyazov encouraged his own cult of personality, dotting the local landscapes with public monuments to himself and even renaming the months of the year to pay homage to himself and his family. After declaring Turkmenistan's independence in October 1991, the former chairman of the Soviet-era Council of Ministers and first secretary of the Turkmen Communist Party quickly established himself as the center and source of all political authority in the new country. Niyazov became the first president of independent Turkmenistan and won the uncontested 1992 election, which was the only presidential election held during his rule. He assumed the title of *Turkmenbashi* ("head of all the Turkmen"), and the country's obedient legislature proclaimed him president for life. He even authored a book—the *Ruhnama*, or "Book of the Spirit"—that became a compulsory part of the curricula at all levels of the national educational system.

The term *cult of personality* became a buzzword after Soviet leader Nikita Khrushchev bitterly denounced Stalin's near deification before a closed session of the Twentieth Party Congress on February 25, 1956:

> The cult of personality acquired such monstrous dimensions mainly because Stalin himself, using all conceivable methods, supported the glorification of his own person.… One of the most characteristic examples of Stalin's self-glorification and of his lack of even elementary modesty is the edition of his *Short Biography*, which was published in 1948. This book is an expression of the most unrestrained flattery, an example of making a man into a god, of transforming him into an infallible sage, "the greatest leader," "sublime strategist of all times and nations." Ultimately, no more words could be found with which to praise Stalin up to the heavens. We need not give here examples of the loathsome adulation filling this book. All we need to add is that they all were approved and edited by Stalin personally and some of them were added in his own handwriting to the draft text of the book. (Khrushchev 1989)

In a country long known for its traditional worship of religious saints and czars, the public exaltation of Soviet leaders was deliberately pursued as necessary for building national unity and consensus. The result was Stalin's cult

of personality—the total loyalty and dedication of all Soviet citizens to the all-powerful leader, whose demigod personality exemplified the heroism and glory of "building socialism in one country." Khrushchev's "Secret Speech" was a major break by the post-Stalin leadership with the oppressive dominance of Stalinism. "Big Brother," a fictional character in George Orwell's famous novel *Nineteen Eighty-Four*, is widely believed to be a satire of Stalin's cult of personality (even though it is equally likely to have been based on Britain's ubiquitous Lord Kitchener).

SEE ALSO *Authoritarianism; Autocracy; Divine Right; Hitler, Adolf; Khrushchev, Nikita; Mao Zedong; Peronism; Social Movements; Stalin, Joseph; Stalinism; Totalitarianism*

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PERSONALITY, TYPE A/TYPE B

The roles that personality and behavior play in illness and disease can sometimes be difficult to determine. Because specific personality or lifestyle characteristics cannot be randomly assigned to people, researchers must rely on longitudinal and prospective studies. In these studies, factors that are suspected to be related to disease proneness must be shown to predict health outcomes, sometimes by following participants for a period of many years. In the late 1950s, two California cardiologists named Meyer Friedman (1910–2001) and Ray Rosenman proposed a specific personality type that, based on their clinical experiences, seemed to be associated with high frequencies of cardiovascular disease. In 1960, Friedman and Rosenman began the Western Collaborative Group Study. In this longitudinal study, the researchers followed over 3,000 healthy adult males aged 39 to 59 for more than eight years. Their goal was to determine the relationships among personality, behavior, and the development of heart disease.

At the start of their study, Friedman, Rosenman, and their colleagues conducted 15-minute structured interviews that focused on both verbal and nonverbal behaviors. Participants answered questions about everyday events, such as waiting in lines, driving in traffic, and dealing with problems at home. In addition, interviewers assessed how loud and fast participants spoke during the interview and how they reacted when they were deliberately interrupted during the interview. Based on these taped interviews, the researchers identified different patterns based on a combination of physical, emotional, psychological, and behavioral indicators. Among these patterns was what the researchers called the Type A pattern, the Type B pattern, and mixtures of the two types.

TYPE A AND TYPE B

Physical indicators of Type A Behavior Pattern (TABP) include excess perspiration; facial muscle tension and tics; high levels of alertness and hyperactivity; high levels of epinephrine and norepinephrine (hormones associated with stress); and increased heart rate and levels of diastolic and systolic blood pressure. Emotional indicators include high levels of stress, irritation, hostility, anger, and aggression (especially under provoking conditions). Psychological indicators include impatience; strictness, rigidity, and perfectionism; low tolerance for mistakes; low self-esteem; personal insecurity; compulsiveness; and a high need for control. Finally, examples of behavioral indicators include a general sense of time urgency; losing one's temper while driving; speaking loudly and quickly; interrupting other people's speech; teeth and tongue clicking; a chronic focus on success, ambition, competitiveness, and achievement; and workaholism.

Early proponents of TABP sometimes referred to it as the "hurry sickness," in order to highlight those factors related to the perception of and use of time. Several TABP indicators are thought to be influenced by European and North American social, cultural, and economic values. For example, job promotions and social prestige may often be tied to how much Type A behavior a person shows. The work climate and demands of many kinds of jobs may also reinforce Type A behaviors.

In contrast to the Type A pattern, Type B behavior pattern is characterized by a more calm and even-tempered demeanor. With regard to physical indicators, Type B individuals show more muscle relaxation and lower levels of activity and alertness. Emotionally, such personality types show less frequent irritation, anger, hostility, and aggression than Type A individuals. Psychologically, Type B persons are methodical, tolerant of mistakes, and personally secure. Finally, Type B individuals are more cooperative and relaxed and less achievement-oriented than their Type A counterparts. In the Western Collaborative Group Study, the TABP proved to be a significant predictor of coronary heart disease (CHD), with Type A men showing almost twice the risk of developing CHD than Type B men. In that study, the TABP predicted increased incidence of CHD independent of other risk factors such as smoking, exercise frequency, and parental history of heart disease.

REFINEMENT OF THE TYPE A CONCEPT

As these findings were publicized and tested more fully, several concerns arose regarding the original conception of TABP. First, questions about the best way to assess the pattern emerged. In an effort to assess TABP more efficiently than through the time-consuming individual structured interviews, researchers developed several self-report measures. For example, the multiple-choice Jenkins Activity Survey (JAS), developed in 1979, assesses many of the attitudes and behaviors originally identified as comprising the TABP. However, concerns have arisen about how well the JAS and other measures capture the major dimensions of TABP. For instance, the JAS devotes less attention to the hostility component than seems to be warranted, and scores on the JAS are only weakly related to incidence of CHD. Nonetheless, this measure continues to be the most frequently used instrument in studies of the TABP. More recently, some researchers have utilized videotaped structured interview protocols.

Although the original formulation of TABP was intuitively appealing, one of the problems with such a broad and overly inclusive definition is that many (sometimes the majority) of participants in a study had been labeled as meeting the diagnostic criteria of TABP. As researchers continued to examine the links between personality and CHD, some studies were also unable to replicate the earlier findings of Friedman and Rosenman. In addition to facilitating the development of new and different measures, the concerns about diagnostic criteria led to a detailed examination of the major components of TABP. Given the large number of behaviors that can make up the Type A pattern, it is not surprising that some of these do not necessarily occur together with others. Researchers thus began to focus their attention on which components of the original multifaceted TABP were (and were not) associated with negative health outcomes.

With these more sophisticated studies, researchers discovered that hostility, especially antagonistic or angry hostility, appeared to be the TABP component that was most strongly related to CHD. In other words, people showing chronic levels of anger and hostility as well as negative affect (in particular depression and anxiety) are more likely to develop CHD. On the other hand, levels of achievement motivation, impatience, and workaholism failed to predict CHD. In addition, subsequent research showed that the perception and use of time turned out to be less predictive of negative health outcomes than other parts of TABP. A 2006 study showed that negative affectivity (i.e., the frequency of negative emotions) and a socially dominant interpersonal style can play a role in a variety of poor health outcomes.

Researchers have also attempted to determine how the psychological components of the TABP develop and how they contribute to the development of CHD. Along these lines, some research suggests that Type A children react more strongly to stress than do Type B children. Researchers have also demonstrated that hostility and aggression are related to cardiovascular response and future risk level in children. Other research suggests that Type A characteristics are likely to develop through a combination of children's temperaments and parental behaviors. For example, children who show the competitiveness associated with the TABP may be encouraged by their parents to perform well in achievement settings, possibly making them more prone to anger and hostility.

In the last decade, researchers have examined how the TABP might be related to social behaviors that are not specifically related to illness or disease. Examples of these behaviors include marital dissatisfaction, driving behavior, group performance, and work-related stress. Some researchers have attempted to apply TABP to companies and organizations. In addition, research has examined how TABP might interact with situational factors, specific kinds of stressors, and various demographic variables (such as age and gender) in determining negative health outcomes. For example, Type A persons might be more likely than Type B persons to find themselves in situations or settings that create frustration, impatience, or irritation. Researchers have also begun to examine whether certain aspects of TABP might be caused by specific disease processes and to identify possible pathways through which personality might increase the likelihood of unhealthy behaviors that could contribute to disease frequency.

In other words, efforts to assess the relationships among personality, behavior, and disease have become more sophisticated and complex than the original TABP

concept. As such, the interest, excitement, and promise relating to the original formulation TABP has waned considerably. This has led many modern day personality and health researchers and theorists to consider TABP concept to be no longer useful. Nonetheless, the initial study that identified Type A and Type B personalities, and the publicity it received, helped to energize the emerging fields of behavioral medicine and health psychology.

SEE ALSO *Aggression; Behaviorism; Disease; Lifestyles; Medicine; Mental Health; Mental Illness; Overachievers; Personality; Psychology; Replicability, Statistical; Stress*

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PERSON-SITUATION DEBATE

Many social scientists strive to understand why people do what they do. One traditional perspective in personality psychology suggests that people do what they do because of their personality traits. A trait psychologist might suggest, for example, that a person behaves talkatively because she has a high level of extraversion. Trait psychologists traditionally assume that traits are stable psychological characteristics, remaining quite consistent across situations and time. By implication, the trait approach assumes that an individual's behavior should be fairly consistent across situations and time.

In 1968 Walter Mischel published a book challenging the foundations of the trait perspective. Mischel reviewed empirical examinations of behavioral consistency, and he claimed that results revealed surprisingly low levels of cross-situational consistency. He concluded that a theoretical perspective based on broad, context-free personality traits was too simplistic, and his conclusions became the basis of the "situationist" position that human behavior is strongly determined by situational forces.

The debate between those sympathetic to traditional personality psychology and those representing a situationist position became known as the *person-situation debate*. The nature of the debate ranged widely, with protagonists from both sides taking positions of varying extremity, accusing each other of undue extremity and of misinterpretation or misrepresentation of the opposing position. For example, proponents of the "situationist" side variously suggested, or at least were *accused* of variously suggesting, that the traditional trait approach was too simplistic, that traits do not exist, or even that personality itself does not exist. Despite such ambiguity on both sides, at its heart the debate concerned two important issues—the nature of the behavioral phenomena to be explained and nature of the theories offered as explanations of behavior.

One fundamental issue in the person-situation debate was the degree to which stable individual differences in behavior exist alongside cross-situational variability in behavior. At least two developments advanced the field's understanding of the empirical realities of behavioral stability and variability. First, research demonstrated that individuals do manifest stable differences in their general behavioral trends, if behavioral observations are aggregated across situations (Epstein 1979). Second, research demonstrated that considerable levels of behavioral stability and variability coexist (Fleeson 2001; Funder and Colvin 1991). That is, an individual does behave differently across a variety of situations; however, individuals differ from each other in their average levels of behavior, and these individual differences are indeed stable. These findings are important because they empirically demonstrate, within a single set of behavioral data, the validity of the assumptions of both the trait position (that people manifest stable differences from each other in their behavior) and the situationist position (that people's behavior varies across situations). The fact that both the trait side and the situationist side are empirically tenable legitimizes the theoretical basis of both.

A second important issue in the person-situation debate was the theoretical basis of personality psychology. Psychologists debated the appropriate ways to conceptualize personality and its ties to behavior. Emerging from two or three decades of debate, most theories are "interactionist" because they acknowledge the fact that behavior results from an interaction between personality and situational forces. Despite the general agreement that personality and situational forces affect behavior, such theories differ in terms of the nature and relative importance placed on such factors. Some theorists are sympathetic to an expanded trait perspective. Such theorists acknowledge

the role of situational forces in shaping specific behaviors, but they emphasize the utility of traits as predictors of important behavioral trends and outcomes such as psychological well-being, physical health, social relationships, occupational performance, and political attitudes (e.g., Costa and McCrae 1998; Ozer and Benet-Martinez 2006). Other theorists reconceptualize personality in terms other than "traits." For example, the social-cognitive approach emphasizes the importance of cognitive characteristics affecting the way people process information about social situations. From this perspective, cognitive personality characteristics such as one's expectations, beliefs, or self-concept are indeed stable, but different situations trigger different aspects of the cognitive system, leading to variability in behavior (Mischel and Shoda 1995). Finally, some theorists recognize the need for greater attention to the psychological nature of social situations (Funder 2005).

The person-situation debate was a challenging yet ultimately constructive argument for personality psychology (Fleeson 2004). By forcing psychologists to think carefully about the links between behavior, personality, and situations, the person-situation debate was a catalyst for a deeper appreciation of the importance of personality and for a more sophisticated understanding of why people do what they do.

SEE ALSO *Personality; Schemas; Trait Theory*

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R. Michael Furr

PERSPECTIVE-TAKING

Perspective-taking—viewing the world from something other than one's habitual vantage point—covers a broad range from the literal to metaphorical. One can literally take a visual perspective by physically positioning oneself and gazing in a particular direction, often replicating another person's physical position and directional gaze in an attempt to see what that person sees (e.g., "Stand here and you can see the tower between the hills"). Alternatively, one can imagine a particular visual perspective (e.g., "These steps must look very tall to someone as short as a toddler") or mentally construct a visual perspective (e.g., "Let's see … facing east, I can see the house, so if I were to face west, I would see the street"). However, perspective-taking often goes beyond the visual, referring to attempts to adopt an overall mindset that differs from one's default mindset ("Imagine what the rabbi must have thought when the caterers brought out all those trays of ham!" or "I can see your point—you could have used more time to prepare").

A cornerstone of Swiss developmental psychologist Jean Piaget's (1896–1980) theory of cognitive development was that human infants have just one perspective—their own. They are profoundly egocentric: unable to even comprehend that someone else may have a different mental experience from their own and thus unable to take another person's perspective. As young children develop, they not only learn that other perspectives exist, but also how to take those perspectives and use them. Children who can recognize that other people have their own minds and can thus have other perspectives are said to have developed a *theory of mind*. In a typically developing child, a coherent theory of mind emerges between ages three and five (although rudiments of this skill, such as following another person's gaze to understand what he or she is looking at, appear earlier). Theory of mind and perspective-taking deficits are among the hallmark symptoms of autism, a psychological disorder that usually appears early in life (other psychological disorders or brain injuries can also produce perspective-taking deficits).

Some scholars have argued that a true understanding of theory of mind may be unique to the human species. However, even for adult humans, perspective-taking requires effort and presents a challenge. Easy or perfectly accurate perspective-taking is hindered by the "other

minds problem"—that is, we can never know from a first-person perspective exactly how things are perceived by another person with another mind.

Perspective-taking has a variety of social implications. In both children and adults, perspective-taking is associated with greater empathy, prosocial behavior, and more favorable treatment of the person (or group) whose perspective is taken. The exact mechanism by which perspective-taking produces these outcomes is debated, with a variety of options proposed, including suppression of the usual "self" -ish perspective, a heightened desire to help the other person, attempts to relieve negative feelings aroused by perceiving another person in distress, and the cognitive merging of one's representation of the self with that of the person whose perspective is being taken. Research consistently demonstrates that instructing people to take the perspective of another person in need leads to increased feelings of compassion and empathy and often results in offers to help the person whose perspective was taken. However, perspective-taking can also be used for malevolent purposes (e.g., anticipating a rival's next move and taking steps to thwart it).

Since Piaget's day, developmental researchers (e.g., Janet Astington, Simon Baron-Cohen, John Flavell, Alison Gopnik, Andrew Meltzoff, Joseph Perner, and Henry Wellman) have continued to ask questions about perspective-taking and its relationship to other aspects of human development. Social psychologists have also pursued perspective-taking and its effects on social behavior (notably Daniel Batson's work on links between perspective-taking and altruistic behavior, and William Ickes's work on adults' accuracy in guessing others' thoughts). Most recently, neuroscientists (e.g., Jean Decety) have used brain-imaging techniques to explore perspective-taking.

SEE ALSO *Empathy; Piaget, Jean; Role Theory; Theory of Mind*

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Sara D. Hodges

PERSUASION

Every day we are exposed to hundreds of attempts to change our opinions. Consider how often you come across an advertisement—in a magazine or newspaper, on television, the radio, or a Web site. But marketers are not the only ones trying to influence us. Family members, religious leaders, politicians, and friends all try to convince us to do things, agree with them, or support their cause. Although persuasive attempts are pervasive, they are not always successful.

Persuasion can be defined as an active attempt by a person, group, or entity (such as a corporation), usually through some form of communication, to change a person's mind. Although we use the term *mind* here, often what we are referring to are attitudes or opinions. Persuasion has been a central focus of the social psychology literature at least since the mid-twentieth century—perhaps because persuasive attempts are so common. Furthermore, if attitudes can be changed, behavior can be changed as well.

THE MESSAGE LEARNING APPROACH

In the 1940s a group of researchers led by the psychologist Carl Hovland (1912–1961) at Yale University spearheaded a comprehensive program of research on persuasion. The catalogue of persuasive factors that they examined is now referred to as the *message learning approach*. The Yale group also proposed a sequence for the process of persuasion: in order for persuasion to occur, a person needs to be exposed to the persuasive message, as well as pay attention to, comprehend, accept or yield to, and remember the message. Although more recent researchers have argued that not all of these steps are absolutely necessary (particularly remembering the message), this basic process has been supported in numerous studies.

The Yale group also found that the source of the persuasive communication is an important determinant of success. The expertise and trustworthiness of the source are critical. For example, in an advertisement for basketball shoes, a professional athlete may be an expert but may not be trustworthy because he is being paid to sell the shoes. Thus the advertisement may not be effective. The attractiveness of the source is also important. This is why clothing advertisers use attractive models in their advertisements. The implicit message is: "If you buy these clothes, you will look good too." Furthermore, the more you like someone and the more you are attracted to that person, the more likely you are to buy the product he or she is selling.

Characteristics of the persuasive message have also been explored. Factors that have been found to influence persuasion include: a one-sided versus a two-sided message (i.e., providing one or both sides of an argument); the order of messages; the comprehensibility of the message

content; and the number of arguments presented. In terms of the sidedness and order of messages, which is superior depends on the situation. Nonetheless, it is clear that if people do not understand the message they are exposed to, they will not be persuaded. For this reason, print advertisements for complex products (such as computers or stereos) are often more effective because people have the time to read and understand them. With regard to the number of arguments, more arguments usually result in more persuasion.

Characteristics such as the intelligence, self-esteem, and gender of the recipient have all been explored as factors affecting persuasion, but the results of these studies are mixed. In general, the more intelligent a person is, the more likely it is that he or she will comprehend a message, but the less likely it is that the person will accept the message. Early studies found that women tend to be more easily persuaded, but more recent research suggests that one's knowledge about a topic is more important than gender.

TWO ROUTES TO PERSUASION

Despite hundreds of studies exploring the variables discussed above, results have not always been consistent. Sometimes variables matter and sometimes they do not. Furthermore, the change in attitude achieved by persuasive communication is often transitory. To address these issues, Richard Petty and John Cacioppo developed the *elaboration likelihood model*, which proposes that persuasion typically happens by one of two routes. They argue that the extent to which message-relevant arguments are elaborated is a key determinant of the success of a persuasive appeal. Elaboration is not simply the learning of the arguments, but involves scrutinizing, making inferences about, and evaluating the quality of those arguments.

In a number of experiments, researchers have shown that when elaboration is low, persuasion tends to occur through *peripheral route* processes. That is, persuasion occurs through features or characteristics of the persuasion context (referred to as *cues*) that are not directly related to the central merits of the arguments. Such cues include the attractiveness or expertise of the message source, the mood of the participants, and the number of arguments presented.

When elaboration is high, however, people attend to the central merits of the arguments (*central route* processing). If the arguments are of high quality (i.e., strong), people's attitudes are likely to change. However, if the arguments are weak, people will be able to counter them, and the message will not be effective. In order for elaboration to occur, however, two conditions must be met: (1) people must be *motivated* to scrutinize the message (they need to be involved, feel a sense of personal responsibility, or enjoy engaging in cognitive tasks); and (2) people must be *able* to scrutinize the message (they must have the requisite knowledge to process the information, and must not be distracted). Perhaps this is why most advertisements on television, billboards, and Web sites are structured around peripheral cues (using expert, trustworthy, attractive sources, or humor); since people do not typically scrutinize these types of advertisements, peripheral approaches may be more successful.

Attitude-change research continues to enjoy a central role within the social psychological literature. Furthermore, it is clear from the numerous applications of the attitude-change literature to our daily lives (for advertisers, marketers, politicians, and many others) that persuasion research will continue to be at the forefront of the field.

SEE ALSO *Attitudes; Social Influence*

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PERSUASION, MESSAGE-BASED

Does advertising plant product images in people's minds? Do the media influence outcomes of elections? Why do so many attempts to scare teenagers into protecting their health fail abysmally? Is persuasion a social good or a malevolent agent used by cunning connivers?

These questions strike to the heart of persuasion theory and research, a time-honored academic field that dates back to fourth century BCE when the ancient Greek philosopher Aristotle (384–322 BCE) developed the first systematic approach to persuasion, or rhetoric as it was known then. From Aristotle's era to our own, persuasion endlessly fascinates people because of its uncanny ability to powerfully influence human attitudes and the elusive relationship with truth and morality.

Persuasion is defined as "a symbolic process in which communicators try to convince other people to change their attitudes or behavior regarding an issue through the transmission of a message, in an atmosphere of free choice" (Perloff 2003, p. 8). Persuasion is fundamentally self-persuasion. We persuade ourselves to go along with what communicators suggest; unfortunately, self-persuasion can be both benevolent and malevolent, with the determination of what is malevolent or benevolent a function of the consequences of the action, the persuader's intentions, and social context.

The basic component of persuasion is the *attitude*, which the entity persuaders hope to form, influence, and reinforce. We have attitudes toward all sorts of topics, from politics to religion. Attitudes have a cognitive structure and serve psychological functions for individuals. Attitudes can be weak (e.g., one's attitude toward the candidate running for state auditor) or strong (e.g., prejudice against African Americans). Attitudes predict behavior when the attitude is strongly held and is measured at the same level of specificity as the behavior.

Persuasive communications can change attitudes by employing appealing communicators, by developing a convincing message, or by containing features that attract attention but are peripheral to the message (e.g., music that accompanies an advertisement).

The key characteristic of effective communicators is credibility. Credible communicators are perceived to possess expertise, trustworthiness, and good will. Communicators also change attitudes because they are likable, physically attractive, or perceived as similar to the audience. Because charming, likable persuaders can take advantage of naïve individuals, psychologist Robert Cialdini (2001) refers to these communicator traits collectively as "the friendly thief."

What you say and how you say it are aspects of the persuasive message. Evidence and statistics strengthen the persuasiveness of a message. Emotional factors, such as fear, also can sway audiences. A speech arousing fear (e.g., on cigarette smoking or drugs) can influence audience members if it scares them, points out negative consequences of performing a behavior, and identifies ways to avoid these consequences. Communications are also persuasive when they provoke inconsistencies—or arouse cognitive dissonance—between attitudes people harbor and their behavior.

Language is a key component of the persuasive message. The words you use, how fast you speak, and the metaphors you employ to frame your message can influence attitudes. Communicators who do not qualify or hedge their verbal statements are seen as more credible than unassertive speakers. Messages containing metaphors produce greater attitude change than those without metaphoric statements. We all can think of books, movies, and songs that changed the way we looked at the world, in large part due to the metaphors they employed and the stories they told (Green and Brock 2005).

Persuasion occurs in different contexts—one-on-one, as when a salesperson tries to sell you a car, and in groups, such as a business meeting or a jury. Interpersonal persuasion frequently occurs in stages, and persuasion professionals frequently resort to such techniques as foot-in-the-door, door-in-the-face, and lowballing. Today, much persuasion occurs through mass media, and a great deal of money is spent on research to understand consumers' attitudes toward products and politics. Advertisements link products with fantasies in the hopes of convincing people that the product will bring them happiness or success. Politicians hire consultants who help them frame messages in politically palatable ways.

Scholars study persuasion by developing theories and testing hypotheses through empirical research. Contemporary theories, such as the *elaboration likelihood model* focus on process, emphasizing that persuaders cannot develop an effective message unless they appreciate how audiences think about the topic at hand. When individuals lack motivation to consider an issue, they process the message superficially, which suggests that simple messages with appealing images will carry the day. When people are more psychologically invested in a topic, they think more deeply about underlying issues. Under these circumstances, more complex or value-based messages influence attitudes (Petty and Cacioppo 1986).

Persuasion has great potential to help people change prejudiced attitudes and adopt healthier lifestyles. Unfortunately, human nature being what it is, unsavory communicators will continue to exploit persuasion to achieve their own ends. An educated citizenry should understand the processes by which persuasive communications induce individuals to alter their attitudes and behavior.

SEE ALSO *Advertising; Media; Medium Is the Message; Subliminal Suggestion*

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PETROLEUM INDUSTRY

The documentary evidence for the human use of petroleum begins with the Old Testament books of Genesis and Exodus and the works of the ancient Greek historian Herodotus (c. 484–430/420 BCE). In addition archaeologists found pitch in the tombs of the Egyptian kings Tutankhamen (c. 1370–1352 BCE) and Seti II (c. 1200 BCE). The Toltecs of Mexico used bitumen to set tiles as early as 1200 CE, and Native Americans dug oil wells in what are now Pennsylvania, Kentucky, and Ohio.

Still, until the 1850s there was no petroleum mining or production. In that decade oil wells were drilled specifically seeking petroleum in Poland, Canada, and the United States. By 1900 petroleum had been discovered in Baku (in present-day Azerbaijan), Poland, France, Scotland, Italy, Romania, Egypt, Canada, the United States, Mexico, Sumatra, Trinidad, and Peru. In the twentieth century discoveries were made on every continent and in most countries.

THE MODERN PETROLEUM INDUSTRY

The first modern use of petroleum was for kerosene, discovered in 1852. A kerosene lamp was invented in 1857, and the first kerosene factory was built near Baku in 1859. Gasoline was a by-product of kerosene production. After 1901 most petroleum was used for fuel oil to heat and light buildings and for gasoline to power automobiles with internal combustion engines.

From a macroeconomic perspective, petroleum is important because the industrial systems of Western nations and Japan all are based upon its use as a major source of cheap energy and of chemicals for other uses. About 30 percent of the top fifty industrial firms in the United States are petroleum or chemical firms. A similar proportion of the top fifty non-American industrial firms also produce petroleum or chemical products. Petroleum has become essential for fueling production facilities in all industries and for powering, heating, cooling, and lighting buildings and illuminating streets. It thereby makes possible the high-density urban agglomerations so characteristic of western Europe and North America. Without it Western societies would have had to develop either a more efficient energy source or an extensive form of land use rather than the intensive form now practiced. Such a use of land for living space, given a growing population, would threaten food production by depleting the acreage of farmable land. Moreover, because petroleum fuels the vast bulk of industry, virtually all employment in the West depends in the final analysis on its use. Petroleum fuel shortages mean unemployment, and large-scale unemployment can have catastrophic political consequences. Paradoxically, another use of petroleum since the mid-twentieth century has been to encourage decentralization of massive urban agglomerations into the suburbs, requiring the use of petroleum to fuel vehicles. A sustained shortage of petroleum thus would halt this trend toward decentralized land use.

From a macroeconomic perspective, petroleum is an intermediate good, consumed only to produce final consumption items. Despite the emphasis in the mass media on gasoline consumption and prices, the most extensive use of petroleum products since 1949 according to the U.S. Energy Information Administration has been for combined heat and power for homes and industry. Petroleum products thus enter the production functions of every home and industry in the economy. The amount value of petroleum products consumed in the United States in 2005 was 1,836,392 thousand barrels per day.

Industry Structure The modern petroleum industry is structured into four types of organizations: (1) state enterprises, (2) multinational corporations, (3) the Organization of Petroleum Exporting Countries (OPEC), and (4) legally organized commodity exchanges. In most petroleum-producing countries in the early twenty-first century, the state owns a petroleum company with a legal monopoly on the production and distribution of crude petroleum. The largest of these after 1918 was the Soviet state petroleum enterprise.

Most crude petroleum is produced by Western companies. In 1870 the Standard Oil Company was created by the Rockefeller brothers and two other partners. In 1893 the Standard Oil Trust was formed in New Jersey to evade an antitrust suit brought by the state of Ohio. Gulf Oil Corporation was formed in 1901 by the Richard K. Mellon family. Texaco was founded as the Texas Company in 1901 by Joseph S. Cullinan, Walter B. Sharp, and Arnols Shaect. The U.S. Supreme Court in 1911 ordered Standard Oil Trust dissolved. The component companies, still with the plurality of shares owned by the former Rockefeller shareholders, continued to operate as ostensibly separate companies. These companies were Standard Oil of Ohio, Standard Oil of Indiana, Standard Oil of New York, Standard Oil of New Jersey, Standard Oil of California, Standard Oil of Kentucky, Atlantic, and the Ohio Oil Company (later Marathon).

The Royal Dutch Company for the Exploration of Petroleum Sources in the Netherlands Indies was established in 1890. It merged in 1907 with Shell Transport and Trading Company, a British company, to form Royal Dutch Shell. The British government formed the Anglo-Iranian Oil Company in 1914. This company ultimately became British Petroleum. In 1924 the Compagnie Française des Pétroles was established by the French government. ELF began before World War II (1939–1945) with the establishment of three small companies to explore for gas near oil seepages in Aquitaine. Italy in 1926 formed Agencia Generale Italiani Petroli (AGIP). In 1953 ENI was founded as a conglomerate of thirty-six subsidiaries, including AGIP.

These companies all were multinational, multidivisional, and vertically and horizontally integrated firms. Within each company, five major functions were performed—exploration, drilling and production, transportation, refining, and distribution to final consumers. Subsidiaries were responsible for each function. Transfers of product among these subsidiaries and other divisions of the companies were accomplished using shadow pricing or some other form of transfer pricing. Actual payments were made only for transactions with outside firms.

OPEC was established in Baghdad in September 1960 as an intergovernmental organization of five original member states—Iraq, Iran, Kuwait, Saudi Arabia, and Venezuela. Its charter required that each member acquire an increasing level of control of production. By 1970 each member state was required to own a minimum of 55 percent of foreign petroleum companies operating within its jurisdiction. Iraqi production has not been part of OPEC quota agreements since March 1998 due to U.S. and United Nations controls. Other OPEC members have included Qatar (joined 1961), Indonesia and Libya (1962), Ecuador (1963–1993), Trucial States of Oman (now United Arab Emirates, 1967), Algeria (1969), Nigeria (1971), Gabon (1975–1995), and Angola (2007). The OPEC cartel was formed to control the world oil supply so as to increase revenue to member states. It operates by assigning members an annual supply quota for crude oil production and export. In 2005 it controlled about 41.7 percent of world production. OPEC also sets prices.

THE ERA OF THE SEVEN SISTER COMPANIES, 1911–1980

The name *seven sisters* was coined in a 1961 *Time* magazine article to refer to the dominant firms in the world oil industry: Royal Dutch Shell, Anglo Persian Oil (Anglo-Iranian Oil/British Petroleum/BP), Gulf Oil, Texaco, and three of the Standard Oil companies from the 1911 trust dissolution—Standard Oil of New Jersey (Humble Oil [Esso]/Exxon), Standard Oil of New York (Socony/Socony-Vacuum/Socony-Mobil/Mobil), and Standard Oil of California (Socal/Chevron). With the exception of Royal Dutch Shell, which is British and Dutch, these are all U.S. or British companies. Only the U.S. companies had their own significant domestic supply sources in the founding period of the industry from 1850 to 1950. The British and Dutch thus undertook a worldwide search for sources, beginning with their colonies and extending after World War I (1914–1918) to the League of Nations territories mandated to their administration. The seven sisters and Atlantic Richfield (ARCO), called *majors*, were vertically integrated, and all had similar structures. They had separate subsidiaries for exploration, production, refining, and distribution and geographic subsidiaries for operations in different areas.

The most important "independent" or nonintegrated companies, which did not operate in at least one of the areas defining the integrated companies, in this period included Getty, Phillips, Signal, Union, Continental, Sun, Amerada Hess, Cities Service, Marathon, Compagnie Française des Pétroles, Occidental, ENI, Tenneco, and Skelly Oil. In 1983 Occidental acquired Cities Service. Texaco acquired Getty in 1984.

Soviet Petroleum Industry The petroleum industry in Russia prior to the Bolshevik Revolution of 1917 was operated largely by U.S., British, and Swedish companies. During the seven sisters period, the Soviet state owned and operated the industry. The industry returned to private hands after 1991. ConocoPhillips acquired 16.8 percent of Lukoil, the largest Russian oil company. BP-Amoco invested in both Lukoil and Sidanko.

NATIONALIZATION, 1970–2000

Around 1912 producing countries began nationalizing or expropriating the ownership of foreign companies. The theoretical basis for expropriation was provided by Marxism-Leninism. The acceleration of this policy after 1970 was due more to nationalism, although the regimes that instituted it were almost always leftist. Majority or full expropriation took place in Argentina (1912), the Soviet Union (Baku, 1918), Mexico (1938), Iran (1951), Indonesia (1950s–1960s), Egypt (1961–1964), Peru (1968), Libya (1971), Nigeria (1971), Iraq (1972), Algeria (1972), and Saudi Arabia (1973).

CONCENTRATION AND CENTRALIZATION

Since the 1980s there has been an acceleration in the rate of concentration and centralization in the world oil industry with the development of what are referred to as *supermajors*, *majors*, and *independents* or *jobbers*. Supermajors

consist of BP-Amoco, Chevron-Texaco, Exxon-Mobil, ConocoPhillips, and Shell. This category of companies is defined as having a capitalization of $100 billion or more. Majors are defined as companies having a capitalization of $30 to $100 billion. Independents and jobbers include those with a capitalization of less than $30 billion. Supermajors have largely abandoned their traditional function of exploration, 80 percent of which now is conducted by independents. They receive most of their profits from the refining and petrochemical industries and also have diversified into alternative sources of energy, including atomic energy.

Simultaneously with this centralization and consolidation, many countries opened up their petroleum industries again to private international companies. Conflicts between source countries and companies extracting crude petroleum have been endemic from the beginning of the modern era, and examples such as the conflict in southeastern Nigeria and the war in Iraq are manifestations of this phenomenon.

Environmental issues in the extraction and transportation phases of the industry's operation are less visible and perhaps less important than in the consumption phase. For this reason this issue has been the most recent to emerge. However, the environmental impact of the international industry is difficult to measure systematically, for no international statistics on this issue are collected. The number and volume of oil spills are available, but these represent only extraordinary occurrences, not the everyday degradation of the environment due to operations.

THE POLITICAL ECONOMY OF THE PETROLEUM INDUSTRY

During World War I and continuing into the early twenty-first century, Western countries transformed their economies and their military forces to use petroleum as the primary fuel source. As they did so diplomatic and military conflicts arose over control of the known sources of petroleum. Because this transformation was not far advanced until after World War I, that war cannot be characterized as a war over oil.

Most of the known sources at the beginning of this period were in the United States. Elsewhere oil production began in Baku in the 1870s, in the Dutch East Indies in 1883, in Iran in 1908, in Egypt in 1910, in Venezuela in 1914, in Kurdistan (now part of Iraq) around 1915, in Iraq in 1927, in Saudi Arabia in 1935, in Libya in 1959, in Egypt in 1966, in Sudan in 1974, and in Kazakhstan in 2000. These sources were discovered by Western oil companies, which have involved their governments in protecting their exploitation of these resources.

Local and Regional Conflicts Many of the conflicts that arose were local or regional, involving antagonistic political and military forces internal to countries with petroleum reserves, or between neighboring countries with at least one having reserves. These conflicts took the form of rebellions, revolutions, coups d'état, civil wars, and border wars. For example, in the failed 1905 revolution in Russia, the Baku fields were set afire. The Kurds, representing Turkey, massacred millions of Armenians during World War I. In 1929 and 1989 civil wars occurred in Afghanistan. In 1945 a coup in Venezuela gave control of the oil fields to a different power group in the country. Petroleum has been associated with two civil wars (1955–1972 and 1983–2005) and an armed rebellion in Sudan. The Nigeria-Biafra civil war (1967–1970) involved petroleum fields in the Niger Delta. The Angolan civil war (1976–2002) involved petroleum reserves in the Cabinda enclave. And a rebellion that began in Darfur in 2003 involved the South Darfur fields. Local and regional conflicts increased significantly after Britain withdrew its naval forces from the Indian Ocean and the Persian Gulf in 1971.

Multinational and Global Conflicts Other conflicts involved the major European political powers of the day—the large petroleum-consuming countries—in conflicts that were considered to be major set-piece "wars." Britain and Afghanistan fought three wars (1838–1842, 1878–1881, and 1919), the British attempting to thwart perceived Russian designs on British India, then including Pakistan. At that time petroleum had not been discovered in or near Afghanistan and so played little role in these wars.

After World War I, Turkey captured a part of the territory of the ethnic Kurds. Another part was given to Britain by the League of Nations as part of the Iraq mandate. A section of this territory was given to the French in the Syrian mandate. The Soviet Union captured the Azerbaijan part in 1920. Kurdistan was made a semiautonomous region of Iraq, the only Kurdish political entity internationally recognized. Turkey and the Soviet Union captured parts of the territory of the ethnic Armenians, other parts of which lie in northern Syria, Iraq, and Iran.

During the 1890s the British attempted to expand the border of their colony British Guiana (now Guyana) westward to include parts of Venezuela, where indications of oil had been discovered. This was probably unnecessary, because Guyana is a geologic sink, a lower-than-sea-level basin into which petroleum flows by gravity from Venezuela on the west and Dutch Guiana (now Surinam) on the east, so wells drilled in Guyana would draw from pools shared with Venezuela and Surinam. Nevertheless, British and German warships blockaded the ports of Venezuela until the United States, citing the Monroe

Doctrine, forced them to cease. Oil was discovered in 1914, and by 1928 Venezuela was the world's largest exporter of oil. Thus one sees the hand of Britain in the Afghanistan, Kurdistan, and Venezuela conflicts between the two world wars.

The most important of these major conflicts was World War II, the first war that might be characterized as an "oil war," with the petroleum resources of the Caspian Sea, the Persian Gulf, the Gulf of Mexico, the Caribbean Sea, Lake Maracaibo, and the Dutch East Indies being strategic targets of all combatants. As part of its strategy to defend the Caribbean Sea and the Gulf of Mexico from German attack, the United States concluded a deal with Britain in 1940 by which the United States gave Britain used destroyers in exchange for the right to use or build bases in the British Caribbean colonies.

North Africa was the location of battles between Italy and Germany on one side and Britain and the United States on the other to secure Persian Gulf oil, even though no oil had yet been discovered in Libya or the Western Desert of Egypt, where most of the battles were fought. On August 1, 1941, before its entrance into the war, the United States imposed an oil embargo on the Axis powers—Germany, Italy, and Japan. The Netherlands and Britain followed suit. The 1941 embargo reduced Germany's supply from Mexico and Venezuela and reduced Japan's supply from the Caspian Sea, the Persian Gulf fields, and the Dutch East Indies. The U.S. entrance into the war was largely due to its embargo of petroleum supplies to Japan. After negotiations with the United States, Britain and Holland failed to reverse this decision, and Pearl Harbor was attacked in December 1941 to reduce the U.S. capacity to enforce the embargo. Japan then invaded and occupied the Dutch East Indies (Sumatra, Java, and Borneo) from 1942 to 1946 to secure petroleum to fuel its war effort.

A few months after the war ended in 1945, a military coup took place in Venezuela, with control of revenues from oil production a major motivation for the conflict. The Dutch also fought wars in Indonesia to regain control of its colony but was forced to grant it independence in 1948. The cold war between the United States and the Soviet bloc from 1945 to 1991 involved the same strategic oil issues as World War II but did not rise to the level of open warfare. The Korean War (1950–1953) and the Vietnam War (1954–1975) were proxy wars for the United States and the Soviet Union but were less conspicuously concerned with control of petroleum reserves and their transportation to world markets. Importantly, however, with the exception of World War II, all conflicts over oil, both regional and global, took place in the countries in which the reserves lay, and not in the consuming countries. This changed dramatically with the onset of "terrorism."

Terrorism The rise of terrorism since the airplane hijackings in 1968—including especially the attacks on New York City in 1993 and 2001 and on the Pentagon in 2001, the bombings of U.S. embassies and ships in 1998 and 2001, and the bombings on Spanish and British trains and buses and other facilities in 2004 and 2005—changed the location of conflicts. Terrorism may be considered a form of guerrilla warfare, in contrast to a set-piece war. In response to this shift in theaters and tactics, Western governments alleged that certain Arab Muslim states were "sponsors" of these acts of terror or gave safe haven to terrorists. Western states directed military and economic sanctions against these states, which included Iran, Libya, Sudan, Somalia, Afghanistan, and Iraq. It is not without significance that all these states either have petroleum reserves or stand athwart transportation routes to world petroleum markets. Somalia, for example, controls the approach to the Red Sea and the Suez Canal.

Since 1980 five major wars have been fought in the region: the Soviet-Afghanistan War (1979–1989), the Iraq-Iran War (1980–1988), the Persian Gulf War (1990–1991), the U.S.-Afghanistan War that began in 2001, and the U.S.-Iraq War that began in 2003. In addition since 1980 U.S. naval ships and aircraft have blockaded and threatened to attack Libya, accusing it of being a state sponsor of terrorism.

In 1991 the former republics of the Soviet Union became independent. Several of them gave concessions to Western companies to explore for petroleum. With these discoveries, proposals were made for pipelines to carry the petroleum to shipping points for export to world markets. Three feasible routes exist for exporting Caspian Sea petroleum to world markets: west through Azerbaijan, Armenia, and Georgia to the Black Sea; south through Iraq and Iran to the Persian Gulf; or southeast through Afghanistan and Pakistan to the Arabian Sea. Overland markets are north into Russia and east into China.

All wars have as an objective the conquest of territory and its resources and assets, a major part since 1900 being petroleum reserves. Thus all wars since 1900 may be considered, to some extent, wars to control oil. This objective has attained the highest priority since World War II, leading to increased military and diplomatic conflict. Petroleum wars may be expected to continue to arise until a different energy source is discovered and widely employed or until an effective international nonviolent conflict resolution method is found and employed.

SEE ALSO *Energy Industry; Industry; Iran-Iraq War; Iraq-U.S. War; Nationalization; Organization of Petroleum Exporting Countries (OPEC); Resource Economics; State Enterprise*

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Julian Ellison

PETTIGREW, THOMAS. F.

1931–

The American civil rights researcher and activist Thomas Fraser Pettigrew is one of the leading experts in the social science of race and ethnic relations to emerge in the post–World War II (1939–1945) period. Pettigrew received his B.A. in psychology from the University of Virginia in 1952 and both his M.A. (1955) and PhD (1956) in social psychology from Harvard University in the Department of Social Relations. His graduate training, requiring courses in sociology, social psychology, and anthropology, is reflected in the interdisciplinary perspective he has brought to over five decades of research on intergroup conflict. Pettigrew's approach to social psychology was shaped by his mentor, psychologist Gordon Allport (1897–1967), and his classic 1954 text, *The Nature of Prejudice*. Other intellectual influences included sociologist and survey researcher Samuel Stouffer (1900–1960) and sociologist Talcott Parsons (1902–1979). Pettigrew's experience of growing up white in the segregated South in the 1930s and 1940s further influenced his approach to prejudice and intergroup conflict by bringing him into close contact with the plight of African Americans.

Initially, Pettigrew studied the differences among white Americans in different regions of the United States. His research showed that psychological factors alone, in this case authoritarianism, could not account for the greater hostility toward blacks found among southerners. For a more complete picture, he argued for the importance of examining the structural components and the way in which societal norms hold bigotry in place. Pettigrew's work continued to build on this insight, and he has argued throughout his career for the importance of studying social issues at several levels of analysis.

Pettigrew consolidated his theoretical position by developing a multilevel approach to social issues that combined the individual, the situational, and the societal levels, and the links among them. In the case of prejudice, there is the micro level of analysis, which includes individual attitudes, cognitions, and personality dynamics. There is also the macro level of analysis, including structural aspects of one's society, its norms, and its mores. And finally, there is the meso level of analysis, in which the immediate situation of social interaction plays a key role. Throughout his career, Pettigrew has studied each level of analysis and its interaction with other levels, arguing that none is sufficient alone. Consequently, he has pursued research on authoritarianism and its relationship to prejudice, subtle prejudicial attitudes and their involvement in undermining societal desegregation, and the importance of friendship in his reformulation of contact theory and intergroup conflict. Pettigrew's research is international in scope, with attention always paid to racial norms guiding the societies and their institutions (e.g., South Africa, the Netherlands, Germany) in which micro and meso factors are played out.

Pettigrew came into the study of social psychology with the intention of combining both scientific work and social activism. Throughout the 1960s and 1970s, he argued for an "honest broker" approach to the study of social issues, whereby social scientists, in a two-way dialogue with policymakers, would bring research to bear on social issues through, for example, pro bono expert testimony to courts and Congress, as well as policy-relevant research. Pettigrew has provided expert testimony on the positive effects of school desegregation to municipal, state, and federal levels of government. He has conducted research and consulted directly on implementation of policies and plans for desegregated schooling. Pettigrew's work has always reflected the pulse of change in the United States for African Americans, as well as the resistance to change. He has researched, for example, white

attitudes to African American breakthroughs in public life at the grassroots level (e.g., the 1960s sit-in movement) and their candidacies as mayoral "firsts" in Gary, Indiana; Newark, New Jersey; Cleveland, Ohio; and Los Angeles. In his earliest books, *A Profile of the Negro American* (1964) and *Racially Separate or Together?* (1971), as well as more recent writings, Pettigrew has argued for an integrated society with data supporting its benefits in information and access for minorities.

As incoming president of the Society for the Psychological Study of Social Issues in 1967, Pettigrew pressured a reluctant American Psychological Association to provide a suitable forum for Martin Luther King Jr. (1929–1968) to address its annual convention, which King did to an overflow crowd of five thousand psychologists. Working with noted civil rights activist and scholar Kenneth B. Clark (1914–2005) on this and other civil rights projects through the latter's Metropolitan Applied Research Center (MARC), Pettigrew continued research in the public domain at a time when the majority of social psychologists were focused on micro-level analyses of individual social behavior.

Pettigrew has never retreated from debate in both the academic and the public arena, and he is one of the most articulate defenders of the need for social scientists to engage with and make explicit their values. In 1975, at the beginning of the resegregation era, James Coleman (1926–1995) published a widely publicized study showing that school desegregation resulted in "white flight" to the suburbs. Pettigrew is well known for his critique of the Coleman Report, both its flawed science and the recommendations that ensued. While "white flight" was neither universal nor as damaging as thought, it provided judges with an acceptable reason for opposing urban school desegregation, turning back the gains of the desegregation era (1930–1973) and dismissing effective metropolitan solutions.

In the late 1970s, Pettigrew challenged the claim that race was declining in its significance relative to the rising role of social class, a claim put forward by sociologist William Julius Wilson. Pettigrew drew attention to the importance of the interaction of race and class, making racial discrimination only more subtle for upper-class African Americans. Reflecting back on the fiftieth anniversary of the U.S. Supreme Court's landmark 1954 ruling in *Brown v. Board of Education*, Pettigrew argued for a rededication to efforts for preventing further resegregation in American society. By combining the best research with political and historical analyses, Pettigrew has demystified legal arguments for segregation, showing instead that separate educational facilities are inherently unequal and that intense residential segregation is a key element in the continued resistance to integrated schooling.

Pettigrew has maintained a prominent place as a scientist, teacher, public intellectual, and activist for over five decades. He has mentored numerous doctoral students, many of whom are renowned in their fields, including John Jemmott III, Howard Schuman, and Eliot Smith. He has collaborated with numerous colleagues internationally on issues of prejudice and discrimination toward immigrants in western Europe, most notably with Roel W. Meertens in the Netherlands and Ulrich Wagner in Germany. In addition, Pettigrew has held several appointments in sociology and social psychology, including appointments at Harvard University (1957–1980), the University of California, Santa Cruz (1980–1994), and the University of Amsterdam (1986–1991). He has been honored at many points in his career: as a fellow of the Center for Advanced Study in the Behavioral Sciences, Stanford University (1975–1976); with the Kurt Lewin Award of the Society for the Psychological Study of Social Issues (1987); with the Distinguished Scientist Award from the Society for Experimental Social Psychology (2002); and as a New Century Scholar, Fulbright Foreign Scholarship Board (2003). He served as president of the Society for the Psychological Study of Social Issues (1967–1968) and has been a longtime member of that organization, as well as of the American Sociological Association and the American Psychological Association.

SEE ALSO Brown v. Board of Education*, 1954; Achievement Gap, Racial; Allport, Gordon; American Sociological Association; Authoritarianism; Bigotry; Clark, Kenneth B.; Ethnicity; Parsons, Talcott; Prejudice; Psychology; Race; Racism; Segregation; Social Psychology; Sociology; Stereotypes; Wilson, William Julius*

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Frances Cherry

PHALANGISTS

Phalangists are members of the Lebanese Phalanges Party (Hizb Al-Kata'ib Al-Lubnaniyyah). The Phalanges Party was founded in November 1936 by pharmacist Pierre Gemayel (1905–1984) and four other Christians in the wake of a visit to Germany, where Gemayel was a member of the Lebanese delegation to the infamous 1936 Olympic Games in Berlin. Gemayel never denied his desire to replicate the youth organizations of Nazi Germany, and the name was taken from Francisco Franco's (1892–1975) Falange Española, a fascist political party. The Phalanges Party was founded as a response to the rise of "unionist" calls among Muslims and some Christian groups in Lebanon who sought the unity of Lebanon with either Syria or another Arab country as part of a larger Arab nation. *Al-Kata'ib* means "battalions," a term that underlined the military purpose of the organization. In 1943 Phalanges leaders broke with Émile Edde (1886–1949), who wanted to preserve French rule in Lebanon, supporting instead the rising tide of popular sentiment that called for immediate independence. This position gave the party national legitimacy.

The party first fielded candidates in the by-election of 1945, but failed to win parliamentary seats until 1958, when the civil war boosted the popularity of the party among Lebanese Christians. As sectarian polarization tore the country apart, the Phalanges emerged as a well-organized party with a militia. Its recruitment and propaganda techniques became more sophisticated, and the party won six parliamentary seats in the 1960 election. It emphasized the ostensible uniqueness of Lebanon and resisted the Arabization of Lebanese culture and foreign policy. A Phalanges ideologue published a manual in 1966 pledging strict dedication to traditional values: God, homeland, and family. According to the manual, the party is also dedicated to democracy, private property, and the free enterprise system, and is opposed to individualism, leftism, and communism. Membership in the party was predominantly Christian, specifically Maronite, and the leadership was tightly in the hands of its founder, Pierre Gemayel.

The Phalanges Party established the most powerful militia in Lebanon as early as the 1950s, and the party attracted followers in the 1960s and 1970s by provoking clashes with Palestine Liberation Organization (PLO) forces. The clashes increased in the late 1960s when Phalanges armed men would ambush PLO trucks and cars in Kahhalah, a strategic Phalanges city on the Damascus-Beirut highway. The party was the major fighting force of the right-wing coalition during the 1975 civil war and received aid and weapons from Israel while its enemies were receiving aid from the PLO and other Arab countries. The rise of Bashir Gemayel (1947–1982, the son of Pierre) marginalized the party, although Bashir was also a leading member of the party. The civil war had many dimensions, but one of them entailed a PLO-Phalangist conflict. Many of the episodes of the conflict, including the siege of the Tal Az-Za'tar camp (and its destruction) and the Dbayy refugee camp in 1976, were Phalangist campaigns to root out the Palestinian presence in East Beirut.

The year 1982 was a watershed in the history of the party. First, Bashir Gemayel was elected president of Lebanon, but he was assassinated before he took office. After his assassination, militias loyal to the Lebanese Forces (a collation of right-wing militias under the control of the Phalanges) entered the Sabra and Shatila refugee camps and massacred hundreds of Palestinian (and some Lebanese) civilians. Bashir's brother, Amin, became the first Phalangist to assume the presidency of the republic. In 1984 Pierre Gemayel died, and Amin insisted that Pierre's deputy, Elie Karamah, a Greek Catholic, become the permanent leader of the party. Karamah's tenure marked the ultimate marginalization of the party in Lebanese politics. In 1986 Georges Sa'adah, a Maronite, was elected to the presidency of the party, and he remained president into the 1990s, despite efforts to unseat him by his opponents and by a splinter faction headed by Karamah and supported by Amin Gemayel. The party boycotted the 1992 parliamentary election and did not win seats in the 1996 election. The Syrian government helped engineer a takeover of the party by a pro-Syrian faction headed by Karim Pakradoni, who served as a minister during the administration of Émile Lahhud. In 2005 Pakradoni all but surrendered the party to Amin Gemayel in recognition of his loss of popular support among Christian voters.

SEE ALSO *Arab-Israeli War of 1967; Elections; Genocide; Lebanese Civil War; Olympic Games; Palestine Liberation Organization (PLO); Spanish Civil War*

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As'ad Abu Khalil

PHARMACEUTICAL INDUSTRY

The modern pharmaceutical industry in the United States originated during the 1818 to 1822 period when less than

a dozen fine chemical manufacturers constructed factories in Philadelphia. History records Robert Shoemaker, producer of glycerin, as the first large-scale manufacturer in the period from 1818 to 1840. Medicines were previously manufactured in the laboratories of pharmacies where doctors and pharmacists compounded and administered drugs to patients and observed drug reactions. The Food and Drug Administration (FDA), which originated in 1902 by an act of U.S. Congress, regulates the modern pharmaceutical industry. (The agency is also a scientific and public health agency with oversight for the safety of most food products, radiation-emitting consumer products, cosmetics, and animal feed.)

Pharmaceutical firms are engaged in the discovery, manufacturing, and marketing of legal drugs, biologics (viruses, toxins, serums, and analogous products), vaccines, and medical devices such as pacemakers and prosthetics. Products are made for both humans and animals. Pharmaceutical products, both prescription and over the counter (OTC), account for a large share of the aggregate health care spending and represent major account items in international trade transactions of developed countries.

Pharmaceuticals as a percentage of total health care spending during 2002 comprised 12.8 percent in the United States, 14.5 percent in Germany, 15.8 percent in the United Kingdom, and 22.4 percent in Italy. Pharmaceutical spending in the United States grew at an average annual rate of 11 percent between 1970 and 2005. The industry is global and led all other industries in rent-seeking activities by spending nearly $1 billion from 1998 to 2004 on lobbying. Profit-seeking firms engage in strategic lobbying, a special case of rent seeking. Rent seeking is a selfishly motivated effort of one party (pharmaceutical firms) targeted at influencing another party's (government regulators) decision. Economic agents will decide to invest in rent-seeking activities, such as lobbying, if the expected net present value of the effort is profitable at the margin. Global pharmaceutical trade grew at an average annual rate of 23 percent from 2000 to 2003 and was valued at $200 billion in 2002. More than 80 percent of pharmaceutical production and consumption occurs in North America, Western Europe, and Japan.

GENERAL CHARACTERISTICS

Several characteristics distinguish the pharmaceutical industry from other industries. A newly released pharmaceutical agent is usually available only by physician prescription. Patients in effect transfer decision-making authority on the appropriateness of medications for their ailments to the gate-keeping physicians (or pharmacists and nurses in some countries). Generally, a prescription may become available OTC (i.e., without physician prescription) for a non-chronic condition that is relatively easy to self-diagnose and has low potential for harm from self-medication under conditions of widespread availability.

Another important industry characteristic is the availability of health insurance coverage for prescribed medications. Most often, private insurers or government entities subsidize retail drug purchases. Consumers make a copayment (a fixed sum for each prescription regardless of the full price) or pay a coinsurance (a fixed percentage of the full price) that is less than the full market price. Copayments tend to vary depending on the drug classification. Consumer payment of far less than full cost of prescriptions creates the familiar "moral hazard" (excessive use) problem.

INDUSTRY GROWTH

The Centers for Disease Control (CDC) estimated that in 2005 more than 130 million Americans got prescriptions monthly. Physicians acting as the decision maker for patients and health insurance coverage of prescriptions create a market with fairly "inelastic product demand." An inelastic product demand means that buyers' percentage change in quantity purchase decisions are relatively insensitive to a given percentage price change that brought it about. Pharmaceutical product demand elasticity estimates vary depending on many factors, including the setting (e.g., inpatient versus outpatient or military versus noninstitutional population), brands versus generics, stringency of regulatory and provider reimbursements, and the strength of the consumption habits of consumers.

Some experts predict that the rise in insurance coverage is a major culprit in the undisciplined rising consumption of prescribed drugs. Other experts contend that the growth in prescription drug use is partly a function of greater marketing efforts of the drug firms. The pharmaceutical industry in 2003 spent $3.3 billion on direct-to-consumer advertising and marketing expenditures totaled $25.3 billion. Doctors' prescribing habits are directly influenced by the probability of patient noncompliance, and advertising targeted at doctors and patients. Direct-to-consumer advertising reportedly slowed noncompliance rates. The U.S. drug firms spend a similar percentage of their sales revenue on advertising as on research and development.

The pharmaceutical industry manufactures innovative products with government-granted patent rights that may be extended after application approval from the FDA. Patents give researchers and inventors exclusive rights to market an invention for twenty years before others may duplicate and sell it. Therefore, producers of new drugs are free to limit the supply and set prices that reflect profit-maximizing mark-ups with exclusive marketing rights. Most pharmaceutical manufacturers in the United

States are multinational enterprises operating globally across countries. In 2004 the Pharmaceutical Research and Manufacturers of America (PhRMA) recorded drug sales of $159 billion within the United States and $79 billion abroad. The industry boasts investment rate of return that is four times the magnitude of the typical Fortune 500 firm. Technological progress in this industry and in the broader health care sector has led experts to project the global pharmaceutical market sales to be $842 billion in 2010.

There were more than 700 companies operating in the "pharmaceutical preparations" industry in 2006. The leading ten firms accounted for more than 40 percent of total industry sales. Other factors in this industry include retail pharmacies, health care provider institutions, and wholesalers. According to a 2000 report, the pharmaceutical industry earned 80 percent of the drug sales directly from wholesalers, 12 percent from retailers, and 4 percent from hospitals. Consumers typically buy drugs from retail pharmacies but there has recently been a rising trend in purchased drug activities via the Internet and from mail-order services within and outside the United States. Prescription drug buyers consider nontraditional purchasing outlets more convenient and private relative to traveling to a retail drugstore. Physicians may suggest Internet pharmacies to some homebound patients in order to improve compliance.

RESEARCH AND DEVELOPMENT (R&D)

In the United States new drugs must be approved by the FDA. In order to satisfy safety and benefit considerations of the FDA, pharmaceutical companies conduct on average ten to fifteen years of research on a new medication. Approval of a new drug is a rigorous process and for every 5,000 to 10,000 compounds tested, only one receives FDA approval and becomes a new or improved treatment. The entire U.S. pharmaceutical industry spent an estimated $51.3 billion on research and development in 2005. Nearly 80 percent of global R&D spending takes place in the United States and the major portion of the remaining 20 percent occurs in Europe.

The drug discovery process begins with the screening of thousands of compounds and modifying them to raise disease-fighting activity and/or minimize undesirable side effects for patients. Both laboratory and animal studies may be used to evaluate a drug's safety and efficacy during pre-clinical testing. Investigational new drugs go through a rigorous review by the FDA before moving to the clinical trials stage. Clinical trials of new medicines occur in three testing phases. Phase I includes drug tests in a small group of about 20 to 100 healthy volunteers to determine safety. During Phase II, 100 to 500 volunteer patients participate in controlled trials to determine whether the medicine effectively treats the disease. Phase III includes 1,000 to 5,000 patients taking the new drug and being monitored to confirm effectiveness and identify any side effects with comparison to patients in the placebo (inactive substance) group.

Drug development responds to the urgency and intensity of consumer demand, and economic harm, measured by disease-specific mortality, in the United States largely motivates the global distribution of drug development. The FDA approved 28 new drugs in 2005 and more than 350 medications became available for treating patients in the last decade. New medicines in development in 2006 included 682 to treat cancer, 531 to treat neurological disorders, 341 to treat infections, and 303 to treat cardiovascular disorders. One study in 2005 reported that new drugs generated 40 percent of the two-year gain in life expectancy achieved in 52 countries from 1986 to 2000.

When a company's patent rights expire, other companies can imitate the drug and produce generic brands of the medication. According to PhRMA, the generics' share of the U.S. prescription drug market was 57 percent in 2005. This share is expected to rise within the next decade as the rate of brand patent expirations increases.

ECONOMIC FEATURES

The discovery and manufacture of new drugs is a risky business without guaranteed profitability. The cost of developing one new medicine is estimated to be about $800 million (higher if genetically engineered) and on average, only three of every ten prescription medications available to treat Americans generate revenues that meet or exceed average R&D costs.

In the absence of patent protection, imitators could copy the new medication and manufacturers would lack practical incentives to invest millions of dollars on R&D of new drugs. Although patents nominally last for 20 years, the average effective patent life of prescribed medicines is only about 11.5 years due to time lost during the development and distribution of the new medicine to the market. Patent protection gives pharmaceutical manufacturers a monopoly status although generic drug makers can start preparing copies of drugs for FDA approval before patent expiration. A monopoly provides the patent owner with the sole right to manufacture the drug and determine the quantity to supply (hence the market price) according to its projected profit margin. The Treaty of Marrakech, signed in 2004 during the international trade negotiations, provided full patent protection for pharmaceutical products across industrialized nations as well as in the less-developed nations.

The pharmaceutical sector is controlled or strictly regulated by the government acting as a single buyer (payer) or a monopsony in countries with nationalized

health systems (e.g., Canada, the United Kingdom). There are many end-users but they buy at government-regulated prices. Governments can regulate drug prices in a variety of ways. The most common methods of price regulation are reference pricing, formula pricing, capping or budgetary control, profit regulations and item-by-item negotiation. *Reference pricing* is a reimbursement rule where the government sets the maximum reimbursement for one drug by reference to the price of a comparable drug in the same market. Under *formula pricing*, governments use a wide criteria set, such as therapeutic novelty, to set drug prices. Capping or budgetary control would involve limiting reimbursement to the providers at a certain capitated level.

Other regulatory instruments generally target the profit margins of pharmaceutical companies and quality of manufacturing practices. For example, a 1990 law in the United States required drug manufacturers to apply on retail Medicaid prescriptions the largest discount they give any purchaser (the Medicaid drug rebate program). The U.K. government has used a rate of return regulation in which each firm negotiates with the government an allowed before-tax rate of return on its assets. Germany has used aggregate budget constraints and rollbacks. In this application, the government sets a tight overall budget and any amount above this budget would be deducted from payments to a third party (e.g., from the incomes of physicians, from the reimbursements to the drug manufacturers). These are all examples of government regulations to control drug prices and regulate excess profitability in the pharmaceutical industry.

The future pharmaceutical industry faces multifaceted challenges that include setting and enforcing manufacturing standards; rapid patent expiration of widely used brand drugs; unregulated parallel trades (re-importation in the European context) that ignores intellectual property rights; highly fluid and unregulated Internet sales; shortage of pharmaceutical scientists; biotechnology drugs and genetically engineered products (As of 2006 the FDA had no generics approval process in place for patented biotechnology drugs whose patents are about to expire.); ineffective post-marketing surveillance; foreign manufacturing, regulatory, and pricing challenges of drugs for major diseases afflicting developing countries (e.g., AIDS and malaria); and counterfeit products.

Intellectual property abuse and counterfeiting, the fastest growing economic crime, is a $200 to $400 billion global industry. In 2006, the National Association of Boards of Pharmacy (NABP) reported that the prevalence of counterfeit medicines can range to over 10 percent of the drug supply globally. A dramatic growth of global counterfeit and piracy activities would seriously threaten the economic well-being of international pharmaceutical companies.

SEE ALSO *Drugs; Industry; Medicine*

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PHASE DIAGRAMS

Phase diagrams display the characteristics of dynamical systems. They include *fixed points* (equilibrium points); *isoclines*, which subdivide the phase space into different vector forces; *trajectories*, which show particular paths of the system over time; and information on the stability/instability properties of the dynamical system. Phase diagrams have been employed in a number of areas in the social sciences. In economics, for example, they have been used in environmental economics, growth theory, and macroeconomics—most recently in structural macroeconomics. They can be one-dimensional (called a *phase line*) or two-dimensional, involving a two-dimensional phase space. Phase diagrams can also be used to display discrete systems of difference equations or continuous systems of differential equations—although the latter is the most common.

A deterministic dynamical system has three elements: (1) a set of equations showing the direction of motion; (2) a set of parameters; and (3) a set of initial conditions. Given these elements, the trajectory of the system is defined and can be plotted in a phase diagram. To illustrate these concepts, consider the simple continuous dynamical system in Figure 1.

$\dot{x}(t)$ and $\dot{y}(t)$ define the system's motion for the variables x and y, which are a continuous function of time, t. The system has a set of parameters a, b, c, d, e, and f. The initial condition is $x(0) = x_0$ and $y(0) = y_0$. This system is *autonomous* since it does not involve time as a separate variable. A nonautonomous system, for example, might have an equation such as $\dot{x}(t) = a + bx(t) + cy(t) + he^{gt}$. This is important because the mathematical properties of dynamical systems apply largely to autonomous systems.

One of the first considerations of a dynamical system is whether it has a fixed point: an equilibrium point. A fixed point for a two-dimensional system is where $x(t) = x^*$ and $y(t) = y^*$ for all t. In other words, the system remains at this position. When systems represent economic or social systems, such fixed points identify equilibrium states: They denote a balance of forces and so remain in that position unless something exogenous, such as a shock, disturbs the system. Fixed points are identified by the conditions $\dot{x}(t) = 0$ and $\dot{y}(t) = 0$. In the example in Figure 1, therefore, the equilibrium is where $x^* = 6$ and $y^* = 9$. Because this example is linear, there is only one equilibrium point.

	Example
$\dot{x}(t) = \dfrac{dx(t)}{dt} = a + bx(t) + cy(t)$	$\dot{x}(t) = 24 - x(t) - 2y(t)$
$\dot{y}(t) = \dfrac{dy(t)}{dt} = d + ex(t) + fy(t)$	$\dot{y}(t) = 15 + 2x(t) - 3y(t)$
$x(0) = x_0$ and $y(0) = y_0$	$x(0) = 1$ and $y(0) = 1$

Figure 1

But far more meaning can be given to the equations in the example when they refer to economic or social systems. For example, the first equation may refer to the goods market in a macroeconomic model of the economy, and the second equation may refer to the money market. Each of these markets can be in equilibrium separately or simultaneously. The first is in equilibrium when $\dot{x}(t) = 0$ for all t, while the second is in equilibrium when $\dot{y}(t) = 0$ for all t.

Such conditions for equilibrium in each market separately identify isoclines. Isoclines represent partitions in the phase plane. Each side of the isoclines represents a disequilibrium state. More importantly, each side of the isocline represents vector forces pushing one of the variables in a particular direction. In the example in Figure 1, there are two isoclines. Along the $\dot{x}(t) = 0$ -isocline market, x is in equilibrium; along the $\dot{y}(t) = 0$ -isocline market, y is in equilibrium. The system is in total equilibrium when x and y are simultaneously in equilibrium. This must be where the two isoclines intersect. Figure 2(a) illustrates this example, and point E denotes the fixed point of the system. This figure also shows a typical phase diagram in two-dimensional space. The initial point is denoted A. The differential equations indicate the conditions by which x and y will increase or decrease over time. But exactly whether x is increasing (decreasing) or y is increasing (decreasing) will depend on the sign of $\dot{x}(t)$ and $\dot{y}(t)$ at some time t. For this reason we need to identify the vector forces in each of the quadrants.

The isoclines in this example divide the phase plane into four quadrants (areas). In each quadrant the market for x (or y) is in disequilibrium. When the market is in disequilibrium, it will change over time according to the nature of the differential equations (for continuous systems) or the difference equations (for discrete systems). The vector forces are shown by the arrows in the diagrams. They supply qualitative information about the movement of the system over time. For example, the vector forces in Figure 2(a) show that the system will move in a counterclockwise direction over time. Although the system will move between the vector forces in any quadrant, only a detailed specification of the equations can indicate whether the horizontal force or the vertical force is dominant. With autonomous systems there is only one trajectory through point A, and this is the path AE.

Consider another example illustrating a different application. Europeans discovered the Polynesian civiliza-

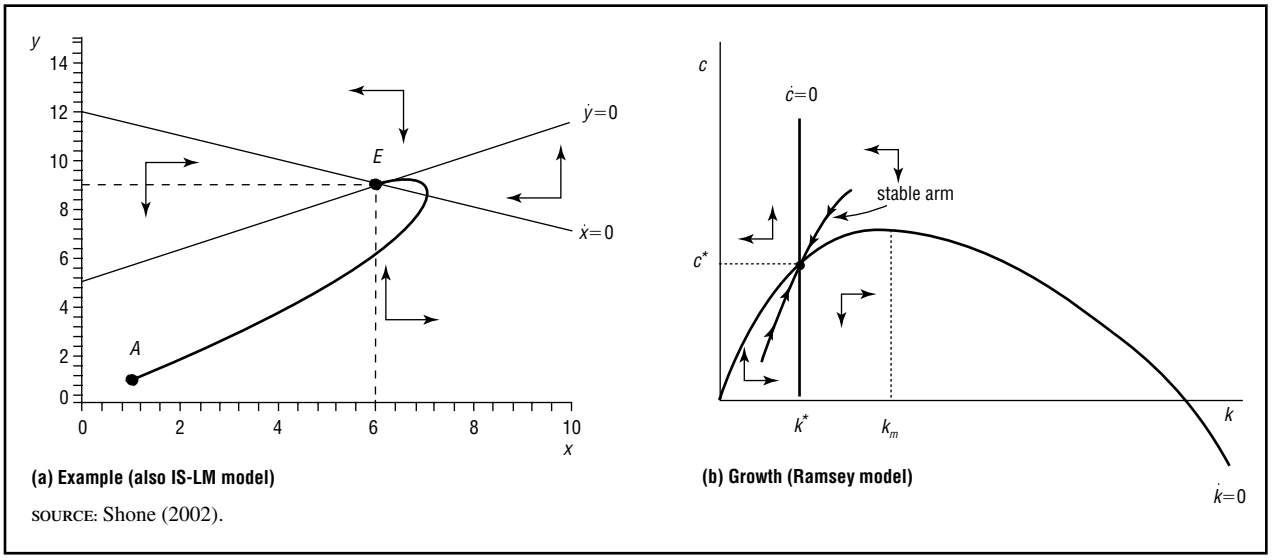

SOURCE: Shone (2002).

Figure 2: Phase Diagrams

tion of Easter Island in 1722 with a population of about three thousand and a set of enormous statues (*moai*). The island itself was first settled around 400 CE, when there was a large palm forest, although the island was virtually treeless in 1772. The palm was a natural resource used for a variety of purposes, and it sustained the population. However, the island's rising population, which at its height built the enormous statues, led to deforestation and, along with violent conflict, to the eventual collapse of the Easter Island civilization. Based on information about population and resources, the rise and fall of this civilization has been modeled, and is illustrated in the phase diagram in Figure 3(c) and the time profile in Figure 3(d).

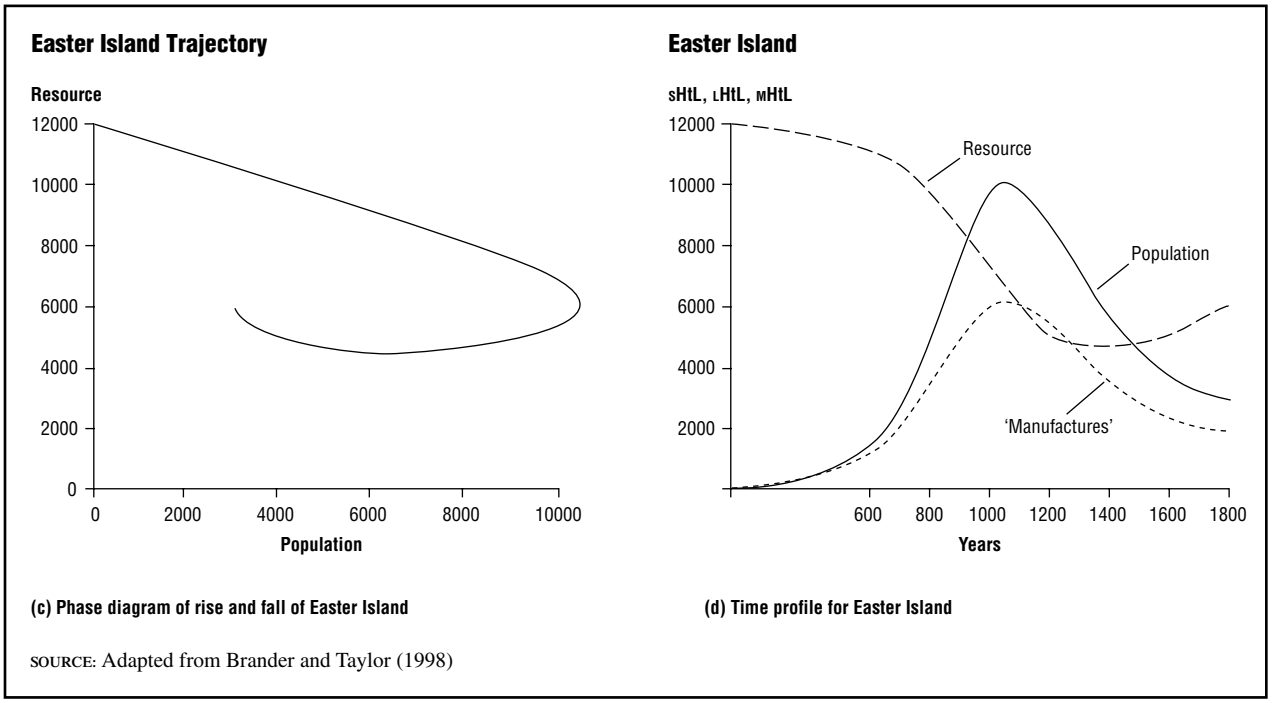

SOURCE: Adapted from Brander and Taylor (1998)

Figure 3: Phase Diagrams

The trajectory illustrates that as the population expanded, the resource base declined, with the population reaching a peak of about ten thousand around 1400 CE. Analytically, we have a stable clockwise spiral. Sociologically, what was so particular about Easter Island? A major characteristic is that the forest involved a slow-growing palm (the Jubea palm), which grew nowhere else in Polynesia. The other Polynesian islands grew the coconut palm and the Fiji fan palm, which have a much shorter fruit-growing age—and none of these islands exhibited the same rise and fall noted on Easter Island.

A feature of dynamical social systems is asymmetric behavior. If, for example, the variable on the *x*-axis adjusts more quickly than that on the vertical axis, then the system will move in a more horizontal direction in any given quadrant. Another feature illustrated by the vector forces is the possible existence of *saddle-path* solutions. Systems can generate unstable paths except for a saddle-path, which directs the system to the equilibrium. Such saddle-paths are a particular feature of economic systems that postulate rational expectations. In example (b) of Figure 2, the saddle-path for the Ramsey growth model denotes a balanced growth path. Saddle-path solutions, however, highlight an unsatisfactory feature of such modeling. There is no reason for the system to initially be on the saddle-path, and if it is not, there needs to be some mechanism to move the system to the one and only path that will take the system to equilibrium. A third feature that dynamical systems highlight is the possibility that systems will follow orbital paths around the equilibrium, never actually moving away from or toward the equilibrium. A major consideration, therefore, of dynamical systems is whether they are stable or not. Many of the features just mentioned, however, are more likely to occur in systems that involve nonlinear isoclines, such as the Ramsey growth model.

SEE ALSO *Comparative Dynamics; Cumulative Causation; Differential Equations; Hume Process; North-South Models; Stability in Economics; Taylor, Lance*

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Ronald Shone

PHENOMENAL CONSCIOUSNESS

SEE *Consciousness.*

PHENOMENOLOGY

At the beginning of the twentieth century the philosopher Edmund Husserl (1859–1938) formulated phenomenology both as a philosophical perspective and as a theory of knowledge. It had a great impact on a variety of social sciences. To Husserl, reality is not given, but is constituted. It is thus apprehended in human experience and given meaning and form. Humans look upon their reality as given in a natural and unquestioned way. It is the task of the philosopher to penetrate beyond the taken-for-grantedness of the world of experience (*Lebenswelt*) through a bracketing procedure (*epoché*) in order to arrive at a deeper understanding of the essence of phenomena. For example, the phenomenologist may look at the multiple ways in which humans experience the color red and how they give meaning to it. He or she then has to "bracket" the definitions of red as phenomena or appearances of essential redness.

In his endeavor to establish the basis for an interpretative sociology, Alfred Schutz (1899–1959) critically adopted Max Weber's insistence that understanding social action was the methodological and epistemological foundation of sociology. However, understanding involved the two perspectives of the actor and observer, and the sociologist most frequently occupies the latter position. Taking Husserl's notion of the everyday world of experience characterized by the natural attitude of uncritical acceptance, Schutz accounted for social reality as one in which people cognitively suspend doubt. This is the domain of first order constructs. The sociologist, on the other hand, suspends belief in the way Husserl bracketed the world of appearances. This is the domain of second order constructs resulting from sociological reflection. Schutz laid bare the structure of the life world in terms of typifications people make in everyday life along the axes of familiarity and strangeness in space and time. On the basis of these first order constructs the sociologist embarks on the construction of ideal types through a rigorous procedure. Good examples of these ideal typifications can be found

in his essays titled "The Stranger" (1944) and "The Homecomer" (1945).

Schutz laid the foundations of social constructionism for a wide range of social, cultural, and feminist studies. Widening the perspective beyond the social domain was one of the main contributions of his students, Peter Berger and Thomas Luckmann. In their seminal work *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (1966), they positioned phenomenology as a perspective rather than as an alternative paradigm in sociology. In their rendering of a sociology of knowledge from a phenomenological perspective, they demonstrate how reality as such, not just social reality, is constructed and installed as objective reality, which in turn affects society's members subjectively through processes of internalization and socialization. Other social thinkers such as George Psathas adhere to the idea of a phenomenological sociology as an alternative paradigm to functionalism.

Ethnomethodology seeks to problematize the everyday world taken for granted. Its objective is not the interpretation of first order constructs, but exploring how and by what methods people achieve and sustain a sense of order, normality, and morality in their lives. Aaron Cicourel and Harold Garfinkel pioneered this approach. Garfinkel adopted a methodological procedure akin to bracketing through his breaching experiments, during which the investigator acts as a stranger in familiar situations. Society's members' reaction to the breaching of social order and rules demonstrate their background expectations about this order and their desire to restore rule-governed situations.

The phenomenological perspective's focus on the subjective and everyday aspects of human existence proved attractive to investigators from a spectrum of inquiry including medicine, law, architectures, literature, the environment, ethnicity, gender, embodiment, history, and technology. Methodologically phenomenological investigations rely heavily on ethnographies and other qualitative measures.

With its emphasis on reality as a social construct, phenomenologically oriented social science provides fresh insights on local and global issues. Looking at race and racism, for example, it exposes racial orders, in whatever society they occur as historically constructed entities objectified as real. To society's members it demonstrates how a specific racial order appears cognitively as commonsense and legitimated as natural and how they are made to believe in its inevitability and normality. Finally it throws light on how empowered insiders construct and maintain racial hierarchies and their predominance in them by remaining racially invisible while racializing other groups and assigning them to their "proper place" in society.

Some have criticized phenomenological approaches as conservative due to their preoccupation with the mundane and commonsense aspects of life. This may be true for some studies, but phenomenology's insistence on a radical critique of knowledge resists any social structure's self-interested appropriation of social science.

SEE ALSO *Ethnomethodology*

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Gerhard Schutte

PHENOTYPE

Variations in phenotypic characteristics—skin complexion, hair texture, facial features, and stature—play a central role in racial stratification processes throughout the world. Historically, groups that are western European in physical appearance have been privileged over people of color socially, politically, and economically. Within communities of color, individuals who are more European in appearance have been accorded higher status and more opportunities than co-ethnics who are more indigenous in appearance. These overlapping systems of phenotype-based stratification are rooted in the European conquest, colonization, and enslavement of visibly different people from Africa, Asia, and Latin America beginning near the end of the fifteenth century. To justify expansion into these newly discovered lands and the subjugation of their inhabitants, Europeans established boundaries between themselves and others based on phenotype and constructed ideologies supporting their own cultural superiority. White, European appearance became equated with civilization, beauty, and competence, while indigenous appearance became equated with savagery, ugliness, and incompetence. Miscegenation resulted in a continuum of phenotypic types in these societies, and this ideological framework sometimes supported more a privileged treatment of mixed-raced subordinates. Structural and social-

psychological consequences of phenotypic hierarchies are still evident to varying degrees in communities of color in the Americas and in other parts of the world.

PHENOTYPE AND STATUS ATTAINMENT

At the structural level, there is a strong link between phenotypic appearance and status attainment, which has been studied most systematically in the Americas. In the United States, where the rule of hypodescent declared that an individual with any degree of African ancestry was black, the burden of blackness has not been equally shared. It is widely held, although not uncontested, that African American slaves and free persons of color with visible white ancestry had greater access to material goods, education, and cultural capital and, consequently, emerged as social and economic elites within African American communities after emancipation in the mid-1800s. More contemporary analyses of longitudinal and cross-sectional data show that lighter skin, which is usually associated with other Eurocentric facial features, is positively correlated with education, employment, occupational prestige, and income among African Americans. Indeed, some research suggests that educational and occupational differences between the darkest and lightest African Americans are nearly equal to the differences between whites and African Americans. A study published in 2006 suggested that the advantage of light skin disappeared for African American cohorts born in the mid-1940s, but it is not clear if these analyses included adequate controls for sample attrition where African Americans with darker skin and a lower socioeconomic status may have been lost to the study due to higher mortality. Thus, the most convincing evidence to date is that phenotype continues to matter for African Americans.

The link between phenotype and socioeconomic status is also evident within the Mexican-origin population in the United States and Mexico. The conquest of Mexico by the Spaniards resulted in a caste-based society that placed light-skinned, European-looking persons at the top of the social and economic hierarchy, the darker native inhabitants of Mesoamerica at the bottom, and the mestizos or persons of mixed race in an intermediate position. As a consequence of racial intermixture during the colonial era, phenotype in the contemporary Mexican-origin population ranges on a continuum from those who appear white to those who have dark skin, indigenous facial features, and shorter height than average. In contemporary Mexico and the United States, anecdotal and rigorous empirical analyses show that Mexican-origin persons with more indigenous complexions and appearance have lower levels of educational attainment, lower occupational status, and lower incomes.

Brazil has long touted that it is a racial democracy where social, economic, and political inequalities are present but are not based on race. Unlike the United States, Brazil did not implement legal segregation, and its racial ideology encouraged racial mixing with the latter resulting in a tri-racial system consisting of whites, browns, and blacks. Yet, in spite of its "alleged" tolerance for racial differences and a fluid racial classification system, phenotypic appearance is an important determinant of Brazilian life chances. As carefully documented by Edward Telles in *Race in Another America: The Significance of Skin Color in Brazil* (2004), brown and black Brazilians are disadvantaged on all socioeconomic indicators relative to whites, and the gap between browns and blacks is quite small. He reports that even among siblings in multi-phenotypic households, those who are white are less likely to drop out of school than those who are darker. Similar to other Latin American countries, limited social mobility of mixed raced individuals blunts recognition of phenotype-based inequality. Collectively, the research on status attainment in the United States and Latin America argues that phenotypic discrimination is widespread throughout the Americas. The closer individuals of color resemble white institutional gatekeepers, the more comfortable their material lives are likely to be on average.

Interestingly, a growing mixed race population in the United States, along with other factors, suggests that the U.S. racial stratification system is moving closer to the Latin American model where an intermediate group will serve to buffer racial conflict between whites at the top and black Americans and other "symbolically" black groups positioned at the bottom of the race hierarchy. This idea is buttressed by widespread adherence to a color-blind discourse that mistakenly asserts that racism is no longer a problem in the United States. A tri-racial system does not mean the end of racism, but it does mean that phenotype is likely to become even more important in racial dynamics.

PHENOTYPE AND SOCIAL-PSYCHOLOGICAL PROCESSES

The phenotypic-based reward structure imposed by racially dominant elites has also affected social-psychological processes internal to communities of color. Phenotypic evaluations and biases are embedded in ethnic identity, complexion preferences, and concepts of beauty. Latin Americans in the United States tend to eschew black identity in favor of white identity even when their complexions are dark and their country of origin has a high proportion of Afro Latinos and Afro Latinas. Some research indicates that in countries like Brazil, great pains are taken to avoid or hide African ancestry. Thus, despite claims that racism does not exist in Latin America, it is

clear that blackness and indigenous appearance are devalued. Preference for white or lighter skin is found in many communities of color. Among African Americans, there are indications that uniform preference for very light skin has diminished, but very black skin is not especially desired. Preferences for light skin have also been documented in Asian countries, in the Asian Diaspora, and among Americans of Mexican origin.

Among all people of color, phenotypic preferences disproportionately impact women because they define who is physically attractive, and expectations of attractiveness are applied more stringently to women than men. In many societies around the world, idealized beauty and femininity are constructed to incorporate white or light skin, long hair, thin bodies, and European facial features. Women whose phenotype places them at a distance from this ideal sometimes turn to cosmetic enhancements. African American women, for example, straighten their hair, wear colored contact lenses, and have attempted to become lighter by bleaching their skin. Modern skin bleaches often contain harsh chemicals that cause severe skin damage, and despite substantial health risks and attempts to ban them, bleaching products are a major problem in African countries and the West Indies. In Asian countries, women are bombarded with ads for facial creams that promise to lighten and brighten. Cosmetic surgeries, marketed under the guise of enhancing one's ethnicity, are increasing among women of color in the United States, but these procedures seem to erase rather than enhance ethnic phenotype. Women engage in these practices because attractiveness operates as a form of social capital that translates into economic rewards such as access to employment and upward mobility through marriage. In some South Asian groups light skin complexion is referenced in ads for prospective spouses, and among the Kerala of India light skin can be important in dowry negotiations. Light-skinned African American women also tend to marry more economically successful males than their darker-skinned sisters. For women, looking good counts, and looking good is heavily influenced by Eurocentric facial features and light complexion.

A CONTINUING FACTOR

Phenotypic appearance is the basis for racialized processes that privilege some groups over others and some individuals within groups. As nations become more racially and ethnically diverse and European cultural and aesthetic forms are exported around the world, it is likely that phenotype will continue to shape human interactions.

SEE ALSO *Audits for Discrimination; Blackness; Colorism; Correspondence Tests; Discrimination; Discrimination, Racial; Preference, Color; Racism; Whiteness*

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Verna M. Keith

PHILANTHROPY

The word *philanthropy* derives from the Greek word *philanthrōpos*, meaning "love of mankind." In more conventional terms, it is the act of giving money to charitable causes. Although among western cultures giving has its roots in Judeo-Christian notions of tithing, or contributing to one's church, philanthropy has also been linked to capitalism.

Philanthropy has become a cultural norm in the United States. Americans give their money at a higher rate than any other country in the world. Approximately 2 percent of the U.S. gross domestic product (GDP) is given to nonprofits (Gaudiani 2003). Although corporations and foundations practice philanthropy, the real power of American giving lies with individuals. According to the Association of Fundraising Professionals (2003), individual gifts represented approximately 76 percent of the money raised by U.S. nonprofits in 2002.

Philanthropy is seen by some as a supplement to government, and by others as a way to effect change without involving government. Much of the funding for religious, artistic, educational, and health-related causes comes from

philanthropic sources. In fact, many cultural, religious, and artistic organizations are almost entirely dependent on philanthropic donations. The government gives these organizations tax-exempt status in the United States. Scholars of philanthropy have identified these nonprofit organizations as the "third sector," as they are neither public nor private in nature (Payton 1991).

Throughout history there have been many critics of philanthropy. On a theoretical level, Marxists have argued that philanthropy is another aspect of capitalism that serves the interests of the rich; on an empirical one, social scientists such as C. Wright Mills showed how a small group of families control the wealth in capitalist nations, and any notion of creating social mobility through philanthropic assistance may be a mere illusion. More recently, scholars have considered race as a factor in philanthropic issues of control (Anderson 1988; Watkins 2001). In this regard there are many examples of philanthropists exerting pressure on recipients of their gifts. The oil tycoon John D. Rockefeller Sr. often tied rigid stipulations to his donations, especially those given to African American education. According to historian James D. Anderson (1988), during the late nineteenth and early twentieth centuries Rockefeller and his associates funded only vocational and manual arts education for blacks, while supporting the liberal arts for whites. Philanthropists such as the steel magnate Andrew Carnegie and Sears and Roebuck founder Julius Rosenwald followed Rockefeller's lead (Anderson 1988; Watkins 2001). In addition to their philanthropic efforts in the United States, the Carnegie, Rockefeller, and Ford foundations participated (and continue to participate) in extensive overseas initiatives, including school building in many African countries, health-related efforts in South America, and housing and agricultural programs throughout Africa, Asia, and South America. Many have questioned whether these efforts truly help the recipient nations, or merely serve the interests of U.S. foreign policy and global capitalism. On occasion, foundations have been publicly criticized for the projects that they fund both in the United States and abroad. For example, in 2003 the Jewish Telegraphic Association, a New York wire service, accused the Ford Foundation of funding organizations that supported anti-Semitic behavior. Initially, Ford denied the allegations, but the sometimes controversial foundation later learned that some of their grantees were, in fact, promoting anti-Semitic attitudes. This realization forced the foundation to make policy changes and caused discontent in the foundation world as these nonprofits worried about government interference in their grant making.

Over the course of U.S. history some have felt that the nation must choose between government-controlled and private solutions to social problems. This perspective was especially prevalent during the Roosevelt administration. Angered by Franklin D. Roosevelt's New Deal policies, many of the country's wealthy individuals refused to give because they felt the government had taken over the domain of philanthropy—a domain that they believed was rightfully theirs (Cutlip 1965). Some factions continue to hold this view today. However, most philanthropists see their gifts as a supplement to the support that government provides.

According to the conventional view, a philanthropist is a wealthy person who gives to those with less. Yet this definition tends to obscure acts of giving by middle- and lower-income people; moreover, it depicts philanthropy as primarily a white male enterprise. In response, some scholars, including Andrea Walton (2005), Emmett D. Carson (1993), Kathleen McCarty (1991), and Marybeth Gasman and Katherine Sedgwick (2005), have expanded the definition to include the giving of small monetary sums, time, and goods. Under this new definition, American philanthropists include the very wealthiest (e.g., Andrew Carnegie, George Eastman, Bill Gates, and John D. Rockefeller) and those with barely enough to make ends meet. In fact, individuals in the lowest income brackets tend to donate as much or more than their higher-waged counterparts as a percentage of their income. And in this view, minorities and women are as much philanthropists as white men. For example, a survey conducted by the *Chronicle of Philanthropy* in 2003 found that African Americans in particular give 25 percent more of their discretionary income to charity than whites (Anft and Lipman 2003).

The March of Dimes is an excellent example of the power of collective and small donors. From 1938 to 1954, 4 billion dimes, many of them collected one at a time from all sectors of the U.S. population, paved the way toward a cure for polio. Another example of vast philanthropic giving from small donors can be seen in the black churches, where parishioners, often nearly destitute themselves, donate more than 10 percent of their income. In recent times, the tragedy of September 11, 2001 spurred renewed interest in philanthropy among ordinary Americans. Besides the $2.9 billion in monetary contributions that citizens gave in the wake of the disaster, there were enormous in-kind contributions as well. For example, in the initial days after the tragedy, more than 500,000 people donated blood at American Red Cross centers across the fifty states, even after blood supplies were deemed adequate.

An innovative form of philanthropy that has emerged from the newest generation of American entrepreneurs and capitalists is venture, or "high-engagement" philanthropy. In this approach, the donor is engaged beyond providing financial support to the nonprofit organization. Venture philanthropists often require their grantees to

craft, with their assistance, strategic and long-term plans, find other sources of funding, and create new partnerships. As it is a recent development, few scholars have been able to assess venture philanthropy's effectiveness and value. However, some skeptics have likened this "new" form of philanthropy to that of the turn-of-the-century industrial philanthropists—large sums of money accompanied by large amounts of interference.

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Marybeth Gasman
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PHILISTINES

SEE *Palestinians.*

PHILLIPS, A. W. H.
1914–1975

Alban William Housego ("Bill") Phillips was born in New Zealand in 1914. Reflecting a boyhood interest in electronics, he became an electrical engineering apprentice and then wandered through Australia and Russia during the Great Depression years. He continued to study for the Institution of Electrical Engineers examinations by correspondence, and passed the examinations in 1938. During World War II (1939–1945) he served in the Royal Air Force in Asia, where he was captured and imprisoned. His experiences in the prison camp led him to study sociology at the London School of Economics after the war. One of the required units was economics, which led to an interest in macroeconomics.

Keynesian economics, which required the study of a complete system, was then coming to the fore. Phillips recognized that there were similarities between the systems studied by engineers and those by economists. Because economists were unfamiliar with systems, he recognized the utility of having a visual demonstration of the response of a miniature economic system after it was disturbed by a shock, and of how this response might be modified. Consequently, he built a hydraulic model of an idealized economy—the "Phillips machine." This was initially done for Leeds University, but improved models were later constructed for a number of universities around the globe. The machine was a great success, influencing many researchers, including Nobel Laureate James Meade (1907–1995). Today, simulations on digital computers have replaced the Phillips machine, but the ideas underlying it appeared in a number of Phillips's classic papers. These emphasized the difficulties that could arise when attempts were made to control an economic system, since economic policy actions often take a long time to have an effect upon targets. In these papers, Phillips studied the performance of an economic system when policy was envisaged as being set in a (then) novel way—according to a set of *rules*.

After this early work, Phillips's research focused upon examining relationships in the economic system and propounding methods for estimating the parameters that characterize them. His best-known paper determined a relation between inflation and the rate of unemployment that became known as the *Phillips curve*. The original curve linked the rate of wage inflation with the unemployment rate. It was transmuted into a relationship between price inflation and unemployment, particularly by Solow and Samuelson in the 1960s.

Phillips was appointed lecturer to the London School of Economics in the 1950s and rapidly rose to the position of Tooke Professor. In 1967 he moved to the Australian National University in Canberra but within a few years he suffered a stroke. Retiring to Auckland, New Zealand, he died in 1975. That Phillips's ideas have had an enduring legacy is apparent from the structure of a very popular model used for policy discussion in central banks—the *new Keynesian policy model*. Two of the three

equations in its closed-economy variant are a Phillips curve and an interest-rate rule for describing how interest rates are set in response to inflation and excess demand.

SEE ALSO *Economics, Keynesian; Phillips Curve*

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Adrian Pagan

PHILLIPS CURVE

The term *Phillips curve* originated in the work of New Zealand–born economist A. W. Phillips (1914–1975). In a 1958 article, Phillips plotted annual observations on wage change against unemployment in the United Kingdom for the 1861–1957 period, and he fitted a nonlinear curve by trial and error to the six grouped observations on wage change and unemployment (using an unusual technique, as noted by Desai [1975]). The resulting equation of $w = -0.900 + 9.638\,U^{-1.394}$, where w is the (annual) rate of change of money wages and U is the unemployment rate, displays the negative relationship between wage change and unemployment. The equation also places a floor under money-wage annual change of –0.9 percent.

The term *Phillips curve* has subsequently been used in a variety of ways and to invoke a number of mechanisms. Paul Samuelson and Robert M. Solow (1960) converted the curve into a relationship between price inflation and unemployment by deducting the presumed rate of growth of productivity from growth of wages to provide a presumed growth of prices. Later, there was an appeal to the links between output and unemployment to derive an equation linking price inflation and output (or capacity utilization or output gap).

Precursors can be found: For example, Irving Fisher's 1926 article "A Statistical Relation between Unemployment and Price Changes" was reprinted in 1973 under the heading "I Discovered the Phillips Curve." Fisher argued that "surprises" in inflation (i.e., unanticipated inflation) lead to supply responses, with the postulated positive effect of unanticipated inflation on economic activity. Anthony Thirlwall (1972) argues that Arthur Brown (1955) has a strong claim to the discovery of an empirical relationship between wage changes and unemployment. His diagram (Brown 1955, p. 199) maps out the wage change–unemployment observations for the United Kingdom from 1880 to 1914. Even earlier, Karl Marx (1818–1883) argued that the industrial reserve army of the unemployed regulated the movement of wages.

Richard Lipsey (1960) provided a theoretical justification for the Phillips curve on the basis of a labor-market adjustment process whereby wages change in response to the level of excess demand for labor, and unemployment is viewed as a (negative) proxy for excess demand for labor. Milton Friedman argued that "Phillips' analysis of the relation between unemployment and wage change … contained a basic defect—the failure to distinguish between *nominal* and *real wages*" (1968, p. 8). This observation led to the *expectations-augmented Phillips curve*, such as $w = p^e + f(U - Un)$ (abstracting from the general trend upward of real wages), where p^e is the expected rate of inflation and Un is the "natural rate of unemployment," with the significant property that money wages would rise in line with expected inflation when $U = Un$. When unemployment was below this "natural rate," then wages would rise faster than prices, and inflation overall tends to rise. The "natural rate" was viewed as "the level that would be ground out by the Walrasian system of general equilibrium equations, provided there is embedded in them the actual structural characteristics of the labor and commodity markers, including market imperfections, stochastic variability in demands and supplies, the cost of gathering information about job vacancies and labor availabilities, the costs of mobility, and so on" (Friedman 1968, p. 8).

Edmund Phelps introduced "a sort of Phillips Curve in terms of the rate of price change, rather than wage change, that shifts one-for-one with variations in the expected rate of inflation" (1967, p. 254) with "the rate of inflation depend[ing] upon the utilization ratio and upon the expected rate of inflation" (p. 261). Using the idea that expectations were adaptive, Phelps developed the idea of a vertical long-run relationship between inflation and output, with output at the level determined by the "equilibrium utilization ratio."

Expressing the argument in terms of wage changes and unemployment, in the short-run, with a given state of expectations, there is a trade-off between wage change and unemployment. But expectations will adjust to (or even anticipate) the experience of wage inflation (and the subsequent price inflation). When expected price inflation fully incorporates wage inflation, then $p^e = p = w$, and hence $f(U - Un) = 0$: This became known as the *vertical long-run Phillips curve*. This has enormous policy implications: The economy has to operate at the "natural rate" if

continuously rising or falling inflation is to be avoided. Specifically, unemployment below the "natural rate" would see escalating inflation, leading to hyperinflation.

Many of the arguments developed by Friedman were anticipated by David Champernowne. Champernowne concluded that "no period of monetary employment or of monetary unemployment is likely to last for very long. We expect there to be alternate periods of monetary employment and of monetary unemployment, so that the actual level of unemployment would oscillate above and below the level of basic unemployment" (1936, p. 206), where "basic unemployment is the amount of unemployment that there would be in that situation if each man demanded neither more nor less than his basic real wage" (p. 203). But a significant difference was that Champernowne postulated responses from the monetary authorities through interest rates as the mechanism by which actual unemployment moved to the level of "basic unemployment."

INFLATION AND THE OUTPUT GAP

The term *Phillips curve* is now widely used to signify the relationship between price inflation, expected price inflation, and the output gap, which feature heavily in the new consensus macroeconomics (e.g., Meyer 2001; Woodford 2003). The new Keynesian approach to the Phillips curve is based on price decisions being forward looking, and at the level of the individual firm price decisions depend on the expectations of prices to be charged by other firms in the future. But price decisions are staggered (following Calvo 1983), and only a proportion of firms change their price in any given period. Each firm is postulated to produce a differentiated product, and faces a constant price elasticity of demand curve for its product. In each period, a proportion of firms change price (but others do not). In each period, the probability that a firm changes price is α, which is independent of any change of price in the preceding period. The aggregate price level is then a weighted average of the lagged price level and the optimal price (derived from forward-looking profit maximization) set by those changing price. These considerations yield an equation involving prices and marginal costs: A typical form would be (from Galí and Gertler [1999], equation 3): $p_t = \lambda mc_t + \beta E_t\{p_{t+1}\}$, where *mc* is real marginal costs, β is the subjective discount factor, and λ depends on the frequency of price adjustments and β. Some approximations and the assumption that marginal cost is positively related with output yield an equation of the form: $p_t = \lambda\kappa x_t + \beta E_t\{p_{t+1}\}$, where κ is the output elasticity of marginal cost, and x is the output gap.

EVIDENCE

The origins of the Phillips curve were empirical rather than theoretical. Throughout its history, there have been claims and counterclaims on the extent of the empirical support for the Phillips curve, and on its disappearance and its reappearance. The initial proposition from the Phillips curve literature was a negative relationship between wage changes and unemployment. This was augmented by a proposition that the coefficient on expected price inflation was unity and there was a "natural rate of unemployment" consistent with constant inflation. Although the "natural rate" has often been treated as a constant, it can rather be seen, reflecting the quote from Friedman above, as influenced by a range of supply-side factors, but viewed as independent from the course of the level of aggregate demand or economic activity.

Although the Phillips curve as a single equation features in much theoretical literature, the empirical approach generally draws on a two (or more) equation approach involving both wage and price determination. This entry limits its discussion to the single-equation approach of a Phillips curve. The differences in the empirical results are reflected by the following. Robert Gordon (1997) considered a basic model (for the United States) in which inflation is regressed on lagged inflation, current and lagged "demand" (unemployment gap, output gap), change in productivity, in relative import price, and in relative price of food and energy (and Nixon incomes policy on/off). Gordon tried three alternative price indices. He reports that "estimated sums of coefficients on the inflation inertia variable are very close to unity, while those on the unemployment gap are always highly significant and of the correct sign. The significance of the various supply variables differs, but with two exceptions of insignificant coefficients, they all have the correct sign" (Gordon 1997, p. 24). "Taken as a group, the inclusion of the supply side variables makes a substantial difference, especially during the 1973–1981 period, which is influenced by adverse supply shocks" (p. 25). The sum of coefficients on lagged inflation is 1.01 (but 24 lags on quarterly basis) and on the unemployment gap the sum is –0.61 (current plus four lags).

In contrast, Robert Eisner separated out the effects of high and low unemployment and found "great disparities in the relations involving high and low unemployment" (1996, p. 118). For example, he found that unemployment had a negative impact on inflation when unemployment was high, but a positive effect when unemployment was low. Furthermore, the coefficients on lagged inflation were below unity when unemployment was low. Overall, Eisner concluded that "there may indeed be no stable universal relation among unemployment and all the various factors that may contribute to inflation, let alone accelerating inflation" (1996, p. 128).

For the *new Keynesian Phillips curve*, N. Gregory Mankiw argued that it "has many virtues, [but] it also has

one striking vice: It is completely at odds with the facts" (2001, p. C52). In a similar vein, "attractive though the need to establish a direct inflation-output link may be, as an empirical framework for explaining inflation over the business cycle, the New Keynesian Phillips Curve … in inflation-output space has not been particularly successful" (Chadha and Nolan 2004, p. 271). Jordi Galí and Mark Gertler noted that "it is often difficult to detect a statistically significant effect of real activity on inflation using the structural formulation implied by the theory, when the measure of real activity is an output gap (i.e., real output relative to some measure of potential output). Failure to find a significant short-run link between real activity and inflation is unsettling for the basic story" (1999, p. 196; see also Galí et al. 2005).

The experience since the beginning of the 1990s, at least in the United States and the United Kingdom, could be characterized by a rather stable rate of inflation as unemployment declined substantially (at least until 2001), which some have described as akin to a horizontal (rather than a vertical) Phillips curve.

The shifts in estimates of the "natural rate of unemployment" were illustrated by Stephen Nickell (1990), who estimated the equilibrium rate of unemployment in the United Kingdom as having risen as follows (with actual rates of unemployment given in parenthesis):

1956–1959: 2.2 percent (2.24 percent)

1960–1968: 2.5 percent (2.62 percent)

1969–1973: 3.6 percent (3.39 percent)

1974–1980: 7.3 percent (5.23 percent)

1981–1987: 8.7 percent (11.11 percent)

1988–1990: 8.7 percent (7.27 percent)

Richard Layard, Nickell, and Richard Jackman (1991, p. 436) report actual and equilibrium unemployment for nineteen countries for each of three decades, and an essentially similar pattern is provided—namely, the two types of unemployment move together. Oliver Blanchard remarks that "the natural rate is at best a weak attractor" and that "the natural rate is often as much an attractee as it is an attractor" (1995, p. xiii). The "natural rate of unemployment" is seen to vary over time, but that leaves open the question of why it does so.

SEE ALSO *Friedman, Milton; Inflation; Phillips, A. W. H.; Policy, Fiscal; Policy, Monetary; Samuelson, Paul A.; Solow, Robert M.; Unemployment*

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Malcolm Sawyer

PHILOSOPHY

Philosophy is the systematic inquiry into fundamental questions about the nature of reality, knowledge, and behavior. As an academic discipline, philosophy has three central areas of inquiry and a number of other related subdisciplines that follow from these three areas. The three core areas are metaphysics, epistemology, and ethics. Other important branches of philosophy include logic, the philosophy of science, the philosophy of mind, the philosophy of language, aesthetics, political philosophy, and the philosophy of religion. Each of these areas can be further broken down into subspecialties; so for instance, the philosophy of science includes the philosophy of physics, the philosophy of biology, the philosophy of math, the philosophy of the social sciences, and so on. Furthermore, given what is generally taken to be the systematic nature of philosophical inquiry, the boundaries between the different areas of study and how each area relates to others are themselves matters of some disagreement. Is the philosophy of science to be regarded as a subdiscipline of epistemology or as a separate area of study? What is the relation of the philosophy of mind to metaphysics, on the one hand, and to the philosophy of psychology, on the other? What is the relation of political philosophy to ethics and to the philosophy of law, and should all of these areas be considered subdisciplines under a broader rubric such as value theory? Indeed, most philosophers would agree that the question "what is philosophy?" is itself a philosophical issue about which there is no one accepted answer, regardless of whether philosophy is taken as a method of inquiry, a way of understanding and living in the world, or as an academic discipline.

THE FUNDAMENTAL QUESTIONS OF PHILOSOPHY

Perhaps, then, a better way of characterizing philosophy is in terms of the fundamental questions that concern the three core areas. Metaphysics traditionally asks questions about the fundamental nature of reality. What really exists? What are the fundamental constituents of reality? Are there two (or more) fundamental and mutually irreducible substances, for instance, mind and matter? What is the nature of identity, of causation, and of time? How should we characterize the difference between persons and bodies? Metaphysical questions cross over into what might seem to be other areas of philosophy. For instance, the question of the existence of God is a metaphysical question that is at the heart of the philosophy of religion. Likewise, the metaphysical question of the relation of mind and body has traditionally been the central focus of the philosophy of mind. One might regard questions about the nature of truth as metaphysical, but the nature of truth is a central concern in both the philosophy of language and logic. The problems of freedom and determinism and the nature of freedom are generally taken to fall within metaphysics, but they have obvious and important implications for ethics, political philosophy, and the philosophy of law.

Epistemology is the study of knowledge, what it is, and how we acquire it. What can we know? What are the limits of knowledge? Can we really know anything? Or is skepticism of some variety true? If we cannot know anything, if genuine knowledge (in a particular domain or in general) is impossible for humans, then some sort of skepticism must be the case. The traditional challenge of the skeptic going back at least as far as Plato is to the assertion that we are justified in claiming to know something (in particular or in general as the case may be), the claim to have secure knowledge. So the options, in a crude and simplified way, are between having secure knowledge or skepticism. What is the difference between mere belief and knowledge? Is true belief the same as knowledge? Is there a fundamental difference between empirical knowledge and knowledge of a priori entities such as concepts and numbers? Questions about the nature of justification and justified belief, as opposed to mere opinion, also are part of epistemology.

Some questions are both epistemological and metaphysical. Such questions often have to do with the nature of perception. For example, the question of the relation of appearance to reality, that is, of how the world appears to us versus how it really is in itself, is at once both a question in epistemology (what we can know of how the world really is) and metaphysics (the nature of the real). Hovering over these epistemological concerns are questions about rationality and what it means to be, think, and act rationally. The concept of rationality might be taken to be in part epistemological and in part metaphysical, but it also is important in normative domains such as ethics and in logic.

Ethics, or moral philosophy, has three traditional questions at its core: How should one live? What is the good? What is the right? These questions have to do with, in turn, the nature of virtue, value, and duty or right action. One can approach ethics, as the Greeks typically did, by thinking about the first question: how a person should live. What is the proper or best life for a human being? What kind of person should I be? What kind of virtues or disposition of character should I attempt to cultivate in myself? Answering these questions allows one to determine what is good (what adds value to a life) and what is right (what duties one has and how one should act in certain situations).

In the modern period, philosophers have typically started with one of the other questions and moved from it to the other two concerns. One approach, consequentialism including utilitarianism, starts with a theory of the good or what has value, and then determines right action in terms of what will bring the most good into the world. Virtues are understood as those character traits that will help one best promote the good. The other major approach, often called deontology, starts with a theory of duty or right action. Certain actions are taken to be dutiful or right because of some feature they possess. The good is understood in terms of the promotion of such actions, or if there is an independent theory of the good, promoting the good is seen as subservient to doing one's duty. A third contemporary approach, virtue theory or neo-Aristotlelianism, attempts to revive the approach of the Greeks and make virtue the fundamental normative concept.

These questions are all considered part of normative ethics, or the theory of how one should act. When these sorts of questions are asked of specific sorts of cases or problems, normative ethics shades into applied ethics, which includes a number of subfields such as medical ethics or bioethics, environmental ethics, and business ethics. Another important area of ethical inquiry is metaethics, or the theory of the nature of ethics. Metaethics is the inquiry into metaphysical and epistemological issues about normative ethics and the nature of moral language. Metaethical issues include questions about the nature of value and truth in ethics; epistemological issues about ethical judgments such as whether ethical assertions admit of truth, how we can come to have knowledge in ethics, and the nature of justification in ethics; and philosophy of language concerns about the nature of specifically moral language such as the moral ought and good.

The discipline of philosophy as practiced in the English-speaking world and most of Europe is primarily the tradition of the West starting with the Greeks. Non-Western traditions, including Chinese philosophy, Indian philosophy, African philosophy, and Islamic philosophy, receive some attention but remain largely on the margins of the field. In the twentieth century, a major and rather complicated division developed in European philosophy between two schools or approaches to the subject generally known as Analytic philosophy and Continental philosophy. Both approaches share the same history of the discipline, even with somewhat different readings of certain figures such as Immanuel Kant until at least Georg Wilhelm Friedrich Hegel. The Analytic tradition sees its specific roots in Gottlob Frege, Bertrand Russell, G. E. Moore, and Ludwig Wittgenstein in the early twentieth century, whereas the Continental tradition traces its origins to such figures as Franz Brentano, Edmund Husserl, Friedrich Nietzsche, and Martin Heidegger. The Continental tradition includes such philosophical subdisciplines as phenomenology, existentialism, and postmodernism. By the middle of the twentieth century the Analytic approach was dominant in Anglo-American philosophy, and the Continental approach held sway in France, Germany, and most of Western Europe.

Unlike many disciplines, in particular the natural sciences, the history of philosophy is itself an important field within philosophy. Although the history of physics might be of some interest to physicists, most would not consider it an important field of current research or inquiry within physics. Philosophers, however, regard some mastery of the history of their discipline as an essential part of current work in most areas of philosophy. More than in most other subjects, philosophers recognize that how one tells the history of the field often affects how one understands the very nature of the problems that seem of greatest contemporary interest. Discussions of the major figures in the history of Western philosophy such as Plato, Aristotle, René Descartes, David Hume, Kant, and John Stuart Mill are directly relevant to current work in ethics, epistemology, and many areas of metaphysics so much so that positions in current debates are often labeled as Kantian or Humean or Cartesian.

THE RELEVANCE OF PHILOSOPHY TO THE SOCIAL SCIENCES

Historically, the social sciences have either been offshoots of philosophy or very closely connected to philosophical discussions. In some sense the social sciences have their roots, as do the natural sciences, in Greek thought. Plato and Aristotle can lay claim to being the first political scientists and economists. Not until the modern period, however, starting with seventeenth-century figures such as Thomas Hobbes and Giambattista Vico, did the social sciences begin to emerge in their modern form. Still, it was only in the late eighteenth century and into the nineteenth century that thinking about the nature of society

and social behavior began to be seen as an area of investigation separable from thinking about the deep normative issues of ethics and political philosophy. The great figures regarded as among the fathers of modern social science such as Adam Smith, Karl Marx, Émile Durkheim, Max Weber, and William James were all trained in philosophy. Only in the twentieth century, largely as a result of the influence of positivism and the specialization of the academy, did a split between the investigation of the nature of social life and processes and the traditional concerns of philosophy clearly emerge.

A subdiscipline of contemporary philosophy of particular relevance to the social sciences is the philosophy of the social sciences. A central question of this subdiscipline concerns how to situate the social sciences in relation to the other disciplines. To what degree should the social sciences on the model of the natural sciences, such as physics, be understood? Or should they rather be viewed as closer to the humanities? Or should the social sciences be regarded as different in important respects from both the natural sciences and the humanities? Part of the difficulty in answering this question is that the social sciences span a broad spectrum of types and areas of investigation, from the study of the mind and of individual behavior in different arenas of social existence such as the economic or political, to understanding alien cultures, to social and political theory on the broadest scale. Can one expect to find epistemological, metaphysical, or methodological unity across all areas of investigation that are generally regarded as social sciences?

Still, there are central questions that remain at the core of philosophical interest in the social sciences. Since the Greeks, philosophers have speculated about whether society and the institutional norms and rules that govern human life are natural or the result of convention. Thinking about this question leads naturally into questions about diverse cultures and to epistemological and methodological issues concerning how one understands alien cultures. These questions about the nature of foreign cultures and the possibility of our understanding cultures different from our own are central to anthropology and the philosophy of anthropology, a subfield of the philosophy of the social sciences.

A different, but related, epistemological issue concerns how we explain social behavior. The standard model of explanation in the natural sciences is causal explanation. This model assumes that there are lawlike generalizations in terms of which we can understand particular occurrences or phenomena. But are there comparable laws or generalizations in the social sciences, especially that hold across cultures? Many doubt that there are. Alternatively, some have tried to attempt to explain social phenomena in terms of functional explanation, where the explanation appears to be in terms of the effects brought about rather than the causes of those effects. There are, however, serious questions about the relation of causal and functional explanation. A third important position holds that neither causal nor functional explanation is appropriate in the social sciences. Rather, the goal of the social sciences is understanding in the sense of the recovery of the meaning of individual or social behavior and phenomena from the point of view of the agents themselves. This debate has traditionally been referred to as that between *Eklaren* (explanation) and *Verstehen* (understanding).

Another central debate in the philosophy of the social sciences concerns the relation of social structures, institutions, and practices on the one hand, and individual behavior and meaning on the other. Can all social phenomena be reduced to the aggregation of individual behaviors and meanings, in which case the goal of the social sciences should be to explain everything on the level of the individual? Or is the social ultimately irreducible to the level of the individual? In the latter case, the social sciences, or at least some of them, seem to occupy a conceptual space separate from the natural sciences, psychology, and the humanities. The position that holds that reduction of the social to the individual is possible and epistemologically required can be called methodological individualism. The position that resists this reduction and holds for a separate conceptual space for the social can, accordingly, be referred to as methodological holism.

One final and important issue should be mentioned: the relation of fact and value in the social sciences. The natural sciences are concerned with facts, the facts out of which the world is constructed, and regard themselves and are generally regarded as value neutral. The relation of fact and value is much more problematic in the social sciences in at least two ways. Although natural science can be used in ways that might be judged good or bad, social scientists more often seem to bring value judgments and commitments to their work, making it harder to separate purely scientific judgments from value judgments. On a more basic philosophical level, there is a question about whether the very subject matter of the social sciences can be constituted independently of values. Although some hold that all theory, regardless of whether it is in the natural or social sciences, is value-laden, those in the natural sciences have traditionally thought of themselves as concerned with a realm of fact independent of values. Whether there are social facts with anything similar to the same degree of value independence has long been and remains a much more controversial claim. The constitution of social facts may inescapably involve normative assumptions, in which case the object domain of the social sciences would be significantly different from that of the natural sciences.

SEE ALSO *Aristotle; Epistemology; Ethics; Hobbes, Thomas; Hume, David; James, William; Kant, Immanuel; Knowledge; Marx, Karl; Meaning; Meta-Analysis; Mill, John Stuart; Nietzsche, Friedrich; Philosophy of Science; Philosophy, Moral; Philosophy, Political; Plato; Positivism; Reality; Reductionism; Revolutions, Scientific; Sartre, Jean-Paul; Science; Smith, Adam; Social Science; Weber, Max*

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PHILOSOPHY, MORAL

Moral philosophy is roughly the same as ethical philosophy—morals and ethics are virtually indistinguishable, *moral* being Cicero's translation of the Greek term *ethics* or *ethos,* which meant the customs and manners characteristic of a country or city-state. Typically, one distinguishes the concrete level of moral behavior and judgments from a higher theoretical level where one reflects upon this concrete level and proposes higher-order ethical principles about ethical behavior and judgment (ethical theory).

Moral philosophy is ordinarily divided into three levels: applied ethics, normative ethics, and meta-ethics. Normative ethics is primarily concerned with two questions: (1) What actions should an individual perform? and (2) what states, properties, things, and persons are (morally) good or valuable? Ordinarily, a normative ethicist will propose answers to these questions in terms of normative principles—principles specifying what one *ought* to do. Applied ethics is concerned with the application of these normative principles to concrete areas such as social science ethics. Meta-ethics is concerned with the theory of normative ethics: Are ethical propositions true or false? What is the meaning of moral terms? What kind of reasoning can be advanced in support of ethical arguments? In the twentieth century meta-ethics dominated the field until midcentury, when normative theory made a gallant return. Since then all three areas have been actively pursued. The present discussion will be limited to normative ethics.

INTRODUCTION

Beginning with Socrates and Plato, philosophers have been concerned with the question of the nature of the good life and how one should attain it. It was the characteristic Greek view that an individual could reach this ultimate goal only as part of a larger social entity—the *polis*—of which he was an integral part. There was, therefore, little if any conflict between the individual's real interests and the welfare of the larger community. In short, as Plato argued in *The Republic*, it pays to be moral because an individual can be happy in life, and thus attain the ultimate state of well-being, only if the individual has the property of justice. This view was characteristically Greek, and widely shared among Greek thinkers. For example, the Stoics believed that a concern for the well-being of all human beings was developmentally built into human nature, and that even though humans begin their lives as self-centered animals, they mature to the point where they are (and should be) concerned about all humankind; this constitutes natural law theory.

Such a view was denied or undercut by Christian thinkers, who tended to separate self-interest and altruism sharply and to argue for the importance of the latter to the detriment of the former. At the same time, however, Christian thinkers such as Augustine (354–430) appropriated the ethics of Plato together with Stoicism to form the characteristic Christian view of ethics that Friedrich Nietzsche later reviled in the nineteenth century. In the thirteenth century, Thomas Aquinas appropriated the ethical views of Aristotle and wed them with the natural law tradition of the Stoics to argue that being ethical was built into human nature, where being ethical meant obeying the laws of God.

NATURAL LAW VERSUS SOCIAL CONTRACT

Historically, therefore, the key issue of ethics has concerned the self-interest of the individual (egoism) in relation to the welfare of others (altruism), with ethics pertaining primarily to actions that involve the welfare of others. A key distinction was that between natural law

theory and social contract theory, which maintained that morality was conventional, not natural, and tied to the social conventions of one's larger society. Hence, being moral was not part of human nature, but rather imposed upon human nature by society.

Both of these issues—egoism versus altruism, and natural law theory versus social contract theory—emerge in clear relief in modern times in the views of Hugo Grotius (1583–1645), Samuel von Pufendorf (1632–1694), and especially Thomas Hobbes (1588–1679), the most important ethical theorist of the seventeenth century. In his immensely influential work *Leviathan* (1651), Hobbes clearly set forth an influential version of the social contract theory, in which he maintained that people originally existed in a state of nature without social laws or morals. This is a state of "all against law," unbridled egoism, in which life was "solitary, poor, nasty, brutish and short" (p. 92). People come together, Hobbes said, and agree to a social contract whereby they give up some of their liberties and rights in exchange for the security lodged in a larger system of law and order, which protects their interests. According to Hobbes, one behaves morally because of the benefits one receives from doing so; in short, because it is rational to do so. However, if one could benefit oneself by disobeying a moral convention without getting caught, it would be rationally defensible to do so. In a sense, therefore, morality is based upon rationality, and the kind of rationality present here is the economic rationality present in rational choice theory—pursuing those behavioral means that are most likely to result in the ends one desires.

Similar social contract theories can be found, in substantially different forms, in the works of John Locke, Jean-Jacques Rousseau, David Hume, and even Immanuel Kant. These are the main representatives of the social contract tradition.

The natural law theory also has its famous modern agents. Locke, who was also a representative of the social contract tradition, argued that human beings had certain "natural rights" given to them by their creator, who had hardwired these rights, as it were, into human nature. There is, Locke argued, a natural psychological law governing how human beings act, based upon their desires. It is natural for humans to strive to satisfy these desires, and it is the duty of others to allow them to pursue these interests. Locke is thus a classical liberal (like John Stuart Mill) and the inspiration for later libertarianism.

UTILITARIANISM

Hobbes said individuals behave morally out of fear of the government, but one could also argue that there are elements of human nature that support this. This was the view of David Hume and Adam Smith, who argued against both the natural law tradition and the social contract tradition. According to Hume and Smith, humans are born with certain moral sentiments or feelings of sympathy for their fellow creatures. These feelings, a basic part of human nature, motivated individuals to care about others and to take into consideration their interests and needs. Hence, it was not rationality so much as it was emotional makeup that turned us into moral creatures.

For subsequent, post-Enlightenment thinkers, the conflict between natural law and social contract theory gave way to what is one of the major moral philosophies of modern times: utilitarianism. Although the writings of earlier individuals such as Hume contained utilitarian themes, it was Jeremy Bentham and John Stuart Mill who set forth the theory of utilitarianism: One should always act so as to produce the greatest benefit for the greatest number of individuals. This is a version of consequentialism, the view that it is the consequences of an action (or a rule governing that action) that determine its moral acceptability. As such, it has been interpreted as a commitment not to egoism, nor to altruism, but to universalism—treat everyone (including oneself) as an individual and determine the total amount of happiness to be produced by an action. Twentieth-century thinkers proposed several important modifications in this formulation, notably "rule utilitarianism," which maintains that an action is right or wrong in virtue of the good or bad consequences of the rule under which it falls.

DEONTOLOGY

In Enlightenment and post-Enlightenment thought, the philosophical debate about ethics has, until fairly recently, turned on the question of the adequacy of utilitarianism in relation to its historical rival—deontology (sometimes called "formalism"). Deontology is the view that there are fundamental human duties that are independent of their good or bad consequences; some actions are morally right or morally wrong by virtue of certain inherent properties in the actions themselves, for example, by virtue of their possessing or not possessing certain rational properties such as universalizability, reversibility, and so on. Immanuel Kant is the most famous deontologist (although in the twentieth century other individuals such as W. D. Ross championed a somewhat similar cause). Kantian ethics is concerned with advocating absolute duties (prohibitions) against lying, killing, and so on. The basis of such absolute duties derives, Kant thought, from the moral agent's rational nature pure and simple, by virtue of one's unique nature as a universal lawgiver (prescriber). There are several formulations of Kant's famous "categorical imperative": "Act as though the maxim of your action becomes by your will a universal law of nature" (2002, p. 222). and "Act in such a way that you

treat humanity, whether in your own person or in any other person, always at the same time as an end, never merely as a means" (2002, pp. 229–230). Both formulations of the categorical imperative were rooted in our rational nature as autonomous agents.

VIRTUE THEORY AND RATIONAL CHOICE THEORY

The classic moral debate typically has been presented to be between utilitarianism and deontology, although recently virtue theory has become a third contender. According to virtue theory, exemplified especially by Aristotle, a morally proper action is one that flows from an internal moral virtue or good character trait of the moral agent. From the point of view of social science (especially psychology and economics), the status of moral principles has always been somewhat problematic. Assuming that such social sciences are empirical ("positive") sciences and hence concerned with ascertaining the factual nature of the social world, how can normative principles fit into such an empirical science?

According to the now-classic distinction championed by Hume and Kant and pressed even further by G. E. Moore (1873–1958), the fact-value (is-ought) distinction is a categorical one in which one can never proceed to draw an inference from a factual statement to a statement about values, or "oughts." Hence, if the social sciences are concerned exclusively with factual matters, the status of ethics in the social sciences has always remained problematic. If one is to have a unified, consistent empirical social science, committed to naturalism (in which only the natural world exists, and one can obtain knowledge only by employing the methods of the natural sciences), one might study ethical behavior empirically, describing how people actually behave or think about morality, or one might avoid ethical principles altogether (because they fall outside the realm of positive science). The latter course is problematic because the social sciences are knee-deep in value judgments and normative principles (e.g., don't fake your data, don't harm your research subjects, etc.). Furthermore, at least in the case of economics, assumptions about rationality are unavoidable: Economic behavior seems to presuppose that the economic agent is a rational one pursuing one's preferences (desires, utilities) in a rational (instrumental) way. The only possibility, therefore, would seem to be a naturalistic ethics: Produce and rationally defend a set of normative principles, but do so in a completely naturalistic way. One candidate for such a naturalistic ethics is modern contractarianism.

Rational choice theory is a descendant of utilitarianism, with a change from interpersonal preference functions to Pareto preference functions (this occurred in the early twentieth century). Contractarianism is a descendant of the social contract theory of Hobbes and has two versions: Hobbesian contractarianism and Kantian contractarianism. John Rawls (1921–2002) is the best-known Kantian contractarian (or "contractualist"), who attempts to establish a set of normative principles involving justice on the basis of what individuals would agree to in an original state of nature (the original position). However, this position begins with normativity already built in (because individuals are under "a veil of ignorance"). For many individuals, such a view is not sufficiently naturalistic. The other view is Hobbesian contractarianism, in which the goal is to derive normative principles involving justice from an original position in which nothing normative is presupposed, except the notion that the agents are rational agents attempting to maximize their utilities (preferences, desires). The main philosophical representative of this theory is David Gauthier (b. 1932), although there are social scientists who also advocate a similar position.

Beginning with the "prisoner's dilemma," Gauthier (and others inspired by this approach) attempt to show that certain kinds of prisoners' dilemmas (e.g., iterated versions) will necessarily result in cooperation, promise keeping, and justice. In short, according to this model, it is possible to show that it is rational to engage in moral behavior—understanding "rationality" in something like the standard economic sense (i.e., instrumental rationality). If such a proposal were plausible, and many doubt that it is, one would have a naturalistic ethics for the social sciences. An alternative account, one going back to Hume and Smith, would be to argue that altruism is innate in humans, that we are born with feelings of sympathy, and that such feelings are a sufficient ground to justify moral principles. There are, of course, other versions of naturalistic ethics, and many moral philosophers are skeptical of such attempts to construct a naturalistic ethics. This applies, for example, to contemporary Kantians who reject all attempts to naturalize ethics. If they are correct, then insofar as the social sciences depend upon moral principles, the social sciences would be unable to rationally ground such principles using standard social science methods and methodology. This would, once again, raise the question of the adequacy and hegemony of the social sciences—at least a certain conception of them—and thus, indirectly, of our scientific worldview. Needless to say, such an issue remains a crucial one to address in reflections upon the status of the social sciences in the twenty-first century.

SEE ALSO *Bentham, Jeremy; Economics, Classical; Enlightenment; Ethics; Hobbes, Thomas; Hume, David; Kant, Immanuel; Libertarianism; Locke, John; Maximin Principle; Mill, John Stuart; Philosophy; Plato; Prisoner's Dilemma (Economics); Prisoner's*

Dilemma (Psychology); Rawls, John; Scottish Moralists; Smith, Adam; Social Contract; State of Nature; Utilitarianism

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PHILOSOPHY, POLITICAL

The scholarly analysis of politics, as the realm where human beings interact and associate with each other, tends to be approached through two partly overlapping but distinct disciplines: political science and political philosophy. While political science seeks to impose order or meaning upon phenomena in the real world through observation, experimentation, and measurement, political philosophy covers more abstract and more fundamental thoughts about politics. Hence, while political science may be interested in analyzing the workings of the democratic process in a particular society (e.g., the factors that determine voter behavior in democratic elections), political philosophy takes a step back and asks second-order questions about the political concepts we use in those analyses: What is actually meant by *democracy*? What rights and duties should be bestowed on the individuals living in a democracy? And do we need political institutions such as a state, a government, or the law to ensure that these rights are upheld and the duties honored? Although infinitely more could be added, these are the questions that have proved enduringly important to human life in general and the discipline of philosophy in particular, today as much as two hundred or two thousand years ago. The student of the discipline is therefore exposed to concepts, ideas, and philosophers that often date back to Greek antiquity.

AUTHORITY, THE STATE, AND THE SOCIAL CONTRACT

Arguably, the most fundamental concern of political philosophy is the question of *political authority*. In its broadest sense, authority is the means by which one person can make others do what they would otherwise not have done. It is usefully distinguished from the related concept of *power*, in that both may be forms of control, but the latter refers to the *ability* to influence the behavior of others

(through persuasion or coercion), whereas the former defines the *right* to do so (expressed through the moral duty on the part of the ruled to obey). While thus "might does not make right," the question remains when we should regard authority over us as rightfully exercised by the ruler and therefore morally justified and, crucially, what the source of that authority should be. In the view of some, notably *anarchists*, authority is always impermissible, and the only form of human association is one in which there are no persons or institutions issuing commands. Others believe in *divine authority*, whereby God's supreme might or goodness is granted, initially by God to Adam in the Garden of Eden and subsequently to God's descendants on earth who then claim unquestionable rule, for example as king over Egypt or as pope over Christendom.

The most common justification of authority, however, is the idea of the social contract as developed in various versions by philosophers such as Thomas Hobbes (1588–1679), John Locke (1632–1704), Jean-Jacques Rousseau (1712–1778), Immanuel Kant (1724–1804), and even Plato (427–347 BCE). The writings of the first three in particular had considerable impact on the creation of democratic states in the seventeenth and eighteenth centuries. Significant differences between them notwithstanding, these thinkers ask us to imagine a hypothetical "'state of nature" before there is any political authority. Individuals are on their own, in the sense that there is no higher authority that would command their obedience or protect their interests and possessions. Since their self-interested behavior may lead to a situation of conflict between them, individuals agree to establish institutions that define and impartially enforce binding decisions on them so that their lives are preserved in a physically and economically more secure environment. They enter a voluntary agreement, the social contract, to create a state to which they hand over their power and whose laws and actions they pledge to abide by. In return, the state guarantees the protection of individuals' liberties at home and against aggression from abroad. Most democracies possess features that guarantee the legitimacy of this form of authority, such as constitutional governments, regular elections, a competitive party system, and checks and balances between the executive, legislature, and judiciary.

UTILITARIANISM, JUSTICE, AND THE INTERNATIONAL REALM

Once individuals have agreed to live in a state so depicted, the question arises as to what sorts of institutions they ought to try to bring about politically. In the nineteenth century, the British philosopher Jeremy Bentham (1748–1832) and his student John Stuart Mill (1806–1873) established a broad consensus, commonly referred to as *utilitarianism*, according to which the yardstick in assessing political institutions is the happiness, or pleasure, of the people affected by them. On this view, all human beings are motivated by self-interest, which can be defined as the desire to avoid pain and maximize pleasure. Institutions should therefore act so as to promote the greatest happiness of the greatest number of people, which is made possible by measuring happiness in terms of its intensity and duration (and calling the resulting metric *utility*).

By virtue of its mathematical and therefore ostensibly objective approach to making moral judgments, utilitarianism succeeded in having a lasting impact upon political issues in real life, most notably the social, political, and legal reforms in nineteenth-century Britain. Yet, it also became heavily criticized for its individualistic view of human nature, which is both asocial and ahistorical, as well as its disregard for the divergent concerns, agendas, needs, powers, and wealth of individuals. What is more, the focus on utility maximization makes utilitarianism endorse acts widely considered to be unjust. To use a simplified example, it is morally wrong and a violation of human rights to harvest someone's organs, and kill one life in the process, even though in numeric terms utility is maximized because three patients could be saved by the donor's liver, heart, and lung respectively.

It took more than a century before a similarly comprehensive theoretical framework emerged as an alternative ordering principle of society. In 1971 the American philosopher John Rawls (1921–2002) published *A Theory of Justice*, in which he developed a contract-based argument of how to arrive at the principles by which members of a just society would want to distribute rights, duties, and goods amongst each other. To prevent asymmetries of power and wealth bringing about unjust contracts and principles, he asks us to imagine an "original position" where individuals exist behind a "veil of ignorance" and are deprived of any knowledge about their own particular properties, including their social status, wealth, talents, gender, and race. Free and rational agents, so he argues, would then agree to commit to two basic principles: a liberal principle according to which each person is to have an equal right to the most extensive liberty compatible with a similar liberty for others, and an egalitarian "difference principle," whereby social and economic inequalities are only justified if they are to the greatest benefit of the least advantaged. With this device, Rawls seeks to ensure that individuals are not penalized for factors over which they have no control, such as gender, race, and genetic inheritance, while still maintaining a level of inequality that provides them with sufficient incentive for economic enterprise.

The technological, social, and political developments the world saw in the second half of the twentieth century

induced political philosophy to extend its thematic and geographical scope and engage with issues beyond the immediate set-up of the individual society. Not only were attempts made to transfer Rawls's conception of justice from the domestic to the international realm, but other cross-border issues began to be explored as well, such as the protection of ethnic minorities; the right of nations to wage (just) wars; secession and national self-determination; the universal applicability of human rights; as well as environmentalism and sociobiology. These topics have since come to define the research frontier of the discipline, and should continue to do so for the foreseeable future.

POSTMODERNISM AS A CHALLENGE TO THE DISCIPLINE

Political philosophy of the type described above is driven by a rigid analytical methodology, and hence it is often referred to as *analytical philosophy*. Yet, as a scholarly discourse it dominates the academic community much more in the Anglo-American sphere than in other regions. In continental Europe, for example, a school of thought called *postmodernism* holds that because society in the twentieth century is increasingly based on shared information and communication, all knowledge must be dependent on discourse and language and can by definition only be partial and local. What is more, language itself is a product of complex relations of power (on the part of the media, politicians, businesses, and other interest groups). Postmodernists such as Martin Heidegger (1889–1976), Michel Foucault (1926–1984), and Jacques Derrida (1930–2004) therefore deny that philosophy is capable of standing above such power relations. It cannot represent a moral or rational high point from which claims about knowledge, universally applicable values, and objective truths can be made. Rather, philosophy is an intrinsic part of the power relations it purports to analyze.

The postmodern disruption serves as a useful reminder to us that philosophy consists of many legitimate ethical and political positions and that the concepts employed by the discipline may not always be as neutral as they appear to be.

SEE ALSO *Arendt, Hannah; Enlightenment; Foucault, Michel; Justice; Justice, Distributive; Justice, Social; Locke, John; Philosophy, Moral; Plato; Rawls, John; Rousseau, Jean-Jacques; Smith, Adam; Social Constructionism; Social Contract; State of Nature*

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Dirk Haubrich

PHILOSOPHY OF SCIENCE

Everyone takes for granted scientific progress in the natural sciences, but the topic raises controversy about the social sciences. Philosophy of science attempts to answer questions like: What makes some practice scientific? Why is science so successful? Why is there unevenness in the success of science? But it also attempts to explain what these questions might mean. Because social scientists so often deal with difficult and controversial topics—the role of religion in human welfare, tolerance for cultural difference, psychological bias and stereotyping—they routinely turn to philosophy of science for guidance.

PHILOSOPHY OF SCIENCE IN THE SOCIAL SCIENCES

Three systematic theories in the philosophy of science emerged at different times in the twentieth century—*logical empiricism*, *scientific realism*, and *social constructivism*. Each position is designed to explain apparent scientific development or progress. Logical empiricism—in many ways the dominant outlook among methodologically reflective psychologists and social scientists in the twentieth century—states that scientific knowledge is restricted to observable phenomena, and that theories are mere instruments for generating hypotheses to be tested by observation (for the modern version, see van Fraassen 1980). Scientific Realism, as elaborated by J. J. C. Smart (1968), Hilary Putnam (1975), and Richard Boyd (1984), is the alternative view that the best scientific theories should be understood as approximately accurate descriptions of a mind-independent reality, in both its observable (empirical) and unobservable (theoretical) aspects. Social constructivism (Kuhn 1962) is the doctrine that scientific knowledge depends so deeply on theory that it is best understood as the result of a construction rather than a discovery procedure. There are also complicated hybrids of these three views, such as Arthur Fine's *natural ontological attitude* (Fine [1986] 1996).

Many social scientists accept another philosophical doctrine: *philosophical naturalism*. Naturalism is the doctrine that philosophy is methodologically and perhaps (meta)physically continuous with the natural sciences. According to this view, a philosophical doctrine about the social sciences gets tested and confirmed or disconfirmed in the same way hypotheses in the natural sciences do—by prediction and measurement.

Traditional methods in the social sciences did not emphasize prediction and measurement; the social sciences were typified by narrative methods (Martin and McIntyre 1994). Narrative methods typically describe the course of behavior by appealing to actors' intentions and construct a story of how an effect came about. Narration has been a central method in social sciences such as anthropology and history, where a chief goal is to describe the course of behavior in a particular cultural setting or epoch. The anthropological writings of Bronislaw Malinowski, such as *Coral Gardens and their Magic* (1935) or *Argonauts of the Western Pacific* (1922), and E. E. Evans-Pritchard's *Witchcraft, Oracles, and Magic Among the Azande* (1937) are prime examples of the narrative method, as are Garrett Mattingly's *Armada* (1959) and classics by Oswald Spengler (*The Decline of the West* [1928]) and Edward Gibbon (*The Decline and Fall of the Roman Empire* [1776–1788]) in history. Most of the social sciences have developed clever methods to expand the methodological power of their fields (Joseph Henrich, Richard Thaler, Steven Leavitt), but much contemporary work in anthropology, history, and the clinical arm of psychology remains in the narrative tradition. Because such appeals would be wholly inappropriate for explanations in physics, chemistry, and biology, narrative methods are unique to the social sciences.

Measurement has always played an important role in the natural sciences, from Isaac Newton's (1642–1727) laws of motion to Robert Boyle's (1627–1691) law based on the measurement of heat, pressure, and the volume of an enclosed container. The social sciences make room for another method of inquiry that uses the tools of statistical measurement. Sociology uses such techniques as causal modeling. Economics also uses causal models, as well as a wide range of regression techniques. Psychology uses experimental design and the standard array of statistical tests: analysis of variance, t-tests, multivariate analysis, and so on.

So there are some differences between the methods of inquiry in the natural and social sciences, but there is also broad agreement about such topics as the importance of measurement (Trout 1998). Other shared norms place a premium on observability and testability, however unevenly applied. Testability—at least in the experimental sense—is not a practical requirement in evolutionary theory, for example. But the testability criterion does represent an ideal. Scientific assertions, and the theories that recommend them, are testable: There is a well-established generalization in psychology that words that are more frequent in a language are identified more quickly, and in economics that markets clear, to cite just two examples.

Early philosophy of science made testability, verifiability, and falsifiability a necessary condition for scientific status—and this was a mistake. The philosophy of science has a regrettable record when it dictates the standards of science; it performs much better when it extracts lessons from reliable scientific practice. So, while it makes sense to ask what the ideal norms are in the philosophy of science, the intellectual trend runs in the opposite direction: What features of the practice of science are so successful that they deserve to be elevated to a normative standard in the philosophy of science?

METHODOLOGICAL DISPUTES IN SOCIAL INQUIRY

The logical positivists, following their interpretation of David Hume's (1711–1776) dictum that all nontautological knowledge arises from experience, attempted to formulate a way of distinguishing claims that have empirical content—and thus could be adjudicated objectively by appeal to observable evidence—from those that do not have empirical content. Fortified by the meaning-atomism of the early Rudolph Carnap (1891–1970) and Ludwig Wittgenstein (1889–1951), the logical positivists hoped to catch and identify those claims that are metaphysical, that describe conditions that are beyond experience and thus empirically meaningless. The *principle of verifiability* was formulated in a variety of ways (for the scientific rationale that was in the air at the time, see Schlick [1932–1933] 1991). But ultimately, the principle of verifiability could not accommodate the actual, epistemically reliable practices of scientists; indeed, it contradicted those practices. Scientists made patently metaphysical assertions, and no amount of "rational reconstruction" could cleanse that vocabulary. Indeed, it is now an adage that, when reliable scientific practice meets exacting philosophical principle, philosophical principle either yields or faces embarrassment. (For an excellent introductory overview of twentieth-century philosophy of science, see Godfrey-Smith 2003.)

With similar concerns about identifying and diagnosing intellectually disreputable practices, Karl Popper (1902–1994) proposed the principle of falsifiability—that the hallmark of a scientific theory is that it is falsifiable under empirical testing. Put more formally: a theory is potentially scientific if and only if there are possible observations that would falsify or refute it. According to

Popper's vision, that is what scientists do—they make conjectures and attempt to refute them.

Although Popper's proposal proved enormously influential, it turned out that neither verifiability nor falsifiability captured the practices of science. Scientists attempt to confirm and not refute their hypotheses. Moreover, their expressions are not meaningless without an experimental test to verify their hypotheses. In addition, Popper's notion of corroboration—the tendency of a hypothesis to survive repeated attempts at refutation—was too weak to capture the scientific practice of confirmation.

Thomas Kuhn (1922–1996) was a classic social constructivist. He argued that science is not progressive or even continuous, but is typified by a series of "ruptures" in the normal process of science. These ruptures, produced by scientific revolutions, make theories and the items they refer to "incommensurable," to use Kuhn's term. Scientists separated by fundamentally different theories "see different worlds."

Imre Lakatos's (1922–1974) philosophy of science deemed Kuhn's view too much of a concession to holism and relativism. Departing from Carnap's and Popper's focus on testing individual hypotheses, however, Lakatos took the entire theory as the unit of analysis. When confronted with falsifying evidence, scientists will protect the core of their favored theory from refutation by introducing auxiliary hypotheses. In response to Kuhn, Lakatos argued that a progressive (rather than stagnating) research program reflects growth, as well as findings that are novel and surprising.

LESSONS FROM PHILOSOPHY OF SCIENCE TO SOCIAL SCIENTISTS

Social scientists have long desired to extract information from catalogs of demographic data. But the reigning philosophical and social science standards in hypothesis testing had prohibited the search for correlations after the fact; all hypothesis tests have to be a priori. With new, powerful data-storing capacities, social scientists have developed sophisticated post hoc search and "data-mining" methods (Spirtes et al. 2001). These methods have allowed the social sciences to extract causal information from correlation data about important social issues, such as the efficacy of the Head Start program for low-income children.

Philosophy of science has built its theories—such as realism, empiricism, and constructivism—not just on methodological success but also on historical evidence of scientific progress. This evidence consists of case studies, often casually assembled and intuitively interpreted. But philosophers of science have been alert to the findings in the psychology of problem solving establishing the inaccuracy of intuitive judgments. Accordingly, philosophy of science has adopted a more quantitative focus, one that replaces narratives with models, and stories about episodes with data.

Earlier antimetaphysical philosophy of science was profoundly suspicious of causal notions. But with the demise of antimetaphysical philosophy of science, the causal properties of scientific items have received close attention. Moreover, individual causal properties—like being wealthy, a Democrat, or a member of a union—can be involved in different disciplines. These causal properties produce not only unified explanations of phenomena, but also a more unified image of the world. In a roundabout way, then, contemporary philosophy of science, by focusing on causal properties generally rather than observable properties specifically, completed the unity of science program begun by the logical positivists.

The logical positivist model was one of unification by reduction, of higher-level to lower-level sciences. According to this view, sociology and economics are reducible to psychology, psychology is reducible to biology, biology to chemistry, and chemistry to physics. But the course actually taken by the social sciences has not confirmed this logical positivist account. Instead, adjacent portions of the disciplines appear to get integrated rather than assimilated, reduced, or eliminated. If anything, the social sciences have undergone a proliferation of durable specialization, a model of unification confirmed by the increasing interdisciplinary activity in these disciplines.

SEE ALSO *Revolutions, Scientific*

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PHOBIA

Phobias are morbid, irrational fear reactions to specific objects and situations. Phobias are among the most prevalent mental disorders worldwide. The term *phobia* comes from the name Phobos, the son of Aries, the Greek war god. Phobos was so fearsome-looking that enemies on the battlefield became panic-stricken when they saw him. Specific phobias are named by combining the Greek word for the object or situation with *phobia*. Thus, fear of thunder becomes *brontophobia*, and fear of closed spaces becomes *claustrophobia*. Phobias have been described for at least 2,500 years, going back to the ancient Greek physician Hippocrates (c. 460–377 BCE), the "father of medicine."

Table 1: List of Phobia Names

arachnophobia	spiders
astraphobia	lightning and stars
belonephobia	needles
catagelophobia	ridicule
ophidiophobia	snakes
ereuthophobia	blushing
kyklonasophobia	tornadoes
mysophobia	contamination
ornithophobia	birds
pediophobia	dolls
scriptophobia	writing
trichophobia	hair
xenophobia	strangers

Phobias are classified as types of anxiety disorders by the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*-IV-TR, 2000). The major diagnostic characteristics of a phobia are that an individual consistently reacts to some object or situation with intense fear and seeks to escape or avoid that stimulus; this fear is sufficiently strong that it interferes with the person's normal functioning. Three types of phobias are differentiated by the nature of the circumstances that precipitate the strong fear reaction: specific phobia, social phobia, and agoraphobia.

Specific phobias include fears of clearly identifiable objects or situations, such as looking down from a tall building or seeing a snake. There are four basic subtypes of specific phobia: natural environment (water, storms); animals (snakes, spiders); situations (enclosed places, bridges); and blood, injections, and injuries (dentistry). Specific phobias that do not fall into these four subtypes are classified as *other*.

Social phobia, also called *social anxiety disorder*, is defined by a persistent and intense fear reaction and avoidance of social and performance situations in which one might be embarrassed or negatively evaluated by others. Common social phobic situations include public speaking, meeting strangers or persons of the opposite sex, using public restrooms, and writing one's name in public. Social phobias typically begin in adolescence or young adulthood.

Agoraphobia, literally "fear of open spaces," is more accurately the fear of having a panic attack in a public place, such as a shopping mall or a theater, from which one might have difficulty escaping to safety. Due to this fear, agoraphobics avoid public situations and, in many cases, become totally housebound.

Phobias share many characteristics with other anxiety disorders. For example, a person with panic disorder experiences intense panic attacks that are similar to what phobics experience, except that these attacks seem to come out of nowhere and are not clearly attached to specific cir-

cumstances. The majority of agoraphobics will be diagnosed as having panic disorder with agoraphobia. *Post-traumatic stress disorder* is also similar to phobias in that following a severely traumatic experience in which people believe that they or someone else might die (such as war or rape), some people continue to react with intense fear and avoidance when reminded of the original trauma.

Although the exact details of how phobias develop are not clear, there is a broad consensus that classical or Pavlovian conditioning-like processes are involved, in which an individual experiences a strong fear reaction in the presence of a specific object or situation, forming an associative link. Subsequently, when the object is reexperienced, it triggers a panic attack. Recent theories suggest that cognitive or thinking processes contribute to some phobia development. For example, the mere observation of another person being injured or frightened can initiate a phobia. Although most phobias develop via conditioning or observation, a considerable number of phobics have no recollection of having been frightened or injured in the presence of their phobic stimulus, either directly or vicariously.

Evolutionary theory enters in as well to explain why some objects are more frequently found to be phobic stimuli than others. American psychologist Martin Seligman's theory of biological preparedness hypothesizes that due to their evolutionary significance as potential dangers, we are prone (prepared) to develop conditioned responses more readily to objects that were dangers in our evolutionary past, such as small, poisonous animals (e.g., snakes). We are less prone to develop conditioned responses to more modern but equally dangerous stimuli, such as guns.

Specific phobias are the most successfully treated of the anxiety disorders. The basic paradigm guiding most successful treatment follows from the conceptualization of the phobia's origin as a conditioning-like process. To overcome or to extinguish a conditioned fear reaction, the phobic must engage the stimulus that elicits the panic reaction. With repeated exposure to the triggering stimulus, the panic reaction diminishes progressively until it is extinguished. The engagement with the triggering stimulus can be done gradually in small increments, or the phobic can be immersed or confronted with the stimulus full-strength. When presented in small increments, an *anxiety hierarchy* can be constructed that consists of a series of graded representations of the feared stimulus. Starting at the bottom, each item is presented to the phobic, who tolerates the fear until it diminishes, after which the phobic moves up to the next item in the hierarchy. Alternately, a phobic might be immersed in the feared stimulus through a procedure called *flooding*. Here the stimulus is presented at full strength, eliciting a strong fear reaction that diminishes over time.

These exposures can be accomplished with direct, live confrontation with the feared stimulus or through a procedure in which the patient brings elements of the anxiety hierarchy to mind as mental images. In a version of this treatment, called *systematic desensitization*, patients learn deep relaxation, which helps them remain relaxed as each item of the hierarchy is imagined. With repetition, each item is progressively mastered. Although systematic desensitization was the first method found to be truly efficacious in treating phobias, it requires an average of eleven one-hour treatment sessions. Live, direct exposure to the stimulus elements extinguishes the fear reaction more quickly. Swedish psychologist Lars-Goran Öst has shown that a single five-hour session of live exposure is highly effective for treating many phobias. More recently, computer-generated stimuli presented as virtual reality have been shown to be effective for treating phobias.

In practice, several of these approaches are often combined with cognitive mechanisms that help phobics believe that they can tolerate the feared stimulus. One method, called *modeling*, is particularly effective with children. Dog-fearful children, for example, observe nonfearful children playing safely with dogs, and this exposure by observation diminishes the phobic child's fear.

Similar methods using live or imagined exposure to a feared situation are also effective for social phobia and agoraphobia. However, in contrast to specific phobias, where psychotropic drugs are generally ineffective, some medications can assist in the treatment of social and agoraphobia. A class of antianxiety drugs called *benzodiazepines* can be useful adjuncts to exposure treatments, but such drugs must be used with caution because they are addictive. Another class of medication, *selective serotonin reuptake inhibitors*, can also assist in some cases by diminishing the number of panic attacks among social phobics and agoraphobics. Although effective, the exact psychological mechanisms underlying these phobia treatments remain unclear.

SEE ALSO *Anxiety; Post-Traumatic Stress*

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PHOTOGRAPHY AND PAINTING

SEE *Visual Arts.*

PHYSICAL ANTHROPOLOGY

SEE *Anthropology, Biological.*

PHYSICAL CAPITAL

Capital is a contested concept and thus its components are contested. *Physical capital* generally refers to plant and equipment, while *financial capital* refers to money. The first is a matter of physics and biology. The latter is an understanding among people allocating opportunities—an institution. Financial capital is part of the social system controlling the physics of production and the distribution of income. Physical capital is a produced good used in further production—not used up when a consumer good is made. But, the relevant time period needs definition. Stocks of raw materials and inventory of finished goods are usually referred to as circulating capital. Capital has a beneficent connotation in modern societies and thus many adjectives are added to capital, such as *social* capital, *cultural* capital, and *human* capital.

Some aggregative measure of physical capital is necessary if one is to relate its quantity to cross-country or time series differences in physical output (economic growth). But there is no way to measure a collection of physical things that differ in quality. How is one to add up a computer and a blast furnace and the change in their capacity over time? This presents an index number problem. At first glance, it appears that capital might be aggregated in terms of money invested. But a unit of money invested in the past may buy a quite different machine today. There are no convenient or unambiguous units of technology. Counting the number of scientists or patents or putting an increasing weight on investment over time only hints at changing technology. If physical capital is measured by its value today, the aggregate is influenced by the rate of profit and interest, making the measure circular. The quantity of capital would be sensitive to the business cycle and capacity utilization. In short, the money value of plant and equipment cannot be used as a proxy for the amount of physical things used in production. If capital cannot be measured unambiguously, it is impossible to determine its marginal value product and use it to justify factor shares.

Alternative capital theories and definitions are part of the history of legitimating distribution. The payment of interest was justified to motivate waiting by owners of financial assets. If the rate of interest reflected the marginal value product of capital, it could justify the income of capitalists. But the argument becomes circular if the value of capital stock is influenced by income distribution. The value of capital cannot be ascertained independently of the rate of interest.

Harrod-Domar models of growth held the ratio of financial capital to labor constant, in spite of empirical contradiction. It would be useful if investments could be ranked according to the marginal product of capital. The so-called Cambridge capital theory controversy arose over another long-held notion that a falling rate of profit would lead to more capital intensive techniques. However, it was noted that a technique profitable at one rate of interest might not be at another and may then become profitable again at still higher rates. This *reswitching* phenomena upset the conception of a unique equilibrium. The conceptual problem turns on the fact that capital is not homogeneous. It is questionable to claim that the rate of profit equals the marginal value product of financial capital.

Harrod-Domar models led to policy recommendations emphasizing saving as the means to economic growth. Poor countries were encouraged to save more. When it was clear that it was hard for the poor to save, development aid took the form of loans and capital grants. Growth then depended on exogenous inputs. The results were uneven and many countries had little growth, but huge debts. Modern growth theory has shifted attention to endogenous factors such as research and development—changing the quality of physical capital and preventing diminishing returns. New growth theory suggests that less-than-perfect competition and the promise of extraordinary profits may be necessary to entice innovation. The empirical record is mixed. The "Asian Tigers" had high savings rates, but little research and development of their own. The United States has high growth, but saves little. In rich countries such as the United States, the asserted relationship between the rate of profit and physical capital formation is used to justify tax breaks for the wealthy, even though the higher profit may be used to acquire other financial assets rather than build new plant and equipment.

Increasing the volume of financial capital transferred to poor countries may not increase growth if it is used for consumption (or fraudulently stolen by the elite) rather than investment. And, even if it is invested, it may not be invested in the most advantageous physical projects and sectors, or it may be poorly managed. Modern technology may be in place, but inputs may not be available in a

timely fashion. The picture is complicated by the fact that some sources of growth, such as computers, are not capital intensive, while such things as petrochemicals and power-generation plants are. Both physical labor and physical capital have problems of aggregation because of different qualities. An hour of work from illiterate laborers is not the same as an hour from skilled workers. This led to the conceptualization of human capital. But, again, readily available measures of years of education beg many qualitative problems, as was the case for technology over time. Even land (natural resources) is difficult to aggregate because of differences in quality and kind. The ecological system can degrade without a production or financial impact in the short run.

The coordination of physical inputs to production and its distribution is a matter of institutions affecting learning and incentives. In short, the distribution of income is not some natural result of supply and demand, but of the distribution of power. It would be convenient for growth accounting and legitimation of income distribution if it were easy to clearly relate increments of physical and financial capital to increments of growth, but alas this problem has not been solved. Confusion arises when financial and physical capital inputs are mixed together in empirical studies.

SEE ALSO *Cambridge Capital Controversy; Capital; Cultural Capital; Human Capital; Natural Resources, Nonrenewable; Social Capital*

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A. Allan Schmid

PHYSICAL QUALITY OF LIFE INDEX

Rapid economic growth raised average living standards in many countries around the globe in the 1960s and the early 1970s, but inequality also emerged as an issue. Prosperity bypassed large segments of the population, especially in developing countries, which stimulated a search for meaningful measures of poverty that were readily calculable. Some people saw progress in the segments of the population that lacked essential human needs, such as clean water, basic medical care, suitable housing, and adequate calories. Although interesting and useful, this approach also required considerable survey evidence, which was expensive and often unreliable.

At the behest of the Overseas Development Council, Morris David Morris created the physical quality of life index (PQLI), which assessed conditions in a country from its infant mortality rate, adult literacy rate, and life expectancy at age one (Morris 1979). Nearly all countries routinely reported these data by the 1970s.

The technique first scales each ingredient from 0 to 100, with the end points set to capture the range of historical experience. The infant mortality rate extends from a high of 229 to a low of 7 per thousand (a span of 222); life expectancy at age 1 from a low of 38 to a high of 77 years (a span of 39); and the literacy rate from 0 to 100 (a span of 100). For example, the index value of life expectancy = (100) (life expectancy – 38)/39, which means that an increase in life expectancy of 0.39 years raises the index value by 1 point. Then the indexes of the components are averaged to obtain the overall PQLI.

In principle one could use the PQLI in much the same way as any measure of human welfare, including policy design and assessment, or as a phenomenon to be explained by economic or social models. Econometric work, however, has been limited, in part because imitators and successors have crowded the field. Although the PQLI was designed as a minimal measure of social performance and partly as an antidote to undue emphasis on gross national product (GNP) per capita, its critics have noted that health is counted twice (infant mortality and life expectancy at age one are highly correlated) and that the index omits the material side of the quality of life. Soon other indexes appeared, some with more than 40 components or indicators, including crime, pollution, and suicide rates. Among these, the Human Development Index (HDI) of the United Nations has been the most widely discussed and applied. Created by the economist Mahbub ul Haq in 1990, this index was designed to register the "expansion of choice" provided by good health, knowledge, and access to material goods (United Nations Development Programme 1990). It soon was criticized for lack of attention to inequality and for incorporating a poor measure of knowledge. Thus researchers continue to debate the components of quality of life indexes and the weights that should be given to each. What is suitable, however, depends heavily on how the index will be used.

SEE ALSO *Education, USA; Inequality, Income; Morbidity and Mortality; Welfare Analysis; Welfare Economics*

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PHYSIOCRACY

The term *physiocracy* means law or rule of nature. It derives from a collection of essays by François Quesnay edited by Pierre Samuel du Pont de Nemours and published in two volumes in 1767–1768 in which the name *Physiocratie* figures prominently. Quesnay was the uncrowned leader of what was perhaps the first school of thought in economics. The school was highly influential on economic policy matters in France in the period from 1756 to the beginning of the 1770s during the reign of Louis XV. Even more important, it had a decisive impact on the emerging new scientific field of political economy. The school's relatively small number of followers and their strict adherence to the teachings of Quesnay are presumably responsible for the school also being known as a "sect." The school's major members, apart from those already mentioned, were Abbé Nicolas Baudeau, Victor Riqueti, Marquis de Mirabeau, Le Mercier de la Rivière, and François Guillaume Le Trosne. On the natural law underpinnings of physiocratic thought, see Hanz Rieter (1983).

On the physiocrats' recommendation, in 1763 and 1764 the corn trade, both domestically and abroad, was liberalized in France. The second half of the 1760s saw substantial increases in the corn price, which the public took to have been caused by the liberalization policy. However, there is reason to think that the price increase was the result not so much of grain exports as a series of bad harvests. The experiment was terminated in 1770, and since its failure was blamed on the physiocrats, it comes as no surprise that their influence declined as quickly as it had risen (Weulersse 1910; Hecht 1958). In other countries the ideas of Quesnay and his followers remained important, at least for a while, including especially Germany and Russia.

Quesnay, a surgeon and medical doctor of the king and of Madame de Pompadour, the king's favorite, came to economics rather late. In 1756 and 1757, in his early sixties, he published entries on *Fermiers* (tenant farmers) and *Grains* (corn) for the *Encyclopédie* edited by Denis Diderot and Jean d'Alembert. Yet his most important contribution to economics was the *Tableau économique*. Its first version, in 1758, was difficult to understand because of a confusing table with three columns and numerous zigzag lines joining them. Two further editions came out in 1759 (Quesnay 1972). In 1766 came the publication of a substantially revised and improved version of the *Tableau* in a work titled *Analyse de la formule arithmétique du Tableau économique de la distribution des dépenses annuelles d'une Nation agricole*. This latter version of the *Tableau* is the best known (Institut National d'Études Démographiques 1958; Quesnay 1972). It contains the first attempt to describe the intertwined processes of the production, distribution, exchange, and disposal of the riches of a nation in terms of a scheme with two large sectors of the economy—primary production and manufacture—and three social classes—the propertied class (landlords), the "productive class" (farmers), and the "sterile class" (artisans). The economy under consideration is supposed to generate a *surplus* of commodities over and above what is used up in production in terms of raw materials, tools, and means of subsistence or *produit net*. However, the surplus concerns only products of the primary sector of the economy, which explains why the people employed there are called "productive."

The idea at hand may be illustrated in the following way. To produce 1,000 bushels of corn, farmers need 200 bushels for seed, 200 bushels to support themselves and agricultural workers, 100 bushels to feed animals (horses, oxen), and 200 bushels as payment for plows bought from the manufacturing sector. The remaining 300 bushels constitute the net product. Its value in money will be paid as rent to the proprietors of the land (king, nobility, church) for the lease of their lands. The proprietors in turn will buy with money worth 150 bushels precisely that amount of corn from the productive class, and with the remaining money-rent worth another 150 bushels they will buy goods from the sterile class. The sterile class in turn will use the money to buy raw materials and means of subsistence for its artisans worth 150 bushels and transform them into manufactured goods and luxuries sold to the propertied class. The manufacturing sector is "sterile" because, while it uses part of the net product of the agricultural sector and transforms it into some other goods, it does not add to the (value of the) net product (Meek 1962; Pressman 1994).

An important aspect to be stressed is that while only the wealthy proprietors of land get the net product, their revenue is the only source from which the public administration, the army, investments in infrastructure, improvements in the conditions of production in agricul-

ture, and the like are financed. This is secured by levying a tax—an *impôt unique*—on the propertied classes, thus relieving the tenant farmers from burden.

The *Tableau* has frequently been interpreted as involving an analogy to William Harvey's (1578-1657) scheme of blood circulation. However, as Rieter (1990) has shown, there is reason to suppose that it involves an analogy with the mechanics of a particular type of clock.

The *Tableau* contains the first description of an economic system in a state of "simple reproduction," to use Karl Marx's concept, or more precisely, of a large kingdom in a state with the highest level of agriculture. Year after year the economy could continue to reproduce itself at the same level, without expansion or contraction, provided there is neither technical progress nor regress and the agricultural and manufacturing products exchange for one another in the market as implied by the *Tableau*. In fact Quesnay assumed that the "fundamental price" of a product, a concept that anticipates Adam Smith's concept of "natural price," covers all physical real costs of production (materials used up, means of subsistence in the support of labourers) and reflects in addition the rule according to which the social surplus product is distributed among different claimants (Vaggi 1987, 1998). The *Tableau*, however, was only a first step in the physiocrats' analysis. Concerned with first identifying and then putting to use the potential for growth of the French economy among competing nation states, the physiocrats embarked on an analysis of capital accumulation, the modernization of French agriculture, and more generally the role of technical, organizational, and educational innovations. Hence with the inception of systematic economic thought at the time of the transition from feudalism to capitalism in France, the problem of the dynamism of the economic system immediately made an appearance. The physiocrats opted especially in favor of productivity-enhancing measures in agriculture and against sterile luxury consumption. Therefore the *Tableau* contained not only an ex-post analysis (national income accounting, input-output) and ex-ante analysis (circular flow and a much disputed discussion of development and growth) but also a manual for economic and social policy; see especially Quesnay's thirty "maximes générales du gouvernement d'un Royaume agricole" (Du Pont de Nemours, vol. 1, pp. 99ff.).

The physiocrats were criticized by, among others, Achille-Nicolas Isnard (1781), who argued that the impression they generated that only agriculture was productive was closely related to the system of prices underlying their schema. These prices were such that the entire net product was indeed appropriated by the landowners. Other rules of distribution would immediately reveal the peculiarity of the physiocratic doctrine and the untenability of its proponents' concept of productivity. Smith was full of praise for Quesnay and his disciples and for a while tinkered with the idea of dedicating *The Wealth of Nations* (1776) to Quesnay. However, he too found the particular form of the physiocratic concept of productivity difficult to sustain and explicitly reckoned manufactures to those industries in which "productive" labor is performed. "Unproductive" labor is now essentially identified with services that generate products that cannot be accumulated. Marx considered the physiocrats "the true fathers of modern political economy" (Marx 1963, p. 44) and dubbed the *Tableau* "an extremely brilliant conception" (Marx 1956, p. 344). He developed his own schemes of simple and extended reproduction taking it as a starting point (Gehrke and Kurz 1995). Wassily Leontief (1941) saw his own input-output analysis as following in the direct lineage of the *Tableau*. For an attempt to locate the *Tableau* in the prehistory of input-output analysis, see Heinz D. Kurz and Neri Salvadori (2000). Piero Sraffa (1960) saw his return to the classical viewpoint in the theory of value and distribution as rooted in the *Tableau*.

SEE ALSO *Input-Output Matrix; Laissez-faire; Leontief, Wassily; Liberalization, Trade; Marx, Karl; Quesnay, Francois; Smith, Adam; Surplus*

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Heinz D. Kurz

PIAGET, JEAN
1896–1980

Considered by many to be the founder of modern developmental psychology, the Swiss psychologist Jean Piaget devoted his researches to children's distinctive ways of knowing and to the process of developmental change leading toward adult thought. He charted a sequence of stages in children's intellectual development whose manifestations encompass domains ranging from logical reasoning to emotional development. Trained in biology and philosophy, Piaget extrapolated from his studies of mollusks in their natural habitat to a conception of the development of intelligence in children as a progressive adaptation, tending toward ever greater equilibrium, with its reciprocal aspects of the "assimilation" of new information to existing concepts and the "accommodation" (i.e., modification) of the concepts to the new information. He viewed the development of intelligence, in turn, as the foundation of a "genetic epistemology," a theory of knowledge that conceived the development of ideas as part of their essence. On the basis of his observations of children's cognitive development and his claim that children's own action catalyzes that development, Piaget altered the face of psychology and education.

BASIC CONCEPTS: DEVELOPMENTAL STAGES

Piaget became convinced that children exhibit a distinctive type of thinking, as opposed to simply flawed adult thought, when, as a young associate working on intelligence testing in the laboratory of Alfred Binet (1857–1911), he noticed that when children answered items incorrectly, they tended to give the same wrong answer. He inferred that the children must have approached the problems methodically, only the method differed from that of adults. After altering the testing methods to include the exploration of children's answers and devising many probes of his own, he set about determining the intellectual organization of what he eventually conceived as four broad stages of development, each embodying a progression toward increasingly flexible, systematic, and complex thought: sensorimotor, preoperational, concrete-operational, and formal operational.

During the *sensorimotor* period, extending from birth to approximately eighteen months, intelligence manifests in action. Action develops within the period from reflexive movement to means-ends behavior that comes, by the last of six substages, to incorporate tool use, foresight, and detours ([1936] 1952). The advent of *representational intelligence* in the sixth substage manifests in additional ways, including deduction based upon remembered events, the imitation of events witnessed previously, symbolic play, and language. Thought now progresses to some degree independently of what is seen or otherwise directly experienced. For example, an eighteen-month-old child who sees a toy hidden in a box, then sees the box moved under a cloth, and then finds the box empty, will spontaneously search under the cloth for the missing toy, evidently having inferred that the toy left the box when the box was under the cloth (an instance of deduction). Children at this age might also imitate a funny face someone made the day before (an instance of deferred imitation) or slide a leaf along the countertop as though the leaf were a car (an instance of symbolic play). Although any of these representational activities might occur in the absence of language, language, which also depends upon conceptual connections, normally begins at around the same time.

These symptoms of nascent representational thought mark the beginning of Piaget's second broad stage, of *preoperational* or *intuitive* intelligence, which extends roughly

from two to seven years of age. Piaget found that, despite the advances it embodied, thought during this interval exhibited limitations, in particular with respect to the property of what he termed *reversibility*. The limitation is apparent in Piaget's best-known experiment with school-age children, his probe of what he called the "conservation" of quantity. When water, for example, is poured from a wide flask into a thin one, although adults or older children know the water level must rise, children under the age of (approximately) seven years sometimes anticipate that the water level will remain the same. Alternatively, when confronted with the raised water level after the water is poured, they may assert that the new (thin) flask contains more water than did the original (wide) flask ([1941] 1965).

By comparison, when presented with the same problem, children between seven and twelve years, normally the stage of *concrete-operational* thought, say the amount of liquid must remain the same because, for example, if one returned the water to the original flask, the water would rise to the level it reached initially. Or, they might say that although the level is higher in the second flask than it was in the first, the second flask is also narrower, or that nothing was added or taken away. Piaget perceived in these arguments the imagined reversal of an observed state of affairs and the construction of compensations between different variables of the problem.

The state of affairs had to be concrete and observable, however, whereas from roughly twelve years onward, during the *formal operational* stage, individuals can reason about hypothetical states and solve both abstract and concrete problems systematically, by taking account of, and if necessary manipulating, all variables pertinent to a problem. Thus, as a scientist would do, a child at this stage confronted with the problem of determining which of a series of chemicals was responsible for altering the color of a solution, for instance, would systematically vary each possible combination of liquids to isolate the necessary reaction (Inhelder and Piaget [1955] 1958).

Development through the stage of concrete operations is believed to be universal, whereas only a fraction of even well-educated teenagers from the United States exhibit formal operational reasoning when they are given the problems originally employed by Piaget. As suggested by Jean Retschitzki (1989) in a study of expert players of a popular game in the Ivory Coast, however, evidence exists that formal-operational reasoning may be employed even by members of undeveloped countries with low literacy when people participate in culturally indigenous activities in which they are expert.

Piaget characterized these tiers of development in a second way, as embodying three "Copernican revolutions" ([1964] 1968), in which children, initially "egocentric" at the level in question, gradually progressed toward the ability to take alternative perspectives into account. Although Piaget eventually retracted the term *egocentric* in response to its apparent misconstrual by other psychologists, he retained the substantive theses underlying it.

During the sensorimotor period of infancy, as conceived within this second scheme, children come gradually to acknowledge a self, a world, and their separation. They come to recognize, for example, that their caregivers come and go on their own and that the external world generally operates independently of them ([1937] 1954).

During the preoperational period of early childhood, children progress from an obliviousness to the perspective of others to the awareness that others may perceive things differently from what they perceive, and they anticipate the alternative perspective. Thus, for instance, whereas when an interlocutor's back is turned, a four-year-old might point to the location of an object for which the interlocutor is searching, an older child would describe the location ([1923] 1955).

Corresponding to the advent of the capacity for formal operations is an interest in abstract ideals and, according to Piaget, a progression during adolescence from the view that the world should submit to one's schemes to the understanding that one does not know everything ([1964] 1968).

Piaget believed his stage sequences extended to many areas of cognition, including logical thought and children's conceptions of objects, space, time, causality, number, chance, and probability, as well as aspects of perception and memory. He perceived their manifestations also in areas of social life, especially morality. Corresponding to the progression he observed toward concrete operations, for example, he documented the emergence of an understanding of and interest in social rules and an appreciation of their purpose in regulating people's relations and protecting their welfare. He also documented a trend from the negative moral valuation of people whose actions produce bad outcomes to the negative valuation of those whose intentions are bad ([1932] 1965).

In delineating the myriad developments he did, Piaget ascribed greater importance to the sequence of developments he described than to the uniformity of development across areas of activity. He believed, however, that the capacity for more primitive types of reasoning remained in all areas throughout life and, especially in the case of morality, were more evident in some individuals and groups than in others.

BASIC CONCEPTS: THE PROCESS OF DEVELOPMENT

All of the developments Piaget described resulted, he believed, from natural, spontaneous development. With

the possible exception of moral judgment, whose early stages he suggested reflected the influence of adult disciplinary tactics, the developments were not taught or otherwise prompted by the environment, which at most afforded (or limited) opportunities for growth. He contended, moreover, that the advances he charted arose through feedback from children's own action, as opposed to from the maturation of innately given abilities.

Piaget was sufficiently convinced of the potential of the mind to construct itself that he believed the entire series of developments he described evolved from a starting point of only reflexive action and the "invariant functions" of assimilation, accommodation, and the progressive storage of their results, which Piaget called organization. Merely by sucking, grasping, listening, and looking—initially reflexively—and repeating these behaviors, as followed from the inborn tendency to repeat experiences (the most primitive manifestation of assimilation), the resulting chance effects would eventually bring about change in the actions. Further changes would follow from there, until individuals reached the final equilibrium of adult forms of thought ([1936] 1952).

CRITICISM OF THE THEORY

Piaget's studies of children have been replicated worldwide, in both developed and undeveloped countries. Many have also extended his sequences to domains he did not investigate, such as attachment relations in infancy and friendships during childhood.

The theory has also been challenged by researchers who, after modifying the measures Piaget used to assess the abilities he investigated, have produced results the researchers believe attest to children's grasp of mature concepts at an earlier stage than Piaget specified. Some of this work appears in reviews by Paul Harris (1989) and John Flavell and colleagues (2002). The researchers assert that the results warrant a different model of development in which, rather than gradually developing the concepts in question, as Piaget described, children begin development in possession of the concepts' essentials and progressively "access" the essentials in increasingly reflective thought and over ever broader areas of application; Paul Rozin lays out a version of the model in "The Evolution of Intelligence and Access to the Cognitive Unconscious" (1976). According to the general view, younger children falter on Piaget's tasks not because they lack the concepts under examination, but because they become confused by nonessential features of Piaget's experiments. With age, the view says, as children's working memory and attentional capabilities increase, children became better able to negotiate Piaget's tasks.

Some researchers in the foregoing line have challenged Piaget's theory based not upon new experimental procedures, which most of the aforementioned studies employ, but upon naturalistically occurring behavior, a focus more in keeping with Piaget's original observations. For example, in 1973 Marilyn Shatz and Rochel Gelman reported that, contrary to the idea that preschoolers fail to take in others' perspectives when addressing them, four-year-olds simplify their speech when they talk to two-year-olds. More recently, Debra van Ausdale and Joseph Feagin (2001) found evidence in preschoolers' social interactions of racist ideas and practices that the authors believe possible only with the "operational" thought Piaget ascribed to middle childhood.

Another line of criticism questions the cogency of Piaget's theoretical constructs independently of the data, as exemplified by works by Sophie Haroutunian (1983) and Susan Sugarman (1987a), or the formalisms he used to represent the constructs, as argued by Daniel Osherson (1974).

Few dispute Piaget's sequences as measured by his own tests. Controversy continues about the equivalence of the concepts measured by newer tests to the concepts assessed by Piaget's procedures. The two bodies of work differ fundamentally in method. Whereas the work that challenges Piaget's norms replaces his tests at younger ages, Piaget extrapolated to his sequences from developmental changes in children's behavior on the same measure at all ages he tested; the strategy dates to Piaget's days as a researcher in intelligence testing. The difference makes it difficult to render any final conclusion about the import of the apparently conflicting results (see Sugarman 1987b for discussion of this).

With respect specifically to the challenges brought by fresh observations of naturally occurring behavior, evidence can be found within Piaget's own observations of allegedly "preoperational" thought more complex than that ascribed by his account of preoperational thinking (Sugarman 1987a). Nonetheless, the particular complexities Piaget associated with "operational" thinking, in the abstract reflective thought in which he sought them, do not appear in either Piaget's or newer data. The claim that the racist ideas and practices of some preschoolers require operational thought presents the additional problem that racism bears precisely the hallmarks of preoperational mentality as Piaget originally defined it. These properties include a one-sided point of view, often based upon appearances, that does not take account of alternative vantage points, is impervious to contradiction, and consequently remains unaware of itself as a point of view. Especially in the moral domain, which, as Piaget discusses in *The Moral Judgment of the Child* ([1932] 1965), draws upon incompletely comprehended adult influences, thought can become rigid and nearly mystical as a result of these tendencies. Given the persistence of these charac-

teristics into adult morality, the telling question raised by the observation of racism in preschoolers might be not how preschoolers manage to exhibit racism, but why adults remain susceptible to it, given their apparent possession of more sophisticated forms of thought.

Despite the empirical challenges to his theory, Piaget's developmental milestones in children's thought dominate research in developmental psychology and retain a strong influence in education. Although conceptual critiques of the theory suggest the presence of gaps in the edifice, Piaget's general philosophy of how development occurs, namely through the exertions of a knowing subject, remains widely embraced.

SEE ALSO *Cognitive Dissonance; Intelligence*

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Susan Sugarman

PILOT NATIONAL ASIAN AMERICAN POLITICAL STUDY (PNAAPS)

SEE *Race and Political Science.*

PIMPS

A pimp is commonly defined as a person who lives off the income of a prostitute. More often than not, the prostitutes are female. Pimps often lure their victims into prostitution under the pretense of a love relationship, specifically targeting adolescents who have escaped physical or sexual violence at home and are vulnerable economically, socially, and sexually. Assuming the role of a "boyfriend," a pimp might eventually suggest to his girlfriend to have sex with his friend as a favor, and eventually might resort to violence to "break her" (including beatings, death threats, rape, gang rape, false imprisonment), often also introducing her to drugs to make the person dependent on him.

Pimps might have prostitutes engage in sex work in various venues, such as brothels, escort services, massage parlors, or strip clubs. The more prestigious the establishment, the less brutal and direct is the pimp's abuse of prostitutes. Sex workers dependent on crack tend to occupy the lowest rank of all, demanding the least pay—usually in the form of crack—and providing the most high-risk sexual services. In a way symbolic of the dependency of the prostitute on the pimp, for these prostitutes the "crack pipe is the pimp."

A pimp might secure the area in which a prostitute pursues customers. A pimp prides himself on "managing" all financial and economic matters prostitutes experience in their work, including marketing (finding customers) and workplace protection (controlling an area of the street from competition, fighting dangerous or nonpaying customers, or paying off police). He might also post bail for prostitutes who have been apprehended by police.

A pimp demands all or the majority of the money prostitutes generate through their work for himself. By having more than one prostitute, a pimp multiplies his income capabilities, and experienced pimps boast about the size of their "stables," or the number of prostitutes working for them.

Ostensibly, women "trade" part or all of their income to the pimp in exchange for protection from abusive customers or those who refuse to pay, or from other pimps who might try to force them to work for them. To what extent women actively and willingly participate in a relationship with a pimp is a point of debate. Some feminists and human-rights advocates consider any sex work as sexual oppression of women and challenge the idea that someone agrees to being managed by a pimp. Their opponents argue that sex work needs to be legalized and protected. But even advocates of prostitution often request that pimping remain illegal.

A critical psychological requirement to become a successful pimp is to "learn how to reverse the pussy game." In other words, rather than sexually desiring the prostitutes who work for him, and thus becoming sexually vulnerable if they withhold their affection from him, the pimp has to learn to subjugate his sexual desires to his financial desires. In this regard, the pimp is regarded as the ultimate hustler and manipulator.

In the social milieu of the underworld, pimps enjoy high status by exhibiting many traits of hegemonic masculinity—conspicuous consumption (fancy clothes, jewelry, accessories, cars) and other evidence of a successful economic position, control over women, and sexual access as well as opportunity. Although the pimp has enjoyed a long history as an iconic figure in certain subcultures of the United States (for example, Iceberg Slim), the pimp has become a mainstream persona only since the mid-1990s, when gangsta rappers such as Snoop Dogg made the pimp a staple of their lyrics and a persona they also try to cultivate offstage. Since then, it has become a broadly used term of approval and endearment across all youth cultures, with ever-growing appeal in commercial venues, including such popular shows as "Pimp My Ride" (Staiger 2005). But while in the racial imagination of the United States pimps are thought to be primarily African American, pimping is not limited to any particular race or ethnicity.

Notwithstanding this widespread perception of the pimp, current research reveals a more complex picture of pimps and their relationship to prostitutes. A comparative ethnographic study in Canada's major cities found that many prostitutes do not have pimps at all, while a study of New Jersey streetwalkers found that pimps are in fact often boyfriends or husbands. Further, the emotional attachment between the pimps and prostitutes can be strong and supportive, with prostitutes sometimes lovingly referring to their pimps as "Daddy." As the New Jersey study found, prostitutes tend to consider their sexual interaction with customers not as a form of making love but merely as a sexual transaction with instant compensation, while reserving their emotions of sexual intimacy for their sexual relations with their pimps. This factor also explains why prostitutes who are meticulous about using condoms with customers often refuse to use condoms with their pimps, as the condom is equated with sex as a commercial transaction. This semantic separation of lovemaking with the pimp versus tricking the john suggests the psychological significance of the pimp as a means to "normalize" the sexual identity of the prostitute, an emotional attachment that of course can also give the pimp additional power.

The potential for violent relationships, however, is always there, and some pimp–prostitute relations have characteristics of battered-batterer relations on one hand or sadomasochistic relations on the other. According to the autobiography of Iceberg Slim, a legendary pimp from the 1930s to the 1950s, successful pimps "train" their prostitutes through the use of well-calculated torture. How realistic Iceberg Slim's alleged autobiography is remains questionable, but following the popularity of this text in the United States and worldwide as a handbook on how to pimp and as a bible for the gangsta rap of the 1990s, it is to be expected that many imagine pimps and prostitutes in this way, if not practice pimping accordingly.

Another pressing issue is the growing phenomenon of human trafficking fueled by the increasing profitability and the growing divide between poor countries that send prostitutes and high-demand, wealthy countries that receive them. In this manifestation of pimping, the socioeconomic role of the pimp is tilted to the extreme of economic exploitation, where pimps subject prostitutes to brutal sexual, physical, and mental abuse to "condition" them into docility and resignation, before selling them again to other pimps or end users. In such contexts, pimps take on characteristics of slave traders, "buying" individuals "in bulk" and "reselling" them to other pimps/traffickers within a relatively short period of time before finally "dumping" them if they are too sick or too old to generate further profits. This form of pimping has no traces of emotional attachment between pimp and prostitute,

except for the terror of physical and sexual violence. This phenomenon of pimping has been described for traffickers from eastern Europe.

Theoretically, pimps can also be women. The trend, however, has been that women who reap profits from the prostitution of another tend to do so in brothels, with greater formal security. These women are called madams. Often they are ex-prostitutes themselves, but contrary to common perceptions, a nineteenth-century case study from St. Paul, Minnesota, showed that these madams were little older than the prostitutes who worked in their establishments, enjoyed considerable wealth and influence in the community, and often engaged in friendly relationships with the women who worked for them. As a contemporary British study has found, their crime rates associated with prostitution tend to be substantially lower and their crimes substantially less violent than those of their male counterparts.

The violence caused by pimps, from sexual and physical abuse to torture, murder, drug dealing, and the like, constitute crimes significantly more dangerous than prostitution. While this is generally recognized, pimps tend to be charged much less frequently than prostitutes, with streetwalkers, who constitute the bottom of the sex-work industry, being the ones most likely to be arrested. Many self-help and advocacy groups have raised the charge that the laws and legal enforcement against prostitution victimize sex workers significantly more (and women more so than men) than the pimps, who are reaping the lion's share of their profits. Responding to the growing movement of sex workers for their right to self-determination, and in the hope of eliminating the violence and crime associated with prostitution, several countries (for example, the Netherlands and Germany) have legalized prostitution. However, even in countries where prostitution is legal, pimping remains illegal. Whether legalizing prostitution in fact eliminates or diminishes the crimes associated with prostitution and the existence of pimps remains a hotly debated issue and awaits further study.

SEE ALSO *Crime and Criminology; Drug Traffic; Economies, Transitional; Inequality, Gender; Prostitution*

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Annegret Staiger

PITKIN, HANNA
1931–

Hanna Fenichel Pitkin is one of the most influential political theorists of the twentieth century. While best known for her seminal book *The Concept of Representation* (1967), Pitkin has composed several works of lasting relevance to the study of politics. She has shed light on such diverse topics as democracy, justice, gender, action, and the tension between political philosophy and political theory.

In *The Concept of Representation*, Pitkin utilizes the methods of linguistic analysis, developed by Oxford philosophers such as J. L. Austin (1911–1960), to focus on representation as a concept rather than a set of actual practices. She defines *representation* ideally as "re-presentation, a making present again" (1967, p. 8), but then moves on to show how this meaning has been distorted and contorted throughout the history of modern philosophical discourse. Every attempt to capture the complexity of the concept misleadingly conveys *part* of the meaning of representation as if it were the whole meaning. Pitkin surveys the various theoretical approaches to the term *representation* and finds them all lacking, including the authorization view, expressed by Thomas Hobbes (1588–1679); the trustee theory, expressed by Edmund Burke (1729–1797); and the liberal view, associated with James Madison (1751–1836), among others. Each vision is shown to be incomplete by the central paradox of representation—that is, the competing demands of the representative and the represented. Pitkin aims to preserve rather than to reconcile this paradox, and her book culminates in the recommendation that citizens safeguard both the capacity of the represented to authorize decisions and the capacity of the representatives to act independently.

Pitkin's book has been a touchstone for subsequent work in the area of representation theory. Some contemporary scholars, however, find Pitkin's insights to be anachronistic for a globalizing world in which practices of representation seem to stretch beyond the boundaries of the nation-state (Mansbridge 2003). Furthermore, scholars sensitive to issues of diversity and cultural heterogeneity have highlighted the ways in which every representative formation can obscure or suppress minority voices (Young 2000).

In many ways, the lasting relevance and importance of Pitkin's early work has overshadowed her subsequent development as a thinker and theorist. In 1972 she further articulated her interest in conceptual analysis as a fruitful method of political philosophy through an examination of the late work of Ludwig Wittgenstein (1889–1951). She pays close attention to Wittgenstein's central notion of "forms of life," the matrices of human behavior that define the contexts in which a discourse acquires meaning. For Pitkin, political philosophy should proceed to analyze

these contexts to enhance our conceptual clarity on terms such as justice, membership, and action. Political theory, on the other hand, is concerned with advocating a change in our current conceptions, as the contexts in which we live and the needs of the human community transform through time.

Pitkin's *The Attack of the Blob: Hannah Arendt's Concept of the Social* (1998) exemplifies her recommended trajectories for both political philosophy and theory. She explores Hannah Arendt's (1906–1975) use of the *social* through contextual and psychobiographical analysis, and discusses the ways in which Arendt's concerns for action are compromised by a residual fear of social conformity. In the end, Pitkin implores her readers to discover ways in which they can become more reflective and critical as agents and actors in the world. In so doing, she echoes concerns born with her 1967 book, and reveals herself ultimately as a committed theorist of democracy.

SEE ALSO *Representation*

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PLACAGE

SEE *Mulattos.*

PLAGUE AND BLACK DEATH

SEE *Disease; Nursery Rhymes; Public Health.*

PLAGUES

SEE *Morbidity and Mortality.*

PLANNING

Planning represents the process of looking into the future, establishing something out there, creating a vision of a future state of affairs, and determining means of actualizing that state. A plan is something one intends to do or achieve, as when someone asks, "Do you have any plans for the weekend?" As a construct, a plan may mean activities that have to be performed to achieve something (objective). Plans therefore are predetermined, preceding action, and constitute programs of activities (means) considered valid for achieving predetermined aims and objectives.

TYPES OF PLANNING

Planning can take place in a variety of areas, for plans take varied forms: policy choice, manpower plans and incentive strategies, community action plans, site plans, comprehensive plans, building plans, economic development plans, disaster containment plans, housing and community development plans, and transportation plans, among others. However, urban planning has received attention in academic discussions perhaps because of its potential for improving the welfare of people and communities as well as the added impetus given to it since the nineteenth century by the formalized disciplines of architecture and engineering. Thus planning has tended to combine rationality and stylistic approaches to solving community problems by means of physical designs. Urban planning, city planning, regional planning, or community planning are concerned with ordering and designing human settlements with a view to creating more convenient, healthy, and aesthetically pleasing places for people.

Planning generally is people and community oriented. For instance, planning for economic development is vital to the process of building sustainable community. Housing and community development planning is concerned with creating accessible and equitable communities, sensitizing people to community and development issues, and generally seeking to develop strategies to address the needs of the homeless and the handicapped. Transportation planning also tends to show similar concerns for people and communities as it aims at revitalizing suburban commercial corridors to improve accessibility and mobility and, importantly, strike a balance between community needs and the interests of transporters.

Planners construct a broad vision of the community or help communities identify their goals or create a particular vision. They develop strategies by which communities can accomplish their goals and vision. They actively participate in the implementation of plans and monitor and coordinate the work of several groups of people.

THE PLANNING PROCESS

On plans and planning, Henri Fayol wrote "'The plan of action is, at the same time, the result envisaged, the line of action to be followed, the stages to go through and the methods to use" (Fayol 1949, p. 130). George Steiner observed that planning is "a process that begins with objectives, defines strategies, policies and detailed plans to achieve them" (Steiner 1969, p. 20). It follows therefore that the planning process has three distinct phases, namely, definition of basic objectives and goals; developing strategies and means (or strategic plans) and policies to implement objectives; and developing detailed tactical and operational plans, such as work procedures and practices, time schedules, and budgets.

Planning, no matter in what area it takes place, generally follows this characteristic pattern. The first and basic aspect of planning is setting objectives. While it is possible for individuals and organizations to have goals and objectives, it is equally possible for them not to have any. Peter Drucker highlighted the importance of objectives: "Few companies have any clear idea of what their mission is and that is one of the major causes of their worst mistakes.… Managers have no feeling for what the company is really good at and conversely what it is not good at" (Drucker 1954, p. 4). Aims and objectives are necessary not only to ensure effective performance by focusing energies, time, and other resources but also to ensure that strategies are related to objectives. Goals and objectives vary, however, and depend on the planning area and institution concerned. Common institutional goals include profitability, growth, market share, innovation, survival, social responsibility, worker and employee welfare and development, service to customers, and provision of public services.

Planning is also concerned with decisions about methods, that is, about means or strategies for achieving identified aims and objectives. Strategic planning (or developing strategies and policies for achieving objectives) describes processes involved in producing plans, often called strategies, that identify the basic objectives and concrete actions necessary to implement them. This aspect of planning calls for auditing of the planning environment to identify needs, constraints, opportunities, and the organization's internal strengths, weaknesses, resources, and capabilities.

The experience of California Union Bank provides apt example of a firm scanning its rather crowded competitive environment. When Harry Volk accepted an offer to become president of the bank in 1957, he surveyed the banking industry and perceived a vigorous race to create more retail or consumer-oriented branches. Rather than join the race, he decided to pursue a different strategy. Volk had observed that no bank concentrated exclusively on businesses, particularly fairly risky business loans. He reasoned that if he charged higher-than-normal interest rates on weaker credit risks, it was possible to suffer higher-than-normal loan losses and yet have a profitable business. Consequently, Union Bank opted to pursue a strategy of becoming a wholesale- or business-oriented bank.

Another aspect of planning is determination of the manner in which plans must necessarily be carried out. This is essentially a matter of conduct generally governed by such written documents as mission statements, policy statements, customer charters, and the like. Policies provide guides to decision-making, reflect company objectives, and generally guide managers and employees toward objectives in situations where judgment and discretion are required. However, conduct may also either be determined by influence or by informal standards that lie beneath organizational behavior.

The next phase preceding action in the planning process is developing tactical plans, which involves making specific commitments and providing details for methods (work practices and procedures), money (budgets), and time (time schedules). While policy provides guides for deciding, procedures provide guides for doing, for concrete actions. Procedures refer to methods of carrying out activities and might prescribe steps to be followed in doing work a kind of checklist for action. Procedures produce programmed responses to organizational problems and apply mainly to routine repetitive work.

PUBLIC-SECTOR PLANNING

Planning in the public sector is essentially embodied in public budgets, so public-sector planning emphasizes project-based financial plans. Because plans are problem-solving mechanisms, they design solutions to public-sector problems. The process in the public sector presents a distinctively different scenario from private-sector or business planning. While mathematical optimization models and computer formulations and simulations may be developed under the philosophy of obtaining "the answer," that is, the best or optimal solution for business problems, such models, including multiobjectives models, when applied to public-sector planning, may not be useful because there is a multitude of local optima and because important planning elements are not captured in the formulations. The omitted elements may actually imply that the optimal planning solution lies within the inferior region of multiobjective analysis rather than along the noninferior frontier. The choice of action, selection of public programs, or decision option may be far from the best, what is most rational, or what makes an economic sense, but it remains a political choice. The roles of these optimization methods have been to generate planning alternatives and to facilitate their evaluation and elabora-

tion as well as to provide useful insights and to serve as catalysts for human creativity.

Business planning is relatively new to public-sector and nonprofit organizations. Approaches to business planning in provincial, municipal, federal, or board-governed organizations are different from those in the private sector, although the language and concepts remain the same. The emphasis remains on establishing the vision, goals, strategies, and performance measures for high-performance organizations.

Such plans develop strategies for performance measurement, create benchmarks, and set standards. They may also include implementation strategies with emphasis on service excellence and must necessarily involve people in the decisions that affect them. However, many rational planning models applied in the public sector appear to focus on efficiency objectives and suffer from two lingering limitations: failure to consider equity or distribution of income and the empirical limitation of calculating costs and benefits. This has meant that achieving planning's intended roles in the public domain may require the use of several models as well as new types of optimization formulations and modified algorithms and computer codes. Optimization models are important because they help generate planning alternatives and facilitate comparison between them. Thus in the public sector it may be desirable to use several different models to aid the planning process.

Because plans are strategic instruments for goal attainment, their nature and form tend to be determined by the type and nature of objectives and goals established. While goals tend to differ from one individual and organization to another and while individuals and groups generally operate under varying conditions, the effectiveness of plans and planning appears to depend on the total planning situation, consisting of several sometimes complex variables, such as the knowledge, skill, and expertise of planners, available resources and technology, and the nature of the environment, among others. It means that plans must be related to objectives and adapted to the circumstances of the planning institution. Therefore plans that enable organizations to cope with relatively stable conditions will differ in significant respects from plans that suit relatively unstable conditions. For instance, extrapolative planning may be appropriate for stable conditions, enabling forecasts of revenue and expenditure to be made based on current conditions that are assumed to remain unchanged from the previous planning period. While its major purpose may be to ensure control over costs and legality of action, extrapolative planning is unsuitable for long-range planning and incapable of dealing with turbulence and the constraints of unstable conditions. On the contrary, unstable conditions, where there are uncertainties and where the environment is characterized by turbulence and complexities, warrant a rational comprehensive planning approach able to address long-term goals and contend with the various environmental forces. Planning, programming, and budgeting systems, one approach often used in the public sector, offer great potential for dealing with the present-day world of uncertainties. It is an integrated planning-budgeting system that is program based and relates expenditures to performance and outcomes.

Public-sector planning calls for access to budget information and the ability to understand that such information is capable of promoting public involvement in and scrutiny of the budget process. Public access to government policy initiatives, priorities, and implementation can promote popular participation. Public planners therefore necessarily need to look out for and respond to forces from the popular sector if social rationality in the public planning process is to be achieved. While the aim of rational public planning may be economic prosperity, the elimination or reduction of poverty, and the provision of public goods, good health, environmental sanity, and security, or in a nutshell, provision of general happiness, to exclude the public in this process totally contradicts the requirements of long-term comprehensive planning, which calls for active participation, cooperation, and the support of all stakeholders and clientele groups in society. In a democratic society, a theoretical and empirical if not political question has often remained: Who determines or takes part in determining what constitutes general interests? The public will probably remain indispensable in answering these questions.

Public access to information on public policy issues recommends itself for effective national comprehensive planning because it guarantees both government accountability and civil society participation in the budget process. This enables planners to use feedback arising from internal and external sources to bring about necessary adjustments in plans and, through public criticism or external performance evaluation, to remain focused.

SEE ALSO *Cities; Development Economics; Metropolis; Policy Analysis; Public Policy; Regions; Regions, Metropolitan*

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PLANTATION

Often defined as a "total institution," even as a prison camp, the plantation has been represented as both a type of social institution and an agricultural organization. The historical significance of this socioeconomic complex stems largely from its function in capitalist agricultural production, where it has been considered instrumental both in the creation and persistence of economic underdevelopment of those tropical areas where it dominated, and in the industrialization of northern Atlantic economies. In his influential text *Persistent Poverty* (1972), agricultural economist George Beckford, building on the seminal ideas of Lloyd Best (1968), argued that while the plantation incorporated all regions where it dominated in the larger developing world economy, as a type of economic organization it did so unevenly, driving the modernization of regions of the northern Atlantic, particularly Britain, at the expense of those in the south, including the U.S. South. However, other scholars, notably Robert Fogel and Stanley Engerman (1974), countered this perspective and held that U.S. southern plantation economies were a variant of capitalism. Such plantations, they argued, were highly productive and profitable, and the U.S. South's comparative advantages as an agricultural zone accounted for its limited or nonindustrialization.

The plantation economies of the Americas incorporated thousands of mainly African laborers, unskilled and enslaved, both free and indentured, who produced for the home and/or export market, as occurred in the U.S. South, the Caribbean, and South America. They labored on both small plantations as in the U.S. South with enslaved labor locked into paternalistic or overtly coercive relationships and large-scale, highly regimented, exploitative factory-like labor-force control. Plantation agriculture thus bespoke a peculiar mix of capital and labor processes. Consequently, debates emerged over its economic modus operandi and labor organization. These "modes of production" debates, prevalent during the mid-1970s through the 1980s, turned on whether slaves were proletarians or an in-between labor form, and whether the plantation was capitalist or not. While no scholar disputed the triangulated relationship between plantations and areas of the proto-industrializing Atlantic, differences emerged about how to characterize its relationship to the emergent capitalist economic system. Generally, several analysts saw the plantation as articulated with capitalism but distinct from it, while primarily non-Marxists viewed the emergent global market (then mercantile) as *the* critical defining element of the capitalist world system, given slavery's facilitation of wage labor and the circulation of commodities primarily from then-emergent industrialized countries. This view was particularly prevalent among world-system theorists such as Immanuel Wallerstein (1979), who stressed relational historical developments.

Hotly debated also were questions centering on the cultures and personalities found on plantations. For example, Eric Williams (1944) saw racialization as an outcome of plantation slavery. Others averred that plantation slavery was itself a product of racialized thinking. These provocative positions were joined by questions about the social consequences of slavery's economic and racial divisions. Comparing Latin America and the U.S. South in his influential 1959 text, *Slavery: A Problem in American Institutional and Intellectual Life*, Stanley Elkins compared the "closed" authoritarian system of the plantation to Nazism's psychic destruction and concluded that plantation slavery resulted in a psychological stripping of the slave, thereby producing an infantile Sambo mentality or personality. Elkins's Sambo-type personality resonated with stereotypical representations of blacks found in earlier American classics, such as the films *Birth of a Nation* and *Gone with the Wind*, the latter adapted from Margaret Mitchell's 1936 best seller. In the former, freed and out-of-control Sambos visited disorder and chaos upon a highly racialized, gendered, and segregated South ostensibly preoccupied with protecting the virtues of white womanhood, while in the latter, blacks were stereotyped props for a melodramatic Southern romance. But these representations of the docile slave were swiftly undercut by other studies documenting modes of resistance that spelled agency rather than passivity, and later there emerged other perspectives that complicated those notions as well.

Eugene Genovese's *Roll, Jordan, Roll: The World the Slaves Made* (1976) would shift the discussion toward more detailed research on the sociocultural nature of plantation life and its impact on the U.S. South. In this seminal work, Genovese explored the master–slave relationship, arguing that masters' and slaves' transactions were paternalist in nature. For him such a hegemonic relation yielded a tacit realization and acceptance by both slave and master of their symbiotic roles within the slavery complex. In other words, slaves and masters realized their dependence on each other, and the so-called exploitative relation stressed by other analysts was shaped *essentially* by familial practices that tempered the incidence of slave revolts.

Several scholars have contested Genovese's conclusions and highlighted the need to distinguish between

physical domination and hegemony, thereby undermining his romanticization of the planter class and his thesis of slaves' willful participation in the plantation-slavery complex. Moreover, analysts point to the pitfalls of reading slaves' practices within the slave system from generalized conclusions culled from too few planters in a large-scale plantation-slave complex that covered the U.S. South. Such perspectives suggest that dependent connections do not negate the incidence of exploitative relationships, nor do they prohibit the development of spaces for creating and articulating futures that are different from those the planters may have envisioned. Subsequent scholarship, which has focused on strategies of maneuver and on processes of culture building by the enslaved, tends to bear this out.

SEE ALSO *Slave Trade; Slavery Industry*

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PLANTATION ECONOMY MODEL

The theory of plantation economy and society has been developed to explain the experience and evolution of societies subjected to European-controlled sugarcane production by an enslaved African labor force and later by indentured Asian laborers (mostly Indians). As the historian Philip Curtin observes, "The plantation complex … ultimately stretched from Rio Grande do Sul in south eastern Brazil to the Mason-Dixon line and it had outliers in the Indian Ocean islands of Reunion and Mauritius" (Curtin 1998, p. xii).

The plantation economy model posits that plantation slavery and specialization in export of primary commodities has marked the evolution of the societies in which it existed. The plantation economy theorist Lloyd Best hypothesizes, "The legacy of institutions, structures and behaviour patterns of the plantation system are so deeply entrenched that adjustment tends to take place as an adaptation within the bounds of the established framework" (Best 1968, p. 32). The Caribbean economist Norman Girvan contends that the transnational corporation (TNC) is an institution that exists within the "rules of the game" of the plantation economy. He points out that the historic continuity of foreign ownership, terminal stage of production, limited domestic linkages, repatriation of profits, and persistence of the incalculability of value flows with transfer pricing by TNCs are similar to slave plantation–metropole flows.

The plantation school is not fatalistic but perceives the need to understand the grip of the founding institution of the plantation in order to remove its stranglehold on the dynamic for change within the interstices of the system. The role of the Maroon, or runaway slave, culture of resistance and non-plantation production by the peasantry, for example, is central to transformation of the plantation economy. Plantation economies continue to reflect the historic legacy with plantation-type enterprises operating in primary, natural resource sectors, such as oil, gas, bauxite, bananas, sugar, and tourism. Nontraditional producing sectors compete with these export sectors and with import sectors. Fiscal, monetary, exchange rate, and industrial policy do not favor such nontraditional, residentiary-type activities. The term *residentiary sector* was developed by the plantation economy theorists to describe non-plantation production that sprang up after the end of slavery.

A subtext is the contribution of plantation economies to the industrial transformation of the slave-owning metropolitan countries themselves. Curtin notes that "the Europeans who ran the (plantation) complex learned a great deal from the experience—in ocean shipping, tropical agriculture and economic management at a distance. All this is a part of the background of the industrial age" (Curtin 1998, p. 204).

Plantation economy theory has become diffused in a range of courses offered at the University of the West Indies, including economics, sociology, and political science. Many economists incorporate plantation economy theory in an evolving theory of Caribbean economy and society. These economists include Michael Witter, Mark Figueroa, Claremont Kirton, Vanus James, and Dennis Pantin of the University of the West Indies and Eric St. Cyr. The plantation economy model differs from the Arthur Lewis model of transformation by its focus on the potential within residentiary sector peasant production. Lewis emphasizes dismantling the traditional sector and replacing it with a modern sector. Some adherents of the plantation economy share the Guyanese historian Walter Rodney's concept of the underdevelopment of both Africa and the Caribbean, while others, notably Lloyd Best, argue that Rodney's view is static and mechanistic in nature.

Critics of the plantation model include Adlith Brown and Havelock Brewster, who contend that the school has not produced a theory but rather a recounting of the history of the Caribbean. Trevor Sudama questions the historic accuracy of the model when applied to Trinidad and Tobago. Denis Benn, Thomas, and Pantin raise questions on the model's method and theory.

SEE ALSO *Lewis, W. Arthur*

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Dennis A. Pantin

PLATO

427–347 BCE

Plato was born in Athens in 427 BCE just as the Peloponnesian War between Athens and Sparta was beginning. His mother was related to one of the oligarchs who ruled Athens after the Spartan victory in 404 BCE, and his father died when Plato was very young. The most important shaping influence in Plato's early life, however, was the philosopher Socrates (469–399 BCE). Plato was among the young men of Athens who regularly engaged Socrates in dialogue and who took the Socratic challenge to "know thyself" very seriously. Plato, then twenty-eight, was present at the trial of Socrates, an event that clearly made a deep and lasting impression on Plato and which is reflected in all of his work. Socrates is widely regarded as the hero of the Platonic dialogues, a literary form that Plato preferred for most of his works. Following Socrates' death, Plato traveled throughout Italy, Sicily, and parts of northern Africa before returning to Athens, where he founded the Academy in about 387 BCE. Among Plato's pupils there, for twenty years, was Aristotle (384–322 BCE). Late in life, Plato traveled to Syracuse to educate and inspire a new young king, Dionysius II, though the attempt ended in failure. Plato died in Athens in 347 BCE at the age of eighty-one.

Among the more famous of Plato's dialogues are the *Apology, Crito*, and *Euthyphro*, on the trial and death of Socrates; the *Gorgias*, which explores the way of life of the *sophist;* the *Symposium*, which focuses on love and beauty; the *Phaedrus*, on rhetoric; and the *Timaeus*, a study of cosmology. Other dialogues of note that are still widely read and studied today are the *Meno, Protagoras, Phaedo, Thaetetus*, and the *Sophist*. All of these deal in various ways with Plato's famous theory of *forms*, according to which aspects of the physical world, because subject to decay and death, are inferior to eternal forms such as the true, the good, and the beautiful. But Plato's most famous dialogues, and those that continue to shape international discussion and research in the social sciences, in some measure at least, particularly in political science, are the *Republic*, the *Statesman*, and the *Laws*.

The *Republic* is considered one of the great works of world literature. It is often referred to as an example of utopian literature, which sketches an ideal *polis*, or city-state. Such a view distorts, however, what Plato clearly intended as an exploration of what human beings mean when they appeal to justice and to good rule or government. Similarly, the *Republic* is frequently summarized as an appeal for the rule of philosopher kings. This too obscures, at a minimum, Plato's belief in gender equality among *philosopher rulers*, not necessarily *kings*. Like any classic work, it is difficult to condense and summarize Plato's *Republic*. But there are key aspects that may be

sketched along the following lines. At the center of Plato's political theory is a concept of the *cardinal virtues*. These virtues are moderation, or temperance, courage, wisdom, and justice. Following a procedure according to which the state (city-state) is the human person "writ large," Plato examines the cardinal virtues both with respect to the individual person and with respect to the larger city-state. Ultimately, a just society for Plato is a society of just persons. And individuals are just according to their capacity with respect to each of the cardinal virtues. Another important concept in the *Republic* is the *three waves*, which refer to perennial issues in all societies at all times. These waves represent the issues of gender, property relations, and who should rule. In the dialogue, Socrates argues on behalf of gender equality; for a community of goods and spouses for the guardians of the *polis*, a group further divided according to warriors (*auxiliaries*) and rulers (*philosopher rulers*); and for the rule of philosophers. A full measure of justice is possible for Plato only when philosophers become rulers or rulers become philosophers.

Perhaps the most famous passages in the *Republic* are those that present the allegories of the *divided line*, from Book VI, and the *cave*, from Book VII. According to the divided line, human consciousness develops well or poorly according to a progression from imagination, to belief, to understanding, to reason based on consciousness of the good. This same progression is illustrated in the famous cave allegory, where we must *imagine* human beings chained and facing a cave wall, see them *believe* in the images projected on that wall from a fire behind their backs, *understand* that there might be more to reality than what such images suggest to the cave dwellers, and have the courage and capacity, unlike most of those in the cave, to turn around, see the drama to our backs, and theirs, and make our way out of the cave to a transcendent reality that, for Plato, must ultimately inform human *reason*. These allegories come toward the end of the *Republic* and summarize and condense what is explored through dialogue in the previous five books (chapters). Toward the end of the dialogue, Plato presents his thoughts on *declining forms* and *censorship*. According to the first, regime forms decay over time, such as from *aristocracy* (rule of the virtuous), to *timocracy* (rule of those who love honors), to *oligarchy* (rule of the wealthy), to *democracy* (rule of those who love freedom), to *tyranny* (rule of the lustful despot). The final book, Book X, explores the role of the artist in society, among other topics, and the need for some form of censorship.

The *Statesman* and the *Laws* represent significant departures from Plato's views and style of presentation in the *Republic*. In the *Statesman*, for example, an outsider from Elea takes the place of Socrates as the primary spokesperson and the dialogue form is all but abandoned. More significantly, Plato emphasizes a rule of law, or legal codes, as preferable to the rule of philosophers. This shift of emphasis in the *Statesman* puts Plato more in the tradition of constitutional democracy, with its emphasis on well-constructed constitutions and institutions, characteristic of modern and postmodern approaches to the science of politics. Yet, in the *Laws*, among Plato's last works, which otherwise places a similar emphasis on the need for good laws, one encounters a *nocturnal council* that would be the final authority in the city-state. Many critics point to this dimension of Plato's work to support the idea that Plato was ultimately something of a totalitarian.

The twentieth-century philosopher Alfred North Whitehead (1861–1947) once famously observed that the European philosophical tradition could be characterized as but a "series of footnotes to Plato." Though his influence is not as great in the modern social sciences, there is continuing debate, especially among theorists within the discipline of political science, regarding Plato's insights on the role of intellectuals in society; the role of government in promoting excellence, or virtue; the educative function of the state; gender relations; property relations; the role of religion in the state, if any; and the perennial question regarding who should rule and why. And these are but a few of the modern issues regarding which Plato's works continue to inspire creative approaches. Some modern scholars, most famously Karl Popper (1902–1994), see in Plato's political theory the seeds of modern tyranny and closed societies. Others, such as John H. Hallowell (1913–1991), Eric Voegelin (1901–1985), and James M. Rhodes, see a more balanced and humane approach to the study and practice of politics. Because of his depth of insight and his creative approach to the perennial issues of human beings in their social and political dimensions beyond temporal and cultural considerations, Plato and his legacy will continue to be debated among scholars in all of the modern social sciences into the distant future.

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Timothy Hoye

PLEASURE PRINCIPLE

SEE *Psychoanalytic Theory.*

PLESSY, HOMER

SEE *Separate-but-Equal.*

PLESSY VS. FERGUSON

SEE *Separate-but-Equal.*

PLUMBING

The progress of a society may be judged by the way in which it disposes of its human waste material, and thus by the quality of its sewerage system (Mumford 1961, chap. 8). In the ancient world, the Greeks and Romans put great emphasis upon town planning. Roman cities were famed for their sewers, drains, aqueducts, paved streets, and roads. Domestic plumbing ranged from marble bathrooms with under-floor heating and indoor toilets in upmarket villas to basic latrine provision for the Roman army, as found, for example, alongside Hadrian's Wall in northern Britain (Greed 2003). Following the decline of the Roman Empire, waste disposal returned to more primitive methods. Most ordinary people used an outdoor "privy," while nobles often had an "indoor" toilet built out from the wall of their castle, hanging over the moat. In the Christian West during the Middle Ages, indoor plumbing, or for that matter personal hygiene and privacy, were not highly esteemed marks of civilization or progress, although washing and bathing, and bathhouses, were given higher priority in the Muslim East (Bonneville 1997).

In urban areas, the emptying of chamber pots straight into the street, and the accumulation of piles of human waste, resulted in disease and an unpleasant urban environment. Night-soil men were often employed to collect excreta, which was spread on the fields as fertilizer. Although Sir John Harrington had developed an indoor flushing toilet for Queen Elizabeth I in 1596, it was not until the rise of mass industrialization and urbanization in the nineteenth century that domestic toilets were mass-produced in northern England. Flushing technology was improved through the efforts of inventive manufacturers such as John Shanks, George Jennings, Alexander Cummings, and Thomas Crapper in the United Kingdom (Reyburn 1969) and Thomas Maddocks, John Randall Mann, William Campbell, and Henry Demarest, among others, in the United States (Palmer 1973). Early toilet manufacturers were generally companies that had first made their name in the manufacture of china and earthenware. Such English companies as Minton, Twyford, and Doulton adapted their production processes to make porcelain toilet bowls and pans. Toilet design was based upon the "sit" rather than "squat" mode of excretion (which required nothing more than a hole in the ground). The sit approach required a specific and highly marketable consumer product, the "pedestal" toilet, along with all the plumbing fixtures, such as taps (faucets), cisterns, basins, and fittings that together made up the "bathroom." Interestingly, urinals for men, although a common feature of public toilets, are not generally a feature of private domestic bathrooms. These artifacts were exported from Britain to the rest of the world as a sign of modernity and Western progress, and were rapidly adopted for fear of being seen as "backward" or "dirty," in spite of the fact that the majority of the world's population squats when eliminating waste, a position that is ergonomically more healthy and efficient.

Compartmentalization of production was marked by separate metal-manufacture companies specializing in lead piping, plumbing fixtures, and other nonporcelain components. Nowadays, international toilet companies such as Armitage Shanks, Ideal Standard, and Geberit have diversified to offer a wide range of toilet technologies and materials. Synthetic materials now predominate; piping is made of plastic and the "porcelain" is more likely to be polymer. Old and widely used lead piping has been condemned as a potential cause of poisoning. (Plumbing gets its name from *plomb,* the medieval word for lead, as plumbers were essentially lead workers.)

While in the past, mains drainage and indoor plumbing were a sign of modernity, today people want "designer" bathrooms, luxury fixtures, power showers, fitted kitchens, and the latest technology. There has been a "restroom revolution" in Asia in particular, with companies such as Toto producing complete prefabricated bathroom units for the Japanese housing market, all the components being made together. Colored polyester resins, modern plastics, and marble and granite composites feature strongly in these modern bathroom modules (Greed 2003). Likewise, modern automatic public toilets are fully integrated, prefabricated systems that often use stainless steel and pathogen-resistant polymer materials. However, user-end toilet innovation must be matched by provider-end infrastructural sewerage system provision. The functionality of domestic toilets is dependent on there being a working sewerage system to take away output. Alternatively, the output from a luxury bathroom, as is the case in some affluent areas in developing countries,

might end up in a cesspool under the house for collection by traditional night-soil operatives. Alternatively, as in some parts of the Americas and Australasia, even upmarket private houses are not served by a municipal sewerage and drainage system, and depend upon their own cesspits, generators, and water tanks.

Both public and domestic toilet design is becoming increasingly technologically driven, with automatic flushes and sensor-controlled washing-and-drying facilities becoming commonplace. In parallel, environmental sustainability requirements to save water have resulted in a range of dual-flush cisterns, waterless urinals, and human-waste recycling innovations. High levels of toilet provision in every home, along with highly developed sewerage systems, are no longer necessarily seen as signs of progress and economic development. Such assumptions are now being questioned. Many parts of the world are not economically or environmentally in a position to build modern, expensive water and sewerage systems: It is not a high priority. Water is becoming an increasingly expensive and scarce resource; some see it as "the new oil" in terms of future geopolitical tensions. Far from being a sign of economic development, many see the emphasis upon water-based sewerage systems and flushing toilets as old fashioned, colonial, and unsustainable. Instead, new, more sustainable solutions are being developed, especially within prosperous advanced Asian countries that can afford such research. Such systems will incorporate the most modern technological and scientific advances in the fields of engineering, pathogen control, and urban governance (Chun 2002; Mara 2006).

SEE ALSO *Civilization; Developing Countries; Development; Modernization; Planning; Public Health; Sanitation; Toilets; Urbanization; Water Resources*

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Clara Greed

PLURALISM

Pluralism denotes more than one or two of anything and is contrary to monism, or the view that there is only one kind of a thing. *Pluralism* refers to a philosophical approach to the world as well as a theory of political and social power and, finally, to an empirical and normative focus on plural groups and group-based identities. Pluralism is central to liberal democracy in that it assumes that a diversity of views and identities, or a plurality of power centers, is essential to ensure democratic outcomes.

Contemporary debates over social and political pluralism tend to center on issues of identities in the context of multiethnic, multiracial, and multi-religious societies. This sense of pluralism is discussed in greater depth in the section below. Earlier theoretical formulations of pluralism reflected an evolving notion of competing interests in a democratic society and the role of non-state associations.

BRITISH AND AMERICAN PLURALISM

In twentieth-century Western thought, pluralism has at least two dominant strands. The first found expression is in works of British political philosophy such as those of Frederic William Maitland, John Neville Figgis, G. D. H. (George Douglas Howard) Cole, and Harold J. Laski, as well as in the work of the German theorist Otto Friedrich von Gierke. The unifying theme of these works was the plurality of associations and groups of various kinds that operate independently of the state but are vital for a functional government. The argument was that centralized power in the state ought to be lessened or "pluralized" to meet the needs of citizens in a free society. In order to preserve liberty it was preferable to disperse state power among a variety of distinct and functionally autonomous groups that could better reflect the specific and diverse interests of citizens. The English pluralists rejected the sovereignty of the state but differed in their conception of the relationship between citizens and the state, with some arguing that the state is composed of groups rather than individuals and that belonging to the state is mediated through membership in other groups. These thinkers generally considered the ideal to be a limited and constrained state with a proliferation of free associations. World politics in the post–World War I era led to a resurgence of interest in a strong and effective state, thereby weakening the pluralist argument.

American theorists of pluralism shared an interest in the multiplicity of voices acting upon the state but focused on competing interest groups or pressure groups and their efforts to exert influence on the state. Notions of pluralism and its contribution to democracy originated in Alexis de Tocqueville's *Democracy in America*, in which Tocqueville argued in part that democracy depends on a plurality of secondary associations outside of the state that prevent majoritarian democracy from becoming tyrannical. Particularly since the 1950s, American pluralists have used theories of pluralism to describe a model of minimum democratic competition for influence and office. The role of the state in this view is as something of an arbiter, seeking balance among semiautonomous, often opposed and self-interested interest groups.

One prominent pluralist, Nelson W. Polsby, described American society in 1980 as a collection of "hundreds of small special interest groups, with incompletely overlapping memberships, widely differing power bases and a multitude of techniques for exercising influence on decisions salient to them" (p. 118). American theorists argued that U.S. society was differentiated and fractured into many interest groups. One of the most influential thinkers in this group was Robert A. Dahl, whose work reflected an interest in "a plurality of relatively autonomous (independent) organizations (subsystems) within the domain of a state" (Dahl 1982, p. 5). A democracy can be called a "polyarchy" if it meets certain specific conditions, especially that it contains plural centers of interest, each of which has some influence on policy making, and that no group has a monopoly of influence. Particularly relevant to the discussion below, Dahl and other pluralists argued that pluralism of identity (race, ethnicity, religion) is generally a feature of less competitive political systems, while pluralism of interests is a feature of a democracy. Dahl also posited that a democratic society is stronger if it is made up of citizens with crosscutting identity cleavages (rather than reinforcing cleavages), which reflect common interest on some issues and opposing interest on others. This means that a democratic society is one in which a broad array of issue-oriented movements draw together new constituencies that cut across identity lines.

Pluralism in this sense also stands in contrast to corporatist politics. Pluralist interest groups are made up of multiple associations focusing on a single interest issue, and the groups are voluntary, decentralized, and separated from the government. Corporatist politics is generally more organized and is characterized by a single association for each societal interest, typically with compulsory and universal membership and with central organization. For pluralists like Dahl (1998) the associations should be relatively independent and autonomous. In all respects, pluralists focus on power dispersal as a check on all centers of power, including the state.

Critics of American pluralist theory have challenged the ideal of pluralism as well as the empirical fact that such a process operates as it has been theorized in the United States. They point to the systematic inequality among interest groups that runs counter to the pluralist vision of equal and competing associations. For instance, critics such as C. Wright Mills have argued that American politics is dominated by an economic elite and that a discussion of a mere plurality of associations does not account for the hierarchies of power present in political life. In 1970 Peter Bachrach and Morton S. Baratz highlighted the importance of nondecision-making processes, those individuals or groups that seek to limit decision-making to relatively uncontroversial issues, thereby influencing political decisions in significant ways. Their work pointed to the manner in which political systems are characterized by inequality that tends to persist over time, and how subordinated groups then are "often unable to convert their demands for change into important political issues" that are ever considered by policymakers (p. 105). Henry Kariel saw classic studies of American pluralism as elevating one particular institutional system, American pluralism, as both "irreducible, beyond analysis and critique" and objectively good, preventing systematic analysis of American institutions (p. 136).

Finally, Dianne M. Pinderhughes's critical study of Chicago politics, *Race and Ethnicity in Chicago Politics: A Reexamination of Pluralist Theory* (1987), provided rich historical data on labor and housing markets, political participation, education, and the criminal justice system for black, Polish, and Italian immigrants, all of whom came to the city at roughly the same time and for similar reasons but had strikingly different patterns of social and political integration some decades on. Her work demonstrated that pluralist assumptions of black integration into American life based on the evolution of specific issue sets did not occur because of the substantial discrimination inherent in American political institutions and because black citizens' own political attitudes led to a rejection of conventional American institutions and authority symbols. The assumptions about bargaining that undergird pluralist theories of issue-oriented politics cannot occur when the issues are not bargainable and the parties to the bargain are not equal.

CONTEMPORARY PLURALISM

Pluralism in political thought underwent something of a revival in the last two decades of the twentieth century. Building on the body of work such as that of Pinderhughes, pluralists have put the concept to use in defense of multiculturalism and diversity that run counter

to assimilationist nation-building projects. Pluralists have charged that modern majoritarian democratic institutions and laws privilege dominant racial, ethnic, or cultural groups and should be thoroughly democratized by giving greater attention to inclusion of these plural identity groups. Unlike earlier forms of pluralism, the diversity of groups is not composed of voluntary associations or civil society groups in the strict sense. Neither are these issue-focused interest groups. Rather, "plural" identities in this conceptualization are communal groups, typically understood to include ethnic, racial, religious, or cultural characteristics and based on identities that, while situational and fluid, are not easily acquired or discarded.

The roots of this strain of pluralist theory are to be found in part in the writings of social anthropologists and historians of the colonized world in the first half of the twentieth century. Studies of colonial empires in South Asia and Africa in particular led to a focus on "traditional societies," which were plural in the sense of being composed of ethnic groups who retained strong attachments to their distinct religions, culture, languages, and community life and were held together by pressure and even force from the colonial power and, in the postcolonial period, by the newly independent state. These distinct social segments, living side by side but rarely interacting, led to the types of heterogeneous societies found in newly independent states. Theorists typically argued that the state was captured by one minority segment within the plural society. Kuper summarized these as societies "characterized by cultural diversity, social cleavage and dissensus" (Kuper and Smith 1969, p. 12). While the focus was often empirical and descriptive, the normative tone suggested ways to reduce the plurality, which was presumed to cause political and social conflict through assimilationist nation-building policies.

Subsequent studies in comparative pluralism have widened this contemporary understanding of pluralism by emphasizing that nearly all states in the modern world are heterogeneous and plural in the sense that M. G. Smith and Leo Kuper had argued colonial societies were. Pierre L. Van den Berghe suggested that pluralism can encompass not only subcultural ethnic and communal identities but also differences based on race, caste, and class. This signaled a transition in two somewhat distinct but conceptually related subfields of social and political inquiry: race and ethnic stratification in the Western democracies, and the various ethnic (and sometimes racial) cleavages found in the former colonies of the Middle East, Africa, Asia, and Latin America.

A flourishing interest in the empirics and theory of racial and ethnic differences in North America and western Europe has produced many strands of thought on pluralism, most with a focus on group-based citizenship. Scholars argued that the notion of a homogeneous Western nation-state was more a fiction than a reality. Michael Omi and Howard Winant's concept of racial formation described the historical creation, deployment, transformation, and destruction of racial categories. Critical race theorists pointed to the distinct role that racial identities play in the context of a "racial state" and the social, political, and economic significance of group-based identities on life prospects for members. Philosophers such as Linda Martín Alcoff (2006) defended the attachment to cultural identities as ontologically real and fully defensible within a tradition concerned with individual autonomy and rationality. Political theorists asserted that political struggles over cultural diversity are at least as important in the West as elsewhere, and that only through "multicultural citizenship" (as Will Kymlicka put it in 1995) or "differentiated citizenship" (in Iris Marion Young's 1991 formulation) can democracy or a just constitutional order be achieved. Critics of this approach, such as Brian Barry (2001), do not argue that there is a plurality of identity groups, but they insist that there is only one status of citizenship in a liberal democracy. Rights are, and should be, assigned to individuals as such, rather than to particular groups.

Paralleling this shift in Western thought on pluralism, and reflecting greater attention not just on a plurality of groups but specific kinds of groups (racial, ethnic, religious), was a deepening of theoretical attention to the nature of communal diversity in non-Western contexts. These theorists challenged perspectives like that of Kuper and Smith, which had focused on the conflict-prone nature of groups and seemed to point toward assimilationist nation-building projects. Donald L. Horowitz's seminal study *Ethnic Groups in Conflict* (1985) attempted to explain not only the material and political basis of ethnic identities but also the psychosocial importance of relative group worth in plural societies. A wealth of literature has developed on the topic, much of it focusing on institutional engineering and conflict management in ethnically diverse societies (Lijphart), as well theoretical approaches accounting for the diverse citizenship models that emerge in the context of this kind of diversity (Berman, Eyoh, and Kymlicka).

What is increasingly clear is that various forms of pluralism, however constituted, are critical to the deepening of democracy. Pluralism disperses power and contributes to the vitality of the democratic community by acting as a check on a strong state. Further, it can support identification with the democratic state by recognizing and valuing the diverse communities to which citizens belong.

SEE ALSO *Cleavages; Community Power Studies; Consensus; Dahl, Robert Alan; Democracy; Discrimination, Racial; Elites; Ethnic*

Fractionalization; Ethnicity; Interest Groups and Interests; Kariel, Henry S.; Lindblom, Charles Edward; Nondecision-making; Politics, Urban; Polyarchy; Power Elite; State, The

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Lahra Smith

PLURALITY

As a mechanism for deciding political contests, elections held under plurality rules have the great apparent advantage of simplicity. Plurality elections are most commonly used to elect one candidate for one position. When the number of positions to be filled is one, the candidate with more votes than any other candidate is declared the winner. In some plurality elections, however, the number of positions to be filled is more than one—for example, four. In such elections, the positions are filled by the four candidates who win more votes than the other candidates.

But plurality elections are not as simple as they seem. Candidates are elected under plurality rules with more votes than the losing candidate or candidates. But when there are many more candidates standing for election than positions to be filled, successful candidates may receive far less than half the votes: For example, in an election in a single-member district for which there are 100 voters and five candidates, the winner might receive only 21 votes, three losers 20 votes, and the other 19. Sometimes the difference in number of votes between the winning and losing candidate in a single-member plurality election is called the *majority*. But more accurately, a majority is 50 percent plus one of all votes cast. In this case, in the election example above, the winner would receive 51 votes and the losing candidates 49 votes between them. Therefore, candidates elected under plurality systems where many more stand than can be elected do not necessarily have majority support.

Electoral theory posits that the number of candidates likely to be competitive in a plurality election is the number that can be elected plus one: where the position is for a single member, therefore, this equals two (Cox 1997), but this does not always happen. This claim is often extrapolated from a single election in one district to a general election across an entire country where parties compete. Thus plurality electoral systems are said to generate two-party systems, and, in particular, they tend to increase the number of successful candidates for the winning party

beyond its share of the votes cast nationally. Plurality elections, in this context, are said to produce *manufactured majorities* among the persons elected. In this sense, plurality elections produce majority outcomes, and are thus often labelled *majoritarian*. Certain theories of democracy value this aspect of plurality elections because the consequent two-party systems are said to make possible alternation of office between moderate parties and enhance the stability, decisiveness, and accountability of governments.

However, this strength of plurality elections is most apparent where societies have one major social division and related political preferences are distributed across electoral districts in a way that can generate balanced two-party competition. Plurality elections worked successfully in many democratic societies during the twentieth century under these conditions. But if social divisions and preferences are distributed similarly in all districts, one party can in theory win all seats. And if there is more than one social division and associated sets of preferences are separated spatially among districts, a multiparty system will emerge (Kim and Ohn 1992). In essence, plurality elections privilege social divisions that are distributed spatially, but provide poor representation of those that are not. Given this, it remains debatable whether plurality can operate as a system of election in the increasingly socially heterogeneous societies of the twenty-first century as successfully as it did in the past.

SEE ALSO *Elections; Electoral Systems; First-past-the-post; Voting*

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POGROMS

The term *pogrom* is derived from the Russian *pogromit* (to create a desert) and describes forcible excursions and plunder against a specific ethnic or religious minority. Outbreaks of this kind occasionally occur spontaneously but are initiated by local or national forces. It is common for a significant portion of the majority population to take part in these persecutions; as a rule the authorities do not intervene to halt the violence.

The term is used in the twenty-first century to designate a variety of events, such as the persecution of the Armenians by Sultan Abdulhamid II (1842–1918) in the Ottoman Empire from 1894 to 1896; the attacks on Greeks in Istanbul, Turkey, in 1955; the murder of ethnic Chinese in Indonesia after the fall of President Ahmed Sukarno (1901–1970) in 1965; the harrying of the Ibo people in northern Nigeria in 1967; the agitation against the Sikhs in India following the assassination of Prime Minister Indira Gandhi (1917–1984); and the excesses against the Armenians in Baku, Azerbaijan, in 1990. The word gradually became part of the international vocabulary toward the end of the nineteenth century. Originally it meant only the anti-Semitic excesses of czarist Russia. Hence consideration of the pogroms directed against Jews in central and eastern Europe is key to the following discussion, along with consideration of their political and socioeconomic context and background.

EUROPEAN POGROMS: FROM THE MIDDLE AGES TO THE EARLY MODERN ERA

During the first two Crusades (1096–1102 and 1147–1149), the Jews of central Europe, especially in Germany, fell victim to persecutions and sacrifices. The initial nature of the conflict was religious. The persecutors justified their action with the argument that the liberation of the Holy Land should be preceded by the murder of the "murderers of Christ" in Europe. The actual motives of the perpetrators were more economic, however. The burgeoning religious fanaticism of the time presented a suitably legitimate opportunity to get rid of some economic competitors, because many Jews were involved in credit trades at the time. Yet it would be a mistake to equate the history of the Jews in medieval Europe with persecution and discrimination. There were certainly longer periods of relatively peaceful coexistence with the Christian world. Nonetheless, relations between Christians and Jews were precarious. Famines and epidemics inflamed the Christian majority against religious and social minorities. Thus the great epidemic and plague of the late Middle Ages in the mid-fourteenth century resulted in pogroms against the Jewish population. The Jews were accused of causing the plague by poisoning wells and streams. Hence the initial motive for the persecution was an attempt to explain the sudden appearance of the rapidly spreading illness. At the same time the hatred of the Jews this stirred up played into the hands of Christian debtors and merchants.

Mobilization against the Jews was further spurred by accusations of ritual murder. These assertions claimed that Jews stole Christian children and slaughtered them in order to use their blood for ritual purposes. This accusation, among others, served as a reason for the destruction

and plunder of the Prague Ghetto in 1389, which at the time contained the largest and wealthiest Jewish population in Europe.

Because the threat of persecution and expulsion constantly hung over their heads, beginning in the thirteenth century large segments of the Jewish population moved farther to the east. The Polish kings encouraged the settlement of Jews and guaranteed their security and economic privileges. The Jews soon became indispensable for the Polish economy, mediating as traders and brokers between town and country. The Polish nobility came to prefer leaving the administration of their property to Jews, which dragged the latter into conflicts between nobility and peasantry. In 1648 these tensions finally resulted in a pogrom of hitherto unseen magnitude, when Ukrainian peasants joined with Cossacks, Russian cavalry, led by Hetman Bogdan Chmelnicki (1595–1657) and attacked Polish cities. As many as 125,000 Jews fell victim during these massacres. As a rule the Jews could not count on the support of their Polish neighbors, and it took decades for the Jewish communities to rebuild. One reaction to the catastrophe was the rising popularity of cabalistic doctrine among eastern European Jews and the spread of messianic apocalyptic sects. The eventual outcome of these movements was Hassidism, one of the most significant mystical-religious movements in Judaism.

POGROMS IN RUSSIA UNDER THE CZARS AND DURING THE REVOLUTION

A rise in anti-Semitism in Russia coincided with the shaking off of Mongolian rule and the strengthening of the Orthodox Church in the late Middle Ages. Czar Ivan IV (1530–1584) forced religious conversion on the Jews in the newly conquered territories and severely restricted Jewish trade. By the middle of the seventeenth century, Russia had become a great power in the region and annexed Poland in 1772, lending the "Jewish question," that is, the question of how to deal with the unpleasant minority, a new urgency. Under pressure from Russian merchants fearful of Jewish competition, Catherine II (1729–1796), who ruled Russia from 1762 to 1796, issued a decree forbidding Jews from living in the Russian interior. Their territory was restricted to the so-called Pale of Settlement—the former territory of Poland and the area north of the Black Sea.

The nineteenth century saw a profound socioeconomic transformation of Russian society that also affected the life and economic activity of Jewish communities. The Jewish population concentrated itself in the cities inside the Pale of Settlement, focusing on trade; skilled trades and the cultivation of the land had become less profitable and therefore lost their appeal for most Jews. Although a small portion of the population established itself in banking and credit, most Jews became impoverished. From this point on Jews attempted to succeed as petty merchants, peddlers, and handicraftspeople. They thus found themselves in bitter, destructive competition with their Christian neighbors, which led to a rise in anti-Semitism. The Russian upper classes and nobility also became increasingly anti-Semitic, associating the Jews with modernization and capitalism (i.e., with movements that threatened the traditional social order). Thus anti-Semitism came to be associated with anticapitalism and antisocialism.

The hostility toward Jews was widespread in the Russian Empire: between 1881 and 1921 there were three devastating waves of pogroms. The first followed the assassination of Czar Alexander II (1818–1881), when anti-Semitic circles blamed his death on the Jews. The rumor spread like wildfire and gave an anti-Semitic mob justification for attacks on the Jewish community. Pogroms regularly ensued until 1884, primarily in southeastern Ukraine, but also in White Russia (later Belarus) and Lithuania. The Ukrainian pogroms were perpetrated primarily by migrant workers and railway employees. The local population, especially in the Ukraine, passively observed the plunder and violence and left the mobs unhindered, seeing these pogroms against an unloved minority as a suitable release for the pressures of unresolved social issues. Czar Alexander III (1845–1894) blamed the pogroms on the Jews themselves and drafted a series of discriminatory edicts against them in order to unite a divided population behind him. In their struggle for legitimacy, the Russian upper classes fanned the flames of already widespread anti-Semitism, misusing it as an ideology of social integration.

The outbreak of the second wave of pogroms, from 1903 to 1906, was linked directly to political developments in the czarist empire. In order to try to contain growing revolutionary sentiment, the government fanned anti-Semitism by inciting the conservative press against the Jewish population. The first pogrom of this era took place at the Jewish holiday of Passover in 1903 in the town of Kishinev, with roughly 1,500 Jewish houses and businesses looted. These pogroms were organized by the so-called Black Hundreds, an association of reactionary monarchist groups. The government instructed local authorities not to proceed against the perpetrators. Representatives of the czarist secret police wrote and disseminated anti-Semitic pamphlets, such as the infamous *Protocols of the Elders of Zion*, which blamed the Jews for all the country's ills. After the Reform Edicts of 1905, which extended suffrage to the Jews and established the Duma (i.e., the Russian parliament), the most devastating pogrom to date occurred involving sixty-four cities and six

hundred villages. More than eight hundred Jews fell victim to its violence.

The wave of pogroms from 1917 to 1921 occurred in the context of world war, revolution, and civil war. Even before the end of World War I (1914–1918), deserters committed terrible massacres and robberies of Jewish property in villages near the front. After the Bolshevik October Revolution in 1917, units of the Red Army and more particularly counterrevolutionary forces (the so-called White Russian, anti-Bolshevik armies) fell on the Jewish population in towns and cities. The worst pogroms took place in the Ukrainian Republic. Before the pro-Bolshevik Red Army's victory in 1920, over sixty thousand Jews lost their lives in the violence.

As a result of the constant pogroms and growing legal and social discrimination, from the 1880s onward many young Jews joined the socialist opposition. A Jewish national consciousness also developed, culminating in Zionism. The Zionists believed that Jewish integration into eastern European society had failed and that the sole solution to the "Jewish question" was the creation of a Jewish national state. During this time also Jewish emigration to the United States (and also to Palestine) rose steadily.

POGROMS IN GERMANY

German Jews only achieved full civil rights with the creation of the Second German Empire, following the French defeat in the Franco-Prussian War in 1871. But the path was a bumpy one. In 1819 some manual workers, merchants, and students took the discussions instigated by Jewish emancipation as an occasion for pogroms in several German cities. During the nineteenth century a large portion of the Jewish population in Germany was able to achieve some social progress; however, by the 1870s several anti-Semitic parties had formed with the explicit aim of reversing the social equality and integration of the Jews. After the beginning of the twentieth century, most of these parties sank into insignificance. Although anti-Semitism was as widespread and significant a political force in Germany as in surrounding European states, it was considerably less powerful than in eastern European states.

Extreme nationalism during World War I had already led to a growing climate of anti-Semitism. After the end of the war, nationalist and populist groups, such as the right-wing extremist party the National Socialist German Workers' Party (NSDAP), blamed German Jewry for the defeat as well as the succeeding economic misery. For many members of the NSDAP Judaism and bolshevism (anticapitalism) were synonymous; both phenomena were treated as dangerous to traditional social and political order.

The systematic disenfranchisement and exclusion of German Jews began soon after the NSDAP's seizure of power in January 1933. The first pogrom against the Jews during this period broke out on 9 and 10 November 1938 and was referred to as *Reichskristallnacht* or *Kristallnacht* (night of broken glass). But this incident was anything but a spontaneous expression of violence. Members of the NSDAP and the Gestapo (the secret security police of the NSDAP) as well as paramilitary organizations such as the Sturmabteilung (SA) started fires in synagogues across Germany and plundered Jewish businesses. In the process they murdered one hundred German Jews. The German police had received orders that under no circumstances were they to intervene on behalf of the Jews. A small portion of the population participated in the pogrom, especially the plunder, while most Germans observed the events passively without participating. The NSDAP government had attempted to portray the pogrom as a spontaneous reaction by the Germans to the assassination of a German diplomat by a Jewish conspirator in Paris. The NSDAP government had three goals in the November pogrom. Initially forces within the party for whom existing anti-Jewish measures were insufficiently radical were to be mollified. Moreover the Nazi leadership sought to further intimidate the Jews and encourage their emigration. Finally, the pogrom accelerated the systematic persecution and dispossession of the Jews, a process referred to as "aryanization."

During World War II members of the NSDAP, or Nazi Party, committed countless pogroms against Jewish populations in occupied areas of eastern Europe. The local populations generally cooperated willingly with the occupiers and permitted themselves to be dragged into deeds of violence against their Jewish neighbors. On occasion, such as in the Polish town of Jedwabne, the local population did not wait for the arrival of the German conquerors and murdered the Jewish population on their own initiative. The prospect of taking over Jewish property was every bit as much to blame for this turn of events as historically deep-rooted anti-Semitism.

The czarist pogroms in Russia and the November 1938 pogrom in Germany all occurred with government participation in the planning and the violence. Nonetheless, the involvement of the population in Russia was considerably greater than in Germany, since the integration of Jews into German society was considerably more advanced than in Russia. Thus the aim of the 1938 pogrom was not so much to push social and political problems into the background and unite a politically and socially divided populace.

SEE ALSO *Anti-Semitism; Bolshevism; Christianity; Concentration Camps; Ethnic Conflict; Ethnic Fractionalization; Ethnocentrism; Ghetto; Hitler, Adolf; Holocaust, The; Jews; Nazism; Riots; Russian Revolution; Shtetl; Terrorism; Violence; World War II*

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Dominik J. Schaller

POISSON, SIMEON DENS

SEE *Distribution, Poisson.*

POL POT

1925?–1998

Pol Pot was the ruler of Cambodia from 1975 to 1979 and presided over one of the worst genocides of the twentieth century. In approximately 1925 (the exact date of this birth remains unclear), he was born Saloth Sar to a fairly well-to-do family in Kompong Thom Province, Cambodia. Although Pol Pot's political zest developed while he was in his home country, his path to political leadership began to be forged after his arrival in Paris in 1949 to study radio electronics. There he became a member of the French Communist Party and met other Cambodian intellectual elites who would become powerful figures in the years 1975 to 1979.

Having failed his exams three years in a row, Pol Pot (a nom de guerre, short for the French *politique potentielle*) returned to Cambodia in January 1953. He had, however, become well-versed in socialism and communism—his intellectual models were Vladimir Ilyich Lenin, Leon Trotsky, Joseph Stalin, and Mao Tse-tung—and his opposition to the government of Prince Norodom Sihanouk led him to join the Communist resistance. Pol Pot became a member of the Indochina Communist Party, which was dominated by Viet Minh, within a month after his return. He then joined the Cambodian Communist Party Group, whom Sihanouk named the Khmer Rouge or Red Cambodians, and became secretary general in 1962. This group then started agitating against the Phnom Penh government. Ultimately, through armed rebellion, the Khmer Rouge gained full control of the country. The party took power on April 17, 1975, less than two weeks before the fall of Saigon ended the Vietnam War, and renamed the country Democratic Kampuchea. One of the Khmer Rouge's first acts was to implement a complete evacuation of Phnom Penh to the countryside.

Under his four-year plan, Pol Pot's stated aim was to turn Cambodia into a Maoist agrarian utopia; he planned to nationalize all industry and finance the economy through increased agricultural exports. His regime seized all legislative and judicial powers. Every Cambodian was forced to become an unpaid agrarian laborer and was allowed limited food and rest. Under the four-year plan, at least one million Cambodians died as a result of starvation, disease, or murder. Anyone suspected of betraying the government was killed.

Throughout the late 1970s relations with Vietnam worsened. Pol Pol's government was toppled on January 7, 1979, by the invading Vietnamese army. Pol Pot himself never surrendered; he fled into the jungle near Thailand and led a Khmer Rouge guerrilla war from there. As Cambodia worked to return to normalcy, it remained under threat from the Khmer Rouge, which never recognized the Phnom Penh government and claimed some western provinces on the border with Thailand. Pol Pot maintained his opposition to the new coalition government until the national elections of 1993. Never brought to justice for having decimated his country, he died on April 15, 1998, in the Thai-Cambodian border area.

SEE ALSO *Communism; Dictatorship; Genocide; Khmer Rouge; Killing Fields; Socialism; Vietnam War*

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Lay Vicheka

POLICING, BIASED

Biased policing refers to the practice of law enforcement officers or agencies of systematically targeting certain groups in society for suspicious activities. Instead of being judged as innocent until proven guilty, targeted groups tend to be considered guilty first and questioned about their innocence later. Police biasing often takes the form of racial and ethnic profiling. However, biased policing may also be directed at gay men and lesbians, people who

occupy the lower-class rungs of society, or groups that do not exemplify the normative behaviors expected in society (e.g., biker gangs, religious cults). In the past, research on biased policing was typically centered on local and state law enforcement agencies, such as city and state police and sheriff's departments. However, since about the mid-1990s there has been increasing research on federal law enforcement agencies that engage in biased policing (e.g., the Federal Bureau of Investigation, the Department of Homeland Security).

Biased policing is a form of institutional and systemic racism. Using Eduardo Bonilla-Silva's (2006) notion of the "racialized social system," biased policing can be seen as one form of social control against groups who are considered "outsiders." As such, biased policing helps to maintain the white middle-class structure that dominates U.S. society. This form of negative profiling has existed in American society since the slavery era, when "black codes" were institutionalized to regulate both free and enslaved blacks (Jordon 1968; Marable 2000). Both groups were heavily monitored by slave patrols, whose duties included not only punishing runaway slaves but also free blacks who were considered threatening to whites. These slave patrols were usually organized groups of three to six white men who patrolled plantations, state borders, and state roads, profiling people who did not fit the skin color and phenotype of white Europeans.

Although most law enforcement agencies have policies that clearly state that any form of biased policing, including racial profiling, is deemed unacceptable, the American Civil Liberties Union maintains that tens of thousands of Americans face some sort of biased policing everyday. Furthermore after the September 11, 2001, terrorist attacks on the World Trade Center in New York City and the Pentagon in Virginia, biased policing and, more specifically, racial profiling reached a new high in regard to the number of people who are affected by these extreme forms of social control.

The form that biased policing takes varies depending on the law enforcement agencies involved, the personal characteristics of the law enforcement officers, whether state or federal laws are involved, and the location. For example, after the passage in 2001 of the Patriot Act, designed to expand the authority of U.S. law enforcement agencies for the purpose of fighting the threat of terrorism in the United States, an increase in racial profiling against Arab and Muslim Americans took place and was justified under the guise of fear (Muneer 2002). Forms of biased policing include the stopping of motorists, the detention of a person or group of people, or the searching of a person's vehicle, home, or body based on any number of characteristics, including race, ethnicity, gender, age, or income status. Common forms of biased policing include harassment of specific groups of people at malls, workplaces, and even political gatherings. For example, numerous blacks reported being harassed by local police on their way to voting booths during the 2000 presidential election in Florida. In addition a large number of Latinos report harassment by law enforcement officers on their way to work, school, or home as a result of controversies concerning immigration in the United States.

RACIAL PROFILING

Of the various forms of biased policing, the most notable and well researched concerns discrimination by race or ethnicity. This type of biased policing is known as *racial profiling* and refers to the systematic targeting of a person or group based solely on race or ethnicity. In other words, other than a person's race or ethnicity, there is no reasonable justification for stopping or detaining him or her. The issue of racial profiling has been such a frequent problem for blacks and Latinos in the United States that new slang terms have been created to describe such instances (Lundman and Kaufman 2003). For example, the stopping and searching of blacks and Latinos for "suspected" traffic violations is commonly referred to as DWB (i.e., driving while black) or DWM (i.e., driving while Mexican).

After the 2001 terrorist attacks, U.S. law enforcement agencies slightly shifted their focus on blacks and Latinos to include Arabs and Muslim Americans and even South Asian Americans as racially profiled targets. The matter has become increasingly complex as poll data indicate that a majority of blacks and Latinos may support racial profiling against Arab and Muslim Americans.

COUNTERARGUMENTS

Although numerous studies indicate that biased policing and racial profiling continue to be a major issue in the United States, a number of studies argue that the issue of racial profiling has been overstated or that such practices are necessary given the terrorist threat. For instance, Michael Smith and Matthew Petrocelli (2001) argued that while black drivers were pulled over more frequently than white drivers, there was no data that suggested that vehicles driven by blacks were more frequently searched. Moreover, controlling for certain variables, blacks were more likely to be issued a warning, whereas white drivers were more likely to be ticketed or arrested. In addition to research that favors biased policing, numerous articles in the mainstream press argue that racial profiling does not occur. For example, Heather MacDonald (2003) reported in the *Los Angeles Times* that police officers who were labeled as racist were in fact just doing their jobs. MacDonald further argued that what appeared to be racial profiling was really just "good policing." However, the

problem with the majority of such studies and articles resides in their limited sampling techniques; as such, they do not reflect the overwhelming data that find that biased policing and racial profiling continue to be major issues in the United States.

SEE ALSO *Colorism; Crime and Criminology; Discrimination; Discrimination, Racial; Discrimination, Statistical; Inequality, Racial; Law and Order; Phenotype; Race-Blind Policies; Race-Conscious Policies; Racism; September 11, 2001; Signals; Stereotypes*

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David G. Embrick

POLICY, FISCAL

Fiscal policy is the use of a government's spending, taxing, and debt issuance authority for the purpose of influencing economic activity. The origins of fiscal policy are rooted in the worldwide economic depression of the early twentieth century (1929–1939). Prior to that time, there was little in economic theory or practice suggesting the deliberate use of the government's authority to achieve particular economic ends. Rather, emphasis was placed on the government's role in creating a favorable environment for private economic activity.

DYNAMIC PRINCIPLES

A tool for understanding fiscal policy is government's intertemporal budget constraint. This constraint relates the path of government spending to the path of government receipts. It highlights the fact that a government's budget need not be balanced each time period. However, the present value of current and future government spending must equal the present value of government revenue.

To fix the ideas, let G equal current government spending, G^f equal future government spending, T equal current taxes imposed on the private sector, T^f equal future taxes imposed on the private sector, and r equal the real rate of interest. Further, let D equal the government's current budget deficit. That is, $D = G - T$. The government finances the deficit by selling an equal amount of government bonds.

In the future, the government must collect enough taxes to repay the debt (including interest) and to pay for future government purchases. That is, $T^f = (1 + r)D + G^f$. Substituting into this latter equation the expression for D and rearranging yields a government's intertemporal budget constraint:

$$G + G^f / (1 + r) = T + T^f / (1 + r)$$

The left-hand-side of this expression is the present value of government purchases. The right hand side is the present value of government taxes. A fundamental fiscal policy lesson learned from this analysis is that all government spending ultimately must be reconciled with current and/or future government taxes so that the government's intertemporal budget constraint is satisfied.

Recognition of the government's budget constraint is crucial for assessing the impact of fiscal policy on long run economic growth. Neoclassical growth theory suggests that fiscal policy's only impact is on the level of output per capita and the transition dynamics from one per capita output level to another. On the other hand, endogenous growth models suggest that fiscal policy can affect the steady state rate of economic growth. Key to this prediction is the distinction between distortionary and non-distortionary taxation and productive and nonproductive expenditures. Using data from twenty-two Organisation for Economic Co-operation and Development (OECD) member countries, in 1999 Richard Kneller, Michael Bleaney, and Norman Gemmell demonstrated that if appropriate account is taken of the implicit financing of government spending, then the evidence suggests that distortionary taxation (income, profit, property, and payroll taxes) reduces growth and productive government expenditure (education, health, housing, and transportation spending) enhances growth.

STABILIZATION CAPACITIES

Because the government is not constrained to balance its budget period-by-period, it may adopt other objectives for its spending and taxing authority in the short run. One short-run objective that has been adopted is stabilization of the macroeconomy. Discretionary fiscal policy seeks to moderate fluctuations in overall economic activity by adjusting government expenditure or taxes. (Whether there is much scope for effective discretionary fiscal policy is controversial.) Traditional macroeconomic theory suggests that for a closed economy performing below its potential, an increase in government expenditure will stimulate aggregate expenditure. Private business firms respond to the increase in expenditure by raising production and employment. The total rise in production exceeds the increase in government spending because of a chain reaction of private consumption spending induced by the initial government expenditure. This chain reaction of spending is called the multiplier. An alternative, though slightly less potent, way for the government to trigger a chain reaction of spending is to reduce the amount of taxes it collects from the private sector. These policies also work in reverse. Therefore, if the economy is performing above its potential, the government can reduce its expenditures or raise taxes to prevent the economy from overheating.

Empirical evidence from the United States in the post–World War II period suggests that shocks to government spending and taxes effect real gross domestic product (GDP) in a manner that is broadly consistent with the aforementioned description. According to a 2002 study by Olivier Blanchard and Roberto Perotti, increases in government spending raise real GDP contemporaneously and over time. The peak dynamic effect of the increased spending on GDP occurs between one and fifteen quarters in the future. Tax increases, on the other hand, lower real GDP contemporaneously and over time. The peak dynamic effect of tax increases on GDP occurs between five and seven quarters in the future.

In order to detect the impact of discretionary fiscal policy, it is necessary to account for important yet passive changes in spending and taxation by a government. Automatic stabilizers are changes in spending and taxation that occur in response to changes in economic activity. They do not require initiative by a government. Transfer payments such as unemployment insurance and tax payments linked to income are examples of automatic stabilizers. Net tax payments (taxes minus transfers) tend to rise during economic expansions and fall in recessions.

OPEN ECONOMY CONSIDERATIONS

The effectiveness of fiscal policy in economies open to international trade depends on several factors, including whether a country is large or small relative to the size of the world economy, whether capital can flow freely in and out of the country, and whether a country's exchange rate is fixed or floating.

Consider, for example, the case of a small country with capital mobility and a flexible exchange rate. Such a country takes the world interest rate as given. Further, the domestic interest rate equals the world interest rate plus a risk premium. An increase in government expenditure increases aggregate spending. The rise in spending will cause an incipient rise in the domestic interest rate. Capital from abroad will be attracted to the domestic country causing the country's exchange rate to appreciate. Net exports will fall in response to the appreciation, thereby choking off the expansion of domestic production. In the end, there will be no expansion of total output. Fiscal policy's only impact will be to change the composition of the initial level of output. The government sector is larger. The export sector is smaller. The theoretical prediction that fiscal policy is totally ineffective in this case stands in stark contrast to the closed economy case previously discussed.

Canada is a relatively small country whose characteristics closely match those described. The evidence from Canada suggests that the impact of fiscal policy on economic activity at the business cycle frequency is small at best. In 2005 Perotti estimated that the cumulative response of real GDP to positive shocks to government spending is positive but less than one, suggesting that there is no multiplier effect. In fact, in the post-1980 period, the cumulative response of real GDP to positive shocks to government spending is actually estimated to be negative. Tax cuts are estimated to stimulate economic activity in Canada. This finding, however, appears to be particular to Canada as it was not the case in any of the other OECD countries studied by Perotti.

DIFFICULTIES WITH FISCAL POLICY

Several issues make the theory and practice of fiscal policy controversial and difficult. First, there is uncertainty as to how fiscal policy should be measured. A generational accounting approach, such as the one taken by Laurence Kotlikoff, would focus on the lifetime tax burden born by different age cohorts. Second, lags in the recognition of the need for a policy change, the design of a new policy, and the implementation of a new policy may render fiscal policy too ponderous to be timely. Third, private sector expectations may thwart fiscal policy. According to a 2003 article published by Alan Auerbach in *Brooking Papers on Economic Activity*, tax changes known to be temporary, for example, are likely to have different affects than those that are permanent. Finally, fiscal policy makers may not be

able to resist the temptation to renege on tax and spending promises in order to realize short-term gains. According to Edward Prescott's 2004 work, this time inconsistency problem may cause more damage to the economy in the long run because the private sector may lose confidence in the government.

SEE ALSO *Business Cycles, Real; Multiplier, The; Phillips Curve; Policy, Monetary; Shocks; Treasury View, The*

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Philip N. Jefferson

POLICY, FOREIGN

SEE *Foreign Policy.*

POLICY, MONETARY

Monetary policy is the management of money, credit, and interest rates by a country's central bank. Unfortunately, this short definition is clearly inadequate. What is money? What is credit? What is an interest rate? What is a central bank and how does it control them? And, most importantly, why should anyone care? The purpose of this entry is to answer these questions (for more detail, see the relevant chapters of Stephen G. Cecchetti [2006]).

A FEW BASICS

Money is an asset that is generally accepted as payment for goods and services or repayment of debt; money acts as a unit of account, and serves as a store of value. That is, people use money to pay for things (it is a means of payment); quote prices in dollars, euros, yen, or the units of our currency (it is a unit of account); and use money to move purchasing power over time (it is a store of value). *Credit* is the borrowing and lending of resources. Some people have more resources than they currently need (they are savers) while others have profitable opportunities that they cannot fund (they are investors). Credit flows from the savers to the investors. And an *interest rate* is the cost of borrowing and the reward for lending. Since lenders could have done something else with their resources, they require compensation—interest is rent paid by borrowers.

THE CENTRAL BANK

The U.S. Federal Reserve System, the Bank of Japan, and the Bank of England are all central banks. Nearly every country in the world has a central bank. It is easiest to understand a central bank by looking at what it does (for a history of money and central banks, see Glyn Davies [2002]). A modern central bank both provides an array of services to commercial banks (it is the bankers' bank) and manages the government's finances (it is the government's bank). While not universally true, we will assume that only banks and governments have accounts at central banks. As the bank for bankers, the central bank holds deposit accounts and operates a system for interbank payments that enables commercial banks (the ones the public uses) to transfer balances in these accounts to one another. The central bank is also in a unique position to provide loans to commercial banks during times of crisis—more on this shortly.

Like any individual or business, the government needs a bank to make and receive payments. So, the central bank keeps an account for the government. When the government wants to make or receive a payment, it needs a bank just like the rest of us. The central bank does that job. In addition, the government gives the central bank the right to print money—that is the paper currency that people use in everyday life.

At its most basic level, printing money is a very profitable business. A $100 bill costs only a few cents to print, but it can be exchanged for $100 worth of goods and services. It is logical then that national governments create a monopoly on printing money and use the revenue it generates to benefit the general public. Also, government officials know that losing control of the money printing presses means losing control of inflation.

CONTROLLING MONEY, CREDIT, AND INTEREST RATES

The fact that the central bank has the license to issue money makes it unique. If individuals want to make a purchase, they need to have the resources to do it. So, for example, someone using a debit card to purchase groceries

will have to have sufficient balances in a commercial bank account to cover it. If the grocery purchaser does not have sufficient resources of his own, he will need the financial assistance of someone who is willing to make him a loan. The central bank is different. If the central bank wants to buy something—say a government-issued bond—it can just create the liabilities to do it. Essentially it can issue the money. Importantly, the central bank can expand the size of its balance sheet at will. No one else can do this.

The central bank uses its ability to expand (and contract) its assets and liabilities to implement monetary policy. Figure 1 is a simple version of the central bank's balance sheet, stripped of a number of incidental items (like buildings and gold). When looking at any balance sheet, the most important thing to remember is that assets equal liabilities, so any change in one side must be matched by a change in the other. When a central bank purchases a government security, increasing its assets, this is normally matched by an increase in commercial bank reserve liabilities. Banks hold these reserves both because they are required by law and in order to make interbank payments.

At its technical, day-to-day level, monetary policy is all about buying and selling securities to control the quantity of reserves in the commercial banking system. Modern central banks, like the Federal Reserve or the European Central Bank, use their monopoly over the supply of commercial bank reserves to control an interest rate of their choosing. In some, like the Reserve Bank of Australia, it is the deposit rate the central bank pays commercial banks on the balances in their reserve account. In the United States, it is the *federal funds rate*—the rate banks charge each other for overnight loans of reserves. The Federal Reserve decides on its target for the federal funds, and then buys and sells securities to set the supply of reserves to hit this target. Twenty-first century monetary policy is not about controlling the quantity of money or its growth rate; it is about interest rates. (For a technical discussion of the use and the abandonment of money as a target, see Laurence Meyer [2001a]. For a detailed discussion of the monetary policy of the European Central Bank, see Otmar Issing et al. [2001]).

The Central Bank's balance sheet

	Assets	Liabilities
Government's bank	Government securities	Currency
	Foreign exchange reserves	Government's account
Banker's bank	Loans	Accounts of the commercial banks (reserves)

Figure 1.

It is important to note that some central banks decide to use their ability to control the size of their balance sheet to target something other than interest rates. The natural alternative is the exchange value of their currency—that is, the value of the number of dollars it takes to purchase the currency issued by another central bank. But, by the beginning of the twenty-first century, this had become increasingly rare. A central bank cannot control the total quantity of money and credit in the economy directly, and no modern central bank tries.

Finally, in addition to the size of their balance sheet, central banks have two additional tools. During times of financial stress, the central bank stands ready to provide loans to banks that are illiquid (so they cannot make payments) but still solvent (so their net worth is positive). Policymakers set interest rates on these loans. When the lending is done properly, this eliminates financial systemwide panics. In addition, central banks in many countries are given the power to set requirements governing how banks hold their assets. So, for example, they may require a certain level of reserve deposits, or prohibit the holding of common stock.

MONETARY POLICY OBJECTIVES

The central bank is part of the government. Whenever an agency of the government involves itself in the economy, people need to ask why. What makes individuals incapable of doing what they have entrusted to the government? In the case of national defense and pollution regulation, the reasons are obvious. Most people will not voluntarily contribute their resources to the army, nor will a country's citizens spontaneously clean up their own air.

The rationale for the existence of a central bank is equally clear. While economic and financial systems may be fairly stable most of the time, when left on their own they are prone to episodes of extreme volatility. In the absence of a central bank, economic systems tend to be extremely unstable. The historical record is filled with examples of failure, such as the Great Depression of the 1930s, when the American banking system collapsed and economic activity plummeted.

Central bankers adjust interest rates to reduce the volatility of the economic and financial systems by pursuing a number of objectives. The three most important are: (1) low and stable inflation; (2) high and stable real growth, together with high employment; and (3) stable financial markets. Let's look at each of these in turn.

The rationale for keeping the economy inflation-free is straightforward. Standards, everyone agrees, should be standard. A pound should always weigh a pound, a mea-

suring cup should always hold a cup, a yardstick should always measure a yard, and one dollar should always have the same purchasing power. Maintaining price stability enhances money's usefulness both as a unit of account and as a store of value.

Prices are central to everything that happens in a market-based economy. They provide the information individuals and firms need to ensure that resources are allocated to their best uses. When a seller can raise the price of a product, that is supposed to signal that demand has increased, so producing more is worthwhile. Inflation degrades the information content of prices, reducing the efficient operation of the economy.

Turning to growth, central bankers work to dampen the fluctuations of the business cycle. Booms are good; recessions are not. In recessions, people lose their jobs and businesses fail. Without a steady income, people struggle to make their auto, credit card, and mortgage payments. Consumers pull back, hurting businesses that rely on them to buy products. Reduced sales lead to more layoffs, and so on. The longer the downturn goes on, the worse it gets.

Finally, there is financial stability. The financial system is like plumbing: when it works, it is taken for granted, but when it does not work, watch out. If people lose faith in banks and financial markets, they will rush to low-risk alternatives, and the flow of resources from savers to borrowers will stop. Getting a car loan or a home mortgage becomes impossible, as does selling a bond to maintain or expand a business. When the financial system collapses, economic activity also collapses.

THE POLICY FRAMEWORK

Central banks use their ability to control their balance sheet to manipulate short-term interest rates in order to keep inflation low and stable, the growth high and stable, and the financial system stable. But what makes monetary policymakers successful? Today, there is a clear consensus that to succeed a central bank must be: (1) independent of political pressure; (2) accountable to the public; (3) transparent in its policy actions; and (4) clear in its communications with financial markets and the public.

Independence is the most important of these elements. Successful monetary policy requires a long time horizon. The impact of today's decisions will not be felt for a while—not for several years, in most instances. Democratically elected politicians are not a patient bunch; their time horizon extends only to the next election. Politicians are encouraged to do everything they can for their constituents before the next election—including manipulating interest rates to bring short-term prosperity at the expense of long-term stability. The temptation to forsake long-term goals for short-term gains is simply impossible to resist. Given the ability to choose, politicians will keep interest rates too low, raising output and employment quickly (before the election), but resulting in inflation later (after the election).

Knowing these tendencies, governments have moved responsibility for monetary policy into a separate, largely apolitical, institution. To insulate policymakers from the daily pressures faced by politicians, governments must give central bankers control over their budgets, authority to make irreversible decisions, and long-term appointments.

There is a major problem with central bank independence: It is inconsistent with representative democracy. Politicians answer to the voters; by design, independent central bankers do not. How can people have faith in the financial system if there are no checks on what the central bankers are doing? The economy will not operate efficiently unless policymakers are trusted to do the right thing.

The solution to this problem is twofold. First, politicians establish the goals for the independent central bankers, and second, monetary policymakers publicly report their progress in achieving those goals. Explicit goals foster *accountability* and disclosure requirements create *transparency.* While central bankers are powerful, elected representatives tell them what to do and then monitor their progress.

The institutional means for assuring accountability and transparency differ from one country to the next. In some countries, such as the United Kingdom and Chile, the government establishes an explicit numerical target for inflation. In others, such as the United States, the central bank is asked to deliver price stability as one of a number of objectives (for a discussion of the structure of central bank objectives, see Laurence Meyer [2001b]).

THE FUTURE OF MONEY AND MONETARY POLICY

In the early 1980s, nearly two out of three of the countries in the world were experiencing inflation in excess of 10 percent per year. In the early twenty-first century, this is one in six. Two decades ago nearly one country in three was contracting. By 2005, five in six countries were growing at a rate in excess of 2 percent per year. But not only has inflation been lower and output higher, both inflation and output appear to be more stable. And careful empirical analysis shows that monetary policy is a likely source of this low, stable inflation and high, stable growth (see Cecchetti, Flores-Lagunes and Krause [2006]).

Central bankers' success can be traced to their ability to control interest rates. And their ability to manipulate interest rates relies on their control of the size of their balance sheet. This, in turn, requires that banks and individuals actually demand central bank liabilities. That is, people have to want to hold the currency issued by central banks,

and commercial banks have to demand reserves. Won't the day come when no one wants this stuff anymore? And when that happens, won't monetary policy disappear?

The answer is almost surely no. While it is true that the creation of a secure and anonymous substitute for paper currency will ultimately cause dollar bills and euro notes to disappear, reserves are different. The central bank operates an interbank payments system based on reserves. It does this to ensure that, even during periods of crisis, banks can continue to make payments. And to ensure that commercial banks use their payments system, the central bank offers cheap access to this system—that is, it subsidizes the cost of the system's operation. So long as banks want reserves, there will be monetary policy (for a discussion of the challenges facing monetary policy makers, see Gordon Sellon and Chairmaine Buskas [1999] and Laurence Meyer [2001c]).

SEE ALSO *Business Cycles, Real; Inflation; Policy, Fiscal; Treasury View, The; Unemployment*

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POLICY, PUBLIC

SEE *Public Policy.*

POLICY ANALYSIS

Policy analysis is the art and science of determining which public policy, from among alternatives, will most likely achieve a determined set of goals. The art of policy analysis involves putting together pieces to determine what will work in public policy. Central to policy analysis is an understanding of the evolutionary process of policy development as policymakers strive to improve the policymaking process in general and specific policies in particular. Policy analysis is the activity of generating knowledge both *of* and *in* the policymaking process. Creating such knowledge includes the examination of the causes, consequences, and performance of public policies and programs. Unless this knowledge is shared with decision makers and the relevant public, the process of policy analysis is unfinished.

Policy analysis is a relatively young field of study. Traditionally, institutions and the processes of public policymaking were the primary concern of social scientists and political scientists. In 1951 sociologist Daniel Lerner (1917–1980) and political scientist Harold Lasswell (1902–1978) introduced the concept of "the policy sciences." Their work is often cited as the foundation for the evolution of how public policies are studied. Over time, the traditional approach expanded to include analysis of the content and process of actual policies, a discipline that is now commonly referred to as *policy analysis*.

Policy analysis, a part of the larger field of policy studies, evolved and developed in the 1960s and 1970s. Various stimuli have been cited as promoting the growth of the field. Social concerns over civil rights, women's liberation, the Vietnam War (1957–1975), the politics of the Middle East, rising energy costs, inflation, and environmental protection were among the stimuli. The expanding relationship between government and the academic community, along with government's increasing reliance on the assistance of the academic community for developing methods of maximizing output in the face of diminishing resources, also facilitated the expansion of the field. Additionally, government offered expanding research funding and job opportunities as it sought assistance in addressing the above-mentioned social issues. New analytical and interdisciplinary methods allowed academics and think tanks to capitalize on government expansion. The Keynesian revolution in economics (1930s and 1940s) is one such development. This revolution allowed for public sector intervention in the economic decision-making process. Applied policy research continues to play a major

role in contemporary government decision making around issues of efficiency, effectiveness, and equity.

Although heavily influenced by the disciplines of political science, policy analysis is eclectic as it borrows from and lends to a myriad of academic disciplines. Economics, for example, contributes cost-benefit analysis and models relating to the optimal allocation of resources. Policy analysis also incorporates the emphasis in economics on prescriptive conclusions. Psychology lends to policy analysis the research paradigm of experimental and control groups and various techniques of statistical inference. Additionally, psychology provides theories and insights on the application of rewards and punishment as tools for promoting specific behaviors. Sociology's concern with social problems has also added to the development of the study of public policies. In addition, the comparative analysis of public policies has roots in anthropology, geography, and history.

Methods of policy analysis vary from analyst to analyst. Various schools of thought, such as behaviorist, postbehaviorist, and rational choice theory, among others, influence analysts in terms of what types of questions are asked and what methods are employed to answer these questions. Public policy analysts rely on a number of different approaches. Analysts can take an empirical approach, designed to primarily determine the causes and consequences of public policies. A central goal of such an approach is to understand a policy problem. Such an approach tends to yield more descriptive and predictive information. An analyst can also use an evaluative approach, where the central question concerns the value or worth of past or future policy prescription. Finally, analysts using a normative approach ask what *should* be done. Their work thus yields more prescriptive types of knowledge. Analysts can also study policy content or the policy process itself.

Over the years, different methodological tools and approaches have been employed in the analysis of public policy. Theories derived from management, organization development, and psychology, in conjunction with the use of economic and political models, influence the techniques used by policy analysts. Analysts draw from a bank of both qualitative and quantitative methods. These include, but are not limited to, case studies, economic modeling, quasi-experimental approaches, causal-path analysis, operations research, and correlations analysis.

SEE ALSO *Public Policy; Public Sector*

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Julia S. Jordan-Zachery

POLICY EXPERIMENT

SEE *Social Experiment.*

POLICY PROCESS

SEE *Public Policy.*

POLITICAL BUSINESS CYCLES

SEE *Business Cycles, Political.*

POLITICAL CONVENTIONS

National political party conventions have been the scene of some of the most dramatic moments in U.S. electoral history and have often changed the course of that history. These weeklong gatherings, held in the summer months every four years, enable delegates of the major political parties to meet and officially nominate their candidates for the presidency and vice-presidency and adopt a statement of principles. Despite this rich history, various circumstances fostering a more egalitarian nominating process and the explosion of instantaneous modern media coverage of events have rendered modern national party conventions less relevant than those of the past.

ORIGINS

Early in the nation's history, the congressional leaders of political parties met in party *caucuses* to select presidential candidates. These meetings were sometimes held in secret. In the 1824 presidential election, Andrew Jackson (1767–1845) won 43.9 percent of the popular vote, but because no candidate had received the requisite number of electoral votes to win the presidency, the election was thrown into the House of Representatives as directed by the

Constitution. Thanks to some adroit political dealing, John Quincy Adams (1767–1848), who had won just over 30 percent of the popular vote, was elected president. Supporters of Jackson decried *King Caucus* and accused Congress of ignoring the will of the people. Presidential nominating caucusing disappeared after the 1824 election in favor of national nominating conventions. The first such convention was held by a single-issue party, the Anti-Mason Party, at Baltimore, Maryland, in 1831. Other than being the first party to hold a national convention and running a candidate who won seven electoral votes in the election, the Anti-Mason Party faded from the scene after its significant historical contribution. The Democratic and Whig Parties held national conventions in 1832, and the Republican Party did so in 1854 after replacing the defunct Whigs as a national party.

Ideally national conventions were to be a transparently democratic nominating setting. This was hardly the case, however. Delegates to party conventions were almost always selected by and/or under the control of the party *boss*, or individual who had risen to power via enormous networks of support or through less-than-ethical methods. In the late nineteenth century, New York state politics were controlled by Senator Thomas Platt (1833–1910). His dislike of, and inability to control, New York governor Theodore Roosevelt (1858–1919) led Platt to demand enough delegates to the 1898 Republican Convention to nominate Governor Roosevelt for the vice-presidency, in effect removing him from office in New York. Although Roosevelt was eventually elected vice president and Platt and his colleagues congratulated themselves on their successful tactics, the plan backfired when President William McKinley (1843–1901) was assassinated, and Roosevelt became president of the United States in 1901.

Often, party conventions presented previously unknown individuals to head presidential tickets. These *no-names* resulted from deadlocked ballots and political dealing and intrigue behind closed doors. In 1844, the Democratic Convention nominated James K. Polk (1795–1849) after nine ballots. Polk was not even mentioned on the first seven of those ballots, but was seen as an acceptable compromise and, finally, the nominee. Polk won the general election. Similarly Franklin Pierce (1804–1869) was not even a candidate entering the 1852 Democratic Convention, but became the nominee and won the presidency. Intrigue became absurdity when, during the 1924 Democratic Convention, John W. Davis (1873–1955) emerged as the nominee after 103 ballots, a drama that was closely followed by Americans across the land via a new technological development called the radio.

One traditional function of national party conventions is the debate over, and eventual adoption of, a party platform. The platform is a statement of party principles and the purported foundation upon which the party's candidates will conduct their campaigns, and upon which the party stands for the subsequent four years. The proposals approved by the delegates and the stated goals are called planks. Platforms are now often ignored both by the candidates and the public at large, though they were much more useful in outlining a party's views for the public before the evolution of mass media. Platform committees construct a platform document for delegate approval. At times, planks relating to difficult issues such as abortion have divided delegates, but not enough to make a significant mark during a convention. More often than not, platform planks are not even proposed as policy, yet the adoption of a platform remains an integral part of national conventions.

Although conventions gave at least the appearance of a more open selection process, the 1912 Republican Convention was an early example of an increasing demand for the formation of a primary election system to determine delegate support and party nominees. Theodore Roosevelt, troubled by policies he viewed as overly conservative on the part of his successor, President William Howard Taft (1857–1930), decided to challenge Taft for the Republican nomination in 1912. Roosevelt campaigned in states holding presidential primaries, and swamped Taft everywhere, including the incumbent's home state of Ohio. Taft, however, still controlled enough delegates to carry him to victory at the convention and was the party nominee despite Roosevelt's electoral strength. Roosevelt and his supporters (who chanted Thou shalt not steal! after Taft was nominated) fled to form a third party, and took enough Republican support away from Taft to help make Woodrow Wilson (1856–1924), the Democratic nominee, the next president. No such drama has occurred at modern conventions. The last nomination in doubt during a national convention was the 1976 Republican Convention, in which former California governor Ronald Reagan (1911–2004) nearly toppled incumbent President Gerald Ford (1913–2006). History was made at the 1984 Democratic National Convention when the party nominated the first female candidate for the vice-presidency, Geraldine Ferraro (b. 1935), though her selection was not a surprise before the convention convened.

CONVENTIONS AND THE PRIMARY SYSTEM

Since 1936, every successful presidential candidate has been nominated by his party convention on the first ballot. The advent of television and live coverage of conventions by the major networks, however, did capture some of the traditions of old. Conventions in the 1950s and

early 1960s retained the spectacle of the delegates choosing the ticket, and often the presidential nominee would throw the choice of his running mate to the convention floor. At the 1956 Democratic Convention, Adlai Stevenson (1900–1965) let the delegates choose and a dramatic race ensued between Senator Estes Kefauver (1903–1963) and Senator John F. Kennedy (1917–1963). Kennedy lost, but the nation watched as he delivered a graceful concession speech that many believed propelled him as a favorite for the 1960 nomination, which he eventually won. Even in 1960, though, Kennedy had to fend off a convention-week challenge from Lyndon B. Johnson (1908–1973), who did not participate in primaries as Kennedy had. Johnson was eventually the vice-presidential nominee.

Demand for a national primary system for choosing presidential nominees reached its peak at the 1968 Democratic National Convention in Chicago, Illinois. Senator Eugene McCarthy (1916–2005) of Minnesota had won much primary support for his stances against the Vietnam War and the increasingly unpopular incumbent Democratic president, Lyndon B. Johnson. Johnson, who declined to run for reelection, favored his vice president, Hubert H. Humphrey (1911–1978), who controlled the delegates and won the nomination. Humphrey's nomination and his alliance with Chicago mayor and political boss Richard J. Daley (1902–1976), whose Chicago police forcefully repelled antiwar demonstrations throughout the convention—all of it seen on live television across the country—led to the formation of a committee that revamped the nominating process of the Democratic Party in favor of primary elections preceding the national convention. The Republican Party followed suit.

The Democratic and Republican parties, of course, differ in how each allocates delegates to the national convention. Democrats divide delegates according to how each state voted in the previous three elections; party leaders and certain elected officials hold 15 percent of the total number of delegates. Republicans assign delegates who are already pledged to vote for a certain candidate in proportion to the votes the candidates received in the primaries. The primary election season begins in January of the election year, usually with the New Hampshire primaries and Iowa caucuses (in which voters gather in schools, homes, and community centers to debate and vote), and continues in many other states until June. Most of the primary votes are cast before April, and the nominations of each party are not in doubt by the time the last primaries are held.

While the primary system is a more democratic method for selecting a presidential nominee in that it places the selection in the hands of voters rather than convention delegates, it has relegated the nomination function of the national convention to mere formality. Reliance upon the primary system to find a party's presidential nominee has meant that presidential campaigns now begin two and sometimes three years ahead of the date of the election, and candidates are obliged to raise millions of dollars in campaign contributions to remain competitive in such a long process. The amount of money that changes hands during a presidential election has led many lawmakers and commentators to call for more legislation governing the influence of campaign contributions on candidates and officeholders. However, few—if any—in either major party have suggested a return to the convention as the sole nomination process. Thus conventions have taken on a role of showcasing important members of the national party, writing and adopting a party platform, and presenting the presidential and vice-presidential nominees, who give acceptance speeches that attempt to persuade the voting public to support their campaigns.

SEE ALSO *Elections; Primaries; Voting*

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POLITICAL CORRECTNESS

The term *political correctness* was first used in the innumerable and acrimonious discussions among Communist ideologues that took place, both in Russia and among members of Communist parties abroad, after the Bolshevik Revolution of 1917. The term was used, with-

out any irony, to judge the degree of compatibility of one's ideas or political analyses with the official party line in Moscow. Because the Kremlin position kept twisting in response to nationalist and personal interests much more than to ideological consistency, staying politically correct required agile intellectual gymnastics.

After the demise of international Communism around 1990, when there no longer was a correct, official line to be measured against, *political correctness* took on a second life as a term of derision used mostly by ideologues on the Right. The term was now meant to ridicule or stigmatize conformity with the opinions, or simply the vocabulary, of liberal or leftist intellectuals, mostly in academic circles. The principal targets of that ridicule were generally movements aiming to reduce prejudice and stigmatization against racial and ethnic groups, women, homosexuals, people with disabilities, and other marginalized groups.

Since the most noticeable change brought by such movements was the adoption and diffusion of neologisms and euphemisms aimed at enfranchising such groups, the semantics of tolerance became the main butt of ridicule, notably "gender-neutral" language (e.g., *chairperson*); the use of new ethnic labels (such as *Native American* for *American Indian*, *Roma* for *Gypsy*, or *Inuit* for *Eskimo*); or euphemisms (such as *differently abled* for *disabled*, or *educationally challenged* for *slow learner*).

Soon, however, the critics of political correctness extended the scope of their attacks from the relative trivia of semantics to what they saw as a stultifying climate of hypocrisy and conformity, rampant, they alleged, on college campuses. Political correctness, they argued, stifled intellectual discourse in and out of academia, or, worse, punished the pursuit of legitimate research on, for example, the genetic bases of human behavior, sexual orientation, or gender differences.

Some scholars found themselves under assault from both the Left and the Right. For instance, the few social scientists who tried to suggest (and show) that human behavior was the product of biological as well as cultural evolution were simultaneously berated as "secular humanists" by fundamentalist Christians and as racist and sexist by their colleagues in the mainstream of their disciplines.

Intellectual climates keep changing, however, so that what may appear to be the menacing shadow of political correctness from the Left may eventually be neutralized by a rising tide of conservatism from the religious Right and the "intelligent design" movement. Reason and sanity, it seems, are always under attack, from the Left, from the Right, or, indeed, from both simultaneously. The university campus is the main theater for such jousts, and thus, also, the main depository of much nonsense. In the end, each swing of the ideological pendulum leaves a little residue of good sense. We must, however, be vigilant that the university remains the one venue where anything can be said fearlessly, and, thus, where political correctness has no place. Any restriction on intellectual discourse, even when internally generated, clashes with the central mission of the university, namely the critical examination of ideas and the diffusion of knowledge.

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Pierre L. van den Berghe

POLITICAL CULTURE

Although insights into political culture have been part of political reflection since classical antiquity, two developments in the context of the French Revolution laid the groundwork for modern understandings. First, when members of the Third Estate declared "We are the people," they were overturning centuries of thought about political power, captured most succinctly by Louis XIV's infamous definition of absolutism: "*L'etat, c'est moi*" ("I am the State"). Henceforth, sovereignty was seen to reside in society rather than in the monarch and his divine rights. A century later, Max Weber turned this political claim into a scientific one when he defined legitimacy as that which is considered to be legitimate—not only by elites but by the population in general; to understand the political power of the state, social science must therefore attend to its reception and sources in society. Second, when Jean-Jacques Rousseau retheorized the social contract as one in which individual interests were taken up in an overarching "General Will" of the collectivity, he raised the question of how social solidarity could be maintained in the absence of recourse to divine right. His answer was "civil religion," symbols and rituals that establish and dramatize the sense of collective belonging and purpose. A century later, Émile Durkheim took up these themes when he questioned whether modern, complex societies could generate sufficient solidarity to function in a stable manner. Durkheim's interest in what he called collective effervescence (generated in and through communal rituals) and collective representations (embodied in symbols as well as more abstractly in "collective conscience") extended Rousseau's concerns and has underwritten con-

temporary analyses of political culture as the sets of symbols and meanings involved in securing and exercising political power.

Contemporary work on political culture, however, dates more directly to the mid-twentieth century, particularly in the United States. In the wake of World War II (1939–1945), social scientists were motivated to explain why some nations had turned to authoritarianism while others supported democratic institutions. Before and during the war, anthropologists such as Margaret Mead and Ruth Benedict were proponents of a "culture and personality" approach, which asserted that members of different societies develop different modal personalities, which in turn can explain support for different kinds of political programs and institutions. In a somewhat different vein, the German exile philosopher Theodor Adorno and colleagues undertook a massive study during the war into what they called, in the title of their 1950 work, *The Authoritarian Personality*, continuing earlier research by critical theorists into the structure of authority in families, which they believed had led Germans to support authoritarian politics and social prejudice. In a similar vein, Harold Laswell described a set of personality traits shared by "democrats," including an "open ego," a combination of value-orientations, and generalized trust.

Perhaps the most important work on political culture in this period was Gabriel Almond and Sidney Verba's 1963 *The Civic Culture: Political Attitudes and Democracy in Five Nations*, which combined Laswell's description of the democratic personality with at least two strands of social science theory at the time. First, the predominant sociological theory in the United States was that of Talcott Parsons, who explained social order in terms of institutions that inculcated individuals with coherent sets of norms, values, and attitudes—what Parsons called culture—which in turn sustained those institutions through time. In contrast, the so-called behavioral revolution in political science argued that such accounts neglected extra-institutional variables as sources of social order (a concern that could be traced back to Montesquieu in the mid-eighteenth century, who sought external factors—in his case climate—to explain the different forms of law in history); in Parsons, moreover, critics charged that norms, values, and attitudes were more often simply assumed as necessary integrative features of social systems rather than measured empirically (hence the appeal to behaviorism, which in psychology held observability to be the only relevant criterion for science).

The major point of Almond and Verba's comparative study was to address the role of subjective values and attitudes of national populations in the stability of democratic regimes. This fit clearly within the behavioral revolution because it turned to extra-institutional variables (norms, values, and attitudes) to explain political outcomes. Nonetheless, the work was presented as a study of political *culture*, defined as the aggregate pattern of subjective political dispositions in the populace, thus incorporating and, indeed, operationalizing, the Parsonsian concept of culture. On the basis of extensive survey research, *The Civic Culture* theorized three basic orientations toward political institutions and outcomes: parochial, where politics is not differentiated as a distinct sphere of life and is of relatively little interest; subject, in which individuals are aware of the political system and its outcomes but are relatively passive; and participant, where citizens have a strong sense of their role in politics and responsibility for it. *The Civic Culture* rated five countries on these qualities, finding Italy and Mexico to be relatively parochial, Germany to be subject, and the United States and the United Kingdom to be participant political cultures.

Subsequent work in this tradition by Ronald Ingelhart and others has shown that the effect of basic satisfaction with political life and high levels of interpersonal trust (what would later be called "social capital") are analytically distinct from economic affluence, thus arguing forcefully that democracy depends on cultural as well as economic factors. Contemporary authors such as Samuel Huntington have extended this kind of argument about norms, values, and attitudes to the world stage, where they describe a "clash of civilizations" in terms of basic "cultural" differences understood in this way.

Nevertheless, there have been many criticisms of the approach developed by Almond and Verba and their colleagues. These ranged from methodological concerns about the survey instruments to the claim that the approach normatively privileged American-style democracy as the model against which all others must be judged. Still others argued that political culture was being used as a residual category for all that cannot be explained by other theories, and thus has no theoretically defensible conceptual ground of its own. Most trenchant, however, were charges that the way Almond and Verba defined political culture—in terms of subjectivity—eviscerates the importance of culture as symbols and meanings: Without a richer understanding of symbols, meanings, rituals, and the like, critics charged, political culture could not be distinguished conceptually from political psychology: "What 'theory' may be found in anyone's head is not," one set of critics charged, "culture. Culture is interpersonal, covering a range of such theory.… Political culture is the property of a collectivity" (Elkins and Simeon 1979, pp. 128–129).

Indeed, since the 1970s, political culture theory has been radically transformed by a more general cultural turn in social science, brought about by such influences as the symbolic anthropology of Clifford Geertz and the rise of semiotics, structuralism, and poststructuralism in European

anthropology and literary theory. In contrast to older subjectivism, as well as to those who ignore culture altogether, newer work on political culture in the 1980s and 1990s argued that, in Geertz's words, "culture is public because meaning is" (Geertz 1973, p. 12). This work reformulated political culture as a system of meanings sui generis, as "a form of structure in its own right, constituted autonomously through series of relationships among cultural elements" (Somers 1995, p. 131), or as "codes," which could be either manifest or "deep." In this view, political culture can be measured only crudely by survey analysis; instead, it must be excavated, observed, and interpreted in its own terms as an objective structure, on the analogy of language.

However, the rise of various structuralisms in political culture analysis—emphasizing the Rousseau-Durkheim more than the Montesquieu-Weber axis—has required some modifications since the 1990s, when structuralist approaches in general have fallen somewhat out of favor. More recently, many historians, sociologists, and anthropologists have embraced a "practice" approach that emphasizes meaning making rather than meaning systems. While in no way a return to the earlier subjectivism in political culture theory, the practice approach recognizes the limitations of structuralism, in which agents seem to drop out of the picture, or serve only as enactors or carriers of structure. Instead, recent work has emphasized "the activity through which individuals and groups in any society articulate, negotiate, implement, and enforce competing claims they make upon one another and upon the whole. Political culture is, in this sense, the set of discourses or symbolic practices by which these claims are made" (Baker 1990, p. 4).

In sum, political culture theory makes empirical sense out of the French Revolution's claim that sovereignty derives from society rather than the state. One temptation with this recognition, however, is to assume that while states are about power, societies are about meaning and the reception of power. One solution, inspired by Michel Foucault, among others, has been to declare society the true locus of power. The problem is that this misses the ways in which states do indeed set agendas for societies. Recent analyses have thus returned to the political culture of the state (e.g., Bonnell 1997). But they do so without supposing that societies are mere recipients of such productions.

In contrast to much work in political sociology, which has drawn a facile distinction between "merely" symbolic politics and "real" politics, recent political culture theory has thus demonstrated that social life is an ongoing reproductive process. New political culture analysts in particular have focused not only on how political acts succeed or fail to obtain some material advantage but also on how in doing so they produce, reproduce, or change identities. The struggle for position that constitutes politics, we now understand, is always simultaneously strategic and constitutive: As Lynn Hunt has written, "Political symbols and rituals were not metaphors of power; they were the means and ends of power itself" (Hunt 1984, p. 54). Interpreting them and understanding how they are generated and how they work is thus of paramount importance.

SEE ALSO *Almond, Gabriel A.; Civilizations, Clash of; Culture; Dahl, Robert Alan; Discourse; Foucault, Michel; French Revolution; Geertz, Clifford; Huntington, Samuel P.; Ideology; Institutionalism; Kariel, Henry S.; Lasswell, Harold; Norms; Parsons, Talcott; Philosophy, Political; Political Science; Postmodernism; Power; Semiotics; Social Capital; Sociology, Political; State, The; Symbols; Verba, Sidney*

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POLITICAL DEVELOPMENT

SEE *Research, Democracy.*

POLITICAL ECONOMY

The phrase *political economy* came into currency in the seventeenth and eighteenth centuries. It is natural to think that the name refers to a discipline that studies how politics affects the economy and vice versa. Yet the fundamental idea of the original political economists—Adam Smith, David Ricardo, Thomas Malthus—was that an

economy works best when governed least. They believed that there were economic principles that tended to produce the common good if government generally left people alone in their material endeavors. Adam Smith's (1776) famous remark about "the invisible hand" puts the idea succinctly: an individual, through his industry,

> intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention.… By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. (p. 456)

This invisible coordination of individual interest will result in the general welfare only if government allows the market to run on its own principles. It is ironic that the founders of political economy—the "classical economists," as they are now called—rejected a large role for politics in the economy.

While there is irony in calling this view *political* economy, it nonetheless has a rationale. The term *economics* derives from the Greek word for "household." For much of human history, the individual household was expected to meet the needs of its members through its own efforts, without significant help from the state. Nation-states came into being only in the sixteenth and seventeenth centuries, and they were soon expected to have the ability and duty to improve economic well-being. Mercantilist and physiocratic theories were the first expressions of this concern. Both of these, but especially mercantilism, demanded significant intervention in the economy, including protectionist measures to improve a nation's balance of trade.

The political economists reacted to these earlier theories. Their aim was to reveal the proper aim of political activity in economic life. The name *political economy* still made sense for their discipline, even though the proper aim was negative, a matter of minimizing interference.

MARXISM

The next iteration in the life of the phrase *political economy* came with the work of Karl Marx in the mid-nineteenth century. For Marx, the economy dominates politics. In every era (until the final era of communism) there is an economic structure that benefits certain classes and exploits others. The rest of social life, including the state, the law, culture, and dominant ideas and values, exists only to promote the economic structure and to further the interests of those on top. Marx is reasonably categorized as a political economist, given the linkage he sees between economics, politics, and the rest of social life.

There is, however, another irony about the use of the phrase *political economy* here. Marx's most important economic work, *Capital*, is subtitled *A Critique of Political Economy*. His central ideas about society are most clearly laid out in the famous preface to a different work entitled *A Contribution to the Critique of Political Economy*. Marx thus took himself to be rejecting political economy. He was rejecting ("critiquing") the ideas of the classical economists such as Smith and Ricardo. Nevertheless, since he linked economy, politics, ideology, and culture, it became reasonable for later generations to think of Marxism as the archetype of political economy. For many today, political economy means Marxist and nonorthodox explanations of political, legal, and cultural phenomena, and also mainstream ideas by reference to the economic forces they are said to uphold.

NEOCLASSICAL ECONOMICS

By the end of the nineteenth century the phrase *political economy* gave way to the word *economics*. Marginal utility theory, also known as neoclassical economics, developed. Perhaps the strongest ground for the name change was the desire to develop a discipline both independent and scientific, based on the rigorous mathematical tools and laws that marginal utility theory put forth to explain production and exchange. Neoclassical economic thinkers wished to disentangle their discipline from the normatively tinged areas of politics, philosophy, and the moral sciences generally. Thus the concept of political economy slowly gave way to the more scientific-sounding idea of economics. The phrase *political economy* has, however, remained in favor among those who want to resist the narrowness of modern neoclassical economic theory and insist that economic phenomena can only be fully understood through an understanding of the roles played by politics and culture.

Another use of the term *political economy* has developed in the last half century in the work of public choice theorists such as James Buchanan, Gordon Tullock, and Mancur Olson. These scholars seek to explain the behavior of groups, especially governments, on the basis of the idea, central to modern economic theory, that people tend to act as individual utility maximizers. Roughly put, public choice theorists argue that through the political process, politicians attempt to capture benefits for specific groups from the resources of the population generally ("rent seeking"). Thus, citizens are taxed to pay for benefits they do not receive, and the economy is made inefficient. Public choice theorists tend to respond to this "government failure" by returning to the original idea of the classical economists—the less government the better.

In recent years, the idea of political economy has come into use among those interested in global problems. International political economy studies national development and the planetary distribution of wealth. It examines the effects of economic globalization on human well-

being, politics, law, culture, the environment, national sovereignty, and religion. Perhaps the most important question is the effect of economic globalization on the rich and poor. Thinkers scrutinize such organizations as the International Monetary Fund, the World Bank, and the World Trade Organization. Some argue that these represent a modernized version of neoclassical economics, labeled neoliberalism, that tends to work in favor of the rich and powerful and against the weak and poor. Others argue that free trade and liberalized flows of capital and labor will eventually improve the prospects of the global poor. The continuing debate about these issues gives *political economy* a new meaning in the global context.

SEE ALSO *Collective Action; Economics; Economics, Classical; Free Rider; Game Theory; Malthus, Thomas Robert; Political Theory; Public Choice Theory; Ricardo, David; Smith, Adam*

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Bruce Landesman

POLITICAL INEQUALITY

SEE *Inequality, Political.*

POLITICAL INSTABILITY, INDICES OF

Political instability can be defined in at least three ways. A first approach is to define it as the propensity for regime or government change. A second is to focus on the incidence of political upheaval or violence in a society, such as assassinations, demonstrations, and so forth. A third approach focuses on instability in policies rather than instability in regimes (i.e., the degree to which fundamental policies of, for instance, property rights are subject to frequent changes).

INDICES OF POLITICAL STABILITY

Just as there are a number of definitions of political instability, there are also a number of indices designed to measure the level of political instability in countries. Some of these indices have been developed primarily for academic or policy purposes, such as the POLITY indices and the World Bank governance indices. The inclusion of objective data on political violence, such as the number of assassinations and demonstrations, in data sets for academic studies is common.

There are a number of other indices that have been developed primarily to inform international investors of the political risk involved in investing in various countries. A number of companies and institutions offer these types of indices; they include the Political Risk Services (PRS) group's International Country Risk Guide [ICRG] indices; Business Environment Risk Intelligence (BERI); the Economist Intelligence Unit; Moody's and many more.

Finally, there are a number of more specialized indices of phenomena that relate to political instability, such as the Corruption Perceptions Index of Transparency International, and the political risk and civil liberties indices of Freedom House.

The available indices relate to the various definitions of political instability in different ways. The POLITY data contain indices of regime transition and durability, reflecting the first definition. The objective indices of political violence included in the 1997 dataset of William Easterly and Ross Levine are more in line with the second definition. Indices such as those in the ICRG encompass several of the definitions, including instability in terms of potential policy volatility.

The indices broadly fall into two categories in terms of how they are developed. On the one hand there are the objective indices, which typically collect count data on the incidence of certain phenomena (e.g., demonstrations, revolutions, assassinations, and more). On the other hand, perceptions indices, which use expert opinion or surveys, gauge the assessments and insights of certain groups on the degree of political stability in a country.

PERCEPTIONS INDICES

The design of objective indices of political instability does not require much explanation. For perceptions indices,

however, the methodology must be examined more closely. Following is a detailed account of two sets of indices that are frequently used in academic studies; the ICRG indices and the World Bank governance indices developed by Daniel Kaufmann and his colleagues.

The ICRG rating comprises three subcategories of risk: political, financial, and economic. The political risk rating includes twelve weighted variables covering both political and social attributes. The twelve variables are: government stability; socioeconomic conditions; investment profile; internal conflict; external conflict; corruption; military in politics; religious tensions; law and order; ethnic tensions; democratic accountability; and bureaucracy quality. The score on each variable is set by experts based on available information, and is thus based on subjective judgment. The ICRG indices provide monthly data for 140 countries, starting in 1984.

The World Bank governance indices measure six dimensions of governance: voice and accountability; political instability and violence; government effectiveness; regulatory quality; rule of law; and control of corruption. The index of political instability and violence measures the likelihood of violent threats to, or changes in, government, including terrorism. The indices are based on 352 individual variables measuring perceptions of governance, drawn from thirty-seven separate data sources constructed by thirty-one organizations. The sources include inter alia the ICRG indices. The governance indices cover 209 countries and territories for 1996, 1998, 2000, 2002, and 2004.

USE OF INDICES IN ACADEMIC WORK

Indices of political instability are employed in many cross-country empirical studies, which are generally of two types. In one type of studies, political instability is the dependent variable, whose variation is explained by other variables. These kinds of studies are typically conducted in the discipline of political science. In other studies, political instability is an independent variable. This type of analysis is common in the field of economics, where political instability is related to such dependent variables as growth or investment.

In the first type of study, researchers, for instance, seek to establish a link between inequality and political instability. Early studies of this kind use objective indices of political violence as their dependent variable. In later studies such as that of Philip Nel in 2003, objective indices of violence are complemented by the Kaufmann political stability index.

A similar development is apparent in economic studies using political instability as an independent variable. Such studies have shifted emphasis from analyzing political stability in the traditional sense towards institutions. Early studies of growth, such as the 1992 work of Levine and David Renelt, find that the number of revolutions and coups has a robust influence on investment, which in turn influences growth. Daron Acemoglu and his colleagues used indices from the PRS group and POLITY to test the impact of institutions on growth. In the investment literature, Alberto Alesina and Roberto Perotti and Jakob Svensson use indices of political unrest and violence, and indices of government change, as independent variables. Aymo Brunetti and Beatrice Weder, however, include both objective measures and perceptions indices such as those of the ICRG. Moreover, in early-twenty-first century studies of foreign direct investment (FDI), researchers frequently use perceptions indices. Steven Globerman and Daniel Shapiro use the Kaufmann governance indices to explain the pattern of FDI across countries, while Philipp Harms and Heinrich W. Ursprung use a set of ICRG indices for the same purpose.

SEE ALSO *Conflict; Ethnic Fractionalization; Political Science; Revolution; World Bank, The*

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POLITICAL PARTIES

Political parties are organizations subscribing to an ideology or formed around a special interest, with the aim of attaining power within government. They participate in elections, select candidates for public office, mobilize voters, raise funds, articulate political positions, coordinate policy making, develop campaign strategies, and generate symbols of party identification and loyalty. Parties are rooted in political, religious, sectional, ethnic, racial, and/or economic class interests. Parties are frequently coalitions of groups espousing disparate interests. Persons who support a party's candidates, espouse its policies, and work to advance its political objectives are *partisans*. An opposition party does not challenge the legitimacy of the government, but only its policies.

EARLY POLITICAL PARTIES

European political parties formed during the seventeenth and eighteenth centuries to advise the monarchy. The model of a political party can be traced to Great Britain as the Tory and Whig parties fought for control of Parliament. Alexander Hamilton (1755–1804) founded the first U.S. political party, the Federalists, in 1792 to support his fiscal and political policies.

Although a competitive party system is considered to be an essential prerequisite for political freedom today, seventeenth- and eighteenth-century Anglo-American thinkers were wary of political parties, faulting them for serving special interests rather than the public good. Parties often were associated with treason and conspiracy. George Washington (1732–1799), the first president of the United States, in his "Farewell Address" deplored "the baneful effects of the Spirit of Party" (Washington 1796, p. 226). John Adams (1734–1826), the second president, held that "a division of the republic into two great parties … is to be dreaded as the greatest political evil under our Constitution" (Adams 1851, p. 508). Political leaders who serve only the interests of their parties rather than the common good were condemned as corrupt. The Federalists and Jeffersonian Republicans did not regard each other as legitimate opposition parties, but as threats to the republic that should be eliminated. When the Federalist Party collapsed in 1814, the political consensus that ensued—the "Era of Good Feeling"—was cited as evidence that the U.S. system had succeeded.

Others wrote more sympathetically and prophetically about the positive role that parties played in political life. Edmund Burke (1729–1797) saw party competition as a necessary good. Famously defining a party as "a body of men united for promoting by their joint endeavors the national interest upon particular principle in which they are all agreed," Burke declared that "[p]arty divisions whether operating for good or evil are things inseparable from free government" (Burke 1925, p. 229). One of the authors of the U.S. Constitution, James Madison (1751–1836), following the English philosopher David Hume (1711–1776), held in *Federalist Paper* number 10 that parties, or "factions," could not "be removed" because they are rooted in man's natural propensity to differ. The "mischief" of factions that cause, though, could be curbed by fostering a multiplicity of "factions and parties" that would render unlikely "that a majority of the whole will have a common motive to invade the rights of citizens." If they do, sufficient impediments, such as bad roads and poor communications, would make it difficult for them "to act in unison" (Madison 1787, pp. 55–61).

Although there is no mention of political parties in the U.S. Constitution, political parties are a logical outcome of the constitutional system. The First Amendment of the Constitution guarantees freedom of speech and assembly, both necessary conditions for the emergence of voluntary political organizations. The Constitution's delegation of legislative power to elected representatives encouraged the formation of political parties. Parties, in turn, transformed and democratized the constitutional system. Thomas Jefferson (1743–1826) is credited with having created the first popular political party—the Democratic-Republicans later known as the Democratic Party. For his election to the presidency in 1828, Andrew Jackson (1767–1845) transformed this party into the first national, massed-based party.

TYPES OF PARTIES AND PARTY SYSTEMS

Because power is shared between the central government and the individual states, the U.S. federal system of government impedes the development of the type of unified, cohesive parties found in, for example, the European parliamentary systems. A parliamentary system demands greater party discipline because the majority party in Parliament forms the government. Except when the Democrat and Republican parties gather every four years

at their national conventions to nominate candidates for the offices of president and vice president and to write their platforms, they are not in any meaningful way national parties. Rather, each is really a coalition of state parties that are themselves confederations of semiautonomous local governmental parties. Even presidents or candidates for the presidency have only feeble control over state and local party members and elected officials. Under the U.S system, a divided government is possible, when one or both houses of Congress and the presidency are held by different parties.

The ideological spectrum of political parties typically runs from left to right. Right-wing political parties espouse conservative or reactionary views, whereas left-wing parties are associated with progressive or radical policies. The Conservative Party of Canada and the United Kingdom and the Republican Party of the United States are right-wing parties, and the Labour Party of the United Kingdom, the Liberal Party of Canada, and the Democratic Party of the United States are generally considered to be left-wing parties. The British National Front Party and the Front National of France are examples of far right-wing parties, and the Green, Communist, and Socialist parties are all on the extreme left.

Political party systems vary across the world. Nonparty states, such as Saudia Arabia and the United Arab Emirates, have no political parties at all. Single-party states, such as the People's Republic of China, North Korea, and Cuba, allow only one-party rule. The constitution of the former Soviet Union officially established the primacy of the Communist Party. The prohibition against the formation of opposition parties is evidence of the absence of liberty. In contrast, dominant-party states do allow other parties, but one party, such as the People's Action Party of Singapore and African National Congress Party of South Africa, typically wins most if not all elections. In the U.S. South until the 1970s, the Democratic Party won nearly all the general elections.

Two-party states, such as the United States, have two dominant national parties that vie for power. The system for electing the president in the United States entails an indirect election in which the electorate votes for a slate of electors who cast their votes for the president and vice president in an electoral college. This system impedes the formation of third parties: Because the slate of electors for the electoral college are elected in winner-take-all state elections, minor party candidates rarely win sufficient electoral college votes to have an impact on a national election. The election of legislative representatives in winner-take-all district elections further discourages the development of third parties. The principle that the single-member district plurality voting system results in a two-party system has been called Durverger's law, after the French sociologist, Maurice Duverger (b. 1917), who formulated it. The two parties tend to resemble each other because each party gravitates toward the middle in an effort to capture the independent vote.

Multiparty states, such as the United Kingdom, Israel, and Canada, have a number of parties that compete for power. A multiparty system commonly exists in states with a parliamentary form of government. If no party wins a majority of seats in a parliamentary election, a coalition government is formed between two or more parties. The majority of the members of Parliament vote for a leader who serves as the head of the government. Proportional Representation, a scheme of voting used in several European states, encourages further proliferation of parties. Under this system, legislative seats are allocated according to the percentage of popular votes that the party received in the most recent election.

POLITICAL PARTIES AND DEMOCRACY

Modern political scientists regard political parties as beneficial avenues through which political interests and opinions can be channeled. "Democracy," political scientist E. E. Schattschneider (1892–1971) concluded, "is unthinkable save in terms of parties" (Schattschneider 1942, p. 124).

Other thinkers, though, were more cautious in their assessment of the democratic influence of political parties on government. Most significantly, the Italian anarcho-syndicalist sociologist Robert Michels (1876–1936) proposed the iron law of oligarchy which stipulated that no matter how democratic an organization may be initially, it will eventually develop into an oligarchy. All large organizations, to attain greater efficiency and decision-making coordination, tend to concentrate power into the hands of a few. As parties grow in size and complexity, they become more hierarchically organized. True democracy, given the premises of Michels's argument, is practically and theoretically impossible.

The noted American sociologist C. Wright Mills (1916–1962) observed that the top of the American political system was becoming more unified and powerful. He described in his most famous book, *The Power Elite* (1956), the interconnecting relationship between corporate, military, and government leaders. His controversial argument was that there was a growing power gap between a class of people Mills called "the power elite" and the increasingly manipulated and controlled masses.

Not all theorists agreed with the pessimistic implications of these arguments. The popular definition of democracy as "government by the people," Schattschneider contended, exaggerates the power of the public. Rather, a more realistic definition that emphasizes organ-

ization and leadership rather than spontaneous grass-roots politics is needed. "Democracy is a competitive political system," he observed, "in which competing leaders and organizations define the alternatives of public policy in such a way that the public can participate in the decision-making process" (Schattschneider 1960, p. 141).

WEAKENING OF PARTY LOYALTY

Some of the factors that weaken the power and influence of political parties include declining patronage, the direct primary, the role of the media, the proliferation of non-partisan political action committees, and the growing importance of the Internet as a tool for raising campaign funds and disseminating information about candidates and issues. The direct primary diminishes the ability of party leaders to select preferred candidates to run for political office. Patronage induces voters to support the party's candidates by handing out jobs, contracts, or promotions for political reasons rather than merit. As easily accessible information about candidates and issues becomes available to voters through the mass media and the Internet, voters become less dependent on parties. Better informed voters tend to be less deferential to parties and more likely to split their votes among candidates from two or more parties.

Many analysts of the U.S. political party system detect a continuing trend toward party dealignment. A growing number of voters are declining to affiliate with any political party, preferring instead to identify themselves as independents. Since 1988 the plurality of independent voters has steadily increased. In 2004 39 percent of the American voters identified themselves as independents. Polls suggest that a large portion of the American public is allergic to partisan politics. They want candidates who promise to rise above partisan bickering and party loyalty to work on enacting legislation that will effectively solve the nation's most pressing social and economic problems.

The most important function of the national political parties today is to raise funds for candidates and wage "get-out-the vote" campaigns.

SEE ALSO *Burke, Edmund; Campaigning; Centrism; Cleavages; Constitutions; Dahl, Robert Alan; Dealignment; Democracy; Elections; Electoral Systems; Federalism; Hamilton, Alexander; Hume, David; Ideology; Interest Groups and Interests; Left and Right; Left Wing; Madison, James; Michels, Robert; Mills, C. Wright; Oligarchy, Iron Law of; One-Party States; Pluralism; Political Science; Politics; Power Elite; Representation; Right Wing; Schattschneider, E. E.; State, The; Washington, George*

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W. Wesley McDonald

POLITICAL PSYCHOLOGY

Political psychology is an interdisciplinary academic field that emphasizes the psychological dimension of political life. Its practitioners use psychological constructs, such as personality, attitudes, beliefs, values, needs, goals, and expectations, to explain political behavior and to examine the complex and reciprocal relationship between politics and psychology. Political psychologists presume that political actions, like all other forms of human behavior, are the result of interplay between the individual and the environment. Because the scientific study of politics investigates relations and interactions among individuals behaving as political actors, it is inevitably linked with

psychology, which is concerned with human thinking and behavior. Political analysts throughout the ages and across civilizations have been interested in the interrelation between personality traits and political contexts. They have employed many concepts and theories to explain why rulers and subjects think and act as they do, and how their thoughts and actions shape the course of politics. Hence, political psychology focuses on the important role of psychological factors in determining the individual's responses to various contextual/environmental stimuli.

Born in the decades between World Wars I and II, modern political psychology has developed to cover a wide variety of subjects. It traces its intellectual roots back to the eminent American political scientist and communications theorist Harold D. Lasswell (1902–1978). His classic writings, such as *Psychopathology and Politics* (1930), *World Politics and Personal Insecurity* (1935), *Politics: Who Gets What, When, and How* (1936), *Power and Personality* (1948), and *Power and Society* (1950), centered on the impact of individual and social psychological processes—perception, motivation, conflict, cognition, learning, socialization, attitude formation, and group dynamics—as causal factors influencing politics. It was Lasswell's pioneering work in political psychology that contributed to the field's initial unidirectional nature, characterized by a specific focus on how the individual psyche shapes political behavior and values.

Several leading members of the Institute for Social Research at the University of Frankfurt (the so-called *Frankfurt school*) who had arrived in the United States as refugees from Nazi Germany—Max Horkheimer (1895–1973), Erich Fromm (1900–1980), Herbert Marcuse (1898–1979), and Theodor Adorno (1903–1969), among others—developed the concept of *authoritarian personality*, which deals with the causal relationship between political views and personality types. Their ideas inspired Adorno and his associates at the University of California at Berkeley to conduct a seminal empirical study, *The Authoritarian Personality* (1950), based on the F(ascism)-scale measurement, which linked right-wing authoritarianism ("implicit antidemocratic tendencies and fascist potential") to a family pattern of rigidity, discipline, strict rules, and fearful subservience to the demands of parents. Even though it has been widely criticized, including for its heavy reliance on the psychoanalytical perspectives of Freudian theory, this now classic work reveals how certain politically relevant aspects of the psyche lead to fascist or authoritarian belief systems. The F-scale describes a personality type characterized by ethnocentric nationalism, extreme in-group conformity, rigid adherence to conventional values, submissiveness to authority, a readiness to punish, opposition to the free-thinking and kind-hearted, arrogance toward those considered inferior, and other authoritarian attitudes that explain major political outcomes (for instance, the rise of archconservative, ultranationalist, and fascist ideologies and war in twentieth-century Europe).

Political psychology received a significant impetus from and, in turn, was a major contributor to the "behavioral revolution" that swept the field of political science in the 1950s and 1960s. Behavioralist-oriented researchers directed their scholarly attention to new issues such as analyzing the impact of personality characteristics upon political participation and party preference. Lasswell, for one, came up with eight psychological reasons for participation in politics: power, wealth, well-being, skill, enlightenment, affection, rectitude, and respect. Similarly, Robert E. Lane in his *Political Life: Why and How People Get Involved in Politics* (1965) argued that political participation serves a number of conscious and unconscious needs and motives, including power, economic and material gain, friendship and affection, self-esteem, relief from psychic tensions, and a need to understand the world. Thanks to the behavioral revolution, survey methods showed marked improvement from early studies such as *The People's Choice* (1944), the classic study of the 1940 U.S. presidential election conducted by the famous Austrian-born sociologist Paul F. Lazarsfeld (1901–1976), to later ones such as *The American Voter* (1960), the best-known research study of American voting behavior by Angus Campbell, Philip Converse, William Miller, and Donald Stokes. Electoral behavior was examined in relation to various demographic and population variables (age, gender, level of education, type of employment, social class, ethnicity, race, religion, and ideology). The increased sophistication of public opinion polling led to numerous in-depth analyses of belief systems at both the mass and elite level, such as Philip Converse's influential study, "The Nature of Belief Systems in Mass Publics" (in David Apter's *Ideology and Discontent*, 1964), which found that mass public opinion tends to be inconsistent, fickle, and poorly informed.

Largely under Lasswell's influence, early political psychology had centered on the unidirectional impact of individual and social psychological processes upon the polity, but in later decades attention began to be devoted also to the reverse effect of politics on personality systems. Studies of political culture and political socialization, such as Gabriel Almond and Sydney Verba's *The Civic Culture: Political Attitudes and Democracy in Five Nations* (1963), looked at how political systems inform individual behavior and values. By the 1980s most political psychologists had accepted the "bidirectional" nature of the interaction between individual psychology and the polity:

> [T]he perceptions, beliefs, motives, opinions, values, interests, styles, defenses, and experiences of individuals—be they citizens, leaders, group

> members, bureaucrats, terrorists, or revolutionaries—are seen as influencing what they do politically; and, in turn, the political culture, political system, mechanisms of political socialization, political movements and parties, and the international system are perceived as having an impact on what people are like. (Hermann 1986, p. 2)

Political psychology finally took shape as an academic discipline in its own right when the International Society of Political Psychology was founded in 1978 and began holding annual scientific meetings and publishing a quarterly journal, *Political Psychology*. Today, political psychology is a key component of the political behavior subfield of political science. Its diverse objects of analysis range from the psychobiography of political leaders (for example, the 1997 psychobiography of President Richard Nixon by Vamik D. Volkan, Norman Itzowitz, and Andrew W. Dod) to inquiries into the "postmaterial" bases of identity politics (e.g., Ronald Inglehart's seminal work, *Silent Revolution: Changing Values and Political Styles among Western Publics*, 1977). Psychological terminology is now an important and pervasive part of political science discourse, as numerous psychological concepts have been incorporated into political studies at both the national and international level. Psychological concepts are widely used in research on voting behavior, political socialization, political leadership, the dynamics of public opinion, political attitudes, political conflict and cooperation, international negotiation, decision-making, and, more recently, political information processing.

The two empirical research methods most often employed to study psychological variables are the sample survey and the in-depth interview. For example, political psychologists frequently use attitude surveys to probe the connections among personality structures, demographic and population variables, and dispositions toward political participation and party preference. Other more innovative but less frequently utilized research tools include simulation, projective techniques, content analysis, focus groups, and the controlled experiment. The application of psychological insights to political inquiry remains a widespread and growing trend, as many political psychology studies continue to appear within the framework of related social-science disciplines, especially political science. Although no underlying scientific paradigm or even a single basic theory provides unity and coherence to this eclectic interdisciplinary field, political psychology has already acquired a permanent, if rather heterogeneous and pluralistic, presence within the discipline of political science.

SEE ALSO *Almond, Gabriel A.; Attitudes, Political; Authoritarianism; Authority; Behaviorism; Cognition; Communication; Fascism; Frankfurt School; Lay Theories; Left Wing; Persuasion; Political Science; Politics; Preferences; Prejudice; Psychoanalytic Theory; Psychology; Right Wing; Stereotype Threat; Stereotypes; Tolerance, Political; Verba, Sidney*

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Rossen Vassilev

POLITICAL REPRESENTATION

SEE *Constituency; Democracy; Representation.*

POLITICAL SCIENCE

The first efforts to systematically study politics can be traced to Plato's *Republic* (c. 427–c. 347 BCE) and Aristotle's *Politics* (384–322 BCE). Their works were later incorporated into Christianity through neo-Platonists, such as St. Augustine (354–430 CE), and neo-Aristotelians, such as St. Thomas Aquinas (c.1225–1274 CE). The classical and Christian traditions of political philosophy postulated metaphysical first principles and relied on a process of deductive reasoning that sought to derive the moral and ethical principles of an ideal-state. Whether the ideal-state was ever achieved by any civilization was considered secondary to discovering the "highest good" that ought to guide citizens and statesmen.

The political writings of Niccolò Machiavelli were the first to break with these traditions of political philosophy. Machiavelli believed that the study of political history could yield general principles to guide statesmen in the conduct of politics, diplomacy, and war. He studied

existing and historical political institutions, and the actions of great statesmen, not for the purpose of discerning a morally ideal-state, but to identify institutional arrangements that would maintain social order and political stability. The separation of politics from any metaphysical or theological foundation led subsequent political philosophers to seek a new basis for legitimate political authority, although, in the end, solutions such as reason, natural law, custom, and tradition were superceded by the idea that sovereignty resides in a nation's people.

FROM POLITICAL PHILOSOPHY TO POLITICAL SCIENCE

Francis Lieber (1798–1872) is considered the first modern political scientist. He was a liberal German émigré to the United States, who from 1827 to 1832 devoted himself to writing and editing the thirteen-volume *Encyclopedia Americana*. Its major contribution was to establish "the idea of the state," or *Staatswissenshaft*, as the organizing concept of political science. The idea of the state was gaining wide currency in Europe, particularly in Germany, but it was Lieber who first argued in the United States that the "idea of the state is the basis of a class of sciences, and gives them a distinct character as belongs to the various classes of history, philosophy, theological, medical, &c., sciences" (1838, Vol. 10, p. 225). He drew a distinction between idea of the state and the "form of government," which was "merely a means of obtaining the great objects of the state" (1838, Vol. 11, p. 568). Against the backdrop of events leading up to the U.S. Civil War, Lieber articulated a distinctly idealistic theory of the state which identified the state as an abstract and organic sovereign society that was the source of governmental authority and the basis of its legitimacy. Lieber's appointment as professor of history and political science at Columbia University in 1857 made him the first person to hold that title in the United States.

THE DOMAIN AND METHODS OF POLITICAL SCIENCE

After Lieber, political science was established as a broader discipline when John W. Burgess, a professor of constitutional law, founded the Faculty of Political Science at Columbia in 1880. Burgess's school became the leading graduate faculty in political science during the 1890s along with the Department of History, Politics, and Economics, which had been established by Henry Baxter Adams at Johns Hopkins University in the 1870s. Burgess and Adams were both adherents of the *Staatswissenshaft* doctrine, but they shifted the discipline's methodological emphasis from political ethics to history.

In 1886 Columbia's faculty founded the *Political Science Quarterly (PSQ)*, which was the new discipline's first scholarly journal. In its first issue, Edmund Munroe Smith, a professor of international law, announced that it would "recognize but one political science—the science of the state" (1886, pp. 2–3). However, the *PSQ* also facilitated a new departure in *Staatswissenshaft* by emphasizing that it was one thing to describe the state's development, comparatively and historically, but more was required to *explain* changes and development in the state. Smith argued "if we seek to trace through history the evolution of the state, we find each step in its development recorded in the evolution of law and explained to a great degree by economic changes" (p. 7). This methodological principle, which was called "the economic interpretation of history" was developed first by James E. Thorold Rogers (1823–1890), a professor of political economy at Oxford University, whose work stimulated the next advances in the discipline.

THE ECONOMIC BASIS OF POLITICS

The Populist revolt and the Progressive movement were fertile political environments for an intellectual revolt against the formalist-idealism of the early discipline. The method of economic interpretation led to a new iteration of *Staatswissenschaft* that seemed better able to explain the political conflicts of the era. During the 1890s, there were several miscues in the effort to define "the method of economic interpretation," including both skirmishes and dialogues with Marxian historical materialists. The major breakthrough came from Edwin R. A. Seligman, a political economist in Columbia's Faculty of Political Science. Seligman's general statement of the economic interpretation of history is that:

> The existence of man depends upon his ability to sustain himself; the economic life is therefore the fundamental condition of all life. Since human life, however, is the life of man in society, individual existence moves within the framework of the social structure and is modified by it.…To economic causes, therefore, must be traced in the last instance those transformations in the structure of society which themselves condition the relations of social classes and the various manifestations of social life (1967, p. 3).

The method of economic interpretation was widely adopted by political scientists in the early twentieth century, particularly after Seligman had differentiated it from Karl Marx's historical materialism. Nevertheless, the method of economic interpretation is most often identified with the work of Charles A. Beard, one of Seligman's students, and the author of *An Economic Interpretation of the Constitution of the United States* (1913). In its political context, the book became an intellectual lightning rod,

because according to Beard capitalistic interests had dominated the U.S. Constitutional Convention of 1787 and, consequently, they authored a founding document that appealed "directly and unerringly to identical interests in the country at large" (p. 188). Beard later sought to generalize this doctrine in *The Economic Basis of Politics* (1922).

Beard exerted a powerful influence on the discipline over the next two decades, partly by authoring the first introductory textbook on *American Government and Politics* (1910), which became a standard text in political science for nearly four decades. In 1926, Beard's soaring reputation secured his election as president of the American Political Science Association (APSA). By the mid-1930s, his economic interpretation of the American state had achieved orthodox status among scholars as the Great Depression forced economic considerations to the forefront of government and political science.

However, developments in political science and other disciplines put the doctrine of *Staatswissenschaft* under pressure from the outset. In 1895 the American Historical Association was established by historians seeking to institutionalize Leopold von Ranke's methodological program of historical positivism. Frank J. Goodnow, who had been a member of *PSQ*'s editorial board, led the founding of the American Political Science Association in 1903, along with its new journal, the *American Political Science Review*. As the APSA's first president, Goodnow reaffirmed that the domain of political science is "that political organization of society which is termed 'the State' " (Ross 1991, p. 282). Nevertheless, the vision for a science of the state, anchored by political economy, started to fragment as one social science after another splintered into separate disciplines and, after World War I, began exploring the new positivist philosophy as an alternative methodological foundation.

THE POSITIVIST MOVEMENT

During the 1920s, political science began a paradigm shift that culminated in the behavioral revolution of the 1950s. The first aspect of this paradigm shift was a redefinition of the meaning of "science." The positivist movement sought to place political science on the same methodological foundations as the natural sciences. This movement was also promoted by the federal government, which was anxious to bring about the same types of technical success in the social sciences as had been achieved in the physical, life, and behavioral sciences (psychology) during World War I. Positivists claim that all research is similar in method and differs only in the specific problems to be solved by a particular science. Thus, there is a single "scientific method" that starts with the formulation of a hypothesis, followed by empirical observation or experimentation, which leads to a falsification or verification of the initial hypothesis. Knowledge is accumulated incrementally as hypotheses are rejected or accepted as a result of empirical tests.

The Social Science Research Council (SSRC) was chartered in 1923 as an independent nonprofit organization, and funded by private foundations, specifically to encourage "behavioral research" in economics, sociology, and political science that employed empirical and statistical methods of the type advocated by positivists. The University of Chicago, which was among the first to pioneer such methods, was designated as the SSRC's showcase institution. The SSRC distributed funds to political scientists and political science departments for fellowships and training in the new empirical methods, for the development of new courses in statistics and behavioral research design, and general department building along the Chicago model. Charles E. Merriam, a professor of political science at Chicago, is often called the father of behavioral political science. In his *New Aspects of Politics* (1925), Merriam called for a science based on the observation of real governments and political behavior, although he remained skeptical about an overly quantitative political science. This skepticism was retained by Harold D. Lasswell and V. O. Key, who were both students of Merriam and important transitional figures between the positivist movement of the 1920s and the behavioral revolution of the 1950s. Lasswell called for an applied political science oriented toward solving the problems of democracy as opposed to a discipline that emulated natural science in a quest to discover "universal laws" of political behavior without respect to their practical applications. In 1951 Lasswell proposed that "policy scientists" should conduct research that was directly and immediately useful to decision makers, while employing "appropriate" quantitative methodologies that acknowledged the limits of data availability and the pressures of time and scarce resources in the decision-making process. Key is best known for his work on political parties, interest groups, electoral behavior, and public opinion. Although he disagreed with the behavioralists' fundamental tenets, he pioneered many of the statistical techniques and analytic concepts later employed by them.

THE BEHAVIORAL REVOLUTION

The positivist influence reached its apogee in the "behavioral revolution" of 1950s, which consolidated the discipline's paradigm shift, first, by codifying behavioral methodology and, second, by finally rejecting outright the concept of the state. The behavioralists broke with the earlier practice of political scientists by claiming to have discovered a "value-neutral" science and by viewing all earlier works on politics as merely a storehouse of hypotheses for

empirical falsification or verification. This attitude toward political philosophy widened the long simmering rift between empirical political science and normative political theory with the latter regarded as an "unscientific" legacy of the discipline's past.

Behavioralism's main methodological claim was that uniformities in political behavior could be discovered and expressed as generalizations, but that such generalizations must be testable by reference to observable political behaviors, such as voting, public opinion, or decision making. Most behavioralists equated observation with quantification to a degree that went beyond what Merriam, Key, or Laswell had considered "appropriate quantification." Finally, the behavioralists proposed a "pure science" where the theoretical explanation of political behavior was to precede the solution of urgent practical policy problems in society.

The concept of the state, which had been central to political science, was also displaced in the 1950s by a concept of the "political system" that is mainly associated with Talcott Parsons's systems analysis. Parsons's sociology identified the political system with behaviors and institutions that provide a center of integration for all aspects of the social system. David Easton echoed this view by declaring, "neither the state nor power is a concept that serves to bring together political research" and instead defined the political system as "those interactions through which values are authoritatively allocated for a society" (1953, p. 106). Systems analysis was tied closely to various theories of decision making, but most notably to pluralist theory, which viewed decision making as the outcome of peaceful bargaining between interest groups in society. Easton emphasized that to account for the persistence of political systems, one had to assume that they successfully generate two "system outputs": (1) the political system must successfully allocate values for a society (decision making); and (2) the political system must induce most members to accept these allocations as binding, at least most of the time (legitimacy). These "policy outputs" feed back into the social, economic, international, and natural systems to generate new inputs and demands that must be continually processed by the political system.

Easton's model of the political system stimulated a great deal of research over the next two decades on decision making, interest groups, political communications, political parties, elections and voting behavior, legislative behavior, political socialization, political beliefs, and the policy process. These fields of research have also been characterized by ever increasing levels of sophistication in the use of statistical techniques and concepts. However, the systems model was often limited in applicability by its emphasis on system stability and the assumption of institutional arrangements peculiar to Western democracies. These limitations were partly addressed by the functionalists, who employed a modified concept of the political system that focused on "functions" and "processes," while acknowledging that the same functions could be fulfilled in various political systems through different processes or institutions. Functionalism was particularly influential in the study of comparative politics and non-Western political systems, where there were different institutional arrangements or where the use of statistical techniques was hampered by the absence of data and technology.

During the 1950s the political science discipline also assumed its current form as a collection of distinct subfields with most political scientists specializing in one or two subfields, while having less and less interaction with practitioners in other subfields of the discipline. The standard subfields are American government, comparative politics, international relations, political theory, public administration, and public policy, although the two latter "applied" fields have often been shifted into separate academic units, such as schools of public administration or public policy, while political theory is now actually practiced as often by historians, philosophers, and literary critics as by political scientists.

THE POSTBEHAVIORAL REVOLUTION

Political science entered a postbehavioral revolution amidst the political rebellions of the late 1960s and the new social movements of the 1970s and 1980s. New intellectual currents, such as neo-Marxism, postpositivism, poststructuralism, and postmodernism were conjoined with a variety of political movements, including pacifism, feminism, environmentalism, postcolonialism, and the gay and lesbian liberation movements. Easton identified the source of the postbehavioral revolution as a "deep dissatisfaction with political research and teaching, especially of the kind that is striving to convert the study of politics into a more rigorously scientific discipline modeled on the methodology of the natural sciences" (1969, p. 1051). The behavioral persuasion remains the dominant orientation of the official discipline, but it has been challenged numerous times since the late 1960s.

One of the most significant intellectual challenges to the behavioralist paradigm and to pluralist theory was the return to the state initiated in the late 1960s by Marxists, such as Ralph Miliband and Nicos Poulantzas and then carried forward by the "new institutionalists." Nicos Poulantzas's *Pouvoir Politique et Classes Sociales* (1968), and Ralph Miliband's *The State in Capitalist Society* (1969) directly challenged systems analysis and pluralist theory by drawing on a radical tradition identified with the writings of Karl Marx, Friedrich Engels, V. I. Lenin,

and Antonio Gramsci. These authors developed theories of the state that questioned the basic assumptions of the dominant political science, particularly its assumption that political power is distributed more or less equally among different social groups. At the height of his popularity in the mid-1970s, Miliband was recognized as one of the leading political scientists in the English-speaking world, while Nicos Poulantzas was arguably the most influential political theorist in the world for a time.

However, the interest in state theory waned temporarily as many political scientists abandoned the quest for grand theory in the context of a more widespread intellectual disillusionment with grand scale metanarratives, such as state theory and their attendant transformational political projects. The shift from Marxist to post-Marxist to poststructuralist and postmodernist theory shifted the analysis of power from macroscopic to microscopic forms of power and, therefore, to the multiple "technologies of power" such as language, family, interpersonal relationships, culture, leisure and entertainment, and the configurations of repressed desire (Foucault 1972, p. 12).

The growing discontent among a minority of political scientists led to the establishment of the Caucus for a New Political Science in 1967. The Caucus includes political scientists of many diverse viewpoints, but it is united by the idea that the discipline should abandon "the myth of a value-free science" and advance a progressive political agenda. While originally founded as an alternative to the APSA, it won recognition as the first organized section of the APSA with the right to sponsor its own panels, collect dues, and to publish its own journal *New Political Science*. Members of the Caucus have authored numerous commentaries on "the tragedy" of political science, "the crisis" in political science, and "the flight from reality in political science." In 2000, these discontents again resurfaced in the "perestroika" rebellion, which denounced the APSA as an organization controlled by "East Coast Brahmins," which promotes a "narrow parochialism and methodological bias toward the quantitative, behavioral, rational choice, statistical, and formal modeling approaches" (Monroe 2005, pp. 1, 9).

While Caucus members remain a small proportion of the APSA's membership, it established a precedent that has resulted in the proliferation of "organized sections" to represent the interests of political scientists in interdisciplinary, subfield, and methodological research outside the official discipline. There are now 37 organized sections in the APSA, whose combined membership is greater than that of the discipline as a whole and attendance at "section" panels of the APSA's annual meeting tends to be higher than at the "disciplinary" panels. Political science is now fragmented into so many subfields, methodological approaches, area specializations, and theories that "political scientists apparently come together at APSA meetings, but only in spatial terms" (Yanow 2003, p. 398). The future of the discipline in the next century is not clear, but its development over the last century has been characterized by the accretion of multiple approaches. Despite major paradigm shifts, no conception of the discipline is ever completely displaced by another approach and the discipline is now clearly marked by a lack of consensus concerning its basic concepts, theories, and methodology.

SEE ALSO *Campbell, Angus; Dahl, Robert Alan; Data; Data, Longitudinal; Economics; Empiricism; Enlightenment; Experiments; Game Theory; Methodology; Methods, Qualitative; Methods, Quantitative; Methods, Research (in Sociology); Methods, Survey; Philosophy, Political; Plato; Political Psychology; Political Science, Behavioral; Politics; Politics, Comparative; Regression; Regression Analysis; Reliability, Statistical; Research, Cross-Sectional; Research, Longitudinal; Research, Survey; Scientific Method; Social Science; Validity, Statistical*

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Clyde Barrow

POLITICAL SCIENCE, BEHAVIORAL

Behavioral political science is an approach to the study of politics that claims to be more "scientific" and methodologically sophisticated than the older, so-called "traditional" political science. Although the study of politics and government dates back to Plato and Aristotle, Greek philosophers in the fourth century BCE, political science only emerged as a separate academic discipline toward the end of the nineteenth century. Since that time, the science of politics has shifted from a descriptive focus on political history, formal institutions, and legal codes to a more "behavioral" emphasis upon decision-making processes, the political behavior of individuals and groups, and their informal relationships. Methodologically, behavioral political science has replaced the predominantly historical, legalistic, and institutional studies of the traditional approach with the more empirical methods of modern social science, borrowed mostly from the field of psychology.

Broadly defined, the traditional approach of political science was concerned with the purpose, nature, and organization of the "state," stressing humanistic, ethical, and philosophical perspectives. The traditionalists shared a preference for intensive case studies and other qualitative observations in which inferences were derived on the basis of subjective norms and values. Quantitative methods were only rarely used, because the traditionalists doubted that the "scientific method" of the natural sciences could be successfully applied to the investigation of the more indeterminate human behavior. Research typically focused on the detailed description of historical data, political institutions, constitutions, and legal systems, earning traditionalists the label of "hyperfactualists."

Traditionalist political scientists regarded both empirical and normative questions as equally worthy of scholarly attention, often undertaking their studies because of strongly held personal opinions about the nature of politics. Many of their inquiries showed a normative or prescriptive slant, trying to describe the general principles and best-suited institutions of "good" government. They were also inclined to examine the influence of human values in politics and prescribe specific public policies.

In contrast, behavioral political science has attempted to apply the methodologies of empirical natural sciences to the study of politics and government. In response to the influential political scientist Heinz Eulau's (1915–2004) call for political scientists to study behavior, not institutions, the field has focused analysis on the political behavior of individuals and groups, rather than on their formal roles or the structures within which they function. Although little consensus exists about the exact characteristics of the so-called "behavioral revolution" in political science, the scientific method of the behavioralists emphasizes the collection of observable data and the use of statistical analysis based on many recorded cases. Behavioral political science claims to be "value-neutral" in the sense of separating fact from value and describing political phenomena without judging their goodness or morality.

Behavioralist-oriented political scientists try to be more rigorous and disciplined in their research, seeking scientific precision by the quantification and measurement of collected data. Through the formulation and systematic testing of empirical hypotheses, they attempt to

discover regularities and uniformities in political behavior, which can be expressed in generalizations or theory. Behavioralists see a close relationship between theory and empirical research in the sense that theory should be "verifiable" by analysis of observed behavior, while the process of seeking and interpreting empirical data should be guided by theory. Behavioral political science is concerned with the cumulative acquisition of law-like generalizations about human behavior and suggests a close relationship with the other social sciences.

The "behavioral revolution" in the science of politics emerged as a major force in the 1950s and won over much of the field during the 1960s. For years its supporters and detractors debated whether or not behavioralism represented a Kuhnian "scientific revolution," producing a "paradigm shift" in the basic values and objectives concerning the nature of political science and how the pursuit of systematized knowledge about politics should be conducted. According to Thomas Kuhn (1922–1996), one of the most famous philosophers of science, a *scientific revolution* is a noncumulative revolutionary development in which an older scientific (paradigm) is supplanted by an entirely new, incompatible tradition that does not build on preceding knowledge. As the behavioralist approach gradually established itself, a new emphasis on methodology and the use of quantitative tools of analysis swept the field and increasingly became the preferred instrument of research, as reflected in refereed academic journals, scholarly books, and professional conferences. The behavioralist approach has made some remarkable contributions to the discipline, especially in providing political theory with a strong empirical basis and in dissecting the "social bases" of politics, as well as in examining comparatively the "political culture" of average citizens, as in the classic study by Gabriel Almond and Sydney Verba, *The Civic Culture: Political Attitudes and Democracy in Five Nations.*

By the late 1960s, however, the behavioral mode of inquiry came under heavy attack for its preoccupation with methodology at the expense of substance and public-policy orientation. Many younger political scientists criticized the distinction between fact and value, or "value-free" science, as abstract, sterile, and irrelevant in the age of the Vietnam War and the Watergate scandal. Far from being value-free and scientific, behavioralism was seen as static, pro-status quo, imbued with conservative values, ethnocentric, and presenting a highly idealized model of American politics. Behavioral political scientists were accused of focusing on trivial subjects of inquiry (such as analyzing accumulated statistics from elections, public-opinion surveys, legislative votes, and other easily quantifiable data), while ignoring the great ideological struggles of the day. The new movement, which the renowned Canadian-born political scientist David Easton called the "postbehavioral revolution," reaffirmed the obligation of political scientists to be more problem-oriented and concerned with class relations and conflict, as well as to use their expertise about politics to improve public life. Postbehavioralists wanted to reverse some of the "excesses" of the behavioral school by placing substance before technique, policy orientation before ahistorical "pure science," and the service of society before academic neutrality and moral relativism.

While the fundamental changes wrought in political science by the behavioralist emphasis on empirical theory and quantitative methods now seem irreversible, what emerged from the postbehavioralist revolt of the early 1970s was a widespread recognition that practical relevance and ethical evaluation of politics are equally important. The discipline has since moved to a "postbehavioral synthesis" of the traditional and behavioralist approaches, combining the empirical perspectives and statistical tools of behavioralism with renewed concern for change-oriented values and the use of specialized political knowledge to solve societal problems.

SEE ALSO *Almond, Gabriel A.; Behaviorism; Easton, David; Kuhn, Thomas; Revolutions, Scientific; Scientific Method; Social Science, Value Free; Verba, Sidney; Vietnam War; Watergate*

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POLITICAL STRATIFICATION

SEE *Stratification, Political.*

POLITICAL SYSTEM

Political system refers broadly to the process by which laws are made and public resources allocated in a society, and

to the relationships among those involved in making these decisions. The term, however, has acquired not only a descriptive meaning but also a methodological one. In the first case, "political system" describes how the institutions of a government function together to translate the desires, or "preferences," of a society's citizens into laws governing that society. Descriptions of the political system of the United States, for example, focus on how the Congress (House and Senate), the executive (the president and the bureaucracy), and the judiciary (the Supreme Court and lower courts) collectively make, implement, and enforce public policy. They also tend to describe how citizens make their preferences known to members of these institutions through voting and interest-group advocacy and how citizens respond to the policies actually produced. Though undergraduate textbooks often claim to use a political systems approach in their organization, in practice they tend to describe the structure and behavior of citizens and institutions in relative isolation from each other. By contrast, a true systems approach would emphasize *process*, or how these institutions function together and how their relationships and the policies they produce change (or fail to change) as the preferences of citizens change.

Political systems, however, need not conform to the American descriptive model. Other systems may receive citizen input in different manners or process it into policies through different institutions and relationships. The British political system, for example, is perhaps a simpler system because it does not possess separate legislative and executive institutions (the prime minister is also the majority party leader in Parliament). Political systems in other nations may listen only to the preferences of a few privileged citizens. Perhaps the most degenerate political system is the dictatorship, where preferences and lawmaking authority are vested in only a single individual.

Political system as a methodological concept grew out of efforts to scientifically study politics and predict political behavior using the "systems approach," an intellectual movement arising late in the first half of the twentieth century advocating the application of physical and biological systems models to the study of human behavior (Hammond 2003). In the wake of Talcott Parsons's (1951) argument that society is best understood as layers of systems, several leaders of the Behavioral Revolution, most notably David Easton (1965, 1981), advocated a systems approach to studying the processes of lawmaking and the function of institutions. Broadly speaking, the approach required researchers to differentiate the system from its larger social environment, identify its key components (institutions) and the relationships binding them together, learn how citizen preferences were communicated to them, and identify the "homeostatic" mechanisms that kept the resulting policy outputs stable and the system in equilibrium when these inputs remained constant. More importantly, systems analysts were concerned with whether and how policy outputs would change as different social groups mobilized and articulated new demands on government and how great the difference between these inputs and policy outputs, the feedback loops, would have to be to stimulate resistance and even revolution. Classifying states by different systems was even promoted by Gabriel Almond (1956) as the key to comparative political research.

Political systems theory was largely abandoned as an overarching methodology for a couple of reasons. On one hand, opponents of empiricism in political science criticized it for its focus on steady-state equilibria and search for generalizable behavior over the study of the unique, as well as its emphasis on quantification and hypothesis testing (Wilson 1961). On the other hand, proponents of empirical analysis also found its use as a unifying methodology to be cumbersome and overreaching. Difficulties in identifying the system's boundaries, testing the functions of individual institutions and their interaction with each other as hypotheses, and measuring concepts such as feedback loops with the linear analysis methods commonly employed proved too intractable. Instead, political science has adopted a more reductionist approach by studying the political system's pieces, meaning various institutions, interest groups, and voters, in relative isolation. Although the last decade has seen some renewed interest in linking these pieces, political science is still a long way from returning to the political system as a unified theory.

SEE ALSO *Autocracy; Democracy; Dictatorship; Easton, David; Government; Law; Nation-State; Parsons, Talcott; Pluralism; Political Science; Political Theory; Politics; State, The*

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POLITICAL THEORY

Political theory lies at the intersection of the contemporary disciplines of philosophy and political science. Among philosophers, political philosophy is often distinguished by its preoccupation with practical matters. Among political scientists, political theory is often understood as the least practically relevant of the major subfields. In truth, self-identified political theorists are engaged in a wide range of activities, both normative and empirical, scientific and spiritual, esoteric and practical. In addition, the history of political thought encompasses many people who would not necessarily understand themselves to be primarily political thinkers or philosophers (e.g., Julius Nyerere, Sophocles, and the Buddha).

The meanings and purposes of political theory are contested within the academic discipline because a great deal of political theory involves thinking about the nature of politics itself. Therefore, rather than describing what political theory is, it is more appropriate to describe what it has been concerned with thus far, with the understanding that the contours of the history of political thought are also part and parcel of the discussion of what constitutes "politics."

In general, political theory attempts to understand and form the human character, with particular emphasis on how people coordinate their ways of life, aims, needs and desires, and their potential to act together as a collective. One of the most important insights of political philosophy is the notion that human beings have the capacity to explore, imagine, and implement associations configured in various ways. Across cultures and throughout recorded history, at least three important and interrelated themes recur in such configurations:

1. *Femininity and masculinity.* Notions of gender often divide labor, determine the distribution of goods, and create and order the public and private spheres.
2. *The spiritual and material worlds.* Understandings of the interplay between God or gods and human beings, along with the idea that the spiritual world does not exist, often shape the nature of authority and rule.
3. *Human beings and the environment.* Ideas about the place of human beings in the natural world, and the idea that people can be distinguished from it, typically undergird various political orientations.

As these themes suggest, political theory often intersects with philosophical perspectives in sociology, economics, ethics, and theology. However, political theory lays special claim to understanding and developing ideas about formal and informal rules of collective action and interaction, such as when and how decisions are made, who can and cannot speak, and what kinds of actions are required, sanctioned, or prohibited. This interest in institutions involves the study and development of certain concepts, including justice, power, consent, citizenship, duty, legitimacy, sovereignty, freedom, equality, punishment, property, oppression, rights, liberation, and deliberation. In the last two centuries, approaches to these concepts have often been framed in terms of ideologies, including nationalism, fascism, authoritarianism, democracy, theocracy, communism, secularism, socialism, liberalism, Islamism, republicanism, colonialism, and postcolonialism.

Such concepts form the parameters of governance and law, habits and customs, appropriateness, and virtue in a wide variety of groupings. Such groupings are themselves the subject and creation of political thought and include families, extended kinship relations, castes, factions, interest groups, tribes, parties, communities, cities, classes, ethnicities, nations, races, confederations, states, genders, caliphates, dynasties, empires, colonies, international organizations, and the relations between these entities. Indeed, the idea of "humanity" itself is a primary subject, and some would argue a creation of, political thought. Deconstructing and reconfiguring such arrangements is also an important task of political theory.

Political theorists often posit new ideas through the resuscitation and reinterpretation of old ideas, frequently by analyzing the thought of a particular thinker or thinkers. Examples include: Socrates, Plato, Aristotle, and the Stoics, in the ancient Greek tradition; al-Kindi, al-Farabi, Avicenna, and Sohravardi, in the Islamic tradition; Saint Augustine, Nyerere, Nkrumah, and Sékou Touré in the African tradition; Confucius, Mencius, Mo-tzu, Chuang-tzu, Han Fei-tzu, and numerous thinkers influenced by Taoism and Buddhism in the Chinese tradition; Aquinas, Machiavelli, Hobbes, Montesquieu, Wollstonecraft, Marx, and Mill in the European tradition; Bartolomé de las Casas, Jefferson, Madison, Bolivar, and José Marti, in the American tradition; and the Vedas, written by many seers, as well as the Buddha (Siddhartha Gautama) and Mahatma Gandhi, in the Indian tradition. A full accounting of influential contemporary political thinkers would include hundreds of names from various philosophical schools and political movements (e.g., existentialism, feminism, the Frankfurt school, postcolonial studies, and environmental philosophy). Listing individual thinkers also raises questions about the proper conduct of political theory and, in particular, its relationship to political action by necessarily excluding the oral traditions of many cultures both living and dead.

SEE ALSO *Party Systems, Competitive; Philosophy, Political; Political Science; Political System; Politics*

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POLITICS

The term *politics* derives from the ancient Greek word *polis*, meaning "city-state," the main form of political community in ancient Greece. We continue to use the term even though few city-states remain in existence. A commonsense understanding of the term is illustrated by this analogy: Politics is to the polis what athletics is to athletes. Just as the world of athletics is subdivided into different types of sport, politics comes in numerous modes and orders: democratic, tyrannical, constitutionalist, oligarchic, theocratic, bureaucratic, fascist, authoritarian, and so on.

However, everyday language is not a reliable guide to defining politics, because we regularly apply the term to practices that are not political. We speak of office politics, locker-room politics, or the politics of high school cliques. These usages are too broad and fail to distinguish politics as a unique activity, distinct from business, sports, social interactions, and so on. In order to gain a more comprehensively scientific understanding of the meaning of politics, it is helpful to consider two basic components: (1) the character of political activity and (2) the scope of political activity.

THE CHARACTER OF POLITICAL ACTIVITY

Politics has been defined in numerous ways. The philosopher Plato (c. 428–348 BCE) defined it as the art of caring for souls, meaning that the duty of political rulers is to cultivate moral virtue or excellence in their citizens. Numerous thinkers throughout history have reiterated Plato's view. The medieval theologian Saint Thomas Aquinas (c. 1224–1274), who closely studied the philosophy of Plato's student Aristotle (384–322 BCE), characterized politics as the activity of bringing together diverse individuals and groups, including doctors, economists, professors, and priests, each with their own talents and characteristics, into a unity: "The object for which a community is gathered is to live a virtuous life. For men to consort together that they may thus attain a fullness of life which would not be possible to each living singly: and the full life is one which is lived according to virtue" (Fuller 2000, p. 85). Both Plato and Aquinas were concerned with cultivating virtue and living a good life. Aquinas further emphasizes the synthetic or "architectonic" dimension of politics as the activity of building coalitions and maintaining harmony among the constituent parts of political society. Politics for Plato and Aquinas reflects humanity's sociable nature.

Ancient and medieval thinkers emphasized the moral purpose of politics (the why) and the means of reaching that purpose (the how), while modern thinkers, including contemporary political scientists, are more likely to emphasize only means (the how). For example, the Renaissance thinker Niccolò Machiavelli (1469–1527) wrote in *The Prince* that it is unrealistic for princes to provide moral guidance to citizens because politics requires rulers to perform unjust deeds to ensure the security and glory of the state, including such acts as treating one's friends as subjects and killing family members if necessary. Machiavelli thus introduced what would later become known as the fact-value distinction into the study of politics. It states that facts are the only objects that can be analyzed empirically and with certainty, while values are less certain. Thomas Hobbes (1588–1679) provided what in the early twenty-first century one would consider a more scientific understanding of politics. His method was to deduce political principles from general and abstract theories. In his view humans resembled atoms, and human behavior was "matter in motion," whose principle mode of behavior was self-preservation. Unlike Plato and Aquinas, Hobbes regarded humans not as social but as asocial. He sums this up in his famous formulation of human behavior:

> So that in the first place, I put for a general inclination of all mankind, a perpetual and restless desire of power after power that ceaseth only in death. And the cause of this is not always that a man hopes for a more intensive delight than he has already attained to, or that he cannot be content with a moderate power, but because he cannot assure the power and means to live well, which he hath present, without the acquisition of more. (Hobbes 1996, p. 70)

This general principle of human behavior leads Hobbes to characterize the activity of politics as the pursuit of peace and security, not as the perfection of human social inclinations. While Hobbes was not what in the early twenty-first century one would call a liberal democrat, his theory laid the foundations for liberal democracy by making consent the basis of government. He also placed politics on a lower (and in his eyes, more stable) ground than earlier thinkers by making peace and security its purpose, not the cultivation of virtue and community.

Machiavelli and Hobbes's distinction between the moral purpose of politics and the pragmatic pursuit of power can be seen in some twentieth-century definitions of politics, which deemphasize moral excellence in favor of the use of power and the distribution of goods within a community. The French thinker Bertrand de Jouvenel (1903–1987) defined politics as the activity of gathering and maintaining support for human projects: "We should regard as 'political' every systematic effort, performed at any place in the social field, to move other men in pursuit of some design cherished by the mover" (Jouvenel 1963, p. 30). Allan Ball emphasizes conflict in his definition: "[Politics] involves disagreements and the reconciliation of those disagreements, and therefore can occur at any level. Two children in a nursery with one toy which they both want at the same time present a political situation" (Ball 1971, p. 20). Harold Lasswell emphasizes distribution in his treatment of politics, as reflected in the title of his 1936 treatise *Politics: Who Gets What, When, and How*.

While these definitions have their benefits, they fail to distinguish political activity from other forms of activity. This is especially true for Ball's definition, which provides little guidance on the difference between a nursery and a nation-state like the United States. More promising is Bernard Crick's definition of politics as "the activity by which different interests within a given unit of rule are conciliated by giving them a share in power in proportion to their importance to the welfare and the survival of the whole community" (Crick 1972, p. 22). This definition recalls Aquinas's characterization of politics as unifying different parts of society. By mentioning survival, Crick also alludes to the fact that a political society requires a large degree of autonomy, in a way that a smaller unit, such as a family, lacks. By mentioning welfare, which is broader than survival, he also indicates that a political society is organized around a set of goals and principles.

THE SCOPE OF POLITICAL ACTIVITY

The activity of politics, then, consists of a continuous attempt to fashion a unity from a diverse set of competing interests and talents. Beyond this, any analysis of politics needs to move to a more concrete level. Politics, as the activity of the polis, depends on the form the political community takes. Political actions such as the conciliation of interests would take different forms in Nazi Germany, for example, and a liberal democracy like the United States. In the former, power is based on a personality cult surrounding Adolf Hitler for the purpose of furthering the utopian ideal of a Third Reich. In the latter, coalitions of interests form and compete with one another in a law-based constitutional system. In the former, politics is seen as something that will in fact cease once the utopia is reached (this is true of any utopian system). In the latter, politics is assumed to be a never-ending activity of negotiation and bargaining, on the assumption that a diversity of opinions and interests will always exist.

Political thinkers have devised a variety of methods for evaluating the differences among political systems. Plato distinguished five regimes, ranked according to the degree to which each is just. In descending order, they are the just city governed by philosopher kings, timocracy (ruled by warriors), oligarchy (ruled by the wealthy), democracy (ruled by the many), and tyranny (Plato 1991, pp. 449a–592b). Aristotle distinguished six different regimes according to who rules and for what purpose. He identified three good and three corrupt systems: (1) monarchy and tyranny, (2) aristocracy and oligarchy, (3) polity, or constitutional democracy, and mass democracy (Aristotle 1984, pp. 1288b10–1296b15).

Plato and Aristotle's typologies are based on the polis. Modern scholars have developed typologies that attempt to organize the different forms the modern state takes. Three separate axes can be identified: (1) the interpenetration of state and society, (2) whether the state is presidential or parliamentary, and (3) whether the state is federal or unitary (Dickerson and Flanagan 1998, pp. 209–310; Finer 1999, pp. 1473–1484).

The first axis considers the extent to which state institutions and civil society are autonomous. For example, liberal democracies prize pluralism, which requires a multiplicity of political parties competing for power as well as a wide array of independent schools, newspapers, and other sources of opinion. Totalitarian governments—for example, that of Hitler—attempt to control all facets of society, including universities, newspapers, unions, and businesses. Totalitarian states permit only one party, which purportedly speaks for the nation.

The second axis considers the composition of the representative institutions. In a presidential system like the United States, the central government is divided into three branches: executive (the president), legislative (Congress), and judicial (the Supreme Court). These three branches balance one another to ensure that no single branch of government possesses complete power. In a parliamentary system like that of Great Britain, executive power (the prime minister and cabinet) is more fused with legislative (the House of Commons). According to the doctrine of responsible government, the prime minister and cabinet must continually maintain the confidence of the House of Commons, which has the power to dissolve the government. Dissolution can occur at any time, in contrast to the U.S. presidential system, where members can only be removed by election or, in extreme circumstances, by impeachment.

The third axis reflects the territorial size of a society. In ancient Greece the polis was not divided into states or provinces because city-states were small enough for government to exert control over its territory and maintain solidarity among its citizens. Modern nation-states are considerably larger in size, which poses special challenges for controlling territory and promoting social solidarity. A federal state splits up the nation-state into states or provinces and hands over to those small units specific powers appropriate to them while maintaining the powers necessary to address national concerns. Large nations such as the United States and Canada have a federal system, while smaller nations such as Great Britain are unitary. Federal systems are based on the view that citizens will have greater solidarity with those who live nearby and who share common ways of life, though this view is less salient when a society has a highly mobile population.

THE STUDY OF POLITICS

The political analysis of major thinkers like Plato, Aristotle, Machiavelli, and Hobbes attempted to combine the empirical study of politics with normative concerns, though the latter two dissolve that combination somewhat. Politics is studied in the early twenty-first century at the academic level in departments of political science. While the term *political science* is a translation of Aristotle's *politike episteme*, modern usage, with the emphasis on "science," reflects the attempt, begun by Hobbes, to study politics according to the methodologies of the physical sciences.

The division of most departments of political science into four subfields of analysis reflect this methodology. Political philosophy, which focuses on normative questions of political life, is one subfield. International relations considers the complexities of the international order, including law, organizations, war, and political economy. Comparative politics examines the politics of various countries and regions of the world. A fourth subfield examines the politics of the native country, so, for instance, every political science department in the United States has an American politics subfield, and their counterparts in Canada have Canadian politics subfields.

Political scientists frequently step outside of their subfields. This is most true of political philosophy and its relation to other fields, as few political phenomena can be separated from their normative dimensions. For instance, the study of power requires one to consider why a political actor seeks power, and these reasons usually depend on that actor's particular understanding of justice. As a result, political science involves the study of the good society, just as it did for Plato 2,500 years ago.

SEE ALSO *American Political Science Association; Aristotle; Campaigning; Conflict; Elections; Electoral Systems; Elites; Hobbes, Thomas; Lasswell, Harold; Machiavelli, Niccolò; Participation, Political; Party Systems, Competitive; Plato; Political Science; Political System; Political Theory; Power Elite; Power, Political*

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John von Heyking

POLITICS, ASIAN AMERICAN

Americans of Asian heritage have been one of the fastest growing population groups in the United States over the last several decades. According to the U.S. Census Bureau, there were fewer than one million U.S. residents in 1960 who identified themselves as Asian, or less than 0.5 percent of the total population ("Asian" here refers to Americans with a Far Eastern, Southeast Asian, or subcontinent Indian background). By July 2004, this number grew to 14 million, or roughly 5 percent of the total U.S. population (based on individuals who identify as "Asian alone or in combination" with other racial groups, according to the current census classification system). This trend

is expected to continue, with current census projections of 33.4 million Asians in America by midcentury. This population, moreover, is highly concentrated in particular states and cities in America. For example, Asian Americans make up 58 percent of Hawaii's population and 12 percent of California's population. Asian Americans also make up 68 percent of Honolulu's population, 33 percent of San Francisco's population, and, in the two largest "gateway" cities, 11 percent of the population of both New York and Los Angeles.

Many observers of this demographic growth predict that Asian Americans will soon be a rising political force in the United States. Several Asian Americans have already ascended to prominent elected and appointed offices, including former Democratic governor of Washington Gary Locke, Democratic senators Daniel Akaka and Daniel Inouye (both from Hawaii), members of Congress Bobby Jindal (R-LA), Mike Honda (D-CA), Doris Matsui (D-CA), and David Wu (D-OR), and Bush Administration appointees Elaine Chao (U.S. Secretary of Labor) and Norman Mineta (U.S. Secretary of Transportation). At the same time, Asian Americans in elected and appointed office are conspicuously underrepresented relative to their numbers in the general population.

More importantly, a group's political fortunes often depend critically on the number of its members who vote and the number of those votes that can be delivered to a particular political party. In this instance, the power of Asian American electorate is far less clear. Based on 2004 data from the Current Population Survey, only 69 percent of Asian Americans are eligible to vote (as citizens), 36 percent are registered to vote, and only 31 percent report having voted in the last election. The proportions in the general population, by comparison, are 91 percent citizens, 66 percent registered to vote, and 58 percent reported voting. Much attention has thus turned to the question of why Asian Americans "underparticipate." The most commonly mentioned answer is that Asian Americans are simply less interested in politics and less invested in their long-term future in the United States. This view, while perhaps true in isolated instances, gives an incomplete portrayal that almost certainly evokes insidious stereotypes of Asian Americans as inscrutable, insular, and perpetually foreigners.

Roughly two of every three Asians in the United States are foreign born. As such, factors specific to the immigrant experiences and institutional inclusion of Asian Americans better explain their (under)participation. For one thing, Asian American political participation generally rises with one's immigrant generation and length of stay in the United States. Furthermore, contrary to the perceived wisdom, the availability of dual nationality does not divide the loyalties of Asian Americans or diminish their political engagement; if anything, Asians in the United States who come from countries allowing for dual nationality are more likely to be U.S. citizens and to vote than their counterparts from countries that make no such allowances. A third important factor is language. In particular, the availability of language assistance or multilingual ballots is key to the participation of many Asians in the United States.

As for mediating institutions, the mobilization of voters by political parties has been and still remains a decisive factor. Whereas parties in the era of urban "political machines" played a central role in the political mobilization of immigrants from European shores, parties in the mid-2000s were strong as national organizations but much weaker as local institutions that bring new Americans into their partisan fold. In their place, civic associations such as places of worship, unions, ethnic organizations, and community-based organizations were increasingly central as institutional forces that mobilize Asian American communities.

The relative absence of political parties as mobilizing institutions is also often reinforced by the prevailing belief that Asian Americans do not cast their collective political fates behind a political party. This belief is true in the sense that a plurality of Asian Americans, when given a choice, opt to affiliate with neither the Democratic nor the Republican Party. But it is untrue (and increasingly emphatically so) that Asian Americans have *no* preferences between the Democratic and Republican parties. In the 2004 presidential election, an exit poll conducted by the Asian American Legal Defense and Education Fund found 74 percent of its Asian American respondents who reported voting for John Kerry; 57 percent of poll respondents identified themselves as Democrats, compared to only 15 percent who identified as Republicans and 26 percent who did not affiliate with a party.

A final important consideration is that the political interests and identities of Asian Americans remain relatively ambiguous and amorphous by comparison, say, to that of African Americans. Only a small proportion of Asians express a strong sense of panethnic solidarity as "Asian Americans," exhibiting instead far stronger ties to ethnicity or national origin (i.e., as Japanese, Korean, Vietnamese, Pakistani, Taiwanese, and so on). This is the result in part of Census Bureau classifications that bring together a dizzying phenotypic, national, linguistic, religious, and ideological, inter alia, diversity of peoples under the common rubric of "Asian American." It is also the result in part of the mythical status of Asian Americans as "model minorities"—hard-working, law-abiding, family-oriented, education-revering people who embody the virtues of the American Dream. This model minority myth essentializes and homogenizes the diversity

of Asian American experiences. It functions ideologically to reproduce racial hierarchy in the United States by exaggerating the prosperity of Asian Americans while continuing to cast them as "perpetual foreigners" and exploiting the hard-earned gains of Asian Americans as a foil to denigrate the lesser fortunes of African Americans and Latinos.

At the same time, there have been moments of successful panethnic collective action. In the Vincent Chin case in 1982, two white autoworkers in Detroit who clubbed the Chinese American to death while calling him a "Jap" were acquitted of any crime. In the Wen Ho Lee case in 1999, a naturalized U.S. citizen from Taiwan was wrongfully accused of sharing nuclear secrets with the mainland Chinese government. These were two notable instances of "reactive identity formation" that drew a national outcry of protest from Asian Americans. Perhaps the most sustained case here was the decades-long legal challenge and political campaign for "redress and reparations" for the nearly 120,000 Japanese Americans who were forcibly removed from their homes and sent to internment camps during World War II. These efforts contributed to the passage into law of the Civil Rights Act of 1988, which provided $20,000 to each surviving internee and led to the issuance of a formal apology from President George H. W. Bush. It is important, then, to remember that panethnic categories such as "Asian American" are political and social constructions that respond to a collective memory and contemporary experiences of exclusion and racialization—from the 1882 Chinese Exclusion Act and the 1907 "Gentlemen's Agreement" between the United States and Japan to the U.S.A. Patriot Act and the post–9/11 debates over restrictionist immigration policies.

SEE ALSO *Immigrants to North America; Immigrants, Asian; Model Minority; Politics, Black; Politics, Latino; World War II*

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Taeku Lee

POLITICS, BLACK

Black politics refers to the collective struggle of people of African descent to gain power and influence in the processes and institutions of government as a way of securing and protecting a diverse array of interests that allow them to attain and maintain the rights afforded them as American citizens. It includes not only the actions of black people to assure these rights but also those of other individuals and collective groups with whom these interests and outcomes are negotiated. Research throughout various disciplines of the social sciences have sought to understand the conditions in which black politics have emerged, as well as the wide array of problems, challenges, successes, and failures that have resulted from its pursuits.

HISTORY

Insofar as it is at its core a struggle for and negotiation of power, black politics was initiated within the American institution of slavery. Though dictated for them by both law and custom, African slaves' identity, status, and relationship to America's white citizenry represented the beginnings of blacks' struggle for recognition, power, and legitimacy within the confines of plantation life. While there was no real sense of slaves' involvement in the formal governments of the nation, slavery was a system in which blacks, though stripped of power generally, nevertheless used means available to them (religious gatherings, informal and secret attempts to educate themselves, underground escape from plantation life, insurrection, and even forging relationships with their white slave masters) to achieve their first steps toward a more perfect real-

ization of a good life—freedom, and recognition as full and equal citizens of America.

However, blacks found that the freedom granted in law by Abraham Lincoln's Emancipation Proclamation did little to guarantee their equal status as full citizens. The years immediately following emancipation were years of uncertainty regarding the status of blacks, particularly in the South—years in which black codes extended the same system of subjugation blacks experienced throughout slavery. Yet soon, the project of Reconstruction, with its Congress-led protections and opportunities for blacks, would show signs for hope and optimism. W. E. B. Du Bois characterized blacks' political struggle for equality during this period (1867–1877) as the "mystic years"; blacks seemed to be on the fast track toward equality. Newly instituted policies such as the creation of the Freedmen's Bureau in 1865–1866, the passage of the Civil Rights Act in 1866 and the Fourteenth Amendment the same year and ratified in 1868, and others granted legal protections and opportunities for blacks to participate in American life. Blacks were afforded educational opportunities through public schools, some of which were integrated. Perhaps the greatest opportunity for blacks to forge their own political destinies was the granting of the right to vote by the Fifteenth Amendment, ratified in 1870 (giving them the ability to determine election outcomes) and the inclusion of blacks in state and federal elected office, including the 1870 election of both Hiram Revels as America's first black senator and Joseph H. Rainey as the first African American to serve in the U.S. House of Representatives.

However, the promises of Reconstruction would prove hollow after a few short years. White violence against blacks was rampant among such groups as the Ku Klux Klan and in historic riots such as those in New Orleans and Memphis in 1866 or the 1876 Hamburg Massacre in South Carolina. Informal and state-sanctioned barriers to black education and voting became prevalent, black elected officials were either stripped of their power or were made to support policies counter to their interests, and black political and social leaders were cast as buffoons, carpetbaggers, and unscrupulous opportunists in the American imagination, in large part through the white press of the time. By the end of Reconstruction, blacks found themselves stripped of many of the freedoms, opportunities, and means for political engagement they had received a brief taste of in the preceding few years. However, despite the beginnings and persistence of the Jim Crow era in the South that followed Reconstruction, blacks continued to mount considerable political and social influence: through the educational leadership of those such as Booker T. Washington and George Washington Carver, among many others; through the legal profession and such prominent legal figures as Thurgood Marshall and organized legal/political groups such as the National Association for the Advancement of Colored People, founded in 1909; and through the institution of the black press (which had its roots in the pre–Civil War and Reconstruction eras), which spawned more than 500 newspapers between 1880 and 1890.

The 1950s and 1960s ushered a new era of black politics—one born of new struggles and resulting in new political, economic, and social opportunities. Through a variety of "unlawful" channels and struggles engaged in by Martin Luther King Jr. and organizations such as the Congress on Racial Equality (CORE), the Student Nonviolent Coordinating Committee (SNCC), and others, blacks gained much in the 1960s that would lay a foundation for the continued pursuit of black politics. This included landmark legislative initiatives passed in three consecutive years: the Civil Rights bill brought before Congress in 1963, the 1964 Civil Rights Act, and the 1965 Voting Rights Act. Although this legislation opened doors previously closed and locked to black Americans, they did not completely ensure full access to and fulfillment of the rights enshrined on its pages. Yet it was these victories, along with the beginning of a cultural shift in American society to what political scientist Tali Mendelberg refers to as a "norm of racial equality" (2001), that made possible the growth of the idea, movement, symbols, and actions of black political life.

Following these legislative gains, the late 1960s saw a marked increase in the numbers of black representatives in Congress. With the addition of three representatives to the six already seated, the 1970 Congress had the most concurrent black members serving in its ranks. This watershed of black representation led to the eventual formation of the Congressional Black Caucus, which, according to William Clay, "constituted a power-bloc deserving respect within the institution" organized around the idea of a "solidarity of purpose and program [that] would enable the nine of us to wield a significant amount of influence in the House" (1993).

Outside of this official body, a host of other individuals and organizations were working to secure a sense of black solidarity to help ensure that the earlier legislative victories were not hollow. These ranged from "militant" groups such as the Black Panthers, Malcolm X, and the Black Muslim movement to a host of black pride and similar movements that sprang up within the academy. Included were movements to form the first department of Black Studies by sociologist Nathan Hare at San Francisco State University in 1968. Soon, similar departments were begun on college campuses across the country, aimed at understanding the culture and politics of African Americans. Their inauguration would spawn similar departments geared to study the social, political, and cul-

tural life of other American ethnic groups—departments of Latin American Studies, Asian American Studies, and others under the general rubric of ethnic studies. Each of these movements worked in formal and informal ways to secure the idea and trajectory of black politics that developed into a sense of black solidarity and collective action around securing black interests. And although the nature and substance of these interests and means of securing them have changed, the fundamental nature of black politics remains to this day.

CORE CONCERNS

There are a number of what might be called "core concerns" related to black politics. Many of these areas of scholarly investigation are related to what is perhaps a single most central concern: equal representation. Despite its presence and protections in civil rights legislation, it is an ideal that many feel has yet to be reached. Social scientists have generally focused their attention on this issue by investigating two broad related areas: the drawing and redrawing of legislative districts in ways that either allow or prohibit the election of blacks to legislative office, and the persistent nature of racial prejudice as it impacts the political process designed to ensure black representation.

Initiated by the Voting Rights Act of 1965, the practice of racially gerrymandering congressional and state legislative districts became a legal way of creating districts with a majority black population, thereby increasing the election hopes of blacks running for political office. Social scientists investigating the effectiveness of such policies have demonstrated strong arguments on both sides of this issue. Scholars who suggest the persistent need for racial redistricting policies focus on a number of research findings: the propensity for white voters to harbor deep-seated prejudices; resentments and fears of blacks; the reality that when primed by racial appeals, whites are likely to be less sympathetic to African American public-policy interests and infer that such would be the case in evaluating black candidates; and that, in general, whites tend to evaluate black political candidates less favorably than their white counterparts. The implication of such studies is that public-policy guidelines such as ensuring "safe" districts for black politicians may be necessary to mitigate the white prejudice that erects a barrier to what political scientists refer to as racial crossover voting.

Scholars whose research suggest that racial gerrymandering is not needed and may even hinder the pursuit of black political interests point to a different set of conclusions: studies of recent elections that demonstrate that white voters are sophisticated enough to sublimate racial attitudes when making voting decisions; research indicating that political ideology and political party affiliation—not negative racial attitudes—are the primary cause for whites' unwillingness to vote for black candidates; and arguments that suggest that racial redistricting provides for a modicum of "descriptive representation" but does not likely translate into "substantive representation." This is to say, it ensures that someone who is black will quite likely be elected, but it cannot ensure that the person elected, though black, will necessarily work in the interest of his or her black constituents.

This array of competing conclusions by political scientists, sociologists, and legal and communication scholars writing in the late twentieth and early twenty-first centuries suggests that both the ideal of equal representation for African Americans and the most effective means for securing it are still an open question, persisting as one of the most significant debates within the arena of black politics.

RECENT TRENDS

Beyond research surrounding the principal concern of equal representation, much research from the early 1990s to 2006 has demonstrated some interesting trends that have a direct bearing on the present and future state of black politics. These include the shift in policy concerns of African Americans, the growing number of blacks elected to government bodies, and the nature of black participation in the political process.

According to political scientists and communication scholars such as Donald Kinder, Nicholas Valentino, Katherine Tate, Michael Dawson, and others, public opinion on national public-policy concerns continues to be divided between blacks and whites and, increasingly, among blacks themselves. For instance, studies in the early 2000s demonstrated waning—barely a majority—support among blacks for affirmative action policies in hiring practices. Research shows that diminished support from earlier decades has been influenced by gaps among blacks in terms of economic class, levels of in-group identification, and out-group racial resentment. In addition to this, public-opinion surveys conducted around the same time period by the Joint Center for Political and Economic Studies, a think-tank that has researched trends in black politics since the early 1970s, show that although blacks still by and large support policy issues that have long been central interests—social welfare policy, affirmative action, education, and others—few of these concerns rate highly in terms of what blacks say are the issues that most concern them. Thus, it seems that while the public-opinion divide between blacks and whites persists, there is a growing fragmentation of black policy interests and concerns. This has led to a number of related developments, including, but not limited to, waning (although slow) affiliation of blacks with the Democratic Party (always overwhelmingly supported by blacks) and renewed interest in and

strategies by the Republican Party to recruit black political support.

Along with these public-opinion trends, the country has also seen an increase in the number of black elected officials since 1980. While most of these increases have been in state legislative bodies, there has also been a rise in blacks elected to Congress, as well as an increase in the number of black congressional hopefuls running against white opponents (some successfully) in non-majority-black districts. The increased numbers at the state level are likely to translate into continued increases in the numbers elected to higher levels and add to the debate about equal representation and the effectiveness of strategies used to ensure it.

A final area of social science scholarship has paid close attention to trends in black political participation. Research by many scholars in sociology and political science, particularly, has shown that generally the level of African American political participation has steadily declined in the years following the dawn of the civil rights movement. Research has sought to determine the precise causes and consequences of this declining participation. One set of arguments among many supported by the extant literature demonstrates that neighborhood isolation, in conjunction with states of extreme poverty, leads to political isolation—the feeling of being disconnected from the political system and of having no or little political power, which therefore sublimates motivations for political involvement. Other research suggests that a declining sense of black racial group identification has led to decreased interest in black political participation. Much of this research also relates to the increased socioeconomic stratification existing in black communities—a result, to some extent, of affirmative action policies that dramatically increased the size of the black middle class in the 1970s and 1980s.

However, there is much social-scientific evidence to suggest that black political activism and participation in social movements that coalesce around black interests—and increasingly shared interests with other minority groups—is still relatively strong. In this arena, much of the literature has focused on the issue of religious participation, most specifically on the continued relevancy of the black church as a motivating factor for, and conduit of, black political life. The influence of the church has been seen to impact the nature of black political participation in explicitly political activities such as voting and political campaign involvement, as well as less explicit forms of political participation such as volunteerism.

Social science research in the arena of black politics has tackled many significant and controversial issues in the more than four decades since the beginning of the civil rights era. While focusing on specific issues and problems, this area of scholarly inquiry has served to create and influence larger discourses about race in America. It has influenced American public opinion as well as the policy-making decisions that have occurred at every level of government that seek to protect the highest ideals of American democracy.

SEE ALSO *Attitudes, Racial; Bunche, Ralph Johnson; Civil Rights; Civil Rights Movement, U.S.; Desegregation, School; Du Bois, W. E. B.; Education, Unequal; Education, USA; Gerrymandering; Immigrants, Black; Immigrants to North America; Politics, Asian-American; Politics, Gender; Politics, Latino; Politics, Southern; Politics, Urban; Politics: Gay, Lesbian, Transgender, and Bisexual; Race; Racism; Reconstruction Era (U.S.); Slavery; Terrorism; Violence*

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POLITICS, COMPARATIVE

Comparative politics designates a distinct subfield in political science. Although Aristotle's political writings were arguably some of the first works in comparative political inquiry, the field has been most influenced by the writing of nineteenth- and twentieth-century thinkers including Gabriel Almond, Hannah Arendt, Robert Dahl, Harry Eckstein, Samuel Huntington, Seymour Martin Lipset, Karl Marx, and Max Weber. Research in comparative politics seeks to account for the observed variation

over time and among political units on consequential social, political, cultural, and economic outcomes by examining, describing, modeling, and predicting continuity and change resulting from the dynamics among international, national, and subnational actors.

The subfield's methodological orientation is catholic in its use of quantitative and qualitative techniques. Historically, the subfield has emphasized the use of case studies, often employing John Stuart Mill's methods of difference and similarity, but statistical analysis (mostly on cross-sectional, time-series, and multilevel data), computational methods, and formal modeling have become more prevalent in recent years. Gary King, Robert Keohane, and Sidney Verba (1994) and Henry Brady and David Collier (2004) offer introductions to some recent issues in comparative political methodology.

The field is organized around substantive topics, though disagreement on these canonical elements remains considerable. However, two broad dimensions can be delineated: the statics of political systems and the dynamics of political conflict and cooperation. The study of political systems evolves around the conditions and prerequisites for the establishment and survival of various regime types. Some of the crucial questions include: What distinguishes democracies from nondemocracies and from what lies in between? What explains the successful transition from one political system to another? What is the nature of liberal democracy?

A core debate in the study of democracy is the relationship between wealth and democracy: Some claim that wealth induces democracy, others that wealth simply accompanies democracy but is causally unrelated to it, and still others (e.g., Adam Przeworski) have suggested that wealth sustains democracy once it has taken root. Closely related is the study of democratic institutions and competitive elections, which has focused on the relationship between political institutions and political outcomes, such as collective mobilization, party formation, and policy preferences (e.g., in the work of Gary Cox, Robert Dahl, Richard Katz and Peter Mair, Herbert Kitschelt, and Giovanni Sartori). The study of autocracies has focused largely on developing typologies of authoritarian regimes and on the strategic interaction of elites during the transition to democracies. The comparative study of political liberalism across countries and over time has also received sustained attention in, for example, the work of Ira Katznelson.

Gabriel Almond and Sidney Verba's *The Civic Culture* (1963) was an early cross-national comparative study of democracy in which the authors linked civic attitudes and democratic stability using a tripartite typology of political cultures—parochial, subject, and participant. The cultures spanned from purely passive to highly engaged attitudes toward the political system and civic life. Almond and Verba argued that political cultures adhere to the principle of congruence between a political structure and the attitudes of its citizens. The study concludes that competent, active citizenries sustain democracies.

The literature on democratization has vacillated between an emphasis on the structural determinants of sustainable democracy and elite incentives and capabilities to modify the political order (Skocpol 1979). The work of Samuel Huntington derives the preconditions for political order both from socioeconomic changes and political institutions. Guillermo O'Donnell and Philippe Schmitter's work challenges structuralism and represents an actor-centered approach, which argues that the elite split followed by negotiated pacts (which incorporate the preferences of the military) is a necessary precondition for the successful transition from authoritarianism to democracy. Since 1989, the transitions from authoritarian regimes have produced a variety of political outcomes in the gray zone between autocracy and democracy. The study of competitive authoritarianisms (or illiberal democracies) is an emerging field of comparative study.

The study of linkages and distributional conflicts that arise at the intersection between politics, economics, and society has led to the development of an area of inquiry often dubbed "political economy." The "varieties of capitalism" literature is a prime example (e.g., Hall and Soskice 2001; for discussions of corporatism, see Schmitter 1975). The analysis of advanced capitalist democracies (OECD states) was induced by the oil shocks and the collapse of the Bretton Woods system. Political economy, in the work of Torben Iversen, for example, has since focused on the conditions for growth, stability, wage equality, and redistribution and seeks to untangle the ties between political systems, inequality, and policy formation. One line of inquiry focuses on domestic responses to international challenges, such as global economic competition, trade openness, and international institutions.

The study of dynamics among and within political systems focuses on conflict, revolutions, ethnic tensions, and order in society. The study of revolutions, for example, identifies the sources of state collapse and patterns of group alignment and mobilization. Studies of ethnicity and political culture analyze identity formation and the conditions under which identity is or can be mobilized for political purposes. Comparative politics intersects with international relations in many ways, but most often at the interface of ethnic conflict (e.g., Horowitz [1985] 2000). According to such writers as Donald Horowitz, Arend Lijphart, and David Laitin, the causes and consequences of state failure, intercommunal violence, and the institutional conditions under which ethnically divided

societies can coexist remain core questions in comparative politics.

The third wave of democratization has raised new questions about the relationship between electoral competition and economic reforms and has moved the field closer, in some ways, to international relations in debating the push-and-pull effects of international organizations (e.g., the European Union) or of global economic strategies (e.g., foreign direct investment). New agendas in comparative politics are emerging at the intersection of ethnic- (and culturally) based identities and political mobilization. Topics and subjects developed in the study of the OECD countries are beginning to migrate outside the region to address related issues. Methodologically, the field has benefited from the massive increase in computing power now available to social scientists, but it has not abandoned altogether its reliance on a small number of in-depth case studies. The field appears to be moving recognizably toward the potentially fruitful cross-pollination of quantitative and qualitative research methods and strategies.

SEE ALSO *Almond, Gabriel A.; Arendt, Hannah; Aristotle; Authoritarianism; Autocracy; Class; Democracy; Government; Keohane, Robert; Marx, Karl; Methods, Qualitative; Methods, Quantitative; Mill, John Stuart; Political Science; Politics; Socioeconomic Status; Stratification; Verba, Sidney; Weber, Max*

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POLITICS: GAY, LESBIAN, TRANSGENDER, AND BISEXUAL

The politics of sexual diversity became a subject of scholarly interest soon after a surge in lesbian and gay activism in the late 1960s and early 1970s. Writers publishing in the 1970s and early 1980s on such activism or state response to sexual diversity worked at the margins of publishing and academic disciplines and often outside the academy. In the 1990s, as sexual diversity came to be more publicly recognized, there was a major opening up of publishing opportunities for social science writing on lesbian, gay, bisexual, and transgender issues, though political science was slow to recognize their relevance.

PIONEERING CONTRIBUTIONS

The activism of the 1970s brought visibility to gay liberationist challenges to the gendered foundations and sexual repressiveness of European and North American societies. Gay community magazines and newspapers such as Toronto's the *Body Politic*, London's *Gay Left*, and Boston's *Gay Community News* provided means for nonfiction writers to focus their political visions through a new radical lens. One current of this writing reflected a belief in a clearly demarcated gay and lesbian population with distinctive social and cultural norms. Most writers, however, held that homosexuality was a social and political construct and that only in relatively modern times did it shift from labeling a form of sexual behavior to describing a distinct category of person. The British sociologist Mary McIntosh had articulated such a "constructionist" view in an influential article published in 1968 ("The Homosexual Role").

The Australian writer Dennis Altman's *Homosexual: Oppression and Liberation* (1971) was a liberationist manifesto. Altman was one of the few political scientists to publish on gay issues before the late 1980s, and many years passed before his work was considered a legitimate part of that discipline. In the decade that followed most work on lesbian and gay politics was by historians, sociologists, and independent scholars. One was Jeffrey Weeks's *Coming Out: Homosexual Politics in Britain, from the Nineteenth Century to the Present* (1977); another was the U.S. historian John D'Emilio's *Sexual Politics, Sexual Communities: The Making of a Homosexual Minority in the United States, 1940–1970* (1983), which was notable for having been published by an established academic house (University of Chicago Press). Both books pointed to radical questioning of social and political repression in earlier periods, and both adopted "social construction" views by linking the development of homosexual identities to advanced forms of capitalism.

Most lesbian activism was quite separate from gay male activism, and this was soon reflected in published work. Lillian Faderman's *Surpassing the Love of Men: Romantic Friendship and Love between Women from the Renaissance to the Present* (1981) was an early example of American writing that sought to claim lesbian visibility. Writers such as Gayle Rubin, Carole Vance, and Estelle Freedman used lesbian feminism as a lens for theorizing the interplay of gender and sexual inequalities and for outlining a distinctive political agenda. At the end of the decade the political theorist Shane Phelan published *Identity Politics: Lesbian Feminism and the Limits of Community*.

THE IMPACT OF AIDS

The spread of AIDS in the 1980s posed a new threat of stigma but also enhanced the visibility of sexual minorities, reradicalized activism, provoked engagement with state institutions, and created openings to mainstream political processes. It also highlighted issues of workplace discrimination and the formal recognition of the same-sex partners of those who were infected.

This increased intellectual interest in the interdisciplinary analysis of the politics of sexual difference. Altman was one who chronicled the expansion of AIDS activism and the public response to the epidemic from its early stages. A few years later David Kirp and Ronald Bayer produced books on public and bureaucratic responses using more established political science frameworks, and together they edited a collection of essays from several European and North American countries on the politics of AIDS.

It was in the late 1980s that the first comprehensive survey of lesbian, gay, bisexual, and transgender (LGBT) activism was published, *The Rise of a Gay and Lesbian Movement* by Barry Adam, who like Altman had a comparative vision that extended across and beyond the American and British experiences. This work coincided with a surge of academic interest in social movements, though little of this material was by political scientists and even less of it addressed LGBT activism.

Much of the coverage of the movement in later years emphasized gender divisions or the distinct experience

and political agendas of lesbians. Work by Vera Whisman and Becki Ross pointed to widespread fluidity in women's emotional and sexual experiences and to conscious, politically informed shifts away from men and toward other women. At the same time most accounts noted that wariness of bisexuality was more widespread among lesbians than among gay men, though it was common enough across the gender line to hamper the emergence of bisexual activism for years.

Some of the important analyses of the movements in Britain, Canada, and the United States came from the pens of activists, including Urvashi Vaid, formerly head of the Washington-based National Lesbian and Gay Task Force, and Tom Warner, long involved in the Coalition for Lesbian and Gay Rights in Ontario. Vaid, Adam, and the British sociologist Kenneth Plummer were among those students of the movement who discussed social class inequalities. Most published work on the movement extensively covered divisions within it but focused most often on gender and race or ethnicity more than class.

QUEER THEORY

The early 1990s saw a dramatic growth of publishing on sexual diversity, though legitimacy within the academy was slower to develop. One of the most prominent new bodies of literature was in queer theory, taking up a traditionally derogatory term that had been proudly adopted by young Queer Nation activists at the beginning of the decade. *Queer* was used in many different ways but usually was intended to indicate a provocative rejection of assimilitionist politics and to reflect the wide range of sexual practices and identities rejecting "heteronormativity."

Writers such as Eve Kosofsky Sedgwick (author of the influential *Epistemology of the Closet*, 1990), Michael Warner, Judith Butler, and the political theorist Mark Blasius were heavily influenced by the French philosopher Michel Foucault and particularly by the first volume (1978) of his *History of Sexuality*. They saw "homosexual" and other sexual categories as the products of a regulatory and controlling impulse. Language itself was seen as one of the fields on which power was exercised, though also where resistance was mobilized. Queer theory, like other forms of poststructural analysis, resisted the notion of a universal narrative or a common human experience of sexual difference. Within any particular time and setting too, practices were variable and identities unstable. Not surprisingly writers in such veins often paid particular attention to sexual practices and identities that crossed gender boundaries.

A current of critical legal studies was growing at this time; among the most prolific writers were the British legal scholars Didi Herman and Carl Stychin. The frameworks and very language of law, according to this view, structured the way claims are presented and narrowed the impact of the "victories" gained. Alongside queer theory then, this writing raised critical questions about what was thought to be the assimilationism of mainstream lesbian and gay activism.

DIFFERENCES ACROSS CULTURES AND SOCIETIES

Queer theory's rejection of universalism dovetailed with discussions of racial and cultural inclusiveness among European and North American activists and the emerging profile of sexual diversity politics in minority communities in European and North American countries and in Asia, Africa, and Latin America (often propelled by AIDS). By the end of the 1990s more writers were taking up questions of cross-cultural and cross-national difference, though not necessarily through a queer theoretical lens. The activist Keith Boykin began writing about African American gay experience, and the political scientist Cathy Cohen then published *The Boundaries of Blackness: AIDS and the Breakdown of Black Politics* (1999). Both explored the erasure of African Americans in mainstream chronicles of the epidemic and within African American political circles.

At the beginning of the twenty-first century two collections brought together articles on the politics of sexual diversity covering a wide range of countries, one edited by the British activist and political scientist Peter Drucker, the other by Adam and colleagues. This new literature pointed to the influence of Euro-American "identity" models on other regions of the globe but alongside persistent local patterns of sexual practice and self-perception. The best of this writing resisted the temptation to romanticize sexual practices and beliefs about them in precolonial non-Western societies and to homogenize the West itself.

THE POLITICS OF RIGHTS

Activist claims for equality secured major gains in the 1990s, propelled partly by the visibility of sexual minorities in an expanding range of countries and partly by the public policy prominence of the issues associated with AIDS. Openly gay candidates for public office were winning elections in the 1980s for the first time, and in the following decade their numbers grew significantly in the United States, Britain, the Netherlands, and other industrialized countries.

In the United States especially, gay and lesbian rights issues became much more prominent as religious conservatives and the Republican Party intensified their opposition to such rights. President Bill Clinton's 1993 attempt to lift the ban on lesbians and gays serving in the military provoked a firestorm of protest (and some scholarly atten-

tion, such as in a collection edited by Craig Rimmerman). A successful court challenge to Hawaii's marriage law in that same year led to an even greater focus on homosexuality by the Religious Right—a focus sustained for well over a decade. Under George W. Bush's presidency, the Republican Party was as ready as ever to use the marriage issue to attack Democrats, and a series of state constitutional amendments to bar same-sex marriage was successfully introduced on election ballots in the mid-2000s.

Nevertheless, steady gains were being made in recognizing families led by same-sex couples. As activists in North America and Europe made progress in state systems, writing on their access and impact expanded. Work that deals with legal rights received substantial attention in the United States, which is not surprising given the political importance of litigation. Writers such as David Richards, William Eskridge, Daniel Pinello, William Rubenstein, and Jason Pierceson examined the highly uneven record of U.S. courts in terms that provided at least some hope for activists. The influence of critical legal studies is more evident in writings about Canadian law by writers such as Kathleen Lahey, Miriam Smith, Bruce McDougall, Brenda Cossman, and Susan Boyd.

The spread of legal recognition of sexual diversity in Europe has received somewhat less attention but more as issues related to relationship recognition have come to the fore. Robert Wintemute, Kees Waaldijk, and Yuval Merin have chronicled the rapid spread of national regimes of same-sex relationship recognition in the late 1990s and early 2000s as well as the slow march toward equity within European Union institutions.

In the late 1990s and the early 2000s dramatic shifts toward recognizing same-sex relationships (in some cases including marriage) occurred in Canada, Spain, the Netherlands, and several other northern European countries. Most reformed regimes initially excluded or compromised parenting rights for lesbian and gay couples (Canada and Spain being notable exceptions), though greater inclusiveness on that front was slowly spreading in the 2000s.

In no other country has controversy over challenges to family regimes been as sustained as in the United States. Consequently there has been only modest scholarly attention to tracking these changes outside the United States apart from the writings of Waaldijk, Wintemute, and David Rayside.

The enactment of rights measures at the state and regional government levels has received some attention in the United States, where local and state authorities have greater jurisdictional reach in areas related to sexual diversity than in almost any other system. Bob Bailey, Kenneth Wald, Barbara Rienzo, James Button, Steven Haeberle, and Donald Haider-Markel are among the contributors to this field exploring what factors explain rights advances.

Family policy began receiving analytical attention in the United States following the emergence of same-sex marriage as a front-burner political issue during the 1990s and the early 2000s. Writers such as Eskridge and Richards argued for the importance of the issue; others such as Valerie Lehr are more skeptical of the "normalizing" dangers of seeking entry to the traditionally inequitable institution of marriage.

The prioritization of gay-related issues by the U.S. Religious Right eventually produced an analytical literature on that opposition, including work by Wald, Herman, and Clyde Wilcox. As struggles over public recognition intensified, greater analytical attention was paid to public attitudes (for example, by Sherrill). The prominence of the marriage issue in the United States led to a proliferation of analytical treatment on that issue in particular by such writers as Daniel Pinello, William Eskridge, Martin Dupuis, Jonathon Goldberg Hiller, and Andrew Sullivan. Many other issues, such as those related to schooling, policing, and parenting, should have received substantial academic attention but did not.

Transgender politics gets little space in these strands of literature on rights politics. The theorist Paisley Currah is among the few social scientists and is possibly the only political scientist who has written in a sustained way on this topic. Empirical treatments of activist movements or public policy engagement with transgenderism and bisexuality are exceedingly rare, despite the spread of a rhetorical commitment to inclusion.

ACADEMIC LEGITIMACY?

In general the legitimacy of academic attention to the politics of sexual diversity has not kept pace with the readiness of publishers to produce works in the area. To be sure, the surge of work during the 1990s was matched by a growth in academic profile. The American Political Science Association (APSA) recognized a Committee on the Status of Lesbians and Gays in the Profession in the early 1990s, following the earlier formation of an LGBT caucus. This produced more equitable policies, studies of scholarly inclusiveness (by the APSA in 1993–1995), and increased room for specialists in LGBT issues to present their work. The 1990s and 2000s also saw the creation and growth of academic programs and research centers focusing on sexual diversity, the largest and most successful being the Center for Lesbian and Gay Studies (CLAGS) at the City University of New York.

Well into the 2000s, however, sexuality was still viewed as a marginal area, much as gender had been in previous decades. Undergraduate texts in political science in all countries only rarely referred to LGBT issues. Social

science literature on these questions has routinely been pigeonholed with other gay-related material and seldom seen as contributing to more general understanding of public policy, social movements, voting behavior, or legislative politics.

SEE ALSO *American Political Science Association; Civil Rights; Gender; Gender, Alternatives to Binary; Human Rights; Liberation Movements; Marriage, Same-Sex; Politics; Politics, Gender; Politics, Identity; Queer Studies; Sexual Orientation, Social and Economic Consequences; Sexuality*

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David Rayside

POLITICS, GENDER

Gender politics is a multifaceted concept in the social sciences. As a term it is used to refer to a wide range of phenomena, stemming from multiple and even competing meanings of *gender* and *politics*. Its definition is further complicated by the emergence of similar and related phrases like *women and politics*, *gender and politics*, and the *politics of gender*. This complexity indicates ongoing conceptual debates within research on gender and politics. At the same time, it reflects theoretical and empirical developments as the study of gender politics has evolved and grown to encompass a broad and heterogeneous set of topics.

DEFINITIONS

Several definitions are necessary in order to grasp the scope and content of gender politics as a concept and a field of study. At the most basic level, it is crucial to distinguish between sex, gender, and sexuality. In their most common usages, *sex* denotes biological differences between men and women as male and female, *gender* describes the social meanings given to sexual differences through notions of masculine and feminine, and *sexuality* refers to sexual relations and questions of sexual orientation. However, definitions of all three of these terms, as

well as the connections between them, are subject to a great deal of confusion and debate.

First, there is a tendency to identify all three terms with only one side of the dichotomies they represent: sex is often equated with *female*, gender with *feminine*, and sexuality with *homosexuality*. The result is that sex and gender are often treated as synonymous with women, while sexuality is considered only in relation to gays, lesbians, bisexuals, transsexuals, and transgendered individuals. Second, there are important disagreements on the ways in which sex, gender, and sexuality inform and are linked to one another. Although the binaries of sex and gender assume heterosexuality, for example, other sexual orientations raise questions about the necessary connections between male and masculine and female and feminine. These patterns intersect with debates about the causal relations between these terms: Although some argue that sex produces gender which leads to sexuality, others suggest that gender and compulsory heterosexuality give rise to distinctions on the basis of sex.

Parallel to these discussions, feminists and others have pioneered new uses for the term *politics*. Although many people employ this word to refer to formal political processes, like government and elections, *politics* has assumed at least two additional meanings in the last several decades. On the one hand, women's movement activists have expanded its range to encompass informal politics and the dynamics of everyday life. They insist that social movements are a form of political participation on a par with engagement inside the state. At the same time, they draw attention to the power relations that permeate all levels of social life, including relations within the private sphere of home and family. For them, "the personal is political." On the other hand, feminist and postmodern theorists have adopted a broader notion of politics as any instance or manifestation of power relations. They are thus interested not only in the politics of the state and the politics of social movements, but also in the politics of language, the politics of exchange, and the politics of representation, to give but a few examples.

These debates, in turn, lead to a range of different understandings of the term *gender politics* and cause it to be confused with related terms like *women and politics*, *gender and politics*, and the *politics of gender*. Although many people use these phrases interchangeably, it is possible—on the basis of the theoretical distinctions outlined above—to carve out some general differences between them. *Women and politics* involves the study of various aspects of women's political activity, whether this entails engagement in social movements, political parties, elected assemblies, or the state. *Gender and politics* covers many of these same topics, but in addition, implies attention to masculinities and femininities, as well as relations between men and women, as they operate in various political arenas. The *politics of gender*, finally, comprises a closer look at the power relations behind definitions of—and presumed causal relations between—sex, gender, and sexuality. In comparison, *gender politics* may refer to any and all of these distinct foci of investigation.

Individual disciplines take up the study of gender politics in various ways, depending on their core research interests and theoretical frameworks. Because various currents in sociology, anthropology, and philosophy embrace broad definitions of *politics*, scholars in these fields use the term *gender politics* in many different ways to refer to the study of women and politics, gender and politics, and the politics of gender. Ironically, political scientists tend to adopt a much narrower definition of gender politics to refer only to the study of women and politics and gender and politics, where the term *politics* encompasses only formal and informal political processes, to the exclusion of questions about broader power relations. Even this more restricted focus, however, has produced a wide range of literature that over time has expanded and evolved in terms of theoretical approaches and fields of empirical research.

APPROACHES

As feminist theorists have developed *sex* and *gender* as analytical categories, scholars in political science have elaborated a series of approaches for analyzing the sexed and gendered nature of political life. The first phase of research on gender politics involved highlighting women's exclusion from formal politics and then incorporating women into existing political frameworks. It was thus guided by an "add women and stir" approach: Using sex and gender as synonyms for *women*, it sought to include women but did not question the male norm implicit in reigning understandings of political processes.

Recognizing the limits of this approach, the second phase shifted its attention to the activities of women as women and analyzed their participation in formal and informal politics. Although many scholars continued to employ the term *gender* when they discussed only women, a growing number also began to use it to refer to relations between men and women in order to study how the form and content of politics reflect and shape inequalities. The third and current phase extends these insights to explore how ideas about sex and gender permeate all aspects of political life, sometimes—but not always—with the intent to break down these dichotomies. This work introduces, for the first time, the importance of studying masculinities as well as femininities in politics. It also investigates how political science itself may be gendered in terms of its concepts, definitions, theories, and methods.

The main theoretical innovation that emerges over the course of these stages is a multifaceted shift in focus

from *sex* to *gender*. In light of the different definitions attributed to these terms, analysts ascribe at least three distinct meanings to this shift. The first is a move away from biological sex, or the notion that men and women are binary opposites, toward socially constructed gender identities, or the idea that masculinity and femininity constitute features that exist along a continuum. The second is a move away from exclusive concern with women in politics and public policy toward greater attention to the impact of masculinities and femininities, as well as relations between men and women, on political inputs and outcomes. The third is a move away from sex as one of many possible variables in political science toward gender as a concept that forces a fundamental reexamination of core features of political life.

All three aspects of the shift from sex to gender, nonetheless, are in some sense incomplete. For one, mainstream and feminist researchers find that while indicators for sex are relatively straightforward to incorporate into political analysis, those for gender are much more complicated. This is partly because sex refers to biological markers that are relatively unambiguous, while gender denotes social meanings that may vary a great deal within and across particular contexts. However, this is also due to difficulties that many people experience in grasping that the relationship between sex and gender is not a perfect one. Secondly, many feminists are hesitant to abandon sex in favor of gender. As the two concepts are not equivalent, these scholars argue that both are crucial to good research design, whether the purpose is to analyze men and women or masculinities and femininities as these play out in various kinds of political arenas.

FIELDS OF RESEARCH

Attempts to expand the scope of *politics* to include formal and informal political processes are reflected in the areas of empirical research on gender politics in political science. Seeking to break down dichotomies of public versus private spheres and formal versus informal politics, these scholars have explored the effects of sex and gender on a broad range of political activities. Focused on women specifically, they have examined women and voting, in terms of the right to vote, the implications of delayed suffrage, and gender gaps in voting support; women and social movements, in terms of participation in social movements, women's movements, and feminist movements; women and political parties, in terms of candidate selection and other aspects of party politics; and women and parliaments, in terms of access to political office, behavior in political office, and impact on public policy.

Turning to the products of political processes, gender politics researchers have theorized the role of the state in reflecting and shaping gender relations. They analyze how states contribute to the reproduction of gender hierarchies, or alternatively, lead to changes in patterns of inequality through different kinds of public policies. Attentive to variations across countries, they note the ways in which such policies make implicit or explicit assumptions about men and women and identify—or ignore—certain questions as *women's issues*. The possibilities of exploring other definitions of *politics* and incorporating interactions with other identities, combined with the already multifaceted nature of sex and gender, ensure that all six of these areas will remain vibrant areas for future research.

SEE ALSO *Abortion Rights; Femininity; Feminism; Feminism, Second Wave; Gender; Gender, Alternatives to Binary; Gender Gap; Inequality, Gender; Masculinity; Patriarchy; Politics; Politics: Gay, Lesbian, Transgender, and Bisexual; Politics, Identity; Sexual Orientation, Determinants of; Sexual Orientation, Social and Economic Consequences; Sexuality; Suffrage, Women's; Women and Politics*

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Mona Lena Krook

POLITICS, IDENTITY

Identity politics is a term that first came into usage in the 1970s to refer to the view that social identities, such as race, ethnicity, sexuality, and gender, have an important influence on an individual's political motivations, affiliations, and political commitments. The term quickly moved from a neutral description to primarily a pejorative and began to refer to the practices of narrow interest-group politics, separatism, and the practice of assessing a person's politics on the basis of his or her identity alone.

In the 1990s both the concept and the practice of identity politics began to be vigorously defended primarily by theorists working on identity-based political movements or movements against identity-based forms of oppression.

Most consider the locus classicus of the concept of identity politics to be the Combahee River Collective Statement written in 1978. The term had been used in public discourse in the Left before this time, but this was the first place that it received an explicit formulation. In this statement, identity politics refers to the idea that the identity of political agents and theorists will have an impact on both the political work they choose to pursue and also on its effectiveness.

The Combahee River Collective was composed of African American women who believed that there did not yet exist a social theory or political movement that fully and accurately reflected the conditions of African American women's lives. They argued that African American women needed to develop such a theory and movement themselves, that they would be the group most motivated to do so, and that they would be the group with the knowledge base from which to develop the specific social analyses applicable to their form of intersectional oppression. They made a specific point of stating that they were not separatists and in fact supported coalition work, particularly with those in the feminist and antiracist movements. They also stated that they did not reject the utility of more general social theories of oppression, such as Marxism. Yet they held that a special focus on black women's lives by black women themselves was necessary to yield new insights and practices. Their defense of this latter claim was based on the state of the social movements of that time, in which the specific oppression of African American women was not pursued by either feminism in general or by the antiracist movements.

The concept of identity assumed by the Combahee River Collective was an intersectional and complex one. They did not assume that all women or all African Americans have the same political motivations or goals, hence their formation of this separate group. Many members also were lesbians and experienced marginalization as well as homophobia in other groups. Despite their experience with the complexities of group identity, they nonetheless asserted that "we believe that the most profound and potentially the most radical politics come directly out of our own identity, as opposed to working to end someone else's oppression" (Combahee River Collective 1978, p. 365).

From this rather careful and cautious explanation of the relationship between identity and politics—a relationship conceived of as philosophical as well as political—the term *identity politics* began to be associated with the identity-based splits and sectarianism that rippled throughout the civil rights, gay and lesbian, women's, and student movements of the 1960s and 1970s. Most notably this included the removal of whites from the Student Nonviolent Coordinating Committee that occurred in the mid-1960s and the gay-straight split that occurred in the women's movement in the early 1970s. Splitting organizations along identity lines was attributed to identity politics. This connotation of the term may already have been in circulation when the Combahee River Collective first formed, motivating them to give an explanation and defense of the identity-based form their collective took.

CRITICS OF IDENTITY POLITICS

From the 1980s on both liberal and left political theorists began to critique the concept as based on simplistic notions of identity and narrow conceptions of solidarity and as maintaining a focus on victimization rather than on effective solutions. These theorists argued that identity politics was an obstacle to the work of creating trust across differences of identity, which is necessary for coalitions and class-based movements. They argued further that it had detrimental effects within identity defined groups themselves, such as enforced conformism within the group, a policing of the group's boundaries, and a hampering of the expression of and debate over internal political differences within groups.

Leading liberals such as Arthur Schlesinger Jr. criticized identity politics for making a cult of identity that derailed the trend that had been growing up until the 1960s toward a melting-pot society. Other liberals also worried that identity politics in a multiethnic society would disable democracy by transforming the arena of public political discourse from a shared concern over the common good to a negotiation between interest groups locked in battle. Liberals also predicted that identity politics would lead to a Balkanization of the political landscape and an increase in civil strife, possibly including the kind of violence that occurred in the former Yugoslavia in the 1990s.

Leftists expressed the concern that identity politics had derailed the possibility of forming a class-based progressive movement that could unite around critical issues of economic injustice. Race- and gender-based movements are multi-class, they argued, and so cannot take up a working-class agenda. Many philosophers also entered the debate, especially those influenced by French poststructuralism, to argue that the concept of identity being assumed by proponents of identity politics is an illusion of coherence and unity based perhaps on a form of psychological pathology. Identity concepts assume a homogeneity of experience and political interests where none exists, and this is why identity-based movements must enforce homogeneity and police the borders around identities to keep out those with intersectional identities who might

have a different set of political priorities. Some ethnic theorists, such as Paul Gilroy, united with this critique, arguing that identity politics is an understandable but pointless reaction to modernist pressures that transform identities and diminish their significance.

IDENTITY-BASED AND PROGRESSIVE

In response to these concerns a number of theorists, especially in ethnic studies, argue that identity-based political movements—such as the abolitionist movement and civil rights movement—have been among the main forces expanding democratization and developing progressive politics. Identity-based movements have improved the inclusiveness of class-based movements so that the interests of nonwhite and women workers are also represented. The white male union leaders would not have come to these more inclusive agendas on their own without being pushed by the various caucus groups within the labor movement that were organized around identity. Identity politics was a necessary part of the strategy to overcome identity-based forms of oppression, to ensure an inclusive political agenda, to develop a more thorough analysis of social oppression, and to show the equality of all people as leaders and intellectuals.

A number of ethnographic studies reveal that identity politics do not always lead to separatism or enforced conformity and that we need to develop a typology of identity-based movements in order to distinguish between different forms with different effects. Mobilizing on the basis of identity can bring new actors to political participation and thus work against the passivity of victimized notions of identity. Under extreme repression, identity groups may curtail the expression of internal differences, but this is not inherent to identity-based movements.

The concepts of identity assumed by the parties to this debate vary widely. Some theorists on both sides of the debate assume that identities are like interest groups with uniform political interests or that members of identity groups are identifiable by their shared practices, preferences, and beliefs. Other theorists, such as Satya P. Mohanty, Paula M. L. Moya, and Linda Martín Alcoff, argue that identities are historically fluid, intersectional, and heterogeneous and thus a starting place rather than the endpoint of politics. Nonetheless, identities are important indices of experience and provide epistemic resources for social analysis.

SEE ALSO *African Americans; Civil Rights Movement, U.S.; Class; Democracy; Ethnicity; Gender; Gender Gap; Identity; Individualism; Liberalism; Poststructuralism; Race; Sexual Orientation, Social and Economic Consequences; Social Movements; Women's Movement*

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Linda Martín Alcoff

POLITICS, LATINO

The terms *Latino* and *Hispanic* are the most accepted words for a diverse population of people with linguistic, geographic, and historical similarities, but the terms are wrought more for practical convenience than descriptive clarity. The literature on Latino politics has stressed the differences between the various Latino groups since the Latino National Political Survey in 1989, the first major national survey specifically targeting Latinos. National debates over immigration policy in 1994 and 2006, however, demonstrate that despite their diversity, Latinos are a group of people distinguishable, for better or worse, by both Latinos and the electorate at-large.

LATINO ELECTORAL PARTICIPATION

The litmus test of civic participation for any group is their level of electoral turnout. David Leal, Matt A. Barreto, Jongho Lee, and Rodolfo O. de la Garza noted in "The Latino Vote in the 2004 Election" that Latino voter turnout "surged from 5.9 million in 2000 to at least 7 million in 2004" (2005, p. 41). Increasing levels of electoral participation may suggest a comparative increase in socioeconomic status, higher levels of personal interest, greater levels of civic engagement, or a greater effort on the part of the establishment to recruit Latinos. The greatest impact Latinos have had on American politics comes from speculation regarding the Latino vote, but the numbers paint a considerably different picture. Table 1 illustrates U.S. Census Bureau reports showing that registration and participation rates among Latino citizens and non-citizens have hardly changed since 1980. The increase in the raw numbers of Hispanics voting from 1980 to 2004 is attributable almost entirely to population growth, considered to be the driving force of Latino politics.

LATINOS' RELATIONSHIP WITH THE AMERICAN POLITICAL SYSTEM

In their work *The Chicano Political Experience* F. Chris Garcia and Rodolfo de la Garza illustrated four models to explain the relationship between Latinos and American society in 1977: pluralism, internal colonialism, and elitism. Rodney Hero later contributed his influential description of a two-tiered pluralistic society in 1992 with *Latinos and the U.S. Political System.*

Under the pluralist framework, groups vie with one another on a competitive field, each with their own advantages, resources, and centers of power where there are multiple access points to influence the political system. The most compelling argument for a pluralistic model is Lawrence H. Fuchs's *The American Kaleidoscope* (1990), in which he parallels the Latino immigrant experience and past immigrants who are now largely integrated into the political power structure.

By contrast, internal colonialism claims a sociopolitical system in which Latinos are dominated and exploited by other groups, even though they may have the same formal legal status of the dominant group. It emphasizes the integration of historically racist relationships between the dominant non-Latino majority and Latinos into the fabric of the political system. Distinctions from the dominant group are seen to have negative or inferior qualities, and the stereotypes of Latinos are embedded into the institutions of the social and political systems, from the electoral system to the financial and educational infrastructure.

The elitism perspective asserts that there is a privileged class of people who enjoy superior resources with racially generated attachments that serve to further appropriate the privileged class to their position at the top. The elitism model depends less on racial distinctions and more on class differences to explain the unequal distribution of power and resources that characterizes the Latino masses. Elitism is also different in that it does account for some growth in Latino influence, but Latino elites are not likely to resemble the Latino masses and are more likely to resemble their non-Latino elite cohort.

Hero argues that there is a large segment of Latinos who are structurally cut off from the opportunities that are available to the mainstream, despite the success stories. He describes a compelling perspective on Latinos' relationship with the American system, a two-tiered pluralistic society in which there is a conventional population that operates in the traditional patterns that most immigrant groups do, and a second tier that consists of a political and social subclass whose position is supported by historical and cultural inequalities that have become embedded into the fabric of the structural system. Two-tiered pluralism is a complex framework that consists of a political system that is formally unrestricting but exists within a social system that is informally constrained by negative historical relationships.

The 1994 Proposition 187 debate in California illustrates Hero's model, as Latinos were politically fully engaged, but largely helpless in their efforts to prevent Proposition 187 from passing decisively. Although Proposition 187 was deemed unconstitutional, the anti-immigration movement throughout the United States remains robust into the mid-2000s and illustrates the relationship Hero draws between Latinos and the American political and social systems. Latinos may have a legal status equal to the majority, but the continued poverty and social status of Latinos is a function of continually having

to defend themselves against the mainstream, preventing them from tapping into valuable social resources.

ASSESSING LATINOS' RELATIONSHIP WITH THE AMERICAN SYSTEM

As noted above, the rate of Latino electoral participation has not changed significantly since 1980, just three years after Garcia and de la Garza outlined their models on the relationship between Latinos and the American system. After reflecting on nearly three decades of literature on Latino politics, however, de la Garza believes Latinos do indeed fit into the pluralistic model. He points out that this was not always the case and if he were to make the same assessment back in 1977, pluralism would not have been his first choice.

The empirical evidence since 1977 has swayed his opinion, suggesting that the distasteful realities of the Latino experience have indeed improved. One reason for de la Garza's initial judgment in 1977 might have been the available models at the time, which were used to explain the how, why, and whom of Latino politics. Up until 1977, the field of political behavior had largely settled into two general camps, rational actor theory and socioeconomic status theory. These theories are not exclusive, but in their stages of development before 1977, neither could sufficiently explain the position of Latinos in the American system.

The literature on Latino politics up to that point had been guided by the scholarship on African American politics and focused on grassroots movements that tended to skew the perspective toward the inequalities born out of the social and political climate of the time. These perspectives focused on the effects of socioeconomic status (SES), social capital, institutional trust, group identity, and group relations. The development of these models provides researchers with the tools to better understand the forces behind Latino politics.

Up until 1977, the strong impact that SES had on political participation was a truism in the field. The rational actor model assigned higher stakes to the socially privileged because they had a greater incentive to take an active role in a system from which they benefited. The socioeconomic status model had established the connection between participation and higher levels of SES in a variety of national and international surveys at the time. Whether it was out of civic-minded duty or rational self-interest, Latinos could hardly be seen to have had much of an incentive to participate.

Given the low SES of Latinos it was not difficult to speculate why Latinos did not participate, but the empirical models had yet to capture the depth of this dimension in Latino politics. While Latinos simply did not have the resources to effectively participate, from a theoretical perspective one could only speculate as to how Latinos would be able to exact change on the political system.

Registration and voting of non-Hispanic whites and Hispanics in the 2004 and 1980 presidential elections

	2004			
	N/H White		Hispanic	
	Citizens only	Non-citizens included	Citizens only	Non-citizens included
Registered	75.1%	73.5%	64.0%	34.9%
Voted	67.2%	65.8%	47.2%	28.0%
	1980			
Registered	84.7%	70.3%	56.0%	36.3%
Voted	66.2%	62.8%	46.1%	29.9%

The comparison between 1980 and 2004 is an approximation because the changes in ethical and racial categories by the census does not allow true apples to apples comparison.

SOURCE: U.S. Census Bureau.

Table 1

This hole in the literature left a heavy burden on pluralism to explain the unequal distribution of resources, and the literature had hardly given much promise in Latinos' ability to traverse the social barriers that were clearly evident at the time. Elitism and internal colonialism offered the best explanation for the position of Latinos in the American system almost by default. But if the relative participation rates have not changed much since 1977, what evidence have the empirical models provided that might convince de la Garza that Latinos live in a pluralistic society?

One potential answer is that the field of Latino politics has learned that Latinos behave no differently than do non-Latinos and that ethnicity in and of itself has little direct effect on the participation rates of Latinos. Carole J. Uhlaner, Bruce E. Cain, and D. Roderick Kiewiet concluded in their 1989 article "Political Participation of Ethnic Minorities in the 1980s" that "Latino activity rates appear no lower than those of non-Hispanic whites once demographic factors and related determinants of participation are controlled" (p. 217). The behavioral models have taken a greater account of the experiences and obstacles that faced Latinos and are able to control for many of the speculative factors that had not been empirically established, such as different patterns of civic voluntarism and an underdeveloped elite-driven organizational structure necessary for effective mobilization.

More important, events since 1977 have provided many examples of Latino political success and the large Latino population has made it easier to witness a growing Latino middle class. Because of this, it is difficult to jus-

tify the internal colonialism model, and Hero's two-tiered pluralism was an attempt to rectify the internal colonialism model with the facts on the ground. Two-tiered pluralism concedes what at that point could not be argued anymore, that Latinos had indeed reached legal parity with the majority, while still relying on historical racism to explain the differences in socioeconomic status. The future may prove two-tiered pluralism to be wrong, but until then, it is still the best framework available to explain why Latinos behave the same as non-Latinos given the same characteristics, and why they do not reap identical benefits as Anglos do from the same political actions.

SEE ALSO *Behaviorism; Boricua; Caribbean, The; Citizenship; Colony, Internal; Elite Theory;* Hernandez v. Texas; *Immigrants, Latin American; Immigration; Indigenismo; Latino National Political Survey; Latinos; Pluralism; Stratification*

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Stephen A. Nuño

POLITICS, REPRODUCTIVE

SEE *Reproductive Politics.*

POLITICS, SOUTHERN

In politics, religion, and culture, the South is arguably the United States' most unique region. Southerners, particularly native-born white southerners, have a collective consciousness and attachment to history that exceeds that found in other regions, such as the upper Midwest, New England, and the West. A native-born Connecticut or Massachusetts resident is far less likely to identify as a "New Englander" than a native-born South Carolinian or Mississippian is to identify as a southerner. Historian David Goldfield refers to the drive among some white southerners to preserve some elements of the past as "still fighting the Civil War" in his 2002 book of the same title. While not unique to the region, several elements, including military traditions, a "culture of honor," attachment to traditional gender roles, and fundamentalist Christianity, have striking support in much of the South compared to the rest of the nation. These elements materially influence politics, and southern politics, always distinctive in the past, remains distinctive in the twenty-first century.

Which states make up the South? This question has no single agreed-upon answer, and opinions vary. Many political-science datasets include data from only the eleven former Confederate states. For the purposes of this entry, the South includes thirteen states: Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas, Tennessee, Oklahoma, and Kentucky. The first eleven of these states were the former Confederate states—those that seceded from the Union during the Civil War. Oklahoma and Kentucky, though not former Confederate states, have cultural and political features—for example, large Southern Baptist populations—that arguably warrant their consideration as southern states as well.

CLASSIC AND CONTEMPORARY STUDIES OF SOUTHERN POLITICS

The distinctive nature of southern politics is implicitly acknowledged in the two most widely cited scholarly studies on the topic: V. O. Key's *Southern Politics in State and Nation* (1949), and Merle Black and Earl Black's *Politics and Society in the South* (1987). Key wrote when southern whites remained economically, socially, and politically dominant over blacks—as they had been since the end of slavery in 1865. Southern whites used their control over government to ensure and perpetuate racial segregation and impose rampant, official racial discrimination on wide swaths of social institutions: education, housing, employment, voting, and criminal justice, to name a few. While racial discrimination also existed in much of the North, it was more pervasive and severe, and more a product of government actions, in the South. As Key notes, most of the South was under one-party Democratic control, and most political conflict in southern states centered on factions within the Democratic Party. Factions sometimes centered on regions within states (with conflict between Delta and "hills" factions in Mississippi). In other cases, factions centered on personalities (such as the flamboyantly racist "Pitchfork Ben" Tillman of South

Carolina and Theodore Bilbo of Mississippi) or other interests, such as textile mill owners in North and South Carolina and the "big mules" of timber, iron and steel, coal, insurance, and utilities in Alabama.

Although factions sometimes splintered the Democratic Party, on racial issues there was little disagreement among southern whites at midcentury. Racial discrimination and segregation were entrenched; any (white) elected official who dared to challenge either faced severe social ostracism, economic reprisals, and certain defeat in the next election. Southern blacks had virtually no political power, and voting discrimination along with threatened and actual violence effectively deprived them of voting rights—especially in the Deep South states of Louisiana, Mississippi, Alabama, Georgia, and South Carolina. With elected officials virtually all white Democrats and with Republicans reviled by whites as the party of Lincoln, the Union, and racial equality, there was little impetus for racial change. Thus, Key concluded, "The race issue broadly defined must be considered as the number one problem on the southern agenda. Lacking a solution for it, all else fails" (1949, p. 675).

In 1987, political scientists (and twin brothers) Merle Black and Earl Black published *Politics and Society in the South*. By then, much had changed in southern politics. Federal court decisions and laws effectively guaranteed civil rights in housing, education, and employment, and the 1965 Voting Rights Act had ended various egregious practices that promoted voting discrimination and the dilution of black political power. By 1987, they wrote, the Democratic Party's monopoly in southern politics had ended, replaced by a competitive two-party system, with Republicans becoming dominant in presidential electoral votes as early as 1984, when Ronald Reagan swept every southern state. The authors also noted a decided "conservative advantage" in white public opinion: White southerners identifying as conservatives outnumbered those identifying as liberals by nearly a three-to-one margin (Black and Black 1987, p. 218, Table 10.1). This and similar findings, they argued, meant likely continued Republican gains in southern governorships, state legislatures, and delegations in the U.S. House and Senate. Black and Black's later (2002) study confirmed their suspicions, documenting strong Republican growth in the region.

The studies by Key and Black and Black are widely considered the most systematic investigations of southern politics. However, other studies also deserve note. Numan Bartley and Hugh Graham's *Southern Politics and the Second Reconstruction* (1975) was written less than ten years after the civil rights movement fundamentally reorganized race relations, and at a time when Republicans were beginning to erode the Democratic one-party monopoly that had been entrenched from 1890 to 1950. A more recent study is journalist Peter Applebome's *Dixie Rising: How the South Is Shaping American Values, Politics and Culture* (1997). Applebome's account is rich with historical observations, economic and social data, and anecdotal evidence derived from personal observation and travels in locales such as Cobb County, Georgia; Charlotte, North Carolina; Columbia, South Carolina; and Nashville, Tennessee. Finally, some political scientists have published more focused studies of southern politics. Book-length studies in this tradition include Oran Smith's *The Rise of Baptist Republicanism* (1997), James Glaser's *Race, Campaign Politics, and the Realignment in the South* (1996), Merle Black and Earl Black's *The Rise of Southern Republicans* (2002), and Glaser's *The Hand of the Past in Contemporary Southern Politics* (2005). Clearly, the study of southern politics has matured into a well-defined subfield in political science, as much as southern history is a well-known specialty among historians.

THE CIVIL WAR, RECONSTRUCTION, DISENFRANCHISEMENT, AND JIM CROW

The Civil War (1861–1865) was a searing experience nationwide, but its physical devastation and psychological scars fell especially hard on the South. As the losing side, southerners saw their region ravaged by the Union army, with widespread destruction of and damage to homes, crops, and livelihoods. In the war's aftermath, federal troops occupied southern state capitals for over a decade—a profoundly humiliating experience for a region that already had lost a war and seen federal officials force an end to slavery, the dominant economic system of much of the region. Congress passed the Thirteenth Amendment, outlawing slavery; the Fourteenth Amendment, guaranteeing equal protection under the law, among other things; and the Fifteenth Amendment, aimed at preventing voting discrimination against blacks and freed slaves. During the Reconstruction era (1865–1877), Republicans dominated national politics and forced white southerners to accept the end of slavery, occupation by perceived federal invaders, and, sometimes, southern black elected officials. In Mississippi, Hiram Revels became the first African American to serve in the U.S. Senate (1870–1871). As Black and Black note:

> [The Democratic Party] gave southern whites something to love, honor and glorify; Republicanism gave them something to hate, despise and excoriate. Republicans were irredeemably identified with a long series of outrages against the white South—the Civil War, abolition of slavery, Reconstruction, threats of renewed fed-

> eral intervention, and the exploitation of the South's vulnerable economic condition. Except in a few (mainly mountainous) areas where grassroots Republicanism persisted, public support for the party of Lincoln entailed the stigma of providing aid and comfort to the region's historical enemy. (1987, pp. 233–234)

For black southerners, Reconstruction was a brief era of relatively improved conditions. Blacks' living conditions remained difficult, but under federal control of the South, they had more freedom to pursue their destinies and faced less severe discrimination in doing so. For white southerners, Reconstruction was an uninterrupted regional nightmare. Whites' obsession was to expel the federal "invaders," end their "radical" control, and reestablish "home rule"—local control over their social, political, and economic affairs. Above all else, southern whites fought to reestablish white domination and the subjugation of southern blacks.

In 1877, the federal army withdrew from southern state capitals, bringing Reconstruction to an end. The era that followed was dubbed "Redemption" by southern whites. But for most southern blacks, "Redemption" meant the return, in different form, of the nightmarish conditions of the slavery era, including white-imposed economic exploitation through the sharecropping system. Whites sought to reestablish white Democratic control and expel the hated Republican Party and anyone friendly to it from the political system. By 1890, using a combination of terror and violence, widespread electoral fraud, racial demagoguery, and pervasive social and economic pressure on any reluctant friends, family, and neighbors, white conservative Democrats succeeded in effectively eliminating Republican competition in southern politics. The resulting virtual one-party Democratic stranglehold in southern politics lasted from 1890 to 1965.

For southern blacks, the consequences were devastating socially, politically, and economically. With a virtually unbreakable lock on political power, white Democrats imposed social, economic, and political discrimination on blacks on a colossal scale. Black southerners were shut out of political power, as whites imposed discriminatory poll taxes, literacy tests, the grandfather clause, and the white primary to perpetuate white domination and crush black opposition. These electoral tests and devices frequently were applied arbitrarily by hostile white registrars to ensure that few if any blacks could register to vote. For blacks, the result was massive disenfranchisement: the often-successful panoply of white efforts to deny voting rights to blacks. Blacks who managed to evade official voting discrimination and actually register to vote faced harassment, threats, violence, and economic retaliation. Arbitrary evictions, job terminations, and blacklisting, ensuring that no other local employers would ever hire the person, often effectively "persuaded" blacks to avoid challenging white domination and meekly accept their lot. The costs of being an "uppity Negro" in the South—one audacious enough to challenge the racial status quo—were manifold: social ostracism, harassment and persecution by law enforcement, threats, actual violence, and possibly death by lynching. In much of the South, the only real qualification for voting was being white, though the poll tax did disenfranchise many poor whites also.

With blacks shut out of the ranks of elected officials and largely shut out of voting, the establishment of conservative white Democratic "home rule" was complete by 1890. Local and state governments passed Jim Crow laws imposing legal segregation in public schools and places, including restaurants, drinking fountains, theaters, pool halls, parks, train and bus stations, neighborhoods, and more. Blacks also faced economic discrimination; other laws prohibited blacks from holding many types of jobs, typically higher-paying, higher-status jobs. Informal customs and practices strongly reinforced these patterns. White business owners and managers commonly refused to hire blacks at all, or at best hired them only for the most menial and low-paying jobs. Southern textile mills were particularly ruthless in enforcing the color bar in employment, with black mill workers virtually nonexistent. In housing, governments forced blacks to live in segregated, usually deeply impoverished, neighborhoods, and white homeowners would, by custom, refuse to rent or sell to blacks anyway. Restaurants, theaters, libraries, and other establishments commonly refused to serve blacks altogether; colleges and universities refused to enroll them, resulting in the establishment of historically black colleges and universities, some of which still exist. Few whites dared openly sympathize with blacks or support efforts to combat segregation and discrimination. A white seen as pro-black could expect to be branded a "nigger lover" and faced the same threats, economic reprisals, and violence that "uppity Negroes" did. As Black and Black point out, even well into the twentieth century, southern whites were obsessed with maintaining "home rule"—local control over race relations:

> Early in [the twentieth] century, most white southerners looked upon the rest of the nation—generally lumped together as Yankees—with abiding hostility and suspicion. Unable to forget or forgive the nightmare of war, defeat, and occupation, most whites shared the conviction that nonsoutherners must never again be allowed to interfere with southern racial practices. Acting almost as if it were an independent nation, the South pursued deterrence of outside intervention in race relations as the paramount objective of its "foreign" policy. (1987, p. 233)

THE CIVIL RIGHTS MOVEMENT AND ITS POLITICAL CONSEQUENCES

In the early twentieth century, the U.S. Supreme Court overturned some racially discriminatory voting practices. In 1915, the Court overturned the grandfather clause, and in 1944, it struck down the white primary. However, other forms of voting discrimination persisted, and until 1965, federal law did little to prevent it.

The first major federal civil rights action of the twentieth century was the Supreme Court's *Brown v. Board of Education* ruling in 1954. Overturning an 1896 legal doctrine allowing "separate but equal" public facilities, the Court ruled that racial segregation in public schools was inherently unequal. The ruling and its 1955 companion ruling (*Brown II*, ordering officials to desegregate public schools "with all deliberate speed") exploded like bombshells in the southern political landscape. Southern officials responded with outrage and unvarnished defiance. The "Massive Resistance" campaign mounted by southern officials to oppose school desegregation was intense and unrelenting. From 1959 to 1964, Prince Edward County, Virginia, closed its public schools altogether to avoid desegregation and provided money to white parents to send their children to private, whites-only schools. Meanwhile, most black children were locked out of an education for five years. In 1964, nearly 98 percent of southern black children still attended segregated schools. Only after more court orders did some districts comply with the *Brown* rulings.

During the early 1960s, efforts to integrate southern schools and universities and register blacks to vote provoked waves of violence. In 1960, sit-in demonstrators seeking integrated lunch counters faced attacks and violence. In 1961, freedom riders seeking to integrate public transportation faced more violence and beatings. In 1962, when James Meredith integrated the University of Mississippi, thousands of segregationists rioted, resulting in two deaths and mobilization of thousands of National Guard troops to restore order. In 1963, white supremacists bombed a black church in Birmingham, Alabama, killing four little girls, and NAACP leader Medgar Evers was murdered in his driveway in Jackson, Mississippi. In 1964, three civil rights workers were murdered near Philadelphia, Mississippi. In 1965, Alabama state troopers attacked unarmed voting-rights marchers with clubs, police dogs, and electric cattle prods. Searing images of these events were broadcast on national television at a time when (by 1964) 97 percent of American households had television sets. The repeated incidents of civil-rights-related violence spurred calls for concerted federal action on civil rights from the public and in Congress.

In 1964, southern members of Congress mounted ferocious opposition, including a Senate filibuster, to the 1964 Civil Rights Act. But northern Republicans and Democrats overcame the filibuster, and President Lyndon B. Johnson signed the Civil Rights Act into law in July 1964. The Civil Rights Act banned employment discrimination for most employers, and banned racial segregation in public facilities, including private businesses that serve the public such as restaurants, theaters, pool halls, hotels, and motels. In 1965, Congress passed the Voting Rights Act, which placed most of the South under federal supervision of its voting and elections laws. The Voting Rights Act banned tests or devices such as "literacy tests, educational requirements [or] good character tests" and other arbitrary actions by local registrars that promoted racial discrimination in voting. The act required covered states and districts to gain prior federal approval before implementing any changes in election laws or voting requirements. The act also banned racially discriminatory efforts to dilute black voting or political power, such as some "at large" schemes for drawing electoral districts to prevent black candidates from being elected. Finally, the Voting Rights Act allowed federal registrars to replace local registrars that continued discriminatory voting practices. The passage of the Twenty-fourth Amendment (1964) banning poll taxes lent further impetus to the drive to guarantee equal voting rights for blacks.

Overall, the Voting Rights Act was tremendously effective. In 1960, 61 percent of southern whites but only 29 percent of southern blacks were registered to vote. Racial discrimination in voting was much less rampant in Rim South states such as Tennessee and Kentucky than in the Deep South, especially Mississippi and Alabama. Although small racial disparities in voter registration and turnout remain as of 2007, differences in income and education account for most such disparities.

Politically, the civil rights movement generated shock waves that permeated southern and national politics. As political scientists Edward Carmines and James Stimson (1989) demonstrate, the civil rights movement triggered a polarization of the Democratic and Republican parties on racial issues, with Democrats moving leftward to embrace racially egalitarian policies and Republicans moving sharply rightward to oppose them. This process was already well under way during the 1964 presidential campaign. Abandoning the Republicans' historical moderation on racial issues, the 1964 Republican nominee, Senator Barry Goldwater of Arizona, openly opposed federal civil rights laws. Goldwater's position was not racist; he neither openly vilified blacks nor expressed support for negative racial stereotypes as southern segregationists had done for decades. Instead, Goldwater couched his concern in "states' rights" terms: In his view, civil rights policy was best decided by local and state governments, not the fed-

eral government. This was an enormously appealing position for white southerners, and Goldwater cracked the Democrats' monopoly on the South by winning five southern states. Goldwater's position was politically disastrous in the rest of the country, however, and President Lyndon Johnson won reelection by a landslide. After 1964, Republicans began openly pursuing a "southern strategy" of appealing to white southerners by opposing vigorous implementation of civil rights laws, embracing "law and order" campaign themes in the 1968 election, tying Democrats to unpopular groups such as Vietnam War protesters, hippies, black militants, and radical feminists, and using racially charged appeals on such issues as welfare, crime, and affirmative action to loosen white southerners' historical attachment to the Democratic Party. In 1968, Alabama governor George Wallace also ran for the presidency and won several southern states, embracing similar "law and order" and culturally conservative themes. Although he was a Democrat, Wallace's themes are often echoed in southern politics—but much more often by southern Republicans than southern Democrats.

"STATES' RIGHTS" APPEALS: ENDURING AND SELECTIVE

The states' rights appeal first introduced by Goldwater in national campaigns was nothing new in southern politics. Before 1964, southern Democrats had long declared allegiance to states' rights as a socially acceptable code for minimal federal intervention in race relations in the South—and therefore code for white supremacy. Most white southerners readily got the message. White southerners' disdain for the federal government was part and parcel of an ideology of selective minimalist government that extends to policy areas well outside race relations.

One such unmistakable impact is the region's tendency to favor a "low-tax, low-service" ethic: lower taxes, fewer government services, less regulation of business, and less government support for the disadvantaged. For example, according to the U.S. House of Representatives (2004), average 2002 monthly TANF (Temporary Assistance to Needy Families) benefits, which are set by state lawmakers, were lowest in the South. The average monthly TANF benefit was $327 nationwide; for the thirteen southern states, the average benefit was $202, and all six states with benefits less than $200 were southern states. The "low-tax, low-service" ethic also means less government regulation of business, for example, in protecting employees from workplace hazards and the environment from pollution. Southern state governors frequently encourage business executives with operations in the North to relocate to the South, touting the region's "favorable business climate": lower taxes and minimal regulations on business coupled with right-to-work laws and other policies that discourage workers from joining labor unions.

The tradition of minimalist government in the South prevails on most economic and social welfare issues, but often not on social and moral issues. Southern lawmakers often prefer policies that *maximize* government activity in promoting "traditional values." Thus, gay-marriage bans have passed in twenty-seven of the twenty-eight states that have considered them, but in southern states they pass by wider margins, frequently with over 75 percent support—even 86 percent support in Mississippi (2004). Restrictive abortion laws, bans on gay adoption, and efforts to promote prayer in the public schools and Ten Commandments displays in public places are all more common in southern states. Southern elected officials' proclaimed fealty to "limited government," then, is selective. Also, conservative southern lawmakers eagerly embrace states' rights in response to liberal federal policies but not conservative federal policies. Few southern lawmakers objected to then-U.S. Attorney General John Ashcroft's effort to ensure that federal antidrug laws could overrule state laws allowing medicinal marijuana.

States' rights is a less potent symbol in southern politics than it was forty or more years ago, when it was widely understood as a desire to preserve white domination over blacks. On issues of federal versus state power, which side embraces states' rights is often predictable based on whether the federal or state government is advocating the more conservative policy.

RACIAL POLITICS IN THE SOUTH SINCE THE CIVIL RIGHTS ERA

Race remains a notable dividing line in southern politics. This is evident from examining four issues in modern southern politics and campaigns: racial appeals in campaigns (mostly covert racial appeals), Confederate flag controversies, racial redistricting, and the marked racial polarization of southern political parties.

Racial Appeals in Southern Campaigns While not limited to the South, racial appeals in southern campaigns appear with surprising regularity. Sometimes, racial appeals are less than subtle. North Carolina's Republican senator Jesse Helms was particularly famous for issuing racial appeals. In 1972, Helms, running for the U.S. Senate against a Greek American opponent, produced bumper stickers that read, "Jesse. He's one of us." In the 1984 Senate race against then-governor Jim Hunt, Helms complained about "the bloc vote," referring to North Carolina blacks, who almost universally viewed Helms as hostile to racial equality. Helms scarcely tried to burnish his image among blacks; he launched a long, eventually

unsuccessful crusade against declaring a national holiday for Martin Luther King Jr. In 1990, Helms made his most famous racial appeal against Democrat and former Charlotte mayor Harvey Gantt, an African American. Late in the campaign, Gantt led Helms and appeared poised to win. The Helms campaign produced a commercial attacking Gantt on affirmative action, in which white hands were shown crumpling a job rejection letter as an announcer intoned, "You wanted that job, and you were the best qualified. But they had to give it to a minority because of a racial quota. Is that really fair?" The late Helms ad was widely credited with producing a pro-Helms surge, and Helms won reelection.

Racial appeals in southern campaigns are usually more subtle, and implicit racial issues (especially welfare) have figured prominently. In the 1991 Louisiana governor's race, Republican candidate David Duke, a former Ku Klux Klan leader, made campaign speeches to virtually all-white audiences attacking the "welfare underclass"—racial code for black welfare recipients. The same year, in Mississippi, Republican Kirk Fordice, then a political unknown, won the governor's race using an array of implicit racial appeals: opposing quotas, saying that welfare recipients should be forced to work, and attacking policies for coddling criminals. In his 2003 campaign for Mississippi's governorship, Republican Haley Barbour also raised the welfare issue (and wore Confederate-flag lapel pins on the campaign trail). Political scientists James Glaser (1996) and Tali Mendelberg (2001) provide substantial evidence of the use of implicit racial appeals, which seem particularly common in southern campaigns, where Republicans, in particular, are tempted to "play the race card" by making implicit racial appeals to white voters. Welfare, affirmative action, and crime are common issues that structure implicitly racial appeals. But as Glaser (1996) shows, others include attacking a candidate for "cozying up to" civil rights leaders such as Reverend Jesse Jackson or for not enthusiastically supporting the display of the Confederate flag.

In the 2006 U.S. Senate race in Tennessee, the Republican National Committee (RNC) sponsored a late television advertisement on behalf of Republican candidate Bob Corker against his Democratic opponent, Harold Ford Jr., who is black. The ad was widely criticized as a covert racial appeal on the issue of interracial dating and/or sex—which historically white southerners were obsessed with preventing. Between 1880 and 1950, many black men accused of dating or having sexual relations with white women were summarily lynched, in response to white assumptions that any sexual relations between white women and black men were nonconsensual, resulting from rape. The 2006 Republican ad showed a flirtatious white woman with bare shoulders and no visible other clothing, claiming "I met Harold at the Playboy party!" The ad's conclusion showed her winking and cooing breathily, "Harold—call me!" Commenting on the Republican ad, political scientist John Geer, a leading analyst of attack advertising, said, "I've not met any observer who didn't immediately say, 'Oh my gosh! It was a race card.'" As documented by Associated Press reporter Beth Rucker (2006), Geer described the ad as "breaking new ground, and frankly, breaking new lows," and "mak[ing] the [1988] Willie Horton ad look like child's play. It is racist. That is the bottom line." Although RNC chairman Ken Mehlman denied the ad carried racial overtones, Geer and other analysts concluded otherwise. As Rucker notes, Hilary Shelton, an NAACP official, added, "In a Southern state like Tennessee, some stereotypes still exist. There's very clearly some racial subtext in an ad like that." Corker won the election, but it is unclear whether the RNC ad changed the outcome.

Confederate Flag Controversies Since 2000, three high-profile Confederate flag controversies have arisen, each over whether southern state governments should support displays of the Confederate battle flag ("stars and bars") or a state flag design containing it. For some southern whites, the Confederate flag is a symbol of heritage; for most blacks, it is a symbol of racial hatred and white domination. In Mississippi, a 2001 public referendum was held on whether to continue flying the 1894 state flag with a Confederate flag design. Voters approved keeping the Confederate flag design by a surprisingly high 65 percent to 35 percent margin. Not surprisingly, the vote was extremely racially polarized. In two 90 percent white counties, the vote ran 90 percent to 10 percent in favor of keeping the Confederate flag design. In two 80 percent black counties, the vote ran 83 percent to 17 percent in favor of replacing the Confederate design with a new one.

In Georgia in 2002, controversy over Democratic governor Roy Barnes's handling of the Confederate flag issue contributed to his upset loss to Republican Sonny Perdue in the governor's race. Confederate veterans' groups and some Republicans criticized Barnes for pushing changes to the design of Georgia's state flag to reduce the Confederate emblem's size. The Sons of Confederate Veterans and other groups argued Barnes should have put the question of redesigning the flag to a public referendum. Perdue's election put a Republican in the Georgia governor's office for the first time since Reconstruction.

In South Carolina, too, the flag issue proved electorally damaging to a Democratic governor, Jim Hodges. In 2000, Hodges approved removing the battle flag from atop the state capitol dome and moving it to a less conspicuous location on the capitol grounds. Some analysts viewed Hodges's action as contributing to his loss in South Carolina's 2002 governor's race to Republican Mark

Sanford. The Confederate flag issue, then, appears to offer a case study of the continuing importance of race in southern politics.

Racial Redistricting After the 1990 census, civil rights groups expressed concern over the underrepresentation of blacks in Congress and asked state lawmakers to redraw House districts to concentrate black voters in some mostly southern districts. The expectation was to create congressional districts with black majorities to elect more black members of Congress. In the history of congressional elections nationwide, very few majority-white districts have elected minority Congress members. After the 1990 census, some "majority-minority" districts were drawn in various southern states. Majority-minority districts are those in which a minority group (most commonly blacks) makes up a majority of the district's residents. By 1992, North Carolina, Georgia, and several other states had drawn some majority-minority districts, and these districts did elect black representatives. In 1992 in North Carolina, Melvin Watt and Eva Clayton became the first blacks elected to Congress since Reconstruction, in a state where 22 percent of the population was black. Although most majority-minority districts were intended to elect blacks, some Latino-majority districts were also drawn in Texas and Florida, both states with significant Latino populations.

Some of these racial redistricting efforts were challenged in a series of court cases. In 1996, the Supreme Court ordered the redrawing of North Carolina's majority-black First and Twelfth Districts, ruling that race was too predominant a factor, and geographical compactness an insufficiently considered factor, in drawing these districts. Melvin Watt's Twelfth District was redrawn with more compact boundaries, converting it from a majority-black district into a 47 percent black district. Watt retained his congressional seat in the redrawn district. Similarly, in Georgia, the district of Sanford Bishop, an African American, was redrawn to a 39 percent black district after another court challenge.

One impact of these and similar court challenges, then, has been to convert some previously majority-minority districts into "minority-opportunity" districts. In these, the minority group makes up less than a majority of the district's residents but enough to make it likely that a minority candidate or representative can win elections. As a general rule, in southern districts where blacks make up 45 percent or more of residents, a black candidate has a good chance to win. In districts where less than 30 percent of residents are black, a black candidate is unlikely to win. In southern districts, minority candidates or lawmakers (virtually all Democrats) are likely to win when they can combine (1) a sizable minority presence in the district—40 percent or more is best; (2) high voter turnout from the minority group—best when minority turnout at least equals white turnout; (3) lopsided support from minority-group voters—preferably 85 percent or more; and (4) a significant share of the white vote—preferably 25 percent or more. Most white southerners identify as and vote Republican, and few minority candidates, being overwhelmingly Democrats, can expect to win more than 30 percent of the white vote.

Racial redistricting has had unintended but damaging consequences for southern Democrats. The drawing of districts to concentrate black voters has also pulled blacks out of neighboring districts, giving them larger white majorities. Since most southern whites vote Republican, these neighboring districts have more often elected Republican lawmakers. Racial redistricting, then, has resulted in the election of more Republicans and fewer Democrats to Congress from southern states. Political scientists estimate that racial redistricting has resulted in Democrats losing between seven and eleven U.S. House seats.

The impact on the numbers of southern Democratic lawmakers has not been symmetrical by race. As Earl Black (1998) shows, racial redistricting has resulted in increased representation of *black* Democrats but also sharply decreased representation of *white* Democrats holding southern congressional seats. It appears racial redistricting has contributed to sharp increases in the ranks of white Republicans holding southern U.S. House seats. Within and outside the South, the vast majority of blacks identify as Democrats and view Republicans negatively. Some southern Republicans, such as David Duke, Jesse Helms, and Trent Lott, have been openly hostile to black interests. While blacks celebrate the increases in black congressional representation that racial redistricting has produced, most also lament the loss of Democratic strength in southern congressional delegations—to which racial redistricting has also contributed.

Racial Polarization of Southern Political Parties In Congress, then, Earl Black (1998) identifies "the newest southern politics": Black Democrats have become more numerous, white Republicans have become much more numerous, and white Democrats have become much less numerous. Southern congressional delegations are increasingly polarized by race and party combined. Nowhere is this truer than in Texas. After Republicans captured the Texas legislature in the 2002 elections, they forced through a mid-decade redistricting in 2003. In January 2004, before the first election following the redistricting, Texas's U.S. House delegation consisted of sixteen Democrats and sixteen Republicans. After the 2004 election, the delegation consisted of eleven Democrats (one white, ten black or Latino) and twenty-one Republicans

(twenty white, one Latino). The plan of maximizing Republican strength in Texas's U.S. House delegation had worked.

In 2006, the U.S. Supreme Court upheld the overall redistricting but overturned the drawing of some district boundaries because the Republican plan diluted Latino voting strength, in violation of the 1965 Voting Rights Act. A panel of judges redrew the boundaries to ensure a larger Latino majority in the district of the only Latino Republican, Henry Bonilla. The new district boundaries were in place for the 2006 elections, in which Bonilla lost his seat to Democrat Ciro Rodriguez, and a white Democrat, Nick Lampson, captured former House Majority Leader Tom DeLay's former seat near Houston (probably temporarily). As of 2007, racial polarization in Texas's U.S. House delegation remains nearly complete, with two white Democrats, ten black or Latino Democrats, and twenty white Republicans. In the future, both white Democrats face a strong risk of losing their seats, as they represent heavily Republican districts. Texas's U.S. House delegation may soon consist of an all-white Republican majority and an all-nonwhite Democratic minority.

In other southern states, a similar pattern holds. With few exceptions, Republican lawmakers are white (a few from Florida are Cuban American; former representative Bonilla is Mexican American; Oklahoma's former representative J. C. Watts is black). Democratic lawmakers are more racially diverse, with both white and black lawmakers and a contingent of Latino lawmakers from Texas. In state legislatures, too, Republicans are lopsidedly white while Democrats are more diverse.

In southern electorates, too, racial polarization has been striking. Especially in the Deep South, Republicans have become an overwhelmingly white party. Democrats are more racially diverse, now capturing only a minority of white votes but huge majorities (generally 85% or more) of black votes, and in Texas, sizable majorities of Latino votes. Although the degree of racial polarization of southern parties is striking, the reasons for it are not fully clear. Racial conflicts and attitudes appear to be a contributing factor in pulling southern whites out of the Democratic Party and into the Republican Party—but not the only factor. Other likely contributors include the marked social conservatism, assertive militarism, and preferences for smaller government on economic issues on which southern Republicans virtually unanimously agree. In other words, the Republican Party's attractiveness to southern whites is partly based on conservative ideology. Among southern Republicans as of 2007, politically moderate views are scarce and liberal views are nonexistent. Conversely, southern Democrats are ideologically more varied. Some (largely majority-minority) districts elect liberal lawmakers, but in more heavily white or conservative districts, Democrats can be moderate or even notably conservative.

As of 2007, race remains a significant factor structuring the southern party system. Political scientists Nicholas Valentino and David Sears (2005) studied the connection between white southerners' racial attitudes and Republican identification and voting. They found that racial antagonism remains higher among white southerners than white nonsoutherners, and that the association between racial antagonism and Republican voting is stronger among southern whites than nonsouthern whites. Furthermore, that association has grown stronger in recent years among southern whites, but not among nonsouthern whites. These and other findings indicate, then, that racial resentments continue to influence partisanship and voting among southern whites—to the benefit of the Republican Party.

THE CONTOURS OF MODERN SOUTHERN POLITICS

As of 2007, southern politics consists of two-party competition with highly racially polarized parties and a lopsided Republican advantage in federal elections. In state elections, Republicans dominate in some states (especially South Carolina, Georgia, Texas, and Florida), but other states, including Tennessee, Kentucky, Louisiana, and Virginia, show more partisan parity. As of 2007, Democrats have regained ground and even an edge over Republicans in North Carolina and Arkansas. Regionwide, an overwhelmingly white, and sharply and uniformly conservative, Republican Party contests elections against a racially and ideologically more diverse but generally moderate Democratic Party. The Republican Party has dominated the region in presidential elections since 1980 and in congressional elections since 1994. After the 2004 election, Democrats held only four (15%) of the region's twenty-six U.S. Senate seats and 36 percent of its House seats. The 2006 elections changed matters little; as of 2007, Democrats held 19 percent of the region's Senate seats and 40 percent of its House seats. In state elections, Democrats have become virtually irrelevant in Florida, Texas, Georgia, and South Carolina. However, Democrats have shown strength in state legislatures in Mississippi, Arkansas, North Carolina, and Alabama and won governor's races in North Carolina (2004) and Virginia (2005). In 2006, Democrats won a previously Republican-held U.S. Senate seat from Virginia and six previously Republican-held House seats in the region. However, these gains are modest, and some, especially in Texas, are probably temporary. As political scientists Philip Klinkner and Thomas Schaller (2006) demonstrate, Democratic gains in 2006 were concentrated *out-*

side the South—particularly in the Northeast and Midwest.

The 2006 elections, then, did little to change the major story of southern politics since the civil rights era: the growth of Republican support, virtually entirely among white southerners. Black and Black (1987) identified southern politics as consisting of vigorous two-party competition, with prospects for increasing Republican strength—a prediction that proved correct, as their 2002 follow-up study shows. The Republican trend among southern whites is traceable to several factors, including racial conflicts and resentments, religion and associated social conservatism, urban politics and population changes, "law and order" issues, and southern military traditions.

Racial Conflicts and Resentments As black lawmakers and activists have become more prominent among southern Democrats, it appears a racial backlash has pushed some southern whites out of the Democratic Party because of perceptions that Democrats advocate liberal policies on government social programs and are becoming too pro-black. Whites provide virtually all support for Confederate flag displays, but many southern Democratic officials fear offending blacks by supporting the flag. By emphasizing such issues as welfare and affirmative action, Republicans unmistakably have staked their claim as the home of racial conservatism, which many southern whites find appealing, partly for ideological reasons but, as Valentino and Sears's (2005) analysis indicates, partly out of continuing racial resentments as well.

Religion and Social Conservatism Like southern politics, southern religion is distinct. By numerous indicators, southerners are more religious than nonsoutherners are. Furthermore, southern religion has two major centers of gravity, according to political scientists John Green, James Guth, Lyman Kellstedt, and Corwin Smidt (2003). Among whites, they refer to the "white Protestant alliance"—especially Southern Baptist and other evangelical Christian traditions, which constitute the center of southern Republican politics. Among African Americans, black churches are an increasingly important source of support for the Democratic Party. The overall impact of these counteracting centers of political gravity is a decided conservative tilt. Southern Baptists are the largest Protestant denomination in the country, at 16.5 million members. Since 1979, the theologically fundamentalist, politically conservative faction has controlled the heavily white Southern Baptist Convention (SBC) without interruption. The SBC is a thoroughly conservative force in southern politics, and the moderate faction that contested SBC elections into the 1980s has abandoned the SBC. Former U.S. president and lifelong Southern Baptist Jimmy Carter also renounced the SBC following its adoption of resolutions prohibiting women from serving as pastors and stipulating that wives should be "graciously submissive" to their husbands. The SBC's large numbers and lopsided Republican support easily outweigh the support that black churches can provide Democrats. Indeed, political scientist Oran Smith concluded his 1997 study *The Rise of Baptist Republicanism* by noting that the SBC and the Republican Party in the South have become virtually indistinguishable. Southern Republicans (and some Democrats), seeking political acceptance from Southern Baptists and other evangelicals, have strong incentives to take strongly conservative positions on social issues—opposing abortion, feminism, stem-cell research, pornography, gay rights, and perceived "secular humanist" influence in public life, and favoring school prayer, public Ten Commandments displays, traditional gender roles, and gay-marriage bans. Although southern religious traditions vary, the overall impact of religion in southern politics is a marked conservative (and therefore pro-Republican) influence, especially on social and moral issues, owing to the large number of Southern Baptists and other conservative Protestants in the region.

Urban Politics and Population Changes In the twentieth century, urbanization proceeded much more slowly in the South than elsewhere. But jobs and economic activity have shifted southward since World War II, and as of 2007, urban areas such as Dallas–Fort Worth, Atlanta, Charlotte, Nashville, and others are now thriving economic centers. These and similar areas have rapidly growing populations, including large numbers of migrants from nonsouthern states. These migrants were more willing to support the Republican Party than native-born white southerners were until the 1990s. In addition, those moving into southern cities were often upwardly mobile economically, making them more receptive to Republican appeals for lower taxes and less intrusive government, that is, the "low-tax, low-service" ethic. While many core cities, such as New Orleans, Richmond, Atlanta, and Memphis, have strongly Democratic black majorities, their fast-growing suburbs are heavily white and Republican. These population shifts have benefited the Republican Party, and southern "exurban" areas such as Union County, North Carolina, outside Charlotte, and suburban areas such as Cobb County, Georgia, outside Atlanta, are heavily Republican.

In some southern states, Latino populations are growing quickly. In Texas, Latinos (mostly Mexican American) make up 32 percent of the population. North Carolina and Georgia are also experiencing notable Latino immigration. Outside Florida, most Latinos migrating to southern states are Mexican American, and politically they

lean Democratic. However, Latinos' political influence will probably lag behind their presence in the population because of language barriers for some and because some Latinos are not U.S. citizens, making them ineligible to vote. In Texas, Republican dominance rests on the heavily Republican tilt of the state's Anglo (white) population, and Democrats will probably climb back toward competitive status only as Latinos become more politically active and vote in greater numbers.

"Law and Order": Crime, Gun Control, and Related Issues Southerners, especially white southerners, have a pronounced conservative tilt on "law and order" issues, that is, approaches to fighting crime and drugs and punishing criminals. Most white southerners favor the death penalty, "three strikes" laws and other "get-tough" anticrime measures, and corporal punishment in the schools, and regional policies reflect these realities. Southern states are by no means unique in allowing the death penalty; thirty-eight states, including all southern states, do. What *does* set the South apart is a greater willingness to convert death sentences to actual executions, and more numerous and frequent executions, as cultural psychologists Richard Nisbett and Dov Cohen (1996) show. Texas, in particular, far outstrips all other states in number of executions, with Virginia in second place. If Harris County, Texas (including Houston), were a state, it alone would rank third among the states in number of executions. The top four states in frequency of executions are Texas, Oklahoma, Virginia, and Florida, and southern states make up eight of the top ten states.

Southern states cluster near the top of all states in both the frequency of executions and the use of corporal punishment (spanking or paddling) to discipline schoolchildren. Recent initiatives to extend the death penalty to multiple-offense child molesters are concentrated in southern states. Religion probably reinforces white southern support for the death penalty, corporal punishment, and other "get tough" measures. Southern Baptist and other conservative Protestant traditions typically favor literal interpretations of the Bible and endorse harsh punishment in the criminal justice system and corporal punishment in the schools, as biblically mandated. Literal interpretations of the Bible typically endorse "an eye for an eye" doctrine in criminal justice and a "spare the rod, spoil the child" doctrine in disciplining children. Popular support for state violence and aggression is a natural byproduct of these realities.

On gun control, southerners more often oppose stricter gun control laws and support their relaxation. Nisbett and Cohen (1996) attribute greater southern opposition to gun control to the region's "culture of honor," which values "standing one's ground" against an attack on one's person or property, even if that results in killing the attacker. Southern laws on killing in self-defense are thus more lenient in southern than nonsouthern states, and southern gun control laws are more lenient.

Nationwide, Republican officials and candidates more often support the death penalty, the "war on drugs," mandatory-minimum sentencing, and other "get tough" measures on crime policy than their Democratic counterparts do. Likewise, opposition to gun control is concentrated in the Republican Party. As such, white southerners, who constitute the center of southern conservatism, find these positions attractive, and this probably exercises a pro-Republican pull in partisan identification and voting.

Southern Military Traditions Most historians agree that southern states are home to unusually robust military traditions, reflected in southerners' greater support for wars and willingness to fight in them. As Texas-born observer Michael Lind (2004) notes, military recruitment comes disproportionately from southern states, and southerners have been more willing to support and fight in U.S. wars overseas, including the Vietnam War, the 1991 Persian Gulf War, and the Iraq war that began in 2003. Military bases are more frequently found in southern states than elsewhere, and regional military traditions are reinforced by military academies for boys as young as ten years old. Even titles of historical studies reflect southern military traditions—for example, John Hope Franklin's *The Militant South* (2002) and John Temple Graves's *The Fighting South* (1985).

Politically, the South's militaristic bent probably strengthens Republican support, as Republicans, lacking the significant contingent of peace activists that Democrats have, tend to favor more aggressive actions overseas. As Nisbett and Cohen (1996) show, the white southern "culture of honor" reinforces strong support for defense spending and military actions overseas, as well as the use of force and violence generally (i.e., the death penalty and corporal punishment).

SOUTHERN POLITICS: CAMPAIGNS, CONTINUITY, AND CHANGE

Overall, southern politics has evolved from one-party Democratic rule to two-party competition, with a Republican advantage in federal elections and some states, but competitive party politics in other states. The movement of large numbers of white southerners from the Democratic Party into the Republican Party is the overriding story of southern politics in the twenty-first century. Equally clearly, in the South, the philosophical descendants of southern Democrats before 1960 have clearly found a new political home—not in the Democratic Party but in the Republican Party. In modern southern politics,

Republican candidates typically emphasize staunchly conservative positions on national defense, social and moral, economic, racial, and "law and order" issues—a strategy designed to gain lopsided majorities among whites. Democratic candidates walk a tightrope between emphasizing such economic issues as raising the minimum wage and opposing tax cuts (popular among blacks), while at the same time dodging charges of being "liberal" (an unpopular label among whites, especially on social and moral issues). Democrats must capture a sizable share of white votes to win, but Republicans typically write off (and sometimes try to suppress) black votes. Thus, in southern politics, as of 2007, the central social cleavage remains race. That said, southern politics evidences elements of continuity with the past, as well as significant changes. The future nature and evolution of these changes will have major implications for the course of U.S. national politics.

SEE ALSO *African Americans; Appalachia; Civil Rights Movement, U.S.; Confederate States of America; Desegregation, School; Dixiecrats; Jim Crow; Key, V. O., Jr.; Ku Klux Klan; Law and Order; Militarism; Patriotism; Politics, Black; Protest; Race; Racism; Reconstruction Era (U.S.); Secession; Segregation; Slavery; Southern Strategy; Supreme Court, U.S.; Terrorism; Voting Patterns; White Supremacy; Whiteness*

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Fred Slocum

POLITICS, URBAN

Urban politics draws upon many academic disciplines, particularly sociology, history, public policy, economics, demography, political science, urban planning, and public administration. The multidisciplinary nature of urban politics fosters both innovation and confusion, for there are many suggested definitions for the term. Intellectual differences aside, it is useful to characterize urban politics as the study of the institutions within and the governance of cities, suburbs, and other metropolitan areas. This article focuses on the study of urban institutions and governance in the United States.

As a field of study, urban politics is primarily concerned with urban political power. Specifically, urban scholars seek to define what urban power is, uncover who holds power in urban areas, and, more importantly, determine whether such power relationships are consonant with the ideals of American democracy. There are several theoretical approaches to studying urban power, the major tenets of which are summarized below.

ELITE THEORY OF URBAN POLITICS

Perhaps the earliest theory of urban politics is elite, or stratification theory. The elite theory of urban politics is an intellectual movement developed in the philosophies of noted political scientists and sociologists Gaetano Mosca (1858–1941), Vilfredo Pareto, Robert Michels, and Floyd Hunter, but commonly identified with C. Wright Mills and his influential book *The Power Elite* (1956). Elite theorists maintain that a few top leaders make the key decisions with little regard for popular desires. This occurs because urban areas divide naturally into distinct political classes. At the top level are the elites, most of whom are the business and financial leaders assumed to play a commanding role in urban governance. Underneath the elites is the middle class composed of the elected officials (mayors, councilmen, and the like) charged with the day-to-day operations of the city. At the bottom level are the masses, the common citizens who have limited input and influence over their government. In defense of these social divisions, elite theorists argue that elite rule is a natural consequence of democracy and a safeguard against mob rule. A major critique against the elite theory of urban politics is that it paints a negative picture of urban democracy, for policies are made independently of public opinions, elections are perfunctory, elites are ultimately self-interested, and corruption in government is inevitable.

PLURALIST THEORY

In response to the criticisms of elite theory came the pluralist, or interest group, approach to urban politics, a scholarly tradition influenced heavily by the works of Robert Dahl, Charles Lindblom, and David Truman. Rejecting the idea that democracy is a sham, pluralists argue instead that urban governments are open and democratic, that citizens have free will, and that elections are the ultimate guarantee of democracy. Once the dominant paradigm of urban power, pluralists argue that societies consist of numerous institutions and organizations, each having diverse cultural, religious, economic, racial, and ethnic interests. Political resources divide among these different groups, and policies are made by group conflict and collective bargaining. Such group competition allows dif-

Summary of theories of urban politics

	Elite theory	Pluralist theory	Regime theory
What is power?	Resources = Power	Resources ≠ Power (power is fluid, mobile, diffuse)	Power = Multilevel Process
Who has power?	Few elites (Economic Notables)	Many elites (Interest groups)	Regimes (governmental and nongovernmental alliances)
How is power studied?	Look at reputations	Look at decisions, not reputations	Look at cooperation across institutions
Most important political division(s) in society	Elites who have the power, and the masses who do not	Multiple, competing groups that make demands on government	Leaders distinguish between their governing and electoral coalitions
Structure of power	Concentrated among a relatively small set of decision makers	Dispersed among multiple leadership groups	Varies by members of coalition
Interaction among leaders	Consensus about values and goals for society and means of achieving them	Conflict and competition over values and goals as well as means of achieving them	Strategic dependence between groups with different goals
Sources of leadership	Common backgrounds and experiences in control of institutional resources	Diversity in backgrounds and experiences and activism in organizations	Relationship between different groups pursuing shared agendas
Major institutions of power	Private organizations as well as government	Government institutions and organizations	Formal or informal institutions and organizations
Primary direction of political influence	Downward, from elites to masses	Upward, from masses to elites	Sideways across coalitions (regimes)
View of public policy	Policy benefits reflect elite preferences	Policy benefits reflect the balance of competing interest groups	Emphasizes the production rather than distribution of policy benefits
How democratic values are protected	Elite commit themselves to ensuring civic well-being	The negotiation of diverse interests ultimately benefits the common good	Through coordination, networking, and establishing relations

Table 1

ferent interests the chance to influence the outcomes of government, which ultimately furthers urban democracy. While it is an improvement over elite theory, some common critiques against pluralism are that it underestimates the strength of elites and fails to account for the interests of individuals who are systematically excluded from the political process (for example the poor, racial/ethnic minorities, and so on).

REGIME (OR COALITION) THEORY

An increasingly popular theoretical perspective is the regime (or coalition) theory of urban politics. Borrowing from the intuitions gained from the literature on foreign policy, regime theorists suggest that urban power is indirect and informal and realized through coalitions (regimes) between government and nongovernment partners. One of the more widely cited books in regime theory is Clarence N. Stone's *Regime Politics: Governing Atlanta, 1946–1988* (1989). Regime theorists contend that understanding urban governance requires examining the composition of political coalitions and the manner in which members of these coalitions are accommodated. A recurring argument among regime theorists is that power is a "social production," something that occurs when different interests unite to achieve common purposes. Decision-makers have relative autonomy, but they have to create a "capacity" to govern to be successful. To do so, leaders need to combine forces with private agencies to induce cooperation among people with access to institutional resources. Despite its widespread appeal, regime theory has its share of critics. A common argument against regime theory is that it does not adequately explain why regimes form, how they maintain themselves, or why they change.

Much of the research on American political power focuses on national trends. This is unfortunate because large-scale analyses depend on the insight gained from state, local, and municipal-level research. To borrow the phrasing of former Speaker of the House, Thomas "Tip" O'Neill (1912–1994), the study of urban politics reminds social scientists that "all politics is local."

SEE ALSO *Cities; Community Power Studies; Dahl, Robert Alan; Economics, Urban; Elite Theory; Gentrification; Hunter, Floyd; Metropolis; Mills, C. Wright; Planning; Pluralism; Political Science; Politics; Power Elite; Public Administration; Public Opinion; Public Policy; Towns; Urban Sprawl; Urban Studies; Urbanization*

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Ray Block Jr.

POLITICS, WOMEN AND

SEE *Women and Politics.*

POLL, EXIT

SEE *Exit Poll.*

POLL TAX

Poll taxes, also known as head taxes, soul taxes, or capitation taxes, are taxes that are levied upon individuals, rather than on income or property. Economists are divided over the efficacy of the poll tax. Some economists argue that

the poll tax is a regressive tax, while others argue it is an effective mechanism for ensuring that public expenditures more closely reflect public demand. Although poll taxes are technically revenue measures, their enactment can have political implications.

Poll taxes have been part of recorded human history with Ptolemaic Egypt leaving the first records of these taxes. The poll tax has been used intermittently in European countries such as Britain, Prussia, and Russia since the Middle Ages. It was also used in some areas of the Ottoman Empire. Some European countries such as Britain and France also imposed poll taxes (also known as hut taxes) on their colonies in Africa and Asia.

In the United States poll taxes date back to its colonial era. In some jurisdictions poll taxes were linked to suffrage, while in other jurisdictions the poll tax was simply another form of revenue. In the post–Civil War era, the poll tax emerged as one of the techniques used by southern whites to disenfranchise African Americans. Along with other disenfranchising techniques, the poll tax was designed to be an instrument that could evade the reach of the Fifteenth Amendment (stating that no state may deny or abridge the right of citizens to vote on account of race, color, or previous condition of servitude; citizens may not be prevented from voting due to race) and any other federal intervention. In order to be eligible to vote, an individual had to pay a poll tax. In some cases the poll tax had to be paid almost a year in advance of the election, and in other cases the tax had to be paid for a certain period of years. In the aftermath of the political upheaval of populism (a social movement of southern and western farmers and workers) in the late 1890s, the poll tax also became a device used by the southern political elite to decrease the influence of poor whites on southern politics. By 1908, all of the southern states had enacted a poll tax. By the 1930s, as a result of the poll tax, it was estimated that white electoral participation dropped to less than a third of the total voting age population.

The administration of poll taxes varied across the states. Some states added the bill automatically to other tax bills, while other states required individuals to make a separate payment. Some states required annual payments, while others also included cumulative charges as well. These back taxes, coupled with the low cash income of many southerners, made voting an expensive proposition, thereby further depressing voter registration. Varied enforcement or non-enforcement of poll tax payments and the varied provisions across the states made the impact of poll taxes on a particular state's rate of electoral participation hard to calculate. A number of states included exemptions based on age or veteran status. What was easier to calculate was the fiscal impact of poll taxes. Although supporters of the poll tax claimed that the taxes provided an important revenue source for local school systems, most analyses showed that only a minute fraction of school funds derived from poll tax revenues.

Although most African American leaders opposed the poll tax, leaders and organizations such as the National Association for the Advancement of Colored People (NAACP), for example, did not actively pursue poll tax reform until the 1930s. In addition to African Americans, southern women activists increasingly viewed the poll tax as a gender and class issue that undercut the promise of the Nineteenth Amendment (guaranteeing all American women the right to vote). Given the overall low incomes of white families, gender roles ensured that if a choice had to be made between paying the poll tax to ensure the right of a male to vote versus a female, the male's right to vote would invariably win out. V. O. Key Jr. (1908–1963) and his student Frederic Ogden were two of the first political scientists to systematically study the effect of the poll tax on electoral participation in the late 1940s and early 1950s. The political scientists' conclusion that the poll tax affected more whites than blacks was weakened as they did not consider the cumulative effects of the poll tax and other disenfranchising techniques on African Americans, nor did they consider the effects of this tax on the electoral participation of women.

By the late 1930s, with the support of President Franklin D. Roosevelt (1882–1945) and First Lady Eleanor Roosevelt (1884–1962), a variety of groups such as the Southern Conference on Human Welfare, the American Civil Liberties Union, and the NAACP, allied with two newly formed organizations, the National Committee to Abolish the Poll Tax and the Southern Electoral Reform League, to press for congressional enactment of a poll-tax bill. As a result of this mobilization as well as other developments, the poll tax emerged as an important national civil rights issue in the pre-*Brown v. Board of Education* (1954) era. By the end of the 1940s, the House of Representatives would ultimately pass five anti–poll tax bills, which in turn were repeatedly filibustered in the Senate by southern Democrats.

Concurrent with legislative attempts to attack the poll tax, opponents of the tax also turned to the courts where they encountered little encouragement. For example, in 1937 the Supreme Court indicated in *Breedlove v. Suttles* 302 U.S. 277 that it was not willing to see the poll tax as a suffrage test. Another important case was decided in 1941. *Pirtle v. Brown* (118 F.2d 218 [1941]) affirmed the right of states to set voter qualifications.

Despite these setbacks at the congressional and judicial level, poll tax reform achieved some success at the state level. By 1953 six out of the eleven southern states had abolished the poll tax. North Carolina abolished the tax in 1920; Louisiana in 1934; Florida in 1937; Georgia

in 1947; Tennessee in 1951, and South Carolina in 1952. Of the remaining five states, two states (Alabama and Arkansas) reformed their poll taxes by decreasing the cumulative feature and the amount of the tax, and three states (Mississippi, Texas, and Virginia) failed in their attempts to repeal or amend the tax.

Nevertheless, as the civil rights movement unfolded the poll tax became less of an immediate issue. Its applicability to federal elections was prohibited in 1964 with the ratification of the Twenty-fourth Amendment, which stated: "The right of citizens of the United States to vote in any primary or other election for President or Vice President, for electors for President or Vice President, or for Senators or Representative in Congress, shall not be denied or abridged by the United States or any State by reason of failure to pay any poll tax or other tax." Despite this amendment, some states still tried to use poll taxes. A later court case, *Harper v. Virginia Board of Elections* 383 U.S. 663 (1966) extended the reach of the Twenty-fourth Amendment to state elections.

In Europe, Great Britain had enacted short-lived poll taxes in 1379 and in 1641. More recently, the British government during the administration of Prime Minister Margaret Thatcher (b. 1925) tried to enact a poll tax in 1990 as a means of controlling local government expenditures. Although initially successfully implemented in Scotland in 1989, the administration's attempt to enact a poll tax in England was met with stiff resistance by a broad range of groups. This resistance ultimately culminated in protests and riots in March 1990. The poll tax riots, as well as other factors, led to the end of the Thatcher administration. Despite the resistance, the poll tax survived under slightly different form as the Community Charge or Council Tax.

SEE ALSO *Civil Rights Movement, U.S.; Key, V. O., Jr.; Left Wing; National Association for the Advancement of Colored People (NAACP); Politics, Southern; Roosevelt, Franklin D.; Suffrage, Women's; Taxes; Thatcher, Margaret; Voting; Women and Politics*

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Kimberley Johnson

POLL TAX (BRITAIN)

SEE *Thatcher, Margaret.*

POLLING

Polling involves gathering information by asking people to report their beliefs, attitudes, and behaviors. First, it is one of the most widely used techniques in social science research, of particular interest to political scientists, who use surveys such as the University of Michigan's American National Election Studies to analyze relationships between political attitudes and other attitudes, voting behavior, and participation. Second, polling has numerous applications in business through market research studies to assess customer satisfaction, identify new markets, and identify new prospective customers. Third, polling is applied in campaign politics. Party and campaign organizations frequently use tracking polls to identify candidates' standing, strengths, and weaknesses during campaigns. Fourth, polling is used in policy analysis and program evaluation. Nonprofit organizations and local, state, and national governments are often interested in their clients' opinions of their services and programs—this information is useful in program assessment and evaluation. The political scientists Barbara Bardes and Robert Oldendick (2007) provide an especially extensive discussion on the uses of opinion polls. Throughout this entry, the terms *poll* and *survey* are used interchangeably.

THE DEVELOPMENT OF SCIENTIFIC POLLING TECHNIQUES

During the twentieth century polling techniques became much more scientific, spurred in part by failed efforts by pollsters to predict presidential election results in 1936 and 1948. As noted by the political scientists Robert Erikson and Kent Tedin (2005), in 1936 a straw poll from *Literary Digest* magazine predicted that Republican candidate Alf Landon (1887–1987) would defeat Democratic president Franklin D. Roosevelt (1882–1945). The poll was off by nearly 20 percentage points, as Roosevelt won handily. Responses to this survey heavily overrepresented the wealthiest (and heavily Republican) groups of Americans. Respondents were drawn from automobile registration lists and telephone directories, but during the Great Depression, most automobile and telephone owners were wealthy. In 1948 preelection polls predicted that Republican candidate Thomas Dewey (1902–1971) would defeat Democratic president Harry S. Truman (1884–1972). However, this poll also relied on flawed sampling that overrepresented the better-off. As a result the 1948 poll overrepresented Republicans. Chastened by

these polling mistakes and seeking to avoid future ones, pollsters were spurred to develop scientific polling methods.

ELEMENTS OF SCIENTIFIC POLLING

Scientific polls have several major characteristics that distinguish them from nonscientific surveys. First and foremost, scientific polls use samples of respondents that mirror the larger population under study. In a large, diverse nation like the United States, interviewing all American adults in a survey is impractical and impossible owing to prohibitive costs, resource constraints, and time limits. Thus pollsters rely on adult samples, selected randomly, such that all individuals have an equal chance of being included in the sample. This random sampling process usually yields a sample that closely reflects the characteristics of the larger population—that is, the sample is representative of the larger population. Statistically samples are most likely to be representative when random sampling methods are used and sample size—that is, the number of completed surveys—approaches or exceeds one thousand, with larger sample sizes producing better results.

Second, scientific polls use survey questions that are carefully constructed, clear and nonconfusing, and free of biased or "leading" language. Confusing language can sometimes produce major polling surprises. A 1993 Gallup Poll sponsored by the U.S. Holocaust Memorial Museum in Washington, D.C., revealed that 22 percent of Americans either were unsure of or doubted the Nazi extermination of the Jews during the Holocaust. This stunning finding was soon called into question, however. Close examination of the poll questions revealed a confusing double negative in the survey question. Follow-up polling using a revised question showed more comforting results: Only 1 percent of Americans actively doubted the Holocaust had happened, with an additional 8 percent unsure. The sociologists Howard Schuman and Stanley Presser ([1981] 1996) offer extensive evidence of the impact of question wording on survey results. Their and others' research shows that tone of wording, question ordering, question context (or lack thereof), and differences in response formats (i.e., a three-point scale versus a seven-point scale) all can significantly affect survey responses. How a question is asked, then, definitely shapes the answers received.

A third element of scientific polling is accurate and thorough reporting of results. Scientific surveys include a statement of how the poll was conducted and what the limitations of the survey are. Such a disclosure statement should include how many completed surveys there are; interviewing techniques used (in-person, telephone, or mail questionnaires); how respondents were selected (random sampling is best); the survey's margin of error and confidence level, two numbers indicating how well results will likely extend to the general population; any additional survey techniques, such as weighting of respondents, use of variations in question wording, or interviewer characteristics; and limitations of the survey. Above all else, scientific polling means that the pollster seeks to accurately measure attitudes, opinions, and behaviors, not influence them.

Some surveys are not scientific, for varying reasons. Some news media, such as MSNBC, have Web sites where viewers can answer an online survey. These are not scientific surveys as they lack the key ingredient of random sampling. Scientific polls do not allow people to self select into completing the survey. Similarly mail-in surveys found in some magazines and call-in polls used on some television shows are unscientific. Other "surveys" sponsored by political parties, campaigns, and interest groups are unscientific because they frequently use "loaded" questions that (usually not subtly) encourage some responses over others. At best these qualify as "pseudo-polls" because their objective is not to accurately measure opinion but to arouse support for the sponsoring party or group or anger at political opponents. A 1993 *TV Guide* survey sponsored by Ross Perot contained clearly loaded questions, including "Should laws be passed to eliminate all possibilities of special interests giving huge sums of money to candidates?" Such loaded questions provide virtually no meaningful information, but they do provide examples of how some surveys fall well short of scientific standards for measuring public opinion.

POLLING IS NOT PERFECT: THE PROBLEM OF SELF-CENSORSHIP

An additional limitation of polling is that some respondents face questions they prefer not to answer, resulting in self-censorship, which can take several forms. Someone contacted by a pollster may refuse to answer some questions, refuse the entire survey, or give insincere answers. Insincere responses are especially likely on sensitive subjects, such as past drug use, sexual activity, or racial attitudes, where some respondents answer falsely to give more "socially desirable" responses. The sociologist Eduardo Bonilla-Silva (2006) studied white Americans' discourse on racial issues and found a prevalent "color blind racism" in which many whites deny holding racist attitudes, contending that racism is "a thing of the past" and that race does not impact their attitudes and behaviors. This phenomenon perpetuates white dominance by denying continuing racial discrimination, revealing negative racial stereotypes, such as attitudes that minorities (especially blacks) tend to be lazy, violent, and lacking in self-restraint and attributing racial-group differences in

income, housing, education, crime, and other areas to individual choices or market forces that have nothing to do with race. The political scientist Martin Gilens (1999) found that white Americans' opposition to welfare is frequently driven by racial stereotypes that welfare recipients are usually black and that blacks are often lazy and shiftless, preferring to collect handouts rather than work.

The political scientists Jon Hurwitz and Mark Peffley (1997) found that white attitudes favoring punitive anticrime policies are often driven by stereotypes of blacks as violent and disposed to criminal acts. Similarly the political scientists Joe Soss, Laura Langbein, and Alan Metelko (2003) studied white Americans' attitudes toward the death penalty. They found that racial prejudices were by far the single strongest explanation for whites' death penalty attitudes, especially in areas where blacks comprise a larger share of the population. In all these cases, white attitudes on issues that appear non-race-related on the surface are suffused with racial stereotypes. But few whites in the early twenty-first century would admit they hold negative racial attitudes ("I'm not racist") or that those attitudes influence policy preferences. Social scientists must often use creative methods, such as unobtrusive survey questions on racial attitudes or experiments that vary question wording within surveys, to demonstrate the racial components underlying these attitudes.

THE IMPORTANCE OF POLLING IN POLITICAL SCIENCE RESEARCH

Polling has a central place in political science research. Academic survey research centers exist at major universities, such as the University of Chicago, the University of Michigan, and the University of California at Berkeley; these frequently sponsor nationwide scientific surveys. More survey research centers conduct further polling in many states. Collectively the polling conducted by these centers yields invaluable data for political scientists. For example, a researcher wishing to examine how racial stereotypes or beliefs in biblical inerrancy impact voting can use data from the University of Michigan's American National Election Studies, which measure these and many other social science variables. Statewide surveys, such as the Arkansas Poll sponsored by the University of Arkansas, or regional surveys, such as the Southern Focus Poll sponsored by the University of North Carolina at Chapel Hill, provide more data that political scientists find useful in researching attitudes in a state or region of the country. Although polling outside the United States presents many additional challenges, there is increasing demand for cross-national polling data, including that from Middle Eastern, Asian, and African nations. The World Values Survey, sponsored by multiple universities worldwide, has provided polling data from more than eighty nations since 1981. These data are opening new avenues for political scientists to better understand public opinion not just in the United States but worldwide.

SEE ALSO *Attitudes; Attitudes, Political; Attitudes, Racial; Elections; Hypothesis and Hypothesis Testing; Polls, Opinion; Psychometrics; Public Opinion; Survey; Surveys, Sample; Voting*

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Fred Slocum

POLLS, OPINION

Opinion polling is a method of analysis for drawing inferences about the attitudes or behaviors of a population by studying a random sample of persons from that population. Nonrandom surveys are sometimes used by social scientists for theory building, but only random samples can produce valid estimates of population traits. Since social scientists are typically interested in population traits, and since few other methods are as useful for studying population traits at the level of individuals, opinion polling with random samples has become one of the most common methods of data collection in the social sciences. Space does not allow a full treatment of this topic internationally and across the social sciences, but detailing the early adoption and continued use of opinion polls for political science research in the United States provides a useful introduction to the reasons why opinion polling remains such an important tool for the social sciences.

OPINION POLLS IN POLITICAL SCIENCE

Political scientists have long studied elections and public opinion, but before the 1940s they tended to emphasize how elections and public opinion should work in theory more than how they actually did work in practice. In part this emphasis reflected the scholarly paradigm of this period, which saw the core questions of democratic politics residing in the institutions, processes, and outcomes of political systems more than in the ways ordinary citizens made sense of them. But this emphasis was also encouraged by limitations in early methods of social analysis, which often forced scholars to speculate about factors influencing election outcomes because they lacked systematic evidence for studying many questions of interest. During this period, the best forms of voting data available to political scientists were aggregate election results that could be compared across voting districts or geographic areas, but such data had little to say about the reasons why individuals decided to participate in elections or why they supported particular candidates.

The development of random sampling surveys in the 1930s had a lasting impact on the ways that political scientists studied elections and public opinion. Nonrandom *straw polls* that included anywhere from dozens to millions of citizens had been used to predict elections and describe public opinion since the 1820s, but these proved to be invalid methods of social inquiry. Their results could not be generalized to larger populations because the people who answered such polls were not a random cross-section of society. The demise of the straw poll came in the presidential election of 1936, when the *Literary Digest* magazine incorrectly predicted a Republican win over Democratic incumbent Franklin D. Roosevelt (1882–1945). George Gallup's (1901–1984) new random sample survey correctly predicted a Roosevelt win, and he demonstrated that the Digest Poll's biased sample was the source of its inaccuracy.

The success of random sampling at predicting elections quickly encouraged its adoption by political scientists, and the 1944 publication of *The People's Choice*—the first systematic analysis of American voting behavior to use modern opinion polls—marked a major turning point in political science research. The transformation of this research tradition is widely considered to have been completed with the 1960 publication of *The American Voter*, which became a cornerstone of political behavior research in America. By this time the opinion poll—particularly the American National Election Study—had become the standard tool for political science research on mass opinion and voting behavior, as it remains a half century later.

The rapid adoption of polling came during a transitional period in political science known as the *behavioral revolution*, and stems in part from two parallel developments that were occurring at the same time. The first is the rise of *methodological individualism* as a critique of the dominant style of inquiry common to social science scholarship before the 1940s, which tended to explain any particular social phenomenon as a product of other social phenomena. For example, an election outcome might be explained as resulting from the state of the national economy. Methodological individualism held to the contrary that any social phenomenon was a collective product of individual-level behavior. For this school of thought, explaining election outcomes as a product of the economy requires understanding how economic factors influence the choices made by individual voters. Because opinion polls could measure not only political behavior but also the underlying attitudes that precede and shape such behavior, polls fit squarely with the tenets of methodological individualism and with the new paradigm of scholarship championed by behavioral researchers. The second development was the rapid growth of the science of statistics during the first half of the twentieth century. Polls not only provided information about the attitudes and behaviors of individuals, but when sampled using the new random probability methods they produced findings that could be generalized to entire populations. It was this unique combination of developments, arriving as the behavioral revolution was getting underway, that quickly transformed the opinion survey into the standard method for opinion research in the United States.

THE STATISTICAL LOGIC OF OPINION POLLING

The ability to generalize survey findings from a sample of 1,500 respondents to a population of millions comes from strict adherence to the statistical principles of random probability sampling. Researchers often want to study the attitudes or behaviors of a population, such as adults in the United States. Although they might prefer to include every member of the population in a survey, conducting a census for any but the smallest of populations is prohibitively expensive and fraught with difficulties. The solution offered by random probability sampling is a compromise. If a small subset of the population is selected at random to take the survey, then the central tendencies of that sample—such as the percentages of people holding various opinions—will tend to be quite similar to those of the population from which they were drawn. The compromise comes in how closely the sample estimates are likely to match the true characteristics of the population. Random sampling allows for a small amount of error between the mix of answers given by the sample and those that would be revealed by a census of the population, and also allows for the possibility that once in a while the sam-

ple may have quite different characteristics from the population.

Because random sampling allows researchers to accurately determine the probability that both kinds of error will occur in a given sample, they can assign a level of confidence to the likelihood that the sample results approximate the population's actual characteristics. The probability estimate for the first type of error is called the *margin of error*, defined as the range of values around a sample estimate in which the true population value is likely to be found. The size of the margin of error is determined by the number of persons included in the sample, with larger samples allowing more precise estimates. The margin of error for a sample of one thousand persons is plus or minus three percentage points, meaning that the proportion of respondents in the sample holding a particular opinion should be within three percentage points either way of the true population value. The probability estimate for the second type of error is called the *confidence level*, which is the likelihood that a population's true value falls within the range given by the sample's margin of error. Typically, random samples are drawn with a 95 percent confidence level, meaning that the population's true value should fall within the sample's margin of error ninety-five times out of one hundred.

These error estimates presume that each individual in a population has an equal and random chance of being selected, but other types of error can also influence poll results. Any violation of equal and random selection may produce *sampling errors* that can bias survey estimates away from the population's true value. *Nonresponse errors* can occur when persons selected to be in the sample are never contacted, decline to be interviewed, or refuse to answer particular questions. *Measurement errors* can be introduced by the wording of questions and the order in which they are asked. For example, answers obtained by asking respondents to select from a list of pre-determined responses—using what are called "forced-choice" questions—can produce different estimates of public opinion than answers obtained by recording the verbatim responses provided by respondents using "open-ended" questions. *Errors of conceptual validity* can occur when a question fails to adequately measure the concept of interest to survey researchers. These other types of error are not taken into account by the sample's margin of error or confidence level.

POLLS AND THE STUDY OF PUBLIC OPINION

Opinion polls are used by political scientists for four main purposes. First, polls are used to measure and predict political behavior. Pre- and postelection surveys help political scientists understand why citizens support particular candidates or parties. Election-day *exit polls* provide insights into the demographic and social characteristics of voters. Second, polls are used to chart trends in behavior and attitudes over time. *Tracking polls*, which consist of small samples taken every few days during the course of an election campaign, clarify how citizens respond in the short term to campaign activities. *Trend analyses* pose the same questions to different samples every few months or years to study long-term changes in the attitudes and behaviors of a population. Third, polls are widely used for *correlational analysis*, which examines how attitudes and behaviors are related to one another at the individual level. Fourth, polls are used to conduct general population experiments, where samples are divided into treatment and control groups to produce experimental findings. Unlike traditional laboratory experiments, the findings from survey experiments can be generalized to populations, which makes this combination of methods increasingly appealing to social scientists.

Polling has helped political scientists understand public opinion processes, but it also has changed the ways that political scientists think about public opinion. Up until the middle of the twentieth century, a sociological paradigm emphasizing the activity of organized groups informed the mainstream of opinion research in the social sciences. Before the behavioral revolution, the phenomenon of public opinion tended to be associated with action or barriers to action rather than merely with a potential to act. In contrast, newer psychological interpretations of public opinion associated with the behavioral revolution and informed by survey research have tended to view attitudes rather than actions as the primary phenomenon of interest. Likewise, while the earlier sociological conceptions of public opinion were concerned with action conducted by interested groups rather than the population as a whole, the method of random sampling has cultivated a perspective that views public opinion as an attribute of unorganized masses or entire societies. As a byproduct of this paradigm shift, the rise of polling has encouraged political scientists to neglect sociological and philosophical dimensions of public opinion research that once had been vibrant areas of social inquiry.

SEE ALSO *Exit Poll; Hypothesis and Hypothesis Testing; Methods, Quantitative; Methods, Research (in Sociology); Methods, Survey; Polling; Public Opinion; Quantification; Survey; Surveys, Sample*

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POLLSTERS

Pollsters are professionals dedicated to working with polls, which are sample surveys designed to uncover information about a defined population through questioning a representative sample. Scientific polling developed in the wake of the predictive failure of prescientific methods that used nonrepresentative samples. The most famous early pollsters began work in the 1930s and took part in government efforts to mobilize citizens in the United States during the Great Depression, the New Deal, and World War II. Soon after the war they generally emerged as heads of their own polling organizations, notably George Gallup (1901–1984), Elmo Roper, and Archibald Crossley. These names became synonymous with polling, and they not only sold clients on polling's value but also argued for and succeeded in giving polling results a prominent place in democratic politics. Gallup especially popularized polling's roll in governance, and he wrote several books on the subject, including *The Pulse of Democracy: The Public-Opinion and How It Works*. He also was a groundbreaker in the practice of regularly releasing poll results that revealed feelings about contemporary political issues. At the same time many pollsters entered academics, particularly Angus Campbell, Donald Stokes, Phillip Converse, and Warren Miller, who founded the Center for Political Studies. That group created American voting studies and the National Election Studies, a poll that offers data on voting, public opinion, and political participation and that continues in the early twenty-first century. A similar effort started later at the National Opinion Research Center, whose General Social Survey also remains in use in the early twenty-first century.

Modern pollsters play an important but somewhat underexamined social, political, and economic role in the development of information about large groups in society, especially polls directed at entire nations or states. While the number of practicing pollsters is not large, they collectively do many polls each year, often several simultaneously. Each poll can be an independent project requiring customization of two steps, creating a sample and conducting interviews. To create the sample, a population must be identified, and then chance is used to select a statistically representative subset. The interview requires developing a questionnaire with an overall theme as well as formulating specific questions. Pollsters also repeat certain questions in order to publicize specific public attitudes that have become associated with their organizations. The Gallup and Roper organizations are known, for instance, to frequently poll on citizens' approval of the U.S. president.

Pollsters tend to be budget sensitive, as they must maintain a staff that includes statisticians, interviewers, analysts, and writers as well as pay other administrative costs; thus their tasks involve satisfying clients' needs. Although they overlap, pollsters can be categorized by clientele. In broad strokes, clients are media organizations, businesses, or other private entities or academic enterprises. Media pollsters tend to work directly or indirectly with reporters and editors, generally part of the news department, to produce newsworthy tidbits about public attitudes for a wider audience. These pollsters tend to have journalistic goals and tailor efforts to supporting their organization's mission and specific projects. Increasingly media pollsters aid in the production of lifestyle pieces, like polls concerning parents' attitudes toward college.

Private pollsters work for specific clients ranging from large businesses and nonprofit organizations to political groups, including individual candidates. They use polls to uncover information clients consider valuable. Such information may help design public communication, for example, marketing a new product; assess performance by surveying customers or employees; and develop new ideas by surveying particular demographic categories. Pollsters have taken on increasing responsibility in political campaigns as well, performing similar functions but in the intense campaign environment. In assisting candidates with elections, pollsters have become central advisers, helping to assess candidates and issues, drafting advertisements, and even structuring policy proposals. In so doing pollsters play a prominent role in governance.

Within scholarly communities pollsters are spread widely in the social sciences, working for academic institutions to further knowledge about human thoughts and

behavior. In addition to political science, pollsters work in sociology, communication, psychology, public health, and economics pursuing studies relevant to each discipline. The well-known studies of consumer confidence produced by pollsters at the University of Michigan, for instance, help forecast future business conditions. Likewise the Euro barometer has become widely used by scholars to compare attitudes across countries. Though most pollsters working in the early twenty-first century are nonacademics, much of their training came from universities, and academics often take advantage of data produced by nonacademic polls.

SEE ALSO *Campbell, Angus; Converse, Philip; Exit Poll; Key, V. O., Jr.; Miller, Warren; Polling; Polls, Opinion; Survey*

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Adam Simon

POLLUTION

Pollution is the contamination of the natural environment by one or more substances or practices. Most pollution is an externality—an unintended by-product—of the use of energy and other products that have become central to industrial society. As a consequence, pollution is very difficult to eliminate, because doing so requires change in people's use of these central products and systems. The automobile, for example, is the single most important component of the transportation systems of Western industrial economies, yet it is also a major source of air and water pollution, toxic wastes, and noise.

Pollution of vital "common resources" such as air and water is an especially challenging problem. Because these resources are owned by society as a whole and cannot be divided among individuals, their use is often regarded as being free. The benefits to the individual of using common resources (for instance, disposing of chemical wastes by dumping them in a river) are frequently tangible and immediate (in this case, avoiding the expense of proper disposal), whereas the costs of such use are typically long-term, intangible, and paid by the community as a whole (in the form of polluted water). Thus, it appears to be rational for an individual to make maximum use of common resources, even at the risk of their overuse and eventual destruction.

The single most important cause of pollution, especially in industrial societies, is the use of fossil fuels in cars, industries, and homes. Fossil fuels include petroleum, coal, natural gas, and uranium. Major forms of air pollution, such as global warming, acid rain, depletion of the stratospheric ozone layer, and airborne toxic chemicals, all result at least in part from the incomplete burning of fossil fuels. The main piece of legislation governing air pollution in the United States is the Clean Air Act Amendments (CAAA), first passed in 1970 and amended several times, most notably in 1990. The guiding principle of the CAAA was to require that industrial expansion incorporate efforts to reduce air pollution. Market-based incentives have been added to the CAAA, particularly in the 1990 acid rain title, and are considered by many economists and policymakers to be more effective and more politically palatable than the traditional command-and-control approach to pollution control.

Fossil fuels cause water pollution as well, in the form of oil spills, industrial emissions, and acid rain. Congress passed the Federal Water Pollution Control Act in 1972 to restore the integrity of U.S. waters, and the Safe Drinking Water Act in 1974, giving the Environmental Protection Agency (EPA) the power to set standards for drinking water quality, which are implemented by the states. These legislative initiatives have had demonstrable though partial success, though many aspects of water pollution control, such as the protection of wetlands, remain highly controversial and limited.

Toxic chemical wastes became an important issue in environmental policy soon after the tragedy of Love Canal, an area of Niagara Falls, New York, where the Hooker Chemical Company transferred ownership of some land to the local government for the building of a school. Hooker Chemical had previously dumped massive quantities of hazardous chemicals in the area, and families living nearby began to be alarmed by an unusually high incidence of illnesses and birth defects. The Superfund program, passed in 1980 and reauthorized in 1986, has been the most far-reaching and expensive legislative effort to clean up toxic wastes on land that has been abandoned by its owners. The program has a significant number of drawbacks, however, including the facts that a substantial amount of Superfund money has been spent on lawsuits rather than on remediation of sites, the number of sites cleaned up is a small proportion of the total proposed for

cleanup, and the program has slowed almost to a standstill since the 1990s.

Another serious pollution problem stems from the use of artificial radioactivity for the development and testing of nuclear weapons as well as for the production of electrical power. Although nuclear power plants do not emit the same levels of air pollutants that coal and oil-fired power plants do, radioactive substances such as uranium and plutonium are powerful poisons. Meltdowns and near-meltdowns of nuclear plants (such as the Chernobyl disaster in 1986 in Ukraine) have sharply discouraged the use of nuclear power in the United States, as has the inability to create completely inviolable, long-term storage for nuclear wastes.

In addition, pollution problems and loss of habitats have contributed to the extinction of many species of plants and animals. The Endangered Species Act (ESA) of 1973 established a series of regulations to protect endangered and threatened species and the ecosystems on which they depend. The ESA generally has been considered to be successful; conflicts between requirements of the ESA and projects proposed by developers were effectively resolved during most of the act's existence. However, in recent years the property rights movement has taken strong exception to the continued enforcement of the ESA.

Other forms of pollution are less commonly recognized. One is indoor air pollution. As people work to bring down the high cost of heating and cooling by weatherproofing their homes, the atmosphere in these more airtight homes is more easily contaminated by pollutants such as cigarette smoke and toxins given off by carpeting, paneling, and household chemicals. Another, less commonly recognized form is light pollution: the excessive use of artificial light that brightens the dark sky, interfering with the work of amateur astronomers and harming nocturnal wildlife and other ecosystems. A third, noise pollution, refers to excessive noise levels, typically in urban and industrial areas, which not only disrupt people's lives and work but also raise blood pressure and stress levels, cause hearing loss, and interfere with the natural feeding, breeding, and migration cycles of animals.

Desertification—the encroachment of desert-like conditions into semidesert land—has been identified in large areas of Asia, Africa, and North America. The use of wood rather than oil or coal for fuel leads people in many developing nations to cut trees on a large scale; this often leads to disastrous flooding because tree roots can no longer hold topsoil in place when the rainy season comes. The burning of agricultural lands to clear dead vegetation, a common practice among farmers in many nations, can cause clouds of soot to move across neighboring nations.

Many of the most common forms of pollution have substantial economic impacts. Increases in air pollutants such as sulfur dioxide and urban ozone affect human health, causing or worsening conditions such as asthma, emphysema, and lung cancer. The resulting costs of medical treatment and shortened life expectancy affect a nation's productivity. Those who usually suffer are often the most vulnerable members of society: the elderly, the sick, the poor, and the very young. The environmental justice movement charges that the burden of pollution-caused health problems tends to fall most heavily on disadvantaged groups because these groups are least able to mobilize politically to demand pollution control. In more affluent areas, NIMBY ("not in my backyard") groups often have been successful at preventing the siting of incinerators, waste dumps, and other environmental hazards that can undermine property values in their neighborhoods.

Cleaning up pollution is very expensive as well. The EPA estimated that the provisions of the CAAA have cost $523 billion to implement between 1970 and 1990 (U.S. Environmental Protection Agency 1997). Some economists and political leaders regard this as unproductive spending, in that these expenditures do not help the businesses spending the money produce more goods. According to the 1997 EPA study, however, during this time period the application of the CAAA saved 205,000 American lives and provided between $6 and $50 trillion in economic benefits. Spending on pollution control goes in part to fund the manufacture of pollution control equipment, which adds to economic growth.

Pollution levels in the United States generally have improved as a result of the pollution-control policies of the past thirty years. Recycling and "precycling" (developing methods of manufacture that produce smaller amounts of waste) have reduced the production of solid wastes in many communities. The amount of lead (a neurotoxin) recorded in the air and in human blood samples is substantially down from 1970 levels, in large part because of the removal of lead from gasoline, due to the CAAA. Some international agreements have been effective, such as the Montreal Protocol (1987), which appears to have stabilized the problem of depletion of the stratospheric ozone layer. The improvement has been uneven, however. Urban ozone levels remain a substantial problem for most big cities in the United States. Global warming (Gore 2006) poses an extremely serious risk to the planet, and pollution problems are worsening rapidly in many industrializing nations, such as China and India.

SEE ALSO *Disaster Management; Environmental Kuznets Curves; Externality; Global Warming; Love Canal; Pollution, Air; Pollution, Noise; Pollution, Water; Regulation; Toxic Waste; Transportation Industry*

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Marjorie Randon Hershey

POLLUTION, AIR

The economy extracts natural resources from the environment to be used as inputs in production processes (the *source function* of the environment). The output of these production processes may be either produced inputs for yet other production processes or final products to be directly consumed. Yet these produced inputs and final products are not the entirety of the output; there are also residual by-products of these processes (waste).

Just as the economy extracts natural resources from the environment, the economy in turn dumps many residual by-products, or waste, back into the environment (the *sink function* of the environment). There is waste at each stage of the economic process: waste from extracting and refining natural resources, waste emanating from production processes, waste in the marketing of products, and waste in the sphere of consumption. Wastes may be solid, airborne, or waterborne. Air pollution describes airborne wastes that can harm the environment and human health due to their accumulation in the atmosphere, their concentration geo-spatially, and/or their synergistic effects when combining with other wastes.

There is an interesting relationship between the total natural resources utilized and the total waste produced by the economy. That is, they are ultimately equivalent. This is due to the first law of thermodynamics, which states that matter-energy can neither be created nor destroyed; only the form of matter-energy can change. Of course, it is more complicated than a simple equality. Natural resources are frozen in the form of capital goods during the depreciation process (and capital goods from previous periods are at differing stages in the depreciation process), and there is a time element in the consumption of many final products as well. At a fundamental level, however, the equality holds.

RESOURCES AND POLLUTION

Some wastes are recyclable or reusable and others are not. The fact that all waste is not recyclable or reusable is due to the second law of thermodynamics, which states that any utilization of matter-energy decreases the total available matter-energy. In other words, some of the forms into which matter-energy is transformed can no longer be accessed. This is also known as the entropy law, and put differently means that not all the forms into which matter and energy are transformed are recyclable or reusable. That waste which is not recycled or reused is dumped into the environment.

The environment has an assimilative capacity, which is the ability of the environment to transform waste into harmless (or even beneficial) forms. This assimilative capacity, however, is not infinite. Waste at some level is not only incapable of being assimilated, but will damage or even destroy the assimilative capacity itself.

It is not simply the level of *homogeneous* waste in relation to the assimilative capacity that needs to be considered, but additionally what specific *types* of waste are being emitted. Some types of waste (e.g., mercury) are not assimilable in any quantity, and at some stock level can result in various detrimental effects, including damage to the assimilative capacity itself. In addition, it is not sufficient to simply look at each type of waste and the quantity of it emitted in isolation, one must consider also its synergistic effects. The *combinations* of different forms of waste have effects that are more damaging than the sum of the component waste products independent of one another. A classic case here is sulfur dioxide and nitric oxide resulting in acid precipitation (acid rain, fog, and snow).

The qualities and quantities of waste globally along with spatial considerations concerning the local *concentration* of wastes are crucial. And it is not simply the case that the assimilative capacity detoxifies or degrades waste instantaneously, or even within some set time period. There are *cumulation* effects that have to be dealt with. So in assessing the ability of the assimilative capacity to deal with industrial and other waste, combination effects, concentration effects, and cumulation effects all need to be carefully considered.

Furthermore, nothing guarantees that all waste that is *capable* of being recycled or reused *is* being recycled or reused. All waste, whether recyclable or not, which is dumped into the environment, may impact on the assimilative capacity. Therefore, when considering the quantities and qualities of wastes confronting the assimilative capacity, only those residuals may be exempted that are *actually* recycled. Generally speaking, the technologies do not yet exist to capture and recycle airborne emissions.

EVOLUTION OF AIR POLLUTION REGULATION

In the United States, early air pollution laws were enacted locally in Chicago and Cincinnati. These were smoke control laws that addressed only smoke emissions from coal burning. Before 1948, there was almost no real government intervention in the environment, which means that there was, by default, a market approach to natural resource use and environmental protection.

An early recorded disaster resulting from air pollution occurred in Belgium in 1930. A thermal inversion occurred in an area characterized by concentrated industry with substantial amounts of sulfur dioxide emissions and discharges of particulate matter. Air circulation, which requires horizontal or vertical air currents, is one of the keys to the dispersal of air pollution. If there is no horizontal wind movement, then vertical air currents will usually disperse the pollutants due to the fact that atmospheric temperature is inversely related to height. The temperature falls by 5.4 degrees Fahrenheit every thousand feet above the Earth's surface. So normally, the warm polluted air, being lighter, will rise and disperse into the cooler air.

However, if the temperature decrease is less than 5.4 degrees Farenheit per thousand feet, warm air, unable to rise because of the existence of even warmer air above it, hovers over the source of the pollution, trapping concentrated pollutants in the lower stratum. This phenomenon is called thermal inversion.

The thermal inversion in Belgium in 1930 resulted in sixty-three deaths and five thousand people becoming seriously ill. A similar episode occurred in Donora, Pennsylvania, a small industrial town thirty miles south of Pittsburgh, in 1948. Twenty people died and six thousand became ill. Thermal inversion combined with pollution and fog killed four thousand and caused numerous respiratory illnesses in London in 1952.

In the United States, the Donora incident led to a greater awareness of the problem of air pollution, and eventually to the Air Pollution Act of 1955. Although this act did little more than authorize and provide limited funding for research, it served as the basis for future amendments to the Act. The Clean Air Act of 1963 authorized the Public Health Service to take corrective action in addressing problems of interstate air pollution, and 1965 amendments gave the federal program the authority to curb auto emissions. The first standards for motor vehicle emissions were applied in 1968.

The Air Quality Act of 1967 strengthened the powers of state and local as well as federal authorities to set and enforce standards on a regional basis. This paved the way for the Clean Air Act of 1970, which was the first legislation to call for uniform air quality standards based on geographic regions.

The newly created Environmental Protection Agency (EPA) was given the authority to enforce two sets of standards: primary and secondary. Primary air quality standards concern the minimum air quality necessary to keep people from getting ill. These standards are based on proven harmful effects of individual pollutants. Secondary standards are intended to promote the general public welfare and prevent damage to plants, animals, and property in general. Within each geographic region, states determine how these standards are to be met.

MARKET APPROACHES TO AIR POLLUTION

Direct regulation or standards have been criticized on a number of grounds and have given rise to market approaches. Pollution taxes have been used, which it has been argued gives firms an incentive to reduce their emissions and is a lower cost method than command and control. The problem with such taxes or fees is identifying and calculating the social costs, and even if that is possible, there is no guarantee that they will reduce emissions to levels consistent with assimilative capacity.

These problems resulted in the market permits and emissions trading approach, which entails a market in pollution rights. The government makes some maximum allowable emissions standards, but then auctions off pollution permits to the highest bidders. Firms could purchase in the original market directly from the government or in secondary markets from other firms or individuals who purchased directly from the government, or in secondary markets themselves. Only after having acquired the *right to pollute* could a firm discharge polluting emissions. Here there is a tax incentive: The firm pays to reduce emissions and to seek ways of producing that pollute less, but the difference is that the total amount of pollution is fixed. In this sense, the market permit approach combines the strengths of both direct regulation and market approaches.

The market permits approach is not without its critics however. Many see the practice as government auctioning off clean air to the highest bidder. These issues are becoming particularly important as scientific evidence about problems such as global climate change becomes more reliable and available.

SEE ALSO *Externality; Global Warming; Greenhouse Effects; Pollution; Pollution, Noise; Pollution, Water*

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POLLUTION, NOISE

Noise pollution is undesired sound that is disruptive or dangerous and can cause harm to life, nature, and property. It is often said that noise differs from other forms of pollution in that, unlike atmospheric pollutants for example, once abated, noise leaves no residual accumulation in the environment or the human body. Noise does leave behind its effects, however, and these can deteriorate after continued exposure to harmful sounds. So it is not true, strictly speaking, that "noise … leaves no visible evidence" (Lai 1996, p. 389).

The hazardous effects of noise depend on its intensity (loudness in decibels), duration, and frequency (high or low). High and low pitch is more damaging than middle frequencies, and *white noise* covering the entire frequency spectrum is less harmful than noise of a specific pitch. Noise may be ambient (constantly present in the background) or peak (shorter, louder sounds).

Noise-induced hearing loss (NIHL) in humans is the major, though by no means only, problem stemming from noise pollution. In 1978 the U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control estimated that around twenty million Americans were exposed daily to noise resulting in permanent hearing loss (EPA 1978). In 1990 about thirty million people in the United States were exposed daily to occupational noise levels above 85 decibels, compared with just over 9 million people in 1981. Exposure for more than 8 hours a day to sound in excess of 85 decibels is potentially hazardous. In Germany and other developed countries, as many as four to five million people, that is, 12 to 15 percent of all employed people, are exposed to noise levels of 85 decibels or more (World Health Organization 2001).

Loud, abrupt sounds can harm the eardrum, while sustained sounds at lower volume can damage the middle ear; both types of sounds can cause psychological damage. Noise disrupts sleep and communication, and numerous studies have documented the heart-related, respiratory, neurological, and other physiological effects of noise. Stress, high blood pressure, anger and frustration, lower resistance to disease and infection, circulatory problems, ulcers, asthma, colitis, headaches, gastrointestinal disorders, and many other physiological and psychological problems have been linked directly to noise. In addition, children have been shown to suffer from slower language development and disruption of learning as a result of noise. More than five million children in the United States, ages six to nineteen, suffer from noise-induced hearing impairment (Havas 2006). In the United Kingdom, Netherlands, and Spain, exposure to noise impaired children's reading comprehension and caused a delay in reading skills development (Clark and Stansfeld 2005). In Austria, children in noisier neighborhoods were shown to suffer from increased stress and diminished motivation (Evans et al. 2001). A fetus exposed to noise may experience a change in heart rate, or it may suffer the impact of its mother's noise-related stress.

In addition, noise can harm animals and the environment, as well as physical property. Livestock and pets are harmed by noise, as are animals in the wild. Noise can also disturb wildlife feeding and breeding. Noise-related property damage includes structural damage from vibrations induced by sound waves and economic harm in the form of lower property values. The true social costs of noise pollution also must include monetary losses from sickness, absenteeism, loss of productivity and earning capacity, and much more.

Noise pollution is not new, but it has become more problematic with the developments associated with industrialization and urbanization. Between 1987 and 1997, community noise levels in the United States were estimated to have increased by 11 percent and were predicted to continue increasing at that rate or more (Staples 1997). Commercial and industrial activities, construction, aircraft, vehicular traffic (highway and off-road), and the rapid increase in the use of machines and other technologies are all associated with noise pollution. Modern household appliances and lawn and gardening equipment are increasingly common sources of noise. Like many other forms of pollution, noise appears to disproportionately affect poor and disadvantaged minority communities, and so is also an environmental justice issue.

In the United States, public policy to address noise pollution began in the early 1970s. The Noise Control Act of 1972 charged the federal government with protecting public health and welfare from noise pollution by establishing standards for noise emissions and by authorizing federal agencies to establish rules. The EPA created the Office of Noise Abatement and Control (ONAC) as a result of the Noise Control Act. The Quiet Communities Act of 1978 authorized the EPA to provide grants to state

and local governments for noise abatement. In the early 1980s the Occupational Safety and Health Administration (OSHA) set standards for industrial noise exposure and criteria for hearing protection. The OSHA guidelines resulted in a reduction of noise levels and hearing loss to workers, but some hearing loss can occur even at OSHA-approved levels. In 1981 Congress agreed to the Ronald Reagan administration's proposal to cease funding for ONAC, although Congress did not repeal the Noise Control Act when it eliminated ONAC's funding.

Noise pollution can be controlled through reduction at the source, interruption of transmission paths, or protection of the receiver. Reengineering machines and simply turning down volume when possible are methods of reduction at the source. Barriers, enclosures, and other forms of soundproofing can interrupt transmission paths. The use of hearing protection is the main form of receiver protection. Experts recommend a multifaceted approach, including appropriate training on the use of equipment and on why ear protection matters, enforcement of hearing-protection regulations, and the use of new technologies that reduce noise at the source (Lusk et al. 2004). Like many other environmental problems, addressing noise pollution is complicated by issues of shared responsibility and jurisdiction, making some conventional economic approaches less effective and inviting new interdisciplinary solutions. New active noise control (ANC) technologies may assist in dealing with noise pollution in the years ahead through the use of digital processors that convert analog sounds into digital signals, allowing computer-generated "antinoise" to erase sound with sound (Alper 1991).

While market-based approaches to pollution control have become more popular in recent years, there have not yet been any emissions trading or pollution permits schemes applied to noise. It should be recalled, however, that up until the time of the first government regulation of pollution, a market-based approach was the "default" mode of pollution control.

SEE ALSO *Pollution; Pollution, Air; Pollution, Water*

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POLLUTION, WATER

Water pollution exists when water is contaminated by impurities or its quality is otherwise adversely affected, for example, by solid matter or thermal discharges. Water pollution problems have a long history that can be traced to antiquity, and the attempts of communities to control such problems have an equally long track record. The nature of water pollution problems has changed over time, and their geographic scale has steadily increased, as has the scale of institutional solutions that have been adopted to control them. This entry explores the key changes in the nature and scale of water pollution and in the institutional solutions that have been adopted as a response to it.

Pollution of water by human wastes was a key public health problem when today's developed countries urbanized in the 1800s. Urban life expectancies decreased because contaminated water supplies caused epidemics of cholera, typhoid fever, and other water-borne diseases and increased people's susceptibility to all illnesses. These problems were initially local, when wells and ground water were used for water supplies, and communities responded to them with local public health and sanitation regulations. The construction of networked water supplies and sewer systems after the mid-1800s increased the scale of water pollution. Local regulations proved powerless when sources of pollution were increasingly outside the local jurisdiction. This situation gave rise to the first state and national water pollution policies, which successfully safeguarded public health but which largely failed to improve in-stream water quality.

The nature of water pollution changed in industrialized countries around the time of World War II (1939–1945) because the war effort and postwar recon-

struction resulted in the rapid growth of industrial production and increased discharge of industrial effluents. New innovations such as organic pesticides and synthetic detergents also proved potent water pollutants. The decades after the war witnessed several widely publicized environmental disasters, including mercury pollution in Minamata, Japan, that caused "Minamata disease" in the 1950s; the *Torrey Canyon* (1967) and *Amoco Cadiz* (1978) supertanker disasters in Europe; and the Santa Barbara, California, oil spill in 1969. Furthermore, there was controversy over asbestos-containing discharges from Reserve Mining into Lake Superior in Silver Bay, Minnesota, in the 1970s; the leak of toxic chemicals from the Sandoz factory in Basel, Switzerland, in 1986; and the cyanide spill from a gold mine in Baia Mare, Romania, which polluted the Tisza and Danube rivers in 2000. More recently, in November 2005, an explosion in a chemical plant in Jilin, China, polluted the Songhua River with benzene and nitrobenzene.

Water pollution continues to be a public health problem in the developing world. Worldwide, one child out of six under five years of age dies of a diarrheal disease such as cholera, typhoid fever, dysentery, and gastroenteritis, which are caused by the contamination of water by human wastes. Moreover, weak enforcement or the nonexistence of environmental and safety regulations in developing countries means that agriculture, horticulture, and mining are major sources of toxic water pollutants such as pesticides and mercury. Such pollutants have caused grave public health consequences across the developing world, but particularly in severely polluted areas such as the Aral Sea region in Central Asia. In some places, such as in Bangladesh, naturally occurring arsenic pollutes certain layers of ground water on which many communities depend for their water supply.

Most developed countries have adopted water pollution policies that have reduced conventional water pollutants from *point sources*. Conventional pollutants include biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, oil and grease, and pH (acidity and alkalinity). Point sources include municipal sewage treatment plants, industrial establishments, and other facilities, which only contributed about half of all conventional pollutants in the United States when the Clean Water Act of 1972, with its focus on point sources, was adopted. Water pollution originating from nonpoint sources, such as agriculture, streets and roads, and storm sewers, was not originally controlled with the same level of effectiveness. National policies have also been less successful in reducing the amount of nonconventional pollutants, such as those of toxic chemicals. More recently, market-based instruments such as fertilizer, manure, and pesticide taxes have been used in many countries for controlling water pollution from nonpoint sources. Other market based instruments, particularly tradable effluent permits and sewerage charges, have increasingly been used also for controlling conventional water pollutants.

The incentives and capacity of states to control pollution from sources that lie outside their jurisdictions is limited, however. International environmental agreements have been negotiated to address this problem, including early agreements on the transportation of dangerous substances on the River Rhine in western Europe, which came into force between 1900 and 1902, and the Boundary Waters Treaty between the United States and Canada, which took effect in 1909. International agreements since 1970 have addressed, for example, the pollution of the marine environment by oil and dumping; the pollution of transboundary bodies of water such as the Baltic Sea, the North Sea, and the Mediterranean; the elimination of persistent organic compounds; and the international transport of hazardous materials and liability for damages caused by their transport. Some of these conventions, such as the 1992 Baltic Sea Convention, have been successful, while others have made little difference to the quality of the marine environment to date.

SEE ALSO *Pollution; Pollution, Air; Pollution, Noise*

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POLLUTION TAXES

SEE *Pollution, Air.*

POLYARCHY

The term *polyarchy* was introduced into the English language in the seventeenth century as a term meaning "gov-

ernment by many," but later fell into disuse. Robert A. Dahl and Charles E. Lindblom revived the term in *Politics, Economics, and Welfare* (1953) to refer to a process by which non-leaders control leaders. Dahl subsequently revised and developed the concept, defining it in *Polyarchy: Participation and Opposition* (1971) as a political regime that is "highly inclusive and extensively open to public contestation" (p. 8), and in *Democracy and Its Critics* (1989) as a regime in which "citizenship is extended to a relatively high proportion of adults, and the rights of citizenship include the opportunity to oppose and vote out the highest officials in government" (p. 220).

The robustness and importance of the concept are derived from three features. First, polyarchy unambiguously refers to really existing modern representative democracies that have universal suffrage. Second, it does so by focusing on two dimensions essential to these regimes, participation and contestation. Third, polyarchy specifies a limited number of institutions that together are necessary and sufficient for its existence.

Polyarchy refers to the form of government found in contemporary democracies, but it is not the same as democracy. Dahl understands democracy to be a regime completely responsive to all its citizens. As such, democracy is an ideal, and polyarchy refers to regimes at considerable distance from the ideal. The institutions of polyarchy are held to be necessary for democracy on a large scale, but not sufficient. Though usually considered a "minimalist" concept of democracy, polyarchy nonetheless constitutes a significant human achievement. No country was a full polyarchy until the 1890s when women gained the right to vote in national elections in New Zealand, and until the 1990s only a minority of the world's independent countries could qualify as polyarchies.

Polyarchy is a narrower concept than democracy in that it is comprised of just two of the many possible dimensions of democracy: political participation and contestation. Although the expansion of citizen participation in governing has been of great historical importance, in recent years universal suffrage has become widespread and most variation in polyarchy has occurred along the dimension of contestation. Polyarchy does not directly include many other dimensions often associated with democracy, such as the degree or extent of the rule of law, horizontal accountability, or actual government responsiveness to citizens, nor does it specify a level of political rights or civil liberties beyond that required for the effective presence of the institutions (listed below). Polities that qualify as polyarchies due to relatively high levels of competition and participation may vary significantly in other ways related to democracy.

Dahl has described the institutions of polyarchy, with some variation over the years. In *On Democracy* (1998) he lists them as:

1. *Elected officials.* Control over government decisions about policy is constitutionally vested in officials elected by citizens.…
2. *Free, fair, and frequent elections.* Elected officials are chosen in frequent and fairly conducted elections in which coercion is comparatively uncommon.
3. *Freedom of expression.* Citizens have a right to express themselves without danger of severe punishment on political matters broadly defined.…
4. *Access to alternative information.* Citizens have a right to seek out alternative and independent sources of information.… Moreover, alternative sources of information actually exist that are not under the control of the government or any other single political group.…
5. *Associational autonomy.*… [C]itizens also have a right to form relatively independent associations or organizations, including independent political parties and interest groups.
6. *Inclusive citizenship.* No adult permanently residing in the country and subject to its laws can be denied the rights that are available to others and are necessary to the five political institutions just listed. These include the rights to vote … [and] to run for elective office.… (pp. 85–86)

What is important for polyarchy is that each of these institutions must be effectively present, not merely a set of nominal rights. The degree to which these institutions are effective may be measured and a scale of polyarchy established, although polyarchy is often used dichotomously, with only those polities whose institutions are effective above a certain threshold qualifying as polyarchies.

Some authors have suggested that the list of institutions of polyarchy is incomplete and have proposed additions, while others have sought to provide more concise, accurate, or inclusive operational definitions of contemporary democracy than polyarchy. That most such attempts continue to use the concept of polyarchy as their starting point is testimony to its enduring usefulness.

SEE ALSO *Associations, Voluntary; Citizenship; Dahl, Robert Alan; Democracy; Elections; Franchise; Lindblom, Charles Edward; Representation; Representative Agent*

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Charles D. Kenney

POLYGYNY

SEE *Dowry and Bride Price*.

POLYTHEISM

The term *polytheism*, referring to the worship of several gods, was coined in the sixteenth century. For medieval European Christians, the religious universe could be exhaustively categorized in terms of Judaism, Christianity, and paganism. This neat tripartite division was rendered obsolete by the Reformation. The first recorded use of the term *polytheism* was in a treatise against witches published in 1580 by the noted French thinker Jean Bodin (1530–1596). Significantly, Bodin also wrote an unpublished series of dialogues between "sages" who each practiced a different religion (including a Jew, a Roman Catholic, a Lutheran, a Calvinist, and a Muslim, among others) and who, unable in the end to resolve their differences, worshiped together in harmony. Bodin's dialogue suggests a moral equivalence among all these religions that might be characterized as "monotheistic," a term that would be invented slightly later.

This contrast between polytheism and monotheism appealed to secularizing Enlightenment thinkers precisely because it did not privilege Christianity. In particular, in *The Natural History of Religions* (1757), David Hume, deliberately turning his back on the biblical account, suggested that polytheism was the earliest form of human religion. It was not, he argued, born out of abstract speculation or contemplation, but rather in response to human hopes and especially fears—of illness, childbirth, war, and so on. Each such fear was governed by its own divinity, and because humans had an abundance of fears, they had a plethora of divinities. Only much later, according to Hume, did monotheism emerge as a (relatively) rational explanation of the world in terms of a single creator. In other words, polytheism was a religion of the passions, and monotheism a religion of reason. Hume was himself pessimistic about the capacity of reason to triumph over passion, and he envisaged the past and future histories of religion in terms of oscillation between the two poles of polytheism and monotheism.

The notion that "polytheistic" religions were emotional and irrational was used by Europeans to disparage non-European peoples and their religious practices. Charles de Brosses's 1760 work *Du culte des dieux fétiches* (On the cult of the fetish gods) compared West African and ancient Egyptian religions in terms of their worship of gods who combined animal and human characteristics in a manner particularly repellent to Enlightenment criteria of rationality. Initially, late-eighteenth-century British observers of Brahmanical Hinduism characterized it as essentially monotheistic, in light of ancient texts. However, in the nineteenth century, Hindu "polytheistic" worship was evinced as evidence of the degeneration of Indian society.

Beginning in the middle of the nineteenth century, emerging anthropological theories of social evolution easily incorporated the distinction between polytheism and monotheism into their vision of human progress. Most notably, Edward Tylor's *Primitive Culture* (1871) traced the origins of religion to "animism," the belief, derived from the experience of dreams, that there existed a "soul" independent of the human body. Primitives believed that animals, plants, and even inanimate objects also had souls, making nature worship the earliest and least rational form of religion. Polytheism, involving a hierarchy of greater and lesser gods and spirits, represented an initial advance, a step in the direction of monotheism and, ultimately, "scientific" atheism. Sigmund Freud gave this perspective a psychoanalytic twist in *Moses and Monotheism* (1939), associating the plural gods of polytheism with the different urges of the id, and the God of monotheistic religions with the superego.

Beginning in the early twentieth century anthropologists challenged the broad evolutionary schemes of their predecessors, preferring to concentrate on the intensive study of small-scale societies in the field rather than on "conjectural history." Their studies were committed to demonstrating the rationality of non-European peoples and explaining their religious ideas in their own terms. They had little use for a term such as *polytheism* that, in their eyes, lumped a multitude of particular and radically different cultures and religious traditions into one broad rubric. Although the term was not the object of specific anthropological critique, anthropologists by and large avoided its use. The most conspicuous exception was E. E. Evans-Pritchard, whose influential study *Nuer Religion* (1956) described Nuer belief in and worship of a single "Spirit" (*Kwoth*) alongside a host of greater or lesser "spirits" (*kuth*). The Nuer alternatively could be described as monotheists

or polytheists, a contradiction Evans-Pritchard attempted to reconcile by suggesting that lesser spirits were in fact understood as refractions of the one Spirit from the point of view of specific groups or individuals.

However, too exclusive a focus on the religious particularities of small-scale societies obscured the ways in which multiple cults of divinities could proliferate regionally, nationally, and indeed transnationally. Hinduism is an obvious example. C. J. Fuller recently argued that "fluidity—which means that one deity can become many and many deities can become one—is a supremely important characteristic of Hindu polytheism" (Fuller 1992, p. 30). Not only does this allow the cult of greater divinities such as Vishnu, Shiva, and Devi to articulate with the local worship of tutelary gods and goddesses, but it also reconciles the seemingly antithetical eighteenth- and nineteenth-century characterizations of Hinduism as monotheistic and polytheistic. Similar examples can be drawn from West Africa, such as the cults of *orishas* among the Yoruba, and the cults of their neighbors who were transported across the Atlantic by the slave trade and formed Candomble in Brazil, Vodun in Haiti, and Santeria in Cuba. As with Hindu divinities, *orishas* have multiple names if not multiple personalities, and often are associated with specific localities. The myths that relate the principal *orishas* of the Yoruba pantheon to one another exist in multiple, and sometimes contradictory, versions. It is important to point out that individual worshippers form a personal bond with one specific *orisha*. Seen in this light, polytheism is not intrinsically a fixed and overarching system, but rather a highly flexible framework that can articulate local cults within a wider regional or supraregional framework. Attempts to systematize the theology and worship of such religions, most particularly Hinduism, are modern outcomes of colonial and postcolonial situations.

SEE ALSO *Anthropology; Culture; Evans-Pritchard, E. E.; Monotheism; Religion; Sociology*

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Robert Launay

PONZI SCHEME

Ponzi scheme is the name given to any business or economic entity promising to pay a higher return to its investors than can be generated by this business's net operating income. Operations of this type are sustainable only as long as funds from new investors or lenders are available to meet outstanding payout requirements.

This phrase originated in a get-rich-quick operation devised in the early twentieth century by Charles Ponzi (Zuckoff 2005). After immigrating to the United States from Italy in 1903 and serving time in prison, Ponzi launched his scheme in Boston in mid-1919. Ponzi's operation was based on the arbitrage possibilities of the cross-border system of postal-reply coupons. In this system, people mailing documents internationally could send along coupons that enabled recipients to mail back the documents using stamps bought in the recipient's country. The system used rates fixed in 1907 that had not been adjusted for subsequent currency realignments. Ponzi and his agents took advantage of this system by converting funds into devalued currencies, using those monies to purchase postal-reply coupons, trading them (at 1907 par values) for postal coupons in countries with stronger currencies, then converting these stronger countries' coupons back into currency.

Ponzi obtained funds for his plan by offering a 100-percent return in ninety days. By July 1920 he had attracted millions of dollars to his Security Exchange Company. His scheme triggered an investment mania, and he began living luxuriously. Most of the returns paid to investors in Ponzi's schemes came from new investors' funds, not from postal-coupon investment earnings. Ponzi's scheme was exposed by the U.S. Postal Service, and federal agents raided the Securities Exchange Company in August 1920, rendering worthless the stakes of his 17,000 investors. After serving more time in prison, Ponzi was deported to Italy; he died at a charity hospital in Rio de Janeiro in 1949.

Ponzi schemes have arisen frequently, both in the past (Kindleberger 1978) and in the present. Many Ponzi schemes now operate on the Internet. Such schemes can be sustained as long as existing investors do not liquidate their positions, and as long as new investors opt in and regulators do not intervene. When a bailout is expected, it can be rational to participate in a Ponzi scheme (Bhattacharya

2003). These schemes resemble asset bubbles in that investors in both cases suspend belief and are often driven by greed; but asset bubbles arise in open markets with changing sets of investors, whereas Ponzi schemes arise via closed contracts made to well-defined sets of investors. *Pyramid schemes* are one variant of the Ponzi scheme in which the earlier in the scheme a participant signs on, the greater that person's share of excess returns.

Economists increasingly describe any situation as "Ponzi" when it involves payout obligations that can be met only through borrowing against future income. For example, in his theory of financial fragility, Hyman Minsky (1975) used the term *Ponzi finance* to denote the borrowing requirement of firms whose cash flow from current operations is insufficient to meet current liability obligations. Thomas Sowell (2003), among others, has argued that social security systems have Ponzi characteristics, in that old-age benefits liabilities are transferred across generations instead of being self-financed. Other economists, such as Stephen O'Connell and Stephen Zeldes (1988), have modeled the behavior of governments with growing fiscal deficits as Ponzi games.

SEE ALSO *Bubbles; Discounted Present Value; Discounting; Financial Instability Hypothesis; Financial Markets; Future Prices; Hedging; Leverage; Liquidity Premium; Overlending*

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Gary Dymski

POOLED TIME SERIES AND CROSS-SECTIONAL DATA

Economic datasets come in a variety of forms. The cross-sectional, time series, and panel data are the most commonly used kinds of datasets. A *cross-sectional* dataset consists of a sample of individuals, households, firms, cities, states, countries, or any other micro- or macroeconomic unit taken at a given point in time. Sometimes the data on all units do not correspond to precisely the same time period. In a pure cross-sectional analysis, such minor time differences in data collection are ignored. Figure 1 illustrates the relationship between cross-sectional data on the price of houses sold within a two-week period and the houses' size. The basic model, $y_i = c + x_i\beta + \varepsilon_i (i = 1, 2, \ldots N)$, where y_i is the dependent variable and x_i is a $1 \times K$ vector of explanatory variables, often has stochastic errors ε_i such that $E(\varepsilon_i / x_i) = 0$ but $V(\varepsilon_i / x_i) = \sigma_i^2$. *Ordinary least squares* (OLS) estimates that ignore heterogeneity across cross sections are unbiased but inefficient. Efficiency can be attained from *generalized least squares* (GLS) estimation. In economics, the analysis of cross-sectional data is closely associated with applied microeconomics fields such as labor economics, public finance, industrial organization, urban economics, demography, and health economics. Data on individuals, households, firms, and cities at a given point in time are important for testing microeconomic hypotheses and evaluating economic policies.

A *time series dataset* contains information on a variable or a set of variables over time. Examples of time series data include stock prices, money supply, the consumer price index, gross domestic product (GDP), annual homicide rates, and automobile sales figures. Figure 2 illustrates the time series for NASDAQ on July 7, 2006. Since past events influence the future and lags in behavior are prevalent in the social sciences, time is an important dimension in time series datasets. Unlike the arrangement of cross-sectional data, chronology is crucial in time series datasets. Time series observations are hard to analyze mainly because of the interdependency of observations over time. The basic model, $y_t = c + x_t\beta + \varepsilon_t (t = 1, 2, \ldots, T)$, where y_t is the dependent variable and x_t is a $1 \times K$ vector of explanatory variables, has stochastic errors ε_t such that $E(\varepsilon_i / x_i) = 0$ but $\varepsilon_t = \rho\varepsilon_{t-1} + u_t$ (u_t satisfies all classical assumptions).

Most economic data are strongly related to their recent histories. For example, information on GDP from the last quarter allows the researcher to make accurate predictions about the likely range of GDP during the current quarter, because GDP tends to remain fairly stable from one quarter to the next. OLS regression estimates that ignore the time-dependence features of time series data produce inaccurate results. Model transformation is required to produce GLS estimates that are efficient. Several modifications and embellishments to standard econometric techniques have been developed to account for and exploit the dependent nature of economic time series and to address other issues, such as the fact that some economic variables tend to display clear trends over time.

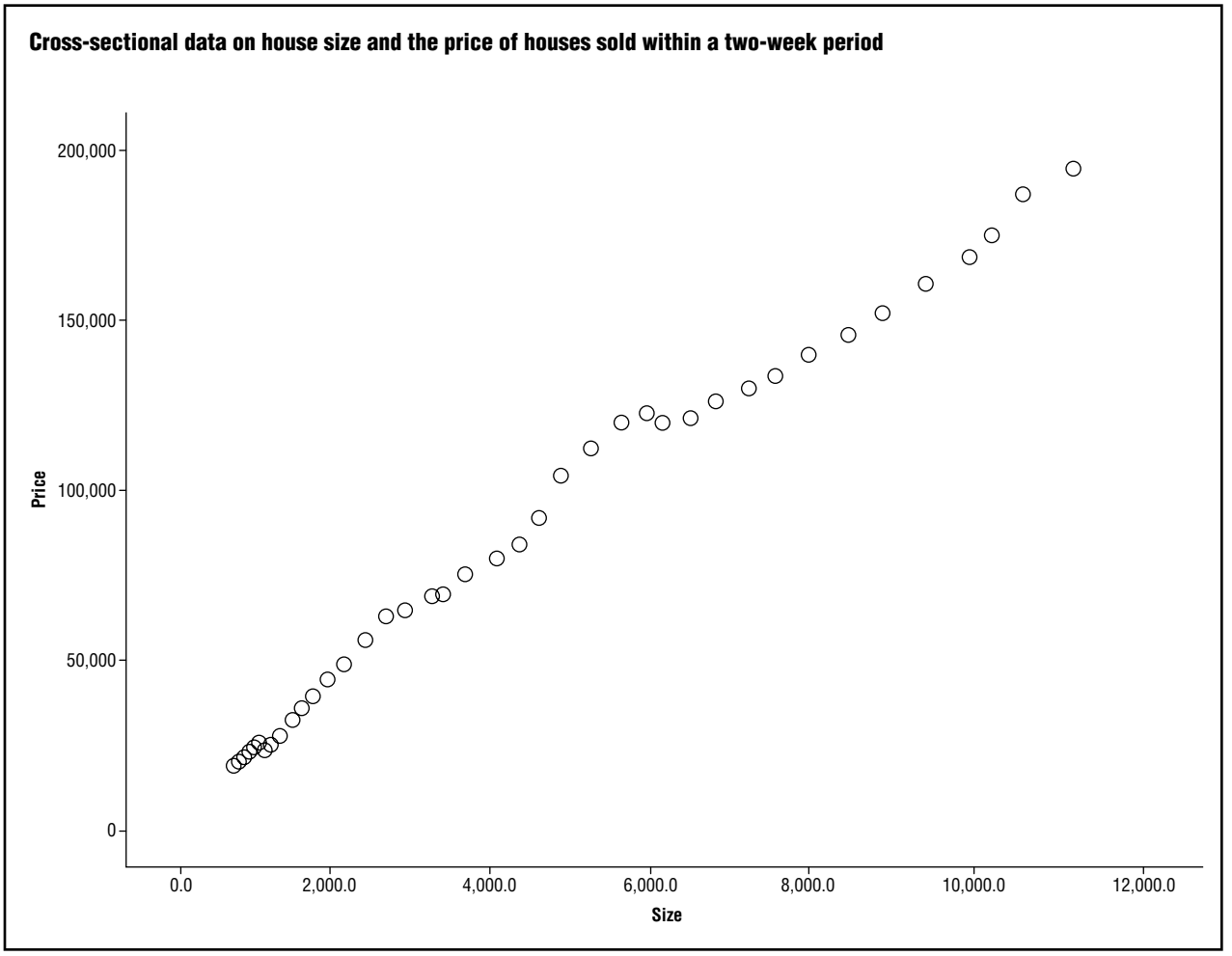

Figure 1

Another feature of time series data that can require special attention is the *frequency* at which the data are collected. In economics, the most common frequencies are daily, weekly, monthly, quarterly, and annually. Stock prices are recorded daily (excluding Saturday and Sunday). The money supply in the U.S. economy is reported weekly. Many macroeconomic series, such as inflation and unemployment rates, are tabulated monthly. The gross domestic product is a quarterly series. Other time series, such as the infant mortality rates in the United States, are available only on an annual basis. Many weekly, monthly, and quarterly economic data display strong seasonal patterns. For example, monthly data on crop yield differ across months simply due to changes in weather conditions. Hence, before analyzing time series data, it is important to *deseasonalize* the data or remove the seasonal trends.

A *panel* or *longitudinal dataset* varies across both time and cross-sectional units, as seen in Figure 3. This is a partial table of the entire dataset that consists of the value of sales (*sal*), payroll (*pay*), capital expenditure (*cap*), and cost of pollution abatement (*abat*) for a set of industries followed over a three-year period. The ordering of the data by microunits first and then by time is typical of all longitudinal datasets. The number of time periods are kept constant across the cross-sectional units in *balanced panels*. Treatment for *unbalanced panels* requires further analysis.

The basic model for the ith cross section is $y_{it} = c_i + x_{it}\beta + u_{it}$ ($t = 1, 2, \ldots, T$), where x_{it} is a $1(K)$ matrix of explanatory variables that vary across i or t or both, c_i represents cross-sectional heterogeneity, and u_{it} is a stochastic error. The conditional mean of the disturbances is assumed to be zero. In traditional approaches, the model is *random effects* (RE) when c_i is a random variable, and *fixed effects* (FE) when c_i is a fixed parameter to be estimated (Balestra and Nerlove 1966). Yair Mundlak (1978) made a valid argument that unobserved effects c_i should be treated as random draws from the population along with y_{it} and x_{it}. In modern econometric language, in an

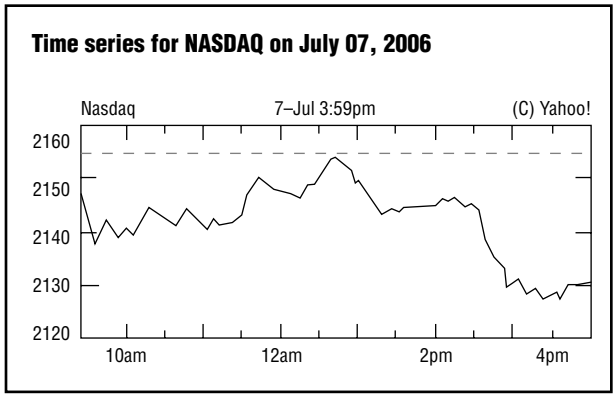

Figure 2

Industry	Time	*sal*	*pay*	*cap*	*abat*
Ind **1**	199**1**	y_{11}	12.78	56.78	100.89
Ind **1**	199**2**	y_{12}	10.78	48.89	x_{12}^{3}
Ind **1**	199**3**	124.78	x_{13}^{1}	30.89	x_{13}^{3}
Ind **2**	199**1**	123.67	x_{21}^{1}	29.56	67.89
Ind **2**	199**2**	y_{22}	x_{22}^{1}	x_{22}^{2}	x_{22}^{3}
Ind **2**	199**3**	139.99	18.89	x_{23}^{2}	x_{23}^{3}
Ind **3**	199**1**	178.90	20.78	x_{31}^{2}	x_{31}^{3}
Ind **3**	199**2**	y_{32}	21.22	67.89	1.28
Ind **3**	199**3**	y_{33}	21.24	x_{33}^{2}	x_{33}^{3}

Figure 3

RE model, c_j is assumed to be uncorrelated with x_{it}, while in a FE model, arbitrary correlation between c_j and x_{it} is allowed.

Two famous studies that analyze panel datasets are the National Longitudinal Survey of Labor Market Experience (NLS) and the Michigan Panel Study of Income Dynamics (PSID). In these datasets, very large cross sections, consisting of thousands of microunits, are followed through time, but the number of time periods is often small. The PSID is a study of roughly six thousand families and fifteen thousand individuals who have been interviewed periodically from 1968 to the present. Another group of intensely studied panel datasets are those from the income tax experiments of 1970, in which thousands of families were followed for eight to thirteen quarters. For most panels, cross-sectional dependence is strong and time dependence is insignificant. Panel datasets are wide but short, and heterogeneity across units is often the central focus of the analysis. In two-way error components models, the cross-sectional heterogeneity varies across time and cross sections, that is, $y_{it} = c_{it} + x_{it}\beta + u_{it}$ or $y_{it} = c_i + \delta_t + x_{it}\beta + u_{it}$. The fundamental advantage of a panel dataset over a cross section is that it allows the researcher greater flexibility in modeling differences in behavior across individuals.

SEE ALSO *National Longitudinal Survey of Youth; Panel Study of Income Dynamics*

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Monica Das

POOR, THE

SEE *Poverty, Urban.*

POPE, THE

SEE *Vatican, The.*

POPPER, KARL

1902–1994

Sir Karl Raimund Popper was a leading twentieth-century philosopher. His first major work, *Logik der Forschung* (The Logic of Scientific Discovery, 1935), was a methodology of the physical sciences that dispensed with induction. His second major work, in two volumes, *The Open Society and Its Enemies* (1945), was a democratic manifesto that burst out of broad yet incisive discussions of the philosophy of history, society, and politics. Slightly less influential was his slim, sober *Poverty of Historicism* (1957).

David Hume's (1711–1776) critique of induction—that universal statements of science never follow deductively from particular statements describing experience—inadvertently undermined the rationality of science. His own response to his critique was to base inductive inferences on habit rather than on rationality. Immanuel

Kant's (1724–1804) response was to base inductive inferences on the principle of induction (or of simplicity, as he called it), whose status is that of extralogical truth known with no recourse to experience: synthetic a priori knowledge. Most philosophers find Hume's response a retreat to irrationalism and Kant's response a retreat to dogmatism. They sought a different way around Hume's critique. Thus, the problem of induction, the search for a satisfactory response to Hume's critique, became a central concern of rationalist philosophy. Popper reworded the problem: how is theoretical learning from experience possible? To this, he had a new solution: learning from experience is deductive; it advances by the refutation of bold conjectures; and the bolder the better. The view of learning from experience by refutations is impervious to Hume's critique: a statement of experience conflicts with a theory. Thus, contrary to Kant, Popper viewed science as no knowledge, much less as a priori knowledge. Science then is the search for explanatory conjectures and for ways to test them. He thus shifted traditional epistemology from the positive to the negative, to *via negativa*: groping in the dark and learning from error. He likewise turned traditional positive epistemology into Socratic negative epistemology: we know that we do not know, we know the limitations of some theories. Our pursuit of knowledge engenders our best and most interesting errors.

Popper's view aimed to account for the progress of science, not for its alleged reliability. On this he made three very important comments. First, absolute reliability is impossible and conditional reliability is question-begging. Second, most applied theories and the most frequently applied ones—Galileo's (1564–1642) and Isaac Newton's (1642–1727)—are refuted. Third, current efforts to answer Hume must be hopeless and useless. In particular, reliability is not probability; to the extent that it is possible it is the elimination of some dangerous applications of science achieved by severe tests. Following probability is caution, whereas scientific thinking is bold and so are attempts to apply it. Yet because theories are hypotheses that invite critical discussion, a testable theory of induction may be welcome, but most proposed solutions of the problem of induction are untenstable and so they are pseudoscientific.

Popper's contribution to social and political philosophy accords with his negative philosophy of science. It is more significant, both politically and intellectually. He argued that any regime that safeguards the means for peaceful corrections of government errors deserves respect as a democracy. Politics invites criticism aimed at improvements, he observed, and seeking improvements is superior to—more fruitful than—the traditional theory of the sovereign that is a futile search for the best regime. This is the central message of Popper's philosophy, both theoretical and practical, regarding science, government, and anything else worthwhile: improving is preferable to legitimating. He took particular aim at intellectuals, arguing that they had moral responsibilities commensurate with their privileges and that they had a long history of falling short. As examples, he expounded the ideas of two of his greatest intellectual heroes, Plato (427–347 BCE) and Karl Marx (1818–1883). He claimed that their devotees glossed over the defects of their philosophies, especially their illiberalism. His doctrine that great men make great mistakes from which we should learn was more challenging than his negative epistemology.

Popper deemed unscientific the doctrines of historical inevitability or historical destiny (*historicism* in his jargon) of Plato and of Marx. He said that no doctrine of this kind can be worded in a manner clear enough to be put to the test of experience, because if such a theory were to cohere with known facts, it must be vague. (Irrefutable versions of historicism are easy to invent: the simplest is the purely existential "historical destiny exists.") Ingeniously, Popper found a way to refute all reasonable versions of historicism, despite its inherent vagueness. The argument deploys two intuitive premises: future science is in principle unpredictable, and its impact on society is tremendous. Hence, no large-scale theory of the future development of society can possibly yield significant or interesting predictions.

Popper's mode of thinking leads to his greatest and most significant idea. It is his replacement of the theory of rationality that characterizes Western philosophy. Most people take for granted the idea that the best culture is their own. The first to reject this idea as too complacent were the leading ancient Greek philosophers. They deemed problematic all cultures, and what cultures espouse as true they declared to be nonbinding, conventional truths. They deemed binding only universal, absolute truths—truths by nature. Proof is required to show that an assertion is true by nature.

Popper challenged this doctrine: applying the Socratic maxims to science, he declared its rationality to rest neither on proof nor on surrogate proof but on willingness to engage in critical debate. This willingness creates a balance between tradition and science, between conservative and radical politics, between the given and the hoped for: it is a plea for reformist democracy, a view of scientific progress as an approximation to the truth and to freedom and justice, a view that applies to all walks of life, a remarkable and exciting move towards a synthesis and a challenge to push it forward. As the root of rationality is willingness to debate, reform is secondary to the replacement of both traditionalism and radicalism with the advocacy of individual autonomy.

SEE ALSO *Philosophy of Science*

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Joseph Agassi

POPULAR CULTURE

Popular culture is the domain of cultural products created in mass quantities for a mass audience. While folk culture is the realm of face-to-face culture in small groups and high culture is the realm of cultural products produced by a few for the few, popular culture is more public than folk cultures and more easily accessible than high culture. Popular culture often appropriates ideas, forms, and formulae from both folk culture and high culture. In modern industrialized societies, popular culture appeals to the broad middle class and generally reinforces that class's views of the world.

THE ORIGINS OF POPULAR CULTURE

Although some historians argue that popular culture is very old, most scholars believe that popular culture in its present forms emerged in the nineteenth century when communication technologies (e.g., printing processes and photographic reproduction) and large-scale media organizations (newspapers, magazines, book publishers) were able to create and market messages for a large audience of consumers. Modern popular culture required the development of commodity capitalism, the stage of capitalist development when the problem of production had been solved (through technology and bureaucratic organization), leaving the problem of consumption of the goods and services produced by the society. Advertising, a form of popular culture, plays a crucial role in the creation of desire to consume the commodity goods and services produced in a capitalist society.

The role of print and electronic media (print, then film, radio, television, and Internet-based communication) in the dissemination of popular culture products leads some critics to call this realm "mass-mediated culture," and the role of markets and consumers since the latter part of the twentieth century has led some to call this realm "commodity culture." Whatever the term the key elements in identifying and analyzing popular culture are its mass production and mass consumption, often "mediated" through channels of communication that stand between the producers and consumers of the cultural products. Scholars who study popular culture believe that patterns of production, dissemination, and consumption in this realm of culture reveal much about the values and beliefs of the audience. The assumption is that if people will spend money to consume a product or an experience, then they expect that experience to satisfy some need or desire. The nature of commodity capitalism, of course, is that the satisfaction experienced by consuming popular culture products and experiences is fleeting, always bringing the audience (the customer) back for more.

Some genres of popular culture include familiar sorts of "texts," including popular fiction, magazines, advertising, film, radio programs, comic books, cartoons, television programs, recorded music, and even fast food. Other genres appear as more complex social events or experiences, such as popular music concerts, sporting events, entertainment events (e.g., professional wrestling), visits to amusement parks, leisure pastimes, or tourist experiences. In all of these cases and more, the critical element is that a mass audience pays money to consume the commodity or experience.

POP CULTURE AND SOCIAL CLASS ISSUES

Social class issues pervade discussions of popular culture. Access to the economic resources one needs to consume the products of popular culture is one of these issues, but equally important has been the issue of "taste cultures," the idea that different social classes acquire different tastes

in arts and entertainment, for example. Popular culture has been dismissed by some critics as "middlebrow," a judgment that its quality is not on par with high culture, but defenders of popular culture champion it as the distinctive product of democratic societies.

Social scientists became interested in popular culture in the 1920s as Marxist scholars and others began to realize that commodity capitalism was creating a whole new realm for struggles between ideologies and centers of power. A group of intellectuals affiliated in these years with the Institute for Social Research at the University of Frankfurt am Main in Germany (known as "The Frankfurt School" of social thought and criticism) began rereading German political philosopher Karl Marx (1818–1883) and adding Sigmund Freud's (1895–1939) psychology of the unconscious, thereby developing a "critical theory" of society that saw the products of popular culture as a more effective means by which one class of people establishes hegemony in society, persuading with words and images rather than with class violence. Especially relevant to understanding popular culture is Walter Benjamin's 1936 essay, "The Work of Art in the Age of Mechanical Reproduction," which belongs to this period and school of social criticism and lays the groundwork for important inquiry into issues of authenticity, the political uses of popular art, and the possibilities of cultural change in a world of mass production and consumption.

Social scientists in the United States were a bit slower than their European colleagues to realize the importance of popular culture. In their 1929 and 1937 studies American sociologists Robert S. (1892–1970) and Helen Merrell Lynd (1896–1982) noted the importance of popular entertainments in the lives of their Middletown (Muncie, Indiana) families, but it was in the postwar years that sociologists like Paul Lazarsfeld, Kurt Lewin, Harold Laswell, Carl Iver Hovland (1912–1961), David Riesman, and C. Wright Mills (1916–1962) took mass-mediated culture seriously as the realm where middle-class ideologies of gender, race, social class, and American "exceptionalism" were exerting their power. After struggling for legitimacy in the academic world through the 1950s, the academic study of popular culture finally took hold in the 1960s. In the next decade a new cluster of ideas came from those working at the University of Birmingham Centre for Cultural Studies and elsewhere in Great Britain, again informed largely by Marxist thought. British cultural studies recognized the importance of popular culture and saw in youth cultures and in other subcultures the potential (often squandered) for resistance. As Americans and then others picked up and elaborated on the ideas offered by the Birmingham School, the study of popular (mass-mediated, commercial) culture moved to the center of these social scientists' interest in power and ideology.

PRODUCTION

Some social scientists ask and answer questions about the societal circumstances and organizations that produce popular culture. Historian and cultural studies scholar Raymond Williams, for example, led the way in creating a "sociology of culture" in the 1970s and early 1980s. His 1974 book *Television: Technology and Cultural Form* is a classic piece of cultural studies criticism, and a generation of sociologists, historians, and communications scholars has continued the examination of the ways mass media corporations organize production, create popular culture products, disseminate the products, and exert control over other organizations and realms of society. Of special interest to some scholars is the concentration of media power by certain corporations, including powerful transnational corporations, and how this affects society.

CONSUMPTION

Humanists brought to the initial media criticism of the 1950s their familiar methods from literary and art criticism, but social scientists had their own methods for understanding the meaning of texts. Content analysis of films, television shows, advertising, and other popular culture genres was a favored method of popular culture analysis for a time, and some theories of textual criticism (e.g., semiotics) provided an interdisciplinary bridge between humanistic and social scientific approaches.

The problem with most media textual criticism, whether it used humanistic or social scientific methods or a combination of these, is that the criticism appears to assume that the meanings of a popular culture text or experience are determined by the author(s) of the text. British cultural studies, especially the work by cultural theorist Stuart Hall and his colleagues, challenged that author-based model of the meaning of texts and in its place developed the position that the meanings of a popular culture text or event is a product of the active interaction between the text itself and the audience consuming the text. The creators of the popular culture may have "encoded" a series of meanings in a text or event, noted Hall, but the audience "decodes" the communication and need not accept the hegemonic reading of the text desired by the creator. Some readers or viewers might have the resources to formulate an oppositional understanding of the text, while others may adopt a more "negotiated" stance, accepting some of the creators' meanings and rejecting others.

This new view of the agency of the audience led critics to see that they would have to do fieldwork with audiences or otherwise engage in exchanges with audiences so that the critic could see how people were making their own meanings out of popular culture texts and experiences. Some social scientists use broad survey instruments for their audience response analysis. Others use interview

methods with focus groups of audience members. Some put themselves in the natural settings with audiences (e.g., at Disney World) and observe how the audience interacts with and talks about the experiences.

GLOBALIZATION AND NEO-IMPERIALISM

The products of popular culture easily cross geopolitical boundaries. National film industries quickly became international, for example, but this is also true for other popular art forms, including music, literature, television, and comics. By the 1930s American films were dominating the world markets, but it was World War II (1939–1945) and the occupation of Europe and Japan by U.S. soldiers that accelerated the foreign appetite for American popular culture, in particular music, film, clothing (especially blue jeans), and comic books. By the 1950s the increasing globalization of the corporations producing popular culture was leading to what critics came to call "the Coca-Cola-ization" of the world, as it was hard to find any place in the world without that soft drink and the advertising for its consumption.

Some scholars and critics point to this international dissemination of American popular culture as a form of "neocolonialism" or "neoimperialism" by which the United States exerts ideological influence on other nations through its popular culture. Governments and nationalist social movements sometimes have resisted this American world hegemony through popular culture. Cultural studies expert Paul Gilroy and other critics see a different sort of neocolonialism in the field of cultural studies itself. Gilroy's work on the transnational movement of African people and their cultural products makes an explicit critique of the racial assumptions and of the Anglocentric and Eurocentric focus of some cultural studies scholarship.

Although American popular culture still dominates the world markets, the flow of popular culture across borders became more complicated in the turn of the twenty-first century. Japanese animated television series and films (animé) and Japanese graphic novels (manga) became very popular among American and other youth, and Korean popular culture (musical groups and television serial dramas, for example) became very popular in Japan. Scholars have mapped "world music" cultures and the movement of the music across cultural boundaries. These trends have raised speculation that there is emerging a transnational youth culture linked by communication technologies and creating a shared culture through music, dress, video games, and television.

NEW TECHNOLOGIES

Popular culture has depended on advances in technology since the nineteenth century. Technologies of mass production and mass distribution made possible newspapers, magazines, and popular fiction (from dime novels to comic books to paperback novels). Popular music and the technologies of sound production have always been intertwined. Songwriters wrote to the time limits possible for recordings, and scholars have noted the effects of electronic amplification of music on the art of the music itself. The history of film is as much a history of technological change as of artistic change, and digital moving images may actually make film an archaic technological medium. Radio continues to evolve with the technologies, as the new satellite radio manufacturers and stations overcome the limitations of atmospheric broadcast and as increasing numbers of people listen to radio through their computers. Musicians and the companies that produce and market popular music have had to adjust to digital technological advances that make artistic and intellectual property rights difficult to enforce, as people use their computers to share music, films, and television shows. Young people seem to be "platform agnostic," as some critics call the tendency to move easily between different technologies for consuming music, film, and television. These technologies add to the globalization of popular cultural products.

The new technologies of communication are having effects on social interactions that scholars are still trying to understand. Several studies make clear the role of social class in the uses of these technologies, and several worry that the gap between rich and poor people in the world will be widened by this technology gap.

Scholars are also interested in the cognitive effects of these new technologies for disseminating and consuming popular culture. American cultural historian Walter J. Ong studied the cognitive effects of our move from primarily oral cultures to written cultures, which led him to speculate that there is a "secondary orality" emerging in electronic communication. Furthermore some scholars argue that new media entertainments, including video games and computer games, actually require increasingly complex cognitive skills, from spatial intelligence to the ability to keep track of multiple storylines and characters. The advancements in cognitive and mind sciences make it likely that those working in these natural science disciplines will collaborate even more with the social scientists studying popular culture toward understanding the social and cognitive effects of mass mediated experiences.

SEE ALSO *Capitalism; Cognition; Comic Books; Cultural Studies; Culture; Culture, Low and High; Digital Divide; Distinctions, Social and Cultural; Film Industry; Food; Frankfurt School; Freud, Sigmund; Globalization, Social and Economic Aspects of; Hall, Stuart; Humanism; Imperialism; Internet; Internet, Impact on Politics; Lasswell, Harold; Lazarsfeld, Paul*

Felix; Lewin, Kurt; Literature; Marx, Karl; Media; Mills, C. Wright; Music; Neuroscience; Property Rights, Intellectual; Radio Talk Shows; Social Science; Television; World Music

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Jay Mechling

POPULAR CULTURE STUDIES

SEE *Cultural Studies.*

POPULAR MUSIC

While music that "the people" listen to has always been present, *popular music* as it is known today is a recent phenomenon dating to the late nineteenth and early twentieth centuries. Several factors are responsible for bringing about the rise of popular music. One is technological: New technologies for the reproduction of music, such as the player piano and phonograph in the late nineteenth century and radio and sound film in the 1920s, greatly facilitated access to music, and helped prompt a proliferation of different musical styles. Another factor was the rise of consumer culture, as people increasingly came to understand themselves less through their occupations, as producers, and more through the ways that they spent their leisure time, as consumers. The growth of the modern advertising industry helped push this process along; manufacturers of player pianos and phonographs spent heavily promoting these technologies early in the twentieth century.

Yet another factor was the increased industrialization of the production of music. Modern management techniques derived from Frederick Taylor (1856–1915) and Henry Ford (1863–1947) found their way into the music business, which became increasingly rationalized, more like a business that manufactured everyday commodities.

At the same time that these developments were occurring, new musical styles were entering people's consciousness. The craze for ragtime piano music in the late nineteenth and early twentieth centuries helped fuel player piano sales. Jazz, blues, and other African American musical styles helped the American recording industry market African American performers to a broader white audience under the rubric of *race music*.

Perhaps most significant, however, was the rise of radio. Radio in the moment of its popularization, the mid-1920s, boasted greater fidelity than phonograph records and did not have the three-minute time limitation of 78 rpm recordings. And early radio was live. Listeners around the country were in thrall to dance music, which was essentially highly arranged, sanitized jazz performed by white musicians such as Paul Whiteman (1890–1967). The sensitivity of electrical microphones for radio resulted in a new style of singing called *crooning*, in which performers sang in a much more intimate way than when they sang without amplification in auditoriums. This style produced the first mass-media popular music superstars in the United States, such as Rudy Vallée (1901–1986) and Bing Crosby (1903–1977), who helped define a mode of popular musical superstardom that paved the way for later figures such as Frank Sinatra (1915–1998) and Elvis Presley (1935–1977).

After World War II (1939–1945), the invention of magnetic tape made the production of recordings much less expensive, and many small record labels sprang up to capture the sounds of African Americans who had moved from the South seeking employment. Their urban blues gave rise to rock and roll, which found a consumer base in the newly developed marketing category of teenagers in the postwar era of intensified consumption practices.

Rock and roll helped give some types of popular music, as well as musicians, greater influence and prestige than either had known before.

Today, popular music is a multinational, multibillion-dollar business dominated by American and European stars, as well as American, European, and Japanese record labels whose products are sold and traded digitally around the world. Hundreds of local styles globally are influenced by American and European sounds, some of which are picked up by labels with international connections and are marketed as *world music*.

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Timothy D. Taylor

POPULATION CONTROL

Concern over uncontrolled population growth already existed in ancient times when scholarly discussion of population issues and evidence of efforts to control family size were recorded in Greece, China, and some other areas (Potts 2003; Zhao 2006). The advocacy for population control has grown notably since the eighteenth century, when population growth began accelerating in many parts of the world.

Population control has been promoted mainly because of the following considerations: To prevent a fall in living standards and the consequences of such a fall, population growth should not outstrip the growth of subsistence. The growth of the population needs to be contained within the biophysical carrying capacity of the earth, otherwise it will lead to overexploitation of natural resources, greatly damaging the ecosystem. In addition to such economic and environmental concerns, promotion of population control also reflects people's varying views of social reform and is regarded as an important step toward enhancing the health of women and their families, protecting people's reproductive choices, and improving sexual expression for both sexes through freedom from fear of pregnancy. In the early stages of its development, population control was also closely connected to the spread of social Darwinist ideas and the eugenics movement.

Population control can be achieved through various means, including those labeled by Thomas Malthus (1766–1834) as positive checks, such as war, famine, disease, and infanticide, that increase death rates (Malthus [1803] 1989). The most significant development in recent human history, however, has been the family-planning or birth-control movement, which is the focus of the remainder of this entry.

The family-planning movement began in Europe. Increasing use of contraception (mainly coitus interruptus and the sponge) was first observed in France in the eighteenth century. Ideas and knowledge of birth control spread in Europe (in Britain in particular) and the United States in the nineteenth century when a number of publications about family planning were widely circulated. The first family-planning clinic was established in the Netherlands in the 1880s. During the next few decades, the number of family-planning clinics and organizations promoting birth control grew markedly in Europe and North America. Because of widespread family planning, fertility had already fallen to a very low level in some populations by the early twentieth century.

Significant political and socioeconomic changes took place in many countries after World War II (1939–1945). The baby boom and rapid mortality decline together led to unprecedented population growth, which further stimulated the development of the family-planning movement. Between the 1950s and 1970s, an increasing number of countries began offering family-planning services. The financial and technical assistance provided by developed countries and international organizations greatly helped family planning in less-developed countries. Modern and easy-to-use contraceptives, such as the intrauterine contraceptive device and the birth control pill, became widely available and provided women with greater choice. By the mid-1980s, family-planning programs flourished worldwide. Forty percent of national governments regarded fertility in their countries as too high, 32 percent had official policies to reduce fertility, and 86 percent directly or indirectly supported access to contraception (Tsui 2001). In the first decade of the twenty-first century, world contraceptive prevalence rates exceeded 60 percent among women of reproductive age (United Nations 2006).

It is nonetheless noteworthy that different views toward family planning and population control could be found throughout the twentieth century. For example, concern over low fertility and depopulation already existed in France and some other Western countries in the 1920s, and this concern had grown by the end of the century. In less-developed countries—especially those with relatively low population densities—environmental degradation, poverty, and many other social problems are regarded by some as the result of inequality in the distribution of power and wealth, rather than the outcome of

uncontrolled population growth (Hodgson 2003). It is also argued that increasing population density could stimulate economic growth, rather than constrain it (Boserup 1965; Simon 1996).

Although family-planning programs exist in both developed and less-developed countries, there are noticeable differences between them. In most developed countries, family planning started in the nineteenth century or early twentieth century. It was largely a private and philanthropic enterprise and primarily for the purpose of granting individuals, especially women, control over their own reproduction. Programs were organized and executed mostly by voluntary family-planning associations, and governments played no part in this great social-demographic change. The early reduction of fertility was achieved largely through the use of traditional contraceptive methods. In less-developed countries, by contrast, family planning began mainly in the second half of the twentieth century. Rapid population growth in these countries was often seen as a constraint upon socioeconomic development. Family planning was adopted as an official policy to release such pressure, and was directly organized and financed by the government. In some countries, incentive and disincentive (sometimes coercive) measures were employed to induce people to regulate their reproduction. The role of modern contraceptive methods in controlling fertility was crucial in these programs.

China's family-planning program is one such example. Although family planning was promoted in some Chinese cities in the first half of the twentieth century and then again in the 1950s, China's nationwide family-planning program did not start until the early 1970s when its population reached more than 800 million. Facing this pressure, the "later-longer-fewer" policies (which encouraged people to postpone marriage and childbirth to older ages, to prolong birth intervals, and to reduce family size to one or two children) were formed and implemented through a nationwide family-planning network. Even though a great reduction in fertility was achieved between 1970 and 1978, the Chinese government further tightened its birth-control policies in 1979. In cities and advanced rural areas, couples were asked to have only one child; in other rural areas, a family could have no more than two children, although there were exceptions. These radical policies remain in effect, with minor modifications, through the use of both incentive and punitive measures, in addition to the vigorous promotion of family planning. By 2007 China's family-planning program had met its demographic goals, and the country's total fertility rate had been below replacement level for more than a decade. Despite this achievement, China's family-planning program has been accompanied by some negative developments, such as rising sex ratios at birth and an increasing number of induced abortions (similar trends have also been observed in other countries). These developments, which are related to China's long cultural tradition of son preference and the implementation of strict birth-control policies, have made the program very controversial.

At the beginning of the twenty-first century, largely due to the family-planning movement, high fertility or uncontrolled population growth was no longer an issue in many parts of the world. Many developed and some less-developed countries had experienced below-replacement fertility rates for more than a generation, and a few had even experienced a population decline. Indeed, some countries are now taking action to reverse these trends. However, fertility is still high in some countries (mainly in sub-Saharan Africa and the Middle East), where further improving family-planning services remains a major concern.

SEE ALSO *Birth Control; Demographic Transition; Demography; Family Planning; Fertility, Human; Overpopulation*

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POPULATION GROWTH

Population growth (positive or negative) is caused exclusively by the operation of fertility, mortality, and migration. Regarding the population growth of countries and

other national populations, the effect of migration is normally not as influential as the effects of fertility and mortality, usually considered to be the major factors directly causing national population growth (Hinde 1998). However, regarding the population growth of the subareas (states, provinces, counties) of national populations, migration is the single most important of the three demographic processes. Differences in birthrates and death rates in subareas of the same country are typically small compared to differences between the subareas in migration. Migration is thus the major method for redistributing the population within a country.

Fertility is a source of population growth because the number of births indicates whether a population is in a growing pattern (Hinde 1998). If a fertility rate, say the total fertility rate (TFR), is above 2.0, this indicates that on average a woman has more than two children in her lifetime. If the TFR is above 2.1, it means that the woman on average has above replacement fertility, allowing the population to grow via fertility. Mortality is also important given that the death rate determines the number of people who will no longer be able to contribute to the growth of the population. Controlling fertility, countries with high age-specific death rates in infancy and childhood are more likely to have fewer people to give birth to children and thus slower and sometimes negative rates of population growth. Constant fertility and mortality rates typically produce constant population growth rates (Hinde 1998).

The rate of population growth is not only a demographic phenomenon, it also has a broad impact on the society and people's lives. For instance, researchers have found relationships between population growth and economic growth (Barlow 1994; Blanchet 1992; Coale 1986). Robin Barlow (1994) has argued that in a relatively short period of time, an increase in fertility tends to have a negative effect on the economy, while in the long run the opposite relationship is true. Population growth can also lead to a rising demand for food. Problems of instability in food production are particularly difficult for some developing countries with high population growth rates and low technological changes in agriculture (Mellor 1982). In addition rapid population growth tends to impact the interactions between human beings and their environment. An increasing number of people in the population leads to pressures on land resources, which limits the amount of arable agricultural land and tends to worsen the situation of food supply and human reproduction (Shaw 1976). Furthermore a high rate of population growth is likely to increase population density in certain geographic areas, particularly urban settings. As a result overcrowding, unemployment, and poverty are likely to lead to social problems in some localities (Sibly and Hone 2002).

From a microperspective, the population growth rate also has significant influences on an individual's life. Researchers have found that population pressures tend to affect individuals' social reactions. They either force individuals to withdraw from social life as methods of escape or protection due to social overload (Baum and Koman 1976; Evans et al. 2000), or they provoke competition for resources, which tends to amplify people's aggressive behaviors (Calhoun 1962; Lorenz 1967). The latter reaction is often used to explain deviant social behavior in overly crowded areas (Regoeczi 2002). Residential overcrowding has also been found to have an effect on individual well-being and family relations. Children in crowded households have sometimes been observed to have difficulties in behavioral adjustment at school, to perform poorly in academic settings, and to have vulnerable relationships with their parents (Evans et al. 1998). Highly populated households have been shown to increase marital instability and result in the more frequent disciplining of children (Fuller et al. 1993). Previous research has also noted that the impacts of overcrowding on individuals often vary among different subgroups. High-density homes with mothers, children, or low-status individuals are more likely to be problematic compared to other subgroups, and they tend to report more health complaints than other subgroups (Baldassare 1981). All the above effects of high population density on individuals are considered "largely mediated by psychological stress" (Fuller et al. 1993, p. 410). Individuals, however, are not only passively affected by the condition of crowdedness, they can also be adaptive to the social context. Residential overcrowding has been considered a well-known feature of the immigrant experience in the United States, especially in Southern California. Researchers find such an overcrowding situation has been reduced due to the growth of immigrants' incomes, although patterns of decline in overcrowding vary significantly among different racial groups (Myers and Lee 1996). This phenomenon provides an example of how individuals improve the situation of overcrowdedness.

Even though psychological stress is treated as the major mediator shaping the manner in which crowding impacts individuals, other factors have been found to play a role through interaction with psychological pressures. These factors include social support for children and parents, gender, and interactions among individuals. Social support is important because individuals in crowded families are often associated with deteriorating social support structures, which may intensify an individual's psychological pressure (Evans et al. 1998). Gender is often related to the level of stress and an individual's behavior. It has been found that stress is more marked among males than among females in high-density locations (Evans et al. 1998; Freedman et al. 1972; Paulus 1988). Moreover

interaction among household members tends to determine the way individuals handle psychological stress (Evans et al. 1998). Thus providing social support for crowded families, especially for males, and strengthening parent-child interaction and family members' communication may reconcile the problems in overcrowded households.

At the societal level many countries and places with rapid population growth rates and high population densities have developed a number of strategies to slow down their population growth. China, the country with the largest population in the world (almost 1.3 billion people in 2005) has made considerable efforts to reduce its fertility and control its population growth. These efforts include the "later, longer, and fewer" policy (later marriage, longer intervals between births, and fewer children) in the early 1970s (Qian 1983) and the nationwide one-birth policy announced in 1979. Consequently, along with social and economic developments, China has experienced a remarkable decline in fertility since the 1970s (Poston 2000), and this has led to considerable population control in China. These programs, however, have also raised demographic and social concerns. One of them is the unbalanced sex ratio at birth (SRB) in China. Due to the strong tradition of son preference and the policy constraints of one birth per couple, the selective abortion of female fetuses and the underreporting of female babies have led to extremely high SRBs in China since the 1980s (Zeng et al. 1993); that is, there are more boys born every year than girls. It is estimated that between the years of 2000 and 2025, there will be more than 31.6 million marriage-age Chinese males who will not be able find Chinese brides. There will not be enough Chinese women in the marriage market for them to marry. These "bare branches" may possibly result in increases in sexual crimes owing to forced marriages, girls stolen for wives, bigamy, prostitution, rape, and adultery (Poston and Zhang 2007). The surplus boys could eventually threaten national stability and international security. Thus it is crucial to strategically coordinate the population growth rate, resources, and social and economic development.

SEE ALSO *Demography; Economic Growth; Fertility, Human; Migration; Morbidity and Mortality; Population Control*

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POPULATION STUDIES

Population studies is broadly defined as the scientific study of human populations. Major areas studied include broad population dynamics; fertility and family dynamics; health, aging, and mortality; and human capital and labor markets. Researchers in population studies also focus on methodology. Population studies is an interdisciplinary area of study; scholars from demography, epidemiology, sociology, economics, anthropology, and various other disciplines study populations. Various associations and centers exist throughout the United States and elsewhere. The Population Association of America, established in 1930, is a scientific, professional organization established to promote the improvement, advancement, and progress through research of problems related to human populations. Many university-based population studies centers are located throughout the United States, such as the University of Michigan's Population Studies Center and the University of North Carolina at Chapel Hill's Carolina Population Center.

POPULATION DYNAMICS

Among population researchers, demographers are concerned with the empirical study of population dynamics; that is, demographers study population determinants and consequences including size, composition, how populations change over time, and the processes influencing those changes. Demographers deal with the collection, presentation, and analysis of data relating to the basic life-cycle events and experiences of people: birth, marriage, divorce, household and family formation, migration, employment, aging, and death. They also examine compositions of populations by sex, age, race, ethnicity, occupation, education, religion, marital status, and living arrangements. Demographers further assess the distribution of populations by region, country, province or state, urban or rural area, and by neighborhood. Most demographic data come from population censuses, vital registration systems, national registers, and surveys.

Demographers use a variety of counts, rates, ratios, and other statistics to measure fertility, mortality, migration, and other population dynamics. The *crude birth rate* is the annual number of live births per thousand people; the *general fertility rate* is the annual number of live births per thousand women of childbearing age. The *crude death rate* is the total number of deaths per thousand people; the *mortality rate* is the number of deaths in some population, scaled to the size of that population, per unit of time. The *morbidity rate* refers to the number of people who have a disease compared to the total number of people in a population. The *infant mortality rate* is the annual number of deaths of children less than one year old per thousand live births. *Life expectancy* is defined as the number of years that an individual at a given age can expect to live at present mortality levels. For example, in 2001 the average life expectancy at birth in the United States was seventy-seven years.

The crude death rate, applied to a whole population, can be misleading. For example, the number of deaths per thousand people can be higher for developed nations than for less-developed countries, despite standards of health being better in developed countries. This is because developed countries have relatively older people, who are more likely to die in a given year, so that the overall mortality rate can be higher even if the mortality rate at any given age is lower. A more complete picture of mortality and life expectancy is given by a *life table* that summarizes mortality separately at each age. A life table is a table that shows, for a given person at a given age, what the probability is that the person dies before his or her next birthday. Life tables are usually constructed separately for men and for women because of their different mortality rates. Other characteristics can also be used to distinguish different risks, such as health behaviors and socioeconomic position.

As the world population doubled from three to six billion, researchers in population studies have been examining shifts in population dynamics. The first five years of the twenty-first century saw a decline in the overall volume of population growth, with the world's population increasing at a rate of about seventy-six million people per year as of 2005. Overpopulation occurs when the population of a living species exceeds the carrying capacity of its ecological niche. At the end of the eighteenth century, economist Thomas Malthus (1766–1834) concluded that, if unchecked, populations would be subject to exponential growth. He feared that population growth would surpass growth in food production, leading to ever increasing famine and poverty. On a global scale, however, food production has grown faster than population. Moreover, contrary to Malthus's predictions, natural population growth in most developed countries has diminished to close to zero, without being held in check by famine or lack of resources. This pattern of population growth, with slow (or no) growth in preindustrial societies, followed by fast growth as the society develops and industrializes, followed by slow growth again as it becomes more affluent, is known as a *demographic transi-*

tion. Benjamin Gompertz's (1779–1865) law of mortality, a demographic model published in 1825, is a refinement of Malthus's demographic model.

Future population growth is difficult to predict. Birth rates are declining on average, but vary greatly between developed countries (where birth rates are often at or below replacement levels) and developing countries. Death rates can change unexpectedly due to disease, wars and catastrophes, or advances in medicine. *Population pyramids*, graphs that display a population's age and sex composition, are often used to provide information about future population growth or decline.

Researchers in population studies are also interested in the impact of migration on population dynamics. Migration is the geographic movement of people across a specified boundary. For instance, in the United States, suburban areas are growing more rapidly than central cities. Immigration refers to moves between countries. Immigration is one of the defining characteristics of twentieth-century America; one of the most important changes for the U.S. Census 2000 was the revision of the questions on race and Hispanic origin to better reflect the country's growing diversity.

FERTILITY AND FAMILY DYNAMICS

Population researchers are interested in various facets of family dynamics, cohabitation, marriage, childbearing, and divorce, trends in these dynamics, and differentials in fertility and family dynamics by race, ethnicity, education, and income. Fertility, the number of births for an individual or population, is distinguished from fecundity, the physiological ability of individuals or couples to have children. While the theoretical maximum is estimated to be about fifteen children per woman, even in the world's highest fertility countries the average has rarely exceeded eight. The average fertility rate for the United States in 2003 was 2.0, and the average for the world was 2.8.

Demographers are interested in how various factors influence the probability that a woman bears a child; Kingsley Davis (1908–1997) and Judith Blake (1926–1993) in the 1950s and John Bongaarts in the 1980s identified "proximate determinates of fertility." The primary trends of the second demographic transition include delays in fertility and marriage; increases in cohabitation, divorce, and nonmarital childbearing; and increases in maternal employment. Women also vary considerably in when and how many children they will have depending upon age, race, income, religion, and many other social, economic, and cultural factors.

HEALTH, AGING, AND MORTALITY

Epidemiologists, population researchers who study the distribution and determinants of disease frequency, aim to identify factors that promote health and reduce the burden of disease in human populations. A disease is broadly defined as an abnormal condition of the body or mind that causes discomfort, dysfunction, or distress to the afflicted person. Some diseases are infectious, such as influenza, and can be transmitted by a variety of mechanisms. Other diseases, such as cancer and heart disease, are noninfectious or chronic. Aging is generally characterized by the declining ability to respond to stress, increasing homeostatic imbalance, and increased risk of disease. Death is the ultimate consequence of aging. Key areas of research in aging include: demographic trends; health, disease, and disability; labor force participation and retirement; and family status.

Health researchers employ a range of study designs, often integrating molecular, cellular, medical, and social levels, with the purpose of revealing unbiased relationships between exposures such as nutrition and stress or social factors such as education to outcomes like disease, well-being, and other health indicators. Morbidity and mortality rates vary by common social categories such as age, sex, socioeconomic status, and race/ethnicity. Research on social class differentials in mortality has a long history. Higher-status individuals live healthier and longer lives than their lower-status counterparts in virtually every society. Despite improvements in public health in the last half-century, large disparities continue to persist between and within countries for a range of health indicators.

HUMAN CAPITAL AND LABOR MARKETS

Sociologists and economists in the field of population studies often examine labor markets and human capital such as education and skills. Researchers examine trends and inequalities in educational attainment. Other areas of study include labor force participation rates, how labor markets operate (including the matching of employees to jobs and differences across labor market segments), earnings differences, mobility, and inequalities by various demographic characteristics. Researchers also examine labor market trends, such as unemployment rates, as well as trends in length of employment relationships. There is a large amount of research on sex, race, and socioeconomic disparities in human capital and labor markets.

SEE ALSO *Anthropology; Demography; Economics; Family Functioning; Family Structure; Fertility, Human; Geography; Marriage; Migration; Morbidity and Mortality; Population Control; Population Growth; Sociology*

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POPULATION SURPLUS

SEE *Surplus Population.*

POPULISM

Populism, as both ideology and political movement, is nearly a universal, albeit sporadic, feature of all modern democratic political systems. One basic problem in identifying and assessing populist movements can be traced to definitional questions because their basic features are similar to those found in conventional democratic politics. For example, references to "the people" by charismatic leaders who emphasize the need for a "redeeming break" with current practice and who exploit the anger of citizens are all features of populist protest as well as staples of electoral practice. Further, the causes of populist movements are quite varied and can include a wide range of both economic and cultural issues.

In the United States after the Civil War, farmers protested against the impact of industrialization, particularly in regard to railroad rates for their crops, the cost of new machinery, and bank lending policies. These complaints coalesced into a mass movement led by the Farmers' Alliance. Populists formed their own political party in 1892 and approved a platform that expanded on these initial protests. The party later merged with the Democrats and the movement declined in part as a result of the defeat of William Jennings Bryan by William McKinley in the 1896 presidential election. Populist movements in somewhat different forms, however, continue to reemerge as a factor in American politics. While populism is possibly the only example of an indigenous radical mass movement in the United States, it is a subject of controversy among democratic theorists.

The Farmers' Alliance was a complex collection of state and local organizations, including two broad groups in the Midwest and the South, that sometimes competed with one another. Since the Southern Alliance did not admit African Americans, these farmers formed their own organization (Colored Farmers' Alliance). These groups used a variety of inventive measures to increase the price of crops. The price of cotton, for example, had declined below the cost of production. Cooperative trade agreements were made with merchants for lower prices for equipment and higher prices for produce. In some states, the alliance built its own mills for crops. Speakers and lobbyists were hired to publicize the farmers' plight. The Colored Farmers' Alliance created aid programs for needy farmers.

Differences in strategies and tactics, however, plagued the movement. Some Texas "alliancemen" favored the polices of Andrew Dunlap, who emphasized a "strictly business" approach of self-help, while others, including S. O. Dawes and Charles William Macune, sought broader goals and focused on reforming the currency system, which they had concluded was the core cause of the farmers' plight. There were also disputes between relatively economically secure farmers who could afford the "cash and carry" agreements of the cooperatives and indebted farmers who could not.

The goals of the movement began to expand in the late 1880s as the impact of these cooperative plans proved to be more limited than hoped and farmers became disenchanted with politicians who failed effectively to promote agendas that helped elect them to office. Mary Lease, a Kansas activist, allegedly urged farmers to "raise less corn and more hell." Independent candidates with alliance support ran with considerable success in midwestern states in 1890. In the South, the alliance focused upon taking over the Democratic Party. While these local efforts produced elected officials such as Tom Watson of Georgia and "Sockless" Jerry Simpson of Kansas, who would become major figures in the populist movement, the alliance leaders increasingly came to the conclusion that a national third party was the only hope for farmers.

After series of meetings in Ocala, Florida; Saint Louis, Missouri; and Cincinnati, Ohio, a national convention was held in Omaha, Nebraska, to form a new political party. The Omaha platform itself became a revered document among Populists who regarded it as a "second Declaration of Independence." The preamble, written by Ignatius Donnelly, announced that "a vast conspiracy against mankind" was about to take "possession of the world." "If not met and overthrown at once … terrible social convulsions, a destruction of civilization, or the

establishment of an absolute despotism" was certain to follow. The proposals themselves were organized into three categories: finance, transportation, and land. The new party demanded the "free and unlimited coinage of silver and gold," an increase in the money supply, a graduate income tax, limits on state and federal spending, postal savings banks, public ownership of railroads, privatization of land now held by corporations "in excess of their actual needs," and reclamation of land owned by aliens. The convention also approved an "expression of sentiments," including support for a strike led by the Knights of Labor against clothing manufacturers in Rochester, New York, and urged a boycott of the firm's products. Specific endorsement of a subtreasury plan that provided for government-backed credits for farmers, which Macune had long supported, did not appear in the final document. Nor was a proposal for female suffrage included on the platform, although it had been endorsed at the Saint Louis meeting.

Delegates would likely have nominated Leonidas L. Polk, head of the National Farmers' Alliance and renowned orator, for president, but they turned instead to James B. Weaver, a former Union general, after Polk's sudden death. James G. Field, a former Confederate general, was nominated to give the ticket regional balance. Weaver campaigned widely and attempted to trace the ideology of the party back to Andrew Jackson. "The whole movement," he said, "can be summed up in one sentence: 'Equal rights for all and special privileges to none.'" The Populist Party received a million votes and twenty-two electoral votes in the 1892 presidential election. Populist candidates at the state level did quite well, although the party was unable to win control of any state government without Democratic Party support.

Several decisions proved to be crucial to the course of populism after the 1892 election. Grover Cleveland's victory as president was the result in large part of the Populist Party, which drew Republican votes, particularly in western states. The Democrats were severely weakened by the panic of 1894. Some Populists, called "fusionists," argued that they should now attempt to take control of the Democratic Party away from its conservative leaders. Others argued for a continuation of a separate third party, and others believed that a regionally based party should be the focus of the next elections. When Democrats nominated William Jennings Bryan with Populist support at the Democratic convention in Chicago in 1896, Populists feared that two presidential candidates supporting populist proposals would assure a Republican victory. Some Populists now argued that the new party should endorse Bryan rather than nominate him as their candidate. At their convention in Saint Louis, Populist delegates nominated Bryan but refused to accept his running mate, Arthur Sewall, a conservative shipbuilder, and nominated Tom Watson instead. Populists did not anticipate that the outcome of the election would be a major national party realignment that made Republicans the dominant party for the next thirty-six years. Antifusionists claimed that Bryan's defeat was largely the result of his emphasis of monetary issues over other Populist ideas. The majority of Populists again nominated Bryan, although a faction of the party dissented and nominated their own candidates. Tom Watson ran as the presidential candidate of the Populist Party in 1904 and 1906 but received only 120,000 and 30,000 votes, respectively.

Despite the collapse of the movement, the themes of the Populist Party have sporadically remerged in American politics. Antipathy to elites, an interest in monetary plans as a fulcrum for political change, support for rural and small-town values, and acceptance of conspiratorial theories are featured in whole or in part among those who supported Senator Joe McCarthy in the 1950s and the presidential campaigns of George Wallace (1968) and Ross Perot (1992) as third-party candidates. Several presidents, including Franklin Roosevelt in 1936, Jimmy Carter in 1976, and George W. Bush in 2004, have employed some populist themes.

The "golden age of populism" in Latin America occurred later than in the United States. These movements were responses in part to the Great Depression. They grew in the context of unstable regimes, and some were more successful than their earlier North American counterparts. The exemplar was Juan Perón, who governed Argentina for two terms as president (1946–1955; 1973–74) with the support of urban workers (derisively called the "shirtless ones" by his opponents) through the promise of numerous economic benefits, the nationalization of major corporations, and the incorporation of trade unions into the government. Perón called his programs the "third way," but Peronism was in fact a volatile mixture of right- and left-wing elements. Gertúlio Vargas in Brazil and Lázaro Cárdenas in Mexico pursued some of the same policies. Vargas was an admirer of Mussolini, and Perón welcomed fascists to his country after World War II, while Cárdenas invited Leon Trotsky to Mexico after his exile. While those sympathetic to the Peronistas are still a political force and Cárdenas's regime gave birth to the Party of the Mexican Revolution, or PRM, the current rise of populism can be directly traced to reaction against the "neoliberal" policies of political leaders in the 1990s. Hugo Chavez in Venezuela and Evo Morales in Bolivia, among others, have rejected programs encouraging foreign investment and privatizing social services as policies of U.S. imperialism. Chavez's "Bolivarian Revolution" emphasizes redistributive programs based on state oil revenues, and Morales promotes the economic and cultural goals of indigenous farmers. Both frame their policies as correctives to the power of local elites and foreign economic interests.

Many scholars locate the basic features of populism in the rise of fascist regimes in Europe and thus conclude that populist appeals are a significant threat to democratic regimes. On the other hand, political leaders such as David Lloyd George in the United Kingdom and Leon Blum in France employed populist themes and programs within a democratic context. Recent populist movements reveal the same range of alternatives. Protests against immigration and economic centralization have produced populist challenges in the Netherlands, Slovakia, Austria, and France.

Scholars are divided over whether populist outbursts represent a desirable form of democratic protest against economic and political centralization or whether they pose a threat to democracy in their emphasis on the authority of the "people" and opposition to economic change.

SEE ALSO *Ballots; Chavez, Hugo; Elections; Jingoism; McCarthyism; Peronism; Personality, Cult of; Progressive Movement; Racism; Radicalism; Social Movements*

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Philip Abbott

PORNOGRAPHY

SEE *Obscenity.*

PORTES, ALEJANDRO

SEE *Assimilation.*

POSITIVE CRIMINOLOGY

SEE *Ortiz, Fernando.*

POSITIVE PSYCHOLOGY

During the first half of the twentieth century, psychologists who held either a behaviorist or psychoanalytic perspective were the dominant forces in American psychology. Apprehensive about what they considered the passive view of human functioning that behaviorism represented, and dissatisfied with the focus on abnormality that characterized psychoanalytic interests, a third group of psychologists called for attention to inner experience, internal processes, adaptive functioning, positive life-influences, and self-constructs. The writings of these theorists caught the attention of scholars and researchers and, during the 1950s, the humanistic movement was born. The most powerful voice in the new movement was that of Abraham Maslow (1908–1970), who proposed a dynamic theory of motivation in which internal and intrinsic motivating forces and affective processes lead to personal, social, and psychological well-being. This was a view of human functioning in which subjective experiences and positive attitudes played a prominent role.

Although widespread, the influence of humanistic psychology was erratic. The emphasis on self-processes encouraged a personal and cultural self-absorption that minimized the importance of collective well-being. Moreover, the gap from theory to practice proved difficult to breach, and many laudable but misguided efforts to nurture the self-esteem of individuals fell prey to excesses and, ultimately, ridicule. The goal of focusing on and fostering positive self-perceptions became mired in controversies over the value of self-processes in areas such as education, controversies that continue unabated to this day. Because research efforts were unsystematic and results highly inconsistent, the tenets of humanistic psychology failed to develop an empirical base. As a consequence, the humanistic movement waned during the 1980s as psychologists shifted their interest to cognitive processes and information-processing views of human functioning.

As the twenty-first century arrived, however, there was another vigorous call within the discipline for a science of psychology grounded on positive experience. This *positive psychology* has been described as the study of human strengths and optimal functioning, and one of its key aims is to foster research on the positive personal traits and dispositions that are thought to contribute to subjective well-being and psychological health. Such research stands in contrast to the traditional study of people's distress, pathology, and maladaptive functioning that contin-

ues to characterize American psychology. Moreover, although positive psychology shares with the humanistic movement the aim of advancing human fulfillment, one of positive psychology's key aims is that its methodology be firmly grounded in systematic and scientific inquiry.

The central feature of positive psychology is its dual focus on fostering wellness and preventing maladies such as depression, substance abuse, or mental disorders in individuals who are genetically vulnerable or whose problems are exacerbated by the pressures of our modern lifestyles. In education, proponents of a positive psychology call for the powerful need to prevent bullying and other school violence and to foster academic motivation.

What differentiates the approach of positive psychology from that which has characterized mainstream psychology during the last century is the abandonment of the "disease model" of human functioning in favor of a "human strengths model." The disease model, positive psychologists observe, evolved from the psychoanalytic practice of deducing normality, mental health, and well-being from the study of abnormal individuals, a method that came to dominate the discipline of psychology. In addition, psychologists have been traditionally trained to correct problems rather than prevent them. A human strengths model shifts psychologists' perspective from this focus on mental illness to one on mental health. Thus, prevention is viewed with equal import as correction, and the development of wellness is put on the same footing as the curing of illness. Positive psychologists working in clinical practice would focus on augmenting the strengths of their clients rather than simply correcting and repairing their weaknesses. Those who work in education would have it as their aim to help create healthy school and classroom climates that foster academic success and personal well-being. All professionals who practice a positive psychology would see it as their mission to make individuals stronger and more productive so that they can more easily maximize their own potential.

Because positive psychology promulgates a perspective focused on building competence, not on correcting weakness, proponents call for a focus on the human strengths that act as buffers against mental maladies. These include optimism, happiness, well-being, empathy, courage, friendship, faith, hope, love, honesty, self-determination, autonomy, insight, future mindedness, positive illusions, perseverance, physical health, wisdom, creativity, altruism, and flow. In each case, the aim of positive psychologists is to investigate how these constructs can foster positive human development. For example, those who emphasize the study of happiness are proponents of an evolutionary psychology in which improving that human quality can be accomplished by remaining in closer proximity or maintaining greater emotional closeness to existing kin, developing deep friendships, reducing subjective distress, managing competitive mechanisms, and exploiting knowledge of evolved desires. Other psychologists suggest that human development and potential can be fostered through the cultivation of an optimistic life view in which the causes of life's events are interpreted in adaptive and beneficent ways.

The American Psychological Association (APA) has itself embraced this approach toward the study of optimal human functioning, making the first issue of the *American Psychologist* in the year 2000 a theme issue on positive psychology constructs. The APA has also joined with the John Templeton Foundation to create a new award designed to promote the advancement of the new science. The annual award provides the largest monetary prize ever given in the field of psychology.

In the area of education, researchers hope that insights available from investigations that emphasize a positive psychology will alter the present focus of drawing inferences about adaptive functioning from students who are "at-risk" or "unmotivated" to those who are resilient and resourceful. For example, positive psychology seeks to shift the emphasis from research frequently conducted on concepts such as learned helplessness and anxiety to the study of learned optimism and self-efficacy. To these ends, the new researchers urge that positive psychology constructs be integrated with those of traditional and established bodies of educational literature and lines of inquiry.

SEE ALSO *Altruism and Prosocial Behavior; Behaviorism; Creativity; Empathy; Flow; Hope; Motivation; Optimism/Pessimism; Psychoanalytic Theory; Self-Determination; Self-Efficacy; Self-Esteem*

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POSITIVE PSYCHOLOGY CENTER

SEE *Seligman, Martin; Positive Psychology.*

POSITIVE SOCIAL SCIENCE

The words *positive*, *positivism*, *positive science*, and *positive social science* have meant many different things to many different people. In the context of French social thought, the words *positive science* were first uttered, it seems, by Madame de Staël (1766–1817), the eccentric thinker, writer, socialite, and associate of Romantic and scientific utopians of the late eighteenth and early nineteenth century (Gordon 1991, p. 271). Like others in her circle, Madame de Staël was enthusiastic about the role that scientific method could play in advancing human progress toward the goals of spiritual and material perfection. Historians of ideas typically end their trace of positive *social* science with the originators of modern sociology, that is, with Henri Saint Simon (1760–1825) and his disciple, Auguste Comte (1798–1857). Thus the linguistic turn from positive science to positive social science. There is of course some controversy over the "origins of sociology" question—for example, a case can be made for the claim that Aristotle (384–322 BCE) was the founder of sociology (and, for that matter, of economics, too)—but these claims are not a concern here.

Still, historically and methodologically speaking, positive social science is a difficult notion to define precisely. One way to define it is to name what its diverse advocates claim it is not: positive social science is not old school metaphysics, and it is not a normative branch of science, such as welfare economics or applied ethics. Against the speculative metaphysics of Plato (427–347 BCE) and Immanuel Kant (1724–1804), for example, and against the value judgments of moralists such as Jean-Jacques Rousseau (1712–1778) and Comte and the contemporary philosopher John Rawls (1921–2002), positive social scientists are united in their attempt to understand and explain the sensory world in objective, logical, factual, and value-neutral observational terms. The positive social scientist seeks a view from nowhere, or from God's eyes. He does not necessarily do the empirical, factual side of the homework on his subject; he need only claim to believe that his logic speaks to the factual and logical as ultimate arbiters of objective inquiry. Since the late nineteenth century, most adherents to positive social science have dropped the historical belief in "progress" toward "perfection" by discontinuous stages or constant evolution, the inheritance of Comte and de Staël. After the publication of *Grammar of Science* (1892) by Karl Pearson (1857–1936), and especially after the 1929 publication of *Wissenschaftliche Weltauffassung: Der Wiener Kreis* (A Scientific Conception of the World: The Vienna Circle), the manifesto of the so-called Vienna Circle, the aims of positive social science entailed a set of beliefs and an argumentative style more than it did a historical explanation or perfectionist state to be aimed for.

If positive social science ever had a firm philosophical grounding, the grounding was provided not by the so-called *wertfrei* (value-free) social science of the economic sociologist Max Weber (1864–1920) but rather by a series of philosophical arguments commonly referred to as *logical positivism*. Initially a loosely knit group of philosophers, physicists, economists, sociologists, and mathematicians, the logical positivists were directly associated with or otherwise allied with the Vienna Circle. A goal of the logical positivists, early and late, was to firmly lodge the "fact/value dichotomy" into the minds of working scientists, a dichotomy first brought to the attention of philosophers by Kant and to social scientists by David Hume (1711–1776). Logical positivists tended to conflate the analytic/synthetic argument of Kant with the ought/is argument of Hume. Despite or perhaps because of their struggle to construct a "unified science," the positivists did not much quibble over their own ambiguities.

Ever since a simple faith in positivism has faded, social scientists have typically stuck to a Humean argument. Hume, many interpreters have said, suggests in Book III, Part 1, of his *Treatise of Human Nature* (1739) that one cannot derive *ought* propositions from *is* propositions. He is commonly understood to have argued that value judgments cannot be derived from factual observations. Facts and values are distinct entities, most of his interpreters have held, making a kind of fork between data and judgment. Since the 1920s the vast majority of economists, political scientists, and psychologists have taken Hume's fork as dogma. A similar influence of the fact/value dichotomy on medical and biological research has not gone unnoticed (by contrast, anthropologists and sociologists have long raised objections to it).

Logical positivists took Hume's fork to be the whole scientific meal, a belief that rapidly entered the mainstream of social scientific thought. Only scientific statements were to be accepted as "cognitively meaningful." And only axiomatic and value-neutral statements about the facts of the world would count as science. Value judgments—especially judgments of an ethical kind—were said to be the province of preachers and poets, objectively speaking, "meaningless," no guide to social or economic policy.

Often it is not obvious how one can push values entirely aside so that objective facts are the only entities revealed. Take, for example, the sentence "Iraq does not have weapons of mass destruction." At one level of reading, it is a straightforward factual claim—true, false, or uncertain. Iraq is a nation, nations engage in both self-defense and aggressive war, weapons of mass destruction have been used in war by other nations, and many nations

agree on what counts as a weapon of mass destruction: these are facts. Presumably one could assemble a team of social, physical, and life scientists, trained in best-practice census tabulation, sampling theory, and experimental and analytical methods, such that—conditional on Iraqi government cooperation or military force—one could arrive at a correct answer to the central factual claim: Iraq does not have weapons of mass destruction.

But the interdependence of facts and values can be illustrated by a single change in subject-object relation. Suppose the original sentence is changed to "The United States does not have weapons of mass destruction" (a change in subject) or "Iraq does not have balloons for school decoration" (a change in object). Changing the subject from Iraq to "the United States" or the object from weapons of mass destruction to "balloons for school decoration" involves not merely a change in the facts of the subject and object, but a thorough-going change of perspective, driven not by the raw facts—however defined—but by value judgments largely or entirely embodied by the original sentence. Some officials of the U.S. government, including some high-ranking scientists, obviously do not care about, or are not troubled by, the fact that the U.S. government has weapons of mass destruction. "The United States does not have weapons of mass destruction" is not a factual statement that can elicit a similarly massive sacrifice of money, time, capital, and human lives. A change in object brings one to a similar conclusion. "Iraq does not have balloons for school decoration" is a claim that could presumably be answered by the same team of scientists, statisticians, and military personnel. But the U.S. government does not value the answer to the latter claim; it will not sacrifice many resources to discover the truth about balloons.

Fact statements and value statements are interdependent in science because human motives generate the questions and methods of science. This is not a bad thing to admit for either science or society—on the contrary, it is probably an advantage. Free and public deliberation over the values and interests of science and society is, for instance, an alternative to despotism and mass ignorance. And the expansion of free and democratic alternatives tends, social scientists agree, to increase human well-being. Opinions differ on the 2003 U.S.-led invasion of Iraq. For example, some say the loss to the world of being *wrong* about the original claim may be so large that any scientific and military investigation should receive funding until surety on the issue is achieved. But even then one is not armed with reasons sufficient to justify allegiance to the factual side of the alleged fact/value dichotomy. Different opinions on facts and values prevail over most public matters. For example, many public institutions, from elementary schooling to space exploration, persist with mass approval, despite a wide variance of professional economic opinion. To put it another way, who would spend billions of dollars trying to discover whether another nation has balloons to decorate their schools? Only a fact-crazed scientist, lacking a rhetoric of values.

At still another level of reading—as seen from the values-only side—the fact/value dichotomy remains dubious. Suppose the original sentence is changed to "According to the United States government, Iraq should not have weapons of mass destruction." The new sentence directly appeals to a value judgment. Notice it does not say exactly from whom the value judgment is coming (only "the government"). And it does not say who the speaker of the sentence is. But the word *should* has replaced the word *does*, signaling, it seems, an abandonment of facts and a decisive move over to the values side of things. But there are at least two objections one can raise to such a conclusion: (1) The author of the original sentence and her readers were never on the facts-only side of things, as the argument above suggests, in the first place; and (2) The sentence "According to the United States government, Iraq should not have weapons …", if taken in the same spirit as the supposedly facts-only claim ("Iraq does not have weapons …"), must entail a moral commitment to change the situation (that is, the situation implied by the fact that Iraq has the weapons, if they do). But if the U.S. government is to change the situation, as indeed it endeavored to do when it sought to determine factually whether Iraq had the weapons, it must commence with the same or similar scientific investigation and, perhaps, military force, as in the previous case. The decision of a scientist engaged in free inquiry is not a decision to speak about facts as against values, or positive science as against normative science; it is a decision to choose transparency over opacity. Status quo belief induces most to choose the latter. Yet by 1974 one scholar counted "two score and more of [philosopher and scientist] witnesses *against* the fact-value split" (Booth 1974, p. 207; emphasis added).

The philosopher and logician Hilary Putnam (2002) has taken the argument a step further, showing that even if one insists that *is* and *should* or *is* and *ought* are radically distinct, and that *ought* propositions cannot be derived from *is* propositions, as some scientists maintain in, for example, the case of weapons of mass destruction, there are still further "value judgments" of an aesthetic type that permeate the most factual sounding research claims. (Putnam's observation is not original, but it is nowadays rare; one can find a similar link between aesthetic qualities of science and normative judgment in Aristotle's *Rhetoric*.) Scientists value, for example, "coherence," "simplicity," and "consistency" in their models and facts (and again Putnam is hardly the first scholar to say so; cf. Burke 1950). Aesthetic values are always at play in science and

are, as any scientist who has received a referee report can attest, constantly being judged by "positive" scientists.

It has been a long time since any respectable historian or philosopher of science believed that logical positivism succeeded in its goal to speak in a circumscribed, fact-and-logic only language. Today, very few philosophers adhere to the fact/value dichotomy, though, to repeat, social scientists cling to it.

POSITIVE SOCIAL SCIENCE AND NOVELTY IN ECONOMICS

Still, many novel ideas in economics have emerged despite the strange faith. Before the publication of Milton Friedman's (1912–2006) *Essays in Positive Economics* (1953), the Dutch economist Jan Tinbergen (1903–1994) and the American economist Lawrence Klein were inspired by visions of positive science to build multiequation econometric models of the Dutch and U.S. economies. The facts of these economies could be revealed through logical (that is, model-based) relations widely held by economists. Both models failed at the level of macroprediction. But for their remarkable technical achievements, both Tinbergen and Klein were awarded (in 1969 and 1980, respectively) the Nobel Prize in Economic Sciences.

Following the work on the theory of human capital by the economist and 1992 Nobel laureate Gary S. Becker, first developed in the 1950s and 1960s, positive economists and sociologists have developed new methods for examining the extent of racial and gender discrimination in labor markets. Becker has argued that competition and the pursuit of profit will drive racist and sexist employers out of business. In statistical regression analyses, researchers after Becker have attempted to show the quantitative influence of race and gender by holding constant a host of independent variables—education level, family structure, labor force attachment, and so forth—such that race and gender are the only variables left in the model to "explain" black-white, male-female, or white-male/black-female differences in wages and occupational attainment.

That an adherence to positive social science and the fact/value dichotomy is coincident with some novel ideas in social science research does not demonstrate the fact or value of positive social science, however circumscribed. Indeed, both the Tinbergen-Klein and Becker research programs have been criticized on "value-laden" grounds: new classical and rational-expectations macroeconomists object that Tinbergen's and Klein's Keynesian models of agent behavior are not "consistent" with rational choice theory (consistency being a value judgment), and a wide range of economic sociologists working in the tradition of W. E. B. Du Bois (1868–1963) and St. Clair Drake (1911–1990) reply that Becker's independent variables are themselves the products of racial and gender discrimination (O'Connor et al. 2001), a value judgment masquerading in the econometrics as mere data.

SEE ALSO *Friedman, Milton; Methodology; Normative Social Science; Positivism; Social Science, Value Free*

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Stephen Ziliak

POSITIVISM

There are two uses of the term *positivism* in the social sciences, one derived from sociology, the other from

jurisprudence, especially international law. In sociology, positivism was a broad movement of European thought during the second half of the nineteenth century. The name derives from the fact that thinkers returned to the appreciation of positive facts so as to restore the world of nature, which idealists had reduced to a mere representation of the ego. Positivism placed greater stress on immediate experience and on the data obtained through the senses.

In jurisprudence, positivists emphasize textual analysis, in contrast to naturalists, who take treaties and other texts as a starting point for determining the guiding principles of the day. However, if there is no text and a new or revised rule of customary international law is advocated, naturalists are likely to emphasize the actual consequences of the new practice, while positivists underscore intent or motive. This is the opposite of the situation faced in textual analysis. One could imagine situations in which the claim is made that the text should be ignored in favor of a new customary principle. Where there is a conflict between positive law and customary principles, naturalists argue that the customary law claimed to exist should prevail. However, naturalists are also likely to argue that principles can be used to interpret provisions in such texts as the UN Charter, which would reduce the probability of a conflict with custom.

Positivism flourished in Latin America as nowhere else, not even in France, where it was first developed by Auguste Comte (1798–1857). It met the needs of many Latin American intellectuals who rejected Spanish and Portuguese culture and were trying to prove their independence by adopting French ideas. They considered Catholicism as a tool of Spanish imperialism, which had kept Latin America in a state of amoral, chaotic backwardness. Positivism called for progress, discipline, morality, and freedom from the tyranny of theology. The positivists rebelled against the spiritualist metaphysics shared by deists and Catholics. This rebellion turned them into agnostics and sometimes even into atheists.

ADVENT AND EVOLUTION OF SOCIOLOGICAL POSITIVISM

The sociological use of positivism emerged in France under Comte, evolving from English empiricism, which argued that experience was the only source of human knowledge. The new school of thought held that reality mechanically evolves from inferior forms until it attains consciousness in humans. According to Comte, historical observations on the process of human society show that humans have passed through three stages. First was the theological state, in which nature was mythically conceived and the individual sought the meaning of natural phenomena from supernatural beings. Second came the metaphysical stage, in which nature was conceived of as a result of obscure forces and the individual sought to explain natural phenomena from them. Third came the positive stage, in which all abstract and obscure forces are discarded and natural phenomena are explained by their constant relationships. Comte extended the law of the three stages to include all reality.

Jurisprudential positivism emerged in the nineteenth century and gained influence in the twentieth century because of the tendency to replace customary or natural law with statutory or treaty law. In international law, positivism gained even more influence after the 1945 UN Charter. Positivists argue that the charter, and law generally, should be treated as a constitution that, following the model of H. L. A. Hart (1961), establishes "primary" rules (to make rules) and "secondary" rules based on them that establish particular policies and principles, including, but not requiring, conceptions of justice and other issues of substance. In international law, if treaties are read loosely, or principles are imputed or inflated, or customs are claimed rather than observed, positivists feel that the consent required for law to exist on the basis of explicit rules does not exist. Furthermore, in specific applications, motives matter in order to assure that the community of nations agrees. Because motives are difficult to know, the presumption of positivists is that consent for actions against prevailing interpretations of legal doctrine must be unambiguous for law to deviate from claimed fundamental principles. Opposition to what is clearly the intent of positive law as expressed in texts is normally a sign of illegality.

Sociological positivists did not follow exactly the same course in the Latin American countries. Positivism was most influential in Brazil, whose elites studied French and visited Paris, where they came to admire everything French. By the end of the nineteenth century these elites wanted to import or copy everything they associated with France. At the time, positivism became particularly important in Brazil's technical schools and military academies, where many middle-class children studied. Comte's emphasis on progress through gradual change appealed to Brazil's new elite, who saw positivism as a way of incorporating themselves into the national elite without threatening the social order on which the old elite depended. They were attracted by the idea of using military and government officials to plan economic development for progress and industrialization. They believed that by expanding economic opportunities and education, they could incorporate the disenfranchised into society without the need for widespread social or political change. Furthermore, in positivism they saw the possibility of ending foreign economic domination and colonialism in Brazil.

MAIN PHILOSOPHICAL TENETS OF JURISPRUDENTIAL POSITIVISM

Jurisprudential positivism, following a line of jurisprudence that has included the theories of Vattel, Zouche, Kelsen, and Hart, emphasizes legal rules and consent in the relations of states. Rights and obligations about rules and principles are based primarily on the words in treaties. Based on the empiricism of Locke and Hume, positivists in international law, such as Humphrey, the principal author of the Universal Declaration of Human Rights, Schachter and Henkin among lawyers and Donnelly among political scientists, have argued that rules take precedence over claimed principles or unprecedented customs of states. Without observable experience or consent, validating customs after the fact betrays self-serving, perverse incentives besides nullifying the original intent of primary rules.

Jurisprudential positivists cite three UN Charter articles that make humanitarian intervention presumptively illegal. First, Article 39 of Chapter VII limits coercion sanctioned by the United Nations Security Council (UNSC), whether by the UN or by the armies of member states, in three situations: a "threat to the peace, breach of the peace, or act of aggression." Taken literally, Article 39 (and the title of Chapter VII) does not apply to a country that is killing its own citizens but not threatening or attacking other countries. Second, positivists might also argue that unilateral humanitarian intervention would usually be illegal because of Article 2(4), except either when the UNSC finds an Article 39 situation, as indicated above, or for individual or collective self-defense to armed attack under Article 51. Article 2(4) names only three situations in which a state may not threaten or use force: (1) against the territorial integrity, or (2) political independence of any state, or (3) in any manner inconsistent with the purposes of the United Nations.

Jurisprudential positivists define a violation of territorial integrity as an armed attack on another state and a violation of political independence as a de facto partition or loss of sovereignty over part of a country. Donnelly calls for "positive non-intervention" to respect UN Charter Article 2(7)'s intervention prohibition and encourage uninhibited criticism. "Nonintervention" means only the renunciation of "intervention," in the strict sense of coercive interference. International human rights, however, are an appropriate subject for the exercise of international *influence*. Inaction in the face of human rights violations is not only morally inappropriate, it is in no way required by international law.

Some positivists, such as Schachter, would permit armed humanitarian intervention for great emergencies and with a consensus among the five permanent members of the Security Council. In commenting on UNSC Resolution 688 regarding northern Iraq, he notes that the council could invoke the Chapter VII enforcement procedures, at least if there is some threat to international peace as well. Others, such as Henkin, might be willing to forgo UNSC authorization to authorize force to stop mass murder, but not in the face of a likely veto. Positivists might be divided on whether to insist upon a consistent standard for legal humanitarian intervention or to permit it where it is politically possible. As Henkin (1991, p. 41) suggests, "The Charter does not prohibit humanitarian intervention by use of force strictly limited to what is necessary to save lives." He would presumably not accept humanitarian intervention if a UNSC consensus was absent or if a unilateral intervention were to change national boundaries or replace a government: "It has not been accepted, however that a state has a right to intervene by force to topple a government or occupy its territory even if that were necessary to terminate atrocities or to liberate detainees." Henkin also opposes using force to promote democracy, as do his ideological opposites, Franck and the Reagan administration.

SEE ALSO *Comte, Auguste; Economics; Empiricism; Friedman, Milton; Hume, David; Imperialism; Jurisprudence; Locke, John; Logic; Methodology; Naturalism; Philosophy of Science; Realist Theory; Religion; Social Science; Sociology*

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POSSESSIVE INDIVIDUALISM

SEE *Individualism.*

POSSIBILITY THEOREM

SEE *Arrow Possibility Theorem.*

POSTCOLONIALISM

Postcolonialism is a generalized term used to describe the variety of events that have arisen in the aftermath of European decolonization since the nineteenth century. Among the events included under the rubric are social change, cultural redefinition, and political upheaval on both the small and large scale. The term implies a breaking free or a breaking away from a colonizing force, but essentially the study of postcolonialism addresses issues of power, subordination, race, gender inequity, and class—and examines how these issues linger far after the colonizer has exited. It is sometimes understood that colonialism ended in the early to mid-twentieth century, but the vestiges of colonial power and influence remain in many parts of the once colonized world. These vestiges can be seen in the unequal sharing of power in government, especially when Western interests are at stake, as well as in inequities in military control, resource allocation, and economic benefits when more powerful governments and entities participate in economic exchanges with postcolonial nations.

POSTCOLONIAL THEORY

Postcolonial theory has been developed in various fields, including philosophy, literary studies, and sociology. From its beginnings in the 1960s and 1970s, with Frantz Fanon and Edward Said, postcolonial theory has addressed issues such as identity, gender, race, ethnicity, and class. It also examines how once colonized nations develop their own identities and how information among the exploited populations has been produced and used both by the colonized and the colonizers. In literary studies, postcolonial theory addresses the question of how the writing produced by the colonized and by those who colonize them responds to colonial legacies.

Postcolonial theorists can trace much of their initial discourse to Antonio Gramsci, who, in his *Prison Notebooks* ([1929–1935] 1992), examined the *subaltern*, or those who were excluded from power by virtue of their race, class, gender, ethnicity, or colonial status; this study was later taken up by Partha Chaterjee (1993), among others. Fanon, in the *Wretched of the Earth* ([1961] 1963), a work considered a landmark in colonialism studies, expressed clear anticolonialist sentiments in his discussion of the Third World. In a highly influential 1978 book, Edward Said argued that a set of attitudes he dubbed *orientalism* was a way for the West (here meaning Europe) to differentiate itself from its progenitors. Even though Europe in its modern form was essentially a product of the East, to rationalize its ascent to power it aspired to colonize the East through many means, including the physical and economic. Gayatri Spivak, another significant postcolonial theorist, has, like Chaterjee, focused on the subaltern, though as a gendered category—both in terms of those who are colonized and those who have colonized (1988). Feminist postcolonial theorists have additionally discussed sexuality, gender and diasporic communities, power and globalization, and the idea that the feminine in any capacity or context can be equated with a subaltern position.

To make the above comments more concrete, the remainder of this entry will seek to illustrate many of the issues postcolonial theorists are concerned with through a brief examination of one postcolonial country: Ireland. Ireland was a colony of the English for eight hundred years, but perhaps due to its position as a Western country, is often not understood in the same light as other colonies. Its affluence today (the 'Celtic Tiger') also makes it easy to forget that it is less than a century since that independence was gained. Since the turn of the twentieth century, Ireland has moved from being a long-term colony of England to being a postcolonial power on its own. The next section examines how Ireland became a colony, its response to colonization and the plantation system, and how it has developed its national identity in the decades following independence in 1922.

IRELAND

Ireland has been a colonized nation since the time of the Vikings in the ninth century. The Vikings were followed

in 1169 by the Normans (the "Old English"), who began "civilizing" the native Irish. In more recent times, as with many colonized nations, Irish perspectives on the colonial situation varied based on the nature and closeness of economic relationships with the colonizer, and whether those relationships conferred economic advantage. During the plantation era, Anglo-Irish, who had thrown their lot in with the English, could hold lands and resources their Irish brethren were excluded by law from owning. Lower-class Irish were indentured laborers on plantations, though a few could hold small plots of land; Irish who once had held political or social power were stripped of their valuables, land, homes, and driven into exile—either to another country or into the poor counties of western Ireland.

The Reformation was brought to Ireland by Oliver Cromwell in 1649. He was not the first Englishman to arrive on Irish shores, but he was among the first to come with arms and the intent of suppressing the Irish people as a class and forcefully instituting Protestantism. In that he was very successful. A brutal military strategist, Cromwell destroyed entire towns and villages, including the walled city of Drogheda, where he burned 3,000 people alive. From then on, Ireland remained under the control of the English. Though a variety of short-lived uprisings and revolts occurred over the centuries, it was not until the Potato Famine of the mid-nineteenth century that the Irish were able to bring their plight to the attention of the rest of the Western world. Millions starved to death, millions more were forced to leave Ireland. In the space of ten years (1846–1856) Ireland's population halved from eight to four million. The 1916 Easter Uprising, led by Padraig Pearse, loosened the hold the English had over the country. Though principally limited to urban centers such as Dublin and Cork, the Uprising reverberated across the country. When the heroes of the uprising were executed or jailed in the months that followed, civil war broke out. In 1922 Ireland gained independence from England, but was partitioned—most of Ulster would remain under the English flag while the Irish Free State was inaugurated in the south.

Despite their hard-won freedom, Ireland remained closely linked with England and depended on it economically for several decades. During this time, however, following the lead of people like President Eamon de Valera, and poets and authors W. B. Yeats, Brendan Behan, and Patrick Kavanaugh, the Irish began to consciously express their own national identity through a revival of Gaelic culture. This revival, known as the Celtic Twilight, was based on a vision of Ireland as a rural idyll, in which people were closely tied to the land. With the Celtic Twilight came a revival of the Irish language, which had been on the brink of extinction, and now became part of the school curriculum. This restoration of a national language separate from that of the colonizer is a common response to decolonization. Traditional Irish music was also revived and is now popular throughout the world. The Gaelic Athletic Association, which organizes hurling and Gaelic football and was first established in the 1880s, has steadily risen in popularity as well.

Only recently, beginning in the 1970s, has Ireland truly developed a modern national identity and become an independent economic powerhouse. Since the 1990s, Ireland has been dubbed the "Celtic Tiger," a reference to its new wealth and status. As of 2006, Ireland has the fourth strongest GDP in the world behind the United States, Norway, and Luxembourg (ESRI 2006). In July 2006 Ireland ranked second among the wealthiest nations in the world behind Japan (RTE 1, 2006).

SEE ALSO *Anticolonial Movements; Colonialism; Decolonization; Empire; Imperialism; Moral Suasion; Neocolonialism; Nkrumah, Kwame; Orientalism; Passive Resistance; Said, Edward*

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Kelli Ann Costa

POSTERIOR DENSITY

SEE *Bayesian Econometrics.*

POSTERIOR DISTRIBUTION

SEE *Inference, Statistical.*

POSTLETHWAYT, MALACHY

1707–1767

Malachy Postlethwayt was a prolific English writer and publicist on matters of mercantilist economics in the 1740s and 1750s. Little is known about his upbringing or formal education, although he is believed to be the brother of James Postlethwayt (d. 1761), a writer on finance and demography. Malachy Postlethwayt was elected a fellow of the Society of Antiquaries of London in 1734. His writings are claimed by Edgar Johnson to "have exerted a good deal of influence on the trend of British economic thought" (1965, p. 185).

Postlethwayt was alleged to be propagandist for the mercantilist endeavors of the Royal Africa Company, whose interests were well served by his publications *The African Trade, the Great Pillar and Supporter of the British Plantation Trade in North America* (1745) and *The National and Private Advantages of the African Trade Considered* (1746). These works supported a strategy of British commercial and manufacturing expansion through trade with Africa and the colonies, and promoted the importance of slavery for British commerce and industry.

Postlethwayt's most noted work, *The Universal Dictionary of Trade and Commerce*, appeared after he had devoted twenty years to its preparation. The first edition was published in London in installments between 1751 and 1755, and then in subsequent editions as a two-volume set in 1757, 1766, and 1774. This dictionary was a translation, with large additions and improvements, from Jacques Savary des Bruslons' *Dictionnaire universal de commerce* (1723–1730). According to Johnson, Postlethwayt's dictionary was a "huge storehouse of economic facts, laws and theory" (1965, p. 188), and his departures from the French version reflected his "greater interest in political problems; his more intense economic nationalism; and his exuberant belief in the economic usefulness of experimental philosophy" (p. 402).

In the 1757 edition of the *Universal Dictionary*, Postlethwayt outlined his vision for the establishment of a British mercantile college to benefit those who intended to work as merchants, or in gathering public revenue, or in merchandizing. He proposed that theoretical training for business should occur in formal academies and involve the study of mercantile computations, foreign exchanges and the intrinsic value of foreign coins, double-entry accounting, languages, geography, and public revenues and related laws. Postlethwayt's ideas appear to have been influential in developing the statutes and procedures of the Portuguese School of Commerce, established in Lisbon in 1759.

Postlethwayt's most important contribution to economic literature is regarded by many to be *Britain's Commercial Interest Explained and Improved* (1757), in which he outlines his concept of "physical commerce" and the policies England should follow to attain commercial parity with foreign rivals.

Whether Postlethwayt's writings were his original thoughts and words is a matter for conjecture. Johnson (1965, p. 205) notes that his *Universal Dictionary* included ideas taken from fifty other past or contemporary writers and that it had scattered throughout it practically all of Richard Cantillon's *Essai sur la nature du commerce en général* (Essay on the Nature of Commerce in General, 1755). Although Postlethwayt was alleged widely to be a plagiarist, Peter Groenewegen considers this accusation to be "greatly exaggerated" (2004, p. 1000).

Postlethwayt died suddenly on September 13, 1767, and was buried in the Old Street Churchyard, Clerkenwell, in London.

SEE ALSO *Plantation; Slave Trade; Slavery Industry*

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POSTMODERNISM

Ever since its ideas first took hold in the 1980s, postmodern theory has had a significant influence on the social sciences. At the time, social theory imported certain theoretical concepts from literary criticism, including deconstruction and other discourse-based theories of textual interpretation. It is best, however, to refer to a postmodern "turn" within contemporary social science, because many academics influenced by these intellectual trends abjure the term *postmodernism*. Nevertheless, many contemporary social scientists acknowledge a debt to deconstructive methods of textual interpretation and to deconstruction's (or poststructuralism's) rejection of teleological theories (or "grand narratives") and the concept of a coherent, fixed human subject.

Judith Butler's writings on the unstable and "constructed" nature of both sex and gender identities played a crucial role in transmitting postmodern concepts into social theory and the social sciences. Yet Butler herself rejects the term *postmodernist*, claiming only to deploy deconstructive techniques to better discern the "discursive construction" of identity. Postmodern conceptions of the "hybrid," "plural," and "inconstant" nature of "identity" have had their greatest influence in the areas of cultural, gender, and postcolonial studies, though they have also influenced anthropology (e.g., James Clifford) and international relations theory (e.g., James Der Derrian).

Many people working in these areas reject behavioral, structural, and hermeneutic interpretations of the relationship between individuals, groups, and social structure, favoring instead analyses of the "decentered," "local," and "fragmented" nature of social phenomena. Postmodern social theory rejects traditional social science's goal of discerning causal relationships among social phenomena. It also rejects social science aspirations to discern superior or "parsimonious" interpretations of human behavior. In the postmodern conception, no "readerly" interpretation of a "text" can be more "truthful" than another. In fact some postmodernists refer to the concept of "truth" as "terroristic," for the "truth" can only defend itself by repressive "exclusion."

Postmodernism represents both a sensibility in regard to social science research and a normative critique of modernity. According to postmodernism, the Enlightenment's search for rational understanding that could ameliorate the human condition engendered ideological or false "grand narratives" of history, which are based on "essentialist," "universal," and "fixed" conceptions of human nature. Drawing upon Jean-Francois Lyotard's analysis in *The Postmodern Condition* (1984), postmodernists reject the Enlightenment's search for "totalizing" theories that offer "universal" narratives of human motivation and experience. Building on the work of Michel Foucault, postmodern theory claims that these "grand narratives" underpinned the Enlightenment's efforts to "normalize" human beings through the bureaucratic and repressive institutions of "governance" (e.g., both state and nonstate organizations, such as the asylum and the hospital) that "categorize" human beings.

POSTMODERNISM AND DECONSTRUCTION

According to postmodernists, social theories that claim to "represent" reality fail to comprehend that humans have no unmediated access to "reality." Human conceptions of reality are, unavoidably, a product of subjective interpretation. Modern media and technology deny people the ability to discern the original author or to distinguish the original from the imitation. In 1936 Walter Benjamin argued that in an age of "mechanical reproduction" it is nearly impossible to distinguish the original from a copy. Following this lead, postmodern theorists such as Jean Baudrillard have contended that reality itself is a *simulacrum* (a copy of a copy). In a world of corporate image production and virtual realities, one cannot determine what is authentic or inauthentic, real or fake. When computers allow people to "live" in cyberspace, the very concepts of reality, time, and space are contestable and destabilized. Thus attempts to interpret the "essence" or true nature of social phenomena deny the reality that the world is a constantly shifting image.

Postmodern social theory draws heavily upon Jacques Derrida's and deconstruction's critique of structuralism. Claude Levi-Strauss's structural anthropology and Louis Althusser's structural Marxism (which investigated the structural role that class played within capitalist economics and ideology) dominated French intellectual life in the 1960s. Both of these theorists drew upon the early twentieth-century structural linguistics of Ferdinand Saussure. Saussure held that the meaning of a particular speech or language (*la parole*) is structured by the underlying structure of grammar (*la langue*, the structured relationship

between signifier and signified that yields the meaning of a sign). But Derrida in *Marges de la philosophie* (1972) held that the relationship between signifier and signified is inherently unstable. For Derrida, "meaning" includes both identity (what is) and *différance* (what is not). Thus postmodernists argue that any attempt to "fix" meaning will yield repressive attempts to eliminate the ineluctable "other" of human reality.

To avoid eliminating the play of *différance*, postmodern-influenced social science rejects the "binary oppositions" that allegedly ground Western philosophy: subject-object, man-woman, reality-appearance, reason-emotion, and speech-writing. In this view, the very effort of representation and causal analysis excludes and devalues the "inferior" part of the binary term that is traditionally denigrated as being irrational or emotional. This rejection of binary oppositions as repressive and "norming" has had a profound influence on contemporary feminist and critical race theory, which warn against "essentializing" identities of gender and race. These studies of identity focus upon the "socially constructed," hybrid, and ever-shifting nature of individual and group identity.

Given the absence of a stable referential relation between subject and object, postmodernists argue that social theory should focus upon the way subjects are "constructed" by discourse itself. The postmodern conception of how the subject is a product of language and thought draws heavily upon philosophical traditions deriving from Friedrich Nietzsche. In addition, Martin Heidegger's critique of Western philosophy's ineluctable search for a fixed conception of "Being," and of its attempt to dominate nature in the name of the "human," informs postmodern analysis. Postmodern social science frequently draws upon Foucault's conception of power-knowledge discourses to examine how subjects are "produced" by discourse. While Foucault's earlier "archaeological" work on how *epistemes* (or systems of thought) "norm" and "exclude" has influenced postmodern analysis, it is his later genealogical analysis of power as "productive" and "enabling" (rather than as primarily coercive) that has most influenced postmodernism's critique of "agency." As Butler holds, the conception of a coherent, rational, human individual who exercises conscious agency ignores the reality that human identities are continually being reconfigured through performative "self-inscriptions" of dominant norms and discourses.

LACLAU AND MOUFFE AND "NEW SOCIAL MOVEMENTS"

Ernesto Laclau and Chantal Mouffe's *Hegemony and Socialist Strategy* (1985) represents a highly influential poststructuralist critique of the use of "grand narrative" in the social sciences. Rejecting a "determinist" Marxism that drew from the workers' structural position in production of the teleological necessity of a "revolutionary consciousness," Laclau and Mouffe asserted the "discursive"—and open—nature of social consciousness. In the determinist Marxist view, both social democracy and authoritarian communism believed that capitalism's interdependent division of labor would inevitably yield (whether through gradual self-organization or via a revolutionary external agent) a self-emancipating working-class movement for democratic control of the interdependent capitalist mode of production. In contrast to the Marxist tradition, Laclau and Mouffe held that one cannot—and should not—mechanistically determine a subject's "objective, true consciousness" from the subject's alleged "structural" position in society. Rather, consciousness itself is discursively produced and represents a contested arena for politics.

In this view, much of the emancipatory impulse for democracy has come from the "new" social movements of racial, gender, and sexual identity. The consciousness of these identity-based groups cannot be deduced from their "objective" social role in society. Thus social theorists had to abandon privileging the "old" movement of the working class and construct a new, plural, and democratic theory that would unite (without homogenizing) the liberatory discourses of the new social movements. Laclau and Mouffe's work has had a great influence on both social movement theory and postcolonial studies.

POSTMODERNISM AND ITS CRITICS: THE SEARCH FOR NORMS

The postmodern turn in social science has generated considerable controversy, some of it finding its way into the mass media. Most visible has been the neoconservative critique that postmodernist analysis dominates the humanities and social sciences, imparting to students a dangerous, nihilist critique of American democracy. Ironically, this critique conflates postmodernism with Marxism, despite postmodernism's hostility to macrostructural and teleological forms of social analysis, including Marxism. Some left-leaning social theorists concur with the postmodern analysis that the marketing of images and lifestyles partly supplants the production and sale of physical goods in late capitalism. But these analysts of late capitalism (such as the geographer David Harvey and the cultural theorist Frederic Jameson), in contrast to postmodernists, offer macrostructural and analytic explanations for the emergence of these phenomena. They locate the production of images-as-commodities within the global corporate conglomerates of the "infotainment," media, and publishing industries.

The postmodern rejection of the realist conception that economic and social institutions constrain the choices of individuals has occurred at a time of rapidly

increasing global violence and economic and material inequality, and some critics have pointed out the ironic element in the timing of this development. Postmodernists often explain their critique of fixed, "linear" conceptions of time and space by metaphorical references to chaos theory's rejection of periodicity and to the finding of quantum mechanics that mass, force, and acceleration cannot be independently determined. This postmodernist rejection of even an "unrepresentative" realist conception of an external reality independent of theoretical interpretation helped engender the "Sokal affair." Alan Sokal, a physicist (and materialist Marxist) at New York University, submitted a paper to the postmodern journal *Social Text* in 1996. The article cleverly deployed postmodern concepts while making alleged scientific references that any physics undergraduate could readily deem to be ludicrous. After the essay was published, Sokal revealed that it was a hoax aimed at revealing postmodernism's ignorance of both science and the nature of material reality. The story made the front page of the *New York Times*.

Some leftist theorists note that the postmodern turn arose at the very moment that conservative political dominance decreased the prestige of leftist theory and practice. A crude "sociology of knowledge" of the postmodern turn might contend that, absent mass social movements contending for state power, left-wing academics retreat into the realm of pure theory. The rejoinder to this might be that postmodernism's insistence on the relevance of the particular, local, and hybrid has had a salutary effect on limiting the imperial claims of "grand narratives." Either way, analytic attempts of macrostructural and historically oriented social theorists to discern the interaction between social agency and social structure are likely to remain a major theme within social science. And the postmodern concern with the fate of marginalized groups would seem to push the discussion ethically beyond postmodernism's emphasis on the local and particular. The quasi-universal concepts of citizenship and global human rights may not have an irrefutable, a priori basis in a fixed human nature, but if human beings cannot develop shared understandings and values that bridge their differences, it is unlikely that the emancipatory, democratic project embraced by many postmodern theorists will ever be realized.

SEE ALSO *Critical Theory; Enlightenment; Ethics; Foucault, Michel; Hegemony; Knowledge; Modernism; Multiculturalism; Paradigm; Positivism; Power; Relativism; Social Constructs; Universalism*

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POSTNATIONALISM

The term *postnationalism* refers to the critique of the concept of the nation as the central organizing principle of modern political identity and government. According to postnationalism, the category of the nation is no longer sufficient to describe the fundamentals of political identity or state government. In a postnational context it becomes necessary to move beyond the idea that a homogeneous national identity is the natural integrating factor of modern political community. Further, postnationalism questions the idea that the sovereign nation-state is indispensable to the order of international affairs and the functioning of the domestic rule of law.

THE CRITIQUE OF NATIONALISM

Postnationalism arose out of the critique of nationalism. It was only at the end of the eighteenth century that citizenship and national identity came together, in the figure of nationalism, for the functional purpose of providing a principle of integration that could serve to mobilize the transition from royal sovereignty to popular sovereignty. Nationalism provided the solution to the twin problems of secular legitimation and complex integration in the wake of religious schism and republican revolution.

While *citizenship* describes a purely legal relation within a political community, in modern times the tendency has been to tie it to an identity that points beyond

the political sphere. Political membership based upon the principle of a unique national culture presupposes an existential difference between peoples. According to this logic, in order for a nation to be free it must remain homogenous and independent from alien influence, necessitating not only separation but also suspicion of others as corrupting forces. According to this logic, diversity becomes a threat. The concept of postnationalism seeks to break this tie between citizenship and ethnic identity or existential difference. The use of postnationalism, in this sense, is most common in debates about the future of Europe and the European Union.

THE DEMISE OF THE NATION-STATE

Postnationalism also arose from the critique of the nation-state. A large literature surrounding the topic of "globalization" has called into question the institutional capacity of the nation-state to fulfill its role as an all-encompassing form of political organization. As a result of globalization, the world's political, economic, cultural, technological, and military forces have established connections across national borders with increasing facility. Beyond the borders of the nation-state, transnational institutional authorities have emerged and become increasingly powerful. External authorities have a growing influence over the internal affairs of states, and traditional understandings of state sovereignty have been called into question by the growth of international systems of decision making, law, and security. Thus the proliferation of international decision-making bodies has tended to extend the sphere of authority beyond the nation-state. The consolidation of the World Trade Organization, for example, signifies the appearance of an international institution that claims the authority to overrule national governments. As a result, some have argued that the twenty-first century will be an era of postnationalism, in which regional organizations, such as the European Union, or international organizations, such as the United Nations, will be the principal organs of political authority, rather than the nation-state.

SEE ALSO *Borders; Globalization, Social and Economic Aspects of; Nationalism and Nationality*

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POSTSTRUCTURALISM

Though often equated, poststructuralism and postmodernism are distinct intellectual phenomena. Most well-known poststructuralists, especially the French philosophers Michel Foucault (1926–1984) and Jacques Derrida (1930–2004), eschewed any association with postmodernism. Only Jean-François Lyotard (1924–1998) can be said to straddle both of these movements.

Postmodernism is as much a sensibility or cultural mood as a specific doctrine. It implies a break with modern modes of experiencing time and space, the dissolution of coherent meanings and narratives, and changes in media of communication. Politically, postmodernism is often seen as reflecting new forms of political organization such as global capitalism or new social movements that reflect cultural difference rather than unity. While aesthetic modernists often wove the fragmentary nature of modern experience into a unity, postmodernists reject the assumptions of unity as metaphysical residues of modern reason. Poststructuralism shares the postmodernist unease with totality, but it refuses to herald new forms of experience of culture, politics, or thought that would replace the modern. Rather, poststructuralism is a form (one of several) of modernity's self-criticism. Poststructuralists do not entirely reject important concepts of modernity, such as knowledge, rights, or subjectivity, but they subject these concepts to a critique that dethrones them from an imperial or originary position. They seek to avoid the totalitarian and utopian pretensions of reason and subject them to a permanent critique.

Along with Derrida, Foucault, and Lyotard, prominent poststructuralists include Gilles Deleuze (1925–1995), Roland Barthes (1915–1980), Julia Kristeva, and Jean-Luc Nancy. As the name suggests, poststructuralism arose as an intellectual movement in reaction to the shortcomings of structuralist approaches in linguistics and the social sciences. Ferdinand de Saussure (1857–1913) in linguistics and Claude Lévi-Strauss in anthropology developed theories that explained language and social action, respectively, as the product of objective structures alone. While structuralists recognized that systems of meaning were essentially arbitrary systems of linguistic difference, and not reflections of transtemporal or ultimate meaning, they were still guilty, according to critics, of a form of rationalism, in which a fixed object of meaning could be studied by objectifying procedures of social science. This explanatory strategy leads to difficulties explaining the nature of involvements of participants who had to take up and employ meanings. It cannot tell us, to use a well-known example, how a gift is given or whether it is given properly.

Poststructuralists such as Derrida argued that meaning has a performative, practical dimension not associated

with an originating subjectivity. Meaning is renewed or transformed through such performances. Poststructuralists employed this practical dimension, however, to show the limits of the projects of theory not only in structuralism but in modern subjective reason as well. This critique took many forms, from Barthes' criticism of the unified literary text, to Kristeva's notion that meaning is intertextual without reference to any fixed outside order, to Deleuze's nomad thought, and to Derrida's criticism of the logocentrism of Western thought and its desire for plenitude and fullness.

Poststructuralists, hermeneutic, phenomenological, and critical approaches rely implicitly on totality and thus do not fully escape the grip of Western rationalism. The nature of the practical or performative dimension always provides resistance to fullness or totality. Derrida, for example, argued that meaning was indeterminate, that is, it was not fixed through any objective or theoretical process. Meaning is not a representation of an objective world but the disclosure of a world of meaning within which we make sense of things. However, linguistic meanings are never complete or univocal, but always fissured through ambiguity and contradiction. From another angle, Foucault argued that systems of knowledge are always formed by power interpretations, and hence are never pure or interest-free as the traditional metaphysical notion of objectivity would hold. Poststructuralism is a form of negative critique. It stresses the nonidentity between enacted performances that may always create a novel meaning and a fixed ideal sense. The indeterminacy of linguistic performance undermines the possibility of ideal meaning found in a transcendental subjectivity. In the tradition of negative critique, poststructuralists stress the nonidentity between enacting a performance and the ideal concepts of totality and practical understanding. The aim of this critique is to undermine the latent (and sometimes explicit) totalitarian assumptions of an overextended notion of reason, and thus its political thrust as well. There is no single political movement or ideology that captures all of reality, nor any utopian goal in human actions. The political is always in the particular.

Critics have equated poststructuralism with anarchic or amoral strains of postmodernism. The poststructuralist stress on the indeterminacy and internal inconsistency of thought is linked to a free-floating conceptual apparatus driven by desire and power. Poststructuralism rejects the primacy of subjectivity altogether and in contrast employs a view of social reality as fictional, without references to an outside reality. Other critics have pointed to the possible political quietism of a view that denies the viability of general or universal values. These judgments have proven to be incorrect. Poststructuralists have displaced subjectivity from its imperial role as an origin, recognizing its produced character, but they have not rejected the subject, knowledge, or even a constructive politics. After an initial phase that placed questions of language and power at the center, poststructuralism has taken an ethical turn. Many of the major figures of poststructuralism, including Foucault, Derrida, Nancy, and Lyotard, have devoted considerable work to ethics.

There are two major strains of poststructuralist ethics. The first approach, the power-interpretive view, is associated with Foucault and Deleuze. It holds with Friedrich Nietzsche (1844–1900) that dominance is the establishment of new interpretations. The second, which is associated with Derrida, Nancy, and Lyotard, is an ethics of otherness. The ethical is equated with a nondominating otherness that is beyond being and ontology. This interpretation is heavily influenced by the work of the Lithuanian-born philosopher Emmanuel Lévinas (1906–1995).

Foucault, and for the most part Deleuze, follow Nietzsche in seeing interpretation as a form of power. In Nietzsche's view, the creation of new interpretations established what is true or false and moral or immoral. Power discloses a world of meaning. Foucault takes this formative power in an Aristotelian direction in order to view the ethical as a form of work on the self, an interpolation of self and other. Interpretative thought is not pure strategy because it draws on an expressive world-forming capacity.

The ethics of otherness draws on the poststructuralist idea of the resistance of performance to full interpretation. Against what he saw as a Hegelian notion of totality, as well as Martin Heidegger's (1889–1976) notion of homeland, Lévinas rejected the view of mutual recognition as metaphysical residue. Mutual recognition extends only to the familiar, the similar, or the identical. Such an ethics could not account for the outsider or the stranger—they can never be assimilated. Recalling another radical critic of G. W. F. Hegel (1770–1831), the outsider is a nonperson who belongs to no corporate entity. An ethics of otherness is beyond the realm of being or ontology. It can never be made explicit, but requires an attitude of openness or welcoming toward the excluded other.

Derrida, Nancy, and Lyotard all begin from Lévinas's ethics of otherness. Derrida employs what might be called a linguistic-critical approach to otherness. The limits of deconstruction are found in the notion of justice. Respect for the other is the one premise that can never be deconstructed. Derrida gives a non-Kantian account of universal justice as a reception of the other that is the precondition of any language. This leads not only to an ethics of otherness, but to a conception of democracy that is linked to the ethical demands of the other. Democracy is never fulfilled, never entirely specified, but it is always yet to be. Still, Derrida's use of otherness as a critique of ethics, politics, and philosophy denied any specific poli-

tics or doctrine. No explicit account of democracy or an ethos of otherness is possible.

In contrast, Nancy's ethical and political reflections draw on phenomenology and on Heidegger's notion of *Mitsein* (being with others) in order to develop a notion of community as incorporating otherness. Identity and difference constitute each other.

Lyotard's position is an important variation of the ethics of otherness. He begins with a notion of speech acts that gives more credence to everyday understanding than does Derrida or Nancy. Like neo-Aristotelians, Lyotard puts the faculty of judgment at the center of political reflections. Despite this similarity with interpretive approaches, Lyotard relies on Lévinas's notion of the ethical as beyond the dialogical nature of ordinary speech and action. Justice is not an ineliminable basis of his theory. Instead, justice is a political capacity that steers between the realms of action. Lyotard's conception of justice, like Hannah Arendt's (1906–1975), is drawn from Immanuel Kant's (1724–1804) critique of judgment.

Critics of poststructuralism, such as Todd May, argue that an ethics of otherness must fail. While poststructuralists correctly identify the limits of foundationalism, they often err in equating all theoretical accounts with foundationalism. Domains of inquiry that are constituted through difference or otherness are difficult to define or delimit and are inherently contradictory. Even sympathetic critics, such as Simon Critchley, find the excessive emphasis on otherness to be problematic. Critical theories that grow out of Jürgen Habermas's work have held that accountability is not just theoretical but a feature of practical activity. This postmetaphysical version of mutual recognition and mutual understanding does not, in their view, require the identity of subjects, but fosters the inclusion of the other into ethics without the need for totality.

Poststructuralism has had a significant impact on the social sciences, especially in regard to the social construction of knowledge, communication, and methodologies. Poststructuralists challenge the traditional model of objectivity, which claims to be able to represent or describe social reality. They dissent from interpretive approaches in holding that the social construction of knowledge raises an irresolvable dilemma on the nature of truth. Anthropologists, for example, have had to address questions about the adequacy of their descriptions of other cultures. They doubt whether one can represent social reality in any way. Poststructuralist anthropology often contends that anthropologists create the very phenomenon they seek to study. More recently, many social scientists have linked poststructuralism to a postpositivist perspective that overcomes the division between natural science and social science. Here, all science is a kind of pragmatic production shaped by social motives of power and dominance.

Sociologists, while raising similar questions about the objectivity of knowledge, have employed poststructuralist perspectives to study the production of knowledge. In opposition to what they see as the interpretive theorists' emphasis on the formative power of intentional action, poststructural sociologists want to emphasize the way subjects themselves are formed by regimes of knowledge. Foucault's *The Order of Things* (1970) is an example of this type of approach, as is Bruno Latour's study of scientific practices. Latour sees science as constructed by the laboratory and its instruments, not independent of them.

In communications theory, Jean Baudrillard's influential work analyzes the way in which subjectivity is constructed as a consumer of material good and products. Charles Lemert developed a general sociological approach based on poststructuralism. Though not strictly in the camp of poststructuralism, Bent Flyvbjerg's attempt to formulate a practically oriented phronetic social science draws heavily on Foucault's linkage of power and knowledge. In addition, much of Pierre Bourdieu's (1930–2002) writing on symbolic power and the construction of social hierarchies of knowledge in universities and in "culture" was influenced by Heidegger and poststructuralism.

SEE ALSO *Other, The; Postmodernism; Subject/Self; Subjectivity: Overview*

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POST-TRAUMATIC STRESS

The term *post-traumatic stress* is used to describe an individual's reaction to an experience of serious, life-threatening trauma. The trauma can come from a single event—such as a physical assault, a car accident, a natural disaster, or witnessing the death of another—or it can come through a series of events, such as chronic abuse or combat experiences. Symptoms include flashbacks, nightmares, intrusive thoughts about the event, decreased ability to concentrate, panic, memory loss, and mood changes (e.g., depression, irritability). Individuals may experience these symptoms immediately following the event, or it may be months to years before symptoms first appear. Symptoms occur in a range of intensity and longevity; for some the symptoms become debilitating.

For many individuals, post-traumatic symptoms diminish over time or with appropriate mental health services, support from friends and family, and other therapeutic or supportive interventions. Although individuals continue to feel the effects of the trauma in some form, most report that the symptoms subside or are minimal, and the effects can be managed so that the individual does not feel burdened. However, as reported by the National Center for Post-Traumatic Stress Disorder (NCPTSD), for 8 percent of men and 20 percent of women, the symptoms do not diminish and develop into post-traumatic stress disorder (PTSD). Furthermore for 30 percent of these individuals, PTSD becomes a chronic condition that persists throughout their lifetimes. PTSD is distinguished from post-traumatic stress by the intensity and duration of the symptoms and by three characteristics of symptoms: they are reexperienced, there is hyperarousal or sensitivity to stimuli, and there is avoidance of triggering stimuli.

The American Psychiatric Association (APA) outlines the PTSD diagnostic criteria in the *Diagnostic and Statistical Manual-IV-TR* (*DSM*):

> A. The person has been exposed to a traumatic event in which both of the following were present: (1) The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others; (2) The person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganizing or agitated behavior.
>
> B. The traumatic event is persistently re-experienced in one (or more) of the following ways: (1) Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed; (2) Recurrent distressing dreams of the event. Note: In children, there may be frightening dreams without recognizable content; (3) Acting or feeling as if the traumatic event were recurring (including a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). Note: In young children, trauma-specific reenactment may occur; (4) Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
>
> C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following: (1) Efforts to avoid thoughts, feelings, or conversation associated with the trauma; (2) Efforts to avoid activities, places, or people that arouse recollections of the trauma; (3) Inability to recall an important aspect of the trauma; (4) Markedly diminished interest or participation in significant activities; (5) Feeling of detachment or estrangement from others; (6) Restricted range of affect (e.g., unable to have loving feelings); (7) Sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span).
>
> D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following: (1) Difficulty falling asleep or staying asleep; (2) Irritability or outbursts of anger; (3) Difficulty concentrating; (4) Hypervigilance; (5) Exaggerated startle response; (6) Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month; (7) The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
>
> Specify if: *Acute*: if duration of symptoms is less than 3 months; *Chronic*: if duration of symptoms is 3 months or more.
>
> Specify if: *With Delayed Onset*: if onset of symptoms is at least 6 months after the stressor. (APA 2000, pp. 218–220)

Although these criteria are well-defined, diagnosis of PTSD is a complicated process in part because PTSD symptoms are similar to those of many other psychiatric disorders (e.g., depression), anxiety disorders, and psychotic disorders. In addition many individuals feel shamed or embarrassed by the event or their reactions and may not report the full extent of their symptoms. A multimodal approach is considered to be the most effective for accurately diagnosing PTSD. The NCPTSD suggests an approach including a clinical interview, completion of standardized assessment tools, and a physical assessment.

Statistics from the National Mental Health Association indicate that at least 5.2 million Americans (3.6 percent of U.S. adults) experience PTSD during the course of a year, and nearly 8 percent of Americans will experience PTSD at some point in their lifetimes. Researchers have shown that although PTSD can occur at any age, females develop PTSD at twice the rate of males regardless of their age.

PTSD is a relatively new term within the mental health field, having first appeared in the *DSM* in 1980. However, the concept appeared in the historical medical literature as early as during the Civil War as the term *Da Costa's Syndrome*. In World War I, World War II, and the Korean War *shell shock*, *battle fatigue*, and *war neurosis* were used to describe the troubling symptoms experienced by combat soldiers. The U.S. government did not begin systematically to focus on the origins, symptoms, and treatment of PTSD until the era following the Vietnam War. The military research on PTSD was drawn on by those working in noncombat trauma areas to better understand the impact of various forms of trauma on individuals.

If left untreated, PTSD symptoms can have an impact on all areas of a person's life and can cause both psychological and physical illnesses. Physical effects include chronic pain conditions, immune system disorders, and neurological system symptoms (i.e., memory loss, coordination of the fear response). Cognitive symptoms include distractedness and an inability to analyze events because of physical changes in the hippocampus (the brain region responsible for such processes). Emotional effects include grief, rage, sorrow, numbness, despair, and guilt, among others, as manifested in behaviors such as difficulties with interpersonal relationships

and maintaining employment, addiction, isolation, and self-mutilation or self-injury. According to the NCPTSD, a majority of those with PTSD (88 percent of men and 79 percent of women) also met the criteria for a secondary psychiatric diagnosis, meaning that PTSD puts individuals at risk of other mental health disorders.

The National Child Traumatic Stress Network reports that children and adolescents are especially vulnerable to developing PTSD after experiencing a traumatic event because of their limited ability to process information, their lack of cognitive sophistication, and general issues of maturity. Children may exhibit additional symptoms, such as toileting problems, development of a disturbed sense of self, low self-esteem, academic struggles, or symptoms that interfere with a normal developmental task.

Although much remains unknown about PTSD, there are promising treatments that have been successful in treating individuals with PTSD. Some of these include prolonged exposure therapy, cognitive-behavioral therapy, family therapy, group therapy, and some drug therapies.

SEE ALSO *Anxiety; Depression, Psychological; Disease; Emotion; Memory; Mental Health; Mental Illness; Military; Mood; Panic; Psychology; Psychotherapy; Stress; Trauma; Traumatic Bonding; War*

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POTRON, MAURICE
1872–1942

Father Maurice Potron, a French Jesuit and a graduate of France's prestigious École Polytechnique with a Ph.D. in mathematics, published major, but surprisingly little known, mathematical-economic papers between 1911 and 1941. His writings include three major findings.

First, in mathematics, he published a demonstration about the existence of solutions of nonnegative matrixes (or "linear substitutions" as he called them) as early as 1911, before Ferdinand Georg Frobenius (1849–1917) did so in 1912. In 1908 and 1909 Oskar Perron (1880–1975) and Frobenius had only demonstrated theorems related to strictly positive matrixes.

Second, in the same paper, Potron, while trying to reconcile social justice ("fair" price, "fair" wage) and economic interdependencies, was the first to apply Perron-Frobenius's theorems on a Leontief-type model, in order to find the conditions for the existence of a fair economic equilibrium, a "satisfactory economic regime" in Potron's words, allowing simultaneous adequacy between the consumption structure and that of production and work capacities, and adequacy between price and wage levels. As far as we know, nobody had used Perron-Frobenius's theorem in economics before World War II (1939–1945).

Third, in 1912 Potron laid the foundations of future input-output analysis, offering a detailed study of the expenses supported by his baker to produce a two-kilogram loaf of bread. The extension of such a study to other industries would allow precise calculation of the "effective satisfactory regime of production-consumption and prices-wages" (Potron 1912, p. 19). Indeed, he used matrixes to describe the economic interdependency between products and branches. The concept of a "technical coefficient" was used in 1912 to promote a central planning office whose mission would be to organize the economy according to social Catholic doctrine. Thus, the invention of input-output matrixes is undoubtedly due not to Wassily Leontief (1906–1999) but to Potron (1912), since Leontief's "The Balance of the Economy of the USSR" was published in 1925 and *The Structure of the American Economy*, his greatest book, in 1941. The existence of a "calculations bureau" (*bureau des calculs*) would constitute the only way to achieve a "satisfactory regime." This concern led Potron to put forward, in 1936, the use of Gauss-Lanczos's iterative method in order to help the planning office deal with the huge dimensions of the matrix, a method widely used in algorithms today.

As early as 1912, Potron introduced the number of working days per year as a relevant parameter of the viability of an economic system. He was also concerned with the possibility of demand inadequacy: in what has been called *Potron's law*, he shows how an increase in demand will raise general activity and revenue. Since he lacked academic training in economics, Potron's economic approach is mainly explained by his intellectual and social environment (Abraham-Frois and Lendjel 2004). Catholic doctrine (as expressed in 1891 in Pope Leo XIII's encyclical

Rerum Novarum on the rights and duties of capital and labor) and the network of Catholic social reformers (mainly Potron's father, Auguste Potron, as well as Henry Pupey Girard, Gustave Desbuquois, and Joseph Zamanski) led him to formulate original propositions in economics, with his own terminology and cumbersome mathematical notations. But this singularity denied him access to academia and to any audience of economists. In the last years of his life, neither his links with *X-crise*, a French association constituted between 1931 and 1939 by engineering graduates of France's École Polytechnique to deal with the global economic crisis (Fischman and Lendjel 2000), nor his membership in the Econometric Society (since 1938), nor even his participation at the eighth International Congress of Mathematics at Oslo in 1936 (probably with the help of Norwegian economist Ragnar Frisch [1895–1973]) provided him with any recognition. This has only come recently.

SEE ALSO *Input-Output Matrix; Matrix Algebra*

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POULANTZAS, NICOS
1936–1979

Famous for his concept of the "relative-autonomy of the state" as well as for his debate with Ralph Miliband (1924–1994), Nicos Poulantzas was a formative neo-Marxist theorist of politics. Born into a prominent family in Greece, Poulantzas studied law at the University of Athens before moving to France, where he completed his doctoral studies in the philosophy of law. During this time, he was closely aligned with the existential Marxism of Jean-Paul Sartre (1905–1980) and Simone de Beauvoir (1908–1986), and he was a contributor to their journal *Les Temps modernes* (Modern Times). Poulantzas, however, began moving away from existentialism in 1966 and increasingly came to be influenced by the "structuralist" Marxism of Louis Althusser (1918–1990); it is largely in this context, as an Althusserian or structuralist, that Poulantzas has come to be known.

In 1969 the *New Left Review* published Poulantzas's critical review of Miliband's book *The State in Capitalist Society* (1969). This review was the first volley in what came to be known as the Miliband-Poulantzas debate. The debate largely hinged on whether the class bias of the state was a product of the class origins and affiliations of those individuals who occupied the top positions within state institutions (Miliband) or whether the class bias of the state was more a product of its structures and functions (Poulantzas). Beyond separating Marxists into what may have been an overstated divide of "instrumentalist" and "structuralist" camps, the debate highlighted a renewed Marxist interest in the theory of politics, and it foreshadowed and provoked an intense growth of research on the state, a still ongoing body of inquiry often referred to as *state theory*.

Poulantzas's most import work in this context was *Political Power and Social Classes* (1968). It is in this work that he first developed the idea of the relative autonomy of the state. According to Poulantzas, for the state to properly function as a capitalist state it must be able to go against the individual and particular interests of capitalists in order to act in their general/class interests; the state must be "relatively autonomous" from the interests and demands of capitalists. This also implied that the state could not be reduced to some reflection of economic relations or interests, as more orthodox Marxists had often done. Poulantzas argued that, as economic agents, capitalists tend to be divided and competitive. The state provides the institutional space for various factions of the capitalist class, as well as other powerful classes, to come together and form long-term strategies and alliances; this is what Poulantzas termed the *power-bloc*. At the same time, the state disorganizes the working class by dividing them into individuals/citizens, what he termed the *isolation effect*.

Poulantzas's *Fascism and Dictatorship* (1970) was an empirical case study based on his theoretical work. He examined the class foundations of fascism and understood the fascist state as an exceptional form of the capitalist state. He argued that fascism was not inevitable or some natural stage in the development of capitalism and thus that it, as a type of response to a crisis of politics, could be repeated in the future. Poulantzas applied similar ideas in one of the first Marxist studies of democratization, *The Crisis of the Dictatorships: Spain, Portugal, Greece* (1975). There he argued that the rise of democracy in each country was the outcome of a political conflict between two key factions of the capitalist class, the domestic and comprador bourgeoisie.

In Poulantzas's subsequent theoretical work, he made a key contribution to class theory when he argued against traditional "in itself" and "for itself" definitions and contended that classes do not exist outside of conflict and struggle, that classes only exist as an ensemble of practices. In *Classes in Contemporary Capitalism* (1974), he also examined the political implications of the growing transnationalization of capital (one of the first Marxist examinations of globalization), and he examined the growth of the "new" petite bourgeoisie.

In his last book, *State, Power, Socialism* (1978), he critiqued the theories of Michel Foucault (1926–1984) and Giles Deleuze (1925–1995), among many others, and refined his previous theories. Poulantzas now defined the state as a social relationship and argued that the question of its relative autonomy was a function of class struggle. Since the state was a condensation of the class struggle it was always in flux and contested; no one class had complete control, and the state always had to take the interests of the dominated classes into consideration. The degree of this relative autonomy would thus be a historical variable and would change in accordance with the content and intensity of the political struggles of the day.

Poulantzas's theoretical positions were also reflected in his political affinities and activities. His emphasis against economic determinism was an anti-Stalinist stance and reflected Poulantzas's support of democratic socialism and the radical democratic positions of Rosa Luxemburg (1870–1919), Antonio Gramsci (1891–1937), and the Eurocommunist movements of the time. Poulantzas was an active member of many leftist organizations, such as the Communist Party of the Interior in Greece and of the CFDT (Confédération française démocratique du travail; French Democratic Confederation of Labor) in France, and he often contributed to the newspapers and journals of these organizations as well as to the popular press. Given his emphasis on questions of political strategy and his support of a democratic transition to socialism (as well as the appropriation of his ideas by radical democratic currents in France, Italy, and especially Portugal, Spain, and Greece), Poulantzas is often considered to be a key theorist of Eurocommunism. Despite his untimely death at the age of forty-three, Poulantzas's conceptual contributions and political sensibilities continue to be relevant to a wide range of concerns within contemporary social science.

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Peter Bratsis

POVERTY

Poverty is among the most central problems of economics, and its alleviation is a long-standing challenge for economists and policy makers alike. The Millennium Development Goals (MDG) adopted by the United Nations in 2000 aim to lower the fraction of the world's poor by the year 2015 to half its 1990 level, where "poor" includes those subsisting on less than $1 a day. This description of poverty is close to the $1.08-per-day poverty line (in 1993 dollars) adopted by the World Bank. Defined by the $1 cut-off, in 1998 one in five people in the world (1.2 billion) were poor, and they were concentrated in South Asia (522 million), sub-Saharan Africa (291 million), and East Asia (278 million).

WORLDWIDE DISTRIBUTION OF POVERTY

Measured in terms of certain basic capabilities—health, education, political voice, credit—these regional poverty patterns persist. The 2004 Human Development Report states that sub-Saharan Africa accounts for 22 percent of the world's malnourished population and 42 percent of primary school-age children not in school. For East Asia the corresponding figures are 25 percent and 13 percent, and for South Asia, they are 37 percent and 31 percent, respectively. Thus, the $1-a-day measure seems to do a reasonable job of capturing other relevant dimensions of poverty.

How do those with less than $1 a day really live? Based on household level surveys across thirteen countries, Abhijit Banerjee and Esther Duflo (2007) give us a vivid picture: They often work multiple odd jobs (and not only in agriculture); frequently migrate temporarily for

work; own few assets other than land; lack access to credit and insurance; get poor-quality health care and education (if at all); are frequently malnourished; spend much (but not all) of their income on food (50–75%), alcohol and tobacco (resisting temptations to spend more), and festivals (but few other forms of entertainment); and importantly, although they do feel the pinch of poverty, their self-reported levels of happiness and health are not particularly low. If this poverty cut-off were doubled to just $2 a day, nearly half the world's people would be deemed poor (2.8 billion)—and shockingly, they consume less in a month than what the nonpoor consume in a single day.

These figures are grim, but to gain some perspective on them and assess how realistic the MDG are, we need to measure the progress the world has made in alleviating poverty. Taking the long view, the drop in the poverty rate—from 84 percent in 1820 to 50 percent in 1950, to 24 percent in 1992—and the rise in life expectancy—from twenty-seven years to sixty-one years over the same period (Bourguignon and Morrison 2002)—is dramatic. Over a shorter period it is less so. According to the World Bank, the poverty rate worldwide has fallen from 28.7 percent in 1987 to 24.3 percent in 1998 (World Bank 2007). (These numbers are somewhat sensitive to the time period and data sources used; Angus Deaton [2002] points out that this can be explained by the use of different underlying data sources, but there is less disagreement of the pattern of changes than in levels.) Once again, there is sharp regional variation—from 26.6 percent to 15.3 percent in East Asia (mostly China) and 44 percent to 40 percent in South Asia, but stagnant around 46 percent in Africa, with an increase of 50 million in the region's poor. These sharp regional variations in poverty reduction emphasize the question of what the underlying causes of poverty are. Not surprisingly, there are multiple views on what is the "right" answer.

ALLEVIATING POVERTY: IS MARKET-DRIVEN GROWTH ENOUGH?

The dominant view of the 1980s, the "Washington Consensus," still prevalent in some influential quarters (such as the International Monetary Fund), is that growth is the best answer to the poverty problem and that market-friendly policies are best suited to achieving growth. Does the data support this view? There is strong evidence of positive correlation between growth and poverty reduction—which, of course, is not the same as causation. Based on numbers from sixty countries with data for more than one year, Timothy Besley and Robin Burgess (2003) find that poverty rates are very responsive to changes in income per capita (elasticity = - 0.73 worldwide), but yet again, with large regional differences (-1.0 in East Asia versus - 0.49 in sub-Saharan Africa). They conclude that, given historical growth rates of per capita income, growth alone is unlikely to help achieve the poverty reduction targets set in the MDG in most regions (Besley and Burgess 2003). As for evidence of market-driven growth, it is now widely agreed that the most prominent growth story of the past three decades, the "East Asian miracle," involved active government intervention in markets (Amsden 2001). Overall, support for the Washington Consensus view does exist, but it is not overwhelming. As a practical matter, many countries have had a less than favorable experience with certain aspects of "stabilization plans" based on this view—a policy package typically involving openness to trade and foreign capital markets, restrictive monetary and fiscal policies, privatization of state-owned enterprises, and deregulation of important markets. Concerted international action to tackle poverty, in the form of foreign aid, has been well below the United Nations's aid target of 0.7 percent of gross domestic product of the G7 countries (the United States, France, Germany, Italy, Japan, the United Kingdom, and Canada). But even if that aid were available, it would be only one-third of what is needed to achieve the MDG. Collectively, these realities have forced a search for alternative explanations for and solutions to the poverty problem.

THE INSTITUTIONAL APPROACH TO POVERTY REDUCTION

A shift in the thinking on poverty is also being driven by a deeper theoretical understanding of both market failure and government failure—that is, how market imperfections deny the poor a chance to make the investments needed to rise out of poverty, and why governments are not always effective in making up for this lapse. One important conclusion emerging from research in this area is the need for sound domestic institutions to promote growth and poverty reduction—more so than a country's geographical or "cultural" legacies. A natural consequence of this finding is a call—by the World Bank (World Bank 2003) and by academic economists—for a wider set of institutional reforms, including promoting democracy and other forms of political voice for the poor, the rule of law, property rights for the poor, increasing government accountability, and reducing corruption. There has been a steady trickle of evidence supporting the favorable impact of sound institutions on outcomes for the poor: for example, how property rights over land in urban areas in Peru help the poor gain access to credit, increase labor supply, and be more productive (De Soto 2000; Field 2002); how political representation for women in India results in more funds for public goods they care about (Chattopadhyay and Duflo 2004); and how a newspaper campaign concerning government accountability in-

creased the resources reaching public schools in Uganda (Reinikka and Svensson 2001).

SERVICE DELIVERY: GETTING "TRICKLE DOWN" RIGHT

Although progress on institutional reform is crucial, it can be slow. A parallel approach is a package of policy measures that target poverty and redistribute resources to the poor through schools and health clinics, promoting small businesses, access to credit, better social safety nets, and so on. Here, theoretical research has helped to explain why certain redistribution mechanisms—for instance, in-kind rather than cash transfers—can deliver greater equity and growth when there are market imperfections. This research has shed light on the political economy of public good provision, with insights into suitable incentives for policy makers, providers, and program recipients. On the ground, the better programs have worked through effective design and implementation. For instance, Mexico's Progresa program involves cash benefits for women and their families that are conditional upon the child(ren) being sent to school and being taken for health check-ups. Microfinance—pioneered by Mohammad Yunus of the Grameen Bank—uses a combination of "peer monitoring" and group liability for borrowers, which makes possible "micro" loans to those too poor to offer collateral. One common feature of both these programs is that they channel resources to poor households through women. Such a gender-based strategy of redistribution is gaining support, given widespread evidence of women's tendency to spend more resources on children's welfare and human capital, relative to men (Haddad, Hoddinott, and Alderman 1987). It has also been recognized as a viable solution to the problem of child labor and low schooling, breaking the vicious link from current to future poverty. While there is strong evidence for the positive impact of Progresa (Schultz 2004), ongoing work is evaluating and refining the design of microfinance initiatives.

More broadly, a combination of empirical and, more recently, experimental work is helping design and systematically evaluate a host of service-delivery mechanisms, including the effect of improved child health on school attendance (Kremer-Miguel 2004); the impact of more rural bank branches on poverty (Burgess and Pande 2002); and the impact of corruption in the issuance of drivers' licenses by the government (Bertrand, Djankov, Hanna, and Mullainathan 2007).

NEW PERSPECTIVES ON POVERTY

As part of these experiments with program design and implementation, economists have sometimes found it hard to rationally explain certain choices that the poor make, be it with regard to savings, or technology adoption (Ashraf et al. 2006; Duflo et al. 2006). This gives rise to an exciting new behavioral economics approach to poverty that seeks to understand decisions of the poor from not just an economic perspective, but also a psychological one. Insight into the strengths and weaknesses of governments and markets also blurs the line between private- and public-service delivery (Besley and Ghatak 2004), giving rise to innovative approaches such as the Advanced Commitment for Vaccines initiative. Some even argue that the world's poor constitute not just an obligation for the rich, but also a vital, untapped market (Prahalad 2004).

At the international level, however, some important issues that affect poverty remain difficult to resolve. Globalization and trade have been a boon to some countries (or some areas within countries), but a bane to others, creating greater income insecurity for the poor in some developing and developed economies. International agreements on trade and immigration, intellectual property issues, and environmental pollution have not always been favorable to poor economies. These remain areas where large strides can be made toward reduction of global poverty.

SEE ALSO *Accountability; Corruption; Culture of Poverty; Development Economics; Economic Growth; Economics; Economics, Stratification; Education, USA; Government; Governmentality; Grameen Bank; Human Capital; Microfinance; Poor, The; Schooling; Stratification; Washington Consensus; World Bank, The*

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Anandi Mani

POVERTY, INDICES OF

A poverty index measures the level of poverty in a society. In measuring the level of poverty, a poverty line or poverty threshold, usually stated in terms of income, is defined to divide the society into two separate groups. An individual is poor if that individual lives below the poverty line.

THE HEADCOUNT RATIO AND THE INCOME-GAP RATIO

The traditional poverty index is the headcount ratio, which is the proportion of people in a society who are living in poverty. If n is the total number of people in the society and m is the number of the poor, the headcount ratio is

$$H = \frac{m}{n} \text{ or } \frac{m}{n} \times 100\%$$

Another poverty index that sometimes is used is the income-gap ratio, which is the percentage of the average income shortfall of the poor to the poverty line. If μ_p is the average income of the poor and z is the poverty line, the income-gap ratio is

$$I = 1 - \frac{\mu_p}{z} \text{ or } \left(1 - \frac{\mu_p}{z}\right) \times 100\%$$

Both poverty indices, however, have serious problems in measuring the poverty level of a society adequately. For example, the headcount ratio does not consider how far a poor individual is below the poverty line; an individual just below the line and an individual far below it are treated the same in the calculation. Although the income-gap ratio does not have this problem, it does not reflect how incomes are distributed among the poor: Whether they are equally poor or some of them are desperately poor, the same level of poverty is determined. Additionally, the income-gap ratio does not deal with the number of the poor; it considers only the average income of the poor. Intuitively, for the same average income of the poor, the society should have more poverty if more people fall into poverty.

THE AXIOMATIC APPROACH

Since the publication of Amartya Sen's 1976 work on poverty measurement, the construction and evaluation of poverty indices have followed an axiomatic approach. In this approach, ideal properties for poverty measurement are formulated as axioms and a poverty index is generated to satisfy those axioms. The following are the key axioms for poverty measurement: The focus axiom states that the poverty index is not affected by a change in a nonpoor individual's income as long as that individual remains nonpoor. The restricted continuity axiom states that the poverty index is continuous in poor incomes in that a

small change in a poor individual's income should not lead to a large change in the poverty level. The monotonicity axiom states that all else the same, a decrease in a poor individual's income should increase the overall level of poverty in the society. The weak transfer axiom states that all else the same, a transfer of income from a poor individual to a poorer individual should decrease the overall level of poverty. The subgroup consistency axiom states that if the society is divided into different subsocieties (such as the different states in the United States), all else the same, an increase in the poverty level of a subsociety also should increase the overall level of poverty of the society. The increasing poverty line axiom states that the poverty index should increase as the poverty line increases. Additionally, a poverty index should satisfy the unit consistency axiom: If one society (say, the United States) has more poverty than another society (say, the United Kingdom) when all incomes and the poverty line are measured in one currency unit (e.g., U.S. dollars), the conclusion should hold when another currency (e.g., British pounds) is used.

The headcount ratio does not satisfy the monotonicity axiom, the weak transfer axiom, or the increasing poverty line axiom. The income-gap ratio violates the weak transfer axiom and the increasing poverty line axiom.

Sen (1976) proposed the first axiomatic-based poverty index. Suppose all individuals' incomes are arranged in increasing order and x_i is the ith individual's income, then $x_1 \leq x_2 \leq \ldots \leq x_n$. The Sen poverty index is

$$S = \frac{2}{(m+1)nz} \sum_{i=1}^{m} (z - x_i)(m + 1 - i),$$

which also can be written as

$$S = \frac{2}{n} \sum_{i=1}^{m} (1 - \frac{x_i}{z})(1 - \frac{i}{m+1}) = H[I + (1 - I)G_p\frac{m}{m+1}]$$

where H is the headcount ratio, I is the income-gap ratio, and G_p is the Gini coefficient of the poor incomes. The Gini coefficient is twice the area between the Lorenz curve of the poor incomes and the 45-degree diagonal line. A slightly modified version of the Sen index is the Thon poverty index:

$$T = \frac{2}{(n+1)nz} \sum_{i=1}^{m} (z - x_i)(n + 1 - i)$$

Other poverty indices include the Chakravarty poverty index:

$$C = \frac{1}{n} \sum_{i=1}^{m} \left[1 - \left(\frac{x_i}{z}\right)^{\varepsilon}\right] \text{ with } 0 < \varepsilon < 1$$

the Foster-Greer-Thorbecke poverty index:

$$FGT = \frac{1}{n} \sum_{i=1}^{m} \left(1 - \frac{x_i}{z}\right)^{\alpha} \text{ with } \alpha \geq 0$$

the Watts poverty index:

$$W = \frac{1}{n} \sum_{i=1}^{m} (\ln z - \ln x_i)$$

and the Kolm poverty index:

$$K = \frac{1}{n} \sum_{i=1}^{m} (e^{\sigma(z - x_i)} - 1) \text{ with } \sigma > 0$$

Both the Sen and Thon indices satisfy all the axioms listed above except the subgroup consistency axiom; the Chakravarty index, the Foster-Greer-Thorbecke index, and the Watts index satisfy all the axioms; and the Kolm index satisfies all the axioms except the unit consistency axiom. All these new poverty indices are referred to as distribution-sensitive indices because they satisfy the weak transfer axiom. The differences among these poverty indices lie in the ways in which the shortfall of each poor income to the poverty line is characterized and the ways in which those shortfalls across all individuals are aggregated into an overall index of poverty. For example, for the headcount ratio, each individual's shortfall is assigned a value of one if the individual is poor and zero if the individual is nonpoor, and the overall poverty level is the simple average of those shortfalls (zeros and ones). For the Sen poverty index, each individual's shortfall is recorded by $1 - \frac{x_i}{z}$ if the individual is poor and zero if the individual is nonpoor, and the overall poverty is the weighted average of those shortfalls, with the weight being $1 - \frac{i}{m+1}$, which is the relative rank of that individual among the poor. For the Watts poverty index, each individual's shortfall is recorded by $\ln z - \ln x_i$ if the individual is poor and zero if the individual is nonpoor, and the overall poverty is the simple average of those shortfalls.

CALCULATING THE POVERTY LEVEL

To calculate the poverty level of a society, one needs to define the poverty line and choose a poverty index. The definition of the poverty line varies from society to society. In the United States the official poverty line initially was developed by Mollie Orshansky of the Social Security Administration in 1963–1964 and adjusted each year thereafter for inflation. The U.S. poverty line is regarded as an absolute poverty line because it was calculated as the minimum amount of resources needed for living at a point in time and is not affected by changes in the entire

income distribution. Because the minimum amount of resources needed for living depends on the specific society, the calculated absolute poverty line tends to vary from society to society. For example, an individual with an income at the U.S. poverty line would be regarded as rich in some developing countries. In poverty studies, especially in international comparisons of poverty, another type of poverty line—the relative poverty line—has been used. A relative poverty line is specified as a point in the distribution of income (e.g., one-half of the mean or median income), and the line is updated automatically over time for changes in the distribution.

Because the use of any specific poverty line, whether absolute or relative, is somewhat arbitrary, a range of poverty lines often are used to check the robustness of poverty comparisons. The resulting conditions for poverty comparisons are closely related to the conditions of stochastic dominance (Foster and Shorrocks 1988) and Lorenz dominance, which is based on comparisons of Lorenz curves. Similarly, the choice of a specific poverty index in poverty comparisons is somewhat arbitrary in light of the fact that there are multiple poverty indices that satisfy the same set of poverty axioms. If, for a specific poverty line, all poverty indices that satisfy certain axioms are used in poverty comparisons, the resulting conditions are also related to the conditions of stochastic dominance (Atkinson 1987) and Lorenz dominance.

SEE ALSO *Economics, Stratification; Gini Coefficient; Income Distribution; Inequality, Income; Poor, The; Poverty; Sen, Amartya Kumar; Social Welfare Functions; Welfare Analysis*

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Buhong Zheng

POVERTY, URBAN

For well over a century and a half, the urban poor have been an object of intense contemplation among scholars, politicians, philanthropists, activists, and policy makers, and the topic of urban poverty has been one of the most controversial in the field of urban studies. Alternatively reviled or pitied, the urban poor tend to be characterized in academic and popular discourse as either undeserving, irrational, passive, pathological, apathetic, and in need of charity and moral reform or as deserving, resilient, exploited, and oppressed. Accordingly, explanations for the causes of urban poverty have, for the most part, vacillated between blaming the poor for their own impoverishment and explaining impoverishment in terms of urban political economy.

Research on urban poverty first gained prominence in nineteenth-century Europe and the United States as industrialization transformed the urban landscape. Its roots were primarily in early social reformism, which built on investigative journalism with survey research to make poverty visible so that it could be reckoned with by the burgeoning middle classes. In England, social reformer Charles Booth, for example, followed the earlier work of journalists Henry Mayhew and Andrew Mearns to gain widespread attention for his classificatory survey of the laboring classes, *Life and Labour of the People of London* (1902). In the United States, journalist Jacob Riis published the still famous *How the Other Half Lives* (1890). Soon thereafter, Hull House settlement founder Jane Addams spearheaded the publication of *Hull House Maps and Papers* (1895), revealing the distinctive pattern of immigration, wage inequality, and residential segregation that characterized American cities at the time.

As the first empirical studies of poverty in European and American cities, the work published by these social reformers is widely considered to be the precursor to modern social scientific poverty studies. Importantly, these studies were largely descriptive and were designed to be systematic in their classifications of the poor and in their depictions of the illicit commerce, violence, deprivation, and sloth that was sometimes present in urban neighborhoods. They were also focused squarely on the question of urban political economy, with class, wages, and employment as central categories of analysis. As the first study to establish a direct link between industrialization, the labor process, and the depreciation of living conditions in overcrowded slums, Friedrich Engels's *The Condition of the Working Class in England in 1844* became an early classic of this approach.

The rise of Chicago School sociology in the early twentieth century reoriented poverty studies away from urban political economy toward "social ecology." Less interested in class than in assimilation and social disorganization among immigrants, the Chicago approach sought to explain industrialization, commerce, and residential distribution as natural occurrences in the urban environment (Park et al. 1925). In this formulation, poverty and segregation were understood as part of a nat-

ural process of ecological succession, in which poor and segregated neighborhoods were seen as "natural areas" where new immigrants were oriented to the city, giving them a foothold before their eventual accommodation with and assimilation into the more affluent mainstream. In a series of important and highly influential field and ethnographic studies on such topics as juvenile delinquency, gangs, hobos, and slums, the Chicago School provided the social scientific basis for the understanding of urban poverty, which its protagonists tended to view as a consequence of social deviance and neighborhood disorganization. E. Franklin Frazier's *The Negro Family in Chicago* (1932) and *The Negro Family in the United States* (1939) gained wide influence in poverty studies by downplaying the importance of racial inequality, establishing a powerful connection between poverty and family structure, and arguing in particular that the matriarchal black family was "pathologically" disorganized and that it therefore perpetuated poverty. (It should be noted, however, that Frazier ultimately viewed family disorganization as temporary and that he was a strong advocate for incorporation of black men into the industrial workforce [O'Conner 2001].) In contrast, St. Clair Drake and Horace Cayton, also trained at Chicago, published *Black Metropolis* (1945). Like Du Bois's *The Philadelphia Negro* (1899) before it, they placed a stronger emphasis on the role of racial inequality in the production and reproduction of black inner-city poverty.

The influence of the Chicago School's poverty-as-cultural-pathology argument grew in the poverty scholarship and public-policy work of the 1960s and 1970s. Notably, anthropologist Oscar Lewis, best known for his widely disseminated "culture of poverty" thesis, linked behavior with the persistence of poverty (Lewis 1966). He argued that a significant faction of the poor were caught in an intergenerational quagmire of dysfunctional values and behaviors. This argument resonated with and reinforced the dominant policy positions that emerged as poverty was "rediscovered" in America in the 1960s during the War on Poverty. Famously, Lewis's influence can be seen in Daniel Patrick Moynihan's 1965 report to President Johnson, *The Negro Family: A Case for National Action*, which relied heavily on the "culture of poverty" thesis to describe black "ghetto" poverty and familial "dysfunction." Many social scientists rebutted Lewis's culturalist explanations for social "disorganization" with work showing that the consumption, labor market participation, and kinship patterns among the poor were not "dysfunctional," irrational, or self-destructive but rather survival strategies that made sense given economic constraints (see, for example, Stack 1974; Liebow 1967; Valentine 1978).

In the 1980s and 1990s, the controversy around the "culture of poverty" thesis replayed itself as the underclass debate, which focused on the poorest of the poor in cities struggling to remake themselves under postindustrial conditions. Also centered around the behaviors of black inner-city residents, the debate this time focused on their social "isolation" and "dislocation." Pundits and policy makers on the right argued that poverty was caused by poor people's "dependency" on welfare programs (Murray 1984; Mead 1992). In rebuttal, left-liberal scholars countered the moralist formulations of the right with demographic analyses demonstrating the "structural" roots of impoverishment. William Julius Wilson (1987, 1996), among others, showed that public policies such as affirmative action, which enabled residential mobility for middle-class blacks, combined with labor market restructuring in deindustrializing cities to create an isolated underclass of chronically jobless inner-city residents. Both sides of the underclass debate were critiqued by left-leaning scholars for downplaying the persistence of racial and gender discrimination in labor markets, housing policies, and tax policies, and for perpetuating the image of the pathological poor (Goode and Maskovsky 2001; O'Conner 2001).

Recent research on urban poverty has redirected attention once again to urban political economy. In the aftermath of the 1996 welfare reform, the popularity of the poverty-as-cultural-pathology argument has abated significantly, and new policy-centered work has documented the plight of the U.S. working poor, who are not able to earn wages high enough to pull them out of poverty. More significantly, as global cities paradigms have become more influential in urban studies, the idea that urban poverty is a consequence of global shifts in economy, politics, and governance has once again taken center stage. Whereas some European Third Way scholars have shifted their focus away from poverty toward social exclusion (e.g., Giddens 1998), others have directed critical attention to the political economy of the new global inner city. In the global North, gentrification and other redevelopment strategies are displacing low-income residents from central cities (Hackworth 2007). In the global South, slums are proliferating in large measure because of new migration patterns that correspond with global shifts in industrial and agricultural production patterns (Davis 2006). Of particular interest in this work is attention to the polarizing effects of neoliberalism on cities across the world (Harvey 2005). This new work resonates with scholarship that understands poverty as fundamentally a political problem, one that is shaped dramatically by forms of activism, urban or otherwise, that either include or exclude the impoverished residents who live in cities across the globe (Maskovsky 2001; see also Piven and Cloward 1977).

SEE ALSO *Affirmative Action; Assimilation; Chicago School; Culture of Poverty; Deviance; Discrimination, Racial; Drake, St. Clair; Du Bois, W. E. B.; Frazier, E. Franklin; Immigration; Inequality, Racial; Lewis,*

Oscar; Moynihan, Daniel Patrick; Moynihan Report; Neoliberalism; Park School, The; Pathology, Social; Poverty; Racism; Slums; Underclass; Urban Renewal; Urban Sprawl; Urban Studies; Welfare

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Jeff Maskovsky

POWER

Power is a central concept in the social and political sciences. It is also commonplace in everyday discussions: We often refer to a political party getting into power, or to the power of governments or individuals to perform a particular action or achieve a certain result, or to someone having power over another, or to a country being a superpower. Power would appear to be self-evident. However, power is an extremely elusive concept, and there are numerous disagreements over its definition, foundation, function, and operation. Power remains, as Steven Lukes says, an "essentially contested" concept (1974, p. 26).

Power is usually associated with the bringing about of consequences. However, what these consequences are, whether or not they are intended, how they are actually brought about, who brings them about and in whose interests—are all a matter of unresolved debate across a number of different disciplines. It is not possible here to give an exhaustive list of these controversies, or to touch on all the many questions regarding the nature and exercise of power. There are, however, several major areas of contention that should be mentioned:

1. Should power be seen in terms of the actions or capacities of individual agents, or should it be seen as deriving from broader social structures?
2. Is power a resource or capacity that can lie dormant, or does it only exist when it is exercised?

3. Does power refer to the ability to achieve certain desired outcomes, or is it a relationship between agents where one exercises power over another?
4. Does power necessarily involve domination, coercion, or constraint, or can it be based on consent?
5. Is power exercised only where the consequences of a certain action are intended, or do unintended or unforeseen consequences also count as evidence of the exercise of power?

The remainder of the entry will explore a number of key theories and debates about power, which refer to several of the questions outlined above. It will also trace a certain logical development in the theorization of power from pluralist-behavioralism to structuralism to poststructuralism.

THE THREE DIMENSIONS OF POWER

The idea that power has three dimensions or "faces" comes from Lukes, who argues that the formula for power—*A has power over B to the extent that he can get B to do something that he would not otherwise do*—can be seen as operating in three distinguishable, yet interrelated, ways. The first face of power is usually associated with Robert Dahl who, along with Polsby (1963) and Wolfinger (1971), tried to show that power in the U.S. political system was distributed pluralistically. In doing so, they were opposing the "ruling elite" theorists such as Mills (1956), who believed that power was concentrated in the hands of a dominant group in society. In his study of local politics in the New Haven area of Connecticut—which he took as a microcosm of the broader distribution of power in American society—Dahl argued that there was no empirical evidence to support the idea of a ruling elite, and that, in fact, different groups were influential over different areas of policymaking (1961). Dahl's analysis contained the implicit idea that there are plural centers of power in a democratic society. More importantly, its central focus was on decision-making behavior in cases where there is an observable conflict of interests. For Dahl, power is the ability to affect another's decision-making: A exercises power over B when he can get B to make a decision that he would not have otherwise made.

However, this idea of power as decision-making was criticized for being too one-dimensional. Peter Bachrach and Morton Baratz argued that power also has a hidden or covert dimension—a "second face" (1962). Power involves not only decision-making, but also what they call *nondecision-making*. This refers to the ability of dominant elites to "set the political agenda" in such a way that certain issues are prevented from being aired, thus precluding the very possibility of a decision being made about them. In situations of conflict, there is often a "mobilization of bias" against certain interests. The mass media would be an example of this: Whether consciously or unconsciously, it reinforces dominant values and practices, thereby delegitimizing or marginalizing opposing viewpoints and preventing *potential* issues from becoming *actual* issues. In this paradigm, power operates not necessarily by directly influencing B's decision-making, but by preventing B from raising concerns that might be detrimental to A's preferences.

Lukes, however, contends that even this understanding of power was limited, because, like the pluralist-behavioralist view, it assumed that power is only exercised in situations of observable conflict between different interests. But what if it were the case that power functioned in such a way as to prevent conflict from arising in the first place (1974)? Here Lukes points to an even more insidious dimension of power—its "third face"—where power operates not simply by A getting B to do what he does not want to do, but by shaping B's thoughts and desires in such a way that B does what A wants him to do *as if it were a free and autonomous act*. In other words, power may operate as a form of subtle thought-control or manipulation, and may cause someone to act, not according to his own interests, but in the interests of those who are exercising this power. What is being suggested here is that what we *think* we want and is in our best interests may not actually be so—our preferences may be shaped by external influences. Here we might think of the advertising industry, which sells us products that we do not necessarily need or even want, by manipulating our desires. This distinction Lukes draws between *subjective* interests and *real* interests is problematic, as discussed below, but his analysis of power is nonetheless interesting for the way it moves away from the domain of individual decision-making behavior, toward some notion of an overall structuring of the ideas and values that shape individual behavior.

STRUCTURALISM AND MARXISM

The structuralist argument is that power derives not so much from individual or even collective agents, but from their place in a broader social structure. In other words, it is the structural position of agents that allows them to exercise power over others. Marxists like Nicos Poulantzas argue, for instance, that in a relationship of class conflict, the economic and political power of the bourgeoisie—and its capacity to realize its interests—derives from its structural location within the capitalist system. In his debate with Ralph Miliband—who suggested that the class bias of the state could be explained by the privileged background and class allegiances of those who manned

the state apparatus (1969)—Poulantzas argued that Miliband's view places too much emphasis on individual behavior, and neglects the effects of structural relations in the capitalist system (1973). In Poulantzas's view, power derives from the ensemble of structures that make up capitalist society, which shapes relations between classes and allows one class to dominate others.

FOUCAULT AND POSTSTRUCTURALISM

Michel Foucault further radicalizes the concept of power by taking it beyond questions of both individual behavior and structure. For Foucault, power is a *non-derivative* concept that cannot be reduced to the preferences of individual agents, economic classes, or even the structural requirements of the capitalist system. Rather, power must be studied in its own right. Here he introduces a number of important methodological innovations. Firstly, the focus must be on the "how" of power—because power only exists when it is being exercised. There is no mysterious substance called power that can lie dormant without being exercised: Indeed, Foucault goes so far as to suggest that power "as such" does not exist (1994, p. 336). Secondly, power is *relational*, rather than an individual or structural capacity: That is to say, power is a mutual relation between agents—both individual and collective. Power is a *way of acting on the actions of others*. This implies, thirdly, a certain freedom of action on the part of both agents in a power relationship. The power relationship presupposes that agents are able to act differently, that they have a range of actions open to them, and that power involves constraining or influencing these actions. Foucault argues, for instance, that slavery is not a power relationship because there is no possibility of the slave acting differently. In this sense, power is not a zero-sum game as many suggest: Rather, it involves a dynamic interplay between agents. Fourthly, then, while power is not the same as coercion, neither is it a matter of consent, as Arendt (1969) or Parsons (1969) would claim. While power constrains, there is always the possibility of there being resistance to it, even in situations of domination, where the normally free and reciprocal flow of power becomes congealed.

However, the question of resistance in Foucault's theory of power is also ambiguous and problematic (see Newman 2001; 2004). This is because Foucault sees power as being not only repressive and prohibitive, but also productive: Power *produces and incites* (1978). Unlike Lukes, who sees power as distorting the subject's "real interests," Foucault believes that this notion of "real interests" is an essentialist illusion manufactured by power itself. Power intersects with discourses and "regimes of truth" to construct the very identity of the subject. While this avoids the dubious notion of "real interests," it would seem, at the same time, to undermine the idea of a firm ontological and normative foundation for resistance to power: The subject who resists power is at the same time constructed by it. Foucault's theory of power raises as many questions as it answers, and it should not be thought that he has revealed some elusive "fourth dimension" of power beyond which we cannot proceed any further. However, by focusing on the "how" of power, and by seeing power in terms of relationships rather than as a substance or capacity, Foucault has considerably advanced our understanding of the concept.

SEE ALSO *Arendt, Hannah; Community Power Studies; Dictatorship; Foucault, Michel; Galbraith, John Kenneth; Mills, C. Wright; Political Science; Politics; Postmodernism; Poulantzas, Nicos; Power Elite; Power, Political; Repression; Resistance; Structuralism; Wealth; Weber, Max; Zero-sum Game*

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Saul Newman

POWER, COMMUNITY

SEE *Community Power Studies.*

POWER, MONOPOLY

SEE *Monopoly.*

POWER, POLITICAL

Political power is commonly defined as the ability or potential to influence outcomes. Yet, there are several interpretations of this definition. To some scholars, it is the ability to control outcomes or shape the behavior of others. For instance, if *A* has power over *B*, *A* can coerce *B* to do things that *B* would not otherwise do. Thus, political power is conceived of as a coercive or control mechanism. To others, political power is simply a relative and self-oriented term: *A*'s power is equal to *B*'s or *A* has more or less power than *B*, but *A* and *B* do not necessarily have a coercive power over each other. Still others conceive political power as a public good that in a democratic society is shared by everyone. The foregoing three concepts seem to be unrelated but they, as will become clear later, actually describe different levels of power at different points in time.

HISTORICAL PERSPECTIVES

Understanding the concept of political power is enhanced if analyzed with respect to different political systems. Most societies have a history of autocratic systems. Modern democracies have been established only since the advent of the Industrial Revolution. During the long history of autocratic rule, societies were governed by monarchs, warlords, and their subordinates. Political power rested upon a single person or a handful of individuals. Going back to the beginning of political history, one finds that the first leaders were probably those who had above normal social skills, ambition, and motivation. Over time, however, political power often passed to the children or families of the rulers, regardless of merit. Power was used to amass wealth, and wealth, in turn, brought more power to the ruling elites, leading to a more skewed distribution of power. The masses had little or no political or civil rights. Accession to power became a function of being a member of the royal family or the ruling elite. The conceptualization of political power as a coercive or control mechanism, *A* having power over *B*, is grounded on the experiences of autocratic rule. The Industrial Revolution, beginning in countries like England and Sweden, changed that relationship by gradually diffusing power from the ruling elites to the masses.

The concept of political power as a public good seems to be based on the experiences of ancient and modern democracies. In the classical Greek democracy, the people were both the rulers and the ruled. Political power was equally or almost equally shared among citizens. In modern democracies, political leaders are elected by the people and are considered to be representatives of the people. Political leaders are expected to make decisions that, on average, benefit the interests of their respective societies. Leaders who are unaccountable or unresponsive to the interests of the people are unlikely to be reelected. The fear of loss of office, in part, motivates leaders to excel in their job performance. In modern democracies (unlike in classical ones) citizens, for the most part, possess power in different magnitudes. For instance, although all citizens have the right to vote and are treated equally before the law, individuals do not have an equal chance of influencing public policies or winning the highest elected offices. Thus, the idea that power is a public good or is shared evenly by all in modern democracies is empirically unsupported. The thesis describes what ought to happen, not what actually happens, in modern democracies. Nevertheless, power as a public good, or the perfect equality of power, may be considered a theoretical ideal, one end of the political power continuum, and democratic societies can be judged by how far removed they are from that ideal.

DIFFUSION OF POLITICAL POWER

From Greek philosopher Aristotle to seventeenth-century thinker James Harrington to socialist Karl Marx, many have argued that the distribution of power in a given society is influenced by the distribution of wealth and education or the level of socioeconomic development. The more wealthy and educated an individual is, the more power he or she will have. Informed and affluent citizens in modern democracies have acquired greater power and fundamental political and civil rights, including the right to vote, to assemble, to run for office, to due process, and to freedom of speech.

Citizens combine their individualized power to form interest groups and political parties to make sure that their interests are protected and fostered. Accession to a position of leadership also has, for the most part, become a function of an individual's wealth, education, and, to a certain extent, personal charisma. Leaders are elected to serve the people, not necessarily to earn more power. The authority and coercive rights of leaders in democracies, unlike in autocracies, is often institutionalized, power that is impersonal and resides in the state.

POLITICAL POWER: DYNAMIC OR STATIC?

The fact that political systems have evolved from autocracies to democracies, at least in most industrial societies, may indicate that the distribution of political power is a process or a dynamic, as opposed to a static, phenomenon. The three conceptualizations of political power—power as a coercive or control mechanism, power as a relative and self-oriented term, and power as a public good—may indeed be a continuum, different points in space and time. Thus, autocracies are political systems in which the distribution of power is concentrated in the hands of a few individuals. Democracies, in contrast, are political systems in which political power, in addition to basic procedural rights such as one-person-one-vote and equality before the law, is widely diffused among individuals. Older democracies, such as those in England, evolved from autocracies only after centuries of gradual and incremental political reforms. During this long period of political change, political power of the traditional elites and the masses have been minimized and maximized, respectively. Given the presence of some asymmetry in the distribution of power, even in modern industrial democracies, and assuming that economic development will continue to grow, there is no reason to assume that democracies will fail to evolve further. Indeed, the weaknesses of the concepts of power as a coercive or control mechanism and power as a public good are, respectively, that they fail to account for the changing nature of power and the fact that power parity among individuals has not in practice been achieved in modern democracies. It is not clear that such power parity will ever be achieved. But how do researchers measure the continuous nature of political power?

Political power may be redefined as the probability of attaining the most important office in a given state, the presidency or the prime ministry. The fact that not all individuals are interested in becoming president or prime minister or the fact that only one individual can attain the highest office is not important. Rather attaining such office is important as a yardstick for calculating the level of power an individual possesses. Thus, the probabilities of winning the highest office for each individual, and hence each person's level of power, would lie between 0 and 1. The foregoing describes the concept of political power as a relative and self-oriented term: *A*'s power is equal to *B*'s or the former possesses more or less power than the latter. Given that political power is hard to quantify, however, income distribution can be a proxy for political power. Thus, the chances of each individual winning the highest office are estimated by using income levels; the higher the income of an individual, the higher the probability he or she will become a leader. The probability of winning the most important office for an individual in an ideal democracy, in which the number of adult citizens is equal to N and in which power is perfectly equal among individuals, would be $1/N$. However, because of inherent differences in merit among individuals, ideal democracy or a perfect equality of power will not likely be achieved. Democracies embrace individual freedom and a market economic system, which result in some citizens having more power than others. What then is the most plausible distribution of power that in the future?

Gizachew Tiruneh posits that political power in democracies will, in the long run, likely be normally distributed or take the form of a bell-curve (2004). Early-twenty-first century industrial democracies have an uneven distribution of power (and income) where the mean or average citizen is to right of center. That is, the distribution of power and income are skewed toward or in favor of the upper classes. As the level of democracy, propelled mainly by continuous socioeconomic development, increases or the level of power diffuses over time, the mean citizen will gravitate to the center of the normal curve (where the preponderant majority or the middle class is located), and, once settled at the center, will have the most decisive voice and power in democratic politics. Because those individuals to the right of the mean have, in theory, more power than those to the left of the mean and most leaders may come out of the former group, the political agendas and policies of leaders will likely be dictated by the preferences of the mean citizen. The normal distribution of power represents a democratic system whose quality or degree is likely to be optimal. In this stage of political development, the levels of democracy and power become nearly identical. Tiruneh calls this state of political evolution *normal democracy*. Assuming that power is a function of merit, the role of socioeconomic development (wealth and education) does not bring power parity among individuals per se, but erases the power bias (the skewed distribution of power) that has been created mainly by autocratic systems.

Some scholars may disagree with aspects of Tiruneh's theory of political power. For instance, they may conceive power as a static, rather than dynamic, concept. Or they may, on philosophical or moral grounds, contend that citizens ought, regardless of levels of income and rationality, possess an equal distribution of power. The validity of these contentions is unclear. Until a majority of scholars agree on a definition of political power, an understanding of the concept remains incomplete.

SEE ALSO *Autocracy; Dahl, Robert Alan; Democracy; Dictatorship; Distribution, Normal; Elections; Elite Theory; Hierarchy; Income Distribution; Inequality, Political; Monarchy; Politics; Power; Power Elite; Public Goods; Repression; Stratification; Stratification, Political; Wealth*

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Gizachew Tiruneh

POWER ELITE

In his 1956 work of the same name, American sociologist C. Wright Mills coined the term *power elite* to characterize a new coalition of ruling groups that rose to dominance in the post-World War II United States. Mills rejected the conventional view of a dispersed, plural, and democratic organization of power and instead saw an increasing concentration of that power in the hands of the three institutional orders that composed the power elite: the military, large corporations, and government leaders. This concentration of power was progressively more centralized and undemocratic. Public discussion and debate over policy was replaced by elite command and control. Mills argued that "within American society, major national power now resides in the socioeconomic, political and the military domains" (Mills 2000, p. 6); the family, religious, or educational arenas, dominant in other eras, have become subordinated to the *governmental-military-industrial complex*.

Much like the Frankfurt school, Mills synthesized the perspectives of Karl Marx and Max Weber. Advanced capitalist societies were characterized by increasing instrumental rationalization. Following from the dominance of means-ends and strategic rationality, bureaucratic and technological elements became the central structuring factors of social order. Political authority and social power required command and control over technologies, industrial production, the military, and in another sense the higher levels of government. Thus the new power elite derived its position from the concentration of power in large corporations and oligopolies that dominated sectors of industries, and in a strata of political leaders who directed an expanded federal state, as well as a military that dwarfed most other nations in size and had become the largest expenditure in the federal budget.

While the image of a society of small landowners with few sources of concentrated power may have been idealized, it contained an element of truth. By the end of the nineteenth century, however, the United States had become more urban and industrialized. With industrial capitalism came greater concentration of power in the large industries that dominated in the mid to late-twentieth century.

Mills opposed the pluralist school whose foremost representative was political scientist Robert Dahl. Pluralists argued that there were many centers of power in the United States, multiple interest groups that were each capable of setting agendas and checking other powerful groups through veto. Mills believed that the pluralist view was wrong. Power in the United States was highly concentrated and, in most respects, undemocratic. Only the power elite really set the agenda. The notion of a vital political public in which important issues are discussed (an idea central to John Dewey [1859–1952], another important influence on Mills) was descriptively untrue. National government was characterized by an increasing concentration of executive power and a diminution of legislative power. The pluralist outlook mistook mid-level debates on power, which may have had a plural character, for the major centers of power.

Social and political power was concentrated in a small group of interlocking elites who shared a common social world. While members of the power elite did not necessarily possess a unified class consciousness, they traveled in common social circles, followed common career paths, and formed interlocking groups.

Mills agreed with mass society theorists that the displacement of public discussion made way for the influencing, directing, and manipulating of public opinion through new media of communication. The power elites gained control of mass media but also were surrounded by a culture of celebrity in which they participated. The elites not only associated with entertainment celebrities, drawing on their cultural capital, they became celebrities themselves.

Mills's synthesis of Marx and Weber was not doctrinaire. Mills did not conceive of the power elite as *class* in Marx's sense. The three institutional orders were not united by a common relation to production, class con-

sciousness, or simple economic interests. They constituted an elite in the sense used by Vilfredo Pareto (1843-1923) or Gaetano Mosca (1858-1941). They formed an alliance for ruling groups with interlocking membership and sociality. This alliance can shift over time and circumstance.

Mills's conception of the power elite was a major influence on the New Left, especially on its non-dogmatic appropriation of Marx and the radical tradition. It also initiated a major body of research on power structure that further challenged the pluralist argument. The most well-known proponent of power structure research is G. William Domhoff, who continued Mills's research into the social construction of elites in U.S. society.

Critics have noted that Mills may have overstated the permanent role of the military in influencing U.S. society and in forming the power elite. They point out that the nature of leading companies and industrial elite has changed rather radically since the l960s. Still recent research on the concentration of wealth and power in the United States, such as that conducted by Kevin Phillips (2003), seems to lend support to Mills's concerns.

SEE ALSO *Autocracy; Bureaucracy; Crony Capitalism; Dahl, Robert Alan; Elites; Frankfurt School; Groups; Hierarchy; Interest Groups and Interests; Leninism; Marx, Karl; Military; Military-Industrial Complex; Mills, C. Wright; Oligarchy; Pareto, Vilfredo; Pluralism; Policy Analysis; Pressure Groups; Social Influence; Stratification; Wealth; Weber, Max*

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POWER POLITICS

SEE *Realism, Political.*

PRACTICE THEORY

Practice theory is generally recognized as a way to account for social life through the synthesis of societal structures and a person's individual dispositions. Pierre Bourdieu (1930–2002) is perhaps the most famous social theorist associated with this method of apprehending social life—a method that in the early 1990s he termed *genetic structuralism*. Until his death in 2002, Bourdieu held the chair of sociology at the Collège de France and directed the Centre de Sociologie Européenne.

In *Outline of a Theory of Practice* (1972), Bourdieu argued that in their attempt to account for social practice, sociologists and ethnographers must not only leave the objectivist grand theories of history and society behind, they must also abandon the unmediated subjectivism of phenomenology and existentialism. For Bourdieu, neither set of theoretical apparatuses could satisfactorily account for the social practice of everyday life. By reconstructing the dialectic between structure and agency, he hoped to reconcile the levels of abstract structures with the actions, feelings, and mental states of individual persons. It is critical to appreciate that while Bourdieu's work is situated in the ethnographic present, it works simultaneously in the world of politics and semantics of institutions, social structures, and social movements.

While Bourdieu vigorously critiqued earlier attempts to theorize social life, he also took seminal aspects of his own argument from European social theorists such as Max Weber (1864–1920), Karl Marx (1818–1883), Ludwig Wittgenstein (1889–1951), Georges Canguilhem (1904–1995), and Georges Bataille (1897–1962). In particular, his use of the concepts of domination, social class, and power reflects earlier economic and sociological theories, particularly those of Marx. In his use of personal dispositions and dynamic personal agency, Bourdieu's work reflects his rejection of Claude Lévi-Strauss's structural anthropology, which in the late 1950s and 1960s had argued that there were specific rules that governed kinship and symbolic structures in traditional society.

Instead, Bourdieu argued for an active synthesis of theory and method as tools to investigate the interactions between larger, objective structures of society and the individual. The thread that connects activism with his method is his understanding of society as a struggle of symbolic and material forces, in which the "truth" about reality is constructed both from interpretation and from structural necessity imposed by a dominant symbolic

structure, which treats its particular version of reality as natural.

In order to achieve adequate analysis, he proposed a set of concepts, defined in such a way that they can be used in any ethnographic situation for the study of everyday life; in fact, it is the empirical work that actualizes this program. Bourdieu also argued that these concepts not only constitute his method of investigating social practice, they imply a theory of social structure as well. Bourdieu's basic outline for a theory of practice involves three major conceptual categories—*habitus*, *field*, and *capital*—as well as concepts of struggle and strategy, which evoke intentionality on the part of individuals, families, and social groups as they seek to manipulate their position in various social fields.

In brief, *habitus* refers to durable dispositions, to a sense of one's place in the social world, and it embodies our understanding of the logic of society and the place we have in it. In broader terms, it refers to social structures that operate on the person, as well as a system of models of perception and appreciation that results from our learning in the world and from our acting in the world.

Bourdieu's concept of *field* is one that reflects the space of social interaction, conflict, and competition. Fields are defined by a system of objective relations of power that lie between positions in the field. For Bourdieu, society is a system of fields that are relatively autonomous, but that nonetheless exist in relationship to one another and that collectively exist within a larger social space (defined as the overall conception of the social world). Each field is dynamic and has its own logic and its own structure and forces, which are organized around specific capitals over which individuals and groups struggle as they attempt to maintain or change their position in a field.

In using the concept of *capital*, Bourdieu rejects the purely economistic meaning of the word, and adds to it the notions of symbolic and cultural capital as ways through which class positions and power are manifested. Broadly defined, capital is a socially valued good. Symbolic capital is the most critical form of capital; Bourdieu argues that not only are precapitalist and capitalist societies organized around symbolic capital, but that capital also structures our everyday lives through the use of judgments about taste, social hierarchy, and methods of discernment. Symbolic capital is also closely connected to class privilege, and the domination of masculine ideology, which is itself related to his use of symbolic violence.

Bourdieu's work has influenced the fields of sociology, philosophy, education, and social anthropology. In particular, his work has been central in what has been called the *reproduction debate*, in which scholars investigate the reproduction of social hierarchy and the cultural production of forms of resistance, social identity, and ethnicity. In addition, his has been a voice in the debate on practices of authorship, reflexivity, and objectivity. Perhaps most importantly, Bourdieu has been a political voice that spoke for the dispossessed, the unheard, and those who suffered through the institutions of racism and sexism.

SEE ALSO *Bourdieu, Pierre; Habits; Habitus; Marx, Karl; Marxism*

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Cheleen Ann-Catherine Mahar

PRACTICING ANTHROPOLOGY

SEE *Anthropology, Public.*

PRAGMATISM

Pragmatism refers to the philosophical position that the test of an idea's truth is its practical consequences. Pragmatism is a reaction against abstract, romantic, and idealistic philosophies, countering instead that the truth of an idea arises from observing its consequences.

Pragmatism was in many ways a product of its era. Pragmatism's roots are in empiricism and the scientific method, and the energies and enthusiasm of late nineteenth-century American life are obvious in pragmatism. After the Civil War (1861–1865), the United States was exploding with advances in communications, transportation, and technology resulting in scientific breakthroughs and technical innovations such as immunizations, the

telephone, the mechanization of industry, and the like. Thus, American pragmatism—focused on experience and consequences—was extremely different from the romanticism and idealism of much of contemporaneous European philosophy and the arts.

Pragmatism developed in discussions of the Metaphysical Club, a group of faculty and professionals meeting to discuss the issues of the day at Harvard University during the 1870s. Members of the club included the scientist Charles Sanders Peirce (1839–1914), the mathematician Chauncey Wright (1830–1875), the historian John Fiske (1842–1901), the psychologist William James (1842–1910), and lawyers such as Oliver Wendell Holmes (1841–1935), Joseph B. Warner (1848–1923), and Nicholas St. John Green (1830–1876).

Trained as a mathematician and physicist, Peirce is hailed as the father of pragmatism. He first used the term *pragmatism* in an 1878 article in *Popular Science Monthly* titled "How to Make Our Ideas Clear." Peirce's famous guide was, "Consider what effects which might conceivably have practical bearings we consider the object of our conception to have. Then our conception of these effects is the whole of our conception of the object" (Peirce 1878, p. 24). Peirce, who later renamed his pragmatism *pragmaticism*, argued that it was a powerful empirical and philosophical tool because it demanded that ideas be examined for their consequences, not for the elegance of some abstract metaphysical model. He wrote about pragmatism:

> It will serve to show that almost every proposition of ontological metaphysics is either meaningless gibberish—one word being defined by other words, and they by still others, without any real conception ever being reached—or else is downright absurd; so that all such rubbish being swept away, what will remain of philosophy will be a series of problems capable of investigation by the observational methods of the true sciences. (Peirce 1905, p. 171)

WILLIAM JAMES AND JOHN DEWEY

Certainly the best-known proponent of pragmatism was William James. Trained in medicine, he spent most of his adult life studying and teaching the new field of psychology at Harvard University. James popularized pragmatism, giving Peirce credit for its founding in a 1908 address at the University of California. In his chosen profession of psychology, James is famous for his notion of "stream of consciousness." The term is much misused today, but for James it meant that the mind is active in giving meaning to experiences that it encounters. James's pragmatism is rooted in his understanding of psychology. James argued that the "truth" of ideas lay not in their abstract formulation but in their "cash value" as consequences in human experience. He wrote: "The whole function of philosophy ought to be to find out what definite difference it will make to you and me, at definite instants of our lives, if this world-formula or that world-formula be the true one" (James [1907] 1986, p. 50).

James applied his theories to a number of philosophical areas, including the question of religion and the supernatural. In his famous works *The Will to Believe* (1897) and *The Varieties of Religious Experience* (1902), James explored the power of the individual "will to believe." James concluded that although the materialist might wrongly conclude that religion was a fallacy, the positive effects on the life of the individual adherent (rather than the existence of God) demonstrate the "truth" of religion. He wrote: "On Pragmatic principles, if the hypothesis of God works satisfactorily in the widest sense of the word, it is true" (James [1902] 2002, p. 299).

James's contemporary, John Dewey (1859–1952), chair of the philosophy department at the University of Chicago at the turn of the century, is best known for his work on education and social issues. Dewey's guiding philosophy, *instrumentalism*, is a strand of pragmatism. Dewey was critical of abstract and theological notions of truth and reality. He defined his instrumentalism as "an attempt to constitute a precise logical theory of concepts, judgments, and inferences in their various forms, by primarily considering how thought functions in the experimental determinations of future consequences" (Dewey 1903, p. 21). Dewey's approach utilized a praxis formula for inquiry as the method for advancing knowledge. Dewey believed that through experience the mind acquires knowledge, but over time new experiences challenge the previously held beliefs. The process of inquiry, challenging staid ideas and the resulting new synthesis, is the process by which truth becomes known to the individual.

Pragmatism was applied to law by members of the Metaphysical Club, including Supreme Court justice Oliver Wendell Holmes Jr. and Nicholas St. John Green. Holmes argued that the law should be interpreted not on static historical observation of the original intent of the framers of the constitution but by considering the practical outcomes of the law or judgment in question. In other words, the cardinal rule of jurists should be the practical policy consequences of a given outcome in their deliberation. Holmes recognized that such a view of the judiciary empowers it with a dynamic and legislative function akin to that of the Congress. This practical approach to the outcomes of the law, in distinction to theories of law rooted in tradition, religion, and metaphysics, is shared among legal pragmatists.

THE PHILOSOPHY OF PRAGMATISM

In philosophical terms, pragmatism is generally considered to be nominalistic and pluralistic. Ideas are not "real" as abstract, formal categories, but change as experiences are apprehended and given meaning by the mind. The philosopher Ferdinand C. Schiller (1864–1937) wrote: "Concepts are tools slowly fashioned by the practical intelligence for the mastery of experience" (Schiller 1907, p. 64). Thus, for Schiller there is no single Truth, although there are truths that are relevant within a given context. James agreed, citing that truth was not static but "ambulatory," directly related to human experiences. Moreover, old "truths" may no longer be relevant to the contemporary setting because they no longer adequately convey meaning about the world as it is. Thus, they are no longer true.

For pragmatists, ideas are contextual and their worth derives from the utility of their consequences. This epistemology is rooted in a rejection of Western teleology and monism. For the pragmatist, there is no first cause, nor is there a single ultimate end. Rather, the world is pluralistic in that social and empirical phenomena are connected but it is the individual who gives meaning to experience, and therefore the value of a concept is in its practical consequences. James wrote: "The distinctions between thoughts and things … the conceptions of classes with subclasses within them … surely all these were once definite conquests made at historic dates by our ancestors in their attempts to get the chaos of their crude individual experiences into a more shareable and manageable shape" (James 1909, p. 62).

Although not exclusively an American philosophical tradition, pragmatism is usually identified with Americans such as Peirce, Holmes, Dewey, Wright, Schiller, and especially William James. However, pragmatism crossed the ocean, influencing and being influenced by others, such as the Italian authors Giovanni Papini (1881–1956) and Luigi Pirandello (1867–1936) and the French philosopher Henri Bergson (1859–1941). Other well-known pragmatists included George Herbert Mead (1863–1931), James Hayden Tufts (1862–1942), and Sidney Hook (1902–1989). Many of the assumptions of pragmatism were to influence later twentieth-century philosophical currents, particularly that of secular humanism.

SEE ALSO *Civil War; James, William*

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Eric Patterson

PRAXIS

"Praxis," from the Latin, is the opposite of "theory." The Greek praxis and its related stem, "prassein," means "to do." It is commonly defined as "action" or "practice." Traditionally, there has been a perceived dichotomy between theory (speculation, thinking) and praxis (action, doing). However, contemporary notions of praxis, especially as the Marxists see it, reject this distinction.

There are two prevalent meanings of praxis in the modern day: one in religion and ethics, and one in social theory and political philosophy. In Catholicism, praxis refers to applying the principles and ethics drawn from religion to everyday life. It is, in a sense, applied belief. The idea is that the practice of one's religious beliefs enables one to live a just life. Hence, belief (theory) leads to a just society.

In *Phenomenology of Spirit*, German philosopher Georg Wilhelm Friedrich Hegel (1770–1831) argued for the interrelationship of thought and action, linking theory and praxis. Karl Marx (1818–1883), in a movement against idealism and metaphysics, proposed a "practical-critical" activity that combines theory with practice, where no thinking can be isolated from social practice (Marx 1845). This linkage of thinking with action marks the most sustained examination of the question of praxis in contemporary critical theory (CT).

Praxis is given a specific agenda and political program in the Frankfurt School's CT. CT erases the distinction

between theory and praxis by showing how one leads to and informs the other. Praxis is theory that serves the purpose of social transformation. The social transformation sought by praxis is not only informed by critical reflection ("theory") but also by questions of justice and emancipation (social or collective action). It corresponds therefore to Marx's "practical-critical" thought.

"Theory" in CT is essentially a question about reflection as related to knowledge. As philosopher Max Horkheimer (1895–1973) understood it, CT is a form of knowledge distinguished not just by its specific object of knowledge but also by its special relation to this object. Knowledge or theory is directed at society and social relations (its object). The relation is not one of mere "interpretation" or "analysis" of this object-society. The relation to this object of study (society) is informed by the aim of emancipation. Theory is thus directed at a goal: a just society. Knowledge leads to, or at least aims for, social justice. In this sense CT is not independent of political action or program. This Marxist line, as Horkheimer elaborated, sees theory as "an element in action leading to new social forms" (Critical Theory 1972, p. 216). This emphasis on action and superior knowledge distinguishes it from traditional theory where the object of knowledge and the subject are in a passive relation. In CT, reflective theory engages with the object in such a way as to transform both itself and the object.

CT is here a program of social research, investigating social conditions of facts as well as of theory. It resists the institutional demarcation of theory and application. The philosophical (theory) and the social (praxis) come together in this formulation. It applies thought to the entirety of human existence.

CT's mode of engagement with the social can be described as "knowledge as action." It calls for active thought that continually challenges the existing state of affairs in society. The praxis of CT is in its thinking differently about the social world, where a different thinking will lead to changes in the way life is lived. CT does not offer a program of change in material experience; it offers a mode of understanding that can transform how material experience in modernity is interpreted. In CT a critique of culture may bring about changes in society because it develops new frames for interpretation, knowledge, and action.

Feminist exponents of critical ethnography express these elements most strongly in making praxis the defining moment of all investigative methodology. Such an ethnography focuses on political practice and breaks down the gap between researcher and object of research. Others, such as the education and cultural studies scholar Handel Kashope Wright, see the discipline of cultural studies as "social justice praxis work" where interpretation, or theory, must be informed by a commitment to social justice. Thus, praxis is political action informed by knowledge, where knowledge itself is driven by self-reflection and the need to engage with goals of justice and emancipation.

SEE ALSO *Activism; Critical Theory; Cultural Studies; Feminism; Justice; Marx, Karl; Marxism; Science*

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PREBISCH, RAÚL
1901–1986

Raúl Prebisch was a highly influential Argentinian economist and policymaker of the twentieth century. He is best known for proposing the idea that the world economic system consists of two connected elements—an industrialized center and an underdeveloped periphery—wherein the former dominates the latter. Contrary to the Ricardian claim that trade benefits all, Prebisch argued that trade between the center and periphery is unequal and detrimental for the periphery, and that became increasingly true as the world economy developed. His ideas were central to Latin American structuralist and dependency schools of thought. During the middle decades of the twentieth century, they led to the widespread adoption, in the periphery, of import substitution industrialization (ISI) policies that focused on "inward-directed" industrial development.

Prebisch's ideas achieved a wide dissemination and receptivity when he headed the United Nations (UN) Economic Commission for Latin America (ECLA) between 1948 and 1963. One of his central theses was that, in the long run, primary producers in the periphery faced declining terms of trade for their exports vis-à-vis manufactured goods. This view received empirical support from a 1949 UN study, *Relative Prices of Exports and Imports of Underdeveloped Countries*, which examined the

period between the late nineteenth century and end of World War II. Prebisch and the ECLA pointed out that during the upswing of a trade cycle, prices of primary goods rise faster than those of industrial goods, but that they fall much more steeply during the downswing, causing an overall decline in prices by the end of the cycle. In the industrialized center, the strength of organized workers and firms causes a relatively smaller decline in the prices of industrial goods during a downswing, while the vulnerability of farmers and unorganized workers leads to sharp declines in prices in the periphery.

Prebisch's ideas were shaped by the experience of Argentina in its trade with industrialized nations such as Great Britain and the United States, both before and after the Great Depression. Another UN economist, Hans Singer, argued that income elasticity of demand for industrial goods (percentage increase in the demand for industrial goods associated with a percentage point increase in people's incomes) is higher than that for primary goods, thereby causing a decline in the benefits from trade for the periphery over the long run. Together, these ideas came to be known as the Prebisch-Singer hypothesis.

Prebisch's work has predictably attracted criticism from mainstream trade theorists. While the UN report that originally provided the empirical basis for Prebisch's theory has been largely discredited, later studies have supported the Prebisch-Singer hypothesis. International Statistics Institute (ISI) policies have been blamed for certain longstanding problems, such as unsustainable debt levels in the periphery. Notwithstanding such critiques, ISI policies have also led to substantial increases in income and the development of an industrial base in a number of developing countries.

Prebisch's insights remain important today for regions and countries in the periphery, notably Africa. Scholars continue to argue in favor of careful, "inward-directed" policies with concerted cooperation among countries in the periphery, and for the establishment of multilateral institutions that genuinely represent their interests. This vision informed the founding (in 1964) of the United Nations Conference on Trade and Development (UNCTAD), a multilateral organization that Prebisch headed for its first six years. If there was ever a need for such institutions to represent the interests of the periphery on the world stage, it is at the present critical juncture of global integration. Indeed, there is a strong and growing literature among critical development scholars on the negative effects of globalizing policies for developing countries. These scholars are arguing that existing multilateral organizations such as International Monetary Fund or World Trade Organization have not represented the interests of the periphery adequately.

SEE ALSO *Dependency Theory; Import Substitution; Industrialization; Ricardo, David; Structuralism*

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Vamsi Vakulabharanam

PREBISCH-SINGER HYPOTHESIS

The classical economists believed that the terms-of-trade of primary products would show long-term improvement vis-à-vis manufactures due to the operation of the law of diminishing returns in primary production and the law of increasing returns in manufactures. The policy implication of this classical proposition is that a primary-producing country need not industrialize to enjoy the gains from technical progress taking place in manufactures; free play of international market forces will distribute the gains from the industrial countries to the primary-producing countries through the higher prices of their exports of primary products relative to the prices of their imports of manufactures (that is, the terms-of-trade will move in favor of primary-product exporting countries).

THE PREBISCH-SINGER HYPOTHESIS AND ITS POLICY IMPLICATIONS

The opposite hypothesis—the Prebisch-Singer hypothesis of long-term deterioration in the terms-of-trade of primary products—can be traced back to the early mid-twentieth-century writings of Charles Kindleberger. He thought it inexorable for the terms-of-trade to turn against primary producing countries because of the operation of Engel's law—which states the demand for goods needed for bare subsistence such as food rises less than

proportionately while demand for other luxury consumption goods rises more than proportionately—in the process of world economic growth and improvements in the standard of living. It was, however, a 1945 League of Nations report prepared by Folke Hilgerdt and its subsequent follow-up by the United Nations in 1949 that is actually the origin of the Prebisch-Singer hypothesis and the related debate. It was observed in these reports that during the sixty years preceding 1938 primary product prices had fallen relative to prices of manufactures.

In the 1950s both Raúl Prebisch and Hans Singer referred to this so-called historical fact and questioned the classical proposition and its implicit support for the colonial pattern of trade. It was pointed out that productivity increased faster in the industrialized countries (constituting the North or the industrial center) than in the primary-producing countries (constituting the South or the raw-material supplying periphery), so that the terms-of-trade should have moved in favor of the South, given the factors of free trade and competition. The South could have enjoyed the fruits of technical progress taking place in industry through free trade and specialization (in primary production) without going for industrialization, as suggested in the classical writings. But this did not happen as the available evidence showed. So the primary-producing countries were advised to pursue a vigorous policy of industrialization with the suspension of the free play of international market forces.

THE EVOLUTION OF THE PREBISCH-SINGER HYPOTHESIS

In the post–World War II period, the Prebisch–Singer hypothesis provided the theoretical basis for the policy makers of the newly independent countries to adopt a path of import-substituting industrialization (ISI) through protective commercial policy. The path of ISI in basically agricultural countries required imports of machines and technology. So, in the process of industrialization these countries began to face acute balance-of-payments problems. This led many southern countries to follow the path of export-oriented industrialization. Dependence on a few primary-product exports was reduced and these began to be substituted by manufactured exports.

Meanwhile, the emphasis of the Prebisch–Singer hypothesis shifted from the relations between types of commodities to relations between types of countries. The shift of emphasis too had its origin in the writings of Kindleberger in the mid- to late 1950s. He found no conclusive evidence of deterioration in the terms-of-trade of primary products, but he did have some evidence of a decline in the terms-of-trade of the primary-producing countries (South) vis-à-vis the industrialized countries (North). In fact, both Prebisch and Singer had in mind the concept of terms-of-trade between the North and the South. But, in the absence of appropriate data, they used the series on terms-of-trade between primary products and manufactures as a proxy, with the logic that primary products dominated the then export structure of the South and manufactures dominated that of the North.

The Prebisch-Singer hypothesis generated much controversy in the academic world. In their published papers, critics such as Jacob Viner (1953), R. E. Baldwin (1955), G. M. Meier (1958), G. Haberler (1961), R. E. Lipsey (1963), Harry Johnson (1967), Paul Bairoch (1975), Ronald Findlay (1981), and many others raised different statistical questions and discarded the hypothesis. Since the 1980s, a series of studies undertaken by John Spraos (1980), David Sapsford (1985), Prabirjit Sarkar (1986a, b, 1994, 2005), Sarkar and Singer (1991), E. R. Grilli, and M.C. Yang (1988), and many others questioned the validity of the criticism and provided strong statistical support for the Prebisch–Singer hypothesis, thereby bringing it back into the limelight.

THE PREBISCH-SINGER HYPOTHESIS: DIFFERENT EXPLANATIONS

The question that logically follows is what explains the deteriorating trends in the terms-of-trade of the South? The factor highlighted by Singer is the raw-material saving and/or substituting technical progress in the North which created a demand bias against southern exports in the process of growth of northern manufactures leading to a fall in the southern terms-of-trade.

In his 1950 work Prebisch tried to explain the phenomenon in terms of the interaction of the diverse economic structures of the North and the South with different phases of business cycles. In an upswing, wages and profit, and so prices, rise more in the North than in the South due to stronger labor unions and higher monopoly power of the northern capitalists. In the downswing, northern profits and wages do not fall much due to the same reason. The burden of adjustment falls on the raw material suppliers of the South; their prices fall more than the prices of manufactures.

The diverse economic structures created an asymmetry in the mechanism of distribution of the fruits of technical progress, argued Prebisch, Singer, and Arthur Lewis in their individual works published in the 1950s. In the North, technical progress and productivity improvements led to higher wages and profit while in the South, these led to lower prices. The North-South models of Findlay (1980) and Sarkar (1997 and 2001b) supported this asymmetry. Granted this asymmetry, the terms-of-trade would turn against the interest of the South in the process

of long-term growth and technical progress in both the North and the South.

In 1997 Sarkar provided another explanation in terms of product cycles. A new product is often introduced in the North. Initially there is a craze for this product and its income elasticity is very high. Owing to a lack of knowledge of its production technique, the South cannot start its production. The South produces comparatively older goods with lower income elasticity. By the time the South acquires the knowledge, the North has introduced another new product. In such a product cycle scenario, the income elasticity of southern demand for northern goods is likely to be higher than that of the northern demand for southern goods. Under these circumstances, if both the North and the South grow at the same rate (or the South tries to catch up by pressing for a higher rate of growth), the global macro balance requires a steady deterioration in the terms-of-trade of the South vis-à-vis the North.

Many other theoretical models exist to explain the Prebisch-Singer hypothesis. As it is increasingly recognized to be a fact, not a myth, many other models will be forthcoming.

SEE ALSO *Development Economics; Prebisch, Raúl; Singer, Hans; Terms of Trade; Unequal Exchange*

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Prabirjit Sarkar

PRECAUTIONARY MOTIVE

SEE *Money, Demand for.*

PRE-COLUMBIAN PEOPLES

The term *pre-Columbian* refers to the time before Columbus first set foot in the Americas. He sailed to find alternative routes to the East, as Asian imports had become very expensive in Europe after the Turks conquered Constantinople in 1453. Yet pre-Columbian peoples had flourishing civilizations long before the arrival of Columbus. Each society had prescribed laws and unique religions, and far from the savage cultures that history painted them to be, several societies were highly sophisticated.

Some scholars have postulated that around the time that the Israelites chose David as their king, a tribe of Asians crossed the land bridge that became the Bering Strait in search of new game. These people, called the Nadene, closely resembled modern Mongolians. About two thousand years ago, the group split into two factions—the Tlingit and Haida tribes, which went to the northwestern coast of North America—and the Athabascans, who stayed in Alaska around Lake Athabasca. But the Athabascans continued to move southward to form tribes in the Southwest.

Although this scenario is speculation, many similarities exist between the Asian peoples and Native American tribes. For instance, the mandala of the Hindus and Buddhists closely resembles the sand paintings of southwestern tribes. Early Asian calendars were also similar to those of the Aztecs. Special significance was often placed on the number four. Although no physical proof of this migration exists, signs point to its possibility. Asian tribes may have migrated as far south as the tip of South America.

One of the oldest tribes on record lived in the Four Corners area of the southwestern United States. They were called the Pueblos, and their ancestors were the Anasazi, a tribe that existed two thousand years ago. The Anasazi are known for their elaborate apartment buildings, built on the sides of cliffs. Later, the Pueblos used adobe and wood to build their homes. Their hunter-gatherer status changed around the year 1000 BCE, when they began to plant corn, squash, and beans, and to craft fine pottery.

The people who lived in Cahokia, in what is now southwestern Illinois, are known popularly as the "mound builders" because they built large structures for underground burial, governmental, or ceremonial purposes. The society is thought to have been territorial, led by a chieftain, and possessed the most elaborate hierarchial system in its time.

In Mesoamerica, as each new culture appeared, it adapted, and often improved upon, significant elements of the civilization that had come before. The Olmecs, the original civilization, lived in wood and thatch huts in a humid area on the Gulf Coast of Mexico. They raised corn, beans, and squash, worked with fine stones, and made pottery. It is theorized that the Olmecs traveled and traded throughout the area and thereby spread their culture throughout the region.

The Zapotec capital, Monte Alban, began to flourish at about the same time as the Olmec society fell into decline. The Zapotecs may have built the first observatory, and their system of glyph writing was the first writing of any type to be used in Mesoamerica. They recorded the first calendar, although the Olmecs may have begun to develop a similar system of counting the days before them.

The Mixtecs seem to have taken over sites where Zapotecan society was failing. The Mixtecs were exquisite goldsmiths, but their most significant contribution is the written record of their history, which covered a period of almost 600 years beginning around 940 CE.

Thriving at roughly the same time was another people, whose true name is still unknown. The name *Teotihuacanos* comes from their city—Teotihuacán, named by the Aztecs long after the civilization fell. Although few written records exist, a glimpse of their culture survives in colorful frescoes, which adorn palace walls. It appears that the Teotihuacanos traded goods widely, had a class-based society with specialized jobs, and worshipped a number of gods. They were also weavers and potters and jewelers who worked in semiprecious stones. Their civilization sharply declined around 700 CE, when the city was sacked and burned, probably by barbarian tribes from the north.

The Mayan society, which first appeared around 1000 BCE, was prevalent in parts of Mexico and farther south into Central America. They refined the art of writing and the calendar to their highest forms up until that time. Mayan art developed between about 200 and 900 and is considered to be the most sophisticated and beautiful of the region. The Mayans are known for their mathematical prowess and traded in salt, cacao, and obsidian.

No society in ancient Mesoamerica was as revered as the Toltecs. Later societies credited the Toltecs with inventing astronomy, the calendar, and the arts because of the finely crafted items found in the ruined Toltec capital of Tolan; however, historical fact disproved these claims. Toltec civilization fell into decline after Tolan was burned and sacked around the year 1150, and after the city vanished, an even more sophisticated and powerful people came to revere them. They adopted Toltec music, called their artists "Totecatls," and copied Toltec artistry in sculpture, architecture, and featherwork. They even proudly claimed Toltec lineage. These people called themselves the Mexica (me-SHI-ca), but history knows them as the Aztecs.

The Aztecs were arguably the most advanced culture to have arisen in pre-Columbian times, although they are more often remembered for their ritual practice of human sacrifice. Yet the Aztecs had a well-developed military, and they enlarged their capital of Tenochtitlán, now Mexico City, through the construction of floating farm plots known as *chiampas*. The Aztecan pantheon was elaborate, their educational system substantial, and they held great esteem for the arts.

Farther into South America were the Incas, whose society developed only shortly before the arrival of Columbus in the New World. Still, they managed to expand their influence throughout western South America by the time of their demise in 1533. The Incas are most remembered for their architectural construction, such as that at the site of Machu Pichu.

In the Bahamas and the Greater Antilles Islands, which include Cuba, Puerto Rico, Haiti, the Dominican Republic, and Jamaica, the Taino culture was the dominant society before the time of Columbus, although Ciboney and Guanahatabey (western Cuba), Macorix and/or Ciguayo (Bohio), and even Carib (Lesser Antilles) were also present. They were united by Arawak, the common language. As they were island cultures, they were adept sailors, and fishing was their main occupation, but the islands also provided abundant edible fruits and they used the fauna of the land to fulfill their needs. In 1492, the Taino had a thriving civilization. As the Mesoamerican cultures had, they constructed ceremonial ballparks, and they had an elaborate hierarchy of gods. They lived in five predominant kingdoms on Hispaniola, which were led by chieftains to whom tribute was paid. They raised crops of casaba melons, garlic, potatoes, and other fruits and vegetables, with yucca being their staple food. They had no system of writing nor a calendar, and could count only up to twenty using their hands and feet. But the Taino made exquisite handcrafted works, with pottery being the most remarkable.

Other less political societies also existed in North America before the arrival of Columbus. They were independent city-states, thriving in small groups. Their less-centralized chiefdom polities were also evident and included a central community surrounded by bordering neighbor villages. Each community had a central ruler, with a subservient underclass. When Columbus landed in the Bahamas, he was the first European to encounter the Taino. He called them "Indians" because he thought he had landed in India, and the appellation became the common term to describe all Native American peoples in the Americas.

Population estimates of pre-Columbian peoples in North American range from 8 million to more than 100 million, centered mainly in Mesoamerica and South America. However, because of incomplete evidence, the true population is difficult to determine.

SEE ALSO *Archaeology; Architecture; Columbus, Christopher; Geography; Incas; Indigenous Rights; Monarchy; Olmecs*

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Patricia Cronin Marcello

PREDATOR-PREY MODELS

SEE *Predatory Pricing.*

PREDATORY PRICING

Predatory pricing is primarily a strategy of price reduction that intends to eliminate a rival firm and thus increase market power. More generally, the goal of predatory pricing may be to discipline or otherwise inhibit a competitor. Also, while price is typically the instrument used for this purpose, other actions may be taken, such as bundling, refusing to supply, or other practices that effectively raise the rival's cost of doing business. Predatory pricing is therefore just one form of predation—though arguably the most commonly practiced and studied.

Predatory pricing is a controversial issue in scholarly and legal circles alike. On one hand, price cuts can be used as a means to exclude rival firms and increase future market power. On the other, price cuts are the bread and butter of market competition. Thus it is very difficult to distinguish genuine competitive pricing from predatory (and thus anticompetitive) pricing; and even if predatory pricing has negative long run effects, in the short run it has the same positive effects of aggressive competitive pricing.

LEGAL PERSPECTIVES

Allegations of predatory behavior are as old as oligopoly competition. Starting in the nineteenth century, examples include ocean shipping, sugar, tobacco, oil, and others. For example, some historians argue that, in the late 1900s the Southern Bell Telephone Company effectively eliminated competition through a strategy of pricing below cost in response to entry.

Reviewing the evidence in one of the most prominent cases, *Standard Oil Company of New Jersey v. United States* 221 U.S. 1 (1911), economist John McGee argued that there is little support for the allegations of predatory behavior. More importantly, he argued that the concept of predatory pricing itself lacks logical consistency. Of the several reasons pointed out by McGee, one deserves special attention. McGee maintained that, in addition to the prey, the predator too suffers from predatory pricing. If the prey resists predation and remains active, then the predator eventually will give up its efforts. Anticipating this outcome, the prey is indeed better off resisting predatory efforts. Anticipating this outcome, in turn, the alleged predator is better off refraining from its predatory strategy. Even if the alleged prey were short of cash, it could always borrow from a bank with the (correct) promise that its losses are only temporary. One can hardly underestimate the influence of McGee's work, both in economics scholarship and in legal practice.

Early-twenty-first-century legal rulings in the United States illustrate a skeptical approach to the concept of predatory pricing. This is particularly apparent in two important decisions by the U.S. Supreme Court: *Matsushita Electric Industrial Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574 (1986) and *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993). Adopting the theories of McGee and his followers, the Court embraced the view that predatory pricing schemes are rarely attempted; and that, if attempted, their success is rare.

In contrast to the United States, the European Union's (EU) approach to predatory pricing (based on Article 82 of the European Community Treaty) is rather aggressive. For example, in 2003 France Telecom SA was fined for "offering its services at a loss" in the high-speed internet access market.

Broadly speaking, the U.S. and EU approaches to testing for predatory behavior are similar: They look for evidence that there is (a) a sacrifice of short-term profits; and (b) a reasonable expectation that such losses are compensated by long-term gains from greater market power. The main difference between the United States and Europe is the strength of the second requirement, which is weaker in Europe. (There is also some divergence with respect to part (a). Typically, evidence of short-term losses is gathered by comparing price to some measure of cost. The question is then what measure of cost makes the most theoretical and practical sense.)

ECONOMIC PERSPECTIVE

For a long time, McGee's analysis provided the only coherent economic theory of predatory pricing. But unlike legal practice, economic thinking has departed significantly from McGee's theory. The research suggests that there are several reasons why predatory pricing is a plausible strategy. One reason is asymmetry of information between predator and prey. By repeatedly fighting rivals with low prices, a predator increases its reputation for toughness; and thus encourages exit and discourages future entry. Alternatively, if the prey is uncertain about the predator's costs, then the latter's low prices signal that the predator's costs are low too, and so are the prey's long term prospects.

A related source of information asymmetry is between the prey and capital markets. One of the key points in McGee's case against predation is that, if the alleged prey were short of cash, banks should be willing to step in with a loan under the (correct) promise that the prey's losses are only temporary. But due to imperfect monitoring of the borrower's actions banks are forced to

offer contracts where future financing is contingent on repayment of current loans. In this context, the predator may have an incentive to price below cost: While the predator loses money, so does the prey; and to the extent that lower current profitability decreases the probability of loan repayment, the predator has something to gain in the long run—the possibility that the prey, unable to secure financing, will be forced out of the market.

Finally, a third class of equilibrium models of predatory pricing is based on dynamic effects through the firms' profit functions (either through demand or through costs). Consider the case of two competitors moving down the learning curve. If the lagging firm loses the current sale, it might find itself so far behind the race that exit is the best option. Anticipating such behavior, the leader has an incentive to price aggressively, possibly below cost, thus increasing the chances of monopolizing the market. Unlike the previous theories, this one does not rely on asymmetric information between firms or between firms and capital markets. Moreover, while the learning curve provides a natural link between current sales and future profits, there are several other examples: switching costs, installed base or network effects, and so forth.

In summary, although U.S. legal doctrine is rather skeptical with respect to predatory pricing, economic theory has provided a wealth of coherent explanations of why predation is plausible.

SEE ALSO *Antitrust Regulation; Competition; Competition, Imperfect; Competition, Marxist; Game Theory; Information, Asymmetric; Monopoly; Price Setting and Price Taking; Regulation*

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Luís Cabral

PREDICTION

Prediction can be defined as "to declare in advance: foretell on the basis of observation, experience, or scientific reason" (Webster's 7th New Collegiate Dictionary). Predictions can be short-term, long-term, qualitative, quantitative, negative, positive, optimistic, or pessimistic. They can be based on hunches, guesses, folklore, astrology, palm reading, extrapolations from data, or scientific laws and theories or alleged laws of historical change. The term *prediction* overlaps with *prophecy* but has somewhat different connotations.

Not until the seventeenth and eighteenth centuries did prediction take on its modern connotations. Pierre-Simon Laplace (1749–1827), arguably its first major theorist, presented a systematic answer to the major theoretical and practical problem prediction raises: Why are we so successful in some areas of research (e.g., astronomy, physics, and chemistry) but conspicuously less successful in others, particularly human behavior? The most frequently given answers are that some phenomena are intrinsically unpredictable, or we are not using correct scientific methods, or the complexity of the phenomena rule it out, or it is due to limits of human ignorance, fallibility, and superstition. The twentieth century saw significant developments in the theory and practice of prediction, with simultaneous significant advances in predictive accuracy and a greater awareness of the limits of such accuracy.

EMPIRICAL AND PRAGMATIC SIGNIFICANCE

There are four major theories concerning the possibility of predictive success in the areas where, so far, they have been rather limited. The first is *Laplacian determinism*, named for Laplace, who asserted that an intelligence endowed with omniscience (who therefore would know the current position and velocity of all particles, as well as the laws that control their behavior) could predict every future event.

The second view, *the covering law model*, is based on the two principles involved in the Laplacian view. As developed by Karl Popper (1934), it requires that an adequate explanation be deduced from universal laws and initial conditions (a generalization of Laplace's positions and velocity). The more general and more precise the prediction, the better it is. This is because it is more testable, which in Popper's view means "falsifiable."

The third position, *probabilistic prediction,* is more modest but still in accordance with Laplace's view that our ignorance and fallibility forces us to rely on probability, not certainty, in our predictive endeavors. We can predict a 60 percent chance of rain this weekend, but not with the virtual certainty of astronomical predictions (e.g., that Venus will be in transit in 2112) or those based on

(Newtonian) laws of gravity and motion. The quantum physics uncertainty principle is often seen as the paradigm case of this type, although weather predictions and many social phenomena may be better examples, given that quantum electrodynamics has the most numerically precise, accurate predictions in the history of science.

The final theory, *pattern prediction,* originated with Warren Weaver (1894–1978), a natural scientist, but was made widely known to economists and social scientists by Friedrich von Hayek (1899–1992). This position seems furthest from Laplacian determinism. Pattern prediction downplays precise quantitative predictions, and has a weakened type of testability, due to the theory of complex phenomena adapted from Weaver. It appears to harmonize well with modern chaos theory and with probabilistic reasoning about phenomena. However, the most recent developments in the theory and practice of prediction may be making it more susceptible to quantitative precision.

Any adequate theory of prediction should allow retrodiction as a special type. If one predicts that devaluing the currency will lead to inflation, then a study of such policies in ancient Rome, Egypt, or China should find these results. This can be defined as prediction, although it concerns not the society studied but what the scholars of such societies should find.

CRITICISM OF METHODOLOGY

B. F. Skinner's behaviorism emphasized prediction and control; his position was extreme Laplacian determinism. The reason for our inability to be as successful at predicting human behavior as we are with predictions made in physics and astronomy is due to our failure to apply proper scientific method, primarily because of a lingering antiempirical belief in an inner man not subject to the laws of nature. But the history of science since Newton has postulated several unobservable entities (e.g., atoms, gravity, natural selection) with spectacular practical and empirical success.

Logical positivism (including Popper's weakened version) associated predictions with testability, meaning both verifiability and falsifiability. But it has been argued on both logical and historical grounds that a false prediction does not always disprove a theory. Nor does verification of predictions prove the theory true for purely logical reasons (the fallacy of affirming the consequent).

Popper that, in contrast to unconditional historical prophecies, scientific predictions are conditional (1963). This is based on his model described above and the laws he argues are conditional not asserting the existence of the initial conditions. But the model only works for systems that are well isolated, stationary, and recurrent (Popper 1963). This is why predictions of eclipses and the regularity of the seasons can be made accurately, because the solar system is such a system. Such systems are not typical; they are special cases where scientific prediction becomes particularly impressive.

In addition, there are arguments based on the nondeterministic character of classical physics. The "three-body problem" undermines Laplacian determinism. The three-body problem arises out of the inability of physics (so far) to use Newton's laws for more than two bodies.

The twentieth-century scientist Edward Lorentz, distinguished between two types of determinism thus: "one with clear rules that apply always and everywhere" so that repetition of the same conditions makes prediction possible and another where "small variations aggregate and amplify" (Kaplan and Kaplan, 2006, p. 221) and so repetition prevents prediction. The former will result in long-run variation canceling out, with a clear pattern emerging. The latter leads to what are now called "chaotic systems," which are extremely sensitive to initial conditions.

Despite these impediments, progress has been made in improving meteorological and other types of predictions by the use of "ensemble prediction" as well as "threshold" and "pattern effects." The former involves turning predictability itself into a variable, such as temperature or rainfall. The latter combines Weaver's pattern prediction with the important idea of threshold effects, as in the second type of determinism described in the preceding paragraph. Threshold effects are best illustrated by the straw that broke the camel's back.

Developments in the last two decades are improving efforts to predict possible disasters such as earthquakes, tornadoes, epidemics, and perhaps climate change, as well as the interactions of large groups of people, their societal effects, and their impact on the environment. (Cribb, 2006). Great use has been made of modern computers, often employing simulated effects over centuries (which leaves a great margin of error due to unreliable data), possibly unjustified assumptions in constructing the models, and human fallibility, yet there are good indications of improved predictive ability with computers.

Nonetheless, we are nowhere near Laplace's omniscient intelligence, and for theoretical and practical reasons we are unlikely ever to be. The major reason is that the mathematics and data used are both so complicated (millions and millions of lines in a computer code) that no one person can master it. In addition, it relies on Baysean probability theory. The mathematics of that is not very complex, but it requires initial assignments of probability, which can then be modified by new evidence. However, there are numerous problems in deciding how to assign these so that they are not too arbitrary.

SEE ALSO *Behaviorism; Determinism; Hayek, Friedrich August von; Popper, Karl; Positivism; Probability; Skinner, B. F.*

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Calvin Hayes

PREEMPTIVE STRIKE

The decision to use military force can be made in a variety of different situations and in response to numerous different triggers or actions taken by an enemy or adversary. A *preemptive strike* is a military action taken to forestall an imminent military attack or other type of threat. This type of activity is different from a *preventive action*, which is undertaken to counter a more distant threat. In this respect, a preemptive strike deals with a current threat, while preventive action deals with a potential or future threat.

Preemptive strikes are generally motivated by the fear of an impending attack or invasion. In this scenario, the leadership of a state believes its adversary is preparing for an attack or invasion. Instead of waiting for the attack to actually occur, the leadership decides to take action first—to launch a preemptive strike against the adversary.

The Israeli decision to strike against Egyptian forces on June 5, 1967, is an example of a preemptive strike. The Israelis believed that the Egyptians were poised for their own attack and that Israel could ill afford to absorb such an attack. As a result, the Israelis decided to launch a preemptive strike to forestall the imminent Egyptian attack.

A preventive action, on the other hand, would be undertaken to deal with a threat that could develop sometime in the future. With preventive action, the "threat" posed by the target is distant in nature, and in some cases a mere potentiality. The Israeli strike against the Iraqi nuclear reactor at Osiraq in June 1981 is an example of a preventive action. Israel struck the Iraqi facility in order to forestall the further development of the Iraqi nuclear program, which the Israelis viewed as a threat. This action was not really "preemptive" in nature, however, in that Iraq did not pose an imminent threat to Israel.

The distinctions between preemptive and preventive actions are important, but often confused. The 2002 *National Security Strategy of the United States of America* (NSS) describes a strategy identified as "preemptive," but in actuality it is closer to being preventive in nature. The NSS states, in the context of the threat from weapons of mass destruction, that "the greater the threat, the greater is the risk of inaction—and the more compelling the case for taking anticipatory action to defend ourselves, even if uncertainty remains as to the time and place of the enemy's attack" (p. 15). The fact that the NSS stresses that the "time and place" of the attack are unknown makes the policy preventive. However, the NSS goes on to state, "To forestall or prevent such hostile acts by our adversaries, the United States will, if necessary, act preemptively" (p. 15). While the NSS does use the word *prevent*, it describes the policy as *preemptive*. Regardless of the terminology used to describe the policy, it fits squarely with the criteria of preventive actions. In this regard, the 2003 U.S.-led invasion of Iraq and ongoing conflict can be considered a preventive, but not preemptive, action—the threat faced was not imminent, but instead was of a more distant nature.

While preemptive strikes do involve the "first use of force," they are generally viewed to be reactive policies, or actions taken in self-defense. Preemptive strikes are usually carried out in response to some action taken by the enemy that is believed to signal preparations for an imminent attack. Preventive actions, on the other hand, are taken in response to activities that *could* develop into a specific threat at some point in time in the future.

This distinction has important implications, particularly with respect to international law. International law allows for the first-use of force in response to an imminent threat, but not in response to a distant threat. Or, in other words, preemption in response to an actual and imminent threat is OK, but preventive action is not. The line between imminent and distant threats, however, is becoming increasingly harder to distinguish in today's world. With today's modern technology, leaders no longer have the ability to see the adversary's army massing at the border in preparation for an attack.

It is also important to realize that preemptive strikes and preventive actions are not a type of war, but rather should be viewed as a "pathway to war." In other words, a preemptive strike or a preventive action may signal the beginning of a war—but they are not in and of themselves distinct types of war. Any of the numerous types of war (e.g., limited war, total war, hegemonic war) can be started through the use of a preemptive strike or a preventive

action. Furthermore, since preemptive strikes or preventive actions involve the first use of force, they can only be taken *before* the outbreak of armed hostilities. Since these actions are designed to forestall an enemy attack, once such an attack has occurred, the opportunity to take preemptive or preventive action has passed.

While there are numerous arguments as to why leaders would adopt preemptive or preventive strategies, the historical record indicates that states rarely employ these types of policies. One of the possible reasons why the leadership of a state would be hesitant to launch a preemptive strike is that there are substantial political "strings" attached to these actions. The state risks being labeled the aggressor in the conflict and potentially alienating allies and friends in the process—thereby jeopardizing support that might be essential during the rest of the conflict and in later relations. Additionally, there is a great deal of uncertainty inherent in any war or armed conflict. A leader would want to be quite certain that an attack was truly imminent before he or she struck the blow that would start the war process. But, this level of certainty is rarely present, and leaders are, therefore, reluctant to utilize preemptive strikes. This does not mean that leaders never decide to launch preemptive strikes, but rather helps explain why their use is much rarer than might be otherwise expected.

SEE ALSO *Defense; Defense, National; Deterrence; War*

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PREFERENCE, COLOR

For most people, one of the first decisions of the day concerns color preference. College students learn that whether they are choosing an outfit for a job interview, designing a new product, or creating a Web site, the colors they choose greatly affect their final result. Psychologists report that color impression can account for 60 to 70 percent of consumer reaction. Therefore, understanding people's color preferences becomes an important learning tool.

Color preferences change as a person develops and are in part determined by a person's economic and social status. Education, environment, climate, and family heritage influence people's favorite colors. Furthermore, people have color preferences for different objects like clothing, home decorations, and cars. A person may prefer a blue shirt, yellow walls, and a red car. Babies respond more readily to bright, primary colors than to pastel colors. The favorite color of most preschool children, up to the age of five, is bright red. Young children between five and ten years old prefer bright yellow.

As people grow and mature, their color preferences change. Adults may have learned to associate red with negative things, such as blood and fire, and so their color preference changes from childhood to adulthood. Adults have been found cross-culturally to favor blue over other colors. Adult women generally prefer blue-based colors, whereas men tend to prefer yellow-based tints. Even education levels and the degree of cultural sophistication seem to affect people's color preferences. In general, highly educated and sophisticated people favor complex colors, those mixed with shades of black. In contrast, people with less education and lower income favor low-intensity, simple, or pure colors.

People respond differently to various colors depending also upon the climatic conditions in which they live. For example, Scandinavians have a preference for light yellows, bright whites, and sky blues, in contrast to their long, dark winter nights. San Franciscans, who live in an area that is often foggy and overcast, generally are not fond of gray. Conversely, cool gray is a popular color among people in Miami's sunny, hot, and humid climate.

Ethnic heritage and traditions also affect color preferences. For instance, American couples most often prefer to dress brides in white, representing purity. Chinese typically wear white to funerals and prefer black or red colors for their wedding dresses, since these colors represent joy in their culture. Americans traditionally dress their newborns in blue or pink according to gender rather than personal individual preference.

Color preferences have changed over time. In the mid-1800s, bright colors were popular, but they were replaced by more subdued tertiary colors such as muddy reds, greens, browns, blues, pinks, and ambers in the 1870s. Pastel and cream colors came back into fashion in the 1890s, and were popular during the latter part of Queen Victoria's (1819–1901) reign. But as fashions changed and furniture became more ornate, heavier, and more elaborate, room colors also became richer and darker.

Certain color preferences seem universal, such as that of "warm" and "cool" colors. People perceive red, orange,

and yellow to be warm colors, reflecting the natural association with the hot sun and flames. Blue and green shades are considered cool, in relation to cool water and shady leaves. Warm colors generally include magenta, red, orange, yellow, and yellow-green. Warm colors speed up our perception of time and produce feelings that are cozy and inviting. These colors are associated with excitement, happiness, and comfort. Cool colors generally include violet, blue, and green. Emotions associated with cool colors range from calm and peace to sadness, withdrawal, and repression.

COLOR PREFERENCE AND BUSINESS

Color-preference trends help sell products. Advertisers, fashion designers, and auto manufactures know that color influences the approval of or negative response to products or services. Commercials change fashion and cultural icons—Santa Claus, for example, used to wear a blue or green suit until Coca-Cola dressed him in their trademark colors red and white. Marketers use color preferences in products and advertising based on research and market tests. Along with personal preference, the typical meanings and effects of color are factors in product development and promotion. This happens because adults habitually relate colors to emotions.

Red elevates blood pressure, respiratory rate, and appetite. Red symbolizes heat, blood, passion, love, power, excitement, vitality, and aggression. In advertising, red grabs attention and stimulates people to make quick decisions. Pink, associated with sweetness, helps sell pastries and candies.

Orange causes people to feel energetic and is often found in the décor of fast food restaurants. Yellow represents the sun and is considered a spiritual color that symbolizes deity in many religions. Because yellow is the first color human eyes process, it attracts attention in advertising.

Indian mystics favor green because they believe it to be a combination of balance and harmony. Green, a sacred color to the Egyptians, represents the promise and rejuvenation of spring. In the Middle Ages, brides wore green to represent fertility. Green helps people relax, which makes it a popular color in hospitals.

Blue, the favorite color of adults, is disliked as a color around food. Most people prefer to dine surrounded by food-related colors, such as red strawberries, green apples, yellow bananas, and brown breads. Blue is the preferred color to wear to a job interview because people associate blue with loyalty and trustfulness.

Purple became related to perceptions of royalty and richness because the color was difficult to produce in ancient times. People think of luxury when they view purple. Leonardo da Vinci (1452–1519) favored purple lighting to enhance his creativity.

Brown is favored by men more than women. Connected to the earth and wood, brown is thought to represent solidity and strength.

Black, a color preferred by many for clothing, represents power, sophistication, and formality. Black also has contrary associations with witches and criminals. Black aids advertising materials by making other colors stand out in contrast and is the preferred type color for Web sites.

White represents cleanliness and purity to many people, who prefer white for automobiles, clothing, and interior design. White automobiles show up best at night. White clothing and interior spaces feel cooler in warm climates.

Color affects people, every day of their lives, on both the conscious and subconscious levels. With a thorough understanding of the effects of color preference, businesses can make wise decisions about product development and marketing. Individuals who understand their color preferences can make wise choices when selecting clothing, home furnishings, and automobiles.

SEE ALSO *Bigotry; Colorism; Hierarchy; Prejudice; Racism; Stratification*

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Jeanette Fisher

PREFERENCE, GENDER

The term *gender preference* is confusing because it has a number of at best tangentially related meanings. For example, the term *gender preference* or *sexual preference* is used to describe the desire of biological parents for either a male or female child and—in the extreme—use a range of odious methods (e.g., infanticide and sex-selective abortions) to achieve that result. In patrilineal societies, the necessity for a male birth is straightforward. Less-developed societies tend to favor males for immediate utilitarian reasons and, eventually, as a primitive social security system. No such clear-cut historical and/or cultural rationales fully explain this phenomenon's occurrence in developed countries, where adoptive parents

strongly prefer to adopt girls. Another use of the term *gender preference* is to describe explicit or implicit job discrimination by which women are perceived as unable to perform certain skills (e.g., tasks requiring heavy lifting and other such manual labor). Overall though, the most ubiquitous use of the terms *gender preference* and *sexual preference* is in reference to sexual orientation.

Prefer, meaning "to like better or best," is a transitive verb: It requires a direct object. Given this use of the word, *sexual orientation* is considered synonymous with *gender preference*, for most discussion of sexual orientation is about whether an individual can be labeled as homosexual, heterosexual, or bisexual—that is, whether the "direct object" is the opposite gender, the same gender, or both. Most research and theories focus on homosexuality, not heterosexuality or bisexuality. Indeed, at the heart of most explorations of sexual orientation is an attempt to determine whether homosexuality is an outcome of nature or nurture. In an effort to attain the worthwhile goal of destigmatizing homosexuality and having it successfully removed from official lists of pathologies, activists have tended to fixate on biological determinism.

Acknowledging the difficulty of parsing out the influences of nature and nurture, Mustanski, Chivers, and Bailey proposed a "thought experiment" (2002, p. 94) that would involve an ideal test of whether hormones influence sexual orientation by a prenatal, organizational action. This experiment would require sex reassignment of a random sample of newborn males reared by adoptive parents blinded to the child's natal sex. This unethical "experiment" exemplifies the extremes required to sort out these factors. Mustanski and colleagues summarized the findings of the last decade in the neurohormonal areas, including psychoneuroendrocrinology, prenatal stress, cerebral asymmetry, neuroanatomy, anthropometrics, genetics, birth order, and developmental stability. They acknowledged some consistent findings, especially regarding genetics; however, their report concludes that it remains "puzzling … how and when these biological factors act and to what degree these factors influence sexual orientation" (p. 129). They also stated, "The term biological is frequently misunderstood and misused due to it being somewhat amorphous, given that all human behaviors are enacted by the brain and thus are in some sense biological" (p. 90). Thus, they speculated, "Rather than asking if sexual orientation is biological, we believe it is more fruitful to consider whether differences in sexual orientation primarily reflect differences in social experiences, differences in biologic factors unrelated to social experiences, or both. The ultimate goal of such research will be to understand the timing and mechanism of various etiological factors that influence sexual orientation" (p. 90).

In *The Homosexual Matrix* (1975), C. A. Tripp included a section titled "The Directional Controls of Sex." Tripp stated that sexual choices made and actions taken are learned behaviors influenced by an individual experience in the context of a particular society. These learning processes are "rooted in a biological groundwork of slowly accumulating changes … over eons of mammalian evolution." Tripp followed this path from sexual activity that is "rigorously regulated by specific physiologic controls" in lower mammals where "every movement is predetermined by key responses," through primates whose "sexual patterns are neither stereotyped nor guided by specific signals; they are almost entirely dependent on individual learning," culminating in humans with an enlarged cerebral cortex. Tripp described a "progressive relaxation of specific physiologic controls over sexuality" as the cerebral cortex assumes controls of voluntary behaviors such as sexuality. "Thus, human sexuality is exceedingly variable, deriving its directionality (especially its final targeting) from what is individually learned and experienced in personal and social settings" (pp. 12–15).

John Money created a list highlighting the endlessness of teasing out the antecedents for Tripp's directionality and targeting. Describing what is required for what he labeled a lovemap, Money contended that "the variables will be genomic status; hormonal history (prenatal and postnatal); sexual brain cell functioning; history of toxic, infectious, or traumatic exposure; infantile pairbonding; juvenile troopbonding; juvenile sexual rehearsal play; sex education; adolescent sexual history; amative history in imagery, ideation, and practice; and so on" (2003, p. 238).

Ultimately, in reference to what or who leads to sexuerotic arousal and attainment of orgasm, the terms *sexual preference* and *gender preference* are oxymorons because they imply that choice is at their core. Furthermore, such terms limit the "object" that stimulates the sexuerotic arousal and its sequela to gender-based categories. Such conceptualization marginalizes the entire phenomenon of paraphilias. Any review would be negligent if it focused on the power of the attraction of gender and ignored the same power that objects such as a shoe, a goat, or a child have on some individuals. Edward Albee's realistic staging of "The Goat, or Who is Sylvia?" (2003) explores sexual orientation in a way that science has yet to attempt. Research into sexual preference needs to be broad enough to include such phenomena if it is to lead to an understanding of related conditions such as pedophilia. Use of *gender preference* as a synonym for sexual orientation limits such exploration.

SEE ALSO *Determinism, Biological; Discrimination, Wage, by Gender; Gender; Gender, Alternatives to Binary; Marriage, Same-Sex; Neuroscience;*

Psychoneuroendocrinology; Sexual Orientation, Social and Economic Consequences

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Benjamin Graber

PREFERENCES

Preferences are value judgments about the relative desirability of alternatives. In decision theory, the decision-maker's preferences are the criteria used to compare the alternatives available for choice. But preferences need not be related to choice: They may also represent how an entity values outcomes, or states of the world, that it does not choose. Depending on the setting, preferences may be objective or subjective.

In abstract, given a set X, a menu of alternatives that may be chosen or that may simply occur, an entity's preferences are a binary relation defined on X. Given two alternatives, x and y, this relation answers the question "Is x at least as good as y?" When, according to the entity, the answer is "yes," one says that the entity weakly prefers x to y (denoted $x \succsim y$).

Historically, preferences were initially treated as cardinal objects: it was postulated that to any alternative x one could attach a number $u(x)$, measuring the level of inner happiness, or utility, derived from it. Classical analyses in distributive justice and in economics during the eighteenth and nineteenth centuries, such as the utilitarianism of Jeremy Bentham (1748–1832) or the marginalism of William Stanley Jevons (1835–1882) and Carl Menger (1840–1921), required cardinal utilities. The independent contributions of Vilfredo Pareto (1848–1923) and Irving Fisher (1867–1947) in the late nineteenth century emphasized that only the ordinal information of preferences matters: That an entity prefers one alternative to another is merely a ranking. After the work of John Hicks (1904–1989) in the 1930s and Kenneth Arrow in the 1950s, it is commonly accepted that preferences are ordinal.

Suppose that a decision-maker (DM) is choosing from a menu X, and let x and y be two alternatives. It is clear that either DM likes x at least as much as y, likes y at least as much as x, is indifferent (both previous statements being true), or is unable to tell (neither statement is true). This means that $\succsim$ is a binary relation over X. If $x \succsim y$ while it is not true that $y \succsim x$, DM likes x strictly better than y; this strict preference defines a second binary relation, $\succ$, the asymmetric part of $\succsim$. A third binary relation is given by the indifference of preferences, $\sim$, the symmetric part of $\succsim$.

DM has *complete preferences* if he or she is able to compare any pair of alternatives: either $x \succsim y$ or $y \succsim x$, for any x and y. Preferences are said to be *transitive* if $x \succsim y$ and $y \succsim z$ imply $x \succsim z$. Complete and transitive preferences constitute a *complete preorder*, which is the most basic assumption on tastes of a decision-maker: DM is then said to be *rational*.

In more specific settings, additional structure allows for further properties. When X is a field over the real numbers (for example, a Euclidean space), preferences are convex if any average of alternatives is preferred to the least-preferred averaged alternative. When a definition of *more* exists for X, preferences are said to be monotonic if more implies better. When X is endowed with a topology, preferences are continuous if the at-least-as-good-as property is preserved under limits.

Preferences are representable if there exists a "utility" function, mapping X into the real line, with the property that $x \succsim y$ if, and only if, the value of the mapping at x is at least its value at y. In the 1950s Gerard Debreu (1921–2004) presented the seminal solution to the representability problem for continuous preferences. Representability does not mean that preferences have cardinal meaning: While any two functions representing given preferences contain, by construction, the same ordinal information, their cardinality may differ nontrivially. Given representable preferences, a property is ordinal if it is preserved upon increasing transformation of its representations, while cardinal properties are preserved only by affine, increasing transformations.

In economics, demand theory studies the individual choice of a bundle of commodities, at given prices and income, with preferences understood to be subjective and ordinal. In applications, a useful family of preferences delivers invariant substitution effects: The *constant elasticity of substitution* (CES) family includes *linear preferences* (perfect substitutability), *Leontieff preferences* (perfect complementarity), and *Cobb-Douglas preferences* (unitary elasticity of substitution). *Homothetic preferences* deliver demand functions that are homogeneous of degree one in

income, while, with some qualification, *quasi-linear* preferences isolate all commodities but one from income effects.

When X represents an intertemporal situation, some structure is usually imposed on preferences. Suppose that $(x_0, x_1) \in X$ represents consumption in the present (x_0) and in the future (x_1). In this setting, it is usually assumed that the person is impatient to consume in the sense that $(x + \varepsilon, x - \varepsilon) \succ (x, x)$, for a small enough perturbation $\varepsilon > 0$. In this case, a simplification is usually obtained by defining an instantaneous-utility (or felicity) function v on the real line, which represents the individual's satisfaction of consumption without intertemporal considerations, and a discount factor, β, and by assuming that $\succsim$ is represented by the function $u(x_0, x_1) = v(x_0) + \beta v(x_1)$. Here, the assumptions that v is increasing and $\beta < 1$ model the hypotheses that the individual enjoys consumption and is impatient.

When the individual faces risk, the outcome of his or her choice is a random variable. In this case, X is a set of random variables (lotteries), $\succsim$ ranks these variables ex-ante (in ignorance of the outcome that they will realize), and, in general, the standard analysis of preferences applies. As in the case of intertemporal preferences, a simplification is obtained via representation by utility functions. Leonard J. Savage (1917–1971) provided axioms that guarantee the existence of an expected utility representation, as defined by Daniel Bernoulli (1700–1782) in the eighteenth century: The ex-ante utility of a lottery is measured by the mathematical expectation of the well-being that the individual would derive from the outcome of the lottery were it not subject to risk, the induced random variable $v(x)$. In this case, the felicity function has cardinal meaning: Only upon affine transformations is the representation of preferences preserved. Under expected utility, the curvature of function is used to measure individual dislike of risk. Arrow proposed two measures of risk aversion: absolute (the negative of the ratio of the second to the first derivatives of v) and relative (the absolute measure times the consumption level). An exponential representation of v exhibits constant absolute risk aversion, whereas an adaptation of the CES family yields constant relative risk aversion. Under uncertainty, completeness of preferences has been questioned: When unsure about the probabilities of different states of the world, individuals may be unable to compare all alternatives.

While research on choice often takes preferences as given, there are different theories about how humans form value judgments. In mathematical psychology, laboratory observation has led to the hypothesis that preferences (human and animal) are themselves random objects, which implies that choice itself is random (see, for example, the work of Duncan Luce and Patrick Suppes). Other prominent theories have considered the influence of experience and social interactions in the determination of preferences: While a basic view may take them as physiologically determined (so choice appears as a cognitive process), a broader view takes into account the influence of an individual's history or social context on the determination of tastes, from which choice appears as a behavioral phenomenon. These theories account for the learning processes that are embedded in sequential decision problems, for the effects of habit formation (for example, addictions) or for the influence of fashion or peer pressure on behavior (see the work of Gary Becker). Also, Amos Tversky (1937–1996) and Daniel Kahneman observed that the way in which a decision problem is framed seems to affect the choices of many individuals, which highlights the effects of perception on preferences. One more apparent anomaly of the standard theory arises in intertemporal problems, as evidence shows that often individuals choose not to delay the realization of a negative effect, which is at odds with the usual impatience postulate.

The problem of explaining how groups of individuals value alternatives has led to the definition of *social preferences*. An important difficulty in this direction was presented by Arrow in the mid-1950s: Under certain axioms, it is impossible to aggregate individual preferences into social preferences without the imposition of a "dictator" whose preferences are assumed for the whole society. Competing theories of social justice—for example, utilitarianism, Rawlsianism, or Robert Nozick's (1938–2002) libertarianism—provide prominent discussions of social preferences.

SEE ALSO *Demand; Endogenous Preferences; Lexicographic Preferences; Preferences, Interdependent; Utility Function*

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PREFERENCES, INTERDEPENDENT

Interdependent preferences models rely on the basic intuition that economic agents are not always purely self-interested. This intuition may sound uncontroversial to noneconomists, but it is surprisingly so among the many economists who like parsimony and believe self-interest is a good approximation for most, or all, economic behavior.

Agent A has interdependent preferences whenever A's utility function depends on those of other agents in the reference group. Consider two agents, A and B. A's generic utility function with interdependent preferences is $U = u(x) + s(x, y, \lambda)\, v(x, y, \lambda)$, where u is the material utility component of the utility function and is a positive function of A's material consumption x; v is the interdependent utility component of the utility function and can be a function of x, is always a function of B's material consumption y, and can be a function of a vector of additional parameters λ; and s is the interdependent component weight in the utility function, is bounded between -1 and 1, and can be a function of x, y, and λ. The utility function reduces to the self-interest case if $s = 0$.

The generic utility function encompasses most interdependent preferences models (nonadditive versions are also possible):

- Pure altruism where $s > 0$ and is a constant, and v is only a positive function of y (Collard 1975).
- Pure envy where $s < 0$ and is a constant and v is a positive function of y and a nonpositive function of x (Clark and Oswald 1998).
- Distributional models that are a function of the distribution of incomes between the players (v is a function only of x and y, with the weight s) depending on how they relate to one another (Fehr and Schmidt 1999; Bolton and Ockenfels 2000).
- More complex psychological characterizations based on intentionality, as captured by the dependence on λ (Levine 1998; Falk and Fischbacher 2001; Charness and Rabin 2002).

λ could also incorporate other psychological considerations, such as group identity (Akerlof and Kranton 2000; Darity et al. 2006). There is strong empirical evidence for interdependent preferences (for reviews, see Camerer, 2003; Sobel 2005; Zizzo 2000), with distributional models outperforming pure altruism or envy (Zizzo 2003b, 2004) and intentions mattering (Falk et al. 2003).

Four limitations of interdependent preferences are their cardinality, heterogeneity, endogeneity, and context-sensitivity. *Cardinality* means that an individual's generic utility function requires strong interpersonal comparability of utility. *Heterogeneity* reflects the intuition that different people have different preferences, and the holy grail of capturing the empirical distributions of preferences is still at its early stages (see Burlando and Guala 2005 for an example). *Endogeneity* reflects the fact that environmental factors shape one's interdependent preferences, and this has policy implications (Zizzo 2003a). Most seriously, interdependent preferences are sensitive to the context of the decision problem, that is, to the way that the decision problem is perceived, with a large number of factors coming in and possibly interacting with one another (e.g., deservingness, social distance, communication, and so on) in ways that are poorly understood (Harrison and Johnson 2004; Konow 2000; Zizzo 2000, 2004). Adding dummy variables to ever more complex utility functions is hardly a solution; understanding the cognitive mechanisms underlying how agents perceive decision problems would be, but regretfully it is not a step that most economists are willing to take.

SEE ALSO *Endogenous Preferences; Evolutionary Games; Lexicographic Preferences; Preferences; Reciprocity*

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Daniel John Zizzo

PREJUDICE

Prejudice is defined as the affective or evaluative component of the tripartite attitude structure of social bias. As such, prejudice consists of the emotional reaction evoked by social group members, is informed by the cognitive component or stereotype held about the perceived social group, and predicts the discrimination or behavior exhibited toward the group members. Prejudice as a concept has interested social scientists since World War II (1939–1945). The Holocaust drove a number of Jewish psychologists from Europe to the United States, where they initiated relevant research on conformity, obedience, aggression, and prejudice.

Prejudice initially had been considered simple animosity or negative affect toward out-groups. However, beginning with Gordon Allport's *The Nature of Prejudice* (1954), social scientists began to analyze the psychological construct in a more nuanced, differentiated manner. As a result, prejudice is now viewed as more than simple animosity. Led by Allport's influential work, social psychologists in the late 1990s and early 2000s posited various intergroup emotion models to predict the types of prejudice elicited by different types of out-groups. These theories borrowed from work across the social sciences, including political science, economics, and evolutionary psychology. The gist of the models was that when we encounter an out-group member, an initial threat appraisal is based on his or her perceived social category. For instance, Susan Fiske and colleagues' Stereotype Content Model argues that the interaction of perceived warmth (good or ill intention) and competence (ability to enact the intention) predict four types of emotional prejudices evoked by the out-group member. These models therefore allow for ambivalent emotions (e.g., pity, envy) beyond a simple like-dislike (e.g., pride, contempt) dimension, and, as a result, have allowed the landscape of prejudice to become much more detailed and comprehensive.

PREJUDICE AS A DUAL-PROCESS ATTITUDE

Prejudice occupies a dual-process model of attitude processes. Attitudes comprise the evaluations of attitude-objects, and research in the 1990s unearthed the central insight that attitudes include both an explicit and implicit component. The explicit component is the easily self-reported attitude in conscious awareness. The implicit component is often hidden from our consciousness, but does inform unintentional responses to out-groups. Moreover, the implicit attitude results from learned associations picked up from social environments. Prejudice is therefore thought to have an implicit and explicit component.

A dispute followed the adoption of this dual-process framework, and the field of prejudice serves as a primary battleground. The conflict involves whether one's implicit attitude is really an attitude, and if it is, is it the same as one's explicit attitude? For instance, one may hold egalitarian beliefs about social groups and as a result, not report any prejudiced feelings toward a certain social group. However, one's implicit attitude is informed by the society one inhabits, and a stronger association between a group and negativity may lie deep in one's unconscious. Hence, even though one does not explicitly hold any prejudiced attitudes, one's implicit beliefs may contradict this position.

Nevertheless, prejudice continues to be conceived in lay terms as simple animosity—a conception that makes it a taboo topic. The advent of the civil rights movement of the 1960s changed the social norm against prejudice, and expressing overtly prejudiced attitudes slowly became unacceptable, particularly to members of minority racial and ethnic groups. This norm change did not eliminate these prejudices, however; to the contrary: Institutional imbalances alone point to continued bias. Instead, social scientists argued that prejudiced attitudes are now more often held implicitly, adding more fire to the dual-process debate.

MEASUREMENT

This antiprejudice social norm's demands persist today, preventing social science researchers from measuring prejudice simply by self-report. As a result, researchers tend to use subtle, indirect measures. For instance, instruments such as David Sears's and John McConahay's Modern Racism Scale assesses prejudiced attitudes toward black Americans via indirect questions that ask participants to make judgments about concerns related to disadvantaged minorities. The scale also has a component that measures traditional, "old-fashioned" blatant prejudice, as well as the modern, subtle component described above. This scale correlates with antiminority voting, among other behaviors.

Conceiving of prejudice in a dual-process framework also has led to the creation of implicit measures of prejudice. These measures test the strength of association between the attitude-object and negative constructs. The most popular such measure, the Implicit Association Test (IAT) developed by Anthony Greenwald and Mahzarin Banaji, uses reaction times to detect differences between the strength of prejudiced and unprejudiced associations. The test asks participants to categorize a prompt (either a word or a picture of a face) in the middle of a computer screen to either the left or the right category. In some trials one side is positive valence, the other negative, and in others, one represents a social category (black people) and the other another (white people). After several trials, valence and social category are both represented on either side (white-positive on one, black-negative on the other side) and the speed of categorization is assessed. These congruent trials are subtracted from incongruent trials where the opposite pairings are represented. A resulting faster time categorizing white-positive and black-negative pairings indicates that the association between the opposite pairings is more difficult for participants to make and thus, people show an implicit association, for example, between black and bad, white and good. The score on the IAT predicts a number of related phenomena such as nonverbal behavior in an interracial interaction, discrimination against out-groups, location on a liberal-conservative continuum, support for antidiscrimination policies such as affirmative action, and even neural activity in brain regions associated with negative affect (disgust and fear in particular).

NEURAL COMPONENTS OF PREJUDICE

Developments in technology and in social neuroscience have illuminated the neural underpinnings of prejudice. Both white and black participants have viewed white and black faces while their neural activity was recorded using functional Magnetic Resonance Imaging (fMRI). Participants across a number of studies consistently show greater brain activity in structures associated with emotional vigilance (amygdala) and disgust (insula) when viewing unfamiliar black faces than when viewing unfamiliar white faces (although the effect is always smaller for the black participants). Further, the amount of participants' brain activity correlated with their scores on the IAT. These fMRI studies support the idea that prejudice may result in part from social learning, both because an IAT score indicates knowledge of the negative stereo-types about the social group, and because blacks also show the effect.

Social context can reduce this neural activity simply by changing the social goal of the participants. When forced to think of people as individuals, not just category members, the increased activation in the amygdala provoked by viewing black faces diminishes below significance. Converging evidence also comes from electroencephalography (EEG). This technique likewise measures brain activity, but by detecting small electrical signals produced by neural cells as they fire. These studies also demonstrate that once the social goals change, social processing changes within 200 milliseconds. Changed social goals carry over even to subsequent nonsocial tasks, as whites' efforts to appear unprejudiced cost them executive control in purely cognitive tasks.

REDUCTION OF PREJUDICE

Other than changing social goals, a few strategies reduce or eliminate prejudice, with varying degrees of success. The most successful, and ironically the most heavily debated, is the intergroup contact hypothesis proposed by Allport. According to the hypothesis, because social learning of stereotypes influences prejudice, contact with out-group members will eliminate the category-based dependence on stereotypes for information; instead, information will result from the nuanced interaction itself. The contact hypothesis utilizes potential friendship to diminish the limited, categorical perception of the out-group member based on stereotypes and replace it with a more nuanced, individuated perception. However, contact works to reduce prejudice under only certain conditions—cooperation rather than competition, equal status

in the social interaction, authority endorsement, and meaningful interactions.

PREJUDICE AS AN INDIVIDUAL DIFFERENCE

Certain individual differences make one more likely to hold prejudiced attitudes than not. Political ideologies, particularly right-wing authoritarian (RWA) beliefs, predict explicit levels of prejudice. An authoritarian individual demonstrates conformity to convention, authority-sanctioned aggression against deviants, and submission to authorities. Additionally, dominance-oriented personalities also tend to be more likely to hold prejudiced beliefs because they endorse the inevitability of group hierarchy. In this view, societies minimize group conflict by promoting ideologies that endorse discrimination and the dominant social hierarchy. Essentially, social dominance orientation prefers hierarchy over equality and dominance over parity. As a result, scales that measure these two constructs have also been used as indicators of prejudice. Prejudice level therefore can be predicted by political ideologies.

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Lasana T. Harris
Susan T. Fiske

PREMIUM, LIQUIDITY

SEE *Liquidity Premium.*

PRESENT ORIENTATION

SEE *Time Orientation.*

PRESIDENCY, THE

The presidency of the United States is one of the truly original creations of democratic politics. When the framers of the U.S. Constitution decided upon a democratically elected unitary executive, they did so without any contemporaneous referents. While many of the authors favored the creation of a president that was little more than chief ambassador and head bookkeeper, others had witnessed the chaos under the weak executive of the Articles of Confederation and felt that stronger leadership was necessary. The final result is an institution that represents the attempt to balance the desire for a strong leader while avoiding the pitfalls of monarchy or tyranny.

BECOMING PRESIDENT

The constitutional requirements for becoming president are relatively straightforward. All candidates for the office must be natural-born residents of the United States of at least thirty-five years of age. Rather than using a process of direct election, the authors of the Constitution opted for a process of indirect election. In this process, the voting public selects members of the Electoral College, and the Electoral College selects the president. Since the members of the Electoral College are selected by each state in a winner-take-all system, it is possible for a presidential candidate to win a majority in the Electoral College without receiving the most popular votes nationwide. This occurred in the elections of 1824, 1876, 1888, and 2000.

CONSTITUTIONAL POWERS OF THE PRESIDENT

The constitutional powers of the president fall into four general categories: military, executive, diplomatic, and legislative. Within each category, the relative lack of specificity in the language has offered presidents some measure of flexibility to expand these powers when it suited their political or institutional needs.

The president's military power resides in Article II Section 2, where the office is clearly designated as "the commander in chief of the Army and Navy of the United States." The president has consistently been assumed to be the highest-ranking military official in the nation. While presidents may choose to delegate these powers to military officials in times of conflict, the president is entrusted with the final authority in the realm of military decisions, including the use of nuclear weapons.

The presidential executive powers address the president's responsibility as the individual most responsible for overseeing the execution of federal law. Through this authority, the president oversees nearly all parts of the federal bureaucracy and is ultimately responsible for how these bureaucratic agencies apply the laws passed by

Congress. The president is also granted the authority to appoint, with the approval of the Senate, members of the cabinet, federal judges, ambassadors, and most high-ranking administrative officials.

As the head of the Executive Branch, the president has the power to execute *executive orders*. These directives inform officials in the executive branch of the president's desired policy implementation. Since the executive branch encompasses the vast majority of the federal bureaucracy, the president can use executive orders to cover a wide array of policy goals. Presidents have utilized executive orders to intern Japanese-Americans during World War II (Order 9066), prohibit employment discrimination based on race or gender (Order 11246), and to create new agencies, such as the Federal Emergency Management Agency (Order 12148). Given the strength of presidential authority, the president's power to mold policy through executive orders is clearly wide-ranging.

No formal review process exists for executive orders. Congress can pass laws that overturn executive orders, but since the president is virtually certain to veto such an act, Congress must gather enough votes to override a presidential veto in order to invalidate an executive order. Congress may also refuse to fund the section of the executive branch impacted by an executive order, though this also makes a veto more likely. Therefore, Congress rarely interferes with executive orders.

Although theoretically subject to review by the federal courts, the judiciary has overturned only two of the more than 13,000 executive orders issued by the office of the president since the Lincoln administration. Both rejections were grounded in the contention that the particular orders created new laws rather than modifying existing laws.

The power of the president in the area of foreign affairs clearly places the president at the forefront of the diplomatic apparatus. The president is specifically given the authority to receive all ambassadors and ministers from other nations. The president is also given the authority to negotiate and sign treaties with foreign nations pending Senate approval and to appoint ambassadors and other personnel to represent the interests of the United States abroad.

While the president's powers in the legislative arena are somewhat limited, those limitations are as much in the eye of the beholder as anything. The president has veto authority, which gives him the power to prevent legislation from Congress from becoming law. While Congress has the power to override presidential vetoes, the supermajority needed for a successful override gives the president a significant advantage. In addition to the power to veto legislation, the president can call Congress into special session as deemed necessary. While he is required to inform Congress about the state of the union "from time to time," he can use that event to recommend legislation to Congress that he believes to be necessary and appropriate.

THE SCOPE OF PRESIDENTIAL POWERS

In many ways, the power of the office of the presidency is shaped not by the Constitution, but by the individual. The remarkable specificity invested in the discussion of Congressional powers in Article I stands in stark contrast to the vague comments regarding presidential power in Article II (Pious 1979). While the authors of the Constitution had some general ideas of what they wanted the office to include, the relative lack of clarity has allowed occupants of the office to mold it to their own needs and desires.

The lack of clear direction regarding presidential power from the Constitution has allowed for varying interpretations of the extent of presidential authority. Throughout the nineteenth century, the assumption was that the president was limited to the powers expressly granted under the Constitution. This limited view of presidential power is generally referred to as the *Whig theory* of presidential authority. Presidents that subscribed to the Whig theory saw themselves primarily as bureaucratic administrators and ambassadors. As President James Buchanan (1791–1868) noted, "My duty is to execute the laws … and not my individual opinions" (quoted in Brinkley 1962, p.142).

Eventually, the Whig theory was deemed to be too limited and fell out of fashion at the beginning of the twentieth century. The replacement was Theodore Roosevelt's (1858–1919) much broader *stewardship theory*. Stewardship theory argues that presidential authority extends to all areas not specifically forbidden by the Constitution or statutory law. While the Whig theory saw the president as limited to the powers clearly expressed in the Constitution, stewardship theory looks for all possible outlets for presidential power and authority. Stewardship theory has remained the dominant approach to presidential authority since the presidency of Franklin Roosevelt (1882–1945).

The third theory of presidential power, the *unitary executive* theory, argues that *all* power to execute laws and manage the executive branch falls to the president. This theory, which has generated much controversy in the first decade of the twenty-first century, essentially argues that Congress passes laws but the executive branch can interpret the laws in terms of implementation. This has led to presidents issuing "signing statements" that indicate whether or not the president intends to enforce the law as Congress had it written. The unitary executive theory is seen by many critics as a violation of the separation of

powers and an effort by the executive to supersede Congressional authority.

PRESIDENTIAL-CONGRESSIONAL RELATIONSHIPS

The nature of the relationship between the president and Congress is determined by several factors. The most important factor is the relative partisan control of each branch. When the majority in Congress is of the same party as the president (called *unified government*), the president is often able to work with the leadership to achieve their common policy goals. When the president and at least one chamber are controlled by opposing parties (often called *divided government)*, presidents are often forced to compromise with the opposition party in order to pass legislation. The common perception is that presidents and Congress accomplish more under unified government compared to divided government, but the evidence indicates that this is likely not the case (Peterson 1990).

In addition to majority-minority status, the second major factor in determining presidential relations with Congress is the president's approval rating in the public. The more beloved the president is, the more likely Congress is to follow the president's lead. Congressional leaders realize that a popular president can campaign for or against them in any given election, and the president's popularity does have an impact on Congressional races. Conversely, an unpopular president can often find it difficult to move even small agenda items forward even under a unified government (Neustadt 1991).

In the era of broadcast media, presidents have often found it effective to use the public to generate pressure on Congress to pass a particular piece of legislation. This strategy, known as *going public*, is often used when presidents feel they need to exert external pressure on Congress to generate momentum (Kernell 2007). While these efforts do not always work, they give the president an additional, if unofficial, method to encourage Congressional action.

PRESIDENTIAL-JUDICIAL RELATIONSHIPS

As a general rule, presidents and the judicial branch do not interact on a regular basis. The most common ground they cover is actually in the process of selecting new members of the judiciary. Presidents have the authority to nominate all judges in the federal judicial system subject to the confirmation of the Senate. Presidents generally use this power to nominate judges with political beliefs similar to their own. Research shows that it is common for well over 90 percent of a president's judicial appointments to come from the same party as the president, and this becomes more relevant if the nomination involves an appellate court or the U.S. Supreme Court.

SEE ALSO *Bush, George H. W.; Bush, George W.; Carter, Jimmy; Clinton, Bill; Congress, U.S.; Constitution, U.S.; Eisenhower, Dwight D.; Elections; Electoral College; Government; Grant, Ulysses S.; Jefferson, Thomas; Johnson, Lyndon B.; Judicial Review; Judiciary; Kennedy, John F.; Lincoln, Abraham; Madison, James; Media; Nixon, Richard M.; Reagan, Ronald; Roosevelt, Franklin D.; Separation of Powers; Truman, Harry S.; Voting; Washington, George; Wilson, Woodrow*

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Geoffrey Peterson

PRESIDENT'S COMMISSION ON THE ASSASSINATION OF JOHN F. KENNEDY

SEE *Warren Report.*

PRESSURE GROUPS

Pressure groups are private organizations that attempt to influence the lawmaking process to benefit the members they represent. Though the term has been applied to corporations and nonprofit organizations engaging in advo-

cacy, it properly refers only to organizations that represent factions of the public before government. Pressure groups form when individuals sharing some want or desire that can be realized through public policy mobilize, usually with the aide of an experienced political entrepreneur or wealthy patron. But in a highly diverse society such as the United States, it is rare that policy advancing the interests of one group can be produced without harming those of others. As lawmakers must choose between winners and losers when they divide public resources and enact regulation, pressure groups compete with each other to convince lawmakers to promote and protect their interests by offering campaign contributions and the votes of their members in elections.

The term *pressure group* is rarely used by social scientists in the early twenty-first century because how scholars view advocacy groups and lobbying has changed. It is more specific than the term *interest group* because it only conceives of groups as proactively pushing lawmakers to enact policies they desire at the expense of the electorate. This view was part of a larger belief first articulated by American behavioral scientist Arthur Bentley (1870–1957) in 1908, and which came to fruition with the behavioral revolution of the 1950s, that U.S. politics was only about competition among social factions mobilized as pressure groups. Law was simply the outcome of competition favoring the stronger group. For several reasons, however, this view declined in the late 1960s. First a major study in 1963 by Raymond Bauer and his colleagues articulated a more benign view of interest groups gaining access to lawmakers by providing services the latter required, not by pressuring them with threats of electorate reprisals. Second, in 1956 American sociologist C. Wright Mills argued that competition among advocacy groups was largely irrelevant because lawmaking was always rigged in favor of a ruling elite. Finally, in 1965 Mancur Olson demonstrated that the whole premise of many groups representing the interests of the public was untenable because the reason groups formed had little to do with any desire to influence policy.

This change from seeing groups as proactively wielding pressure also dampened an important debate among political scientists as to their importance as vehicles of representation in a democratic society. Believing the electorate to be too poorly organized and motivated to hold elected officials accountable through elections, scholars divided into two camps regarding the legitimacy of pressure groups. One, exemplified by political scientist Robert Dahl (1956), argued that groups representing minority factions were a legitimate form of representation, while the other, as described in *The Semi-Sovereign People* (1942) by E. E. Schattschneider, believed they inhibited political parties from electing slates of candidates that voters could hold responsible for the performance of government. With a decline in the belief of the real power of groups to pressure lawmakers, this debate also faded. New evidence, however, has emerged regarding how truly large and diverse the modern community of interest groups is in U.S. politics, and there is new attention in the early twenty-first century on whether groups might really be competing to shape policy. If so, it may be time to revive this debate over the role of pressure groups in democratic politics and return the term to the political lexicon.

SEE ALSO *Behaviorism; Collective Action; Dahl, Robert Alan; Interest Groups and Interests; Mills, C. Wright; Power Elite; Public Policy; Schattschneider, E. E.*

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Thomas T. Holyoke

PRESTIGE

Prestige refers to a person's standing or estimation in the eyes of others. Having prestige means to be honored and respected. To understand the concept of prestige, it is useful to contrast it with other similar concepts related to the broader category of power, which refers to an individual's relative capacity to influence other people's outcomes in general.

How can prestige be differentiated from dominance, for example? Certainly, those with the power to dominate others can enjoy a kind of prestige. But definitions of prestige emphasize that we acquire prestige though our achievements, expertise, and admirable characteristics and behavior. This gives the prestigious person power, but it is usually a power to influence others through the positive emotions and attitudes elicited from them. We admire, respect, and even feel awe toward prestigious people, and these feelings are a major source of their power to influ-

ence us. In contrast, we are more likely to fear someone who is dominant.

The power inherent in the prestigious person has an earned, unforced quality. If we follow the lead of people with prestige, there is sense in which they well and truly merit their power. The honor and respect that they inspire draws us in willingly, sometimes enthusiastically. Words such as *charisma* and *hero* fit in extraordinary cases of prestige. Thus, while prestige breeds imitation and emulation, dominance creates distance and the begrudging of advantage. Prestige promotes the loving gaze; dominance, the furtive glance. Prestige produces the desire for an autograph; dominance creates resentment and unease.

Ethnographic studies show that there are also differences in how the prestigious and the dominant person behave. Despite the legitimate foundations of prestige, it does not appear to cause grandstanding and arrogance in the possessor. Rather, one sees confidence blended with self-deprecation and gratitude. Dominance, on the other had, involves swagger, implied threat at the very least, and the accentuating of superiority. Also, because prestige is earned rather than forced, the orientation of prestigious people is toward an understanding of those around them, the ones who award them prestige. Dominant people are alert to threats that forebode the taking away of their superiority and power.

All the differences between prestige and dominance hardly imply that these distinct sources of power cannot travel together. An army recruit can fear his sergeant and also respect him for the hard-earned medals. The sergeant may have no intention of striking fear in the recruit but may do so nonetheless because the capacity for punishment is inherent in the position. But that aspect of influence that flows from those hard-earned medals is different from the power that flows from holding the position itself.

It is worth emphasizing that prestige is linked to emotions, both in the person enjoying prestige and the person witnessing it in others. In evolutionary terms, these are rank-related emotions. Ranking on various characteristics is associated with access to resources that in turn lead to greater survival and reproductive success. It feels good to rank highly because one can enjoy the prestige that can come with high ranking (e.g., pride) and, correspondingly, it feels bad (e.g., shame) to have low rank. Thus, few of us are immune to the appeal of status and prestige. Most people seek the satisfactions of having prestige. And, presumably, one reason that prestigious individuals can create positive emotions in us is that they inspire us to do better ourselves.

An example of a domain in which the concept of prestige has intriguing explanatory power and where one finds considerable research focus is in marketing. This seems largely the result of the imitative, emulative potential in observing someone imbued with prestige who is also linked to products through marketing. This strategy makes good evolutionary sense, as modeling and learning from people admired for their achievements and remarkable qualities are likely to be a highly efficient way of operating. Although a typical feature of things that lead to prestige is that they are real and earned, consumer products simply linked to prestigious individuals can serve as proxies for the achievement of these features. These indicators, of course, may or may not correlate with actual characteristics in the particular case. The "status symbol" of an expensive car also driven by the rich and famous can mean actual wealth or credit card debt. The acquiring of status indicators is seductive, as it enables the apparent though often illusory achieving of prestige through short cuts. The use of the allure of prestige to affect consumers' behavior is time-honored and is the source of an often-repeated phrase, "conspicuous consumption," coined over a century ago by social scientist Thorstein Veblen.

It is tempting to see prestige in human groups as homologous to dominance processes in nonhumans, in which rank seems very much determined by physical power, fighting ability, and the like. However, rank in human groups is more associated with the possession of skills, expertise, and socially valued attributes. Although dominance resulting from physical power is far from irrelevant, depending on the particular culture, the ability to hold the attention of others because of earned qualities and admired attributes—the kind of things that produce prestige—is more of what leads to high rank. When Henry Kissinger noted that power is the ultimate aphrodisiac, he was not referring to the benefits, for example, of being a professional wrestler such as Gorgeous George but rather of having things relating to prestige more broadly defined. Interestingly, even Gorgeous George was a role model for Muhammad Ali, who learned some of the secrets of showmanship from this flamboyant wrestler. But Ali did not see defeating others in the boxing ring as an end in itself. He claimed that his boxing success was means to a broader goal of positive change in the world. He wanted to be a hero and inspiration for others—which indeed he was.

SEE ALSO *Ali, Muhammad (USA); Conspicuous Consumption; Culture; Distinctions, Social and Cultural; Elites; Emotion; Ethnography; Gaze, The; Hierarchy; Kissinger, Henry; Power; Shame; Social Comparison; Social Dominance Orientation; Social Influence; Veblen, Thorstein*

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Richard Smith

PRETO

SEE *Pardo.*

PREVENTION SCIENCE

Prevention science is an area of scholarship and research in the medical and social sciences that aims to establish principles of prevention and to apply them using tested and effective prevention-intervention programs (Schinke et al. 2003). A major goal in prevention science is to identify health risks or protective factors, along with the conditions that exert beneficial or detrimental effects on health (Hawkins et al. 1992), including, for example, the factors and conditions that lead to alcohol, tobacco, or drug addiction. Thus, prevention science contributes to the design of interventions that can enhance health or reduce the risk of disease or disorders.

The concept of prevention focuses on changing naturally occurring disease-producing conditions by administering interventions early in the disease process to reduce, eliminate, or alter the events that produce diseases. Individuals or populations that experience prolonged exposure to a number of risk factors have a higher likelihood of developing a certain disease or disorder. Such individuals constitute a *high-risk group*. Strategically, interventions are implemented according to two basic approaches: (1) eliminating or reducing exposure to *risk factors*; and (2) increasing exposure to *protective factors*. The most effective prevention interventions will incorporate both strategies.

The science of prevention emphasizes rigor in the design, testing, and implementation of the most potent (or most effective) prevention interventions. The *efficacy* of an intervention refers to its potency in producing a beneficial outcome under ideal conditions. Efficacy is evaluated scientifically using randomized controlled trials. The interventions developed from such trials can be taken from laboratory to community to test the intervention's real-world effect. Randomized controlled trials examine the effect of a new intervention program when administered to an intervention group (the group that receives the improved or enhanced intervention) relative to a control group (the group that receives the standard or unimproved intervention). Under this design, researchers look for the occurrence of a greater or more beneficial posttest outcome in the intervention group as compared to the control group.

AREAS OF EMPHASIS

Prevention science focuses on the application of the principles of prevention in several areas. These areas include: (1) programs to reduce aggressive behavior in children and adolescents; (2) substance-abuse prevention programs that include teaching life skills or changing social norms; (3) community-level interventions to change laws or social ordinances to enhance public health, such as ordinances that require the use of seat belts; (4) scientific studies to test the effectiveness of prevention interventions using rigorous standards of evidence (Flay et al. 2005); and (5) various studies that generate new knowledge that adds to established principles of prevention and guides the application of these principles.

COMMUNITY PARTNERSHIPS

An important aspect of prevention science involves establishing working partnerships between prevention scientists and community members. Partners may include community members who can be described as *stakeholders*, or persons who have something to gain or lose from the implementation of a proposed community-based program. For example, a program that aims to reduce automobile accidents resulting from alcohol intoxication among adolescent drivers may encompass such stakeholders as parents, liquor-store owners, high school teachers, and other concerned individuals or groups within the community. Community partnerships, when well developed, set the stage for community input in the development of new prevention interventions. Such partnerships also promote community "buy in," or a sense of local ownership that allows a prevention program to thrive within a community.

CONTEMPORARY ISSUES

The field of prevention science faces a number of challenging issues. One important issue involves finding ways to design programs that work with greater potency, that is,

programs that can increase the size of the prevention effect and the magnitude of healthy change. For example, how much can a program reduce the rate of smoking among adolescents who initiate or experiment with cigarette smoking? The more potent a program, the greater the *effect size*. Even the most effective community-based prevention programs generally exhibit only a small effect size, that is, they produce a small degree of change on specific outcome measures, such as a drop in the smoking rate among adolescents. Accordingly, one challenge facing prevention science involves increasing a prevention program's magnitude of effect.

Another issue involves the *fidelity-adaptation* controversy. Tested and effective prevention programs are generally organized into instructional manuals that provide program-delivery personnel with information and a set of activities for program sessions. Such prevention-intervention programs, when delivered exactly as prescribed within program manuals, are considered to be implemented with high *fidelity*. This approach contrasts with the challenge of program *adaptation*, which involves changing or otherwise adjusting certain aspects of a tested and effective program with specific and well-planned modifications that are necessary to make the program relevant and viable when delivered within a community (Castro et al. 2004).

Another challenge involves identifying ways in which prevention-intervention programs can be delivered broadly in several sites. A related issue involves *sustainability*, that is, identifying ways of keeping a prevention program in operation into the future by convincing a community group or coalition to adopt the program as their own and to maintain the program in operation. These prevention-science challenges serve as important areas for research and program development.

POLICY-ORIENTED ISSUES

Social policy involves the development of guidelines that govern the decision-making process used by lawmakers, administrators, civic leaders, and others as they work to solve social problems. Prevention science can inform policymakers with scientific information and evidence-based knowledge to help them make better decisions in the interest of promoting public health. Thus, prevention science can contribute to social policy by: (1) informing policymakers on theories of human behavior and on ways to prevent disease and promote health; and (2) offering tested and effective intervention techniques and programs that can improve health in specific ways.

On a larger community or regional scale, however, such principles cannot be fully implemented without the support of local policymakers. The development of legislation and local ordinances can endorse, institutionalize, and maintain local prevention intervention programs, including, for example, ordinances prohibiting smoking in restaurants or the mandatory use of seatbelts while driving. These are examples of the contributions of prevention science to policy-related actions; in turn, social policy can aid in the implementation of prevention-science programs within diverse sectors of the community.

FUTURE ISSUES

Future challenges facing prevention science involve finding ways to design prevention programs that are more accessible, and thus more likely to be adopted and used by greater numbers of consumers. Prevention programs must also be user-friendly and widely available at an affordable cost, and they must allow consumer feedback to constantly monitor and improve the programs and keep them relevant to changing community needs. Moreover, making prevention programs more potent, whereby they produce greater and more enduring changes on targeted outcomes, remains a major challenge for prevention science. The use of new technologies and new forms of responsiveness to diverse cultural and economic consumer groups will aid in making prevention science and its interventions more socially relevant and more effective.

Prevention science is the product of ongoing research that aims to discover stable and generalizable new knowledge and intervention approaches. In the United States, this ongoing scientific endeavor aims to increase the capacity of prevention science to effectively meet the complex public health needs of growing and increasingly diverse sectors of the American population.

SEE ALSO *Addiction; Disease; Occupational Hazards; Occupational Safety; Public Health; Public Policy; Risk; Smoking*

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Felipe González Castro

PRI

SEE *Partido Revolucionario Institucional.*

PRICE, SHADOW

SEE *Shadow Prices.*

PRICE CONTROLS

SEE *Inflation.*

PRICE INDICES

In 1927 Irving Fisher provided a simple definition of price indices in his classic book on index numbers, *The Making of Index Numbers: A Study of Their Varieties, Tests, and Reliability*:

> An index number of prices, then, shows the *average percentage change* of prices from one period to another. The percentage change in the price of a *single* commodity from one time to another is, of course, found by dividing its price at the second time by its price at the first time. The ratio between these two prices is called the *price relative* of that one particular commodity in relation to those two particular times. An *index number* of the prices of a *number* of commodities is an average of their price relatives (p. 3).

To begin a discussion on price indices, some notation is important: Let $p^0 = (p_1^0, \ldots, p_n^0)$ be a vector of prices for n goods in period 0. Let $p^1 = (p_1^1, \ldots, p_n^1)$ be a vector of prices for the same n goods in period 1. Thus, the *price relative* of any good i is p_i^1/p_i^0. A simple way of measuring the average change in all n prices from period 0 to period 1 is to take an average of the price relatives across all of the goods. For example, the arithmetic mean of the price relatives is $P_{01} = \frac{1}{n}\sum_{i=1}^{n}(p_i^1 / p_i^0)$ and the geometric mean of them is $P_{01} = \prod_{i=1}^{n}\left(p_i^1 / p_i^0\right)^{\frac{1}{n}}$.

As noted by E. Antony Selvanathan and D. S. Prasada Rao in their book *Index Numbers: A Stochastic Approach*, these simple measures:

> tend to consider price changes for all commodities to be equally important. However, in practice, movements of prices in essential items are considered to be more important and it is expected that any meaningful price index should accord weights to different price relatives. This principle leads to a class of weighted averages, where the weights are usually based on the value shares of each commodity (1994, pp. 19–20).

SOME WELL-KNOWN PRICE INDICES

Let $q^0 = (q_1^0, \ldots, q_n^0)$ and $q^1 = (q_1^1, \ldots, q_n^1)$ represent quantity vectors for the n goods in periods 0 and 1 respectively. Total expenditure in the two periods is the sum (across all n goods) of the prices multiplied by the corresponding quantities: $Y^0 = \sum_{i=1}^{n} p_i^0 q_i^0$ and $Y^1 = \sum_{i=1}^{n} p_i^1 q_i^1$. Thus, the *expenditure shares* for each good i are given by $w_i^0 = p_i^0 q_i^0 / Y^0$ and $w_i^1 = p_i^1 q_i^1 / Y^1$ for periods 0 and 1 respectively.

A *price index* is a function of the price and quantity vectors in two periods, which measures the change in the prices of the n goods between them. As in the previous section, the notation, P_{01} is used to denote a price index between periods 0 and 1. A price index can be interpreted in the same way as an individual price relative. If it is greater than one, it means that prices are increasing from period 0 to 1. If it is less than one, prices are decreasing. The rate of increase or decrease of an individual price can be computed by either subtracting one from the price relative, giving the growth rate $(p_i^1/p_i^0) - 1 = (p_i^1 - p_i^0)/p_i^0$, or by taking natural logarithms of the price relative, giving $\ln(p_i^1/p_i^0) = \ln(p_i^1) - \ln(p_i^0)$. Similarly, the rate of increase or decrease in the prices of all n goods can be measured as either $(P_{01} - 1)$ or $\ln(P_{01})$.

Given a price index, P_{01}, one can always define a quantity index, Q_{01}, implicitly from the following equation: $P_{01}Q_{01} = Y^1/Y^0$, which means that the product of the price and quantity indices equals the ratio of total expenditure in the two periods.

A number of well-known price indices can be obtained by taking the weighted arithmetic or geometric means of the price relatives, where the weights depend on the expenditure shares. The *Laspeyres price index*, P_{01}^L, is

obtained by taking a weighted arithmetic mean of the price relatives, where the weights are the expenditure shares for period 0. As explained by Selvanathan and Rao, the *Paasche price index*, P_{01}^{P}, can be obtained in a similar fashion using hypothetical expenditure shares derived from period 0 prices and period 1 quantities. Although mathematically equivalent, the Laspeyres and Paasche price indices are usually defined as follows: $P_{01}^{L} = \dfrac{\sum_i p_i^1 q_i^0}{\sum_i p_i^0 q_i^0}$ and $P_{01}^{P} = \dfrac{\sum_i p_i^1 q_i^1}{\sum_i p_i^0 q_i^1}$. *Fisher's ideal price index*, P_{01}^{FI}, is the geometric mean of the Laspeyres and Paasche price indices: $P_{01}^{FI} = \sqrt{P_{01}^{L} P_{01}^{P}} = \sqrt{\dfrac{\sum_i p_i^1 q_i^0}{\sum_i p_i^0 q_i^0} \dfrac{\sum_i p_i^1 q_i^1}{\sum_i p_i^0 q_i^1}}$.

The *Tornqvist-Theil price index*, P_{01}^{TT}, is the weighted geometric mean of the price relatives with weights that are the average of the expenditure shares from the two periods: $P_{01}^{TT} = \prod_{i=1}^{n} \left(p_i^1 / p_i^0 \right)^{\frac{1}{2}(w_i^0 + w_i^1)}$. An attractive property of this index is that its natural log is a weighted sum of the natural logs of the n component price relatives: $ln(P_{01}^{TT}) = \sum_{i=1}^{n} \frac{1}{2}(w_i^0 + w_i^1) ln(p_i^1 / p_i^0)$.

THE TRUE COST OF LIVING INDEX AND SUBSTITUTION BIAS

In his 1992 article "Economic Theory and the BEA's Alternative Quantity and Price Indexes" Jack E. Triplett discusses the connection between a price index for a set of consumer goods and services and a cost of living index:

> a consumption price index should measure the change in the cost of maintaining a fixed, or constant, standard of living. If the price index holds the standard of living constant, then any increase in per capita consumption expenditures that exceeds the increase in the price index can be interpreted as an increase in the standard of living.… Thus, from the standard-of-living orientation, the price index measures the changing cost of a constant standard of living, and the quantity index measures increases or decreases in the standard of living (p. 49).

The *true cost of living index* was originally proposed in a 1924 paper by A. A. Konüs (an English translation was published in 1939). The true cost of living index is defined as $\dfrac{e\left(p^1, U(q)\right)}{e\left(p^0, U(q)\right)}$. In the definition, the *expenditure function*, $e(p, u)$, gives the minimum expenditure needed to obtain a particular standard of living, u, when prices are p. The *utility function*, $U(q)$, in turn, gives the utility, or standard of living, associated with the quantity vector, q. Thus, the true cost of living index measures the change in the minimum expenditure needed to maintain the standard of living associated with a particular vector of quantities, q, as prices change from p^0 to p^1. (See W. E. Diewert's 1981 article, "The Economic Theory of Index Numbers: A Survey," for an extensive discussion of these concepts.)

The true cost of living index can be evaluated using any quantity vector. It could, for example, be evaluated using the quantities q^0, from period 0. In the following discussion, it will be assumed that $e\left(p^0, U(q^0)\right) = \sum_{i=1}^{n} p_i^0 q_i^0$, which means that the quantities q^0 are optimal given prices p^0. It would cost $\sum_{i=1}^{n} p_i^1 q_i^0$ to purchase the same vector of quantities in period 1 and doing so would ensure that the standard of living is unchanged. If relative prices have changed, however, it may be possible to achieve the same standard of living at a lower cost by substituting away from goods whose relative prices have increased toward goods whose relative prices have decreased. This reasoning implies that $e\left(p^1, U(q^0)\right) \leq \sum_{i=1}^{n} p_i^1 q_i^0$.

It follows that the Laspeyres index provides an upper bound on the true cost of living index when the standard of living is based on the quantities from period 0, since $P_{01}^{L} = \dfrac{\sum_i p_i^1 q_i^0}{\sum_i p_i^0 q_i^0} \geq \dfrac{e\left(p^1, U(q^0)\right)}{e\left(p^1, U(q^0)\right)}$. The upward bias in the Laspeyres index, relative to the true cost of living index, is a type of *substitution bias*. The same reasoning also implies that the Paasche index provides a lower bound on the true cost of living index when the standard of living is based on the period 1 quantities, since $\dfrac{e\left(p^1, \mathrm{U}(q^1)\right)}{e\left(p^0, \mathrm{U}(q^1)\right)} \geq \dfrac{\sum_i p_i^1 q_i^1}{\sum_i p_i^0 q_i^1} = P_{01}^{P}$.

In general the true cost of living index depends on the choice of the quantity vector, so it would not be correct to say that the true cost of living index is bounded above and below by the Laspeyres and Paasce price indices respectively, since those upper and lower bounds are based on different quantities. A stronger result can be obtained if preferences are homothetic. As explained by Angus Deaton and John Muellbauer in their 1980 book, *Economics and Consumer Behavior*, homotheticity means that for some normalization of the utility function, doubling quantities doubles utility. Under homotheticity, it can be shown that the true cost of living index does not depend on q and is, consequently, bounded above and

below by the Laspeyres and Paasche price indices respectively (see Diewert 1981). Nevertheless, homotheticity is a very strong assumption, since it implies that expenditure shares of the goods are independent of the level of total expenditure, which is contradicted by most empirical evidence (see Deaton and Muellbauer 1980).

SUPERLATIVE INDEXES

In his 1976 article, "Exact and Superlative Index Numbers," Diewert provides a strong rationale for preferring certain price and quantity indices, which he termed *superlative indexes*. The Tornqvist-Theil price index and Fisher's ideal price index are both superlative. Without going into precise technical details, essentially a price index is superlative if it can provide a good approximation to the true cost of living index even though the functional form of the expenditure function is not known (see Diewert's 1976 and 1981 articles for further discussion, including the role of homotheticity in the theory of superlative indices).

The Laspeyres and Paasche price indices are not superlative, because they just measure the change in the cost of purchasing a fixed bundle of goods and, therefore, ignore substitution. As explained by Triplett:

> Diewert showed that the Fisher Ideal index and the Tornqvist index are theoretically better measures of the cost of living than the traditional fixed-weighted Paasche or Laspeyres indexes. The superlative indexes accommodate substitution in consumer spending while holding living standards constant, something the Paasche and Laspeyres indexes do not do. From the view of theory, the Fisher Ideal formula and the Tornqvist formula are equally good; therefore, one can choose between the two on pragmatic grounds (1992, p. 50).

In fact, there are many other superlative indices besides the two that have been discussed.

The influential 1996 Boskin Commission report, *Toward a More Accurate Measure of the Cost of Living*, concluded that the consumer price index (CPI) overstated inflation in the United States by 1.1 percent per year in 1995–1996. The report further concluded that 0.4 percent of that bias could be attributed to upper and lower level substitution. The remainder of the bias was mostly attributed to quality change and new products. Robert J. Gordon, in his 2000 paper, "The Boskin Commission Report and Its Aftermath," states:

> It is noteworthy that few if any criticisms addressed the Commission's basic recommendations that the CPI should become a COL [cost of living] index and that substitution at both the upper and lower level should be addressed within the framework of superlative index numbers (2000, p. 24).

CHAIN-WEIGHTING

Suppose there is price and quantity data for many periods denoted by p_t and q_t, where $t = 0, 1, \ldots, T$ (for example, suppose there is annual data for twenty years). One can then compute price indexes from each period to the suc-

Inflation measures for the United States

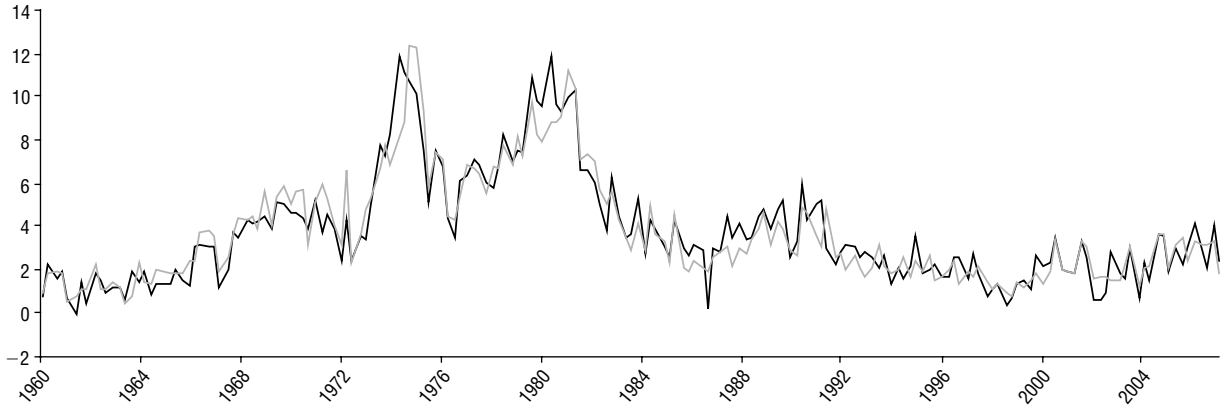

SOURCE: Federal Reserve Bank of St. Louis, Economic Data – FRED.

Figure 1

cessive one, $P_{t-1,\,t}$, for all t. A time series covering more than two periods can be produced using the concept of *chain-weighting*. A chain-weighted time series can be constructed as follows: The value of the series, I_t, for any period t is the previous value of the series, I_{t-1}, multiplied by the corresponding price index for the two periods, so that $I_t = I_{t-1}P_{t-1,\,t}$ for all t. Thus, the growth rate of a chain-weighted index between adjacent periods is $(I_t - I_{t-1})/I_{t-1} = P_{t-1,\,t} - 1$. Any price index formula can be chain-weighted, although a superlative formula is preferable as previously discussed.

The Bureau of Economic Analysis (BEA) produces chain-type price indices for Personal Consumption Expenditures (PCE) and for Gross Domestic Product (GDP) for the United States, which are based on Fisher's ideal formula (see *A Guide to the National Income and Product Accounts of the United States* published by BEA in 2006). See Triplett's 1992 article, as well as Allan H. Young's "Alternative Measures of Change in Real Output and Prices, Quarterly Estimates for 1959–92" (1993) for related discussion including alternatives to chain-weighting.

EMPIRICAL ILLUSTRATION

In this section, the use of price indices to measure inflation is illustrated. Annualized quarterly percentage changes in the chain-type price indices for PCE and GDP for the United States were calculated using data from 1960Q1 to 2006Q3. These two inflation measures are graphed in Figure 1 (PCE is black and GDP is grey).

These measures indicate that inflation was relatively low and stable in the early 1960s, but was higher in the mid to late 1960s. In the 1970s inflation was higher and more volatile and, in particular, oil shocks in 1973 and 1974 and 1979 and 1980 were associated with high rates of inflation. Inflation declined in the early 1980s and has been relatively low and stable in the 1990s and beyond.

SEE ALSO *Wholesale Price Index*

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Barry Jones

PRICE SETTING AND PRICE TAKING

The determination of prices in different markets is usually characterized by two opposing strategies: *price taking* and *price setting*.

PRICE-TAKING STRATEGY

In this theoretical situation, which characterizes the limiting case of "pure competition," market price is determined by the confrontation of a supply curve and a demand curve. With the usual assumption that the supply curve is increasing and the demand price is decreasing, there exists generally one intersection point. Other assumptions are that this intersection point is unique and stable, stability being warranted by adjustment processes, *tâtonnement*, which will lead to convergence on the equilibrium position. Here, the equilibrium point is unambiguously associated with the position where supply equals demand at price p^*.

The equilibrium price is determined at the intersection of the supply curve and the demand curve (see Figure 1 left); this price is "given" to the firm (see Figure 1 right), which appears as the *price taker*. The firm's production level will be determined at the intersection of this given price and its own marginal cost curve: the firm's profit is maximized at the intersection, since the marginal cost equals the marginal revenue. Producing more would be inefficient, since the marginal cost will exceed the price; producing less would mean that the marginal cost is less than the price, and profit may be increased by increasing

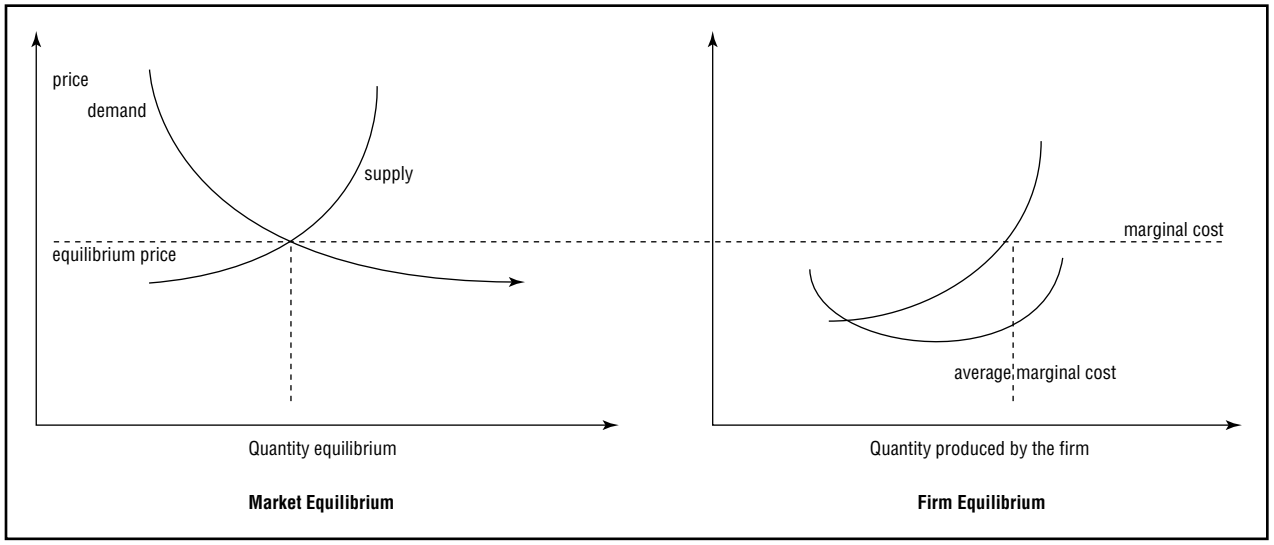

Figure 1

the production level. The individual firm makes a profit, since the price is superior to the average cost, and the total profit is obtained by multiplying the unit profit by the quantity produced.

In the conventional narrative, under long adjustment, new firms will appear in this market. The presence of positive profits induces new firms to enter. Hence, adjustment will be characterized by an increase in supply and a decrease in the market price, which will eliminate profit-making firms. Eventually, the market price level will coincide with the minimum average cost curve of the firm.

This price system plays an essential role in the information and regulation of general activity for producers and consumers. Equilibrium prices are scarcity indicators. Utility maximization implies that the market price represents the marginal value of the last dollar spent by consumers on the considered commodity. But the market equilibrium price also will represent production conditions, since the supply curve is derived from aggregation of the individual firm's marginal cost curves.

PRICE-SETTING STRATEGIES

Producers are generally able to fix, or *set*, their output price by taking into account quantities demanded by consumers.

Monopoly A monopolistic firm provides the whole product for the relevant market. The firm's demand and the market's demand are the same; hence, product demand, for which the firm is the only supplier, is a decreasing function of price. A monopoly will then maximize profit when it sets its level of output such that marginal cost is equal to marginal revenue. Given the profit-maximizing level of output, the monopolist then uses the demand curve to find the highest price that consumers are willing and able to pay for the profit-maximizing level of output. Consequently, in this case, quantity and price are determined simultaneously.

With the assumption of linearity of average and marginal receipt, representation is simple, as indicated in Figure 2.

More complicated strategies can be taken into account. In some cases, a monopoly may try, for instance, to maximize its turnover, which will be realized when marginal revenue equals zero, determining quantity and

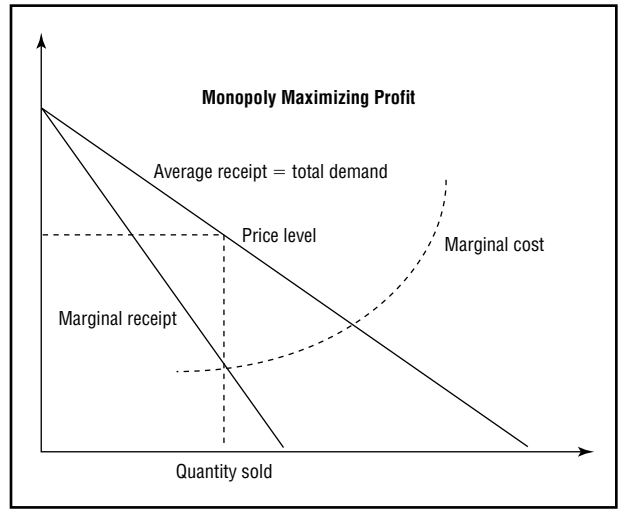

Figure 2

price. In another case, a monopoly will try to get balanced accounts—that is, zero profit—which will be realized when average cost equals average revenue. Such strategies obviously lead to more production, and can appear when a monopolist tries to avoid the "entry" of competitors.

Lastly, a monopolist may engage in *marginal cost pricing*, a strategy frequently used by publicly owned enterprises that guarantees optimal use of economic resources. The relevant level of production corresponds to equality of marginal cost and marginal revenue. Such a strategy, which appears as "optimal," may imply deficits; consequently, economists have come to "second-best" solutions. Discrimination between different types of consumers or markets also can occur. Elasticity of demand is to be taken into account in price-setting strategies.

Monopsony In the symmetrical situation of a monopsony, a large number of suppliers of a homogeneous product or service face a unique buyer. The monopsony average unit curve is represented by the supplier's curve. The monopsony's marginal cost increases with quantity, and is situated above the average cost curve. With the simplified assumption that the monopsony sells its product at a fixed price, maximization of profits will be realized when the firm buys a quantity of raw materials (or labor services), q_M, such that the value of its marginal product is equal to its marginal cost.

The purchase price paid to sellers, p_P, will correspond to this quantity on the supply curve of the product. The monopsony will set the selling price on the product market, p_S, at the point of the monopsony's average receipt corresponding to the quantity sold (in this simplified case, no transformation of the product is taken into account); the profit unit is the difference between the "purchase price," p_P, and the "selling price," p_S.

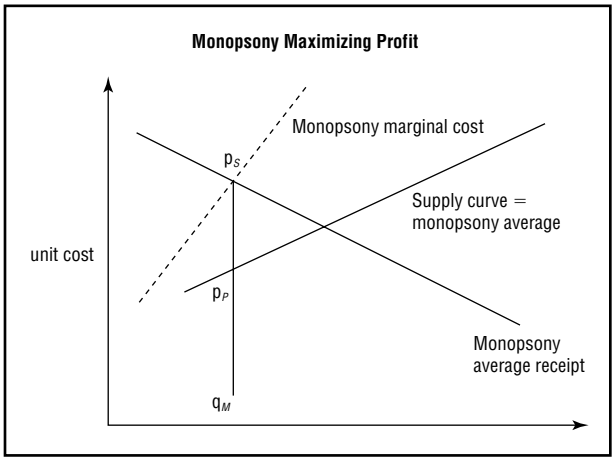

Figure 3

Monopolistic Competition Monopolistic competition is a market structure characterized by a mixture of perfect competition and monopoly. There are a multiplicity of sellers, but each firm produces a unique product, although it is a product that is similar to those of other firms within the industrial group. So-called fast-food franchises, for example, are usually considered monopolistically competitive firms. As such, McDonald's Big Mac hamburger is considered different from, but substitutable for, Burger King's Whopper or Wendy's Single. Or, more broadly, these different burgers are also competitive substitutes for KFC's original fried chicken or Long John Silver's fish and chips. Each producer then faces a downward-sloping demand curve that is affected by the decisions of both its competitors and its consumers. An increase in the number of sellers or a decrease in attractiveness of its products mean a reduction in demand for a monopolistically competitive firm. It will sell less at all available prices. An increase in its own price means a reduction in the quantity demanded.

Similar to a monopoly, in the short run, a monopolistically competitive firm will maximize profit at the level of production such that marginal cost equals marginal revenue and the output price is consistent with consumer demand. However, if economic profits exist, this is an unstable situation; new competitors will progressively appear, which will decrease the firm's receipts. The firm's demand curve will progressively shift to the left until it is tangent to the average cost curve, a situation where the price will be set with zero profit. Further decrease in demand will lead to a new shift of the demand curve to the left, and the firm will disappear, since there is no further production level that will allow profitability.

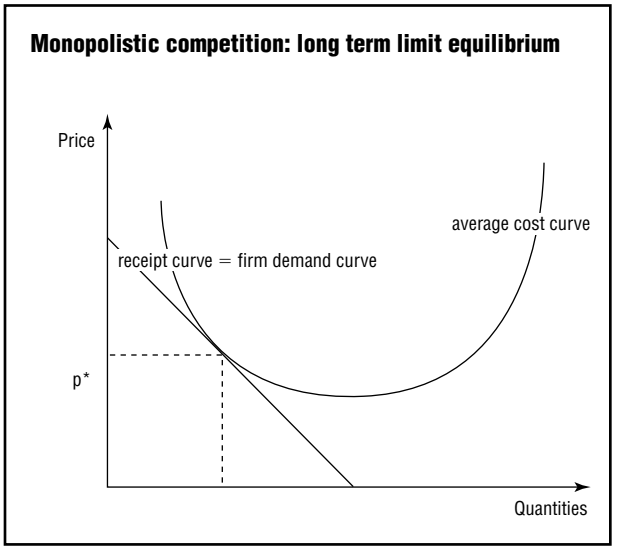

Figure 4

Duopoly and Oligopoly In a duopoly or oligopoly, price setting by one competitor generally leads to price wars with fatal outcomes. Of course, it is always possible that firm *A* draws customers from firm *B* by a price decrease. But since it is also possible for *B* to do the same, the only outcome, if a price war breaks out, is perfect competition equilibrium with price being equal to marginal cost, leading to ruin for one of the competitors. So price setting is generally not the solution, except when agreements between firms lead to a situation close to a monopoly. Such situations are common, and have developed among such firms as Boeing and Airbus, Pepsi and Coca-Cola, and Ford, General Motors, and Toyota.

The only strategy left, if one excludes agreements, collusion, and various nonmarket arrangements, is a determination of quantity produced by one or more competitors, the same price being settled by all. Such a situation will be stable or unstable, according to the behavior of competitors (i.e., their aggressiveness).

It must be recognized that in many industries, firms sell very similar, nonidentical products. In such markets, it is equally easy to represent firms as price choosers or quantity choosers.

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PRICE VS. QUANTITY ADJUSTMENT

The phrase *price vs. quantity adjustment* refers to the debate over the way in which the economy adjusts over the business cycle. Neoclassical economics claims that the price mechanism (prices, wages, and interest rates) is the most important adjustment mechanism in the economy, whereas Keynesians believe that the quantity of output and employment are the primary forces of adjustment during the business cycle, and that downward price and wage flexibility in fact tends to make things worse.

The neoclassical view claims that under conditions of perfect competition, the economy is self-correcting and therefore would not require government intervention. When labor supply exceeds labor demand, competitive pressures would compel job-seekers to accept lower wages, which would encourage firms to hire more workers, thus increasing aggregate output and employment. If the newly produced output is entirely purchased by the newly hired workers, then workers' savings would be equal to zero and the labor market would converge to full employment. However, under a more likely scenario, workers would save a portion of their income, which creates a potential problem for the self-adjusting mechanism of the market. The dual nature of saving means that on the one hand, from the workers' perspective, saving is income not spent and is therefore a benign if not a desirable decision. On the other hand, from the firms' perspective, saving is the equivalent of production not purchased. This problem, however, is dealt with in the loanable funds market. For neoclassical theory, the increased amount of savings would create an excess supply of savings relative to the demand for investment, thus driving down the interest rate due to bank competition to lend out their excess reserves. Consequently, a lower interest rate would encourage firms to borrow and invest in plant and equipment, thus continuing to hire workers up to the point where savings equal investment at full employment. The simultaneous adjustment of the labor market and loanable funds market requires price flexibility. Any obstacles to the price mechanism, such as minimum-wage laws, union bargaining wage policies, or central bank interest-rate target policies, would interfere with the self-regulating feature of the market, and are therefore undesirable.

The Keynesian view, however, was developed in the midst of the Great Depression in response to the neoclassical laissez-faire approach that dominated academic and policy circles alike. According to John Maynard Keynes (1883–1946), unemployment was not due to wage and price rigidities but rather to a lack of effective demand. Keynes rejected the loanable funds theory, which assumes that saving creates investment through interest-rate adjustments. From a macroeconomic perspective, the neoclassical model assumed that when aggregate consumption falls, aggregate saving would increase and would finance an equal amount of investment, which would keep aggregate demand high (thanks to the price mechanism). Keynes, on the other hand, showed that when the economy is in a recession or depression, consumer expectations turn negative due to unemployment and job insecurity. This leads to an aggregate reduction in consumer spending, leading to fewer sales, lower business revenues,

and a downturn in business expectations about future profits. Firms will slow down production (in an attempt to reduce inventories), cancel investment spending, and eventually lay off more workers, thus leading to further deterioration in business activity.

Keynes explained that a reduction in consumer spending is likely to be accompanied by a fall in investment spending, hence an overall reduction in effective demand. It is understandable that during a recession, consumers will not go out on a shopping spree, nor will firms expand their productive capacity when they have difficulty liquidating their inventories. Therefore, the only solution to boost the economy during the recession is to increase the level of effective demand through government spending in order to compensate for low consumption and investment spending.

In Keynesian economics, the key adjustment mechanism is the level of effective demand, with aggregate investment being the engine of the economy. More investment (financed through credit rather than savings) leads to higher aggregate income, which in turn fuels more consumption and generates a residual amount of aggregate savings. The increase in consumption will, in turn, generate more revenues and stimulate positive expectations about future profits, thus helping increase the level of investment, output, and employment.

Robert W. Clower (1965) and his student Axel Leijonhufvud (1967) launched a significant attack on the neoclassical interpretation of Keynes known as the *Neoclassical-Keynesian Synthesis*, which dominated macroeconomics through the standard IS-LM model. Clower and Leijonhufvud started the so-called disequilibrium Keynesianism movement, which culminated in the creation of the famous Barro-Grossman model in 1971. The IS-LM interpretation of Keynes made the Keynesian model a special case of a neoclassical model with sticky (nonflexible) prices. Leijonhufvud, however, showed that one could understand Keynes's theoretical contribution only in the context of the rejection of the Walrasian auctioneer coordinating mechanism. Both Clower and Leijonhufvud believed that the disequilibrium situation (i.e., unemployment and effective demand failure) is the result of information and coordination deficiencies, rather than wage and price stickiness. Clower explained that when unemployed workers offer their services to firms, this does not constitute a signal of an effective demand for goods. Additionally, the change in time preference of individual economic agents—say, an increase in saving—will result in a fall in effective demand, leading to a decrease in both employment and output levels. This coordination failure results, therefore, in involuntary unemployment according to Clower and Leijonhufvud.

With the rise of the rational expectations theory, Robert Barro and Herschel Grossman abandoned the disequilibrium approach and reunited with the standard equilibrium models of New Classical economics in the late 1970s. A revival of the same (mis)interpretation of Keynes in terms of sticky prices has been echoed by New Keynesian economists since the early 1990s, claiming that in reality prices and wages are not as flexible as in the neoclassical model because of things like efficiency wages, long-term labor contracts, menu costs, credit rationing, capital market imperfection, adverse selection, and adverse incentives. New Keynesian economics is, therefore, in favor of the price adjustment approach. The Keynesian quantity adjustment approach, however, argues that downward wage and price flexibility could make things worse by adding to consumer income insecurity and business uncertainty about investment and operating costs. Therefore, downward wage rigidity and price inflexibility reduce uncertainty and provide a more stable environment for economic growth. This debate, however, continues to be one of the most important ones at the theoretical and policy level, with arguments over the usefulness of minimum-wage laws, labor unions, and discretionary fiscal policy.

SEE ALSO *Barro-Grossman Model; Business Cycles, Theories; Competition; Economics, Classical; Economics, New Classical; Economics, New Keynesian; Equilibrium in Economics; General Equilibrium; Great Depression; Sticky Prices;* Tâtonnement; *Wages*

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Fadhel Kaboub

PRICE-DIVIDENDS RATIO

SEE *Market Fundamentals.*

PRICE-EARNINGS RATIO

SEE *Market Fundamentals.*

PRICE-ENHANCING RATIO

SEE *Market Fundamentals.*

PRICE-SPECIE-FLOW MECHANISM

SEE *Hume Process.*

PRICES

Prices are the rates at which goods and services are exchanged for other goods and services, or for money. In a monetized economy, the term *price* usually connotes the amount of money for which a good or service is purchased or sold. While in conventional usage, the term *price* is applied only to goods and services, in economic analysis, wages, interest rates, rents, and other money exchange rates for specialized services are also considered prices.

Prices have a critical coordinating role in a market economy. Ordinarily, an increase in a good's price conveys the information that it has become scarcer relative to the demand for it, either because its supply has fallen or because the demand for it has risen. A higher price induces existing producers to supply more of the good, and it attracts new entrants into an industry, since it tends to be associated with a higher-than-normal profit margin. Conversely, a declining price leads to reduced supply. Economists see these reactions as being exactly what is required for social efficiency, since resources should be withdrawn from uses that are less valued and drawn into uses that people value more.

Economist and social theorist Friedrich Hayek (1899–1992) argued that prices convey information about "global" (or society-wide) conditions to "local" actors (such as business owners), thereby solving a core informational problem faced by a society when it attempts to decide how best to allocate scarce resources. Hayek argued that the compactness or one-dimensionality of prices and the fact that they arise spontaneously as by-products of self-interested buying and selling activities makes them a uniquely economical way to coordinate society's resource allocation process. In the "socialist calculation debate" of the 1940s, Hayek argued that it is impossible to solve the problem of efficiently allocating resources among productive activities in an economy of specialized producers without market-generated prices. During the middle decades of the twentieth century, the apparent economic viability of the Soviet Union and like economies was sometimes viewed as contradicting that claim; yet reform-minded economists in the socialist world asserted the validity of Hayek's argument when political conditions allowed the matter to be discussed and their views ultimately prevailed.

Economic analysis distinguishes between nominal and real prices. The real price of a good is its price relative to the prices of other goods, while its nominal price is its price denominated in a currency the value of which may be changing over time. For example, if all nominal prices, including wages, were to double over a certain span of time, the real price of any given good would remain unchanged. The terminology reflects the idea that money is merely a medium of exchange without an intrinsic value of its own, and that what matters economically is therefore relative prices, including the purchasing power of people's money incomes.

In practice, changes in a country's price level can have real consequences. Inflations rarely affect all prices in perfect proportion. For this reason, and because of their asymmetric effect on, for instance, debtors versus creditors, they have significant distributional consequences. In a world of many countries and currencies, differences in rates of change in price levels affect international trade and payments. Unpredictable price changes increase risk, discouraging some investing and trading activities. Rapid price change can give rise to real costs, such as those associated with having to recalculate and reprice items frequently, the pressure to spend money as soon as it is earned, and the need to print and to carry large quantities of money.

Classical economists such as Adam Smith (1723–1790) distinguished between natural prices and market prices. While the terminology suggests that the "natural price" may have an underlying ethical quality, modern historians of economic thought generally understand the term to have been a reference to what would today be called a "long-run equilibrium price," that is, the price at which a normal or average rate of profit can be earned. This is the level toward which a good's price will adjust in the long run, through expansion or contraction of output

by current producers and through exit of old and entry of new producers into the market. The "market price" is simply the price at which a good is sold at any given point in time. Since changes in supply or demand are always occurring, market prices are the prices we actually observe, while natural or long-run equilibrium prices are idealized or theoretical indicators of long-run tendencies.

Neoclassical economic theory teaches that allowing prices to be governed by the forces of supply and demand is the best way to permit them to play their role of signaling scarcity and guiding the ongoing reallocation of resources to their most valued ends. When governments intervene by setting price floors or ceilings, by taxing the sale of some goods but not others, by imposing tariffs on imports, by subsidizing some producers, or by directly determining what prices can be charged, prices become "distorted" and can no longer be counted upon to steer resource allocation toward efficient uses. In an economy in which prices are significantly distorted or controlled in these ways, it remains possible in principle to calculate what prices "should" be, that is, what they would be if market forces were permitted to determine prices freely and exclusively. The true "scarcity-reflecting" prices thus calculated are referred to by economic theorists as *shadow prices,* and they play important roles both in theoretical analysis and in some practical policy exercises.

On closer inspection, however, unregulated prices are not always the ideal, even according to neoclassical economic theory. Monopolists can push prices above levels associated with normal profit rates and efficient supply. The market prices of goods whose production destroys unpriced resources, such as clean air and water, systematically understate their true cost to society. Government interventions, such as setting a maximum price for a monopolist, breaking up monopolies so that competition will bring down prices and increase supply, or taxing polluters to force them to internalize costs they might otherwise impose on society, can at least in principle improve upon unregulated outcomes, although knowing how a government will act in practice requires an understanding of a range of political and economic factors.

Scholars who compare economic systems of different types emphasize that prices play more than a scarcity-signaling role in an economy. Prices also determine the relative incomes of different groups of economic actors. For example, higher real wages may mean lower profits and hence a smaller income gap between wage versus profit earners. A higher ratio between the wages of more-educated or skilled and less-educated or skilled workers was associated with rising income inequality in industrialized economies during the last decades of the twentieth century. In the heyday of the Soviet Union and other planned economies, planners set the wages of urban workers and the prices paid to farmers for their produce at levels consistent with the proportions of consumption versus investment desired by the political authorities. In this way, they used control over wages and prices as a method of dictating high rates of capital formation. Prices also functioned as accounting aids in the centrally planned economies. Their existence allowed economic planners to monitor the fulfillment of plan targets through a system of indicators (money flows) parallel to but distinct from indicators of physical input and output.

Their impact on the distribution of wealth, for instance between sellers and buyers, also explains why prices attract ethical attention, as epitomized by medieval European discussions of the "just price." Sellers of a resource in plentiful supply, for example unskilled labor, cannot command high prices (wages) for their service under competitive conditions, resulting in their poverty in comparison with those selling a scarce resource—perhaps access to fertile land. Companies in the oil industry earning large profits in the wake of short-run supply shortfalls attract ethical and political attention because a higher price for transportation and heating fuel means poorer consumers and wealthier company owners. Governments sometimes try to prevent such transfers by fixing a maximum price. If the supply of the commodity in question is fixed, the price ceiling will cause demand to outstrip the available supply, which will then be "rationed" by some nonprice mechanism—perhaps willingness or ability to wait in line, perhaps rules governing who can purchase on which day of the week, or perhaps government issue of coupons in limited number. In some circumstances, rationing a scarce but crucial commodity may be preferable to letting market forces operate, but in eliminating the short-run windfall that would otherwise accrue to suppliers, it can also slow the expansion of output that would reduce the commodity's scarcity in the long run.

Many governments set minimum wages, tax high incomes at steeper rates than low ones, or engage in other price-altering interventions in order to protect disadvantaged groups or moderate income inequalities. But governments face pressures from constituencies other than the poor, which also leads to price interventions. For example, tariffs preserve the profits of domestic producers at the expense of domestic consumers, and often also at the expense of forces promoting long-run competitiveness. The effect of prices on the distribution of income helps to explain a variety of government price-altering policies.

SEE ALSO *Aggregate Demand and Supply Price; Interest, Natural Rate of; Long Period Analysis; Long Run; Rent; Shadow Prices; Short Period; Short Run; Spot Market; Wages*

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PRICES OF PRODUCTION

SEE *Long Run.*

PRIDE

SEE *Shame.*

PRIMACY/RECENCY EFFECTS

Is it better to go first in a debate, or second? Who has the advantage in court, the prosecutor who speaks first and can set the stage, or the defense attorney who has the final word? Do first impressions really matter? These questions and others like them have been the focus of a great deal of social psychological study since the mid-twentieth century.

Understanding when there is an advantage to going first or last could be a powerful communications tool. Not surprisingly then, determining whether or not people will attend to, remember, and be swayed by the first information they encounter (i.e., showing a *primacy effect*) or whether they will process, recall, and be convinced by the last information they encounter (i.e., demonstrating a *recency effect*) has been a major focus of research in the social psychological literature.

One of the more comprehensive approaches to the issue of primacy and recency effects has been in the persuasion literature. After World War II (1939–1945), the psychologist Carl Hovland (1912–1961) and his colleagues at Yale began to conduct research in order to understand how one could change people's attitudes, and what contextual factors might influence the persuasive impact of a message. In their 1957 book *The Order of Presentation in Persuasion,* Hovland and his colleagues began to explore the issue of order effects. Many studies found primacy effects such that postmessage attitudes were more influenced by the first speaker or set of arguments. However, other studies found a recency effect, such that the perceivers were more influenced by the last information they encountered. Additional studies demonstrated neither primacy nor recency effects.

In 1959 members of the Yale group hypothesized that persuasion effects should work much like memory. If two messages were presented sequentially and without delay, the first message would be more persuasive because it would interfere with the processing of the second message (resulting in primacy effects). However, if the second message was presented after a sufficient delay (e.g., one week), the first message would have decayed and the second (or more recent) message would be stronger in memory, resulting in greater persuasion. Although some data supported this hypothesis, the findings were not straightforward. Interestingly, memory in and of itself was not a strong predictor of persuasion. Other research has explored how the familiarity of the issue or the types of information may influence the occurrence of primacy and recency effects.

More recent research has suggested that contextual factors, such as people's ability and motivation to process the persuasive communication, are important determinants in whether primacy or recency will occur. Duane Wegener and his colleagues have presented evidence that when people are motivated and able to process information, they will demonstrate primacy effects. However, when motivation or ability are low, recency effects will tend to occur.

Perhaps not surprisingly, given the extensive work linking persuasion and memory, a number of researchers have explored how primacy and recency effects are manifested in human and animal learning and memory. Much of the research in this area is consistent with the findings in the persuasion literature. For example, contextual factors (e.g., type or topic of information, personal responsibility for outcomes, an individual's motivation to think about the topic) have been found to moderate primacy and recency effects in human memory. Reviews of the primacy/recency literature have highlighted that both primacy and recency effects are possible depending on the context in which the information is learned.

There has also been substantial research on primacy effects in the field of impression formation (the study of how we make judgments about the people we meet). Consistent with persuasion and memory research, Phillip Tetlock and his colleagues have found that as one's moti-

vation to be a complete information processor increases (e.g., one has personal responsibility for the decision, the outcome is perceived to be important), there is a tendency for primacy and recency effects to diminish. As motivation decreases (personal responsibility is low, people are tired), biases can occur.

Thus, the question remains: Is it better to speak first or second if you want to convince your audience? Of course, as with most psychological questions, the right answer is "it depends." Most importantly, it depends on the knowledge, ability, and motivations of the audience. The impact of this research has been felt in many domains, including communications, marketing, and political science, among others. Indeed, as long as there is the possibility of gaining an advantage in the area of communications, it will be useful to conduct research to explore how and when order effects will occur.

SEE ALSO *Persuasion; Persuasion, Message-based*

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PRIMARIES

Presidential and congressional primaries are intraparty election contests whereby candidates compete for the privilege of being the party's general election nominee. Direct primaries in non-southern states originated with the Progressive Era of the early twentieth century as a way to move intraparty candidate selection away from corrupt state and local political bosses and urban machines. In southern states it was seen as a way to ensure continued political domination by one party. Although first pioneered at the local level, primaries spread to state and national offices and dominated candidate selection in U.S. Senate and House races by the mid-twentieth century. At the presidential level, reforms made after the contentious 1968 Democratic National Convention placed delegate selection, and hence the selection of the party nominee, in the hands of the party rank and file and away from party elites. This led to the proliferation and dominance of primaries in the presidential selection process. Primaries are generally considered a uniquely American institution.

TYPES AND TIMING

Participation and contest rules vary by state, party, and time. There are four general types of primaries: open, semi-open, closed, and runoff. In open primaries, voters choose the party's primary in which they want to participate. Registered party members and independents who choose to participate can vote in a semi-open primary, though independents often have to change their party registration to that of party in whose primary they are participating. Only registered party members can vote in a closed primary. Primary runoffs, used especially in southern states, happen when no candidate receives a majority (more than 50%) of the vote. In a second primary or runoff, the top two vote getters face off. Runoffs may threaten a nominee's general election chances if the opposing party's candidate does not compete in a runoff. This potential disadvantage stems from the fact that one candidate has to expend resources on a second intraparty contest, while the other candidate can immediately shift focus to the interparty general election race.

A unique feature of the presidential nominating system is its extended and sequential nature. Primaries begin in New Hampshire, typically in late January or early February, and end with a slate of late states in mid-June. This serial process has given political elites and potential candidates the opportunity to move state primary dates up in the process, a procedure known as front-loading, to advantage their own political ambition or their state both politically and economically. Politically, early states have greater influence over who wins the nomination by sending signals to later voters about the viability and electability of the contenders and by helping to winnow candidates. Early states benefit economically due to increases in candidate spending, visits, mobilization efforts (including television ads), and media attention. Unfortunately, as the race progresses and it becomes clearer who the party nominee will be, the process produces disincentives for individual voter participation and reduces overall levels of voter turnout.

Congressional primaries also vary in timing and in the use of party endorsements. Some states schedule congressional primaries in early March and others as late as September of an election year. When states schedule presidential and congressional primaries on the same date, voter turnout levels increase. Some state parties attempt to influence voter choices through party endorsements. Endorsements may require candidates to meet a support threshold at the party convention to be placed on the primary ballot or may reward the top party convention vote getter with the first line of the primary ballot or with a designation as the party's candidate.

Presidential and congressional incumbents seldom encounter a viable challenge in their primary bids, and

therefore these races are rarely competitive. The advantage incumbents have in fund-raising, name recognition, and perquisites of office tend to discourage competition. Strong primary challenges to incumbents are more likely to emerge when the challengers' chances of winning the nomination and general election campaigns are greater. Incumbent members of Congress who face strong primary challengers typically are those involved in a scandal, such as charges of unethical behavior, or those who stray from representing their constituents' interests. Although a surprising number of incumbents are unlikely to suffer a primary defeat amid allegations of wrongdoing, their precarious position makes them much more susceptible to a general election defeat. At the presidential level, incumbents are often challenged when their presidential approval is low. Since 1972 and the post-reform era, no presidential incumbent candidate has been defeated during the nomination campaign. In contrast, the out party contest is always competitive in presidential primaries, though this is less the case in congressional races. In open contests where there is no incumbent running, both parties generally draw a long list of nomination contenders, and the contests are more competitive.

IMPACT ON VOTERS AND PARTIES

Primaries are candidate-centered contests where candidates act strategically, directly appealing to voters. Because party identification is not a voting cue, candidate attributes figure strongly in voter decision-making. Candidate-centered contests lead to intraparty factionalization as candidates directly compete against one another for voter support. Primary factionalization, however, appears to play at best a modest role in general election outcomes. Though early research in congressional and presidential races found that the party with the more divisive primary (defined as primaries with more contentious contests and usually based on margin of victory measures) loses votes in the general election race, late-twentieth-century models demonstrate little effect once candidate quality is considered. In a presidential contest, the party appears to heal from internal divisions as the focus of the race turns to the interparty general election fight; similar factors may be at work in congressional elections. Presidential research indicates that primary supporters of losers often turn their efforts to support the party or the party nominee in the general election campaign. At the congressional level, party activists who supported a losing candidate in a divisive primary were less active on behalf of the party nominee in the short term but still expressed interest in long-term party involvement. Thus primary campaigns are a unique opportunity for new party entrants, regardless of who they supported, to become mobilized and be a resource for general election party activity and other future party activity.

SEE ALSO *Campaigning; Political Parties; Voting*

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PRIMATES

No simple set of diagnostic characteristics defines "primates." Rather, members of the order Primates share, to varying degrees, several suites of features that reflect a generally arboreal lifestyle. These attributes include:

1. Pentadactyl, prehensile hands and/or feet with nails (rather than claws) on the digits, of which the thumb and/or big toe are opposable.
2. Pronounced sensory emphasis on vision, notably through development of binocular and stereoscopic vision, as well as expansion of the visual cortex.
3. A generalized postcranial anatomy tending toward orthrograde (upright) posture.
4. A trend toward enlargement of the cerebral cortex, especially in monkeys and apes.

Primate taxonomy is debated, but 200 to 350 species are recognized. The majority are distributed in tropical and subtropical regions (roughly between the Tropics of Cancer and Capricorn) and throughout sub-Saharan Africa, south and southeast Asia, and South and Central America, although a few forms, such as the Japanese macaque, inhabit decidedly temperate habitats. Primates are chiefly rain forest and tropical forest dwellers, although many other biomes are ecologically relevant for certain groups, including savanna, woodland scrub, evergreen temperate forest, desert, and high-altitude eflinwood meadow.

Six major groups of primates are usefully distinguished:

1. Lemuriformes: the small nocturnal and larger diurnal lemurs of Madagascar.
2. Lorisiformes: the nocturnal, small-bodied lorises and bushbabies of Africa, south Asia, and island southeast Asia.
3. Tarsiiformes: the small, nocturnal tarsiers of Sumatra, Borneo, Sulawesi, and the Philippines.
4. Playtrrhini: the small- to large-bodied monkeys of Central and South America.
5. Cercopithecoidea: the medium- to large-bodied monkeys of Africa and Asia.
6. Hominoidea: the large apes of Africa and Asia, as well as humans.

The Lemuriformes and Lorisiformes form a coherent suborder, the Strepsirhini, unified by various traits, notably retention of the "rhinarium" (the naked, "wet" mammalian nose), increased reliance on olfaction, and greater seasonality of sexual behavior ("estrus"). Many strepsirhines are nocturnal. The second suborder, the Haplorhini, comprises the primates of the remaining three taxa, which exhibit predominantly diurnal habits (with the exception of tarsiers and one monkey species), enhanced vision and visual communication, and comparatively more continuous (less seasonal) sexual activity and reproduction.

DIETARY HABITS

Diversity and omnivory generally typify primate feeding strategies, rather than marked dietary specialization such as the bovid emphasis on grass. The three principal primate foods are fruits, leaves, and insects, but their relative dietary proportions vary considerably across species. Frugivory is most widely distributed: Most primates eat some fruit, and species strongly committed to frugivory are found in virtually every family. Figs (Moraceae, *Ficus* species) are an often a crucial keystone fruit source for forest primates. Because of metabolic implications of body size, folivory is more common among larger primates (greater than or equal to 13.5 pounds), such as the Old World "leaf monkeys" (Colobinae), neotropical woolly spider monkeys, and mountain gorillas. Conversely, insects are generally consumed in higher proportions by small primates (less than or equal to 3.5 pounds), such as the nocturnal strepsirhines, tarsiers, and neotropical marmosets, tamarins, and squirrel monkeys. Thus, with increasing body size, primate diets typically grade from insectivory, to insectivory-frugivory, frugivory, frugivory-folivory, and finally to folivory.

Some less common foods are nevertheless important for certain primates or in specific seasons. For example, marmosets, tamarins, and some strepsirhines rely heavily on exudates (gum), particularly seasonally. Underground storage organs (e.g., rhizomes, tubers, corms) are paramount in baboon foraging. These parts are modified stems or leaves in which the plant stores starch, minerals, and water (the potato being a well-known example utilized by humans). Nectar (for some lemurs and neotropical monkeys), grass (for gelada baboons), and seeds (for saki monkeys) are other examples. Carnivory (predation) occurs at significant rates only among baboons (*Papio* species), neotropical capuchin monkeys (*Cebus* species), and most notably chimpanzees (*Pan troglodytes*), the latter of which prey heavily upon red colobus monkeys. In contrast to the more individualistic and "opportunistic" prey capture of *Papio* and *Cebus*, chimpanzee "hunting" is performed simultaneously by multiple adult males. Researchers debate, however, whether male chimpanzees act independently of one another or coordinate their actions cooperatively through an organized division of labor (different hunting "roles") and the use of foresight and mental attribution.

The omnivorous, "generalist" feeding inclination of primates has not precluded some adaptive specializations in dentition, physiology, and behavior. One noteworthy example is the gastrointestinal tract of Colobine monkeys: In a manner directly analogous to ruminants, it contains a large, multichambered stomach with variable chemical environments facilitating fermentation by symbiotic, cellulolytic bacteria. Thus, these monkeys are able to metabolize and subsist on otherwise difficult-to-digest, mature foliage.

SOCIAL SYSTEMS AND BEHAVIOR

Perhaps the most striking features of primate biology are the diversity and complexity of social systems. Many nocturnal strepsirhines—as well as the orangutan—live in "dispersed" societies in which adult males and females inhabit individually separate home ranges wherein daily activities are independently pursued. These home ranges may partly overlap and, in some species, differ in size between the sexes. Thus, a single polygynous male may occupy and defend from other males (territoriality) a large home range encompassing several females' individual ranges. The original characterization of this arrangement as a "solitary" or "asocial" existence was understandable but inaccurate. Not only do "solitary" individuals interact at meaningful rates through indirect olfactory and vocal modalities, they may even aggregate regularly, for example, during feeding in orangutans, or at sleeping sites in some nocturnal strepsirhines. Recent mitochondrial DNA evidence from nocturnal lemurs reveals that such sleeping

aggregations comprise related females, thereby suggesting a "hidden" matrilineal dimension of as yet unclear significance in these dispersed social systems.

In contrast, the diurnal lemurs and all monkeys are highly gregarious, living in permanent social groups. With few exceptions, primate societies are generally closed (interaction—particularly affiliatively—between individuals of separate groups is rare) and age-graded (immatures of multiple ages/generations are present). The size and composition of groups vary greatly, as do the nature and patterning of constituent social relationships. This variation is expressed not only between species but also often across populations of the same species.

As with mammals generally, female primates often remain in their natal area and social unit for most if not all of their lives, whereas males disperse to other groups around the age of sexual maturity. The resulting female-bonded societies are thus based on "core" affiliative networks of related females—matrilines—to which males associate in variable numbers and time periods.

For example, in some species (leaf monkeys and guenons) only one adult male lives in a group of several (typically three to ten) adult females and their offspring. Group membership is likely to confer polygynous reproductive advantages to males, although in at least some species, females copulate with other males in the population, which either live alone or in all-male "bachelor" units.

A "multimale" variant of this social system generally emerges with relatively larger female group sizes (e.g., ten to fifty). In such cases, three to fifteen adult (nonnatal) males typically reside with the females and their offspring. This social structure predominates in many of the Old World monkeys—notably the baboons and macaques—in addition to neotropical forms such as capuchin and squirrel monkeys. Relationships among females are highly differentiated, most often manifested as relatively rigid, linear dominance hierarchies organized around kinship (matrilineal relatedness). Several field and laboratory studies suggest a substantive cognitive dimension to nonhuman primate understanding of both "status" and "matrilineal kinship." Females invest heavily in activities that maintain their status, such as grooming and coalitionary support. Males similarly maintain dominance relationships that are, however, much more dynamic and unrelated to kinship.

In 10 to 15 percent of species—most notably the gibbons (Hylobatidae) and species of small neotropical monkeys—the group comprises one adult of each sex accompanied by several immature individuals of various ages. This social system was originally designated "monogamy" or the "nuclear family," but the term "social monogamy" is now preferred, particularly in light of avian research. Individuals in over 90 percent of bird species live and breed in heterosexual pairs, but genetic data have revealed that in many species *extra-pair* paternity may be significantly high (e.g., 40 to 50%). Although not all extra-pair sexual behavior results in fertilization, it is clear that one can no longer assume that sexual or reproductive monogamy results invariably from the monogamous *social* arrangement of birds. Correspondingly, "extra-pair" copulations, pair-bond termination ("divorce"), and "nonnuclear" families do occur among socially monogamous primates, but the generality and significance of these phenomena remains less clear than is the case for birds.

A polyandrous mating system is found in some marmosets and tamarins that live in groups comprising one adult female, two adult males, and youngsters of various ages. Males, as well as young adult offspring of either sex, are primarily responsible for care of the breeding female's (fraternal) twin offspring. The reproduction of adult daughter "caretakers" may, in fact, be behaviorally or physiologically suppressed by the dominant female.

Great ape societies are characterized by comparatively attenuated female relationships. As noted, female orangutans pursue largely separate lives. Although gorillas live in unimale, multifemale groups, dispersal of females (as well as males) at sexual maturity constrains the formation of matrilineal relationships; female gorillas instead direct more social attention to the resident male. Individual female chimpanzees occupy separate home ranges, interact infrequently, and have weak dominance relationships. Females disperse at sexual maturity, whereas males remain in their natal community. Thus, the kinship element of chimpanzee society is patrilineal in nature, based on relationships among related males that collectively maintain a territory encompassing the individual home ranges of numerous "solitary" females. These males and females may join and leave temporary foraging parties that vary greatly in size and composition, dynamically undergoing "fusion" and "fission" with other foraging parties and individuals of the community over days, if not hours. Cooperation in competition is a hallmark of male social life. Hunting is one such context, as is vying for dominance and the sometimes violent territorial aggression directed against neighboring communities of related males. Although the patrilineal structure and "fusion-fission" system of social foraging also characterizes bonobos (as well as neotropical spider monkeys), bonobos are noteworthy for the much more amicable nature of their social relationships and apparent female dominance over males.

Negotiating complex relationships involving status, kinship, and affiliation over their relatively long lives is believed to have been an important impetus in the evolution of social cognition in monkeys and, especially, apes.

SEE ALSO *Alpha-male; Anthropology; Anthropology, Biological; Kinship; Kinship Selection; Social Status*

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PRIMING

People are influenced by their immediate environment, which includes the objects, situations, and persons they encounter. Indeed, features of the environment can affect psychological experiences and behaviors so subtly that people fail to notice these influences. *Priming* refers to an unobtrusive and momentary environmental influence on an individual's psychological experiences and behaviors. The term *priming* has also been used to describe the experimental technique researchers use to study these effects in the laboratory.

How does priming work? The dominant explanation posits that environmental features temporarily activate (prime) mentally represented concepts, such as attitudes, behaviors, emotions, goals, memories, stereotypes, and traits. For example, suppose that you encounter a dog on the street. This encounter activates the concept "dog" and its associated traits, such as "furry" and "loyal." Once activated, primed concepts become more likely to influence immediate cognitions (e.g., thoughts, judgments), feelings, and behaviors. So, if immediately after encountering the dog you are asked to name a characteristic that is important in a friend, you may be temporarily more likely to say "loyalty."

Importantly, priming effects occur automatically. That is, concepts can be activated without awareness and go on to bias overt responses in ways that people do not intend and cannot control. *Supraliminal priming* describes cases in which people are aware of an environmental cue, but are not aware of its influence on them, such as in the dog example above. In *subliminal priming*, people are not even aware of an environmental cue, yet it still influences them. As an example, imagine moviegoers who are flashed a brand of drink for fractions of a second, below the radar of conscious perception, and unwittingly choose it over other beverages.

Priming effects are explained by presuming that concepts are mentally represented in an associative network. Only when associations between concepts are strong does activating one concept temporarily activate others. Because associations are strengthened through repeated and consistent pairing, environmental cues that are encountered frequently can be powerful primes. Take, for instance, relationship partners. Among students who strongly associate their mothers with the goal to work hard, subliminally priming the word *mother* will activate the goal to "work hard" and the students will persist longer and perform better on a subsequent academic test (Shah 2003). Sometimes these strong associations arise through learned sociocultural stereotypes. An individual's group membership and stereotypes related to that group can be primed and help or hinder performance, depending on the stereotype activated. For instance, if Asian American women are asked about their gender, their quantitative performance on a subsequent test will suffer, but if asked about their ethnicity, their quantitative performance will improve (Shih, Pittinsky, and Ambady 1999). Priming stereotypes can also influence members of non-stereotyped groups. Young adults exposed to words related to the elderly stereotype, including *sentimental* and *wrinkle*, will subsequently walk down a corridor more slowly (Bargh, Chen, and Burrows 1996).

The idea that behavior is not always consciously and intentionally guided raises questions about personal accountability. Suppose that a child behaves aggressively after watching violent television. To what extent is the child's aggression due to an active, intentional, conscious thought process versus a passive process that does not require conscious intention or motivation on the part of the child? The roles attributed to conscious choice versus environmental determinism in explaining aggressive behavior, and other primed behaviors, have tremendous legal and policy implications.

SEE ALSO *Collective Memory; Identity; Memory; Social Psychology; Steele, Claude; Stereotype Threat; Subliminal Suggestion*

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Amy N. Dalton

PRIMITIVE ACCUMULATION

At any given time, the accumulation of capital depends on some already existing capital to invest in the production process. Therefore, it appears that the capitalist mode of production as a historical formation presupposes some "original" or "primitive" accumulation. Adam Smith (1723–1790) called this "previous accumulation" and saw it necessary for the advancement of the division of labor and therefore of what he calls the "productive powers of labour." He argues that "the accumulation of stock must, in the nature of things, be previous to the division of labour, so labour can be more and more subdivided in proportion only as stock is previously more and more accumulated" (Smith [1776] 1976). So, for example, in a market society, "a weaver cannot apply himself entirely to his peculiar business, unless there is beforehand stored up somewhere, either in his own possession or in that of some other person, a stock sufficient to maintain him, and to supply him with the materials and tools of his work, till he has not only completed but sold his web. This accumulation must, evidently, be previous to his applying his industry for so long a time to such a peculiar business" (Smith [1776] 1976).

Smith, however, grounds this claim on the ideological belief that division of labor and "stock" is somehow a feature of modern industrial societies, since "in that rude state of society in which there is no division of labour, in which exchanges are seldom made, and in which every man provides everything for himself, it is not necessary that any stock should be accumulated or stored up beforehand, in order to carry on the business of society" (Smith [1776] 1976). This claim is in fact untrue and based on a methodological individualism typical of classical and neoclassical political economy: even in hunting and gathering societies arrows and containers are produced and "stocked" before the production of food and, typically, along a division of labor within a community of producers. By means of this ideological counterposition between a "primitive" and a modern industrial society, Smith does not need to explain the historical emergence of the peculiar form of the "previous accumulation" and of social division of labor correspondent to capitalist societies. He does address the question of how a social formation in which market relations play a marginal role in the reproduction of people's livelihoods (as in European societies up to the eighteenth century) can turn into one in which capital is accumulated in the hands of the few, while the vast majority turn into wage laborers. According to classical political economy, this previous "accumulation of stock" resulted from thrift and abstinence by a section of the population. Along this line Adam Smith, who believed capitalist market relations to be harmonious and beneficial to its participants, never confronted the historical process that originated these market relations.

Marx rendered Smith's term "previous" as "ursprünglich," which then was translated into English as "primitive" (Perleman 2000, p. 25). In Part 8 of Volume 1 of *Capital* (1867), Karl Marx (1818–1883) discusses "the so-called Primitive Accumulation." Marx adds the pejorative *so-called* to emphasize the flesh-and-blood history that formed the precondition of capitalist production. In highlighting the historical process, Marx developed a different meaning of primitive accumulation in that he linked it to the notion of capital as "class relation" rather than as "stock." Given that "the capital-relation presupposes a complete separation between the workers and the ownership of the conditions for the realization of their labour," it follows that "the process … which creates the capital-relation can be nothing other than the process which divorces the worker from the ownership of the conditions of his own labour." By turning "the social means of subsistence and production … into capital, and the immediate producers … into wage-labourers," this process is therefore the basis of class formation. Thus, the "so-called primitive accumulation … is nothing else than the historical process of divorcing the producer from the means of production" (Marx [1867] 1976, pp. 874–875).

To illustrate this process, Marx refers to English land enclosures during the sixteenth and seventeenth centuries; at times he also refers to the international dimension of primitive accumulation, such as the effect of the slave trade on Bristol and Liverpool. Furthermore, this process presupposes people's resistance and struggles either implicitly, as in the case of the "bloody legislation" (Marx

[1867] 1976, pp. 896–904), or explicitly, as in the case of the "barbarous laws against combinations of workers [that] collapsed in 1825 in the face of the threatening attitude of the proletariat" (p. 903).

There are perhaps two main interpretative frameworks of the concept of primitive accumulation within a century-long debate in Marxist literature. One framework sees primitive accumulation as a one-time/one-place phenomenon, the occurrence of which leads to the development of capitalism. The other framework instead emphasizes the continuous occurrence of primitive accumulation as an integral part of capitalism, whatever its stage of development. The first approach perhaps has its roots in Vladimir Ilyich Lenin's (1870–1924) early study, *The Development of Capitalism in Russia* (1899). In a polemic against the Populists, who believed that the absence of a developed market would prevent capitalist development in Russia, Lenin argued that the disappearance of the peasants and their communities was precisely the prerequisite for the creation of the capitalist market. Lenin saw this process as inevitable and ultimately positive, although he often underlined its contradictions.

The second interpretative framework seems to emerge from Rosa Luxemburg's (1870–1919) *The Accumulation of Capital* (1913). Her work points toward an interpretation of primitive accumulation as an integral part of capitalism and its development. Luxemburg regards Marx's schemes of expanded reproduction as a representation only of the mathematical conditions for accumulation in cases in which there are no more than two classes. In reality, she contends, capitalist production must rely on third parties (peasants, small independent producers, etc.) to be commodity buyers. Thus the enforcement of exchange relations between capitalist and noncapitalist production becomes necessary to realize surplus value. However, this exchange relation clashes with the social relations of noncapitalist production. In order to overcome the resistance to capital that arises from this clash, capital must resort to military and political violence. Here Luxemburg introduces a crucial thesis that, independently of the validity of her reasoning and interpretation of Marx's schemes of reproduction, seems to open the way to considering primitive accumulation as an inherent, continuous element of capitalism; as such it encompasses the world as a whole, and implies political and military force.

Elements of Lenin's and Luxemburg's interpretations can be found in subsequent approaches, although until the 1970s the influence of Lenin's approach seemed to be greater. For example, in his classic *Studies in the Development of Capitalism* (1963), which generated much debate on the transition from feudalism to capitalism, economist Maurice Dobb (1900–1976) used the category of primitive accumulation to denote a well-defined age of accumulation of property rights, better known as the *mercantile age*, which predates capitalist production (p. 178). Also, in the context of the early Soviet debate on the transition to socialism, Evgenii Alexeyevich Preobrazhensky (1886–1937), in his book *The New Economics* (1926), argued for the need for a primitive socialist accumulation.

More recently, widespread opposition to global neoliberal policies of privatization and cuts in social spending linked to structural adjustment have refocused scholars' attention on the category of primitive accumulation as a continuous and integral element of capitalism, although within different interpretative frameworks. More specifically, and in relation to political-economic issues, emphasis has been put on crises of overproduction and profitability creating a need for capital to engage in primitive accumulation. Thus, George Caffentzis, for example, refers to neoliberal policies following the profitability crises of the 1970s as "New Enclosures" (1995), while more recently David Harvey refers to "accumulation by dispossession" in *The New Imperialism* (2003), situated in the contemporary crises of overproduction.

The role of social conflict and class relations in defining the continuous character of primitive accumulation is also clearly spelled out in the literature. In the essay "Separating the Doing and the Deed" (2004), Massimo De Angelis argues that in different historical phases, profit-driven capital must devise strategies of enclosures, either by promoting ex-novo areas of commodification vis-à-vis resistance, or by preserving old areas of commodification vis-à-vis ex-novo social struggles claiming "new commons." Also, and complementarily, the typology of "new enclosures" and "new commons" has been seen to include a wide range of resources, such as land, water, and knowledge, among others.

Finally, it has been argued that the current attempt by states and international institutions to control demographic rates depends on the expropriation or "enclosure" of the body, of the sexual and reproductive powers of women, for the purpose of accumulating labor power and thus promoting capital's valorization requirements. In *Caliban and the Witch* (2004), Silvia Federici shows that the witch-hunt terror in the sixteenth and seventeenth centuries opened the way for state attempts to control demographic rates and the reproduction of labor power, and she draws parallels with contemporary phenomena. In *The Invention of Capitalism* (2000), Michael Perelman has pointed out that primitive accumulation is linked to the social and sexual division of labor at least since the classical proponents of laissez-faire ideology (e.g., Adam Smith, James Steuart [1712–1780], and Edward Gibbon Wakefield [1796–1862]) were disguising a strategy for state-implemented primitive accumulation to shape the social division of labor.

SEE ALSO *Capitalism; Common Land; Marx, Karl; Mode of Production*

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Massimo De Angelis

PRIMITIVISM

Definitions of the term *primitivism* have varied historically in their intellectual usage and inflection across the disciplines. In its broadest sense, primitivism is an interest in or study of societies and cultures that have an ostensibly less developed notion of technological, intellectual, or social progress. Primitive societies defined thus are those that have not progressed to a state of technological advancement and are therefore perceived as antecedent to the industrialized economies of the West. While more recent definitions of primitivism in literature, visual arts, and anthropology have emphasized the temporal relationship between primitive societies and modernity, discourses on "otherness" are discernible in the Plato's *Republic* and in Homer's description of the Cyclops in *The Odyssey*.

As an intellectual practice or school of thought, primitivism can be broken down into two main strands of inquiry—firstly, that of the empirical study of primitive societies. This approach typified nineteenth-century anthropology, in which empirical study was carried out to chronologically ascribe customs and social structures of "primitive" societies in an evolutionary relationship to Western notions of modernity. Secondly, there is the study of cultural primitivism, which can be traced to Enlightenment philosophical interests in the ideas of nature versus reason seen most notably in Jean-Jacques Rousseau's *Discours sur les sciences et les arts* (1749) [*Discourse on the Sciences and the Arts*] and his idea of the noble savage in *Discours sur l'origine et les fondements de l'inégalité parmi les hommes* (1755) and later in Denis Diderot's *Supplément au voyage au voyage de Bougainville* (1772). In French literature, René Chateaubriand's two novellas, *Atala, ou les amours des deux sauvages dans le désert* (1801) and *Réné* (1802) continued to explore this post-Enlightenment fascination with non-European cultures.

In the visual arts, earlier aesthetic explorations of the primitive in the work of artists Emil Nolde (1867–1956) and Paul Gauguin (1848–1903) in the nineteenth century began to develop in conjunction with new directions in the social sciences in the early twentieth century. In Europe this development was seen most clearly in the break from the disinterested intellectual focus of Victorian anthropology into the newer paradigms of cultural relativism of ethnology and ethnography that had been emerging since Franz Boas wrote *The Mind of Primitive Man* in 1911 (1983) in which he set out a new model of cultural relativism for the anthropological study of non-Western societies. This approach was taken up and developed by later cultural anthropology in Bronislaw Malinowski's *Argonauts of the Western Pacific* (1922) and *The Sexual Life of Savages in North-Western Melanesia* (1929).

The formation in 1926 of the Institut d'Ethnologie in Paris by ethnologist Marcel Mauss (1872–1950), philosopher Lucien Lévy-Bruhl (1857–1939), and ethnologist Paul Rivet (1876–1958) heralded a new era of ethnographic enquiry into the concept of the primitive in the social sciences. Large-scale interdisciplinary ethnographic projects such as the Mission Dakar Djibouti 1931–1933 brought together writers, artists, sociologists, and anthropologists to work on new conceptualizations of cultural primitivism. In Europe this development of the

term *primitivism* was simultaneous with the emergence of the modernist movement in art and literature and a new aesthetic engagement with a notion of the primitive that found diverse expressions in painting, as in Pablo Picasso's *Les Demoiselles d'Avignon* (1907), inspired by his contact with African and Oceanic art in the Musée du Trocadéro. This was also found in the modernist avant-garde performances in the dadaist Cabaret Voltaire and in poetry in Blaise Cendrars's "Prose of the Trans–Siberian" (1913) and Guillaume Apollinaire's "Zone" (1913).

This renewed literary interest in primitivism was in part motivated by several texts that explored psychology, society, and religion from new intellectual and cultural perspectives: Sir James George Frazer's *The Golden Bough: A Study in Magic and Religion*, first published in 1890 (1990), the work of Sigmund Freud in *Totem and Taboo: Some Points of Agreement between the Psychic Lives of Savages and Neurotics* (2000 [1913]) and later in *Civilization and Its Discontents* (2005 [1930]). All in some way influenced some of the major works of European literary modernism such as Joseph Conrad's *Heart of Darkness* (1899), Thomas Mann's *Death in Venice* (1912), and D. H. Lawrence's *The Plumed Serpent* (1926).

Frazer's study of the primitive roots of religion was the first of its kind to examine religious practices and rituals from a cultural rather than a theological perspective, and this marked a twentieth-century movement away from simple evolutionary binary divisions between notions of "primitive" and "civilized" forms of religious practices to more culturally relativist approaches influenced by the theories of Karl Marx (1818–1883), Émile Durkheim (1858–1917), and Max Weber (1864–1920).

SEE ALSO *Anthropology; Boas, Franz; Cultural Relativism; Culture; Ethnology and Folklore; Malinowski, Bronislaw; Religion*

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Carole Sweeney

PRINCIPAL COMPONENT ANALYSIS

SEE *Factor Analysis.*

PRINCIPAL COMPONENTS

Quantitative social science often involves measurements of several variables on a number of individuals. Principal components are *variates*, linear combinations of variables that have special properties in terms of variances. Variates hav-

ing large variance across the population are of special interest, in that they best distinguish among individuals in it.

It is often possible to understand or interpret a set of variables through a few variates. Also, sometimes relationships are not exhibited in the observed variables but rather in combinations of them; principal components can reveal such relationships.

Variates are expressions such as 6X + 8Y or 2X + 3Y + 4Z. The sum and difference are special cases. For example, instead of a verbal *IQ, V,* and a quantitative *IQ, Q,* one might study their sum $V + Q$ and their difference $V - Q$. If it is known that the sum is 260 and the difference is 20, one can see that V is 140 and Q is 120. If the original variables are replaced by the same number of variates, all the information in the original variables is retained; the original values could be recovered.

It is useful to transform to *uncorrelated* variates, containing separate information. This can be done in many ways, so the transformation can be chosen to have further desirable properties. In principal components analysis, first the variate having the largest possible variance is found. In doing this, the sizes of the coefficients (multipliers of the variables) must be controlled. For example, the variance of 6X + 8Y is 100 times that of 0.6X + 0.8Y. Only *normalized* variates, like the latter, whose coefficients have a sum of squares of one, are considered in defining principal components.

The *first principal component* is the normalized variate having maximum variance. The second principal component is the normalized variate having maximal variance among those uncorrelated with the first. The third principal component is that having maximal variance among those uncorrelated with the first two, and so on. In short, then, the principal components are uncorrelated linear combinations of maximal variance.

Principal components are computed from variances and covariances that depend upon the units of measurement, so often the data are first converted to *z-scores*, each value being replaced by the number of standard deviations above or below the mean for that variable. The resulting variables have variances equal to 1. Sometimes the original data are used, especially when the variables have the same units of measurement, for example when they are measurements of several dimensions of the same object. The operations obtaining principal components are performed on the *covariance matrix*. Use of z scores is equivalent to using the *correlation matrix* rather than the covariance matrix.

Principal component analysis approximates the variables using a small number of variates. In exploratory studies involving many variables, some may be dropped later if they have small coefficients in the first several principal components. To obtain a two-dimensional *scatterplot* of a multivariate sample, the first and second principal components are used.

Principal components can be inputs to another procedure, such as *multiple regression* or *cluster analysis*. *Factor analysis* describes each variable as having a part that is explained by factors shared with other variables and a unique part that is not so explained; it analyzes the *shared variance* of the set of variables. Once a reduction to a smaller number of factors or principal components is made, often the pattern of coefficients leads to an interpretation of them. Here caution must be exercised. Since there are many mathematically equivalent solutions, such an interpretation is not unique; it is *an* interpretation, not *the* interpretation.

Harold Hotelling (1895–1973), an American economist and statistician, developed many of the ideas of principal components.

SEE ALSO *Cluster Analysis; Factor Analysis; Regression Analysis*

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PRINCIPAL-AGENT MODELS

Black's Law Dictionary (1999) defines a principal as someone "who authorizes another to act on his or her behalf as an agent." The principal-agent relationship appears in many contexts. An employee acts on behalf of an employer in the sense that the employer receives certain benefits from the employee's actions. Less obviously, there is a principal-agent relationship between an insurance company and an insuree, in the sense that the insurer's actions subsequent to the insurance affect the principal, in effect, via payouts.

In economics, principal-agent problems generally refer to the analysis of contracts between individuals in which the individuals have conflicting goals and where asymmetric information is present. The labor contract is a classic example. A firm, when hiring a worker, wants maximum effort from the worker, whereas in many cases the worker prefers not to perform at the maximum level. If the contract between the two provides a fixed wage independent of the effort of the worker, then the worker has no incentive to work hard. The obvious solution is to

make the wage depend on the worker's effort. However, it is often the case that the relevant behavior is unobservable. While one can in principle identify the effort of an isolated worker who is producing objects, one cannot do this in more complicated environments, such as those in which many factors interact to determine output. This example illustrates some of the basic issues that exist in designing contracts in modern economies; namely, the dependence of the payoffs of the participants in a contract on the behaviors of others when these behaviors cannot be observed and can only be enforced by the terms of the contract.

This example of a principal-agent problem has focused on questions of hidden actions; that is, one agent takes an action that is unobservable to another, which affects the benefits to the contract between them. Other principal-agent models focus on the question of hidden information, in which one agent must reveal information to another in order to determine actions under the contract. The classic example of this problem concerns the writing of a contract when the disutility of a job is unknown. If the compensation a worker receives is increasing in the disutility he or she experiences, then he or she will have an incentive to claim the job is unpleasant regardless of the truth.

The analysis of principal-agent problems has led to a large number of substantive insights. For example, insurance deductibles can be understood as a way to create incentives for insurees to avoid overuse of medical care for which they are covered. These models have also been used to understand how landowners structure sharecropper contracts to elicit effort from tenants. The general problem is to structure the contract to obtain maximum expected utility for the principal subject to a constraint that the agent receives some prespecified level of utility. In their 1983 article Sanford Grossman and Oliver Hart discussed the design of optimal incentive schemes in this setting. Roy Radner demonstrated how the principal can improve design of optimal contracts by exploiting information gleaned in a repeated game setting. William Brock and Lewis Evans showed how continuous record asymptotics can be used to uncover hidden actions by agents.

Joseph Stiglitz pioneered a number of the ideas in the principal-agent literature. His Nobel Prize lecture "Information and the Change in Paradigm in Economics" (2002) is an enlightening summary of his thought. Other leading writers in this area include Grossman, Hart, Bengt Holmstrom, Paul Milgrom, James Mirrlees, Roger Myerson, Radner, and Stephen Ross; Ross's 1973 article is an early explicit use of the terms *principals* and *agents* in modern economic theory. The contemporary theory of principal-agent models is well surveyed in Andreu Mas-Collel, Michael Whinston, and Jerry Green's book *Microeconomic Theory* (1995).

SEE ALSO *Information, Asymmetric; Information, Economics of; Mechanism Design*

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PRIOR DISTRIBUTION

SEE *Inference, Bayesian.*

PRIORS

SEE *Bayesian Econometrics.*

PRISON INDUSTRY

Fueled by "get tough on crime" policies, incarceration rates in several developed countries have increased considerably in recent years. For instance, Australia's incarceration rate increased from 89 per 100,000 persons in 1992 to 163 per 100,000 in 2004, while Great Britain's incarceration rate grew from 90 per 100,000 in 1992 to 141 per 100,000 in 2004, according to the International Centre for Prison Studies at King's College London. The increase in incarceration rates has been most prominent in the United States; as of mid-year 2005, there were 2,186,230 inmates behind bars, with two-thirds in federal or state prisons and one-third in local jails, as cited by the U.S. Bureau of Justice Statistics (2006). Approximately 60 percent of those incarcerated in local jails have not been convicted of any crime. The United States incarceration rate in 2005 was 730 per

100,000, a rate that is higher than even the Russian Federation (at 581 per 100,000). In fact, the United States imprisons approximately 500,000 more individuals than China, which has a population five times greater than the United States. Furthermore, while the United States has 5 percent of the world's population, it holds 25 percent of the world's prison population. The United States diverts substantial economic resources to the criminal justice system. In 2003, the country spent $185 billion for police protection, corrections, and judicial activities, representing a 418 percent increase since 1982 (U.S. Department of Justice 2006). In the same year, the justice system employed nearly 2.4 million individuals.

While some believe that the recent increases in incarceration rates are related to increases in crime, most scientific studies of this issue find no such relationship. Instead, fear of crime and the demonization of criminals by the media and politicians have led to support for policies that result in more people being incarcerated, and for longer periods of time. These policies include mandatory minimum sentencing, "three strikes and you're out" laws, truth-in-sentencing legislation (which requires inmates to serve 85 percent of their sentences), and the war on drugs.

Among the major drivers and beneficiaries of these policies and the resultant incarceration binge are constituents of the prison-industrial complex. These growing incarceration rates have created a powerful coalition of vested-interest groups with stakes in keeping prisons full and building more of them. These interests include private prison companies and individuals who lobby for them; financial institutions that underwrite loans and bond issues to finance prison construction; companies involved in the construction, operation, and maintenance of correctional facilities; corporations that use prisoners as a cheap source of labor; state and local politicians with prisons in their districts, or who covet such facilities due to the presumed economic development they will stimulate; individuals employed in the criminal justice system, in particular those who serve as correctional officers in prisons; and companies that provide products and services such as food, medical, transportation, furniture, and telephone services to prisons. Under the laws of several states, prisoners can make only collect phone calls, and this situation results in considerable profit for both states and major telephone companies, with the latter charging up to six times the regular rates plus an automatic "connect fee" of $1.50 to $3.00 per inmate call. AT&T estimates that nationally, inmates place $1 billion per year in long-distance calls, and profits from contracts with MCI and GTE netted the state of California more than $16 million in 1998, while the state of New York received $21.2 million from phone-call commissions in 1997, according to Joseph T. Hallinan in his study *Going up the River: Travels in a Prison Nation* (2001). There is also a burgeoning specialty industry that sells fencing, handcuffs, drug detectors, protective vests, and other security devices to prisons.

Given the considerable profits enjoyed by corporations enriched by the booming prison industry, several communities have competed to host prisons on the assumption that prisons will generate local economic activity in the form of jobs and tax revenues. Recent research, however, casts doubt on this assumption. Prison towns often end up with a net decline in employment, notes Gregory Hooks et al. in *Social Science Quarterly* (2004). This suggests that the benefits are being reaped by distant corporations, not the local communities. This is largely because prisons hire relatively few local employees and because unpaid inmate work crews often compete with local residents for low-wage jobs.

Similar to the military-industrial complex, the prison-industrial complex has an internal logic that allows it to benefit and expand regardless of whether it is a success or failure. If the United States loses a war, it requires more spending to win the next war; if the United States wins a war, it requires more spending to ensure that it keeps on winning. In a similar fashion, if crime is increasing, we need more prisons to lower crime rates; if crime is decreasing, we need more prisons to ensure it continues to decrease (Donziger 1996).

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Gregory Hooks
Clayton Mosher

PRISON LABOR

SEE *Servitude.*

PRISON PSYCHOLOGY

Prison psychology encompasses both clinical mental health practice within correctional settings and the study of psychological aspects of imprisonment and maladaptive behavior. As a clinical discipline, the term *correctional mental health* is often used to be more inclusive of its multiple professional disciplines and settings, which may include jails, state and federal prisons, juvenile or adult detention centers, and residential "halfway" houses, where inmates may live transitionally after leaving prison. Unlike its courtroom counterparts *forensic psychology* and *psychiatry*, which focus mainly on legal determinations related to criminal behavior, correctional mental health provides clinical assessment and treatment for incarcerated offenders.

The number of inmates in the United States increased more than fivefold between 1973 and the early twenty-first century, as a "law and order" political climate radically altered initial penal policy efforts at rehabilitation and reintegration of offenders into the community. At the same time public and private mental health resources failed to keep pace with the treatment needs of persons with mental illnesses, increasing the numbers of inmates with untreated mental illness in jails and prisons. Studies indicate that at least 8 to 19 percent of prisoners have significant psychiatric or functional disabilities, with another 15 to 20 percent requiring some form of psychiatric intervention during their incarceration. A recent history of a mental health problem (based on symptoms, diagnosis, or treatment by a mental health professional in the past year) was present in more than half of all prison and jail inmates in the United States. Since the 1970s numerous class-action lawsuits and the appearance of basic standards for correctional mental health care have prompted states to provide a system for identifying and monitoring persons with mental illness severe enough to interfere with their functioning, and for transferring at-risk inmates to treatment settings where specific types of services can be provided by trained mental health staff.

The number and credentials of mental health staff in correctional facilities vary greatly by state and locality. Some facilities have a mental health team consisting of a psychiatrist, psychologist, and social worker consulting together. Where special units for more severely ill inmates have been established, music, art, and occupational therapists, psychiatric nurses, and correctional officers may supplement the treatment team.

Prisons and jails vary greatly in mental health programs and services, as they vary in providing inmates access to the recreation, education, and vocational programs that relieve stress and boredom and can inspire a sense of mastery, positive self-concept, and the possibility (with adequate aftercare and community programs) of creating a prosocial future life. At a minimum, most correctional settings share an emphasis on preventing suicides through brief initial assessments and prompt crisis intervention. Primary treatment modalities may include psychopharmacology, group or individual psychotherapy, substance abuse treatment, and occasionally (especially for selected sex offenders) relapse prevention programs. Some facilities offer all inmates life skills training groups, including meditation and anger management, and groups such as the Houses of Healing program, which survey a range of issues commonly encountered by inmates.

Treatment needs are frequently complex. Substance abuse, homelessness, a physical or sexual abuse history, criminal recidivism, and rule violations in prison are seen more frequently in mentally ill inmates. As the inmate population has grown, so has the list of subpopulations of mentally ill inmates with special treatment needs: women, juvenile offenders, the mentally/developmentally disabled, elderly or dying inmates, sexual offenders, and those with diseases especially prevalent among inmates and the mentally ill, such as HIV and hepatitis C.

Since the 1970s the psychotherapy literature itself has changed its focus from individuals, their behavior within society, and the ways they may be rehabilitated to psychopathologies and their treatment. Critics argue that, in the pursuit of treatments for mental illness that are empirically validated or court mandated, the part of an offender that is syndromally "mad" must be distinguished from that which is morally "bad." Symptoms, diagnoses, and (especially in assessing sex offenders) actuarial data, in this view, have eclipsed the broader tasks of discovering the cause and context of offenders' maladaptive behavior and how these fractured individuals, families, and communities may be restored.

However, several factors, including the burgeoning costs of incarceration, have prompted a renewed interest in rehabilitative possibilities. Given high rates of criminal recidivism and illness recurrence when mentally ill inmates return to communities devoid of aftercare and community resources and to avoid a new round of lawsuits, several states are enhancing aftercare programs. "Prison boom" allocations relative to communities' education, job training, housing, community health care, and mental health budgets are under scrutiny. Research has shown that substance abuse treatment reduces serious crime ten times more than conventional enforcement and fifteen times more than mandatory minimum sentencing. Clear racial and economic disparities (approximately half of prison inmates are black, with an incarceration rate averaging five to seven times that of white prisoners) have prompted more discussion of culturally sensitive styles of therapy but have also raised the question of the social context producing the disparity. Women inmates, who typically have higher rates of mental illness than their male

counterparts, are frequently separated from their children, who are often at increased risk of becoming the next generation of inmates with mental illness. Research has highlighted incarceration's chilling effect on marital, parenting, and other relationships as well as the marginal communities from which so many young black males have been transplanted to jails and prisons.

The landmark 1971 Stanford Prison Experiment (SPE) by the psychologist Philip Zimbardo highlights the importance of institutional environments themselves in producing maladaptive behavior. Of twenty-four young men selected as "the most normal and healthiest" following a battery of screening tests, half were randomly assigned the role of prisoner, half the role of guard. After a realistic arrest and booking, each prisoner was brought to the "prison" constructed in the basement of Stanford's Psychology Department building. Guards wore military-style uniforms and silver-reflecting sunglasses, and prisoners wore a smock with a prison ID number to enhance anonymity. Within days the "guards" were "behaving sadistically … inflicting humiliation and pain and suffering on other young men who had the inferior status of prisoner." Signs of "emotional breakdown" caused five "inmates" to be removed from the study the first week. Zimbardo had to terminate the two-week experiment after six days, not only because of the violence and degradation by the guards but because he became aware of his own transformation into a "prison superintendent" in addition to his role as principal investigator.

Hans Toch and Kenneth Adams (2002) extended Zimbardo's "situationist" perspective within an actual prison system by documenting inmates' maladaptive behavior demographically and cross-sectionally then following each inmate's course over time. They found that disciplinary rates peak by the first six to nine months of incarceration, with the youngest inmates (especially when single, unemployed, and uneducated) having the most difficulty adapting. Where the SPE might predict progressively worsening behavior with more prolonged exposure to "prisonization," Toch and Adams found instead that inmates typically lead "compromise existences" in prison that allow for behavioral improvement for most inmates over time. Maturation with the passage of time, nonpunitive structure, and participation in even conventional activities could turn attitudes in a prosocial direction. The authors propose that the self-reform happening by chance encounters in prison might be enhanced through a problem-solving (rather than control-oriented) approach in a therapeutic community setting.

Writing in a twenty-five-year retrospective of the SPE and U.S. prison policy, Zimbardo and Craig Haney recall the era of mass incarceration that followed as "a runaway punishment train, driven by political steam and fueled by media-induced fears of crime" (Zimbardo and Haney 1998, p. 712). They conclude with a hope that the nation reconsiders its strategy of seeking and discarding "bad apples": "While a few bad apples might spoil the barrel (filled with good fruit/people), a barrel filled with vinegar will *always* transform sweet cucumber into sour pickles—regardless of the best intentions, resilience, and genetic nature of those cucumbers" (Zimbardo 2004, p. 47).

SEE ALSO *Authoritarianism; Crime and Criminology; Homelessness; Mental Health; Militarism; Prison Industry; Prisoner's Dilemma (Psychology); Prisons; Psychotherapy; Self-Concept; Zimbardo, Philip*

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PRISONER'S DILEMMA (ECONOMICS)

The prisoner's dilemma is a classic example of an environment in which individuals rationally fail to cooperate even though cooperation would make each person better off. A standard formulation is the following: Two men commit a crime and are arrested. The following possible punishments await them. If both men confess, each will receive five years in prison. If neither man confesses, each will receive three years in prison. If one man confesses and the

other does not, the confessor will receive one year in prison whereas the other receives ten.

The two men would receive the lightest sentence if both refused to confess than if neither does so. However, suppose each man is a prisoner in his own separate holding cell, so that it is impossible for the two men to coordinate their behavior. If the prisoners are acting rationally, each will confess. The reason is the following: A person convicted of a crime should confess if it reduces his prison sentence. The complication in each man's decision is that the consequence of his behavior depends on the behavior of the other man, which he does not know. However, in the prisoner's dilemma, it turns out that the rational choice for a prisoner is to confess regardless of the behavior of the other prisoner. To see this, if the other prisoner confesses, then confession brings a sentence of five years whereas not confessing brings ten years. If the other prisoner does not confess, then confession brings a sentence of one year whereas not confessing brings three. Thus, confession is a dominant strategy as it is always preferable to the alternative. The two men therefore choose strategies that, although individually rational, are collectively inferior to those they would choose if they could cooperate.

When one considers situations where individuals play a sequence of prisoner's dilemma games, rational behavior leads to very different outcomes. The reason for this is that for repeated prisoner's dilemma games, each player will be making a sequence of choices so that the decision to cooperate in one game can depend on the past behavior of the other player. This means that players can reward each other by making choices that depend on the play of their opponent. The existence of noncooperative equilibrium strategies for an infinite repeated prisoner's dilemma has been shown in many contexts; a classic formulation is explored in Drew Fudenberg and Eric Maskin's 1986 paper. It is also possible for periods of cooperation to occur in finite sequential games, as described in David Kreps et al.'s 1982 work.

The prisoner's dilemma is a basic component of any game theory textbook; a particularly insightful treatment may be found in Roger Myerson's *Game Theory* (1991). A history that places the prisoner's dilemma in the context of the development of game theory is William Poundstone's book *Prisoner's Dilemma* (1992).

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PRISONER'S DILEMMA (PSYCHOLOGY)

The prisoner's dilemma game (PDG) is a method of indicating the results of the possible pairings of the cooperative and noncooperative choices of two players. PDG can be illustrated by either of the matrices in Figure 1. With a PDG there are two players, a column player (*A*) and a row player (*B*), each of whom has two choices, *X* or *Y*, resulting in four possible combinations of choices with each combination yielding a different set of payoffs or outcomes. Payoffs or outcomes can be thought of as rewards or as some index of player satisfaction. The usual convention is that numbers above the diagonal in each cell represent the outcomes for the column player, and numbers below the diagonal in each cell represent the outcomes for the row player. In the example matrices, the numbers, or outcomes, can be thought of as dollars.

Suppose that both players choose *X*. For the left-hand matrix this combination of choices would result in each player receiving $3. After such a combination of choices, one player, for example the column player, might be tempted to choose *Y* on the next trial. If the row player continued to choose *X*, the result would be that the column player's outcome would increase to $4, but the row player's outcome would decrease to $1. Following such a result, one can imagine that the row player would shift from *X* to *Y* on the next trial, with the result that both players would receive only $2. Such a possibility illustrates the dilemma. Each player can increase his or her outcomes by choosing *Y*, but if both players are guided by immediate self-interest, both will receive lower outcomes than could have been obtained through cooperation or mutual *X* choices.

The *X* choice is usually referred to as a *cooperative choice*, and the *Y* choice is sometimes referred to as a *competitive choice* and sometimes as a *defecting choice*. Which term is more appropriate depends on whether the *Y* choice is motivated by greed or by fear. If the *Y* choice is motivated by greed, or an interest in increasing outcomes, the choice is appropriately referred to as a competitive choice. On the other hand, if the *Y* choice is motivated by fear, or an interest in minimizing the reduction in outcome resulting from the other player's *Y* choice, the *Y*

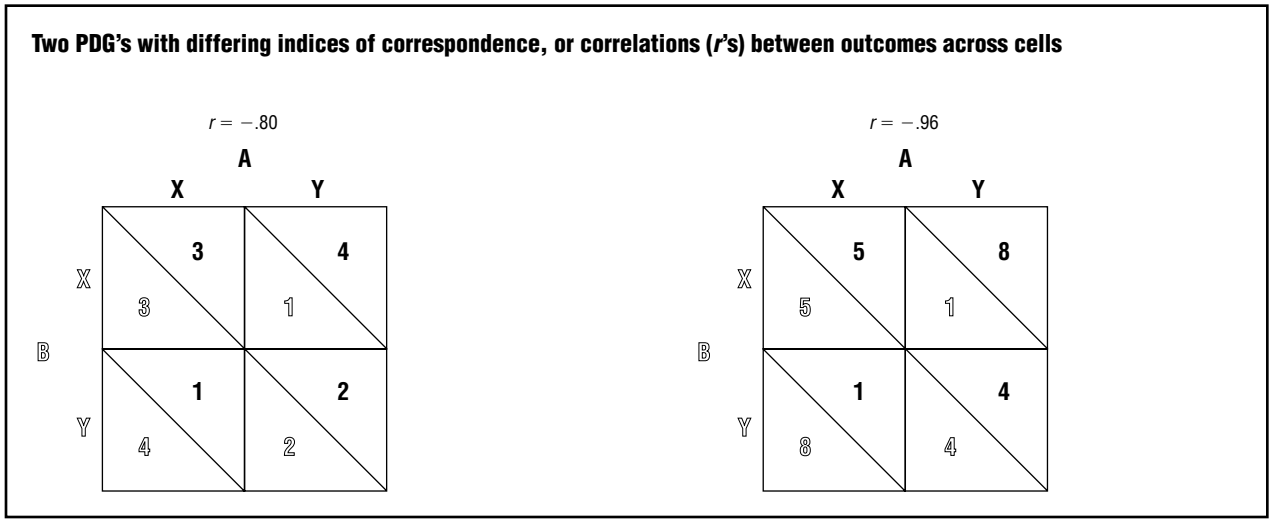

Figure 1

choice is appropriately referred to as a defecting choice (a choice to withdraw from cooperation).

According to Matt Ridley, "broadly speaking any situation in which you are tempted to do something, but know it would be a great mistake if everybody did the same thing, is likely to be a prisoner's dilemma" (1996, pp. 55–56). An everyday example relates to being honest versus cheating. Other examples relate to overwhaling, overfishing, pollution of the air, pollution of the water, and conservation of water during a drought. These latter examples, which may involve more than two people and may provide more than two choices (e.g., how much water to save and not just whether to save or not to save water), are sometimes labeled *resource dilemmas* and sometimes labeled *commons dilemmas*. The term *commons* comes from Garrett Hardin's (1968, 1993, 1998) description of the potential "tragedy" that could result from overgrazing in a shared, but unmanaged, medieval commons or pasture. Commons dilemmas share with the PDG the assumption that the pursuit of self-interest results in collective detriment. This assumption stands in contrast to Adam Smith's (1776) marketplace model, which implies that the pursuit of self-interest results in collective benefit. One can regard many political disputes as partially flowing from disagreement regarding which model is more appropriate in a particular situation.

William Poundstone (1992, p. 123) maintains that recognition of the tension between self-interest and the common good has been widespread; he supports this assertion by citing numerous historical instances of statements similar to the "golden rule" as stated in the Bible in Matthew 7:12, "In everything, do to others what you would have them do to you." However, the conflict between self-interest and the common good was first cast in the form of a two-by-two matrix by two mathematicians at Rand Corporation, Merrill Flood and Melvin Dresher (1952). The matrix was specifically created to provide an empirical test of mathematician John Nash's concept of an equilibrium point, developed in his 1950 dissertation at Princeton University (see Colman 1995, pp. 58–61; Nasar 1998, pp. 115–122).

For the PDG, the Nash equilibrium is the lower right-hand cell. On the assumption that each player assumes that the other player will follow his or her self-interest, the players should arrive at this mutual-*Y* cell. Such choices should, furthermore, be stable or in equilibrium, because if either player moves from this cell, he or she will receive a lower outcome. In order to test Nash's theory, Flood and Dresher had two colleagues in January 1950 play the PDG for one hundred trials. The results indicated that mutual *Y* choices, the Nash equilibrium, only occurred fourteen times. One player cooperated sixty-eight of one hundred times, and the other player cooperated seventy-eight of one hundred times. Although there was some competition, or defection, clearly the participants did not behave as Nash's theory predicted.

Subsequently, the Flood and Dresher matrix was labeled the *prisoner's dilemma game* by mathematician Albert Tucker, Nash's adviser at Princeton University. At a talk given to the Psychology Department at Stanford University in 1950, Tucker illustrated the matrix with an anecdote of two prisoners who had been arrested on suspicion of having committed a crime. Each prisoner had a choice of remaining silent (analogous to choosing *X*) or of giving evidence against the other (analogous to choosing *Y*). Either prisoner could minimize his sentence by giving

evidence against the other, but when both gave evidence, the prisoners could be convicted of a more serious charge than when both remained silent.

The PDG is sometimes characterized as a matrix meeting two requirements. First, the outcomes in the four cells follow a rank order for the column player from upper right to upper left to lower right to lower left. Note from the left-hand matrix in Figure 1 that the payoffs in these cells are 4, 3, 2, 1. (For the row player, the rank order is from lower left to upper left to lower right to upper right.) Second, the average outcome for the upper-right and lower-left cells is less than the outcome in the upper-left cell. Note that 2.5, the average of 4 and 1, is less than 3. This second requirement guarantees that higher outcomes will be achieved by mutual *X* choices, rather than by alternating between the lower-left and upper-right cells.

Interdependence theory (Kelley and Thibaut 1978; Kelley et al. 2002) provides a more sophisticated perspective on the PDG. This perspective relies on four concepts that can be illustrated by the left-hand matrix in Figure 1. The first of these is labeled *actor control* (AC) by Harold Kelley and his coauthors, and reflects the direct control that each player has over his or her own outcomes. For the column player, AC is the difference in column averages (the average of 3 and 1, or 2, for the *X* column versus the average of 4 and 2, or 3, for the *Y* column). For the row player, AC is the difference in row averages. For both players, AC is 1.

The second concept is labeled *partner control* (PC) by Kelley and his associates, and reflects the direct control that the partner has over actor outcomes. For the column player, PC is the difference in row averages (the average of 3 and 4, or 3.5, for the *X* row versus the average of 1 and 2, or 1.5, for the *Y* row). For the row player, PC is the difference in column averages. For both players, PC is 2. Note that AC has a smaller absolute value than PC, and also that an increase in one player's AC results in a decrease in the partner's PC. If the column player, for example, increases AC by shifting from *X* to *Y*, the row player's PC is decreased. From the perspective of AC and PC alone, the PDG is a matrix in which a small increase in one's own outcomes results in a large loss in partner outcomes.

The third concept is labeled *joint control* (JC) by Kelley and his coauthors, and reflects the extent to which the players can maximize their outcomes by taking turns, or alternating, their *X* and *Y* choices. For both players, JC is the difference in diagonal averages (the average of 3 and 2 versus the average of 4 and 1). For both players, JC is 0; that is, there is no joint control or advantage in alternating *X* and *Y* choices. The purpose of the requirement that JC be 0 is similar to the purpose of the above requirement that the average outcome for either column or row player for the upper-right and lower-left cells is less than the outcome in the upper-left cell.

The fourth and final interdependence theory concept is the correspondence between the two players' outcomes across the four cells. For matrices such as those in Figure 1, in which the players' outcomes are symmetric, correspondence is indexed by the correlation between the two players' outcomes across the four cells. For the PDG, the correlation is always negative; that is, in general, as one player's outcomes increase, the other player's outcomes decrease.

The correlation between the outcomes for the two players is a mathematical consequence of the AC to PC ratio. For the left-hand matrix, the ratio is 1 to 2 and the correlation is -.80. For the right-hand matrix, the ratio is 3 to 4 and the correlation is -.96. This difference illustrates the point that the PDG is not one matrix, but a family of matrices with differing AC to PC ratios. The importance of this point becomes apparent in view of the interdependence theory assumption that correspondence reflects conflict of interest. As the AC to PC ratio becomes larger, and the correlation more negative, conflict of interest increases. From the perspective of interdependence theory, some PDG situations are more likely than others to lead to conflict.

Research has indicated that when the PDG is played between two groups, each of which is required to make a consensus choice on each trial, there is frequently, but not always, more competition than there is between individuals (see Wildschut et al. [2003] for a statistical summary, or meta-analysis, of published research). This difference, which is labeled a *discontinuity effect*, has been shown to be more evident as correspondence, or the correlation between the individuals' or groups' outcomes, becomes more negative.

SEE ALSO *Common Good, The; Commons, The; Externality; Nash Equilibrium; Nash, John; Noncooperative Games*

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PRISONS

The prison, which would become a dominant correctional strategy in Western societies, emerged in the late 1700s. Throughout its history, the prison has been used in attempts to achieve various goals of criminal sanctioning: retribution, incapacitation, general and specific deterrence, and rehabilitation. No one theory can account for the historical development and evolution of the prison. Michael Welch, a highly regarded criminologist, makes the observation that correctional ideologies, policies, and practices cannot be understood outside the political, economic, religious, and technological forces that shape them.

HISTORY OF THE PRISON

Forerunners of the more sophisticated models of the prison were *workhouses* and *houses of correction* that emerged in western Europe. In the eighteenth century, when European societies were experiencing a dramatic population shift to urban areas due to the breakdown of the feudal order and the Industrial Revolution, these institutions became a mechanism for managing the growing numbers of an urban underclass. The expressed objective of workhouses and houses of correction was to provide vocational training and to instill a work ethic among inmates. However, these institutions functioned more effectively to remove "undesirables" from the community and, most importantly, to provide a cheap source of labor to private industry.

The United States is credited with being most influential in the development and proliferation of the modern prison. A wing of the Walnut Street Jail in Philadelphia (1790–1835) was the first *penitentiary*. Influenced by the religious ideology of the Pennsylvania Quakers, the penitentiary was designed for the solitary confinement of criminal offenders, a place where they would repent for their sins without the contaminating influences of other prisoners or the community. These objectives were the foundation for the design of the Western State Penitentiary in Pittsburgh and the Eastern State Penitentiary in Philadelphia, opened in 1826 and 1829, respectively. Because it was believed that work would interfere with inmates' penitence, inmate work was not originally planned or desired by the founders of the penitentiary. However, individual handicraft work (e.g., weaving, woodcarving, leather tooling) was introduced later to ameliorate the negative consequences of solitary confinement and idleness. During the development of the Pennsylvania system, an alternative prison model, the Auburn system, emerged in New York.

The Auburn Prison opened in Auburn, New York, in 1817. The Auburn model incorporated a silent congregate work system, ostensibly through which inmates would learn vocational skills and be instilled with the work ethic. In complete silence, inmates would work in factory-like settings during the day, and return to their cells at night. The goal of the *silent system* was to prevent the spread of criminogenic values and influences among inmates. Order was maintained through a quasi-militaristic regimen, such as lockstep marching and harsh punishments for rule infractions.

The Auburn system proliferated in the United States at the same time that western European societies modeled their prisons after the Pennsylvania system. Whereas Europeans were compelled by rehabilitative ideals and what they saw as more humane treatment of inmates, the United States was motivated by the low operating costs and profits generated by cheap inmate labor sold to private industry.

Fortresslike industrial factory prisons dominated the penal landscape in the United States until the early twentieth century, when laws were passed, prompted largely by skyrocketing unemployment in the private sector during the Great Depression, restricting prison industry to the manufacture of instate public-use goods. The result of the demise of prison industry was an idle inmate population in which discipline and control, rather than production and vocational rehabilitation, became the primary objective of the prison.

A radical turn in the objectives and nature of the prison in the United States emerged following World War II (1939–1945) with the emergence and dominance of *correctional institutions*. The expressed goal of correctional institutions was the treatment and rehabilitation of

inmates. Therapeutic professionals, including physicians, psychologists, educators, and social workers, were charged with diagnosing and treating inmates based on individual needs. Under indeterminate sentencing strategies, parole boards were given more discretionary power to release inmates once they were deemed to be rehabilitated.

The ideals of the correctional system began to unravel in the 1960s, in part due to overcrowding, lack of funding, and a turbulent period of unrest associated with the prisoner rights movement. Despite these systemic circumstances, a neoconservative political climate that exaggerated the failings of the rehabilitation model was successful in garnering public support for a "get tough" approach to crime. The momentum of the movement became most evident in the 1980s when the United States embarked on an "imprisonment binge." Within a decade, both the prison population and rate of incarceration more than doubled as a result of the proliferation of new federal and state prisons. This trend of expansion continued through the 1990s with the rate of incarceration reaching 491 per 100,000 U.S. citizens in 2005 compared to 139 in 1980. Longer, determinate sentences contributed to this growth, but no single factor is more responsible than the concentration on the arrest and incarceration of illegal drug offenders.

Between 1985 and 1995, over 80 percent of the increase in the federal prison population was due to illegal drug offenses. In 1985, 34 percent of prisoners were incarcerated for drug offenses; by 1995 the proportion was 60 percent. As the state prison populations tripled in the late 1900s, the proportion of inmates incarcerated for drug offenses grew from 9 percent in 1986 to 23 percent by 1995.

IMPACT ON WOMEN AND MINORITIES

The crackdown on drugs had a disproportionate impact on women and minorities, particularly African Americans. There were almost eight times as many female prisoners in 2003 as there were in 1980, and the primary reason for the growth was drug offenses.

Similarly, illegal drug offenses contributed to a much greater extent to the growth of the African American prison population in the latter twentieth century compared to the growth for whites and Hispanics. Welch points out that "African Americans represent 12 percent of the U.S. population, 13 percent of drug users, 35 percent of the arrests for drug possession, 55 percent of convictions for drug possession, and 74 percent of the prison sentences for drug convictions" (2004, p. 439).

PERSPECTIVES ON THE PRISON

The ideals and functions of the prison can be viewed from three broad and competing perspectives: conservative, liberal, and critical. From the conservative perspective, the threat of imprisonment is believed to deter would-be offenders from committing crimes (general deterrence), while the purpose of prisons is to protect society from those who are not deterred (incapacitation), and through this punishment, deter convicted offenders from repeating crimes (specific deterrence). The conservative ideology is based on a fundamental belief that criminal offenders are driven by the choice to engage in criminal behavior and that crime can be controlled through the threat of punishment and the incapacitation of those who are not deterred.

From the liberal perspective, a criminal offense is seen as a result of forces—biological, psychological, or socioenvironmental—that influence the behavior. This perspective upholds the rehabilitative ideal that prisons should function to treat and rehabilitate offenders in order that they ultimately may be reintegrated into free society. Under the liberal perspective, scientific inquiry into the etiology of criminal behavior will reveal its underlying causes, and correctional rehabilitation is ideally guided by those etiological factors.

From the critical perspective, the criminal justice system is considered a means of social control that is used by the powerful class over the less powerful. Consistent with Karl Marx's (1818–1883) writings, criminal behavior is primarily the consequence of the economic order and politics in society. The criminal justice system and prisons, in particular, function to control an economically marginalized population, also defined as a surplus labor pool. Critical criminologists point to historical trends across societies in which correctional populations swell in times of abundant free-market labor and shrink in times of labor shortages. In his compelling book, *The Warehouse Prison* (2005), John Irwin adopts a critical perspective to describe the economic conditions and resulting marginalized population that spawned the prison expansion in the United States in the late twentieth century.

While the prison remains a dominant strategy aimed at controlling crime and punishing offenders in Western societies, there is a great deal of doubt among scholars that it is an effective strategy beyond retribution and incapacitation. The high recidivism rate of ex-inmates points to the general failure of imprisonment to deter or rehabilitate and, further, may promote a higher level of criminality among those released. With over 90 percent of inmates ultimately returning to free society, this is, or should be, a central concern for social reform.

Prison abolitionists advocate radical reform in the use of incarceration. Vocal prison abolitionists span both ends of the political spectrum. Pointing to the failure of the prison system to reform or deter, and to the swelling prison population, as well as to the evidence and claims

that current practices are racist and classist, abolitionists promote expanded and widespread use of alternatives to incarceration for most offenses and support the decriminalization of certain behaviors, such as drug offenses. With the entrenchment of the prison as a primary means of criminal sanctioning, along with the recent privatization of prisons and of corrections, in general, the abolitionists face powerful ideological and economic barriers.

SEE ALSO *African Americans; Crime and Criminology; Davis, Angela; Deterrence; Drug Traffic; Imprisonment; Law; Punishment; Racism*

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PRIVACY

One of the main difficulties in assessing the meaning of *privacy* in the social sciences is that the term usually connotes a normative character. From the liberal defense of privacy as a right that protects individuals from state intervention and abuse, to the feminist critiques that denounce its role in disguising the oppression of women, most definitions of privacy present contrasting perspectives regarding its value or function.

Yet, when approached from the standpoint of ordinary language, privacy describes a certain domain of social practice—spatial, relational, decisional—that is generally expected to be sheltered from public scrutiny. It can be argued then, that privacy also facilitates the emergence of difference and particularity, and nourishes the development of interpersonal relations based on varying degrees of closeness and *intimacy* (Boling 1996).

The notion of privacy is closely connected to the predicate *private*, which can be ascribed to places and objects but also to practices, decisions, information, feelings, or—as critic Iris Young synthesizes—any aspect of life from which one has a right to exclude others. Control over access, then, is a central feature of privacy (Gavison 1980). Since the last decades of the twentieth century, concern over the right to privacy, its limits, and the legal measures to protect it has spanned the advances of information technologies and the incursion of the media; regulation over sexuality and the body, reproductive rights, or domestic violence; and issues of family law, such as decisions on childrearing.

In all these discussions, *privacy* designates a sphere of life that is protected from the influence of what is deemed external, be it state institutions or the public realm more generally. The history of the distinction between the private and public spheres can be traced back to the Greek philosopher Aristotle (384–322 BCE), who conceived the domain of the household and family in opposition to the *polis*, or public realm of political activity. The divide has since remained a central theoretical notion and was inherited by the social sciences, often resulting in one of the poles viewed as a residual category defined by its opposition and relative subordination to the other. Modern theories of the public sphere, for example, often relegate the private realm to a subsidiary role. Thus, Hannah Arendt (1906–1975) argues that household matters—such as the sustenance and reproduction of life—are necessary preconditions for political life but are not part of it. In a similar vein, Jürgen Habermas sees the family as functioning to prepare individuals to be rational and autonomous actors in the public realm. In both depictions the spheres are clearly distinguished by virtue of their content, the private being equated with the *domestic* realm where basic necessities of life are satisfied.

The public/private divide is one of the pillars of liberal political theory, where the private is given preeminence as the sphere of individual freedoms. Classical liberal philosophers attribute a quasi-natural quality to the private realm, which is associated to the individual in opposition to the contractual character of society. This becomes evident in John Locke's (1632–1704) natural law arguments restricting the power of the state over private property and the family, or John Stuart Mill's (1806–1873) discussion of privacy as the natural domain of liberty.

Liberalism has long considered privacy a necessary requirement for *autonomy*, as it provides the adequate milieu to develop the capacity of independent decision making that allows one to lead a self-determined or autonomous life. This argument conveys an implicit spatial understanding of privacy as isolation, or *seclusion*, straightforwardly demarcating the space of the individual from the outside. However, privacy can conversely be conceived as a condition that allows selective degrees of access and fosters intimacy and relations with others (Schoeman 1992).

Legal perspectives focus on the notion of privacy as a right, questioning if it designates a specific domain not

provided for by other established rights, such as the right to property or to individual freedoms, or debating whether it is granted by the U.S. Constitution. In the American case, for example, there has been significant discussion since the late nineteenth century concerning the status of privacy as a principle of common law. Whether considered a legal right or a moral principle, however, there is an understanding of the notion of privacy as protecting individuals from unwanted contact with others and intrusion or judgment on personal decisions.

The feminist critique that emerged in the second half of the twentieth century, has consistently challenged the liberal notion that privacy benefits all equally. Through historical and theoretical elaborations, feminists have shown that the conventional distinction between the public and the private spheres is not only naturalized, but also gendered, as the domestic is considered the realm of women and thus deprived of public recognition. The defense of privacy, they argue, serves the purpose of concealing the oppression of women through the appearance of personal choice and intimacy. Feminists deny any particularity of social relationships that happen in private that inherently distinguishes them from those that take place in public, as they are all conditioned by power and hierarchy. Rather, it is the distinction between the private and the public—between a prepolitical or natural sphere and a political one—that performs the ideological role of hiding oppression. Feminist critics have moved to reject the very distinction by stating that even the personal is political (MacKinnon 1989).

Still, several scholars are reluctant to abandon the notion of privacy altogether, and propose to produce a redescription of the concept taking into account the aforementioned critiques. Political theorists like Jean Cohen or Iris Young, for example, argue that privacy does not merely obscure oppressive practices but also enables diversity by protecting from the homogenizing pressure of the public realm and facilitating differences in experience and perspectives. Moreover, the concept is useful to confront domination of women and minorities by preserving a domain of information and decision, which might involve aspects of intimacy, sexuality, the body, or other personal issues. In a similar tone to Ferdinand Schoeman's suggestions, these arguments draw away from conceiving the private and the public as clearly demarcated spaces, and view them instead as dimensions of social relations present in different spheres of life. Moving away from the normative bend, social sciences might depict privacy as a common practice emerging from and at the same time constituting a shared form of life.

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PRIVATE INTERESTS

The distinction between public and private interests has deep roots in the Western political tradition, dating back to ancient times. Roman philosopher Marcus Tullius Cicero (106–43 BCE), for example, defined a "republic" as "the property of the people" and argued that the power of the state should be used only to advance the common interests of its citizens. More recently political theorists of widely varying views have argued that government power should only be used to promote the public interest rather than purely private ones.

Seventeenth-century English philosopher John Locke (1632–1704) and later theorists in the liberal social contract tradition contended that the functions of the state should be limited to those that flow from the purposes for which the people consented to be bound by the government. Should government power exceed its assigned purposes and begin to serve the narrow interests of private individuals at the expense of the general public, the latter would no longer be bound by its laws and might even have a right to rebel.

THE PUBLIC INTEREST AND AMERICAN POLITICAL THOUGHT

Distinctions between public and private interests have also played an important role in the American political tradition. Like Locke, many of the Founding Fathers believed that the powers of government should be limited to promoting the public interest, as opposed to promoting the selfish parochial interests of individuals or "factions." The Preamble of the U.S. Constitution reflects this belief, stating that the purpose of the new government is to "provide for the common defense and general welfare," a phrase repeated in the Constitution's Spending Clause, which grants Congress the power to raise taxes in order to "provide for the common Defense and General Welfare of the United States." The phrase "General Welfare" was understood to exclude the possibility of expenditures intended for the sole benefit of particular states and individuals, though there was much disagreement about where the line between "general" and local or private interests should be drawn. In the nineteenth and early twentieth centuries, American courts would periodically invalidate various economic and other regulations on the grounds that they represented "class legislation" intended to benefit narrow interest groups at the expense of the general public.

From ancient times to the present, however, advocates of differing ideologies have disagreed over the question of what interests truly count as "public" and which are merely private. The rise of the modern welfare state accentuated such divisions. Liberals and egalitarians view many redistributive programs as essential to the promotion of the public interest, while libertarians and conservatives see them as wealth transfers to narrow interest groups promoting purely private interests. The concept of the public interest maintains its hold on our imagination in part because we can each define it in a way conducive to our own preferred ideology and self-interest.

PUBLIC AND PRIVATE GOODS

Modern economic theory helps to shed light on the distinction between private and public interests through the concept of public and private goods. A public good is characterized by the fact that it is nonrivalrous and nonexclusive. Consumption of the good by one person does not prevent simultaneous consumption by others; nonexclusivity implies that, once the good is produced, it is impossible to exclude anyone in the relevant group from its benefits. A classic example is clean air. One person breathing clean air does not prevent others from enjoying it as well, and once air pollution has been eliminated in a given area, it is impossible to exclude anyone in that territory from benefiting from its removal. Standard public goods theory concludes that, absent government intervention, public goods will tend to be underproduced by the market, since individuals will have little or no incentive to contribute to their production. Instead, many may seek to "free ride" on the efforts of others.

The distinction between public and private goods offers a possible way to draw the elusive line between public and private interests. In theory, the production of a public good is in the interests of everyone in the relevant population, yet underproduction is likely in the absence of government intervention. Thus, the provision of public goods may well be coextensive with the public interest. By contrast, private goods will usually be adequately produced by the market, and so their attempted production by government is likely to advance only private interests, transferring wealth from the general public to narrow interest groups or individual citizens.

However, the production of public goods does not fully capture the concept of the public interest as it is understood by either ordinary citizens or many political theorists. If, for example, the idea of the public interest includes some commitment to distributive justice, wealth transfers that provide only private goods may still be viewed as "public." Unemployment insurance, old age pensions, and most other welfare state programs provide benefits that economic theory would classify as private goods. Yet, an argument can be made that these programs nonetheless advance the public interest.

As a proxy for the public interest, public goods theory may be overbroad as well as underinclusive. Recent scholarship shows that traditional public goods theory may have been too quick to conclude that public goods will always be underproduced by the market. Scholars have identified several mechanisms by which an optimal level of public good production can occur even without government intervention. For example, private "planned communities" effectively produce such public goods as security and local pollution control for their residents. It may not be in the public interest for government to try to provide those public goods that are already produced in close to optimal quantities by market mechanisms.

Ultimately, the distinction between public and private interests is very difficult to define because it is more a normative concept than an empirical or theoretical one. Economics and other social sciences can help us understand whether or not a particular goal can be better achieved by the state or by the private sector. But they cannot, in and of themselves, prove that it is in the public interest.

SEE ALSO *Defense; Defense, National; Locke, John; Private Sector; Public Goods; Public Interest*

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PRIVATE SECTOR

The private sector is the part of a country's economy that is not controlled directly by the government; it is a term that combines households and businesses in the economy into a single group. The resources of production owned by the private sector are owned in the form of private property. The private sector includes entities such as households and individuals, for-profit enterprises, sole traders, partnerships, corporations, nonprofit-making organizations, charities, and nongovernmental organizations (NGOs). *Private sector* is contrasted with *public sector*, which is a comparable term for the governmental sector. In 2004 the private sector share of gross domestic product (GDP) in current prices in countries of the Organisation of Economic Co-operation and Development was: Australia 85.85 percent, Canada 87.72 percent, Finland 81.48 percent, France 80.73 percent, Germany 85.32 percent, Greece 87.54 percent, Italy 85.68 percent, Japan 84.38 percent, Norway 82.31 percent, Sweden 78.17 percent, the United Kingdom 83.65 percent, and the United States 89.46 percent. In contrast, in developing countries and transition economies the 2004 private sector share of GDP in current prices was lower: the Bahamas 73.29 percent, Botswana 70.50 percent, the Democratic Republic of Congo 69.07 percent, Nicaragua 76.61 percent, South Africa 75.92 percent, Bulgaria 70.36 percent, Croatia 75.36 percent, the Czech Republic 71.98 percent, Georgia 51.44 percent, and the Slovak Republic 75.69 percent (Heston, Summers, and Aten 2006). Dani Rodrik (2000) argues that the reason for the private sector's low share in developing countries is due to the fact that for governments in low-income countries, creating additional public-sector jobs is administratively easier than establishing an unemployment insurance scheme or subsidizing job security in the private sector.

The distinction between private sector and public sector reflects the two alternative methods of solving the allocation of resources in an economy: markets or government. Markets utilize private ownership of resources—thus the term *private* sector—for voluntary allocation decisions. In contrast to the public sector, the private sector—with the exception of nonprofit-making organizations, charities, and nongovernmental organizations—mainly searches for profit opportunities. Private companies and organizations produce goods and services in response to supply-and-demand forces in the market, with the final goal of making a profit for the owners and shareholders of the private enterprise.

The private sector plays a key role in accelerating economic growth in market capitalist economies. The private sector is the foundation of the market capitalist economic system. Without the private sector the capitalist market cannot exist, and vice versa. For example, the development of the private sector in transition economies was vital, and the final goal of transition was associated with the private sector being converted into the dominant sector in the economy. In all industrialized or advanced capitalist economies, the absolute and relative size of the private sector is very high. Hence, in a capitalist market economy the private sector is mostly responsible for most of the country's investments, for the generation of new job opportunities, and for the improvement of standards of living, and it is the source of most technological developments.

The government in market capitalist economies undertakes the following responsibilities to promote and support the private sector:

1. creating proper legal environment for the private sector to function, through private property rights and contract law;
2. introducing customs and tax laws that should encourage private investment;
3. often providing basic infrastructure produced by public enterprises such as water, power, land, transport and communication services, and other necessities;
4. initiating macroeconomic policies and expenditure to increase the demand for the private sector produced goods.

The private sector increases into two ways: through privatization of state-owned enterprises (SOEs) and through the creation and establishment of new firms. In this way, the share of the private sector in the economy grows. Privatization represents the transfer of state-owned assets to private ownership, alongside the creation and fostering of private businesses. Privatization is an alternative way of distributing and choosing the means of generating wealth (Marangos 2004). Consequently, it also may be considered a distribution of political and economic power

in the economy. The increase of the private sector further implies the abandonment of government control over economic activity, as well as the abandonment of state monopoly in certain sectors. However, as the private sector increases, both income and wealth inequality increase, and intergenerational mobility decreases:

> It is true, however, that America was once a place of substantial intergenerational mobility: Sons often did much better than their fathers.… [However,] over the past generation upward mobility has fallen drastically. Very few children of the lower class are making their way to even moderate affluence.… In modern America, it seems, you're quite likely to stay in the social and economic class into which you were born. (Krugman 2004)

Supporters of the private sector mistrust government-initiated economic activities because they believe that the private sector is both efficient and enterprising. This further increases efficiency because of the increase in macroeconomic productivity due to the adoption of new technology. Critics of the private sector argue that the private sector does not produce public goods, that it creates private monopolies, enhances income and wealth inequality, and discourages intergenerational mobility. Public goods are commodities where the exclusion principle breaks down, and they are nonrivalrous. Such goods include, for example, lighthouses, national defense, police, fire brigades, and traffic lights. In nearly all industrialized or advanced market-capitalist economies, public goods are provided by the government and funded through the collection of state revenues.

SEE ALSO *Capitalism; Corporations; Investment; Privatization; Productivity; Property; Public Goods; Public Sector*

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PRIVATIZATION

Although *privatization* is an imprecise term with different meanings in different contexts, it broadly refers to loosening governmental control over public operations. The phenomenon gained prominence in the 1980s and 1990s, when governments in many advanced industrial nations reduced their stake in state-owned industries such as steel, aerospace, railroads, oil, postal services, telecommunications, electricity, gas, and water. Two decades later, the phenomenon diversified into many variants, such as outsourcing, subcontracting, "internal markets," and public-private partnerships; extends well beyond the industry sectors listed above; and is repeated in the transitional economies of the former Warsaw Pact.

CAUSES AND RATIONALE

In simple economic terms, a small number of goods and services has to be provided publicly. Their defining characteristic is that they cannot be priced and no one can therefore be excluded by price from the benefits they provide—or indeed the disbenefits, since such goods and services may be associated with public ills such as atmospheric pollution and epidemic diseases. Some significant areas of state spending are *unpriceable public goods* in this sense, including national defense and law and order. Yet there are also *policy-determined public goods*, or publicly provided private goods, such as medical care, education, pensions, and transport, which could be priced but are not. Depending on the extent to which nations subscribe to the ideals of the Keynesian welfare state, policymakers may decide to provide these goods publicly as a means to bring about greater equality among citizens. On this view, it is deemed unjust if access to (and the quality of) public services such as health care or education depends on an individual's level of income.

A further cause of the trend toward privatization was that public debt and borrowing requirements in many industrialized nations rose significantly as in the final decades of the twentieth century states found themselves having to foot the bill for burgeoning welfare provisions. Privatization was regarded as a means to cut debts by selling off state-owned assets and by transferring the responsibility for investment to private entities, the management skills and financial acumen of which were expected to create better value for the money for taxpayers.

However, while the newfound prosperity after World War II (1939–1945) led to a continuous expansion of welfare states around the world, this process came to a halt in the 1980s. This was due, first, to the up-and-coming economic paradigm of neoliberalism, which demanded that states relinquish their role in economic affairs so as to restore incentives for economic growth and efficiency. The underlying rationale was that the private sector is more

efficient in providing these goods because of the disciplining effects of competition, which provides incentives to cut costs and produce goods that people want. Both productive and allocative efficiency were said to improve as a result. Furthermore, increasing processes of economic globalization put states in direct competition to each other for inward investment and provided a further rationale to cut taxes and "roll back" the state.

Finally, although the aforementioned factors triggered privatization predominantly in industrialized nations, governments in developing countries experienced an altogether different cause: the imposition of the principle of *conditionality* by institutions such as the International Monetary Fund (IMF) and the World Bank. According to the principle of conditionality, access to development aid was made conditional upon the borrower agreeing to meet specific requirements of economic liberalization, resulting in the coerced privatization (and subsequent sale to investors of mostly foreign origin) of many state-owned entities.

TYPES OF PRIVATIZATION

The term *privatization* can refer to (1) *assets*, as the sale or auctioning off of state property; (2) the *organization*, as the adaptation of organizational and legal constructs prevalent in the private sector, with the aim of creating autonomous entities unconstrained by political interference; (3) *functions*, as the abandonment of public functions in favor of market principles and actors; or a combination of the three.

The sale of assets raises problems for public policy if no real contestation from private entrepreneurs is forthcoming—for example, because the privatized entity retains its monopoly position and can therefore restrict output, raise prices, or extract excessive rents. Network utilities such as railways, water, gas, and electricity are particularly vulnerable to such scenarios, because the inherent natural monopoly means that consumers have no choice of network. As a countermeasure, policymakers tend to design complex governance schemes of regulation and deregulation aimed at preventing such exploitation.

The privatization of functions, in turn, is a policy lever that can be introduced at various junctures in the value chain, including the financing, production, provisioning, and operation stages. To use an example, a state may decide to provide publicly a good such as education or health care, but may choose to leave the financing, construction, or operation of schools or hospitals to the private sector, which then rents the finished project back to the government. The separation of production from provision has allowed many forms of such public-private partnerships (PPPs) to emerge, within which responsibilities, risks, and benefits are contractually shared between the public and private sector.

Critics of privatization argue that a private company will serve the needs of those who are most willing (and able) to pay, rather than the needs of the majority of citizens that public sector organizations would be obliged to satisfy. Furthermore, the anticipated efficiency gains, critics argue, have failed to materialize, particularly in sectors with a natural monopoly. Finally, in order to attract private investors in the first place, the sale price of many state-owned organizations awaiting privatization are claimed to have been lower than their actual value, thereby wasting taxpayers' money invested in previous decades. PPPs, in turn, are controversial because the long-run cost of paying the private sector to run the schemes are said to exceed the cost the public sector would incur to build and run them itself. The test of time will tell the extent to which PPPs provide better value for citizens.

SEE ALSO *Conditionality; Deregulation; Private Interests; Property, Private*

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PROBABILISTIC REGRESSION

Probabilistic regression, also known as "probit regression," is a statistical technique used to make predictions on a "limited" dependent variable using information from one or more other independent variables. This technique is one of several possible techniques that can be used when the presence of a "limited" dependent variable prevents the more common ordinary-least-squares regression technique from being used.

A "limited" variable here refers to both nominal-level variables and ordinal-level variables. A nominal-level variable is defined as a variable that can (1) take distinct values, but (2) those values cannot be placed in any meaningful numerical order. A variable where "yes" and

"no" are the only two possible values is one common type of nominal-level variable. An ordinal-level variable is defined as a variable where (1) the variable can take several possible values and (2) these different values can be placed in some logical numerical order. A variable that measures whether a person (1) strongly agrees, (2) agrees, (3) is indifferent, (4) disagrees, or (5) strongly disagrees with some given statement is a common type of ordinal-level variable.

In order to use ordinary-least-squares regression, there must be a linear relationship between one's dependent and independent variables. One can see if this linearity requirement has been met by first making a scatterplot with the independent variable on the x-axis and the dependent variable on the y-axis, then calculating a mean for the dependent variable at each value of the independent variable and plotting this series of means on the scatterplot. If the observed series of means looks approximately like a straight line, then the linearity requirement has been met. If not, other regression techniques must be employed.

There are two main reasons why the linearity requirement of ordinary-least-squares regression is seldom met when the dependent variable of interest is nominal or ordinal. First, because there are a limited number of values that the dependent variable can take (as few as two in some cases), any straight line one would try to impose on the scatterplot could, for low and high values of the independent variable, respectively, extend far above or below the possible values that the dependent variable can take. The second reason is best described in the simple case when the dependent variable takes only two possible values. Because the scatterplot in this instance appears as a series of dots dispersed along two parallel horizontal lines, any single line one would try to impose on the scatterplot would cross each of these horizontal lines at only one point. This imposed line would not pass near many of the data points and therefore would not achieve a high degree of fit, as was originally sought. In this situation, a nonlinear function can achieve a much closer fit to the data.

When one's dependent variable fails to meet the linearity requirement of ordinary-least squares regression, one attempts to mathematically transform the dependent variable so that there is a linear relationship between the independent variable(s) and the transformed dependent variable. Common transformations include taking the natural logarithm or the square root of the dependent variable. When the dependent variable is "limited" and therefore cannot take values above a certain number or below a certain number, the mathematical function one specifies for the transformation must also not be capable of going above or below those same numbers. Probit regression uses the s-shaped cumulative distribution function of the normal distribution to meet this requirement.

Probit regression predicts the probability of seeing a given value of the dependent variable by fitting the available data to a mathematical function from which probabilities can be calculated. Specifically, this function is the inverse of the indefinite integral of the probability density function of the normal (Gaussian) distribution (also known as the "inverse cumulative density function of the normal distribution"). Formally, this function is written as $\Phi^{-1}(p) = \sqrt{2} * erf^{-1}(2p-1)$, where erf^{-1} is the inverse error function and p is the probability of observing a particular outcome on the dependent variable.

Probit regression was first proposed by the entomologist Chester Ittner Bliss (1899–1979) in a 1934 article in *Science* titled "The Method of Probits." Noting that his dependent variable was too limited to be modeled using ordinary-least-squares regression, Bliss sought to overcome this limitation by transforming his limited dependent variable into a new dependent variable that did not have the same limitations. Using a table derived from the cumulative density function of the normal distribution, Bliss converted the units of his dependent variable into what he called "probability units." Bliss then used these probability units as his new dependent variable, and fit them to the rest of his data using standard ordinary-least-squares regression. The word *probit* is simply an abbreviation of the phrase "probability unit."

Probit regression, when it was first developed, provided a powerful yet computationally simple way to model limited dependent variables. It required the use of widely available statistical tables and knowledge of the ordinary-least-squares regression technique. Yet probit regression is not the preferred method for modeling relationships between limited dependent variables and a set of independent variables in the social sciences. According to Adrian Raftery (2001), this is largely because interpreting the dependent variable when it has been transformed into probability units is not easy. Probability units have no common-sense interpretation by themselves, so they must be converted back to simple probabilities before one can effectively convey their meaning in words. A competing and more popular method, logistic regression, can handle the same types of dependent variable but has the additional advantage that the results of the procedure are more easily made interpretable in words.

In terms of binary dependent variables, there is little that distinguishes probit regression from its more popular competitor, logistic regression. Probit regression is simpler computationally than logistic regression, but this advantage is negated through the use of computer software. Ironically, however, the development of generalized linear modeling by John Nelder and R. Wedderburn beginning in 1972 and the creation of computer software for performing the technique re-created a space for probit regres-

sion. Generalized linear modeling was born out of the observation that the many different regression techniques identified at the time were more alike than they were different. Probit regression and logistic regression produced similar predictions for "limited" dependent variables *because* they were so similar on a general level. But through the process of outlining similarities between the two techniques, key differences were also highlighted. When one has an ordinal-level dependent variable and each category of the dependent variable occurs approximately an equal number of times, logistic regression is most appropriate. When middle categories of the dependent variable occur much more frequently than either low or high categories, probit regression achieves a better degree of fit. Thus, increased computing power and the development of more general statistical models helped to pinpoint a niche for probit regression.

For a more in-depth treatment of probit regression and logistic regression in a social science setting, the reader is referred to E. Scott Adler and Forrest Nelson's book *Linear Probability, Logit, and Probit Models* (1984).

SEE ALSO *Distribution, Normal; Distribution, Poisson; Distribution, Uniform; General Linear Model; Method of Moments; Nonlinear Regression; Ordinality; Pareto, Vilfredo; Probability Distributions; Regression; Regression Analysis*

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David J. Roelfs

PROBABILITY

The concern of empirical social statisticians in matters theoretical is usually limited to troubles regarding choices of random sets with repeatably observable frequencies—meant to test hypotheses that suggest some limitations on these values. (An example is the test of claims regarding discrimination.) As many statistical observations are hardly ever repeated, a huge literature discusses the question of how representative observed sets are: Is an observed distribution characteristic of the whole population, or is it due to an accidentally great deviation from it?

Diverse examinations of the likelihood of a freak accident are calculated, all made on the basis of assumptions, often reasonable but at times highly question begging. For example, social statisticians seldom notice that the calculations take empirical finds as crucial tests between hypotheses. They specify single hypotheses without troubling themselves to consider the hypotheses the calculations take as the default options. Most social statisticians are ignorant of the mathematical intricacies involved and of the fierce debates among top experts in the field as to what exactly these calculations mean. The long and the short of it is this: How representative is the sample? This question translates into a question of the sample's randomness.

Critics often suggest that randomness is wanting because the criterion of the choice of the sample introduces bias. The standard example is in biology. The use of laboratory animals introduces bias and renders some tests worse than useless. In social research it is the use of telephone books for the selection of random telephone numbers, in oblivion of the fact that in some cases the choice of people with telephones introduces bias. The best way to handle bias is to repeat the test with a new sample using different criteria. In some cases tests for the randomness of a sample may comprise random selections from the existing sample.

The most popular computer program for social statisticians, SPSS (originally Statistical Package for the Social Sciences), warns users against correlating everything in sight, because such an approach is sure to yield some useless (because unrepeatable) results. Common sense reduces such risks, but no method is foolproof. It is therefore always advisable to be wary of computer-generated numbers. To this end, it may be useful to comprehend the general ideas behind the statistics.

The term *probability* is open to different readings. Some of these may be subject to the mathematical calculus of probability (see below) and some not. Methodologists are most concerned with two of these readings, only one of which obeys this calculus. (Many insist that this need not be so.) In one sense probability, especially betting, is a matter of guesses. In another sense probability is the plausibility of a conjecture, as in the common assertion, "What you say is probable." Can different people propose competing probable views? To deny this is to dismiss without debate the views of peers who reject what seems plausible. This is inadvisable, at least in a democracy. Suppose, then, that it is possible for competing views to be probable. Since the calculus of probability ascribes to the probable the numerical value of more than one-half and considers the sum of probabilities of all alternatives to be at most unity, the probable in this sense defies this calculus.

Many methodologists deem this argument misleading. It fails for scientific ideas, they say, where such cases

are a priori impossible. Not so: When two new theories compete, researchers who find both plausible seek facts that will tip the scale against one of them. In the light of such experiments, theories do gain probability in a sense that defies the mathematical theory of probability. Proof: The mathematical theory will render more probable the theory that comes closer to existing information, yet such theories are implausible. Plausibility goes to an imaginative theory that looks implausible at first and then gains support from new information. The calculus distinctly does not differentiate between information that was known before the theory was invented and the information that the theory reveals. End of proof.

Theoretical learning results from the wish to understand observed regularities. Probability is the study of luck. With no foreknowledge of the fates of individuals, we know that ensembles have a percentage of lucky members, a percentage that improves or declines with the institution of precaution or carelessness, respectively. The simplest ensemble is that of tosses of a coin. Unable to predict single outcomes, we can predict their ratio—a number between 0 and 1. We tend to assume that this ratio is one-half. Not so, because a tossed coin with one side heavier than the other will more often fall on the heavy side: It is biased or unfair. All tossed coins turn out to have a constant ratio of heads turning up; this ratio is the probability for heads. Given a coin that we have not tested, we cannot know whether the probability of heads for it is one-half, but we take it for granted that it is a fixed ratio. Moreover as most coins that we use are fair, we tend naively to assume that one that we have not tested is fair. Some gamblers misuse this naïveté regularly.

Some say that in the absence of prior information about a coin, we have to consider it fair. Of course they say this because they speak of probability in a different sense—subjective (see below). Thus even when limiting our discourse to luck, we understand probability in different ways.

The mathematical theory of probability considers in the abstract a set of items with numerical values in a manner that follows certain intuitive axioms. These are basic equations that assign to every ordered pair a and b of these items a number called $p(a, b)$ (the *conditional probability* of a given b): $p(a, b) = r\ 0 \leq . r \leq 1$

The axioms of probability relate these numbers and items. Instead of going into the detail of the axioms, most textbooks, including most mathematically powerful ones, use examples, such as a series of outcomes in tosses of a coin, throws of a die, or pulls of a playing card out of a pack. These examples legitimately stand for the major theorems of the calculus, provided that the rule of equal probability that they usually exhibit is not generalized to allow for marked cards or biased or unfair coins and dice. The troubled discussions about probability that occurred at the turn of the nineteenth century disappeared with the realization that *equiprobability* is only one possible probability distribution among many. The alternative ways to assign equiprobability seem problematic only because of erroneous methodology. Quantum theory beautifully illustrates the freedom of assigning these. The philosopher Rudolf Carnap (1891–1970), for example, tried to use one quantum probability distribution in his theory of subjective probability (1962). Deviations from traditional rules about probability are hypotheses to be tested like any other. The identification of probability with plausibility plays havoc, as tests may grant such theories plausibility. Giving up this identification dispels such troubles. The axioms of probability, then, concern measures of possibilities, and assuming any distribution is thus conjectural: The more-possible items receive a higher degree of probability, with impossibility as probability 0 and necessity as probability 1. Probability can be a measure of the possibility of success in betting, and it can be the betting success rate; it can also be more than that. This is why the axioms of probability should apply to an unspecified set of uninterpreted items.

The axioms demand, then, that every item a has a complement b, given c: if for some d, $p(d, c) \neq 1$, then $p(a, c) + p(b, c) = 1$. Obviously otherwise $p(a, c) + p(b, c) = 2$. Similarly for every a and b, there is an item c that is their conjunction: $p(ab, d) = p(c, d)$ for every d. It turns out, as Karl Popper (1902–1994) has proved, that these rules abide by Boolean algebra (1968). The heart of probability theory is the multiplication theorem, the feel for which is central to the general feel for probability. It is intuitively obvious that probability is a monotone function: for every three items, $p(ab, c) \leq p(a, c)$; and $p(ab, c) = p(a, bc)$ times $p(b, c)$. For c that may be ignored (it may be understood as the universal condition, as the condition that always holds in the system under study), we may write $p(a)$ for $p(a, c)$. The probabilities depending on it are known as *absolute probabilities*. The multiplication law for absolute probabilities, then, is $p(ab) = p(a, b)$ times $p(b)$. And if $p(b) \neq 0$, then obviously $p(a, b) = p(ab)$ divided by $p(b)$. This makes it obvious that conditional probability is logically prior to absolute probability, since items that have zero probability appear in probability considerations of all sorts (Rényi 1970; Popper 1968).

One of the most popular reasons for the subjective view of probability is the *theory of errors*, the assumption that random errors of measurement of some given quantity cancel each other, so the most reliable hypothesis about that quantity is that it is the average of the many measurements of it. This makes probability appear as reliability (of measurements). Consider then the hypothesis that reliability of measurements follows the axioms of the

theory of probability. If this reliability is measurable by the reliance that people ascribe to measurements, then this hypothesis is empirically easily refuted: People prefer impressions to averages. This is not the case with researchers, however, as they assume errors to be random. Otherwise they are ready to change their minds. Hence, the errors in question are not errors of reliability. Moreover the same formula applies to acts, such as shooting at a target, that have nothing to do with reliability. Consider the correction of a gun fixed on a gun rest, aimed at a target, and hitting the target on average at a point that is not its center. The most important aspect of this kind of exercise is that it is repeatable. Otherwise it is pointless. (The same holds for the way astronomers eliminate random errors due to atmospheric interferences.) The demand for repeatability clearly eliminates the problem of credence. Those who refuse to work on repeatable experience are invited to test it afresh. Repeatable situations with deviations are particularly important for plotting the graph of the random differences between each hit and the center of the target. These random deviations are errors in the sense of distractions, not in the sense of observers negligently making mistakes. The error graph is in the famous bell shape (achieved when the sample grows infinitely to cover all possible deviations); the smaller the errors, the thinner the bell. This is known as *dispersion*, and it is essential for the study of populations subject to diverse random deviations. In physics the expression of the wish to find sharp spectral lines is the effort to reduce random interferences in the process of radiation (heat).

Historically the strongest reason for subjective probability was provided by the Marquis de Laplace (1749–1827) and later was endorsed by Albert Einstein (1879–1955): Facts are predetermined, and probability is due to ignorance. The opposite view is that randomness is objective. The chief argument here is that the assumption of randomness is essential for almost all successful application of the calculus of probability (the exception being its application to number theory). The subjectivist view of randomness as mere ignorance leads to the defunct assumption of equiprobability. Sophisticated subjectivists admit this but take it as a challenge, relying on another, more convincing reason to view probability as subjective and randomness as ignorance. It rests on a theorem named after Thomas Bayes (1702–1761). (This is why subjectivism is often called *Bayesianism*.)

Bayes's theorem concerns inverse probabilities. It is the formula that enables the move from the value of p(*e, h*) (of empirical data given a theory) to the value of p(*h, e*) (of a theory given empirical data), from the likelihood of an effect given one of its causes to the likelihood that a given cause is responsible for the effect at hand. This formula is a theorem that is easily deducible from the multiplication law, provided all relevant probabilities are given. This of course is an objectivist proviso; viewed subjectively, however, these provisos are convictions. This leads back to the defunct rule of equiprobability. Moreover, the most important theorem of probability theory, the law of large numbers, is not given to the subjectivist interpretation. It says that any option, however improbable, will occur in a sufficiently large collection, although the less probable the option, the less frequent it will be.

SEE ALSO *Bayes' Theorem; Bayesian Econometrics; Bayesian Statistics; Classical Statistical Analysis; Econometric Decomposition; Methods, Quantitative; Popper, Karl; Random Samples; Sampling; Science; Social Science; Statistics; Test Statistics*

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Joseph Agassi

PROBABILITY, LIMITS IN

The terms *limits in probability* and *probability limits* are encountered in the field of Bayesian inference and in the

field of asymptotic theory; however, their meanings are applied differently in each of these two areas. In terms of popularity, probability limits as applied to Bayesian inferences seems to appear more frequently in current literature, especially in applied statistical sciences.

PROBABILITY LIMITS IN BAYESIAN STATISTICS

In Bayesian inference, or Bayesian statistics, probability limits are also referred to as "credibility limits." Probability limits are the upper and lower end-points of the probability (or credible) interval that has a specified (posterior) probability (e.g., 95% or 99%) of containing the true value of a population parameter. Probability limits are used when the parameter is considered as the realization of a random variable with given prior distribution. As the distribution is presumably assessed prior to sample evidence, such distribution is called a "prior distribution." In classical inference, the parameter is considered to be an unknown constant, and then confidence limits are applied. Both upper and lower probability limits reflect not only prior information, but also sample information; therefore they are random statistics.

Confidence limits are the upper and lower end-points of an interval around a parameter estimate, such that if an experiment were repeated an infinite number of times, in the specified percentage (usually 95% or 99%) of trials the interval generated would contain the true value of the parameter. Confidence limits may be calculated using asymptotic (normal approximation) or exact methods. Both upper and lower confidence limits are obtained (purely) from sample data, so they are also a realization of random statistics.

Bayesian inference or Bayesian statistics is based on the theory of subjective probability. A formal Bayesian analysis leads to probabilistic assessments of the object of uncertainty. For instance, a Bayesian inference might be the statement "The probability is 0.95 that the mean μ of a normal distribution lies between 5.6 to 11.3." Therefore, the 95 percent probability limits for the parameter μ are 5.6 and 11.3. The number 0.95 here represents a degree of belief, either in the sense of subjective probability coherent or subjective probability rational; it needs not correspond to any objective long-run relative frequency. By contrast, a classical inference based on the sampling theory might lead to the statement "A 0.95 confidence interval for the mean of a normal distribution is from 5.6 to 11.3." The number 0.95 in this case represents a long-run relative frequency.

Finding Bayesian Probability Limits There is some flexibility in choosing the credible limits from a given probability distribution for the parameter. Examples include: choosing the narrowest probability interval that, for a unimodal distribution, will involve choosing those values of highest probability density (highest posterior density credible limits); choosing the probability interval where the probability of being below the interval is as likely as being above it (the interval will contain the median); and choosing the probability interval that has the mean as its central point. The following is an illustration of finding probability limits using the second method.

In a problem of making inferences about the mean λ of a Poisson distribution, the prior distribution is given as a $\Gamma(\alpha, \beta)$ distribution with known α and β. In Bayesian statistics, the parameter λ is considered to be a random variable, so a bold $\boldsymbol{\lambda}$ is used in the next sentence. Now suppose that a random sample of size n has been drawn from the underlying Poisson distribution. Let $\boldsymbol{X} = (X_1, X_2, \ldots, X_n)$, then the joint conditional probability density function (pdf) of $\boldsymbol{X}$, given $\boldsymbol{\lambda} = \lambda$, is

$$L(x|\lambda) = \frac{\lambda^{x_1}e^{-\lambda}}{x_1!} \cdot \frac{\lambda^{x_2}e^{-\lambda}}{x_2!} \cdots \frac{\lambda^{x_n}e^{-\lambda}}{x_n!},$$
$$x_i = 0, 1, 2, \ldots, i = 1, 2, \ldots, n.$$

The prior pdf is

$$h(\lambda) = \frac{\lambda^{\alpha-1}e^{-\lambda/\beta}}{\Gamma(\alpha)\beta^{\alpha}}, \quad 0 < \lambda < \infty.$$

Hence, the joint mixed continuous and discrete probability function is given by

$$L(x|\lambda)h(\lambda) = \left[\frac{\lambda^{x_1}e^{-\lambda}}{x_1!} \cdot \frac{\lambda^{x_2}e^{-\lambda}}{x_2!} \cdots \frac{\lambda^{x_n}e^{-\lambda}}{x_n!}\right] \left[\frac{\lambda^{\alpha-1}e^{-\lambda/\beta}}{\Gamma(\alpha)\beta^{\alpha}}\right] = \frac{\lambda^{\alpha-1+\Sigma x_i}e^{-\lambda(n\beta+1)/\beta}}{\Gamma(\alpha)\beta^{\alpha}x_1!x_2!\ldots x_n!},$$

provided that $x_i = 0, 1, 2, \ldots, i = 1, 2, \ldots, n$ with $0 < \lambda < \infty$, and is equal to zero elsewhere. Then the marginal distribution of the sample is

$$G(x, \lambda) = \int_0^{\infty} \frac{\lambda^{\alpha-1+\Sigma_1^n x_i}e^{-\lambda(n\beta+1)/\beta}}{x_1!x_2!\ldots x_n!\Gamma(\alpha)\beta^{\alpha}}\, d\lambda = \frac{\Gamma(\alpha + \Sigma_1^n x_i)\left[\beta/(n\beta+1)\right]^{\alpha+\Sigma_1^n x_i}}{\Gamma(\alpha)\beta^{\alpha}x_1!x_2!\ldots x_n!}$$

Suppose that the observations are $\boldsymbol{x} = (x_1, x_2, \ldots, x_n)$. Finally, the posterior pdf of λ, given $\boldsymbol{X} = \boldsymbol{x}$, is

$$k(x,\lambda) = \frac{L(x|\lambda)h(\lambda)}{G(x,\lambda)} = \frac{\lambda^{\alpha-1+\Sigma x_1} e^{-\lambda(n\beta+1)/\beta}}{\Gamma(\alpha+\Sigma_1^n x_i)\left[\beta/(n\beta+1)\right]^{\alpha+\Sigma_1^n x_i}},$$

provided that x_i = 0, 1, 2, …, i = 1, 2, …, n with $0 < \lambda < \infty$, and is equal to zero elsewhere. This posterior pdf is also a gamma distribution with parameters

$$\alpha^* = \alpha + \Sigma_1^n x_i,\ \beta^* = \beta/(n\beta+1).$$

Notice that the posterior pdf reflects both prior information carried by (α, β) and the sample information $\Sigma_1^n x_i$.

To obtain a credible interval, note that the posterior distribution of $\frac{2(n\beta+1)}{\beta}\lambda$ is $\chi^2(2(\alpha+\sum_1^n x_i))$. Based on this, the following interval is a $(1-\alpha)$ 100 percent credible interval for λ:

$$\left(\frac{2(n\beta+1)}{\beta}\chi^2_{1-\alpha/2}(2(\alpha+\Sigma_1^n x_i)),\ \frac{2(n\beta+1)}{\beta}\chi^2_{\alpha/2}(2(\alpha+\Sigma_1^n x_i))\right) \quad (1)$$

where $\chi^2_{1-\alpha/2}(2(\alpha+\Sigma_1^n x_i))$ and $\chi^2_{\alpha/2}(2(\alpha+\Sigma_1^n x_i))$ are the lower and upper quantiles of a χ^2 distribution with $2(\alpha+\Sigma_1^n x_i)$ degrees of freedom. Then, $\frac{2(n\beta+1)}{\beta}\chi^2_{1-\alpha/2}(2(\alpha+\sum_1^n x_i))$ and $\frac{2(n\beta+1)}{\beta}\chi^2_{\alpha/2}(2(\alpha+\sum_1^n x_i))$ are $(1-\alpha)$ 100 percent probability limits of λ.

Relationship to Confidence Limits For the example above, the confidence limits can be obtained by applying the distribution of sample sum $\Sigma_1^n x_i$. Note that the distribution of $\Sigma_1^n x_i$ is also a Poisson distribution with $\lambda^* = n\lambda$. For the lower limit of a $(1-\alpha)$ 100 percent confidence interval for λ can be selected so that

$$\sum_{i=\Sigma_1^n x_i}^{n} \frac{(n\lambda)^i e^{-(n\lambda)}}{i!} = \frac{\alpha}{2}; \quad (2)$$

and the upper limit of a $(1-\alpha)$ 100 percent confidence interval for λ can be solved by

$$\sum_{i=0}^{\Sigma_1^n x_i} \frac{(n\lambda)^i e^{-(n\lambda)}}{i!} = \frac{\alpha}{2}. \quad (3)$$

In general, equations such as (2), and (3) above are impossible to solve algebraically. The solutions can be obtained using a search procedure on a computer.

The asymptotic confidence limits for λ may be obtained by

$$P\left(\left|\frac{\Sigma_1^n x_i - n\lambda}{\sqrt{n\lambda}}\right| \le z_{\alpha/2}\right) = 1-\alpha.$$

So, the $(1-\alpha)$ 100 percent confidence limits for λ are

$$\left(\frac{2\Sigma_1^n x_i + z^2_{\alpha/2}}{2n}\right) \pm \frac{1}{n}\sqrt{\left(\frac{2\Sigma_1^n x_i + z^2_{\alpha/2}}{2}\right)^2 - (\Sigma_1^n x_i)^2}. \quad (4)$$

In addition, the further approximation for the confidence limits for λ using standard error of $\frac{1}{n}\sum_1^n x_i$ are

$$\frac{1}{n}\Sigma_1^n x_i \pm z_{\alpha/2}\sqrt{\frac{\Sigma_1^n x_i}{n}}. \quad (5)$$

Compare (1) to (4) or (5); they are quite different. Probability limits are obtained by a combination of subjective knowledge of λ and the objective information from the sample data whereas confidence limits only contain pure objective information.

There are situations in which the confidence limits and credible limits are numerically identical. For example, if μ is a location parameter of a normal distribution, and the prior for μ is uniform, then the 95 percent central confidence limits are identical to the 95 percent highest density credible limits.

PROBABILITY LIMITS IN ASYMPTOTIC THEORY

For a sequence of random variables $\{\boldsymbol{X}_n\}$, if there exists a real number c such that for every small positive number ϵ the probability that the absolute difference between $\boldsymbol{X}_n$ and c is less than ϵ has the limit of 1 when $n \to \infty$, namely, $\lim_{n\to\infty} P(|X_n - c| \le \varepsilon) = 1$, then we say that $\{\boldsymbol{X}_n\}$ converges in probability to constant c, and c is called the probability limit of $\{\boldsymbol{X}_n\}$ (White 1984). See Simons (1971) for how to identify probability limits.

For example, if the average of n independent, identically distributed random variables $\boldsymbol{Y}_i$, i = 1, …, n, with a common mean, μ, is given by $\bar{\mathbf{Y}}_n = \frac{1}{n}\sum_{i=0}^{n}\mathbf{Y}_i$, then as $n \to \infty$, $\bar{\mathbf{Y}}_n$ converges to μ in probability. The common mean, μ, of the random variables $\boldsymbol{Y}_i$ is the probability limit of the sequence of random variables $\{\bar{\mathbf{Y}}_n\}$. This result is known as the weak law of large numbers. In the context of estimation, we also call $\{\bar{\mathbf{Y}}_n\}$ a (weakly) consistent sequence of estimators for μ.

More generally, convergence in probability means that a sequence of random variables $\{\boldsymbol{X}_n\}$ converges to a

random variable $\boldsymbol{X}$, which is not necessarily a constant. It has not been observed that "probability limit" is used, for this general case, as a limiting random variable.

In probability theory there exist several different notions of convergence of random variables. The convergence of sequences of random variables to some limiting random variable (illustrated below) is an important concept in probability theory, and in its applications to statistics and stochastic processes. The following section presents a brief overview of the various modes of convergence of a random variable sequence, and the relationships between them (for greater detail, see Parzen 1960).

Modes of Convergence of a Random Variable Sequence Suppose that $\{F_n\}$ is a sequence of cumulative distribution functions corresponding to random variables $\{\boldsymbol{X}_n\}$, and that F is a distribution function corresponding to a random variable $\boldsymbol{X}$. We say that the sequence $\{\boldsymbol{X}_n\}$ converges to $\boldsymbol{X}$ in distribution, if $\lim_{n\to\infty} F_n(a) = F(a)$ for every real number a at which F is continuous. This is the notion of convergence used in the central limit theorem.

A sequence of random variables $\{\boldsymbol{X}_n\}$ is called *convergent in probability* to a random variable $\boldsymbol{X}$ if for any $\varepsilon > 0$, $\lim_{n\to\infty} P(\left|\mathbf{X}_n - \mathbf{X}\right| \le \varepsilon) = 1$. Convergence in probability is the notion of convergence used in the weak law of large numbers.

A sequence of random variables $\{\boldsymbol{X}_n\}$ is called *convergent in mean square* to a random variable $\boldsymbol{X}$ if $\lim_{n\to\infty} E\left[(\mathbf{X}_n - \mathbf{X})^2\right] = 0$. More generally, for any $p > 0$, a sequence of random variables $\{\boldsymbol{X}_n\}$ is called *convergent in p–mean* to a random variable $\boldsymbol{X}$ if $\lim_{n\to\infty} E\left[(\mathbf{X}_n - \mathbf{X})^p\right] = 0$.

A sequence of random variables $\{\boldsymbol{X}_n\}$ is called *convergent almost surely* to a random variable $\boldsymbol{X}$ if $P\left(\lim_{n\to\infty} \mathbf{X}_n = \mathbf{X}\right) = 1$.

A sequence of random variables $\{\boldsymbol{X}_n\}$ is called *convergent surely* to a random variable $\boldsymbol{X}$ if $\lim_{n\to\infty} \mathbf{X}_n = \mathbf{X}$.

Relationships between Various Modes of Convergence There are a few important connections between these modes of convergence. Convergence in distribution is the weakest form of convergence, and is in fact sometimes called *weak convergence*. It does not, in general, imply any other mode of convergence; however, convergence in distribution is implied by all other modes of convergence mentioned herein. Convergence in probability is the second weakest form of convergence. It implies convergence in distribution, but generally does not imply any other mode of convergence. However, convergence in probability is implied by all other modes of convergence mentioned herein, except convergence in distribution. If $\{\boldsymbol{X}_n\}$ converges in distribution to a constant c, then $\{\boldsymbol{X}_n\}$ converges in probability to c. Namely, when the limit (constant) in probability exists, the convergence in probability is equivalent to the convergence in distribution. Both convergence in mean square and almost sure convergence imply convergence in both distribution and probability. However, the inverse is not commonly true; convergence in mean square does not imply almost sure convergence, and vice versa.

LEGITIMATE CRITICISMS

In order to avoid possible confusion in using the term *probability limits* in these two different contexts discussed above, we suggest using "credible limits" for Bayesian probability limits, and using "a limit that … converges to in probability" in reference to the limit of a sequence of random variables that is convergent in probability when discussing asymptotic theory.

SEE ALSO *Bayesian Econometrics; Bayesian Statistics; Econometrics; Probability Distributions; Probability Theory; Probability, Subjective; Statistics*

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PROBABILITY, OBJECTIVE

SEE *Probability.*

PROBABILITY, SUBJECTIVE

The *subjective* or *personalist* theory of probability views probability as the likelihood that a particular individual attaches to the occurrence of an event or the truth of a

proposition, rather than as the frequency with which a particular observation would occur in a long sequence of repetitions.

In his *Treatise on Probability*, published in 1921, but written as a Cambridge fellowship dissertation before World War I (1914–1918), John Maynard Keynes (1883–1946) distinguished a probability distribution over possible outcomes from an individual's degree of belief that a particular probability distribution was in fact the true probability distribution, with the degree of belief reflecting the weight of available, relevant evidence. Keynes viewed probability as an objective relation that would be perceived the same way by any rational person with the same information. Émile Borel (1871–1956) and Frank P. Ramsey (1903–1930) responded by arguing for the more subjective interpretation that a person can have any degree of belief in any given statement on any evidence, and those beliefs will still be consistent and coherent, provided only that the person's subjective probabilities attached to all possible outcomes sum to one and are bounded by zero and one, with a probability of p attached to statement or event S implying a probability of $1-p$ attached to the denial of S. (The relevant essays by Borel and Ramsey are reprinted in Kyburg and Smokler [1964]; see also Bruno de Finetti's 1937 monograph and Bernard O. Koopman's 1940 article in that volume.) In his memorial article on his friend Ramsey, Keynes accepted Ramsey's criticism on the issue of the subjectivity of degrees of belief.

Like Frank Knight's (1885–1972) *Risk, Uncertainty, and Profit* (1921), Keynes distinguished between *risk* (where outcomes are random, but the probability distribution of outcomes is known) and *uncertainty* (where the probability distribution is not known, and even a complete list of possible outcomes may not be possible). Risk is insurable, but uncertainty is not. Knight saw entrepreneurial profit as the reward for bearing uncertainty. Knight (1921, pp. 250-251) held that insurance was feasible even in situations with little objective data provided that professionals in the relevant field could make "conservative and competent" estimates (even if insurance was imperfect in such situations because of moral hazard), but that there remained some uncertainty that was "uninsurable (because unmeasurable and this because unclassifiable)," when it was not possible for businessmen to even list all the possible outcomes. According to Keynes (1921), not all degrees of belief are numerically measurable or even comparable. Writing on long-period expectations in chapter 12 of his *General Theory of Employment, Interest, and Money* (1936), Keynes invoked fundamental, uninsurable uncertainty about the prospects of another world war, technological breakthroughs, or the position of property owners in the future social order to explain the volatility of private investment spending: expectations of the profitability of investment projects are guesses about an unknown and unknowable future, and are subject to drastic revision as scraps of new information become available. Under nonergodic conditions of true uncertainty, past observed frequencies are highly imperfect guides to future events, and a universe of discoverable regularities that can be expected to continue is a misleading analogy (Davidson 1991). Other chapters of Keynes's *General Theory*, however, proceeded as though discoverable regularities exist.

Leonard J. Savage (1917–1971) and I. J. Good developed the personalist view of probability advanced by Ramsay, de Finetti, and Koopman, and explored its implications for statistics. In this view, probability is no more than an index of a person's degree of belief in a statement (or in the occurrence of a future event), and reflects the limitations of a person's information, which may or may not reflect any inherent randomness in the world. Good and Savage emphasized Thomas Bayes's (d. 1761) theorem or rule as the way to update one's belief in the probability of statement S in light of some observed data. The probability that the data is observed and that S is true can be expressed either as the probability of the data being observed given that S is true multiplied by the prior probability that S is true, Pr(data|S)Pr(S), or as the probability of the data being observed multiplied by the probability of S being true given that the data have been observed, Pr(data)Pr(S|data). The posterior probability that S is true given that the data have been observed, Pr(S|data), can be solved for as Pr(data|S)Pr(S)/Pr(data). The approach pioneered by Good and Savage is known as Bayesianism (see Joyce 2004) and views rational behavior as the maximization of subjective expected utility (with expected utility being linear in probabilities) subject to probabilistic beliefs that have been updated according to Bayes's theorem. To the Bayesian, there is no distinction between uncertainty and risk: using available evidence in forming updated, posterior probabilities (over all possible, mutually exclusive outcomes, with "any other outcome" as one of the possibilities, so that the list is exhaustive) does not presume that a true, objective probability distribution will ever be achieved.

Various paradoxes, such as the Allais paradox and Ellsberg paradox, have been observed, in which people make choices in ways that violate Savage's axioms for rationality in the sense of maximization of expected utility given coherent and consistent beliefs about probabilities (Machina [1987] and the extensive references given there, as well as Jallais and Pradier [2005]). Experiments conducted by the psychologists Daniel Kahneman and Amos Tversky (1937–1996), for which Kahneman received the 2002 Nobel Prize in economics, revealed framing effects, in which choices made by subjects depend on how questions are put: in particular, someone may

assign probability p to a statement (or event) S, yet assign some probability other than $1-p$ to not-S.

Daniel Ellsberg (1961) showed experimental subjects two urns, one with fifty red balls and fifty black balls and the other with one hundred balls, an unknown number red and the rest black. Offered a prize for drawing a red ball, subjects strictly preferred to draw from the first urn, yet offered a prize for drawing a black ball, they again strictly preferred to draw from the first urn, a result not consistent with any subjective probability assigned to drawing a red ball from the second urn. Several commentators have interpreted such results as displaying aversion to uncertainty or ambiguity. Savage responded to Maurice Allais's counterexample (in which Savage himself responded to twenty questions from Allais in ways that violated Savage's axioms) by reinterpreting his axioms as a normative theory, which should convince anyone to whom it was explained suitably, rather than as a positive theory of rational behavior (Jallais and Pradier 2005). Peter Fishburn, David Schmeidler, and Robert Sugden, among others, have dealt with the observed paradoxes of choices involving subjective probability by generalizing expected utility theory by dropping the standard additivity or compounding rules of probability theory (Machina 1987).

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Robert W. Dimand

PROBABILITY DISTRIBUTIONS

The fundamental notion in statistics is that of a group (aggregate), which is usually called a *population*. This denotes a collection of objects, whether animate or inanimate, for example, a population of humans, of plants, of mistakes in reading a scale, and so on. The science of statistics deals with properties of populations, or more precisely, with the data obtained by counting or measuring properties of populations of natural phenomena. Natural phenomena include various happenings of the external world, whether human or not.

Consider a population of members each of which bears some numerical value of a variable (variate), for example, a population of men with measured height. Here the variable is the height of men. We thus have a population of variates (which can be discontinuous [discrete] or continuous). In the continuous case, the number of members possessing a variate value that falls into a given interval of the variate values is called the *frequency* in that interval. Finally, the manner in which the frequencies are distributed over the intervals is called the *frequency distribution* (or simply *distribution*).

To everything in social science there is a distribution. From the characteristics of persons and the aggregates they form—health and wealth, city size and resource endowment, happiness and social harmony—to the characteristics of myriad other entities—stock performance, volatility of money, the number of words in a language—distributions both summarize the characteristics and describe their operation.

Moreover, there are distributions for every kind of variable: continuous or discrete; defined on a support that may be any subset of numbers (positive half-line, full line, positive integers, etc.); displaying a great variety of shapes; symmetric or asymmetric; with zero, one, or many peaks; skewed to the left or the right; possessing one or several modes; and so on. As a rule, continuous distributions are specified by mathematical functions.

Functions of variables and combinations (mixtures) of variables generate new variables whose distributions show the imprint of the input distributions and their

interrelations. Because approximation of a variable's distribution unlocks many doors—in theoretical analysis, where distributions are a prime tool for forecasting and prediction, and in empirical analysis, where distributions usually serve to represent the unobservables—detailed compilations of distributions are a necessary part of the social scientist's toolkit.

For introduction and comprehensive exposition, see Stuart and Ord (1994), Dwass (1970), and Tsokos (1972), and for rather encyclopedic coverage the volumes in Johnson and Kotz's series, *Distributions in Statistics*, and their revisions (e.g., Johnson, Kotz, and Balakrishnan 1994). The handbook by Evans, Hastings, and Peacock (2000) is an appropriate and valuable source for initial study.

ASSOCIATED FUNCTIONS

A variety of mathematical functions are associated with mathematically specified distributions. The most basic is the distribution function, also known as the *cumulative distribution function* (cdf). The distribution function may be defined as a mathematical expression that describes the probability that a system (consisting of several components) will take a specific numerical value or set of values (such a varying system is designated as a "random variable" and usually denoted by capital *X*, *Y*, or *Z*). The description of a system may involve other quantities, and the distribution function may take into account some (or all) of them. In the case of a system with one variable, the distribution function (or cumulative distribution function) is defined as the probability α $(0 < \alpha < 1)$ that the variate X assumes a value less than or equal to x and is usually denoted $F_X(x)$, or simply $F(x)$:

$$F(x) = P(X \leq x) \qquad (1)$$

(distinguishing, as customary, between the random variable X and its specific numerical value x). The distribution function of any random variable is a nondecreasing (usually increasing) function of x. The range of its values is [0, 1]. (Remember that the cdf is nothing else but a particular probability.)

Besides the cdf, the behavior of a random variable can be described by an "associated" function. The most common of the associated functions (and by far the most often graphed) is the probability density function (pdf), denoted $f(x)$. In the case of continuous distributions the pdf is simply the first derivative of the distribution function with respect to the value x of the corresponding variate X. (In discrete distributions it is sometimes called the "probability mass function," and is obtained by taking the difference of the consecutive values of the distribution function.) As visible from its relationship to the distribution function, the pdf, represented graphically as a curve, possesses two main properties: (1) it is nonnegative for all values of x, $f(x) > 0$ (because the cdf is a nondecreasing function of x); (2) the total area under the curve is 1:

$$\int_{-\infty}^{\infty} f(x)\,dx = 1. \qquad (2)$$

By far the most familiar and most widely used of all (continuous) distributional shapes is the symmetric bell-shaped curve depicting the pdf of the normal (or "Gaussian") distribution. The normal distribution was popularized in the social sciences by the great Belgian scholar Lambert Adolphe Jacques Quételet (1796–1874).

Other popular associated functions used in social science are (1) the *quantile function*, which, inter alia, provides the foundation for distributional measures of inequality, such as Pen's Parade, and (2) the *hazard function*, formally defined as the ratio of the pdf to 1 minus the cdf: $f(x)/[1 - F(x)]$. The denominator, $1 - F(x)$, is also known as the "reliability function" and as the "survival function" and denoted by $S(x)$.

All the associated functions are related to each other. For example, as already noted, among continuous distributions, the probability density function is the first derivative of the distribution function with respect to x. The quantile function, variously denoted $G(\alpha)$ or $Q(\alpha)$ or $F^{-1}(\alpha)$, is the inverse of the distribution function, providing a mapping from the probability α $(0 < \alpha < 1)$ to the quantile value x. Recall that the range of the values of a distribution function is (0, 1). If the distribution function rises steadily from 0 to 1 there is a unique number x_α for each α on the interval [0, 1] such that

$$F(x_\alpha) = P(X \leq x_\alpha) = \alpha\,. \qquad (3)$$

The number x_α is a number in the set of values of X and it is the value such that the fraction α $(0 < \alpha < 1)$ of the *total probability* (which is 1) is assigned to the interval $(-\infty, x_\alpha)$. This number is the αth quantile of the distribution function defined above, $F_X(x)$. (For a standard normal distribution at probability $\alpha = .5$, the value of the quantile function is 0, given that the total probability under the normal curve [which ranges from $-\infty$ to $+\infty$] up to value 0 is .5.) Important relations between the quantile and distribution functions are (Eubank 1988; Evans, Hastings, and Peacock 2000):

$$\begin{aligned} &F\big[Q(\alpha)\big] = \alpha, \text{ for } F \text{ continuous} \\ &Q\big[F(x)\big] = x, \text{ for } F \text{ continuous and strictly increasing.} \end{aligned} \qquad (4)$$

DISTRIBUTIONAL PARAMETERS

Quantities which appear explicitly in the expression of the distribution function are called *parameters*. Distributions usually have associated with them a number of parameters. Of these, three are regarded as basic—the location, scale, and shape parameters. The location parameter is a particular point in the variate's domain, and the scale and shape parameters govern the scale and the shape, respectively. Variates differ in the number and kind of basic parameters. For example, the normal (Gaussian) distribution has two parameters, a location parameter (the mean) and a scale parameter (the standard deviation); the Pareto distribution has a location parameter and a shape parameter; and the gamma is a three-parameter distribution (with location, scale, and shape parameters). The gamma distribution is sometimes specified as a two-parameter distribution (possessing scale and shape parameters, with the location parameter being 0).

MOMENTS, MEAN, AND VARIANCE

Borrowing from physics the idea of the moments of a function, the *mean* (or expected value) of a distribution (also referred to as *of a random variable*) is defined as the first moment about the origin (0):

$$\mu = \int_{-\infty}^{\infty} x f(x)\,dx \qquad (5)$$

(representing an ideal or a theoretical average and characterizing the central tendency). The *variance* is defined as the second moment about the mean:

$$\sigma^2 = \int_{-\infty}^{\infty} (x-\mu)^2 f(x)\,dx \qquad (6)$$

(representing dispersion of the random variable around the expected value). The square root of the variance is known as the "standard deviation" and is usually denoted σ.

SKEWNESS AND KURTOSIS

Two additional quantities are the coefficient of skewness, denoted β_1 (the positive square root of β_1 is denoted by $\gamma_1 = +\sqrt{\beta_1}$:

$$\beta_1 = \frac{\int_{-\infty}^{\infty} (x-\mu)^3 f(x)\,dx}{\sigma^3}, \qquad (7)$$

and the coefficient of kurtosis, denoted β_2:

$$\beta_2 = \frac{\int_{-\infty}^{\infty} (x-\mu)^4 f(x)\,dx}{\sigma^4}. \qquad (8)$$

The numerators of the coefficients of skewness and kurtosis are the third and fourth moments about the mean, respectively, and the denominators are the third and fourth powers, respectively, of the standard deviation. The coefficient of skewness measures the relative asymmetry and the coefficient of kurtosis measures the peakedness (and humpness) of the distribution. For the normal distribution, the kurtosis is

$$\beta_2 = 3. \qquad (9)$$

Evidently, for any symmetric distribution the skewness equals 0, given that every odd moment is zero in this case. The coefficient of kurtosis is thus sometimes defined as the expression in (8) minus 3 (usually denoted by γ_2), which may lead to ambiguity. (The Greek word κυρτόσ means "humped").

CUMULANTS

Cumulants (also known as semi-invariants) are simple functions of moments having useful theoretical properties. Unlike the moments, all the cumulants (except the first) are independent of the origin of calculations so it is unnecessary to specify the origin of calculations in giving their values.

GROUPS AND SUBGROUPS, DISTRIBUTIONS AND SUBDISTRIBUTIONS

Groups and subgroups are pivotal in social science, and the distributional operations of censoring and truncation serve to analyze subgroup structures. Using what is by now standard terminology (Gibbons 1988, p. 355), let "censoring" refer to selection of units by their ranks or percentage (or probability) points; and let "truncation" refer to selection of units by values of the variate. Thus, the truncation point is the value x separating the subdistributions; the censoring point is the percentage point α separating the subdistributions. For example, the subgroups with incomes less than $30,000 or greater than $90,000 each form a truncated subdistribution; the top 2 percent and the bottom 5 percent of the population each form a censored subdistribution.

There is a special link between these two kinds of subgroup structure and Blau's (1974) pioneering observation that much of human behavior can be traced to the differential operation of quantitative and qualitative characteristics. Quantitative characteristics—both cardinal characteristics (such as wealth) and ordinal characteristics

(such as intelligence and beauty)—generate both truncated and censored subdistribution structures. For example, the subgroups "rich" and "poor" may be generated by reference to an amount of income or by reference to percentages of the population. However, qualitative characteristics—such as race, ethnicity, language, and religion—may be related so tightly to quantitative characteristics that the subgroups corresponding to the categories of the qualitative characteristic are nonoverlapping and thus provide the basis for generating censored subdistribution structures. For example, in caste, slavery, or segmented societies, the subdistribution structure of a quantitative characteristic may be a censored structure in which the percentages pertain to the subsets formed by a qualitative characteristic—such as "slave" and "free" or "immigrant" and "native."

SOME IMPORTANT DISTRIBUTIONS

The number of probability distributions appearing in the literature is now by a conservative estimate far more than 300, and climbing. The standard compendia highlight the basic forty or fifty distributions, and among these, the most important twenty or so appear in all textbooks and in all languages. Chronologically, the earliest distributions that were scrupulously investigated, starting from the early eighteenth century, were the normal (Gaussian) distribution and, to a lesser extent, the Cauchy distribution. The Pareto distribution was proposed by the Italian-Swiss economist and sociologist Vilfredo Pareto (1848–1923) in the late nineteenth century, and the Weibull is of more recent origin, developed by the Swedish engineer Waloddi Weibull (1887–1979) in the mid-twentieth century. Information about univariate and multivariate discrete distributions and multivariate continuous distributions is by now easily available, and these are not discussed here due to space constraints. The 2000 handbook by Evans, Hastings, and Peacock provides a lucid introduction to some forty widely used distributions. A more extensive source is the six-volume compendium by Kotz, Johnson, Balakrishnan, and Kemp under the overall title *Distributions in Statistics*, 2nd ed., 1995–2002. The *Dictionary and Classified Bibliography of Statistical Distributions in Scientific Work*, edited by Patil, Boswell, Joshi, Ratnaparkhi, and Roux, 1984, is a handy reference source.

We now present a brief description of twelve selected basic continuous univariate distributions. Table 1 reports their probability density function, mean, and variance (for a more detailed table, see e.g. Tsokos 1972, which also provides graphical display).

Uniform Distribution The uniform is a natural conception that has been in use since before printed records. Its applications include corrections for grouping, life testing, traffic-flow analyses, and round-off errors, and it provides a model for the set of relative ranks in a group or population.

Normal Distribution As indicated above, the normal (also "Gaussian," "Laplace-Gaussian," and "Gaussian-Laplace") is the most important distribution in probability theory and in mathematical as well as applied statistics. The normal's density is symmetric and bell-shaped. Values for the density, cumulative, and inverse of the standard form are extensively tabulated. The importance of the normal distribution is due to the fact that under general conditions, the sum of many independent variables tends, as the number of variables increases, to the normal. The relevant conditions are provided in the central limit theorem.

Lognormal Distribution The lognormal distribution is defined on the positive support; it is unimodal with a long right tail. Its name refers to the fact that the logarithm of a lognormal variate has a normal distribution. The lognormal is widely used in the biological, physical, and sociobehavioral sciences, including economics, and even in philology. It serves as a model for income, physician's consulting time, sickness absence, number of persons in a census occupational category, height and weight, automobile insurance claims payments, and size of oil and gas deposits.

Exponential Distribution The exponential (more precisely, the "negative exponential") has a mode at the origin ($x = 0$) and a long right tail. It is widely used in studies of lifetimes, life testing, and life characteristics, producing usable approximate solutions to difficult distributional problems. It also provides the model for social status in the case where status arises from one (or several perfectly positively related) personal characteristic(s). Its mirror image, the positive exponential, has a mode at its upper bound and a long left tail. Justice processes generate both negative exponential and positive exponential distributions. Recent extensions by Jasso and Kotz (2007) are geared towards applications in the social sciences (see below).

Weibull Distribution The Weibull is an asymmetric single-peaked distribution defined on the positive support. It is widely used in analyses of reliability problems, the theory of sound, health phenomena, human performance, duration of industrial stoppages, and migratory systems.

Gamma Distribution The gamma is defined on the positive support; it is unimodal and asymmetric and has a

Probability Density Function, Mean, and Variance of Some Important Continuous Univariate Distributions

Variate	Probability Density Function	Mean	Variance
Uniform (Rectangular) $a < x < b$	$\frac{1}{b-a}$	$\frac{a+b}{2}$	$\frac{(b-a)^2}{12}$
Uniform standard form $0 < x < 1$	1	$\frac{1}{2}$	$\frac{1}{12}$
Normal (Gaussian) $-\infty < x < \infty$	$\frac{1}{\sigma\sqrt{2\pi}} \exp\left\{\frac{-(x-\mu)^2}{2\sigma^2}\right\}$	μ	σ^2
Normal standard form $-\infty < x < \infty$	$\frac{1}{\sqrt{2\pi}} \exp\left\{\frac{-x^2}{2}\right\}$	0	1
Lognormal $x > 0, c > 0$	$\frac{1}{xc\sqrt{2\pi}} \exp\left\{-\frac{\left(\frac{c^2}{2} + \ln\frac{x}{\mu}\right)^2}{2c^2}\right\}$	μ	$\mu^2\left\{\left[\exp\left(c^2\right)\right] - 1\right\}$
Weibull $x > 0, \lambda > 0, k > 0$	$\frac{k}{\lambda}\left(\frac{x}{\lambda}\right)^{k-1} \exp -(x/\lambda)^k$	$\lambda\Gamma\left(1+\frac{1}{k}\right)$	$\lambda^2\Gamma\left(1+\frac{2}{k}\right) - \left[\Gamma\left(1+\frac{1}{k}\right)\right]^2$
Weibull standard form $x > 0, k > 0$	$kx^{k-1}\exp(-x^k)$	$\Gamma\left(1+\frac{1}{k}\right)$	$\Gamma\left(1+\frac{2}{k}\right) - \left[\Gamma\left(1+\frac{1}{k}\right)\right]^2$
Exponential $x > 0, \lambda > 0$	$\lambda\exp(-\lambda x)$	$\frac{1}{\lambda}$	$\frac{1}{\lambda^2}$
Exponential standard form $x > 0$	$\exp(-x)$	1	1
Gamma (2-parameter) $x > 0, \lambda > 0, c > 0$	$\frac{(\lambda x)^{c-1}\lambda\left[\exp(-\lambda x)\right]}{\Gamma(c)}$	$\frac{c}{\lambda}$	$\frac{c}{\lambda^2}$
Gamma standard form $x > 0, c > 0$	$\frac{x^{c-1}e^{-x}}{\Gamma(c)}$	c	c
Pareto $x > \frac{\mu(c-1)}{c}, c > 1$	$\left[\frac{\mu(c-1)}{c}\right]^c cx^{-c-1}$	μ	$\frac{\mu^2}{c(c-2)}, c > 2$
Pareto standard form $x > 1, c > 1$	cx^{-c-1}	$\frac{c}{c-1}$	$\frac{c}{(c-1)^2(c-2)}, c > 2$

Notes: In the formula for the beta distribution, "B" denotes the beta function, and $\Gamma(\cdot)$ appearing in formulas for the gamma and Weibull distributions denotes the gamma function.

(CONTINUED)

Probability Density Function, Mean, and Variance of Some Important Continuous Univariate Distributions

Variate	Probability Density Function	Mean	Variance
Laplace (double-exponential) $-\infty < x < \infty$, $b > 0$	$\frac{1}{2b}\exp\left\{-\frac{\lvert x-\mu\rvert}{b}\right\}$	μ	$2b^2$
Laplace standard form $-\infty < x < \infty$	$\frac{e^{-\lvert x\rvert}}{2}$	0	2
Beta $a < x < b$ $p > 0, q > 0$	$\frac{(x-a)^{p-1}(b-x)^{q-1}}{\left[B(p,q)\right]\left[(b-a)^{p+q-1}\right]}$	$a + \left(\frac{p}{p+q}\right)(b-a)$	$\frac{(pq)(b-a)^2}{(p+q)^2(p+q+1)}$
Beta standard form $0 < x < 1$ $p > 0, q > 0$	$\frac{x^{p-1}(1-x)^{q-1}}{B(p,q)}$	$\frac{p}{p+q}$	$\frac{pq}{(p+q)^2(p+q+1)}$
Logistic $-\infty < x < \infty$, $b > 0$	$\frac{\exp\left[-(x-\mu)/b\right]}{b\left\{1+\exp\left[-(x-\mu)/b\right]\right\}^2}$	μ	$\frac{\pi^2 b^2}{3}$
Logistic standard form $-\infty < x < \infty$	$\frac{e^x}{(1+e^x)^2}$	0	$\frac{\pi^2}{3}$
Cauchy $-\infty < x < \infty$, $b > 0$	$(\pi b)^{-1}\left\{1+\left[(x-a)/b\right]^2\right\}^{-1}$	—	—
Cauchy standard form $-\infty < x < \infty$	$\pi^{-1}(1+x^2)^{-1}$	—	—
Power-Function $0 < x < \frac{\mu(c+1)}{c}$, $c > 0$	$\left[\frac{c}{\mu(c+1)}\right]^c c x^{c-1}$	μ	$\frac{\mu^2}{c(c+2)}$
Power-Function standard form $0 < x < 1$, $c > 0$	cx^{c-1}	$\frac{c}{c+1}$	$\frac{c}{(c+1)^2(c+2)}$
Equal (Dirac delta)	—	μ	0

Notes: In the formula for the beta distribution, "B" denotes the beta function, and $\Gamma(\cdot)$ appearing in formulas for the gamma and Weibull distributions denotes the gamma function.

long right tail. It includes as special cases the exponential, whose mode is at the origin, and the Erlang distribution, whose shape parameter c is an integer. The gamma is used to represent lifetimes and personal income, as well as daily demand for electrical power and the distribution of single-species abundances at equilibrium. It arises also in the study of social status, where it provides a model of the case where status is generated by two or more independent characteristics, and in the study of justice, where it provides a model of the case where the justice evaluation is generated by two or more independent ordinal characteristics.

Pareto Distribution The Pareto has a mode at its positive origin and a very long right tail. It is used to model personal income, firm size, city size, and occurrence of natural resources. Because the Pareto has a positive infimum, it is ideal for modeling income distributions that have a "safety net." Recently it has been used in connection with the random walk hypothesis of common stock prices.

Laplace Distribution (Double Exponential) The Laplace is a symmetric distribution with a sharp point at its mode—it arises, inter alia, from the difference between

two identical exponential distributions. It is similar to the normal, but the smooth top of the bell is replaced by a needle peak. It is the "prior distribution" in Bayesian statistical analysis. It is used as a substitute for the normal in robust statistics analysis, and provides a model for demand during lead time for slow-moving items. It also arises in the study of justice, in the case where both actual incomes and personal ideas of just incomes are independently and identically Pareto distributed; the asymmetrical Laplace form arises in the case where actual incomes and personal ideas of just incomes are independently and nonidentically Pareto distributed.

Beta Distribution The beta is a very flexible family, being a generalization of the uniform distribution. It provides the prior distribution for binomial proportions and serves in models and analyses of hydrologic variables, project planning/control systems (such as PERT), tool wear, construction duration, transmission of HIV virus, traffic flow, and risk analysis for strategic planning. Via its special case, the power-function distribution, it also is used to model the income distribution.

Logistic Distribution The logistic is a symmetric unimodal distribution defined on the real line. It is used in analyses of growth (including the growth of human populations), quantal response data, psychological issues, weight gain, and physiochemical phenomena. It also is sometimes used as a substitute for the normal.

Cauchy Distribution The Cauchy is a symmetric unimodal distribution defined on the real line. Its density is similar to the normal's but with thicker tails. It has the interesting (and restrictive in applications) property that moments (including the expected value) are not defined. Advances in computational procedures diminish the effect of the absence of moments, and the Cauchy distribution is nowadays often used (in particular in financial applications) as an alternative to the normal distribution.

Power-Function Distribution The power-function, a special case of the beta, is defined on the positive support; it can have a left tail or a right tail, depending on whether its shape parameter is larger or smaller than 1. When the shape parameter is 1, the power-function becomes the uniform distribution. Because the power-function has a supremum, it is appropriate for modeling situations marked by scarcity.

To summarize, the normal, Cauchy, Laplace, and logistic distributions are defined for all real values; the exponential, Weibull, gamma, and lognormal distributions are defined for all positive values; the Pareto distribution is defined for all positive values larger than a specified number; the beta distribution (and the continuous uniform distribution) are defined for an interval of a specified length.

Some of the distributions in the list are rivals for modeling some phenomena. For example, the gamma and lognormal are competitors for modeling size distributions, and the exponential and Weibull are competitors for modeling reliability. Many other distributions are used in social science to model sociobehavioral phenomena, and still more distributions arise from sociobehavioral operations. For example, status processes generate, besides the Erlang, a general Erlang and new variates called *ring-exponential* and *mirror-exponential distributions* (Jasso and Kotz 2007). Further, in addition to the pivotal normal, other distributions used in mathematical and applied statistics include the chi-squared, Student's *t*, and the *F* distribution (central and noncentral).

Finally, special mention must be made of the equal distribution (sometimes called "degenerate" when defined as discrete, and "Dirac's delta" when defined as continuous), which provides a model for a perfectly equal distribution and thus serves as a benchmark in analyses of social inequality (Jasso 1980; Jasso and Kotz 2007).

SEE ALSO *Bayesian Econometrics; Bayesian Statistics; Central Limit Theorem; Distribution, Normal; Distribution, Poisson; Distribution, Uniform; Method of Moments; Pareto, Vilfredo; Probabilistic Regression*

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Guillermina Jasso
Samuel Kotz

PROBABILITY THEORY

With the identification of Huygens's 1657 book *Ratiociniis in aleae ludu* as its first text, Ian Hacking characterizes the decade around 1660 as *the* decade of the birth of probability. He chooses to bring the story of its emergence to an end with the year of publication of Jacques Bernoulli's *Ars Conjectandi* in 1713:

> In that year probability came before the public with a brilliant portent of all the things we know about it now: its mathematical profundity, its unbounded practical applications, its squirming duality, and its constant invitation for philosophizing (Hacking 1975, p. 143).

Hacking structures his prehistory, a "prehistory … more important than the history," around the dual notions of the aleatory versus the epistemic: "the degree of belief warranted by evidence" versus the "tendency displayed by some chance devices to produce stable relative frequencies" (1975, p. 1).

Augustin Cournot (1843) and Francis Edgeworth (1884, 1922), and following them in the second quarter of the twentieth century, John Maynard Keynes and Frank P. Ramsey, distinguished students of economy and society, all had a deep and abiding interest in probability theory, but struggled with the definition of their (instrumental) subject. Edgeworth, in particular, settled in his 1884 paper on the description of probability as "importing partial incomplete belief," but was unsure about "how far the gradations of belief are a subject of science" (p. 223). Returning to the term, and to the "philosophy of chance" forty years later, he flatly stated that "probability seems not to admit of definition" (Edgeworth 1922, p. 257). Already, his 1911 entry on *probability and expectation* for the *Encyclopedia Britannica* had opened with the following demurral:

> As in other mathematical sciences, so in probabilities, or even more so, the philosophical foundations are less clear than the calculations based thereon. On this obscure and controversial topic, absolute uniformity is not to be expected (p. 376).

In his biographical essay on Ramsey, Keynes responded to Ramsey's (1922, 1926) critique of his "objective theory of probability" with a wary ambivalence:

> The calculus of probabilities belongs to formal logic. But the basis of our degrees of belief—or the *a priori* probabilities, as they used to be called—is part of our human outfit, perhaps given us merely by natural selection, analogous to our perceptions and our memories rather than to formal logic. So far I yield to Ramsey—I think he is right. But in attempting to distinguish "rational" degrees of belief from belief in general he was not yet I think quite successful (Keynes 1933, pp. 338–339).

In her discussion of the "subjective theory of probability," Maria Galavotti alluded to Ramsey's scepticism concerning a single notion of probability equally applicable "in logic and in physics," and quoted Bruno de Finetti's bald antirealist claim that "probability does not exist" (Galavotti 1991, pp. 241, 246). Colin Howson's (1995) conclusion then that the foundations of probability have not yet entered a "final stable phase" was only fitting.

Whatever the final phase and the precise definition, *equipossibility* and *asymptotics* are identified as foundational in any application of the subject. In his endorsement of the equal-treatment property, and of the "utilitarian who thinks it 'fair' to treat as equals those between whom no material difference is discerned, … [to] treat as equals things which are not known to be unequal," Edgeworth relied on the standard of statistical uniformity to consider John Venn's claim that "whereas full belief about an event is either verified or disproved by the event, fractional belief can only be verified or disproved by a series of events" (Edgeworth 1884, pp. 234, 225). It is of interest to trace the evolution of this Laplacian idea to the role it plays as a principle of indifference in Keynes's objective theory, and to the assignment of equal initial degrees of confirmation in Rudolf Carnap's system of inductive logic based on "logical probability"; (see Gillies 2000, chapters 2 and 3; Ayer 1963, chapters 7 and 8; and Ayer 1972, chapter 2). Hacking, too, devotes discussion to "equally possible cases," before moving on to the "first limit theorem" (Hacking 1975, chapters 14 and 17). In his history of the subject in the nineteenth century, he observes an attitude, especially among the French.

> When there are enough events they display regularities. This law passed beyond a mere fact of experience. It was not something to be checked against experience; it was the way things had to be. The law of large numbers became a metaphysical truth (Hacking 1990, p. 104).

By the middle of the twentieth century, however, the logical and mathematical presuppositions of such a law were well-understood (see Ayer 1972, section 2.D).

It is now conventional to see Andrei Kolmogorov (1933) as having laid the mathematical foundation of the subject in the theory of measure, and in having brought probability into the mathematical mainstream by providing a rigorous framework for the study of an infinite sequence of coin tosses, and even for an uncountably indexed set of trials. Authoritative texts abound for the mathematics of probability, and the tables of contents in Jeffrey Rosenthal's *A First Look at Rigorous Probability Theory* (2000) or in A. V. Skorokhod's *Basic Principles and Applications of Probability Theory* (2004), for example, bring out what is now considered to be the standard subject matter. What is important is that rather than attempting probability on the same rigorous basis as the rest of mathematics, after Kolomogorov, the question turns to the insights that probability can give rather than take from the rest of mathematics: from analysis, dynamical systems, optimization, and even number theory and geometry (see Lasota and Mackey 1994; de Melo and van Strein 1993; Steele 1997; and Dajani and Kraaikamp 2002 and their references). The subject has attained a maturity that it can be studied solely through counterexamples, as in Jordan Stoyanav (1987), but as Joseph Doob (1994a) documents, this mathematical coming-of-age has resulted in some tension between probabilists and measure-theorists. Indeed the issue—a mini-issue really—reduces to the essential difference between a measure and a probability, a difference encapsulated in the concept of independence and in a bounded rather than an unbounded measure: For the former, Mark Kac's (1964, 1985) elegant emphasis is unparalleled, and for the latter, one can hardly do better than begin with a comparison of Walter Rudin (1987) and Doob (1994b).

A subsidiary question then arises as to the evolution and the autonomy of the subject of *statistics* as distinct from that of *probability*. If the notion of *independence* is a synecdoche for one, is the notion of *sufficiency* that for the other? If Hacking (1975) is devoted to one, is Hacking (1990) devoted to the other? It is interesting that Ramsey, de Finetti, and Leonard Savage do not make it to the index of Hacking's investigation of "statistical fatalism," and how "an avalanche of numbers turned rational moral science into empirical moral science" (1990, pp. x, viii). However, if the distinction between the theories of probability and measure is a mini-issue, the distinction between probability and statistics is almost surely a nonissue, and it would be a naive anthropology indeed that uses professional societies and journals to refute the fact of one community finding its true identity in the other (see Khan 1993 in this direction). In any case, current conventions see Savage (1954, 1962) as consolidating the earlier insights into a strongly contending, if not dominant, framework for statistical decision theory, one in which utility and (finitely additive as opposed to countably additive) probability are intertwined (see Hacking 1965, chapter 13 for evaluation and possible synthesis).

Savage (1954) is also seen as bringing to culmination the original ideas of Ramsey and de Finetti and providing a founding text for individual decision making. His text thus fulfills Edgeworth's promise of a "mixed science of probability and utility: of what Laplace (1814) calls *espèrance*, the product of probability and utility; that quantity which to maximize is the main problem of the Art of Measurement—of the art proper" (Edgeworth 1884, p. 235). The modern twist lies in the use, nothing if not dramatic, of the theory of expected utility to depart from the notion of expectation as Laplace defined it, and to construct a theory of nonexpected utility. After an identification of Kreps (1988), Karni and Schmeidler (1991) and Machina and Schmeidler (1992) as the relevant texts, I move on.

With the wholesale importation of the idea of a continuum of agents into more applied areas of economics—macroeconomics certainly, but also the economics of labor and industry, albeit in a framework of identical agents buffeted by independent exogenous shocks—a law of large numbers for a continuum of random variables became an instrumental necessity. The models were geared to exploit the plausible intuition that aggregation removed idiosyncratic uncertainty, and it was difficult to see how the averaging operation of Laplace could not cancel out errors without a tilt or a dependence to them, not only asymptotically but also for a suitably idealized limit. In other words, there was a demand for a framework that was hospitable to the averaging of an independent continuum, and could thereby execute what the Lebesgue probability measure could not, and cannot, do (on this, see Doob 1994a; Khan and Sun 1999; and Sun 2006). In a landmark paper, Peter Loeb (1975) offered such a framework, and Yeneng Sun exploited it to deliver not only a law of large numbers, but also a variety of novel probabilistic patterns and dualities concerning independence and exchangeability (see Sun 1998ab). R. J. Aumann's limitation on the diversity of agent characteristics through the assumption of a finite number of commodities is now translated into a possibly analogous limitation that requires the order of averaging over names and states of nature not to matter, a limitation that yokes Fubini to an event space richer than the one conventionally constructed for products (see Hammond and Sun 2003a, 2003b, 2006a, 2006b). Thus, in its needs and demands for a limit law of great numbers, probability theory was led to supply new adjectives for a probability measure, and thereby surely to go beyond the original Kolmogorov

axioms (in addition to Fajardo's 1999 overview, see Khan and Sun 2002 and Sun 2006).

Stochastic dynamics, and a surge of interest in functional analysis, had already led probability theory to a study of function-valued and vector-valued random variables, as in Joseph Diestel and Jerry Uhl (1977); after Aumann's formalization of Edgeworth's conjecture (see Anderson 1991 for details and references), economic theory led it to a study of set-valued random variables. Laplace's *espèrance* was correspondingly generalized to sets, as was the induced law of a random variable and the law of large numbers; once random sets are made tractable, it is a small step to the consideration of random preferences, random economies, set-valued martingales, and a variety of other set-valued notions. (In addition to Khan and Sun 2002, see Sun 1999, Majumdar and Rotar 2000, and Bhattacharya and Majumdar 2004.)

We conclude this entry by pointing out that its narrower compass has forced a neglect of the economics of information and the affiliated fields of game theory and finance, let alone the manifold applications to sociology, behavioral psychology, quantum mechanics, and evidence-based bio-medical sciences. But even a briefly adequate view of these other applications surely requires another entry.

SEE ALSO *Classical Statistical Analysis; Keynes, John Maynard; Probability; Probability Distributions; Risk; Statistics; Statistics in the Social Sciences; Uncertainty*

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M. Ali Khan

PROBIT REGRESSION

SEE *Probabilistic Regression.*

PRO-CHOICE/PRO-LIFE

The abortion debate in the United States connects to wide-ranging cultural arguments about civil liberties and gender. Legal abortion raises questions concerning the role of women in society, the place of motherhood in meanings of womanhood and family, the biological and social status of the fetus, the separation of church and state, and the legal understanding of privacy. Diverse views on these issues have come to be polarized into absolutist positions named *pro-choice* (supporting legal elective abortion) and *pro-life* (opposing legal abortion), politicized terms that do little to characterize the complex experiences of women who face inopportune or otherwise compromised pregnancies.

In the nineteenth century, American women of all social classes could legally procure an abortion, which often entailed using herbal abortifacients. However, as "regular" physicians distinguished themselves from midwives and homeopaths, many lobbied state legislatures to criminalize induced abortion. Shortly after its formation in 1847, the American Medical Association (AMA)

declared human life to begin at conception and not, as midwives and lay women held, at "quickening," midway through gestation when a woman first feels fetal movement in the womb. In taking an anti-abortion stance, physicians professionalized and also moralized their practice through association with saving lives. By the end of the century, abortion was defined as a medical issue and was criminalized at the state level throughout the United States.

Following legislation in several states relaxing abortion restrictions, the U.S. Supreme Court's 1973 ruling in *Roe v. Wade* decriminalized elective abortion in the first trimester of pregnancy, allowing abortion in the second trimester given cause that "reasonably relates to the preservation and protection of maternal health," and in the third "when it is necessary to preserve the life or health of the mother." In *Roe* the court interpreted women's right to terminate pregnancies and physicians' right to perform abortions as within constitutional rights to privacy; abortion in the United States is thus framed as a "negative" right to act without government interference, rather than an "affirmative" right guaranteed by the state. It is an historic irony that abortion was medicalized in order to restrict its practice, only to be legalized a century later based on its status *as* medical procedure, a private matter between patient and doctor.

Supporters of *Roe* argue that legal abortion is necessary to protect women from unsafe pregnancies and nonmedical abortions. For feminists, women's "right to choose" abortion in the first trimester symbolizes liberation from patriarchal control over women's sexual and reproductive lives. It also reinforces a more expansive view of adult womanhood than one rooted in a biological capacity to reproduce. For the 1970s feminist movement, the "right to choose" abortion became synonymous with a woman's right to choose whether, when, and how often to become a mother.

The American pro-life movement was galvanized by the *Roe* decision. Grassroots organizing built up a single-issue voting block of Catholics, Evangelical Protestants, and political conservatives. Pro-lifers argue that abortion is a sin and therefore criminal. Many also condemn legal abortion for eroding traditional gender roles and what is taken to be women's special moral standing based on the capacity to bear children. Pro-life activists redefined the question of "life" in the American abortion controversy as a matter of fetal, rather than maternal, right to life. Ultrasound images of free-floating fetuses are used in propagandistic displays to portray fetal life not only as viable but autonomous, suggestive of personhood—a requisite for having rights. Pro-life campaigns project images of intact, well-developed fetuses despite the fact that 90 percent of abortions in the United States occur during the first trimester, while late term abortions are generally performed only in cases of fetal abnormality. Radical pro-lifers view abortion as a holocaust, a symbol of America's moral degeneracy. During the late 1980s and 1990s, several abortion providers were murdered by extremists who championed a vision of a Christian nation currently in millenarian "end times," during which God's law prevails over human law.

Although pro-choice rhetoric is consistent with American values of self-determination, "choice" may be a limited symbol for reproductive rights; many women experience abortion not as desirable, but as an unfortunate necessity following failed contraception, forced intercourse, or a diagnosis of fetal abnormality. In the 1990s, reproductive rights groups ran into conflict with disability rights activists over the possible eugenic use of elective abortion to limit the range of acceptable human life following prenatal screening, such as for Down's syndrome. Further, women's ability to "choose" an abortion in the United States remains subject to federal and state-level legislative restrictions. The 1976 Hyde Amendment restricts government-funded elective abortions (through Medicaid). In 2000, 87 percent of U.S. counties lacked abortion providers.

Following the George W. Bush administration's 2001 signing into effect of the Mexico City Policy (called the "Global Gag Rule" by reproductive rights advocates), developing countries have felt the effects of American abortion controversies. This policy, cutting off U.S. international aid money to organizations directly or indirectly engaged in abortion-related services, including referral, has also hampered the promotion of contraceptives and HIV-awareness. Illegal abortions continue to be a significant cause of morbidity and mortality among women of reproductive age throughout the nonindustrialized world.

Pro-choice and *pro-life* are not universally meaningful terms. Worldwide, the legal status and availability of abortion is often determined by government interest in population control, rather than religious or moral concern for life and family. The People's Republic of China has implemented its one-child policy in part through mandatory abortions; Nicolae Ceauçescu's regime in Romania, on the other hand, attempted to accelerate population growth by banning abortion and contraception. Under state socialism, reproduction has been considered a form of production subject to government regulation. The Soviet Union provided workers with medical abortion as routine birth control; in impoverished 1990s Russia abortions outnumbered live births two-to-one.

Japan legalized abortion in 1948 when families and the government shared interests in reducing family size. Women in Japan, as in southern Europe, turned to abortion during World War II to cope with wartime poverty.

Initially used by mothers to limit family size but now practiced by women of all ages, abortion in countries like Japan, Greece, and Russia is not regarded as posing a symbolic threat to motherhood. In these countries, economic considerations are said to trump religious belief in guiding decisions to terminate pregnancies. Historic memory of the war and political expectations of the European Union help explain why Italians support legal elective abortion (available since 1978), even as abortion remains highly restricted in Roman Catholic Latin America.

Where abortion is medicalized as routine birth control, a backup to nonmedical contraceptive methods, it is medical contraception rather than abortion that symbolizes women's liberation. In countries with high abortion rates, family planning workers, frequently trained in the United States or Britain, work to dissuade women from relying on abortion to control births, often by emphasizing potential physical, psychological, and even moral hazards of the procedure. In countries with declining population growth rates, as in Southern Europe, "pro-life" campaign materials imported from the United States are combined with nationalist pro-natal rhetoric.

When influenced by patriarchal, religious, and nationalist beliefs, legalization can restrict women's access to abortion. Turkey's 1983 Population Planning Law allows elective abortion through ten weeks of pregnancy, but a married woman's husband must consent. Germany, cognizant of the Nazi history of eugenic applications of abortion, requires counseling and a three-day waiting period before granting medically approved abortion.

SEE ALSO *Abortion; Abortion Rights;* Roe v. Wade

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Heather Paxson

PRODUCER SURPLUS

Market transactions typically increase the well-being of the participants. Consumers, sellers, and input providers may all enjoy a surplus from production and exchange. Producer surplus (introduced by English economist Alfred Marshall [1842–1924]) is the benefit on the production side from voluntarily participating in market transactions. The concepts of consumer surplus and producer surplus are widely used for evaluating policy changes: cost-benefit analysis recognizes that benefits accrue as surplus and so are not always measured in market transactions. Producer surplus consists of gross profits accruing to firms and economic rents accruing to input owners (in special cases, it consists only of one or the other). It is often depicted as the area to the left of the supply curve and below the horizontal line representing price.

A firm's supply curve is determined by its cost. Two cases are commonly considered. In the first, the quantity supplied increases continuously from zero as the price rises (corresponding to increasing average avoidable costs). Then, the firm's supply curve is its marginal cost curve. Any point on it characterizes a price and output whose product is the firm's revenue. The area below the curve is the avoidable cost at that quantity, and hence the area to its left and below the price is this producer's surplus. The second case covers the standard U-shaped average cost curve. For prices below a threshold level (the minimum average avoidable cost) the firm produces nothing, but at or above this threshold the firm is willing to supply a strictly positive output. Then, the firm's supply curve is its marginal cost curve above average avoidable cost. The area to the left of the supply curve and below the price is this producer's surplus. To see this, note that this surplus is zero at the threshold price since the firm is indifferent between producing and not producing. If price increases, the quantity supplied rises and the revenue rectangle expands. The area below the supply curve represents the increase in costs, so the difference is this producer's surplus. In either case, a firm's profit equals its producer surplus minus sunk (unavoidable) costs.

If all inputs are supplied to the industry perfectly elastically, input prices are constant. In the long run, the market supply curve is perfectly elastic, reflecting zero profit and zero producer surplus. If the number of firms is fixed (as in the short run), the market supply is the horizontal sum of individual supplies, and producer surplus is the sum of the individual firms' producer surpluses. All producer surplus accrues to firms since inputs earn no rents.

Now suppose instead that at least one input supply curve slopes upward. This gives rise to an upward-sloping market supply curve because increased industry output bids up the prices of those inputs with upward-sloping supply curves. In the long run, free entry ensures zero profits, and the supply-side benefits from the market accrue only to the owners of inputs whose prices are bid up. The area below the price and left of the supply curve measures the economic rents received by input owners.

With a fixed number of firms, the market supply curve is more inelastic than the horizontal sum of the individual firms' supply curves: firms take input prices as given, but these are bid up as industry output expands. Then, the area between the market supply curve and the horizontal sum represents the rents accruing to input owners.

SEE ALSO *Consumer Surplus*

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PRODUCT DIFFERENTIATION

SEE *Competition, Imperfect.*

PRODUCT QUALITY

SEE *Quality, Product.*

PRODUCTION

In political economy the term *production* refers not merely to technical processes but also to the motives and the way human actions are organized to bring the output to existence. Consequently, production is a social process, and a theory of production can be linked to a theory of social development and change. One of the characteristics of production is that it takes time. The Austrian capital theory, and specifically the work of Eugen von Böhm-Bawerk (1889), emphasized the time character of production stemming from the division of labor. Karl Marx emphasized the so-called "realization" problem in his critique of the Say's Law. John Maynard Keynes extended this problem to the role of uncertainty and expectations in monetary production economy.

The idea that production takes time was common for the Physiocrats, but after Adam Smith (1776) put forward the importance of the division of labor for explaining industrial growth, this concept became central for the argument of roundaboutness of production. Increasing division of labor requires more capital goods, and the production of these lengthens the production process. John Rae (1834) argued that increased division of labor goes together with increased durability of capital and hence longer periods of time required for production. Böhm-Bawerk (1889) conceptualized a "production function" in which he made the level of output obtained per unit of capital a function of the degree of roundaboutness of the production method. He argued that more roundabout methods of production are more capital intensive and therefore more productive. Maxine Berg (1980) connected the shift from concern with the division of labor to fixed capital formation to the social conflict in the early 1830s, which was prompted by technological development and by the so-called "machinery question"—the consequences of implementing radically new techniques and forces of production at the beginning of the nineteenth century.

SCOPE OF PRODUCTION THEORY

With the emergence of the marginalist approach in economics in the nineteenth century, relative prices were put forward as the driving force for change, and the scope of production theory in this tradition became conflated with a theory of exchange. As a contrast, Marx, Thorstein Veblen, Keynes, and Dudley Dillard, among others, focused on "monetary production," where money is not merely "the great wheel of circulation," as Adam Smith characterized it.

Marx viewed the relations of exchange as a manifestation of the relations in production, which determine the social, political, and spiritual aspects of life (Marx 1859, p. 100). Although it appears as if exchange, or circulation of commodities, dominates production in capitalist economies, production is the causal force in classical political economy. This is not to say that there is no interaction between exchange and production. As Smith argued in the *Wealth of Nations* (1776), the division of labor, or production, is limited by the extent of the market (or expanding possibilities for exchange). The point is that the consequence of reducing production relations to the exchange and circulation of commodities explains away the contradictions and conflicts of capitalist production. Marx in *Capital*, Volume I, made this argument in his critique of Say's Law (which holds that supply creates its own demand, and there is no possibility of the economy functioning below full employment), and referred to this tradition in economic analysis as "apologetic economy" (p. 114). Not only was production reduced to relations of circulation in this approach, but also circulation was explained as merely the barter of commodities, which is not characteristic for capitalist economies.

In his 1933 article "Monetary Theory of Production" and in the *General Theory* (1936) Keynes added a distinct

component to the circuit theory of capitalist production—production of money by means of money. That component was liquidity preference. Keynes argued that money, with its special properties (low or zero elasticity of production and substitution) is crucial for understanding the changes and direction of output and employment at the macroeconomic level. Thus, he reaffirmed the importance of Marx's realization problem for understanding a capitalist system.

Keynes recognized that because the decisions to undertake investment had to be made before the results were known, and because the future returns from capital assets would be uncertain, the confidence of expectations in the occurrence of future events becomes important for the occurrence of current investment. As a measure for this confidence Keynes proposed the concept of "liquidity preference" to replace the traditional quantity theory where the rate of interest is determined by "real" factors such as the productivity of capital and thriftiness. As a measure of investors' confidence in their expectations for the occurrence of future events, liquidity preference determines the price that will be paid to possess money today.

MONETARY THEORY OF PRODUCTION

In a monetary production economy the "return" from holding money comes from its liquidity premium (Keynes [1936] 1964, p. 227). Each asset has an expected total return (an own-rate of interest) composed of $q - c + l + a$, where q is the expected income from employing the asset in production; c is the carrying cost; l is the liquidity premium; and a is the expected capital gains (appreciation or depreciation). Physical capital will have a return comprised mainly of the yield it is expected to generate from employing it in production. Carrying costs are insignificant for liquid assets, but they would be large for physical capital that depreciates over time. The liquidity premium has two roles: first, protection from future uncertain conditions (expressed through increased liquidity preference); and second, opportunity for profiting from future uncertain conditions (expressed through animal spirits). Expectations about the returns from new investment are compared to those of existing capital, financial assets, and money. The interest rate on money competes with the expected return from employing capital in production—that is, with the marginal efficiency of capital. A situation in which the expected returns of assets are equal, so "that there is nothing to choose in the way of advantage between the alternative" (Keynes [1936] 1964, p. 228), is defined in Keynes's analysis as equilibrium—a state of rest, not market clearing. In equilibrium the interest rate on money would be equal to the marginal efficiency of capital. But Keynes notes that this does not indicate at what level the equality will be effective. The expected return from holding money as a store of value could be in "equilibrium" (state of rest) with the expected returns from all existing assets at an income below full employment.

Because money is something that cannot be produced, and demand for it cannot be readily choked off, Keynes came to the conclusion that unemployment develops "because people want the moon"—the object of their desire, money, cannot be produced (Keynes [1936] 1964, p. 235). Thus, Keynes's monetary theory of production explains unemployment not merely through a realization problem (as other economists employing the concept of the circuit do) but through the nature of money and its relation to production and distribution. In the tradition of classical political economy, Keynes's monetary theory of production emphasized conflict. However, the marginalist schools based on "real-wage" systems demonstrated a harmony of cooperative exchange and equal status of the various revenue shares in production. This is due to the construction of functional relations between quantity consumed and utility on the demand side, and between quantity produced and cost on the supply side, and the resulting symmetry between consumption and production in the marginalist theory (Bharadwaj 1984).

The proposition that capitalists and workers have symmetrical roles in production was put forward by means of conceptualizing their payments as remuneration for their "services" and contribution to production. Profits are viewed as symmetrical to wages as remuneration for the sacrifices of capitalists and as reward for their "waiting," in the same manner that wages reward labor efforts. Consequently, the distinction between wages and profits is blurred as these are merely returns for homogeneous "factors of production." The revenue shares are not qualitatively different, as the distinction between the various factors is also obscured. Overall, the shift toward the centrality of individuals' self-interest and its role in determining relative prices of commodities put forward a conception of an inherently just, value-free mechanism of distribution and production decisions.

MARGINALIST THEORY AND ITS CRITICS

The analytical construct of supply and demand as an explanation of production and distribution was a departure from classical political economy, and it refocused economic theory onto exchange under competition. Increasing returns created problems for the assumption of competition in the neoclassical system, which was pointed out by Piero Sraffa (1926). The possibility for decreasing overhead fixed costs when output increases provides the theoretical possibility for a monopoly, which violates the assumption of competition. The theory of monopolistic

competition emerged as an attempt to solve this problem. The theory of diminishing returns is grounded in the supposed technical fact that there is a decreasing productivity of the successive portions of a constant factor of production. The understanding that if more and more inputs are applied to a given piece of land the average output inevitably diminishes has been extended to other factors of production, as well as to the theory of consumption in the form of diminishing marginal utility. The latter is explained by "human nature" rather than technical conditions. Indeed, Sraffa (1926) argued that the same is also valid for diminishing returns, as the producer is the one who ranks the alternative combinations of resources according to their returns. If decreasing returns are not a technical fact, then the producer's technical choices would not be ranked independently of distribution.

Sraffa critiqued the marginalist theory of production in *Production of Commodities by Means of Commodities* (1960) on the grounds that diminishing returns to a variable factor presupposes a possibility of substitution, which is problematic when there is heterogeneity of inputs that are also produced. Joan Robinson in "The Production Function and the Theory of Capital" (1953) also pointed out that substitution between capital and labor inputs does not take place within the production process in the way that marginalist theory suggests. Capital inputs are not simply added to or subtracted from other inputs used in production following changes of relative prices. In the marginalist tradition, relative prices then are interpreted as indicative of relative scarcities, instead of being linked to the production process (Roncaglia 1978, p. 92).

A production schema depicts the principal flows of produced goods in the technically required sequence. Such schema has a corresponding quantity model that refers to a precise system of production equations where the level of final demand determines the level of output, intermediate inputs, and labor inputs. The production schema, together with the quantity schema and the pricing model—referring to a precise system of pricing equations—form the price-quantity monetary production model of the economy as a whole (Leontief 1951; Lowe 1976; Pasinetti 1977; Lee 1998).

In the marginalist tradition the profit, often conflated with the interest rate, is presented as the price of a particular commodity—capital, which is subject to the functioning of the supply and demand mechanism. Thus, an increase in the price of capital would bring about an increase in the supply, and a decrease in the demand for this "commodity." The problem that Sraffa identified and Robinson discussed is that this reasoning presupposes a measure of capital that does not depend on the distribution of income between wages and profits. Sraffa (1960) showed that such a measure cannot exist. Consequently, the linking of variations in output to variations in the quantity of capital and labor utilized in production is undermined. Under these circumstances, profit and wage rates cannot be determined on marginalist principles. Consequently, this critique of capital disputes the harmonious vision of production and distribution characteristic of the neoclassical exchange-based approach, and brings back the issue of conflict within the monetary theory of production.

SEE ALSO *Capital; Economics, Keynesian; Economics, Neoclassical; Economics, Post Keynesian; Expectations; Keynes, John Maynard; Labor; Marginalism; Marx, Karl; Profitability; Robinson, Joan; Sraffa, Piero; Technological Progress, Economic Growth; Veblen, Thorstein*

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PRODUCTION FRONTIER

In economic theory a production frontier is a mathematical relationship describing the maximum quantity of output that an organization can obtain from a given collection of resources given the technology in use. An equivalent definition specifies the minimum resources an organization requires to produce a given quantity of output, again given the technology in place. A production frontier is thus the economist's distillation of the detailed information contained in the engineer's blueprints that describe what is possible. Organizations operating on the production frontier avoid waste and are technically efficient. Organizations operating beneath the production frontier waste resources and are technically inefficient. The degree of technical inefficiency increases with the distance to the production frontier.

A cost frontier is a dual mathematical relationship that describes the minimum expenditure an organization requires to produce some quantity of output given the prices it pays for the resources it employs in the production process and given the technology in place. Technical efficiency is necessary but not sufficient for operation on the cost frontier. A second requirement is that resources be allocated efficiently in light of the resource prices paid by producers. Organizations achieving both technical and allocative efficiency operate on the cost frontier and are cost efficient. However, if waste in the organization causes actual output to fall short of maximum possible output or if resources are misallocated in light of their respective prices, then actual cost exceeds minimum feasible cost. Organizations failing to fulfill both efficiency conditions operate above the cost frontier and are cost inefficient. The degree of cost-inefficiency increases with the distance to the cost frontier.

Over a short period of time the assumption of a given technology underlying a fixed frontier is reasonable. Over a longer period of time existing technology diffuses and new technologies are introduced. Technical progress shifts the production frontier up, increasing the maximum output that can be obtained from a given collection of resources, or reduces resource requirements for a given amount of output. Consequently, technical progress shifts the cost frontier down, reducing the minimum cost that must be incurred to produce a given quantity of output.

Just as it is not possible to know how fast a human can run one hundred meters, the production frontier and the cost frontier of economic theory are unknown. However, it is possible to identify faster runners and slower runners and to observe improvements in best practice through time. It is also possible to identify best-practice organizations and less efficient organizations and to track their performance through time. Thus, theoretical production and cost frontiers are approximated by best-practice production and cost frontiers.

Approximation requires an empirical technique. In 1957 Michael James Farrell used primitive linear programming techniques to construct a best-practice production frontier. However, his contribution remained largely overlooked for twenty years. In 1977 the team of Dennis J. Aigner, C. A. Knox Lovell, and Peter Schmidt and the team of Wim Meeusen and Julien van den Broeck used statistical techniques to develop a best-practice production frontier concept now known as stochastic frontier analysis. A year later the team of Abraham Charnes, William W. Cooper, and Edwardo Rhodes refined Farrell's linear programming techniques to construct an alternative best-practice production frontier concept known as data envelopment analysis. Both approaches to the construction of best-practice production frontiers have been used to provide empirical measures of relative technical efficiency. Both approaches have been extended to the construction of best-practice cost frontiers and to the empirical measurement of relative cost efficiency.

Best-practice production and cost frontiers have been used to test a variety of hypotheses having a direct bearing on public policy. Perhaps the most significant hypothesis is that market structure matters. A highly competitive marketplace rewards organizations operating at or near best practice with growing market share and penalizes inefficient organizations with shrinking market share, often to extinction. A less competitive marketplace can shelter inefficient organizations. A popular example is provided by trade liberalization, which subjects domestic producers to increased foreign competition. A common empirical finding is that trade liberalization brings aggregate performance gains attributable among other factors to improvements in the efficiency of continuing domestic firms, to entry of relatively efficient foreign firms, and to exit of relatively inefficient domestic firms.

A second popular hypothesis is that ownership matters. Private organizations have different incentives and face different constraints than public organizations. When

the two operate in the same marketplace, one group may operate closer to best practice than the other. Education and health care are two sectors in which numerous public/private performance comparisons have been conducted, with the empirical evidence being mixed.

A third hypothesis asserts that regulation matters. Ill-designed regulatory frameworks inhibit best practice by diverting resources away from production toward compliance. Thoughtfully designed regulatory frameworks can enhance best practice by providing incentives for organizations to operate efficiently and to improve their efficiency through time. One regulatory context in which theoretical predictions have been quantified by empirical investigation concerns the impact of alternative forms of environmental control on organizational performance. In this context, however, the private cost of reduced efficiency must be balanced against the social benefits of environmental protection.

The theoretical concept of production and cost frontiers is universally accepted. However, the empirical implementation of best-practice frontiers and their use in the policy arena has attracted some criticism. One criticism asserts that the mathematical framework is necessarily incomplete and fails to incorporate the objectives of and constraints faced by the organization and its stakeholders. In 1976 George J. Stigler claimed that "waste is not a useful economic concept. Waste is error within the framework of modern economic analysis" (p. 216). A second criticism asserts that the empirical implementation fails to control adequately for variation in the operating environment, thereby confusing variation in operating efficiency with variation in factors beyond the control of management. This concern has inhibited the use of best-practice frontiers in evaluating the relative performance of educational institutions, health care providers, and regulated utilities.

SEE ALSO *Fixed Coefficients Production Function; Production; Production Function*

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C. A. Knox Lovell

PRODUCTION FUNCTION

The principal activity of a firm is to produce a good or provide a service, that is, to turn inputs into output. To represent this process, economists use an abstract model of production. The central concept in this model is the *production function*. A production function is a mathematical description of the various technical production possibilities faced by a firm. Algebraically, it is written as

$$q = f(x_1, x_2, \ldots x_n) \qquad (1)$$

where q represents the flow of output produced and $x_1, \ldots, x_n$ are the flows of inputs, each measured in physical quantities—for example, the number of bushels of corn produced and the number of tractors and workers utilized. Often, production functions appear in textbooks written with two inputs as $q = f(k,l)$, where k denotes the amount of capital and l denotes the amount of labor. To simplify, we will use this production function in the remainder of the entry. Equation (1) is assumed to provide, for any conceivable set of inputs, the engineer's solution to the problem of how to best (most efficiently) combine different quantities of those inputs to get the output. Therefore, a production function can be understood as a constraint on the activities of producers that is imposed by the existing technology.

It is important to stress that, as noted above, equation (1) is essentially an *engineering* relationship. As such, it allows for no testing of economic hypotheses. Actual observed data are the results of economic decisions in which the production function is but one constraint. However, the key question from an *economic* point of view is how the levels of output and inputs are chosen by profit-maximizing firms. Thus, economists use production functions in conjunction with marginal productivity theory (see below) to provide explanations of factor prices and the levels of factor utilization. Whereas the engineering production function captures the maximum level of output that can be achieved if the given inputs are efficiently employed, the economic production function reflects the "best-practice" use of the available input and output combinations.

PROPERTIES OF THE PRODUCTION FUNCTION

The *marginal physical product* of an input is the additional output that can be produced by employing one more unit of that input while holding all other inputs constant. Algebraically, $\frac{\partial q}{\partial k}$ is the marginal physical product of capital, and $\frac{\partial q}{\partial \ell}$ is the marginal physical product of labor. It is assumed that both marginal products are positive, that is, $\frac{\partial q}{\partial k} > 0$ and $\frac{\partial q}{\partial \ell} > 0$ (a negative marginal product means that using more of the input in question results in less output being produced). It is also usually assumed that the production process exhibits diminishing marginal productivity. This means that successive additions of one factor while keeping the other one constant yields smaller and smaller increases of output, that is, $\frac{\partial^2 q}{\partial k^2} < 0$ and $\frac{\partial^2 q}{\partial \ell^2} < 0$.

Factor elasticity (ε) is the percentage change in output in response to an infinitesimal percentage change in a factor given that all other factors are held fixed, that is, $\varepsilon_\ell = \frac{\partial q}{\partial \ell}\frac{\ell}{q}$ and $\varepsilon_k = \frac{\partial q}{\partial k}\frac{k}{q}$.

The *marginal rate of technical substitution* (*MRTS*) shows the rate at which labor can be substituted for capital while holding output constant at the level q_0, that is, $MRTS\ (\ell \text{ for k}) = -\left.\frac{dk}{d\ell}\right|_{q=q_0}$. It can also be shown that the *MRTS* equals the negative of the ratio of marginal productivities, that is, $MRTS\ (\ell \text{ for k}) = -\left.\frac{dk}{d\ell}\right|_{q=q_0} = -\frac{\partial q}{\partial \ell} / \frac{\partial q}{\partial k}$. This expression indicates that the gain in output from increasing l slightly is exactly balanced by the loss of output from suitably decreasing k (so as to keep output constant at the level q_0). It is important to note that for large ratios of k to l, the *MRTS* is a large positive number, indicating that a large amount of capital can be given up if one more unit of labor becomes available. On the other hand, when a large amount of labor is already in use, the *MRTS* is low, indicating that only a small amount of capital can be exchanged for an additional unit of labor if output is to be held constant. This is the so-called property of *diminishing MRTS*, which states that progressively reducing the amount of one input while maintaining a constant output level will require progressively large increases of the other input. Diminishing *MRTS* requires both positive and diminishing marginal productivities and $\frac{(\partial q / \partial \ell)}{\partial k} > 0$, that is, that an increase in capital leads to a higher marginal productivity of labor.

If the production function is given by $q = f(k,l)$ and all inputs are multiplied by the same positive constant $t > 1$, the degree of *returns to scale* can be classified as follows: (1) constant if $f(tk,tl) = tf(k,l) = tq$; (2) increasing if $f(tk,tl) > tf(k,l) = tq$; and (3) decreasing if $f(tk,tl) < tf(k,l) = tq$.

The *MRTS* is a useful measure of substitutability of one factor for another, given output. However, it depends on the units in which both labor and capital are measured. An alternative measure, independent of the units of measurement, is the *elasticity of substitution* (σ). It measures the percentage change in the relative amount of the factors employed resulting from a given percentage change in the relative marginal products (that is, the *MRTS*). Assuming there are only two factors of production: $\sigma = \frac{d(k/\ell)}{(k/\ell)} / \frac{d(MRTS)}{MRTS}$. Given that k/l and *MRTS* move in the same direction, $\sigma > 0$. However, this is not true in the case of a production function with more than two inputs, in which case there are different definitions of the elasticity of substitution (see Chambers 1994, pp. 27–36). A high σ means that the *MRTS* does not change much relative to k/l. In the extreme $\sigma = \infty$, the two inputs are said to be perfect substitutes. On the other hand, a low σ means that the *MRTS* will change by a substantial amount as k/l varies. For example, if $\sigma = 0$, the inputs are used in fixed proportions and substitution is not possible.

MOST COMMON PRODUCTION FUNCTIONS

Fixed proportions (or Leontief): $q = min(\alpha_1 k, \alpha_2 l)$, $\alpha_1, \alpha_2 > 0$. This production function is characterized by $\sigma = 0$, as the marginal products are not defined. In this case, capital and labor must be used in fixed proportions. This production function offers a good approximation to many real-world industrial processes.

Cobb-Douglas: $q = Ak^{\alpha_1} l^{\alpha_2}$. This is the most ubiquitous form in empirical analyses at the macroeconomic level. The marginal product of capital equals $\frac{\partial q}{\partial k} = \alpha_1(q/k) > 0$ (and $\frac{\partial^2 q}{\partial k^2} = \alpha_1(\alpha_1 - 1)(q/k^2) < 0$ provided $0 < \alpha_1 < 1$); and that of labor equals $\frac{\partial q}{\partial \ell} = \alpha_2(q/\ell) > 0$ (and $\frac{\partial^2 q}{\partial \ell^2} = \alpha_2(\alpha_2 - 1)(q/\ell^2) < 0$ provided $0 < \alpha_2 < 1$). This production function can exhibit any degree of returns to scale, as $A(tk)^{\alpha_1}(tl)^{\alpha_2} = At^{\alpha_1+\alpha_2}k^{\alpha_1}l^{\alpha_2} = t^{\alpha_1+\alpha_2}q$. In this production function, $\sigma = 1$, that is, the elasticity of substitution does not vary with the combination of factors used.

CES: $q = \gamma[\delta k^{-\rho} + (1-\delta)l^{-\rho}]^{-(\varepsilon/\rho)}$, where $\gamma > 0$ is an efficiency parameter; $0 \le \delta \le 1$ is a distribution parameter;

$\rho \leq 1$ is the substitution parameter; and $\varepsilon \geq 0$ denotes the degree of returns to scale. For this production function, $f(tk, tl) = t^{\varepsilon} q$; and ρ is the substitution parameter, which equals $\rho = \frac{\sigma - 1}{\sigma}$. This implies that the elasticity of substitution is $\sigma = 1/(1 - \rho)$.

Translog: $logq = \beta_0 + \beta_k logk + \beta_l logl + \beta_{kk}(logk)^2 + \beta_{ll}(logl)^2 + \beta_{lk}(logk)(logl)$. Mathematically, this is a second-order expansion, which is easy to implement empirically. In this case, estimates of marginal products and the elasticity of substitution are functions of the coefficients and the input levels. This form is flexible in that it imposes no assumptions on the elasticity of substitution. Other widely used flexible forms include the quadratic and the square root production functions (Beattie and Taylor 1985; Chambers 1994).

DUALITY

A major development since the late 1960s has been the dual formulation of production theory. This approach consists in recovering through the profit or cost functions the properties of the underlying production function. The cost function $TC(q, w, r)$ represents the minimum cost of producing output for any set of input costs (see Beattie and Taylor 1985, chap. 6, and Chambers 1994). The dual approach is very convenient in applied work because it deals directly with observed economic data generated by markets (that is, factor prices and output). For example, the Cobb-Douglas cost function dual of the production function $q = Ak^{\alpha_1} l^{\alpha_2}$ is given by the expression $TC = kq^{1/\nu} r^{\alpha_1/\nu} w^{\alpha_2/\nu}$, where k is a constant, r is the user cost of capital, w is the wage rate, and $\nu = \alpha_1 + \alpha_2$ is the degree of returns to scale.

TECHNICAL PROGRESS

Technical progress in economics refers to the impact of the adoption of new techniques on production (or cost). Analytically, the simplest way to represent technical progress is through a shift in the production function over time, that is, $q = f(k, l, t)$, where t is an index of the level of technology. In the analysis of time series data (one economic unit observed over time), time is used as a proxy for t. Technical progress is measured by how output changes as time elapses with the input bundle held constant. The rate of technical progress is defined as $T(k, \ell, t) = \frac{\partial \ln f(k, \ell, t)}{\partial t}$. The representation of technical progress this way, though convenient, is very unrealistic, for it assumes that technical progress does not require new inputs and, further, that the production function maintains the same form as time elapses (see Chambers 1994, chap. 6).

PRODUCTION FUNCTIONS IN APPLIED WORK

In this section, first, we provide some useful references for the reader interested in estimating production functions empirically; second, we provide examples of applications in microeconomics; and finally, examples of applications at the macroeconomic level.

Hands On: Estimating Production Functions Given the availability of computers and sophisticated software packages, estimation of production functions (that is, the use of statistical methods applied to real data in order to obtain values of the relevant parameters, such as the factor elasticities, the elasticity of substitution, or the degree of returns to scale) does not present serious problems from the technical and data points of view. Kenneth Wallis (1979, chap. 2) offers a classical and very accessible introduction to the estimation process. Ernst Berndt (1991, chap. 9) also offers a hands-on approach. R. L. Thomas (1993, chap. 11) offers a modern treatment with discussion of recent advances in time-series econometrics, such as unit roots and cointegration analyses. Estimation of engineering production functions requires the availability of data in physical terms for output and inputs. See Sören Wibe (1984) for a survey of estimation of engineering production functions. At aggregate levels (sectors or total economy), there are now many databases that contain series of output and inputs.

As noted above, economists use production functions in conjunction with marginal productivity theory to provide explanations of factor prices and the levels of factors utilization. Observed prices, output, and inputs are generated by a set of simultaneous relationships, and so it is inappropriate to estimate the production function as a single equation treating capital and labor as exogenous variables. In the simplest case, assuming perfect competition in product and factor markets, the prices of output, capital, and labor are exogenous. In the case of the Cobb-Douglas production function, the marginal productivity conditions are given by the equality of the factor prices to the marginal productivities, that is $\frac{\partial q}{\partial k} = \alpha_1(q / k) = r$ and $\frac{\partial q}{\partial \ell} = \alpha_2(q / \ell) = w$, where r denotes the price of capital (that is, the user cost of capital) and w denotes the price of labor (that is, the wage rate). The firm's optimal output and input levels result from jointly estimating these two equations together with the production function $q = Ak^{\alpha_1} l^{\alpha_2}$.

Examples of Applications in Microeconomics Efficient production decisions require that the marginal productivity of an input equals its market price. Therefore, comparing the marginal productivity with input prices permits

the analyst to test whether inputs are allocated efficiently. Pranab Bardhan's "Size, Productivity, and Returns to Scale" (1973) is a seminal paper in the literature. Bardhan estimated farm production functions to test the efficiency of land and labor allocations in rural areas of developing economies. Likewise, Hanan Jacoby (1993) illustrates how such tests can be refined and the difficulties in estimating marginal labor productivities.

The degree of returns to scale displayed is of great interest to market regulators. Mergers between rival companies reduce costs and potentially enhance welfare if they are in processes that are subject to increasing returns to scale. Similarly, the argument for granting exclusive franchises to operators providing certain public services (most notably public utilities) hinges upon the assumption that the activity displays increasing returns to scale over the relevant range of output (see Train 1991).

Elasticities of substitution are important for understanding how changes in the price of one input impact the demand for others. Ernst Berndt and David Wood (1975), in the aftermath of the first oil shock, showed that capital and energy were complements in U.S. manufacturing. This implies that fiscal incentives to stimulate investment would promote greater energy use.

Examples of Applications in Macroeconomics In broad terms, aggregate production functions are estimated empirically in macroeconomic work for the following purposes: (1) to obtain measures of the elasticity of substitution between the factors, and the factor-demand price elasticities; such measures are used for predicting the effects upon the distribution of the national income of changes in technology or factor supplies; (2) to apportion total growth into the accumulation of factors of production and technical change between two periods; (3) to test theories and quantify their predictions; and (4) to assess the likely effects of macroeconomic policies. Likewise, much work in international trade and labor economics uses the production function as one of their main pillars.

However, the most important application of production functions in macroeconomics is in the field of growth theory. Since the 1980s, the field of growth theory has mushroomed with the development of the so-called endogenous growth models (see, for example, Barro and Sala-i-Martin 1995; Aghion and Howitt 1998; and Valdés 1999). These models posit production functions with increasing returns to scale, an elasticity of capital of unity, externalities, or some combination of these. In order to assess the importance of these assumptions, economists have estimated aggregate production functions for entire economies, for the manufacturing sector, or for more narrowly defined industry aggregates with a view to testing if the real world is characterized by such phenomena. Paul Romer (1987), Robert Hall (1990), Ricardo Caballero and Richard Lyons (1992), N. Gregory Mankiw et al. (1992), David Backus et al. (1992), Susanto Basu and John Fernald (1995, 1997), Craig Burnside (1996), and others have attempted to document the empirical importance of the phenomena of increasing returns and externalities hypothesized by the new growth models.

The other important application of production theory in the area of growth is referred to as *growth accounting*. Here the purpose is to decompose overall output growth into the contributions of factor accumulation and technological progress. In this case, the factor elasticities are not estimated econometrically but assumed to be equal to the factor shares (under profit maximization and competitive markets), which can be obtained from the national accounts. In fact, the purpose of growth accounting is to estimate residually the contribution of technical progress (the shift in the production function) to overall growth. In growth rates, the production function $q = f(k, l, t)$ can be written as $\hat{q} = \varepsilon_k \hat{k} + \varepsilon_l \hat{l} + T$ where ε_k and ε_l are the factor elasticities. The only unknown here is T, the rate of technical progress, which can be obtained as $T = \hat{q} - \varepsilon_k \hat{k} - \varepsilon_l \hat{l}$.

THE AGGREGATION PROBLEM

Macroeconomic work assumes that the economy produces a single homogenous output with "quantities" of homogenous inputs. In most applied work, this assumption is not even discussed, and applied economists use published (aggregate) data from the national accounts, for example. However, at the aggregate level, output and inputs are not physical quantities. The output of a nation (GDP) must be expressed in monetary units. Capital is not measured as a collection of machines, but as the result of a series of investments (thus also expressed in monetary units) added up through the perpetual inventory method and assuming some rate of depreciation. In other words, in aggregate work, economists actually estimate $V = F(J, L)$, and not $q = f(k, l)$, where V is real aggregate value added, L is total employment, and J is the deflated or constant-price value of the stock of capital. When these variables are used as arguments in a production function, they present a serious problem. This is that aggregate production functions cannot be, in general, derived theoretically. If one asks for the conditions under which a series of microproduction functions can be properly aggregated so as to yield an aggregate production function, such conditions are so stringent that it is difficult to believe that actual economies can satisfy them. In other words, for practical purposes, aggregate production functions do not exist (Felipe and Fisher 2003, 2006).

This led a number of economists to ask the following question: If aggregate production functions do not exist,

what do applied economists find when they get aggregate data and estimate a regression? The answer is that all they do is approximate the accounting identity that relates definitionally the value of total output to the sum of the value of total inputs, that is, $V_t \equiv W_t + \Pi_t \equiv w_t L_t + r_t J_t$, where V is real value added, W is the total wage bill in real terms, Π denotes total profits (*operating surplus* in the NIPA [National Income and Product Accounts] terminology) also in real terms, w is the average real wage rate, L is employment, r is the average ex-post real profit rate, and J is the deflated or constant-price value of the stock of capital. The symbol $\equiv$ indicates that the expression above is an accounting identity. In a series of papers, Jesus Felipe (2001), Felipe and F. Gerard Adams (2005), and Felipe and John S. L. McCombie (2001, 2003) have shown that this identity can be rewritten as $V = F(J, L)$. This argument explains why aggregate production functions, despite the fact that they do not exist, tend to "work" (that is, the fit is high when estimated econometrically and, at least at times, the factor elasticities approximate the factor shares), and why it deprives most applied work with aggregate production functions of any meaning and significance.

SEE ALSO *Cambridge Capital Controversy; Physical Capital; Production; Smith, Vernon L.*

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PRODUCTIVE CLASS

SEE *Physiocracy.*

PRODUCTIVITY

Productivity is a measure of output relative to input. It can be calculated in a number of different ways, and in a variety of different situations, both over time and within sets of firms, industries, countries, or other organizations.

The two principal measures are labor productivity and total factor productivity (TFP, sometimes loosely called the Solow residual). For the former, it is typical to take the ratio of output to the quantity of labor input, for example, the number of automobiles produced per production worker or the number of automobiles per hour of production worker time. For the latter, it is typical to take the ratio of output to the weighted sum of a broader set of inputs (sometimes labor and capital together; sometimes labor, capital and intermediate inputs, taken together). While labor productivity is easier to measure, TFP is often preferred as a measure of productivity since TFP growth represents output growth not accounted for by the growth of inputs, whereas labor productivity growth reflects both TFP growth and changes in the capital to labor ratio.

Although a single productivity number is of some interest, it is often better to have time-series productivity data for a particular unit or a cross-section of productivity data for a range of similar units. Furthermore, the definitions of labor productivity and total factor productivity are straightforward, but there are a large number of potential problems of measurement when it comes to defining just what is meant by output and by the various inputs. For example, in the case of the quality of inputs, should labor inputs be adjusted for the skills of workers and, if so, how? There are also a large number of problems in aggregating various outputs and inputs together. For example, in the case of TFP it is usual to weight labor and capital by their shares in value-added, which makes certain assumptions about the nature of the production function.

Empirically, the majority of work on national productivity growth has been conducted for the United States, which has presented a number of interesting features. First, there was a marked slowdown in productivity growth in the 1970s associated with the economic turbulence of that decade (oil shocks, stagflation, and so on) as well as structural changes (the rise of the service sector which historically has had slower productivity growth than manufacturing, as well as being harder to measure). Second, there has been a marked speedup (especially relative to European productivity growth rates) since 1995, associated with the spread of information and communication technologies throughout the U.S. economy, but most particularly in the financial, wholesale, and retail industries.

International comparisons of productivity are particularly difficult because of problems with exchange rates and differences in industrial structure. The United States enjoys a substantial advantage in terms of output per worker over every other major economy in the world—14 percent higher in 2004 than the G7 average. This is driven by a higher ratio of capital per worker, high labor utilization, and high levels of technology. The relative position of the United States is somewhat less advantageous in terms of output per worker hour. According to data from the Organization for Economic Cooperation and Development (OECD), if the United States in 2004 is taken to have a productivity level (output per hour) of 100, the Eurozone has a level of 87, with the United Kingdom at 86, Germany at 91, and France at 103. Substantially larger gaps remain with other OECD members, with Japan at 70, Czech Republic at 45, and Mexico at 29. The excellent performance of France is often seen as a result of high capital intensity and a labor market that tends to favor employment of skilled rather than unskilled workers.

Finally, the level of productivity is an important determinant of the standard of living, which is often measured by the gross domestic product (GDP) per person. However, higher productivity does not necessarily imply a higher standard of living. In addition to productivity per worker hour, GDP per person also depends on hours worked per worker and the employment rate (employment per person) and these latter two factors are affected by national and local labor market institutions. Based on data from the OECD survey of the Euro area, GDP per person in the Euro area was 30 percent lower than that of the United States in 2002, with just over two-thirds of that shortfall due to lower labor resource utilization and the other one-third due to lower labor productivity.

SEE ALSO *Cambridge Capital Controversy; Economic Growth; Marginal Productivity; Physical Capital; Production Function; Savings Rate*

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Gavin Cameron

PROFANITY

Most media and social science treatments of profanity fail to grasp the significance of its underlying neurological, psychological, and sociocultural functions. The term *profanity* generally describes forms of offensive or vulgar speech that are scatological, irreligious, or sexual (e.g., *shit, hell*, and *fuck*). The *American Heritage Dictionary* (2000) definition refers to "abusive, vulgar, or irreverent language." The concept of profanity in most cultures also extends to offensive gestures, such as the middle-finger gesture; behaviors, such as pelvic thrusting; and forms of art, for example, sexual content in the motion picture *The Last Temptation of Christ* or modern artwork such as *Piss Christ* by Andres Serrano.

The preceding works of art are offensive because they affront religion, which is in line with the original usage of the term *profanity*. From the fifteenth through the nineteenth century profanity had a more precise meaning, referring specifically to irreligious speech or behavior and not merely vulgarity. Biblical taboos restricted sacrilegious speech, as defined by religious authorities, for example the commandment not to use the Lord's name in vain.

The word *profane,* according to the *Oxford English Dictionary* (1989), can be traced in writing to 1483. It literally meant outside of the church, secular, not concerned with religion or religious purposes, and by extension not holy, impure or defiled; as a verb it described treating something sacred with abuse, irreverence, or contempt. This definition of profanity is similar to that for *blasphemy*, which refers to an act of insulting or showing contempt or lack of reverence for God. Blasphemy is currently understood as a pointed attack on religion and religious figures, as opposed to merely showing irreverence. For example, Salman Rushdie's *The Satanic Verses* (1988) was considered by Muslims to be blasphemous toward Islam because of its insulting references to Muhammad.

The concepts of profanity and blasphemy form an integral part of European law regarding obscenity. British obscenity laws, which formed the foundation of American obscenity law, were adapted by the American colonies in the 1600s. They were predicated on the idea that offensive speech has the power to corrupt and deprave people, especially women and children. Early obscenity decisions in both England and the United States dealt with profanity and blasphemy, that is, speech offensive to religion and religious figures. In the late 1800s there was a shift from religion to sexuality as the basis of obscenity. Around the time of the U.S. Civil War (1861–1865) the postal service broadened its censorship of irreligious material to include materials of a sexual nature (e.g., photographs or post cards mailed to soldiers). A historical analysis by Stuart Flexner (1976) indicated that the power of profanity to offend declined throughout the nineteenth century, being supplanted by sexual words and phrases in the United States and other English speaking countries. Since the early 1900s, obscenity cases in the United States have dealt exclusively with sexual materials and their effects on adults and children.

Educators regard the use of profanity as a problem of style more than an affront to religion. In most modern cultures profanity is regarded as substandard speech and inappropriate in formal communication, for example at school. The changing acceptability of profanity in U.S. society is mirrored in motion picture language restrictions. In the early 1900s, U.S. film censorship boards were highly influenced by the church, and religious profanities were explicitly forbidden. The 1939 American classic *Gone with the Wind* made history when Clark Gable uttered one of cinema's most famous lines, "Frankly, my dear, I don't give a damn," resulting in a $5,000 fine. Jay (1992) reported how language in film was heavily censored in the United States prior to the evolution of the rating system used by the film industry since 1968, which permits hundreds of profanities and obscenities in a film for adults, and fewer in films for teenagers and young children. Offensive language is restricted in almost all media around the world (the Internet and satellite radio being exceptions in most countries); censorship occurs in television, radio, newspaper, billboard, magazine, and advertising content. Profanity is heard more frequently in media than obscenity, but that trend could change.

In the United States, the Federal Communications Commission (FCC) has always regulated obscenity on the airwaves, and following the 1978 Supreme Court ruling in *FCC v. Pacifica Foundation,* expanded its scope to include "indecent" speech, defined as patently offensive references to sexual and excretory functions. *Pacifica* was based on a complaint by John Douglas, a member of the Planning Board of Morality in Media, about a radio station's afternoon broadcast of George Carlin's comedy routine "Filthy Words," which featured seven words not allowed on television. In the early 2000s, conservative political action committees in the United States (e.g., Parents Television Council, Morality in Media) pressured the Federal Communications Commission (FCC) to ban religious profanity from television and radio. Since 2003, the FCC has vacillated on whether "fuck" is universally obscene or not, depending on the context. The FCC originally ruled that "fuck" was not obscene when pop singer Bono uttered the word at the 2003 Golden Globe Awards. The commission reversed itself in 2004, ruling that it was obscene. When ABC broadcast the World War II film *Saving Private Ryan* in 2005, the FCC allowed the offensive speech because soldiers naturally used profanity and obscenity in the heat of battle.

As profanity came to be seen as less offensive than sexual obscenity, profanity became more common in public places, on television, on radio, and in newspapers. Timothy Jay (1992, 2000) published data indicating that profanities are among the most frequently spoken swear words; they are learned in early childhood and persist into old age. People's feelings about profanity often depend on their view of religion. Religious people are less likely to use profanity than non-religious people, and religious people are more offended by profanity in the media than are non-religious people. Some religious people are more offended by profanity than by obscenity; for example, Jay (2005) documented how religious working-class women will frequently use obscenities at work but are reluctant to use profanities. Restrictive attitudes toward profanity have led to complaints about profanity in popular media. Although religion-based complaints are predicated on the notion that children will be harmed by profanity, there is no social science data to indicate that profanities are psychologically harmful to listeners.

It is normal for people to use profanity, but its use depends critically on the social context. Brain damaged patients may have difficulty suppressing profanity. Jay (2000) has demonstrated both the universality of profane speech and behavior and the culturally determined nature of profanity by observing the behavior of Tourette's syndrome patients. Tourette's syndrome (TS) is a motor disorder characterized by uncontrollable movements (e.g., grimacing, head turning, or arm flailing) and vocalizations (e.g., yelling, grunting, or swearing). Uncontrollable obscene gestures and movements (copropraxia) and speech (coprolalia) occur in 25 to 30 percent of Touretters, and tend to feature the most socially inappropriate behaviors in a given culture. What a Touretter produces during a seizure depends on cultural and developmental context. English-speaking Touretters might utter obscenities such as *fuck, cunt*, and *motherfucker*, brandish the middle finger, or act out vulgar behaviors such as simulated masturbation. A young woman with TS in Kuwait is more prone to expose a naked leg, a gesture forbidden in her culture. Japanese and Chinese TS patients are more likely than English speakers to utter insults based on ancestral allusions (e.g., *aunt fucker*). Touretters in countries where religion is dominant are more likely to use profanities (e.g., *holy mother*) than Touretters from more secular countries. Coprolalia in the form of sign language also occurs among members of the deaf community with TS.

Originally meant to denote an offense toward religion, the term *profanity* now refers to a broader range of offensive speech and behavior, which is regarded by many people as too coarse for public use. Context-sensitive social science interpretations of profanity support a less restrictive view of profanity.

SEE ALSO *Norms*

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Timothy B. Jay

PROFESSIONALIZATION

Several attributes set *professionals* apart from *nonprofessionals*: (1) establishing formal means of recruiting and training members for the occupation; (2) creating associations to disseminate knowledge in the field, represent and promote the interests of its practitioners, and regulate and standardize its practices; (3) establishing stringent membership requirements and standards in practice; (4) getting official recognition; and (5) developing a code of ethics to make exclusive claims on qualifications, expertise, and jurisdiction. Taken together, these elements are critical in the making of a profession.

Formal education has gatekeeping as well as status-claiming functions. Requiring someone to receive formal training in a field, via university education, is the first step toward securing monopoly control of specialized knowledge. Formalizing the training process serves to invalidate the claims made by those who have obtained such knowledge solely through experience. Implementing this process would potentially limit the number of people acquiring formal education in the field and, in turn, gain control over who might enter the profession. Having everyone undergo similar training would also standardize the socialization process for all practitioners in the field.

Besides requiring formal training at schools, establishing professional organizations contributes to professionalization. Stringent membership criteria underscore the overall strength of a professional organization, which could be a unifying force for its practitioners. If the practitioners could agree on a set of universal standards to clearly define themselves, they could restrict membership to those who can meet the stringent requirements for full memberships and, more important, set the stage for a full closure in the profession (i.e., collective control over entry

into the profession). Thus, nurturing unity and maintaining a strong spirit of professionalism would enhance the professional standing of its practitioners. Conversely, changing or lowering membership requirements reflect practitioners' loose attachment to the profession and a lack of closure.

The process of securing closure is incomplete without legal backing from the state. Licensure allows practitioners to ward off competition from outsiders. Aside from restricting entry, state laws give all practitioners the exclusive right to perform certain tasks or to provide services in the market. State licensure constitutes the "grand prize" in securing control over one's work. For example, certification by degree and examinations allows medical doctors and lawyers to eliminate potential competitors from related fields. In these professions, experience cannot be substituted for certification.

Developing and accepting a code of conduct is vital for the development of a profession. A professional society sets clear boundaries of acceptable professional values and conduct for its practitioners. Adopting an ethics code also signifies members' commitment to the interest of the public (or clients) rather than to a third party. To gain and maintain the public's confidence in practitioners' integrity, skills, and performance, practitioners are expected to live up to the code of ethics. Developing professional guidelines can be construed as the final stage of securing jurisdiction control. A set of professional ethics for, by, and of the practitioners preserves their professional standing as well as autonomy. It is a means of maintaining internal control as much as a measure of minimizing external interference.

The code of ethics for professionals first and foremost proclaims members' commitment to the public and their dedication to the values of the profession. The profession requires members to have a strong sense of dedication and commitment to the profession. The code also spells out the obligations and responsibilities of the practitioners to the profession and to their peers: being loyal, trustworthy, and honest; using discretion and exercising good judgment; and holding one's and others' actions to the highest standards.

Being a professional is a tall order. The code of ethics for a profession not only unifies practitioners, it implies that the practitioners themselves have the desire, ability, and obligation to monitor their own professional behavior. The penalties for those who fail to live up to the pledge would be reprimand, suspension, or termination of licensure. This code of conduct is developed to fulfill a sense of professionalism among practitioners. It is also a self-declaration of the profession's autonomy, high status, commitment, and self-policing.

The *career model* of professional development postulates that professionalization is sequential in that there is a fixed pattern of development, evolution, and internal differentiation. Each of the elements noted earlier constitutes a chronology of events in professionalization. Social scientists have used the career model to make sense of the developmental process for established fields (e.g., medicine, law, theology) and new occupations (e.g., computer science, engineering).

Practitioners in "new" professions are organized differently from those in "old" professions. For instance, medical doctors have kept jurisdiction control firmly in their hands through formal training and mandatory licensing. They strive for autonomy, status, and recognition in the society, rather than aspiring to be entrepreneurs.

The *functional model* pays attention to how and to what extent these activities foster professional development. The sequencing of these functions is closely linked to professionalization. Practitioners first call for exclusion, followed by the establishment of jurisdiction, internal controls, and external relations. Professional development is seen as an outcome of different stages of securing control over jurisdiction in a field.

The *professional model* focuses on the characteristics shared by professions, rather than on the processes of professional development. All professions share several commonalities. A profession is an occupational group with an abstract, theoretical knowledge base, acquired primarily through extensive formal training. A profession is an activity based on formal training and higher learning. Its practitioners are agents of formal knowledge. Professions enjoy the autonomy to establish their own standards of assessment and control. Hence, self-policing members' behavior and practices becomes an obligation of a profession. Its practitioners see their vocation as a "calling" rather than simply a job. Members of a profession are expected to have a lifetime commitment to their careers and to develop a strong sense of professional identity and dedication to their work.

There are differences among the three models of professional development in their emphasis on sequence of events, functions, or properties. To set themselves apart from nonprofessionals, professionals ought to have ways and means of defining and maintaining their monopoly power. This common theme highlights the ideological and organizational aspects of professionalism. All three models share a common theme that, due to their unique knowledge bases, professions have the desire for authority and freedom, though in varying degrees, to set their own boundaries of expertise, internal and external control, and activities.

Not all professions are truly "free" professions. Medicine, law, and dentistry come close to having all of the characteristics of a profession. Doctors and lawyers have been able to maintain control over their jurisdiction. Dentists also enjoy a high degree of professional autonomy compared to their counterparts in accounting. Entry to medicine, law, and dentistry is regulated by academic and nonacademic requirements. Only licensed doctors, lawyers, and dentists can practice in the United States. These gatekeeping techniques are so effective that even foreign nationals with similar credentials or experience from abroad cannot practice in the United States unless they satisfy the U.S. licensing requirements.

In contrast, there are fewer restrictions to move into other professions. Engineering will never come close to being a truly autonomous profession. It is a semiprofession in that it has a body of specialized knowledge and requires extended training. However, in the absence of mandatory licensing for all entrants, it cannot effectively block anyone without a college degree from becoming an engineer. Engineers do not enjoy legitimate protection from competition in the labor markets. Contemporary engineering can be considered a bureaucratic profession. Due to the organization and nature of engineering work, it is impossible for its practitioners, including the self-employed, to insulate themselves from business and industrial influence. Not only do engineers not have the means to be completely independent from the patrons of their services, they may not have the desire to be independent. Engineers tend to seek power, status, and mobility within an organization. A strong orientation to their profession may be counterproductive to career advancement in bureaucratic institutions.

Experience can substitute for formal education in computer work. Employers can promote an experienced worker without an advanced degree in management to head a division of young, college-educated workers. Degrees in social work are required for some but not all social workers. The military is different from other professions in that extensive training is required for all participants. Compared to their counterparts in civilian employment, workers in this "total institution" do not enjoy a high degree of professional independence. However, one can make the argument that the rites of passage into the military may induce a relatively strong sense of professional commitment. Advanced degrees in one's field, such as a doctorate, are usually required for teaching in higher education. Yet, a medical degree is not required for teaching in medical schools. None of these professions in the civilian sector has a monopoly of jurisdiction control. The good news is that outsiders enjoy greater access to these professions than to the legal or dental professions. On the other hand, talented individuals may be more attracted to professions with tighter gatekeeping for social status, autonomy, and earnings.

Administrative and managerial positions have been classified as "professional occupations" in the U.S. Census and in scholarly research. Those who perform primarily administrative or managerial tasks may have received formal (e.g., a master's degree in business administration) and ongoing professional or organizational training. There are professional associations (e.g., the American Management Association) for managers to advance members' career interests. However, administrators may not possess as much professional autonomy as do doctors or dentists. Like scientists or engineers, managers are semiprofessionals.

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Joyce Tang

PROFESSIONAL-MANAGERIAL CLASS

SEE *Managerial Class; New Class, The.*

PROFESSORIATE

The professoriate comprises faculty in postsecondary institutions who have specialized expertise in one of the many academic disciplines or professional fields and who teach and to varying degrees engage in research, institutional governance, and service (for example, provide medical care). In the early twenty-first century the professoriate includes approximately 3.5 million professionals teaching more than 80 million students worldwide (Task Force on Higher Education and Society 2000).

The evolution of the academic profession has been inextricably linked to changes in fields of study, colleges and universities, and national systems of higher educa-

tion. The kaleidoscope of organizational structures and operations that characterize postsecondary institutions are associated with an array of faculty employment and career patterns as well as differences in the nature of academic work. The teaching and research of a psychologist differ from a chemist's, and the career path of a professor in a German university only slightly resembles that of a professor in a small American liberal arts college. Hence treating the professoriate as a single professional group is often difficult.

Despite the differences, there are some core features of the profession that can be attributed to the common origins of most contemporary universities in the medieval European universities. Specifically, a history of the professoriate should take into account the nature of academic work, professors' autonomy, and their roles in institutional governance.

HISTORY OF THE ACADEMIC PROFESSION

A fundamental difference in the overall governance of higher education distinguishes the United States from other nations. Whereas in most countries there is a national system of public higher education with government bodies that set policies for all institutions under their jurisdictions, this is not the case in the United States. In the United States control of higher education is decentralized, and responsibility for funding and governance is delegated to individual states. States in turn have given individual universities leeway to establish their own faculty employment practices. Consequently, variations among campuses are greater in the decentralized U.S. higher education "system" than is the case in a centralized one, where conditions of employment are determined by national policies. For a variety of reasons, countries with centralized national systems are looking to the United States as an example of how professorial roles might be restructured. Hence it is instructive to consider the history of the U.S. professoriate in some detail.

The Professoriate in the Decentralized U.S. System The earliest colleges, founded in British colonies, were modeled after Oxford and Cambridge, and their mission was to prepare children of means for public life and further study in medicine, law, or theology. Education was for the privileged class—the elite—and the classical curriculum varied little from that found in the Middle Ages: ethics, metaphysics, and natural philosophy. The language of instruction was Latin.

From the opening of Harvard College in 1636 until the early 1800s, tutors predominated in the professoriate. Recruited from among recent graduates, tutors were considered qualified to teach all subjects. The curriculum was set, and campus governance was the responsibility of a lay board and a strong president.

In the 1720s Harvard made the first "permanent" faculty appointments: endowed professorships in divinity, mathematics, and natural philosophy. Professors differed from tutors in that they usually had some advanced professional training, were appointed to and taught almost exclusively in one subject area, and remained in their positions longer. By 1795 approximately 105 professors were distributed across nineteen colleges. However, the faculty career was not financially viable, so most professors also earned incomes as clergymen, lawyers, and physicians. In the early 1800s the work of Enlightenment scholars, emphasizing scientific reasoning and truth, edged into undergraduate curricula. New areas of academic knowledge with new modes of research emerged, bringing opportunities for postbaccalaureate education outside the traditional professions. The German university, with its ideals of unfettered inquiry and faculty simultaneously engaged in teaching and research, became the model to which the United States aspired, and Americans went abroad for advanced education.

The late 1800s brought specialized colleges for women and blacks and land-grant institutions devoted to utilitarian education. Disciplinary associations (for example, the American Chemical Society) were established, providing avenues for faculty publication that brought national recognition to scholars and their universities. American doctoral education began in earnest. Yale granted the first PhD in 1861, and in 1876 the first exclusively graduate school was founded—Johns Hopkins University.

Further differentiation of postsecondary institutions occurred as the American graduate university began to take shape alongside the liberal arts, specialized, and land-grant institutions. Its core was a four-year undergraduate college organized into disciplinary departments, with graduate and professional programs arrayed around it. These universities exerted profound influences on the definition of academic knowledge and on the professional norms and values of the professoriate. In 1913 faculty in the leading graduate universities called a meeting to set professional standards for university-based scholars, paving the way for the founding of the American Association of University Professors (AAUP) in 1915.

The late 1800s and early 1900s were pivotal years for the academic profession. The earned PhD was becoming a requirement for entry. Growing numbers of individuals moved directly from doctoral study to faculty positions. The ranks of instructor, assistant professor, and professor were forged into a distinguishable career. Individuals were appointed in departments representing specialized disciplinary areas. Structural changes in universities enhanced

professors' work autonomy and their authority in academic personnel matters. Primary responsibility for academic decisions such as curriculum and faculty hiring migrated to professors.

Between 1921 and 1945 state and federal governments recruited faculty to help solve societal problems, increasing the visibility and stature of the professoriate. The prestige of graduate universities became calibrated in terms of student quality and achievement and faculty prominence and research accomplishments. Between 1920 and 1940 the annual production of doctorates increased from 620 to about 3,300. At the same time new institutions—two-year colleges and normal schools with qualitatively different programs—were created to meet the needs of immigrants and part-time students interested in technical and semiprofessional occupations. Nationally, institutional differentiation and enrollments increased. Student and faculty profiles changed as access to higher education widened and the "massification" of higher education progressed.

Although the professoriate grew in stature and assumed primary responsibility for academic matters, faculty served at the pleasure of institutional governing boards and presidents. Faculty did not enjoy the economic security or due process that characterized other professions, and they chafed at restrictions on their academic freedom. The AAUP, with the American Association of Colleges, crafted professional guidelines to address these problems and in 1940 produced the Statement of Principles on Academic Freedom and Tenure. The statement articulated the concept of continuous tenure, meaning that an individual could not be fired without a judicial hearing, and provided guidelines for awarding tenure. The authors proffered tenure as a means to protect academic freedom and ensure "a sufficient degree of economic security to make the profession attractive to men and women of ability" (American Association of University Professors). Another AAUP report on faculty governance from this period asserted that professors were not employees to be managed by administrators but professionals to be consulted on institutional decisions—in particular faculty appointments and promotions and educational matters.

After World War II, as a result of federal legislation such as the GI Bill, enrollments tripled, as did the need for professors. Established graduate education programs grew, and new ones were created. Government funding for research burgeoned. The confluence of these events in the 1950s further expanded the influence of graduate universities, diffusing the research ethos throughout academe. The specialized scholar came to epitomize the academic professional.

In the 1960s faculty enjoyed ready employment, funding for research, career advancement, and geographic mobility. Faculty autonomy strengthened as departments assumed primary responsibility for academic decisions and faculty personnel matters. The standards for faculty promotion and tenure heightened. Economic conditions worsened in the 1970s, and undergraduate enrollment declined. Professors were criticized for valuing esoteric research, being inattentive to undergraduates, and failing to diversify by hiring and promoting women and minorities. Beginning in the 1980s the nation's economic policies shifted greater responsibility for funding their education to students and encouraged greater cooperation between postsecondary institutions and business. State and federal governments called for greater fiscal and educational accountability.

Beginning in the 1990s and continuing into the early twenty-first century reduced campus budgets, attributed to lost tax dollars and diminished tuition revenue, and the need for instructional flexibility were reasons given for significant changes in personnel practices. Faculty appointments were changed from tenure track, with its assumption of continuous employment, to term appointments that specify a fixed period at the end of which a person is released or the contract is extended. The proportion of the U.S. professoriate employed full-time dropped from 78 percent to 56 percent between 1970 and 2001, and the majority of full-time appointments in the 1990s were off the tenure track—about 53 percent in 1997 (Finkelstein and Schuster 2001). Unionization of nontenure-track faculty has increased, providing an alternative to traditional forms of shared governance on some campuses.

The Professoriate in Centralized Higher Education Systems Certain factors have had pervasive and similar effects on the professoriate in both the United States and other countries. For example, new modes of inquiry as well as calls for more utilitarian programs of study have altered postsecondary institutions and the nature of academic work worldwide. However, different national contexts and cultural traditions have led to variations in employment conditions and career structures within the professoriate. For example, in the former Soviet republics, the requirements for different programs of study and rigid workload guidelines are set by the national government and constrain faculty autonomy in their teaching. In western Europe professors participate in and greatly influence decisions about academic matters, but nonprofessors have little to no power. Some nations maintain separate organizational structures for professors' teaching and research, such as the research institutes and academies of science found in Germany and throughout eastern Europe. Yet Britain has created an institutional ranking system in which placement depends heavily on the research productivity of the university's faculty. In certain nations—

France, Germany, and Italy, for example—professors are civil servants and enjoy a form of tenure based on their status within the public-service sector. In contrast, the British government removed faculty from the civil service ranks, and now all faculty hold fixed-term appointments. Professors in Latin America must compete periodically with a national pool of applicants for the positions they hold. Some countries—China, for example—are implementing policies that will require faculty to fund parts of their full-time positions with money obtained through research grants.

Such examples highlight variations in the professoriate across centralized higher education systems. Academic work continues to be shaped by changes outside as well as within academe, and it appears that several professional features of the professoriate—autonomy and career stability in particular—are being eroded.

PROFESSIONAL REQUIREMENTS

The configuration of faculty activities and the credentials of professors vary by field, institutional mission, and national context. In the United States, for example, a research university professor with graduate and undergraduate students and a research laboratory distributes her or his time differently than does a community college professor who teaches five or more undergraduate courses. In France the credentials to teach lower division university courses are the same as those required to teach in the elite university preparatory schools.

U.S. colleges set their own personnel policies and practices, but typically, when they seek tenure track faculty, they announce openings in national venues. Search committees made up primarily of faculty screen applicants, interview candidates, and ultimately recommend preferred candidates to administrators. Selection is based on merit criteria, such as academic credentials, publication quality, and peer recommendations. Fixed-term appointments are handled differently, especially if the employment period is brief. In countries with national systems, traditions differ, but typically a government body establishes personnel policies and practices for all postsecondary institutions.

The U.S. tenure track has three ranks: assistant professor, associate professor, and professor. After a probationary period, assistant professors are evaluated and are either promoted to associate professor and awarded tenure or dismissed. Reappointments and promotions of fixed-term faculty are also based on performance evaluations. Faculty may be dismissed from their tenured or nontenured positions because of misconduct, financial exigencies, or post-tenure reviews that document inadequate performance.

In other countries the sequence of positions held by nonprofessors varies greatly, as do national policies regarding whether a person can earn promotion in the university where he or she is currently employed. In contrast with the United States, where faculty can be promoted through the ranks in a single institution, the careers of academics unfold within national systems. Faculty must often migrate from one institution to another to advance their careers. The Humboldtian university chair system, in which each discipline (department) has one professor—the chair—was copied widely and has significantly influenced faculty careers in many nations. A professor enjoys permanent employment, but nonprofessors are on fixed-term contracts, and to be promoted, they must successfully compete for a position at another university. Nonprofessors must complete a "second doctorate" (the *Habilitation*) to be eligible for a professorial appointment. While they complete the *Habilitation*, these nonprofessors hold either paid or unpaid university teaching and research appointments. Unlike in the United States, where junior faculty and professors participate in decision-making with respect to a range of academic issues, in Germany a significant gap in authority exists between these two groups.

SOCIETAL PERCEPTIONS

Throughout the 1950s and 1960s, public views of the academic profession were positive, and occupational prestige was high. However, public perceptions began to change in the 1970s. Criticism of the professoriate appeared regularly in the popular press, students rioted in some countries, and there were general calls for accountability. Faculty productivity, instructional quality, research relevance, and tenure were all questioned in the last thirty years of the twentieth century. The political beliefs of faculty, particularly in the social sciences and humanities, have also drawn criticism. As guaranteed employment and pay in other professions declined, disapproval of U.S. institutional tenure and presumed tenure of professors who are civil servants intensified. However, sociological studies suggest the occupation has remained among the highest in prestige.

CHALLENGES

The academic profession faces multiple challenges. Here are a few:

- One challenge results from government pressures for accountability and structural changes in faculty roles. Proponents of increased efficiency and those who want to change the balance of power among faculty, administrators, and government bodies argue that tenure (both as defined in the United

States and in national civil service careers) is outmoded and advocate fixed-term faculty appointments as an alternative. Critics of such appointments believe they diminish the quality of the professoriate and the conditions of academic work that have made higher education successful: professional autonomy, academic freedom, and economic security. These divergent views of the professoriate are a source of tension among government officials, university administrators, and faculty.

- Since the nineteenth century, teaching and learning through simultaneous engagement in scholarship and instruction has been a cornerstone of the strongest higher education systems in the world. Critics of personnel policies that prioritize fixed-term positions with heavy teaching loads challenge what they believe is a failure to recognize the impact on the advancement of knowledge that has resulted in countries that have adopted such practices.
- Yet another challenge for the professoriate is changes in government and foundation research support. Funding for research in some areas is abundant. In others, especially the arts and humanities, monies are scarce. The attractiveness of fields and the availability of future scholars may be affected by this situation.

SEE ALSO *Cambridge University; Education, USA; Intellectualism, Anti-; New Class, The; University of Oxford; University, The*

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PROFILING, RACIAL

SEE *Policing, Biased.*

PROFITABILITY

At first sight profit appears to be a simple concept that is defined as the residual of revenues from the cost of production; the related concept of profitability is defined as the ratio of profits to some basis, with the most commonly employed basis being invested capital. The simple concept of profitability is of great significance for understanding the motion of the capitalist system because the desire for and promise of profit motivate entrepreneurs to initiate productive activity and because the level of profitability is the measure of the success or failure of an endeavor. Consequently, measuring current and past profitability as well as projecting future profitability is crucial for entrepreneurial decisions with regard to the expansion or contraction of investment in the current activity or alternative activities, the possibility of takeovers, and the like.

DEFINITIONS OF COSTS AND PROFITS

In spite of the fact that profitability appears to be easy to define, a closer examination reveals that in reality costs, which are crucial for the determination of profits, are difficult to define in a generally accepted way. The usual textbook discussion of costs refers to the definitions of costs by accountants and economists. Definitions by accountants record only explicit costs, that is, all monetary expenses incurred in the production and sale of goods and services, whereas those by economists include additional costs called the implicit or opportunity cost: the compensation for not exploiting the best alternative opportunity. Clearly, the notion of profits of the economist includes that of the accountant, and this implies that profits in the economist's sense exist if the revenues from sales exceed both the explicit and the implicit costs. Economic profit

sometimes is referred to as supernormal or excess profit, and the normal profit (rate) is the part of the cost that usually is identified with the interest (rate).

In light of these distinctions, it is clear that there is no single definition of profitability even for accountants because costs and therefore profits depend on various accounting practices and the purposes they serve. For example, accountants usually convey different pictures of a firm's profitability to the government and to the stockholders. Similarly, economists use different measures of profitability, such as profits over invested capital and profits over equity, among a host of others. However, the Cambridge capital controversies show that it is difficult to deal with profitability because it involves the evaluation of capital goods, which requires the prior knowledge of equilibrium prices. Those prices can be estimated only if one knows the average rate of profit of the economy. That estimation, however, requires the evaluation of invested capital, among other things, creating a vicious cycle from which there seems to be no exit.

MEASUREMENTS OF PROFITABILITY

Thus, economists have further difficulties in the estimation of the proper notion of profitability, which usually is identified with the internal rate of return (IRR): the discount rate that equalizes the value of the investment project with the present value of the future stream of expected profits that will result from the lifetime of the investment project. The IRR concept has certain limitations that, among other things, have to do with the idea that only the short-term horizon is relevant for investment decisions. This is why economists make use of the economic rate of return (ERR), which is the IRR over a specific, much shorter period of the firm's life. Even this notion of profitability, however, is hard to measure with actual data, and so economists revert to the accounting rate of profit (ARP): the ratio of the value of a flow of profit in a specific period to the value of the stock of capital.

It is true that in any particular instance the ARP for firms and industries will be different from the respective ERR. More specifically, in 1983 Fisher and McGowan showed that as a result of depreciation methods, the projected cash profiles over time and the growth rate of a firm make ARPs fall short of a good approximation to the ERP. The problem with these experiments is that they were performed with numerical examples, not with actual data. By contrast, in 1990 Duménil and Lévy, using actual data from the U.S. economy over a long period, contended that for all practical purposes and under certain conditions and for certain types of economic problems the ARP can serve as a reliable approximation of the ERR.

In spite of criticisms economists use the notion of the ARP in many applications, such as industrial organization studies; if a particular industry makes an ARP above the economy's average ARP for a considerable period, economists say that this may be evidence of economic (sometimes called excess or even supernormal) profit that accrues to a firm or an industry. This may be due to the exercise of monopoly power or the presence of barriers to entry, which prevent new firms from seizing such profit opportunities. Economic profit is viewed as a departure from the ideal of perfect competition, and the government must take action to correct the situation in its effort to make economic life look more like the perfectly competitive model, in which economic profit in the long run is zero. Furthermore, the ARP has been used, along with other variables, in econometric specifications as a determinant of investment behavior and capital accumulation. The idea is that excess profits attract investment, and therefore capital accumulation accelerates to the point where excess profits are competed away; the opposite is true in the cases of losses.

ARP also has been used in historical studies as an indicator of the expansion or contraction of an economy. In fact, it has been shown that the contraction phase of an economy is associated with a protracted falling ARP that leads to stagnant or even falling total real profits, giving rise to pessimistic expectations and thus discouraging aggregate investment and increasing the rate of unemployment. The opposite is true with a rising rate of profit, which creates an atmosphere of optimism, encouraging investment spending, lowering unemployment, and setting the stage for prosperity.

SEE ALSO *Average and Marginal Cost; Cambridge Capital Controversy; Capital; Profits; Rate of Profit; Revenue*

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PROFITS

Any discussion of profits must carefully distinguish between profits at the microeconomic level of the firm

and profits at the macroeconomic or aggregate level, that is, in the economy as a whole. In mainstream economics, the existence of profits at the microeconomic level is not a complicated issue: An individual firm can make profits or losses in the short run based on its sales and the price at which its good or service is sold. In other words, as long as total revenue is greater than total costs, gross profits are realized. In perfect competition, given the nonexistence of barriers to entry, economic profits are necessarily nil in the long run—a condition of equilibrium analysis, where marginal cost must be equal to marginal revenue.

At the macroeconomic level, orthodox or mainstream economists associate the existence of profits to market imperfections: As stated above, profits do not exist in perfect competition. Yet, by allowing for some imperfections, profits will exist in less than perfectly competitive markets, such as in oligopolistic markets and under monopolistic competition, to name a few. At both levels, profits are always maximized by firms.

A second explanation of profits in neoclassical theory sees them not so much as a surplus value where a firm's revenues are greater than its costs. Instead, we can also see profits as a reward: If an individual has savings, he can choose to consume today or postpone his consumption to a later date and lend his savings to someone who is willing to borrow them. In this sense, the lender is reimbursed his initial loan plus interest, which is his reward for sacrificing consumption today for consumption tomorrow.

For heterodox economists, however, the existence of monetary profits at the macroeconomic (aggregate) level has always been a conundrum. In fact, as we will see, they do not exist—that is, at the macroeconomic level, profits are necessarily nil in theory. This conclusion poses a number of challenges that are tied to the way in which production is financed and the way money is created by bank credit. Yet, profits must exist so that at the macroeconomic level, firms as a whole are able to cover not only their costs of production but also the interest on their bank debt. So where does the extra money come from? To borrow a popular expression from Karl Marx (1818–1883), how does M become M'?

PRODUCTION FINANCE AND THE ENDOGENEITY OF MONEY

For heterodox economists, firms do not finance production or purchase capital goods with prior savings. Indeed, unlike in neoclassical or mainstream theory, savings only play a passive role in the production process. This is but the first of the *reversed causalities* within heterodox economics. Rather, since the economy is seen as a logical sequence of irreversible events that operate in historical time within a monetary economy, savings arise from income that logically follows a prior investment. Two questions arise. First, if investment is not financed by savings, how is it financed? Second, will this have any implications for the generation of profits?

Overall, heterodox economists see the economy as a dynamic interactive process between various social groups, such as wage earners, firms, and banks. Such a class-based approach is at the heart of the explanation of macroeconomic profits.

In a monetary economy of production, as advocated by John Maynard Keynes (1883–1946), this circuit of irreversible events begins with the determination of production plans by firms (planned production)—that is, wages are set and production levels are determined, as are other costs of production, such as the rate of interest, exogenously determined by the central bank according to its policy objectives. At this stage, therefore, firms are able to properly determine their financing needs for the production process to begin. In the aggregate, we can argue that firms need to borrow M.

As Keynes pointed out, "banks are special," in the sense that they are entrusted with the role of financing the production process: They "hold the key." Banks are therefore an important part of not only the production process but also the realization of profits, as we will see below.

Once firms approach a bank for the financing of their production plans, banks will then evaluate the creditworthiness of the potential borrowers. Provided firms have the sufficient collateral to secure a loan, or provided they otherwise meet the strict lending criteria of the banks—such as the firm's ability to generate profits, the firm's net worth, the firm's ability to withstand transitory shocks, and certain key financial ratios, such as cash flows and debt/equity—they will receive the funds to cover their production costs, which may be called the *initial finance* phase. Of course, some firms will not be able to secure credit, thereby jeopardizing production and output (Graziani 2003).

Once credit has been secured and a loan is made, usually as a line of credit, firms will draw on their line of credit to pay wages and purchase other inputs of production. As they pay wages, bank accounts of wage earners will increase; money is created. In this sense, the creation of money is parallel to the creation of incomes.

Once incomes are created, wage earners will carry out their consumption and saving plans according to their needs. As they consume, money flows back to firms as revenue as they sell their goods and services to consumers. In this sense, firms are able to capture a portion of their initial outlays from the direct consumption by wage earners in the overall economy. Firms will use these funds to extinguish their existing debt toward the bank, which in the process will also destroy money.

Once their consumption plans are carried out, wage earners will assign the remaining component of their wages to savings. We can identify two types of savings: *financial* savings, which are used to purchase obligations on financial markets, and *hoarded* savings, which then remain in the wage earners' bank account, which consists of the demand for money balances.

Although both types of savings may appear similar, they are in fact very different and play very different roles. In the first instance, when households purchase financial obligations, these funds flow back to firms. Firms will then use these funds to reimburse their debt toward the banking system. In this sense, as Keynes once argued, there is no difference between consumption and financial saving, as they both play the same role. Both are, in fact, part of *final financing*. This is the reflux phase of the circuit of production. It is the phase of the destruction of money.

From the above discussion of the economy as a monetary circuit, two fundamental conclusions about the heterodox approach can be drawn. First, the money supply is endogenous and responds to the needs of production (Lavoie 1992; Moore 1988; Rochon 1999). Credit creates money, which is another reverse causality inherent in the heterodox approach. Money endogeneity suggests therefore that there is no excess money. The money supply always adapts to the requirements of the economy; such is the characteristic of a monetary economy of production.

Unlike neoclassical theory, where the money supply is an exogenous stock imposed by the central bank, heterodox economists consider the flow nature of credit and money as a fundamental characteristic of production economies. In this sense, the banking system is at the heart of the production process and of the endogeneity of money. The existence of money therefore is the result of debt between firms and banks. Heterodox economists therefore argue that the money supply is credit-led and demand-determined.

The second conclusion, however, is even more important. Indeed, if firms borrow M, how can they make any profits if, at best, they succeed in capturing only M, assuming no savings? Even more importantly, how can firms in the aggregate generate revenues to even pay the interest on their bank loan?

Granted, the above example is a simplified model, but even if we were to complicate the model by adding a government, the open economy, or additional realistic characteristics of a production economy, it would not change the fundamental conclusion that, at best, firms can only succeed in capturing what they injected into circulation at the beginning of the circuit. The question, therefore, is simple: If profits exist at the macroeconomic level, how can we explain the transformation of M into M'?

Heterodox economists have proposed a number of possible solutions to this conundrum. For instance, some have suggested that profits can be accounted for, provided we assume several circuits that overlap with each other. In other words, in the real world, production periods are staggered in the sense that firms or sectors do not borrow and reimburse their debt all at the same time. As such, several sources of monetary outlays would exist simultaneously, thereby providing firms with more than M at any one time.

Another possible solution consists in considering the existence of the state or an open economy. Under each of these conditions, there is an additional injection of outlays coming from the state and from other countries. In this sense, when the government undertakes fiscal expenditures, they increase aggregate demand and translate into additional revenues for firms. Yet, the problem with this solution is that while expenditures are revenues for firms, taxes are a drain on the circuit. As such, for this solution to be a viable and general solution, it requires that governments consistently incur fiscal deficits.

In an open economy, of course, countries are increasing their exports, which increase the proceeds of domestic firms, with which they can extinguish their debt toward the banking system and show some profits. This additional influx of revenue would account for the transformation of M into M'. Yet, as in the above example, this solution remains a limiting case, and not a general solution: While exports represent an influx of additional revenues, imports are the opposite. In this sense, this solution only applies in situations of net exports (trade surplus).

There is no doubt that all the above suggestions contribute in some way to the existence of macroeconomic profits. Yet, they all consist of ultracircuit explanations, in the sense that they all require that we amend the basic circuit by allowing some external explanation, such as the state, the rest of the world, or additional, overlapping circuits. What is required is a general theory of macroeconomic profits that applies in all circumstances.

For Marxists, since the value of goods reflect the labor hours used in their production (the labor theory of value), profits can be explained because capitalists are able to extract from labor a greater value out of their work or labor power. In other words, capitalists, as owners of the means of capital, are able to exploit workers: Capitalists are thus able to extract "surplus value" from the workers and enjoy profits.

A GENERAL THEORY OF PROFITS

How can we therefore account for profits within a single period of production without relying on external solutions? Recall that until now, this entry has said nothing about the financing of investment. Yet, just like produc-

tion, investment must be financed. Assume therefore that like wages, investment is financed with the use of bank credit. Yet, unlike wages that are financed with short-term credit that needs to be reimbursed at the end of the production circuit, investments are long-term credit: Firms do not reimburse the whole value of investment within the same period, but rather typically reimburse investment over several periods. In that way, while firms in the aggregate borrow to cover wages (and other costs of production) and the purchase of investment goods, they only reimburse a fraction of that total value, which accounts for the existence of profits at the macroeconomic level.

SEE ALSO *Capitalism; Capitalist Mode of Production; Economics; Economics, Marxian; Economics, Neoclassical; Economics, Neo-Ricardian; Economics, Post Keynesian; Entrepreneurship; Long Period Analysis; Marginalism; Markup Pricing; Profitability; Rate of Profit; Surplus; Surplus Value*

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PROGRAMMED RETARDATION

The concept of "programmed retardation" comprises policies, programs, and instructional practices designed to guarantee educational failure for students. Significantly, following the U.S. Supreme Court's momentous *Brown v. Board of Education* decision of 1954, education strategies originally implemented to deny quality education to many black students began an overall decline of America's public schools in both urban and suburban areas. This trend has led writers of dramatically different viewpoints to comment on America's declining educational competitiveness in the world (e.g., Berman 2006; Friedman 2006).

In April 1983, the National Commission on Excellence in Education, which is part of the U.S. Department of Education, issued a report that stated unambiguously that "the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people." The report, titled *A Nation at Risk*, likened the devastation of public education to "an act of war." "We have in effect," the report warned, "been committing an act of unthinking, unilateral educational disarmament." Many Americans seemed shocked by the report's findings, though they were not a new discovery.

The source of the crisis in public education in many of America's cities can be traced back to the late 1950s and 1960s. The *Brown* decision ended state-sanctioned racial apartheid in America's public schools; but the reasoning that all black schools were inherently inferior was incorrect. In a deliberate attempt to distort and evade the Court's decision, many urban school systems outside of the South installed a pupil assignment policy known as "tracking," which effectively resegregated many schools by channeling the majority of black students into the lowest "track" early in their educational careers.

Interpreting the *Brown* ruling as an opportunity to improve their children's education, black residents in many cities across America fought the policy of tracking. In 1969 the community activist Jewell Mazique labeled the policy "programmed retardation," declaring that tracking was more harmful than the conservative practice of racist segregation in the Old South.

Reasoning that poor education would ultimately hurt black and white working-class children in the nation's capitol, community leaders called for neither racial integration nor segregation. Instead, they demanded quality education. Mazique and other Washington, D.C., community activists defined this educational goal unambiguously, calling for: (1) the distribution and mastery of the fundamental tools of learning—namely reading, writing, computational skills, and thinking; (2) academic motivation; and (3) positive character development (Mazique 2000).

As in so many other urban areas, Washington, D.C.'s black community lost the political struggle for quality education. In 1967, the celebrated *Hobson v. Hansen* case terminated the school system's tracking policy, but the court claimed that racial integration automatically improved the educational performance of black students. Liberal civil rights leaders and educational managerial elites won the day and began to implement various racial integration policies. By the 1970s, many schools system adopted the policy of racial-balance busing, which transported a percentage of black students (and later Latino students) from their neighborhood schools to white schools in order to achieve racial balance. Magnet school programs and other education experiments also were implemented in order to bring about racial integration.

Because integration is not an end in itself but only a means to an end, the contradictions and dilemmas of this approach quickly became apparent. Authentic racial integration, however, could not be realized with policy strategies that focused mainly on the well-being of white students and their schools. Therefore, as many black students were drawn away from their local schools and communities, these schools and other community institutions continued to decline as a result of neglect and economic impoverishment.

Yet educational managers and civil rights elites put forward racial integration as the singular goal of education, demanding that it be imposed on public schools at all costs. However, the implementation of various racial integration policies did not result in educational equality for black students. This was the case because educational professionals and civil rights elites overlooked the issue of quality education. As a result, good classroom teaching declined, the fundamental tools of knowledge were abandoned, and positive character building was perverted. Beginning in the 1970s, many school systems turned away from teaching students important values, such as respect for others and self-restraint, which severely distorted the acculturation and socialization functions of schooling.

Moreover, as white flight, and later middle-class black flight, from cities to suburbs accelerated in the late 1960s and 1970s, America allowed its urban areas and their schools to decay and deteriorate. In the process, school regimes bused African American and Latino children to an expanding system of largely white and affluent suburban schools in order to achieve "racial balance." This tactic helped to destroy the sense of community in many urban areas, and inner-city life became increasingly characterized by economic impoverishment, political disenfranchisement, and cultural despair. The consequences of this course of events became evident with the collapse of public education in urban areas across the nation. Ironically, school budgets have continued to rise, along with a growing ossification and inefficiency in urban school bureaucracies.

Adding insult to injury, liberal members of the educational managerial elite rationalized the denial of quality education to black students by applying various theories of cultural deprivation. To observers like Mazique, categorizing African-descended Americans as "culturally deprived" or "culturally disadvantaged" has merely compounded and continued the legacy of cultural domination and the denial of black human dignity that began during the Atlantic slave trade. It is a strategy for keeping the oppressed in a condition of oppression.

These unfortunate educational trends and developments characterized urban and less affluent public school systems in the 1960s and 1970s. Since then, however, even many suburban and more affluent public school systems have experienced an educational crisis. They confront a growing rate of complex problems, including functional illiteracy, violence, increased dropout (and "pushout") rates, discipline problems, drug use, teenage pregnancy, gang activity, and teacher burnout. As a result, generations of young people are being educationally sabotaged in many public schools across America. In his book *Retarding America: The Imprisonment of Potential* (1993), Michael Brunner demonstrates that programmed retardation, and especially the failure to teach young people to read, results in increasing juvenile crime and incarceration.

In the current stage of American postindustrial development, the collapse of public schooling is frightening. Continued public school experimentation—including privatizing strategies or policies supposedly designed to "leave no child behind"—has not proved successful in big-city school systems. Yet in the emerging society, knowledge and the management of people are supplanting money and manufacturing as the only sources of political and economic power. Resisting the professional-managerial class' cultural domination and intellectual imperialism requires that people come to view knowledge and its utilization as sources of power. Learning, therefore, needs to be understood as a lifelong project and an indispensable investment for social development. Educational credentials will more and more be the key to a person's role in society. However, more than the possession of certificates and diplomas will be required to put one's knowledge into practice. Knowledge-based performance and decision making will be the necessary attributes of the educated person.

To many observers, a generation or more of urban African American and Latino students have been betrayed by the U.S. educational system, and their educational underdevelopment is undercutting their ability to survive and develop in a postindustrial society grown cynically indifferent to social suffering. To overcome a looming educational crisis, America will need to devise and implement a national educational strategy, guided by the principle that in the new age of knowledge, science, and technology, investment in quality educational advancement is the very foundation of national development and competitiveness.

SEE ALSO Brown v. Board of Education, *1954; Desegregation, School; Education, Unequal; Educational Quality; Race and Education; Resegregation of Schools; Segregation, School; Tracking in Schools*

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PROGRAMMING, LINEAR AND NONLINEAR

The need for extremal values (maxima or minima) of a function whose variables might have to satisfy certain constraints leads to a problem of *optimization*. In its most general form, an optimization problem is ordinarily expressed as maximize $F(x)$ subject to $x \in X$, the symbol $\in$ standing for "is an element of." Posing the problem in terms of maximization is not restrictive since $\min_{x \in X} F(x) = -\max_{x \in X}\{-F(x)\}$.

Such extremal problems are classified according to the mathematical properties of the *objective function* F and the *feasible region* X. The optimization problem is said to be *feasible* if and only if its feasible region is nonempty. This entry will restrict attention to the case where X is a subset of a finite-dimensional vector space, say Euclidean n-space, E^n so that $x = (x_1, x_2, \ldots, x_n)$ denotes a vector of n variables. Problems of this sort are also called *mathematical programs*, and their study is called *mathematical programming*. When $X = E^n$, the problem is said to be *unconstrained*. Finding relative minima and maxima in elementary differential calculus ordinarily deals with unconstrained optimization problems on the real line. In advanced calculus, one encounters multivariate unconstrained optimization. A related problem class is that in which X is the solution set of a system of equations $g_i(x) = 0$, $i = 1, m$. Symbolically, $X = \{x: g_i(x) = 0, i = 1, \ldots, m\}$. When suitable differentiability and linear independence conditions hold, optimization problems of this form can be handled by the *method of Lagrange multipliers*, an approach dating back to the eighteenth century (long before the term *programming* was used).

LINEAR PROGRAMMING

Among constrained optimization problems, the linear programming problem is the leading representative. *Linear programming* (LP) can be described as the problem of maximizing a linear function F over a polyhedron X. This means that the objective function has the form $F(x) = c_1x_1 + \ldots + c_nx_n$, where $c_1, \ldots, c_n$ are given constants, and the *polyhedron* X is the set of solutions of a system of *linear inequalities*, say:

$$a_{i1}x_1 + \ldots + a_{in}x_n \leq b_i, \quad i \in \mathcal{I}_1 = \{1,\ldots, m\}. \tag{1}$$

In many practical applications, the variables x_j are required to satisfy $x_j \geq 0$. Such a nonnegativity constraint is equivalent to $-x_j \leq 0$, a special case of (1).

Economics is the foremost social science field of application for LP (and nonlinear programming as well). The optimal allocation of scarce resources is a typical example. For instance, suppose a firm manufactures n products from m resources. Each unit of product j consumes a_{ij} units of resource i, of which there are b_i units available. It is assumed that the consumption of the resources by product j is proportional to the level x_j of the corresponding production activity; it is assumed further that the consumption effects are additive. In that case, the total amount of resource i consumed by the n production levels $x_1, x_2, \ldots, x_n$, is $a_{i1}x_1 + a_{i2}x_2 + \ldots + a_{in}x_n$, and each of these sums must not exceed the amount available, namely b_i. The unknown production levels x_j are naturally nonnegative. Finally, it is assumed that the aim is to maximize the profit resulting from the production and that it is of the form $p_1x_1 + p_2x_2 + \ldots + p_nx_n$. Thus, the optimization problem is:

$$\begin{aligned} &\text{maximize} && p_1x_1 + p_2x_2 + \ldots + p_nx_n \\ &\text{subject to} && a_{11}x_1 + a_{12}x_2 + \ldots + a_{1n}x_n \leq b_1 \\ & && a_{21}x_1 + a_{22}x_2 + \ldots + a_{2n}x_n \leq b_2 \\ & && \vdots \qquad\qquad \vdots \\ & && a_{m1}x_1 + a_{m2}x_2 + \ldots + a_{mn}x_n \leq b_m \\ & && x_j \geq 0, \quad j = 1, 2, \ldots, n \end{aligned} \tag{2}$$

In some instances, it is appropriate to introduce other linear constraints in (2). These could be *output requirements* $a_{i1}x_1 + a_{i2}x_2 + \ldots + a_{in}x_n \geq b_i$, $i \in I_2$, or *material balance equations* $a_{i1}x_1 + a_{i2}x_2 + \ldots + a_{in}x_n = b_i$, $i \in I_3$. What results is still a linear programming problem.

Two historically important cost-minimization problems illustrate further applications of linear programming in economics and planning. The first of these is called the *diet problem*, which calls for a plan whereby a given set of nutritional requirements can be met from a given set of ingredients at minimum cost. In this case, one has nutritional requirements $r_1, r_2, \ldots, r_m$ for vitamins, minerals,

calories, and so on. These requirements are to be met by combining appropriate amounts of n ingredients $j = 1, \ldots, n$ having unit costs $c_1, \ldots, c_n$, respectively. Each unit of ingredient j contributes a_{ij} units of nutrient i. The proportionality and additivity of these contributions is assumed. Thereby, the problem can be stated as:

$$\begin{aligned} &\text{minimize} && c_1x_1 + c_2x_2 + \ldots + c_nx_n \\ &\text{subject to} && a_{11}x_1 + a_{12}x_2 + \ldots + a_{1n}x_n \geq r_1 \\ & && a_{21}x_1 + a_{22}x_2 + \ldots + a_{2n}x_n \geq r_2 \\ & && \vdots \qquad\qquad \vdots \\ & && a_{m1}x_1 + a_{m2}x_2 + \ldots + a_{mn}x_n \geq r_m \\ & && x_j \geq 0, \quad j = 1, 2, \ldots, n \end{aligned}$$

The formulation can be modified by including constraints such as upper bounds on the amounts of individual ingredients. This model is widely applied in making animal feed.

The second of these applications is called the *transportation problem:*

$$\begin{aligned} &\text{minimize} && c_{11}x_{11} + \ldots + c_{mn}x_{mn} \\ &\text{subject to} && x_{i1} + \ldots + x_{in} \leq a_i, \quad i = 1, \ldots, m \\ & && x_{1j} + \ldots + x_{mj} = d_j, \quad j = 1, \ldots, n \\ & && x_{ij} \geq 0, \quad i = 1, \ldots, m, \quad j = 1, \ldots, n \end{aligned}$$

which arises in the context of shipping but, in fact, finds use in other areas as well. In this case, a single commodity is to be "shipped" from m "origins" to n "destinations." At origin $i = 1, \ldots, m$, there is a supply of a_i units of the commodity. At destination $j = 1, \ldots, n$, there is a demand for d_j units of the commodity. To meet the demands from the supplies it is necessary that $a_1 + \ldots + a_m \geq d_1 + \ldots + d_n$. The cost of shipping a unit of the commodity from i to j is denoted c_{ij}. Under the assumption of linearity, the cost of shipping x_{ij} units of the commodity from origin i to destination j will be $c_{ij}x_{ij}$. The total cost is $c_{11}x_{11} + \ldots + c_{mn}x_{mn}$. The *assignment problem* is a special case of the transportation problem in which $m = n$ and $a_i = d_j = 1$ for all i and j. Feasibility considerations then force the "$\leq$" inequalities to hold as equations. The assignment problem arises in both minimization and maximization situations.

In addition to the aforementioned applications, one finds the computation of optimal mixed strategies in finite, two-person, zero-sum (matrix) games, problems of optimal blending, electric power dispatch, manpower planning, investment planning, and many more. Such topics are covered in George B. Dantzig's *Linear Programming and Extensions* (1963).

Standard Form For computational purposes, the constraints of a linear program are usually expressed as a system of linear equations in nonnegative variables. This is called *standard form.* Any legitimate linear program can easily be brought to standard form. Thus $a_{i1}x_1 + \ldots + a_{in}x_n \leq b_i$ becomes $a_{i1}x_1 + \ldots + a_{in}x_n + s_i = b_i$, with $s_i \geq 0$, and $a_{i1}x_1 + \ldots + a_{in}x_n \geq b_i$ becomes $a_{i1}x_1 + \ldots + a_{in}x_n - s_i = b_i$, with $s_i \geq 0$. Any variable x_j that is not sign-restricted can be replaced by the difference of two nonnegative variables: $x_j = x'_j - x''_j$. A variable x_j constrained to be nonpositive can be replaced by $\bar{x}_j = -x_j$.

Duality To every linear programming problem there corresponds a *dual problem* constructed from the same data used in a different way. The dual problem is again a linear program whose form depends on that of the given problem, which in this relationship is called the *primal problem.* Thus, if the primal problem is (2), the dual problem is:

$$\begin{aligned} &\text{minimize} && b_1y_1 + b_2y_2 + \ldots + b_my_m \\ &\text{subject to} && a_{11}y_1 + a_{21}y_2 + \ldots + a_{m1}y_m \geq p_1 \\ & && a_{12}y_1 + a_{22}y_2 + \ldots + a_{m2}y_m \geq p_2 \\ & && \vdots \qquad\qquad \vdots \\ & && a_{1n}y_1 + a_{2n}y_2 + \ldots + a_{mn}y_m \geq p_n \\ & && y_i \geq 0, \quad i = 1, 2, \ldots, m \end{aligned} \tag{3}$$

The dual of a linear program in standard form is like (3) except for the fact that its variables y_i are *free* (not sign-restricted).

These (and other) pairs of primal and dual linear programs are intimately linked in the following way.

Duality Theorem of Linear Programming Let X and Y denote the feasible regions of (2) and (3), respectively. Then

$$p_1x_1 + \ldots + p_nx_n \leq b_1y_1 + \ldots + b_my_m \tag{4}$$

for any $x \in X$ and any $y \in Y$. If equality holds in (4), then x and y are optimal solutions of their respective programs. Moreover, the primal problem has an optimal solution $\bar{x}$ if and only if the dual problem has an optimal solution $\bar{y}$; when this is the case, equality holds in (4). If the feasible regions X and Y are both nonempty, then both problems have optimal solutions. If only one of the two problems is feasible, then the objective function of that problem is unbounded in the direction of extremization.

Simplex Method The general formulation of the linear programming problem and the *simplex method* for its solution were advanced by the American mathematician George B. Dantzig (1914–2005) in 1947. This method

continues to be the main algorithm for solving problems of this class.

The simplex method works with linear programs in standard form and takes advantage of the fact that in order to find an optimal solution, it suffices to confine attention to the vertices of the polyhedral feasible region, X. Starting from a known vertex of X, the method generates a path along the edges of X as it moves from one vertex to an adjacent vertex. As long as "cycling" does not occur, the process is guaranteed to terminate after visiting finitely many vertices. When the algorithm finds an optimal solution of the primal problem, it reveals an optimal solution of the dual problem as well. However, it may happen that a vertex of X is not known in advance and will have to be found. Techniques are available for finding a vertex of X (if one exists) and for preventing cycling.

Sensitivity Analysis The optimal value of the objective function of an LP, say (2), depends on the input-output coefficients a_{ij}, the right-hand side constants b_i, and the objective function coefficients p_j. The study of how changes in these parameters affect the optimal value is called *sensitivity analysis* or *postoptimality analysis*. The most frequently used fact emerging from this kind of analysis is that (in the nondegenerate case) the rate of change of the optimal value z with respect to a change in the ith right-hand side parameter b_i equals the dual variable y_i corresponding to the ith constraint; in symbols $\partial z/\partial b_i = y_i$.

Large-scale Linear Programming Many practical applications engender very large-scale models, often running to tens or hundreds of thousands of equations and a million or more variables. Solving large-scale problems requires powerful computers and specialized algorithms that often exploit the structure of the coefficient matrix corresponding to the constraints. The decomposition principle of Dantzig and Philip Wolfe (1960) is of this type. It is intended for problems with block-angular structure in which there are many organizational units whose corresponding variables appear in a relatively small number of coupling constraints that represent the central administration and otherwise only in constraints that pertain to that unit.

NONLINEAR PROGRAMMING

An optimization model with an objective function or at least one constraint function that is not linear is called a *nonlinear programming problem* (NLP).

Nonlinearity can arise in many ways, thereby yielding diverse types of NLPs. The oldest and easiest to comprehend are *quadratic programming* problems, wherein the constraints are just like those of an LP but the objective function is quadratic (rather than linear). The first to identify (and name) this problem class was the economist Robert Dorfman (1916–2002) in his monograph *Application of Linear Programming to the Theory of the Firm* (1951). In analyzing production scheduling for monopolized products, the assumption of constant marginal production costs may not hold. As the monopolist's production increases, it may begin to saturate the market, thereby lowering the price at which products can be sold. Alternatively, the monopolist can restrict production in order to uphold the price of the product. Dorfman's model covers those cases where the firm produces m monopolized products jointly and where it faces linearly decreasing marginal revenues. When the prices at which the products can be sold are decreasing linear functions of the outputs y_i, such as $p_i(y_i) = f_i - g_i y_i$, where f_i and g_i are positive constants, the revenue from the sale of the output vector $y = (y_1, \ldots, y_m)$ is $\sum_{i=1}^{m} f_i y_i - g_i y_i^2 = (f_1 y_1 - g_1 y_1^2) + \ldots + (f_m y_m - g_m y_m^2)$.

The inputs to the n production processes are assumed to be $x_1, \ldots, x_n$ measured in monetary units. The input-output relations are assumed to be given by the linear equations $y_i = \sum_{j=1}^{n} h_{ij} x_j$, $i = 1, \ldots, m$. The sum of the x_j represents the cost of the production, so that $\sum_{i=1}^{m} (f_i y_i - g_i y_i^2) - \sum_{j=1}^{n} x_j$ is the profit resulting from an expenditure of $\sum_{j=1}^{n} x_j$ on the production. The equations $y_i = \sum_{j=1}^{n} h_{ij} x_j$ permit one to substitute for the y_i thereby obtaining the objective function in terms of the x_j alone. The x_j might need to satisfy linear constraints, such as (2). The result is then a linearly constrained maximization problem with a quadratic objective function, that is, a quadratic program.

Sometimes optimization problems arise in purely technical settings. For instance, it is often necessary to minimize the *distance* from a point $\bar{x}$ to a set X. When the measure of distance is the Euclidean metric and the set in question is defined through a system of linear inequalities, the resulting problem is a quadratic program with objective function:

$$\sum_{j=1}^{n} (x_j - \bar{x}_j)^2. \qquad (5)$$

Convexity and Convex Programming One of the most important concepts in linear and nonlinear programming is that of *convexity*. A set X is said to be *convex* if it contains the entire line segment between any two of its points. The *line segment* between the points u and v in a real vector space is $\{x : x = \lambda u + (1 - \lambda)v$, for all $0 \leq \lambda \leq 1\}$. All polyhedral sets (1) are easily seen to be convex. A function f defined on a convex set X is said to be convex there if the inequality $f(\lambda u + (1 - \lambda)v) \leq \lambda f(u) + (1 - \lambda) f(v)$ holds for all vectors $u, v \in X$ and all scalars λ satisfying $0 \leq \lambda \leq 1$.

All linear functions are convex. A notable example of a nonlinear convex function is the quadratic function given in (5). The nonnegatively weighted sum of a finite number of convex functions is again convex. A *concave function* is one whose negative is convex. In minimization problems, it is desirable to have a convex minimand defined on a convex set, in which case the problem is called a *convex program*. (In the case of maximization problems, one would analogously prefer a concave maximand defined on a convex set. Such problems are called *concave programs*.) The main reason for this is that local minima (maxima) in convex (concave) programs are global minima (maxima). This property need not hold in so-called *nonconvex programs*.

FIRST-ORDER OPTIMALITY CONDITIONS

In all optimization problems, it is essential to have a clear, testable definition of what is meant by the (local) optimality of a candidate solution to the problem. Since LPs and NLPs normally have infinitely many feasible solutions, it is important to know what extra conditions must be satisfied by those that are (locally) optimal. In the case of linear programming—where the simplex method is used—one essentially has information that reveals whether passage from a particular vertex to any adjacent vertex will improve the objective function value. If not, the vertex yields an optimal solution. This information is obtained by checking the signs of certain numbers in the algebraic representation of the problem.

In nonlinear programming, the matter is far less simple. A major tool used for finding a local minimum is the following result.

Theorem (Karush-Kuhn-Tucker Theorem) Suppose $\bar{x} = (\bar{x}_1, \ldots, \bar{x}_n)$ is a local maximum for the nonlinear program

$$\begin{array}{ll} \text{maximize} & F(x_1, \ldots, x_n) \\ \text{subject to} & g_i(x_1, \ldots, x_n) \le 0, \quad i = 1, \ldots m \end{array} \tag{6}$$

and that the functions $F, g_1, \ldots, g_m$ are differentiable at $\bar{x}$. If the gradients $\nabla g_i(\bar{x})$ of the constraint functions at $\bar{x}$ satisfy a suitable regularity condition (one such being linear independence of the gradients), then there exist multipliers $y_1, \ldots, y_m \ge 0$ such that

$$\nabla F(\bar{x}) = y_1 \nabla g_1(\bar{x}) + \ldots + y_m \nabla g_m(\bar{x}) \tag{7}$$

$$y_i g_i(\bar{x}) = 0, \quad i = 1, \ldots, m \tag{8}$$

Collectively, (7) and (8) are called the *Karush-Kuhn-Tucker (KKT) conditions*. Because $g_i(\bar{x}) \le 0 \le y_i$ for each i, the conditions (8) imply that at least one of y_i and $g_i(\bar{x})$ must be zero. Accordingly, these are called *complementary slackness conditions*. The *stationarity condition* (7) then says that, at a local maximum, the gradient of the objective function is a linear combination of the gradients of the constraints for which $g_i(\bar{x}) = 0$; the corresponding y_i are called *generalized Lagrange multipliers*.

It bears repeating that when the assumptions of the KKT theorem hold, conditions (7) and (8) necessarily hold. Since these assumptions do hold in most instances, the KKT theorem provides a mechanism for seeking candidate local maxima. In the absence of further hypotheses, it is not guaranteed that a solution of the KKT conditions will be a local maximum of the NLP. However, when the objective function and the constraint functions are all concave, a solution of the KKT conditions must be a global maximum of the optimization problem. In this instance, the KKT conditions are necessary and sufficient for the global optimality of $\bar{x}$. Beyond the first-order optimality conditions given above, there exist second-order optimality conditions, but the discussion of such matters exceeds the scope of this entry.

Lagrangian Duality Relative to (6) with feasible region X, there is the corresponding Lagrangian function $L(x, y) = F(x) - \sum_{i=1}^{m} y_i g_i(x)$.

From the Lagrangian function, one defines the *Lagrangian dual problem*, which calls for minimizing the function $\varphi(y) = \sup_{x \in X} L(x, y)$. An immediate consequence of this definition is $\sup_{x \in X} F(x) \le \inf_{y \ge 0} \varphi(y)$. If $F(x) = \varphi(y)$ where $x \in X$ and $y \ge 0$, then x and y are optimal for their respective programs. R. Tyrrell Rockafellar's *Convex Analysis* (1970) gives a comprehensive theory of duality for convex programming.

Nonlinear Programming Algorithms Nonlinear programs can differ greatly in the mathematical properties possessed (or lacked) by the functions through which they are defined. Examples of such properties include convexity and differentiability. NLPs whose constraint functions are *affine*, that is, of the form $a_{i1}x_1 + \ldots + a_{in}x_n - b_i$ for $i = 1, \ldots, m$, constitute a special class of which the quadratic programming problem is a notable member. Another property is that of problem structure: Some are very large and "sparse"; others are small and "dense." A dense problem is one in which each of the functions actually depends on a high percentage of the total set of variables. Some nonlinear programs include (linear or nonlinear) equations among the constraints. The methods used to solve NLPs tend to take advantage of problem characteristics, and for this reason, differ greatly from one another. Even so, they share some common properties.

A common feature of mathematical programming algorithms is their iterative nature. Starting from a trial solution x^0, a sequence of trial solutions $x^1, x^2, \ldots$ is generated until one of them, say x^k satisfies a specified crite-

rion indicating that it is an (approximately) optimal solution or that some other reason for halting the process holds. The steps of the algorithm constitute the process by which one passes from a given iterate to its successor. In some cases, this may entail the solution of one or more optimization subproblems. For linear programming and certain instances of quadratic programming, there are algorithms that generate a *finite* sequence of trial solutions ending with an optimal solution or evidence that none exists. Algorithms for nonlinear programming are more often *convergent* than finite. When the KKT theorem is applicable, the matter of finding a solution boils down to solving a system of equations (for which numerical methods are available). But before this can be done, it is necessary to try to identify exactly which equations need to be solved. The optimality conditions, and especially the information provided by Lagrange multipliers, play a large part in algorithmic strategies.

SEE ALSO *Hamilton's Rule; Linear Systems; Manifolds; Matrix Algebra; Maximin Principle; Maximization; Minimization; Nonlinear Systems; Objective Function; Optimizing Behavior*

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PROGRESS

Social scientists have historically concerned themselves with identifying patterns in the way people interact with their environment in order to account for factors that enhance both stability and change in society. This concern with the conditions that underlie the preservation and improvement of the human condition made the concept of *progress*—from the Latin *progredior*, meaning "a going-forward" or "advance"—an attractive analytical construct to the nascent social sciences in the nineteenth century.

While some scholars have traced *progress* back to classical Greece and Rome, most agree that, as an organizing concept in the social sciences, the concept derives its full meaning from specific developments in modern Europe. These included the growth of the physical sciences and theories of knowledge since the seventeenth century; the concern of eighteenth-century social philosophers with political, economic, and social reforms; and the influence of the biological model of evolution and a secular philosophy of history in the nineteenth century.

As early as the eighteenth century, the idea of progress marked a growing confidence in what many then believed to be the unlimited potential of science and human reason to create favorable conditions for improved human life. Following Auguste Comte's *positivism*, which sought to extend the empirical method of the natural sciences to the study of social processes, *progress* came to epitomize the conviction that, as in nature, developments in society were regulated by innate laws. Through a scientific study of society, these laws could be deduced and their interactions with other social phenomena could be modified to ensure a desired social outcome. On the one hand, this meant that civilization was moving through cumulative stages of improvement so that even catastrophes like wars, epidemics, and earthquakes came to be viewed as temporary reversals, even necessary evils, in a movement to a happy ending. On the other hand, it implied that human beings, equipped with scientific knowledge, could alter this movement to influence the quality or quantity of the end product. Social institutions such as schools, prisons, and hospitals serve this purpose of complimenting natural laws to enhance the knowledge, morality, and health of members of society. In his *The Idea of Progress: An Inquiry into Its Origin and Growth*, Irish historian John Bagnell Bury (1861–1927) famously captured the optimism of this view by defining *progress* as the belief that "civilization has moved, is moving, and will move in a desirable direction" (1920, p. 2).

Most importantly, *progress* provided the social sciences with a rational solution to the old problem concerning the causes, mechanisms, and ends of social change. Where in earlier times change was generally dreaded and attributed to chance or supernatural intervention, it

would thenceforth be viewed positively as the outcome of processes that could both be predicted and objectively verified. There were ideological differences among social scientists concerning the mechanisms of social change. For social conservatives like Auguste Comte (1798–1857), change proceeded in an orderly manner through rational interventions by an elite class of social engineers, while for radicals like Karl Marx (1818–1883), change was attributed to class conflicts. This general understanding of *progress* as both law-governed and subject to human manipulation remained central in the social sciences up to the twentieth century.

Contrary to the atmosphere of optimism that attended the birth of modern social institutions, however, world events in the twentieth century gave rise to strong doubts about the desirability of the direction of human civilization. Two world wars, particularly the atrocities in Nazi Germany, and a succession of liberation wars in European colonies led to such intellectual and political criticism of *progress* that by the middle of the century the concept had lost its earlier luster. Thus, while in the 1930s sociology textbook series in the United States still included a volume on *progress*, by the late 1940s the historian Sidney Fay (1876–1967), in his article "The Idea of Progress," would declare the concept "logically meaningless" (1947, p. 231). Even the first edition of the *International Encyclopedia of the Social Sciences* (1968) did not include *progress* as a separate entry.

Ironically, reconstruction efforts in the wake of the very events that led to the decline of *progress* invested a new set of concepts with some of the basic assumptions that the obsolescent *progress* had generated. The decolonization movements in the 1960s and 1970s fuelled internal hopes for economic growth, self-determination, and social justice in the former European colonies. In this context, progress meant catching up with former colonizing countries by improving conditions of living through mass education and expanded social service. The economic plight that soon besieged these newly independent countries led to increasing interventions by international financial institutions like the World Bank, with the goal of encouraging growth-focused economic policies. New concepts like *development, modernization*, and *structural adjustment* moved in to fill the conceptual space vacated by *progress*.

CONCLUSION: WHAT WENT WRONG WITH PROGRESS?

Criticisms of *progress* both predated and outlived the calamities of the twentieth century mentioned above. They ranged from theoretical challenges of its analytical purchase to political denunciation of the social implications of some of the assumptions it had generated. One of these assumptions was aptly expressed by the Marquis de Condorcet (1743–1794), who declared in his *Sketch for a Historical Picture of the Progress of the Human Mind* that "the perfectibility of man is truly indefinite" (1793, p. 211). In itself, the notion that human beings can improve is not controversial. It is the idea behind educational institutions. However, the uncritical extension of scientific methods to the study of social life effectively reduced the diffuse and fluid interactions of everyday life to patterned behavior. If human behavior follows a determinant blueprint whose laws can be identified, does this mean we can socially engineer people to behave in certain ways and not others? In the context of fascist regimes and other forms of dictatorships in the twentieth century, the question was more than merely rhetorical.

Some philosophers and historians of science have also pointed out that science and reason are themselves not disinterested tools of knowledge but they can be used to perpetrate prejudice and domination. In the wake of Nazi theories of racial superiority, for instance, the earlier suggestion by the eugenicist Francis Galton (1822–1911) that social conditions could be created to ensure improved racial characteristics in future generations created fears of racial genetic profiling and contributed to the decline of eugenics as a science.

Cultural evolution, or the idea that whole cultures develop along a line of progressive improvement from barbarism to modern civilization generated the assumption that European cultures were at the apex of this cultural progress. On the basis of this assumption, European colonization of other people was often justified as a humanitarian mission to accelerate or guide their civilization. The idea, central to *progress*, of a universal history or of history as driven by a single universal norm also generated the assumption that people in other parts of the world existed outside history until the arrival of Europeans on their shores.

Another important aspect of *progress* was the emphasis on rationality and scientific thought, which put human beings at the center of social progress as its rational movers. Earlier critics of this humanist assumption had attributed social progress to nonhuman forces, such as the structured relations of social classes for Marx and the social division of labor for Émile Durkheim (1858–1917). In art, literature, philosophy, and social sciences, other critics have portrayed the human being as alienated, insecure, fragile, brutal, emotional, and as just one part of a complexly structured reality. *Progress* as an analytical concept developed in an environment in which men were generally assumed to be the standard bearers of the human species. Feminist critics have highlighted the fact that ideas about the "unity of humankind" and "perfectibility

of human beings" were held contemporaneously with practices and beliefs that denied political rights to women.

While *progress* generated some questionable assumptions, it also highlighted our collective capacity to improve the conditions of our lives. Among its advocates were people like the American philosopher and educator John Dewey (1859–1952), who emphasized that progress meant improving the efficiency of social institutions that are set up to meet the needs of all members of society.

SEE ALSO *Development; Modernization; Positivism*

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PROGRESSIVE MOVEMENT

The Progressive movement is a broad label for the various economic, social, and political reform movements that took place in the United States between 1900 and 1914. Given the diversity among the reform efforts proposed or undertaken during this period, many scholars have disputed whether in fact this period should be treated as one common movement. It is true that many progressive Americans at the turn of the century supported a wide variety of reforms with different and sometimes irreconcilable goals. Nevertheless, the tendency to regard this period as a common whole is generally justified by the fact that the majority of reformers identified the same problems in America despite the wide variety of solutions they proposed. Throughout the Progressive Era, a common concern sets the tone for nearly every discussion of economic, social, and political policy: an uneasiness in the population brought about by the dramatic development of modern industry and the material and social changes it wrought in the lives of average citizens. Because of the substantial changes incurred from the emergence of large-scale mass production, the centralization of industry, the demand for greater specialization in labor, and the rise of new modes of transportation and communication, the landscape of the nation seemed suddenly transformed from a simple country of small, tightly knit communities into a complex giant of interspersed economic activities. In this new environment, the relationship of the individual to the broader economic, social, and political community took on an entirely new form.

As the United States entered the twentieth century, many progressives argued that the nation's institutions and fundamental beliefs about the nature of government lagged behind the country's dynamic economic and social growth. Railroad development had extended to nearly 200,000 miles and engulfed the nation in a dense network of trunk lines that had transformed its relatively autonomous communities and states into a single body of fluid commerce. According to many progressives, democracy had not kept pace with the national economic development of the industrial era due to its outdated understanding of federalism and the system of constitutional checks and balances. Many progressives thought that doctrines such as federalism, property rights, and separation of powers had rendered governments so inept that when state legislatures did pass regulations they proved harmful to both customers and the efficiency of business and industry, particularly railroad operations. Federal land grants to railroads and farmers during the late 1800s, made with very few contingencies out of deference to federalism, had led to reckless speculation by farmers and land owners, leaving the natural resources of the country in disarray. The rise of mass production in the steel, lumber, flour, textile, and meat industries had a major economic impact on the services provided by artisans, local mills, and jobbers, demanding an entirely new breed of legislation and regulation to handle the complex arrangements of modern industry.

The difficulty in regulating these corporations was most dramatically expressed in the case of *United States v. E. C. Knight Co.* (1895). Although E. C. Knight, a Philadelphia-based sugar-refining company, had consolidated nearly 98 percent of the nation's sugar production, the U.S. Supreme Court held that refining was manufacture, not commerce, and thus could not be regulated under the interstate commerce clause of the U.S. Constitution. Distinctive to the Progressive Era was the belief that these obstacles to reform were not the result of temporary misjudgments by legislators or judges, but permanent defects in the institutional arrangements of American government.

From the political dilemma of government in a postindustrial age, progressivism developed along two lines: reformers bent on accomplishing concrete changes in the American system of government on the local, state, and federal levels, and intellectuals concerned with providing a revised notion of political life based on a new conception of human nature. As an intellectual move-

ment, the Progressive Era was an intensely active period of new ideas among a diverse body of thinkers from many fields of expertise. Despite their differences, almost all of these intellectuals raised doubts about the fundamental tenets of American political thought. In contrast to the fixed principles of human nature—the self-evident truths of equality and rights articulated in the Declaration of Independence—the progressives believed that a basic understanding of human nature involved a more fluid conceptual framework, such as the concepts implied in Charles Darwin's (1809–1882) theory of evolution.

The impact of Darwin's *Origin of Species* (1859) in social theory had raised serious questions about whether human beings were indeed created equal and endowed from birth with certain "unalienable rights." Social Darwinists, as they came to be known, denied that human nature could be understood from such axiomatic principles, and some even challenged the fundamental political maxim that followed: governments derive their just powers from the consent of the governed. Enamored of the concept of natural selection and "survival of the fittest," a new generation of scholars following the seminal work of William Graham Sumner (1840–1910) argued that political life ought to be geared toward the elevation of more talented individuals over less gifted or educated members of society, regardless of individual consent. Thinkers like the economist Irving Fisher (1867–1947), Sumner's doctoral student at Yale, had even made the case for eugenics and the sterilization of the mentally infirm. Others, like John Dewey (1859–1952), while concurring with the basic premise of social Darwinism, contended that survival depended not on the elevation of certain individuals, but on a collective effort by all to overcome threats posed to the collective interests of the whole.

This theoretical debate over human nature had implications for the political direction of the reform movements. While some progressive intellectuals believed that the emergence of powerful corporations constituted a positive development, in which more-efficient entities capitalized on their superior capability over less-efficient organizations and modes of production, others argued that these corporations presented a challenge to the common welfare. Such a challenge could only be met by reforms in law and the country's institutions of government.

THE ACHIEVEMENTS OF PROGRESSIVISM

While it is true that progressives never achieved the passage of constitutional amendments that equaled the breadth of their criticism, the movement did manage to spur a number of significant reforms at the local, state, and national levels of government. Such reforms sought to bring American government to a level of parity with the modernization that had taken place within civil society.

Municipal Reforms Progressivism was initially most successful at the level of municipal reform. Many American cities during the early twentieth century suffered from mismanagement and corruption. Under the control of party bosses and public utility magnates, city aldermen were often the stooges of special privilege rather than the guardians of urban health and safety. Through a series of reform efforts, urban dwellers managed to eliminate the most obtrusive corruption in their cities. Citing partisan politics as the main obstacle to triumph over corruption, many municipalities introduced such progressive reforms as the initiative, the referendum, and the Australian ballot to encourage greater civic participation and weaken the strong arm of political bosses. Other cities, however, took more dramatic steps during this period by replacing potentially corruptible politicians in city government with so-called nonpartisan experts in urban management.

These two approaches to municipal reform illustrate how the movement's diverse and even contradictory efforts aimed at solving the same problems. Some progressives hoped to eliminate corruption through increased democratic methods, such as the initiative. Others embraced the new methods of scientific management codified by Frederick W. Taylor (1856–1915), author of *The Principles of Scientific Management* (1911), a work that spurred a movement for greater efficiency and expertise in all aspects of American life, including politics, as illustrated in such municipal reforms as the adoption of the post of city manager. While the above proposals differed, they shared the common view that democratic politics as traditionally practiced in the United States had led to corruption under the new demands of modern industrialism.

State Reforms Though less successful than municipal reformers, progressives at the state level could boast of major accomplishments in a number of states. As Wisconsin governor from 1901 to 1906, Robert M. La Follette (1855–1925) was probably the nation's most ambitious progressive reformer, championing such state causes as railroad rate reform, procedural reforms in the legislature, progressive taxation, the open primary system, and the direct election of U.S. senators. William S. U'Ren (1859–1949) pioneered the use of the initiative, recall, and referendum in Oregon, while Hiram Johnson (1866–1945) in California successfully campaigned for the popular election for U.S. senators and to permit candidates to register with more than one political party. Other states achieved numerous reforms aimed at greater efficiency in the administration of state governments, particularly in the area of executive and bureaucratic reorga-

nization. By adopting higher standards for admission to civil service positions and organizing administrative offices in state government to attract greater expertise, many states were able to reduce waste and corruption, which had been an obstacle to the effective regulation of their economies.

Federal Reforms While progressivism did not produce the realignment in national politics that many political leaders had hoped for, the period did compile an impressive record of legislation at the federal level. These reforms would redefine relations between the national government and the country's economy.

One of the most notable transformations in the role of the government in the nation's economy began in 1902 as Theodore Roosevelt's (1858–1919) administration pioneered the federal conservation reform movement under the Newlands Restoration Act (1902), which empowered the federal government to regulate the country's natural resources with the help of experts in resource management. Like many progressive reforms, proponents of these changes also hoped to use the conservation movement as a means of introducing nonpartisan scientific expertise into the government's management of the economy. Under Roosevelt, and later even more vigorously under Howard Taft (1857–1930), the trusts that had for years operated in violation of the antimonopoly provisions of the Sherman Antitrust Act (1890) were prosecuted by the federal government. By 1914 the Sherman Antitrust Act was strengthened by the passage of the Clayton Antitrust Act (1914), which prohibited discriminatory pricing, conditional sales intended to dilute competition, mergers and acquisitions that inhibit competition, and interlocking directorates. Like the reforms in conservation, the Clayton Antitrust Act was designed to incorporate nonpartisan expertise into the government's regulation of the economy. To enforce the provisions of the Clayton Antitrust Act, Congress created the Federal Trade Commission (FTC) in 1914. The FTC would be staffed with five commissioners appointed by the president, with the advice and confirmation of the Senate. Rather than specifying the type of anticompetitive activities that would be prohibited, as the Sherman Antitrust Act had done, the FTC was granted the power to determine what kind of activity was harmful to the interests of the national economy, and could regulate accordingly.

Between 1903 and 1906 the federal government also made progress toward mitigating concerns over the power of the railroads and their discriminatory practices in favor of big business. In 1903 Congress passed the Elkins Act, which prohibited rebate schemes responsible for discriminatory shipping prices that angered economically disadvantaged farmers. In 1906 Theodore Roosevelt successfully negotiated the passage of the Hepburn Bill, which gave the Interstate Commerce Commission power to set maximum railroad rates. Besides remedial legislation addressing economic inequalities among the public, the federal government also began protecting the health and safety of consumers. Congress passed the Meat Inspection Act (1906), which required health inspections for food-processing plants, and the first Food and Drug Act (1913), which required companies to clearly label the ingredients and contents of their products.

Not only did government expand its reach within civil society during this period, it also released its grip on foreign trade, in contrast to previous regulations that had worked to the disadvantage of consumers. Under the administration of Woodrow Wilson (1856–1924), Congress repealed much of the tariff support for American industries with the passage of the Underwood Tariff (1913), which stripped many industries of the economic advantages they enjoyed under the former system.

Although constitutional reforms fell far short of progressive aspirations, two important amendments were passed during this period. Both the Sixteenth Amendment establishing Congress's power to legislate for an income tax and the Seventeenth Amendment for the direct election of U.S. senators were ratified in 1913. Establishing a progressive income tax fit the long-term reform goal of equalizing the burden of federal revenue and easing the sectional antipathy that had arisen from debates over the tariff. The direct election of senators satisfied the more democratic strain of progressivism, which aimed at introducing greater democratic participation into the choosing of the nation's elected officials; reformers hoped that politicians who were beholden to party machines in state legislatures would be removed from office.

Despite its achievements, progressivism ultimately waned as a movement in the United States when the public's attention shifted to the international concerns of World War I (1914–1918). Another explanation for the demise of the movement may have been its breadth as an umbrella for many different types of reform. Unable to identify a coherent purpose among the many ideas for political reform in the age of industrial modernization, progressives could not sustain the public attention necessary to effectuate a major realignment in American politics.

SEE ALSO *Antitrust; Antitrust Regulation; Eugenics; Fisher, Irving; Inequality, Wealth; Labor Union; Modernization; Monopoly; Populism; Progressives; Public Health; Railway Industry; Regulation; Sanitation; Social Movements; Suffrage, Women's; Taylorism; Urbanization; Wilson, Woodrow*

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PROGRESSIVE TAXES

SEE *Taxes, Progressive.*

PROGRESSIVES

Progressives are people who strive to make government and society better—more democratic, more inclusive, and fairer. Toward this end, progressives engage in a broad range of activities aimed at reforming economic, social, and political institutions and processes. The term *progressive* encompasses a diverse and difficult–to-characterize variety of groups and ideologies. In general, progressives are activists who thrived during two periods in American history: The first progressive period ran from the 1890s to the 1920s; the second ongoing progressive period began in the 1960s.

THE PROGRESSIVE ERA

America's first period of progressivism, known as the Progressive Era, came at the height of industrialization and urbanization in the United States. Although the goals and the types of reforms that progressives sought during this period differed, perhaps nothing characterizes the Progressive Era better than the impulse to reform. At the time, the United States was characterized by the increasing dominance of large corporations and political party machines, which progressives perceived as a threat to the American ideals of democracy and individual freedom. Corporate dominance inhibited the capacities of the vast majority of Americans to achieve social mobility, and urban-based political party machines were seen as corrupting the democratic process.

In response, progressives challenged laissez-faire ideology by arguing that good government could help solve problems. Progressives promoted, often successfully, a long list of reform legislation at all levels of government, including regulation of railroads, public utilities, and banks; laws protecting women and child laborers; and the passage of workers' compensation and minimum-wage legislation. Progressives also worked for a progressive income tax; relief for the poor; a host of electoral reforms, including the direct election of senators, direct primaries, referendums, and recalls; voting rights for women; nonpartisan election systems; civil service; and commission-manager and council-manager forms of local government. Such reforms aimed at strengthening popular sovereignty and produced significant and lasting results, even if some reforms did not lead to intended outcomes.

Progressivism had its roots in the populist movement of the late nineteenth century, as well as the struggles for equality for women and better living conditions for workers. Similar to the response of radical agrarian and working-class groups during the Gilded Age, progressives targeted many of the same problems wrought by industrialization, urbanization, and immigration: the spread of poverty, rapid financial and industrial concentration, and the oligarchic character of the political parties.

As the power of corporations expanded and social strife spread, middle-class social workers established settlement houses and other programs to ameliorate human degradation in city slums. Muckrakers, or investigative journalists, illuminated the corruption of corporate influence in politics and society. Religious groups promoted a social gospel that raised concerns about poverty, corruption, and the concentration of economic power and called on the moral conscience of the nation. Labor unions and workers organized to improve wages and working condi-

tions, and to make business more responsible through regulation. Women organized against child labor, in support of a minimum wage and a maximum number of working hours, and in favor of temperance. Even businessmen joined progressives in attacking political machines and promoting reform regimes. Thus, progressivism included professionals who undermined the foundations of laissez-faire ideology and promoted an ideal of public interest.

Yet progressivism was an uneasy coalition and not a cohesive movement. Progressivism during this period actually encompassed numerous movements for reform on the local, state, and national levels. These movements were diverse and sometimes even mutually antagonistic. Some progressives, such as socialists, sought fundamental change and structural reform to achieve social justice. Other progressives, such as middle-class professionals, strove for social order and more modest reform. Similarly, Protestant patrician reformers differed in their goals, approach, and sensibilities from Catholic, immigrant, and urban liberal progressives. There were also overtly reactionary groups involved in Progressive Era reform efforts, including eugenicists and antiblack and anti-immigrant groups. Thus, the Progressive Era was an ideologically fluid period where particular groups focused on different issues, and shifting coalitions competed to reshape American society. Despite their varying agendas, shared ideals of antimonopolism, efficiency, and social justice propelled and sustained the diverse progressive reform coalitions.

For example, new types of professionals—members of an emerging middle class, and members of religious organizations and business groups—pressed for reforms that focused in particular on urban America. These progressives strove to undermine big-city political machines, which had in many cities retained the loyalty of immigrant working-class voters. Middle-class reformers regarded political machines as inefficient and corrupt, and they attacked the use of government resources as patronage—whether in the form of jobs for loyal party workers and supporters, or the distribution of municipal franchises, licenses, and contracts to favored businesses, sometimes in exchange for graft. Protestants attacked the tolerance of urban politicians for gambling, prostitution, and liquor, vices that offended middle-class sensibilities. The faith of progressives in scientific organizational principals led them to propose independent governmental institutions staffed by nonpartisan experts.

Labor and radical socialist groups attacked political machines for other reasons, such as the practices of allowing business groups to dominate economic policymaking and using police forces to break strikes. These socialist progressives fought to rein in corporate power and broaden government authority to improve education, expand social and municipal services, and advance social justice.

More often, however, progressive reform outcomes represented the interests of middle- and upper-class Americans. Middle-class reformers undermined working-class political power by backing the creation of independent commissions and boards that eliminated important powers from city councils and aldermen (city council members). These reformers also advocated the election of officials from neighborhood-based wards and the establishing of at-large schemes of political representation. Middle- and upper-class progressives also revised city charters and promoted new forms of government that shifted power to higher levels that they could more easily influence. Such reforms included implementing a commission form of government and a city-manager system. Some reform efforts during this period also reflected middle-class bigotry. Anti-immigrant groups, for example, were responsible for drastically reducing the flow of newcomers that could enter the United States and restricting the proportion of non–Western European immigrants allowed to enter. Advocates of eugenics employed pseudoscientific methods in their reform efforts.

Despite the antibusiness stance of most progressives, they rarely questioned the basic structure of capitalist principals as vigorously as working and radical groups did. On the contrary, when the expansion of the public interest implied extending democracy to social as well as economic life, many progressives were ambivalent. Worker- and socialist-led movements, however, pushed the progressive critique further.

Politically, progressives allied themselves with particular factions of both the Democratic and Republican parties. Some progressive activists also mounted independent and third-party challenges. At the national level, progressives rallied behind Teddy Roosevelt (1858–1919) in 1912 as he ran for a second full term as president, this time as an independent under the Progressive Party ("Bull Moose") banner. During his campaign, Roosevelt championed greater regulation of capitalism. In 1924 Robert M. La Follette Sr. (1855–1925), a U.S. senator from Wisconsin, ran for president as the Progressive Party candidate. La Follette, whose politics were more left wing, called for public ownership of the railroads during his campaign. Overall, progressives were more successful at the state and local levels, where they succeeded in electing members of the U.S. Congress, including Moses P. Kinkaid of Nebraska and Hiram W. Johnson of California, as well as scores of state legislators, and city officials.

The Progressive Era left an enduring legacy. Progressives promoted an ethos for harnessing government power to promote the public interest, which laid the

foundation for the active participation of government in solving social problems that would emerge during the 1930s and 1940s in the New Deal of Franklin D. Roosevelt (1882–1945). Many of the changes to law and government structures born during the Progressive Era remain in force at the beginning of the twenty-first century.

CONTEMPORARY PROGRESSIVES

Like their historical counterparts, the progressives who emerged during and after the 1960s criticize the concentration of economic and political power and engage in a broad range of activities aimed at making the economy more democratic and government more representative, responsive, and accountable. To achieve these goals, progressives fight against inequality and for social justice, and seek to foster ways ordinary citizens can more directly participate in decision making and self rule at all levels.

Contemporary progressives are associated with the social movements of 1960s, including the civil rights, Black Power, antiwar, youth, and countercultural movements, as well as later movements centered on women's rights, labor, the environment, immigrant and human rights, gay and lesbian rights, antiglobalization and global justice, and peace. Contemporary progressives often try to form connections among the various struggles, an orientation embodied in a popular slogan: "think globally, act locally."

Many progressives embrace left-wing or radical ideologies, including Marxism and anarchism. Many contemporary American radicals prefer the term *progressive* because it is safer and more palatable than *socialist* and *communist.* Contemporary progressives contend that a better future is possible, and they strive to create a radically egalitarian, community-controlled world that meets human needs through environmentally sustainable development. They target multinational corporations and international institutions, such as Wal-Mart and the World Trade Organization (WTO), and they engage in a variety of tactics to achieve their goals, from lobbying and nonviolent civil disobedience to militant protest and outright rebellion. Their efforts often incorporate new communications technology, and they have developed innovative strategies and political savvy.

In many ways, these contemporary progressive organizations model a progressivist vision in that they are comprised of many participants with few leaders. In addition, progressive coalitions embody groups that have not always seen eye to eye, including labor union members, immigrants, civil rights leaders, anti-sweatshop activists, environmentalists, human rights advocates, socialists and anarchists, and middle-class professionals. Progressives have spearheaded campaigns to achieve living-wage laws, advance public health, provide affordable housing, and protect the public sector and space. Contemporary progressives cross borders and continents, and are made up of participants from both the developing and developed worlds. They criticize the prevailing philosophy that governments should make way for the free market's invisible hand, arguing that free trade is not always fair trade. In short, progressives attempt to think—and more importantly, act—beyond present-day predicaments, and they strive for a stronger democracy with greater citizen involvement in problem solving. Only then, they believe, will real equality and social justice be achieved.

Politically, American progressives have formed or allied themselves with various third political parties, including the Green Party, the Reform Party, and the Labor Party. These groups have supported such independent-minded candidates as Ralph Nader, Bernard Sanders, Paul Wellstone, Barbara Boxer, and Dennis Kucinich.

SEE ALSO *Gilded Age; Populism; Progressive Movement*

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Ronald Hayduk

PROLETARIAT

The English word *proletariat* is derived from the Latin *proletarius*, first used in the sixth century BCE to designate a census category encompassing those without property,

who it was supposed could only contribute their sons to the state (*proles*=offspring). The Latin term (and its equivalents in other languages) came to refer to the poorest class of nonslaves and to paupers. In the early nineteenth century, however, *proletariat* began to acquire a more precise meaning, and by the 1830s it was often used to refer to the newly emerging class of wage laborers in capitalist societies, formed by the expulsion of much of the peasantry from the land.

MARX'S THEORY

It is in this more precise sense of those who do not possess their own means of production, and who must therefore labor for others for a wage in order to make a living, that political philosopher Karl Marx (1818–1883) began to use the term in the 1840s. Marx saw the proletariat as a "universal class," in the sense that its social position drives it toward the overthrow of capitalist relations of production, which he believed would bring about the end of all forms of exploitation and oppression, and thus universal human emancipation.

Marx wrote in the *Communist Manifesto*, "Society as a whole is more and more splitting up into two great hostile camps, into two great classes directly facing each other: bourgeoisie and proletariat" (Gasper 2005, p. 40). The bourgeoisie, or capitalist class, consists of the relatively small number of people who own or control the means of creating wealth—including land and raw materials; mines, factories, and offices; machinery and technology—and who can employ wage laborers to work for them. Proletarians perform most of the work in capitalist economies, but they have little or no control over their work-lives or over the wealth that they produce. The relationship between the bourgeoisie and the proletariat is an exploitative one because the latter is paid less than the value that its labor creates, with the surplus being kept by the bourgeoisie. While wages may rise if workers are well organized and during periods of economic growth, competition between capitalists compels employers to reduce labor costs as much as possible, particularly during recurring periods of capitalist economic crisis.

During Marx's lifetime, wage laborers constituted a majority of the working population only in Great Britain, some other parts of northern Europe, and the northeastern seaboard of the United States, with the vast majority of the world workforce still peasants engaged in small-scale rural production. Today, by some estimates, wage laborers are a majority of the world's population. However, it was less its size than its structural and strategic location that made the proletariat important for Marx. Marx believed that antagonism with the bourgeoisie leads proletarians to organize themselves into trade unions and other forms of association. Because workers in modern capitalism are concentrated in urban centers and in large workplaces, they have enormous social and economic power when organized, exhibited in their ability to bring whole economies to a halt through the weapon of the mass strike. By contrast, what Marx called the *lumpenproletariat* (literally the proletariat in rags, i.e., those sections of the population permanently or near-permanently excluded from the workforce), lacks this power and is therefore not a revolutionary class, although it is more oppressed than the proletariat. Even where wage laborers are a minority, their structural position gives them the ability to draw wider social circles into struggle under their leadership, including the majority of the peasantry.

In the course of the struggle to protect their interests, proletarians are repeatedly led to challenge bourgeois institutions (for instance, by ignoring legal restrictions on strike action) and to question the general framework of bourgeois ideas that confers legitimacy on the status quo. As the movement develops, Marxist theory contends that class-consciousness increases among workers and narrow economic demands give way to broader political ones. At the same time, divisions within the class—based on sectional interests, nationality, race, ethnicity, and so on—will tend to be overcome. If carried to a successful conclusion, this process will culminate in the revolutionary overthrow of the bourgeoisie. The proletariat will replace the bourgeoisie as society's ruling class and begin instituting changes that will gradually lead to the elimination of class divisions entirely.

CRITICISMS OF MARX AND THE PROLETARIAT TODAY

Critics generally raise two kinds of objection to Marx's account of the proletariat. One is that the proletariat in Marx's sense has declined in importance as capitalism has developed. It is certainly true that the structure of the workforce in developed capitalist countries has changed dramatically since the mid-nineteenth century, and the proportion of factory and manufacturing workers has been declining for decades. But while Marx often emphasized the role of the industrial proletariat, this is only one segment of the capitalist working class, and as its relative size has shrunk, the size of other segments has grown. Moreover, segments of the workforce that had not previously been regarded as parts of the working class (such as teachers and office workers), have found their work increasingly routinized and controlled by their employers, and have often unionized in response. It should also be noted that on a global scale the number of industrial workers is greater than ever, and that even in developed countries they may continue to play a disproportionately important role in the working-class movement.

The second objection is that wage laborers, at least in the advanced capitalist world, have benefited enormously from economic growth, and—even if still technically exploited—no longer have an interest in the revolutionary overthrow of capitalism, if they ever did. Contemporary Marxists acknowledge the large rise in living standards, although they are likely to emphasize the role of class struggle in achieving them and the fact that they are far from evenly distributed. More importantly, they argue that the gains should not be regarded as permanent, that capitalism is inherently unstable, and that its continued turbulence will bring about new economic, social, and environmental crises. On this view, it is because such crises are unavoidable, and because they will make life for the majority of wageworkers unacceptable, that the proletariat retains its revolutionary potential.

SEE ALSO *Capitalism; Lumpenproletariat; Marx, Karl; Marx, Karl: Impact on Economics; Marxism; Revolution; Surplus; Unions; Wages; Working Class*

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Philip Gasper

PROLIFERATION, NUCLEAR

Although recent events pose serious challenges to international efforts to limit the global spread of nuclear weapons, the nonproliferation regime is by many measures a great success. Despite pessimistic past projections that the world would by now contain twenty, thirty, or more nuclear weapons states, only three countries have joined the five nuclear weapons states acknowledged by the nuclear Non-Proliferation Treaty (NPT) in 1968 in openly declaring their status. As the cornerstone of international efforts to limit the spread of nuclear weapons, the NPT is unusual in two respects. First, in contrast to virtually all international treaties, it is discriminatory by design. The treaty recognizes and locks in inequality by regulating access to powerful weapons. Second, despite inequalities in rights and obligation, membership has grown to make the NPT the most widely ratified arms-control agreement in history, with 187 parties. In 2006, the only countries in the world remaining outside the treaty were India, Israel, and Pakistan (although North Korea declared its withdrawal in 2003). However, in recent years the regime has faced its greatest challenges, ranging from the potential emergence of new nuclear weapons powers to the apparent disinterest of the United States in the NPT.

THE NUCLEAR NON-PROLIFERATION REGIME

The impetus for the NPT grew out of dissatisfaction with the "Atoms for Peace" policies promoted by U.S. president Dwight D. Eisenhower's administration during the 1950s. Under this program the United States offered unrestricted access to nuclear fuel in exchange for the promise that it be used only for peaceful purposes. The Atoms for Peace framework established the core bargain that would underpin the NPT: Countries that give up the military potential of the atom should be able to enjoy the full peaceful benefits of it. Oversight tasks were vested in a United Nations (UN) agency created to monitor Atoms for Peace transfers: the International Atomic Energy Agency (IAEA).

However, shortcomings in the Atoms for Peace/IAEA framework soon became apparent. By focusing only on nuclear materials transferred explicitly under specific agreements, the arrangement neglected to regulate technology, material, and knowledge developed indigenously (or copied from transferred material). At the initiative of the United States, Soviet Union, and United Kingdom, a new framework designed to monitor and regulate all nuclear material was negotiated. This became the nuclear Non-Proliferation Treaty, which opened for signatures in 1968 and entered into force in 1970. A grand bargain forms the core of the NPT: In exchange for forgoing nuclear weapons, nonnuclear weapons states gained access to technology necessary for nuclear energy and secured a commitment from the nuclear weapons states "to pursue negotiations in good faith" aimed at nuclear disarmament. The treaty thus strives to stem both horizontal proliferation (the spread of weapons beyond the five nuclear weapons states acknowledged by the treaty: the United States, Soviet Union, United Kingdom, France, and China) and vertical proliferation (by reducing the arsenals of these five). Article X of the treaty allows a party to withdraw from the treaty if "extraordinary events" jeopardize the "supreme interests of its country." All other parties of the treaty and the UN Security Council must be notified three months prior to withdrawal. The NPT has a supply-side orientation aimed at regulating the use of nuclear technology, with relatively little concern for reducing the demand for nuclear weapons. To the extent that states

desire nuclear weapons to gain security and prestige, the NPT does relatively little.

SAFEGUARDS AND EXTENSION OF THE TREATY

The NPT established a set of international safeguards to obstruct the diversion of nuclear material and technology from energy to weapons programs. Administered by the IAEA, safeguards entail the monitoring and inspection of material and facilities declared by the signatory state. Iraq exposed the loophole in this arrangement by limiting its weapons-related activity to clandestine, undeclared facilities that remained outside the IAEA's inspection regime. To close this loophole, the IAEA obtained an expanded legal mandate in the form of an additional protocol providing inspectors with the authority to visit any and all facilities, declared or not. First available for signature in 1997, the Additional Protocol remains voluntary; members are encouraged, but not required, to sign. As of 2006, 78 Additional Protocol agreements are in force, and 110 states have signed them.

Although central to the treaty, safeguard arrangements are not backed by an effective enforcement mechanism. The IAEA itself can only suspend technical assistance to a country in violation of its safeguard agreements. To pursue stricter measures, the IAEA must refer a noncomplying country to the UN Security Council, which can choose to impose further sanctions. These range up to and include military intervention if action is taken under Chapter VII of the UN charter, which permits military intervention by other states in the face of a threat to international peace and security. However, the difficulty of achieving consensus in the Security Council—where each of the five nuclear weapons states (NWS) holds a veto—makes vigorous enforcement unlikely.

India's "peaceful nuclear explosion" in 1974 exposed another weakness in the NPT-based nonproliferation regime by demonstrating that nuclear technology transferred for peaceful uses could easily be misused. In response the United States proposed forming the Nuclear Suppliers Group (NSG), a group of nuclear technology exporters that seeks to control the export of nuclear materials, equipment, and technology. Growing from an initial membership of seven in 1975 to forty-five in 2006, the NSG had the advantage of including countries not party to the NPT (at the time of its origin including France, who, along with China was given NWS status but had refused to sign until 1992) and regulating exports to all countries. However, Pakistan's nuclear weapons program revealed two shortcomings in the NSG: National exports were weak at blocking transfer of subcomponents, and countries varied widely in the vigor with which they regulated exports.

In 1995 after month-long negotiations, the NPT extension conference adopted a motion to extend the treaty indefinitely. Although successful, the negotiations revealed divisions among members, most notably dissatisfaction among many non-nuclear powers at the limited progress of the NWS in reducing their own arsenals. Responding to these concerns, the conference adopted a "Principles and Objectives" calling for the completion of a Comprehensive Test Ban Treaty, the conclusion of a fissile material cut-off treaty, and the "determined pursuit" by the NWS of efforts to reduce nuclear arsenals. The extension conference also established a strengthened review process in which conferences to promote full implementation are held at five-year intervals. The first review conference in 2000 called once again for the "unequivocal undertaking" by the NWS of steps toward reducing their nuclear arsenals. Divisions among members had grown so great by the time of the 2005 review conference that members were unable even to agree on an agenda.

POST–COLD WAR CHALLENGES

The immediate aftermath of the cold war brought both peril and promise in terms of the spread of nuclear weapons. The collapse of the Soviet Union created three new nuclear powers overnight in 1991, as Belarus, Kazakhstan, and Ukraine inherited the nuclear weapons that had been stationed in their territories. Moreover, many scholars believed that the combination of security guarantees and restraint provided to their allies by the United States and the Soviet Union during the cold war had limited the spread of nuclear weapons. Removal of these guarantees and restraints, it was feared, might increase the demand for nuclear weapons. Finally, economic distress, rampant crime, and widespread corruption in Russia fed fears that some of its 27,000 nuclear weapons and large stock of weapons-grade uranium and plutonium would find their way to either terrorists or non-nuclear states.

Yet in the first years after the cold war, the promise seemed to outweigh peril. Belarus, Kazakhstan, and Ukraine all returned their weapons to Russia and joined the NPT. South Africa, which had accumulated a small nuclear arsenal, renounced its weapons and joined as well. France and China joined in 1992. And in response to the revelations of Iraq's circumvention of the safeguard regime, NPT members strengthened inspections, established the Additional Protocol, and extended the treaty indefinitely. Finally, North Korea's attempt to leave the NPT and acquire nuclear weapons appeared defused by the 1994 Agreed Framework accord with the United

States. Contrary to most expectations, by the mid-1990s there were still only five overt nuclear powers (although Israel, India, and Pakistan had unacknowledged weapons capabilities), the number of countries pursuing weapons was falling, and the NPT had become nearly universal.

CURRENT PROSPECTS

Recent years have seen new challenges emerge, exposing weaknesses in the nonproliferation regime. The decision of India and Pakistan to test nuclear weapons in 1998 heightened concerns about the three nuclear weapons powers that remain outside the NPT (although Israel does not publicly declare its nuclear weapons status, its nuclear capabilities are widely acknowledged). The three non-NPT nuclear powers are problematic because many countries joined the NPT on the belief that no other countries would openly declare nuclear status. If states successfully retain nuclear weapons outside the treaty, the incentives for members to exercise restraint become ineffective.

The apparent efforts of Iran and North Korea to pursue nuclear weapons from within the treaty pose an even more serious challenge. North Korea detonated a nuclear device in October 2006, and Iran is widely believed to be pursuing nuclear weapons. Both appear to be taking advantage of a key feature of the NPT: Countries can master the nuclear fuel cycle within the treaty and then withdraw to take the final steps in developing nuclear weapons. Obtaining weapons-grade fissile material—highly enriched uranium-235 or plutonium-239—is the only really serious obstacle to developing nuclear weapons. Yet the treaty facilitates mastery of the skills and technology necessary to enrich uranium and to separate plutonium from spent fuel. Once these tasks have been mastered, it is a short step from peaceful activities to producing weapons-grade material. The treaty thus bars countries from making nuclear weapons while providing them with much of the means to do so. Although this tension has long been recognized, no state appears to have pursued this path except North Korea and, perhaps, Iran. If North Korea and Iran acquire an open nuclear weapons capability, it may spur other countries to leave the NPT and also pursue weapons; Japan, South Korea, Saudi Arabia, and Egypt are frequently suggested as possibilities.

The revelation in 2003 that Pakistani nuclear scientist A. Q. Khan, who headed Pakistan's nuclear program for almost twenty-five years, had been running a private proliferation network for the export of nuclear technology exposed further weaknesses in the nonproliferation regime. Most of the efforts to control the spread of nuclear technology, such as the Nuclear Suppliers Group, focus on stopping exports from the most technologically advanced countries. Yet the revelations that Khan ran a network selling everything from centrifuges for enriching uranium to bomb designs to Iran, Libya, North Korea, and perhaps a fourth country, raised fears that countries in the developing world with diverse capabilities could trade among themselves to bolster their nuclear programs, bypassing export controls. These fears prompted responses from both the United States and the United Nations. The United States announced the Proliferation Security Initiative (PSI), in which participating nations agree to forbid suspect shipments. With more than 70 countries participating by 2007, the PSI, unlike other controls, addresses technology transfer among developing countries. And in 2004 the UN Security Council passed Resolution 1540, which requires all members to establish export and transshipment controls over technology relevant to the development of nuclear, chemical, or biological weapons.

Discovery of the Khan network also heightened fears that nuclear weapons might fall into the hands of terrorist organizations. Similar private sector networks, poorly secured weapons and material in Russia, and North Korea are the most frequently cited possibilities as sources of atomic bombs for terrorists. Analysts are divided on the magnitude of this threat. Although nuclear devices would not help most terrorist organizations achieve their goals, terrorists with apocalyptic beliefs or those bent on meting out severe punishment to enemies may find them attractive, and evidence does suggest that Al Qaeda has a persistent interest (of debatable intensity) in weapons of mass destruction.

Although many of the challenges facing the nonproliferation regime suggest the necessity of revising the NPT, current policies of key states make that task difficult. Many see recent U.S. policies as retreats from commitments made at the 1995 review conference; these policies include the failure to ratify the Comprehensive Test Ban Treaty, the abandonment of the qualified no-first use pledge made by U.S. president Jimmy Carter's administration to NPT members, and the persistent interest in new nuclear weapons designs. In addition, the U.S. invasion of Iraq is widely believed to have spurred proliferation by enhancing the appeal of nuclear weapons in the eyes of insecure regimes. Any bargain to reinvigorate the NPT would require commitment by the United States and the other four NWS to move forward on their commitments to disarmament, and most likely require some kind of agreement on the status of the three nuclear weapons states that remain outside the treaty. Given current policies, achieving agreement on reforms appears difficult, if not impossible.

SEE ALSO *Al-Qaeda; Cold War; Deterrence, Mutual; Terrorism; Weaponry, Nuclear; Weapons of Mass Destruction*

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Christopher Way

PROMOTION, EXPORT

SEE *Export Promotion.*

PROMOTION, IMPORT

SEE *Import Promotion.*

PROPAGANDA

Propaganda refers to the use of communication techniques to affect people's thinking and behavior. Any technique or action that attempts to influence the emotions, attitudes, values, beliefs, or actions of a group can be described as propaganda. Typically, propaganda benefits the sponsor and puts the interests of the sponsor above those of the recipient. As an instrument of persuasion and psychological coercion, it seeks to compel the recipient to submit to the will of the sponsor. Propaganda is thus different from education, which seeks to develop independent thinking, and from information, which is based on objective facts.

Many practitioners of propaganda have insisted that they merely transmit "education" and "information." Other euphemisms they use to describe their trade include "public relations," "public affairs," "public communication," "public information," "public diplomacy," "psychological warfare," "psychological operations" (or "psyops"), and "communication." At the end of the twentieth century the word *spin* became a popular and somewhat derogatory euphemism for propaganda.

Propaganda does not necessarily include lies, as many people believe. Often, propaganda involves truthful statements that are presented, or twisted, to serve the interests of the sponsor. In addition, propaganda is not always verbal: Although speeches, articles, leaflets, books, and rhetorical ploys are common forms of propaganda, so too are photographs, films, music, monuments, currency, flags, parades, and symbols. Propaganda also can include deeds—actions calculated to have an impact on the perceptions of others.

Today the word *propaganda* has a negative connotation, but originally it was a Latin term referring to the reproduction of plants and animals. It developed a positive religious association in the seventeenth century, when Pope Gregory XIII created a commission of cardinals (*de propaganda fide*) to spread the Catholic faith in foreign lands. In the next century some English speakers began to use *propaganda* to refer to the spread of political ideals, though not necessarily in a negative way. Many people continue to use the word *propaganda* in a political context, but propaganda need not be a product of a government or political organization. The advertising and public relations industries, for example, conduct propaganda on behalf of businesses and other nongovernmental organizations.

As a technique of persuasion, propaganda has been a feature of human life since the first civilizations were founded. The scope and intensity of propaganda, however, increased dramatically in twentieth century. As the communication and information revolutions gathered steam, governments, businesses, interest groups, and revolutionaries turned increasingly to propaganda to advance their agendas in a crowded marketplace of ideas. At the turn of the twentieth century many elite observers expressly advocated the use of propaganda as an instrument of social control. Theorists such as Gustave LeBon (1841–1931) and Walter Lippmann (1889–1974) issued alarmist warnings of a coming age of "mass society." Fearing that an uninformed public (which they called the "herd") would undo the social fabric of society, they suggested that elites should manipulate images and symbols to control the masses.

World War I marked an especially notable turning point in the history of propaganda. It was widely perceived as a "total war": an all-encompassing battle for national survival that demanded the mobilization of all the nation's resources. All the major governments involved

in the conflict developed propaganda bureaus to mobilize their publics for total war. The armies of the belligerents also developed sophisticated techniques of psychological warfare to demoralize enemy soldiers. Much of the war's propaganda consisted of wild exaggerations, crude images, and stories of atrocities. Warring governments played up nationalistic and patriotic sentiments while at the same time demonizing their enemies as barbaric savages. One of the most famous propaganda episodes of the war was a fabricated story circulated by British agents claiming that Germans were using human corpses to make soap. When the United States joined the war on the side of the Allies in 1917, President Woodrow Wilson added a peculiarly idealistic character to the propaganda by selling the war as a fight for democracy that would end all wars.

In the aftermath of World War I popular suspicion of propaganda as a technique increased, and many ordinary people came to use the word *propaganda* as a synonym for *lies*. The negative connotation was furthered by the conspicuous use of propaganda by totalitarian and fascist regimes in the 1920s and 1930s. The communist government in the Soviet Union, the fascist government in Italy, and the National Socialist regime in Germany all relied on propaganda techniques to come to power, to legitimize their rule, and to facilitate expansionist ventures abroad.

World War I also helped to stimulate the professionalization of propaganda techniques in democracies. The public relations and advertising professions ballooned into massive independent industries in the 1920s and 1930s. Most of the leaders in these fields developed their expertise working for government propaganda bureaus during the war. Additionally, more and more academic researchers began conducting serious social science investigations into the management of public opinion. World War II and the Cold War accelerated this trend by funneling money into the scholarly field of communication which emerged, in large part, from government-sponsored research into public opinion management.

Perhaps the most famous propagandist in history was Joseph Goebbels (1897–1945), who disseminated Adolf Hitler's doctrine of racial supremacy in Nazi Germany. But probably the most *influential* propagandist was an American: Edward Bernays (1891–1995), the so-called "father of public relations." By his example and through his many writings—including the still-consulted *Crystallizing Public Opinion* (1923) and *Propaganda* (1928)—Bernays established the core principles that continue to be used in propaganda and public relations to this day.

Although the development of propaganda in the twentieth century was tied instrumentally to warfare and national security causes, propaganda techniques have become a reality of modern life. Few political leaders, celebrities, interest groups, businesses, and organizations go without an image advisor, public relations counselor, or spokesperson—all effectively "propagandists" working to advance the causes of their sponsors.

SEE ALSO *Advertising; Persuasion; Persuasion, Message-based; Politics*

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Kenneth Osgood

PROPENSITY TO CONSUME, MARGINAL

A marginal propensity to consume is, in economics, a change in consumption associated with a change in a factor that determines consumption. The most common use of the term is with respect to income. The concept stems from John Maynard Keynes's (1883–1946) *General Theory of Employment, Interest, and Money* (1936), Book III of which is titled "The Propensity to Consume." Keynes defines the marginal propensity to consume as the change in consumption associated with a change in income (p. 115); later usage has differentiated a number of these propensities.

In elementary Keynesian models of the aggregate economy, the marginal propensity to consume from income determines the *expenditure multiplier*, the amount that total output will increase from an increase in autonomous spending (Keynes emphasizes this point in the *General Theory* immediately below his introduction of the term). If the marginal propensity to consume from income is nine-tenths, a one-dollar increase in autonomous spending will induce an initial increase of ninety cents in consumer spending and income; this ninety-cent increase in income will then induce a further increase of eighty-one cents in consumer spending and income, and so on. The sum of the increases in income will be ten dollars, or the product of the one dollar injection of autonomous spending and the inverse of one minus the marginal propensity to consume from income. Models

developed since the *General Theory* have attenuated the value of the multiplier from the very large ones suggested in the early analysis (in full employment models the multiplier will be zero); however, it is still the case that there will be a positive relationship between the multiplier and the marginal propensity to consume from income.

Given the central role of the marginal propensity to consume from income in Keynesian analysis, empirical work on measuring this variable started shortly after the *General Theory* appeared. Early examination of U.S. data, most notably those compiled by Simon Kuznets (1901–1985), suggested that the marginal propensity to consume from income in the short run was substantially less than in the long run. From the 1940s through the 1960s, three broad models of consumer behavior were proposed to explain this divergence. (1) The relative income hypothesis, proposed by James Duesenberry, argued that consumers are reluctant to change their living standards upon experiencing changes in income. Duesenberry maintained that consumption is partly affected by previous peak levels of income. Hence, the marginal propensity to consume out of income will be lower in the short run than in the long run. (2) The permanent income model of Milton Friedman argued that consumers recognize that a very large portion of income changes will be short-lived, or transitory, and will only change spending for those movements that are viewed to be permanent. In the long run, a higher share of income changes will be permanent. (3) The life-cycle model associated with Franco Modigliani (1918–2003) accepted the logic of the permanent income model but modified it to propose that the aggregate marginal propensity to consume out of permanent income would be affected by the distribution of income changes across age groups.

The distinction between the marginal propensities to consume out of permanent and transitory income became of significant policy interest in the United States in the 1960s and 1970s when a number of explicitly "temporary" changes in income taxes were enacted, and others proposed. Research suggests that the consumer spending impact from the enacted temporary tax changes was smaller than from "permanent" tax changes, in line with the idea that the marginal propensity to consume from transitory income is lower than that from permanent income.

More recent studies have noted the anomaly that the propensity to consume from temporary tax changes, while lower than from permanent changes, is considerably higher than theory would suggest. "Liquidity constraints" (the recognition that many consumers are unable to make the costless borrowing adjustments required for the strict permanent income theory to hold) are one plausible explanation for the high propensity. Other research has emphasized how precautionary saving motives—the need for many households to accumulate financial assets to insure against income losses—can affect the propensity to consume from income changes. The spending of households that need to accumulate precautionary savings will, in general, be more sensitive to purely transitory income changes than theory suggests, thus blurring the distinction between the propensities to consume from permanent and transitory income.

PROPENSITY TO CONSUME FROM WEALTH

The marginal propensity to consume from wealth is the partial derivative of consumer spending with respect to household wealth. The life-cycle model highlights the importance of wealth accumulation for retirement in the household spending and saving decision. This emphasis brought the wealth propensity to prominence. Movements in the value of wealth are, in principle, one-time events that will affect spending through the remainder of a consumer's life. Hence, the marginal propensity to consume from wealth is much smaller than that from income (less than one-tenth from wealth, seven-tenths or higher from permanent income), but given the enormous magnitude of changes in the value of aggregate wealth, even a small number raises the likelihood that major shifts in aggregate consumption could be generated.

The precise size of the aggregate marginal propensity to consume from wealth has been an active issue in the United States since the middle of the 1990s, given the increase in household wealth relative to income and the very large swings in market values. One line of research has emphasized that typically, a disproportionate share of changes in observed wealth (even some movements in wealth persisting for several years) are likely transitory. In other words, a large share of changes in observed aggregate wealth may not factor into consumer spending because households may not believe they will persist indefinitely. In particular, wealth movements that appear inconsistent with other economic developments, such as changes in income or productivity, could be regarded as transitory. Analysts and forecasters should not be assumed to have any special insight into the permanence of currently observed changes in the value of wealth. It follows that applying any estimate based on past experience of the aggregate marginal propensity to consume from wealth to project the spending impact of an observed movement in wealth may be problematic.

SEE ALSO *Absolute Income Hypothesis; Consumption; Economics, Keynesian; Keynes, John Maynard; Multiplier, The; Propensity to Import, Marginal; Propensity to Save, Marginal*

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PROPENSITY TO IMPORT, MARGINAL

The marginal propensity to import is the increase in imports that is caused by a certain increase in income. This concept expresses the idea that as income of economic agents (firms and households) increases, so does their demand for intermediate and consumption goods imported from abroad. Since this relation also holds for the whole economy, at the aggregate level the marginal propensity to import can be calculated as the ratio between the increase in total imports of an economy and the increase in its output. In mathematically formalized economic models, the marginal propensity to import is equal to the partial derivative with respect to output in an import function. If imports are assumed to be a linear function of output, the marginal propensity to import is equal to the slope of the resulting straight line. The concept of the marginal propensity to import is related to the concept of the average propensity to import, which is equal to the ratio of total import to total income.

The marginal propensity to import plays a role in determining the size of the Keynesian multiplier (Blanchard 1997, pp. 232–235). In the Keynesian multiplier model extended to an open economy, some of the increased demand caused by a domestic expansion falls not on domestic goods but on foreign goods. This effect will be bigger, the higher is the marginal propensity to import of the domestic country. In the extreme case in which the additional domestic demand falls completely on imported goods (when the marginal propensity to import is equal to one), the multiplier is equal to one. Empirically, however, the marginal propensity to import is likely to fall between zero and one, which implies a multiplier larger than one even in an open economy. Since imports tend to be equal to a larger share of the economy for smaller countries, the magnitude of the leakage effect of domestic demand expansions into imports is likely to be inversely related to the country size.

An attractive empirical feature of the concept of marginal propensity to import is that it is easily measurable and can be used to forecast the change in imports stemming from a certain expected change in output. For example, if total domestic output in country *A* increases by 1,000 in a given year, and imports increase by 200 in the same year, the marginal propensity to import is equal to 200/1,000 = 0.2. Assuming that the government expects output to increase by 2,000 in the following year, the projected increase in imports calculated on the basis of the marginal propensity to import is $0.2 \times 2{,}000 = 400$. This methodology is obviously based on the assumption that the marginal propensity to import remains constant. This might be a reasonable assumption in the short run. However, the size of the marginal propensity to import is affected by changes in the relative prices of domestic and foreign goods and could therefore change in the long run, or if the economy is hit by a significant exchange rate shock.

SEE ALSO *Balance of Trade; Imports; Multiplier, The; Propensity to Consume, Marginal; Propensity to Save, Marginal; Trade*

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The opinions expressed are personal and should not be interpreted as reflecting any view of the International Monetary Fund.

PROPENSITY TO SAVE, MARGINAL

In economics, a marginal propensity to save is the additional savings associated with a change in a factor that determines saving. Since saving is the difference between income and consumption, a marginal propensity to save is related to a marginal propensity to consume in a simple fashion. For example, the marginal propensity to save from household income is one minus the marginal propensity to consume from household income, and the marginal propensity to save from wealth is the negative of the marginal propensity to consume from wealth.

Any analytical result regarding marginal propensities to consume can be readily expressed in terms of marginal propensities to save. For example, in simple Keynesian analysis the autonomous expenditure multiplier is equivalently the inverse of one minus the marginal propensity to

consume from income and the inverse of the marginal propensity to save from income.

In policy discussions and proposals, distinctions between national and personal saving should be kept in mind in applications of estimates of the marginal propensity to save and other arguments of the saving or consumption function. Numerous proposals have been offered to increase personal saving in the United States through tax or other fiscal incentives increasing the after-tax rate of return available to households. Discussions of these proposals often involve estimates of the responsiveness of household or personal saving to changes in the rate of interest, which is connected to the marginal propensity to save with respect to the rate of return. What is sometimes not emphasized is that a full analysis of these policies likely requires looking beyond the personal propensity to save with respect to the rate of return. For instance, such policies would likely increase after-tax personal income, and the marginal propensity of personal saving with respect to after-tax personal income is surely positive. This effect would add to saving generated through a positive rate of return propensity, or offset a decline in saving generated through a negative rate of return propensity. However, these policies (unless negated by other changes), will also increase government outlays or reduce tax revenue, thus reducing government saving. Hence, the effect on national saving of these policies would be problematic even if personal saving increased.

In sum, knowledge of the marginal propensity of personal saving with respect to the rate of return does not provide complete information about the effect on national saving of policies of this type. If the aim of such policies is to encourage saving by certain groups of people, or the policies are financed from tax revenues or cuts in government outlays, analysis of individual household responses would be adequate. But if the aim is to increase national saving and capital formation, and the policies are financed through increased borrowing, broader analysis would appear to be warranted. The parameters of interest will then be marginal propensities of national, not personal, saving with respect to its arguments.

SEE ALSO *Economics, Keynesian; Propensity to Consume, Marginal*

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PROPERTIES OF ESTIMATORS (ASYMPTOTIC AND EXACT)

Economic models are useful in making statistical predictions and policy evaluations. These models include statistical mean models, regression models, simultaneous equations models, limited dependent variable models, and panel and spatial models, among others. Based on the sample data, econometric methods are used to estimate these models, and then the testing of relevant economic hypotheses can be conducted. The commonly used estimators are least squares or generalized least squares, maximum likelihood, generalized method of moments, and empirical likelihood. The hypothesis-testing procedures are Wald's, Rao's score, and likelihood ratio methods. Since all these methods are based on sample information, the statistical properties of these procedures are of great interest for both small and large samples. The properties include studying the distribution; unbiasedness, which implies the average value of the difference between a sample estimator and the corresponding population parametric is zero; and efficiency, which means a smaller variability. For large samples, the estimators are consistent if they converge to their true parameter values. In the context of hypothesis testing, a test having a correct size and high power implies the probability of rejecting an assumed economic model when the model is true and not true, respectively. All these have led to the development of *asymptotic theory econometrics* (White 2001) and *finite sample econometrics* (Ullah 2004).

Asymptotic theory provides the properties of estimators and test statistics for large samples. The statistical methods used to develop such properties are the *law of large numbers* and *central limit theorems* (see Chung 2001). There is extensive literature on the asymptotic properties of econometric estimators and test statistics (see White [2001] for linear models; Jennrich [1969] and Gallant [1987] for nonlinear models).

Finite sample econometrics deals with the exact and approximate properties of estimators and test statistics. The exact properties are valid for any size of the sample; however, the derivation of the exact analytical properties is often difficult, especially for the large class of applied economic models that can be nonlinear, nonnormal, or dynamic. Furthermore, even when the analytical exact results are obtained, they are usually expressed in terms of complicated multivariate integrals or infinite series, and they do not provide meaningful interpretations and conclusions (see Ullah 2004). In view of these problems, a vast amount of literature has developed on the approximate analytical properties of estimators and test statistics

using the procedures developed by Francis Edgeworth (1896) for distributions and Anirudh Nagar (1959) for moments. The simulation-based approximate properties have also been extensively analyzed, especially using bootstrapping procedures (see Hall 1992; Horowitz 2001). The analytical and simulation-based approximate results can tell us how much we lose by using asymptotic theory results and how far we are from the known exact results.

It is well known that large sample properties may not imply finite sample behavior of econometric estimators and test statistics, and this can give misleading results for small or even moderately large samples. For example, an estimator can be biased for the finite sample but unbiased asymptotically. Also, two estimators may be asymptotically unbiased and have the same variances and asymptotic distributions, but, in the finite sample case, these two estimators may have different biases, variances, and distributions. Thus the statistical inference for the asymptotic case can be quite different compared to the finite sample case. Also, if the asymptotic results are used for small samples, then the conclusions or interpretations of the econometric analysis may be misleading.

R. A. Fisher (1921, 1922) and Harald Cramér (1946) laid the foundations of statistical finite sample theory on the exact distributions and moments. This exact theory on distributions and moments was brought into econometrics by the seminal work of Trygve Haavelmo (1947), T. W. Anderson and Herman Rubin (1949), Leonid Hurwicz (1950), R. L. Basmann (1961), and Peter C. B. Phillips (1983), among others. Another major development took place through Nagar's work (1959) on obtaining the approximate moments of econometric estimators. This was followed by research by J. D. Sargan (1975) and Phillips (1980), who rigorously developed the theory and applications of the Edgeworth expansions to derive the approximate distribution functions of econometric estimators. Most of the contributions, however, were confined to the analytical derivation of the moments and distributions of the econometric statistics with independent and identically distributed (i.i.d.) normal observations. These also included the finite sample results using the Monte Carlo methodology (Hendry 1984) and advances in bootstrapping (resampling) procedures (Hall 1992). The analytical and bootstrap results for models that are nonlinear with nonnormal and non-i.i.d. observations remain a challenging task for future development. Some development has begun to take place for approximate analytical results (see Ullah 2004; Bao and Ullah 2006). Similarly, there are developments in the bootstrapping procedures for studying the properties of estimators with i.i.d. as well as dependent and nonstationary observations (see Horowitz 2001).

The study of asymptotic and finite sample properties is a fundamental issue of statistical inference, since the quality of data-based inference depends on the properties of estimators and test statistics used in the inference. The developments described provide analytical and simulation-based procedures for the properties of estimators and test statistics. The frontier of this research area has moved forward over the years, but some challenging issues remain. With advances in computer technology, this subject will further develop in both the analytical and the bootstrapping domains.

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PROPERTY

In the social sciences the concept of property or property rights refers to social mechanisms that control the use of valuable resources and create opportunities and incentives for private and public actors. Those mechanisms have profound consequences for social outcomes and over time are shaped by social outcomes. Many scholars, such as Douglass C. North in his 1990 *Institutions, Institutional Change, and Economic Performance*, use the terms *institutions* and *property* virtually synonymously. Modern social science has borrowed the concept from law but typically refers to real or de facto control of resources rather than formal legal or de jure control, which is the usual legal connotation. Law, moreover, gives property a narrower interpretation than does social science. In law, property is only one of several legal control mechanisms, which include tort law, criminal law, antitrust law, and constitutional law. In social science, property (or institutions) refers to all formal control mechanisms (rules and their enforcement) as well as informal ones such as social norms and ideologies.

THE VARIETY OF PROPERTY RIGHTS

A scarce resource or asset usually has mutually exclusive uses as well as compatible uses. A pasture cannot be used simultaneously as a shopping center, although various other uses are not excluded automatically. The grazing function of pastures often is not affected when aircraft use the airspace above, transportation tunnels are dug below, hikers cross the area on foot, and passing trains emit noise and vibrations. Property rights to a resource can be unified or partitioned by use.

A fundamental problem arises when a specific use of resource A interferes with the use of resource B by creating unwanted costs for the owner of B. Airplanes and automobiles often disturb the peace of homeowners, and factories pollute their surroundings. Uncompensated physical impact (known as negative or positive spillover or external effects) in principle is due to weak or absent property rights. Homeowners, for instance, have incomplete control (property rights) of the air they breathe and the sound waves that penetrate their residences.

Property consists of bundles of rights. In 1996 Elinor Ostrom and Edella Schlager identified five elements of rights to natural resources that appear in various bundles: access, rights to hike or canoe, for instance, but excluding rights to withdraw resource units; withdrawal, such as the right to catch fish or divert water; management, the right to maintain, improve, and transform a resource; exclusion, the right to decide who has access and withdrawal rights and how those rights are transferred; and alienation, the right to lease or sell exclusion and management rights.

Property systems vary with the ways in which categories of rights are divided and users and/or controllers are organized. The concept of public property has little meaning unless one identifies the exact bundle of rights, those who actually control the various elements, and the controllers' incentives and opportunities. Similarly, by itself the term *private property* has little empirical content. Private property rights often are shared among independent private parties and delimited and restricted by the state. In law a privately owned corporation is classified as a legal individual, but the behavior of such entities depends on their internal organization and external constraints. Although their views are contested, as early as 1933 Adolf Berle and Gardiner Means in *The Modern Corporation and Private Property* drew attention to the possibility that shareholders, the formal owners, have limited control over their managers. Similar agency problems arise in public organizations that range from representative parliaments to nationalized industries.

The literature often confuses two distinct concepts: common or communal property and public domain or open access. Common or communal property involves arrangements by which a group of individuals jointly control access, withdrawal, and management rights to a resource such as a water system or pastureland. The usual defining characteristic of common or communal property is that the group lacks authority to alienate the resource to outsiders. Under appropriate circumstances common or

communal property can be an efficient arrangement, as Elinor Ostrom showed in 1990 in *Governing the Commons: The Evolution of Institutions for Collective Action*. Property is absent, however, when a resource is in the public domain with no limits on withdrawal rights. This condition, which also is called open access, implies that no user has the incentive to maintain or improve the resource and invest in sustainable utilization. Lack of maintenance and unconstrained use eventually will dissipate the resource rent, as is happening in many high-sea fisheries. Open access conditions sometimes emerge in de jure property systems when the enforcement of private, public, or communal rights is weak.

EFFECTIVE PROPERTY RIGHTS

Property rights are said to be effective or efficient only with reference to specific goals. If the goal is to maximize the joint value of assets that belong to a social group (maximize wealth per capita), the community must minimize the sum of three cost categories: the costs of traditional production (transformation), exclusion, and internal governance. High exclusion cost sometimes rules out the option of dividing a resource such as the atmosphere, fish stocks in the ocean, or knowledge among individual owners and enforce exclusive ownership. Eventually new technologies and new types of organization may enable exclusion and, for instance, make possible exclusive ownership of individual fish in the oceans.

It is often efficient for independent actors to cooperate in utilizing a resource and share property rights if they can solve the problem of internal governance. The governance problem arises because opportunistic actors have a propensity to follow their self-interest and exploit their co-owner, for instance, by withdrawing more than their allocated share of units from a fishery or an orchard or failing to cooperate in doing maintenance work. Incentive schemes and direct monitoring are used to contain internal governance problems. High internal governance costs limit joint ownership, but new technologies and new forms of organization can lower those costs.

THE EVOLUTION OF PROPERTY RIGHTS

Recent studies indicate that the structure of property rights (institutions) is the fundamental explanation for long-term economic growth. In 2004 Dani Rodrik and coauthors provided empirical evidence for this proposition in "Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development." The importance of property rights for economic progress raises two related questions: How do property rights evolve over time? Why do societies tolerate systems of property rights that cause economic decline?

Social science provides at least two perspectives on the evolution of property rights: the notion of unplanned or spontaneous evolution, which often is associated with the work of Friedrich Hayek, and planned or administered change, such as recent attempts at transition in Eastern Europe and in developing countries. Spontaneous evolution and administered change, however, need not be mutually exclusive. The history of the Soviet Union suggests that the general direction of change in property systems, for instance, away from or toward markets, often is administered centrally whereas the details and actual outcomes depend on spontaneous, decentralized interactions.

The state is the ultimate guarantor or destroyer of secure property rights. To finance projects such as warfare, powerful rulers and their cohorts throughout history have created uncertainty about investment projects by appropriating the wealth of their subjects. Stable property rights have emerged only when the balance of power has shifted against the rulers; that has occurred when social developments have increased the de facto power of groups such as feudal barons or a new middle class. Those groups sometimes have used their new strength to constrain the de jure power of the state, tie the hands of the ruler, and create limited government. These autonomous and path-dependent developments often are fostered by historical accidents. Dutch primacy in world trade and the Industrial Revolution in England were fundamentally not planned or administered events.

If flaws in the system of property rights are the root cause of economic decline, why do potential investors and producers not persuade their rulers to reform the system, expand the tax base, and share the fruits of growth? Failure to cooperate is caused by uncertainty about exactly who will gain materially from reforms, how reforms will affect future power relationships, and the high costs of making credible promises. When the state is not bound by strong judicial or other mechanisms, agreements between social groups and current or future rulers lack credibility. Political bargaining about property rules requires a balance of power and credible constraints. In addition to power relationships, social norms and ideology appear to play a role in the evolution of limited government.

PROPERTY IN THE NEW ECONOMY

A system of property rights is of great practical importance when the system fails to support advanced production technologies and wastes resources on a large scale. Large-scale failures are prevalent in developing countries and occur universally in the use of certain natural resources, such as the atmosphere. In a high-income country rapid technological change can undermine a previously effective property system and retard the country's future development unless appropriate adjustments are made.

The new economy with its network industries and knowledge-based firms presents this type of challenge. Knowledge or intellectual property has replaced the plants and equipment of the Industrial Revolution as the engine of growth. Once they are made available, knowledge products have characteristics of public goods in that knowledge cannot be used up. In the new economy property regimes must balance two conflicting goals: giving scientists and technicians strong incentives to discover new knowledge and innovate and creating competition in the distribution of knowledge goods with output prices near the marginal cost, which often is close to zero.

The solution requires a difficult compromise. The initial creation of knowledge goods such as computer software and medicinal drugs entails high fixed costs, whereas the marginal cost of reproducing existing goods is often close to zero. Efficient intellectual property regimes must stimulate the supply of innovations by giving innovators an opportunity to cover their fixed costs while not allowing them to raise their prices so high that they limit the distribution of valuable products such as drugs. Various devices are used to create intellectual property, including patents, copyrights, trademarks, and trade secrets. In recent years the scope of patents has expanded, for instance, to include basic research in university laboratories. Some critics maintain that the use of patents and copyrights has exceeded sensible limits. Digitalization of knowledge and the rise of the Internet have worked in the opposite direction and undermined intellectual property rights, for instance, by lowering the cost of copying and distributing music and the contents of books.

For high-income as well as developing countries the lesson is the same: Economic progress depends on how each community adjusts its property rights to new technologies and new opportunities. The adjustment is determined in interactions between the state and powerful social groups, with the uncertain results depending on the balance of power, the structure of the political system, ideological beliefs, and available knowledge.

SEE ALSO *Coase Theorem; Common Land; Computers: Science and Society; Corporations; Cyberspace; Externality; Franchise; Governmentality; Institutionalism; Internet; Knowledge Society; Land Claims; North, Douglass; Overfishing; Property Rights; Resources; Social Science; Tragedy of the Commons; Transaction Cost*

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PROPERTY, PRIVATE

The institution of private property is one of humankind's principal social arrangements. By defining and assigning legal ownership, property tends to promote the production, exchange, and accumulation of wealth. Property is especially lauded for the protection it is thought to provide against overbearing, arbitrary, and capricious government action. The institution, however, is more complicated than that laudatory view might lead one to believe.

Numerous theories of property have been formulated over the centuries. These are theories of the origin of property, the justification of property, the nature of property qua property, the evolution of property, the operation of the institution of property, and, among other things, how property interacts with other institutions. Some or many of these theories share a preoccupation with or defense of the received details of the institution. The typical argument is that the defense of a detail is instrumental to the defense of the institution as a whole. But these theories tend to be applied to different instantiations of property. If a proposed change in the law of property be

designated *B*, then it is likely to be opposed insofar as it would change property provision *A*; then, after *B* is adopted, and another change, *C*, is proposed that will alter *B*, *B* is defended in much the same terms as *A* was defended. The argument is to conserve existing rights. The same is true of multiple jurisdictions, the details of whose respective property institutions vary between them. The arguments used in defense of different existing sets of details are likely to be the same. To be in favor of property, therefore, is to be in favor of the results that the institution likely will promote. Whether a particular system of property is to include some detail is quite another matter.

One important implication of the foregoing is that different instantiations of property will yield different results. Putting it again formally, rights structure *I* will generate market structure *I* and demand-and-supply structure *I*, and these in turn will result in resource allocation structure *I* and distribution (of opportunity, income, and wealth) structure *I*; and similarly with rights structure *II* ultimately resulting in distribution structure *II*. That is to say, there is no unique result, only results specific to the initial structure of rights, and so on.

One group of theories of property presumes that property is, or is derived from, the natural order of things. This presumption commits the naturalistic fallacy, namely, to intuit that because something exists it does so because it is either natural or derived from nature. This is fallacious in part because of the multiplicity of property systems and in part, indeed especially, because every property system is socially constructed, a product of human collective action, and not given by nature.

The institution of property is, for most practical purposes, the law of property, and the law of property is generated by government. Property is a mode of protecting interests, and any actual property system protects certain interests and not others. If *A* and *B* are in the same field of action and have conflicting interests, protecting *A*'s interest by law is substantively different from, but the analytical equivalent of, protecting *B*'s interest. To see that property is a mode of protecting interests enables one to see other aspects of property. One aspect is that property is not protected because it is property; property is property because it is protected. Another aspect is that litigation and lobbying are the means of promoting one's interests to be protected as property by either changing or not changing the law. A corollary is that the right to petition government about its protection of one's interests is a very important right; where one group has such access and another does not, it is more than likely that the former group will more largely and more effectively get its interests protected as property than the latter group. Another aspect of property has to do with regulation. If property is defined as antecedent to government (as in saying it derives from nature), then any regulation by government is a taking of part of that property. If property is defined as a product of government, then no such taking occurs: government is only changing the interest to which it is giving its protection. Thus, as a corollary, regulation may be formally identified as the protection of *A*'s interest against *B*; in which case, so-called deregulation does not mean that government is no longer regulating. Rather it means that *A*'s interest is no longer protected against *B*, and that government is now protecting *B*'s interest rather than *A*'s. Such regulation (or deregulation) is a principal mode through which the law of property and therefore the institution of property changes.

Not all government protection of interests is designated property. What makes the institution of property so special is that a higher level of protection is generally thought to be given to interests protected as property than to interests not so protected, that is, protected as ordinary rights. For example, the right to be paid by one's employer in lawful money, or to have so many restrooms per hundred workers, or to have clean air at work (no more than a certain maximum of impurities and toxic elements) are rights that government can withdraw or change much more easily than it can change the property right to pollute; this is so even though the three specified rights may be seen as checks on property rights.

This latter point underscores another aspect of property: while the institution of property provides some measure of protection against government, that is, providing a check on the power of government, the government is itself a check on the power of property. This conflict is central to the institution of property and its evolution; what is important is what people are led to believe concerning which power should be checked. Moreover, determining which power needs to be checked by the other, and how, is largely a matter that is worked out by government, typically the courts. But such is only largely the case, inasmuch as voting for senators, representatives, and judges is in part a matter of providing citizen input into the process of whether *A*'s interest or *B*'s interest is to be protected or whether in a particular situation property owners or government itself is to be held in check.

Property, it is important to see, is relativist and is so in several ways. First, property rights are relative to the actions of the government that generates them. Second, property rights are relative to each other. And third, property rights are relative to the situation in which they exist. The economic significance of a right, therefore, is a function of: (1) the law that protects it relative to other protected interests; (2) others' rights; and (3) the buying and selling activities, macroeconomic conditions, and other variables that comprise the economy. Competition itself is

a way of destroying the value of others' property insofar as one competes to attract their customers to you.

The institution of property is so important not merely because of its status among other institutions, nor its function in promoting production and material well-being, and so on, but because of the decision making that goes into making and adjusting the rights that constitute property. Property is sometimes described through the analogy of a bundle of sticks. Each stick constitutes a potential ability to act or to be immunized against the consequences of others' actions. This decision making is about who can do what to whom and has several dimensions. These are evident in the transformation of the economic system from one in which landed property had both economic significance and governance authority, to one in which both landed and nonlanded property, as well nonpropertied persons, participate in economic and political decision making. Apropos of the conflict between continuity and change, both small and large, or systemic, changes in property systems have taken place. Apropos of the conflict between freedom and control, the most fundamental changes are those that involve changes in the decision-making or power structure of the economy.

Also evident is the legal-economic nexus in which polity and economy do not simply interact but mutually help form each other. At the heart of both the transformation and the nexus is property and other rights as both cause and consequence. The total structure of rights constitutes the structure of decision making in markets and in government. Although rooted in the past, with decision making over changes in property keeping a selective eye on past legal precedents, seeking justice through continuity, the institution's social function is oriented toward the future, in the encouragement it provides for economic activity and the structure given to that encouragement, as well as to the path to be taken by legal, social, political, and economic change. Not all sources of property need be normatively equal, nor are all property and other rights substantively equal.

SEE ALSO *Private Interests; Private Sector*

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PROPERTY RIGHTS

Property rights consist of a person's ability to own, transfer, and use that which a person owns without government coercion. Property rights and economic freedom are interrelated in that a person cannot engage in economic activity if the state does not recognize and defend that person's right to own property, and because it is meaningless to have the ability to speak and act freely if one lacks the ability to monetize one's words and actions.

The way in which property rights are defined depends on which of two premises is taken as the starting point. Rights of ownership either originate with society as a whole and are bestowed by society on individuals from time to time or originate with individuals and are bestowed by individuals on society from time to time. The former is the position of socialist philosophers; the latter, that of classical liberal philosophers.

THE CLASSICAL LIBERAL POSITION

Classical liberalism begins with the premise that an individual's life belongs to that individual. This ownership of self, classical liberalists believe, is not something that is bestowed by human-made law but is a natural right that arises by virtue of an individual's status as a human being. Starting from the assumption that individuals own their own lives, classical liberals argue that it logically follows that individuals own their own labor because labor is the action of the self and individuals own themselves as a matter of natural law. Because individuals own their own labor, they also own the wages they earn from that labor because the wages are what they receive in exchange for the labor they own. Similarly, an individual owns the things that individual buys with his or her wages because those things are traded for the wages that were traded for labor that is the result of action by the self that the individual naturally owns. Thus, classical liberals maintain that property rights are sacrosanct as a matter of natural law.

The principle of natural law is invoked in the U.S. Bill of Rights, which speaks of "inalienable rights": rights that exist as a matter of people's state as humans and that can be neither established nor revoked by government

action. Although the individual may choose to give up some property rights to society for the common good or in exchange for protections granted by society, classical liberals maintain that those rights are the individual's to give up, not society's to take.

THE SOCIALIST POSITION

Socialism begins with the position that it is the responsibility of society to ensure an equitable distribution of ownership. That obligation falls to society because, socialists believe, when individuals are left to their own devices, political and economic power become concentrated in the hands of the strong, who then exploit the weak. Thus, because it is the responsibility of society to protect all its members, property rights must belong to society as a whole. In the socialist framework the society bestows property rights on individuals to maintain equality of income and wealth.

The socialist position was greatly influenced by the exploitation of western workers in the late nineteenth century. The German philosopher Karl Marx maintained that workers had a right to the value of their labor and that a system that allowed employers to profit from the fruits of workers' labors is destined to bring about the exploitation of those workers. Marxist socialists maintain that the way to avoid this exploitation of labor is for the state to own the means of production. Removing private ownership means that the government must decide how the means of production are to be used. This is accomplished by a central planning board that decides how much output industries will produce, what prices they will charge, and how much they will pay their workers.

Communism is regarded as the next evolutionary step beyond socialism. In the socialist system, the government owns the means of production only. Individuals still maintain ownership of their personal property. In the Communist system, the government keeps all property rights to itself and the individual owns nothing. In the Communist system, people work for no wage and receive everything they need from the government at no cost. What is common to the socialist and Communist frameworks is that property rights originate with society, not with the individual. Despite the use of the term, no modern country has ever achieved a Communist framework. Even those that have come closest, Russia, China, and North Korea, have not succeeded in attaining government control of all property. Modern examples of Communist systems are seen in religious communities whose members take vows of poverty. In these communities, the individual owns nothing but is granted use of property owned by the community.

EXTERNALITIES AND THE TRAGEDY OF THE COMMONS

Economists argue that it is important that property rights be well defined. When they are not, there is a disconnect between individuals who make decisions and individuals who must live with the consequences of those decisions. This situation is known as externalities and the tragedy of the commons.

In the case of externalities one individual imposes a cost on another that would necessitate compensation for the second individual if property rights were well defined. For example, a factory that pollutes the air imposes a cost on people who breathe the air. Because the factory does not bear the cost of pollution, it has an incentive to pollute more than it would otherwise. If property rights are defined so that those people own the air, the factory is forced to compensate them for the air it pollutes. The result is that the factory pollutes less. If property rights are defined so that the factory owns the air, people must pay the factory to pollute less so that the air will be breathable. Again, less pollution is created. Thus, when property rights are poorly defined, the economy produces more of the good than is socially optimal. When property rights are well defined, regardless of whom the rights are assigned to, the economy produces the socially optimal quantity of product.

The economic problem of the tragedy of the commons also results from poorly defined property rights. For example, if everyone in a village together owns a plot of pastureland (a commons), each person is free to graze his or her cattle on the land. However, because the ownership is spread over so many people, no single person has an incentive to maintain the land. The result is that the land will be overgrazed. However, if one person owned the land, that person would have the ability to profit from owning the land and therefore would have an incentive to maintain it.

A contemporary example of the tragedy of the commons is the treatment of endangered species. In countries that have outlawed the killing of elephants the elephant population dwindles because poachers have an incentive to evade the law and no one has an incentive to protect the elephants. Conversely, in the few countries in which killing elephants is legal, the elephant population is flourishing because people have an incentive to help the elephants thrive so that they can be harvested at a profit. As an extension of this example, cows are not endangered in the United States despite the fact that Americans consume millions of tons of beef annually. Because it is legal to own cows, farmers have an incentive to maintain herds and cull them at a profit. The decimation of the American buffalo, in contrast, occurred because cattlemen came to the plains before the rule of law was established. Without law to

enforce property rights, the buffalo were a common resource and so were hunted to near extinction.

SEE ALSO *Bill of Rights, U.S.; Capitalism; Coase Theorem; Communism; Externality; Freedom; Government; Individualism; Liberalism; Market Economy; Natural Rights; Property; Socialism; State, The; Tragedy of the Commons*

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PROPERTY RIGHTS, INTELLECTUAL

Intellectual property rights (IPR, or IPRs) are the rights of artists and inventors to get legal protection against unauthorized copying of their work. There are three main subtypes of IPRs: copyrights, trademarks, and patents. Copyrights apply to literary and artistic works, such as books, music, and computer programs; trademarks cover brand names, such as Coca-Cola®; and patents are awarded for new and useful inventions, such as the active ingredient of the molecule of a new antihypertension drug. In advanced industrial countries, IPRs account for an increasingly larger proportion of gross domestic product (GDP). In less developed countries, however, very little indigenous copyright-, trademark-, and patent-protected goods are produced.

Genuine IPR goods are often prohibitively expensive for citizens of the developing world. For example, in many countries in Asia and Africa, the cost of a computer software program is equal to the average per capita income. Thus, global income inequalities have given rise to a situation in which developing countries produce and consume illegitimate copies of IPR-protected goods. Usually, these goods are referred to as either pirated goods (for copyright-protected goods, such as software, books, and music) or counterfeit goods (for trademark- and patent-protected goods). The severity of piracy and counterfeiting varies, depending on the type of goods, the historical period, and the geographical location of goods. For example, the United States was notorious for not protecting foreign copyrights well into the twentieth century. Similarly, many African and Asian countries do not provide patent protection for pharmaceuticals. At the turn of the twenty-first century, software piracy and trademark counterfeiting are the best-known examples. According to estimates of the Business Software Alliance (BSA), in 2005 alone, $34 billion worth of business software was pirated worldwide. While copyright piracy poses no threat to consumers, some trademark and patent counterfeiting can have harmful effects on consumer health and safety. For example, fake (counterfeit) foods and medicines can lead to human death, while fake automobile parts have been linked to traffic deaths (Phillips 2005). One example of a counterfeit food is the "Sars" candy bar appearing in 2003, which is a counterfeit of the Mars candy bar.

How can IPR counterfeiting be eliminated? IPRs are protected both by national legislation and by various types of international treaties. In the United States, the 1976 Copyright Act, the 1946 Trademark Act ("Lanham Act"), and the 1985 Patent Act provide guarantees for the holders of IPRs. Most countries around the world have national laws protecting at least some types of IPRs. In addition, there are several dozen international IPR treaties. The main IPR treaties are the 1886 Berne Convention for the Protection of Literary and Artistic Works (for copyrights) and the 1883 Paris Convention for the Protection of Industrial Property (for trademarks and patents). The World Intellectual Property Organization (WIPO) in Geneva administers the Berne and Paris Convention, in addition to twenty-two other treaties covering the entire panoply of IPRs. Currently, WIPO has 183 member countries. Separately from WIPO, the World Trade Organization (WTO) administers the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which has been ratified by 149 countries. Despite the wealth of international agreements, however, there have not been radical improvements in the protection of IPRs in individual countries, and piracy and counterfeiting continue to exist around the world. This situation exists because international agreements are not self-enforcing and cannot be implemented without the will of individual national governments.

There are two mechanisms through which developed countries can compel developing countries to enforce international IPR agreements. The first one is the threat of trade sanctions. In the United States, the Omnibus Trade and Competitiveness Act of 1988 allows the U.S. Trade Representative to impose trade sanctions against countries that do not provide adequate IPR protection. Although virtually never imposed, the threat of trade sanctions can help sensitize some countries about the need to enforce IPR laws. This is a particularly powerful instrument against small states (e.g., Thailand) that are heavily

dependent on trade with the United States. For bigger states, however, the threat of trade sanctions is not an effective mechanism for bringing about meaningful improvements in IPR enforcement. In such countries, the threat of withdrawing foreign direct investment (FDI) has proven to be a more successful strategy. For example, in China, the Quality Brands Protection Council (QBPC), representing more than 100 foreign companies with over $20 billion of investment in China, has been remarkably successful in lobbying the Chinese government to enhance IPR enforcement (Dimitrov 2004). Developing countries that invest in IPR, especially the development of indigenous patented technology, can be more competitive in the global economy.

In conclusion, IPRs protect valuable, yet often pirated products. Although multiple international IPR treaties exist, good enforcement depends on the will of domestic governments to implement them. When properly applied, foreign pressure can help sensitize the governments of developing countries to the benefits of providing stronger IPR protection.

SEE ALSO *European Union; World Trade Organization*

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PROPOSITION 2 (MICHIGAN)

SEE *California Civil Rights Initiative.*

PROPOSITION 209 (CALIFORNIA)

SEE *California Civil Rights Initiative.*

PROPRIETARY CLASS

SEE *Physiocracy.*

PROSLAVERY ARGUMENTS

SEE *Slavery.*

PROSOCIAL BEHAVIOR

SEE *Altruism.*

PROSPECT THEORY

Prospect theory is a psychologically-based framework that describes the mental processes involved when an individual makes a choice among uncertain prospects. In the 1970s Israeli-born psychologists Daniel Kahneman and Amos Tversky (1937–1996) developed prospect theory along with a body of work that came to be known as *heuristics and biases*. The Nobel Prize committee singled out prospect theory when they awarded Kahneman the 2002 Nobel Prize in Economics, which he shared with economist Vernon Smith.

Prospect theory holds that people's psychological makeup induces them to value the outcomes of decision tasks as either *gains* or *losses* relative to some reference point. Moreover, people tend to become less sensitive to incremental gains or losses, meaning that the additional sensation associated with either an incremental gain or loss is less than the previous comparable increment. In addition, losses are experienced more acutely than gains, a feature that Kahneman and Tversky called *loss aversion*. Taken together, the features just described give rise to a value function over gains and losses that is S-shaped—concave in gains and convex in losses. Moreover, the function features a kink at the origin, and is more steeply sloped for losses than for gains.

Prospect theory also holds that psychologically people overweight low probabilities and underweight probabilities whose magnitudes are moderate or high. According to prospect theory, a person facing a decision task evaluates each possible decision in the decision menu using a rating function. The rating function is a sum of products, where each product combines a value and an uncertainty weight. The decision that receives the highest rating is the one the decision maker chooses.

The S-shaped value function typically induces people to behave in a risk-averse fashion when the potential out-

comes involve only gains, and to behave in a risk-seeking fashion when the potential outcomes involve only losses. However, because of the weighting function, this pattern can be reversed when low probabilities are involved. Specifically, the weighting function can induce people to behave in a risk-seeking fashion when the potential outcomes involve only gains, and in a risk-averse fashion when the potential outcomes involve only losses.

When prospects involve a mixture of potential gains and losses, loss aversion will tend to induce people to act as if they are averse to risk. In particular, the kink at the origin of the value function leads people to exhibit a strong preference for certain outcomes over uncertain outcomes.

The manner in which a decision task is framed is known as *framing*. When people frame their decision tasks they are said to engage in *editing*. Prospect theory explains why people often frame complex decision tasks as sequences of simpler decision tasks, and then make decisions by applying value functions and weighting functions to each of the subtasks. In doing so, they might overlook connections among subtasks, and as a result choose inferior decisions, behaving as if they were throwing away money.

Prospect theory has had a profound influence on economic scholarship. It has been used to explain investors' disposition to sell their winners too early and hold their losers too long; corporate managers' reluctance to terminate losing projects; the equity premium puzzle about why the difference between the return to stocks and the return to bonds is puzzlingly high; why certain types of investors find cash dividends attractive; and why corporate managers appear willing to leave money on the table when their firms participate in initial public offerings. Prospect theory, especially the concept of loss aversion, has also had an impact on psychological research.

Prospect theory is a descriptive theory, unlike *expected utility theory*, which is the normative framework most commonly used in economic modeling. A comprehensive treatment of expected utility theory can be found in the *Handbook of Utility Theory* (1998). Whereas expected utility theory assumes that final wealth is the carrier of value, prospect theory assumes that change in wealth is the carrier of value. Whereas expected utility theory assumes that people are immune to framing effects, prospect theory assumes that framing has an effect on people's choices. Whereas expected utility theory assumes that people do not distort probability values, prospect theory assumes that people overweight low probabilities and underweight moderate to high probabilities. Whereas expected utility theory assumes that people are uniform in their attitude toward risk, prospect theory assumes that people's attitude toward risk is situation specific. Whereas the axioms that underlie expected utility are normatively desirable, experimental evidence suggests that in practice, people tend to violate some of these axioms, and instead behave more in accordance with prospect theory.

SEE ALSO *Decision-making; Expected Utility Theory; Uncertainty*

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PROSTITUTION

Prostitution involves the exchange of sex for money or other material compensation. The most common type of prostitution involves women who provide sex to male customers.

Prostitution has a long history, and is sometimes called "the oldest profession." It has not always been condemned and stigmatized. In ancient times, some forms of prostitution were viewed positively. *Sacred prostitution*, where a temple priestess had sex with men, was a way of worshiping the deity. In ancient Greece, prostitution was an accepted part of life. The highest-status prostitutes, the *hetaerae*, were valued for their intellect and companionship, and at their salons they entertained politicians, artists, and scholars. The *hetaerae* enjoyed much more freedom and mobility than other Greek women of the time.

PROSTITUTION AND GENDER RELATIONS

For most of history, however, prostitution has been condemned, and gender bias has been marked: Prostitutes have been blamed for a large number of social problems, but male customers and profiteers were rarely chastised. This double standard continues to this day.

Prostitution reflects larger, traditional gender relations between men and women. First, for the most part, it is men, not women, who typically pay for sex, which is an outgrowth of the broader worldwide pattern of objectification of women. Customers' motives for buying sex differ, including satisfying a "need" for sex, inability to find

a conventional partner, desire for a certain type of sex or sex with a certain type of woman, fulfilling a fantasy, or engaging in risky behavior (Monto 2004). Second, reflecting women's subordinate status in society, gender inequality is pervasive in prostitution. Female prostitutes are paid for their services, but often not under conditions of their choosing. For those who have male managers (pimps, brothel owners, etc.), the women have little if any control over their working conditions and are subject to significant economic exploitation.

Third, prostitutes are vulnerable to victimization, and this victimization is gendered. Male customers, pimps, and other men sometimes engage in violence and other types of abuse. A significant number of prostitutes report that they have been robbed, raped, or assaulted at some time in their career, and serial killers prey on streetwalkers. Because no study of sex workers is based on a representative sample, it is impossible to tell how frequently they experience violence, but it is clearly an occupational hazard. Customers are sometimes robbed and assaulted as well, but most of the victimization is directed at female prostitutes. Fourth, gender inequality is also the norm in the criminal justice system's treatment of prostitution. Where prostitution is illegal, prostitutes continue to be arrested much more often than their male customers. Unequal justice is less pronounced in some cities than in others, and some cities periodically target customers but, overall, the police tend to focus on prostitutes (Weitzer 1999). Fifth, gender bias is apparent in portrayals of prostitution in the mass media. Films, television shows, popular music, and literature usually depict prostitution negatively, although it is occasionally romanticized. There are, of course, some realistic or sympathetic portrayals in popular culture, such as Sting's 1999 song, "Tomorrow We'll See," but such depictions are rare exceptions to the rule.

INDOOR PROSTITUTION, STREET PROSTITUTION, AND MALE PROSTITUTION

There are exceptions to this general pattern of gender inequality. Not all prostitutes are exploited or victimized. *Indoor workers* who sell sex in brothels and massage parlors, as independent call girls, or as employees of escort agencies are less likely to be abused by customers than *street prostitutes*, and the indoor workers are also less economically exploited, express greater job satisfaction, and have higher self-esteem than their street-level counterparts (Vanwesenbeeck 2001; Weitzer 2005). Research shows that some indoor workers have quasi-romantic encounters with customers—not limited to sex but including conversation, cuddling, emotional support, and intimacy (Lever and Dolnick 2000). Indoor prostitutes are also less likely than streetwalkers to use addictive drugs and are at significantly lower risk of sexually transmitted diseases (Plumridge and Abel 2001). There is one important exception to this portrait of indoor prostitution: Women who are recruited by force or fraud and trafficked to work in brothels are at high risk for subsequent exploitation and victimization.

Gender inequality is absent in the case of male prostitutes, who sell sex to other men, who comprise a significant minority of the sex trade. Male prostitutes may be sexually objectified in the same way as female prostitutes, but compared to female streetwalkers, male prostitutes have greater control over their working conditions (few males have pimps); are less likely to have been abused as children, to be forced into prostitution, and to experience violence from customers; are more likely to enjoy their work overall and to derive sexual gratification from it; and are less susceptible to arrest or harassment by the police (Aggleton 1999; West 1993).

In sum, workers in different sectors of the sex trade, as well as male and female workers, experience different kinds of working conditions and varying degrees of victimization, exploitation, freedom, and job satisfaction. The type of prostitution is extremely important.

TRENDS

Today, the sex trade is a huge business worldwide, with numerous providers, customers, and third-party profiteers. Since prostitution is illegal in many places and stigmatized everywhere, it is impossible to determine exactly how prevalent it is or whether it is increasing, but a significant number of men admit to having bought sex from a prostitute. According to a 2000 survey, 17 percent of American men have paid for sex at some time in their lives, compared to 16 percent of Australian men (in 2001) and 9 percent of British men (in 2000). The real numbers are likely higher, given the tendency to underreport disreputable activity.

The Internet offers unprecedented new opportunities for sex workers to communicate with clients and set up appointments. Several major Web sites contain message boards that offer a wealth of information for customers: what to expect in terms of services and prices; "reviews" of a certain worker's appearance, demeanor, and performance; and the offerings of specific establishments (e.g., a massage parlor, an escort agency). Customers' chat rooms and message boards provide a fascinating window into the reasons why men buy sex, what they are looking for in a provider, norms regarding appropriate treatment of workers, and clients' general views about paid sex and the sex industry.

Another trend is the growing internationalization of the sex trade. *Sex tourism* involves persons who travel from

one country to another for the purpose of having sex with a prostitute in the destination country. Most sex tourists are men, but a small number of female tourists buy sex from local men in the Caribbean and elsewhere. Travel companies around the world promote sex tourism, providing information to prospective customers and offering package tours.

In some places, such as Holland, sex tourism accounts for a significant share of the country's tourism revenues. One study found that the sex industry accounted for between 2 and 14 percent of the gross domestic product in Thailand, Indonesia, Malaysia, and the Philippines (Lim 1998). Customers pump a substantial amount of foreign currency into these economies, which explains why these governments tacitly support the sex trade. In Thailand alone, prostitution earned $23 to $27 billion from 1993 to 1995 (Lim 1998).

Among the reasons why international travel for sex is seen as attractive, compared to buying sex in one's own country, are anonymity and low risk of detection, low prices, and a desire to have sex with a member of a particular racial or ethnic group. In Thailand, for example, most of the foreign customers are affluent and come from Australia, Germany, the United States, and Japan, and most of the workers are Thai or Filipino women, many of whom originally came from poor rural areas and sell sex to support their families back home. There is, therefore, a striking class disparity between most workers and most foreign customers.

Some sex tourists travel to other countries with the specific purpose of having sex with minors. Doing so in certain foreign countries is seen as far less risky than engaging in such conduct in a customer's home country. Some nations, including the United States and Canada, have passed laws prohibiting their citizens from buying sex from minors outside the home country, though these laws are difficult to enforce.

SEE ALSO *Patriarchy; Pimps*

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PROTECTED MARKETS

A protected market is defined as one shielded from competition. The analytical concept dates back at least to Adam Smith, David Ricardo, Alfred Marshall, and other economists who analyzed the implications of imperfect competition, trade restrictions, and market power. Market protections may be natural or man-made, private or public, and welfare enhancing or depleting.

Some markets are naturally protected from competition by high costs of transportation because of distance, bulk, or terrain. A market isolated by high transport costs and characterized by economies of size so that only one firm can operate at low unit cost is called a natural monopoly. A cooperative form of business organization owned by patrons or government regulation of pricing has been used to avoid exploitation of producers and consumers in such naturally protected markets.

Naturally protected markets are the exception; protected markets more frequently emerge from deliberate action by firms, organizations, and government. Firms engage in exclusionary, predatory, and price-fixing behavior to create or exploit protected markets (Black 2002). Most nations have antitrust laws to avoid or countervail such exercise of market power. In the modern age of sophisticated science, technology, and information systems, firms turn to other strategies to protect markets. For example, a firm may protect its market by encouraging excessive standards (suited to the firm in question but not to other firms), by aggressive advertising, by exploitation of public ignorance (e.g., fear of chemicals or pathogens in tap water or in conventionally produced food), and by market power to expand shelf space in supermarkets.

In the case of organizations, workers form unions to protect their labor market from competition and so enable

collective bargaining to raise wages and improve working conditions. Workers in some countries have lobbied successfully for laws requiring large severance payments, high minimum wages and unemployment compensation, long vacations, short workweeks, and strict work rules. A consequence, illustrated by France, is high overall labor costs that discourage employment, especially of young, inexperienced workers. These factors coupled with racism and discrimination in French labor markets brought long-term unemployment rates of 20 percent or more among Muslim youth in the *banlieue* neighborhoods across France, sparking massive social unrest in 2005.

Turning to markets protected by government, border controls attempt to protect domestic workers from immigrant laborers willing to work for low wages and benefits. The result is salutary for domestic workers but hurts would-be migrant workers. Thus, policies to protect labor and industry can be divisive, creating a dual labor market of cosseted job-secure workers with generous benefit packages on one hand and poor unemployed and underemployed workers with limited future prospects on the other.

Governments of some countries pursue an infant industry policy or industrial policy by protecting selected domestic firms through tariffs, quotas, and regulation of competing imports while also promoting the firms with subsidies in the form of cheap credit, low taxes, and concessional access to public research and educational benefits. Such market protection is intended to help new firms until they attain the critical mass necessary to compete in international markets without assistance. A problem is that governments are not very adept at picking industrial winners. Target industries and firms are likely to be favored for political rather than sound economic reasons. Partly because market protection invites complacency in industry, favored treatment tends to be institutionalized and continued even after the favored industry was expected to mature.

Instruments such as tariffs, licenses, and regulations used to protect markets create economic rents—the stream of income generated over time by such instruments. Individuals, firms, and organizations have reason to engage in unethical practices, lobbying and bribing politicians and bureaucrats to create or remove such instruments. The consequence is corruption in government.

However, some market protections are justified and raise real national income. Firms that protect their market by being a first mover or by innovating faster than competitors serve consumers and raise national income. Market protection is useful in supplying public goods. In a laissez-faire competitive market, firms can recover only the marginal cost of their products. Hence, a firm is dissuaded from developing a new soybean variety, for example, because it cannot recover the millions of dollars spent to develop the seed. Governments award patents, copyrights, and trademarks so that firms can protect their intellectual property. Thus, firms can exercise market power to charge prices above marginal costs and pay for research and development.

Charging above marginal cost is a second-best policy. The first-best "textbook" policy in such cases is to rely on the public rather than the private sector to develop and pay for such technology. But governments do not have a favorable record, suffering from a dearth of funding and a surfeit of political misdirection in providing such public goods.

Society benefits from grades, standards, and sanitary and phytosanitary regulations that improve private market performance. Unfortunately, these and other market protections sometimes are employed to the detriment of society. The World Bank (Anderson et al., pp. 346, 351, 352) estimates that elimination of 2006 barriers (tariff and nontariff impediments not justified by sound science) to international trade in goods would add $278 billion to world income each year by 2015 and beyond—nearly half of that accruing to developing countries.

Public protection of markets often is justified to serve the environment (Southgate et al. 2007, pp. 103–123). Natural resources such as oceans, the atmosphere, and land are frequently open-access property inviting overuse. The consequent overexploitation of open-access property is called the tragedy of the commons. Uncontrolled access leads users to exploit resources "before the hoarders get them." In 1960 Nobel laureate Ronald Coase pointed out that creation of property rights to such resources can align private with social incentives to achieve efficient resource use.

An example is the "cap and trade" market employed successfully to reduce sulfur dioxide emissions at low economic cost in the United States. The system begins with emission permits issued to each firm. The permits, which can be sold to firms or given to firms (reduced appropriately from historic emission levels), are negotiable. Firms that can reduce emissions at low cost sell their permits to firms expanding emissions to produce highly valued products.

In conclusion, prudent public policy to privatize, deregulate, and open markets at home and abroad has the potential to improve the quality of life around the world. In some cases that means opening markets, as in international trade. In other cases that means protecting markets, as in cap and trade systems for effluents or in patents for intellectual property.

SEE ALSO *Coase Theorem; Coase, Ronald; Competition; Infant Industry; Marshall, Alfred; Monopoly; Pollution; Predatory Pricing; Regulation; Returns,*

Increasing; Ricardo, David; Smith, Adam; Theory of Second Best; Tragedy of the Commons

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Luther Tweeten

PROTECTION, EQUAL

SEE *Equal Protection; Equality.*

PROTECTIONISM

Protectionism includes a broad range of obstacles created by governments to change the flows of international trade. A variety of policy instruments for trade barriers, including tariffs, quotas, and subsidies, has historically been used to protect domestic import-competing industries and to encourage exports. Occasionally, extreme measures such as a total prohibition of certain imports (bans) and sanctions are employed for economic or political reasons. Also, to avoid retaliation, or a "trade war," strategies such as voluntary export restraints may occasionally be used. Broader restrictive measures that may be regarded as policies aimed at shaping the pattern of trade include: exchange-rate controls; the creation of monopoly power by establishing cartels, such as the Organization of Petroleum Exporting Countries (OPEC), to stabilize prices of raw materials; free trade areas, such as custom unions; most-favored-nations principles; relaxed property-rights protection; environmental standards; and imports certificates.

The effect of trade barriers on individual countries depends upon market structure in the world and the type of policy tools used. Protectionism in principle alters the allocation of resources, creating distortions and inefficiencies in production. While free trade as the rule of thumb is best, there are exceptions. For example, it has been argued that some trade strategies, such as temporary and targeted protection of key infant industries, may benefit the domestic economy in the long run, though the effects on the global economy are unclear. In fact, some of today's industrial powers have benefited from such protectionist policies in the past. Similarly, the optimum tariff concept suggests that limited tariffs on imports may be advantageous to a nation, though world efficiency would diminish.

ANCIENT HISTORY

In ancient times, trade routes such as the Silk Road, the Spice Route, and the Incense Road were created and supported by governments to facilitate the exchange of goods between civilization centers in China, the Mediterranean, and Europe. During this period, raising revenue, rather than protection of domestic producers, was the primary objective of tariffs. For example, revenues from tariffs were used to build and maintain bridges and roads to make trade possible. However, China, between the late tenth and thirteenth centuries, maintained strict control over maritime trade by monopolizing exports, restricting trade to a few ports, imposing tariffs on imports, and regulating the purchase of traded Chinese goods. Trade was also a persistent issue in the relationship between Europe and the East. For example, the Crusaders banned trade with their Mediterranean foes, and only after conquering the eastern Mediterranean did they open it to European shipping.

In the sixteenth century, with the rise of nation-states, mercantilists introduced a formal analysis of winners and losers in trade and exercised protectionist policies lasting through the eighteenth century to accumulate gold and silver for armies. The mercantilists maintained that precious metals were the only things of value. In France, Jean Baptiste Colbert (1619–1683) brought all aspects of production under state control, including luxury goods, in order to improve industry in the colonial empire. To stimulate trade, the French government established an alliance with business by building and repairing canals and even subsidizing shipbuilders and shippers. Also, to defend French industry against foreign competition, Colbert imposed tariffs on imported cloth and subsidized the settlement of Dutch weavers into France. To discourage domestic consumption of exportable luxury goods, excise taxes known as *sumptuary taxes* were imposed. However, the extreme protectionist policies of Colbert did not bring prosperity to the French economy because the costs of such intervention exceeded the value of the benefits.

The protective trade policies of the mercantilists in Britain and Germany, on the other hand, were shaped by interest groups, wars, and recessions. For example, in

Britain, Thomas Mun (1571–1641), director of the East Indian Company, maintained a state-supported monopoly over trade with India because of his lobbying power and influence in the Parliament.

MODERN HISTORY

At the start of the Industrial Revolution in the late eighteenth century, as belief in the protectionist policies of the mercantilists was dwindling, the views of physiocrats gained popularity. The physiocrats believed that land is the source of value and were the first to articulate free trade under their laissez-faire policy, according to which there should be no tariffs on the export of agricultural goods. Later, the English classical economists Adam Smith (1723–1790) and David Ricardo (1772–1823) rebelled against the mercantilists' protectionist doctrine. Using the comparative advantage argument, Ricardo advocated free trade and attacked the corn laws, which limited the import of grain into England to protect domestic farmers. Assuming what was called later *perfect competition*, Smith viewed unconstrained expansion of markets through free international trade as a powerful force providing additional opportunities for specialization and the division of labor.

Although liberal trade policies gained prominence in the nineteenth century, some economists on both sides of the Atlantic questioned the assumptions of these free trade theories. They argued that in the presence of positive externalities and dynamic economies of scale, government must pursue activist national policies to promote economic development and industrialization. Among these economists, Friedrich List (1789–1846) of Germany is notable for the power of his argument and his historical exemplars—demonstrating how, alternatively, free trade or protectionism is useful, depending on the stage of economic development. In the nineteenth century, Hamburg was a major trading center benefiting from free trade, even as the largely agricultural economy of Germany was becoming overwhelmed by the industrial supremacy of Great Britain. List linked economic development and industrial growth to the national interest and security of Germany, and he called for elimination of internal tariffs among states and for the expansion of the custom union (*Zollverein*). He also pleaded for protection of infant industries with tariffs as a part of a broader development strategy that included other policies, such as the creation of a national railway network. List did not suggest a return to mercantilist policies; rather, he believed in the importance of manufacturing to the national economy. Living in the United States in the 1830s, List was influenced by the views of Alexander Hamilton (1755/57–1804), who, like List, was critical of protectionist policies such as corn laws and agreed with Adam Smith on national defense as a justification for protectionism. The infant industry argument was also supported by prominent contemporary economists, such as John Stuart Mill (1806–1873) and Alfred Marshall (1908–1993).

Historically, changes in economic theories seem to have motivated changes in government trade policies, though the direction of causation is not always clear. With the new ideological tool of laissez-faire, government policies moved toward more free trade during the nineteenth century. In the late nineteenth century, a revolution in shipping and an expansion of railways contributed to falling transportation costs, offsetting rising tariffs. The use of trade barriers rose during the twentieth century's two world wars. However, after World War II (1939–1945), international organizations, such as the General Agreements on Tariffs and Trade (GATT), brought order to world trade by allowing a multilateral system of rules for government trade policies. During the oil and financial crises of the 1970s, protectionism tended to expand again in world trade. However, the Uruguay Round of the GATT trade negotiations led in 1995 to the formation of the World Trade Organization (WTO), which provides a forum for trade negotiations and dispute resolution among member states. The WTO has experienced some success in reducing trade barriers and reaching agreements in the areas of financial services, telecommunications, and information technology. In agriculture, however, reducing subsidies among developed countries has remained a challenge for the WTO.

PHILOSOPHIES OF PROTECTIONISM

While the old protectionism philosophy was concerned with attracting and retaining precious metals, modern protectionism theories are interested in the production benefits of restricted trade policies. Some of the new theories of international trade consider the consequences of economies of scale and relax the assumption of perfect competition. These theories question comparative advantage as the explanation for trade, and renew support for protectionism for national interests.

The historical pattern of government policy on international trade appears to exhibit cyclical movements between free trade and protectionism. The apparent systemic shifts between openness and protectionism are caused by a variety of factors, such as hegemonic stability emphasizing the importance of leadership. For example, in the second half of the nineteenth century, after Britain became the world economic and political power, it pursued an open economic system. U.S. leadership after World War II and the dominance of capitalism led to a worldwide reduction in tariffs by GATT. Other causes of changes in international trade policies include excess

industrial capacity and overproduction or a glut of agricultural products leading to high unemployment, declining profitability, and eventually protectionism, and developments of new economic theories, such as those by Smith and Ricardo. It is even argued that patriotic sentiments help shape protectionist beliefs.

EMPIRICAL EVIDENCE

Numerous studies since the 1980s examine various protectionist policies and their effects. For example, some studies have shown that the greatest growth in the world has been associated with the most liberal trade policies (Capie 1994; Baldwin 1986). However, since the late 1950s, some of the empirical evidence and casual observations have not been fully consistent with the simple theory of comparative advantage. In some cases, endogenous technological change, economies of scale, and imperfect competition have explained patterns of international trade better than the simple law of comparative advantage and have provided justification for government intervention. Strategic trade policies of export subsidies and import restrictions, targeting sensitive industries with increasing return and imperfect competition, have been successful in some countries in creating sustainable comparative advantage. However, economists such as Paul Krugman (1995) argue that the influence of interest groups on governments can lead to excessive and misguided interventions that are likely to raise national income but benefit only a small group of people. In other words, real world politics is as imperfect as markets. Typically, a small group of stakeholders in the protected industry benefit from protectionist policies, whereas the costs are distributed among a large number of consumers. Therefore, as Jong-Wha Lee and Phillip Swagel (1997) argue, while protectionism is inefficient economically, it may be efficient politically.

Gene Grossman and Elhanan Helpman (1994) produce a more rigorous analysis of protectionism and the role of interest groups. In their model, the structure of protectionism is determined by the elasticity of import demand, which determines the degree of welfare distortion and the ratio of imports to domestic output, showing the political significance of the domestic industry. Daniel Trefler (1993) carries this argument further by demonstrating that the level of trade protectionism is endogenously determined. According to the theory of endogenous protectionism, as import penetration rises in an industry, lobbying activities by interest groups intensify, leading to greater protection.

Investigating the determinants of trade barriers, Edward Ray (1981a) finds that tariff and nontariff barriers are the result of both economic and political factors. Ray's cross-sectional study of U.S. trade finds that both the existence and intensity of nontariff barriers affect exports, though the profitability of protectionism depends on industry characteristics. Elsewhere, Ray (1981b) finds that industries with an apparent comparative advantage and with larger consumer losses tend to receive more protection in the United States. While tariffs are positively related to labor intensity, they are inversely related to the capital/labor ratio. Interestingly, the opposite is true for nontariff barriers. Furthermore, nontariff barriers are negatively related to seller concentration and geographical concentration, but tariffs are positively related to seller concentration and geographical concentration. Lee and Swagel (1997) accounted for country and industry characteristics and found that weak, declining, and politically important industries tend to receive more protection than exporting industries.

SEE ALSO *Absolute and Comparative Advantage; Quotas, Trade; Tariffs; Trade, Bilateral*

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Akbar Marvasti

PROTEIN GAP

SEE *Malnutrition.*

PROTEST

Social protest is collective action that uses unconventional means to press claims on institutional authorities to alter conditions and address collective grievances. From suicide bombings, to peaceful street marches, to religious ceremonies ordaining women as Catholic priests or acts of sabotage and passive resistance, social protests make claims on the state and other institutional authorities to correct perceived injustices, alter practices and understandings, and redistribute access to social goods. In the process, these protests also construct new collective identities and forge new meanings that inform politics and everyday life and bring about changes in popular culture, social practices, and institutional structures. While all protests are political in the minimal sense that securing desired changes typically requires gaining the cooperation and approval of political authorities, many protests are explicitly political in that they attempt to change public policies, the personnel in the government, and the structure of the state.

Protests vary in their visibility and methods. Everyday *resistance* is the most covert, involving acts of noncooperation, such as military desertion and foot-dragging by peasants, to more proactive acts, such as using symbols and gestures of authority to highlight discrepancies between how authorities act and their claims about what is fair and equitable (Scott 1985). Popular songs about exploitative bosses, as well as poetry highlighting the evils of landlords and heralding the heroism of the common people, put authority into question and prepare the way for more concerted protests. In Poland during the 1980s, for example, workers, artists, and intellectuals used the symbolism of the socialist state to question the extent to which the state actually represented worker interests, thereby paving the way for the demonstrations, vigils, and marches of the Solidarity movement (Osa 2003).

By questioning authority, everyday resistance may open the way to *institutional protests* that are overt, entail collective mobilization, and are legal or at least recognized by authorities as a legitimate form of expression. Initially, these protests are often illegal, but, through a process of accommodation with authorities and public acceptance, they become legitimized. By "striking their sails," eighteenth-century sailors forced ship captains to pay back wages, distribute the "grog ration," or put into shore. Later, the *strike* became a legally regulated form of protest, with government agencies responsible for certifying strikes and court regulation of picketing, marches, and the use of strike funds. In the 1770s early American colonists burned effigies and dumped tea into Boston Harbor, and organized widespread boycotts by refusing to pay new taxes imposed by the British Crown. Later, boycotts became legally regulated, and were split into *primary boycotts* (directed against the primary target) and *secondary boycotts* (directed against a third party, such as a grocery store that sells boycotted products).

Historically, forms of institutional protest were forged by excluded groups, such as industrial workers and racial minorities, who turned to protest when the conventional politics of voting and lobbying were unavailable or ineffective. Francis Piven and Richard Cloward (1977) argue that protests retain their leverage so long as they are illegitimate, but lose potency as they become regulated. In contemporary Western democracies, protest marches and demonstrations are mobilized by all types of groups, including corporations, churches, professional societies, and trade associations. Such protests have become legally regulated events, leading to the conclusion that Western democracies have become social movement societies (Meyer and Tarrow 1998). Sidney Tarrow (1998) argues that, by the early twentieth century, such institutional protests had become "modular" in that they are readily understood and available for most literate and media-conscious populations as a vehicle for expressing their interests.

Illegal or illegitimate protests that violate institutional rules and understandings are more disruptive and require more commitment. In such cases, protestors directly disrupt ongoing institutions by blocking access to them or impeding their routine operation and by directly defying authority. Nonviolent resistance or civil disobedience is one form of this category of protest. Drawing on Mohandas Gandhi's (1869–1948) theory of passive resistance (Sharp 1973), in the early 1960s black college students organized lunch counter sit-ins across the American South, refusing to move until they were served and challenging authorities to arrest them until their demands for racial desegregation were recognized (Orum 1972; McAdam 1999). In the early 1970s in Northern Ireland, Irish Republican Army supporters staged hunger strikes in the prisons, refusing to cooperate with authorities and ultimately bringing into question the legitimacy of British policies and rule in the region (White 1993). Nonviolent resistance is typically framed in terms of a universal moral claim, such as "God's law" or the "natural order," that supersedes existing institutions.

All these forms of protest attempt to exert influence directly by imposing negative sanctions and creating uncertainty in the eyes of targets, and indirectly by mobilizing third-party bystanders to support demands for change. Protestors engaging in *collective violence* attempt

to exert influence by imposing physical injury or harm on targets, forcing targets to comply or destroying their will to resist change. Violence creates clarity and polarization by forcing potential allies and bystanders to choose sides. This makes violence a risky strategy, especially for weak and poorly organized groups. Violent protest is almost certain to provoke repression or counterviolence as authorities claim the need to protect "law and order," leading to arrests or destruction. Except where the state is already weak or has already collapsed, political authorities typically hold the advantage and respond with police and military force, as well as less obtrusive forms of social control (Davenport 2005). Groups that resort to violence typically have to go underground, using "safe houses" and secret codes, imposing iron discipline on their members, and resocializing activists to become "true believers" whose world is reduced to a single cultlike movement or group.

Protest has multiple causes. First are *collective grievances*, typically stemming from abrupt and widely experienced social strains or discontinuities that disrupt everyday life. Mass unemployment, political flight due to war and civil violence, and widespread hunger due to famine and political chaos are often critical. Second are *resources*, especially leadership and collective organization, that facilitate mobilization. More-cohesive groups that share collective identities and networks of solidarity, as well as experienced local leaders, are much more likely to protest. Black ministers and church leaders in the United States, for example, were central to organizing many of the civil rights protests of the 1950s and 1960s (Morris 1984). Third are *cultural resources* in terms of collective identities and understandings that can be used to frame and justify protest. Framing defines conditions as unjust and subject to change, thereby allowing groups to protest (Snow and Benford 1988). Fourth are *political opportunities*, that is, "the probability that social protest actions will lead to success in achieving a desired outcome" (Goldstone and Tilly 2001, p. 182). Electoral candidates faced with closely divided government and close elections make appeals to political outsiders in the hope that these groups might provide the votes needed for victory. In the United States, the closely fought national elections in the late 1950s and early 1960s made the black vote an appealing resource for both Republicans and Democrats, which encouraged civil rights protests by creating signals of governmental responsiveness (McAdam 1999). Similarly, these electoral contests helped trigger the farmworker movement of the 1960s, as well as a wave of student, women's, disabled, and other minority protests (Jenkins 1985).

Does protest create social change? Most protests fail in their broader objectives, especially as envisioned by critical intellectuals and activists (Rochon 1998). But protests nonetheless set in motion processes that often result in improvements for aggrieved groups. The labor protests of the 1930s helped create industrial unions, which became an important device for providing better wages, benefits, and job security for workers. Civil rights protests helped abolish Jim Crow laws and legal racial segregation, which characterized the United States through the 1960s, paving the way for black elected officials to introduce improved urban services in many southern communities (Button 1989). Anti–Vietnam War protests, especially the more violent and disruptive protests, helped push the U.S. Congress to adopt legislation limiting the war effort and eventually contributed to a reversal of U.S. foreign policy (Burstein and Freudenberg 1978; McAdam and Su 2002). These changes were not due simply to protests, but protests contributed to a broader set of political processes that have often generated policy and broader institutional and cultural changes. By initiating and stimulating these changes, protest can be seen as a rational and effective method of gaining political and social influence.

SEE ALSO *Activism; Anticolonial Movements; Authority; Civil Disobedience; Civil Rights Movement, U.S.; Jim Crow; Mau Mau; Participation, Political; Passive Resistance; Resistance; Social Movements; Vietnam War; Violence*

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J. Craig Jenkins

PROTEST MOVEMENTS

SEE *Social Movements.*

PROTESTANT ETHIC, THE

Published originally as two long articles in 1904 and 1905, Max Weber's classic *The Protestant Ethic and the Spirit of Capitalism* (1920) is one of the most enduring and widely read volumes in modern social science. On its publication it immediately set off a heated debate and, remarkably, to this day the controversy has continued almost undiminished.

The Protestant Ethic investigated whether the "Protestant ethic" found among seventeenth-century Puritans (mainly Calvinists, Methodists, Baptists, and Quakers) "coparticipated" in giving birth to a driving force Weber (1864–1920) saw as contributing to the rise of the industrial west: a secular "spirit of capitalism." Adherents of this "modern economic ethic," he argued, viewed work as a vocational calling (*Beruf*). Characteristic was a rigorous—an ascetic—organization of occupational life according to a set of values, a methodical and dutiful striving for profit and wealth, and a systematic reinvestment of money rather than its enjoyment.

THE DOCTRINE OF PREDESTINATION

The doctrine of predestination anchors Weber's argument in *The Protestant Ethic*. According to the French theologian John Calvin (1509–1564), an inscrutable Old Testament God, omniscient and omnipotent, has determined that only a chosen few will be reborn into heaven. Good works or ethical behavior can never influence His decisions. Unbearable anxiety and fatalism were the consequence of this doctrine for the faithful, Weber noted. However, revisions were undertaken in the late sixteenth and early seventeenth centuries by the "Puritan Divines," a group of Methodist, Calvinist, Quaker, and Baptist ministers, theologians, and lay believers in England. Herein lies the source of the Protestant ethic, Weber maintained.

Weber's analysis at this point can be seen to divide into two stages. First, the Puritans elevated to the forefront methodical work and wealth. The purpose of life itself involved labor, they argued; work in a calling is "commanded to all" by God, and He is gratified by the active execution of His will by believers. Moreover, by taming base wants and desires, systematic labor assists concentration upon God and His plan; it also dispels the overwhelming doubt, anxiety, and sense of moral unworthiness caused by the doctrine of predestination. A parallel sanctification took place in respect to wealth. The creation of God's kingdom constituted the purpose of this short life, according to the Puritans, and an earthly cosmos of wealth and abundance would surely serve His glory. Methodical work—a crucial means toward this noble end—thereby acquired a further special dignity. In sum, this ascetic Protestantism bestowed clear "psychological premiums" upon constant labor and the search for riches. Both activities lost their exclusively mundane meaning and became providential.

Although influential, this sanctification failed to overcome fully the long-standing ethos anchored in medieval Catholicism. Labor, according to this "traditional economic ethic," was understood as a necessary evil, and profit was seldom earned honestly. If this "frame of mind" was to be banished, work and wealth had to acquire an even more comprehensive sanctification, *The Protestant Ethic* held. Furthermore, the all-important question to anxious believers—"am I among the

saved?"—had not yet been answered adequately. In this regard, the second stage of Weber's analysis proves crucial.

Despite the predestination decree, the Puritan Divines concluded that *signs* from God of the believer's salvation status could be discovered. Above all, the deity's favor seemed apparent if the devout demonstrated a capacity, as required by their vocational calling, either to labor systematically or to remain focused upon the onerous task of acquiring wealth. Indeed, the faithful convinced themselves that their strength and discipline to do so, as well as their intense devotion and righteous conduct, came from God: His energy was "operating within." And surely this majestic divinity would bestow His powers only upon the predestined elect. Methodical work and great wealth now became "evidence" of one's favorable salvation status.

FROM "SPIRITUAL FOUNDATION" TO "MECHANICAL FOUNDATION"

Now awarded psychological premiums in an even more thorough manner, constant labor and the possession of riches became viewed by believers as testifying to their salvation. They offered literal proof (*Bewährung*) to the devout of redemption. As anxiety declined, the depressed and bleak Puritan became transformed into the disciplined "tool" of God's will, proudly engaged in the task of building His glorious kingdom on earth.

According to Weber, this methodical-rational organization of life and inner-worldly asceticism—a "Protestant ethic"—distinguished the "Puritan style of life." The faithful focused their energies and conduct in a comprehensive manner upon God's will, restricted consumption, reinvested profits, banished the traditional economic ethic, and placed work at the center of life. Extreme loyalty to His grand design marked the devout, as did cognizance that riches emanated from the hand of this omnipotent deity and thus belonged exclusively to Him and His kingdom. Wealth *must* be, on His behalf and for His community, invested instead of enjoyed. Simultaneously, the image of those engaged in business and oriented to profit changed: Rather than viewed as calculating, greedy, and self-interested, as had been the case since antiquity, capitalists were now perceived as honest employers engaged in a noble project given by God. The halo of religion—a "spiritual foundation"—surrounded their activities, and hence the understanding of the production and exchange of goods as involving exclusively utilitarian calculations and clever business procedures must be abandoned, Weber contended. Specialists in vocations—a new "type of person" (*Menschentyp*)—now embarked upon the stage of western history. They "coparticipated" in the formation of the spirit of capitalism and constituted one of its major "social carriers."

Weber saw this "modern economic ethic," which is represented in *The Protestant Ethic* by Benjamin Franklin (1706–1790), as providing an underlying psychological thrust and legitimation to modern capitalism's early development in the eighteenth and nineteenth centuries. However, its value-oriented roots gradually died out as industrialization and urbanization proceeded over the last two centuries, and today capitalism unfolds exclusively on a purely "mechanical foundation." Impersonal exchange relationships, pragmatic necessities, and manifold external constraint—a "steel-hard casing" (*stahlhartes Gehäuse*)—now predominate. "The Puritan," Weber maintained, "*wanted* to be a person with a vocational calling; we *must* be" ([1920] 2008, p. 123).

CRITICISMS OF WEBER

Controversy surrounded *The Protestant Ethic* immediately after its publication. Generations of critics and defenders have debated vehemently "the Weber thesis." Arguably, no other volume in the social sciences in the English-speaking world has generated a more intense and long-term discussion. Four of the major lines of criticism are adumbrated here.

First, commentators have frequently viewed *The Protestant Ethic* as proposing that ascetic Protestantism caused, in a linear manner, modern capitalism. Innumerable critics then insisted that beliefs never explain historical change. Some maintained that new technologies introduced industrial capitalism (e.g., the cotton gin, the steam engine); others perceived the heroism and greed of great capitalists (e.g., Rockefeller, Carnegie, Vanderbilt) as pivotal; still others insisted that sheer business astuteness or the economic and political power and interests of a dominant class were central—and then argued that a systematic work ethos developed out of power and interests alone. All then dismissed *The Protestant Ethic* as naively trumpeting the power of ideas to change history. This criticism—"Weber is an idealist"—misses the mark, however. *The Protestant Ethic* acknowledged the necessity for a complex and multidimensional analysis ([1920] 2008, p. 125), yet Weber focused intentionally in this volume upon only "one side" of the causal configuration. He did so in order forcefully to bring a heretofore neglected cultural factor into an ongoing debate. Moreover, as noted, he sought to explain the origin of the spirit of capitalism rather than of modern capitalism.

Weber held in *The Protestant Ethic* that subsequent research must address the large question of whether the spirit of capitalism played a significant part in calling forth industrial capitalism. In fact, this broad theme—the unique development of the modern west out of arrays of "ideas and interests"—directly captured his attention in an ambitious series of comparative studies almost entirely

neglected by his critics. He asked, what constellations of interacting social, economic, political, technological, legal, and religious activities explain the particular historical pathway taken in the west? How can sociologists oriented to multiple causes analyze the specific direction and outcome of western history? *The Protestant Ethic*'s exploration of the *religious* sources behind the secular spirit of capitalism must be understood as Weber's first step toward fulfilling this broad-ranging agenda.

Second, theologians in particular have been critical of Weber's discussions of Catholic, Lutheran, and ascetic Protestant doctrines. Many have dissected Calvin's teachings and failed to discover an emphasis upon work in a vocation. However, these scholars have neglected to note Weber's distinction between Calvin's doctrines and the ascetic Protestantism of the sixteenth and seventeenth centuries. He locates the source of the Protestant ethic in the Puritanism of this latter period rather than in Calvin's teachings, and emphasizes the many revisions of Calvin's thought introduced by the Puritan Divines.

Third, commentators frequently insisted that capitalism predated Puritanism. They discovered it to be significantly widespread in the ancient and medieval worlds in the west and Middle East, as well as in China and India. Although Weber maintained that his main concern in *The Protestant Ethic* involved the origins of a Protestant ethic and the extent of its influence upon a spirit of capitalism, capitalism's general origins were also of interest to him. His discussion of this theme, however, distinguished sharply between modern industrial capitalism on the one hand and "political," or "adventure," capitalism on the other hand. Whereas the former—his interest—arose only in the modern west, the latter appeared universally, he held.

Fourth, a long list of critics argued that two Renaissance figures, the great entrepreneur Jacob Fugger (1459–1525) and the urban architect and aesthetician Leon Battista Alberti (1404–1472), possessed a spirit of capitalism essentially similar to Benjamin Franklin's. These commentators further maintained that the spirit of capitalism blossomed forth exclusively out of practical interests and utilitarian business astuteness. A religious source must be seen as both superfluous and historically inaccurate, they insisted.

Weber countered this attack in endnotes added in 1919 and 1920 to *The Protestant Ethic* by repeating and elaborating upon his defense against these "relativizing" critics. While noting that Alberti and Fugger had accommodated to, rather than changed, the economic conditions of their time, Weber contended that the central issue here involves a distinction—pivotal for him yet unacknowledged by the critics—between utilitarian activity on the one hand and value-oriented activity on the other hand. Motives vary, he emphasized, and the "practical-rational" approach to life is not dominant in all groupings in all historical epochs. This commentary, he maintained, neglected the ways in which values may independently motivate action. Indeed, a *methodical* aspect—an element indispensable for the birth of the spirit of capitalism and the shattering of the traditional economic ethic—was alone introduced by action oriented to values, according to Weber.

In sum, Weber often has been misunderstood by his many critics. A dynamic tapestry characterizes *The Protestant Ethic* analysis. Despite regular indictments, the Weber thesis survives to this day and must be confronted by scholars seeking to understand the rise of modern capitalism. By calling attention to the important historical roles played by both a Protestant ethic and a spirit of capitalism, *The Protestant Ethic* questions all those theories that explain the origin of the modern world exclusively by reference to utilitarian activity (for example, rational choice theory) or structural transformations (whether of Marxian or Durkheimian lineage). The varying *subjective meaning* of persons in demarcated groups proved central to Weber, as did the other-worldly, value-oriented ancestry of the modern world. The Puritan's asceticism originated from his life "in but not of" the world.

The Protestant Ethic must be comprehended as the father of all schools of sociological thought that, in seeking to explain long-range social change, explicitly attend to cultural forces. It must be further understood as declaring emphatically that the past is interwoven with, and influences, the present. Finally, in an age of universalizing globalization, *The Protestant Ethic* conveys the causal significance of the indigenous cultural make-up inevitably manifest when a nation embarks upon an economic modernization course. He admonished social scientists generally to take account of religion-based background contexts for social change.

SEE ALSO *Culture; Norms; Values*

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Stephen Kalberg

PROTESTANTISM

Protestantism is generally thought of as being one of the three major branches of the Christian faith (the other two being Roman Catholicism and Eastern Orthodoxy). Protestantism is a broad category. It includes, for example, Anglicans, Baptists, Campbellites, Congregationalists, Lutherans, Methodists, Mennonites, Nazarenes, Presbyterians, Quakers, Seventh-Day Adventists, and Unitarians. Texts that are generally taken to embody the spirit of Protestantism include Martin Luther's translation of the Bible into the German language, John Calvin's *Institutes of the Christian Religion*, the Anglican *Book of Common Prayer*, John Milton's *Paradise Lost*, Isaac Watts's *Hymns and Spiritual Songs*, John Woolman's *Journal*, George Eliot's *The Mill on the Floss*, Søren Kierkegaard's *The Sickness unto Death*, the *Barmen Declaration*, and the Rev. Dr. Martin Luther King Jr.'s *Letter from Birmingham Jail*.

HISTORY AND GEOGRAPHY

Protestantism arose in Western Europe in the sixteenth and seventeenth centuries. It came into being as the result of the efforts of men such as John Calvin, John Knox, Martin Luther, Menno Simons, and Huldrych Zwingli to "reform" what they saw as the "errors" of the Roman Catholic Church. The drive to "correct" these "mistakes" ended up profoundly transforming the political, as well as the religious, institutions of Western Europe. Indeed, scholars have claimed that the Protestant Reformation played a crucial role in creating the religious, political, social, economic, and cultural formations that came to embody "modernity."

There is no scholarly consensus on the number of Protestants in the world. If one adopts a quite broad definition and counts people who are only nominally Christian as well as those who are quite devout, then one might argue that the total is over 800 million. Although Protestantism was created in Western Europe, it has spread throughout much of the world. Protestant beliefs and practices are quite common, of course, in Australia and North America, and have a strong foothold in some Asian countries—South Korea and the Philippines, for instance. Protestants make up sizable minorities in Latin American nations such as Brazil, Costa Rica, El Salvador, and Guatemala. In a number of African countries (Lesotho, Liberia, Malawi, Namibia, South Africa, and Swaziland, for instance), Protestants constitute a large proportion of the citizens. Indeed, some scholars have argued that Protestantism's future may lie in Africa and Latin America rather than in Europe or North America. Certainly, it now seems to be far more vital in Africa and Latin America than in some of the nations of Western Europe.

PRACTICES

From the sixteenth century to the present, Protestants have consistently claimed to be highly suspicious of "empty ritualism." Such suspicions notwithstanding, over the centuries Protestants have developed a set of powerful religious practices that vivify the doctrines and symbols of the Christian faith. Some Protestants (Lutherans and Anglicans especially) have maintained carefully crafted formal liturgies. The roots of those liturgies stretch back to—indeed reach back beyond—the sixteenth century, and have much in common with Catholic and Orthodox liturgies. Other Protestants, often referred to as Evangelicals, have created revival services intended to convert nonbelievers into devout Christians. And since the beginning of the twentieth century, a group of Protestants who are often labeled Pentecostals or Charismatics have held services that focus on the "gift of tongues." This gift—which often results in a kind of ecstatic speech that is not intelligible to hearers—is thought of as a sign of the power of the Holy Spirit.

As a general rule, Protestants tend to display a strong love for singing hymns and gospel songs. Accordingly, a good portion of many Protestant worship services is devoted to choral and congregational singing. Protestant worship services also tend to devote a good deal of time to listening to homilies and sermons. These sermons, which are sometimes filled with emotion and sometimes quite erudite, are intended to help the people who hear them comprehend the truths of the Christian faith as those truths are set forth in the Christian scriptures.

Indeed, the importance of the Christian scriptures in shaping Protestant practice and belief is difficult to exaggerate. Reading the scriptures aloud is one of the high points of many Protestant worship services, and the hymns Protestants sing are often based on passages from the Bible. (Martin Luther's "A Mighty Fortress is Our God" is, for example, based on Psalm 46.) The scriptures also play a large role in the private devotional practices of most Protestants. And Protestants greatly value Bible study groups and Sunday School classes in which small groups meet together to ascertain the meaning of passages from the Bible.

It is no accident that many Protestant devotional practices focus on the Christian scriptures, for Protestants have tended to see the Bible—rather than the traditions of

the church—as the surest guide to understanding the nature of reality and of God. Protestants have often expressed a certain distrust of human reason or of observations of nature as a way to grasp the truth. If given a choice between relying on observations of nature, reason, tradition, or the Bible as a way to understand the nature of God and the universe, many Protestants would say, without hesitation, that their choice would be the Bible.

In part because they tend to put great confidence in the power of the Christian scriptures, correctly comprehended, to disclose the nature of ultimate reality, Protestants sometimes have acted in ways that have seemed to smack of hubris. In its most extreme form, this apparent hubris has resulted in some Protestant leaders coming close to asserting that the Bible is infallible and that they themselves have fully and correctly comprehended the truths that are taught therein. Critics have sometimes argued that this self-confident scripturalism is one of the hallmarks of Protestantism and that its predilection for that kind of scripturalism makes Protestantism a particularly dangerous form of religion. Such arguments are not without merit.

It should also be noted, however, that Protestants (like many other religious human beings) have sometimes been keenly aware of human finitude. This has sometimes led Protestants to fiercely critique all human attempts to speak for God and all human claims to have fully understood God's nature and desires. Some Protestants have gone so far as to say that all human ideas and beliefs—including all Protestant ideas and beliefs—are very far from the mind of God. Under some conditions, the Protestant view of the world can, therefore, inculcate a good deal of humility within the people who adhere to it.

SOCIAL TEACHINGS

The Protestant tendency to see all human institutions as imperfect has sometimes been connected with a wide-ranging set of emancipatory impulses. Protestant beliefs and practices played an important role, for instance, in the abolitionist movements of the eighteenth and nineteenth centuries. Those beliefs and practices have sometimes been linked, too, with anticolonial and feminist movements. Many Protestants have, on occasion, fiercely critiqued the behavior of the nation-states in whose borders they resided. Created in part in reaction to what sixteenth- and seventeenth-century reformers saw as an overly rigid and overly powerful set of ecclesiastical institutions, Protestantism has sometimes tended to value "freedom" over "tradition" and "conscience" over the "laws of men."

Protestantism has also, many scholars would assert, served to naturalize a wide range of inegalitarian social relationships. In the eighteenth and nineteenth centuries, for example, Protestants wrote and preached countless defenses of the institution of chattel slavery. In the twentieth century, many white Protestants living in the United States (especially those living in the former slave states) advanced theological defenses of white supremacy. Indeed, pious Protestants often played crucial roles in Southern campaigns to defeat the civil rights movements of the 1950s and 1960s.

Patriarchal social relations have also often been naturalized by Protestant beliefs and practices. Protestants have generally thought of God as masculine and referred to God with masculine pronouns. Protestant churches have generally believed that to obtain salvation a woman must submit herself to the authority of this masculine Lord. Historically, women have been taught that it was "natural" for them to defer to men. Protestant churches have also tended to see persons who have sex with someone to whom they are not married as rebelling against God's laws. Protestant churches have taught that women who have sex with other women and (especially) men who have sex with other men are violating God's fundamental laws, and these sorts of violations have been regarded as particularly unnatural and repugnant. In general, Protestant churches have tended to be organizations in which heterosexual norms have been enforced quite strictly.

Scholars do not agree on the precise nature of the relationship between Protestantism and capitalism. Some scholarly analyses of that relationship (Max Weber's, for instance) emphasize Protestantism's role in creating circumstances in which modern capitalism could arise and flourish; other scholarly analyses (R. H. Tawney's, for example) focus on ways in which the rise of capitalism decisively influenced Protestants' assumptions and habits. Most scholars would, however, assert that Protestant churches have tended to naturalize the authority of capitalist institutions. Protestant churches have often seen commercial success as a sign of Godly favor and they have often acted as though it was natural for businessmen to play a large role in running church affairs. Protestant churches have eagerly adopted techniques and methods developed by businessmen. Indeed, many have been run in ways strikingly similar to those of for-profit corporations.

The "peace churches" (Mennonites, for example) have sometimes raised pointed questions about whether the violence employed by nation-states can be reconciled with the life and teachings of Jesus. But for the most part, however, Protestants have tended to see nation-states and nationalism as natural, even as ordained by God. They have been reluctant to challenge state authority even when it conflicts with Christian beliefs.

SEE ALSO *Fundamentalism, Christian; Protestant Ethic; Weber, Max*

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PROTOTYPES

A *prototype* is a cognitive representation that exemplifies the essential features of a category or concept. Specifically, a prototypical representation reflects the central tendency or the average or typical attributes of the members of a category. For example, the prototype of *table* consists of the knowledge that a table has four legs propping up a flat surface. People store prototypical knowledge of social groups (e.g., librarians), objects (e.g., tables), events (e.g., dining out), and ideas (e.g., the perfect date). These prototypical representations facilitate people's ability to encode, organize, and retrieve information about everyday stimuli.

An early pioneer of prototype research was psychologist Eleanor Rosch, whose work during the 1960s and 1970s was inspired by the Aristotelian assumption that categories are logical entities whose membership is defined by an item's possession of simple matching features. Rosch argued that not all items within a category have an equal degree of membership—that is, that potential category members vary in their distance from prototypical exemplars. In short, category membership is not absolute but a matter of degree, and these differing degrees of membership have important implications for information processing. For example, people are quicker to agree with the statement "a robin is a bird" than to the statement "a turkey is a bird." Moreover, people are more likely to remember statements that are conceptually prototypical (e.g., "the boulder fell down the mountain") than those that are conceptually nonprototypical ("the lettuce fell down the mountain").

During the 1970s and 1980s, Nancy Cantor and Walter Mischel extended Rosch's work on prototypes to the realm of social perception and social categories. According to Cantor and Mischel, there exist basic personality categories that social perceivers use to facilitate information processing about other people. This research was important in showing that people do not simply store specific, concrete items of information about others, but they routinely form abstract, prototypical representations. For example, when given traits about a person suggesting extroversion (e.g., friendly), people will later erroneously recall that they were given other traits (e.g., energetic) that fit the prototype of extroversion. These findings suggest that people are economical in their mental storage of information about others, relying on prototypes to influence the interpretation and accurate memory of specific personality trait information.

A concept in psychology that is related to the notion of prototype is *schema*. These two terms are often used interchangeably, but there are subtle differences. *Prototype* refers to a specific ideal image of a category member, with all known attributes filled in. For example, the prototypic "apple" may engender a representation of red, round fruit, even if actual category members vary so much on these characteristic dimensions that the prototype becomes meaningless for identifying them (e.g., some apples are green). An alternative to the prototype view of categorical knowledge is the concept of schema, which suggests that particular attributes can be ignored. For example, although we may associate "red" with apple, the schema concept allows for some features to remain unspecified. This greater flexibility with the schema concept may explain the wider use of the term *schema*, rather than *prototype*, in the social psychology literature.

Eliot Smith (1998) has argued that the distinction between schemas and prototypes is largely inconsequential and that four general points can be made about schema and prototype-based processing. First, schemas and prototypes are preexisting knowledge structures that are learned from other people or from experience. Second, the effects of schemas and prototypes on free recall tasks result from two sources: information processing that occurs at the time the stimulus information is first learned, and information processing that occurs when the information is later retrieved or reconstructed. Third, schemas and prototypes can be primed, thus influencing

interpretations of information presented later. Finally, separate processes may govern our recall of specific traits and our overall evaluations of a person, rendering prototypes just part of the process of knowing others.

As Smith also has noted, psychologists in the twenty-first century have moved away from models of mental representations that portray knowledge units as static or stored in memory. In contrast, contemporary cognitive models view knowledge representations as active, interactive, flexible, and sensitive to context. The relatively new field of cognitive science, with its ties to computer modeling and neuroscience, promises to shed significant future light on the more dynamic role of prototypes in influencing phenomena at multiple levels of analysis, including neural, mental, and social.

SEE ALSO *Central Tendencies, Measures of; Priming; Psychology; Schemas; Social Psychology*

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SEE *Anarchism.*

PSEUDOPANEL DATA

SEE *Data, Pseudopanel.*

PSYCHIATRIC DISORDERS

The 2000 version of the American Psychiatric Association's diagnostic manual, the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (termed *DSM*-IV for short), contains nearly 400 mental disorders, distributed across seventeen broad categories. These categories include childhood disorders, schizophrenia and psychotic disorders, mood disorders, substance-related disorders, anxiety disorders, eating disorders, sleep disorders, personality disorders, sexual- and gender-identity disorders, and impulse-control disorders. The number of mental disorders has ballooned from the first *DSM* edition in 1952 to the present, reflecting an increased "splitting" of broad mental illness categories into narrower ones.

DSM-IV AND MULTIAXIAL FORMULATION

DSM-IV describes individuals along five axes, or dimensions of functioning, the first two of which focus on what is conventionally regarded as mental illness. By providing users with a multiaxial formulation, *DSM*-IV aims to paint a reasonably comprehensive picture of each individual.

Axis I lists most major mental disorders, such as schizophrenia, mood disorders, and anxiety disorders. In general, researchers view these disorders as acute problems that are superimposed on individuals' preexisting functioning.

Axis II lists personality disorders and mental retardation, which ostensibly differ from Axis I disorders in their greater persistence over time. Personality disorders are extremes of personality traits, such as impulsivity, dependency, and anxiety, that are inflexible, maladaptive, or both. Mental retardation is characterized by an IQ (intelligence quotient) of approximately 70 or below, severe deficits in adaptive functioning (e.g., inability to cook or dress oneself), and onset prior to adulthood.

Axis III lists medical conditions that can be relevant to individuals' psychological functioning. Medical conditions can adversely affect the prognosis of many mental disorders and mimic the symptoms of many others. For example, hypothyroidism and stroke can produce the full clinical picture of major depression, a condition characterized by extreme sadness and loss of pleasure, along with such features as extreme guilt, sleeping and eating difficulties, and suicidal thinking.

Axis IV lists recent life stressors, such as death of a relationship partner or friend, and environmental problems, such as housing difficulties, extreme poverty, or inadequate access to mental health services. These psychological factors can precipitate or maintain mental illnesses. For example, research indicates that certain negative life events, especially those involving losses of loved ones, can trigger major depression in predisposed individuals. Evidence also suggests that schizophrenia, a condition marked by unusual thinking, delusions (fixed false beliefs), and hallucinations (perceptions occurring in the absence of any stimulus), can be triggered in some predis-

posed individuals by the stresses associated with poverty. Nevertheless, evidence suggests that causality also operates in the reverse direction because, for example, the deteriorating job skills associated with schizophrenia can lead to poverty.

Axis V describes the individual's overall level of daily functioning. The inclusion of this axis acknowledges that people with the same psychiatric disorder differ markedly in their levels of adaptation to the environment. For example, some people with major depression are almost constantly bedridden, suicidal, or both, whereas others manage to perform surprisingly well in their occupational and family lives despite intense psychological pain.

DEFINING PSYCHIATRIC DISORDER

Theoreticians have long struggled with the question of what, if anything, all disorders of psychological functioning have in common. Although they have proposed numerous definitions of psychiatric disorder, all of these definitions have their shortcomings.

A subjective distress model posits that all mental disorders are marked by inner turmoil. Although many mental disorders, such as panic disorder (a condition marked by sudden surges of intense anxiety), are associated with subjective distress, some others, such as antisocial personality disorder (a condition marked by a long-standing history of illegal and irresponsible behavior) are associated with minimal subjective distress.

A statistical model posits that mental disorders are marked by statistical rarity. Although many mental disorders, such as infantile autism (a condition originating in infancy that is associated with serious deficits in language, social bonding, and imagination), are relatively rare in the population, others, such as major depression, are fairly common.

An evolutionary model posits that all mental disorders generate biological disadvantage, such as reduced life span or reduced ability to reproduce. Although some mental disorders, such as major depression, are associated with increased rates of suicide and therefore clear-cut biological disadvantage, others, such as specific phobia (an intense and irrational fear of an object, place, or situation), are not associated with any apparent reduction in lifespan or reproductive capacity.

In the 1990s Jerome Wakefield attempted to remedy these shortcomings by proposing that all mental disorders are harmful dysfunctions. According to Wakefield, all mental disorders (1) produce undesirable consequences for the affected individual, society, or both (harm); and (2) are characterized by the failure of a psychological system to perform its evolved function (dysfunction). For example, according to Wakefield, paranoia ("delusional disorder" in DSM-IV) is a mental disorder because (1) people with paranoia frequently experience marked distress, and (2) paranoia reflects a failure of the human threat system to operate properly. Specifically, in paranoia the threat detection system either reacts to nonexistent dangers or overreacts to mild ones. Yet the harmful dysfunction formulation has its limitations. In particular, some conditions, such as anxiety disorders, do not appear to stem from dysfunctions. Instead, in most cases these conditions seem to result from evolved systems reacting in adaptive ways to subjectively perceived threats.

In light of the problems with previous attempts to define disorder, some authors have proposed that psychiatric disorders are best conceptualized in terms of a family resemblance model. Just as brothers and sisters within a large family tend to look similar but do not share any single facial characteristic, mental disorders typically share a loosely covarying set of features. These features include subjective distress, statistical rarity, biological dysfunction, impairment, societal disapproval, irrationality, and loss of control over one's behavior. From this perspective, there is no "bright line" demarcating abnormality from normality, but rather a constellation of partly overlapping attributes that set most psychiatric disorders apart from healthy functioning.

LABELING THEORY AND RESPONSES TO IT

The mental illness concept has long had its harsh critics. Advocates of labeling theory, such as Thomas Szasz (b. 1920), have argued that diagnoses of mental illness are merely pejorative names that society attaches to behavior that it finds objectionable. In a 1961 book Szasz referred famously to mental illness as a myth, contending that what the mental health profession calls psychological disorders are actually "problems in living," that is, difficulties in adjusting one's behavior to societal demands. Many labeling theorists further contend that psychiatric diagnoses are culturally relative, because the behaviors that societies deem abnormal vary markedly across place and time.

Labeling theory has served a valuable function by reminding psychologists and psychiatrists that diagnoses are readily abused. Many nonscientific "diagnoses" in the popular psychology literature, such as sexual addiction, codependency, and road-rage disorder, are scant more than descriptive labels for undesirable behaviors. These labels yield little new information. For example, labeling an aggressive driver with road-rage disorder informs us only that this person frequently loses his or her temper while driving, a fact of which we were already aware.

Nevertheless, labeling theory's critique of psychiatric diagnostic systems and the concept of mental illness falls

short on at least three grounds. First, many devalued behaviors, such as laziness, slovenliness, rudeness, and racism, are not mental disorders. Therefore, there is more to psychiatric disorder than social undesirability.

Second, many labeling theorists have overstated the cultural relativity of mental disorders. Admittedly, some mental disorders are specific to certain cultures. For example, koro, a condition characterized by a pathological fear that one's genitals are disappearing, is localized largely to parts of Southeast Asia. Nevertheless, many major psychological disorders appear to be present across most, if not all, cultures. In 1976 Jane Murphy conducted a significant study of two societies that had experienced essentially no contact with Euro-American culture—a group of Yorubas in Nigeria and a group of Eskimos near the Bering Strait. These cultures had terms for disorders that were strikingly similar to several Euro-American disorders, including alcoholism, schizophrenia, and psychopathic personality, a condition marked by dishonesty, callousness, guiltlessness, and lack of empathy.

Third, many psychological diagnoses do more than describe already known behaviors. As Eli Robins and Samuel Guze observed in a classic 1970 article, valid psychological diagnoses provide us with novel information. For example, if we accurately diagnose an individual with bipolar disorder, formerly known as manic depression, we will learn several things about that individual that we did not know previously. Among other things, we will learn that this individual (1) experiences relatively sudden episodes of both mania (a condition marked by dramatically elated mood, energy, and self-esteem, along with poor judgment and impulsivity) and depression, typically punctuated by periods of essentially normal functioning; (2) is more likely than nonaffected individuals to have one or more biological relatives with mood disorders; (3) is at heightened risk for other psychological difficulties, including substance abuse and suicide; and (4) will probably respond positively to certain medications, such as lithium carbonate and antiseizure agents.

PREVALENCE OF MENTAL DISORDERS

Several large survey studies conducted in the 1980s, 1990s, and early twenty-first century have yielded valuable knowledge regarding the prevalence of major mental disorders in the general population. A 2005 study by Ronald Kessler and his colleagues revealed that between 25 percent and 30 percent of Americans suffer from anxiety disorders such as phobias, about 20 percent suffer from mood disorders such as depression and bipolar disorder, and about 15 percent suffer from substance-abuse disorders such as alcoholism. A surprisingly large proportion of Americans, perhaps 25 percent, also suffer from impulse-control disorders such as kleptomania (marked by recurrent stealing) and pathological gambling. On a lifetime basis, the most prevalent single disorder appears to be major depression, which afflicts about 17 percent of Americans at some point in their lives.

Survey studies also reveal important gender differences in the prevalence of some mental disorders. For example, in most populations major depression is about twice as common in women than in men. Antisocial personality disorder, in contrast, is about three times as common in men as in women. The reasons for these gender differences are unknown, but remain an active area of research investigation.

Race differences in the prevalence of psychopathology tend to be less pronounced than gender differences, although there are notable exceptions. For example, posttraumatic stress disorder, a condition marked by severe anxiety and avoidance reactions following a traumatic event (e.g., a rape, shooting, or motor vehicle accident), appears to be more prevalent in African Americans than in whites, perhaps because individuals in poor, inner-city areas, including many African Americans, often witness and experience traumatic events. Alcoholism is more prevalent in Native Americans than in other individuals, probably for a mixture of genetic and environmental reasons, the latter including poverty and alienation from the broader American society.

CAUSES OF MENTAL ILLNESS

The past several centuries have witnessed a variety of approaches to the etiology, or causation, of psychiatric illnesses. Etiological models of psychological disorder have shifted over time in accord with prevailing societal conceptions.

During the Middle Ages many people embraced a demonic model, which viewed mental illnesses largely as the product of evil spirits infecting the mind. Not surprisingly, exorcism was often the preferred "treatment" of the day. In succeeding centuries, conceptions of the causes of mental disorder became progressively more rooted in naturalistic as opposed to spiritual explanations.

Psychodynamic approaches, originated by Sigmund Freud (1856–1939) and his followers, place substantial emphasis on the role of early life experiences, unconscious influences, and psychological conflict in the genesis of mental disorder. For example, psychodynamic theorists might view obsessive-compulsive disorder, an anxiety disorder characterized by repeated intrusive thoughts (e.g., fears of contamination) and by unsuccessful efforts to neutralize them (e.g., frantic cleaning), as an unconscious psychological defense against deep-seated fears of loss of emotional control. These fears, in turn, may trace their roots to aversive childhood experiences, such as physical

or sexual trauma. Despite their value in generating hypotheses concerning the causes of mental illness, psychodynamic theories have proven difficult to test.

Behavioral approaches, influenced by the work of John B. Watson (1878–1958), B. F. Skinner (1904–1990), Joseph Wolpe (1915–1997), and others, conceive of mental disorder as maladaptive learned habits. For behaviorists, atypical and disturbed behaviors are governed by the same learning processes as other behaviors. For example, behaviorists might attempt to explain a phobia of dogs in terms of an early unpleasant experience with a dog in conjunction with subsequent avoidance behavior. By avoiding dogs whenever they are within sight, the victim of a dog bite experiences short-term relief. Yet this person also forfeits the opportunity to learn that most dogs are not as dangerous as he or she fears.

Cognitive approaches, pioneered by Albert Ellis (b. 1913), Aaron Beck (b. 1921), and others, posit that psychological disorders derive from irrational patterns of thinking. Cognitive theorists emphasize that an individual's interpretations of events, rather than events themselves, are the principal determinants of behavior. They regard unfounded beliefs about oneself, the world, and the future—such as the belief that "I must be perfect" or that "I must be liked by everyone to be a worthwhile person"—to be risk factors for depression and other disorders.

Biological approaches focus on physiological factors, such as genetic influences, early damage to the central nervous system, and hormonal abnormalities, as predisposing factors in mental illness. There is compelling evidence from twin and adoption studies—which permit researchers to disentangle the roles of genes and environment—that genetic factors play a substantial role in a wide array of psychiatric disorders, including schizophrenia, mood disorders, and anxiety disorders. There is also preliminary but growing evidence that viral infections prior to birth may set the stage for subsequent schizophrenia.

The advent of sophisticated neuroimaging techniques such as PET (positive emission tomography) and fMRI (functional magnetic resonance imaging) has been a substantial boon to biological approaches, as these techniques have allowed researchers to discover which brain areas are underactive or overactive during certain tasks. For example, many individuals with schizophrenia exhibit decreased activity in their frontal lobes, which is consistent with the poor judgment, inadequate planning, and memory deficits often observed in this condition. The human genome project also promises to add to our understanding of the biological underpinnings of mental disorder, because it is permitting researchers to identify genes linked to specific psychological disorders.

Proponents of differing etiological models have often sorted themselves into highly partisan camps, separated as much by ideology as evidence. Yet, few if any of these etiological approaches are mutually exclusive. Moreover, most researchers and theorists agree that the causes of mental disorders are likely to be multifactorial, that is, produced by many variables rather than one. In some cases, these causal variables may interact. For example, several studies indicate that a genetic abnormality that affects serotonin, a chemical messenger in the brain, may combine with life stressors to trigger depression. As a consequence, the most fruitful approaches to understanding mental disorder will probably involve multidisciplinary collaborations among researchers from diverse theoretical perspectives.

SEE ALSO *Alcoholism; Anxiety; Behaviorism; Cognition; Cultural Relativism; Depression, Psychological; Freud, Sigmund; Madness; Manic Depression; Mental Health; Mental Illness; Mental Retardation; Mood; Nature vs. Nurture; Neuroticism; Obsessive-Compulsive Disorder; Panic; Personality; Post-Traumatic Stress; Psychopathology; Psychotherapy; Schizophrenia; Stress*

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PSYCHIATRY

SEE *Mental Health; Psychotherapy; Psychotropic Drugs.*

PSYCHOANALYTIC THEORY

Founded by the Austrian neurologist and physician Sigmund Freud (1856–1939), psychoanalytic theory is a framework for understanding the impact of the unconscious on thoughts, feelings, and behavior. Freud posited that most of what motivates individuals lies outside of their immediate awareness. Borne out of Freud's treatment of patients with neurological disorders, psychoanalytic theory describes both normal and abnormal human experience and emphasizes the lasting impact of early childhood events on adult personality and psychological development. Psychoanalysis, the clinical application of Freud's theory, is a tool that explores the unconscious mind in order to relieve painful emotional symptoms and increase self-awareness. Psychoanalysis is the forerunner of most forms of modern psychotherapeutic techniques. To this day, psychoanalytic theory and the practice of psychoanalysis continue to evolve in ways that support, discard, and expand some of Freud's original principles.

At the heart of Freud's ideas was his seminal work *The Interpretation of Dreams* (1900), which describes dreams as unconscious wish fulfillments. Freud contended that there are core sexual and aggressive wishes that the conscious mind finds unacceptable and represses. These wishes are symbolically expressed in dreams. The surface details and narrative structure of the dream—what we remember—are referred to as the *manifest content*. The *latent content* of the dream represents its unconscious hidden meaning and can only be discovered through the process of interpretation.

Freud described other ways in which the unconscious is revealed in everyday life. For example, what Freud called a *parapraxis*, known today as a "Freudian slip" or "slip of the tongue," is popularly understood to describe the occurrence of an unconscious wish "accidentally" being revealed in an individual's speech or writing. For instance, a man who calls his wife "mom" may unconsciously reveal repressed thoughts or feelings that he has about either woman. Freud also argued that jokes can be derivative expressions of unconscious sexual or aggressive feelings disguised as humor.

Freud's explication of dreams and the unconscious led him to develop a more comprehensive theory of the mind. His *topographical model* posited conscious, unconscious, and preconscious parts of the mind. The *unconscious* contains all that is outside of immediate awareness, whereas the *conscious* contains those parts of which individuals are immediately aware. Information that is not in immediate awareness but is easily retrievable is called *preconscious*. Freud used the analogy of an iceberg to describe this model: Only a small tip of a much larger iceberg is visible above water, much like only a small fraction of the mind is conscious. Most of the mind lies in the unconscious, below the level of awareness.

Complementing the topographical model, Freud also proposed a structural model of the mind that includes three parts: *id*, *ego*, and *superego*. The id is unconscious and active at birth, and encompasses all of the instinctual and bodily wishes. It operates according to the *pleasure principle*, which has as its sole goal the immediate gratification of all urges. The ego operates mostly out of the *reality principle*, which accounts for reality factors and social norms that prohibit instinctual urges from being immediately gratified. The ego helps to regulate the frustration from ungratified id drives. The superego is the moral part of the mind that represents an individual's internalized sense of parental and societal values. Freud compared the conflict between the id and the ego to that between an unruly horse and its rider; the rider (ego) has to direct the unbridled energy of the horse (id) in a way that is neither too permitting nor too restrictive. These conflicts are at the heart of both classic and modern psychoanalytic theories' understanding of symptoms, psychopathology, and defense mechanisms.

When unacceptable and unconscious id drives approach conscious awareness, a sense of danger and anxiety develops. Defense mechanisms are employed by the ego to defend against this anxiety. In a *compromise formation*, the ego attempts to express these id impulses in socially appropriate ways while accounting for the moral and societal values of the superego; there is a compromise between the original wish and the anxiety against the wish. Some examples of defense mechanisms are *projection*, *displacement*, *reaction formation*, and *sublimation*.

Projection occurs when an individual's own unacceptable impulses are attributed to another person. The

boy who, before dinner, asks his mother if she wants a cookie projects his own desire onto her because he may feel ashamed by his wanting something that has been prohibited in the past. Displacement is the transferring of unacceptable thoughts or feelings one might have towards an object onto a more acceptable target object: A man who is mad at his wife "displaces" his dangerous angry feelings when he comes home and kicks the dog. Reaction formation involves the blocking of an unacceptable impulse by acting in an exaggerated and opposite way. For example, a new mother's friend may shower the mother with gifts and praise to conceal her own feelings of jealousy at not having a baby. Sublimation is considered one of the more mature defense mechanisms, and involves the redirection of unacceptable impulses into constructive, healthier endeavors. A successful surgeon sublimates unconscious aggressive impulses through the helpful act of surgery. The use of defense mechanisms is a natural function of living that helps individuals manage overwhelming thoughts and feelings. The rigid and pervasive adherence to particular defense mechanisms and styles of coping, however, may become maladaptive, often causing more psychological and emotional turmoil than it resolves.

Psychoanalytic theory encompasses views on human development and personality. According to Freud's theory there are five stages of psychosexual development that children must negotiate. At each stage id energies, called *libido*, are focused on various parts of the body called *erogenous zones*. The stages are: oral, anal, phallic, latent, and genital. During each stage a child must negotiate fulfilling those pleasures in the context of growing social rules and norms. The pleasure area during the oral phase is the mouth, and actions such as sucking, teething, and biting are prominent. During the anal phase children must reconcile the pleasures of retaining and eliminating feces (and urine) and the socially imposed responsibility of toilet training. During the phallic phase bodily pleasures are obtained from self-stimulation of the genitals. It is during this phase that the challenge of the *Oedipal complex* is confronted. Fond of antiquity and the classics, Freud named this complex to invoke the themes of Sophocles's Greek tragedy *Oedipus Rex*, a tragedy in which the character Oedipus unknowingly kills his father and marries his mother. Freud argued that in this complex, children feel repressed sexual attraction towards the parent of the opposite sex and aggressive hatred of the same-sex parent. During the next phase, the latency phase, libidinal instincts are repressed, only to reemerge at the start of puberty and the genital phase. At this time the focus is on genital pleasures with another person, leading toward the development of adult sexuality. When individuals have difficulty resolving the conflicts that each particular stage presents, they may become fixated, which affects adult personality.

These stages are important ideas in the history of psychoanalytic theory, but they are not distinct and precise developmental events. Rather, they are theoretical conceptualizations of some of the important challenges of psychological maturation. Nonetheless, they live on in modern parlance. Someone who is "orally fixated," for example, may have been overly indulged during the oral phase of psychosexual development and later, as an adult, develop an oral symptom such as excessive drinking or cigarette smoking. An adult described as "anal" may be excessively concerned with orderliness, timeliness, and control, much as a toddler in the anal phase must negotiate the pleasures and challenges of bowel control.

Encompassed in psychoanalytic theory of all types are the ideas of cure and personal growth. Psychoanalysis represents the clinical application of psychoanalytic theory to the issues of psychopathology, neurosis, psychosis, and dysfunctional patterns of living. It is an intense form of psychological treatment that involves four to five sessions per week with a trained psychoanalyst (usually a psychiatrist, psychologist, or social worker) and lasts several years. Patients lie on a couch and are asked to speak as freely as they can about whatever comes to their minds, a process called *free association*. As with dream interpretation, the theory holds that free associations, no matter how irrelevant, obscure, or trivial they may seem, exhibit an internal logic that, through the process of interpretation, reveals conflicts of the unconscious that can be worked through to bring about symptom relief. Integral to this intense form of treatment is the development of *transference*, which occurs when a patient unconsciously transfers onto the psychoanalyst the thoughts, feelings, and conflicts that they have toward early caregivers. Working through the transferred conflicts in the unique interpersonal relationship with the psychoanalyst is a key component of the psychoanalytic theory of cure. Psychoanalytically informed psychotherapy, though similar in guiding principles, differs from psychoanalysis in that an analytic couch is not typically used, sessions are less frequent, and transference issues, though present, are not as fully integrated in the curative process.

As a prolific theorist, writer, and practitioner, Freud had many followers, some of whom broke ranks with aspects of his theory. Carl Gustav Jung (1875–1968), for example, was the heir apparent to the psychoanalytic movement until theoretical differences ended his professional relationship with Freud. Jung emphasized religion, archetypes, and what he called the *collective unconscious*, a culturally shared set of unconscious symbols. Alfred Adler's (1870–1937) emphasis on individual striving for superiority and Karen Horney's (1885–1962) integration

of feministic views of psychological development and functioning—something Freud is often criticized for ignoring—represent some of the earliest expansions of psychoanalytic theory.

Modern additions to psychoanalytic theory, such as object-relations theory, move away from strict drive- and conflict-motivated models to more relational and interpersonal ones. That is, interpersonal relationships, in addition to internal bodily drives and instincts, play an increasingly important role in individuals' conscious and unconscious notions of self and other. As such, these issues are often played out in rich and meaningful ways in psychoanalytic treatment, which most modern psychoanalytic practitioners view as inherently more relational than Freud's original conception.

The ever-evolving system of psychoanalytic theory that exists today is arguably one of the most far-reaching and pervasive theories of the last one hundred years. One can hardly escape the influence of Freud's unique system of thought. As a theory of symbolic and hidden meanings, psychoanalytic theory is often applied to the critical understanding of literature, poetry, cinema, and the visual arts. Anthropologists have used psychoanalytic ideas to explore and understand the relationship between individuals and their cultures. Modern neuroscience has even paved the way for the emerging field of neuropsychoanalysis, which aims to integrate psychoanalytic ideas with physically observable brain structures, neural pathways, and brain chemistry. Psychoanalytic theory has often been criticized as being the unscientific, dogmatic, chauvinistic, illogical, and narcissistically insular theory of one man, Freud. Fair though aspects of these criticisms may be, the psychoanalytic theory of today offers a comprehensive and cogent account of the human condition.

SEE ALSO *Consciousness; Dreaming; Freud, Sigmund; Jung, Carl; Oedipus Complex; Psychology; Psychotherapy; Sublimate; Subliminal Suggestion*

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PSYCHODYNAMIC THEORY

SEE *Equilibrium in Psychology; Freud, Sigmund.*

PSYCHOLINGUISTICS

Psycholinguistics studies the way in which operations of the mind make language possible. It is a cross-disciplinary field, drawing upon ideas and findings from areas such as cognitive psychology, theoretical linguistics, phonetics, neurology, discourse analysis, computer science, semantics, and education. It is especially indebted to the first of these, which provides many of its basic tenets and its research methods.

Specifically, the field explores the cognitive processes that underlie the use, storage, and acquisition of language. Affective and contextual factors are a concern only as far as they impact upon performance. Although psycholinguists recognize that language users are individuals possessing different linguistic repertoires, their main goal is to identify general patterns of behavior across users. Those patterns might reflect the capabilities and biases of the human brain or the processing requirements of the language under investigation.

Psycholinguistics has a relatively recent history. It did not come into its own as a subject until the early 1960s, when behaviorist approaches to the study of the mind lost favor. However, interest in related topics can be traced back to eighteenth-century diaries recording the language development of children, to nineteenth-century research on the location of language in the brain, to the introspective methods of Wilhelm Wundt's psychology laboratory (established 1879), and to Francis Galton's work on word associations.

LANGUAGE PROCESSING

Those who work in the field of language processing seek to identify the processes, often highly automatic, that underlie the two productive skills (speaking and writing) and the two receptive ones (listening and reading). Starting with the generation of ideas, accounts of language production allow for macro-planning at discourse level and local micro-planning in relation to the utterance

about to be produced. The resulting plan is given linguistic form, which is stored in what is termed a mental buffer while the utterance is being produced.

Accounts of language reception recognize two stages. In decoding, the user identifies units of language within the input and builds smaller ones into larger. Current models represent the listener or reader as seeking potential matches at many different levels of representation (sound, letter, syllable, word) as well as relying on external cues provided by sources such as world knowledge or speaker knowledge. There were early suggestions that skilled readers and listeners spared themselves decoding effort by relying upon contextual cues. However, the key to skilled performance has been shown to lie in efficient decoding, which releases memory capacity and enables the reader or listener to give adequate attention to higher-level meaning.

Meaning construction is heavily dependent upon a process of interpretation. It requires the reader or listener to expand on the literal significance of the input by adding in what the writer or speaker appears to have left unexpressed. The user also decides on the relative importance of the new information, adds it to the meaning representation built up so far in the discourse, and checks for consistency.

Some language processing research relies upon observational data or upon introspective methods such as verbal report. However, the most favored approach is experimental. Importance is accorded to methods that tap in to processes on line, in other words, as they are occurring. There is a preference for parametric data in the form of, for example, the reaction times involved in carrying out a small-scale task such as distinguishing actual words from non-words.

LANGUAGE STORAGE

A long-term area of interest has been the way in which vocabulary is stored in the language user's mental lexicon. A word's lexical entry specifies its spoken and written forms, its word class, its senses, and the way it participates in larger linguistic structures. There is uncertainty as to whether word-forming prefixes and suffixes such as *un–* or *–less* have their own entries. Current theory represents entries as interconnected within the mind of a user, with much stronger connections between those that frequently co-occur.

More recently, interest in storage has been extended to the ways in which sounds and grammar are represented in the mind. In conventional accounts, it tends to be assumed that sounds are stored as templates or prototypes against which variations can be matched, while grammar takes the form of abstract, internalized rules. However, growing evidence of the enormous storage capacity of the mind suggests that language users may retain precise records of the many utterances they encounter throughout their lives. Their ability to recognize sounds, words, and even patterns of grammar consequently derives not from generalizations but from millions of accumulated examples. On this analysis, the frequency with which strings of sounds and words are encountered is an important factor in the ease with which an individual retrieves them when they are needed. The premise is supported by evidence from computer modeling on connectionist principles, which has shown (so far in a limited way) that it is possible for a program to acquire a set of grammatical rules and exceptions by dint of exposure to repeated examples.

LANGUAGE ACQUISITION (OR DEVELOPMENTAL PSYCHOLINGUISTICS)

Any discussion of how children acquire language is influenced by the long-running debate as to whether language is innate and genetically transmitted (a nativist view) or whether it is acquired wholly or mainly through exposure to the language of adult caregivers (an empiricist view). Early comments by the American linguist Noam Chomsky (b. 1928) about the poverty of the stimulus (the uninformative nature of the speech samples provided to the child) have been challenged by analyses of child directed speech (CDS). Many child language researchers therefore adopt a neutral position or propose that language may be partly innate.

Research in this area falls into two broad traditions. One is theory-driven and adopts the assumption that linguistic descriptions of grammar correspond to actual mental processes. Drawing especially on Chomskyan accounts, this line of enquiry seeks evidence in children's speech of universals of language, of common default values for certain features and of the adjustment of those values to match the target language.

A second branch is data-driven. It studies samples of child language, using the analytical tools provided by mainstream linguistics and discourse analysis. Researchers have formed conclusions about the way in which a child develops a phonological system, although the precise relationship between hearing and producing spoken words remains unclear. Vocabulary has been studied in relation to the words that are acquired earliest and to the rate at which the child's knowledge increases. Especially important have been studies of how the child manages to construct conceptual categories such as *flower* or *bird* from discrete examples of the category. Studies of grammar have monitored the gradual increase in length of utterance and in the complexity of the syntax used and the concepts expressed.

The research method most favored in language acquisition studies consists of longitudinal observation based

upon diaries or recordings. One outcome has been the assembly of a large international corpus of child language known as the Child Language Data Exchange System, or CHILDES. Researchers sometimes employ interviews with children to elicit specific linguistic items. Experimental methods have also been devised that enable a researcher to track the shifts of attention of a prelinguistic infant and thus to assess the infant's ability to discriminate between different signals.

A very different area of acquisition research investigates the way in which learners master a foreign language. Psycholinguistic theory provides a framework for studying both the cognitive processes that lead to expertise in the target language and the additional cognitive demands imposed upon the second language (L2) user by unfamiliar phonology, lexis, and syntax. The concepts of attention, working memory, and automaticity have proved especially useful; and an understanding of L2 fluency has been enhanced by first-language evidence of how speech is assembled.

TECHNOLOGICAL ADVANCES

In recent years, all these areas of psycholinguistics have been assisted by technological advances, especially the advent of brain imaging equipment. Researchers can now monitor brain activity while a subject is undertaking a language processing task; the purpose being to discover which parts of the brain are engaged and at which stages. They can identify where different types of linguistic information are located within the brain. They can even track the processing taking place in the brains of prelinguistic children.

Recent neurolinguistic findings build upon a long tradition of research on language in the brain, going back to the nineteenth century. It was assumed then that language was lateralized to the left hemisphere for most language users and stored in two small areas, named after the researchers Paul Broca (1824–1880) and Carl Wernicke (1848–1905). However, modern technology has demonstrated that the right hemisphere also plays its part, handling larger-scale constructs such as intonation and discourse structure. It has also shown that language is widely distributed throughout the brain, relying upon massive neural connections for rapid transmission.

Loosely associated with the study of language in the brain are a number of other areas of enquiry. One explores the question of whether language is a form of communication peculiar to human beings; another, the question of how language evolved. Both consider the possibility that language owes its existence to the unique configuration of the human brain in addition to the evolution of the human vocal apparatus.

A final area worth noting is the contribution that psycholinguistics makes to an understanding of language impairment—both developmental impairment (manifested from infancy) and impairment that is acquired as the result of accident or illness. Psycholinguists concern themselves with the processes that contribute to dyslexia and dysgraphia, with aphasic symptoms produced by strokes, and with disorders of speech. Besides contributing to the work of clinicians, this research helps to shed contrastive light on normal language processing. Similarly, work on the relationship between language and other cognitive skills in conditions such as Down syndrome or autism provides insights into whether language is part of general cognition or develops independently of it.

SEE ALSO *Anthropology; Child Development; Chomsky, Noam; Cognition; Communication; Disease; Neuroscience; Psychology; Rhetoric; Signals; Symbols; Theory of Mind*

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John Field

PSYCHOLOGICAL CAPITAL

Conventional microeconomics assumes that individuals seek to maximize their happiness, often called utility, by consuming goods and services while being constrained by

their earnings. Tibor Scitovsky (1976) in his seminal work on consumer behavior suggested that psychological factors such as arousal, status, and sense of control over life events may influence happiness. In addition, Art Goldsmith, Jonathan Veum, and William Darity Jr. (1997b) assert that psychological elements affect workplace performance and, hence, earnings. Thus, psychological factors must be accounted for to attain a rich understanding of consumer behavior. Behavioral economics is the subfield of economics that integrates insights from economics and psychology into the study of economic and social behavior. "Psychological capital" refers to the collection of values, norms, perceptions, cognitive elements, and affective or emotional factors embedded in a person that can be expected to influence happiness and earnings. This essay provides an overview of how the concept of psychological capital has been integrated into social science research.

PSYCHOLOGICAL CAPITAL, HAPPINESS, AND EARNINGS

The roots of behavioral economics, and hence the importance of psychological capital, can be found in the discovery by economists that economic motives are often at odds with actions and that in many instances psychological elements appear to shape behavior. For instance, conventional economists adopt the assumption that individuals are rational decision makers who compare the additional benefits and costs of an action and engage in those activities offering a net gain. This perspective, however, is difficult to square with many commonly observed behaviors including customers tipping at a restaurant they will never again frequent because it is so far from their home. Psychologists explain this behavior as evidence that actions are guided by values, such as fairness, and cultural norms learned through socialization. There is also reason to believe that perceptions regarding safety and economic security are important determinants of happiness. Joblessness, especially unemployment, creates a sense of economic vulnerability. Goldsmith, Veum, and Darity (1997a) draw a connection from unemployment to poorer psychological well-being in several distinct but interrelated ways: as a consequence of lower self-esteem; as a result of a feeling that life is not under one's control, leading to helplessness and depression; and as a loss of the social byproducts of participation in a work environment.

Psychological elements are expected to affect a person's wage, which in turn influences his or her level of consumption and happiness. A standard argument in economics is that a person's wage is tied to his or her workplace performance or productivity, which is largely governed by his or her level of skills, called human capital. Of course, effort on the job is also expected to influence productivity and wages. Carl Shapiro and Joseph Stiglitz reported in 1984 that economists claim that workplace effort is promoted by fear of joblessness or, according to George Akerlof in 1982, to reflect gratitude for favorable treatment by the firm. Expectancy theory is the most widely accepted and empirically supported theory of motivation or effort among psychologists. According to expectancy theory the strength of a person's motivation depends on the extent to which he or she believes that exertion, performance, and reward are linked tightly. Attribution theorists have proposed that an aspect of personality—locus of control—governs a person's perception of the strength of the connection between exertion, performance, and reward. Julian Rotter in 1966 classified individuals who believe they are masters of their own fate, and hence bear personal responsibility for what happens to them, as internalizers. Externalizers are those who believe they have little, if any, influence on the events that influence their lives. Expectancy theory predicts that a person with a more internal locus of control will be more motivated than a comparable individual whose locus of control is external.

MEASURING PSYCHOLOGICAL CAPITAL

Psychological capital is a broad term used to encompass various features of an individual's mind-set and personality, including motivation and emotional wellbeing. The convention in psychology is to use a battery of questions, called an inventory, to obtain a scale that gauges the psychological construct to be measured, such as motivation—locus of control—or self-esteem. Morris Rosenberg developed a survey instrument in 1965 to measure self-esteem because opinions about "self" are virtually the most treasured of our opinions and a crucial aspect of personality. He conceives of self-esteem as multidimensional, comprising notions of worth, goodness, health, appearance, skills, and social competence. Rosenberg uses a series of questions, each answered on a two point (0,1) basis. His measure of self-esteem may range in value from 0–6, with a higher value representing a greater level of self-esteem. Herb Lefcourt used a similar methodology in 1982 to measure locus of control, with larger values reflecting a more internal orientation, and hence a higher level of motivation.

Many economists are skeptical that elements of a person's psychological capital, such as locus of control, can be measured accurately by scales constructed from self-reported evaluations collected in the form of responses to survey questions. Their concerns are twofold. First, that it is difficult to compare responses across individuals because their replies are not anchored to a common baseline. Consider a question aimed at assessing a person's mental health that asks how often they have feelings of

anxiety, with response options including; 1 equating to never, 2 for occasionally, 3 representing often, and 4 meaning all of the time. Two different persons who have similar bouts of exposure to depression may answer this question differently, one reporting *occasionally* and the other *often*, resulting in misclassification error because their frame of reference is different—there is no common baseline. To reduce this problem investigators transform responses to a two-point scale such as *never* versus *not* never, which reduces misclassification error.

The second concern is that subjective responses may differ widely from objective evaluations. A person may report feeling anxious while a professional evaluation of the individual conducted by a physician or clinical psychologists may lead them to conclude that the person is not suffering from anxiety. Research by Anne Case, however, offers evidence that a person's subjective responses to health questions about his or her children are virtually identical to independent assessments conducted by a physician. Thus, social scientists now conduct empirical studies of the link between psychological capital and economic outcomes. For instance, as reported by Goldsmith, Veum, and Darity in 2000, they find that persons who are more internal in their outlook—those more motivated—earn higher wages, and that unemployment leads to lower self-esteem and a more external perspective (1997a). The mental health consequences of adverse developments, however, will be less severe for persons with an external outlook because they do not blame themselves for the situation. Thus, high status individuals with an internal locus of control are particularly vulnerable in terms of emotional well-being to negative occurrences that arise at the workplace or in the family. Minorities often hold an external locus of control both as a result of past discrimination and as a defense mechanism to avoid self blame for undesirable outcomes that are beyond their control. Thus, members of minority groups may experience less harm to their mental health due to adverse social and economic developments.

SEE ALSO *Economics, Labor; Locus of Control; Mental Health; Rosenberg's Self-Esteem Scale; Rotter's Internal-External Locus of Control Scale; Self-Esteem*

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Arthur H. Goldsmith

PSYCHOLOGICAL DEFENSE

SEE *Napoleon Complex.*

PSYCHOLOGY

The term *psychology* has been used to refer to the study of the soul, consciousness, behavior, the mind, or the brain, depending on the era and cultural context investigated. In the nineteenth century German philosopher-psychologist Friedrich Eduard Beneke (1798–1854) defined his new psychology as the natural science of inner experience and suggested that the subject matter of psychology was what one finds in oneself. His countryman Wilhelm Wundt (1832–1920), who is often considered one of the central figures in the creation of modern psychology, defined the subject matter of psychology as the total content of experience in its immediate character. William James (1842–1910), one of the pioneers of American psychology, defined psychology as the science of mental life, both of its phenomena and of its conditions.

In a 1989 study, Tracy B. Henley and his colleagues showed that in the first third of the twentieth century psychology was defined the majority of the time as including concepts of *mind*, *consciousness*, or *mental activity*. Between 1930 and 1969, the prime time of behaviorism, these terms were barely mentioned in North American psychology, although with the coming of the *cognitive rev-*

olution they became widely used again. Use of the term *behavior* increased throughout the twentieth century, with later definitions including both behavior and mental activity. Definitions of psychology reflect the dominant research programs in a particular context.

PSYCHOLOGICAL TOPICS

Psychology did not exist as an independent discipline before the nineteenth century, although psychological topics were studied long before then. The study of the soul (*psyche*) goes back to Greek philosopher Aristotle (384–322 BCE) who wrote a pioneering work entitled, in Latin, *De anima* (On the soul). Aristotle discussed the five senses as well as perception, thinking, and imagination. He also discussed memory and dreaming. He did not study intelligence quotient (IQ), motivation, or prejudice, however, which are all later psychological constructions.

In the eighteenth century German philosopher and mathematician Christian Wolff (1679–1754) divided the study of the soul into two parts: *rational psychology* and *empirical psychology*. *Rational psychology* depicted what the human soul was capable of. He discussed the soul's substantiality, simplicity, immateriality, immortality, as well as the mind-body problem, and provided logical proofs that the soul was immaterial. *Empirical psychology* aimed to identify psychological principles on the basis of concrete experiences of what actually happened in the human soul. *Empirical* referred to something that could be determined through experiences rather than reason. Wolff's empirical psychology addressed the ability of the soul to know and to desire, the interaction of the soul and the body, and the *faculties* of the soul. Psychology concerned the study of the soul until the mid-nineteenth century, when German philosopher Friedrich Albert Lange (1828–1875) proclaimed a psychology without a soul.

Present-day psychology covers a wide range of topics such as biological bases of behavior, sensation, perception, memory, cognition, emotion, motivation, learning, language, dreaming, social interaction, prejudice, development, aging, intelligence, personality, stress, psychopathology, and psychotherapy. In psychology each concept is subdivided and studied in its parts: For example, memory is subdivided into short-term memory, long-term memory, working memory, explicit memory, and implicit memory, among others. Memory can be researched from a developmental, social, or biological perspective, each of which provides a variety of theoretical frameworks.

PSYCHOLOGY AS A DISCIPLINE

In the sixteenth century the word *psychologia* (psychology) first appeared in a book title, although some research does indicate earlier usage of the term. In 1590 Rudolf Goclenius (1547–1628), a German professor of physics, mathematics, logic, and ethics used the term.

Some historians suggest that the acceptance of psychology as an institution of research and teaching at universities first occurred during the first half of the nineteenth century during a period of transformation for German universities. With the establishment of state-funded and state-controlled classical high schools, professors of philosophy were asked to teach courses on psychology and pedagogy for classical high school teachers-in-training. Because psychology was understood as the scientific basis for pedagogy, teacher candidates were required to take exams in the discipline of psychology. Horst Gundlach (2004) offers 1824, the year in which Prussia established psychology as an examinable discipline at its universities, as the origin of the discipline of psychology. Most books on the history of psychology, however, list its inception from 1879, the year in which Wundt began to conduct psychological experiments in his new psychological laboratory at Leipzig, Germany. From a critical perspective it is difficult to attribute the birth of a discipline to a single event. The institutionalization of psychology—the establishment of an academic discipline that followed university rules—occurred at different times in different geographical or national contexts.

PSYCHOLOGY AS A PROFESSION

Psychology as a profession or an expert occupation became a reality in the twentieth century. The professionalization of psychology can be linked to the development of other institutions in European and North American culture. The transformation of the legal system required experts, for example, regarding the validity of testimony and the reliability of memory; the health system needed experts in dealing with the mental health problems of patients; the prison system sought professionals who could provide information on the progress of rehabilitation and the likelihood of re-offending; the school system needed expertise in order to determine which children would need special education; and industry and corporations needed experts on personnel selection, the improvement of productivity, and advertising. In all of these applied fields psychologists emerged and claimed scientific knowledge.

In addition, public demand for psychological expertise increased; for example, regarding the parenting of children, people sought advice on the adequate amount of emotional contact, sensory stimulation, potty training, masturbation, and the appropriate extent of parental control at different ages. The search for expertise on how to have fulfilling romantic relationships, to be successful, and even live life led to the birth of *pop psychology*. Prominent examples of pop psychologists include former

academic John B. Watson (1878–1958), whose book *Psychological Care of Infant and Child* (1928) contained historically contingent ideas such as that one should never hug or kiss a child, and Dr. Phil McGraw, whose media-magnified psychological activities are largely rejected by academic psychologists. There were a number of troubling manifestations of the professionalization of psychology as well: German psychology expanded in the context of the militarization of the *fatherland* at the beginning of the twentieth century; and U.S. psychologists, using IQ tests, labeled populations from Eastern and Southern Europe and non-European *races* mentally inferior during the great immigrations of the same time period.

PSYCHOLOGY'S RISE

According to Steven Ward, psychology's integration with other institutions has made it a uniquely successful field. Psychology flourished in the twentieth century in terms of its intellectual and social expansion. Psychology is one of the most popular undergraduate majors in North America and many European countries. The American Psychological Association (APA), the largest association of psychologists worldwide, has 150,000 members. The APA has more than fifty divisions that cover traditional experimental, social, developmental, or clinical psychology; the psychological study of lesbian, gay, and bisexual issues; peace psychology; and the advancement of pharmacotherapy, among many other diverse topics.

There are several thousand journals dedicated to psychology, and the APA's *Publication Manual* (2001), a style guide, has been adopted by most psychologists and by professionals in other disciplines as well. As a profession psychology pervades popular consciousness in the twenty-first century. The increasing global dominance of American psychology after 1945 reflects the economic power of the United States. But psychology did not only succeed as an institution; it also thrived in the *psychologization* of human life. The public and many expert cultures explain human and social events in psychological terms: Individual decisions, the arts, political crises, economic problems, history, and terrorism are all explained with the help of psychological categories.

CONTROVERSIES IN PSYCHOLOGY

The importance of psychology as a scientific discipline and in everyday life is clear. However controversies regarding basic precepts continue among psychologists.

The Dualism of Psychology Psychology can comprise understanding or explaining psychological objects and events. For example, one can explain the physiological mechanisms of memory or one can understand the specific content of a person's memory that is formed within meaningful life experiences. Psychologists with a *natural-scientific* orientation emphasize the explanation, prediction, and control of behavior or cognition, while psychologists with a *human-scientific* perspective focus on thinking, feeling, and willing based on the assumption that reflection, intention, and action are meaningful processes. German philosopher Wilhelm Dilthey (1833–1911) provided a systematic foundation for two types of psychology when he divided the discipline into *descriptive* (human-scientific) and *analytical* explanatory (natural-scientific) parts. He argued that psychology's subject matter was human experience and thus its method must be understanding. German experimental psychologist Hermann Ebbinghaus (1850–1909) endorsed psychology as a natural science that did not need the method of understanding and should rely on natural-scientific explanation and experimental methods. Wundt, who many see as the father of German experimental psychology, divided the science into an experimental branch that focused on precise analysis of the basic processes of consciousness, and an observational *Völkerpsychologie* (cultural psychology) that covered complex psychological processes that accompany the development of human communities and mental products in the context of values, customs, and language.

In the North American tradition Gordon Allport observed an increasing *nomothetic*, natural-scientific commitment of psychology, but he petitioned for the inclusion of an *idiographic* approach in scientific psychology. Human-scientific approaches (hermeneutic, existential, humanistic psychologies) generally have been marginalized since the twentieth century, although they have never been totally abandoned, especially in clinical contexts. The impact of the natural-scientific approach was so powerful that even Sigmund Freud considered his method of psychoanalysis to be natural-scientific. The dualism of psychology is surfacing again in discussions surrounding *quantitative* versus *qualitative* methods, with the latter gaining more acceptance in the early twenty-first century.

Unification Dualism is one facet in an ongoing discourse regarding unification. Since the end of the nineteenth century, theoretical psychologists and later Russian psychologist Lev Semyonovich Vygotsky (1896–1934) have critiqued the missing unity of psychology. In the first half of the twentieth century the focus was on the unification of large research programs such as psychoanalysis, behaviorism, Gestalt psychology, and structuralism, and later unification was demanded regarding the multiplicity of theories, approaches, and empirical results that were often contradictory. Psychology as it exists in the early-twenty-first century is so diverse in its conceptual and theoretical positions and so fragmented in its identity that multiple psychologies rather than a unitary psychology have prevailed.

Solutions to the unification problem in the past have largely been based on a conceptual reductionism in promoting a single program such as behaviorism. Some have called for unifying theories of unification before any unification of the discipline could succeed. Proponents of unification demand unification for theoretical reasons. For example, the increasing demand for interdisciplinary work must remain fragmented if it is not clear what the discipline of psychology stands for. Opponents of unification suggest that the lack of unity makes psychology an extremely adaptive discipline that is able to work with other fields in academic and applied settings. The factual lack of theoretical unity has led to the phenomenon that mainstream psychology identifies itself by the commitment to a specific methodology, namely an experimental-statistical point of view.

Dichotomies Psychology throughout its history has struggled with conceptualizing the relationship between society and the individual, nature and nurture, and mind and body. The lack of an adequate conceptualization of the individual and society has led to criticisms that psychology is too individualistic in its theories and practices. For example, a person's psychological distress regarding homelessness cannot solely be explained, understood, and solved on an individual level. Even social psychology, which by definition should take the social context into account, does not provide ecological relevance because many studies use undergraduate students in laboratories as subjects. Klaus Holzkamp (1972) argues that in the real world there are many more variables that influence behavior and cannot be included in their complexity in an experiment.

The mind-body problem has been addressed in behaviorism in a reductionist way by denying or neglecting the reality of a mind. Neuropsychological researchers have developed more sophisticated theories since the late twentieth century. The largest political impact derives from an inadequate conceptualization of the nature-nurture debate. This dichotomy is most prominent in IQ controversies but also surrounds the heritability of pathologies, personality, and other psychological characteristics. The lack of an adequate understanding of nature-nurture has led psychologists to make premature judgments about alleged inborn intelligence. The heritability of intelligence received widespread public attention in the context of British educational psychologist Cyril Burt's (1883–1971) fraudulent data on twins and in connection with the issue of "race." As Stephen Jay Gould and others have pointed out many interpretations were unsupported by data but these interpretations were presented as factual knowledge. Many of the premature conclusions should be labeled *epistemological violence* (Teo 2005).

Natural Kinds versus Social Kinds More recently there has been a debate regarding whether psychological concepts are *natural kinds* or *social kinds*. Kurt Danziger (1997) suggests that many psychological concepts are social constructions that have become social reality. This idea has had an impact on research and practice and means that psychological concepts are bound to culture not to nature. Thus American or European psychology, indigenous psychologies themselves, cannot be exported straightforwardly to another cultural context. Many psychologists are often unaware that in believing their concepts can be used globally, they display misplaced ethnocentricity.

Professionalization The professionalization of psychology itself is a debated topic in academia. There have always been proponents and opponents, and this struggle has continued into the twenty-first century. For example, in the United States an American Psychological Society was founded in 1988 as a response to APA, which was perceived as catering to the interests of applied psychologists but not academics. One of the recent topics discussed in the context of the profession are prescription privileges for psychologists in some U.S. states. This topic is significant because it connotes a shift from a psychological to a medical model of mental illness. From the perspective of health insurers, allowing psychologists to prescribe drugs means cost reduction. However, giving such rights to psychologists challenges a long-standing privilege reserved to medical doctors, with probable economic consequences for that profession.

SEE ALSO *Achievement; Allport, Gordon; American Psychological Association; Anxiety; Attention-Deficit/Hyperactivity Disorder; Attitudes, Behavioral; Autokinetic Effect; Behavior, Self-Constrained; Behaviorism; Bettelheim, Bruno; Body Image; Brazelton, T. Berry; Child Behavior Checklist; Child Development; Cognition; Cognitive Dissonance; Consciousness; Contempt; Coping; Dementia; Depression, Psychological; Diathesis-Stress Model; Erikson, Erik; Family Functioning; Festinger, Leon; Foucault, Michel; Freud, Sigmund; Fromm, Erich; Gender; Gilligan, Carol; Goffman, Erving; Guttman Scale; Hite, Shere; Infidelity; Ingratiation; IQ Controversy; James, William; Jones, Edward Ellsworth; Jung, Carl; Kinsey, Alfred; Locus of Control; Maccoby, Eleanor; Manic Depression; Marital Conflict; Mechanism Design; Memory in Psychology; Mental Health; Mental Illness; Mental Retardation; Milgram, Stanley; Nature vs. Nurture; Neuroscience; Oedipus Complex; Operant Conditioning; Optimism/Pessimism; Overachievers; Overeating; Pavlov, Ivan; Post-Traumatic Stress; Priming;*

Professionalization; Psychoanalytic Theory; Psycholinguistics; Psychometrics; Psychosomatics, Social; Psychotherapy; Pygmalion Effects; Race; Racism; Realism; Realism, Experimental; Rotter's Internal-External Locus of Control Scale; Scarr, Sandra Wood; Self-Control; Self-Esteem; Sexuality; Sherif, Muzafer; Skinner Box; Skinner, B. F.; Social Psychology; Spock, Benjamin; Steele, Claude M.; Stereotype Threat; Strategies, Self-Handicapping; Stress; Stress-Buffering Model; Underachievers; Undereating; Zimbardo, Philip

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Thomas Teo

PSYCHOLOGY, ADOLESCENT

SEE *Adolescent Psychology.*

PSYCHOLOGY, AGENCY IN

The concept of *agency* as a psychological dimension refers to the process of behaving with intentionality. Human beings exercise agency when they intentionally influence their own functioning, environments, life circumstances, and destiny. To posit that human beings have agency is to contend that they are self-organizing, proactive, self-regulating, and self-reflecting rather than reactively shaped by environmental forces or driven by concealed inner impulses. This is not to say that people always behave agentically. A driver who inadvertently runs a stop sign would not be considered the agent of that event because he did not intend to commit the infraction. An intention is a mental representation of a future course of action to be performed. It represents a proactive commitment to act.

Human agency has four core properties. The first is *intentionality*. People create and engage plans and strategies with which they realize their predetermined intentions to act in a certain manner. The second property is *forethought*, which addresses the temporal dimension of human agency. People make plans, set goals, and anticipate the likely outcomes of their prospective actions. To set plans in motion so as to bring about the desired outcomes, people must self-regulate their thinking and behavior. Thus, the third property of human agency is *self-reactiveness*, a process through which individuals not only make plans and choices but also construct the appropriate courses of action and regulate their execution. Because actions must be examined in order to be corrected, the fourth agentic property is *self-reflectiveness*. Through proactive self-awareness, people can reflect on their capabilities, the soundness of their thoughts and actions, and the meaning of their pursuits. As a consequence, they can make needed adjustments.

In addition to possessing four properties, agency operates through three modes: *individual*, *proxy*, and *collective*. When agency is exercised individually, one brings one's own personal influence to bear on one's own functioning and on the environmental events that comprise one's life. When people cannot exercise their personal influence, however, they must seek their well-being and obtain the outcomes they desire through the exercise of proxy agency. In this mode, people appeal to others who can secure these benefits for them. Thus, children turn to parents, students to teachers, and citizens to elected officials. Finally, people must often work together to obtain the things they need. Thus, they must pool their knowledge, skills, and resources, form alliances to advance common interests, and work collectively to obtain those things that they cannot obtain on their own.

To exercise human agency, people must believe in their capability to attain given ends. These *self-efficacy*

beliefs are the foundation of human motivation, well-being, and accomplishment. Whatever other factors serve as guides and motivators, they are rooted in the core belief that one has the power to effect changes by one's actions, that one's locus of control is internal rather than external. This is because unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or to persevere in the face of difficulties.

SEE ALSO *Self-Determination Theory*

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Frank Pajares

PSYCHOLOGY, DEVELOPMENTAL

SEE *Stages of Development.*

PSYCHOLOGY, FLOW

SEE *Flow.*

PSYCHOLOGY, POLITICAL

SEE *Political Psychology.*

PSYCHOLOGY, PRISON

SEE *Prison Psychology.*

PSYCHOLOGY OF TEACHING

SEE *Teachers.*

PSYCHOMETRICS

Psychometrics literally means "psychological measurement." It is the methodology that deals with designs, administrations, and interpretations of measurement on individuals' constructs such as abilities, attitudes, personality, knowledge, quality of life, and so on. There are several major components in psychometric theory, including classical test theory, item response theory, factor analysis, structure equation modeling, and statistical methods and computing. A *psychometrician* is an expert who practices psychometrics. He or she usually holds a postgraduate degree in either educational measurement or quantitative psychology.

CLASSICAL TEST THEORY

Reliability is a major concern for any kind of measurement, which copes with issues in measurement consistency. Classical test theory (CTT) views the score of an individual as a random variable X that can be decomposed by a fixed true score T plus an error: $X = T + E$, where the expected value of X is T, that is, $E[X] = T$ and $E[E] = 0$. Moreover, for a given population, $\sigma_{\mathbf{x}}^2 = \sigma_T^2 + \sigma_E^2$. If $\sigma_E^2 = 0$, then the measurement X is perfectly reliable. Thus, the reliability of a test, often denoted as $\rho_{XX'}$, can be defined as

$$\rho_{XX'} = \frac{\sigma_T^2}{\sigma_X^2} = \frac{\sigma_T^2}{\sigma_T^2 + \sigma_E^2}.$$

According to the above, $\sigma_E = \sigma_X\sqrt{1-\rho_{XX'}}$. Therefore, for a student who received score X, a 68 percent confidence interval for his or her true score is $X \pm 1(\sigma_E)$. Adequately quantifying indices to measure reliability is at the core of CTT. Let ρ_{XT} be the correlation coefficient between X and T. It can be proved $\rho_{XT}^2 = \rho_{XX'}$, where ρ_{XT} is the Pearson correlation between X and T. In statistics ρ_{XT}^2 is interpreted as the proportion of variation in T that is related to the variation in X. Thus, the larger the value of ρ_{XT}, the more reliable the measurement. Because T is unobservable, methods were proposed to estimate ρ_{XT}^2. For example, if two parallel forms of a test are administered simultaneously to the same population, it can be proved $\rho_{XX'} = \rho_{XT}^2$, where X and X' are scores of the two tests and $\rho_{XX'}$ is the correlation. This implies that reliability can be estimated from two parallel tests. When there is only one single test available, the correlation between its odd and even items, say $\rho_{YY'}$, measures the internal consistency between the half-tests and is called the "split-half reliability coefficient." According to the Spearman-Brown formula, the reliability for the entire test can be obtained from that in half-test:

$$\rho_{XX'} = \frac{2\rho_{YY'}}{1+\rho_{YY'}}.$$

In the early days of psychometric research, numerous methods were proposed to estimate reliability indices, including Cronbach's coefficient-α, Kuder-Richardson's KR-20, and so on.

Another important concept in psychometrics is *validity*, which concerns the purpose of measurement; a measure is valid if it measures what it purports to measure. A pivotal task in psychometric research is to search for adequate methods to assess all kinds of validities, such as *content validity*, *criterion related validity*, and *construct validity*. Though they all were created to gauge the correlation between a measure and its purpose, each one plays a unique role. *Criterion related validity* is used to demonstrate the accuracy of a measure with respect to a criterion that has been demonstrated to be valid. For example, a job-screening test was shown to be an accurate test for job performance. Let X be the job-screening test score collected last year and Y be the job-performance rating of this year, where X can be called a predictor score and Y is called a criterion score. A straightforward quantity to assess the validity by using X to predict Y is the Pearson correlation between X and Y, ρ_{XY}. The larger the value of ρ_{XY} is, the more valid it is to use test score X to predict Y. Y can be predicted by least-squares linear regression

$$\hat{Y} = \rho_{XY} \frac{\sigma_Y}{\sigma_X} (X - \bar{X}) + \bar{Y},$$

where $\hat{Y}$ is the predicted criterion score, $\bar{X}$ and $\bar{Y}$ are the sample means, and σ_Y and σ_X are sample standard deviations.

Construct validity is a relatively newly developed form of validity. It refers to the degree to which the measure associates the construct that it was designed to measure. According to Mary Allen and Wendy Yen (1979), establishing construct validity is an ongoing process that involves the verification of predictions made about the test scores. Suppose a new test is proposed to measure a construct; according to theory, male and female should perform similarly if they are all at the same construct level. This hypothesis needs to be tested. If the testing is supported by the data analysis, the construct validity is enhanced.

FACTOR ANALYSIS

Factor analysis (FA) is another important component in psychometric theory. It has been commonly used to examine the structure of correlations among a set of observed scores. These scores can be either subscores of a test or the scores of several different tests. When FA is conducted, tests that are influenced by the same factor are shown to have high factor loadings on such factor. By conducting FA, researchers can identify factors that explain a variety of results among subtests or different tests. For example, a potential research question could be "How many traits are these tests measuring?" There have been immense applications and generalizations, including both confirmatory factor analysis and exploratory factor analysis. FA was originally developed within psychometrics for studying human intelligence testing, but it has become a frequently used methodology in many areas of psychology, social sciences, business, economics, engineering, and biology.

ITEM RESPONSE THEORY

Item response theory (IRT) is a relatively new methodology in psychometric theory. It is also referred to as "latent trait theory." In CTT the true score of an examinee, which can be interpreted as the examinee's ability level, is test dependent. When the test is easy, the examinee tends to have high true score; when the test is difficult, the examinee tends to have lower true score. The difficulty level for either an item or a test is population dependent. In order to overcome the shortcomings of CTT, IRT was created in an attempt to incorporate certain desirable features, such as examinee ability estimates, which are not test dependent, and item characteristics, which are not group dependent. IRT is based on certain fundamental assumptions: (1) For a dichotomously scored item, the performance of an examinee on the item can be predicted by knowing his or her latent trait (or set of latent traits); and (2) the relationship between examinees' item performance and the required latent trait (or traits) to perform on the item can be described by a response function (see, e.g., Hambleton, Swaminathan and Rogers 1991). As for a polytomously scored item, a set of response functions are needed.

Different models were proposed. The most commonly used model for dichotomously scored items is a three-parameter logistic model. Let X_j be the score for a randomly selected examinee on the jth item; $X_j = 1$ if the answer is correct and $X_j = 0$ if incorrect, and let $X_j = 1$ with probability $P_j(\theta)$ and $X_j = 0$ with probability $1 - P_j(\theta)$ where $P_j(\theta)$ denotes the probability of a correct response for a randomly chosen examinee of latent trait θ; that is, $P_j(\theta) = P\{X_j = 1|\theta\}$, where θ is unknown and has the domain $(-\infty, \infty)$ or some subinterval on $(-\infty, \infty)$. When the three-parameter logistic model (3PL) is used, the probability becomes

$$P_j(\theta) = c_j + (1 - c_j) \frac{1}{1 + e^{-a_j(\theta - b_j)}},$$

where a_j is the item discrimination parameter, b_j is the difficulty parameter, c_j is the guessing parameter.

Polytomous IRT modeling is another important application in IRT. Assume that the response of an examinee to the j-th item can be categorized into one of a set of $m + 1$ categories; that is,

$$P_{jk}(\theta) \equiv \text{Prob}\{X_j = u_{jk}|\theta\}.$$

In other words,

$$X_j = \begin{cases} u_{j0}, & \text{with probability } P_{j0}(\theta), \\ u_{j1}, & \text{with probability } P_{j0}(\theta), \\ \vdots & \vdots \\ u_{jm}, & \text{with probability } P_{j0}(\theta), \end{cases}$$

where $\Sigma_{k=0}^{m} P_{jk}(\theta) = 1$, and $P_{jk}(\theta)$ is referred to as the item category response function. When the category sequence is an increasing order $u_{j0} < u_{j1} < \ldots < u_{jm}$, the model is referred to as an "ordered polytomous model." There are numerous IRT models, such as the graded response, partial credit, and nominal models.

Popular applications of IRT include latent trait estimation, item parameter calibration, modeling and detection of differential item functioning (DIF), linking and equating, and computerized adaptive testing.

NEW DEVELOPMENTS IN PSYCHOMETRIC THEORY

Perhaps one of the biggest challenges for psychometricians today is how to keep abreast of the rapid developments in technology. Computerized Adaptive Testing (CAT) and Internet-Based Testing (IBT) are undergoing rapid growth. Although the implementation of new technologies has led to many advantages, such as new question formats, new types of skills that can be measured, easier and faster data analysis, faster score reporting, and continuous testing, many research questions remain unanswered. For example, how does one improve CAT test security without sacrificing estimation efficiency? How does one detect cheating behavior from an examinee's response pattern? How does one automatically grade examinees' performance in a large scale performance based assessment? How does one use test scores to make inferences about examinees' cognitions? Another big challenge stems from the fact that an unprecedented number of people are taking tests daily, from K-12 educational assessments, college admissions tests, job application and placement tests, professional licensing exams, survey research, psychiatric evaluations, and medical diagnostic tests. As such, the need for new methods is apparent in many aspects of psychometric development. Examples of some new developments are discussed below.

Large-Scale Automated Test Assembly Large-scale application of computer-based achievement tests and credentialing exams has generated many challenges to test development. One of these challenges, maintaining content representation in multiple forms, is central to test defensibility and validity. Manually assembling parallel test forms is not only time consuming, but also infeasible when a great number of forms are needed. Utilizing automated test-assembly (ATA) procedures reduces the workload of test developers and ensures the quality of the assembled test forms. ATA methods can be achieved by *constrained combinatorial optimization*, which involves how to best arrange the controllable elements in large complex systems in order to achieve a specified goal. A typical test-assembly problem can be treated by selecting items so that the assembled test satisfies a certain reliability index (objective function) subject to constraints such as test length and content coverage. Several methods were proposed. According to Wim van der Linden (2005), binary linear programming seems to be a popular method for test assembly due to two reasons: (1) the techniques are well developed within the field of operations research, and (2) some commercial software packages are readily available and user-friendly. Other promising ATA methods include sampling and stratification, weighted deviation, network flow, and optimization methods.

Automatically Scoring Performance-Based Assessment A new trend in large-scale assessment is to increase the portion of performance-based tasks in standardized testing. With the rapid development in computer technologies, more and more computer-based tests (CBT) for a variety of innovative constructed-response tasks have become available. Examples of such tasks include writing an essay or diagnosing a computer-simulated patient. However, grading on these complex tasks demands tremendous effort. Due to the subjectivity in human readers' scoring process, each task requires two or more content experts to review, which is very time consuming and pricey. Moreover, oftentimes there are several thousand or more students taking a given exam. How do we grade such examinations? Can we use automated scoring systems to address the cost issues and make the scoring more consistent? One of the most innovative developments in psychometrics for the last decade is automated scoring of complex tasks.

The Electronic Essay Rater (E-rater) is a technology developed by the Educational Testing Service (ETS) to score essays automatically based on holistic scoring guide criteria (see Burstein et al. 1998). The E-rater is designed to provide a distinct scoring model for each new essay topic. In the first step, a few hundred essays on the same topic were randomly sampled as a "training sample" and then scored by well trained human raters. The human scores are treated as the values of a dependent variable Y. Second, a set of variables are derived statistically from the learning sample, either through Natural Language Processing (NLP) techniques or by simple "counting" procedures. These feature variables, say $X_1, \ldots, X_n$, are treated as a set of "independent variables" and a linear regression model is established

$$Y = B_0 + B_1X_1 +, \ldots, + B_nX_n + \varepsilon.$$

Third, a stepwise linear regression analysis is performed on the feature variable $X_1, \ldots, X_n$ extracted from the training dataset to identify a subset of features that parsimoniously explains observed variation in the consensus scores. Lastly, the final score prediction for cross-validation sets is performed using these estimated equations. Once the scoring model is established, the scores of the examinees outside the learning sample can be "predicted" by the linear model. Several million essays have been scored by E-rater since it was adopted for scoring the GMAT in 1999, and the technology is being considered for use with the Graduate Record Examination, for graduate school admissions, and the Test of English as a Foreign Language, which assesses the English proficiency of foreign students entering U.S. schools (Mathews 2004).

Measuring Patient-Reported Outcomes Conventional clinical measures of disease such as x-rays and lab results do not fully capture information about chronic diseases and how treatments affect patients. In order to get remedial measure, self-completed questionnaires are often administered to patients to assess their subjective experiences such as symptom severity, social well-being, and perceived level of health. Such measurement of patient-reported outcomes (PROs) is important for disease intervention. Many psychometric approaches can be used to meet the needs of clinical researchers across a wide variety of chronic disorders and diseases.

In particular, the CAT technology developed in educational testing can be used innovatively in health-related quality-of-life (HQOL) measures, in which a next item is selected based on the response the patient has given to the previous question. According to Frederic Lord (1971), an examinee is measured most effectively when test items are neither too "difficult" nor too "easy." Heuristically, if the examinee answers an item correctly, the next item selected should be more difficult; if the answer is incorrect, the next item should be easier. Note that in HQOL applications, the term *difficulty* is analogous to *severity*. For example, asking a patient if it is difficult to climb the stairs might measure a lower level of severity than asking if it is difficult to walk 1 mile. Thus, items are tailored to the individual with greater estimation precision and content validity. According to the National Institutes of Health (2003), such a CAT HQOL system would be useful in clinical practice to assess response to interventions and to inform modification of treatment plans.

Psychometric application in HQOL shares many similarities with its use in educational testing, with, for example, reliability and validity being the highest priorities for both. However, different perspectives do exist. For example, the length of the assessment for a particular domain in HQOL is a much greater concern, especially when many domains must be assessed in a population of patients with a chronic disease, because patient burden must be carefully considered. The need for more psychometric research in developing, evaluating, and applying HQOL measures is growing, and undoubtedly, this will advance the field of psychometrics.

SEE ALSO *Cliometrics; Eugenics; Factor Analysis; Galton, Francis; Intelligence; Measurement; Pearson, Karl; Probability; Psychology; Reliability, Statistical; Scales; Spearman Rank Correlation Coefficient; Statistics; Statistics in the Social Sciences; Structural Equation Models; Validity, Statistical*

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PSYCHONEURO-ENDOCRINOLOGY

Psychoneuroendocrinology (PNE) is the study of the dynamic interaction of hormones with the central and peripheral nervous systems, toward the manifestation of behavior, cellular activity, systems-level functionality, and body processes, as well as their clinical applications. PNE is rooted in philosophy and the search for an understanding of the duality or unified nature of the "mind" and "body." Philosophers wrote copiously about the influence of cognitive and affective processes on physiology, and

vice versa, and established the intellectual foundation for the development of PNE as a scientific discipline.

Throughout the nineteenth and twentieth centuries, many advances in medicine and science were guided by the pursuit of an understanding of the relationship of the "mind" to the "body." Many philosophers, physicians, psychologists, and others argued for duality and that the entities were separate and disintegrated. A vocal group of equally qualified and proliferative writers adamantly made a case for integration of the "mind" and "body" and ultimately yielded a coherent and well-articulated philosophy that posited a functional interaction of behavior, the nervous system, and hormones.

PNE evolved from an effort to understand the complex factors that influence human behavior and the development of normality and pathology. This evolution of the development of PNE was not unlike the occurrences that marked the development of many other areas of study (psychoneuroimmunology, psychophysiology, etc.) from a common philosophy of "integration," resulting in many similarities between disciplines.

Psychoneuroendocrinology can be viewed as extremely similar to psychoneuroimmunology (PNI). Both study the influence of psychological and neurological processes on the manifestation of behavior and disease. However, PNE focuses on endocrine pathways, whereas PNI focuses on immune pathways. Clearly, there is an intimate relationship between hormones and immunity, and it is functionally impossible to discuss the influence of one without discussing the impact on the other. PNE, however, is most often distinguished from other disciplines by a focus on a primary mechanism of action, *hormones*, on affected cells, tissues, organs, systems, and the body.

Many of the activities of researchers and clinicians from diverse disciplines such as psychiatry, psychology, neurology, endocrinology, molecular and behavioral genetics, and behavioral medicine are often broadly covered under the umbrella of activities that are considered PNE. Topics that are increasingly studied by psychoneuroendocrinologists include but are not limited to glycemic control, chronic pain, infertility and contraception, autoimmunity, Alzheimer's Disease and other dementias, addiction and compulsive disorders, exercise physiology, cancer, language acquisition and pervasive developmental disorders, marriage and mate selection, reactions to physical and psychological trauma, and racism, inequity, and discrimination.

In 1969 the International Society of Psychoneuroendocrinology was founded in Milan, Italy. Today, this organization represents PNEs across the world and has grown in size and scope. The organization represents the interest of approximately 450 researchers and clinicians toward the goal of promoting, initiating, facilitating, and disseminating into public and clinical forums, basic, clinical, and applied interdisciplinary research in psychoneuroendocrinology.

SEE ALSO *Alzheimer's Disease; Marriage; Mental Illness; Pathology, Social; Philosophy; Psychopathology; Racism; Stress*

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PSYCHONEURO-IMMUNOLOGY

Psychoneuroimmunology (PNI) is the study of interactions between the mind, the nervous system, and the immune system. The mind involves thoughts, emotions, and experiences; the nervous system involves the brain, the spinal cord, and nerves; and the immune system involves cells and organs protecting the body from invaders. The mind and the immune system communicate through the peripheral nervous system and through hormones and cytokines, and this communication enables the immune system to be responsive to psychosocial factors and to signal the brain.

The field of PNI is interdisciplinary and has over the years contributed to the contemporary trend toward viewing health and disease as multifactorial. During the 1960s and 1970s, evidence began to accumulate indicating that the immune system could be influenced by psychological phenomena. In 1964 George F. Solomon and Rudolf Moos proposed that the development of rheumatoid arthritis was related to personality factors, advancing the possibility of psychoneuroimmunological phenomena, and Robert Ader and Nicholas Cohen demonstrated in 1975 that conditioning could affect the immune response by pairing taste with an immunosuppressive drug. Today,

there is little doubt that a number of factors—biological, environmental, behavioral, and psychological—can interact to impact the progress and course of many illnesses.

Psychoneuroimmunology research strives to expand the understanding of how psychosocial factors can influence people's health, either positively or negatively. Research on the influences of psychological factors on the endocrine and immune systems involve examinations of the effects of stressors on these systems, and evidence clearly indicates that psychological and physical stressor exposure can affect the immune system. Stressor exposure also influences the endocrine response, changing levels of hormones such as cortisol. The effects of stressor exposure depend critically on the characteristics of the stressor. Acute stressors that last only minutes can be adaptive as part of a fight or flight response, whereas longer term stressors have less potentially beneficial effects. For example, chronic stressors, such as having a spouse with dementia, have been found to decrease both the cytotoxic and antibody-producing functions of immune cells. Adverse changes in immune functioning have also been associated with divorce, bereavement, unemployment, and other stressful episodes. Research has also demonstrated the importance of healthy social relationships and individual differences that buffer the psychological effects of stress, such as optimism, to better immune function.

Individual differences may not only confer an adaptive impact on the immune system, however. Studies on repression, which is characterized by low self-report of anxiety and avoidance of anxiety-provoking stimuli, but also by high defensiveness, have found associations between repression and poorer cellular immunity. Also, cynical hostility, which reflects suspiciousness, mistrust, and anger, appears to increase the physiological response to stressors involving social interactions and has been associated with increased susceptibility to illness. Clearly, individual differences can impact the immune system in a number of ways.

Studies have shown that stressful experiences can alter elements of the immune response, as well as impact health and disease onset. However, research has not yet convincingly linked these findings together to conclude that alterations in the immune system are in fact the mechanisms through which stressor exposure augments vulnerability to disease.

SEE ALSO *Optimism/Pessimism; Stress*

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PSYCHOPATHOLOGY

Psychopathology, also referred to as mental disorder, is considered present when a behavior pattern or emotional state causes an individual clinically significant distress, dysfunction, or impairment in social, occupational, or other important areas of functioning or is widely deviant from social or cultural norms. This conceptual definition is somewhat subjective and might be difficult to apply in specific cases, in part because behavior patterns found to be acceptable according to the norms of one group or culture might be seen as abnormal or deviant in another. For example, self-mutilation is seen as an expression of piety in some cultures and as a sign of pathology in others.

An alternative means of defining psychopathology is to follow a more objective guide to psychiatric diagnosis in which specific symptom criteria are assessed for a standard set of mental disorders. Two related diagnostic protocols contain these specific criteria: *The Diagnostic and Statistical Manual of Mental Disorders* (DSM, American Psychiatric Association), and *International Classification of Diseases* (ICD, World Health Organization). Table 1 displays DSM criteria for the diagnosis of schizophrenia.

Diagnostic criteria for schizophrenia

A. Characteristic symptoms (two or more)
   a. Delusions
   b. Hallucinations
   c. Disorganized speech
   d. Grossly disorganized or catatonic behavior
   e. Negative symptoms (flat affect, avolition)
B. Social or occupational dysfunction in work, self-care, or social relations
C. The duration of the disturbance is at least six months
D. Symptoms not due to ingestion of medicine or drugs or due to other mental or medical disorders

SOURCE: American Psychiatric Association 1994.

Table 1

CATEGORIES OF MENTAL DISORDER

There are several broad categories of mental disorder representing differences in severity or degree of maladaptiveness. *Psychotic* disorders are among the most severe in that such patients are said to be out of touch with reality. For example, people suffering from schizophrenia often experience *hallucinations*, aberrant perceptions, such as hearing voices that others do not hear or seeing things others do not see while believing them to be actually occurring. They might also experience *delusions*, false beliefs, such as that they are being pursued by aliens because they hold some secret of the universe. Another defining characteristic of schizophrenia is the presence of *thought disorder*, in which patients are unable to maintain a coherent train of thought as their minds jump from topic to topic without apparent awareness that they are doing so.

Bipolar disorder (formerly known as manic depression) involves alternating episodes of *mania* in which patients are hyperactive, feel elated, and need little sleep. They might also experience delusions consistent with their mood, such as believing that they are invincible, brilliant, or have a theory that will save the world. Ultimately, they lapse into severe depression and may be unable to function at all while experiencing delusional beliefs, such as that they are dead or that their bodies are hollow.

Neurotic disorders are of a lesser degree of severity than the psychotic disorders yet cause significant distress and dysfunction to millions of people. Among the most prevalent of these are the *anxiety disorders*, which include the phobias, panic disorder, obsessive-compulsive disorder, and post-traumatic stress disorder. *Mood disorders*, such as *major depression*, are also quite common and can be episodic or continuous if not treated.

Organic mental disorders occur as a result of brain injury or disease, including *dementia* due to Alzheimer's disease, head injury, Parkinson's disease, or ingestion of toxic substances such as alcohol or inhalants. The primary areas of dysfunction in organic mental disorders include impaired abstract reasoning, lack of judgment, and impulsivity. In dementia in particular, memory deficit for new material is pronounced, and in more advanced stages entails loss of recall of previously familiar information, including recognition of family members and friends. Organic mental disorders can also involve delusions and depressive symptoms.

One in four American adults age eighteen and older has a DSM-diagnosable mental disorder within any given year. However, only one in seventeen (6 percent), suffers from serious mental disorder, such as schizophrenia or bipolar disorder. Table 2 displays prevalence figures for several of the more common mental disorders in the adult U.S. population. Approximately 20 percent of children are also estimated to have a diagnosable mental disorder, but less than 9 percent are considered serious. These prevalence figures are only general averages that vary by gender, by culture and ethnicity, and from rural to urban areas. Some mental disorders found only in certain cultures are said to be *culture bound*, such as "running amok" in Malaysia.

Prevalence of selected mental disorders in U.S. adults

Diagnostic category	Prevalence (percentage) in a given year
Phobias	15.2
Major depressive disorder	5.3
Post-traumatic stress disorder	3.6
Antisocial personality disorder	2.1
Bipolar disorder	1.7
Panic disorder	1.6
Schizophrenia	1.3
Anorexia nervosa	0.1

SOURCE: National Institute of Mental Health 2007.

Table 2

THE ROLE OF GENES

Family and twin research demonstrates that there are genetic components that predispose some people to mental disorders. The closer one's relationship to a family member with schizophrenia, for example, the more likely that person will develop the disorder. Children born of two schizophrenic parents have a 46 percent chance of developing schizophrenia at some time in their lives. Similarly, if one member of an identical twin pair becomes schizophrenic, in 48 percent of cases the co-twin will also become schizophrenic. The fact that all such identical co-twins do not become schizophrenic indicates that more than genetics is involved in developing the illness. Various environmental factors hypothesized to be involved along with the genetic predisposition in determining who becomes mentally disordered include family and life stresses, early traumatic events, and maternal illnesses at critical periods during gestation. Some anxiety, depression, and substance abuse disorders also have genetic liabilities, although the genetic contributions in most cases are not as strong as for schizophrenia and bipolar.

ASSESSING MENTAL DISORDERS

Psychological assessment is the process of examining a patient to understand the range of possible problems or symptoms that can then lead to a diagnosis and treatment plan. One common assessment process is administration of a *mental status examination*, which is a semi-structured sur-

Mental status examination

Area Assessed	Sample questions or observations
• Orientation in time, place, and person	"Where are you? What year is it?
• Physical appearance	Is patient appropriately groomed and dressed?
• Mood and affect	"How do you feel today?"
• Thought processes	Is train of thought coherent, disconnected?
• Thought content	Does patient have delusions?
• Memory	Can patient recall three items after five minutes?
• Judgment	"What should you do if you find a lost wallet?"
• Abstract reasoning	"How are a peach and a banana alike?"
• Attention	"Count backwards from 50 by 3s"

SOURCE: University of California, San Diego, School of Medicine 2006.

Table 3

vey of a patient's mental, emotional, cognitive, and behavioral functioning. Sample questions are shown in Table 3.

Personality tests, such as the Minnesota Multiphasic Personality Inventory (MMPI), are self-administered questionnaires in which patients respond to a series of statements by indicating "true" or "false." Examples include "I am sure that many people are out to get me" and "My head aches all over." Patterns of responding to some 567 statements are statistically compared with patterns from samples of the normal population and of patients with various psychiatric disorders.

Brain scans represent an advance in technological assessments. X-ray and digital imaging of brain structure and function can highlight brain abnormalities associated with some mental disorders, particularly the dementias and schizophrenia.

CONSEQUENCES OF MENTAL DISORDERS

The consequences of being mentally ill are great both for the individual and for society. For the individual, there is a strong social stigma attached to mental illness that may manifest itself in many ways, such as employment discrimination, which is greater for the mentally disabled than for the physically disabled. Fully half of employers are reluctant to hire someone with a psychiatric history or someone currently taking medication for depression.

The economic consequences for society are great as well. The World Health Organization estimates that mental illness accounts for 15 percent of the burden of disease (years lost as a result of premature death and disability) in developed countries—more than the burden caused by all types of cancers. For women, depression causes more disease burden than any other illness. In fact major depression is the leading cause of disability worldwide among individuals five years of age and older.

TREATMENTS

Numerous treatments for mental disorders have emerged, varying according to the state of medical science at any given time. When mental disorder was thought to be caused by malevolent spirits infesting the brain, treatment consisted of chipping holes in the skull (trephining) to let the evil spirits out. When overcharged blood vessels were thought to be the cause, bloodletting was prescribed to reduce pressure on the brain and to bring patients back to their senses. Although these forms of treatment are no longer used in European and North American medicine, the focus remains on the brain. Brain processes are targeted to be changed through social, psychological, or biochemical means; the bloodstream transports chemicals to the neuroreceptors in the brain to effect therapeutic emotional, behavioral, and cognitive changes.

In the late nineteenth century Sigmund Freud pioneered the use of psychological processes to effect change in mental and emotional states. His original procedures have become the subject of much debate in the fields of psychology and psychiatry, but research demonstrates that other psychological treatment procedures are quite effective in treating a number of highly prevalent mental disorders. One group of treatments, referred to as *cognitive behavioral therapy*, focuses on assisting patients to systematically alter their thinking processes and their behaviors in ways that effect changes in the emotions and behaviors that led to and perpetuate their dysfunction. These procedures have been particularly successful in treating anxiety disorders and depression and are as effective as medications for treating these conditions.

Psychotropic drugs are perhaps the most widely used treatments for mental disorders in the early twenty-first century. *Antianxiety* medications, such as the benzodiazepines (e.g., Xanax, Valium, Atavan), effectively reduce felt anxiety but have a drawback in that they are potentially addictive. These antianxiety drugs work with the GABA system of neurotransmitters, which work to inhibit nerve transmission in areas of the brain that relate to anxiety.

A widely used class of *antidepressants*, some of which also have antianxiety properties, are the selective serotonin reuptake inhibitors (e.g., Prozac, Zoloft, Paxil). These drugs increase the availability of the neurotransmitter serotonin in the brain and relieve depression and some anxiety.

Psychotic conditions, such as schizophrenia, are treated with several types of *antipsychotic* drugs (e.g., Thorazine, Haldol, Clozaril, Risperidol). These medications tend to block the neurotransmitter *dopamine*, which is thought to underlie schizophrenia symptoms and

related psychotic states. Bipolar disorder, mania, is now treated with drugs, such as Geodon and Seroquel, that tend to reduce the hyperactive manic state and associated psychotic delusions. Although they are largely successful in reducing psychotic symptoms, prolonged use of these drugs can lead to severe movement disorders, such as Parkinsonism and tardive dyskinesia.

Psychosurgery, brain surgery to affect changes in mental or emotional states, was widely used until the advent of antipsychotic drugs in the mid-twentieth century. Since then it has been used rarely, only in cases unresponsive to standard therapies. *Electroconvulsive therapy* continues to be used in severe cases of depression, in which patients are unresponsive to psychotherapy or antidepressant medications. *Transcranial magnetic stimulation* is a promising new experimental procedure for treating severe depression and involves applying powerful electromagnets directly to the skull.

SEE ALSO *Deviance; Madness; Manic Depression; Mental Illness; Neuroticism; Psychotherapy; Schizophrenia*

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PSYCHO-PHARMOGENOMICS

SEE *Psychotropic Drugs.*

PSYCHOSEXUAL DEVELOPMENT

SEE *Psychoanalytic Theory.*

PSYCHOSOMATICS

The term *psychosomatic* relates primarily to a physical concern, symptom, or illness of the body originating from emotional and thinking processes. The *psychosomatic* is born from an appreciation that the mind influences the body and the body influences the mind, and that pathology is the multifactoral product of biological, psychological, and social processes.

Historically, *psychosomatic* referred to the adverse impact that psychic and hysterical struggles exerted onto physical functioning and illness. Many illnesses (asthma, tuberculosis, allergies, chronic headaches, epilepsy, fibromyalgia, hypertension, interstitial cystitis, irritable bowel syndrome, etc.) were initially, in a pejorative manner consistent with the zeitgeist of the times, conceptualized and evaluated as being hysterical reactions to psychic disturbances. In this mostly psychodynamic context promoted by Josef Breuer (1842–1925), Sigmund Freud (1856–1939), and other theorists, the term *psychosomatic illness* was used to describe physical symptoms and diseases whose primary etiologies were emotional and mental processes.

More recently, a psychosomatic illness is conceptualized as one whose etiology cannot be described by physical or organic causes or whose etiology is idiopathic. In cases of unknown or ambiguous onset, anger, hostility, repressed sexual tension, and guilt are often ascribed as etiological precipitants of disease. In other cases, even when significant biological factors clearly influence the onset and course of illness but psychic disturbance is saliently present (depression, anxiety, hostility, etc.), the term *psychosomatic* is also used to reference the interaction of psychiatric and biological processes on symptom and disease manifestation.

Consequently, psychosomatic illnesses refer to symptoms or diseases that have psychic onset or psychic influences on the course, duration, or resolution of symptoms. Notably, psychosomatic illnesses have *real* symptoms and are diseases with *real* physical manifestations. This distinction is important in comparison to disorders where motivational and conscious factors characteristic of the patient influence the reporting of feigned diseases. For example, as a psychosomatic manifestation, the gastrointestinal symptoms associated with irritable bowel syndrome (diarrhea, constipation, or abdominal pain and cramping) may increase during periods of prolonged or intense emotional stress. Similarly, the magnitude of an asthmatic onset may be reduced with relaxation, focused deep breathing, or other behavioral techniques that alter physiology.

As in the previous example, psychosomatic illnesses have brought about a focus on interventions that exploit the known relationship between the mind and body. The study of such interventions is known as *psychosomatic*

medicine, and the journal that is most aligned with this pursuit is *Psychosomatic Medicine*, the official journal of the American Psychosomatic Society. In its basic conceptualization, psychosomatic medicine is the science of treating the mind and body toward the reduction of morbidity and mortality.

The methodology of inquiry, as well as the topics explored by clinicians and researchers who practice and study psychosomatic medicine, have evolved over many years. Most often, the scientific inquiry and reviewers' and editors' choices for published articles have been reflective of scientific and societal priorities at the time.

One of the best discussions of this evolution in methodologies and priorities for clinicians and researchers appears in a review article in *Psychosomatic Medicine* of papers published in the journal on the topic of pain from 1940 to the end of the 1990s (Keefe et al. 2002). The authors found that in the 1940s "case studies" were one of the major methodologies published on the topic. However, by the 1950s the number of such publications had decreased by more than 50 percent, and by the 1970s case studies were rarely published in the journal. In contrast, the number of published studies exploring the role of personality traits and individual differences on pain was relatively small in the 1940s, but it had increased more than 400 percent by the end of the 1990s.

More reflective of deeply rooted societal beliefs about race and ethnicity, there were no studies published on the impact of race, ethnicity, and culture on pain in the 1940s, 1950s, or 1960s in *Psychosomatic Medicine*. Two such studies appeared in the journal in the 1970s, and only one was published in the 1980s. Only four articles were published on racial and ethnic influences on pain in the 1990s, for a total of seven across sixty years. This lack of published studies is interpreted as demonstrative of the infancy of general interest, knowledge, and understanding of racial and ethnic influences on medical outcomes in society, medicine, and psychosomatic medicine.

Issues of gender differences in psychosomatic illnesses have a much more robust and long history within psychosomatic medicine. The first studies of gender on the prevalence and experiences of pain appeared in *Psychosomatic Medicine* in the 1950s. There was a steady number of publications on this topic throughout the 1950s, 1960s, and 1970s, with a rise in the 1980s and a fourfold increase in the 1990s. A similar pattern in the number of published articles after 1980 can be seen for pain induction studies and pain treatment studies.

The current state of psychosomatic medicine seems embedded in the historical roots of the discipline and is focused on such issues as coping and the impact of psychological constructs like depression and anxiety on biological, neurological, endocrine, and other symptom and disease-related outcomes. Although the horizon is bright with an increased number of studies that focus on individual differences and the impact of demographic factors like race, ethnicity, age, and geographic region on disease-related outcomes, there is still much work to be done.

As evidence of a new global environment and a terrorism-conscious world, experts in psychosomatic medicine are increasingly involved in the development of health policies and are advocates for the collaboration between medical practitioners and public health officials toward more effective responses to international and local threats. Many government officials have begun to recognize the unique skill sets that experts in the field possess and are utilizing these skills to more effectively implement public health policy. The use of advanced statistical methodologies by researchers in psychosomatic medicine allows for the development of more ecologically valid predictive models of human health and behavior. Journals such as *Psychosomatic Medicine* and *Psychosomatics* highlight the zeitgeist of the discipline and provide a forum for scientific communication among researchers.

SEE ALSO *Disease; Medicine; Pathology, Social; Personality; Psychology; Psychopathology; Psychosomatics, Social; Psychotherapy; Public Health*

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PSYCHOSOMATICS, SOCIAL

Social psychosomatics attempts to explain how social psychological processes—thoughts, feelings, and emotions—influence bodily changes. More generally, the field of social psychosomatics seeks to explore the links between social processes and physical illness. This field of study is principally concerned with the influence of emotional

stimuli on physiologic changes. This relationship is bidirectional, with emotions influencing biological changes and physical health influencing emotion. Indeed, numerous studies have shown that overall health is the best predictor of happiness in adults.

Interest in the relationship between emotions and bodily processes extends as far back as Socrates and Hippocrates, who believed that emotion was a critical influence on health and disease. Modern day social psychosomatics is an interdisciplinary field that combines research from the fields of psychology, sociology, anthropology, medicine, and many others. The "fight or flight" response is well known throughout both the social and medical fields. Like other animals, our bodies release adrenaline in preparation to either face or flee from an environmental stressor. While this was at one point evolutionarily adaptive, and remains so in situations requiring split-second decisions, long-term activation of this stress response may have detrimental health consequences.

PSYCHONEUROIMMUNOLOGY

One particular branch of social psychosomatics that has been particularly influential in recent years is psychoneuroimmunology. This term describes the influence of psychological processes on immune system functioning. In particular this field of study examines the influence of stress on the susceptibility to infectious disease processes, such as the common cold. According to a 1991 study by Sheldon Cohen, David A. J. Tyrrell, and Andrew P. Smith, one illustration of this approach is known as a "viral challenge." In such a study participants are quarantined in a laboratory setting for a particular period of time. During this time participants undergo medical exams, complete questionnaires assessing their physical and mental health as well as health behaviors, and respond to psychosocial measures that describe various aspects of their personality and the amount of stress they are currently experiencing. Following this initial assessment, participants are given nasal drops containing a strain of a virus or a placebo. For the next few days, participants undergo daily examinations to assess for the presence of viral symptoms and the number of tissues used are counted and weighed. The "viral challenge" technique allows the impact of stress on susceptibility to the common cold to be analyzed, while controlling for exposure to the illness. The paradigm also enables the study of other factors thought to influence susceptibility to illness, including personality variables.

Another means of exploring the influence of stress on health is to examine viruses that are usually held latent by active immune systems, but that may return when the person is exposed to high levels of stress, such as a major life event. One virus that illustrates this scenario is the herpes virus, thought to be responsible for diseases such as cold sores, genital lesions, and mononucleosis. While the virus is typically suppressed by a strong immune system, it will flare, and studies have supported the idea that there is a relationship between negative emotional states, such as stress, and flare-ups.

HOW PERSONALITY MAY AFFECT HEALTH

Another indication of the impact of mind states on the body are diseases that seem to be strongly connected to certain personality types. For example, people who display high levels of aggression, hostility, or anger seem to be more likely to develop cardiovascular problems, while those people who are shy or socially isolated seem to be more likely to develop immune and metabolic illnesses.

While most research has focused on the negative repercussions certain emotions or life events may have on physical health, other research has focused on positive emotions that can foster health and well-being. Indeed studies have shown that factors such as high self-esteem, a strong sense of self-efficacy, and resilience predict positive changes in mental and physical health. Other positive factors that have been studied are hope, optimism, social support, and positive interpersonal relationships. Indeed studies have shown that these positive qualities can hasten recovery from serious injury or illness, while people who do not have these qualities are at greater risk for developing illnesses such as heart disease and cancer. A 2006 review by Sheldon Cohen and Sarah D. Pressman demonstrated an ongoing association between positive affect and lower rates of morbidity, illness, pain, and increased longevity, while John C. Barefoot and colleagues in their 2005 study found that people with heart disease who had larger and more diverse social networks had better outcomes.

In summary the field of social psychosomatics explores the connection between social processes and physical health, seeking to discover both the consequences and benefits of the link between our social world and our physical beings, as well as examining potential factors that may reduce or exacerbate the link.

SEE ALSO *Emotion; Morbidity and Mortality; Psychology; Psychoneuroimmunology; Psychosomatics; Stress; Stress-Buffering Model*

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PSYCHOSURGERY

SEE *Lobotomy.*

PSYCHOTHERAPY

Psychotherapy is the treatment of mental illness, emotional difficulties, or behavioral problems through usually non-invasive psychological means. It is based on the premise that human psychological suffering can be alleviated by speaking and listening. At its core, psychotherapy involves the interpersonal interaction between a trained professional and a suffering individual. Collectively, the varied forms of psychotherapy are often referred to as "talking therapies." The specific techniques used in any psychotherapy depend largely on the theoretical orientation of the psychotherapist. Most approaches to psychotherapy can be traced in origin to one of the following schools: psychoanalytic, behavioral, cognitive, or humanistic. In practice, however, much of what is called psychotherapy today involves an evolving, fluid, and personalized use of techniques that depend on the specific problem, the professional's training, and the sufferer's needs. The goals of all types of psychotherapy typically involve the reduction of symptoms (e.g., depression, anxiety), altering maladaptive patterns of living (e.g., alcohol abuse, compulsive gambling), and/or improvement in specific areas of life functioning (e.g., increased capacity for work, creativity, or relationships).

The advent of modern psychotherapy can arguably be attributed to the work of Franz Anton Mesmer (1734–1815). Though few, if any, of his ideas would be recognized today as sound practice, his work marked an important shift from religious theories and explanations of healing (i.e., exorcisms) to theories based on scientific understandings of the time. The trance-like state Mesmer induced in individuals (still known colloquially today as being "mesmerized") was the precursor to hypnosis, a practice that French neurologist Jean-Martin Charcot (1825–1893) began using more specifically to treat patients with psychological difficulties. As a student of Charcot's, Sigmund Freud (1856–1939) first began using hypnosis to treat patients before he abandoned it for what would later become his revolutionary method of psychoanalysis. Decades of theoretical evolution of psychoanalytic theory has spawned a vast array of psychotherapies.

Though a contemporary of Freud's, Ivan Pavlov's (1849–1936) work represents a different yet important developmental line in the understanding of human behavior and learning. Known for his work studying the reflexive behavior of dogs, Pavlov discovered how certain behavioral responses could be experimentally brought about, or "conditioned," by pairing specific stimuli with other naturally occurring behaviors. This principle was used by American psychologists John B. Watson (1878–1958) and B. F. Skinner (1904–1990) in the clinical application of behaviorism, behavior therapy, and then to cognitive and cognitive-behavioral therapy. Historically, behavioral and cognitive psychotherapies have been viewed as an important counterargument to the earliest psychoanalytic ideas and techniques. In fact, the trailblazers of the behavior and cognitive psychotherapy movement, Albert Ellis (b. 1913) and Aaron Beck (b. 1921), both had early psychoanalytic training and interests.

PSYCHOANALYSIS

Developed by Sigmund Freud, psychoanalysis is often recognized as the first modern form of psychotherapy. It is based on the assumption that psychological symptoms are caused by unconscious conflict often rooted in one's early childhood experience. The aim of psychoanalysis is to bring unconscious conflicts into conscious awareness through the processes of introspection, insight, and interpretation. In a collaborative effort, the patient and therapist examine and try to resolve these conflicts, freeing the patient to live a more adaptive, healthy, and fulfilling life.

Freud discovered that examining the unconscious required some special tools. Foremost of these was the process of "free association," the uncensored report of all thoughts and fantasies, regardless of content. What seemed potentially irrelevant, tangential, or embarrassing to the patient was seen by Freud to have disguised connections and meanings that once understood would help reveal unconscious conflicts and reduce suffering. To pro-

mote free association, an analytic couch was often used, with the analyst sitting behind the couch and listening to the patient. Freud also viewed dreams as disguised and symbolic representations of unconscious conflicts, which could be useful in the psychoanalytic process. The interpretation of these conflicts brought about change, according to Freud.

As Freud's understanding of psychoanalytic theory evolved he began incorporating such ideas as transference, resistance, and defensive mechanisms into his theory of cure. The practice of psychoanalysis continues to evolve today in ways that maintain, reject, and expand some of Freud's original principles. Although traditional psychoanalysis (usually four to five appointments per week for several years) is not as popular as it was in the first half of the twentieth century, at the beginning of the twenty-first century it remains a sought-after treatment modality for some people. A more popular variant of psychoanalysis is face-to-face psychoanalytic psychotherapy, which uses many of the same principles as psychoanalysis but is less frequent (usually one to two appointments per week). In the psychoanalytic community, psychoanalysis is viewed as the treatment of choice for a wide range of psychological difficulties, including depression, anxiety, and personality disorders. Though the cost and length of treatment has been criticized as being prohibitive for many individuals, proponents of psychoanalysis and psychoanalytic psychotherapy argue that benefits are more comprehensive and longer lasting than other forms of treatment.

BEHAVIORAL THERAPY

Behavior therapy emphasizes the scientific understanding of observable behaviors, rejecting the importance of self-awareness, insight, and the unconscious as valued in psychoanalytic techniques. The goal of most forms of behavior therapy is to increase desired behaviors and decrease undesired ones. It is a collective group of therapeutic techniques based on systematically researched theories of learning and behavior. For example, Pavlov's discovery of "classical conditioning," or Pavlovian conditioning, led to an increased understanding of how certain behaviors could be learned. In his experiments with dogs, Pavlov found that the repeated pairing of a bell immediately proceeding the presentation of meat powder would eventually "condition" the dogs to salivate when the bell was later presented alone (without the meat powder). John B. Watson's (1878–1958) famous "Little Albert" experiment demonstrated how fear of a non fear-inducing white rat could be conditioned in a toddler boy by the repeated pairing of a loud noise with a the presentation of the rat. While the increase of salivation in dogs or the induction of fear in infants are hardly desired outcomes of modern psychotherapeutic techniques, these principles of classical conditioning have had a far reaching influence on subsequent developments of different forms of behavior therapy.

"Systematic desensitization," for example, is a behavioral therapy technique that uses principles of classical conditioning to help gradually alleviate specific phobias (e.g., fear of flying) or reduce the symptoms of certain anxiety disorders. "Flooding" (also called exposure therapy) is another form of behavior therapy used to help reduce anxiety by exposing an individual to a feared stimulus until the anxiety is extinguished. Though not commonly used in modern day, "aversion therapy" is a controversial behavior therapy technique that pairs unwanted behaviors with unpleasant results in order to reduce the behavior (e.g., pairing alcoholic beverages with a chemical substance that causes nausea). Other behavioral approaches involve principles of "operant conditioning" that Skinner was most noted for. Operant conditioning relies heavily on ideas of reinforcement and punishment in the service of increasing desired behaviors and decreasing unwanted behaviors.

Behavior psychotherapies tend to be directive, specific, and symptom focused. They are most popularly associated with the treatment of specific phobias, various anxiety disorders, or maladaptive behaviors (e.g., addictions, pedophilia). While research suggests that these techniques can be highly effective, especially in the short term, there is some debate as to how lasting the effects can be. A criticism of a strict behavioral approach to treatment is that it does not address underlying causes of the behaviors. The principles of behaviorism and behavioral psychotherapy are often used most successfully in conjunction with other theoretical approaches.

COGNITIVE THERAPY

Since the 1960s cognitive psychotherapy has been the predominant force in the treatment of many psychological difficulties. The basic assumption of all forms of cognitive therapy is that thinking impacts feeling. For example, cognitive therapists posit that an individual may be feeling depressed because of certain thoughts the person has (e.g., "I am not good enough"). In contrast to behaviorism's focus on observable behaviors, the aim of cognitive therapy is to address, challenge, and alter maladaptive thoughts and cognitions. This can be done in many ways.

Developed by Ellis, Rational Emotive Therapy, also known as Rational Emotive Behavior Therapy, is a confrontational form of cognitive therapy that involves active and direct confrontation of an individual's irrational beliefs. This type of intervention was intended by Ellis to be somewhat jarring to patients so as to highlight how individuals' thoughts and beliefs were irrational appraisals of events that led to self-imposed suffering (e.g., depres-

sion, anxiety). As such, alleviation of symptoms came about by attacking these irrational thoughts directly.

Beck is known for developing a less confrontational, gentler approach to cognitive psychotherapy. Beck's work, and many approaches that follow, focuses on correcting errors of reasoning called "cognitive distortions." These distortions are said to create and maintain negative feelings such as anxiety or depression. For example, a young man engages in the cognitive distortion of catastrophizing (e.g., assuming the worst case scenario) when he believes that his public speaking will provoke unbearable anxiety and illicit embarrassing ridicule. In reality, however, the experience may just be uncomfortable. A cognitive therapist would address with this young man the distortions of his thinking. Other cognitive distortions include "overgeneralization," "all-or-nothing thinking," and "jumping to conclusions." All of these distortions are automatic in nature and the process of cognitive psychotherapy works to reprogram these thoughts into more adaptive ones. Technically, cognitive psychotherapy tends to be directive with an emphasis on self-monitoring, problem solving skills, behavioral experiments, and improved decision making. Many cognitive therapists utilize homework assignments to encourage patients to continue monitoring their thoughts and feelings when outside the consulting room.

The term cognitive-behavioral psychotherapy is often used to describe the natural and practical mix of many of the cognitive and behavioral techniques described. In general, cognitive and cognitive-behavioral therapy utilize a much more structured and guided approach. It has proven to be a highly effective, efficient, and often time-limited treatment of many psychological disorders. Its structure also lends itself well to empirical investigation. Cognitive and cognitive-behavioral psychotherapy is the predominate form of psychotherapy being practiced in the United States today.

HUMANISTIC THERAPY

Having its roots in existential philosophy, humanistic psychotherapy is based on the ideas and practice of Abraham Maslow (1908–1970) and Carl Rogers (1902–1987). Often referred to as a "third force" of modern psychology and psychotherapeutic technique, humanistic psychotherapy represents an alternative to the larger psychoanalytic and cognitive-behavioral approaches. Both Maslow and Rogers focused on the ideas of psychological growth and deemphasized the notion of mental illness. Developed in the 1960s, humanistic psychotherapy posits that humans have an innate desire to maximizing personal growth and fulfillment, a goal termed by humanistic thinkers as "self-actualization." The blocking of self-actualization is viewed by humanistic therapists as the source of psychological suffering.

Perhaps more than any other clinician, Rogers's person-centered therapy illuminated the more universally practical components of psychotherapy, regardless of orientation. His focus on a genuine, empathic, and honest relationship between therapist and sufferer has been viewed as instrumental across many therapeutic disciplines. Humanistic psychotherapy tends to be non-directive. The humanistic psychotherapist focuses on the patient's current feelings and experiences. The goal of Rogers's type of psychotherapy is to listen in an empathic way that allows the patient to feel heard and understood. It was this understanding, Rogers believed, that helped patients navigate personal roadblocks and live more fulfilled and meaningful lives. Other important variants of humanistic psychotherapy were practiced by Rollo May (1909–1994), Victor Frankl (1905–1997) and James Bugental (b. 1915).

OTHER PSYCHOTHERAPIES

The various practices described share in common the most traditionally recognized form of psychotherapy: one trained professional listening and speaking with a suffering individual. There are, however, other forms of psychotherapy that deserve mention. As early as the 1940s, psychotherapy in a group setting was an accepted form of treatment.

The unique benefits of the interpersonal experience coupled with the increased patient-to-therapist ratio maintains group psychotherapy as a popular alternative to individual psychotherapy. Support groups led by lay persons or fellow suffers, such as Alcoholics Anonymous, remain a popular treatment choice for individuals. Specific psychotherapies have been designed to work with families, couples, or even in industrial settings. Play therapy is often a method used by practitioners working with children. There are also different forms of psychotherapy that involve the use of music or art. The variety of problems, populations, theoretical orientations, and modalities, coupled with each psychotherapist's individual style, makes the number of different types of psychotherapy virtually endless.

BIOLOGICAL CONSIDERATIONS AND RESEARCH

The biological treatment of psychological distress has become inextricably linked to current ideas about psychotherapy. The 1950s marked an explosion of scientific research that led to new understandings about the connection between brain chemistry and psychological disorders. Most notably, the advent of psychotropic medication demonstrated that medicines could influence individuals' thinking, feelings, and behaviors in ways that brought

about relief of symptoms. This development has drastically changed the way people suffering from mental health issues receive treatment. Though it has not supplanted psychotherapy as a treatment modality, psychopharmacology has proven to be an important aspect of treating many disorders. Findings suggest that for most mental health issues, a combination of psychotherapy and medication is often more effective than either alone or none at all.

Critics of the biological approach often state that medication alone treats only symptoms and does not address underlying, more psychological causes, often leaving individuals dependent on medications to maintain a sense of mental health. The effectiveness and efficiency of symptom relief that some medication has demonstrated, however, solidifies the medical treatment of mental illness as an important modality that is here to stay. That said, new developments in neuroscience, brain imaging, and research techniques are beginning to demonstrate how psychotherapy alone can alter brain chemistry. This nascent line of research has begun focusing the historically fuzzy distinction between mind and body that has puzzled philosophers and scientists for thousands of years.

Psychiatry itself is a biologically oriented field. As compared to other mental health fields such as clinical psychology, counseling psychology, and social work, modern psychiatric training involves relatively little instruction or experience in the practice of psychotherapy. This has not always been the case. At the height of its popularity in the United States, psychoanalysis was practiced almost exclusively by psychiatrists. It was only in the late 1980s that psychologists, social workers, and counselors were first accepted into American psychoanalytic training institutes. Although some psychiatrists practice various types of psychotherapy as part of their profession, most do not and the balance of psychotherapy practice has shifted to non-medically trained professionals. As a medical profession with prescription privileges, however, psychiatrists are the most knowledgeable and well-trained in the area of psychotropic medication and the biological treatment of mental illness.

In the study of mental health treatment there is a growing call for the introduction and dissemination of psychotherapy approaches to be scientifically sound and have evidence-based proof of effectiveness. This comes from a social value of consumer protection as well as the financial pressures inherent in increasing health care costs. The structured nature of cognitive and behavioral psychotherapy techniques have made these forms of treatment better suited to traditional experimental designs and standardization, whereas the less structured and more individualized psychoanalytic and humanistic treatments present more complicated research challenges. This makes comparing the effectiveness of one type of therapy versus another understandably problematic. What constitutes proof is also a matter of debate among researchers, practitioners, and patients alike. While the scientific study of psychotherapy process and outcome likely will continue to illuminate and inform the public about treatment options, it is important to always consider the limitations of such research.

Debates between theoretical camps of psychotherapy have had a history of contention, each, at times, extolling the virtues of their own techniques and criticizing the deficits of the others. This debate has also been informative, propelling the understanding of what helps troubled people feel better. In some ways the debate is like the fable of the six blind men asked to describe an elephant to one another. Having only the sense of touch, one man described the smooth coolness of the ivory tusk, another the furrowed curve of the trunk; a third the wispy tuft of the tail, and so on. Each man could hardly believe that he was describing the same thing as the other.

SEE ALSO *Anxiety; Classical Conditioning; Depression, Psychological; Emotion; Existentialism; Freud, Sigmund; Maslow, Abraham; Medicine; Mental Illness; Operant Conditioning; Pavlov, Ivan; Psychoanalytic Theory; Psychology; Psychoneuroendocrinology; Skinner, B. F.*

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PSYCHOTROPIC DRUGS

Psychotropic drugs are substances prescribed to affect one's behavior, emotions, or cognition. They can be categorized into the following drug classes: antipsychotics, antidepressants, anxiolytics, mood stabilizers, and stimulants. Psychotropic drugs are routinely used to treat various mental disorders, and their efficacy is determined by how well the drug decreases the presenting symptoms of a disorder, as well as the presence or absence of side effects.

PSYCHOTROPIC DRUG CLASSES

Antipsychotics are prescribed primarily to manage the symptoms associated with schizophrenia, autism, and other developmental disabilities. On occasion, they are used in combination with other drugs to treat depression and bipolar disorder. There are two classes of antipsychotic drugs: typical and atypical. The difference between these two groups lies in their mechanism of action. Typical antipsychotics are highly selective for dopamine receptors, specifically D2 receptors. Unfortunately, because of this selectivity, movement disorders (e.g., tardive dyskinesia) are a side effect of the typical antipsychotics. Given this undesirable side effect, atypical antipsychotics were developed. They differ from the typical antipsychotics in that they have a lower affinity for D2 receptors, and affect other neurotransmitter systems such as serotonin. Atypical antipsychotics have significantly fewer motor side effects; however, weight gain is an issue.

Antidepressants are used in the treatment of depression, post-traumatic stress disorder, anxiety, and obsessive compulsive disorder. There are three major classes of antidepressants prescribed: monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants (TCAs), and selective serotonin reuptake inhibitors (SSRIs). The best known of these is the SSRI. SSRIs exert their effect by blocking the reuptake of serotonin from the synapse into the presynaptic neuron, thus increasing its availability postsynaptically. Physiological side effects associated with SSRIs are usually minimal and transient, with the exception of sexual dysfunction. Increases in suicide ideation in adolescents treated with SSRIs have been reported, and thus SSRIs are not generally recommended for use with this population. Despite their popularity, SSRIs have not been found to be any more effective at treating depression than any other antidepressant.

Anxiolytics are prescribed to treat anxiety and sleep disorders. There are two classes of anxiolytics, benzodiazepines and non-benzodiazepines. Benzodiazepines exert their effects by increasing the efficiency of gamma-aminobutyric acid (GABA), an inhibiting neurotransmitter. These drugs are fast-acting, and side effects include the potential for physiological addiction. Non-benzodiazepines include buspirone, which exerts its effect via activity at serotonin receptors. The potential for abuse with non-benzodiazepines is less than with benzodiazepines, but they also appear to be less effective at treating anxiety disorders than benzodiazepines.

Although lithium is the only drug used specifically for the treatment of bipolar disorder, anticonvulsants such as lamotrigine also have been demonstrated to have mood-stabilizing properties. At the present time, the neuropharmacology of these drugs in the treatment of mood disorders is not understood, and both lithium and certain anticonvulsants require routine blood monitoring to guard against toxicity.

Finally, stimulants are prescribed to treat attention disorders such as attention deficit/hyperactivity disorder (ADHD). These drugs operate by increasing the availability of dopamine, epinephrine, norepinephrine, and/or serotonin. Side effects associated with stimulants are decreased appetite and difficulty sleeping.

EFFICACIOUS USE OF PSYCHOTROPIC DRUGS

Prior to the advent of psychotropic drugs in the late 1940s, treatment of psychiatric disorders included admittance to asylums, physical restraints, and psychoanalysis. Consistent and effective results of treatment were often elusive. Advances in technology and the convergence between the fields of psychiatry, neurology, genetics, and neuroscience have made it possible to evaluate the therapeutic effects of psychotropic drug use, and to make predictions about who will respond well to their use. The application of neuroimaging techniques such as functional magnetic resonance imaging (fMRI) to drug evaluation allows assessment of changes in cerebral blood flow, volume, and oxygenation as a function of psychotropic drug use that may provide an indication of the efficaciousness of psychotropic treatment in disorders such as schizophrenia and depression (Tracey and Wise 2001). Psychopharmacogenomics is another approach that attempts to predict efficacious drug treatment (Malhotra, Murphy and Kennedy 2004). The goal is to identify polymorphisms or mutations of genes involved in receptor function, pharmacokinetics, and pharmacodynamics, to determine who is at an increased risk for experiencing side effects of psychotropic drugs. With each of these technological advances, the aim is to improve prescribing practices and provide individualized, effective treatment while ensuring quality of life.

SEE ALSO *Adolescent Psychology; Cognition; Emotion; Genomics; Mental Health; Mental Illness; Neuroscience; Psychoanalytic Theory; Psychology; Psychoneuroendocrinology; Psychoneuroimmunology; Psychotherapy; Suicide*

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PUBLIC ADMINISTRATION

Public administration is a practice of government, an academic study, and a political reform movement. While public policy is the study of the process of making laws and government programs, public administration implements these policies and studies and seeks to improve this implementation.

The administration of King Frederick William I of Prussia (1688–1740) in the eighteenth century and an 1887 journal article by political scientist and future U.S. president Woodrow Wilson (1887) emphasized the need to create and use a nonpolitical, career civil service in order to implement policies more honestly and efficiently. With the rapid increase in industrialization and urbanization in the United States during the late nineteenth and early twentieth centuries, public administration developed further as an academic study at major universities and as a political reform movement within federal, state, and local governments. In particular, the public administration movement wanted to transform most entry-level government jobs from politically appointed positions to merit-based civil service positions determined by standardized tests and protected from improper political influence. The Pendleton Act of 1883 began merit-based testing and hiring for federal jobs, and state and local governments gradually adopted similar reforms.

During the twentieth century, public administration also wanted to apply the methods, organizations, and values of business administration to government. In particular, people who wanted to "run government like a business" wanted public administration, especially in local government, to be as cost efficient, productive, and professional as corporations in managing personnel, providing goods and services, and spending funds. This perspective and objective are especially evident in the city manager form of government. This is a type of government in which a city or town council hires a city manager to exercise the administrative, personnel, and budgetary powers typically exercised by elected mayors in other forms of local government. The Budget and Accounting Act of 1921, the recommendations of the Brownlow and Hoover commissions, and the Civil Service Reform Act of 1978 reflected similar business-like practices and values in personnel and budgetary management as they applied to the federal government. According to the book *Democracy and the Public Service* by Frederick C. Mosher (1968), the Brownlow commission of 1937, chaired by political scientist Louis Brownlow, and the Hoover commissions of 1949 and 1955, chaired by former president Herbert C. Hoover (1874–1964), respectively recommended the creation of the Executive Office of the President (EOP) in order to assist the president's administration of the federal bureaucracy and an improvement of the relationship between political appointees and top civil servants within the executive branch.

During the 1990s, the widely read and influential book by Vice President Al Gore (b. 1948) called *Reinventing Government* (1993), about his work with the National Performance Review (NPR), explained and advocated the "Third Way" of experimenting with the greater use of nonprofit organizations to provide some public services as an alternative to the extremes of probusiness conservatism and progovernment liberalism. Following the terrorist attacks of September 11, 2001, the federal bureaucracy was expanded to include the Department of Homeland Security and reformed to facilitate greater communication and coordination among federal agencies and between the federal and state governments regarding terrorist-related national security, surveillance, immigration, and transportation safety issues.

SEE ALSO *Administrative Law; Bureaucracy; Government; National Security; September 11, 2001*

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Sean J. Savage

PUBLIC ASSISTANCE

At any point in time, some members of an affluent or poor society may be unable to fully support themselves due to a variety of circumstances, including adverse economic conditions (e.g., unemployment), health problems (physical or mental infirmity), changes in family circumstances (e.g., births, deaths, divorce), age factors (e.g., youth, advanced age), and natural disasters. In these situations, the government, in fulfilling its role as enhancer of the well-being of its citizens, may intervene by providing assistance to the affected individuals or families. For the sake of long-term viability, however, it is important to design a system that encourages able-bodied adult public assistance beneficiaries to become self-supporting again. Because public assistance programs seek to provide an economic or social safety net to the disadvantaged or vulnerable members of society, it is not surprising that such programs are subjects of extensive public policy debates in democratic societies. These debates focus on the long-run viability of specific public assistance programs, on distributional impacts, on whether public assistance encourages or discourages job-seeking and childbearing, and on whether or not programs help beneficiaries escape from poverty and welfare dependence, as well as the extent to which governments should be providing such programs.

The governments of the United States, Canada, Japan, and other industrialized countries have developed comprehensive public assistance programs over the years to assist the poor and needy financially or through medical care, employment training, and a variety of other programs. Because of their comprehensive public assistance programs, these countries are labeled *welfare states*. The sociologists James Rice, Robert Goodin, and Antti Parpo (2006) have articulated some ways in which welfare states contribute to people's well-being.

THE MEANING OF PUBLIC ASSISTANCE

To many people, public assistance is synonymous with welfare benefits (and because the latter is often perceived negatively, so too is the former). Strictly speaking, public assistance is broader than welfare; it includes cash benefits (e.g., social assistance), direct "in-kind" provision of goods and services (e.g., food stamps, child care services), and tax breaks (e.g., tax credits for families with dependent children). The designation *public* arises from the fact that some level of government (central, state, or local) controls the relevant financial flows; thus, benefits provided by private charities are not considered public assistance, except in cases where public expenditures are channeled through private charities. Three salient aspects of public assistance programs follow from the above definition. First, the assistance is intended to be provided for the direct benefit of needy individuals or families. Second, because some level of government controls the relevant financial flows, the governments in power influence such expenditures. Third, the benefits, which can be cash, in kind, or in the form of tax breaks, must address some social or economic goal.

Since the 1930s many specialized public assistance programs for low-income households, seniors, youth, the sick and handicapped, and the unemployed have been launched in the United States, in response to changing economic and social conditions. A partial list of such programs includes the Food Stamp Program (FSP), Medicaid, Supplemental Security Income (SSI), Aid to Families with Dependent Children (AFDC), Temporary Assistance to Needy Families (TANF), General Assistance (GA), Job Opportunities and Basic Skills (JOBS), Earned Income Tax Credit (EITC), and the Low Income Home Energy Assistance Plan (LIHEAP). TANF (which replaced AFDC) is what is commonly referred to as *welfare*; it assists needy families with dependent children, whereas SSI is designed to assist the blind, aged, and disabled. Most of these programs are means-tested (or income-tested)—that is, benefit eligibility is restricted to individuals or households whose income and/or assets are valued below some threshold level. For example, Medicaid provides medical assistance for only certain low-income individuals and households, and FSP ensures provision of adequate nutrition to low-income individuals and households by supplementing their food budget.

According to statistics provided by the U.S. Social Security Administration (2006), in 2002 there were 49.754 million recipients of Medicaid, at a total cost of $213.491 billion; an average of 5.058 million recipients of TANF/AFDC per month, at a total cost of $9.717 billion; an average of 19.094 million recipients of food stamps, at a total cost of $18.257 billion; and 6.940 million recipients of SSI in December 2002, at a cost of $34.567 billion.

ECONOMIC IMPACT OF PUBLIC ASSISTANCE

Public assistance programs are designed to achieve economic and social goals. Two such goals are noteworthy. First, the provision of public assistance is a step toward creating an egalitarian society in which all citizens enjoy a reasonably decent standard of living. Second, public assistance spending may serve as a tool for regulating demand, structuring the labor market, and stabilizing the economy.

Opponents of public assistance programs claim, among other things, that such programs provide disincentives to work and incentives to bear children. These programs also, they assert, divert scarce resources away from productive uses (e.g., investment) to unproductive social services and contribute toward creating a large number of

poor and welfare-dependent individuals and families. These viewpoints have motivated extensive empirical research on the economic and social impacts of specific U.S. public assistance programs. The conclusions of this research have been mixed: For example, case study research by the economist Barbara Wolfe (2002) found that work-effort disincentives exist in both TANF and AFDC. The economists Dean Jolliffe, Craig Gundersen, Laura Tiehen, and Joshua Winicki (2005) examined the impact of FSP on child poverty and found that food stamp benefits lead to large reductions in the poverty gap. The sociologists Taryn Lindhorst and Ronald Mancoske (2006) tracked TANF recipients who were involuntarily removed from welfare rolls, as a result of the increased use of sanctions and time limits on welfare, and identified several negative social and economic effects.

THE U.S. PUBLIC ASSISTANCE RECORD

How does the United States fare relative to other industrialized Organization for Economic Cooperation and Development (OECD) countries in terms of commitment to supporting the standard of living of poor and needy individuals and families? Ideally, comparison should be made on the basis of an examination of the gross (before-tax) total public expenditures on each public assistance program as a ratio of the size of the economy as measured by gross domestic product (GDP), with higher values indicating greater commitment. Although public assistance programs in different countries share the common goal of assisting the poor and needy, there are significant cross-country variations in program design, which makes international comparison problematical. To deal with this problem, the OECD has attempted to create a comprehensive database of internationally comparable data on public social expenditures, which include expenditures on public assistance programs, in the OECD countries. The database focuses on nine social policy areas: namely, *old age*, *survivors*, *incapacity-related benefits*, *health*, *family*, *active labor market policies*, *unemployment*, *housing*, and *other social policy areas*. Because most public assistance programs are means-tested, public expenditures on means-tested programs as percentages of GDP provide a good sense of how levels of public assistance, in particular, compare.

Table 1 shows the gross (before-tax) total public social expenditures and total expenditures on means-tested programs as percentages of GDP for several OECD

Table 1: Total Public Social Expenditure and Total Expenditure on Means-Tested Programs as a Percentage of GDP for Selected OECD Countries (2003)

Country	Public Social (% GDP)	Means-tested (% GDP)
Australia	17.9	7.3
Austria	26.1	1.2
Belgium	26.5	0.9
Canada	17.3	3.5
Denmark	27.6	1.0
Finland	22.5	2.9
France	28.7	1.4
Germany	27.6	1.1
Greece	21.3	1.4
Iceland	18.7	1.2
Ireland	15.9	2.6
Italy	24.2	0.7
Japan	17.7	0.4
Luxembourg	22.2	0.9
Netherlands	20.7	1.1
New Zealand	18.0	3.4
Norway	25.1	1.1
Portugal	23.5	0.0
Spain	20.3	1.5
Sweden	31.3	0.7
Switzerland	20.5	1.7
United Kingdom	20.1	2.2
United States	16.2	1.3
OECD Average	20.7	1.5

SOURCE: OECD (2007).

Table 1

countries, as reported by OECD (2007). It is apparent from the table that the United States fares poorly in relation to most industrialized OECD countries, especially the Nordic countries, when gross public social expenditures are considered. In fact, the United States falls below the OECD average for every year between 1990 and 2003. Sweden's total public social expenditure as a percentage of GDP, which is the highest among the OECD countries for every year between 1990 and 2003, is about twice that of the United States. Another interesting feature of the table is that the total U.S. public social expenditure is very comparable to that of Japan, with both falling below the OECD average. A slightly different story emerges when means-tested programs, which are characteristic of most public assistance programs, are considered. For means-tested programs, the United States and Japan also fall below the OECD average and both countries fare much worse than Australia, Canada, New Zealand, Finland, Ireland, and the United Kingdom.

SEE ALSO *Compensation, Unemployment; Medicaid; Medicare; National Health Insurance; Poverty; Public Health; Social Welfare System; Transfer Payments; Welfare State*

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Tomson Ogwang

PUBLIC BROADCASTING SYSTEM

SEE *Television.*

PUBLIC CHOICE THEORY

Public choice theory is a positive theory of interest group politics that applies the microeconomic perspectives of market exchange to political and policy problems. Borrowing from Anthony Downs's approach of policy selection (1957), wherein governments select policies to appeal to a winning coalition of voters, public choice theory considers the ways in which interest groups' policy preferences and relative bargaining power will affect government policies. The theory assumes a logic in which the government awards policy goods to those groups best able to lobby for their interests. Although the public choice method borrows from economics, its principal uses have been in the analysis of political questions. Public choice theory and interest group politics have generally been used in a variety of political contexts, such as tax policy (Becker 1983), trade protection (Schattschneider 1935; Eichengreen 1989), public good provision (Olson 1965), and economic sanctions (Kaempfer and Lowenberg 1992).

According to public choice theory, although a market analogy is a useful way to conceive of policy selection, there remain significant differences between economic exchange markets and political exchange markets. For example, economic market exchanges are generally believed to: (1) be undertaken voluntarily, (2) benefit all those involved, and (3) be Pareto optimal. Political markets, on the other hand, tend to favor one group over others, and are thus distributional and inherently conflictual. Thus, the political market is characterized by competition between opposed interest groups that expend their political capital to secure their preferred policies.

Through this competition over policies between opposed interests, the policy goods ultimately awarded by a government will reflect the influence-weighted preferences of the opposed interest groups. More formally, the political market will equilibrate when the influence-weighted utilities of the stronger groups are equal to the influence-weighted disutilities of their weaker opponents. Furthermore, policy changes will result from shifts in either the underlying distribution of the power of opposed groups or as a result of shifts in the relative salience that groups hold for issues of concern. These shifts will, in

turn, influence decisions on where these groups expend their scarce political capital.

Public choice theory has two principal variants: the "Chicago School," which considers the awarding of policy goods through a political market as relatively benign; and the "Virginia School" (based at George Mason University), which is concerned about how competition over government largess undermines social welfare through deadweight costs and inefficiencies. Members of the Chicago School, such as Gary Becker, argue that these social deadweight costs will be minimized for two reasons. First, because the utility of policy goods increases at a diminishing rate (as market distortion and deadweight costs accumulate), winner groups will become decreasingly inclined to lobby for further rents, while loser groups will become increasingly inclined to lobby for relief and a rationalization of the political economy. Secondly, because loser groups lobby to ensure that they suffer the minimum disutilities possible, they will reduce deadweight costs further. As a result, the competition between opposed groups will reduce social costs to a minimum.

On the other hand, members of the Virginia School point out that, because of their political nature, rent transfers are often highly inefficient in order to disguise the extent of the pilfering from the community chest undertaken by beneficiary groups. Worse, when rents are highly concentrated and their costs are widely defused, narrow rent-seeking interests may be able to exploit collective action problems on behalf of the larger body politic for their own benefit, resulting in further net social and economic inefficiencies. For example, the economist Gordon Tullock notes that farm support is often given through inefficient market manipulation, as opposed to more efficient cash subsidies, in order to conceal the real scope of the super-normal returns to farming interests through the political process (1989). Thus, due to their concern with the interaction between interest group pressures and rent-seeking and governments' proclivity for overregulation, the Virginia School is pessimistic with respect to interest groups' normative impact on policy outcomes.

Although public choice theory and interest group politics have been used with some success in the political economy and economics literatures, critics have noted two potentially significant problems with this body of work. First, public choice theory may give short shrift to the key role that domestic institutions play in determining policy outcomes, because the groups of interest are often modeled as if they were operating in an institutionally unconstrained policy market. Yet while work in the public choice tradition often does not explicitly address institutions, they can still be incorporated into such a framework. As politically determined rule- and agenda-setting mechanisms, institutions are amenable to the same lobbying and bargaining processes described above. That is, by thinking of institutions as meta-policies, public choice tools can be used to endogenously analyze institutions' creation and downstream effects.

Second, critics allege that public choice theory, which was developed primarily within the American political context, is unsuited to nondemocratic countries in which the capacity of opposition groups to lobby for their policy preferences is repressed. It is important to note that the metaphor of "lobbying" need not be taken literally, however. As conceived of in public choice theory, lobbying can refer to any kind of influence. Regardless of the type of regime, political bargaining always takes place, even if it is only implicit. Although the preferences of excluded groups in nondemocratic countries may not affect the political process directly, they may do so indirectly, since disenfranchised groups can signal their policy preferences by engaging in acts of political resistance such as fomenting armed rebellion. This resistance, or the threat of it, effectively acts as a tax on the ruling group's willingness and ability to unilaterally set policy because it raises the costs of enforcement and administration. Thus, even in nondemocratic states, policies will be determined through a bargaining process between opposed groups, although ruling groups in authoritarian regimes are, of course, likely to enjoy policies far closer to their preferences. In these regimes there is an extreme concentration of political capital, in contrast to its relative diffusion within democratic regimes.

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Solomon Major

PUBLIC GOODS

Public goods such as law enforcement, national defense, highways, and environmental regulation are typically provided by governments rather than the private sector, although this is not a requirement. Governments provide these because public goods share two properties that make their provision by private firms difficult. The first is that there is no rivalry in their consumption: Use of a public good by one individual does not decrease its value to others. The second is that the benefits are freely accessible to all, so no individual can be excluded from the use of these goods.

The first condition implies that financing production by charging a price for access to the good would inefficiently restrict access to the good. The second condition of non-excludability implies that charging a price is also infeasible from a practical standpoint (Figure 1). As a result, private firms will generally have little incentive to produce public goods: Provision requires collective action among those parties desiring the good (Olson 1965). Insufficient financing for production is likely to result from voluntary contributions, however, since individuals need not pay a price to enjoy an open-access public good. This has been called the *free-rider problem*. As a result, provision of public goods generally falls to governments, which have the coercive power necessary to levy the taxes required to pay for the goods.

A difficulty arises, however, in establishing both equity and the preferred level of a public good. To provide the sufficient level of a public good, governments must know how much individuals benefit from it. Optimally, an individual's tax assessment would then reflect his or her own valuation of the public good. In practice, however, when individuals know they cannot be denied access to the good and will be assessed taxes in proportion to their announced valuation, they have no incentive to reveal their true preferences (the free-rider problem again). Economists have studied various means by which governments can induce individuals to provide information about their preferences. The key to these revelation mechanisms is that the taxes levied on the individual to finance the good must be set independently of their announced valuation.

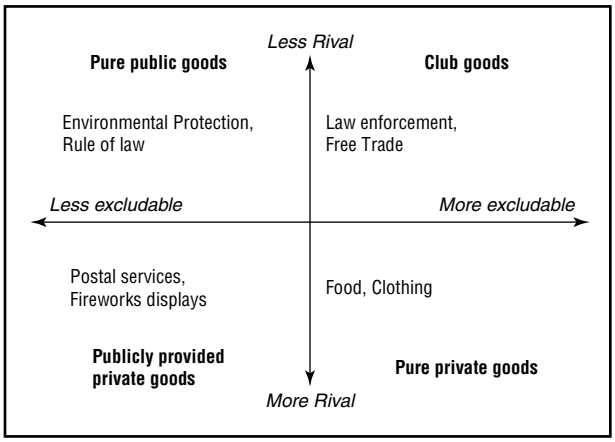

Figure 1: Non-rivalry of Benefits (Desirability) vs. Excludability (Feasibility)

This fact, combined with the fixed costs of designing a tax system, provides one explanation for the observation that countries typically organize so that a single government provides multiple public goods, rather than having a system of overlapping jurisdictions each responsible for a single public good. Not all public goods are most efficiently provided by a single centralized authority, however, and a hierarchy of jurisdictions and subjurisdictions may exist for providing public goods. One example is the U.S. system of federal, state, and local governments, in which the federal government provides military defense, regulates commerce, and designs social welfare programs to achieve equity goals, while state governments set regulations on social behavior and local governments provide a range of services from education to street cleaning. Another example is the hierarchy between public goods provided within sovereign nation-states and global public goods that must be provided through collective action among a group of nation-states, such as peacekeeping, international regulation of civil aviation and commerce, exchange rate management, and efforts to combat global warming.

Analytically, the key distinction between global, national, and state or local public goods rests on two dimensions: the sovereignty of the nation-state and the mobility of the citizenry. The free-rider problem can be overcome in providing public goods at the level of the nation-state and its subjurisdictions through the coercive power of governments to enforce tax and regulatory policies, but no similar mechanism exists for the provision of global public goods. Similarly, within the nation-state, citizens are typically free to live in the subjurisdiction that offers their preferred combination of public-good provision and tax burden. As a result, efficient provision can be achieved by citizens "voting with their feet" (Tiebout 1956). Migration between nation-states is more difficult, however, and between planets impossible, so the political process by which national and global public goods are determined is crucial.

Ideally, responsibility for public goods should be allocated among the hierarchy of governments using several criteria: (1) the extent of nonrivalry (including both the proportion of fixed costs relative to variable costs and the geographic scope of the benefits); (2) the uniformity of

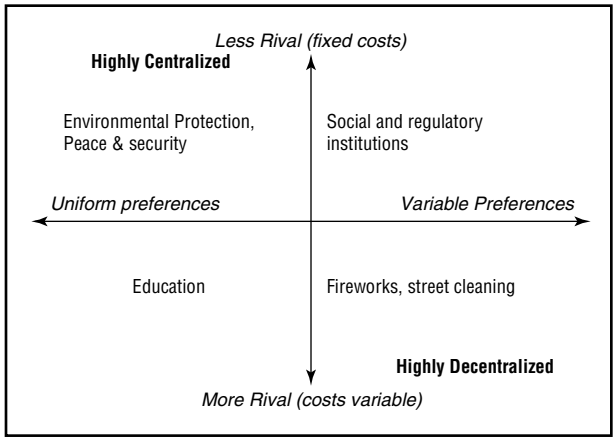

Figure 2: Optimal Centralization of Public Good Provision

opinion regarding the preferred nature of the public good; and (3) problems of adverse selection. Public goods that entail relatively high fixed costs and have widespread benefits, such as maintaining peace and security through law enforcement and the military, or maintaining clean air and water and a stable climate through environmental protection, should optimally be provided at a centralized level (Figure 2). Where preferences over the size, quality, or nature of the public good vary widely, however, more decentralized provision may be preferable. This is particularly true for goods that have more limited geographic benefits, and thus a higher degree of rivalry, such as public education and community social activities. Wallace Oates (1972) argues further that policies designed to achieve distributional equity goals are also best provided at a federal level to avoid the adverse budgetary effects that might arise with poorer families selecting to live in, and richer families selecting to live outside of, those state and local jurisdictions with more progressive policies.

It is worth noting that not all publicly provided goods are pure public goods by the conventional definition employed in this entry. Information, for instance, is nonrival in consumption but certainly potentially excludable. Legal rights and the rule of law are potentially excludable as well, as history has demonstrated to many disenfranchised communities. Common property resources like fish, on the other hand, are nonexcludable, but their consumption is rival. In each case government regulation of the provision process—whether through patent law, civil rights legislation, or fishery management—can in principle be desirable. In weak and failed states, however, regulation of resources may generate incentives for corruption, as officials "sell" licenses and grant access for personal profit. In other cases, governments have opted to provide private goods, such as education, health care, or postal services, all of which are both rival and excludable, in order to capitalize on fixed costs, achieve beneficial externalities, or to adopt certain standards (the benefits of which are both nonrival and nonexcludable).

SEE ALSO *Collective Action; Institutionalism*

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Mark R. Hopkins

PUBLIC HEALTH

Public health is a branch of the social and health sciences, as well as a field of social and health endeavor, that aims at collective action for the prevention of disease and the promotion of health. The U.S. Institute of Medicine offers this definition: "public health is what we, as a society, do collectively to assure the conditions in which people can be healthy" (K. Gebbie, L. Rosenstock, and L. M. Hernandez 2003). Depending on the political philosophy of governance and the role of the state, this aim and its operational applications have taken different shapes in different contexts. In some contexts, "public health" refers to public-sector health; in other contexts, the term refers to the public's health.

Public health is as old as history itself. Most holy texts (including the Bible, Torah, and Qur'an) contain instructions regulating sanitary behavior. Other belief systems, such as the Indian Ayurveda (from the Sanskrit *ayu*—life and *veda*—knowledge of), have formulated prescriptions for leading healthy lives. The Hippocratic writings have been highly influential in Western conceptualizations of health and illness. Although the ancient Greek physician Hippocrates (c. 460–377 BCE) and his school are found to be the fathers (and mothers) of modern medicine, their instructions for healthy housing are the direct forebears of current perspectives on environmental health.

The rise of modern public health occurred in the mid-nineteenth century. With the advance of statistics and empirically-based science, health advocates (later known as the *hygienists*) in France, Germany, England, and the United States endeavored to link disease patterns to environmental conditions. These hygienists had roots

in engineering, law, and charity, and to a lesser extent in emerging scientific—allopathic—medicine. British royal anesthesiologist John Snow (1813–1858) made a breakthrough in 1854. Using an ancestor of what is known as a geographic information system, Snow was able to attribute cholera outbreaks in Victorian London to the quality of water coming from the city's Broad Street pump.

Although public health *science* had certainly made its mark with the work of early epidemiologists, public health *action* was relatively slow to follow, mostly because the proposed interventions met with considerable political resistance. The idea that large infrastructural works (sewage systems, garbage collection, piped water) had to be put in place for the public good was persistently countered with arguments that the delivery of appropriate individual health care services, and emphasis on the responsibilities of individuals for their lifestyles, would yield better results. Ultimately, though, the political argument that the workforce was withering as a result of lack of public action won over the critics.

Formal public health training in this tradition started at the Massachusetts Institute of Technology in 1889 and at the London School of Hygiene and Tropical Medicine in 1899. A pressing debate emerged in the United States around the question of whether public health was a branch of medicine and should thus be taught in medical schools. The Flexner Report (1910), sponsored by the Carnegie Foundation, found that schools of public health should be separate entities. In Europe, however, there was a commonly shared belief that public health was an integral part of the medical realm. Outside the United States, the Rockefeller Foundation eventually sponsored schools of public health that were closely allied with medicine (in Zagreb, Beijing, and London). Public health in Europe became known as *social medicine* or (in the United Kingdom) as *public health medicine*.

The breakthrough stature that the field had acquired in the second half of the nineteenth century withered, regrettably, as a consequence of advances in vaccine development and immunology. The dominant idea became that most, if not all, disease could be treated or prevented through immunological interventions. Public health could contribute to this notion by developing population-based vaccination campaigns. The social and political aspects of public health science and action lost prominence, even in those realms where the political dimensions of health issues were blatantly obvious. Governments had been engaging, since a failed first meeting in Paris in 1851, in a series of "sanitary conferences" aimed at regulating the transmission of disease between nation-states through measures such as quarantine. Such efforts would clearly have had an impact on trade, which was why most of these conferences had limited success.

In the era of globalization, little has changed in the public health landscape. Trade and mobility are profound drivers of the potentially rapid spread of infectious diseases such as avian influenza or SARS (severe acute respiratory syndrome)—the 2003 SARS outbreak in China led to a World Health Organization (WHO) travel warning for Toronto—and tensions between individual foci on the promotion of health and community-based orientations have not been resolved.

One would, for instance, expect that modern public health knowledge and practices would have been able to prevent the Black Death (or "pestilence") that ravaged Europe in the mid-fourteenth century. At the time, witchcraft, ethnicity (arguments reminiscent of those voiced in the twentieth century on the HIV/AIDS epidemic by some religious groups), and seasonal bad airs were blamed for the pandemic. Current scientific knowledge of the disease pathogen and its vectors would, supposedly, account for more effective interventions, reducing overall mortality. This supposition is only partly true. Bubonic plague is still endemic in many nations. Similarly, the global community has not been able to fully contain or control contemporary cholera pandemics, nor will it be able to fully prevent annual influenza outbreaks, including those caused by particularly virulent pathogens such as the H1N5 avian influenza virus. It must be recognized that pathogens are an inseparable element of the global ecosystem, and global public health surveillance and control systems—partly due to political indolence, sometimes referred to as a "betrayal of trust"—have only a limited capacity to proactively engage in their complete prevention.

Many international organizations include health in their considerations: for example, the International Labor Organization (ILO) deals with workplace health, UNICEF with maternal and child health, the UN-Habitat with urban health, and UNESCO with education for health in schools. The United Nations technical agency responsible for health matters since its inception in 1948 (its establishment urged by Brazil and China at the UN founding conference in San Francisco in 1945) is the WHO.

The WHO is the only UN technical agency that, apart from a global headquarters and national liaison offices, has six Regional Offices (in Europe, the eastern Mediterranean, Africa, Southeast Asia, the Western Pacific, and the Americas). These offices formulate "regional" policies following directions from the global World Health Assembly. The programs of the WHO in its first decades focused on infectious disease. The greatest accomplishment of this era is the first and only eradication of a major human disease, smallpox (1967–1977). This accomplishment also signaled, however, the end of the infectious disease paradigm. From the launch of the

"primary health care" approach following an international meeting in Alma Ata (Almaty), Kazakhstan, in 1978, the community and social aspects of health promotion and the management and delivery of care became more important than biomedical intervention considerations. In this shift, the WHO has experienced great successes and failures. Under the visionary leadership of Halfdan Mahler (1973–1988), the WHO positioned itself as a powerful broker for health between professionals, governments, and communities. The WHO's next director-general, Hiroshi Nakajima (1988–1998), was accused of letting the organization fall victim to corruption, a pawn of (pharmaceutical) industries, with an ineffective bureaucracy not responsive to such global threats as HIV/AIDS nor the call for evidence-based medicine and public health. His successor, Gro Harlem Brundtland (1998–2003), was elected to take charge and reposition the organization. One of her most visible accomplishments was the commissioning of a series of studies into macroeconomics and health chaired by the American economist Jeffrey Sachs. Lee Jong-Wook (1945–2006), who became WHO director-general in 2003, further advanced the social science angle of the organization by appointing in 2005 a prestigious Commission on Social Determinants of Health. This commission is to report on early child development, health systems, employment, globalization, urban settings, and gender in public health, among other issues. This range of topics again emphasizes the intrinsically political nature of public health.

In the 1990s, the WHO established a list of essential functions to which public health agencies should strive to conform:

- Prevention, surveillance, and control of communicable and noncommunicable diseases
- Monitoring of health situations
- Health promotion
- Occupational health
- Protection of the environment
- Public health legislation and regulations
- Public health management
- Specific public health services
- Personal health care for vulnerable and high-risk populations

The list reflects the ideal that public health must embrace insights from the social and natural sciences. These would range, for instance, from molecular medicine to empowerment and community development, toxicology, and political science. Some disciplines, such as epidemiology and health services research, are uniquely aligned to the public health realm. Others have specialized branches related to public health, notably biostatistics, health economics, sociology, anthropology, psychology, and environmental health. In many universities, schools of public health provide a critical link between faculties. However, the domain is also rich in contention, particularly where the survival or growth of "established" disciplines is concerned. A pivotal review by the U.S. Institute of Medicine, for instance, demonstrated the enormous untapped potential for insights from the social and behavioral sciences in the promotion of health. These insights, for reasons linked to "disciplinary exclusiveness," have not yet pervaded "traditional" public health research and teaching.

Another level of rivalry has developed around the application of public health expertise. On a scale, two extremes are found. One, predominantly carried by laboratory-based public health sciences, poses that clinical expertise determines courses of action. This would, for instance, relate to the legitimacy to implement population-wide vaccination or risk-behavior-change campaigns (top-down). Others, notably the radical social sciences, start from the position that health is an inherently social condition and that community-driven action is most appropriate (bottom-up). Agreement is difficult to reach, and a "mixed-scanning" approach is often advocated by the WHO and many local public health agencies.

An organization strongly committed to the bottom-up approach is the global People's Health Assembly (PHA), an alliance of academics, communities, and nongovernmental organizations. The PHA endeavors to balance the expert-driven globalized stance with a community-based local ("glocal") approach. A major imbalance with which both the PHA and the WHO struggle is the "ninety/ten divide": 90 percent of the global public health research effort is spent on only 10 percent of the global health burden. Important players in this arena, apart from the WHO, are private sector entities. These include pharmaceutical industries and charitable organizations such as the Bill and Melinda Gates Foundation (the largest single donor to public health efforts—over $5 billion—in 2005).

The nexus between globalization and health is an important research challenge. Like the unresolved ninety/ten divide, most public health research resources are devoted to issues in industrialized nations. These include such matters as access to and the efficiency of health services—for example, medical technology assessment and health services financing schemes (often mirroring, again, the difference between public sector or the public's health). A critical issue in these analyses is the inequitable distribution of access, as well as disease burden, within and not between nations. Research into equity and inequalities in health top many European

agendas; in other countries, such terms have been deemed politically taboo, which has not prevented research into areas that are alternatively labeled with less value-laden terms, such as *social exclusion* or *diversity and health*. Ethnicity, socioeconomic status, heredity, and gender issues thus remain at the core of many public health controversies.

SEE ALSO *Disease; Health Economics; National Health Insurance; World Health Organization*

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Evelyne de Leeuw

PUBLIC INTELLECTUALS

SEE *Intellectuals, Public.*

PUBLIC INTEREST

While there is no one public interest, most political philosophers credit some notion of collective welfare. Examples include French philosopher Jean-Jacques Rousseau's "general will," U.S. president James Madison's "collective good," or English philosopher Jeremy Bentham's "greatest good for the greatest number." In debate, public interest is often invoked when a faction's influence harms the larger group. As James Madison defined it in Federalist Paper number 10, the tenth Federalist Paper in a series of published articles arguing for the ratification of the U.S. Constitution:

> By a faction, I understand a number of citizens, whether amounting to a majority or a minority…united and actuated by some common impulse of passion, or of interest, adversed to the rights of other citizens, or to the permanent and aggregate interests of the community.

There are two core conceptions of the public interest, *organic/republican* and *utilitarian/liberal*. In Western philosophy, "republican" societies regard the state or society as a collective entity, possessing virtues and commanding citizen obligations that dominate individual or self-interested objectives. "Liberal" conceptions of public interest focus on individual welfare or value, and invoke some assumption justifying interpersonal comparisons of value or satisfaction.

Political theorists couple normative conceptions of public interest with claims about institutional design. One extreme is the Rousseau-Marx approach (named after Rousseau and German political philosopher Karl Marx), which suggests an objective underlying definition of the good or virtuous society. According to this approach, any action or policy that violates this objective "public interest" is a mistake, or even a crime against citizens.

Near the other extreme are conceptions of the public interest that credit consensus, appealing not to objective values but to deliberation. In varying degrees this view is embodied in the writings of John Rawls, Jürgen Habermas, and James Fishkin. This approach claims that reasonable people can achieve consensus (or near consensus) on public policy problems through deliberation.

But some would go further. "Agonistic pluralists," such as Chantal Mouffe, require only that citizens disagree peacefully. Policy debates, in this view, are value-laden and emotional, so requiring consensus causes violence. The democratic process is the alternative to violence, an arena in which fundamental differences can be aired and discussed, preventing difference from hardening into enmity and violence. In this regard, it is participation and democratic engagement, *in and of itself*, that is the public interest.

RATIONAL CHOICE THEORY

Another approach, rational choice theory, is consequentialist and utilitarian. The public interest can only be defined, in this tradition, in terms of the Pareto criterion. The Pareto principle is essentially unanimity: Given a status quo policy A, new policy B serves the public interest if, but only if, all members of the society prefer B to A. A weaker comparison would allow that many citizens are indifferent between A and B, but at least one prefers B to A, and none prefer A to B.

Other proponents might extend valid public interest arguments to include the work of welfare economists John Hicks and Nicholas Kaldor. Their "compensation," or "potential Pareto" principle, defines the public interest in terms of monetized gains and losses. If some citizens prefer new policy B to status quo A, but others prefer A to B, then the Pareto criterion does not apply. But the policy authority can still discover the public interest, adding up

the gains (how much would those who prefer B sacrifice to effect the change?) and the losses (how much would those who prefer the status quo offer to block the change?). If the summed gains exceed the summed losses, then the gainers can compensate the losers and still leave some surplus. Disagreement becomes unanimity.

Cost-benefit analysis uses this reasoning to derive the public interest. So does the use of eminent domain, which governments use to take private property in the public interest. The difference is that compensation must be paid in the case of eminent domain, where no compensation is needed in a cost-benefit analysis. Both procedures are as close as we can get to implementing Bentham's "greatest good for the greatest number."

PUBLIC CHOICE THEORY

Public choice theory is a strand of rational choice that makes two more assumptions about the formulation of the public interest. First, the public interest is defined in utilitarian terms. Second, all participants, including public officials, pursue their perception of their private interest. But the public officials respond to incentives created by institutions.

For example elected officials must seek reelection, and therefore serve voters, though out of self-interest, not love for the voters. Institutional design is the key to creating this coincidence of public interest and private action of officials. In Federalist Paper number 51 the authors wrote, "Ambition must be made to counteract ambition." A federal system, with separation of powers, reasoned Madison and coauthor Alexander Hamilton in this essay, transforms private interest to coincide with the public interest.

Kenneth Arrow's famous "Impossibility Theorem," introduced in his 1963 book *Social Choice and Individual Values* illustrates a problem with any specification of public interest in terms of individual preference "lists."Arrow's result, which shows that only dictatorship satisfies the other normative criteria he specifies for ethically defensible government, raises important questions about the coherence of democracy as a means of discovering the public interest. But since the Arrow argument affects only disaggregated utilitarian conceptions of the public interest, organic conceptions might still be defended on some other grounds.

An alternative approach to public choice theory is to begin with the psychological determinants of citizen conceptions of the public good, and to build upon this foundation a more psychologically oriented theory of the actions of public officials based on conceptions of community and the obligations of health professionals to serve the public interest. This view can be found in a large number of different public health disciplines, but it is most coherently developed in community psychology, as outlined in Julian Rappaport's 1977 book *Community Psychology: Values, Research, and Action*. Some psychologists practicing "critical community psychology" argue that much preventable human suffering can be traced to policies and institutions that violate and suppress the public interest. Treating individual psychopathologies, in this view, is a red herring. The only effective "treatment" is to work for social justice, ameliorating disparities and transforming institutions to make such disparities less likely to reappear. Thus, knowledge of the public interest imposes an obligation on health professionals to work outside of their narrow specialties toward social change.

How might one tell if a policy serves the public interest, an official's private interest, an organized group's interest, or something else? The answer is contingent on many things, as Arthur Denzau and Michael Munger showed in their 1986 article "Legislators and Interest Groups: How Unorganized Interests Get Represented." The essential responsiveness of a political system to the public interest depends on legislator goals, agency professionalism, the private influence of organized groups, and the competitiveness of the electoral system. But public interest also is contingent on citizens' sophistication. If citizens know their private interests, and understand how policies affect those interests, then competitive elections push policy close to the public interest, at least in utilitarian terms. But if citizens do not understand their private interests, or if complex policies are misunderstood or misrepresented in public discourse, or even if elections are not competitive due to campaign finance or party organization barriers, public policy will diverge sharply from the public interest in favor of policies favored by narrow special interests.

SEE ALSO *Arrow Possibility Theorem; Bentham, Jeremy; Cost-Benefit Analysis; Habermas, Jürgen; Interest Groups and Interests; Pareto Optimum; Philosophy, Political; Preferences; Psychology; Public Interest Advocacy; Public Policy; Public Sector; Public Welfare; Rational Choice Theory; Rawls, John; Rousseau, Jean-Jacques; Utilitarianism; Welfare Economics*

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Michael Munger

PUBLIC INTEREST ADVOCACY

Public interest advocacy is performed by organizations that exist primarily to promote a common good that extends beyond the narrow economic or sectarian goals of their members or supporters. Organizations in this domain typically address such issues as consumer protection, free markets, the environment, taxation, peace, fiscal responsibility, campaign finance reform, civil rights, and social welfare. Prominent examples include the American Civil Liberties Union, the Center for Science in the Public Interest, Common Cause, the National Taxpayers Union, the Natural Resources Defense Council, Peace Action, and Public Citizen. Public interest advocacy groups make up less than 5 percent of the total interest-group universe in Washington, D.C., which is heavily dominated by corporations, business associations, and occupational groups. Public interest groups are disproportionately visible, however, allowing them to draw more attention from the media and spots at congressional hearings than their numbers alone would suggest.

A precise delineation of which organizations are engaged in public interest advocacy is difficult to establish. First, the term "public interest" is fundamentally ambiguous. One person's public interest may be another person's special interest, and vice versa. All organizations have an incentive to frame their concerns in terms of the public interest, even if they are motivated principally by private interests. Second, economic interests are increasingly using the facade of public interest advocacy to conceal their private political agendas from the public. For example, in the late 1990s, the pharmaceutical industry established "Citizens for Better Medicare" as a front organization to stop the enactment of prescription drug legislation that would have been adverse to its economic interests. Third, many traditional public interest advocacy organizations are assembling portfolios and boards of directors that bear closer resemblance to the for-profit sector than to the not-for-profit sector. As a result, classifying a group as a public interest advocacy organization requires probing beneath the surface of its stated mission and goals to discover its sources of financial and political support.

Ambiguities of classification aside, public interest advocacy organizations play a major role in representing otherwise neglected constituencies. They are often able to overcome the free-rider problems inherent in the provision of collective goods by offering selective incentives for individuals to contribute to their organizations, by using informal pressures distributed through decentralized social networks, by attracting generous patrons, and by latching on to new areas of government involvement. Their tactics include lobbying, testifying at congressional hearings, submitting regulatory comments, mobilizing grassroots constituents with public rallies and letter-writing campaigns, buying media advertising, filing amicus curiae briefs with appellate courts, and sponsoring class-action or other lawsuits. They most readily influence public policy when they raise new issues on the public agenda, establish reputations as experts on policy issues, demonstrate the ability to reliably mobilize constituencies important to politicians, become connected as key brokers within issue networks, or reframe issues to change a debate in favor of their concerns.

Public interest advocacy has had a major impact on the formulation of environmental legislation, such as the Clean Air Act Amendments of 1970, which made uniform national emissions standards a goal of national public policy. More recently, public interest advocacy was instrumental in passing the Bipartisan Campaign Reform Act of 2002, which banned unlimited "soft money" contributions to national political parties. These campaigns benefited from the charismatic leadership of political entrepreneurs such as Ralph Nader, who founded (or helped to found) more than a dozen public interest advocacy organizations (such as Public Citizen and the Public Interest Research Groups) over the course of his lifetime.

The dramatic rise of public interest advocacy organizations, following largely from the mass social movements of the 1960s and 1970s, has significant implications for the nature of civil society in the United States. First, their rise reflects, and helps to drive, a shift in advocacy away

from material concerns (such as rising wages) toward postmaterial concerns (such as environmentalism). Second, their growth leads to a shift away from organizations based on the active participation of their members and toward organizations that rely on their members only to pay dues or provide financial support ("checkbook" members). Because these organizations are generally managed by paid, middle-class professionals rather than by citizen-activists, they may mute efforts toward genuine civic engagement.

Political pressures sometimes undermine the willingness of organizations to engage in public interest advocacy. Not-for-profit organizations are often discouraged from undertaking advocacy efforts because of concerns about losing their tax-exempt status under federal law. Not-for-profit organizations are permitted to engage in lobbying if it is not a "substantial" part of their activities. However, lack of clarity about how much activity meets the substantial threshold leads many not-for-profit executives to worry that the Internal Revenue Service could construe any level of political activity as a violation of the law. As a result, the not-for-profit sector as a whole pursues less public interest advocacy than is permissible under current law.

The range of public interest advocacy is limited not only by the external political pressures on an organization but also by its internal political dynamics. Advocacy organizations frequently do not represent all the constituencies within their purview equally. Leaders are more likely to direct their attention to the concerns of advantaged subgroups within their memberships in lieu of working on issues important to disadvantaged subgroups. When working on advantaged-subgroup issues, leaders tend to frame the issues as if they affect the majority of the organization's constituents, even if the advantaged subgroup in fact is a minority. Conversely, when talking about disadvantaged-subgroup issues, leaders tend to frame the issues as if they affect a minority within the organization, no matter how large the actual population. The consequence of these tendencies is that groups that are intersectionally marginalized—that is, they have more than one marginalized status, such as black women—are the least represented by public interest advocacy organizations.

The increasingly partisan nature of American politics leaves the future of public interest advocacy organizations in question. The more that all advocacy is viewed as following from predetermined partisan or ideological points of view, the harder it is for some observers to accept that any organization legitimately advocates for an unbiased public interest. While the number of public interest advocacy organizations continues to grow robustly, the general political environment surrounding them threatens to reduce their relevance.

SEE ALSO *Campaigning; Collective Action; Collectivism; Free Rider; Interest Groups and Interests; Politics; Private Sector; Public Interest; Public Sector; Social Welfare Functions*

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Michael T. Heaney

PUBLIC INTEREST ANTHROPOLOGY

SEE *Anthropology, Public.*

PUBLIC OPINION

In democratic societies, governments are widely expected to respond to citizens' preferences. This implies that an accurate process for measuring these preferences exists. However, the capacity to measure public opinion scientif-

ically was not developed until the twentieth century. Modern polling techniques have greatly expanded the ability of government officials to measure public opinion, including opinions of subgroups in society, and to act accordingly in their decision making. Public opinion is frequently measured today, and it has wide-ranging applications in business, academic settings, politics, and policy-making.

DEFINITION AND SCOPE OF PUBLIC OPINION

The political scientists Robert Erikson and Kent Tedin define public opinion as "the preferences of the adult population on matters of relevance to government" (2005, p. 6). However, in early American history, public officials conceived of public opinion primarily as the attitudes of the most educated, affluent subgroup of white males, who were also in the best position to convey their views to officials. The expansion of voting rights nationwide—first to white males who did not own property, (1830s), and then to women (1920), to African Americans (1965) and finally to those from eighteen to twenty-one years of age (1971)—forced public officials to broaden their conception of whose opinions deserved their attention. In addition, the United States' population continues to grow, with much of this growth coming from immigration.

These developments mean that pollsters face the mounting challenge of measuring opinions from a sample that accurately reflects an ever-growing, ever-changing population. The influx of immigrants sometimes raises language barriers to pollsters (although some pollsters use Spanish-speaking interviewers), and new technologies (such as answering machines, "caller ID" boxes, and cellular phones) are creating new barriers to pollsters' reaching survey respondents by telephone, the preferred method.

THE HISTORY OF THE MEASUREMENT OF PUBLIC OPINION

Before and during the nineteenth century, there were very few systematic methods for measuring public opinion. The best nineteenth-century method available, the straw poll, was conducted by magazines and newspapers, which asked readers to send in a response ballot. Most straw polls centered on predicting presidential elections. For example, in 1896 the *Chicago Record* conducted an elaborate and expensive straw poll to predict the outcome of the hard-fought presidential election between William McKinley and William Jennings Bryan. However, some straw polls sought to measure issue preferences, especially in the 1920s, when they were used to measure attitudes about the emotional issue of Prohibition.

Straw polling was necessarily haphazard and informal, only capturing opinions of those who read such publications—generally the most affluent and educated. They were of very limited use, then, in gauging opinions of American adults generally. The upper-class bias in straw polls had serious consequences during the 1936 presidential election between Franklin D. Roosevelt and Alf Landon. That year, *Literary Digest* magazine sponsored a nationwide straw poll using respondents whose names were drawn from telephone directories and automobile registration lists. The *Literary Digest* poll predicted that Landon, the Rebublican candidate, would win the presidential election, 57 percent to 43 percent. Instead, Roosevelt swept to a landslide re-election, winning 62.5 percent of the popular vote. The fatal flaw of the *Literary Digest* poll was that its respondents were on average much more wealthy than the average American. During the Great Depression, the affluent were heavily Republican, but they were greatly outnumbered by the less affluent, who voted resoundingly Democratic, thus ensuring Roosevelt's victory. The *Literary Digest* polling fiasco was a major contributor to the magazine's bankruptcy in 1938.

THE DEVELOPMENT OF SCIENTIFIC OPINION POLLING

While 1936 sounded the death knell for straw polling, it also marked the advent of a new era of scientific polling. In 1936, three younger pollsters with market-research backgrounds, Archibald Crossley, Elmo Roper, and George Gallup, also conducted polls to predict the presidential election. Though still 7 percent off the mark, they fared far better, predicting that Roosevelt would win 56 percent of the popular vote. All three pollsters would go on to found their own polling organizations, with the Gallup Poll the most famous of them. Gallup introduced important new methods in polling, including use of in-person interviews and adopting "quotas" to ensure that samples of respondents reflected social and economic characteristics of the larger population. For example, if the national population were 49 percent male, 17 percent African American, 68 percent Protestant, and so on, Gallup would strive to ensure that his respondent pools reflected similar proportions.

This "quota sampling" technique would soon prove problematic itself, however. In 1940 and 1944, Gallup's polls accurately predicted presidential election results, but each time they overestimated the Republican vote. In 1948 the Gallup Poll predicted that the Republican candidate for president, Governor Thomas Dewey of New York, would defeat the incumbent, President Harry S. Truman, by a margin of 49.5 percent to 44.5 percent. The Crossley and Roper polls also predicted Truman's defeat, by even wider margins. But after a surge in support dur-

ing the campaign's final week, Truman emerged victorious. Analyses of the failings of the 1948 polls centered on the use of quota sampling, which under-represented social and economic groups more likely to favor Democrats. After 1948, pollsters abandoned quota sampling in favor of probability sampling, which uses random sampling techniques to select communities, neighborhoods, households, and eventually adult individuals, such that all have equal probabilities of being contacted by the pollster. Although not perfect, probability sampling remains the best method pollsters have of generating samples of poll respondents that accurately reflect the larger population of American adults.

THE ADVENT AND GROWTH OF ACADEMIC POLLING

George Gallup and his contemporaries Roper and Crossley were commercial pollsters, concerned with profitability. During the 1940s, academic researchers, especially social scientists, realized the importance of polling for research purposes as well. In 1941 the National Opinion Research Center (NORC) was founded at the University of Chicago, and in 1946 a group of scholars founded the Survey Research Center (SRC) at the University of Michigan. Authors affiliated with both the NORC and SRC would soon produce major studies using nationwide surveys conducted by these organizations. The most important of these was *The American Voter* (1960), a prolific study of American public opinion and voting by the political scientists Angus Campbell, Philip Converse, Warren Miller, and Donald Stokes. Both NORC and SRC continue to sponsor large nationwide surveys every election year, and the results of these surveys are widely used by pollsters, government officials, journalists, and political scientists. The SRC, along with the University of Michigan's Center for Political Studies, has conducted the American National Election Studies (ANES) every even-numbered year since 1948. Other important academic-based surveys include the NORC-sponsored General Social Survey (GSS), which has occurred annually or biannually since 1971.

Both the ANES and GSS rely on in-person interviewing, which is extremely expensive. The ANES typically interviews respondents both before and after presidential elections, asking hundreds of questions, with total interviewing times of three hours or more. Academic polls typically devote considerable time and resources to accurate sampling, clear question wording, and thorough reporting of results. Most poll questions yield closed-ended, fixed-format responses (such as agree/disagree, a 7-point scale, or even a 100-point scale), which produce results that can be expressed in numbers and subjected to statistical analysis. This emphasis on quantification is virtually universal in academic polling today, and it is also common in commercial polling, including the market research studies businesses commonly use to identify new markets or measure customer satisfaction, among other things.

The mass media, too, are now heavily involved in polling. Because of the fast pace of politics, media organizations frequently sponsor surveys to measure opinions on important issues of the day. During election campaigns, media-sponsored tracking polls ("if the election were held today, who would you vote for?") are common also. Major media organizations that often commission nationwide surveys include the *New York Times*, which often partners with CBS News, and the *Washington Post*, which often partners with ABC News. Most media-sponsored surveys are conducted by telephone because of the high costs and large investments of time that in-person interviews require.

THE INTERNATIONAL SCOPE OF PUBLIC OPINION RESEARCH

Public opinion polling is not uniquely American, though many modern polling techniques were introduced and refined by Americans. Polling is big business worldwide, with both commercial and academic polling organizations easy to find in industrialized democracies. In less developed nations, polling organizations are less common, though citizens in Asia, Africa, and Latin America are increasingly sought after by pollsters. For example, the University of Iowa political scientists Arthur Miller and Vicki Hesli have directed surveys measuring Russian citizens' attitudes toward democracy, and their findings have been published in major political science journals. Although there is increasing interest in conducting surveys outside of industrialized nations, doing so entails considerable additional costs and challenges. Native speakers in the local language, such as Swahili, Japanese, or Uzbek, are mandatory, and careful and accurate translation of the survey is essential. Cultural differences may also create unexpected challenges for the pollster, and the usual limitations of probability sampling almost certainly are magnified in cross-national survey research. According to the 2000 U.S. Census, 97.6 percent of American households have telephones; in some other nations, however, far fewer households have them. This reality may require in-person interviews for some cross-national surveys, with the attendant expenses for travel, hiring and retaining interviewers, and other challenges.

PUBLIC OPINION AND GOVERNMENT RESPONSIVENESS

Political scientists have identified two major orientations adopted by government officials in response to public opinion: the delegate and the trustee orientations. The

"delegate" attends closely to, and follows, public opinion. Consider a lawmaker who favors stricter gun control laws, but whose district has a majority opposed to them. This lawmaker would act as a delegate by setting aside her own views and voting consistent with the majority in her district. The "trustee" often takes public opinion into account, but is more willing to vote based on personal views, or on the perception of what is best for the district. For trustees, then, lawmaking is more often independent of public opinion. In the example above, the trustee might vote in favor of tightening gun control laws, motivated by personal convictions. In general, delegates are more likely to follow public opinion, while trustees are more likely to act independently of public opinion and try to lead it, which would include educating constituents on "why I voted this way."

Both the delegate and trustee orientations can pose problems for lawmakers. For delegates, following public opinion can be difficult if decisions need to be made on issues that pollsters have not included in their surveys. Furthermore, some thinkers, like the journalist Walter Lippman, have argued that many people lack knowledge of or interest in political issues, and thus are susceptible to manipulation by propaganda from political elites. Similarly, the political scientist John Zaller has analyzed survey responses, finding that some respondents "fabricate" survey responses on the spot when poll questions center on topics they know little about. These "nonattitudes," Zaller contends, are a growing problem for survey researchers, given that Americans' knowledge of and interest in politics have declined. For trustees, ignoring public opinion to cast votes based on personal convictions can have electoral consequences. An official who often votes against the views of a majority of constituents, especially on high-profile issues, risks electoral defeat.

Although the evidence does not always demonstrate a causal relationship, it is likely that public opinion influences policy more often than not. The political scientist Alan Monroe found in 1979 that when public opinion favors a policy change, that change occurs 59 percent of the time. Likewise, when opinion favors maintaining the status quo, the policy change occurs only 24 percent of the time. Similarly, the political scientists Robert Erikson, Gerald Wright, and John McIver found in 1994 that states with conservative opinions produce conservative policies, while states with liberal opinions produce liberal policies. Public opinion, then, appears to have policy consequences, and government officials do respond to public opinion more often than not. More generally, understanding public opinion is valuable in the realms of business (through market research), the media (through tracking and other media-sponsored polls), academia, and government.

SEE ALSO *Ideology; Measurement Error; Random Samples; Selection Bias; Statistics; Survey*

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Fred Slocum

PUBLIC POLICY

Public policy refers to a set of interrelated decisions governments make to select goals where the market is not working. Governmental officials establish laws and institutions to correct the perceived problems in a continual process that involves elected officials, governmental employees, lobbyists, and public-policy experts. As social scientists developed more methods and tools, both law and public-policy analysis, originally conceived of as a branch of political science, expanded to include all social scientists, but in the twenty-first century public-policy analysis is dominated by lawyers and economists.

Public policy is the making of governmental rules and regulations to benefit not one individual but society as a whole. It asks, what is the best way to conceive and evaluate policies aimed at the public as a whole and its various subgroups? Who benefits? How much does it cost? It runs through a political process, but economic, social, legal, and psychological influences help determine the possible choices and measured impacts. Often, the results of a public-policy choice are measured in statistical terms so as to seem as objective as possible.

According to Thomas A. Birkland (2005), consensus is lacking on a more precise definition of public policy. Birkland outlines several possible definitions of public policy, always starting with the actions of government and the laws and appropriations that determine those actions. Birkland then indicates that the elements common to all

definitions of public policy are: (1) It is made in the name of the "public"; (2) it is generally made or initiated by government; (3) it is interpreted and implemented by public and private players from corporations and nonprofit institutions; and (4) it also includes what the government chooses not to do.

While the study of politics has a long history, the systematic study of public policy, on the other hand, can be said to be a twentieth-century creation. It dates to the Progressive Era, when early social scientists began to recommend and rank possibilities for solving public problems. Then public policy included policies having to do with crime, poverty, health, education, and foreign affairs. Later it expanded as problems changed, and by the close of the twentieth century also included policies bearing on energy, the environment, defense, sex (e.g. same-sex marriages, sexual education and the like), and other social welfare issues. It is difficult to conceive of a united "department of public policy" because it is interdisciplinary by its very nature. It also expands beyond social science to the formation of policy objectives that are value laden. Scholars and researchers from a wide range of disciplines use different tools and methods. It takes a skilled social scientist to explain clearly a complex program such as Medicare to decision makers and other parties in the public-policy debates.

Marilyn Moon (2006), though, offers one of the best such explanations by explicitly, systematically, and logically describing and analyzing a public-policy program that offers what the market fails to do: health insurance for an aging and disabled public. Policy makers are wholly confused about how the program works and what alternatives are available to them. Moon's book creates a primer by translating social science research into public policy. She is an applied economist who understands perhaps the most complex public-policy program in the United States, both as a matter of law and governmental practice. Her interdisciplinary analysis examines the alternatives of a national program that must work through the states and reach people on the local level. She clearly lays out criteria for evaluating the current Medicare program and how well it is working.

Since the biggest United States public programs are defense, Medicare and Medicaid, crime prevention, and education, she sets a high standard for describing and analyzing these other billion-dollar allocations. For example, nearly every nation-state has an organization to defend itself from foreign threat. But how best is this organized? Most nation-states, and even some subgroups, have an army and air force. But how should these forces be paid for (economics), organized from members of the population (sociology), positioned (geography), related to the legal system (law), dealt with in terms of individuals of the nation or subgroup (psychology), and best measured as to its effectiveness (statistics)?

Yet because the subject matter that fits into the category of social sciences evolves in parallel with societal changes, new fields of study, issues, and concepts will be added, such as the ethics of censorship, the value of income distribution, proper support of the arts, public sanction of same-sex marriage, and the psychological and economic aspects of helping people age with dignity. But all vexing policy problems require more than social sciences can deliver. They involve value judgments.

Usually the different avenues contemporary public policy takes are determined by the problems of the day. For example, as the late twentieth century spawned a whole new batch of medicines, nation-states and subgroups had to figure out how to handle health care in different ways. One can have a national system of health care delivered and paid for in any number of ways. These usually range from each person who is a member of the nation paying for his or her own care to insurance by corporations to governmental units handling the needed tasks. Most often it is some mixture of systems in flux.

How do social scientists communicate new approaches to public policy? There are the usual books and journals. But key are conferences that bring scholars of different social sciences together. A conference on aging issues might include not only social scientists but also medical researchers, operators of assisted-living facilities, and a plethora of experts to discuss ways to coordinate research efforts on policy opportunities and reform agendas.

These conferences might be funded by the National Institutes of Health and other national agencies, state agencies on crime prevention, or local schoolteachers and administrators. Public-policy agencies on a national or international level can offer and pay for conferences that no single group can afford. So, for example, all nation-states want the best tools to prevent disease. In the United States, this is done by the federal government's National Institutes of Health, or NIH. It does some of its own research on a campus in Bethesda, Maryland (just outside Washington, D.C.), and by making grants of money to university researchers. Profit-seeking corporations usually do little of this basic research because it is not a profitable investment.

We can rank public-policy commitments by the amounts of money spent. In advanced capitalist nations, these commitments prominently include defense, social insurance, health care, and education. Defense and social insurance are usually provided collectively by the nation, while education is far more fragmented, usually at the local and state level in the United States. Health care is an issue everywhere, for it is evolving as the possibilities of cures and prevention increase.

The policy process (and the input of public-policy experts) depends of the degree of democracy of the nation-state. If some form of democracy is in play, then lawmakers at the federal, state, and local levels are voted into office and asked to make public policy that is best for their constituencies. But in more autocratic nations, the decisions are simply made at the top and implemented. At the beginning, this seems easy because basic needs for the whole are paramount. But as these policies are translated into practice, it becomes far more difficult because special interests lobby for laws and policies they claim are best for the whole but also (less articulated) best for them as a group.

In the twentieth century schools and departments of public policy in universities have developed. They usually take the form of an interdisciplinary center for social science applications to government, education, health, social welfare, and the like. Most major research universities have a school of public policy. It usually contains a core of tenured faculty, but the majority of the faculty is drawn from allied departments such as economics, sociology, psychology, and political science, as well as from medical and law schools. Many public-policy analysts earn a Master of Public Policy (or a Master of Public Administration) in such programs, while others earn specialized degrees, such as an MEd for specializing in educational policy or an MSW for specializing in social welfare policy.

Trained graduates can go to work for governments, lobby organizations (such as AARP's Public Policy Institute, headquartered in the nation's capital), advocacy groups (such as the Medicare Rights Center in New York City), or think tanks such as the Brookings Institution and the RAND Corporation. Later, usually with experience, they can return to teach at universities such as Harvard, Michigan, Wisconsin, and the University of California at Berkeley, to name but four of the more notable and sizable public-policy programs.

SEE ALSO *Decision-making; Government; Nation-State; Nondecision-making; Political Science; Politics; Public Administration; Public Choice Theory; Public Goods; Public Interest; Public Sector; Public Sphere; Regulation; Research, Trans-disciplinary; Social Science; State, The; University, The; Values; Welfare Economics*

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PUBLIC RIGHTS

Within the domain of thinking about rights, the preponderant nineteenth-century typologies distinguished between natural, political, civil, and social rights, with varying accounts of the relationship among them. In the 1860s, however, as political activists and legal thinkers grappled with the question of the scope and meaning of freedom for those who had previously been held as slaves, the concept of *public rights* was introduced into debate as a means of articulating resistance to inequalities associated with castelike systems of privilege.

Capturing the element of dignity and honor at stake in the treatment of citizens in public places, public rights encompassed what is now termed equal access to public accommodations and public transportation, and could be extended to prohibit segregation in public schools. The concept and content of public rights, however, were strongly opposed by conservatives, who associated its claims with what they called "social equality"—a derogatory term they used to evoke images of forced physical intimacy across racial lines, particularly the proximity of black men to white women. Although the term *public rights* was lost to jurisprudence in the United States by the late 1870s, much of its content would subsequently be incorporated into the expanded notion of civil rights that underlay the twentieth-century movement for justice for African Americans.

The formal category of public rights seems first to have been proposed in the 1830s by an Italian jurist, Pellegrino Rossi, who held the chair of Constitutional Law at the Collège de France in Paris. True to the constitutional monarchy under which he had been appointed, Rossi believed that the state could limit political rights, arguing that access to suffrage should depend on capacity, which he assumed to vary among different groups of citizens. In keeping with the anti-aristocratic spirit of the earlier French Declaration of the Rights of Man and of the Citizen, however, Rossi endorsed universal public rights, within which he included rights of assembly, conscience, and free expression. These, he argued, were fundamental rights of humans as social beings and should not be restricted on the basis of privileges of birth or presumed capacity.

The phrase *public rights* was introduced and given an expanded meaning in the United States as the end of slavery and the debates over the Fourteenth Amendment to the Constitution made it clear that men and women who had been considered property would now become the bearers of rights. Everything turned on the question: Which rights? Moderates contended that former slaves and other persons of African descent might henceforth hold certain civil and political rights, but that social rights fell outside the proper scope of legislation. This formula could leave broad areas of public life—including education, public transport, and public accommodation—outside the action of equal-rights lawmaking.

In 1867 and 1868, a group of radical delegates to Louisiana's Constitutional Convention proposed an alternate schema: The state should guarantee to all its citizens "the same civil, political, and public rights and privileges." This construct, advanced by members of an alliance of long-free men of color, local and northern-born white radicals, and former slaves, allowed the delegates to avoid the word *social*, which their enemies had used to accuse them of seeking an unearned "social equality." The radicals won, and the 1868 Louisiana Constitution mandated equal access, independent of color, to public transportation, public accommodations, and places of public entertainment, including saloons and restaurants. For a decade, this document provided a framework for racially integrated schools and permitted victims of discrimination in the public sphere to sue for damages.

A commitment to equal public rights for all citizens subsequently appeared in the platform of the national Republican Party in 1872 and again in 1876. With the reversal of Reconstruction in the late 1870s, however, the concept almost vanished. Newly ascendant white-supremacist Democrats expunged it from the 1879 state constitution in Louisiana, and national Republicans dropped it from their platform.

Among some equal-rights activists, however, a variant of the concept remained alive and well. As southern Democrats pushed forward with the political project of white supremacy in the 1880s and 1890s, restricting suffrage and imposing state-mandated segregation, the lost language of the 1868 Louisiana Constitution became a touchstone for such figures as Rodolphe Desdunes, a cigar seller who helped mount the challenge to segregation on the railroads that led to the U.S. Supreme Court case *Plessy v. Ferguson*. The Citizens' Committee that arranged Homer Plessy's test case drew on a broad base of urban and rural activists, including artisans, schoolteachers, and even some Cuban émigré cigar workers, one of whose leaders framed his support explicitly in the language of "public rights" (Scott 2005, pp. 88–93, 151).

When the case reached the Supreme Court, Plessy's attorneys invoked broad anticaste principles rooted in an expansive concept of national citizenship. Their arguments went down to defeat before the Court, whose majority accepted the white supremacists' sleight-of-hand that portrayed Plessy's opposition to caste distinctions as a presumption to "social equality" that no law could impose. The language of the briefs drafted for Plessy was nonetheless echoed in Justice John Marshall Harlan's memorable dissent, in which he held "caste" to be antithetical to the principles of the nation.

In its time, the concept of equal public rights provided a coherent basis for claiming formal respect in the public sphere. Its use rested on a coalition and a movement that did not prevail, but it left a conceptual legacy for those who would subsequently renew the struggle under the name of civil rights.

SEE ALSO *Caste; Civil Rights; Civil Rights Movement, U.S.; Constitution, U.S.; Human Rights; Justice; Natural Rights; Reconstruction Era (U.S.); Segregation; Separate-but-Equal; Slavery; White Supremacy*

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Rebecca J. Scott

PUBLIC SECTOR

The term *public* refers either to the people affected by some property or activity or to government property and activities. The *public sector* is the governmental sphere of an economy. Economists classify four basic functions of the public sector: the provision of collective goods and services, the redistribution of income and wealth, the promotion of stabilization and growth, and the prevention of social costs and market failures from crime, pollution, congestion, and monopoly.

The word *public* refers to the public sector in the following terms: public administration, public debt, public economics, public employment, public finance (and rev-

enues and expenditures), public insurance, public libraries, public office, public ownership, public policy, public schools, public servant, and public works. The word *public* refers to people in the following terms: public corporation, public goods, public health, publicly held, public offering, public opinion, and public relations. Some terms, such as public domain, public service, public utilities, and public welfare, can refer to either serving the people or to government operations. Companies can be nominally private but under so much control by government that in effect the operation is in the public sector.

The branch of economics that studies collective decisions and decisions that affect the public is called *public choice*. The field includes voting, bureaucracy, and the policies enacted by elected officials. Public finance, a much older branch of economics, examines actual and optimal taxes and incentives as well as the economic impact of fiscal policy. A key concept in public choice is *rent seeking*, the influence of various interests that seek to transfer wealth (unearned rents) to themselves at the expense of the public. But also the median voter theorem states that policy makers cater to the voters in the middle of a policy spectrum. Thus the policy outcome can vary. Public choice as a field of study does not imply any particular policy outcome or normative viewpoint.

THE GROWTH OF THE PUBLIC SECTOR

In ancient Greece *public* referred to politics and government, the private sphere being the family and nongovernmental enterprises, such as farming and trade. Until the 1800s public sectors were mainly concerned with the military, taxation, legislation, relief for the indigent, administration of state land, maintenance of royalty, public works, and control of trade. During the 1800s the public sector expanded into municipal police and governmental schooling. In the latter 1800s, responding to socialist movements, Germany, followed by Great Britain and other countries, expanded the public sector to include social security and other welfare programs on a national scale. In the early 1900s central banking extended government further into money and banking, especially after countries switched from commodity money to fiat money. Russia in 1917 established the Union of Soviet Socialist Republics, which put its whole economy in the public sector.

The income tax as well as the value-added taxes established in Europe and other countries facilitated a great expansion of the public sector. In the United States there was a large expansion of government under the New Deal of President Franklin Roosevelt, including the establishment of Social Security. The public sector expanded again during the 1960s with the introduction of Medicare and Medicaid. In the late twentieth century the public sector became more involved in protecting the natural environment.

Wagner's Law, named after Adolph Wagner, states that economic growth is accompanied by an increased gross domestic product (GDP) share of the public sector. The public may demand greater collective services, such as better education, as wealth increases, but some theorists propose that much of the expansion is in response to previous interventions that create distortions. For example, a city policy that limits development can result in higher rentals, which then induce the city to respond with rent control. Governments have also increased their role in economic development by providing education, research, and infrastructure. Many government programs, such as medical care and housing subsidies, are in response to poverty and economic insecurity. War has also ratcheted up the public sector, as the size of government rises during wartime but then does not return to its prewar level. Governments now commonly seek to promote economic growth with investments in infrastructure and by the expansion of money and credit. Governments also finance activities such as basic research when markets are perceived as failing to provide sufficient amounts, as the benefits apply to the economy as a whole.

PUBLIC SECTOR PROVISION

The government can directly produce goods and services such as the military, postal service, schools, streets, highways, parks, police, and fire protection or contract out the production to private enterprise. Much of governmental expenditure consists of transfer payments. By imposing costs, government regulations can have the effect of taxation. For example, if firms are required to provide medical insurance to employees, that has a similar effect to taxing the firms and using the funds to subsidize the insurance.

Taxation has a social cost beyond the funds paid to government, an "excess burden" or "deadweight loss" caused by the reduction of output and investment caused by taxes. The amount of deadweight loss depends on the amount of the tax and the elasticity of the item taxed, that is, how its quantity responds to a change in price. Since land has a fixed supply, taxes on land value have no deadweight loss. There is also no excess burden if the tax, such as a pollution levy, also reduces social costs by a greater amount. User fees, based on benefits, also have no excess burden.

The effects of government borrowing depend on how the funds are borrowed, how the funds are spent, whether the spending stimulates the use of untapped resources, and the extent to which various financial investments substitute for one another. In some cases, government borrowing can raise interest rates and crowd out private investing, but in other cases, especially if there is high

unemployment, if funds are borrowed from abroad, if the borrowing is for productive investments complementary to private investment, if private savings rise to offset government borrowing, or as noted by Benjamin M. Friedman (1978), if the borrowing uses short-term bonds that substitute for money, government borrowing can result in "crowding in" or a stimulus to private investment. Many economists think that optimally government should borrow money only for productive investments, including enhancements to human capital, and use current revenues for its collective consumption, such as military operations.

The size of the public sector can be measured by the total amount of spending, the share of GDP, workers employed, and public sector assets and liabilities. The U.S. federal government spent $2.5 trillion in 2005, 20 percent of GDP. State and local governments spent from their own sources $1.4 trillion, 11 percent of GDP. The relative size of government for the members of the Organization for Economic Cooperation and Development with developed economies grew from 27 percent in 1960 to 48 percent in 1996. Government outlays as a percentage of GDP in 1996 were 44 percent in the United Kingdom, and Denmark was the highest at 61 percent.

MACROECONOMIC ACTIVITY AND INTERNATIONAL TRADE

A large public sector can increase the trade deficit to the extent that taxation makes exports more expensive and to the extent that government spends its funds abroad, as in the case of a war. Governments mostly affect international trade with tariffs and restrictions, such as quotas, and with policies that affect foreign-currency exchange rates.

LABOR AND THE ENVIRONMENT

In most developed economies, public sector labor is about 15 percent of employment. Several studies have concluded that workers in the public sector tend to be better paid than those in the private sector. Government workers typically are under a civil service system by which it is difficult to fire an unproductive worker. A more fundamental element of the cost of labor in the public sector is Baumol's cost disease, put forth by William J. Baumol and William G. Bowen (1966), who argued that productivity in services such as an orchestra or education has changed little compared to that in manufacturing, which explains the increase in relative costs in the service-intensive public sector.

With global warming recognized as an urgent issue, people increasingly seek remedies in government policy. The taxation of pollution is more efficient than regulations, as the former permits firms and households to adjust according to their individual costs and benefits. Pollution permits that trade in a market are also used to increase the cost to business of polluting more. Environmentalists have proposed a "green tax shift" that increases pollution charges while reducing taxes that have an excess burden, a policy that would minimize the economic costs of reducing pollution.

Advancing technology has meanwhile reduced the rationale for some large-scale government involvement, as knowledge becomes more easily accessible and the private sector becomes more capable of providing infrastructure, such as tolled highways and decentralized utilities. Nevertheless, conflict tends to expand the public sector, so the future role of the public sector depends on the interplay of advancing technology, threats to security and the environment, and the influence of theoretical knowledge and real-world experience in shaping public opinion.

SEE ALSO *Capitalism; Economics, Public; Government; Planning; Policy, Fiscal; Policy, Monetary; Private Sector; Public Choice; Public Goods; Public Utilities; Socialism; State Enterprise; Taxes*

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PUBLIC SPHERE

Discourse on the public sphere derives from the work of the German social theorist Jürgen Habermas, particularly with his first major work, *The Structural Transformation of the Public Sphere*, which first appeared in Germany in 1962, and in what some consider to be his magnum opus, *The Theory of Communicative Action* (1981). In these and other works, Habermas has been concerned with explicating the historical and social structural factors that have

served to inhibit or advance democracy. Given the centrality of free and open dialogue for the functioning of democracy, of particular concern to Habermas is identifying where such discussions take place and under what conditions. His guiding question has been: Where is the space in which democracy is nurtured? Habermas refers to this space as the *public sphere*, a term related to *civil society*, which refers to a realm of social life distinct from both the state and the market, where participation in public life occurs with a spirit of cooperation and a norm of reciprocity. Seen in this light, Habermas construes the public sphere as a space within civil society. By claiming that a prerequisite of a democratic polity is an autonomous public sphere, Habermas can be seen as building on the work of Max Weber (1864–1920) and Seymour Martin Lipset (1922–2006) in attempting to identify the most important social structural conditions underpinning democratic societies.

What Habermas refers to as the "bourgeois public sphere" came into its own in the nineteenth century, most fully in Britain, as a result of the triumph of capitalism and the establishment of a laissez-faire state. In contrast to the feudal era, in which the economy and polity were intimately linked, in the earliest phase of the capitalist industrial era this linkage was uncoupled. The public sphere can be visualized as being carved out between the economy and the state, being separate and distinct from them. It is an arena that is accessible to all citizens on the basis of equality and thus is not dominated or controlled by powerful economic actors or by state officials. His perspective on this sphere has been depicted as a theater where political discourse occurs.

The public sphere requires the existence of independent voluntary associations of citizens and an institutionalized apparatus that permits the unrestricted dissemination of information and ideas. Thus the panoply of organizations—ranging from local parent-teacher associations and neighborhood clubs to labor unions, human rights organizations, environmental organizations, and so on—is part and parcel of this arena. In addition, so are media committed to ensuring that citizens are informed about the vital issues of the day and to providing outlets for articulating an array of stances on issues and forums for debate and dissent.

Critics of Habermas contend that he tends to romanticize the public sphere during its earlier years, confusing his ideal vision about how it should have functioned with the reality of the historical situation, which involved from its inception persistent intrusions of powerful economic interests and the repressive tactics of the state. The result was that the public sphere never managed to be as autonomous as he seems to think. This may be a somewhat unfair characterization of Habermas's position because he provides ample evidence of being aware of the limitations of actual existing public spheres in the past. He does think, however, that public spheres in the past exhibited greater autonomy than their contemporary versions.

At the same time Habermas leaves himself open to charges of utopian thinking, especially when he develops the ideal of a state of undistorted communication, free from coercion and restraint. In his view, democratic decisions arise dialogically. In an ideal speech situation, people talk to others to come to an understanding of which ideas and values are best, not to manipulate others to get one's way. In other words, he assumes a willingness on the part of citizens to freely embrace the better argument. There are examples of situations in which this ideal seems to have been more or less realized, such as old New England town meetings and Quaker meetings. The participants in these examples can be fairly depicted as being cooperative, tolerant, critical, self-reflective, and rational, whereas the differences among them in terms of both economic status and levels of human capital are not great.

Two other criticisms have been leveled at Habermas's portrait of the public sphere. First, some feminists contend that he is insufficiently attentive to the relationship between the private and public spheres and its implication for gender relations. Second, he has been accused of operating with an overly rationalistic and overly civilized view of human nature.

Habermas has expressed concern that the public sphere in what he describes as "late capitalism" is threatened by what he calls "refeudalization." What he refers to is the tendency to link or integrate the economy and the polity in a way quite at odds with their separation in the earlier period of capitalist development. Given his focus on communication, it is not surprising that he is particularly apprehensive about the concentration of media power in the hands of political and economic elites. Large media conglomerates have arisen to choke dissident voices out of the market, and these corporations, far from being independent of political power, serve as apologists for it. The result is that genuine public debate has given way to propaganda and increasingly sophisticated public relations.

Although the portrait he paints might lead to despair regarding the future of democracy, Habermas presents a cautious optimism. In particular he sees in the new social movements—environmental, antinuclear, peace, feminist, and so forth—potential for change. These movements have abandoned any belief in the possibility of revolutionary change, opting instead for radical reforms and a commitment to nonviolent change. Underlying his tempered hope for the future is a particular understanding of human nature. It presupposes that people are by nature political and thus concerned about and willing to participate in issues related to the well-being of society as a whole.

SEE ALSO *Associations, Voluntary; Civil Society; Feminism; Government; Habermas, Jürgen; Persuasion; Public Sector; Rationality; Utopianism; Volunteerism; Weber, Max*

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Peter Kivisto

PUBLIC UTILITIES

Public utilities are firms that are sometimes synonymous with natural monopolies. Some examples of public utilities include the Tennessee Valley Authority and Illinois Power.

These organizations are generally so called because there is structurally no room for market competition—one firm can "naturally" produce at lower costs than competitors who are eventually priced out of the market. Thus, natural monopolies tend to be regulated by governments in the public interest. However, being a natural monopoly is not a necessary prerequisite for government regulation. Industries that are not natural monopolies may be regulated for a number of reasons, including service reliability, universal access, and national security.

Public utilities generally supply goods or services that are essential, like water, electricity, telephone, and natural gas. For example, the transmission lines for the transportation of electricity or natural gas pipelines have natural monopoly characteristics in that once these lines are laid by one utility, duplication of such effort by other firms is wasteful. In other words, these industries are characterized by economies of scale in production.

Left to themselves, private utility companies would make decisions that are most profitable for them. Such decisions generally involve too high prices and relatively little service compared to competitive conditions. These decisions may or may not be in the best interests of the society. The government or the society would like to see these services being economically accessible to all or most of the population.

Not all utility companies are in the private sector. In many countries, utilities are owned by the government. Generally, in these cases, the government creates autonomous bodies for government utilities to prevent them from day-to-day political interference. In such instances, the government utilities' goals are better aligned with societal goals; however, they tend to be less efficient than their private sector counterparts.

Two main issues facing public utilities are coverage of service area and pricing. Alternately stated, the regulators try to balance the competing aims of economic efficiency and social equity. Economic efficiency generally requires that markets be left to work by themselves with little intervention. Such instances are usually not equitable or fair (some consumers might be priced out of the market). Equity issues demand that everyone gets the service at a "just" price. However, these instances can turn out to be inefficient (think about the cost to an electric utility of having to run cables a number of miles especially to serve one or two remote fishing cabins that are used sparingly).

In general, the pricing of the services of public utilities is problematic. As mentioned above most public utilities are structural monopolies, implying that there is no room for competition in the market for services they provide. However, if they are left alone to price like monopolies, the resulting price is too high and a large part of the market area may not be served. While the utility companies have no complaints about such arrangements, given the essential nature of the services they provide, the society would like to provide such services to all or most of the population. Think, for instance, about the undesirability of denying heat to someone in the winter. Hence, their pricing actions are regulated.

However, these decisions are somewhat problematic. If these utilities are mandated to set prices at the low competitive levels, they generally end up making losses. So there continues to be an ongoing tussle between regulators and the utility companies regarding a "fair" price between the monopoly and competitive levels.

Common alternate pricing actions include (1) setting prices equal to average production costs and serving the maximum area possible; (2) rate of return regulation; and (3) price cap regulation. Under average cost pricing, the utility is assured of breaking even, since the prices equal average costs. The equity aspects are somewhat met since most of the market is being served. However, the regulated firm lacks incentives to minimize costs. Under rate of return regulation, the regulators let the firms charge any

price, provided the rate of return on invested capital does not exceed a specified rate. Whereas such regulation is flexible in allowing pricing freedom and frees the regulators from monitoring prices, a key drawback is that such regulation can lead to overcapitalization. In other words, when the rate of return is fixed at 5 percent, then the firm can charge higher prices by investing more in capital than it would otherwise (i.e., 5% of $10 million is greater than 5% of $6 million). Price cap regulation directly sets a limit on the maximum price charged by regulated firms. This type of regulation can result in a loss of service area. A (somewhat debated) plus point of price cap regulation is that such regulation induces firms to seek cost-reducing technologies because they offer a way to increase utility profits.

With technological changes over time, the nature of regulation changes in that some functions of the utility companies are "unbundled" and thrown open to free competition. New technologies might make it possible to break up the different stages of the electric generation process or natural gas transmission such that competition might be allowed to function in some stages. For example, in twenty-first-century United States and elsewhere the electricity generation market is relatively competitive and consumers are able to purchase electricity from competing vendors (generators). However, the transportation of electricity still remains a natural monopoly and continues to be regulated. Further, oftentimes the deregulation of some or all functions of public utilities might occur over time due to political-economic compulsions.

In practice, however, both deregulation and increased regulation are plagued by uncertainties, both for regulators and the firms they oversee. For instance, the firms do not know when and whether they will face additional regulation (or deregulation). The regulators, on the other hand, are unaware whether new technologies would mandate additional regulation. Another related issue facing nations involves how to make the regulations somewhat consistent across international borders so that utilities from one nation do not have undue advantages over utilities from other nations (U.S. and Canadian utilities have faced such issues following the North American Free Trade Agreement [NAFTA]).

There is some criticism of public utility regulation in that over time the regulated utilities tend to take over the regulatory agencies that oversee them (called the capture theory of regulation). Thus the societal interests that the regulatory agencies are supposed to further are somewhat compromised. The evidence regarding the capture of regulatory agencies is mixed, however. Further, some researchers, including John Galbraith in his 1973 work, have questioned the supposed underproduction by monopolies.

To summarize, whereas over time changes in environment and technology warrant changes in regulation of public utilities, the nature of markets that utilities serve generally warrants they be overseen in some form or another by government bodies.

SEE ALSO *Energy; Energy Industry; Public Sector*

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Rajeev K. Goel

PUBLIC WELFARE

Welfare programs represent an effort on behalf of nation-states and international organizations to provide assistance to people who are otherwise unable to take advantage of market (primarily capitalist) relations. Welfare programs emerged as a public (meaning government-funded) phenomenon following historical periods of industrialization in Western nation-states during the eighteenth and nineteenth centuries and in Asian, Latin American, and African states in the twentieth century, following the decline of colonialism.

Prior to industrialization, explanations for poverty and other forms of political marginalization abounded, most of which emphasized the failings of poor individuals themselves rather than market-based, state-centered, or international explanations. Preindustrial explanations for the existence of the poor fall into two categories. The first category follows the logic of retribution. Poor individuals have committed sins or other values-based transgressions for which the penalty was poverty. In response to such explanations, programs developed first by private individuals and religious organizations were geared toward treating the poor as criminals in fact if not by law.

The second set, paternalistic explanations, evolved from two primary origins: (1) a response to the recognition of the harsh conditions industrialization brought to urban centers, which were increasingly teeming with rural poor who had migrated in search of work; and (2) a justification for the economic exploitation of indigenous populations in colonial contexts around the world. In response to the first origin, labor laws emerged in Great Britain, France, and later the United States first to protect children, who were the first to be seen as "innocent" victims of market fluctuations. Later, through the social movements of labor unions and the rise of Marxist ideol-

ogy as a challenge to capitalism, women and, last, adult males found increased economic protection through widows' pensions, unemployment insurance, and better protected labor negotiations.

In response to the second origin, the logic of paternalism dictated an attention to the supposed "natural and primitive" state of the indigenous poor, who then must be "developed" or otherwise socialized into market-based civilization. A different set of programs arose that focused on the mollification of indigenous resistance to the economic exploitation of colonialism and, later in the postcolonial context, the enforced economic independence of new states with limited reparations from colonial conquerors who had benefited economically from previous arrangements. In response to the needs of newly independent states, an international development movement emerged to plug some of the holes required for economic integration into world markets and increased political stability. Many international development programs were premised on this prior paternalistic logic.

Both explanations of poverty remained salient during the rise of progressive movements in industrialized liberal democracies such as Great Britain and the United States. However, a third explanation emerged following the Industrial Revolution as part of reformist, progressive activism that emphasized the role of economic institutions that were either dependent upon or responsible for the creation of vast swaths of poverty. In Western nations, the emergence of socialism as an alternative to liberalism produced hybrid political-economic models such as social democracy, which emphasizes a balance between free markets and economic equality. Northern nations such as Sweden have emerged as the archetypical models of social democracy, where public welfare includes guarantees of financial assistance, generous child care and family leave policies, housing assistance, employment protections, and disability and old age insurance. More recent scholarship has emphasized four ideal types for public-welfare provision comparisons: social democratic, liberal democratic, conservative, and post-Communist regimes.

While social democracies are attractive in terms of the safety net for the economically disadvantaged, individual citizens carry a much heavier tax burden to cover such programs than they do in liberal democracies such as the United States, where programs are not nearly as comprehensive—financially or programmatically. This fact may help to explain why there is not a direct linear relationship between the level of public-welfare provision and general citizen support for such provision. The relationship is instead curvilinear, suggesting that citizens in high-spending, social democratic Scandinavian countries level off in support, while citizens in lower-spending liberal southern European nations continue to support such public-welfare expenditures. This trade-off is one that continues to be contested within each country, with welfare program popularity also based significantly on perceptions of program recipients.

Both liberal democracies and social democracies among Western nations, however, share a comparative advantage in terms of long-term political stability, gross domestic product, and other economic resources that enable nation-states to remain relatively independent of international organizations in terms of social safety-net provision. Newer democracies—many of which emerged in a postcolonial context of limited political stability, low gross domestic product, and low availability of cash-producing resources—face ongoing struggles to provide a social safety net of cash assistance, agricultural subsidies, child care and family leave policies, housing assistance, employment protection, or disability and old age insurance. In these contexts, international organizations, such as the World Health Organization, UNICEF, the International Monetary Fund, and the World Bank, have significant influence upon nation-states' ability to provide public welfare for their citizens.

For example, structural adjustment programs prescribed for what are called "developing" nations often require fiscal policies that substantially limit domestic public-welfare capabilities. For example, liberalizing a national economy often includes allowing significant amounts of foreign investment to enhance the economy. However, with such investments comes the provision of corporate incentives that can limit labor protections for workers—including less onerous minimum wage laws, worker safety regulations, and labor union protections. The trade-offs between public-welfare programs and economic stability for new nation-states is an ongoing challenge. However, a new framework promises to question some of these trade-offs and the paternalistic premises that undergird international development programs. The "empowerment" literature changes the social construction of public-welfare recipients—from either domestic or international programs—into one that focuses on the existing capabilities of the poor and more democratically includes them in program design and funding decisions. Still new, empowerment logic is widespread in the area of microlending, which encourages market integration one small business owner at a time.

In "developed" nations public-welfare programs are more commonly defined as protections against the vagaries of the market—cash assistance for those who do not work, whether because of unemployment, disability, or old age. The security of these programs is based on more domestic considerations than those of developing nations. In countries such as the United States, Great Britain, and France, public policy debates surrounding the shrinking of public-welfare programs boils down to

debates that focus again on the people who might benefit—whether they are deserving of assistance or not. As one might expect, those who are deemed deserving of assistance—those, for example, who have "paid into a system" through decades of taxes on their wages—are less likely to have benefits cut than those who are presumed to receive "something for nothing." To the degree recipients are perceived as deserving, programs are more popular. When recipients are perceived as undeserving, programs are less popular. Such explanations continue to shed light upon the size and limits of welfare state disbursements to the poor and to debates surrounding the boundary lines between the "deserving poor" and the "undeserving poor."

SEE ALSO *Developing Countries; International Monetary Fund; Poverty; Public Health; Public Interest; Social Welfare System; Stability, Political; Structural Adjustment; United Nations; Welfare; Welfare State; World Bank, The; World Health Organization; World War II*

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Ange-Marie Hancock

PULLMAN PORTERS

Ironically, the position of Pullman porter, which was designed to capitalize on the legacy of slavery, instead became the catalyst for both the formation of an African American middle class and the first major African American labor union (the Brotherhood of Sleeping Car Porters). In addition it was linked to the emergence of the U.S. civil rights movement in the twentieth century.

At the end of the Civil War, the Pullman Sleeping Car transformed travel in the United States. Though sleeping cars on trains had been used before, the Pullman was the first comfortable, indeed luxurious, sleeping car, and it ushered in a new era of comfortable cross-country train travel. The job of the Pullman porter included loading and unloading passengers and their luggage, keeping toilet and general-use areas and cabins clean, and turning down and putting up the folding upper and lower beds. The porter also took care of patrons' personal needs, such as boxing ladies' hats, sending letters and telegrams, setting up card tables, stocking coolers with ice, serving food and drinks in the dining car, and selling cigarettes, candy, and playing cards. When necessary he also took on the chores of the conductor, though he was never paid a conductor's wages. For many years porters were on call twenty-four hours. As envisioned by founder George Pullman (1831–1897), the porter's role was to supply the average traveler with the luxury of a servant for the duration of the trip. Pullman specifically modeled the Pullman porter after the plantation house servant, and he intended the jobs to be filled by the recently freed slaves.

The Pullman Company, headquartered just outside Chicago, quickly became the largest single employer of African Americans, and Pullman porter positions were among the most prestigious jobs available to them. However, the wages and working conditions were poor compared to those of white Americans. Porters represented the first foray for African Americans into the middle class, but this was due more to the perceived prestige of the position and the experience of being well traveled than to the economic gains. That said, many of the Pullman porters were highly educated. Nonetheless, this was the best employment they could obtain in Jim Crow–era America, and the company kept porter hours long and wages low, forcing them to rely upon tips as a significant part of their income. Until the formation of the Brotherhood of Sleeping Car Porters (BSCP) in 1925, porters were never paid more than office boys, the lowest ranking white employees.

In a degrading act of racism, whites routinely called all porters "George" after George Pullman, following an older racist custom of naming slaves after their masters. The Society for the Prevention of Calling Sleeping Car Porters "George" (SPCSCPG) was formed in 1916 to pro-

mote the elimination of the practice. The SPCSCPG lasted until 1941 and at its peak counted more than 31,000 members, including George Herman "Babe" Ruth and King George V. Although the SPCSCPG ostensibly was formed to eliminate a racist practice stemming from the slavery era, some scholars speculate that the society was formed as a way for white railway workers and frequent Pullman passengers to distance themselves from the African American Pullman porters.

In 1925 the Pullman porters formed the BSCP and chose A. Philip Randolph (1889–1979), the well-educated editor of Harlem's *Messenger Magazine*, as president. Randolph had never been employed as a porter and therefore could not be disciplined by the Pullman Company. Hence Randolph maintained complete control of the direction of BSCP throughout his long tenure as the organization's president and relied on his regional delegates, most notably Milton P. Webster of the Chicago chapter, to maintain the day-to-day activities of the union.

The most important issues for Randolph and the BSCP in the early years were to win recognition of the BSCP as the sole authorized representatives of the Pullman porters and then to deal with the industry's split labor market that placed African Americans in lower-paying positions or paid them less even when they were doing the same work as whites, such as conductor duties. After a long and contentious fight, the first goal was accomplished, and progress was made toward achieving the second goal.

The Pullman Company and other employers of the period were not alone in their determination to protect the split labor market. Labor unions were unwilling to embrace African Americans, typically seeing them as competitors rather than allies. However, by 1929 the BSCP was admitted into the American Federation of Labor (AFL). Randolph used his position in the AFL to push for greater acceptance of minority workers by stressing the common economic goals of workers rather than racial differences, and he was instrumental in gaining wider acceptance of African Americans in many industries.

In 1941 Randolph and other BSCP organizers called for African Americans to march on Washington, D.C., to protest racial discrimination in the defense industries. Randolph decided that the march had to be an African Americans–only protest, not to distance African Americans from supportive whites but to establish African American control over their own destinies. Once it became obvious to President Franklin D. Roosevelt that Randolph had succeeded in effectively organizing a massive protest, he signed Executive Order 8802, the Fair Employment Act (1941), which prohibited defense and other government-related industries from discriminating against African Americans. Although this order carried no punitive measures for those who did not comply, it officially acknowledged the need for the government to address racial issues. Randolph called off the march on Washington, but the group continued to work on civil rights issues.

In 1982 Jack Santino produced and directed *Miles of Smiles, Years of Struggle: The Untold Story of the Black Pullman Porter,* a documentary chronicling the organization of the BSCP and the impact this group had on the U.S. civil rights movement. In 1983 Santino followed up with a striking article in the *Journal of American Folklore* that documented through oral history the racial stereotypes, racial violence, and other forms of racial discrimination faced by African American porters, who were by then in their eighties and nineties. Interestingly many of the instances of racism and abuse discussed by the former porters occurred long after the formation of the BSCP.

SEE ALSO *Civil Rights Movement, U.S.; Discrimination, Racial; Labor; Racism; Roosevelt, Franklin D.; Social Movements; Unions*

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PUNCTUATED EQUILIBRIUM

Punctuated equilibrium is a descriptive hypothesis in evolutionary biology concerned with macroevolutionary dynamics specifically at the level of speciation. Punctuated equilibrium holds that most species originate by the splitting of a population during brief geological periods (punctuations), and that subsequently species persist with only

relatively moderate morphological change (stasis) for the remainder of their existences. "Evolution by jerks," as punctuated equilibrium has been lucidly labeled, is usually contrasted with *phyletic gradualism* ("evolution by creeps"), which states that species evolve uniformly and slowly by the gradual transformation of large populations. Proposed jointly by paleontologists Niles Eldredge and Stephen Jay Gould (1941–2002) in 1972, punctuated equilibrium immediately lit a scientific controversy that has smoldered ever since.

Punctuated equilibrium was, however, hardly controversial at its inception. As a general characterization of macroevolutionary processes, it was largely presaged by Hugh Falconer (1808–1865) and Charles Darwin (1809–1882) in the mid-nineteenth century and later echoed by Hermann J. Muller (1890–1967) and George Gaylord Simpson (1902–1984) in the early twentieth century. Eldredge and Gould postulated their version of the hypothesis as a logical extension (into paleontology) of Ernst Mayr's (1904–2005) ecological theory of *allopatric speciation* (1963), which was widely considered the dominant theory of speciation. Allopatric theory proposes that speciation occurs when a smaller subpopulation becomes geographically isolated from its parent population. Over time, this peripheral daughter population diverges in isolation until it can no longer interbreed with the parent. Speciation as such happens relatively quickly in a small population and in a limited geographic range. Due to the relative brevity of this localized speciation event, intermediate morphologies will be unlikely to fossilize and will be rare even if they do, producing an apparent paleontological pattern of stasis punctuated by discontinuous speciation events.

While born of an orthodox evolutionary theory, punctuated equilibrium has been associated throughout its existence with more radical evolutionary concepts. The scientific controversy over punctuated equilibrium is multifaceted, but it has largely coalesced around three related issues: (1) whether punctuated equilibrium is "Darwinian"; (2) whether stasis truly is the predominant mode of evolution in the fossil record; and (3) whether the proposed mechanisms for both stasis and punctuations are valid.

One of the easiest means to draw attention to an evolutionary concept is to pronounce it "anti-Darwinian," and punctuated equilibrium has been no exception. Both proponents and detractors of punctuated equilibrium often claim that Darwin explained the incompleteness of the paleontological record as solely the result of the imperfect geological preservation of fossils. However, as pointed out by Frank H. T. Rhodes (1983, 1987), Darwin in fact devoted the larger part of chapter 10 of *On the Origin of Species* (titled "On the Imperfection of the Geological Record") to explaining how "gaps" in the fossil record are a direct consequence of speciation processes and the nature of natural selection. Like Eldredge and Gould, Darwin thought it likely that most species exist in a state of morphological stasis, only intermittently broken by bursts of localized change and speciation. Darwin found this point so important for understanding the paleontological record that he reiterated the argument in three separate chapters (Darwin [1872] 1993, chap. 4, "Natural Selection," p. 152; chap. 10, p. 428; and chap. 15, "Recapitulation and Conclusion," p. 619).

Furthermore, in debates over punctuated equilibrium, the term *gradualism* has been used in at least two different senses. Eldredge and Gould's phyletic gradualism concerns the tempo of evolution, entailing evolutionary trajectories that are geologically slow, constant, and unidirectional—a concept pointedly contrasted with the rapid speciation described by punctuated equilibrium. For Darwin, however, *gradual* has little to do with rate ([1872] 1993, pp. 312–317). Rather, it means that evolution by natural selection advances in small "grades" that are dependent on a population's normal genetic variation. Morphological change therefore can be genetically gradual and geologically rapid. While phyletic gradualism may have been a widespread evolutionary assumption in the twentieth century, it cannot be pinned on Darwin himself. Thus, given the significant overlap between the tenets of punctuationism and Darwin's views, punctuated equilibrium is resolutely "Darwinian."

Whether the fossil record truly displays a predominant pattern of stasis continues to be an active area of paleontological research. Punctuated equilibrium is most readily tested when geological strata are well resolved temporally with abundant fossil preservation. Empirical studies have resulted in mixed appraisals, with a roughly equal spread among those supporting phyletic gradualism, punctuated equilibrium, or a third "hybrid" process that may be described as *punctuated gradualism* (Erwin and Anstey 1995). Probably the most tangible contribution of the punctuated equilibrium controversy has been the widespread acceptance of Gould and Eldredge's claim that "stasis is data." Lack of morphological change is an evolutionary pattern that warrants an explanation.

The assortment of mechanisms that Gould and Eldredge have proposed to explain stasis and rapid speciation is the most contentious aspect of the punctuated equilibrium debate (Coyne and Charlesworth 1997). Eldredge and Gould initially implied that punctuated equilibrium is explained adequately by Mayr's mainstream theory of allopatric speciation. However, they successively suggested numerous additional "non-Darwinian" mechanisms, including saltational mutations and species selection (Gould 1980, 2002), none of which have been broadly accepted. Emphasizing an antireductionist plural-

ism, Eldredge and Gould further claimed that each of these speculative mechanisms was significant for its potential to decouple lower-level genetic processes from upper-level macroevolutionary trends. Perhaps ironically, the punctuationist paradigm has been adopted more recently by molecular biologists, who have found within in vitro evolution experiments analogous patterns of stasis interleaved with rapid genetic change (Elena et al. 1996). Thus, punctuated equilibrium may ultimately find its *raison d'être* in the very reductionist realm so vigorously opposed by Gould: molecular evolution via the "selfish gene."

SEE ALSO *Anthropology, Biological; Archaeology; Darwin, Charles; Gould, Stephen Jay*

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PUNISHMENT

The concept of punishment originates at least as far back in philosophy as Socrates (Cooper and Hutchinson 1997), and the practice of punishment as a social institution seems to go as far back as there have been human societies. While the histories of the institutions of punishment vary from society to society, country to country, and nation to nation, some questions about punishment seem to be nearly universal. Because of the importance of the institution of punishment, it is crucial that its conceptual underpinning be explored with precision and care. What is punishment? Is it ever morally justified? Can it play a role in maintaining and strengthening just political institutions?

There are at least three important philosophical and ethical questions concerning punishment. The first concerns its nature. Much confusion can result if the nature of punishment is not understood to amount to some kind of harsh treatment of the offender or the harmful wrongdoer. Although punishment is legitimate, institutionally implemented harsh treatment for the commission of a legal offense (Hart 1968; Feinberg 1970; Rawls 2000; Corlett 2006), it might well have side effects—even positive ones—such as moral education or rehabilitation. By "harsh treatment" is meant some form of corporal punishment, incarceration, fines, or the like. But it is important not to confuse punishment with deterrence, moral education, or rehabilitation. These are not forms of punishment, because punishment is not properly defined necessarily in terms of deterring, morally educating, or rehabilitating offenders. To think otherwise is to beg the question in favor of one of the theories of punishment considered below. This is not to say, however, that genuine punishment cannot deter future harmful wrongdoings, morally educate, or rehabilitate in some ways on some occasions.

A second question concerning punishment amounts to a set of questions raised by Anthony Quinton (1954), John Rawls (1955), and Stanley Benn (1958). The first pertains to the moral justification of the institution of punishment itself, while the second regards the moral justification of particular forms of punishment. Clearly, the belief that punishment is morally justified does not mean that all forms of punishment are justified, though it would seem that for any particular form of punishment to be justified, the institution of punishment itself must be justified. Attempts have been made to reconcile major theories of punishment by suggesting that one theory is best fit to answer the question of the morality of the institution of punishment, while another theory is best able to answer questions of how particular punishments ought to be meted out to offenders (Rawls 1955; Corlett 2006).

A third question regarding punishment is the extent to which it might serve to the betterment of just political institutions. The role that punishment might play in maintaining and strengthening just political institutions has been addressed in a myriad of ways in recent years,

especially in the debate about the morality of the very institution of punishment. It has been argued by punishment abolitionists that punishment is morally wrong because of social and political inequalities of opportunity that make the imposition of the punishment unfair and hence unjust. Indeed, they argue, there exist significant degrees of unfairness in terms of racism and classism in the system of punishment that make punishment unjustified. Proponents of punishment argue that the system is often fair enough to justify the punishment of those who truly commit their crimes and are sufficiently responsible for them, assuming that adequate due process of law obtains.

Considering the nature of punishment as hard treatment, there are two main theories of punishment—that is, of the moral justification of the institution, particular forms, and the role of punishment. Although there are various hybrid forms of these theories, the two are called "utilitarianism" and "retributivism." The former was defended by Jeremy Bentham ([1789] 1948), among others, while the latter was formulated by Socrates (Cooper and Hutchinson 1997) and later made famous by Immanuel Kant ([1780] 1996). Each theory defends some form(s) of the principle of proportional punishment. While Bentham provides no fewer than thirteen principles of proportional punishment based in utilitarian reasoning, Kant and other retributivists subscribe to some notion that punishments ought to fit the crimes and that the choice of punishment does not depend solely on considerations of social utility.

More recently, retributivists such as Joel Feinberg have argued for a number of expressive functions of punishment: authoritative disavowal, symbolic nonacquiescence, vindication of the law, and absolution of others (Feinberg 1970). It would seem that these expressive functions are consistent with either a utilitarian or retributivist outlook.

Perhaps the most oft discussed issue of punishment is that of capital punishment. Some capital punishment abolitionists argue that the criminal justice system is so corrupted because of racism and classism that the administration of capital punishment is unfair and hence unethical. Others point to the prohibitive cost of imposing the penalty as well as the mitigating factors that seem to accrue with every capital case. Still others point to the intrinsic value of human life and argue that this prohibits the taking of life in any circumstances. Utilitarians who oppose capital punishment argue that it fails to deter violent crime and robs society of the opportunity to rehabilitate capital offenders (Corlett 2006).

However, proponents of capital punishment argue that while these considerations are important and ought to be taken seriously by anyone thinking about punishment, it is unclear that the racism, classism, and other factors that make capital punishment unfair in one society make it necessarily unfair when imposed in another that lacks such factors. Also the administration of capital punishment can be made more economically efficient without threatening due process considerations of appeals and related factors necessary for a reasonably just legal system. Moreover considerations of alleged intrinsically valuable human life (in some absolute sense), deterrence, and rehabilitation each admit of dubious foundations apart from particular ethical standpoints, which themselves need independent argumentative support. In particular, it is argued, they do not seem to be able to account well for considerations of deservedness and proportional punishment, without which no theory of punishment can be properly construed as plausible.

For some, capital punishment is morally justified to the extent that it is administered without prejudice as to ethnicity, sexuality, and socioeconomic class and to the extent that the alleged offender is guilty of the capital offense; performed it with sufficient intent, voluntariness, and knowledge; and was at fault in what he or she did, failed to do, or attempted to do. That some are wrongfully charged and even convicted and sentenced to death in no way logically discounts the rightness of capital punishment for those who are guilty. However, no theory of punishment ought to take lightly the unforgivable evils of wrongful convictions—especially in capital cases. Thus these theorists desire to put in place legal rules punishing those responsible for wrongful convictions, where fault accrues.

But retributivism and utilitarianism differ from one another in other ways. According to utilitarianism, punishment is an evil and can only be justified insofar as it increases the overall happiness of society—either by deterrence of future harmful wrongdoings or by rehabilitation. Classic criticisms of this position on punishment's justification include that it fails to take into consideration what offenders deserve and thus minimizes if not nullifies personal and social responsibility for harmful wrongdoing. It is future oriented.

Retributivism, on the other hand, holds that harmful wrongdoers ought to get what they deserve in approximate proportion to their harmful wrongdoings caused to others. Classic concerns with this theory include that it does not clarify the allegedly primitive notion of desert and that it cannot provide an adequate account of proportional punishment. Those who defend retributivism have replied with robust conceptual analyses of the concepts of desert and proportionality, adding that any plausible theory of punishment must take seriously deservedness, proportionality, and responsibility (Corlett 2006). And insofar as utilitarian theories flounder along these lines,

only retributivism serves as a plausible foundation of punishment's justification. For any plausible theory of punishment's justification must make adequate sense of deservedness, responsibility, and proportional punishment because denying the importance of these notions spells disaster for systems of punishment seeking to be just and fair. Retributivism has often been confused with vengeance theories of punishment. But as Feinberg (1965) and Robert Nozick (1981) have argued at some length and with precision, retributivism does not entail vengeance of any kind. There are also moral education theories of punishment (Hampton 1984), but they seem not to entail punishment (hard treatment) at all or unwarrantedly assume a version of utilitarianism to justify punishment. Hence they either are not theories of punishment at all or they beg important questions about punishment's justification.

Of course there are hybrid theories of punishment, especially between retributive and utilitarian theories. Indeed it might well be the case that most theories of punishment amount to some form of hybrid theory, as not even Kant (who many allege founded retributivism) held to a pure form of retributivism, as many believe he did (Corlett 2006).

Punishment theorists have written much on the matter of forgiveness, mercy, and punishment. Ought the state to forgive or show mercy to harmful wrongdoers by mitigating or even excusing punishments? Many utilitarian theorists have argued affirmatively to this complex question in that the future results of how society responds to harmful wrongdoers is more important than past harmful wrongdoings themselves. Some retributivists, however, have argued that taking responsibility seriously requires that a criminal justice system not permit the language and emotions of forgiveness to interfere with holding harmful wrongdoers responsible for their actions, failures to act, or attempted actions. The reason for this is that they must get what they deserve—nothing more and nothing less—for harmful wrongdoings they have wrought on others. The value of deservedness, responsibility, and proportionality are so strong for some retributivists that not to take them into account in punishment is to commit a most serious injustice. This implies that forgiveness and mercy have no legitimate place in a reasonably just criminal justice system. And this is true even if the wrongdoer offers a genuine apology. Apology, forgiveness, and mercy are irrelevant to a system of genuine criminal justice, though mitigation and excuse play pivotal roles in such a system where responsibility is, all relevant things considered, not full.

While collective forms of punishment do not take on forms of corporal punishment as in individual human cases, certain collectives can be legitimately held responsible for harmful wrongdoings as a kind of vicarious liability (Feinberg 1970; Corlett 2006). But unlike individual harmful wrongdoers, collective harmful wrongdoers are typically fined because they have "no soul to be damned, no body to be kicked" (Coffee 1981). Other forms of collective punishment might include adverse publicity (French 1984).

Among the many contemporary areas of investigation in punishment theory is the question of whether there ought to be similar punishments for both successful and failed crimes. Some have argued that certain theories of punishment demand by implication that they ought not to be punished differently simply because of differences in the consequences of the intended crimes. For insofar as the intentions of the harmful wrongdoers are the same, they ought to be punished similarly. Yet this places such theories of punishment in an embarrassing situation, as the result appears counterintuitive (Feinberg 2003). Others deny this point, arguing that no plausible theory of punishment would ever concede that punishment can rightly accrue to a harmful wrongdoer simply because of considerations of intent; that is, there are no purely anti-consequentialist theories of punishment that are even initially plausible. Thus any plausible theory of punishment must hold that a combination of criminal intent and the consequences of the harmful wrongdoing play roles in determining the just punishment of the criminal.

What is clear is that punishment entails hard treatment, and what justifies it on moral grounds must involve at least notions of deservedness, responsibility, and proportionality. To deny this much is implicitly to embrace claims that result in injustice and unfairness.

SEE ALSO *Ethics; Foucault, Michel; Imprisonment; Justice; Kant, Immanuel; Philosophy; Prisons; Rawls, John; Utilitarianism*

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J. Angelo Corlett

PURCHASING POWER PARITY

Purchasing power parity (PPP) is the theoretical proposition that national currencies have the same real purchasing power at home and abroad. This notion is best understood starting from the point at which two currencies trade at par. Suppose that the exchange rate of the U.S. dollar for the Canadian dollar is unity (as was approximately true for a good portion of the early 1970s). If PPP holds, goods and services sold within Canada (quoted in Canadian dollars) will have the same prices as goods and services sold within the United States (quoted in U.S. dollars). Assuming Canadian and U.S. dollars were both accepted as media of exchange, there would be no need to post prices in anything other than "dollars." And it would not matter which dollars were chosen.

Consider the following thought experiment. Suppose one or a combination of the three variables in the PPP equation—the prices charged by Canadian retailers, those charged by U.S. retailers, or the nominal exchange rate—changes such that Canadian goods become 10 percent more expensive than the same U.S. goods when all prices are expressed in the same units (i.e., a common currency). If so, consumer demand for the now more expensive Canadian goods would rapidly decline to zero.

Purchasing power parity may be thought of as ruling out this possibility. The literature has contrasted two ways in which this happens. First, arbitrageurs would take advantage of the fact that the market has two prices for goods and services of the same quality. Specifically, arbitrageurs would buy the lower priced goods in America and resell them at the 10 percent higher price in Canada. However, the increased demand for goods and services sold in America will pull American prices up while the increased supply of goods and services sold in Canada will push Canadian prices down. Arbitrageurs will continue buying in America and selling in Canada until the prices in the two countries are equal. Some economists argue that instantaneous arbitrage prevents the departure from parity—departures from PPP would never be observed in the real world. The more likely case, however, is that the force of arbitrage would be quick enough that the temporary nature of the deviation would be a fleeting economic event, of minor consequence from a macroeconomic perspective.

The second scenario is that restoration of purchasing power parity takes a long time. During this time, consumers and firms are altering their demand and supply decisions. In the literature that uses the consumer price index to compute deviations from PPP, the amount of time is takes for a deviation of 10 percent to work its way down to only 5 percent—the so-called half-life of the deviation—is somewhere between three and five years. In contrast to the near instantaneous adjustment case, this is glacial and should be expected to put into motion seismic shifts in demand and supply across locations. Yet, we do not see this type of quantity reaction in the data. Large variations in real exchange rates (deviations from PPP) are not associated with large variations in trade balances or the overall business cycle.

Thus, purchasing power parity, one of the most intuitive of economic concepts, fails to hold in practice. Moreover, its failure to hold does not appear to lead to the type of quantity reactions we would anticipate from basic economic principles. These observations raise two key issues. The first issue is the conceptual validity of PPP. The second is the empirical validity of PPP measures relative to the theoretical concept.

The consumer basket of a modern industrialized country contains literally thousands of individual goods and services, and the cost of arbitrage varies significantly across them. When costs of arbitrage such as transportation costs arise, price differences across locations are expected to arise as well. These deviations are referred to as deviations from the law of one price (LOP). For items in the consumption basket that are not traded across countries, deviations from the LOP are expected to be large and may persist indefinitely. The classic example of a nontraded item is a haircut, which requires the purchaser and the seller to be at the same place at the same time. While the haircut is exchanged in this bilateral meeting, the market for haircuts is localized. Contrast this

with heart surgery. Here again, the buyer and seller must be at the same place at the same time. While most major cities have impressive medical centers to meet local demand for high-quality care such as this, people do travel to the markets with the best heart surgeons, sometimes across a vast ocean. The combination of scarcity and high consumer benefit overcomes a large trade cost. Commodities, in contrast, often involve small trade costs and their physical depreciation is slow. This means that buyers and sellers do not have to be in the same place at the same time and inventories provide stocks of supply at or near consumption locations. The general message here is that services tend to be localized in trade while goods are globally mobile. We see these distinctions between goods and services in trade flow data, although the Internet is changing the manner in which some goods and a few services are produced and exchanged. While the PPP exchange rate may be thought of as a weighted average of LOP deviations of the individual items that underlie its construction, there is so much variation across those items that any broad-brushed economic interpretation of the PPP exchange rate are highly debatable.

Currently there are perhaps three or four competing theories that attempt to explain deviations from PPP. The simplest and most enduring explanation for the time series variation in relative prices is sticky prices. We know that the nominal exchange rate varies often by a percent or more over the course of a single day, while many retail prices remain fixed for months on end. This begs the question of why prices are so costly to adjust or why it is not in the firm's interest to adjust.

If two sellers are physically across the street from one another, we expect the prices of identical goods or services to hold up to a deviation associated with the cost of crossing the street. Otherwise, consumers would never visit the high-price location. Given that we do observe a price differential, we are led to associate the deviation with an impediment to spatial arbitrage. The impediments could take various forms: physical distance, branding, patents, or copyrights.

For example, restaurant menu prices need not adjust continuously in light of what competitors are doing because the menus contain differentiated products. Models of monopolistic competition have been developed to account for price differences across varieties of goods. Here the producer has the ability to charge different prices in the same market even when the cost of providing the different goods is the same.

Price differences could also arise under perfect competition and arbitrage because the cost of providing goods to final consumers involves both shipping costs and the costs of providing goods in the retail outlets. The price of bread in a grocery store must partly defray the cost of labor, capital, and rent borne by the grocer. These costs often differ enormously across locations, particularly when the locations are in different countries. This contrasts starkly with the emergence of manufacturers who sell products online. In this case, everyone pays the same price up to a shipping cost, exactly as the trade cost model would predict.

As models develop in sophistication and the empirical data becomes available to make extensive cross-location comparisons of prices of individual goods and services, we will gain an increasingly clear picture of the reasons for the failure of purchasing power parity to hold at a point in time and over the long run. Inevitably this will involve models that incorporate a variety of goods, services, and market structures. Moreover, the empirical target of the theoretical literature is moving as locations of production and consumption change and as the technology for achieving the exchange of goods and services continues to evolve. Highly accessible introductions to the academic literature on purchasing power parity, the law of one price, international trade costs, and price dispersion in the European Union are, respectively, Rogoff (1996), Goldberg and Knetter (1997), Anderson and van Wincoop (2004), and Crucini, Telmer, and Zachariadis (2005).

SEE ALSO *Arbitrage and Arbitrageurs; Balance of Trade; European Union; Exchange Rates; Inflation; Interest Rates; International Monetary Fund; Trade; Trade Deficit; Trade Surplus*

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Mario J. Crucini

PURGATORY

Purgatory comes from the Latin word, *purgatio*, which means purification, cleansing or expiation. Many religions affirm the need for moral and spiritual purification. Purgatory, though, is chiefly identified with the Catholic doctrine that maintains, first, that some souls after death

require purification (*purgatio*) before reaching heaven, and second, that the prayers and intercessions of the living can assist souls in purgatory.

The word *purgatory* as such, is not found in the Bible, though variations of *katharsis*, the Greek equivalent of *purgatio*, can be found (e.g., *katharoi*, Matt 5:8, and *katharismou*, 2 Pet. 1:9). Church fathers such as Augustine (354–430) found support for purgatory in 2 Maccabees 12:43–46, a passage (not considered canonical by Protestants) that mentions an expiatory sacrifice offered in the temple to atone for the sins of Jewish soldiers who died wearing pagan amulets. The inference is that there is expiation for some sins after death.

Various Church fathers, such as Gregory of Nyssa (c. 330–395), affirmed a postmortem purgation by "purifying fire" (*tou katharsíou purós*) based on 1 Corinthians 3:11–15 (some will be saved "only as through fire"). Patristic writers such as Augustine and Pope Gregory I (c. 540–604) also believed that Matthew 12:32 implies that certain sins will only be forgiven in the age to come (i.e., after death).

Under the influence of neo-Platonism, some early Christian writers, such as Origen (c. 185–254), suggested an ongoing purification after death leading to a universal restoration (*apokatastasis*) of all humans (and possibly demons) with God. The local Council of Constantinople condemned *apokatastasis* in 543.

The doctrine of purgatory underwent more systematic development in the West than in the East. As its penitential system developed, Latin theology saw purgatory as the postmortem expiation of the temporal punishment due to sins. According to this theology, temporal effects or "punishments" of sin (e.g., wounds to oneself and others) remain even after the guilt (*culpa*) of sin is taken away by confession. Such temporal "punishments" require penances for adequate purification, satisfaction, or expiation. When the temporal effects of sin have not been purified prior to death, the person must undergo purgatory.

Because penances during the Middle Ages were often severe, the Church offered various indulgences, that is, extrasacramental ways (e.g., prayers, pilgrimages, and almsgiving) for gaining remission of the temporal punishments due to sin. These indulgences were granted by the Church via her access to the "treasury" of the merits of Christ and the saints. The faithful could apply these indulgences to themselves for their own purification or to souls in purgatory by means of suffrage or intercession (*per modum suffragii*).

Although purgatory was often seen as a temporary hell, the Italian poet Dante Alighieri (1265–1321) offered a more positive understanding of the doctrine. In the *Purgatorio*, the second part of his *Divine Comedy*, Dante describes the purifying rather than penal aspects of punishment. The souls ascend "Mount Purgatory" while receiving penances, practicing virtues, and reciting prayers designed to purge the root causes of the seven capital sins. Those in "lower purgatory" are purified of sins or vices related to "love perverted," namely pride, envy, and wrath. Those in "mid-purgatory" overcome sloth, which is associated with "love defective." Finally, those in "upper purgatory" are purged of "love excessive," linked to the sins of avarice, gluttony, and lust. For Dante, the purpose of purgatory is the interior purification of one's love for God and neighbor before entering heaven.

Only the Roman Catholic Church teaches purgatory as dogma. The Profession of Faith, read before the Second Council of Lyons (1274), distinguished between the souls who go immediately to hell after death, those who go immediately to heaven, and those who die in charity but are cleansed after death by "purgatorial and cleansing penalties" (*poenis purgatoriis seu catharteriis*). The Council of Florence repeated this doctrine in 1439 and reaffirmed that sacrifices of the mass, as well as prayers and offerings of the faithful, can alleviate the penalties of those in purgatory. In the wake of the Protestant denial of the doctrine, the Council of Trent, in 1563, upheld the reality of purgatory but warned bishops to exclude from popular sermons "the more difficult and subtle questions" not useful for edification and to prohibit all that belongs to curiosity, superstition, or unseemly gain.

The Catholic Church has never defined purgatory as a specific place. The exact nature and duration of the purgatorial punishments is open to speculation, and some, such as Catherine of Genoa (1447–1510), describe the fire of purgatory as the fire of God's love. Traditional Catholic theology specifies two forms of suffering in purgatory: the pain of loss (*poena damni*), because of the temporary deprivation of heaven; and the pain of sense (*poena sensus*), experienced by souls in a manner analogous to sensible pain. Whatever suffering the souls in purgatory experience is mitigated by their assurance of heaven once their purification is complete. The common Catholic teaching is that, after the general judgment, there will be only heaven and hell, and purgatory will cease.

The Protestant Reformers of the sixteenth century rejected purgatory as an unscriptural doctrine that obscures the atonement of Christ as the only satisfaction for sin. Moreover, they linked purgatory to "false practices" such as indulgences, private masses, and prayers for the dead.

The Eastern Orthodox churches have prayers for the departed in their liturgies, but they have never defined purgatory as a doctrine. Several Orthodox confessions of faith, such as the original ones of Peter Moghila (1596–1647), the metropolitan of Kiev, and Dositheus (1641–1707), the patriarch of Jerusalem, affirmed the

reality of postmortem purification. Some Orthodox theologians have also posited the existence of two hells, one for the damned and another for those needing further purification. Still others have mentioned a middle state of souls after death (*mesi katastasis*), where they receive comfort from the prayers of the living. In general, though, Eastern Orthodox churches regard the whole matter as too mysterious for dogmatic formulations.

The Catholic Church continues to teach the reality of purgatory. Vatican II (1962–1965) and the *Catechism of the Catholic Church* (1992/1997), however, limit themselves to general affirmations of postmortem purification through the grace of God (cf. Vatican II's *Lumen Gentium*, 49 and the *Catechism*, 1030 and 1472).

SEE ALSO *Christianity; Church, The; Greek Orthodox Church; Heaven; Hell; Protestantism; Punishment; Purification; Religion; Roman Catholic Church; Sin*

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PURIFICATION

The concept of purification, or the ritual cleansing of persons and objects, is found across cultures and religions. It is present in urban and rural settings, in sectarian and secularized societies, and in tribal and multiethnic communities. It has been a sociological feature of human existence from antiquity to modernity, one with an array of behavioral guidelines and consequences.

Purification is associated with two other socioreligious notions: purity and pollution. Purity is linked to sanctity, devotion, and safety; pollution is associated with impurity, irreligion, and danger. Purification is regarded as a means of transitioning from a polluted to a pure state. Personal and group activities are carefully regulated by rules and rites designed to protect and purify individuals, communities, the deity or deities venerated by those groups, and even the world itself from the impurity supposedly caused by pollution. These notions arise from within the context of religious worldviews, and they often have transgressions and demonology as causative factors and penitence and exorcism as resolutionary mechanisms. Modern notions of hygiene, disease, waste products, and environmental contaminants that appear to be reflected in the codes and practices of purity, pollution, and purification bear only an inadvertent correspondence to purification. Purity and pollution are usually not based on physical cleanness and uncleanness, but on holiness and the loss of that state through inadvertent and deliberate violations of socioreligious tenets that renders a believer devotionally impure or polluted, thereby excluding him or her from partaking in the activities of a confessional community.

IMPLICATIONS

The ideal of purity, the fear of pollution, and the quest for purification arose from the systemic ordering of the religious world. The problem of pollution became a subcategory of evil because ritual impurity was equated with moral disorder caused by the forces of evil. Thus, the holy had to be protected from defilement. As a result, purity and impurity came to be regarded as opposites within religious settings. There was a rejection of spiritual and physiological conditions regarded as inappropriate. These conditions came to be prohibited completely, and they were to be resolved via purification whenever present. In some religions, such as Zoroastrianism, Judaism, and Islam, prohibitions became codes whose breach, whether intentional or unintentional, causes pollution, which is to be corrected by purification and atonement. In other devotional systems, such as in Polynesian societies, items and actions that were holy became taboo, and any violation of the connection between what is *tabu* and the deities with which these items and actions are associated is believed to bring divine wrath upon the violator, and possibly upon his or her community. In each case, however, the shared notion is that of separation of the pure from the impure, based on a religious dichotomy between the holy and the profane (representing good and evil, respectively).

Also central to understanding purification is a widespread belief that pollution can cross physical and spiritual boundaries through transfer between individuals and objects, all of which would in turn become impure and capable of spreading the pollutant. The human body is

one such domain where transition across a physical boundary creates pollution and requires acts of purification. Hair and nails, while attached to the body, are considered to be pure, as are blood, saliva, semen, and vaginal fluid when inside the body. But all these items are viewed as open to pollution by evil spiritual forces once separated from the body's protection, and they are all capable of causing impurity in any persons and objects with which contact occurs. Ultimately, therefore, it is not just a single person or item that is involved in the system of purity, pollution, and purification, but rather the entire society and environment in which the believers live.

ANALYSIS

Methodological dilemmas exist in the interpretation of purification rituals. Among the issues involved are cultural relativity, the notion that beliefs and rituals are personal and social phenomena having values and meanings assigned by practitioners, the necessity for interpretations to be based on particular contexts, and attention to the historical contexts in which beliefs and practices developed. For instance, the Hebrew Bible, or Old Testament, preserves an apparent distinction in belief, terminology, and praxes between ritual purity and moral purity. Israelites who were not *tahor* (pure) because of a deliberate or accidental transgression that had rendered them *tameh* (impure) could not enter the temple nor have contact with believers, activities, and items relating to the community's religious life. Purification with water, followed by isolation or at least refraining from contact with other persons and items was one prescribed means by which purity could be reestablished. In other situations, such as the purification of men after skin diseases and women after childbirth, sacrifices of burnt offerings (*'olah*) and sin offerings (*hatta'*) necessary for the atonement of sins were associated with the process of regaining purity. So a nexus took place between ritual and moral purity in Judaism. Another historically-based intertwining of concepts is seen in Roman praxis, where *lustrare* (lustration), which may have originated around the second century BCE as a propitiatory rite, came to involve sprinkling with pure water, and so was categorized by Greeks and then Romans as a purification ritual, or *katharmon*.

Perhaps most important to the study of purification is the variety of functions served. For example, purification and penance are viewed by Zoroastrians as necessary to counter evil, which is believed to function as a pollutant external to the holy. In Jewish, Christian, Muslim, Hindu, and Buddhist belief as well, purification can be used to negate impurity and defilement. But Hindu, Buddhist, and Jain penances, or *tapas*, do not negate impurity caused by contact with an external pollutant. Instead, they are undergone as a form of repentance. Self-flagellation, a practice among European Christians during the Middle Ages and still performed by Shia during the Muslim month of Muharram, involve acts of suffering intended to provide an expiation of sin and spiritual pollution. Despite the differences, however, all such acts of purification are connected by the intent of ensuring physical and, even more importantly, spiritual purity. Therefore, rites of passage or important transitory stages in the life cycle—such as birth, puberty, marriage, initiation into confessional communities and clerical organizations, and death—came to be associated with purificatory rites, as did individual physiological acts, whether voluntary or involuntary, such as urination, defection, sexual intercourse, childbirth, menstruation, and sickness.

In certain communities, such as among the ancient Israelites, medieval Jews, and ancient and medieval Zoroastrians, participation in purification was obligatory. Among other groups, such as the ancient and classical Greeks, participation in the system of purity and purification, or *miasma*, appears to have been at least technically a voluntary one. Yet whether obligatory or voluntary, such systems operated on consensus and coercion, and being regarded as impure often resulted in exclusion from communal life.

SELECT INSTANCES

Often, but not always, purification involves an external cleansing of the person or object, an internal expiation of the person, a period of isolation, and atonement for having become impure. The sequence of events varies, as do the items utilized during the process. The Zoroastrian ritual of *barashnum i no shab*, or purification of the nine (days and) nights, which is now used only before induction as a magus, or priest, is emblematic of such cleansing. A variety of items have been utilized by different cultures as purificatory agents. Earth (dust), urine, and blood are some purificatory agents utilized by specific communities. Dust has often been employed among Zoroastrians and Muslims as a substitute for water. The blood of a sacrificial bull served to purify Roman men undergoing initiation into the mysteries of Mithras during late antiquity. Smoke via fumigation would be used to purify household items among Jews and Zoroastrians.

Water is the most widely used substance for purification. The Christian practice of dipping fingers into a water basin upon entering a church (now quite infrequent) is a remnant of the custom of purification before prayer. All Muslims, irrespective of gender and age, perform *wudu'* (or *vuzu'*), a washing of the face, hands, and feet prior to entering a mosque. Zoroastrians perform a *padyab*, or rite of protection by water, by washing all uncovered parts of the body and face before praying at a fire temple. Water, because it symbolizes life and fertility,

is also the purificatory agent used prior to initiation in many religious communities—the Christian baptism is the most widely known example, continuing a Jewish and Gnostic tradition that was followed later by Mandeans and Manicheans. The Zoroastrian *sade nahn* (simple bath) and the Hindu *upanayana* (washing) serve similar purposes.

Purification rites using water are performed by orthodox male and female Jews, Muslims, Zoroastrians, Hindus, and Buddhists after sexual intercourse to purify themselves from contact with semen and vaginal fluid. Because water is associated with fertility, such purification may also occur prior to marriage to ensure that the new couple begins life together in ritual and moral purity. A Roman counterpart, the *lustration*, can also be mentioned in the context of purification before marriage. In Africa, washing a Yoruba bride's feet before entering the bridegroom's home is another such purification.

Menstruation and childbirth are two situations in which purification is widespread across cultures. The seclusion of menstruating women and the prohibition of sexual intercourse during menses and for a certain period of time thereafter (the time of menses plus one day for Zoroastrians, menses plus four days among Hindus, between three and ten days for Muslims, and seven days for Jews) has been practiced in order to ensure that the husband or male partner does not become polluted by the woman's ritual impurity. After childbirth, a period of separation or isolation of the mother is prescribed by many confessional groups—it would last for forty days among Jews, Zoroastrians, Hindus, and Buddhists. After menses and childbirth, Jewish women are required to undergo a ritual immersion, or *mikvah*, to regain purity, Zoroastrian women have to perform a *sade nahn*, and a ritual bath, or *ghusl*, is undergone by Muslim women. Only orthodox or orthopractic women follow the stipulations completely now. Most other Jewish, Muslim, and Zoroastrian women now regard menses, childbirth, and the blood associated with these conditions as merely physiological processes that have no moral connection, and so they simply bathe or shower in water as they would to routinely clean themselves. The Christian practice of churching—or reintroducing a new mother to the community after childbirth, isolation, and purification—has fallen into disuse.

Fears that sex, procreation, and menstruation were linked to evil and sin reinforced the concepts of impurity associated with them, generated gender-specific misogyny in beliefs and practices directed at women, and contributed to patriarchy in many ancient and medieval societies. Traditionalist communities in both Western and Eastern countries continue some of those dichotomies. One result, among orthodox Jews, Christians, and Zoroastrians, is the exclusion of women from the priesthoods.

Class and caste hierarchies were shaped in part by issues of purity, pollution, and purification as well. One example among Hindus, Buddhists, and Zoroastrians pertains to families that wash and transport corpses, and thus are often shunned as ritually impure due to their occupation. For Hindus, in particular, the *varnashrama dharma*, or system of endogamous classes, excludes persons who deal with corpses, bodily fluids, and bodily excrements in their work. Those individuals—called *dalit* (downtrodden), and more paternalistically *harijans* (children of the god Hari Vishnu)—have traditionally been social outcastes living apart from the other classes and unable to worship at temples. Any member of the three upper socioreligious classes—the Brahmins (priests and scholars), the Kshatriyas (warriors and politicians), and the Vaishyas (merchants, artisans, and landowners), all of whom are regarded as "twice born" and therefore permitted to study scripture—who has direct or indirect contact with an untouchable person, through touch, food, water, objects, or even the outcaste's shadow, becomes polluted. He or she is technically required to undergo a ritual bath for religious purity to be regained. Only in modern India (after 1949–1950) and Pakistan (after 1953) have secular national constitutions deemed the still fairly widespread practice of untouchability illegal.

CONCLUDING OBSERVATIONS

Vitiation of the efficacy of purification is thought to occur if the prescribed rites are not performed exactingly or if contact occurs again with impure persons and objects. Consequently, during antiquity and medieval times, the proper performance of purification rituals, specialization of individuals as purifiers, and an extensive literature on purification developed, as evidenced by the biblical *Leviticus* and the Iranian *Videvdad*. The violation of divine commandments and contact with evil spirits were said to be the ultimate sources of pollution. As a part of religion, purification was an important, widespread, socioreligious factor linked to good, evil, demonology, and even differential gender and class relations. Its sway began to attenuate slowly in Europe with the Enlightenment and the Industrial Age. From the eighteenth century onward, colonialism spread Western science, especially in connection with medicine, to other societies via secular education. As result, practices of purification have attenuated in the daily lives of many secularized women and men.

SEE ALSO *Buddhism; Caste; Christianity; Cultural Relativism; Hinduism; Humiliation; Islam, Shia and Sunni; Judaism; Magic; Purgatory; Religion; Rites of Passage; Rituals; Sanitation; Shame; Sin; Stigma; Vodou*

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Jamsheed K. Choksy

PUSH-PULL EFFECTS

SEE *Immigrants to North America; Migration.*

PUTIN, VLADIMIR
1952–

Vladimir Vladimirovich Putin succeeded Boris Yeltsin as president of the Russian Federation on December 31, 1999. A former KGB agent, Putin was appointed prime minister by Yeltsin in August 1999. When Yeltsin abruptly resigned at the end of 1999, he named Putin his successor. Putin subsequently won the presidency in elections in March 2000, and a second term in March 2004.

With the end of the Cold War and the collapse of the Soviet Union in 1991, Russia's international relevance ebbed. Consequently, Putin's presidency has been dominated by domestic concerns, such as the concentration of wealth and power in the hands of the new Russian entrepreneurial oligarchs and separatist violence in the province of Chechnya. The former problem arose when young Russian businessmen, taking advantage of a weak legal system that lacked adequate property rights and could not protect contracts, amassed huge amounts of money and influence in the 1990s when the Russian government began auctioning state-owned assets. Putin, in a crackdown on corruption and illegal business practices, embarked on a crusade against the "robber barons," resulting in the high-profile and controversial arrest of Mikhail Khordovsky, the head of the oil company Yukos, as well as the indictments of many others. While these attacks on Russia's megarich may have broken the power of the oligarchs, they have drawn criticism for leading to the consolidation of power in Putin's hands and the suppression of media outlets critical of Putin's administration.

The problem of Chechnya has plagued Russia since the first Chechen war began in December 1994. The first war ended in 1997 with a peace treaty that was violated when Chechen separatists invaded the neighboring Russian republic of Dagestan to consolidate power and establish Islamic rule. But the invasion and the subsequent bombing of buildings in Russian cities, allegedly by Chechen rebels, had a galvanizing effect on Russian public opinion, which simultaneously discredited Yeltsin's administration and strengthened Putin's image as a strong nationalistic leader, contributing to Putin's victory in the presidential elections in March 2000. By the end of 2006, the Russian military occupied much of Chechnya, but Chechen rebels had carried out several brutal attacks against civilian targets, including the seizure of a Moscow theater on October 23, 2002, which resulted in the deaths of 130 civilians, and the siege of a school in Beslan on September 1, 2004, in which 344 people, including 186 children, were killed.

While Putin's legacy in Russian politics remains unclear, he is trying to reestablish Russia's place on the world stage and to shepherd Russia through difficult political and economic transformations. Putin enjoys personal relationships with many Western leaders, including U.S. president George W. Bush, French president Jacques Chirac, and British prime minister Tony Blair. While Russia has been accommodating toward the West on issues such as counter-terrorism, other concerns such as domestic civil liberties have strained those connections. Putin has come under fire from Western observers for stepping back from Yeltsin's democratic reforms and moving Russia toward a semi-authoritarian regime. This domestic retrenchment has been accompanied by a halting rapprochement with the West, including acceptance of NATO's expansion into central Europe and the Baltic states, and gradual economic improvement. However, having failed to diversify Russia's domestic economy, the country's economic success rests mainly on the export of oil, casting doubts on the long-term viability of Putin's

reform plan. Critics fear that ultimately Putin's failure to enact meaningful political reform will undermine Russia's economic future as well.

SEE ALSO *Russian Federation; Yeltsin, Boris*

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Seth Weinberger

PUTNAM, ROBERT
1941–

It has been a fundamental concern of the social sciences to understand the individual, societal, and governmental traits that enable a human community to thrive. The research of Robert D. Putnam is driven by a desire to understand the conditions for effective governance. Putnam has examined the question of how national traditions of ideological style affect political decision-making in books such as *The Beliefs of Politicians* (1973) and *Bureaucrats and Politicians in Western Democracies* (1981). In *Hanging Together* (1987) and *Double-Edged Diplomacy* (1995) he also looked at how political leaders negotiate within the constraints of domestic political opinion and national interest to develop international agreements that are beneficial to all signatories.

Putnam is best known, however, for his work on the ways in which an active community—one characterized by a high level of social capital—contributes to the welfare of society and the effectiveness of government. Following Putnam's lead, the Organisation for Economic Co-operation and Development (OECD) and the World Bank have each issued reports on how social capital can assist economic development in sub-Saharan Africa, East Asia, and eastern Europe. As Putnam noted wryly in the epilogue to his book *Bowling Alone* (2000), he went overnight from being an "obscure academic" to being a guest of presidents and prime ministers and appearing on talk shows and in the pages of *People* magazine.

In *Bowling Alone* Putnam defines social capital as "social networks and the norms of reciprocity and trustworthiness that arise from them" (p. 19). Like financial, physical, and human capital, stocks of social capital can be built up or drawn down. Putnam finds that the accumulation of social capital in America is rapidly dwindling. His metaphor for the reduction of organized social networks, that Americans are now "bowling alone," is emblematic of their reduced willingness to engage with others for purposes ranging from community improvement to pursuing a hobby.

Putnam's first sustained treatment of the effects of social capital centered on Italy. Despite the equalization of financial resources available to Italian regional governments, some are far better than others in developing effective policies. Putnam discovered that those regions with a high level of social capital—including active participation in politics, widespread feelings of solidarity, trust and tolerance, and a social structure rich in associational life—enjoy more effective governance because they create an active partnership between government and society. Where social networks are widespread, Putnam notes in *Making Democracy Work* (1993, p. 113), "light-touch government is effortlessly stronger because it can count on more willing cooperation and self-enforcement among the citizenry."

Putnam's work in Italy led him to consider declining social capital in the United States. Over the last generation, America has experienced sharp declines in citizen participation in politics, in active membership in all manner of clubs and associations, in church membership and attendance, in involvement in unions and professional associations, and even in social gatherings and family dinners. We have become a spectator society, more likely to support community purposes through our checkbooks than through direct involvement. In *Democracies in Flux* (2002), Putnam and his colleagues found that other countries have also experienced declines in social capital. The United States is distinctive because the loss of connectivity and participation began earlier and has been steeper than elsewhere.

The immediate impact of a growing disconnection among family, friends, and neighbors is to reduce the quality of social and political life. Growing levels of political distrust and alienation, declining satisfaction with one's life, the physical decay of cities, and increases in crime, teen pregnancy, and mortality rates are all associated with diminishing social capital. As Putnam notes in *Bowling Alone*, "Weak social capital fosters the symptoms of social disintegration, such as crime and poverty, and those symptoms in turn further undermine social connections" (p. 287).

Critics have pointed out that the concept of social capital levies a special responsibility to understand social networks in poor communities, and for that matter in any community not organized in ways characteristic of predominantly white, middle-class neighborhoods. The constraints of income, leisure, and social amenities make it likely that poor communities will lag in social capital for-

mation compared to wealthier areas. There are alternative forms of social organization in poorer communities, though, and understanding social capital formation in such areas requires an appreciation of forms of association and collaboration that may be quite different from those characteristic of middle-class communities. Cultivating a broad understanding of social capital formation has always been an objective of Putnam's, implied in his juxtaposition of reading clubs with bowling leagues as two effective forms of association.

Some observers have pointed to a "dark side" of social capital. A tightly knit community is a community of control. When you know the religion, ethnic background, and political beliefs of everyone in your neighborhood, and when your neighbors know yours, there is pervasive pressure for homogeneity. One who does not (or cannot) conform remains an outsider. The same social networks identified by Putnam as creative of social capital—churches, clubs, social and civic organizations—are identified by Antonio Gramsci as structures that maintain the hegemony of the dominant group (Gramsci 1971).

Although communities with tightly knit social networks may be less tolerant, it is possible to combine highly developed social networks with collaborative attitudes toward people outside those networks. This is a phenomenon Putnam calls the "bridging" form of social capital. In *Better Together* (2003) Putnam recounts a number of strategies community leaders use to develop community networks that form bridges over existing social divides.

Given the significance of social capital for human welfare, it is important to know how stocks of social capital can be increased. Putnam's work on Italy demonstrated that regional variations in social capital remained strikingly similar for over 800 years, despite massive changes in government, society, and economy. His more recent work on the United States, however, emphasizes the positive effects of people's efforts to organize on behalf of some cause that will improve their lives. People do not set out to build social capital, but trust and social networks are nonetheless created as a by-product of person-to-person contacts that occur in the process of working for a common goal. Trends in social capital, like trends in financial or human capital, feature growth sectors even in a general context of stagnation or decline. Robert Putnam's work aids in the identification of what concerned citizens can do to increase the extent of interpersonal connectivity and trust in their societies.

SEE ALSO *Associations, Voluntary; Class; Communalism; Communitarianism; Democracy; Gramsci, Antonio; Hegemony; Networks; Networks, Communication; Social Capital; Social Movements; Trust*

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Thomas R. Rochon

PUTTING-OUT SYSTEM

The putting-out system was a system of domestic manufacturing that was prevalent in rural areas of western Europe during the seventeenth and eighteenth centuries. It evolved out of an early form of independent commodity production, constituting a *transitional phase* to what German social theorist Karl Marx (1818–1883) called the "formal" subordination of labor to capital.

The subordination of labor to capital refers to a situation in which the direct producers are *separated* from the means of production, depending on capitalists to provide them with the necessary tools, machinery, and raw materials to produce commodities. Such producers also receive a wage from the capitalists and have no control over the disposition of the products of their labor. Wage-earners

who still retain considerable control over their own labor process, however, are subject merely to "formal subordination" rather than to the "real subordination" to capital that characterizes the fully developed factory system of industrial capitalism.

Domestic workers involved in the putting-out system typically owned their own tools (such as looms and spinning wheels) but depended upon merchant capitalists to provide them with the raw materials to fashion products that were deemed the property of the merchants. Semi-finished products would be passed on by the merchant to another workplace for further processing, while finished products would be taken directly to market. The typical commodity product of the putting-out system was cloth (more specifically, wool textiles), although other commodities (notably ironware) were also produced under this system.

A salient feature of the putting-out system was the high degree of control that the direct producers retained over their own labor processes. Working at home (or near home) and at their own pace, domestic producers were well positioned to balance work-time and leisure-time in accordance with the pre-capitalist preference for leisure. The system also allowed adult family members to develop a domestic division of labor in which their children could contribute productive labor under direct parental supervision. These circumstances were conducive to the rise and consolidation of the nuclear family as a dominant family form—a form that was also encouraged by the earlier (and still-extant) system of independent commodity production.

With time, it became clear to the merchant "putter-outs" that their domestic employees required a greater degree of supervision to maximize their productivity and discourage "embezzlement" of raw materials or even finished products. Stephen Marglin argued in his 1974 article "What Do the Bosses Do? The Origins and Functions of Hierarchy in Capitalist Production," that it was these *social* considerations rather than any technological imperative that accounted for the rise of the factory system. By removing wage-earners from their own domestic environments and assembling them in a common workplace, merchant capitalists were in a better position to control the hours and pace of work and, through vigilant surveillance, to prevent embezzlement. By doing this, of course, many merchant capitalists transformed themselves into industrial capitalists, inaugurating the long transition to a "specifically capitalist" as opposed to an artisanal mode of commodity production.

Dan Clawson argued in his 1980 publication *Bureaucracy and the Labor Process* that Marglin's "social control argument" for the disappearance of the early putting-out system and the rise of the factory has many strengths but is one-sided in its dismissal of the important role played by new technologies (especially power-driven machinery) in facilitating the subordination of labor to capital. According to Clawson "It is much more fruitful, and obviously the only Marxist approach, to understand the process as one of class struggle: Capitalists tried to impose social control in the form of factories, while workers struggled to resist. In this struggle, technological innovations were crucial capitalist weapons to help change the balance of power" (p. 51). Furthermore, noted Clawson, by assembling workers in large factories and workshops, capital could significantly improve their productivity by imposing ever-more detailed divisions of labor and taking advantage of machinery requiring a central power source.

The putting-out system all but disappeared in western Europe by the nineteenth century. However, by the late twentieth century it experienced a revival, stimulated by the advent of new computer and information technologies. Thanks to computer technology, the Internet, and new systems of inventory control, it has become increasingly possible for capital to employ stay-at-home workers without sacrificing productivity, control over hours, or effective cost accounting. The products of this new putting-out system are varied, but its most typical product is information.

SEE ALSO *Autonomy; Capital; Computers: Science and Society; Conjunctures, Transitional; Division of Labor; Factory System; Internet; Labor; Machinery; Marx, Karl; Microelectronics Industry; Mode of Production; Productivity; Technological Progress, Economic Growth; Technological Progress, Skill Bias; Wages*

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Murray Smith

PUTTY-CLAY MODELS

SEE *Vintage Models.*

PUTTY-PUTTY MODELS

SEE *Vintage Models.*

PUTTY-SEMI-PUTTY MODELS

SEE *Vintage Models.*

PYGMALION EFFECTS

The Pygmalion effect, which is an interpersonal form of a self-fulfilling prophecy, borrows its name from the myth by the Roman poet Ovid and the subsequent play by George Bernard Shaw. Pygmalion was a sculptor who carved a sculpture of a beautiful woman from a piece of flawless ivory. He fell in love with his creation and begged the goddess Aphrodite to intervene on his behalf. She was so moved by his devotion that she brought the statue to life, and they lived happily ever after. In social psychology, Pygmalion effects occur when one person's beliefs or expectations about another creates or elicits the expected behavior, much as Pygmalion created his perfect woman, or Professor Higgins transformed Eliza Doolittle into a lady in Shaw's play.

Psychological research on Pygmalion effects began with Robert Rosenthal's studies that showed that experimenters' expectations for their participants' behavior could operate as self-fulfilling prophecies. Self-fulfilling prophecies were first defined by Robert K. Merton (1948) as originally false definitions of the situation that evoke new behaviors that make the false definition come true. In a research context, this means that experimenters may obtain significant results not because their theories are correct, but because they unintentionally bias participants to respond in the hypothesized manner. For example, Rosenthal and Kermit Fode (1963) showed that rats whose experimenters believed them to be specially bred to be "maze bright" actually completed a test maze more quickly than rats believed to be "maze dull," although in reality the "maze bright" and "maze dull" labels had been randomly assigned.

These studies initially generated tremendous controversy because they raised the inevitable question of the extent to which research findings are merely an artifact of experimenter bias. Sufficient studies were conducted to confirm that experimenter expectancy effects can and do occur and that, consequently, steps should be taken in the design of experimental studies to prevent them. The simplest way to do so is to conduct a study in a *double-blind* manner, such that neither the participant nor the experimenter is aware of the participant's experimental condition. Today, the double-blind randomized experiment is considered the gold standard of experimental design.

Rosenthal and his colleagues then turned their attention to other domains where Pygmalion effects could be operating. In 1968 Rosenthal and Lenore Jacobson published *Pygmalion in the Classroom*, describing the results of an experiment in which teachers at an elementary school were informed that certain of their students had performed well on a test of "academic blooming" and could be expected to demonstrate dramatic spurts in academic performance in the upcoming school year. In reality, the students identified as "academic bloomers" had been randomly chosen. Results of IQ tests administered at the end of the school year showed, however, that students labeled "academic bloomers" did in fact demonstrate significantly greater gains in IQ across the school year compared to control students. This finding similarly generated tremendous controversy, owing to the inescapable implication that some children who do not thrive in school may underperform not because of limitations in natural ability but because their teachers do not expect them to do well. This implication is particularly socially problematic when one considers that teachers' expectations are not random, but are systematically related to the socioeconomic status and race of the students.

The controversy was laid to rest in 1978 when Rosenthal and Donald Rubin published a meta-analytic review of the 345 studies of Pygmalion effects conducted to date. This review showed, first, that the combined significance level for Pygmalion effects was highly statistically significant across all studies and, second, that the average effect size was a Pearson correlation coefficient of $r = .33$, an effect considered to be moderate in magnitude. The Rosenthal and Rubin review thus provided definitive evidence that Pygmalion effects occur across a wide range of domains and are of practical importance.

Subsequent research on Pygmalion effects has been concerned primarily with documenting their existence in other interpersonal contexts, including everyday interactions and the workplace, and with understanding their underlying mediating processes—in other words, identifying the specific verbal and nonverbal behaviors given off by expecters that elicit the expected behavior from the targets. For example, Mark Snyder, Elizabeth Tanke, and Ellen Berscheid (1977) showed that men spoke in a warmer and friendlier fashion during telephone conversations with women whom they had been led to believe were very attractive, which in turn elicited warmer, friendlier, and more appealing behavior from the women.

Efforts to eliminate Pygmalion effects have been largely ineffective, owing to the fact that the behaviors that cause these effects are often subtle and not under the conscious control of the expecters. Future research needs to focus more on ways in which we can harness the power of positive expectancies and minimize the destructive effects of negative expectancies.

SEE ALSO *Self-Fulfilling Prophecies*

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Monica J. Harris

Q

QADHAFI, MUAMMAR AL
1942–

Muammar al Qadhafi was born in 1942 to a nomadic Bedouin family, which was part of the Qadhafa tribe. After completing his primary education, Qadhafi attended the Sebha secondary school in Fezzan, Libya, between 1956 and 1961, where he received a traditional Islamic religious education. The political events that took place during his school years—including the establishment of Israel and the defeat of the Arab armies and Gamal Abdel Nasser's (1918-1970) rise to power in Egypt—defined the fundamentals of his political philosophy and worldview. Likewise, his tribal background and Islamic education contributed to his piety and the high value he attached to family ties, egalitarianism, and personal honor.

Between 1961 and 1963 Qadhafi attended the University of Libya after which he joined the Military Academy in Benghazi, which was opened to members of low income classes and offered them an opportunity for upward economic and social mobility. During his stay at the military academy, together with a few of his fellow cadets Qadhafi formed a free officer movement, which four years later would depose the pro-western Libyan monarchy. After his graduation from the academy in 1965, he was sent to Britain for one year of military training at the Royal Military Academy at Sandhurst.

On September 1, 1969, in a bloodless coup, Qadhafi and a group of seventy young army officers seized control of the government and overthrew the Libyan monarchy. The coup received enthusiastic backing from the Libyan people and the army. The Revolutionary Command Council abolished the monarchy and proclaimed Libya as the Libyan Arab Peoples Republic.

QADHAFI'S POLITICAL IDEOLOGY AND FOREIGN POLICY

While Qadhafi occupied the position of head of state and the commander-in-chief of the armed forces, he left the day-to-day administration of governmental tasks to his subordinates and devoted his time to his revolutionary views concerning pan-Arabism, Islam, and the struggle against pro-western Arab reactionary forces, imperialism, and Zionism (including support of the state of Israel). Official government statements and the Libyan press referred to Qadhafi as the "Brother Leader," "Guide of the Revolution," and "Philosopher of the Revolution."

Instead of using socialism or western liberalism, Qadhafi gave primacy to his own vision of Islamic socialism and pan-Arab Nationalism. He called his form of government a "direct, popular democracy" and "Islamic socialism." He formed public committees to increase the opportunities for the Libyan people to exercise direct political participation and supervision of the government.

In 1973 Qadhafi proclaimed his Third Universal Theory, which consisted of socialism, popular democracy, Arab unity, and progressive Islam. His political philosophy appeared in his 1976 *Green Book*. Qadhafi called for the nationalization and redistribution of domestic industries and large private landholding, including religious properties. He also imposed a system of Islamic morals and outlawed alcohol and gambling. He directed the pub-

lic committees to supervise the mosques in order to undermine the influence of the clerics who were critical of the *Green Book* and his nationalization of private property.

Qadhafi advocated Arab and pan-Islamic unity and tried unsuccessfully to form unions with other Arab states including Egypt, Syria, and Tunisia. He has also been active in African politics and various pan-African organizations, and he has given extensive humanitarian aid to African states.

QADHAFI'S SUPPORT OF REVOLUTIONARY MOVEMENTS AND TERRORISM

Qadhafi also extended financial and military support to several liberation and opposition movements such as the Palestine Liberation Organization, Black September (another pro-Palestinian organization), and the Irish Republican Army (IRA) among others. His revolutionary committees were engaged in the assassination of some Libyan dissidents living abroad. By the mid-1980s he was widely regarded in the West as the key supporter of international terrorism.

In an attempt to force Qadhafi to abandon his support of terrorist groups, in March 1982 the United States declared a ban on the import of Libyan oil and the export to Libya of American oil technology. During January and March 1986, President Ronald Reagan (1911–2004) ordered the American navy to attack Libyan patrol boats, and on April 15, 1986, he directed the American air force to attack Qadhafi's headquarters in Tripoli and Benghazi. The United Nations also imposed upon Libya economic sanctions for Qadhafi's refusal to allow the extradition to the United States or Britain of two Libyans accused of planting a bomb on Pan Am Flight 103 over Lockerbie, Scotland, in December 1988.

QADHAFI'S ECONOMIC EXPERIMENT FALTERS

The 1990s witnessed increasing disapproval of Qadhafi's revolutionary experiment by Islamic clerics, the middle class, professionals, and students. Moreover, the Libyan economy experienced serious problems resulting from the international sanctions, the decline in the price of oil in the second half of the 1980s and the 1990s, and poor governmental economic planning. This economic downturn limited the capacity of the government to provide employment and social welfare benefits to the politicized youth and the urban poor. The economic crisis was made worse by the fact that half of the Libyan population at the time was below the age of 15.

Following years of international isolation and growing socioeconomic challenges, and despite the anti-imperialist rhetoric against the West, Qadhafi's revolutionary ideals did not come to fruition. Not only did his Arab unity schemes fail, but also the various armed revolutionary movements he backed did not achieve their goals, and the demise of the Soviet Union left Qadhafi more vulnerable to his main archenemy, the United States.

In the wake of these developments, Qadhafi began to redirect Libya's domestic and foreign policy starting the second half of the 1990s. He initiated economic liberalization measures to revitalize the economy and to attract foreign capital and investments. In his effort to lift the United Nations sanctions, in 1999 Qadhafi pledged to fight Al-Qaeda and offered to open up Libya's weapons program to international inspection. Through the mediation of South African president Nelson Mandela, Qadhafi gave up the two accused Libyans for the bombing of Pan Am Flight 103 in order to be tried in the Netherlands. In August 2003 Libya formally accepted responsibility for the Lockerbie bombing and Qadhafi agreed to pay compensation of $2.7 billion to the families of the 270 victims.

The terrorist attacks of September 11, 2001, availed Qadhafi the opportunity to further normalize Libya's relations with the West. Qadhafi condemned the attacks and extended his condolences to the American people, and he supported the United States' right to retaliate. As a sign of his abandonment of supporting international terrorism, Qadhafi started sharing information about Al-Qaeda and other terrorist groups with British and American intelligence services. In 2003 he allowed international inspectors to dismantle Libya's weapons of mass destruction. Because of Qadhafi's moves, the UN sanctions were lifted, and in March 2004 British prime minister Tony Blair became the first western leader in decades to visit Libya to meet with Qadhafi.

SEE ALSO *Al-Qaeda; Arabs; Blair, Tony; Coup d'Etat;* Green Book, The *(Libya); Islam, Shia and Sunni; Nationalization; Organization of Petroleum Exporting Countries (OPEC); Pan-Africanism; Pan-Arabism; Petroleum Industry; Reagan, Ronald; Revolution; Socialism, Islamic; United Nations; Weapons of Mass Destruction*

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Emile Sahliyeh

QUALIA

SEE *Functionalism.*

QUALIFICATIONS

In any society where good (desirable) jobs and high social status positions are relatively scarce, elites put mechanisms into place to limit access. Whereas in traditional societies "proof of ancestry" served that gatekeeper function, in modern societies the gatekeeper mechanism is expected to be the system of *qualifications*. The German social theorist Max Weber famously noted the rise of education, and specifically certificates (diplomas), as the preeminent form of qualification in modern society. In delineating the distinction of a society/system dominated by bureaucratic form (as opposed to traditional or charismatic forms), Weber wrote that office holding in bureaucracy was a vocation that required at least a prescribed course of training and working experience and oftentimes specialized examinations. The system of examinations was, then, a way to ensure the qualifications of any applicant (of any social strata), and it took the place of the traditional selection by noble birth.

EDUCATIONAL CREDENTIALING

The sociologist Randall Collins, studying U.S. society closer to the turn of the millennium, noted that education and parent occupational level were indeed the most important predictors of occupational success. Yet Collins, in the influential book *The Credential Society: An Historical Sociology of Education and Stratification* (1979), challenged the notions that (1) education led to skills acquisition and that (2) skills were the main determinant of occupational success. Instead Collins posited that while educational credentials were still the key to occupational achievement, this correlational path need not, and often did not, run through the intervening variable of skills acquisition. Collins noted that most skills could be learned on the job, but the best jobs were saved for the applicants with the best educational credentials. This line of thinking was presaged by the work of postwar French sociologists such as Georges Friedmann (1946) and Alain Touraine (1955) who claimed distinctions between the concepts of qualification (a social construction with historical specificity) and skill (job-specific mastery). Touraine was particularly concerned with how the Industrial Revolution increasingly caused "social" qualifications to replace technical competence as measures of worker value.

Support for the value of education as one of these new qualifications was also proffered in economics by the Nobel laureate A. Michael Spence. Spence argued in 1973 that in a (labor) market characterized by imperfect information, individuals possessing qualifications would need to signal such qualifications to potential employers. Spence noted that education worked as a signal of qualification in the labor market. Taken together, the arguments of Collins and Spence suggest that whether or not education actually bestows qualifications, it bestows the presumption of qualifications in a competitive labor marketplace. As such, it is often not the actual possession of qualifications that leads to a job but rather a credential or signal of employability that leads to a job. That such credentials or signals are not equitably accessible by all members of a given society has been a continuing source of social science inquiry and popular consternation.

Historically, in societies stratified by race, gender, and class, educational credentialing has stratified correspondingly. Human Rights Watch concludes that children across the globe face discrimination in access to education, and thus the educational imparting of qualifications, based on race, ethnicity, religion, and other status. A 2003–2004 UNESCO report confirms that gender disparity in education remains a deep concern for much of the developing world. This concern is exacerbated in societies that are increasingly characterized by the need for knowledge and technological expertise acquired through education.

Yet in many Western postindustrial societies, gender parity in access to education (and even higher education) has been largely achieved. While women in these societies have made great strides in educational credentialing, racial minorities have fared slightly less well, and lower social classes still less well, even though progress has been made. For example, racial discrimination embedded both inherently in a qualification vehicle and in that qualification's use as an exclusionary moving target was addressed

directly by the Supreme Court of the United States in 1992. The U.S. Supreme Court, in *United States v. Fordice*, 505 U.S. 717 (1992), noted that the State of Mississippi had used minimum ACT test scores first as a way to racially segregate institutions of higher education and then, as black student scores on these exams rose, as a way to maintain segregation by setting minimums out of reach of even the highest performing students of color. In striking down Mississippi's sole dependence on a discriminatory qualifier, the court further noted that most other states used a variety of qualifications in order to compensate for discrimination embedded in any one indicator and thereby improve racial balance on higher education campuses. The case demonstrates both the progress made and the barriers still to overcome in the United States' use of qualification for selection purposes.

OPPORTUNITY AND OCCUPATIONAL OUTCOMES

But even if women and racial minorities (though not necessarily lower and working classes) increasingly have access to qualifications (taught skills or merely credentials) afforded by attendance at both non-elite and elite colleges and universities, there is still evidence that coveted jobs are not meted out by qualifications alone. Indeed, social capital theorists are quick to point out that many individuals may share the same qualifications (or human capital) when seeking jobs yet may not achieve the same occupational outcomes due to the scarcity of opportunities. Groundbreaking research by Mark Granovetter in 1974 empirically confirmed the common wisdom that in job placement, it is often not "what you know" (formal qualifications) but rather "who you know." Even in postindustrial, bureaucratized societies, then, traditional modes of meting out jobs based on social capital and networks oftentimes negate the value of educational qualifications.

Further, some occupational qualifications depend less on education and training and more on physical or biological traits. In the United States, for example, societal controversies have arisen over the stated qualifications for jobs such as firefighters and police officers: Admittance to these occupations typically entails passing physical ability and strength tests that have often discriminated on the basis of sex. U.S. statutes, such as Title VII of the 1964 Civil Rights Act, that prohibit discrimination in employment based on race, color, religion, sex, and national origin still allow exceptions in cases where an employer can demonstrate that sex, religion, or national origin is a bona fide occupational qualification (BFOQ). British law, under the sex Discrimination Act of 1975, also allows for limited discrimination in recruitment, training, promotion, and transfer in a job for which the sex of the work is a "genuine occupational qualification" (GOQ). As in the U.S. law, the occupational qualification mandating preference for a particular social category exists when the essence of the job makes it unsuitable for persons in other social categories. In these cases, then, sex, religion, and national origin may denote actual job qualifications and not just mark inequitable access to job qualifications.

Due to the richness of the concept, social scientists have been interested in qualifications as both an independent and dependent variable. As noted above, there is a long social science tradition of trying to understand precursors and access to qualifications in the job market (often focusing on racial and gender disparity in possession of job qualifications). As well, newer literature is beginning to center questions of qualifications as independent variables in models of income and occupational prestige, for example. The French sociology of work tradition is a reminder that qualifications are often social constructions, manipulated in the interests of elites. And finally, a continuing challenge is the interchangeability of the constructs of job qualifications and KSAs (knowledge, skills, and abilities) in the management and sociological literature coming out of the United States.

SEE ALSO *Labor Market; Skill; Stratification*

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Rikki Abzug

QUALITY CONTROLS

Quality control is a management process that provides information about the conformity of either products or services to prespecified standards of utility. This function first became professionalized during the nineteenth century as a means for addressing the growing problem of the asymmetric distribution of product information that

attended the rise of giant business enterprise and the emergence of mass markets. On the firm level, the growing scale and scope of manufacturing created pressure for the development of new metrics for informing management decision processes. While cost accounting was effective in ascertaining profitability, it provided little insight into the factors that affected output quality. This represented a potentially serious informational shortcoming as the largest manufacturing entities sought the realization of economies of scale through long production runs of standardized products.

On the consumer level, industrialization changed the nature of the relationship between consumers and producers. Unlike the shop economy of the preindustrial era, the line of communication connecting these groups for resolving quality issues became attenuated by the intermediation of longer supply chains and more impersonalized distributional arrangements. Industrialization also displaced indirect modes for assuring quality through guild or craft union validation of artisan skills through apprentice, journeyman, or master status. Many firms following scientific management principles enhanced the efficiency of their production lines by systematizing work effort through worker time-and-motion studies. These initiatives de-emphasized the role of the skilled craft practitioner and encouraged the placement of greater reliance in mass production on cheaper un- or semiskilled labor.

Quality assessment had within its compass the ability to surmount the problems of informational asymmetries about product quality in two ways. First, firms could apply quality standards to define what constituted a steady-state condition in their manufacturing. This new firm-specific knowledge, used in conjunction with accounting and financial data, could enhance efficiency by extending organizational capacities for planning, coordinating, controlling, monitoring, and evaluating production activities. Such study was also important to corporations in determining the economic limits of product inspection. Second, the dissemination of reliable information about product standards helped to eliminate asymmetries in external markets, thus contributing to a reduction in consumer risk perceptions. Such knowledge also helped consumers weigh more objectively the trade-off between performance benefits and costs in project analysis. Moreover, quality standards affected producer reputations by providing consumers with a basis for making grading comparisons between the output of rival suppliers.

Initially the focus of quality assessment centered on products rather than processes. The measurement of key design attributes and their alignment with engineering design standards became paramount. This involved the use of such measurement devices as gauges, calipers, jigs, and meters to determine if products met physical and performance requirements detailed in specification documents and blueprints. Such evaluation also involved destructive testing to measure the physical limits of materials. These early approaches, however, proved insufficient because they lacked an effective means for assessing the significance of test data. The statistical summarizations of this period were mere enumerations, devoid of a scientific basis for defining the nature of quality or for determining whether it had been effectively controlled in production.

The Bell System in the United States achieved a major breakthrough in surmounting problems of quality definition and analysis in the 1920s by developing new approaches that emphasized process and probability theory. The initial focus of innovation centered on the captive manufacturing subsidiary Western Electric, which supplied most of the material requirements of the Regional Bell Operating Companies. Such methodological innovation responded to regulatory pressures to provide more economical and efficient communication services through the deployment of more reliable equipment. In 1925, quality-control research centered on the inspection engineering department of the Bell Laboratories. Prime movers in establishing what became known as "statistical quality control" included Walter A. Shewhart of the theory and special studies unit and Harold F. Dodge of the inspection methods and results unit. Working in close coordination with the firm's manufacturing departments, they defined a unifying theory and set of applied methodologies that revolutionized quality engineering by 1928.

The assessment of quality at Bell benefited from several new analytical constructs based in probability theory. The control chart, for example, exploited the properties of the normal curve to clarify the economic limits of control. It distinguished between "common causes of errors" that were random and uncontrollable and "assignable causes of error" that could be rectified through management action. The trade-offs inherent in sample selection and evaluation became better illuminated from the specification of consumer's risk (Type I) involving the incorrect acceptance of an unreliable sample and producer's risk (Type II) involving the incorrect rejection of a valid sample. Customer planning was facilitated by the determination of the "average outgoing quality limit," a steady-state metric indicating the maximum number of defects in product shipments. In these and other ways probability theory increased the analytical power, flexibility, and range of quality engineering.

The new knowledge subsequently gained higher professional status in the United States and abroad. Shewhart taught the first collegiate course in quality engineering at Stevens Institute of Technology during the late 1930s, and

soon thereafter Armand V. Feigenbaum of General Electric wrote the first doctoral dissertation on the subject at the Massachusetts Institute of Technology. During World War II, the new techniques were applied extensively in the U.S. Army Ordnance Corps with the assistance of Bell System advisers. W. Edwards Deming was also instrumental in organizing training programs for national defense industries through the War Production Board. In the postwar era, engineers with the Civil Communication Service of Supreme Command Allied Powers helped to revive interest in the topic in Japan. The Japanese Union of Scientists and Engineers began sponsoring courses presented by Deming, Joseph Juran, and others. In 1947 a new professional association, the American Society for Quality Control (now the American Quality Society), was founded. In 1956 the European Organization for Quality Control was formed.

While manufacturing quality control has continued to evolve, the new frontier involves the use of its concepts to address problems of informational asymmetry for services. The U.S. General Accounting Office, for example, reflected a concern about quality in audits of federally financed projects by requiring the evaluation of program effectiveness and results. Studies of environmental pollution, for example, often employ the probabilistic tools initially developed for industry. The notion of quality has also affected professional governance, albeit in a less quantitative way. The American Institute of Certified Public Accountants since the 1980s has required accounting firms to evince compliance with practice-quality standards as a condition of membership.

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Paul J. Miranti

QUALITY OF SERVICE

SEE *Quality, Product.*

QUALITY, PRODUCT

The product quality concept is often surrounded by some vagueness. Sometimes it is associated with such imprecise notions as "goodness," "expensiveness," "having class," and "satisfying" (Robson 1986, p. 69), albeit all these notions of quality point to the broad idea of customer satisfaction.

Quality is also sometimes defined as freedom from deficiencies or conforming to specifications, or predetermined standards that remain largely assumptive and imprecise. Because quality is perceived as "freedom from deficiencies," the concept is often interpreted to mean quality control and thus the exclusive concern of a special unit of the organization that may be called the Quality Control Department.

In recent years, however, a new quality concept has emerged that appears to focus more on product aspects such as utility, functionality, brand, packaging, and aftersales service that meet the needs of customers in a wider way. Quality is perceived as "meeting the requirements of the customer, now and in the future" (Cole 1996, pp. 232, 237–238). The quality concept is therefore often related to the customer, and so in this sense we talk about not only quality of goods but also quality of services such as accounting, invoicing, and communication.

Customers also include internal customers, people in the production line who are supplied with or receive the product of another's work. The inclusion of internal customers has meant that theoretically as well as practically the quality concept covers those things that affect not only end users, who may not even be seen or known, but everyone involved. Consequently, it becomes incumbent on every worker to meet the requirements of his or her own customer(s).

This new dimension to the quality concept underscores a shift in emphasis from quality control to quality of service, from the culture of "appraise and react" to the prevention of defects. Quality improvement and emphasis on quality concern everyone in the organization, and so reflect a realization of the real importance of quality.

The quality policy of a company that aims at defect-free performance would probably rest on deficiency-prevention programs. Investment in preventing errors involving costs in getting things done right the first time or preventing things going wrong in the first place through proper training of workers, planning ahead, and investing in appropriate tools, techniques, and technolo-

gies can significantly reduce total costs of failure and quality. Theoretically, the economics of quality would probably state that reduction in the number of errors through prevention would tend to lead to reduction in total costs. Consequently, quality as a policy option may be warranted by solid commercial and financial considerations.

Technological changes and innovations have the potential to improve techniques of work, and by preventing mistakes and increasing productivity, a better way of doing work assures product quality. Other prevention activities capable of changing quality include monitoring worker efforts and efforts aimed at improving managerial quality or skills. Because the organization depends on the skills, knowledge, innovativeness, and motivation of workers, improved managerial skills and quality can integrate and align employee contributions with organization strategy for achieving results, increase problem-solving capacity, provide understanding and use for information systems to support decision-making and evaluation processes, and develop paradigms to understand and direct all parts of the organizational system in the same direction to achieve quality objectives.

Another factor capable of affecting changes in product quality is market conditions, particularly market pricing. Generally, organizations sell and people want to acquire the benefits of products. Much as other aspects of the product, quality has benefits that potential buyers want, such as long product life, absence of faults and subsequent breakdown, reliability, and increase in value. However, for some types of products such as disposable goods (syringes or plastic cutlery) whose one-time benefits may be immediate, quality may take a backseat to such characteristics as hygiene, functionality, durability, or aesthetics. Quality may be emphasized because of the need to sell benefits. Prices can be raised if the product can offer added benefits, and generally, depending on what is important to buyers, price changes arising from improved product quality affect customer buying behavior. For instance, if price is not a major factor in the buyer's analysis, a marginal increase in quality may prove more attractive.

Productivity studies tend to suggest that productivity increases improve quality, lower prices, and generally can affect society in significant ways. However, similar studies of the public sector show that there has been a lack of growth in the productivity in public services such as hospitals and public schools while, over time, the cost of providing public goods increases as a result of new technologies and better trained public service providers. Baumol's cost disease is often used to describe this lack of growth in productivity and inflation in the cost of bureaucracy. Baumol (2003) argues that because many public administration activities are heavily labor-intensive and take place under relatively monopolistic market conditions, and because the demand for public goods is generally inelastic, there is little growth in productivity over time.

There is a widely held view that a high relative quality position (often incompatible with a low relative cost position) can be achieved through product differentiation. Product differentiation involves marketing or designing product that customers perceive as unique. Products may be differentiated along key features of the product or minor details, and at the market level, differentiation becomes the means by which the quality of goods is improved over time, mainly as a result of innovations such as introduction of new improved or better products. However, where goods presented in the market are ordered according to their objective quality so that one may be considered better than another, vertical differentiation occurs. This differentiation can be made along one definitive or decisive feature, along a few features each of which has a range of values, or across a large number of features each of which has only a presence or absence "lag." It is possible with the last two to have a product that is better than another using one set of criteria but worse than the other using a different set of criteria. Common with supplied goods, vertical differentiation, which produces perceived differences in quality by different customers, may play a key role in customer buying behavior. Though advertising can influence or bias customer perceptions of these differentiating features, what makes the big difference in comparing widely different goods fulfilling the same needs is the nature of the need fulfilled, as often is the case with necessities or luxury goods.

This model of vertical product differentiation regards buyers in competitive market situations basically as price insensitive, for customers without their own opinion or means of judging quality will often rely on price to make their calculations of quality, so the quality-price relationship is often upwardly sloped. This model has been used to study the market structures that emerge from differentiation and to demonstrate that better production has a higher price and more expected benefits for consumers. However, a neoclassical model of product differentiation has been developed to explain the probable exploitation of market situations where customers exhibit bounded rationality because they lack knowledge and information-processing capability for market choices they make so that not all highly priced goods are of high quality (Piana 2003). This neoclassical model shows that the customer, a hyperrational agent, maximizes utility by choosing an optimal collection of things and thus exhausts his or her budget.

In contrast, when products are differentiated by minor details or features that cannot be ordered, horizontal differentiation occurs. A model of horizontal product differentiation captures consumer behavior for various

versions of the market. For instance, ice cream flavors or a product with different colors or styles presents different versions of the same product. While consumers may have consistent preferences for one version or the other, it is common for a supplier of many versions of the same product to determine a unique price for all of them. Nevertheless, the rating of a product according to different measures of quality or taste depends on its physical and immaterial features. Manez and Waterson (2001) reviewed the implication of horizontal and vertical product differentiation on market structure under the assumption of single-product firms and also examined the major results of multiproduct firm models.

On the effects on product market and consumer behavior, Christou and Vettas (2003), in their study of advertising within a random-utility, nonlocalized competitive model of product differentiation, maintain that in a symmetric equilibrium, advertising is suboptional when product differentiation is small and excessive otherwise. They believe that increasing the number of firms may increase or decrease the market price. They believe that in a quasi-concavity, profits may fall because firms may prefer price deviation as they target only those customers who are informed about their product.

Differentiation by quality protects a business from competitive rivalry, for it creates customer loyalty, lowers sensitivity to price, and protects the business from other competitive forces that reduce price-cost margins (Phillips, Chang, and Buzzell 1983). Competition may exist in the context of product rivalry where differentiation is achieved by both quality and brand or from some specific product characteristics or brand. Ford and General Motors both sell lines of automobiles having specific product features such as economy compacts, luxury cars, and so forth, and within these limits both companies provide similar offers, but then customers typically remain aligned to each depending on their valuation of quality or other perceived product benefits.

In a relatively free competitive market, vertical differentiation may permit businesses to increase profits by offering products that appeal to different types of customers, though cutthroat or head-on rivalry may result if customers perceive these products as good substitutes. Where, however, the market is open but monopolistic—what is often described as a "contestable market"—transient or opportunistic firms may not worry about quality as they may move in, exploit the gains, and leave before market conditions turn sour. Quality of goods and services enables an organization to achieve excellence and engage in profitable activities. Harold Greneer of ITT once remarked that quality was their most profitable product line, whereas IBM's policy on quality has been one that seeks complete defect-free performance. In fact, IBM and ITT have in recent years invested millions of dollars on quality to reap immense benefits, which include cost reduction, increased profitability, and a reputation for excellence.

In spite of these apparent gains of quality, however, there appears to be inherent difficulties in measuring product/service quality. Quality is often perceived in relative terms and so presents the problem of determining how much good is "good," what level of satisfying is "satisfactory," or how high enough in the hierarchy of classes a product has to be before it is considered "classy." These difficulties of assessment have given rise to many companies establishing acceptable quality levels (AQLs) for their products and services, a level determined by what each company considers appropriate.

SEE ALSO *Competition, Monopolistic*

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Fred Ozor

QUANTIFICATION

Quantification is the act of giving a numerical value to a measurement of something, that is, to count the quanta of whatever one is measuring. Quantification produces a standardized form of measurement that allows statistical procedures and mathematical calculations. Quantitative research methods are based on a natural science, positivist model of hypothesis testing. In the social sciences these methods attempt to collect and analyze numerical data on social phenomena, seeking to understand the links between a relatively small number of attributes across a wide variety of cases. Thus, quantification is especially useful in describing and analyzing social phenomena on a larger scale.

THE RISE OF QUANTIFICATION

During the last centuries quantification has become immensely prevalent in the social sciences. Practices of quantification have been widely used in the West since the thirteenth century, and even before that. But only in the first part of the seventeenth century did the idea that social topics may be subjected to systematic quantitative analysis begin to acquire real dominance in Europe. These tendencies grew stronger during the nineteenth century, and by the first half of the twentieth century the "quantitative paradigm" had become extremely dominant in most of the social sciences, including economics, psychology, sociology, and political sciences.

There are a few prominent explanations for this growing use of quantitative measures in western society and in the social sciences in particular. First, the growing prominence and success of the natural sciences, especially physics, drove social scientists to imitate their use of quantitative measures in the hope of acquiring similar success and precision (see for example the 2002 book *How Economics Became a Mathematical Science*, by Roy Weintraub).

A second explanation emphasizes the rise of capitalism and the rational spirit in western societies, described by sociologist Max Weber in his 1905 book *The Protestant Ethic and the Spirit of Capitalism*. Weber describes a move toward a more rational, bureaucratic, and calculative life, and the increased tendency to quantify social entities and behaviors is well explained in light of these changes. Some scholars ascribe the proliferation of quantification mainly to the rise of the modern centralized state, in which public officials face the need to efficiently manage increasing populations and large-scale social institutions. Finally, in his 1995 book *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life*, Theodore Porter suggests another interesting explanation. Porter argues that the tendency toward quantification in modern society is not so much a response to the success of the natural sciences, as it is an attempt of weak professional groups to pacify social and political pressures for greater accountability. In other words, according to Porter, the surge of quantification in the social sciences was driven mainly by the desire to create an appearance of professionalism and gain legitimacy for social research and public policies.

THE MERITS OF QUANTIFICATION

Quantification holds prominent advantages to scholars and policy makers. Its advocates believe that it increases precision and generalizability, while minimizing prejudice, favoritism, and nepotism in decision-making. According to this view, the decontextualized and value-free mathematical symbols used in statistical analyses assist in achieving objectivity, stability, and fair judgment as decisions become more businesslike. In this sense the quantification and standardization of the social life have liberating and emancipatory effects.

Quantification is also economical. Many feel that in today's world, with the inevitable avalanche of numbers that arises from the growing state apparatuses and with the fast advancing information revolution, there is simply too much information to be efficiently handled with detailed qualitative descriptions. Trying to make complicated decisions without finding a way to reduce the amount of information to be considered may be overwhelming. Quantification, therefore, serves as a necessary tool for organizing and discarding information, making the flux of data more manageable. It recognizes that people have bounded cognitive skills and can only process limited amounts of information. Quantification saves time, helps in making sense and analyzing large datasets, and facilitates large-scale research, planning, managing, and decision-making. In light of these advantages, some scholars believe that every aspect of the social world can, and in fact should be quantified. Psychologist Edward Thorndike, for example, claimed at the beginning of the twentieth century that "Anything that exists exists in a certain quantity and can be measured" (Custer 1996).

THE SHORTCOMINGS OF QUANTIFICATION

But many disagree with this approach. First, critics of quantification claim that it sacrifices the substance and authenticity of the information. Transforming social experiences into standardized numbers leads to alienation and distances many groups from these experiences. It also allows decision makers to escape accountability, as numbers and statistics become refuge from personal responsibility. In that sense, quantification is actually a way of making decisions without seeming to decide, as decisions are left to the numbers. Quantification, according to its opponents, symbolizes the takeover of the market econ-

omy over social life, eliminating values of recreation and spontaneity. Another problem is that quantification facilitates the emergence of new categories such as "the nation" or "public opinion." These terms are actually materializations of complex social actions and institutions, but in the process of quantification they turn into "things." In the process of quantification, important information is lost for the sake of simplicity and calculability. But in areas such as environmental preservation, intimate relationships, identities, rights, and religion, these attempts often distort the nature of the category and fundamental qualities disappear. At the same time, the dominance of quantification also erases existing objects and relations, making some social phenomena, which cannot be quantified, practically invisible.

Finally, critics of quantification claim that it is often extended into areas in which it does not make statistical sense. This is especially true when measuring social entities, which are often flexible and subject to revision and change. For example social scientists often criticize the quantification of categories such as race and ethnicity, claiming that these are not real and stable entities, but rather fluctuating social definitions and classifications. This problem is exemplified in population censuses, in which some categories are invented and imposed on people by state officials, even when they do not coincide with personal identities and perceptions of self. In addition the interpretation of quantitative representations of social realities, such as race, fails to place these realities in the social context of the real world. This failure, in turn, may lead to misconceptions and erroneous judgments.

Despite these problems, quantification is clearly a process that cannot be avoided. It is an important and viable component of today's social world, and there are few who would argue for returning to a prequantification world. Still, much more thought must be given to the problems of quantification and to its pitfalls. Researchers and policy makers must identify the places where it distorts the reality of social life and be much more cautious when applying it to social categories.

SEE ALSO *Alienation; Bureaucracy; Capitalism; Data; Demography; Ethnicity; Information, Asymmetric; Mathematics in the Social Sciences; Professionalization; Protestant Ethic; Race; Rationality; Science; Social Science; Social Science, Value Free; Weber, Max*

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Eran Shor

QUANTITY INDEX

We begin our discussion of quantity indexes by setting up some basic notation: Let $p^0 = (p_1^0, \ldots, p_n^0)$ be a vector of prices for n goods in period 0. Let $p^1 = (p_1^1, \ldots, p_n^1)$ be a vector of prices for the same n goods in period 1. Similarly, let $q^0 = (q_1^0, \ldots, q_n^0)$ and $q^1 = (q_1^1, \ldots, q_n^1)$ represent quantity vectors for the n goods in periods 0 and 1, respectively.

Total expenditure in the two periods is the sum (across all n goods) of the prices multiplied by the corresponding quantities: $Y^0 = \sum_{i=1}^{n} p_i^0 q_i^0$ and $Y^1 = \sum_{i=1}^{n} p_i^1 q_i^1$. Thus, the ratio of total expenditures in the two periods equals Y^1/Y^0. If total expenditure is increasing from period 0 to period 1, then Y^1/Y^0 exceeds 1. If total expenditure is decreasing, then Y^1/Y^0 is less than 1. Total expenditure can increase from one period to another simply because prices are increasing. For example, suppose that the quantity vectors are identical in the two periods but the prices of all n goods increase from period 0 to period 1; then total expenditure will also increase.

Quantity indexes can be used to remove the effects of price changes in order to facilitate comparison of expenditures in different time periods. We will use the notation Q_{01} to denote a *quantity index* between periods 0 and 1. If the quantity index exceeds 1, then it means that expenditure is increasing from period 0 to period 1 after the effects of price changes have been removed. Similarly, if it is less than 1, then it means that expenditure is decreasing after the effects of price changes have been removed. In the context of national income accounting, quantity indexes can best be thought of as measuring changes in

real or *inflation-adjusted* expenditure; see "How Do I Use Chain-Type Indexes (or Chained Dollar) Measures of Economic Activity, Such as Real GDP?" under FAQs at http://www.bea.gov/index.htm.

A simple and easy-to-interpret way to remove the effects of price changes and, therefore, to calculate a quantity index would be to compare the cost of the quantity vectors in the two periods using a common set of prices. The *Laspeyres quantity index*, for example, uses the prices from period 0 and is defined as follows: $Q_{01}^{L} = \frac{\sum_i p_i^0 q_i^1}{\sum_i p_i^0 q_i^0}$. If Q_{01}^{L} exceeds 1, then it means that the period 1 quantity vector costs more than the period 0 quantity vector in period 0 prices. Similarly, if Q_{01}^{L} is less than 1, then it means that the period 1 quantity vector costs less than the period 0 quantity vector in period 0 prices.

The *Paasche quantity index* is analogous to the Laspeyres quantity index, but with the period 1 prices replacing the period 0 prices. The resulting index is defined as follows: $Q_{01}^{P} = \frac{\sum_i p_i^1 q_i^1}{\sum_i p_i^1 q_i^0}$. If the quantity vectors are identical in the two periods, then both Q_{01}^{L} and Q_{01}^{P} will equal 1 even though Y^1/Y^0 may well differ from 1.

Later, we will develop the concept of superlative quantity indexes, which are preferable to these simple quantity indexes.

PRICE INDEXES, QUANTITY INDEXES, AND THE WEAK FACTOR REVERSAL TEST

Price and quantity indexes are closely related concepts. A *price index*, P_{01}, is a function of the price and quantity vectors in periods 0 and 1, which measures the change in the prices of the n goods between the two periods. If it is greater than 1, it means that prices increased from period 0 to 1. If it is less than 1, it means that prices decreased.

A price index and a quantity index satisfy the *weak factor reversal test* if the following equation holds: $P_{01}Q_{01} = Y^1/Y^0$. Weak factor reversal can be used to formalize our interpretation of quantity indexes as removing the effects of price changes in order to facilitate comparison of total expenditure in two different time periods.

Assume, just for simplicity, that both total expenditure and prices are increasing between the two periods, so that $Y^1/Y^0 > 1$ and $P_{01} > 1$. If the percentage increase in prices, implied by the price index, is exactly the same as the percentage increase in total expenditure, then $P_{01} = Y^1/Y^0$ and, consequently, the quantity index will equal 1. If the percentage increase in prices exceeds the percentage increase in total expenditure, then $P_{01} > Y^1/Y^0$, implying that the quantity index will be less than 1. Conversely, if the percentage increase in total expenditure exceeds the percentage increase in prices, then $Y^1/Y^0 > P_{01}$, implying that the quantity index will exceed 1.

COST OF LIVING, STANDARD OF LIVING, AND SUPERLATIVE INDEXES

Triplett discusses the connection between price and quantity indexes for a set of consumer goods and services and the concept of a cost-of-living index:

> A consumption price index should measure the change in the cost of maintaining a fixed, or constant, standard of living. If the price index holds the standard of living constant, then any increase in per capita consumption expenditures that exceeds the increase in the price index can be interpreted as an increase in the standard of living.… Thus, from the standard-of-living orientation, the price index measures the changing cost of a constant standard of living, and the quantity index measures increases or decreases in the standard of living. (1992, p. 49)

Diewert (1976) provided a strong rationale for preferring certain price and quantity indexes, which he termed *superlative*. Without focusing on technicalities, a price index is superlative essentially if it provides a good approximation to the changing cost of a constant standard of living using only the observed price and quantity data. A more extensive discussion of the concept of a cost-of-living index and its connection to superlative price indexes can be found in the entry Price Indices.

A pair of price and quantity indexes is said to be a *superlative pair* if one of them is a superlative index and the other is defined implicitly by the weak factor reversal test. Thus, for our purposes, it will suffice to interpret a superlative quantity index as one that satisfies the weak factor reversal test in conjunction with a superlative price index (we note, however, that superlative quantity indexes can be defined independently of superlative price indexes without reference to weak factor reversal; see Diewert 1976). In practical terms, following Triplett, this means that superlative quantity indexes can be interpreted as measuring increases or decreases in the standard of living. For an authoritative survey of index number theory, including superlative indexes, see Diewert (1981).

The Laspeyres and Paasche quantity indexes, discussed previously, are not superlative. There are, however, many price and quantity indexes that are known to be

superlative. Among these, indexes based on Fisher's ideal formula have been widely used. *Fisher's ideal price index* is defined as $P_{01}^{FI} = \sqrt{\frac{\sum_i p_i^1 q_i^0}{\sum_i p_i^0 q_i^0} \frac{\sum_i p_i^1 q_i^1}{\sum_i p_i^0 q_i^1}}$. The corresponding quantity index is defined as $Q_{01}^{FI} = \sqrt{\frac{\sum_i p_i^1 q_i^1}{\sum_i p_i^1 q_i^0} \frac{\sum_i p_i^0 q_i^1}{\sum_i p_i^0 q_i^0}}$, which is the geometric mean of the Laspeyres and Paasche quantity indexes. Together, these two indexes satisfy the weak factor reversal test, since $P_{01}^{FI} Q_{01}^{FI} = \frac{\sum_i p_i^1 q_i^1}{\sum_i p_i^0 q_i^0} = \frac{Y^1}{Y^0}$. Diewert (1976) proved that Fisher's ideal quantity and price indexes are both superlative and, in view of the weak factor reversal test, together they constitute a superlative pair.

In the same paper, Diewert also proves that the Tornqvist-Theil quantity index is superlative. The *Tornqvist-Theil quantity index*, Q_{01}^{TT}, is defined as $Q_{01}^{TT} = \prod_{i=1}^{n} \left(q_i^1 / q_i^0\right)^{\frac{1}{2}(w_i^0 + w_i^1)}$, where $w_i^0 = p_i^0 q_i^0 / Y^0$ and $w_i^1 = p_i^1 q_i^1 / Y^1$ are the expenditure shares for good i for periods 0 and 1 respectively. A corresponding implicit price index can be obtained for this index using the weak factor reversal test.

CHAIN-WEIGHTING

Suppose that we have price and quantity data for many periods denoted by p_t and q_t, where $t = 0, 1, \ldots, T$ (for example, suppose we have annual data for twenty years). This allows us to compute quantity indexes from each period to the successive one, $Q_{t-1,t}$, for all t. We can produce a time series covering more than two periods using the concept of *chain-weighting*. A chain-weighted time series can be constructed as follows: The value of the series, I_t, for any period t is the previous value of the series, I_{t-1}, multiplied by the corresponding quantity index for the two periods, so that $I_t = I_{t-1} Q_{t-1,t}$ for all t (see Bureau of Economic Analysis 2006, Appendix 1). Thus, the growth rate of a chain-weighted index between adjacent periods is $(I_t - I_{t-1})/I_{t-1} = Q_{t-1,t} - 1$.

FROM THEORY TO PRACTICE

National statistical agencies, such as the Bureau of Economic Analysis (BEA), use chain-type quantity indexes to estimate changes in real or inflation-adjusted gross domestic product (GDP) and its components, which can be used when making comparisons over time. BEA (2006) discusses the background and history of the national income and product accounts (NIPAs) for the United States.

As noted by BEA (2006, p. 2), "in 1996, BEA introduced several major improvements to the NIPAs. BEA began estimating the changes in real GDP and its components by chaining together year-by-year quantity changes that were calculated using the Fisher index formula, rather than estimating real GDP on the basis of prices of a single, arbitrary base year." The previous method tended to cause an understatement of real GDP growth for periods prior to the reference year and an overstatement of real GDP growth for periods after the reference year, which is called *substitution bias* in real GDP growth. These and other problems are eliminated by the use of Fisher's ideal formula (see BEA 2006, p. 15).

Quantity indexes are useful in other contexts as well. For example, the Federal Reserve Bank of Saint Louis and the Bank of England both produce chain-weighted monetary aggregates based on the Tornqvist-Theil quantity index formula; see Anderson, Jones, and Nesmith (1997) and Hancock (2005), respectively. The Federal Reserve Bank of Saint Louis refers to its superlative monetary aggregates as *monetary services indexes*, while the Bank of England refers to its as *Divisia money*. Monetary aggregates include many different types of components—for example, currency, checking accounts, savings deposits, money market mutual funds, time deposits, and the like—which vary in terms of their usefulness for making transactions. As argued by Hancock (2005), Divisia money is a gauge of the money supply that gives the greatest weight to the components of the aggregate that are most used in transactions.

EMPIRICAL ILLUSTRATION

As noted above, the BEA estimates changes in real GDP and its components for the United States by employing chain-type quantity indexes based on Fisher's ideal formula. In this section, we show how real GDP growth is related to the U.S. business cycle to illustrate the use of quantity indexes.

We obtained the chain-type quantity index for real GDP from BEA and calculated its annualized quarterly growth rate from 1947 to 2006. As identified by the National Bureau of Economic Research (NBER) (see http://www.nber.org/cycles.html) there were ten recessions over the period from 1947 to 2006. These recessions are strongly associated with negative real GDP growth, whereas real GDP growth is usually, although not always, positive when the United States is not in a recession. Annualized quarterly real GDP growth averaged 3.4 percent over the entire period from 1947 to 2006. By comparison, averaging over just the recessionary quarters (peak to trough inclusive) yields average annualized quarterly real GDP growth of –1.2 percent.

As noted by the Business Cycle Dating Committee of the NBER (2001), the financial press often defines a recession as two consecutive quarters of decline in real GDP. While this is true of most of the recessions identified by NBER, it is not true of all of them.

SEE ALSO *Business Cycles, Real; Divisia Monetary Index; Economic Growth; Fisher, Irving; Price Indices; Recession*

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Barry Jones

QUANTITY THEORY OF MONEY

The quantity theory of money (QTM) refers to the proposition that changes in the quantity of money lead to, other factors remaining constant, approximately equal changes in the price level. Usually, the QTM is written as $MV = PY$, where M is the supply of money; V is the velocity of the circulation of money, that is, the average number of transactions that a unit of money performs within a specified interval of time; P is the price level; and Y is the final output. The quantity theory is derived from an accounting identity according to which the total expenditures in the economy (MV) are identical to total receipts from the sale of final goods and services (PY). This identity is transformed into a behavioral relation once V and Y are assumed as given or known variables.

The QTM dates back to sixteenth-century Europe where it was developed as a response to the influx of precious metals from the New World, and in this sense it is one of the oldest theories in economics. Nevertheless, only in the writings of the late mercantilists does one start to find theoretical statements that justify the connection between M and P. David Hume (1711–1776) argued that assuming a case of equilibrium, an expansion in M (for example, through the discovery of new gold mines) would make a group of entrepreneurs richer, and their rising demand would increase the prices of products, thereby increasing the income of another group of entrepreneurs whose demand would increase the price level even further, and so forth. These chain effects at some point die out, and their end result would be the restoration of equilibrium, albeit at a higher price level. Hume and the mercantilists did not back up their claims by developing a theory of value and distribution; for them, the QTM was explained either mechanically or through the operation of competition.

In contrast to Hume, for classical economists the QTM became a constituent component of their theory of value and distribution. Invoking Say's Law of markets, according to which output can be taken as given, and assuming that V is also given for it is determined by the customs of payments and the institutional arrangements of society, it then follows that proportional changes in M will be reflected in P and vice versa. David Ricardo (1772–1823) in particular reversed the usual causal relationship of the QTM arguing that changes in P lead to changes in M and not the other way around. The idea is that the value of gold (money) is a kind of a *numéraire* for all other prices, which means that if the quantity of money becomes more abundant because of the rise in productivity of gold mines (because of the discovery of new gold mines or technological change), it follows that the price of gold falls and, therefore, the prices of all other commodities rise. Alternatively, if total output increases, the subsequent scarcity of money raises its price above the normal level, and the excess profits in gold production lead to the expansion of supply, thereby reducing the price of gold, which returns to its normal level, and equilibrium is restored at a higher price level. Thus, the normal price of gold is what actually determines the quantity of money in circulation. Consequently, the difference between Ricardo and the mercantilists is that the arrow of causality runs from P to M and, therefore, the quantity of

money is endogenously determined—that is, it is determined within the economic system.

The quantity theory continued in the writings of the neoclassical economists, with the issue of exogeneity predominant in the work of Irving Fisher (1867–1947). The so-called Fisher's equation of exchange (1911) can be stated as follows: $MV + M'V' = PT$, where M is currency and M' is demand deposits; V and V' are the respective velocities; and T stands for total volume of transactions and not only of final goods. Another interesting development is that associated with Knut Wicksell (1851–1926), who stressed the endogenous character of the money supply, which is responsible for the variations in the price level. The advent of Keynesian economics in the 1930s rendered the QTM of minor importance, and it was used only for the determination of nominal magnitudes of real variables.

According to Keynesian analysis the quantity of money could not affect the real economy in any direct way but only indirectly through variations in the interest rate. In contrast, a characteristically different view has been expressed by economists at the University of Chicago. More specifically, Milton Friedman (1912–2006) claimed that money matters and is responsible for almost every economic phenomenon. In fact, Friedman argued that the major economic episodes in U.S. economic history—from the Great Depression of the 1930s to the inflation of 1970s—could be explained through variations in money supply. During the mid- to late 1960s the appearance of stagflation and the rejection of the usual Phillips curve were registered as a blow against Keynesian economics and facilitated the acceptance of monetarism and its establishment as a school of economic thought with significant appeal. Friedman not only showed the inadequacy of Keynesian economics to deal with stagflation but he also proposed an explanation based on the concept of the natural rate of unemployment—that an expansionary economic policy affects the economy only in the short run, while in the long run the economy returns to the natural rate of unemployment but this time with higher inflation.

Friedman and the monetarists express the QTM in terms of growth rates, which means that they consider as a given, in the beginning at least, the velocity of money circulation, and thus that the growth rate of money supply influences the growth rate of nominal output identified with the nominal gross domestic product (GDP), that is, the product of the real GDP times the general price level. Later, when Friedman introduced the notion of natural unemployment, it could be argued that in the long run, at least, the real GDP is equal to full employment GDP, which corresponds to the level of natural unemployment, and thus the growth rate of GDP is known in the long run. Consequently, in the long run the growth rate of the money supply—to the extent that it exceeds the growth rate of the real GDP—increases the growth rate of the price level, that is, the rate of inflation.

According to Keynesians the velocity of money is characterized by high volatility; consequently, changes in the supply of money can be absorbed by changes in the velocity of money with negligible effects either on output or on the price level. These arguments emphasize that the velocity of money depends on consumer and business spending impulses, which cannot be constant. A similar view is shared by economists of the neoclassical synthesis, especially in the case in which the economy is in the liquidity trap, whereby, regardless of the changes in the supply of money, the real economy is not affected at all. Changes in the supply of money are absorbed by corresponding changes in the velocity of money. Furthermore, the effect of money supply on prices may work indirectly through variations in interest rates, which in turn induce effects on aggregate demand.

The empirical evidence with respect to the effects of the money supply on the price level so far has been mixed and depends on the definitions of the money supply (narrow or broad) and the time period. As a consequence, the velocity of the narrow money supply, $V1 = GDP/M1$, for the U.S. economy has displayed a rising trend during the period 1920–1929, a falling trend during the period 1929–1946, an upward trend in the period 1947–1981, erratic behavior along a falling trend during the period 1981–1991, and an upward trend since then. The erratic behavior of the 1980s has been attributed to the deregulation of the banking industry and the appearance of new checkable accounts. Clearly, the overall movement of $V1$ is associated with the long-run upward or downward stage of the economy. The results with respect to the U.S. data prove somewhat better for the monetarist argument with regard to the velocity $V2 = GDP/M2$. A closer look at $V1$ or $V2$ in monthly or quarterly data reveals substantial fluctuations in the short run. The variability of the velocity of circulation has been attributed, among other things, to the frequency of payments, the efficiency of the banking system, the interest rate, and the expected inflation rate. From the above it follows that the causal relationship between money supply and price level—that is, the issue of exogeneity versus endogeneity—is not settled yet and, therefore, continues to attract the attention of economists. There is no doubt that the discussion will continue in the future as economists try to understand better the interrelations of monetary and real economic variables.

SEE ALSO *Economics, Keynesian; Fisher, Irving; Friedman, Milton; Hume, David; Interest Rates; Keynes, John Maynard; Mercantilism; Monetarism; Monetary Theory; Money; Money, Demand for;*

Neutrality of Money; Phillips Curve; Ricardo, David; Say's Law

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Lefteris Tsoulfidis

QUASI-EXPERIMENTATION

SEE *Campbell, Donald.*

QUEBECOIS MOVEMENT

The Quebecois movement of the late twentieth century was the product of long-standing strained relations between the francophone (or French Canadian) and anglophone (or English Canadian) populations of Canada. From these deep historical roots, the Quebecois movement grew into an important force shaping Canada's current social, political, and economic conditions. Although the movement has at times sought sovereignty for Quebec, recent developments suggest that such an outcome is highly unlikely.

Tensions between anglo- and francophone settlers in colonial North America mirrored those among the imperial powers of the period but took on their own character. For example, French settlers interacted more easily with Native Americans than did the British, and this relationship both affected and reflected the balance of power each European group perceived in eighteenth-century North America. In fact, the war known variously as the French and Indian War (in the United States), the Seven Years War (in Europe and English Canada), or the War of Conquest (in French Canada) had been raging in North America for two years before European powers actually declared war on one another in 1756. One decisive element of that war was the rapid and thorough defeat of French forces by the English at the Plains of Abraham, upstream from Quebec City, on September 13, 1759. That defeat led to the withdrawal of French imperial governance from Canada and set the stage for British domination. While the British did make some conciliatory gestures toward French Canadians, notably in the 1774 Quebec Act, cultural and economic competition and hostility between English and French Canadians continued unabated. In a report to the British government, Lord Durham, the governor general of British North America from 1837 to 1838, famously described the two groups as "two nations warring in the bosom of a single state." As a remedy, he suggested aggressive assimilation of French Canadians into the British system.

French Canadians balked at being anglicized and resisted repressive moves by English Canadians, such as abolition of bilingual and Catholic schools in New Brunswick and Manitoba, respectively, in the 1870s. By this time, Canada was independent from Britain, and French Canadians soon found themselves united in opposition to Ottawa's alignment with British military policy. The 1899 Boer War was particularly odious to French Canadians, who regarded it as simple British imperialism, a phenomenon they themselves had experienced as oppressive. In this political climate, French Canadians continued to experience everyday humiliations and bigotry at the hands of English Canadians, who generally regarded them as inferiors.

TWENTIETH-CENTURY DEVELOPMENTS

At the turn of the twentieth century, Prime Minister Wilfred Laurier emphasized that the Canadian confederation had been founded on the concept of "two nations." The obvious domination of one nation by the other was antithetical to the logic of confederation. When the Great Depression struck, French Canadians were much harder hit than their English counterparts, giving painful evidence of the terrible economic disadvantage under which the Quebecois labored. Crises over conscription in both world wars showed the depth of French Canadian distrust of Canadian military policy. For example, a 1942 plebiscite showed that nearly 80 percent of English Canadians supported entering World War II, while the same margin of French Canadians opposed doing so.

Arguably, the contemporary Quebecois movement began in the 1960s with the Quiet Revolution. This was a trend in French Canadian politics toward more aggressive political demands for special status within Canada and a new emphasis on the Quebec provincial government as the instrument of change. The Liberal provincial government of Jean Lesage began the process in 1960 under the slogan "*Maîtres chez nous*" ("Masters of our own house"), demanding that Ottawa recognize Quebec as having a "special status" that afforded the province economic and social powers unique in Canada. At the national level, the

Liberal Party under Prime Minister Lester Pearson responded to these developments in part by recruiting more French Canadians, including Pierre Elliott Trudeau, who would later serve as prime minister and be an important figure in Anglo–French relations. Trudeau entered federal politics in 1965, believing that neither Quebec separatism nor a special status for the Quebecois was in the best interest of Canada. He swiftly rose through the ranks of power, succeeded Pearson as leader of the Liberal Party, and in 1968 became prime minister. In the same year, several provincial parties advocating varying degrees of Quebecois separation from the rest of Canada joined forces to create the Parti Québécois (PQ, or *Péquistes*), under the forceful and charismatic leadership of René Lévesque. The *Péquistes* advocated a plan of sovereignty-association, in which Quebec would be politically independent from, but economically linked to, the rest of Canada.

Quebec's 1970 provincial elections were a watershed, passionately debated and anxiously watched throughout Canada. If Lévesque and the *Péquistes* gained control of the provincial legislature, separation seemed sure to follow. In fact, the provincial Liberals, led by Robert Bourassa, won handily, and the *Péquistes* took only 7 of 108 seats. Sparked by this loss, the terrorist Front de Libération du Québec (FLQ) kidnapped James Cross, Britain's trade commissioner in Montreal, and Pierre Laporte, a cabinet minister of the Quebec government. In exchange for the hostages, the FLQ demanded funds, the release of FLQ-sympathizing prisoners (whom Trudeau referred to publicly as "bandits"), and promulgation of their manifesto. This became known as the October Crisis. Trudeau's government responded by passing the War Measures Act, which gave police and government extra leeway to use force domestically and led to the unusual circumstance of tanks and armed soldiers in Canadian streets. When asked by a reporter how far he would go to defend his position, Trudeau famously responded, "Just watch me." While the majority of Canadians did not sympathize with the FLQ, the War Measures Act was highly controversial. The crisis ended when Cross was freed, Laporte was killed, some kidnappers were given safe passage to Cuba, and others were captured. Nonetheless, a significant minority of French Canadians sympathized with at least some of the FLQ's position, and the federal government still had to address Quebec's concerns.

In 1974 and 1976, Quebec's provincial legislature passed two laws—Bill 22 and Bill 101 (the latter also known as the Charter of the French Language)—declaring French the province's official language, mandating French-language schools for immigrants, and requiring the use of French in the workplace. These laws were generally well received by francophone residents of Quebec but were highly controversial among English-speaking and other Quebeckers and in Canada as a whole.

Trudeau's Liberal government was reelected in 1980, and the prime minister set a high priority on patriating the Canadian Constitution. Canada had been created in 1867 by the British North America Act, an act of the British Parliament. Arguably, then, Canada existed only with another state's permission. A true sovereign declares its own sovereignty, and Trudeau believed Canadians' own sense of nationality hinged on this distinction. For these and other reasons, Trudeau's government wished to change Canada's founding document from an act of the British Parliament to an act of the Canadian Parliament. The process of shifting from the British North America Act to a truly Canadian document was known as patriation of the Constitution.

Trudeau's government had reason to hope Quebec would not be a stumbling block in this process. Also in 1980, the Parti Québécois introduced a provincial referendum asking for a mandate to negotiate a new relationship between Quebec and the rest of Canada; the referendum failed. The Liberals' optimism must have vanished quickly, however, since the following year the Parti Québécois was reelected with substantially increased support. The referendum was not a clear indicator of the complex situation in Quebec. Ultimately, the federal government formulated a new Constitution (in the Constitution Act of 1982), with a Charter of Rights and Freedoms to address some of the human-rights concerns of, among others, French Canadians. The Constitution Act, which represented compromise by the national government as well as the provinces, was accepted by Ottawa and every provincial government except Quebec's.

In 1984, the Liberals lost control of Parliament to the Conservatives. Brian Mulroney, the new prime minister, made a priority of resolving constitutional tensions with Quebec and met with Robert Bourassa at Meech Lake, Ontario, in 1987. As a result of the Meech Lake conference, the national government agreed to propose constitutional changes recognizing Quebec as a "distinct society" within Canada; stating that the coexistence of French and English speakers is fundamental to Canadian society; and affording Quebec a role in choosing supreme court justices, making immigration policy, and vetoing constitutional amendments. Bourassa was satisfied with the Meech Lake Accord, but the agreement rankled some nonfrancophone Canadians by seemingly giving the Quebecois a privileged position ahead of other groups, such as aboriginals and women. Although Ottawa and eight provincial governments approved of the accord, holdouts in Manitoba and Newfoundland succeeded in killing the agreement in 1990.

The Quebec government announced another referendum on sovereignty for 1992. In hope of preempting separation, the national government proposed a new conference, this time at Charlottetown, Prince Edward Island, to work on constitutional issues. Ottawa hoped to reconcile Quebec's demands with those of aboriginal groups, social groups protected under the charter, and various economic demands of the provinces. This proved a monumental task, and the result pleased few parties. Ultimately, only four provinces approved the Charlottetown Accord, while six (including Quebec) rejected it.

In 1995, the Quebec government held its second referendum (the first being in 1980) on separation. The margin of victory was almost the smallest imaginable: 49.4 percent favoring sovereignty for Quebec, 50.6 percent opposing. The run-up to this vote spurred passionate discussion across Canada about what it means to be Canadian, and the reporting of election returns was both politically and emotionally fraught. In 1998, charismatic politician Lucien Bouchard of the Bloc Québécois (a political party with candidates at the national level, whereas the Parti Québécois stands candidates only at the provincial level) began calling for the people of Quebec to consider asking Ottawa for a new deal. The national government responded by requesting an opinion from the Supreme Court of Canada on the domestic and international legality of Quebec's secession. In 2000, the Court ruled that Quebec could not unilaterally secede from Canada and that the conditions facing Quebec did not constitute persecution under international law. However, a "clear expression of a clear majority of Quebeckers" for sovereignty would require a serious response from the national government or else would call into question the democratic legitimacy of the Canadian government. Since the Court's ruling, separation seems unlikely, although the Bloc and Parti Québécois remain important voices in Canadian politics.

SEE ALSO *Assimilation; Ethnocentrism; Identity; Minorities; Nationalism and Nationality; Parliaments and Parliamentary Systems; Partition; Secession; Separatism; Sovereignty; Terrorism*

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Lisa L. Ferrari

QUEER STUDIES

Formed out of scholarly conferences in the 1980s, queer studies started as an elite academic movement of primarily humanities scholars who had taken a lead in developing lesbian and gay social constructionist studies in the 1980s (Fuss 1991). Social science scholars were largely absent from its beginning intellectual formations (see, for example, Fuss 1991; Abelove et al. 1993; Warner 1993).

Correcting for this absence, two important edited readers stand out in foregrounding a queer perspective for the social sciences and, conversely, a more social standpoint for queer studies. The first is *Queer Theory/Sociology* (1996). In his introduction to the volume, Seidman argues that queer theory wants to shift the study of sexuality "from explaining the modern homosexual to questions of the operation of the hetero/homosexual binary, from an exclusive preoccupation with homosexuality to a focus on heterosexuality as a social and political organizing principle, and from a politics of minority interest to a politics of knowledge and difference" (1996, p. 9). While this volume importantly situates the development of sexuality studies within earlier British sociological work on homosexuality (e.g., McIntosh 1996; Plummer 1996; Weeks 1996), its intersectional queer/sociology focus provides empirical studies that illustrate the postmodern critique of identity as multiple, exclusionary, and performative.

As Steven Epstein (1996) and Arlene Stein and Ken Plummer (1996) noted, earlier sociological work on sexuality as socially constructed was problematically absent from the new onslaught of queer studies scholarship. Instead, queer studies theoretically centered Michel Foucault's work (1978) and those of his followers, particularly Judith Butler (1990, 1993) and Eve Sedgwick (1990, 1993), making them the triumvirate benchmarks in the field. Setting the bar for analytical virtuosity, Sedgwick's statement in *Epistemology of the Closet* (1990) triumphs the need to make sexuality and the hetero/homo binary part of every analytical study of modern Western culture. Later historical studies, such as George Chauncey's (1994), date the rise of the closet to the 1930s and its intensification during the cold war, when state-sanctioned homosexual discrimination became patterned and systematic. Similarly, Seidman's (2002) sociological genealogy of the closet's rise and fall over the last half century empirically concretizes the closet's social shifts and

changes. Interestingly, the theoretical acumen of Butler's work, and its ironically enabling programmatic framework, on identities as performative, specifically in their striving to perform idealized versions of heteronormative and gender-normative forms, serves as a theoretical cradle for empirical studies on intersectional identities of sexuality, gender, race, and class (e.g., Stein 1997; Esterberg 1997; Bettie 2002; Salzinger 2003).

Social Perspectives in Lesbian and Gay Studies (1998), edited by Peter Nardi and Beth Schneider, is the other key reader in sociology that highlights a queer perspective as the latest word in conceptualizing sexualities. However, in his afterword to the volume, Plummer (1998) notes the limitations of what he calls the "Foucauldian deluge" on sociology and is critical of its overemphasis on discourses and texts to the detriment of empirical social research more broadly (see Green [2002] for a similar critique of queer theory).

Contradictorily, since the mid-1990s, queer studies and the sociology of sexualities have converged in their analytical focuses while continuing to remain apart in their conversations and debates (see, for example, David Eng et al. [2005] on queer studies in a double issue of the journal *Social Text* and Joshua Gamson and Dawne Moon [2004] in their review of queer studies and its status in the sociology of sexualities). The fields converge, however, in their Foucauldian conceptualization of power as disciplinary, exclusionary, and normalizing, as well as in their studying of identities, institutions, and relations of state, nation, and globe. Still, queer studies' latest voices remain scholars from primarily the humanities (see Eng et al. 2005). And the sociology of sexualities, although drawing strongly on queer studies, remains distant from its emphasis on discourse/text, its poststructural antinormative theoretical presuppositions that typically eschew identity altogether, and its use of antihumanist language to problematize identity categories and the written text itself (see Butler's [1995] and Fraser's [1995] exchange as exemplars of these issues).

These contradictions notwithstanding, queer studies and the sociology of sexualities come together in their analysis of identities, from their gender and sexual interaction to the problematizing of heterosexual identities to the analyzing of the multiple ways race, class, and gender, in addition to sexuality, interact, and finally to the very limit of identity itself. Additionally, the two fields have made the relationships between processes of sexualities and nationalism, colonialism, and globalization key trends as well. This entry will briefly review some of these convergences in detail.

In rethinking sexual and gender-identity formations, Judith Halberstam's (1998) and R. W. Connell's (1987, 1995) works on female masculinity and hegemonic masculinity, respectively, help queer studies scholars to rethink conceptions of dominance and resistance. Female masculinity, for Halberstam, extends the concept of masculinity beyond men to include women, and views masculinity as a general form of gender expression and practice that lesbians, butch lesbians, butch women, as well as nonlesbian females, draw on to project authority, strength, and aggression in social life. Conceptualizing the intersection of compulsory heterosexuality and male dominance, Connell's concept of hegemonic masculinity links heterosexual male practices of homophobia and sexism to the subordination of femininities and dominated masculinities.

Building on the work of Monique Wittig (1992), Adrienne Rich (1980), and Connell, queer studies continues to make compulsory heterosexuality and heterosexual identities problematic and in need of social explanation. From Jonathan Katz's (1996) historical overview of the development of heterosexuality as an ideology and an identity over the nineteenth and twentieth centuries to Chyrs Ingraham's (1996, 1999) concept of the heterosexual imaginary and its ideological role in white weddings or Elizabeth Freeman's (2002) work on marriage, weddings, and heterosexualities, queer studies continues to attempt to undo compulsory heterosexuality's hegemony.

As Gamson and Moon note, "Long before queer theory began speaking of 'multiple identities,' black feminists had articulated an intersectional analysis of oppression that recognized race, gender, class, and sexual oppression as interlocking systems" (2004, p. 52). Since the early 1980s, scholarship on intersectionality has proliferated in the field. Stein's (1997) study of generational differences between two cohorts of lesbians makes age, history, and social conditions central aspects in explaining differences among lesbians who came out in the 1970s in comparison to the 1990s. Analyzing the racial, gender, class, and sexual intersections of mostly queer people of color on talk shows, Gamson's (1998) study demonstrates struggles over queer visibility and media representation. Furthermore, from humanities scholars like Tavia Nyong'o (2005), whose work illustrates the exclusions but also social necessities of intersectional identities like the pejorative *punk*, and intersectional sociologists like Roderick Ferguson (2004), who approaches the social through combining social theory, sociology, and literature, to Chet Meeks (2001), who theorizes the limits of sexual identity and liberation and develops a politics of antinormalization to underscore sexual differences beyond identity, scholarship on intersectionality demonstrates the hybrid importance of this research in queer studies.

The last key trend in queer studies is scholarship on nationalism, colonialism, and globalization and its relation to sexual practices. Important work by Joyti Puri

(1999) shows the continuities and discontinuities in transnational discourses of menstruation, marriage, pornography, and homosexuality for Indian women today. Focusing on the relationship between sexual and colonial practices, Ann Laura Stoler's (2002) study of Dutch colonial rule in nineteenth- and twentieth-century Indonesia demonstrates the way colonial practices organized sexuality, intimacy, and family in shaping the relationships between Dutch men and the native Indonesian women they had sex with and made "concubines." Finally, Chandan Reddy (2005) details the uses and abuses of gay Pakistani asylum seekers in the U.S. policy of "family reunification," which simultaneously makes asylees part of a class of low-wage workers in the United States.

In short, queer studies' focus on identity and its multifarious constructions, as well as its engagement with scholarship on nationalism, colonialism, and globalization, illustrates the field's intellectual efflorescence, contemporary relevance, and vanguardism.

SEE ALSO *Foucault, Michel; Gender; Gender, Alternatives to Binary; Gender Studies; Heteronormativity; Identity; Other, The; Said, Edward; Sexual Orientation, Determinants of; Sexual Orientation, Social and Economic Consequences; Sexuality*

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James J. Dean

QUEER THEORY

SEE *Politics: Gay, Lesbian, Transgender, and Bisexual; Queer Studies.*

QUESNAY, FRANÇOIS
1694–1774

François Quesnay was born in the village of Méré, Île de France, into a family of merchants and small landowners. As a child he received no formal training, but he learned to read and write from a gardener. Largely self-taught, in 1711 he began to study medicine and surgery in Paris. In 1717 he married; he had three children. He first earned a living as a surgeon and contributed several essays to the controversy between surgeons and physicians in France in the 1740s. In 1734 he assumed the position of physician of the Duke of Villeroy and in 1749 of Madame the Pompadour, Louis XV's favorite, in Versailles. In 1752 he saved the dauphin from smallpox, which won him the king's favor, a noble title, and a significant amount of money. At the beginning of the 1750s he was elected a member of the Académie des Sciences, Paris, and the Royal Society, London. During this period Quesnay stopped publishing medical works and turned to economics. The years 1756 and 1757 saw the publication of his entries in the *Encyclopédie* on *Fermiers* (farmers) and *Grains* (corn). Three further entries devoted to *Hommes* (people), *Impôts* (taxes), and *Interét de l'argent* (money rate of interest) could not be published in the *Encyclopédie* after an attempt to assassinate the king, which was grist for the mill of the enemies of the *encyclopédistes* (d'Alembert, Diderot, and others) and brought the project to a standstill. The first two articles were published only at the beginning of the twentieth century, the third in 1766.

Of particular importance to Quesnay's works in economics and their impact on the contemporary political debates first in France and then beyond was his encounter with the Marquis de Mirabeau in 1757. Mirabeau became a close follower of Quesnay and untiringly spread the gospel of the new physiocratic school. In 1758 Quesnay composed the first edition of the *Tableau économique*, which contained the first schematic account of the intertwined processes of production, distribution, and disposition of the riches of an entire nation. Mirabeau compared the importance of the *Tableau* to that of the discovery of fire and the wheel; Marx called it the "most brilliant idea" of political economy up until then and the physiocrats "the true fathers of modern political economy" (Marx 1963, p. 44). Two further editions of the *Tableau* followed in 1759. In 1763 Mirabeau published the *Philosophie rurale* in three volumes, a work that was heavily influenced (and partly even written) by Quesnay. In the same year the physiocrats began to engage in economic policy debates. Their articles appeared first in the *Journal de l'agriculture* and then in *Éphémerides du citoyen*, the "sect's" main outlet. Quesnay contributed several essays on themes such as the natural law doctrine, the so-called sterility of industry, and, in 1766, a simplified version of the *Tableau* in an article titled "Analyse de la formule arithmétique du Tableau économique." The school's influence in France peaked in the late 1760s and then steadily declined. Quesnay died in December 1774 near Versailles.

Quesnay conceived the process of production as a circular flow, with the rent of land being traced back to the existence of surplus product (*produit net*) left over after all means of production have been used up and all means of

subsistence in support of the laboring population have been deducted from annual gross outputs. With a social division of labor, the products have to be exchanged for one another in interdependent markets. In order for the process to be able to continue unhampered, prices must cover physical real costs of production, consisting of means of production and subsistence, plus, in agriculture, the rent of land. A major concern of Quesnay was with the system's potential for growth. This depended on whether the surplus was consumed productively or unproductively and whether new methods of production could be developed and introduced, which by increasing productivity increased the social surplus.

Quesnay's works had a major influence on the development of central concepts and analytical tools in economics. After him the idea of ubiquitous economic interdependence never left the realm of economics again. Marx's analysis of simple and extended reproduction in volume 2 of *Capital* drew on the *Tableau* (see Marx 1974, and Gehrke and Kurz 1995), as did Wassily Leontief's (1941) input-output analysis. Piero Sraffa's (1960) reformulation of the classical approach to the theory of value and distribution was inspired by the physiocrats' multisector analysis. Also inspiring Sraffa was the physiocrats' concern with the implications for the theory of value and distribution of the specific conditions of the transformation of matter and energy into new forms of matter and energy in given sociotechnical conditions. Quesnay's concept of production as a circular flow is in marked contrast with the view entertained by some marginalist economists such as Eugen von Böhm-Bawerk of production as a one-way avenue of finite duration leading from the services of original factors of production to final output. The concept of a closed system, as we encounter it in Quesnay, is employed in fields of economics that take into account the laws of thermodynamics, such as environmental economics.

SEE ALSO *Economics; Marx, Karl; Physiocracy; Surplus; Sraffa, Piero*

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QUESTIONNAIRES

SEE *Surveys, Sample.*

QUOTA SYSTEM, FARM

Farm commodity quotas are defined as government-administered area or quantity allotments restricting what a farmer can produce or market. Such supply controls in the United States initially rested on several presumptions, some or all of which are no longer valid. One was that farmers reacting to market forces were incapable of adjusting their resources and output in a timely manner to maintain their income at a socially acceptable level in response to shocks from weather, foreign markets, and rapid productivity advance. That presumption in turn implied that, in the absence of supply control, farmers were predestined to chronically produce too much and hence to experience perennially low farm prices, incomes, and rates of return on resources.

Another presumption was that the demand for farm commodities was inelastic. That is, a reduction in market quantity would reduce quantity proportionately less than it would raise commodity price, thereby raising commodity receipts and farm income.

Supply controls in the form of quotas or allotments can be voluntary or mandatory, on resources or commodities, whole farm or part farm, on crop area or output, and short term or long term. Under the Agricultural Adjustment Act of 1933, the grandfather of farm commodity programs, government rewarded farmers who voluntarily controlled how much of major crops they planted with commodity price supports or direct payments.

The Agricultural Adjustment Act of 1938 introduced mandatory supply control. The term mandatory, though widely used, was nonetheless misleading because area quotas became binding on all producers of the commodity only if a two-thirds majority supported quotas in a national referendum. Due to generous price supports attending these quotas, farmers widely accepted mandatory controls. However, controls were largely ineffective in boosting total farm income because the area reduced for basic farm program crops was offset by area and production expansion for other crops. Slippage also was large because crop price supports encouraged additional application of fertilizers, irrigation water, and other inputs so that higher yields offset area cuts. Despite ineffective supply control, production was not excessive because of droughts in 1934 and 1936, and demand expansion during World War II.

Generous commodity support prices introduced in the 1940s were continued after the war, generating surpluses in the absence of supply control. Consequently, the government in 1954 introduced a conservation reserve program (CRP) to convert cropland, even whole farms, to long-term soil conserving uses. By 1960, 29 million acres were under 10-year contracts.

Farmers idled inferior cropland under CRP. Surpluses continued to mount due to the slippage factors noted and to statutory limits on the minimum size of specific crop quotas. The U.S. Congress rejected industry-wide mandatory controls in 1962. The next year the government offered wheat farmers the opportunity to accept tight mandatory allotments coupled with high support prices versus free markets. Wheat farmers rejected controls in a hard fought national referendum in 1963.

The government deemed that farmers should not have free markets, however, and enacted voluntary short-term diversion programs whereby each farmer annually could choose to divert part of his land to soil conserving uses in return for price support and payments from the government. Such newly dominant short-term area diversion, of minimal size in previous decades, grew large and averaged 52 million acres in the 1960s, then reached the high-water mark of 78 million acres in 1983. Problems engendered by that 1983 diversion coupled with drought in the same year prompted a reexamination of commodity programs. Critics observed that voluntary area diversion programs were expensive for taxpayers. Furthermore, such programs, by raising commodity prices, lost markets to cheaper substitutes (for example, cotton to synthetics) and to foreign competition. Agribusiness firms that supply farm inputs and process and market farm products thrive on farms' raw material volume—and they were not getting volume. Livestock producers as well as food consumers were hurt by feed costs inflated by supply controls.

These and other factors led Congress to end most supply controls in the Freedom to Farm bill of 1996. By 2007, supply control remained only under the Conservation Reserve Program (for environmental purposes) and on a minor crop, sugar. The demand for farm output had become elastic due to a large biofuels market. Because quotas reduce farm income when demand is elastic, they are an anachronism of an earlier era.

Termination of controls pleased consumers, agribusiness firms, and livestock producers, but reliance on payments without supply controls introduced new problems. Payments without controls induce farm output to exceed levels in an unregulated market. Whereas programs prior to 1996 cut production by approximately 5 percent from unregulated competitive market levels in the 1960s and 1980s and lesser amounts in other years, the 1996 and 2002 farm bills without supply management raised farm output an estimated 3 percent over competitive market levels. Part of that excess production is being dumped on international markets. Thus, the United States has shifted from World Trade Organization (WTO) acceptable blue box policies (that support farm income but control production) to less acceptable amber box policies (that expand output and exports above competitive market levels). Supply control programs are fatally flawed and are dead, but other, current government programs to support farm income in the United States remain problematic.

SEE ALSO *Agribusiness; Agricultural Economics; Agricultural Industry; Great Depression; New Deal, The; Protectionism; Subsidies; Subsidies, Farm*

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Luther Tweeten

QUOTA SYSTEMS

A quota system is one of two different ways in which a policy of affirmative action may be implemented; it is the alternative to a system of *preferential boosts.*Under an affirmative action policy, membership in an identity group

recognized as marginalized and underrepresented increases one's chances of being selected to a desirable position—for example, admission into a prestigious educational institution, or employment in a respected organization. The increased access is accomplished under a quota system by reserving a certain share of the available positions for members of the relevant group, thus dividing the overall selection process into two separate competitions. Under a system of preferential boosts, by contrast, there is a single competition for access to the available positions, but some additional favorable consideration is given to group members in evaluating individual qualifications and thereby determining applicant rankings.

During the early period in which affirmative action policies were implemented in the United States—from the mid-1960s through the 1970s—quota systems were not uncommon, though affirmative action policies more often took the form of preferential boosts. In India, however, affirmative action has mainly taken the form of quota systems. In other countries where affirmative action is practiced, one can find varying combinations of the two systems.

Under a quota system, the number of available positions reserved for members of a marginalized identity group in a separate competition is most often set equal to the proportion of that group in the overall population of the country (or the relevant region or locality). Such proportionality need not necessarily, however, characterize a quota system of affirmative action; the number of reserved positions may be set at any level. Separate quotas and competitions may of course be established for members of more than one identity group. Whatever the criteria for ranking applicants, these criteria are applied separately to each group of applicants, and the highest-ranking applicants in each group are selected until the available positions are filled.

Under a quota system, the number of selected members of any group targeted by affirmative action will equal the size of the quota for that group—unless fewer group applicants actually apply. A variant of this kind of selection process is one that excludes from the reserved quota those applicants whose qualifications irrespective of group membership enable them to be selected in competition with all other applicants. In this case, all the group applicants who are selected to reserved seats rank lower, by the relevant ranking criteria, than those selected in the general competition, and the overall number of group applicants selected may well exceed the quota reserved for them.

A preferential boost system is applied somewhat differently to quantitative and to qualitative selection procedures. In a quantitative selection procedure, an applicant's qualifications are summarized in an overall point score in order to determine his or her position in the rank order, and the preferential boost takes the form of a certain number of additional points credited to applicants from the targeted group. In the case of a qualitative selection procedure, a variety of applicant qualifications are taken into account but not formally aggregated into a single overall point score. In this case, the preferential boost takes a less precise form; for example, applicants from the targeted group could be viewed in a rosier light or given extra credit for signs of unrealized potential. Different degrees of preferential boost may of course be given to applicants from different groups. In any kind of preferential-boost system, one cannot be certain in advance how many applicants from each group will be selected.

The difference between a quota system and a preferential-boost system is not as great as it may first appear. Corresponding to a quota system that selects any given number of targeted group applicants for a particular position, there is bound to be some amount of preferential boost that leads to the same outcome. In the case of a selection process in which applicants' qualifications are summarized in a single point score, the amount of preferential boost that would do so is the number of points needed to bring the marginal group applicant's score up to the level that would make him or her the last applicant admitted in the general competition. (There is one minor exception to this rule: if the last applicant selected to fill a quota has qualifications equal to those of one or more of the top applicants who failed to be selected, then a preferential-boost system would have to either accept or reject all of the marginal applicants with equal qualifications.)

Notwithstanding the formal correspondence between quota and preferential-boost systems, there remains a substantive difference between the two systems insofar as the parameters of each kind of system—the size of the quota or the amount of the preferential boost—are held constant for a period of time. A preferential-boost system assures that the gap in conventional qualifications between targeted group applicants selected and other applicants selected does not vary much over time, while the number of the targeted group applicants selected will in all likelihood vary from one competition to the next. A quota system assures that the number (or the proportion) of targeted group applicants selected will remain constant, unless the quota is not filled, while the gap in conventional qualifications will likely vary considerably over time.

In practice, quota systems are often constrained by specification of minimum conventional qualifications (e.g., a minimum qualifying score) below which targeted group applicants will be rejected, even if their quota is not filled. Whenever such a minimum conventional qualifications requirement serves to keep the number of accepted applicants below or equal to the quota, this kind of con-

strained quota system has the same effect as a preferential-boost system in which the size of the preferential boost is equal to the gap between the minimum conventional qualifications required of a successful targeted applicant and the conventional qualifications of the last applicant admitted in the general competition. (If and when the preferential boost implied by a minimum qualifications requirement in a constrained quota system is not binding—that is, if it alone would allow more applicants to be selected than the size of the quota—then there is, of course, a difference in outcome as between the constrained quota system and the corresponding preferential-boost system.)

A pure quota system is considerably more arbitrary than either a constrained quota system or a preferential-boost system of affirmative action. By focusing on a target number (or proportion) of group applicants to be selected, a pure quota system ignores problems likely to arise if the conventional qualifications gap between targeted group and other applicants selected becomes substantial. At the same time, however, it should be clear that the choice among a pure quota system, a constrained quota system, and a preferential-boost system is not the most critical choice for an affirmative action policy. Arguably the most important factor is the size of the explicit or implicit preferential boost involved in the policy, for this will affect the likelihood that affirmative action beneficiaries can succeed in performing well in the positions to which they have gained access.

SEE ALSO *Affirmative Action*

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Thomas E. Weisskopf

QUOTAS

Quotas represent one method available to policymakers as a structural remedy for political or economic inequality. Put most succinctly, quotas have traditionally emerged from pragmatic discussions regarding the implementation of legislation or constitutional mandates to pursue equality among citizens. While citizens across nations have traditionally endorsed the political value of equality, there have been long-standing debates at the local, national, and international levels about the role of government in establishing or protecting citizens' equality.

Contemporary debates about quotas emerge most frequently in the context of affirmative action policies. Affirmative action policies are premised on the belief that government must not simply protect citizens from invidious discrimination but must also take "affirmative steps," as U.S. president Lyndon B. Johnson stated in his 1965 Executive Order 11246, to ensure that citizens have equal opportunity to obtain jobs in a labor market with a history of pervasive discrimination. Quotas have emerged around the world as one method to pursue and achieve equality in two ways: equality of opportunity to compete for jobs, education, or political power; and equality of outcome—the successful acquisition of such jobs, education, or political power.

One common use of quotas has enhanced the political power of women in legislatures around the world. Many parliamentary democracies have implemented quotas of women to stand for election, including Germany, France, Belgium, Bolivia, Rwanda, and Palestine. Such quotas have produced greater female representation in parliaments and changes in public policy and legislation that have an impact upon women's well-being. These quotas, while controversial at the time of implementation, seem relatively stable and unlikely to change in the foreseeable future.

The use of quotas in other sectors of government policy continues to be much more controversial as they attempt to enhance equality among various lines of difference in political society. Nigeria, at the time of its independence in 1979, attempted to counteract the ethnic inequality that was a legacy of colonialism by instituting policies of "ethnic balancing," many including hard numerical quotas for admissions into higher education and civil-service hiring. Yet ethnic tensions over access to wealth and ethnoreligious differences continue regularly to erupt into violence. Similarly, India included some forms of affirmative action at the time of its independence from Britain in 1947, yet political and economic inequality remains widespread in the world's largest democracy. The "reservation system," as India's quota system is known, sets numerical percentages as targets for the inclusion of lower-caste minorities. Despite its constitutional legitimacy, implementation remains uneven. For this and other reasons, some target quotas go unfulfilled each year. When framed as a policy of racial or ethnic incorporation, quotas remain subject to legal challenge and outright invalidation, as occurred in the United States.

The U.S. policy of affirmative action emerged out of the modern civil rights movement of the mid-twentieth century and has moved away from "hiring goals" as quotas into a still-controversial system of preferential boosts to women and minority candidates for federal contracts, jobs, and college admission. Presidents John F. Kennedy,

Lyndon B. Johnson, and Richard Nixon together were responsible for affirmative action's evolution into a system of quotas. Kennedy first established a Presidential Committee on Equal Employment Opportunity, chaired by then–vice president Johnson, which focused on a comprehensive remedy to racial inequality by focusing on both protecting black and other minority citizens from discrimination and taking positive steps to encourage greater access to fair employment and education. These two policy arenas—education and employment—became primary battlegrounds for the implementation of affirmative action in the United States.

Initially the executive orders of Johnson (1965, 1968) and Nixon (1970, 1971) focused on two aspects of affirmative action implementation: time and scope. As well, both presidents' administrations started with oversight of corporations that were federal contractors, and then sought further expansion of the policy in the private sector. Goals and timetables emerged as methods of enforcing compliance with both the letter and spirit of antidiscrimination laws. "Hiring goals" were set in cases where there was significant underutilization of certain racial groups in an industrial sector such as construction, and "admissions goals" were set in the domain of higher education. In the implementation of programs to achieve such goals, quotas were set as targets so that employers and educational institutions could demonstrate that they were taking the aforementioned affirmative steps.

These quotas were almost immediately challenged in court by white majority individuals who considered such programs a direct threat to their access to employment and higher education opportunities. The Supreme Court has spent a significant amount of time over the past forty years attempting to regulate the constitutionality of programs designed to implement the protection and promotion of equality. The court first contended with the Civil Rights Act of 1964, which created the Equal Employment Opportunity Commission as a federal agency charged with the oversight of public and private employers' policies to prevent discrimination. In *Griggs v. Duke Power* (1971), the Court developed the theory of disparate impact, allowing the definition of discrimination to expand to situations where malicious intent was not necessarily a factor. Enforced corrective action such as hiring goals were permissible in situations where a definitive mismatch existed between the availability of minority workers and their presence in a particular occupation. Later, in *United Steelworkers of America v. Weber* (1979), the Supreme Court allowed voluntary agreements, including quotas reserving half of all craft training positions for African Americans until the percentage of African American workers in the sector matched the percentage in the local labor force. This decision is consistent with the underlying assumption that affirmative action in general is a time-bound policy; such policies will be obsolete once equality is achieved.

The Court also had a major impact on the scope of affirmative action programs. In 1978 the Court strictly limited the use of quotas as a tool of affirmative action programs in *Regents of the University of California v. Bakke*. Allan Bakke, a white applicant to the University of California at Davis medical school, successfully sued to remove the "hard" quota of reserving sixteen seats in each incoming first-year class for racial minorities. While the Court refused to allow this kind of quota, it continued to allow the use of race in a more vague way, "as a plus," in admissions decisions. Quotas were also restricted in terms of the types of actions employers could take to pursue them. In two cases—*Firefighters v. Stotts* (1984) and *Wygant v. Jackson Board of Education* (1986)—the Court refused to allow employers to take jobs away from whites via layoffs in order to increase the number of minority hires.

During this same period scholars have hotly debated both whether quotas are a just form of implementing affirmative action and chronicled the trajectory of marginalized groups who have been targeted by such programs. In elite levels of higher education, African Americans have been determined to benefit greatly from admissions policies that include affirmative action—whether quotas or more loosely defined "goals." On the other hand, though such policies have vastly contributed to the expansion of the black middle class, the persistently poor who have been left out of such benefits have become more economically insecure and isolated from the economic and political benefits of stable communities. As well, although little evidence suggests that affirmative action has produced "reverse discrimination" in the employment sector, the lack of structural investment in higher education over the past forty years and the emerging baby boomlet population have produced greater competition for a relatively stable number of college admissions slots in the United States, increasing public anxiety about affirmative action in general and political resistance to quotas of any kind—Supreme Court sanctioned or not.

Most recently the Supreme Court has continued to uphold the idea that the time for race to be considered a factor in college admissions and employment continues, despite numerous restrictions on the scope. In *Grutter v. Bollinger* (2003), Justice Sandra Day O'Connor, author of the majority opinion, restated the idea of a time limit to policies such as the constitutionally permissible law school admissions process. It is clear from the docket of the Court, however, that the scope of such policies is ever changing, and given political resistance to quotas in col-

lege admissions, their eventual reinstatement is highly unlikely in the United States.

The experience of the United States with quotas varies from that of other countries in terms of scope, policy domain, and timetable. While other nations have successfully implemented quotas to ensure proportional representation of women in their lawmaking bodies, the winner-takes-all quality of the U.S. electoral context makes such quotas more difficult, though not impossible, to implement. On the other hand, compared to such countries as France and Great Britain, which have both struggled to address racial inequality through either color-blind means or race-conscious means such as quotas, the United States spent more time during the mid-twentieth century directly confronting the lack of minority incorporation through various pieces of state and federal legislation.

While it is clear that persistent inequality is a challenge for nearly every country in the world, the responses to such inequality through the policy remedy of quotas has had mixed results and varying levels of political will to enforce them. As well, the scholarly analysis of such policies has not settled on a conventional wisdom as to their efficacy in producing the goal to which almost all of the quota programs aspire: equality among all citizens.

SEE ALSO *Affirmative Action; Discrimination; Hierarchy; Inequality, Gender; Inequality, Racial; Quota Systems; Stratification*

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Ange-Marie Hancock

QUOTAS, TRADE

Trade quotas are upper limits on the quantity of goods shipped between two nations in a particular category, for example, men's shirts. An export quota is administered by customs officials in the export nation, while import quotas are administered by the import nation. Prospective exporters or importers must first obtain a license to ship an agreed quantity, such as one unit. In practice many export quotas are set up at the request of importing nations, in which case they are voluntary export quotas (VERs). The most prominent example of VERs is the Multifibre Arrangement (MFA) that lapsed in 2005 and that set bilateral export quotas for textile and apparel trade, affecting some 10 percent of the value of trade of rich countries.

Quotas act similarly to tariffs in that trade is reduced, domestic prices are driven up, and exporter prices are driven down. In one very special case, quotas are fully equivalent to tariffs. The equivalence case requires that the importing country set the quota and that it sell the licenses to import at a competitive auction, thereby obtaining the revenue as it would with a tariff. When other qualifications are met, the price paid for a one-unit license is equivalent to a tariff, volume of trade and domestic and export nation prices are the same, and equivalence prevails.

QUOTAS VERSUS TARIFFS

Quotas in practice are more inefficient than tariffs. First, quotas strengthen monopoly power. For example, a sole domestic firm becomes a monopoly in its home when foreign firms are limited to a fixed quantity of sales whereas with a tariff, that firm potentially competes with many firms. Monopoly power raises prices above cost and thus imposes a loss on the economy.

Quotas are also inherently highly discriminatory, which adds to their cost. Discrimination arises because quotas are set individually for trade partners and for product lines. Even if the quotas initially are associated with uniform tariff equivalents, changes in economic conditions introduce nonuniformity. This produces dramatic discrimination across countries. Moreover, across product lines within a country, regulations typically prevent resale of quota licenses from low-payoff to high-payoff lines of sale, similarly preventing market forces from achieving nondiscrimination. Nations also use quotas to discriminate in favor of allies or against enemies, as with the U.S. sugar quota, which allows imports from high-cost Philippines and excludes low-cost Cuba.

Quotas may increase fluctuations in prices compared with tariffs, and this is costly. A fixed specific tariff will permit fluctuating amounts of trade when there are shocks to foreign supply or domestic demand. The average vol-

ume of trade anticipated should be compared with a fixed quota of the average amount. The fixed quota will produce fluctuating tariff equivalents, which in effect discriminates across situations (states of nature) with different realized shocks. This discrimination is costly: It is more efficient to have more trade in high-tariff-equivalent states and less trade in low-tariff-equivalent states. The tariff accomplishes this perfectly compared with the quota.

The allocation of quota licenses is a potent cause of corruption, imposing further costs on the economy as resources are diverted from production to the pursuit of quota licenses: Before its reforms of the 1990s, India's government was often called "the license Raj."

POLITICAL ECONOMY OF QUOTAS

Why have quotas been used when tariffs can also provide benefits to import-competing interests, apparently at lower cost? There must be some political advantage of quotas over tariffs in cases where they are used. Quotas are less transparent than tariffs because calculation of tax equivalents requires data on comparable domestic and foreign prices. The lack of price data often means no one outside the most closely concerned parties knows how costly the quota is. This may permit import-competing interests to obtain tighter limits on imports than they could obtain from tariffs. Because beneficiaries provide political support to politicians who set quotas, both the government and interest groups may gain from choosing quotas over tariffs.

An apparent disadvantage of quotas relative to tariffs is that the government's potential tariff revenue is dissipated as quota rent earned by the license holders. The apparent disadvantage may, however, be a political advantage. First, with a VER, the quota rent typically gets awarded to foreign exporters who are initially being restricted in their access to the market. This compensates the foreigners for their loss and eases the problem of international trade relations with the foreign government. (This advantage is temporary. Later on, the VER will exclude exporters from other foreign countries and complicate trade relations with their governments.) Second, license holders are a very easily identified group of beneficiaries–easier to squeeze for political support than import-competing producers who may be hard to identify.

The apparent political advantage of quotas seems to argue that they should be very widespread. Politicians can play mutually beneficial games with producer groups in setting up market-share arrangements all over the international trading economy. Thus, limits on their use to a few areas of the world economy poses an important puzzle. To illustrate the importance of the puzzle, consider the MFA set of VERs that, until recently, controlled some 10 per cent of world trade. The MFA began in the 1950s and was gradually extended to cover more products and countries, so it looked durable. Yet the Uruguay Round of multilateral trade negotiations set an end date in January 2005. Despite the reversion to a temporary extension of VERs on China in fall 2005, the end of the MFA seems to be accomplished. Political economy should be able to say why. Moreover, political economy should be able to explain the use of tariffs as opposed to quotas in many other product categories.

SEE ALSO *Barriers to Trade; Tariffs*

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James E. Anderson

QUOTATIONS FROM CHAIRMAN MAO

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VOLUME 7

RABIN, YITZHAK–SOCIOLOGY, MICRO-

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RABIN, YITZHAK
1922–1995

At a time when Israel's global economic and political prominence was on the rise, the nation's prime minister, Yitzhak Rabin, was tragically gunned down. The three shots fired into Rabin's back on the night of November 4, 1995, also pierced through a newly emerging Israel. As Israel began to forge significant political bonds with its Arab neighbors after years of territorial conflict, an Israeli law student, Yigal Amir, assassinated Rabin out of religious conviction. Rabin's premature death left questions as to whether or not his objectives for a peaceful, economically strong Israel would be fully realized. This article discusses Rabin's political and societal contributions to Israel, his relationship with Palestine, and the impact of his untimely death on Israeli politics and its relations with Palestine.

During Rabin's early years, Israel struggled for national independence. Rabin was born in Jerusalem on March 1, 1922. A little over twenty years later, Rabin fought in the 1948 War of Independence, from which the Jewish population in Palestine could claim Israel as an official state. In 1968, Israel successfully fought against Egypt, Syria, and Jordan during the Six Day War, in which it gained control of the Gaza Strip, the Sinai Peninsula, the West Bank, and the Golan Heights.

Not long after, Rabin entered politics with minimal political experience. In 1974, the incumbent prime minister, Golda Meir of the Israeli Labor Party, stepped down after vociferous public calls for her resignation after Israel's failure in the Yom Kippur War of 1973. Israel suffered a large number of casualties and the loss of limited territory in the Sinai Peninsula to Egypt and Syria during this war. Since Rabin was free from blame, he won the election for prime minister and took the oath of office on June 3, 1974. He faced numerous challenges as a political leader during a tumultuous time in Middle East history.

As prime minister from 1974 to 1977, Rabin contributed greatly to Israel in both the domestic and international arenas. He strategically forged a closer relationship with the White House and the U.S. State Department, a process that began during his tenure as Israeli Ambassador to the United States. This relationship was made evident when Richard Nixon became the first U.S. president to visit Israel. The visit was also a way for Nixon to resurrect his falling public stature during the Watergate trials, according to Rabin's memoirs. This bond became significant as Rabin sought and garnered U.S. support for arms sales to Israel. Rabin also succeeded in finalizing a 1975 interim agreement with Egypt, in which Israel agreed to pull back from the Sinai Peninsula.

Rabin exhibited more skill in his second term as prime minister, from 1992 until his assassination in 1995. Israel and Palestine remained in conflict over the establishment of Israel as a separate state. Yet Rabin and Yasser Arafat, the leader of the Palestinian Liberation Organization (PLO), signed the Declaration of Principles (DOP), which aimed to terminate Israel's occupation of the Gaza Strip and the West Bank. The Jewish and Arab leaders later signed the Oslo II agreement, in which Israel agreed to withdraw from seven West Bank towns and the Palestinians agreed to hold elections. The historically significant cooperation between the two leaders created opportunities for political and economic ties with the rest of the Middle East and nonregional states.

The Arab-Israeli tensions resulted in divisions within Israel itself. Rabin sought to resolve Israel's conflicts with its Arab neighbors, especially Palestine, through political negotiation. However, some Jewish citizens such as Amir felt betrayed by the Oslo II accords. Amir saw the agreement as handing over land given to the Jews by God to Palestine. He felt that what he perceived as betrayal could only be rectified through murdering Rabin.

A focus on the free market contributed to Israel's economic growth. Israel's economic policy shifted away from socialist ideology towards a liberal economic policy, and in the early 1990s Israel experienced an annual growth rate of over 5.5 percent. At the same time, unemployment dropped below 7 percent. Israel's economic stability attracted more foreign investment.

Ultimately, Rabin's premature death had a long-lasting effect on Israel's relationship with the rest of the Middle East. Many years later, Israel still struggles with questions of its identity, democratic order, the future of occupied territories, and the chance for peace with Palestine.

SEE ALSO *Arab-Israeli War of 1967; Arafat, Yasir; Meir, Golda; Nobel Peace Prize*

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Sarita D. Jackson

RACE

The concept of race as a categorization system for human beings did not exist formally until the late eighteenth century. Most analysts (e.g., Feagin and Feagin 1999; Allen 1994; Roediger 1991; Omi and Winant 1994) have linked the inception of the biologically based idea of distinct races of human beings to European colonization of the New World. Although prior to this time human beings certainly distinguished between themselves in many ways, these distinctions tended to be based upon tribal, clan, ethnic, or national differences that stemmed from place of residence/territory or shared belief systems rather than on innate, genetic characteristics. However, as capitalist-based exploitation of certain (often darker-skinned) groups began in the form of chattel slavery and other abuses of humanity, those in power began turning to science as a way to rationalize the oppressive conditions to which these groups were consigned. The rush to develop these pseudoscientific claims might have been spawned in part by the need of the colonizers to assuage their guilt and to resolve the cognitive dissonance and contradictions evident in rising new societies that prided themselves on freedom and democracy even as they relegated certain groups in their societies to a nonfree, even subhuman status (Horsman 1997). While the "science" that developed the idea of race is certainly discredited by today's standards, the social ramifications of humans having separated themselves into races still remain firmly intact. As the Thomas theorem once stated, "when men define situations as real, they are real in their consequences" (Thomas and Thomas 1928, p. 572). Thus, although the idea of race as a classification system of human beings is what social scientists call socially constructed rather than biologically based, it still is an enduring category of social analysis. It is so not because of its genetic or biological basis, but because of the power it has wielded as an idea to create dividing lines between different classes of human beings across the globe (Graves 2004).

BEFORE RACE

Prior to the eighteenth century, human beings were recognizing differences between themselves as they crossed national and continental borders in exploration and trade. Sometimes these differences would be reflected upon positively and at others, negatively, especially when groups clashed over territory and power. For example, there are Biblical writings where African kingdoms and Jewish kingdoms are regarded as allies of generally equal worth and status. And in Greek and Roman periods, these two societies expressed a great respect for the learning they gleaned from African cultural developments. Even as occasional negative images of blackness (associated with sin, devil, and non-Christianity) were expressed, "these views were never developed into a broad color consciousness viewing Africans as a greatly inferior species" (Feagin 2000, p. 71). Thus, although human beings reflected upon their own differences as they made contact with each other throughout time, there was generally a mix of negative and positive imagery, and prior to the idea of race, no discussion of an altogether inferior or superior species attached to physical differences yet existed.

From the 1400s to the 1600s, as colonization and enslavement expanded, the Spanish and other Europeans began to use consistently negative language to describe the African human beings they enslaved. This pattern was coupled with positive evaluations of their own group. However, these evaluations still did not amount to explic-

itly racial designations. The Europeans' negative assessments of Africans at this point were rooted in cultural and religious differences rather than in any biological, unchanging facts of their physical chemistry. For instance, Europeans described themselves as rational and civilized while they described Africans as uncivilized and uncontrolled. Further, the Africans not being Christian resulted in Europeans characterizing them as "heathens," and later in North America, European settlers used the same line of thinking toward the Native Americans (Feagin 2000; Takaki 1993). In fact, in the 1600s, a European named François Bernier (1625–1688) even developed a hierarchy of groups ranking them from the most primitive and civilized to the least, placing Europeans at the top and Africans at the bottom (Feagin and Feagin 1999).

However ethnocentric and biased these claims were, they were based upon the assumption that these were cultural differences emanating from shared, learned beliefs rather than body composition or other unchangeable biological inheritances. Indeed, in the case of the Native Americans, for a brief time, the colonists in power considered the possibility that Native Americans could be civilized and thus considered equal by converting them to Christianity (Takaki 1993). These positions acknowledging a common human *capacity* for acquiring knowledge across all skin color gradations (even as it was perceived as underutilized or underdeveloped for some) still ran counter to later notions of biologically grounded races.

RACE AS IDEOLOGY AND SOCIAL RELATIONSHIP

Several scholars have identified the conception of human races as a key part of the development of a racist ideology (e.g., Feagin 2000; Yetman 2004). An ideology is a belief system intended to rationalize and justify existing social arrangements. In this way the concept of race is a decisively social concept because it is not observed as existing independent of the "racialized social systems" (Bonilla-Silva 1997) that hold it in place. Feagin identifies three dynamics that crystallized by the late 1700s to result in a clearly racist (as opposed to nationalist or cultural) ideology: "(1) an accent on physically and biologically distinctive categories called 'races'; (2) an emphasis on 'race' as the primary determinant of a group's essential personality and cultural traits; and (3) a hierarchy of superior and inferior racial groups" (Feagin 2000, p. 79). Thus, at this point in history, no longer are human differences attributed first and foremost to national, regional, and cultural variations. Instead, they become perceived in a biologically determined (static, unchanging) way, and the differences begin to be encoded into hierarchical categorization schemas that connote superior and inferior species of human beings.

The language of race as a pseudobiological category of humans emerged first in the 1770s with the German philosopher Immanuel Kant (1724–1804). As noted by Emmanuel C. Eze in his 1997 publication, Kant's categorization hierarchy for "races of mankind" was laid out as follows:

Stem genus, white brunette;

First race, very blond (northern Europe), of damp cold;

Second race, copper-red (America), of dry cold;

Third race, black (Senegambia), of dry heat;

Fourth race, olive-yellow (Indians), of dry heat.

Roughly two decades later, another German scholar (of human anatomy) named Johann Blumenbach (1752–1840) ventured into similar territory of racial hierarchies founded on what he viewed as biological premises. Ivan Hannaford noted in his 1996 work that Blumenbach's categories were conceptualized in the following order (top to bottom; superior to inferior):

Caucasians (Europeans)

Mongolians (Asians)

Ethiopians (Africans)

Americans (Native Americans)

Malays (Polynesians)

Blumenbach was the one who coined the term Caucasian simply because he felt the Europeans he observed in the Caucasus mountains were the most beautiful, and he erroneously concluded that the first human remains were found there (Gould 1994). Yet the power of this pseudoscience remains in contemporary consciousness, as some modern-day Americans who view themselves as white, for example, refer to themselves as Caucasian, even when their genealogy hails from nowhere near the Caucasus mountains from which this category got its name. It is work like this that laid the groundwork for the centuries that followed, with human beings across the globe viewing themselves as members of distinct racial groups. These groupings were never just nominal categories; they were always hierarchically arranged and structured by dominance (Hall 1980).

An important point to note about these racial categories is that they did not just come to have meaning simply because a couple of scholars penned these categorizations systems and they attained popularity. They were reified because racialized social systems were structured around them. That is, the social relations of the day mirrored the order that the categories suggested. They would not have acquired such powerful social meaning

without the systems that held them in place. Thus, one way to conceptualize race is a way of relating within a particular racial social system. Since its inception in the eighteenth century, the meaning of any particular race changes over time and is culturally specific. A single individual could be deemed one race in one society but move or travel to a different society (or even between states in the same society, as in the case of the United States) and be categorized as a different race. Its basis for meaning resides in a particular society's racialized social system and not within an individual body. Some social scientists use the term reification to describe this process of turning a social relationship into a thing in and of itself. As noted by Margaret Radin, once reified, race "acquires a 'phantom objectivity,' an autonomy that seems so strictly rational and all-embracing as to conceal every trace of its fundamental nature: the relation between people" (Harris 1998, p. 107).

USING BLOOD TO DETERMINE RACE

Although the social distinction of a race of human beings was often based upon physical characteristics, the question of which physical characteristics were used to determine race and in what proportion has varied greatly across cultures and across time. These distinctions are usually set by those in power for a distinctly political purpose. For example, in the United States, the so-called "one-drop rule" predominated for all of the nineteenth and well into the twentieth century. This rule stated that an individual having even a distant ancestor who was categorized as black (conceived as one drop of black blood) also made that individual black as well. It is important to note that this determination was not, of course, made from blood testing but rather from knowledge of the individual's family tree and the racial categorizations (socially) attached to each member. This rule served the political purpose of limiting the numbers of persons who could cross the racial dividing line to become white and enjoy all the perquisites and privileges thereof. In the United States, chattel slavery was officially permitted and governmentally sanctioned until the Emancipation Proclamation of 1865. However, shortly into the nineteenth century, no further importation of slaves from overseas was permitted under the Constitution. Thus, it was convenient for the white patriarchal powers of the country that any offspring resulting from the sexual exploitation of their black female slaves (even though these children were also half white) would still be considered their own property and not eligible for freedom (Graves 2004). However, even after slavery was abolished, individuals who were defined as black by the one drop rule had severely curtailed rights, and many lived in a status that was similar to slavery except in name, due to sharecropping, the convict lease system, and white terrorism holding all of this in place.

According to court records, in order to escape this awful fate, many individuals attempted to remove their black racial categorizations by way of the law. What fraction of black blood was needed in order to categorize one as black? In Louisiana, for example, it was one-32nd of "black blood" that made someone into "black." The U.S. Census identified the racial categories of Negro, Mulatto (one-half black blood), Quadroon (one-fourth black blood) and Octoroon (one-eighth black blood) as late as 1890 (Lee 1993). When individuals were not able to attain legal freedom from blackness but were somewhat light-skinned, they sometimes participated in passing by portraying themselves as white. It is notable that such passing activities almost always occur when someone categorized as an "inferior" race attempts to pass as a member of the "superior" race and not the other way around. This indicates how race is explicitly hierarchical and designed to keep dividing lines between who does and who does not receive the full rights and privileges of citizenship in any given society.

In the contemporary context in the United States, the pseudoscientific notion of a blood quantum (one-fourth) has to be proven in order for citizens to be able to racially categorize themselves as American Indian. Additionally, this one-fourth fraction of Native American blood must be with a tribe that is officially acknowledged and sanctioned by the federal government (Thornton 2001). In early 2006 there were about 569 such tribes (Taylor 2006). In order to get one's tribe recognized by the government, one goes through a lengthy process of forms and bureaucracy, which is sometimes a challenge for older members of a tribe struggling with the level of literacy in bureaucratic language that these forms require. Thus, there are probably many more U.S. citizens who consider themselves to have Native American ancestry than are officially counted by the federal government, who estimates they are only about 1 percent of the total population. This official count, estimated by the U.S. Census, experienced a sizable increase between the 1960 and 1990 censuses. Researchers pointed out that this "growth" in the American Indian population was not due to increased births, and certainly not to migration, but to the increase in individuals who decided to categorize themselves as Native American (Thornton 2001; Nagel 1995). This finding again underscores the socially constructed basis of race.

RELIGION, ECONOMICS, AND SHARED STIGMA AS RACE

While examining one's family tree and ancestors is one way that societies go about determining who belongs in which race, occasionally, other factors are used. For exam-

ple, government officials sometimes transform religious groups into races. Adolf Hitler (1889–1945) during Nazi Germany spoke of the Jews as a race and structured gruesome genocidal public policy around this claim. Additionally, the U.S. Census records show that in 1930 and 1940, Hindu was given as a choice for racial categorization (Lee 1993). Besides these cases of religion being racialized, sometimes, one's social class is used as a marker for race. In Brazil there is a saying *o dinheiro embranquece*, which means "money whitens." Because there are many mixtures of skin types in Brazil, skin tone combines with socioeconomic status to create the notion of race. For example, if a person is of a mixed skin tone but is dressed professionally and holds a prestigious position, that person may be considered white while a person with an even lighter skin tone who appears impoverished might be labeled black (Taylor 2006).

In a minority of cases, groups who are not in the majority racially sometimes come together to create a racial group and ask those in power to sanction it as a new race. For example, the pan-ethnic racial category of Asian and Pacific Islander (API) appeared on the U.S. Census for the first time in 1990 (Lee 1993). This race was created by bridging some major differences in terms of national origins, languages, and religions. In fact, the United States had a history of finding favor and disfavor with different ethnic groups that are now in the API category depending on the political and economic climate of the day. When the economy became saturated with Chinese laborers in the nineteenth century, the United States passed the Chinese Exclusion Act. At this time, it was more favorable to be Japanese. However, during World War II (1939–1945) when the federal government placed Japanese Americans (even those who were born and raised in the United States) into internment camps, it was more favorable to be Chinese. Despite these and many other cleavages between the groups that are now united in the API race, the groups came together under a specific political climate in the 1980s when the United States was experiencing an economic recession and some dominant rhetoric blamed a global Asian face for the job loss and downward mobility of those who considered themselves white. Thus, regardless of national origin, many API individuals began to be scapegoats and targets of white hostility and even vicious hate crimes (Espiritu 1992). Perceiving common issues of oppression shared across ethnic lines in the U.S. context was an important motivating factor in the creation of the API race.

Omi and Winant (1994) developed a theory of racial formation that underscores how racial categories such as the API are socially constructed, usually for political ends. Although in the majority of cases of racial formation the state uses its power to control what defines a race and who is allowed to claim membership within it, in a minority of cases (such as the API category), the initiative to construct a racial category comes "from below." These minority individuals still have to find favor with the state in order to make their category official. In the case of the one-drop rule, many people were denied their legal efforts to challenge the state and become recategorized racially. But it is important to note that in the case of the one-drop rule, permission was being asked to join into the dominant group (whites) whereas the API group created a new category that did not upend or challenge the existing racial hierarchy. Similarly, in 2000, a group of individuals who considered themselves multiracial effectively lobbied to change U.S. Census procedure so that for the first time people could check more than one box to define their race. Again, this was a movement from below to create new racial possibilities, and it did not seek to challenge the dominance of the category white. The closer policing of the boundaries of whiteness by the state is indicative of how structured by dominance race is.

DETERMINING WHICH ETHNICITIES GET TO BE WHITE

Unlike ethnicities that are often directly linked to a particular continent, and usually a specific nation, the concept of race is an obviously socially constructed category due to its inability to be traced to any one geographic region. One cannot point to black or white on a map as one can with an ethnicity, such as Chinese, Japanese, Jamaican, Irish, or Mexican. This is particularly evident when studying the dominant category of whiteness. While some might equate the term white with a term such as European American, such terminology conceals how much whiteness has adapted to incorporate various non-European groups over time when it served the purpose of solidifying the material and ideological advantage of the category white in a particular area. For example, although people claiming either Chinese or Japanese ancestry are placed into the API category (usually known as Asian Americans) in the United States, during apartheid in South Africa, individuals with these two ethnicities had very different racial experiences. The Japanese were classified into the white category, enjoying the social privileges of the dominant group, while the Chinese were placed into the "colored" category. Although coloreds were not treated as poorly as those considered Africans, they nonetheless were well below whites on the racial hierarchy (Marger 2006). Thus, when it was crucial and beneficial for South Africa to maintain positive economic relations with Japan, it was not in their best interests to consign Japan's citizens to second-class status. Treating the Japanese as whites meant that South African whites could still cash in on the material advantages that came from trading and doing business with the Japanese in an

increasingly globalized marketplace in which China was not yet a key player.

In the U.S. context, the Irish and the Jews are two examples of ethnic groups that, although still predominantly European, were not regarded as white upon arrival into the country and had to "earn" their incorporation into whiteness. In the early nineteenth century, the Irish arrived in a mass migration, escaping famine and British oppression. They had no kind of shared identity with the largely British white majority in the United States since the Irish saw the British as their oppressors. Furthermore, the Irish found themselves still excluded outright from many of the best jobs and were even targets of the exaggerated big-lipped, ruddy-skinned caricatures that students of history would typically associate with African Americans. Yet when the political question of the abolition of slavery reached front and center by the middle of the 1800s, the side that the Irish chose to take en masse would be an important deciding factor in whether they became incorporated into whiteness. To side with the slaves, they perceived, would consign them to the second-class citizenship they had just worked so hard to flee in their native land. In coming out decidedly antiabolition on the slavery question, already speaking the English language, and attaining access to some key positions in civic life (particularly in New York City), the Irish solidified their position into the dominant race, white, by the middle of the nineteenth century (Allen 1994; Roediger 1991; Takaki 1993).

The Jews also faced the kind of in-between racial status upon first arriving to the United States that the Chinese faced by being categorized as colored in South Africa. The immigrant Jews certainly were not as ostracized, disenfranchised, and terrorized as African Americans were, but they were not at first deemed worthy of receiving the full benefits of whiteness. They were excluded from most major universities and were victims of prejudices and ethnic slurs (Takaki 1993). Further illustrating the point that race is a relational category, it was the outright exclusion of blacks from the educational and housing benefits of the post-World War II GI Bill that catapulted Jews into middle-class status. Not unlike the situation of the upper class Brazilians, Jews gained the favor of whiteness by their newly acquired socioeconomic status during an economically prosperous era of U.S. history. This prosperity was generated in part by huge government subsidies for both college scholarships and home mortgages, which could be characterized as the nation's first affirmative action program, giving all those deemed white a leg up over their African American counterparts. Although many blacks technically were eligible for these benefits due to their service in great numbers to the military during World War II, they were often unable to cash in on them when prejudiced southern commanders would give them dishonorable discharges for no particular legitimate reason. Moreover, since the Fair Housing Act was not passed until the late 1960s, it was perfectly legal for African Americans to be excluded from buying any of the quality housing to which those deemed white had full access. The events of this time period have been identified as the major factor contributing to the movement of Jewish Americans from nonwhite to white (Brodkin 1998).

STATE-CREATED CATEGORIES VERSUS PERSONAL IDENTITIES

While one's state-defined race clearly plays a crucial role in whether one can access the full material benefits of a society, due to its explicitly hierarchical basis, it is also the case that individuals are not completely without agency in navigating their relationship to these racial categories. People all over the globe have always resisted their oppression in various ways. For example, a U.S. professional golfer named Tiger Woods resisted the society's one-drop rule categorization of himself as African American and invented the term Cablinasian to encompass his Caucasian, black, Indian, and Asian heritage (Taylor 2006). Furthermore, there is a large group of U.S. citizens who think of themselves racially as Latino or Hispanic even though the nation's census does not allow them the option of identifying this as their race (unless they write it in as "Other," as many do). The census only includes the racial choices of White, Black/African American, Asian Pacific Islander, Native American Indian, and Other but lists various Hispanic national origins under a separate ethnicity question. This structure actually encourages persons of Latino heritage to either identify as a white Hispanic or a black Hispanic (as 50% did in 2000), further reifying the country's dichotomous black–white divide. Nonetheless, as this group of persons with Latino heritage in the United States grew exponentially by the advent of the twenty-first century, national conversations began to occur about the inadequacy of the state categories for race to adequately measure their experiences (Swarns 2004).

Because of the extreme occupational, residential, and social segregation that continues to exist in the United States, distinct cultural and ethnic patterns have come to be associated with these state-identified racial categories. For example, due to their exclusion from white churches, African Americans developed decisively different worship patterns even from those who shared their same denominations as Christians. Additionally, due to the many prohibitions during slavery of African Americans from socializing and congregating with each other, they also developed their own distinct linguistic patterns. Cultural developments and distinctions like these often lead to people talking about feeling (or not feeling) black, white,

Asian, and so on. France Winddance Twine found that some young women of African descent who had mixed parentage and grew up in affluent suburban communities stated that they did not feel black until they came to college campuses where they were not the only token minority and together with others developed a more politicized understanding of racial identity (Twine 1997). Conversely, many whites who subscribe to a colorblind racial ideology state that they do not feel white or see themselves as white at all (McKinney 2005; Bush 2004). Nonetheless, due to the sedimentation of racial inequality (Oliver and Shapiro 1995) where whites collectively transmit their "ill-gotten gains" from slavery and segregation in the form of wealth to succeeding generations (Feagin 2000), these whites still gain a material advantage from being white even if they do not see themselves that way.

Beyond feeling culturally and emotionally linked (or not) to particular racial identities, some individuals may eschew state-created racial categories for other reasons. When perceiving that the dominant culture has a particular disdain for individuals of a certain race, new immigrants may seek to distance themselves from that racial categorization, especially when the dominant culture's tendency is to lump them into that negatively perceived category. For example, some members of immigrant groups who would be classified as blacks in the United States, such as Samoans, West Indians, and Haitians, have been found to distance themselves from the racial category of black due to the pervasive antiblack stereotypes they encounter about such things as work ethic and dedication to education (Waters 1999). Similarly, sensing negative prejudices about Mexicans in the United States, some Cuban Americans and other South American Latinos have chosen to stress their national heritages over a more global racial identity as Hispanic (Fernandez-Kelly and Schauffler 1994). Although it is difficult to escape the systemic benefits or lack thereof of being deemed within a particular racial group (as a pseudoscientific birthright), individuals certainly do participate upon occasion in challenging, at least at the personal identity level, their affiliation with an assumed racial group.

SOCIAL CONSTRUCTION, MATERIAL REALITY

Race is not skin color, nor is it ethnic identity. It is not reducible to genetics. Indeed, there is much more genetic and physiological variation within the members of any given race than between individuals of different races. It has been estimated that the overlap between genetic material of people of any two racial groups is about 99 percent, so less than 1 percent of physiological differences can be explained by race (Lewontin 1996). Moreover, eventually, all genetic material of human beings traces back to Africa, where the earliest human remains were found (Feagin 2000). It has been established that any separate race (other than the human race) is not an actual scientific category and is, instead, a social construction. The assertion that race is a social construction, though, should not be confused with the notion that race is a complete fabrication only needing deconstruction (or simply ignoring/discrediting) to no longer be relevant. Even if governments decided to stop recording the racial categorizations of their citizens (as many outside of the United States have), race would still continue to be a fundamental organizing principle in society.

As has been demonstrated, the concept of race originated as an ideology meant to justify colonization and exploitation of people who happened to be, usually, darker-skinned than their exploiters. Material conditions between those who were eventually to be considered separate, superior/inferior races were already starkly unequal by the time the pseudoscientific category of race was formalized. Rigid laws enforcing the so-called superior racial group's advantages and the so-called inferior group's disadvantages continued for centuries. These chains have only been lifted, as of early 2006, for a few decades, and the material advantage/disadvantage gap has been so solidified that people's ways of thinking, being, and doing are still very much tied to this way of relating called race. Moreover, the pseudoscientific claims of racial difference in intelligence, athletic/physical ability, and other characteristics are constantly resurging into the present day. People are also finding other ways to further racialized understandings of the world without even mentioning race by using various code words and rhetorical strategies to camouflage what, in the end, has a very similar effect in organizing the social world into superior and inferior beings (Bonilla-Silva 2003).

Thus, regardless of how socially constructed race is, for better or for worse, society is stuck with its legacies. The rigid boundaries it was invented to enforce have created distinct cultures and ways of being. To even expect that these racial categories could eventually remain in society in a more benign way as nominal ways of distinguishing between separate but equally valued cultural groups is to confuse race with ethnicity. Race's raison d'etre was never solely to distinguish between various national and cultural heritages; it was always proposed in a hierarchical order, with attached value judgments of superior/inferior and corresponding material advantages or disadvantages. Until society addresses the material foundations of race and rectifies the resulting imbalances, simply deciding to erase race linguistically from the vocabulary will hardly get rid of it as a fundamental organizing principle of social life.

SEE ALSO *Marriage, Interracial; Miscegenation; Race Mixing; Race Relations; Racialization; Racism*

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RACE AND ANTHROPOLOGY

The history of anthropology has been closely identified with the study of race. In the early twenty-first century the concept of race is highly contested among anthropologists, some of whom claim that it does not exist in either biology or society except as an objectionable, stigmatizing

fiction. Its problematic biological status has led some to assume a "no-race" stance that resonates with the color-blind ideology that has gained popularity in some segments of U.S. society. Color blindness denies the extant social significance and the experiential and institutional materiality of race, races, and racial inequalities.

Race is an ideologically charged and invidious social distinction (Berreman 1972). As a social and often legally codified classification, it is applied to populations presumed to share common physical, biological, or natural attributes believed to be heritable. The "naturalizing" effect of many racial discourses translates into claims that the social disparities linked to racial divisions exist naturally rather than having emerged as a result of human practices and inventions. Due to the imprecision of what physical variation, biology, and nature actually mean and the slippage between culture and biology within any cultural context, race is difficult to define in a manner that clearly differentiates it from ethnicity, nationality, or even gender. The permanence and fixity conventionally associated with nature and biology are questionable due to "the human organism's [and nature's] constant state of change"—often in response to human interventions (Wade 2002, p. 6). A cross-cultural approach reveals that in certain parts of the world (e.g., Latin America) racial identification can shift, and the extent to which it is based on appearance, ancestry, or sociocultural status varies. Anthropological inquiry is rethinking and attempting to provide clearer operational definitions for the basic categories around which the social analysis of race has been built. Terms such as *phenotype*, *nature*, *biology*, *blood*, and *heredity* must be scrutinized in view of the unspoken assumptions underpinning them. Rethinking the parameters of race is being done, from different angles, in all of the discipline's subfields: social and cultural anthropology, anthropological linguistics, archaeology (particularly historical archaeology), and biological anthropology (especially the specialty in which a critical biocultural approach is employed).

Although race has long been a gloss for human biological variation, they are not the same. During the eighteenth and nineteenth centuries along with the first half of the twentieth, the race concept was used to make sense of the diversity of human phenotypes, which were assumed to index fundamental biological and sociocultural differences. Biological variation is more complex than the physiognomic diacritics that came to signify race in the broad geographically based taxonomies formulated in 1735 by the Swedish botanist Carolus Linnaeus (1707–1778) and in 1795 by the German professor of medicine Johann Friedrich Blumenbach (1752–1840). Beneath the skin's surface are differences of blood type and strings of DNA. However, genetic variation among human beings is small. Humans are 99.9 percent alike genetically, with most of the difference "involv[ing] modest degrees of variation in the frequency of shared genes" (IUAES). Most of this is within groups rather than between them. Socially targeted differences ignited the imagination of folk theorists and scientists, who drew on the popular consciousness to construct the formal typologies conferred the legitimacy of science.

Skin color, hair texture, and morphological traits were visible markers used to develop universal taxonomies for classifying human populations during the age of European exploration and colonial expansion. These differences were linked to social and moral characteristics that stereotyped and rank-ordered the world's populations in a global hierarchy (Fluehr-Lobban 2005). These hierarchical classifications naturalized perceived cultural variation and culturalized what was defined as nature. They also justified the colonial expansion that gave rise to a modern world system of culture, power, and political economy in which privileged western Europeans exercised supremacy over the heterogeneous peoples, habitats, and resources of the world. These structures of domination were predicated on the land alienation, coerced labor, and repressive state policies that racialized colonial landscapes, with the transatlantic region playing a central role in the transfers of value that were a catalyst for the Industrial Revolution (Williams 1944; Wolf 1982). This momentous transition in social evolution occurred in the context of the transatlantic slave trade and related forms of enslavement established throughout the Americas.

Although color/phenotype prejudice preexisted the modern world system, race as a worldview (Smedley 2007) and material relation did not emerge until the "post-1400s western European racist order" (Sanjek 1994, p. 8). According to St. Clair Drake (1911–1990), skin-color prejudice and slavery converged for the first time in the New World's colonies of exploitation where the conditions for racial slavery arose (Drake 1987). This transformation laid the foundation for a global racial hierarchy in which sub-Saharan Africans represented the most extreme variant of cultural and racial difference. The primitive savagery attributed to Africa and other peripheralized zones of the world system represented the binary opposite of western Europe's purportedly advanced civilizations.

A chapter in the multinational history of racial typologies is that in which Count Arthur de Gobineau (1816–1882) elaborated the notion of the natural inequality of human races and Aryan supremacy in his *Essai sur l'inégalité des races humaines* (Essay on the Inequality of Human Races, 1851–1855). The part of this history that is usually omitted is that Joseph-Anténor Firmin (1850–1911), a Haitian who belonged to the Anthropology Society of Paris, wrote *De l'égalité des races*

humaines: Anthropologie positive (The Equality of the Human Races: Positivist Anthropology, 1885), a robust rebuttal and alternative approach to the study of humankind (Fluehr-Lobban 2005, pp. 110–116). Similar debates occurred in other national and regional contexts, including Latin America, where interpretations of Charles Darwin's (1809–1882) evolutionary theory were informed by cultural orientations significantly different from those of Anglo North America. The Anglo-dominant United States emphasized the permanence and mutual exclusivity of race and that whiteness was constructed along lines of purity. In Brazil and elsewhere in Latin America, whiteness was tied to the idea, goal, and social process of race mixing and its implicit ideal, whitening—becoming white by marrying up the social scale or by acquiring wealth and assimilating socially valued cultural and linguistic characteristics.

Throughout the nineteenth and at least half of the twentieth centuries, scientific racism or racialism (Lieberman 2003) was espoused within theological and secular varieties of monogenesis and polygenesis. At the height of the antislavery movement, polygenists, claiming that a single genesis could not account for the diversity of the world's peoples, honed the technical capacity of phrenology and craniometry to measure differences. They also promulgated their research results through scientific outlets, popular culture, and political debate. Samuel T. Morton (1799–1851), Josiah Clark Nott (1804–1873), and George Gliddon (1809–1857), who constituted the core of the early American school of anthropology, attempted to substantiate the hierarchical ranking of the races, with the Caucasoid at the top, the Mongoloid in the middle, and the Negroid at the bottom. Louis Agassiz (1807–1873), a Harvard professor, supported their polygenetic findings and advised President Abraham Lincoln (1809–1865) that freed blacks were incapable of becoming the equals of whites. Later in the nineteenth and early twentieth centuries, biodeterminism developed along the lines of social Darwinism, couched in Darwinian categories but filtered through Spencerianism. These views underpinned the unilinear evolutionism of Edward B. Tylor (1832–1917) and the physical anthropology of Aleš Hrdlička (1869–1943), leaders in anthropology's professionalization. Anthropology's scientific racism also provided ideological fuel for the eugenics movement. Through sterilization and immigration restrictions, it aimed to limit the growth of poverty, criminality, and intellectual inferiority believed to be concentrated among African Americans, immigrants from southern and eastern Europe, and the poor. Eugenics laws developed in the United States were later used as models for population control policies in Nazi Germany. Also philanthropic support from the United States contributed to the rise of Nazi anthropology (Schafft 2004).

A paradigm shift occurred under the leadership of the Columbia University professor Franz Boas (1858–1942), whose research challenged the dominant perspectives on immigrants and other racialized segments of society. Conceptualizing race, language, and culture as distinct domains (Boas 1911, 1940), he influenced many colleagues and students, including Ruth Benedict (1887–1948), Margaret Mead (1901–1978), Melville Herskovits (1895–1963), Zora Neale Hurston (1891–1960), Ella Deloria (1888–1971, Dakota Sioux), and Ashley Montagu (1905–1999). Montagu (1942) insisted that race was a fallacy and advocated the alternative notions of genogroup and ethnic group. By World War II (1939–1945) Boasianism had become more widely accepted. It cleared the ground for major shifts in the 1960s, when race's biological status was refuted (Livingstone 1962). Many sociocultural anthropologists assumed that race was not useful for understanding social distinctions. This led to a silence concerning structural racism.

The Boasian agenda was not the only antiracist trajectory to influence anthropology. W. E. B. Du Bois (1868–1963) produced critical social analysis that in many respects paralleled Boasian thought (Baker 1998; Harrison 1992). He was part of a tradition of black racial vindication that contested biodeterminist ideas. Early African American anthropologists, trained in leading graduate departments but also influenced by Du Bois's noncanonical public intellectualism, often undertook antiracist scholarship, which entailed negotiating the tensions between mainstream disciplinary approaches and more critical interdisciplinary frameworks. The physical anthropologists Caroline Bond Day (1889–1948) and W. Montague Cobb (1904–1990) along with the social anthropologists W. Allison Davis (1902–1983) and St. Clair Drake exemplify this trend (Harrison and Harrison 1999). Davis and Drake, under W. Lloyd Warner's (1898–1970) supervision, provided important inputs into the collaboratively produced *Deep South: A Social Anthropological Study of Caste and Class* (Davis et al. 1941). Drake and Horace Cayton's (1903–1970) *Black Metropolis* (1945), which became a race relations classic, combined the methods and analytical perspectives of anthropology and sociology. These books' receptions in anthropology were negligible.

After anthropology's "biological revolution," when the discipline was largely silent about social race and racism, Marvin Harris (1927–2001), St. Clair Drake, Eleanor Leacock (1922–1987), Gerald Berreman, and John Ogbu (1939–2003) kept these issues alive, often bringing cross-cultural perspectives and data to bear on them. In the 1980s Virginia Dominguez (1986) and James W. Loewen (1988) explicated the social construction and dynamics of race, including how they related to

the social identities of Euro-Americans and Asian Americans. Eric Wolf's (1923–1999) anthropological history of world capitalism (1982) elucidated the differences between ethnicity and race, with race being associated with forced exclusion, stigmatized labor, and other types of dehumanization. Brackette F. Williams (1989) illuminated the ways race and ethnicity operate as distinct yet closely interrelated dimensions of identity formation in projects of imagining, building, and contesting nations.

Since the early 1990s there has been an expanded interest in race (Harrison 1995, 2002). In good part this has arisen because of race's heightened volatility in many parts of the world, especially under the conditions and outcomes of globalization: technologically mediated time-space compression, widening disparities in subsistence security and wealth, new migrations, transnational cultural citizenries, and diasporic identities. Sociocultural anthropologists have investigated the multiple histories and cultural dynamics of race, the persistence of its social significance, the shifts in its meanings, and its overt and covert modalities (Smedley 2007; Baker 1998). Neoracisms without races, the social censorship of talk about race and racism, and race's intersections with gender and class have also captured anthropologists' scrutiny and ethnographic gaze. Research is being undertaken in many parts of the world, from eastern Europe, where postcommunist restructuring has exacerbated discrimination against the region's Roma ("Gypsies"), to the more paradigmatic settings of the United States, South Africa, and Brazil, which have long been a focus of debates over the varieties of racial formation (Scheffel 2005; Sheriff 2001; Wilson 2001).

A great deal of attention has been given to the social life of discourses that biologize or culturalize difference—that is, use notions of culture to produce racializing effects. Linguistic anthropologists have examined language practices that contribute to or resist the dynamics of racialization. Their approach to the racial politics of language may lead them from explicit hate language to covert language whose efficacy is affected by indirect indexes or widely understood but never directly articulated nonreferential meanings (Hill 1998). Critical biocultural anthropologists explore the embodied experiences that affect human exposure to stress and susceptibility to diseases. In their view, race affects the internal and external workings of the body, which is always situated in a nexus of power. These dynamics have health-related outcomes. Racism has concrete consequences for human biology, which is socialized in historically specific contexts of culture, power, and political ecology (Goodman and Leatherman 1998). Historical archaeology is also unburying new layers of understanding about past landscapes of race and racism. Studies of the material cultural remnants of plantation slavery, maroons (runaways), free and freed communities, and the cultural life of other racialized or subracialized groups (e.g., Irish immigrants) fill in some of the gaps that historiographical research cannot (Orser 1998; Singleton 2006).

Other trends are studies of whiteness, which shift from the traditional focus on racial subordinates (Brodkin 1998; Buck 2001). Critical studies of race and racism are also examining indigeneity, especially in contexts in which the concept of ethnicity has provided the conventional analytical lens (Cowlishaw 1999; Wade 1997). Analyses of nontraditional Indians and African descendants with a history of contact with or even citizenship in Indian nations are disrupting conventional boundaries of classification and identity (Sturm 2002; Warren 2001). There are also studies of racism as a site of human rights violation and of antiracism's place within the international context of human rights struggle (Banton 1996; Harrison 2005).

Finally, anthropologists have been vigilant in challenging the latest revival of biological determinism (e.g., Herrnstein and Murray 1994; *Current Anthropology* 1996) and in detecting the potential dangers of reifying race in the Human Genome Project. The intellectual and ideological heterogeneity of anthropology precludes a consensus. In light of this, it should be of no surprise that the bell curve thesis made sense to Vincent Sarich (1995) or that Glenn Custred coauthored Proposition 209, the 1996 California civil rights initiative that aimed to dismantle affirmative action. Race has figured prominently in anthropology's history of ideas and public engagement. That relationship is likely to persist.

SEE ALSO *Anthropology; Anthropology, Biological; Anthropology, Linguistic; Boas, Franz; Colorism; Determinism, Biological; Drake, St. Clair; Du Bois, W. E. B.; Heredity; Hurston, Zora Neale; Mead, Margaret; Montagu, Ashley; Nature vs. Nurture; Other, The; Race; Racial Classification; Racialization; Racism; Social Constructionism; Social Constructs; White Supremacy; Whiteness*

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Faye V. Harrison

RACE AND ECONOMICS

Commentaries by political economists about the concepts of race and ethnicity and the implications of those categories for economic behavior and outcomes date back to the eighteenth century. Classical political economists generally maintained that all groups have comparable abilities to make rational economic decisions. Variations in observed outcomes among groups were explained in terms of history, luck, and incentives. Incentives and markets were seen as especially powerful forces capable of generating convergence in observed outcomes. In contrast, most postclassical economists believed that permanent and semipermanent group differences in desirable wealth-generating characteristics are primarily responsible for differences in levels of development.

Although the Irish were often a principal subject of discussion, the colonization of the Americas and the massive expansion of African enslavement ensured that attention would shift to Native Americans and blacks. Much of that discourse consisted of thinly veiled rationalizations for policies of discrimination, exploitation, and oppression through assertions that the victims were less than fully human. The expropriation of Native American land was justified by a "natural law" argument by which so-called civilized communities were divinely mandated to master and transform that environment.

EARLY THEORIES

Philosophers' theories of Caucasian, Aryan, and Anglo-Saxon racial superiority provided a rubric for distinguishing between the civilized and the uncivilized. The philosopher David Hume (1711–1776) insisted, for example, on the universality of human nature in 1748, but by 1753 he had become a staunch proponent of racial hierarchies. Hume wrote, "I am apt to suspect the negroes and in general all the other species of men … to be naturally inferior to the whites. There never was a civilized nation of any other complexion than white, nor even any individual eminent either in action or speculation." (Morton 2002, p. 3).

Such contrived claims about black inferiority served to justify enslavement. As was noted by Eric Williams, "Slavery in no way implied, in any scientific sense, the inferiority of the Negro" (Williams 1994, p. 29). Supporters of slavery predicted disastrous consequences if blacks were emancipated. The inaccuracy of those predictions did not deter mid-nineteenth-century postclassical economists who were influenced by the writings of anthropologists from fully endorsing notions of differences among racial groups in the capacity to exercise economic rationality. Nonwhites and the Irish were characterized as "lower races," and the category "Africanoid Celt" and an "Index of Nigrescence" were introduced in 1870 to measure how close the Irish were to blacks (Levy and Peart 2002).

DARWIN AND MARX

Charles Darwin's 1859 book *On the Origin of Species by Means of Natural Selection, or, The Preservation of Favoured Races in the Struggle for Life* provided additional fuel for speculations about racial hierarchies, although Darwin and some of his supporters were dubious about the extent to which the dictum "survival of the fittest" could be applied appropriately to human beings. Alfred Russel Wallace, for example, insisted in 1864 that natural selection does not apply to humans because of ethical issues deriving from the phenomenon of human sympathy. However, prominent social Darwinists, including Herbert Spencer (1820–1903) and William Graham Sumner (1840–1910), argued that human progress depends on unbridled competition in all areas of economic life. As individuals sought to improve their circumstances, continuous movement toward the perfection of the human race inevitably would occur.

Karl Marx (1818–1883) was fascinated by Darwin's work, although his views about race were more nuanced than those of most of his contemporaries. Although Marx and Friedrich Engels (1820–1895) envisioned the eventual disappearance of national and ethnic identities through the expansion of global capitalism, Marx recognized that in the interim a variety of social formations were sustainable and that economic progress "does not prevent the same economic basis … from displaying endless variations and gradations in its appearance, as the result of innumerable different empirical circumstances, natural conditions, racial relations, historical influences acting from outside, etc." (Marx 1991 *Capital*, vol. 3, p. 927).

Marx's sensitivity to issues of race and culture is evident in his discussion of Native American societies, in which he expressed special admiration for the Iroquois, highlighting their "sense of independence" and "personal dignity." In addition, his writings are generally devoid of many of the prevailing stereotypes about non-Western traditional societies, including India and pre-Columbian Mexico (Anderson 2002). Nevertheless, the influence of Darwin is suggested by Marx's comments about the dependency of barbaric and semibarbaric countries on civilized ones, indicating that he, like most thinkers of that period, failed to recognize white supremacy as an overarch-

ing global phenomenon (Robinson 1983). However, unlike most postclassical economists, Marx believed that differences in levels of social development among groups could be mediated through social interventions rather than reflecting a permanent pattern enshrined by innate genetically or culturally based variations in development potential. He argued that "all this crippling under existing social relations has arisen historically, and in the same way can be abolished again in the course of historical development" (Marx and Engels 1976, p. 425). That view resonated with those of classical political economists who insisted on the efficacy of incentives and markets to produce convergence in economic behavior and outcomes.

RACIAL HIERARCHIES IN POSTCLASSICAL ECONOMICS

Pseudoscientific notions of racial hierarchies can be found in the writings of several prominent postclassical economists, including William Stanley Jevons, Alfred Marshall, Arthur Pigou (1907), John R. Commons, and Irving Fisher (1930). In 1871 Jevons stated: "A man of lower race, a negro, for instance, enjoys possession less, and loathes labour more; his exertions, therefore, soon stop. A poor savage would be content to gather the almost gratuitous fruits of nature, if they were sufficient to give sustenance; it is only physical work which drives him to exertion" (Jevons 1871, p. 183). Those postclassical economists explored a variety of areas in which racial variations in economic rationality were hypothesized to exist, including labor supply, family size, consumption, and savings decisions. Marshall wrote about savage life ruled by custom and impulse in which there was no conception of future planning and rational economic decision-making and people were incapable of steady work. Individuals belonging to the "lower races" were deemed to be especially prone to the consumption of luxury goods and alcoholic beverages (Marshall 1891).

Large-scale migration from southern and eastern Europe to the United States beginning in the last decade of the nineteenth century led to the extension of notions of racial inferiority to those population groups. In 1907 Commons warned, for example, that the new immigrants were genetically inferior and would reduce the genetic quality of the nation. Various postclassical economists characterized those immigrants as "untaxed imports" and advocated eugenics policies to improve the genetic pool of the nation, including measures to encourage fertility among the "superior" genetic stock and reduce fertility among those with "inferior" natural abilities, including permanent segregation, sterilization, and selective restrictions on immigration (Levy and Peart 2002).

As described by William Darity, several researchers who were actively involved with the American Economic Association during its formative years subscribed to the view that African Americans eventually would face extinction as a result of a combination of genetic deficiencies and social maladjustment. Proponents of that view refused to discard the underlying assumptions of black inferiority even after demographic trends contradicted the predictions associated with the "Black Disappearance Hypothesis" (Darity 1994).

REVIVAL OF THE CLASSICAL VIEW

Beginning in the 1930s, the Chicago School played a pivotal role in reviving the classical tradition of treating individuals as possessing equal competence to engage in rational economic decision-making and reestablishing the critical role of incentives and markets in conditioning human behavior. Frank Knight's 1931 critique of the presumed correlation between time preference and race in a 1931 review of Irving Fisher's *Theory of Interest* was a major turning point.

George Stigler and Gary Becker also helped undermine postclassical views about racially distinct time preferences. Becker's well-known "taste" or preference theory of discrimination has determined the contours of discussions about race for most contemporary neoclassical economists (Becker 1957). His analysis was conceived as a response to the failure of economists to examine the phenomenon of racial economic discrimination systematically. Two exceptions to the pattern of neglect of this topic noted by Becker include a 1952 study of black workers in southern industry by Donald Dewey and a 1955 analysis of occupational racial wage differentials by Morton Zeman. In Becker's model social identities are treated as economically nonproductive individual characteristics that may, however, have significant economic consequences. A racial group thus can be treated simply as the aggregation of those individuals identified by a particular classifying parameter, allowing neoclassical economists to ignore the economic implications of individuals' decisions for the intensity of group identification. The key theoretical conclusion flowing from Becker's model is that the competitive forces of the market inevitably undermine the economic impact of racial prejudices, which are presumably irrational. However, the persistence of inequality in outcomes across groups has been documented, and this finding poses a formidable challenge to the efficacy of Becker's model. Among others, Patrick Mason (1999) has suggested that racial discrimination may be consistent with the competitive process.

LATER RECONCEPTUALIZATIONS

Efforts to explain persistent racial differentials have generated two markedly different approaches to reconceptualizing the relationship between race and economic

outcomes. One approach reintroduces the postclassical notion of racial hierarchies. Monographs by George Gilder and Charles Murray in the early 1980s assert that differentials in economic outcomes between blacks and whites stem primarily from dysfunctional behaviors endemic to black culture, including willful refusal to adhere to the traditional American values of hard work, self-reliance, future orientation, thriftiness, a strong emphasis on education, and individualism. Economists such as Thomas Sowell and Walter Williams readily integrated aspects of this discourse into their writings in the 1980s, and subsequently the number of subscribers to those views increased significantly (Akerlof and Kranton 2000; Loury 2002). Although claims about black genetic inferiority that were prominent during the postclassical period have been resurrected, few economists have been willing to endorse those claims openly (Herrnstein and Murray 1994).

The second approach to reconceptualizing the ways in which race affects economic behavior and outcomes revives the classical tradition of focusing on the role of incentives and institutions in reducing disparities and is associated with the emergent subdiscipline of stratification economics. Stratification economists conceptualize race as a produced form of personal identity that is responsive to changes in incentives for altruistic versus antagonistic behavior in social interactions. Collective identity is deemed to have economic value even as there are also costs to identity formation. As a consequence, reductions in intergroup wealth differentials are a necessary but not sufficient condition for eroding traditional patterns of collective identification. This conclusion is consistent with Marx's views on the value of culture and institutions. Stratification economists believe that racial disparities and racial discrimination are endemic features of the U.S. economy and social systems that are reproduced by a myriad of institutional practices that require transformation to produce outcomes characterized by sustainable reductions in racial differentials. Like Marx, stratification economists recognize that historical inertia is a powerful barrier to change, leading to caution in making predictions about short-term reductions in racial differentials.

SEE ALSO *Akerlof, George A.; American Economic Association; Culture; Darwin, Charles; Discrimination; Economics; Economics, Classical; Economics, Neoclassical; Economics, Stratification; Fisher, Irving; Hume, David; Immigration; Inequality, Racial; Marshall, Alfred; Marx, Karl; Race; Race and Religion; Racism; Stratification; Williams, Eric*

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RACE AND EDUCATION

Race and education becomes a social issue when educational opportunities are differentially available to members of diverse racial groups within a society.

Educational discrimination has a variety of effects that often lead to interracial conflict. Because education is a major means of social mobility, discrimination in this domain forces less-favored racial groups to occupy lower-status jobs and receive less income. Such results form a vital component in a wider system of racial oppression—as in the former apartheid policies of South Africa and state-mandated segregation in the U.S. South. But educational segregation by race also operates to limit the life chances of discriminated racial groups in nations without such formal systems of oppression, such as Brazil. And in countries where social class and race are highly intercorrelated, as throughout Latin America, racial segregation in schools results directly from intense patterns of residential segregation by class.

Racially segregated schools are the hallmark of racial discrimination in education. Separate schools allow for vastly fewer resources to be provided for the oppressed race. Indeed, racially separate schools are so central to systems of racial oppression that they are tenaciously maintained in the face of efforts to end them. The protracted and only partially successful efforts to end segregated schools in the United States provide a striking illustration.

Public schools did not emerge in the U.S. South until late in the nineteenth century, and these early schools were for whites only. Black schools came later, after formal state laws for racial segregation had been sanctioned in 1896 by the U.S. Supreme Court in *Plessy v. Ferguson*. Although the case involved segregated railroad seating, its decision establishing the formula of "separate but equal" was promptly applied by the white South to schools, which became extremely separate and unequal.

It was fifty-eight years before the High Court overturned *Plessy*. By 1950, in two graduate education cases, the meaning of "equal" went beyond mere parity in brick-and-mortar terms to include such intangibles as faculty reputation and general prestige. The decisions prepared the ground for *Brown v. Board of Education* four years later to hold separate facilities to be inherently unequal. But implementing this unpopular decision has proven difficult.

Critical to the acceptance of mandated social change that runs counter to dominant public opinion is the perception of inevitability. The responses of the white South to the varying firmness of the High Court's rulings illustrate the point. With an uncompromising, nine-to-zero decision in *Brown*, the Court in 1954 generated a strong sense of inevitability. But in 1955 the Supreme Court retreated in its implementation order to a vague "all deliberate speed" formula (*Brown II*). This formula returned the enforcement of desegregation back to southern federal district courts without guidelines. Only when this weak order undermined the sense of inevitability did southern politicians become uniformly defiant and prosegregationist organizations gain momentum. Then the opposition believed *Brown* could be effectively opposed. *Brown II* is not solely responsible for the violent opposition that followed, but its vagueness contributed to the resistance by eroding the strong sense of inevitability that had prevailed.

Consequently, the region's school desegregation did not take hold until the federal courts lost patience between 1968 and 1973 (Orfield and Eaton 1996). This brief period saw court orders achieve sweeping gains—especially in the recalcitrant South but also in the cities of the North and West. By the 1970s the South had more racial desegregation in its public schools than any other region. But this process ended abruptly in 1974 when the Supreme Court reversed direction. In *Milliken v. Bradley* the Court by five to four struck down a metropolitan solution ordered by a district court to remedy the intense racial segregation of Detroit's public schools. What made this decision so regressive is that such remedies were the *only* means available to desegregate the public schools of many of the nation's largest cities (Orfield and Eaton 1996; Pettigrew 1981). Moreover, segregation between city and suburban districts is now by far the major component today in metropolitan school segregation (Clotfelter 2004). Decisions of the High Court from 1974 into the twenty-first century continued this trend, and allowed racial segregation of the public schools to return not only in the South but also throughout much of the United States.

Thus, *Brown* was largely reversed without the High Court ever stating that it was overturning the famous decision. By 2000 black children were more likely to be attending majority-black schools than at any time since the 1960s; 70 percent went to predominantly black schools and 37 percent to schools with 90 percent or more black students. The greatest retrogression during the 1990s occurred in the South, the region that had previously witnessed the greatest gains (Orfield 2001). And Latino school children became more educationally segregated from white children than African American children (Orfield and Eaton 1996).

Supporting this retreat from desegregated schools, the sociologist James Coleman (1926–1995) claimed in a highly publicized speech that urban interracial schools were impossible to achieve because desegregation causes massive "white flight." Desegregation led, he claimed, to whites fleeing to the suburbs and leaving minority concentrations in central city cores. This research had serious weaknesses, and its policy recommendations ignored metropolitan solutions (Pettigrew 1981).

The "white flight" thesis is far more complex than Coleman claimed (Pettigrew and Green 1976). Some whites did move from large cities when school desegregation began, but this movement was neither universal nor permanently damaging. Some cities without any school desegregation also experienced widespread white suburbanization. Other cities experienced little such movement at the time of desegregation. And where so-called "white flight" to the suburbs did occur, it constituted a "hastening up" process; within a few years the loss was what would have been expected without desegregation (Farley, Richards, and Wurdock 1980).

But does school desegregation improve the life chances of African Americans? From the 1970s to the 1990s, black high school completion rates rose sharply. Although less than half finished high school at midcentury, by 2000 the figure approached that of white Americans. During these same years, the mean difference between black and white achievement test scores steadily narrowed (Neisser 1998). White scores were improving, but blacks who entered school during the late 1960s showed especially strong gains—when extensive school desegregation began. Mean racial differences in achievement tests were not eliminated, but they began to close. However, these positive trends stalled and were even reversed by the late 1990s once the federal courts allowed resegregation. Yet these trends are only suggestive, because other factors were also influential—notably, rising black incomes and such effective national educational programs as Head Start.

More to the point, did school desegregation expand opportunities for African Americans in the long term? An array of sociological studies tracked the products of desegregated schools in later life to find answers (Pettigrew 2004). With social class controlled, black children from desegregated schools, when compared with black children from segregated schools, are later more likely:

1. to attend and finish majority-white colleges;
2. to work with white coworkers and have better jobs;
3. to live in interracial neighborhoods;
4. to have somewhat higher incomes;
5. to have more white friends and contacts and more positive attitudes toward whites.

Similarly, white products of desegregation have more positive attitudes toward blacks than comparable whites from segregated schools. In short, desegregated education prepares black and white Americans for an interracial world.

These positive lifetime effects of desegregation are not limited to test score gains—more important is the fact that desegregation enables African Americans to break through the monopoly that white Americans have traditionally had on informational flows and institutional access. Sociologists have identified several interrelated processes underlying this phenomenon (Pettigrew 2004). These processes mirror the harsh fact that life chances in America flow through white-dominated institutions.

Desegregation involves interracial contact. Intergroup contact is one of social psychology's best-established theories. A comprehensive meta-analysis found that 95

percent of 714 independent samples with 250,000 subjects show that intergroup contact reduces prejudice (Pettigrew and Tropp 2006).

Desegregation teaches interracial interaction skills. Given the nation's racist past, neither black nor white Americans are skilled in interracial interaction. The products of desegregated schools have the opportunity to learn these skills. Their anxiety about such interaction is reduced. This is highly useful for both blacks and whites, for it contributes to their willingness to enter biracial environments and their acceptance in these situations.

Desegregation erodes avoidance learning. After long facing discriminatory treatment, some black Americans learn to avoid whites. But this reaction has negative consequences. It closes off for ghetto dwellers the better opportunities that exist in the wider society. And, like all avoidance learning, it keeps one from knowing when the situation has changed. Desegregated schooling overcomes such avoidance.

Desegregated blacks gain access to formerly all-white social networks, such as those that share information about colleges and jobs. This process does not require personal friendships: Weak interpersonal ties are the most informative, because close friends are likely to possess the same information (Granovetter 1983). Interracial schools allow black students to gain access to these networks.

Thus, although it is not a popularly recognized fact, the racial desegregation of America's public schools has led to positive outcomes. But the resegregation of the nation's schools in the twenty-first century threatens to reverse these beneficial processes.

Although the racial scene in the United States has many unique features, social research in other nations suggests that similar intergroup processes operate in schools throughout the world. Additional research is needed, but the separation of groups in schools and other societal institutions, whether the groups are racial or not, appears to have comparably negative effects. Indeed, in some interracial nations such as Brazil, the deleterious effects of separate education may be even greater than in the United States. Educational differences between Brazilians of different skin colors explains much of the nation's variation in racial occupational inequality and its racial gap in white-nonwhite mobility (Telles 2004).

In addition to thwarting beneficial intergroup contact, intergroup separation triggers a series of interlocking processes that make group conflict more likely. Negative stereotypes do not just persist but are magnified; distrust cumulates; and misperceptions and awkwardness typify the limited intergroup interaction that does take place. The powerful majority comes in time to believe that segregated housing, low-skilled jobs, and constrained educational opportunities are justified, even "appropriate," for the minority. In short, racially segregated schools reproduce racial inequality. Intergroup schools have proven one of the needed antidotes for combating these negative processes—from Northern Ireland to South Africa.

SEE ALSO *Colorism; Cox, Oliver C.; Park, Robert E.; Park School, The; Race; Race Relations; Racism; Sociology*

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Thomas F. Pettigrew

RACE AND POLITICAL SCIENCE

Although controversies surrounding race have arisen in a variety of nations since at least the sixteenth century, it has only been since the mid-twentieth century that these

issues have generated serious attention in the discipline of political science. Beginning primarily in the aftermath of such watershed events as the civil rights movement in the United States, the rise of Fidel Castro in Cuba, and the demise of the apartheid system in South Africa, political scientists have slowly begun to focus on the impact of race in politics. In particular, scholars have examined issues such as the impact of racial group membership and racial attitudes on public opinion and voting behavior, partisanship, and political incorporation.

The literature on race and politics is perhaps most developed in the United States, where race plays a role in the level of support garnered by black candidates. There is little doubt that African Americans represent a small percentage of elected officials nationwide and that self-identified black candidates are rarely elected in majority-white political jurisdictions. It is not at all clear, however, that blacks fare poorly among white voters because of their race. Scholars have sought to get a better grasp on this question by relying upon experimental designs as a way of isolating the effects of candidate race. When white voters are randomly assigned to experimental conditions wherein otherwise identical candidates differ only in their racial background, some studies have found that black candidates are evaluated less favorably relative to white candidates.

Racial considerations do not just figure prominently in biracial contests. Some political scientists argue that the contemporary American party system is primarily based on racial cleavages. According to this view, after the 1964 presidential contest pitting racial liberal Lyndon Johnson (1908–1973) against racial conservative Barry Goldwater (1909–1998), voters began to view the political parties as primarily distinctive on matters of race. This view became solidified with the War on Poverty, which seemed to link the Democratic Party with the aspirations of racial minorities. There is some support for this controversial claim. Although African Americans have been part of the Democratic coalition since Franklin D. Roosevelt's (1882–1945) second term, blacks have supported Democratic presidential candidates—and identified with the party—by increasingly lopsided margins since the mid-1960s. Many whites, on the other hand, are now firmly attached to the Republican Party, and since the late 1960s have consistently supported Republican presidential candidates over their Democratic opponents.

Much of this "realignment" of partisan loyalties has occurred in the American South. Although solidly Democratic since the end of Reconstruction, the South began to abandon the Democratic Party in the 1970s and 1980s. The political science literature has not reached consensus as to whether this is primarily due to racial considerations. For example, some scholars would argue that social issues such as abortion, gay rights, and prayer in the schools are more important as explanations for the contemporary embrace of the Republican Party among white southerners. However this debate is resolved, there is no doubt that the South remains the most racially conservative region in the United States. Whether the issue is school integration, enforcement of antidiscrimination laws, or increased spending on race-targeted programs, national surveys conducted as recently as the 1990s have consistently shown that white southerners are more conservative than their northern counterparts.

Regional differences have not only emerged from standard survey data but also using experimental methods. James Kuklinski, Michael Cobb, and Martin Gilens (1997), for example, developed an unobtrusive method for gauging racial attitudes. In short, they provide a nationally representative group of respondents with an opportunity to indicate how angry they are at a list of four items, one of which (the experimental condition) includes a specific reference to African Americans, as well as three topics not related to race. A randomly selected half of the sample is asked only about the three nonracial topics (the control condition), and all respondents are assured that no one will be able to determine which specific item makes them angry. However, because of random assignment, if levels of racial resentment are higher in the experimental condition relative to the control, then the differences can only be attributed to racial concerns. With this technique, Kuklinski and his colleagues show that white southerners are far more racially resentful toward blacks than their northern counterparts. This difference is also much greater than the results from traditional surveys.

RACIAL ATTITUDES

Racial schisms and the influence of racial attitudes do not just occur in the United States. Although some scholars have argued that Latin America and the Spanish Caribbean are mostly free from the racial strife associated with the United States, more recent work has called this Latin American exceptionalism thesis into question. For example, Mark Sawyer, Yesilernis Peña, and Jim Sidanius (2004) fielded surveys in Cuba, the Dominican Republican, and Puerto Rico and found that respondents perceived racial hierarchies in their respective countries that were very similar to those in the United States. Whites were consistently perceived as having greater social status, followed by "mulattos" and finally blacks. Similarly, in follow-up work, Sawyer has found that Cubans who identify as white are much more likely than their darker-skinned counterparts to perceive other races as less intelligent and moral.

Another area where scholars are beginning to examine the impact of racial identity and attitudes on public

opinion is South Africa. This country has, of course, been wracked with racial divisions since its founding and has only been a multiracial democracy since 1994. James Gibson conducted the first systematic nationwide survey of attitudes on racial identity, national identity, and the Truth and Reconciliation Commission. His 2001 survey included a large number of whites, blacks, "colored," and South Africans of Asian ancestry. Gibson finds that race relations in South Africa are far more complicated than many often assume, with considerable variation on public opinion within racial groups. Nevertheless, whites are far more likely to *not* identify with blacks than are blacks to reject identification with whites. On a more optimistic note, he finds that white South Africans who have greater contact with other races are also more likely to embrace the results from the Truth and Reconciliation Commission.

In the United States, the empirical study of the impact of racial attitudes on policy opinion can be traced to David Sears and Donald Kinder, and their subsequent development of the theory of *symbolic racism* (also sometimes referred to as *modern racism* or *racial resentment*). According to this theory, a new form of racial attitude emerged in the waning days of the civil rights movement. Support for the biological inferiority of African Americans was discredited, but antipathy directed at blacks remained a powerful force among whites. This anti-black affect would, in the aftermath of the urban riots in the late 1960s, merge with the widespread perception that blacks were making unfair demands on the system and not working hard enough to get ahead. According to Sears and Kinder, it is this new form of racism—which blends negative attitudes about blacks with the perception that they violate cherished values such as hard work—that accounts for white opposition to various policies designed to achieve racial equality.

The theory of symbolic racism has sparked a spirited and longstanding debate in the literature as to the manner and the extent to which racial attitudes influence whites' policy preferences. None of the critics insist that racism is nonexistent, or that it has no influence on the policy preferences of white Americans. Instead, controversy has arisen with regard to the ambiguity in the conceptual definition and the measurement of the theory. These criticisms have on occasion hit their mark, as the symbolic racism theorists have modified their measures and sought to specify their model more carefully. Some of the more recent work in this literature has, however, generally supported the theory (see, for example, Sears and Henry 2003).

An emerging literature on the influence of race-based campaign communications also highlights the enduring linkage between race and politics. This work suggests that these communications can be effective, provided they do not rely on overtly racist messages. Specifically, Tali Mendelberg (2001) has shown that subtle racial cues, such as pairing pictures of African Americans with a standard conservative narrative condemning welfare, increased the role of racial considerations in candidate evaluations. Although this literature is both provocative and promising, scholars have yet to explore the frequency or impact of candidate appeals that invoke race explicitly but in a way that could not be interpreted as "racist."

RACE AND RACIAL MINORITIES

Although most of the racial attitudes literature focuses on the United States and white attitudes about African Americans, an emerging literature has begun to examine the role that race-based political perceptions have on black public opinion. Much of this research can be traced back to the pioneering work of Patricia Gurin, Shirley Hatchett, and James Jackson's 1989 book, *Hope and Independence*. These authors argued that black attitudes about prominent political figures, such as Jesse Jackson and Ronald Reagan (1911–2004), are influenced strongly by race-based perceptions of group solidarity and group consciousness. This work, and much of the literature inspired by it, finds that African Americans' racial attitudes and policy preferences seem to be driven more by their in-group bias rather than out-group animus. Additionally, high levels of in-group identity appear to account for the unprecedented levels of black political unity.

Unlike the study of African American political behavior, there has been comparatively little attention devoted to other racial and ethnic minorities in the United States, such as Latinos, Asian Americans, and Native Americans. This has begun to change, however, as these groups have become an increasingly large share of the American population. Of these groups, the most attention has been devoted to Latino politics. One of the central questions in this emerging field is whether theoretical models designed to explain the broader electorate, or subgroups such as African Americans, can also be applied to Latinos (de la Garza 2004). This comparison with blacks is a common one since both groups are socially and economically disadvantaged relative to whites and both groups tend to support the Democratic Party. One question researchers have asked is: Are Latinos more likely to participate in politics when Latinos seek or have already achieved elective office in the local jurisdiction? This pattern holds for blacks, and some research finds similar effects among Latinos in California. It remains to be seen whether this applies elsewhere in the country. Another issue that arises frequently in this literature is whether Latinos should be treated as a single ethnic group or if national origin is the more salient identity. There is not yet a consensus on this question, although it is clear that Mexican Americans and Puerto

Ricans tend to have different partisan and political preferences compared to Cuban Americans.

With the 2000–2001 Pilot National Asian American Political Study (PNAAPS), scholars have taken their first steps toward understanding the political views of this rapidly growing demographic group. Relying on this groundbreaking dataset, *The Politics of Asian Americans* (Lien et al. 2004) provides a wealth of descriptive information on this diverse population. For example, it reports that most Asian Americans identify with their country of origin rather than with pan-ethnic labels. Additionally, more Asian Americans identify with the Democratic Party than with the Republicans, although about half do not identify with either major party. Although this work is largely descriptive, it represents an important first step in mapping the contours and variations present among this largely foreign-born population. At a minimum, it is clear from the PNAAPS that many of the political theories and hypotheses developed for the larger electorate must be modified when applied to Asian Americans.

SEE ALSO *Affirmative Action; African Americans; Apartheid; Attitudes, Racial; Blackness; Civil Rights Movement, U.S.; Democratic Party, U.S.; Identification, Racial; Japanese Americans; Latinos; Native Americans; Political Science; Politics, Asian American; Politics, Black; Politics, Latino; Race; Racial Classification; Racism; Reagan, Ronald; Reconstruction Era (U.S.); Reparations; Republican Party; Segregation; Southern Strategy; Terror; Truth and Reconciliation Commissions; Violence; Voting Patterns; Whiteness*

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Vincent L. Hutchings

RACE AND PSYCHOLOGY

Before the formal institutionalization of psychology in the nineteenth century, academics attributed psychological qualities to specific ethnic groups (such attributions can even be found in Aristotle's writings). However, the systematic combination of psychological characteristics with race occurred in the eighteenth century when Carolus Linnaeus (1707–1778) linked varieties of humans ("races") with psychological and social characteristics in his taxonomy. Johann Friedrich Blumenbach (1752–1840) advanced the concept of the *Caucasian* based on his idea that European culture originated in the Caucasus. The term *Caucasian*, still used in empirical psychological studies, has no scientific validity.

In the second half of the nineteenth century, some European scholars suggested that the Caucasian variety divided into two branches, identified as Semites and Aryans. Both were associated with different psychological characteristics and formed the theoretical basis for Hitler's ideology. In the 1860s John Langdon H. Down (1829–1896) studied the structure and function of various organs in "idiots" and "imbeciles." He observed a group of individuals that he characterized as having round faces, flattened skulls, extra folds of skin over their eyelids, protruding tongues, short limbs, and retardation of motor and mental abilities. Down classified this group on the basis of their resemblance to racial groups. He suggested that the physical features and behavioral attributes of these individuals represented typical Mongols—hence the term *Mongolism* for what is now called *Down syndrome*.

Pioneers of social psychology such as Gustave Le Bon (1841–1931) incorporated an ideology of race into their studies of intellectual ability, emotion, and volition. Le Bon understood races as physiologically and psychologically distinct entities that each possessed an immutable race soul. Paul Broca (1824–1880) was convinced that non-European races were inferior and used a variety of scientific studies to prove his preconceived conviction. Francis Galton (1822–1911) argued that Europeans were by nature more intelligent than "primitive races" and suggested the quantification of levels of racial intelligence. In the United States, pioneers of psychology such as

Granville Stanley Hall (1844–1924), the first president of the American Psychological Association (APA), argued that "lower races" were in a state of adolescence, a claim that provided a justification for segregation.

Empirical race psychology was prominent and influential during the first half of the twentieth century. Race psychologists used the accepted methods of the discipline and applied them to the empirical comparison of various groups. An early example is the research emerging from the Cambridge Torres Straits Expedition, which produced psychophysiological data on racial differences. Many race-psychological studies were used to demonstrate the inferiority of certain races and thus were part of the program of *scientific racism*. American race psychologists performed empirical studies on immigrants and were motivated by fears that the "national stock" was declining. They participated in empirically "evidencing" the inferiority of southern and eastern Europeans and African Americans.

Based on the results of the Army Mental Tests, administered to 1.75 million American recruits during World War I, it was concluded that there were inborn racial differences between whites and blacks, and among various European "races." Psychological studies played a role in the Immigration Restriction Act of 1924, which imposed quotas on the allegedly less intelligent European nations. Leading American psychologists participated in race psychology, including two APA presidents: Robert M. Yerkes (1876–1956), who played a decisive role in the army testing, and Lewis Terman (1877–1956), who supported segregated education. Also popular in race psychology was the study of the *mulatto hypothesis*, which suggested that a greater proportion of white "blood" in a black person's ancestry would lead to higher intelligence.

Most of the empirical studies on race carried out in North America and Europe during this period were unable to overcome prejudicial ideas. Research found differences and these differences were frequently interpreted in racist terms. These studies were also unable to challenge the cultural meaning of psychological instruments, concepts, theories, and methods. After World War II and the international recognition that racism was an integral component of the atrocities committed in the name of racial superiority in Europe and Asia, empirical race psychology, which could not overcome its racist connotations, declined significantly. However, contemporary studies on differences among races on intelligence tests continue a racist legacy when these differences are interpreted as representing essential racial divisions in mental life or when ideas of inferiority or superiority are invoked.

Social psychologists began, as early as the 1930s, to shift away from studying race differences to researching prejudice. Some racial studies took on a different perspective and were performed in the context of challenging racism, especially in the United States, where racial conflict, injustice, and discrimination were still endemic. Kenneth Clark (1914–1995) and Mamie Clark (1917–1983) performed a variety of studies in order to demonstrate the negative impact of prejudice, racism, and discrimination on African American identity. The best-known studies included a "doll test" that assessed whether African American children preferred to play with a brown or white doll and which color they considered nice. Many of the children preferred the white doll and considered it nice. The Clarks interpreted the results as showing that black children had low self-worth, an argument that played a role in court cases concerning desegregation and also in the 1954 *Brown v. Board of Education of Topeka* case, in which the U.S. Supreme Court judged segregation to be unconstitutional.

In the wake of the civil rights movement, Lyndon B. Johnson's War on Poverty, and early educational compensatory programs such as Head Start, a dedicated and high-profile group of researchers personally and ideologically committed to a naturalistic concept of race emerged in Great Britain and North America. In 1969 Arthur Jensen published an article in the *Harvard Educational Review* that challenged the idea of the value of compensatory education. He also suggested that because intelligence had a heritable component, it seemed reasonable to hypothesize that genetic factors might play a role in producing racial differences in IQ. His argument was speculative but had an enormous impact on the field of psychology and on society in general.

From a methodological point of view it is important to understand that even if intelligence has a heritable component, mostly estimated through twin studies, this does not mean that differences *between* groups can be explained through heredity. For example, a heritability estimate of .50 for IQ means that 50 percent of the variability of IQ that one finds within a given population can be attributed to heredity. Hypothetically assume that a researcher finds a heritability of 55 percent in a "white group," 50 percent in a "black sample," and 45 percent in a sample that contains various ethnicities (heritability estimates do not have a single true value and change with environment). These results mean that 55 percent of the differences that can be found *within* the "white group," 50 percent of the differences *within* the "black group," and 45 percent of the differences *within* the "mixed group" can be attributed to heredity. They say nothing about the differences *between* the groups.

In 1994 Richard Herrnstein and Charles Murray suggested in their book *The Bell Curve* that genetic differences might be involved in producing racial differences in IQ. Again, they provided no evidence for this speculation. Beginning in the 1990s J. Philippe Rushton promoted his

ideas of a racial hierarchy. He presupposed the existence of three major races (Orientals, whites, and blacks) and has argued that there is a three-way pattern of differences in brain size, IQ, and behavior. For Rushton, whites and Asian developed larger brains and are more intelligent than blacks because gathering food, providing shelter, making clothes, and raising children during long winters was more mentally demanding than accomplishing the same tasks in permanently warm climates. Rushton has not provided any genetic evidence for his interpretations that genes cause racial IQ differences.

The genetic speculations of contemporary race researchers in psychology take place in the context of anthropological and biological research that posits *race* as a sociohistorical and not a natural-biological category. Empirical differences are not interpreted as inborn and as reflecting a natural hierarchy, but as variations that must be understood as the product of cultural difference. Advancements in genetic analyses have shown that the variation within traditionally conceptualized races is much larger than between them. Instead of three or five races one should assume several thousand *populations* that are in the process of changing. Empirical studies that include race as a variable are now often motivated by the idea that a sociohistorical concept of "race" should be taken into account when making generalizations in psychology.

Social psychologists have provided alternative and more complex explanations for ethnic group differences than have traditional race psychologists. Experimental *stereotype threat* research conducted by Claude Steele (1997) is of particular significance. It is based on the empirically validated finding that the threat of being negatively stereotyped leads to underperformance in accordance with that stereotype. A negative stereotype is threatening when it provides an explanation for one's actions or experiences, or aligns with one's self-definition. For example, when a test is presented as assessing intellectual ability, black participants underperform in comparison to white participants. When the same test is presented as assessing problem solving unrelated to intellectual ability (and therefore unrelated to stereotypes about black intellectual ability) both groups achieve the same level of performance.

Effects of stereotypes can also be found in other areas. A study examining the stereotype that Asians perform well at numerical tasks has shown that Asian American women performed better than a control group on a mathematics test when ethnic identity was focused on, but worse when their gender identity was highlighted (Shih, Pittinsky, and Ambady 1999). In addition, social psychologists have studied attitudes associated with minority life that increase successful psychological functioning. Robert Sellers has investigated the meaning that African Americans attribute to race in their self-definitions (e.g., Sellers and Shelton 2003). He has developed a conceptual framework as well as instruments to provide a comprehensive assessment of African American racial identity. Instead of focusing on the negative impact of prejudice and discrimination, he has studied the protective role of identity. He has analyzed how African Americans are able to live normal lives in a context of discrimination. This has allowed him to provide a more precise picture of African American realities.

Other researchers have looked at interethnic interaction and its consequences from the standpoint of both minorities and majorities. Nicole Shelton, Jennifer Richeson, and Jessica Salvatore (2005) have demonstrated that the expectation of being the target of prejudice has complex implications for the dynamics of interethnic interaction. For example, the more ethnic minorities expected whites to be prejudiced, the more they had negative experiences during interethnic interactions. Yet, for whites, the more ethnic minorities expected them to be prejudiced, the more positive experiences they had during interethnic interactions. Richeson and Shelton (2003) have also examined the influence of interracial interaction on the cognitive functioning of members of a dominant racial group. Racial attitudes were predictive of impaired cognitive performance for individuals who participated in interracial interactions. This means that the activation of racist beliefs on the part of "whites" actually reduces their own cognitive functioning.

Despite the human genome project and advancements in human population genetics, ideological struggles over the concept of race continue. In the genome era, psychologists have been publishing increasingly on race and psychology. Although many psychologists suggest that the results from genomic research demonstrate that a biological concept of race is not tenable in psychology, others disagree. What is evident from the history of race psychology is that scientific methods are not sufficient to prevent bias, prejudice, and racism. In fact, empirical research has been used to support racism. Finally, it must be emphasized that much of race psychology has participated in *epistemological violence*—meaning that psychologists have produced and distributed interpretations, presented as knowledge, that have negatively shaped the life, health, and opportunities of minorities.

SEE ALSO *American Psychological Association; Aryans; Bigotry;* Brown v. Board of Education*, 1954; Clark, Kenneth B.; Cognition; Determinism, Genetic; Discrimination; Galton, Francis; Genomics; Head Start; Heredity; Hitler, Adolf; Immigrants to North America; Immigration; Intelligence; IQ Controversy; Nature vs. Nurture; Psychology; Race; Racism; Stereotypes; Twin Studies; War on Poverty*

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Thomas Teo

RACE AND RELIGION

Although both *race* and *religion* are enormously difficult to define, almost all human beings in almost all societies recognize, shape themselves, and are shaped by representations, influences, effects of the phenomena and dynamics to which each term generally refers. Bringing these two freighted and problematic terms together in critical analysis may force consideration of certain issues that may otherwise not be addressed at all, or at least not addressed in the manner befitting their complexity. Notwithstanding evidence of phenomena associated with both terms going back to the beginning of social ordering among human beings—for example, language and behaviors—the understandings, usages, and representations most often associated with both race and religion among contemporaries in the English-speaking world were determined by interests at the beginning of the modern era.

RELIGION AND MODERNITY

The modern and contemporary English term *religion* is taken from Middle English (*religioun*) and the Latin of ancient Rome (*religio*, "piety"; *re-ligare*, "to tie," "to bind back"). Although different connotations and uses of the term have developed over the centuries in different cultures and settings, the baseline assumption that has persisted in the English-speaking world has to do with different understandings about the operations, officers, ideologies, rhetorics, and symbolic objects facilitating orientation to—that is, communication with and reverence of—what is understood to be the supernatural, the Other. This supernatural or Other is a social-psychological projection that can be experienced as a form of transcendence or as a special aspect of inward presence.

Those human beings for whom a certain set of the operations, ideologies, rhetorics, and symbolic objects come to mean generally the same things, through whatever means, are thereby bound together into a type of society. This society may be large-scale and international, nationalist, or local and on the fringes of the dominant host society. It may have its beginning as an alternate, oppositional, unpopular, and illicit society, but over a period of time, with growth, complexity of organization, and social power, it may develop into a dominant force such that its boundaries overlap with the boundaries and interests of the dominant society. The binding effect of that large-scale "society" inspired by or reflective of "religion" then comes to be represented in recognizable external forms—in canonical practices, structures, societies, offices, officers, ideologies, and operations. Such forms generally have fairly serious ramifications—social-cultural, political, economic—for the larger host societies; and they are what distinguish "religion" in strict terms from some of the ongoing experiences, practices, and sentiments of single individuals often understood and claimed to be comparable.

What has come to be called "religion," then, can be considered ways of orienting individuals to certain types of societies. Given this general function, religion has some specific complex purposes and effects—that of binding persons into a new alternate society or order. It simultaneously and to different degrees and in different respects separates such bound persons from all or some other societies that do not recognize and respond to the same forms. It leads to a binding with larger-scale pressure and challenge for the purpose of institutionalizing the new society's ideologies within or across a larger expanse of society or territory.

RACE AND MODERNITY

The origins of the modern and contemporary English term *race* are not at all clear. The term has multiple origins

and valences from different cultural settings and discursive domains. It comes from Middle and Old English (*rase[e]*) and (*raes*) and from Old Norse (*ras*), meaning "a running," "rush," "swift movement," "attack." These meanings may have had an Indo-European base (*-eras*), carrying the meaning "to flow," "to move rapidly." The term has for centuries if not millennia been used most basically to refer to particular types of athletic competition. From this specific usage the term has been widely borrowed and pressed into service to reflect a rather wide range of provocative meanings in domains far from the original. Uses have come to be more figurative in order to reference different types of competition and differentiation.

Included among such figurative uses is the poignant usage whereby different groups of human beings are differentiated, classified, and hierarchialized. That at the onset of modernity the term *race* came to be accepted by almost everyone—from scientists and learned scholars of many types within and beyond the academy to politicians in their chambers to the haranguers on the streets—as a way to refer to and classify human beings was consequential. That the term came to be used to refer to and classify human beings not on the basis of their activities, accomplishments, or exploits but in terms of external physical features, especially color of skin, was decisive. This change facilitated a type of freezing of categories to the point that, notwithstanding more recent scientific (especially biological) and postmodernist arguments about the problematics, even nonexistence, of "race" (in strict physiological terms) as applied to human beings, many observers and critics would consider the contemporary world to be obsessed with it and many persons—especially "racial" and "ethnic" minorities—radically (over-) determined by it.

RELIGION AND RACE AND MODERNITY

No responsible critical grasp or engagement of "religion" and "race" in our times is possible without attention to the specifically modern-era determination of the concepts and phenomena associated with the terms. The modern-era understandings and uses begin with the European encounters—through the exploits of their commissioned merchants, military seamen, explorers, and missionaries—with other peoples in the lands mistakenly and unfortunately called "new." Beginning in the fifteenth century these contacts challenged and inspired Europeans to name and conceptualize themselves in relationship to the newly "discovered" peoples and their lands. This naming and conceptualization led to a type of hierarchy of human classification that squared with and justified the eventual domination of many of the newly discovered peoples. Notwithstanding the emergence of modern nation-states and their nationalist ideologies and fierce competition, in this period of "discovery" Europeans began to think of themselves more consistently and collectively as "European" in culture and orientation over against the several newly discovered other worlds and their ways, and they began to think of themselves as "white" over against the others who were "black," "red," "yellow," and "brown." The recognition of the differences between European and North American "white Christian European" ways (in all their variety) and the ways of the others came to be exploited. This exploitation came to include a conceptualization of power on terms that determined some of the others as inferior, befitting the roles of natural perennial servants and slaves. The "discovery" of other peoples by Europeans made for Europeans the "race"-ing of all peoples compelling and strategic.

In such circumstances "religion" became along with "race" a marker of associations and identities shaped in relationship to modern imperial forces. Throughout the nineteenth century and into the early twentieth century, the critical study of the "science" of religion, the history of religions and comparative religions, was invented, and the concept of "world religions" evolved in conjunction with the first convocation of the World Parliament of Religions. These developments reflected the heightened awareness of the complexity of the world, its many different peoples, traditions, varied global developments, challenges, and crises, including the beginning of global wars and their resultant power reformations and arrangements. Religion increasingly came to be seen as one of the reflectors of social-cultural differences, with a presumed hierarchy that established the "world religions"—those religions built around literacy and sacred books—as the superior formations. Within this larger period and set of developments, there could be found alongside the large transnational boundaries and formations—for example, the "Christian" West, the "Islamic" Near East, the "Hinduism" of South Asia; and the "Buddhist" Far East—modern nationalist religious formations—for example, French Catholics, German Lutherans, and Chinese Buddhists.

In relationship to these large-scale global formations, one can further distinguish the religions of the formerly colonized, enslaved, and otherwise dominated, who were through various more or less violent means heavily missionized—for example, African American Baptists and Methodists, East African Anglicans, Korean Presbyterians, Mexican Catholics, Brazilian Pentecostals, Nigerian Muslims, and so forth. As religion was used to integrate persons into and to hold together large social-political formations, it also provided minorities and the subaltern within the large-scale formations media and means by which to register resistance and criticism. The symbols, offices, officers, operations, and ideologies that constituted local traditions, on the one hand, and the "religions" of dominants, on the other, have in certain situations been

critically engaged by the subaltern as part of efforts to undermine the social-cultural and political-economic effects of dominance as well as to help restructure identity and reorient themselves to the world.

The historical and ongoing consequences of the imbrication of the two categories are at best mixed. The enslavement and disenfranchisement of black peoples in Europe and in the Americas, the Holocaust and pogroms against Jews in Europe, the violence of apartheid in South Africa, ethnic conflicts and wars among black Africans, hate crimes in the United States and Europe, denominational splits, the Israeli-Palestinian-Arab world conflicts, the genocidal crisis in Darfur—these are just a few examples of religion-inflected conflicts in the modern world. Yet not to be forgotten are the biblically inspired songs and artistry as well as insurrections of the slaves and the religious piety and formations of the soldiers of the civil rights movement, of the modern-day Palestinian movement, and of the Irish Republican Army. These examples suggest that the confusion of "religion" and "race" set forth at the beginning of modernity is likely to obtain with mixed consequences for the futures that can be imagined.

SEE ALSO *Black Nationalism; Blackness; Christianity; Culture; Discrimination; Islam, Shia and Sunni; Liberation Theology; Modernism; Modernity; Nation of Islam; Natives; Palestinians; Postmodernism; Protestantism; Race; Race and Economics; Racism; Religion; Segregation; Whiteness*

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Vincent L. Wimbush

RACE MIXING

Shortly after Europeans first arrived in America in the mid-1600s to colonize the region that would become the United States, the issue of race mixing arose. The concept of race itself was then just emerging in its modern form, but European thinkers drawing from firsthand accounts of encounters with Native Americans and Africans began debating the meaning and scope of the physiological and cultural differences among people from different regions of the world. The conception that eventually won out understood racial difference to be real, intrinsic to individuals, and linked to hierarchies of status and capability.

In addition to the well-known case of Pocahontas, the Powhatan woman who entered into a formal European marriage in 1614 with an English settler and traveled to England before her untimely death, there are many documented instances of intermarriage and other sexual connections between Native Americans and European settlers. Although unions between Native American women and European men were more likely to be acknowledged and accepted, occasionally European women partnered with assimilated Native American men or joined Native American tribes. As time passed partnerings between Native American men and white women became less acceptable culturally, and by the late 1700s these types of partnerings gave rise to a stock story that a variety of Native American tribes readily kidnapped and assimilated white women forcibly. (James Fenimore Cooper's 1826 novel *The Last of the Mohicans* provides an example of this type of narrative.) Still, even as late as the twentieth century, descendants of prominent families in southeastern states such as Virginia and Alabama related family stories of their descent from early male European settlers and "Indian princesses."

Race mixing between Africans and Europeans in the colonial era was also initially a matter of debate and confusion rather than censure. Records dating back to the mid-1600s suggest that colonial officials struggled to sort out whether sexual relations between slaves and white indentured servants were legally problematic. By the late 1600s several colonies had begun to regulate against relationships between white women and slave men by rendering them as crimes, shifting the status of white women involved with black men to that of slaves rather than free or indentured persons or by fixing the status of children produced in such relationships as slaves. By the dawn of the 1700s the legal status of slavery had been more firmly fixed, and the descendants of slaves were understood by most people in the southern colonies to be slaves themselves, absent formal emancipation by their owners.

Despite the centrality of slavery and its increasing connection to blackness, European conceptualization of race mixing in the Caribbean and Latin American

colonies did not initially rest upon a rigid bifurcation between white and black. As early as the seventeenth century white Spaniards and their descendants living in Mexico developed the concept of *casta*, a classificatory scheme for race mixing that categorized individuals by descent. In addition to introducing the categories of "quadroon" and "octoroon," designating individuals with three white and one black grandparents and seven white and one black great-grandparents respectively, such schemes provided means of taxonomizing by name various degrees of native and black ancestry. These categories had real legal consequences for the status and rights of individuals placed in them—in but one example, the required amount of tribute paid to the Spanish Crown varied on the basis of one's racial classification, and that variance marked individuals as belonging to particular classes and holding particular statuses.

At this point the cultural and legal differences between relationships involving white men and black women versus black men and white women became more distinct. Although both types of relationships had the capacity to produce children, intimate connections between white women and black men gradually became perceived as more worthy of censure, based on culturally embedded beliefs about the threat of black masculinity and the need to protect white femininity. Interracial intimacy between slave women and white men became defined as undesirable and occasionally scandalous conduct on the part of the white men, but the legal system did not define it as a crime even if the relationship was overtly coercive or violent; the children born from such relationships were universally understood to be slaves. (Same-sex interracial intimacy was not formally recognized or regulated other than under the general rubric of same-sex sexual intimacy, which was often culturally and legally effaced when between women and punished as sodomy when between men.)

In the Revolutionary era in the United States, blacks experienced a brief taste of a more egalitarian ideology as several northern states abolished slavery or set it on a course for extinction after the freedom of the United States had been won. Some states experimented with extending the franchise to blacks and women as well. By the 1820s, however, this openness had dissipated completely as the franchise was withdrawn in state after state and southern pressures to protect and defend the institution of slavery increasingly led to harsh application of fugitive slave laws. Nonetheless, by the 1820s a substantial and growing mixed-race population was established in the United States. Descendants of blacks and whites were called mulattoes, although some scientists who studied race in the United States, the Caribbean, and Latin America persisted with intricate classification schemes for various combinations of black, native, and white ancestry. Mulattoes were at the time understood to be a distinct race but one more closely related to the African race than the white race. In some circles in the South, mulattoes were particularly prized as house servants or concubines.

At the same time, although some descendants of Native Americans and whites assimilated into white communities and gradually forgot their mixed-race heritage over the generations, some tribes actively embraced mixed-race individuals and defined them as wholly Indian. In some regions of the South small communities composed of the descendants of free blacks and Native Americans who had resisted removal began to establish themselves. The Seminole Indians of Florida, Georgia, and Alabama are an example. Eventually the United States became frustrated with the Seminoles' refusal to cede their land and move west, and the government entered into a long and vicious war to remove them forcibly, which was won only through the U.S. Army's betrayal and capture of the Seminoles' leader under a false truce.

As sectional conflict worsened, understandings of race and racial difference shifted toward a harder line based in emerging scientific theories about the superiority of the white race and the inferiority of other races. As scientists began to argue for a rigid hierarchy of physical, emotional, and intellectual fitness among the races, they also began to warn of the dangers of race mixing. In the 1840s and 1850s *Debow's Review*, a southern agricultural and social journal, began to publicize much of this work, including various versions of the theory that the mixed-race descendants of white and black parents were inferior. As scientific debates hardened racial categories and separated them more broadly, new theories emerged about the dangers of racial mixing.

This scientific anxiety reflected and reinforced social and cultural anxieties about race mixing, which became increasingly disfavored. Although some black men accused of engaging in intercourse with white women were able to avoid severe punishment even in the South, such connections increasingly were framed as rape. And although white men continued to have the legal authority to exercise sexual control over slave women, many southern states passed laws limiting white slave owners' ability to free their slaves and give them substantial property, actions that white men occasionally took to benefit their enslaved sexual partners and children. By the time of the Civil War many southern states had adopted rules that allowed property to pass to enslaved individuals by will only if they were first freed and then sent out of the state or the country.

Anxieties about race mixing ran high among whites as slavery was abolished and the possibility for a new, more egalitarian, political order arose. Two Democratic newspaper editors sought to capitalize on these anxieties by

secretly publishing a pamphlet extolling the virtues and benefits of race mixing, coining the word *miscegenation* to refer to the practice; they sent copies of the pamphlet to prominent Republicans in the hopes that some would endorse it. Although the plot failed, the term quickly became part of the public lexicon, and despite an intense constitutional struggle in the early postbellum years, bans on interracial marriage were passed and upheld across the South. Through the remainder of the nineteenth century and into the twentieth century, these bans spread into the western states as well.

Bans on interracial intimacy took different forms. Some states, such as Alabama, broadly criminalized attempts at intermarriage, interracial adultery, and interracial fornication between blacks and whites as felonies, and the courts interpreted these bans to bar sexual relationships that paralleled legitimate same-race marital relationships. Other southern states such as Florida made intermarriage between blacks and whites a serious crime but left interracial fornication at the level of a misdemeanor offense. Western states often incorporated a bewildering array of racial groups in their injunctions against interracial intimacy between whites and people of color; Native Americans were prohibited from marrying whites in many states, but the western coastal states also barred marriages between whites and Asians, whites and Hawaiians, and whites and Filipinos.

Through the first three decades of the twentieth century, cultural and legal definitions of race increasingly moved toward eliminating the broad array of terms for mixed-race individuals in favor of a limited range of rigid categories. The category of mulatto gradually disappeared in favor of a strict separation between black and white, with those formerly considered to be mulattoes reclassified as black. Although communities of racially ambiguous individuals with Native American, white, and black ancestors persisted in southern rural areas, they increasingly had to operate under difficult conditions of fitting into the legal regime of segregation, which presupposed a black-white binary universe.

The bans on interracial marriage fell to judicial attack, first in California's 1948 state court ruling in *Perez v. Sharp* that such bans violated the Fourteenth Amendment and then nationally in 1967 when the U.S. Supreme Court decided in *Loving v. Virginia* that Virginia's antimiscegnation statute was unconstituional. In conjunction with this, however, state legislatures in the West had been removing bans in the 1950s; by the time *Loving* was announced, only the Old South retained statutory bans. Although further judicial action was necessary to enforce the rule of *Loving* in a few southern states, by 1970 the legal struggle was essentially over regarding marriage. Social acceptability of interracial relationships required more time, and even in the early twenty-first century marriages between blacks and whites comprise only a small percentage of marriages in the United States.

Controversy over race mixing arose again over proposals to add a mixed-race category to the 2000 census, which allowed individuals to select more than one race as an identifier. Nearly seven million Americans identified themselves as mixed race or multiracial.

SEE ALSO *Miscegenation; Sex, Interracial*

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Julie Novkov

RACE RELATIONS

The term *race relations* entered the sociological lexicon through Robert Ezra Park (1864–1944), who pioneered the study of race at the University of Chicago. Before becoming a professor in 1914 at the age of forty-nine, Park did a stint as a reporter and then worked for eight years as

publicist and ghostwriter for Booker T. Washington (1856–1915), the founder of Tuskegee Institute in Alabama, whose mission was to provide blacks with "industrial education." Washington, of course, is famous as the apostle of self-help and racial accommodation. He was catapulted to national prominence in 1895 with his speech at the Atlanta Exposition exhorting blacks to forego politics and to pursue education and manual labor. His core assumption was that once blacks demonstrated that they were deserving of full rights of citizenship, better race relations would ensue. This raises the tantalizing question: To what extent was Park, as he entered the nascent field of sociology, the purveyor of ideological tenets associated with Washington's uplift ideology?

Park was also heavily influenced by the evolutionary theories prevalent at the turn of the century when he studied social philosophy at Harvard and in Germany. Herbert Spencer (1820–1903), the English philosopher and political theorist, applied Charles Darwin's (1809–1882) theory of evolution to the social order, arguing that history progressed through a series of stages from lower to higher levels of development. Park, in turn, applied Spencer's theory to the domain of race, and expounded a theory that "in the relations of races there is a cycle of events which tends everywhere to repeat itself" (1950, p.150).

According to Park's famous formulation, the race relations cycle has four distinct phases. It begins with *contact* when different races come together through migration or conquest. This leads to *conflict* as the rival groups compete for supremacy. During the third stage, *accommodation*, the weaker group resigns itself to its subordination, and a *racial etiquette* is established that maintains *social distance* between the races. The final stage of the race relations cycle is *assimilation*, which involves the gradual but inexorable absorption of the subordinate group into the dominant group, culturally and biologically. Thus, according to Park, new races are formed out of "the broken fragments" of different racial groups, and the race relations cycle provides the impetus of human evolution.

Park applied the race relations cycle both to people of color and to "the races" of Europe who were flocking to Chicago and other American cities at the time he wrote. Park's race relations model had a sanguine political subtext: it rebuffed the nativist claim that the new immigrants were "unassimilable," and provided reassurance that the intermingling of the peoples of the world was the stuff of human evolution. As Park wrote in *Race and Culture*: "Every society, every nation, and every civilization has been a kind of melting pot and has thus contributed to the intermingling of races by which new races and new cultures eventually emerge" (1950, p.192).

Park acknowledged that the race relations model did not proceed as rapidly or completely when it came to people of color. Even so, he clung to his evolutionary optimism that the assimilation process eventually would run its course, and like Washington, he emphasized the great progress that blacks had made during the half-century after slavery. Park also shared Spencer's view that attempts to influence the flux of history were in vain. He was contemptuous of social reformers, and exhorted social scientists to observe an Olympian distance from the world of politics. Thus, Park's race relations model gave theoretical exposition and scientific legitimacy to Booker T. Washington's politics of accommodation. As Charles U. Smith and Lewis Killian observed, Park "constructed a theory of assimilation which paralleled Washington's program in its major premises of accommodation and assimilation, realism and optimism" (1974, p. 200).

Park's race relations model emerged as the reigning paradigm in the social sciences, both in the United States and Britain (Banton 1967; Rex 1983). The hallmark of this paradigm was to normalize and naturalize race and racial inequality, and to remove them from the political realm. Even black demands for full civil rights remained off the radar screen of mainstream social science. In a trenchant analysis of the social science literature on race, Stanford Lyman shows how leading sociological theorists from Park to Gunnar Myrdal (1898–1987) to Talcott Parsons (1902–1979) avoided the issue of civil rights. Instead, they advanced teleological models that projected racial improvement as part of an evolutionary process of societal change. "Since the time for teleological redemption is ever long," Lyman writes sardonically, "blacks might consign their civil and equalitarian future to faith in the ultimate fulfillment of the inclusion cycle's promise" (1993, p. 394). Lyman concludes with an indictment of the entire discipline: "Sociology, in this respect, has been part of the problem and not part of the solution" (1993, p. 397).

The race relations paradigm had enormous implications for praxis as well as for theory. Social scientists of all disciplinary stripes were cast into the role of managers of the troubled and fractured "relations" between the races (Steinberg 2001). The root cause of racial conflict was seen as prejudice: the distorted, derogatory, and often malicious beliefs that placed a stigma of inferiority onto blacks and led to their discriminatory treatment. Sociologists over many decades have charted historical trends in the prevalence and distribution of prejudiced beliefs. Other practitioners in "the race relations industry," as it came to be called, engaged in projects of education and social work, designed to bridge the racial chasm and to forge better, more tolerant and harmonious "relations" between the races (Killian 1979; McKee 1993). According to critics, the fatal problem with this otherwise innocuous approach was that it elided those structures of oppression that enforced black subordination: Jim Crow

laws in the South, racial apartheid in jobs and housing in the North, and structured inequalities along racial lines that pervaded all major societal institutions.

Nor was criticism of the University of Chicago's race relations model only a matter of hindsight. There were some contemporaneous critics, though they were mostly black or Marxist, and therefore could be easily marginalized. Throughout his long career as both scholar and activist, W. E. B. Du Bois (1868–1963) treated racism not as an individual anomaly but as a feature of major political and economic institutions. In 1909 Du Bois was a principal founder of the National Association for the Advancement of Colored People (NAACP), whose main purpose was to secure full rights of citizenship for blacks. Oliver Cox (1901–1974), another black Marxist, directly challenged Park's "new orthodoxy" on race relations, arguing that Park's "teleological approach has diverted him from an examination of specific causal events in the development of modern race antagonism" (1948, p. 476). For Cox, race prejudice was merely "the social-attitudinal concomitant of the racial-exploitative practice of a ruling class in a capitalist society" (1948, p. 476). That both Du Bois and Cox were beleaguered and ostracized within the sociological profession, and their work dismissed as "propaganda," underscores the intellectual hegemony of the Chicago School of race relations (Deegan 2000, p. 284).

Just as the Chicago School studiously ignored power "from above," it was oblivious to the possibility of revolt "from below." All of this changed with the eruption of black insurgency, beginning with the Birmingham, Alabama, boycott in 1955 and culminating with the passage of landmark civil rights legislation in 1964 and 1965. The ensuing societal crisis threw into question the prevailing paradigm on race. A pivotal moment occurred at the 1963 Annual Meeting of the American Sociological Association when Everett Hughes (1897–1983), a student of Robert Park, delivered his presidential address in which he pondered the reasons that sociology had failed to anticipate the civil rights revolution (McKee 1993, p. 9). Here was a rare admission of intellectual failure and an unmistakable sign of paradigm crisis. Indeed, with the intensification of racial conflict beginning with the Watts revolt in Los Angeles in 1965 and the escalating black militancy during the 1970s, events demonstrated the utter failure of the race relations paradigm to shed light on the forces that were tearing American society apart. The time was ripe for paradigm change.

TOWARD A NEW PARADIGM

The civil rights revolution engendered a "scholarship of confrontation" that emphasized the centrality of race and racism, and incorporated minority and radical voices that had long been relegated to the fringes (Steinberg 1995). The most important revision to the race relations paradigm came from a book that was a collaboration between Stokely Carmichael (1941–1998), a frontline activist, and Charles V. Hamilton, a political scientist at Lincoln University. In *Black Power* (1967), Carmichael and Hamilton posited a distinction between "individual racism" and "institutional racism," the latter referring to the ways in which racism is not necessarily predicated on racist motives but rather embedded in routine institutional practices that reproduce racial inequalities. The concept of institutionalized racism provided a crucial theoretical underpinning for affirmative action policy, which succeeded in integrating significant numbers of blacks into blue-collar industries, corporate management, and the professions (Collins 1983; Darity and Myers 1998).

In another landmark study, *Racial Oppression in America* (1972), Bob Blauner gave theoretical exposition to ideas that emanated from the anticolonial movements in the third world. Even his title, *Racial Oppression*, implicitly challenged the obfuscating terminology of the "race relations" model. Blauner also drew a sharp distinction between "immigrant" and "colonized" minorities—the latter referring to people of color who did not arrive as voluntary immigrants seeking a better life, but who entered American society en masse, as the result of conquest or slavery. These "colonized minorities" were not only exposed to more virulent prejudice, but were also denied the rights and opportunities that delivered immigrants from poverty.

Recent scholarship is marked by two opposing schools of thought. On the one hand, there has been a "scholarship of backlash" that contends that racism is of declining significance, and restores the victim-blaming discourses that anteceded the civil rights revolution (Wilson 1978; D'Souza 1995; Thernstrom and Thernstrom 1997). In the tradition of Washington and Park, these theorists see racial progress as contingent upon blacks acquiring the education and skills that explain the relative success of the black middle class. The flip side of this proposition is that the sources of persistent inequalities are located not in societal structures but in putative defects of black families, communities, and culture. Institutionalized racism is either ignored or defined out of existence.

On the other hand, there is a rival discourse that builds on "the scholarship of confrontation" associated with the civil rights movement, and posits "colorblind racism" as the central concept for both theory and praxis (Bonilla-Silva 2006; Brown et al. 2003; Feagin 2006). According to these writers, despite progress on some fronts, we are far from the colorblind society that Martin Luther King (1929–1968) envisioned in his 1963 "I Have a Dream" oration. Indeed, the claim of colorblindness has

been used as a smokescreen to conceal the retreat from the affirmative action and other antiracist policies that account for much of the success during the post–civil rights era.

This intellectual contestation is indicative of an ongoing struggle for intellectual hegemony between rival paradigms. The outcome may well determine whether sociology will continue to be part of the problem, as Stanford Lyman has alleged, or whether it will be part of the solution.

SEE ALSO *Park School, The; Park, Robert E.; Race; Race and Education; Race Relations Cycle; Racism*

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Stephen Steinberg

RACE RELATIONS ACT OF 1968

SEE *Integration.*

RACE RELATIONS ACT OF 1976

SEE *Integration.*

RACE RELATIONS AMENDMENT 2000

SEE *Integration.*

RACE RELATIONS CYCLE

Robert Ezra Park (1864–1944) was a member of the Chicago school of sociology and had a major hand in establishing the discipline of sociology in the United States. One of his many contributions was his "race rela-

tions cycle," the first systematic attempt to account for the origins and evolution of group relationships. Park posited four stages in the development of group relations: competition, conflict, accommodation, and assimilation.

When groups first come into contact (through immigration, conquest, and so forth), relations tend to be competitive and conflictual. Park (1969) saw competition between individuals and groups as fundamental and universal. In a world of finite resources, all living things compete to satisfy their needs and survive. Competition is impersonal and unconscious and does not require contact or face-to-face interaction. Competition becomes conflict when competitors become aware of each other. "Competition … is continuous and impersonal, conflict is intermittent and personal" (p. 574). Group conflict requires some form of ethnocentric awareness of group differences—some sense of "we" versus "they"—and is a struggle for control of the other group—for resources, status, or other scarce commodities.

Conflict between groups is disruptive and costly and will tend to move toward an accommodation or an institutionalized, stable relationship. Accommodations can take a variety of forms, including slavery and other forms of institutionalized discrimination. An accommodation organizes social relations and encourages social attitudes and norms that permit groups to coexist and conduct their daily activities.

Accommodations may persist for long periods of time, may be disrupted and dissolve into further periods of conflict, or they may evolve into assimilation, which is "a process of interpenetration and fusion in which persons and groups acquire the memories, sentiments, and attitudes of other persons or groups, and, by sharing their experience and history, are incorporated with them into a common cultural life" (Park 1969, p. 735). Thus, assimilation merges two or more cultures into a single, shared set of traditions and memories.

Assimilation does not produce uniformity or sameness but rather a "unity of experience and orientation, out of which may develop a community of purpose and action" (Park 1969, p. 737). Competition and episodes of conflict continue after assimilation but are organized along lines other than those of ethnicity, culture, or race, such as class, for example.

Although his ideas have been extremely influential, they are not without their limitations. Park's theory has been criticized for its lack of specificity in the time frame required for assimilation and, more importantly perhaps, in its lack of detail with regard to the process of assimilation. On the other hand, Park's work initiated a tradition of theory and research that has guided the American sociology of immigration and assimilation for the past eight decades.

The cycle can be illustrated in the history of black–white relations in the United States. The earliest period of competition and conflict in colonial days was followed by the institutionalization of slavery, an accommodation that began to emerge in the 1660s and ended in 1865 at the end of the American Civil War. After a brief period of renewed conflict (Reconstruction), black–white relations were stabilized in a second accommodation: de jure segregation, which ended in the 1960s. Since that time, black–white relations have returned to conflict and struggle. There are some signs of assimilation (e.g., rates of intermarriage are increasing, even though they remain a tiny percentage of all marriages), but continuing sharp distinctions in group identity and cultural traditions persist, reinforced by continuing racial exclusion and persistent racial inequalities of income and wealth.

While black–white relations have not (yet?) evolved to assimilation, examples of the completed cycle can be found in the histories of other American groups. European immigrants who arrived between the 1820s and 1920s competed for jobs, housing, and status and faced intense rejection, prejudice, and discrimination. Accommodations gradually emerged, and the descendents of the immigrants eventually assimilated and achieved parity with national norms in terms of occupations, income, and other measures of equality. Various researchers (e.g., Alba 1990; Gallagher 2001) have found that white ethnic identity is currently in its "twilight" and that descendents of European immigrants currently share identity, memories, and traditions with other white Americans.

Since the 1960s, the United States has received a second great wave of immigration. These immigrants are extremely diverse and compete for jobs and position in every niche of American society from high (e.g., scientists and surgeons) to low (e.g., day laborers and nannies), including work in the irregular economy (e.g., piecework in garment industry "sweatshops" and sex workers). Some analysts (e.g., Portes and Rumbaut, 2001) argue that some contemporary immigrant groups will not assimilate into the dominant culture but into the marginalized urban underclass, where they will learn cultures, values, and traditions that invert or challenge the dominant culture. Evidence for this assertion includes the high rates of unemployment and poverty and low levels of education for some groups, even those with substantially large third generations. For example, some recent immigrant groups, such as Mexicans and Haitians, bring low levels of education and job skills and take jobs marginal to the mainstream economy. In an era of hardening social mobility and increasing inequality, these immigrant groups and their descendents may find themselves permanently excluded from the mainstream job market.

Other analysts believe that this viewpoint amounts to little more than "blaming the victim" and present evidence (e.g., Bean and Stevens 2003) that suggests that the descendents of current immigrants will acquire the values and traditions of the larger society and, much like the descendents of the first mass immigration, gradually assimilate. For example, Alba et al. (2002) report that the tendency to speak English rather than the "mother tongue" at home increases by generation for recent immigrant groups. They found that the percentage of second-generation group members who reported that they spoke only English at home ranged from a low of 8 percent for Dominicans to a high of almost 80 percent for Filipinos. For the third generation, the percentage speaking only English at home rose for every group and ranged from a low of 50 percent for Dominicans to a high of almost 100 percent for Japanese and Filipinos. This pattern of language assimilation is quite consistent with the experiences of the descendants of the great wave of European immigrants who arrived between the 1820s and 1920s and may denote a movement of these groups toward higher levels of inclusion and assimilation. The ultimate fate of these groups—whether they will move toward assimilation or be caught up in a constant cycle of conflict and accommodation—will not be known for some time. As Park himself noted, immigration can be very fast but assimilation is by nature slow.

SEE ALSO *Assimilation; Competition; Conflict; Culture of Poverty; Ethnic Conflict; Identity; Immigration; Intergroup Relations; Park School, The; Park, Robert E.; Race; Race Relations; Reconstruction Era (U.S.); Sociology; U.S. Civil War*

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Joseph F. Healey

RACE RIOTS, UNITED STATES

Scholarly concern with riots and crowd behavior dates back to some of the earliest theorists who can be called social scientists. Gustave Le Bon (1841–1931), often credited as the most important early writer on crowd behavior, published *The Crowd* at the end of the nineteenth century, a book that influenced thinking about temporary assemblies of people for decades after. Le Bon and other important crowd theorists, such as Sigmund Freud (1856–1939), viewed crowds as crazed, criminal, unanimous masses of anonymous individuals who had ceded psychological control of themselves to the group mind and whose behavior was being directly controlled by the mob. Although this view of the crowd has been almost completely debunked in later empirical work, it is important not only because it had a decisive influence on the development of social psychology and sociology, but because the notion of mob psychology still lives on in the popular mind and the media. In particular, when serious rioting occurs, it is inevitable that commentators will draw on LeBonian notions to characterize both what happened and those who participated. But, in fact, riots in general, and race riots even more so, are expressive incidents in which actors have a large variety of motives for participating. They also make purposeful choices about their own behavior, and although some coordination of activity occurs, crowd members actually engage in very heterogeneous behaviors.

WHAT IS A RACE RIOT?

Defining race riots is a two-step process. First, we must come to an understanding of what constitutes a riot and then, among those events that qualify, decide which are fundamentally racial in character. One can easily imagine an event that would qualify as a race riot: hundreds of people in a pitched battle on the streets of a large city, where one racial group hurls rocks, bottles, and epithets at the other, and then receives an in-kind response. Such prototypical visions of race riots are straightforward. The edges of the concept, however, are more difficult to establish.

One tricky issue is the number of people involved. Rioting is undoubtedly a collective phenomenon—a single person cannot riot. But how many people are necessary before we can call the event a *riot*? Indeed social scientists have often faced this issue, and lacking a reason to use a particular threshold, have instead decided to call the events in question *collective violence* or *civil disorders*—and, in fact, many of the events analyzed in such studies would not be recognized as riots by most social scientists. Most social scientific studies of phenomena that are called riots appear to involve a minimum of thirty to fifty peo-

ple, even if the popular conception of a riot is something of a much grander scale.

A second defining characteristic of a riot is violence. Protest marches, confrontations between two racial groups, or even face-offs between citizens and police cannot be called riots unless some kind of physical violence transpires. Definitions of riots and of the broader category of collective violence almost always include the requirement that someone is injured or significant property damage occurs before the event can be counted. Sometimes, however, it is only necessary that such damage or injury be attempted, rather than accomplished. If a large crowd of protestors pelts the police with stones and refuse, but the police are adequately protected with riot gear so as to prevent any injury, scholars would still judge that a riot has occurred.

Third, riots must have a significant period of duration. A clash of only a few moments that is immediately broken up by authorities is rarely considered a riot. And finally, riots involve a temporary breaking away from the participants' normal routines in a way that is not typically sanctioned by authorities or prevailing social norms. Rioting is not everyday behavior and also must be distinguished from sanctioned violence like an American football game or the running of the bulls in Pamplona, Spain.

Even having drawn a boundary about what social scientists have considered to be riots, it is still important to recognize the diversity within the category. Consider the differences among these subtypes of riots, all of which meet the demands of the core definition: sports celebration riots that often occur after championship games; genocidal ethnic purges such as those that occurred in Rwanda in the 1990s; food riots in Latin America; machine-breaking raids in nineteenth-century Britain; brawls among soccer fans throughout Europe in the 1980s and 1990s; lynch mobs in the southern United States in the late nineteenth and early twentieth century; immigrant protests of French police brutality that resulted in thousands of torched automobiles; and the urban riots of the 1960s that occurred throughout the United States.

Among these many forms of rioting, a *race* riot occurs when a racial grievance is expressed or is apparent through the behavior of the rioters. For example, if African American riot participants selectively loot white-owned stores, then a racial riot has occurred. If white Klansmen attack a peaceful African American civil rights rally, if an African American crowd burns down a government building in reaction to reports of white police brutality, or if Mexican Americans and African Americans clash on the border of their neighborhoods, causing deaths among one or both groups, then a racial riot has occurred. All of these scenarios were repeated throughout the 1960s in the United States.

WHAT CAUSES RACE RIOTS?

Although the U.S. urban riots of the 1960s dominate both the popular vision of race rioting and the scholarly literature on the subject, it is far from the only race rioting in the history of the United States. U.S. race riots can be thought of as belonging to one of two categories. The first are those typified by the Watts riot of 1965 (in Los Angeles, California); the Newark, New Jersey, riot of 1967; the Detroit, Michigan, riot of 1967; and the Washington, D.C., riot of 1968. These riots were most typically sparked by a confrontation between local police and African American residents of poor inner-city neighborhoods. In the most severe of these riots, the action lasted for several days and millions of dollars of property damage occurred before the authorities reasserted control of the riot areas. The activity of rioters was most often directed at damaging stores and government property, rather than attacking members of another racial group. Injuries and a few deaths did occur, but these were mainly the result of police attempts to contain and extinguish the riot. Imitative events followed in the wake of large riots and spread unrest across the region and the nation. And although there was a major concentration of these events during the 1960s, similar riots have since occurred throughout the United States and in urban environments in other countries.

Before the 1960s, the dominant kind of racial collective violence did not involve minority attacks on symbols of economic and political exploitation. Rather, they involved majority group members attacking minorities who had made gains in competition over occupational and residential turf. Here the dominant character of the conflict was white groups physically attacking members of minority groups, and destroying their property as well. For example, thousands of whites gathered in the "five points" area of downtown Atlanta in September of 1906 and ended up murdering dozens of blacks. Other such riots occurred throughout the United States, including both southern and northern cities. In the "Red Summer" of 1919, a devastating string of riots crossed the United States, killing many whites and blacks in cities such as Washington, D.C., Chicago, and Omaha. Although in extreme cases the authorities had to step in to quell the violence, more often than not, the attacks were carried out with the approval, if not the active participation, of the police.

For both of these types of race riots, economic conditions have been at the center of theorizing about their causes. In the case of the 1960s, sociologists hypothesized that unemployment and poverty were root causes of the dissatisfaction that African Americans seemed to be expressing through the riots. In this view, African Americans were not receiving their fair share of the American dream, and in many cases, they were struggling

to even survive. Lacking the political access to address their problems through institutional means, they turned to the streets in order to draw needed attention to their problems. Although this argument seemed more than plausible, the research has been considerably less than definitive. Studies attempting to explain why riots broke out in some cities but not others, and why riots in some locations were more severe than others, have had a hard time connecting rioting to poor economic conditions. Closely related ideas about insufficient social services, population changes, and political access to the city government have not been any more robust than the core economic indicators.

Competition notions, however, have had more success in predicting both kinds of rioting. Here, the idea is that competition over scarce resources (jobs and coveted residential areas) produce conflict—especially when one group begins to make gains perceived to be at the expense of another. The group that is losing ground is therefore motivated to fight back and to punish those who seem to be threatening its position. In the end though, economic conditions are not strong predictors of racial rioting. Economic hardship may very well be a prerequisite for rioting, but it is not sufficient to ignite the flames of rioting itself. Other conditions, such as poor relations between the police and the community, must provide a catalyst in areas where economic conditions have created fertile ground for unrest.

SEE ALSO *Riots; Tulsa Riot; Urban Riots*

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RACE-BLIND POLICIES

In a race-blind (or synonymously color-blind) society, persons of all ethnic backgrounds are supposedly viewed as equal and have access to the entitlements of a meritocracy. It is a theoretical position that gradually emerged in the post-1960s civil rights era and has become a contentious topic in both academic and social policy circles. Many advocates of race-blind policies, but not all, tend to be from the conservative-right school of thought. They adhere to the view that "racelessness" will help bring about equal opportunity for all and is ultimately good for society. Moreover, they view overt racism as an issue from the past that does not figure in the imagination of the majority of Americans. Hence, there is no longer a need for affirmative action policies (or positive discrimination) that were designed socially to engineer greater equality for minority cultural groups—in the United States, primarily African Americans, American Indians, and Hispanics—that had historically been underrepresented in key institutions such as education, law, the media, and politics. However, one could argue that any group considered as a "people of color" could come under an affirmative action mandate.

Race should not be viewed as the only criterion for affirmative action policies. The main beneficiaries of such policy initiatives have been white women. However, race is arguably the key factor in determining the push for race-blind policies. Those who are most vociferous in advocating race-blind policies tend to focus on race being *the* salient factor in creating what is often deemed reverse discrimination. Arguably, one of the key personalities in race-blind policies is Ward Connerly, who made his name after being appointed to the University of California Board of Regents by Republican governor Pete Wilson in 1993. Connerly is largely acknowledged as responsible for Proposition 209, which outlawed racial preferences in the California university system in November 1996. Ironically, Connerly professes to be of one-fourth African ancestry, and his opposition to racial preferences in admission to universities or to employment, which gained widespread support in the 1990s, shows no sign of diminishing in the 2000s. Indeed, writers of all hues such as Shelby Steele, Ann Coulter, David Horowitz, Dinesh D'Souza, and Thomas Sowell, to name a few, have provided ideological support for Connerly's position as probably the preeminent anti-affirmative action proponent.

Interestingly, some conservatives employ Dr. Martin Luther King Jr.'s perspective on race to argue for race-blind policies, arguing that King wanted his children to be judged by the content of their character and not by the color of their skin. However, it could be contended that race-blind advocates have taken King's perspective out of context. It would be wrong to suggest, for example, that he envisioned a society devoid of color or that his children would not be seen as African American. Rather, he wanted a society that did not discriminate on the grounds of race, as had been the case for centuries through the African American experience of enslavement, segregation, and sec-

ond-class citizenship. To suggest that King did not favor affirmative action to provide a fairer playing field is tantamount to not comprehending the civil rights movement. In this sense, there had to be some form of institutionalized redress for centuries of systemic exclusion based on one's racialized identity.

Contemporary advocates for race-blind policies contend that institutions that favor race-based preferences actually do harm to the person of color by stigmatizing the person with the "affirmative action" label. The argument is that the person has gained his or her place in the university or employment sphere on unmeritocratic principles. For commentators like Shelby Steele, race-preferential treatment actually does more harm than good. Moreover, Steele argues that racism is no longer a relevant factor in the experience of African Americans. For him it is a matter of applying one's individual talent to the task of achievement in society. Race should not enter the equation when it comes to getting ahead in life.

Criticism of the race-blind school of thought has been constant and ever-present. One of the key opponents of the color-blind approach is sociologist Eduardo Bonilla-Silva. He argues forcefully that it is simply another form of ideological racism on behalf of those who benefit from the practice of racialized discrimination. To be sure, individuals such as Steele and Connerly, from historically disadvantaged racial groups, are personally benefiting greatly from their anti-affirmative action points of view. What they oppose, it could be said, is what they most benefit from. Some critics see race-blind advocates as persons wanting to shed every vestige of their ancestral past that identifies them as a "person of color" or as an African American. Others claim that the Katrina hurricane tragedy in Louisiana in 2006 all but confirms the reality of race in North America and continues to be a salient factor in the life chances of many millions born into a cycle of essentially racialized poverty. When millions viewed the tragedy on television screens across the world it was obvious that the Katrina hurricane exposed both race and class in relation to the African American experience. Moreover, if one considers the criminal justice system and how defendants and prisoners continue to be grossly overrepresented by African American males, there is certainly food for thought in considering race as a major factor in the life chances of many.

In short, critics of the race-blind perspective contend that there is still too much social significance in the determining factor of race for North America to suddenly become color-blind in finding methods that ensure equality of opportunity. One only has to read King's books carefully to realize that his vision of a "beloved community" meant, in relation to the reality of race, being aware of the past while carefully monitoring the future via affirmative action policies. There is a strong case for a color-conscious affirmative action initiative that offers equal opportunity without relinquishing fairness in the process. To put it another way, some would suggest that not to consider race as a factor in determining life chances is to suggest cancer will go away if we simply ignore it. Although Proposition 209 has gained momentum, most universities still employ affirmative action, but now it has become based more on one's overall socioeconomic standing rather than one factor such as race or gender. In the latter part of the 2000s, a more nuanced approach to equality of opportunity is being thought through by university administrations.

SEE ALSO *Affirmative Action; African Americans; Civil Rights Movement, U.S.; Diversity; Equal Opportunity; King, Martin Luther, Jr.; Race-Conscious Policies; Stigma; University, The; Whites*

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Mark Christian

RACE-CONSCIOUS POLICIES

Race-conscious policies are usually defined as those explicitly and directly intended to affect the life conditions of racial minorities, whether it be to promote racial equality or preserve the racial status quo. Race-conscious policies in the contemporary United States have been targeted predominantly at African Americans.

Race has been entangled with public policy throughout the history of European settlement in North America. Slavery was introduced early in the seventeenth century, and lasted until the Civil War (1861–1865), more than two centuries later. It was soon replaced by the two-caste racial system known as "Jim Crow," which was most formally organized in the American South. That system was passionately supported by most southern whites, and it

was, by common agreement, essentially ignored in both local and national political debates for many years.

The 1930s brought renewed political attention to race. The peremptory lynching of blacks for real or imagined offenses was then a common, though extreme, technique for enforcing the two-caste racial system. Federal anti-lynching legislation was proposed in Congress, but President Roosevelt refused to support it, fearing the loss of his critical political base in the white South. Roosevelt's centerpiece economic legislation, however, which created the Social Security system, was intended to provide support to all older and disabled Americans, regardless of race. But at the behest of white congressmen from the South, agricultural workers and domestic servants were excluded from coverage, leaving those predominantly black segments of the southern work force dependent on the low wages normally paid by white farmers, businessmen, and families. Race was central to congressional debates on both of these issues. Unlike lynching, however, social security was not an explicitly race-conscious issue.

At the end of World War II (1939–1945), formal racial segregation and discrimination remained the cornerstones of southern society, and they were only somewhat less common elsewhere. Civil rights advocates soon began to propose a wide variety of race-conscious policies, all designed to eliminate the elaborate machinery of law, institutional practice, personal behavior, and public opinion that sustained racial inequality. These proposals were almost always greeted with overwhelming opposition in the white South, and they were often initially opposed by whites elsewhere as well. Nevertheless, a number of civil rights successes followed, including the 1950 desegregation of the armed services; the 1954 Supreme Court order to end school segregation; the Civil Rights Act of 1964, which mandated the desegregation of public schools and public accommodations and banned discrimination in employment; the Voting Rights Act of 1965, which outlawed discrimination in the voting process; the 1967 Supreme Court order invalidating laws against racial intermarriage; and the Civil Rights Act of 1968, which banned discrimination in housing. By the 1970s, these paradigmatic race-conscious policies had largely eliminated both the legal foundations and public support for formalized racial segregation and discrimination.

Still, major racial gaps persisted in most areas of life, including educational attainment, income, wealth, health, crime, and mortality. These racial gaps were national problems, but outside of the South they often were perpetuated by custom rather than law, making them more difficult to address directly. Moreover, many of the new civil rights policies had initially been accompanied by weak enforcement provisions. For example, the 1964 Civil Rights Act mandated equal opportunity for all individuals, but lawmakers explicitly rejected proposals that would have required racial equality in outcomes, such as quotas for hiring or college admissions.

In the 1970s, a variety of new race-conscious policies were proposed that were more results-oriented. That is, they were designed to produce actual racial equality in outcomes, not just opportunities, with less concern about the reasons for inequality. The end of de jure segregation, originally created by the legally mandated separation of the races in the public schools, had not ended extensive de facto segregation, created by the largely voluntary residential separation of the races. In 1971 the Supreme Court first ordered the use of busing to redistribute children across school systems. Court-ordered busing soon spread throughout the nation as a solution to racial segregation. This race-conscious policy was vastly unpopular among whites, and racial prejudice was apparently the strongest factor in generating that white opposition.

"Affirmative action" became a blanket term applied to results-oriented policies in several domains, including preferences for minorities in hiring and promotion, "set-asides" of government contracts for minorities, and preferences for underrepresented minorities in higher education. Such policies soon attracted opposition from many, if not most, whites, again often driven by racial prejudice. A series of closely divided court cases followed. The Supreme Court narrowly upheld preferences in higher education in the 1978 Bakke case, but in 2003 it rejected one University of Michigan plan while narrowly accepting another.

A second category of race-conscious policies is somewhat different. Like de jure segregation, explicit racial policies directly target blacks. Like de facto segregation, implicit racial policies may disproportionately affect blacks, although they are designed to be universalistic and apply equally to people of all races. Implicit racial policies are marked by advocacy that usually includes racial overtones in its visual aids and stereotyped anecdotes, by the polarization of the attitudes of whites and blacks (both among advocates and the mass public), and by the role of racial attitudes in motivating policy preferences, both pro and con.

"Welfare" is a prominent implicit racial-policy domain. In the late 1960s, "the poor" came to be increasingly identified by many Americans as being urban and African American (Gilens 1999), and the opposition to "welfare" among whites became rooted more strongly in racial animosity. A second implicit racial domain is that of "law and order." A number of tough crime policies have been tainted by their association with racial inequality, such as the death penalty, "three strikes" laws, mandatory sentencing laws, the opposition to "permissive" judges, and the especially harsh penalties for the sale and use of

crack cocaine, which is used extensively by African Americans. A celebrated political case focused on Willie Horton, a black murderer who, while on a weekend furlough from prison, brutally assaulted a white couple in their home. This case was used successfully by the 1988 Republican presidential campaign to attract racially conservative whites.

A third category of potentially race-conscious policies has been generated by the expanding waves of immigration to the United States and western Europe. Immigration policies concerning border control, citizenship requirements, and public services for the undocumented are all relevant here, as are language policies, such as bilingual education, multi-language ballots, and the drive for an "official" language. These political issues do not comfortably fit within the category of explicit race-conscious issues, because most of the new immigration to the United States has come from Latin America and Asia, rather than involving people of African descent. However, they often are framed as explicitly targeting other stigmatized groups, such as Mexican Americans.

By the turn of the twenty-first century, white support for the old system of legalized segregation and discrimination had virtually disappeared. However, there was still much white opposition to policies intended to remedy racial inequality, and new theories explaining this opposition began to develop. Social psychologists described new forms of racism—such as "symbolic racism"—that had replaced the old, discredited Jim Crow racism (Sears & Henry 2005). Sociologists, meanwhile, focused more on whites' feelings that black gains threatened their real resources and superior group position (Bobo and Tuan 2006).

The gradual movement of American society to formal racial equality and the expanding numbers of non-European immigrants have converged to produce new political debates on multiculturalism and identity politics. "Multiculturalism" has several meanings, variously describing a society with peoples of many cultures, tolerance and equal treatment for people differing in values and customs, or the privileging of group identities as bases for resource allocation, political alliances, and even self-concepts (Citrin et al. 2001). Although multiculturalism has been influenced by the long intellectual history of black nationalism, it has spread far beyond race and ethnicity as group categories, and therefore well beyond race-conscious policies as well.

SEE ALSO *Affirmative Action; Attitudes, Racial;* Brown v. Board of Education, *1954; Civil Rights Movement, U.S.; Desegregation; Desegregation, School; Jim Crow; Lynchings; Racism; Welfare*

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David O. Sears

RACIAL CLASSIFICATION

Modern racial classification schemes emerged in the eighteenth century during a period of European colonization and empire building. Racial classifications have been central to state formation, nation building, and the establishment of hierarchies that determine access to power in the form of material, social, cultural, and natural resources. The racial classifications schemes employed in the English-speaking, French-speaking, Spanish-speaking, and Portuguese-speaking worlds were established during European colonialism, when indigenous peoples were conquered, enslaved, and forcefully incorporated into European nation-states as colonial subjects. These classification schemes are not simple reflections of "biological" or natural differences in physical appearance, but power relations that were established during the seventeenth and eighteenth centuries as colonial expansion brought people in diverse regions under the control of Europeans.

HISTORICAL BACKGROUND

The scientists who produced classifications of human groups were Europeans. Carolus Linnaeus (1707–1778), a Swedish botanist, produced the first modern classification of human populations in 1735. Linnaeus, the founder of

scientific taxonomy, divided the genus *Homo* into four racial types: Eurapaeus, Americanus, Asiaticus, and Africanus. During this period the dominant view was monogenesis—the view that all humans were the descendants of a common original ancestor. Johann Blumenbach (1752–1840), a German professor of medicine, became the most influential of the scientists who classified human populations. Between 1770 and 1781 Blumenbach proposed the division of humans into four and later five "varieties" that represented the world's major regions: Caucasian, Mongolian, Ethiopian, American, and Malay. Blumenbach considered women from the Caucasus region in Russia to be the most beautiful of all Europeans, so he chose them to represent the European ideal type, and all other human groups were a departure and degeneration from this ideal. These racial typologies were ranked and were not considered equal in aesthetic beauty, intelligence, temperament, or morality. The racial typologies created by Blumenbach reflected a belief in European supremacy, legitimated racialized slavery, and the subordination of groups of people based upon their physical and cultural differences. These racial classification schemes linked physical traits such as eye color, skin color, hair texture, nose shape, and mouth size to intellectual capacities, cultural traits, and moral temperaments. To formulate these classification schemes Blumenbach and other scientists relied primarily on the written observations and descriptions of "ordinary" men who earned their living as slave traders, slave owners, merchants, or others in dominant positions over peoples whom they considered "savages."

By the end of the eighteenth century the economic interests and political goals of European colonizers had firmly established racial classification systems as tools employed by nation-states to subordinate the people whom they had colonized and conquered. Three hundred years after the establishment of modern racial classification systems, patterns of social and economic inequalities remain between racial and ethnic groups in multiracial nations throughout the world. The racial typologies established by European men during the eighteenth century are used as "legal" and political identities, and they continue to inform "scientific" thinking today. Many of these typologies' terms remain in use today. For example, the term *Caucasian* continues to be used as a reference to white people of known and visible European ancestry, and is a term of self-identification in North America. In some countries such as the United States it is common to classify children by race when they are born in hospitals. Race, like gender, has become part of people's "legal" identities, which follows them through their lives as they move from various institutions such as schools, hospitals, and prisons. Their "racial" and ethnic identity may change as they move across nation-state boundaries where the criteria for inclusion or exclusion in a racial category changes. In other cases, individuals may be "reclassified" as adults upon their request. For example, prior to the dismantling of apartheid in South Africa, special legal courts were established to handle racial reclassification cases.

POLITICS OF RACIAL CLASSIFICATION

In nations that were structured by state-sponsored racial segregation (and white supremacy) such as the United States and South Africa, one's racial classification determined where one could live, purchase a home, and attend school, whom one could marry, and what occupation was suitable. In other words, all aspects of one's economic, intimate, social, and political life were structured along racial lines. In the late twentieth century as state-sanctioned racial inequality such as Jim Crow segregation in the United States and apartheid in South Africa were dismantled, nations established a range of public policies designed to remedy past group-based discrimination. These policies have taken various forms, such as affirmative action in the United States and positive discrimination in the United Kingdom. Although nation-states have dismantled *de jure* (legal) racial segregation and formally criminalized discrimination against members of racial and ethnic minorities, one's racial status continues to overdetermine an individual's life chances and access to resources in multiracial societies.

Social scientists have documented patterns of social inequality that demonstrate that belonging to a racially dominant or racially subordinate group is correlated with infant mortality rates, educational achievements, access to healthcare, housing, and wealth, and freedom from routinized violence. In other words, resources and privileges are unequally distributed along racial and ethnic lines. Public-policy initiatives by nation-states and local governments depend on racial classifications to remedy and counter group-based inequalities. Governments employ census data that classifies individuals by race and "ethnicity" in order to redistribute resources such as education, health care, housing, public assistance, and other resources in an effort to eliminate and minimize racialized inequality that continue to determine life chances. For example, in the United States, the direct descendants of American Indians and the descendants of enslaved Africans are more likely to endure intense poverty, lower life expectancies, residential segregation, social isolation, higher suicide rates, and higher infant mortality rates, and are more likely to be victims of hate crimes when compared to European and Asian Americans in the same age cohort and/or class position. One's racial classification is strongly associated with one's location in economically impoverished regions and communities where access to valued resources is minimal.

CHANGES IN THE U.S. CENSUS CATEGORIES

Racial classification schemes reflect power relations and political constituencies and thus are not stable. For example, in the United States, racial categories have been added, removed, revised, and altered during the past 300 years in response to demographic changes, immigration, political mobilization, technologies, cultural shifts, and economic interests. The United States is unique in its historical enforcement of what has become known as the "one-drop rule," in which a person of multiracial ancestry, who had known or visible African ancestry, is legally classified as "black," regardless of appearance, cultural training, and self-identification. The one-drop rule has been consistently upheld by state and federal courts. In states such as Louisiana there were so many people of African ancestry socially classified and living as "whites" that "race clerks" were hired to strictly enforce the one-drop rule. A number of significant changes have occurred in the census during the past 100 years including changes in census categories, instructions to the census enumerator, and the ability of individuals to self-report their race and ancestry.

In 1918, the U.S. Census Bureau estimated at least three-fourths of all native blacks were racially mixed, and it predicted that pure blacks would disappear (see Davis 1991, p. 57). Consequently after 1920 the mulatto category was removed from the census and no further attempt was made by the U.S. government to systematically count the number of visible mulattos in the United States, partly because there were so many persons with some black ancestry who appeared white.

Social scientists have documented the inconsistencies in the logic employed by the U.S. census and the disparity between social-cultural and scientific definitions of race. By 1960 the practice of self-identification by race replaced the earlier practice in which the census taker assigned race. Beginning in 1960 the head of household indicated the "race" of all of its members. Surprisingly this did not introduce any noticeable changes in the numbers of blacks in the population. In 1970 the Hispanic category was added to the U.S. census for the first time. While in 1980, for the first time, a question on ancestry was included in the census. In response to increased political mobilization by members of interracial or multiracial families, the United States added the category "multiracial" to the 2000 census. In the following year the United Kingdom also added a "mixed race" category to their 2001 census. These changes in the official census reflect political struggles over the boundaries between and within racial groups, as well as how resources will be distributed and who will be counted and included in racial and ethnic minority categories. Racial classification schemes are socially produced, yet they have real material, social, and economic consequences for members of racialized groups.

SEE ALSO *Discrimination; Economics, Stratification; Hierarchy; Identification, Racial; Identity; Identity, Social; Policing, Biased; Race; Racism; Self-Classification; Social Categorization*

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RACIAL EPITHETS

SEE *Racial Slurs.*

RACIAL IDENTIFICATION

SEE *Identification, Racial.*

RACIAL INEQUALITY

SEE *Inequality, Racial.*

RACIAL PROFILING

SEE *Policing, Biased.*

RACIAL SLURS

Racial slurs, often called *racial epithets*, are words or phrases that refer to members of racial and ethnic groups in a derogatory manner. Slurs and all other forms of racial defamation dehumanize targeted groups and justify racial oppression by suggesting that targeted populations are unworthy of equality (Clark 1995, p. 6). Racial slurs take myriad forms and are often adapted by users to fit a variety of contexts. They may mention a racial category explicitly (e.g., *Japs* for Japanese people, *Chinks* for Chinese people, and *spics* for Hispanics) or indirectly allude to the targeted racial group by referencing common derogatory stereotypes (e.g., *porch monkeys* and *spearchuckers* for African Americans). Other racial slurs refer to historical encounters (e.g., *redskins* for Native Americans). In some cases, racial epithets targeting one group are derived from slurs targeting a different group (e.g., *sand niggers* for Middle Eastern people). Other examples of racial slurs commonly used in the United States include *nigger*, *wetback*, *coolie*, *kike*, and *dago*.

Racial slurs are usually created and used primarily by the dominant racial group in society. A variety of sociopolitical circumstances govern the creation and duration of racial slurs. Initial contact between racial groups in the form of militaristic exploration (colonialism) or migration frequently leads to racial conflict. This, in turn, often generates racial imaging and racial slurs, when one racial group considers itself distinct from and better than another. During conquests, European conquistadors and colonists invented numerous racial slurs (for example, *Indian savages*) to denigrate and rationalize the oppression of Native Americans. Subsequent generations of European Americans coined other slurs to disparage and rationalize the subordination of African Americans and various populations of immigrants of color.

After their creation during initial contact, racial slurs persist in two contexts, which Leslie Picca and Joe Feagin (2007) have termed the social *frontstage* and *backstage*. Frontstage refers to multiracial environments where racist acts are performed. These environments range from relatively private gatherings to major public events. Members of dominant groups use racial slurs in public spaces to intimidate members of other groups and to prevent challenges to the dominant group's status and privileges. Racial slurs are extremely common when the economic and political privileges of dominant groups are threatened by resistance from oppressed groups. In 1994 six African American employees were embattled in a racial discrimination lawsuit against the Texaco company. Threatened by their act of resistance, some angry Texaco executives were tape-recorded referring to the employees as "black jellybeans."

Explicit public uses of racial slurs range from their appearance on signs during white supremacist demonstrations to their use by whites during lynchings and other incidents of racial violence. In the absence of a sufficiently powerful formal or informal social structure, dominant groups may use racial slurs as the primary colloquial term for discussing racial others. In contemporary times, some have resorted to referring to African Americans with derogatory "coded" racial slurs. In 2006 the Equal Employment Opportunity Commission filed a lawsuit against a medical clinic that was referring to a black employee as a "reggin," the N-word spelled backwards. There has been a rise in the use of "coded" racial slurs such as "boy," "drug dealer," "you people," and "thug." These coded racial slurs carry a contemporary message of hate.

Despite the attention such public usage receives, racial slurs are now most commonly used *backstage*, in settings where only members of the dominant racial group are present. In this environment, slurs insult the relevant racial others and build solidarity among those present. Formal and informal sanctions against the public use of racial slurs have created a climate of political correctness in which most people refrain from the use of terms and symbols that may be viewed by other populations as offensive. Ever since the moral climate of the civil rights movement there have been changes in the United States that have curbed the public use of racist epithets; however, in private, members of the dominant racial group may continue to use them with impunity.

Because race is a social construction and not a biological reality, over time a minority group may be redefined as part of the dominant racial group. As this process occurs, these redefined groups are less often the targets of racial slurs. For example, in the United States, white Anglo-Saxon Protestant Americans originally classified Irish Catholic immigrants as nonwhite and racially inferior. During the mid-nineteenth century, established European Americans targeted the Irish with racialized slurs, such as *paddy* and *mick*. As generations of Irish Catholic families assimilated to the Anglo-Saxon core culture, the established white groups were unable to distinguish Irish people from other European Americans, and the use of anti-Irish slurs decreased. The use of slurs against racial groups who cannot pass as white does not decline as sharply, regardless of their degree of cultural assimilation.

Arguably, no racial slur has been as prominent and damaging as *nigger*, which remains a potent epithet used against people of African descent. Use of *nigger* is so hurtful to African Americans that most people publicly reference it as "the N-word." Possibly derived from *niger*, the Latin word meaning black, *nigger* has been decidedly derogatory since the eighteenth century. The term has pri-

marily been used by white Americans to derogate blacks as unworthy of equality due to their alleged intellectual, moral, and cultural inferiority. Although generations of white Americans used *nigger* as their primary term for referring to African Americans, whites would often use the slur during explicitly violent racist actions, such as lynchings, adding an implicit threat of violence to any use of the word. Despite contemporary use in popular media, sometimes by black musicians attempting to defang its potency, *nigger* retains its power to insult, intimidate, and threaten African Americans.

In the United States, many citizens have looked to the political and judicial systems for relief from hateful terms. In a landmark case, *Chaplinsky v. New Hampshire* (1942), the U.S. Supreme Court ruled that " 'fighting' words—those which by their very utterance inflict injury or tend to incite an immediate breach of the peace," are not protected by the First Amendment to the U.S. Constitution. The court ruled that restricting fighting words is permissible because hate speech is not valuable for contributing to greater understandings and because the state has a legitimate interest in limiting disruptions of the peace. Under *Chaplinsky*, state laws proscribing the public use of racial slurs were deemed constitutional. Since *Chaplinsky*, however, the Court has limited the scope of the doctrine to incidents in which provocative words are "directed at the person of the hearer" and there is an immediate threat of retaliatory violence (*UWM Post, Incorporated v. Board of Regents of the University of Wisconsin System*, 1991). In so doing, the court has largely disregarded the first half of the fighting words doctrine, which recognized the injury that racial slurs and other hate speech inflict on hearers.

The Supreme Court has generally struck down laws limiting free speech on the grounds that they are either "overbroad," meaning they restrict speech beyond that which falls under the fighting words doctrine, or are attempts to regulate ideas and content. Speaking to attempts to regulate content, in *R.A.V. v. St Paul, Minnesota* (1992), the Supreme Court declared that the purpose of the First Amendment is to prevent the majority from expressing its preferences by silencing the minority. Consequently, the high court provided protection for racially hostile speech in public spaces by deeming unconstitutional laws precluding speech simply because that speech is racially hostile.

Academics and legal scholars have responded to the courts by emphasizing the right of individuals to move in public spaces without the fear of racial hostility. These scholars take seriously the harmful effects that racial slurs and closely related actions have on their targets. Many victims of hostile and intense racial slurs suffer physiological and psychological injuries, including high blood pressure, breathing difficulty, nightmares, and thoughts of suicide (McKinney and Feagin 2003; Matsuda 1995). To avoid subjection to recurring racist slurs, people of color often must leave their homes or jobs, which limits their socioeconomic opportunities. Scholars also criticize the Court's insistence on limiting only words directed at individuals. Because racial slurs dehumanize members of the targeted group, they lay the groundwork for both individual and state-sponsored violence against that group (Fergenson 1995). To take a major example, the German Nazis' hostile slurs against Jews as *vermin* and *parasites* were directly connected to the "final solution" that Jews must be "exterminated."

Prompted by the effects of German Nazi propaganda during World War II (1939–1945), international efforts to regulate hate speech have given far more consideration than have U.S. policymakers to the rights of the targets of such speech. Consequently, the international community has outlawed most racist hate speech (Matsuda 1995, pp. 92, 96). Article 4 of the International Convention on the Elimination of All Forms of Racial Discrimination (1965) declares illegal all propaganda based on ideas of the superiority of one race over another or that promote racial hatred and discrimination. Other human rights treaties, including the European Convention for the Protection of Human Rights and Fundamental Freedoms (1950) and the Inter-American Declaration of the Rights and Duties of Man, (1948) protect people against recurring racist slurs and other hate speech. Similarly, many national governments have outlawed racist speech.

SEE ALSO *Anti-Semitism; Civil Rights Movement, U.S.; Colonialism; Feagin, Joseph; Harassment; Humiliation; Immigration; Nativism; Obscenity; Other, The; Political Correctness; Race Relations; Racism; Supreme Court, U.S.*

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RACIALIZATION

The concept of racialization has developed over time. In his 1989 book *Racism*, sociologist Robert Miles described racialization as "a dialectical process by which meaning is attributed to particular biological features of human beings, as a result of which individuals may be assigned to a general category of persons which reproduces itself biologically.… The process of racialization of human beings entails the racialization of the processes in which they participate and the structures and institutions that result" (Miles 1989, p. 76). Earlier, in *The Wretched of the Earth*, the political theorist Frantz Fanon (1925–1961) had described the "racialization of thought" in reference to the failure of early Europeans to recognize that Africans had a distinct culture that was unique to them. Instead Europeans, "set up white culture to fill the gap left by [what they believed was] the absence of other cultures" (Fanon 2001, p. 171). Sociologist Yehudi Webster later defined the concept of racialization as "a systemic accentuation of certain physical attributes to allocate persons to races that are projected as real and thereby become the basis for analyzing all social relations" (Webster 1992, p. 3). Webster goes on to argue that "the second foundations of racialization are provided by social scientific research on race relations, in which the disciplines of history and sociology play an eminent role" (p. 4).

Culture is a key aspect in both Miles's and Fanon's definitions of racialization. Historically, there have been intense debates over the issue of race as a social construction versus race based on biology. Omi and Winant addressed the debate and articulated the concept of racialization that many scholars use today. They defined racial formation as "the sociohistorical process by which racial categories are created, inhabited, transformed, and destroyed.… Race is a matter of both social structure and cultural representation" (Omi and Winant 1994, pp. 55–56). This view revolutionized the conception of race as a process and as a social construction.

CRITIQUING "RACIALIZATION"

Some scholars have critiqued current definitions of racialization. Karim Murji and John Solomos, for example, argue that the idea of racialization "has become a core concept in the analysis of racial phenomena, particularly to signal the processes by which ideas about race are constructed, come to be regarded as meaningful, and are acted upon.… Racialization is applied to whole institutions such as the police, educational or legal systems, or entire religions, nations, and countries" (Solomos 2005, p. 1).

Sociologist Joe Feagin argues that "Omi and Winant view the past of North American slavery and legal segregation as not weighing 'like a nightmare on the brain of the living,' but rather as lingering on 'like a hangover' that is gradually going away" (Feagin 2006, p. 7). Feagin adds that what is "missing in both the mainstream race-ethnic relations approach and much of the racial formation approach is a full recognition of the big picture—the reality of this whole society being founded on, and firmly grounded in, oppression targeting African Americans (and other people of color) now for several centuries. Given that deep underlying reality of this society, all racial-ethnic relationships and events, past and present, must be placed within that racial oppression context in order to be well-understood" (p. 7).

Sociologist Eduardo Bonilla-Silva notes that although the perspective of Omi and Winant "represents a breakthrough, it still gives undue attention to ideological/cultural processes, does not regard races as truly social collectivities, and overemphasizes the racial projects … of certain actors (neoconservatives, members of the far right, liberals), thus obscuring the social and general character of racialized societies" (Bonilla-Silva 1997, p. 466). Bonilla-Silva further states:

> Although all racialized systems are hierarchical, the particular character of the hierarchy, and thus the racial structure, is variable.… The racial practices and mechanisms that have kept Blacks subordinated changed from overt to eminently racist to covert and indirectly racist. The unchanging element throughout these stages is that Blacks' life chances are significantly lower than those of Whites, and ultimately a racialized social order is distinguished by this difference in life chances.… The historical struggle against chattel slavery led not to the development of race-free societies but to the establishment of social system with a different kind of racialization. (Bonilla-Silva 1997, p. 470)

In their 2005 book *Racialization*, Murji and Solomos summarize the arguments that suggest that the conception of racialization introduced by Omi and Winant may not have represented a breakthrough:

> Barot and Bird feel that Omi and Winant "use the concept of racial formation as a perspective that is not fundamentally different from the concept of racialization as deployed in British literature in the 1980's.… Miles himself has argued that Omi and

> Winant's conception of racialization is underdeveloped and not used systematically.… Miles and Torres state, 'Omi and Winant's defence of the race concept is a classic example of the way in which the academy in the US continues to racialize the world.' " (Murji and Solomos 2005, p. 22–23)

RETHINKING RACIALIZATION

Bonilla-Silva proposes use of "the more general concept of racialized social systems as the starting point for an alternative framework. This term refers to societies in which economic, political, social and ideological levels are partially structured by the placement of actors in racial categories or races" (Bonilla-Silva 1997, p. 469). In rethinking a theory of racial oppression, Feagin suggests three elements: "It should indicate clearly the major features—both the structures and the counterforces—of the social phenomenon being studied; it should show the relationships between the important structures and forces; and it should assist in understanding both the patterns of social change and the lack of social change" (Feagin 2006, p. 7). As the critiques of these scholars suggest, the concept of racialization has changed over time and continues to change.

SEE ALSO *Discrimination; Preference, Color; Race; Race Relations; Racism; Whiteness; Whitening*

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Ruth Thompson-Miller

RACISM

Racism is intertwined with discrimination in two dimensions. On the one hand, discrimination is a specific practice that can arise from racism. On the other hand, racism is a specific form of discrimination directed against a social group that is constructed with regard to physical attributes, for example the color of the skin or the hair type. To these physical attributes specific social features such as behaviors and values are ascribed, thus naturalizing social attributes. Privileges and disadvantages of groups are therefore grounded in nature and gain their legitimacy through this naturalization. The identity of a person is always dependent on the marking, the ascription, and the perception of others. Self and other are defined in a reciprocal relationship: Racism is a specific process of producing self and other (see Darity, Mason, and Stewart 2006). It is the praxis of a dominant group classifying and characterizing an inferior group. Thus some scholars argue that racism transforms political or economical interests into apparently natural facts. Because racism affects social relations, class and race should be examined together (see Hall 1980).

Racism is produced on different levels of societies. On the macro level, racism comes into being through institutional rules, guidelines, and processes of exclusion that are based on and justified by racist discourse. Examples are the Jim Crow laws in the United States, the Nazi regime in Germany, and the apartheid system in South Africa. On the micro level, individual racism comes into being through generalizations, stereotypes, and discrimination against the other's everyday activities.

The phenomenon of racism existed long before social scientists defined the term. In the 1930s the term *racism* was first used by the German physician Magnus Hirschfeld (1868–1935) to describe the ideology upon which the Nazis based their identification of the Jews as members of an alien, subordinate, and dangerous race, providing an ideological foundation for the Holocaust (for a wider analysis see Horkheimer and Adorno 1947).

THE DEVELOPMENT OF IDEOLOGICAL RACISM

Ideological racism developed from the processes of construing the human races as apparently homogenous and then building a hierarchy of these races on the basis of ascribed features. These concepts were developed in Europe in the eighteenth century in the context of the Enlightenment and the increased trust in scientific knowledge. Laws of nature were presented as the foundation for differences between social groups, and scientists tried to classify human beings according to categorizations developed in the natural sciences.

Some argue that these classifications based on nature replaced former classifications based on religion, following a trend to secularization. In contrast, Robert Miles and Malcolm Brown argued in *Racism* (2003) that the clash between the idea of biologically constituted different races and the religious belief that all human species descend from Adam and Eve and are therefore homogenous was harmonized by the claim that in response to human sin God damned the sinners and their descendents by distinctive features, such as black skin.

The main impulse to formulate racism as a theory came from French aristocrats striving to get back the privileges they lost in the French Revolution. According to them, the French aristocrats were descendants of the Franconian conqueror, so any restriction of their privileges was a violation of their inherited rights; this idea was formulated as "the legend of the Franconia" by the French historian Henri de Boulainvilliers (1658–1722). Socially different estates in France became referred to as different "races." In consequence, the privileges of the aristocracy became legitimized not only by the legal system, but also by what were presented as hereditary, physical traits. Charles Darwin's theory of natural selection and evolution (1863) provided further justification for this theory of the naturally grounded inequality of human beings. The adaptation of Darwin's theory of evolution to society is called *social Darwinism* (see Hawkins 1997, Dickens 2000). Following this theory, disadvantaged races have their social positions because of their inferior qualities, and those inferior qualities are translated to inevitably lower social status in the common struggle for existence. The idea of a racial hierarchy based on nature became important during the colonization period beginning at the end of the fifteenth century when in the process of oppressing and exploiting Africans, Asians, and Native Americans the supposed racial superiority of whites was established (for a discussion of whiteness, see Bonnett 2000 and Allen 1994).

Racial inequality is a matter of scholarly debate. Some academics argue, with the help of recent genetic research, that there are more genetic variations *within* races than between them. In this view, races do not naturally exist, but instead are powerful social constructions of racist people (see Miles and Brown 2003). Adherents to this theory argue that there are no clear *natural* borders between the races; racism itself constitutes these borders and tries to maintain them by ignoring any exceptions. Two crucial aspects of the impact of racism emerge: On the one hand, there is the practice of defining an apparently homogenous group of human beings as a race by negating differences between the individual members of the group; on the other hand, it is essential that the differences between the social groups that are constructed as races are emphasized.

Other scholars argue that the reason for racism is not that there are different races. According to them, racism is caused by the ascription of specific attributes to the races, and they hold that by identifying races as an ideological effect the racial solidarity of the disadvantaged race is undermined.

PSYCHOLOGICAL EFFECTS OF RACISM AND REFLECTIONS OF RACISM IN THE PSYCHE

Racism gets its full power by infiltrating people's own specific perceptions. In the minds of both victims and perpetrators, racism is produced and reproduced with prejudices and stereotypes from the other and the own. It has been widely demonstrated that from the perspective of whites, blacks are seen as violent and criminal. Studies in psychology illustrate that the same behavior pattern is interpreted differently depending on the race of the actor (see, for example, Eberhardt, Goff, Purdie, et al. 2004). From the point of view of whites, a positive action by a black person, like being smart and helpful, often is seen as an atypical event explained by special circumstances, whereas a negative action by a black, like committing a crime or an aggressive behavior, is seen as typical of the genuine personal characteristics of black people. For the actions of whites, the relation is reversed. Claude Steele and Joshua Aronson illustrated the harmful effects of stereotypes when they demonstrated that the mere presence of a question asking the race of those taking an academic test led to a distinct decrease in the scores of participating African American college students: The race question activated negative stereotypes and self-confirming mental representations of poor academic performance. In consequence, the test participants confirmed unwittingly the stereotype that African Americans are intellectually inferior. Different tests showed that the simple activation of race stereotypes had different effects on test performances, depending on the kind of stereotypes (Shih, Ambady, Richeson, et al. 2002).

RACISM IN THE UNITED STATES

Because racism depends on economic and political factors, it is important to point out that racism came into being in different forms depending on the historic epoch and geographical region in which it appeared.

Slavery Slavery came into existence in China, imperial Rome, and West Africa without relying on racist concepts. However, in the colonial period the ideology of racism was useful in circumventing any of the conquerors' religious or moral considerations that would make all human beings equal before God and thus require that they be

treated equally by man. Using racist arguments, white conquerors could justify slavery, the use of slaves as property, the destruction of their social and cultural identities (Patterson 1982), and their exploitation. This was possible because the conceived hierarchy of races presented the whites as superior to other races; from a racist perspective, human beings are not equal and therefore they can be treated unequally.

The main reasons for the growth of slavery were economic. Slaves were used as a cheap labor force and as a profitable trade good. In the United States the profits acquired through slavery were an important factor in the growth of the shipping industry and a source of surplus wealth for early industrialism. Slaves worked in households, in mines, and on sugar and cotton plantations in the southern states of North America, in Brazil, and in the Caribbean. Most of the 4 million slaves in 1860 were the property of a small upper class in the U.S. southern states, and for this elite, their own economic power was bound directly to their property of slaves. They justified slavery by identifying blacks as a weak race that had to be protected by the slave owners, who knew how to treat them according to their natural status.

Before the end of the slave trade in the mid-nineteenth century, between 11 and 15 million Africans were enslaved and transported to Europe and South, Central, and North America. Most of them were enslaved during the eighteenth century, and most came from the West African coast and from central Africa.

After the Civil War After the U.S. Civil War (1861–1865) slavery was legally banned in 1870 by the Fifteenth Amendment to the Constitution. Because there was no land reform most African Americans were solidly concentrated in the southeastern states, nominally free but economically tied to the same cotton lands and the same employers as before the war. Former slaves were still stigmatized and pressed into economic poverty. From the perspective of racist whites in the northern and southern states, African Americans were an inferior race without the right to participate equally in political and social life. After the end of slavery in the United States racism took shape in the oppression of the African American population and in defining them as a subordinated race.

Discriminatory practices continued in the United States; the Jim Crow laws (1890–1912) banned African Americans from public places, curtailed their educational rights, and allowed widespread violence against people of color, including the lynching of more than 3,000 African Americans in the southern states between 1882 and 1936. Clandestine organizations such as the Ku Klux Klan murdered and harassed African Americans.

The Twenty-First Century The civil rights movement in the United States led to the passage of the Civil Rights Act of 1964, ending institutionalized racism in the United States. However, racism is still alive; the durability of ideological racism and the idea of naturally based inequality between races still is present in the attribution of social traits to racial groups. In consequence, economic and educational opportunities are still unequal between the races. African Americans are still put into a position of inferiority in the hierarchy of races; an expression of this is segregation in urban ghettos (see Massey and Denton 1993 and Wilson 1987). Racist discourse still exists and reproduces itself in the stereotypes; it is part of everyday discrimination, and it leads to different chances for access and participation in the contemporary United States and elsewhere.

SEE ALSO *Discrimination; Economics, Stratification; Hierarchy; IQ Controversy; Prejudice; Race; Stigma; Stratification; White Supremacy; Whiteness; Whites*

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Lars Meier

RADCLIFFE-BROWN, A. R.

1881–1955

Alfred Reginald Radcliffe-Brown was a British anthropologist closely associated with the development of structural-functionalism. His firm theoretical framework and his administrative skills helped to consolidate social anthropology as an academic discipline across the British Commonwealth.

Defying his impoverished lower-middle-class beginnings, Radcliffe-Brown enjoyed an elite academic education at Cambridge University, where A. C. Haddon (1855–1940) and W. H. R. Rivers (1864–1922) were his mentors. He first wanted to study natural sciences, but was directed toward "moral sciences" (comprising philosophy, psychology, and economics). Yet his leanings toward the natural sciences remained with him throughout his career, and the use of analogies between social structures and structures occurring in nature are emblematic of his style of thought. At the same time, he was able to combine his insistence on "structure" with a flamboyant way of dressing and a fascination with Peter Kropotkin's (1842–1921) anarchism, earning Radcliffe-Brown the nickname "Anarchy Brown."

Most of Radcliffe-Brown's adult life was spent outside England. He conducted ethnographic fieldwork in the Andaman Islands (1906–1908) and Western Australia (1910–1912), but never achieved the kind of in-depth familiarity with local settings that would soon become typical of social anthropology. Radcliffe-Brown's influential academic career began in 1920, when he became the founding professor of social anthropology at the University of Cape Town in South Africa. He went on to become founding professor at the University of Sydney (1926–1931), professor at the University of Chicago (1931–1937), and chair of social anthropology at the University of Oxford (1937–1946). He continued lecturing at universities in Brazil, Egypt, England, and South Africa, and served as president of the Association of Social Anthropologists until shortly before his death.

Even by his own account, Radcliffe-Brown was a slow writer. His only monograph is *The Andaman Islanders* (1922); the rest of his publications are articles and lecture transcriptions. Although his academic career spanned half a century, Radcliffe-Brown's theory remained more or less unchanged throughout. He constantly systematized the idea that social anthropology should become a "natural science of human society" through empirical investigations of social structures. Comparisons between different societies should enable anthropologists to discover universal and essential relations; apparent diversity should be reduced to clear classifications. Anthropology should focus on directly observable networks between persons, and distill "general structural forms." Rejecting diffusionism, evolutionism, and any kind of "conjectural history," Radcliffe-Brown was also critical of the concept of "culture," which for him was a foggy abstraction and subordinate to social structure.

Assessments of Radcliffe-Brown's contribution to anthropology tend to be polarized. He was a charismatic lecturer, able to impress upon others a habitus of scientific rigor. Even some streams of American anthropology, with its longstanding emphasis on culture and historical particularity, were influenced by him. But just as much as he united scholars during his lifetime, his name soon became synonymous with an overly rigid and intellectually unsatisfying approach that no one wanted to follow anymore. From the 1950s onward, all major figures in British social anthropology, notably E. E. Evans-Pritchard (1902–1973), Raymond Firth (1901–2002), and Edmund Leach (1910–1989), denounced Radcliffe-Brown's theory as unable to grasp history, social change, and unequal relations of power. That he wanted anthropology to become a "natural science" attracted particular scorn (e.g., Leach 1976). Even if Radcliffe-Brown's importance for the discipline is now widely seen as historical, his emphasis on observable social networks, as opposed to cultural values, retains a certain influence, especially in Britain.

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Stefan Ecks

RADICALISM

The word *radical* has a number of meanings, one of which involves "getting to the root of the matter." This analogy is helpful in focusing attention on the key characteristics of the term, and on its various usages within social science. When people talk about "radicals," they mean those who take ideas and concepts back to first principles. They are those who are unafraid of laying bare what is hidden, subterranean, or uncomfortable to discuss. Radicals do not mind upsetting the status quo, received wisdom, or "common sense" conceptions of any kind. To talk about radicalism is therefore to talk about the belief systems of radicals. Yet what is it that characterizes radicalism, and how does this impact our understanding of knowledge generally?

As is clear from the above, radicalism is not a concept that denotes a particular set of ideas or a particular approach, in the manner of many other terms in the lexicon of social science. When one discusses Marxism, it is clear that this relates to the word and ideas of Karl Marx and his many followers. The same cannot be said of radicalism, which is a concept that is positional or contextual. Whether a given ideology or stance can be regarded as radical depends on where it stands in relation to dominant or "accepted" ideas. Thus a "radical conservative" (if this is not an oxymoron) is someone whose radicalism is defined in relation to dominant conservative ideas. He or she wishes to get to the "root" of conservatism, or of the problems discussed by conservatives. Radical conservatism is therefore not inherently radical, it is only radical in relation to other conservative ideas. Likewise, radicalism only exists insofar as there are ideas that are mainstream, orthodox, and widely accepted.

Radicalism can also be regarded as contextually dependent. In other words, whether a set of ideas is radical depends on the context in which these ideas are being offered or pursued. Many ideas that were once perceived to be radical have, over the course of time, come to be regarded as mainstream. Thus, radicalism should be understood less as a description of a core orientation of the kind associated with labels such as "Marxist," "liberal," or "conservative," and more as a set of ideas that is inclined to query orthodoxy, whether it be secular, religious, social, or scientific. A starting point of this article is thus the contention that radicalism does not denote a particular set of ideas or arguments, but rather any ideology or position that takes issue (or appears to take issue) with settled, accepted or otherwise mainstream views. Some examples will help to clarify the above.

RADICALISM AS POSITIONAL AND CONTEXTUAL

As mentioned above, radicalism does not denote a particular set of ideas or arguments, but any argument that takes issue with accepted positions, however defined. In this positional sense, radicalism can be mapped in terms of certain well-known debates. To take an obvious starting point, Darwin's account of evolution was once regarded as radical (as well as absurd and despicable) by mainstream commentary. However, from the late nineteenth century onward, more and more scientists in the West began to hold Darwinian views. A great deal of the evidence, from a wide variety of scientific and social scientific investigations, seemed to support the view that evolution takes place over very long periods of time and can be adduced to random genetic mutations. Darwinism, therefore, once a radical and heretical doctrine, became mainstream science. Likewise, those who opposed Darwinism, such as Christians and other religious groups, were once in the majority, but over the course of a century or so they became "minoritarian" in relation to issues in basic science. One might ask whether Darwinism or intelligent design should now be regarded as the more radical position. This is a moot point, however. In areas or communities that are deeply committed to a deist view of the universe, Darwinism remains a radical doctrine to be combated wherever possible. To Darwinists, the claims of creationists are radically conservative.

It is often held that radicalism is necessary because progress is impossible without challenges to orthodoxy. Thus, philosophers of science frequently reserve a special place for radical ideas as necessary, and indeed desirable. This usually comes with the caveat that radicals submit to the norms of falsification and experimentation. Radicalism can be good if it is seen to be in tune with the general tenor of scientific understanding, but it is less so when it appears to take issue with a certain set of expectations. Albert Einstein's radicalism is useful on these terms, for example, but Sigmund Freud's is less so, at least according to figures such as the philosopher Karl Popper (1902–1994). Those who oppose such a conventional view of scientific progress, such as Jean-François Lyotard (1924–1998) and Paul Feyerabend (1924–1998), are themselves regarded as radicals by philosophers of science and social science because of their insistence on the relativism of knowledge claims. This kind of radicalism equates to the view that science does not deserve the special status many accord it, for it is merely one kind of "nar-

rative" to set alongside other narratives—such as "Creationism"—that claim to offer privileged access to the true nature of things.

FROM SCIENCE TO IDEOLOGY

More generally, there have always been radical views that have challenged or undermined the mainstream. The twentieth century, for example, is often noted for the variety and impact of unorthodox, extreme, and nonmainstream views that surfaced during this period. To illustrate the way in which radicalism is context-dependent, the century can be divided up into four periods: the interwar years; the postwar era up to the oil crisis of the mid-1970s; the period of conservative preeminence to the fall of the Berlin Wall; and finally the period of the "Post–Cold War Order," which carried over into the twenty-first century. Traversing a century of radicalisms will illustrate the changes in the nature and form of radicalism from modernity to what is often termed "postmodernity" or a "second" modernity.

In the interwar years (1918–1939), the world witnessed an astonishing burst of radicalism, radical parties, and radical politics. This was due to a number of factors, principally the impact of war, the rise of capitalism, and the perceived shortcomings of individualism. The radicalism of the Russian Revolution came out of a deep discontent with the inherited monarchic order. Bolshevism promised a world without hunger, hierarchy, or war, and a world without capitalism, individualism, or imperialism. The rise of Hitler owed a great deal to similar sentiments, although it translated into a different set of demands. Nevertheless, radicalism in this period meant collectivism, as opposed to individualism; state control, as opposed to the free market; and universalist claims, in the name of "proletarian internationalism" or Aryan superiority. The individual counted for little when compared with the needs of the class or the race. This common set of characteristics offered commentators such as Hannah Arendt, Karl Popper and Carl J. Friedrich license to roll up these otherwise diverse radicalisms into one overarching phenomenon: "totalitarianism." This was a radicalism that threatened the annihilation of prevailing orthodoxy, whether characterized as liberal or conservative.

In the postwar period (1945–1975) the dominant or mainstream ideology in most Western states was that associated with the work of the British economist John Maynard Keynes. The "postwar consensus" insisted on the growth of the public sector or welfare state, the extension of basic rights and liberties (as announced in the UN Charter), and the pursuit of policies of growth through the management of demand. Social-democratic or welfare-state thinking became dominant across the developed world.

In terms of political ideas and positions, "radicalism" at this point referred to two main tendencies: those who were opposed to Keynesian because it was too statist, and those who argued that it was not statist enough. With regard to the former, the period is noted for the emergence of neoliberal ideas associated with figures such as Friedrich von Hayek, Milton Friedman and, later, Robert Nozick. Their radicalism consisted in the suggestion that the welfare state was despotic and heralded the end of choice, the end of the individual's control over his or her fate, and the elimination of the entrepreneurial and risk-taking characteristics upon which economic growth depended. The state should give way to the market, they believed, not the other way around. At the same time, considerable interest developed in models of socialism that radicalized the terms of the postwar consensus while also seeking to avoid the perils of communist dictatorship. Multiple left-wing radicalisms emerged and flourished (e.g., The Frankfurt School, situationism, Maoism, "humanist Marxism"), reflecting the "postmaterialist" discontent with both Western and Eastern society that was to be such a feature of the late 1960s.

Other kinds of radicalism arose in this period out of the desire for "liberation," particularly liberation from racism, colonialism and, "patriarchy." Antiracism became a powerful current and gave birth to a number of radical groups and figures across the developing and developed world, including the Black Panthers, Malcolm X, and various figures in the civil rights movement, such as Martin Luther King Jr. Anticolonial or postcolonial demands were articulated in the work of writers such as Paolo Freire, Frantz Fanon, and Jean-Paul Sartre, while radical anticolonial movements swept the globe, led by figures such as Che Guevara and Ho Chi Minh. For feminists, the problem was the "patriarchal" assumptions of mainstream political theories and practices. "Radical feminism" spared little in its critique of the exclusionary and demeaning character of patriarchal practices. Women had to assert not equality, but their difference from men. This entailed developing novel and inclusive strategies in relation to oppressive discourses wherever they were found.

The oil crisis of 1973 and 1974 was followed by a period of conservative preeminence, which put into relief what was at stake in these ideological battles and allowed advocates of what had been regarded as a deeply radical position to win support in the mainstream. In a matter of a decade, neoliberalism moved from being a deeply heterodox and radical position to being "common sense"—as described by prominent advocates such as Margaret Thatcher and Ronald Reagan. Orthodoxy now shifted away from being protective of public services and demand-fuelled economic growth, moving toward a position hostile to the welfare state, "dependency culture," and public spending. This, in turn, encouraged a new set

of radicalisms highlighting the perceived shortcomings of the prevailing political orthodoxy. Chief among these was the emergence of environmentalism. Associated with figures such as James Lovelock, who developed the "Gaia hypothesis," E. F. Schumacher and Ivan Illich, environmentalism was a response to the oil crisis and the perception that there were structural "limits to growth." The problem was not too little market, as advocated by the neoliberals, but too much. In particular, there was too much unfettered market activity in relation to scarce natural resources.

There was also a change in the morphology of radical activism during this period, coinciding with the decline of the mass party in the wake of the emergence of so-called new social movements. These movements were much more diffuse than mass parties, less ideological, and often very radical. This radicalism expressed itself in terms of a rejection of mainstream political processes in favor of "direct action" or DIY (do-it-yourself) practices.

The era of the "Post–Cold War Order," which began with the fall of the Berlin Wall in 1989, has witnessed an explosion of radicalisms in response to widespread discontent with several new orthodoxies, particularly the "Washington Consensus," associated with the extension of neoliberal policies to many different areas of economic and social activity; the idea of the "clash of civilizations," positing an inevitable conflict between cultures; and the continuing dominance of individualism and consumerism.

In the 1990s an "antiglobalization movement" emerged in response to the neoliberal ideology that had come to prominence. This involved a panoply of radicalisms—some old, some new—all responding to the perceived shortcomings of the free-market policies pursued by global institutions such as the International Monetary Fund (IMF), the World Trade Organization (WTO), and the World Bank. The antiglobalization movement gives witness to one of the more remarked-upon features of the contemporary period, namely the proliferation of radical currents and energies, as opposed to their crystallization within mass parties united by a single ideology. This is not to be mistaken for the "end of ideology," as long lamented by cultural commentators such as Daniel Bell, Herbert Marcuse, and Francis Fukuyama, but rather the proliferation of ideologies, some of which are radical, while others are much less so.

Samuel Huntington's "clash of civilization" thesis is perhaps both a result and a cause of the profusion of cultural and political radicalisms across the world. This is paradoxical in the same sense that globalization is, for while globalization seems to be drawing people closer together, it also renders "local" resistance more intense and radical. Thus, key radicalisms that emerged at the start of the twenty-first century include neoconservatism and Islamic fundamentalism. Both are responses to perceived isolation and cultural embattlement: the former in defense of values associated with the imperiled Greco-Roman civilization; the latter in defense of an ever more literal reading of the Qu'ran. Each faces the other as a defensive response against incorporation into what are perceived to be homogenizing global forces beyond the control of distinct nations and cultures.

More generally, any set of ideas that challenges the supremacy of the free market, of dominant interpretations of ideals such as equality and freedom, or of the idea of the individual as preeminently a consumer will be perceived by the mainstream as "radical." In this sense, there are many sources of radicalism, including religion (and not just Islam). There has also been a rise in the influence of all manner of fundamentalisms, New Age ideas, alternative therapies and perspectives, and postmaterial ideas and ways of living that stress the need to escape from the dominant ethic and values.

FROM MODERN TO POSTMODERN RADICALISM?

In the political sense, radicalism has ceased to express itself on the same terms that marked the radical currents of the twentieth century. Radicalism had one goal during that period: the transformation of the existing world into a world that would, so it was claimed, be markedly better than the one displaced. Today's radicalisms are rarely built from such certainties. Nor are they, in the main, built on the kinds of universalist ambitions that characterized earlier radicalisms. Instead, they are partial, sectional, particularistic, local, and fragmented. Where commentators once lamented the prospect of being engulfed by a singular countervailing radicalism ("totalitarianism"), there are now many radical currents and tendencies—some benign, and others much less so. Orthodoxy, however defined, does not have one rival but many, and radical ideas are often resolutely minoritarian. Ideas, positions, philosophies, and therapies no longer seem to harbor the ambition, once shared by the world-transforming ideologies of modernity, to transform the world itself. What they demand is a space of "difference," a space in which heterodoxy, otherness, and particular identities and positions can stand apart and flourish.

These "postmodern" radicalisms are modest, even parsimonious, in relation to the claims they make for themselves. With the "end of grand narratives," as Lyotard put it, many radical groups and movements have evidently lost or abandoned that sense of certainty that was such a hallmark of the ideologies and movements of the twentieth century. In a world of skeptics, radicalism (as expressed in the ideas of the leftist Zapatistas in Mexico, for example) can only be sustained by thin or partial

affinities and affiliations, by appeals to shared "intuitions" and the desire for "dignity." This is hardly the basis for the kind of mass mobilization hoped for by yesterday's radicals, but it seems to be enough to sustain the radicals and radicalisms of today.

In sum, radicalism is not on the wane or in danger of being made redundant by an overarching conformity to ideas and values, no matter how expressed (as per Fukuyama's "end of history" thesis). Any such view reveals a certain naivety about the role of ideas in history. As this brief overview suggests, mainstream and conventional ideas are always faced by ideas that challenge or undermine them. Indeed it makes little sense to talk about "the mainstream" or "the conventional" without reference to ideas or positions that lie outside them. Radicalism is, in simple terms, the name given to whatever is different, challenging, or otherwise difficult to digest. As such, radicalism is just as much a feature of contemporary life as is the status quo, however defined.

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Simon Tormey

RADIO TALK SHOWS

Radio talk shows can be defined as radio broadcasts centered primarily on conversational speech. They encompass numerous discourse genres and formats, ranging from political diatribes to highly interactive exchanges with members of the listening audience. Many talk shows have hybrid formats featuring music, sound effects, and news interspersed with interviews, debates, social and political commentary, religious exegesis, medical advice, therapeutic discourse, question-and-answer sessions, sports-fan exchanges, and storytelling.

Talk shows are typically hosted by a single radio personality, usually positioned as an expert in some area. Many also feature occasional guests who are interviewed, as well as one or two regular interlocutors who assist the host. Audience participation is usually a major feature of talk radio shows worldwide, with opportunities for listeners to telephone or write to the program host with questions, comments, or music requests, which are then relayed on air. The place of talk radio in non-Western nations parallels the role of talk radio in Western nations, yet it is a relatively new area of exploration that merits more in-depth research.

The social consequences of talk radio are extensive. Three major types of impact can be identified. First, talk radio has far-reaching implications for the nature of the public sphere in modern societies as it creates forums for participatory democracy and the development of public opinion. Second, talk radio influences both everyday discourse and political discourse by providing models of talk and by setting agendas through talk. And third, talk radio has become a major part of everyday life for countless people around the globe as they structure their days around favorite programs and as they develop affective ties to radio personalities.

HISTORY

Talk shows have been a prominent feature of radio since the inception of broadcasting in Western nations in the 1920s and in non-Western contexts from the 1940s onward. Early examples include Alexander Woolcott's (1887–1943) urbane commentary on New York's WOR in the 1920s and Walter Winchell's (1897–1972) political gossip program on NBC in the 1930s. More interactive formats emerged in the 1930s, first with *vox populi* "man on the street" interviews being taped and then later relayed on air, and then with radio "town hall meetings," which featured live broadcasts of studio audiences discussing current events. Such formats were also introduced in colonial broadcasting in Africa as early as the late 1940s. In the United States, radio call-in programs began in the mid-1940s. Precursors of talk radio formats and functions include public traditions such as town hall meetings, and gathering places such as literary circles, coffee houses, village squares, and beer gardens, as well as mass entertainment forms, such as vaudeville and circus sideshows.

Between the early 1980s and the mid-1990s, the number of radio stations in the United States featuring

talk radio quadrupled. By the mid-1990s, talk radio ranked as the second most popular radio format in the United States, with country music being the first. The dramatic rise of talk radio during this period is attributed to several factors, including a general collapse of public life in the United States, coupled with an increased predictability and absence of personality in FM radio programming. Some scholars have argued that Americans found themselves increasingly isolated and thus turned to talk radio as a way to be connected to community and to others. Similar arguments have been made about talk radio in other parts of the world, such as England and Israel.

During the 1980s, certain AM stations as well as National Public Radio (NPR) strategized to "reactivate attentive listening" (Douglas 1999, p. 286) through less predictable formats, more chatty ad-libbing, and greater emphasis on sound effects and voice qualities. Further contributing factors to the prevalence and popularity of talk radio at the end of the twentieth century include the increased facility of national broadcasting afforded by satellite technology and the increased facility of audience interactivity afforded by cell phones. A final factor relatively unnoticed by scholarship is the fact that countless radio listeners are engaged in lengthy commutes to and from work. Morning "drive time" talk radio formats as well as evening news magazines fit into these lifestyle patterns and relieve the boredom and isolation of commuting for long periods every day.

CONTEMPORARY TRENDS

Approximately 80 percent of all U.S. radio stations include some form of talk radio in their programming. Many stations, such as NBC's Talknet, ABC's Talkradio Network, and Air America Radio, are exclusively devoted to round-the-clock live talk programming. NPR also features a substantial number of entertaining and informative talk programs, such as *All Things Considered, Talk of the Nation, Car Talk*, and *A Prairie Home Companion*.

While the genre of talk radio might be best known for its strong language, irreverence, and polarizing discourse, encapsulated in the persona of the *shock jock*, the majority of talk radio programs worldwide do not adhere to this model. Examples of the former in the United States include broadcasters Howard Stern, Rush Limbaugh, and Don Imus. As with many shock jocks, these individuals and their stations have been subject to investigations by the Federal Communications Commission (FCC), a governmental regulatory body, and some have received fines and suspensions for pushing the limits of respectability on the airwaves.

By contrast, most of the world's talk show hosts, including those in the United States, are models of respectability. They work to build community, air common concerns, solve problems, and develop better futures for their listeners. In many African nations, for example, talk radio programs play a significant role in informing people about electoral processes, debating political issues, and allowing citizens to air their views. One dramatic case of talk radio in the service of democracy in Africa is exemplified by the *Talk Mogadishu* program on Somalia's station, HornAfrik. On this program, listeners from different parts of the city call in to update each other on events across the chaotic, war-torn city landscape. In addition, they pose pointed questions to rival warlords who appear as program guests. Other examples include the popular talk shows on Zambia's national radio station. Two Bemba-language programs, *Baanacimbuusa* (Women Advisors) and *Kabuusha Takolelwe Boowa* (a proverb meaning "the inquirer was not poisoned by a mushroom"), are inspired directly by indigenous modes of advising. In the former, the host introduces a topic concerning family and marriage, which a panel of elder women then discusses. In some cases, the topic is developed from a listener's letter. In the *Kabuusha* program, an expert advisor answers listeners' letters on a variety of subjects, including corrupt politicians, adulterous spouses, in-laws who demand more marriage payments, and employers who exploit their workers.

In their capacity as important avenues for influencing public opinion and voting behavior, talk radio programs have attracted the attention of politicians in numerous contexts worldwide. In the United States, for example, talk radio contributed to a coordinated popular protest against a proposed congressional pay raise in 1989. It continues to be a vital influence on the tenor of presidential campaigns, cabinet and Supreme Court nomination hearings, and the reception of government policies in general. In contexts where there is less media freedom, political radio talk show hosts often risk charges of sedition, physical threat, or forced exile, as recent cases from Uganda and Haiti attest.

CRITICISMS, CONCERNS, AND PROSPECTS

Critics of talk radio describe it as a debased form of journalism and public discourse. Their concern is that personal opinions and private experiences are emphasized over relevant facts and information. Listeners are thus not enlightened in ways that allow them to develop informed opinions. In this analysis, talk radio is not about citizenship or participatory democracy, but about sensationalism and ratings. Other criticisms include an assessment that hosts with call-in programs simulate a model of authentic dialogue, but in reality are engaged in a complex form of social control and norm making. These criticisms are well

founded when applied to certain forms of talk radio, particularly the shock jock genres, but detract from the fact that a multiplicity of talk radio genres also work to foster positive social change, personal growth, and enjoyable listening experiences among audiences.

Talk radio will continue to be a vibrant and multifaceted hybrid genre well into the future. The recent emergence of Internet radio and Internet telephoning is already yielding many more possibilities for talk radio formats and talk radio communities, including global talk radio. Coupled with the rise of other participatory and audience-produced media such as blogs and wikis, talk radio will continue to be a media form that allows audiences to "be the media" and thus have an impact on the tenor of political life and communication environments more generally. From ice hockey fan exchanges to dialogues on compassion in Zen Buddhism, talk radio provides an important area of scholarly inquiry as it touches on virtually every field of the social sciences, including media studies, cultural studies, anthropology, sociolinguistics, social psychology, and political science.

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Debra Spitulnik

RAILWAY INDUSTRY

A railway industry is a group of companies that transport goods (freight) or individuals (passengers) by railcars from one place to another. Locomotives pull or push railcars (containing freight or passengers) over rail tracks. Railways enhance the access consumer and resource markets have to goods and individuals, which in turn contributes to economic development and rising land values, and influences industry locations.

Even before the advent of locomotives, horse-drawn railcars (or tramways) were an improvement over other means of land transportation—the resistance encountered by a wheeled vehicle traveling over smooth rails is less than with non-smooth roadways. By the late eighteenth century, tramways were commonly used in the United Kingdom for transporting coal. The first tramway in the United States appeared in Boston in 1807. Experiments with steam-driven rail locomotives began in the 1820s. By the middle of the nineteenth century, steam locomotives had made the railway industry the world's dominant provider of land transportation. Steam locomotives, in turn, were subsequently replaced by diesel locomotives.

Freight railway companies are primarily transporters of bulk commodities (such as coal, chemicals, and grain) over relatively long distances. By comparison, trucking companies are transporters of manufactured commodities over relatively short distances. In the United States, railway companies generally incur less cost than trucking companies in transporting goods at a distance of five hundred or more miles. Passenger railway companies provide intercity transportation service, moving individuals from one city to another. Rail service for passengers traveling within a city or to and from a city and its suburbs is provided by urban transit companies.

Governments in many countries have assisted in the early expansion of the railway industry. Forms of government assistance include government ownership, outright donations, tax exemptions, and loans. This assistance stimulated railway construction and, in turn, economic development. At the same time, many projects were undertaken that were not economically justified, resulting in an overexpansion of the railway network.

Cheap labor also stimulated the early growth of the railway industry. Chinese laborers were hired by the Central Pacific Railroad Company in 1863 to build a section of the U.S. transcontinental railroad over the Sierras and into the interior plains. They worked for meager wages through harsh winters and under dangerous working conditions. Convicts and slaves also built railways in the United States and in other countries.

Eric Williams (1944) has argued that, because the African slave trade was instrumental in U.S. and British economic development, it indirectly stimulated the expansion of railway networks in the United States and Britain. This claim was countered by Stanley L. Engerman (1972) through what is called the "small ratios" argument, which maintains that slave-trade profits were too small to stimulate British industrialization. In response to Engerman, William Darity Jr. (1990) argues that there are several growth and trade theories supporting a prominent

role for the African slave trade in British industrialization that cannot be dismissed or disproven by the small ratios argument.

An earlier application of the small ratios argument by Robert Fogel (1964) focused on the economic history of the railway sector itself. As part of his development of an overarching hypothetical picture of American economic growth without a transport revolution, Fogel sought to demonstrate that the revenues generated by the railway system as a percentage of gross domestic product were too low to have been decisively important. But Fogel's argument is subject to the same response that has been given to Engerman's attempted refutation of the Williams hypothesis: While it is true that the revenues or profits of any single sector as a percentage of total national income generally will look "small," the critical consideration is the full impact of the sector via its linkages with numerous other productive sectors forming the economy.

To protect the public against monopoly-related abuses, railway companies were often economically regulated by government. In the United States, for example, the 1887 Interstate Commerce Act established the Interstate Commerce Commission (ICC) to economically regulate interstate railway transportation service. Economic regulation of railways may include rate/fare regulation, entry regulation, service regulation, and financial regulation. Rates (prices for freight service) and fares (prices for passenger service) charged and entry into the industry are subject to approval by the regulatory commission. Freight and passengers are to be delivered in the same physical condition as received. Various financial aspects of the railway industry, such as mergers and accounting systems, are also regulated.

Government assistance and regulation aimed at economic development and protection of the public interest may also restrict competition. In the United States, restrictions on "intermodal" competition (i.e., between two modes of transportation, such as railways and trucking) have contributed to a decline in the U.S. railway industry, exhibited by a decrease in industry market share and return on investment. In 1945, 67.2 percent of the U.S. domestic intercity freight traffic (in ton-miles) was transported by railways and 6.5 percent by truck; by 1975, 36.7 percent was transported by rail and 22 percent by truck. The rate of return on net investment for U.S. Class I (the largest) railroads was 4.7 percent in 1944, but declined to 1.2 percent in 1975. Regulation suppressed intermodal price competition and the abandonment of excess track capacity.

In the 1970s the U.S. Congress responded to the decline in the railway industry by creating Amtrak (the National Railroad Passenger Corporation) to take over all rail passenger-service lines over seventy-five miles in length, and Conrail (a government corporation), to operate the freight service of seven major Northeast railways in bankruptcy. The Staggers Act of 1980 partially deregulated the industry by providing railway companies with greater opportunities to compete and thus reverse the industry's decline. Specifically, the Act provided greater pricing freedom and reduced the time permitted for the ICC to make merger and track-abandonment decisions.

The U.S. railway industry, its shareholders, and most shippers have benefited from deregulation—the industry's share of intercity freight traffic (in ton-miles) increased to 41.7 percent by 2001, the rate of return on net investment for Class I railroads increased to 6.1 percent by 2004, and real railway prices (adjusted for inflation) have declined. On the other hand, labor has been harmed. In 1975 the industry had 548,000 (488,000 Class I) employees; by 2004 the number had declined to 226,000 (158,000 Class I) employees. These job losses are attributed to industry restructuring and the increased use of technology.

The United Kingdom has sought to promote competition in its railway industry by privatizing the government-owned British Railways (BR) through passage of the Railways Act of 1993. The ownership and control of infrastructure were separated from train operation. Infrastructure was placed under the control of a new government company, Railtrack, in 1994, but in 1996 BR's freight-train operations (including rolling stock) were split into six companies and sold to the private sector. Passenger train operations were not sold, but were franchised to twenty-five private-sector train-operating companies. Under privatization, however, government subsidization of the railway industry has more than tripled, due to subsidies to passenger franchises and to Network Rail, the company that replaced the collapsed Railtrack. The numerous private freight-operators that have entered the market have resulted in more competitive freight operations. The four remaining freight-operators are profitable.

The European Commission (EC) is seeking to liberalize the national railways of its European Union member-states by creating a single market for rail transport through the removal of barriers to cross-border freight and passenger rail traffic. Specifically, the EC is seeking to separate the control of rail infrastructure from operations, to eliminate physical differences among national railways (e.g., with respect to signaling, electrification, and operating rules), and to open the market up to competition. The entry of numerous private freight operators into the market has forced the national railways to become competitive.

An important challenge facing railways in many countries is to provide enough capacity to keep pace with the growth in world trade. The volume of ocean-container shipments is growing worldwide at the rate of 9 percent

per year, thereby overburdening the infrastructure of railways that transport containerized cargo to and from ports (i.e., railways engaged in intermodal traffic). Today, the largest share of the cargo mix for U.S. railroads is intermodal cargo. In Canada, a shortage of intermodal rail cars has resulted in congestion (or traffic delays) at a number of its ports. Intermodal rail service in China has numerous problems, such as lateness and cargo damage.

SEE ALSO *Immigrants, Asian; Industry; Servitude; Slavery; Transportation Industry*

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Wayne K. Talley

RAINBOW/PUSH COALITION

SEE *Coalition.*

RAJ, THE

The *Raj*, a Hindi word meaning "rule," is the epithet most closely associated with British rule of the Indian subcontinent. While the English East India Company (EIC) had been present in South Asia from the early seventeenth century, formal British rule began in 1757. The British finally left the subcontinent in 1947, ceding independence to the new states of India and Pakistan on August 14/15. The latter included Bangladesh as East Pakistan, which gained independence in 1971. The period of the Raj covers two hundred years of South Asian history and is one of the most important episodes of colonialism in modern history.

THE EAST INDIA COMPANY (1757–1858)

The origins of British rule of South Asia lay in the founding of the English East India Company (EIC) in 1600. The company's participation in the lucrative spice trade led it to establish trading posts first at Surat on the Gujarati coast and later at Bombay, Madras, and Calcutta. By the mid-eighteenth century, competition with the French drew the British into the South Asian political scene through alliances with local powers. Political instability following the disintegration of Mughal authority enabled the EIC to transform from a mere trading interest to a territorial ruler. The company exercised power indirectly through local allies and rulers, setting a precedent followed up to 1947.

The indirect exercise of control contributed to the hybridity of EIC governance. An English trading company driven by European ideas of economy as well as European norms and practices of political authority, the EIC was also a participant in the South Asian political universe, asserting its credentials as a successor state to the Mughal empire. It continued to transact the business of government through local allies, according to local custom and in local languages. The company made an extensive effort to codify indigenous law and practice. Yet this effort to preserve and participate in Indian "traditions" fundamentally transformed them. The EIC became the ultimate arbiter of what constituted tradition, and its codification turned previously fluid arrangements of social interaction into rigid systems of social classification. Throughout its reign, the debate as to whether the company's role was to transform Indian society or to preserve Indian tradition continued unabated.

THE GOVERNMENT OF INDIA (1858–1947)

Company rule ended with the abolition of the East India Company in 1858 in the wake of the Indian rebellion, more commonly known as the Indian Mutiny. The revolt convinced the British that their efforts at reform of Indian society had been dangerously miscalculated. Consequently the Government of India (GoI) understood its role in an extremely conservative light. India was to be governed for the benefit of the British metropole as cheaply as possible. The GoI's mission was thus to preserve stability and control, largely through a strategy of "divide and rule." Government was to be exercised

through a collaborative elite responsible for the implementation of government policy in the locality.

The emergence of a national political discourse in the late 1800s came about against the wishes of the GoI, but on a stage prepared by it. Only in a society penetrated by contemporary European ideas of nationalism and tied together by modern communication and transportation technologies could the conceptualization of an "Indian" political community emerge. That conceptualization was dominated by the all-India Congress, initially a vehicle for the collaborative elite to advocate their interests. By the turn of the century however, Congress began to transform itself from a party of collaborators to a party advocating home rule (*swaraj*) and eventually independence. During the First World War, Indian nationalists promised their support in exchange for guarantees of postwar political movement. They were bitterly disappointed as the expected peace dividends dissolved in the face of a reassertion of imperial control. The 1920s witnessed the transformation of the Congress and Indian nationalism into a mass political movement. This change was largely engineered by Mohandas Gandhi (1869–1948), who organized mass campaigns of civil disobedience built upon a cross-communal political platform of Indian nationalism. Gandhi's efforts redefined the bounds of India's public political space, including parts of society, such as women and so-called untouchables (*dalits*), previously excluded from political participation. Yet local elites proved wary of the perceived peasantization of politics and the erosion of their autonomy by the nationalist cause.

The preeminence of Indian nationalist discourse was threatened by communalist politics, progressively more prominent from the late nineteenth century. India's formerly plural religious traditions became increasingly standardized, hardening the boundaries between them. The Anglo-Indian judiciary arguably played the primary role in the standardization of the diverse traditions of India's various communities, in turn leading to the solidification of communal borders. As the colonial state became more involved in civic disputes through the course of the nineteenth century, it increasingly usurped the spaces formerly regulated by communal "tradition" and "custom." Faced with an array of competing and often contradictory customs, the judiciary established the parameters of what constituted judicially recognized, and therefore state-sanctioned, "tradition." The judicial establishment of tradition was followed by its codification by the colonial executive, such as in the Hindu and Muslim law code bills, which created corpuses of standard communal private law. These traditions thus transformed into central tenets of exclusivist communal identities, which in turn became politicized through their patronage by the colonial state. Rather than the state enforcement of uniformity, so often central to the construction of the modern state, colonial authorities codified and enforced difference.

The Raj reinforced this difference through the categorization of its subjects in the decennial census, where it denominated people into religiously based communities to which it then dispensed entitlements. The most important manifestation of this communally centered politics in the formal, state-regulated arena was the creation and extension of separate electorates. Muslims, Christians, and Anglo-Indians were granted separate electoral lists in which candidates and eligible voters were restricted to members of these denominated communities. The Morley-Minto reforms of 1909 first made widespread use of separate electorates, which were significantly extended by the Montague-Chelmsford reforms of 1919 and the 1935 Act on the basis of the 1932 Communal Award. GoI leaders' official rationale for the use of separate electorates was twofold. First, they sought to deny Indian nationalists an outright majority in the formal structures of government, which they feared open elections would ensure them. Second, the Government believed that by granting Muslims separate electorates where they would be electoral minorities in all but two of the provinces of British India (Bengal and the Punjab) they would be forced to look to the Raj as their protector, thus more firmly tying Muslim fortunes to those of the British. The British believed that because separate electorates would fracture the formal spaces of governance they surrendered to Indians, native politicians would be forced to work on the basis of cross-communal alliances. This course would therefore have a moderating influence on communal politics, which would reward the collaborative, conservative elites on whom British authority largely depended.

The colonial state's enumeration of people along confessional lines was only one of the ways in which it categorized people. It also enumerated people according to their caste affiliation, specifying their *varna* as well as *jati*. The colonial state used these categories to create communal rights and entitlements as well as to facilitate communal punishments. Untouchables, also known as "backward" or "scheduled caste," mainly suffered social discrimination widespread throughout the subcontinent, while the "criminal tribes" were the objects of penal state regulation. Whereas the separate enumeration of the former by the Raj was partly an attempt to ameliorate their low social position through special state dispensation, the latter was purely a punitive construction of the colonial state creating categories of "group" criminality. Yet the consequences of categorization varied widely throughout India, with members of the "same" community experiencing differential treatment in the various regions of British India as well as in the princely states. The legal positions of both the untouchables and tribals were transformed

with the advent of independence, when these groups were granted comparatively extensive political entitlements and reservations. The use of communal patronage and punishment as a strategy of governance imprinted a lasting legacy on Indian politics.

By the end of the First World War, British governing circles reached a consensus that India would eventually have to be granted independence. However, no time line for such a move was agreed upon. Their actions during the interwar period were designed to more firmly embed British rule. The Raj endeavored to undermine the appeal of all-Indian nationalists through the inclusion of Indian elites in local elected assemblies. Yet as the GoI invested localities with governmental responsibilities, it tightened its grip on key areas of governance it considered essential to its paramountcy—defense, communications, and foreign affairs. The British sought to fracture Indian political opinion further through the use and extension of separate electorates for "minorities" within the newly elected assemblies. By channeling state-recognized political power through communal identity, separate electorates had dire consequences for the Indian body politic.

By 1945 the once far-off potentiality of Indian independence had become an imminent reality. The cost of the Second World War, Britain's early defeats by the Japanese, and the force of Indian nationalism combined to shatter the myth of the Raj's invincibility. The most extreme anti-British nationalists found expression during the war under the leadership of Subhas Chandra Bose, former president of the Congress, in his Indian National Army (INA) set up under the tutelage and ultimate control of the Japanese. The campaigns against the Japanese and their INA auxiliaries in Burma from 1942 onward had a lasting psychological effect on the Raj. More powerfully however, the activities of mainstream Indian nationalists, culminating in the Quit India movement of 1942, underlined the Raj's moral and political bankruptcy and also laid bare the costs and limits of what force could achieve. The memory of the wartime experiences of Indian nationalism weighed heavily on the minds of British policy makers as they looked to their future in the subcontinent, forcing an acknowledgment that the local collaborationist politics that had been the foundation of authority during the interwar period no longer served the realities of a postwar world. Opting for a quick exit, the British negotiated the transfer of power with India's nationalist politicians, represented by Congress and the All-India Muslim League. Congress, proponent of a strong center, jockeyed with the League, which claimed to exclusively represent India's Muslims and advocated a federal outcome, to author India's independent future. Under pressure to leave and recognizing the League's weakness, the British decided on Congress. Their withdrawal led to the independence and partition of the Indian subcontinent into the successor states of Pakistan and India. Partition was accompanied by horrendous communal violence and resulted in the largest forced migration in recorded history. After nearly two hundred years, the Raj succumbed to a bloody and ignominious end.

In the early twenty-first century the memory of the Raj remains contested. In the immediate aftermath of independence, nationalists attempted to minimize the legacy of the Raj and largely expunge it as a historical aberration in the Subcontinent's history. A nationalist tradition of historiography buttressed popular perceptions of the Raj as an episode of exploitation that was eventually defeated by the strength of the Indian freedom struggle. This image remains firmly fixed in the public imaginations not only of India and Pakistan but also to a significant extent of Britain as well. Nostalgia for the Raj, however, has continued to be a subtle but powerful countercurrent. The belief in the ultimate munificence of the Raj, held by a few intransigent imperialists and their collaborators, has morphed into a more muted romantic reminiscence. The experience of rule is projected through the memory of those who wielded authority, such as the families of imperial administrators, as days of order, innocence, and benevolence. The juxtaposition of "Raj nostalgia" with a narrative nationalist "freedom struggle" underlines the depth of the experience linking South Asia and Britain. Just as the experience of the Raj had a diverse array of expressions, so too does its memory.

SEE ALSO *Colonialism*

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B. D. Hopkins

RAND, AYN

SEE *Objectivism.*

RANDOLPH, A. PHILIP

SEE *Pullman Porters.*

RANDOM EFFECTS

SEE *General Linear Model.*

RANDOM EFFECTS REGRESSION

The random effects estimator is applicable in the context of panel data—that is, data comprising observations on two or more "units" or "groups" (e.g., persons, firms, countries) in two or more time periods. The simplest regression model for such data is pooled Ordinary Least Squares (OLS), the specification for which may be written as

$$y_{it} = X_{it}\beta + u_{it} \qquad (1)$$

where y_{it} is the observation on the dependent variable for cross-sectional unit i in period t, X_{it} is a $1 \times k$ vector of independent variables observed for unit i in period t, β is a $k \times 1$ vector of parameters, and u_{it} is an error or disturbance term specific to unit i in period t.

One of the assumptions required in order that OLS is optimal is that the error term is independently and identically distributed (IID). In the panel context, the IID assumption means that $E(u_{it}^2)$, in relation to equation (1), equals a constant, σ_u^2, for all i and t, whereas the covariance $E(u_{is}u_{it})$ equals zero for all $s \neq t$, and the covariance $E(u_{jt}u_{it})$ equals zero for all $j \neq i$.

This may be inappropriate in a panel data context, because it amounts to saying that y_{it} is no more different from y_{jt} than it is from y_{is}. That is, observations from the same individual at a different time are just as independent from y_{it} as those coming from different individuals. Because this assumption is hard to maintain in many situations, the probabilistic model is often taken to be

$$y_{it} = X_{it}\beta + v_i + \varepsilon_{it}, \qquad (2)$$

where we decompose u_{it} into a unit-specific and time-invariant component, v_i, and an observation-specific error, ε_{it}.

The fixed-effects and random-effects models differ in their interpretations of the v_i term: In the fixed-effects model, the v_is are treated as fixed parameters (unit-specific y-intercepts); in the random-effects model, in contrast, they are treated as random drawings from a given probability distribution.

In the fixed-effects approach, we merely acknowledge that differences between individuals exist. Therefore, the parameter β can be estimated by including a dummy variable for each cross-sectional unit and suppressing the global constant. If, however, we are willing to go the extra step of modeling the v_i, greater efficiency may be attained by using Generalized Least Squares (GLS), taking into account the structure of the error term. This is the random effects approach (for an early and influential example of this, see Balestra and Nerlove 1966).

Consider observations on a given unit i at two times s and t. From the hypotheses above, it follows that $\mathrm{Var}(u_{is}) = \mathrm{Var}(u_{it}) = \sigma_v^2 + \sigma_\varepsilon^2$, whereas between u_{is} and u_{it} is $E(u_{is}u_{it}) = \sigma_v^2$. In matrix notation, we may group the T_i observations for unit i into the vector y_i and write

$$y_i = \mathrm{X}_i\beta + \mathrm{u}_i \qquad (3)$$

The vector u_i, which includes all the disturbances for i, has covariance matrix

$$\mathrm{Var}(\mathrm{u}_i) = \sum\nolimits_i = \sigma_\varepsilon^2 I + \sigma_v^2 J \qquad (4)$$

where J is a square matrix with all elements equal to 1. It can be shown that the matrix

$$K_i = I - \frac{\theta}{T_i} J,$$

where $\theta = 1 - \sqrt{\dfrac{\sigma_\varepsilon^2}{\sigma_\varepsilon^2 + T_i\sigma_v^2}}$ has the property

$$K_i \Sigma_i K'_i = \sigma_\varepsilon^2 I$$

It follows that the transformed system

$$K_i y_i = K_i \mathrm{X}_i \beta_i + K_i \mathrm{u}_i \qquad (5)$$

satisfies the Gauss-Markov conditions, and OLS estimation of (5) provides efficient inference. But because

$$K_i y_i = y_i - \theta \bar{y}_i$$

GLS estimation is equivalent to OLS using "quasi-demeaned" data—that is, variables from which we subtract a fraction θ of their average. Notice that for $\sigma_\varepsilon^2 \to 0$, $\theta \to 1$, whereas for $\sigma_v^2 \to 0$, $\theta \to 0$. If all the variance is attributable to the individual effects, the fixed-effects estimator is optimal; if, instead, individual effects are negligible, then pooled OLS is optimal.

To implement GLS we need to calculate θ, which in turn requires estimates of the variances σ_{ε}^2 and σ_{v}^2. (These are often referred to as the "within" and "between" variances, respectively, because the former refers to variation within each cross-sectional unit and the latter to variation between the units). Several means of estimating these magnitudes have been suggested in the literature (see Baltagi 2005).

The above derivation presupposes that the ε_{it} term is IID. Departures from this assumption (e.g., heteroskedasticity) have been analyzed, leading to a sizable body of literature (see, for example, Baltagi 2005 and Arellano 2003).

When is the random effects estimator preferable to fixed effects? If the panel comprises observations on a fixed and relatively small set of units of interest (for example, the member states of the European Union), there is a presumption in favor of fixed effects, because it makes little sense to consider the v_i terms as sampled from an underlying population: In the case of the European Union states, the sample and the population coincide, and even a thought experiment in which the units are different would be audacious. If, instead, the sample comprises observations on a large number of randomly selected individuals (as in many epidemiological and other longitudinal studies), there is a presumption in favor of random effects. Besides this general heuristic, however, certain statistical issues must be taken into account.

First, some panel data sets contain variables whose values are specific to the cross-sectional unit but which do not vary over time (for example, the gender of an individual). If such variables are to be included in the model, the fixed-effects option is simply not available. (When the fixed-effects model is implemented using the dummy variables approach, the trouble is that any time-invariant variables are perfectly collinear with the unit dummies.) Second, the random-effects estimator can be shown to be a matrix-weighted average of pooled OLS and the "between" estimator (a regression using the group means, and hence ignoring the intragroup variation). Suppose we have observations on m units and there are k independent variables of interest. If $k > m$, the "between" estimator is undefined—we have only m effective observations—and hence so is the random-effects estimator.

If one does not fall foul of one or other of these issues, the choice between fixed effects and random effects may be expressed as a tradeoff between robustness and efficiency.

The robustness of the fixed-effects approach stems from the fact that it makes no hypotheses regarding the differences in mean across the units, except that such differences exist. This estimator "always works," but at the cost of not being able to estimate the effect of time-invariant regressors.

The richer hypothesis set of the random-effects estimator allows for estimation of the parameters for time-invariant regressors, and ensures that estimation of the parameters for time-varying regressors is performed more efficiently. But these advantages are tied to the validity of the additional hypotheses. If the individual effects are correlated with some of the explanatory variables, then the random-effects estimator is inconsistent, whereas fixed-effects estimates are still valid. It is on this principle that the "Hausman test" (Hausman 1978) is built: If the fixed- and random-effects estimates agree, to within the usual statistical margin of error, then there is no reason to believe the additional hypotheses are invalid, and as a consequence, no reason *not* to use the more efficient random-effects estimator.

SEE ALSO *Regression*

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RANDOM SAMPLES

A teacher has four students who have done well in their homework, and she wants to reward them by assigning them a special task that they enjoy. The problem is that the task requires only two students. What is a "fair" way to choose the two students who receive the reward? When this question is posed to the students themselves, they are quite likely to say something like, "Put the four names on individual slips of paper in a box, mix them up, and have someone draw out two names, sight unseen."

The students are describing a *random sample* of two names from the four. Labeling the names as *A, B, C*, and *D*, the six possible samples of size two are (*A,B*), (*A,C*), (*A,D*), (*B,C*), (*B,D*), and (*C,D*). Because there is no reason to suspect that one sample is any more likely than another, the appropriate probability model for this ran-

dom sampling assigns each of the six a probability of 1/6. This leads to a definition of a *simple random sample* for the general case in which n names are selected from the N names in the box, generally called the *population*. A simple random sample of n objects selected from a population of N distinct objects is a sample chosen so that all possible samples of size n have an equal chance of being selected.

It follows from basic rules of probability that the probability that person A gets selected, written $P(A)$, is given by $P(A) = 1/2$; because three of the six equally likely samples have A in them. For the general case, the probability of any one object ending up in the sample is n/N. Thus the definition implies that, in simple random sampling, each individual has the same chance of being selected as any other individual. The reverse statement is not true, however. A method of sampling that gives each individual the same chance of being selected is not necessarily a simple random sample. For example, suppose A and B are male and C and D are female. Then selecting one male at random and one female at random gives each person the same chance (1/2) of being selected, but no sample would ever contain two boys or two girls.

If N and n were large, the process of physically drawing names from a box would be impractical if not impossible. Most often simple random samples are selected by a process that essentially numbers each of the N objects and then generates n random numbers between 1 and N by means of a calculator or computer, selecting as the sample those objects whose numbers were so generated.

SAMPLING WITHOUT AND WITH REPLACEMENT

The sampling scheme described above is referred to as *sampling without replacement*. Drawing the two names is mathematically the same as drawing one name at random and then drawing a second name from those that remain in the box. Using basic rules of probability, it follows that

P (selecting A and then selecting B)
= P (A on first draw) · P (B on second draw given that A is already selected)
= (1/4)(1/3) = 1/12.

To get the probability of the sample (A,B) this has to be doubled, because B could have been selected first and A second. Thus $P(A,B) = 1/6$, as shown above.

Suppose, however, that the two students receiving the reward could perform the task separately and at different times, so the same person could be selected twice. This could be accomplished by selecting one name at random, placing that name back in the box, and selecting the second name at random from the same set of four names. Under this scheme of *sampling with replacement*,

P (selecting A and then selecting B)
= P (A on first draw) · P (B on second draw given that A is already selected)
= (1/4)(1/4) = 1/16.

Because the probability of selecting B after A is the same as the probability of selecting B on the fist draw, the events "select A" and "select B" are said to be *independent*. Under independence (sampling with replacement), the probability of selecting two specific students changed from that of sampling without replacement. Suppose, however, that N were 40,000 instead of 4. Then removing one object would not appreciably change the probability on the second draw, and the counterparts of the two probabilities displayed above would be practically equal.

This fact leads to a second definition of a random sample, one based on independence. A random sample of size n is a set of n objects selected independently and at random from the same set of N objects.

If N is large compared to n, the second definition results in a probability structure for the sample that is approximately the same as that of the first definition. Moreover the second definition makes the statistical theory of sampling much easier to work out. That fact, coupled with the fact that the most common uses of random sampling, sample surveys and opinion polls generally involve large populations, makes the second definition more useful in practice.

Populations have been discussed thus far as if they were well-defined entities that the sampler could actually see or list. Consider a classical die toss using a balanced die. The population of possible outcomes of die tosses is infinite and conceptual, but it can readily be modeled as if the possible outcomes, 1 through 6, were represented in equal numbers because it seems logical to think of each possible outcome as having probability 1/6. Using the second definition then, a set of n outcomes generated from independent tosses of a balanced die can be considered as a random sample, each outcome being randomly (through the tossing) and independently (assuming the second toss is not influenced by the first) selected from this large, conceptual population.

RANDOM SAMPLING AND STATISTICAL INFERENCE

Random sampling forms the probabilistic basis for statistical inference. Consider the common opinion poll in which n people are randomly sampled from a large population of N people. Because N is usually large, the inde-

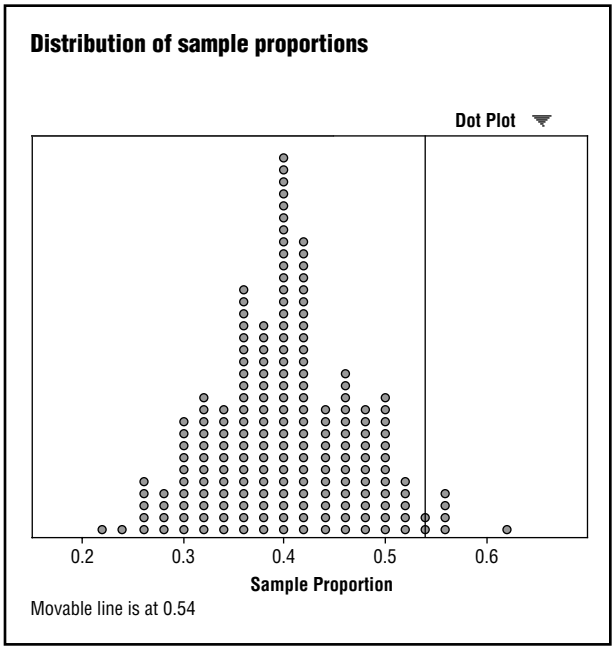

Figure 1.

pendence model provides a good approximation, even though the samples are selected without replacement. The goal of such a poll is to estimate a population proportion, p, such as the proportion of voters that favor a certain candidate. The estimate of p is the corresponding sample proportion, often designated by $\hat{p}$, of voters in the sample who favor the candidate. Due to the random sampling and the mathematics of probability, many facts can be established with regard to $\hat{p}$. If n is large, $\hat{p}$ has a small chance of being "far" from the true p it is estimating. In fact $\hat{p}$ will be within a distance of approximately $1/\sqrt{n}$ from p about 95 percent of the time in repeated sampling. (This is why a poll of 1,000 persons is said to have a *margin of error* of about 3 percent.) If a poll is done many times, it will give results close to p most of the time but can miss by a large amount on occasion (about 5 percent of the time).

The facts stated above are related the result that the values of $\hat{p}$ will have an approximately normal distribution (mound-shaped symmetric distribution) when random samples of the same size are taken repeatedly from the same population. The figure below shows a simulated distribution of 200 $\hat{p}$ values for samples of size 50 taken for a population with $p = 0.40$. The theoretical margin of error is approximately $1/\sqrt{50} = 0.14$, indicating that a $\hat{p}$ of 0.54 or more would be an extremely rare occurrence. Such an outcome occurred only 7 times out of 200 in this simulation (see figure 1).

THEORY VERSUS PRACTICE

All of the above presents a neat theory of random sampling, but obtaining a truly random sample in practice is nearly impossible for most sampling situations. Consider the relatively simple situation of selecting a sample of students from a college. First, the population to be sampled needs a clear definition (but what constitutes a student?). Second, a list of students will be needed (but this changes almost every day). Third, even with a good definition and a good list, the sampled students may not be able to be found or, if found, may not be willing to respond (or respond correctly) to a survey. These three concerns, population definition, population dynamics, and nonresponse, cover many of the practical difficulties that occur in nearly all sampling problems. They are compounded with others in surveys of subjects who are hard to find anyway, such as victims of war atrocities. In many situations the difficulties can be mitigated by a more complex sampling design, the most common features of which involve stratification (divide the population into nonoverlapping but relatively large groups and take a random sample from each) and clustering (divide the population into many relatively small nonoverlapping groups and take a random sample of the groups). A national survey that selects respondents by state is an example of stratification. A city survey that samples city blocks, rather than households, and then interviews someone in each household in every sampled block is an example of clustering.

SEE ALSO *Central Limit Theorem; Probability; Research, Survey; Sample Attrition; Sampling; Survey*

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RANDOM WALK

A *random walk* is one in which future steps or directions cannot be predicted on the basis of past actions. When the term is applied to the stock market, it means that short-run changes in stock prices cannot be predicted: Investment advisory services, earnings predictions, and complicated chart patterns are useless to the investor.

ORIGINS AND RATIONALES

The application of the random walk hypothesis to stock prices usually is associated with Samuelson (1965), although the general idea that security prices change randomly goes back at least to the time of Bachelier (1900). The basic rationale for the hypothesis is that securities markets are very efficient at digesting information. When information arises about a particular security or about the market in general, the news spreads quickly and is incorporated into the price of that security without delay. Armies of investment managers pounce on any news that could affect the value of a security. By their trading, they ensure that security prices fully reflect all available information. As a result it is not possible to make profitable trades on the basis of that information because any potential profit will have been realized already. Changes in the prices of securities will be random and unpredictable.

The random walk hypothesis does not imply that movements in security prices are erratic or capricious. However, tomorrow's price change in securities markets will reflect only tomorrow's "news" and will be independent of the price change today. True news by definition is unpredictable, and thus the resulting price change also must be unpredictable and random.

The term *random walk* usually is used loosely in the finance literature to characterize a price series in which all subsequent price changes represent random departures from previous prices. Thus, changes in price essentially are not related to past price changes. It is believed that the term was used first in an exchange of correspondence in *Nature* in 1905. The subject was the optimal search procedure for finding a drunk who had been left in the middle of a field. The solution was simply to start where the drunk had been left. That point provides the best unbiased estimate of the drunk's future position because presumably he will have staggered along in an unpredictable and random fashion.

If stock price movements approximate those of a random walk, technical analysis (the making and interpretation of stock charts to divine the future) is unlikely to offer investors a guide to making above-average profits. Moreover, trading strategies that seek to buy and sell stocks on the basis of charting signals will not help investors outperform a simple buy-and-hold strategy.

Considerable statistical work has supported the random walk hypothesis. Changes in stock prices from day to day are essentially uncorrelated, and news seems to be reflected in the prices of securities without delay. Although markets sometimes overreact to news, they underreact at other times. Several technical trading systems have been tested, and they do not produce greater profits after transactions costs than does a simple buy-and-hold strategy.

The stock market does not fully meet all the conditions for a random walk, however. Some slight dependencies have been found, and there is a small degree of momentum in stock prices. Some seasonal patterns have been discovered. However, the dependencies that have been found are very small relative to the transactions costs that would be required to exploit them, and they are not dependable from period to period.

Logic suggests that any patterns that might have existed in the past are likely to self-destruct in the future. Suppose, for example, there was a dependable Christmas rally; that is, the stock market consistently rose in the trading days between Christmas and New Year's Day. Traders attempting to profit from that pattern would plan to buy the day before Christmas and sell the day before New Year's Day. However, pre-Christmas buying would make stock prices rise the day before Christmas and fall the day before New Year's as traders unloaded their positions to realize profits. Hence, to beat the gun, traders would have to buy two days before Christmas and sell two days before New Year's Day. Before long all the buying would take place before Christmas and the selling would occur after Christmas, and the year-end rally would disappear. Any dependable pattern that could be exploited for profit would self-destruct. This is the logical reason why dependable patterns in stock prices are unlikely to persist.

IMPLICATIONS FOR INVESTORS

The random walk hypothesis has important implications for investors in the stock market. Visually, charts of stock prices appear to display some obvious patterns, but those patterns are simply a manifestation of a statistical illusion. The "cycles" in stock charts are no more true cycles than are the runs of luck or misfortunes of the ordinary gambler. History tends to repeat itself best in an infinitely surprising variety of ways that confound any attempts to profit from knowledge of past price patterns. Although the market does not meet the statistician's ideal of a perfect random walk, any systematic relationships that exist are so small and undependable that they are not useful for an investor. The history of stock price movements contains no useful information that will enable an investor consistently to outperform a buy-and-hold strategy in managing a portfolio.

Attempting to use past patterns of stock prices to ascertain the times when investors should be out of the market is especially dangerous. Because there is a long-term uptrend in the stock market, it can be very risky to be in cash. An investor who frequently carries a large cash position to avoid periods of market decline is very likely to be out of the market during some periods when it rallies smartly. Market timers risk missing the infrequent big gains that are the main contributors to performance, and

they also pay more in taxes and transactions costs than does an investor who simply buys and holds a diversified portfolio.

SEE ALSO *Efficient Market Hypothesis; Expectations, Implicit; Expectations, Rational; Financial Markets; Information, Economics of; Stocks*

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RANDOMNESS

Randomness is a term used in the social sciences and mathematics to refer to chance factors occurring in a manner that the individual events in a series of events or outcomes do not exhibit a connection to each other in their occurrence. Events are independent of each other, and thus the occurrence of one event is not linked to the occurrence of other events in a series in any systematic manner.

Randomness as a quality of a series of events is believed to be the result of numerous minor causes producing small effects as an outcome that results in no systematic predictability for a given event in the series. The result of the many small causes, some canceling each other, is the independence of each event from the others. It is notable that the operation of causation is not denied in the universe of events and experiences. Rather, the causal background to a series of random events is interpreted as a multiplicity of small influences, some almost infinitesimal in impact, with some causes canceling or partially canceling the influence of other causes. The outcome is a series of events with independent occurrence in relation to each other. The word *chance* is used in popular speech to refer to this condition wherein events are generated independently of each other.

RANDOMNESS AND RANDOM DISTRIBUTIONS

Of great interest to social scientists is the demonstrable fact that some random distributions follow broadly predictable patterns when a series of events occurs in large numbers. Individual outcomes or instances cannot be predicted with any certainty, but a random pattern may be demonstrated to follow a broad configuration in such a manner that larger areas in the distribution of random events may be assigned a broad likelihood or probability of occurrence. Examples include various known or empirical distributions of random events that follow the bilaterally symmetrical distribution that forms a curve known as the normal curve. Another related known probability distribution is the binomial distribution, where only two possible outcomes can occur in a random series of events, such as tossing an unweighted coin a large or an even infinite number of times. The binomial distribution approximates the normal curve of probability with a large series of discrete, independent trials of two possible outcomes. Yet another known distribution of random events is the chi-square distribution when the X^2 statistic is calculated on a number of randomly drawn samples if the samples themselves are drawn from a larger universe of randomly distributed frequencies for a number of categories of observations. The tables that summarize the patterns of these known distributions of statistics are available in any book on statistical method.

STATISTICS AND RANDOMNESS

The field of statistics as it is applied in research in the social sciences can be broken into two broad divisions: descriptive statistics and inferential statistics. The purpose of the first division, descriptive statistics, is the summary of data. Data are ordinarily summarized by measures of central tendency, such as means, medians, and the mode. Variation or dispersion of data can be summarized with measures of variance and standard deviations. If there are two or more variables measured, a researcher may search for association through measures of correlation.

The second broad division in statistics is inferential statistics. This is the division used to deal with randomness and the use of known random distributions to compare for departures from randomness in empirical distributions. Departures from randomness in the latter situation can be assessed probabilistically and can be of great value in the assessment of causation. The search for causation begins with the determination by an observer of correlation or association between observations. Departures from randomness are of great importance because there is an initial indication of a pattern of association or correlation.

This second broad area of inferential statistics is itself broken into two large divisions. The first division involves estimation of parameters or universe values. This is attempted when a smaller sample must be drawn from a larger population or universe. The value calculated on

a sample is referred to as a *statistic*. A mean calculated for a sample is a statistic. If the mean were calculated for an entire population, it would be referred to as the *parameter*. Researchers are often required to estimate parameters based on sample statistics due to limitations in time, personnel, and particularly the cost of conducting research on an entire population. Randomness is an important consideration for estimation of parameters because a sample must be drawn through a random process if an inference is to be made as a probability statement for the parameter value.

This requirement exists because the estimation of the parameter, or population mean, is based on knowledge of the pattern of a series of randomly sampled means, or a *sampling distribution* of means. This known sampling distribution approximates a normal curve, with the latter's known probabilities for areas under the curve. Random sampling matches the assumptions of randomness for the pattern of means in the sampling distribution and thus enables a researcher to calculate the probability of being in error while using a sample mean to estimate the parameter of the population.

A second division of inferential statistics involves prescribed procedures used in hypotheses testing. Hypotheses testing is used in research as a search for the existence of relationships in a population or larger universe of possible observations. Again, random samples must be used if exact statements of probability are to be made in regard to the hypotheses being tested. Research scholars vary in style of work, but a typical model utilizing randomness is one that searches for non-randomness or hypothesized correlated variables by generating research hypotheses of correlation between categories of empirical observations or variables and then tests for these correlations through statistical procedures, such as a difference of means test, chi-square, or tests of significance for randomly sampled measures that yield the sampled correlation coefficients.

In this manner of conducting research, the hypothesis of randomness, or no relationship, which is referred to as the null hypothesis, is cast against a set of empirical frequencies drawn from a random sample. If the test of differences between means, or the X^2 statistic, or the sampled correlation coefficients yield a value or values that are so large that they are unlikely to occur by chance in repeated random samples from random distributions with their known statistical patterns, inferences can be made regarding the likelihood of a correlation or relationship between the hypothesized variables in the larger universe from which the samples have been randomly selected. This family of tests is known as significance tests. Thus the observation and understanding of random events enables one to become knowledgeable about random patterns. This knowledge of random patterns is useful for social scientists as it enables them to make inferences about causes in the social world, which is largely a non-random world, and thereby to build theoretical explanations based on empirical research to reach a better understanding of the complex social world in its many structured variations.

SEE ALSO *Butterfly Effect; Chaos Theory; Regression Analysis; Residuals*

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RAPE

Rape is a crime of sexual coercion that can cause acute physical and psychological trauma. Its victims are mostly female, although males may be rape victims as well. Nearly all rape perpetrators are male.

PREVALENCE AND EFFECTS

Research conducted in the United States provides a window on the prevalence of rape. Approximately 20 percent of American women report that at some point in their lives they have been forced to have sexual intercourse against their will. Approximately 8 percent of American females indicate that their first experience of sexual intercourse was coerced. Although legal and cultural climates surrounding the crime of rape vary greatly around the globe, research suggests that rape is a widespread phenomenon and that most rapes go undetected. Mass rape has also been used as a weapon of warfare, torture, and genocide—notorious in the 1990s and early 2000s in Bosnia, Rwanda, and Darfur—and has been classified under international law as a crime against humanity. Rape in U.S. prisons is a significant problem that remains largely unaddressed.

Victims of rape report an experience of degradation, often with immediate effects of physical paralysis and

mental dissociation. Studies indicate that victims of acquaintance rape can suffer as much or more psychological harm than victims of stranger rape, in part because they experience more intense feelings of guilt and self-blame. Almost one-third of rape victims experience fragmented memory, traumatic amnesia, or other long-term effects, similar to those associated with posttraumatic stress disorder. These common symptoms of sexual trauma can compromise the victim's ability to report the crime in a coherent narrative and to demonstrate nonconsent for a legal proceeding.

DEFINITION AND PUNISHMENT

Historically, the law defined rape as a man having sexual intercourse with a woman through the use of force and without her consent. In his leading legal treatise of the eighteenth century, *Commentaries on the Laws of England* (1765), William Blackstone (1723–1780) described rape as "carnal knowledge of a woman forcibly and against her will" (p. 209). This definition remained remarkably static for generations.

In contemporary law, force and consent became irrelevant in *statutory rape*, which presumes involuntary any sexual relations with a person under an age specified by statute. First enacted into law in England in 1275, statutory rape laws are common in the United States but rarely enforced against consensual sexual relationships between adolescents. The rare statutory rape prosecution is likely to involve an older man and an underage woman, and some jurisdictions have statutes that require the perpetrator to be over twenty-one or significantly older than the victim. Originally the age of consent for statutory rape was twelve, later reduced to ten. Although the nineteenth-century women's movement successfully lobbied to raise the age limit for statutory rape, in some states the age limit remains as low as thirteen. Other states consider sixteen or eighteen to be the appropriate age of consent.

In early England, rape was classified as a misdemeanor to be punished by a fine or imprisonment. By virtue of a statute enacted in 1285, rape became a capital felony, a classification imported to colonial America. During the twentieth century, however, imprisonment became the most common punishment for rape convictions.

PROPERTY AND RACE

From the seventeenth through the nineteenth century, notions of property shaped the understanding of rape. Female slaves, deemed the property of their owners, could not be raped under law and therefore received no protection from rape law. In situations where rape law applied, rape was understood as a crime of trespass committed by a male stranger against the property of another man, the husband or father of the woman who was raped. Hence, rape within marriage was considered legally impossible. Even after America's formal abandonment of the notion of women as property, its influence reached into the twentieth century through the marital exemption from rape laws that continued to presume a wife's consent to all intercourse with her husband, even when it was coerced. Although all states have abolished the full marital rape exemption, some still retain it in partial forms.

From the eighteenth through the mid-twentieth century, rape indictments and conviction rates in America were low, except when defendants were nonwhite. African American men alleged to have raped white women were zealously prosecuted, even in cases where there was reason to doubt the allegation's reliability. About 90 percent of the men executed for rape in the twentieth century in the United States were African Americans. This racialized pattern of punishment was noted by the U.S. Supreme Court in the 1977 case of *Coker v. Georgia*, which held the death penalty for rape to be unconstitutional.

In marked contrast, when victims were African American women, rape laws were largely unenforced, especially during the slavery era. Rape of female slaves, which could reproduce more slave labor for the owner's service, was a commonplace occurrence. Studies suggest that African American women who report being raped continue to have disproportionate difficulties obtaining redress through the legal system, as their reports are especially likely to be regarded with suspicion.

REFORM EFFORTS

For centuries a culture of skepticism surrounded all women's accusations of rape. Such skepticism is revealed in the language of the seventeenth-century English jurist Matthew Hale (1609–1676) in his *History of the Pleas of the Crown* (1847): "It must be remembered, that [rape] is an accusation easily to be made and hard to be proved, and harder to be defended by the party accused, tho never so innocent" (p. 635). Such an attitude is also apparent in the law's traditional requirements that proof of rape entailed not only evidence of the use or threatened use of force but also evidence of resistance—resistance to the utmost of the victim's physical capacities in some states—as a proxy for nonconsent. Additionally, some jurisdictions required corroboration of a victim's testimony and cautioned jurors to give it extra scrutiny. Most of these procedural hurdles have formally disappeared in the United States, although some, such as corroboration requirements, remain in other legal systems around the world.

The first twentieth-century effort to modernize rape law in the United States came with the 1950s revision of the Model Penal Code (MPC), an influential model statute written by recognized legal experts. According to

the MPC, rape victims no longer needed to resist "to the utmost" to demonstrate nonconsent. This revision led many states to abolish resistance requirements. The MPC also proposed three grades of sexual assault. Violent stranger rape was felony rape in the first degree. Violent acquaintance rape was a second-degree felony. Other kinds of sexual coercion established the third-degree felony of "gross sexual imposition." Adapting this approach, many states adopted statutory schemes that graded rape offenses by severity.

Rape law reform continued in the 1970s and 1980s when feminist reformers raised awareness of the extent of the incidence and harm of rape and the law's failure, despite harsh potential penalties, to hold most perpetrators accountable. In her book *Real Rape: How the Legal System Victimizes Women Who Say No* (1987), law professor Susan Estrich observed that date rapes or acquaintance rapes are the most common kinds of rape, yet the criminal justice system is less likely to treat these cases as crimes and may even blame the victims for the incidents. Victims experience dehumanization from all of these rapes, all of them violate a victim's bodily integrity and sexual autonomy, but only victims of violent stranger rape are likely to have recourse to the legal system.

Some proposed reforms have received widespread acceptance. For example, along with the broad elimination of resistance and corroboration requirements, rape shield laws that, with some exceptions, prohibit admission of the victim's prior sexual conduct have been widely adopted. Studies, however, are inconclusive as to whether these reforms have made a measurable difference in victim behavior or case outcomes.

Other proposed reforms remain controversial, such as whether sex obtained through fraud or extortion can constitute rape. Another area of controversy concerns whether and under what circumstances to allow mistakes about consent to establish a defense to rape. Estrich's book sparked a "no-means-no" movement, advocating verbal resistance as sufficient to establish nonconsent. Others have suggested that the absence of affirmative assent or of a verbal discussion about desired acts should undermine consent as a defense in rape cases. Strong arguments have been made to abandon force as an element of rape, because the use of force is inherent in unwanted sex. New Jersey did so in the case of *In re M.T.S.* (1992), and some state statutes classify nonconsensual penetration without force as a sexual offense, although typically one less serious than rape.

While reform efforts have been influential in drawing attention to a variety of problems in social and legal responses to rape, popular attitudes are harder to modify than written laws. Solving many of these problems will require deeper cultural change.

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Phyllis Goldfarb

RAPE OF NANKING

SEE *Chinese Revolution.*

RASTAFARI

Following the 1930 crowning of Ras Tafari (1892–1975) as Haile Selassie ("Power of the Trinity"), Emperor of Ethiopia, several street-corner preachers in Jamaica (among them, Joseph Hibbert, Leonard P. Howell, Robert Hinds, Archibald Dunkley, and Paul Earlington) began asserting that Selassie was a divine personage or the reincarnated Christ. For these Jamaicans, Selassie embodied Marcus Garvey's vision of black pride, self-reliance, and

repatriation to Africa; signaled the restoration of Ethiopia's ancient glory; and fulfilled the Bible's prophecies of a messianic deliverer. In proclaiming Selassie a messianic figure, they pinned on him their longing for liberation from the legacy of slavery and colonialism.

From the activities of these founding personalities there emerged a set of religious, social, and political beliefs known as *Rastafari* (or *Rastafarianism*), the adherents of which are termed *Rastas* (or *Rastafarians*). From its beginning, Rastafari represented a fundamental critique of the values and institutions of Jamaican society. Rastas' declaration of adherence to a black messiah indicated their rejection of both European religion and the authority of the colonial state. By referring to Jamaica as *Babylon*—land of exile, oppression, and exploitation—they expressed their conviction that this was a society with no redeemable values or institutions, and declared their intention to repatriate to their African homeland, from which they had been "stolen." The Rastas' explicit promulgation of black superiority—admittedly, an overcompensation for centuries of denigration—signaled not just a rejection of the ideology of white supremacy, but even more a reclamation of blackness and of Africa.

From the 1930s to the 1960s, conflict characterized the relationship between Rastafari and Jamaican civil authorities. The charismatic Rastafarian leader Leonard P. Howell exemplified this conflict in the early decades. For inveighing against the British colonial government, he was repeatedly arrested and imprisoned. Law enforcement also repeatedly raided Pinnacle—the commune he established—and eventually demolished it in 1954. The authorities concluded that Howell was demented and committed him to a metal institution. After his release, Howell lived in relative obscurity until his death in the mid-1980s.

By the late 1940s or early 1950s, the House of Youth Black Faith (HYBF) had emerged as the avant-garde of the Rastafari movement. These young Rastas were even more radical than their elders. They elevated the smoking of *ganja* (marijuana) to a personal and communal ritual, which they believed aided them in the discovery of their spiritual and cultural identity by breaking through the mental confines imposed by Babylon. They adopted the dreadlocks hairstyle to accentuate their Africanness and to symbolize their rejection of European standards of beauty (favoring fine, straight hair). They are also credited with the development of *dreadtalk*, an argot that made their speech often unintelligible to outsiders. Furthermore, HYBF projected an aura of militancy through marches and street meetings, vitriolic language calling down "blood and fire" on Babylon and its agents, and the flaunting of laws against ganja possession and use.

For their marijuana use, dreadlocks hairstyle, and general insubordination, Rastas became subjected to the ire of the agents of social control and public opinion: They suffered frequent arrests on drug charges, scapegoating that saw them blamed for a range of criminal activities, and characterizations in the media as lazy, demented, and disposed to violence. When a few weapons were found in the compound of Claudius Henry, a Rastafarian elder, and when his son was implicated in an alleged plot against the Jamaican government, the repression escalated into indiscriminate harassment, arrests, and forced cutting of the locks of Rastas.

Though a 1960 study of Rastafari by University of the West Indies professors M. G. Smith, Roy Augier, and Rex Nettleford effectively debunked myths about the mental deficiency, laziness, and criminality of Rastas, negative views of Rastafari persisted. These prejudices reached a boiling point in 1963, when an attempt to keep Rastas out of the area surrounding the Rose Hall Great House (a tourist attraction) escalated into a virtual riot in which several people were killed. When the government found "evidence" of the endemic criminality of a West Kingston slum in the mid-1960s, Rastas again took the rap. In an attempt to deal with what it considered entrenched Rastafarian criminality, the government bulldozed the entire shantytown where Rastas and others had constructed shacks on an urban dump.

Though a negative perception of Rastafari persisted among many in Jamaican society after 1960, the Smith, Augier, and Nettleford study helped to influence Jamaica's political leadership to adopt a less confrontational approach to the Rastafarian phenomenon. In 1961 Norman Manley's People National Party (PNP) government sent a delegation of civic leaders and Rastas to West Africa and Ethiopia to determine which African countries would be willing to receive Jamaicans desiring to return to the continent of their ancestors. The official report indicated that these countries were only willing to welcome educated and skilled workers. The Rastas of the delegation issued their own report, however, painting a picture of African countries waiting to receive their diasporic children with open arms. Jamaica gained its independence in 1962 under a new Jamaican Labor Party (JLP) government that was less disposed to pursue repatriation for Rastas. Though some Rastas formed their own delegation to make another trip to Africa in 1963, no official repatriation ever took place.

Another measure growing out of the 1960 study was a concerted effort by the Jamaican government to establish cultural and political ties with African countries. This included an invitation to the Ethiopian Orthodox Church to establish itself in Jamaica, and an exchange of visits by Jamaican and African dignitaries. The Ethiopian

Orthodox Church eventually established a congregation in Kingston in 1970, and has established further congregations in several other towns since then. Many Rastas identify with or have become members of this church, but they have often come into conflict with its orthodox teachings. The visitor exchange culminated with Haile Selassie's three-day visit to Jamaica in April 1966. From his arrival until his departure, he was greeted at every public appearance by throngs of Jamaicans, including a multitude of Rastas decked out in their symbolic colors of red, green, and gold. Rastas were among the invited guests at the Vale Royal residence of the prime minister and at fancy hotels where events were held in honor of Selassie. According to reports, some members of the movement were even granted a private audience with the emperor. While Selassie publicly declared that he was not a divine personage, Rastas reported that he confirmed his divinity to them in private, and requested that they work for the liberation of Jamaica before repatriating. After Selassie's visit, the phrase *liberation before repatriation* gained currency among Rastas, and the fervor for repatriation seems to have diminished accordingly. Despite the new emphasis on the need for liberation, the visibility and civility of Rastas at public and private functions conferred a measure of legitimacy on the Rastafarian movement.

By the late 1960s, signs of the changing perception and fortunes of Rastafari were becoming evident. One sign was the diffusion of Rastafarian perspectives and symbolism throughout society and particularly among young people and radical intellectuals. Young people, including many from middle-class families, assumed the Rastafarian mode of dress (knitted caps and the colors red, green, and gold), mode of speech, and ideological stance vis-à-vis the oppressive nature of Jamaican society. Many black intellectuals, who had adopted the black nationalism of the Black Power movement in the United States, found a vernacular expression of such nationalism in Rastafari and established dialogue with the movement. This is best exemplified by the Black Power radical Walter Rodney, a history professor at the University of the West Indies, Mona.

Another sign was the growing influence of Rastafari on local popular music. In the 1950s, Rastafari adopted an African drumming style that had been preserved in Jamaica by a cultural group called the Burru. Rastas made this style into their ritual music and regarded it as having mystical power for use in the fight against oppression. In the early 1960s, Count Ossie, a Rastafarian drummer, arranged and accompanied "O Carolina," which became a hugely popular song in Jamaica. For the first time, Rastafarian rhythms were incorporated into popular music. After the recording of "O Carolina," Ossie's compound in East Kingston became a gathering place where local musicians congregated and participated in lengthy jam sessions, thus fostering the exchange of musical ideas. These and other musicians began to incorporate Rastafarian rhythms into reggae music, and they eventually reproduced the whole range of Rastafarian rhythms on modern instruments.

The incorporation of Rastafarian rhythms into Jamaican popular music was followed by the insertion of Rastafarian spirituality and social criticism into the lyrics of popular songs. Lyricists, whether they were Rastas or not, tended to aim their barbs at the establishment, employing the verbal tools and the critical perspective of Rastafari. No one did this with more clarity and consistency than Bob Marley. His growing social consciousness and his proximity to his Rastafarian neighbors eventually led him to embrace Rastafari. In a short time, Marley made himself the public persona and international ambassador of Rastafari and reggae. Through his considerable repertoire, from "Concrete Jungle" to "Redemption Song," Marley became the voice of the marginalized, expressing their critical assessment of the values and institutions of the West, their resolve and resilience in the struggle against extreme odds, and their determination to resist and rebel against their oppression.

Despite their activism around issues relating to poverty, the importance of African heritage, repatriation of blacks to Africa, and the legalization of ganja, Rastas have traditionally despised politics, calling it *politricks*, to indicate their belief that it was marked by deception and trickery. However, some members of the movement have made forays into Jamaica's electoral politics. Most notable are the candidacies of Ras Sam Brown in 1961, Ras Astor Black of the Jamaica Alliance Movement in 2002 and after, and members of Imperial Ethiopian World Federation Party in 2003. In all instances, Rastafarian candidates received minimal support at the polls. Nevertheless, Rastafarian ideas, symbols, and lingo and Rastafari-inspired songs have been tools of political electioneering in Jamaica, as was particularly evident in the 1970s.

During the lead-up to the 1972 Jamaican general election, the PNP leader, Michael Manley, presented himself as the champion of the poor masses. In doing so, he co-opted many of the ideas and much of the language used by Rastas in their criticism of Jamaica's sociopolitical establishment. Specifically, he painted the members of the ruling Jamaica Labor Party as agents of Babylon, and presented himself as Joshua (of Biblical fame), presumably appointed by God to "beat down Babylon" and establish justice for all. A central symbol in this political drama was a walking stick continuously brandished by Michael Manley. Manley claimed to have received the stick from Haile Selassie during a visit to Addis Abba. It was dubbed the *Rod of Correction* and portrayed as symbolic of Manley's authority, bestowed by Jah (God) or Selassie, to right the wrongs of Jamaican society.

Probably the most effective electioneering tool in Jamaica in the 1970s was reggae music, with its Rastafari-inspired lyrics. Manley and the PNP adopted such songs as "Better Must Come," "Beat Down Babylon," and "Dem Ha Fi Get a Beatin" to convey to the masses that they intended to change fundamentally social conditions in Jamaica. Such Rastafarian terms as "One Love," "Peace and Love," and "Hail De Man" flowed from the lips of PNP politicians in a streetwise and populist attempt to woo the young and poor who made up the majority of the voting public. While the PNP referenced elements of Rastafari more extensively and managed to win the 1972 and 1976 elections, the JLP was also quick to invoke the vernacular culture deeply influenced by Rastafari. Its campaigners made liberal use of reggae songs, and its leaders, such as Hugh Shearer and Edward Seaga, gave speeches that were laced with Rastafari-inspired street lingo. By the 1980 election, which was won by the JLP, the overt use of Rastafarian references and language was clearly on the wane in political campaigning. Manley had become steeped in Marxist/socialist rhetoric, whereas Seaga, who had become the leader of the JLP, appealed more to the folk-Christian sensibilities of followers of Revivalism and Pentecostalism, religious movements that are even more pervasive in Jamaican society than Rastafari. Seaga had been a promoter of Jamaican folk culture since the 1960s, had done ethnographic research on Revivalism, and had been rumored to be a secret practitioner of its healing arts.

Though politicians may have been self-serving when they co-opted Rastafarian lingo and symbolism as electioneering tools, they unwittingly bestowed legitimacy on both. At the same time, reggae's status was on the rise. Artists such as Desmond Decker, Toots and the Maytals, and Jimmy Cliff gained international success, while Bob Marley and the Wailers achieved superstardom, making them the epitome of reggae's cultural ascendancy. Despite earlier misgivings, Jamaicans of all walks of life came to embrace reggae as Jamaica's cultural gift to the world. Marley was eventually awarded Jamaica's second-highest honor, the Order of Merit, and at his passing he received a state funeral. Since then, reggae and Rastafari have become a source of inspiration for artistic and cultural production in Jamaica, the Caribbean, and beyond.

From its inauspicious beginnings among the marginalized in Jamaica, Rastafari has blossomed into a global religious and cultural movement. Today Rastafari claims followers throughout the Caribbean, including Cuba; in West and Southern Africa; throughout North America and Europe; in Central and South America, especially Brazil; in New Zealand and Australia; and even in Japan. The spread of Rastafari has been facilitated by international travel and migration and by the worldwide distribution of reggae via the global music industry and communication technology.

The post–World War II era saw the immigration of numerous Jamaicans, including Rastas, to England and North America. When many of the children of these immigrants looked to Jamaica in the 1960s and 1970s for something to counter the alienation they felt in their parents' adopted homelands, it was Rastafari that provided them with both a critique of alienating Western culture and a sense of self that celebrated their African heritage. Students from other Caribbean islands studying in Jamaica, and Jamaicans traveling to and studying in other parts of the Caribbean, were the main agents of the spread of Rastafarian ideas and practices throughout the Caribbean, especially to Barbados, Cuba, Dominica, and Trinidad and Tobago. Over the years, Rastas have traveled far and wide throughout the world, taking their message with them, and visitors to Jamaica from around the world have also contributed to the dispersal of the Rastafarian message.

Probably even more important than travel and migration has been the spreading of the Rastafarian message through reggae music. Through the global marketing of reggae and the ubiquity of modern communication technology, even people who have never seen a Rasta in the flesh have come in contact with the message of Rastafari and have found resonances with their own experiences and aspirations in the music. Thus, we find reggae and Rastafari inspiring the struggles of people around the world: the Maoris of New Zealand, the Aborigines of Australia, the Punjabis in India, Native Americans, and the Palestinians.

The earliest studies on Rastafari tended to focus on its rejection of Jamaica, its call for repatriation, and its deification of Haile Selassie. Using a label commonly applied to new religious movements in colonial or former colonial societies, these studies identified Rastafari as an example of messianic millennialism (Simpson 1955; Barrett 1977; Kitzinger 1969). The next wave of studies tended to highlight the political dimensions and revolutionary potential of Rastafari and hence saw Rastafari as a call for social change in Jamaica (Nettleford 1970; Owens 1976). The third wave was more serious about taking an ethnographic approach and about exploring the character of the Rastafari movement. These scholars described the contours of the movement, highlighting its cultural, social, and spiritual beliefs and practices (Chevannes 1994; Yawney 1978). Into the twenty-first century, the output is almost too varied for categorization. The spread of Rastafari and its growing globalization have led to mutations and transformations. Most academic studies have built upon the second and third waves mentioned above. In addition, many Rastas have written accounts and interpretations of their experiences; numerous studies of reggae and its relationship to Rastafari have been published; biographies of Rastafarian reggae artists, chiefly Marley, abound; and various studies of Rastafari in a range

of locations (Britain, West Africa, South Africa, Brazil, Trinidad, Dominica, Cuba) are now available.

SEE ALSO *Garvey, Marcus; Reggae; Religion; Selassie, Haile*

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Ennis B. Edmonds

RATE OF EXPLOITATION

According to Karl Marx, exploitation takes place under capitalism through the extraction of *surplus value*. In the capitalist mode of production, the surplus takes the form of profits appropriated by the capitalist, and exploitation results from the working class producing a net product that can be sold for more than they receive as wages. Marx made a distinction between *labor* and *labor power* that is important for understanding the source of profits. Labor power is the sum total of abilities (spiritual and physical) a worker uses to produce use-values. It is a commodity owned by a laborer but sold in the labor market, and its value—as with any other commodity purchased by the entrepreneur—equals the socially necessary labor time required for the production of goods and services consumed by a laborer for the reproduction of himself and his family. *Labor*, on the other hand, is the use of labor power—that is, the amount of useful labor provided by a worker in a given period of time (an hour or a day). According to Marx, the amount of labor spent in producing a commodity determines that commodity's value.

In the capitalist mode of production, the labor time required for the production of the means of subsistence for the laborer is smaller than the labor time actually provided by him to his employer during a labor day. Hence, for any given time period, the laborer produces more value than the equivalent of his or her remuneration (wage). This difference Marx calls *unpaid labor* or *surplus labor*. The net product produced by the worker during the labor time that is above and beyond the time needed for the reproduction of the labor class is called *surplus value* and is the foundation on which the Marxian theory of profit rests. Hence, the amount of surplus value (s) a worker produces is the difference between the value he or she produces and the value of his or her labor power (v). The value produced by a worker during a labor day is determined by the conditions of the labor process, whereas the value of his or her labor power is determined by the conditions of the labor market and the value of the goods a worker must consume. The ratio s/v represents the rate of surplus value (sometimes called the *rate of exploitation*), because it indicates how much value has been produced during a labor day beyond the value that laborers actually receive as remuneration. This surplus product is appropriated by the employers, who are the owners of the means of production.

In a capitalist mode of production, the driving force of the system is the self-expansion of capital that can be attained with the creation of more surplus value. This is because profits are realized as surplus value (through the selling of commodities in the market), and the more surplus value there is, the higher are the profits and profit rates, and by extension, the easier is the process of accumulation and concentration of capital. If π stands for profits and approximates the surplus value and w stands for wages and approximates the *variable capital* (that is, the wage proportional to labor hours spent for the reproduction of the laborer and his family), then the rate of surplus value or exploitation can be approximated in a real

economy by the ratio π/w, which gives us a good idea of the income distribution in the economy. The higher the profit-wage ratio, the higher the distribution of income in favor of profits and, eventually, the higher the investment.

Several economists (right-wing and left-wing) have argued that the constant decline in the above ratio in most economies since the end of World War II indicates an increase in the wage bill relative to profit share, the redistribution of income toward labor, and the lessening of the exploitation rate. One of the reasons claimed for this rise in the wage bill is the unionization of the labor force and the concomitant "malfunctioning" of the labor market (that is, wages do not fall to the level necessary to clear the markets). The same economists argue that the slowdown in growth rates observed after the 1970s is also due to the rise in the wage bill, because that rise deprives capital of the profits needed for investment. Hence, policymakers, based on this evidence, promote the liberalization of the labor market in an attempt to increase profit share.

The counterargument to these suggestions comes from Marxist economists who claim that before the profit-wage ratio can be accurately measured, a distinction must be made between productive and nonproductive labor, to ensure that the correct surplus value (s/v) is computed. Relevant studies have shown that the rate of surplus value has increased, indicating an increase in labor exploitation. This increase in the rate of surplus value is absolutely consistent with the falling rate of profit (r) during the same time period. In fact, by definition the rate of profit is $r = s/(c + v)$—that is, surplus value over capital invested (circulating and variable)—or $r = (s/v) / [1 + (c/v)]$. The term c/v represents the organic composition of capital, an index of capital intensity whose rate of increase is higher than that of the rate of surplus value, giving rise to a falling rate of profit.

SEE ALSO *Accumulation of Capital; Marx, Karl; Primitive Accumulation; Rate of Profit; Social Surplus; Surplus Value; Work Day*

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Persefoni V. Tsaliki

RATE OF PROFIT

The *rate of profit* is defined as ratio of profits, the difference between total revenues and total costs, to the capital advanced for production. Theories differ in terms of how both profits and capital are defined. The profit rate is also defined on the aggregate or economy-wide level, the industry level, and the firm level. In most theories with competitive markets, capital will flow to higher-profit firms, and there will be a tendency for the rate of profit to be equalized among firms in the long run.

The rate of profit is a category not generally modeled in standard neoclassical economics. Indeed, in general equilibrium models with competitive markets, the rate of profit will tend toward zero. Instead, neoclassical economists focus on the existence of *rent*—that is, returns to factors of production such as mineral resources or special talents that are not generally reproducible—rather than profits. In contrast, the rate of profit is the central category in Marxian economics. The rate of profit is also an important category in Keynesian, neo-Keynesian, and post-Keynesian economics. As a result, most of the theoretical work on this subject comes out of these fields, particularly Marxian economics.

This article examines trends since the end of World War II in the rate of profit in the United States and reviews some of the theoretical literature on the rate of profit in the Marxian tradition.

TRENDS IN THE RATE OF PROFIT IN THE UNITED STATES SINCE WORLD WAR II

It is helpful to begin by considering the relation between productivity and earnings. In the case of an economy characterized by competitive input markets and constant returns to scale, it follows from a standard neoclassical aggregate production function that wages and labor productivity should grow at exactly the same rate. (In this case, $w = \partial X/\partial L = \varepsilon_L X/L$ where w is the wage rate, X is total output, L is total employment, and ε_L is output elasticity of labor, which equals the wage share in this special case.) The wage is thus a fixed percentage of overall labor productivity, and the wage share is also constant (the wage share $wL/X = \varepsilon_L$).

Basic data are from the U.S. Bureau of Economic Analysis National Income and Product Accounts, as well as its series on net capital stock (data are all available on the Web site supported by the U.S. Bureau of Economic Analysis). From 1947 to 1973 real wages in the United States grew almost in tandem with overall labor productivity growth (see Figure 1). While the latter averaged 2.4 percent per year, the former ran at 2.6 percent per year. Labor productivity growth plummeted after 1973. Between 1947 and 1973, it averaged 2.4 percent per year

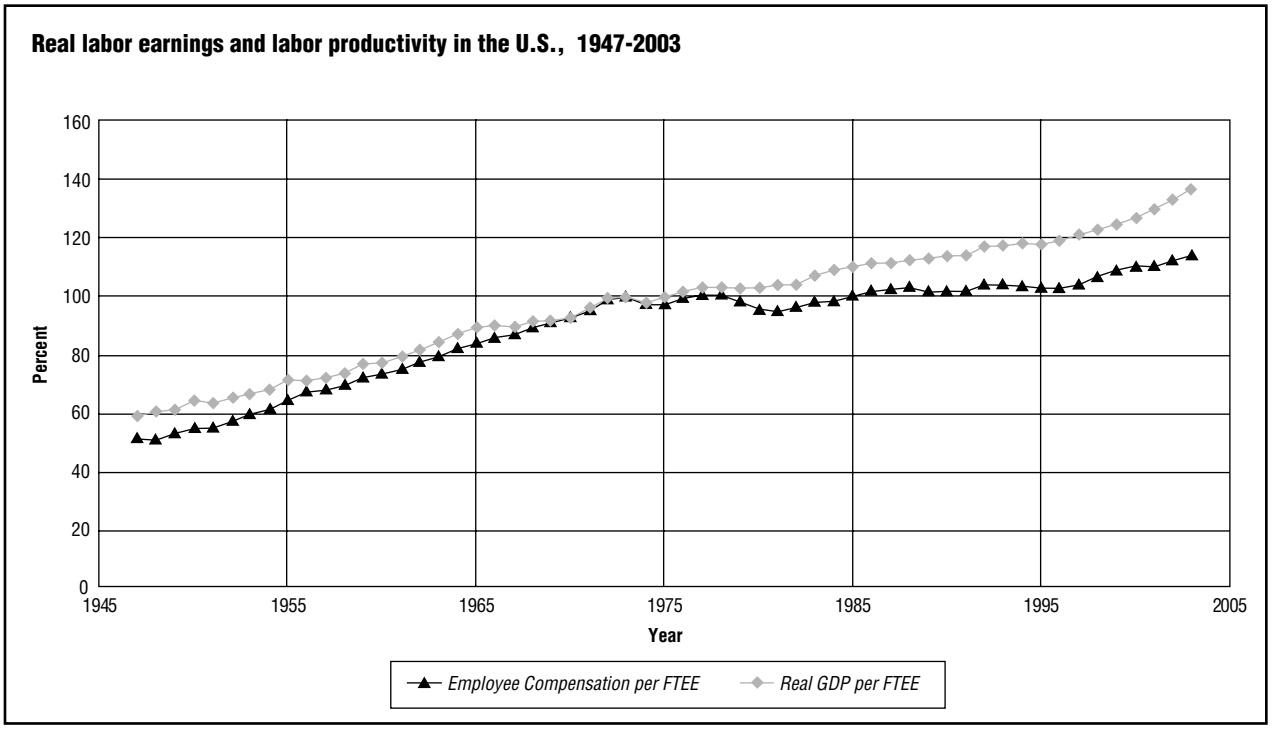

Figure 1

whereas from 1973 to 2003 it averaged only 1.0 percent per year. The period from 1973 to 1979, in particular, witnessed the slowest growth in labor productivity during the postwar period, 0.5 percent per year, and the growth in real employee compensation per full time equivalent employee (FTEE) actually turned negative during this period. Since 1979, the U.S. economy experienced a modest reversal in labor productivity growth, which averaged 1.2 percent per year from 1979 to 2003, whereas real wage growth was 0.6 percent per year. In particular, the historical connection between labor productivity growth and real wage growth appears to have broken down after 1973.

If productivity rose faster than earnings after 1973, where did the excess go? The answer is increased profitability in the United States. The Bureau of Economic Analysis defines profits as total gross property-type income, including corporate profits, interest, rent, and half of proprietors' income. The definition excludes the capital consumption allowance (CCA). The net rate of profit is defined as the ratio of total net property income to total private net fixed capital. The net profit rate declined by 7.5 percentage points between 1947 and its nadir, 13.1 percent, in 1982 (see Figure 2). It then climbed by 6.0 percentage points from 1982 to 1997 but fell off by 1.1 percentage points between 1997 and 2001. However, after 2001, it surged upward, reaching 20.5 percent in 2003, fairly close to its postwar high of 22.7 percent in 1948.

Figure 2 also shows trends in the net profit share in national income. It rose by 2.4 percentage points between 1947 and its peak value of 32.0 percent in 1950 and then fell by 7.2 percentage points between 1950 and its low point of 24.8 percent in 1970. It then generally drifted upward, rising by 4.2 percentage points between 1970 and its next high point of 29.1 percent in 1997. It then fell off by 1.7 percentage points between 1997 and 2000 but once again climbed upward to reach 29.4 percent by 2003. The results show a remarkable recovery in both the overall rate of profit and the profit share since the early 1980s in the United States.

A number of studies have documented these trends. Earlier ones such as the 1986 study by Edward Wolff and the 1994 study by Anwar Shaikh and Ahmet Tonak looked into the factors responsible for what seemed to be a secular decline in the profit rate in the United States from the late 1940s to the early 1980s. The rise in profitability since the early 1980s has been discussed by Gérard Duménil and Dominique Lévy (2002) and Wolff (2001). Duménil and Lévy (2002) also provide time trends on the profit rate for Germany, the United Kingdom, and particularly, France. All three countries, as with the United States, showed declines in profitability from 1960 to the early 1980s and a sharp reversal through the late 1990s. Both Lewis Corey in 1934 and Duménil and Lévy in 1993 presented data on movements in the

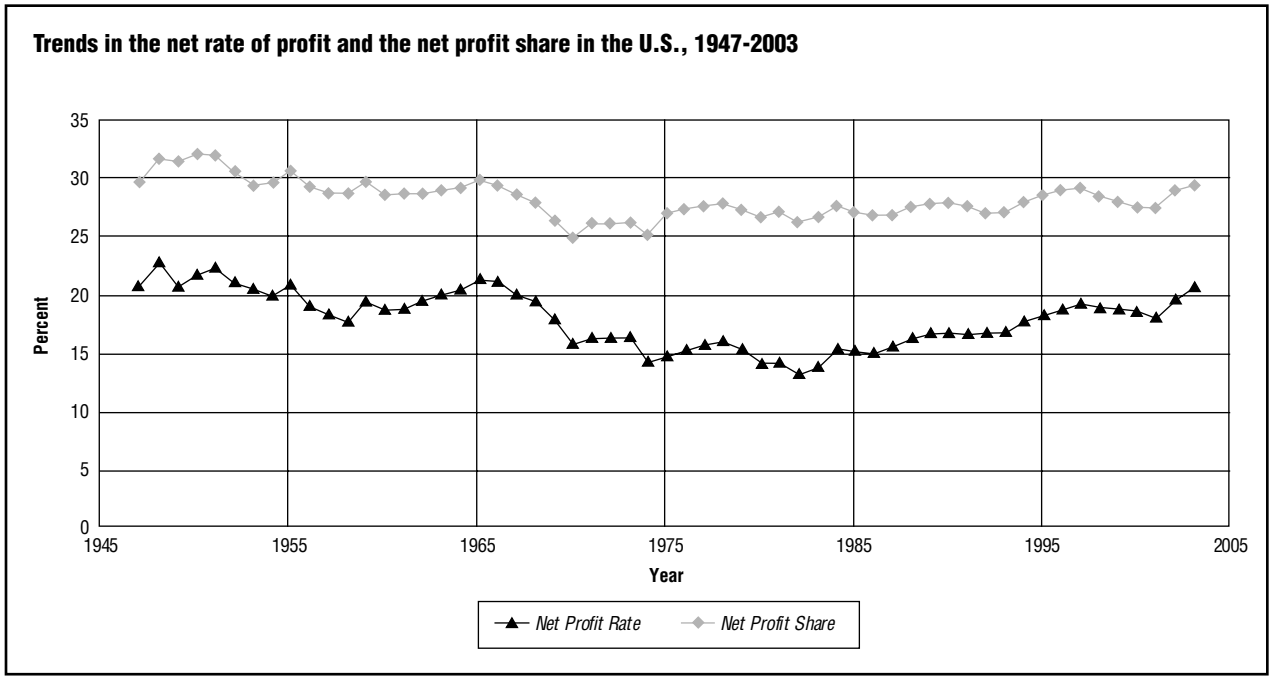

Figure 2

rate of profit in the United States from the early part of the twentieth century. These authors make the case that the onset of the Great Depression beginning in 1929 coincided with a sharp decline in the rate of profit in the United States.

THEORIES OF THE RATE OF PROFIT

As noted above, movements in the rate of profit have long occupied Marxian economists. Marx himself argued that the rate of profit would tend to decline over the long run. His "law of the tendency of the rate of profit to fall" states that over time, the organic composition of capital (the ratio of capital valued in nominal terms to the wage bill) would rise, thereby causing the general rate of profit to fall (Marx 1894). This law has been subject to criticism on theoretical grounds as discussed, for example, by Paul Samuelson in his 1971 article, though more recent literature has reversed some of these theoretical criticisms, as developed by Duncan Foley in his 1986 work.

Despite the theoretical disagreements, Marx's theory does provide a useful framework in which to analyze factors that affect movements in the rate of profit, and many papers have done this. Marx's law can be formalized as follows (where variables in current prices are specified instead of labor values): The ratio of total profits to total worker compensation (the *rate of surplus value*) is defined as: $e = \pi/wL$, where π is total profits, w is the wage rate, and L is total employment. The economy-wide *organic composition of capital* s is given by: $s = p_k K/wL$, where p_k is the price of capital and K is total capital. The *standard capital–labor ratio* (the *technical composition of capital*) is given by: $t = K/L$. The relation between the organic and technical composition of capital can be derived as: $s = t\,(p_k/w)$. The rate of profit r is defined as: $r = \pi/p_k K$. Here it should be noted that the rate of profit is defined as the ratio of profits to the current dollar value of capital. Finally, it can be shown that the rate of profit $r = e/s$, the ratio of the rate of surplus value to the organic composition of capital.

Marx believed that the rate of surplus value, or the *rate of exploitation* as he also termed it, was relatively fixed over time because it reflected the *social relations of production*, which were relatively stable over time. He also argued that the organic composition would rise over time because of the increasing capital intensity of production and that this would lead to a falling rate of profit in the long term. The problem in this line of reasoning is that while it was true that the capital–labor ratio did tend to rise over time because of the rising capital intensity of production, the price of capital relative to labor also tended to fall over time, offsetting the increase in the capital–labor ratio. Empirically, the organic composition also tends to remain relatively stable over time. Marx did discuss many mitigating factors to his "law" and, indeed, referred to it as a "tendency" rather than in absolute terms.

Two other very important contributions to the theoretical literature come out of the Keynesian tradition. The first, by Michał Kalecki (1971), develops a model in which national income is directly determined by autonomous investment and profits, in turn, are determined as a fixed share of national income. This model led to an extensive literature tracking the profit share in national income. The second, by Piero Sraffa (1972), develops the concept of the maximum rate of profit. He shows analytically that the maximum rate of profit depends exclusively on the technology of production and is independent of the wage (and therefore profit) share.

SEE ALSO *Markup Pricing; Profits; Returns to a Fixed Factor*

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Edward N. Wolff

RATE OF SURPLUS VALUE

SEE *Rate of Exploitation.*

RATIONAL CHOICE THEORY

Rational choice theory (RCT) in sociology draws on the tradition of utilitarian philosophy, and insights from the field of economics. While the central elements of RCT found expression in some earlier sociological accounts (most notably exchange theory), the formal development of RCT in sociology came only recently. Sociologists tend to explain human behavior as patterned outcomes of macro-level causes (culture and social structure) that have an impact on individual and groups. In contrast, RCT focuses on the intentional, goal-oriented behavior of individual actors. Social interaction, and the development of cultural systems and social structure, reflect the outcome of the purposive pursuit of individual self-interest.

The methodological individualism of RCT clearly sets it apart from traditional sociological accounts. Rational choice theorists maintain that the starting point for explanations of macro-level structures and group behavior is determined by the behavior of the core element of such systems, the individual actor. Individuals, including the corporate actor, are characterized as rational actors who choose actions designed to maximize their own individual interests—the satisfaction of their needs and wants:

1. Actors calculate the benefits (utility) of expected outcomes resulting from particular activities and interactions.
2. Actors take into account the expected costs of particular behaviors and include in these calculations the variable utility related to alternative courses of action (opportunity costs).
3. Actors engage in actions they expect to maximize their own interests.

Recognizing that other factors (cultural norms and values as well as the structure of the existing social con-

text) also influence decision-making, RCT stipulates that individuals nonetheless employ a utilitarian strategy designed to insure their access to and control over desired resources (material and nonmaterial). RCT offers an explanation of how macro-level structures emerge from the micro-level, purposive activity of individuals.

Social exchange theory (Homans 1961) represents an early approach that incorporated this image of the rational actor. Whereas George Homans's approach rests on a behaviorist conception of the individual actor motivated by rewards and punishments, contemporary RCT (Coleman 1990) simply argues that individuals act *as if* they are rational, and that human rationality needs no further explanation. RCT is not concerned with how actors define utility, or what particular objectives they seek to acquire; rather, the focus is simply on the fact that actions are chosen to achieve such ends efficiently.

RCT characterizes social interaction as social exchange. Individuals enter into interaction with others when the potential rewards (tangible and intangible) outweigh the calculated costs. Although it is not always possible for individuals to satisfy all their needs, they will choose alternatives they think lead to the greatest maximization of their individual interests within the constraints of particular situations. Sustained interaction, and the emergence of social structure, depends on the recognition, from the perspective of each individual involved, of the ongoing effort to achieve fulfillment of individual self-interest (Homans 1961).

Within a social context, a variety of factors affect the calculation of individual utility. The scarcity of available resources and differential access to those resources can limit opportunities for specific actors. Individuals who possess scarce resources can use them to further their own interests. Differential control of available resources produces differentials in power, allows for control over the exchange process, and opens up the potential for exploitation. Individual actors also vary in their relative dependence on the utility associated with expected outcomes, and the costs involved in pursuing particular actions versus others (opportunity costs) require consideration as well. The rational actor does not choose one goal over another because of its overall value, but due to the distribution of resources related to achieving that goal, the feasibility of success in obtaining the goal, the relative costs of any exchange involved in pursuit of the goal, and the variable value (objective and subjective) assigned to alternative strategies and their related rewards (Ritzer and Goodman 2004).

The development of sustained interaction and the emergence of a social system present certain problems for RCT:

1. If all actions are based on self-interest, why do individuals cooperate? (The so-called *free-rider problem*.)
2. What are the roles of institutionalized norms and sanctions, as well as values, that may both limit particular courses of action and encourage others (and how do these elements develop)?

Two types of collective interaction are involved—structured and unstructured. For organized, structured groups and organizations, participation by the rational actor is based on the costs involved in participation versus *relative* benefits accrued. The structuring of the context is important, with "selective incentives" altering the rewards/cost equation (Olson 1965; Hechter 1987). An actor may calculate that the relative costs of an exchange are outweighed by the potential benefits of sustained cooperation; however, such calculations are oftentimes based on unequal distribution of desired resources. Control of desired resources provides an individual or corporate actor the power to force (or legitimate) the surrendering of individual control and decision-making from one actor to others. Whether voluntary or not, the surrendering of authority and rights possessed by one individual to another produces a relatively stable, independent social structure and a redirection of purposive behavior based on both reciprocity and restraint (Scott 2000). Unstructured (collective) behavior emerges when individual maximization of utility becomes defined in terms of unilateral (nonreciprocal) transfer of control to the collective. As the individual cedes authority to a collective based on the recognition that individual success is *only* served through collective action, a dynamic character to social action ensues, resulting in the potential for disorder or change (Coleman 1990; Ritzer and Goodman 2004).

As collective interaction persists, a normative system is established, supporting the interests of actors with control over scarce resources, and the mutual interests of actors who recognize the utility of cooperative engagement. James Coleman (1990) maintains that norms are created and enforced by people who see benefits resulting from obedience, and harm or costs associated with violation. Norms allow the individual to transfer partial control within a shared system of rules, and relative maximization of utility is achieved by gaining partial control over the behavior of others. Normative structures legitimate the authority of particular collective actors based on their control over desired resources, or represent actors' trust or anticipated long-term reciprocity (Blau 1964; Scott 2000).

Although criticized for its reductionist approach, for ignoring the role of cultural values and subjective meaning in individual and group behavior, and for an overreliance on the idea of the rationality of the human actor,

RCT retains support among sociologists. Advocates claim that RCT provides an integrated theoretical analysis that bridges the differences across disciplines in the social sciences.

SEE ALSO *Choice in Economics; Choice in Psychology; Collective Action; Economics, Neoclassical; Free Rider; Individualism; Maximization; Microeconomics; Microfoundations; Minimization; Public Goods; Rationality; Reductionism; Satisficing Behavior; Utility Function; Utility, Objective; Utility, Subjective*

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Robert O. Keel

RATIONAL CHOICE THEORY (ECONOMICS)

SEE *Choice in Economics; Constrained Choice; Rationality.*

RATIONAL EMOTIVE THERAPY

SEE *Psychotherapy.*

RATIONALISM

Rationalism comes in various versions and makes wider or narrower claims. The idea underlying most versions is that reason is the most characteristic faculty of *Homo sapiens*. Appeal to reason is part of traditional wisdom, yet traditional (ancient Greek) rationalism includes an out of hand dismissal of traditional wisdom. The modern version of this dismissal is the radical demand for starting afresh (Enlightenment radicalism) and admitting only ideas that are proven, absolutely certain, and fully justified by rigorous proof. Science begins with rejecting all doubtful ideas. Francis Bacon initiated the idea that traditional unfounded views are the causes of all error; René Descartes tried to ignore all doubtful ideas and start afresh from nothing. David Hume began his investigations in efforts to delineate all that is certain while ignoring all else; he and many others, from Denis Diderot to Pierre-Simon de Laplace, took it for granted that Isaac Newton's success was due to his adherence to Bacon's advice. Auguste Comte and T. H. Huxley took it for granted that other fields will be as successful if they only jettison tradition more fully; Ludwig Wittgenstein went further and said only scientific assertions are grammatical (positivism, scientism).

ENLIGHTENMENT RADICALISM AND THE ROMANTIC REACTION

Yet what proof is no one knew. Mathematics was the paradigm of proof, and the success of physics was largely ascribed to its use of mathematical methods, a practice for all to emulate. What is that method, and how can it be applied to the social domain? How does the relinquishing of tradition help word theories mathematically? This was unclear even after the discipline of statistics was developed enough to become applicable to some social studies (as in the work of Adolphe Quételet, 1796–1874). Yet clearly as usefulness gives rational thought its initial (even if not final) worth, at least the rationality of action is obvious: its goal-directedness. Hence the study of rationality is vital for the study of the rational action that is the heart of the study of humanity. Whereas students of nature seldom pay attention to the rationality and the scientific character of their studies, students of humanities are engrossed in them. And whatever their views on this rationality, at least they openly center on it. Thus in the opening of his classic *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), Adam Smith declares his intent to ignore irrationality, no matter how widespread it is. Slavery is widespread, yet everyone knows that putting a worker in chains is no incentive, he observed.

The Enlightenment movement deemed Smith's argument obvious; this led to its dismissal of human history as the sad story of needless pain caused by ignorance and superstition. This was an error. The advocacy of the abolition of slavery came in total disregard for its immediate impact on the lot of slave owners. Smith spoke of rationality in the abstract. Because high productivity depends

on the division of labor and because this division leads to trade, freedom is efficient. Selfish conduct is rational as long as it is scientific, that is, undogmatic. Life in the light of reason is egalitarian, simple, and happy. This abstract reasoning led to concrete results, including the French Revolution and its terror and wars. Edmund Burke and Georg Wilhelm Friedrich Hegel blamed the radicalism of the revolution for its deterioration into terror. The reaction to the French Revolution was aggressively hostile to radicalism, to egalitarianism, and even to reason (Hegel).

MARX AND AFTER

Karl Marx wedded the two great modern movements, the radical Enlightenment movement and the Romantic reaction to it. The former had the right vision, and the latter had the historically right view of the obstacle to its realization. Smith-style harmony between individual and society has no place in traditional society. Hence the institution of enlightened equality is an essential precondition for it. The realization of the radical dream of harmony requires civil war. But it is certainly realizable, he insisted.

Marx's critique of radicalism from within is as popular as ever. We are chained to our social conditions, and rationalism cannot break them. Max Weber, the author of the most popular alternative to Marx's ideas, stressed this; so do all the popular radical critics of the ills of modern ("bourgeois") society, chiefly imperialism, racism, and sexism, perhaps also alienation from work. These critics puzzle the uninitiated, as they seem to belabor condemnations of obviously indefensible aspects of modern society. But they do something else; they advance a thesis. Social evils will not go away by sheer mental exercises. Are there any reasonable people who disagree with this thesis? It is hard to say. Perhaps some thinkers still follow the central thesis of the Enlightenment movement. If such people do exist (as seems true but not obviously so), then they are the neoliberals, the Chicago school of economics, which is not confined to economics, as it preaches the idea that a world with free markets still is the best of all possible worlds, even though it is far from ideal (Friedrich A. von Hayek).

VARIANTS OF RATIONALISM

What then is rationalism? Of the alternative views on reason, which can count as variants of rationalism? Consider pragmatism, the view of the useful as the true (Hegel, William James, John Dewey). It is unsatisfactory, because assessments of usefulness may be true or not; but is it a version of rationalism? Consider the traditionalist reliance on the test of time (ordinary-language philosophy; neo-Thomism). The assessment of the relative worth of traditions may be cultural (Martin Buber, Amitai Ezioni; communitarianism) or intellectual (Michael Polanyi, Thomas S. Kuhn; postcriticalism). It is unsatisfactory, as these assessments may be true or not; but is it a version of rationalism? There is no telling. The same holds for appeals to other criteria for truth. These are common sense (Hume, Smith, Thomas Reid, Adam Ferguson, George Edward Moore), the intuitions of Great Men (Johann Gottlieb Fichte, Hegel, Martin Heidegger), higher religious sentiments (Friedrich Schleiermacher, Fyodor Dostoevsky, Leo Tolstoy), and superior tastes (Richard Rorty). Are these variants of rationalism? Do they lead to more reasonable human conduct? The standard claim is that their asset is in their ability to maintain social stability. But in the early twenty-first century stability is unattainable and even deemed inferior to democratic controls (Karl R. Popper).

There is no consensus about whether the counsel to limit reason and admit religion is rationalism proper (Moses Maimonides, Saint Thomas Aquinas, Robert Boyle, Moses Mendelssohn, Polanyi) or not (Immanuel Kant, David Strauss, Ludwig Feuerbach, Sigmund Freud, Bertrand Russell, Adolf Grünbaum). The only consensus is about the defiance of reason (Søren Kierkegaard, Max Stirner, Joseph Arthur Comte de Gobineau, Georges Sorel, Friedrich Nietzsche, D. H. Lawrence, Heidegger, perhaps also Paul Feyerabend). The only generally admitted necessary condition for rationalism is the demand to side with reason. Therefore it is fashionable to limit rationalism by allowing the taking of a single axiom on faith while otherwise swearing allegiance to reason (Polanyi, Richard H. Popkin, Pope John Paul II; fideism). The default view should then be that this allegiance suffices. Add to this the consensus around a necessary condition for this allegiance. It is the critical attitude, openness to criticism, the readiness to admit the success of the criticism of any given view. Consider the view that the critical attitude is sufficient as the default option (Popper) and seek valid criticism of it that may lead to its modification, to the admission of some unavoidable limitations on reason, whether in the spirit of Marx or in that of his critics. The need for this limitation comes from purely philosophical considerations. Hume said that we need induction for knowledge and for practice, yet it is not rational (it has no basis in logic); instead, we rely on it out of habit and necessity and this is the best we can do. A popular variant of this is that because induction is necessary, it is in no need of justification (Kant, Russell). Another variant takes it on faith (Polanyi, Popkin; fideism). Is induction really necessary?

This question is welcome. Since finding alternative answers to a worthy question improves their assessment, they are all worthy. Hence all versions of limited rationalism are welcome—as hypotheses to investigate (Salomon Maimon, Popper). This is the power of the method of always trying out the minimal solution as the default.

CRITICAL RATIONALISM

Critical rationalism is revolutionary because it replaces proof with test; it replaces radical, wholesale dismissal of ideas with the readiness to test piecemeal (Albert Einstein, Popper; reformism). The demand to prove thus yields to the critical attitude (William Warren Bartley III, Willard Van Orman Quine; non-justificationism), recognizing that theories possess graded merit (Einstein, Leonard Nelson, Popper; critical rationalism)—by whatever rule we happen to follow, no matter how tentative. Rules are then hopefully improvable (Charles Sanders Peirce, Russell, Popper; fallibilism). Hence diverse rules may serve as competing criteria or as complementary. Being minimalist, critical rationalism invites considering some older theologians as allies, although not their contemporary followers. Unlike radical rationalism, critical rationalism is historically oriented. (It is the view of rationality as relative to contexts and of truth as absolute, as a guiding principle à la Kant.)

This invites critical rationalism to enlist rational thought as a category of rational action (Ian C. Jarvie and Joseph Agassi). And this in turn invites the study of rationalism as an aspect of extant scientific research. It also invites comparison of the various versions of rationalism as to the degree of their adequacy to this task: take scientific research as it is, warts and all, and examine its merits and defects according to the diverse alternatives. This attitude is new and expressed in various studies of the sociology of science, so-called, that often spread over diverse disciplines, including political science and even criminology no less. This renders a part of the project of rationalism the assessments of the intellectual value of the outcome of research, theoretical, practical, or cultural—or even aesthetic. The only intellectual justification of a scientific theory, said Einstein, is its ability to explain; its best reward is its successor's admission of it as approximate. In this way he stressed that the aim of research is to explain in the hope of approximating the truth. This is open to debate. Social science as a whole may serve as a test case, with the sociology of science at the center of the debate on this matter.

Historically, rationalism doggedly accompanied studies of nature, not social studies. What in these should rationalism approve of? Discussion of this question allowed rationalism to inform the social sciences. A conspicuous example is the vagueness in social studies of the boundaries between philosophy, science, and practice that still invites open discussion. Anything less is below the minimal criterion of the critical attitude.

Critics of minimal rationalism find criticism insufficient, since positive criteria of choice need justification. If so, then rationalism is back to square one. If not, then positive criteria must be tentative, and the issue must shift from their justification to efforts at their improvement. Some do not like this, as it rests on their initial choice that was too arbitrary. They prefer to return to the initial criterion and replace it with the least arbitrary one. They are radicals. The clash is thus between the radical and the critical version of rationalism—as well as between them and fideism.

The agenda of rationalism—in philosophy, in science, or in practice—is the same: heightening the critical attitude, seeking improvement through criticism everywhere. Where is the starting point? How are we to decide on our agenda? Parliamentary steering committees decide on agendas. The commonwealth of learning, however, is its own steering committee. Those concerned to promote rationalism should do their best to put discussions of it high on the public agenda.

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Joseph Agassi

RATIONALITY

Rationality in its ordinary sense is reasonableness. It requires justified beliefs and sensible goals as well as judicious decisions. Scholars study rationality in many ways and adopt diverse views about it.

Some theorists adopt a technical definition of rationality, according to which it is just maximization of utility. This definition is too narrow. It considers only adoption of means to reach ends, that is, instrumental rationality. It also evades a major normative question, namely, whether rationality requires maximization of utility. The definition simply stipulates an affirmative answer.

A traditional theory of the mind takes reason as a mental faculty. It characterizes humans as rational animals because they have the faculty of reason, whereas other animals lack that faculty. According to this tradition, any behavior resulting from reasoning is rational. This account of rationality sets the bar low. Most accounts hold that the products of reasoning must meet certain standards before they qualify as rational. A conclusion, for example, must fit the evidence to be rational. It is not rational simply because it results from an inference. Reasoning must be good to yield rational beliefs reliably.

For simplicity, some theorists take being rational to be the same as being self-interested. Being rational differs from being self-interested, however. Promoting self-interest means doing what is good for oneself. Doing what is good for others promotes their interests, not one's own. Rationality may require some measure of self-interestedness but does not require exclusive attention to self-interest. It permits altruism, as Amartya Sen (1977) and Howard Rachlin (2002) explain.

Epistemologists treat justified belief. Under one interpretation, a justified belief is just a rational belief. However, other interpretations of justification are common because a conventional view takes knowledge to be true, justified belief. Making justification fit into that view of knowledge motivates taking justified belief to differ from rational belief. Children rationally believe many true propositions without having knowledge of them because the grounds for their beliefs do not amount to justification.

Rationality is a normative concept. Principles of rationality state how people should behave rather than how they behave. However, some fields assume that people are rational by and large and then use principles of rationality to describe and explain behavior. For instance, some economic theories assert that consumers make purchases that express their preferences. They take this as a fact about consumers' behavior rather than as a norm for it. Psychologists seeking to infer a person's beliefs and desires from the person's behavior may assume that behavior maximizes utility. The assumption simplifies inference of beliefs and desires. Several prominent representation theorems show that if a person's preferences concerning acts meet certain axioms, such as transitivity, then one may infer the person's probability and utility assignments (given a choice of scale) from the person's preferences, under the assumption that preferences concerning acts agree with their expected utilities. Richard Jeffrey ([1965] 1983) presents a theorem of this sort.

PHILOSOPHY AND RATIONALITY

Philosophy treats rationality because it is the most important normative concept besides morality. Understanding how a person should conduct her or his life requires a thorough understanding of rationality. Being a rational person requires being sufficiently rational in the various aspects of one's life. Common principles of rationality attend to beliefs and desires and to the decisions they yield. Some principles evaluate character traits and emotions. They judge, for example, that some fears are rational and that others are irrational. Principles of rationality extend from individuals to groups. Committees may pass rational or irrational resolutions. Political philosophy evaluates social contracts for rationality. Mancur Olson (1965) investigates rational collective action and the conditions that foster it.

A traditional metaphysical question asks for the grounds of principles of rationality. What makes consistency a requirement of rationality? Are the principle's grounds conventions or something more universal? A common answer claims that natural properties realize normative properties. Consistency increases prospects for true beliefs.

A traditional practical question asks for reasons to be rational. A common answer is that being rational yields the best prospects (with respect to one's evidence) for meeting one's goals and so achieving a type of success. Decisions that maximize expected utility are more likely to be successful than decisions that do not maximize expected utility.

Some philosophers hope to derive principles of morality from principles of rationality. Kantians, for example, hold that a rational person acts in accord with moral principles. Hobbesians hold that the legitimacy of a government derives from the rationality of the social contract that creates it. Rawlsians hold that principles of justice emerge from a hypothetical social contract rational to adopt given ignorance of one's position in society.

BELIEF AND INFERENCE

A general principle states that rationality is attainable. Its attainability follows from the familiar principle that "ought" implies "can." Well-established principles of rationality also treat formation of belief and inference. Consistency is a noncontroversial requirement. Holding inconsistent beliefs is irrational unless some extenuating factor, such as the difficulty of spotting the inconsistency, provides an excuse. Perceptual beliefs are rational when the processes producing them are reliable. Vision in good light yields reliable judgments about the colors of objects. Logic describes in meticulous detail patterns of inference that are rational. For example, if one believes a conditional and believes its antecedent, then believing its consequent is a rational conclusion. Repeated application of rules of inference to prove theorems in logic requires sophistication that ordinary rationality does not demand. Rationality requires an ideal agent to believe each and every logical consequence of her or his beliefs. Its requirements for real people are less demanding. (For a sample of principles of rationality concerning belief, see Foley 1993; Halpern 2003; and Levi 2004.)

Rationality governs both deductive and inductive inference. Principles of statistical reasoning express principles of rational inductive inference. If one knows that an urn has exactly eighty red balls and twenty black balls, then it is rational to conclude that 80 percent is the probability that a random draw will yield a red ball. Given a statistical sample drawn from a population, principles of statistical inference attending to the size of the sample and other factors state reasonable conclusions about the whole population.

PREFERENCES

Preferences may arise from partial or complete consideration of relevant reasons. Common principles of rational preference apply to preferences held all things considered.

The principle of transitivity requires preferring A to C given that one prefers A to B and also prefers B to C. The principle of coherence requires having preferences among acts that may be represented as maximizing expected utility. The definition of preference affects the force of such principles. The ordinary sense of preference acknowledges the possibility of weakness of will and acting contrary to preferences. However, some theorists for technical reasons define preferences so that a person acts according to preferences, so telling a person to pick an option from the top of her or his preference ranking of options has no normative force—she or he does that by stipulation.

The principle of consumer sovereignty puts basic preferences beyond criticism. Some basic preferences are irrational, however. Forming preferences among ice cream flavors one has not tasted may be irrational. Having a pure time preference may be irrational. That is, it may be irrational to prefer the smaller of two goods just because it will arrive sooner than the larger good. Certainty of having the larger good if one waits for it is a strong reason for waiting.

The chief principle of rational decision making is to pick an option from the top of one's preference ranking of options. If some options are gambles, a supplementary principle says to prefer one option to another option just in case its expected utility is higher than the expected utility of the other option. J. Howard Sobel (1994) and Paul Weirich (2001) analyze such principles of rational choice.

DECISION MAKING

Rationality evaluates free acts that an agent fully controls. Decisions are in this category; so are acts such as taking a walk. Rationality evaluates acts an agent controls directly by comparing them with rivals and evaluates acts an agent controls indirectly by evaluating their components. An agent directly controls a decision, and so rationality evaluates it by comparing it with its rivals. An agent indirectly controls taking a walk, and so rationality evaluates it by evaluating its directly controlled components. The rationality of a series of acts, such as having dinner and going to a movie, depends on the rationality of its temporal components.

Game theory, expounded in classic texts by John von Neumann and Oskar Morgenstern (1944) and R. Duncan Luce and Howard Raiffa (1957), addresses decisions people make in contexts where the outcome of one person's decision depends on the decisions that other people make. Strategic reasoning looks for combinations of decisions that form an equilibrium in the sense that each decision is rational given the other decisions. A common principle for such strategic situations recommends making a decision that is part of an equilibrium combination of decisions. Edward McClennen (1990), Robert Stalnaker (1998, 1999), Weirich (1998), Andrew Colman (2003), and Michael Bacharach (2006) conduct critical appraisals of principles of rationality widespread in game theory.

A principle of rationality may be controversial. A common pattern for controversy begins with a claim that in some cases thoughtful people fail to comply with the principle. Some respond that in those cases people are rational and the principle is faulty. Others respond that the principle is fine and people are irrational. Still others hold that people in the problem cases actually comply with the principle, contrary to the initial claim.

For example, Amos Tversky and Daniel Kahneman (Tversky and Kahneman 1982) present cases in which people form judgments that fail to comply with the probability axioms. In their study a story describes a young woman as a political activist and a college graduate with a philosophy major. People asked to speculate about the woman's current activities may put the probability of her being a feminist and a bank teller higher than the probability of her being a bank teller only. This ignores the law that the probability of a conjunction cannot be higher than the probability of a conjunct. Some theorists may conclude that people are irrational in their probability judgments, others that people have in mind the probability that the woman is a feminist given that she is a bank teller rather than the probability of the conjunction that she is a feminist and is a bank teller. In this particular example, few dispute the law of probability concerning conjunctions.

Kahneman and Tversky (Kahneman and Tversky 1979) also present cases in which it seems that people fail to comply with the principle to maximize expected utility. A person may prefer a gamble that pays a guaranteed \$3,000 to a gamble that pays \$4,000 with probability 80 percent and \$0 with probability 20 percent. The same person may prefer a gamble that pays \$4,000 with probability 20 percent and \$0 with probability 80 percent to a gamble that pays \$3,000 with probability 25 percent and \$0 with probability 75 percent. Let U stand for utility. If the first preference agrees with expected utilities, it seems that $U(\$3{,}000) > 0.80\,U(\$4{,}000)$. If the second preference agrees with expected utilities, it seems that $0.20\,U(\$4{,}000) > 0.25\,U(\$3{,}000)$ and hence, multiplying both sides by 4, that $0.80\,U(\$4{,}000) > U(\$3{,}000)$. Because the inequalities for the two preferences are inconsistent, it seems impossible that both preferences agree with expected utilities.

One response is to reject the principle of expected utility maximization. Another response denies the rationality of having the pair of preferences. A third response claims that people care about factors besides monetary outcomes. They may, for instance, value certainty and the elimination of risk. Then the pair of preferences may agree with broadly based expected utilities without implying inconsistent inequalities.

RATIONAL CHOICE THEORY

Rational choice theory uses principles of rationality to explain behavior. The social and behavioral sciences and even literary interpretation employ it. Proponents claim that rational choice theory yields insightful analyses using simple principles of rational behavior. Critics claim that those simple principles are too austere to adequately characterize human behavior. This debate turns on the principles of rationality at issue. Some rational choice theorists may use only principles of instrumental rationality. In that case, evaluation of basic goals is missing. Other rational choice theorists use more comprehensive principles of rationality to extend the theory's scope. They provide for principles that evaluate basic goals.

Various applications of rationality yield distinct types of rationality, such as bounded, procedural, and substantive rationality. Herbert Simon (1982) is famous for treating these types of rationality. Principles of bounded rationality set standards for people and other nonideal agents with limited cognitive power. Contrasting principles set high standards for ideal agents with unlimited cognitive power. Rationality may require ideal agents to maximize utility, whereas it requires real people to satisfice, that is, to adopt the first satisfactory option discovered. The principle to satisfice is a principle of procedural rationality because it recommends a procedure for making a decision and does not characterize the content of the

decision it recommends. A substantive principle may recommend making a decision that maximizes utility. Whether a decision maximizes utility depends on its content. It depends on the prospects of acting according to the decision. Compliance with a substantive principle of rationality, such as utility maximization, may require a procedure that is more trouble than its outcome justifies. Spending hours to make a move in a chess game may sap the game's fun. Sometimes thorough calculation is too costly, and one should make a quick decision. It may be sensible to adopt the first satisfactory course of action that comes to light instead of running through all options, calculating and comparing their utilities.

An evaluator may apply a substantive principle to an act already performed. The principle judges the act without regard for the process that produced it. The principle of utility maximization gives an optimal option high marks whether it arose from a thorough or a hasty review of options. The principle evaluates the option adopted and not the method of its adoption. In contrast, an agent applies a procedural principle to discover an act to perform. A rational procedure may culminate in an act that is not optimal. Rationality does not require calculating in all cases. In many cases, weighing pros and cons, computing utilities, and comparing all options is not a rational way to make a decision—spontaneity may be appropriate. A rational decision procedure takes account of circumstances. Brian Skyrms (1990), Ariel Rubinstein (1998), Gerd Gigerenzer (2000), Gigerenzer and Reinhard Selten (2000), Weirich (2004), and John Pollock (2006) pursue these themes.

Principles of rationality vary in the scope of their evaluations of acts. Some principles evaluate a decision for instrumental rationality, taking for granted the beliefs and desires that generate it. Others evaluate the beliefs and desires along with the decision. Principles of rationality also adopt conditions. A principle may evaluate a decision, assuming unlimited time and cognitive resources for reaching it. Idealizations play a crucial role by generating an initial theory with simplified principles of rationality. Relaxing idealizations later leads to more general principles and to a more realistic theory.

Principles of conditional rational also provide a way of putting aside mistakes. A person's act may be rational given his or her beliefs, though his or her beliefs are mistaken and if corrected would support a different act. Evaluating his or her act for nonconditional rationality requires a complex assessment of the significance of the mistaken beliefs. Conditional rationality has an interesting structure resembling the structure of conditional probability. The rationality of an act given a background feature is not the rationality of the conditional that if the background feature holds then the act is performed. Nor is it the truth of the conditional that if the background feature holds then the act is rational.

Theoretical rationality treats belief formation, and practical rationality treats action. A theory of practical reasoning formulates rules of inference, leading to a conclusion that an act should be performed. It classifies reasons for acts and assesses their force. (For a survey, see Parfit 1984; Bratman 1987; Broome 2001; and Bittner 2001.)

Some arguments that degrees of belief should conform with the probability axioms point out that failure to comply leaves one open to a series of bets that guarantees a loss, that is, a Dutch book. This observation yields pragmatic reasons for compliance with the axioms. Some theorists hold that the probability axioms require a purely epistemic justification.

The principle to maximize expected utility uses probability, and so there are grounds for holding that probability is not purely epistemic and that its axioms do not need a purely epistemic justification. In contrast, probability's role in assessing an option's prospects requires that it represent only the strength of evidence. If it is sensitive to an agent's goals, even cognitive goals, then using it to calculate an option's expected utility counts the agent's goals twice: one time in calculating the utilities of the option's possible outcomes and a second time in calculating the probabilities of the possible outcomes. A purely epistemic justification of the probability axioms may be required given probability's role in the calculation of an option's expected utility. It may be required because of probability's role as a guide to action.

Studies of rationality are multidisciplinary because several fields have a stake in their outcomes. Progress with theories of rationality is broadly rewarding, and many scholars are contributing.

SEE ALSO *Altruism; Behavior, Self-Constrained; Collective Action; Economics, Experimental; Epistemology; Expected Utility Theory; Game Theory; Information, Economics of; Kant, Immanuel; Logic; Maximization; Minimization; Morality; Optimizing Behavior; Philosophy; Probability Theory; Psychology; Random Samples; Rawls, John; Risk; Sen, Amartya Kumar; Simon, Herbert A.; Social Contract; Theory of Mind; Utility, Von Neumann-Morgenstern*

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Paul Weirich

RATIONALITY, BOUNDED

SEE *Rationality.*

RATIONALITY, PROCEDURAL

SEE *Rationality.*

RATIONALITY, SUBSTANTIVE

SEE *Rationality.*

RATIONING

SEE *Wage and Price Controls.*

RATIONING MODELS

SEE *Barro-Grossman Model.*

RAWLS, JOHN

1921–2002

John Rawls was one of the leading political philosophers of the twentieth century. His magisterial work, *A Theory of Justice,* was published in 1971. That book was deeply influenced by philosophers in the social contract tradition, including John Locke, Jean-Jacques Rousseau, and especially Immanuel Kant. *A Theory of Justice* stands with Thomas Hobbes's *Leviathan* and Locke's *Second Treatise* as a classic statement of the contract view. In Rawls's later work, epitomized in his book *Political Liberalism*, he rethought and clarified some of his earlier positions and made explicit a highly original philosophical methodology. In his last book, *The Law of Peoples*, Rawls used the social contract to approach problems of international justice.

John Rawls was born in Baltimore, Maryland, in 1921. He received his BA in philosophy from Princeton in January 1943. He entered the army shortly after graduating from college and saw combat in the Pacific theater during World War II. After his discharge from the military, Rawls returned to Princeton, where he received his doctorate in philosophy in 1949. In that year, he also married Margaret Fox, to whom he remained married until his death. Rawls spent 1950–1952 as an instructor at Princeton and 1952–1953 on a Fulbright Fellowship at Oxford. Upon his return to the United States, Rawls joined the philosophy department at Cornell. He moved to the Massachusetts Institute of Technology in 1960 and to Harvard in 1962. Rawls remained a member of the Harvard faculty until he retired in 1991. He taught and published in retirement until ill health made it impossible for him to continue working. He died on November 24, 2002.

Rawls took the central problem of contemporary political philosophy to be that of framing a conception of justice that would be appropriate for liberal democracies existing under modern conditions. At the heart of a conception of justice, Rawls thought, are norms for distributing the "primary goods" generated by social cooperation and distributed by society's "basic structure." These goods are rights, liberties, income, wealth, opportunity, and the social bases of self-respect. The basic structure is the set of a society's most important economic, legal, and political institutions. In *A Theory of Justice*, Rawls defended two principles of justice governing the basic structure's distribution of these goods: (1) Each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of liberty for all. (2) Social and economic inequalities are to be arranged so that they are both (a) to the greatest expected benefit of the least advantaged and (b) attached to offices and positions open to all under conditions of fair equality of opportunity.

Rawls defended these principles by arguing that they are the solution to an important choice problem. More specifically, he argued that they would be adopted in a version of the social contract that he called "the original position." In the social contract theories of Hobbes and Locke, the contract is arrived at in "the state of nature." Both Hobbes and Locke imagine this state to be one in which there is no government and in which human beings have God-given authority over themselves, but in which they also know that living under a common human authority would be advantageous. The choice problem confronting parties in the state of nature, according to Hobbes and Locke, is that of determining what form that authority should assume. Hobbes famously argued that parties faced with this problem would choose to delegate their powers to an absolute sovereign, while Locke defended limited sovereignty. In the original position, parties do not choose a form of government. Instead, they choose principles of justice to regulate their society. They choose from a menu of principles by asking which ones would guarantee them the greatest stock of primary goods if basic institutions conformed to them.

In the states of nature described by Hobbes and Locke, parties are free and are roughly equal in power. Despite their equality, they have information about themselves and their situation that they could, in principle, use to their advantage. In Locke's theory, for example, parties could know the extent of their property holdings, since Locke held that property rights are established before agreement on the terms of the social contract is reached. Differences in the parties' holdings could give some an advantage over others, and so parties' knowledge of differences in their holdings could affect the outcome of the contract.

According to Rawls's description of the original position, parties in it are deprived of all information about themselves and of all but the most general information about society. Given these restrictions on information, Rawls argued that it would be rational for parties in the original position to decide on principles using the maximin rule of rational choice. This rule enjoins choosers to select the option that guarantees the best worst outcome. Applied to the original position, maximin enjoins parties to maximize the stock of primary goods they would enjoy if they were in the worst-off social position. Rawls argued that parties choosing in the original position, using maximin, would adopt his two principles. The first principle guarantees equal liberty. The second clearly imposes a strong restriction on economic inequality and requires that all have equal opportunities to secure positions of advantage. Equality of opportunity, in turn, requires far

more than the absence of legal barriers to such positions. Rawls believed that social and economic class of origin should not affect life prospects. Fair equality of opportunity therefore requires systems of education and training sufficient to ensure that developed talents are widely dispersed. Equal liberty has long been a part of the liberal tradition. Part of Rawls's own pioneering contribution was to show the resources of the social contract tradition could be deployed to defend equality of opportunity and highly economic egalitarianism as well.

The lack of information available in the original position, effected by what Rawls called "the veil of ignorance," struck many rational choice theorists as an implausible stipulation. Rawls defended the informational constraints by arguing that the veil of ignorance merely makes vivid a condition we intuitively recognize as a plausible one to impose on our own reasoning about justice: Our thinking about what is right should not, we think, be distorted by information about what is to our own advantage. The veil of ignorance guarantees that the parties' reasoning about justice will not be distorted in this way. Because parties in the original position are free, equal, and unbiased, Rawls argued, they are situated fairly. Because they are situated fairly, he concluded, the principles they would choose are fair. Rawls therefore called his conception of justice "justice as fairness."

Modern liberal democracies exist under conditions of religious and philosophical pluralism. In *Political Liberalism* and other later work, Rawls argued that justice as fairness could secure agreement about basic justice among citizens of democracies in these conditions. It could do so because justice as fairness does not begin with metaphysical theses about the human person or the human good that are drawn from any one religious or philosophical view. Rather, it begins with ideas about the person, about political argument, and about social cooperation that are implicit in the public culture of democratic societies. For example, Rawls argued that the conditions of the original position "represent" fundamental elements of human moral personality. Rawls's argument that political philosophy should begin with ideas latent in public culture seemed to some philosophers to introduce a highly questionable method into political theorizing. But, Rawls countered, liberal thinkers in the early modern period sought a basis for political agreement that could be shared by citizens of diverse religions. To claim that political philosophy should not presuppose the truth of a contentious metaphysical theory is to do no more, he maintained, than to extend their principle of toleration from religion to philosophy itself. Because the principle of religious toleration is so much a part of the liberal tradition, Rawls's imaginative extension of the principle of toleration—like his defense of economic egalitarianism and fair equality of opportunity—counts as an important part of his enduring bequest to that tradition.

SEE ALSO *Democracy; Hobbes, Thomas; Justice; Justice, Distributive; Locke, John; Maximin Principle; Rousseau, Jean-Jacques; Social Contract; State of Nature*

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Paul Weithman

REACTANCE THEORY

Research in social influence demonstrates that individuals often move in the direction demanded by a leader (obedience) or modeled by a majority (conformity), and cognitive dissonance theory suggests that individuals will depreciate the items and activities that are denied them ("sour grapes"). However, despite the allure of cognitive consistency and the power of the leader and majority, there are many cases in which people resist influence and even move in the opposite direction ("boomerang"). American psychologist Jack Brehm's (1966; Brehm and Brehm 1981) theory of psychological reactance offers an explanation for this obstinate behavior and identifies the conditions under which individuals will be motivated to resist compliance.

Brehm argues that individuals have a set of "free behaviors" that they believe they can engage in at present or some time in the future. Behavioral freedoms vary in importance, with some being highly important because they deal with critical survival. Stephen Worchel (2004) suggested that these freedoms help define the individual's self-identity, and many are based on the positions one holds in groups. Jack Brehm and Sharon Brehm (1981) argued that these freedoms help establish the individual's sense of control over his or her environment. Events that threaten or eliminate behavioral freedom create a motivational state (reactance) aimed at restoring the freedom(s) in question. The degree of reactance is determined by the importance of the threatened/eliminated freedom(s) and the degree of threat. A threat or elimination of freedom results in an increase of attractiveness of the forbidden act

and the motivation to engage in that behavior. Hence, pressure to engage in a specific act may arouse reactance because this pressure threatens the individual's freedom to adopt other positions or engage in other behaviors. The result will be an increase in the motivation to embrace the forbidden alternative.

For example, Thomas Hammock and Brehm (1966) led children to believe that they could choose between a number of candy bars. When the experimenter threatened the freedom to choose candy bar X by stating that candy bar X should not be chosen, children reacted by choosing the item. In another situation, the importance of the freedom to play with a toy was varied by pairing it with a similar type of toy (low importance) or a different type of toy (high importance). The degree of threat to play with a specific toy was manipulated by placing it behind either a high barrier (high threat) or low barrier (low threat). The combination of high importance and high threat increased the likelihood of children choosing the toy behind the barrier (Brehm and Weinraub 1977). And Worchel and Brehm (1970) found that a target audience was more likely to adopt a forbidden position (boomerang) when the communicator threatened their freedom by explicitly telling them that they could not adopt this position.

Reactance theory has also been applied to explicate findings in a variety of other areas. For example, the empirical foundation of cognitive dissonance theory was research demonstrating that after choosing between two relatively attractive items, individuals enhanced the attractiveness of the chosen item and depreciated the rejected item (Brehm 1956). However, closer inspection of the behaviors in this free-choice paradigm reveals that prior to the decision individuals often pay closer attention to the item they eventually reject, and immediately after the choice the rejected alternative increases in attractiveness and the chosen alternative's attractiveness decreases (regret). These effects have been explained by suggesting that choosing an alternative eliminates the freedom of the individual to have the rejected alternative, thereby creating reactance.

In another realm, research has demonstrated that an item (a commodity or individual) becomes more attractive when it becomes more scarce, distant, or difficult to obtain. Each of these conditions can be viewed as threatening the individual's freedom to possess the item and as arousing a state of reactance. Similar reasoning has been applied to explain why censored material is often more desired and influential than material readily available to the individual. Other research has shown that an individual's freedom may be threatened when he or she observes the freedom of a closely related group member being threatened (implied threat), and freedom may be restored (implied restoration) when the individual observes a group member regaining his or her freedom (Worchel and Brehm 1971). In a unique twist, reactance theory has been applied to explain why desired behavior change in therapy settings may be achieved by discouraging the desired behavior (paradoxical intervention), and to caution health communicators about overly strenuous efforts to dissuade an audience from engaging in risky behaviors (e.g., the use of drugs, unprotected sex) that audience members view as being important options.

Overall, reactance theory points out that for every force pushing in one direction, there will be a counterforce moving people away from this position. The counterforce will be strongest when a negated position (or behavior) is perceived as important and as comprising a free behavior.

SEE ALSO *American Psychological Association; Behaviorism; Censorship; Cognitive Dissonance; Developmental Psychology; Evolutionary Psychology; Happiness; Optimism/Pessimism; Resistance; Social Cognition*

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Stephen Worchel

READINESS, SCHOOL

There are two universal principles regarding the readiness of children for formal education. They are (1) that children will learn most effectively if they have certain personal characteristics, and (2) that teachers must adjust their instruction to accommodate those features. Many lists of the specific factors that constitute children's readiness for conventional instruction have been drafted. These tallies include, among other things, children's interest in books and reading, their fondness for conversation, curiosity about the world, and the quality of their oral language, including the extent of their knowledge of the meanings of words.

Also included on these lists are youngsters' emotional, psychological, and physiological characteristics, how well they function socially, and the economic status of their families. The last factor is considered to be especially important: Children in low-income families frequently suffer not only from a lack of the necessities of daily life, but also from inattention from their parents. Aggravating this situation is the fact that parents of such children often are not married. It is found at all socioeconomic levels that children raised in married, two-parent families display greater readiness for formal education than do youngsters brought up by single parents.

In the United States an educational program called Head Start was established in 1965 to benefit four-year-old children from low-income families. A major assumption of Head Start is that many children have handicaps to learning due to deficits in the culture of poverty, which encompasses issues such as substance abuse by parents, homeless families, little if any family health care, lack of prenatal care for mothers, neighborhood crime, and the relatively large number of children in foster care. Head Start programs have not always succeeded in one of their main goals: to raise children's later standardized academic test scores. However, there are indications that children's attendance in Head Start classes produces other favorable results such as greater social maturity, a higher rate of high school graduation, fewer absences from school, greater self-esteem, and more positive aspirations for life. As a consequence, Head Start has not lost any significant financial support from the U.S. federal government.

There also is widespread recognition that all children need to be ready to perform adequately in grades one through high school. Students who display significant difficulties in learning at these grade levels usually are enrolled in small-sized "special education" classes, which acknowledge that some students are not able to take advantage of regular school offerings, and that teachers must be prepared to help them overcome specific handicaps to learning that they have either inherited or developed. There is disagreement about the most time- and cost-effective methods for teaching these students. The two most prevalent special-education teaching methods are the academic skills and knowledge approach and the child-centered method.

Advocates of the former insist that students' acquisition of discrete academic knowledge and skills must be the paramount goal of schools. Hence, they argue for "direct, systematic, intensive, early, and comprehensive" (DISEC) instruction of a prearranged hierarchy of discrete scholastic skills and knowledge. This view assumes that some students enter schools without having mastered the standard English grammar that is considered to be necessary for them to become effective learners. Under the DISEC method, children's knowledge about basic academic subject matter and skills, sometimes called "cultural literacy," is developed in as interesting a manner as possible. This itself is not a controversial position, but the kind of learning assessment favored by DISEC teachers of children's learning has been disputed. Most DISEC teachers strongly defend standardized tests designed to measure students' subject matter knowledge and their mastery of standard English grammar.

Teachers who oppose DISEC instruction conduct their classes in a very different way. Their first action is to determine what children are interested in learning. If a given subject matter is found to be meaningful to children, it will be selected for their further attention. In addition, individual children are allowed to pursue queries that excite their particular fancies. A goal of the non-DISEC teacher is to develop children's abilities to explain and find solutions for everyday dilemmas. In these classes the conventional skills of reading, spelling, handwriting, written composition, speaking, and listening are taught only when they are needed to aid a student's process of solving problems. The traditional subjects science, history, geography, mathematics, literature, art, and drama also are only engaged by students when and if they are deemed useful to finding solutions to questions that they themselves have decided to resolve. Also, non-DISEC teachers usually honor nonstandard-English spoken dialects as valid and legitimate idioms.

Non-DISEC teachers generally are strongly opposed to the administration of standardized tests of students' academic skills and knowledge because these tests do not measure the kinds of skills and knowledge their pupils acquire from problem-solving activities. Thus, whereas DISEC teachers view standardized tests as allies in their instructional endeavors, non-DISEC teachers declare them to be unacceptable because they hold all students to uniform standards of learning.

Teachers opposed to DISEC instruction also often deplore what they consider to be unnecessary stress on children to regulate their mental behavior at earlier and

earlier ages. In this respect, they voice doubts as to the merits of the conventional homework that younger students ordinarily are required to complete. Traditional homework exercises are deemed an unsatisfactory substitute for children's free play, the exercise of their creative imaginations outside of school, and intimate interactions with their parents. Both positive and negative findings about the merits of homework have been reported.

Children's readiness for schooling is a complex matter, and educators still hold strikingly contradictory viewpoints on the subject. Confounding the issue is the fact that empirical as opposed to subjective evidence about it often has been contradictory.

SEE ALSO *Achievement Gap, Racial; Children; Education, USA; Head Start; Head Start Experiments; Schooling; Schooling in the USA; Self-Esteem; Standardized Tests*

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Patrick Groff

REAGAN, RONALD
1911–2004

Ronald Wilson Reagan, the fortieth president of the United States, held office from 1981 to 1989. Reagan was born in Tampico, Illinois, on February 6, 1911. In 1937 he started a thirty-year career in film and television, and his time in Hollywood engendered his interest in politics. Upon leaving military service at the end of World War II (1939–1945), Reagan was an active member of the Democratic Party and had been a supporter of U.S. presidents Franklin Roosevelt (1882–1945) and Harry Truman (1884–1972). Newly out of uniform, he engaged in union activity with the Screen Actors Guild and was its president for six years. Reagan's experiences of the postwar red scare in the movie industry during the heyday of McCarthyism worked to solidify his staunch anti-Communist orientation. In 1952, owing to the new trajectory of his career and accompanying events, Reagan publicly renounced his Democratic Party affiliation and became a conservative Republican. His extensive acting experience, his service as president of the Screen Actors Guild, and his tenure as public spokesman for General Electric all prepared Reagan well for his entrance into California politics as state governor, and then beyond onto the national stage. Reagan's political style is noted for his ability as a highly effective public speaker and his successful use of the presidential pulpit to advance his policy agenda, skills that earned him the moniker of "the great communicator."

At the age of fifty-five, Reagan defeated the Democratic incumbent and was sworn in as California governor in 1967. He was reelected in 1970. His tenure as governor was marked by his sensitivity to the need to compromise his conservatively driven policies so as to allow enactment of legislation, as well as his management style of delegation and decentralization. Reagan's aides exercised great authority and served as important formulators of policy, a management orientation that later marked his presidency and would be criticized subsequently as excessive abdication by Reagan of his presidential responsibilities. In the late 1960s, he took a firm and aggressive stance against student protesters at colleges, most notably at the University of California at Berkeley in 1969, by calling in the national guard and state police to deal with demonstrators.

Reagan secured the Republican presidential nomination in 1980 and chose George H. W. Bush as his vice-presidential running mate. Reagan's campaign stressed the economy, governmental growth, the budget deficit, declining U.S. prestige abroad, and the threat of the Soviet Union. Winning the presidency with 51 percent of the popular vote and 489 electoral college votes, Reagan took office with a new Republican majority in the Senate but with a House of Representatives controlled by Democrats. In 1984 Reagan won reelection with a landslide victory over Democratic opponent Walter Mondale, obtaining a record 525 electoral votes and 59 percent of the popular vote.

The first year of Reagan's presidency is regarded as his most significant domestically. After recovering quickly from an assassination attempt in early 1981, Reagan advanced his supply-side economic policies through Congress. Showing political skill, he was able to get congressional enactment of sweeping tax reductions that were designed to induce economic growth. Congress passed most of the president's proposals, including a cut in income-tax rates, a substantial increase in defense spending, and a drastic shrinking of nondefense, social-welfare expenditures. The purpose of these policies was to drive economic growth, and the resulting increase in governmental revenue via taxes was expected to offset the deficit and produce a balanced federal budget. The actual results were not as envisioned: Tax cuts and defense spending

pushed the United States into becoming the world's biggest debtor nation, and the federal budget deficit and national debt exploded. Reagan did, however, preside over the longest peacetime economic expansion in American history.

With a Republican-controlled Senate, Reagan effectively and efficiently used his judicial appointment power to advance his conservative social agenda at all levels of the federal judiciary by nominating only "the ideologically faithful." By the time of his departure from the White House in 1989, Reagan had appointed over 60 percent of all federal judges and four U.S. Supreme Court justices, a highly significant legacy.

In foreign affairs, Reagan's stern anti-Communist posture in his first term evolved into one of relative conciliation and rapprochement in his second term. His building of a line of communications with the new Soviet leader Mikhail Gorbachev through several summit meetings was pivotal in the reduction of tension between the two superpowers. This development ostensibly ushered in a new era of U.S.-Soviet relations. In addition, Reagan successfully enhanced American power in the international arena through a military buildup and the use of force in selected regional conflicts.

Reagan will be particularly remembered for bringing forth a new tide of conservatism to American politics. Domestically, Reagan changed the face of campaigning and governing with effective imagery, symbols, and video. He emphasized personal warmth and charisma, and forged success through economic growth, tax cuts, and tax reform. His legacy has been tempered by his administration's long-term budget deficits and national debt concerns, and by the Iran-Contra scandal, in which presidential aides violated federal law in an effort to advance foreign policy endeavors that Congress had prohibited. Many of the tenets of Reagan's 1980 campaign, including reducing the size and scope of government and balancing the federal budget, were not achieved.

Reagan left office in 1989. He was diagnosed in 1994 with Alzheimer's disease, a condition typically associated with the elderly in which the mental capacity and intellectual functions decline due to deterioration of brain cells. Some analysts assert that early signs of this illness (such as memory troubles) could be observed while Reagan was still in office, but this is a point of contention and speculation. Ronald Reagan passed away at his home in Los Angeles, California, on June 5, 2004. He remains a revered figure in the Republican Party and among adherents of conservative ideology.

SEE ALSO *Berlin Wall; Bush, George H. W.; Gorbachev, Mikhail; Iran-Contra Affair; McCarthyism; Neoconservatism; Presidency, The*

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REAL INCOME

Many societies strive to improve the well-being of their members by increasing their incomes. But an increase in one's income (wage, pension, and so forth) does not necessarily mean that he or she is better off unless inflation is appropriately factored in. This is because inflation reduces purchasing power, the amount of goods or services that one can afford with a given amount of income, thus eroding some or all of one's nominal income gains. In order to make an accurate assessment of the effect of an income change on well-being, it is important to consider *real income* (income in constant dollars), which takes inflation into account, instead of *nominal income* (income in current dollars), which does not.

MEANING AND ORIGIN OF THE CONCEPT

Real income of a particular individual or household is the income that is adjusted for the effects of inflation on purchasing power. To see the rationale for inflation adjustments, suppose that your nominal income increases by 50 percent (from $200 to $300) this year over last year, but the price per bottle of your favorite drink increases by 25 percent (from $2.00 to $2.50) over the same period. With last year's lower income ($200) you could afford $200 / $2.00 = 100 bottles of the drink at that year's price ($2.00). With this year's higher income ($300), you can afford $300 / $2.50 = 120 bottles of the drink, which is more than the 100 bottles you could afford with last year's income, indicating that you are better off (i.e., your real income has increased). However, if the price of a bottle of the drink increases by 100 percent (from $2.00 to $4.00), you can afford $300 / $4.00 = 75 bottles of the drink with this year's higher income ($300) at this year's higher price ($4.00), which is less than the 100 bottles you could afford with last year's lower income ($200) at last year's lower price ($2.00). Hence you are worse off this year relative to last year, even though your income has increased, because your real income has decreased. You are better (worse) off if the percentage increase in your nominal

income is greater (less) than the percentage inflation rate because the percentage growth in your real income (i.e., the percentage growth in your nominal income minus the percentage inflation rate) is positive (negative). A fall in your nominal income does not necessarily imply that you are worse off as long as the percentage decrease in the price level is higher than the percentage decrease in your nominal income, because the percentage change in your real income is positive. In summary, you are better off as a result of an increase or decrease in your nominal income provided that the percentage change in your real income is positive. If the inflation rate is positive, doubling nominal income this year over last year will less than double the corresponding real income. If the inflation rate is zero, however, doubling nominal income also doubles the corresponding real income.

Real income could be viewed in two equivalent ways. Again suppose that your nominal income rises by 50 percent (from \$200 to \$300) this year over last year but the price per bottle of your favorite drink rises by 25 percent (from \$2.00 to \$2.50) over the same period. First, with the \$200 you could afford \$200 / \$2.00 = 100 bottles of the drink at last year's price (\$2.00). However, to buy the same 100 bottles of the drink at this year's price (\$2.50), you require \$250. Because your income has increased from \$200 to \$300, your real income has increased by only \$300 – \$250 = \$50, a 25 percent increase from your original income of \$200 last year (i.e., less than the 50 percent increase in your nominal income). Second, because your nominal income increases by 50 percent (from \$200 to \$300) and the price of the drink increases by 25 percent (from \$2.00 to \$2.50), your real income increases by 50 – 25 = 25 percent, which also amounts to \$50.

Real income is relevant in wage contract negotiations. An important goal of unions is to protect the real wages of their members. Achieving this goal involves determining the appropriate amount of nominal income adjustment that would protect union members' real incomes in inflationary situations. To demonstrate the adjustment process, suppose that your nominal wage increases from \$50,000 to \$52,000 this year over last year, but the price of a given basket of goods and services that you buy increases by 10 percent. With the 10 percent price increase, you would require \$50,000 × 1.10 = \$55,000 this year to afford the same basket as last year. Because your new nominal income is only \$52,000, your real income will have decreased by \$55,000 – \$52,000 = \$3,000, which is 6 percent lower than your nominal wage of \$50,000 last year. This can also be confirmed by noting that the percentage increase in your nominal wage from \$50,000 to \$52,000 is 4; the percentage increase in the price level is 10; hence the percentage increase in your real wage is 4 – 10 = –6, indicating a 6 percent decrease in your real wage. To maintain the same real income, your nominal income has to be increased (or indexed) by 10 percent, the same as the inflation rate (i.e., from \$50,000 to \$50,000 × 1.1 = \$55,000). The same principle is used to index pensions, welfare allowances, and other incomes in order to maintain desired real income levels. In general, if real income decreases by, say, 5 percent, nominal incomes must be increased by 5 percent in order to maintain the same real income as before.

As noted above, adjusting nominal income to maintain some desired level of real income requires information about the inflation rate. However, practical difficulties arise in the measurement of inflation. In practice, the inflation rate is computed from a price (or cost-of-living) index, a summary measure describing relative price changes between some reference (base) period and another (current) period. For purposes of indexing wages, pensions, and so on, the inflation rates are commonly derived from a Consumer Price Index (CPI). The CPI is based on the prices of a representative "basket of goods and services" purchased by households. The economists M. C. McCracken and E. Ruddick (1980) provide a simple exposition of the nature and practical difficulties associated with CPI as an inflation measure. The economic statistician Roy Allen (1975) describes some applications of price index numbers in the measurement and international comparisons of real incomes. Given the aforementioned connection among real income, prices, and purchasing power, the origin of the real income concept can be linked to that of price index numbers, which the economic statistician Wesley Mitchell (1938) traced as far back as the 1700s.

The concept of real income is used in national income accounting to refer to real gross domestic product (GDP), the real value of all final goods and services produced in a country during a specific time period. In evaluating real GDP, the output for different years is evaluated using a common set of prices, thus eliminating the contamination of the value of actual output by inflation. Real GDP is obtained by deflating nominal GDP by a special price index called the *GDP deflator*, which measures changes in the average price of a broader "basket of goods and services" than does CPI. The usage of real income to mean real GDP is commonplace in the literature on economic growth and the measurement of human well-being, among others.

REAL INCOME AS A MEASURE OF WELL-BEING

Because real income takes into account the actual physical quantity of goods and services that can be consumed with the income, it is a better measure of human well-being than its nominal counterpart. It is therefore not surprising

that real income has been incorporated into several measures of human well-being developed by the United Nations Development Program (UNDP) in its annual issues of the Human Development Report. UNDP (2006) describes these measures, including the Human Development Index (HDI), the Gender-Related Development Index (GDI), and two human poverty measures (HPI–1 and HPI–2).

Amartya Sen, winner of the 1998 Nobel Prize in Economics, has raised some philosophical issues surrounding the appropriateness of real (or nominal) income as a measure of well-being. Sen (1985) argues that functional capabilities (i.e., what a person can do or can be) are more important than income improvements. This view, which has come to be known as the "capabilities approach," emphasizes the removal of obstacles to what a person can be or can do. Such obstacles include illiteracy, poor health, lack of access to resources, and lack of civil or political freedom, among others. The ideas underlying the capabilities approach have been incorporated in UNDP's human development and poverty measures.

The link between real (or nominal) income and happiness has been the subject of empirical investigations by economists and sociologists. There is evidence that higher incomes may not necessarily translate to greater happiness. The economist Mathias Binswanger (2006) has reviewed several explanations for the failure of (real) income growth to increase happiness.

SEE ALSO *Economic Growth; Happiness; Inflation; Mitchell, Wesley Clair; Money Illusion; Nominal Wages; Price Indices; Sen, Amartya Kumar; Welfare Economics*

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Tomson Ogwang

REAL RATE OF INTEREST

SEE *Interest, Real Rate of.*

REALIGNMENT

SEE *Dealignment.*

REALISM

Realism as a nameable phenomenon in Western thought and culture emerged in France during the mid-nineteenth century. Primarily a movement in art and literature, it claimed to represent common people and their everyday circumstances based on accurate observation. Realism challenged centuries of tradition, when the highest art aspired to idealized pictorial forms and heroic subjects. Supporters of realist art considered its veracity to be an indication of an artist's "sincerity," a moral judgment. It acquired a democratic political dimension from its inclusiveness and from the accessibility of its imagery to ordinary people unversed in the classics but capable of recognizing "truth." These appeals were informed by progressive attitudes and an empirical concept of knowledge, as in the social theories of Pierre-Joseph Proudhon (1809–1865) and the scientific epistemology and the positivist philosophy of Auguste Comte (1798–1857). The leader of artistic realism was the French painter Gustave Courbet (1819–1877). Its advent revolutionized the history of art, leading to impressionism. In literature, various writers represented realism, from Gustave Flaubert (1821–1880) to Henry James (1843–1916). Unlike in art, literary realism was rarely self-conscious or polemical.

The movement realism must be distinguished from the generic term *realism*—the latter an aspect of much art and literature throughout time. In its general meaning, the word can refer to an optical or descriptive realism, in which forms or details appear to be drawn from life or produce an illusion of reality. In art, this type of realism is an ingredient in the high classicism of the Greek age of the Parthenon, in Roman portraiture, in certain Renaissance and Baroque styles, in Pre-Raphaelitism, and in photorealism, among many others. In literature, it is an aspect in certain passages of Homer's *Iliad*, in the early novel generally, and in the provincial settings of Honoré de Balzac (1799–1850) or the urban settings of James. Indeed, in literature, prose generally developed as a realist genre, as opposed to epic or lyric poetry. In theater, realism was associated primarily with comedy, whereas tragedy was considered more ideal. Following a related hierarchy, real-

ism in art developed in opposition to academic classicism, which looked back to antiquity and the conventions of the French classical theater of Pierre Corneille (1606–1684) and Jean Racine (1639–1699) for its idealist forms.

The realism movement was a response to two interrelated factors. On the one hand, there was an increasing demand for rational and eventually scientific empiricism, which since the Enlightenment had been regarded as intellectually and socially progressive. The invention of photography in 1839, which introduced a new standard for optical realism, can be considered in the light of the same spirit, for there would otherwise have been no incentive or use for it. Second, the same rationalism encouraged the rights of the individual against both coercive political regimes and their art academies. Realism represented a rebellion, said to be grounded in "truth," against academic recipes and conventions. When Courbet's paintings of 1849 to 1855 made such attitudes militant, he adopted the term *realism*, which was being used by both his critics and supporters. A later term, *naturalism*, was developed as a more scientific-sounding, less-politicized alternative by the French novelist Émile Zola (1840–1902) and the art critic Jules Castagnary (1830–1888).

Realism's most coherent artistic manifestation occurred in mid-nineteenth-century France. It followed romanticism, which was already encouraging artistic freedom and self-expression, with artists looking to nature as their source. In his *Realist Manifesto* (1955), Courbet stated his aim as: "to translate the customs, the ideas, the appearance of my epoch according to my own appreciation" (Rubin 1997, pp. 157-158). Linking a faithful portrayal of his times with artistic independence (from teachings based on imitations of classical art), he made both elements the basis for the movement of which he became the undisputed leader. In the 1840s, Courbet's generation drew on two related artistic trends. First was the Barbizon school of landscape painters, who studied people and places from a recognizable countryside, usually near Paris. Second was the recent popularity in literature and art of rural and provincial life. As a contrast to urban materialism and its inequities, the virtues and innocence of country folk were extolled in novels by George Sand (1804–1876) and stories by Courbet's friend Champfleury (Jules Husson, 1821–1889). Painters like the Leleux brothers and Jean-François Millet (1814–1875) embodied this ethos in their representations of peasants. In addition, simple, often crude folk art and poetry were admired as naive expressions of popular culture and the working class.

The difference between Courbet and these artists was that, beginning with his *Stonebreakers* (1849, destroyed during World War II), the people, places, and activities in Courbet's paintings appeared specifically contemporary, devoid of antimodern nostalgia, whereas his predecessors evoked a timelessness associated with romantic innocence and virtue. Courbet's workers alluded to the harsh conditions of the 1840s, when failing harvests drove many off the land into day-wage labor, providing raw materials for modern roads, railroads, housing, and industry. *A Burial at Ornans*, painted in 1850, showed a ceremony outside Courbet's hometown in the region of Franche-Comté near Switzerland. Against their rugged landscape, some thirty odd friends and neighbors gathered at the open grave of a respected citizen. Courbet portrays death as a prosaic, literally "down-to-earth" event whose meaning goes no further than laying the body in the ground. The huge canvas with life-sized figures flaunted Courbet's challenge to assumptions about what was worthy of large-scale artistic representation, and his ostensibly coarse technique evoked a worker's handicraft. Combined with their ostensible politics, the lower-class content and unrefined surfaces of his paintings caused a scandal. In 1855 Courbet challenged authority in a solo exhibition outside the grounds of the Universal Exposition. The central painting in his "Realist Pavilion" was *The Studio of the Painter*, in which he showed himself at the easel, supported by friends on the right and facing on the left a mix of figures embodying various ideas he considered outdated. The purpose of this much-interpreted painting was a declaration of both artistic freedom and solidarity with his own community.

Similar scandals shook the realm of literature. Earlier in the nineteenth century, Stendhal (Henri Beyle, 1783–1842) began the study of contemporary manners as a way to expose hypocrisy. In 1856 and 1857 respectively, Flaubert and the poet Charles Baudelaire (1821–1867) were brought to trial for offending public morality. Flaubert's novel *Madame Bovary* (1856) was about an adulterous housewife bored by her conventional husband. Poems from Baudelaire's *Les Fleurs du Mal* (1857) were often set in contemporary Paris and sometimes described erotic experience in a highly suggestive manner. A decade later, Zola considered his own novels analytic. In a preface to his notorious murder story *Thérèse Racquin* (1867), he compared his way of representing subjects—an adulterous woman and her lover plotting to murder her husband—to the scientific analysis performed by surgeons in medical dissections. In his art criticism, Zola's interpretation of the painting of Édouard Manet (1832–1883) was similar. Calling Manet a child of his times, in which the direction was toward positivism, Zola praised the artist's *Olympia* (1863–1864), a painting of a naked prostitute that was obviously meant to shock. Zola wrote that this picture, drawn from modern life, was sincerely observed by a dispassionate artist whose sole interest was to observe forms, colors, light, and shade.

Realism was associated with impressionism when the latter first appeared, since impressionism took up the commitment to modern life and contemporary manners flaunted by Manet and the contemporary novel. The young Claude Monet (1840–1926) was friendly with and drew upon Courbet and his technique, as did several other impressionists. Their imagery ranged from sailboats, promenades, and other forms of modern leisure to representations of industrial riverbanks, railroads, and factories. But the greater legacy of realism was to free artists to paint "sincerely"—that is, from their personal vision, which they indicated by a highly individualized style, often loosely handled as if the performance of representation were as important as the subject matter being painted. Hence, impressionism, praised by many for capturing the reality of a fleeting moment, contained the seeds of the demise of realism. The artifice of its execution was in constant tension with its illusion of the real. Yet realism successfully undermined doctrinal academicism once and for all by legitimizing images of modern life, heroic or anecdotal, rural or urban, and painted in whatever way the artist chose. It even entered sculpture, though as a more literal medium sculpture was far less challenging to traditional modes of representation than was painting, until the liberties with form taken by the "impressionist" sculptor Auguste Rodin (1840–1917).

Russian linguist Roman Jakobson (1896–1982) theorized that at the core of realism in art and literature is metonymy, a mode of figuration in which the part stands for the physical whole. The metonym is opposed to metaphor, in which an object stands for an idea; it is, in other words, a wholly concrete means of expression. Roland Barthes (1915–1980), in his famous short essay "The Reality Effect" (1968), pointed out that a profusion of observed detail in the realist novel slows the narrative, making it seem to advance almost unnoticeably, as if in real time, and making it appear to be the result of the concrete context established by such extensive description. In realist and impressionist painting, a sense of materiality and a dispersion of interest were achieved by a profusion of detail and a fragmentation of form across the entire image, along with subject matter from everyday modernity. Such painting was often compared to photography, the latter considered no more than a mechanical exercise, devoid of imagination and creativity. Painting was expected to emphasize certain truths in order to uplift and educate its audience, whereas photography's lack of selectivity made the edges of a composition as interesting as the center and seemed to negate the possibility of moral content.

The response to realism by establishment artists was to employ their labor toward a finished optical realism, as in the work of Léon Bonnat (1833–1922), or to incorporate occasional free paint handling, as did Jules Bastien-Lepage (1848–1884). In other countries, realism reinforced existing trends in genre painting, as occurred in Holland (e.g., Jozef Israëls [1824–1911]) and England. The *macchiaioli* movement in Italy paralleled realism and impressionism, especially in outdoor scenes. *Verismo* in opera followed later, near the turn of the century. In Germany, where Courbet was popular, realist images acquired a grander scale and avant-garde technique, as seen in the work of Wilhelm Leibl (1844–1900) and Max Liebermann (1847–1935). Artists in the United States adopted realism, as exemplified by Thomas Eakins (1844–1916), then impressionism, as national styles, although usually without the avant-garde connotations. Later realisms, such as in Richard Estes's displays of photograph-like technique or Eric Fischl's suburban psychorealism, were often ostentatious. Even in politics, first with Klemens von Metternich (1773–1859) in Austria, then with Willy Brandt (1913–1992) in Germany, there emerged a so-called realpolitik that looked to facts on the ground rather than ideology for its goals. Whatever its manifestations, then, realism continues to have a grip on consciousness thanks to its claim to represent "reality" truthfully, compared to forms of thought that defy material verification.

SEE ALSO *Naturalism*

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James H. Rubin

REALISM, EXPERIMENTAL

Experimental realism refers to the extent to which an experimental manipulation actively involves the participants in the research. If the manipulations are realistic, the phenomenology of the participant will be like that of a person in the social circumstance being indexed by the manipulation even if the lab circumstance is quite different than the naturalistic one. Thus, the goal of developing

realistic experimental manipulations is to have participants really experience whatever psychological states the experimenters are interested in studying in the context of the conditional variations that might instantiate those states. To the extent that the participant is made to take the experiment seriously they will be more likely to be influenced by the manipulations.

The general logic of the experimental method in research is based on the detection of causal relationships. An independent variable is manipulated in a controlled environment, with the intention of assessing how the changes in the independent variable influence the dependent variable. Therefore, by controlling for other possible influences, an experiment can help determine whether changes in the independent variable cause changes in the dependent variable. It is important for the manipulation of the independent variable to be strong enough to have the desired effect on the participants. If the experimental manipulation does not actively involve the participants, the resultant experiment is not an accurate test of the causal relationship between the independent and dependent variables.

ISSUES OF VALIDITY

If an experiment lacks experimental realism, the participants are not affected by the manipulation of the independent variable. Thus, researchers' efforts to maximize a study's experimental realism are important in ensuring the construct validity of an experiment. Construct validity refers to the effectiveness of experimental manipulation. A study is high in construct validity when the manipulation produces the intended changes in the conceptual variable. When the variables in an experiment truly represent the abstract, hypothetical variables of which the researcher is interested, the study is said to possess a high level of construct validity.

The issue of validity is often used to critique experimental designs. It is sometimes difficult for researchers to defend their experiment and show that their study was high in experimental realism. One way to measure the extent to which participants were actively involved in the psychological processes engaged by the research is to use manipulation checks. A manipulation check involves measuring whether the participants actually experienced different levels of the independent variable. This serves to provide a test of whether the study had adequate experimental realism. That is, did the participants believe the manipulation?

RESEARCH PROCEDURES

It is difficult to specify exactly what makes a study high in experimental realism. The experimental design typically involves the use of some deception. This is because the researcher needs to create a convincing illusion in order to have participants become engaged in the manipulation of the independent variable. It is generally advised that a researcher create a manipulation that is as strong as possible, within the confines of ethical and practical concerns. This ensures that the manipulation is maximally effective, thereby increasing the experimental realism of the study.

Even if explicit deception is not used in the experimental design, the researcher will often misinform the participants about the true purpose of the experiment. This involves what is referred to as a "cover story," where the researcher describes the purpose of the study to the participant using a believable but fake explanation. This serves to get participants into the right frame of mind for the purposes of the experiment, while ensuring that participants will not know the true purpose of the study and behave in a certain manner simply because it is what the experimenter expects.

One famous psychological experiment, conducted by Stanley Milgram in 1974, relied on deception to achieve experimental realism. In this experiment of obedience, participants were led to believe that they were taking part in a study of the effects of punishment on learning and were asked to deliver strong electric shocks to a fellow participant whenever he failed to learn an association between two words. As the intensity of the shock the participant ostensibly delivered to the learner increased, and the learner began to complain of a heart condition, participants often questioned the method or protested the use of such strong shocks. The researcher would always respond in the same manner, assuring the participant that the learner would not suffer any permanent damage and that the integrity of the experiment required that he continue with the shocks. The true purpose of the experiment was to determine whether participants would obey the instructions of the researcher and continue to injure the learner even when they personally felt that it was wrong to do so. If participants had known the true purpose of the experiment, one can assume that they would not have continued to obey the experimenter. However, the deception used in this experiment allowed researchers to investigate the conditions under which participants will obey an authority figure that orders them to harm another person.

This strategy of using deception to minimize reactivity and response bias on the part of participants is a matter of ethical debate, since participants agree to take part in the research based on a fabricated explanation of the purpose of the experiment. However, the use of this deceptive practice is justified by researchers explaining that many questions cannot be meaningfully addressed in the context of an experiment without the use of deception, and that this practice results in minimal risk or harm to the participant. Indeed, after researchers explained the

true purpose of the experiment to participants in Milgram's experiment (in a process known as debriefing), most participants said that they understood why deception needed to be used in explaining the purpose of the study and that they did not regret participating.

Experimental realism is often discussed in contrast to mundane realism (also known as ecological validity). Mundane realism refers to the extent to which the research is conducted in situations that are highly similar to everyday life experiences. Experimental research designs often don't have high levels of mundane realism, since they are typically conducted in artificially created situations. However, even if the research situation doesn't look the same as an everyday situation, it can still feel like a real experience. That is the goal of maximizing experimental realism: to get an artificial experimental manipulation to feel like a real experience.

SEE ALSO *Experiments, Controlled; Experiments, Human; Validation*

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REALISM, MORAL

Moral realism is the doctrine that some moral claims are true in a way that is independent of their being endorsed, or regarded as true, by any human being. Consider, for instance, the claim that torturing babies for the sole purpose of deriving sadistic pleasure is immoral. Moral realists would regard this claim as true. But that itself does not distinguish the moral realist from many other moral theorists. What is distinctive about the moral realist is that the truth of this claim in no way depends on the attitudes that people take toward the claim itself. It is not true because one believes it or because society endorses it. For the moral realist, the standards that determine whether moral claims are true or false are as objective as those that determine the accuracy of claims in logic or the natural sciences.

All moral realists will accept that an action's rightness depends to some extent on the circumstances in which one is situated. That is because, for the realist, the correct standards of morality may well dictate different actions, depending on the circumstances. In some cases, for instance, it is morally acceptable to cut into the flesh of human beings—for instance, during surgery. But in other cases, such action is impermissible, because it is being done in the name of coercion or humiliation. What is centrally important for the moral realist is that attitudes about what is right and wrong do not determine what really qualifies as such. Even the most cherished moral beliefs might be mistaken, because their authority does not depend on an endorsement of them.

Moral realists qualify as cognitivists. Cognitivists are theorists who conceive of moral judgments in terms of their cognitive content and function. Cognitivists regard moral claims as capable of truth or falsity, and conceive of the function of moral discourse to be that of attempting to describe the nature of moral reality. This differs from noncognitivists, who consider moral judgments to be primarily expressions of emotions or commitments, and, thus, incapable of being either true or false.

Error theorists, like moral realists, accept cognitivism. But error theorists deny that there is any moral reality awaiting discovery. In rendering sincere moral judgments, one is indeed trying to state the truth about what is moral and immoral. But there is, according to error theorists, no such truth. Therefore, all fall into error when issuing moral judgments. Perhaps the most illuminating analogy here is that of the atheist, who regards theistic discourse as intended to describe an objective, divinely ordered reality. But, from the atheist's perspective, there is no such reality, and so all theistic discourse is riddled with error.

Moral realism should also be distinguished from ethical relativism. The relativist is also a cognitivist, and so believes that moral judgments are capable of truth and falsity. Unlike the error theorist, the relativist thinks that some moral claims are true. But they are true only because they accurately capture the implications of different social agreements. The realist and the relativist differ, in other words, on the ultimate source of correct moral standards. For the relativist, moral standards are correct because they are endorsed by various groups of human beings. For the moral realist, human endorsement is not the ultimate authority in morality.

In psychological circles, moral realism is often associated with the work of the Swiss psychologist Jean Piaget (1896–1980), who attributed a belief in it to very young children. In Piaget's hands, moral realism stands for the idea that there are objectively correct moral rules that are never permissibly broken, such that failure to adhere to them is always morally blameworthy. Neither of these latter implications is essential to the doctrine as it is currently discussed within the philosophical community.

SEE ALSO *Morality; Objectivism; Relativism*

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REALISM, POLITICAL

Political realism is a view of politics that centers on power and conflict. The term goes back to the British historian E. H. Carr, who argued in 1939 that fact-driven "realism" needed to replace "utopian" trust in legal arrangements to preserve peace among nations. Unfamiliar to the liberal elites of America at the time, this view had a long tradition in European statecraft. Since the nineteenth-century, Germans had spoken of *Realpolitik* (realistic policy) and *Machtpolitik* (whose translation gave us "power politics") in reference to a foreign policy that recognizes self-interest and power as the driving forces of international reality. Even older is the doctrine of "reason of state" (It. *ragione dello stato*, Fr. *raison d'état*, Germ. *Staatsräson*), which asserts that the state has principles of action of its own, allowing it to do what law and morality forbid to its subjects. (Since it acquired this meaning under the influence of Niccolò Machiavelli, the Florentine political thinker of the early sixteenth century, it is also known as "Machiavellism.")

This type of intellectual reflection on power and politics goes back to the beginnings of political thought in the great civilizations of antiquity. In ancient Greece, for example, itinerant teachers of rhetoric and politics (known as sophists) argued during the fifth century BCE that morality is merely a convention (*nomos*) that stands in contrast to real human nature (*phusis*), which commands a ruthless struggle for advantage and the rule of the strong. This point was famously rendered by Thucydides in his *History of the Peloponnesian War*. In China, the legalist school (*fa chia*)—whose principal texts are the *Book of Lord Shang* and the *Han Fei Tzu* (written by the philosopher of the same name)—argued from the third century BCE onward that order required strict laws aimed at maximizing the power of the state and backed up by harsh punishments. In India, the tradition of *arthaśāstra* (science of material gain), especially the text attributed to Kautilya, who lived in the fourth century BCE, maintained that only the king's "rod of punishment" prevented people from devouring each other in accordance with the "law of the fishes."

Realpolitik, reason of state, Chinese legalism, and *arthaśāstra* are largely limited to providing practitioners of politics with maxims of action, such as punishing small infractions harshly so that big ones will not arise, or dividing one's enemies to defeat them one by one. Political realism contains these maxims, but it also relates them in theoretical fashion to assumptions about human nature, morality, and the world at large. Its generative logic was stated most cogently by Machiavelli and the seventeenth-century English philosopher Thomas Hobbes. Human beings, by nature, fear each other on account of their capacity to inflict harm and their uncertainty of each other's intentions. To secure themselves, they acquire enough power to deter or, even better, subdue the others.

From this nature arises a general struggle for power, which is aggravated by the fact that people want not only security, but also glory, power, and wealth. In addition, they will readily commit acts of aggression to attain these things. As the weak are forced to submit to the rule of the strong, political units (e.g., tribal chiefdoms, ancient city-states, feudal kingdoms) arise, providing a measure of protection and prosperity in exchange for obedience. But they cannot maintain order without repeatedly injuring innocents, which is morally warranted by the good consequences that order has for the others. Moreover, force and fraud continue unabated in the relations between units (that is, in their foreign affairs). Hence, the world is not a coherent ethical order, as the classical and Christian traditions maintain, but a chaos of conflicting ends and calamitous accidents.

Political realism became one of the major approaches in the field of international relations—where it is simply called "realism"—around World War II (1939–1945), when Reinhold Niebuhr, E. H. Carr, Hans Morgenthau, and John Herz combined the logic of Machiavelli and Hobbes with the lessons of European statecraft in order to explain why international law and the collective security arrangement of the League of Nations had failed to prevent Japanese and German aggression, and to advise American leaders on dealing with the newly threatening Soviet Union. They argued that nothing but countervailing power can check an expansionist state, because the foreign realm lacks both the central authority and sense of community that hold domestic societies together. At root, the liberal effort to subordinate politics to the rule of reason—by enlightening people about their harmony of interests and the absolute respect owed to persons—must founder on the dark side of human nature. A realistic foreign policy consists of the firm and prudent use of power in pursuit of the national interest, which is primarily to provide security. Power consists most readily of military capabilities, followed by industrial capacity, natural resources, quality of leadership, and the size and morale of the population.

Whereas the first generation of realists in international relations relied on philosophical insight and historical experience to address particular foreign policy problems—an approach now called "classical realism"—the second generation embraced the methods of social science to explain state behavior in general. In the 1980s, this effort led to the ascendancy of Kenneth Waltz's "neorealism," which ignores the particular characteristics of states (e.g., their ideologies, economic systems, ties of friendship, and the personalities of leaders) in order to explain their behavior solely from the constraint exercised by the "anarchic structure." This structure consists of the absence of central authority among states, and of the distribution of capabilities (i.e., power) across them. Neorealism predicts that states balance each other's power either by their own efforts or in alliance with others, and that balances of power form recurrently in the international system.

Since the mid-1990s, the (intentional) inability of neorealism to account for variations in the behavior of states caused by their characteristics has prompted the rise of "neoclassical realism." Its proponents insert the particular characteristics of a state—especially its perception of other states and its incentives arising from domestic politics—as a secondary cause, placing it between its structural position in the distribution of capabilities (the primary cause) and its foreign policy (the effect). It is hoped that this approach will yield a synthesis between the empirical richness of the case-study method and the analytical rigor of Waltz's structuralism.

SEE ALSO *Deterrence, Mutual; Hobbes, Thomas; Machiavelli, Niccolò; Morgenthau, Hans; United Nations; Waltz, Kenneth*

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REALIST THEORY

Theoretical schools and trends represent more than abstract, free-floating ideas. They are socially moored, and need to be seen in relation to other intellectual and social trends. "Realism" has been present in philosophical thought at least since Aristotle, but the return of realism in recent years can be best understood as a reaction against the dominance of "postmodernism" in the academy, especially in the humanities and humanistic social sciences. What we have now come to call postmodernism (even when some of its adherents disavow the label) is a theoretical position that relies on a definable epistemic stance—what the philosopher Bernard Williams has called the stance of the "denier." At the most general level, what is being denied is the value of such intellectual (and social) ideals as *truth* and *objectivity*.

The current version of realism in literary and cultural disciplines emerged as a response to postmodernism as an epistemological position. Drawing on sources in realist philosophy of science (e.g., the work of Putnam and Boyd; see Antony [1993] for a good exposition), and in solidarity with the progressive goals of postmodernist

thinkers, recent versions of realist theory, identified as "critical realism" or "postpositivist realism," attempt to go beyond both idealism and positivism without relying on the relativist and skeptical stance that characterizes postmodernist thought of various stripes (see Steinmetz 1998 on "critical realism," inspired by Bhaskar's work; on postpositivist realism, see Boyd 1988; Livingston 1988; S. Mohanty 1997, 2001, 2004; Moya and Hames-García 2000). In the social sciences, where postmodernism has had at best marginal influence, some critics of positivism invoke postmodernist theses about the social and discursive construction of social phenomena to move beyond narrow empiricism, but other theorists of social science, suspicious of postmodernism, are more robustly realist (see Calhoun 1995; Gilbert 2001). (Postmodernists and contemporary antipositivist realists share a commitment to one version or another of the social construction idea, but much depends on how that idea is specified and developed.)

Key postmodernist figures such as Jacques Derrida saw themselves as deconstructing the idealist substructure of "Western thought," the idealism that sometimes permeates even some self-avowed materialist approaches. Contemporary realists share the anti-idealist perspective of deconstruction and other strands of postmodernism but also develop a nonpositivist account of the very concepts postmodernists wanted to deny—concepts such as truth and objectivity most centrally, but also reference (Boyd 1988; S. Mohanty 2004), causation (Miller 1987; also see Somers 1998, a sociologist who draws on an alternative tradition of realism), identity, and experience (Alcoff 2000; S. Mohanty 1993; Moya and Hames-García 2000; Siebers 2004).

A serious debate between the postmodernist position and the contemporary realist one has barely begun, and narrowly partisan rhetoric, mistaking intellectual disagreement for political hostility, has prevented a genuine engagement. But the implications of the questions that are being scrutinized are large—and these questions could, for the first time in recent years, gather practitioners of the humanities and the social sciences together on common intellectual ground.

BEYOND POSITIVISM

Often, key theoretical slogans become more useful when their underlying claims are questioned and clarified. The postmodernist movement relies, for instance, on a critique of illegitimate and overly general historical accounts—what Jean-Francois Lyotard (1984) and many others following his lead called "grand narratives." On one level the rejection of grand narratives is a rejection of ethnocentric (Hegelian) accounts of entire cultures and civilizations. But on another level the critique extends more generally to all explanations—historical or social (see Spivak 1990 for one typical example). The danger with this approach is that it is too extreme, conflating as it does all kinds of idealization, legitimate and illegitimate. After all, all explanation (in the natural and the social sciences) requires idealization, the tracing of a perspicuous pattern through the vast mass of available data, and an indiscriminate skepticism toward all grand narratives and all explanations prevents us from distinguishing good, productive use of idealization from overly general and distorting ideal accounts.

A more useful critical approach would examine the ways in which both Hegelian idealizations of history and positivist methodologies, despite their differences, demand (as Richard Miller [1987] puts it about the latter) a debilitating "worship of generality." As Miller argues, the positivist "covering law" model of explanation relies on an overly abstract understanding of phenomena, given its primary commitment to "subsumption under general laws," scientific or historical. Realist philosophers of science such as Miller thus typically emphasize an approach that is more hermeneutical, reflexive, and dialectical.

The crucial antipositivist point made by realist philosophers of science and social science is this: Background or auxiliary theories, which are ineliminable, have epistemic significance; there are no theory-independent "methods" and there is no unmediated knowledge. This is a hermeneutical point on which they agree with such forebears of postmodernism as Martin Heidegger, who urged that we acknowledge the theoretical "forestructures" of understanding. Realists such as Hilary Putnam and Richard Boyd would differ sharply from Heidegger's postmodernist descendants, however, by insisting that a nonpositivist objective knowledge is possible and that it is gained by taking the epistemic import of our background theories seriously. Putnam's antipositivist insights lead him and others not toward relativism or skepticism but to a sophisticated notion of objectivity as theory dependent and situated. On this view, objectivity is not neutrality; rather, it is the product of active engagement with the content and implications of our theoretical and ideological presuppositions. For Putnam and others, the postmodernist denial of objectivity rests, ironically, on an essentially positivist framework: The postmodernist thinks that the only possible form of objectivity is a positivist one, based on the ideal of a completely atheoretical and aperspectival knower. And when the postmodernist (rightly) sees that such a knower is a dangerous fiction, a false myth, he or she (wrongly) concludes that objectivity *as such* is impossible to achieve. That conclusion follows only if one agrees with the postmodernist that the positivist conception of objectivity is the only candidate available. The nonpositivist account of theory-mediated (or theory-dependent) objectivity is an attempt to sketch an

alternative notion of objective knowledge that is dialectical, hermeneutical, and situated.

SCIENTIFIC KNOWLEDGE AND MORAL KNOWLEDGE

Richard Boyd (1988) makes the important argument that after recent developments in realist philosophy it is possible to see how the justification of moral claims is not altogether different from justification procedures in natural science. Both rely on a holistic process of achieving "reflective equilibrium" (Rawls's phrase) among our various beliefs, theories, and rational conjectures. The sharp positivist distinction between the "hard" sciences and the softer areas of human knowledge is untenable on this view. Boyd proposes a materialist account of the human good as based on our best scientific understanding of human nature—our deepest needs and capacities, for instance—*and* on our best conjectures about how these needs can be met and these capacities realized. Realist thinkers argue that even the most "objective" moral—and aesthetic—theory be seen as corrigible, since it is the product of social inquiry. Even when such inquiry is based in everyday practice, it is rational—in the broadest sense of the word—and purposive, and hence not all that different from inquiry in the natural sciences (Babbitt 1996; Boyd 1988; Gilbert 2001; S. Mohanty 1997, 2001; Railton 2003).

REHABILITATING IDENTITY AND EXPERIENCE

In literary and cultural theory, where postmodernist ideas have been immensely popular, realist theorists have outlined a series of proposals about such key concepts as experience and identity (and, more recently, values). Extending the nonpositivist view of moral objectivity to these social-theoretical domains, realists have argued since the mid-1990s against a purely constructivist view of experience and identity, showing how both can be not only "constructed" but also "real" (see Alcoff 2000, 2006; S. Mohanty 1993; Moya 2002; Moya and Hames-García 2000; Siebers 2004; Wilkerson 2000). The key thesis here is that claims about our subjective experiences and social identities are mediated by ideology and social context, and by theoretical presuppositions, but are nonetheless evaluable claims. They are explanations, and can be evaluated by comparing them with other relevant and competing explanations—since they refer not to mysterious inner essences but "outward," to key features of the social world and to the individual's location in that world. This theoretical proposal counters the postmodernist argument that experiences and identities are purely constructed and hence epistemically unreliable (Culler 1982; Scott 1991).

Realists about identity argue, moreover, that the future of progressive social struggles depends on greater clarity about the ways in which identity claims are justified, clarity about where and why such claims are valid, and where and why they are specious. Realists propose that we take the epistemic content of experiences and identities of minoritized groups seriously, since they contain alternative (buried or explicit) accounts of the world we all share. The development of objective knowledge about society grows out of an engagement with such alternative perspectives (see the ongoing work of the Future of Minority Studies Project).

One important consequence of this rehabilitation of identity is we can see how the best kind of moral universalism (the kind that underwrites our conceptions of human rights, for instance) is compatible with those particularist moral claims that require us to take minority identities seriously. Instead of railing against all aspects of Enlightenment thought, realists suggest how the best strands of Enlightenment universalism can accommodate—and indeed complement—the identity-based struggles of minoritized groups (e.g., women, racialized populations, gays and lesbians, the disabled) in a modern, diverse society (S. Mohanty 1997; C. Mohanty 2003; Teuton 2006).

SEE ALSO *Civilization; Culture; Derrida, Jacques; Empiricism; Epistemology; Hermeneutics; Human Rights; Idealism; Identity; Identity, Social; Minorities; Narratives; Objectivity; Philosophy; Philosophy of Science; Politics, Identity; Positivism; Postmodernism; Relativism; Social Science; Subjectivity: Overview; Universalism*

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REALITY

In everyday usage, *reality* refers to the universe that exists independent of our thoughts. Dreams or delusions, which we experience when we are asleep or are otherwise not in full possession of our senses, are examples of the *nonreal*.

In philosophy, this commonsense view is known as *realism*. The opposing view in which only our thoughts are real is called *idealism*. An intermediate view is *dualism*, in which reality is composed of both the concrete objects of experience, which we call *matter*, and some other nonmaterial element usually associated with mind and perhaps some external supernatural substance called *spirit*. While dualism is a common belief within most of the world's religions, it is nonparsimonious in the sense that no evidence requires the complication of dual realities. Spirit can be incorporated into either realism or idealism, although it is explicitly excluded in a form of realism called *materialism*. In the materialist view, matter and perhaps space and time are all that exist.

Associated with many thinkers since ancient times in both the East and the West, idealism asserts that our only knowledge of the outside world comes from perceptions, which are developed in the mind. So, it is reasoned but not proved that these are the only entities that can be real. The implication of idealism is that our thoughts are somehow more perfect, more truthful than the raw data that

impinges our senses. Furthermore, perceptions that may be formed independent of the senses are equally real. Plato (c. 427–347 BCE) told the allegory of the cave, in which the cave's inhabitants are constrained to view only shadows on the wall and cannot observe the sources of the shadows. He introduced the notion that reality is composed of perfect *Forms* such as the *Form of the Good*, which some interpret as Plato's notion of God. In an example of Plato's view, the planets travel in perfect circles around Earth, and their observed zigzag motion across the sky is a distortion, much as the images of our bodies are distorted when viewed in a funhouse mirror.

In modern times, many mathematicians and theoretical physicists have adopted an updated Platonic view of reality. Mathematical truths seem to exist independent of individual opinions and cultures. Some are not only unproved but also provably unprovable, yet they are known by other means to be correct (Gödel's theorem). Furthermore, mathematical models in the physical sciences have the remarkable ability to predict future observations with exquisite precision. Surely, the argument goes, mathematics and mathematical physics must carry some aspect of reality. Yet they are still inventions of the human mind. Carried to its extreme, idealism implies that we should be able to make our own reality simply by thinking about it. Clearly this is not the case, despite the claims of some New Age gurus. Try as they might, none have been able to think themselves younger.

Each of us has an intuitive feeling that the concrete objects we confront during our waking experience constitute some aspect of reality. Samuel Johnson (1709–1784) expressed this common view when he heard of the idealistic philosophy espoused by Bishop George Berkeley (1685–1753). As described in James Boswell's *Life of Johnson*:

> We stood talking for some time together of Bishop Berkeley's ingenious sophistry to prove the nonexistence of matter, and that every thing in the universe is merely ideal. I observed, that though we are satisfied his doctrine is not true, it is impossible to refute it. I shall never forget the alacrity with which Johnson answered, striking his foot with mighty force against a large stone, till he rebounded from it, "I refute it thus." ([1791] 1934, Vol. I, p. 471)

When we kick an object and it kicks back, we are pretty certain that we have interacted with some aspect of a world outside our heads (and feet). In simple terms, this describes the processes of everyday observations as well as the most sophisticated scientific experiments. According to physics, when we look at an object with our naked eyes, particles of light called *photons* bounce off the object into our eyes. This process generates electrical signals that are analyzed by our brains. Essentially the same process takes place with scientific observations, where various particles besides photons and instruments more sensitive than the eye are used.

From the available data, scientists form mathematical models, or theories, to describe their observations and predict future observations. In the twentieth century, physicists developed the remarkably successful theories of *relativity* and *quantum mechanics*, leading to the *standard model of particles and forces* that accurately describes the nature of matter as we observe it. An equally successful *standard model of cosmology* has resulted from the application of the above theories to astronomical observations of increasing precision. With these theories, we can now describe the basic physics and cosmology of our universe from one trillionth of a second after it came into existence until the present. Surely the quarks and quasars of these models constitute some element of reality.

More than two thousand years ago, the Greek philosophers Leucippus (480–420 BCE) and Democritus (460–370 BCE) proposed that reality is composed of *atoms* and the *void*, where atoms were defined as particles that could not be divided further and the void was the empty space between atoms. This became the working model of Newtonian physics (Sir Isaac Newton, 1642–1727), although it seemed necessary to also include some kind of continuous, smooth background of fields to account for gravity and electromagnetism. In the nineteenth century, atoms came to be associated with the chemical elements, and that term is still used in that context. However, we have now cut the elements into smaller pieces in nuclear reactions.

In the twentieth century, it was found that theoretical quantum fields exist in one-to-one correspondence with particles, the so-called quanta of the fields. The quantum of an electromagnetic field is the particle of light, called the *photon*. The fields associated with forces that appear at the nuclear level have quanta called *weak bosons* and *gluons*. While a quantum theory of gravity has not yet been developed, it is speculated that the gravitational field will be associated with a quantum particle called the *graviton*.

Thus it remains possible, though not provable, that ultimate reality is composed of only atoms and the void, where the atoms are localized bits of matter, whatever the ultimate uncuttable objects may turn out to be. Einstein's theory of general relativity, which led him and others to attribute a reality to space and time, suggests a connection between geometry and matter. The currently fashionable *string theory* supports that connection.

SEE ALSO *Idealism; Materialism; Realism*

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Victor J. Stenger

REALPOLITIK

SEE *Kissinger, Henry; Realism, Political.*

REASON OF STATE

SEE *Realism, Political.*

RECALL

Recall is an electoral procedure that allows citizens to vote on whether or not a public official should be removed from office. It is distinct from an impeachment, which involves a formal trial. A recall is simply a special election open to all voters in the area represented by the official in question. Similar types of procedures date back to ancient Athens, where politicians could be banished from the city by a vote of the citizens. The idea of citizens taking the initiative to remove public officials exists in many but by no means all local, state, and national jurisdictions. Depending on the political unit, the recall may apply to administrators, executives, judges, or legislators. Moreover the grounds for recall, such as incompetence, malfeasance, neglect, and so on, may vary from jurisdiction to jurisdiction. In many cases no rationale is even necessary.

All recall procedures are typically initiated by a petition. The required number of signatories may be a percentage of citizens in the political unit or of voters in a preceding election. If the appropriate number of signatories is secured, then the official is recalled and an election is scheduled. There are at least four types of recall elections. In one type, a special election requires that the incumbent run in an election against all other contenders, with the winner assuming office. In another, a simultaneous recall and replacement election decides the fate of the incumbent separately but simultaneously with the choice of a successor. Voters cast ballots on the worthiness of the incumbent and the preferred replacement candidate. If the incumbent loses the recall, then the winner of the replacement election takes office. If the incumbent wins, then the outcome of the replacement election is moot. In a third type, a sequential recall and replacement election first decides the fate of the incumbent. Given that the incumbent is successfully recalled, then a replacement election is scheduled at a later date, with the vacant office filled by the winner. Finally, in the fourth type, a sequential recall and appointment procedure begins with a recall election. If the incumbent is voted out of office, then he or she is replaced by an appointee selected according to some constitutional provision.

In the early twenty-first century eighteen U.S. states allowed for the recall of public officials on the state level, and thirty-six states permitted the recall in local jurisdictions. The best-known contemporary example of this procedure is the 2003 recall of California governor Gray Davis. The governor was recalled in large part because of the state's economic downturn and large budget deficit. In a contentious race, Davis lost the recall election and the Hollywood actor Arnold Schwarzenegger won the simultaneous replacement election. The event attracted much public attention because of Schwarzenegger's celebrity, but it was also notable because state recall elections are rare and there had only been one other successful recall of a governor. In contrast, recalls at the local levels of government are used much more often.

Because the recall gives citizens the power to remove public officials before their terms expire, it serves the aims of direct democracy within a representative political system. It is consistent with an understanding of representatives as delegates for their constituents, as opposed to trustees. Proponents of the recall procedure contend that it advances democracy by increasing the accountability of public officials, giving them a reason to remain responsive to the general public. It also offers citizens the opportunity to more quickly remove incompetent, irresponsible, or unethical officials from office, instead of waiting for the end of their terms.

Opponents of recall procedures cite at least two basic problems. First, the recall is contrary to the principles of republican government because it undermines the independence of public officials. It encourages public officials to cater to the desires of citizens at the expense of the community, and it gives them an incentive to promote the satisfaction of short-term interests over long-term benefits. Second, recall elections are disruptive and costly. Recalled officials usually devote time to winning their elections so they can remain in office. More time spent campaigning means less time spent on serving the public. The recall is also expensive because it requires the government to conduct unscheduled elections.

When used judiciously, the recall can be an important tool for citizens to protect the integrity of their political systems. However, it can also be a destructive weapon

when abused by an impetuous constituency or an opportunistic demagogue. Consequently, whether or not the recall is a good idea may depend on one's confidence, or lack thereof, in the intelligence and savvy of the electorate.

SEE ALSO *Accountability*

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Johnny Goldfinger

RECESSION

A recession is the declining phase of a business cycle, when seasonally adjusted output falls significantly and unemployment increases, though by no means in every industry. A recession should not be confused with periods of low output and high unemployment. Early in a recession output, though falling, is still above its trend value. Similarly, shortly after the recession ends, output is still below its pre-recession level. Recessions should not be confused with depressions. While economic historians sometimes use this term to refer to conditions in the early 1890s, most American economists use it only in connection with the Great Depression, which started in August 1929 and encompassed one catastrophic recession until March 1933. This was followed by a recovery that was succeeded by another sharp recession from May 1937 to June 1938.

DETERMINING THE TIMING OF RECESSIONS

There are three major ways of determining when a recession has occurred. A popular one is two or more successive quarters of declining GDP (gross domestic product). This is simplistic. Suppose quarterly GDP grows at the following rates: –2.0 percent, 0.1 percent, –2.5 percent. Under this definition that would not be a recession. Moreover, since official GDP figures are issued only quarterly in the United States, it cannot provide the months of turning points, without relying on unofficial estimates. And looking only at a single variable, GDP, is risky because the U.S. Department of Commerce revises, sometimes substantially, its initial GDP estimates.

Economists therefore use more complex procedures. By far the most widely accepted is that of the National Bureau of Economic Research (NBER), a private research organization. As it explained in an October 21, 2003, press release titled "The NBER's Business-Cycle Dating Procedure" it defines a recession as "a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales." It determines when a recession started or ended by looking primarily at four statistical series, the most important of which is quarterly real GDP, supplemented by data that allow it to gauge monthly GDP. The other series it uses are real personal income minus transfer payments, employment, industrial production, and real wholesale and retail sales. Primarily because the initially issued data are subject to substantial revisions, it identifies the cyclical peaks and troughs only with substantial lags; for example it did not identify the November 2001 trough until July 2002. The NBER has also identified peaks and troughs back to 1857. To do so it had to rely on a large number of less comprehensive series, and on contemporaneous descriptions of business conditions. The table shows the NBER's turning points.

The NBER's contraction dates

Peak	Trough	Duration (months)
1857, June	1858, Dec.	18
1860, Oct.	1861, June	8
1865, April	1867, Dec.	32
1869, June	1870, Dec.	18
1873, Oct.	1879, Mar.	65
1882, Mar.	1885, May	38
1887, Mar.	1888, Apr.	13
1890, July	1891, May	10
1893, Jan.	1894, June	17
1895, Dec.	1897, June	18
1899, June	1990, Dec.	18
1902, Sept.	1904, Aug.	23
1907, May	1908, June	13
1910, Jan.	1912, Jan.	24
1913, Jan.	1914, Dec.	23
1918, Aug.	1919, Mar.	7
1920, Jan.	1921, July	18
1923, May	1924, July	14
1926, Oct.	1927, Nov.	13
1929, Aug.	1933, Mar.	43
1937, May	1938, June	13
1945, Feb.	1945, Oct.	8
1948, Nov.	1949, Oct.	11
1953, July	1954, May	10
1957, Aug.	1958, Apr.	8
1960, April	1961, Feb.	10
1969, Dec.	1970, Nov.	11
1973, Nov.	1975, Mar.	16
1980, Jan.	1980, July	6
1981, July	1982, Nov.	16
1990, July	1991, Mar.	8
2001, Mar.	2001, Nov.	8
	Average, all 32 cycles:	37

SOURCE: National Bureau of Economic Research, "Business Cycle Expansions and Contractions," 2006 (www.nber.org).

Table 1

Although widely used, the NBER's estimation of turning points has been criticized for being subjective or based on arbitrary rules. Take for example the following hypothetical growth rates –0.1, 0.1, –2.0, –1.8, –0.9. Did the recession start with the 0.1 percent decline, or only with the 2.0 decline? Thus, Christina Romer estimated alternative turning points in her 1999 article "Changes in Business Cycles: Evidence and Explanations." The largest discrepancy between the NBER and Romer's estimates, five months, occurred in the 1982 trough. Another problem is the NBER's delay in announcing turning points. Hence some economists developed methods that, using the growth rate of GDP in successive quarters, allow them to quickly determine in an objective way the likelihood that the NBER will subsequently declare that a turning point has occurred.

Following the NBER's lead turning point chronologies have also been developed for other countries. There is some tendency for recessions to be synchronized in various countries since a recession in one country lowers its demand for the products of other countries, thus "exporting" part of its recession.

CHANGES IN THE SEVERITY OF RECESSIONS

There is much debate about whether U.S. recessions have been milder in the post–World War II era. What is clear is that recessions have become substantially shorter since 1983–1984, a phenomenon called "the great moderation." The reasons for this are controversial. One hypothesis is that computerization has reduced inventory investment. That matters because about half of business-cycle fluctuations consist of fluctuating in inventories. However, the timing does not fit: Computerization has been a steady process, while the great moderation started abruptly. Another hypothesis points to other institutional changes: the larger role of government with its automatic stabilizers; the greater availability of consumer credit, which allows the unemployed to maintain consumption; and the shift from manufacturing to the more stable service sector. But these changes are not large enough to explain the great moderation. A third hypothesis points to the greatly increased efficiency of monetary policy. Finally, some economists attribute the moderation to good luck; that is, to the shocks to the economy being smaller since 1983. Several of these explanations may well be part of the story. In any case, unlike the fluctuations that the NBER measures, fluctuations in the unemployment rate have not become shorter. This is possible because the peaks and troughs in unemployment lag those of GDP.

Given that recent U.S. recessions have been moderate, how damaging are they? Some economists argue that relative to changes in the trend rate of growth they are unimportant. Imagine that the trend rate of growth falls from 3 percent to 2.75 percent. After thirty years income has grown by only 86 percent, instead of by 126 percent as it would have at the 3 percent growth rate, a 40 percent difference. Compare that to a recession that lowers GDP by 5 percent for a year. However, happiness studies have shown that above a certain threshold long-run per capita income has little effect on happiness, while temporary unemployment has a substantial effect. Moreover, recessions could reduce the trend rate of growth.

WHAT CAUSES RECESSIONS?

Explaining why initial declines in income are followed by subsequent declines is relatively easy. As their incomes fall consumers spend less, and falling sales also lower the incentive to invest. Moreover, if prices fall (or rise less than expected) the real interest rate exceeds the rate borrowers expected, and that may drive them into bankruptcy; a more salient danger in the nineteenth century when prices declined much more in recessions than they do now.

There is much less consensus on what causes the initial downturn. One should distinguish two types of explanations. The first considers recessions as endogenous (related to) to capitalism, with expansions generating forces that terminate them. The other considers recessions to be due to exogenous, or outside, shocks. An old-fashioned example of the former is underconsumption theory. A more modern version is that expansions generate overconfidence that leads to excessive borrowing, risky lending, and lax financial practices that make firms vulnerable to failure.

Modern theories stress exogenous shocks. Monetarist theory, which for major U.S. recessions has much empirical support, focuses on declines in the growth rate of money due mainly to bank failures (until 1934) and since 1921 to inept monetary policy. It faces the problem that the growth rate of money may be endogenous rather than causal. Another theory argues that recessions are due to negative shocks to productivity that lower equilibrium real wage, which workers, who do not know this, refuse to accept. Still another theory claims that the government adopts expansionary policies prior to elections, and subsequently offsets them with restrictive policies.

More than one theory may be correct, because recessions differ. The 1914 recession was not preceded by a monetary shock, the 1921 recession was. The 1945 recession was due to end of wartime pressures for high output, while the 1973–1975 recession followed a doubling of oil prices to which the U.S. Federal Reserve Board initially responded with a restrictive policy, and the 1981 recession probably resulted from a major shift in monetary policy. The 1929 stock market crash may perhaps have played a

significant role in the severity of the 1929–1933 recession, while subsequent crashes did much less damage.

SEE ALSO *Business Cycles, Political; Business Cycles, Real; Depression, Economic; Economic Crises; Great Depression; Stagflation; Stagnation; Underconsumption*

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RECIPROCITY

Reciprocity is mutual exchange. It is the back-and-forth movement of goods and services between people. Reciprocity is the defining characteristic of nearly every nonmarket exchange system, and it shapes formal market economics as well. Dynamic social and political aspects of mutual exchange significantly influence the production, distribution, and consumption of goods and services in all societies. Nuances in reciprocity also influence how various items and labor are imbued with culturally specific values.

Marshall Sahlins (1972), drawing on the work of Bronislaw Malinowski (1922) and Marcel Mauss (1925), pinpoints three overarching categories of reciprocal exchange among different past and present peoples: (1) generalized reciprocity, (2) balanced reciprocity, and (3) negative reciprocity. These distinct forms of mutual exchange often correspond with differing degrees of closeness in society. Whereas intensely social groups employ generalized reciprocity, moderately engaged communities practice balanced reciprocity, and distant networks of individuals commonly use negative reciprocity. Within a given culture, the different kinds of reciprocal exchange are not exclusive; multiple forms can coexist and be used for interaction with various groups.

Generalized reciprocity is driven by generosity and magnanimity. The exchange consists of pure something-for-nothing gifts. However, since the giver enjoys giving and gains satisfaction from the apparently one-sided transaction, the exchange is, in fact, reciprocal. Although givers engaging in generalized reciprocity may seem disinterested because they do not actively seek compensation for their altruistic actions, they are nonetheless rewarded with contentment for their good deeds. Westerners often only engage in generalized reciprocity when dealing with close family members and friends, but many non-Western societies employ generalized reciprocity on a much wider scale. Successful generalized reciprocity relies overwhelmingly on trust and interpersonal bonds.

Balanced reciprocity consists of giving that is later requited and balanced by return offerings. The original giver must trust the recipient enough to know that the gift will ultimately be fairly and adequately requited. Since there is always a danger that the initial gift will not be properly reciprocated, these offerings are often made publicly. The presence of an audience helps to ensure that gifts are properly repaid in two respects. First, they serve as a public record for exactly what was offered and accepted. Second, the local community can punish those who accept gifts without reciprocating by spreading word of the exchange transgression, thus socially humiliating ungracious recipients and discouraging others from making future gifts to them.

The timing of balanced reciprocity is essential to the success of this informal exchange system. Jacques Derrida (1992) asserts that the only thing the gift truly offers is time—"time to forget, time to return, time for delayed reciprocation that is no longer a return" (Schrift 1997, p. 10). Since an immediate countergift diminishes the necessary display of trust, the initial offering creates a temporal buffer. When discussing the time that a gift offers, Derrida identified a meaningful cross-cultural linguistic similarity between the term *present* as (1) a description of time and (2) a reference to an offering. All in one, the word *present* captures the duality of Derrida's argument. A present—a material gift—provides the recipient with the present, the here and now. The offering requires future reciprocation yet frees the recipient from doing anything in the present; it provides the recipient with time. In a single word, the present presents the present (Mallios 2005).

Mauss notes an important link between perceptions of generalized and balanced reciprocity. He poetically writes, "Society always pays itself in the counterfeit coin of its dream" (Bourdieu 1997, p. 231). Mauss's metaphor captures two distinct aspects of the gift. "Society paying itself" is a reference to obligatory reciprocation, the mandatory return offerings made by individuals engaging in balanced reciprocity. Yet, the exchange is made "in the

counterfeit coin of its dream," an offering that maintains the superficial form of pure something-for-nothing generosity. It appears to be a selfless act of altruism. Although these transactions are indeed mandatory, they are physically indistinguishable from blissful magnanimity. The dream is generosity; the hidden reality is the obligation to give (Mallios 2005).

Negative reciprocity is trade. It is the simultaneous and immediate exchange of one good or service for another. Trade can be characterized by antagonistic haggling or complete anonymity. The transaction is in no way dependent on trust or the closeness of the individuals involved in the exchange. The only relationship of significance is the equation of exchange values between the goods or services being traded.

Chris Gregory (1982) summarizes the differences between balanced reciprocity and negative reciprocity. Calling the former a gift-exchange system and the latter a commodity-exchange system, Gregory explains that, "Commodities are *alienable* objects transacted by aliens; gifts are *inalienable* objects transacted by non-aliens" (1982, p. 42). One is a sale between strangers; the other is a loan between friends. There is also an important exchange-form distinction that adds to Gregory's dichotomy: commodities are alienable objects *traded*—something for something—by aliens; gifts are inalienable objects given—something for nothing—by non-aliens (Mallios 2006). Although the initial gift in balanced reciprocity mandates a return gift and is ultimately an exchange of something for something, it nevertheless takes the meaningful form of something for nothing. Gregory presents these two models as opposites, with the giving of inalienable goods between permanently allied and perpetually interdependent transactors on one side and the trading of alienable goods between momentarily allied and perpetually independent transactors on the other.

Distinct differences exist between the world's many economic systems that are based primarily on balanced reciprocity. Anthropologists often use the terms *limited* and *unlimited* exchange to describe an important difference within these economic systems. Limited exchange confines the interaction between a set of partners. It is symmetrically dyadic, meaning that one person gives an item to someone else and that recipient makes a return offering back to the original benefactor. The most common form of reciprocal interaction, limited exchange includes only two people—that is its inherent limitation—and only two sets of offerings. Unlimited exchange, to the contrary, is open-ended. Different people pass gifts on asymmetrically in a series of exchanges. In this case, a person gives a present to another individual, who then regales a third person. Unlimited gift exchange spirals outward to include multiple parties, one of whom will ultimately make an offering to the original gift giver. This final present completes the circular exchange system. Ideally, blood donation in the United States follows a process of unlimited gift exchange. People who give blood pass their offering onto anonymous others, who then feel obliged by these magnanimous gifts to repeat the action at some point later in time. In the long run, donors participating in a successful system of unlimited balanced reciprocity are able to depend on the available blood donations of equally anonymous others should they find themselves or their loved ones deficient. The driving force behind seemingly random acts of kindness, unlimited reciprocity establishes a favorable gift karma that its participants expect to produce far-reaching benefits for all.

A similar distinction concerns *even* and *incremental* exchange. Even gift giving results when an offering completely cancels out a previous debt. A present that both eliminates debt and creates a new obligation contributes to incremental gift giving. Repeated incremental gifts further connect exchange partners as they continue to seesaw back and forth in terms of debt owed and debt accrued. This type of gift exchange is more common than even gift giving for the simple fact that evenness is not a primary goal or concern in the gift economy. Social reciprocity hinges on creating and enhancing mutually beneficial relationships, not canceling them out.

Undermining reciprocity is more than a simple economic transgression. Mauss explains that, "To refuse to give, just as to refuse to accept is tantamount to declaring war; it is to reject the bond of alliance and commonality" (1925, p. 13). Failure to perpetuate reciprocal exchanges and relationships that draw individuals closer together, in fact, pushes intended exchange partners away from each other. This denial frequently leads to conflict. Claude Lévi-Strauss (1969) identified a link between exchange and hostility. He writes in specific reference to native Nambikwaras of western Brazil and in general of societies that engage in balanced reciprocity, "Exchanges are peacefully resolved wars, and wars are the result of unsuccessful transactions" (Lévi-Strauss 1969, p. 62).

One of the most pronounced examples of a reciprocity-based culture clash occurred in 1607 at Jamestown Island, the first permanent English settlement in the Americas. Historical records and analogous ethnographic accounts reveal how profit-minded English colonists and their emphasis on negative reciprocity collided with the Powhatan's indigenous expectations of balanced reciprocity (Mallios 2006). The English failed to reciprocate the Paspaheghs—geographically the closest tribe in the Powhatan chiefdom to the new European outpost—on four separate occasions during the first weeks of colonization. Wowinchopunk, the local leader of the Paspaheghs, gave the settlers food, the land on which the colonists

would build James Fort, and other goods, but the English made no return offerings. The natives grew frustrated, at one point even attempting unsuccessfully to steal reciprocal items. A Paspahegh warrior took an iron hatchet from the English camp following the series of unrequited native offerings, but a colonist snatched it back in a confrontation that nearly erupted into violence. Immediately following English trade with indigenous social rivals and enemies of the Paspaheghs, Wowinchopunk and his followers spearheaded a multitribal attack on the colonists at James Fort. Overall, exchange transgressions by the English—be they failures to give, accept, or reciprocate property—immediately preceded nearly every intercultural assault at Jamestown during the colony's first five years.

SEE ALSO *Trade*

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Seth W. Mallios

RECIPROCITY, NORM OF

Social norms refer to the rules and expectations about how people should behave in a group or culture, and pertain to generally accepted ways of thinking, feeling, and behaving that people agree on and endorse as right or proper. Various norms can be distinguished: among others, the *norm of social responsibility*, prescribing that people should help others who are dependent on them; the *norm of social justice* or fairness, which relates to the just distribution of resources; and the *norm of social commitment*, which concerns the shared view that people should honor their agreements and obligations.

American sociologist Alvin Gouldner (1960) was the first to propose the existence of a universal, generalized *norm of reciprocity*. He argued that almost all societies endorse some form of the reciprocity norm, and that only a few members were exempt from it—the very young, the sick, and the old. The norm regulates the exchanges of goods and services between people in ongoing group or individual relationships, dictating that people should help those who have helped them, that people should not injure those who have helped them, and that legitimate penalties may be imposed on those who fail to reciprocate. Reciprocity thus calls for positive reactions to favorable treatment and for negative reactions to unfavorable treatment. The things exchanged may be heteromorphic; that is, the goods or services may be concretely different but equal in value, as perceived as such by the exchange partners. Or the things may be homomorphic; that is, the goods or services may be roughly equivalent, or identical. Recent developments indicate support for Gouldner's general statement concerning the universality of the norm (Cosmides and Tooby 1992; Ridley 1997; Sober and Wilson 1998; for primates, see De Waal, 1982, 1996).

The norm has important social functions in ongoing relationships. It increases social stability in social groups or systems, and it structures and maintains the social relationships. Additionally, reciprocity may function as a positive, facilitating starting mechanism for the development of stable and enduring social relations in newly formed relationships. If a future time perspective is imposed in the social exchange relationship, the norm hinders the pursuit of nonreciprocal, selfish, and/or exploitative moves on the part of the exchange partners, thereby fostering mutual cooperation between them. As such, the time variable increases stability in the social system through reciprocity (Axelrod 1984).

Reciprocity is an evolutionary factor that can favor, among others, altruism among kin (*kin selection*; Hamilton 1964), and nonkin (*reciprocal altruism*, Trivers 1971; Axelrod and Hamilton 1981). As such it is an important factor in the social exchanges of many species, including humans, influencing such diverse behavior as helping (Lorenz 1966), cooperation (Axelrod 1984), compliance with requests in economic exchanges (Cialdini 1993), dealing with conflict and associated health impairment in organizational settings (Buunk and Schaufeli

1999), and bargaining and negotiations in conflicts in international settings (Lindskold 1978).

To indicate its relevance in social relationships, mechanisms have evolved to detect *cheaters* (that is, nonreciprocators, or exploiters; see Cosmides and Tooby 1992; Wright 1994). Furthermore, research on negative reciprocity has shown a strong relationship between the violation of the reciprocity norm by cheaters and norm-enforcing, punitive, aggressive actions, exemplifying the *lex talionis*, or the "eye-for an-eye" tendency. This research involved computer simulations by Axelrod (1986: *punitive meta-norm*) and Boyd and Richerson (1992: *moralistic strategies*); research among primates by Brosnan and De Waal (2003; *equity aversion*); and neuropsychological studies among human subjects (e.g., De Quervain et al. 2004: *altruistic punishment*). The findings of all these studies generally revealed that (a) parallel to the norm of reciprocity in social exchange relationships, secondary, punitive norms have evolved that dictate the legitimate, aggressive enforcement of the former one in different species, and (b) that effective retaliation against transgressors or cheaters may be more satisfactory than ineffective retaliation.

A pervasive phenomenon in intergroup relations is *in-group favoritism,* or *in-group bias*: Individuals evaluate their own group (or in-group) and its members more favorably than an out-group and its members on relevant dimensions, or they allocate more of a valued resource (money) to in-group members than to out-group members. Many social-psychological theories, such as social identity theory (Tajfel and Turner 1986) and self-categorization theory (e.g., Hogg 1992), serve as the main explanations for this phenomenon. However, recent developments indicate that in-group reciprocity can also at least partially account for this pervasive intergroup behavior (Gaertner and Insko 2000; Rabbie and Lodewijkx 1994; Stroebe, Lodewijkx, and Spears 2005).

SEE ALSO *Altruism; Collective Action; Communitarianism; Culture; Evolutionary Psychology; Exchangeability; Identity, Social; Norms; Punishment; Shame; Social Exchange Theory; Social Psychology; Trust*

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RECOGNITION

Recognition is a term that has been increasingly employed in the social sciences. In psychology, the term usually refers to identifying external objects or to other mental processes. In other disciplines within the social sciences, *recognition* has been used rather freely to denote an act of or motivation for acknowledgment of certain demands, goals, values, and identities. It is this latter social and political meaning of recognition that has increasingly become a matter of importance, moral concern, and focus of scholarship.

At the level of the individual, the importance of recognition can be observed when, for example, one person assaults another person due to what is perceived as a lack of respect or recognition. The "code of the streets" emphasizes recognition and "saving-face" as issues of the highest importance. At the collective level, people strive for recognition of group values, identities, and reparations for past wrongs. To recognize, in this sense, means to behave in a manner that satisfies expectations of respect and contributes to a sense of positive self-esteem in those who are recognized.

The psychological motivation for recognition is defined in social psychology as the pursuit, defense, and maintenance of positive self-esteem. In fact, recognition and self-esteem are often used interchangeably because positive self-esteem is intertwined with, and affected by, attitudes of others, such as the granting or withholding of social acknowledgement. Social psychologists assert that positive self-esteem contributes to optimal functioning, higher efficacy, development (self-enhancement), happiness, satisfaction with life, better performance, persistence at tasks, and reduced anxieties. In contrast, low self-esteem is strongly associated with mental disorders, malfunctioning, antisocial behavior, aggression, delinquency, and opposite traits and effects of positive self-esteem. Because recognition enhances positive self-esteem and the lack of recognition tends to produce low self-esteem, it is understandable that people are highly motivated to pursue recognition and may act aggressively if denied recognition.

The notion of recognition has also been examined in philosophy. Plato identified recognition with the *thymos*, the enthusiastic part of the soul that seeks honor and pride. Thomas Hobbes argued that people are led by a natural human passion for fame and honor, which is a desire to be recognized by others. Many other political philosophers discuss recognition as *esteem*. G. W. F Hegel, however, was the first to discuss recognition in the context of the relationship between a master and a slave, and to suggest that equal recognition is the key for the development of human freedom over the course of history. Several political philosophers were influenced by Hegel's conception of recognition, such as Karl Marx, Alexandre Kojève (1902–1968), and Francis Fukuyama (1952–).

Later in the twentieth century, the notion of recognition was discussed in new contexts. John Rawls argued that to acknowledge the moral duty of fair play is to recognize others as human beings with equal aspirations and interests. According to Rawls, this recognition is a necessary element of just societies. Charles Taylor introduced the idea of recognition in the debate on multiculturalism and differential treatment of minority groups. In the opening of his treatise "The Politics of Recognition" (1992), Taylor argues that contemporary politics had become significantly shaped by needs and demands for recognition. Because identity and self-respect are affected by recognition or the lack thereof, and because nonrecognition or misrecognition can inflict real harm and serve as a form of oppression, Taylor argues that recognition is not only a matter of a moral obligation to others, it is a vital human need.

The transition from the normative to the descriptive aspect of recognition also characterizes Francis Fukuyama's *The End of History and the Last Man* (1992). Following Hegel, Fukuyama argues that the pursuit of recognition is part and parcel of human nature. Fukuyama discusses the moral aspects of recognition and the necessary acceptance of equal recognition as the foundation for liberal democracy, but he continues to suggest that recognition is also the causal engine of democratization. Nondemocratic regimes tend to inflict a sense of low self-esteem in the population, and hence the oppressed become motivated to regain a sense of recognition and human dignity. They can achieve this only through the establishment of a democratic order that entails equal recognition to all citizens.

Given the importance of recognition to self-esteem, and the growing awareness that demands for recognition are often voiced in politics, the pursuit of recognition may become the new frontier of research as an explanatory factor to various social and political phenomena. An array of social change phenomena seems to be associated with the pursuit of recognition, at least as members of social change movements express their ultimate goals. This has been the case for slaves and other oppressed groups, feminist groups, and minority groups. Democratization also

appears to be affected by struggles for recognition, as demands for political and civil rights are often demands for recognition. Struggles for recognition are usually expressed as struggles for human dignity and against humiliation, and for restoration of self-esteem and similar concepts that are associated with self-respect and self-esteem. As such, the pursuit of recognition appears to lie at the heart of political life. Recognition, thus, has become not only an important normative concept, but also an overarching explanatory concept.

SEE ALSO *Black Power; Civil Rights; Democratization; Feminism; Hegel, Georg Wilhelm Friedrich; Hobbes, Thomas; Human Rights; Public Rights; Reparations; Self-Esteem; Subaltern*

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RECONCILIATION

Reconciliation, the overcoming of differences, the healing of broken relations, is initially a religious concept addressed in the Hebrew Bible and especially in the New Testament. It has acquired wider meaning in the context of the wars and violence of the twentieth century.

In the Hebrew Bible, the term *kiffer* (from the verb *kaffar*: covering over, atonement, propitiation, reconciliation) was used in the context of animal ritual sacrifice. Propitiation of God was the objective. Saint Paul, especially in 2 *Corinthians* 5:18–20 and in *Romans* 5:10, raises this concept to the level of a restoration to the favor of God for sinners who repent and put their trust in the expiatory death of Christ. But the term refers not only to such reconciliation with God but also to the task of reconciliation with other persons as a primary requirement for the followers of Christ. In *Matthew* 5:23–24: "If therefore you are presenting your offering at the altar, and there remember that your brother has something against you, leave your offering there before the altar, and go your way; first be reconciled to your brother, and then come and present your offering."

In the Gospels, as in much later discussion, reconciliation came to be paired with the concept of forgiveness, the forgiveness freely given by God and to be imitated by all. In this, the New Testament's reconciliation with God and with others took on the full character of the Hebrew Bible's *shalom*: completeness, soundness, welfare, peace. Yet in practice, the concept long tended to be confined to the private sphere, the individual's forgiveness by God, as in the Catholic practice of confession to a priest and the absolution of sins, now called the *sacrament of reconciliation* rather than, as in the past, *of penance.*

But the wars of the twentieth century and the many situations of *transitional justice* (the restoration of civil relations after periods of oppression) brought the wider social-political concept of reconciliation back into prominence in Christian thinking and made it the property of all the world. Thus, in South Africa, the effort to heal the society after the ills of apartheid gave rise to the Truth and Reconciliation Commission. Its grant of amnesty to offenders, on condition that they admit their guilt, was seen as far more satisfactory than the more vengeful process of the Nuremberg Trials after the collapse of Nazism. We can observe an outgrowth of this development in the growing interest in *restorative justice,* a legal concept that defines the objective of a justice system as the restoration of relations rather than simply the determination of guilt and the punishment of the offender—*retributive justice.*

Christian proponents of reconciliation, such as Archbishop Desmond Tutu of South Africa or the Croatian theologian Miroslav Volf, have consequently held prominence in this movement, although it has also been taken up as a managed and secular technical process conducted by professional mediators. Realization of the benefits that can be derived from this kind of process has brought about the rise of *Track II diplomacy,* the work of nongovernmental peace-building professionals who can often help the citizenry of conflicted societies reach reconciliation in ways that the official diplomatic representatives of governments cannot, or who can be the catalysts of solutions to conflict that governments could not generate themselves.

Distinguishing between the concepts of forgiveness and reconciliation has troubled many. We may see forgiveness as the personalized action of individuals and reconciliation as the effect of the healing of relations in the broader society.

Welcome as all this has been in its humanity and generosity, it carries its dangers. Most obvious is that a demand for instant forgiveness and reconciliation, and a

blaming of victims who cannot bring themselves simply to forget the evils done to them, can lead to the hasty covering up of severe trauma in a society, leaving the underlying ills unaddressed. Connected with this is the tendency, sometimes, of churches and religious actors, as well as those who most benefit from systems of exploitation, to treat reconciliation as an alternative to the liberation of victims of oppression, imposing a sense of guilt on them if they persist in their quest for justice rather than reconciling themselves to an unjust status quo. In an atmosphere in which reconciliation is seen as a virtuous action, superior (more religiously acceptable) to the pursuit of justice, this can take on the character of blackmail. And in this context the professionalization of the mediator's task in managing conflict can easily become an unwelcome form of coercion.

Warning indications hang, therefore, over this valuable practice and concept of reconciliation. An understanding is required that unfair disparities of power between victims and controllers of society may not be tolerated. The third-party reconciler must realize that forgiveness is not an instant process, and that those who feel themselves victimized, often from both or all sides of a conflict, must have time to mourn, to lament the harm that has come to them. They must have an opportunity to learn, through what may be a difficult and time-consuming process, the common humanity of those who have hurt them. They and their victimizers need to unlearn the stereotypes by which they have perceived one another. And all the participants need to understand that it may not be possible to resolve all problems and contentions among them, but that the more promising course is a conflict transformation by which the relations among them are seen in a different light.

Setting the objective of reconciliation, however, rather than simply a cessation of violence or the stifling of protest, as in a military process of "pacification," holds promise to bring about more humane relations among peoples, possibilities of addressing their inevitable differences of interest or aspiration nonviolently, and the healing of past traumas in ways that do not call for visiting retributive trauma on those who have harmed us. The development, as rather a new discipline, of peace studies has been a result of the renewed social and political interest in the concept of reconciliation.

SEE ALSO *Truth and Reconciliation Commissions*

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RECONSTRUCTION ERA (U.S.)

The Reconstruction Era refers to the period following the Civil War from 1865 to 1877, during which the victorious North reorganized, or reconstructed, the Southern states that had formed the Confederacy. This reorganization was carried out under the requirements of the Military Reconstruction Act passed by the U.S. Congress on March 2, 1867, hence the term *Reconstruction.* But the attempt to reorganize the South's political system in order to move the region in a new direction, away from the priorities and practices of the slavery regime, ran into difficulties. By the early 1870s, governments formed under the provisions of the Reconstruction Act were encountering such opposition and hostility from the former Confederates that they were unable to stay in power. After the contested presidential election of 1876, the federal government withdrew its political support and its troops from the South, bringing the Reconstruction experiment to an end.

THE VICTOR'S BURDEN, 1865

The Civil War was precipitated by the decision of the Southern states to secede from the Union in 1860–1861, but it was caused by the Southerners' long-term fear that their valuable and profitable institution of slavery was endangered by a hostile majority in the North. This fear came to a head with the election of a Republican, Abraham Lincoln, to the presidency and his Northern party's capture of Congress. As a result of the war, secession was defeated and slavery abolished. Alarmingly, however, the successful resolution of the long-term cause of the war (slavery) and of the short-term cause (secession) did not end the matter. Rather, it gave rise to new problems. First, what was to be the future status of the emancipated slaves? How free would they be and did freedom

involve equality of some kind? Would they obtain land, as several Union government actions during the war had hinted? Second, what was to be the future status of the rebels who had been defeated on the battlefield? Would they be allowed to return to the Union they had broken up four years earlier and, if so, under what terms? Terminating slavery and Southern independence had solved one set of problems, but emancipation and reunion immediately presented another, as massive and vexing as the first. Even more was at stake, however, because failure to handle emancipation and reunion satisfactorily would raise doubts about how much the Union's victory had ultimately achieved. The North had won the war, but it might lose the peace.

PRESIDENTIAL RECONSTRUCTION, 1865

After the war, the federal government was embroiled in a struggle over the terms for readmitting the South to the Union. Instead of collaborating, the president and Congress found themselves dangerously at odds over the appropriate course to pursue. The conflict centered on the fundamental issues of what policy would be adopted and which branch of government would prevail. But it was exacerbated by the personality of Andrew Johnson who had succeeded to the presidency when Lincoln was assassinated just a few days after the Confederacy's surrender on April 9, 1865. A stubborn and combative man, Johnson was a Southern Democrat who had stayed with the Union after his state had seceded in 1861 and who had practiced politics in Tennessee as the art of confrontation, rather than compromise.

Promulgated in May 1865, Johnson's plan for the South required that new governments be formed in each state, elected by voters who had sworn an oath of loyalty to the United States. But Johnson's conciliatory scheme soon encountered difficulties because even its minimal requirements were questioned and sometimes rejected by the Southern states, and the voters sent prominent Confederates to Congress, among them the former vice-president, Alexander H. Stephens. Simultaneously, reports of mistreatment and violence toward the freed slaves (the freedmen) were pouring into Washington and began appearing in the newspapers. Not surprisingly, the Republican majority in Congress rejected the South's congressmen-elect.

Rather than adapting to the emerging realities in the South and changing course, as Lincoln would almost certainly have done, Johnson stood his ground. He proceeded to thwart the efforts of the Republicans to formulate alternative proposals for the South, resorting to his veto power on every possible occasion. This extremely dangerous confrontation continued until 1868 when, after several attempts had been defeated by a veto-wielding president, Congress managed to enact and implement a reconstruction policy that readmitted the South to Congress and established a Republican-controlled government in each of the ex-Confederate states.

CONGRESSIONAL RECONSTRUCTION, 1866–1867

After taking the initiative in December 1865, Congress proposed three different approaches for dealing with the South. The first took the form of two measures, introduced in early 1866, to protect the freedmen who, although no longer slaves, were still vulnerable and in need of physical and legal protection. One measure extended the life of the Freedmen's Bureau, a wartime agency created to supervise the transition from slavery to freedom and provide relief for the destitute of both races in the war-torn South. The other was a civil rights bill that defined citizenship as a national, not state, matter, and therefore extended citizenship to 4.5 million African Americans, all but 500,000 of whom had been slaves. The statute also provided federal protection for the civil rights of all citizens, that is, equality before the law, ensuring equal access to the courts and prohibiting legal discrimination. Although the Civil Rights Act marked a major expansion of federal jurisdiction, it was still limited in scope because it did not ban private discrimination, and the federal government could only intervene when a state failed to provide formal legal protection. Nevertheless, to most Republicans' surprise, the president rejected both bills, accompanying his vetoes with hostile messages that pronounced them unconstitutional. Although the vetoes were soon overridden, Johnson clearly intended to oppose Congress. Furthermore, by vetoing the Republicans' proposals and declaring them unconstitutional, he was obviously provoking a fight.

Congress's second initiative was a set of terms for readmission in the form of a constitutional amendment to be submitted to the Southern legislatures elected in 1865 under Johnson's plan. The Fourteenth Amendment, as it became known after its ratification in 1868, consisted of three basic propositions. First, a federal guarantee of citizenship and civil rights, incorporating the provisions of the Civil Rights Act into the Constitution. Second, a reduced representation in Congress for the South if African Americans were denied the vote. And third, the disqualification of leading Confederates from holding office. The civil rights clause became the enduring contribution of this amendment, especially its equal protection feature, but it was the third clause—keeping former Confederates out of power—that made the proposal unacceptable to the South in 1866. Accordingly, the Southern legislatures rejected the amendment decisively,

following the president's earlier and predictable veto. In the congressional elections of 1866, Johnson's determination to defeat his former Republican allies and their proposed amendment had led him to create a party of his own called the National Union party, with the Northern Democrats as its primary source of support. But it had been defeated overwhelmingly, allowing the Republicans to increase their majority.

With the president still defiant and the South emboldened, the Republicans moved quickly to produce yet another plan before the Thirty-ninth Congress expired in March 1867. The outcome was a law, the Military Reconstruction Act, the terms of which would be mandatory, unlike an amendment that needed to be ratified by the states. As first introduced by Thaddeus Stevens of Pennsylvania, the leading radical Republican in the House, the bill was conceived as a program for keeping the South under federal military supervision, for several years perhaps, until loyalty returned and changes were under way democratizing the region's political system and modernizing its economy. The radical wing of the party saw the postwar moment as a critical opportunity to move the South in a new direction, but Republican moderates amended Stevens's bill so thoroughly that it became instead a formula for immediate readmission.

Under the terms of the law, the eleven Southern states were divided into five military districts, each of them under the command of a U.S. general. The troops stationed in each district were to supervise the creation and registration of a new electorate that was to include all adult male African Americans. Black suffrage was a radical innovation never even contemplated by other slave societies in the Americas, although none of them had been forced to end slavery after defeat in a massive civil war. The new electorate included just under a million African Americans, but not the leading Confederates who were now disfranchised by the Act. These former Confederates were also barred from holding office under the Fourteenth Amendment, which the reconstructed states were required to ratify.

The Reconstruction Act became law—over Johnson's veto, of course. Immediately, the process of reconstructing the South began and it required that new governments be created and Congressmen elected. As a result, a Republican party was formed in the South and the Republicans proceeded to gain control of every Southern state and its Congressional delegation. This outcome was achieved, despite constant opposition from President Johnson who used his authority as chief executive and commander in chief to obstruct the implementation of the complicated political process laid down by the Reconstruction Act. Also presenting a problem was the South's political class whose members opposed, not only the idea of enfranchising their ex-slaves, but also the creation of a new political order from which they were to be excluded. As the South was being reconstructed, Johnson was impeached for his persistent obstruction, although the Senate failed to produce the two-thirds majority needed to convict and remove him from office. Meanwhile, the former Confederates, who were now out of office but actively organizing an opposition party, lived to fight another day.

RECONSTRUCTION IN THE SOUTH, 1868–1877

The newly created Republican party managed to win control of every Southern state between 1868 and 1870. The success of Reconstruction now depended on how well the party governed and how long it could stay in power. This task was enormously difficult, not only because the party was new to the region and most of its elected officials were inexperienced, but also because it was faced by a relentless foe determined to see it fail. In the eyes of the conservative opposition that consisted of former Confederate officeholders and most of the region's political class, the Republican-controlled state governments were unworthy of their support, and therefore they were deemed illegitimate. The federal government had created the party, and the state governments that the party controlled had been imposed upon the South. Moreover, the party's constituency and leadership were drawn from elements that were alien and unacceptable, namely, Northerners whom they called derisively carpetbaggers, Southern whites dismissed as scalawags and, of course, blacks, most of them ex-slaves.

Besides ridiculing and vilifying these Republican governments, the opposition employed every means possible for attacking, destabilizing, and ultimately overthrowing them, one by one, during the early 1870s. They resorted to electoral fraud and intimidation. They frustrated the operation of these state governments by withholding taxes. They broke up the Republican coalition by encouraging dissidence among the racial and sectional groups within it and then offering to give electoral support to any faction prepared to leave and run an independent campaign. And when the masked and secret Ku Klux Klan emerged in 1868, intimidating Republican supporters and assassinating some of the party's leaders, the conservatives did nothing to discourage this insurgency until the federal government intervened in 1871–1872. By 1872, many of the states with white majorities had slipped from Republican control, a result of favorable electoral conditions for the opposition, supplemented by pressure, fraud, and violence.

Although the Klan was subsequently dispersed, the violence soon assumed a different and more deadly form as

the paramilitary White Leagues appeared in Louisiana in 1873 and various other overtly violent organizations arose in the Deep South that was still under rather precarious Republican control. The Republicans' opponents, who were at that time aligning with the Democrats and determined to regain control of their states, officially sanctioned these forces that styled themselves Rifle Clubs or Red Shirts. Accordingly, they unleashed virulent and violent race-based campaigns aimed at rousing white voters and discouraging blacks and carrying elections "peaceably if we can, forcibly if we must." Faced by this onslaught, the last remaining Republican governments located in the heavily black states of Alabama, Mississippi, South Carolina, and Louisiana were overthrown between 1874 and 1876. A few months later, federal troops were withdrawn, allowing the Democrats to take over throughout the region.

Painfully aware at the outset that the opposition was going to be fierce, the Republican state governments were caught in a dilemma. They had to provide for and protect their supporters who were, for the most part, former slaves and less advantaged whites. Simultaneously, the governments they controlled had to govern for the state as a whole, while defusing the criticism of the conservatives and fending off their attacks. Pulled in these two different directions and under constant attack, the party began to collapse. Nevertheless, the Republicans began well. In 1868, they drew up a new constitution for each state, as required by the Reconstruction Act. Liberal and democratic in thrust, these constitutions reduced privilege and increased political participation, and also provided government services previously lacking in most Southern states. They made adult male suffrage a constitutional right, lowered or removed age- and property-qualifications for holding office, and ensured that most offices were elective rather than appointive. Government assumed responsibility for creating and funding institutions to care for orphans, the insane, and the deaf and dumb, as well as for building penitentiaries and systems of public schools. Because government was to be more active than before, the powers of the executive branch were increased.

But the Republican framers of these constitutions proved unwilling to push much further. They did not provide for any redistribution of land to the landless, in particular the freed slaves who felt they deserved a portion of the land that had gained value from their unpaid labor (the possibility of making land available to the former slaves was all but eliminated by earlier developments at the national level, first, by Johnson's executive proclamation of August 1865 allowing the rebels to regain their lands and, then by the Republican party's general lack of enthusiasm for pursuing such a policy). The public schools were to be racially separate, a decision actually favored by black delegates because they feared losing the entire system if white parents refused to send their children to schools attended by blacks. And the constitutions usually removed the ban on former Confederates holding office, because the Republicans who wrote them favored equal rights, even though this liberality would allow the South's political class to reenter politics.

Cautious and moderate rather than extreme, these new constitutions provided the framework for Republican rule. Although the party leaders hoped that this constitutional foundation would satisfy their supporters and reassure their opponents, they knew that successful programs were needed if the party was to consolidate its power and acquire legitimacy. To this end, the Republicans promoted three initiatives in particular: the creation of a viable school system, the protection of civil rights, and the development of the region's railroad system. Of these three, the railroads were considered critical in the Republicans' attempt to prove that they could govern efficiently and effectively. Accordingly, the Republican legislatures moved forcefully to encourage economic development by offering state aid to builders of railroads in the hope that they would create vital infrastructure and develop the localities that their roads penetrated and opened up. Had these ventures succeeded, the Republicans expected to gain considerable political capital. But, for a variety of reasons, they failed. The states were left holding the debt of these enterprises and, somewhat unfairly, the Republicans were accused of mismanagement and fiscal irresponsibility, but not the railroad companies that had actually failed to build the lines.

This serious setback was compounded by the party's inability to raise the necessary revenue to fund the public schools adequately, a direct result of the taxpayers' unwillingness to pay and of the precipitous decline in the value of the land on which the school tax was levied. Also disappointing was the party's record on race relations. Despite legislation to end racial discrimination on transportation and in other public places, the patterns of separation established under slavery remained the norm. Whites were unwilling to break with the past, and blacks themselves were hesitant to challenge these customs, believing it was safer and more constructive to develop their own institutions, a calculation similar to the one they had made earlier over mixed schooling. Nevertheless, most black and many white children attended school during and after Reconstruction, and a significant cadre of African Americans were trained as teachers. In addition, hundreds of African Americans held office under the Republicans. Two hundred sixty-seven were delegates to the constitutional conventions in 1868; nearly 800 served in the state legislatures during Reconstruction; and 18 held national office as members of Congress. Meanwhile, hundreds more served in lower-level positions, such as sheriff, county commissioner, justice of the peace, and even an occasional mayor. Although inexperienced, these

officials were usually literate and their visible presence in public life was evidence that race relations were improving, somewhat dramatically in fact.

Unfortunately, African Americans, and most of the white population who also stood to gain from the Republicans' new initiatives, depended upon the Republican party's ability to remain in power. But the Democrats relentlessly opposed the Republicans. They subverted and attacked the Republicans and were quick to exploit their mistakes and aggravate their difficulties. By the mid-1870s, less than a decade after the South had been politically reconstructed, the Republican party had lost control, either through its inability to hold its diverse coalition together or by losing elections because of force or fraud.

SEE ALSO *Confederate States of America; Lincoln, Abraham; Slavery; U.S. Civil War*

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Michael Perman

RECORDING INDUSTRY

The growth of the global recording industry represents a post–World War II (1939–1945) phenomenon. Despite the inventions of the radio and the phonograph, record sales remained relatively low in the first half of the twentieth century. It was not until 1948, when Columbia Records introduced the 12-inch vinylite long-playing (LP) record onto the market in the United States, that the industry enjoyed its first significant stimulus to growth. The emergence of new low-cost recording equipment followed in the 1950s and allowed many independent record labels, known as *indies*, to compete with the major record labels, or *majors*, namely, Columbia, RCA, and Decca. This provided an opportunity for a greater variety of artists to release music and increased demand as consumers exploited the wider choice of music available.

The 1960s was a creative decade in which many of the old formulas and structures changed. Hi-fi stereo recordings were first introduced, and the development of tape formats that would eventually transform the industry picked up pace in the mid-1960s with the appearance of *four-track* and *eight-track* tapes. The eight-track achieved a dominant position over the four-track until the cassette tape, introduced by the Philips Company in 1963, eventually took over in the 1970s. Cassette tapes were smaller, more convenient, reasonably cheap to produce, and, in combination with the development of accompanying compatible software, transformed the production and consumption of music.

Growth of the industry continued until the recession of the early 1980s when the demand for music fell. Many in the industry at this time believed that the availability of home cassette recorders was responsible for much of the loss in sales and there were attempts to tax blank recording cassette tapes. Yet, some analysts suggest that the decline was predominantly related to the poor quality of the recordings, inferior software, the global recession, and a shortage of creative work.

The downturn only proved temporary, however, and a period of high growth followed, largely due to recording improvements and the expanded use of digital formats, such as the compact disc (CD). Because of the low cost of production and strong market demand for high-quality recordings, record companies focused on low-risk opportunities for profit. This took the form of issuing CDs of back catalogues and compilations of works by established artists. At the same time, the development and growth of global satellite television channels catering to music lovers only, such as MTV, also contributed to an increased demand for music.

By the late 1990s, a culture of "free" music was emerging as use of the Internet expanded. In 1999, Shawn Fanning, then an eighteen-year-old student at Northeastern University in Boston, created a computer program called Napster that allowed Internet users to search for songs in MP3 format ("near" CD-quality sound) on the hard drives of other users, and then download this music to

their own hard drives at no cost. However, within only a few months of its existence, Napster was sued by the Recording Industry Association of America on behalf of the major record labels for copyright infringement. Napster lost the case, and in July 2001 was forced to shut down.

By 2004 global sales of physical recorded music (audio and video) were estimated to be $33.6 billion, representing a fall of 10 percent in real terms since 1999. Total global unit sales in 2004 were 2.8 billion, 77 percent of which were accounted for by sales of CDs. In the same year, the United Kingdom had the world's highest per capita sales of recorded music in both volume and value terms, at 3.2 units and $58.20 respectively. The figures for the United States were 2.8 and $41.50 respectively. However, the recording industry also helps drive a much broader music sector, from subscription radio stations to mobile ringtone sales, that was estimated to be worth more than $100 billion globally in 2005. Music has an economic importance that extends well beyond the scope of record sales.

In terms of its organization, the recording industry has a highly concentrated, oligopolistic structure dominated by four majors: Sony-BMG, EMI, Universal, and Warner. In 2004 these four companies enjoyed a combined global market share of 75 percent. The remainder was accounted for by numerous indies whose continued presence reflects two factors: (1) an ability to expand markets and specialize in market niches; and (2) a reliance upon the majors to bring their music to market. One consequence of this symbiotic relationship between the majors and indies has been the reduction of potential competition. However, digital technologies and the Internet are reducing costs and barriers to entry and represent an opportunity for the indies to loosen the majors' stranglehold on the distribution of music.

As noted earlier, the growth of Internet technology that allows consumers to download music without paying the producers represents a major challenge to the recording industry. In theory, the main concern is that the activity may reduce legitimate demand for albums as potential consumers turn to pirated versions, though it can be argued that illegal downloading may stimulate legitimate demand. For example, online "sampling" of individual songs may increase demand for full album recordings.

Most empirical work by economists on this issue suggests that the negative effects of online piracy outweigh the positive effects, that is, piracy is associated with a fall in legitimate music sales. However, history shows that technology has been responsible for the growth of the mass consumption of music and has allowed today's superstars to earn huge sums of money compared to musicians of two hundred years ago. Like the invention of recording tape and the compact disc, therefore, the Internet is likely to ultimately result in an increase in demand for music once new business models are in place. Indeed, the success of Apple's iTunes music store has demonstrated that consumers are willing to pay for music downloads from the Internet. Industries that do not innovate in a market economy, or ineffectively compete with producers of other similar products, will decline, a rule that applies to the recording industry.

SEE ALSO *Entertainment Industry*

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Simon W. Bowmaker

RECTANGULAR DISTRIBUTION

SEE *Distribution, Normal.*

RECURSIVE MODELS

A system of equations is recursive rather than simultaneous if there is unidirectional dependency among the endogenous variables such that, for given values of exogenous variables, values for the endogenous variables can be determined sequentially rather than jointly. Due to the ease with which they can often be estimated and the temptation to interpret them in terms of causal chains, recursive systems were the earliest equation systems to be used in empirical work in the social sciences.

In any equation system there will be a number of exogenous variables and as many endogenous variables as there are equations in the system. Exogenous variables are those whose values are determined outside the system and that affect the endogenous variables without being affected by them. Variables that can depend on each other and on the exogenous variables are called "endogenous variables." These are the variables whose values are explained by the equation system. (Some endogenous variables enter with a lag and are called "lagged endogenous variables.") An endogenous variable that appears on the left-hand side of

one equation will typically appear on the right-hand side of some or all of the other equations in the system.

A recursive model is a special case of an equation system where the endogenous variables are determined one at a time in sequence. Thus the right-hand side of the equation for the first endogenous variable includes no endogenous variables, only exogenous variables. The right-hand side of the equation for the second endogenous variable includes exogenous variables and only the first endogenous variable. The right-hand side of the equation for the third endogenous variable includes exogenous variables and only the first and second endogenous variables, and so on. Another way to put this is to say that a system is recursive if the solution for the gth endogenous variable involves only the first g equations.

A simple example involving three endogenous variables (y_1, y_2, and y_3) and only one exogenous variable (x) would be the following system—the εs represent the stochastic disturbances (if the system was a purely deterministic, mathematical one, all of the εs would be zero).

$$y_1 = \beta_1 x + \varepsilon_1$$
$$y_2 = \beta_2 x + \gamma_{21} y_1 + \varepsilon_2$$
$$y_3 = \beta_3 x + \gamma_{31} y_1 + \gamma_{32} y_2 + \varepsilon_3$$

From the structure of this system, it is clear that there is a sequential (one-way) rather than a simultaneous (two-way) relationship between the endogenous variables. Thus y_1 affects y_2, but y_2 does not affect y_1 either directly or indirectly. Similarly y_1 and y_2 influence y_3 without in turn being influenced by y_3. Systems of equations of this kind are called "recursive" or "triangular models." If in addition there is no correlation between the stochastic disturbances, then we refer to the system as "diagonally recursive." Ordinary Least Squares (OLS) is an appropriate estimator for each single equation in a diagonally recursive system because it can be shown that for such a system OLS yields consistent and (asymptotically) efficient estimates. This is because in a diagonally recursive system there is no correlation between the explanatory variables in any one equation and that equation's stochastic disturbances.

More formally, in matrix notation a system of structural equations may be written as

$$\Gamma y = \mathrm{B}x + \varepsilon$$

where y is a vector of the g endogenous variables, x is a vector of the k exogenous variables (these might also include any lagged endogenous variables), ε is a vector of the g stochastic disturbances, Γ is a $g \times g$ matrix of the coefficients on the g endogenous variables, and B is a $g \times k$ matrix of the coefficients on the k exogenous variables.

If Γ is a triangular matrix (that is, it has zeroes in all of the cells above the principal diagonal) we refer to the system as "recursive." This is why recursive models are also called "triangular models."

In the case of the three equations system given above, we would write Γ as

$$\Gamma = \begin{bmatrix} 1 & 0 & 0 \\ -\gamma_{21} & 1 & 0 \\ -\gamma_{31} & -\gamma_{32} & 1 \end{bmatrix}$$

This is a triangular matrix, indicating that the system is recursive.

Define Σ to be a matrix of the variances and covariance's of the stochastic disturbance terms. In the case of the three equations system given above, we would write Σ as

$$\Sigma = \begin{bmatrix} \mathrm{var}\,(\varepsilon_1) & \mathrm{cov}\,(\varepsilon_1\varepsilon_2) & \mathrm{cov}\,(\varepsilon_1\varepsilon_3) \\ \mathrm{cov}\,(\varepsilon_2\varepsilon_1) & \mathrm{var}\,(\varepsilon_2) & \mathrm{cov}\,(\varepsilon_2\varepsilon_3) \\ \mathrm{cov}\,(\varepsilon_3\varepsilon_1) & \mathrm{cov}\,(\varepsilon_3\varepsilon_2) & \mathrm{var}\,(\varepsilon_3) \end{bmatrix}$$

If Γ is a triangular matrix and in addition Σ is a diagonal matrix (so that all the covariance terms are zero), the system is diagonally recursive, and OLS is an appropriate estimator. Now Σ will be a diagonal matrix only if the disturbances across the different equations are (contemporaneously) uncorrelated—in other words, the disturbance terms are independent of each other. If a system is recursive but not diagonally recursive, in other words if Γ is a triangular matrix whereas Σ is not a diagonal matrix, we describe the system as "seemingly unrelated," and the Seemingly Unrelated Regressions (SUR) method of estimation is more appropriate (more efficient) than OLS (Zellner 1962). One reason why the stochastic disturbances might be correlated across equations is if the equations have in common omitted variables, sometimes even variables that by their nature cannot be observed. This is not an unusual situation in the social sciences.

Some equation systems are said to be "block recursive," meaning that the recursive or triangular property applies only to blocks made up of subsets of the equations in the model. If the system can be characterized as block recursive, then the endogenous variables listed in each block of equations may be jointly determined, but the blocks of equations can be ordered such that they (the blocks) form a triangular structure (see Bodkin, Klein, and Marwah 1991 for examples).

Computer packages exist that will take a list of equations and order them in such a way that any recursive structure including recursive blocks are identified. Statistical tests to ascertain whether or not the variance-covariance matrix is diagonal are also available (see Breusch and Pagan 1980 for an example).

The technique of path analysis that features in psychology and other disciplines often utilizes a recursive system, following on the ideas of Sewall Wright (1921). However, while recursive models are easier to interpret

than models that are simultaneous, there is no mathematical or statistical reason why path analysis has to be limited to recursive models (see Seneta 2006 and the references cited therein).

SEE ALSO *Multiple Equilibria; Regression; Simultaneous Equation Bias*

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Robert Dixon

RED ARMY

SEE *Chinese Revolution.*

RED BOOK (CHINA)

SEE *Little Red Book.*

REDUCED FORM EQUATION

SEE *Variables, Predetermined.*

REDUCTIONISM

Reductionism is the hypothesis that science is unified by chains of intertheoretic reductions across disciplines, with theories from basic physics providing the ultimate ground. The classic work on intertheoretic reduction in the philosophy of science is chapter 11 of Ernest Nagel's *The Structure of Science*. For Nagel, reduction is logical deduction (derivation) of the statements of the reduced theory T_R from those of the reducing theory T_B. In interesting cases from science's history, the T_Rs contain terms that do not occur within the descriptive vocabulary of T_B (e.g., equilibrium thermodynamics contains "pressure" and "temperature," which do not occur in statistical mechanics and the kinetic/corpuscular theory of matter). Such cases are especially prominent in the psychological and social sciences because their theories developed mostly independently of one another. To derive such T_Rs from T_Bs in something other than a trivial fashion, Nagel insisted that the premises of the derivation require bridge principles connecting terms across the theories (e.g., "temperature in a gas is mean kinetic energy of molecular constituents"). Furthermore, most historical scientific reductions are corrective—they indicate where the T_R is false. Thus Nagel insisted that the premises of the deduction must contain not only the T_B and the necessary bridge principles but also various limiting assumptions and boundary conditions on T_B's application, some of which are contrary to fact. These elements circumscribe the falsity in the premises of the valid derivation of a false conclusion (T_R) away from the (presumed true) T_B. Challenges to Nagel's account were quickly raised by philosophers of science, but virtually every alternative account of intertheoretic reduction—for example those by Kenneth F. Schaffner in 1967 and Clifford Hooker in 1981—emerged as a direct response to Nagel's details.

With physics providing the ultimate reducing theories, reductionism is allied with physicalism about mental and social phenomena. As an explicit program, it has focused primarily on cases from biology and psychology rather than the social sciences. The rationale is straightforward: Claims about accomplished reductions in the former remain controversial, and if these controversies cannot be resolved, then the plausibility of the program for the latter seems remote. However, social phenomena do make an explicit appearance in one of the classic papers on reductionism in the philosophy of science. Paul Oppenheim and Hilary Putnam (1958, p. 7) illustrate the "working hypothesis" of the unity of science as follows:

6…….. Social groups

5…….. (Multicellular) living things

4…….. Cells

3…….. Molecules

2…….. Atoms

1…….. Elementary particles

Each level is related as parts (below) to wholes (immediately above), with "micro-reductions" hypothe-

sized to obtain between theories explaining phenomena at a lower and an immediately higher level. And while Oppenheim and Putnam admit that accomplished micro-reductions from levels 6 to 5 have not advanced very far, they cite individual choice theories in economics and the "principal theoretical approaches" in sociology (Marxist, Veblenian, Weberian, Mannheimian) as examples of attempted micro-reductions to individualist psychology.

One popular general criticism of reductionism focuses on the *multiple realizability* of given higher-level kinds on lower-level mechanisms. (Bickle's 2006 article "Multiple Realizability" provides a survey of these arguments and many reductionist responses, with an extensive bibliography.) An example from the social sciences often appealed to is Gresham's law (colloquially stated, that "bad money drives out good," and more precisely stated in terms of what happens in monetary exchanges under specific exchange conditions). Monetary exchange is realized by a wide variety of physical phenomena—exchanging paper bills or minted coins or strings of wampum, signing checks, or depressing the "Enter" button on one's desktop computer, to name just a few. It seems a safe empirical bet that no single physical kind, described and studied by some lower-level physical science, obtains in all these cases (not to mention in the myriad possible realizations of monetary exchange). One could disjoin all the lower-level realizers of such a high-level kind, but it seems an even safer bet that the resulting disjunctive kind does not occur in the explanatory laws of any physical science from which the laws of the higher-level science can be derived.

From the mid-1970s until the mid-1990s this argument held sway against reductionism. A few replies emerged during this time. Some reductionists advocated domain-specific reductions, limited to classes of realizers that shared lower-level mechanisms. Others pointed out examples of accomplished reductions from science's history that included multiply realized kinds in the reduced theories, showing that multiple realizability is not sufficient by itself to block intertheoretic reduction. Since the late 1990s some critics have appealed to different "grains" in the characterizations of higher- and lower-level kinds. Advocates of multiple realizability tend to tolerate a wide variety of functional differences in their specification of higher-level kinds shared across distinct realizers, but they insist that a single (minute) physical difference indicates distinct lower-level kinds. When grains are matched across higher- and lower-level theories, multiple realizability vanishes. Others have noticed a dilemma for advocates of multiple realizability. The more that the physical mechanisms across distinct realizers are similar, the less likely is *multiple* realization of the same higher-level kind. The more that the physical mechanisms are dissimilar, the easier it is to find functional differences across realizers at the higher level and hence the less likely is multiple realization of *the same* higher-level kind. At the time of this writing, anti-reductionists appealing to multiple realizability owe responses to these challenges.

A more diffuse anti-reductionist argument focuses on the *complexity* of social phenomena. Most likely it is this intuition that lies behind critiques of reductionist approaches by critics of neoclassical economics: Reducing social phenomena to the dynamics of individual decision makers will fail to explain some crucial economic or social features. (Reductionism to individuals is often characterized as "doctrinaire" or "simplistic" in the social sciences.) But turning this intuition into rational argument is not easy. One recent attempt applies the sophisticated mathematics of *complexity theory* to social sciences—dynamical systems, chaotic nonlinearity, trajectories through high-dimensional state spaces, and the like. Explanations in the form of differential equations are proposed to account for the behavior of *systems*, but not in terms of the mechanical outputs of its components. (Timothy van Gelder's application of complexity theory to cognitive psychology is a detailed attempt of this sort.) The principal worry is whether the "reductionism" targeted here is a straw man. If the behavior of systems requires these explanatory resources, then so will the lower-level sciences that appeal not only to the structure but also the dynamics and organization of the systems' components. The philosopher William Bechtel (2001), for example, replies that complexity is compatible with reduction, in the form of decomposition and localization explanatory strategies. He argues not just on conceptual grounds but also by appealing to empirical work by cognitive neuroscientists studying memory.

SEE ALSO *Choice in Economics; Choice in Psychology; Determinism; Economics; Economics, Neoclassical; Individualism; Marginalism; Materialism; Microeconomics; Objectivism; Psychology; Rational Choice Theory; Sociology; Sociology, Micro-*

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John Bickle

REFERENDUM

A referendum is a form of direct democracy in which the entire electorate votes to accept or reject a policy proposal. Nearly all democracies in the international community provide for national referendums. Yet there is no provision in the U.S. Constitution for one. The Tenth Amendment implies that referendums are left up to the states. Because of this, states decide individually whether to allow referendums and how they are to proceed.

In the United States a *legislative referendum* is an election in which the state legislature passes a bill for consideration by a state's voters for final adoption. Not all states have a legislative referendum provision for nonconstitutional issues, even though all states except Delaware allow or require constitutional amendments to be approved through referendums. Some states allow for voters to overrule legislation by referendum, so long as supporters gather a requisite number of signatures. This is known as the *popular referendum*. Twenty-four states (mostly in the American West) and myriad local governments provide for legislative and popular referendums. Referendums are similar to but conceptually distinct from *initiatives*. Although similar in that the people have the final say to support or oppose a policy and citizens groups may be required to gather signatures for both referendums and initiatives, referendums are a direct response to action by the legislature. Conversely, citizens, citizens groups, or other interest groups initiate the policy proposal to be placed on an election ballot.

REFERENDUMS AS PROGRESSIVE REFORMS

The history and initiation of referendums in the United States is a product of the progressive reforms. In response to the political corruption of party machines in urban areas throughout the United States, the Progressives pushed numerous reforms to depoliticize politics. Progressive reforms began with the creation of the federal civil service system with the Pendleton Act of 1883. They also included state-printed secret ballots, direct primary elections, nonpartisan elections, and initiatives, recalls, and referendums. The goal of these reforms was to wrest political control away from centralized and strong political parties and return democracy to the people. Although they had their intended effect of weakening political parties, they also contributed to a significant decline in voter participation over time. Even directly deciding policy through referendums is typically not sufficient to mobilize high voter turnout.

States vary in their use of referendum. For legislative, nonconstitutional referendums, California requires that the measure, with valid signatures equal in number to 5 percent of all votes cast in the previous gubernatorial contest, be presented to the secretary of state within ninety days after its enactment by the state legislature. The secretary of state then submits the referendum for placement on the ballot in the next general or special election, or the governor may request a special election. California's procedure for legislative referendum is fairly typical of most other states. California used the legislative referendum process in 2000 to pass Proposition 22, which held that only heterosexual marriages were legally valid in the state. Citizens in the state of South Dakota relied on a popular referendum to overturn, or veto, a 2006 state law that would have banned abortion except to protect the life of the mother. Citizens were required to gather over 18,000 valid signatures (or 5 percent of votes cast in the previous gubernatorial race) to place this popular referendum on the November 2006 ballot. Texas state law requires that any amendment to the Texas Constitution be approved by two-thirds of both houses of the state legislature and then placed on an election ballot for final adoption by the voters. In November 2005 Texas amended its constitution in this manner by defining marriage as a union between a man and a woman. All states may place advisory or nonbinding referendums on an election ballot. These referendums have no binding policy effect but instead are consultative referendums initiated by the government, perhaps, to poll the electorate as to their general belief on an issue. It is ultimately up to the state legislature whether to embrace or ignore these results.

CONSEQUENCES OF REFERENDUMS

Although the goal of referendums and other forms of direct democracy is to allow people to decide policy, there may be unintended consequences for some of the people as a result of these popular initiatives. James Madison (1751–1836), fourth president of the United States, warned about the deleterious effects of factions, that

majority will—if left unchecked—could actually punish the minority, creating a "tyranny of the majority." For these and other reasons, the framers of the U.S. Constitution adopted a document that was exceedingly thin on direct democratic provisions but instead provided for representative democracy.

With the institution and proliferation of forms of direct democracy as a policy tool in the late twentieth century, scholars began to explore the consequences of direct democracy and whether or not referendums or initiatives actually harm minorities. Barbara Gamble found in her 1997 article "Putting Civil Rights to a Popular Vote," for instance, that local and state ballot measures (referendum included) typically harm minorities, and she concluded that representative democracy protects minorities better than direct democracy does. Todd Donovan and Shaun Bowler showed in their 1998 article "Direct Democracy and Minority Rights: An Extension," on the other hand, that direct democracy is not necessarily harmful to minorities. Instead, largely populated areas with well-educated citizens tend to adopt ballot measures that actually protect homosexuals. Donovan and Bowler concluded that both direct and representative democracies have comparable limitations in protecting specific minority groups.

The claim that referendums reflect the popular will of the majority or that they provide for direct democracy in the truest sense is open to question for several reasons. First, as with most other elections, only a small and self-selected percentage of the voting public participates in referendum elections. Constitutional amendments that must be approved of through referendum may be placed on the ballot during special elections, not associated with either statewide or nationally elected office. The skew in voter participation for these referendums is likely to be especially pronounced. Moreover many of these referendums may pertain to mundane matters, such as issuing bonds for economic development or pollution control, which are not of interest to many voters. Second, large states, like California and Texas, may have too many referendums on an election ballot, which may cause voters to *roll off*, or not finish the ballot, actually reducing the proportion of voters who participate. Indeed the 2006 midterm election ballot used in several California counties was over 120 pages long. Third, referendums may be worded in a confusing fashion, with a "yes" vote supporting change in one referendum and a "no" vote supporting change in another. Fourth, voters may make policy based on a whim, not careful research, leading to ineffective or countereffective policies. Finally, government accountability may be reduced if citizens—not their elected representatives—are responsible for making public policy.

Unlike the United States, referendums are more central to governance in many other democracies, with numerous states relying extensively on national referendums for policy making. Switzerland's referendum process is central to policy making, whether for constitutional amendments, legislative enactments, or according to Lawrence LeDuc in his 2003 book *The Politics of Direct Democracy: Referendums in a Global Perspective*, "rejective" referendums. It does not have a nonbinding or advisory referendum provision. Although Sweden provides for both binding and nonbinding referendums, most of its late-twentieth-century referendums were advisory to the legislature. Other countries use the referendum process to approve constitutional amendments (France), vote on independence (Puerto Rico), recall politicians from office (Venezuela), determine public policy directly (Brazil), or decide European Union membership (United Kingdom).

SEE ALSO *Accountability; California Civil Rights Initiative; Democracy, Representative and Participatory; Government; Initiative; Representation; Voting*

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REFLECTION PROBLEM

In his extension of the identification problem to the social sciences, Charles Manski, in his book *Identification Problems in the Social Sciences* (1995), poses the reflection problem. The problem surfaces when one tries to predict the behavior of an individual by the behavior of the group of which the individual is a member. The problem is likened to the image of a person reflected in a mirror. The mirror can be said to reflect the image of the person's motion or to reflect the image and the person moving together consequent to an external stimulus.

The reflection problem is further explained through the variables used in a statistical model. Standard identification problems in economics use observations of prices and quantities, two endogenous variables, to reveal consumers' and producers' behavior. The economist would add predetermined variables to identify the demand and

supply curves. The reflection problem, however, looks at other endogenous effects that are overlooked or ignored in the standard order-and-rank identification process in economics. These additional variables are used mostly by sociologists who are concerned with how problems are reflected from society to the individual, while economists usually use social effects as constraints of individual opportunities.

Modern researchers are unable to solve the reflection problem through the modeling of output data, which cannot capture the reflection problem. One of their hypotheses might be that individuals belonging to a group tend to behave similarly. The researchers probe their models for endogenous, contextual, and correlated effects. Models with endogenous effects explain variations in individual behavior by the prevalence of the behavior in a group. Individuals behave similarly because they may experience pressure to conform to certain norms. Models of contextual effects explain individual behavior with the variation of background characteristics of the group, such as the influence of the neighborhood environment. Models of correlated effects assess whether individuals facing a similar environment or sharing similar individual characteristics will behave the same way. For example, people may associate with each other because they share similar characteristics.

Manski provides an intuitive example to explain the problem of separating these effects. A measure of the mean behavior of the group will contain the individual behavior. A measure of the outcome of a group behavior might simply be an aggregation of individual behaviors. One cannot be sure, therefore, that it reveals the individual behavior. By using the mean behavior of a group, the mean value of exogenous attributes of a group, or similar characteristics of members of a group to explain individual behavior, one captures exogenous, contextual, and correlated effects, respectively. To infer individual behavior from a measure of group behavior would require prior information that explains the composition of the group. To distinguish among these effects, it is necessary to know something more about how the groups are formed and how the members interact.

One can solve the reflection problem if one knows that the group mean influences individual behavior with a specific lag structure. Analogous assertions can be made if the researchers know a nonlinear specification, specific group features, or some instrument that conveys influences from the group to the individual. Generally, such information is not available.

SEE ALSO *Behaviorism; General Linear Model; Identification Problem; Least Squares, Ordinary; Nonlinear Regression; Structural Equation Models*

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REFLEXIVE COUNSCIOUSNESS

SEE *Consciousness.*

REFLEXIVITY

Individuals, institutions, and societies are reflexive: They "turn back" upon themselves to observe, reference, describe, predict, assess and explain their own ways and workings. *Reflexive turns* are not mere adjuncts to social life: They make it possible and increasingly comprise its very fabric. Selfhood, mind, and agency are constituted through the human capacity to reflexively make an object of oneself. Individuals interact with one another in light of their reflexive understanding of the contexts and consequences of their actions. Innumerable professionals—social scientists among them—audit, analyze, and forecast the functioning of organizations, institutions, and the society itself. Reflexive turns, then, are implicated in the very construction of social actors, social actions, and the disciplines and professions that study and monitor them.

Reflexive turns are complexly related to the circumstances from which they emerge. First, rather than mirror a preexistent domain, reflexive turns are constitutively *entwined* with the form, dynamics, and even existence of what is observed or described. Self-fulfilling prophecies illustrate one way reflexive "knowledge" about circumstances affects their development. In the classic example of self-fulfilling prophecies provided by R. K. Merton in 1948, rumors of insolvency precipitate a run on a financially sound bank culminating in actual insolvency. Second, while reflexive turns may claim an objective vantage point from which to observe, analyze, and explain, they are *embedded* in and informed by the embodied, interactional, organizational, and cultural contexts from which they emerge. A perspicuous example of the embeddedness of reflexive explanations is provided by E. E. Evans-Pritchard's 1937 study of Azande beliefs regarding

magic, witchcraft, and oracles. Azande explanations of the occasional failure of oracles to correctly predict future events were predicated on the cultural assumptions that contributed to belief in the efficacy of oracles in the first place. Finally, reflexive turns efface their own embeddedness and entwining. Forgetful of both their origins and contributions to what they "discover," reflexive turns (including this description of reflexive turns) treat the phenomena they discern as preexistent independent objects and themselves as (mere) observation, revelation, or representation.

INQUIRY INTO REFLEXIVITY AND REFLEXIVE INQUIRY

The embedded and entwined features of reflexive turns are topics of social scientific inquiry. Studies of social interaction, for example, highlight how discourse and background knowledge "about" a social setting contributes to its collaborative construction. Studies in economic sociology and kindred fields identify how lay and professional economic reasoning shapes financial markets and even the reasoners themselves. In examining how economic theories are appropriated by the society, Fabrizio Ferraro, Jeffrey Pfeffer, and Robert I. Sutton in 2005 suggested that as the model of *homo economicus* of classical economics infiltrates the discourse, norms, and circumstances of society, individuals increasingly invoke, conform to and thereby "validate" the model intended to explain their behavior. Analysts of major sociohistorical developments suggest that "late-modern" social life is marked by unprecedented levels of institutional and individual reflexive monitoring. Modern life requires, as Anthony Giddens observed in 1991, that "the question, 'How shall I live?' has to be answered in day-to-day decisions about how to behave, what to wear and what to eat" (Giddens 1991, p. 14).

In addition to being a topic for social science, reflexive turns are also challenges to social science. Nourished by the sociology of knowledge and amplified by the heightened reflexivity of late modernity, a panoply of voices asserts that the social (and natural) sciences have yet to recognize the full extent of their own embedding in and entwining with the processes they study. Calls for reflexive inquiry (in contrast to inquiry into reflexivity) challenge social scientists to explicate how they themselves and their projects, perspectives, operations, and findings are embedded in a nexus of enabling and constraining relationships, presuppositions, interests, and practices whose operation and effects escape the delimited self-reflection of conventional inquiry.

Reflexive inquiry bids researchers to address themselves, their inquiries, and the inquiries' products in terms of the processes found elsewhere in social life. On the micro level, reflexive inquiry focuses on tacit practices of categorization, interpretation, interaction, and textualization through which research is conducted. On the institutional level, reflexive inquiry examines how various contexts or fields foster intellectual dispositions and prejudgments that form what Pierre Bourdieu in 1992 referred to as "the collective scientific unconscious" (Bourdieu and Wacquant 1992). On the structural level, reflexive inquiry invites self-examination in terms of how the process and products of inquiry are shaped by the researcher's social location in political, economic, ethnic, or gender hierarchies.

PROBLEMS AND PROMISES OF REFLEXIVE INQUIRY

Promising to deepen and even improve research, reflexive inquiry may give rise to unsettling problems. Reflexive inquiry tends to blur the very distinctions between observer and observed and between representation and reality upon which conventional inquiry is predicated. Further, explication of the embedded and entwined features of social scientific inquiry threatens to initiate an infinite regress in which each successive reflexive turn calls forth yet another to explicate its predecessor. Moreover, reflexive inquiry may so divest itself of analytic concepts (treating them as phenomena to be reflexively explicated) that it threatens to devolve into a vacuous exercise. Finally, the extent to which reflexive inquiry can access and explicate the effaced background of research is uncertain. Unsurprisingly, social scientists vary in their enthusiasm for taking the reflexive turn and exposing themselves to these (and other) problems.

The ways persons, institutions, and societies take account of themselves are constitutive processes of social life. The social sciences are themselves reflexive turns and thus are charged not only with inquiry into reflexivity but also with reflexive inquiry, that is, with explicating their own embeddedness in and entwining with the affairs they purport to illuminate. The dividends of reflexive inquiry include insight into the constitutive role of observation, description, and analysis and the practices and prejudgments implicated in such activities. As daunting as they may be, the unsettling problems of reflexive inquiry, in the very ways they unsettle, are potent resources for discerning fundamental assumptions, practices, and limits of social science.

SEE ALSO *Anthropology; Ethnography; Ethnology and Folklore; Observation, Participant; Primitivism*

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Melvin Pollner

REFUGEE CAMPS

Refugee camp refers to a place where temporary housing is provided by governments or nongovernmental organizations (NGOs) for persons displaced from their homes due to war, political oppression, and/or religious persecution. The displaced person, referred to as a refugee, is someone with a well-founded fear of persecution on the basis of his or her race, religion, nationality, membership in a particular social group, or political opinion, who is outside of his or her country of nationality and unable or unwilling to return. A broader definition might include internally displaced persons (IDPs), those who had been uprooted within their own countries.

The basic infrastructure for refugee camps normally includes sleeping accommodations, hygiene facilities (bathrooms and showers), medical supplies, and communication equipment but the quality of infrastructure varies within and across geographic locations. The camp sites might be composed of tents, huts, or boxcar living structures. The development of refugee camps, however, is not always the result of government or NGO initiatives. Often makeshift refugee camps emerge because of massive numbers of people fleeing conflictual situations gathering in spaces that offer some greater level of personal security. At this point governments and organizations providing humanitarian assistance intervene to provide relief that might include latrines, food, medical assistance, and sleeping accommodations.

HISTORICAL DEVELOPMENT

Refugee camps are not solely a contemporary world phenomenon. One of the earliest recorded refugee camps is described in the biblical account of the Israelites' flight from Egypt in Exodus. Moreover, throughout human history there have always existed clashes of interests that had profound implications for human suffering, forced removal from homelands, and caused displacement. The development of refugee camps, however, is associated most often with conflicts transpiring in the contemporary world. In the aftermath of World War I significant numbers of people could be categorized as refugees, but the existence of refugee camps took on global significance after World War II and has become increasingly more common since the end of the cold war.

At the end of both world wars, individuals who feared for their lives or otherwise felt threatened were likely to seek refuge by fleeing to another country. The United Nations (UN) Charter included provisions that established the UN High Commissioner for Refugees (UNHCR) in 1951. The UNHCR had a mandate to seek durable solutions for affected refugee populations through repatriation programs, integration into host communities of the country of first asylum, or resettlement in a third country. This indicates that refugee camps as they have come to be known in the early-twenty-first century were not as widely dispersed globally as they were in the late 1990s. However, one of the oldest known camps, which was created in 1948, still exists in Palestine. Internal conflicts that can be traced back to the end of colonialism have contributed to the proliferation of refugee camps in modern times. The end of the cold war also revived historic animosities and ethnic tensions leading to increased numbers of complex emergencies, increased numbers of people affected by them, and a change in the nature of population displacements that contributed to a proliferation of refugee camps. Such conflicts coupled with natural catastrophes have created a global challenge and make clear the need to ensure that people worldwide enjoy security and freedom.

TWENTY-FIRST CENTURY PERSPECTIVES

According to the 2005 World Refugee Survey, there were more than 11 million refugees worldwide and more than 21 million IDPs as of December 2004. Not all refugees live in camps, and it is difficult to obtain reliable data pertaining to the actual number who do. In some cases, refugees permanently settle in the host country and integrate into the communities in which they live. In other cases, it is difficult to distinguish between what constitutes the refugee camp, camps for IDPs, and normal housing for a given area. Even so, providing basic accommodations for refugees, as well as IDPs, is a problem that demands global attention. The number of refugees and IDPs associated with ethnic conflicts—such as those in Rwanda in 1994; the Sudan from the 1980s to 2006; East Timor; Kosovo in the 1990s; Afghanistan; and other Third World countries—led to the establishment of refugee camps such as those in Musasa in Northern Burundi; Mboki in Central Africa Republic; Darfur, Sudan; Karama in the Democratic Republic of Congo; Kupang in Indonesia; and Kelli Fazo in Pakistan, which are some of the most populated sites.

Despite enormous efforts by the UN, host governments, and NGOs to render these and other refugee camps livable, conditions have ranged from bearable to horrendous. Some lack very basic supplies such as potable drinking water, latrines, medical supplies, and ample food. Diseases are widespread; many of the children lack access to medical care of any kind and schooling can be unavailable or inadequate; and some refugees live under the threat of forced removal from camps. Although refugee camps tend to be set up near border areas, away from conflicts, many are subject to violence inflicted upon the inhabitants by government forces and/or insurgents on both sides of the border.

One of the greatest threats to peace and security in the twenty-first century is the large-scale movement of refugees and other forced migrants stemming mostly from internal conflicts and natural catastrophes. Failure to address the problem may lead to greater ethnic conflict within countries and across borders, the uncontrollable spread of disease, and greater environmental degradation. Given that Third World nations hosting refugees have challenges in terms of meeting the needs and demands of their own citizens, industrialized nations must step up their efforts to address the problem. In addition to providing financial and humanitarian support, these nations must pressure governments to observe human rights; demonstrate a stronger commitment to timely diplomatic intervention, as a first step, to avert conflicts that are likely to increase the refugee population; and revisit restrictive asylum policies that came to fruition during the 1980s.

SEE ALSO *Disease; Genocide; Nongovernmental Organizations (NGOs); Palestinian Diaspora; Palestinians; Refugees; War; World War I; World War II*

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Kathie Stromile Golden

REFUGEES

Refugees are a subset of immigrants often termed *political migrants*. They are pushed out of their homelands, typically by war or government persecution due to religion, ethnicity, or political activism. For example, Albert Einstein (1879–1955), often considered the most influential scientist of the twentieth century, was among the Jews who left Germany during the 1930s due to Nazi anti-Semitism. The Buddhist monk His Holiness the Dalai Lama is an internationally recognized advocate of human rights for Tibetans; he fled Tibet in 1959 following the brutal crackdown by China against Tibetans opposing Chinese rule.

In contrast to refugees, most immigrants are pulled from their homes by the prospects of better jobs in other countries, or to join family members who already reside abroad. These economic and social forms of international migration allow time for a considerable amount of planning and preparation. Such immigrants often believe they will return to their homelands at some point in the future. Refugee migrations, however, are unanticipated and forced, and will keep the émigrés away from home for a very long time, possibly for the rest of their lives.

Since the mid-1990s the world has averaged between 11 million and 15 million refugees per year. The majority are women and children. The United Nations (UN) first defined a refugee in 1951 as a person who "owing to a well founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail

himself of that country." This definition is contained in the 1951 Convention Relating to the Status of Refugees, which was developed in the aftermath of World War II (1939–1945) and only pertained to people in Europe. The 1967 Protocol Relating to the Status of Refugees broadened the policy to include people in the rest of the world. Today there are five refugee populations numbering 500,000 people or more: those from the former Palestine, Afghanistan, Iraq, Myanmar (Burma), and Sudan.

The 1951 convention and the 1967 protocol establish the rights of refugees in exile, including the rights to protection, movement, and work. They specifically prohibit *refoulement*—the forced return of refugees to a country where they would be persecuted. One hundred forty-five countries have signed the convention and/or the protocol, but forty-four countries, including India, Pakistan, and Indonesia, have not. Some governments use the UN definition of *refugee* in their national laws, as the United States did when it passed the landmark Refugee Act of 1980. Nonetheless, foreign-policy interests often determine to what degree signatories of the convention and protocol actually abide by them. The U.S. government historically has given a very favorable reception to political migrants from Cuba, but uses the U.S. Coast Guard to interdict those leaving Haiti.

There have been several global trends in refugee migrations since World War II. European decolonization produced intense ethnic conflict in newly independent states in Africa and Asia (e.g., the 1947 partition of India), and it was a major cause of refugee crises from the late 1940s through the 1960s. The cold war between the United States, the former Soviet Union, and the client states of each superpower was the main cause of refugee crises from the 1960s through the 1980s. In the United States the best known cold-war refugees are the Cubans and the Vietnamese.

Since the 1990s a new cause of refugees has been the total collapse of national institutions in some countries (termed *failed states*), leading to perpetual social conflict and disorder. This occurred in Somalia during the early 1990s, and other countries in Africa have followed this same pattern. In the western hemisphere, Haiti shows many signs of being a failed state and Colombia has some symptoms as well. Two catastrophic ethnic conflicts occurred almost simultaneously in the mid-1990s: More than 1 million Bosnian refugees fled Serbian ethnic cleansing in Bosnia, and about 2 million Hutus fled Rwanda when Tutsi forces regained power following the genocide of some 800,000 Tutsis at the hands of Hutu militias.

The UN High Commissioner for Refugees, created in 1950, is the primary international body charged with advocating for refugees and providing them with assistance. Many nongovernmental organizations (NGOs) also assist refugees, such as the U.S. Committee for Refugees, U.S. Catholic Conference, and Médecins Sans Frontières (Doctors Without Borders). NGOs lobby states for more favorable policies, provide services in refugee camps, and facilitate adaptation when refugees resettle in host countries or repatriate to their homelands. But refugees often endure years of waiting in impoverished, segregated camps, a situation termed *warehousing*. If the root political problems remain unresolved for a long time, warehousing creates multigenerational refugee populations. Nearly 2 million Afghani refugees reside in Iran and Pakistan, a legacy of the Soviet invasion in 1979 and subsequent wars. About 2.5 million Palestinians throughout the Middle East receive assistance from the UN Relief and Works Administration for Palestine Refugees. The Palestinians were originally displaced by the wars that followed the creation of Israel in 1948.

An important legal distinction for political migrants is whether they seek refugee status before or after arriving in a host country where they hope to permanently reside. The United States, Canada, Australia, and the countries of the European Union allow people with a well-founded fear of persecution to apply for entry while still living in their homelands or in adjacent countries to which they have fled. Since passage of the Refugee Act of 1980 the United States has accepted more than 2.5 million refugees in this way. Congress and the president establish an annual refugee admissions quota, and refugees who arrive are eligible for social welfare programs operated by the federal government, state governments, and NGOs. Since 2000 the former Soviet Union, Somalia, and Iran have been the leading source countries of refugee admissions to the United States.

Actual or imminent persecution can be so dire that people flee without waiting for permission to resettle in a host country. When political migrants cross into another country without legal authorization and then apply for refugee status they are called *asylum seekers*. China, Haiti, El Salvador, and Guatemala are the sources of about 45 percent of all asylum seekers who have entered the United States since 1989. In western Europe most asylum seekers come from Turkey, Africa, and the Middle East. The United States and other western countries use legal proceedings, which often are hasty and haphazard, to determine whether asylum seekers have credible reasons to fear persecution if deported to their homelands. U.S. asylum officers approve fewer than half of all asylum requests. U.S. immigration judges adjudicate claims initially denied, but the success rate of these appeals is even lower.

People who flee persecution but stay within their native country rather than crossing an international bor-

der share many of the same experiences as refugees. They are termed *internally displaced persons* (IDPs). The term *displaced persons* gained prominence in Europe after World War II, when it was used to describe Poles, Germans, and other people who were outside their homelands due to the war; in some cases they did not wish to return home. IDPs now is used to refer to people who have fled persecution or war but who cannot avail themselves of the 1951 convention or the 1967 protocol because they are still within the jurisdiction of the state which regulates their citizenship.

There are more IDPs in the world than refugees: about 25 million compared to 11.5 million. Five countries have more than 1 million IDPs: Sudan, Colombia, Uganda, Congo-Kinshasa, and Iraq. International protection and aid for IDPs conflicts with national sovereignty and requires asserting that a state is unwilling or incapable of protecting its own citizens. For a brief period during the 1990s the UN undertook such humanitarian intervention in northern Iraq, Bosnia, and Somalia. Unfortunately, the humanitarian crisis that began in 2003 in the Darfur region of Sudan did not produce a similar response from the international community. In 2005 the UN adopted guidelines for assisting internally displaced persons by creating a division of labor among its various agencies. Social scientists are divided over whether or not to extend the concept of IDPs to the survivors of catastrophic natural disasters, such as the South Asian tsunami in 2004 and Hurricane Katrina on the U.S. Gulf Coast in 2005. Many of the people displaced by Hurricane Katrina were offended when the media described them as "refugees," believing that the label equated them with "foreigners" who did not merit the protections granted to "citizens." Whether to use the term *environmental refugees* to describe people who flee the environmental problems caused by deforestation and global warming is also a matter of debate.

There are two solutions to a refugee crisis. Voluntary repatriation occurs when homeland conditions have improved and the refugees return from abroad. They require economic development assistance similar to that provided for other projects in the developing world. Resettlement in the United States, Canada, Australia, and the European Union is a second though less frequent outcome for refugees. Resettled refugees share with other immigrants many of the same adaptation challenges, such as acculturation and finding employment. But refugees have some distinct adaptation concerns, including mental health problems and often a particularly intense interest in homeland politics. Given the trauma of forced migration, it is not surprising that refugees carry lifelong vestiges of their experiences.

SEE ALSO *Refugee Camps*

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Jeremy Hein

REGGAE

Reggae is a complex Afro-Jamaican twentieth-century musical phenomenon that has profoundly influenced global popular musical culture. As a genre of modern black cultural production, reggae music dates from the 1970s, when it emerged from the musical confluence of ska and rock steady, two forms born in early postcolonial Jamaica. As a cultural practice in Jamaican postcolonial society, reggae was closely tied to subaltern representations of slavery, colonialism, history, and Africa. As a consequence in many instances reggae became a counter-hegemonic practice critiquing the formal Jamaican Creole nationalist project of political independence.

Ska was a 1960s musical synthesis that ruptured the Jamaican musical form known as *mento*, which emerged from the encounter between European colonialism, racial plantation slavery, and the slave African population. Mento adapted and morphed the harmonic structures, instrumentation, and melodies of European musical styles into indigenous sounds. It added other instruments, in particular rhumba scrapers and drums, and wove melodic structures within the sound of the rhumba scraper to produce a unique rhythm to which many rural Jamaicans enjoyed dancing.

Profoundly influenced by African American jazz and big band swing music, ska broke with mento in two ways. It used different instrumentation, and it became an urban-based rather than a rural-based musical form. Ska

was driven in part by two migratory patterns: the external migration to the American Eastern Seaboard and the internal migration between the island's rural areas and the capital city Kingston, where impoverished young men and women not only wanted to carve out a future but also brought with them the culture of the rural folk. Particularly in Kingston's western sections—Jones Town, Trench Town, and Denham Town—postcolonial popular Jamaican music found its moorings. This rural-to-urban shift in Jamaican society is visually captured by the opening moments of the film *The Harder They Come* and Jimmy Cliff's driving lyrics of the song: "You can get it if you really want."

In addition to ska, the cauldron of west Kingston gave birth to the sound system, the early recording industry, rock steady, and eventually to reggae. The Folkes Brothers' 1961 record *Oh Carolina* marks a watershed in Jamaican recorded music. With the Rastafarian nyabinghi-style drumming of Count Ossie forming the spine of the track, the song is now a classic of Jamaican music. Although ska incorporated big band horn-blowing elements, it differed from jazz and swing in the way Jamaican musicians sped up the second beat while slowing down the fourth, so that the music seemed offbeat with loose skips. One of the most important ska instrumentalists was the trombonist Don Drummond, who played with the Skatalites, perhaps Jamaica's most accomplished musicians at the time. This group produced such titles as "Freedom Sounds," "Far East," "Addis Ababa," and "Man in the Street," indicating the tight relationship between urban poor communities in Jamaica and Africa and certainly the cultural importance of Rastafari. The music of the Skatalites remains a rich archive of early Jamaican music.

Jamaican music is organically tied to dance and the body. There is no popular music without dance steps. In the history of Jamaican music, with its reliance on the local sound system as the conduit of its popularity, the participation of both audience and dancers in giving the music its form is critical. When the audience comprises primarily urban dwellers alienated from official society, then the relationship among the music, musicians, form, and audience becomes especially intimate and can become a practice of counter-signification. This practice is clearly illustrated by the morphing of ska into the musical form of rock steady. If ska began as the music of hope, it quickly came to express a growing alienation and despair, as "Simmer Down," the single most important ska hit of the Wailers, illustrates. In the song the Wailers ask the "rude bwoy" to "simmer down." The "rude bwoy" was the iconic young black male of the city, a figure of rebellion who began to confront notions of Jamaican citizenship and respectability. Prince Buster, the Nation of Islam producer and singer, also sang in "Judge Dread" of the confrontation between the Jamaican justice system and the "rude bwoy." These songs were not reflective of but rather an integral part of Jamaican social and political discourse of the period.

In rock steady, the transitional music between ska and reggae, the music slowed down, lost its skip, became languid. The dance movements were transformed, with the shoulders and hands operating in different time from the motions of the pelvis. Singing groups were central to this style; the Wailers, Heptones, Ethiopians, Paragons, Melodians, and Mighty Diamonds were popular. Singers like Jimmy Cliff, Alton Ellis, Delroy Wilson, and Ken Boothe also emerged, and along with the centrality of the sound systems of Sir Coxsone and Duke Reid and Prince Buster, Jamaican popular music consolidated itself locally. The singers and instrumental creativity of ska and rock steady combined with the creative musical drives of the urban dispossessed population to lay the ground for reggae.

In reggae the drum and bass became pronounced and the individual singer was given more scope; the horns surround the bridge segments of the music, and the dancer skips and moves with feet free from the thralldom of postcolonial oppression, while the body retraces the memory of the Middle Passage. Reggae music relies heavily on the message it delivers—from Marley's "Trench Town Rock" to Junior Byles's "Fade Away" and perhaps that most reproduced of all reggae riddims, the rhythm of the Abyssinians, "Satta Massagana." Reggae music operates in the languages of black struggle and redemption and is shaped by the language—what Velma Pollard calls "dread talk"—and religious and political doctrines of Rastafari. Dread talk undertakes the lexical reorganization of Jamaican language in an effort to linguistically reorder society. The themes of reggae music are history, slavery, Africa, and exile alongside the machinations of record producers. These themes are lyrically enunciated in the idioms of proverbs, rereadings of biblical passages, Jamaican folksongs, and children's songs. The lyrical rhetorical strategies of many reggae songs are embedded within the social and linguistic complexities of Afro-Jamaican life. One only has to listen to the vast musical archives of the Black Ark studio of Lee Scratch Perry, of Channel One Studio operated by the Hoo-Kim brothers, and of Gussie Clarke to understand how reggae presented alternative narratives of Jamaica's history and postcolonial society. As the reggae producer Rupie Edwards put it, "The music was a way of life, the whole thing is not just a music being made … it's a people … a culture … it's an attitude, it's a way of life coming out of the people" (Bradley 2000, p. 1). Marley put this well another way in the song "Trench Town":

> Whoa my head
> In desolate places we'll find our bread

And everyone see what's taking place …
We come from Trench Town
Lord, we free the people with music. Sweet
Music.

For many reggae musicians, Jamaican postcolonial society was, in the words of the Rastafari and reggae singer Johnny Clark, a "Babylon system" that the Jamaican people had to move out of. History was a "stench" that consisted of "old pirates," and freedom was possible only through some sort of revolution or redemption. Reggae music became the voice of black prophetic criticism in postcolonial Jamaican society. At the international level reggae has produced many iconic figures, with Marley being the most popular. Many factors shaped both Marley's Jamaican and international appeal: the rise in Jamaican radical nationalist politics driven by conceptions of black power, the anticolonial struggles in Africa, the civil rights movement in the United States, and the failures of the immediate Caribbean postcolonial state to deliver on the hopes and aspirations of political independence. In the last stage of Marley's life, his concert for the guerrillas of the Zimbabwean anticolonial struggle illustrated the deep connections between reggae as a popular antihegemonic musical form and aspects of international black struggles. This dimension of reggae is now being practiced by reggae poets like Mutabaruka.

Reggae continues to develop in the twenty-first century. One genre, roots reggae, popularized by the singer Luciano, distinguishes itself by its message of openness, its rebellious quality, its firm affirmation of Rastafari, and a central preoccupation with social and political issues. Other genres are dub and dance hall. In the 1970s many children of Jamaican immigrants to the United Kingdom, often called "black British," deployed reggae as a cultural form not only of identity but of protest. Bands such as Steel Pulse and Aswad played a role in the black cultural politics of the United Kingdom. Thematically these bands reflected on the concerns of the black British experience as part of an international black experience. It was from this experience that one of the most important reggae poets, Linton Kwesi Johnson, emerged. Johnson's poetry, as Fred D'Aguiar put it, is "an epicure of this familiar metre and rhyme served up into a reggae rhythm" (Johnson 2002, p. xi). Reggae has come to constitute an aesthetic form for many Caribbean poets.

Reggae still shapes black popular music around the globe, with reggae bands in Africa, Europe, and Latin America. In addition the philosophy of Rastafari, which traveled with reggae, remains an important cultural and social movement in many parts of the world. Perhaps the best summary of the importance of the historic achievement of reggae is that given by Count Ossie, the drummer and Rastafarian personality, who remarked that both reggae and rasta were "fighting colonialism and oppression but not with guns and bayonet, but wordically, culturally" (Bogues 2003, p. 192). Reggae as a black cultural achievement is an integral element of late-twentieth-century efforts of former colonized people to achieve full decolonization.

SEE ALSO *Black Power; Blackness; Caribbean, The; Culture, Low and High; Migration, Rural to Urban; Music; Music, Psychology of; Pan-Africanism; Popular Culture; Protest; Rastafari; Slavery; Social Movements; Urbanization; World Music*

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Anthony Bogues

REGIME THEORY

SEE *Politics, Urban.*

REGIMES, MILITARY

SEE *Military Regimes.*

REGIONAL SCIENCE

SEE *Geography.*

REGIONS

Social scientists looking for an organizing principle with which to understand a large area of social life have long employed broad concepts aimed at integrating complex observations and categories of social behavior. One such concept that has demonstrated broad utility is that of *regions*. Its application has been great in sociology, history, political analysis, economics, geography, and anthropology. In turn, each of these disciplines has contributed something to the understanding of regions.

During the first half of the twentieth century the study of urban sociology grew strongly, and a major center of this research and theorizing was the sociology department at the University of Chicago. Scholars such as Robert Park, Ernest Burgess, Louis Wirth, and Roderick D. McKenzie developed innovative research projects and interpretations of the human community. Their emphasis overall was on the urban community, and a significant aspect of their work elaborated an ecological conception of the region as an extension of the study of the community.

The ecological approach studies human beings as organisms adapting to a physical environment. Using concepts originally developed in plant and animal ecology, these sociologists focused on the spatial patterns and social organization of the community that resulted from competition for space and available resources in a geographical locale. The approach became distinctively sociological through its focus on social organization, role specialization, population concentration and centralization, and interdependence resulting from differing economic activities. Age and sex distributions are affected by ecological interactions, as is the distribution of various groupings by ethnicity and race. These stratified orders are a salient aspect of the social organization of the human community, and a significant source of these patterns lies in the realm of ecological relationships.

This approach has significant ties with *demography*, or the statistical study of human population aggregates, and *human geography*, particularly *economic geography*, with its attention to the physical factors that determine strategic points of location for commerce and industry. Human ecologists devote great attention to *concentration*, or increasing density of a population in an area, which often becomes regional concentration. Thus, regional development has its origins in population growth and movement and the tendency of people to concentrate.

TYPES OF REGIONS

The classic conception of the region as taking one of four forms was developed by Louis Wirth, a prominent member of the Chicago school of sociology. His scholarship approached the region as an area distinguished by physical characteristics, such as the type of soil, annual and seasonal amounts and patterns of rainfall, length of growing season, crops grown, and border contours. Here the region is a recognizable physical area in relation to human activities carried on within, or limited by, the contours of the place inhabited or utilized. Wirth continues his analysis of the region by giving attention to areal variations in cultural features of the people who make the region their home. Cultural attributes such as language or local dialects, distinctive religious beliefs and practices, customs in dress, architectural patterns, and unique customs and forms of social organization are considered here. He concludes that either natural areas or cultural areas comprise regions, due to the homogeneity of specific features.

Wirth distinguishes a second form of region set off from other areas by physical features that serve as barriers to migration. These barriers may be mountain ranges, deserts, lakes, rivers, and oceans, or large protected valleys. He also viewed barriers created by human beings as equally powerful. These can include state and national boundaries as well as trade and custom regulations that inhibit or prevent contact between geographical locales and operate to limit the activities of an area and isolate it from surrounding areas.

The third form of region analyzed by Wirth emphasized the interdependence of activities in an area. Activities and units of organization are not homogeneous or necessarily similar, but are integrated as a way of life. This third pattern is likely to involve a trade area with a network of economic linkages with multiple radii of influence extending from a trade center outward. Examples of this third variation of the region are political capitals, cultural centers, colonial primate cities, and in the modern era, the metropolitan region with its urban center. These forms of centered regions frequently have fewer discernible boundaries, with the periphery gradually shading into a vast hinterland, or in some instances, a borderland receiving influence from a competing center or area of dominance. This third form of the region is likely to be less bound by local traditions and is likely to be dynamic, with the life activities of the region's inhabitants in flux.

The fourth type of region is referred to by Wirth as an *administrative region* or *ad hoc* region. It often develops in an attempt to control some human problem such as crime, traffic, slum life, or contagious disease. Units of administration are created in order to ameliorate or, at minimum, set limits to the growth of one or more problems of a community. The planning region is likely to take form in a manner that does not coincide with a "natural" or physically bounded area. The New York Port Authority and Tennessee Valley Authority serve as illustrations of this fourth form of the region.

It should be noted that each of these types of region involves an areal and a spatial dimension in relation to the distribution of people and social behavior. The organized social behavior of human beings is analyzed in terms of location and position in some form of physical, cultural, or social utilization of space. Wirth cautions that none of the conceptions of the regions implies a form of geographical or physical determinism. Soil and atmosphere do not determine culture and social organization. In contrast, some of the previous writings on regionalism took physical determinism for granted and might have reflected earlier viewpoints asserting a close connection between habitat and economic and political activity.

REGIONAL RIVALRY AND CONFLICT

The concept of the region should be clearly separated from *sectionalism*, which implies organization and political consciousness based on the economic and political interests of a geographical area in a nation. In the United States, and during periods in the history of some European nations, sectional interests have been based on the natural resources of a geographical region. Historical interpretations of sectionalism incline toward a form of economic determinism. The presence of sectional interests and consciousness do point to the manner in which regional organization, and the similarity of a region's qualities, can lead to conflict between regions. The American Civil War was an extreme example of sectional conflict based in part on regional conflict and differing economic interests, along with differing culture and way of life. Regional differences in ethnicity and racial identification, industrial development, types of agriculture, interests in tariff and trade policy, and military traditions were involved in a regional conflict of catastrophic proportions in the War between the States. A result was long-term domination by the North over the South in political and economic relations that followed the conflict.

There is no shortage of conflicts in the world at large in which regional differences play a large role. The domination of Tibet by China is a striking example in Asia. Through centuries the strategic location of Tibet between East, South, and Central Asia made it a focus of contention between more powerful rival empires. Nonetheless, its extreme difficulty of access enabled Tibet to live in isolation through most of its history. It was governed by a series of aristocratic families and became the religious center of Lamaistic Buddhism.

After the victory of the Chinese Communists over the Nationalists in 1949, the victors announced plans to "liberate" Tibet and secure China's "traditional boundaries." The Peking government acted on its threat in 1950, attacking in Eastern Tibet. After appeals for support that were ignored or rebuffed, Chinese terms were accepted in 1951. Chinese sovereignty was recognized, in exchange for assurances of broad Tibetan autonomy. The Chinese soon widened their administrative control and in response Tibet's people rose up in revolt in 1956, and again in 1959. After the Dalai Lama was forced to flee to India, the Chinese crushed the rebellion. In 1965 Tibet became an "Autonomous Region of the People's Republic of China." This sequence of events represents an example of a more powerful nation exerting domination over a smaller, less powerful region near its border.

Governance in Spain represents another illustration of strains between regions within a nation containing historical regional-based divisions in language and culture. A part of the basis for representation is regional variation in interest. At the beginning of the twenty-first century, Spain's senate, composed of 256 members, includes 46 members chosen by regional governments. Earlier, during the 1980s, Catalonia and the Basque Provinces had begun asking for greater autonomy, as well as the official use of Catalan and the Basque languages in their respective provinces. The Basque separatists were defeated politically in 1994. When the major Catalonian terrorist group renounced violence in 1991, Catalonia's president was given an influential position in the Spanish government.

Italy represents another example of a nation with major regional divisions based on natural resources, economic development, local custom, and dialects, as well as other regional subcultural differences. In this case, the northern region of Italy is largely dominant over the south.

Northern Italy includes the Italian Alps, a northern plain, and the region of Liguria, on the steep and narrow coastline of the Ligurian Sea. The northern plain of Italy, south of the Alps, is an extended lowland that benefits from an abundant water supply from rainfall and the region's rivers. Summers are long, farmlands are fertile, and there is a heavy concentration of industry. The large city of Genoa provides services to the industries of Lombardy, as well as hosting local enterprises that include chemical firms, shipbuilders, and oil refineries. Genoa's oil pipelines penetrate into Switzerland and Germany.

Central Italy includes the regions of Tuscany, Umbria, Latium, and Marche. This area has contributed very strongly to Western civilization. The peninsula is highly urbanized, with centers such as Rome, though industry is not highly developed. Farther south, the islands of Sicily and Sardinia have no notable resources; their terrain is rugged, and droughts as well as floods are frequent. These islands are also physically more isolated, and despite attempts at development following World War II, industrial growth has been slow. These conditions have meant that economically, the north of Italy has been dominant, with population migration more frequently

directed at the northern cities. Social mobility has increased in recent years with population movement from villages into cities, and particularly from the south to the more industrialized north.

World development can also be seen from the perspective of large regional variations in industrial development and political influence. Colonialism has had an overarching influence on large world areas. European influence in North America, New Zealand, and Australia resulted in the domination of small groupings of traditional hunters and gatherers, or in some instances, pastoral societies. European settlements became dominant, and long-term colonial administrative relations were established. In large areas in southern portions of the globe—in Africa, Asia, and South America—the autochthonous, or native, populations remained numerically predominant, but under colonial rule.

These latter areas have experienced much slower industrial development than North America, the Western and Northern European capitalist centers, or Australia and New Zealand. In recent years, conditions in some of the impoverished regions of the South have actually deteriorated. Poverty is extremely widespread in the former colonial areas: In the year 2000, an estimated 1.5 billion people, nearly a quarter of the world's population, lived in poverty in developing countries around the world. An estimated half of the global poor live in Asia, and around one-third live in Africa, with many of the remaining portion of the world's impoverished people living in Central and South America. These statistics are now frequently seen as reflecting a worldwide division between North and South—a division that is perhaps world history's greatest regional variation, with the largest human consequences.

SEE ALSO *Development in Sociology; Geography; Globalization, Social and Economic Aspects of; Nationalism and Nationality*

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REGIONS, METROPOLITAN

At the beginning of the twentieth century it was widely recognized that the frontier in the United States had passed and that the new growth in population was in and around cities. As rural counties lost population and cities became centers of nonfarm employment, students of social behavior in North America saw a trend toward the development of larger cities. What was not immediately apparent was that the trend toward urbanization and larger cities would continue within another significant trend. This other trend was the centrifugal movement of population around large cities as the urban population, including both older urban dwellers and newcomers, would begin to move outward around larger urban places. This new trend was one of metropolitan development in contrast to merely urban growth, and it carried with it strong changes in population distribution first toward the periphery, then well beyond the boundaries of central cities.

The growth of the metropolitan region was a major social pattern during the entire twentieth century and has continued into the twenty-first century. Roderick D. McKenzie was the first urban sociologist to recognize and call attention to the national trend of metropolitan regional growth in his 1933 book, *The Metropolitan Community*. This growth pattern involves the ecological process of concentration of population in cities, combined with locally significant deconcentration into nearby areas around cities and their outlying areas. Associated with these demographic and ecological tendencies is an accompanying centralization of administrative control in urban areas, which results in a large-scale regional integration of occupational opportunities. Business decisions, employment, governmental services, shopping and consumer behavior, and a range of recreational and other quotidian

activities spread in interlinked fashion over an enlarged regional area.

The major source of the expansion of urban influences into outlying spaces, creating a region of metropolitan impact, is the reduction of the "friction" of space by reducing the limiting effects of time and distance. The enhanced speed and flexibility of motor-vehicle travel has now enlarged the radius of one hour of travel time to thirty miles or so. In the nineteenth century with horseback travel and horse-drawn wagons, this distance was closer to six miles. On foot, an hour's walking is around three miles. Few people will commute distances that require more than an hour in travel time. The effect has been to expand the square miles of space with urban influence from travel, including shopping, from around thirty-six square miles to two thousand to three thousand square miles or even more. This much greater separation of residence from work, and of errands and shopping areas from residences, has greatly expanded the metropolitan influence into a larger area. Railroad travel between cities in the latter half of the nineteenth century, followed by motor truck transport after the 1920s, have expanded the metropolitan impact to entire regions.

For purposes of clarification and definition, the terms *metropolitan community* or *metropolitan areas* are used to refer to the city and the immediately surrounding countryside, usually within a radius of twenty-five to thirty miles. *Metropolitan region* is the term used to refer to the much broader area, which includes a multiplicity of scattered activities that have come under administrative influences and even supervision of the large central city, or metropolis.

THE GROWTH OF METROPOLITAN REGIONS

The widely observed trend in modern societies toward large-scale social organization and greater economic reach is a fundamental source of the growth of regions and the great expansion of the metropolitan community. This pattern of growth has developed over about the last hundred years and has been documented for that length of time in the U.S. Census. These changes follow the great redirections in time and cost of movement that motorized vehicles traveling on hard-surfaced roads provide. The telephone, radio, and television followed improvements in transmitting electrical power and made possible the expansion of urban community boundaries. More recently, the computer has facilitated instant communication of information and speeded economic transactions in a manner that reduces the importance of traditionally recognized community boundaries.

The growth of a metropolitan region occurs through ecological processes that involve transportation and contact and exchange, typically in connection with distributive functions arising from various sustenance activities. A center with specialized functions and an involuted administrative organization may be the coordinating base for a hierarchy of socially connected but dispersed activities. The boundaries of a region may be set by the points of intersection of interregional routes. The size of the metropolitan center and spacing of coordinated service functions influence the emerging regional pattern. Interregional nodes of transportation may determine the early development of regional boundaries. It should be added that extractive industries as well as manufacturing exert an eccentric or decentralizing influence on large metropolitan urban locations. Continued expansion of population along with a widened range of administrative organizations extends economic activities over a larger territory.

The U.S. Census Bureau began recognizing metropolitan areas with impact on a nearby region as early as 1910. At that time approximately one-third of the population lived in these newly recognized urban "metropolitan districts," as they were known. Before midcentury they were named Standard Metropolitan Statistical Areas. Today these metropolitan areas are known as MSAs, or Metropolitan Statistical Areas, the change in designation having been made in 1983. Approximately four out of five people in the United States now live in these metropolitan areas.

A review of population data on metropolitan areas in the United States shows a long-term but massive shift outward from central cities in metropolitan areas as population moves in a large-scale pattern of decentralization into suburbs and adjacent regions. This movement of people and industry was one of the great social trends of the twentieth century, comparable to the decline of small farms and self-employment during the first half of the twentieth century, with the consequent migration to larger towns and cities. A third major social pattern, that of married women entering the labor force and remaining in the workplace after the birth of children, began to develop strongly after World War II and remains a vigorous trend. A visible effect of this tendency toward metropolitan decentralization is the high proportion of Americans who maintain suburban and exurban residences, and in moving even farther outward, contribute to the large-scale growth of urban sprawl as population continues to spread into more distant areas of metropolitan regions and beyond.

Currently, urban life in the United States, viewed demographically and ecologically, has become a metropolitan way of life, with day-to-day activities and living arrangements occurring in a continually growing multicentered region. The metropolitan center is actually replacing the city itself as the most significant urban unit.

Whereas the first half of the twentieth century had seen a little heralded emergence of a larger metropolitan unit dominated by a central city, the later twentieth and early twenty-first centuries have seen the growth of deconcentrated populations with a multicentered pattern of growth over entire regions. These major changes have been fueled by the spread of the private automobile and the use of motor truck transport in combination with the national interstate highway systems begun in the late 1950s. Quite influential at the level of individual consumers and families have been federal tax laws that provide for mortgage interest income-tax deductions. The effect has been to subsidize middle-income families in the purchase of affordable single-family dwellings. The dearth of city lots in central cities combined with lower-cost land in rural and developing suburban areas created a potential for large-scale suburban growth and even rapid, leapfrog-style exurban development.

Scholarship in human ecology has assumed consumer demand and improvements in transportation technology as vital in reducing the critical time and distance factors prominent in urban location theory. More recent scholarship in urban sociology and urban ecology has pointed to the strong role of real estate development promotions as well as the interactions of business and local government elites in facilitating the growth of the suburbs and a continuation of the sprawl pattern around urban areas. Thus, a newer trend in urban research and scholarship emphasizes supply-side activities and real estate developers, in cooperation with banks and lending organizations, combined with government subsidies of various kinds in producing the spatial patterns of suburbs around Metropolitan Statistical Areas. All the while, continued belief in seemingly endless supplies of cheap fossil fuel for motor vehicle transportation and maintenance have contributed an ideational support for the continued growth of suburban housing and shopping malls.

METROPOLITAN CHANGES IN EMPLOYMENT AND CONSUMPTION

In metropolitan areas of the United States, there are more than three suburban residents for every two residents of the area's central city. This trend has been growing for nearly a generation as industrial cities have lost manufacturing jobs that were often unionized with high pay and benefits, along with other lower-paying entry-level jobs that might have been filled by younger workers and poorer urbanites. As early as the 1980s, nearly twice as many people were employed in manufacturing in the suburbs than in the cities. Interestingly, since the 1980s, the typical commuter's trip to work has been from suburb to suburb rather than the more traditional suburb to city, or earlier, urban neighborhood to city factory by foot, bicycle, or streetcar, or automobile.

Retail sales of various types, including major department stores, were concentrated in downtown locations until the 1970s. A decline in this concentration had started as much as a decade or so earlier as urban-based manufacturing and businesses as well as retail activity moved from central city locations to outlying areas, typically following highway arteries and suburban housing development. These changes in retail location and activity are seen most clearly in the growth of shopping malls. Only a few malls existed in the 1950s. Today there are more than forty-five thousand shopping malls of various sizes in the United States.

SOME CONSEQUENCES OF POPULATION CHANGES IN METROPOLITAN REGIONS

In the United States in the early twenty-first century, over half of the population lives in suburban areas. In the metropolitan areas of the nation, more than 60 percent of the population lives in the suburbs. Not surprisingly, the suburban areas have increasingly taken on an urban character in the social and cultural attributes of their populations. This is seen structurally and demographically in changes in social-class composition and increased numbers of minority group members in the suburbs of metropolitan areas. Working-class and industrial suburbs are a strong presence around larger cities in metropolitan areas. Major segments of middle-status white-collar employees find themselves pressured financially to maintain what is viewed as a middle-class and suburban level of living. This is seen in widespread credit abuse and second mortgages on houses purchased on installments. People in manual occupations are very likely to be dependent on two incomes.

Poverty is also a stronger presence in the suburban portions of metropolitan regions. The federal standard for the measurement of poverty is based on the ability of an individual or family to purchase food. Under the official methods of determining poverty levels, around one person in eight in the United States is in poverty. One-third of the people classified as poor under that standard live in a suburban location.

RESIDENTIAL PATTERNS OF MINORITY GROUPS IN METROPOLITAN AREAS

Impressions from the middle to the third quarter of the twentieth century linger in mass media and public imagery of the suburbs. Some of these stereotypical perceptions of suburbs as dwelling places for a white population have their source in the development of the early

suburbs around large cities in the late nineteenth and early twentieth centuries. As with much stereotyped imagery, they have some basis, historically, in fact. Also, at present some of the oldest and most established traditional incorporated suburbs in outlying areas of the largest North American cities exemplify what sociologists refer to as "suburban persistence," meaning that they retain a significant degree of their original exclusiveness and Anglo-American characteristics.

In looking at metropolitan areas nationally, a different picture emerges. Almost 40 percent of black Americans live in a suburban location, and a growing proportion of this population continues to move to the suburbs. Half of the people from a Latino background are suburban dwellers. For the last two decades or so, Latino people have accounted for around one-quarter of all suburban growth in the United States. Finally, although a small proportion of the total population, 55 percent of all Asian Americans live in suburbs, often in suburbs that are predominantly Asian but contain a significant proportion of Anglo-American residents.

METROPOLITAN REGIONS, THE SUBURBS, AND CHANGES IN POLITICAL BEHAVIOR

The deconcentration of population around large urban areas in the United States is associated with changes in politics, political alignments, and election outcomes in public life. First is the large number of political jurisdictions in the multicentered urban region. This has many implications, but the most direct impact is on the region and its frequent inability to regulate urban sprawl and its connected problems of leapfrog growth, traffic congestion, and pollution as well as maintaining clean water resources. There is also a growth in the number of local public officials, and as regional-level problems develop, these officials are often unable to operate in a coordinated manner to resolve them and ameliorate the social problems that arise from the organizational features of the metropolitan region. At the national level, the changes reviewed above are reflected in new areas of influence with altered political alignments. Central-city areas have declined in political influence, and an urban, union-influenced vote has determined fewer outcomes than in past decades. The suburban vote is not easy to characterize as it is not nearly as uniformly conservative as it was in past generations. Recent elections have seen a shift toward independent voters in the suburbs, who are issues-oriented and often concerned about lifestyle, with weakened ties to traditional social-class-based political involvement.

In conclusion, central cities are no longer the dominant locations in political decisions and economic activity in metropolitan regions. The newer territorial organization is multicentered, with edge cities and specialized nodes developing along major interstate highways and with services used by a more affluent suburban population. Ethnic variation is commonplace in suburban areas, as is manufacturing activity with suburban commuting working-class populations. Shopping malls are the predominant medium for retail business, and most jobs are in the services sector. Typical commuting occurs from one suburb to another. The longer term effect on politics is not clear, but regional problems are far from experiencing resolution at the local, regional, or national level.

SEE ALSO *Anthropology, Urban; Borders; Cities; Economics, Urban; Ethnicity; Human Ecology; Metropolis; Migration; Migration, Rural to Urban; Poverty; Public Goods; Race; Regions; Sociology, Urban; Spatial Theory; Suburban Sprawl; Suburbs; Transportation Industry; Urban Renewal; Urban Sprawl; Urban Studies; Urbanization*

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Kenneth N. Eslinger

REGRESSION

Regression is a broad class of statistical models that is the foundation of data analysis and inference in the social sciences. Moreover, many contemporary statistical methods derive from the linear regression model. At its heart, regression describes systematic relationships between one or more predictor variables with (typically) one outcome. The flexibility of regression and its many extensions make it the primary statistical tool that social scientists use to model their substantive hypotheses with empirical data.

HISTORY AND DEFINITION

The original application of regression was Sir Francis Galton's study of the heights of parents and children in the late 1800s. Galton noted that tall parents tended to have somewhat shorter children, and vice versa. He described the relationship between parents' and children's heights using a type of regression line and termed the phenomenon *regression to mediocrity*. Thus, the term *regression* described a specific finding (i.e., relationship between parents' and children's heights) but quickly became attached to the statistical method.

The foundation of regression is the regression equation; for Galton's study of height, the equation might be: $\text{Child}_i = \beta_0 + \beta_1 (\text{Parent}_i) + \varepsilon_i$. Each family provides values for child's height (i.e., Child_i) and parent's height (i.e., Parent_i). The simple regression equation above is identical with the mathematical equation for a straight line, often expressed as $y = mx + b$. The two regression coefficients (i.e., β_0 and β_1) represent the y-intercept and slope. The y-intercept estimates the average value of children's height when parent's height equals 0, and the slope coefficient estimates the increase in average children's height for a 1-inch increase in parent's height, assuming height is measured in inches. The intercept and slope define the regression line, which describes a linear relationship between children's and parents' heights. Most data points (i.e., child and parent height pairs) will not lie directly on the simple regression line; the scatter of the data points around the regression line is captured by the residual error term ε_i, which is the vertical displacement of each datum point from the regression line.

The regression line describes the conditional mean of the outcome at specific values of the predictor. As such, it is a summary of the relationship between the two variables, which leads directly to a definition of regression: "[to understand] as far as possible with the available data how the conditional distribution of the response … varies across subpopulations determined by the possible values of the predictor or predictors" (Cook and Weisberg 1999, p. 27). This definition makes no reference to estimation (i.e., how are the regression coefficients determined?) or statistical inference (i.e., how well do the sample coefficients reflect the population from which they were selected?). Historically, regression has used least-squares estimation (i.e., coefficient values are found that minimize the squared errors ε_i) and frequentist inference (i.e., variability of sample regression coefficients are examined within theoretical sampling distributions and summarized by p-values or confidence intervals). Although least-squares regression estimates and p-values based on frequentist inference are the most common default settings within statistical packages, they are not the only methods of estimation and inference available, nor are they inherently aspects of regression.

EXTENSIONS OF THE BASIC REGRESSION MODEL

If regression only summarized associations between two continuous variables, it would be a very limited tool for social scientists. However, regression has been extended in numerous ways. An initial and important expansion of the model allowed for multiple predictors and multiple types of predictors, including continuous, binary, and categorical. With the inclusion of categorical predictors, statisticians noted that analysis of variance models with a single error term and similar models are special cases of regression, and the two methods (i.e., regression and analysis of variance) are seen as different facets of a general linear model.

A second important expansion of regression allowed for different types of outcome variables such as binary, ordinal, nominal, and count variables. The basic linear regression model uses the normal distribution as its probability model. The generalized linear model, which includes non-normal outcomes, increases the flexibility of regression by allowing different probability models (e.g., binomial distribution for binary outcomes and Poisson distribution for count outcomes), and predictors are connected to the outcome through a link function (e.g., logit transformation for binary outcomes and natural logarithm for count outcomes).

Beyond the general and generalized linear models, numerous other extensions have been made to the basic regression model that allow for greater complexity, including multivariate outcomes, path models that allow for multiple predictors and outcomes with complex associations, structural equation models that nest measurement models for latent constructs within path models, multilevel models that allow for correlated data due to nested designs (e.g., students within classrooms), and nonlinear regression models that use regression to fit complex mathematical models in which the coefficients are not additively related to the outcome. Although each of the preceding methods has unique qualities, they all derive from the basic linear regression model.

REGRESSION AS A TOOL IN SOCIAL SCIENCE RESEARCH

Research is a marriage of three components: Theory-driven research questions dictate the study design, which in turn dictates the statistical methods. Thus, statistical methods map the research questions onto the empirical data, and the statistical results yield answers to those questions in a well-designed study. Within the context of scientific inquiry, regression is primarily an applied tool for theory testing with empirical data. This symbiosis between theoretical models and statistical models has been the driving force behind many of the advances and extensions of regression discussed above.

Although regression can be applied to either observational or experimental data, regression has played an especially important role in observational data. With observational data there is no randomization or intervention, and there may be a variety of potential causes and explanations for the phenomenon under study. Regression methods allow researchers to statistically control for additional variables that may influence the outcome. For example, in an observational study of infidelity that focuses on age as a predictor, it might be important to control for relationship satisfaction, as previous research has suggested it is related to both the likelihood of infidelity and age. Because regression coefficients in multiple regression models are estimated simultaneously, they control for the presence of the other predictors, often described as partialing out the effects of other predictors.

Regression can also play a practical role in conveying research results. Regression coefficients as well as regression summaries (e.g., percentage of the outcome variability explained by the predictors) quantitatively convey the importance of a regression model and consequently the underlying theoretical model. In addition, regression models are prediction equations (i.e., regression coefficients are scaling factors for predicting the outcome based on the predictors), and regression models can provide estimates of the outcome based on predictors, allowing the researcher to consider how the outcome varies across combinations of specific predictor values.

LIMITATIONS

Even though regression is an extremely flexible tool for social science research, it is not without limitations. Not all research questions are well described by regression models, particularly questions that do not specify outcome variables. As an example, cluster analysis is a statistical tool used to reveal whether there are coherent groups or clusters within data; because there is no outcome or target variable, regression is not appropriate. At the same time, because regression focuses on an outcome variable, users of regression may believe that fitting a regression model connotes causality (i.e., predictors cause the outcome). This is patently false, and outcomes in some analyses may be predictors in others. Proving causality requires much more than the use of regression.

Another criticism of regression focuses on its use for statistical inference. To provide valid inference (e.g., p-values or confidence intervals), the data must be a random sample from a population, or involve randomization to a treatment condition in experimental studies. Most samples in the social sciences are samples of convenience (e.g., undergraduate students taking introductory psychology). Of course, this is not a criticism of regression per se, but of study design and the limitations of statistical inference with nonrandom sampling. Limitations notwithstanding, regression and its extensions continue to be an incredibly useful tool for social scientists.

SEE ALSO *Vector Autoregression*

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REGRESSION, LOGISTICAL

SEE *Logistic Regression.*

REGRESSION, PROBABILISTIC

SEE *Probabilistic Regression.*

REGRESSION, RANDOM COEFFICIENTS

SEE *Random Effects Regression.*

REGRESSION ANALYSIS

The term *regression* was initially conceptualized by Francis Galton (1822–1911) within the framework of inheritance characteristics of fathers and sons. In his famous 1886 paper, Galton examined the average regression relationship between the height of fathers and the height of their sons. A more formal treatment of multiple regression modeling and correlation was introduced in 1903 by Galton's friend Karl Pearson (1857–1936). Regression analysis is the statistical methodology of estimating a relationship between a single dependent variable (Y) and a set of predictor (explanatory/independent) variables (X_2, X_3, … X_k) based on a theoretical or empirical concept. In some natural science or engineering applications, this relationship is exactly described, but in most social science applications, these relationships are not exact. These nonexact models are probabilistic in nature and capture only approximate features of the relationship. For example, an energy analyst may want to model how the demand for heating oil varies with the price of oil and the average daily temperature. The problem is that energy demand may be determined by other factors, and the nature of the relationship between energy demand and explanatory variables is unknown. Thus, only an approximate relation can be modeled.

The simplest relationship between Y and X is a linear regression model, which is typically written as,

$$Y_i = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \ldots + \beta_k X_{ki} + U_i \qquad (1)$$

where the index i represents the i-th observation and U_i is the random error term. The β coefficients measure the net effect of each explanatory variable on the dependent variable, and the random disturbance term captures the net effect of all the factors that affect Y_i except the influence of the predictor variables. In other words, U_i is the difference between the actual and mean value ($E(Y_i/X_i, i = 1, 2, \ldots, k) = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \ldots + \beta_k X_{ki}$) of the dependent variable. It is customary to assume that U_i s ($i = 1, \ldots, n$) are independently normally distributed with zero mean and constant variance (σ^2). The parameters are estimated from a random sample of $n (n > k)$ observations. The explanatory variables are assumed to be nonstochastic and uncorrelated with the error term. The meaning of the β coefficient varies with the functional form of the regression model. For example, if the variables are in linear form, the net effect represents the rate of change, and if the variables are in log form, the net effect represents elasticity, which can be interpreted as a percentage change in the dependent variable with respect to a 1 percent change in the independent variable.

The parameters βs are estimated by minimizing the residual sum of squares $\Sigma_{i=1}^{n} U_i^2 = \Sigma_{i=1}^{n} (Y_i - \beta_1 - \beta_2 X_{2i} - \beta_3 X_{3i} - \ldots - \beta_k X_{ki})^2$, which is known as the *ordinary least squares* (OLS) method. The minimization problem results in k equations in k unknowns, which gives a unique estimate as long as the explanatory variables are not collinear. An unbiased estimate of σ^2 is obtained from the residual sum of squares. When the random error term satisfies the standard assumptions, the OLS method gives the best linear unbiased estimates (BLUE). The statistical significance of the coefficients is tested with the usual t-statistic ($t = \hat{\beta}_i / \text{s.e.}(\hat{\beta}_i)$), which follows a t-distribution with $n - k$ degrees of freedom. In fact, some researchers use this t-statistic as a criterion in a stepwise process to add or delete variables from the preliminary model.

The fit of the regression equation is evaluated by the statistic R^2, which measures the extent of the variation in Y explained by the regression equation. The value of R^2 ranges from 0 to 1, where 0 means no fit and 1 means a perfect fit. The adjusted R^2 ($\bar{R}^2 = 1 - (1 - R^2)(n - 1)/(n - k)$), which compensates for n and k, is more suitable than R^2 in comparing models with different subsets of explanatory variables. Sometimes researchers choose the model with the highest R^2, but the purpose of the regression analysis is to obtain the best model based on a theoretical concept or an empirically observed phenomena. Therefore, in formulating models, researchers should consider the logical, theoretical, and prior knowledge between the dependent and explanatory variables. Nevertheless, it is not unusual to get high R^2 with the signs of the coefficients inconsistent with prior knowledge or expectations. Note that R^2s of two different models are comparable only if the dependent variables and the number of observations are the same, because R^2 measures the fraction of the total variation in the dependent variable explained by the regression equation. In addition to $\bar{R}^2$, there are other measures, such as Mallows's C_p statistic and information criteria AIC (Akaike) and BIC (Bayesean), to choose between different combinations of regressors. Francis Diebold (1998) showed that there is no obvious advantage between AIC or BIC, and they are routinely calculated in many statistical programs.

Regression models are often plagued with data problems, such as multicollinearity, heteroskedasticity, and autocorrelation, that violate standard OLS assumptions. Multicollinearity occurs when two or more (or a combination of) regressors are highly correlated. Multicollinearity is suspected when inconsistencies in the estimates, such as high R^2 and low t-values or high pairwise correlation among regressors, are observed. Remedial measures of multicollinearity include dropping a variable that causes multicollinearity, using a priori information to combine coefficients, pooling time series and cross-section data, adding new observations, transforming variables, and ridge and Stein-rule estimates. It is worthwhile to note that transforming variables and dropping variables may cause specification errors, and Stein-rule and ridge estimates produce biased and inefficient estimates.

The assumption of constant variance of the error term is somewhat unreasonable in empirical research. For example, expenditure on food is steady for low-income households, while it varies substantially for high-income households. Furthermore, heteroskedasticity is more common in cross-sectional data (e.g., sample surveys) than in time series data, because in time series data, changes in all variables are in more or less the same magnitude. Plotting OLS residuals against the predicted Y values provides a visual picture of the heteroskedasticity problem. Formal tests for heteroskedasticity are based on regressing the OLS residuals on various functional forms of the regressors. Halbert White's (1980) general procedure is widely used among practitioners in detecting and correcting heteroskedasticity. Often, regression models with variables observed over time conflict with the classical assumption of uncorrelated errors. For example, in modeling the impact of public expenditures on economic growth, the OLS model would not be appropriate because the level of public expenditures are correlated over time. OLS estimates of βs in the presence of autocorrelated errors are unbiased, but there is a tendency for σ^2 to be underestimated, leading to overestimated R^2 and invalid t- and F-tests. First-order autocorrelation is detected by the Durbin-Watson test and is corrected by estimating difference equations or by the Cochrane-Orcutt iterative procedure.

SPECIFICATION ERRORS

The OLS method gives the best linear unbiased estimates contingent upon the standard assumptions of the model and the sample data. Any errors in the model and the data may produce misleading results. For example, the true model may have variables in log form, but the estimated model is linear. Even though in social sciences, the true nature of the model is almost always unknown, the researchers' understanding of the variables and the topic may help to formulate a reasonable functional form for the model. In a situation where the functional form is unknown, possible choices include transforming variables into log form, polynomial regression, a translog model, and Box-Cox transformation. Parameters of the Box-Cox model are estimated by the maximum likelihood method because the variable transformation and the parameter estimation of the model are inseparable.

Specification errors also occur either when relevant explanatory variables are missing from the model or when irrelevant variables are added to the model. For example, let the true regression model be $Y_i = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + U_i$ and the estimated model be $Y_i = \beta_1 + \beta_2 X_{2i} + U_i$. If the omitted variable X_3 is correlated with the included variable X_2, then the estimates of β_1 and β_2 are biased and inconsistent. The extent and the direction of the bias depends on the true parameter β_3 and the correlation between the variables X_2 and X_3. In addition, incorrect estimation of σ^2 may lead to misleading significance tests. Researchers do not commit these specification errors willingly; often the errors are due to unavailability of data or lack of understanding of the topic. Researchers sometimes include all conceivable variables without paying much attention to the underlying theoretical framework, which leads to unbiased but inefficient estimates, which is less serious than omitting a relevant variable.

Instead of dropping an unobserved variable, it is common practice to use proxy variables. For example, most researchers use general aptitude test scores as proxies for individual abilities. When a proxy variable is substituted for a dependent variable, OLS gives unbiased estimates of the coefficients with a larger variance than in the model with no measurement error. However, when an independent variable is measured with an error, OLS gives biased and inconsistent estimates of the parameters. In general, there is no satisfactory way to handle measurement error problems. A real question that arises is whether to omit a variable altogether or instead use a proxy variable. B. T. McCallum (1972) and Michael Wickens (1972) showed that omitting a variable is more severe than using a proxy variable, even if the proxy variable is a poor one.

CATEGORICAL VARIABLES

In regression analysis, researchers frequently encounter qualitative variables, especially in survey data. A person's decision to join a labor union or a homemaker's decision to join the workforce are examples of *dichotomous* dependent variables. Dichotomous variables also appear in models due to nonobservance of the variable. In general, a dichotomous variable model can be defined as,

$$Y_i^* = X_i\beta + U_i$$

where $X_i\beta = \beta_1 + \Sigma_{j=1}^{k} \beta_j X_{ji}$ and Y^* is an unobservable variable. An observable binary outcome variable Y_i is defined as,

$$Y_i = \begin{cases} 1 & \text{if } Y_i^* \text{ exceeds zero and} \\ 0 & \text{if otherwise.} \end{cases}$$

Substituting Y_i for Y_i^* and estimating the model by OLS is unsuitable primarily because $X_i\beta$ represents the probability $Y = 1$ and it could lie outside the range 0 to 1. In the probit and logit formulations of the above model, the probability that Y_i is equal to 1 is defined as a probability distribution function,

$$\begin{aligned} Pr(Y_i = 1) &= Pr(Y_i^* > 0) \\ &= Pr(U_i > -X_i\beta) \\ &= 1 - F(-X_i\beta) \end{aligned}$$

where F is the cumulative distribution function of U. The choice of the distribution function F translates the regres-

sion function $X_i\beta$ into a number between 0 and 1. Parameters of the model are estimated by maximizing the likelihood function,

$$L(\beta_1, b_2) = \Pi I_{Y_i=0} F(-X_i\beta) \Pi_{Y_i=1} [1 - F(-X_i\beta)]$$

Choosing the normal probability distribution for F yields the probit model, and choosing the logistic distribution for F gives the logit model where $P(Y_i = 1)$ is given by,

$$Pr(Y = 1) = \Phi\left(\frac{X_i\beta}{\sigma}\right) \quad \text{for the probit model, and}$$

$$Pr(Y = 1) = \frac{\exp(X_i\beta)}{1 + \exp(X_i\beta)} \quad \text{for the logic art model}$$

where $\Phi(.)$ is the cumulative normal distribution function. Many statistical packages have standard routines to estimate both probit and logit models. In the probit model, the β parameters and σ appear as a ratio, and therefore cannot be estimated separately. Hence, in the probit model, σ is set to 1 without any loss of generality. The cumulative distributions of logit and normal are close to each other, except in the tails, and therefore, the estimates from both models will not be much different from each other. Since the variance of the normal distribution is set to one, and the logistic distribution has a variance of $\pi^2/3$, it is necessary to divide the logit estimates by $\pi^2/3$ to make the estimates comparable. In practical applications, it is useful to compare the effect of each explanatory variable on the probability. A change in probabilities in the probit and logit models for a unit change in the k-th variable are given by $\pi(X_i\beta)\beta_k$ and $\exp(X_i\beta)\beta_k/(1 + \exp(X_i\beta)^2$, respectively, where $\varphi(.)$ is the standard normal probability density function.

In the multivariate probit models, dichotomous variables are jointly distributed with appropriate multivariate distributions. Likelihood functions are based on the possible combinations of the binary choice variable (Y_i) values. A practical difficulty in multivariate models is the presence of multiple integrals in the likelihood function. Some authors have proposed methods for simulating the multivariate probabilities; details were published in the November 1994 issue of the *Review of Economics and Statistics*. This problem of multiple integration does not arise in the multinomial logit model because the cumulative logistic distribution has a closed form.

TOBIT MODEL

The Tobit model can be considered as an extension of the probit and logit models where the dependent variable Y_i^* is observed in the positive range and is unobserved or unavailable in the negative range. Consider the model described in equation (2), where

$$Y_i = \begin{cases} Y_i^* & \text{if } Y_i^* > 0 \text{ and} \\ 0 & \text{if } Y_i^* \le 0. \end{cases}$$

This a censored regression model where Y^* observations below zero are censored or not available, but the X observations are available. On the other hand, in the truncated regression model, both Y^* and X observations are unavailable for Y^* values below zero. Estimation of parameters are carried out by the maximum likelihood method, where the likelihood function of the model is based on $Pr(Y^* > 0)$ and $Pr(Y^* \le 0)$. When U_i is normally distributed, the likelihood function is given by,

$$L = \Pi_{Y_i^*<0}\left[1 - \Phi\left(\frac{X_i\beta}{\sigma}\right)\right] \Pi_{Y_i^*>0} \frac{1}{\sqrt{2\pi\sigma^2}} \exp\left[-\frac{(Y_i^* - X_i\beta)^2}{2\sigma^2}\right].$$

Unlike the probit model, where σ was arbitrarily set to 1, the Tobit model estimates the parameters. In the probit model, only the effect on the probabilities for changes in X values are meaningful to a practitioner. However, in the Tobit model, a practitioner may be interested in how the predicted values of Y_i^* change due to a unit change in one X variable in three possible scenarios of the model, linear functional form, unconditional mean and conditional mean (i.e., $E(Y^*) = X\beta$, $E(Y^*)$ and $E(Y^*/Y^* > 0)$). The impacts of the variable X_j on the above three expressions are given by the β_j, $\Phi(Z).\beta_j$ and $\beta_j[1 - Z\varphi(Z)/\Phi(Z) - (\varphi(Z)/\Phi(Z))^2]$, respectively, where $Z = X_i\beta/\sigma$, and $\varphi()$ and $\Phi()$ are standard normal density and distribution functions. An extension of the Tobit model with the presence of heteroskedasticity has been proposed by James Powell (1984).

CAUSALITY BETWEEN TIME SERIES VARIABLES

The concept of causality in time series variables was introduced by Norbert Wiener (1956) and Clive W. J. Granger (1969), and refers to the predictability of one variable X_t from its past behavior, another variable Y_t, and a set of auxiliary variables Z_t. In other words, causality refers to a certain type of statistical feedback between the variables. Some variables have a tendency to move together—for example, average household income and level of education. The question is: Does improvement in education level cause the income to increase or vice versa? It is also worthwhile to note that even with a strong statistical relation between variables, causation between the variables may not exist. The idea of causation must come from a plausible theory rather than from statistical methodology. Causality can be tested by regressing each variable on its own and other variables' lagged values.

A closely related concept in time series variables, as well as in cross-sectional data to a lesser degree, is simultaneity, where the behavior of g ($g > 1$) stochastic variables are characterized by g structural regression equations. Some of the regressors of these regression equations contain stochastic variables that are directly correlated with

the random error term. OLS estimates of such a model produce biased estimates, and the extent of the bias is called *simultaneity bias*. The implications of simultaneity were recognized long before the estimation methods were devised. Within the regression analysis context, the identification problem has another dimension—that is, whether the difficulty in determining a variable is truly random or not. Moreover, a more serious fundamental question that arises is whether the parameters of a model are estimable.

SEE ALSO *Causality; Censoring, Left and Right; Censoring, Sample; Frequency Distributions; Galton, Francis; Identification Problem; Linear Regression; Logistic Regression; Multicollinearity; Ordinary Least Squares Regression; Pearson, Karl; Probabilistic Regression; Probability; Regression; Regression Towards the Mean; Serial Correlation; Specification Error; Specification Tests; Student's T-Statistic; Test Statistics; Tobit*

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REGRESSION TOWARDS THE MEAN

Regression towards the mean is a fundamental yet at first sight puzzling statistical phenomenon occurring between data from two variables, and it is a natural and inherent consequence of correlation being generally imperfect.

The effect of regression towards the mean was recognized in the late nineteenth century by Francis Galton (1822–1911) when investigating the relationship of the heights of parents and their adult children (see Bland and Altman 1994, Stigler 1986). Such height data are positively correlated; tall parents tend to produce tall adult children.

The diagram shows an ellipse that represents a cloud of correlated data points. The X and Y values are assumed for simplicity here to have equal mean and equal standard deviation. The X and Y values for Galton would be parent's height and adult offspring's height, but they could be any correlated variables, for example a measure of crime

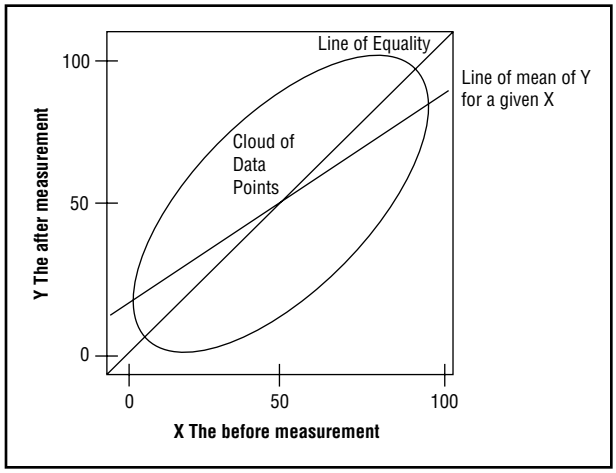

on some scale, for a sample of areas at one time, *X*, and at a later time, *Y*. The tilt of the ellipse shows that high values earlier are associated with high values later and vice versa; that is, positive correlation exists. Also on the diagram is the line of equality going diagonally bottom left to top right along the major axis of the ellipse. (Equality means that its slope = 1). Any point below this line indicates that the value of *Y* is smaller than that of *X*, whereas a point above indicates that it is greater. If correlation was perfect, the ellipse would narrow and become identical with the line of equality.

Also on the diagram is a line of shallower slope that gives the mean of *Y* for a given *X*. This is the *conditional mean* of *Y*. One can see that the conditional mean of *Y* given *X* is not the line of equality, because taking a vertical slice through the ellipse shows that the bulk of the distribution lies above the line of equality for an *X*-value below the mean of *X*, whereas it is below the line for an *X*-value above the mean of *X*. In fact, the line of the conditional mean for the situation described, that is, with standard deviations of *X* and *Y* equal, has a slope equal to the (Pearson) *correlation coefficient*. Therefore, the expected *Y*-value for a given *X*-value, in other words the conditional mean, is above the line of equality for *X* below the mean of *X*, and below the line of equality for *X* above its mean. Therefore, there is a tendency for values to be closer to the overall *Y*-mean, the effect being greater the weaker the correlation is.

This is precisely what Galton found: that the heights of adult children tended to be closer to the mean of the population than their parents' heights were; that is, they regressed towards the mean. Note that this does not make every one the same height in the end—the distribution can remain stable generation after generation.

A similar situation applies in a more general case than that described when neither the means nor the standard deviations of *X* and *Y* variables are equal to each other, such as when successive generations are getting taller on average and becoming more variable in absolute terms, that is, in centimeters. In a more general case such as this the elliptical cloud of data points will be shifted up and will have greater vertical extension due to the greater standard deviation of the *Y* variable. The major axis of the elliptical cloud will no longer be the line of equality, but will still represent the line that the ellipse shrinks towards as the correlation becomes perfect. As in the earlier case, the line of conditional mean is still at a shallower slope than the major axis, and so the same effect occurs, that there is regression towards the mean such that the expected *Y*-value will be fewer *Y*-standard deviations from the *Y*-mean than the *X*-value is *X*-standard deviations from the *X*-mean. In fact, for an *X*-value Z_x standard deviations from the *X*-mean the expected *Y*-value will be "(1-correlation coefficient) multiplied by Z_x" standard deviations in *Y* from the major axis line, and equivalently only "correlation coefficient multiplied by Z_x" standard deviations in *Y* from the *Y*-mean. So, for example, if the *X* value is 1.5 standard deviations above its mean and the correlation coefficient between *X* and *Y* is 0.2, then the expected *Y*-value is only 0.3 standard deviations above its mean, that is, 1.2 below the original number of standard deviations.

The statistical method of *regression* owes its name to the discovery by Galton of this effect. Indeed, the *regression line* is simply the line of the conditional mean, exactly as discussed above. It is a surprise to some that the regression line does not run along the major axis of the cloud of data points. The equation for the line of conditional mean can be determined mathematically (see, for example, Freund 2004, which treats the more general case).

A consequence of the effect of regression towards the mean is if an intervention is applied to a group with high values before, for example a bad state before, and the control is another with lower values, a better state before, one is likely to find that the intervention appears to work even if it really has no superior effect. This is because the expectation is that the higher measurements will become lower. It is therefore vital that comparison is made like with like.

While it is possible to envisage situations that are more complex than those described above, so that the conditional mean is consequently no longer a simple straight line, one should never assume that the effect described is nonexistent.

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Paul R. Marchant

REGRESSIVE TAXES

SEE *Taxes, Regressive.*

REGRET

SEE *Farsightedness.*

REGULATION

Regulation involves attempts by the government to monitor and correct any disorders in the workings of free markets. Formally, economic regulation refers to all types of taxes and subsidies as well as to governmental controls over prices, market entry, and other aspects of economic activity. Some regulation might directly impose monetary costs (e.g., taxes or fines on noncompliers), while other types of regulation might impose costs indirectly by mandating standards that might be costly to adhere to. Examples of regulation include limits on emissions from vehicles, fire-retardant materials used in children's bedding, airline safety standards, smoking bans, food safety, and consumer protection laws.

While the extent of government intervention in economic activity remains a matter of heated debate, few individuals would argue for a complete absence of regulation. Two widely accepted issues deserving of regulation might be related to a country's monetary system (smooth working of the banking system and the money supply) and national defense. These attempts might be focused on both buyers and sellers, or might be directed at one of the parties. Banking laws are examples of laws that affect both buyers and sellers, while regulations by the Occupational Safety and Health Administration (OSHA) can be viewed as aimed directly at sellers. The disorders or imperfections that regulation seeks to rectify might be related to prices (too high prices), quantity or service (not all customers being served), reliability (failure to adhere to schedules), and fairness, among other issues. In practice, common instances of regulation include promotion of competition, safeguarding the interests of buyers or sellers (or both), protecting the environment, and defending national interests. For instance, the Clayton Act and the Sherman Act are two primary laws in the United States that deal with provision of fair market competition.

HISTORICAL PERSPECTIVE

Historically speaking, regulations have changed over time with new technologies, new concerns, and new revelations (e.g., harmful environmental effects of certain known substances). Sometimes, however, certain unexpected events bring about a flurry of regulations (or deregulations) in a rather short period of time. Examples of such events include the Great Depression, the 1973 oil embargo, and certain natural calamities. The Great Depression prompted governments to better regulate their economies so they could prevent wide and sudden variations in the unemployment and inflation rates. In the United States, the Federal Reserve System, which governs the money supply and oversees the banking system, was a direct offshoot of the Great Depression. The oil embargo led to various regulations regarding oil conservation including provisions for minimum fuel efficiency on automobiles. Further, natural disasters such as hurricanes and earthquakes can lead to tougher building codes in vulnerable areas.

Governments generally set up regulatory agencies to impose and monitor regulations. These agencies usually have semi-autonomous status to keep them relatively free of political pressures, although in a number of instances the regulated agencies end up enforcing the regulations passed by the executive branch. These agencies might be national (Federal Communications Commission), or they may be sub-national (Illinois Commerce Commission). In some instances, cross-national organizations such as the World Bank and United Nations impose codes of conduct across nations. However, such regulations generally are difficult to enforce and are usually less effective.

THEORETICAL UNDERPINNINGS

The theoretical underpinnings of regulation may be understood in the context of the three widely cited theories of regulation: (1) public interest theory; (2) capture theory; and (3) economic theory of regulation. According to the public interest theory, regulation is supplied or enacted by governments to correct inefficient and/or unfair market practices or outcomes. However, this theory implicitly assumes that regulators have the capacity and the willpower to determine what is fair and efficient. Since the late twentieth century, the public interest theory has been somewhat revised to recognize that regulatory agencies themselves might be inefficient. It is also unclear from this theory how public interest matters take the form of legislation. The capture theory of regulation can be seen as drawing from both economics and political science. According to this theory, regulatory agencies over time tend to be dominated or influenced by the industries they

regulate. In other words, the integrity of the regulatory agencies tends to be compromised by their clientele. This theory, however, ignores special interest groups other than the regulated industries (e.g., consumers). The economic theory of regulation is primarily due to the work of the scholar George Stigler. This theory suggests that the economic laws of demand and supply can be employed to understand regulation. Alternately stated, the optimal amount of regulation would balance the demand and supply of government intervention. The demanders of regulation may be viewed as special interest groups (consumers) or parties being harmed by the current state of affairs (businesses unable to compete in protected markets). The suppliers of regulation are the regulatory agencies. This theory also recognizes that in the real world enactment of rules and regulations is not based purely on economic considerations. Rather, they are enacted in a political-economic context. The use of the laws of demand and supply enables efficiency in the provision of regulation. However, the economic theory of regulation has not been refined to the point where it enables us to predict specific industries in which regulation will be found.

IMPLEMENTATION AND BENEFITS

In imposing various types of regulation, regulators should be mindful of equity or fairness aspects on the one hand and efficiency or wastage considerations on the other hand. Generally, there is a tradeoff between the two criteria. For instance, some regulatory intervention that is relatively equitable (e.g., minimum wage laws providing a "fair" wage to unskilled or less-skilled workers) is usually not efficient (i.e., minimum wage laws do not allow the markets to work efficiently and impose undue hardships on some businesses). Thus, regulators have to weigh relative pros and cons of intervention and impose the socially optimal level of regulation. The socially optimal level would generally be less than total regulation (e.g., there should be a socially desirable level of pollution; getting rid of all pollution would impose undue costs on the society in terms of sacrifices to be made, such as no electricity generated via nuclear or thermal power plants and no polluting vehicles).

The main benefit of regulation is that it corrects shortcomings in the workings of markets. Some benefits of regulation, however, might be diffused over time, while the costs might be upfront. In such cases, it becomes difficult for regulators to convince the affected parties of the desirability of regulation. An example of this may be environmental regulation. Regulations mandating the cleanup of toxic waste dumps impose costs up front but their benefits in terms of improvement in the environment and related health benefits would only be realized over time.

The costs of regulation include the costs of compliance and the costs of monitoring. Sometimes the monitoring costs can turn out to be very high with the result that in certain instances products might either not be regulated or not be regulated effectively. Other times there are unexpected consequences of regulation when markets are connected or are interdependent. For instance, tougher regulation ensuring the purity of the milk supply would affect the milk industry directly, but also related industries that make use of dairy products (restaurants, cheese, coffee, and ice cream, for example).

Price regulation might impose direct price controls on products (price cap regulation), or it might control prices indirectly (via rate of return regulation where regulated firms are free to set prices, provided they do not earn above a specified rate of return on capital). Price cap regulation can affect the regulated firm's investments in research and development, while it has been shown that the rate of return regulation leads to overcapitalization (i.e., regulated firms would use more capital than they would in the absence of such regulation). Thus, one type of regulation does not seem suitable for all cases.

Sometimes regulation is uncertain and not all types of intervention are predictable. Such uncertainty might plague both suppliers of regulation (i.e., government) and the parties affected by regulation. Governments might not know a priori whether they would have to regulate a new technology (new supersonic airplane) because of some future undesirable side effects (new airplane too noisy for residential areas). The public is uncertain whether and when current or future products might face additional regulations. A case in point is the impending threat of restrictions on cell phone usage while driving.

In practice, even after regulators have determined that certain products or industries need to be regulated, there is generally a time delay (called a regulatory lag) between the realization of the need for intervention, the enactment of relevant laws and their implementation. This reduces the effectiveness of regulatory intervention as it affords the affected parties time to find ways to circumvent the regulations. In certain cases, the regulatory lag might be long enough to make rules unnecessary when they are finally put into place.

In conclusion, regulation seems essential in many instances. One could differ in one's perceptions about the scope of regulation, but its desirability in many instances seems real. Over time government intervention needs to be dynamic to be efficient and effective. Certain industries might not need regulations over time, while new regulatory instruments might have to be developed in other instances, such as in the regulation of the Internet.

SEE ALSO *Antitrust; Antitrust Regulation; Deregulation; Privatization*

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Rajeev K. Goel

REHABILITATION

SEE *Prisons.*

REIGN OF TERROR

SEE *French Revolution.*

REINCARNATION

Reincarnation is the cultural belief that human beings can be born and reborn in endless cycles of births and rebirths. Forms of reincarnation are found in a wide range of human societies, ranging from small scale or "tribal" groups to the ancient Greeks and most conspicuously, those religions that developed in India during and after 6 BCE, if not earlier. Nevertheless, there has been a surprising lack of ethnographic documentation of the cross-cultural spread of these religions. The reasons are many: Perhaps most significant was the impact of Christian missions generally hostile to indigenous religions, especially reincarnation theories that were declared "anathema" by the Church in 553 CE.

Until recent times ethnographers were unfamiliar with such doctrines and tended to subsume them under the better known class of "ancestor cults," easy enough to do because reincarnation is often associated with the world of ancestors. Additionally, there was the widespread prejudice that reincarnation is uniquely associated with Indic religions like that of Buddhism and Hinduism, tending scholars to neglect its presence elsewhere. The historical evidence is clear that reincarnation doctrines known as metempsychosis, metacosmesis, or metensomatosis existed in ancient Greece even prior to the Buddha in the cosmology of Pythagoras. These doctrines continued outside of the dominant or mainline Greek traditions of cosmology between 7 BCE to about 3 CE through such figures as Empedocles, Pindar, Plato and the neo-Platonic traditions, especially Plotinus. Greek reincarnation doctrines influenced some Middle Eastern societies, most notably the Druze of Israel and Lebanon from around 1017 CE; the Shiite Nusayriyah of Western Syria belonging to the Ismā'ilī tradition around the same time; and the Alevis of Central Turkey, perhaps during the same time period although no clear historical evidence is available. All these societies had reincarnation theories that for the most part posited immediate reincarnation after death followed by rebirth in the larger religious community, if not a specific social group or clan.

Studies by ethnographers found that the presence of reincarnation doctrines among Northwest Coast Indians was the basis of the Indians' eschatological and cosmic beliefs. These studies culminated in a 1994 pioneer work, *Amerindian Rebirth: Reincarnation Beliefs among North American Indians and Inuit*, which described a wide range of Amerindian groups believing in reincarnation. For Melanesia, the only detailed study is the classic work of anthropologist Bronislaw Malinowski (1884–1942). Malinowski documented in great detail the reincarnation theories of the Trobriand Islanders, most notably in his 1916 essay "Baloma: the Spirits of the Dead in the Trobriand Islands," based on his fieldwork in New Guinea during World War I. A similar ethnographic lacuna exists for West Africa where scattered references indicate that reincarnation theories were widely prevalent before colonial contact. Fortunately, there are detailed ethnographic accounts for at least one large group, the Ibo of southeastern Nigeria, now highly Christianized but still retaining some of their traditional reincarnation beliefs. What the cross-cultural evidence reveals is that reincarnation doctrines are found in various parts of the world, many of whom were unaffected by Indic civilization.

In order to bring some order into widely dispersed reincarnation doctrines it is necessary to deal with their simplest manifestation among small-scale societies, and then the more complex Greek and Indic representatives. Propitiation of ancestors ("ancestor cults") is a widespread form of religious life. After death, the spirit goes into a realm of the ancestors and ancestral spirits continue to interact with living persons, who in turn have to propitiate them. Only one structural feature is required for an ancestor cult to develop into a reincarnation doctrine. The spirit at death goes into the world of the ancestors and then, after a temporary stay in that realm, returns to the human world by being reborn among former kin. Then, after death, the spirit goes back to the ancestral world and the rebirth cycle continues. More complex systems are constructed upon this "elementary form" of a reincarnation doctrine.

Among small-scale societies there are two trajectories of rebirth: The Northwest Coast Indians and the Inuit share a widespread circumpolar complex (spreading into Central Asia) in affirming that after death one could be reborn as an animal. In West Africa and Melanesia one cannot be reborn except as a human being. When there is a belief in rebirth as an animal or when humans and animals have their own reincarnation cycles there develops a concomitant respect for animal life. Thus, while killing animals is necessary for existence, the Inuit hunter thanks the animal for its sacrificial gift and implores it to return to another rebirth, human or animal. Within the two broad complexes of being reborn as animal or human, there is considerable variation as to whether cross-sex reincarnation is possible or not.

The striking feature of reincarnation in small-scale societies is the absence of other-worldly rewards and punishments imposed on the departing soul at death, even though such societies have highly developed secular moral codes. Once the appropriate funeral rites have been performed, anyone can enter the temporary world of ancestors. By contrast, owing to Indian and Greek philosophical preoccupation with social morality and ethics, the entry into the other world is conditional on the good and bad done in this world. Thus, in Indian thought there developed the doctrine of "karma," the idea that the good and bad humans do on earth will result in punishments or rewards in the other world, followed by similar rewards and punishments in the next reincarnation. By contrast, the Greek tradition does not have this uniformity although considerable emphasis is placed on otherworld compensations rather than rewards in the next rebirth.

Greek reincarnation can be illustrated with an example from Plato in the final chapter of *The Republic*. Plato mentions the case of a warrior named Er whose spirit escaped after ten days while his hitherto undecomposed corpse was being cremated. Er then went on a long underground journey followed by a sojourn in a strange place where he confronted judges sitting beside two chasms. These judges order the righteous to take a right road of the heavenly chasms whereas the bad must take the left that went downward into places of punishment. Er was instructed to watch and remember the proceedings so that he could relay his experiences to fellow mortals when he returned to Earth. Er mentions specific punishments and rewards offered to people right then and there by the judges, the bad undergoing cruel but just punishment and the good enjoying the rewards of heaven.

Having expiated their past in this manner, people are now free beings who will eventually assemble in a meadow awaiting their rebirth in the human world. One of the Fates, the goddess Lachesis, gives the people a choice of "packages" containing their future life projections on Earth. Unhappily, people do not choose wisely. Enticed by power and wealth they pick the wrong life choices, often replicating the habits of their former lives on Earth. They come back to Lachesis who allocates each a guardian spirit; the other Fates seal these compacts making them irreversible. People then come to a land of dreadful thirst and reach Lethe, the river of forgetfulness. All drink the waters of Lethe except Er, who must remember to tell his tale to mortals when his spirit eventually returns to his corpse and revives it. The Platonic myth culminates in people going to sleep but when midnight comes there is an earthquake and thunder. Suddenly, the people are all swept up and away like shooting stars, here and there, propelled to another rebirth in the human world.

SEE ALSO *Anthropology; Buddha; Buddhism; Ethnography; Hinduism; Malinowski, Bronislaw; Religion*

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Gananath Obeyesekere

REINFORCEMENT THEORIES

For more than a century, the term *reinforcement* has referred to the emergence of a reliable, learned change in behavior produced when a response or stimulus is differentially followed by a rewarding or punishing event (a reinforcer). Early examples of instrumental reinforcement included: Edward Lee Thorndike's (1874–1949) experiments with cats learning to escape (what he called) a puzzle box by manipulating a release mechanism for the door,

B. F. Skinner's (1904–1990) training of rats to press a lever for food, and the work of Willard Stanton Small (1870–1943) and Edward Chace Tolman (1886–1959) showing that rats could learn a maze path with, or without, food in the goal box. The dominant example of early Pavlovian reinforcement—from the work of the Russian physiologist Ivan Petrovich Pavlov (1849–1936)—showed that a dog could be conditioned to salivate to a signal predicting the imminent arrival of either meat powder or a weak acid solution in its mouth.

THEORY WARS

Each of the above examples provided an answer to a critical conceptual and practical question, "What conditions must be added to the simple repetition of a stimulus and/or a response to produce learning?" However, each answer also left notable theoretical questions unresolved. As a result, more than half of the twentieth century was spent on attempts to develop a general theory of learning. These theories differed in: (1) how learning was represented (for example, as stimulus-response or stimulus-stimulus associations, as cognitive maps, memories, or transmitted information; (2) the necessary and sufficient qualities of a reinforcer (for example, a drive reducer vs. a drive inducer); and (3) the necessary temporal and spatial relations between the response and/or stimulus and the reinforcer (for example, contiguity vs. contingency). For additional differences see the analyses in William K. Estes's *Modern Learning Theory: A Critical Analysis of Five Examples* (1954) of Thorndike's concept of the strengthening of neural connections, Edwin Ray Guthrie's (1886–1959) emphasis on temporal contiguity and repetition, Tolman's cognitive maps and expectancies, and Clark L. Hull's (1884–1952) multiple learning variables and performance equations relating them to each other and behavior.

The theory wars were both exciting and frustrating. Excitement came from the development of extensive frameworks like Hull's hypothetico-deductive system, which was applied to behaviors ranging from approach-withdrawal reactions (Neal E. Miller, 1944), to curiosity (Harry Fowler, 1967), and personality and psychotherapy (John Dollard and Neal E. Miller, 1950). Difficulties arose from the inability of researchers to agree on critical tests to distinguish alternative theories and concepts, and from the continued failure of general theories to account for important empirical phenomena like partial reinforcement, and incentive contrast. For example, Abram Amsel (1922–2006; 1992) and E. J. Capaldi (1967) showed that relatively unpredictable reinforcers produced greater resistance to extinction than more frequent but predictable reinforcers. Similarly, Charles F. Flaherty (c. 1937–2004; 1966) showed that the effects of presenting two different reinforcers depended on their order. The absence of a satisfying general theoretical account of diverse phenomena led many researchers to abandon the search for a general theory and focus on the empirical effectiveness and applications of specific reinforcement procedures.

EFFECTIVE REINFORCEMENT PROCEDURES AND APPLICATIONS

Thorndike claimed that all organisms were susceptible to the effects of reinforcement. Skinner supported the empirical generality of this claim by showing how reinforcement could be used to readily control the laboratory behavior of rats and pigeons. Marian Breland Bailey and Keller Breland, early students of Skinner, handily extended his reinforcement approach to the training of animals in shows and zoos by using "bridge stimuli" (secondary reinforcers). During his lengthy career, Skinner focused increasingly on the control of human behaviors by reinforcers, at first by using reinforcement schedules to produce human-like behaviors in pigeons, including "superstitions" and "assembly-line" response patterns. In a recent continuation of this kind of comparative approach, Brian Lau and Paul W. Glimcher used brain scanning to identify specific areas involved in the well-known operant behavior of matching response rates to reinforcer frequency in rhesus monkeys.

Skinner also added a specific human focus, emphasizing the potential effects of operant conditioning on everyday human behavior in his writing of a utopian novel, *Walden Two* (1948), followed by several books of essays: *Science and Human Behavior* (1953), *Beyond Freedom and Dignity* (1971), and *About Behaviorism* (1974). Further, Skinner helped develop specific reinforcement applications in the form of programmed learning in education, and token economies for treating the mentally ill and deficient. Many examples of such procedures are described in an extensive applied literature, e.g., the *Journal of Applied Behavior Analysis*, and in edited volumes (such as William O'Donohue's *Learning and Behavior Therapy*, 1998; see also work of Leonard Krasner).

MOTIVATIONAL AND OPTIMALITY MODELS OF REINFORCEMENT

Reinforcers, in terms of their ability to produce learning and behavior, were first limited largely to incentives that reduced physiological imbalances of the body; but reinforcers also can be novel stimuli, social or sexual cues, or simply access to a higher probability response. For example, William Timberlake and James W. Allison showed that reinforcement depends on the use of operant schedules that restrict access to a response or reinforcer relative to its free (unconstrained) baseline level. William

Timberlake and Valerie Farmer-Dougan reviewed how such a general regulatory framework could be translated to applied settings, and James W. Allison showed the relevance of regulatory work-income trade-offs to economic models (see *Behavioral Economics* 1983). J. E. R. Staddon (see *Adaptive Dynamics: The Theoretical Analysis of Behavior,* 2001) linked operant behavior to general optimization models, and J. C. David (see MacKay in *Information Theory, Inference, and Learning Algorithms,* 2003) and other scientists used computer modeling to produce optimizing algorithms leading to adaptive learning in machines.

PAVLOVIAN MODELS OF REINFORCEMENT

Beginning with work on information processing and interaction among predictive cues in the 1960s, Pavlovian conditioning became an important focus of reinforcement research and theory. Psychologists Robert A. Rescorla and Allan R. Wagner modeled the interaction of cues in Pavlovian conditioning using a variant of a linear operator model in which stimuli predicting a reinforcer compete for its incremental strengthening effect. Their model appropriately predicts that when two predictive stimuli are trained together, the more salient stimulus typically overshadows learning about the less salient stimulus, and a stimulus learned first most often interferes with (blocks) learning about a stimulus added later (although both facilitation and configural learning can occur in similar circumstances).

Subsequent researchers, like Ralph Miller and Mark E. Bouton, added a role for context conditioning, especially in application-related phenomena like the reinstatement of extinguished fear. Similar models of reinforcement have focused either on aspects of the interaction of Pavlovian and instrumental contingencies (see Geoffery Hall, 2002), or on the scalar effect on acquisition speed and performance of the length of the CS relative to the length of inter-reinforcer interval (see a summary by Russell M. Church, 2002). Finally, Modelers such as Nestor A. Schmajuk (1977) have turned to the use of multilayer connectionist models, based on error-correction algorithms, to simulate interactions among multiple predictive cues.

To complete the picture, current investigators interested in neurophysiological substrates of learning often use Pavlovian and Operant reinforcement procedures to clarify the effects of brain stimulation, lesions, drugs (see Shepherd Siegel), neural transmitters and trans-gene manipulations (see Louis D. Matzel). Finally, considerable progress has been made in deciphering the contribution of simple sensory, motor, and Pavlovian mechanisms to learning related to species typical behavior. See the admirable book by Thomas J. Carew, 2000, in which he includes accounts of the neurophysiological work by Richard W. Thompson (see also Thompson, 2005) on conditioning of the nictitating membrane in rabbits, and by Eric Kandel (see also Frank Krasne, 1985) on gill withdrawal in Aplysia (sea slugs).

EVOLUTIONARY AND ECOLOGICAL APPROACHES TO REINFORCEMENT

A final approach to reinforcement began with twentieth-century researchers interested in evolution and learning. For example, T. C. Schneirla and M. E. Bitterman examined similarities and differences among species in reinforcement learning (see accounts in *Comparative Psychology: A Handbook* edited by Gary Greenberg and Martin Haraway). More recent investigators have explored the extent to which phenomena of human cognition can be produced by selective reinforcement of the perceptual choices of nonhuman animals. See Edward A. Wasserman and Thomas R. Zentall's edited book on categorization and short-term memory mechanisms in animals, and edited book of Cecilia M. Heyes and Bennet G. Galef focused on imitation and social learning (*Social Learning in Animals: The Roots of Culture*).

More ecologically oriented researchers like John Garcia, Alan Kamil, David Sherry, and Charles R. Gallistel have clarified how ecologically specialized perceptual-motor learning mechanisms evolved to meet requirements for survival (summarized in Sara J. Shettleworth, 1998 *Cognition, Evolution, and Behavior*). The relevance of such mechanisms to all laboratory research was pointed out by William Timberlake (2002) in examples of how ecologically-based abilities of common laboratory species have affected the design and results of common laboratory apparatus and procedures. Finally, work on human information-processing abilities, like that of John Tooby and Leda Cosmides on causal reasoning, and Paul Rozin and Carol Nemeroff on contamination and disgust reactions to foodstuffs, apply a similar ecological and evolutionary logic in the study of humans.

In short, given the diversity of reinforcement phenomena, mechanisms, and results, it appears that further increases in the effectiveness and generality of Reinforcement Theories and Models will depend on considering the effects of evolutionary, functional, applied, and neurophysiological contexts, rather than depending solely on general learning principles and theories.

SEE ALSO *Classical Conditioning; Cognition; Economics, Behavioral; Hull, Clark; Learned Helplessness; Neuroscience; Operant Conditioning; Pavlov, Ivan; Skinner, B. F.; Thorndike, Edward; Tolman, Edward*

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William Timberlake

REJECTION/ ACCEPTANCE

Whether people perceive that they are socially rejected or accepted plays a role in determining how individuals evaluate themselves and the world around them. People who generally feel accepted or included by important others may fare better emotionally and interpersonally than people who generally feel rejected or excluded. In fact,

research has demonstrated that people may possess a fundamental need to belong that closely ties their feelings of self-worth, or self-esteem, with their yearnings for social acceptance (Baumeister and Leary 1995). Because of the apparent pervasiveness of people's quest for social inclusion, systematic investigation of experiences and consequences of social rejection has enjoyed considerable popularity. Social psychologists, for example, may be interested in examining how people's perceptions of inclusion or exclusion during a given situation may influence their self-esteem. Clinical psychologists, on the other hand, may be more interested in investigating the long-term consequences of people's perceptions of inclusion or exclusion (e.g., marital satisfaction).

One theory of self-esteem, *sociometer theory*, states that people's self-esteem and mood may function as a gauge, much like a fuel gauge, alerting them when they are experiencing feelings of rejection or exclusion (Leary, Tambor, Terdal, and Downs 1995). People experience increases in state self-esteem (momentary feelings of self-worth) and positive mood in response to inclusion experiences and decreases in state self-esteem and positive mood in response to exclusion experiences. In fact, people may be attuned more to decreases in perceived social acceptance than to increases in social acceptance (Leary, Haupt, Strausser, and Chokel 1998). This is because feelings of social rejection provide a signal for the rejected person to behave in ways that will increase their likelihood of social inclusion at the current time or in the future. For example, if a man perceives that he is being socially excluded, he may make a greater effort to increase his interaction partner's liking for him. Alternately, he may be aggressive toward his rejector, temporarily sacrificing his need for acceptance but, perhaps, influencing the rejector and others to reconsider excluding him in the future.

Because people respond to experiences of social rejection in different fashions, researchers have investigated the influence of certain individual difference, or personality, variables on their reactions to instances of social inclusion, including, for example the influence of trait, or overall self-esteem, and *rejection sensitivity* (Downey and Feldman 1996) on people's responses to exclusion feedback. Although trait self-esteem does not differentially influence people's responses to exclusion, rejection sensitivity, a tendency to anxiously perceive and interpret social interactions as exclusion experiences, may do so. More specifically, people who are highly sensitive to rejection may respond to perceived exclusion experiences in ways that ultimately lead to continued negative social interactions. In contrast, people who are less sensitive to rejection may be both more likely to accurately identify rejection experiences and more adept at restoring positive interpersonal interactions.

SEE ALSO *Self-Awareness Theory; Self-Esteem; Sociometry*

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Jorgianne Civey Robinson

RELATIONS, INTERGROUP

SEE *Intergroup Relations.*

RELATIONS, INTERNATIONAL

SEE *International Relations.*

RELATIONS, RACE

SEE *Race Relations.*

RELATIONS, SOCIAL

SEE *Social Relations.*

RELATIONS, WORKPLACE

SEE *Workplace Relations.*

RELATIONSHIP SATISFACTION

Satisfaction in close relationships is defined as the subjective attitude (satisfaction) and affective experience (happiness) in the evaluation of one's relationship. Most of the existing research on this topic focuses on the correlates and predictors of satisfaction in married couples. The subjective perception of satisfaction is an important indicator of relationship quality and has consequences for the longevity of the relationship, as less satisfied relationships are more likely to end. Multidimensional analyses indicate that the structure of satisfaction is different for men and women. Men's marital satisfaction usually can be determined by one factor that taps into overall happiness in the marriage (e.g., lack of regret over marrying, the amount of disagreement with their spouses on affection and sex). Women's marital satisfaction, in contrast, appears to be two-dimensional. The first factor is overall happiness in the marriage, as with men, and the second dimension concerns the ways in which the couple relates to other people, including proper behavior with family members and friends.

In terms of stability, research by Carolyn Pape Cowan and Philip A. Cowan on the patterns of change in marital satisfaction (2000) shows that satisfaction is highest during the premarital and early years of marriage, then declines later. This decline holds true for both men and women, but appears to level off after several years. Despite this drop, couples that stay together often still report that they are happily married.

Research on predictors of relationship satisfaction has centered on intrapersonal, interpersonal/interactional, and environmental determinants of marital satisfaction. Researchers examining the intrapersonal determinants of relationship satisfaction investigate the ways personality characteristics of the members influence happiness in the context of the marriage. Analyses of differences and similarities between members of a couple reveal that "homogamy," or partner similarity on different dimensions such as personality, emotionality, and values, predicts greater relationship stability and satisfaction. There is also evidence that specific personality characteristics of one or both of the members of the couple predict relationship satisfaction. Individuals who score high on the scale for emotional instability and those with negative views about themselves tend to have less satisfied partners. Similarly, Lilah Raynor Koski and Phillip R. Shaver in *Satisfaction in Close Relationships* (1997) note that in general, people with an insecure attachment style (i.e., those who doubt their own worthiness for love, as well as the dependability and availability of their partners) tend to have less satisfied spouses. It has also been shown, however, that attachment styles in men and women relate to relationship satisfaction somewhat differently. Women with an anxious attachment style (i.e., being preoccupied with relationships, and wanting extreme closeness and being afraid of being in love) experience lower levels of self- and partner satisfaction. Among men, in contrast, it is an avoidant attachment style (i.e., being uncomfortable with closeness, and dependency on other people) that predicts lower levels of self- and partner satisfaction. These personality differences relate to differences in communication and emotions. Securely attached men and women, who believe in their self-worth and have a trust in the availability of significant others for love and safety, appear to be more comfortable with self-disclosure, trust, and commitment, and report higher levels of positive emotions that are characteristic of satisfied relationships.

Researchers who focus on interpersonal and interactional correlates of marital satisfaction have observed that certain emotional and communication patterns are more prevalent among dissatisfied couples. One main finding is that it is the communication style between the partners, and not the number of conflicts per se, that predicts enduring relationship satisfaction. For example, Mari Clements, Allan Cordova, Howard Markman, and Jean-Philippe Laurenceau identified a pattern of "escalation-withdrawal-invalidation" in communication as detrimental to relationship satisfaction (1997). In this pattern, the couple allows negative interactions to spiral out of control and reach increasing levels of negativity. John Gottman in *What Predicts Divorce?* (1994) refers to a similar processes of "negative reciprocity" that prevents the couple from snapping out of the negative mood state the conflict has put them in. Such escalation and negative reciprocity is then followed by one or both members of the couple becoming less communicative (withdrawal). In the next phase, the couple usually engages in invalidation, whereby partners angrily assail each other's character. Gottman's research shows that a communication style characterized by a "demand-withdrawal" pattern is similarly maladaptive. The repetition of this pattern, in which one partner's criticism, demands, or complaints produces defensiveness and passive inaction (stonewalling) in the other partner, erodes relationship satisfaction and ultimately leads to the dissolution of the relationship.

There is very little research on relationship satisfaction outside of heterosexual married couples. Based on the limited evidence available on same-sex partners, Gottman and his colleagues reported that there are many commonalities in the correlates of relationship satisfaction in homosexual and heterosexual relationships (Gottman, Levenson, Gross, et al. 2003). Consistent with findings on heterosexual couples, behavioral expressions of contempt, disgust, and defensiveness are related to lower levels of relationship satisfaction, whereas positive expressions,

such as humor and affection, are related to higher levels of relationship satisfaction in gay and lesbian couples.

In addition to the intrapersonal and interpersonal factors reviewed, environmental factors also affect relationship satisfaction. Life events such as the loss of a job or illness, as well as chronic stressors such as unemployment, can contribute to decreased levels of satisfaction. The effects of environmental factors can best be explained through their interaction with intrapersonal and interpersonal vulnerabilities, however. For example, although Cowan and Cowan reported significant drops in satisfaction around the time couples have their first child, couples who communicate better appear to be less vulnerable to erosion of marital satisfaction around this stressful time (2000).

Interventions aimed at increasing relationship satisfaction target maladaptive communication styles and/or negative emotions. For instance, therapeutic approaches try to change negative expectations about the partner and the relationship in order to enhance constructive discussion. Likewise, emotion-focused interventions attempt to enhance the understanding and down-regulation of negative emotions such as anger that hinder more constructive styles of coping with problems in the relationship.

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RELATIONSHIPS, PARENT-CHILD

SEE *Parent-Child Relationships.*

RELATIONSHIPS, SIBLING

SEE *Sibling Relationships.*

RELATIONSHIPS, TEACHER-CHILD

SEE *Teacher-Child Relationships.*

RELATIVE DEPRIVATION

Nearly all theorists of social movements identify *relative deprivation*, rather than absolute deprivation, as the leading cause of revolution and rebellion. This accounts for the counterintuitive but persistent finding that typically such revolts are launched by groups that enjoy rising, not falling, socioeconomic conditions. However, two underlying questions remain the subject of academic inquiry. First is the specific definition of relative deprivation—namely, deprivation of what and relative to whom or what? The second is which factors mediate the connection between deprivation and rebellion—that is, when will relative deprivation actually lead to rebellion?

Aristotle wrote that people will rebel "if they think that they have too little although they are the equals of those who have more" (Davies 1971, p. 86). Marx typically focused narrowly on the relative material inequality between classes, predicting that workers would rebel even in the face of improving living standards if they perceived capitalist living standards to be rising even faster. Alexis de Tocqueville crucially observed that relative deprivation alone was insufficient; also necessary was an expectation that rebellion would improve the situation: "Evils which are patiently endured when they seem inevitable become intolerable when once the idea of escape from them is suggested" (Davies 1971, p. 135). This, he said, explained his empirical observation that revolution tended to occur when states were relaxing, not heightening, oppression.

In the early 1960s James C. Davies posited that the decisive relative deprivation was not between groups but rather between the expected satisfaction and actual satisfaction of one group. Rebellion was caused by "an intolerable gap between what people want and what they get," so that it was "most likely to occur when a prolonged period of objective economic and social development is followed by a short period of sharp reversal" (Davies 1971, pp. 135–136). Like Tocqueville, he identified the key mediat-

ing factor between deprivation and rebellion as the expectation of success. "It is when the chains have been loosened somewhat, so that they can be cast off without a high probability of losing life, that people are put in a condition of rebelliousness" (Davies 1971, pp. 135–136).

Subsequently theorists such as Doug McAdam and Sidney Tarrow have emphasized the mediating role of "political opportunity structures" in determining when relative deprivation and mobilization actually will lead to actions such as rebellions (McAdam, Tarrow, and Tilly 2001). This work clearly echoes Tocqueville.

For more than three decades Ted Robert Gurr integrated these and other emergent findings of the literature into his repeatedly revised and expanded general theory of ethnocultural rebellion and political action. His primary causal variable continues to be relative deprivation, although he defines it broadly like Davies as the difference between perceived entitlement and actual welfare, so that even relatively privileged groups may be motivated to rebel by perceived disadvantage. Gurr (2000) says three mediating variables determine whether deprivation actually will lead a group to take action—salience of ethnocultural identity, group capacity for mobilization (based partly on geography), and political opportunities for success. A domestic political variable—whether state institutions and resources favor repression or accommodation of group demands—determines whether ethnopolitical action will take the form of peaceful protest or violent rebellion. Prominent economists and political scientists, including Paul Collier, Anke Hoeffler, David Laitin, and Jim Fearon, have disputed the primary role of relative deprivation in motivating rebellion, which they say is driven less by grievance than by greed.

SEE ALSO *Aristotle; Coup d'Etat; Ethnic Conflict; Ethnocentrism; Marx, Karl; Poverty; Resistance; Revolution; Social Movements; Tocqueville, Alexis de; Wages*

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RELATIVE INCOME HYPOTHESIS

Relative income hypothesis states that the satisfaction (or utility) an individual derives from a given consumption level depends on its relative magnitude in the society (e.g., relative to the average consumption) rather than its absolute level. It is based on a postulate that has long been acknowledged by psychologists and sociologists, namely that individuals care about status. In economics, relative income hypothesis is attributed to James Duesenberry, who investigated the implications of this idea for consumption behavior in his 1949 book titled *Income, Saving and the Theory of Consumer Behavior.*

At the time when Duesenberry wrote his book the dominant theory of consumption was the one developed by the English economist John Maynard Keynes, which was based on the hypothesis that individuals consume a decreasing, and save an increasing, percentage of their income as their income increases. This was indeed the pattern observed in cross-sectional consumption data: At a given point in time the rich in the population saved a higher fraction of their income than the poor did. However, Keynesian theory was contradicted by another empirical regularity: Aggregate saving rate did not grow over time as aggregate income grew. Duesenberry argued that relative income hypothesis could account for both the cross-sectional and time series evidence.

Duesenberry claimed that an individual's utility index depended on the ratio of his or her consumption to a weighted average of the consumption of the others. From this he drew two conclusions: (1) aggregate saving rate is independent of aggregate income, which is consistent with the time series evidence; and (2) the propensity to save of an individual is an increasing function of his or her percentile position in the income distribution, which is consistent with the cross-sectional evidence.

Despite its intuitive and empirical appeal Duesenberry's theory has not found wide acceptance and has been dominated by the life-cycle/permanent-income hypothesis of Franco Modigliani and Richard Brumberg (published in 1954) and Milton Friedman (1957). These closely related theories implied that consumption is an increasing function of the expected lifetime resources of an individual and could account for both the cross-sectional and time series evidence previously mentioned. However, starting with the 1970s, inability of these theories to explain some other puzzling empirical observations as well as the increasing evidence that people indeed seem to care about relative income have generated renewed interest in relative income hypothesis.

The first piece of evidence was presented in 1974 by Richard Easterlin, who found that self-reported happiness of individuals (i.e., subjective well-being) varies directly

with income at a given point in time but average well-being tends to be highly stable over time despite tremendous income growth. Easterlin argued that these patterns are consistent with the claim that an individual's well-being depends mostly on relative income rather than absolute income. Subsequent research, such as that published by Andrew Oswald in 1997, has accumulated abundant evidence in support of this claim.

Relative income hypothesis has also found some corroboration from indirect macroeconomic evidence. One of these is the observation that higher growth rates lead to higher saving rates, which is inconsistent with the life-cycle/permanent-income theory since the lifetime resources of an individual increases as growth rate increases. The work of Christopher Carroll, Jody Overland, and David N. Weil explains this observation with a growth model in which preferences depend negatively on the past consumption of the individual or on the past average consumption in the economy that is under the relative income hypothesis.

Another empirical observation that has been problematic for the life-cycle/permanent-income theory is the equity premium puzzle, which states that the observed difference between the return on equity and the return on riskless assets is too large to be explained by a plausible specification of the theory. Introducing past average consumption into the preferences accounts for this observation much better.

Relative income hypothesis has other important economic implications. Perhaps the most obvious implication is that consumption creates negative externalities in the society, which are not taken into account in individual decision-making. If individuals consume, and therefore work, to increase their status, then they will tend to work too much relative to the socially optimal level and hence income taxation could improve the social welfare.

Relative income hypothesis is a special case of negatively interdependent preferences according to which individuals care about both their absolute and relative material payoffs. In 2000 Levent Koçkesen, Efe Ok, and Rajiv Sethi showed that negatively interdependent preferences yield a higher material payoff than do selfish preferences in many strategic environments, which implies that evolution will tend to favor the emergence of negatively interdependent preferences. This could be regarded as one explanation for the empirical support behind relative income hypothesis.

SEE ALSO *Absolute Income Hypothesis; Consumption; Life-Cycle Hypothesis; Microfoundations; Modigliani-Miller Theorems; Permanent Income Hypothesis*

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Levent Koçkesen

RELATIVE SURPLUS VALUE

Relative surplus value is a concept introduced by Karl Marx in chapter 12 of the first volume of his book *Capital* (1867). One of the key objectives of this book was to explain the origins of capitalist profit. Marx argued that profits could not arise simply from trading between commodity owners because such trade was what von Neumann (1944) would later call a zero sum game. Instead, the source of profit had to be sought outside the sphere of circulation in the process of capitalist production. Here, labor power that had been purchased by the capitalist was set to work to make things. The amount of value created by the laborers would be proportional to the number of hours worked whereas the sum advanced by the capitalist to purchase labor power would be proportional to the value of that labor power itself as a commod-

ity. Laboring power was the ability to perform work, a concept analogous to Watt's rating of the cotton mill engine's ability to perform work in terms of normalized horsepower. Because the ability to perform work and the work actually done by employees are distinct, the zero sum game is avoided.

Marx argued that there were systematic processes in a capitalist economy that caused the value of labor power to be less than the value created during the working day. The first of these was the prolongation of working hours beyond preindustrial levels to twelve or fourteen hours a day. This lengthening of the day, which he termed *absolute surplus value*, was the principle source of profit during the early encroachments of capitalist production on an economic sector. During this phase the technology of production would be comparatively static, still depending on hand-operated tools.

The real revolution in production came with mechanization, which enabled the production of relative surplus value. Individual capitalists had an incentive to introduce new machinery because it gave them a competitive advantage. When power looms, for example, were first introduced, the mills using them could produce cloth using less labor than the competing hand-loom weavers. Because the market value of cloth was still regulated by the dominant hand looms, the powered mills earned higher profits. The hand-loom weavers were squeezed and eventually ruined by the process.

The surplus profit accruing to innovators was transitory, vanishing once the new technology was generally adopted, but it drove a process of continuous technical change. It was this change, operating at the level of the whole economy, that produced relative surplus value. Commodities entering into the consumption of the laboring classes—bread, coal, cotton clothing—were being constantly cheapened by innovation. This tended to reduce the value of labor power across the whole economy. The industrial revolution in textiles, mining, and mechanized agriculture had thus increased profits in all other sectors of the economy because labor power could now be purchased more cheaply. The constant efflux of impoverished handicraft producers onto the labor market also acted to force down wages. Accumulation of wealth by the new factory owners went hand in hand with an absolute immiserization of the mass of the population.

The possibility of innovator profit was always there, so the drive to produce relative surplus value was an invariant structural feature of capitalism. Unlike all previous exploiting classes, capitalists were forced to constantly transform the conditions of production. Constant revolutionizing of production, uninterrupted disturbance of all social conditions, everlasting uncertainty, and agitation distinguished the bourgeois epoch from all earlier ones.

The basic mechanism set out by Marx seems to accurately describe the broad economic transformation of the world economy over the nineteenth and twentieth centuries. Indeed, it seems more credible than ever in the epoch of globalization. However, taken at its face value, it would predict a constantly rising rate of surplus value over the period of capitalist history, and whether this has actually occurred is questionable. Evidence shows that the rise of surplus value due to mechanization has at times been offset by increased real wages. The production of relative surplus value may be seen as a process that interacts with other forces, including demographic ones, to regulate the overall level of profits. In countries with a stagnant or declining working population, shortages of labor power allow some of the gains of technological change to be transferred to the working classes. These factors were probably important in developed countries during the mid-twentieth century. The extent to which these offsetting tendencies will operate in the period of globalization is still an open question.

SEE ALSO *Labor Theory of Value; Profitability; Profits; Rate of Profit; Surplus Value; Value*

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W. Paul Cockshott

RELATIVES

SEE *Family; Kinship.*

RELATIVISM

Relativism, put very generally, states that a particular feature varies (or at least can vary) relative to certain phenomena. Prime candidates for the varying feature have been meaning, truth, rationality, justification, knowledge, value, and morality. Relativism thus arises in many areas of inquiry, and it has numerous variations within each area.

TRUTH AND REALITY

Relativism about truth states that truth varies relative to, for example, the concepts, the beliefs, the purposes, or the reasons possessed by an individual or a group. Relativists

about truth thus suggest that truth is, in a sense, always truth for an individual or a group with certain concepts, beliefs, purposes, or reasons. Cultural relativism about truth, for instance, implies that truths are true for a culture (perhaps in virtue of that culture's system of concepts, or conceptual scheme) but need not therefore be true for a different culture (say, with a different conceptual scheme). Relativism about truth, then, denies that truths obtain in virtue of reality independently of an individual's or a group's concepts, beliefs, purposes, or reasons. It thus opposes certain kinds of realism, or objectivism, about truth. Relativists must be cautious, however, not to suggest that their relativism about truth is true *absolutely*, or nonrelatively. If, however, relativism is true relatively, and not absolutely, opponents will find room for their absolutism about truth.

Concepts, truth-bearers, and statements are perhaps relative, regarding their existence, to a natural language or some other person-dependent phenomenon. This position seems coherent at least. Even so, we cannot thereby infer that what concepts, truth-bearers, or statements are about is similarly relative to person-dependent phenomena. Referring, describing, and explaining are perhaps relative to a natural language or some other person-dependent phenomenon, but it does not follow that the things about which one says something are similarly relative. Relativists and antirealists sometimes overlook this important lesson. It calls for a plausible distinction between human semantical activity and what such activity is about (e.g., objects, properties, states, or relations).

MORAL RELATIVISM

Morality has long been a prime candidate for relativism. Moral relativism, put very broadly, states that certain moral features vary relative to certain phenomena. Such moral features can include the basic moral beliefs accepted by an individual or a group, the basic moral requirements pertaining to an individual or a group, and the correctness of moral judgments or standards. Relativism corresponding to such moral features encompasses *moral-belief* relativism, *moral-requirement* relativism, and *moral-correctness* relativism. Moral-belief relativism can be assessed by empirical investigation, and is much less controversial than the other two versions.

Moral-requirement relativism entails that the moral requirements binding on a person depend on, and are relative to, the person's intentions, desires, or beliefs (or those of certain people in the person's society). Moral-requirement relativism has two common forms. *Individual* moral-requirement relativism states that an action is morally obligatory for a person if and only if that action is prescribed by the basic moral principles accepted by that person. *Social* moral-requirement relativism states that an action is morally obligatory for a person if and only if that action is prescribed by the basic moral principles accepted by that person's society.

Moral-correctness relativism states that moral judgments are not objectively correct or incorrect and thus that different people or societies can hold contradictory moral judgments without any incorrectness. In other words, what is morally correct for one person or group need not be correct for another person or group. Moral-correctness relativism can be developed with various accounts of "relative correctness," some of which do not imply that whatever moral judgments a person accepts are correct for that person.

Proponents of moral-correctness and moral-requirement relativism have based their case on various considerations, including moral *tolerance*. They sometimes stress that people should tolerate diverse moral views by allowing those views to be freely expressed. Even so, opponents of moral relativism need not disagree; they can hold that views conflicting with their own should be treated with full tolerance in terms of expression. In contrast, moral-correctness relativists cannot consistently hold that it is *objectively* correct that "a person morally ought to be tolerant of the views of others." Such relativists, then, may face a problem of tolerance in morality.

Some moral-requirement relativists hold that a moral requirement applies to a person only if that person accepts (perhaps implicitly) the requirement as reasonable for himself or herself. This view upholds a connection between (1) what is morally required of a person and (2) what that person approves of and has a convincing reason to do. Many relativists hold that a person's moral reasons (and thus moral requirements) have their basis in that person's own psychological attitudes, such as that person's desires, intentions, or beliefs. Gilbert Harman thus proposes that "for Hitler there might have been no [moral] reasons at all not to order the extermination of the Jews" (1975, p. 9). The underlying relativist position is inspired by David Hume (1711–1776); it claims that desire-independent objective principles of morality are inadequate as a source of moral reasons and that certain psychological attitudes (e.g., intentions) of a person are central to any source of moral reasons for that person. The opposite view is inspired by Immanuel Kant (1724–1804); it implies that desire-independent moral principles themselves can supply compelling moral reasons and requirements.

MOTIVATION AND RIGHTNESS

Is a person subject to a moral requirement only if that person has a psychological attitude, such as an intention, that recommends the satisfaction of that requirement? We can evidently "be subject" to a moral requirement in two ways: (1) as a motivating principle and (2) as a rightness-

determining principle. A moral requirement is a motivating principle for me if and only if I have, on the basis of my psychological attitudes, an inclination to satisfy that principle. In contrast, a moral requirement is a rightness-determining principle for me if and only if that principle determines whether an action I might perform is morally right. The first concerns motivation for a person; the second concerns moral rightness of an action for a person.

Relativism about the *motivational* efficacy of moral requirements does not entail relativism about the *rightness-determining* relevance of moral requirements. A person's motivating psychological attitudes are not automatically morally obligatory or even morally permissible. For instance, Adolf Hitler's psychological attitudes motivated him to wipe out millions of innocent Jewish people. Obviously, however, Hitler morally should have renounced those evil attitudes, given their role in bringing unjust harm to others.

According to a plausible nonrelativist view, the moral rightness of an action is determined by the action's consistency with what is prescribed by the set of correct moral principles. Of course, we cannot quickly or easily specify the exact conditions for a moral principle's belonging to the set of correct moral principles. The task is difficult. Even so, we need not finish that demanding task to recognize that a rightness-determining moral principle for a person does not depend on that person's intending to satisfy that principle. A moral principle can be rightness-determining for me even if I intend not to act in accordance with it. Morality, as ordinarily understood, is intention-independent in this respect.

Some relativists will reply that there is no such thing as a "correct" moral principle in the sense suggested. These relativists, however, will need to identify the defect in the view that moral principles are correct in the sense suggested. In particular, they will need to show why we should not hold on to a robust notion of moral correctness. They must also specify, in this connection, the sense of "should" in the previous sentence in a way that fits with relativism. In response, nonrelativists will then be able to consider whether the resulting relativism is "true for them." If it is not, they may proceed with their nonrelativism.

A general lesson emerges. Relativists must avoid a self-referential problem in their needed relativist notion of correctness: the problem that their notion of correctness either assumes nonrelativism about correctness or fails to challenge nonrelativism about correctness in virtue of allowing for absolutism about correctness. This is no easy task for relativists about correctness.

SEE ALSO *Cultural Relativism; Fundamentalism*

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Paul K. Moser

RELATIVISM, CULTURAL

SEE *Cultural Relativism.*

RELIABILITY, STATISTICAL

Statistical reliability refers to the consistency of measurement. According to Jum C. Nunnally and Ira H. Bernstein in their 1994 publication *Psychometric Theory*, in classical test theory reliability is defined mathematically as the ratio of true-score variance to total variance. A true score can be thought of as the score an individual would receive if the construct of interest were measured without error. If a researcher developed a perfect way to measure shyness, then each individual's shyness score would be a true score. In the social sciences, constructs are virtually always measured with error, and as such true scores are unknowns that must be estimated by observed scores.

The expected standard deviation of scores for an individual taking a test many times is known as the standard error of measurement (SEM). The SEM of a score is estimated by

$$SEM = s_x\sqrt{1-r_{xx}}$$

where s_x is the between-groups standard deviation of scores on the test and r_{xx} is the estimate of score reliability. The expectation is that if an individual takes a test many times, 68 percent of scores will fall within one and 95 percent of scores will fall within two SEM's of the observed score. Assume that Jamie scored 1,000 on a test with an observed standard deviation of 100 and a score reliability estimate of .84. The SEM for Jamie would be

$$SEM = 100\sqrt{1-.84} = 40$$

If Jamie took the achievement test many times, one would expect approximately 68 percent of the resulting scores to

fall between 960 and 1,040, and approximately 95 percent of the scores to fall between 920 and 1,080.

RELIABILITY AND ESTIMATES OF CONSISTENCY

Reliability can refer to several different types of estimates of consistency. *Alternative form* reliability refers to the degree of consistency between two equivalent forms of a measure. *Split-half* reliability refers to the consistency between two randomly-created sections of a single test. The internal consistency statistics coefficient α (also referred to as Cronbach's α) and the related Kuder-Richardson 20 (or "KR-20") can be thought of as the mean of all possible split-half estimates. *Test-retest* reliability is the consistency of scores on separate administrations of the same test. Determining an appropriate delay between the initial and follow-up administrations can be difficult. As examples, if the chosen delay is too long, expected changes (e.g., learning) in the respondents may contribute to a low test-retest correlation, which may be mistaken for evidence of invalidity. If the delay is too short respondents' remembering and repeating their responses from the first test may contribute to a high test-retest correlation, which may be mistaken as evidence of validity. Ideally in this context, respondents would receive the exact same score on the test and the retest. If scores tend to go up or down from the test to the retest, the correlation between the test and the retest will be reduced unless all scores rise or fall by the same amount.

Inter-rater reliability refers to the extent to which judges or raters agree with one another. As an example, assume two judges rate teachers on the extent to which they promote a mastery orientation among students. The consistency of the judges can be estimated by correlating the scores of both judges. A 1965 study by John E. Overall found that the effective reliability of the judging process (i.e., of both judges together) can also be estimated; effective reliability will generally be better than the reliability of either judge in isolation. One problem in estimating inter-rater reliability is that the judges' scores may reflect both random error and systematic differences in responding. This problem reflects a fundamental concern about the representativeness of judges, and, according to Richard J. Shavelson and Noreen M. Webb in their 1991 publication *Generalizability Theory: A Primer*, it is addressed in an extension of classical test theory known as generalizability theory.

SAMPLE AND CONTEXT DEPENDENT

The assertion "this measure is reliable" reflects a common misunderstanding about the nature of reliability. Reliability is a property of scores, not of measures, and it is therefore sample and context dependent. A test yielding good reliability estimates with one sample might yield poor reliability estimates with a sample from a different population, or even with the same sample under different testing conditions. The decision about whether to adopt an existing measure should therefore be based on more than a simple examination of score reliability in a few studies. Further, score reliability should be examined on each administration regardless of the measure's empirical history (Thompson, 2002).

RELIABILITY AND VALIDITY

Reliability and validity are not necessarily related. Validity concerns the extent to which a measure actually measures what it is supposed to. While reliability does set a maximum limit on the correlation that can be observed between two measures, it is possible for scores to be perfectly reliable on a measure that has no validity or for scores to have no reliability on a measure that is perfectly valid. As an example of the latter, suppose that students in a pharmacology class are given a test of content knowledge at the beginning of the semester and at the end of the semester. Assume that on the pretest the students know nothing and therefore respond randomly, while on the post-test they all receive As. Estimating reliability via the split-half method or coefficient α on the pre-test would suggest very little consistency, as would the test-retest method. The test itself, however, would seem to be measuring content taught during the course (indicating good validity).

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RELIEF TAX

SEE *Tax Relief.*

RELIGION

Though difficult to define from an intercultural perspective, religion informs the lives of virtually every society as a complex system involving beliefs, behavior, organizational structures, and symbols. Problems in satisfactorily defining the term emerge from the manifold ways in which religion expresses itself, the varied roles that it performs both for individuals and for social groups, and the plethora of academic disciplines that study it.

DEFINITION AND SCOPE

Beliefs that may be deemed "religious" range from precisely articulated perceptions of a complex array of anthropomorphic deities, such as the myriad levels of divinity recognized in Hinduism, to vague notions of impersonal, overarching power—for example, the concept of *mana* recognized in many Polynesian societies. Behaviors include a variety of practices, such as the silent meditation practiced on a personal level by mystics from a diversity of religious traditions, including Buddhism and Christianity, and complicated ritual scenarios involving scores of people such as the annual Sun Dance that has provided the central corporate religious experience for many American Indian groups on the Great Plains. Religion's organizational structure may be simple groupings of individuals brought together temporarily for specific religious purposes, such as the *big meetings* held by some Aborigines in the Western Australian desert, as well as multileveled hierarchies that have endured over millennia (for instance, the Roman Catholic Church). Symbolic representations with religious dimensions can be discrete metaphors that stand for a single concept (e.g., a shaman's characterization of his or her mystical experience as a death and rebirth) as well as variegated iconographic vocabularies of interrelated images, such as that which characterized medieval and Renaissance Christianity and which continues to afford ways for Christians to communicate about their faith.

Social scientists and others have noted that religion plays varied roles in society, including validating other features of a society, such as its political or economic system, and compensating individuals for the limitations that their humanity imposes on them and for the prohibitions dictated by specific societal norms. Religion also has an integrative function as it provides a focus for cultural identity, endorses those values and norms that ensure that a person will truly be a respectable member of the society, and discourages behavior that undermines social cohesion. Religion also offers answers to some of life's persistent problems, especially the meaning of death and the possibility of an afterlife.

The study of religion is genuinely multidisciplinary, and different fields stress different emphases in their approaches to the concept. Sociologists, for example, usually highlight the organizational structures and patterns of behavior as central to their concerns, whereas practitioners of philosophy, theology, and comparative religious studies focus their attention on beliefs. Literature and art history are most likely to foreground religious symbolism. Priding itself on its holistic approach to society and culture, anthropology is more apt than other disciplines to pay more or less equal attention to all four components of religion.

The problem of defining religion is further complicated when one attempts to differentiate it from other systems of belief, behavior, organization, and symbolism. These attempts often rely on terms that themselves need definition and clarification: *sacred*, *transcendent*, *supernatural*, *spiritual*, and *ultimate*. Most of these terms suggest that religion focuses on nonroutine phenomena that are set apart in some way from nonreligious experience (the *secular* or the *profane*). But exactly what sets them apart and the degree to which they differ from the rest of life have not been consistently articulated. What may be perceived as sacred phenomena in some systems of belief may be regarded as secular elsewhere. Mysterious lights, for example, may signal the presence of a supernatural entity, or they may be explained as the product of gases emitted by decaying vegetation. One may base the decision whether to eat meat on religious proscriptions, or the decision may be simply a nutritional issue.

Another contributor to the difficulty in defining religion is that although religion is apparently universal—that is, found in all societies—the concept of a system of beliefs, behavior, organizational structures, and symbolism distinct from other social systems is largely a Western construct. Many languages have no equivalent for the English word *religion*, though the societies that speak those languages evince much that would be considered religious in Western terms.

RESEARCH CONCERNS

Theoretical and methodological approaches to the study of religion generally reflect different emphases in how the concept is defined. Whereas social scientists, for example, usually focus on how religion operates within specific cultural contexts, theologians and comparative religion scholars may examine the nuances of religious beliefs. But one area of concern that has transcended a range of academic disciplines is the issue of origins. For example, a historian may be interested in how Mormonism emerged from the ferment of religious enthusiasm that characterized the burned-over district of western New York in the early nineteenth century, or in tracing the origins of Christian apocalypticism of the twenty-first century to

Zoroastrian beliefs in Persia from perhaps as early as the tenth century BCE.

More fundamentally, interest in origins has often addressed how religion as a system originated in the human individual and collective psyche: as a response to dream experiences (the view of the nineteenth-century anthropologist E. B. Tylor), out of fear and guilt regarding a primordial father figure (one of the ideas articulated by Sigmund Freud), as a product of the human tendency to personify incomprehensible natural forces (articulated by the eighteenth-century philosopher and historian Giambattista Vico, among others), as a method for suppressing social discontent and for promoting adherence to a society's power structure (advocated by philosophers from Plato to Marx), and even as the product of revelation from a god or other spiritual being or force (the stance assumed by many religious adherents—at least in regard to their own religions). Of course, many other explanations of religion's origin have been and continue to be proposed, and many of them lack the criterion of testability upon which many academic fields insist in order for an idea to be more than hypothesis. Consequently, many other issues in religion have received more scholarly attention.

Many sociologists, in particular, look to the pioneering concepts of Émile Durkheim, a late-nineteenth-century social scientist who argued that religion is principally a social phenomenon. Drawing upon data from the religions of Australian Aboriginal groups, he proposed that the object of religious belief and behavior was, in fact, the society itself, and that religion operated to maintain social stability through the devotion of its adherents. Whereas many of his contemporaries were more attracted by the issue of religion's origins, Durkheim concentrated on how religion operated. This concern anticipated the functional emphases of anthropologists Bronislaw Malinowski and A. R. Radcliffe-Brown, who early in the twentieth century examined how religion operated as a support for other social institutions and—in Malinowski's case—how it might assist believers in their everyday lives by providing ways of dealing with issues that lay beyond their scientific knowledge. Malinowski studied the culture of the Trobriand Islanders, Melanesians who inhabited an archipelago to the east of New Guinea and who relied on seafaring for much of their livelihoods. He noted that Trobriand sailors did not evoke religion when they were operating within the peaceful lagoons just offshore from their island homes, but when they faced the potentially uncontrollable forces of the open seas, they turned to religious beliefs and behavior to complement their knowledge of ocean currents, the weather, and other variables.

Though they might reject the designation "functionalist" as too simplistic for how they approach the study of religion, many social scientists nevertheless continue to deal principally with how religion operates in social life collectively and in the lives of individuals. Durkheim's belief that the object of religious interest symbolizes the society finds echoes in the more recent ideas about *civil religion*. Sociologist Robert Bellah has suggested that in many societies—the United States, in particular—patriotism has developed beliefs, behaviors, organizational structures, and symbolism tantamount to a religious system (1967).

Many social scientists have been especially interested in the nature of religious participation: who finds given religious systems amenable to meeting their particular needs and who performs what roles in religious behavior and organization. In heterogeneous, stratified societies such as those in the West, research has attempted to correlate membership in a particular class or caste with participation in a particular religious system or subset thereof. For instance, the wealthy and highly educated populations in the United States are more likely to affiliate with branches of Christianity that stress the importance of formal liturgy, whereas middle- and lower-class individuals prefer Christian groups that stress less organization and underscore instead the importance of personal religious experience. Ethnicity also has been a frequently identified variable in determining religious affiliation. In fact, some ethnic groups in the United Kingdom and France use religion, particularly Islam, to reinforce and signal their ethnic cultural identity. In the latter half of the twentieth century, researchers became more and more interested in ways in which gender might affect not so much a person's specific affiliation but the nature of that person's involvement in religion. While the women's movement was encouraging a more visible, active role for women in many Christian denominations in the West, researchers looking at religions in other parts of the world often found that women traditionally had been central in local religious belief and polity.

Another focus of social scientific interest in religion has been the way in which it interacts with other systems of ideology in a society. Max Weber is an important early figure in this interest because of his demonstration of the way in which Protestant Christianity, especially Calvinism in western Europe, created a milieu conducive to the emergence of capitalism by emphasizing individualism and hard work, among other values. Of particular interest in the late-twentieth and twenty-first centuries has been the association between religion and nationalism. Islamic-based governments, primarily in the Middle East, have become among the most important participants in global politics, and competition between different branches of Islam (Sunni and Shia, in particular) has characterized their internal politics. Christianity has assumed a similar role in some Western nation-states such as the United States, where fundamentalist groups have become powerful elements on the political landscape. Sociologists and

political scientists have shown particular interest in measuring the ways in which religious affiliation has affected the voting patterns of the U.S. electorate and in shaping the programs of the politicians they support.

An important and very fundamental development in social scientific interest in religion concerns the way in which scholars position themselves in regard to their subject. Conventionally, social scientists have been urged to develop a stance of methodological agnosticism in which they eschew their own religious beliefs at least temporarily and adopt a perspective of cultural relativism that is not concerned with whether a religious belief is true or whether a ritual actually produces the results that its practitioners desire. Instead, researchers have attended to the internal consistency of belief systems, the social and cultural functions of ritual, and the extent to which adherents lend credence to beliefs and rituals. Recently, however, some social scientists have begun to recognize that this perspective brings with it certain assumptions that color what researchers observe, how they report what they encounter, and the directions taken by their analyses. Influenced by the set of ideas loosely known as "postmodernism," researchers have become more aware of the role of their own religious ideas in their work and have become more forthcoming about those ideas. The cultural anthropologist Victor Turner, for example, was usually very open about his own Roman Catholicism in his work focusing on the symbolic dimension of religious systems. In addition to this move toward reflexivity on the part of religious researchers, some social scientists have begun to accept that religious beliefs may often stem from actual wondrous events that an individual has experienced and which the social group interprets in terms of the events' relation to indigenous ideas about the sacred, the supernatural, the spiritual, or the ultimate.

New tools have allowed social scientists to explore traditional areas of religious study more fully and accurately. The availability of computer programs, for instance, allows demographic studies to be done more quickly and with a larger number of variables than was feasible before the computer age. Meanwhile, technology has taken religious studies into some new, still controversial, and largely unexplored areas such as the possibility of a genetic basis for the need for religion. Interestingly—and perhaps counterintuitively—the growth of technology during the latter half of the twentieth century did not parallel a decline in religious adherence; instead, many religions have witnessed significant growth as technology has blossomed.

DEMOGRAPHICS

Literally thousands of religious systems flourish throughout today's world. Although many of these appeal only to small groups (and have consequently been labeled "tribal" or "primal-indigenous" religions), even these may exert international influence through the globalized mass media and through such phenomena as cultural tourism. Other religious systems are truly world religions whose practitioners believe that they can and should promulgate their beliefs to everyone. Despite their purported international scope, though, these world religions are often focused on specific territories. For example, the largest religious system, Christianity (with more than two billion adherents), developed in the eastern basin of the Mediterranean Sea and then spread primarily through Europe and then to those parts of the world that were subjects of European colonialism. Most branches of Christianity retain primary geographical ties with Europe or with the United States, but some are flourishing most luxuriantly in other parts of the world—Roman Catholicism in Central and South America and in Africa, for example.

Meanwhile, Islam—second in number of adherents to Christianity with perhaps a billion and a half followers—maintains its primary geographical association with southwestern Asia and southeastern Europe. But it has spread throughout the world, and, in fact, the country with the most Muslims is Indonesia. Hinduism, with close to a billion practitioners, remains principally associated with the Indian subcontinent, and Buddhism, with maybe half a billion adherents, also has an Asian focus. Nevertheless, both these religions have had enormous influence elsewhere, especially as replacements for or supplements to Christianity. The diaspora of the Jewish population has made Judaism a world religion with a symbolic attachment to the nation of Israel.

As contact between societies becomes more efficient, these world religions as well as more local systems of belief, behavior, organizational structures, and symbolism will spread more widely. Meanwhile, they will continue to influence one another to create syncretistic systems such as the Native American Church, which blends Christianity, various North American Indian religions, and ritual behavior that apparently originated in Mexico; and Vodoun, the principal religion of Haiti, which merges Roman Catholic Christianity and several West African religious systems, with influences from native Caribbean religions. The endurance of religions whose roots lie in the distant past, as well as the emergence of new religions, often the result of syncretism and other processes of cultural exchange, ensures that social scientists and other scholars who specialize in the study of religion will not lack for subject matter any time soon.

SEE ALSO *Animism; Anthropology; Buddhism; Christianity; Church and State; Church, The; Coptic Christian Church; Cults; Durkheim, Émile; Ethnicity; Heaven; Hell; Hinduism; Islam, Shia and Sunni;*

Jainism; Judaism; Malinowski, Bronislaw; Monotheism; Polytheism; Protestant Ethic; Protestantism; Radcliffe-Brown, A. R.; Rastafari; Religiosity; Roman Catholic Church; Santería; Shinto; Sociology; Weber, Max

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William M. Clements

RELIGIOSITY

Religiosity is a term used by social scientists to refer to religious behavior. Social scientists generally view religion as a cultural system of shared beliefs and rituals that offers a sense of transcendent meaning and purpose. Religion is often constrained within the natural and material categories. Religiosity therefore refers to the way people and communities are influenced by religious ideas and shape social reality accordingly.

From its inception, religiosity has been a central issue for social scientists. The German political philosopher Karl Marx viewed religion as an ideology of capitalist oppression. For Marx, religion compensated for the needs denied under capitalism, and the elimination of religion was indispensable to human emancipation. The German sociologist Max Weber (1864–1920) viewed religion as a meaning-making system that determined human behavior and shaped societies. Weber predicted that with the increase of rationalization there would be a "disenchantment of the world" that would lead to the decline of religious beliefs. The French sociologist Émile Durkheim viewed religion as the very essence of society that constrained individuals from egocentric behavior while simultaneously enabling them to adjust and function in social settings.

In the 1950s and the 1960s social scholars, most notably Peter L. Berger, proposed the secularization theory. The secularization theory claims that modernization necessarily leads to the decline of religion, both in society and in the minds of individuals. This in turn leads to the privatization of religion that marginalizes religion from the public sphere. Therefore as modernity ushered in plurality, subjectivity, and different authorities for legitimation, religion, unable to deal with these challenges, eventually withdrew from the public realm. According to the theory, the future of religion is a private one, eventually existing mainly in the private lives of individuals.

Decades after the secularization theory was popularized, Berger and its other champions revised and reconsidered the theory in light of an unsecularized modern world. Modernity not only did not secularize society but it created a counter-secularization movement that resulted in the increasing influence of religiosity in the modern world. In *Public Religions in the Modern World* (1994) Jose Casanova argued against the assumption that the increasing differentiation between religious and public institutions automatically leads to the decline of religion. Casanova claimed that public religions do not necessarily challenge the foundation of modern liberal society. In fact Casanova suggested that public religions can help advance modern agendas such as those of human rights and democracy.

FUNDAMENTALISM

One public form of religiosity is the religious phenomenon known as fundamentalism. Fundamentalism is characterized by a strict adherence to religious doctrines in their original form in order to restore a previous social order in the present world. The sociologist James Davison Hunter argued that fundamentalism is a direct product of modernity. Hunter characterized fundamentalists as those who believe that something has gone wrong in human history. Religious fundamentalists believe that their sacred order for human life has been disturbed and they must correct it to the best of their abilities. Hence religious fundamentalists are religious adherents who believe that they must restore the sacred order that their deity intended for this world. Though the term *fundamentalist* is ambiguously used to characterize both peaceful devout Muslims

and extremist terrorists, it is important to note that religious fundamentalism does not always involve acts of violence. As the scholar Nancy T. Ammerman noted, one characteristic of many fundamentalist sects is that they are separatists. They seek to restore what they believe to be a sacred order only for their religious community. Many of these fundamentalists retreat from the secular world in order to construct the social reality of their liking. For example, the fastest growing Christian denominations in the United States are religious groups with fundamentalist beliefs.

One of the most notable branches of Christian fundamentalism is Pentecostalism. This form of Christianity emphasizes the experience of the Holy Spirit. Adherents are highly expressive and emotional, and their religious rituals often involve spiritual healings and the act of speaking in tongues, which is the utterance of what appears to be an unknown foreign language or simply nonsense syllables. In less than one hundred years Pentecostalism, along with its offshoot the charismatic movement, has become the largest segment of Protestant Christianity and the second largest Christian tradition after the Roman Catholic Church. In the early twenty-first century one out of every four Christians in the world is Pentecostal or charismatic. Pentecostal Christians use mass media to carry their message around the world and are arguably the most visible form of Christianity in the world.

The resurgence of religiosity in social sciences is especially clear at the beginning of the twenty-first century. The clear relationship between church and state in the United States was apparent to the great French observer Alexis de Tocqueville in the 1830s when he noted that churches and other voluntary organizations were the cradle of American democracy. The interconnectedness of religion and politics should not be confused with the conflict between church and state, though the clash of both are increasing in modern times. The conflict between church and state is institutional, while the conflict of religiosity and politics is within individuals. All religious citizens must negotiate between personal sacred beliefs and secular laws designed to appease a plurality of religions. This creates a cognitive dissonance that often leads to public confrontations between religion and politics. In *The Clash of Civilizations and the Remaking of World Order* (1997) Samuel Huntington traced the shifting focus of global conflict toward the end of the twentieth century. He noted that international conflict has shifted from ideological differences to religious and cultural conflict. Gone are the days when the United States allied with Islamic fundamentalists to repel the then communist Soviet Union out of Afghanistan. Under Huntington's new order, religiosity determines enemies and allies.

SEE ALSO *Fundamentalism; Religion*

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Tony Tian-Ren Lin

REMEDIAL TRACKS

SEE *Tracking in Schools.*

RENEWAL, URBAN

SEE *Urban Renewal.*

RENT

The term rent has two meanings in economics and one taken from everyday usage. When a person leases an apartment or house from its owner, the lease provides for a payment to the owner. Although commonly called rent, it is very different in both orientation and calculation from the two uses in economics, namely, economic (or Ricardian) rent and rent-seeking, which are themselves very different from each other.

ECONOMIC RENT

The rent paid to an owner of leased property is a composite payment. It covers or includes the following items: the cost of the land, the cost of improvements, interest on the combined costs, the amount of appreciation of the land and improvement values, taxes, the cost of any services provided along with the leased property, and, given the overall workings of demand and supply, any further profit; all of which are calculated on a per-period basis. Should the owner have a mortgage, the owner's receipt of rent enables the owner to accumulate equity in the prop-

erty. Should the renter arrange with the present owner to purchase the property, it is the former renter, now owner, who accumulates equity in the property by paying off the mortgage, if any. The principal connection with economics, or economic theory, of such rent is that the rent paid for the leasing of the property must be worth its expenditure to the renter (including consideration of alternative leasing) and must be suitable, relative to the owner's costs and alternative leasing), to warrant for both of them to enter into the rental contract, or lease.

The concept of economic rent stems from the English economists David Ricardo and Thomas Robert Malthus in the early nineteenth century. Ricardian, or economic, rent is the return to the owner of land (or any factor of production) that is fixed in supply and whose level is governed by the pressure of population growth. With trivial exceptions, such as filling in shallow bodies of water for one reason or another, the amount of land does not change with a change in the demand for it. The demand for land is driven by the need for land on which to grow crops and to erect homes. This need increases with population increase and is due solely to the growth of society. The increment in the price of land thus generated is widely considered unearned compared to situations in which investment in improving land and its appurtenances takes place.

Several additional features stemmed from early-nineteenth-century study. One feature is that land rent is differential with regard to location and to fertility. Increments or decrements of property value will reflect relative location and fertility, and likely will not be constant in either amount or percentage change. The second feature is a specific form of the first, namely, that as increasing levels of labor and capital are applied to the same amount of land, output per unit of input will fall. This is called diminishing returns. The third feature is due to the fact that not all land is equally fertile or located equidistant to a given point. This means that as the price of food increases due to the population-driven demand for food and thereby land, the increments of price (rent) of the more fertile or better situated land will increase more rapidly than those of less fertile or worse situated land. The fourth feature is that rent is a residual category such that any tax on land rent will have no disincentive effect on the level of food production on the land.

Given both that the increased price of pure, unimproved land is due to the growth of society and that any tax on the rent will have no adverse effects on income-maximizing owner calculations and farming, it has followed for many economists that a tax on unimproved land would have no negative effects and would be a fit subject of taxation. Objection to this reasoning arose from those who felt that acquisition of the increased value was one of the rights of property. The rejoinder to that objection was this: Land-value increments being due to the growth of society and not the activities of the owner, not taxing land rent but maintaining the same governmental budget, meant that tax revenues would have to come from taxes levied on productive activities. Nevertheless, a tax on land-value increments conflicted with the principle of conservatism, that appropriation of the increase of value was a right of property. However, for the American economist Henry George (1839–1897), for example, whose reasoning was initially based on Ricardo's, nothing was more conservative than promoting income in accordance with productivity rather than unearned increments.

The theory of Ricardian rent must be supplemented by consideration of the competition over pieces of land by people who had different, and conflicting, uses for the land. The idea of quasi-rent was developed by the English economist Alfred Marshall to identify the return to owners of factors of production, such as one's own labor or pieces of capital, that are in temporary inelastic supply.

RENT-SEEKING

The second notion of rent in economic theory is that of rent-seeking. The idea is that rent is the difference between two sets of rights, that people could invest money in efforts, through lobbying, legislation, and/or litigation, even bribery and extortion, to change the law in their favor, thereby increasing their incomes. Rent-seeking would engender counter-measures by those threatened with loss. The result would be wasted resources deployed in such activities. The objection to rent-seeking theory is that prohibition of such activity, were it actually possible, would remove the opportunity to address grievances, perpetuate the law in existence at the time of prohibition, and deny people their legal and constitutional rights, including their right to a lawyer, and their right to participate in government as well as limit competition. The perpetuation criticism is particularly objectionable, inasmuch as modern urban industrial society and political democracy would never have been feasible had the beneficiaries of the old post-feudal order had a veto, as it were, on legal, political, and social change. Anne Krueger's more limited model, centering on bribery and extortion, is much less amenable to criticism along these lines than several other broader and less discriminating versions of rent-seeking.

Both theories, Ricardian rent and rent-seeking, are greatly affected by the situation that, under post-feudal structures, land ownership conveyed important rights of governance and therefore control of social evolution.

SEE ALSO *Returns, Diminishing; Ricardo, David*

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Warren J. Samuels

RENT CONTROL

Rent controls can be broadly defined as governmental regulations that limit landlords' ability to set and increase rents freely on residential properties. Rent controls often coincide with a host of other regulations concerning landlords' responsibilities and tenants' rights in a rental arrangement. Most rent controls are one of two types: rent ceilings, which place hard limits on the amount of money a landlord can charge for a rental unit that is based on the unit itself; and tenancy rent control, which is a set of regulations that limit the actions a landlord can take during the tenure of a sitting tenant, including limitations on landlords' ability to increase rents.

Rent ceilings (or first-generation rent controls) are the most commonly studied type of rent control, but have become quite uncommon in practice. Most rental ceilings came into being at the end of World War II (1939–1945) to help mitigate expected disruptions in the rental housing market due to the demand shock of veterans returning from overseas service in the war. The most well-known example is in New York City, where a number of rental properties are still controlled under a rent ceiling. Tenancy rent controls (also known as second-generation rent controls) are much more common in the contemporary world. Most tenancy rent control laws were enacted in the wake of the global economic downturn of the mid-1970s that brought high inflation, and many were then abolished in the 1980s and 1990s. Tenancy rent controls are still relatively common in North America and Europe and elsewhere. Tenancy rent controls are typically one component of a host of policies that strengthen tenants' rights in the rental housing market. In addition to limiting the amount of rent increases a landlord can impose on a sitting tenant, they often regulate or prohibit the practice of collecting nonrefundable deposits, limit the ability of landlords to evict sitting tenants, and restrict the use of fixed-term contracts.

One particular aspect of tenancy rent controls that differs considerably from rent ceilings is the "vacancy decontrol" provision most employ. This provision frees landlords to set rents freely once a rental unit becomes vacant. The common justification for tenancy rent control is the shift to the landlord in the balance of power once a tenant has taken up occupancy in a rental unit due to the expense to the tenant (both financial and emotional) of vacating the unit and moving elsewhere. As arbitrary evictions are generally prohibited, it is necessary to limit the landlords' ability to increase rents on sitting tenants so that they are not deliberately priced out of the unit to affect the same result as an eviction.

Rent ceilings are fairly straightforward to analyze and have thus secured a place in almost every basic textbook on economics. The artificially low rents created by these laws create excess demand for apartments. This excess demand would normally drive prices up, but the regulation prevents this, leaving a group of potential tenants unable to find housing. Those who do secure housing are better off as they are paying less than they would in the absence of the policy. Landlords receive less than they would in the free market, which serves to limit the supply of apartments. So there are fewer units available under rent control than without, and there are winners and losers among those who want housing at the rent ceiling price: the winners are those that are able to find a rental unit and who pay the depressed rent, and the losers are those that cannot find housing.

Tenancy rent controls are less straightforward to analyze. Since initial rents are generally set to market clearing rates, the problem of excess demand is not realized. However, as rental increases on sitting tenants are limited, it creates a situation where apartments are more valuable for those that are able to remain in them for a long time as they get the benefit of diminishing real rents, and these types will therefore bid up initial rents. Those that are more peripatetic are likely to find initial rents too high as they will not be able to realize the full benefit of decreasing real rents. The result in this situation is a different type of winner and loser. The winners under tenancy rent control are those that can remain in an apartment for a long time (perhaps older, more established individuals) and the losers are those that need to move more frequently (perhaps younger, less established individuals). In the end, landlords are able, through the setting of high initial rents, to do just as well under tenancy rent control as in an unregulated market and therefore supply is not affected.

SEE ALSO *Regulation; Wage and Price Controls*

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Patrick M. Emerson

RENT-SEEKING

SEE *Rent.*

REPARATIONS

The term *reparations* refers to a concept and tool for providing monetary payments to members of aggrieved groups based on past wrongful actions against them or their ancestors. Reparations are used for addressing injuries and damages in relations among nations, ethnic groups, and other victims of sustained economic and sociopolitical injustice or military or police aggression. Examples include reparations paid to victims of the German Holocaust in Europe from 1930 to 1945 and Japanese Americans who were partially compensated for their internment and loss of property in the United States during World War II (1939–1945). Earlier reparations were paid by Germany to the Allies after World War I (1914–1918), but in a manner and intensity that probably contributed to reopened hostilities later in the century. The reparations concept is being thought of by some as a potentially useful tool for helping to resolve chronic ancestral grievances in many situations worldwide, including in Northern Ireland, the Balkans, the Middle East, South Asia, and elsewhere.

In the United States, the idea of reparations has gained strength as a way to remedy injustices against African Americans as a group, as well as Native American Indians and Native Hispanic American Indians. This latter debate over what many call *reparations* has often been a catchall for discussion of a wider range of concerns in social policy and the expression of other agendas. In that sense, some reparation advocates seek monetary damages for their ancestors' pain and suffering, for their loss of language and African identity, and for the slave trade itself. The debate has also been characterized by imprecision, and the parties to the argument often mischaracterize, disregard, or distort opponents' actual positions and beliefs. This was the case, for example, in the article "Ten Reasons Why Reparations for Slavery Is a Bad Idea for Blacks—and Racist Too" (2001) by the conservative activist and media personality David Horowitz.

After Horowitz's article was published, a sharp encounter ensued between Horowitz and several others involving the definition of "reparations for slavery" and whether it was justified or fair to white Americans currently living and paying taxes. None of the parties to the discussion, on either side, had carefully reviewed the literature or provided any original opposing or clarifying analysis. Thus, the entire episode primarily illustrated the tendency toward carelessness in thought and discussion on racial redistributive justice, even by most proponents. This encounter also underscored the highly emotional quality of much discussion of the subject of reparations, which brings to the surface fundamental, and long-buried and unarticulated, core racial concerns on all sides. The debate also raises questions about the political feasibility of reparations, whatever the term means. Is there broad support for a practical policy and program of explicitly redistributive and compensatory justice in the United States?

There is a growing scholarly analytical literature on the subject of reparations. Among the earliest articles was one by Robert Browne, published in 1972 in a special issue of the *Review of Black Political Economy*. This issue featured the first attempts to quantify the present value of the stream of benefits to whites from past wrongful takings under slavery, segregation, and discrimination. Much of that analysis was based on work done by the economist Lester Thurow in his 1969 book *Poverty and Discrimination*. Thurow developed a model, and using census data he established that white Americans gained approximately $15 billion in one year, 1960, from racial discrimination in the labor market.

From 1985 to 1990, the National Economic Association, an organization of African American economists and policy analysts, conducted sessions on reparations at their annual meetings. The papers presented at these sessions were published in *The Wealth of Races: The Present Value of the Benefits of Past Injustices* (1990), edited by Richard F. America. This volume included the work of William Darity, Roger Ransom and Richard Sutch, Warren Whatley and Gavin Wright, Larry Neal and Robert Browne, and other established economists, and carried quantitative and historically based analysis several steps forward. In a 1993 monograph Richard America continued to refine and develop the concept of reparations, focusing on unjust enrichment and the income and wealth-transfer effects of slavery and discrimination. In 2003 Darity and Dania Frank published a short but comprehensive summary of research to date. This volume

refines the analysis and points to a new framework that can produce an even more robust analytical basis.

A common question raised about reparations is that if they are suitable for African Americans, are they not also appropriate for other aggrieved groups? Reponses vary widely. But the emerging approach with the deepest analytical grounding involves an analysis of wrongful taking and unjust enrichment, and findings of magnitudes of compensation based on historical auditing. This approach can be used for other groups with similar historical backgrounds, wherever appropriate.

What about popular opinion and support for or opposition to reparations for African Americans? Michael Dawson and Rovana Popoff (2004) found that 79 percent of blacks and 30 percent of whites in the United States favored an apology for slavery, but 66 percent of blacks and only 4 percent of whites favored monetary reparations to blacks "for slavery." This finding may or may not reflect actual views on reparations when defined differently as "recapture of unjust enrichment" rather than reparations "for slavery." That distinction is crucial. The question of reparations, in various forms, has become a serious public policy issue since it first emerged in the late stages of the civil rights movement of the 1960s. Of course, as early as the American Revolution, some advocates of abolition were framing remedies that included some form of compensatory justice for freedmen and freedwomen.

The concept of reparations varies according to the worldview of those in the debate. There are three broad views. For some, reparations primarily mean compensation for the slave trade. A second view is that reparations are owed to current generations for the pain and suffering of their collective ancestors—for crimes against humanity. A third view of reparations is narrower and seeks to recapture, recover, and reclaim unjust enrichment that resulted from wrongful takings under slavery, segregation, and many forms of discrimination from 1619 through the present. The focus in this entry is on this third definition.

The idea of unjust enrichment is key, and functions as a useful framework for understanding chronic poverty, poor educational performance, substandard housing, high unemployment, and low income and wealth accumulation among African Americans, as well as persistent black-white disparities in health care, business investment, and competitiveness. These conditions all derive, significantly, from the processes of wrongful taking and unjust enrichment. In addition, these conditions can be measured because they all include a measurable, historically based component. The processes of slavery, Jim Crow segregation, and discrimination were all mechanisms that transferred or diverted income and wealth from blacks as a class to whites as a class, producing unjust enrichment. Reparations, in this view, constitute the proper basis for a well-founded program for rational compensatory public policy. Unjust enrichment and reparations are ways to understand chronic social distress in a long-term historical context. Slavery and discrimination operated in many forms, in every aspect of American life, for 350 years, and this explains much of the current dysfunction. Social problems derive largely from the extraction or confiscation of black property and income by white decision-makers, for white benefit, in millions of daily microdecisions.

The cumulative effect of those wrongful takings produces current unjust enrichment and a range of conditions referred to as affluence and poverty. This situation helps explain the problems we objectively see on the ground, but this fact has been absent from policy discussions. The reparations concept inserts these ideas into the heart of policy analysis, and changes the way problems are viewed and the way policy and programs are created.

There has been widespread and consistent white discrimination against blacks. This behavior has been outlawed in the United States since 1965, but policy analysts and social scientists have not failed to note the full long-term consequences, especially the unjust enrichment. Explicitly accounting for the ways in which black and white ancestors behaved puts a spotlight on the transferred income and wealth. The concept of reparations, and the associated framework of wrongful taking and unjust enrichment, provides a public policy framework for examining objective reality by quantifying and taking into full account historical context. In this way, it is a new or, at least, improved paradigm—a new or improved way of viewing the world. There has been massive, systematic exploitation and confiscation. And those practices—slavery and discrimination—produced wrongful benefits that have been passed on, transferred intergenerationally, to the present.

This analysis points to redistributive justice—recovering monies wrongfully taken through restitution—as the general remedy. That is what reparations mean in public policy terms. Other analysts emphasize payment for pain and suffering or for crimes against humanity. And still others have focused on a form of reparations as a means of laying the groundwork for atonement and reconciliation; they emphasize healing.

But reparations of the kind described here focus on improved public policy analysis, in which national tax and budget priorities are informed by the concept of unjust enrichment, and, by implication, reparations. Thus, social spending becomes a tool for explicitly making restitution.

The amount of reparations owed would equal the net present value of the sum of the deviations from "fair" standards in prices, wages, rents, employment, interest, and investment in education, plus all other affected transactions between whites and blacks. This is an overly simple

but illustrative form of the model that leads to a grasp of the dimensions of the wrongful taking and unjust enrichment that produced the need for reparations. We can audit the actual patterns of labor, trade, and investment relations long after the fact. We can also posit a set of "fair" wages, occupational distributions, employment levels, prices, rents, interest rates, educational expenditures, taxes, profits, and returns on investment. We can then estimate the deviations from those "fair" standards. And we find that those deviations resulted, in part, from force, manipulation, and coercion. Then we aggregate, compound, and adjust for price changes over time. That produces a "bill" that represents the financial basis for redistributive justice. We can then negotiate the bill, and reach rational, feasible, make-whole settlement agreements that will restore African Americans as a class to their rightful place. These actions are reparations. Clarifying that will help clarify policy choices in education, housing, employment, and every other controversial sector. The remedy is income and wealth redistribution in capital injections, or grants, in housing equity, quality education, and business equity, targeted to rectify the injustice.

Reparations are a way of looking at complex policy issues that can be rationally applied to understanding, defining, and solving chronic social problems in housing, health, education, employment, and business and community development. Without this historical framework, public policy cannot effectively address these problems.

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Richard F. America

REPATRIATION

From the Latin for "fatherland" (*patria*), *repatriation* literally means to return, voluntarily or involuntarily, to one's homeland. The term now has two distinct meanings: either the return of people to their homeland, or the return of cultural objects to their place of origin. The repatriation of people, for example after a war, has a long history, whereas the repatriation of cultural objects, typically the cultural artifacts of aboriginal communities, is associated with postcolonialism, the social movements of native peoples, and the changing function of museums in modern societies.

The repatriation of peoples is closely associated with the growth of national citizenship, the involvement of civilians as victims of modern warfare, and the development of human rights legislation. After World War II (1939–1945), there were over one million displaced persons in Europe, and in 1950 the post of United Nations High Commissioner for Refugees (UNHCR) was established, a year before the 1951 Refugee Convention. In the first fifty years of its existence, the UNHCR gave assistance to at least fifty million people who have been displaced, both internally and externally, as a result of warfare and civil conflict. With the apparently unstoppable growth in the numbers of refugees in the second half of the twentieth century, the humanitarian protection of refugees led to greater concern by the UNHCR in a right to "return in safety and dignity," as expressed in a 1989 policy document (Coles 1989). *Safety* refers to physical security and the entitlement to protection from a forced return. *Dignity* is to be measured by the quality of life in the location to which displaced persons return voluntarily. In practice, achieving a consensus over safety and dignity between states, refugees, and UN agencies is extremely difficult, often because there is little reliable information about the security of war zones that have been subject to a long period of conflict. The protracted arrangements between five separate organizations and a commission in the 1990s to return Guatemalans to Mexico or the case of 200,000 Tigrayans walking home to Ethiopia against the wishes of UNHCR and the government of Sudan are typical of such political uncertainty.

Any account of the repatriation of cultural artifacts needs to consider the historical development of museums as institutions for collecting the material cultures of aboriginal communities and the ancient world. The expansion of museums in the Victorian period was in part a function of the growth of European colonization and the colonial sense of superiority. Britain's acquisition of the Elgin Marbles from classical Greece was a notorious illustration of the acquisitiveness of Western classicism and archaeology. Thomas Bruce (1766–1841), the seventh Earl of Elgin, obtained a *firman* (legal document) from

the Ottoman sultan to remove sculptures from the Parthenon in Athens in 1801. Attempts by the Greek government with the support of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) to repatriate the Elgin Marbles have so far been rejected by the British government.

In addition to plundering the classical world, museum curators were especially interested in the primitive and the exotic as collectable items. This was also the period in which the native peoples of the Western Hemisphere were at their lowest cultural ebb. War and disease had produced a demographic catastrophe, and the cultural heritage of native peoples was removed to museums in policies that amounted to deculturalization. In addition to cultural artifacts, human remains from battlefields entered the medical collections of the U.S. Army and physical anthropologists.

The federal Antiquities Act (1906) prevented the destruction of antiquities on public land in the United States, but allowed free import and export of Native American artifacts. It was not until the repatriation movement of the 1980s and 1990s that there was a fundamental change in the relationships between museums and Native American communities, resulting in the National Museum of the American Indian Act (1989) and the Native American Graves Protection and Repatriation Act (1990). Although this legislation is significant, the demand for sacred and ceremonial materials on the international art market is such that looting from archaeological sites continues to be a serious problem.

SEE ALSO *Burial Grounds, Native American; Migration*

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Bryan S. Turner

REPLICATOR DYNAMICS

The replicator dynamics are part of evolutionary game theory and are especially prominent in models of cultural evolution. Evolutionary game theory uses principles of interactive behavior to explain the emergence of behavioral regularities in organisms forming a population. The results of organisms' interactions affect their fitness, measured as their ability to reproduce. If one organism is fitter than another, then it is more likely to reproduce than the other. An organism's offspring inherit its traits. The offspring may differ from the parent in fitness, however, because the offspring's fitness depends on their success in interactions with their contemporaries. As the population changes, the traits that confer fitness may change, too.

The replicator dynamics explain changes in fitness that arise from changes in a population's composition. Applications divide a population according to organisms' behavioral traits, in particular strategies for interacting with others. For instance, in a dispute over food, one strategy may be to fight. Another strategy may be to retreat. A strategy's consequences are assessed in terms of fitness, or average number of offspring.

A mathematical equation characterizes the replicator dynamics. It applies to a population given simplifying assumptions. They specify four conditions: (1) The population is infinite. Assuming an infinite population makes the relative frequency of an outcome match its probability. (2) An individual in the population has the same probability of interacting with any other member of the population. Pairs of interacting individuals form as if individuals were matched at random. (3) Strategies breed true. That is, if an organism has offspring, its offspring adopt the same strategy it follows. An organism's fitness equals the average number of offspring following its strategy. (4) Reproduction is asexual. An organism has a single parent and so inherits the parent's strategy. This condition puts aside the possibility that an organism's strategy differs from a parent's strategy because it has two parents with differing strategies. The proportion of individuals following a strategy changes only if some organisms with that strategy are more or less fit than their parents and so reproduce more or less frequently than their parents did.

Brian Skyrms's (1996, pp. 51–53) notation is used here to present the replicator equation. First, assume that a population evolves in steps from one generation to the next. Using the proportion of individuals following a strategy in one generation, and the strategy's consequences for their fitness, one may compute the proportion of individuals following the strategy in the next generation. Let $U(A)$ be the average fitness of a strategy A, and let U be the average fitness of all strategies. Then the proportion of the population using A in the next generation equals the proportion of the population using A in the current generation times the ratio $U(A)/U$. That is, if $p(A)$ is the proportion using strategy A in the current generation and $p'(A)$ is the proportion using A in the next generation, then $p'(A) = p(A)\,U(A)/U$. If A has greater than average fitness, its proportion increases. A little algebra yields the following equation specifying the change from one gener-

ation to the next in the proportion of the population using strategy *A*.

$$p'(A) - p(A) = p(A)[U(A) - U]/U$$

Next, suppose that evolution is continuous with respect to time. Then the population evolves according to this differential equation.

$$dp(A)/dt = p(A)[U(A) - U]/U$$

The equation gives the rate of change in the proportion of the population using strategy *A*. Given that the average fitness of the population is positive, the following simpler differential equation describes the structural features of the population's evolution.

$$dp(A)/dt = p(A)[U(A) - U]$$

This equation characterizes the replicator dynamics. Peter Taylor and Leo Jonker (1978) were the first theorists to formulate the equation (using different notation). Peter Schuster and Karl Sigmund (1983) called it the replicator equation and the pattern of change it describes the replicator dynamics.

Social scientists use the replicator dynamics to construct models of human behavior, for example, models of the emergence of cultural norms. When applying the dynamics to cultural evolution, imitation may replace reproduction as the mechanism responsible for replication of strategies. Because human populations do not satisfy exactly the idealizations of the replicator dynamics, the models the dynamics yield are simplifications. However, in some cases the dynamics may approximate the course of evolution.

Applications of the replicator dynamics look for the emergences of stable behavior. Consider, for example, food sharing in a hunter-gatherer society. This strategy may enhance fitness, propagate within a population, and drive out rival strategies. It may be evolutionarily stable in the sense that once a population adopts it, even if a few organisms with different strategies arrive, those new strategies do not propagate within the population. The stable strategy resists invasion by mutants. A strategy that is evolutionarily stable with respect to the replicator dynamics corresponds to a stable Nash equilibrium in a game representing individuals' interactions.

SEE ALSO *Game Theory; Nash Equilibrium; Strategy*

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Paul Weirich

REPORT OF THE WARREN COMMISSION

SEE *Warren Report.*

REPRESENTATION

Any major dictionary offers numerous definitions of the term *representation*. This indicates that the concept comprises a range of meanings and usages, depending on the type of discourse in which it emerges, the variety of cultural phenomena to which it may refer, and the philosophical programs and ideological perspectives it is intended to serve. Within the realm of sociocultural studies, two clusters of meanings of the term—defined as the "act or action of representing: the state of being represented" (*Merriam-Webster's Collegiate Dictionary* 2003, p. 1057)—have acquired critical importance:

> 1. To bring clearly before the mind (a book that *represents* the character of America); to serve as a sign or symbol of (the flag *represents* a country); to portray or exhibit in art; to serve as the counterpart or image of (a movie hero who *represents* the character of a culture); to describe or depict in language.
>
> 2. To take the place of in some respect; to act in the place of or for usually by legal right; to serve especially in a legislative body by delegated authority usually resulting from election. (*Merriam-Webster's Collegiate Dictionary* 2003, p. 1057)

Both clusters of meaning suggest that representations essentially stand in for something or someone else, and, as such, present something or someone a second time—they literally re-present. Although it is fair to say that representation functions through reproduction (for example, most people in the Western world are familiar with the image of Rembrandt's 1642 painting *The Night Watch*, without ever having seen the original painting, through reproductions), or by processing the likeness of an object, this is not the sense in which the issue of representation has come to prevail in recent theoretical discussions. In the simplest terms, representation in contemporary sociocultural theory is the production of meaning through lan-

guage. As Stuart Hall points out in *Representation: Cultural Representations and Signifying Practices* (1997, p. 17), representation constitutes the link between concepts and language that allows us to refer to objects, people, and events in the "real" world, or to imaginary worlds of fictional objects, people, and events (as in films or literary texts). In this line of thought, representations do not so much stand for some underlying "real," or re-represent some original or preexisting object, as they call into being, in fact quite literally *produce*, that to which they supposedly refer, or re-present.

The philosophical concern with representation dates back to ancient times, with Plato (427–347 BCE) and Aristotle (384–322 BCE) acting as key figures. Plato considered representations—whether musical, literary, or visual—as potentially dangerous, creating illusory worlds that would lead one away from "real things." Aristotle, in contrast, regarded the ability to re-create, through *mimesis* (the imitative representation of nature and human behavior in art and literature), as that which distinguishes human beings from animals, and thus as necessary for people's learning and being in the world. In his influential book *The Mirror and the Lamp* (1953), literary scholar M. H. Abrams argues that the Aristotelian notion of representation in terms of *mimesis* (the supposition that the mind, and its products, reflect the external world) dominated Western attitudes toward representation up to the eighteenth century. The antimimetic approach that emerged with the advent of romanticism subsequently came to substitute the idea of the mind as an essentially passive, reproductive apparatus with the notion of the mind as an active and creative power. Since reality is only accessible through representation—through texts, discourses, and images—there is no unmediated access to reality. The products of the mind, in the form of representations, consequently came to be regarded as so many different and, indeed, active attempts to make sense of the world, as historically and culturally shifting constructions of equally shifting realities, rather than as accurate reflections of preexisting objects, people, and events in the world. Moreover, since reality is always more complicated and therefore necessarily exceeds the ways in which it can be signified by any culturally and historically prevailing means of representation, it remains always necessary to construct new ways of seeing reality, to produce new (modes of) representation.

The productive notion of representation suggests that there is no inherent meaning in any picture or sentence or sound; rather, as Dani Cavallaro posits in *Critical and Cultural Theory*, a representation "only represents by virtue of being interpreted and ultimately represents anything it is capable of suggesting" (2001, p. 39). This entails that, rather than acting individually and exclusively on their own terms, any representation is part of a *system of representation*. First, as Hall argues, there is the system that allows us to sort all kinds of objects, people, and events, in correlation with a set of concepts and ideas that "we carry around in our heads" (1997, p. 17). This system does not so much consist of individual concepts or ideas, but rather of different ways of organizing, arranging, and classifying concepts on the basis of similarity and difference. Representations, therefore, always require interpretation within a specific set of interpretive conventions that make up the dominant way of looking at reality within a culture at a certain time in history. Second, there is the system of language. The conceptual map of reality that is shared by individual people within a given society, and which enables them to make sense of reality, is necessarily mediated by a shared system of signs, a common language of words, images, and sounds. Signs—in the broadest sense, so as to include not only spoken and written languages proper, but also visual images, facial expressions, and body language, as well fashion, music, or any other body of signs that carries and expresses meaning—jointly make up the system of signification and representation, that is, the sociohistorically specific system of organizing reality that helps us to make sense of the otherwise incoherent mass of our everyday experience. Since systems of representation mediate our access to the world, representations are never immediately and unequivocally connected with an underlying reality: We only experience reality through the mediation of texts, discourses, and images. The real as such is unattainable, and may only be grasped according to the codes and conventions of interpretation and signification of any specific society.

Understanding representational practices as the medium or channel through which meaning production happens, most contemporary theorists infer that objects, people, and events in the world do not have fixed or stable meanings, but only acquire meaning within a specific culture, and are defined by human beings, participants in a culture, who speak with a certain authority to make things mean or signify something. At this point, the first and the second cluster of meanings of the term *representation* begin to converge, as well as to show up its ideological and political aspects. Since those who speak with authority about the ways in which (certain aspects of) reality make sense, or signify, and since no representational account of reality can ever fully grasp the complexities of such realities, systems of representation cannot but offer partial and, indeed, interested ways of viewing the world and the people, objects, and events within it. As W. J. T. Mitchell points out in *Picture Theory*, representation not only works to mediate our "knowledge (of slavery and of many other things), but obstructs, fragments, and negates that knowledge" (1994, p. 188). Instead of seeing representations as only particular kinds of objects representing something or someone else, this perspective

asks us to approach representation as an active process and product of power (relations), in which certain kinds of representations are produced, valued, and exchanged on the basis of underlying interests and investments, while alternative ways and conventions of representation are either disavowed or simply negated so as to affect, fragment, or deny other forms of knowledge about the world, and the objects, people, and events within it. As such, particular modes of representation can be seen to offer clues to a given culture's (dominant) belief systems, its interpretations of reality, and its translations of factual and fictional situations into words and images. Representations, on this view, embody certain kinds of social relations, the interpretations and evaluation of which are necessarily partial, more imaginary than "real," and always already endowed with specific interests and investments. Rather than objectively reflecting the world as it is, representation thus constructs shifting realities as they are perceived through various, ideologically informed filters and channels.

SEE ALSO *Aristotle; Critical Theory; Culture; Hall, Stuart; History, Social; Nonverbal Communication; Plato; Representation in Postcolonial Analysis; Society; Symbols*

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renée c. hoogland

REPRESENTATION, MIRROR

SEE *Constituency.*

REPRESENTATION, POLITICAL

SEE *Constituency; Democracy.*

REPRESENTATION IN POSTCOLONIAL ANALYSIS

People know and comprehend the complex world in which we live through the act of naming it; thus through language and representations. The term *representation* embodies a range of meanings and interpretations. Etymologically, *representation* can be understood as a presentation drawn up not by depicting the object as it is but by re-presenting it or constructing it in a new form and/or environment. In ancient times representation played a central role in studying and understanding literature, aesthetics, and semiotics. The construct has since evolved into a significant component to analyze the contemporary world's creation of audio visual as well as textual arts, such as films, museum exhibitions, television programs, photographs, paintings, advertisements, and literature. None of these representational forms are neutral because it is impossible to divorce them from the culture and society that produces them. R-rated films are an example of cultural restrictions, highlighting society's attempt to control and modify representations to promote a certain set of ideologies and values. Despite these restrictions, representations have the ability to take on a life of their own once in the public sphere. The term *representation* cannot be given a definitive meaning because there will always be a gap between intention and realization, original and copy.

In a 1997 essay entitled *The Work of Representation*, the sociologist Stuart Hall discusses the relationship between politics and representation and the systems representing both. He approaches representation as the medium or process through which meaning, associations, and values are socially constructed and reified by people in a shared culture. Representation involves understanding how language and systems of knowledge production work together to produce and circulate meanings. According to Hall, we give things meaning by how we represent them. Cultural representations help form the images people have of others; if assimilated by those others, they help form the images people have of themselves as well; cultural representations get embodied in institutions and inform policies and practices. The politics of representation, then, revolve around issues of power and control over one's own self and its representations and reproduction by others.

In sociocultural representations it is often difference that signifies by creating binary oppositions. Within this dichotomized relationship, one pole always tends to dominate (e.g., male over female, us over them, high over low), bringing issues of dissimilarity and power to the fore within a representation. The act of unreflexively representing the other has significant resonances with long-standing practices of domination within the context of colonization. A heightened awareness that asymmetries of

representation enacted and reproduced the asymmetries of power in the colonial world has enhanced the significance of cultural politics in the academic field of postcolonial studies. The focus on culture and representation is not necessarily a diversion from the political realities of postcolonial struggle; culture and representation can even be used to inform the understanding of those colonial processes.

Much postcolonial scholarship is informed, in one way or another, by theories that elucidate the politics of representations. The single most influential scholar demystifying the process of constructing "the Other" is Edward Said (1935–2003). Employing a Foucaultian conception of the power/knowledge nexus and the politics of representation, Said's seminal book *Orientalism* established how the "West" (especially Britain, France, and the United States), through an academic, literary, and philosophical endeavor executed by Western intellectuals, was able to manage—and even produce—the Orient politically, sociologically, militarily, ideologically, scientifically, and imaginatively during the post-Enlightenment period (an era initiated by colonial conquest). This linear and uninterrupted construction of the Orient as "Other" over many centuries became the basis and rationale for colonial oppression and served to strengthen the identity of Western culture. In Said's words, "Orientalism is—and does not simply represent—a considerable dimension of modern political-intellectual culture, and as such has less to do with the Orient than it does with 'our' world" (Said 1994, p. 12).

Said eloquently demonstrated how the representations of Orientalism pervade the writings of European and North American literature icons such as Charles Dickens, Jane Austen, Henry James, and Thomas Hardy as well as modern-day media reports about the developing world, particularly the Islamic world. Although Said's arguments have been challenged and extended, his work is still the governing voice that leads scholars in anthropology, literature, mass communication, and postcolonial studies to critically analyze representations that demarcate "us" versus "them." Said's insights provide a handy toolbox with which one can easily demystify how the global media exacerbated the stereotyped conflict between the West and the Islamic world in the post 9/11 era.

The postcolonial scholar Gayatri Spivak made an important contribution to theories of representation by insisting that the concept in a literary or semiotic sense must be reconsidered in connection with representation in politics, representation in the sense of any capacity for a person to be the agent of, to stand for, the will of other people. In her provocative essay *Can the Subaltern Speak?* Spivak underlined how representations, especially of marginalized groups from developing countries, are intimately linked to positioning: socioeconomic, gendered, cultural, geographic, historical, and institutional. The crux of Spivak's argument is that the representations of the developing world conflate two related but discontinuous meanings of representation (Spivak 1988, pp. 275–276). One meaning is "speaking for," in the sense of political representation, and the second is "speaking about" or "re-presenting," in the sense of making a portrait. While Spivak recognizes that representations cannot escape "othering," Spivak argues for us to be scrupulous in so doing, especially in the case of unequal power relationships, when representing the West's Other (the developing world) and the developing world's Other (the subaltern).

Awareness of the constructed nature of sociocultural representations does not mean that people can do without them. A way to bypass the dilemma of representation of and for others is to acknowledge and articulate how power enters into the process of cultural translation. In the end, the crisis of cross-cultural representation can be resolved only through cross-cultural communications that are actually, rather than virtually, decentered and multivocal, that is, through the empowerment of others to participate as equal partners in the conversation of humankind.

SEE ALSO *Colonialism; Cultural Studies; Culture; Foucault, Michel; Hall, Stuart; Islam, Shia and Sunni; Orientalism; Other, The; Popular Culture; Postcolonialism; Representation; Said, Edward; Social Constructs; Subaltern; Visual Arts*

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REPRESENTATIVE AGENT

The representative agent is a device used by economists to model the macroeconomy. The general idea is to solve a well-specified microeconomic problem, and then use the relationships between the variables in that model as a description of the macroeconomy. For example, we can model the decisions that would be made by a person who

would like to consume goods and enjoy leisure, but can only purchase goods after earning wages through working. Additionally, we can posit a specific production technology that determines how many goods are produced when the person works. From this problem, we can solve for the relationship between the state of the economy and the person's decision on how much to work and consume. A representative agent model would then take these relationships, which were derived for an individual, and use them as an exact specification of the macroeconomy. Thus, if the representative agent would increase consumption by 10 percent in response to a 5 percent increase in the level of technology, it is assumed that aggregate consumption will also rise by 10 percent in response to the same change.

The earliest form of a representative agent was in Alfred Marshall's *Principles of Economics* (1890). Marshall constructed a representative firm as a means of specifying an industry supply curve. This representative firm was vigorously criticized by economists at the time, and the notion vanished from economics.

Representative agent models were resurrected by macroeconomists in the 1970s and became the predominant means of studying the macroeconomy in the 1980s. Surprisingly, nobody has ever written an explicit defense of this technique. The underlying rationale seems to be a desire to provide microfoundations for macroeconomic research. If we acknowledge that macroeconomic relationships are the result of a vast number of decisions made by individuals, then it might be desirable to have our macroeconomic models derived from relationships found in microeconomic problems. Because it is impossible to model the decisions of every individual in an economy separately, some shortcut is needed. Hence the representative agent is a stand-in for an average person, and the macroeconomy is assumed to behave, on average, like the average person.

Representative agent models have been roundly criticized as being an improper means of studying the macroeconomy for several reasons. It is simply not the case, even in very simple economies, that the aggregate of many decisions is exactly the same as the decision made by the representative agent. Representative agent models are incapable of capturing the effects of heterogeneity and interaction among agents, nor can they capture the effects of problems related to asymmetric information or strategic interactions. Fundamentally, representative agent models suffer from the fallacy of composition (that what is true of the part is true of the whole). The extensive criticisms demonstrating that representative agent models are neither good nor useful means of studying the macroeconomy have never been addressed by those who use such models. Yet, the use of the representative agent model continues apace.

SEE ALSO *Macroeconomics; Marshall, Alfred; Microfoundations*

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James E. Hartley

REPRESSION

Repression is the use or threat of actions taken by state "authorities, or their supporters, against opponents or potential opponents to prevent, weaken, or eliminate their capacity to oppose policies" (Stohl and Lopez 1984, p. 7). Authorities include security forces and paramilitaries that target groups or individuals because of "their perceived political beliefs" (Goldstein 1978, p. xvi). Repression is associated with the related but distinct phenomena of terror, violence, and oppression.

Terror and violence describe actions by authorities against political opponents or by insurgent groups in their own campaigns against the incumbent government. The distinguishing characteristic is the perpetrator. State terror is a strategy of repression to instill fear and quiescence in the entire population. Violence by the state is also repression.

Oppression and repression are distinct but may occur together, such as with the policies of the white apartheid government in South Africa from 1948 until 1990. The apartheid system denied civil and political rights and economic and social privileges to the black South African majority as a matter of government policy (oppression). Nelson Mandela, a political prisoner for almost thirty years and leader of South Africa's black-majority African National Congress, was also the target of repression, including torture during his imprisonment.

Common examples of repression are media censorship, surveillance of political meetings, the suspension of habeas corpus, the banning of political parties, and the violation of due process rights (e.g., illegal searches and arbitrary arrests). Some restrictions may be ostensibly nonviolent, like censorship. Violent repression is sometimes called a *personal integrity violation* because it violates bodily and personal autonomy. Examples are torture, disappearances, and extrajudicial killings by security forces and paramilitaries associated with military governments

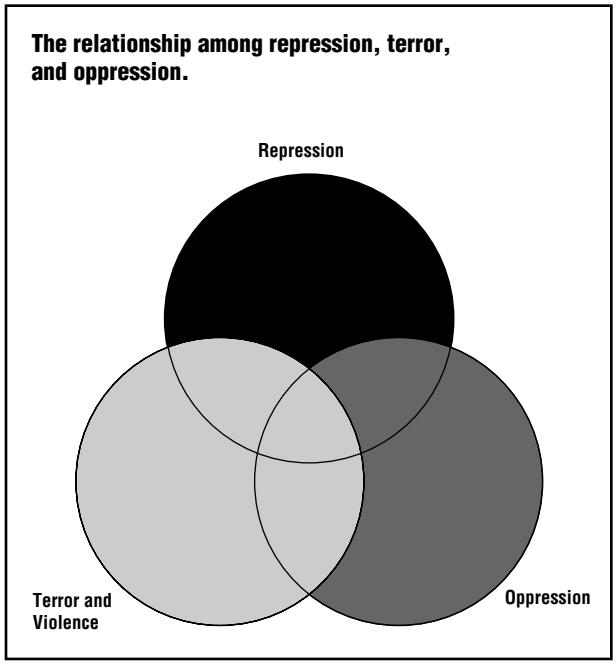

Figure 1

where civilian rule is suspended or abolished. This type of repression occurred under the Argentine military junta during the "Dirty War" (1976–1983) against Peronists, labor leaders, and other civilians.

Well-known examples of violent repression include the genocide of six million Jews, along with dissidents, Catholics, and countless others, by the German Nazi government (1930s to 1940s); forced collectivization under Joseph Stalin (1879–1953) in Soviet Russia in the 1940s; and the Cultural Revolution (1966–1976) in China under Mao Zedong (1893–1976). The 1980s were marked by extensive disappearances and killings by military regimes in Guatemala and El Salvador that targeted indigenous groups, whether or not they were politically mobilized.

Constitutional or emergency provisions may provide a legal character to such actions as detaining people (without charge) suspected of political violence, conducting surveillance on radical groups, or banning political parties accused of threatening political stability. Legal prohibitions may be codified into statutes to restrict political behavior or reconstitute political quiescence. For example, in the 1980s the Polish Communist government imposed martial law and banned the politically mobilized labor organization Solidarity to avert a Soviet intervention. In Germany, *Mein Kampf* (My Struggle, 1925–1926), an anti-Semitic political manifesto by Adolf Hitler (1889–1945), has been banned to prevent the expression of fascist ideology. Legal repression, especially in democracies, is not necessarily legitimate behavior and is often admonished by citizens, world leaders, and human rights organizations.

Repression in the form of repressive tolerance puts pressure on unpopular political minorities to conform to majoritarian views. This may occur under democratic governments along with surveillance of political groups. For example, the U.S. House of Representative's Un-American Activities Committee (HUAC), active from 1945 to 1975, targeted the American Communist Party and its supporters during the tenure of Senator Joseph McCarthy (1908–1957). Similarly, J. Edgar Hoover (1895–1972), director of the Federal Bureau of Investigation (FBI), established the covert COINTELPRO (counterintelligence program) in 1956 using the FBI to monitor communists, civil rights leaders, and political activists like Martin Luther King Jr. (1929–1968), Malcolm X (1925–1965), and Huey P. Newton (1942–1989) of the Black Panther Party. COINTELPRO operations lasted until 1971, when Hoover officially disbanded the program in anticipation of congressional investigations.

No ideological system evinces exclusive association with repression, although healthy debate exists over this issue. Different patterns are identified within certain political historical contexts. Some scholars argue that in the United States and historically, groups representing leftist ideas, such as labor, student movements, and the more radical Black Panther Party, were targeted much more than violent groups on the extreme right, such as the Ku Klux Klan. News media and other scholars have produced equally extensive documentation on Soviet and Chinese Communist repression against their own populations. For example, the secret police in the Soviet Union imprisoned political dissidents and used surveillance and propaganda for the duration of the twentieth century. The Chinese government killed many prodemocracy demonstrators in the Tiananmen Square massacre in 1989.

Claims are advanced on each side of this ideological debate, backed by historical evidence in books, reports, and other material. A more tenable position is that no clear affinity exists between repression and the ideological orientation of government. Repression has been used against internal political opponents by communist (leftist), fascist (rightist), and even democratic governments.

SEE ALSO *Civil-Military Relation; Repressive Tolerance; Violence*

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Claudia Dahlerus

REPRESSIVE TOLERANCE

In the essay "Repressive Tolerance" (1965), the German-born American critical theorist Herbert Marcuse (1898–1979) of the Franklin School of political theorists argued that, under the conditions of advanced industrial capitalism, the only hope for realizing the original objectives of "liberalist" or "pure" toleration (as articulated by the British philosopher John Stuart Mill [1806–1873])—freeing the mind to rationally pursue the truth—was to practice a deliberately selective "liberating tolerance" that both targeted and enacted the repression alluded to in the essay's paradoxical title (Marcuse 1965, pp. 81, 85, 90). This "liberating tolerance" would involve "the withdrawal of toleration of speech and assembly from groups and movements" on the Right, and the aggressively partisan promotion of speech, groups, and progressive movements on the Left (pp. 81, 100).

Marcuse professed to share liberalism's belief in human rationality and objective truth, and a commitment to its core mechanisms, including toleration. Following G. W. F. Hegel (1770–1831), however, Marcuse insisted that the meaning and logic of ideas, concepts, and principles cannot be determined abstractly, but instead are dialectically conditioned by the totality of the historical epoch in which they are practiced. Following Karl Marx (1818–1883), Marcuse insisted that domination was the central social fact and the most importunate moral and political problem, and that a humane society of genuinely free and equal individuals living "without fear and misery" is history's telos (Marcuse 1965, p. 82). And, following Sigmund Freud (1856–1939), Marcuse conceded that, in any civilized society, intractable conflicts would necessitate the suppression of important human desires. Nevertheless, Marcuse argued that developments in the political and cultural economies of the affluent, post–World War II (1939–1945) liberal capitalist societies had ushered in new forms of domination—"surplus repression"—that placed intolerable fetters on human freedom (Marcuse 1955). In the process, they had undermined the basis of both economic and political liberalism and "the liberal function of tolerance" (Marcuse 1965, p. 115). The practice of a liberating tolerance was the only hope for its restoration.

"The function and value of tolerance," Marcuse explained, "depend on the equality prevalent in the society in which tolerance is practiced" (Marcuse 1965, p. 84). Driven as they are by the engines of advertising, propaganda, and militarism in the service of ever-increasing affluence, advanced liberal capitalist societies are defined by their inequality. Moreover, their dominant social institutions, including the "monopolistic media," use new and dystopian forms of "technological and mental coordination" to administer what has become a "totalitarian," self-perpetuating system (pp. 94, 95, 97). In these societies, where "the economic and political process is subjected to an ubiquitous and effective administration in accordance with the predominant interests," individuals have been systematically divested of their capacity to think as rational, autonomous individuals (p. 115). As such, they have lost their capacity to pursue truth through the free exercise of their individual reason, and, in turn, to create a just and humane society.

In a "democracy with totalitarian organization," the administration is so permeating that it comes to define consciousness itself (Marcuse 1965, p. 97). Far from serving as a neutral medium for rational reflection, the language, its very concepts and categories, is transformed into a neutralizing instrument of repression. Through the operation of language, "mental attitude[s]" are formed that tend to "obliterate the difference between true and false, information and indoctrination, right and wrong" (p. 97). People "are indoctrinated by the conditions under which they live and think and which they do not transcend" (p. 98). We observe "the systematic moronization of children and adults alike by publicity and propaganda" (p. 83). The populace is incorporated into "a system which fosters tolerance as a means of perpetuating the struggle for existence and suppressing the alternatives" in significant part by "testifying to the existence of democratic liberties" (pp. 83, 84). The society's ceaseless congratulation of itself for its commitment to "the marketplace of ideas" acts as an opiate on the mass consciousness, turning individuals away from radical possibilities and reconciling them to the status quo (p. 110). While the toleration of ostensible dissent is celebrated, truly "effective dissent" becomes impossible (p. 95). Under these historical conditions, the purportedly neutral "liberalist" tolerance becomes repressive (p. 90). To weigh truth and falsity rationally and accurately, to be in practice the rational and autonomous beings that Mill envisioned,

individuals first need to be "freed from the prevailing indoctrination" (p. 99). For this reason, affirmative, partisan steps slanted to the Left are needed to liberate individuals and to restore their ability to reason.

"The efforts to counteract this dehumanization," Marcuse explained, "must begin at the place of entrance, there where the false consciousness takes form (or rather: is systematically formed—it must begin with stopping the words and images which feed this consciousness)" (Marcuse 1965, p. 111). To be liberated, individuals "would have to get information slanted in the opposite direction" (p. 99). The withdrawal of tolerance would have to be aimed at ideas, groups, and movements "which promote aggressive policies, armament, chauvinism, discrimination on the grounds of race and religion, or which oppose the extension of public services, social security, medical care, etc." (p. 99).

Marcuse's call for "the restoration of freedom" through the practice of liberating tolerance raised the question of "who is to decide on the distinction between liberating and repressive, human and inhuman teachings and practices" (Marcuse 1965, p. 101). Rejecting relativism, he maintained that these distinctions "can be made rationally on empirical grounds" by "everyone who has learned to think rationally and autonomously" (pp. 105, 106). Who would these clear-sighted leaders be, and how many could we expect to find? "Where society has entered the phase of total administration and indoctrination," he noted, "this would be a small number indeed, and not necessarily that of the elected representatives of the people" (p. 106).

Marcuse was often pessimistic about the prospects of a widespread liberation from "the false consciousness [that] has become the general consciousness" (Marcuse 1965, p. 110). But in "Repressive Tolerance," he appealed hopefully to engaged intellectuals whose "task and duty … [is] to recall and preserve historical possibilities which seem to have become utopian possibilities," and "to break the concreteness of oppression in order to open the mental space in which this society can be recognized as what it is and does" (pp. 81–82).

Marcuse insisted that, unlike in the spheres of business, advertising, and the broader culture, "the trend in the educational enterprise … could conceivably be enforced by the students and teachers themselves, and thus be self-imposed" (Marcuse 1965, p. 101). "The restoration of freedom of thought," of course,

> may necessitate new and rigid restrictions on teachings and practices in the educational institutions which, by their very methods and concepts, serve to enclose the mind within the established universe of discourse and behavior—thereby precluding a priori a rational evaluation of the alternatives.… Restoration of such freedom would also imply intolerance toward scientific research in the interest of deadly "deterrents," of abnormal human endurance under inhuman conditions, etc. (pp. 100–101)

"Unless the student learns to think in the opposite direction," Marcuse insisted, "he will be inclined to place facts into the predominant framework of values" (p. 113). Under these historical conditions, all genuine education is "counter-education" (p. 112).

Marcuse's call for a liberating tolerance was adopted enthusiastically by the radical student movements of the late 1960s in both Europe and the United States, and was particularly influential on the American New Left. His argument that a vanguard of students, teachers, and intellectuals had a special role to play, especially within educational institutions, of "break[ing] the concreteness of oppression" by suppressing ideas and actions (and language) objectively determined to be "regressive" and "inhumane" with the object of freeing students from "the prevailing indoctrination" and reestablishing the conditions of equality conducive to true freedom, played a major role in reshaping the mission and practices of the contemporary "politically correct" multiculturalist college and university (Marcuse 1965, pp. 81, 101, 99).

As liberalism and leftism made common cause in the historical crucible of the late 1960s and the 1970s, the Marcusian approach to tolerance insinuated itself—if not always self-evidently in theory, then more transparently in practice—into even ostensibly mainstream or "pure" liberal thinking (the thought of libertarians excepted), as well as into the governing rules and practices of institutions, such as universities, under liberal-left control. Whether this marks a departure from liberal principles, or (as Marcuse maintained) a return to liberalism's traditional historical function, is a question of considerable interest and complexity.

SEE ALSO *Liberalism; Marxism; Repression*

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REPRODUCTION

"Reproduction" in anthropology refers to the processes by which new social members are produced—specifically, the physiological processes of conception, pregnancy, birth, and child-raising. In its larger sense, reproduction encompasses the processes by which societies are reproduced for the future. The term is thus fraught with biological, cultural, and political meanings; power is a central focus in reproductive studies, as those who have the power to influence the process of reproduction can control both individual and large populations for better or for worse.

The maturation of the field of the anthropology of reproduction was marked by the publication of *Conceiving the New World Order: The Global Politics of Reproduction* (1995), edited by Faye Ginsburg and Rayna Rapp. This collection expanded the meaning of reproduction into the political arena and generated the interface of reproductive studies with wider issues in the politics of women's health care. From a study of anti-abortion policies in Romania, to China's one-child policy, to the displacement of thousands of women in India and Pakistan to "purify the national bodies" of both countries, the chapters in this volume called attention to the impact of national and global processes on everyday reproductive experience, most especially through the notion of "stratified reproduction," which points to transnational reproductive inequalities based on gender, race, and class. In addition, Rapp's long-term fieldwork on amniocentesis illustrates racial, class, and religious differences in how women make choices about this technology, and demonstrates the linguistic power of genetic counselors to influence these choices in favor of the culturally approved choice of abortion for genetically defective babies.

Since the 1990s, most anthropological studies of reproduction have focused on what have come to be called "the new reproductive technologies" (NRTs)—technologies designed to intervene in human reproduction. From the birth of the world's first test-tube baby in 1978 to the cloning of a higher vertebrate from an adult cell in 1997, the rapid expansion of the NRTs in the latter half of the twentieth century dramatically redefined the parameters of biological reproduction. The NRTs include, among many others: birth control technologies such as intrauterine devices (IUDs) and the birth control pill; assisted conception technologies such as artificial insemination and in-vitro fertilization (IVF); screening technologies such as ultrasound, amniocentesis, and blood testing; reparative technologies such as fetal surgeries performed in utero; labor and birth technologies such as electronic fetal monitoring, synthetic hormones for labor induction and augmentation, and multiple types of anesthesia; and postnatal technologies such as infant surgeries and high-tech treatment of babies in neonatal intensive care units. All of these technologies are increasingly affected by developments in biotechnology, such as genetic engineering, which have major implications for the control and management of human fertility.

Like the obstetrical forceps developed by the Chamberlen brothers in the sixteenth century, the NRTs have double-edged implications for women and their offspring. While those early forceps did save the lives of babies who otherwise might have died, their overzealous and ill-informed application during childbirth by male midwives and obstetricians often left the mother and baby severely damaged. The NRTs have been equally problematic, often creating as many problems as they solve and causing as much damage as they repair. For example, maternal mortality as a result of ovarian hyperstimulation, and increased congenital abnormality because of multiple births, are but two examples of the downside of in-vitro fertilization (IVF).

Reproductive technology has affected every facet of the reproductive process, from preconception onward. To an extent, these developments respond to specific impediments to fertility: IVF, for example, was originally used to assist women with blocked ovarian tubes. Feminist critics, however, have rightly pointed to other, less woman-centered influences shaping the development of these technologies. For example, Robert Edwards, the research scientist who helped to develop IVF, was trained in embryology and foresaw tremendous research potential from the ability to manipulate the human embryo *ex vivo*. This potential was extensively exploited in the rapid expansion of human embryo experimentation in the 1980s and the 1990s.

The encounter between a largely male medical and scientific establishment and women's reproductive capacity is very pointed in the context of IVF, which is often represented as being a response to the "desperate" desires of infertile women but can as readily be interpreted as a response to the irresistible scientific urge to "unveil" and indeed to redesign "the facts of life." The tremendous value of early embryonic cells—both commercially and in terms of research—has made IVF an important source of human embryonic stem cells. This fact exists in uneasy tension with women's demands for improved reproductive services. As in other historical periods, the neglect of women's reproductive needs is most evident in terms of which kinds of services will be developed and prioritized.

While new embryo therapies are used to detect, and even to eliminate, genetic disease, other reproductive priorities remain devalued and underfunded. For example, while ever more sophisticated technologies are developed to deal with the complications of labor and birth, the normal physiological needs of laboring women remain understudied and unfulfilled. The scientific evidence that does

exist supports simple technologies like eating and drinking during labor, woman-centered, supportive care, and upright positions for delivery as being of far more help to birthing women than high-tech machines. Nevertheless, the hegemonic global influence of what Davis-Floyd (2004) calls "the technocratic model of birth" has resulted in rapidly rising cesarean rates in many countries and has simultaneously precluded adoption of more humanistic and physiologic techniques for supporting normal birth. A growing body of anthropological literature reveals the systematic deconstruction of traditional birthing systems around the world. These systems are being replaced by biomedical care that disregards women's individual needs in favor of standardized approaches (DeVries et al. 2001), and that, in the developing world, often suffers from such drastic underfunding that basic supplies, clean facilities, and sufficient numbers of trained caregivers are regularly unavailable (Allen 2002; Davis-Floyd and Sargent 1997; Feldman-Savelsberg 1999; Hunt 1999; Luckere and Jolly 2002; Ram and Jolly 1998; Van Hollen 2003).

Two major influences continue to shape the development of reproductive technology in ways that are not in women's interests. One is the continuing, and indeed worsening, effects of global inequality that are borne most heavily by women and young children, especially infants. Adequate, or indeed any, access to basic contraceptive technology remains out of reach of the majority of the world's female population (despite concerns about population growth, and largely as a result of U.S. anti-abortion policy). Consequently, resource-intensive and largely private fertility care is provided to a predominantly wealthy world elite. Meanwhile, enduring tragedies of high maternal and infant mortality from preventable causes such as malnutrition and lack of a clean water supply, inadequate access to safe abortion and contraceptives, and limited, nonexistent, or ineffective reproductive health care are the main issues affecting the majority of the world's women. In sum, proper sanitation, adequate nutrition, improved vaccination programs, access to culturally appropriate forms of birth control, access to community midwives backed by adequate transport systems, and above all increased literacy and education rates among women remain the most important and lifesaving "reproductive technologies."

At the other end of the spectrum, at the cutting edge of twenty-first-century medical science, is the resurgence of a new genetic essentialism. Reproductive technology is shifting its focus in the direction of germline gene therapies (therapies that can be genetically transmitted because they modify reproductive cells). Annexed to the project of mapping the human genome, reproductive science and medicine are increasingly aimed at both the elimination of genetic pathology and the effort to reengineer the genomes of humans and other life-forms. In addition to existing means of technologically assisting conception, the effort to alter human genealogy is the single most important influence on contemporary reproductive technologies. This effort is driven by enormously competitive economic forces and by an "if we can do it, we must do it" technocratic mentality, resulting in rapidly escalating and largely unregulated technological innovation.

While some commentators argue that reproductive technologies such as the freezing of eggs, cloning by nuclear transfer, germline gene therapy, and embryo biopsy will have a radical effect on gender roles and kinship definitions, the majority of evidence demonstrates a reverse effect: the restabilization of traditional and conservative family ideologies in the face of their potential disruption. At the same time, other influences, such as the lesbian and gay movement, the increase in transnational adoption, rising divorce rates, and greater economic independence for women, have proven more influential in the redefinition of family and parenthood. Consequently, although some uses of reproductive technology have created more parenting options, such as the use of artificial insemination by lesbians, the overwhelming pattern of access to NRTs is defined by the goal of enhancing conventional parenting arrangements by married, heterosexual, and middle-class couples.

Feminist concern about reproductive technologies in the twenty-first century will increasingly overlap with the criticisms of biotechnology and genetic engineering raised by environmentalists and the general public. Concern about genetically modified organisms in the food chain and in medical applications will increase, particularly as the human-animal border becomes ever more permeable. The extensive feminist literature on NRTs anticipates with great precision many of the profound social, ethical, and political concerns surrounding new forms of genetic and biological determinism arising out of the attempt to alter the human genome. In addition to the effort to redefine medical and scientific priorities in relation to women's reproductive health worldwide, feminist anthropological scholarship will continue to insist upon the primacy of fully informed reproductive decision making, in its widest sense, as a fundamental component of human rights.

SEE ALSO *Abortion; Abortion Rights; Anthropology; Birth Control; Childlessness; Demography; Fertility, Human; Genetic Testing; Limits of Growth; Malthusian Trap; Marriage; Multiple Births; Population Growth; Reproductive Rights; Sexual Orientation, Social and Economic Consequences; Women's Movement*

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REPRODUCTIVE FITNESS

SEE *Eugenics; Sociobiology.*

REPRODUCTIVE POLITICS

Reproductive politics address fundamental values relating to highly personal topics, such as sexuality, marriage, bodily integrity, and the definition of life. Specific topics addressed are drawn from the steps in human reproduction (sexual intercourse, conception, gestation, and parturition) as well as the major interventions in fertility control (abstinence, contraception, and induced abortion). Because only women become pregnant and bear children, reproductive politics necessarily reflect attitudes and social mores about the role of women. While reproductive politics in the United States became particularly fierce after the 1973 *Roe v. Wade* decision, the state's role in reproductive behavior has been debated for considerably longer.

At the beginning of the nineteenth century, reproductive matters were largely outside of American politics, but contraception and induced abortion were legal. Puritan disapproval of birth control as well as other social conventions kept these subjects out of the realm of politics. By the end of the century, both contraceptive practice and induced abortion had been outlawed in every state. Physicians led the way in passing state anti-abortion legislation, but opposed contraceptive restrictions. In 1873, Congress passed the *Act for the Suppression of Trade in and Circulation of, Obscene Literature and Articles of Immoral Use*. Known as the Comstock law, the act prohibited interstate trading in any article that prevented conception or caused abortion. Twenty-two states followed with even more contraceptive restrictions, called the "little Comstock laws."

Removing nineteenth-century prohibitions was a major part of reproductive politics during much of the twentieth century. The most influential birth control crusader was Margaret Sanger, founder of the American Birth Control League, which eventually became Planned Parenthood Federation of America. By 1937, the birth control movement had orchestrated and won the *U.S. v. One Package* case, which largely invalidated the federal Comstock law. It was 1965, however, before the U.S. Supreme Court overturned Connecticut's Comstock law prohibiting the use of birth control by even married couples (*Griswold v. Connecticut*) and 1972 before the Court invalidated the Massachusetts law specifically prohibiting unmarried persons from obtaining contraceptives (*Eisenstadt v. Baird*). In the 1973 *Roe v. Wade* decision, the Court legalized abortion.

Roe v. Wade ignited interest group activity in reproductive politics. There are many advocacy groups in this arena, including the NARAL Pro Choice America (pro-choice or favoring the legal status of abortion) and National Right to Life (pro-life or opposing the legal status of abortion). Their debates have expanded far beyond the legal status of abortion and now focus on policies toward welfare, scientific research, custody of offspring, international humanitarian assistance, and a variety of other subjects. These topics are best framed within steps in reproduction.

STEPS IN REPRODUCTION

Except for artificial insemination and in vitro fertilization, the first step in human reproduction is sexual intercourse. Within reproductive politics, who should be sexually active and with whom are active debates. Religious conservatives believe that heterosexual marriage is the only suitable context for sexual activity; their growing political involvement has spawned significant federal support for abstinence-only education and the ABC (Abstain, Be faithful, or use Condoms if you cannot follow A or B) policy in HIV/AIDS prevention. Opposing groups argue for accurate, comprehensive sex education that includes contraceptive information, pointing out that the effectiveness of abstinence-only education has not been demonstrated and that most people are sexually active years before marriage.

Conception is the second step in human reproduction. The politics regarding it include both contraception and fertilization. Here there are differing viewpoints concerning who should have access to birth control, what methods are appropriate, and how to pay for contraceptives. The provision of contraception to minors is hotly debated, particularly whether there should be mandated parental involvement (e.g., permission or notification). The politics around available methods includes the U.S. Food and Drug Administration (such as delays in the approval of over-the-counter emergency contraception) and product liability laws, which have limited contraceptive options in the United States. Political issues around fertilization include who should have access to assisted fertility technology (such as single women, married heterosexual couples, persons under a certain age) and how fertilized eggs can be used (for example, stem cell research and embryo adoption).

The third step in human reproduction is gestation and parturition. The dominant issue here is induced abortion or pregnancy termination. Abortion brings up a number of policy issues such as parental involvement, mandatory waiting periods, informed consent, funding, allowable procedures (such as partial birth abortion, which is a political term from the Christian Coalition, not a specific medical procedure) pharmaceutical abortifacients, and gestational limits. Many of these policies vary widely among the states.

Other political issues related to gestation include violence against pregnant women; the Mexico City policy, also known as the Global Gag Rule; surrogate maternity; and drug use and pregnancy. For example, the Unborn Victims of Violence Act, enacted in 2004, known as the "Laci and Conner Law," establishes the same penalty for killing a fetus in utero as for killing a pregnant woman. Both sides in the abortion debate have seen this legislation as a step toward criminalizing abortion. The Mexico City policy forbids foreign nongovernmental organizations that are recipients of American population assistance from referring their patients for abortions or from engaging in political activity to legalize abortion in their countries.

Advances in technology have brought many new questions, including who should pay for in vitro fertilization, who is able to benefit from this technology, whether children conceived with donated sperm or ova have the right to know their biological origins, and whether embryos can be created for research purposes. In human reproduction, science has raced far ahead of policy. All of these issues and many more will be decided within the rubric of reproductive politics.

Since *Roe v. Wade*, the coalitions in this policy arena have been fairly consistent, and they have become more partisan. Pro-choice groups tend to line up with other groups supporting access to contraception and comprehensive sex education. Pro-life groups tend to support abstinence-only education as well as legally mandated parental involvement in both contraceptive and abortion decisions. Several prominent scholars think that these divisions are based on beliefs about the role of women. Although there are individual exceptions, the Democratic Party generally reflects the pro-choice positions, and the Republican Party espouses the pro-life position. Advances in reproductive technology, however, sometimes alter these coalitions; the stem cell controversy within the Republican Party is an example of such a development.

REPRODUCTIVE POLICIES OUTSIDE THE UNITED STATES

Although American reproductive politics are particularly contentious, public debates about reproductive issues are certainly not confined to the United States. Issues that achieve prominence vary by region and culture. In western Europe, for example, adolescent sexual activity is generally a subject for public debate. Public health policies support widespread contraceptive availability. Consequently, western European abortion rates are a small fraction of those in the United States. Moreover, abortion politics are not as nearly as vociferous.

Low fertility is a concern in much of Europe and Japan. Public policies to increase childbearing have had mixed results. Generous French maternity leave and childcare policies, however, have apparently achieved their pronatalist objectives, and recently the Japanese birth rate has increased slightly.

In much of the world, reducing fertility rates is still on the public agenda. China retains its one-child policy, instituted in 1979, although the impact of that measure on fertility has been debated. Moreover, the one-child policy has skewed the ratio of males to females in that nation. As birth rates decrease in Latin America, politics in that

region are focusing more upon maternal health measures such as legal access to emergency contraception and safe abortion.

As a continent, Africa has the highest fertility rates in the world as well as some of the highest maternal mortality ratios due to the unavailability of contraception, female genital mutilation, and unsafe abortion. Because of the low status of women in many African countries, these issues have not been salient until the mid-2000s. The HIV/AIDS epidemic has put reproductive politics on the public agenda in several African nations.

SEE ALSO Roe v. Wade; *Abortion; Birth Control; Fertility, Human; Infertility Drugs, Psychosocial Issues; Politics: Gay, Lesbian, Transgender, and Bisexual; Politics, Gender; Pro-Choice/Pro-Life*

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Deborah R. McFarlane

REPRODUCTIVE RIGHTS

Reproductive rights is a term used to describe the rights of individuals as it relates to sexual reproduction, including the right to have or not have children; to have information about all aspects of sex, sexuality, and reproduction; to have the highest attainable level of reproductive health; and to be free from harassment, coercion, and violence with respect to sex and sexual expression. Reproductive rights encompasses concepts of both privacy (the right to decide on matters related to reproduction and sexuality without intervention by other individuals, institutions, or governments) and human rights, which are founded on principles of dignity and equality for all people. Because women are uniquely affected by matters relating to reproduction (including pregnancy, childbearing, and in most societies, childrearing), many people view women's rights as inextricably tied to reproductive rights. As a result, women have historically led and been the focus of many of the struggles for reproductive rights around the world. These movements have included efforts to gain access to contraception; legalize abortion; reduce maternal mortality; give birth without unnecessary medical intervention; have sexual pleasure and health; and eliminate rape and sexual harassment, to name just some.

EXAMPLES OF DENIAL OF REPRODUCTIVE RIGHTS

There are many examples of the denial of reproductive rights in the United States and around the world. One example is the experience that many women have had with forced sterilization. In the United States, permanent sterilization of women who were deemed socially "unfit" to have children either because of their race, socio-economic status, intelligence or mental stability (or some combination of the above) became a common practice as early as 1907 in many states. The United States also carried out similar policies in Puerto Rico beginning as early as 1898 when it took over governance of that country. Thus, many women, particularly those who were poor, of color, uneducated, or mentally retarded were sterilized either without their consent or against their will. This form of abuse went on into the 1970s when a movement to end sterilization abuse eventually led to laws and regulations that ended this practice.

Other examples of reproductive rights abuses (both historic and current) include rape as a weapon of war; forced childbearing (as evidenced by laws restricting access to contraception and abortion); female genital circumcision; and a lack of control over childbirth practices (as evidenced by high rates of cesarean section or conversely lack of access to emergency obstetric care). Many other examples of reproductive rights abuse exist.

HISTORY OF REPRODUCTIVE RIGHTS MOVEMENTS

Although humans have attempted to control their reproductive destinies for many thousands of years, the notion of "reproductive rights" is a relatively recent phenomenon. The term was first articulated on a global level in 1984 at the International Meeting on Women and Health in Amsterdam. However, in individual societies and countries around the world, movements to gain rights related to reproduction had emerged prior to this time. Nonetheless, these movements were discrete and in many cases, such as with the struggles to legalize contraception and abortion in the United States, the focus was primarily on rights as they related to an individual's right to privacy. It was not until the meeting in Amsterdam that the

emerging concept of human rights was applied to reproductive concerns, marking the beginning of what would become a global "reproductive rights" movement.

Following the 1984 meeting, the next significant international gathering in which reproductive rights became a major focus was at the World Conference on Human Rights, held in Vienna in 1993. At the Vienna meeting, participating countries agreed that any violation of the specific rights of women would be regarded as a human rights violation. Furthermore, an important shift in human rights theory took place at that meeting with the groundbreaking recognition that human rights exist in both private and public realms and as such, can be violated in either sphere. This shift brought the notions of privacy and human rights together, a critical joining of two previously separate ideas at an international level, which further spurred the global reproductive rights movement.

Since 1993 there have been a number of other significant international meetings that have built upon the foundations that were established in Amsterdam and Vienna to promote an international reproductive rights agenda and movement. In 1994 the United Nations International Conference on Population and Development (ICPD) in Cairo codified and furthered these ideas through its consensus document, the ICPD Programme of Action which states:

> Reproductive rights embrace certain human rights that are already recognized in national laws, international human rights documents and other consensus documents. The rights rest on the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. It also includes the right to make decisions concerning reproduction free of discrimination, coercion and violence, as expressed in human rights documents. (ICPD 1994, paragraph 7.3)

Similarly, the United Nations Fourth World Conference on Women held in Beijing in 1995 advanced a broad agenda that linked women's advancement and empowerment globally to human rights, and recognized reproductive rights as a critical element to achieving the goals it laid out as part of its future agenda.

Since those seminal meetings, there have been numerous follow up gatherings at international and regional levels where reproductive rights advocates from both government agencies and non-governmental organizations have come together to assess progress and further implementation efforts related to these goals, formidable challenges unto themselves. These efforts have been further complicated by the influences of a growing, worldwide movement to restrict reproductive rights—in particular abortion, but also contraception and freedom of sexual expression. This movement is based in conservative beliefs and/or religious fundamentalism. The United States has been extremely influential in this regard, using its significant power to block the passage of consensus documents that aim to promote a broad reproductive rights agenda from these meetings and refusing to provide funding to reproductive health organizations in other countries that have any connection to abortion procedures. These actions have had a chilling effect on efforts to advance reproductive rights around the world.

At the same time that these anti-abortion and anti-sexuality movements have emerged in the United States and other parts of the world, reproductive rights advocates have also expressed concern about practices that lead to the selective termination of fetuses and coercive abortions. For example, in India the use of ultrasound or amniocentesis to determine the sex of a fetus has been a growing practice that has led to an increase in the rate of abortion of females. In China, the government mandated one-child policy has led to a high rate of abortion which may often not coincide with a woman's choice. Both of these examples represent reproductive rights violations from another angle.

In the early twenty-first century a dialogue emerged within reproductive rights movements in the United States (and elsewhere) about the need to expand to a broader concept of "reproductive justice" in order for women and girls to truly achieve "complete physical, mental, spiritual, political, economic, and social well-being" (ACRJ 2005, p. 1). Critical of the traditionally narrow focus on individual women's rights and the reliance on primarily legal or public policy strategies that many reproductive rights groups have relied on, those who advocate a reproductive justice framework emphasize the need to promote "a model grounded in organizing women and girls to change structural power inequalities" (ACRJ 2005, p. 2).

With the advent of new reproductive technologies (such as assisted reproductive technologies, cloning, and genetic screening), a growing global population, and widening health disparities in the United States and around the world, struggles for reproductive rights will undoubtedly continue to be a dynamic and compelling aspect of human society into the foreseeable future.

SEE ALSO *Abortion Rights; Human Rights; Pro-Choice/Pro-Life; Reproduction; Sterilization, Human; Women's Liberation; Women's Movement*

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REPUBLIC

The origin of the term *republic* lies in the Latin phrase *res publica*, or "public thing." The term implies the development of the public, distinct from the private, in both degree and manner. First, a republic must be developed socially and economically to a degree that sets it apart from a mere collection of private households. Second, a republic must be developed politically in a manner that distinguishes its rule from despotism, wherein the ruler regards all land and people as his or her private property. Over time, as noted in Paul Rahe's definitive work, *Republics Ancient and Modern*, republics have taken on different characteristics. Some have been authoritarian, using the power of the regime to establish a fixed way of life for all citizens, while others have been liberal, allowing citizens to pursue happiness as each individual defines it. Some republics have been highly democratic, others less so. Consequently, republics have featured different kinds of institutions, from presidential to parliamentary systems and constitutional monarchies. This diversity has developed largely in response to the changing relationship between public and private.

Early republics, such as the Greek *polis*, or "city-state," tended to be small and homogeneous. Aristotle argued that the *polis* came into existence for the sake of security, but once formed it assumed the higher purpose of providing a venue for self-perfection or virtue. In order to promote virtue, the classical republic assigned not only politics, but also religion, the arts, and the economy, to the public sphere. Politics were generally democratic, but they were also inegalitarian and illiberal. The regime expected citizens to conform to the public understanding of the best way of life, and it rewarded those who did with rule over those who did not. The nineteenth-century historian Fustel de Coulanges notes that public control of the economy was not intended to equalize wealth so much as it was used to make sure people found a vocation and engaged in production and exchange in a manner consistent with the moral vision of the regime. In sum, the ancient republics left little other than matters exclusive to the household to the private sphere. Yet the ancient republic is also the birthplace of philosophy—a pursuit that entails questioning public ideas. This was considered hostile to the regime, so ancient republics tended to protect themselves by exiling or, in the case of Socrates, executing those who questioned the city's beliefs.

Changing public ideas about the household, economy, and religion brought to light a new conception of the republic. The English philosopher John Locke argued that people had a natural right to appropriate the goods of the earth to satisfy their personal self-interest. This required an economy in which people took up a vocation and engaged in the production and exchange of goods based on personal appetites and desires. At the same time, the idea of religious toleration left decisions about faith to individuals, prompting the secularization of the modern republic. With greater emphasis on the household, there was less justification for the use of law to establish a common way of life. This did not, however, constitute an unqualified preference for the private, or any disregard for the public. Rather, the expanded private sphere was intended to serve a public purpose by mediating and channeling behavior driven by self-interest to raise the standard of living for all.

Thus, the modern republic is, by definition, liberal in character, existing not for virtue but for security. Consequently, modern republics feature institutional safeguards to prevent the abuse of power, particularly the separation of the legislative, executive, and judicial branches, as recommended by the French philosopher Montesquieu. Most scholars, including Thomas Pangle, credit Montesquieu and Locke with having a considerable influence on the founding of the United States. Others, however, such as J. G. A. Pocock, dispute the degree of this influence.

James Madison took a special interest in the development of republics, noting the problem of instability that had plagued both classical and modern regimes. In *Federalist No. 10*, Madison argued that instability was the result of factions, or organized groups motivated by a common goal adverse to the rights of others. Factions arose because republics permitted citizens to formulate individual opinions, gave them the freedom to associate, and offered groups the ability to influence policy to reflect their narrow interests. Madison's solution was the extensive commercial republic, which was a break with earlier thinkers who believed republics had to be small and homogeneous.

Madison used the idea of representation to distinguish the republic from a pure democracy. A representative government, he argued, could take in greater territory and population. People would put the land to use differently, and the different types and amounts of property

would lead to diverse opinions. This would result in a multiplicity of factions, such that no single interest could dominate political decisions—a condition Robert Dahl famously termed *pluralism*. However, James W. Ceaser, among others, has disputed the fidelity of Dahl's logic to Madison's argument. Madison's strategy intended the political arena to be a public place where people of differing passions and interests would engage one another, allowing the experience to refine and enlarge their views. This would produce decisions that did not benefit some at the expense of others, but that were conducive to a common good. Ultimately, Madison's plan would have a centralizing effect on public opinion, but it would still offer freedom for those who desired to pursue more unconventional ideas.

Pressure from those exercising the right to explore the margins continues to redefine the center. This has made the modern republic the site of important rights movements, particularly the women's liberation movement and the civil rights movement. This has intensified as globalization has prompted yet another reconsideration of the place of the market, religion, and the household. Economically, some want the market to be more purely private, seeking to reduce regulatory controls on land use, production, and exchange. Others advocate greater public control over the marketplace in the name of safety, fairness, and increased public assistance to the poor. At the same time, some desire a greater separation between religion and the public sphere, while others would prefer to see an increased public role for religion, allowing church groups to replace government agencies in the provision of social services. Finally, there is a debate over the nature of the household itself. Many republics, for example, are considering public recognition of same-sex marriages. Some see these changes as the next logical step in the evolution of the republic. Others consider them a radical departure and a threat to the very existence of the republic. Thus, the persistent redefinition of the relationship between public and private, especially with regard to the economy, religion, and the household, continues to shape the nature of the republic.

SEE ALSO *City-State; Democracy; Federalism; Locke, John; Monarchy, Constitutional; Pluralism; Republicanism; State, The*

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REPUBLICAN PARTY

The Republican Party is one of the two major parties in American politics and government. Like the Democratic Party, the Republican Party's organization reflects federalism and the separation of powers. Each state has a Republican state committee and most American cities, towns, and counties also have Republican committees. Usually, Republican voters choose members, officers, and chairs of these state and local committees. Through primaries and caucuses, they also choose delegates to represent them at Republican national conventions.

Republicans in the states and territories also choose members of the Republican National Committee (RNC). In addition to representing their states and territories in the RNC, RNC members also elect RNC officials, such as chairs and treasurers, choose the city that will host the next Republican national convention, and determine party rules and procedures, relating to such matters as the apportionment and selection of delegates from the states and territories and platform-making processes. At Republican national conventions, held during the summers of presidential election years, the major responsibilities of Republican delegates are to ratify or reject national platforms and to nominate presidential and vice presidential candidates.

Besides federalism, the separation of powers also divides and distributes the Republican Party's organization, authority, and functions. The National Republican Congressional Committee (NRCC) and the National Republican Senatorial Committee (NRSC) respectively serve the campaign needs of Republican candidates who run for election or reelection to the U.S. House of Representatives and Senate. Like the RNC, the NRCC and NRSC receive and distribute campaign funds and provide research, information, and literature on Republican policy positions, media and mailing services, and coordination among Republican candidates. The campaign finance role of the RNC, NRCC, and NRSC has diminished as Republican presidential and congressional candidates have become more dependent on individuals, state and local party committees, and interest groups, such as the National Rifle Association (NRA) and Christian Coalition, for campaign spending and the delivery of campaign services, such as advertising, direct mail, and voter mobilization.

The Republican Party was established in 1854. Most of its founders were disaffected Democrats and former Whigs. The Republican Party's major, initial policy position was its opposition to the extension of slavery into new states and territories. It adopted this policy position from the Free Soil Party, which it soon absorbed. Like the Whig and Federalist parties that preceded it in the two-party system, the Republican Party supported high, protective tariffs, a national bank, federal supremacy over the states, and a flexible interpretation of the federal government's powers in the Constitution. With the Democratic Party divided over the slavery issue, Abraham Lincoln was elected as the first Republican president in 1860.

During the period of closely contested presidential elections from 1876 until 1896, Thomas Nast, a political cartoonist, popularized the use of the elephant as the unofficial symbol of the Republican Party, which was also nicknamed the "Grand Old Party," or the GOP, because of the party's close association with the Grand Army of the Republic, an organization of Union army veterans of the Civil War. In 1896 the Democratic Party nominated William Jennings Bryan for president. Bryan was a Nebraska congressman affiliated with both the Democratic and Populist parties. His rousing campaign speeches zealously denounced the GOP's positions on high tariffs and the gold standard for enriching big business and impoverishing farmers and laborers.

Orchestrated by Marcus Hanna, an Ohio businessman, the Republican presidential campaign portrayed Bryan as a dangerous economic radical and rural demagogue with an anti-urban, anti-immigrant bias and contended that high tariffs and the gold standard promoted a broad, national prosperity. The Republican landslide in the 1896 national elections established a long-term Republican realignment of voters that enabled the GOP to usually control the presidency and Congress from 1896 until 1932. Growing intra-party conflicts between the Old Guard, i.e., the conservative wing, and the Progressives, i.e., the GOP's liberal wing, helped Woodrow Wilson, a Democrat, to win the 1912 and 1916 presidential elections.

The Great Depression that began in 1929 during the Republican presidency of Herbert Hoover discredited the Republican Party's reputation among many Americans for competent economic leadership and ended their association with national prosperity. Democratic president Franklin D. Roosevelt's attractive leadership style and the popularity of New Deal economic policies broadened and diversified the coalition of the Democratic Party, thereby transforming it into the new majority party among voters. In particular, African Americans, who recently were the most loyal Republican voters, became the most loyal Democratic voters during the 1930s because of Roosevelt and the New Deal, despite the continuing association of the Democratic Party with Southern whites and segregation.

The Democratic realignment of the 1930s helped the Democratic Party to dominate American politics and government until the election of Republican president Richard M. Nixon in 1968. During those years, Republicans disagreed about how to defeat Democrats in elections and what ideological and policy alternatives they should offer American voters. Moderate and liberal Republicans, such as President Dwight D. Eisenhower (1953–1961), accepted most of the New Deal's policy legacy and an internationalistic, bipartisan foreign policy in the cold war. These Republicans emphasized that the GOP could manage liberal Democratic policies with greater efficiency and fiscal responsibility and could achieve civil rights for African Americans more sincerely and effectively than the Democratic Party, with its powerful anti-civil rights Southern wing in Congress. Meanwhile, conservative Republicans, such as Senators Robert A. Taft of Ohio and Barry Goldwater of Arizona, criticized the moderate-liberal wing of the GOP for "me too-ism" and argued that the GOP would perform better in federal elections if it offered voters a distinctly conservative ideological and policy alternative to liberal Democratic policies and candidates. This conservatism included an emphasis on less domestic spending, greater protection of states' rights and property rights through opposition to new civil rights bills, and a more nationalistic, aggressive, and partisan American foreign policy in the Cold War. Nonetheless, except for the 1964 presidential election, moderate and liberal Republicans dominated the GOP's presidential nominations and major platform

planks at Republican national conventions from 1940 until 1980.

Despite the Democratic realignment of the 1930s, a substantial minority of African Americans remained Republicans because they perceived the Republican Party, with its "Lincoln legacy," to be more sincere and effective on civil rights. To black Republicans, the noisy defection of some Southern Democrats to Strom Thurmond's "Dixiecrat" presidential candidacy in 1948, because of their opposition to Truman's doomed civil rights legislation, proved that the Democratic Party would also be sharply divided between its Northern and Southern wings on civil rights. In the 1964 presidential election, however, Barry Goldwater, one of the few Republican senators to vote against the Civil Rights Act of 1964, received most of the Southern white vote and only around 6 percent of the black vote. As the presence and influence of conservative Southern whites steadily increased within the Republican Party, fewer white Republican politicians supported liberal policies on race, such as affirmative action, court-ordered busing, and antipoverty programs.

During the 1970s, conservative Republicans, such as Ronald W. Reagan, often disagreed with the moderate policies of Republican presidents Richard M. Nixon and Gerald R. Ford, especially regarding détente with the Soviet Union and China. After nearly defeating Ford for the GOP's 1976 presidential nomination, Reagan was nominated and elected president in 1980. Reagan's policy goals prioritized the conservative agenda of major tax cuts, defense spending increases, reduced federal regulation of the economy, less domestic spending, a return of more domestic policy responsibilities to the states, and a more aggressive foreign policy. Aided by Republican control of the Senate from 1981 to 1987, Reagan increased the number of conservative federal judges, especially those with conservative judicial positions on abortion, crime control, school prayer, and other social issues. The conservative domination of the GOP by the end of Reagan's presidency (1981–1989) was also a consequence of the growing political influence of the religious right, especially in the South.

Although William J. Clinton, the Democratic presidential nominee, won the 1992 presidential election against Republican incumbent George H. W. Bush, the Republicans won control of both houses of Congress in 1994. For the first time since the Reconstruction Era (1865–1877), most members of Congress from the South were Republicans. When Republicans in Congress impeached Clinton and tried unsuccessfully to convict him during 1998 and 1999, polls indicated that many Americans perceived the Republican leadership of Congress, especially Speaker of the House Newt Gingrich, to be harsh, extreme, and unreasonable in its relationship with the president.

Realizing the need for the GOP to express a more inclusive and less divisive type of conservatism, George W. Bush, the Republican presidential nominee in 2000, promised an ideology and domestic policy agenda based on "compassionate conservatism" during his successful presidential campaign. Bush's "compassionate conservatism" included cultivation of minority voters, especially Latinos, and his proposal to use "faith-based initiatives" to provide some federally funded social services. Following the terrorist attacks of September 11, 2001, Bush's perspectives, actions, and objectives in foreign and defense policy were influenced by neoconservative positions. Neoconservatism advocates and justifies the use of American military force, including preemptive attacks and invasions, to protect the security of the United States and its allies, especially Israel, and to promote freedom and democracy in the Middle East. Neoconservatives are willing to engage in these actions, including "nation-building" efforts in American-occupied Afghanistan and Iraq, without the support and participation of most U.S. allies.

After Bush was reelected in 2004 with 44 percent of the Latino vote and a victory margin of over three million popular votes, Karl Rove, Bush's top political strategist, hoped that Bush's presidency would stimulate a Republican realignment of voters similar to that of 1896. As Bush's second term progressed, however, the president experienced low public approval ratings, and more Republicans in Congress openly disagreed with each other and Bush over the Iraq war, deficit spending, and immigration. The Democrats won control of Congress in the 2006 elections with net gains of twenty-nine House seats and six Senate seats. Polls and media analyses indicated that voters were reacting against lobbying scandals, the Iraq war, inadequate health care, and Republican control of both the presidency and Congress.

SEE ALSO *Bush, George H. W.; Bush, George W.; Left and Right; Multiparty Systems; Nixon, Richard M.; Political Parties; Reagan, Ronald; Republic*

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REPUBLICANISM

In rudimentary form, the origins of republicanism can be traced to Aristotle (384–322 BCE). However, this political form finds its first institutional embodiment in the republic of Rome (510–23 BCE), and its most comprehensive expression is in the writings of Marcus Tullius Cicero (106–43 BCE) and Titus Livius (59 BCE –17 CE). Both Cicero and Livius argued that Rome's failure resulted from internal corruption and conflict, which disrupted the checks and balances between the senate, the magistrates, and the people. The tradition was amended and revived during the Middle Ages and the Renaissance by Italian city-states and thinkers such as Niccolò Machiavelli (1469–1527) and Francesco Guicciardini (1483–1540). It underwent further developments in England and the United States in the seventeenth and eighteenth centuries, when individuals such as James Harrington (1611–1677), Thomas Jefferson (1743–1826), and James Madison (1751–1836) attempted to restrain or remove monarchical power.

Republicanism is a political doctrine principally concerned with freedom and its realization through self-governance. For republicans, the people are the source of sovereignty. Freedom thus consists in not being subject to another's will, and by having the power to raise claims for or against the laws under which one is governed. The primary danger to freedom, republicans argue, comes in the form of internal corruption and conflict that, if left unchecked, threaten to run roughshod over the common good. In its classical form, it emphasizes the importance of a mixed constitution that provides an institutional balance between the diverging interests of the many (the plebeian or democratic element), the few (the patrician or aristocratic dimension), and the one (the monarchical aspect) in society. The classical model is reflected in the Roman system, which included tribunes of the people, the aristocratic Senate, and consuls, usually two elected annually.

Classical republicanism, however, has undergone an important transformation in modern times, centering on the weight different thinkers attach to self-governance. Robert Dahl refers to this as a shift in emphasis from the older aristocratic republicanism to a radical view that places a greater emphasis on the democratic character of the constitution. The older aristocratic position is articulated by thinkers such as Aristotle and Guicciardini, while the second radical character is embodied in the works of Machiavelli, Paine, and Jefferson.

While both forms worry about the consolidation of power and the extent to which it will become a form of domination, they disagree over how this danger will be realized, and from what sectors of society. In the older view, the people have an institutional place in the constitutional structure, but because they lack the reflective capacity to curb their desires, the constitution needs to limit their power to selecting leaders that will govern on their behalf. Aristocratic republicans argue that these individuals are guided by an interest in the public good and have an ability to engage in impartial and careful reflection, making them uniquely situated to govern on the people's behalf and for their long-term interests.

In contrast, egalitarian republicans believe that modern societies no longer reflect these distinct social classes. The presence of a hereditary aristocracy, for example, becomes increasingly difficult to distinguish, especially in the earlier American context. Egalitarian republicans further argue that those trying to balance the aristocratic and democratic elements of society fail to see that the only legitimate good is the public good. The hallmark of modern radical republicanism, then, consists in dividing powers among separate institutions more carefully than reflected in the mixed constitution, with each serving as a check on the other. Modern examples include the British parliamentary system, and the United States Constitution, with its executive branch, bicameral legislative branch (the House and Senate), and judicial branch. The significant improvement to note is that these different branches of government do not reflect diverging but natural political cleavages in society vying for supremacy. Rather, they are constructed institutional appendages in which each element is but a part, with each designed to realize and protect the public good. As such, the public good is no longer a by-product of an institutional arrangement, as was often the case in the older view, but rather the end to which those institutions aim.

Another important transformation relates to political representation. Classical republics were unable to effectively incorporate growing populations into their institutional structure to ensure that the people remained sufficiently involved. In the case of Rome, for example, a population expansion did not result in a further development of sites for political participation. The problem of participation in large republics seemingly pointed to a limitation of the political doctrine—namely, that it was inappropriate in the modern expansive nation-states of the seventeenth and eighteenth centuries.

In modern times the answer comes in the form of representative democracy. As John Locke (1632–1704), Baron de Montesquieu (1689–1755), and Madison argue, a modern republic can connect the otherwise antidemocratic practice of representation with the sovereignty of the people. Indeed, as Madison explains in *Federalist No. 39*, the people never give up their power because they always hold in reserve the right to change their representatives. Representation is based upon a revocable trust precisely because it is merely a proxy for direct participation and not a replacement of popular sovereignty. The result

allows power to extend over vast territories in response to various problems of collective organization.

SEE ALSO *Aristotle; Dahl, Robert Alan; Democracy; Freedom; Locke, John; Machiavelli, Niccolò; Pluralism; Republic; Separation of Powers*

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Melvin L. Rogers

REPULSION

SEE *Similarity/Attraction Theory.*

RESEARCH, CROSS-SECTIONAL

A cross-sectional study is a type of research study widely used in economic, social, health, and marketing research. A cross-sectional study provides a snapshot of the distribution of factors and outcomes in a population at a specified period of time. In this type of study the prevalence of specific factors and outcomes can be calculated for a given population (community, state) and levels of exposure to factors and outcome status can be compared. In contrast to other study designs, cross-sectional studies sample individuals not based on their outcome status or the presence of a particular risk factor; rather, the presence of factors and outcomes are determined simultaneously.

Cross-sectional studies are very useful from the policy and public health point of view because, for example, they can provide a picture of the burden of a particular disease in a population and measure the prevalence of risk factors, such as smoking, in the population. However, this type of study is limited in its ability to give rise to inferences about causality. Cross-sectional studies are also very useful in monitoring conditions in a population, such as the surveillance of specific diseases (e.g., diabetes) or important risk factors (e.g., obesity), or in monitoring socioeconomic characteristics of the population (e.g., unemployment).

Cross-sectional studies offer several advantages over other types of research design. Compared to longitudinal cohort studies, which are studies that follow individuals with and without a specific risk factor over time to observe the occurrence of outcomes, cross-sectional studies are cheaper and can be carried out faster. Cross-sectional studies also allow for examining multiple factors and multiple outcomes in one single study. Generally, cohort studies can evaluate only one risk factor at a time, and case-control studies, a type of study that selects participants based on their outcome status, can evaluate only one outcome at a time. Another strength of cross-sectional studies is that when they are based on a representative sample of the population, their results can be generalized to the overall population from which the sample came. Analyses of surveys using representative samples require special analytic techniques to account for the sampling probability—the probability of being selected as a participant in the study—since this type of survey may oversample segments of the population (e.g., minority groups) to make sure they are adequately represented in the survey.

A major limitation of cross-sectional studies is called temporality bias. Since risk factors and outcomes are measured simultaneously, it is not possible to know whether the factor preceded the occurrence of the outcome, which is a criterion for determining causality. For example, in a cross-sectional study relating unemployment to heart disease, we cannot determine whether being unemployed contributed to the development of disease, or whether heart disease caused people to lose their jobs, perhaps by making them too sick to continue working. Another limitation that is particularly important in medical research is that in cross-sectional studies, diseases with longer duration are overrepresented because people who have the disease for a longer period are more likely to be included in the sample compared to people who quickly recovered or died from it. Thus, the association observed between risk factors and the disease may reflect survival rather than etiology. This limitation is often referred to as length bias or prevalent case bias.

Opinion polls are cross-sectional studies. They are commonly used in political research to determine voters' preferences for candidates in an election, people's perceptions of government policies, and the distribution of these preferences and perceptions by segments of the population such as gender, race/ethnicity, and age group. In mar-

ket research, cross-sectional surveys are conducted to examine consumer preferences for certain products, shopping patterns, and the impact of advertisements. Social scientists use cross-sectional surveys to examine societal factors, such as the association of social capital, a measure of neighborhood cohesion, collective efficacy, and social trust with adolescent pregnancy and domestic violence. Such studies have found, for example, that neighborhoods with higher social capital have lower prevalence of teen pregnancy and family violence.

In the education field cross-sectional studies are used to examine factors associated with academic achievement. For example, Gwen Glew conducted a survey of elementary schools across the United Stated that reported a high prevalence of bullying and found that bully victims have low academic achievement and feel unsafe at school. Cross-sectional studies are widely used in medical research to identify risk factors associated with disease and explore associations among risk factors, as well as factors associated with health care. These studies have helped to identify the risk factors for heart disease (smoking, hypertension, cholesterol), determine the association of psychosocial factors (e.g., self-efficacy) and dietary behaviors or physical activity, and examine ethnic and gender inequalities in access to health care (e.g., access to cardiovascular procedures).

An example of the use of cross-sectional studies in surveillance is the National Health and Nutrition Examination Survey (NHANES). In this national survey a representative sample of the population living in the United States has a comprehensive examination and completes questionnaires about their lifestyle behaviors. Such a survey reports on access to health care, the prevalence of overweight and obesity, dietary patterns and physical activity levels across U.S. states, and other health-related factors. The NHANES is repeated periodically and allows researchers to compare trends in health behaviors and conditions over time. The Youth Risk Behavior Survey (YRBS) is another example of a national cross-sectional survey. The YRBS, a school-based survey of adolescents living in the United States, reports on the prevalence of lifestyle behaviors such as smoking, drug use, sexual behavior, fruit and vegetable intake, and physical activity levels.

SEE ALSO *Causality; Demography; Demography, Social; Polls, Opinion; Public Health; Public Policy; Research, Longitudinal; Risk; Social Science; Survey; Surveys, Sample*

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Carmen R. Isasi

RESEARCH, DEMOCRACY

Research into democratization is as old as the democratic idea. Aristotle studied, with some prejudice, the democracy of Athens. Much later, James Madison tried to design a "republican remedy" for the "disease" of too much democratization. For most of western history, democracy was mistrusted by most of those most famous for having studied it.

Democracy as a positive ideal had a rebirth in the nineteenth century, eventually attaining hegemony after World War II as the political ideal appropriate for all nations (even Communist nations such as East Germany—the German Democratic Republic—claimed to be democratic). Research into democratization therefore is perceived by many today to be research into the best possible form of political society.

DEMOCRATIZATION RESEARCH TODAY

What, however, are we researching when we research democratization? Most western political scientists have defined *democracy* in ways that mirror the political and legal institutions and political culture of western liberal states, including ideas about citizenship, constitutions and rights, market economy, and separation of the public and private spheres. In this, political scientists have moved the ideal of popular rule in a decidedly liberal, republican, and market-oriented direction.

This predilection was reinforced by a mid-twentieth-century turn in the study of politics away from political science, broadly conceived, toward a social science presumed to be modeled on the natural sciences. Many students believed that "operationalizable" standards with which to measure democratic performance could only be "scientifically" derived from existing democracies—that is,

from the west. Although this model is open to the charge of being culturally and ideologically biased, it contains important democratic features, and it is the one that has been most often used as the standard for democratization research.

In the 1960s modernization theory, premised on the developmental path of western industrial societies, took hold among western political scientists studying newly (re)emerging nations. Similarly, in the 1960s and 1970s some scholars sought to discover prerequisites for establishing stable democracies, mirroring modernization theory. As authoritarian regimes fell in the mid-1970s, democratization studies grew rapidly. By the 1980s, instead of developing a general theory of democratization, scholarship moved to trying to understand strategic interactions between elites, downplaying the importance of masses in democratic transitions, and to categorizing the forces at work in democratic transitions, the type of democratic political system being created, and the requirements for democratic consolidation. In the 1990s studies shifted to also trying to study democratic development over time. Scholars popularized the metaphor of three democratization "waves": the first from 1826 to 1926; a shorter post–World War II wave; and the famous "third wave," beginning around 1974. It is this third wave, encompassing developments in Latin America, Eastern Europe, and East Asia, that most democratization research explores.

Overall, the literature recognizes four stages in the transition to democracy: decay of authoritarianism, transition, consolidation, and maturation. Democratization is facilitated by a decline in legitimacy of authoritarian rule due to either an inability to solve problems or a shift in values. It is supported by the development of civil society, increasing education and income levels, external democratic pressures and/or support, the "snowball" effect of being within a democratizing region, and citizens valuing it as an intrinsic good rather than for economic or social performance. Many scholars now believe the reasons for democracy's emergence are not the same as those for its consolidation or maturation, and they see ebb and flow and sideways movement rather than linear progress.

In addition to regime type and patterns of transition and consolidation, scholars devote attention to the impact of democratization on regime performance; the need for a "mature state" for democratization; the importance of external actors, whether they be states or nongovernmental organizations (NGOs), in trying to promote internal democratization; and the effect of democratization on citizen well-being. Some who see strategic interaction among elites as decisive argue that third-wave democracies are fragile because democratic elites are forced to bargain with nondemocratic elites, and are further constrained by undemocratic constitutions that protect privilege. Some fear that fragile democracies can be overloaded with citizen demands, making the development of competitive economies problematic, thereby undermining the regime. Others think robust citizen participation is essential in democracy, and see international constraints on domestic democracy emanating from the "world market" and its key institutions.

Although analysts empirically find democratic features within "third-wave" regimes, such as free elections, other critical features of these regimes are found by some to be problematic, especially inadequate civil rights and concentration of power in the executive. They use a variety of terms to define these problematic regimes, such as "illiberal," "delegative," "imperfect," and "immature" democracies. Scholars have begun to rethink whether some of these "hybrid" regimes should be called democratic at all, and have coined terms such as "electoral," "competitive," or "contested authoritarianism" to indicate a notion of "enhanced authoritarianism" rather than "qualified democracy." Some "third-wave" scholarship indicates that democracy emerges through a complex process that varies from country to country with few preconditions or causing factors. Scholars often emphasize elite interaction as decisive in the foundation and consolidation of democracy, but some also still point to the importance of mass mobilization for both.

CRITICISM OF DEMOCRACY RESEARCH

Democratization research has been criticized in a number of ways that are relevant for future twenty-first-century researchers. Some criticism points to the need to further refine concepts and measurements, or to the need to be more selective in developing new concepts, or to how the "wave" metaphor can be misleading; others point to biases in the research itself and the inadequacy of past approaches to a more rapidly "globalizing" world.

An important line of criticism is that the overall emphasis on terminology is confusing and occludes the fact that although third-wave democracies may be less effective, the kind of problems they face—such as inequalities of rights, institutional power imbalances, and failures of accountability—were, and to a degree still are, faced by first-wave democracies. Favoring "minimalist" procedural definitions rather than robust ones that stipulate deeper notions of political equality and social justice, therefore, runs the risks of repressing the history of conflict and struggle in western democracy and of evaluating newer democracies by a sanitized and static metric.

Some caution researchers against trying to implicate other states or NGOs into the process of democratization, recalling the difficulty of efforts to "transplant" democ-

racy, including through war, for example, in Vietnam and Iraq. Others temper this by suggesting that research into efforts to aid democratization can be successful if they are culturally sensitive and invoke a broader standard than western liberalism.

DEMOCRACY AND GLOBALIZATION

Internationalization of the world economy brings both economic development and new ideas, which can aid democratization. However, it can also promote greater inequality and/or foster constraints on the choices open to democratically elected officials, which generally impede it. Research shows that lessening inequality and insulating politics from inequalities do advance democratization and make de-democratization less likely. The sources of inequality, however, are shifting to include not just domestic, coercive control characteristic of industrial and agricultural production, but also transnational niches of elite control of finance, science, technology, information, and media, characteristic of postindustrialism and global neoliberalism. These international forces of economics, business, politics, culture, communication, migration, and ideas such as democracy bring religions, cultures, and subcultures into closer contact, possibly stirring popular movements of political action and resistance. The democratic idea may even take on unfamiliar forms. Although procedural definitions and certainly constitutional protections remain very important benchmarks in the study of democratization, in this context, how are we to judge what should count as critical democratic supplements to them?

Researchers should also ask: Have elected representatives within western liberal democracies ceded significant new power to unaccountable international markets, administrators, and elites, thereby diminishing the real impact of the voting power—the democracy—of their citizens? Does research therefore need to evaluate global as well as national, regional, religious, and cultural obstacles to democratization, obstacles applicable to all societies, including those in the west? If so, the freedom and ability of citizens to organize across borders and to engage in international political participation and agenda setting become important measures of democratization for all societies.

As economic and political integration, and resistance to it, proceed toward an uncertain future, as new groups emerge and define their rights, democratization research faces another powerful challenge. Just as democratic theory has needed to—and continues to need to—address the harms done to those left out in the consolidation of liberal institutions, systems of representation, and even concepts of normal citizenship, whether of race, gender, ethnicity, or economic standing, so too, does democratization research need to open itself even more to the unfamiliar on all these registers. None of this obliges researchers to cede valuable standards—quite the contrary. It asks them to go back to the root and engage the primary but difficult question: In today's world, what advances popular rule and what stands against it?

SEE ALSO *Aristotle; Citizenship; Democracy; Democracy, Indices of; Democratization; Globalization, Social and Economic Aspects of; Politics; Sociology, Political; Strategic Behavior*

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RESEARCH, ETHNOGRAPHIC

The discipline variously called *social anthropology*, *cultural anthropology*, *ethnology*, or *ethnography* seeks to describe the entire range of distinctive cultures in the world, past and present, and to arrive at a general understanding of human society through systematic comparison between them. This vast research undertaking uses a wide range of methods, both quantitative and qualitative, and is buttressed by related disciplines, principally archeology, human paleontology, biological anthropology, sociology,

demography, history, and psychology. Although anthropologists, like other social scientists, commonly use and even collect censuses, surveys, written documents, and other sources of data, and analyze them with the help of statistical methods, their main claim to methodological distinctiveness is fieldwork.

Ethnographic fieldwork consists of spending extended periods of time, ideally a year or longer, in intensive observation of, and interaction with, a study population. Such observations and interactions are recorded in the form of daily field notes, transcriptions of texts, construction of genealogies, and household surveys, often with the help of such mechanical devices as tape recorders, cameras, and camcorders.

Much of that methodology is shared with students of the behavior of other animals, namely ethologists or animal behaviorists, with, however, two crucial distinctions. Anthropologists and their study animal belong to the same species, and they communicate through symbolic language. This means that ethnographic fieldwork requires additional skills besides keen observation and recording. Though anthropologists sometimes work through interpreters, or use a common second language (such as Spanish in Latin America or French in Africa), being fluent in the language of a study population is considered important if not crucial to good ethnography.

The heart of fieldwork consists of the twin methods of "depth interviewing" and "participant observation." Depth interviewing generally involves a small number of informants (five to twenty is a typical range), who are interviewed repeatedly and at length, preferably in their own language and over a period of months or even years. These informants are carefully chosen for their knowledge and understanding of their culture, and often become real partners in inquiry to the anthropologist. Participant observation consists of participation by ethnographers in the events they record and a general immersion in a culture, as opposed to simply observing and recording interaction from the outside. Ethnographers strive to be accepted, as much as possible, as one of those studied. In practice, however, total acceptance is rare, and total participation is not necessarily desirable. Ethnographers must be wary, for instance, of sexual involvement, of entanglement in local politics and factions, and of activities that may be illegal.

In the first half of the twentieth century, when it was first established, field ethnography was applied mostly to non-Western, non-literate societies, often colonial dependencies of the imperial countries to which anthropologists belonged. This led to the more recent criticism of anthropology as the handmaiden of colonialism, exemplified by Edward Said's *Orientalism* (1979), and various articles in collections edited by James Clifford and George Marcus, and by Dell Hymes. If you studied whites, it was said, you called your work *sociology*; if blacks, *anthropology*. Partly in response to this criticism (and partly as a result of decolonization during the second half of the twentieth century), anthropologists increasingly applied their field methods to the entire range of human societies, including their own. We now have a thriving urban anthropology of Western societies, which was indeed prefigured by the "Chicago school" of sociology in the 1920s.

Related to the charge of colonialism leveled at anthropology is the question of who "owns" a culture, and who can legitimately interpret it and present it to the world. Some critics argue that only native members can and may do so. Clearly, there are advantages to belonging to the culture under study (familiarity, access, linguistic fluency, depth of understanding), and many ethnographic "informants" no doubt deserve more recognition as coauthors than some anthropologists are willing to grant them. However, the advantages of being an insider are counterbalanced by drawbacks (lack of objectivity and distance, taking too much for granted, being captive of one's position within the culture). Ideally, perhaps, fieldwork should be done by a team consisting of insiders and outsiders.

Participant observation also raises several problems, which potentially affect the validity and reliability of ethnography. The first is the effect of the observer on the observed. Animal behaviorists speak of "habituating" their subjects, that is, of accustoming them to their presence, to the point that they are ignored. This is easy enough if one studies, say, ants, but much less so with chimpanzees. Between humans, true habituation is simply impossible, except in highly impersonal urban situations, where fieldwork can be done surreptitiously. But, then, fieldwork without the informed consent of those observed is generally considered unethical by most anthropologists.

Informants almost invariably alter or manage their "presentation of self" to the anthropologist. Their account of themselves and their people is contaminated by their personal interests, their likes and dislikes, their attempt to manipulate the fieldworker, and their perception of what the anthropologist likes or wants to hear. Not uncommonly, key informants become quasi-anthropologists, and adopt the approach of the fieldworker. Some are not above telling tall tales and pulling the anthropologist's leg.

Another serious problem in participant observation is the inevitable tension between objectivity and subjectivity, between trying to be both an insider and an outsider. On the one hand, anthropologists seek a deep understanding of what an event, a ritual, a text, a conflict, a folktale means to their subjects. Ethnography involves telling the story from the native perspective, as an insider sees it. But it is not simply a matter of accepting at face value, then repeating, what informants have said. Understanding

social reality involves analysis, and that, in turn, implies detachment, seeing things as an outsider. The anthropologist is, thus, constantly involved in alternating between immersion in, and detachment from, the studied "reality."

Few anthropologists are naive enough to claim Olympian detachment from "their people." Indeed, most claim warm affection for them. But quite a few clearly disliked them. For instance, the great pioneer of fieldwork, the Polish-British anthropologist Bronislaw Malinowski, referred to the Trobrianders he made famous as "niggers" in his intimate diary. Others, like Colin Turnbull, make no effort to hide their likes (of the Mbuti) and dislikes (of the Ik). It is considered good form to address the problem of objectivity in ethnographic fieldwork through an explicit statement of one's position and an account of one's field experiences. Often such matters are relegated to a methodological appendix, but sometimes their explication results in book-length autobiographies, such as those written by Claude Lévi-Strauss and Elenore Smith Bowen.

Finally, there is the issue of self-censorship. Many anthropologists refrain, for a variety of reasons, from telling all. They have a responsibility as scientists to share their findings, but they must also do their best to protect the anonymity of their hosts, to respect the secrets they pledged to keep, and to shield their hosts from condemnation, exploitation, or persecution by hostile outside forces.

In the 2000s, ethnographic research came under fire from academics of "postmodernist" persuasion, who have argued that objectivity is a delusion, that no human experience can truly be communicated, and that any attempt to do so is but one "discourse," usually self-serving, among many. Such a position is one of intellectual nihilism: It negates the possibility of any social science. Understanding across cultural, gender, age, and class divides—indeed, between two persons of any kind—becomes impossible if everyone is enclosed within the self.

Others draw a different conclusion about ethnography, namely that from it emerges a vision of a common humanity, transcending the wide range of cultural differences and the diversity of anthropological approaches. From this perspective, the ultimate mission of anthropology is to make human diversity communicable, and, by doing so, to reveal our unity as a species.

SEE ALSO *Anthropology; Ethnography; Ethnomethodology; Observation, Participant; Race and Anthropology*

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Pierre L. van den Berghe

RESEARCH, LONGITUDINAL

Longitudinal studies are investigations that study the same units (individual, households, communities, etc.) over time, with repeated waves of data gathering. They may be small-scale studies of a particular group, large-scale surveys of samples of national populations, or large-scale social experiments.

DISTINCTIONS FROM OTHER TYPES OF STUDIES

In contrast to longitudinal studies, cross-sectional studies collect data at one point in time; repeated cross-sectional studies collect data from comparable units at successive time points. This distinction, however, depends on the unit of inference. For example, in the 1970s the researchers Howard M. Bahr, Theodore Caplow, and Bruce A. Chadwick replicated the 1924 Middletown study in the form of a repeated cross-section, meaning they asked the same questions as in 1924 of a new random sample of the town's inhabitants. But inferences about the social structure and prevailing attitudes of the community were longitudinal.

Both panel studies and cohort studies trace units through time, with the distinction that a cohort study chooses units experiencing an event in the same time period (e.g., a birth or age cohort as in the National Longitudinal Survey of Youth [NLSY]), whereas a panel study uses a sample, random or otherwise, chosen without respect to a defining event (e.g., the Panel Study of Income Dynamics [PSID]).

Collecting data longitudinally confers several advantages. Such data are necessary for studying individual processes, such as of aging, of labor force transitions, of family formation and change. Longitudinal data are especially crucial when the research attempts to establish

causality. Only with longitudinal data can the criterion of temporal priority be established unambiguously. In cross-sectional data one can sometimes infer temporality, but often one must trust memory, which is very unreliable. (This criticism applies equally to what are sometimes called longitudinal designs but which collect data retrospectively. The recall of attitudes and opinions is so influenced by the current state of those variables as to make recall an exercise in creative imagination.) In addition, if the research purpose is to study "flows" (e.g., the number of people who move into or out of unemployment during a month) rather than "stocks" (e.g., the number of people unemployed on a given date), then longitudinal data are absolutely required. The study of flows employs a turnover table, as illustrated by Bernard Levenson's 1978 article.

Although temporal priority can be established via a longitudinal study, without a true experiment involving randomization and manipulation of an independent variable, causality cannot be proved. Large-scale social experiments, however, such as the negative income tax experiments of the 1960s and 1970s, involve longitudinal data collection and hence partake of all the advantages and disadvantages of longitudinal studies.

SPECIAL ISSUES IN LONGITUDINAL STUDIES

When investigators analyze data from longitudinal studies in the aggregate, they seek to separate age effects (caused, for example, by physical aging or moving to different age-related roles) from period effects (caused, for example, by changing social environments) and from cohort effects (caused, for example, by different social environments at critical stages in individuals' development). Work by Erdman Palmore, as presented in his 1978 article, points out that longitudinal differences (between measurements of the same cohort taken at two time periods) are the sum of age and period effects; cross-sectional differences (between measurements of different cohorts taken at the same time period) are the sum of age and cohort effects; and time lag differences (between measurements of an older cohort taken at time one and those on a younger cohort taken at time two, when they have achieved the same age the older cohort was at time one) are the difference between period and cohort effects. Disentangling these effects requires careful thought and analysis, especially if only a single cohort is being followed over time.

Because measurements on the same unit at different time points are correlated, longitudinal data rely on special statistical techniques that take such correlation into account. Analogous to analysis of variance models appropriate for repeated measures designs, these techniques employ certain forms of generalized linear models. Dorothy D. Dunlop's work from 1994 and that of James H. Ware from 1985 are explications of these statistical techniques.

The problem of attrition haunts longitudinal data collection. Researchers lose the opportunity to conduct follow-up when people move out of the study area, refuse to continue, or die. Investigators do their utmost to prevent attrition; for example, the PSID sends postcards to its respondents yearly to determine their whereabouts. Attrition degrades data from a longitudinal study to the extent that data from those not participating in later rounds differ from the data of those participating. Imputation of missing data is, in theory at least, easier for a longitudinal study than for a cross-sectional one, as data from earlier rounds of the study can aid in the effort; Roderick Little's 1988 work offers examples of such techniques.

To avoid missing data, some longitudinal studies (e.g., NLSY) use a life-history method, asking respondents to report not only their current status on such variables as employment and marital status, but also to report and date any changes in these statuses since the previous interview. Thus if a respondent misses one or more interviews, longitudinal data for that respondent are nevertheless available from these retrospective reports, although possibly at some cost in accuracy if respondents' memories are faulty.

When a longitudinal study is concerned with units other than individuals, additional complications arise. For example, PSID, which studies income dynamics for families, sampled approximately 4,800 families in 1968. Because PSID follows all members of these original families as they leave (children marrying, original couples divorcing, etc.), by 1996 the study encompassed about 8,500 families. To keep the sample representative of the general population, about 440 immigrant families were added in 1996 and almost 1,500 families had to be dropped.

When data are collected repeatedly from the same unit, those data present an increasingly detailed and thus increasingly identifiable picture of the study subjects. Thus issues of confidentiality and data security become increasingly important and increasingly difficult.

In addition to studies designed longitudinally to study change, several large-scale government surveys (e.g., the Current Population Survey [CPS] and the National Crime Victimization Survey [NCVS]) use rotating panel designs in which a unit participates in the survey for several reference periods. This design makes contacting respondents easier than if a new sample were drawn for every wave and increases the efficiency of statistical estimation. It is difficult for the government agencies collecting these data to link respondents across waves in order to

study them longitudinally; nevertheless, such linked files have been produced and used fruitfully in both methodological and substantive research.

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Judith M. Tanur

RESEARCH, QUALITATIVE

SEE *Methods, Qualitative.*

RESEARCH, QUANTITATIVE

SEE *Methods, Quantitative.*

RESEARCH, SURVEY

Survey research is a methodological process by which social scientists convert theoretical concepts into numbers. The quantification of theoretical concepts via the survey instrument allows for the modeling of relationships between variables such as education and socioeconomic status. Surveys are used by researchers across all of the social sciences as one of the primary means of data collection. For example, in order to measure a theoretical concept such as religiosity, the social scientist can use an indicator or set of indicators of religiosity, and the aggregate responses can then be coded numerically. A common example of such an indicator is the question "How important is religion in your life?" The subjects being surveyed would typically select one of the following responses: "Very Important," "Pretty Important," or "Not Too Important." The three response categories are then coded as follows: 1= "Very Important," 2= "Pretty Important," and 3= "Not Too Important." In this way, social scientists are able to quantify theoretical concepts.

EPISTEMOLOGICAL FOUNDATIONS

The philosophical underpinnings of survey research rest squarely on the side of positivism, as opposed to interpretivism. Positivist social scientists seek to emulate the level of quantification that is characteristic of the natural sciences, particularly physics. The aim of survey research, from a purely positivist viewpoint, is to discover the universal laws operating in society. It is thought that such laws are best uncovered through a deductive, scientific method, whereby data is collected through a survey instrument in order to test a theory. Interpretive theorists, with a more qualitative focus on issues such as meaning and historicity, are critical of positivist assumptions and tend to prefer a more inductive, theory-building approach to data collection.

QUESTIONNAIRE CONSTRUCTION

The successful execution of survey research depends in great measure on the proper construction of the questionnaire. Good questionnaires provide measures of theoretical concepts, also referred to as variables, that are concomitantly reliable (i.e., able to be reproduced) and valid (i.e., accurate). The questionnaire should be clear and concise in presentation and wording. The researcher can choose between single items or multiple items in order to measure a variable. For example, another question that measures religiosity might be: "How often do you attend religious services?" Possible response categories could include: 1= "Often," 2= "Not Too Often," and 3= "Never." This is an example of a closed-ended question, in which response categories are predetermined by the researcher. Such categories should be exhaustive (i.e., they should cover all possible responses) and mutually exclusive (i.e., there should be no overlap among the responses).

One of the most common sets of response categories is the Likert scale, which measures how strongly a person agrees or disagrees with a statement. One way to measure happiness, for example, is with a four-point Likert scale in

which the response categories range from "Strongly Agree" to "Strongly Disagree." Consider the following indicator of happiness: "On the whole, I am happy with my life." A standard Likert scale would code the responses as: 1= "Strongly Agree," 2= "Agree," 3= "Disagree," and 4= "Strongly Disagree."

When multiple items are used to measure a single concept like happiness, it is sometimes useful to invert some items, such as: "On the whole, I am unhappy with my life." The inversion of items can disrupt potential patterns in which the respondent "Strongly Agrees" or "Agrees" with all of the items.

In addition to closed-ended questions, which tend to be comparatively high on reliability, survey instruments can also be constructed with open-ended questions, which tend to be comparatively high on validity. Open-ended items probe the respondent's knowledge on a given issue, but they do not offer a predetermined set of response categories. For example, a social scientist interested in studying the nature and determinants of trust might include the following item in a questionnaire: "What are the most important factors in your decision to extend trust?" The obvious advantage of such open-ended items is that the researcher does not need to be concerned with the development of exhaustive and mutually exclusive response categories. The major disadvantage is that open-ended responses, as a result of their variability, are difficult to code, leading to reduced reliability.

ADMINISTRATION AND INTERVIEWING

The three most common methods of administering questionnaires are by mail, by telephone, and in face-to-face interviews. Since the 1990s, there has also been an interest in the use of the Internet to administer electronic surveys. The principal advantage of administration via post and the Internet is the comparatively low cost of the research vis-à-vis telephone and personal interviews. The disadvantages of survey research conducted via post and the Internet are the comparatively lower response rates and the overall length of the research process.

Telephone interviews have the obvious advantage of being cheaper to conduct than face-to-face interviews. In terms of the length of the research process, a second clear advantage is that questionnaires can be administered and data collected more quickly than with face-to-face interviews. The third advantage of telephone interviews is that a random sample can be readily selected using random digit dialing (RDD), whereby a computer generates random telephone numbers. However, the fact that not every household has a telephone can bias the sample. Furthermore, telephone interviews are generally not suitable for long questionnaires.

The consensus is that face-to-face interviews yield the highest quality data. In general, there are three main advantages of face-to-face interviews. First, the instrument can be longer than if it were administered by telephone, post, or the Internet. Second, interviewers can use visual aids to assist respondents. Third, it is easier for interviewers to clarify questions and items that are unclear, although it is possible that clarification on the part of the interviewer can bias the results. The main disadvantage of personal interviews is the high cost involved in the research.

STRENGTHS AND WEAKNESSES

In short, survey research has several strengths vis-à-vis the more qualitative methodological approaches. First, the results of survey research are, on balance, more generalizable than the results of qualitative research. In other words, because of the greater number of respondents, survey research typically yields findings that are more representative of the population being studied. Second, survey instruments yield more reliable results than qualitative interviews. Third, questionnaires are useful in terms of both testing theories and establishing correlations between variables.

There are four main weaknesses of survey research. First, it can be potentially very expensive to conduct. Second, it is rigid and inflexible, especially in the absence of open-ended items. Third, it is open to the criticism of having a top-down bias; that is, it seldom allows for theory construction from the bottom-up. Fourth, although it is strong in terms of establishing statistical correlations, it is weak in terms of proving causality between two variables. In spite of these weaknesses, survey research is one of the most widely used methodological approaches.

SEE ALSO *Methods, Research; Surveys, Sample*

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Andrew R. Timming

RESEARCH, TRANS-DISCIPLINARY

The complexity of defining trans-disciplinary research lies in its roots. While maintaining its own niche in research disciplines, trans-disciplinary research owes much of its

identity to the related structures of inquiry of multidisciplinary and interdisciplinary research.

The Transdisciplinary Prevention Research Centers defines trans-disciplinary research as "A cooperative effort by a team of investigators from diverse disciplines including meaningful representation of basic sciences as well as clinical or applied sciences. Normally, a trans-disciplinary team of investigators will include persons from different departments but the key issue is that the team will include members who bring markedly diverse methods and concepts to bear on the scientific theme" (Transdisciplinary Prevention Research Centers Request for Application, 2002).

To better understand trans-disciplinary research, one needs to distinguish its approach from other models. Multi-disciplinary and inter-disciplinary research are the two models that trans-disciplinary research broadens.

In his 2004 article "Transdisciplinarity and Its Challenges: The Case of Urban Studies" Thierry Ramadier distinguished the models this way: "Interdisciplinarity differs from multidisciplinarity in that it constructs a common model for the disciplines involved, based on a process of dialogue between disciplines" (Ramadier 2004, p. 433). In other words an inter-discipline is often a discipline of its own. Examples of this synthesis of disciplines are numerous and include such fields as biochemistry, social psychology, and biological anthropology. However a second important aspect of inter-disciplinary research lies in the practice of transferring models or tools from one discipline to another. For example, scholars might apply the mathematics of topography to the study of group dynamics. In this case, according to Ramadier, the concepts of one discipline are appropriated by the other disciplines. Ramadier maintained that interdisciplinarity, like multidisciplinarity, avoids paradoxes and having to solve them, resulting in fragmented approaches in each model.

He further argued that transdisciplinarity breaks away with this type of thinking in a significant way, since the objective is to preserve the different realities and to confront paradoxes between them. Transdisciplinarity is based on a controlled conflict generated by these paradoxes, and the goal is the search for more advanced articulation rather than consensus among the disciplines involved. Ultimately, through simultaneously combining multidisciplinary and interdisciplinary, transdisciplinarity transcends and incorporates these forms of thought. Ramadier argued that transdisciplinarity emerges from the confluence of the three scientific approaches of disciplinarity, multidisciplinarity, and interdisciplinarity.

In his 2004 article Roderick J. Lawrence describes multi-disciplinary research as:

> Research in which each specialist remains within her/his discipline and contributes using disciplinary concepts and methods. Multidisciplinary contributions can be interpreted as the bringing together of disciplines which retain their own concepts and methods that are applied to a mutually agreed subject. In these studies one contributor will usually co-ordinate the research process and seek integration. Interdisciplinarity can be considered as the mixing together of disciplines, whereas transdisciplinarity implies a fusion of disciplinary knowledge with the know-how of lay-people that creates a new hybrid which is different from any specific constituent part. (Lawrence 2004, p. 488)

It is this "fusion" that distinguishes trans-disciplinary research from other research models. As with other models, team building is essential to success. Trans-disciplinary research, however, requires that traditional boundaries and responsibilities be set aside so that team members can fully embrace new skills and knowledge. It requires that team members be willing to step away from the prejudices of their individual disciplines and open themselves up to the perspectives of others, including laypeople, and embrace the learning that takes place when distinct ideas are threaded together. In their 1981 article Frederick Rossini and Alan Porter liken the trans-disciplinary process to a "seamless woven garment" in contrast to the "patch-work quilt" of multi-disciplinary research.

It is this holistic approach that proponents of trans-disciplinary research find so rewarding. A trans-disciplinary research model accepts that complex problems are best understood by acknowledging, from the outset, that effective solutions are more than the sum of critical perspectives from a range of disciplines. It embraces a more modern approach that calls for true collaboration, a dynamic collaboration that crosses turf boundaries and insists that team members be responsible not only for their own success, but for the success of the team as a whole.

Trans-disciplinary research has found proponents in a wide range of research environments. The trans-disciplinary approach has been used successfully in areas as diverse as disability prevention, infectious diseases, drug misuse, and physical therapy. By examining these and other complex problems from a unique vantage point, trans-disciplinary research programs may offer a new perspective on solutions to serious problems, both old and new.

While it owes its origins to interdisciplinary and multidisciplinary research, the trans-disciplinary model has established itself as a distinct and modern research method. Basarab Nicolescu clarifies both the approach and goals of transdisciplinarity: "As the prefix 'trans' indicates, transdisciplinarity concerns that which is at once between the disciplines, across the different disciplines, and beyond all discipline. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge" (Nicolescu 2002, p. 44).

SEE ALSO *Methodology; Social Science; University, The*

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Susan G. Alexander

RESEARCH AND DEVELOPMENT

Research and development (R&D) is the term commonly used to describe the activities undertaken by firms and other entities such as individual entrepreneurs to create new or improved products and processes. The broadest meaning of the term covers activities from basic scientific research performed in universities and laboratories all the way to testing and refining products before commercial sale or use. The performance of, the incentives for, and the contributions of R&D are topics that are widely studied in management, economics, and other social science disciplines. Total spending on R&D activities is also one of the most widely used indicators of the innovative performance of firms, industries, and countries.

Informal R&D has existed at least since the first person experimented with methods of knapping flint to make Stone Age tools. In a formalized sense, it became part of the arsenal of the modern corporation beginning with the creation of industrial labs in the late nineteenth century, and in the early twenty-first century it comprises about 2 to 3 percent of the gross domestic product (GDP) in advanced economies. (For a history of the rise of organized R&D in the United States, see Mowery and Rosenberg 1989.) Spending on and outcomes of R&D investments have become important enough to be the subject of a satellite account in the U.S. System of National Income Accounts that was introduced in 2006 and 2007 (U.S. Department of Commerce 2006) and to be considered for inclusion in the international standard for systems of national income accounts (United Nations Statistics Division 2006).

The *Frascati Manual* of the Organisation for Economic Co-operation and Development (OECD), first published in 1963, created an international standard for surveys of spending on R&D. This manual defines R&D as "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture, and society, and the use of this stock of knowledge to devise new applications" (Organisation for Economic Co-operation and Development 2002, p. 30). R&D is generally thought to consist of three main activities: basic research, applied research, and development. Basic research is research undertaken primarily to acquire new knowledge without a view to its application. Applied research is research directed toward a specific objective, and development is work drawing on existing research results and is directed specifically toward the creation of new and improved products and processes. In general more than two-thirds of R&D spending by firms or countries is directed toward development rather than research. The 2003 *OECD Science, Technology, and Industry Scoreboard* reports that in developed countries with high R&D intensities, basic research is less than one-fifth of total R&D spending.

ECONOMIC ANALYSIS OF R&D

In the theoretical economics literature, the term *R&D* is commonly used to describe the conscious choice of firms and individuals to invest in the invention and commercialization of new products and processes. Although the activity described is seldom made precise in these models, in practice this kind of investment is assumed to correspond roughly to the spending on R&D that is reported in firm accounts and to various governmental surveys. Important insights into the motives underlying investments in R&D were first developed in seminal papers by Richard Nelson in 1959 and Kenneth Arrow in 1962. These two authors clearly argued the economic policy case for subsidies to R&D investment that arise from the nature of its output.

Briefly stated, the argument is that because most inventions (processes and products) can be imitated once they are made and at a cost lower than the original cost of making them, the incentives for undertaking R&D directed toward the creation of such inventions are inevitably weaker than society would like. The performance of R&D therefore generates positive externalities, or "spillovers," that benefit others. Nelson distinguished between basic research with wide applications (which is most likely to be insufficiently provided) and development expenditures targeted to particular products or processes (which are more easily protected by patenting

and other means). Arrow made the case for underinvestment in R&D more broadly by setting it in the context of the then newly invented Arrow-Debreu general equilibrium model. He argued that the allocation of resources for invention (that is, R&D spending) was likely to be nonoptimal because the production of information about new products and processes failed all three of the assumptions required for perfect competition to achieve a Pareto optimum: that the good (information) be infinitely divisible, that it be tradable on the market (that is, that its returns are fully appropriable by the owner), and that there be no associated uncertainty.

All three of these characteristics (indivisibility, inappropriability, and uncertainty) have proved to be important in the case of R&D. Indivisibility implies returns to scale because information about new products and processes can be spread over many units at increasingly lower cost per unit, leading to monopolistic competition in R&D-intensive industries. As Arrow and subsequent economic theorists have shown (see, for example, Reinganum 1989), this can lead to either over- or underinvestment in R&D from a social perspective. In contrast, lack of full appropriability suggests that there will be underinvestment in R&D. In a 1992 article, Zvi Griliches surveyed the evidence on the existence of R&D spillovers, and based on the evidence on measured private and social returns to R&D from a wide number of empirical studies, he concluded that overall R&D spillovers were both "prevalent and important." This result suggests that underinvestment dominates overinvestment, at least in the majority of sectors.

Finally, uncertainty about the nature of the information to be produced by R&D makes it a risky undertaking and sometimes implies that there will be an asymmetric information problem between its producers and those who might finance its production, again leading to potential underinvestment. Empirical evidence for the existence of difficulties in financing R&D investment is surveyed by Bronwyn H. Hall (2002).

R&D AS INVESTMENT

The term *R&D* is often followed by *investment*, which hints at one of its most important attributes. Research and development continues to benefit both those who undertake it and society at large into the uncertain future. Another attribute of R&D that has been emphasized in the modern economic growth literature is its cumulative nature, which can lead to increasing returns, both in the aggregate and also for individuals and firms. The idea is that the stock of knowledge created by doing R&D makes one more productive in acquiring additional knowledge. At the economy-wide level, this idea is the basis of the modern endogenous growth literature that is discussed in Philippe Aghion and Peter Howitt's *Endogenous Growth Theory* (1998).

These attributes create some interesting problems for measurement and analysis. In general applied researchers have dealt with the intertemporal nature of R&D investment by treating it in the same way as ordinary investment in tangible assets, adding up expenditures to create an R&D stock and using a suitable depreciation rate to capture the fact that older research may become less useful over time. However, the aforementioned spillover effects make this exercise somewhat more speculative than in the case of ordinary assets, because R&D that has ceased to be useful for the production of private profit may still be useful to others in the production of new knowledge. The process that renders some R&D output obsolete is the same one that was termed "creative destruction" long ago by Joseph Schumpeter (1942). For a survey of the R&D depreciation problem and its implications for measuring the returns to R&D, see Hall (2006).

SEE ALSO *Arrow, Kenneth J.; Investment; Schumpeter, Joseph Alois; Technological Progress, Economic Growth; Technology*

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Bronwyn H. Hall

RESEARCH ETHICS

SEE *Ethics in Experimentation; Experiments, Shock; Informed Consent; Institutional Review Board.*

RESEGREGATION OF SCHOOLS

In *Brown v. Board of Education* (1954), the Supreme Court declared separate schools to be "inherently unequal" and outlawed segregation in schools. Desegregation efforts were slow, but succeeded in reducing the number of students in racially isolated schools. Despite problems—most prominently the phenomenon of within-school segregation, which led to minority students frequently being concentrated in the lower academic tracks—desegregation helped to narrow the achievement gap.

Since 1988, however, there has been a growing trend toward resegregation. The number of black students in the South attending predominantly white schools grew from 0.001 percent in 1954 to 43.5 percent in 1988, to again drop to 32.7 percent by 1998. Nationwide, the number of African American students attending schools with more than 90 percent African American students has grown from 62.9 percent in 1986 to 70.2 percent in 1998–1999. A new phenomenon is the increasing segregation of Latinos, who by 1998 experienced a higher degree of segregation than in 1968. This trend toward increasing segregation of Latinos and African Americans is concentrated in large cities, but also occurs in some smaller cities and in suburbs of large metropolitan areas.

Three reasons have been proposed to explain this trend. First, a growing Latino immigration, particularly in the West, has led to Latinos now making up the largest population in many major cities and older suburbs; second, residential segregation remains and thus contributes to the perpetuation of segregated schools. Residential segregation had become deeply entrenched in the first half of the twentieth century through public policy that disproportionately benefited whites and created predominantly white suburbs. Fair housing laws since the 1970s have had limited success in curbing ongoing discrimination in housing and mortgage markets.

"White flight," or the tendency of whites to leave neighborhoods with growing numbers of black residents, has also been cited as a cause for a growing isolation of African Americans and Latinos in metropolitan centers. Charles T. Clotfelter's study (2004) shows a trend toward integration in all areas of the United States, except in the Northeast. However, Clotfelter also identifies a series of "contrary forces" that have hampered or limited desegregation, several of which support the idea of a "white flight." These include, first, whites avoiding mixed schools with high percentages of minority students; second, whites having options available to escape from desegregation (private schools, suburban schools, academic tracking, segregated school activities), while still appearing to support desegregation in principle; and third, white parents' ability to exert pressure on track assignments, assuring their children attend predominantly white schools or classes.

One of the most far-reaching causes hindering further desegregation and preventing resegregation, however, is the alarming trend in Supreme Court decisions toward turning away from a commitment to integration. In *Milliken v. Bradley* (1974), the Supreme Court adopted a position of "suburban innocence." Declaring that suburbs could not be held accountable for residential segregation, it decided against interdistrict busing, thus making it impossible to achieve integration in highly segregated school districts in Detroit. In *Riddick v. School Board of the City of Norfolk* (1986), the Supreme Court allowed districts to dismantle their desegregation efforts once they were integrated, or had achieved "unitary status," even if such practices would lead to resegregation.

Two new large-scale and controversial educational reforms emerged in the 1990s: first, school vouchers, and later, the No Child Left Behind (NCLB) policy. Both moved the debate on school reform away from the goal of integration. The idea of school vouchers (1994) was to provide federal funding to parents who wanted to send their children to private schools, giving parents the right

to "choose," irrespective of their financial status. Critics argued that only a fraction of students would have been able to be offered these funds, which typically would not cover the entire tuition. Poor students would likely be left behind in schools with declining student enrollment and public funds. While vouchers now only exist in a few metropolitan districts, the NCLB initiative became a nationally adopted reform in 2002, promising to overcome "the soft bigotry of low expectations" through rigorous high-stakes testing. Proponents argue that NCLB has increased achievement, but its critics counter that while it adds little to already well-achieving schools, it is damaging to the poorest ones with the most disadvantaged student populations. With NCLB forcing schools to produce significant and sustained improvement, but often without being granted adequate funding, many urban schools face the likelihood of failure or closure.

As of 2006, many Latino and African American students are attending schools with more than 90 percent Latino and black enrollment. While there is considerable debate about whether the resegregation of schools is due to public policy or to natural demographic changes across region and by race, few question that integrated schools, despite the problem of within-school segregation, tend to provide better conditions for students of color than segregated schools.

SEE ALSO *Segregation, Residential; Segregation, School*

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Annegret Staiger

RESERVATIONS

SEE *Affirmative Action.*

RESERVES, FOREIGN

In economics, the concept of foreign reserves describes the holdings of gold and foreign assets, such as foreign government bonds and foreign currency, by a country's central bank or monetary authority. The amount of foreign reserves a central bank holds is largely determined by the macroeconomic policy and foreign transactions of the country. In balance-of-payments accounts, which record all the cross-border flows of foreign currency, central bank foreign reserves equilibrate inflows and outflows. If a country is running a trade surplus, more foreign currency is coming into the country through trade in goods and services than is leaving the country through this channel. This excess foreign currency could be used to lend to other countries (positive net foreign investment) through the banking industry or other financial institutions. If the country does not spend all the excess currency on foreign lending, the remainder will accumulate as central bank foreign reserves, also known as the *official settlement balance* or *balance of payments* (the narrow definition). For example, in the early 2000s the Chinese central bank accumulated a very large amount of U.S. Treasury bonds largely due to many years of a substantial trade surplus in China.

FOREIGN RESERVES AND EXCHANGE RATE

The foreign reserves of the central bank play a central role in the exchange rate policy. If a country's monetary authority is following a regime of *dirty float*, it might want to intervene in the foreign exchange market to prevent large changes in the exchange rate. Frequently, such interventions are *sterilized*, in order not to affect the total amount of domestic currency in circulation. For example, if the U.S. Federal Reserve (Fed) wanted to keep the dollar from rising in value relative to the euro (that is, to keep the dollar from appreciating), the Fed would use dollars to purchase euros. The supply of dollars in circulation in the United States would increase because of this transaction. The Fed may sterilize this foreign exchange effect on the money supply by selling more U.S. bonds to the public in exchange for dollars, thereby reducing the money supply to its original level.

So, to prevent currency appreciation, the monetary authority would sell domestic currency and purchase foreign currency, thus accumulating foreign reserves. This is another reason, in addition to its trade surplus, that China had such large foreign reserve holdings: the Chinese monetary authority kept the Chinese currency, the *renminbi*, from appreciating with respect to the U.S. dollar.

To prevent currency depreciation, the monetary authority would sell some of its foreign reserves in exchange for domestic currency. In order to do that the

monetary authority has to have sufficient holdings of foreign reserves to sell. For this reason, the central banks of many countries like to hold a substantial amount of foreign reserves to protect themselves from external shocks that could cause sharp depreciation of their currency, such as a sudden outflow of foreign investment from the country or a sudden drop in export revenues.

The amount of foreign reserves is particularly important for countries that follow a *fixed* exchange rate regime—that is, they commit to maintaining the value of their currency at a preannounced level. In many cases, such policies were adopted in order to anchor inflationary expectations and lower the level of inflation. In these cases, inflationary pressure in a flexible exchange rate regime would lead to currency depreciation. When the exchange rate is fixed, the monetary authority has to keep spending its foreign reserves to maintain the promised level of the exchange rate. Most of such fixed exchange rate regimes ended in *currency crises*, also known as *balance-of-payments crises*, because monetary authorities ran out of foreign reserves. Sometimes the currency crisis in such a situation can be delayed through currency devaluation, when the fixed exchange rate is reset to a new level. The most commonly used model that links foreign reserves to currency crises was developed in Paul Krugman's 1979 article "A Model of Balance-of-Payments Crises," modified later by Robert Flood and Peter Garber in their 1984 article "Collapsing Exchange Rate Regimes: Some Linear Examples."

CURRENCIES USED FOR FOREIGN RESERVES

Historically, the currencies used for foreign reserves were largely dictated by the exchange rate policies in the economies that used paper money. Initially, when paper money was introduced, in order to make people believe in its value, many countries tied the value of the paper money to gold or silver—each banknote could be redeemed at the central bank in exchange for the amount of gold or silver indicated on that banknote. Such an arrangement required the central bank to hold sufficient reserves of gold or silver to exchange all of the banknotes it printed for precious metal. If the central bank did not have sufficient reserves, it would devalue the paper currency by lowering the amount of precious metal the holder of the banknote could obtain.

Under the Bretton Woods arrangement (1944–1971), participating countries' currency values were tied to the U.S. dollar, while the value of the U.S. dollar was tied to gold. Thus, the Federal Reserve System, the central bank of the United States, would hold foreign reserves primarily in gold while other countries held their foreign reserves primarily in U.S. dollars. As a rule, countries that adopt fixed exchange rates tend to hold their foreign reserves in the foreign currency to which they tie the value of their national currency.

Most countries, regardless of their exchange rate regime, hold their foreign reserves in *hard currencies*, currencies that are known to have low inflation: the U.S. dollar, the euro (before the existence of the euro, the German mark), or the Japanese yen. As of 2004, as much as 75 percent of total world foreign reserves were held in U.S. dollars. This U.S. dollar dominance is due mainly to the fact that many countries held the U.S. dollar as their foreign reserves during the Bretton Woods period. In addition, as Cedric Tille and Linda Goldberg argue in "Vehicle Currency Use in International Trade" (2005), much of this dollar dominance today is due to the fact that most international trade is invoiced in U.S. dollars. Nevertheless, this need not be the case in the future—as Menzie Chinn and Jeffrey Frankel show in "Will the Euro Eventually Surpass the Dollar as Leading International Reserve Currency?" (2005), the euro may surpass the U.S. dollar in the role of major currency as early as 2020, mostly due to a substantial depreciation of the U.S. dollar from 2001 to 2005.

SEE ALSO *Banking Industry; Currency; Currency Appreciation and Depreciation; Currency Devaluation and Revaluation; Dirty Float; Exchange Rates; Greenspan, Alan; Hedging; Money; Mundell-Fleming Model; Purchasing Power Parity; Trade Surplus*

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Galina Hale

RESIDUALS

To define the notion of residuals, let us introduce a linear model describing the relationship between $K + 1$ inde-

pendent variables x_j with $j = 0, 1, 2, \ldots, K$ and a dependent variable y:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_K x_K + u$$

with u being the stochastic error representing all factors affecting y not included in the x_j's.

Assuming $E(u|x) = E(u) = 0$, the population regression function is:

$$E(y|x) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_K x_K$$

This is estimated by the sample regression function:

$$\hat{y} = \hat{\beta}_0 + \hat{\beta}_1 x_1 + \hat{\beta}_2 x_2 + \ldots + \hat{\beta}_K x_K$$

where $\hat{\beta}_0, \hat{\beta}_1, \ldots, \hat{\beta}_K$ identify a set of estimated parameters calculated using the estimation rule $\hat{\beta}$.

Assuming a sample of N observations, the residual for observation i, with $i = 0, 1, 2, \ldots, N$, is the difference between the actual value of y_i and the fitted value of the estimated regression, that is:

$$\hat{u}_i = y_i - \hat{y}_i = y_i - \hat{\beta}_0 - \hat{\beta}_1 x_{i1} - \hat{\beta}_2 x_{i2} - \ldots - \hat{\beta}_K x_{iK}$$

If the residual is positive, the estimated regression underpredicts y_i and vice versa if the residual is negative. Each residual $\hat{u}_i$ can be interpreted as an estimate of the unobservable error u_i and as such can be employed in constructing a number of statistical tests assessing the properties of the estimated model and a set of indicators determining the goodness of fit.

Ideally, a good model is characterized by small residuals, that is, by fitted values $\hat{y}_i$ that are close to the actual values y_i. The ordinary least squares (OLS) estimator of the parameters β_j is calculated by fitting the regression line that best approximates the data through the minimization of the sum of squared residuals. The resulting first-order conditions for the OLS estimator are $\sum_{i=1}^{N} \hat{u}_i = 0$ and $\sum_{i=1}^{N} x_{ij} \hat{u}_i = 0$, with $j = 1, 2, \ldots, K$.

As regards the goodness of fit, defining the total sum of squares $SST = \sum_{i=1}^{N} (y_i - \bar{y})^2$, the explained sum of squares $SSE = \sum_{i=1}^{N} (\hat{y}_i - \bar{y})^2$, and the residual sum of squares $SSR = \sum_{i=1}^{N} \hat{u}_i^2$, the part of variation in y that is explained by the regressors, is given by the coefficient $R^2 = 1 - SSR/SST$. R^2 is between 0 and 1, with the fit of the regression improving as R^2 approaches 1. A consistent estimator of the variance of the stochastic error is given by $\hat{\sigma}^2 = (N - K - 1)^{-1} \sum_{i=1}^{N} \hat{u}_i^2$. Its square root $\hat{\sigma}$ is then an estimator of the standard deviation of the unobservable factors affecting the dependent variable y. It indicates how well the model predicts y given the information set represented by the observables x_j's. The estimate $\hat{\sigma}$ is used to construct the standard error of the OLS estimator, equal to $se(\hat{\beta}_j) = \hat{\sigma}/[SST_j(1 - R_j^2)]^{\frac{1}{2}}$ where SST_j is the total sum of squares of x_{ij} and R_j^2 is the R^2 of the regression of x_j on all other regressors. The standard error $se(\hat{\beta}_j)$ is then employed to test for statistical significance of each estimated parameter through the t-statistic.

If the errors were homoskedastic, we would have that $Var(u|x_1, x_2, \ldots, x_k) = E(u^2|x_1, x_2, \ldots, x_K) = E(u^2) = \sigma^2$. On the contrary, in the presence of heteroskedasticity the expected value of u^2 can be assumed to depend on some function of the explanatory variables. Following this logic, Breusch and Pagan suggest a test for heteroskedasticity that consists of an F-test on the regression of the squared residuals on the explanatory variables. The White test for heteroskedasticity simply consists of a similar regression including nonlinearities, that is, the squares and cross-products of the explanatory variables.

White suggests using the residuals $\hat{u}_i$ to calculate a heteroskedasticity-robust standard error for $\hat{\beta}_j$. This is given by $se_{robust}(\hat{\beta}_j) = \sum_{i=1}^{N} \hat{r}_{ij}^2 \hat{u}_i^2 / SSR_j^2]^{\frac{1}{2}}$, where $\hat{r}_{ij}$ is the i-th residual of the regression of x_j on all other regressors and SSR_j is the residual sum of squares of this regression.

SEE ALSO *Hausman Tests; Least Squares, Ordinary; Least Squares, Three-Stage; Least Squares, Two-Stage; Ordinary Least Squares Regression; Regression; Test Statistics; White Noise*

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Luca Nunziata

RESILIENCY

Resilience is an increasingly common term used in concept in various branches of psychology, in particular developmental psychology, severe mental illness (SMI), trauma studies, disaster response, social psychology, and "positive" psychology. Across all of these areas of psychological investigation, resilience refers to the human ability to have withstood, or to be able to withstand, challenge, crisis, stress, or trauma of differing types.

In their 1998 work, researchers Ann Masten and J. Douglas Coatsworth conceptualize resilience as "manifested competence in the context of significant challenges

to adaptation or development" (p. 206). Thus they believe, as Nancy Davis noted in 1999, that there needs to have been a considerable menace to a person or an actual traumatic experience and, in spite of this, the individual's quality of adjustment or development is nevertheless good.

According to Masten and Coatsworth in 1998, in the area of clinical psychology and psychopathology, Norman Garmezy is considered to be a "peerless pioneer in the study of competence and resilience." This accolade is the result of his groundbreaking work examining adults with schizophrenia and their functioning that is adaptive as well as dysfunctional and the children of parents with schizophrenia. In investigating the risk factors for these children, vis-à-vis their developing schizophrenia, Garmezy and his colleagues found that while having a parent with schizophrenia does indeed increase an offspring's likelihood for subsequently developing schizophrenia, they were amazed that their investigation indicated that ninety percent of those they surveyed did not develop the illness. He noted that their subjects upset predictions and, in fact, displayed many qualities that arise from good peer relations, including academic achievement and purposeful goals. Garmezy stated in 1971, "Were we to study the forces that move such children to survival and to adaptation, the long range benefits to our society might be far more significant than our many efforts to construct models of primary prevention designed to curtail the incidence of vulnerability" (p.114). He went on to explore what it was that seemed to protect these offspring and, as a parallel result, the scientific investigation of resilience began.

Subsequently, developmental researchers have conducted studies that are not just within psychopathological areas, but other stressful environments such as neglectful or abusive parents, war zones and environments of high poverty, or children who have physical illness. One of the leading authorities in the field, Michael Rutter, noted concerns with early conceptualizations of resilience, with individuals being referred to as "invulnerable" or "invincible." Davis reports in 1999 that Rutter's point is that vulnerability to stress is a continuum, not all-or-none, and some people may display better resilience in response to some stressors, but this may not be uniform across all stressful situations or at all times. Thus, someone is not very likely to be invincible in the face of all adversities. Rutter notes in 1991 that the features that contribute to resiliency will vary in response to risk mechanisms and that resiliency may be contingent as much on social context as on the individual. As a result, rather than being a static characteristic, resiliency is affected by developmental changes (pp. 1–2).

What may seem a rather straightforward concept or construct may indeed not be. In fact, Suniya Luthar notes in 1993 that "overt social competence among high risk individuals is not necessarily paralleled by superior adjustment on covert mental health indices" (p. 441). This may seem surprising or even counter-intuitive. For example, in her study of adolescents who appeared socially competent and who were in stressful situations, Luthar found that they actually self-reported experiencing high levels of mood problems such as anxiety and depression.

Marian Radke-Yarrow and Elisa Brown conducted a 10-year longitudinal study of children with parents who were diagnosed with mood disorders, which they reported in 1993. When they compared resilient offspring to control offspring, they discovered that 56 percent suffered from somatic complaints, versus only 21 percent of the cohorts. This raises the question asked by George Vaillant: "Does resilience merely mean survival in the face of vulnerability and multiple risk factors, or should we think of resilience only when it also permits happiness? Is it enough that the vulnerable patient survives the operation and that the orphan survives the concentration camp, or, in addition, should they be able to run and laugh and feel joy as well?" (1993, p. 285).

Resiliency is much less focused on an individual's deficits or psychopathology in the face of trauma or adverse conditions. For example, Emmy Werner and Ruth Smith consider resiliency to be a "self-righting capacity" involving not only the individual but including the support that comes from loved ones, schools, or even communities that all conspire to aid in one's healthy responses or healing. Thus, when adversity strikes, the individual is able to compensate or "self-right." They believe that all people have some innate self-righting capacity (Werner and Smith 1992, p. 202).

CHARACTERISTICS OF RESILIENT INDIVIDUALS

The Ego-Resiliency (ER) construct views individuals as being able to demonstrate "resourceful adaptation to changing circumstances and environmental contingencies, (ability to) analy(ize) the 'goodness of fit' between situational demands and behavioral possibility, and (have an) … available repertoire of problem-solving strategies," as reported by Jeanne H. Block and Jack Block in 1980 (p. 48). In 1996 Eva Klohnen summarized characteristics of resilient individuals as including the ability to be happy and contented, with a sense of direction and purpose; the capacity for productive work and a sense of competence and environmental mastery; emotional security; self-acceptance; self-knowledge; a realistic and undistorted perception of oneself, others, and one's surroundings; interpersonal adequacy and the capacity for warm and

caring relating to others and for intimacy and respect; confident optimism; autonomous and productive activity; interpersonal insight and warmth; and skilled expressiveness.

Resilience, as conceptualized as Ego-Resiliency, has been measured using the California Adult Q-Set (CAQ), as Jack Block noted in 1978. The Q-set is a number of atheoretical, descriptive personality items used in the CAQ. This instrument used a Q-sort methodology and is thus fairly time consuming. A Q-sort is a sorting task made up of descriptive personality characteristics on cards that require a subject to sort or rank order the cards from high to low relevance to the subject's self-perceived personality characteristics (Stephenson, 1936). In 1996 Klohnen developed an empirically derived, 29-item self-report scale that has good internal consistency, good reliability, substantial convergent validity with the CAQ-based observer measure, and solid external criterion validity with another index of psychological adjustment.

RISK FACTORS

Risk factors in resilience research are defined by Jon Rolf and Jeannette Johnson in 1990 as "those variables that have proven or presumed effects that can directly increase the likelihood of a maladaptive outcome" (p. 387). Various studies issued by Peter Fonagy, Miriam Steele, Howard Steele, Anna Higgitt, and Mary Target in 1994, by Masten and Coatsworth in 1998, Lois Barclay Murphy and Alice Moriarty in 1976, and Werner in 1996 have discovered an almost limitless number of risk and stress factors. These factors include but are not limited to genetic abnormalities, developmental delays or irregularities, lack of education, poverty, parents with chronic or mental illness, death of a close family member, familial violence, and war, as well as constitutional vulnerabilities such as sensory-motor deficits and insufficient impulse control.

PROTECTIVE OR PROMOTIONAL FACTORS

Masten and Coatsworth noted in 1998 that resilience studies are "remarkably consistent in pointing to qualities of child and environment that are associated with competence or better psychosocial functioning during or following adverse experiences" (p. 212). For the individual these include good intellectual functioning; an easygoing disposition; self-efficacy; self-confidence; high self-esteem; talents; and faith. Familial qualities include a child having a close relationship with a caring parent figure; authoritative parenting that provides warmth, structure, and high expectations; socioeconomic advantages; and connections to extended supportive family networks. Outside the family, bonds to pro-social adults, connections to social organizations, and attendance at effective schools also contribute to an individual's resiliency.

Naimah Weinberg, Elizabeth Rahdert, James Colliver, and Meyer Glantz's 1998 meta-analysis suggests that "while there is no single 'resilience' trait," such qualities as those noted above seem to hold some protective ability. Edith Grotberg, through her works in 1995 and 1998, offers a different conceptualization from her international work, suggesting that to overcome adversities, people draw upon as many as fifteen sources of resilience. They include such factors as having people around that are trusted and loving, being a person that people like and love, and being able to find someone to help when needed, for example.

PREDICTORS OF RESILIENCY

A review of the literature compiled by Davis in 1999 resulted in a list of predictors structured within areas of competency. These issues should be interpreted with the caveat that "all of these characteristics are only known to correlate with resilience; they are not necessarily causes. In fact, Davis says they could just as well be consequences of success rather than causes of it" (1999). Having more is better, but absence is not catastrophic.

- Physical Competence: Good health, easy temperament, and good prenatal care.
- Social and Relational Competence: Secure parental attachment and basic trust, ability to reflect upon the mental states of oneself and others, ability and opportunity to recruit actively people who can help, strong ability to make and keep a few good friends, positive peer relationships, interpersonal awareness or role-taking abilities, and empathy.
- Cognitive Competence: Average to above average intelligence quotient and emotional (intelligence) quotient, good language acquisition and reading ability, capacity to plan/have foresight, good problem-solving abilities, positive future expectations, internal locus of control, assertiveness, and optimism.
- Emotional Competence: Emotional regulation, ability to delay gratification, realistically high self-esteem, sense of autonomy, ability to think and work creativity, and a sense of humor.
- Moral Competence: The ability and opportunity to contribute.
- Spiritual Competence: Having faith that one's own life matters, and conviction that there is a meaning to what one does.

RESILIENCY TRAINING

A number of social support and stress inoculation programs were developed in the 1990s. These programs used methods of outdoor education, classroom simulations, and other methods in community intervention efforts. Davis noted in 1999 that these programs include family skills training, strengthening families program, Focus On Families, Families and Schools Together, Family Effectiveness Training, behavioral family therapy, structural family therapy, functional family therapy, Parenting Adolescents Wisely, Kempe Prevention Research Center for Family and Child Health, Dare to Be You, Be A Star, Learn and Service America, Say It Straight, Big Brothers/Big Sisters of America, Adventure Education, and Outward Bound.

In 2002 the American Psychological Association developed a program that is publicly available titled *The Road to Resilience*. It involves a combination of media (television such as the Discovery Health Channel, Web sites, printed materials) through which psychologists could gain training and provide lectures in communities.

SEE ALSO *Child Development; Family Functioning; Parenting Styles; Personality; Psychotherapy; Schooling; Self-Concept; Self-Efficacy; Self-Esteem; Temperament*

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Chris E. Stout

RESISTANCE

The concept of *resistance*, meaning literally to stand against, entered the social sciences primarily from politics and culture. While there is a clinical psychoanalytic definition of the term, and a technical one used by the physical sciences, it is really resistance in a critical politico-cultural sense that has had the greatest impact in the field.

Resistance in a political context is often thought of as the property of the left. The famed French (and often communist-led) *Résistance* against the Nazi occupation

immediately comes to mind. But the concept was first introduced into the modern political lexicon from the right, by Edmund Burke, who argued for the necessity of resisting revolutionary "progress" in his *Reflections on the Revolution in France* (1790). Burke was incensed at the French overthrow of birthright authority and the leveling of classes (he was particularly horrified by the thought of the hairdresser who thinks himself the equal of his betters). These, and other such revolutionary abuses, fly in the face of time-tested tradition and threaten to upset the natural order of things. As such, it is the "best wisdom and the first duty" of every Englishman to stand against such radical change, with "jealous, ever-waking vigilance" (p. 54).

The conservative call for a resistance against change was taken up by Burke's countryman Matthew Arnold. By the mid-nineteenth century the republican ideals of the French revolution had the lead over Burke's beloved tradition, and nature, after Darwin, was harnessed to progress. A new principle of resistance was needed—and for Arnold, it was culture. As "the best that has ever been thought and said" (as he defines it in *Culture and Anarchy*, 1869), culture offered a means with which to rise above the politics, commerce, and industry of the day and supply a universal standard upon which to base authority and order.

Karl Marx, exiled in England when Arnold was writing, also thought *resistance* a conservative ideal. In their 1848 *Communist Manifesto* Marx and Engels paint a heady portrait of dynamic change: traditions overthrown, nature transformed, nations dissolved, people uprooted; a world where "all that is solid melts into air" (p. 38). For Marx, resistance is *not* the answer—it's the problem. It is capitalism's bourgeois caretakers who are resisting the system's own logic. Capitalism has socialized the means of production, yet ownership is kept in the hands of the few. The revolutionary solution is to tear asunder this final resistance and herald in the new world.

Resistance moved leftward with the anticolonial struggles of the twentieth century. Mohandas K. Gandhi, waging a battle against British rule in India, advocated a political philosophy of *satyagraha*. In Sanskrit this word means "insistence on the truth," but Gandhi also used it to denote "civil resistance." This conflation of meanings makes a certain sense, as for Gandhi it was the untruths of colonial rule—that power must rest upon violence, that English culture comprised the "best that has ever been thought and said"—that needed to be resisted more fiercely than even the British themselves. To be free of European bodies on Indian soil was one thing; to be free of their ideas, their prejudices, and their technology was another. Drawing upon both Burke and Arnold, but turning these ideas on their head, Gandhi advised the practice of civil disobedience, not merely in the streets, but through a political and spiritual return to traditional Indian culture and practices like *khaddar*, the hand-looming of cloth.

Radical resistance, defined in part as the rejection of foreign cultures and the celebration of indigenous traditions, spread across the globe as European colonies in Africa and Asia were overturned by struggles of national liberation. Gandhi's strategy of nonviolent civil disobedience was not adopted by all. The Caribbean psychiatrist-cum-rebel Frantz Fanon made the case for bloody resistance in his influential *The Wretched of the Earth* (1963). Indeed, for Fanon it is the very violence of the resistance that will clear the way to a new society. But for all their differences, Gandhi and Fanon agreed on one thing: that the enemy that one had to resist the most virulently was the enemy one had internalized—what the Tunisian writer and activist Albert Memmi referred to in his 1957 book *The Colonizer and the Colonized* as "the colonizer within."

The concept of *resistance* returned to the West via concerns with identity and identity-construction. In the early 1960s the American sociologist Erving Goffman argued that the job of total institutions like prisons, hospitals, and armies is to create—or recreate—their charge's identity in order to integrate them into the system. However, Goffman observes, the patients in the mental institution he studied actually formed their identities by eliding institutional demands and creating "underlives" within the institution. In brief, it is in resisting the definitions pressed upon them that inmates of institutions develop their own sense of identity: "It is *against something* that the self can emerge" (p. 320). Goffman's book, *Asylums* (1961), was not merely a critique of total institutions, but a critical assessment of the postwar "Free World" of big business and the welfare state, mass media, and compulsory education—a mostly benign, but nonetheless totalizing system.

It was in resistance to this benign totality—the ticky-tacky little boxes where everyone comes out all the same, as Pete Seeger sang in 1962—that a youth counterculture emerged in the 1960s, as young people created "underlives" by defining themselves against The System. Some of this resistance was political—opposition to the American war in Vietnam, for instance—but it was also a stylistic confrontation: new styles of clothes, forms of music, and types of intoxicants. In other words, it was *cultural resistance*.

The idea, and ideal, of cultural resistance, while first championed by Matthew Arnold, takes its radical articulation from the Italian Marxist Antonio Gramsci. Gramsci held that hegemony is both a political and cultural process and thus part of the revolutionary project is to create a counterhegemonic culture. But if this culture is to have

real power, and radical integrity, it cannot—contra Arnold—be imposed from above; it must come out of the experiences and consciousness of "the people." Thus, the job of the revolutionary is to discover the progressive potentialities that reside within popular consciousness and from this material fashion a culture of resistance.

It was this implicit politico-cultural mission that guided the Centre for Contemporary Cultural Studies (CCCS) at the University of Birmingham in the 1970s. The CCCS is best known for its study of subcultures, and it was within mainly working class subcultures—punks, mods, skinheads, and Rastafarians—that researchers found an inchoate culture of resistance. For Stuart Hall and his CCCS colleagues, however, cultural resistance was politically ambiguous. Subcultures opened up spaces where dominant ideology was contested and counter-hegemonic culture was created; at the same time, these contestations and symbolic victories often remained purely cultural, leaving the political and economic systems untouched. Cultural resistance, unless translated into political action, becomes what Hall and others referred to as "imaginary" solutions to real-world problems (Hall 1976).

This raises a nagging question that dogs the whole project of politico-cultural *resistance*: Is this resistance really resistance at all? The efficacy of cultural resistance has been questioned since at least 1934, when Malcolm Cowley, reminiscing about his Greenwich Village life in *Exile's Return*, pointed out that while bohemians may have flouted Victorian values of thrift and savings, their libertinism and emphasis on style and innovation mesh quite nicely with the needs of consumer capitalism. As the Frankfurt School theorist Theodor Adorno snidely remarked about the jazz fan of the era, "he pictures himself as the individualist who whistles at the world. But what he whistles is its melody" (Adorno 1938, p. 298). Resistance as a political strategy also has its critics. Resistance only exists in relation to the dominant power—"bonds of rejection" is what Richard Sennett calls this relationship in his discussion of *Authority* (1985)—and without that dominant power, resistance has no coherence or purpose. What, then, is the point of resistance if it rests on the maintenance of the very thing being resisted?

Michel Foucault, like his contemporary Erving Goffman, studied total institutions—prisons, asylums, and schools—but the French intellectual was interested in institutions of the mind as well: disciplinary boundaries and classification systems. The failures of radical political resistance in 1968 confirmed what Foucault had already known: that power was not something "out there"—easy to identify and overthrow. Instead, it was everywhere, continuous, anonymous, intimate, and even pleasurable: "the disciplinary grid of society" (p. 111), as he names it in *Power/Knowledge* (1980). For most critics, the individual subject/self is the hero of resistance against totalizing control; Foucault countered that the subject itself was problematic. The Enlightenment's focus on the subject allowed for new ideals of personal freedom, but it also opened up new sites of oppression: the individual's mind, body, and spirit. Because power is impressed upon and internalized in the subject, it raises a vexing problem: Who is it that resists and what exactly are they resisting? Can one resist the very subject doing the resisting? Resistance remains a stated goal for Foucault, but one that must be reconceptualized. The ideal of developing the pure subject in opposition to the corrupting object of society must be rejected. "Maybe the target nowadays," he suggests in "The Subject and Power" (1984), "is not to discover what we are, but to refuse what we are" (p. 208).

This idea of resistance is played out to its—perhaps illogical—conclusion by the playful postmodernist Jean Baudrillard. In his 1985 essay "The Masses: The Implosion of the Social in the Media," Baudrillard argues that strategies of resistance always change to reflect strategies of control. Against a system that excludes or represses the individual, the natural demand is one of inclusion: to become a subject. Today, however, people are bombarded with appeals for their participation—and yet they still feel that their choice or vote matters little. Against a system that justifies and sustains its existence by the political consent (or consumer purchases) of those it governs, the masses have devised a new strategy of resistance: apathy, "a massive desisting from will" (p. 109). A resistance to resistance.

Another path taken has been to move beyond resistance—to reimagine identities and politics not tied to the negation of the other. Michael Hardt and Antonio Negri sketch a bleak portrait of an all-pervasive, omnipotent system of control: *Empire* (2000). They acknowledge that within such a system, political and cultural resistance is usually expressed in a generalized "being-against"—a negative resistance. Yet they also see the chance for something different. They argue, like Marxists before them, that the system itself is generating the very tools and social conditions that make transcendence possible. The system of Empire relies upon new communication flows, new forms of organization, and new subjectivities—all of which might give rise to radical identities, ideals, and collective actions not mired in the negation of being-against, thereby offering the subjectivity necessary for proactive social change, that is: a "being-for." The boldest, and perhaps most outrageous, proposal to move beyond resistance comes from the Slovenian philosopher Slavoj Žižek who, drawing upon ideas of Jacques Lacan in *The Ticklish Subject* (1999), proposes something he calls "the Act"—a radical act that jumps outside the coordinates of the dominant system, including any opposition tied to these coor-

dinates. This act transcends resistance and its attendant disobedient obedience—but one might also legitimately ask: Where does an act like this lead?

SEE ALSO *Colonialism; Cultural Studies; Fanon, Frantz; Foucault, Michel; Gandhi, Mohandas K.; Goffman, Erving; Gramsci, Antonio; Hall, Stuart; Marx, Karl; Marxism*

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Stephen Duncombe

RESOURCE ECONOMICS

As a subfield of economics, resource economics examines the allocation of natural resources between uses and over time. Natural resources have enjoyed a prominent role in the history of economic thought. French physiocrats Francois Quesnay (1694–1774) and Anne Robert Jacques Turgot (1721–1781) considered in the mid-eighteenth century that agriculture (land) creates all value and supports manufacturing and service sectors in the economy. Land had a central role also in classical political economy, particularly in the works of English political economists Thomas Malthus and David Ricardo. Later in the late-nineteenth century, English economist Stanley Jevons (1835–1882) devoted attention to coal as the crucial natural resource for industrialization and growth in Great Britain.

Land economics emerged in the United States in the early decades of the twentieth century as the immediate predecessor of natural resource economics; this body of theory addressed economic issues related to agriculture and agricultural land in particular. Economists have developed major theories in resource economics since the 1930s. Harold Hotelling (1895–1973) suggested that reserves of nonrenewable resources such as ores, coal, and oil could be considered capital assets. They can either be extracted now or left for the future to appreciate in value. The decision to extract the reserve depends on the relative returns of the two alternatives. Hotelling argued that the optimal extraction rate of a resource equates the change in its net price (price net of extraction costs) with the interest rate or the rate of return from other capital assets. This is known as the *Hotelling Rule*. Its significance lies in underlining the role of interest rate in extraction decisions.

Economist H. Scott Gordon (b. 1924) and fisheries scientist Milner B. Schaefer (1912–1970) produced the key insights into renewable natural resources when they combined biological and economic models of fisheries. The biological model postulates a bell-shaped relationship between a fish population (stock) and its growth. Key aspects of the model also include a minimum viable stock level and the natural equilibrium (or natural maximum stock level), and the maximum sustainable yield at some intermediary level of stock. This biological model can be transformed into an economic one by assuming constant prices for the fish and a direct relationship between the fishing effort and the size of stock, and by recognizing that harvesting involves cost. The bell-shaped relationship now depicts the revenue from fishing, while total costs of harvesting increase monotonously with fishing effort. The efficient level of catch is achieved at a level of harvesting below maximum sustainable yield when the net benefits as the difference between revenue and cost are maximized. However, in the case of open access fisheries, it is prof-

itable for fishermen to increase their catch until their marginal revenue equals their marginal costs. While individually rational, this results in excessive and economically inefficient harvesting, and suggests controlling of harvesting levels by regulating gear or imposing catch quotas. More recent work in resource economics, such as that of economist V. Kerry Smith, frequently focuses on the monetary valuation of non-market environmental harms, risks, and benefits.

Other contributions to understanding natural resource use and problems associated with it have come, for example, from environmentalist Garrett Hardin (1915–2003). His application of game-theoretic ideas to the use of pastures and other natural resources, in 1968, popularized the notion of the *Tragedy of the Commons* as an explanation for the degradation and depletion of renewable natural resources. While Hardin erred in attributing the destructive competition for resources to the commons (instead of open access to a resource), his game theoretic analysis of natural resource use problems shifted attention away from the conditions of optimal inter-temporal allocation to factors which engender nonoptimal outcomes and institutional arrangements that can assist in avoiding them. New institutional scholars such as Elinor Ostrom have popularized this approach in research on the use and management of renewable natural resources since the early 1990s.

SEE ALSO *Externality; Malthus, Thomas Robert; Natural Resources, Nonrenewable; Overfishing; Pollution; Resources; Tragedy of the Commons*

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RESOURCES

A resource is anything of value as an input in production. Classical political economy identified land, labor, and capital as the three factors of production, and in this way it distinguished between natural resources, human resources, and financial resources. Capital could be understood merely as physical instruments of production, but, for example, William Stanley Jevons (1871) considered a sum of money or financial resources a transitory form or capital that could be transformed into physical instruments of production. Whereas human resources and financial resources are terms that are still in common usage, the term *resources* can also be used more narrowly to refer to natural resources only. This is the sense in which resources are discussed in this article.

Natural resources are conventionally divided into three categories: indestructible or nondepletable, renewable or depletable, and exhaustible or nonrenewable resources. Examples of nondepletable resources include wind and solar energy, whereas fisheries, pastures, forest resources, and soils are examples of renewable resources. Minerals, ores, coal, and oil are exhaustible resources. Sometimes the term *exhaustible resources* is also used to refer to both renewable and nonrenewable resources. A broader definition of environmental resources would include newly discovered or defined resources such as biodiversity, the ozone layer, and atmospheric and other sinks, in addition to conventional natural resources. Most of these resources are best understood as renewable or depletable resources.

Exhaustible resources are categorized further by the U.S. Bureau of Mines and the U.S. Geological Survey (1976) on the basis of the economic feasibility of their extraction and the state of knowledge on their quantity and quality: Resources are identified or undiscovered, and economic or subeconomic. Identified and economic resources constitute reserves. Reserves, such as those of oil, increase when technology changes and reduces extraction costs, making it economically feasible to extract previously identified but subeconomic resources. New discoveries can also increase reserves if it is economically feasible to extract them.

The 1972 book *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (Meadows, Meadows, Randers, and Behrens 1972) raised concerns upon its publication regarding the future availability of key resources. Its computer simulations, which were based on the postwar experiences of high population and economic growth and the prevailing technological performance of the time, suggested that a continuation of resource use as it was happening would result in the exhaustion of many important resources such as oil, coal, and metals in a few decades. However, the standard eco-

nomic argument is that when resources become scarcer, new stocks are called into reserves by increasing prices. Price increases also give incentives for technological development and new discoveries that harness new resources to replace the ones that are exhausted. The exhaustion of resources is not a problem from an economic point of view if the proceeds from resource use can be invested in a way that compensates for the loss of economic returns from the resource use.

While the predictions of the report have not become literally true, some general trends have played out: Population growth, increasing income levels, and globalization have put pressure on renewable resources, in particular, to such an extent that physical scarcity and absolute limits have to be taken seriously. In their article "Human Appropriation of the Products of Photosynthesis" (1986), Peter M. Vitousek and his coauthors estimate that humans consume 40 percent of total terrestrial net primary production. Boris Worm and his coauthors in "Impacts of Biodiversity Loss on Ocean Ecosystem Services" (2006) find that global fish landings have diminished since 1994 despite significantly increased fishing efforts, and that the main commercial fisheries are likely to collapse in the coming decades if marine biodiversity is not protected effectively. In their article "Tracking the Ecological Overshoot of the Human Economy" (2002), Mathis Wackernagel and his coauthors estimate that the global mean ecological footprint is 2.3 hectares per person, but it is twice that figure in Europe and four times higher in the United States. This means that many developed countries have to import carrying capacity, often from the developing world, as described by Marc L. Imhoff and his coauthors in "Global Patterns in Human Consumption of Net Primary Production" (2004). The global ecological footprint, the area needed to produce the goods and resources that humanity uses, currently amounts to 1.3 Earths. According to the authors, we currently overshoot the carrying capacity of the earth by a large margin.

SEE ALSO *Natural Resources, Nonrenewable*

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RESOURCES, EXHAUSTIBLE

SEE *Natural Resources, Nonrenewable.*

RESOURCES, NATURAL

SEE *Natural Resources, Nonrenewable.*

RESPONSE, CONDITIONED

SEE *Classical Conditioning.*

RESPONSE, UNCONDITIONED

SEE *Classical Conditioning.*

RESPONSE BIAS

SEE *Survey.*

RESPONSE RATE

SEE *Survey.*

RESTITUTION PRINCIPLE

The theory of restitution is a neglected aspect of international and national income accounting. The concept addresses the problem of how to measure, and account

for, the costs and benefits of systemic economic injustice. What are the economic consequences of longstanding, historically grounded, systemic exploitation, wrongful taking, unjust enrichment, unequal exchange, immoral accumulation, and excessive profiteering based on racial, ethnic, religious, or language-cultural domination and control? Restitution theory provides a basis for understanding and analyzing problems of chronic poverty and inequality, and developing rational public policy remedies.

A related concept is the restitution principle. It is a moral concept that says that if a society democratically decides that certain practices, such as slavery, segregation, and discrimination, are wrong and makes them illegal, then it is not morally acceptable to retain class pecuniary benefits that were produced by those past practices. These benefits must be returned to the class from which they were taken. Whenever there are chronic grievances—between nations, races, or other large social groups—a fundamental issue is invariably the sense that one party has systematically perpetrated unremedied economic injustices.

The theory of restitution is based on the intuition that it is possible to:

- Reconstruct historic economic relations.
- Specify "fair" standards for prices, wages, terms of trade, and interest rates.
- Specify fair rates of return on investments that were violated, usually by force.
- Audit the historic pattern of transactions between the groups in question.
- Compare the actual with the "fair" standard, then estimate the deviation from "fairness."
- Designate that result as unjust enrichment, and estimate its present value and distribution.
- Draw policy implications that will usually lead to remedies in the form of lump sum or other redistributive income and wealth transfers, in-kind subsidies, or investments in real and human capital.

In the case of African Americans, for example, for four hundred years, income and wealth have been coercively diverted from Africans and African Americans to the benefit of Europeans and European Americans. This was primarily done through slavery, then Jim Crow segregation, and then discrimination in education, housing, and labor and capital markets. It is possible now to reconstruct that history in detail, develop national income accounting tools to regularly measure the magnitude of income and wealth transfers, then estimate their present value and distribution.

These unjust enrichments were not dissipated. They were transferred intergenerationally and are currently held by whites in the top 30 percent of the income and wealth distribution. The processes that produced the benefits are now widely regarded as wrong, illegal, and illegitimate. They violate current standards of fairness; therefore, the benefits these processes produced are unjust, and should be returned to those who were harmed or to their descendants collectively.

This becomes a matter of restitution. And the restitution owed—by some estimates, $5 to 10 trillion—can be paid through adjustments in tax and budget policies over approximately forty years. The restitution could also be paid primarily through investments in human capital, housing, and business formation.

U.S. national income accounts do not help much in managing social dysfunction. They overlook unjust enrichment. Similarly, U.S. international income accounts overlook systemic unequal exchange—overcharges and underpayments between trade and investment partners who have asymmetric power and bargaining strength. Without proper accounting, policymakers produce weak concepts and weak policies and programs that fail to remedy problems of poverty and underdevelopment. Scholars and policymakers do recognize disparities and inequalities, and the basic reasons for continuing chronic economic distress, among many African Americans, have been thoroughly documented. But the descriptions and analyses do not produce policies sufficient to manage or solve the phenomenon of gross disparities in income and wealth by race. Economists and other social scientists and policy analysts have focused on the costs of racial exclusion and discrimination. But that is an incomplete approach, and one reason that relatively little progress has been made against intransigent, chronic economic underperformance and persistent poverty.

The concept of restitution is based on the understanding that justice and morality are fundamental to sound public policy. And retaining unjust enrichment is inconsistent and incompatible with holding in perpetuity benefits derived from past immoral and wrongful systemic transactions and processes. Americans, for example, can acknowledge that much wealth has been built in the past by methods that cannot stand scrutiny by today's standards, even though such methods may have been acceptable at the time. But morality according to the restitution principle makes it impossible to accept the fruits of wrongful actions that were committed on one's behalf—as posterity—by one's collective if not direct biological ancestors.

Boris Bittker's *The Case for Black Reparations* (1973) examined these questions thoroughly and successfully. He dealt with all the common objections—that raising these issues now, so late in the game, is ex post facto, and that justice is not meted out that way under the American sys-

tem. In response, Bittker argued that there is ample precedent for finding retroactive responsibility and culpability, and correcting it, if practicable. As part of national and international accounting, government and nongovernmental agencies can perform the statistical and analytical work in the process of managing national economic life.

In the U.S. case, slavery, primarily agricultural slavery, produced benefits for over two hundred years. But many Americans only think of slavery in terms of agricultural commodity production. In fact, slavery generated great benefits in other ways as well. Slaves were used in manufacturing, services, and activities that today would be called municipal or state government, running transportation, utility, and emergency services. Enslaved people also cleared land and built infrastructure—roads, dams, levees, canals, railroads, and bridges. Without this labor, it can be argued, the United States would not have expanded west as it did. Indeed, it is possible, and perhaps probable, that the United States would never have become a continental nation. It likely would not have been able to complete the Louisiana Purchase, nor gain the territories that became the Southwest and West Coast states, so vital to twentieth-century growth. Without the labor of enslaved people, the United States could well have ended, territorially, at about the Mississippi River, and never emerged as a world power. The point is not to speculate on counterfactual history, but the crucial role of slave labor in creating the basis for expansion and total continental development is worth underlining.

Slave-produced goods and services benefited most white Americans indirectly and passively through the process of human capital formation. Slaves made it possible for many whites to go into more rewarding occupations, gain increased skills, and generate greater lifetime earnings for themselves and their descendants. In these indirect and passive ways, slavery produced enormous benefits beyond those usually considered that flowed directly from production. Similarly, after the slavery era, exclusion and discrimination allowed millions of Americans and immigrants to enter occupations with greater prospects. In these ways, racism generated income and wealth that flow to present-day recipients. That is an important reality, and its consequences can be measured.

Historian Theodore Hershberg studied immigration and found that successful, accomplished black tradespeople and skilled operators were displaced by immigrants. So it is not simply a matter of black entrance being blocked. Black earnings were established, then forcibly discontinued by private practice and by conscious, active, wrongful interventionist public policy.

Discrimination continued through the mid-twentieth century. During the twentieth century, discrimination produced far greater benefits than those piled up during the preceding 270 years because of the greater population and size of the economy. The most significant sources of unjust enrichments have fairly recent origins, notwithstanding the dramatic effects of compound interest on the earlier, longer stream of coercively, interracially diverted income.

Exploitation, exclusion, and discrimination were mechanisms that produced unjust enrichment. *Exploitation* is a loaded term that carries great emotional baggage with the general public even when used in a technical sense. In restitution analysis, exploitation refers to super benefits over and above "normal" returns on investment, or above a unit of labor's marginal productivity. *Exclusion* refers to what is usually known as *occupational discrimination*, in which whites occupied jobs that otherwise, in a freely competitive market, would have been occupied by blacks of equal ability and training, exerting equal effort. *Discrimination* refers to three other phenomena in addition to occupational discrimination. First, employment discrimination is commonly seen in the "last-hired, first-fired" practice, whereby blacks and whites of equal endowments experience different lengths of employment in similar economic cycles. Second, wage discrimination refers to situations in which whites and blacks, equally endowed, receive different wages for the same occupational and skill contribution. Third, there are other forms of discrimination, as outlined by economist Lester Thurow in *Generating Inequality* (1975). These include discrimination in capital, housing, medical and health care, and other subtle twentieth-century practices.

All these differential practices produce a diversion of income and wealth in the United States from blacks to whites. All of them made whites better off relative to blacks, in the aggregate, than they otherwise would have been in a society, and in markets, using free and openly competitive selection processes.

The total consequence of these direct and indirect, active and passive methods of diverting income and wealth interracially resulted in unjust enrichment that can be measured. The information will be salutary for all concerned, and it will focus policy discussion on constructive remedies. That leads to the "so what?" question: What difference will this information make? What practical value will restitution theory have? Managing overall national economic performance requires that policymakers understand the concept of unjust enrichment and the restitution theory. Economic underperformance is caused in part by the alienation of millions of people who believe they are victims of injustice, and withhold their best efforts in response.

Systemic economic arrangements often are imposed by dominant social groups on less powerful ones. Invariably, these patterns of transactions produce costs for the latter and benefits for the former. Economic injustices, sustained over time, produce cumulative benefits—that is,

unjust enrichment. This can be measured. When such cumulative benefits are measured, the results can then be introduced into public policy discussions for the purpose of acknowledging the transgressions, admitting the consequences, and accepting the fact that remedies are proper, feasible, and just.

Restitution theory offers a basis for correcting the lopsided results of distortions in markets characterized by coercion, exclusion, and discrimination. It raises the prospect that the simple fact of illuminating economic relationships this way will, in and of itself, tend to reduce the offending behavior. That is because a major reason the injustices occurred in the first place, and then perpetuated, was that a veil of ignorance rested over the phenomena. Restitution theory lifts that veil, and will make it harder in the future for economic injustices to become systemic. Such injustices rely on the fact that their magnitude is not understood. Once their magnitude is discovered, political and social forces will mobilize to stop the practices and to retrieve the unjust enrichments that have been produced.

SEE ALSO *Discrimination; Discrimination, Racial; Discrimination, Wage, by Race; Genocide; Immigration; Jim Crow; Justice; Reparations; Slavery*

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RESTRAINT THEORY

SEE *Weight.*

RESTRICTED STOCKS

SEE *Stocks, Restricted and Unrestricted.*

RETALIATION

Retaliation historically refers to a legal provision that punishes the perpetrator of physical injury, whether committed as a deliberate act or through negligence, in exact conformity to the type and amount of damage that was inflicted. In a broader sense, retaliation refers to a system of justice in which the measure of payback for harms done (not just physical harms) is stated in law and recognized as equivalent punishment or compensation. In some modern contexts, retaliation for inflicting injury, quite broadly conceived, continues in use but with an extended application.

First attested in the laws of Hammurabi from ancient Babylonia c. 1750 BCE, the law of retaliation is undoubtedly best known in the form of the biblical injunction "an eye for an eye, a tooth for a tooth" (Exod. 21:23–25; similarly, Lev. 24:17–21). This provision is also known in Roman legal terminology as *lex talionis* (Latin *talion* is at the root of English "retaliation"), although Roman law (Table VIII. 2, c. 450 BCE) permitted pecuniary compensation in the place of literal retaliation. It has been argued that compensation as an alternative means of satisfaction reflects an evolution of customary practices that dealt with the inadequacy of literal retaliation, namely, the potential to increase the number of physically maimed persons in society. Although compensation became the explicit norm in Roman, Jewish and medieval law, there also is evidence for it in the laws of Hammurabi (for example, laws ¶¶ 203–204), and it dominates the relevant sections of the laws of Eshnunna (laws ¶¶ 42–48, 55–57), Babylonian laws only slightly earlier than Hammurabi. It is likely that compensation, either set by law or negotiated between the relevant parties, was always an option available to the injured party.

The purpose of laws of retaliation originally may have been to curtail excessive vengeance by or on behalf of a wronged party that would have provoked a spiral of retaliatory attacks. These laws set a just balance: an eye for an eye, or compensation determined to be equivalent. Additionally, the law may have been meant to deter prospective perpetrators by drawing attention to the personal cost of actions that cause injury. Literal retaliation prompts you to value my eye (or other body part, or life, or child, or whatever) as much as you value your own. If you would not deliberately remove your own eye, then do not deliberately remove mine, else I demand yours of you; and as you would guard against negligently losing your own eye, so you should equally guard against negligently losing mine, else I demand yours of you.

In ancient and medieval societies justice was usually not impartial; it graded punishments and compensation according to the social statuses of the perpetrator and the victim. So, for example, in the laws of Hammurabi, if an *awīlu* (a high-status person) blinded the eye of a fellow *awīlu*, then the penalty was the blinding of his own eye. However, if he blinded the eye of a commoner, then fixed monetary compensation was paid. Should an *awīlu* blind the eye of a slave, a lesser fixed monetary compensation

was due, apparently to the slave owner (laws ¶¶ 196, 198–199; compare Exod. 21:26, where the blinded slave is allowed to go free, thus compensating the slave, but in common with Hammurabi, the higher-status perpetrator is not blinded). Laws of retaliation reflected and served to reinforce status distinctions in society, and thus protected the honor of high-status individuals. Certain individuals, their family members, their body parts, and their pain, were simply worth more than lower-status individuals under the law.

The developing polity, as a law-making body, assumed the role earlier performed by the extended kin group to regulate retaliatory punishments and to maintain the social status–honor regime. In modern western law, tort law regulated by the state-appointed courts has replaced retaliation, and covers a myriad of "injuries" for which one can seek redress, although the determination of just pecuniary compensation that dominates tort law obviously has roots in its ancient and medieval counterpart. "Retaliation" still features in current U.S. law in respect to employment. "Unlawful retaliation" pertains to actions taken by an employer that discriminate against an employee under the provisions of Title VII of the Civil Rights Act of 1964. If, for example, an employee makes a claim or supports the claim of a fellow worker in respect to discrimination or harassment in the workplace based on the Civil Rights Act, the employer cannot retaliate against the employee to materially adversely affect the employee in terms or conditions of employment (section 704(a) of Title VII). The Supreme Court's 2006 decision in *Burlington Northern and Santa Fe Railway v. White* has significantly lowered the standard claimants must prove to win a retaliation claim. If proven to have retaliated, the employer is liable to pay a court-determined amount in compensation to the harmed employee.

Although laws of retaliation, and tort law generally, focus on individuals, the concept of retaliation has found a distinctively communal application in certain modern contexts. In international relations, for example, the nuclear arms race between the United States and the Soviet Union during the cold war moved the superpowers toward mutually assured destruction. Each developed the capability to destroy the other by launching a retaliatory strike after absorbing a first strike. Nuclear deterrence theory was predicated on the notion that the credible prospect of retaliation should act as a deterrent to a prospective perpetrator.

A second area featuring a communal conception of retaliation is international trade. In this context, trade protection by one nation can issue in trade retaliation by a trading partner, sanctioned by an international body such as the World Trade Organization (WTO). The retaliation might be of a literal kind: a tariff imposed on some good(s) to counteract a tariff imposed by the trading partner, and according to the WTO Dispute Settlement Understanding, the countermeasures should be "equivalent to the level of nullification and impairment" (Article 22.4). That is, the penalty should justly balance the infringement. The point of the retaliation is only partly to obtain compensation for the financial harm caused by protectionist policies of a trading partner. It actually seeks to pressure the protectionist trader to abandon its practices and comply with its WTO commitments. Here retaliation serves mainly as a mechanism to get a party to modify its behavior, but it also serves to warn potential perpetrators because there is a sanctioned retaliatory response.

SEE ALSO *Cold War; Deterrence, Mutual; Policy, Fiscal; Public Policy; Punishment; Restitution Principle; Tariffs; War; World Trade Organization*

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RETALIATION, TARIFF

SEE *Tariffs.*

RETARDATION, MENTAL

SEE *Mental Retardation.*

RETARDATION, PROGRAMMED

SEE *Programmed Retardation.*

RETRIBUTION

SEE *Punishment.*

RETURNS

The idea of returns has a long history in economics. This is not surprising because the concept of a "return" is just the flip side of the concept of cost. Accordingly we may define a return as a change in output (or the cost of producing an additional unit of output) resulting from a change in the quantity of quality of inputs. Adam Smith's famous pin factory discussion of the division of labor in the opening pages of *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776) regards the declining costs associated with productivity-enhancing technical change. David Ricardo, in both the *Essay on Profits* (1815) and *Of the Principles of Political Economy and Taxation* (1817), described the diminishing returns associated with economic growth. Capital accumulation would lead to higher population, increasing the demand for food and thus the need to intensify and extend agricultural production. Intensification of production and the extending of production on to lands of inferior quality or further from the central markets (and thus associated with higher transportation costs) would lead to higher rents and wages, squeezing profits and choking off accumulation.

In economics the distinction must be made between returns to scale and returns to substitution. Returns to scale regards the changes in output resulting from increases in all factors of production (land, labor, and capital). For example, when all inputs are doubled: If output more than doubles, there are increasing returns to scale; if output exactly doubles, there are constant returns to scale; and if output less than doubles, there are decreasing returns to scale. Returns to substitution regards the impact of changing the quantity of one factor of production when one or more other factors are fixed in quantity. For example, when there is an increase in one input, holding the quantity of all other inputs constant: If the cost of producing an additional unit of output falls, there are increasing returns; if the cost of producing an additional unit of output stays constant, there are constant returns; if the cost of producing an additional unit of output rises, there are diminishing returns. There is no such thing as "decreasing returns to scale." If all factors are variable, then they can be combined in the proportions that produce the highest productivity and lowest costs and then replicated. There is no such thing as "increasing returns to substitution," as producers will always use the proportions that give them the lowest cost and highest productivity, even if that means not using the entire quantity of some of a resource.

Piero Sraffa (1925, 1926) showed that the neoclassical versions of nonproportional returns embodied in the U-shaped average cost curve—a necessary component of determining the equilibrium size of the firm in a perfectly competitive market—are indeed problematic. First, the two kinds of nonproportional returns—increasing and diminishing—refer to different parts of economic theory. Increasing returns is part of the theory of general economic progress and so the theory of production, while diminishing returns is part of the theory of rent and so the theory of distribution. Second, in Alfred Marshall's framework, these must be compatible with the ceteris paribus conditions of the partial equilibrium framework while still not violating the assumptions of perfect competition (Marshall 1961). Sraffa shows this to be either terribly unrealistic or logically impossible.

In the case of diminishing returns, unless we find an industry where all firms use a scarce factor, variations in average cost associated with increased production in the industry under consideration will be of the same order of magnitude as variations in costs experienced by other industries using the same scarce factor. This violates the ceteris paribus assumption of partial equilibrium analysis. As for increasing returns, these cannot be present at the same time in both an industry and the firms within it, because otherwise firms will keep on expanding until they reach a size incompatible with perfect competition. Nor can they be found in various industries at the same time, or ceteris paribus conditions will be breached again. Marshall, aware of this, developed a category of economies of production external to the individual firm but internal to the industry. This may be proper in terms of perfect competition and partial equilibrium but wholly unrealistic.

Sraffa's conclusion that we may find some use in the "old classical" conception of constant costs may help in theoretical models, but this does not mean that he did not acknowledge the importance of economies of scale and increasing returns in the real economy. Allyn Young (1928) just a few years later went back to Smith's discussion of the division of labor and drew out its contemporary relevance for economic growth. One of Young's students at the London School of Economics, Nicholas Kaldor, combined the Smith-Young insight into the mutually reinforcing relation between economic growth and technical progress and wed it to a dynamic version of John Maynard Keynes's principle of effective demand in his notion of cumulative causation (Kaldor 1972). This analysis resulted in Kaldor's "polarization thesis" regarding the division of the global economy into rich, industrialized nations and poor, developing national economies, which has links to the Prebisch-Singer hypothesis of declining terms of trade between the two sets of countries (Prebisch 1950; Singer 1950). Even in Smith there is the asymmetric analysis of manufactures and

agriculture, the former characterized by increasing returns and the latter by diminishing returns. This was abandoned by Marshall, whose model portrays all factors of production symmetrically, experiencing increasing returns as production begins and diminishing returns as production continues (as in the U-shaped average cost curve). Marshall also abandoned the qualitative aspects of returns, limiting the causes to quantitative differences only. Thus the important distinction between the classical and neoclassical notions of returns.

SEE ALSO *Average and Marginal Cost; Competition; Competition, Perfect; General Equilibrium; Marshall, Alfred; North-South Models; Partial Equilibrium; Returns to a Fixed Factor; Returns to Scale; Returns to Scale, Asymmetric; Returns, Diminishing; Returns, Increasing; Risk-Return Tradeoff; Sraffa, Piero*

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RETURNS, DIMINISHING

The French economist Anne-Robert-Jacques Turgot (1727–1781) is credited with introducing the concept of diminishing returns into economics. In production theory, it refers to the changes in output associated with changes in some inputs, called variable factors, while other inputs, called fixed factors, are held constant. The relation is stated as a law: *with given production techniques, the increment to output associated with each additional unit of a variable factor applied to a given amount of a fixed factor will* eventually *diminish,* which is why it is more properly called the Law of Eventually Diminishing Returns.

The short-run concept of diminishing returns is not to be confused with the long-run concept of returns to scale. The latter refers to changes in output when all inputs are altered in equal proportion. Diminishing returns caused by a hidden fixed factor has, however, been offered as one explanation of the observation of what appears to be diminishing returns to scale.

Diminishing returns provides a possible explanation of the eventual positive slope of cost curves in the short run (defined as a situation in which at least one key input is fixed). However, its most famous application was made in 1798 by the English economist Thomas Robert Malthus, who argued that increased population (and capital) applied to the given amount of a nation's land would eventually encounter diminishing returns. Each new person added to the labor force would then add less and less to total production, until living standards are reduced to the subsistence level. It is non-controversial that, if techniques of production remain constant, increases in population (and all other inputs) with land held constant, must encounter diminishing returns to agricultural output and, hence, cause falling living standards. Malthus also noted that, if unchecked, populations tend to grow at a geometric progression. He then added the arbitrary assumption that the growth of productivity, due to the development of new technologies, would follow an arithmetic progression, which researchers today know to be incorrect. This theory produced two famous predictions. First, the growth of population and capital would eventually lead to continually falling living standards until bare subsistence is reached. Second, the growth of capital alone could raise living standards but at a falling rate (due to diminishing returns) until the arrival of the "stationary state" in which per capita income could not be raised further. These predictions led the Scottish historian Thomas Carlyle (1795–1881) to label economics "the dismal science."

A related concept, called diminishing returns to income, is used in the economic theory of consumption. It holds that successive increments of income give decreasing amounts of satisfaction (what economists call utility) since people's most pressing needs will be satisfied first and then as income rises further, along with the consumption that it permits, successively less and less pressing needs will be met. The concept was long regarded as an untested although plausible hypothesis. Research summa-

rized by Richard Layard in 2005 has, however, succeeded in measuring satisfaction and has largely confirmed the hypothesis of diminishing returns to consumption—although not necessarily that of diminishing returns to income, since income may serve other purposes than permitting consumption, such as conferring power and prestige.

Physical diminishing returns is often appealed to by those who believe that sustained growth is impossible. They argue that when variable amounts of human capital and effort are applied to the world's fixed amount of resources, diminishing returns must sooner or later be encountered, slowing and eventually halting growth. Modern students of the accumulation of knowledge, and the technological change that it allows, argue otherwise. They make two points. First, unlike most economic entities that are rivalrous—if one person uses a machine, another person cannot simultaneously use it—knowledge is nonrivalrous—if one invents a new technology, everyone can use that knowledge simultaneously. Second, there is no reason to believe that the accumulation of knowledge will encounter diminishing returns when acting through the new technologies that it enables. New knowledge occasionally generates new general purpose technologies (GPTs) such as the steam engine, electricity, and the computer. These in turn make possible a massive set of derivate technological applications. There is no law in physics or economics that suggests that the power of successive GPTs to generate derivative innovations will lessen over time. Indeed, it is clear that the dynamo brought with it a much richer implied research program than did the steam engine.

Knowledge accumulation is the historical process that has allowed humanity to overcome diminishing returns through the invention of new technologies, which have enabled bursts of economic growth throughout history. The accelerating creation of new technological knowledge since the first industrial revolution may well permit the circumvention of diminishing returns by being the source of sustainable improvements in living standards in the foreseeable future.

SEE ALSO *Returns; Returns to a Fixed Factor; Returns to Scale; Returns to Scale, Asymmetric; Returns, Increasing*

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RETURNS, INCREASING

A firm or an industry, having a given technology, exhibits increasing returns to scale if an increase in the inputs it uses to produce a particular product increases its output more than proportionately. This effect is evidenced in a decreasing long-run average cost curve. While the increasing returns concept has relevance for both microeconomics and contemporary growth theory, historically it dates from Adam Smith's *Wealth of Nations* (1776), which links the cost experiences of manufacturing firms to the division of labor (Smith 1776, Book I, Chapter 3). The practice leads to specialization and therefore the capability among those who specialize to trade their surpluses, which has the effect of expanding the market. Under perfect competition, declining cost has the effect of reducing selling prices. Although it reduces profits, it increases the real incomes of all classes.

Antoine Augustin Cournot, a French mathematician, was the first among several thinkers to note that increasing returns to scale are incompatible with price-taking behavior by competitive firms (Cournot 1838, pp. 59–60). A decade later, John Stuart Mill also became cognizant that economies of scale could compromise competitive markets. This possibility was, however, categorically negated by Alfred Marshall, who rejected the idea that increasing returns to scale characteristically cause industries to become monopolized. He invented external economies in the form of "general improvements," which are equally available to all firms in the industrial environment and were believed to account for the already observable tendency in the England of his day to explain declining commodity prices. Economies that are internal to firms are self-limiting, Marshall believed, partly because the full effects of economies of scale are likely to be impeded because over time "the guidance of business falls into the hands of people with less energy and less creative genius" (Marshall 1890, p. 316). Thus, Marshall maintained that monopolistic tendencies would be curbed, and competition would continue to prevail, rendering

unfounded Mill's fear that increasing returns to scale would compromise pure competition; that is, firms and industries invariably produce under conditions of increasing supply price, which explains the upward slope of the industry supply curve.

The definitive theoretical challenge to Marshall's conclusion that increasing returns to scale are compatible with ongoing pure competition was articulated by Piero Sraffa, who maintained that the economies needed to satisfy Marshall's logic "were nowhere to be found" (1926, p. 540). Marshall's particular equilibrium analysis was designed to explain price determination in a competitive industry that is identifiable in terms of the cost curves of its "representative firm." These cost curves must be independent of those of all other firms in the industry and the industry's factor suppliers. Thus, economies that are external to the representative firm but internal to the industry of which it is a part, which is a requirement of the particular equilibrium method, are incompatible with Marshall's methodology. If these economies exist at all, they are "in the middle where nothing or almost nothing is to be found" because Marshall's explanation of increasing returns is methodologically inconsistent (Sraffa 1926, p. 542). Sraffa recommended that economists give up trying to explain competitive prices and turn their attention instead to explaining prices under imperfect competition. Shortly afterward this became the objective of Joan Robinson (1933) and Edward Chamberlin (1933).

More recently, Marshall's concept of increasing returns to scale has been "rediscovered" by contemporary "new growth" theorists (Romer 1986, 1987), who have taken the "internal-external economies" construct out of its original particular equilibrium setting in which it was intended to explain competitive price determination. They have placed it into a Walrasian general equilibrium context in which the prices of all commodity and factor markets are interdependent. The premise of the model is that the external effects of knowledge and capital accumulation can amend the Cobb-Douglas productions function by a multiplicative factor to generate endogenous growth in the affected economies. It is ironic that the theoretical problem that Sraffa identified as being associated with Alfred Marshall's concept of external economies to explain the compatibility of increasing returns and competitive equilibrium has been revived within a general equilibrium framework that is clearly incompatible with the cost-independence requirement of Marshall's particular equilibrium analysis.

By the mid-1920s, with the assembly-line production of automobiles and other industrial products already a fact of life, a trend toward oligopoly—that is, competition among the few—was already apparent. Shortly afterward, the advent of the theories of "imperfect" and "monopolistic" competition (Robinson 1933; Chamberlin 1933) challenged the predominance of pure competition on the premise that product demand curves had come to exhibit a downward slope because firms engaged in differentiating their output had become able to charge prices in excess of the competitive "law of one price." While they were not monopolists of their own commodities, they were able to establish demand curves for their particular brands that were less price elastic than would be the case in competitive markets in which product homogeneity assured that buyers had no basis for preferring one seller's product over another. More recently, despite the institutional and theoretical relevance of the theory of imperfect and monopolistic competition, many thinkers maintained that economies of scale could be theoretically reconciled with perfect competition. A case in point is the interpretation by contemporary trade theorists. Helpman and Krugman (1985) argue that increasing returns might prevail as an external effect that can generate economic growth as an endogenous phenomenon and thus preserve Marshallian perfect competition.

The most forward-looking post-Marshallian interpretation about the relationship between increasing returns and market competition came from Allyn Young's return to Smith's theme of division of labor. In his presidential address to the British Association for the Advancement of Science, "Increasing Returns and Economic Progress," Young noted that "the most important single factor in determining the effectiveness of its industry appears to be the size of its market" (1928, p. 122) and whether it is sufficiently large to generate increasing returns. Except for the impetus that comes from new knowledge, economic progress is principally generated by division of labor to realize more fully the economies of capitalistic or roundabout methods of production. Thus, Young's "Increasing Returns" paper specifically separated Marshall's increasing returns concept from its particular (i.e., microeconomic) industry setting and, following Smith, extended increasing returns to the economy as a whole. Thus, Young anticipated the role of Keynes's emphasis on aggregate demand and Nicholas Kaldor's theory of increasing returns in the process of economic growth. Yet it is only comparatively recently that Young's special insight into the process of growth as "self perpetuating, rather than self-exhausting" has been recognized (Blitch 1983; Sandilands 2000; Rima 2004).

SEE ALSO *Returns; Returns to a Fixed Factor; Returns to Scale; Returns to Scale, Asymmetric; Returns, Diminishing*

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Ingrid H. Rima

RETURNS TO A FIXED FACTOR

A *factor of production* is any input that contributes in a positive way to a production process. For example, to grow wheat a farmer requires inputs such as seed, farm machinery, land, and labor. Economists aggregate factors into three categories: (1) *land* or *natural capital* (such as soil, the air individuals breathe, or the fish in the sea); (2) *labor* (the skills people have and their education, the hours they work and how they cooperate and interact with each other); and (3) *capital* (machinery and tools that can be used to produce other goods).

An input that can only be changed in a production process in the long run is called a *fixed factor*. A factor may be fixed because: (1) the input might take a long time to build or replace; (2) it has few substitutes and is required in fixed proportion to other inputs; or (3) more cannot be purchased because its supply is fixed in the short run.

The return to a fixed factor is the payment to owners of fixed inputs. This return is related to the concept of economic rent, described by the English economist David Ricardo (1772–1823) in *Principles of Political Economy and Taxation* (1817) and defined as the payment in excess of the minimum required to elicit the supply of an input in the long run. Rent is like a windfall gain and can arise because of a factor's overall scarcity, but may also be due to differential quality, location, or other desirable characteristics of particular units of the input, as shown by R. Quentin Grafton et al. in *The Economics of the Environment and Natural Resources* (2004, pp. 215–216).

If demand exceeds current supply at the existing price, an input's price will be bid up, thereby attracting a greater supply in the future. The larger the excess demand and the slower the supply response to a price increase, the greater will be the amount a firm has to pay for an input. Thus a factor fixed in supply, all else equal, will accrue greater returns per unit than if its supply were highly responsive to price changes. Similarly, if a factor is fixed because of inflexibilities in the production process, then any price increase imposes a greater cost burden than if the short-run use of the input could be varied.

Returns to fixed factors have a major influence on the world economy. For example, due to excess demand, the price of crude oil more than doubled over the period 2002 to 2005, despite an increase in supply. Because oil is an essential input into many production processes, firms have, in the short run, little choice but to pay the higher prices in order to maintain their production. The beneficiaries of these price hikes are oil producers. By providing a factor that has few substitutes in many production processes and is also, more or less, globally fixed in supply in the short run, petroleum suppliers receive a windfall gain. These surpluses are worth hundreds of billions of dollars each year and affect the standards of living of millions of people. High oil prices, in turn, encourage oil exploration that should increase supply in the future and also provide incentives for firms to modify their input mix and become less reliant on oil.

SEE ALSO *Rent; Returns; Returns to Scale; Returns to Scale, Asymmetric; Returns, Diminishing; Returns, Increasing*

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R. Quentin Grafton

RETURNS TO SCALE

Returns to scale are defined as the relation between an equi-proportionate change in all the inputs used in a commodity's production and the resulting proportionate change in the output of that commodity. The three possibilities are labeled "decreasing," "constant," or "increasing returns," depending on whether a given proportionate change in all inputs causes a less than proportionate, a proportionate, or a more than proportionate change in output. Although economists debate what generates these effects, all three types are used in microeconomic theory. The common assumption in neoclassical macroeconomics is that gross domestic product (GDP) behaves as if it were generated by an aggregate production function obeying constant returns to scale.

While commonly used in economics, the concept is also used in many of the social and physical sciences. For example, in 1986 Nathan Rosenberg and L. E. Birdzell noted that the invention of the three masted sailing ship allowed Europeans to build larger ships exploiting increasing returns to scale, such as carrying capacity increasing more than in proportion to the increase in materials for construction. In 1991 Leonard Dudley analyzed military returns to scale. Some technologies, such as stone-age weapons, entailed constant returns (a larger army could expect casualties equal to those of a smaller opponent), while others, such as bronze weapons, entailed increasing returns (a larger army could expect fewer casualties than a smaller opponent). Other applications of the concept include the analysis of networks, social organization, governance, and technological change.

Mainstream micro-economists typically argue that constant returns to scale, and hence horizontal long run average cost curves, are ubiquitous given complete divisibility of all inputs. The argument is in two parts. First, decreasing returns are ruled out because it is assumed that all production activities can be replicated, for example, by building a series of identical factories, identically run and managed. Second, increasing returns are ruled out by the proportionality postulate, which states that in the absence of indivisible inputs or hidden fixed factors, any activity can be subdivided so that an equi-proportionate reduction in all inputs yield the same percentage reduction in output. Thus, if there were increasing returns to scale, the larger scale of activities could be achieved and then subdivided, leaving inputs per unit of output unchanged.

The commonly assumed U-shaped long run average cost curve for a firm, with its single most efficient scale of output, is then explained in two parts. First, the falling part (increasing returns to scale) is due to such things as indivisibilities (or "lumpiness") in some inputs so that too much must be used at small scales of output. The rising portion (decreasing returns) is usually explained rather weakly by such things as diseconomies of management in coordinating the activities of many separate production units.

An alternative view, implicit in the work of the nineteenth-century Austrian capital theorists such as Eugene von Böhm-Bawerk and Knut Wicksell, is that returns to scale are latent in the superior productive power of indirect or intermediate production processes that create capital goods. In the twentieth century, scholars B. Curtis Eaton and Richard G. Lipsey examined this theme, providing a proof by contradiction of the existence of latent returns to scale. Lipsey, Kenneth Carlaw, and Clifford Bekar develop this further in 2005. In their research, they maintained that the standard abstract argument for constant returns to scale based on replication and the proportionality postulate is scholastic in purporting to deduce empirical relations from a priori considerations. They argued that checking the hypothesis of the ubiquitous possibility of replication requires an appeal to empirical evidence. For example, replication may not be possible if more output is required at a point in space, such as building a larger bridge over a narrows or applying more pumping power at the pit head of a coal mine. They observed that "… if the list of possible missing inputs is defined as anything that might cause the neoclassical production function to display decreasing returns, such as climate, spatial conditions of production … and a host of other unspecified influences, the proposition becomes tautological and hence uninteresting empirically" (Lipsey et al., p. 399).

Lipsey and colleagues argued similarly with respect to the proportionality postulate. If, for example, one wishes to halve the horsepower of some automobile, a smaller engine is needed. But neither "subdividing" by halving the engine's dimensions, nor by halving all the inputs that make it, will halve the engine's power output. Physics shows that halving its dimensions alters its cost of production, the power delivered, and running costs in different proportions, while halving all the inputs is technically inefficient because of the different dimensionality of the various components. They further argued, " '[h]istorical increasing returns' [to scale] arise because the scale effects are permanently embedded in the geometry and physical nature of the world in which we live, but our ability to exploit them is dependent on the existing state of technology" (Lipsey et al., p. 397).

Increasing returns to scale also arise from complementarity among components of capital and the risk of breakdown, and decreasing returns from the time cost associated with waiting to extract the service flow from durable capital goods. In all of these cases, the relationship between indivisibilities and returns to scale is the reverse of the mainstream view. Indivisibilities—building capital goods with more capacity than the minimum possible—

are the consequence of endogenous decisions to exploit naturally occurring scale effects, whereas in the mainstream view, exogenous indivisibilities are the cause of scale effects.

SEE ALSO *Returns; Returns to a Fixed Factor; Returns to Scale, Asymmetric; Returns, Diminishing; Returns, Increasing*

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Kenneth I. Carlaw
Richard G. Lipsey

RETURNS TO SCALE, ASYMMETRIC

> The forces which make for Increasing Return are not of the same order as those that make for Diminishing Return: and there are undoubtedly cases in which it is better to emphasize this difference by describing causes rather than results. (Marshall 1890, p. 266)

Asymmetric returns to scale are defined in three ways in economics. The first is the one referred to in the above quote, which is an asymmetry among increasing, constant, and decreasing returns to scale that may exist because decreasing returns to scale are thought by many to be implausible if the theoretical exercise concerning returns to scale is conducted properly. Therefore, there may be no symmetric counterpart to the increasing returns portion of production so that long run average cost curves are not symmetrically U-shaped. (Notice that the existence of decreasing returns does not necessarily imply exact symmetry in the shape of the cost curve and so this concept defined in this way is perhaps inappropriately labeled.) The a priori argument for the lack of decreasing returns is that observed apparent decreasing returns to scale actually depends on the existence of a hidden or fixed factor such as managerial or entrepreneurial capacity so that the required scaling of all factors is not actually occurring.

One counterargument to the existence of asymmetry under the first definition was provided in 2004 by Kenneth Carlaw. In his work Carlaw showed that scale effects result from the complementarities among components that make up capital goods and the risk associated with how long each component will last. The cost minimizing agent will create more durability of components than is needed for one period's final production in order to exploit the scale effects inherent in the nature of multiple component systems and environmental uncertainty. However, at some point decreasing returns to scale set in for the durability of the capital good that is obtained from the scaling up of the durability of its components. Thus in such cases returns to scale are symmetric in the sense that increasing and then decreasing returns to scale are encountered as production with multicomponent capital goods is scaled up.

In 2005 Richard Lipsey, Kenneth Carlaw, and Clifford Bekar introduced another argument justifying the existence of diminishing returns to scale: Because real world production takes place in spatial contexts duplication may not always be possible. When and where it is possible must then be determined on empirical not a priori grounds.

A second definition of asymmetric returns to scale is that they are encountered when new technologies are applied in varying contexts. The same technology may be applied in a variety of different production, market, and institutional contexts as it emerges and is diffused across different economies. For example, lean or "just-in-time" production applied in North America is generating lower returns than in China. One suggested reason is that China has no pre-existing manufacturing infrastructure and managerial orthodoxy, whereas North American manufacturing has a solidified structure that has evolved out of the technology of mass production. It is therefore not a good fit for lean production techniques and is generating lower returns.

A third definition of asymmetric returns to scale is found in the arguments of Nicholas Kaldor. His view is

that asymmetry in the returns to scale encountered in developed and developing economies arise because of differences in the goods they produce. The comparative advantage of developing economies leads them to specialize in production technologies that have decreasing returns to scale (e.g., agriculture) while developed economies specialize in technologies that have increasing returns to scale (e.g., manufacturing).

SEE ALSO *Production Function; Returns; Returns to a Fixed Factor; Returns to Scale; Returns, Diminishing; Returns, Increasing*

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REVEALED PREFERENCE

The theory of revealed preference was originally developed by Paul Samuelson using choice as a primitive to derive some fundamental principles of demand theory. In contrast, in the traditional framework of utility theory approach, the weak preference ordering of a chooser is the primitive. The motivation was that an observer does not know or observe a chooser's preferences, but a bundle of goods a consumer buys is observable. Put differently, Samuelson's objective was to derive the laws of demand from assumptions regarding price-quantity data without getting into any traces of preferences. The basic approach is based on the notion that in a given price-income situation, a chooser has an affordable set of consumption bundles, the *budget set*, and if a consumer chooses a particular bundle over all alternative bundles in the budget set, then this choice is revealed to be the chooser's underlying preference.

This revealed preference is not necessarily the true preference of the chooser. Rather, it is the chooser's "as if" preference. Suppose for a price-income situation (p,M), $B(p,M)$ is the budget set. A demand function is a rule that specifies exactly one element of $B(p,M)$ for every budget set $B(p,M)$. If both x and y are in $B(p,M)$, and x is chosen, then x is said to be (directly) strictly *revealed preferred* to y. It is *directly* revealed preferred because both x and y are compared in a budget set $B(p,M)$; it is *strictly* revealed preferred since x is chosen from a budget set while y is rejected, since demand function is single-valued.

Samuelson introduces a condition, known as the *weak axiom of revealed preference* (WARP), which says that if x is (directly) strictly revealed preferred to y, then there is no other price-income situation (i.e., budget set) in which y will be chosen while x is available. In other words, WARP requires that if x is (directly) strictly revealed preferred to y, then y cannot be (directly) strictly revealed preferred to x. It can be viewed as a two-term consistency. If the demand function satisfies the WARP, then it must satisfy the property that a demand function is homogeneous of degree zero in income and prices; it exhibits the nonpositivity of the own compensated price effect (i.e., the substitution effect); and for every normal good, the price effect must be nonpositive. There are additional implications of the utility theory approach to consumer behavior (namely, symmetry of the cross-substitution term) that are not implied by the WARP.

The rationalizability of the demand function in terms of weak preference orderings implies that the consumer behaves as if he or she has a weak preference ordering and, given the budget set, he or she optimizes on the basis of a realized preference ordering. Rationalizability in terms of weak preference orderings implies, but is not implied by, the WARP. So the WARP needs to be strengthened. Suppose x and z are two alternatives that never appear together in any budget set. In addition, suppose x is (directly) strictly revealed preferred to y, y is (directly) strictly revealed preferred to u, u is (directly) strictly revealed preferred to w, and w is (directly) strictly revealed preferred to z. Then we say x is *indirectly strictly revealed preferred* to z. Strengthening the WARP from a two-term consistency requirement to a multiterm consistency—known as the *strong axiom of revealed preference* (SARP), which says that if x is (directly) strictly revealed preferred to y, then y cannot be directly or indirectly strictly revealed preferred to x—it can be demonstrated that this stronger requirement is a necessary and sufficient condition for the rationalizability of a demand function in terms of weak preference orderings (Houthakker). Furthermore, the SARP, together with a continuity condition, implies the existence of a utility function that rationalizes the consumer's revealed preferences. This establishes the logical equivalence of the revealed preference approach and the utility theory approach.

Following Samuelson's pioneering work, the revealed preference approach was developed further in an abstract

choice theoretic framework. For any given universal set of alternatives X, consider all possible nonempty subsets $[X]$ of X, which is the power set of the universal set minus the empty set. Consider a well-specified family S of nonempty subsets of X; i.e., S is a subset of $[X]$. A choice function is a rule, $C(\cdot)$, which for any element A of S specifies a nonempty subset of A, that is, $C(A)$ is a subset of A. Note that $C(A)$ is not necessarily single-valued. Clearly, demand function is a special case of a choice function. Now for any A in S, if x is in $C(A)$ and y is in A, then x is said to be (directly) revealed preferred to y. If x and z together are not in any S, and if x is (directly) revealed preferred to y, y is (directly) revealed preferred to u, u is (directly) revealed preferred to w, and w is (directly) revealed preferred to z, then x is said to be indirectly revealed preferred to z.

For Samuelson, a choice function must be single-valued, and the domain S must be the convex polyhedra (or the budget triangles in a two-commodity world) since the objective is to derive the laws of demand of a competitive consumer (i.e., a price taker) from observed data. For the domain $S = [X]$, the multiterm consistency requirement of the SARP is collapsed into a two-term consistency. Consequently, the WARP becomes equivalent to the SARP (Arrow).

Suppose a multivalued choice function is defined over any arbitrary domain S, a subset of $[X]$. Marcel Richter (1966) introduces a condition, called *congruence axiom*, which says that if x is (directly) revealed preferred to y, then y cannot be directly or indirectly revealed preferred to x. This condition is necessary and sufficient for transitive rationalization of a multivalued choice function in a general domain framework. Clearly, using this general approach, the demand theory results can be derived as a special case. This generalized framework helps to analyze rational choice in a wider context, such as social choice theory, voting theory, and production analysis.

The revealed preference approach developed in two directions. Following the requirement of the preference-based approach that a weak preference relation is transitive, the revealed preference literature originally developed to focus on transitive rationalization of a choice function. For the existence of a maximum, transitivity is indeed very restrictive. A less restrictive requirement could be transitivity of strict preference relation (known as *quasi-transitivity*) and the least restrictive requirement could be acyclicity of strict preference relation. The WARP requires that no revealed inferior alternative of a set A can be chosen in any other set in the presence of *any* revealed preferred alternative in A. This consistency condition can be weakened by simply requiring that no revealed inferior alternative of a set A can be chosen in any other set in the presence of *some* revealed preferred alternative in A. This weaker requirement turns out to be a necessary and sufficient condition for quasi-transitive rationalization of a choice function. Furthermore, if one requires that no revealed inferior alternative of a set A can be chosen in any other set in the presence of *some* alternative in A, then this condition turns out to be necessary and sufficient for (acyclic) rationalization of a choice function. These results are obtained for the domain $S = [X]$ using Samuelsonian revealed preference approach (Bandyopadhyay and Sengupta). Following Arrow's approach, there is a large literature on alternative characterization of various weak rationalization for the domain $S = [X]$. The results for the domain $S = [X]$ can also be obtained for the domain that consists with all pairs and triples in $[X]$. However, there is no complete characterization of weaker rationalization result for any arbitrary S that is a subset of $[X]$.

The other line of development is in the context of stochastic demand theory. For every price-income situation (p,M), a stochastic demand function (SDF) is a rule d, which, for a given budget set $B(p,M)$, specifies exactly one probability measure q over the class of all subsets of $B(p,M)$. Let $q = d(p,M)$, where d is an SDF, and let A be a subset of $B(p,M)$. Then $q(A)$ is the probability that the bundle chosen by the consumer from $B(p,M)$ will lie in the set A. Let $B(p,M)$ and $B(p^*,M^*)$ be the budget sets for two price-income situations. A stochastic demand function, d, satisfies the *weak axiom of stochastic revealed preference*(WASRP) whenever for all pairs of price-income situations, and for all subsets of the intersection of the two budget sets, A, $q^*(A) - q(A) \leq q(B(p,M) - B(p^*,M^*))$, where $q = d(p,M)$ and $q^* = d(p^*,M^*)$. WASRP generalizes laws of demand from its deterministic environment to a stochastic environment (Bandyopadhyay, Dasgupta and Pattanaik, 1999). The rationalizability of a stochastic demand function in terms of stochastic orderings has also been established. Recently, these results are generalized further by considering a stochastic demand correspondence.

The revealed preference theory has been applied largely in the evaluation of economic index numbers and in empirical tests of consistency in consumer behavior. The WARP can be used to evaluate directly a given index number.

SEE ALSO *Demand; Preferences; Samuelson, Paul A.; Tastes; Utility Function*

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REVENUE

A firm's revenue is distinguished from its profit: Revenue is the total money received by the firm ("total revenue"), whereas profit is total revenue less total cost. *Revenue* and *total revenue* are usually synonyms, but the latter term is used especially to delineate total money received, as distinct from the "marginal revenue" of each unit and the "average revenue" received for all units.

Marginal revenue is a central concept in microeconomic theory (Marshall [1890] 1961). It is the change in total revenue created by a one-unit increase in the quantity sold. As long as marginal revenue is positive, increasing output will cause total revenues to increase. Mathematically, marginal revenue is the derivative of total revenue with respect to quantity. Average revenue is the money collected per unit, or total revenue divided by quantity. When all units of a firm's output (q) are sold for the same price (p), total revenue is price multiplied by quantity, pq, and both marginal and average revenue are equal to price.

A perfectly competitive firm's marginal revenue is determined solely by price because a single firm's chosen quantity of production has a negligible effect on the market price. When one firm in a perfectly competitive market decides to produce and sell one more unit of output, the market price does not change, and so the increase in the firm's revenues is exactly equal to the number of dollars brought in by that extra unit: its price. The mathematics behind this intuition recognizes that in this case, the derivative of total revenue is $d(pq)/dq = p$ because price (p) does not change as the firm's output (q) changes.

A firm with market power wields a double-edged sword. The firm can set the price for its output, but it still must contend with a downward-sloping demand curve: Selling more output requires a decrease in price, by the "law of demand." Because of these two effects (increasing quantity while decreasing price), marginal revenue is made up of two components. When the firm decides to produce and sell one more unit of output, (1) selling more of the good increases revenue, while (2) lowering price means that less revenue is collected on each of the units that could have been sold at the higher price. Thus marginal revenue must be less than price for a firm with market power (rather than equal to price, as in the case of perfect competition, above). The two components of revenue are, respectively, the output effect and the price effect. A mathematical analysis recognizes that price now changes as the firm's quantity changes: The derivative dp/dq is nonzero. The derivative of total revenue is thus $d(pq)/dq = p + (dp/dq)q$. The first term is the output effect and the second term is the price effect. The price effect is negative because price falls when quantity rises, and this means that the marginal revenue of producing and selling one more unit of output is less than the price for which each unit can now be sold.

Marginal revenue is also closely related to the own-price elasticity of demand, or the responsiveness of quantity demanded to a change in price. A decrease in price when demand is "elastic" causes a greater percentage increase in quantity demanded than the percentage decrease in price—thus revenues must increase. A decrease in price when demand is "inelastic," in contrast, causes a smaller reaction in quantity demanded, and so revenues will fall. This is especially relevant when a firm is choosing the optimal quantity to sell and costs are fixed as the quantity sold changes: Maximizing total revenue is equivalent to maximizing profits in this case. For example, a toll-road operator should decrease price as long as the resulting increase in drivers (quantity) compensates for the loss in revenue per unit. In other words, price should be decreased as long as demand is still elastic. Total revenue (and in this case, profits) will be maximized when demand is neither elastic nor inelastic. This is also the quantity at which marginal revenue is zero.

The firm with market power thus far has been assumed to sell all units of its output for the same price; that is, it does not "price discriminate." When the firm does price discriminate it can do so either by setting separate prices for each customer or setting separate prices for different customer groups, or by adjusting price according to each customer's quantity purchased. Average revenue will vary as quantity changes, depending on the method of price discrimination, and so total revenue may not be simply price multiplied by total quantity. One example is a quantity discount: In this case, larger quantities will have lower average revenue than smaller quantities. Another example is when the customer must pay a fee for the right to purchase each unit (a "cover charge" or "membership fee"): Total revenue includes both this fee and the revenues collected on each unit's sale, so average revenue (per unit sold) decreases as quantity increases.

In fact, the ability to price discriminate allows the firm with market power to reduce the negative effect that the law of demand has on marginal revenue. The firm can set a higher price for those units of output for which customers have a higher willingness to pay, and set a lower price only for those units of output for which there is a lower willingness to pay. As output increases, charging separate prices for each unit or group of units purchased mitigates the price effect. The price effect may even fall to zero. Thus, when the firm price discriminates, it can be true that marginal revenue approaches price and the economic outcome may approach that of perfect competition, except that the economic value created is reallocated toward the price discriminating firm and away from the customer. This means that a firm with market power may produce more output if it can price discriminate than if it cannot. The firm will benefit from this practice, and this advantage to society may more than outweigh the loss to the consumer.

SEE ALSO *Revenue, Average; Revenue, Marginal*

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REVENUE, MARGINAL

Marginal revenue is a concept introduced into economics by neoclassical economists, especially Alfred Marshall in his *Principles of Economics* (1890). It became a central concept in discussion of market structure with the publication of Joan Robinson's *The Economics of Imperfect Competition* and Edward Chamberlin's *The Theory of Monopolistic Competition*, both published in 1933. Since then it has been taught in all courses in microeconomics as part of the theory of the firm.

Marginal revenue refers to the change in total revenue arising from a change in output, where the change in output can denote a rise or fall and is usually thought of as a one-unit change. More formally,

$$MR = \frac{\text{Change in total revenue}}{\text{Change in output}} = \frac{\Delta TR}{\Delta Q}$$

where MR denotes marginal revenue, TR denotes total revenue, and Q the level of output. Δ is the symbol to denote "a change in."

When used in terms of market structure, marginal revenue is related to the demand curve. The demand curve is also the average revenue curve, because it denotes the price people are willing to pay for each particular quantity. In perfect competition the demand curve is horizontal at a particular price, whereas for the typical demand curve, it is downward sloping, indicating that the quantity rises when the price falls. The relationship between marginal revenue and demand is obtained by considering the change in total revenue (ΔTR). Because total revenue is price times quantity, then $TR = P.Q$ and $\Delta TR = P.\Delta Q + Q.\Delta P$. Hence, marginal revenue can be expressed as

$$MR = \frac{\Delta TR}{\Delta Q} = P + Q.\frac{\Delta P}{\Delta Q}.$$

Under perfect competition, the price does not change whatever the level of output, so $\Delta P/\Delta Q = 0$ and hence marginal revenue is equal to price, which in turn is equal to average revenue. In market structures other than perfect competition, the demand curve is downward sloping, in which case $\Delta P/\Delta Q < 0$, and so marginal revenue is less than price and the marginal revenue curve lies below the average revenue curve—the curve that denotes the price for any level of output.

The concept of marginal revenue is useful when it is combined with other marginal concepts, especially *marginal cost*, which refers to the change in total cost when output changes. More specifically, because profit is the difference between total revenue and total cost, then if marginal revenue exceeds marginal cost, profit must be increasing. Profits are falling when the reverse inequality holds. This means maximum profits can be identified when marginal revenue is equal to marginal cost. In the case of perfect competition, this also means that at the profit-maximizing output level, price is equal to marginal cost. However, under imperfect competition, monopolistic competition, and other market structures such as oligopoly, at the profit-maximizing output level, marginal revenue is below average revenue, which means price is above marginal cost (which is equal to marginal revenue). Both these results have social implications.

If price is equal to marginal cost (equal to marginal revenue), then society is paying at the margin just what it costs society to produce that final extra unit. This is the condition that holds under perfect competition. In contrast, in market structures where the demand curve is downward sloping, price is above marginal cost (which is equal to marginal revenue) at the profit-maximizing output level. Socially, this means that society is paying at the margin more than it is costing society to produce that last unit. In the case of monopoly, this leads to monopoly profits. This is not the case under monopolistic competition, where in the long run such profits can be eliminated as firms enter the industry. What can be observed from

this analysis therefore is that it is the combination of marginal concepts that is important, and marginal revenue is just one of these.

Although marginal revenue, along with other marginal concepts, is taught in most courses in microeconomics, the concept is limited. The market structures referred to above in which the concept of marginal revenue played such an important part applies only to a single product firm. In fact almost all neoclassical analysis applies to single-product firms, which are abstract entities: not only do the firms produce only one product, but there is no internal organization. It would be difficult to apply the concept of marginal revenue to a modern multiproduct multinational company. Even so, as a logical concept it can eliminate muddled thinking.

SEE ALSO *Average and Marginal Cost; Competition; Competition, Imperfect; Competition, Monopolistic; Competition, Perfect; Economics, Neoclassical; Economics, Neo-Ricardian; Marginalism; Maximization; Profits; Revenue; Revenue, Average*

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Ronald Shone

REVOLUTION

Revolution as applied to social change originally referred to the overturning of a government but not to changes that ushered in a new age. From the fourteenth through the seventeenth centuries, Europeans spoke of "revolutions" when one form of government gave way to another, as when a monarchy was overthrown or restored or a city-state's government shifted between republican and aristocratic rule.

The notion of political revolutions as overturning tradition, creating a new era, and thereby bringing about progress was first used toward the end of the eighteenth century to describe the overthrow of monarchies and the founding of national republics in the United States in 1776 and France in 1789. Inspired by the intellectual movement of the Enlightenment, which aimed to make reason the arbiter of governing and social institutions, opponents of traditional authority saw these events as breaking the shackles of tradition and ushering in a new era of freedom under rationally conceived political institutions. Thomas Paine, in *The Rights of Man* (1791), referred to both the "American Revolution" and "The French Revolution" in this manner.

Since the eighteenth century, the notion of revolution as marking a major break with the past, destroying old ways, and bringing progress has been applied to numerous historical and intellectual events. Archaeologists call the prehistoric onset of agriculture the Neolithic Revolution. In economics, the shift from agricultural to industrial economies is called the Industrial Revolution. In science, major shifts in leading theories are commonly labeled scientific revolutions, such as the Darwinian Revolution or the Copernican Revolution, while the term "Scientific Revolution" is used to denote the shift from traditional natural philosophy to experimental science that occurred from the sixteenth to the eighteenth centuries. More recently, agronomists have used the term "Green Revolution" to describe the widespread adoption of high-yield grains and artificial fertilizers in East Asia. In military tactics, the introduction of stealth, satellite, and laser technologies has been labeled "the revolution in military affairs." Almost every area of human endeavor thus has come to use the term "revolution" to mark relatively sudden, progressive change.

SOCIAL AND POLITICAL REVOLUTIONS: HISTORICAL PATTERNS

The most common use of the term *revolution* in the social sciences is to designate major, sudden changes in political regimes, especially when carried forward through mass demonstrations or popular revolts and accompanied by attacks on government officials or elites, on public or private property, or on symbols of elite status or political authority. Such events are called "political revolutions" when they alter government institutions but leave much of the economic and social structure of society intact; they are called "social revolutions" (or "great revolutions") when they alter not only government structures but also the organization of the economy, the social hierarchy, the role of religion, and major symbols and beliefs regarding authority and national identity.

Revolutions are a form of internal political conflict, related to popular rebellions, civil wars, or coups d'état. Revolutions usually include one or more of these events; but these events, by themselves or in combination, do not constitute a revolution (or attempted revolution). What defines revolution is not merely challenges to political authority or contests for power but efforts to change a society's major political or economic or religious institutions.

Although the term is relatively new, revolutions can be identified in history as far back as ancient Egypt, where the Old Dynasty was overthrown amid popular revolts and the pharaoh was replaced by committees of notables. In classical Greece and Rome, and in medieval European city-states, political conflicts often led to a monarchy being overturned and replaced by a republic, or a republic being overthrown and replaced by a monarch or tyrant. Another form of revolutionary movement that arose in many parts of Europe, Asia, and Africa—from the early days of Christianity to the White Lotus rebellions in eighteenth-century China—were religiously inspired movements that sought to replace secular authorities with rule by a charismatic savior or a community of "saints."

The distinctively modern idea of revolution that developed in the eighteenth century was to see revolutions as permanent and progressive changes in the entire social order, changes that replaced outmoded and unjust political, economic, religious, and social institutions with a new social organization based on reason. This kind of revolution has since taken several forms.

Constitutional revolutions sought to replace traditional monarchies or empires with republics bound by newly written rules that would limit state power, end the privileges of hereditary elites, and confer rights and responsibilities on citizens. Major examples include the American Revolution (1776); the French Revolution (1789); the Revolutions of 1848 in France, Germany, and Austria; the Turkish Revolution of 1919; the Iranian Revolution of 1905; and the Chinese Republican Revolution (1911).

Anticolonial revolutions aimed to end rule by foreign countries, drawing on nationalist identities to inspire resistance and the foundation of new institutions of local self-rule. In many cases, nationalist traditions were in fact newly developed by elites, and in some cases self-rule became rule by local elites rather than citizen-based democracy. Major examples include the Latin American revolutions (1808–1828), the Vietnamese (1954) and Algerian (1962) revolutions, the Indian independence movement (1949), and the Mozambique and Angolan revolutions (1974).

Fascist revolutions also drew on nationalist traditions but used them to mobilize mass support for the replacement of weak monarchies or republics with authoritarian regimes. Major examples include Italy (1921) and Germany (1933).

Communist revolutions, inspired by the historical theories of Karl Marx, aimed to overturn existing regimes and replace them with one-party states that abolished private property. They created dictatorships that destroyed economic elites "in the name of the people." Major examples include Russia (1917), China (1949), and Cuba (1959).

Antidictatorial revolutions, provoked by the excessive corruption or depredations of modernizing dictatorships, aimed to create new regimes based on constitutions or one-party states. Major examples include Mexico (1911), Nicaragua (1979), and the Philippines (1976).

Some revolutions combined these features; for example, the Vietnamese revolution was anticolonial and Communist. Other revolutions were distinctive and fit none of these categories; examples include the South African anti-apartheid revolution (1994), which replaced a racially exclusive regime with a multiracial democracy, or the Iranian Islamic Revolution (1979), which replaced a modernizing dictatorship with an elected government that was overseen by nonelected religious leaders.

The last several decades have seen the emergence of yet another kind of revolution, the "people power" or "color" revolutions—so termed because popular demonstrations toppled dictators, not by mass violence, but instead by rallying huge crowds around symbols of national unity and popular opposition, which were mainly colored symbols such as yellow or orange ribbons, roses, or tulips. Examples include the Philippines (1976), Ukraine (2004), Georgia (2003), and Kyrgyzstan (2005). Other examples include the Velvet Revolution in Czechoslovakia (1989) and the Cedar Revolution in Lebanon (2005).

SOCIAL AND POLITICAL REVOLUTIONS: CAUSES, PROCESSES, OUTCOMES

Despite their varied nature, social and political revolutions have been generally rooted in a similar set of causes. These are: (1) a crisis of state authority, often rooted in fiscal problems, military pressures, a succession crisis, or severe corruption, though it can also reflect the rise of religious or nationalist grievances against the ruling regime; (2) major divisions among and defections by the official, military, economic, and/or religious elites of the state, weakening the state and providing leadership to the opposition; (3) economic conditions that are perceived as unjustly imposing hardships on workers or peasants, and that the state is held responsible for causing or failing to ameliorate; and (4) a broad culture of opposition, which unites different social and political groups around a set of ideologies and symbols that produce antistate coalitions among diverse groups and that justifies and encourages efforts to oppose the regime. Such a culture of opposition generally draws on both historical memories of resistance and modern ideologies that depict the injustices of the current regime. In some cases, a fifth condition is important: international conditions, alliances, or conflicts that weaken the power of the ruling regime and offer opportu-

nity or support to opposition movements seeking to challenge state power.

The presence of these conditions is rarely, if ever, created simply by the efforts of revolutionary movements. Rather, such movements create some conditions, exacerbate some conditions once they begin, and take advantage of others. In many cases, the ruling regime itself creates the conditions for revolution by blundering into military or fiscal crises, alienating elites, and forging a culture of opposition by engaging in repression of opponents that is widely seen as unjustified or excessive. Revolutions thus often arise unexpectedly, as neither states nor revolutionaries expect to create all these conditions; rather, a combination of actions by state leaders, elites, and revolutionary movements, plus shifting international or economic conditions, creates the necessary conjunction.

Once a revolution begins, the process of revolution can be long drawn out. Even where the central government collapses quickly, the conflicts that ensue among moderate and radical groups contesting for power, or between the new revolutionary state and recalcitrant regions or groups, can lead to civil war, as in France, Russia, and Mexico. It thus may be a decade or more before a stable revolutionary government is established.

Alternatively, revolutionary movements may gradually establish themselves in remote regions of the countryside, patiently winning allies and extending their zones of control, and waiting for weakness and defections from the ruling regime. In such cases, although the revolutionary regime may take years or even decades to come to power, once the central government has fallen the new regime is often battle-hardened and ready to suppress its remaining foes and quickly take control of the country. This was the pattern in the Chinese and Cuban Communist revolutions.

Where the process of revolution involves drawn-out struggles for power, such processes generally favor the rise of more extreme, radical groups. These groups are often more ruthless in attacking their enemies and better able to rouse popular support by claiming more truly to embody new national identities and to be more devoted to popular demands for rapid change. Revolutions thus typically begin with a mix of moderate and radical groups in opposition to the regime; yet in the course of struggles for control of the new revolutionary state, more extremist groups tend to win out and banish or destroy the moderate opposition. Eventually, however, the regime becomes more stable and conservative, seeking mainly to conserve its power and privileges.

In some cases, the conflict between moderates and radicals persists, leading to a "second phase" of radicalism. In this phase, radicals come to worry that the original revolutionary impetus has been lost and that current officials in the revolutionary regime have become conservative; they therefore launch a renewed set of radicalizing policy initiatives. This often takes place one or two decades or more after the onset of the revolution. Examples include the Jacksonian Revolution in the new United States, the Proletarian Revolution launched by Mao Zedong in China, the radical and nationalizing policies undertaken by Lazaro Cardenas in Mexico, and the radical foreign and nuclear policies backed by Mahmoud Ahmadinejad in modern Iran.

The process of revolutionary conflicts can thus stretch over many decades. In France one can argue that the conflicts among republicans and monarchists were not settled until the defeat of Napoleon III by Prussia in 1870, almost a century after the French Revolution had begun. In China, the conflicts among republicans, warlords, Maoist radicals, and economic moderates lasted from 1911 to at least 1989.

While the causes of political and social revolutions are basically similar, the outcomes of revolutions vary greatly. In some cases, revolutionaries start with, and maintain, relatively moderate and focused goals of political change. Examples include the American Revolution (1776), the Latin American Revolutions (1808–1826), and the Philippines Revolution (1996). In other cases, whether through internal or external struggles in defending their revolutionary program or through ideological inspiration, revolutionaries come to embrace a more radical program of economic and social transformation, as occurred in Russia, China, Cambodia, and Cuba.

The political nature of revolutionary regimes also varies. In some cases, revolutionary leaders have been genuinely committed to achieving democracy and guided their new regimes to that goal. Examples include the United States, South Africa, Poland, Hungary, the Czech Republic, and the Philippines. In other cases, revolutionary leaders placed a higher value on staying in power or maintaining the revolutionary regime in the face of powerful threats; in these cases revolutionary regimes swiftly moved toward one-party or personal dictatorships. Examples include France, the Soviet Union, China, Cuba, Mexico, and Algeria. In some cases, the revolutionary outcomes remained mixed and unclear for some time, as with Russia's anti-Communist revolution of 1981 (first moving toward, then away from democracy), or Nicaragua's Sandinista Revolution of 1979 (first moving away, then toward, democracy).

In sum, once begun, revolutions have a wide variety of lengthy trajectories and varied outcomes. It is rarely possible to be certain in advance what those outcomes will be; instead, domestic and international struggles to defend the revolutionary regime almost inevitably reshape it, so that eventual outcomes are more a result of continuing

processes and struggles than of a prior plan or the conditions of the former regime.

REVOLUTIONS OF IDEAS AND RELATIONSHIPS: GLOBALIZATION, MODERNIZATION, EXPECTATIONS

Although there were many national and anticolonial revolutions in the twentieth century, these events occurred against a backdrop of general, globalizing change. Some of these changes include substantial gains in life expectancies around the world, huge rises in living standards in developed countries, and vast increases in the flow of people, goods, capital, and information across and within national boundaries.

One result of these changes has been a "revolution of rising expectations." This refers to a major shift in how people in poor regions consider their own circumstances. In earlier times, most poor people considered how they lived in comparison to that of their parents, grandparents, and immediate neighbors. How wealthy landowners, nobles, or businessmen lived was of little concern. However, rapidly rising material wealth in developed countries, plus the flow of information and communications in the form of television, movies, CDs, and travel, have made poorer regions cognizant of the much higher living standards and the progress of democracy elsewhere in the world. This has led to a revolution of "rising expectations," such that even poor people in developing countries now expect their governments to bring material improvements to their locale and provide access for participation.

This revolution of rising expectations can, in some circumstances, feed into political movements of rebellion and revolution as well. Where governments are perceived as actively blocking improvement, as unjustly repressing political expression or social or economic opportunities, then oppositions may mobilize for rebellion. When such states are weakened, elite defections occur, and international conditions are favorable, revolutions in ideas can fuel revolutions in politics. Thus, the age of revolutions is likely far from over.

SEE ALSO *American Revolution;* Battle of Algiers, The; *Coup d'Etat; Cuban Revolution; French Revolution; Guerrilla Warfare; Haitian Revolution; Hungarian Revolution; Internet; Media; Political System; Protest; Resistance; Revolution of Rising Expectations; Revolutions, Latin American; Russian Revolution; Sandinistas; Violence*

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Jack A. Goldstone

REVOLUTION, ALGERIAN

SEE Battle of Algiers, The.

REVOLUTION OF RISING EXPECTATIONS

The idea that unfulfilled, rising expectations create unstable political situations has a long tradition in political and social analysis. As far back as the early nineteenth century Alexis de Tocqueville suggested that it explained why the strongholds of the French Revolution were in regions where standards of living had been improving. Throughout the second half of the twentieth century the concept was associated with explanations of revolutions, insurgencies, and civil unrest throughout the world and the urban riots of the 1960s in the United States.

THEORY AND APPLICATIONS

The term *revolution of rising expectations* was popularized during the 1950s in discussions of the foreign and developmental aid policies of the United States. It was used to describe the hope of the poorest counties for a better future in the wake of postwar decolonialization. It was said that rising expectations embodied the twentieth century's "real" revolution insofar as it represented for the vast majority of the world's population a break from centuries of stagnation, fatalism, and exploitation. During the immediate postwar years, regions of Asia, Africa, and the Middle East successfully mobilized national liberation movements against British, French, and Dutch rule to create newly independent countries. Nationalist leaders had fueled their followers' aspirations during struggles for independence and subsequently used promises of industrial development, improved education, and health care to sustain their legitimacy. In India, Indonesia, Malaya,

Burma, Laos, the partitioned Vietnam, and several Middle Eastern countries industrial development based on a Soviet-style planned economy held great attraction, especially in light of the Chinese revolution—a non-Western, nonwhite, and proximate model. In the cold war context the key question was whether a developmental model based on communism or one based on capitalism best satisfied the rising expectations in those countries.

In the 1960s researchers in sociology and political science applied the concept of the revolution of rising expectations to explain not only the attractiveness of communism in many third world countries but also revolutions in general, for example, the French, American, Russian, and Mexican revolutions. In 1969 James C. Davies used those cases to illustrate his J-curve hypothesis, a formal model of the relationships among rising expectations, their level of satisfaction, and revolutionary upheavals. He proposed that revolution is likely when, after a long period of rising expectations accompanied by a parallel increase in their satisfaction, a downturn occurs. When perceptions of need satisfaction decrease but expectations continue to rise, a widening gap is created between expectations and reality. That gap eventually becomes intolerable and sets the stage for rebellion against a social system that fails to fulfill its promises.

The Cuban revolution, the communist insurgency in the Dominican Republic, and several leftist movements in Latin America were attributed to unfulfilled expectations, as was the electoral success of leftist parties such as the election of Jacobo Arbenz in Guatemala (1950) and Salvador Allende in Chile (1970). At the heart of this reasoning was the assumption that the frustration of unfulfilled expectations leads to aggressive behavior, which can be manifested in political rebellion or electoral change.

RELATIVE DEPRIVATION

The idea that unfulfilled expectations create unstable social and political situations is closely related to the variable of relative deprivation as an explanation of civil unrest. Relative deprivation is the perceived discrepancy in what people think they should achieve and what they do achieve. It was the animating concept for a large body of research (Gurr 1970) that attempted to explain both domestic and international civil unrest. The early successes of the civil rights movement in the 1950s had been characterized as a revolution in rising expectations among American blacks, and their perceptions of the slow pace of change during the 1960s were seen as a cause of urban riots in the United States (Geschwender 1964; Runciman 1966). Several studies showed that the most intense rioting occurred in cities where improvement of conditions for blacks had been the greatest.

Most research along these lines on both urban riots and comparative revolution or insurgencies used objective macroeconomic measures to infer deprivation, for example, rising gross national product and regional occupational patterns. However, because relative deprivation is an individual judgment, conclusive proof of its determining role requires survey or interview data to gauge respondents' perceptions directly. Studies that did collect survey data often found that the relationship was weaker than expected (Abeles 1976; McPhail 1971) or that people were much more pragmatic about future expectations than aggregate economic data might indicate (Obershall 1968), suggesting that other variables may cause civil unrest. Also, because perceptions of relative deprivation are individual phenomena, research studies often failed to explain how individual states were translated into collective action, a key process that often was left implicit or assumed.

LATER MODELS

Because of inconclusive empirical proof, methodological constraints, and conceptual criticisms of this body of research, more recent social science models of civil unrest and revolutionary violence have deemphasized the idea of rising expectations, their frustration by state policies, and feelings of relative deprivation. Since the 1990s the focus has been on the structure and strength of state institutions, the mobilization capacity of aggrieved populations, and the cultural processes that channel perceptions of deprivation or injustice into collective action.

SEE ALSO *Anticolonial Movements; Civil Rights; Coup d'Etat; French Revolution; Left and Right; Liberation Movements; Political Science; Political System; Relative Deprivation; Revolution; Social Movements; Stability, Political; Tocqueville, Alexis de; Violence*

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Hank Johnston

REVOLUTIONS, LATIN AMERICAN

Revolutions are a relatively rare but commonly studied and vaguely understood historical phenomenon. The word *revolution* comes from the physical world and generally refers to a political rotation that replaces those in power with a previously dispossessed class of people. The term is sometimes used so loosely to refer to any palace coup or change of power that it loses all meaning. Alternatively, some historians will restrict usage to highly exceptional events, such as the 1640 English Revolution, the 1789 French Revolution, and the 1917 Bolshevik Revolution. Others contend that even those changes were not profound or permanent enough to warrant use of the term. Some assert that social changes, such as those that accompanied the Industrial Revolution, were more significant than those in the political realm where the term is commonly applied.

Likewise, Latin America scholars have not reached consensus on which events to characterize as revolutionary. Previously the term was commonly applied to early nineteenth-century anticolonial movements. Many scholars now view these as elite movements that, while resulting in political independence from European powers, also entrenched preexisting social, political, and economic structures. The one exception is the 1791 Haitian slave revolt. After ten years of sustained warfare, plantation slaves in this French colony overthrew the planter class, destroyed the sugar-based export economic system, and created a new government led largely by ex-slaves. Although rarely considered as one of the classic examples of a revolutionary movement, it was one of the deepest and most profound revolutionary changes in the history of the modern world. Some have taken its levels of brutal violence and the resulting impoverished state as a caution against attempting revolutionary changes.

Interpretations of what causes revolutionary changes, how to understand them, and how they have uniquely developed in Latin America tend to revolve around numerous themes, including the question of who is most likely to revolt. Writing in a European context, Karl Marx (1818–1883) contended that an urban proletariat would lead revolutionary changes. He considered Latin America, with its lack of an advanced industrial economy, to be not ready for a revolution. In the twentieth century, however, Latin America has perhaps experienced more revolutionary movements than any other area of the world, and these have mostly been led by the peasant classes. Revolutionaries also debated how quickly changes could be implemented, and whether violence was necessary to achieve change.

Revolutions are commonly assumed to emerge out of oppression, but Russian revolutionary Leon Trotsky (1879–1940) famously observed that if exploitation alone caused an insurrection, the masses would constantly be in revolt. Rather, as historian Crane Brinton (1898–1968) argued in *The Anatomy of Revolution* (1965), revolutions emerge out of rising expectations. Latin American events seem to underscore the need for a charismatic leader (such as Fidel Castro in Cuba) who can appeal to a coherent (and often nationalist) ideology that gains broad appeal. Anti-imperialist rhetoric and actions usually trigger strong responses from the United States. A successful revolution required the mobilization of significant organizational and material resources, both to overcome U.S. support for the previous government and to overcome opposition to the new regime. It would also appear that revolutions only succeed with the collapse of a weakened and discredited *ancien régime*. While revolution is often seen as synonymous with violence, notable examples (Chile in 1970, Venezuela in 1989) point to the potential for deep structural changes through peaceful and institutional means.

MEXICAN REVOLUTION

The 1910 Mexican Revolution is often seen as a standard bearer through which other subsequent Latin American revolutions are interpreted. Historians debate whether it was truly a social revolution, a rebellion, a civil war, or a mindless blood-letting. It began in 1910 with Francisco Madero's (1873–1913) liberal Plan of San Luis Potosí that called for free elections in the face of Porfirio Díaz's (1830–1915) seemingly entrenched thirty-five-year dictatorship. A popular uprising led Díaz to resign and leave for exile in Europe the following year, but this led to ten years of often chaotic warfare that left one million people dead. On Madero's left, Emiliano Zapata (1879–1919) and Francisco (Pancho) Villa (1878–1923) demanded deeper social and political changes. Zapata's Plan of Ayala called for agrarian reform and introduced one of the revolution's most noted slogans, "Land and Liberty." These peasant demands, together with a wide-reaching labor code and liberal anticlerical reforms that curtailed the power of the Catholic Church, were institutionalized into

a progressive 1917 constitution. Many of these promised reforms were not realized until the 1930s under the Lázaro Cárdenas (1895–1970) government, which is best known for nationalizing the country's petroleum reserves.

GUATEMALA

Similar to Díaz in Mexico, Guatemala's strongly pro–United States dictator, Jorge Ubico (1878–1946), appeared to be deeply entrenched in power (1931–1944) but quickly fell when the population withdrew support. An urban middle class called for liberal reforms similar to those that Madero had championed. Educator Juan José Arévalo (1904–1990) won elections and served for five years (1945–1950), during which time he implemented moderate labor, social security, and agrarian reforms. Jacobo Arbenz (1913–1971) won the 1950 presidential elections and dramatically increased the speed of reforms. Most notably, a 1952 land reform program known as Decree 900 expropriated unused United Fruit Company (UFCO) land. In response, U.S. Secretary of State John Foster Dulles (1888–1959) and CIA director Allen Dulles (1893–1969), who both sat on the UFCO board of directors, authorized a 1954 coup that overthrew Arbenz and implemented a long and bloody military dictatorship.

MOVIMIENTO NACIONALISTA REVOLUCIONARIO (MNR)

A short insurrection on April 9 to 11, 1952, brought the Nationalist Revolutionary Movement (MNR) to power in Bolivia after leader Víctor Paz Estenssoro (1907–2001) had won the 1951 elections but the military prevented him from taking power. As in Guatemala, the MNR's base of support was in the urban middle classes. Workers and peasants quickly exploited this political opening, and demanded more radical structural changes, including nationalization of tin mines, agrarian reform that broke up large landed estates (haciendas), and universal suffrage that eliminated literacy restrictions. This led to some of the most militant labor and peasant unions in Latin America. Notably, the MNR's radical reforms did not trigger U.S. intervention as did Arbenz's in Guatemala. Historians have debated these contrasting responses, with explanatory factors including Bolivia's greater distance from the U.S. sphere of influence, domestic rather than foreign ownership of the nationalized commodities, and the MNR's willingness to accommodate U.S. demands.

CUBAN REVOLUTION

The 1959 Cuban Revolution was the most successful, long lasting, and far-reaching of the twentieth-century revolutions. On July 26, 1953, Fidel Castro led a failed attack on the Moncada Barracks in Santiago in eastern Cuba that he hoped would spark a popular uprising against the corrupt Fulgencio Batista (1901–1973) dictatorship (1934–1959). Timed to correspond with the centennial of the birth of the independence hero José Martí (1853–1895), Castro appealed to his nationalist legacy. Castro went into exile in Mexico, where he met the Argentine Ernesto "Che" Guevara (1928–1967), who had just witnessed the coup against Arbenz in Guatemala. Guevara, who subsequently became the Americas' most renowned guerrilla leader and theoretician, argued that revolutionaries should arm the masses and not hesitate to execute their opponents. His policies assured Cuba's survival even as the new revolutionary government's extensive land reform program and expropriation of foreign industries led to the failed U.S.-backed Bay of Pigs invasion in 1961.

As revolutionary leaders consolidated their control over the island, they radicalized and extended reforms, often with dramatic results. Gains in education and health care led to socioeconomic indicators that rivaled those of the industrial world, sometimes surpassing those in the United States. Critics complained, however, that this was done at the cost of individual liberties. Although strong by developing world standards, Cuba failed to reach the goal of an industrialized economy.

Meanwhile, Guevara left Cuba to continue revolutionary struggles elsewhere in Latin America and Africa. He was most noted for his *foco* theory of guerrilla warfare that challenged traditional Marxist doctrines of waiting for proper objective conditions for a revolutionary struggle. Rather, Guevara believed that the triumph of the Cuban Revolution demonstrated that a small insurrectionary guerrilla force (the *foco*) could create the conditions for a revolution. A subsequent attempt to implement this theory in Bolivia in 1967 failed spectacularly and led to Guevara's death. As a martyr, Guevara became renowned for his selfless dedication to a revolutionary struggle.

CHILEAN ROAD TO SOCIALISM

With Guevara's defeat in Bolivia and the 1970 election of Marxist Salvador Allende (1908–1973) to the presidency in Chile, leftist sentiments swung away from searching for revolutionary changes through guerrilla struggles and toward using constitutional and institutional means. Similar to Arbenz in Guatemala, Allende came to power through constitutional means, dramatically accelerated reforms begun under his predecessor, and quickly alienated the U.S. government. His goal to transform Chile from a capitalist and dependent society into a socialist and independent one within a democratic and constitutional framework realized significant gains for the lower classes at a cost to the wealthy elite. Nationalization of U.S.-owned copper mines led, as in Guatemala, to U.S. support for Augusto Pinochet's brutal September 11, 1973, military coup.

SANDINISTAS

With the collapse of Allende's government, leftist sentiments swung away from the possibilities for electoral means to social revolutionary changes. Led by the Frente Sandinista para la Liberación Nacional (FSLN, Sandinista Front for National Liberation), on July 19, 1979, a guerrilla army defeated U.S.-backed dictator Anastasio Somoza (1925–1980) and took power in Nicaragua. The Somoza family dynasty had ruled the small Central American country since the 1930s. Similar to Castro's use of Martí in Cuba, revolutionary leader Carlos Fonseca (1936–1976) appealed to the nationalist image of Augusto César Sandino (1895–1934), who had fought the U.S. Marines to a standstill in the 1930s.

In power, the Sandinistas implemented goals of a mixed economy, plural political system, and a nonaligned foreign policy. As one of the poorest countries in Latin America, Nicaragua lacked the economic significance of Chile, Cuba, or Guatemala. Nevertheless, the United States feared its independent example and helped train and arm a counter-revolutionary force (called the *contras*) that drug the country down and halted agrarian and social reforms. Ironically, the one lasting legacy of the Sandinistas was implementation for the first time of a functioning electoral system that opponents used to remove the revolutionaries from power in 1990. The defeat of the Sandinistas brought to an end in the minds of many proponents the possibilities for an armed path toward a socialist revolution.

ZAPATISTAS

Four years after the electoral defeat of the Sandinistas, the launch of a guerrilla war in the impoverished southern Mexican state of Chiapas caught the world by surprise. Led by a charismatic masked Subcomandante Marcos, the Ejército Zapatista de Liberación Nacional (EZLN, Zapatista Army of National Liberation) occupied five towns on January 1, 1994. They announced their opposition to neoliberal economic policies that favored the elite at a cost to the impoverished indigenous masses. The EZLN conceptualized the struggle as a continuation of that which their namesake, Emiliano Zapata, had launched at the beginning of the twentieth century. Despite sparking the imagination of leftists around the world, they made few concrete gains.

BOLIVARIAN REVOLUTION

Since elected president in 1998, Hugo Chávez has brought his uniquely styled Bolivarian Revolution to Venezuela. Chávez embodied many of the debates concerning revolutionary movements from throughout the twentieth century. After a failed 1992 coup, Chávez turned toward an electoral apparatus to gain power. Rather than contradictory or ironic, it indicates that these are simply different and not necessarily contradictory strategies in a common revolutionary struggle. As with previous revolutionaries, Chávez is a charismatic leader who provided the inspiration that drove his movement. Similar to how Castro appealed to Martí, and Fonseca to Sandino, Chávez held up Latin American independence leader Simón Bolívar (1783–1830) as his symbolic nationalist hero. Even though Venezuela is primarily an urban country, Chávez continued to emphasize and draw support from peasant and indigenous peoples. His fervent anti-imperialist rhetoric led to strong opposition from the United States, but unlike Allende he weathered an April 11, 2002, coup attempt and consolidated his hold on power. Meanwhile, Chávez's social programs brought education and health care to the lower classes, significantly raising their standard of living. Chávez seemed not only to have learned the lessons of a century of revolutionary movements, but also to embody a synthesis of their gains.

SEE ALSO *Colonialism; Cuban Revolution; Decolonization; Indigenous Rights; Nationalism and Nationality*

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Marc Becker

REVOLUTIONS, SCIENTIFIC

Although the expression *scientific revolution* is perhaps most closely associated with Thomas Kuhn (1922–1996), who embedded the phrase in a general theory of scientific change, it also names a specific time and place—western

Europe of the seventeenth century—from which descend the modern institutions, methods, theories, and attitudes of science, as epitomized in the achievements of such figures as Galileo (1564–1642), Francis Bacon (1561–1626), René Descartes (1596–1650), and most of all, Isaac Newton (1642–1727). That sense was only coined in the 1940s by Herbert Butterfield (1900–1979) and Kuhn's historiographical inspiration, Alexandre Koyré (1892–1964), an émigré Russo-French philosopher influenced in equal measures by Plato (c. 427–347 BCE) and G. W. F. Hegel (1770–1831).

The use of the same phrase, *scientific revolution*, in its general and specific senses is only partly justified. The specific coinage was intended as provocative. It served to consign the Renaissance to a premodern past in which the scientific imagination (which Koyré understood as purely theory-driven) had been held back by the demands of secular governance and everyday life. Thus, Koyré contrasted two Italians who had been previously seen in much the same light: Galileo's single-minded pursuit of a unified truth marked him as a scientist, whereas Leonardo da Vinci's (1452–1519) jack-of-all-trades empiricism did not. The rhetorical force of this distinction was not lost in the postwar period. In the aftermath of two world wars that implicated science in the manufacture of weapons of mass destruction, the future of science required that it be seen as having revolted not only from religion but perhaps more importantly, technology.

A deeper point became more apparent with another postwar project: Joseph Needham's (1900–1995) multivolume comparative study of "science and civilization" in China. China was Europe's economic superior until the early nineteenth century, though it had never passed through a scientific revolution. Science required the belief that humans enjoy a privileged cognitive position in nature, a status associated with the great monotheistic religions descended from Judaism but not those of Asia, where humans were seen more as one with the natural world. The idea that humans might transcend—rather than simply adapt to—their natural condition so as to adopt a "god's eye point of view," especially one that would enable the "reverse engineering" of nature, was profoundly alien to the Chinese way of knowing. In this respect, the scientific revolution marked a revolt against nature itself, which was seen as not fully formed, an unrealized potential. Francis Bacon's account of experimentation famously expressed this sensibility as forcing nature to reveal her secrets, namely, possibilities that would not be encountered in the normal course of experience.

This deeper point had become widespread in the West by the late eighteenth century, especially after Newton's achievement inspired philosophers—not least those behind the American and French revolutions—to envisage society as something designed *ex nihilo* on the basis of a few mutually agreeable principles, what continues today as *social contract theory*. In this context, the precontractarian "natural" state of humanity appears unruly because its wilder animal tendencies have yet to be subject to a higher intelligence, secularly known as *rationality*.

The joining of political and scientific revolutions in this radical sense is due to the Marquis de Condorcet (1743–1794), who specifically connected the successful American Revolution and the ongoing French Revolution via the rhetoric of the first self-declared scientific revolutionary, Antoine Lavoisier (1743–1794). Lavoisier had recently reorganized chemistry from its traditional alchemical practices to a science founded on the systematic interrelation of elements. However, he himself was not an enthusiastic supporter of revolutionary politics, unlike his great English scientific rival, Joseph Priestley (1733–1804). Lavoisier believed that a scientific revolution could stabilize (rather than dynamize, as Priestley thought) the political order. Here Lavoisier fell back on the classical conception of *revolution*, suggested in the Latin etymology, as a restoration of equilibrium after some crime or societal disorder. Specifically, Lavoisier opposed Priestley's continued support for the practically useful, but logically confused, concept of *phlogiston*, the modern remnant of the ancient idea that fire is an ultimate constituent of nature.

Kuhn's relevance emerges at this point—and not only because his own most carefully worked out case of a scientific revolution was the dispute between Priestley and Lavoisier over the nature of oxygen. Kuhn too thought that revolutions restored stability to a science fraught with long unsolved problems. But more generally, Kuhn portrays scientists as the final arbiters of when their knowledge has sufficiently matured to be applied in society without destabilizing it. This doubly conservative conception of revolutions reflects Kuhn's definition of science as dominated by only one paradigm at any given moment. Consequently, despite Kuhn's broad cross-disciplinary appeal, especially among social scientists, he consistently maintained that only the physical sciences satisfy his strict definition because only in these fields (and arguably only until about the 1920s) are scientists in sufficient control of the research agenda to determine when and how a revolution begins and ends, and its results spread more widely.

Kuhn's conception of scientific revolutions appeared radical in the late 1960s because it was conflated with the prevalent Marxist idea of revolution as an irreversible break with the past, something closer in spirit to Condorcet's original conception. This conflation was facilitated by Kuhn's portrayal of scientists in the vanguard vis-à-vis the direction of their own work and its larger

societal import. This image was in marked contrast with the perceived captivity of scientists to what C. Wright Mills (1916–1962) called the "military-industrial complex." However, Kuhn's own reluctance to engage with his radical admirers suggests that his model was proposed more in the spirit of nostalgia than criticism and reform. This interpretation is supported by the original Harvard context for the restorative conception of revolution, the so-called Pareto Circle, a reading group named after the Italian political economist whose "circulation of elites" model was seen in the middle third of the twentieth century as the strongest rival to Karl Marx's (1818–1883) theory of proletarian revolution. This group was convened in the 1930s by the biochemist Lawrence Henderson (1878–1942), who taught the first history of science courses at Harvard, and who was instrumental in the appointment of chemistry department head, James Bryant Conant (1893–1978), as university president. As president, Conant hired Kuhn and coauthored the case history on the chemical revolution that launched the latter's more generally influential thinking about scientific revolutions.

SEE ALSO *Kuhn, Thomas; Philosophy of Science*

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RHETORIC

Rhetoric is employed in both act and perception, in private thought and public communication. It is a means of communication as well as a theory for understanding and criticizing itself and the alternative means of communication. Wedded by the motives of both author and audience, the rhetoric of the social sciences is, like other rhetorics, simultaneously a guide for persuasive writing and a framework for intelligent reading. Centrally speaking, the rhetoric of the social sciences is the study and practice of argumentation and proof making, constrained only by the available means of persuasion. As such, rhetoric judges and is judged, it moves and is moved. Rhetoric is our ways and means of scientific deliberation. Following the models of Aristotle (c. 384–322 BCE) and of Cicero (106–43 BCE), the Roman statesman and philosopher, rhetoric is also importantly about the *ethos* or *character* of the author; to some theorists, such as Quintilian (35–96 CE), it is nothing less than "the good person speaking well."

Rarely claimed after Aristotle to be a science unto itself, rhetoric as a discipline has profoundly shaped the sciences, and each of the sciences, including the social sciences, have returned the sometimes painful favor by reshaping and redefining the theories and vocabularies of rhetoric; (cf. Socrates, in Plato's *Phaedrus*: "The method of the science of medicine is, I suppose, the same as the science of rhetoric. . . . In both sciences it is necessary to determine the nature of something" [2005, p. 56]).

An ancient discipline of Greek and Latin origins established originally for pleadings in law, politics, and international commerce, the rhetorical theories of Cicero, Quintilian, St. Augustine (354–430 CE), and especially Aristotle proved to be of central importance to all of human communication, including scientific communication, and became the foundation for liberal education in Europe for more than twenty centuries. The influence of rhetoric was particularly strong in the medieval university *trivium*, of which St. Thomas Aquinas (c. 1225–1274) is a product. The trivium was organized around three basic subjects: grammar (that is, words, word order, phonics, sentence structure, and the like), logic (syllogism, cause and effect, quality versus quantity, and so forth), and rhetoric—with rhetoric presiding as queen and lord. Rhetoric was not a mere synthesis of grammar and logic, though partly it was; rhetoric provided fundamental training in strategic theories of persuasion. It gave students practice in the arts of persuasion and good citizenship that would be necessary for success in later pursuits, such as immediately in the *quadrivium* (the study of mathematics, science, and music) and followed by (at least for some students) investigations in philosophy, theology, and public service. Compared to today's four- or five-step handbooks on "valid" scientific method, the handbooks of rhetoric appear, like scientific argument itself, copious. In Aristotle's *On Rhetoric* alone, one can identify several scores of distinct strategies for argument and proof, and literally thousands more of unique "commonplaces" (or *topoi*)—that is, general and particular sites of knowledge and belief—for use in designing arguments (Aristotle [c. 350 BCE] 1991). The sum of the permutations, a subset of all the available means of persuasion, is immense.

In the sixteenth century a Frenchman named Peter Ramus (1515–1572) was deeply inspired by his surface reading of Plato (c. 427–347 BCE), the sophists, and other classical rhetoricians. A persuasive and powerful (but not, it seems, a highly original or ethical thinker), Ramus commenced to reduce the very word *rhetoric* to mere "style,"

"emotion," "ornament," or, in the foulest of moods, "manipulation"—a project that was encouraged by the so-called scientific revolution, of which Ramus was a part. In the century before René Descartes, Ramus thought a new language and taxonomy of thought were necessary to suit the scientific and mathematical ideas of the Renaissance, and Aristotelian rhetoric and logic, which students had been learning for centuries, was eclipsing, he said, the full reception of those ideas (Ong 1958; Olmsted 2006). That Ramus himself adapted ancient principles of rhetoric (such as the pairing of opposites) to enact his, as Ong puts it, "superficial" revolution was to Ramus and his followers apparently beside the point. The fleeting success of antirhetoric rhetoric—such as, to repeat, Ramus's own reduction of the very word to mean "mere" style—had been observed in previous epochs, however, and would periodically recur.

In educated circles of the late eighteenth century, rhetoric reappeared in a form closer to its ancient, philosophical stature (Adam Smith and Jeremy Bentham each wrote a book on rhetoric, Smith emphasizing the rhetoric of *belles lettres* and Bentham the fallacies of political pundits). In the second half of the nineteenth century a notable addition to rhetoric and religion was supplied by Cardinal Newman in *Essay in Aid of a Grammar of Assent* (c. 1870). Rhetoric was then shoved far under the rug by neopositivists of the late nineteenth and early twentieth century (the neopositivists were a diverse group that included, among others, the scientist-philosophers Karl Pearson, Ernst Mach, and the so-called "scientific socialists"). But the logical positivists, the members and philosophical allies of the Vienna Circle, went even further and tried with some success to bury rhetoric along with other "cognitively meaningless" subjects such as, they said, metaphysics, theology, and poetry. In retrospect, the positivists said, their goal was not to kill off rhetoric and other humanistic disciplines but simply to banish them from scientific deliberation.

In the 1940s and 1950s the study of rhetoric was again revived to respectability, this time by the writings of I. A. Richards, Kenneth Burke, Richard McKeon, Chaim Perelman, Wayne Booth, Richard Weaver, and some others. A tiny postwar boom came to rhetoric by way of a delayed interest in the philosophy of Friedrich Nietzsche (1844–1900) and American philosophical pragmatism (represented by C. S. Peirce, William James, and John Dewey), both of which, like Aristotle and his followers, saw symbols and human action as inextricably entwined, even in science. A larger boost came from specific economic and cultural change. Demand for workers in the fields of technology, such as in for example the increasingly important radio and broadcast journalism industries, gave new value to the skills of the rhetorician. And in the 1970s and 1980s the philosophical and cultural movements generally referred to as "postmodernism" gave new purpose to theories and arts of communication, that is, to rhetoric.

Nowadays the larger universities maintain a department of rhetoric. If lacking a full department of their own, academic rhetoricians find employment with journalists and others in a department of communication studies, with political scientists and others in a school of public affairs, or with scientists, historians, and philosophers in the departments of classics and science and technology studies.

Rhetoric is among the oldest of subjects and also the most fluid. The fluidity of rhetoric—its ability to adapt to radically changing social, economic, and political conditions—is essential to and descriptive of its fitness. Rhetoric is constantly under attack, often by highly skilled writers. To them—the Platonists, the Ramists, the Cartesians, the logical positivists, the scientific socialists, and the media journalists—the University of Chicago philosopher Richard McKeon (1900–1985) never tired of pointing out that because rhetorical choices are always being made—from the arid symbols of first-order predicate logic to the manifestos of scientists and philosophers who would deny the force of rhetoric—rhetorical training is always relevant to the human condition.

Contemporary social scientists are formally speaking innocent of their own rhetoric. That is not to say they do not grasp the words, facts, models, theories, experimental methods, and institutional environments with which and in which they operate; rather, with a few exceptions, professional societies and the modern university do not require more than an imitative capacity to work with other than highly specific, state-of-the-art rhetorical forms to gain in-group authority (Latour and Woolgar 1979; McCloskey 1985; Nelson, Megill, McCloskey 1987; Brown 1989; Klamer 2007). A mathematical article purporting to prove with utility theory the goodness of market economies, for example, is not likely to refer to the decline of "character" talk in nineteenth-century economic psychology. Nor is the positive social scientist likely to know or even care about the purposive erasure of "ethics" and "narrative" from twentieth-century economic thought. Today's social scientist is trained to believe with the *Publication Manual of the American Psychological Association* that there is only one scientific style—today's style, exemplified by articles published in the top-ranked journals. Her neatly separated section titles—introduction, theory, model, data, hypothesis test, policy implications, conclusion—are said by her teachers to represent distinct and nonrhetorical epistemic objects (Bazerman 1988). She is trained to "let the facts speak for themselves" and to keep her values out of sight (Burke 1950; Booth 1974; Fish 1990). Likewise, the empirical economist does

not bother to learn the rhetorical history of "statistical significance testing," even though significance testing is his lifeblood, and does not achieve the crucial "test" of "economic" or "social scientific significance" his handbook on method imagines (McCloskey and Ziliak 1996; Ziliak and McCloskey 2007). The loss of rhetoric in social science training is more than a simple academic farewell to reason.

Some observers argue that without a basic training in rhetoric, a social scientist cannot know the difference between knowledge and belief, and why the difference matters. Quite a few others think that the reason to bring rhetoric back to the center of education—including graduate education—is that highly specialized scientists would become better equipped to speak with other specialists, and, perhaps more importantly, with policy makers and the general public. Specialization, Adam Smith observed, is on balance good for society; but he added that it is only through mutually beneficial exchange that the gains from specialization can be realized ([1762–1763] 1963). Rhetoric, some say, enables both the means and the ends.

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Stephen Ziliak

RHODES, CECIL
1853–1902

Cecil John Rhodes, a British immigrant to southern Africa, founded the De Beers diamond monopoly, served as prime minister of Britain's Cape Colony, and colonized Southern and Northern Rhodesia (later Zimbabwe and Zambia). Rhodes was the embodiment of late nineteenth-century rapacious capitalism and imperialism. His activities did much to shape important objects of social scientific study with respect to southern Africa: monopoly capitalism, migrant labor, and colonialism.

Rhodes was born to an English parson of modest circumstances. At the age of seventeen, he emigrated to southern Africa. Rhodes arrived in 1870, three years after a diamond-mining rush had begun in an area soon to be annexed by Britain and incorporated into the Cape Colony. The following year, Rhodes left for the diamond fields, where the town of Kimberley emerged to support the mines. Diamonds quickly transformed the region's political economy, becoming the Cape Colony's largest export by 1875 and leading to calls for confederation of the region's colonies and settler states.

In 1880 Rhodes and Charles Dunnell Rudd (1844–1916) formed the De Beers Mining Company to pursue amalgamation of claims, by then considered essential to continued profitability of the mines. By the end of the decade, De Beers completely controlled the diamond mines; more than a century later, De Beers remains the world's largest miner and seller of diamonds and controls the world market in these gems. Amalgamation was intended to remedy major problems of production and marketing. First, as the mines went deeper, enormous amounts of machinery and technical expertise were needed to shore up walls and to cart ore to the surface. Though operations were capital-intensive, they were also labor-intensive, requiring increasing numbers of African men who came to the mines as migrant workers. Second, the huge volume of diamonds being produced from the Kimberley mines meant that it was necessary to limit the numbers reaching the market in order for sales to be profitable. Amalgamation enabled De Beers to solve these problems through centrally organizing flows of capital and labor into the mines and the flow of diamonds out of them. Key innovations, introduced in 1882, were closed compounds to house African workers and legislation to control illicit diamond buying. Closed compounds enabled mining concerns to closely supervise workers, bringing about tighter labor discipline and providing a model for later mining enterprises in southern Africa.

In the late-1880s, prospectors discovered the world's largest gold deposit on the Witwatersrand (Rand) in the Boer-ruled Transvaal. The city of Johannesburg grew up above the mines, becoming the subcontinent's largest city. Kimberley capitalists invested heavily in the Rand, but Rhodes was late to do so, securing poor claims. As a result, his interest was drawn in two directions: toward politics and toward possible mineral discoveries in areas then beyond colonial control north of the Limpopo River.

At the end of the 1880s, Rhodes's agents fraudulently secured from Ndebele king Lobengula (c. 1836–1894) a concession (the Rudd Concession) to exploit all the minerals in his domain. On the strength of this concession, Rhodes obtained a royal charter for his British South Africa Company (BSAC) and sold shares for an enterprise to settle and mine what became Northern and Southern Rhodesia. When the areas the BSAC first exploited failed to produce a "second Rand," the BSAC provoked war with and swiftly defeated the Ndebele. The politics of the Cape, the Transvaal, and BSAC-occupied territories to the north now became deeply entwined. Rhodes, then the Cape's prime minister, conspired with others to topple the Transvaal government in order to install a government more conducive to mining and British imperialism. An armed force under Rhodes's aide, Leander Starr Jameson (1853–1917), launched a hapless invasion from the north in late 1895; its failure forced Rhodes's resignation as prime minister. Tensions over the Jameson raid helped precipitate war between Britain and the Boer republics (the Transvaal and Orange Free State). The Boer War, later known as the South African War, led to uniting South Africa as a white settler state within the British Empire. Meanwhile, oppressive BSAC policies toward Africans in Rhodesia led to a widespread uprising in 1896 to 1897 that was put down at great cost in African lives.

As he gained wealth and power, Rhodes promoted a broad imperialist vision, summed up in his scheme for a transportation network that would span Africa from the Cape to Cairo and parodied in a contemporary political cartoon that showed Rhodes astride the African continent as the "Colossus of Rhodes." As the Cape's prime minister, in 1894 he secured passage of the Glen Grey Act, designed to limit African access to land, force Africans onto the labor market, and reduce African voting strength. His rhetoric and actions thus place him as one of a handful of white power brokers in late nineteenth-century southern Africa who shaped the regimes of alienation of land, exploitation of minerals, and racist regimentation of labor that were to define white-ruled southern Africa for most of the twentieth century. Not yet fifty when he died, Rhodes's will founded the Rhodes Scholarship program for anglo-saxon men from settler societies to study at Oxford University, where he had taken a degree in 1881. He is buried on a hilltop in the Matopos hills of southwestern Zimbabwe, a site sacred to indigenous peoples. His grave thus is a continual reminder of colonial conquest and insensitivity, while its broad vistas give expression to imperial desires to be master of all one surveys.

SEE ALSO *Diamond Industry*

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RICARDIAN EQUIVALENCE

The term *Ricardian equivalence* was coined by the American economist Robert Barro in the 1970s and sub-

sequently became a standard topic in public finance and macroeconomic theory. The Ricardian equivalence theorem ascribes to David Ricardo (1772–1823), the English economist, the view that taxation and public borrowing constitute equivalent forms of financing public expenditure. The rationale behind this view is that the government is expected at some future time to redeem its debt. If one now supposes a closed economy, the repayment of debt will take place via increased future taxation, which means that, on the basis of the rational expectations hypothesis, individuals increase their savings through buying the bonds that have been issued by the government. The amount of savings, in other words, matches the size of the public deficit and therefore the interest-rate remains the same. This means that there is no crowding-out effect of private investment from public expenditure and the overall demand remains the same together with the other real variables of the economy.

A similar mechanism operates in the case of an open economy, where the redemption of public debt takes place via the sale of assets to international institutional agents. Such a possibility raises, once again, the question of limited future government income, hence the inevitable future increase of taxation. Consequently, Robert Barro in the early 1970s and the new classical economists argued that either method of financing public expenditure, that is, through taxation or borrowing, leads to the same final results. The theorem has been used to argue against government intervention in the economy through fiscal policy because it suggests that the government cannot achieve anything quite different from the free operation of market forces. Monetary policy has similar effects; for example, if government expands the money supply, the public does not increase its expenditures but rather its savings in order to meet the future tax obligations. In short, Ricardian equivalence became a necessary weapon in the armory of the new classical economics in their defense of "free market."

The truth, however, is that Ricardo, to whom this theorem is attributed, repudiated the notion of equivalence between the two ways of financing government expenditure. He reasoned that taxation falls on current incomes and primarily reduces current consumption and only secondarily saving. By contrast, borrowing falls entirely on savings, which for Ricardo and classical economists are identical to investment. As a consequence, public borrowing diminishes the investable product and has detrimental effects on the economy's capacity to accumulate capital.

The empirical evidence from various countries does not lend support to the Ricardian equivalence in its pure form, although there is some evidence that saving rates follow government spending—that is, it has been observed that the personal saving rate increases in the case of deficit spending and decreases in the case of government surpluses. It is very hard, however, to show a direct one-to-one relationship here. A usual criticism of the Ricardian equivalence theorem is that real-life situations are characterized by uncertainty regarding future income and also tax liability, which prevents individuals from behaving in accordance to rational expectations. Furthermore, Ricardian equivalence does not hold in cases where the growth rate of the economy exceeds the rate of interest.

SEE ALSO *Policy, Fiscal; Policy, Monetary*

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RICARDIAN VICE

The term *Ricardian vice*, which refers to the English economist David Ricardo (1772–1823), was coined by Joseph A. Schumpeter in his *History of Economic Analysis* (1954). It was intended to highlight Ricardo's alleged habit of introducing utterly bold assumptions into an already oversimplified representation of the economy and treating these as givens when in fact they are unknowns. In Schumpeter's words, Ricardo's "fundamental problem" was that he "wanted to solve in terms of an equation between four variables: net output equals rent plus profits plus wages" (Schumpeter 1954, p. 569). Operating with this perspective, Ricardo was bound to treat three of the variables as constants. Schumpeter also deplored Ricardo's alleged habit of "piling a heavy load of practical conclusions upon a tenuous groundwork" (Schumpeter 1954, p. 1171). Two examples serve to illustrate what Schumpeter considered to be Ricardo's inadmissible way of reasoning. The first is Ricardo's famous suggestion, made in 1819, that the whole of the British national debt accumulated during the Napoleonic Wars could be repaid in a few years by means of a tax on property (Ricardo 1951–1973, vol. 5, pp. 38, 271). Such a tax, Ricardo argued, would not diminish total wealth and would also not unduly hurt the propertied classes, because the capital value of the current taxes levied on them to cover interest charges and amortization was equal to the lump-sum property tax suggested.

This proposal became known as *Ricardo's equivalence theorem*. The second example is Ricardo's view that the burden of a tax on wages or on goods consumed by workers will not be borne by workers (e.g., Ricardo 1951–1973, vol. 1, p. 203). Both conclusions are the logical consequence of the underlying premise that workers are paid a subsistence wage that cannot be changed. As Schumpeter opined, Ricardo's theory of wages amounted to taking wages as fixed at the "subsistence" level (Schumpeter 1954, p. 665).

These criticisms elicit two remarks. The first concerns the way Ricardo reasoned. Apparently his critics have not taken seriously his statement that "in all these calculations I have been desirous only to elucidate the principle, and it is scarcely necessary to observe, that my whole basis is assumed at random, and merely for the purpose of exemplification. The results though different in degree, would have been the same in principle. … My object has been to simplify the subject" (Ricardo 1951–1973, vol. 1, pp. 121–122). Hence, while it is true that Ricardo frequently employed bold cases to "elucidate" the principle at hand and draw attention to what he considered the most important aspects of the problem under consideration, he certainly did not seek to prevent his readers from trying out less restrictive assumptions and investigating their implications, nor did he himself abstain from doing so. Some later commentators rightly praised him for having heralded an approach in economics that requires a clear statement of the assumptions on the basis of which certain propositions are taken to be valid within a given analytical context. This is now considered an indispensable prerequisite of scientific communication. Therefore what Schumpeter considered a vice, others took to be a virtue.

As regards the analytical core of Ricardo's argument, it would be wrong to take Ricardo to have been a strict follower of the Malthusian concept of a subsistence wage. While he used this concept in some contexts for the sake of simplicity, in others he explicitly stressed the historical and social dimensions of the "natural wage" and warned that it must not be mistaken for a minimum required for physiological subsistence (see, e.g., Ricardo 1951–1973, vol. 1, pp. 96–97). He took into account the possibility that workers might receive a share of the social surplus product and maintained that the rate of profits is inversely related to "the proportion of the annual labour of the country devoted to the support of the labourers" (Ricardo 1951–1973, vol. 4, p. 49).

This brings us to the second observation, which concerns the fact that the "standpoint … of the old classical economists from Adam Smith to Ricardo has been submerged and forgotten since the advent of the 'marginal' method," as Piero Sraffa remarked perceptively (Sraffa 1960, p. v). By the turn of the nineteenth century it was no longer understood that the classical economists had advocated a theory of income distribution that was fundamentally different from the marginalist one. The marginalist approach sought to determine the rate of profits and the wage rate in terms of the relative "scarcities" of the respective factors of production, *capital*, and labor and thus on the basis of the economy's given initial endowment of the factors. (With heterogeneous capital goods the amount of *capital* in given supply can be expressed only as a sum of value, which spoils the symmetry between the factors with [homogeneous] labor given in terms of its own natural unit.) The classical economists, on the contrary, determined the rate of profits for the system of production in use in terms of the "social surplus" left over after all used-up means of production and wage goods consumed by workers at a given wage rate have been deducted from gross output levels. Hence, whereas the marginalist authors treated profits and wages symmetrically, the classicals treated them asymmetrically. This asymmetric treatment was unimaginable to the marginalist authors, who therefore felt entitled to accuse the classical authors of treating as a constant what is a variable—that is, the wage rate. Schumpeter's incomprehension was in fact anticipated by major marginalist authors, such as William Stanley Jevons and Léon Walras (see Kurz and Salvadori 2002, pp. 390–395). However, to treat wages as a given in one part of classical theory is a priori no less admissible than to treat the capital endowment as a given in one part of marginalist theory. As Sraffa (1960) has shown, the classical approach to the theory of value and distribution can be formulated in a coherent way that allows one to determine the unknowns (one of the distributive variables and relative prices) in terms of the givens, without depending on bold assumptions, such as the existence of a subsistence wage.

In light of these considerations and granting the fact that Ricardo based some of his arguments on highly simplified analytical constructions, it appears to be somewhat problematic to speak of "Ricardian vice." One can only wonder whether it would be more appropriate to speak of "Schumpeterian incomprehension."

SEE ALSO *Economics; Economics, Neo-Ricardian; Long Period Analysis; Marginalism; Napoleonic Wars; Ricardo, David; Schumpeter, Joseph Alois; Sraffa, Piero; Surplus; Taxation; Wages; Walras, Léon*

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Heinz D. Kurz

RICARDO, DAVID

1772–1823

David Ricardo was born into a prolific Sephardic Jewish family in London on April 18, 1772. His father was a well-to-do stockbroker. David, already "when young, showed a taste for abstract and general reasoning" (Ricardo 1951–1973, *Works*, vol. 10, p. 4). At the age of fourteen he joined the business of his father. When at the age of twenty-one he married Priscilla Ann Wilkinson, a Quaker, his parents broke with him. Ricardo then began a highly successful career as a stockjobber. He made a fortune on the occasion of the Battle of Waterloo (June 18, 1815) by betting on a defeat of the Napoleonic troops.

CAREER AND WRITINGS

Ricardo's interest in political economy was ignited by Adam Smith's *Wealth of Nations* (1776), and it was amplified by economic events at the time, especially the Bank of England's suspension of the convertibility of bank notes into gold in February 1797 and inflationary tendencies during the Napoleonic Wars. In 1809 Ricardo anonymously published his first article, "The Price of Gold," in the *Morning Chronicle*. One year later he published the pamphlet *The High Price of Bullion, a Proof of the Depreciation of Bank-Notes*, which swiftly made him known in learned and political circles. The famous Bullion Report to the British House of Commons reflects his influence, and Ricardo became a major contributor in the Bullion controversy. (The controversy unrolled after the Bank of England in 1797 had suspended convertibility of its notes into gold. The Bullionists, including Ricardo, argued that the ensuing increase in money supply would lead to rising prices, whereas the Anti-Bullionists maintained that the money supply was driven by the "needs of trade" reflected by the real bills presented to the Bank for discount. The Bullion Report was strongly influenced by the monetary theorist Robert Thornton, a Bullionist.) In several letters to the *Morning Chronicle* and in a pamphlet titled *Reply to Mr. Bosanquet's "Practical Observations on the Report of the Bullion Committee"* (1811), he defended the Bullion Report. In his hands, the quantity theory of money became a powerful weapon against the Bank of England's inflationary expansion of money circulation, which, while beneficial to a few, was detrimental to the interests of the nation at large.

Eventually, Ricardo came to know James Mill (1773–1836) and Thomas Robert Malthus (1766–1834). Mill incessantly urged Ricardo to write down his ideas and publish them. With Malthus, Ricardo engaged in many controversial discussions until the end of his life. It was Malthus's relentless criticism that forced Ricardo to rethink his positions and develop what he considered "a very consistent theory" (*Works*, vol. 7, p. 246).

Probably prompted by a move before Parliament to restrict the corn trade in early 1813, Ricardo started to investigate the impact of the accumulation of capital on the rate of profits. This resulted in March 1814 in some "papers on the profits of Capital," which unfortunately have never been found, and in February 1815 in the publication of his *Essay on the Influence of a Low Price of Corn on the Profits of Stock; Shewing the Inexpediency of Restrictions on Importation*. The *Essay* was eventually to grow into his magnum opus, *On the Principles of Political Economy and Taxation*, published in April 1817. The book sold out in a few months. A second, substantially revised edition came out in 1819, and a third, carrying the new chapter "On Machinery," in 1821. Ricardo's "principal problem" in this work was to determine the "laws" that regulate the distribution of the product between the three classes of society—landowners, capitalists, and workers (*Works*, vol. 1, p. 5).

By late 1815 Ricardo had decided to withdraw from the Stock Exchange and invest his money in landed estates—a move supported by his theory of rent, according to which, in an "improving society," ever larger parts of the soil of a country would become scarce and rise in price. In February 1816 Ricardo published some *Proposals for an Economical and Secure Currency*, in which he put forward anew his "ingot plan." The plan suggested a return to the gold standard by making bank notes convertible into gold ingots rather than coins. This practice would allow Britain to continue to use paper as the actual means of payment and it would curb the huge profits of the Bank of England (a private institution until 1946), which in Ricardo's view ought to accrue to the public rather than to the bank's directors. In 1821, with the resumption of cash payments by the Bank of England, Ricardo's plan was implemented.

In 1819 Ricardo became a member of Parliament by buying the seat of Portarlington, Ireland. He participated in many debates, mostly on monetary and financial matters. He became famous for his suggestion in 1819 to

repay the whole of the national debt in a few years by means of a tax on property. Ricardo argued that such a tax would not diminish total wealth and would also not unduly hit the propertied classes because the capital value of the current taxes levied on them to cover interest charges and amortization of the national debt was equal to the lump-sum property tax suggested. This proposal became known as "Ricardo's equivalence theorem."

After the publication of the first edition of the *Principles*, Ricardo was predominantly concerned with the problems of value and distribution, the measure of value, and the machinery question. The second edition brought substantial changes in the chapter "On Value." In the third edition, he withdrew his earlier optimistic view on the swift compensation of labor displacement due to the introduction of improved machinery.

Ricardo died at his country seat, Gatcomb Park in Gloucestershire, on September 11, 1823, from an "infection of the ear, which ultimately extended itself to the internal part of the head" (*Works*, vol. 10, p. 12).

RICARDO ON VALUE, DISTRIBUTION, AND CAPITAL ACCUMULATION

In this entry, emphasis will be placed on Ricardo's contributions to the theory of value, distribution, and capital accumulation. For his views on money, taxation, public debt, and politics, see Giancarlo de Vivo (1987), Samuel Hollander (1979), and Murray Milgate and Shannon Stimson (1991).

Ricardo, a man with considerable practical sense and experience, always defended economic theory against the "vulgar charge" of those who are "all for fact and nothing for theory. Such men can hardly ever sift their facts. They are credulous, and necessarily so, because they have no standard of reference" (*Works*, vol. 3, pp. 160, 181).

Ricardo adopted Smith's *long-period method*, which focuses attention on "natural" as opposed to "market" prices and thus on the persistent and systematic as opposed to the temporary and accidental factors at work in the economic system. However, Ricardo gave greater emphasis to the members of the "monied class" in bringing about, in conditions of free competition, a tendency toward a uniform rate of profits (see *Works*, vol. 1, p. 88).

Ricardo offered clear statements of the principles of *extensive* and *intensive diminishing returns* in agriculture due to the scarcity of land. While Ricardo was not the first to discover these principles, he deserves credit for their incorporation into a system of political economy whose main aim was the determination of the general rate of profits. With extensive diminishing returns, different plots of land can be brought into a ranking of natural "fertility" that corresponds to the ranking of unit costs of the agricultural product, say corn. With very low levels of production of corn, only land of the highest fertility will be cultivated and there will be no rent, for essentially the same reason that nothing is given for "the gifts of nature which exist in boundless quantity" (*Works*, vol. 1, p. 69). It is only as capital accumulates and population grows that land of second and third quality, and so forth, will have to be cultivated in order to satisfy a growing social demand. As a consequence, the price of corn will have to rise relative to that of other commodities. The price is determined on no-rent-bearing (i.e., marginal) land and equals unit costs (including profits at the normal rate) on it; the owners of intramarginal lands obtain differential rents reflecting lower unit costs. From this Ricardo concluded against Smith that rent "cannot enter in the least degree as a component part of its price" (see *Works*, vol. 1, p. 77). In addition, rent was not an expression of the generosity of nature, but of its "niggardliness": it was not the cause of the high price of corn, but its effect.

Setting aside "improvements" in agriculture and assuming a given and constant real wage rate, an extension of cultivation while increasing the surplus product involves an ever larger part of it being appropriated as rent. It follows that the "natural tendency of [the rate of] profits then is to fall" (*Works*, vol. 1, p. 120). The fall is not due to an intensified "competition of capitals," as Smith had maintained, but to diminishing returns in agriculture (and mining).

Profits in turn depend on wages. As is the case with all commodities, Ricardo distinguished with regard to labor between its "natural" and its "market" price. The former is defined in conjunction with the rate of capital accumulation: in an "improving society," natural wages are typically higher than in a stagnant one because, via the wage rate, the growth of population is attuned to the requirements of accumulation. Ricardo also stressed the historical and social dimensions of the natural wage and warned that it must not be mistaken for a purely physiological minimum of subsistence (*Works*, vol. 1, pp. 96–97). He even contemplated the possibility that the "population may be so little stimulated by ample wages as to increase at the slowest rate—or it may even go in a retrograde direction" (*Works*, vol. 8, p. 169). Therefore, Ricardo can hardly be called a strict adherent to Malthus's "law of population." He also discussed the possibility of workers participating in the sharing out of the surplus product. In this case, he felt the need to replace the concept of a given real (i.e., commodity) wage rate by a share concept, or "proportional wages" (Sraffa 1951, p. lii), that is, "the proportion of the annual labour of the country … devoted to the support of the labourers" (*Works*, vol. 1, p. 49). It was on the basis of the new wage concept (and on the premise that the social capital consisted only of, or could be reduced to, wages) that Ricardo then asserted

what was called his "fundamental proposition on distribution": that the rate of profits depends on *proportional wages*, and on nothing else.

One element of Ricardo's theory of profits has particularly puzzled his interpreters. In a letter written in March 1814 he stated: "It is the profits of the farmer which regulate the profits of all other trades, and as the profits of the farmer must necessarily decrease with every augmentation of Capital employed on the land, provided no improvements be at the same time made in husbandry, all other profits must diminish and therefore the rate of interest must fall" (*Works*, vol. 6, p. 104). According to the Italian economist Piero Sraffa (1898–1983), the "rational foundation" of the "basic principle" of the determining role of the profits of agriculture was that "in agriculture the same commodity, namely corn, forms both the capital (conceived as composed of the subsistence necessary for workers) and the product," so that "the determination of the ratio of this profit to the capital, is done directly between quantities of corn without any question of valuation" (Sraffa 1951, p. xxxi). In order for other trades to earn the same competitive rate of profits, their prices have to adjust relative to corn. Sraffa was careful to stress that this model was "never stated by Ricardo in any of his extant letters and papers." Yet although direct evidence is missing, Sraffa saw enough indirect evidence to support this view (Sraffa 1951, p. xxxi). It is interesting to note that the "basic principle" that Sraffa ascribes to Ricardo was clearly spelled out by Robert Torrens (1780–1864), who called it a "general principle" and acknowledged his indebtedness to Ricardo (1820, p. 361).

Malthus's insistence that capital never really consists of a single commodity that is identical with the product obviously required a deeper analysis. This forced Ricardo in the *Principles* to abandon his corn-ratio theory in favor of the labor-embodiment principle of value. Whereas in his early theory the rate of profits was conceived as the ratio between two quantities of *corn*, it was now conceived as the ratio between two quantities of *labor*: the amount of labor "embodied" in the *surplus* product (exclusive of the rents of land) and the amount embodied in the social capital (where Ricardo frequently identified capital with wages). This change was possible by introducing the hypothesis that commodities exchange according to the direct and indirect labor necessary in their production. In this way, bundles of heterogeneous commodities are made commensurable. The new theory replicated the important finding that the *rate* of "profits would be high or low in proportion as wages were low or high" (*Works*, vol. 1, p. 111). The labor theory of value enabled Ricardo to dispel the idea deriving from Adam Smith's "adding-up theory" of prices (Sraffa 1951) that wages and the rate of profits could move independently of one another and to establish the constraint binding changes in the two distributive variables, given the system of production. It was an ingenious move that allowed him, or so he thought, to free the simple inverse relationship between wages and the rate of profits from "a labyrinth of difficulties" (*Works*, vol. 6, p. 214) caused by price movements.

However, Ricardo was aware of the fact that his "general rule" of value was "not rigidly true" (*Works*, vol. 7, p. 279) and was "considerably modified by the employment of machinery and other fixed and durable capital" (vol. 7, p. 30). Different proportions of means of production and direct labor, along with different durabilities of capital goods employed in their production, would make the relative prices of commodities depend on income distribution: the higher the rate of profits (and, correspondingly, the lower the wages), the relatively more expensive will be commodities produced with a high proportion of means of production to labor and means of production that are long-lived. The fact that "profits [are] increasing at a compound rate … makes a great part of the difficulty" (*Works*, vol. 9, p. 387).

This fact threatened to undermine Ricardo's novel solution to the theory of profits. The task of finding a way out of the impasse occupied him until the end of his life. Apparently, to play down the modifications to the labor theory of value as unimportant was not good enough (see *Works*, vol. 9, p. 178). He sought to cope with this problem in terms of his concept of an "invariable measure of value" (see Kurz and Salvadori 1993). Originally, that concept was designed by Ricardo for the purpose of carrying out interspatial and intertemporal comparisons, that is, comparisons relating to *different* technical environments. An invariable standard of value would consist of a commodity produced with an unvarying quantity of total labor. Hence, if another commodity varied in value relative to the standard, it would be clear that this was due to a change in the quantity of labor bestowed on the production of that commodity.

Ricardo now had to face the entirely different problem that even in a given technical environment two commodities may vary in relative value consequent upon a change in income distribution. This was due to the "variety of circumstances" under which commodities are produced (*Works*, vol. 4, p. 368). Ricardo tried to tackle the problem in terms of searching for a standard of value that would have to be a "medium between the extremes" (vol. 4, p. 372). While Ricardo's discussion of this problem is layered with different meanings, and is not always very clear, there can be no doubt that the main purpose of his investigation was to elaborate a consistent theory of value and distribution. This necessitated first and foremost unraveling the properties of a given system of social production as regards the set of alternative constellations of distribution and relative prices compatible with it.

However, since he did not fully master the subject, Ricardo, for lack of a more satisfactory theory, clung to a doctrine that, he felt, offered a sufficiently solid ground to stand on: the labor theory of value. Embodied labor was seen by him to be the main determinant of value and somehow, he thought, both "invariability" requirements could be formulated in terms of a standard that fared well on both counts. The standard had to be produced by a constant amount of labor and by medium circumstances. As regards the second requirement, by expressing bundles of commodities such as the surplus product distributed as profits on the one hand and social capital on the other in terms of such a standard, the positive and negative deviations of prices from labor values could, in each aggregate, be expected to balance. This would allow one to continue to envisage the rate of profits as a ratio of two quantities of labor and thus depend on "the proportion of the annual labour of the country devoted to the support of the labourers" (*Works*, vol. 4, p. 49). The measure was designed to corroborate Ricardo's dictum that the laws of distribution "are not essentially connected with the doctrine of value" (*Works*, vol. 8, p. 194).

While there is no general theoretical solution to Ricardo's first problem, Sraffa (1960), in terms of the concept of "standard commodity," provided a solution to a somewhat reformulated version of Ricardo's second problem. It goes without saying that Ricardo was wrong in assuming that two birds can be killed with one stone (see Kurz and Salvadori 1993).

The theory of value and distribution formed the analytical centerpiece of Ricardo's political economy. It was designed to lay the foundation of all other economic analysis, including the investigation of capital accumulation and technical progress, of development and growth, of trade, and of taxation and public debt.

Like Adam Smith, Ricardo advocated free trade, but he felt that an explanation of the pattern of trade in terms of absolute cost advantages was unsatisfactory. He elaborated the principle of comparative cost and illustrated it in terms of a famous numerical example involving two countries, Portugal and England, and two commodities, cloth and wine. He showed that even if Portugal were to have an absolute advantage in the production of both commodities, there would be room for mutually beneficial trade provided Portugal specialized in the production (and export) of that commodity where its absolute advantage was relatively larger, wine, while England specialized in the production (and export) of the commodity where its absolute disadvantage was relatively smaller, cloth. The effect of foreign trade could be an augmentation of the riches of both trading countries. Ricardo's principle of comparative cost was called the "deepest and most beautiful result in all of economics" (Findlay 1987, p. 514).

In the *Principles*, a great deal of attention is devoted to taxes, the problem of tax incidence, and the impact of taxes on capital accumulation. Ricardo stressed that "there are no taxes which have not a tendency to lessen the power to accumulate. All taxes must either fall on capital or revenue." However, he added: "Taxes are not necessarily taxes on capital, because they are laid on capital; nor on income, because they are laid on income." (*Works*, vol. 1, p. 152). The problem of tax incidence is then illustrated in a number of cases. For example, on the premise that workers are paid a subsistence wage, a tax on wages could not be borne by workers: nominal wages would have to rise, leaving real wages constant, and the tax would accordingly be borne by capitalists. (This premise also underlies Ricardo's tax proposal to repay the national debt.) The situation is similar when a tax is laid on a wage good. In accordance with his doctrine that rent does not enter price, Ricardo concluded that "a tax on rent would affect rent only; it would fall wholly on landlords, and could not be shifted to any class of consumers" (vol. 1, p. 171). A tax on profits would raise the prices of products: "if a tax in proportion to profits were laid on all trades, every commodity would be raised in price" (vol. 1, p. 205). Depending on the consumption patterns of the different classes of society, this would affect their members differently. A rise in the price of wage goods would again entail a corresponding adjustment of nominal wages: "whatever raises the wages of labour, lowers the profits of stock; therefore every tax on any commodity consumed by the labourer, has a tendency to lower the rate of profits" (vol. 1, p. 203).

Ricardo's treatment of taxes, while containing many interesting ideas and suggestions, is generally not considered to be the strongest part of his book and is said to suffer from a poor arrangement of the material and an argument that is frequently tied to excessively restrictive assumptions, such as constant real wages.

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RIGHT TO WORK LAWS

SEE *Labor Law.*

RIGHT WING

The term *right wing* originated with the seating arrangement of the French National Assembly of 1791. The royalists sat on the right side of the chamber while their opponents were seated to their left on an elevated section called the Mountain. Between them sat a mass of deputies, known as the Plain, who did not belong to any particular faction.

OPPOSITION TO THE FRENCH REVOLUTION

The Right, representing aristocratic, royalist and clerical interests, supported the monarchy. The Left called for a limited monarchy and a unicameral legislature. But these labels took on new meanings during the course of the French Revolution. Although originally advocates for moderate reform, the powerful Jacobin clubs became increasingly radicalized as popular figures such as Maximilien Robespierre, Louis St. Just, and Jean-Paul Marat, whose inflammatory rhetoric led to the execution of King Louis XVI and the Reign of Terror, gained influence. Eventually, anyone who defended the monarchy was regarded as a member of the Right.

Since the beginning of the French Revolution, right-wingers typically have resisted calls for revolutionary change. The earliest and perhaps the most famous and influential of them, English statesman Edmund Burke (1729–1797), furiously denounced the *armed doctrines* of the revolutionaries in his *Reflections on the Revolution in France* (1790). He appealed to custom, tradition, religion, prescriptive rights, and social hierarchy. Many subsequent critics of the Revolution acknowledged their intellectual debt to Burke. They believed that the Revolution threatened not only traditional institutions and arrangements but the very foundations of European civilization itself.

CHANGING MEANINGS

What it meant to be a right winger would vary depending on the country, culture, and the particular issue. English conservatives, for example, opposed the Utilitarians, or Classical Liberals, who favored free market economics and minimal government. But by the end of the nineteenth century, the positions were reversed. As the Left embraced socialism, the Right became defenders of the free market.

For nearly two centuries, these competing groups battled each other mostly over questions of economics and class. The Right defended the propertied interests of the privileged classes while the Left sought to equalize wealth and property. For the most part, they debated the extent to which wealth should be redistributed through government intervention. In the early-twenty-first century, cultural and social issues, such as abortion, same-sex marriage, secularism, and multiculturalism, have come to play a more dominant role in Left-Right political struggles.

THE RIGHT WING IN THE TWENTY-FIRST CENTURY

Although there is little consensus over what is meant by right wing, most persons of the Right would subscribe to a basic set of beliefs. The Right gives greater primacy to liberty than equality. Social hierarchy is not only the natural order of things, but desirable. Human nature is fixed and cannot be perfected. Original sin or inherent defects of character explain our proclivity toward violence and evil. Members of the Right generally value religion (usually Christian) as a civilizing force. Culture matters more than either politics or economics. With the exception of the authoritarian Right and radical libertarians, right-wingers detest both collectivist and extreme individualist ideologies. Believing that humans are social creatures, right-wingers hold that people find meaning and purpose in their existence through membership in strong, viable groups such as family, voluntary associations, church, and local community. They equally condemn all efforts to either collectivize or atomize society. Because of the importance right-wingers place on cultural, ethnic, and national particularity, they oppose globalist and multicul-

tural ideologies as inimical to rooted communities. Aware of the limited capacity of human beings for reason, right-wingers believe that traditions and prescriptive institutions are more reliable guides to general happiness and harmony than most proposals for change. They would agree with Samuel Johnson's famous observation that "most schemes of political improvement are very laughable things" (Boswell 1980).

The Right can be divided into three basic categories: reactionary, moderate, and radical or extreme. The reactionary Right longs nostalgically for the ancien régime. They are aristocratic, authoritarian, and often pre-Reformation Catholics. Such views are rarely heard in the early-twenty-first century.

Most members of the moderate, democratic Right can trace their intellectual lineage to Burke, the father of modern conservatism. They reject the Jacobin philosophy of universal rights and the extreme individualism of the Utilitarians, and stress the importance of family, tradition, and religion as indispensable mainstays of civilized existence. Moderates favor limited constitutional government. In U.S. politics, the democratic Right can be broken down further into paleoconservative, neoconservative, and libertarian camps. The paleoconservatives are a group of traditionalists or Old Rightists who support minimal government, traditional institutions, and an isolationist foreign policy. They oppose liberal immigration policies. The neoconservatives are mostly Jewish intellectuals who moved to the Right in response to the excesses of the Left during the 1970s. They propose *big-government* conservatism with a welfare-state component, foreign policy crusades to spread democracy and human rights, and liberal immigration policies. Although defined as right-wingers by the popular media, the libertarians do not share many of the philosophical principles of the Right. They place a greater faith in human rationality and tend to be extreme individualists. Most problems, they believe, can be resolved through the free workings of an unregulated marketplace. Minimal taxes, small government, and laissez-faire economics are the hallmark positions of the libertarians.

Included as well under the rubric of right-wing is the Religious Right, a collection of Christian groups that share a common concern with the decline of moral values in U.S. society and crusade against abortion, same-sex marriage, and the secularization of public school instruction. Also affiliated with the Right are a variety of single-issue groups such as anti–gun-control advocates and tax protestors.

The radical Right groups share few opinions other than extreme nationalism, nativism, and a tendency to spin conspiratorial theories. The John Birch Society, the Ku Klux Klan, neo-fascists, and militia groups are a few representative examples. Most oppose immigration and are racialists such as Jean-Marie Le Pen's Front National movement in France. Others, such as the Ku Klux Klan, White Peoples Party, and neo-Nazis, are overtly racist.

Like those on the Left, who prefer to be called progressive, people on the Right generally do not apply the label right-winger to themselves. More frequently, the Left labels its opponents as right-wingers to distinguish themselves and to define those on the Right as outside of the political mainstream.

SEE ALSO *Capitalism; Cleavages; Conservatism; French Revolution; Hierarchy; Inequality, Political; Jacobinism; Ku Klux Klan; Left and Right; Liberalism; Liberty; Monarchy; Neoconservatism; Political Parties; Property; Religion; Sin; Socialism; Tradition*

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RIGHT-WING AUTHORITARIANISM

SEE *Personality, Authoritarian.*

RIGHTS, ABORIGINAL

SEE *Indigenous Rights.*

RIGHTS, CIVIL

SEE *Civil Rights.*

RIGHTS, HUMAN

SEE *Human Rights.*

RIGHTS, INDIGENOUS

SEE *Indigenous Rights.*

RIKER, WILLIAM

1920–1993

William Harrison Riker pioneered the use of mathematical reasoning in the study of politics, an approach he termed "positive political theory." The method was positive because of the aspiration to explain observed behavior rather than to make normative prescriptions for how people should behave. It was "theoretical" in the same sense as neoclassical microeconomics in that it used axiomatic methods, especially game theory, to derive a coherent set of propositions that comport with observed behavior.

Riker's early work focused on the development of theories of legislative behavior. Of particular import was *The Theory of Political Coalitions* (1962), which used mathematical methods to identify the optimal size of a voting coalition. Previous work suggested that legislators or candidates in election campaigns should work to maximize the number of votes for preferred measures (Downs 1957). Riker's argument was that this behavior would not be rational in settings, such as the distribution of pork-barrel spending, where resources allocated to the benefit of one actor do not benefit others. Instead, he argued that legislators would prefer to belong to a minimum winning coalition that restricted the number of individuals with a claim to the benefits of a particular program.

Another influential work by Riker, written with the political scientist Peter Ordeshook, was "A Theory of the Calculus of Voting" (1968), which elaborated a rational choice model of voter turnout. They argued that rational citizens should not participate if their goal is to influence election outcomes because the probability that their vote would be decisive is essentially zero. Instead, they argue that the factor motivating participation is the sense of satisfaction people get from performing their civic duty. Critics suggest that Riker and Ordeshook's model of political participation is evidence of the nonfalsifiability of microeconomic models because the effect of civic duty has the flavor of a post hoc rationalization for why rational citizens participate when they get no benefit in expectation from the activity (Green and Shapiro 1994).

Riker's later work turned to fundamental questions about the effects of political institutions. In *Liberalism against Populism* (1982), Riker builds on the intuition from Arrow's Theorem that democracies are no better than other political systems at achieving socially desirable (*pareto optimal*) outcomes. He argues that the real value of democratic political systems is not their ability to make good decisions, especially given the possibility of social choice problems, but is instead the public's ability to punish leaders. In *The Art of Political Manipulation* (1986), Riker considers how politicians can strategically manipulate the issues they bring to the fore for political advantage.

Riker's contributions as an institution builder may be even more influential and long lasting than his scholarship. At the University of Rochester in New York, he was given wide latitude to construct a political science department whose faculty and students shared his interest in developing a positive political theory. His success in this endeavor is highlighted by the fact that the Rochester School came to be associated with the body of knowledge derived from the methodological and theoretical orientation Riker advanced, with adherents at almost every major American university. Not wanting to limit the advancement of social science to the study of politics, Riker was instrumental in the formation of the Public Choice Society, which helped positive political theorists form connections with sister disciplines in economics, sociology, public finance, and even philosophy.

SEE ALSO *Positivism; Public Choice Theory*

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Jeffrey Grynaviski

RIOT ACT, THE

SEE *Riots.*

RIOTS

A riot is a social occasion involving relatively spontaneous collective violence directed at property, persons, or

authority. Five main concepts characterize a riot. First, riots are *socially constructed* in that those participating in them define or redefine their social environment through a negotiation or renegotiation of symbols and meanings. For example, if looting occurs during a riot, what is conventionally defined as stealing private property may come to be redefined as "taking" or "receiving" items that are now collectively considered within the domain of public property. Second, riots are not singular events or moments in time, but *occasions*, in that there is a "before," "during," and "after." Although a riot may have an immediate precipitating incident, this moment is only one among many in the processional history of a riot. For example, the Watts Riot (August 1965) began with a relatively routine traffic stop of an African American motorist and quickly escalated into six days of arson, rock throwing, looting, and sniping that resulted in thirty-four dead and $45 million in damages. Though the traffic stop was the precipitating event, it would not be correct to consider it the *cause* of the riot; rather, the cause was the cumulative effect of many events and circumstances. Third, a riot is *relatively spontaneous* in that it does not involve a significant amount of planning and coordination. Although a small number of individuals may instigate a riot and serve as emergent leaders by providing examples of "appropriate" behavior, these individuals are generally unable to plan and coordinate action in a meaningful way once a riot has begun. The relative spontaneity of riots led some of the earliest researchers to conclude that once in crowds, individuals became irrational, highly suggestible, and without social control. More recent research, however, has found these claims to be largely unsubstantiated, noting that during most riots, collective violence is purposive and targeted. Fourth, a riot involves *collective violence*, meaning that groups or communities engage in the infliction of harm or destruction for the purpose of producing social change. Although individual violence may produce social change and even rioting—as in the case of the assassination of Martin Luther King (April 4, 1968)—to be considered a riot, both collective action and violence for the purpose of social change must be present. Finally, a riot involves collective violence directed at *property*, *persons*, *or authority*. It is important to note that in many instances, collective violence is directed not solely at property, persons, or authority but at some combination, such as state-controlled property or persons in authority. For example, in reaction to Italian Reform Minister Roberto Calderoli wearing a shirt decorated with cartoons satirizing the Muslim prophet Muhammad, hundreds of Libyans rioted by throwing stones and burning the Italian embassy, killing ten (on February 17, 2006).

TYPES OF RIOTS

Just as actors participate in a variety of actions during a riot, so too are there different types of riot. There are four main categories of riot, though these distinctions are not mutually exclusive. A *communal riot* is characterized by collective violence directed at persons of an opposing group, and may involve racial, ethnic, or religious groupings. Although police or agents of social control may engage in violence to keep the groups apart, the vast majority of collective violence occurs between groups. A *commodity riot* is characterized by collective violence directed primarily at property, but may involve people of different groups. Next, a *protest riot* involves spontaneous collective violence directed against a specific policy. In contrast to the communal riot, during a protest riot most of the collective violence occurs between the police or other agents of social control and the rioters. The final, and perhaps most frequent, form of rioting is the *revelry* or *celebration riot*. As with a commodity riot, collective violence is directed primarily at property, but may involve persons. However, in contrast to all other riots, a celebration riot does not necessitate grievance and often occurs after a victory over a traditional rival or the winning of a championship.

A riot is distinct from a variety of concepts that are often employed interchangeably in popular usage. The term most frequently used as an equivalent is *demonstration*. However, a demonstration is distinct from a riot in three fundamental ways. First, a demonstration is often planned and thus lacks the relative spontaneity of a riot. Second, unlike a riot, collective violence does not need to occur for something to be considered a demonstration. Finally, during a demonstration, leaders often have enough control to coordinate and direct the actions of others, which rarely, if ever, happens during a riot. Another term often used interchangeably with *riot* is *protest*, which is the act of expressing grievance in hopes of achieving amelioration or to draw attention to a cause. A key feature of protest is the condition of grievance, which although sometimes present is not always necessary for a riot.

A riot is also distinct from a *revolt*, which is an action aimed at the overthrow of an established social order, which may involve a transfer of power and the radical restructuring of social relations. Although riots have the potential to produce some social change, they are perhaps better understood as "proto-political" movements that rarely, if ever, result in a transfer of power from one social group to another.

HISTORY OF THE RIOT

The current understanding of the term *riot* dates back to the fourteenth century, when it began to connote vio-

lence, strife, or disorder on behalf of a particular portion of the populace. By the early eighteenth century, violence and strife was on the rise in England, which resulted in Parliament passing the Riot Act of 1715. The Riot Act stated that if twelve or more persons unlawfully or riotously assembled and refused to disperse within an hour after being read a specified portion of the act by proper authority, those persons would be considered felons and authorities would have the right to use lethal force against them. The Act provided broad powers to institutional authority during riots and despite some notable riots over the next two centuries, resulted in a general decline in the number and severity of riots in England. Although repealed in 1973, the Riot Act was influential in providing a legal framework for similar legislation in many other nations, including Australia, Belize, Canada, and the United States. From 1965 to 1973 the United States experienced a significant increase in the number of domestic riots, particularly in large urban areas with high concentrations of poverty and racially based residential segregation. Some community members from these areas objected to the term *riot*, as they believed it called to mind the image of an unruly ghetto. Consequently, many scholars and politicians began to refer to riots as *civil disorders*. Although *riot* no longer appears to have this same negative connation and again appears in popular and social science terminology, the term *civil disorder* is still often used interchangeably.

Recent research by social scientists has again sparked interest in the study of riots. In a comprehensive review and reanalysis of riots in the United States during the 1960s and 1970s, Clark McPhail (1994) found that a lack of resources, grievance, and aggression did not play as large a role in riots as originally claimed. In addition, McPhail found that actors in a riot are far more purposive in their actions than previously supposed. However, McPhail's findings regarding the causes of riots may be limited in generalizability, as research by Ashutosh Varshney (2002) found urban, caste, and community factors to be predictors of riots in India. This renewed interest in riots highlights the need for a better understanding of where and why they are likely to occur.

SEE ALSO *Communalism; Ethnocentrism; Kerner Commission Report; Protest; Quotas; Race Riots, United States; Resistance; Tulsa Riot; Urban Riots; Violence; Wilmington Riot of 1898*

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John Barnshaw

RIOTS, URBAN

SEE *Urban Riots.*

RISK

The concept of risk is fundamental in the social sciences. Risk appears in numerous guises, from theoretical modeling of financial decisions to determining the social consequences of expanded nuclear power usage. Despite this importance, the precise definition of risk depends on the context and application. Common usage is derived from insurance applications where risk represents the possibility of loss, injury, or peril. This definition is reflected in various risk assessment and management applications, ranging from social and psychological risk to environmental and biohazard risk, where units of measurement for risk vary with context. In contrast, financial economics associates risk with the possibility that the actual return for a security will differ from the expected return. This financial risk is typically measured using the variance or standard deviation of historical return from the mean return, a definition of risk that includes both positive and negative outcomes. Key theoretical notions such as risk aversion and the risk-return tradeoff employ this definition. Where only the possibility of financial loss is of concern, as in value-at-risk applications, measurements are evaluated using the left tail of the relevant probability distribution.

RISK, UNCERTAINTY, AND PERCEPTION

The evolution of methods for the identification, assessment, and management of risk have played a central role in the progress of civilization. In ancient times, religious beliefs were important in reconciling the risks confronting a society. Appeals to the gods by the priesthood, prophecies from the oracle, and chanting by the shaman were all methods of passively dealing with risks encountered. The development of scientific, mathematical, and probabilistic methods during the Enlightenment permitted risk to be more actively identified and assessed. This advancement encountered a philosophical quandary concerning subjective and objective interpretations of probability. More precisely, the objective interpretation views probability as inherent in nature. Logic, scientific investigation, and statistical analysis can be used to discover objective probabilities. In contrast, subjective probabilities quantify an individual's belief in the truth of a proposition or the occurrence of an event and are revealed in an individual's choice behavior. Such probabilities can vary among individuals due, for instance, to differing degrees of ignorance about the event of interest.

Debate over subjective versus objective probability reached a peak around the time that Frank Knight (1885–1972) introduced a distinction between risk—where the objective probability of an event is at least measurable—and uncertainty, where the probability is not knowable and has to be determined subjectively. This terminological distinction between risk and uncertainty has now faded from common usage as the subjectivist approach has gained prominence, supported by seminal contributions from Frank Ramsey (1903–1930), Bruno di Finetti (1906–1985), and Leonard Savage (1917–1971). Attention has shifted to whether subjective beliefs derive from intuition or are realized only in choice behavior. The intuitive approach leads to a focus on the perception of risk, a concept often employed in psychometric and sociological research. Development of the choice-theoretic approach to subjective probability was facilitated by the expected utility function introduced by John von Neumann (1903–1957) and Oskar Morgenstern (1902–1976) in a classic work of social science, *The Theory of Games and Economic Behavior* (1944). The choice-theoretic approach has sustained the modeling of decision-making under uncertainty that is a central component of modern economic theory.

RISK IN ECONOMICS

Prior to von Neumann and Morgenstern, mathematically formal neoclassical economic theory was based on certainty or perfect foresight. Consideration of risk in decision-making could be found in the less formal approaches of Frank Knight, John Maynard Keynes (1883–1946), and Irving Fisher (1867–1947) that have contributed to a range of future contributions and perspectives on the impacts of risk in economics. Knight's recognition that uncertainty could be handled by the insurance principle led to contributions on the importance of moral hazard and adverse selection in decision-making under uncertainty. By explicitly recognizing what he termed the "caution coefficient," which measures the difference between the mathematical expectation and the price that will be paid for a gamble, Fisher laid the foundation for later contributions in mean-variance portfolio theory. The numerous contributions by Keynes on risk and uncertainty range from the *Treatise on Probability* (1921) to the *General Theory of Employment, Interest and Money* (1936). Disciples of Keynes, such as George L. S. Shackle (1903–1992) argue against the use of probability theory to model decision-making under uncertainty. Similarly, the failings of the ergodicity assumption are an important post-Keynesian critique of mathematically formal economic theory.

In addition to the diverse approaches to risk generated by Knight, Keynes, and Fisher, the application of mathematical formalism in economic theory has also produced impressive progress. Using preference orderings over state contingent commodities, Kenneth Arrow (born 1921) and Gerard Debreu (1921–2004) were able to extend the neoclassical economics of Stanley Jevons (1835–1882), Léon Walras (1843–1910) and Alfred Marshall (1842–1924) to include decision-making under uncertainty. This development follows naturally from using the choice-theoretic approach to subjective probability developed by von Neumann and Morgenstern. The utility of a certain outcome is replaced by the expected utility, calculated using known probabilities and the utilities for a set of random outcomes. The known probabilities are notionally determined by direct observation of previous choice behavior. Using this approach, while there is no formal distinction between risk and uncertainty, risk is usually associated with the variability of random outcomes and uncertainty with randomness. Sensitivity to risk is measured by comparing a certain outcome to a random outcome with the same expected value. Risky outcomes are measured in income, dollars, or returns, and can take both positive and negative values.

In financial economics, the expected utility framework has been applied to the problem of determining how to optimally combine individual securities into a portfolio of securities. Using an expected utility function specified over the expected portfolio return and variance of portfolio return, Harry Markowitz (born 1927) and William Sharpe (born 1934) were able to demonstrate that the variability or risk of a portfolio can be further divided into two components: firm specific risk, which is diversifiable

and non-systematic; and market related risk, which is systematic and not diversifiable. Applying this to the tradeoff between risk and return, it is demonstrated that only increases in the systematic risk of an individual security will be rewarded with higher expected return. Hence, it is only that portion of the total variability of a security's return that cannot be diversified away that warrants higher expected return. A measure of systematic risk—the beta of a security—is provided. Beta can be calculated as the slope coefficient in a least squares regression of individual security return on market return: the ratio of the covariance between the individual security return and the market return divided by the variance of the market return. More recently, a variety of risk measures have been developed to deal with limitations of variance of return and beta. These new measures include expected regret, conditional value at risk, and expected shortfall.

RISK IN OTHER SOCIAL SCIENCES

In social sciences other than economics, risk is usually identified with only negative outcomes. Units of measurement vary and can include the annual death toll, deaths or injuries per hour of exposure, loss of life expectancy, loss of working hours, accidents per mile driven, and crop loss per storm. A wide range of risk definitions and risk models are employed, including the classical approach based on objective probabilities, adapted from engineering and medicine; the choice-theoretic expected utility approach employed in economics; and the risk perception approach popular in sociology and psychometrics, where it is explicitly recognized that risk depends on cultural and individual perceptions that can differ from expert or objectively specified risk estimates. Because a variety of different negative outcomes can be of interest, measures of risk vary with the consequences involved. For example, in the classical approach, risk is defined as the loss or hazard if the event occurs times the probability the event will occur. In other words, risk is a combination of exposure and uncertainty. However, when risk involves an event such as death, then risk relates only to the probability of the event occurring.

In many situations in the social sciences, the application of objective probabilities to determine risk is problematic. Though it is possible to specify the relative frequency of a negative outcome from past data, the data is often limited and the estimated risk can be less than objective. In addition, because risk depends on the context, there is room for disagreement over the selection and measurement of relevant consequences. This poses problems in studies of perceived risk where individual perceptions are compared with calculated risk obtained from expert or objective estimates. Early studies on risk perception were concerned with determining whether there were significant deviations between individual risk perceptions and expert estimates. If such deviations were present, this provided support for the presence of heuristics and other sources of probability judgment bias. Further research has revealed that risk perception is a more complicated phenomenon. For example, risk perception depends on the target selected. This is manifested in risk denial, where individuals perceive risk to the general public from, say, alcohol or nuclear waste, to be greater than perceived risk to the individual or the individual's family.

SEE ALSO *Economics, Post Keynesian; Expected Utility Theory; Insurance; Keynes, John Maynard; Markowitz, Harry M.; Risk Neutrality; Risk Takers; Risk-Return Tradeoff; Utility, Von Neumann-Morgenstern; Von Neumann, John*

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RISK AVERSION

SEE *Maximin Principle; Risk; Risk Neutrality.*

RISK NEUTRALITY

Risk neutrality is an economic term that describes individuals' indifference between various levels of risk. When confronted with a choice among different investment opportunities, risk-neutral decision makers only take into account the expected value of the alternative and not the associated level of risk. For example, a risk-neutral investor will be indifferent between receiving $100 for sure, or playing a lottery that gives her a 50 percent chance

of winning $200 and a 50 percent chance of getting nothing. Both alternatives have the same expected value; the lottery, however, is riskier.

In economic theory it is generally accepted that most individuals are not risk-neutral. People tend to prefer safer choices to riskier ones, meaning they are risk-averse. In the above example, a risk-averse person would prefer getting the expected value of the lottery for sure rather than choose the gamble. In other words, a risk-averse person would require a premium above the expected value in order to play this lottery. Risk-neutral individuals would neither pay nor require a payment for the risk incurred.

In terms of utility theory, a risk-neutral individual's utility of expected wealth from a lottery is always equal to his or her expected utility of wealth provided by the same lottery. This implies a linear utility function, or relationship between the wealth and the utility of wealth. A simple example of such utility function is $U(W) = W$, where W is wealth and $U(W)$ is utility of wealth. In this case, a one-dollar increase in wealth will always result in the same increase in utility for any starting wealth level.

In finance, modern portfolio theory states that an investor needs to be compensated for the risk that she takes by receiving extra expected return. Such compensation is referred to as risk premium. The fact that historical returns for riskier asset classes, such as equities, consistently outperform returns for less risky assets (such as Treasury bills) confirms the existence of a considerable risk premium. For example, John Campbell, Andrew Lo, and A. Craig MacKinley reported in 1997 that in the period from 1889 to 1994 U.S. stock market returns were on average 4.18 percent higher than the returns on commercial paper. Risk neutrality, on the contrary, implies that investors do not require any risk premium since they are indifferent to the level of risk (p. 308). Therefore, in a world consisting of risk-neutral investors the difference between stock and commercial paper returns would be expected to be zero.

While risk neutrality is uncommon in the real world, the concept of risk neutrality plays an important role in option pricing. Risk-neutral valuation of options was first introduced by John Cox and Stephen Ross in 1976, and further developed by Cox, Ross, and Mark Rubinstein in 1979. This method is based on an observation that prices of derivatives are the same in the real as in the risk-neutral world. The risk preferences of individuals and the shape of their utility function do not affect the option prices as long as the agents prefer more wealth to less (the so-called nonsatiation condition). The fact that option prices are not affected by the risk preferences and utility functions of individuals allows us to price the options by calculating their expected values in the risk-neutral world and to use the risk-free discount rate to find their present value. The risk-neutral valuation principle is widely used in practice to calculate values of different financial derivatives.

SEE ALSO *Risk; Risk Takers; Risk-Return Tradeoff*

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RISK TAKERS

To take risks is to make decisions for which the favorability of outcomes is uncertain. Therefore, every individual and business entity is a *risk taker* at some level. However, the existence of risk takers who are prepared to put their capital and/or reputation at risk in the hope of a financial reward is a necessary precondition for a capitalist model of society. In the discipline of financial economics, risk takers are subcategorized into *risk lover*, *risk neutral,* and *risk averse* (Blake 2000). Traditional finance theory, applying assumptions of rational behavior, argues that the majority of people are risk averters, and hence "risk averse." Given a choice of two investment opportunities with identical expected returns and uncertain but symmetrical probability distributions with different degrees of dispersion, i.e. risk, the less risky option is always selected by risk averters. Risk averters are said to have a declining *marginal utility* of wealth. A risk-neutral investor, in contrast, would be indifferent between the two options presented above, because the potential for a less favorable outcome than expected is exactly offset by the equal probability of a more favorable outcome. Finally, a risk lover would prefer the riskier choice because the utility conferred by a *financial* gain more than offsets the utility destroyed by a financial loss of equal magnitude. Under the above distribution assumption risk lovers, unlike risk averters, always have an increasing marginal utility of wealth (Tobin 1958).

According to traditional finance theory based on rational risk-averse behavior, a professional risk taker such as a firm manager or an entrepreneur differs from an individual investor or portfolio manager who is concerned with the preservation of wealth (capital) in real terms.

Professional risk takers apply their knowledge and expertise to gain exposure to a specific category, or categories, of largely nonsystematic business risk in which they believe themselves to have a competitive advantage. Such risk averters resemble the "plungers" described by James Tobin (1958) who have indifference curves that, although always upward sloping, may be either linear or upwardly convex. In contrast, wealth-preserving investors seek to diversify away nonsystematic risk exposure to retain only systematic risk that can then be managed according to their risk preferences. They achieve this by allocating their capital between many specialist professional risk takers—that is, by investing the capital in many firms and risky assets—hence delegating their nonsystematic risk decisions to firm managers. Tobin (1958) describes the second category of risk averters as "diversifiers," and explains how the existence of plungers and the shape of utility functions are dependent upon the restrictions applied to the assumed probability distribution.

Frank H. Knight (1921) refers to risk as the quantifiable component of uncertainty in economic decision-making. However, John Maynard Keynes (1936) refers to "animal spirits" when he questions the foundations of neoclassical economics on the grounds that the risk-return trade-off implied by rational models of decision-making are difficult to implement in practice because risk is largely unquantifiable beforehand; furthermore, he argues that it is not possible to distinguish quantifiable risk from unquantifiable risk when making long-term investment decisions. Milton Friedman and Leonard J. Savage (1948) examine the implications for investors' utility functions of the apparently contradictory behavior of individuals who purchase insurance contracts, accepting a certain small loss in exchange for avoiding the low probability of a big loss (risk-avoiding behavior), while at the same time purchasing lottery tickets with a negative expected return in exchange for the very low probability of a big gain (risk-seeking behavior). Subsequent work in behavioral finance, such as that reviewed by David Hirshleifer (2001) and Meir Statman (1999), argues that rather than the cold calculating behavior implied by neoclassical economics and traditional finance theory, many risk takers exhibit an optimistic bias, referred to as "overconfidence," that may lead to risk-seeking behavior when faced with certain losses. Eddie Dekel and Suzanne Scotchmer (1999) discuss evolutionary explanations for risk-seeking behavior, citing the arguments of psychologists and evolutionary biologists to the effect that optimistic risk-seeking behavior exhibited by some individuals has allowed humans, as a species, to survive environmental shocks in which the expected value, and outcome, for the risk-averse majority would have been negative, and fatal.

SEE ALSO *Friedman, Milton; Risk; Risk Neutrality; Risk-Return Tradeoff; Tobin, James*

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Isaac T. Tabner

RISK-RETURN TRADEOFF

The tradeoff between risk and return is one of the cornerstones of financial economics. When capital markets are in equilibrium, they determine a tradeoff between expected return and risk. The only way for investors to achieve a higher expected return is by taking on extra risk. This relationship between return and risk was first formalized by Harry Markowitz in 1952. In what later came to be known as the *modern portfolio theory*, he examined the tradeoff between risk and return in the context of the optimal selection problem for a portfolio of securities. In this theory investors aim to achieve the highest expected return for a certain level of risk; alternatively, they aim for the lowest level of risk for a certain expected return. An interesting graphical treatment of the risk-return tradeoff and variations in tastes for risk is given by James Tobin (1958).

Risk is measured as the standard deviation of the portfolio returns. This relationship is generally confirmed in total annual risk and return series. For example, over the period 1926 to 2002 stocks of small U.S. companies showed a mean return of 16.9 percent, stocks of large U.S. companies had a mean return of 12.2 percent, long-term government bonds had a mean return of 6.2 percent, and

short-term government bonds had a mean return of 3.8 percent. The standard deviations of the returns are in line with the realized returns, as they are 33.2 percent for the small stocks, 20.5 percent for the large stocks, 9.4 percent for long-term government bonds, and 3.2 percent for short-term government bonds (Ross, Westerfield, and Jaffe 2005).

The difference in returns between stocks and short-term government securities is generally referred to as the equity premium. In their 1985 work Rajnish Mehra and Edward Prescott questioned the high level of the equity premium. Their argument is that the size of the equity premium implies an unrealistically high degree of risk aversion on the part of the investors. Stephen Ross, Randolph Westerfield, and Jeffrey Jaffe, in their 2005 study, present an average equity premium of 8.4 percent over the period from 1926 to 2002. They also show that the premium was much lower between 1802 and 1870 (2.9 percent) and between 1871 and 1925 (4.6 percent). Ross, Westerfield, and Jaffe (2005) state that, because of the low-risk premiums in the historical data from 1802 to 1925, caution is needed in making assumptions about the current equity premium.

An important lesson from the theory of Markowitz is that, on the level of individual securities, the covariance between different securities is a more important risk measure than the variance of the individual securities. Securities that have a negative covariance with each other tend to absorb each other's risk. If the price of one of the securities goes down, the other goes up and vice versa. In the 1960s the portfolio theory of Markowitz was further developed into the *capital asset pricing model* (CAPM). According to this model, the contribution of a security to the risk of a large well-diversified portfolio is proportional to the covariance of the security's return with the market's return. The standardized contribution is the beta, which can be interpreted as the responsiveness of the security's return to that of the market. According to this model investors divide their wealth between the market portfolio of assets and the risk-free asset. They are allowed to hold short positions in either the market portfolio or the risk-free asset. The market portfolio consists of all risky investments in the economy. Therefore it does not only include shares of common stock, but also corporate bonds, real estate and more exotic investments such as wine and stamp collections. From a theoretical point of view, the CAPM has been criticized because it assumes a market portfolio the contents of which are not observable, thus making it impossible to test this model. Empirical research by Eugene Fama and Kenneth French in 1993 has shown that the responsiveness to the market is not the only determinant of the expected return of a security. Besides the earlier mentioned beta, their three-factor model includes two additional explanatory variables for security returns. These are the ratio of the market value of stock to the book value and the size of the company.

An important disadvantage of the use of the portfolio variance as the risk measure is that the variance is symmetrical. This means that it assigns the same weight to positive and negative deviations from the expected value. In other words, variance does not capture the common notion of risk as negative and undesired. The 2006 study by Chris Veld and Yulia Veld-Merkoulova of risk preferences of individual investors found that most investors use more than one risk measure. For those investors who systematically choose one risk measure, semivariance is most popular. This is also the case for stock investors, whereas bond investors favor the probability of loss as the most important risk measure.

SEE ALSO *Expected Utility Theory; Insurance; Risk; Risk Neutrality; Risk Takers*

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Chris Veld

RITES OF PASSAGE

A rite of passage is a series of rituals that conveys an individual from one social state or status to another—for example, from adolescence to adulthood, from single to married, from student to graduate, from apprentice to a full member of a profession, from life to death—thereby transforming both society's definition of the individual and the individual's self-perception. Such rituals of social transition mark culturally recognized stages of life and assist the individual and social group in adjusting to an individual's new status and its implications for behavior and social relations. Transition rituals—rites of passage—

reduce the ambiguity associated with change, protecting individual psyches during the vulnerable period by reducing uncertainty and stress. Transition rituals are often directed toward the relationships between social conditions and physiological conditions (e.g., birth, puberty, marriage, pregnancy, death), demarcating certain points of the life cycle as especially significant. Ritual association of symbols and physiological processes provides a means of shaping and controlling human emotions and biological drives and then explaining them within wider cosmological frameworks.

Key social scientists who have studied rites of passage include Arnold van Gennep (1873–1957), who was the first to name and analyze them in 1908 in *Rites de Passage*; Bronislaw Malinowski (1884–1942), one of the first anthropologists to conduct on-site ethnography, who studied the functions of ritual on the Trobriand Islands off the coast of Australia; Victor Turner (1920–1983), who analyzed the roles of ritual and symbol among the Ndembu of Africa (1967, 1969); Mary Douglas (1921–2007), whose work on symbols provided a profound understanding of their uses and effectiveness in ritual (1966, 1973); Clifford Geertz (1926–2006), whose *The Interpretation of Cultures* (1973) offers deep analysis of ritual's roles in cultural preservation and revitalization; the biogenetic structuralists Charles Laughlin, John McManus, and Eugene d'Aquili (1979), who offer a neurologically based understanding of the effects of ritual and rites of passage; and Ronald Grimes, who explores first-person experiences of birth, initiation, marriage, and death (2000).

STRUCTURE AND ROLES OF RITES OF PASSAGE

Robbie Davis-Floyd defines ritual as "a patterned, repetitive, and symbolic enactment of a cultural belief or value" (2004, p. 8). Rituals usually work to enhance social cohesion, as their primary purpose in most cases is to align the belief system of the individual with that of the group. Ritual's role in rites of passage is fourfold:

1. to give humans a sense of control over natural processes that may be beyond their control, by making it appear that natural transformations (e.g., birth, puberty, death) are actually effected by society and serve society's ends (Malinowski 1954);
2. to "fence in" the dangers perceived cross-culturally to be present in transitional periods (when individuals are in-between social categories and therefore call the conceptual reality of those categories into question), while at the same time allowing controlled access to their energizing and revitalizing power (Douglas 1966);
3. to convey, through the emotions and the body, a series of repetitious and unforgettable messages to the initiate concerning the core values of the society into which he or she is being initiated through the carefully structured manipulation of appropriately representative symbols, and thereby to integrate those values, as well as the basic premises of the belief system on which they are based, into the inmost being of the initiate (Turner 1967, 1969; d'Aquili, Laughlin, and McManus 1979); and
4. to renew and revitalize these values for those conducting, as well as for those participating in or merely watching, the rituals through which these transformations are effected, so that both the perpetuation and the vitality of the belief and value system of the society in question can be assured (Turner 1967, 1969; Geertz 1973).

Rites of passage generally consist of three principal stages, outlined by van Gennep as: (1) separation of the individuals involved from their preceding social state; (2) a period of transition in which they are neither one thing nor the other; (3) a reintegration phase in which through various rites of incorporation they are absorbed into their new social state (van Gennep [1908] 1966). Van Gennep states that these three stages may be of varying degrees of importance, with rites of separation generally emphasized at funerals, and rites of incorporation at weddings. Yet, the most salient feature of all rites of passage is their transitional nature, the fact that they always involve what Victor Turner (1967, 1979) has called *liminality*, the stage of being betwixt and between, neither here nor there—no longer part of the old and not yet part of the new. In the liminal phase of initiatory rites of passage, "the ritual subject passes through a realm that has few or none of the attributes of the past or coming state" (Turner 1979, p. 237). Of this liminal phase, Turner writes:

> The passivity of neophytes to their instructors, their malleability, which is increased by submission to ordeal, their reduction to a uniform condition, are signs of the process whereby they are ground down to be fashioned anew and endowed with additional powers to cope with their new station in life.… It is the ritual and the esoteric teaching which grows girls and makes men.… The arcane knowledge, or "gnosis" obtained in the liminal period is felt to change the inmost nature of the neophyte, impressing him, as a seal impresses wax, with the characteristics of his new state. It is not a mere acquisition of knowledge, but a change in being. (1979, pp. 238–239)

One of the chief characteristics of this liminal period of any rite of passage is the gradual psychological "opening" of the initiates to profound interior change. In many

initiation rites involving major transitions into new social roles, this openness is achieved through rituals designed to break down the initiates' belief system—the internal mental structure of concepts and categories through which they perceive and interpret the world and their relationship to it. Ritual techniques that facilitate this process include hazing—the imposition of physical and mental hardships (familiar to participants in fraternity initiation rites), and strange-making—making the commonplace strange by juxtaposing it with the unfamiliar. In *The Reversible World* (1978) Barbara Babcock describes a third such device, symbolic inversion, which works by metaphorically turning specific elements of this belief system upside-down or inside-out, so that the high is brought low, the low is raised high, and the world in general is thrown into confusion. The end result of this inversion, however, is usually that core cultural elements—values, practices, hierarchies—are in the end firmly returned to their positions of centrality, reverence, and weight. Yet, rites of passage can be used to completely overturn these core cultural elements, creating new societies and new religions.

For example, in studying the Moonies (followers of the Korean evangelist Reverend Sun Myung Moon), the sociologist Marc Galanter (1989) found that many of those who attended one of the five-day workshops ostensibly offered to explain the religion to interested newcomers ended up converting—even if their original reason for going was to learn enough about the religion to talk a loved one into getting out. How could this happen? Participants sat through many hours of lecture, during which they were bombarded with an overload of confusing information, resulting in a narrowing of their cognitive abilities. Interspersed between lectures were periods of playful fun—volleyball, dancing—during which the newcomers were made to feel wholly important, wholly wanted, wholly loved. Allusions were made to Moon in connection with the Second Coming of Christ, and it was suggested that if newcomers were truly blessed, they might see visions of Moon himself during their regularly scheduled meditation periods. Not surprisingly, many did. Neuropsychologist John McManus explains:

> As this process is continued over time, the cognitive reality model begins to disintegrate. Learned versions of reality and previously instrumental responses repeatedly fail the initiate. Confusion and disorganization ensue.… at this point the individual should be searching for a way to structure or make sense out of reality, and in terms of the initiation, his search constitutes the launching point for the transformation of identity. (1979, p. 239)

The breakdown of their belief systems leaves initiates profoundly open to new learning and to the construction of new categories. Any symbolic messages conveyed to an initiate during this opening process can thus be imprinted on his or her psyche as deeply "as a seal impresses wax" (Turner 1979, p. 239).

TYPES OF RITES OF PASSAGE

Military initiation rites constitute a classic example of hazing, strange-making, and symbolic inversion. In the rite of passage of Marine basic training, the initiate's normal patterns of action and thought are turned topsy-turvy. He is made strange to himself: His head is shaved, so that he does not even recognize himself in the mirror. He must give up his clothes, those expressions of individual identity and personality, and put on a uniform indistinguishable from that of other initiates. Constant and apparently meaningless hazing (e.g., orders to dig ditches and then fill them up) break down his cognitive structure. Then through repetitive and highly symbolic rituals (such as sleeping with his rifle), his physical habits and patterns of thought are literally reorganized into alignment with the basic values, beliefs, and practices of the Marines.

Cross-culturally, the most prominent types of rites of passage are those dealing with life crises. They accompany what Lloyd Warner has called

> the movement of a man [sic] through his lifetime, from a fixed placental placement within his mother's womb to his death and ultimate fixed point of his tombstone … punctuated by a number of critical moments of transition which all societies ritualize and publicly mark with suitable observances to impress the significance of the individual and the group on living members of the community. These are the important times of birth, puberty, marriage and death. (1959, p. 303)

The sequence of these life-crisis events that Warner uses refers to the baby's birth and not to the woman's giving birth, nor to her transition into motherhood. Thus, this sequence reveals a strong male bias that for many years influenced a general neglect within anthropological research and theory regarding the significance of women's rites across cultures. Arranged from a non–gender-biased perspective, the sequence would have to read: birth, puberty and coming of age, marriage, childbearing, menopause, death. (By now, female life transitions have been studied intensively by female anthropologists.) Additionally, for some cultures, we would have to add first haircuts, adolescent circumcision, debutante balls or quinceaneras, ritual scarring or tattooing, and other such to this list.

For example, in *Birth as an American Rite of Passage* (2004), Davis-Floyd analyzed obstetric procedures as rituals that convey the core values of the U.S. technocracy—a society organized around an ideology of technological progress—to birthing women. These core values center around science, technology, and institutions. The IV is the symbolic umbilical cord to the hospital, communicating to the laboring woman the powerful message that she is now dependent on the institution for her life. Likewise, the electronic fetal monitor (to which nowadays nearly all laboring women in developed countries are attached by means of two giant belts around their stomachs) serves as a powerful symbol of the cultural supremacy of science and technology—it makes the laboring woman dependent on a machine to help her produce her baby. The ability of symbols to imprint their messages onto an individual's psyche is clearly expressed in the words of an interviewee, who said, "As soon as I got hooked up to the monitor, all everyone did was stare at it. Pretty soon I got the feeling that it was having the baby, not me" (Davis-Floyd 2004, p. 107). As this example shows, as an individual experiences the messages conveyed by a powerful symbol, her cognitive system can be partially or completely realigned around those messages. Whether the individual is giving birth, becoming an adult in the eyes of her society, undergoing a religious indoctrination, or being initiated into the army or a secret society, the ritual processes that constitute rites of passage are very much the same.

SEE ALSO *Church, The; Conformity; Culture; Ethnography; Geertz, Clifford; Hitler, Adolf; Malinowski, Bronislaw; Maturation; Military; Performance; Religion; Rituals; Self-Perception Theory; Shamans; Stages of Development; Symbols; Technocracy; Turner, Victor; Values*

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Robbie Davis-Floyd

RITUALS

A ritual is a patterned, repetitive, and symbolic enactment of a cultural belief or value. Rituals usually work to enhance social cohesion, because their primary purpose in most cases is to align the belief system of the individual with that of the group. The more a belief system is enacted through ritual, the stronger it becomes; the less it is enacted, the weaker it becomes. For this reason, religious leaders often exhort their members to participate regularly—for example, to come to church every Sunday and to prayer group every Wednesday night. If people stop going, that is, if they cease to enact the religion's rituals, over time that religion will have less and less meaning for them. Rituals are most commonly thought of as religious, but they can enact secular beliefs and values as effectively as religious ones.

A common misconception holds that ritual is something that goes on only in "primitive" cultures, whereas in so-called modern, developed societies, citizens benefiting from scientific enlightenment lead rational, de-ritualized lives. But the facts suggest otherwise. Across cultures and throughout history, all human cultures use ritual as the physical and psychological means for dealing with the mystery and unpredictability of the natural, social, and cosmic realms. Ritual's cultural roles are myriad; they include engendering belief, maintaining religious vitality, stimulating economic exchange, enhancing courage, effecting healing, and transforming individual consciousness, often in order to bring it into alignment with group values as well as to intensify individual and group investment in social structure.

CHARACTERISTICS OF RITUAL

Nine characteristics are integral to ritual's myriad roles in human cultural life and constitute a sort of anatomy of ritual. They include:

1. the symbolic nature of ritual's messages;
2. its embeddedness in a cognitive matrix (belief system);
3. ritual drivers—rhythmic repetition and redundancy;
4. the use of specific tools, technologies, and clothing;
5. the framing of ritual performances—their set-apartness from everyday life;
6. order and formality;
7. the sense of inviolability and inevitability that is established during ritual performances;
8. the acting, stylization, and staging that often give ritual its elements of high drama, and the fact that it is performed; and
9. often, a ludic dimension—the inclusion of play within the ritual frame.

Symbolism Ritual sends its messages through symbols. A symbol, most simply, is an object, idea, or action loaded with cultural meaning. Symbols are multivocal—that is, many meanings can be brought together and expressed in one symbol (e.g., a cross, a U.S. flag, a swastika). Unlike symbols, straightforward verbal messages are intellectually analyzed by the left hemisphere of the human brain, enabling the recipient to accept or reject their content. Symbols, in contrast, are received through the right hemisphere of the brain as a gestalt—that is, they are felt in the body and the emotions; their meanings are often internalized without conscious awareness. Objects or procedures can function powerfully as symbols even if the conscious intent of their performers is instrumental, not symbolic. For example, a blood-pressure cuff both records blood pressure and symbolizes western technocratic medicine, specifically the value it places on objective information; the stethoscope a physician wears around her neck both enables her to listen to a patient's breathing and symbolizes her authoritative status. When a Marine basic trainee is required to sleep with his rifle, he "in-corporates" its symbolic meanings—they become part of his psyche through his body.

Because ritual works through symbols, the ritual process is fundamentally experiential, and the learning that takes place through ritual is experiential. Anthropological research on the difference between the experiential and didactic (explicit teaching) modes of learning has shown that experiential learning is by far the most powerful kind. Didactic learning can be intellectually rejected or easily forgotten, but experiential learning habituates the individual to specific patterns of behavior and response, and is much longer-lasting. It is no cultural accident that in contemporary society, as in the evolutionary past, skills, trades, and crafts, from tool-carving to eye surgery, have been taught experientially, through the process of apprenticeship.

A Cognitive Matrix A matrix (from the Latin *mater*, meaning "mother"), like a womb, is something from within which something else emerges. Rituals are not arbitrary; they come from within the belief system of a group. Each symbolic message that a given ritual sends manifests an underlying cultural belief or value embedded in that cognitive matrix. Sometimes these are made explicit in ritual, but quite often these deep beliefs that the ritual expresses are held unconsciously, rather than consciously. Ritual's primary purpose is to symbolically enact and thereby to transmit a group's belief system into the psyches of its participants, aligning their individual beliefs and values with those of the group.

Because the belief system of a culture is enacted through ritual, analysis of ritual can lead directly to a profound understanding of that belief system. For this reason, anthropologists studying various cultures often have focused on interpreting the rituals of that culture as a primary way to gain a deep understanding of it. In "Baseball Magic" (2000) George Gmelch decodes the rituals of baseball players to reveal their tensions, anxieties, and value system. Likewise, W. Lloyd Warner's (1959) analysis of Memorial Day, "An American Sacred Ceremony," shows how Americans use the rituals of this day to celebrate the unity of the nation in the face of its diversity, providing important insights into American life.

Ritual Drivers: Repetition and Redundancy For maximum effectiveness, a ritual will concentrate on sending one basic set of messages, which it will rhythmically repeat over and over again in different forms. What is repeated in ritual can include: (1) the occasion for its performance (as in a ceremony that happens every year at the same time); (2) its content (as in a chant); (3) the form into which this content is structured (as in a church ceremony); or any combination of these. This redundancy enhances ritual's efficiency in communicating whatever messages it is designed to send; the Mayan farmer who hears the shaman chant the names of the gods twenty times in one hour, several times a day, is not likely to forget them.

Rhythmicity has long been recognized by anthropologists as a key feature of ritual. Rhythmic, repetitive stimuli affect the human central nervous system, generating (especially in safe, relaxed settings) a high degree of limbic arousal, coordinating emotional, cognitive, and motor

processes within an individual, and synchronizing these processes among the various ritual participants. This process of entrainment may be experienced as a loss of self-consciousness, a feeling of flow. Ritual entrainment can lead to transpersonal bonding, a sense of the unity and oneness of the group. This is a common experience at rock concerts—as the audience begins to entrain with the rhythms of the music, the huge auditorium suddenly seems to shrink and be suffused with shared energy; individuals feel like organic parts of a pulsating whole. Mickey Hart, the drummer for the rock group the Grateful Dead, said of this process, "Sometimes I felt that we were becoming a big noisy animal that made music when it breathed" (Hart, Stevens, and Lieberman 1990, p. 144).

Use of Tools, Technologies, and Clothing All rituals employ specific tools and technologies to achieve their purposes: altars and candles, the shaman's drum and rattle, the priest's robes and communion cup, the diviner's tea leaves and tarot cards, the wrapped Christmas gift. From the Navajo hogan to the Internet, ritual technologies both construct the spaces within which ritual happens, and assist in effecting the external and internal transformations it achieves. As noted above, the technologies of ritual often fulfill both utilitarian and symbolic functions. The candle both sheds light and opens the doorway between dimensions; the communion cup both holds liquid and evokes the Last Supper. In healing rituals, the healer often perceives the patient through the medium of the technology (herbs, smudging, rattling, sandpainting in traditional cultures; x-rays, EEG printouts, vital-sign monitors in modern hospitals). As with much of everyday social life, humans mediate their experience through the technologies they create. This technological mediation influences our perceptions of reality in myriad ways. The technologies employed in ritual play a particularly significant role in altering and mediating perception and experience because their uses in the heightened, set-apart, and formalized structures of ritual make them especially effective at achieving the neural entrainment of the participants, en face or at a distance, with the rhythms of the ritual and with the symbolic messages it sends. The production, sale, and exchange of ritual artifacts serve as major economic drivers in all societies (Malinowski 1948).

Framing Rituals are framed, set apart from everyday life, often in spaces reserved solely for their performance such as churches, temples, theaters, sports stadiums, or simply the space in front of a home altar. This ritual framing works to ensure that participants will keep their attention focused on a limited stimulus field, facilitating their entrainment with the ritual's symbolic messages.

Order and Formality In ritual events, things are no longer casual, but precise. Order matters, and the feeling is formal. Participants must pay special attention to body movements to be sure they are behaving appropriately, as in church or at a formal dinner. Order and formality—the careful sequencing of ritual performances—enhance the strength of this stimulus field and further work to set rituals apart from other modes of social interaction.

Inviolability and Inevitability Rituals establish an atmosphere that feels both inevitable and inviolate—the ritual must proceed to its conclusion through a pre-established sequence of events. Americans would find it hard to imagine, for example, stopping a graduation ceremony, interrupting the Pledge of Allegiance, or standing up in the middle of a church service to argue with the minister. Precise performance of ritual gives humans the feeling of setting into motion cosmic gears—an inviolable process that will inevitably propel the individual through danger to safety. Thus, ritual enhances courage. The anthropologists Sally Falk Moore and Barbara Myerhoff (1977) suggested that ritual's insistence on repetition and order evokes the perpetual processes of the cosmos, thereby metaphorically implying that the belief system being enacted has the same permanence and legitimacy as the cosmos itself.

Performance: Acting, Stylization, and Staging Like a play, ritual is performed, often giving it an element of high drama. The more dramatic ritual is, the more effectively it engages the emotions. These qualities enable ritual to command the attention of participants and audience, while at the same time serving to deflect questioning and the presentation of alternative points of view. A major part of ritual's job is to imbue participants with a strong sense of the value, validity, and importance of the belief system being enacted; in so doing, ritual must also work to preclude challenges to that belief system. Those who manipulate and control ritual are powerful performers, from traditional shamans to Jerry Falwell and Adolf Hitler. Ritual experts have both total command of the belief system being enacted, and dramatic, often charismatic, flair. Their effectiveness rests on their ability to entrain groups, to reorder divergent individual cognition around the symbolic matrix they represent. Hitler's ability to accomplish this through ritual was so profound that within a few years he was able to restructure the cognitive system of an entire nation around the symbolic matrix of German dominance and Aryan supremacy, represented by one powerful symbol, the swastika. On a smaller scale, the continued survival of many indigenous cultures often depends in large part on the ability of their shamans to dramatically and inspirationally perform the rituals that enact and thus perpetuate their unique cultural values, beliefs, and sense of

connectedness to place. When the shamans die without transmitting this cultural lore to apprentices who can carry on, the culture is well on its way to extinction, or at least profound alteration.

A Ludic Dimension In spite of its serious formality, ritual often has an intensely ludic (playful) dimension. In some cultures, such as the Mescalero Apache of New Mexico described by anthropologist Claire R. Farrer (1991), during their most sacred ceremonies a clown mimics and mocks the singers as they perform the ritual acts in the required sequence, while the watching participants laugh uproariously at his antics. The Mescalero do not feel that their laughter decreases the sacredness of the event; on the contrary, it increases it through the revitalizing energy that laughter brings to the culture's most deeply held beliefs. A parallel can be found in the rodeo clown. Rodeo bull riders ritually display the manly heroic virtues that their subculture holds dear; the clowns, whose task it is to divert the bulls while entertaining the audience, mock those manly traits even as they themselves exemplify them.

THE EFFECTS OF RITUAL

The primary effects of ritual include:

1. the cognitive transformation of its participants that is ritual's primary purpose;
2. the cognitive simplification that ritual works to engender in its participants by rendering complex ideas more straightforward or unitary, which can generate habituation;
3. the cognitive stabilization that ritual can achieve for individuals under stress, which can include the enhancement of courage;
4. the preservation of the status quo in a given society; and
5. ritual's paradoxical effectiveness at facilitating social change.

Although not every ritual achieves each of these purposes, these are all part of the capacity of ritual as a symbolic form. Ritual is a powerful didactic and socializing tool. To grasp its inner workings is to have a choice in our response to the rituals that permeate our daily lives, and of which we are often unaware.

Cognitive Transformation Belief follows emotion. In general, people are far more likely to remember events, and to absorb lessons from those events, if they carry an emotional charge. Ritual generates that charge—it focuses the emotions on the symbolic messages it presents. This focusing process is enhanced by the rhythmic repetition of the ritual's messages, which will often intensify toward a climax. If the ritual is successful, belief will be generated through the mapping-on process. And because of the emotions associated with that belief, neither the experience nor the belief will be forgotten.

For example, in *Juan the Chamula* (Pozas 1962), a Chamula Indian from highland Chiapas in southern Mexico describes a healing ceremony in which the shaman attempts to cure him of "soul-loss" through a long and elaborate ceremony. At the climax, the shaman twists the neck of a rooster and kills it, and Juan exclaims, "suddenly I felt free!" (p. 90). This experience of ritual healing constituted for Juan an important step in his cognitive reintegration into the cultural system he had left years ago, and to which he was now returning. As this example demonstrates, healers can use ritual's ability to generate belief to map their interpretation of the illness into the mind-body of the patient. When these fuse, healing can be achieved, as the body responds to what the mind now believes.

The emotional affect generated by ritual can do much more than generate belief. Humans have two nervous subsystems, the excitation and the relaxation systems. Usually, when one is discharging, the other is quiescent. But their repeated stimulation may cause both to simultaneously discharge. Under conditions of stress, the sensations so produced are more likely to be those of calm, reassurance, and a sense of control. Under stable social and environmental conditions, this simultaneous discharge of both nervous systems produces an intensely pleasurable, almost orgasmic sensation—indeed, both subsystems do simultaneously discharge during orgasm. This ecstatic state occurs in ritual when physical, emotional, and intellectual experiences of the symbolic messages become one. It may be very brief, experienced only as, for example, goose bumps popping out as the banner-bearing choir marches down the aisle on Easter Sunday, or a shiver down the back as you salute your national flag during a parade. It may happen only once during the ritual, or may be repeated at numerous focal points. Or this ecstatic state may be prolonged, as in meditation and religious trance or dance. In any case, these ecstatic sensations become experientially associated by ritual participants with the belief system enacted in the ritual. Charismatic Christian groups are filled with the Holy Spirit; !Kung bushmen trance-dancers with the boiling energy they call *n/um.* Biological research has established that during this state, high levels of endorphins—natural pain-relieving, pleasure-producing chemicals—flood the central nervous system. This ritually induced experience of ecstasy is one of the most powerfully emotion-filled experiences available to humans. Once they experience this state (especially the prolonged version) during a ritual, they are likely to want more. This desire can be a powerful incentive to

begin regular attendance at the ritual events that can induce and consistently reproduce these feelings.

Through the ritual drivers of rhythmic repetition, evocative style, and precise manipulation of symbols and sensory stimuli, collective rituals focus the emotions of participants on the calculated intensification of their messages. Ritual generates intense emotion, even ecstasy, in humans, and intense emotion, in turn, generates belief (d'Aquili, Laughlin, and McManus 1979).

Transformation for ritual participants can be both mental and physical. It can be external in the eyes of society, and/or internal in the psyche of the participant. Some kind of transformation can be said to occur in all types of ritual—even a simple ritual greeting opens a previously nonexistent channel of communication between two individuals, resulting in almost immediate entrainment of their bodily rhythms. Deep transformation for ritual participants occurs when the symbolic messages of ritual fuse with individual emotion and belief, and the individual's entire cognitive structure reorganizes around the newly internalized symbolic complex. Although this process may sound final, as if it could happen only once, it is not. Human neural structures are not made of cement; they are relatively fluid. As most religious adherents know from experience, belief waxes and wanes, and must be continually reinforced through ritual if it is to retain a significant role in shaping individual cognition and behavior. Each time a person attends a religious service or a political rally, he or she can experience this process anew, diving deeper and deeper into the symbolic constellations of belief of the religious or political system.

The most profoundly transformative of all rituals are initiatory rites of passage and religious indoctrinations. These break down the belief system of the initiate, then rebuild it around the beliefs and values of the group—a conversion experience. Whether the individual is converted to Islam or Christianity, or initiated into the army or a fraternity, the ritual process is very much the same.

Cognitive Simplification In any culture, ritual participants will differ from each other both in intellectual ability and in cognitive structure. Straightforward didactic communications must take these differences into account if their messages are to be understood. But ritual must work collectively, for the masses. Ritual overcomes this problem by working to reduce its participants, at least temporarily, to the same cognitive level, at which they will all see the world from within the confines of one cognitive matrix. An individual thinking at this level will tend to see the world in terms of black and white, interpreting others as either with her or against her (as do religious fundamentalists, for example). This sort of either/or thinking does not allow for the consideration of options or alternative views. The advantage of this reduction of ritual participants to univariate thinking is that a single ritual structure is now sufficient to communicate social norms and values to a wide variety of individuals. This process is most clearly visible in the performance of religious rituals such as the Catholic Mass, which can be deeply and equally convincing to individuals of all levels of cognitive complexity, or in the political rallies of totalitarian regimes such as Nazi Germany. Such cognitive simplification must precede the conceptual reorganization that accompanies true psychological transformation. The most common technique employed in ritual to accomplish this end is the rhythmically repetitive bombardment of participants with ritual's symbolic messages.

The order and precision of ritual, combined with its repetitious nature, can be highly effective at habituating individuals to doing things one way only. Physicians have described how their learning process was channeled into a "narrow riverbank" in which the water can only flow one way; one said, "You do it, and you do it, and you do it some more" (Davis-Floyd and St. John 1998, p. 54). Habituation to this one way can be efficient; it can also preclude openness to new and perhaps better ways.

Cognitive Stabilization When humans are subjected to extremes of stress, they are likely, at least temporarily, to retrogress cognitively into a dysfunctional condition in which they become panic-stricken, unreasonable, or simply out of touch with reality. Whenever the danger of such retrogression is present, ritual plays a critical role, because it stabilizes individuals under stress by giving them a conceptual handle-hold to keep them from losing it. When the airplane starts to falter, even those who do not go to church are likely to pray! The simple act of rhythmically repeating, "Dear Lord, please save us," can enable terrified passengers to avoid the panic behavior that might increase the likelihood of disaster.

Ritual stands as a barrier between cognition and chaos by making reality appear to fit accepted cognitive categories—that is, by making the world look the way it ought to. In other words, to perform a ritual in the face of chaos is to restore conceptual order. Even a small semblance of order can enable individuals to function under the most chaotic of conditions. The earthquake victim sweeps off her front steps when the entire house lies in ruins around her. This behavior is not as irrational as it seems at first glance. Those steps represent one ordered cognitive category, and for the householder, to make them clean is to ground herself in a little piece of the known and the familiar. From that cognitive anchor, she can then begin to deal, a little at a time, with the surrounding chaos.

To perform a series of rituals is to seek to induce a particular outcome, often involved with creating a sense of safety in the presence of danger. The Trobriand sea fisherman who makes elaborate offerings and incantations in precise order before embarking into perilous waters believes that, if he does his part correctly, so must the gods of the sea do their part to bring him safely home. For the same reasons, the batter turns his cap backwards and clutches his rabbit's foot before he steps up to the plate. And the Bolivian tin miner, before descending into the hot and dangerous mines that he thinks of as the devil's territory, makes an offering of candy or tobacco to the devil so that the devil will be obliged to reciprocate by protecting him. In such cases, the rituals provide a sense of control that gives individuals the courage to act in the face of the challenge and caprice of nature. But the inevitability of ritual can be a double-edged sword: Rituals do not always work, and the sense of confidence they generate can be a false one. Nevertheless, that sense of confidence does facilitate action in the face of fear.

Rituals—from prayer, to carefully setting the table, to lighting candles for loved ones in danger—provide their participants with many such cognitive anchors. Ritual thus has high evolutionary value; it was a powerful adaptive technique our hominid ancestors most likely utilized to help them continue to function at a survival level whenever they faced conditions of environmental or social stress. Groups that believe together can act together to meet and overcome crises and danger. When belief is not shared, joint action is much more difficult to achieve. Even warring armies often rely on a number of shared beliefs, symbols, and rituals—the Red Cross or Red Crescent of medical facilities, the white flag of truce, the process of formal surrender. These are rituals of stabilization that can work even in the face of the mayhem of war.

Preserving the Status Quo Through explicit enactment of a culture's belief system, ritual works both to preserve and to transmit that belief system, and so becomes an important force in the preservation of the status quo in any society. Thus one usually finds that those in power in a given social group strive to maintain control over ritual performances. They utilize ritual's tremendous power to reinforce both their own importance and the importance of the belief and value system that sustains them in their positions.

Effecting Social Change Paradoxically, ritual, with all of its insistence on continuity and order, can be an important factor not only in individual transformation but also in social change. New belief and value systems are most effectively spread through new rituals designed to enact and transmit them. Even if a ritual is being performed for the very first time, its stylistic similarities with other rituals make it feel tradition-like, thus giving entirely new belief systems the feel and flavor of being strongly entrenched and sanctioned by ancient practice. Moreover, entrenched belief and value systems are most effectively altered through changes in the rituals that enact them. Indeed, ritual represents one of society's greatest potentials for the kind of revitalization that comes from internal growth and change in response to changing circumstances.

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Robbie Davis-Floyd

RITUAL DRIVER

SEE *Rituals.*

RIVALRY, SIBLING

SEE *Sibling Relationships.*

ROBBER CAVE EXPERIMENT

SEE *Superordinate Goals; Sherif, Muzafer.*

ROBESON, PAUL

1898–1976

Paul Robeson, an African American actor, singer, and social activist, was born on April 9, 1898, in Princeton, New Jersey, and died on January 23, 1976, in Philadelphia, Pennsylvania. During the 1930s and 1940s, Robeson gained international renown as a concert singer and stage actor. His embrace of the Soviet Union and communism, however, especially during the formative years of the Cold War and the backlash against left-wing causes during the 1950s, effectively ended his artistic career and contributed to his physical decline.

Robeson was the youngest of five children. His father, William Drew Robeson, was born a slave in North Carolina, but he escaped and went on to become a Presbyterian minister in New Jersey, until he was forced to leave his congregation over a major dispute. Robeson's mother, Maria Louisa Bustill, hailed from a prominent Philadelphia family and became a schoolteacher. She burned to death tragically in a house fire when Robeson was only six years old, an experience that undoubtedly affected the youngster.

Between 1916 and 1919, Robeson attended Rutgers College in New Jersey as the only African American student. While there, he gained both academic and athletic distinction, being elected to Phi Beta Kappa and twice named an all-American football player. Between 1920 and 1923, he attended Columbia Law School in New York City, playing professional football on weekends and acting to pay the bills.

It was at Columbia University that Robeson met chemistry student Eslanda Cardoza Goode (1896–1965). Her grandfather, Francis L. Cardozo (1837–1903), was trained as a teacher, minister, and carpenter, and served between 1868 and 1872 as the first black person elected to state office in the history of South Carolina. Robeson and Eslanda married in 1921 and had their only child, Paul Robeson Jr., in 1927. Eslanda went on to become an anthropologist and journalist, as well as her husband's manager and life-long partner until her death.

After graduating from law school, Robeson turned his back on a legal career because of the limited opportunities afforded qualified African Americans. This decision was to prove momentous because it resulted in the launching of one of the most gifted and committed artistic lives of the twentieth century. Robeson's career embraced theater, music, and film. During the early 1920s, he worked with the Provincetown Players based in Greenwich Village and earned praise for his roles in playwright Eugene O'Neill's *The Emperor Jones* (1920) and *All God's Chillun Got Wings* (1924). In 1930 he appeared opposite renowned British actress Peggy Ashcroft (1907–1991) in a London production of Shakespeare's *Othello* and in 1932 a Broadway version of Jerome Kern's musical *Show Boat* (1927). Despite his glittering stage success, not everyone was impressed. The Trinidadian writer and activist C. L. R. James (1901–1989) saw Robeson play Othello on Broadway in 1943 and declared: "Robeson was rotten. He is a magnificent figure, a superb voice, and, as usual with him, at moments he is overwhelming. But in between his lack of training, his lack of imagination, were awful" (1996, p. 90).

Robeson also gained fame as a concert singer and recording artist. Both Robeson and his longtime pianist and arranger Lawrence Brown (1893–1972) played an important role in performing and disseminating African American spirituals and folk songs throughout the United States and Europe. As such, the duo belongs to a black Atlantic musical tradition stretching back to the Fisk Jubilee Singers of the 1870s. It is important to note, however, that their recorded spirituals revolutionized such music by allowing the voice to be free from the performer.

Robeson's third artistic arena was film. During the 1930s, the film industry embarked upon a major transformation with the advent of sound and mass audiences. Robeson appeared in about a dozen American and British films between 1933 and 1942, including *The Emperor Jones* (1933), *Sanders of the River* (1935), *Show Boat* (1936), and *The Proud Valley* (1941). Although his characters often challenged existing racial stereotypes portrayed on the silver screen, these films also reinforced stereotypes about subservient and comedic black people and the benefits of Western colonialism. Robeson later expressed regret over some of these films, a regret the modern viewer can appreciate.

Between 1927 and 1939, Robeson and Eslanda sojourned in Europe. These were important years for Robeson's development as a black artist because they

exposed him to the international communist movement, as well as Pan-African and anticolonial politics. While living in London, Robeson and his wife undertook the study of African history, politics, and languages. At the same time, Robeson participated in the West African Student's Union and became acquainted with a younger generation of Caribbean and African leaders, such as C. L. R. James and George Padmore (1903–1959) of Trinidad, Jomo Kenyatta (1890?–1978) of Kenya, and Nnamdi Azikiwe (1904–1996) of Nigeria. It was this milieu that encouraged Robeson's "return" to Africa. This spiritual rather than physical return encouraged Robeson to espouse a set of universal values that included, rather than derided, the importance of African culture to world historical development. It was a position familiar to many black abolitionists of the nineteenth century and recognizable in some of the more sober statements of modern Afrocentrists.

The other important component of Robeson's political development concerned international socialism. The Great Depression had destroyed many people's lives and corroded their faith in capitalist democracies. In contrast, the new Union of Soviet Socialist Republics (USSR) promised a more equitable distribution of resources, constitutional guarantees of the equality of all people regardless of nationality or race, and international solidarity. In 1934 Robeson made the first of numerous visits to the USSR, eventually learning Russian and schooling his son there for several years. At the same time, Robeson became involved in socialist and pacifist causes, including performing benefit concerts for Republican troops fighting against the fascist takeover in Spain. Although some black radicals, such as Padmore and Richard Wright (1908–1960), saw irreconcilable differences between communism and Pan-Africanism, others like C. L. R. James and Robeson envisioned new connections between the two ideologies.

On his return to the United States, Robeson continued his artistic endeavors, as well as his commitment to numerous left-wing and antiracist causes. In the gathering hysteria of the cold war, however, Robeson was to experience serious state and civil obstacles. Although never a member of the Communist Party, officials in both Sacramento and Washington, D.C., accused Robeson of being a communist. In 1950 the U.S. State Department revoked his passport, keeping it until 1958. An invitation for him to appear at a musical festival in Peekskill, New York, sparked white vigilante violence and resulted in scores of injured people, while both Broadway and Hollywood blacklisted him. Despite this, Robeson continued performing at black churches and small functions sponsored by radical groups. He also continued his radical politics. In 1951 Robeson, on behalf of the Civil Rights Congress, submitted a petition to the United Nations titled "We Charge Genocide," detailing 153 killings, 344 crimes of violence, and numerous other human rights abuses against black citizens in the United States during the previous six years. This tactic of exerting international pressure on the United States stretched back to the proposed building of an antislavery wall, a project advocated by Frederick Douglass (1818–1895) and others during the mid-nineteenth century.

After regaining his passport, Robeson and his family moved to Europe. The persecution and blacklisting, however, began to take its toll. Robeson moved in and out of hospitals in the Soviet Union and Europe, and in 1961 he had a nervous breakdown and attempted suicide. In 1963 the Robeson family returned to the United States. After Eslanda's death in 1965, Robeson moved to Philadelphia to live with his sister. A year later he made his final public appearance at a benefit dinner for the Student Nonviolent Coordinating Committee. During a seventy-fifth birthday tribute at New York's Carnegie Hall, which he could not attend because of ill health, Robeson sent a message declaring that he was as "dedicated as ever to the worldwide cause of humanity for freedom, peace, and brotherhood."

Scholars have debated Robeson's historical significance. Was he an idealist whose adherence to the Communist Party made him, in the words of critic Harold Cruse, "a great potential spokesman with a misdirected and ineffective political line" (1967, p. 297)? Or was he an important radical social democrat who played a critical role in propagating popular front culture from the 1930s through 1950s as argued by Michael Denning (1996)? Or was he, as Sterling Stuckey (1987) claims, primarily a black cultural nationalist who brilliantly fused African and black American cultural activities? Interested readers, especially young artists, should read, hear, and see more about Robeson's remarkable life and make up their own minds. Paul Robeson's true significance concerns his obvious artistic talent; his consistent support for antiracist, anticolonial, and international liberation struggles; and his commitment to a radical political and cultural tradition. In today's world, we can imagine Robeson challenging the iniquities of globalization, demanding peace in the Middle-East, and insisting on racial justice for all.

SEE ALSO *Civil Rights; Cold War; Communism; James, C. L. R.; Pan-Africanism; Racism; Slavery; Theater*

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J. R. Kerr-Ritchie

ROBINSON, JOAN
1903–1983

Among the great scholars who made significant contributions to economics in the twentieth century, one could say that there were scores of men but only one woman who really stood out. Of course there were well-respected female economists of the time, such as Mary Marshall (1850–1944) and Ursula Hicks (1896–1985), but for bravado none of them trumped Joan Violet Morris Robinson. She was swift, sharp, and influential. To her friends, admirers, and students, she was gentle, caring, and encouraging. To those who saw in her a menacing adversary and detractor, she was rude, ruthless, and inconsiderate. While she was at home or abroad, whether lecturing or listening, her presence was noticed.

Joan Robinson was born in Surrey, England, and was first educated in London. She then entered the University of Cambridge for economics, where she graduated in 1925. She married the economist Austin Robinson in 1926. Although she traveled extensively throughout the world, her heart remained in Cambridge, site of her home and her university position and where she died in 1983.

As an economist, Joan Robinson was not only a theorist and pragmatist but her knowledge and interest in history, a subject she had studied before economics, afforded her a good grasp of politics and world affairs. She was truly a complete social scientist who believed that knowledge and theory should be the handmaidens of policymaking. Two words could encapsulate the driving motivation for her research and leftist political persuasion: *economic justice*. Whether in her preoccupation with unemployment in the making of John Maynard Keynes's *General Theory of Employment, Interest, and Money* (1936), with the disparities of classes in her version of Marxian economics, or with economic development in her writings on China and India, she was compassionately engaged by all aspects of income distribution.

In her sixty-three-year academic career, Joan Robinson published 378 books, articles, and other writings, all noted in a bibliography compiled by Maria Cristina Marcuzzo (1991). There are numerous writings about Joan Robinson, the most notable being the enormous two volumes edited by George R. Feiwel and published in 1989. The collection's essays, some critical, some laudatory, are of particular interest because their contents highlight reactions from economic theorists across the whole spectrum in relation to Joan Robinson's philosophy, methodology, macroeconomics, and economic theory and specifically the notions of equilibrium, time, capital and growth, and unemployment and the theories of general equilibrium, trade, imperfect competition, games, credit markets, and finance. On reading the various essays, one could not conclude that Joan Robinson had an answer to every theoretical issue, but she touched a sensitive chord for many foundational premises of economics.

For economic-theory purists, *The Economics of Imperfect Competition* (1933, 1969) places Joan Robinson in the pantheon of economists. For economists in general, her work on employment and interest and especially *The Accumulation of Capital* (1956, 1969) was the catalyst to the highly charged Cambridge Capital Controversy, which pitted Joan Robinson and Pierro Sraffa of Cambridge, England, against Robert Solow and Paul Samuelson of Cambridge, Massachusetts, among others. Joan Robinson voiced opposition to the claims of the dominant neoclassical economics for the universality of its theory of production. Her critique, which targeted the "circularity" of the neoclassical interrelationship of capital value and interest rate, pushed economists of every stripe to ponder the relevance and logic of the production function, disembodied technical change, labor-capital substitution, relative prices, and capital accumulation, among other concepts, and led to a fruitful period of intense debate. Put simply, proponents of the Capital Controversy claimed to have shown that the neoclassical explanation of factor payments and substitution and to some extent growth is restrictive, only valid in a world of constant capital-labor ratio. For die-hard Robinsonians, a subgroup of post-Keynesians, for whom she was in battle with the foundations of neoclassical economics, Joan Robinson will forever remain a Joan of Arc.

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Omar Hamouda

ROCK 'N' ROLL

Rock 'n' roll, a hybrid popular musical form that emerged in the United States in the early 1950s, became one of the most important cultural forces around the world. Rock 'n' roll began when musicians mixed black rhythm and blues with Southern white country and gospel musics, helping to spark a cultural revolution in the 1950s and 1960s. The first exhilarating blasts of rock 'n' roll defied the Eisenhower era's puritanical emphasis on social and political conformity. This interracial music, edgy and rebellious, broke down social barriers by challenging sexual, racial, and, later, political taboos. The music made a powerful statement that young Americans were less divided by race than their parents.

During the 1950s white musicians such as Bill Haley, Elvis Presley, Buddy Holly, and Jerry Lee Lewis and black musicians such as Chuck Berry, Little Richard, and Fats Domino created rock 'n' roll; often fast and highly danceable, it posed a challenge to urban pop music from Tin Pan Alley and rural-oriented country music. Haley took rhythm and blues songs and reconfigured them for a white teen audience. Influenced by the electric blues, Berry created the distinctive rock 'n' roll guitar style. Presley, known as "Elvis the Pelvis" because of his suggestive, hip-swinging performances, became the first rock superstar, aided by skillful marketing. American rock 'n' rollers also developed a large following in Britain and Europe.

Rock 'n' roll evolved into rock in the early 1960s and became the heart of that decade's youth movement. American society in the 1960s grew to be deeply divided over the war in Vietnam, protest movements against racism and sexism, and "countercultural" youth who flouted social norms. In 1963 the Beatles began a "British Invasion"—a wave of U.K. rock groups, such as the Rolling Stones and the Kinks—that electrified American audiences and energized rock. "Beatlemania" reached around the world, spawning local imitators and spreading new fashions. The Beatles revolutionized recording technology and matured from top-selling pop stars to musical philosophers; many of their later albums, such as *Sgt. Pepper's Lonely Hearts Club Band* (1967), are infused with deep meaning. Bob Dylan, once a folk singer, wrote poetic songs exploring the human experience, including politics. The probing music of Dylan, the Beatles, and the musicians they influenced played a major role in protest and social movements. New rock styles also emerged. Hence, the Byrds and Crosby, Stills, and Nash created country rock and folk rock, while the Beach Boys expanded the boundaries of Southern California–based surf music. Often inspired by drug experiences, San Francisco musicians like the Jefferson Airplane and the bluesy Janis Joplin created psychedelic rock. The innovative guitarist Jimi Hendrix laid the foundation for heavy metal and hard rock. The merging of rock music, political protest, and the counterculture of disaffected youth led to the Summer of Love in 1967, when thousands congregated in San Francisco, and culminated in the Woodstock Music Festival of 1969, when 300,000 rock fans crowded a New York farm.

By the early 1970s several rock icons (including Hendrix and Joplin) had died, the war in Vietnam had wound down, protest movements had faded, and a more conservative social and political environment had emerged in the United States. New rock-derived styles developed over the next four decades. In the United States and especially Britain, punk music—loud, fast, and anarchic—appealed to alienated working-class youth with its frontal assault on prevailing social and political values. Heavy metal, with its deafening guitars, was angry and often obsessed with sex and violence. In contrast, dance musics such as disco, techno, and rave were escapist. But some rock musicians directly addressed social and political issues. The superstar Bruce Springsteen, mixing rock and folk, criticized U.S. foreign policies and the neglect of the working class and poor. In the 1990s punk and heavy metal were combined into a new style, grunge, most prominently represented by the Seattle group Nirvana. By the twenty-first century rock had fragmented into diverse styles with niche audiences.

African Americans created popular musics influenced by rock. The soul music of the 1960s, from artists like James Brown and Aretha Franklin, conveyed a message of black self-respect and unity parallel to the civil rights movements. The slickly produced Motown sound appealed to both blacks and whites. Beginning in the

1980s rap, an eclectic urban mix of African American and Caribbean traditions, became the most cutting-edge, politicized music, sometimes called the CNN of the black ghetto. The boastful, angry lyrics highlighted conflict between black and white, rich and poor, male and female. Like rock, rap was adopted by alienated groups around the world, but in the United States its radical message was watered down by the twenty-first century. Whether rock and its kindred musics were empowering or diversionary, promoting social and political change or helping maintain the status quo, remained subject to debate. Whatever the case may be, these debates reflected the enduring appeal of musics rooted, despite five decades of changes, in the black-white fusion of early rock 'n' roll.

SEE ALSO *Blues; Eisenhower, Dwight D.; Jazz; Music; Music, Psychology of; Reggae; World Music; Youth Culture*

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Craig A. Lockard

RODNEY, WALTER
1942–1980

Walter Rodney was born on March 23 in the colony of British Guiana and educated at Queen's College in the capital, Georgetown, and the University of the West Indies in Jamaica where he gained a First Class Honors BA degree in history. Rodney grew up during the country's anticolonial movement; his father was a member of the Marxist-oriented People's Progressive Party, which led the struggle for freedom from British rule. Rodney went on to complete his doctoral dissertation, titled "A History of the Upper Guinea Coast, 1545–1800," at the University of London in 1966. He taught at the University of Dar es Salaam in Tanzania during the period of radical political and agrarian reform led by Julius Nyerere.

TEACHING CAREER

Tanzania was the headquarters of the Organization of African Unity's Liberation Committee, and Dar es Salaam became the base for many of the exiled liberation movements of Southern Africa. Among these organizations were the African National Congress of South Africa, Frente da Libertaçao de Moçambique (FRELIMO) of Mozambique, and Movimento Popular da Libertação de Angola (MPLA) of Angola. In this atmosphere Rodney developed his Pan-African perspectives along Marxist lines and sided with Southern Africa's left-wing activists.

He returned to Jamaica to teach at the University of the West Indies in 1968. His radical views and association with Rastafarians and the Black Power movement in Jamaica led to Rodney being banned from reentering Jamaica by the government after he attended a Black Power conference in Canada in October 1968. The demonstration of university students together with Kingston's urban youth against the ban marked a watershed in Jamaica's political development; the scale of mass action in support of Rodney surprised the regime. There were protests throughout the Caribbean, and in Tanzania, Canada, and London. Rodney's reputation as a scholar-activist with a relevant critique of the Jamaican and Caribbean post-colonial elites was firmly established. In the nearly ten months in 1968 that Walter Rodney spent in Jamaica he not only taught but also spoke to groups in the slums of Kingston and in the rural areas. He had an extraordinary ability to speak with and listen to working people and unemployed youth. He explained the significance of Africa to Caribbean history and the importance of the struggles against the racial and social legacies of slavery and colonialism. His articles and speeches embodying these positions were published in the book *The Groundings with My Brothers* (1969).

HOW EUROPE UNDERDEVELOPED AFRICA

Rodney returned to lecture at the University of Dar es Salaam from 1969 to1974. In 1972 he published his best-known work *How Europe Underdeveloped Africa.* This work brings together historical scholarship and development theory to argue that the transatlantic slave trade and European and North American capitalist slavery did serious damage to Africa in depriving it of millions of its young people from the sixteenth to nineteenth centuries. Rodney was also critical of the impact of colonialism in retarding the development of the continent. The book is more than protest literature in that it advances a revolutionary humanist view of development and decolonization at a time when many countries on the continent were achieving political independence, a process that was also under way in the English-speaking Caribbean whose territories were populated largely by descendants of African slaves.

Some scholars argue that Rodney relies too heavily on the dependency theory of the 1960s and *How Europe*

Underdeveloped Africa has been criticized for not looking sufficiently at the internal factors in Africa that accounted for the slave trade and African underdevelopment. Ironically, however, much of his early work had focused on internal factors that retarded Africa's development and Rodney's analysis of Africa's traditional elites was caustic. So in a sense *How Europe Underdeveloped Africa* was a departure and the emphasis on European involvement in the hugely profitable trade completed his treatment of the relationship between European slave traders and plantation owners on the one hand and on the other hand Africa's elites who facilitated the slave trade. Also in 1972, Oxford University published Rodney's doctoral thesis *A History of the Upper Guinea Coast 1545–1800*. In 1975 two chapters titled "The Guinea Coast" and "Africa in Europe and the Americas" were published in the *Cambridge History of Africa*. The latter essay was a pioneering study of the African Diaspora.

A HISTORY OF THE GUYANESE WORKING PEOPLE, 1881–1905

Walter Rodney returned to his native country, now called Guyana, in 1974 and was denied a job at the University of Guyana by President Forbes Burnham. Burnham saw the young scholar-activist as a political opponent and hoped to keep him out of Guyana. Rodney was associated with the Working People's Alliance, a political organization that sought to offer a nonracial approach to Guyanese politics in a country where party politics had been divided between Cheddi Jagan's East Indian–based People's Progressive Party and Forbes Burnham's African-based People's National Congress. Between 1974 and 1980, when he was murdered at age thirty-eight by a booby-trapped walkie-talkie given to him by a member of Guyana's Defense Force, Rodney lectured in the United States and Europe for short periods in order to ensure an income. He continued his research and completed working on *A History of the Guyanese Working People, 1881–1905*, which was published posthumously in 1981. This work embodies his philosophy on the creative role of ordinary people in the making of history and introduces the contribution of African slaves "to the humanization of the Guyanese coastal environment" in creating "an elaborate system of canals … to provide drainage, irrigation, and transportation" (Rodney 1981, pp. 2–3) in a remarkable transfer of Dutch technology to a coastal landscape that was below sea level. It was the first book on the Guyanese working people written in the twentieth century. In 1982, the book won the American Historical Association's Albert J. Beveridge Prize and in 1983 the Association of Caribbean Historians gave Rodney a posthumous award.

Rodney's reputation as a historian of the Caribbean was duly recognized. He harnessed history in the service of African and Caribbean decolonization with a view to giving his readers a sense of their creative capacity to build postcolonial societies. The Barbadian novelist George Lamming, in his foreword to *A History of the Guyanese Working People, 1881–1905*, described Rodney's approach to history as "a way of ordering knowledge which could become an active part of the consciousness of an uncertified mass of ordinary people and which could be used by all as an instrument of social change. He taught from that assumption. He wrote out of that conviction" (Rodney 1981, p. xvii).

Rodney was also a gifted and compelling speaker whose arguments were backed up by a mastery of contemporary data. He possessed a capacity to communicate complex ideas to small study groups and large audiences with great clarity drawing on his solidly rooted knowledge of African and Caribbean history.

SEE ALSO *Black Power; Caribbean, The; Colonialism; Decolonization; Ethnic Fractionalization; Exploitation; Imperialism; James, C. L. R.; James, William; Marxism; Pan-Africanism; Rastafari; Underdevelopment; Williams, Eric*

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Rupert Lewis

ROE V. WADE

Few U.S. Supreme Court rulings have been as contentious as the Court's 1973 decision in *Roe v. Wade*. This landmark decision not only invalidated a number of state abortion laws, it also served to further divide public opinion with respect to "discretionary" abortion decisions (Franklin and Kosaki 1989, p. 759).

A number of states reformed their abortion statutes to broaden access to legal abortions in the late 1960s. Some of these laws, for example, permitted abortion when a woman's health was in danger as opposed to only her life. Some reforms, moreover, provided for legal abortions if a woman had been a victim of rape or incest, as well as in situations in which a fetal defect was present (Tribe 1991, p. 42). Of course, prior to *Roe*, a number of states,

including Texas, prohibited abortions except when a woman's life was in danger.

In addition to a perceived need for further abortion law reform, developments in the Supreme Court's privacy doctrine with respect to the use and distribution of contraceptives provided constitutional arguments that could potentially be applied to the expansion of abortion rights (Nossiff 2001, p. 41). In *Griswold v. Connecticut* (1965), the Supreme Court held that a Connecticut statute prohibiting the use of contraceptives violated a married couple's constitutional right to privacy. In *Eisenstadt v. Baird* (1972), the Court recognized that single persons also enjoy a right to privacy with respect to reproductive decisions when it struck down a Massachusetts law banning the provision of contraceptives to unmarried persons in order to prevent pregnancy.

The legal question as to whether a woman's privacy right could extend to her decision to terminate a pregnancy was presented to the Supreme Court in *Roe v. Wade*. Jane Roe, who would later reveal her identity as Norma McCorvey, was pregnant and wanted to obtain an abortion in Texas, her state of residence. Texas law, however, prohibited abortions except when necessary to preserve the mother's life. McCorvey's pregnancy did not threaten her life, nor did she have the finances to travel to a state in which abortion was legal. A Dallas attorney referred McCorvey to Sarah Weddington and Linda Coffee, two attorneys who were preparing a legal challenge to the Texas abortion laws. The case, which eventually became a class-action lawsuit, also involved a married couple dubbed John and Mary Doe. They argued that the law interfered with their marital relationship since Mary's physician had cautioned her about becoming pregnant but directed her to refrain from using birth control pills because of a medical condition. Under Texas law, however, abortion would be a foreclosed option for the couple in the event of an unintended pregnancy. James Hallford, a physician who was charged with violating the Texas abortion laws, also participated in the lawsuit. The plaintiffs sought a declaration that the Texas laws were unconstitutional, as well as an injunction to prevent their enforcement (Weddington 1992, pp. 50–62).

Jay Floyd, representing the Texas Office of the Attorney General, raised important challenges concerning the plaintiffs' standing to sue and the timing of the lawsuit. With respect to the merits, he argued that there was no constitutional right to an abortion and that the state had a "compelling interest in protecting the fetus" (Weddington 1992, p. 66). The representative for the district attorney's office argued further that abortion was an appropriate area for state regulation and also suggested that the privacy interests of women seeking abortions must give way to the protection of the unborn (Weddington 1992, pp. 65–66).

Although the three-judge trial court agreed with Floyd's argument that John and Mary Doe did not have standing to sue, the court held that Roe and Hallford could pursue their claims. On the merits, the court found that the laws violated the constitutional right of individuals to determine whether they wanted children; however, it refused to issue the plaintiffs' request for an injunction. Dallas County district attorney Henry Wade's assertion that he would continue to enforce the contested law assisted Weddington's efforts in obtaining a Supreme Court review of the decision (Weddington 1992, pp. 67–69).

The Supreme Court first heard oral arguments in *Roe* in 1971. However, the justices agreed that the case should be reargued to allow newly appointed justices William Rehnquist (1924–2005) and Lewis Powell (1907–1998) to take part in the decision. Accordingly, the Court issued its landmark decision in 1973. Writing for a seven-member majority, Justice Harry Blackmun (1908–1999) argued that a constitutional "right of privacy … is broad enough to encompass a woman's decision whether or not to terminate her pregnancy." (410 U.S. 113, 153). However, the majority also recognized that the state has legitimate interests with respect to "health," "medical standards," and "potential life" that might justify regulating abortion at certain points (410 U.S. 113, 154).

Specifically, Blackmun articulated a trimester framework to evaluate when these state interests could justify regulation of a woman's decision to have an abortion. During the first trimester of a woman's pregnancy, when the risk of mortality from an abortion is low relative to the risk of childbirth, the Court held that "the abortion decision … must be left to the medical judgment" of a woman's doctor (410 U.S. 113, 164). However, by the second trimester, the state could regulate abortions in order to protect maternal health (410 U.S. 113, 163). Finally, the state's interest in protecting "potential life" could justify regulation when the fetus reaches the stage of "viability," defined as the point at which it has "the capability of meaningful life outside the mother's womb." At this stage, Blackmun held that the state could prohibit abortion so long as exceptions were made "to preserve the life or health of the mother" (410 U.S. 113, 154).

While many individuals and groups defended the Supreme Court's decision in *Roe*, others criticized the ruling in the hope of seeing it limited or overruled. At the state level, for example, attempts to restrict access to abortion have been made through laws requiring parental or spousal notification or consent, informed consent, waiting periods, and tests to determine fetal viability, as well as through laws prohibiting public financing or assistance

for abortion procedures (Nossiff 2001, p. 148; Tribe 1991, p. 144). McCorvey herself later backed away from her affiliation with the *Roe* decision and the pro-choice movement. In 1995 McCorvey was baptized by the national director of Operation Rescue, a well-known organization opposing abortion rights in the United States (*New York Times* 1995, p. A12), and in 2003 she unsuccessfully petitioned a federal court to reconsider the result announced in *Roe* (*New York Sun* 2003, p. 6).

The battle over abortion rights and the *Roe* decision has also colored the Supreme Court judicial selection process. Nominees to the Court after *Roe* have been scrutinized concerning their positions on privacy rights generally and their opinion of *Roe* specifically. Although John Roberts was tapped to replace Chief Justice Rehnquist in 2005, particular concern was raised that Justice Sandra Day O'Connor's replacement in 2006, Samuel Alito, might provide the Court with the votes needed to overrule this controversial decision. However, as legal analyst Jeffrey Toobin (2005, p. 81) noted, a number of Republican-appointed justices have joined the Court since *Roe*, and, although the Court has revisited the topic of abortion rights in a number of cases, it has yet to overrule the decision.

SEE ALSO *Abortion; Supreme Court, U.S.; Women's Movement*

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ROGERS, CARL

SEE *Psychotherapy.*

ROLE CONFLICT

The term *role conflict* refers to a clash between two or more of a person's roles or incompatible features within the same role. These incompatibilities can consist of differing expectations, requirements, beliefs, and/or attitudes. The term *role* relies on the theatrical metaphor of an actor performing his or her part in a staged play. Although stage actors generally play only one character per play, the same actor will go on to play multiple characters throughout his or her career, and different actors often play the same role in different ways. Unlike theatrical actors, people in everyday life enact multiple roles simultaneously. For example, Jane might be a boss, an employee, a daughter, a mother, and so on. Often, these roles are activated concurrently and harmoniously. Jane's role as the primary wage earner for her family is not likely to be in conflict with her role as a supervisor at work. Different roles are sometime incompatible, however, and the requirements of one role can clash with those of another. In addition, contradictory requirements within the same role can produce role conflict.

There are two types of role conflict: *intrarole* conflict, referring to incompatible requirements within the same role, and *interrole* conflict, referring to clashing expectations from separate roles within the same person. Intrarole conflict can arise in two ways. First, different people sometimes have inconsistent conceptions concerning the requirements and expectations that constitute a particular role. Jane's conception of being a good mother might consist of having a job outside of the home. She might also believe that providing socioemotional support to her family is a necessary ingredient in her role as a mother. However, Jane's mother-in-law might think that to be a good mother Jane would need to relinquish her job to provide around-the-clock care for her children. Because of these differing conceptions concerning the role of a mother, Jane is likely to experience intrarole conflict.

Intrarole conflict can also occur when the role itself has contradictory expectations or requirements. Jane might feel that her role as a mother requires her to provide emotional warmth to her children. The same role might also require her to discipline her children following misbehavior. Because being sensitive and supportive is at odds with enacting discipline, Jane is likely to experience intrarole conflict in situations where her children misbehave. To resolve intrarole conflict, the role can be compartmentalized. In her role as mother, Jane might justify her job outside the home by noting that it allows her to care for

her children financially. Working outside the home provides them with groceries, housing, heat, schooling, medical care, and so on. As such, it fits with Jane's conception of the motherhood role. An additional way to resolve intrarole conflicts is to avoid those who define a role differently. As such, Jane might avoid her mother-in-law because of their clashing conceptions concerning the motherhood role.

Interrole conflict arises when the requirements and expectations of one role interfere or conflict with those of another role. Jane's role as mother is likely to conflict occasionally with her role as a worker employed outside the home. When one of her children becomes ill, Jane may find that the demands of her job (e.g., staying at work) are in conflict with the demands of motherhood (e.g., taking her child to the doctor). There are a number of ways to resolve interrole conflicts. Often, people will prioritize their roles. In some situations, such as when an important deadline looms at work, it may be more important for Jane to stay late at work. In this situation, her role as a worker will take priority over her role as a mother. At other times, such as when her children are ill and in need of care, her role as mother will take priority. We can also compartmentalize different roles. For example, Jane may find that she interacts with others very differently at work and home. By compartmentalizing her roles, she can be task-oriented in her role as a boss, but socioemotionally oriented in her role as wife and mother. Roles can also be specialized. If children need to be disciplined, Jane and her husband can develop a system in which her husband is in charge of discipline while Jane is in charge of providing warmth and comfort.

The experience of role conflict has been associated with negative health, psychological, social, and work-related outcomes. Role conflict is positively correlated with experienced stress level and depression and negatively correlated with self-esteem. In the workplace, role conflict is negatively correlated with job commitment, job involvement, participation in decision-making, and satisfaction with compensation, coworkers, and supervision and, as Mary Van Sell, Arthur Brief, and Randall Schuler (1981) observed, positively associated with job dissatisfaction, on-the-job tension, and intentions to leave an organization.

SEE ALSO *Conflict; Family; Happiness; Identity; Mental Health; Motherhood; Performance; Role Theory; Self-Concept; Self-Esteem; Work*

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Scott T. Wolf

ROLE MODELS

A *role model* is an individual who is perceived as exemplary or worthy of identification or imitation. It is a conscious or unconscious emotional attachment *not* necessarily involving direct personal contact; for example, identification with sports or entertainment figures is common. *Mentors*, a subset of role models, deliberately support, guide, and shape younger or less experienced individuals as they weather difficult periods, enter new arenas, or undertake challenging tasks. Mentoring may include elements that are instrumental (e.g., career advice, networking contacts, financial assistance) and psychosocial (e.g., emotional support, companionship). Having a role model or mentor is a commonly identified protective factor contributing to resilience—that is, successfully responding to challenges or overcoming adversity—and mitigating risk, particularly in ethnic minority adolescents experiencing poverty or familial dysfunction.

Role model selection reflects critical elements of psychosocial functioning and self-perception, particularly ethnic identity. Individuals generally identify sociodemographically similar role models, and socioeconomic status (SES) is associated with having a role model. In a study of a representative sample of Los Angeles adolescents, African American teens almost exclusively chose African American role models (96%), whereas two thirds (64%) of Latinos chose an ethnically congruent model. Overall, 75 percent of Latinos chose a role model of color, with 11 percent having chosen African Americans. Four in five whites identified a white role model. About one in five teens chose relatives as role models, the most common choice. Whites were more likely than African Americans or Latinos to have known extrafamilial role models. Lower SES and being male were associated with selecting a *figure* role model available primarily through the media, as opposed to a known individual. Consistent with these findings, a qualitative study found that the type of role model (family member or figure) most often identified by low-income African American males differed in high school and college samples: Identified role models for the college students were primarily, though not exclusively, family members (Taylor, 1989). Extrafamilial models tended to be ethnically similar to the young men. Enduring and substantive role models were less frequently identified in the high school sample than in the college sample. Still, even as subjects of fleeting interest, African

Americans—mainly entertainers and political or religious figures—were most often chosen. Regarding the other primary sociodemographic characteristic, gender, boys are more likely than girls to choose a gender-congruent role model. This difference is only found for the figure category of models. For known role models, boys and girls choose same-sex or opposite-sex persons at about the same rate. The greater availability of powerful male figures in the popular media and in sports, in particular, and the greater status that our society affords to men may explain this finding.

That learning occurs through observation and imitation or *modeling of revered others* has been well established by social learning theorists. For example, a parenting study demonstrated that teen fathers often come from families in which there were role models for teen parenthood; for example, first-time teen fathers were three times as likely to have older brothers who were themselves teenaged parents. Certainly, the effectiveness of role models in encouraging the adoption of commercially desirable but risky behavior (e.g., cigarette smoking and alcohol consumption) is well known to the advertising industry. Commercial marketing utilizes *inspirational* and *aspirational* role models in product "branding" and sales promotion. Inspirational role models are quite similar to the target audience ("people like us"); social distance is minimal and "cultural" values and traditions are shared, thereby increasing motivation and enhancing self-efficacy. Peer modeling, in which youth or adult lay health advisers (*promotoras*) are used in outreach, embodies this construct. In contrast, aspirational role models have culturally valued attributes that are coveted by but less prevalent in the targeted population, for example, a higher position within a work hierarchy, extraordinary athletic or musical talent, or physical attractiveness.

The evidence for the utility of role modeling is growing. Evidence that suggests the positive influence of ethnically matched role models may be seen in the educational persistence of graduates of historically black colleges and universities. Although only one in five African American undergraduate students are enrolled in these institutions, one in three black college graduates hail from these institutions, as do more than half of those earning doctorates and more than two thirds of all black professionals. Several recent empirical studies also support the positive influence of role models on certain measures of resilience in ethnically diverse and, particularly, high-risk adolescent populations. This influence may operate largely by enhancing ethnic identity among African American, Latino, and Native American youths. Having a role model, particularly one known to the adolescent, has been linked to higher self-esteem and academic performance, decreased substance use, fewer behavioral problems in school, higher levels of physical activity, and lower levels of engagement in early or high-risk sexual activity. Extrafamilial known role models were just as positively influential as family members. Even a figure role model is associated with some lowered risk, though they exert less influence than known role models. Ethnic congruence of role models does not seem to affect outcomes, but because it is apparent that adolescents for whom ethnicity is most salient strongly gravitate to role models of the same ethnicity, sufficient variability to test this hypothesis is unlikely to be found.

Many young people do not have role models or mentors. Exposure of low SES ethnic minority youngsters, in particular, to positive role models and adult images of their own ethnicity—a task previously performed by racially segregated but socioeconomically heterogeneous churches, neighborhoods, and schools—is increasingly recognized as critical to their development of a stable identity. Social service programs of many varieties have been developed to address this gap through, for example, faith-based organizations, schools, government programs, and unaffiliated community-based efforts. One-to-one mentoring (e.g., Big Brother/Big Sister, center-based programs at YMCAs/YWCAs and Girls'/Boys' Clubs) is a common programmatic approach to providing this resource. However, these programs place tremendous time and energy demands on mentors, who also face their own family demands and often professional struggles with discrimination. Thus, there is limited availability of appropriate one-to-one mentors, given the scarcity of volunteers and increasing socioeconomic homogeneity of ethnic minority neighborhoods. School-based "career day" programs, another common approach, present useful opportunities for role modeling. They do not, however, provide the continuity and personalization of contact necessary for a sustaining influence. Small-scale self-image–enhancement approaches that directly or indirectly utilize role models have been used with measurable success with high-risk African American and Latino youth, and are integral parts of many community institutions. Such emerging "hybrid" role-modeling or mentoring interventions (e.g., many culturally grounded "rites-of-passage" programs) are less taxing to volunteers than one-to-one involvement, but offer more consistent and personal contact than "career days."

Positive images and examples of ethnically diverse individuals of both genders are needed. Attention should be directed to developing and systematically evaluating innovative and cost-effective approaches, both stand-alone programs and programs in conjunction with the provision of other services, via media or in person. Feasible and effective interventions to expose youth to appropriate role models are early in their development, and the process by which youths identify role models is not well understood. Because the process of selecting and

emulating a role model provides critical—and potentially socially constructive—access to the self-images of young people, progress in this area is central to advancing the field of adolescent health promotion.

SEE ALSO *Attachment Theory; Resiliency*

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Antronette (Toni) Yancey

ROLE OVERLOAD

SEE *Role Theory.*

ROLE THEORY

Role theory is generally concerned with explaining the relationship between the individual and society. It has guided empirical research on a range of topics, including the structure of interaction in small groups, the maintenance of gender differences, the development of commitment to deviant behavior, the genesis and resolution of conflict in organizations, and the construction of personal identity. Although the development of role theory has occurred primarily within sociology, it originated in several different social science disciplines. The first significant contributions were published in the 1930s with independent work by the anthropologist Ralph Linton (1893–1953), the psychotherapist Jacob Moreno (1889–1974), and the social philosopher George Herbert Mead (1863–1931). Of these three, Mead's contributions have been the most significant as he was an important influence on the emerging new discipline of sociology. Within sociology, there have been two distinct traditions of role theory; these have been nominally categorized as the structural and interactionist schools.

THE STRUCTURAL SCHOOL

Starting in the 1950s and continuing through the 1960s, role theory was associated mostly with the work of the American sociologist Talcott Parsons (1902–1979). During this period, Parsons and his associates were developing a comprehensive theory of society that came to be known as structural functionalism. Under structural functionalism, society is viewed as a complex system of structures and processes with layers of interconnected subsystems, institutions, values, positions, and roles. In Parsons's scheme, the role concept is used to explain how individual desires and motivations are reconciled with the collective needs of society. This occurs in part through the process of socialization, where kinship, educational, and religious institutions transmit societal values. When individuals are properly socialized, they fulfill the expectations and needs of an orderly social system by playing the roles associated with their position in society. Parsons argued, for example, that the preponderance of men in the occupational system of the 1940s was functional in that it eliminated competition for status between husband and wife. While the husband achieved status through his role as provider in a high-prestige job, the wife achieved a functionally equivalent status in her role as homemaker where prestige could be achieved through superiority in personal appearance, house furnishings, and other artistic pursuits.

In the structural tradition, roles are typically defined as the socially shared expectations and behaviors associated with a position in society. Because individuals have multiple positions in society, however, there are times when role expectations pull in competing directions so

that fulfilling one role may mean failing to fulfill another. This dilemma has been called role conflict, and it can take several different forms. One of these is role overload, which occurs when there is not enough time or energy to play all the roles in one's role set. Related structural interpretations of role theory have been concerned with differentiating among the different types of roles, describing changes in roles, and explaining why people often deviate from role expectations.

THE INTERACTIONIST SCHOOL

By the middle of the 1960s a competing version of role theory was in development. The so-called interactionist school emerged initially as a critique of the dominant structural perspective. The interactionist critics argued that the structural approach to role theory put too much emphasis on societal consensus, relied naively on the existence of widespread conformity with social norms, and held an overly mechanical and deterministic view of social behavior.

The American sociologist Ralph H. Turner spearheaded the development of the interactionist approach by introducing the idea of role making. According to Turner, in everyday situations there is always a degree of uncertainty and discretion. Since roles can only suggest general patterns of action, individuals must cooperate to create and modify roles in particular settings. Research has shown this to be true even in strict, hierarchical organizations such as the military and correctional institutions, where positions are rigidly defined and rules are enforced within a clear authority structure. From the interactionist perspective, understanding the process by which individuals learn to coordinate their actions and construct role-related behavior is crucial.

The central idea in the coordination of joint action is a process called role taking, a concept developed in the seminal work of Mead. Role taking, sometimes called *taking the role of other*, occurs when an actor anticipates the behavior of others in specific situations and adjusts his or her action accordingly. This uniquely human ability develops along with language and other basic skills of symbolic interaction. Once in place, a capacity for role taking enables mutual understanding, coordinated action, and the development of common plans. It is also fundamental to the more complex process of building and maintaining large social institutions. Thus, in contrast to the top-down structural approach to role behavior that focuses on role playing, the interactionists present a bottom-up approach that stresses the creative aspects of role making.

INTEGRATION

After the 1980s, differences between structuralists and interactionists gave way to more synthetic approaches where ideas from both theoretical traditions were integrated. Thus, there developed a general acknowledgment that social roles can profoundly limit and structure patterns of social behavior while at the same time they can serve as resources for enabling and facilitating other actions. Rather than emphasizing role playing or role making, it became more productive to see roles as social resources that are deployed by institutions and persons in different ways; in short, the emphasis was now on role using.

Although role theory is no longer central to most comprehensive theories of society, as it was for Parsons and Mead, it does continue to generate a stream of work at different levels of analysis. At the social psychological level, for example, scholars have found that social roles are central components of one's overall identity, and evidence shows that roles have profound influence on people's behavior in social settings, on how they organize and process information, and on their political, economic, and moral priorities. At the macro and institutional level, research has documented the increasing proliferation of new, more specialized roles in modern society as well as the changing nature of traditional roles resulting from economic and cultural globalization.

SEE ALSO *Conformity; Functionalism; Norms; Role Conflict; Role Models; Self-Concept; Social Psychology; Socialization; Structuralism*

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Peter L. Callero

ROLE USING

SEE *Role Theory.*

ROLL CALLS

Roll calls are votes taken by a legislative chamber in which the names of legislators are recorded along with their votes

on a question. Rules and practices surrounding roll call votes vary across legislatures because of differences in constitutions, chambers rules, actions of legislative leaders, political cultures, legislature sizes, and the technologies used to record votes. Because they are highly visible, roll call votes are useful to social scientists who research legislative behavior. Techniques used to study roll call votes range from simple descriptions to sophisticated scaling techniques adapted from psychometrics and econometrics.

The most thoroughly studied roll call record is that of the U.S. Congress. Article I, section 5 of the U.S. Constitution requires that "the Yeas and Nays of the members of either House on any question" shall be entered in the journal upon the demand of one-fifth of those present. Through the end of the 109th Congress (2006), the U.S. House of Representatives and Senate together had recorded nearly 94,000 roll call votes.

The first social scientific use of roll call votes is attributed to A. Lawrence Lowell's 1902 essay "The Influence of Party upon Legislation in England and America." Lowell introduced the idea of the "party vote," defined as a vote in which at least 90 percent of one party in a legislature voted against at least 90 percent of the other party. An important extension of Lowell's idea was suggested by Stuart Rice in 1928 through his "index of cohesion" and "index of likeness."

Efforts by the liberal interest group Americans for Democratic Action (ADA) in the 1940s encouraged the use of roll call votes to summarize the voting tendencies of individual legislators. The ADA began publishing an annual list of "key votes" in Congress, reporting how often each member of Congress (MC) supported the ADA position. These reports allowed one to array MCs along a continuum, ranging from the most liberal, with a "liberal quotient" of 100 percent, to the most conservative, at a quotient of 0 percent. Ever since the ADA pioneered this technique, dozens of groups have developed "support scores" that reflect their own agendas.

Interest-group support scores are easy to calculate and intuitive to understand, but they have serious shortcomings. Interest-group ratings tend to be based on a small number of roll call votes, thus discarding the rich information that the omitted roll call votes can provide. The roll call votes chosen are typically unusually divisive, which causes the resulting ratings to be too extreme. These techniques also require a priori agreement about which votes best reveal the underlying ideological dimension being described.

Beginning in the 1980s social scientists started exploring ways to overcome these deficiencies, taking advantage of advances in measurement theory and computational capabilities. A frequently used example of this is a class of techniques pioneered by Keith Poole and Howard Rosenthal, called NOMINATE (for *Nomina*l *T*hree-step *E*stimation). NOMINATE scores can be constructed from a large number of roll call votes analyzed simultaneously across a long period of time. Ratings from such techniques as NOMINATE show that a single left-right ideological dimension underlies most roll call behavior across American history, that a second dimension of choice sometimes emerges that corresponds to race-related issues, and that individual legislative voting behavior is highly stable over time.

SEE ALSO *Congress, U.S.; Conservatism; Constitutions; Interest Groups and Interests; Left and Right; Liberalism; Political Science; Voting*

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Charles Stewart III

ROMA, THE

The term *Roma* has come into common parlance to refer to all the populations in Europe (and indeed the rest of the world) that used to be referred to in their host societies as Gypsies, Cigány, Tsigani, and other terms. It thus covers a number of populations with particular histories but also certain distinctive commonalities. This article focuses on those who have a historical link to populations that have spoken Romani, an Indic language now in use on all the continents of the world. Speakers of an ancestral form of Romani were in all likelihood among a number of populations of service nomads who circulated in the southern ranges of the Eurasian landmass between northern India and the Middle East over the past thousand years or more. Other related ethnic-linguistic groups include the Dom (speakers of Domari), found across the Middle East, and the Lom (speakers of Lomavren, spoken in Armenia, Georgia, and eastern Turkey).

The reconstruction of the early history of Romani-speaking populations is fraught with difficulties as archival records are scant. Moreover the procedure by which earlier historians attempted to reconstruct early modern Romani social life from philological materials is

now widely discredited. Genetic evidence (mitochondrial and Y-chromosome DNA) unsurprisingly supports the linguistic link to North India, but founder effects and other sampling uncertainties mean detailed and datable population histories cannot as yet be reconstructed.

While all Romani speakers can be called Gypsy, not all Gypsies are Romani speakers. Nevertheless, there are some signs of a broader Roma ethnic awareness developing in some circles, at least across Europe, including people whose ancestors may never have spoken any Indic language.

On the basis of dialect differentiation it is possible to distinguish four large segments of the European Romani population. The four branches of Romani are Balkan, Vlax (centered in Romania but spreading westward), Central, and Northern. British or Welsh and Iberian Romani once constituted independent branches but survive only as special lexicons used as part of English or Spanish.

These linguistically determined regions of diffusion indicate zones of greater and more intense interaction among Romani speakers but cannot be used to determine the movements or settlement history of all Roma. Since the dialect groupings mentioned here are more or less territorially based (even if the boundaries between them are loose and alterable), dialect corresponds to some extent to history. It thus makes heuristic sense to talk, for instance, of Sinte (in Germany), of Gitanos (in Spain), or Vlax (in various parts of Europe and beyond) as loosely defined cultural groups within the Roma.

Roma speak Romani (often spelled Romany) or Romanes. This is an Indic language, probably originating in central India over one thousand years ago. Yaron Matras has estimated that in the early Romani inherited lexicon, of 1,000 lexical roots, 200 to 250 are from Greek, around 70 from Iranian, and 40 from Armenian, leaving about 650 to 700 roots of Indic origin. There are no monolingual speakers of Romani, and the language as spoken by Roma in different parts of Europe incorporates loan words reflecting the history of local contact with other languages. The fact that the term *Gypsy* and other exonyms such as the Hungarian *Cigány* or the German *Zigeuner* are found from the late Middle Ages in Europe indicates a likely time of arrival for Romani speakers. These exogenous terms are more or less abusive and have strongly negative connotations of deceit and laziness.

Roma make up approximately 3 to 5 percent of the population of most eastern European countries as well as of Spain. Exceptional cases (Poland and the Baltic States, for example, where Roma represent tiny minorities) are areas where Nazi-led persecution and killings were particularly intense. In the early industrialized west of the Continent, Roma or Gypsies constitute around .1 percent of the total population.

Scholarly dispute rages as to the reasons for the persistence and success of the Roma way of life. For some, this is simply a matter of the fall of the cultural dice. The ability of Roma groups to retain a distinctive set of values and then to remain relatively unnoticed and unknown has been stressed by one school of anthropologists. Another focuses on the particular ways Roma have resisted assimilation into sedentary societies and the ways they have constructed cultural values in an oppositional strategy to peasant and farming communities.

The traditional Roma economic orientation was strikingly differentiated from that of the surrounding agricultural population, known by Roma as *gaźe* or "farmers." Though there are communities of Roma who own land, most tend not to rely directly on the natural environment for their livelihood. Rather, they depend on human environments. Thus Roma are found wherever the non-Roma environment provides them with the human resources they need to carry out their economic activities.

In early modern Europe, Roma were known as blacksmiths and musicians, both "infamous" professions that were construed as either polluting or socially dangerous. For much of the twentieth century successful Roma engaged, if possible, in various forms of trade, especially with antiques, horses or other animals, and (more recently) secondhand cars. Poorer Roma are often engaged in various forms of scavenging of industrial waste goods that are then sold back to the *gaźos* (non-Roma).

For most Roma, trade provides an insufficient income to support a family, and so wage labor in factories became the norm after World War II, at least in Spain and Eastern Europe. Under communist rule all citizens were obliged to have a registered workplace. The collapse of the planned economies and with them the heavily subsidized and profoundly inefficient and unmodernized industries of the region led to mass unemployment among Roma families across the region, especially elder Roma. Rates of unemployment are estimated at between 30 and 70 percent in many of the former communist countries.

Relations between Roma and the authorities do not always reflect directly the state of Roma's economic position. The relationship between Roma and majority populations has by no means always been conflictual, though issues around sedentarization and resistance to proletarianization have recurrently led to periods of persecution.

Eighteenth- and nineteenth-century policy toward Gypsies was largely driven by police concerns that they represented a hard-to-identify, unsettled population, and the origin of extraterritorial police (such as Interpol) procedures in Europe lies in part in police work dealing with Roma in Germany and other areas of central Europe. The

history of Roma in the principalities of Wallachia and Moldavia is of particular note, as many were enslaved to feudal lords and monasteries until the mid-nineteenth century. Slavery here refers to a form of unbreakable personal and domestic bond rather than the more familiar plantation slavery characteristic of the Americas in the eighteenth and nineteenth centuries.

During the 1930s persecution of Roma across central and eastern Europe intensified, in particular inside the German Third Reich. Using anthropological and, more importantly, police procedures for identifying "the unsettled," the Third Reich registered the entire German Romani population before deporting two-thirds to camps in the occupied east. Although the Nazis never formulated an explicit "final solution" for the Roma, the cumulative effect of sterilization programs in the Third Reich, mass deportations to Auschwitz, and systematic massacres on the eastern and southeastern fronts constituted a genocidal campaign in which well over 100,000 Roma died.

For forty years after the war the democratic German successor state failed to fully acknowledge the nature and extent of the Nazi persecution, and thousands of Roma died without receiving proper reparation or compensation for their suffering. This remains a potent symbol to young activists of the marginalization of Roma in European political and civic society.

Historical work has demonstrated the existence of a sharp sense of persecution and discrimination among Roma as early as the eighteenth century. But it was not until the second and third decades of the twentieth century that any serious attempts at local and international self-organization began. Communist nationality policy tended to blow alternately hot and cold on Romani self-organization, but the legacy in Bulgaria and Hungary of political movements in the 1950s can still be felt. The formation of the International Romany Union in 1971 counts as a formal landmark in the process of Romany self-organization, but perhaps more important has been the emergence of a broadly based Romani intelligentsia across eastern Europe since the early 1970s. In the early twenty-first century scores of young Romani intellectuals are shaping a new, Europe-wide Romani movement. The presence, in 2007, in the European Parliament of two young Romani members, Livia Jároka and Viktória Mohácsi (both from Hungary), is indicative of the dynamism of this new generation.

Government policies toward Roma vary widely across Europe. In the former communist countries a certain policy schizophrenia may be observed: encouraging an ethnicization of public policy (with programs targeted not at social problems but ethnic groups) and at the same time a tendency to represent the so-called Roma question as one of national security, playing on fears of demographic explosion among Roma and demographic collapse of the majority population. In reality Romani demographic trends mirror the decline in fertility witnessed across Europe.

Mass mobilization of Roma has been hampered by a number of factors. In most Romani communities social organization is kinship based, with no formal political structures existing over and above loose networks of related families. Romani communities tend to be extremely egalitarian in values, despite economic inequalities among households being marked. This militates against the emergence of stable political leadership. Occasionally "kings" or other forms of traditional leaders arise when non-Gypsy authorities collaborate with prominent Roma to control access to some limitable resource, but the authority of such people is largely contingent on their ability to "serve up" the non-Gypsies.

In the last two decades of the twentieth century the importation of a human and civic rights discourse through mainly U.S.-based nongovernmental organizations (NGOs) has provided an oppositional language of self-representation to activists. With most of the former communist countries now inside the European Union (EU), the U.S.-backed NGOs tend to be withdrawing. At the same time EU structures tend to encourage a demand for participation and collaboration at a local level with community representatives. It remains to be seen whether the imported oppositional stance of civic rights can be adapted to the needs and opportunities of the new situation. It is in this complex context that the new, highly educated young Romani elite are trying to create a politics of Romani identity fit for the twenty-first century.

SEE ALSO *Discrimination; Ethnicity; Holocaust, The; Identity; Kinship; Racism*

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Michael Stewart

ROMAN CATHOLIC CHURCH

The Roman Catholic Church refers to the worldwide assembly of Christians who are in full communion with the pope, the bishop of Rome, who is regarded as the sign and instrument of Catholic unity among bishops and faithful alike. Statistically, Roman Catholics form the largest single Christian body, with close to 1.1 billion members worldwide. The rise of Christian culture in western Europe is virtually synonymous with the history of the Roman Catholic Church.

Although other Christians sometimes refer to themselves as *catholic* (from the Greek word meaning universal or complete), Roman Catholics believe communion with the See of Rome is required for full membership in the Catholic Church. In addition to the Western or Latin Rite Catholics, there are some 20 million Eastern Christians in full communion with Rome (better identified as Eastern Catholics than Roman Catholics).

Roman Catholics believe the pope is the successor of Peter, appointed by Jesus Christ as the chief apostle and head of the Church. By the late second century, Irenaeus, the bishop of Lyon (c.130–200), saw agreement with the Church of Rome as necessary for all Christian churches.

Following persecutions by various Roman emperors, the Church received legal recognition from Constantine in 313. The move of the imperial capital from Rome to Byzantium (Constantinople) in 330 set the stage for the later split (schism) of the Byzantine Church from the Church of Rome in 1054.

The monasteries of the Church preserved learning after the collapse of the Roman Empire. The rise of Islam in the seventh century and the Muslim invasions of Spain and Gaul prompted the pope to form an alliance with Charlemagne and the Franks. The Crusades (1095–1291) failed to maintain Christian control over Jerusalem and stem the eventual spread of Muslim power into Asia Minor (Turkey).

During the Middle Ages (c. 800–1400), the Church inspired cultural achievements in art (e.g., Gothic architecture), poetry (e.g., Dante), philosophy (e.g., Thomas Aquinas), and learning (e.g., the universities of Oxford, Paris, Salamanca, and Bologna). During the Renaissance (c.1400–1550), the Church continued its patronage of the arts, but many areas of Europe (e.g., England, Holland, northern Germany, and Scandinavia) broke with papal authority in the sixteenth century following the Protestant Reformation. In the 1500s and 1600s, missionaries and colonial rulers spread Roman Catholicism into the Americas and Asia.

Although the Roman Catholic Church contributed much to the cultural achievements of the medieval and Renaissance eras, religious minorities, such as the Jews, often suffered persecutions in countries under Roman Catholic control. Theological ideas were enforced by various inquisitions (Church tribunals) that conducted trials for those accused of heresies (false teachings). Technically, the inquisition only had jurisdiction over the baptized, but after the Jews and Muslims were expelled from Iberia in 1492, the Spanish Inquisition would often target *Los Conversos*, the Jews and Muslims who had accepted baptism rather than leave the country of their birth.

In the 1700s and 1800s, the influence of the Roman Catholic Church over European culture began to fade. The French Revolution (1789–1799) placed the Church in France under virtual state control. In 1870, the Papal States of central Italy were seized from the Church, leaving control only over Vatican City State (according to the Lateran Agreement of 1929).

Deprived of secular power, the Roman Catholic Church in the twentieth century tried to exert moral authority. Pope Pius XI (1857–1939), who was pope from 1922 to his death, issued encyclical letters protesting Italian Fascism (1931), German Nazism (1937), and atheistic Communism (1937). His successor, Pius XII (pope from 1939–1958), led the Church through the difficult years of World War II (1939–1945). His policies during this time—especially with regard to helping the Jews—have been praised by some and criticized by others.

The Second Vatican Council (1962–1965) urged dialogue with other Christians and non-Christians (most notably Jews and Muslims). In his 1994 apostolic letter, *Tertio Millennio Adveniente*, John Paul II (pope from 1978–2005) called Catholics to a "spirit of repentance" for practices of past centuries that involved "intolerance and even the use of violence in the service of truth." Pope Benedict XVI, who succeeded John Paul in 2005, has continued this spirit into the early-twenty-first century, while at the same time condemning secularization and moral relativism.

SEE ALSO *Christianity; Church, The; Enlightenment; French Revolution; Greek Orthodox Church; Islam, Shia and Sunni; Jesus Christ; Missionaries; Protestantism; Religion; Rituals; Secular, Secularism, Secularization; Vatican, The*

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Robert Fastiggi

ROMANCE

Social psychologists have defined "romance" in a variety of ways. These include: (1) Tales of idealized romantic love between two lovers; (2) A dreamy, imaginative, cognitive state in which people imagine a perfect love relationship; (3) A *feeling* of passionate love. In the early 1950s social psychologists focused on romantic love, attempting to discover if couples' attitudes toward romantic love had an impact on marital happiness and stability. A popular scale at that time was Charles Hobart's "Romantic Love Scale" (1958). It contained such items as: "When one is in love … one lives almost solely for the other." Later, in 1973, Zick Rubin developed a more modern scale to measure romantic love versus friendship. Rubin argued that romantic love was made up of three elements: attachment, caring, and intimacy.

DEFINITIONS

By the end of the twentieth century, however, scientists' attention had shifted to passionate love. *Passionate love* (sometimes called "obsessive love," "infatuation," "lovesickness," "romantic love," or "being-in-love") is a powerful emotional state. It has been defined by Elaine Hatfield and Richard Rapson as "A state of intense longing for union with another. Passionate love is a complex functional whole including appraisals or appreciations, subjective feelings, expressions, patterned physiological processes, action tendencies, and instrumental behaviors. Reciprocated love (union with the other) is associated with fulfillment and ecstasy. Unrequited love (separation) is associated with feelings of emptiness, anxiety, and despair" (1993, p. 5). The Passionate Love Scale is designed to tap into the cognitive, emotional, and behavioral indicants of such longings, as reported by Hatfield and Susan Sprecher in 1986.

GENETIC AND BIOLOGICAL BASES OF LOVE, LUST, AND ATTACHMENT

In the 1990s social psychologists, neuroscientists, and physiologists began to explore the links between romantic and passionate love, sexual desire, and sexual behavior. The first neuroscientists to study romantic and passionate love were Niels Birbaumer and his colleagues in 1993. They concluded that passionate love was "mental chaos." In 2000 Andreas Bartels and Semir Zeki studied the neural bases of passionate love using fMRI (brain imaging) techniques. They interviewed young men and women from eleven countries who claimed to be "truly, deeply, and madly" in love and who scored high on the Passionate Love Scale. They discovered that passionate love produced increased activity in the brain areas associated with euphoria and reward, and decreased levels of activity in the areas associated with distress and depression. Passionate love and sexual arousal appeared to be tightly linked. Other psychologists who have studied the links between passionate love and sexual desire (using fMRI techniques), such as those reported by Helen Fisher in 2004, have found similar results.

Scientists interested in the chemistry of passionate love, sexual desire, and mating, detailed by C. Sue Carter in 1998 and Donatella Marazziti and Domenico Canale in 2004, have found that a variety of neurochemicals shape romantic love, passionate love, sexual desire, and sexual mating. One theorist, Helen Fisher, argued in 2004 that passionate love, lust, and attachment are associated with slightly different chemical reactions—although generally coming together in a single package. According to Fisher, passionate love is associated with the natural stimulant dopamine (and perhaps norepinephrine and serotonin.) Lust is associated primarily with the hormone testosterone. Attachment (a commitment to another) is produced primarily by the hormones oxytocin and vasopressin.

Psychologists may differ on whether romantic and passionate love are or are not emotions and whether passionate love, sexual desire, and sexual motivation are closely related constructs (both neurobiologically and physiologically) or very different in their natures. Nonetheless, this path-breaking research has the potential to answer age-old questions as to the nature of culture, love, and human sexuality.

CULTURAL DIFFERENCES IN ROMANTIC ATTITUDES, FEELINGS, AND BEHAVIOR

Passionate love is as old as humankind. (The Sumerian love fable of Inanna and Dumuzi was spun by tribal storytellers in 2,000 BCE.) People in all cultures also recognize the power of romantic love. In south Indian Tamil families, for example, a person who falls head-over-heels in love with another is said to be suffering from *mayakkam*—dizziness, confusion, intoxication, and delusion. The wild hopes and despairs of love are, as Margaret Trawick noted in 1990, thought to "mix you up."

At one time, however, social commentators contended that the idealization of romantic and passionate love was a peculiarly Western institution. Thus, cultural researchers began to investigate the impact of culture on people's definitions of love, what they desired in romantic partners, their likelihood of falling in love, the intensity of their passion, and their willingness to acquiesce in arranged marriages *versus* insisting on marrying for love. When social psychologists explored folk conceptions of love in a variety of cultures—including the People's Republic of China, Indonesia, Micronesia, Palau, and Turkey—they were surprised to find that men and women in all of these cultures possessed surprisingly similar views

of romantic love and other "feelings of the heart" (Jankowiak 1995; Shaver, Murdaya, and Fraley 2001). Subsequent research by cultural and evolutionary psychologists discovered that there appear to be cultural universals in what men and women desire in mates (Buss 1994), and according to Hatfield and Rapson's 1996 work, in their likelihood of being in love, in how intensely they love, and whether or not they would be willing to marry someone they did not love. One impact of globalization (and the ubiquitous MTV, Hollywood and Bollywood movies, chat rooms, and foreign travel) may be to ensure that young people are becoming increasingly similar in their definitions of love and their romantic aspirations and behavior (Hatfield and Rapson 1996; Hatfield, et al. 2007).

HOW LONG DOES LOVE LAST?

Like any intense emotion, passionate love does tend to erode with time. Jane Traupmann and Elaine Hatfield in 1981, for example, interviewed a random sample of dating couples, newlyweds, and older women (who had been married an average of thirty-three years) in Madison, Wisconsin. (The longest marriage was fifty-nine years.) The authors assumed that passionate love would decline precipitously with time; they expected companionate love to last far longer. They were wrong. Over time, passionate love did plummet. Couples began loving their partners intensely. Both steady daters and newlyweds expressed "a great deal of passionate love" for their mates. After many years of marriage, however, women reported that they and their husbands now felt only "some" passionate love for one another. And what of the fate of companionate love? The authors found that over time, both passionate and companionate love tended to decline at approximately the same rate. This finding was especially surprising since the authors were only interviewing couples whose marriages had survived for ten, twenty, or fifty years. Couples whose relationships were the most dismal may well have divorced and thus been lost from the sample.

SEE ALSO *Similarity/Attraction Theory*

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Elaine Hatfield
Richard L. Rapson

ROOSEVELT, FRANKLIN D.
1882–1945

Franklin Delano Roosevelt was the thirty-second president of the United States of America. He served as president from March 4, 1933, until his death on April 12, 1945. He was elected president four times, more than any other American president.

Franklin D. Roosevelt was born on January 30, 1882, in Hyde Park, New York. He was the only child of James and Sara (Delano) Roosevelt. A graduate of the Groton School and Harvard University, he also attended the law

school of Columbia University before becoming an attorney in 1907.

Like his father, Franklin D. Roosevelt was a Democrat, but he wanted to follow the career path of his Republican cousin, President Theodore Roosevelt (1901–1909). As a young attorney, Roosevelt became active in the progressive wing of the Democratic Party. In 1910 he was elected to the New York state senate. An admirer and supporter of Democratic president Woodrow Wilson (1913–1921), Roosevelt was appointed assistant secretary of the navy in 1913. Like Wilson, Roosevelt supported an active, leading role for the United States in the League of Nations after World War I.

After the Democratic national convention nominated James Cox for president and Roosevelt for vice president in 1920, the Democratic Party decisively lost the 1920 presidential election. In 1921 Roosevelt was stricken by polio, which permanently paralyzed his legs. After resuming his political activism, Roosevelt became closely allied with Democratic governor Alfred E. Smith of New York; he also relied on his wife, Eleanor Roosevelt, who served as a political operative. After Smith was nominated for president in 1928, Roosevelt, at Smith's request, ran for governor. While Smith lost the 1928 presidential election by a landslide, Roosevelt was narrowly elected governor of New York.

For a Democratic governor, Roosevelt was unusually popular in heavily Republican rural areas of upstate New York. He advocated such policies as state-sponsored rural electrification, property tax relief for farmers, and the state construction of paved farm-to-market roads. He directly communicated to New Yorkers through radio broadcasts, and increased public works and relief spending when the economy worsened after 1929. Reelected in 1930, Roosevelt emerged as the leading candidate for the 1932 Democratic presidential nomination.

Citing his rural-oriented policies as governor, Roosevelt emphasized agricultural and rural economic issues as he gained greater political support in the South and West while the Great Depression worsened. Competing against Smith, Speaker of the House John N. Garner, and several minor candidates, Roosevelt was nominated for president at the 1932 Democratic national convention. He chose Garner as his running mate.

The Great Depression helped Roosevelt to easily defeat Republican president Herbert Hoover in 1932. In his campaign speeches and 1933 inaugural address, Roosevelt promised bold, innovative presidential leadership to combat economic suffering and reform the economy. Roosevelt's domestic policies, collectively known as the New Deal, included public works programs, the Social Security Act of 1935, stricter federal regulation of banks and the stock market, agricultural subsidies, legal powers for labor unions, and a national minimum wage. Roosevelt's landslide reelection in 1936 solidified changes in American voting behavior that caused a Democratic realignment which lasted until 1968.

During his second term (1937–1941), Roosevelt was less successful in realizing his domestic policy agenda. The rejection of his "court-packing bill" in 1937 and Republican gains in the 1938 elections increased opposition in Congress to further New Deal legislation. After the outbreak of World War II in Europe in 1939, Roosevelt concentrated on foreign and defense policies. Before the United States entered World War II following the Japanese attack on Pearl Harbor on December 7, 1941, Roosevelt assisted Great Britain against Nazi Germany through military and economic aid, despite strong isolationist opinion in the United States.

In his treatment of African Americans, Roosevelt generally deferred to the pro-segregation beliefs and policies of white Southern Democrats who dominated Congress and the Democratic Party. He never submitted a civil rights bill to Congress and only reluctantly created a Fair Employment Practices Committee (FEPC) after black civil rights leaders threatened a march on Washington. New Deal programs, especially the Works Progress Administration and Civilian Conservation Corps, were often racially segregated and discriminatory. Roosevelt did not publicly support federal anti-lynching legislation and the American military remained racially segregated during World War II.

Roosevelt was reelected president in 1940 and 1944 by narrower margins. During the period of American participation in World War II (1941–1945), Roosevelt converted the U.S. economy's productive capacity for military and foreign aid purposes and developed military and political alliances with Great Britain and the Soviet Union to defeat Germany and Japan. He also secretly authorized the development of atomic bombs and promoted the creation of the United Nations and the establishment of the concept and practice of international human rights.

SEE ALSO *Democratic Party, U.S.; Great Depression; New Deal, The; Pearl Harbor; Truman, Harry S.; World War II*

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Sean J. Savage

ROPER POLL

SEE *Pollsters.*

RORSCHACH, HERMAN

SEE *Rorschach Test.*

RORSCHACH TEST

The Rorschach inkblot test is one of several inkblot-based personality assessment instruments, though it is by far the most well known, commonly used, and frequently researched. Its name is derived from its developer, Hermann Rorschach (1884–1922), a Swiss physician and artist. Rorschach experimented with forty or more inkblots between 1917 and 1920, largely with the goal of understanding the syndrome of schizophrenia (dementia praecox) that had recently been identified and described by his mentor, the Swiss psychiatrist Eugen Bleuler (1857–1939). Contrary to popular perception, these were not simply blots of ink placed on a piece of paper that was folded in half and opened again. Instead, Rorschach used his artistic skills to refine and enhance his final inkblots so that each contained some contours that would suggest objects or images to most people. His interests were in the perceptual operations that contributed to what people saw more than in the content of those perceptions. Ultimately he selected twelve inkblots as most optimal for eliciting and identifying personality characteristics. However, reproducing them was expensive, and Rorschach had to omit two in order to publish the final set of ten in 1921.

Each inkblot appears on a white background. Five are black and gray; two are black, gray, and red; and three are various pastel colors without any black. As the inkblots were prepared for publication, imperfections in the printing process accentuated gradations in saturation that were not obvious before. Rorschach initially was concerned about this but ultimately realized the shading gradations provided another set of perceptual processes that could influence how people perceived the stimuli.

HISTORY

Rorschach died in 1922, less than a year after his work was published. In the late 1920s his test was introduced in the United States, and by the late 1960s five distinct approaches to its use had been developed by the psychologists Samuel Beck, Marguerite Hertz, Bruno Klopfer, Zygmunt Piotrowski, and David Rapaport. Each practitioner had a different approach to administration, scoring, and interpretation of the Rorschach test, which created disorganization in the research literature because there was no single "test" per se. In the late 1960s the American psychologist John Exner (1928–2006) reviewed the similarities and differences between these systems and then in 1974 published the first edition of what he called the Comprehensive System, which synthesized the most logically and empirically defensible elements of the earlier approaches. Fairly quickly the Comprehensive System became the dominant approach to administering, scoring, and interpreting the test in the United States and in other parts of the world. Although not specific to the Comprehensive System, the International Rorschach Society promotes research and clinical practice with the instrument and has twenty-seven member organizations worldwide.

TERMINOLOGY

In the late 1930s the Rorschach was classified as a "projective" test. This term was applied to a range of different kinds of tasks that could be used for personality assessment, such as having people tell imaginative stories that go along with certain pictures or generate pencil drawings of people. The idea was that these tasks required people to project or put forward distinctive aspects of their personality when spontaneously completing an activity without much external guidance. Projective tests were also contrasted with "objective" personality tests, which referred to self-rating questionnaires, where people indicate whether verbal descriptions are characteristic of them, using a fixed set of response options, such as true or false. Although the terms *projective* and *objective* are still used, they have misleading connotations and do not do a good job of describing the methods that psychologists can use to assess personality; so increasingly the Rorschach is called a performance task or implicit measure of personality.

ADMINISTRATION, SCORING, AND INTERPRETATION

Regardless of the label, the Rorschach provides a standard set of inkblot stimuli that are used with children, adolescents, and adults in a wide range of settings where questions of personality and problem solving are relevant, including psychiatric, medical, criminal, or legal settings, as well as when assessing normal personality functioning. Using the Comprehensive System's guidelines for standardized administration and scoring, normative reference data are available for children, adolescents, and adults. On average it takes about an hour and a half to administer and score the test. During administration the examiner sits next to the test taker, presents the cards sequentially, saying, "What might this be?" and then records all responses verbatim. On average people give about twenty-two or twenty-three responses, and a minimum of fourteen is

required. To facilitate accurate scoring, the examiner reviews each response a second time and strives to see it through the test taker's eyes by clarifying the content of what is seen, where it is located in the inkblot, and the perceptual features of the ink that contribute to the response. Each response is then coded on dimensions that include location (e.g., the whole inkblot versus an unusual detail), developmental quality (e.g., vague versus defined object), determinants (e.g., movement, color, shading), form quality (e.g., how typical it is to see an object in a particular location based on an extensive table derived from more than 200,000 responses), content (e.g., human, landscape), organizational synthesis, and a series of special coding categories, many of which indicate disruptions in logic and thought processes. The codes are then summed across all responses to form what is known as the structural summary, which contains about seventy ratios, percentages, and derived scores that are considered important for interpretation. In addition to formal scores, Rorschach interpretation is also based on behaviors expressed during the testing, patterns of scores across responses, unique or consistent themes in the responses, and unique or idiosyncratic perceptions.

Unlike interview-based measures or self-report questionnaires, the Rorschach does not have people describe what they are like but has them show what they are like via the sample of behavior provided in each response. By relying on an actual sample of behavior collected under standardized conditions rather than a self-description, the Rorschach can provide information about personality that may reside outside of a person's conscious awareness.

ISSUES AND EVIDENCE CONCERNING THE RORSCHACH

The Rorschach has frequently been criticized for lacking reliability and validity. Like most personality inventories, it needs more systematically organized data evaluating the focused validity for each of its scales. In addition, based on emerging findings from around the world, the normative expectations for certain scores probably will need to be adjusted, particularly for children. Nonetheless systematically gathered statistical summaries of the research evidence show that its scores can be reliably coded and they are reasonably stable over time. Globally, across all scores that have been researched, the Rorschach is as valid as other commonly used and widely regarded personality tests. Even the most ardent contemporary critics acknowledge that its scores can validly evaluate disorders of thinking, the accuracy and conventionality of perceptions, psychotic disturbances (such as schizophrenia), dependent personality traits, cognitive complexity, anxiousness, hostility, and the ability to predict who will benefit from psychotherapy. Replicated evidence also shows that the Rorschach can quantify improvement from therapy as validly as other tests, assess the maturity with which other people are perceived, and predict suicidal self-harming behavior.

SEE ALSO *Personality; Psychoanalytic Theory; Psychometrics; Psychotherapy; Reliability, Statistical; Validity, Statistical*

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RORTY, RICHARD
1931–2007

Richard Rorty was at his death a professor of comparative literature and philosophy at Stanford University and one of the most influential and controversial American philosophers of the twentieth century. He crafted a unique version of pragmatism from a blend of Anglo-American analytic philosophy with the Continental tradition, and his impact was felt across a broad range of the humanities and social sciences, including philosophy, literature, political science, and the fine arts.

Rorty was the grandson of Walter Rauschenbusch (1861–1918), a founder of the Social Gospel movement. Though he began his career in academic philosophy, Rorty later emerged as a social critic and political theorist of the first rank, connecting his earlier interest in epistemology with a critique of the foundations of twentieth-

century liberalism. His early work in philosophy was limited to the Anglo-American tradition, but in *Philosophy and the Mirror of Nature* (1979) he connected the radical implications of the doctrines of Wilfrid Sellars (1912–1989), W. V. O. Quine (1908–2000), and Donald Davidson (1917–2003) with the insights of Ludwig Wittgenstein (1889–1951), John Dewey (1859–1952), and Martin Heidegger (1889–1976).

Rorty's main target, in both epistemology and political philosophy, was the hegemony of the paradigm of "representation" that had been in ascendance since the time of Immanuel Kant (1724–1804). According to Rorty, this tradition privileged a conception of truth that sought to bring the objects "out there" in the world into correspondence with the representations "inside" our heads. This led philosophers into a misguided search for ways of purifying representations (hence the analytic tradition's emphasis on clarifying linguistic propositions); however, instead of searching for a "final vocabulary" that could somehow bring the world and our representations into complete correspondence, philosophers should have taken up the more mundane tasks issuing from the pragmatism of John Dewey. Since philosophy and language are tools, not objective measuring sticks for determining truth, philosophers should avoid questions of validity, opt for an ironic detachment toward their own pronouncements, and reorient their discipline as therapeutic storytelling rather than rational adjudication.

Rorty's pragmatism and antifoundationalism were disturbing to both sides of the political spectrum. To the Right he represented the worst of liberal relativism, and to the Left his "liberal ironist" pose seemed to justify political quiescence. From Rorty's standpoint both sides mistake the issue—we need neither ontological foundations to justify our political stances, nor a fixed vocabulary to inspire us to political action. In any event, Rorty argued, rationality and foundationalist claims to knowledge are never the effective agents in history, since contending ontological positions (say between a Thomist and a Kantian liberal) are not themselves capable of rational resolution—it is in the "sad, sentimental" stories that we tell to one another that ultimate hope for the elimination of cruelty is to be found. This shift in the self-understanding of philosophy is Rorty's most lasting contribution to the Anglo-American philosophic tradition, and while his idea of philosophy is not universally accepted, it is almost always the one proffered by his opponents as the relevant position to be refuted.

SEE ALSO *Critical Theory; Epistemology; Linguistic Turn; Philosophy; Political Science; Pragmatism; Representation; Storytelling*

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Stefan Dolgert

ROSCAs

Rotating savings and credit associations (ROSCAs) constitute one of the most commonly found informal financial institutions in the developing world. ROSCAs are known by many different names, such as *susu* in Ghana, *tontines* in franchophone Africa, *gamias* in Egypt, *njangis* in Cameroon, *upatu* in Tanzania, *ekub* in Ethiopia, *chilemba* in parts of East Africa, *hagbad* in Somalia, *chit* funds in India, *cheetu* in Sri Lanka, *pasanakus* in Bolivia, *cundina* in Mexico, *kye* in Korea, *arisan* in Indonesia, *pia huey* in Thailand, *kou* in Japan, *hui* in China, and *altin gunu* in Cyprus. The origins of ROSCAs are unclear, but records show that they have existed since premodern times in China, the ninth century in Japan, the seventeenth century in Korea, and the early nineteenth century in many parts of Africa. ROSCAs are particularly prolific in Africa, where they have exceptionally high membership rates (between 50% and 95% of the adult population in many countries). In many rural areas, these associations are the sole saving and credit institution. It has been estimated that the annual sums mobilized in these associations amount to more than 25 percent of national credit for countries of Africa, South Asia, and East Asia. Although ROSCAs are most common in very poor areas of the world, there are places where they exist alongside more formal financial institutions, and where they are sometimes preferred. ROSCAs are also popular among immigrant groups in developed countries.

In these associations, a group of individuals gather for a series of regular meetings, at which each person contributes a predetermined amount into a collective "pot," which is then given to a single member. This person is subsequently excluded from receiving the pot in future meetings, while still being obliged to contribute to the pot. The meeting process repeats itself until all members have had a turn at receiving the pot. The frequency of the meetings, the amount of the contribution, and the number of members determine the total group savings for each ROSCA cycle. Essentially, members take turns in benefiting from collected savings. Members who receive the pot early in the cycle are in debt to other members until the last contribution, while the last member to receive the pot is a creditor to all other members throughout the ROSCA cycle. As a result, the order of turns is an important component of ROSCAs, and there is substantial variation in its determination. At the start of the scheme, the order of such turns is decided either by a lottery draw, a bidding process, or according to a predetermined pattern.

ROSCAs are usually viewed as a way for individuals with little or no access to formal credit markets to save up for the purchase of indivisible durable goods. There is no interest to be gained by saving in a ROSCA since, over the ROSCA cycle, individual participants contribute the total funds that they, in turn, withdraw from the association. The question, therefore, is why do individuals choose to save through a ROSCA instead of individually accumulating savings? Several rationales for ROSCA formation have been put forth. Timothy Besley and colleagues point to the gains from reduced delay: the participants, on average, expect to enjoy the benefits of savings sooner than if they had saved on their own. Other rationales point to the insurance role of ROSCAs. Stefan Klonner notes that when ROSCA funds are allocated by a bidding process, the participants can use ROSCAs to insure themselves against idiosyncratic risks. Other explanations refer to the savings commitment role of ROSCAs. According to Mary Kay Gugerty, if individuals face self-control problems and are unable to credibly commit themselves to future behavior, then ROSCAs can serve as a collective savings commitment mechanism. A related explanation is that, in many cases, ROSCA participants are predominantly women. In a 2002 article, Siwan Anderson and Jean-Marie Baland pointed out that when men have a greater preference for present consumption, relative to women, then women can use ROSCAs as a forced savings device to hide money from their husbands in order to accumulate savings.

In spite of their organizational simplicity, ROSCAs do suffer from incentive problems. Because of the rotational structure of ROSCAs, the incentive for members who receive the pot earlier in the cycle to default on their later contributions is high. A ROSCA cannot function unless all members continue to maintain their obligations throughout the cycle. Since ROSCAs are typically formed by a relatively small group of individuals who live in the same area, it is generally assumed that the threat of social sanctions by the other members of the group are sufficient to deter opportunistic defection. Therefore, social collateral and trust among members seem crucial to the success of these organizations. To this end, as Ngina Chiteji points out in "Promises Kept" (2002), ROSCAs typically organize along ethnic lines or bring together friends and neighbors, for whom existing social capital circumvents inherent problems of enforcement.

SEE ALSO *Finance; Informal Economy; Loans; Trust*

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Siwan Anderson

ROSCH, ELEANOR

SEE *Prototypes.*

ROSENBERG'S SELF-ESTEEM SCALE

Morris Rosenberg's (1965) Self-Esteem Scale (RSES) is perhaps the most widely used instrument for the assessment of *trait self-esteem*, defined as relatively stable feelings of overall self-worth. The importance of self-esteem in the prediction of other self-attitudes and behavior in conjunction with the ease of administration and scoring of the RSES make the instrument useful for social scientists in many different settings.

Rosenberg originally designed the RSES as a face-valid, unidimensional measure of self-esteem designed to assess adolescent self-worth. Example items from the RSES include "I feel that I am a person of worth, at least on an equal basis with others" and "At times I think I am no good at all." Negatively worded items are reverse-scored to create an overall score. The underlying view of self-esteem on which the scale was founded defines self-esteem as a positive or negative attitude about the self. People with high self-esteem respect and consider themselves worthy. Rosenberg noted that high-self-esteem people do not necessarily feel that they are better than others, but they do not consider themselves to be worse than others. People with low self-esteem express "self-rejection, self-dissatisfaction," and "self-contempt" (Rosenberg 1965, p. 31). According to Rosenberg, low-self-esteem people do not respect themselves and wish that they could evaluate themselves more favorably.

Though Rosenberg fashioned the RSES as a ten-item Guttman scale, researchers most commonly adopt five- or seven-point Likert-style response formats anchored by, for example, 1 = *not at all like me* to 7 = *very much like me*. (Blascovich and Tomaka 1991). Internal consistency estimates for the scale typically fall in a range from .77 to .88, indicating acceptable internal reliability. Additionally, test-retest estimates for the RSES range from .85 to .82, revealing that the RSES demonstrates excellent test-retest reliability.

In addition to being reliable, the RSES surfaces as a valid measure of self-worth as well. RSES scores are positively related to an abundance of conceptually related constructs such as confidence and social acceptance, as well as to other self-esteem scales (Blascovich and Tomaka 1991). Moreover, RSES scores are negatively associated with constructs that are typically symptomatic of low self-worth, including anxiety, depression, and feelings of rejection.

Researchers have adapted the RSES for use with different populations (i.e., younger children; Rosenberg and Simmons 1972) and for different purposes. By modifying instructions for the RSES, asking that respondents answer according to how they feel about themselves *right now, at the present moment*, researchers may assess *state self-esteem*, an evaluation of self-worth that is more variable than trait self-esteem using the RSES (Kernis, Grannemann, and Barclay 1992).

Although the RSES is a conceptually and psychometrically sound measure of unidimensional self-esteem, it does not assess all facets of self-worth. Researchers who are interested in assessing domain-specific elements of self-esteem (e.g., appearance self-esteem, school competence, moral self-worth) should include domain-specific measures in addition to or instead of the RSES, depending on their research questions. Additionally, the RSES is transparent, or face valid, making it easy for the respondent to surmise that they are completing a measure of self-esteem. Such obvious face validity might result in artificially inflated self-esteem scores. Researchers who are more interested in people's automatic or uncontrolled ratings of self-worth should make use of available implicit measures of self-worth.

SEE ALSO *Anxiety; Depression, Psychological; Guttman Scale; Likert Scale; Psychology; Psychometrics; Reliability, Statistical; Scales; Self-Concept; Self-Esteem; Self-Perception Theory; Self-Presentation; Self-Representation; Social Psychology; Validation; Validity, Statistical*

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Jorgianne Civey Robinson

ROSSI, PELLEGRINO

SEE *Public Rights.*

ROTATING SAVINGS AND CREDIT ASSOCIATIONS

SEE *ROSCAs.*

ROTHBARD, MURRAY

SEE *Anarchism.*

ROTHSCHILDS, THE

The Rothschild family, the most influential banking and finance dynasty of modern Europe, began with Mayer Amschel Rothschild (1743–1812) in Frankfurt am Main, Germany, and expanded across Europe under his five sons: Amschel Mayer Rothschild (1773–1855) in Frankfurt; Salomon Rothschild (1774–1855) in Vienna, Austria; Nathan Mayer Rothschild (1777–1836) in London, England; Karl Rothschild (1788–1855) in Naples, Italy; and James Rothschild (1792–1868) in Paris, France. Throughout its history, the family has used its unparalleled, networked financial and political assets to support large-scale government borrowing, industrial development, health, education, art collecting, scientific discovery, and Jewish rights.

After moving from Frankfurt to Manchester in 1799, Nathan used the expanding British cotton industry to accelerate the process of wealth accumulation started by his father. He consolidated large quantities of fabric for export from many of the smaller British cloth manufacturers, and supplied these producers with dyes and other raw materials. Using the profits that he earned, Nathan moved to London and refocused on the bullion market. Buoyed by his father's and brothers' continental connections, Nathan smuggled gold through Napoléon Bonaparte's continental blockade, funded the Duke of Wellington's Peninsular and Waterloo campaigns, propped up the Bank of England during the liquidity crisis of 1834, and created a new European state bond market based on easily tradable notes. Benefiting from carefully cultivated friendships with royal and political leaders, Nathan's brothers worked with the governments of France, Austria, and Belgium to finance the reconstruction of Europe, devastated by two decades of war. Beginning in the 1840s they established much of the continental railway network. Through their railways, as well as their development of mining and oil exploration, the Rothschilds powered nineteenth-century industrial growth from Spain to Russia. The Rothschilds also played an instrumental role in late nineteenth-century British imperial expansion, financing the Suez Canal Company and the South African diamond trade.

Like its banking concerns, the family's philanthropic activities have been global, including the building and support of hospitals, schools, and art collections. As a result of intense family pursuit of the natural sciences, more than 150 insect species, 81 animal species, and 14 plant species bear the Rothschild name. Beginning with the Rothschild's early years in the Jewish ghetto, however, anti-Semites viciously attacked the family for its adherence to Judaism, its high-profile wealth, and its Zionist support. Throughout, the Rothschilds remained proud of their faith, and actively supported Jewish personal and legal rights around the world. Nathan's son, Lionel Nathan Rothschild (1808–1879) successfully fought to become Britain's first Jewish member of Parliament in 1847. During World War II (1939–1945), the family suffered substantial loss and hardship in Nazi-occupied Europe. After the war, the Rothschilds expanded into North America, most prominently through the Brinco resource and hydroelectric development scheme in Newfoundland. In the 1980s the French government nationalized the original Paris branch, while the British government depended on the London branch to privatize several major public corporations. Signaling their new emphasis on corporate finance, in 2004 the Rothschilds withdrew from the bullion market that had been critical to their early success.

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Jonathan Eacott

ROTTEN KID THEOREM

SEE *Bequests.*

ROTTER, JULIAN

SEE *Locus of Control.*

ROTTER'S INTERNAL-EXTERNAL LOCUS OF CONTROL SCALE

In an effort to explain how personal characteristics interact with the environment to predict behavior, the psychologist Julian Rotter (b. 1916) proposed a social learning theory in 1954. Although Rotter emphasized both personal and environmental factors in behavioral prediction, much of the research generated by his theory focused on the role of people's expectancies or their subjective estimates of how likely it is that a given behavior will lead to a desired outcome.

According to Rotter, there are two types of expectancies. Specific expectancies apply to single situations, such as whether a student expects to do well on an exam. Over

time people learn to apply their expectancies to a variety of related experiences, resulting in generalized expectancies. A generalized expectancy might refer to how well a student expects to do on exams in all of his or her courses. Rotter proposed that one of the most important generalized expectancies is a person's locus of control (LOC).

LOC refers to the perceived location of reinforcement sources for a person—that is, who or what is responsible to the things that happen to a person. As such, it is similar to other control-related constructs, such as attributions, learned helplessness, and self-efficacy. Those with an internal LOC expect the important things in their lives to occur because of their own effort, skills, or abilities. People with an external LOC expect these things to occur because of outside forces (such as luck, fate, chance, or powerful others).

In 1966 Rotter published the Internal-External Locus of Control Scale. Respondents were asked to choose between pairs of internal and external items relating to everyday situations. For example, on one item respondents must choose whether people's misfortunes are due to their own mistakes (internal) or to bad luck (external). Since its formulation, LOC has been one of the most frequently researched personality variables in the social sciences. Scores on the LOC Scale have been correlated with scores on nearly every social and personality characteristic imaginable. Among the areas that most commonly have used the LOC Scale are personality and social, educational, political, clinical, and health psychology. For example, research shows that whereas high externality scores are associated with high depression scores, internality is associated with more positive adjustment to a physical disability. In addition discrimination based on race or sex has been associated with differences in LOC. Researchers have shown that such group-level internality-externality differences have implications for mental and physical health outcomes.

Researchers have focused a great deal of attention on the psychometric properties and factor structure of the LOC Scale. In Rotter's original conception, LOC was a unitary construct along the internality-externality dimension. However, researchers soon began uncovering several other dimensions related to LOC. Initial analyses revealed a personal control factor and a system (or political) control factor. Other researchers proposed independent dimensions of internality, chance, and powerful others. Based in part on dissatisfaction with the properties of the original scale, researchers have developed new content-specific, multidimensional LOC measures. One of the most popular is a measure of health LOC (Wallston, Wallston, and DeVellis 1978). Although interest in Rotter's original LOC scale has waned, the development of new measures ensures that LOC will continue to be a topic of interest to social scientists for years to come.

SEE ALSO *Attribution; Likert Scale; Locus of Control; Mental Health; Psychological Capital; Psychology; Psychometrics; Scales; Self-Efficacy*

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Thomas M. Brinthaupt

ROUSSEAU, JEAN-JACQUES
1712–1778

Born in Geneva, Switzerland, Jean-Jacques Rousseau spent much of his life in and around Paris acting as the gadfly of the *philosophes*, leaders of the French Enlightenment. He championed equality and popular sovereignty on the eve of the French Revolution, encouraged the birth of nationalism, historicism, and romanticism, and provided prescient critiques of the "bourgeois," the quintessential figure of the democratic age he helped launch.

In *On the Social Contract* (1762), Rousseau denied the existence of any natural hierarchy or divine right that could legitimize political inequality, arguing that natural inequalities between human beings were politically irrelevant. The social contract substituted "a moral and legitimate equality for whatever inequality nature may have placed between men, and … while they may be unequal in force or genius, they all become equal by convention and right" (*On the Social Contract*, I.ix). While he believed every legitimate government was republican, he understood by this only that the executive power should be beholden to the sovereign people (II.vi). His preferred regime was an aristocratic government, or executive, responsible to the people (III.vi). Ironically, while he was one of the first political thinkers to champion popular sovereignty, he maintained that a democratic government was suited only to a people of gods (Iii.iv).

Central to his political thought was the general will: the will of the political community as a whole, manifest in laws to which all citizens had consented and by which all

were bound (II.iv). Rousseau held that "what generalizes the will is not so much the number of votes, as it is the common interest which unites them" (II.iv), and he wrote extensively, in *Considerations on the Government of Poland* (1772) and the *Letter to M. d'Alembert on the Theatre* (1758), on the need to encourage community spirit through civic education and the promotion of virtue. His emphasis on the particular character of political communities inspired the rise of nationalism, influencing the German philosophers Johann Gottfried Herder (1744–1803) and Johann Gottlieb Fichte (1762–1814).

The argument of *The Discourse on the Origins of Inequality* (1754) helped give birth to historicism: the idea that human ideas and actions are better explained by history rather than by nature or divine will. History, not nature, nor God, was responsible for the great paradox that: "Man is born free, and everywhere he is in chains" (*On the Social Contract*, I.i). Free, contented, but asocial by nature, humans could hope only to legitimate rather than remove the chains brought by political life.

Rousseau's autobiographical work, especially *The Confessions* (1782), his praise of nature, particularly in *The Reveries of the Solitary Walker* (1782), and his argument in the *Discourse on the Sciences ands Arts* (1751) that the popularization of science diverted people from the practice of moral duties, all contributed to the romantic movement.

Rousseau also offered one of the first critiques of the "bourgeois." Alienated from nature, without being committed to political life, the bourgeois were torn between private interests and public duties. Materialistic and inauthentic, they were enslaved by the opinions of others and strangers to themselves.

SEE ALSO *Enlightenment; Hobbes, Thomas; Locke, John; Naturalism; Social Contract; State of Nature*

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Fiona Miller

ROYAL ANTHROPOLOGICAL INSTITUTE

SEE *Anthropology, Public.*

ROYAL COMMISSIONS

In Britain and in some of its former colonies such as Australia, Canada, and New Zealand, Royal Commissions of Inquiry have been an ad hoc, flexible, adaptive, and adaptable mode of inquiry established by centralized authority to investigate nominated issues. These topics are specified within a Royal Commission's Terms of Reference and approved under the royal prerogative in its Letters Patent. The first recorded Royal Commission in England is better known as the Domesday Book, ordered by the Norman conqueror William I and compiled between 1080 and 1086. It was an information-gathering exercise for taxation purposes that also sought to cement the authority of a foreign king over his newly conquered population. That Royal Commissions have survived for almost a thousand years since the Domesday Book inquiry is testimony to their flexibility. Royal Commissions, like many other mechanisms of official inquiry, have continued to perform one or both of two broad functions for the state: (1) a pragmatic and/or legal function to investigate an issue for a government, collect information, submit a report, and make recommendations; and (2) a broader political, or ideological, function as a technique of governance, in particular a capability for crisis management of an issue or a range of issues.

In carrying out either, or both, of these broad functions as an information gatherer or a mechanism that provides breathing space for governments, Royal Commissions can be investigatory, inquisitorial, or a combination of both. Their capacity for coercive powers of investigation varies between jurisdictions, but in Australia, for example, they include the ability to compel the attendance of witnesses and/or the production of documents, and to examine witnesses under oath or affirmation. Australia, like the United States, is a federal jurisdiction, so the statutes underpinning the legality of a Royal Commission, can operate at a federal level, such as the Royal Commissions Act 1902, or at a state level, such as the Commission of Inquiry Statute 1854 in the state of Victoria. In Britain, Royal Commissions are established under the Tribunal of Inquiry Act 1921. There is little doubt that political considerations can be a major influence upon the establishment of Royal Commissions. Once governments have decided to establish a Royal Commission they are faced with a range of decisions regarding the form, direction, and timescale of the inquiry. They are not merely the decisions of a minister, but also reflect the opinion of a permanent civil bureaucracy. Generally, civil bureaucrats provide government ministers with advice and draft the actual terms of reference for a Royal Commission. They also provide the secretary and often a short list of appropriate potential commissioners. There has been a traditional tendency in

most jurisdictions that operate Royal Commissions to appoint judges and lawyers to head such inquiries, as they are assumed to bring impartiality and independence, plus appropriate skill sets to manage large amounts of information and direct the cross-examination of witnesses.

It is difficult to evaluate just how effective Royal Commissions are. They do have a somewhat dark side historically, in that some Royal Commissions have been used as political mechanisms by various monarchs and governments. However, many Royal Commissions have brought positive social, political, and economic benefits as they gathered information on issues, established fact, helped resolve disputes, and stimulated worthwhile reform. History demonstrates that Royal Commissions have been too diverse and adaptive to be tied down to a single explanatory model, and their intrinsic adaptability and flexibility are likely to ensure their survival into the foreseeable future.

SEE ALSO *Commonwealth, The*

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George Peter Gilligan

RUBENSTEIN BARGAINING

SEE *Screening and Signaling Games.*

RUGGED INDIVIDUALISM

SEE *Individualism.*

RULE OF LAW

The rule of law characterizes polities where coercive state action is efficiently exercised in accordance with generally applicable authoritative rules, adopted according to an agreed-upon and public procedure, and not contrary to certain fundamental natural rights. The concept is intrinsic to the Western idea of a legitimate legal system.

The most famous exposition of the rule of law was made by British constitutionalist Albert Venn Dicey (1835–1922) in his *Introduction to the Study of the Law of the Constitution* in 1895. Dicey saw the rule of law as embodying three "kindred conceptions": (1) that no one is punishable or can be made to suffer in body or goods except for a distinct breach of law established in the ordinary legal manner before the ordinary courts of the land; (2) that the same general law applies to the rulers as to the ruled; and (3) that individual rights are enforced, not simply proclaimed (Dicey [1895] 1982, pp. 107–122). John Adams (1735–1826), in Article XXX of the 1780 Massachusetts Constitution, added a fourth, quintessentially American contribution to the rule of law: *separation of powers*. "The legislative department shall never exercise the executive and judicial powers, or either of them: the executive shall never exercise the legislative and judicial powers, or either of them: the judicial shall never exercise the legislative and executive powers, or either of them: to the end it may be a government of laws and not of men."

Good organization has been an implicit part of the rule of law since King John (c. 1167–1216) of England was forced to approve the Magna Carta in 1215: "To no one will We sell, to no one will We deny or delay, right or justice" (Magna Carta, c1. 40).

Legalism (respect by the state for, and enforcement of, its laws) is also an important part of the rule of law. This legalism arguably characterized Soviet and, to a large extent, even Nazi rule, however. Legalism is necessary but not sufficient: fundamental individual rights, arguably inherent in Dicey's third kindred conception, are necessary too.

In sum, the rule of law seems to comprise four requirements (five if separation of powers is added):

1. Government is bound by the law.
2. The law is discernible by citizens.
3. Application of the law is well-organized.
4. Ordered liberty is largely maintained; that is, citizens are reasonably secure in their persons and property.

This rule of law can, within these constraints, exist in different legal systems. Republics and parliamentary democracies, civil and common law systems, are compatible with it. Differing tax rates and differing notions of fundamental rights are also compatible with the rule of law. On the other hand, rule-of-law procedural rights, such as the *presumption of innocence* (citizens are to be treated as innocent until they have been proven guilty), *nonretroactivity* (no one can be held accountable for violating a law before it was in effect), and *habeas corpus* (detained persons have the right to have their custody justified both to them and to an independent judicial authority), are intrinsic to the rule of law. Procedure is

related to substance here: only if a legal system were substantially and severely unjust might, for example, retroactivity be authorized to eliminate the injustice.

The concept is elusive and fluid, but utterly meaningful. British philosopher Michael Oakeshott (1901–1990) put it best in his essay "The Rule of Law": "The rule of law bakes no bread, it is unable to distribute loaves or fishes (it has none), and it cannot protect itself against external assault, but it remains the most civilized and least burdensome conception of a state yet to be devised" (1983, p. 164).

SEE ALSO *Due Process; Law*

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Michael I. Krauss

RULES VERSUS DISCRETION

The debate of rules versus discretion in economic policy has its origin in the writings of Henry Simons at the University of Chicago. A policy rule can be specific as fixing the quantity of currency and demand deposits, or general as when the Federal Reserve announces to the public the course of action it will take for various states of the economy, putting its reputation behind it. Although rules can be set up in an equation form, such as the Taylor Rule, they require variables such as the natural level of output and expected prices that are only approximate. A rule can be active, as when it requires increasing the money supply when the economy is on a downswing, or passive when the money supply is increased by a fixed percent annually. By definition rules are normative, but some rules are descriptive, meaning that they predict values close to what the authorities actually allow. The danger with rules is the tendency to substitute administrative authority for rules, which tends to impair competition and expand government activities. In 1990, President George H. W. Bush replaced the term "policy rule" with "systematic policy" or "policy system" in his message to Congress.

Discretion requires delegating responsibilities to economic institutions such as the Federal Reserve to decide macroeconomic goals and policies as they see appropriate. According to Kenneth Arrow, the world of uncertainty necessitates discretionary policies. A decision improves with time and experience, which requires information that is available only sequentially. A decision maker such as the Federal Reserve analyzes the problem at hand, and decides on the best policy action to take. Discretionary policy may be inconsistent when it does not change the initial conditions that create a disturbance, or shortsighted when a policy requires lags to materialize.

Economists are divided over whether rules or discretion is the best policy for managing the economy. In the short run, monetary and fiscal policies can affect income, but in the long run, they do not have permanent effects on real income. The monetarist's preferred habitat is the long run, managing the economy through simple rules of the money supply. Milton Friedman believed that the Federal Reserve did not use its discretion to act when the money supply declined by a third during the 1929–1933 period, turning a garden-variety recession into the Great Depression. However, Keynesians find that output, unemployment, and prices can be stabilized in the short run by autonomous expenditures, including those by the government. Franco Modigliani believed that the deep business cycle in 1974 was a consequence of following monetary rules that did not allow the money supply to adapt adequately in both the up and down swings of the cycle.

The debate over rules versus discretion is not settled empirically. If a rule is placed on the money supply, the monetarists look for a causal link between money and prices. The definition of money and a stable velocity-of-circulation function are necessary for empirical investigation. A currency plus demand-deposit definition is not sufficient for rules to work because people hoard and dishoard money, many "near money" substitutes may exist, or wages and prices may be rigid. If wage and price rigidities are only slight, then a rule might work, but it would require the absence of substitutes such as equity or bonds; it would also require that loans be held for long periods so that repayment on principal is not required.

For Simon, such a systemic policy appears paradoxical, as it would require an intelligent monetary system on the one hand, and credibility of rules on the other. Friedman, a student of Simon, moved the research forward by articulating two rules on the money supply, the k-percent rule, and a Friedman rule, which he later referred to as the "5 percent and the 2 percent rules," respectively (Friedman 1969, p. 48). In the 5 percent rule, "the aggregate quantity of money is automatically determined by the requirements of domestic stability" (Friedman 1948, p. 252). To cover the international scene as well, Friedman complemented the 5 percent rule with a flexible exchange rate. The 5 percent rule, however, runs up against rigidities and lag effects in the economy, which are short run in nature. The long-run 2 percent rule requires nominal interest rates to equal the opportunity cost of producing money for the interest rate to be approximately zero.

The test for a stable velocity-of-money function was indirect. Because the velocity function was variable in the short run, Friedman turned to more general evidences, including the use of his permanent-income concept for further empirical analysis. Regression analysis on demand for the money function between money and prices was significant but did not assign causal agency to money alone. The issue became more complicated in the short run when interest rates, a mostly Keynesian variable, turned up significant. Abraham Hirsch and Neil De Marchi examined ruling out common elements in a variety of results tested in order to help identify money as the cause of price changes. Such method of difference testing, coined by John Stuart Mill, cannot be exhaustive.

As more sophisticated models evolved, policy rules became hard to eliminate, and according to Finn Kydland and Edward Prescott, they could improve social optimum. A change in administration leads people to change their expectations and their current decisions. People have expectations about the tax policies of different administrations. Once people have some knowledge of such changes, they adjust their expectations and set into motion a series of iterative changes that may or may not converge to an equilibrium given the current state of the economy. Some policy rules are suboptimal in the sense that their feedback mechanisms depend on initial conditions, and to continue initial policy in subsequent periods is not optimal.

The discretion to print more money can create unexpected inflation. Robert J. Barro and David Gordon argued that people would adjust their expectation of inflation to eliminate surprise inflation, creating a potential for higher money supply and inflations in equilibrium. If policy rules are implemented, such expectations-driven inflation would not occur, but policy makers would have an incentive to break the rule—cheating—because higher inflation means less unemployment and more growth, according to the Phillips curve. These gaming situations between policy makers and the public can be avoided if policy makers are concerned about their "reputation" or "credibility." The incentive to be credible is based on a substitution of short-term benefits for higher level benefits from lower inflation in the long run.

Other research focuses on ways to pinpoint a rule and extend it into more research areas. William Poole lauds a Taylor Rule that can be refined, much like a scientist would refine a constant. He likens a rule to the choice of using rules to fly a plane rather than letting the pilot have his or her way of navigating. Taylor extended his policy rule to price and nominal income rules for the open economy under fixed versus flexible exchange rates. He found that the nominal income rule outperformed the price rule. Considering the effect of exchange rates on aggregate supply, Richard Froyen and Alfred Guender show that the nominal income rule is weak. V. V. Chari and Patrick Kehoe found that as of 2002, approximately twenty-two countries use some form of rule-based policy.

SEE ALSO *Arrow, Kenneth J.; Central Banks; Economics, Keynesian; Exchange Rates; Friedman, Milton; Great Depression; Macroeconomics; Modigliani, Franco; Monetarism; Policy, Monetary; Taylor Rule*

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RUMBAUT, RUBEN

SEE *Assimilation.*

RUMORS

Rumor is unconfirmed information circulating among persons endeavoring to make sense of a situation that is ambiguous or one that is potentially threatening. Like news, rumor is of current or topical interest and is generally considered important or significant; unlike news, it is never verified. Participants may or may not be aware of the rumor's unstable foundation—they may regard it as fact. Nevertheless, doubtful or deficient supporting evidence is rumor's central defining feature.

FUNCTIONS AND CONTEXTS

Rumors are typically discussed by people trying to make sense of an ambiguous situation or to manage a physical or psychological threat. An example of a sense-making rumor in a school district setting is: "I heard that the real reason the school superintendent was forced to step down was because of certain off-color remarks she made to employees." Faced with a murky state of affairs in which the meaning of current events is not clear or the likelihood of future events is uncertain, people fill the information void with speculation, discussion, and evaluation. Such collective sense-making attempts employ rumors as working hypotheses. Rumors also help people to manage physical threat, sometimes by warning them of how to avoid a potential future negative event, for example: "Get out of town now! A tsunami is headed this way!" More often, rumors simply afford a psychological sense of control over the threat by helping people understand and interpret negative events, for example: "I heard that the department is being downsized despite strong profits this quarter because the new CEO wants short term stock gains (so he can sell his own shares for a windfall before moving on) and doesn't care about long term effects on the company." Rumors may also help manage threats to one's psychological sense of self, often by derogating groups with whom one is not associated; one way of building oneself up is to put others down. An example of one such (false) rumor is: "The Israeli government is behind the events of September 11, 2001: 4,000 Jews were told by the Israeli Secret Service not to show up for work at the World Trade Center that day." Rumors may of course perform more than one of these functions, as when people discuss rumors to make sense of a threatening situation in a way that derogates another social group. Thus rumor is what people collectively do when they find themselves in an unclear or potentially threatening set of circumstances.

COMPARISON WITH GOSSIP

Rumor is often confused with gossip, but there are important differences. Whereas rumor is unverified information circulated to make sense and manage threat, gossip is evaluative social chat about individuals that may or may not be verified. Gossip is idle chit-chat about an individual—typically not present—whose content is often slanderous and personal. Though an important social phenomenon, gossip talk is perceived as less serious, significant, and purposeful than rumor talk. Gossip is part of a relaxed session of shooting the breeze. A classic example is: "Did you hear? Bill and Jennifer are an item!" It matters not whether the statement is firsthand observation or remote speculation; it qualifies as gossip in either case. Thus gossip may or may not be verified, but rumor is never verified. Gossiping to another person tends to strengthen the social bonds between the gossiper and the listener—the listener feels like a privileged insider—and gossip at the same time weakens the social standing of the gossip target. Gossip can be therefore a type of aggression that often attacks another person's relationships and excludes the target from the group. Gossip also serves to convey and reinforce social norms of the group by way of comparison. The statement "Did you hear what Sally did at the Christmas party?" may laud or shame Sally's behavior—depending on the speaker's tone of voice. Though gossip is often negative, it performs a positive function in that it allows people to gain information about a larger group—albeit in a secondhand fashion—that would not be possible if they were limited to firsthand interactions. "Johnny steals from people" is useful social information if a person is deciding who to invite to a party. Finally, gossip is often entertaining—a mutual mood enhancer that again strengthens bonds between participants.

COMPARISON WITH URBAN LEGEND

Urban (also called modern or contemporary) legends also differ from rumors in their characteristic content, function, and context. Whereas rumors are unverified claims circulated in a collective sense-making effort, urban legends are entertaining stories containing themes related to the modern world that are often funny or horrible and usually teach a moral lesson. The urban legend first of all tells a story—it is a narrative with a background, plot, climax, and conclusion; a rumor is typically not that complex and is often a one-liner. Urban legends are often entertaining and tell a morality tale; rumors are not set forth primarily to entertain or propagate norms. For example, when a teenage couple was unable to start their car after necking on a secluded country road, the boyfriend went for help, only to be found dead the next morning hanging upside down above the car, his fingernails scraping against the hood in a macabre fashion. Moral of the story: Don't park! Urban legends are stories about modern themes, such as automobiles, Coca-Cola®, and computers. In addition an urban legend is characteristically migratory, that is, its details vary from time to time and from place to place. However, urban legends may instantiate as specific rumors. For example, stories about the thief who hid underneath a parked car at a shopping mall and—upon the return of the shopper—slashed her exposed ankles with a razor and stole her bags and her car constitute a well-known urban legend. However, "I heard that a woman was slashed on the ankles by a robber at Jonestown Mall last Saturday night" would constitute a rumor.

Of course these forms of informal human discourse sometimes do not fall neatly into one or the other category. Rumors sometimes possess a narrative structure and entertain. Passing a rumor may also endear the speaker to the listener, convey moral norms, and contain slander about an absent third party. Nebulous and intermediate forms do exist. On the whole, however, rumors, gossip, and urban legends tend to possess the divergent qualities discussed above: Rumors are unverified claims circulating during group sense making and threat management, gossip is evaluative social chat, and urban legends are entertaining narratives.

TYPES OF RUMORS

Rumors have been categorized according to a number of different typologies. They have been grouped by subject matter, for example, racial, disaster, organizational, political, and product rumors. They have been classified according to the rumor public—the group through which the rumor circulates. For example, internal organizational rumors circulate among employees, vendors, and stockholders associated with an organization; external rumors circulate among the general public outside of an organization. They have been classified by object of collective concern of the rumor public. For example, pecking order rumors are about changes in management structure and how this might affect job duties and compensation. Stock market rumors circulate among shareholders who want to profit from changing stock values. Organizational change rumors often concern whether or not the change will be effective and how it will affect working conditions. Perhaps the most common rumor typology is by motivational tension. Dread or fear rumors are about potential negative events (e.g., "I heard that twenty-five staff members will be laid off"), whereas wish rumors are about desired positive events (e.g., "We are getting a Christmas bonus this year!"). Wedge-driving rumors derogate other groups (e.g., during World War II "the Catholics are evading the draft" enjoyed audience among non-Catholics).

EFFECTS OF RUMOR

Rumors cause or materially contribute to a variety of outcomes. Rumors can have attitudinal effects, such as sullying a company's reputation (e.g., "Corporation x contributes to the Church of Satan") or fostering hatred toward another group (e.g., "Ethnic Group y greeted the World Trade Center bombing with celebration"). Rumors also result in behavioral outcomes, such as reducing sales (e.g., "Soft Drink Company z is owned by the Ku Klux Klan and puts a substance in their soda that makes black men sterile"), fomenting a riot (e.g., rumors that police caused the death by impalement of a Native Australian by chasing him on his bicycle led to extensive rioting in Sydney), or fostering noninvolvement in disaster relief (e.g., rumors that water flooding New Orleans—after Hurricane Katrina—was toxic kept many workers from participating in rescue operations). Negative rumors in particular affect a variety of organizational attitudes and behaviors, including job satisfaction, organizational commitment, morale, trust in management, productivity, and intention to leave. For example, in a division of one large company, hearing negative rumors about management month after month led to significant increase in negative work attitudes and intentions. Rumors during organizational change are also associated with greater employee stress. Rumors also affect stock market trading behaviors. Experimental investigations have suggested that rumors draw investors away from profitable buy low, sell high trading strategies. And field studies confirm that the stock market is strongly responsive to rumors. Surprisingly, rumors can have these effects even though they are not believed. For example, disaster rumors circulating in 1934 after a catastrophic earthquake in India were not believed but were still acted upon.

FACTORS IN RUMOR TRANSMISSION

Several variables have been associated with rumor transmission. Uncertainty about a situation—being filled with questions about what current events mean or what future events will occur—leads to speculation and rumor as people try to understand their environment and predict what will happen in the future. Anxiety—an emotional state of dread concerning a potential negative event—promotes rumor discussion as people talk with one another in an attempt to thwart the dreaded negative event or to feel better about it by regaining a psychological sense of control. In addition people tend to discuss important rumors—rumors that pertain to an outcome that is personally relevant to them. People also pass along rumors they believe more than those they disbelieve. Poorly managed manufacturing plant layoff situations where employees are given minimal information provide an example of all these factors in action. Employees in such situations are naturally filled with uncertainty; the prospect of losing one's job is anxiety provoking; the topic is an important one; employees often have no control over such decisions; and if trust is low, negative rumors about management are quite believable. Rumors in such situations are rife. Rumor transmission may also be viewed through a motivational lens. People often spread and discuss rumors in order to find facts, that is, to ascertain a true state of affairs in order to deal effectively with real or perceived threats and to make sense of ambiguity. Telling rumors is fundamentally a social act, however, and people may also spread them to enhance their relationships. "I heard that your university is excellent," for example, will tend to improve the teller-listener relationship. Finally, rumors may be told to boost one's self esteem. Self-enhancing rumors typically do this by putting other groups down in order to build up one's own group in contrast—and by association, oneself.

FACTORS AFFECTING RUMOR BELIEF

At least four factors have been associated with belief in rumor. Not surprisingly, rumors in agreement with one's currently held attitudes are more likely to be believed than those that disagree. For example, rumors of government waste and special privilege during the rationing programs necessitated by World War II were more apt to be believed by those opposed to the Roosevelt administration than those in favor of it. Rumors that proceed from a credible source are more likely to be believed than those spread by a non-credible one. In a series of laboratory experiments, rumors about a murder were more likely to be believed when they were heard from someone close to the detective investigating the case than from an elderly busybody with no apparent connection to the case. Repeated hearing of a rumor is also associated with belief. After initial skepticism, a Wall Street stockbroker began to place greater credence in a false rumor that the Clinton White House was covering up the true nature of top aide Vince Foster's death; this occurred solely because he had heard it several times. Finally, hearing a rumor denial reduces belief in the rumor. In one experiment, denying rumors that admittance to a sought-after academic psychology program would be tightened reduced belief in that rumor.

RUMOR ACCURACY

Sometimes collectives are good at ferreting out the facts—and sometimes they are bad at it. For example, rumors circulating in established organizational grapevines tend to be accurate, but rumors following natural disasters tend to be fallacious. Several types of mechanisms have been identified in rumor accuracy. Cognitive mechanisms, such as the narrowing of attention, memory limits, and perceptual biases, tend to reduce accuracy during transmission. Student who serially transmitted rumors—passed them along a chain—tended to pass along parts of a rumor that were more consistent than inconsistent with stereotypes because stereotype consistent information is easier to process. Motivational mechanisms, including fact-finding, relationship-enhancement, and self-enhancement motives, also play a part. Rumors spread by people intent on fact finding tend to become more accurate than those motivated by either relationship- or self-enhancement. Situational features, such as the ability to check on the veracity of the rumor, tend to increase rumor accuracy. Soldiers in one World War II field study could ask superior officers if rumors they heard were false; rumors circulating among this group were highly accurate. Group mechanisms, such as conformity, culture, and epistemic norms, also affect accuracy. In one observational study of rumors among prison inmates, rumors about who was snitching circulated until a consensus was reached, then conformity to that rumor was demanded. Rumors also tend to agree with the cultural axioms and ideas of the rumor public. Finally, social network mechanisms affect transmission and include interaction among participants and transmission patterns. Rumors transmitted serially with interaction between each teller-listener pair in one laboratory study were more accurate than those where discussion was not permitted.

MANAGING RUMOR

Not all rumors are harmful, but those that are remain an object of interest to those interested in preventing or ameliorating such harm. Rumors can be successfully prevented and managed by reducing uncertainty and anxiety, reducing belief in rumor, or reducing dissemination. A sample of experienced public relations officers recommended rumor prevention strategies that reduce uncer-

tainty and enhance formal communications. Strategies rated most highly in effectiveness include stating the values and procedures that will guide organizational change, explaining how decisions will be made, and—if true—confirming the rumor. Increasing trust was also rated highly; in independent research, *dis*trust of management was strongly related to negative rumor transmission in a department facing radical downsizing. Rumor rebuttal—denying the truth of the rumor—is overall an effective rumor management strategy (given that the rumor is indeed false). It is also a more effective strategy than one commonly advocated by some business commentators: no comment. Presenting a no-comment statement to experimental participants who had heard negative rumors about a food manufacturer raised their level of uncertainty and suspicion as much as simply hearing the rumor alone. Some variables moderate the effectiveness of rebuttals; rebuttals proceeding from a source perceived to be appropriate (i.e., knowledgeable regarding the rumor) and honest were most effective in reducing belief in a rumor. Indeed trusted third-party sources of rebuttal are effective. In addition effective rebuttals assist the recipient in attaining a sense of control; for example, rebuttals can include specific actions the hearer can take in order to minimize potential harm from a dreaded negative event. Finally, effective rebuttals can include a rebuttal context that addresses why the rebuttal is being issued; for example, "A competitor is spreading false and malicious rumors, and that is why we are rebutting them today."

SEE ALSO *Collective Wisdom; Equity Markets; Financial Markets; Hearsay; Ignorance, Pluralistic; Lay Theories; Lying; Psychology; Self-Esteem; Social Psychology; Storytelling; Trust*

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Nicholas DiFonzo

RURAL ELECTRIFICATION

SEE *Development, Rural.*

RUSSELL, BERTRAND

SEE *Logic, Symbolic.*

RUSSIAN ECONOMICS

The development of economic theory in Russia is most conveniently divided into a number of separate periods that are bounded by various dramatic changes in the social and political life of the country. Before the emancipation of the serfs in 1861, Russian economics was in many ways imitative of currents of economic theory that were prevalent in the West. Peter the Great (1672–1725) has been interpreted as drawing inspiration from mercantilism for his program of industrial development focused on Saint Petersburg, while physiocracy found expression in the Russian context through the works of Dmitri A. Golitsyn (1734–1803). Classical economics was a major presence across the nineteenth century through the influence of Adam Smith (1723–1790) and his pupils, the first Russian translation of *The Wealth of Nations* (1776) being published in four parts between 1802 and 1806. Heinrich F. Storch (1766–1835) was a noteworthy commentator on Smith's work within Russian borders. Other important Russian economists from the first half of the nineteenth century were Nikolai S. Mordvinov (1754–1845), a supporter of protectionism, and Nikolai I. Turgenev (1789–1871), an advocate of free trade.

After 1861 the originality of Russian economics began to increase dramatically, although Western currents like historical political economy still had a significant influence through Russian representatives such as Ivan K. Babst (1823–1881). Marxists such as Georgii V. Plekhanov (1856–1918) articulated the position that, already in the 1880s, capitalism was successfully developing in Russia, against the populist view that there could never be enough domestic demand for a "mature" form of capitalism to become firmly established. A key issue for Russian economists of this period was the resilience of the peasant commune (or village community), an indigenous institution that practiced the periodic redistribution of arable land. Some argued that such primitive forms of communism were already obsolete, while others maintained that they could be the springboard for future socialist success. Vladimir I. Lenin (1870–1924) argued in favor of the former position, and documented in detail how capitalist industry was rapidly developing within Russian borders. Ironically, given Lenin's assumption of state power in 1917, Karl Marx (1818–1883) came to believe late in his life that the Russian peasant commune could provide a basis for bypassing much of the capitalist phase of historical development, if certain conditions were met. Marx's economic ideas were disseminated in Russia by sympathetic advocates such as Nikolai I. Sieber (1844–1888).

THE GOLDEN ERA

The most inventive and influential "golden era" of Russian economics can be given as occurring between 1890 and 1929, this period being subdivided into prerevolutionary and postrevolutionary segments. In the prerevolutionary golden era, the most significant names in Russian economics were Mikhail I. Tugan-Baranovsky (1865–1919), Vladimir K. Dmitriev (1868–1913), Petr B. Struve (1870–1944), Aleksandr I. Chuprov (1842–1908), Sergei N. Bulgakov (1871–1944), and Dmitri I. Mendeleev (1834–1907). In the postrevolutionary golden era, the most significant names in Soviet economics were Nikolai D. Kondratiev (1892–1938), Eugen E. Slutsky (1880–1948), Alexander V. Chayanov (1888–1939), Evgeny A. Preobrazhensky (1886–1937), Leonid N. Yurovsky (1884–1938), Vladimir G. Groman (1874–1937), Vladimir A. Bazarov (1874–1939), and Grigorii A. Feldman (1884–1958). For reasons of space, the work of only the main aspects of some of the most significant of these economists can be discussed here.

Tugan-Baranovsky's most important contribution to economic theory was *Industrial Crises in Contemporary England* (1894). This book pioneered the empirical description of business cycles by documenting the interrelated movements in gold bullion reserves, interest rates, and exchange rates, plotted alongside shifts in governmental policy regimes. It also presented a theoretical explanation of cycles based upon the accumulation and exhaustion of free loanable capital that fed into debates between economists like John Maynard Keynes (1883–1946) and Dennis H. Robertson (1890–1963) in the United Kingdom in the interwar period. Tugan-Baranovsky's other influential work in economic history was *The Russian Factory in the Nineteenth Century* (1898), which documented various changes in industrial structure, such as the development of possessional factories and the rise and fall of cottage industry. Originally a legal Marxist, Tugan-Baranovsky's economic methodology changed significantly after 1900, favoring an ethical basis to his socialism rather than a class-based approach, to the extent that by 1917 he was employing marginalist ideas in hypothetical planning models. During World War I (1914–1918), Tugan-Baranovsky analyzed the effects of various forms of war finance on future development prospects, and after Russia's exit from the war he assisted in forming the Academy of Sciences in Kiev.

Dmitriev's major work was his *Economic Essays on Value, Competition, and Utility*, first published separately in 1898 and 1902. One of the most well-known elements in these essays was the argument that unrestricted free

competition tended to raise production costs above their essential level, that is, above the lowest possible level for any given state of technique. According to Dmitriev, in the competitive battle for sales, accumulating stocks of commodities played the same role as a military arms race did between opposing powers during peacetime. Under free competition, the nonproductive expenditure on commodity storage was higher than under monopoly, due to the need for competing producers to maintain significant levels of dead stock, in fear of others stepping in and gaining market share. Hence free competition had additional economic costs in terms of wasted output, excess inventories, and redundant advertising. Dmitriev was Russia's first mathematical economist, and he was also one of the most significant interpreters of the ideas of David Ricardo (1772–1823) within Russian borders.

Other significant Russian economists from the prerevolutionary era included Struve, a leading member of the legal Marxists who (after emigration to the United States) became a trenchant critic of Stalinist economic policies; Mendeleev, the inventor of the periodic table of elements, a passionate advocate of industrial protectionism within Russian borders, and creator of the 1891 tariff; Chuprov, the leading representative of historical political economy in Moscow who emphasized the importance of knowledge and scientific invention to understanding economic progress; Bulgakov, a legal Marxist who stressed the international nature of capitalist development; Ivan K. Ozerov, a specialist in public finance and an expert on the structure of taxation in the United Kingdom and Germany; and Petr P. Migulin, a financial theorist who documented the history of currency policy within Russian borders, and also advocated monetary reforms designed to increase the stability of the ruble.

Perhaps the most famous and influential Russian/Ukrainian economist of all was Slutsky, who was also a noted mathematical statistician. He published two articles that had a great and lasting effect on the development of mainstream economics in the West. The first of these articles was "On the Theory of the Budget of the Consumer" (1915) and the second was "The Summation of Random Causes as the Source of Cyclical Processes" (1927). In the former, Slutsky divided the result of a change in demand induced by price changes into income and substitution effects, creating what is called the *Slutsky equation* as a basic tool of microeconomic analysis. In the latter article, Slutsky hypothesized that the summation of mutually independent chance events could generate sinusoidal periodicity, which might imitate the approximate regularity of business cycles, a process that became known in its statistical formulation as the *Slutsky-Yule effect*. Both of these significant contributions are still in use in economics textbooks today. Slutsky also wrote on the praxeological foundations of economics, analyzed the income received by the Soviet state from currency emission, and invented the concept of the stochastic limit. In the mid-1920s Slutsky transferred from Kiev to become a consultant in the Moscow Conjuncture Institute, which was a pioneering center for the study of business cycles and forecasting headed by Kondratiev.

Kondratiev himself is famous today as the originator of the idea of long cycles of economic development, that is, approximately fifty-year business cycles that are generated by both capital accumulation and technological change. In Kondratiev's account, long cycles coexisted with medium-length economic cycles and also short cycles, within a three-cycle scheme of long-run capitalist development later adopted by Joseph Schumpeter (1883–1950). Kondratiev was initially an agricultural economist who worked on topics such as the effects of war and revolution on the functioning of Russian grain markets. During the New Economic Policy (NEP, 1921–1929) he developed a market-led industrialization strategy for the USSR based on the notion of encouraging the export of primary produce in order to fund capital imports, in direct opposition to Joseph Stalin's (1879–1953) centrally planned strategy of import substitution. Kondratiev also developed a detailed planning methodology based on an indicative rather than an imperative approach that was fully realized in his plan for agriculture and forestry (1924–1928). Some of Kondratiev's colleagues in the Conjuncture Institute, such as Albert L. Vainshtein (1882–1970) and Alexander A. Konyus (1895–1982), survived the political purges of the mid-1930s and became well-known economists in their own right, Vainshtein for work on national wealth estimation and Konyus for work on index number theory.

Other significant Russian economists from the NEP period included Chayanov, an agricultural economist who worked on the structure and motivating drive of peasant farms; Preobrazhensky, a Marxist who developed the notion of primitive socialist accumulation and analyzed the tributary relation between the peasant and the state sectors of the Soviet economy; Yurovsky, a neoclassical economist who masterminded the 1922–1924 currency reform that successfully replaced the depreciating *sovznak* with the stable gold-backed *chervonets*; Groman and Bazarov, two leading members of the State Planning Agency (Gosplan) who documented the restoration processes occurring in the Soviet economy after the end of the Civil War and theorized various planning regularities that were significant to Soviet development policies; and Feldman, who developed an innovative two-sector model of economic growth that was disseminated in the West.

There is some noticeable continuity in the main themes and preoccupations of Russian/Soviet economics between the two golden periods identified above. Before

1917 both business cycles and national development were major topics that were addressed by many Russian economists, in particular in terms of documenting the links between the domestic economy and international capitalism. For example, a significant dispute arose over whether and to what extent Russian business cycles synchronized with those of western Europe, which was related to the degree of penetration of French, German, and British capital within Russian enterprises. After 1917 these general topics were still very significant, although the manner in which they were pursued within the framework of the development of the Soviet centrally planned economy was modified dramatically. National development was fostered not through international cooperation, but through centralized state planning. Another significant issue in discussing the development of Russian economics is its relation to economics being pursued in closely proximate countries such as Ukraine. Some of the most famous names in Russian economics, such as Tugan-Baranovsky and Slutsky, were born in Ukraine, only moving to Russia later in their lives. This dual identity makes the entity identified as "Russian economics" an amorphous grouping, especially when the influence of Western currents is added to the mix.

A significant by-product of the early Soviet period was the emigration of a number of important economists to Europe and the United States. Examples of such émigré economists were Sergei N. Prokopovich (1871–1955), Wasily W. Leontief (1906–1999), and also Struve. Leontief in particular had a significant impact on Western economics through his input-output approach to constructing a balance of the entire national economy. In another category of émigré was Roman Rosdolsky (1898–1967), a leading Marxian scholar and Ukrainian socialist. For a while, Rosdolsky was associated with the Marx-Engels Institute in Moscow. In his writings he was one of the first to highlight the relation between Marx's published work in economics and G. W. F. Hegel's *Science of Logic* (1812–1816) by comparing Marx's *Capital* (1867–1894) with the *Grundrisse* (1857–1858). Rosdolsky also provided a reinterpretation of the Marxian reproduction schemes in which they were seen as only an abstraction of capitalist logic, not a concrete model of actual historical development.

THE STALIN ERA AND AFTER

After 1929 Stalin's ascent to power led to the destruction of the cadre of brilliant Russian economists that had prospered so notably in the golden era. Some, like Kondratiev and Yurovsky, were jailed on fictitious charges and eventually executed, while others, like Slutsky, were forced to leave the subject of economics completely for more neutral areas of research such as statistics. Even so, by the end of the 1930s a new school of mathematical economists led by Leonid V. Kantorovich (1912–1986), Vasilii S. Nemchinov (1894–1964), and Viktor V. Novozhilov (1892–1970) had reintroduced neoclassical ideas in a camouflaged form through the notion of an optimal plan and the idea of a system of optimally functioning economy (SOFE). This mathematical school provided the basis for many of the reform efforts directed at improving the performance of the Soviet economy that occurred sporadically throughout the 1950s and 1960s, but entrenched bureaucratic impediments often hindered the implementation of these attempted reforms. Although Kantorovich was awarded the Nobel Prize for economics in 1975, the 1970s are often described as a period of stagnation in the Soviet economy and also in Soviet economics.

In the Mikhail Gorbachev era (1985–1991), economic reformers like Abel Aganbegyan began to win ascendancy, but were quickly outflanked by a more radical group of pro-market thinkers who desired the dismantling of the Soviet economy and the creation of an entirely new market-based system. This group was triumphant after 1989, leading to full-scale privatization and price liberalization in the early 1990s. The pro-market reform program that was adopted was heavily influenced by Western economists such as Jeffrey Sachs and Richard Layard, and also by Eastern European converts to market economics such as Janos Kornai. Transforming property ownership and achieving free prices were given immediate priority, leaving the legal and institutional environment to fend for itself. Macroeconomic stabilization took some time to achieve, with a significant banking crisis occurring in Russia in 1998. In addition, organized crime grew to occupy a more central position in many post-Soviet economies than it did in the "mature" capitalist economies of the West.

Consequently, whether the transition to a market economy undertaken in Russia after 1989 is regarded as a complete success depends at least in part upon the perspective adopted. Dramatic changes and many improvements have undoubtedly taken place, with some definite winners and also some noticeable losers, but whether the post-Soviet form of mafia capitalism is (all things considered) superior in every respect to the previously existing version of bureaucratic socialism is a debatable point. In terms of the influence of market reform on Russian economics as a discipline, mainstream Western economic theory came to occupy a similar position in Russian universities as it does in the West. The Soviet variety of Marxist economics was totally discredited in the process, but this only had a tenuous relation to the actual ideas of Karl Marx in the first place.

SEE ALSO *Gorbachev, Mikhail; Leontief, Wassily*

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RUSSIAN FEDERATION

According to international law, the Russian Federation from 1992 is the successor state of the Union of Soviet Socialist Republics (USSR), which was created after the First Russian Revolution in October 1917. The USSR was established formally in 1922 and was the successor state of the Russian Empire under the tsarist rule of the Romanov family from 1721.

The founder of the Soviet Union was Vladimir Ilyich Lenin (1870–1924). On the ideological basis of Marxism-Leninism, the Soviet Union existed for seventy-four years as an alternative Eastern political and economic regime, competing with Western democracy and the market economies of the "First World" and thus constituting the so-called Second World. In 1928 the successor of Lenin as leader of the Communist Party was Joseph Stalin (meaning "man of steel"; 1879–1953) from Georgia. The Soviet Union moved from Leninist principles (1922–1927) to a totalitarian Stalinist regime, which lasted from 1928 until Stalin's death in 1953. Stalin was followed by Nikita Khrushchev, the Communist leader until 1964, and Leonid Brezhnev from 1964 to 1982. The Brezhnev era was much less radical than the Stalinist era—with its millions of regime victims—and produced a certain degree of social, economic, and political stability as well as stagnation. After the end of the long Brezhnev era, two party leaders, Yuri Andropov and Konstantin Chernenko, had short terms in office until March 1985.

The last important political leader of the USSR after Lenin, Stalin, Khrushchev, and Brezhnev was Mikhail Sergeevich Gorbachev, who came into power in 1985. His policy was to overcome the general stagnation by introducing decisive structural reforms into the Communist economic and political regime. Gorbachev attempted to modernize the USSR so that it could compete successfully with the Western world of democracy and free markets, but it failed in the end. His wide-ranging reforms of the Soviet Union had three main elements. The most important reform was *perestroika*, a structural reform of the planned economy, and *uskorenie*, the acceleration of these economic changes. The second strand of political reforms focused on *glasnost*, or public openness and transparency about the Stalinist past—with political terror, genocide, and mass murder—and the political history of the USSR. Within these broad areas of economic and political change, Gorbachev started public campaigns against alcoholism and corruption, which proved to be rather unpopular in Soviet society. The third dimension of these deep reforms was *demokratisatsiya*, which tried to democratize Soviet society without the introduction of democracy and retaining the Communist one-party state.

In August 1991 conservative Communist forces attempted a coup d'état to stop the structural reforms of the Soviet system that Gorbachev initiated and directed. The Communist coup was stopped within three days by Boris Yeltsin (1931–2007). This attempt to stop the disintegration of the USSR accelerated it. The Soviet Union ceased to exist on December 31, 1991.

The population of the USSR before the final breakdown encompassed 286 million Soviet citizens. The Russian Federation as successor state lost 139 million former Soviet citizens to other Newly Independent States (NIS) and had an initial population of 147 million inhabitants. During the 1990s, the Russian Federation experienced a dramatic decrease in life expectancy, especially among Russian men, and had a population of 143 million citizens in 2005. The Russian demographic crisis has almost been offset by immigration from other former Soviet Republics into the Russian Federation. In the early twenty-first century the Russian Federation is structured into seven federal districts: the Central District around the capital city Moscow, the Northwestern District with Saint Petersburg, the South District that includes the northern Caucasus, the Volga District, the Ural District, the Siberia District, and the Far Eastern District. Russia consists of eighty-six regions and republics, which are integrated into these seven large federal districts.

In June 1991 Yeltsin became president of Russia as part of the Soviet Union after the first Russian presidential elections with 57.3 percent of the vote. In 1996 he was elected as the first president of an independent Russia with 53.8 percent of the valid vote. During his eight years in power, Yeltsin had the difficult task of ending the old political and economic Soviet regime and commencing the transformation toward a democratic system and a market economy in a vast country that covers 11 time zones and about 6.6 million square miles. Weakened by health and alcohol problems, Yeltsin resigned from office on December 31, 1999.

Vladimir Putin (b. 1952) became acting president of Russia on January 1, 2000. He won 52.94 percent of the valid votes in the Russian presidential elections on March 26, 2000. Between 2000 and 2007 he created a hybrid political system, which combines elements of a democratic regime with those of an autocratic regime. The Putin regime is characterized by centralization of power (e.g., appointment of regional governors instead of regional elections), absence of a full rule of law, lack of separation of powers, restricted human and political rights, and suppression of electronic media. President Putin weakened the political powers of the Russian national parliament, the Duma, as well as the Russian party system by favoring a new presidential party with the name United Russia. The Putin era has transformed the Russian Federation into a political system with a historically unique mixture of democratic and autocratic elements. Hence the historical path of Russia toward democracy or autocracy will be decided after the Russian presidential elections in 2008. The Second Russian Revolution, which began in August 1991 with an attempted coup to return to a Communist regime as well as the dissolution of the Soviet Union, has not yet reached a historical conclusion.

SEE ALSO *Brezhnev, Leonid; Communism; Economies, Transitional; Federalism; Gorbachev, Mikhail; Khrushchev, Nikita; Lenin, Vladimir Ilitch; Putin, Vladimir; Russian Revolution; Stalin, Joseph; Union of Soviet Socialist Republics; Yeltsin, Boris*

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RUSSIAN REVOLUTION

The revolutionary crises of 1917 had their origins in the deep social and political polarization in Russian society that intensified in the first decades of the twentieth century. Peasants suffered from land shortages, periodic hunger, high incidence of disease and early mortality, the burdens of taxation and rents, and military recruitment. Factory workers and artisans lived in squalid tenements or hovels and worked long hours in dangerous conditions. The better-off middle and upper classes were not only more literate, educated, and socially mobile than the peasants, but lived under a different code of law and enjoyed privileges that the ordinary villagers did not. Through the nineteenth century politically-engaged Russian intellectuals gravitated from liberalism and moderation toward revolutionary socialism, at first oriented toward the peasants (populism or *narodnichestvo*) and later, by the 1890s, increasingly focused on the urban workers (Marxism, Social Democracy).

Marxism provided a sociological and economic framework for Russian activists, a view of the way the world worked under capitalism and the European future toward which Russia was headed. Unlike the pro-peasant socialists or populists, who eventually formed the Socialist Revolutionary Party, Marxists believed that Russia could not avoid industrialization and capitalism and had to pass through two successive revolutions, a bourgeois-democratic revolution followed by a proletarian-socialist revolution in which the working people would come to power to build socialism. In 1903 the principal Marxist organization, the Russian Social Democratic Workers' Party, split into two rival factions, the moderate Mensheviks, who were usually more willing to work with other democratic parties, like the populists and liberals, and the more radical Bolsheviks, led by Vladimir Lenin (1870–1924), who generally favored a more rapid transition to the socialist revolution.

However wide the social divide between the state and society in the decades before World War I (1914–1918), the war expanded the gulf and radicalized the workers and peasants. Millions of peasants were turned into soldiers,

given guns, and shown that a wider world existed beyond the edges of the village. The February Revolution began on February 23 [Julian calendar] (March 8 on the Gregorian calendar, International Women's Day) with working-class women demanding bread in the cold, dark streets of Petrograd. Within days, hundreds of thousands of Petrograd workers were in the streets, and when Cossacks and ordinary soldiers refused to fire on the crowds, the strike turned into a revolution. The tsar, Nicholas II (1894–1917), abdicated, as did his brother, Grand Duke Mikhail, and the monarchy came to an end.

On March 1 (14), middle-class members of the *duma* formed a provisional government, headed by Prince Georgii Lvov and including leaders of the major liberal and conservative parties. At the same time, workers and soldiers formed their own representative bodies, the soviets (councils) of workers' and soldiers' deputies, for though their leaders were unwilling to take power on their own, they were suspicious of the intentions of the "bourgeois" members of the provisional government. Russia now had not one unchallenged government but "dual power," two competing authorities. In April, the leaders of the Soviet confronted Foreign Minister Paul Miliukov, who insisted on Russia's imperial claims to Constantinople and the Dardanelles. Workers and soldiers poured into the streets, and forced Miliukov to resign. Moderate socialist leaders of the Soviet reluctantly joined the "bourgeois" government, but in the next six months the various coalition governments were unable either to end the world war or to alleviate the social divisions in Russian society. While the government wavered, the Bolsheviks won majorities in the factory committees and successfully agitated against the war at the fronts. Lenin, who had returned to Russia from exile in Switzerland in April, staked out a radical program for transferring all power to the soviets, ending the war, and moving the revolution rapidly into a socialist phase. The Bolsheviks were the only major party that provided a clear alternative to the government and their moderate socialist allies.

To please the Western Allies and contribute to the war effort against the Central Powers, Minister of War Alexander Kerensky launched a disastrous offensive against the enemy in June, but as news of Russian defeats reached the capital, workers, sailors, and soldiers demonstrated against the war and the government, even calling on the Soviet to take power in its own name. The moderate socialists refused, while militant elements supporting the Bolsheviks pushed to seize power. When order was restored by troops loyal to the government and soviets, Lenin was forced to go into hiding in Finland. Lvov resigned, and Kerensky formed a new coalition government. Liberal and conservative forces became more wary of the lower classes and called for an authoritarian government to restore order. The clumsy attempt by General Lavr Kornilov to establish a new authority, however, ended with the lower classes moving swiftly toward the Bolsheviks and electing them the majority party in both the Petrograd and Moscow soviets by early September.

In the second half of October, the Military-Revolutionary Committee of the Petrograd Soviet, led by Leon Trotsky (1879–1940), began establishing its authority over the garrisons of the city. On the morning of October 24 (November 6), Kerensky moved to suppress the Bolsheviks and prevent the insurrection that everyone knew was coming. In the crucial hours, however, the prime minister found his support weak or non-existent. Though workers did not actively participate in the insurrection, the Bolsheviks found the military muscle to take power. By dawn on October 25 (November 7) the city was in the hands of the Military-Revolutionary Committee, and Lenin went before the Second Congress of Soviets and declared that power had passed to the soviets. When the moderate socialists, the Mensheviks and Right Socialist Revolutionaries, protested the Bolshevik seizure of power and walked out of the Congress, they essentially left the Bolsheviks and Left Socialist Revolutionaries to form a new government. Though Lenin preferred a one-party government, within a month he conceded seats to the Left Socialist Revolutionaries, and until March 1918 Soviet Russia had a Left Socialist coalition government.

In November 1917 elections were held to a Constituent Assembly, a kind of founding congress for the new republic. The Bolsheviks failed to win a majority, while the Right Socialist Revolutionaries emerged with the largest plurality. After allowing a single day's meeting (January 5 [18], 1918), however, the Soviet government dispersed the Constituent Assembly, Russia's most freely elected parliamentary body until the early 1990s. In the ensuing civil war the communists did not hesitate to use violence and terror, and as atrocities occurred on both sides, much of the democratic promise of the revolution of 1917 was lost.

SEE ALSO *Bolshevism; Communism; Coup d'Etat; Democracy; Left and Right; Lenin, Vladimir Ilitch; Leninism; Marxism; Monarchy; Revolution; Socialism; Totalitarianism; Trotsky, Leon; Union of Soviet Socialist Republics; Violence*

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RYBCZYNSKI THEOREM

The Rybczynski theorem, along with the Stolper-Samuelson, factor-price equalization, and Heckscher-Ohlin theorems, is one of four key propositions describing the properties of the standard Heckscher-Ohlin model with two goods and two factors. The Polish-born economist Tadeusz M. Rybczynski's (1923–1998) paper, "Factor Endowment and Relative Commodity Prices" (1955), relates changes in an economy's factor supplies to resulting changes in equilibrium outputs and prices.

The simplest version of the Heckscher-Ohlin model assumes that two goods, say autos and textiles, are produced using the same two factor inputs, say labor and capital, but in proportions that differ across the two industries. If the auto industry uses a higher ratio of capital to labor, it is termed the *capital-intensive* industry, while the textile industry is termed *labor-intensive*. Under the usual assumptions of the model, an increase in the supply of either factor, holding constant the supply of the other, results in an outward shift of the production possibility frontier. Thus, the economy can now produce more of both goods, so that most economists prior to Rybczynski's contribution assumed that this kind of biased growth would result in higher equilibrium outputs of each good, though with relatively greater growth of the industry that uses more of the growing factor.

Rybczynski's surprising result is that a given percentage increase in the supply of one factor, say capital, holding constant the supply of the second factor (labor) as well as the relative price of the two goods, must result in a still larger percentage increase in the equilibrium output of the good that is capital-intensive in production (autos), and an absolute *decrease* in the equilibrium output of the good that is labor-intensive (textiles). The result also requires that the economy produce some of each good in both the equilibrium prior to the change in factor supply and the final equilibrium following the change. Rybczynski's proof makes use of the box diagram as applied for the first time to production by Wolfgang Stolper and Paul A. Samuelson in their landmark paper, "Protection and Real Wages" (1941), which presented what is now known as the Stolper-Samuelson theorem. Moreover, Rybczynski builds on Stolper and Samuelson's key insight concerning the basic two-good, two-factor version of the Heckscher-Ohlin model—that the relative price of the two goods uniquely determines factor prices and thus factor proportions.

In general, an economy can adjust to an increase in the supply of capital, holding constant the supply of labor, through some combination of capital-deepening and a changed mix of outputs. This alternative formulation of the Rybczynski theorem was provided by Ronald Jones in his 1965 paper, "The Structure of Simple General Equilibrium Models," which offers the first integrated treatment, as well as a number of generalizations, of the four key theorems of the Heckscher-Ohlin model. To the extent that more capital results in a reduction in its relative cost to producers, firms in both sectors will now opt for a higher ratio of capital to labor. But the Stolper-Samuelson theorem implies that with output prices fixed and both goods produced, factor prices and thus cost-minimizing capital-labor ratios must remain unchanged in the new equilibrium. Thus, the adjustment is achieved entirely through a change in the mix of outputs. Expansion of the capital-intensive industry allows additional capital to be employed, but more labor is also required to maintain that industry's unchanged ratio of capital to labor. This labor (plus additional capital) must be obtained through a contraction in the equilibrium output of the labor-intensive industry, which releases a relatively higher ratio of labor to capital than is required for expansion of the capital-intensive industry. This allows the additional capital to be absorbed at constant factor prices.

The Rybczynski theorem, by indicating what would be produced at unchanged output prices, has clear implications for effects of biased factor growth on actual prices in the resulting equilibrium. Assuming that both goods are normal in consumption—that is, that as incomes rise more of each will be demanded—growth in the supply of capital necessarily means a drop in the relative prices of

autos for a closed economy and, not surprisingly, an associated decline in the return to capital, the auto industry's intensively used factor. Moreover, as Stolper and Samuelson demonstrated earlier, the decline is not merely relative; capital's return must fall in real terms. Likewise, the return to labor, the factor now relatively scarcer, must rise in real terms. For an open economy, the Rybczynski theorem allows predictions about the resulting changes in a country's equilibrium trade volume and terms of trade. As the stock of capital grows, desired trade at given terms of trade will increase (decrease) if the country is capital-abundant (labor-abundant) relative to its trading partners. An expansion of the capital stock will thus lead to deterioration (improvement) in the country's terms of trade. Corresponding results hold for an expansion of labor with capital held constant.

Despite its stark assumptions, the Rybczynski theorem, especially as later generalized by Jones, provides powerful insights into the likely consequences of biased factor growth. Like the supply and demand curves of partial-equilibrium analysis, the simple Heckscher-Ohlin model provides the first back-of-the-envelope attack on a wide range of questions. Together with the other theorems of the Heckscher-Ohlin model, the stripped-down basic version of the Rybczynski theorem has become an essential part of the intellectual toolkit of every international economist.

SEE ALSO *Heckscher-Ohlin-Samuelson Model; Stolper-Samuelson Theorem*

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Rachel McCulloch

S

SACRED, THE

SEE *Symbols.*

SADAT, ANWAR

1918–1981

Born in Mit Abul Kom, a town north of Cairo, Egypt, Sadat was one of the first students to graduate from a British military school. On graduating, he was posted to a remote government base where he met Gamal Abdel Nasser (1918–1970), a charismatic army major who was to become the nationalist leader of Egypt. They maintained a lifelong friendship. From 1942 on, Nasser secretly organized young cadets and officers to promote a republican, anti-British patriotic movement. The movement's radical ideas were also directed against the corrupt monarchy of King Farouk (1920–1965), whose profligacy and incompetence were partly held responsible for the failures of the Egyptian army against Israel in 1948. In response to these military and political failures, Nasser's group evolved into the Free Officers Movement, which staged a coup on July 23, 1952, against Farouk. Sadat, who became Nasser's public relations minister, remained under the shadow of Nasser during the dramatic events in modern Egyptian history—the Suez crisis (1956) and the Six-Day War (1967)—until Nasser's death in September 1970.

RISE TO INTERNATIONAL PROMINENCE

Sadat was relatively unknown in international politics, despite the many positions he had held during Nasser's period—minister of state (1954), secretary to the National Union (1959), president of the parliament (1960–1968), and vice president and member of the Presidential Council (1964). In his attempt to emulate Nasser, he initially adopted a stridently aggressive stance against Israel, including the surprise attack in the Yom Kippur War of October 1973. The war ended in stalemate; with the Egyptian economy in crisis, Sadat adopted a diplomatic approach to Israel, launching the Sadat Initiative in 1977. This started a peace process that led to the Camp David talks in September 1978 with U.S. President Jimmy Carter and Israeli prime minister Menachem Begin. The peace treaty that was signed in March 1979 involved the return of the Sinai to Egypt, the creation of demilitarized zones, and some autonomy for a Palestinian administration. Both Begin and Sadat received the Nobel Peace Prize, but the peace agreement was opposed by the Palestine Liberation Organization, several Arab states, and right-wing elements in Israel.

DOMESTIC PROBLEMS

Opposition from within Egypt came from Muslim fundamentalists. Sadat attempted to co-opt radical Muslim groups, including the Muslim Brothers, whom Nasser had exiled. He realized that the extreme poverty of the peasantry and urban working class created a breeding ground for religious and political radicalism. To stimulate the Egyptian economy, Sadat in 1975 sought to expand the private sector and to reduce the old Soviet-style economy and state bureaucracy. This economic opening (*infitah*) was combined with a policy of supporting moderate Muslim intellectuals such as Omar Telmesani, who began

to publish *Al Dawa* (Call to Islam) in 1976. In return for their political support, Sadat allowed these religious intellectuals considerable cultural freedom.

This political pact began to disintegrate in 1977 when riots broke out in response to the negative consequences of the "open-door" economic policy and a radical group called the Society of Muslims (*Al Takfir wa-l Hijra*) defied the government by kidnapping and murdering a cleric. Sadat's peace process, which involved some recognition of Israeli sovereignty, was rejected by both moderate and radical elements of the Muslim community. The radicals, who became known generally as *takfir*—a devout Muslim who excommunicates other Muslims who are seen to be lapsed—spread their message through much of the Arab world. These movements accepted the teaching of Sayyid Qutb (1906–1966), who, as the founder of the Muslim Brothers, had preached the necessity of violent *jihad* against unbelievers and who was hanged for an alleged plot against Nasser.

In response to this radicalization, Sadat dissolved the Egyptian Students Union and brought a number of key activists to trial. Some 1,600 people were arrested, resulting in significant international and domestic criticism. He also attacked the Coptic community, forcing the Coptic Pope Shenouda III into exile (he was eventually restored by President Hosni Mubarak in 1985). As a result of this political crackdown, the radicals became a clandestine movement among the underclass of the slums of Cairo, declaring a war against Sadat and the moderate clerics who were accused of apostasy. Sadat was assassinated on October 6, 1981, during the yearly 6 October 1973 victory parade by Muslim fundamentalists inside the army. He was buried in the unknown soldier memorial in Cairo and was succeeded by Mubarak as president.

The problems facing Egypt in Sadat's time continue to dominate Egyptian politics. The state bureaucracies remain firmly in control of the economy and, despite President Mubarak's moderate reforms and the recent success of the Egyptian stock market, a democratic culture has been slow to develop. The Muslim Brothers are excluded from parliamentary politics because they are still regarded as an illegal organization. A fragile peace with Israel has, however, been sustained because both governments regard Hamas (*Harakat al-Muqawama al-Islamiyya*) in the West Bank and Hizbullah (the Iranian-backed Party of God) as a threat. Periodic attacks on tourists, Copts, and members of the government have also curtailed the growth of the tourist industry. Between 1993 and 1997, Mubarak responded with ruthless oppression against members of the radical Gamaat Islamiya. In retrospect, Sadat's era was progressive in attempting to secure peace and reform the economy, but he left behind a legacy of authoritarianism.

SEE ALSO *Authoritarianism; Fundamentalism, Islamic; Nasser, Gamal Abdel; Peace Process*

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Bryan S. Turner

SADDLE POINT

SEE *Phase Diagrams; Zero-sum Game.*

SAFETY, OCCUPATIONAL

SEE *Occupational Safety.*

SAHLINS, MARSHALL

1930–

One of the most influential cultural anthropologists of the latter part of the twentieth century, Marshall Sahlins has written seminal works on economic anthropology, social and cultural theory, and the relation of culture and history. In his earliest writings he sought to clarify the social-evolutionist theory of Leslie White, his University of Michigan teacher, but he soon came to reject White's evolutionism and technological determinism. In his mature works, he has elaborated a sophisticated reworking of Claude Lévi-Strauss's structuralism, one that is antithetical to reductionism of all kinds in the study of culture.

In his book *Stone Age Economics* (1972), Sahlins criticized the evolutionist ranking of societies on universalistic criteria such as the intensity of economic production. Influenced by Karl Polanyi, Sahlins argued that economic systems are culturally ordered, serving different ends in different societies. For example, hunter-gatherer societies may seem poor because the people have few possessions, but in fact they enjoy a kind of material plenty precisely by virtue of being unencumbered by things that impede their mobility. Traditionally, such people subsisted on wild foods, and when these grew scarce in one region, they could easily pack up and move to a richer one. Indeed, to the extent that poverty is a social status and a matter of

wanting more than one has, hunter-gatherers have far *less* poverty than do the grossly unequal societies of advanced civilization, since their culture leads them to share scarce resources (like meat from the hunt) rather than possessing or consuming them individually. Thus, they exemplify a "Zen road to affluence," or a "want not, lack not" philosophy that shows that the naturalized Western conception of mankind as fundamentally acquisitive and driven by fear of scarcity is ethnocentric (Sahlins 1972, pp. 2, 11).

In *Culture and Practical Reason* (1976), Sahlins took these arguments farther, offering a philosophically compelling, general critique of anthropological theories that explain social and cultural phenomena by appealing to material or functional causes outside the culture itself. Because practical utility and functionality are themselves always relative to particular cultural modes of existence, Sahlins wrote that it is wrong to conceive of them as external to the symbolically organized order of culture.

Structuralism's great shortcoming has been its artificial separation of culture's abstract symbolic structure from the real historical events that perpetuate and transform it. But these are reintegrated in Sahlins's theory of structural history. Since people necessarily act according to their culturally presupposed categories and values, "history is culturally ordered, differently so in different societies" (Sahlins 1985, p. vii). Sometimes actions have unexpected outcomes, however, that can lead people to reconsider their conventionally held cultural meanings. Thus, cultural orders themselves are historical, partly formed and transformed by events. In his writings since 1980, Sahlins developed this theory through extended historical studies of intercultural contact in early colonial Hawaii and Fiji, as well as in the transpacific trade connecting Britain, China, Hawaii, and the Northwest Coast of America in the eighteenth and nineteenth centuries.

A brilliant polemicist, Sahlins has participated throughout his career in important debates on such matters as color perception, sociobiology, world-systems theory, and postmodernism in anthropology. Perhaps the most famous of these was his debate with Gananath Obeyesekere on native rationality and the power of myths. This exchange centered on Sahlins's historical account of the European explorer Captain Cook's visit to Hawaii in 1779, and particularly on the question of whether he was viewed at the time by native priests as a manifestation of a Hawaiian god, Lono. The larger intellectual issue this raised was the politics of depicting cultural difference. Obeyesekere accused Sahlins of exoticizing the Hawaiians and perpetuating a European colonial myth in which irrational natives are naïvely given to mistaking Europeans for gods. In responding, Sahlins marshaled impressive evidence that Cook was treated as Lono in historical fact, and he argued that it is a greater denigration of other peoples to submerge their cultures' distinctive rationalities under a well-intentioned but ethnocentric portrayal as being essentially just like one's own. Some European colonial writers undoubtedly disparaged cultural Others for confusing certain men with their gods, but these Others may not have shared the European presumption that gods and men are (with one singular exception) nonoverlapping categories, highly distant from one another.

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Ira Bashkow

SAID, EDWARD

1935–2003

Edward Said is recognized as one of the most influential literary critics of the last quarter of the twentieth century. Said's contributions to postcolonial and critical theory, the humanities, cultural studies, social geography, and the social sciences evade easy categorization given the startling breadth and range of his thought. Influenced by Michel Foucault, Giambattista Vico, Georg Lukacs, Antonio Gramsci, Frantz Fanon, and Theodor Adorno and a self-proclaimed admirer of Sigmund Freud, Said was among the first to introduce American academic audiences to structuralism, poststructuralism, and to a lesser extent deconstruction.

A critical scholar nevertheless deeply committed to humanism, Said was also a public intellectual known for

his eloquent commitment to Palestinian self-determination. Born in Jerusalem, Said fled with his family to Cairo in 1948 and a few years later relocated to the United States. He studied at Princeton and then at Harvard, where he wrote a PhD dissertation on Joseph Conrad, then joined Columbia in 1963. Unexpectedly moved by the profound injustice of the dispossession of the Palestinians, with whom he increasingly identified as an exiled intellectual, he found the Six Days War of 1967 a politicizing moment and significant turning point in his life. Over the next several decades Said became a frequent commentator on U.S. foreign policy and Middle Eastern politics. He was a regular contributor to *Al-Hayat* (a London-based Arab daily) and *Al-Ahram Weekly* (an Egyptian daily) as well as serving as the music critic for the *Nation*.

Said is best known for his groundbreaking work *Orientalism* (1978). Widely acknowledged as a cornerstone text for postcolonial studies, this acclaimed work has also had profound influences on social geography, cultural studies, and radical history. Drawing on Foucault's notion of discourse, Said exposes Orientalism as a Western system of thought that is linked to imperialism and the establishment of cultural hegemony and is an essentializing discourse that effectively produces the "Orient" as the West's "other." *Orientalism* observes the West observing the Middle East, Arabs, and Islam, and two further volumes in the triology, *The Question of Palestine* (1979) and *Covering Islam* (1981), sustain this focus. In the trilogy's 1993 sequel, *Culture and Imperialism*, Said expands these insights to explore a more generalized relationship between cultural production and empire. In the latter text he draws on European writing (and one musical piece, Verdi's *Aida*) on Africa, India, the Far East, Australia, and the Caribbean to show how an imperialist imagination is embedded in cultural production and how cultures of resistance to imperialism emerge in a context of decolonization.

The Question of Palestine (1979) was Said's first major text on Palestine, and in it he endeavors to establish a broadly representative Palestinian perspective for a Western, and primarily an American, audience. This particular text documents the historical and political dispossession and erasure of the Palestinians by Zionist colonization and thus differs distinctly from *Orientalism*, which drew mainly on literary texts. However, in method Said effectively demonstrates that a hegemonic cultural attitude toward Islam, the Arabs, and the Orient is what makes the ongoing colonial violence against the Palestinians a possibility. Thus the "Palestinian problem" is a materialized effect of Orientalism. *Covering Islam* proceeds similarly but with a focus on the Western media's role in representing, and imagining, Islam. Other books on Palestine include *The Politics of Dispossession* (1994), *After the Last Sky* (1986), *Blaming the Victims* (1988), and *The End of the Peace Process* (2000).

Said's wide-ranging and often controversial thought is rooted in literary theory. His dissertation on Joseph Conrad's letters was influenced by the Geneva school, a vein of literary criticism rooted in the phenomenological thought of Husserl and Merleau-Ponty, and became his first book, *Joseph Conrad and the Fiction of Autobiography* (1966). For Said, Conrad's letters revealed the uncertainty, difficulty, and reflexive struggle of a self-exiled Pole, an articulate writer who was nevertheless disoriented and not quite sure of his place in the world. An interest in the condition of the exiled writer, a theme that continues through his life's work, is palpably present in this first book.

Said's second book, *Beginnings: Intention and Method* (1975), began to establish his reputation as one of America's foremost literary critics, as the text drew on contemporary French theory in its concerns to shift from theological "origins" to the problem of a secular "beginning" point for critical theory, where human action makes history, and a history of change. The text explores the relation of literature to philosophy, psychology, and critical theory through an engagement with the writings of Freud, Foucault, Freidrich Nietzsche, and Vico as well as Jacques Lacan, Jacques Derrida, Giles Deleuze, and Claude Lévi-Strauss.

The World, the Text, and the Critic (1983) is an early "bridging" text of Said's thought. This integrative and synthetic work is interested in the material contexts—the "worldliness"—of writing. Increasingly impatient with an academic domestication of poststructuralist and deconstructive theories of textuality, Said argues that critical scholarship must be situated in material struggles so that the critic does not lose sight of the political context in which intellectual pursuits become possible. The text is an early critique of the narrow confines of academic disciplinarity, which Said argues is implicated in a tamed specialization of intellectual inquiry. His deep commitments to humanism are evident in this text, and he returns again to these themes in a series of lectures given at Columbia University, posthumously published under the title *Humanism and Democratic Criticism* (2004). In this text Said reflects on the tensions between humanist, structuralist, and poststructuralist modes, and he suggests that although humanism is critiqued as essentializing and totalizing, a commitment to the humanistic ideals of justice and equality are nevertheless crucial for a critical scholar. Throughout his vast and disparate body of work, Said maintains a critical posture within humanism, a "contrapuntal" awareness perhaps made possible by the condition of being an exilic, border intellectual.

A talented pianist, Said also wrote extensively on music's relation to society, and his critical writings often

draw on musical metaphors. *Musical Elaborations* (1991), *Parallels and Paradoxes: Explorations in Music and Society* (2002), and the posthumously published *On Late Style: Music and Literature against the Grain* (2006) exemplify his significant contributions to this interdisciplinary area of humanistic study. In 2003 Said died in New York after a decade-long battle with leukemia.

SEE ALSO *Fanon, Frantz; Foucault, Michel; Freud, Sigmund; Gramsci, Antonio; Humanism; Justice; Lucas Critique; Music; Orientalism; Palestinians; Postcolonialism; Self-Determination*

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Melissa Autumn White

SALIENCE, MORTALITY

Mortality salience is a psychological state in which thoughts of one's death are prominent, or *salient*, in the individual's conscious mind. The concept was developed by Jeff Greenberg, Tom Pyszczynski, and Sheldon Solomon in 1986 to test hypotheses derived from terror management theory. The theory proposes that the fear of death motivates people to maintain faith in cultural worldviews that makes life seem meaningful and to be enduringly significant contributors to that meaningful reality. In this way, people can believe they will endure beyond their own deaths; this belief in turn helps people control their terror of death.

Greenberg and his colleagues proposed that if the theory is correct, then increasing mortality salience should intensify people's support of their own cultural worldview and striving for self-worth within the context of that worldview. Mortality may become salient in many natural contexts, including following acts of terrorism or war, natural disasters, reading or watching news or crime stories, witnessing automobile accidents, the death of a close friend or family member, or being in close proximity to a cemetery. The most common method to increase mortality salience in experiments is to ask participants to respond to the following: "Please describe the emotions the thought of your own death arouses in you"; and "Jot down, as specifically as you can, what you think will happen to you physically as you die and once you are physically dead."

The first study utilizing this mortality salience induction found that mortality salience led municipal court judges to recommend a much higher bond in a hypothetical prostitution case. This finding supports terror management theory because it shows that mortality salience encouraged the judges to uphold their worldview by punishing someone who violated the morals of that worldview. Subsequent studies found that mortality salience leads people to react positively to anyone who supports one's worldview and negatively to anyone who violates it. Further research has found that mortality salience affects a wide range of judgments and behaviors that preserve faith in either one's worldview or one's self-esteem.

More than 200 studies have made mortality salient, using various methods and comparing mortality salience to many control conditions. Mortality salience has been increased by exposure to death anxiety questionnaires, gory accident videos, and proximity to funeral parlors and cemeteries. Control conditions have reminded participants of neutral topics and aversive topics such as failure, uncertainty, pain, and social exclusion. These findings have supported the specific role of thoughts about death in mortality salience effects.

Research exploring the cognitive processes activated by mortality salience has shown that mortality salience first leads people to distract themselves from thoughts of death. However, after a delay, thoughts of death return to the fringes of consciousness; this is when worldview and self-esteem–bolstering effects of mortality salience occur. Similar effects occur after exposure to very quick subliminal flashes of death-related words on a computer screen. These words appear for 28 milliseconds in between two easily visible neutral words. Because research participants are not aware of them, these briefly flashed words bring death thoughts close to consciousness without making mortality salient. This work suggests that the problem of death exerts its influence outside of conscious awareness.

Mortality salience research supports terror management theory and by so doing suggests that because of the need to control mortality concerns, naturally occurring reminders of death may contribute to nationalism, prejudice, and intergroup aggression, as well as pro-social behavior and valued cultural achievements.

SEE ALSO *Self-Esteem; Terror Management Theory*

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Jeff Greenberg

SALPINGECTOMY

SEE *Sterilization, Human.*

SALT RETENTION HYPOTHESIS

SEE *Slavery Hypertension Hypothesis.*

SAMARITAN'S DILEMMA

SEE *Bequests.*

SAMBA

SEE *Dance.*

SAMBO

The derisive term *Sambo* refers to African American males in a manner that is commonly viewed as racist and unacceptable. The long career of the Sambo stereotype is an important window into the history of black-white U.S. race relations. The term itself is a form of denigration and represents a stereotype that has been used variously to justify the inhumane treatment of slaves, provide a rationale for Jim Crow segregation, and, most often, to pander to the basest racist impulses in the United States to entertain white popular audiences. The Sambo stereotype has had several iterations in U.S. popular culture, ranging from children's literature to minstrel shows of the slavery and post–Civil War eras, radio, motion pictures, television, and dining establishments. In addition, the Sambo stereotype also has a controversial career in the work of academics who studied slavery, particularly Stanley Elkins's 1959 publication *Slavery*. This characterization of black men as passive buffoons was creatively challenged in Spike Lee's 2000 movie *Bamboozled*.

THE ORIGINS OF SAMBO

One of the first representations of Sambo appeared in an 1808 short story by Edmund Botsford titled "Sambo and Toney: A Dialogue in Three Parts." Much of the Sambo stereotype—subservient, ignorant, and linguistically challenged—was presented in its full form in this early iteration. The story was intended to convey a supposedly accurate conversation between two slaves:

> Sambo: Yes, thank God brother Toney, my mafter good, and I like up the country and cotton planting very well—you got a good mafter, Toney?
>
> Toney: So fo, he do, he give us victual enough and good clothes but he make us work devilifh hard.…
>
> Sambo: Well then, why you complain and fay devilifh hard, you know what devilifh mean, Toney? devilifh is fomething wicked, I fear you ufe fuch words, you wicked too, Toney.
>
> Toney: What you call wicked, Sambo?

This dialogue is set in the slave South—though according to Botsford, "Fambo" might be a more appropriate spelling—but the last line is not far from a 1980s equivalent uttered in the television program *Diff'rent Strokes*: "Whatchoo talkin' 'bout, Willis?" A continuous thread of racism pervades U.S. popular culture, and to this day African American actors are often relegated to playing the fool.

SAMBO AND THE MINSTREL SHOW

The Sambo stereotype found its largest audience with the rise of minstrel shows in the 1830s. It was the minstrel show that popularized these caricatures of black slaves with white, working-class audiences. Sambo the stage performer was popularized when a white entertainer named Thomas "Daddy" Rice created the character known as Jim Crow. The accompanying song, entitled "Jump Jim Crow," was penned by Rice and utilized the same exaggerated mispronunciations:

> Weel about and turn about and do jis so,
> Eb'ry time I weel about and jump Jim Crow.

Rice claimed he modeled the character after an old black man he observed in Washington, D.C., and he created this notion of "jumping Jim Crow" as a way to entertain predominately white working-class audiences.

Popular entertainers would perform as black caricatures, with makeup that included the application of burnt

cork to the face. They would "act black" by reproducing every stereotype known to the white audiences of the time. "Zip Coon," "Tambo," "Sambo," "Jim Crow," and "Jim Dandy" all corresponded with white stereotypes of black men. In addition, black women were often subjected to the same level of ridicule in the caricatures of "Mammy," "Jezebel," and "Sapphire." Before the Civil War, these stereotypes were often used to justify slavery, for they were meant to show the supposedly inferior essential characteristics of slave men and women. This Sambo stereotype was clearly at work in *Bishop Whipple's Southern Diary, 1834–1844*. The author, an Episcopal clergyman named Henry Benjamin Whipple, wrote of the slaves he encountered on a trip through the South: "They seem a happy race of beings and if you did not know it you would never imagine they were slaves. The loud laugh, the clear dancing eye, the cheerful face show that in this sad world of sin and sorrow they know but very few."

In the separate but unequal period of black-white relations (1865–1964), segregated institutions often found their legitimation in the stereotypical representations of blacks "knowing their place." The minstrel characters included the uppity Zip Coon, who becomes the buffoon because he wrongly thinks he's successful, and the happy, ignorant, subservient Jim Crow and Tambo, who sing and dance their troubles away. At the tail end of the Jim Crow era, Edward R. Murrow aired his famous "Harvest of Shame" broadcast on Thanksgiving evening 1960. Murrow detailed the horrific working and living conditions of white and black migrant farmworkers. A Florida grower in the exposé had this to say about African American workers on his farm: "They love to go from place to place. They don't have a worry in the world. They're happier than we are. Today they eat, tomorrow, they don't worry about [*sic*]. They are the happiest race of people on earth."

POPULAR CULTURE AND BLACKFACE PERFORMANCES

What cannot be overstated is that minstrel shows embodied the first form of popular culture in the United States. There is a direct line from minstrels to vaudeville, Broadway shows, motion pictures, radio, and television. Ziegfeld Follies, Christy's Minstrels, the lyrics and performances of Stephen Foster, and Al Jolson's *The Jazz Singer* mark the most popular performances of antiblack racism in the Jim Crow era. Rather than being an aberration, performing in blackface and invoking racist stereotypes was a mainstay of Hollywood motion pictures. White actors who performed in blackface included Shirley Temple, Al Jolson, Bing Crosby, Eddie Cantor, Bob Hope, Fred Astaire, Judy Garland, Mickey Rooney, and even Mickey Mouse.

Radio and Television One of the most popular radio programs of the pre-television era was *Amos and Andy*, which was performed by two white actors. The show simply took the 1808 Sambo and Toney dialogue and updated it to the times. Many of the first television programs were based on the most popular radio programs of the day. Given the longstanding radio success of *Amos and Andy*, it was no surprise that a television program would be in the works. But two white men performing in blackface did not seem as apropos for the new medium, particularly given the vocal opposition of the NAACP to stereotypical blackface representations. Therefore, the CBS network hired the first all-African American acting crew to re-create the program. But the content of the television show did not veer from the original radio program and the black actors were expected to perform the stereotypes of Sambo, Jezebel, Sapphire, and Zip Coon.

Another early popular television program, *Stepin Fetchit*, took the Sambo stereotype to a similar level. The black actors Bert Williams and Lincoln Perry were both of Afro-Caribbean parentage and did not grow up in the United States. Thus, they were not similarly situated in their upbringing to see how the African American stereotypes of the stupid and docile buffoons they were playing reinforced inferior social conditions for black Americans.

Buffoonery was the main representation of blacks on television. With the advent of children's cartoons, the common tropes deployed in blackface comedies were in evidence. While *Our Gang* and the *Little Rascals* were best known for redeploying the racist caricature of black children as pickaninnies in the characters of Stymie and Buckwheat, the inevitable cartoon explosions, with the resultant blackface or pickaninny image, was frequently used in Warner Brothers, Disney, MGM, Hanna-Barbera, and most other children's cartoons.

Children's Books Children were long subjected to the Sambo stereotype in early picture books and later comic books. *The Story of Little Black Sambo* is the most famous of these products. Written by Helen Bannerman in 1899, the story is a combination of the Sambo and uppity Zip Coon stereotypes though it is set in India, with tigers and allusions to Hindu culture. The story tells of a happy-go-lucky black child who loses his fancy clothes to tigers. It is built on a well-entrenched and blatantly racist structure of storytelling. Over time, the illustrations in various editions of the book increasingly took on the blackface motif for the story's protagonist and his parents (Black Mumbo and Black Jumbo). Updated versions placed the story on a plantation in the U.S. South.

Sambo's Restaurant *The Story of Little Black Sambo* found yet another life when a restaurant chain began to use the

images of the book, and the story itself, to encourage children to eat there. The restaurant, named Sambo's, was officially not named to invoke particular stereotypes. The owners, Sam Battistone and Newell "Bo" Bohnett, expressly identified their own names as the basis for the restaurant name, but they quickly incorporated the Little Black Sambo motif into the menu, placemats, advertisements, and promotions.

The Sambo's chain was purchased by the Denny's chain of restaurants in 1984, and for a time the two restaurants coincided with the same signage but distinct names. After social protest and continued pressure from African American organizations, the Sambo's chain ceased to exist. But the more insidious nature of racism would rear its ugly head in the Denny's corporation when, in the 1990s, it faced class action lawsuits by African American customers, who successfully argued that Denny's was guilty of discriminatory practices and routinely not serving blacks.

Denny's and Sambo's were ubiquitously identified by the black community as particularly hostile to black customers, and a series of well-publicized events, occurring across the country, cemented a sense that an informal policy was in place to require its black patrons, and only its black patrons, to prepay for meals. As a result of the branding of Denny's as a racist company, the corporation underwent a major makeover that involved legally required actions and a massive public relations campaign designed to increase the number of minority-owned franchises. Mandatory racial sensitivity training was undertaken, and an explicit nondiscrimination policy, based on a U.S. Department of Justice–enforced consent decree, was established. The claim that stereotypical images are harmless was severely undercut when it became clear that a chain restaurant long steeped in those stereotypes also perpetrated the most grievous practices of discriminatory treatment against the victims of the stereotypes.

SAMBO IN ACADEME

The Sambo stereotype was a staple of popular culture, but academic research was not immune from stereotypical reasoning. Stanley Elkins's 1959 analysis of slavery as a total institution can be credited for sparking the new social history of slavery research. Historians such as Eric Foner, Herbert Gutman, and Eugene Genovese wrote some of the most widely acknowledged analyses of slavery in part to discredit the claims of Elkins. The dubious hypothesis that Elkins sought to verify was that the peculiar system of U.S. chattel slavery caused the Sambo social psychology of slaves: "Sambo, the typical plantation slave, was docile but irresponsible, loyal but lazy, humble but chronically given to lying and stealing; his behavior was full of infantile silliness and his talk inflated with childish exaggeration" (Elkins 1959, p. 87).

Elkins never empirically verifies that Sambos existed, but he assumes their presence. The following generation of historians effectively challenged this assumption with a body of research that found U.S. slaves to be much more contentious, to be purposive as actors fighting against slavery, and to have great strength in maintaining family and cultural ties in spite of oppressive social conditions.

In popular culture, a series of challenges to the Sambo stereotype have also surfaced. In particular, the Spike Lee movie *Bamboozled* (2000) tells the story of an African American television executive, Pierre Delacroix, who creates the impromptu idea for a new millennium minstrel show in order to save his job. To his chagrin, the white executives love the idea, and Lee effectively demonstrates the damage inflicted on the black actors selected to perform in blackface, as well as the larger societal damage inflicted on everybody involved in the production and consumption of racist stereotypes. In the closing scene, when Delacroix finally comes to terms with the monster he has created, he is seen in his office, which is filled with racist memorabilia. A Sambo coin bank takes on a life of its own until Delacroix eventually destroys it, along with all the lawn jockeys, blackface knick-knacks, and Mammy cookie jars.

As much as this movie was intended to put executives and white audiences on the spot for the perpetuation of stereotypes, it is clear that the message has not been fully received. In *Star Wars Episode I: The Phantom Menace* (1999), a character named Jar Jar Binks was introduced, and though his form is frog-inspired, his mode of speech and general demeanor is Sambo-inspired. The continuing struggle for African American actors is to find roles that allow them to play more than the fool. Most of the television shows featuring African American casts are comedic in genre, and they invariably have one or more characters playing the hapless fool. A strong case could be made that the history of being white in America corresponds with a strong fascination with all things black, except for black people. It is within this context that blackface minstrels, television comedies, Eminem, Elvis Presley, and contemporary jazz and blues bars make sense.

SEE ALSO *Blackness; Comic Books; Film Industry; Jim Crow; Memín Pinguín; Racism; Television; Uncle Tom*

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SAMPLE

SEE *Censoring, Sample; Sampling; Selection Bias.*

SAMPLE ATTRITION

Sample attrition is a feature of longitudinal or panel data in which individual observations drop out from the study over time. Attrition may occur for a number of reasons, including insufficient compensation for survey response, induction into military services, transfer of residence with no follow-up information, or death of the respondent.

A dataset suffering from attrition is referred to as an attrited sample, whereas individual observations that drop out over the course of the panel are referred to as attriters. Assuming a longitudinal dataset is randomized at the inception of the data collection process, sample attrition would not pose any challenges in estimation of the attrited panel data if sample attrition occurs randomly. This would be the case if the attriters compose a random selection of individuals in the survey, and the underlying causes of attrition are independent of the survey response being studied. However, attrition in actual panel data is rarely random, since the probability of attrition is most often dependent on the observable and unobservable attributes of the individual observations that simultaneously affect the response variable being studied. For example, in firm-level data used to study business firm profits over time, firms could make a decision about whether to shut down (and thus, be removed from the sample) based on observable characteristics, as well as unobservable firm characteristics such as expected operating revenues and productivity, which are either directly or indirectly a determinant of firm profits as well. Thus less productive firms attrite from the sample, leaving a nonrandom sample for analysis. Any quantitative inference about the entire population of firms based on analysis of just the attrited sample would thus be misleading, since the attrited sample is nonrepresentative of the underlying population. In these cases, estimation of the panel dataset while ignoring sample attrition would lead to biased and inconsistent estimation, and thus incorrect inference.

Sample attrition was first formally described and analyzed in J. Hausman and D. Wise's work *Econometrica* (1979). Using the well-known random-effects specification, Hausman and Wise considered models in which the unobservable errors that determine the attrition decision are naturally correlated with the unobservable errors that determine the response variable. Due to this choice of specification, this model is sometimes referred to as the Selection on Unobservables model. The specification is easily manipulated to illustrate that least squares regression using only the retained data would be biased and inconsistent for the parameters of interest. The model also shows that using only the first period randomized sample leads to biased and inconsistent estimators, if future periods are affected by attrition. The latter is a consequence of the unavoidable correlation of error terms due to latent individual specific effects that do not change over time. Then, under the joint normality assumption on the errors, it is shown, however, that consistent estimators of the parameters of interest can be obtained by the maximum likelihood (ML) procedure. Generalizations, including models with relaxed distributional assumptions, have been since suggested by various researchers, including M. Verbeek and T. Nijman in the *International Economic Review* (1992) and Jeffrey Wooldridge in the *Journal of Econometrics* (1995). Cheng Hsiao provides a review in his *Analysis of Panel Data* (1986).

Several late-twentieth-century theoretical advances have been suggested in the analysis of sample attrition models. These have included models wherein an observable determinant of sample attrition is uncorrelated with the response variable, but possibly correlated with the unobservable determinant of the response variable. This difference from the original attrition model has led to this model being known as Selection on Observables, as studied in John Fitzgerald, Peter Gottschalk, and Robert Moffitt's 1996 research. This model is complementary to the classical attrition model studied by Hausman and Wise; each is formulated on a different assumption and each is of independent interest in empirical research.

A separate consideration in the theoretical work on sample attrition has been the possibility of obtaining a refreshment sample, which refers to supplemental data randomly sampled from the population to augment the attrited sample. This type of approach has been considered by, among others, K. Hirano and colleagues in 2000, who proposed consistent estimators of the parameters of interest when such refreshment samples are available.

In 2004, Mitali Das considered a generalized model of attrition. This model permits the estimand of interest to be either a parameter (as in previous work) or a flexible and unknown function, permits the errors to have unspecified joint distribution, and usefully permits attriters to reappear in future periods.

SEE ALSO *Pooled Time Series and Cross-sectional Data; Research, Longitudinal; Selection Bias*

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Mitali Das

SAMPLING

A *sample* is a subset of items, objects, or elements from a larger group of interest, called the *population*. When an observed sample is used to make inferences about the unobserved population, chance factors must be considered and the risk of being wrong must be assessed. Statistical sampling uses probability to measure this uncertainty. Statistical, or probability, sampling implies that every item or subset of items in the population has a mathematically determined likelihood of being selected; which item or items in the population will be selected is left to chance and not to judgment. A sample consisting of numerical values that have meaning on a number line (for example, numbers on a ruler) is assumed to have been generated by a random variable that has a specific probability distribution.

SIMPLE RANDOM SAMPLING

In *simple random sampling*, each item in the population is equally likely to be selected. For instance, if the population of interest consists of N elements, then each and every possible sample of n elements (where n may equal 1, 2, 3, $\ldots N-1$) should have a probability of $1/N^n$ of being realized. (Typically, in textbooks, upper case N is used to denote the number of elements in the population, and lower case n gives the number of elements in the sample.) An example would be to blindly draw well-shaken numbered slips of paper from a hat or drum one at a time, with each slip placed back in the hat. Replacement ensures that each number is equally likely on each draw, although computerized random number generators are typically used to simulate it.

In drawing numbers from a hat or in a laboratory experiment, replacement might seem possible; in actual business and economics practices, however, replacement is seldom possible. If the population of interest is extremely large relative to the sample size, then even though the probability of each sample being selected in repeated sampling does not remain fixed, the changes in probability could be trivial. For instance, if $n = 30$ and $N = 30{,}000$, then for the first sample the probability of drawing 30 items is

$$n!(N-n)!N! = 2.8(10)^{-88}.$$

On the second sampling, it is

$$n!(N-2n)!/(N-n)! = 3.0(10)^{-88}.$$

As long as N is large relative to n, whether there is or is not replacement will not be critical. In practice, randomization based on the notion of fixed sampling probabilities is more a matter of degree than an absolute.

Putting numbered items in a hat to be shaken or into a revolving drum, may give the appearance of good mixing, but the resulting selections will not necessarily produce a sample that represents the population. For instance, in 1970, during the Vietnam War, military draft status for induction into the U.S. Armed Forces was determined by the order in which birthdays were drawn from a drum. The Selective Service placed 366 capsules in a drum, each representing a birthday. The drum was turned several times and capsules were selected "at random." As Norton Starr discusses in detail, this method looked impressive on television, but the results were not a good representation of birthdays. Randomization suggests that among the first 183 birthdays selected, about one-sixth should be from November and December. Of the first 183 days selected, however, 46 were from November and December, well above the expected 30 or 31. This led to speculation that more than simple random sampling error was involved.

SYSTEMATIC SAMPLING

Systematic random sampling involves the selection of every k-th element (or block of elements) from a list of elements, starting with any randomly selected element. Systematic sampling is a popular way of generating samples in accounting and quality-control work. It is typically less expensive to select every k-th element than to search for the n randomly determined items. In systematic sam-

pling, however, only the first of n items can be considered as randomly determined.

Systematic sampling is convenient for populations formed by lists, stacks, or series. For instance, if students with e-mail addresses at a university is the population of interest, systematic sampling could be used to minimize the likelihood that those with the same last name (who may be relatives) would be included in a sample. However, if the data have cyclical components, then systematic sampling may be inappropriate.

STRATIFIED SAMPLING

When the population is known to consist of a number of distinct categories, characteristics, or demographics, the sampling process can be made more efficient (requiring a lower sample size for the same precision) if the population is divided into subgroups that have the common attribute. For example, in a study of starting salaries, recent university graduates might be grouped, or "stratified," by their majors. In a study of higher-education costs, universities might be placed in one of two subgroups: public or private. Heterogeneous populations can always be divided into subgroups that are more homogeneous if those in the population can be identified by the characteristic. These more homogeneous subgroups are called "strata." Either simple random sampling within strata or one of a number of sampling methods is then applied to each stratum separately, where sample size for a strata is made proportional to the stratum's share of the population.

Cluster Sampling If sampling requires face-to-face communication and the members of a population are physically separated from one another (as in different cities), then it would be very costly to visit randomly selected homes. Instead, sampling might be restricted to a few cities. Within these cities, a surveyor visits specific neighborhoods, interviewing an adult from every *i*-th house on *j*-th street. Such sampling is called cluster or area sampling because groups or clusters of elements are first selected and then elements within a cluster are chosen. At each stage, selection can be random or based on nonrandom judgment.

Classical Statistics and Sample Statistics Classical statistics assumes simple random sampling. Random "draws" imply that each sample of size n will yield somewhat different values. Thus, the value of any statistic calculated with sample data (for example, the sample mean) varies from sample to sample. A histogram (graph) of these values provides the sampling distribution of the statistic. Many Web sites show how the distribution of the sample means changes with n. Robert Wolf, for example, has designed "Statutor," a computer-based tutorial on sampling distributions, estimators, and related topics that can be freely downloaded.

The law of large numbers holds that as n increases, a statistic such as the sample mean ($\bar{X}$) converges to its true mean (μ). That is, the sampling distribution of the mean collapses on or degenerates to a spike at the population mean. The central limit theorem, on the other hand, states that for many samples of like and sufficiently large size n, the histogram of their sample means will appear to be a normal bell-shaped distribution. As the sample size n is increased, the distribution of the sample mean at first becomes normal (central limit theorem) but then degenerates to the population mean (law of large numbers). Only the standardized mean, $(\bar{X} - \mu)\sqrt{n}/\sigma$, maintains its shape as n goes to infinity, where σ is the population standard deviation.

Sampling and Inferential Statistics in the Social Sciences Unlike laboratory random experiments, sample data in the social sciences are often "opportunistic," meaning they have been observed with no explicit and certain knowledge as to how they were generated. In such cases, the researcher must have a theory about the data-generating process. For example, one might assume that observation i at time t on dependent variable Y_{it} was generated by k independent variables, X_{1t}, X_{2t}, X_{3t}, …, X_{kt}, plus an error term ε_{it} reflecting random chance factors, where the betas are parameters to be estimated:

$$Y_{it} = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \ldots + \beta_k X_{kt} + \varepsilon_{it}$$

A maximum likelihood estimator of the betas requires the researcher to make an assumption about the error term (for example, ε_{it} is normal with mean zero and unit standard deviation) and then have a computer program search for values of the betas that maximize the probability of getting the observed sample values of the *X*s and *Y*. Here the sample *Y* values are assumed to come from this model, conditional on the values of the *X*s, with the randomness in *Y* generated by the assumed distribution of the epsilon error term. If the assumed population model of the data-generating process is wrong, then the estimated parameters are meaningless. Unlike data obtained from simple random sampling in a laboratory experiment, opportunistic sample data cannot be used to make inferences without a theory about the nature of the data-generating process.

SEE ALSO *Censoring, Sample; Ex Ante and Ex Post; Exchangeability; Heteroskedasticity; Monte Carlo Experiments; Multicollinearity; Natural Experiments; Policy Experiment; Probability, Limits in; Sample Attrition; Selection Bias; Serial Correlation*

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SAMUELSON, PAUL A.
1915–

If one could do a mental time-and-motion study of a modern economic theorist at work, a large fraction of what he or she actually does from day to day would turn out to have its origins in Paul Samuelson's work. In that precise sense, Samuelson has been the economist's economist.

Paul Anthony Samuelson was born in Gary, Indiana, on May 15, 1915. He graduated from Hyde Park High School in Chicago in 1932 and went on to the University of Chicago and an already precocious B.A. in 1935. The next step proved to be important: he moved to Harvard for his Ph.D., studying with Joseph Schumpeter (1883–1950), Gottfried Haberler (1900–1995), Wassily Leontief (1906–1999), and, more to the point, the polymath Edwin Bidwell Wilson (1879–1964), from whom he may have learned some tricks of the trade in dealing with equilibrium systems of equations. From 1937 to 1940 Samuelson was a junior fellow of the Harvard Society of Fellows; that was—and is—a plum appointment, providing a stipend, stimulating company, and three undisturbed years in which to pursue one's own research. In 1940 he was appointed assistant professor of economics at Massachusetts Institute of Technology (MIT), retiring as institute professor emeritus in 1986. If Harvard had retained Samuelson as an assistant professor, the history of economic thought might not have been affected, but the center of gravity of economic teaching would not have shifted so strongly toward MIT. Anti-Semitism certainly played a significant role in Harvard's failure to keep him, but there were other factors as well: Lloyd Metzler and James Tobin also slipped away.

Samuelson has probably been the last great generalist in economics. His five volumes of published papers (with more in the works) range from the pure theory of consumer demand to macroeconomics and the history of economic thought. The place to start, however, is with *The Foundations of Economic Analysis*, published in 1947 (and reprinted with additions in 1983) but already containing the results of earlier articles. It is fair to say that this book was the major influence in the transformation of economics into the mathematical-model-building discipline it is today.

Of course there had been many important prior uses of mathematics in economic theory. What the *Foundations* did was to turn scattered stand-alone efforts into a paradigm, in Thomas Kuhn's (1922–1996) original sense of a standard way to answer standard questions. In particular, Samuelson explained, exemplified, and inculcated the notion of comparative statics, aimed at answering a fundamental class of questions: how do the coordinates of an equilibrium point defined by a system of equations shift when one or more of the given determining parameters changes? Bread-and-butter examples range from determining the effects of a changing excise tax on the price and quantity of a single good to determining the effect of a changing quantity of base money on the basic variables of a macroeconomic model. A second focus of the book was on the logic of constrained maximization, and a third on the importance of explicit dynamic modeling both for its own results and for understanding the stability, and therefore the significance, of a longer-run equilibrium. The wealth of examples was an eye-opener to younger economists.

Despite the broad landscape over which his work has ranged, there are especially important concentrations. His first three articles, dating from 1937 to 1938, are on utility theory and consumer behavior, the pure theory of capital, and welfare economics and international trade. The theory of consumer behavior has been on Samuelson's mind for seventy years.

There is a story that, asked by a science department colleague at MIT to name a theory in economics that was neither false nor trivial, Samuelson named the theory of comparative advantage. True to his word, he has made outstanding contributions to the theory of international trade. They include a complete statement and clarification of the gains from trade, the factor-price equalization theorem (when does free trade in produced goods induce uniform prices of immobile factors, wherever they are, and when does it not), the transfer problem, and more.

Yet another such monument is the theory of public goods (initiated by Erik Lindahl [1891–1960] but worked out in its modern form by Samuelson). These are goods the use of which by one "consumer" does not foreclose use by others. Examples include weather forecasts, national defense, and clean air. Instances with a "public-good element" outnumber the pure public goods, and this adds importance to the problem.

There is room merely to mention only one more of these clusters in Samuelson's work, the theory of finance. Here he has not only made contributions himself—for example, the martingale property of asset prices, and even

the beginning of a theory of option pricing—but he has directly inspired the work of others. For further references, comments by specialists, and discussion of Samuelson's contributions to still other branches of economics, see E. Cary Brown and Robert M. Solow (1983) and Michael Szenberg et al. (2006).

What has been described so far was aimed at other economists. Another side of Samuelson's activity has been directed at a broader public. Apart from columns in newspapers and magazines in the United States and elsewhere and many public lectures, there is the famous elementary textbook *Economics*. The first edition was published in 1948, with up-to-date revisions published at approximately three-year intervals until 1985, when it acquired the joint authorship of William D. Nordhaus of Yale. Successive editions have followed, the 2005 edition being the eighteenth. For many years *Economics* was the runaway leader in sales, but it was eventually overtaken by other textbooks, most of which had imitated the form and tone that Samuelson had pioneered.

Economics was an innovator in several respects. The textbook taught economics to beginning students as the model-building enterprise it had become, taught to them in simplified form, of course. Students were expected to use the supply-and-demand apparatus or a simple macroeconomic model as devices for understanding made-up events, and also real-world data. It was a style of teaching that lent itself to problem sets, certainly appropriate at MIT but equally appropriate to the view of economics as a pragmatic discipline, a "How Things Work" discipline. The three-year revisions were intended to keep the noses of students, classroom teachers, and the author to the grindstone of what was actually happening in the economy at large. The unity of theory and practice has been a hallmark of Samuelson's work.

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SANDINISTAS

The Sandinista Front for National Liberation (FSLN) is a Nicaraguan political party. It was formed to oppose the Somoza family dynastic dictatorship, which ruled from 1936 to 1979. It is named after Augusto Cesar Sandino (1893–1934), a Nicaraguan nationalist and anti-imperialist patriot who fought a seven-year war from 1926 to 1933 against a U.S. occupation force. On February 21, 1934, after putting down his weapons, Sandino was killed at the order of Anastacio Somoza Garcia, the head of the U.S.-formed Nicaraguan National Guard. In 1936 Somoza Garcia consolidated his political power, overthrowing the civilian government and staging a rigged election to install himself as president. He was inaugurated on January 1, 1937. From then until 1979 either he, one of his two sons (Luis and Anastacio Jr.), or—for brief periods—one of their cronies ruled Nicaragua.

The FSLN was originally formed clandestinely in 1961. The organization's founding members included Carlos Fonseca, Silvio Mayorga, and Tomas Borge. Particularly important to the organization's formation and early development, Fonseca is widely credited as the organization's intellectual father. His revolutionary ideology came to be known as *Sandinismo*—which combines elements of Marxist class analysis and Sandino's own nationalist and anti-imperialist ideology as applied to the Nicaraguan social, political, and economic reality. This led the Sandinistas to organize for the military overthrow of the Somozas because they were convinced that the Somozas were completely unresponsive to peaceful demands for democratization and economic reform.

Throughout the 1960s and early 1970s the Sandinistas suffered serious setbacks, including the death in combat of all of its original founders, except Borge. These losses led to a regrouping period in which they sought to accumulate strength in secret while organizing politically. However, it also led to a split into several competing Sandinista factions. The first, called the Prolonged Popular War (Spanish acronym GPP) Tendency, advocated building grassroots peasant support in the countryside. In contrast, the Proletarian Tendency grew out of the urban underground and advocated the organization of union workers into self-defense units. The final faction, called the Terceristas (Third Way), favored a more pragmatic approach combining different forms of struggle and advocated the creation of a broad alliance of all Nicaraguans opposed to Somoza to generate a national insurrection.

THE REVOLUTION

By late 1978 the long awaited national insurrection began and many of Somoza's supporters abandoned him. To take advantage of this opportunity the Sandinistas reunited

early in 1979 and created a single nine member National Directorate with three representatives from each faction. The members were Daniel Ortega, Humberto Ortega, and Víctor Tirado (Terceristas); Tomás Borge, Bayardo Arce, and Henry Ruiz (GPP); and Jaime Wheelock, Luis Carrión, and Carlos Núñez (Proletarian faction). On July 19, 1979, the Sandinista Revolution triumphed, ousting Anastacio Somoza Jr.'s regime in a mass popular insurrection.

Once in power the Sandinistas embarked upon ambitious political and economic programs designed to democratize Nicaragua and lift the country out of underdevelopment. Their political agenda called for reforming the country's institutions, including disbanding Somoza's National Guard, and enfranchising the country's vast rural and urban poor through mass organizations affiliated with the FSLN. In 1984 they carried out the first democratic national elections in the country's history, which the Sandinistas won with 66 percent of the vote. Though derided by U.S. president Ronald Reagan's administration as a "Soviet style farce," the elections were designed with the technical assistance of the Swedish Electoral Commission and observed by credible international organizations and European governments. The newly elected Constituent Assembly, with the help of open "town meetings" around the country, promulgated a new constitution in 1987. Simultaneously, the Sandinistas launched aggressive economic reforms to combat the twin evils that had historically plagued Nicaragua: poverty and inequality. To this end they implemented an agrarian reform to distribute land confiscated from Somoza and his cronies (one-fifth of the country's arable land) to individual peasants, cooperatives, and collective farms. In the cities they passed popular economic reforms, such as raising the minimum wage and introducing price controls and subsidies on basic goods and services, and embarked on public works programs to increase employment. These coincided with the Sandinistas' desire to implement a mixed-economy in which private property, state property, and cooperative property would co-exist. Sandinista social policy was equally ambitious, especially in the areas of education, health care, and housing.

From 1979 until Ronald Reagan's inauguration in 1981, U.S.-Nicaraguan relations were cool but nonconfrontational. However, shortly after entering office President Reagan signed a secret executive authorization to begin trying to overthrow the Sandinista government, which the United States accused of supporting the guerrillas in El Salvador, being too closely allied to Cuba, and being Communists. U.S. coercion ranged from diplomatic pressures and economic sanctions to supporting the rebel force known as the Contras and threatening direct U.S. military action. These policies put a huge economic strain on the Nicaraguan economy, and the Sandinistas were forced to respond by shifting much of their trade to Europe and the Soviet Union. Similarly since the early 1980s, sales of weapons from Western countries were also embargoed pushing the Nicaraguans to import most of their weapons from the Socialist Bloc. While the Sandinistas claimed that these weapons were for defensive purposes to fight the U.S.-supported Contra rebels, the Reagan Administration pointed to them as proof that the FSLN were Communists and presented an eminent threat to other countries in the region and ultimately the United States. However U.S. public support for military intervention, whether indirectly by supporting the Contras or directly by U.S. troops, was the most unpopular U.S. foreign military policy of the 1980s. Indeed widespread domestic opposition led to strong public pressure on Congress to limit aid to the Contras. It also eventually led to the outlawing of lethal aid for the Contras from 1984 to 1985.

In turn this led members of the Reagan Administration, notably Oliver North of the National Security Council, to engage in the illegal and covert funding of the Contras by giving them money received from selling arms to a hostile country, Iran, in exchange for the release of U.S. hostages held by Lebanese Hezbollah. When this back-channel funding was uncovered it became known as the "Iran-Contra scandal." An independent counsel, Lawrence E. Walsh, was appointed to investigate the affair. Eventually several members of the Reagan Administration were prosecuted and convicted. However, these convictions were later overturned on appeal or through presidential pardons.

From 1984 through early 2007 the electoral system that the Sandinistas put in place peacefully transferred power four times. The first was in 1990 when the Sandinistas were voted out of office. For the next sixteen years, three conservative administrations held power. However, on November 5, 2006, Sandinista candidate Daniel Ortega was reelected president of Nicaragua on a social democratic platform. The 2006 elections were widely scrutinized by international observers including delegations from Europe, the Organization of American States, and the Carter Center in Atlanta, Georgia. By all accounts they were, with the exception of a few minor irregularities, fair and transparent. In January 2007 Ortega began his new term in office.

SEE ALSO *Anticolonial Movements; Development, Rural; Iran-Contra Affair; Land Reform; Marxism; Peasantry; Reagan, Ronald; Revolution; Socialism*

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Héctor Perla Jr.

SANDINO, AUGUSTUS CESAR

SEE *Sandinistas.*

SANITATION

Sanitation (from the Latin *sanitas*, meaning health) refers to the maintenance and delivery of clean, hygienic conditions that help prevent disease through services such as drinking water supply, garbage collection, and safe disposal of human waste. Sanitation is the focal point of public health policy, but in the experience of local communities much more than health is at stake in "sanitation."

GLOBAL STATISTICS

World Health Organization (WHO) reports show that in 2004, 5.3 billion people (83% of the world population) had access to clean water sources (in 1990 that percentage was 78). Of the 1.1 billion people without access to clean drinking water, 84 percent live in rural areas. The situation is particularly critical in sub-Saharan Africa, where 44 percent of the population remains without clean drinking water, and in Eastern and Southern Asia.

Similar statistics apply to the coverage of "basic sanitation" (improved toilet facilities). According to the same 2004 WHO report, only 59 percent of the world population had access to a hygienic toilet in 2004. It is again sub-Saharan Africa (38 percent) and Eastern Asia (45 percent) that have the highest populations without basic sanitation.

Unsanitary conditions are the main cause of ill health and premature death in poor societies. WHO statistics of 2004 report that 1.8 million people die every year from diarrheal diseases (including cholera), 90 percent of whom are children under five. Eighty-eight percent of diarrheal disease is attributed to poor sanitation. Malaria, another sanitation related disease, kills 1.3 million people each year; again, 90 percent of these deaths are children under five. Other diseases that originate in poor sanitary conditions include schistosomiasis (a parasitic infection), intestinal helminthes (ascariasis, trichuriasis, hookworm), and hepatitis-A. Although the health consequences of sanitation are overwhelming, people often have reasons to pursue—or refuse—better sanitation.

EVOLUTIONIST VIEWS: SURVIVAL INSTINCT

Social scientists have developed various theories to interpret or explain human concern about avoiding dirt and promoting hygiene. Evolutionist thinkers believe that there is medical wisdom in the human fear of dirty things. Dirty objects and activities pose a danger, so it is wise to avoid them. Disgust of dirt is a survival strategy (usually a non-conscious one). A 2001 study by Valerie Curtis and Adam Biran list five disgust elicitors derived from research in India, Burkina Faso, The Netherlands, Britain, and an international airport. The five elicitors are: (1) body excretions and body parts; (2) certain animals; (3) decay and spoiled food; (4) certain categories of "other people;" and (5) violations of morality. Bodily excretions were mentioned most frequently as causing disgust and among them, feces topped the list, but vomit, sweat, spittle, blood, pus, and sexual fluids were also regarded with aversion. Animals that were mentioned most often included pigs, dogs, rats, snakes, worms, cockroaches, maggots, lice, and flies. People that were found disgusting were those with signs of sickness, dirt, or deformity, and strangers with whom one was forced to come into close contact, for example in crowded places. People who behaved immorally also evoked aversion.

Curtis and Biran's hypothesis is that humans have evolved behavioral defenses against disease and that "disgust is one of the mechanisms crafted by natural selection to keep our distance from contagion" (Curtis and Biran 2001, p. 22). The researchers found support for their hypothesis by checking the routes of transmission for a selection of common infectious diseases. In all of them, one or more elicitors of disgust were mentioned as playing an important role in transmission. Feces were named as the source of more than twenty infectious diseases. Breath, saliva, lice, rats, and sexual organs were also important sources or transmitters of infection. All of these score high for human disgust.

William Ian Miller's 1997 study of disgust is difficult to place in any disciplinary tradition. His own expertise mainly lies in literature and history but his study also draws on psychologists, moral philosophers, and political and social theorists. Trying to decipher the origin and working of emotion, Miller derives most inspiration from psychology.

The disgust Miller discusses applies to many phenomena and activities, such as defecation, sex, food, and drink. He distinguishes two types of disgust. The first, which is clearly Freudian, prevents the activation of unconscious desire. It defends against pollution, denies access to objects and acts that would block the psychic development of the human person. The evolutionist perspective of disgust as a survival instinct returns here at the level of the human psyche. The second type of disgust is "disgust of surfeit," it punishes after having indulged in a "disgusting" activity. The two types complement each other. In the aversion of things perceived as dangerous because of their power "to contaminate, infect, or pollute by proximity, contact, or ingestion" it is first of all the unconscious reaction to psychic dangers that is at work (Miller 1997, p. 2).

CIVILIZATION PROCESS

Most authors writing on hygiene and sanitation from a sociological point of view refer to Norbert Elias's study on the civilization process. Elias studied etiquette books, letters, and other documents in France and England from the eleventh century onward and describes how the authors of those guides for proper conduct gradually became more particular about body functions, body parts, and body products.

He talks about a general process of civilization, which implies a "privatization" or "intimization" of human behavior. More and more, public activities became shameful and were confined to the private world. The human body was a focal point. The body itself had to be well covered and activities such as sex, sleep, urination, and defecation became embarrassing when carried out in front of other people. Modern hygiene facilities are regarded as expressions of the civilizing process.

CULTURAL SYMBOLICS AND RELATIONAL CONCERNS

The symbolic anthropologist Mary Douglas, in her classic *Purity and Danger*, turns away from evolutionist and "medical materialist" (a term used by American psychologist and philosopher William James, meaning reducing ritual to its supposed positive medical effect) explanations of hygiene and presents dirt as "matter out of place," a definition that became famous for its beautiful simplicity and provocation. Shoes on the table (Douglas's example) are dirty; under the table they are clean. Saliva safely caught in a handkerchief is hygienic, but when it falls in a plate it turns disgusting. Her claim that absolute dirt does not exist opened new windows in the study of hygiene as a cultural phenomenon. Dirt is defined by its context. It is disorder and carries an invitation or rather an obligation to restore order: "Ideas about separating, purifying, demarcating and punishing transgressions have as their main function to impose system on an inherently untidy experience" (Douglas 1970, p. 15). Hygiene, in short, is a basic cultural act: it distinguishes dirt from what is clean and thus, creates cultural order. Enculturation of small children starts with teaching them what is clean and what is not clean. Hygiene is the essence of culture. *What* is dirty is of less importance. Crucial is *that* dirt exists. Without the concept of dirt people could not formulate the norms and values of culture.

RELATIONAL CONCERNS

What makes an object abject and threatening? Douglas suggested: its out-of-place condition. Others claimed it depends on the matter itself. Too little attention has, however, been given to the identity of the person who is directly associated with something dirty, to the social life of the dirty matter. The answer to the question "whose?" determines the experience of disgust much more than has been suggested by Douglas and other authors who wrote about the cultural meaning of dirt. By adding a sociological dimension to dirt, Douglas's theory of matter out of place becomes more true to life and effective as an interpretative tool.

The humanist Erasmus's dictum that one's own shit has a pleasant smell (*Suus cinque crepitus bene olet*) is a humorous exaggeration, but it is not exaggerating to say that people usually are not disturbed by the smell (and sight) of their own feces. Objects, substances, and acts become dirtier as the person behind them is less close or less liked. Animals that produce dirt are also placed in categories of less and more disturbing. Animals that are "part of the family" are experienced as cleaner than those who belong to another family. And so on. Acts and gestures from a loved person that are cherished as dear and intimate (bodily contact, sex) turn into horrifying violence when another person performs them. Good or bad, clean or dirty, in this case, depends entirely on the actor. The "matter" remains the same. The urge for "hygienic action" also depends a great deal on such relational concerns. Washing hands after toilet use or before eating, for example, is as much a social as a healthful act.

SANITATION POLICY

Hygiene, in the medical sense, is a core value in modern societies. Objects, activities, and people are judged by their medical qualities. Food, houses, streets, markets, working places, holiday camps, public transport, and visitors should be clean and not pose a danger to health. Dirty things and people are rejected and rejected things and people are called dirty.

Anthropologists and historians argue, however, that people do not always make that explicit link between

health and dirt. After studying the hygienic ideas and practices by mothers in Burkina Faso, Curtis concluded that their cleanliness and dirt avoidance were primarily a matter of "etiquette and social acceptability rather than to avoid illness" (Curtis 1998, p. 110). In a 2005 study, conducted in Bénin, Jenkins and Curtis observed that modern toilets were popular because they were seen as a sign of social prestige and success.

Michel Foucault argues that in the modern state, medicine is a major instrument of control by societal and political institutions. His concept of "Bio-power" suggests that the state can reward or punish its citizens by providing or withholding health. Sanitation, preventive heath care, implies the imposition of a regime. Sanitary policy legitimizes the state's interference in households and private lives of people and thus helps to establish more effective disciplinary power. Bio-power—and sanitation in particular—constitutes the link between macro and micro (Foucault 1990; Gastaldo 1997).

Sanitation policies have been most successful when they also appealed to other values in people's lives, such as social decency, respect, comfort, and religion. Cultural ignorance and lack of respect for local knowledge and practices of hygiene are major problems in sanitation projects by both foreign organizations and local governments in low-income societies. Tiokou Ndonko's 1993 anthropological study in Cameroon for example, analyzed cultural and religious resistance against the government's sanitation policy. Hygiene, seemingly a purely medical concern, lies at the heart of culture and is both a means of political control and resistance.

SEE ALSO *Civilization; Cultural Relativism; Disease; Freud, Sigmund; Health in Developing Countries; James, William; Public Health; Taboos; Toilets*

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Sjaak van der Geest

SANSKRITIZATION

The term *Sanskritization* was first coined by the Indian sociologist Mysore Narasimhachar Srinivas (1916–1999) in his Oxford University PhD thesis, which was eventually published as *Religion and Society among the Coorgs of South India* (1952). His research demonstrated that, contrary to the British colonial view, the caste system was not static and pan-Indian, but local, dynamic, and fluid. He captured the dynamics of this stratification system in his theory of Sanskritization. Sanskrit is the canonical language of the Hindu scriptures, including principally the *Upanishads*, and thus Sanskritization is the process by which lower castes attempt to emulate the culture of higher castes. More precisely, this social process involves the adoption by a "low" caste or other group of the customs, rituals, and beliefs of a "high" or "twice-born" caste. One specific example is the adoption of a vegetarian diet, which is not typical of low-caste practice. These social changes are normally followed by a claim to a more elevated position within the hierarchy of castes.

The theory is in fact more complex, because of the difficulties of translation of the notion of "caste," which corresponds to what is locally known as *jati* or *kulam.* Whereas *varna* refers to the four main castes (Brahmin, Kshatriya, Vaisya, and Sudra), *jati* refers to the many smaller groups or subcastes by which the Indian system is internally and locally divided. A caste is characterized by endogamy, hereditary membership, and a specific lifestyle. Although social classes are open, caste in principle is not. Whereas social mobility in class society involves the movement of individuals, in a caste system it is an entire community (typically a *jati*) that moves up or down the system.

This social dynamic is also associated with a contrast between what anthropologists have called the "great" and

"little traditions" of peasant society. In his *Peasant Society and Culture* (1956) Robert Redfield argued that a "great tradition" is a culture closely associated with religion that is spread over a large territory and embedded in a literary tradition defended by a stratum of intellectuals such as priests. A "little tradition," by contrast, is localized, limited, and oral. Little traditions can be absorbed into great traditions and become universalized, or there may be a reverse process whereby great traditions may become parochial. Sanskritization can be seen therefore as the process by which a local community immersed in the "little tradition" makes a claim for membership in the "great tradition" by acquiring elements of Sanskrit learning and ritual practice. The whole history of Hinduism can be interpreted as the constant interaction between the Brahmins (as priests and teachers) and the religious customs of other social groups.

The principal ambiguity of Srinivas's theory is whether Sanskritization is a radical or conservative process. One can interpret the social mobility of *jati* as a social "safety valve" in which able and educated but low-status groups move up the hierarchy of caste to claim their place in society, thereby leaving the existing structure in place. Srinivas, however, saw the process as a progressive feature of a society that was becoming more open and democratic. Although Srinivas did not believe that the caste system would simply collapse under the pressure of modernization, he did argue that it would continue to adapt, especially under the impact of electoral politics at the village level. The increased provision of education, urbanization, and industrialization have had an impact on traditional relations between castes, but approximately one-seventh of the Indian population still bear the stigma of untouchability, despite affirmative action programs introduced by the Indian Constitution of November 26, 1949, rejecting untouchability as an infringement of fundamental rights. The Constitution's principal legal architect was Bhimrao Ramji Ambedkar (1891–1956), who, although himself an untouchable, had been invited by the Congress-led government of newly independent India to serve as the nation's first law minister. Ambedkar advocated the expansion of educational provision for the untouchables as an affirmative action program. These legal measures in the Constitution have been continuously reaffirmed in subsequent legislation such as the Untouchability (Offences) Act of 1955. However, given the resilience of untouchability in Indian society, it is evident that sanskritization is not a radical solution for social inequality.

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Bryan S. Turner

SANTA ANNA, ANTONIO LOPEZ DE

SEE *Mexican-American War.*

SANTERÍA

Santería has long been called an Afro-Cuban religion: This designation highlights the origins of many of its elements and early founders but also obscures the fact that Santería has long been a major religion in Cuba practiced by diverse people and has become a global religious movement. Between 1780 and 1850 the Atlantic slave trade transported approximately 1 million enslaved people to Cuba. Nearly 500,000 came from West Africa, where they were in the process of forging the culture now called Yoruba. In Cuba they intermingled with others and forged a popular religion, related to but distinct from the traditional religion of the Yoruba.

WORLDVIEW

The world in which Santería's followers live overflows with diverse kinds of spirits and divinities, and this "theodiversity" reflects and embodies the natural biodiversity of both tropical West Africa and Cuba. The supreme god, Olodumare, created the natural world in which humans now live as well as a host of *orishas* (divinities, called *orichas* in Cuban Spanish) responsible for its various aspects. Most orishas lived in heaven with Olodumare before descending to the earth. Here they revealed outrageous personalities, led phenomenal lives, and did memorable deeds, and then they ascended into heaven, turned into natural features (e.g., rivers), or disappeared into the earth itself. The stories and rituals for the orishas reveal their specific personalities, complete with foibles, virtues, and preferences for specific foods, objects, metals, and colors. Each orisha rules a specific part of nature and some

aspect of human life or society. Most people consider the orishas to be divine representatives or facets of Olodumare.

Elegguá, the mischievous messenger of the other orishas, wears red and black, carries a hooked stick for grabbing things, drinks rum, and smokes cigars. He lives in the forest, the savannah, bars, and crossroads. Always generous, Yemayá is the maternal ocean. A Great Mother figure, she dresses in blue and white, rules motherhood, and eats rams, ducks, pineapples, and watermelons. Obatalá, the father of the orishas, has clean white clothes and a cool, even character. He resides in high places, patiently forms human bodies and other creations, and eats white animals and fruits with white flesh. The sensual Oshún lives in the river and rules childbirth, dance, and erotic love. She loves brass, gold, pumpkins, oranges, and mangoes. Shangó is a fiery king invoked as the fourth ruler of the Yoruba city of Oyo. He wears red and white and makes his presence known through thunder and lightning. In Cuba approximately thirty orishas make up the pantheon, but people acknowledge the existence of an even greater number.

Each human being has a patron orisha and an innate spiritual component thought to reside within the physical head. Chosen by the individual before birth and authorized by Olodumare, this inner head (*orinû*) contains the individual's destiny, character, and special talents, and it reflects the person's essence (*aché*). The individual's aché continues after death and becomes an ancestral spirit (*egun*), whom the living acknowledge and venerate through ritual.

Aché, the inherent essence and power to make things happen, exists in all natural objects and life forms. Certain herbs heal specific illnesses, and healing is their aché. A mixture of herbs sacred to the orishas helps consecrate priests and priestesses, and this is also called *aché*. Particular individuals have special talents that transform circumstances—their aché. Words, spoken or sung, carry aché, and thus the Lucumí language (derived from Yoruba) remains an important part of the religion. Similarly animal blood and certain key parts of sacrificed animals have aché to engage the orishas and the ancestors in human affairs. Santería conceives of the natural world and its aché through polarities: Heaven and earth, white and red, and male and female are just a few of the oppositions that organize the religion's rituals.

RITUALS AND CEREMONIES

Santería's followers mount complex ritual performances to interact with the orishas and other spirits. Through offerings of objects, foods, and animals, people "make *ebó*" to placate and petition the spirits. In divination they use traditional mechanisms (coconut pieces, cowrie shells, or palm nuts) to learn the disposition of the spirits and what sacrifices will create the appropriate balance between humans and the spirits. Most divination results in an *odu*, one of 256 possible divination signs thought to be spirits in their own right; odus contain proverbs, allegories, advice, and myths about the orishas, used to orient people to their circumstances. Specific songs, drum rhythms, and dance steps call the orishas to possess their followers, and the orishas use the human body to dance, sing, salute community members, and give advice. Through rituals and ceremonies, Santería initiates channel the aché of the orishas.

Through various initiations, people intensify their relationships with the orishas. The ceremonial receiving of consecrated necklaces (*elekes*) for the principal orishas creates a link between the individual spiritual head and those orishas; similarly it forges a bond between the individual and the initiators (godparents) and their ritual lineage. The warrior's ceremony gives the new initiate sacred objects (*fundamentos*) through which to engage four important orishas who guide, protect, and invigorate the individual. The initiation of a new priest or priestess unites a large number of participants in a complex seven-day ceremony (*kariocha*) that begins a year-long process of transformation. These rituals forge intense, intimate connections between people and the orishas, and Santería often becomes an encompassing way of life.

Santería's followers have often embraced other religious traditions and sources of divine power. Santería emerged in proximity to the Catholic Church, and the similar spiritual hierarchies made for easy comparisons: Orishas have long been compared with saints. While many scholars imagine Santería simply as a syncretism, a mixture between Yoruba religion and Catholicism, the religion focuses on worshipping the orishas and allows its followers to include or exclude links to Catholicism and other traditions, like the Afro-Cuban religions Palo Monte and Abakuá, which have their primary sources in other African cultures. People often extend the veneration of the ancestors to include spiritism (from France), and its rituals have evolved to include some specifically Cuban forms. Some people borrow ideas and symbols from Freemasonry and astrology.

CONTEMPORARY ISSUES

Cuban immigrants carried Santería beyond the island, and it now enjoys great popularity in the Caribbean, Mexico, Venezuela, Colombia, and the United States, while smaller active communities exist all over Canada and Europe. As in Cuba, the religion unites diverse people, transcending racial and economic differences. Discrimination against the religion has led to strong movements for legal recognition, and in 1993 the U.S.

Supreme Court recognized Santería as a religion and its followers' right to sacrifice animals. Followers of the religion have begun exchanging ideas, images, and ritual practices with both Haitian Vodou and Brazilian Candomblé, each sharing strong historical ties to Yoruba religion. As Santería becomes a global religion spread by traveling elders, published texts, and the Internet, face-to-face relationships remain central to learning the worldview and rituals. Both the orishas and the odus provide flexible conceptual systems with which people can understand and respond to their diverse circumstances.

SEE ALSO *African Diaspora; Animism; Religion; Rituals; Vodou*

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Michael Atwood Mason

SAPIR-WHORF HYPOTHESIS

SEE *Anthropology; Anthropology, Linguistic.*

SARGENT, THOMAS

1943–

During the 1970s the pioneering work of the American economist Thomas Sargent focused on the implications of rational expectations for econometric research and policymaking. Expectations about the future are a key ingredient of economic decision making, and over the years economic theory has employed different models of expectations formation. The rational expectations hypothesis, initially formulated by John F. Muth Jr. in 1961, swept through macroeconomics during the 1970s. Robert Lucas Jr. and Thomas Sargent, in their 1972 and 1973 articles, led this revolution. The 1981 book by Lucas and Sargent reprints much of the key early literature, while a complete bibliography of Sargent's works can be found in his 2005 interview with George W. Evans and Seppo Honkapohja.

Sargent exposed difficulties in standard procedures and showed how to formulate and conduct valid tests of central macroeconomic relationships under the rational expectations hypothesis. His contributions in this area include studies of the natural rate of unemployment, monetary neutrality of real interest rates, dynamic labor demand, hyperinflation, and tests for the neutrality of money in "classical" models. In the 1980s Sargent developed new econometric methods for estimating rational expectations models, which were presented in his 1980 and 1982 articles with Lars Hansen.

As put forward in articles with Neil Wallace in 1973 and 1975, Sargent also made several key contributions to theoretical macroeconomics, including the saddle-path stability characterization of the rational expectations equilibrium and the policy ineffectiveness proposition for monetary policy. His 1979 graduate textbook integrated these insights into an approach that viewed macroeconomic equilibrium as a dynamic, stochastic process. In later work Sargent continued to extend the rational expectations approach into new areas. Two prominent examples are his 1981 study, with Wallace, of the implications of the government budget constraint for inflation and his 1998 study, with Lars Ljungqvist, of the sources of the European unemployment problem.

Sargent's contributions have not been confined to the development and application of the rational expectations paradigm. The standard formulation of rational expectations makes the strong assumption that economic agents have so much information that their forecast errors are just random noise. Sargent's interest in the theoretical foundations of rationality led him in the 1980s to join a line of research called *learning theory*. In this approach, agents have an imperfect understanding of the economy and try to improve their knowledge over time. Albert Marcet and Sargent's 1989 article showed, in a general setting, that econometric learning could converge to rational expectations equilibrium when certain conditions are satisfied. Sargent's 1999 book called attention to the possibility of "escape routes," that is, occasional large deviations from an equilibrium, and led to a surge of interest in persistent learning dynamics. The 1993 book by Sargent and 2001 book by George Evans and Seppo Honkapohja provide, respectively, an overview and a full treatise on learning and expectations formation in macroeconomics. Closely related to the research on learning are issues of robustness and model uncertainty, to which Sargent has

made key contributions, including his book with Hansen in 2003 and with Hansen and Thomas Tallarini in 1999.

In addition to the great intellectual depth and wide range of the contributions outlined above, Sargent has also done important research in economic history. Examples are his 1985 study on episodes of moderate and rapid inflations and his 2002 study, with François Velde, on monetary standards. Sargent discusses the different facets of his research in a 2005 interview with Evans and Honkapohja.

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George W. Evans
Seppo Honkapohja

SARTORI, GIOVANNI

SEE *Sociology, Political.*

SARTRE, JEAN-PAUL
1905–1980

Jean-Paul Sartre was born in Paris on June 13, 1905, and died there on April 15, 1980. He studied philosophy at the École Normale Supérieure, achieving his doctorate in 1929, and then taught high school until the publication of his first novel, *Nausea*, in 1938. Sartre was a prisoner of war in World War II from 1940 to 1941, after which he founded a group of resistance intellectuals, *socialism et liberté*, which he disbanded by the time of the 1943 publication of his most famous philosophical work, *Being and Nothingness*. Sartre became a celebrity at the end of the war, which enabled him to be a public intellectual on the world stage for a variety of causes that included fighting against anti-Semitism, supporting Third World liberation and workers' struggles, protesting against the Vietnam War, and joining strikers in the student movement of the late 1960s. Some of Sartre's causes, such as his support of the Algerian struggle for independence, led to assassination attempts on his life. Other causes, such as his support of communism without ever joining the Communist Party, led to attacks on him from extreme liberal and conservative critics. Sartre received many awards, two of which he refused—the French Legion of Honor in 1945 and the Nobel Prize in 1964. He was co-founder of the influential magazine *Les temps moderne* in 1945.

Although he wished to achieve greatness as a novelist and playwright, Sartre's legacy is primarily as a philosopher, where he contributed to the study of freedom and the challenges it poses for understanding human existence. His writings from the 1930s until the late 1940s gave him a leading and permanent place in existentialism and phenomenology. Phenomenology is the study of things as understood as objects of consciousness. Sartre's motto "Existence precedes essence," argued for in *Being and Nothingness*, became a major theme of existential thought and a rallying cry against essentialism in the study of human beings. Human beings create themselves through living a biography, which is the only real self that will emerge at each person's death. For a living human, choice is not only a constant possibility but is a precondition for itself. Even so-called choosing not to choose is a choice, and the act of choosing must in principle have preceded it. Sartre's most famous play from this period, *No Exit* (1944), explored these themes in a situation, people encountering other people, with literally no material alternative to the "hell" of being forced together.

Many of Sartre's writings in the late 1940s into the mid-1950s addressed existential themes in concrete situations. In *Anti-Semite and Jew*, he examined how the hating of Jews played a role in the construction of Jewish identity and the anti-Semite's. This question of how humans create values that in turn create "us" was taken up in a unique genre (philosophical biography), in his demand for the writer to be politically "engaged," and in his explorations of Marxism, reflected in works such as *Baudelaire* (1947), *What Is Literature?* (1947), and *Critique of Dialectical Reason* (1960). The *Critique of Dialectical Reason* explored the problem of agency in history and in developing existential Marxism, which is dialectical thought without determinism or the crushing of freedom.

Sartre, in effect, said good-bye to literature in *The Words* (1964), in which his hatred for his own class, the bourgeoisie (capitalist class), culminated in his rejection of literature as a bourgeois ideal in favor of devoting the rest of his life to political engagement. Although he continued to protest and sign declarations condemning human rights violations as long as his health permitted, this last period of Sartre's life was marked by his conducting a sustained, multi-volume study of the life of the nineteenth century French novelist Gustave Flaubert, *The Family Idiot* (1971–1972), which he did not write for an audience but for himself. As with his works of philosophical biography, the role of bad faith in the formation of the self is illustrated in minute detail throughout. The text, like

many of Sartre's projects, was not completed, which is appropriate for a philosopher whose life was a struggle against ever being pinned down and standing still.

SEE ALSO *Anti-Semitism; Bourgeoisie; Culture, Low and High; Epistemology; Existentialism; Human Rights; Jews; Literature; Marxism; Philosophy; Resistance; World War II*

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Lewis R. Gordon

SAT TEST, THE

SEE *Standardized Tests.*

SATANISM

SEE *Magic; Taboos.*

SATIATION

The *Oxford English Dictionary* offers one definition of *satiation* to be the "point at which satisfaction of a need or familiarity with a stimulus reduces or ends an organism's responsiveness or motivation" and thereby encompasses, in principle, the satiety of both needs and desires.

Neoclassical economics, however fuzzily its boundaries are conceived, sits ill at ease with the distinction between needs and desires. By conceiving of a generality in which the particularity of commodities is submerged in an abstract finite or infinite list, or simply postulated as a coordinate-free, infinite-dimensional space endowed with precisely specified mathematical structure, it obliterates the nineteenth-century distinction between use and exchange values. (The loci classici in the case of a finite list of commodities are Samuelson 1947; Debreu 1959; and McKenzie 2002. For an infinite-dimensional space of commodities, see the reference to Gérard Debreu's 1952 paper on *Valuation equilibrium and Pareto optimum* in Debreu 1959 and relevant references in Khan 2008. The source for the use- and exchange-value is Marx 1967, who in turn takes it from chapter 4, book 1 of Smith 1776.) Once food, labor, money, and more popularly current reifications such as fidelity, trust, racial or ethnic characteristics, reputation, and the like are all seen under the same analytical rubric (in addition to Marx 1867, chap. 1, see Hill 1967 for the commodification of labor and Khan 1993 and 2002 for commodification more generally), "wants that spring from the stomach as opposed to those from fancy, appetites of the mind as opposed to hungers of the body" (Marx [1867] 1967, p. 43) are subjected to the same theoretical machinery and tamed by the same indiscriminate calculus, one blind to individual particularities of any commodity. It thus stands to reason that the subject sits ill at ease with the concept of satiation.

Thus *perfect competition*, as formalized in what is referred to as "general equilibrium theory," the existence theorem, the two fundamental theorems of welfare economics, and through its adoption of the monotonicity assumption on preferences, the Debreu-Scarf theorem, all assume individual preferences to be non-satiated and the consumption set on which these preferences are defined to be unbounded from above (see Debreu 1959 and McKenzie 2002 for an explication of these results). To be sure, there is a literature in general equilibrium theory that addresses the assumption of satiation and thereby problems arising from compact consumption sets, but it surely constitutes a peripheral rather than a central stream (see McFadden 1969 and the literature that follows him in Winter 1969; Rader 1980; John and Ryder 1985; Weymark 1985; Mas-Colell 1992. I am supposing Debreu's [1986] verbal proof of the first fundamental theorem to be also relevant here as well as the resurgence of the subject as exemplified in Martins-da-Rocha and Monteiro 2007 and their references.)

At the founding moment of the theory of optimal growth, Frank Ramsey did assume a "bliss point" (a point of *satiation* in the terms of this entry) for his representative agent (see Ramsey 1928 and its finite commodity generalization in Samuelson and Solow 1965). However,

by viewing this assumption as a response to an analytical difficulty rather than as a descriptive point of substance to be incorporated into the theory, subsequent work took two alternative routes. In a literature exemplified by Tjalling Charles Koopmans (1965), David Gale (1967), and William A. Brock (1970), the objective function was rendered well-defined by considering deviations from a golden-rule stock, a stock that ensures the highest constant sustainable rate of consumption and thereby ensuring the convergence of the relevant integral of the utility stream. Alternatively, as in Koopmans (1967) and Nancy L. Stokey and Robert E. Lucas Jr. (1989), the undiscounted framework is done away with altogether as something irrelevant to a regimen in which methodological individualism is rather aggressively prescribed to counter the possibility of any sort of governmental paternalism.

There is an irony in that Robinson Crusoe remains a hallowed figure for neoclassical economics even though his needs are limited (obviously so) and his desires have no ready outlet. (In addition to playing a role in Edgeworth 1881, Koopmans's 1957 exposition of general equilibrium theory and the John von Neumann and Oskar Morgenstern 1953 criticism of this theory are based on Robinson Crusoe.) However, moving away from the creations of Daniel Defoe, Paul A. Samuelson, and Frank P. Ramsey, one ought perhaps not forget that the skeptical David Hume was crystal clear about the dampening effect of satiation on commerce and on the progress commerce was to bring in its wake. In his influential essay "Of Refinements in the Arts," he writes:

> Riches are valuable at all times, and to all men; because they always purchase pleasures, such as men are accustomed to, and desire.… In a nation where there is no demand for such superfluities, men sink into indolence, lose all enjoyment of life, and are useless to the public, which cannot maintain or support its fleets and armies, from the industry of such slothful members.… Luxury, when excessive, is the source of many ills; but is in general preferable to sloth and idleness, which would commonly succeed in its place, and are more hurtful both to private persons and the public. (Hume [1742/1752] 1985, pp. 276, 272, 280)

The problem of scarcity of labor as a damper to the growth of colonial (plantation) economies brought about by satiation and self-sufficiency of native labor, and its possible cure in terms of a head tax levied in money, was well understood by colonial governments of all stripes in both the nineteenth and the twentieth centuries (see, for example, Mamdani 1976, chaps. 2 and 3), but even a half-adequate exploration of these theoretical and practical issues goes well beyond the ambit of this brief entry.

SEE ALSO *Arrow-Debreu Model; Competition, Perfect; Economics, Neoclassical; Optimal Growth; Samuelson, Paul A.; Wants; Welfare Economics*

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M. Ali Khan

SATIRE

The word *satire* is often thought to be derived from the Latin word *satura*, originally meaning the vessel used for carrying harvest produce. It came to mean a mixture, and then a mixed form of entertainment that people might have at harvest time, consisting of songs, jokes, and other kinds of humor. In its broadest sense, then, satire is a mixed kind of humorous entertainment related to comedy that focuses on people and their behavior.

In a more particular sense, satire is a literary form, traced back to the Romans and in particular to the works of Juvenal (c. 50/60–127 CE) and Horace (65–8 BCE), who both wrote about their own times, though in different tones. Horace is characterized as more urbane and witty, Juvenal as more savage and critical. For these writers, a satire was a particular sort of poem with a strict form and specific content. It was this definition that pervaded English literature in the work of John Donne (1572–1631), John Dryden (1631–1700), Alexander Pope (1688–1744), and Samuel Johnson (1709–1784) in the seventeenth and eighteenth centuries.

From the Renaissance onward, the works of Horace and Juvenal, together with works by other great Greek and Roman writers, including Homer (ninth to eighth century BCE), Virgil (70–19 BCE), and Ovid (43 BCE–c. 17 CE), were the basis of an educated person's reading. The one hundred years from the Restoration in 1660 constituted the great age of satire in English literature, known as the Augustan Age, referring to the period in ancient Rome when Augustus Caesar (63 BCE–14 CE) was the first emperor. English writers produced their own translations or versions of such classical works. For example, the "Epistle to Arbuthnot" (1735) is Alexander Pope's prologue to his own imitation of Horace's satires, and Dr. Johnson based his *London* (1738) and *The Vanity of Human Wishes* (1749) on Juvenal's *Satires* 3 and 10.

The eighteenth century, however, also saw the rise of prose satire, especially in the works of Jonathan Swift (1667–1745), whose *Gulliver's Travels* (1726) and *A Modest Proposal for Preventing the Children of Ireland from Being a Burden to Their Parents or Country* (1729) have influenced most satirical writers since.

One significant reason for the pervasiveness and popularity of satire in England during the eighteenth century may have been people's reactions to the disorder and division that they experienced during the civil war of the 1640s. Satire became an effective method of drawing attention to the ways in which human behavior falls short of its ideal and of trying to correct that within an accepted political and social framework. The job of the satirist, therefore, became, as Jonathan Swift put it, "to cure the vices of mankind." It is this moral purpose that underlies great satirical achievements.

Along with this moral purpose, features that distinguish satire from other kinds of writing are its flexibility of tone and its consistent use of wit and irony. The most consistent target for satire in any period is hypocrisy, and the predominant method is irony, where the reader always has to be alert to the conflict between the literal and actual meanings of what is being said. Hence, although the golden age is perhaps the greatest age of satire in English and although writing is the dominant form of satire, nevertheless satire appears in many different periods and in many different forms: writing, painting, and more recently television and film.

It is often the case that effective satire can be ephemeral. Particular examples of hypocrisy come and go quickly, and so references can soon become dated as their occasion slips from memory. Obvious examples may be

found in the contemporary television series *South Park* or *The Simpsons* or in political caricatures or cartoons.

There is also a sense in which satire is culture bound. Because it depends on wit and irony, it is neither accessible nor thriving in societies and groups where fundamentalism or literalism is the prevailing ethos. Throughout history there have been those who can only read literally and who have therefore missed the whole thrust of a satirical work. This was true of some readers of Swift's *A Modest Proposal*, just as it has been true of some viewers of the satirical film *Borat: Cultural Learnings of America for Make Benefit Glorious Nation of Kazakhstan* (2006).

Peter Buckroyd

SATISFACTION, RELATIONSHIP

SEE *Relationship Satisfaction.*

SATISFICING BEHAVIOR

Herbert Simon coined the term *satisficing behavior* to describe human choice among alternative behaviors recognizing bounded rationality. The information-processing capacity of the human brain cannot examine all possible alternatives and their consequences for human satisfaction. Thus, Simon argued that satisficing was the dominant process, with maximizing playing a lesser role. Consumers, for example, might set an aspiration level and then begin to examine alternative purchases. When the aspiration level is reached, the person is satisfied, the search stops, and the purchase is made. Simon also applied his notion to games: "The players, instead of seeking for a 'best' move, need only to look for a 'good' move" (Simon 1955, p. 108). The aspiration level is conceived of as being learned in a series of choices. If the aspiration level is set too low, too many alternatives qualify, and perhaps the person is bored. If set too high, no alternatives may qualify, and the level is lowered. This makes preferences endogenous to ongoing experience and feedback rather than fixed as is often assumed in neoclassical economics. The new conception has not become standard among economists, but its use is growing.

Search among alternatives is necessarily selective and simplified by applying rules of thumb (heuristics) whether by a consumer or a business considering the mix of products to produce and methods of production. The interruption of routine is the occasion for examining behavior and goals. The learning involved in the examination of available means may cause goals (ends in view) to be modified. The problem agenda and problem representation are not given in advance but are worked out in the decision process affected by context and events affecting saliency of particular alternatives. This is consistent with a pragmatic view seeing means and ends as interdependent. "If there are goals, they do not so much guide the search as emerge from it" (Simon 1991, p. 367). Simon referred to this process as procedural rationality.

Humans are quite able to rationalize their current behavior. They can find a reason for what they are doing even if it was not in their consciousness before the behavior. The adjustment of aspiration level to the outcome of present behavior is both psychologically healthy and a possible source of disaster as habits can persist long after they are dysfunctional.

Some economists object to the concept of endogenous and evolving preferences because a moving target provides no deterministic standard for defining rationality. It is not easy to distinguish irrationality from learning. A business manager (or voter) may focus on one sub-problem rather than another over time. Saliency is affected by events, framing, context, and emotion. For example, environmental consciousness may result in management finding that former wastes can actually be recycled into profitable products. This would not happen if rationality were unbounded and all profitable alternatives were always being considered. Likewise, a consumer would not be influenced by product placement in the store or by advertising.

Consumers and producers do not have time to examine all possibilities. They collapse their experience into rules of thumb, and new observations cue behavior when the new data is put into a category to which a particular behavior is attached. The human brain can take in data and jump unconsciously to a conclusion and behavior. The fact that the reinforcement of behavior happens unconsciously does not mean that experience is irrelevant. The mind does not waste experience. The ability of the mind to fill in missing data is a strength and weakness. The brain takes in necessarily limited and uncertain data and fills in the rest by itself. This saves us from helpless indecision and at the same time exposes us to disaster when more observation would have led to a different behavior, perhaps affecting our very survival. In the face of very complex computational problems that challenge the capacity of the brain, this jumping to action may be better for profitability and survival than making a mistaken calculation. More data and more calculation are not necessarily better. When the payoff to one firm depends on the choices of other firms and the future is uncertain, the world may be much more predictable if most firms are

using the same rules of thumb than if all are calculating their best guesses.

Satisficing is consistent with many observed behaviors, such as simple markup pricing by business (requires less data than profit maximization), lexicographic preferences and choice (requires less data and calculation than utility maximization), and modular budgets. There is experimental evidence that many choices are intransitive. A modular budget allocating one's income initially to categories of expenditures produces what appears to an outsider as intransitive choices. Choices of goods then are made within these accounts without further reexamination of all feasible alternatives.

Consumers and businesses have multiple objectives, and making them commensurable would take considerable mental energy and calculation. The same could be said for attaching subjective probabilities to all outcomes. It is simpler to regard outcomes simply as likely or unlikely (outcomes the consumer or manager would be surprised by).

Bounded rationality implies decision costs. There are necessary tradeoffs between decision costs and better decisions. It is tempting then to suggest a calculated optimal search rule and conclusion of what is good enough. But such a rule has the same problem as that of the brain's limitations.

Satisficing, which focuses attention on how managers and consumers actually make decisions, has implications for research. Scholars must get out of their armchairs to conduct field surveys; such research will always be incomplete and messy, but Simon argued that it would still be better than making assumptions. After surveying the literature, John Conlisk concludes in his 1996 article "Why Bounded Rationality?" that "psychology and economics provide wide-ranging evidence that bounded rationality is important" (p. 692). He argues that "models of bounded rationality adhere to a fundamental tenet of economics, respect for scarcity. Human cognition, as a scarce resource, should be treated as such" (p. 692). Satisficing is consistent with both observations. The point is not that optimization be wholly replaced with satisficing, but that human behavior will, as Conlisk notes, "vary by context, depending on such conditions as deliberation cost, complexity, incentives, experience, and market discipline" (p. 692).

SEE ALSO *Maximization; Minimization; Optimizing Behavior; Simon, Herbert A.*

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A. Allan Schmid

SAUVY, ALFRED

SEE *Third World.*

SAVING RATE

The ability of a society to defer consumption from the present to the future provides resources for capital accumulation, which in turn creates a basis for increasing labor productivity and improving living standards. As such, positive national saving may beneficially contribute to a country's economic development, although many other factors—such as the state of domestic demand and the effectiveness of financial intermediation—are also involved in influencing the extent to which this potential may be realized. (See the collection of papers in Setterfield 2002 on demand-led growth.)

The total saving undertaken by a country has three components:

a	Domestic private saving	Y – T – C	Income earned by households (Y), net of taxes they pay to the government (T), minus what they spend on goods and services (C)
b	Public saving	T – G	Any excess in the government's tax revenues (T) over its expenditures (G)
c	International saving	X – M	Any excess in the value of the country's exports (X) over the value of its imports (M), which implies an accumulation of wealth abroad

Items (a) and (b) added together are known as "national saving." To facilitate comparisons across countries and over time, saving levels are usually divided by disposable income (for domestic private saving) or national income (for public and national saving), to compute saving rates:

Domestic private saving rate: $(Y - T - C)/(Y - T) \times 100$;

Public saving rate: $(T - G)/Y \times 100$;

National saving rate: $[(Y - T - C) + (T - G)]/Y \times 100$.

Changes in public saving can be expected to change private saving also because they affect expected after-tax income streams—the basis on which households make saving decisions. As a notable example, public pension programs such as U.S. Social Security generally reduce private saving, because people have less burden to accumulate their own savings to cover consumption in retirement. However, the extent to which private and public saving substitute for each other is open to debate. A contested conjecture is the idea of "Ricardian equivalence," which holds that reductions in public saving are offset in full by increased private saving, because households will set aside resources to pay for the greater tax burden they know they will eventually face (Barro 1974). However, the empirical evidence on Ricardian equivalence is fairly mixed.

To see how a country's saving relates to its investment, it is helpful to look at the following re-expression of the national-income accounting identity:

$$I = (Y - T - C) + (T - G) - (X - M)$$

This expression shows that funds for investment (I) can come from domestic private saving, public saving, and/or international *dis*saving. The last term corresponds to the country's trade balance. Because a country that has a trade deficit ($X < M$) must realize a capital inflow to cover it, the inflow supplements national saving as a source of finance for domestic investment. But if its exports exceed its imports, the surplus entails a capital outflow, reducing financing available for domestic investment in favor of wealth accumulation abroad. This "open-economy" aspect of the saving/investment link has been important for the United States in recent years: The level

Household saving rates, G7 countries, 1988–2005

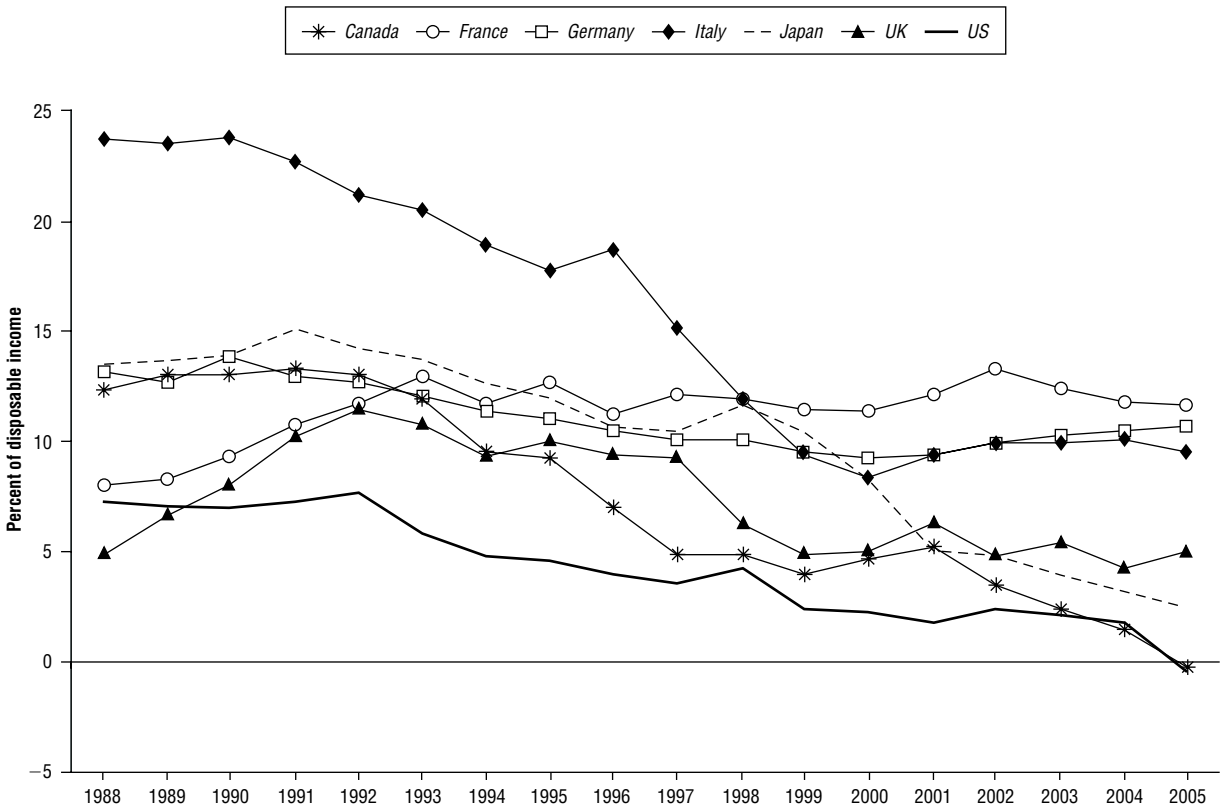

SOURCE: Organization for Economic Co-operation and Development, Economic Outlook database.

Figure 1

Net national saving, 1980–2004

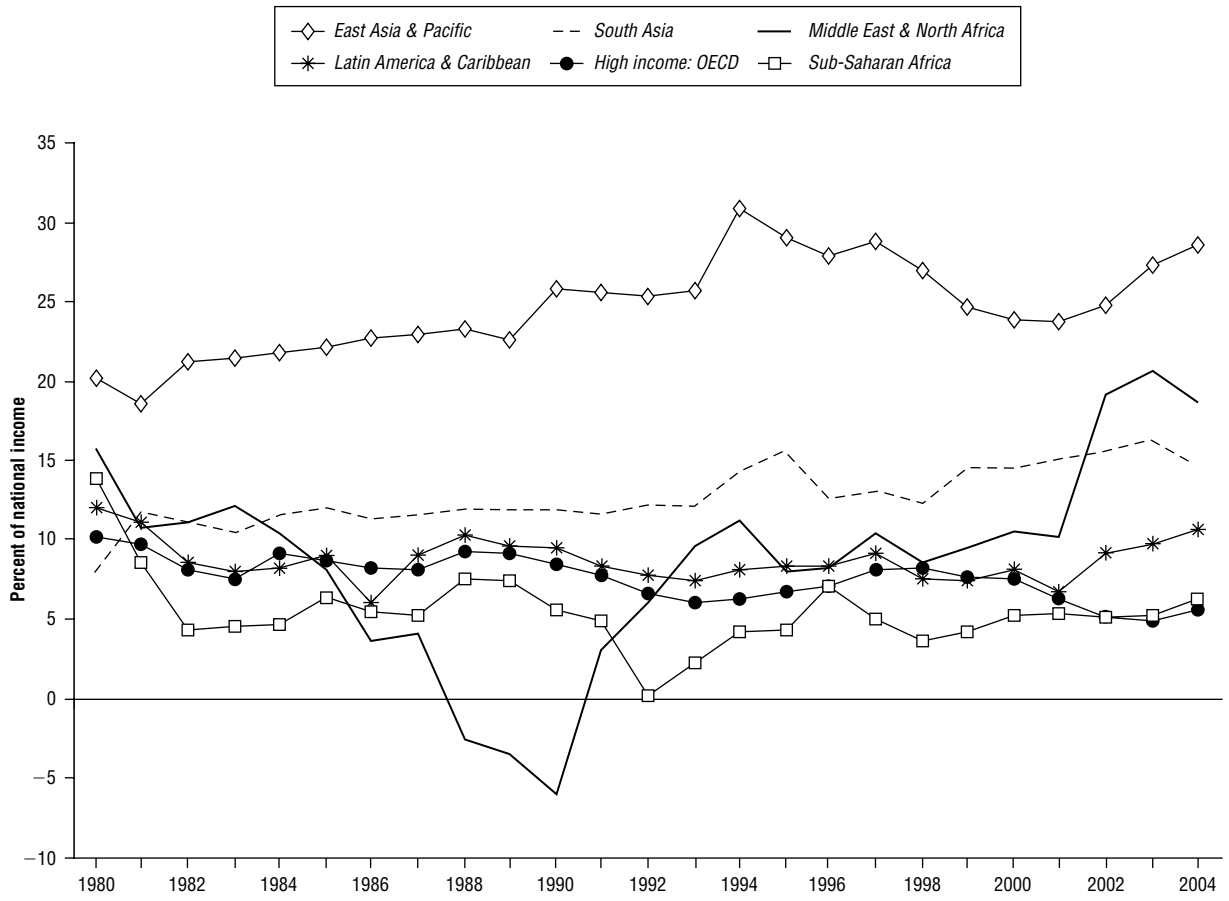

SOURCE: World Bank, World Development Indicators.

Figure 2

of domestic investment has remained healthy despite low national saving due to the willingness of other countries to supply capital to the United States.

It is important to note that saving is a *flow* concept; that is, it measures the excess of income over spending in a given year, which adds to the country's *stock* of wealth. Thus, a decline in household saving does not necessarily imply lower ability to finance consumption in the future—just a slower pace of accumulation of resources toward that end. A related implication is that household wealth can rise, even if saving falls, as long as asset prices are rising. This has probably contributed to the decline in household saving in advanced-industrial countries in recent years (figure 1): Because housing and stock markets have been strong, increases in asset prices have enabled households to scale their saving back while still accumulating wealth.

There are substantial, persistent differences across countries in their saving rates. As shown in figure 2, national saving rates in East Asia and the Pacific tend to be very high by international standards, ranging between 20 and 30 percent in the past twenty-five years. In contrast, saving rates in high-income countries of the Organization for Economic Cooperation and Development (OECD) have drifted down from about 10 percent in 1980 to 5 to 7 percent in the mid-2000s. In Latin America and the Caribbean, saving rates tend to track those of the high-income OECD countries, whereas in South Asia they are higher (10–15%). In sub-Saharan Africa and especially the Middle East and North Africa, national saving rates fluctuate appreciably from year to year, in good part because fluctuating prices of commodity exports impart volatility to public saving.

While the causes of these cross-country differences are not well-understood, several factors are probably involved. First, the "life-cycle" theory of saving (Ando and Modigliani 1957) suggests an important role of demographic variables. The basic proposition of the life-cycle view is that people borrow against future income when young, save in their high-earning middle-age years, and spend down their assets in retirement. Thus, for example, population aging in the advanced-industrial countries might be expected to drive down private saving rates (OECD 1998). Second, periods of rapid economic growth tend to be strongly associated with increased saving, perhaps because consumption takes a while to catch up to permanently higher incomes (Carroll and Weil 1994). Third, the introduction of government social-insurance programs (e.g., unemployment, welfare, disability) alleviates people's need to "save for a rainy day," which may edge national saving down. Fourth, the development of credit markets also reduces precautionary motives to save, as borrowing can be used instead of dissaving to cover consumption needs (Japelli and Pagano 1989). Finally, there are also differences across cultures in the priority placed on saving for the future versus living for today, although it is difficult to disentangle effects of culture on saving from those of other variables.

A growing body of research examines how saving rates vary with household characteristics, using survey data (see Browning and Lusardi 1996 for a valuable review). Many studies find that saving tends to be higher among middle-aged households, *ceteris paribus*, consistent with the life-cycle view. Yet there are also lots of findings that are hard to reconcile with life-cycle theory—for example, that good-sized fractions of households hardly save at all, that older households tend to dissave "too slowly" relative to their life expectancies, and that very rich households save entirely too much for life-cycle motives to be the whole story. Thus, researchers have explored numerous extensions to the life-cycle model to see whether its fit to the data can be improved. These extensions include the possibility that liquidity constraints or asset-limits for social-insurance programs explain low saving among low-income households (Zeldes 1989; Hubbard, Skinner and Zeldes 1995); that uncertainty about time of death and/or bequest motives lie behind slow dissaving in old age (Davies 1981; Abel 1985); and that the very wealthy accumulate wealth for wealth's sake, rather than for the future consumption it assures (Carroll 2000). Nonetheless, given uncertainties about whether intertemporal optimization is a good description of consumption and saving behavior, economic research is also branching out to explore "behavioral" views of household saving, in which households use heuristics to make informationally complex decisions and/or struggle with problems of self-control, in which they know they should be saving for the future but are unable to start doing so today (Sheffrin and Thaler 1988 and Laibson 1997). Behavioral approaches may be especially valuable for investigating whether households save adequately for retirement (Aaron 1999)—which in turn is important for evaluating proposals to shift responsibility for retirement saving back to the private domain.

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Martha A. Starr

SAY, JEAN-BAPTISTE

SEE *Say's Law.*

SAY'S LAW

The French economist Jean-Baptiste Say, in his *A Treatise on Political Economy* (1803), developed a theory of market activity that sited the source of the demand for products not on the quantity of money possessed by individuals but rather on the value of the quantity of products that those individuals supplied. People receive money for producing goods with the purpose of immediately purchasing goods of an equivalent value: "A product is no sooner created, than it, from that instant, affords a market for other products to the full extent of its own value" (Say 1971, p. 134). Money itself has no bearing on the relationship between the production of goods and the quantity of goods that they could fetch. It was in this sense that one might infer from Say's analysis that "supply creates its own demand." Changes in production by one individual thereby affect production in many markets: "The success of one branch of commerce supplies more ample means of purchase, and consequently opens a market for the products of all the other branches; on the other hand, the stagnation of one channel of manufacture, or of commerce, is felt in all the rest" (Say 1971, p. 137).

SAY'S ECONOMICS

Say's views on public policies emanated directly from his understanding of the mechanism by which an economy thrived and grew. The state should not put into effect any policy that would prevent producers from keeping their profits or for income to be diverted to unproductive consumption rather than savings. Anything that promoted the ability to produce more implied the enhanced ability of everyone else to produce *and* consume more goods.

The broader definition of Say's Law as it is customarily accepted relates to the idea that a general glut in commodities for the economy as a whole is impossible. Say, however, at least in the *Treatise*, never imagined the possibility of there being a general glut of all commodities, except as an aside (Baumol 1977, p. 156; Kates 1998, p. 24). He did recognize, though, that in real time one's ability to make a purchase was not automatically equal to what he had intended when measured by the value of the product at the time of production. Gluts in "superabundant commodities," as Say called them, might occur if "it has been produced in excess abundance, or because the production of other commodities has fallen short" (1971, p. 135). Neither of these causes could be attributed to anything economy-wide. Rather, gluts in any one commodity, even the superabundant kind, occurred, at the end of the day, not because of a dearth of money but because of a dearth of supply.

It was left to James Mill (1808) and Robert Torrens (1821) to elaborate on Say's framework, allowing them to conclude that a general glut in the economy as a whole was a logical impossibility. Mill in turn influenced Say's understanding of this issue, which he laid out in later editions of his *Treatise* (see also Say 1967 [1821]). Torrens's explanation was more consistent with Say's perspective in that an economy-wide downturn could be explained by "miscalculations" and particular gluts in the market (Kates 1998, p. 36).

What emerged from these elaborations of Say's original analysis was a generally held conceptualization that one could think about a *price system* that regulated the flow of resources and goods supplied within a theory of markets. Moreover this price system was understood to be independent from the identification of the absolute nature of those prices, which were determined solely by the stock of money at any moment of time—the so-called classical dichotomy.

KEYNES'S ECONOMICS

In 1936 John Maynard Keynes, in his *The General Theory of Employment, Interest, and Money*, criticized this tradition of economic theory and policy that began with the writings of Say, what he referred to as "classical economics." The intention of Say and others to show that output (and employment) in the economy emanated from activity at the level of the individual firm suffered from a logical flaw, in Keynes's opinion, because the specification of the functional relationships at the level of the individual could be posited only if it was assumed that output as a whole was given and unchanging. Thus the method of describing an economy in terms of the behavior of individual supply had no theoretical validity except when output as a whole was fixed at the point where all resources were employed. Classical economics could explain *relative* movements in output and employment, but they had no method for considering changes in the level of output and employment as a whole. This conclusion followed from the view held by Say and his followers that no one would hold money as a store of value; money therefore had no essential properties in and of itself. Keynes therefore

wished to consider, instead, a monetary economy "in which changing views about the future are capable of influencing the quantity of employment and not merely its direction" (1971, p. xxii).

From that criticism of what he considered to be an illogical theoretical system, Keynes sought to develop an alternative framework of analysis with his *theory of effective demand*. Here, he believed, one could think logically about the relationship between activity at the level of each individual or firm and industry as a whole (his *alternative* dichotomy) but without the necessary presumption that output was given at full employment. Keynes's reframing specified those relationships in a form such that each realm (the individual firm or industry and industry as a whole) existed in the context of the other. Either could remain stable or fluctuate without any stipulation that whatever was produced in the economy had to use all of the resources that were available. Keynes therefore felt that he had formulated a *general* theory of employment and output that was not predicated on a price system within a theory of markets in the tradition of Say, independent of the determination of absolute prices in general. Instead, he set the goal of bringing questions of money and prices back into the theory of employment and output as a whole.

This Keynesian revolution, which was intended to overturn the economic theory and policy built on Say's Law, never happened, at least according to one of Keynes's closest students and colleagues, Joan Robinson. Keynes's alternative vision of a monetary theory of production, as well as his mode of reasoning upon which that vision was built, was never embraced by the discipline. Economic theory and policy in the early twenty-first century therefore remained entrenched firmly in the dichotomous framework by which resource allocation is determined in a system of relative prices emanating from the rational behavior of individuals, while absolute prices are determined by the quantity of money.

Modern theoretical debate has been reduced to analyzing the speeds at which prices and quantities adjust. New classical economists, on the one hand, assume that prices adjust instantaneously, meaning that questions of quantity adjustments are never at issue—the classical dichotomy is therefore in place at all times, leading to a clear and limited set of policy prescriptions that eschew any form of discretionary public intervention. The only tool of macroeconomics is the control of inflation through the proper control of the money stock. New Keynesian economists, on the other hand, admit that markets may fail to resolve themselves in the short period, which could lead to greater movements in output than in prices. It should be emphasized that questions of employment and output by new Keynesians are still conceptualized and therefore framed as a mere generalization of individual market activity, the approach Keynes found to be illogical. In these intervals the classical dichotomy might very well be violated, perhaps necessitating policy intervention beyond just monetary policy. But even for most new Keynesian economists, it is just a matter of time before markets make their necessary adjustments, reestablishing the separation of real and monetary sectors.

Both schools of thought do recognize that institutional barriers to full resolution persist even over the longer period. This recognition has led them to construct theoretical edifices such as the "natural rate of unemployment" and the non-accelerating inflation rate of unemployment, allowing them to fit reality back into their theoretical vision. Once resolved, there has emerged a confluence of views on long-term public policies for both new classical and new Keynesian economists limited to the control of inflation by the monetary authorities and the shedding of external barriers to the free market mechanism, allowing it to resolve itself fully.

One should not be surprised that policy to promote *real* economic growth has led to legislation that intends to break down all barriers that might have prevented those who prospered (who made profits either by productive activity or in the form of dividends from equity holding) from keeping the greatest portion of those profits. For they who are the most successful in the market can be expected to increase supply by the greatest amount, "open[ing] a market for the products of all the other branches" (Say 1971, p. 137). These supply-side policies have been disavowed by some new Keynesian economists, although the motivation for their objections has come from political rather than economic foundations. The vision of economics and economic policy has progressed little indeed since Say's *Treatise*, when he suggested that policies should not exist that take away profits from producers unnecessarily and that savings (immediately translating into investment because people do not want to hold onto their money/profits longer than they must) should be encouraged over unproductive consumption.

SEE ALSO *Business Cycles, Empirical Literature; Business Cycles, Real; Economics, Classical; Economics, New Classical; Economics, New Keynesian; Investment; Involuntary Unemployment; Keynes, John Maynard; Mill, James; Natural Rate of Unemployment; Phillips Curve; Robinson, Joan; Savings Rate; Shocks; Voluntary Unemployment; Walras' Law*

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Roy J. Rotheim

SCALES

In the social sciences, it is often important to measure attributes of individuals that are not readily observable, such as beliefs, attitudes, emotional experiences, and personality traits. Because such attributes are not readily observable, social scientists rely on scales that allow individuals to report the extent to which they possess or experience them.

SCALES OF MEASUREMENT

A scale provides both *qualitative* information and *quantitative* information about an attribute. The most basic type of scale has an individual simply indicate whether he or she possesses a certain attribute. This type of scale provides only a qualitative indication of the presence or absence of the attribute and is considered to have a *nominal* scale of measurement. A second type of scale has the individual indicate the presence or absence of the attribute in question *and* the quantitative amount of the attribute he or she possesses. For example, a scale of this sort could ask individuals to indicate how much they like ice cream by selecting a number from one to three, where one represents *not at all*, two represents *moderately*, and three represents *extremely*. This type of a scale has an *ordinal* scale of measurement, which provides a rank-order quantitative value of the degree to which the attribute is present. Note that even if these values are related to one another in a rank ordering, the psychological distance between neighboring values may not be equivalent (e.g., in the example above, the psychological difference between *not at all* and *moderately* may not be the same as the psychological difference between *moderately* and *extremely*). When a scale provides rank-order values of an attribute and equal psychological distances between neighboring values, the scale has an *interval* scale of measurement. Finally if a scale has equal psychological distances between neighboring values and a value that reflects the complete absence of the attribute in question, then the scale has a *ratio* scale of measurement. Most scales used by social scientists are nominal or ordinal in nature because it is very difficult to objectively determine if the psychological distance between neighboring scale values is truly equivalent.

TYPES OF SIMPLE SCALES

Two general types of non-nominal scales are used in the social sciences. The first type is the *Likert scale*, which consists of labeled discrete values located between two labeled endpoint values. The ice cream scale described above is an example of a Likert scale. The second type is the *visual analog scale*, which consists of either discrete unlabeled values or a continuous unlabeled line between labeled endpoints. Likert scales are ordinal and provide only a limited number of values from which to choose, but they yield information about the qualitative degree to which an individual possesses the attribute in question. In contrast, continuous visual analog scales provide a large number of potential values from which to choose, but they yield little information about the qualitative degree to which an individual possesses the attribute in question. Some believe that visual analog scales have an interval scale of measurement, whereas others argue that they possess only an ordinal scale of measurement.

COMBINING SCALES INTO INVENTORIES

Ratings on individual scales are often combined to form an inventory. Inventories are essential when assessing complex attributes. Creating an inventory ensures that an attribute is measured in its entirety, which may be difficult to accomplish with a single scale. In an inventory, individuals respond to a number of statements using the same scale of measurement. For example, an anger inventory may be created by asking respondents to rate how angry, irritated, and mad they feel, each on a discrete visual analog scale. Each statement in the inventory must refer to a single object in order to minimize confusion. It is also useful to include statements that require responses that are the opposite of other statements in the inventory (e.g., How much do you like ice cream? vs. How much do you hate ice cream?) in order to reduce the likelihood that individuals are reporting responses without paying close attention to the scale items.

RELIABILITY AND VALIDITY

A scale or inventory must be both reliable and valid. *Reliability* is the extent to which an individual makes similar ratings across time using the same scale or, in the case of an inventory, the similarity of an individual's responses to related items within the inventory. Assuming that a scale or inventory is reliable, it must also have high *construct validity*. Construct validity is the extent to which the scale or inventory accurately measures the attribute in question. High construct validity can be demonstrated in a number of ways. First, one can establish *convergent validity* by showing that responses on the scale or inventory are positively associated with patterns of behavior or responses on another scale or inventory believed to measure the attribute or a similar attribute. Second, one can establish *discriminant validity* by showing that responses on the scale or inventory are not positively associated with patterns of behavior or responses on another scale or inventory believed to reflect an unrelated attribute.

SEE ALSO *Guttman Scale; Likert Scale; Locus of Control; Ordinality; Rotter's Internal-External Locus of Control Scale; Self-Esteem*

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SCARCITY

The term *scarcity* implies a lack of a given thing, of it not being plentiful or easy to find. It is a term that does not impress one as having anything to do with science. For economics, however, scarcity is the starting point, a state of affairs that gives rise to a series of deductions that build the whole formal structure of economic science.

In the somewhat technical jargon of economics, scarcity represents a situation in which the existing *means* (resources, goods, etc.) are not sufficient for the achievement of all existing *ends* (goals, wishes, desires, etc.). Under such circumstances, it is indispensable to make decisions about which ends one will strive to achieve and which ones will be left unattended to. All such decisions imply the existence of some *benefits* (or *utility*), associated with the achievement of certain ends, and of some *costs*, corresponding to the benefits associated with the achievement of ends that were forgone. It is in terms of benefits and costs that economists conceive of every decision, and it is through benefits and costs that changes in external conditions have an impact on human behavior.

It is easy to see that in a world where everything was abundant—where scarcity would not apply—all the above categories would be meaningless and economics would not exist. However, scarcity does exist, and it is not a mere empirical coincidence. It is a condition of life as human beings perceive it, and as such it cannot be undone. One can certainly imagine having many times more resources at one's disposal and having more of every good than could possibly be enjoyed (although humans are very far from experiencing this scenario). And yet this would not free one from having to make any decision whatsoever: One would still be forced to choose between different ways of enjoying all those superabundant supplies of goods, for human beings cannot engage in mutually exclusive activities. Thus, due to the inescapable scarcity of time, it is not possible to conceive of a world in which scarcity would not be known. This is why most scholars (or economists, at any rate) consider scarcity to be a universal and necessary human condition.

The presence of the scarcity problem people face, and in particular the need for trade-offs in dealing with scarcity, is reflected in popular common-sense adages such as "there ain't no such thing as a free lunch" (coined by Robert A. Heinlein in *The Moon Is a Harsh Mistress* [1966] and popularized in economics by Milton Friedman). In economic science, it is typically illustrated by the "production possibility frontier," a two-dimensional graph showing maximum amounts of two goods (e.g., "guns and butter") that can be produced with given resources. The frontier, which graphically represents the finiteness of options, also illustrates the concept of cost, for it shows that as long as all resources are being used, the output of one good can be increased only at the expense of a lower output of the other good.

While scarcity may be considered an omnipresent condition of human life, it is possible to view human behavior as a struggle to reduce its acuteness. The extent to which people are successful at narrowing the gap between means and ends can, in turn, be seen as a subjective degree of wealth as perceived by the person in question.

In economics, this process of reducing the problem of scarcity can also be shown with the help of the production possibility frontier. A more efficient use of resources allows for greater production of both goods, which in turn allows for more ends to be achieved and (with given wants) gives rise to a feeling of being wealthier than

before. This more efficient use of resources, graphically pictured as an outward shift of the frontier, is usually attributed to three different sources of improvement: (1) improvement in human capital, (2) accumulation in physical capital, and (3) human cooperation (a division of labor and exchange).

The omnipresence of scarcity and its central position in orthodox economics has been challenged both from within economics and from without it. The attack from within has come from progressively minded economists. Believers in the enormous capacities of technological progress and the human mind have claimed there is a possibility of doing away with scarcity at some point in the future by devising ever more efficient ways of using resources, and thus making goods so plentiful as to accommodate all practical needs.

While this theory is usually propounded by some lesser lights among economists, there have been notable exceptions. John Maynard Keynes, for example, insisted that scarcity is kept unnecessarily high by an artificially high interest rate. In a similar vein, John Kenneth Galbraith, not incidentally an admirer of Keynes and a well-known economist as well, undermined the importance of scarcity with his concept of the "affluent society." Our society is supposed to have reached a sufficient degree of affluence to enable it to provide all the genuine needs people may have. The remaining feelings of scarcity are a product of artificial wants, as Galbraith would have it, created by advertising. None of these authors, however, have attacked scarcity directly, nor have they claimed that scarcity would cease to exist altogether. Instead, they have alluded to its man-made, and thus unnecessary, nature, and to a possibility of its substantial elimination through proper government policy.

From outside of economics, the assault on scarcity has come from anthropologists such as Marshall Sahlins. Their point is that a large degree of affluence did exist before the advent of civilization, among the Paleolithic hunter-gatherers. They show that, contrary to conventional wisdom, such societies did not struggle, but rather enjoyed a life of relative plenty, with more leisure time and (some claim) greater happiness than an average modern person would have today. All this, of course, is due to their having had drastically more modest needs.

While these ideas, just like those of Galbraith, can be justly considered as criticism of the modern consumer civilization, they do not show the logical possibility of a world without scarcity. Even the most austere monks living on water would surely have to make some decisions, if only what to meditate about. Thus, these criticisms may well play down the necessity of the scarcity in human affairs (i.e., its severity and centrality in the human mind), but they will hardly cause the orthodox economics to crumble under its weight.

SEE ALSO *Anthropology; Choice in Economics; Economics; Friedman, Milton; Galbraith, John Kenneth; Keynes, John Maynard; Microeconomics; Opportunity Cost; Poverty; Production Frontier; Sahlins, Marshall; Trade-offs*

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Dan Stastny

SCARR, SANDRA WOOD
1936–

Sandra Wood Scarr's career as a psychological scientist spanned more than four decades. During that time, she engaged in scholarly pursuits dedicated to examining genetic influences on development and the importance of quality child care.

Scarr was born in 1936. She received her PhD from Harvard University in 1965 with a dissertation that examined genetic contributions to personality development in identical and fraternal female twins. Scarr's findings, that sociability and activity level were genetically linked, challenged the mainstream belief at the time that environmental influences predominantly affected development. Following graduate school, Scarr held academic positions at the University of Maryland (1965), the University of Pennsylvania (1966–1971), the University of Minnesota (1972–1975), Yale University (1977–1983), and the University of Virginia (1983–1995). She retired in 1995.

While at the University of Pennsylvania, Scarr examined the genetic and environmental predictors of identical and fraternal twins' intellectual development. Although genetic influence accounted for variations in intellectual development overall, environmental influences were more pronounced for black children than white children. Scarr attributed these differences to disparities in the relative opportunities afforded to the white versus the black children.

While at the Institute of Child Development at the University Minnesota, Scarr initiated the Minnesota Adoption Projects with the psychologist Richard A. Weinberg. One of their most controversial and misinterpreted collaborative studies was the Minnesota Transracial Adoption Project, which examined the IQ of 101 black children adopted into white families. Their findings revealed that rearing environments do affect children's performance on intelligence tests; specifically IQ scores of the black children reared in white families relative to those reared in black families were significantly higher. Longitudinal examinations of these same children suggested that the effects of rearing environments are strongest in early childhood and dramatically decrease in adolescence. Although alternative explanations for the decrease in IQ scores may be attributable to environmental factors, such as conflicts surrounding dating and social identity during adolescence or the conflicts that might arise for nonwhite children living in a white environment with their white parents, the reduction of environmental influences in adolescence is well supported in the behavioral genetics literature. Scarr's book *Race, Social Class, and Individual Differences in I.Q.* was published in 1981.

Scarr extended her work on gene-environment interactions through a series of theoretical and empirical papers. She and her colleagues proposed that the environments actively selected by individuals affect the genetic expression of characteristics such as personality. Further individuals' characteristics evoke particular reactions from others in one's environment. Thus the expression of a person's genes has not only passive and active effects but also evocative effects.

Another branch of Scarr's research program was geared toward improving the quality of child care environments. Scarr's research with Margaret Williams, which demonstrated that stimulation practices (e.g., music exposure and rocking) had beneficial effects on premature infants' subsequent growth and development, revolutionized the standards of neonatal care practices in hospital settings.

In 1984 Scarr published *Mother Care/Other Care,* for which she received the American Psychological Association's (APA) National Book Award in 1985. In this book Scarr identified deciding factors that influenced mothers' reasons for entering the workforce as opposed to remaining at home. She also challenged the belief that maternal employment had negative effects on young children's development and maintained that children can be well cared for by someone other than their parents. Her work also addressed the benefits of high-quality child care, particularly the importance of low child to caregiver ratios and stimulating day care environments.

In 1990 Scarr began serving on the board of directors of KinderCare Learning Centers, where she eventually served as chief executive officer from 1995 to 1997. Scarr moved to Hawaii after an investment firm purchased KinderCare.

Throughout her career, Scarr earned numerous awards and honors for her contributions to the science of psychology. In 1988 she received the first APA Award for the Distinguished Contribution to Research in Public Policy, and in 1989 she was elected to the American Academy of Arts and Sciences. Scarr's professional service included serving as the associate editor of *American Psychologist*, as editor of *Developmental Psychology*, and as cofounding editor of *Current Directions in Psychological Science*. Scarr also held several key leadership positions, including serving on the APA's board of directors, as president of the Society for Research in Child Development, and as president of the American Psychological Society.

Ultimately, although controversial, Scarr's contributions to the study of gene-environment interactions and the importance of quality child care defined and paved the intellectual path for contemporary and future generations of psychological scientists.

SEE ALSO *Child Development; Children; Determinism, Environmental; Determinism, Genetic; Developmental Psychology; Intelligence; IQ Controversy; Nature vs. Nurture; Personality; Psychology; Psychometrics; Twin Studies*

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Joann Benigno
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SCHACHTER, STANLEY
1922–1997

Stanley Schachter was trained as a social psychologist at Yale University, Massachusetts Institute of Technology, and the University of Michigan, where he received his

Ph.D. in 1949. After his early collaborative work on social influence with psychologist Leon Festinger (1919–1989), including the classic field study of cognitive dissonance, *When Prophecy Fails* (1956), Schachter produced, on the basis of his own intuitions and distinctive research and analytic style, the prize-winning *Psychology of Affiliation* (1959).

A native New Yorker, Schachter moved in 1961 from the University of Minnesota to Columbia University in New York City, where he spent the remainder of his career, aside from summers (analyzing data) in his beloved Amagansett in New York's Hamptons. He won the American Psychological Association's Distinguished Scientific Contribution Award in 1969 and was elected to the National Academy of Sciences in 1983.

Schachter is primarily associated with the idea that internal and external cues combine to determine human experience. This notion was offered initially in his formula for what constitutes a true emotional experience—namely, the joint presence of physiological arousal and a suitable emotional label or explanation (usually provided by the environment) for that arousal. The absence of either arousal or an appropriate emotional construal leads to an incomplete emotional experience. Empirical support for this notion was not as robust as one might prefer, but the Schachter perspective (Schachter and Singer, 1962) had a powerful impact, largely because of Schachter's creative experimental scenarios and his eloquent and amusing writing style, and also because he and his students extended the formula to the realm of misattribution of emotion, which led to many fascinating and even practical implications.

It is often noted that Schachter's work on obesity and eating grew directly out of his work on emotion. While it is true that both formulations involve internal and external cues, what is often overlooked is that the formula is quite different in the two realms. Whereas a true emotional experience requires both an internal cue (arousal) and an external cue (label), Schachter switched gears when talking about obesity. For one thing, he no longer targeted subjective experience; instead, his work focused on the act of eating rather than the experience of hunger. Moreover, instead of invoking an interaction of internal and external cues to explain eating, Schachter argued that eating could be produced by either sort of cue, acting in isolation. The obese, it appears, are not responsive to internal cues and eat entirely on the basis of external cues (i.e., environmental food cues), whereas normal-weight individuals are responsive to internal cues (and probably to external cues as well). Schachter's internal/external distinction as applied to obesity and eating has been challenged, but once again, his research was so clever and his argumentation so persuasive that he won over a generation of readers.

Schachter went on to study cigarette smoking, where he eventually adopted a radically "internal" perspective, arguing that psychological factors affect smoking only insofar as they affect urinary pH, which in turn influences nicotine reuptake into the bloodstream. He also studied the psychology of money and verbal dysfluencies before retiring in 1992. His legacy is his blend of creativity and the dogged pursuit of data to support his intuitions, which pleased him most when they challenged conventional wisdom.

SEE ALSO *Addiction; Cognitive Dissonance; Festinger, Leon; Obese Externality; Obesity; Overeating; Psychology; Smoking*

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C. Peter Herman

SCHADENFREUDE

SEE *Sympathy.*

SCHATTSCHNEIDER, E. E.
1892–1971

Elmer Eric Schattschneider received his PhD from Columbia University in 1935. For the remainder of his academic career he taught primarily at Wesleyan University in Middletown, Connecticut, where he was John E. Andrus Professor of Government. He was president of the American Political Science Association from 1956 to 1957. He is best known for his work on political parties, which he used as a prism through which he built a powerful and, despite numerous criticisms, enduring argument on the nature of modern democracy.

Schattschneider first presented his argument regarding parties in *Party Government* (1942). It is probably the

most often cited, the most controversial, and the single most influential work on American political parties penned to date. His thesis was that modern democracy is unthinkable except in terms of political parties because they are the umbilical cord that links citizens to their government. If that cord is cut, he thought, both government and citizens would shrivel and die as components of a democratic polity. The weakness of the founding arguments, in *The Federalist* for example, is that the founders' conception of government was not only undemocratic but, because it was essentially nonpartisan, was also built on unrealistic assumptions about democracy. American government became progressively democratic as parties developed. Schattschneider became the best-known advocate for the "responsible party" school in American government, the idea that parties should formulate policy proposals and present them to the voters, thus making elections occasions for major policy decisions. The measure of democracy would largely consist of the ability of parties to translate these policy choices made by the electorate into policy government. The cycle of democracy was one of responsible parties, electoral choice between parties, and party organization of government after the election. Schattschneider further refined and developed his party arguments when he was elected to chair the American Political Science Association Committee on Political Parties. The committee report, *Toward a More Responsible "Two Party" System*, was published in 1950.

The argument for responsible parties was challenged on several grounds. First, responsible parties would necessarily require that ideology, liberal or conservative, would be the organizing principle of policy proposals rather than the more pragmatic consideration of simply winning elections. Responsible parties would intensify political conflict over competing policies. Consensus political scientists argued that the natural tendency of political parties in a winner-take-all system would be toward the center of political gravity because voters would be distributed with varying intensity along a continuum that ranged from liberal to conservative and not merely cluster at the extremes. Second, Schattschneider was challenged on the very purpose of parties in the first place. Do parties exist merely to promote policy government, or do they also serve as intermediary institutions between citizens and their government that should moderate conflict rather than exacerbate it? American political parties, it was pointed out, developed after the ratification of the Constitution and did not so much create a democratic government as they helped provide a means whereby citizens could find a measure of civic peace within a framework that was largely popular from the outset. The founders evidently thought democracy could be conceived of outside the framework of parties.

A measure of Schattschneider's influence is in the literature of political parties since his most important work. It is almost impossible to discuss American political parties in terms of their purpose and role in a democratic system without reference to his arguments. The resulting quarrels over the nature of parties led Schattschneider to publish *The Semisovereign People: A Realist's View of Democracy in America* (1960). It is a deceptively short book—an essay really—that tries to get at, as he puts it, "what makes things happen" in American government (Schattschneider 1960, p.v.). This is his most philosophical work. His conclusion was that "the role of the people in the political system is determined largely by the conflict system, for it is conflict that involves people in politics and the nature of conflict determines the nature of public involvement" (Schattschneider 1960, p. 126). The people, he thought, are powerless unless the system is competitive, and parties are the institutional agents of that competition. *The Semisovereign People* is a fitting epitaph for the work of one of the most influential scholars in American political science.

Schattschneider was right to see parties as the engine of policy changes and innovation. He was also right to see in the development of modern party government a significant departure from the founders' conception of popular government. The extent to which parties are or should be responsible in the sense he advocated is a more debatable proposition.

SEE ALSO *American Political Science Association; Competition; Conflict; Elites; Federalism; Party Systems, Competitive; Political Parties; Political Science; Sovereignty; Voting*

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Sidney A. Pearson Jr.

SCHEMAS

A schema is a knowledge structure containing the generic representation of a concept. For example, a schema for chairs includes a flat platform to sit upon, four legs, and a back. While not all chairs fit this description, schemas can be modified to include other versions of the concept (e.g., a three-legged stool or a chair with no legs). Schemas can be held about any concept, are often arranged hierarchically, and affect perception, cognition, and memory.

The concept of a schema can be traced to Immanuel Kant (1724–1804), who in 1781 discussed the concept in *Critique of Pure Reason*. More recently, Frederick Bartlett, in 1932, had participants read foreign folktales and later asked them to recall the details. When reading a Native American folktale, non–Native American participants often changed "canoe" to "boat," left out prominent themes, and made the story more European. Bartlett suggested that memory was not fixed, but changed as people actively reconstructed episodes to fit their preexisting schemas.

Jean Piaget used schemas to explain how children acquire new skills and learn to interact with the world. After being scared by a large, aggressive dog, a child may develop the schema that four-legged creatures are dangerous. When confronted by similar dogs, the child may react with fear. Piaget referred to the application of an existing schema to a different stimulus as "assimilation." However, when exposed to a small, well-behaved dog, the child might react positively. Piaget referred to the modification of an existing schema (or the creation of an entirely new schema) to fit a new stimulus as "accommodation." Piaget suggested that assimilation and accommodation are the bases of adaptation (i.e., learning) and define the stages of cognitive development.

There are many different kinds of schemas (what follows is by no means an exhaustive list): role schemas (e.g., the role of a student vs. that of a teacher), event schemas (e.g., what happens at a cocktail party vs. a football game), self schemas (i.e., what we think of ourselves either globally or in specific domains), relationship schemas (e.g., the relationship with one's mother vs. one's best friend), trait schemas (e.g., what shy people are like vs. outgoing people), procedural schemas (e.g., how to make coffee vs. how to put gas in a car), stereotypes (i.e., schemas concerning members of social groups; e.g., the cognitive ability of the young vs. the elderly), and scripts (i.e., how to act in certain situations; e.g., ordering food at a fast food restaurant vs. a fine dining establishment).

Schemas are thought to be functional. They help to organize and understand the world and to fill in informational gaps. They also reduce ambiguity and serve as memory guides, directing our attention to relevant aspects in the environment. However, the overuse of schemas can result in stereotypes. For example, a 2001 study by Brian K. Payne found that when participants were shown a picture of a person's face followed by a picture of either a tool or a gun, the race of the face influenced whether people misidentified pictures of tools as weapons. Even though participants were told to ignore the first picture showing a person, they were more likely to report tools as weapons when the pictures were paired with black faces. This tendency for previously viewed stimuli to activate schemas and influence perceptions—even in very different situations—is known as priming.

SEE ALSO *Piaget, Jean; Priming; Racism; Script Models; Stereotypes*

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Scott T. Wolf

SCHIZOPHRENIA

Approximately one percent of the population suffers from schizophrenia, a severe and persistent mental disorder that is characterized by a wide range of cognitive, social, behavioral, and emotional symptoms and that has been identified by the World Health Organization as one of the ten most debilitating diseases. As specified in the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM* -IV-TR) (APA 2000), positive symptoms of schizophrenia include hallucinations, delusions, disorganized speech, and grossly disorganized or catatonic behavior. Negative symptoms include affective flattening (a lack of emotional response), alogia (poverty of speech), and avolition (an absence of motivation). In addition, impairment is present in one or more major areas of functioning, such as work, interpersonal relations, or self-care. Subtypes of schizophrenia

include paranoid, catatonic, disorganized, undifferentiated, and residual schizophrenia.

The vulnerability-stress model offers a useful way of integrating current thinking about schizophrenia. The model assumes that schizophrenia involves a biogenetic vulnerability or predisposition to develop the disorder. A range of biological and psychosocial factors can interact with this vulnerability to affect the manifestation and course of the illness. Certain risk factors, such as substance abuse, are associated with symptom exacerbation and an increased likelihood of relapse. Protective factors, such as social support and coping strategies, can ameliorate the symptoms of the disorder and make relapse less likely.

Both diagnostic and functional assessment are important in designing individualized treatment and rehabilitation plans. The use of standardized instruments, such as the Structured Clinical Interview for *DSM* -IV-TR (SCID), can increase the likelihood of an accurate diagnosis. Functional assessment focuses on potential deficits in skills and resources that can result in impairment in the ability to function at home, work, and school.

Effective and efficacious psychopharmacological and psychosocial treatments have become available during the past three decades. Since the late 1970s there has been increasing development of new antipsychotic medications. Evidence-based psychosocial interventions have replaced older psychodynamic approaches and accelerated community reintegration of patients who were formerly institutionalized. The benefits of antipsychotic medications include decreased symptoms, reduced risk of relapse, and increased response to psychosocial interventions. Generally combined with medications, psychosocial interventions have demonstrated benefits in the areas of relapse and rehospitalization, housing stability, competitive employment, social functioning, psychotic symptoms, and substance use disorders (Mueser et al. 2003).

Evidence-based psychosocial interventions include assertive community treatment (ACT), family psychoeducation, supported employment, training in illness-management and recovery skills, and integrated dual disorders treatment. The *ACT model* was developed to meet the needs of individuals with a history of high service utilization or severe functional impairment. Services are provided on a twenty-four-hour basis in natural living environments by multidisciplinary treatment and rehabilitation teams. *Family psychoeducation* generally includes services both for people with schizophrenia and for their family members. Components include education about mental illness and its management, skills training, and social support. *Supported employment* services include rapid job search rather than extensive prevocational assessment; competitive wages for jobs in integrated settings; ongoing support once a job has been obtained; and combined vocational and mental health services. Interventions that target *illness management* and recovery are designed to help people with schizophrenia acquire the information and skills needed to collaborate in their treatment, to minimize the effects of the disorder on their lives, and to be able to pursue personally meaningful goals. *Integrated dual disorders treatment* focuses on substance use disorder, which is the most common and clinically significant comorbidity associated with schizophrenia. Integrated mental health and substance abuse programs provide simultaneous treatment of both disorders in a single setting. Social and cultural variables are relevant to the etiology, epidemiology, phenomenology, course, and prognosis of schizophrenia.

Because schizophrenia seemed more prevalent in lower socioeconomic groups, earlier sociologists postulated social stress as a casual factor; others attributed clustering in poor areas to downward social drift. Although psychogenic or sociogenic theories have largely been nullified by biogenetic findings, other correlates of the social environment have apparent etiological significance. For example, maternal exposure to wartime famine or the type A influenza virus during fetal development predicts significantly higher risk for later development of schizophrenia.

World Health Organization studies have consistently shown that despite standardized diagnostic criteria, the prognosis for schizophrenia is significantly better in developing countries than in the industrialized West. Some analysts attribute this to the presence of less virulent variants of the syndrome. Others point to cultural variables that mitigate the impact of schizophrenia in traditional societies, including magical causal theories that view mental disorders as temporary. In developed countries, in contrast, the person and illness are often fused, generating damaged identity. In addition, traditional agrarian societies offer more normalization through flexible work roles and arranged marriages. In these societies, people with schizophrenia are five times more likely to marry than in the industrialized West (Hopper 2004). In developing countries, extended kinship networks relieve the burden often experienced by smaller households in developed countries. The nuclear family structure, with its limited capacity for caregiving, is related to high expressed emotion, which entails hostile criticism or emotional overinvolvement in some family members. High expressed emotion is correlated with patient relapse, but is less frequent in non-Western cultures and is largely remediable with family psychoeducation (Leff and Vaughn 1985).

In contrast to now discredited theories that implicated families in causation, a literature has emerged on the impact of schizophrenia on families. Research indicates that the families of people with schizophrenia face both objective burden, which include the time, energy, and

finances devoted to illness management, and subjective burden, which refers to the emotional costs of coping with difficult behaviors and the pain and losses of a loved one. Families have dealt with their distress by organizing into movements throughout the world to improve research and services and to combat stigma. People with schizophrenia suffer the terrors of psychosis, diminished life aspirations, and social devaluation. Social and cultural conceptions range from retribution for personal or ancestral misconduct to the split personality definition that has made the word *schizophrenic* an erroneous synonym for self-contradiction. Media accounts of violence reinforce societal stigma, although people with schizophrenia are more often victims than perpetrators.

In spite of these challenges, many deinstitutionalized patients are functioning well in their communities. Longitudinal studies in Europe and the United States show that more than half of formerly hospitalized, presumably chronic patients with schizophrenia can, with proper treatment, lead satisfying, relatively symptom-free lives. Studies of mostly first-episode patients show from 48 percent to 91 percent experiencing symptomatic remission posthospitalization (Liberman and Kopelowicz 2005). A burgeoning consumer movement of former patients, many with schizophrenia, offers peer services, recovered role models, and hope. With continuing research on improved medications, psychosocial interventions, peer services, and genetic predictors of more exact individualized treatments, the prognosis looks more favorable than ever before.

SEE ALSO *Kinship; Manias; Mental Health; Mental Illness; Psychotherapy; Psychotropic Drugs; Stress; World Health Organization*

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SCHLIEMANN, HEINRICH

1822–1890

Born in Neubukow in Mecklenburg-Schwerin, Germany, on January 6, 1822, the son of a Lutheran minister, Heinrich Schliemann received his secondary education in Neustrelitz and became a grocer's apprentice (1836–1841). He took an intensive course in bookkeeping, but finding no suitable employment in Germany, he decided to sail to Colombia to make his fortune there. When the ship ran aground off the coast of Holland, he became a clerk with Schroeder's, a large trading company in Amsterdam, and eventually their agent in St. Petersburg, where he also set up his own business and married Yekaterina Lyshin in 1852. The marriage produced three children but was not a happy one. Schliemann made a great deal of money buying and selling commodities on the St. Petersburg exchange. In 1868 he went on a grand tour through Italy and Greece to the Troad in Turkey, hiring workmen to make tentative excavations on Ithaca and at Pinarbashi (Troad). The British expatriate Frank Calvert, who had made small excavations at Hisarlik, convinced Schliemann that that was the site of Troy. Schliemann resolved to return and dig there. In 1869 he received a doctorate from the University of Rostock for his book *Ithaque, le Péloponnèse et Troie* (Ithaca, the Peloponnesus, and Troy), divorced his Russian wife in Indianapolis, and married Sophia Engastromenos in Athens. This marriage, which was almost as stormy as the first, produced two children.

After an exploratory (and illegal) dig in 1870, he began a campaign of excavations at Hisarlik (1871–1873) with a large number (70–100) of workmen. These revealed a series of nine superimposed settlements. Schliemann reckoned the second oldest of these (Troy II) to be Homeric Troy. This seemed to be confirmed in May 1873 when he found at that level a large hoard of metal objects including gold and silver vessels and jewelry, which he called "Priam's Treasure." Even more important were his excavations at Mycenae (1876). These brought to light an advanced civilization on mainland Greece that predated Periclean Athens by a thousand years. Before Schliemann, no one had dreamed of its existence. The finds in the shaft graves there were richer and far more sophisticated than those at Troy. Attempting to establish clear connections between Troy and Mycenae, Schliemann returned to excavate at Troy in 1878, 1879, 1882, and 1890. Finally, in 1890 conclusive proof emerged that Troy II was far earlier than the shaft grave burials at Mycenae, though Schliemann did not acknowledge this in his 1890 report. Subsequent excavation has shown that Homeric Troy should be dated to the last levels of Troy VI (according to Wilhelm Dörpfeld and recently the German-

American excavation team led by Manfred Kormann) or to Troy VII (according to Carl Blegen, who excavated Troy 1932–1938). Among the many other sites Schliemann excavated, Tiryns and Orchomenos are the most important. He died in Naples on December 26, 1890.

The accuracy of some of Schliemann's archaeological reports has been questioned in recent years. It is now clear, for instance, that "Priam's Treasure" is not a single find, as Schliemann claimed, but a composite of many pieces found over months of excavation. However, much of his work has been confirmed by his successors. He remains a crucial figure in Aegean archaeology.

SEE ALSO *Archaeology*

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David A. Traill

SCHNEIDER, HERMAN

SEE *Assimilation.*

SCHOMBURG, ARTURO

SEE *Boricua.*

SCHOOL VOUCHERS

The immediate purpose of school voucher programs is straightforward enough: they are designed to provide families with cash subsidies that help defray the costs of a private education. The larger social objectives that school voucher programs purport to serve, however, vary considerably. Some people promote vouchers on the grounds that they inject competitive forces into a monopolistic public education system. Others exalt the perceived benefits of a religious education; namely the teaching of moral values, discipline, and prayer. To some they rescue students trapped in failing public schools, while still others suggest that vouchers are a civil rights issue, extending educational opportunities to predominantly poor, minority, and urban residents that heretofore have been the province of wealthier, whiter populations.

It is little surprise, then, that the specific features of actual voucher programs vary widely. A handful of programs are funded with taxpayer dollars, while numerous others are financed with private donations. Programs intermittently target students with disabilities, students attending chronically underperforming public schools, low-income families, or rural residents who lack ready access to a public school. The particular mix of participating secular and religious schools also varies from program to program, as do the specific requirements and accountability systems with which private schools must comply.

The first voucher experiment in the United States began in 1990 in the city of Milwaukee, where tuition subsidies of up to $2,500 were offered to low-income families. For the first eight years, the program could legally serve no more than 1.5 percent of the city's public school population (approximately 1,700 students), and only secular schools were allowed to participate. In 1996 the state of Wisconsin permitted up to 15 percent of the Milwaukee public school population to participate in the program. The state also expanded the menu of private schooling options to include religious institutions, and it increased the monetary value of the vouchers. A lawsuit objecting to the expanded program's constitutionality delayed its implementation until 1998, when the Wisconsin Supreme Court upheld the program. Since then, the numbers of private schools and students participating in the voucher program have expanded rapidly.

Other publicly funded voucher programs have been implemented in Cleveland, Ohio; Florida; and Washington, D.C. Ohio enacted a pilot voucher program starting in the 2006-2007 school year, and Vermont and Maine have voucher-like tuition programs that assist children residing in rural districts to attend either a secular private school or a public school in another district. In the 2005-2006 school year, roughly 14,200 non-special-education students participated in the voucher program in Milwaukee, while 5,700 did so in Cleveland, 733 in Florida, 1,090 in Washington, D.C., 5,450 in Vermont, and 6,250 in Maine. And thousands more beside have enrolled in privately funded voucher programs in such cities as Dayton, Ohio; Indianapolis, Indiana; San Antonio, Texas; and New York City, as well as a national program operated by the Children's Scholarship Fund.

THE EFFECTS OF SCHOOL VOUCHERS

The origin of the modern voucher movement can be traced to the Nobel laureate Milton Friedman's defense of parental school choice in *The Role of Government in Education* (1955). Friedman promoted vouchers as a way to spark competition, improve the efficiency of public school systems, and improve the actual performance of schools. John Chubb and Terry Moe revived the idea in *Politics, Markets, and America's Schools* (1990), in which they explicated why private institutions have stronger incentives than public ones to mimic "best practices" in education.

In the early twenty-first century, a lively debate persists about whether the threat of losing students (and the dollars attached to them) to other districts or to private schools induces public schools to operate more efficiently. In one especially influential paper published in 2000, Caroline Hoxby found that competition among public school districts improves school productivity by simultaneously raising student achievement and lowering spending. Reanalyzing the same data, Jesse Rothstein came to very different conclusions, which Hoxby then refuted. In a separate exploration of the voucher programs in Milwaukee, Cleveland, and San Antonio, Frederick Hess carved out a middle ground, arguing in 2000 that competition induces only moderate productivity increases, unless the internal structure of the public school system sets performance-based incentives throughout the system.

Whether vouchers raise the performance of those students who use them has been equally controversial. In 1995, John Witte, Troy Sterr, and Christopher Thorn claimed that students who participated in the original, limited voucher program in Milwaukee scored no higher than a random sample of public school students and low-income students. Using the unsuccessful applicants as an alternative control group, Jay Greene and colleagues found in 1996 that the voucher program had a significant positive effect on the students' achievement in math and reading. Using yet another methodology, Cecilia Rouse concluded in 1998 that students participating in the program learned at a faster pace in math and at a similar pace in reading, compared to their peers in public schools.

Because families self-select into public and private school populations, it can be extraordinarily difficult to determine whether observed differences between them are due to the quality of the schools in the two sectors or the kinds of students who choose to attend them. The best evidence regarding vouchers, therefore, comes from randomized field trials, in which vouchers are assigned to an eligible population by means of a lottery. In several privately funded voucher programs in the United States, it was possible to conduct such analyses. After examining such programs in New York City, Washington, D.C., and Dayton, Ohio, William Howell and Paul Peterson found that vouchers had positive effects on African-Americans' test scores but no effect on those of white or Hispanic students. Additionally, as a result of using vouchers, parents did not appear any more or less involved in their children's educational lives; parental satisfaction with their children's schools improved substantially; and the probability that children attended religious services increased, though the frequency of church attendance among parents actually decreased.

Evaluations of voucher programs elsewhere in the world have been similarly mixed. In 2002, Angrist and colleagues found that Colombian students who were awarded vouchers repeated grades less often and achieved higher test scores. In a 2000 study, Edward Fiske and Helen Ladd offered no conclusions about the overall effect of New Zealand's parental choice system, but they argued that the system exacerbated the social stratification of the nation's school system. Both positive and negative effects on Chile's unrestricted voucher program have been reported. Chang-Tai Hsieh and Miguel Urquiola found no evidence that vouchers improved average educational outcomes, though they observed that the best public school students left for private schools as a result of the program. Francisco Gallego, meanwhile, found that the competition increased students' test scores in public and voucher schools alike.

THE POLITICS OF SCHOOL VOUCHERS

In 2002 the U.S. Supreme Court affirmed the constitutionality of the Cleveland voucher program in *Zelman v. Simmons-Harris*, rejecting the claim that the use of public funds to send children to religious schools violated the First Amendment's establishment clause. The Court found the program to be neutral with respect to religion because parents were allowed "to exercise genuine choice among options" that included religious and secular private school, magnet schools, charter schools, and traditional public schools.

Despite *Zelman*, controversy continues to plague voucher initiatives. Voucher programs have faced strong opposition from teachers unions, the existing public school establishment, and such advocacy groups as People for the American Way and the National Association for the Advancement of Colored People. Through legislative battles and lawsuits, these groups have effectively slowed the expansion of school voucher programs. Outside of Milwaukee, where tremendous growth has occurred, only about 7,500 more students around the nation used publicly funded vouchers in 2005 than in 1991. Though considerably more students have participated in privately

financed school voucher programs, topping out at over 100,000 in 2000 (Ladner 2001), enrollments over the last several years appear to have either leveled off or declined.

State judges are partially responsible for arresting the expansion of voucher programs. A pilot voucher program enacted in Colorado in 2003 never saw the light of the day because the state's supreme court ruled that it violated the state constitution's requirement that local districts maintain control of locally raised funds and of "any discretion over the character of instruction participating students will receive at district expense" (*Owens v. Colorado Congress of Parents*, 2004). In early 2006, school vouchers suffered another setback when the Florida Supreme Court struck down the state's program in the name of educational "uniformity" in *Holmes v. Bush*. Other voucher programs have been defeated by voters. In November 2000, both California and Michigan voters rejected school-voucher ballot initiatives.

Public support for vouchers has proven difficult to gauge, not least because of survey respondents' sensitivity to the wording of questions. In 2002, for instance, the annual Phi Delta Kappa/Gallup Poll asked for people's opinion about vouchers in two different ways. A majority of respondents supported vouchers if asked one way but opposed them if asked another way. Since 2002 the Phi Delta Kappa/Gallup Poll has left out the more neutral of the two questions, which, incidentally, also yielded higher support for vouchers. Regardless of question wording, however, in 2001 Terry Moe found that low-income, black, and Hispanic residents in disadvantaged school districts constituted the strongest proponents of vouchers, while wealthy white suburban residents constituted the strongest opponents.

Among political elites, support for vouchers varies markedly across party lines. Republicans tend to favor them, championing the supposed power of unfettered markets and small government. Most Democrats, who have close ties to unions and a history of supporting public education, are skeptical of many forms of choice, especially vouchers. Indeed, congressional votes for the 2004 District of Columbia pilot voucher plan split along party lines. In the House, Republicans were 52 percentage points more likely than Democrats to support the plan, while in the Senate they were 42 percentage points more likely to do so.

Looking forward at the national level, school vouchers face an obvious political challenge. Those political elites who are predisposed to support vouchers (Republicans) disproportionately represent constituents who oppose them (suburban whites), while those elites (Democrats) who represent strong proponents of vouchers (urban minorities) also have strong ties to teachers unions, which vigorously oppose them. Despite calls for a national voucher program, the expansion of voucher programs is likely to be the continued result of a combination of privately funded initiatives and an unusual alliance of younger African-American city leaders and Republican mayors and governors.

SEE ALSO *Education; Education, Unequal; Educational Quality; Schooling; Schooling in the USA*

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William G. Howell
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SCHOOL OF LAUSANNE

SEE *Lausanne, School of.*

SCHOOLING

Around the world, organized education, or schooling as it is better known, has long been responsible for socializing members of society to adopt and practice its values and culture. For example, early schooling focused more on indoctrinating children into a collective religious, dynastic, or national identity rather than individual self-expression. From this standpoint, schooling sought to produce self-knowledge within educators so that they might help produce that knowledge in others. For nearly its entire existence, however, formal schooling has been highly selective in determining whom it educates and for what purpose. Until the advent of the Industrial Revolution, schooling was an activity relegated only to the elite members of a society, as its purpose was to perpetuate elitism and maintain class stratification.

Individuals were educated for careers in the clergy, military, government, and academia. In any given country, however, educated citizens made up only a small proportion of the population. The masses, if educated at all, simply learned through the transmission of information from family and other members of the community, as the elite classes did not believe educating the masses to be socially desirable or responsible (Gutek 1993). In the United Kingdom, for example, a majority of the population could neither read nor write until the early nineteenth century. This pattern of schooling remained consistent throughout much of the world until the Industrial Revolution.

With the Industrial Revolution, some societies found themselves in need of a new, educated middle class. Faced with the need to educate large populations, societies began to develop compulsory, state-supported schools. Because the population of citizens to be educated was growing, societies could no longer be as selective in determining who would be educated. As the number of students increased, they exhibited varying degrees of ability. As a result, schooling became a vehicle to sort students into various levels based on their abilities. Students believed to be able to profit most from schooling were tracked into more traditional paths, while those believed to be able to profit least were sorted into paths that led them out of the educational system. This practice of sorting students into different academic tracks, although now more sophisticated, has prevailed in education systems around the world.

As argued by scholars such as Michael Apple, Henri Giroux, Paulo Freire, and Joel Spring among others, there is an undeniable relationship between education, power, and the state. In light of the current globalization of schooling, academic success is almost exclusively defined in terms of "capital accumulation and the logic of the marketplace" (McLaren 2002, p. 34). Not only are working-class students affected by this principle, but middle-class students are as well. American culture, for example, continuously encourages the consumption of commodities as a mechanism to continue the cycle of accumulation, blinding even middle-class students to the self-repressive, oppressive nature of capitalism. The schools mimic this cycle by intellectual dependence in students (Gatto 1992). The focus of educational reform in the United States has been to create a force of "compliant, productive and patriotic workers for a resurgent America" (McLaren 2002, p. 187). Schools, with their factory-like structure, control the process of learning by keeping students on tight schedules regulated by bells and time blocks. Learning, therefore, is at the mercy of the school's schedule, and students learn only what can be taught in the allotted time span. Learning is prescribed by the society, and students are told what to learn, when to learn it, and how (Gatto 1992). Looking at this phenomenon from a Marxist perspective, capitalism diminishes the individual to a commodity with a certain value—labor value—that can be bought and sold all in the name of profit. In essence the ruling class (the capitalists) exploit the working class (the workers) by extracting "a surplus value beyond what is necessary for the working class to survive" (McLaren 2002, p. 198).

Teachers are also prescribed what and how to teach. Many teachers fear losing their jobs if they deviate from the curriculum that society has deemed appropriate for them to follow. From a critical educational standpoint, schooling is a "form of power which reveals its connections to the entrenched interests of capital and the state, exercised 'over the heads of teachers' and through teachers over their students" (Banya 2002). This is evident in the push toward incorporating corporate management pedagogies within the classroom. Teachers are provided

"teacher-proof" state-mandated curricula that adopt management-type pedagogies that reduce their role to that of nothing more than a "semi-skilled, low-paid clerk" (McLaren 2002). Furthermore, they are "unwitting pawns in class and cultural domination and exploitation" (McLaren 2002, p. 221).

Society, through schools, teaches us that success can be achieved by intelligence, hard work, and creativity. The school system is built on the spirit of meritocracy—those students who try harder and have more innate intelligence reap their rightful rewards. Students who possess the dominant cultural capital—ways of talking, acting, and socializing—are rewarded, while those possessing the cultural capital of the oppressed are devalued. As a result, schools perpetuate the unjust system of trading in cultural capital for economic capital.

Educational inequality is a persistent problem, particularly in terms of race, gender, and social class. In the United States, for example, women and minorities have historically been limited by and excluded from attaining higher levels of education by discriminatory policies. There are those, however, who argue that "things should be different now" because of the opportunities in the public and private sectors available to those who have a good education.

In terms of race, a growing black middle class has raised new concerns regarding the lagging school performance of many African Americans. The new argument is that "class" and not "race" are the root causes of inequality in America. As middle-class African Americans leave urban, inner-city areas, the largely manufacturing employment sector also leaves, thus creating an "underclass" of citizens who are left behind to endure the brunt of poverty and inequality. Poverty is a major barrier to quality education, as many schools in lower income communities have curricula designed to keep poor people in their place (Spring 1989).

In terms of gender, teachers are more likely to value the opinions of middle-class white male students over those of females (McLaren 2002). Girls, for example, are expected to be composed and passive, while boys are encouraged to be more academically aggressive. As a result, girls are less likely to take math and science courses, more likely to attribute failure to internal factors, and although they start school ahead of boys in reading and math, they graduate from high school with lower scores in both areas.

These practices are not perpetuated by force, however. The dominant culture, rather, is able to exercise power over subordinate classes through hegemony—the maintenance of domination through consensual social practices, social forms, and social structures (McLaren 2002). Students are not taught to question the prevailing capitalist values of the nation, and as a result, the culture has helped produce a "veritable passion for ignorance" (McLaren 2002, p. 217). And the social structures—the church, the schools, the mass media and the family—have all been shaped by the dialectical contradiction between labor and capital.

This marketization of schooling is not solely a Western phenomenon. Educational systems in many West African countries were initially developed in the image of Western-type educational systems during the late 1800s and early 1900s in response to perceived needs of the colonizers (Banya 2006). Schools were established for a variety of reasons—commercial, religious, and political—but rarely were they established for indigenous needs. Initially, Christian churches played a major role in the development of educational facilities, and later trading companies and local colonial governments eventually provided their own (Banya 2006).

The major aims of the school systems were to provide personnel for the activities of government administration, the church, and commerce. In attempting to achieve these aims, the frame of reference was entirely Western. In most countries the systems were elitist, focusing their resources and attention on the students who could successfully negotiate the system and take their place in the colonial structure that was being established. As in Western education, West African schools have the responsibility of socializing students to the values and customs of the society. Primary education, for example, introduces those fundamentals necessary to produce an individual who, at a basic level, is able to contribute meaningfully to life in his or her community. Furthermore, the goals of junior and senior secondary level education are the continued acquisition of basic skills and knowledge and the introduction of subjects encouraging the development of nationally desired and saleable skills. Schooling in this sense is designed to utilize each individual's ability, aptitude and interest to equip individuals with skills to satisfy society's manpower needs. They are also expected to develop a character that would help cultivate desirable attitudes and regard for the nation's well-being (Banya 2006).

While the argument can be made that the function of schooling is to prepare citizens to effectively participate in a global economy, it is also important to understand its role in creating autonomous, independent thinkers. To date, however, educational systems continue to perpetuate inequity and injustice.

SEE ALSO *Black Middle Class; Capitalism; Colonialism; Curriculum; Education, USA; Freire, Paulo; Marxism; Middle Class; Missionaries; Pedagogy; Schooling in the USA; Socialism; Socialization; Stratification; Tracking in Schools; Working Class*

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Shelby Gilbert

SCHOOLING IN THE USA

The ancient Greeks believed that education was the optimal means for transmitting and reinforcing societal values through the generations. They believed that religious life should coexist with public life (e.g., society and the state) so that society might flourish by sustaining the prevailing culture's norms and values. For this process to occur, the young must be trained and educated and their character shaped.

COLONIAL EDUCATION

Many U.S. founders adopted a similar theory of education, believing that the republic would not survive without sufficiently educated citizens. For the founders' ideas to thrive, appropriate policies were needed to drive the process of educating young citizens in God and country. The importance of public education and the policies that drive its function have transformed and continuously shaped the identity of the United States since its inception, creating an often turbulent history. Many of the founders of American education focused on education as vital to the continual progression of the republic and, in particular, white Protestant morals. The U.S. educational system and the policies enacted were for white males, by white males, for the purpose of advocating their economic, social, and political interests. After much resistance, women were later granted admission to education, and blacks were the last minority group to gain access.

The linkage between public life and education in the United States was not immediate (Salomone 2000). Seventeenth-century colonists did not believe that religion and public life should coexist. In fact, the founders instituted a separation of church and state. As a result, schools were used primarily to reinforce the religious beliefs of the prevailing white citizenry. Since the colonists' main financial resource was agriculture, education was less critical to the economy. Schooling took place primarily within the home, as the burden of teaching children was laid upon the family unit and the white Protestant church. The few schools that existed at the time were seen as short-term places of learning. Many were held for just ten to twelve weeks out of the year, favored boys, and were substantially influenced by wealthy landowners and the Protestant perspective. Early schools also charged fees, which helped to stretch the minuscule monies spent by towns. Before the American Revolution, "education was neither free nor public" (Kaestle 2001, p. 20). Indeed, a family's race, wealth, and social status heavily impacted the amount of education their children received and their potential outcomes.

THE COMMON SCHOOL

Following the American Revolution, influential men such as Thomas Jefferson, Noah Webster, and Benjamin Rush became concerned at the lack of school expansion and the uneven distribution of education. They advocated statewide education that would be systematically supervised. During the 1790s, Jefferson and Rush made failed attempts to legislate state systems of education in Virginia and Pennsylvania. But with the help of Horace Mann, the first secretary of education for Massachusetts, the idea of a statewide school system finally took hold. Mann devised the "Common School," which replaced the colonial mode of education. These schools would impart a higher quality of education for both boys and girls, giving them a chance for a good life while ensuring the survival of the republic. He proposed that schooling should be free and thus be equally accessible to all, thereby increasing the social capital of all, regardless of social position in life, and enhancing democracy. Mann understood that children of higher social status who could attend school had an advantage because of the cultural capital of belonging to a high-status family with high academic expectations. Following Mann's common schooling initiative, education was to put all children, regardless of cultural capital, on an equal footing. Schools would be headed by women, who many felt were dispositionally designed by God to be the principal educators for the white race. Many young women headed west not only to teach the three R's but also to instill discipline and promote national ideals. The common school became the new direction and principal version of public education throughout the United States.

This approach did not proceed without major conflicts between political parties, such as the Jacksonian

Democrats and the Whigs, who debated the role of the government in school expansion and policies. Resistance to centralized state mandates and government intervention also took place in local communities around the country. But Mann persisted in his fight to end the inequalities of the colonial educational system, and in 1860 state laws were established instituting government control. Finally, schools would be funded by taxes and follow state standards.

THE INDUSTRIAL REVOLUTION AND BEYOND

The purpose of common schools shifted again as a result of the Industrial Revolution and the concomitant increase in immigration. Most white Americans were concerned about the new immigrants, regarding them as poor, socially and morally deviant, and threatening to the predominant white Protestant way of life. Schooling became a critical device for assimilating new immigrants to the ideas of Protestant morals, respect for private property and authority, hard work, patriotism, and accepting one's given second-class citizenship in the social hierarchy, while at the same time training them to understand the political and public affairs that were important to expanding America through the world economy.

The nineteenth century ended with many changes in education and a vast expansion of American schools. Many scholars have noted that the changes in education and educational policy were closely connected to U.S. economic needs (e.g., Vinovskis 1999). The practice of holding school for children until the eighth grade changed because of the new skills demanded of workers. Children were being asked to stay in school longer than they had in previous decades. Later, secondary education was added. In addition, rising curriculum standards, an increased teachers' knowledge base, and additional state and federal control forced the creation of stricter education policies that standardized the practice of education.

Because of government and business influences, education policy transitioned from the philosophy that the role of schools was to provide moral teaching to the philosophy that their role was to provide vocational and industrial education. After World War I, group intelligence tests were used to place children on curricular tracks that purported to demonstrate differences among immigrants, racial minorities, and whites. In the end, the purpose was to show the country that immigration should be restricted. Some proponents of IQ tests felt that they could also be used to assign groups of children to tracks that allegedly offered education that benefited their individual needs. But many saw the educational policies that drove these tests as not simply assigning children to appropriate vocational or academic tracks but as a form of social engineering that restricted the opportunities of immigrants and other minorities.

By the 1950s, many government officials were coming to believe that schools suffered from lower standards that enabled such countries as the Soviet Union to beat the United States in the space race. In response, policy initiatives such as the National Education Defense Act of 1958 provided funding for graduate students to study foreign languages, mathematics, and other sciences. Later, "education, as a form of investment in human capital, was recognized as an important component of economic development in the 1960s" (Vinovskis 1999, p. 153). In decades to come, education policy would be used to provide for the growth of schooling to stimulate economic expansion. This idea of viewing children as human capital was renewed in the 1980s and 1990s and continues in the twenty-first century.

THE CONTEMPORARY SCENE

Although in contemporary America schooling is believed to be universal and connected to the founders' purpose, discussion surrounding public education is more complicated today than ever. Many groups are attempting to reform public education through a variety of initiatives, and many of the same past issues have reemerged. The actors in these conflicts include politicians, administrators, boards of education, special-interest groups, teachers unions, corporations, and foundations. Many functionalists argue that public education and policy have triumphed because education has stayed true to the founders' ideals in continuing the success of the republic. Functionalists accept social inequality as necessary, arguing that social inequality encourages competition, which pushes people to perform to the best of their abilities to attain a desired social level. Therefore, individuals and minority groups without power are in constant conflict, always striving for a better place on the social hierarchy. These theorists believe that an individual or a group's social mobility is determined by their own efforts because everyone, regardless of race or gender, has equal access to education and resources.

Both the Reagan and Bush administrations of the 1980s and 1990s closely adhered to this functionalist doctrine, favoring political approaches to social issues that affected the poor and minority groups. Under the functionalist paradigm, individuals are to blame for their own lack of resources, power, and education. Both administrations blamed the educational system for the failure of public education. The 1980s reports *A Nation at Risk* and *Action for Excellence* blamed public education for the nation's decreased status in the global markets. With Richard Herrnstein and Charles Murray's 1994 book *The Bell Curve*, attention was redirected to children, especially

the supposed deficiency of minority and lower-class children, who were blamed for the nation's drop in competitiveness in global markets.

This approach again became prevalent in the George W. Bush administration through policies and legislation such as No Child Left Behind. Supporters of the policy argue that the education reform act "is aimed at addressing the needs of disadvantaged children, closing the gap between the rich and poor kids, improving accountability, and offering schools more financial resources to improve their performance" (Giroux 2003, p. 72). Parents can obtain vouchers to choose and pay for education that fits their child's needs if their current school is not achieving to government standards within three years. Many voters agreed with Bush, voting largely for a presidential candidate who ran on a strong market-based approach to education policy. This market approach is also seen in the concept of charter schools, which first emerged in 1992 in Minnesota as advocates demanded change in urban schools. Proponents of charter schools see them as a way of enhancing competition in public education by focusing on student achievement while at the same time empowering parents with choice. Opponents such as Jonathan Kozol (1992) note that "choice will fragmentize ambition, so that the individual parent will be forced to claw and scramble for the good of her kid and her kid only, at whatever cost to everybody else" (p. 92). But in reality, the market approach and legislation such as No Child Left Behind focus on the academic and social deficits of poor and minority children and not on the structural deficits of the economic and educational institutions. The blaming tactic that focuses on the low achievement of poor and minority children as well as the operation of public schools takes attention away from economic issues that are closely connected to student achievement. It has also galvanized the connection of the corporate world with public education by treating schools as if they were businesses within the marketplace.

RACE, CLASS, AND EDUCATION

Conflict theorists have attempted to deconstruct the functionalist doctrine. They charge that every society operates socially and economically on the grounds of inequality that privileges the wealthy and powerful while attempting to convince lower groups that the gap in power, resources, or education are necessary to the survival of the society. Conflict theorists argue that schools are set up as mechanisms to sort and control minorities in an unequal manner, inhibiting their social mobility. In essence, regardless of effort, some children in U.S. public schools are set up to "lose."

Conflict theorists consider the current schooling issues as a prime example of the inequalities that exist in public education. Miron (1996) states that in a study of an urban school setting in Louisiana, black students articulated a general dislike for the way school officials treated them. Miron asserts that the curriculum was used as a tool to discriminate against black students. In terms of observed behavior and academic practices, whites were found to be subjected to less rigorous observation than black students.

Secondly, despite significant progress during the civil rights era, some scholars today feel that the spirit of "true" integration never occurred in U.S. public schools. In fact, many feel that public schools today have shown signs of de facto segregation where by choice whites are increasingly leaving ethnically diverse inner-city schools for more homogeneous white surroundings in suburbs (Bell 2004; Kozol 2005). This becomes all the more believable when one recalls that the foundation of U.S. public education meant that whites would benefit from a white system of control.

African Americans have a particularly long history of denied and suppressed educational opportunities. For example, in the South, the expansion of the rights, privileges, and access to formally all-white institutions for blacks took place during Reconstruction (1866–1877). Blacks participated and successfully held governmental positions of power, voted in elections, owned land, partook in the economy, and sought education that was once denied to them during the era of slavery. Moreover, the Reconstruction legislation that affected public schooling in the South was the result of the important and influential efforts of ex-slaves not only to shape but also to create a catalyst for an established public school system for all children, which continues to exist in the South today. Ex-slaves' desire for schooling was felt by old and young alike. Blacks at the time believed that obtaining an education enabled them to open the doors to democratic politics in the United States. In order to obtain an education, they appealed to federal and state governments.

Ex-slaves' desire for education was founded on "self-help." Even though blacks held together in securing a decent amount of resources on their own, blacks also knew they needed the assistance of outside white investors, as well as state and federal government funding, physical protection, and legislation that granted equality. Because of this need for assistance, blacks met many obstacles: lack of money, conflicts with northern white missionaries who tried to control the education process, community conflicts, and acts of terrorism. In terms of education, because of the protection of the Thirteenth, Fourteenth, and Fifteenth Amendments and the Civil Rights Acts of 1868 and 1875, blacks for a while enjoyed equal access to education. But this period of radical progressiveness and alliances between whites and blacks did

not last long because of such factors as the withdrawal of Northern troops from the South, the ousting of blacks from the Republican Party, physical and emotional terrorism by the Ku Klux Klan, and the Democratic Party's return to political power. The U.S. Supreme Court ruling in *Plessy v. Ferguson* (1896) marked the collapse of Reconstruction by making it constitutionally legal to segregate blacks from whites as long as "equality" existed in their separation.

Two race "worlds" took root within the first decade of the twentieth century (Bell 2004). This was no more evident than in public education, with white and black schools. By separating whites from blacks, the process of schooling was another institutional example of the continuation of racial oppression of blacks. This unequal treatment was observed in the lack of adequate pay for school staff, inferior facilities, and lack of suitable academic resources in black schools compared to white schools. Even in the face of school segregation and considerably unequal financial resources—despite *Plessy*'s "separate-but-equal" clause—many black schools thrived because of the adoption of a "counterhegemonic" theme, meaning that they were "organized in opposition to the dominant ideology of white supremacy and Black intellectual inferiority" in order to create literate, academically achieving citizens and leaders who would continue the racial uplift of African Americans (Perry, Steele, and Hilliard 2003, p. 91). W. E. B. Du Bois in *Black Reconstruction* discussed how these schools did not exist in the South without the initiatives of blacks. Shortly after the Civil War, newly elected black officials and their collaborative efforts with the Freedman's Bureau, aid societies, and missionary groups all helped to establish the first state-financed public education system for young and old blacks alike. During Reconstruction, many free blacks began to educate themselves and others. Black women soon filled an important role in establishing and maintaining the schools. These new facilities helped blacks become literate and empowered in the business, economic, and judicial worlds that were foreign to them. Schools provided a place for blacks to be educated on the agenda of the Republican Party, their rights as free blacks, and the importance of voting.

The legal segregation of public schools continued until *Brown v. Board of Education* (1954). In terms of Native Americans, they too were required to attend segregated government schools where they were forced to abandon their tribal traditions, dress, appearance, and customs, in an effort to assimilate them into white customs.

Educational policies and schooling have adapted to the dramatic changes in population, the economy, the push for racial equality, technological advances, war, and cultural transformation. What has remained constant is that elite whites who control power and resources continue to vie for power through policies, including educational policies that have been historically devised to maintain the status quo by denying equal access to education for all citizens. The foundation of inequality set in place by the founders is alive and present in today's education system.

SEE ALSO Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Education, Unequal; Norms*

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Terence D. Fitzgerald

SCHULTZ, THEODORE

SEE *Labor, Surplus: Conventional Economics; Lewis, W. Arthur; Subsistence Agriculture.*

SCHUMPETER, JOSEPH ALOIS

1883–1950

Joseph Alois Schumpeter was born in Triesch, Moravia (now the Czech Republic), on February 8, 1883, an only child of a textile manufacturer. After his father's premature death his mother married a high-ranking officer in the Austro-Hungarian army. Young Schumpeter enjoyed a typically aristocratic education—strong on the humanities, weak on mathematics and science—at the Theresianum in Vienna.

As a law student at the University of Vienna Schumpeter took courses in economics from Friedrich von Wieser (1851–1926) and participated in Eugen Böhm von Bawerk's (1851–1914) seminars, joining other budding economists such as Ludwig von Mises (1881–1973) and Austro-Marxists Otto Bauer (1881–1938) and Rudolf Hilferding (1877–1941). He received his doctorate in 1906 and published his first book, *Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie* (1908; still untranslated), a methodological treatise on economic theory. In 1909 he was offered a position as an associate professor in Czernowitz, capital of the southeastern crownland of the Austro-Hungarian Empire (now in Ukraine). In 1911 he was appointed to the chair of political economy at the University of Graz. By the outbreak of World War I he had already established an international reputation as an economist of the first rank: at the age of thirty he was awarded an honorary degree by Columbia University.

After unsuccessful excursions into politics and banking following World War I—he had served as secretary of state for finance for seven months in 1919 in the new republican Austrian government, and in 1921 he assumed directorship of the Biedermann Bank in Vienna—he returned to academia for good in 1925 as professor of public finance at the University of Bonn in Germany.

His sojourn in Bonn was overshadowed by the deaths of his beloved second wife and shortly afterward of his mother, blows from which he never recovered. Schumpeter's permanent tenure at Harvard University began on September 1, 1932, and he was connected with the university continuously, except for two sabbatical leaves, until his death on January 8, 1950. Schumpeter was a founding member of the Econometric Society, and served as its president from 1937 to 1941. In 1948 he was elected, as the first European, president of the American Economic Association.

Schumpeter was an encyclopedic scholar, equally versed in history, sociology, and economics, with a stupendous knowledge in the history of economic thought. More than any other economist before him, with the possible exception of German social philosopher Karl Marx (1818–1883), Schumpeter highlighted the role of innovation for the performance of market capitalism. By *innovation* he meant the introduction of new production technologies and new goods, the conquest of a new supply of raw materials, the setting up of new organizations of industries, and the opening up of new markets. For Schumpeter entrepreneurial action conceived as innovation is the central feature of capitalism, and it forms the backdrop to his theories of credit, interest, capital, profit, and the business cycle. In Schumpeter's scheme the entrepreneur as an agent of innovative change is a revolutionary, overturning tried and tested ways, departing from routine, resisting inertia, and producing novelty by putting extant resources to new uses. The carrying out of new combinations in production is the essence of "creative destruction," a task accomplished by entrepreneurs.

Such bold and confident ways represent a distinct economic function. It is distinct from that of the inventor, the imitator, the capitalist, the banker, the manager, the landowner, and the worker. The entrepreneur may be any or all of these things, but if so it would be by coincidence rather than by nature of function. Neither is the entrepreneurial function necessarily tied to possession of wealth although it may be helpful, nor do entrepreneurs form a class in a sociological sense. It is not money per se that motivates entrepreneurs but rather the dream to found a private empire and the joy of getting things done against the odds.

The results of the entrepreneurially fueled innovation process being inherently uncertain, it is refractory to reduce them to mere calculation. The knowledge buttressing innovation need not be new, it is usually available knowledge that has not been deployed before at all, or else it is utilized in new ways. According to Schumpeter innovation is above all an act of will, depending on leadership, and should not be confused with scientific (or otherwise) invention. Schumpeter broke with tradition by denying that profit is a return to risk. Schumpeter argued that risk falls on the capitalist, not on the entrepreneur *as* entrepreneur, the latter as such being bereft of capital.

Schumpeter's final great work published during his lifetime, *Capitalism, Socialism, and Democracy* (1942), focused on sociological aspects of capitalism, in particular the institutional structure of capitalist society. The paradoxical message emanating from his most popular book is that capitalism is doomed, not by its economic failure (as Marx averred) but by its success. Writing in the early 1940s, Schumpeter pointed to concrete tendencies within advanced capitalist society that he perceived as depleting its moral capital. He singled out the resentment capitalism breeds among intellectuals. According to Schumpeter capitalism had been disfigured by various historical tendencies to such an extent that it should really be called "socialism." The transformations included the growth of interventionist governments, the advent of a managerial bureaucracy within both the public and private sectors, and the rise of a professional middle class with a mind-set completely at odds with that of the classic capitalist. These developments had been accelerated by economic depression and war. According to Schumpeter, socialism is merely the acknowledgment that they have taken place.

Among economists Schumpeter has been interpreted (rightly or wrongly) as saying that with the advent of large corporations and their generously funded research and development departments entrepreneurship and innovation would become increasingly routinized. The withering away of entrepreneurship would amount to innovation being reduced to a decision-making process amenable to rational calculation. This is precisely how the Soviet economy and its Eastern European satellites had set up their innovation systems (with disastrous consequences), on the assumption that innovation, being mere routine business, is plannable. Such a rationalistic approach to the innovation process would be incompatible with capitalist institutions.

In recent decades Schumpeter's ideas on capitalism as "a method of evolutionary change" have instigated a renaissance in research on technological change led by economists, such as Richard N. Nelson and Sidney G. Winter (1982), favoring an evolutionary approach to economics. Indeed Schumpeterian economics is one of the main sources of evolutionary economics.

SEE ALSO *Austro-Marxism; Capitalism; Entrepreneurship; Great Depression; Hilferding, Rudolf; Marx, Karl; Mises, Ludwig Edler von; Socialism; Technological Progress, Economic Growth*

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Stephan Boehm

SCIENCE

The term *science* (in Latin *scientia*, in Greek *epistēmē*) means "knowledge." In philosophy it refers strictly to proven ideas, to the exclusion of hypotheses or speculations. Until the twentieth century, proof remained mysterious, but what it achieves has been clear since antiquity: certainty, truth unshakable by criticism or doubt. In the nineteenth century Newtonian mechanics was admitted as scientific in this strict sense, and its overthrow was an earthquake. Scholars now agree that certitude is limited to logic and mathematics. Thus scientists have shifted their efforts toward securing for science a surrogate certainty—usually probability.

This shift raises many new questions, thus far unstudied. For example, is Isaac Newton's theory still scientific? In 1962 the historian of science Thomas S. Kuhn spoke of "pre-science" and of "petrified science." Which defunct theory should remain in the up-to-date science textbook? Kuhn suggested that it should present only the latest ideas. Which ones? If not proof, what makes an idea scientific? This is one version of the problem of the demarcation of science (as sets of statements) in disregard for other aspects of the scientific enterprise and its context—intellectual, educational, sociopolitical, and so on. Another possible point of departure is the social dimension of science. In the early seventeenth century the English philosopher Francis Bacon said that the advancement of science would improve the human condition, so investing efforts in scientific research would be the most efficient way to spend one's spare time. Georg Wilhelm Friedrich Hegel, the early-nineteenth-century German philosopher, noted that the invention of gunpowder made city walls useless and so altered the political landscape. The German political philosopher Karl Marx in the nineteenth century equated science with technology (*grosso modo*) and declared all social and political changes as due to technological progress. Following on Marx, in 1939 the English physicist J. D. Bernal made the dubious claim that medieval science was superior to ancient science. In 1964 the Marxist philosopher Louis Althusser rejected many of Marx's sweeping generalizations but still declared the humanities mostly errors that express bourgeois ideology; he contrasted this ideology with science proper, which includes both the exact sciences and revolutionary dialectical materialism as he understood it. He did not trouble himself to demarcate these fields sufficiently to invite detailed discussions as to whether a certain theory, say, in physics or in economics, is or is not scientific. In 1919—decades before Althusser—the American economist Thorstein Veblen studied the nature of science in an effort to examine the validity of claims for the scientific status of diverse economic theories, including that of Marx. He demarcated science historically, by reference to the scientific ethos that, he said, these theories represent; this ethos is often called *humanism*, the same ethos that Althusser later dismissed as bourgeois. Veblen also drew attention to the wealth of empirical finds and role of theories as explanatory (as opposed to classificatory).

Twentieth-century social science developed ideas about specific aspects of society, including prestige—social prestige, the prestige of ideas, and the prestige of scientific ideas. (Prestige is enhanced by power over life; thus nuclear physics is most prestigious.) The concept of science must include the gathering of some sort of empirical information and the search for some interconnections between that information and certain ideas. Science then appears to involve intellectual activities of some sort. Already four centuries ago Bacon deemed science the outcome of the indiscriminate collection of factual information and its use as a solid foundation on which to construct truly scientific ideas. His view, perhaps modified, prevails as the myth of science. (Being a myth proper, it is used at times in its original variant and at other times in modification.) The problem of demarcation then becomes: What do I know, and how can I show that I truly know it? This approach puts science in a psychological context, raising the question, as suggested by the twentieth-century philosopher of science Karl Popper: Is the psychology used to characterize science scientific? Science is also a publicly available fund of knowledge; the traditional view of it as psychological leads to the view (characteristic of the approaches known as reductionism and psychologism) of everything social as inherently psychological.

If science can be viewed as psychological, so too can mathematics, as suggested by Bacon and the nineteenth-century English philosopher and economist John Stuart Mill. The refutation of this notion led to the revolutionary shift of the view of knowledge from psychology to sociology—from my knowledge to ours—opening the way for the study of the enterprise of science, its prestige, and the social class of its practitioners. This in turn opens interesting secondary questions: Are the teaching of science and the administration of science scientific? (Is the dean of the faculty of science a scientist?) Is all science-based technology scientific? The sociology of science, a young discipline hatched in the early twentieth century, has not yet reached these questions. Such questions pose a difficulty: Science is international, but science-based professions are not. (Compare Japanese science with Japanese technology.) Come to think of it, how international is science? (Is establishing some lingua franca for science advisable?)

Here is a general dispute about all human studies: Existentialists and postmodernists want them to be utterly context dependent, case by case; positivists and analysts want them utterly context free. Seeking a middle ground in sociological laws to set limits on fragmentation, one may view social institutions as generalizations that determine the extent of context dependence. Money is one such institution. Rather than speak separately of the interests of every economic agent, we speak of their profit motive, which, as Georg Simmel argued in 1900, is an intermediary. This role of money makes it important and explains the success of the economic theory that eliminates it from its equations (by replacing prices with relative prices). The trouble is, while waiting for sociology to develop, how should social scientists proceed? They can make use of trivial sociology that at times is powerful. The suitable general concept here is that of games or science regulated by recognized rules (usually institutionalized).

Games need not be problematic unless placed under the artificial limitations imposed in game theory, and as in the case of war games, they need not always be frivolous. As to the triviality of the sociology of games, it is advantageous: It stops the question-begging nature of the theory of science from becoming a nuisance. Thus the rules of the game are negotiable. The game of science then might, but need not, exclude science administration, science education, (science-based) technology, and more. Also the rules may be flexible. All this is a secondary issue, as it obviously should be, as long as science remains chiefly the search for ideas and information of a certain kind. The problem of demarcation now reappears: Which kind? Any kind we want.

As this view of science allows excessive freedom, it also invites instituting limitations—to some function, to some tradition, or to some existing paradigms. Paradigms can be ideas (Newton on gravity), preferred ideas (Einstein), institutions (the Royal Society of London, the local medical school, the patent office), traditions, perhaps ways of life. Approaches to problems via paradigms are limited: Taken too seriously, they prove troublesome as too much may depend on an innocent arbitrary choice. The paradigm of this trouble concerns choices of words resting on the view that the commonness of usage is its only justification. We do not want all usage justified, because we want language to function as a useful means for communication.

What then is the function of science? Among several functions, its most conspicuous is explanation, discovery, invention, better living. Jumping a few steps ahead, one can say that its chief function is the search for true explanations (as suggested by Newton, Einstein, and Popper). Its other functions are peripheral. Assuming this to be the case, one can view science as primarily but not solely the enterprise of approaching true explanations of increasing funds of publicly available information.

This is lovely but full of holes. How do we learn from experience? In what way are scientific theories empirical? Popper broke new ground when he said that theories are empirical when they exclude certain observations and to the extent that they do so. Testing them is, then, the search for these observations; the function of testing theories is to refute them so as to usher in their successors. Applying such a test to the theories of Marx and Sigmund Freud, Popper proved them nonempirical. This approach depends on the exact wording of theories, which may become testable by the enrichment of their contents. Popper later tried to square the two ideas: that the empirical is the refutable and that the aim of theorizing is the approximation of the truth (Einstein). The success of his attempt is under debate.

Robert K. Merton approached matters more historically. In 1938, in the wake of Max Weber, the German sociologist of the late nineteenth century and early twentieth century, Merton identified the scientific revolution with the establishment of the Royal Society of London and the motive for it as Protestantism. He then developed a quasi-Weberian model of science, resting on the theory of science of William Whewell (1840, 1858). Merton's views earned much fame and much criticism. The criticism is at times valid, as Whewell's view is outdated, and at times based on trivial evidence that he idealized science (which he frankly admitted), both in the sense of presenting it at its best and in the sense that Weber recommended the developing of an ideal type. Reports on poor examples of laboratory life as if they were representative appeared as alleged refutations of his views, although fraud is hard to eradicate anywhere.

The presentation of science by Michael Polanyi (1958, 1966) is the most intriguing, even though he played down the rationality of science. He compared the sociology of science to that of the arts and deemed both artistic and scientific training as the tacit transmission of ways of life in workshops by way of personal example. Polanyi's view is insightful and beneficial, although it overstresses tradition as endorsement while slighting the traditional encouragement of criticism and of independence (as suggested by Popper). Polanyi was in error when he ignored efforts to render the tacit explicit and open the results to criticism.

Polanyi's views were further developed by Kuhn, who wished to extend the instruction of leaders beyond their immediate personal example limited to their workshops. Their products can travel and serve as substitutes for personal examples. These become chief examples or, in Greek, paradigms. A science is mature, he said, as it gains a ruling paradigm. This notion appealed to those who wanted their products to serve as paradigms, especially in social studies, where the craving for status is strong. Kuhn later admitted that a territory can be divided between paradigms. He also admitted that identifying a paradigm is difficult. This difficulty should not trouble followers of Polanyi, but it does bother followers of Kuhn, as he declared paradigms obligatory. Kuhn's approach runs contrary to the view of Merton about the liberalism of science. Kuhn also declared his theory applicable only to the study of nature, not of society.

How do the studies of nature and society differ? Any discussion of this question has to be in accord with one view of science or another. One may of course go to and fro, using the best view of science to differentiate natural and social science and then taking the best differentiation one has to try to learn what it says about science. One thing is certain: Social sciences have a more important role

to play in the discussion of science than was heretofore believed.

SEE ALSO *Althusser, Louis; Existentialism; Freud, Sigmund; Ideology; Knowledge; Marx, Karl; Merton, Robert K; Mill, John Stuart; Paradigm; Philosophy of Science; Popper, Karl; Postmodernism; Revolutions, Scientific; Scientific Method; Scientism; Social Science; Sociology, Knowledge in; Veblen, Thorstein*

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Joseph Agassi

SCIENCE FICTION

Science fiction consists of stories, often set in the future and off the planet Earth, that emphasize scientific, sociological, and especially technological innovation. While a writer might imagine what could happen to, say, an Irish Catholic politician who felt attracted to his brother's American Episcopalian wife in the 1960s, a science fiction writer might imagine what could happen to an implant formed from the mental software of a human male and the hardware body and brain of a human female. Similarly, while Henry James (1843–1916), in *Daisy Miller* (1878), imagines a nineteenth-century American heiress involved with a European suitor, the science fiction writer Ursula K. Le Guin, in *The Left Hand of Darkness* (1969), speculates about a human male who comes to know a hermaphrodite humanoid, a Gethenian, who sometimes turns male or sometimes female, depending on its emotional circumstances (the Gethenian often remains neuter if no suitable partner is around). James concentrated his attention on Daisy Miller, her commanding father, her suitor, and so forth, while taking the social, cultural, and biological background for granted. Le Guin, in contrast, imagined a world without gender and in conse-

quence (or she so thought) without war, examining it through the eyes of her human visitor.

Science fiction has been said to begin with Mary Shelley's *Frankenstein* (1818) or with Jules Verne's *From the Earth to the Moon* (1865) and *Twenty Thousand Leagues under the Sea* (1870) or even as far back as Plato's *Timaeus* (c. 300 BCE), his imagined version of Atlantis. However, science fiction as a distinct literary genre, with specialty magazines such as *Amazing Science Fiction* and *Astounding Science Fiction*, dates from the late 1920s and early 1930s. Its "golden age" of the 1950s and 1960s was driven primarily by technological speculations about the future, whether set primarily on Earth or spreading throughout the galaxy (with science fiction heroes typically confronted by rapacious aliens). Early readers of science fiction were often budding engineers and natural scientists. Writers and characters were mostly male. Isaac Asimov (1920–1992), although he began publishing science fiction stories in his teens, became a professor of biochemistry at Boston University, eventually publishing over five hundred books. (He was fired from his tenured professorship, not for writing science fiction but for publishing factual science texts for the general reader—"popularizations"). Many of Asimov's stories concerned robot-human interactions. His Foundation series sketched the psychohistory of a vast galactic civilization, loosely paralleling the decline of the Roman Empire and the rise of the modern era.

Robert Heinlein (1907–1988) and Fritz Leiber (1910–1992) created theories of time travel that have fascinated philosophers and physicists (e.g., if you kill a butterfly in the age of dinosaurs, will this event cascade into a future in which intelligent dolphins dominate the world, or will the future conserve reality by resisting change?). In *Gather, Darkness!* (1943), Leiber anticipated a post–World War III dark age of theocracy in which a religious government maintains control using technology concealed as supposed miracles, only to be challenged by revolutionary forces that clothe their technology as witchcraft, thus making it *real* to the thoroughly medieval mind-set of the populace. Heinlein produced a version of Plato's *Republic*, titled *Space Cadet* (1948), in which he imagined a future where an intelligent elite has engineered a world government that the populace believes to be a democracy. Later, during a period of opposition to the U.S. war against Vietnam (1957–1975), the patriotic Heinlein lost trust in intellectuals and wrote *Starship Troopers* (1959), in which warriors ruled politically. Paradoxically, Heinlein also then wrote *Stranger in a Strange Land* (1961), from which American hippie readers enthusiastically co-opted the term *grok* for intimate understanding (as in free lovemaking), although they misconstrued Heinlein's underlying libertarian attitude. In retrospect, some see Heinlein as typifying male chauvinist science fiction. Paradoxically as well, his first novel in manuscript, *For Us, The Living*, written in 1939, describes a man who clashes with, and eventually accepts as wholly justified, a 2086 future in which women have social and career equality with men (this rejected manuscript was not published until 2004, after Heinlein's death).

In the late 1960s, science fiction began to draw more female authors and readers. A readership consisting of budding engineers and scientists gave place to social science and humanities students, while technological innovation, space war, and abstract ideas gave way to psychological and stylistic experimentation. The quietly egalitarian 1950s work of such science fiction writers as Judith Merril (1923–1997) and Katherine Maclean gave way to Joanna Russ's brilliantly feminist *Female Man* (1975), Ursula LeGuin's novels, and Alice B. Sheldon's (1915–1987) many short stories (published under the pen name James Tiptree Jr.). There were also "crossover" figures such as Kurt Vonnegut (1922–2007), who began his career in science fiction and then smoothly switched to a broader "mainstream" readership. Doris Lessing established her reputation as a mainstream writer but has also written much that is science fiction in content terms. In 1976 Octavia Butler (1947–2006) published *Kindred*, whose contemporary African American protagonist time travels to the antebellum South. Butler's Exogenesis series explores issues of sexual identity, sexuality, and power, blurring lines between science fiction and other literatures. Butler's work won her a coveted MacArthur Fellowship in 1995. In the 1980s and 1990s, Orson Scott Card dazzled the science fiction community with *Ender's Game* (1985), *Speaker for the Dead* (1986), and *Xenocide* (1991), infusing traditional science fiction with computer gaming and winning a large youth audience. A practicing Mormon who has complained that science fiction did not take religion seriously, Card has also written explicitly scriptural stories.

The term *mainstream* was adapted by the middle of the twentieth century to distinguish "literature" from specialized, not-quite-literary genres such as science fiction, horror stories, romance fiction, spy stories, and crime fiction (bookstores often arrange their shelves in accord with this distinction). At the same time, however, this breakdown can seem increasingly dubious. For one thing, older books tend to migrate to the literature shelves. Mary Shelley's *Frankenstein*, H. G. Wells's *The Time Machine* (1895), and Verne's *From the Earth to the Moon* will be found there, along with Fyodor Dostoyevsky's *Crime and Punishment* (1855) and Edgar Allan Poe's (1809–1849) horror stories. Graham Greene (1904–1991), who made his mark as a crime and espionage writer, is now wholly included in the literature sections of libraries and bookstores. "Classics" sections may include not only Poe, Wells, Greene, and Dostoyevsky, but also Arthur Conan

Doyle's (1859–1930) Sherlock Holmes detective stories and Leguin's and Lessing's writings, alongside such long-celebrated "literary giants" as Ernest Hemingway (1899–1961) and William Faulkner (1897–1962). Moreover, the centrality and celebrity once granted literary figures now generally envelops only writers, stars, and producers of movies and television. Quite simply, story writers such as Mark Twain (1835–1910) and O. Henry (1862–1910) were the most famous, most widely enjoyed, and best-paid professional entertainers of their day. Even as late as 1952, the issue of *Life* magazine that carried Hemingway's *The Old Man and the Sea* sold over five million copies in two days. Arguably, Hollywood and television comprise the only "mainstream" today.

SEE ALSO *Fiction; Le Guin, Ursula K.; Literature*

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Justin Leiber

SCIENTIFIC MANAGEMENT

SEE *Management.*

SCIENTIFIC METHOD

Research is scientific if and only if it follows a procedure known as *scientific method*. A received view of this method has evolved in the seventeenth century as a synthesis of ideas of Bacon, Boyle, and Newton. Roughly, scientific method consists of indiscriminate observations of regularities, gathering information on repeatable phenomena, and using it as a sound basis for theorizing. Scientific method is, then, a talisman for success. Accordingly, researchers strive to show that their work conforms to scientific method—to the point of distortion. Yet, famously, all guarantees of success in research are worthless. Plato declared that the validity of ideas depends on their pedigree. Tradition offers only two views on the source of ideas: It is intuition—intellectualism, apriorism (Plato)—or it is observation—empiricism, inductivism (Aristotle). Question: Where should thinking or observing begin? No answer. Reliance on both thought and experience as sources of knowledge is impossible, as they may mismatch; yet their judicious use as procedures is possible: Apriorism admits experience as hints; inductivism admits hypotheses as temporary scaffolding.

The promise of success that scientific method grants depends on the unlearning of prejudices. Sir Francis Bacon, the father of the modern scientific method and a precursor of the Enlightenment, was the first to realize that preconceived opinions distort observation, as they invariably confirm themselves; reliable observations come from unbiased minds. So he recommended relinquishing all preconceptions. This is radicalism; it bespeaks utter rationality. The classical rationalists of the Age of Reason viewed humans as utterly rational, with reason as free of local (individual) differences. Their theories ignored these differences; their economic theory concerned only free trade; their political theory deemed the state as taking care of the contracts, including those between ruler and subject; religion they viewed as private, independent of any established church. Social researchers thus viewed individual conduct as purely rational and as yielding to individually endorsed motives exclusively. Thus, their views on scientific method embody a view of humanity as rational and the individual as preceding society.

The received view of scientific method remained excessively rationalist, radical, ahistorical, individualist, and liberal. To date it dominates the natural sciences, economics, and behaviorist and Freudian psychology. After the failure of the French Revolution, the dominant view within social studies had history as its paradigm, and its agenda largely aimed at shunning radicalism by presenting political theory historically, deprecating democracy and science. As views on scientific method differed, so views differed as to whether social studies start with individuals and reach the study of the social whole or vice versa. This was then a backlash against radicalism. Its prime initiator was Georg Friedrich Wilhelm Hegel, who traced the roots of French revolutionary terror to the Enlightenment's dismissal of social authority as resting on prejudice. Scientific method is inapplicable to society, he declared, since societies have historical roots; there is no social prediction even though nations are subject to historical laws. Schelling, Hegel, and others, developed new methods, variants of which some twentieth-century thinkers embraced, especially Henri Bergson and Edmund Husserl. Following Hegel's claim that the methods of the natural and social sciences diverge, Wilhelm Dilthey suggested that whereas the natural sciences employ deductive explanations, the social sciences employ empathy. (Karl Popper endorsed this distinction, incidentally: His theory of explanation—situational logic—encompasses both

models, and allows for reference to both individuals and institutions.) Hegel's methodology is still popular among those who ignore scientific method. Conspicuous among his twentieth-century followers are Gabriel Marcel, Paul Ricouer, Martin Heidegger, Hans-Georg Gadamer, Jean-Paul Sartre, and Jacque Derrida. They all adopted variants of Husserl's method. Heidegger preferred poetic truth to scientific truth. Gadamer endorsed Hegel's objection to the Enlightenment movement's sweeping dismissal of prejudice. He recommended the study of texts, not of facts, hoping that certitude is achievable there, with wider conclusions. Derrida objected: There is no one certain way to read a text. Gadamer was adamant, expressing preference for Aristotle's text on physics over modern ones. Sartre first accepted scientific method and endorsed behaviorism. As he was later impressed with psychoanalysis, he gave up both. (Incidentally, Popper considered both violations of the rules of scientific method, as he rejected the received view.)

Hegel also influenced adherents to science, including Henri de St. Simon, Auguste Comte, John Stuart Mill, and Karl Marx. They sought the scientific historical laws that permit predictions. Marx stressed that scientific method sanctify his predictions, rendering them incontestable. (Not all his followers share his respect for science.) Does the use of scientific method validate Comte's theory of the three stages of history or Marx's view of history as propelled by the class struggle? Is dissent a challenge to their scientific credentials? Or did prejudice distort their use of scientific method? These are difficult questions.

William Whewell, a significant nineteenth-century transitional figure, dismissed the fear of prejudice. He contested Bacon's proposal to empty our minds of preconceived opinions, declaring all ideas preconceived. He trusted rigorous tests to eliminate error. Bacon promised that empty minds will follow scientific method and produce true theories; Whewell denied that: We need hypotheses; occasionally, researchers hit upon true ones and verify them empirically, he said. His view won popularity among physicists while social thinkers followed Mill.

Marx challenged the individualist, ahistorical economics with his historical prediction: As markets must be increasingly unstable, capitalism will give way to socialism—probably through civil war. At the end of the nineteenth century, Émile Durkheim and Max Weber, known as the fathers of modern sociology, circumvented him and shifted the debate away from history back to the other question that Hegel had raised: Which is primary, the individual or the social whole? Their writings on society and on scientific method ignore historical laws.

Durkheim's starting point was the claim that some "social facts" are observable (such as conformity to laws). This is hard to comprehend, but clearly, he wanted to broaden classical individualist methodology to make it recognize collective entities. He steered between Hegel's view of social forces and Marx's view of economic forces. He considered national cultures to be the glue that maintains collectives; in particular, religion is society's representation or celebration of itself.

Durkheim valued individual contributions to culture, as he admired science. Does his view of culture allow for this? He left this question open. Hence, as a response to Hegel, his theory is incomplete. His attention lay elsewhere: He insisted that a culture coheres with its society. He invented functionalism, the view that social wholes are coherent. A clear counterexample to this is crime: It is dysfunctional. He suggested that crime has a function: to remind society of the law. This does not block the counterexample: The need for violent reminders bespeaks incoherence. Once functionalism incorporates dysfunctional aspects, it becomes trivial and abandons coherence. Durkheim was inspired by Claude Bernard's observation that cold-blooded animals are more adapted to the environment but less energetic than warm-blooded ones. He applied this to the division of labor: High specialization enables a striking worker to bring society to a halt and forces it to cohere (organic solidarity). This is too vague to be open to criticism.

Weber rejected "one-sided materialism"—in allusion to Marx—and ascribed social values to ideas. His studies identify typical value-systems of typical members of various classes and societies. Unlike classical individuals who represent humanity in general, Weber's typical individuals represent subcollectives. His theory of scientific method thus steers between classical individualism and collectivism. To emphasize his reluctance to say whether societies are real, he called it "individualism of method."

Georg Simmel (a contemporary of Durkheim and Weber, but influential only after World War II) suggested that individual and society are equally primary, so that conflict is never totally avoidable. Karl Popper suggested considered action as strictly individual but within social contexts—situational logic—thus achieving a view that is in the traditional individualist mode, without being radical. This opens the road for new kinds of explanation—especially for actions aiming at institutional reform.

Popper's suggestion rests on his groundbreaking description of scientific theory as (not proven but) testable, namely, refutable. For success, this is necessary but insufficient: There is no guarantee. Scientific truth is then not *the* truth, but the best available approximation to it. This closes the debate comparing the rules for natural and social studies. For explanations in the social sciences to be refutable, they should center on individual actions.

Science is now increasingly seen as the search for answers to interesting questions that are open to criticism.

Another development is of the systemist outlook: Both individual and society are systems of sorts (Mario Bunge). How is action at all possible? This question is outside the domain of social studies; these take actions as given and center on their unintended consequences (Hayek)—especially actions intended to improve society. Systemism is incomplete without a theory of scientific method. Some variant of Popper's theory is an obvious candidate. This, however, is a matter for future discussions of scientific method adequate for social studies. The starting point of any such study has to be an examination of the history and sociology of the social sciences, especially of the question, what do we owe to the diverse school of thought of the past and to their august members?

SEE ALSO *Positivism*

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Joseph Agassi

SCIENTISM

Scientism, in a broad sense, is a belief in the superiority of science as a way of understanding. There are many different forms or aspects of this belief, but from the perspective of the social sciences, two aspects of scientism have assumed major significance. These are *methodological scientism*, the view that the methods of the natural sciences are the most (or only) appropriate way of understanding social phenomena, and *reductionist scientism* or physicalism, the view that mental and social phenomena can be reduced to or explained in terms of the concepts of the physical sciences. While *scientism* is sometimes used as a positive term by advocates of such positions, it is typically a pejorative label employed by critics.

While scientism has its roots in the work of Francis Bacon, Auguste Comte, Herbert Spencer, and other pre-twentieth-century writers, the term itself was first used by French writers in the 1930s. It was introduced into English by the economist Friedrich A. von Hayek (1899–1992) in several publications in the 1940s that were later collected in his book *The Counter-Revolution of Science* (1952). Hayek presented several arguments that later became central to critiques of scientism:

1. that meaning and intention are essential to understanding human action and social phenomena generally and that these are not reducible to physical terms;
2. that the social sciences seek to understand unique, particular phenomena as well as those that can be subsumed under general laws and that context is essential to explaining such phenomena; and
3. that much of the quantification prevalent in the social sciences is inappropriate, copying the form rather than the substance of physical science.

These arguments are prominent in what later became known as the "interpretive" approach to social science. The German theorist Jürgen Habermas (b. 1929) raised additional arguments against scientism, challenging the traditional separation of science and politics as well as asserting the social sciences' need for interpretive and situation-specific understanding.

While the reductionist version of scientism has sometimes been promoted by physical scientists and philosophers, twentieth-century debate in the social sciences largely focused on methodological issues and the ontological assumptions that inform them. The main arguments against scientism have been grounded in social constructivism, the view that we construct, rather than simply discover, the nature of the world. This view entails that scientific knowledge is simply one construction among others and has no exclusive claim to preeminence or truth. These arguments have informed both the methodological debates in the social sciences, often called the "paradigm wars," between quantitative and qualitative approaches and the broader critique of science itself (the "science wars"), most prominently in what has been called the "critical sociology of science." The latter combines social constructivism with Habermas's political analysis of science to argue that the authority of scientific "knowledge" derives not from any legitimate claim to "truth" about the world but from the rhetorical and political strategies used by scientists to promote their claims.

The "paradigm wars" were widely seen as waning during the last decade of the twentieth century, accompanied by increased acceptance of qualitative and interpretive research and the rise of what has been called "mixed methods" research, combining qualitative and quantitative approaches. In the early twenty-first century, however, scientistic views have gained renewed prominence and political support, particularly in British and American educational policies, where experimental methods have been promoted as "science-based" research, in opposition to the diversity of methods traditionally used in educational research. Attempts have been made to develop a middle-ground position, although some of these have been criticized as still incorporating scientistic assumptions.

Philosophers have also attempted to develop a middle ground between scientism and radical constructivism. One such attempt is the development of critical realism as an alternative to both empiricism and constructivism. Critical realism combines a constructivist epistemology (our *understanding* of the world is to a significant extent socially constructed) with a realist ontology (the world exists independently of our constructions and influences the success of those constructions). Similar views are widespread in the philosophy of science. A parallel critique has challenged the narrowly logical definition of science and scientific method promoted by positivist philosophers and emphasizes the grounding of scientific methods and understanding in our commonsense activities as inquirers. In combination these arguments support both the methodological and the antireductionist critiques of scientism and promote a broader understanding of science that is compatible with methodological and conceptual diversity. They do so while avoiding the relativism of radical constructivism and affirming the value for the social sciences of scientific concepts, such as causal explanation.

SEE ALSO *Epistemology; Science*

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Joseph A. Maxwell

SCOPES, JOHN

SEE *Scopes Trial.*

SCOPES TRIAL

The dramatic Scopes "Monkey Trial" in 1925 involved the prosecution of high school science teacher John T. Scopes (1900–1970) for violating Tennessee's Butler Law, outlawing the teaching of evolution in the state's public schools. The trial was one of American history's landmark courtroom battles and a watershed in what came to be widely understood as a cresting conflict between science and religion.

The publication of Charles Darwin's *Origin of Species* in 1859 was taken by many as a radical challenge to the Biblical accounts of humankind's origin. In the ensuing years, revolutionary advances in science and technology, increasing urbanization, and the growth of religious pluralism fed by mass immigration, buoyed both the self-confidence of science and the appeal of a secular public sphere. Evolutionary theory was applied to social relations to justify the laissez-faire (or hands-off) policies and economic inequalities of the Gilded Age (which many Christians condemned) as naturally occurring instances of the survival of the fittest. Prominent public thinkers increasingly argued that religion was dogmatic, superstitious, and impeded the scientific spirit essential to a more enlightened modernity. The 1920s, however, witnessed a revival of Fundamentalist Protestantism, aimed at fighting these trends, and many of the ideas—like evolution—that undergirded them by undermining the authority of Scripture. Part of the Fundamentalist counterattack involved state-level efforts to outlaw the teaching of Darwinian theory to public school children.

The Scopes trial was self-consciously conceived as a theatrical staging of these broad-ranging social debates. Tennessee's Butler Law was passed largely as a statement of principle. Few of its proponents either intended or expected that it would be aggressively enforced. The proponents of evolutionary theory, scientific investigation, academic freedom, and secular education (including the American Civil Liberties Union) actively recruited John Scopes, a general science teacher substituting as a biology teacher, to admit to having violated the law by teaching a lesson in evolution. They did so in full collusion with local town officials in Dayton, Tennessee (including the prosecutor), who hoped a dramatic public spectacle pitting the claims of science against religion would revive the economic fortunes of the ailing southern town. The town officials bore no ill will toward Scopes, who swam with the opposing side's lawyers during trial recesses. It was understood that, if convicted, Scopes would serve no jail time, but instead pay a fine generously provided by others. The prosecution and defense teams recruited two of the country's most famous lawyers to square off on behalf of science on one hand and the Bible on the other—the radical Chicago attorney (and proud atheist) Clarence Darrow (1857–1938) and the Populist evangelical former presidential candidate and secretary of state William Jennings Bryan (1860–1925), respectively. The trial was conducted in a carnival-like swirl of hot-dog and lemonade hawkers, souvenir vendors, and street-corner orators. The proceedings were broadcast live from Chicago on WGN radio and charted by swarms of reporters, including the celebrated American journalist H. L. Mencken (1880–1956). The sparring between the two lawyers, including Darrow's withering cross-examination of Bryan (who mounted the stand himself as an expert on biblical teaching) became the stuff of legend. Although the jury convicted Scopes, the consensus was that Darrow had effectively humiliated the creationists, striking a powerful blow for science and academic freedom. Many have held the trial's grueling ordeal responsible for Bryan's death only days after the verdict, as well as for the ensuing retreat of many fundamentalist Protestants from the nation's public life.

In subsequent years the Scopes trial retained a rich resonance as a symbol of the dangers of not only religious zealotry, but of religion in general, to the advancement of knowledge and intellectual freedom. These symbolic uses were evident in accounts of it in the most prominent cold war era American history textbooks and, most famously, in the Jerome Lawrence and Robert E. Lee play, *Inherit the Wind* (and its 1960 film adaptation by Stanley Kramer), which took dramatic liberties with real events by building up the depth of John Scopes's commitment to evolutionary theory and academic freedom and the ruthlessness and intolerance of the Dayton townspeople and prosecutors. These reconstructed memories were prominent in the culture at precisely the moment in the early 1960s that the U.S. Supreme Court held—in a run of Establishment Clause cases invalidating Bible reading and prayer in the schools—that the Constitution imposed a "high and impregnable" "wall of separation" between church and state. As evangelical and fundamentalist Christians became newly active in politics in the 1980s (in part in reaction to these judicial rulings) and as a new generation of critics of evolutionary theory and proponents of creationism and "intelligent design" gained influence, the meaning and legacy of the Scopes Trial are being reconsidered once again.

SEE ALSO *Christianity; Church and State; Civil Liberties; Creationism; Cross of Gold; Darwin, Charles; Fundamentalism, Christian; Populism; Science*

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Ken I. Kersch

SCOTTISH MORALISTS

The term *moralist* as used here is historically and technically specific. It describes loosely related but mutually supporting intellectual positions in modern metaphysics and epistemology; in morality, civil society, and the law; in economic and political theories; and in cultural history. Therefore the group of Scottish thinkers who are individually and collectively called *moralists*, though without unanimity in the details of their beliefs, share, in a general and in identifiable ways, compatible views on the nature of philosophy, social science, and politics.

These thinkers are easily identifiable in part because their mature professional lives were spent largely in Scotland, particularly—though not exclusively—at the universities of Glasgow and Edinburgh. Furthermore, their ideas blossomed and their influence radiated from Scotland out to the major centers of learning in modern Europe and beyond roughly between 1740 and 1800. It was in these sixty years that the most influential works were published by the Common Sense philosopher Thomas Reid (1710–1796), the Skeptical philosopher and historian David Hume (1711–1776), the economist Adam Smith (1723–1790), the jurist and cultural historian John Millar (1735–1801), and the sociologist and political scientist Adam Ferguson (1723–1816). Others whose works were part of the moralist trend before, during, and after the sixty-year period and who are privileged for the sake of analysis include: Francis Hutcheson (1694–1746), the jurist Henry Home, Lord Kames (1697–1782), the philosopher and biographer of Adam Smith, Dugald Stewart (1753–1828), and the economist James Mill (1773–1836). Also worthy of mention are James Ramsey McCulloch, Thomas Chalmers, Thomas Carlyle, William Robertson, James Boswell, James Hutton, Robert Wallace, and James Watts. Though born in Ireland to Scottish parents, the Utilitarian philosopher Francis Hutcheson is usually associated with the Scottish moralists because of his influence on Hume and Reid. Hutcheson's impact at the University of Glasgow, where he taught for many years, was so profound that some regard him as a founding father of the Scottish Enlightenment.

WHY SCOTLAND, WHY THEN? SOME HISTORICAL BACKGROUND

When the kingdoms of England and Scotland were united under King James VI in 1707, Scotland was in the midst of a series of so-called Jacobinite revolutions: The first occurred in 1690, the second in 1715, and the last in 1745. These social and political upheavals left Scots not just with a sense of cultural and national instability but also faced with economic challenges that would prove transformative. In order to keep up with its English and French neighbors, Scotland was forced to modernize its economy.

But competition with England and France transcended the domains of the purely political or economic. Cultural issues were never far behind. For example, in England and France it had become a matter of national pride among philosophers, scientists, and playwrights to publish or produce in the national vernacular. It was therefore notable when, in 1729 at the University of Glasgow, Hutcheson became the first to give a lecture in English rather than Latin.

A transformed political culture, the search for economic prosperity through modernization in the context of international competition, and the emergence of a dynamic civil society—these are some of the key factors that account for the national, cultural, and class coherence that characterizes a significant number of the group of thinkers and theorists we call the *Scottish moralists*.

SCIENTIFIC AND CULTURAL CONTRIBUTIONS

In its technical details, it is obvious that Scottish moral philosophy could not have been possible without Copernicus, Bacon, Galileo, Kepler, Boyle, and Newton. The works of these men transformed not just what scientists studied but also, more importantly, the method of inquiry itself. The development of fact-based methods of scientific research—as opposed to idealistic speculative rationalism—directly paved the way for a new kind of philosophy: empiricism. As scholastic speculation and discourse became supplanted by physical observation, measurement, and mechanical experimentation, philosophers like Hume responded by developing a skeptical approach toward traditional metaphysical problems. Hume's self-described "new" philosophy aimed to be grounded in, and reconciled with, the Newtonian and other mechanical and materialistic disciplines. For Hume, skepticism about the existence of the soul, causality, and the possibility of miracles were some of the natural results of his effort—to quote the subtitle of his *Treatise of Human Nature*—to "introduce the experimental method of reasoning into moral subjects."

One of the consequences of empiricist epistemology was antifoundationalism, not just in regard to interpretations of religious beliefs (like the belief in miracles), but also in the conceptions of popular morality and social ethics. *Utilitarianism*, inspired both by the empirical sciences and the new political sciences of writers like Hobbes, became a widely accepted perspective. Hutcheson was the first to use this term to mean "the greatest happiness for the greatest number," though he did so in response to Hobbes and Hume. Hobbes claimed that individuals acted, however indirectly, only out of self-interest and never altruistically. Hume's own methodological and substantive skepticism led him to draw the conclusion that the foundations of both individual and social morality were merely customary and conventional: Neither religion nor metaphysics can guarantee that our ideas of the proper and improper, right and wrong, good and bad, or beautiful and ugly are transcendentally grounded.

Empiricism and utilitarianism combined to produce the doctrine that individuals merely act out of self-interest and to seek pleasure and avoid pain. The doctrine in turn made it possible to say that neither religion nor morality nor aesthetics required, for their explanations, theological or metaphysical foundations. Hutcheson, for example, argued that individuals naturally value society and therefore naturally work cooperatively to achieve it, simply because of their naturally based capacity for feeling or sympathy. It is sympathy that leads otherwise unrelated and self-interested individuals to think and act benevolently toward one another. The task of culture and civilization was merely to promote this fellow-feeling, so that in society persons not only compete but also cooperate for the common good. It is ultimately fellow-feeling and a sense of mutual belonging that leads to well-ordered civil society, national peace, and commercial prosperity. One of the obvious consequences of Hutcheson's social and political philosophy is that being virtuous (e.g., doing what is proper, right, or good), because untethered from earlier theological and metaphysical moorings, amounts to a commitment in personal thought and action to increasing the "degrees of happiness" both for oneself and for all.

Empiricist and utilitarian theories also took hold in the sphere of economic thought. Adam Smith not only accepted the idea that individuals acted out of self-interest but also promoted this self-interest both as a particular kind of natural psychology and as a form of social rationality. In *The Wealth of Nations* (1776), a book considered the founding text of modern economics, Smith translated the original insights of utilitarian ethics into the argument that what is economically selfishly good for the individual is also generally good for the welfare of society. Smith notes: "As every individual … endeavours as much as he can both to employ his capital in the support of domestic industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labours to render the annual value of society as great as he can" (IV, 2.9).

In his famous phrase, the "invisible hand," Smith captured what he thought was going on in any prosperous economy. Dynamic and free commercial relations occur, in nearly mysterious ways, as a result of equilibrium between supply and demand. This equilibrium occurs not because individuals are acting selflessly, nor is it a result of heavy-handed government regulation or of business cartels and monopoly. Rather, market equilibrium is simply an empirical fact based on the psychology of the individual. The self-interested actor "neither intends to promote the public interest, nor knows how much he is promoting it" (IV.2.9). Thus it is the mere effort to look out for one's own economic interests ("he intends only his own security … he intends only his own gain") that makes the actor automatically "led by an invisible hand to promote an end which was no part of his intention" (IV.2.9). In even more colorful language, Smith anticipates objections to his observations by pointing out that it is "not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest" (IV.7.26).

Moreover, Smith believed that a society is worse off in a government-regulated economy. Market forces alone appear to successfully ensure that an individual, "by pursuing his own interest … frequently promotes that of society more effectually than when he really intends to promote it" (IV.2.9). Smith was, accordingly, entirely skeptical about any hope that "much good [can be] done by those who affected to trade for the public good" (IV.2.9). This position provides the reasoning behind the laissez-faire doctrine in classical economics, a doctrine whose origin is rightly attributed to Smith.

What stands out the most in the above-mentioned moral, social, and economic theories is confidence in the autonomy both of the individual and of society. This confidence translates into the belief that a society and its culture—its history—can be consciously made and remade. It inspired the moralist intellectuals to propose progressive theories of history. In their writings, the word *development* acquired an explicitly historical character. Against the feudal worldviews shaped predominantly by traditional attachments to class and land, in which social hierarchies were justified by religion and theology, the moralists proposed a conception of history as a domain controlled by autonomous individuals and their collective quest for rational self-determination. In addition to Smith's *Wealth of Nations*, Lord Kames's *Essays on Principles of Morality and Natural Religion* (1751), John Millar's *Observations Concerning the Distinction of Ranks in Society* (1771),

Ferguson's *An Essay on the History of Civil Society* (1767), and William Robertson's *The History of Scotland* (1794) were each in the forefront of developing the argument that rather than being fated by God or Nature to follow an inexorable path, any society, if based on the psychology of the individual, could be socially progressive and economically prosperous. The scientific study of society and history—in short, the rise as independent and empirical fields of research of such social sciences as psychology, economics, anthropology, sociology, legal history, and cultural theory—had its modern beginnings in many of the insights generated or expanded upon in the works of the Scottish moralists.

The moralists' theory of history helps explain why it is not surprising to discover in some of their writings prejudice against cultures and societies perceived as "backward," static, and nonprogressive. Their evolutionary view of society led them to try to determine the direction of universal progress and to position existing societies and cultures in hierarchical classificatory schemes, using what they supposed were empirical scales of measurement. Smith, for example, believed that societies and ultimately global history progressed through several stages, defined by economic and political activities: The series of stages begins with hunter-gatherers, then progresses through stages characterized by nomadic tribes, sedimentary farmers, feudal states, and mercantile societies, before culminating in industrial urbanization. The secret to industrialization, according to Smith, was division of labor, a method capable of producing the largest quantity of goods for the largest number of people by the most market-efficient methods.

Because of their evolutionary conception of societies, Scottish moralists were not disturbed by imperial expansion and colonial conquest. Imperialism and colonial conquest, in Ferguson's view, for example, promoted commercial activities and transformed culturally and economically "primitive" nations into industrial or industrializing countries or trading partners. Indeed, because of its wide influence the work of the Scottish moralists cannot be decoupled from the contradictions that attended the development of modernity throughout Europe, Africa, and the Americas: Even as the capitals and provinces of Europe and the Americas were championing the idea of historical progress and the "rights of man," a great deal of the growth in the world's local and international economies was based on slave trade and slave labor, imperialism, and colonialism.

INFLUENCE AND LEGACY

The influence of the moralists on the transformation of Scottish society can easily be measured. On January 8, 1696, for example, a young man by the name of Thomas Aikenhead was executed for blasphemy. A university student, Aikenhead was successfully charged with "denigrating" the Bible. But public records of the proceeding suggest that Aikenhead was viewed to have committed something more offensive. Though he said he believed in the Holy Trinity, he also, by his own confession, believed that moral laws were "the work of governments and men" and had said to fellow students that theological arguments produced to show otherwise were "a rapsodie of feigned and ill-invented nonsense" (Hill N.D.). By 1755, however, Scotland itself had changed. This was the year David Hume was formally charged with an offense anyone might have considered far more grievous, namely, atheism. Moreover, like Aikenhead, Hume had published books arguing that morality was justified entirely by tradition and custom. Yet, the charges brought against him were dropped—for lack of cause.

Beyond Scotland, the moralists were at the cutting edge of the wider social and political movement known as the Enlightenment. In the decades 1740 to 1800 the Enlightenment movement both became a more universal phenomenon and took on local coloration not just in the cities of Glasgow, Edinburgh, Paris, London, Berlin, and Philadelphia, but also in lesser-known centers of commerce and learning such as Bristol, Cartagena, La Fleche, Konigsberg, and Axum. In the same sixty-year period, three of the modern world's most significant political transformations occurred: the American, the French, and the Haitian revolutions. The most direct connections between these revolutionary developments included the international evangelical and moral revivals represented by activist groups like the Society of Friends, popularly known as the Quakers. In London, influential Quakers formed The Meeting on Slave Trade and worked with Thomas Clarkson and William Wilberforce in the cause of abolition of the slave trade. In the Americas, particularly Philadelphia, Quaker leaders of opinion like John Woolman and Anthony Benezet worked with atheists and believers alike—Thomas Paine, Benjamin Franklin, Joseph Priestley, among others—to found in 1775 and promote what became the first abolition society anywhere in the western world: the Pennsylvania Abolition Society. In Paris, revolutionary clerics like Abbé Grégoire formed complementary international abolitionist associations, including *La Societé des amies des noirs*, an organization which became influential as a source of moral and material support for the revolutionary black slave and ex-slave populations of the French colony of San Domingue, today's Haiti. These international networks grew out of strong and deep grassroots moral awakening. For example, at its 1754 governing meeting in Germantown, Pennsylvania, Quaker representatives drafted and adopted a formal declaration that, in the language of the Enlightenment social movement, its members "shall never

think of bereaving our fellow creatures of that valuable blessing, liberty, nor endure to grow rich by their bondage." The document goes on to admonish the rest of the world that "to live in ease and plenty by the toil of those whom violence and cruelty have put in our power is neither consistent with Christianity nor common justice" (The Philadelphia Yearly Meeting of the Society of Friends 1754). The influential roles of the Quakers in the abolitionist movement and in the birth of modern world wide human rights campaigns have been chronicled by Adam Hochschild in *Bury the Chains: Prophets and Rebels in the Fight to Free an Empire's Slaves* (2006) and *King Leopold's Ghost: A Story of Greed, Terror, and Heroism in Colonial Africa* (2006).

In technical philosophic and scientific matters, the legacy of the Scottish moralists can be seen throughout the world in the subsequent development of philosophy and in the growth of the social sciences. The antifoundationalist tenor of their works provoked other thinkers to raise questions that had remained hidden. Immanuel Kant, for example, credits Hume's skepticism for helping to awaken in him the questions he formulated and tried to answer in the *Critique of Pure Reason* (1781). The field of modern economics can hardly be said to exist prior to Adam Smith, and Thomas Reid's Common Sense conception of truth and objectivity is echoed in the works of the twentieth-century American psychologist William James and the sociologist George Mead. In fact, in contemporary psychology and medicine, there is a distinct subfield called *symbolic interactionism*, in which it is argued that it is only in society that the most valued human qualities—e.g., our conceptions of the self and of the individual—are generated. In twenty-first-century philosophy, under the name *extended mind* or *external mind*, one finds equivalent social-environmentalism in the conceptions of consciousness and moral agency. Some of these newer research projects in this area draw on the strengths of moralist psychology and social theory while at the same time challenging their ethnocentric aspects.

Some aspects of twentieth-century existentialism also reflect prior developments in "moralist" conceptions of freedom and of history. For example, environmentalism notwithstanding, moralist ego psychology makes it possible to believe that though nature and society may predispose an individual to certain actions, it is only weakness of will or, in the case of illness, natural impairment that robs the individual of control over their decisions, or over the actions based on those decisions.

Finally, social theory from Nietzsche to Marx—specifically, moral psychology and political economy—benefited from the insights of the Scottish moralists. For both Nietzsche and Marx, hypocrisy and lack of transparency in moral and economic relations are "mystifications" that mask the realities of class values and class relations, which are erroneously conceived as products of nature rather than what they truly are: consequences of histories of taste and of social dynamics between individuals and groups within or across national boundaries.

SEE ALSO *Atheism; Civil Society; Economics; Enlightenment; Hume, David; James, William; Liberalism; Marx, Karl; Mead, George Herbert; Mill, James; Morality; Nietzsche, Friedrich; Philosophy; Philosophy, Moral; Religion; Smith, Adam; Social Science*

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Emmanuel Chukwudi Eze

SCRAMBLE FOR AFRICA

SEE *Imperialism.*

SCREENING AND SIGNALING GAMES

An agent with private information who takes a costly action in order to favorably affect the responses of others is "signaling." A responding agent who precommits to a response that is contingent on the informed agent's action is "screening."

In Michael Spence's seminal paper (1973), a worker signals her value by her choice of education. Firms base their beliefs about a workers' productivity based on her educational choice and compete for her services. In the simplest case there are two types of worker, with values v_1 and $v_2 > v_1$. The cost of achieving an educational credential z for a type t worker is $c_t(z)$. Spence asked under what conditions it would pay the high value worker to signal by choosing to add to her educational credentials, even in the extreme case in which the education had no direct effect on productivity. Suppose that there is such an education level z_2 selected only by a high-value worker. That is, the equilibrium outcome separates the different types. Given that there is separating, competition by firms results in a wage offer of v_1 for those without the educational credential and a wage offer of v_2 to those with the credential. For this to be an equilibrium, each type of worker must have an incentive to take the anticipated action. Hence the following incentive constraints must be satisfied:

IC_1: $v_1 \geq v_2 - c_1(z)$

IC_2: $v_2 - c_2(z) \geq v_1$.

Let $\underline{z}$ be the education level where the first constraint is satisfied with equality and let $\bar{z}$ be the education level where the second constraint is satisfied with equality. As long as the high-value worker has a lower cost of education, $\underline{z} < \bar{z}$ and any education level $z_2 \in [\underline{z}, \bar{z}]$ satisfies the two incentive constraints. Note that a smaller z_2 is less costly for the high type. Thus, for Pareto efficient separating, the incentive constraint for the low type is binding.

APPLICATIONS

From this basic idea a vast applied literature has emerged. In the insurance industry it has been argued that deductibles are used to separate risk classes, because a good risk has a smaller probability of incurring the deductible and hence a smaller cost of signaling. For new products, advertising has been explained as a signal, because if the quality is low, the firm will incur a loss of revenue due to reduced future sales, as consumers experience the good. Similarly, a high introductory price can signal high quality, as long as there are a sufficient number of fully informed consumers.

In the theory of bargaining between a firm and union, the delay between an offer and a counter-offer is a potential signal. Suppose that bargaining with full information leads to agreement over how the pie should be shared. The firm only knows whether revenue will be high or low. The opportunity cost of delay is lower for a low profit firm, so the union is willing to accept that the pie must be smaller and thus accept a lower wage.

Signaling theory has also been used extensively in finance to show how the underpricing of an initial public offering (IPO), the capital structure, and the issue of double-taxed dividends can all be used to signal a firm's profitability.

In macroeconomic policy analysis it has been argued that a government can credibly signal its commitment to "tough" future economic policy by taking a tough action in the current period. The net cost to taking this action is lower for a government that really does value the future benefits of (for example) a sustained anti-inflationary policy. Similarly, a government can signal its long-term com-

mitment to trade liberalization by taking a tough action in the current period.

DEVELOPMENT OF THE THEORY

Spence's original work followed largely in the Walrasian tradition. Michael Rothschild and Joseph Stiglitz (1976) argued for a formal game-theoretic foundation. In their analysis, the uninformed agents move first, making commitments as to how they will respond. That is, the firms make screening offers. They showed that in such a model there may be no Nash equilibrium, and concluded that competitive markets can perform poorly.

More recent theory has focused on signaling games in which the informed agent moves first. Suppose, in the Spence model, that the informed agent believes he will be paid a high wage if and only if he chooses an education of at least $z_2 \in [\underline{z}, \bar{z}]$. Given such beliefs, the two types separate. Because any education level on this interval will suffice, there is now a continuum of Nash separating equilibria. But what beliefs are plausible if the informed agent chooses a smaller education $\hat{z}$? This question is at the heart of a large theoretical literature on refinements of Nash equilibria (Intuitive Criterion, Divinity, Stability). The most popular of these refinements is the Intuitive Criterion of In-Koo Cho and David Kreps (1987). Their basic idea is that an informed agent will take an out-of-equilibrium action when (1) she will be better off if the responders correctly infer her type, and (2) given this belief, all other types prefer their Nash equilibrium action. The efficient separating equilibrium is the unique Nash equilibrium that satisfies this restriction on beliefs. This is readily illustrated. Consider the education levels z_2 and $\hat{z} < z_2$ on the interval $[\underline{z}, \bar{z}]$. By construction, a low-value worker is better off earning his true value v_1 than paying for an education at these levels. Thus, by the Intuitive Criterion, a worker choosing $\hat{z}$ will be perceived to be high value. Given such beliefs, high value workers have an incentive to choose the less costly education $\hat{z}$. Arguing in this way, only the Pareto efficient separating Nash equilibrium can satisfy the restrictions on beliefs imposed by the Intuitive Criterion.

SEE ALSO *Evolutionary Games; Game Theory; Noncooperative Games*

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John G. Riley

SCRIPT MODELS

A script is a type of schema, or implicit mental representation, that describes an expected sequence of events. Scripts are developed from experiences with particular situations, from which information is abstracted and organized so as to guide thinking, feeling, and behavior when encountering similar experiences in the future. In a collaboration between the fields of artificial intelligence and social psychology, Roger Schank and Robert Abelson (1977) introduced a script model to explain people's understanding of socially stereotypic events such as eating at a restaurant. From the fields of social, personality, and clinical psychology, a script model has been employed to understand people's experience of emotionally significant and personally idiosyncratic events such as negotiating relationship conflict (Baldwin 1992). For example, a script might specify that in the context of conflict with an intimate other, if the other expresses anger, the self will feel regret and act submissively to achieve resolution of the conflict.

Models of scripts for socially stereotypic events emphasize that scripts enable people to automatically comprehend a variety of experiences through a cognitive structure that provides both power and economy. Models of scripts for personally significant events emphasize that scripts serve an individual's motivation to anticipate and deal with emotional experiences to maximize positive emotion and minimize negative emotion. In either case, script models depict people as creating scripts by extracting the important elements of scenes they have experienced and connecting similar scenes together. Evidence suggests that children less than one year old begin to make such connections between scenes; for example, they cry in anticipation of pain upon seeing a doctor and needle a few months after getting an inoculation. Culture plays a role in the formation of scripts; for example, Utku Eskimos construe being alone as social isolation and feel loneliness, whereas Tahitians see being alone as an opportunity for spirits to cause uncanny feelings and fear. The intrafamilial environment is also important; for example, childhood patterns of relations with parents are significantly related to adult scripts about love relationships.

Research has shown that scripts facilitate processing of and memory for script-relevant information; provide inferences in the face of missing information; guide interpretation of ambiguous situations; promote script-confirming patterns of thought, emotion, and behavior; and are associated with individual differences in personality. Scripts can also have maladaptive consequences if applied when not relevant, leading to inappropriate inferences or recall. Scripts with problematic content can lead to maladaptive thinking, emotion, and behavior patterns associated with psychopathology. In general, scripts are more easily modified by experience when they are first being developed, but at a certain point they become resistant to change in the face of incongruent experience. Mildly inconsistent and peripheral information will be ignored or discounted; however, information that is highly inconsistent and highly central may undermine the script itself. For example, individuals who suffer a traumatic loss are often unable to sustain their construal of the world as meaningful. Methods for changing maladaptive scripts require more research, but one model of therapy proposes that the relationship between therapist and client undermines a maladaptive interpersonal script by presenting recurrent experiences that are emotionally significant and substantially incongruent.

SEE ALSO *Culture; Memory; Personality; Schemas; Social Information Processing; Stereotypes*

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S-CURVE HYPOTHESIS

SEE *Kuznets Hypothesis.*

SEARCH ENGINES

SEE *Computers: Science and Society.*

SECESSION

Secession is the act of withdrawing territory from a state and converting it into an independent state or joining it to another state. In the latter case, secession is combined with irredentism. Secession is a negative term, one that is more likely to be used by its opponents than its advocates. Supporters of secession prefer to describe themselves as struggling for something positive. For example, those who support Quebec's secession from Canada describe themselves as "sovereigntists" or "independentists," not as "secessionists."

Secession can usefully be distinguished from three other terms with which it is often confused. First, it is not a synonym for "self-determination" but one form that a struggle for self-determination might take. Second, it is different, particularly in the minds of international lawyers, from "decolonization," which involves the separation of a colony from its metropole, with a colony typically defined as a racially distinct territory separated from the metropole by saltwater and whose people do not enjoy metropolitan citizenship rights. Secession, by contrast, is seen as withdrawal from a state, with the territory involved usually a contiguous piece of the state's territory or a nearby island. Third, secession is an act that is initiated and carried out by those who want a new state of their own. It should be distinguished, therefore, from "partition," which implies the fresh division of a territory by an external (third-party) actor (O'Leary 2005). Irish nationalists sought the secession of Ireland from the United Kingdom, but the latter partitioned Ireland, as they later partitioned India and contributed to the partition of Palestine.

Secessions are generally attempted by minority nations that want their own state (or to be joined with another state), though Russia, with a significant majority of the state's population, seceded from the Soviet Union. There is no prospect of immigrant ethnic groups, such as the Chinese community in British Columbia or the Koreans in California, seceding from their respective states, as these are not mobilized as nations. Nor is it foreordained that a minority nation will become secessionist. There is evidence that the timely accommodation of minority nations, involving territorial autonomy and, in the case of sizable minorities, inclusive power sharing (consociational) politics at the center, can reduce support for secession.

States almost invariably oppose secession. Many states explicitly rule it out in their constitutions. Some, such as Ukraine or Turkey, even make it impossible to change their constitutions to allow secession. In these cases, the unity of the state is a higher value than popular sovereignty. Americans need no reminders that states are often prepared to resist secession with considerable force, even if it costs many lives.

As international law is written by states, it is hardly surprising that its provisions on secession are very restric-

tive. International law recognizes a legal right of "peoples" to "self-determination," but this right was intended to apply only to historic European colonies, that is, to acts of decolonization. It was developed, moreover, at a time when significant numbers of acts of decolonization had already occurred. The right is a "once-only" right, to be exercised at the point of decolonization, and does not extend to minority regions within colonies or to minority or majority regions that intersect colonial frontiers. Oddly, then, the international legal right to "self-determination" is built on the constructs of imperialists. Since World War II (1939–1945), there has been only one clear example of a successful, internationally recognized secession that was opposed by the state's authorities, the case of Bangladesh, which seceded from Pakistan with India's help in 1971. With one questionable exception, all other secessions have either been agreed to by central authorities (East Timor, Eritrea, the Czech Republic and Slovakia) or have been recognized after central authority had collapsed (the fifteen republics that seceded from the Soviet Union). The Soviet Union's republics had the additional advantage of a constitutional right to secession. The questionable exception is Yugoslavia. The secessions of Slovenia, Croatia, and Bosnia-Herzegovina were opposed by Belgrade (Serbia and Montenegro), but the Badinter Commission nonetheless ruled that Yugoslavia was in "a state of dissolution." To bolster its case, the commission also cited a clause in the Yugoslav constitution that gave its republics the right of secession.

The unwillingness of the states system to sanction secession is underlined by a number of "de facto secessions" (Bahcheli, Bartmann, and Srebrnik 2004). Here, secessionist authorities have failed to win recognition from other states even though they have succeeded in monopolizing the sovereign functions of government on their territory, often for years or even decades. These regions include Transnistria (Moldova), Nagorno-Karabakh (Azerbaijan), Somaliland (Somalia), the Turkish Republic of North Cyprus (Cyprus), and Abkhazia and South Ossetia (Georgia). The strangest case of a de facto secession is Kosovo, which was liberated from Serbia's control by an international military alliance in 1999. In spite of this, the international community has so far refused to recognize Kosovo's independence. If it does, it is likely to do so in a way that does not set a precedent for others. It may help Kosovo's case that, while it was not a full republic of the former Yugoslavia, it enjoyed equality with these republics within federal institutions and a similar level of autonomy. This may allow other states to argue that Kosovo is a special case, sufficiently like the full republics of the former Yugoslavia to enjoy similar rights.

While lawyers have debated the legal right to secession, philosophers have argued about the moral right. As liberals are committed to the idea of a legitimate state, it is difficult for them to rule out secession under any circumstances, although some suggest the priority should be to make the state legitimate, not to break it up. The two main liberal schools of thought on secession are based on "just-cause" and "choice" theories (Moore 1998). Just-cause theorists have traditionally taken a restrictive view of secession, arguing that a right to secede exists only when the state has been egregiously abusive. One of their most prominent representatives has recently offered a softer version of this: Minorities can secede if they are denied autonomy (Buchanan 2003). Choice theorists, using democratic arguments based on consent, analogize from marital to political divorce: Minorities should be able to leave if they want to and not just if they have been abused or not accommodated (e.g., Beran 1984).

Some scholars believe that states, particularly Western democracies like Canada and the United Kingdom, are becoming less resistant to secession and less likely to oppose it by force (Kymlicka 2001, pp. 387–393). In 1998, the Canadian Supreme Court established a process whereby a province can secede, providing there is clear support for breakup, and after negotiations with the federal authorities. The prime minister of the United Kingdom, John Major, opined in the early 1990s that Scotland could secede if it wanted to, and in the Belfast Agreement of 1998, London confirmed that Northern Ireland could join the Republic of Ireland, provided that this was approved by referendums in both jurisdictions. Ethiopia's republics have also been given the right to secession, and recent peace settlements in Sudan and Papua New Guinea have extended this right to South Sudan and Bougainville, respectively. From the other side, one academic has argued that minorities, particularly in western Europe, are no longer as insistent on secession, provided they are given autonomy and are included in international (European Union) institutions (Keating 2001). Neither of these trends is universal. In most parts of the world, states are at least as insistent on maintaining unity as they ever were, and there are still many secessionist movements.

The record of secession as a method of conflict resolution has been mixed. In some cases, the transition from one state to two, or several, has been relatively smooth (Czechoslovakia, the Soviet Union, Norway/Sweden). In other cases, breakup had disastrous consequences (Yugoslavia, with respect to Croatia and Bosnia-Herzegovina, but so far not Slovenia or Macedonia). These contrasting cases suggest a straightforward point: Secessions that are opposed by the center and/or a significant community within the secessionist region are more likely to be violent (McGarry 1998).

SEE ALSO *Borders; Confederate States of America; Conflict; Decolonization; Ethnicity; European Union;*

Partition; Quebecois Movement; Self-Determination; Sovereignty; U.S. Civil War

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SECOND BEST

SEE *Theory of Second Best.*

SECOND RUSSIAN REVOLUTION

SEE *Russian Federation.*

SECOND SIGHT

SEE *Veil, in African-American Culture.*

SECOND-PRICE AUCTION

SEE *Auctions; Value, Subjective.*

SECRECY

Secrecy, according to sociologist Edward Shils, (1911–1995) is a form of concealment reinforced by sanctions against disclosure and differs from privacy in its non-voluntary character. In some societies, secrecy is concealment enforced by tacit and often religious proscriptions or taboos. In other societies, laws and statutes secure secrets and privileges for those who possess them. Regardless of how it is regulated, secrecy is implicated in the maintenance of religious or political hierarchies. Secrecy also plays an essential role in the internal division of groups by limiting access to knowledge.

In many instances, access to knowledge is regulated by membership associations or "secret societies." Secret societies have been significant institutions in virtually all political cultures. For example, among the indigenous people of the Northwest Coast of North America, secret societies provided certain members of hereditary clans exclusive access to mythic, ritual, and political knowledge, which secured them against opposition from other clan members. Among many societies in Australia and Oceania, secret societies are associated with age grades and adult masculinity. Even when secret societies are open to all males, the societies must be entered through elaborate rites of initiation. Membership in such groups may then confer political and economic rights, as well as access to sacred or private historical knowledge.

In China, secret societies often emerged from mutual aid organizations, which represented and protected the interests of particular classes (peasant or aristocrat). Among the Straits Chinese in Southeast Asia, secret societies often worked to preserve language-based cultural traditions and mediated between diasporic and mainland groups, channeling resources and information between the groups. At various times, including revolutionary nationalist and communist wars, secret societies have provided crucial structures for organizing political activity.

Secret societies are associated both with the maintenance of legitimate power and the organization of oppositional movements. Insofar as secrecy is a principle that protects power, secrecy must both display itself and conceal the true nature of power's exclusivity. In other words, political secrecy is public secrecy; people must be led to believe that there is something that they do not know, and that this something underwrites others' power. Hence, secrecy is often associated with elaborate rituals and formalized communicational codes. This is true not only for the infamous sects of esoteric knowledge—such as the cults of Mithra in ancient Greece and the Rosicrucians and Masons or Opus Dei in the Christian tradition—but it also characterizes membership in contemporary political parties and groups such as the Ku Klux Klan in the United States.

The development of secrecy is intensified and accelerated in the context of the state, both in its pre-modern and its modern, bureaucratic forms. The idea that states should withhold knowledge from subjects on the grounds that it would harm them has a long history. This idea can be found in Plato's *Republic*, book 2, where it is suggested that tales of gods warring with gods or performing immoral acts ought to be banned as the subject of poetry, lest these acts encourage similar behavior in humans. In *City of God* book 2, Augustine appraised the Christian church over the Pagan religions precisely because it claimed to oppose a politics of secrecy with a doctrine of universal truth. Nonetheless, state officials within the nations influenced by Christianity never relinquished the practice of secrecy as the basis of power—any more than did those inspired by other theologies.

Both the nature and theory of secrecy received impetus from the institutional and technological developments of modernity. In the nineteenth century, secrecy came to be thought of not only as a phenomenon within society but as an essential principle of social groups in general. German social theorist Georg Simmel (1858–1916) referred to secrecy as one of humanity's "greatest achievements." Simmel's concept, on which Shils built his more elaborate definition, emphasized purposive aggression against a third person. According to Simmel, the concept and phenomenon of secrecy revealed society to be a formation based not on dyadic relations but on the spectral presence of the "third person." By third person, he meant to encompass the total social formation, beyond those with whom one might have dialogic relations—including all those who precede one in history, and all who may come after, but especially those against whom one might forge an oppositional solidarity.

From Simmel's perspective, the value of the secret is intensified by the possibility of its betrayal or revelation. Simmel also remarked that as societies become more complex, what is "public becomes ever more public, and what is private becomes ever more private." A crucial development in this perspective is the emergence of writing and, more specifically, the epistolary form of letter writing, in which writing is linked to the idea of privacy. In the letter, the exclusion of others is simultaneously bureaucratized and made to appear as a necessary condition of interpersonal intimacy.

In German political economist and sociologist, Max Weber's (1864–1920) writings, the link between bureaucracy and secrecy is both explicit and mutually sustaining. According to Weber, bureaucracies produce their relative superiority and claims on professional exclusivity by developing secret knowledge. Hence, while democratic capitalist societies generally presume and espouse the value of openness and transparency, they are increasingly subject to the force of secrecy. In his magisterial work, *Economy and Society*, Weber went so far as to claim that "'the official secret' is the specific invention of bureaucracy." Weber also claimed that secrecy was doomed to fail, as the expert knowledge of private economic interest groups would ultimately come to supplant that of governmental elites.

Weber's sense that government secrecy would ultimately give way to the regime of expert knowledge and, hence, corporate trade secrets has in some senses been realized to the extent that copyright and patent laws dominate the landscape of secrecy legislation. However, in recent years practices of state secrecy have expanded rather than diminished in the United States—despite the anticipation of state secrecy declining following the end of the cold war. (Similar developments have also been seen elsewhere.) According to the U.S. Information Security Oversight Office, acts of original classification (the secreting of primary documents, including "top secret," "secret," and "confidential" materials) decreased in 1995 by more than 36,000 to 167,840. However, that number increased to 258,633 by 2005. Moreover, derivative classifications, materials classified because they include citations of, or reference to, classified documents, increased at an even greater rate. In 1995, reported derivative classifications had decreased by almost 1.2 million to 3,411,665. In 2005, derivative classifications had grown to 13,948,140.

These figures reveal a general trend in the early twenty-first century of an increase in the production of state secrets and an expansion of their sphere of circulation. The latter fact, which derives largely from new digital technologies, enhances the aura of secrecy while the former consolidates the power derived from it.

The result is a doubled development. On the one hand, there are more secrets and more people who are aware that there are more secrets. On the other, fewer and fewer people are authorized to know the content of those secrets. Thus, in the United States, for example, the number of people who are authorized to know and determine the status of government knowledge decreased in the decade between 1995 and 2005 by about 26 percent.

Mitigating the U.S. trends of expanding state secrets are constitutionally authorized mechanisms for accessing information. These mechanisms include acts and procedures gathered together under the title of "Freedom of Information," by which the press and members of the public are entitled to petition for the declassification of documents. The United States also legislates the mandatory termination of classificatory protections, through statutes of limitations on copyrights and patents, as well as limits on government classifications. The 1997 U.S. Senate's *Report of the Commission on Protecting and*

Reducing Government Secrecy termed this built-in obsolescence of government secrecy the "life-cycle" of classification.

However, the legislated dissipation of secrecy protections is different from the mutual entailment of secrecy and revelation that Simmel had observed. Simmel was referring to the intensification of secrecy that comes about through the risk of its revelation. Such a logic can be seen in the transformation of military policies since 1993, when President William Jefferson Clinton signed Public Law 103-160, commonly known as "Don't ask, don't tell." This law promised to limit surveillance activities directed against gays and lesbians in the U.S. armed forces, but it also prohibited people who have same-sex relations from serving in the military. The law also proscribes homosexual and bisexual people who are in the military from revealing their sexual orientation. In 1994 the policies emanating from the law resulted in 617 discharges. That number increased steadily, and in 2001, 1,273 people were dismissed from the armed services. Although dismissals on the basis of sexuality dropped as the U.S. government commenced war after 9/11, dismissals rose again in 2005.

Shils's notion of the enforced secret reaches its apogee in the "Don't ask, don't tell" law. Moreover, the demand for the secreting of homosexuality in the military runs directly counter to the achievements of social movements over the course of the late twentieth century, at least in the Western nations. These movements had made sexual self-disclosure a foundational moment of self-liberation. Such achievements may have limited relevance in societies beyond the West. In the United States however, the logic of "Don't ask, don't tell," appears to confirm Eve Kosofsky Sedgwick's thesis, as articulated in *The Epistemology of the Closet*. Sedgwick states that in modern Western societies the epistemological basis of power operates, as it does elsewhere, in the vacillation between secrecy and revelation but in modernity becomes increasingly focused on questions of sexuality and, more specifically, on the differentiation of populations into hetero and homosexual types.

Inverting the historical relationship between secrecy and power, the "epistemology of the closet" and the policy of "Don't ask, don't tell" makes the possession of a secret (homosexuality) a risk and a source of disenfranchisement. That this inversion takes place while older systems linking secrecy and power are extended and intensified by new technologies of encryption, duplication, and dissimulation, reveals that the classical theories of secrecy are themselves in need of transformation.

SEE ALSO *Bureaucracy; Central Intelligence Agency, U.S.; Cold War; Corruption; Freedom of Information Act; Hot Money; Illuminati, The; Ku Klux Klan; National Security; Plato; Politics: Gay, Lesbian, Transgender, and Bisexual; Power; Sexual Orientation, Social and Economic Consequences; Sexuality; Weber, Max; Whistle-blowers*

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Rosalind C. Morris

SECULAR, SECULARISM, SECULARIZATION

The term *secular* arises from the history of Christianity and describes that which is not sacred or not of the church. The term *secularization* thus refers to the process by which human activity and knowledge progressively come under the control of scientific rather than religious understanding. Max Weber (1864–1920) termed this rationalization and intellectualization characteristic of modern times, "the disenchantment of the world" ([1918] 1946, p. 155).

This differentiating of the sacred from the secular is associated with Europe in the seventeenth century. Prior to this time in Europe, and in non-Western cultures generally, the sacred and the secular were not necessarily separate spheres in the context of political rule. Secularism is thus associated with modernity and in the twentieth century has come to refer to two interrelated practices: (1) a mode of political organization in which the state is neutral with reference to all established religions; and (2) later in

the century, a political practice of the state that protects the rights of minorities in a multicultural society.

The need to separate church from state arose in seventeenth-century Europe for three broad reasons: (1) the rise of the industrial bourgeoisie that questioned the divine right of kings, against the older landed feudal elites that drew on the political and economic power of the church; (2) the fatigue produced by a century of war in Europe, in which Christian denominations clashed with each other for political power; and (3) the challenge posed to religious knowledge by the great breakthroughs in science.

It is only in the late twentieth century that it became widely recognized that *secular*, *secularism*, and *secularization* are not neutral descriptive terms of universal applicability, but arise from a specific spatial-temporal context. Charles Taylor (1998), however, argues that despite its specific origins, secularism continues to be relevant for modern democracies everywhere. Even the most diversified societies can be secular, despite differences about religion at the deeper level, by building consensus on a "common political ethic," such as a doctrine of human rights, freedom, and equality. Such a consensus can be brought about even if there is no agreement about the values in which this ethic is embedded.

From the latter half of the twentieth century, however, it is precisely the concepts of human rights, liberty, and equality that have been challenged as being (Western/Christian) culture-specific. The rise of modern political movements based on Islam offers a powerful challenge to the idea that modern societies must be built on the basis of separation between religious and political power. Even within the West, secularism as state neutrality is increasingly challenged by the growing diversity within these societies. It has become evident that, historically, "secularism" was achieved in Western societies only after defeating rival Christian denominations and diverse cultural practices. The religio-cultural formation that was victorious then attained the status of the "universal." What we see today in the West then, is a resurgence of diversity rather than a new phenomenon.

In newer postcolonial democracies such as India, Hindu right-wing politics opposes the protection of minority rights that is an aspect of Indian secularism. A self-critical response from those opposed to such politics has been the acknowledgement that secularism in India has been state-centric and has not engaged sufficiently with beliefs and practices on the ground.

In this context arises the question of the relationship of secularism to democracy. Many contemporary states assume that secularism as a value trumps democracy. To take one instance, Turkey and France legally prohibit symbols of religion in public, over the protests of Muslim believers who want Muslim women to wear head scarves. Feminist scholars point out that the controversy centers on women's bodies precisely because the patriarchal, patrilineal family is at the heart of modern statecraft. Veena Das suggests that once the idea of God was displaced, secular means had to be crafted to ensure that "the sovereign receives life beyond the lifetime of individual members" (2006, p. 94). In other words, Das suggests that the state has to reimagine its relation to the family in more complex ways than merely assigning the family to the realm of the private.

Samuel Huntington's "clash of civilizations" thesis (1993) argues that current debates over secularism arise from the division of the world into opposing civilizational frameworks, broadly, that of the West and Islam. He traces the conflict between "Western" civilization and "Islamic" civilization to the founding of Islam itself. Thus what we see today is merely an "ancient rival" reacting irrationally to "our Judeo-Christian heritage" and "our secular present."

From this point of view it appears that the contemporary "West" is rational and secular, with its religious heritage lying in the past, while contemporary "Islam" is irrational and trapped in religion. However, scholars have pointed out that the apparent secularism of Western states is built on Christian assumptions; for example, the practice of observing the weekly holiday on Sunday rather than any other day, is biblical in origin. Further, Western secularism involves the continuous regulation of what constitutes religious as opposed to nonreligious practices and institutions. In the United States, the legal apparatus of the state periodically defines what religion is by deciding whether particular forms of public behavior come under the principle of freedom of religion. In France, the antireligious state owns and administers all property belonging to institutions of religions that existed in France in 1905, when the law was passed.

The paradoxes of Western secularism are explained, in Talal Asad's (2003) view, by the fact that the emergence of secularism in modern Europe merely shifted the proper domain of violence from religious communities to nation-states. Henceforth, the nation-state would determine the place of religion, and the only legitimate perpetrator of violence was to be the nation-state, whether the violence was inflicted upon its own citizens, upon other nations, or upon colonized parts of the world.

Ashis Nandy (1990) also makes the link between the violence of the modern nation-state and secularism. Despite its contradictions, the modern state has succeeded in marginalizing all religions, while its own ideologies of secularism, development, and nationalism act as intolerant faiths backed by the coercive state apparatus. Nandy recognizes "religious fundamentalism" (or in India, communalism), as a rational and modern project that seeks to control state power. Religious fundamentalism is thus a product of

"secularization" and is as intolerant of the eclecticism of lived religion as is the modern nation-state. A more tolerant society would require the recovery of those resources within religious practices that make it possible to live with "fluid definitions of the self," an idea inimical to both modern state practices and to religious fundamentalism.

SEE ALSO *Christianity; Democracy; Modernity; Religion*

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Nivedita Menon

SECULAR EFFECTS

SEE *Period Effects.*

SECULAR HUMANISM

SEE *Humanism.*

SECURE BASE

SEE *Attachment Theory.*

SEEMINGLY UNRELATED REGRESSIONS

The seemingly unrelated regressions (SUR) model explains the variation of not just one dependent variable, as in the univariate multiple regression model, but the variation of a set of m dependent variables; that is, the monthly consumption expenditures of m consumers or the annual voting behavior of m voters, in terms of the variation of general and specific input or independent variables and error terms specific to each individual, problems that are frequently encountered in many sciences. Indeed, John Geweke has written, "The seemingly unrelated regressions (SUR) model developed in Zellner (1962) is perhaps the most widely used econometric model after linear regressions. The reason is that it provides a simple and useful representation of systems of demand equations that arise in neoclassical static theories of producer and consumer behavior" (2003, p. 162).

It is the case that a SUR model is a collection of two or more regression relations that can be analyzed with data on the dependent and independent variables. For many years, the individual regression relations were fitted one by one, usually using least squares techniques and justified by an appeal to single equation estimation optimality properties; That is, the least squares estimators are best linear unbiased estimators according to the well-known Gauss Markov theorem and maximum likelihood estimators when single equation normal likelihood functions are employed. Also in traditional multivariate regression models with the same independent variables in each equation and normal error terms in different equations with zero means, different variances and non-zero covariances, it had been shown that applying the least squares method equation by equation leads to fully efficient maximum likelihood estimators for regression coefficients in different equations. What was overlooked in this pre-1962 literature is the fact that when the error terms in the different regression equations are correlated and different independent variables appear in the equations, the regression equations are related, not unrelated as many assumed incorrectly and hence the term "seemingly unrelated," and that the sample information in other regressions can be employed to improve the precision of estimation of parameters in any given regression equation under a wide range of conditions. That is, new, operational SUR best linear unbiased estimators for the parameters of a set of say m regression equations were put forward that uniformly dominate the single equation least squares estimators under a broad range of conditions.

It was shown that these SUR or generalized least squares (GLS) estimators are best linear unbiased and maximum likelihood and Bayesian estimators under frequently encountered conditions. In addition, by joint analysis of the set of regression equations rather than equation by equation analysis, more precise estimates and predictions are obtained that lead to better solutions to many applied problems; that is, portfolio formation procedures in 2003 work by Jose M. Quintana and colleagues, in which dynamic regression equations with time

varying parameters and various input variables were employed to explain the variation of monthly stock prices. By taking account of the fact that the regression equations were related and not unrelated, SUR estimation, prediction, and portfolio formation procedures were utilized to yield improved analyses of the variation of stock prices and to form optimal portfolios with very good rates of return. In Arnold Zellner and Henri Theil's 1962 work, similar techniques were applied to simultaneous equations models to yield a new joint estimator, the three-stage least squares estimator that dominates single equation estimators by taking account of the correlation of error terms in equations of the system by use of joint estimation of coefficients in equations of structural models.

The simplest version of a linear, constant parameter SUR system is one that contains $m \geq 2$ linear regression equations, $y_i = X_i\beta_i + u_i$, $i = 1, 2, \ldots, m$, where y_i is an $n \times 1$ vector of observations on the ith dependent variable, X_i is an $n \times k_i$ matrix with full column rank of observations on the k_i independent variables in the ith regression equation, β_i is a $k_i \times 1$ vector of regression parameters and u_i is an $n \times 1$ vector of zero mean error terms. The usual method of estimating the regression coefficients was to estimate the equations individually by least squares to obtain $\hat{\beta}_i = (X_i'X_i)^{-1}X_i'y_i$, $i = 1, 2, \ldots, m$. However, in Zellner's 1962 work it was shown that when the error terms are correlated across the equations, the equations are related and joint estimation, rather than equation-by-equation estimation, leads to more precise estimates of the regression coefficients and predictions of future values of the dependent variables. Indeed, as explained in the articles and texts cited in this entry's bibliography, these joint SUR estimators are generalized best linear unbiased estimators and, with a normality assumption for the error terms, maximum likelihood and "diffuse prior" Bayesian estimators. Further they reduce to single equation least squares estimators when error terms in the different equations are mutually uncorrelated; that is, the equations are unrelated. In addition, use of SUR techniques leads to improved tests of hypotheses regarding regression coefficients' and other parameters' values.

Similarly, taking account of the error terms' correlations across equations leads to better predictions of future values of the dependent variables, as shown in the 2005 work of Arnold Zellner and Guillermo Israilevich who use SUR techniques in forecasting U.S. economic sectors' output growth rates and aggregate output growth rates. And in works of Sid Chib and Edward Greenberg (1995), John Geweke (2003), and Peter E. Rossi and colleagues (2005) modern Bayesian methods are described that yield optimal finite sample estimation, testing, and prediction techniques for many variants of the SUR model; that is, SUR models with time varying parameters and auto correlated error terms. Similarly, when the dependent variables are discrete random variables as in multivariate logit or probit models with correlated error terms, the SUR joint estimation, testing and prediction techniques have been found to be useful, as shown in the 1977 work of T. C. Lee and colleagues.

SEE ALSO *General Linear Model; Simultaneous Equation Bias*

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Arnold Zellner

SEGA

SEE *Video games.*

SEGREGATION

Segregation is the practice of keeping racial and ethnic groups separated. This includes, but is not limited to, the separation of racial groups in schools, housing, public facilities, and public transportation. This separation usually involves a dominant racial-ethnic group discriminating against a subordinate racial-ethnic group, as in the U.S. South during legal segregation.

The system of legal segregation in the U.S. South was a totalitarian social system that Southern whites developed and maintained after the abolishment of slavery in 1865. The primary function was to continue the social system of servitude, the racial caste hierarchy, and the economic control of African Americans under the legal fiction of *separate but equal*. Legal and informal segregation practices (Jim Crow) meant comprehensive racial subordination and imposed a badge of degradation on all African Americans in many areas of the United States. The daily practice of legal segregation is "a compulsory ritual denoting first and second-class citizenship." It has more than psychological and social significance, serving also the basic economic and political purpose of facilitating the exploitation of nonwhites by whites, collectively and individually (Kennedy 1959, p. 206).

CHALLENGERS OF SEGREGATION

The social system of legal segregation began in the late 1870s and 1880s, and there were several attempts by African Americans to challenge the laws, the violence, and the inequality that resulted from their implementation. The first challenge began with the U.S. Supreme Court case of Homer Plessy, an African American man, who refused to sit in the colored section on a train. His case went to the Supreme Court in 1896. As a result of that case, the laws of racial segregation were buttressed. The decision stipulated that laws mandating segregated areas and sections for blacks and whites, in theory, could be separate but equal.

In 1954, Thurgood Marshall, at the time a successful black attorney for the National Association for the Advancement of Colored People (NAACP) and later U.S. Supreme Court justice, won the *Brown vs. Board of Education* case before the U.S. Supreme Court; the case ostensibly ended segregation in public schools. However, the laws of segregation did not come to an official end until the enactment of the Civil Rights Act in 1964. This act resulted in large part from the nonviolent civil disobedience of the black-led civil rights movement from the 1950s to the 1970s, which included minister-leaders such as Dr. Martin Luther King Jr.

Dr. King, famous for his "I Have A Dream" speech against segregation given at the Lincoln Memorial in Washington, D.C., in 1963, led the Montgomery bus boycott. Rosa Parks (1913–2005), a member of the NAACP, was arrested for refusing to give up her seat to a white man on a segregated bus. Over decades a great many African Americans, including leaders and intellectuals such as Parks, King, Marshall, Malcolm X, W. E. B. Du Bois, and Ida B. Wells-Barnett, stood up against the injustices of segregation, lynching, and civil rights violations.

CONTEMPORARY ISSUES OF SEGREGATION

Even though the official segregation system was finally outlawed by the 1968 Civil Rights Act, its reality and impact continue into the twenty-first century. The racial attitudes of whites on surveys since found that ever fewer whites publicly subscribe to the earlier views of the Jim Crow era. Nevertheless, segregated schools, neighborhoods, and churches are still prevalent. In the early twenty-first century, the United States remains racially segregated and racial equality remains more of an ideal than a reality.

The continued spatial isolation and segregation of black Americans have been achieved by a conjunction of racist attitudes, covert and overt discriminatory behaviors, and rooted institutional practices that continue to subordinate black Americans in most institutions. Social scientists have shown the serious repercussions of this for blacks and other Americans.

Social science research has also shown that racial segregation in housing and education still adversely affects the health of African Americans and other Americans of color because that segregation helps to reinforce institutional segregation in yet other institutional areas. Economic inequality is closely linked to racial inequality,

and both operate as strong determinants of major variations in health status.

Although other subordinated racial groups such as Latinos and Asian Americans, as well as some white ethnic groups, have experienced imposed residential segregation in U.S. history, no group has experienced the high degree of segregation and isolation faced by African Americans, "who are twice as isolated as Hispanics and Asians and about 60% more segregated" (Massey and Denton 1993, p. 67). The social, health, and economic repercussions of this residential segregation are similar to the detrimental results experienced by black South Africans in South Africa's dismantled oppressive system of apartheid.

SOUTH AFRICAN APARTHEID

The oppressive system of apartheid swept through South Africa as a consequence of the electoral victory of the white-racist National Party in 1948. Apartheid embraced a totalitarian racial policy essential to replace the old policy of informal segregation. Legal apartheid controlled and manipulated the space in which black people developed their lives and livelihoods. The main aim of apartheid was total separation of blacks and whites in schools, hospitals, beaches, stores, buses, and housing. Black South Africans were forced to live in subordinate conditions, were separated from their families, were subjected to physical and psychological trauma, and were forced to carry identification cards to move about their country. The white South African government forced black South Africans to live in particular areas called Bantustans and townships. The townships consisted of deplorable one-room shanty houses made of cardboard and scrap metal. Entire families lived in these shanty houses without running water and electricity. These deplorable conditions still exist into the twenty-first century in South Africa. The system of racial apartheid, for many decades during the twentieth century, disproportionately placed all economic, social, and political power in the hands of whites, at the expense of every other racial-ethnic group.

The experiences of apartheid in South Africa for blacks were not unique. The institutionalization of racism there, a process that permeated and perverted every aspect of the individual and collective lives of South Africans, was similar in many aspects to that of the era of legal segregation in the United States. In the early twenty-first century both still have a striking persistence of residential segregation and other racial inequalities in regard to socioeconomic, health, political, and educational resources. South Africa's history of racial, cultural, and economic tensions still affects black South Africans who were used as a cheap source of labor and who were prevented from purchasing land, voting, and interracial marriage.

Black South Africans resisted the system of apartheid just as African Americans resisted legal segregation. Nelson Mandela, an internationally recognized leader in the struggle for black civil rights, was the head of the African National Congress, whose struggle played a major role in finally dismantling racial apartheid. Mandela was imprisoned in 1963 for his participation in the fight for civil rights, and he spent nearly thirty years of his life in prison. He was released in 1990 and served as president of South Africa from 1994 to 1999. His contributions, accomplishments, sacrifices, and commitment to and for civil rights are recognized and celebrated internationally.

Unlike the United States, South Africa was forced to create the Truth and Reconciliation Commission, with the power to interview white oppressors and their victims, to establish historical documents of the events, to unearth the missing dead, and to grant amnesty, in order to secure a democratic society in South Africa. Mandela's message of truth, justice, equality, and reconciliation dominated the early days of transition and aided in the success of ending the oppressive system of apartheid. In contrast, neither the U.S. government nor state governments have ever apologized for the enslavement and segregation of African Americans. A truth and reconciliation commission whose work would recognize that history of racial oppression might do for the United States what it did for South Africa.

SEE ALSO *African National Congress; Apartheid;* Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Citizenship; Civil Liberties; Civil Rights; Civil Rights Movement, U.S.; Du Bois, W. E. B.; Integration; Jim Crow; King, Martin Luther, Jr.; Malcolm X; Mandela, Nelson; Marshall, Thurgood; National Association for the Advancement of Colored People (NAACP); Racism; Segregation, Residential; Segregation, School; Separate-but-Equal; Supreme Court, U.S.; Truth and Reconciliation Commissions; Warren, Earl; Wells-Barnett, Ida B.*

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SEGREGATION, OCCUPATIONAL

SEE *Crowding Hypothesis.*

SEGREGATION, RESIDENTIAL

Residential segregation refers to differences among social groups in their spatial distribution. Conceived broadly, the topic subsumes regional and other macro-level patterns of spatial distribution; but the research literature has focused primarily on group differences in distribution across neighborhoods in urban areas. Research on residential segregation constitutes one of the oldest traditions in sociology and has a rich history of cumulative development extending back to the founding of the discipline. Patterns of neighborhood distribution received close attention in W. E. B. Du Bois's *The Philadelphia Negro* (1899), a landmark work often viewed as the first major empirical study in urban sociology. Studies of segregation processes of neighborhood change were integral to the Chicago School tradition spawned by Robert Park and Ernest Burgess's *The City* (1925) and were a mainstay of empirical urban sociology in the 1920s, 1930s, and 1940s.

Quantitative research on racial segregation advanced significantly in the 1950s and 1960s. A key methodological statement by Otis Dudley Duncan and Beverly Duncan (1955) forged a working consensus on measurement approaches, and studies by Duncan and Duncan (1957), Stanley Lieberson (1963), and Karl Taeuber and Alma Taeuber (1965) established exemplars for research on segregation and neighborhood change that remain influential. Five decades of vigorous, cumulative research ensued, marked by steady methodological refinement—in studies such as those by Lieberson (1981), Linda Stearns and John Logan (1986), Douglas Massey and Nancy Denton (1988), and David James and Karl Taeuber (1985)—and a stream of empirical studies assessing trends and patterns in residential segregation—in studies such as those by Lieberson (1980), Reynolds Farley and William Frey (1994), Massey and Denton (1987, 1989, 1993), Paul Jargowsky (1997), Edward Glaeser and Jacob Vigdor (2003), and Logan (2003).

Residential segregation occurs along many lines of demarcation in social life. Segregation is most pronounced on the dimensions of race and ethnicity and socioeconomic status but is also observed in lesser degrees along cultural and religious lines, stage of family-life cycle, and differences in lifestyle. As a result, cities can be described as urban mosaics of heterogeneous neighborhoods marked by relative internal homogeneity in social characteristics. Urban ethnographies identify a multitude of neighborhood types—"old money" elite enclaves, "nouveau riche" gated communities, suburban developments, working-class areas, ethnic villages, areas of immigrant settlement, poverty areas, gay and lesbian districts, artist colonies, and so on—and they document the variation in social life across these areas. Urban theory outlines the micro- and macro-level dynamics involved. Quantitative studies describe the extent to which social differentiation is expressed spatially and assess the impact of the various factors shaping segregation trends and underlying neighborhood change. The literature on racial and ethnic segregation and segregation among socioeconomic groups is especially well developed and establishes that these forms of segregation are maintained both by informal and decentralized social dynamics and by structured institutional forces, including legal and regulatory guidelines.

In the United States the most closely studied aspect of segregation is the white–black residential color line. Historically, white–black segregation has been, and remains, more pronounced than any other form. For most of the twentieth century it was maintained by a welter of interlocking laws, regulations, and institutional practices supplemented by intimidation and violence on the part of whites, which in combination functioned to exclude blacks from white residential areas. The separate-but-equal doctrine established by the *Plessy v. Ferguson* Supreme Court decision of 1896 provided the legal bulwark for the oppressive Jim Crow system in the South that formally separated blacks and whites in schools and public facilities. In the North and Midwest, restrictive covenants, realtor discrimination, so-called mortgage redlining, and related institutional practices combined with informal intimidation and violence by whites to foster levels of white–black segregation and black ghettoization that surpassed even the levels seen in the South. This unparalleled pattern of segregation had severe consequences for African Americans: inferior housing and schooling, sharply restricted life chances, and disproportional exposure to concentrated poverty and attendant social problems such as drug abuse, crime, and gang violence. In short, the residential color line has been at the heart of the extreme social isolation and disadvantage experienced by the African American population in the United States.

The Civil Rights era of the 1960s, following on crucial legal decisions from the 1950s and earlier (e.g., the Supreme Court *Brown v. Board of Education of Topeka* in 1954), brought the dismantling of overt, formal mechanisms of white–black segregation. Initially, change was often more symbolic than consequential. For example, the Fair Housing Act (Title VIII of the Civil Rights Act of 1968) swept aside many practices of overt housing discrimination in principle but in practice was not backed with effective enforcement policies. Effective enforcement of antidiscrimination policy came only with later legislation (e.g., the Fair Housing Amendments Act of 1988) and associated court rulings. Decades later, reductions in housing discrimination, especially the more blatant formally sanctioned practices, became clear. But discriminatory practices have endured in both the informal realm and less obvious institutional practices (e.g., siting of low-income housing). Consequently, changes in residential segregation have been slow in coming despite seemingly sweeping legal reforms. This is evident in patterns of resurging racial segregation in public schools, as documented by Gary Orfield (2001), which is rooted in enduring patterns of racial residential segregation.

The white–black color line presents a special case for segregation theory. Segregation patterns for other ethnic and racial groups in the United States have not involved comparable levels of social isolation and residential disadvantage. Similarly, patterns of residential assimilation observed over time for many other ethnic and racial groups have not been seen for African Americans. To be sure, white–black segregation has not been a constant. It increased, rising from moderate to unprecedented high levels during the era of the Great Migration of African Americans to northern urban areas during the early part of the twentieth century. In 1970, after a half-century of stasis, white–black segregation began slowly declining and by 2000 had returned to levels not previously seen since 1920–1930; this trend has been accompanied by a rapid disappearance of exclusively white residential areas, as shown by Glaeser and Vigdor (2003). Variation in white–black segregation across metropolitan areas also should be noted; generally, segregation is higher in metropolitan areas that were major destination sites of the Great Migration (e.g., Chicago, Cleveland, Detroit, Philadelphia) and lower in metropolitan areas of the South and West that rose to national prominence after World War II (e.g., Houston, Los Angeles, and San Diego). The trends over time and the variation across metropolitan areas are both important. But the key social fact is that white–black segregation remains more pronounced than any other form of segregation. It is quantitatively more severe and, in a pattern not typically seen for other groups, is routinely manifest on multiple dimensions (e.g., uneven distribution, isolation, clustering, concentration, and centralization) simultaneously, a phenomenon observers such as Massey and Denton (1989) characterize as hypersegregation.

White–black residential segregation is also exceptional for the near absence of dynamics of spatial assimilation. Residential segregation of earlier European immigrant groups dissipated slowly over generations as reductions in cultural and socioeconomic differences between groups were accompanied by steady reductions in spatial separation from "old stock" European groups. At the start of the twenty-first century, a similar dynamic appears to be operating for Latino and especially Asian immigrant groups. As Massey (1985) notes, a comparable process has yet to be observed for African Americans. Thus, for example, the rapid suburbanization of the African American population since the 1980s has largely extended white–black segregation to suburban areas rather than fundamentally reducing overall segregation as historically occurred for other groups.

The reasons for enduring high levels of white–black segregation in the post-Civil Rights era are the subject of much consideration. Scholars generally concur that contemporary white–black segregation cannot be explained as a byproduct of economic segregation and group differences in income. In contrast to patterns observed for other groups, segregation among whites and blacks of similar

socioeconomic status is scarcely lower than overall white–black segregation. In view of this fact, future research will need to monitor the residential experiences of potential bellwether groups such as middle- and high-status African American households. There also is widespread consensus that racial discrimination continues to be a major factor in contemporary white–black segregation. Most observers, as reported by Massey and Denton (1993) and Margery Turner and colleagues (2002), conclude that blatant forms of exclusionary discrimination have declined; but many, as also reported by Massey and Denton (1993) as well as John Yinger (1995), conclude that less obvious but highly consequential forms of discrimination continue.

Opinion is mixed regarding the relevance of informal residential dynamics outside the purview of existing antidiscrimination law. As Camille Charles (2001) has shown, blacks encounter higher levels of negative stereotyping and prejudice and rank at the bottom in survey responses regarding preferences for potential neighbors. Scholars such as John Yinger (1995) and Douglas Massey and Nancy Denton (1993) discount the role of prejudice in the absence of discrimination, but studies by Thomas Schelling (1978), William Clark (1991, 1992, 2002), Mark Fossett (2006), and Fossett and Warren Waren (2005) suggest that household location decisions governed by such preferences can sustain high levels of segregation even in the absence of discrimination. Consistent with this view, studies of residential movement, such as Ingrid Ellen's (2000), indicate that avoidance of blacks on the part of whites and other groups—a social dynamic outside the scope of existing antidiscrimination law—is an important contributing factor in maintaining segregation. This suggests that significant movement toward residential integration for African Americans will not be observed until greater declines occur in negative stereotyping and prejudice against blacks as well as in exclusionary housing discrimination against blacks.

SEE ALSO *Apartheid;* Brown v. Board of Education, *1954;* Brown v. Board of Education, *1955; Chicago School; Cities; Civil Rights Movement, U.S.; Communalism; Contact Hypothesis; Discrimination; Du Bois, W. E. B.; Ethnicity; Ghetto; Jim Crow; Migration; Nouveaux Riches; Park School, The; Park, Robert E.; Prejudice; Race; Racism; Resegregation of Schools; Segregation; Segregation, School; Separate-but-Equal*

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Mark Fossett

SEGREGATION, SCHOOL

Education has been long considered integral to the social health of most nation-states. Despite this regard for its importance, particularly with respect to the frequent promise of education as a "great equalizer," schooling has often been used by dominant groups to engage larger systems of oppression. Indeed, the long and pervasive histories of school segregation that characterize many nations remain glaring proof of such inequities in educational justice.

APARTHEID SOUTH AFRICA

In apartheid South Africa, school segregation was used as one government-directed means to perpetuate racial inequality. The Bantu Education Act of 1953, which gave the state control of all schools, was one of many legislative acts that sought to remove and restrict the lives of nonwhites in every possible sphere of life. While schooling for black Africans dramatically expanded under apartheid, this seemingly paradoxical effect was driven by the survival need of the white Afrikaner regime to acculturate the majority black population to the ideological beliefs undergirding apartheid segregation, as well as to limited job horizons, in an effort to both protect white skilled labor from African competition and provide masses of unskilled labor for growing white industry. As Nelson Mandela recounted in his autobiography *Long Walk to Freedom* (1994), this form of education amounted to "intellectual '*basskap*' (domination), a way of institutionalizing inferiority" (p. 145).

Aside from its ideological destructiveness, the segregated schooling imposed through Bantu Education was characterized by a highly inequitable distribution of resources leading to overcrowding, poor facilities, and low-grade teachers. The inequitable conditions institutionalized through Bantu Education would eventually backfire on the Afrikaner regime, as black youth entering their late teens and early twenties "rose up with a vehemence," most notably during the Soweto student uprising of 1976 (Mandela 1994, p. 148).

RACIAL SEGREGATION IN THE UNITED STATES

Tracing the historical progression of school segregation in the United States provides another striking example of the way education becomes incorporated into a system of oppression. In 2002 Peter Irons verified that never has there been a year in U.S. history when even half the country's black children attended schools where a majority of children was white. However, school segregation in the United States exists as but one part of a centuries-old, interconnected system of racial oppression. As Joe Feagin has documented, the white male founders who drafted the U.S. Constitution built into the country's foundation mechanisms designed to maintain African American enslavement. Eight decades would pass before these enslavement mechanisms were removed. Following a short Reconstruction era in the South, during which time public educational opportunities were finally extended to newly freed black Americans (as well as poor whites), the southern white elite, predominantly former slaveholders returning to power, quickly imposed extreme racial segregation as a new form of domination.

In the post-Reconstruction era, African Americans in the North were not exempt from the effects of a broadening racial segregation. There the daily life of black Americans was impacted by an informal de facto segregation, which affected black children's education as well.

Throughout the South, however, where the majority of African Americans lived, segregation became a deeply entrenched way of life, endorsed by law and culture. Legal segregation, called Jim Crow, was a totalitarian system of government-buttressed control that extended to virtually every facet of life. Under the system of legal segregation African Americans faced not only large-scale discrimination by whites in the economy but also met severe restrictions in access to education, housing, political participation, churches, health care, and public accommodations. Indeed, the hand of overt segregation was undergirded by the constant threat of white violence and extended to every corner of lived existence for African Americans, limiting even the cemeteries where one could be interred.

Nowhere was the existence of legal segregation more rampant than in U.S. school systems. With few exceptions, public and private educational institutions—from nursery schools to universities—were segregated in the South. Segregation in schools, as in other institutions, was legally protected, indeed required, by court decisions, climaxing most significantly in *Plessy v. Ferguson*. This 1896 Supreme Court decision upheld the legal mandate for segregated public accommodations and set the infamous "separate but equal" legal precedent. This separate-but-equal standard was a backhanded way to seemingly satisfy the Fourteenth Amendment equal protection clause while paving the way for segregated schooling that ended up being far from "equal" for African Americans.

In practice, southern state and local governments disregarded the education of black youth. As Paul Finkelman stressed, "the disparity in public expenditures guaranteed that blacks would have inferior educational facilities" (2004, p. 45). In 2004 Richard Kluger documented how such disparities operated during legal segregation, with the case of Clarendon County, South Carolina. In 1949 that county government paid $179 per white pupil, while spending only $43 per black pupil there. In this same year the county's 2,375 white children went to twelve different schools, valued at $673,850 (an average value of $56,154 per building); the county's 6,351 black students were dispersed over 61 schools, collectively valued at $194,575 (an average value of $3,190 per building). Many schools were dilapidated, lacking modern heating or indoor plumbing. The racial disparity in spending meant significantly larger class sizes for black students and poorer pay for black principals, supervisors, and teachers. These material inequities served to support the supremacist doctrine that whites intended to communicate through segregation's practice: Whites and blacks are not simply different; whites are superior.

Significantly, black parents and activists have engaged in long struggles for adequate and desegregated schooling since the mid-nineteenth century. They frequently met extreme resistance and were largely legally stifled in their efforts until the period from 1930 to 1950, when successful court cases (most brought by the National Association for the Advancement of Colored People [NAACP], founded in 1909) laid the legal foundation for what Finkelman referred to as "*the* watershed decision of the twentieth century" (2004, p. 35), *Brown v. Board of Education* (1954). As Feagin and Bernice McNair Barnett noted in 2004, the Supreme Court decision in *Brown* effectively dethroned the *Plessy v. Ferguson* doctrine of separate-but-equal that had defined the law, striking down segregation in schooling with the following declaration by the justices: "We conclude that in the field of public education the doctrine of 'separate but equal' has no place. Separate educational facilities are inherently unequal."

Brown was a landmark decision because it was interpreted by numerous judges as a mandate to dismantle state-created segregation in all major institutions, and recognized African Americans as first-class citizens. As T. Alexander Aleinikoff maintained, in *Brown* "Segregation in the public schools is condemned for producing second-class citizenship for African-Americans both because it imposed a stigma on them (as persons not fit to go to school with whites) and because it did not adequately prepare them to be effective citizens" (2002, p. 40).

The reaction to *Brown* by the southern white elite and public ran from general hostility to massive resistance, and few schools were actually desegregated for more than a decade. One of the primary reasons for the failure was the weakness of the 1955 companion case, *Brown v. Board of Education (Brown II)*, which vaguely stipulated that desegregation should proceed "with all deliberate speed." White leaders, including President Dwight Eisenhower, failed to back the Court's decrees with federal authority. Additionally, some state governments passed laws in an attempt to "bypass" the decrees, for example, by issuing grants or tax credits to white families to send their children to segregated private schools, where *Brown*'s reach did not extend. Not until the late 1960s did the Supreme Court and other federal courts finally force meaningful school desegregation in the South.

RESEGREGATION IN THE POST-*BROWN* ERA

Studies examining African American academic achievement document the substantial benefits of desegregated schooling for children of color. Reviewing desegregation's impact, in 2004 Janet Ward Schofield and Leslie R. M. Hausmann found desegregation positively impacted high school graduation rates and black academic achievement. The impact extends beyond primary and secondary schooling, such that African Americans attending inte-

grated schools are more likely to attend college, entertain higher occupational aspirations, gain access to beneficial networks, and acquire better jobs. It is important to note, however, that such positive outcomes are less influenced by the actual racial heterogeneity of desegregated schools than they are by the typically better educational infrastructure that exists in such schools, for example, in terms of resources. In other words, the great crisis of segregated education has not been that children of color cannot be well educated aside other children of color, but rather that segregated educational institutions have been and most often continue to be, as *Brown* reminds, "inherently unequal."

A number of scholars and civil rights advocates have argued for the importance of integrated education, particularly as a way to reduce racial isolation. Participating in diverse educational communities, all students become better prepared to live, learn, work, and participate democratically in an increasingly multiracial world. Additionally, school desegregation creates opportunities to break down stereotypes as students associate with those unlike themselves. Individuals who attended desegregated schools are more likely to live and work in integrated settings, weakening overall racial isolation.

Despite significant progress, by the late 1970s many white liberals began backtracking in their commitment to desegregate U.S. schools. By the 1980s, such backtracking was widespread, primarily as a result of new conservative presidential administrations and courts. Through the 1990s courts allowed many school systems to abandon desegregation plans. Notably, Supreme Court decisions in *Board of Education v. Dowell* (1991), *Freeman v. Pitts* (1992), and *Missouri v. Jenkins* (1995) proved damaging to long-term desegregation, ending federal segregation orders before lasting success could be demonstrated in the interest of returning schools to local white control. In 2004, Lia B. Epperson identified the fault of this local-rights approach, arguing that "It is a standard that treats whites and blacks as if they were similarly situated and ignores the history of segregation and its vestiges.… This very form of local control allowed segregation to flourish in the era before *Brown*, and has done so again in the decade since these decisions" (2004, p. 140).

As Jonathan Kozol attested in 2005, retreat in desegregation has allowed for the persistence of already segregated schools, as well as the rapidly growing resegregation of schools that had been integrated. The Harvard Civil Rights Project reported in 2003 that three-fourths of black and Latino students attended predominantly minority schools, and more than 2 million attended "apartheid schools" where 99 to 100 percent of students were not white. As during legal segregation, racial disparities in per-pupil spending remain extreme.

Even within schools integrated at the facility level, a type of "second-generation segregation" is often imposed through the racially correlated allocation of educational opportunities. For instance, many scholars argue that ability tracking (a practice instituted soon after the *Brown* decision) has led to the emergence of what economist William Darity Jr. refers to as "segregated curriculums." Beginning as early as elementary school, tracking frequently creates an internal racial segregation, as students of color are disproportionately assigned to lower academic tracks and are relatively absent from accelerated tracks (e.g., "gifted" or honors programs). In 2002 Terence Fitzgerald additionally uncovered categorical labeling practices whereby African American students were disproportionately assigned to special education and/or behavioral disordered categories, as well as more frequently expelled or placed in alternative school settings. The effects of such racially stratified practices have far reaching consequences, initiating a discriminatory cycle of restricted educational opportunities for students of color that leads to inferior learning opportunities, diminished school achievement, oppositional responses, and exacerbated racial disparities in school.

As the increasing prevalence of resegregation and second-generation segregation displays, and as Feagin and Barnett urge, efforts to end racial segregation require "constant renewal, for established arrangements of centuries have a strong social inertia" (2004, p. 1104). Beyond the U.S. and South African legacies, school segregation targeting ethnic or cultural minorities has been documented in many other nations, including England, the Czech Republic, Hungary, Bosnia, and Croatia. Only with continued resistance to the de facto segregation of schools around the globe, acknowledgement of the benefits of integrated education for all, and renewed commitment to actions that will ensure more equitable, integrated societies, can the promise of education be fulfilled.

SEE ALSO *Education; Resegregation of Schools; Tracking in Schools*

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SELECTION BIAS

An important aspect of empirical investigations in the social sciences is to draw inferences for the whole population of interest when one has data only on a subsample from that population. A first step in conducting such inference is to assume that the subsample under examination is drawn randomly from the population. However, in many instances in economics, or in the social sciences in general, it is not possible to make such an assumption. For example, suppose one is interested in drawing inferences regarding the determinants of wages for women when one has information on wages only for women working in market employment. If the sample of market-employed women "differs" from the population in some systematic way, then using the sample of employed women may lead to incorrect inferences regarding the determinants for all women. This issue, where the inference based on subsample is not appropriate for the entire population, is known as *selection bias*.

The example of employed women is useful for further illustrating the concept of selection bias. In fact, the original papers on selection bias were motivated by empirical work on precisely this topic. Suppose one has a sample of women of which, without loss of generality, half are

employed in market employment and half are not. Furthermore, suppose each woman is characterized by observable characteristics, such as race, age, and education, and unobservable characteristics, such as motivation and ability. Also assume that these unobservable characteristics are uncorrelated with the observable characteristics so as to demonstrate that selection bias arises even with exogenous conditioning variables. Suppose the objective of the researcher is to explore the relationship between the observable characteristics and wages for all women by using only the data on the subsample of workers.

First assume that the decision to work in market employment is random. That is, each individual tosses a coin and on the basis of the coin toss decides whether or not to work. In this case examining the subsample leads to correct inferences because the process of selection for the sample, which is used to draw inferences, is random; thus there are no differences between the employed sample and the nonemployed sample. As a result there is no selection bias.

Second, now suppose that only the highly educated individuals in the population are observed to be working in market employment. In this case the working sample would be overrepresented by individuals with higher levels of education. Thus, the sample of employed workers will have different average characteristics from those observed to be not working in market employment.

However, since the topic of interest is how the individual's characteristics affect wages, one can control for the role of any observable characteristics when performing estimation over the employed sample. Thus differences in observable characteristics alone will not lead to selection bias.

Finally, consider the case in which all the highly motivated individuals in the sample of women are those that are observed to work in market employment. If motivation affected only the decision to be employed but not the wage, then this would not induce selection bias; even though the sample of working women would have a higher level of motivation on average than the whole population, one could still directly control for all the determinants of wages when examining the relationship between these determinants and wages. However, consider a case in which motivation does affect wages as well as the market work decision. In this case, the sample of employed women would have wages that were determined by the observable characteristics, which one could control for, and their level of motivation, which one could not control for. Moreover, as one has only a sample of motivated individuals working, one must conclude that for this employed sample the role of motivation, on average, is to increase wages. Failure to account for the role of motivation leads to a selection bias and incorrect inferences regarding the determinants of wages. Thus, in general, selection bias occurs when the unobservable features determining the probability of being observed in the subsample used for inference (in this example the sample of employed women) are correlated with the unobservables determining the outcome of primary interest (i.e., wages).

The issue of selection bias arises in a large number of empirical investigations in economics. Accounting for selection bias has therefore become a critical feature of empirical work in economics. One can see from the example above that adjusting for selection bias essentially requires controlling for the role of the unobservables. The first efforts to account for selection bias were conducted in a fully parametric setting. That is, the distribution of all the unobservables in the model were fully stated up to unknown parameters. This approach was suggested by James J. Heckman (1974, 1979) and ever since has had a substantial impact on both theoretical and empirical microeconometrics. Subsequent theoretical and empirical work in this area focused on relaxing the distributional assumptions in the model and thus attempted to make inference more robust to the assumptions employed in the earliest investigations. The 1998 article by Francis Vella surveys these departures from the original Heckman formulation and treatment. Another important innovation, as discussed by Charles Manski's 1989 article, has been the use of bounds in this literature. According to this approach, one attempts to infer the upper and lower bounds on the object of interest (for example, the impact determinants of wages) when one relaxes various assumptions underlying the process determining selection bias.

SEE ALSO *Classical Statistical Analysis; Descriptive Statistics; Heckman Selection Correction Procedure; Sampling*

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Francis Vella

SELECTION BIAS REGRESSION

SEE *Heckman Selection Correction Procedure.*

SELECTIVE ATTENTION

Selective attention involves the ability to attend to relevant information while ignoring irrelevant information. In early research on this topic, a critical question was whether attention occurs before (early selection) or after (late selection) the information is processed for meaning. One of the tasks used to answer this question is the dichotic listening task. In this task, participants listen to different passages of text presented in each ear through headphones. Researchers found that when questioned about the message in the unattended or ignored ear, participants detected changes in perceptual characteristics (e.g., pitch, volume) but did not notice other meaning-based changes. This result suggests the existence of a perceptual filter that selects information based on features such as volume or pitch. This filter serves to limit the amount of information entering short-term memory (i.e., the "bottleneck" in processing). However, other evidence suggests that unattended information also passes through the filter, though at an attenuated level, whereas still other results suggest that attention occurs much later, after all information has been processed for meaning. One current model of selective attention proposes that attention can occur early or late, depending on the perceptual and memory demands imposed by the task.

Selective attention is also investigated employing tasks using reaction time, measured in milliseconds, as the variable of interest. In the Stroop task, participants name the color of the ink in which a word is printed. Individuals are slower to respond in an incongruent condition (e.g., the word *red* printed in green ink) compared to a congruent condition (e.g., the word *red* printed in red ink), because the relatively automatic word-naming response must be inhibited in the incongruent condition. This interference is more pronounced with increased age, even in relatively healthy older adults. In visual search tasks, participants identify a target item among irrelevant distractor items. Under difficult conditions, when distractors are physically similar to the target, search becomes less efficient, particularly for older adults. However, under conditions in which the target is a unique item and tends to "pop out" from the distractors, search performance is comparable for younger and older adults. Using these tasks with brain-imaging techniques has allowed researchers to identify a frontoparietal network of brain regions involved in selective attention. Healthy older adults show increased activations, compared to younger adults, in this frontoparietal network, combined with decreased activations in visual cortical regions. The increased activation may serve as a compensatory mechanism for age-related declines in visual processing.

Other causes of individual differences in selective attention include attention deficit hyperactivity disorder (ADHD), which has typically been associated with global deficits in attention. However, recent research using visual search tasks suggests no differential impairment in selective attention between ADHD children and matched control children, although ADHD-related deficits have been observed in other components of attention, such as the ability to switch between two different tasks. Although there is little evidence of sex differences in selective attention, a few studies using the dichotic listening and visual search tasks have found moderate differences in selective attention favoring women.

SEE ALSO *Attention-Deficit/Hyperactivity Disorder; Neuroscience*

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SELECTIVE SERVICE

During major military conflicts in which the United States has been involved throughout its history, the government has utilized various programs and forms of military conscription in order to draft male citizens to the armed forces. While no draft has been in place since 1973, the Selective Service exists as an independent agency within the federal government to administer the registration of eighteen-year-old males, which is required by law, and conduct a draft should a need for military manpower over and above a volunteer force arise. An individual who is appointed by the president of the United States and confirmed by the U.S. Senate directs the Selective Service System.

HISTORICAL PERSPECTIVE

Congress passed the first military conscription act on March 3, 1863, during the Civil War. The act authorized President Abraham Lincoln (1809–1865) to draft men between the ages of twenty and forty-five into military service for the Union forces. The law, which included the option of draftees to pay a *commutation fee* of $300 to escape enlistment, provoked protests in New York City by those who saw it as unfairly protecting the wealthy.

Lincoln was forced to send federal troops to quell violent mobs. The Confederate States also instituted conscription in 1862, and it proved just as unpopular in the South as in the North. The next military draft law in the United States was passed in 1917; the Selective Service Act gave the president the power to conscript men for service during World War I.

As American involvement in World War II approached, President Franklin D. Roosevelt (1882–1945) signed the Selective Training and Service Act of 1940. This act created the first peacetime draft and established the Selective Service as an independent federal agency. The original legislation called for a service commitment of twelve months but was expanded to eighteen months following direct U.S. engagement in hostilities. Men between the ages of eighteen and forty-five who registered with the Selective Service were eligible to be inducted into the army and Marine Corps, and more than 10,000,000 men were inducted between 1940 and 1947. New legislation in 1948 reduced the mandatory registration age range to between eighteen and twenty-six. Military conscription continued during the Korean War in the 1950s and, most notably and controversially, during the Vietnam War.

Beginning in 1964, President Lyndon B. Johnson (1908–1973) was authorized by Congress to increase the number of troops in Vietnam, and by early 1968 the United States had more than 500,000 troops there. Tens of thousands of young men were drafted through the Selective Service lottery, while thousands of others avoided service through exemptions—also called deferments—granted by the several regional Selective Service draft boards around the nation based on educational commitments, membership in the clergy, medical restrictions, membership in the National Guard, and other obligations. Critics of the draft process noted an inordinate number of minorities had been selected, and questioned the randomness of the lottery. As in the past, the draft was seen as unfairly singling out those without the economic means to avoid service. As the number of U.S. soldiers killed in action rose and the war became increasingly unpopular, the draft became a focal point for antiwar protestors. In 1973 President Richard M. Nixon (1913–1994) signed legislation that ended the draft, and those joining the military thereafter did so as volunteers.

THE SELECTIVE SERVICE IN THE EARLY-TWENTY-FIRST CENTURY

Despite the end of the draft, in the early-twenty-first century the Selective Service exists as a contingency in the event of a draft. All males in the United States must register within thirty days of their eighteenth birthdays; that requirement applies to citizens and aliens alike. Registrants may sign up via mail, at a U.S. post office, or on a student federal financial aid form. Because the Selective Service does not apply draft status classification to registrants when there is no draft, disabled men must also register. Similarly men who are conscientious objectors to war must register with the Selective Service, since there is no place on the registration form to indicate objection to induction into the armed services. The mere act of registering, however, does not guarantee a man will be inducted in the event of a draft. As it did during previous wars where a draft was in place, the Selective Service would classify registrants to determine eligibility for induction and deferments when and if a draft is reinstated. Additionally, according to its mission statement, the Selective Service would devise an alternative service program for those classified as conscientious objectors.

Females are not required to register with the Selective Service. Congress has explicitly stated in all Selective Service legislation that only males are required to register. In a 1981 case challenging the constitutionality of that particular clause (*Rostker v. Goldberg*), the Supreme Court ruled that Congress was well within its authority to exclude women from registration with the Selective Service because the purpose of the legislation is to raise and regulate armies and navies for combat action, and women are excluded from nearly every type of military combat. President William J. Clinton (b. 1946) ordered a review of the policy regarding females and Selective Service registration in 1994, and the Department of Defense reported that the process of exclusion remained justifiable because of combat regulations and restrictions but noted the need to revisit the issue as the roles of female soldiers expand in the future.

In the event Congress passes legislation reinstating the draft, a National Draft Lottery would be conducted to determine the order in which men would be drafted for induction. The lottery would be based upon the birth dates of registrants, beginning with those men twenty years of age during that calendar year. A major difference from the Vietnam draft-era is that registrants who are eighteen and nineteen years old during the year of the draft would most likely not be called, as opposed to the great number of men under the age of twenty called to Vietnam. The lottery would be conducted in public and under the auspices of the National Institute of Standards and Technology in order to insure as random a lottery as possible.

SEE ALSO *Civil-Military Relation; Military; National Service Programs; Pacifism; Peace Movements; U.S. Civil War; Vietnam War; World War I; World War II*

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SELECTORATE THEORY

SEE *Stability, Political.*

SELF DISCREPANCY THEORY

Self discrepancy theory was introduced by psychologist E. Tory Higgins (1987) with the purpose of explaining the relationship between aspects of the self and affect. In this theory, Higgins posits that individuals possess different types of *self-guides*, or standards, against which they compare their current self. These comparisons yield information that individuals are either near their self-guides or are distant from them. In the case of proximity to self-guides, individuals experience positive affect. In the case of discrepancy from self-guides, individuals experience negative affect. This affect is differentiated by the type of self-guide being used in comparison. Individuals may compare themselves to an *ideal self-guide*, which represents their hopes or wishes. Or they may compare themselves to an *ought self-guide*, which represents their obligations or responsibilities. Comparisons made to ideal self-guides result in affect along an elation-dejection spectrum: Proximity to ideal standards yields affect such as happiness and joy, while discrepancy from ideal standards yields affect such as depression and sadness. Comparisons made to ought self-guides result in affect along a relief-agitation spectrum: Proximity to ought self-guides yields affect such as calmness and contentment, while discrepancy from ought self-guides yields affect such as nervousness and guilt. The magnitude of discrepancy is related to the experience of negative affect such that the greater the discrepancy, the greater the negative affect.

Timothy Strauman (1992) applied self discrepancy theory to psychological disorders of emotion. He found that individuals reporting symptoms of depression had larger discrepancies from their ideal selves, while individuals reporting symptoms of anxiety had larger discrepancies from their ought selves.

Self discrepancy assumes that self-regulation occurs in response to the negative affect experienced as the result of a discrepancy. This self-regulation occurs through a discrepancy-reducing feedback process in which individuals exert changes on their behavior in response to a noticed discrepancy. Feedback about individuals' progress toward self-guides is transmitted back to the individual, and behavioral change is either continued or terminated.

An expansion of this theory by Higgins (1997) suggests that individual differences in self-guides are chronic and related to personality. He labeled individuals who tend to have accessible ideal self-guides as *promotion-oriented* and individuals who tend to have accessible ought self-guides as *prevention-oriented*. These different types of goal orientations are expected to influence the types of goals individuals pursue, as well as the contexts under which they will experience the most successful goal pursuit.

Measurement of discrepancies often occurs through the Selves Questionnaire. On this questionnaire, individuals list attributes associated with each of the different *self-states* (own-actual, own-ideal, own-ought, other-actual, other-ideal, other-ought). Correlations and partial correlations among the self-states are computed to determine magnitude of discrepancy. Some researchers may opt to use only the self-states from the individuals' own perspective.

SEE ALSO *Self-Guides*

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Michelle Sherrill

SELF-ACTUALIZATION

Self-actualization is the process by which an organism or person realizes its full potential. The concept was first introduced by the Gestalt psychologist Kurt Goldstein in his 1939 book *The Organism*. It was soon adopted and developed by several early proponents of the humanistic psychology movement, such as Carl Rogers (1902–1987), the founder of client-centered therapy. Nonetheless, self-actualization is most strongly associated with the work of Abraham Maslow (1908–1970), another early humanistic psychologist. It is for that reason that this article will focus on Maslow's original formulation of self-actualization and subsequent research on that formulation.

HIERARCHY OF MOTIVES

Maslow's first discussed self-actualization in the context of his argument for a motive hierarchy. This hierarchy was put forward in his article on "A Theory of Human Motivation" published in a 1943 issue of *Psychological Review*. According to this early formulation, human needs could be ordered according to their relative *pre-potency*. That is, a particular need will not manifest itself until a more basic, pre-potent need is first satisfied. The most pre-potent motives are physiological and pertain to self-preservation. These include the needs to breathe, to drink water, to eat food, to dispose of bodily wastes, to sleep, and to regulate body temperature. If these needs are reasonably well satisfied, another set of motives are evoked, namely, those that concern safety. This includes the desire for physical security, such as the need to live in a secure, predictable environment free of violence and threat. Once this set of needs is also gratified the individual advances to love needs, which include the desire for affection, intimacy, and belongingness.

After physiological, safety, and love needs are satisfied, the person can move to esteem needs. These involve the enhancement of one's self-confidence and self-respect. Only upon the gratification of esteem needs can an individual progress to the need for self-actualization. According to Maslow, this "refers to the desire for self-fulfillment" or "the desire to become more and more what one is, to become everything that one is capable of becoming" (1943, p. 383). Because each individual human being has a distinct intrinsic potential, self-actualization is the most divergent of the needs in the hierarchy. Everyone can appreciate the desire for a breath of fresh air, the need to feel safe from danger, and the push to feel good about one's self. But where one person might self-actualize by becoming a scientist, another might do so by becoming an athlete or chef. There are as many ways to self-actualize as there are distinguishable individuals. However, because a large number of persons never are able to satisfy more pre-potent needs, self-actualizing individuals tend to be relatively rare.

From 1943 until Maslow's death in 1970, this formulation underwent several modifications and elaborations. One important change was the later distinction between *deficiency* and *being* needs. The former "D-needs" encompass the physiological, safety, love, and esteem needs. To experience these needs is to succumb to "D-cognition," or the awareness of a deficiency—of a negative condition that must be removed. The latter "B-needs," in contrast, concern "B-cognition," or the awareness of pure being—a positive state that is actively enjoyed. In this second group Maslow placed not just self-actualization but also various higher motives, such as the needs for knowledge, for aesthetics and beauty, and for self-transcendence, a spiritual need. Unlike the deficiency needs, Maslow's conception of the being needs changed over the course of his career. These changes involved both their number and their placement within the hierarchy.

CHARACTERISTICS OF SELF-ACTUALIZERS

Having placed self-actualization at or near the apex of the motive hierarchy, Maslow felt it necessary to investigate the attributes of those personalities whose lives are dominated by B- rather than D-cognition. This presented a methodological problem because, according to his theory, self-actualizing individuals should be relatively rare. In fact, he reported that in student populations—the most common source of research participants in psychological research—only 1 out of 3,000 students managed to get beyond deficiency needs. As a consequence, Maslow adopted an unconventional investigative strategy. Rather than study self-actualizing students he would examine eminent personalities whose acts of self-actualization had driven them to major achievements. His sample included, among others, first lady and humanitarian Eleanor Roosevelt, the African American abolitionist Frederick Douglass, the physicist Albert Einstein, the psychologist and philosopher William James, the German poet Johann Wolfgang von Goethe, the Spanish violoncellist and conductor Pablo Casals, and the French painter Pierre-Auguste Renoir.

For each of the sampled self-actualizers Maslow collected biographical information about their personal characteristics. From that information he abstracted a sketch of the typical self-actualizing personality. In particular, self-actualizers were found to have more accurate perceptions of reality, to be more accepting of themselves and others, to display a freshness of appreciation for the world around them, to be more spontaneous, to be more problem centered rather than self centered, to exhibit a strong need for privacy, to maintain deep personal relationships

with just a few select individuals, to harbor a powerful sense of kinship to fellow human beings as well as a great deal of humility and respect for others, to have strong but somewhat unconventional ethical standards, to concentrate on ends rather than means, to be autonomous and to resist enculturation, to project a more intellectual than aggressive sense of humor, to be more creative, and to undergo special cognitive-emotional moments that Maslow called *peak experiences*. The latter experiences were especially important as motivators in the self-actualization process.

EMPIRICAL RESEARCH

Because Maslow was reacting against the predominant behaviorism of his day, his research on self-actualization did not meet contemporary standards for scientific rigor. For instance, his motivational hierarchy was not based on a series of laboratory experiments regarding the relative strengths of various human needs. Although he could be said to have collected data for his global profile of the self-actualizing personality, his analyses were qualitative and subjective rather than quantitative and objective. Moreover, his criteria for identifying certain individuals as being self-actualizers appear in retrospect to be somewhat haphazard or idiosyncratic.

Nevertheless, subsequent researchers have tried to scrutinize Maslow's theory using more conventional methods. Some of this research has focused specifically on the hierarchy of motives. On this point it soon became clear that the empirical data did not lend much if any support to the hypothesized ordering of needs. Not only is the drive priority unstable or variable within the set of D-needs, but also it is the case that B-needs can sometimes take precedence over D-needs. This possibility is suggested by the proverbial image of the "poor starving artist in the attic" who places self-actualization before the supposedly pre-potent needs for food, companionship, and a warm bed. Although Maslow himself acknowledged that the motivational priorities can sometimes be upset in particular cases, he often viewed these departures as pathological rather than healthy. Furthermore, once one allows for individual differences in the hierarchical placement of the motives the whole concept becomes seriously weakened as a scientific explanation. A hierarchy that can assume almost any form across separate personalities can hardly be viewed as a legitimate hierarchy.

A far larger body of empirical research has concentrated on Maslow's profile of the self-actualizing person. Unlike Maslow's own work, this research has relied on the development and application of psychometric instruments that directly assess a person's self-actualization. The first such measure was the Personal Orientation Inventory created by researcher Everett L. Shostrom in 1963. Although this instrument was used extensively throughout the 1970s and 1980s, it was also subjected to numerous criticisms with respect to validity and reliability. In the late 1980s and 1990s alternative measures appeared, including the Jones and Crandall (1986) Short Index of Self-Actualization and the Sumerlin and Bundrick (1996) Brief Index of Self-Actualization. Taken together, research using these instruments has helped validate much of what Maslow had concluded from his eminent creators and leaders. For instance, self-actualizers tend to display superior mental health, to have higher self-esteem, to have lower anxiety, to have more purpose in life, and to be more creative, hopeful, optimistic, and independent. Furthermore, investigations have indicated some of the factors that help increase the level of self-actualization, such as specific meditation practices and therapeutic interventions. Hence, there is little doubt that self-actualization is an observable and significant psychological phenomenon.

CRITICAL EVALUATION

By the twenty-first century self-actualization had acquired a somewhat ambivalent position in the psychological sciences. On the one hand, the concept of self-actualization—including Maslow's formulation of its placement in a hierarchy of motives—remains extremely well known. The word continues to be used by many applied psychologists, especially those active in clinical, counseling, educational, and industrial psychology. Moreover, numerous introductory textbooks in psychology still include an almost obligatory section on Maslow's motive hierarchy. On the other hand, empirical research on self-actualization waned considerably after the 1990s. Indeed, an article on the subject has not been published in a top-tier psychology journal since the 1980s. All of these trends may suggest that its utility as a psychological concept has diminished to the point that its status has become more historical than scientific. Even so, it is hard to imagine that the idea will disappear from popular psychological thought. The concept of self-actualization has entered mainstream culture in a manner almost comparable to the ideas of the Austrian neurologist Sigmund Freud, the father of psychoanalysis. Therefore, it is unlikely that the concept will ever completely retreat into the history books. Furthermore, interest in the construct has undergone something of a revival in the mid-2000s with the advent of the positive psychology movement, which concerns itself with the empirical study of human virtues.

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Dean Keith Simonton

SELF-AFFIRMATION THEORY

Sometimes people have thoughts and experiences that threaten their self-image. According to Claude Steele's (1988) self-affirmation theory, when people's self-image has been threatened they are motivated to affirm the integrity of the self. Moreover, people have a desire to restore their general self-image, not simply to resolve the specific threat. The unique prediction that self-affirmation theory makes is that people have a strong desire to maintain a positive self-image; therefore, when people experience a specific self-threat, they can overcome the unpleasant arousal associated with the threat by affirming an equally important, yet unrelated, aspect of the self. This can work to restore self-esteem even without resolving the specific threat.

Self-image threats can arise from several sources. One important source is when people hold inconsistent cognitions or engage in behaviors that are inconsistent with their beliefs. For example, some people fail to practice safe sex on a regular basis, although they are aware of the health risks associated with such actions. Likewise, some people do not drive energy efficient cars, although they profess to have positive attitudes toward environmental issues. When people hold two conflicting cognitions or when they behave in a way that is contrary to how they think they should act, they often experience an unpleasant psychological state that is referred to as *cognitive dissonance*. The inconsistency between one's cognitions and behavior can be arousing and threatening to the self because it suggests that people are irrational, immoral, and even unintelligent.

According to cognitive dissonance theorists, people often try to reduce this unpleasant psychological state by engaging in one of three actions. First, people may attempt to change their behavior to make it more consistent with their cognition. For example, smokers can stop smoking. Second, people can attempt to reduce cognitive dissonance by changing their cognitions. Smokers, for example, can lower their perception of the health risks associated with smoking. Finally, people can attempt to reduce cognitive dissonance by adding new cognitions to their belief system. For example, smokers can focus on counterexamples to the health risk by focusing on people who smoke but have lived a very long life. Additionally, smokers may justify their behavior by emphasizing how much smoking reduces their stress level. These three basic ways of reducing cognitive dissonance involve changing beliefs and actions within the domain in which the self has been threatened. For example, in order to restore their self-regard, smokers must engage in some affirmation strategy that is directly relevant to smoking behavior. Self-affirmation theory, however, predicts something different. It states that when people experience a self-image threat after engaging in an undesirable behavior in one domain, they can restore their self-image by affirming another aspect of the self. As with the smoking example, smokers can restore their self-image by reminding themselves that they contribute to charities for impoverished children or that they have a lot of friends. In this example, contributing to charities or focusing on being well liked are unrelated to the domain of smoking and yet serve the function of making people feel good about themselves after a threat.

Threatening thoughts and experiences can also arise from the way people are treated or are perceived to be treated by other individuals. The perceptions and behaviors of other individuals can pose a threat to a person's personal self-worth. For example, being accused of being uncooperative may threaten a person's self-esteem because most people desire to appear cooperative. Additionally, other individuals' perceptions and behaviors can pose a threat to a person's collective self-worth. For example, being considered unintelligent because one is black may threaten a person's collective self-esteem or sense of self as a member of a particular group. When people feel threatened because they sense that they are judged or treated in terms of social stereotypes or that they might do something that could inadvertently confirm the stereotype, they experience what Steele (1997) refers to as a *stereotype threat*. According to self-affirmation theory, when people experience a stereotype threat they can reaffirm the self even in a domain unrelated to the stereotyped domain. For example, an African American student who is stereotyped by his teacher as unintelligent can reaffirm the self by thinking about how great he is at negotiating interpersonal conflict.

Self affirmation theory suggests that there are many possible ways that people can protect their self esteem when it is under threat. Specific threats may come from inconsistencies in thoughts and behaviors that may lead to

a state of cognitive dissonance or the presence or perceived presence of societal stereotypes of a particular group. Whatever the source, research has found that affirming an aspect of the self that may even be unrelated to the self threat is effective in making people feel good about themselves, at least in the short term.

SEE ALSO *Cognitive Dissonance; Self-Esteem; Stereotype Threat*

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SELF-AWARENESS THEORY

Self-awareness is the capacity to take oneself as the object of thought—people can think, act, and experience, and they can also think about what they are thinking, doing, and experiencing. In social psychology, the study of self-awareness is traced to Shelley Duval and Robert Wicklund's (1972) landmark theory of self-awareness. Duval and Wicklund proposed that, at a given moment, people can focus attention on the self or on the external environment. Focusing on the self enables *self-evaluation*. When self-focused, people compare the self with *standards of correctness* that specify how the self ought to think, feel, and behave. The process of comparing the self with standards allows people to change their behavior and to experience pride and dissatisfaction with the self. Self-awareness is thus a major mechanism of self-control.

Research since the 1970s has strongly supported self-awareness theory (Duval and Silvia 2001). When people focus attention on the self, they compare the self with standards, try harder to meet standards, and show stronger emotional responses to meeting or failing to meet a standard. The tendency to change the self to match a standard depends on other variables, particularly perceptions of how hard it will be to attain the standard. Remarkably, many experiments have shown that when people are not self-focused, their actions are often unrelated to their personal standards—self-awareness is needed for people to reduce disparities between their actions and their ideals.

Self-awareness theory was enriched by new research methods. According to the theory, anything that makes people focus attention on the self will increase self-awareness. Researchers accomplish this by placing people in front of large mirrors, videotaping them, having people listen to recordings of their voices, or making people feel like they stick out. Momentary levels of self-awareness are measured by people's use of self-referential words and pronouns and by how quickly people recognize self-relevant information.

Self-awareness theory remains a fruitful and controversial theory. One new direction is the application of self-awareness theory to clinical disorders involving negative self-evaluation (e.g., depression) and excessive self-consciousness (e.g., social anxiety). One controversy, reviewed by Paul Silvia and Guido Gendolla (2001), is whether self-awareness enables accurate judgments of the self. Many researchers have proposed that self-awareness creates clearer perceptions of internal states, emotions, and traits. Other researchers, however, have noted that the self-concept is fluid, complex, and contextual—it is not a static object that can simply be apprehended and examined. Ironically, by making some aspects of the self especially salient, self-awareness may exaggerate and bias judgments of what the self is like.

SEE ALSO *Anxiety; Self-Consciousness, Private vs. Public; Self-Esteem; Self-Monitoring; Self-Perception Theory*

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Paul J. Silvia

SELF-CLASSIFICATION

Self-classification occurs anytime an individual reports an identity, characteristic, or membership within a social group. Though the use of self-classification as a discrete form of measurement coincides with the twentieth-century popularization of social surveys in Britain and the United States (Gordon 1973), the origins of classification have roots in antiquity. Efforts to systematically distinguish plants from animals began with Aristotle, and fol-

lowing the influential work of the Swedish botanist Carolus Linnaeus (1707–1778), classification became the scientific standard for expressing organizational hierarchies in the natural world (Frängsmyr, Lindroth, Eriksson, and Broberg 1983). Taxonomic classification groups individual units by the number of properties they share, with broad, loosely related parent categories subdivided into more detailed, closely related subcategories. Societies are also organized hierarchically, and to the extent that population groups differ on outcomes of interest to social scientists, classification can be viewed as a prerequisite of all comparative research and studies of inequality in particular.

In the natural sciences units are classified by the investigator, and taxonomies are assumed to represent objective groupings based on universal laws. Social taxonomies are embedded within social relations, however, and cannot be viewed as objective or universal (Durkheim [1912] 1965). Subjects often classify themselves in social research, and many surveys, polls, and population censuses are composed entirely of self-reported data.

In many ways self-classification has revolutionized social research, particularly in areas of attitude and opinion polling. Self-reports of personal well-being, self-esteem, and presidential approval are common examples of types of subjective measures widely used in cross-sectional comparisons and trend analyses. Even objective information such as height and weight can be self-classified without incurring the costs of direct measurement.

Because self-reports are inherently subjective, however, they sometimes provide inaccurate or unreliable measures of objective characteristics. People may lack relevant knowledge about their personal histories; even seemingly straightforward measures, such as the place and timing of birth, are unknown in certain instances. In other cases, individuals may misrepresent themselves, particularly on measures that are perceived to be intrusive or potentially stigmatizing, as with measures of income, substance abuse, and even height or weight (Strauss 1999). Although advances in questionnaire design and interview techniques have improved the quality of self-reported data, there are limits to what these advances may achieve. For example, many individuals are unwilling to self-classify as perpetrators of discrimination on survey questionnaires, which has spurred the development of "deception designs," such as housing and job search audits, that can be used to circumvent respondents' reluctance to admit socially undesirable behavior (Yinger 1986).

Discrepancies between self-classification and direct measures are also a risk when the constructs underlying those measures reflect a combination of objective and subjective realities. Many axes of inequality fit this criterion. Though concepts such as race, class, and gender can be reduced to ostensibly objective terms (ancestry, income, and sex, respectively), these simplifications ignore the social embeddedness of identity, which is shaped by the dynamic interplay between social actors, institutional forces, and historical contingencies. Systems of racial hierarchy evolved quite differently in North and South America (Graham 1990), for example, so it is plausible for similar-looking individuals from each region to self-classify in different ways. Because identities reflect the social construction of race in each region, however, it is inappropriate to view one identity as more accurate than the other, much less to justify the use of "objective" criteria, such as ancestral descent, which may have little bearing on the social consequences of race in these regions.

SEE ALSO *Audits for Discrimination; Ethnicity; Gender; Identification, Racial; Identity; Identity, Social; Race; Racial Classification; Self-Identity; Social Categorization; Social Constructs; Subjectivity: Analysis*

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SELF-CONCEPT

The self has a long history of study within the psychological tradition, dating back to early work by William James in his seminal book *The Principles of Psychology* (1890). Throughout the next century of study, self-concept was examined by numerous researchers who emphasized both internal characteristics and external influences on the self-

concept. Though some researchers have looked at self-concept as a global construct, many agree that the self-concept is composed of multiple components. Much of the research has focused on the cognitive structure of the self-concept as well as the related evaluative component of self-esteem. In general, the self-concept is an individual's perceptions of the self arising from multiple components, including how one sees oneself in interaction with others as well as how one views oneself in isolation.

DEVELOPMENT

Susan Harter wrote extensively about self-concept development in her book *The Construction of Self: A Developmental Perspective* (1999). Her detailed account of the emergence of self-concept begins as the self-concept appears around the age of two, first manifesting as a recognition of the self as a distinct physical entity. The development of autobiographical memory is important in the emergence of self-concept in that before the age of two, children may have generic memories but do not yet have a memory of the self. Through discourse with parents in which past events involving the child are recounted, children begin to form autobiographical memories and an evolving autobiographical portrait of the self. Another important influence on the emerging self-concept of children is the attachment relationship with the caregiver. From the attachment relationship, children form internalized representations of others and how the self fits into the social world. This is important to the child's asserting his or her unique influences on the world and to viewing the self as a unique entity interacting with the external world.

Increasing cognitive and social demands cause the development of the child's self-concept to change from being based upon only a few components or poorly clarified to a more organized and clear formulation based on several clearly distinct domains. Different roles that are required of children as development progresses require the child to develop different sets of behaviors and personality characteristics according to the current role. Some of these roles and traits may clash, such as when a child sees him- or herself as warm and friendly with peers and moody and unresponsive with parents. As the child moves into adolescence, cognitive capabilities enable the child to integrate all of these roles and clashing components into a coherent sense of self.

SELF-WORTH AND SELF-ESTEEM

Another important component of Harter's account of the development of self-concept is the idea of self-worth. Self-worth is determined from the evaluation of the components of the self; Harter stresses that self-worth is formed primarily from areas that are important to the self. This echoes the ideas of William James and asserts that not only is the self formed of multiple components, but also that these components differ in their importance to the individual. Each component is evaluated separately, such that individuals may feel they are skilled in some domains and not as skilled in other areas. Harter contends that these areas of importance are developed through feelings of competence in different areas. In an individual with a positive sense of self, the areas in which he or she feels competent are more highly weighted than those areas in which he or she does not feel competent.

This close connection between self-concept and self-worth suggests that self-concept is closely related to its evaluative side, frequently termed *self-esteem*. Though often talked about as separate constructs, these two areas may be difficult to separate, as Harter points out that many of the components of the self are evaluative in nature. For example, when asked to define the self-concept, an individual might list adjectives such as "smart," "funny," or "good-looking." However, these words are in themselves evaluative. Thus the self-concept and self-esteem are two constructs that are discussed as though they are separate, but in fact they are closely related.

STRUCTURE

Another area subject of study closely related to the self-concept is the cognitive structure of the self. Social cognition researchers view the self-concept as an organized set of knowledge about the self, and as such, how the different components are organized becomes important. Herbert Marsh and Richard Shavelson developed an influential theory of the self as organized in a hierarchical structure (1985): A stable sense of self is at the apex of the hierarchy, which then branches into academic and nonacademic components, and each of these further differentiates into more specific self areas.

Patricia Linville made important contributions to the literature on the self-concept structure with her self-complexity theory (1985), which asserts that the knowledge about the self is organized into multiple cognitive structures known as "self-aspects." These self-aspects are organized in relation to each other, with related aspects being linked in a network structure. Different social contexts and cognitions activate different self-aspects, which in turn activate other linked aspects. The complexity of the self-concept is a result of both the *number* of self-aspects and the *interrelatedness* of those aspects. A complex self-concept is composed of a large number of independent aspects.

Linville further asserted that having a complex self-representation is positive for mental health. This is due to the network structure of the self. When a negative event occurs in an area related to one self-aspect, the individual is likely to experience negative affect in that area. A sim-

ple self structure may have two important consequences. First, if there are few self-aspects, the negatively affected area represents a large part of the self, and so a negative event leads to negative feelings about the self. Second, if the self-concept is composed of highly interrelated aspects, then this negative event is likely to trigger negative feelings in all other associated areas; Linville referred to this as *affective spillover*. In these two ways a simple self-concept is more affected by any one event, whereas a more complex self-concept has more stability. According to Linville, a complex self-concept leads to more stability in affect, which is associated with better mental health. Later studies have questioned these ideas and aimed to clarify the effects on self-complexity on mental health.

One example of this is Carolyn Showers's 1992 investigation of how positive and negative self-aspects may be separated or related. Showers found that how they are related matters to levels of self-esteem and depression. When positive self-aspects are important to overall self-worth, compartmentalization of positive and negative aspects results in higher self-esteem and reduced levels of depression. In contrast, when negative self-aspects are important, compartmentalization is associated with negative effects, and furthermore, when negative self-aspects are important, a more complex self is better for positive psychological well-being. Therefore, one modification to Linville's 1985 theory has been that the content of the structure matters to the buffering impact as well as to the structure. Other clarifications have also been made to more fully understand the impact of self structure.

Some theorists have argued that the content and structure of the self-concept are unrelated, whereas others, such as Showers, argue that they work in concert. Although there is a distinction between what can be defined as content and structure in the self-concept, several studies suggest that both of these areas are important.

FLEXIBILITY

Another topic in the self-concept literature is the debate about whether the self-concept is dynamic or stable. Some scholars argue that the self-concept is stable once formed; others maintain that it is a more malleable construct. Some social cognition researchers view the self-concept as both stable and changing: There are components to the self that are stable across situations, but there are also components that may change in their expression depending on the context. For example, when asked about his self-concept, a young man in school might mention intelligence as an important part of himself, but in a social setting he might stress social skill as more important. Context as well as self-presentation issues may come into play as important in terms of viewing the self as stable or malleable.

MEASUREMENT ISSUES

With such a broad field of study, there are many ways to measure self-concept. Explicit measures of self-concept are often used to assess different areas that an individual might find important to the self. Examples of commonly used explicit measures include the Piers-Harris "Children's Self-Concept Scale" (1969), Susan Harter's "Self-Perception Profile" (1985), and Marsh and colleagues' "Self-Description Questionnaire" (1984). Implicit measures of self-concept and self-esteem are also used; one example is the "Implicit Association Test." This measure examines response times between sets of stimuli and is based on the idea that items that are cognitively related should have a faster association than items that are unrelated (Greenwald, McGhee, and Schwartz 1998).

SEE ALSO *Child Development; Identity; James, William; Self-Esteem; Self-Schemata; Social Cognition; Social Cognitive Map*

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SELF-CONSCIOUSNESS, PRIVATE VS. PUBLIC

Many organisms exhibit at least a rudimentary form of self-awareness by which they experience themselves as dis-

tinct from their environment. However, humans are capable of more profound and consequential forms of self-awareness that make possible uniquely human capacities such as introspection and self-reflection. Although all normal-functioning people are sometimes self-aware, some people are consistently aware of themselves. The tendency to consistently direct attention toward the self is referred to as self-consciousness.

According to Arnold Buss, to whom the seminal research on self-consciousness is attributed, the tendency to consistently direct attention toward the self is evidenced in the highly self-conscious person in the following ways:

- An intense focus on behavior—past, present, and future
- A heightened sensitivity to privately experienced feelings
- Recognition of positive and negative characteristics in oneself
- A tendency to introspect
- Imagining oneself
- An awareness of how one appears to others
- Concerns about others' appraisals

A distinction typically is drawn between forms of self-consciousness corresponding to the two distinct vantage points from which people can direct attention toward themselves and the different aspects of the self experienced from those vantage points. Private self-consciousness is the tendency to focus on oneself from a personal vantage point and attend to aspects of the self that are not readily apparent to others, such as one's thoughts and feelings. Public self-consciousness is the tendency to focus on oneself from the perceived vantage point of real or imagined others and to attend to aspects of the self that are observable by others, such as facets of one's appearance and behavior.

The origins of the contemporary empirical literature on self-consciousness can be traced to the 1975 publication of the Self-Consciousness Scale by Allan Fenigstein, Michael F. Scheier, and Arnold H. Buss. Although the measure includes a set of items that reflect social anxiety, the primary use of the measure is for the item sets corresponding to the two major forms of self-consciousness. These items are used in virtually all empirical research on individual differences in the tendency to direct attention toward the self. Respondents indicate the extent of their agreement or disagreement with statements such as "I'm generally attentive to my inner feelings" (private) and "I'm usually aware of my appearance" (public). Composite scores on these item sets serve to index private and public self-consciousness. These scores are modestly correlated, suggesting that the tendency to focus on oneself from one vantage point is not necessarily accompanied by a tendency to focus on oneself from the other vantage point.

Psychometric analyses of the Self-Consciousness Scale have routinely identified a schism in the set of private self-consciousness items. Not only do the items reliably cluster in two sets, but scores on these item sets are not strongly related to each other and are differentially related to other variables. Internal state awareness is a rudimentary, nonevaluative form of private self-consciousness, typified by the statement, "I reflect about myself a lot." Scores on internal state awareness are positively correlated with variables that indicate psychological health. Self-reflectiveness is an evaluative form of private self-consciousness, typified by the statement, "I'm constantly examining my motives." Scores on self-reflectiveness are positively correlated with a set of variables that, on the whole, indicate poor psychological health. In comprehensive models of self-awareness, internal state awareness is an instance of objective self-awareness, not unlike the rudimentary forms of self-awareness experienced by nonhuman species. Self-reflectiveness is an instance of symbolic self-awareness, the uniquely human form of self-awareness that makes self-evaluation possible and inevitable.

Research in which these forms of self-consciousness as measured by the Self-Consciousness Scale are studied in relation to other variables does not allow for an evaluation of the extent to which self-consciousness is a causal factor. That evaluation requires experimental research, which involves randomly assigning people to manipulated levels of self-consciousness. Indeed, it is now evident that laboratory manipulations of self-consciousness produce relations with other variables that mirror the relations evidenced when self-consciousness is measured using the Self-Consciousness Scale. Private self-consciousness has been manipulated in several ways. The most frequently used method involves exposing people to an image of their face in a small mirror. Other manipulations include having people listen to their own voice or their own heartbeat; instructing people to focus on themselves; and having people write a story in which they are the main character. Public self-consciousness has received less attention in experimental research but has been successfully manipulated by exposing people to an image of their body in a full-length mirror or having people watch themselves on video. Using these manipulations, people who have been induced to focus attention on themselves can be compared to people who have not been so induced on outcome variables of interest to evaluate the potential causal influence of self-consciousness on those variables.

Findings from research using the Self-Consciousness Scale and laboratory experiments in which self-conscious-

ness is manipulated indicate that self-consciousness is implicated in a host of social attitudes, emotions, and behaviors. Private self-consciousness is associated with better access to self-knowledge, and a greater interest in new self-knowledge regardless of whether that knowledge is positive. As a result, the self-knowledge of people high in private self-consciousness plays a more prominent role in their behavior. For instance, compared to people low in private self-consciousness, their attitudes are more predictive of their behavior; they are less likely to conform when their opinions are challenged; and they are more resistant to inaccurate suggestions about their own sensations. Private self-consciousness also is associated with emotional experience. Because introspection often leads to self-criticism, private self-consciousness can give rise to negative emotion. In addition, attention directed toward private self-aspects appears to intensify current emotional experience—positive or negative.

Public self-consciousness is associated with phenomena that involve perceptions of how other people view the self. For instance, public self-consciousness is associated with a greater concern for appearance as evidenced by wearing more makeup and showing greater concern about balding. Compared to people low in public self-consciousness, people high in public self-consciousness are more likely to conform to group pressure; they are more accurate in their perceptions of how others perceive them; and they are more likely to experience aversive social emotions such as shyness and social anxiety.

Self-consciousness in its two forms—private and public—is a fundamental human trait relevant to a broad range of attitudes, emotions, and behaviors of interest to social scientists. Because humans experience forms of self-consciousness that no other organism experiences, the study of self-consciousness addresses the fundamental question of what it means to be human.

SEE ALSO *Attitudes; Conformity; Emotion; Psychometrics; Scales; Self-Awareness Theory; Self-Perception Theory; Self-Representation; Social Psychology; Trait Theory*

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SELF-CONSCIOUSNESS SCALE

SEE *Self-Consciousness, Private vs. Public.*

SELF-CONTROL

Self-control has been defined as the capacity that individuals have to exert control over their own thoughts, emotions, impulses, and performance. A central component of this definition is that self-control involves overriding or inhibiting something that would otherwise occur. A wide variety of concepts related to self-control have been studied in the field of psychology. These include self-regulation, willpower, and delay of gratification.

Many scholars have used the terms *self-control* and *self-regulation* interchangeably. *Self-regulation* can be defined as the self-governing process by which individuals monitor, evaluate, and modify their behavior in regard to standards. In this process behavior is evaluated in terms of standards or reference values. After the evaluation phase, an operation phase ensues. During this phase, individuals' current behavior is compared to a desired or undesired end state. If a discrepancy is noticed between one's self and standard, the results are negative and imply that individuals should change their behavior in a way that brings them more in line with their standards. If no discrepancy is noticed, the results are positive and imply that individuals should maintain their present course of behavior. The process of exerting self-control is often thought to parallel that of self-regulation. Exerting self-control is probably best viewed as a particular case of self-regulation in which overriding or suppression of an undesired response occurs. Hence any event that requires self-control occurs in the larger framework of self-regulation. However, it is not the case that any event that involves self-regulation could be described as requiring self-control.

The predominant view of self-control has been as a personality characteristic. This trait is influenced by temperament, parental factors such as socialization, attachment, and warmth, and demographic factors such as neighborhood safety and family socioeconomic status. In adults personality characteristics related to self-control include impulsivity, sensation seeking, conscientiousness, and emotional stability. Impulsivity and sensation seeking are negatively correlated with self-control, whereas conscientiousness and emotional stability are positively correlated with self-control.

SELF-CONTROL AND BEHAVIOR

As a trait, self-control is connected with a wide variety of behaviors and problems. In their 2004 work the

researchers June Tangney, Roy Baumeister, and Angie Boone showed convincingly that high levels of self-control are associated with better adjustment whereas low levels of self-control are associated with poorer adjustment and interpersonal problems. In their research high self-control was associated with lower levels of alcoholism, higher grade point averages, less eating disorder symptomatology, and less aggression. Other research has shown that poor self-control skills are related to problems with weight control and overeating, alcohol misuse and drug addiction, impulsive consumer purchasing and behavior, and crime and delinquency. In fact self-control is a central component of the general theory of crime proposed in 1990 by Michael Gottfredson and Travis Hirschi. In this theory self-control is related to crime because individuals with varying levels of self-control consider the consequences of their behavior to different extents. Individuals with high self-control consider the long-term consequences of their behavior, while individuals with low self-control do not.

A different line of research on self-control has focused on the differences between attending to short-term and long-term benefits of behavior. Delay of gratification is a particular type of impulse control in which individuals opt to wait for more preferred rewards in lieu of taking a less preferred reward immediately. In 1988 Walter Mischel showed that the ability to delay gratification is one that increases with age. Additionally his research on delay of gratification supports viewing self-control as a personality variable. In one 1990 study Mischel and his colleagues Yuichi Shoda and Phillip Peake showed that children who waited for longer periods of time to earn rewards became adolescents with better overall adjustment and had higher SAT scores. David Funder, Jeanne Block, and Jack Block provided evidence in the 1980s that the ability to delay gratification is related to a variety of positive outcomes. Children who were better at delaying gratification tended to be calmer, less irritable, less easily frustrated, and less aggressive. They were also better at concentrating and received higher grades then children who were lower in self-control.

Models of self-control vary in the extent to which they view self-control as a skill, as knowledge, or as strength. The largest body of support exists for viewing self-control through a strength model, where self-control is compared to a muscle. In this model individuals have limited regulatory resources or resources available to exert self-control. Individuals who exert self-control suffer a cost in that they may be less able to exert self-control on a subsequent task. In their 1998 work Mark Muraven, Diane Tice, and Roy Baumeister showed that when individuals exert self-control, their regulatory resources become depleted and individuals' performance on simultaneous activities requiring self-control is impaired. Furthermore exerting self-control on an activity impairs performance on consecutive tasks. This resource for self-control is used for tasks related to regulating affect, behavior, and cognition. Activities that require an individual to exert self-control in one domain can lead to deficits in performance in another domain. For example, individuals who are asked to regulate their emotions by refraining from feeling or expressing them while they watch a sad film clip persist for a shorter period of time at a physical task than individuals who watch the same sad film clip without regulating their emotions. Other tasks that deplete individuals' resources to exert self-control include making personally relevant and important choices, ostracizing liked others, refraining from temptations, and overriding habits. Individuals can practice exerting self-control and strengthen this "muscle" so that at later times engaging in the practiced activity does not lead to as much resource depletion.

Although the traditional view of self-control is a response to an unwanted event, individuals may exert self-control by avoiding situations that may contain temptations or distractions. This type of self-control is referred to as counteractive self-control. In 1997 Peter Gollwitzer and Veronika Brandstatter provided evidence that implementation intentions can increase the success of goal pursuit, even in the face of obstacles or temptations. An implementation can best be construed in terms of a "when, then" statement. An example might be "when my alarm clock goes off in the morning, then I will get out of bed to exercise." These intentions connect the desired behavior with the context in which that behavior is expected to occur.

The economist Thomas Schelling defined a similar construct of precommitment. Individuals may exert self-control in this way by planning activities that will preclude, or limit, their potential behaviors. A classic example of this would be a general who commands the army to burn the bridges after it crosses them, thereby limiting the army's likelihood of retreat. The relationship between intentions, planning, and behavior has sparked other research in self-control. Specifically Judy Fitch and Elizabeth Ravlin studied willpower as it relates to the role of the self in motivation and goal pursuit. Their 2005 work approaches willpower as a subfactor of the personality trait of conscientiousness. Willpower is defined as persistency and determination, or the ability to exert extra effort to attain a desired goal. In their research Fitch and Ravlin found that willpower moderated the relationship between intention and behavior. In other words, individuals who have stronger willpower are more likely to engage in behaviors that reflect their intentions.

Temptations may not always act as obstacles to successful self-control. In 2003 Ayelet Fishbach, Ronald Friedman, and Arie Kruglanski found that the presence of

temptations is automatically associated with relevant goal pursuit. Individuals who were primed with temptations that might distract them from their goal were more likely to engage in choices and activities related to that goal. When individuals perceived the goal they were pursuing to be important, they were even more likely to associate temptations with goal pursuit. It should be noted that the priming manipulation in this study occurred at a nonconscious level. That is, temptations were not actually present when the goal pursuit of individuals was being assessed. In regard to self-control, this research implies that thinking about temptations ahead of time may increase an individual's ability to resist them when they are physically present.

In summary, understanding self-control requires viewing it as a function of both the person and the environment. Like many psychological phenomena, both individual and situational factors influence the ways that self-control occurs. Researchers know that individuals vary across personality factors and in their ability to exert self-control and that these differences are attached to meaningful outcomes. They also know that contextual factors such as the presence of temptations lead to fluctuations in how individuals control their thoughts, emotions, and behaviors. Indeed individuals can even influence their own later ability to exert self-control through detailed planning.

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SELF-DEFEATING BEHAVIOR

A self-defeating behavior is any behavior leading to a lower reward/cost ratio than is available through an alternative behavior or behaviors. Self-defeating behaviors include choosing to suffer, self-handicapping, failure to achieve potential, fear of success, learned helplessness, and procrastination. Such behaviors are learned in a variety of ways but usually are initially adaptive in preventing greater suffering or in obtaining rewards in the situations in which they are originally learned. For example, parents may be less punitive if children are self-critical after doing something the parents do not like than if children do not derogate and punish themselves. Self-defeating behaviors often occur as a consequence of situations that are uncontrollable. For example, if children are punished even when they believe they have behaved well, or if they are rewarded even when they have behaved poorly, they may gain the sense that their behavior does not matter. Then "learned helplessness" is said to occur because the child does not feel as if he or she is in control of what is happening.

Self-handicapping can occur when people receive positive information that they feel may be unwarranted. In order to protect a possible positive view of themselves, people may engage in some sort of excuse making in advance in order to protect a positive, but precarious, self-view or self-esteem. Self-handicapping involves engaging in a behavior known to hurt performance, such as getting too little sleep, using a harmful substance, not studying, or not working hard. A person may choose a task so easy that success is meaningless or so difficult that success is unlikely. Success and failure in such situations do not provide information about one's comparative ability. Persistence can become counterproductive when it prevents people from engaging in more valuable experiences or when it leads people to exhaust their resources in futile endeavors.

Roy Baumeister and Steven Scher (1988) identified three potential types of self-defeating behaviors: (1) primary self-destructiveness; (2) tradeoffs; and (3) counterproductive strategies. They found no evidence for primary or deliberate self-destructiveness among normal individuals. Tradeoffs occur when people act to gain short-term benefits despite long-term costs—behaviors especially

likely to occur when people are emotionally aroused or highly self-aware. For example, shy people may avoid social situations out of a fear of making a bad impression. Their avoidance of people may lead to greater social exclusion in the future, leading them to be even less confident. They trade the possibility of intimacy to avoid short-term rejection. Or, the cost of medical treatment may lead people to fail to continue it when they do not or no longer perceive symptom relief. Failure to comply may exacerbate their condition in the long run. Counterproductive strategies involve misjudging one's capabilities or the realities of the situation. An example is "choking under pressure." In this scenario, one may carefully monitor performance in order to do one's best, but the monitoring itself may lead to more anxiety and a poorer performance.

Self-defeating behaviors often simply reflect expectancy-confirmation processes. If we think that we are not good at a particular task, we do not try our best and then perform more poorly than if we had expected that we could excel. People often internalize the expectations held for their gender, race, or social class or by significant others and then engage in self-fulfilling prophecies. If such expectations are negative, then they are self-defeating. A frequent cause of self-defeating behaviors is a desire to maximize self-esteem. There are no consistent effects for high self-reported self-esteem, however. Overconfidence and lack of confidence can both lead to problems.

Sometimes people appear to "choose to suffer" in an effort to (magically) improve their outcomes in other situations. Such behavior may stem from an unrealistic extension of the work ethic. Research has shown that people expecting an unpleasant event are more likely to choose to engage in another unpleasant activity during the waiting period if they change their beliefs about themselves, such as thinking that they are brave or that they deserve to suffer. If they change their beliefs about the situation, such as thinking it will not be so bad after all, they are less likely to engage in an unpleasant activity during the waiting period.

CLINICAL DISORDERS AND TREATMENT

All clinical disorders could be considered as forms of self-defeating behaviors. A "self-defeating personality disorder" was considered briefly by the American Psychiatric Association, drawn largely from characteristics that had been noted by clinicians since Sigmund Freud (1856–1939) as masochistic. The criteria for the proposed self-defeating personality disorder, however, overlapped too much with those for dysthymic disorder (depression) and other personality disorders, such as dependent personality. Furthermore, feminists were concerned that women who were abused might get labeled as having a personality disorder that brought on abuse, thus leading victims of abuse to be blamed.

All forms of psychotherapy are designed to treat some form of what might be called self-defeating behavior. When people are frightened of situations, behavioral treatments are often the most effective. When people are not clear as to what the problem entails, a treatment involving talking and ascertaining feelings that are necessarily conscious may be appropriate. For example, psychoanalysis has been oriented especially toward understanding if fears of hurting parents or other loved ones interfere with achieving personal goals, such as leaving loved ones all alone, being more successful than they are, or not fulfilling loved ones' desires to impress other people. Lack of motivation, anxiety, mood disorders, and unrealistic thinking are also treated with medication in combination with psychotherapy.

SEE ALSO *Learned Helplessness; Psychotherapy; Psychotropic Drugs; Punishment; Shyness*

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SELF-DETERMINATION

Self-determination, in the most general sense, refers to the capacity to control one's own destiny, free of interference by others. Historically, the right to self-determination has meant the right of a subjugated nation or colonized population to establish a sovereign, independent state—to secede from a multinational state or to dissolve colonial ties of dependency to an imperial "mother country." It has also been invoked in support of demands for local autonomy or self-government at the sub-state level as a means to preserve the culture or safeguard the security of national or aboriginal minorities. Since the 1960s, however, many social movement activists (particularly proponents of a postmodernist "politics of identity") have sought to invest the principle with a much looser meaning.

NATIONAL SELF-DETERMINATION

The concept of national self-determination is a modern one, despite the fact that struggles by subjugated peoples

against occupation, colonialism, and enslavement have occurred for many thousands of years. Its advent was predicated on the prior emergence of such defining features of capitalist modernity as the discourse on rights, the ideology of nationalism, and the European nation-state system.

A nation-state is a form of state power in which territorial sovereignty is ostensibly exercised on behalf of a specific nation—a relatively homogeneous aggregation of people who typically share a common language, economic life, and cultural tradition as an "imagined community" (to use Benedict Anderson's expression). The nation-building projects of modern European states were undertaken to strengthen their positions relative to major rivals and often involved attempts to unify and homogenize the population within the borders of the nation-state, usually through coerced assimilation or "ethnic cleansing" (including forced population transfers and genocide in some circumstances). For several of the major European powers, it also involved the conquest and colonial subjugation of other, far-flung territories and peoples with the aim of consolidating empires whose purpose was to enrich and empower the imperial nation-state or "mother country." Political domination, military subjugation, and economic exploitation of colonies stimulated the emergence of anti-imperialist movements and nationalist projects within colonized populations otherwise divided along tribal, religious, and linguistic lines.

Independence struggles by the colonial possessions of the major imperial powers began long before the term *self-determination* came into use. The first such struggle was waged against Britain by several of its "settler colonies" in North America, and its success resulted in the founding of the United States of America in 1776. Encouraged by revolutionary events in France, the black population of Haiti rose up against French rule in the 1790s, eventually establishing an independent republic in 1804. By the late nineteenth century, Spain had lost most of its colonial possessions in the Americas. The success of these New World independence struggles heightened the nationalist aspirations of subjugated nationalities in the multinational states—the Austro-Hungarian, Ottoman, and Russian empires—that dominated much of Eurasia and the Middle East prior to World War I.

Within the imperial nations themselves, few supported the right to self-determination of national minorities at home or colonized peoples abroad. The major exception before 1914 was the international socialist movement. Thus, Karl Marx argued that English wage workers could never achieve their emancipation as a class so long as they remained complicit in the national oppression of the Irish. At its 1896 congress, the Marxist Second International adopted a resolution affirming the right of all nations to self-determination.

In Russia, Vladimir Lenin saw the aspirations of the oppressed nationalities of what he called the czarist "prison house of peoples" as integral to the broader struggle for democracy, insisting that the only way to forge working-class unity across national lines was to combat "great Russian chauvinism" and recognize the right of Ukrainians, Georgians, and other nationalities to establish their own independent states. However, Lenin distinguished between recognizing the *right* to self-determination and actually advocating independence. The right to self-determination, he wrote, is similar to the right to divorce; one can affirm the right without advising the action. After the victory of the Bolshevik Revolution in 1917, Lenin established the right of nations to self-determination as a fundamental programmatic plank of the Third (Communist) International, advocating national liberation struggles in the colonial world and waging an unsuccessful, deathbed struggle against the Russian chauvinist policies of Joseph Stalin and his acolytes in 1923. The subsequent consolidation of bureaucratic rule under Stalin transformed the Soviet Union into a Russian-dominated multinational state in which the right of the constituent, nationally based republics to secede was extinguished.

At the end of World War I, the principle of national self-determination found a new ostensible champion in the American president Woodrow Wilson, acquiring currency, for the first time, in liberal political discourse. " 'Self determination' is not a mere phrase," Wilson declared in 1918, "it is an imperative principle of action which statesmen will henceforth ignore at their peril" (Moynihan 1994, pp.78-79). But Wilson soon qualified his support for the idea, recognizing the dangers that the principle could pose to European stability. Subsequently, U.S. advocacy of the right of national self-determination proved inconsistent. After World War II, the United Nations, under American leadership, upheld a principle of international law that affirmed the right of colonies to independence from overseas empires but that recognized no right of secession for national minorities within established states.

In the post–World War II era, formal political independence was achieved by the great majority of former colonies in Africa, Asia, and the Western Hemisphere, opening the way, in most cases, to their neocolonial economic and political subjugation by the great powers. However, the demand for self-determination continued to be vigorously asserted by Northern Irish Republicans and Scots in the United Kingdom, Québécois in Canada, Basques in Spain, Tamils in Sri Lanka, and by many would-be nationalist movements operating within the hundreds and perhaps thousands of "imagined communities" that had defined themselves as nations. Under the watchword of self-determination, the 1990s saw the rapid

breakup of the Soviet Union and the Yugoslav federation and the emergence of a plethora of new nation-states in Europe and Asia.

The dispossessed status of the Palestinian people, resulting from the creation of the state of Israel in 1948 and the consolidation of a Hebrew-speaking nation on territory claimed by both Jews and Palestinians as a homeland, remains an intractable national problem at the beginning of the twenty-first century. Here the question arises: Under what conditions can two "interpenetrated peoples" reconcile their mutually conflicting claims to self-determination?

SELF-DETERMINATION AND THE POLITICS OF IDENTITY

The radical ferment of the 1960s inspired a much looser definition of the concept of self-determination, such that it was often used to describe the aspirations of any group confronting putatively oppressive treatment. The original impetus to this redefinition was provided by the 1960s Black Power movement in the United States. Reacting against the liberal, integrationist perspective of the mainstream Civil Rights movement, many African American activists (notably Malcolm X, Stokely Carmichael, and the Black Panthers) embraced black nationalism. Having defined African Americans as an "oppressed nation" or as an "internal colony" (however problematically), these activists proclaimed the right of the black population to various forms of "self-determination"—sometimes through proposals for "separation" from "White America" but more commonly through demands for "black control of the black community." It is notable that few of these schemes were implemented—their most enduring legacy probably being black studies programs in higher education.

The stage was thus set for the emergence of a decidedly amorphous notion of self-determination, one with which other marginalized or oppressed sectors could easily identify. The concept was also extended to notions of "empowering" individual victims of abuse or poverty through community organizing. Self-determination merged with the broader notion of "liberation" and was invoked by activists who championed not only the rights but also the unique identities of racial and ethnic minorities, women, gays, and the disabled. Indeed, for many advocates of a postmodern "politics of identity," self-determination became virtually synonymous with unfettered expression of sectoral identity based not only on nationality but on gender, race, or sexual orientation as well.

SEE ALSO *Anticolonial Movements; Autonomy; Black Power; Colonialism; Colony, Internal; Communalism; Dependency Theory; Indigenous Rights; Lenin, Vladimir Ilitch; Liberation; Marx, Karl; Minorities; Nationalism and Nationality; Palestinians; Politics, Identity; Secession; Separatism; United Nations*

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SELF-DETERMINATION THEORY

Self-determination theory (SDT) is a macro-theory of human motivation, personality development, and well-being. The theory focuses especially on volitional or self-determined behavior and the conditions that promote it, as well as a set of basic and universal psychological needs, namely those for autonomy, competence, and relatedness, the fulfillment of which is considered essential to vital, healthy human functioning.

SDT begins with the assumption that people are active organisms, with inherent tendencies toward psychological growth and development. This active nature is manifest in the phenomenon of *intrinsic motivation*, the innate tendency to seek out novelty, challenges, and opportunities to learn. It is also evident in the phenomenon of *internalization*, or the tendency of persons to adopt, and attempt to integrate, ambient social mores and values.

Although the growth tendencies underlying intrinsic motivation and internalization are "natural," this does not mean that they operate automatically. Instead, these propensities require nutriments from the social environment. These are specified using the concept of *basic psychological needs*, defined as those supports that are essential and necessary for psychological health. Within SDT there are but three basic psychological needs: autonomy, relatedness, and competence. When these needs are supported and satisfied within a social context, people experience more vitality and self-motivation, as well as enhanced well-being. Conversely, the neglect or thwarting of basic

needs is implicated in most forms of psychopathology and maladjustment (Ryan, Deci, Grolnick, and LaGuardia 2006).

SDT has evolved as a set of four mini-theories. Each mini-theory was developed to explain a set of motivationally based phenomena that emerged from laboratory and field research.

Cognitive evaluation theory (CET) addresses the effects of social contexts on intrinsic motivation. It stresses the importance of autonomy and competence, and it specifically addresses how factors such as rewards, deadlines, feedback, and pressure affect feelings of autonomy and competence and thus enhance or undermine intrinsic motivation.

Organismic integration theory (OIT) addresses the process of internalization of extrinsic motivation. Here the focus is on the continuum of internalization, extending from external regulation to introjection, identification, and integration. These forms of regulation, which can be simultaneously operative, differ in their relative autonomy, and the more autonomous the overall motivation, the greater the person's persistence, performance, and well-being. OIT further suggests that internalization and integration is facilitated by contextual supports for autonomy, competence, and relatedness.

Causality orientations theory (COT) describes individual differences in how people orient to different aspects of the environment in regulating behavior. When *autonomy-oriented*, people orient to what interests them and act with congruence; when *control-oriented*, people primarily regulate behavior by orienting to social controls and reward contingencies; and when *impersonally oriented*, people focus on their lack of personal control or competence.

Finally, *basic psychological needs theory* (BPNT) elaborates the concept of basic needs. BPNT posits that each need exerts independent effects on wellness and, moreover, that the impact of any behavior or event on well-being is largely a function of its relations with need satisfaction. Based on BPNT, for example, research has shown that materialism and other extrinsic goals such as fame or image do not enhance well-being, even when one is successful at attaining them. By contrast, goals such as personal growth or giving to one's community are conducive to need satisfaction, and thus facilitate health and wellness.

Together these four mini-theories constitute SDT. Given its scope, SDT has also spawned active research in numerous areas. One controversial issue has been the impact of rewards, which CET argues can powerfully control behavior, but often at the cost of intrinsic motivation. Another controversy is the cross-cultural generalizability of SDT. SDT suggests that whether collectivist or individualist, Eastern or Western, people function most effectively and experience greater mental health when their behavior is autonomously regulated. Still another issue has been the characterization of well-being. Richard Ryan and Edward Deci (2001) maintained that wellness is not well captured by hedonic measures of "happiness." Instead, SDT employs the concept of *eudaimonia*, or wellness defined as the vital, full functioning, as a complementary approach. Finally, because autonomy is facilitated by reflective awareness, SDT stresses the role of *mindfulness* (Brown and Ryan 2003) in self-regulation and wellness.

The practical implications of SDT in healthcare, education, work, parenting, psychotherapy, religion, and sport contexts are manifold, and the theory has catalyzed considerable applied research and numerous interventions (see Ryan, Deci, Grolnick, and LaGuardia 2006; Deci and Ryan 2000).

SEE ALSO *Psychology, Agency in*

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Richard M. Ryan
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SELF-DISCLOSURE

Revealing private personal information to other people is a fundamental characteristic of interpersonal communication. A great deal of research in the social sciences has examined the factors that affect such self-disclosure. Sidney Jourard's 1964 book *The Transparent Self* energized self-disclosure research, particularly in the fields of social psychology, clinical and counseling psychology, and communications. Jourard defined self-disclosure as the extent

to which people made themselves "transparent" (or clear) about their inner thoughts and feelings in their self-related communications with others. Jourard's popular Self-Disclosure Questionnaire contains a broad range of topics including a person's attitudes and values, tastes and interests, personality, body, and sexuality. On this and similar measures, respondents typically indicate how much they would tell a target person about each topic.

Research suggests that self-disclosure is a fundamental way that relationship bonds are established, developed, and maintained. For example, self-disclosure helps relationship partners to clarify their own actions and intentions and to understand those of their partners. Self-disclosure also helps to increase feelings of intimacy, acceptance, trust, and self-worth within a relationship. For instance, research shows that more intimate self-disclosures are associated with greater liking, and that having disclosed to others increases people's liking of those persons.

Much research has examined the "disclosure reciprocity" effect, or the tendency for interaction partners to disclose intimate information in a reciprocal fashion. Social scientists have suggested that interaction partners may feel normative pressure or an obligation to reciprocate the intimacy level of information that is shared in the relationship. Failing to attend to the normative aspects of disclosure reciprocity can lead to relationship problems. For example, telling another person too much about oneself too early in a relationship or failing to reciprocate another person's self-disclosures may inhibit the development of that relationship.

Researchers have consistently found that females tend to show more self-disclosure than males. Although a relatively small effect, this gender difference can be moderated by target, measure, or topic. For example, women disclose much more to those with whom they have a relationship (e.g., a friend or parent) than do men. Developmental researchers have found that as adolescents enter puberty, they disclose increasingly more to peers than to parents. Research also suggests that cultures with a greater emphasis on nuclear and extended families (e.g., Hispanic populations) are more self-disclosing than cultures with less closely knit social or family structures (e.g., non-Hispanic white Americans). Members of Eastern cultures (such as China and Japan) tend to report less frequent self-disclosures than members of Western cultures (such as the United States).

In addition to positive consequences for relationships, disclosing emotional self-related experiences has positive effects on physical health. However, sometimes disclosing a personal secret can lead to negative relationship consequences. For example, self-disclosures can make a person vulnerable to the rejection, indifference, alienation, or exploitation of others. In more applied settings, there is much discussion and debate about whether and to what extent therapists should self-disclose to their clients. The nature of self-disclosure in online relationships has also seen increased attention from researchers.

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SELF-EFFICACY

Among all the thoughts that affect human functioning, and standing at the core of psychologist Albert Bandura's social cognitive theory, are *self-efficacy* beliefs, the judgments that individuals make about their capability to accomplish tasks and succeed in activities. Self-efficacy beliefs touch virtually every aspect of people's lives—whether they think productively or self-debilitatingly; how well they motivate themselves and persevere in the face of adversities; their vulnerability to stress and depression; and the life choices they make. People with a strong sense of efficacy approach difficult tasks as challenges to be mastered rather than as threats to be avoided. They have greater intrinsic interest and deep engrossment in activities, and they set themselves challenging goals and maintain strong commitment to them. High self-efficacy also helps create feelings of serenity in approaching difficult tasks and activities. As a consequence, self-efficacy beliefs powerfully influence the level of accomplishment that one ultimately achieves.

Self-efficacy should not be confused with self-esteem, which is a broad evaluation of one's self, complete with the judgments of self-worth that accompany such evaluations. When individuals tap into these two self-beliefs, they ask themselves quite different types of questions. Self-efficacy beliefs revolve around questions of *can* (Can I drive a car? Can I solve this problem?), whereas self-esteem beliefs reflect questions of *feel* (Do I like myself? How do I feel about myself as a father?). Moreover, one's beliefs about what one can do may bear little relation to how one feels about oneself. Many bright students are able to engage their academic tasks with strong self-efficacy even while their academic skills are a source of low self-esteem, having been labeled by their classmates as nerds or eggheads.

Individuals form their self-efficacy beliefs by interpreting information primarily from four sources, the most

influential of which is their past mastery experience. Successes typically raise self-efficacy; failures lower it. People also form their self-efficacy beliefs through the vicarious experience of observing the actions of models. Observing models contributes to the belief in one's own capabilities: "If they can do it, so can I." Individuals also create and develop their efficacy beliefs as a result of the social persuasions they receive from significant others. Finally, somatic and emotional states such as anxiety, stress, arousal, and mood provide information about efficacy beliefs. When people experience negative thoughts and fears about their capabilities, those affective reactions can lower self-efficacy perceptions and trigger additional stress and agitation that help ensure the inadequate performance they fear.

Because individuals operate collectively as well as individually, self-efficacy is both a personal and a social construct. Collective systems develop a sense of collective efficacy—a group's shared belief in its capability to attain goals and accomplish desired tasks. For example, schools develop collective beliefs about the capability of their students to learn, of their teachers to teach and otherwise enhance the lives of their students, and of their administrators and policymakers to create environments conducive to these tasks. Organizations with a strong sense of collective efficacy exercise empowering and vitalizing influences on their constituents.

SEE ALSO *Self-Discrepancy Theory; Self-Esteem; Self-Monitoring*

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SELF-EMPLOYMENT

An individual who is self-employed works for himself or herself rather than as an employee of another individual or organization, obtaining an income through ownership of a business or professional practice in which he or she contributes much of the labor needed to produce or distribute a good or service. According to the Organization for Economic Cooperation and Development, the self-employed include employers, own-account workers, members of producers' cooperatives, and unpaid family members. However, the designation "self-employed person" does not usually apply to those who are in a position to hire a large workforce (that is, to upper-management personnel who have a significant stake in the assets of the firm in which they are nominally self-employed). Such individuals are more appropriately referred to as "capitalists," who derive their income primarily from ownership and investment rather than from the performance of labor. Since 1967 the Current Population Survey conducted by the U.S. federal government has asked self-described self-employed individuals whether the businesses they operate are incorporated. Those who answer affirmatively are deemed to be salaried employees; those who answer in the negative are defined as self-employed.

A self-employed person operating a small-scale, unincorporated business such as a family farm, a retail outlet, a service-contracting firm, or a professional practice may rely on the labor of assistants, whether waged or unwaged, in producing or providing a good or service, but most of the value added is contributed by the self-employed person. The self-employed include many farmers and professionals (e.g., medical doctors, dentists, lawyers, architects) as well as "freelance" workers such as writers, consultants, musicians, and artists who sell the products of their labor (rather than their ability to work) on the market, or who work on an "individual assignment" basis.

The developed capitalist world has seen a secular decline in the number of self-employed since the end of World War II (1939–1945). In 2005 the self-employed constituted 7.5, 12.4, and 14.7 percent of the labor force in the United States, Germany, and Japan, respectively. In the United States, as in most other industrialized countries, the downward trend in the self-employment rate is overwhelmingly attributable to the decline of small-scale agriculture and the movement of much of the self-employed farm population to waged and salaried employment, usually in nonagricultural sectors. However, the trend also reflects a more general decline of small and medium-sized businesses and the concomitant concentration of capital in large corporations. Changing tax laws have encouraged many small business proprietors to incorporate, with the consequence that they have been redefined as salaried employees. New corporate practices, such as franchising, have also had an impact on the measurement of self-employment.

Corporate downsizing, cutbacks in social assistance to the economically indigent, and efforts to reduce the size of the public sector since the profitability crises of the 1970s have contributed to a slowing or even a partial reversal of the long-term trend toward a decline in self-

employment. Although sometimes presented as a revival of "entrepreneurial spirit," an increase in small-business activity may actually reflect the disappearance of "good" corporate or public-sector jobs for highly skilled, formerly salaried employees or for semiskilled or unskilled wage earners. During periods of high unemployment and underemployment, a spike in self-employment is likely to occur. In the 1990s, for example, Canada led the industrial nations in a "shift to self-employment" (with self-employment accounting for 18% of all employment by 1998) over a period in which unemployment and underemployment reached near-record levels (Lowe 2000).

Three additional empirical facts about self-employment deserve to be highlighted. First, self-employment is highest among those who are the most and the least educated, with the well educated typically receiving above-average earnings and the poorly educated below-average earnings, relative to employed workers. Second, the gender gap in earnings is greater between self-employed men and women than it is between their employed counterparts. And finally, the self-employed tend to put in longer hours for their earnings than do the employed, raising quality of life concerns that are magnified by their need to independently finance—or go without—the "benefits" (e.g., pensions, health care insurance, etc.) that are received by many employed workers.

At the ideological level, the persistence of self-employment (and small business in general) in the developed capitalist countries contributes significantly to obscuring the central dynamic of modern capitalism: the division, interdependence, and conflict between capital and wage labor. The self-employed, in Marxist terms, constitute a "petty bourgeoisie" within a global economy whose productive assets are decisively concentrated in the hands of several hundred huge transnational corporations that employ a tiny fraction of the world's workforce. As such, self-employed persons are compelled to "exploit themselves" or face economic ruin. At the same time, their atomized existence, precarious competitive position, and sometime dependence on wage labor predispose them to embrace the ideological nostrums of "free enterprise" and "self-responsibility" to an extreme degree, to view the labor movement with suspicion or outright hostility, and to oppose more generous welfare-state policies.

In 2005 the self-employed constituted 34.9, 35.7, and 45.8 percent of the labor force in Brazil, Mexico, and Turkey, respectively. In the countries of the global South, the destruction of traditional subsistence agriculture and "independent commodity production" by export-led, neoliberal development has produced a new class of impoverished urban "entrepreneurs" struggling to survive with the most meager of economic assets. This phenomenon, which has taken on massive proportions in the barrios and shantytowns surrounding major Latin American cities, is a striking reminder that "self-employment" is very often a manifestation of chronic unemployment and underemployment, of which about one-third of the global labor force (1 billion people) were the victims in the year 2000.

SEE ALSO *Bourgeoisie, Petty; Education, USA; Employment; Globalization, Social and Economic Aspects of; Middle Class*

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SELF-ENHANCEMENT

Self-enhancement refers to an unduly inflated self-image and to the processes that make it so. As a process, self-enhancement is a motivated attempt to seek and emphasize positive feedback and to shield the self from negative feedback (where the shielding is more properly termed *self-protection*). Successful performance, social victories, or acceptance by others can be selectively recalled or embellished in memory, whereas failures, social defeats, or rejections can be reinterpreted, forgotten, or outright rejected. This operation of motivated self-enhancement is constrained by the motive of self-verification, which calls for the construction and maintenance of a stable self-image. The conflict between these two motives is apparent only when self-esteem is low. High self-esteem enables thoughts that are simultaneously self-enhancing and self-verifying. Hence, the process of self-enhancement can provide a buffer against depression (Bernichon, Cook, and Brown 2003).

Some processes of self-enhancement are conscious and strategic. Optimistic predictions regarding future events, such as a high perceived probability of succeeding at a job or a low perceived probability of contracting a dreaded disease, can be self-enhancing. When people care more about the hit rate of their predictions than about the false positive rate, self-enhancement may be the expression of rational decision utilities. These utilities are mal-

leable: Predictions become more modest when people are accountable to others or when their actual outcomes are soon to be revealed. Mood states and the task difficulty also moderate predictions, such that a positive mood heightens self-enhancement and a difficult task lowers it.

Other processes are implicit or even unconscious. People with positive self-images automatically associate their own attributes with positive feelings and approach behavior. For example, the initials of one's own name and the date of one's birth come to be seen as highly desirable through repeated exposure. As a consequence, people like others who share these attributes, however irrelevant they might be for social behavior. When relocating, for example, people prefer to move to states whose names begin with the same letter as their own.

The prevalence of self-enhancement has spawned studies on stable individual differences. As a trait construct, self-enhancement is derivative because it is assessed as a discrepancy between the positivity of a person's self-image and some index of what the person is "really like." The idiographic approach is to ask people how they see themselves relative to the average person. This approach is problematic because many people who claim to be better than average may actually be better. The alternative approach is nomothetic in that it uses the discrepancy between a self-judgment and the aggregate judgment made by observers as a measure of self-enhancement. This method seeks to solve the criterion problem by statistical aggregation over observer judgments, assuming that observers are on average unbiased (Krueger 1998).

The methodological debate over how best to capture individual differences is bound up with the substantive question of whether self-enhancement is beneficial or detrimental to a person's well-being. This question remains open because the answer strongly depends on the method used. Idiographic studies suggest adaptive advantages, whereas nomothetic studies suggest that self-enhancers are narcissistic and disliked.

SEE ALSO *Self-Affirmation Theory; Self-Serving Bias; Self-Verification*

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Joachim I. Krueger

SELF-ESTEEM

Self-esteem is one of the most frequently studied constructs in the social sciences. Popular culture and public policy discussions also make frequent reference to self-esteem. Yet, despite its familiarity and wide usage, there is no generally accepted definition of self-esteem among social scientists. The earliest use of the term was by philosopher/psychologist William James in what became an influential chapter, "The Consciousness of Self," in *The Principles of Psychology* (1890). James included self-esteem in a group of "self-feelings" that emerge from the conscious awareness of self in relation to others. He offered two definitions of self-esteem that, in their inconsistency, typify the confusion and disagreement associated with the term. In the best-known of James's definitions, self-esteem is "determined by the ratio of our actualities to our supposed potentialities; a fraction of which our pretensions are the denominator and the numerator our success: thus, Self-esteem = Success / Pretensions" (p. 310). Alternatively, according to James, self-esteem is "a certain average tone of self-feeling which each one of us carries about with him, and which is independent of the objective reasons we may have for satisfaction or discontent" (p. 306). These seemingly incompatible definitions highlight a valid and important distinction between self-esteem that is contingent on circumstances and self-esteem that transcends them.

Most of the empirical research on self-esteem in the social sciences works from definitions similar to James's "average tone of self-feeling." The best-known of these is offered by the sociologist Morris Rosenberg in his *Society and the Adolescent Self-Image*, where self-esteem is defined as "a favorable or unfavorable attitude toward the self" (1965, p. 15). The brief self-report measure that Rosenberg developed for his research on adolescents, the Self-Esteem Scale, is the most widely used measure of self-esteem in social science research. In another influential book, *The Antecedents of Self-Esteem*, Stanley Coopersmith offered a similar conceptualization of self-esteem as "the evaluation the individual makes and customarily maintains with regard to himself" (1967, p. 4). Both Rosenberg and Coopersmith operate from the assumption that people's attitude toward or customary evaluation of self underlies their overall sense of self-worth. The definitions offered in these two classic works and assumed by much of the empirical work on self-esteem describe a particular form of self-esteem that is traitlike, consistent across time and situations, and global, concerned with all aspects of the self. This definition also corresponds well to usage of the term in popular culture and public policy settings.

Two alternative conceptualizations of self-esteem depart from these classic definitions by dropping the

assumption that self-esteem is global or that it is a trait. Domain-specific conceptualizations accept the premise that self-esteem is an attitude toward or customary evaluation of the self but contend that it is not necessarily global. Thus, for instance, it is possible to have a high opinion of oneself in the social domain but a relatively modest, or even negative, opinion of oneself in the academic domain. Whether self-esteem is viewed as global or domain-specific, it may be conceptualized as a state rather than a trait. This form of self-esteem is like James's ratio of successes to pretensions definition in that it is contingent on circumstances. State self-esteem typically rises when circumstances are positive and drops when they are negative. Neither the domain-specific nor the state conceptualizations are necessarily inconsistent with the global trait conceptualization because it can be shown that weighted combinations of domain-specific self-evaluations are highly predictive of global self-esteem and that state self-esteem varies in a relatively narrow range around the level of trait self-esteem to which it typically returns.

Classic conceptualizations of self-esteem and the questionnaire measures they have spawned assume that people are willing and able to accurately report their self-esteem, an assumption that now seems at least partially unfounded. Drawing on basic research on attitude formation and change, social scientists now make a distinction between self-esteem as traditionally measured—explicit self-esteem—and self-esteem measured using procedures that do not require or allow people to consciously indicate their attitude toward themselves—implicit self-esteem. As with attitudes toward any object, research indicates that explicit and implicit attitudes toward self are not strongly associated. Indeed, different patterns of correspondence between explicit and implicit self-esteem are now viewed as evidence of qualitatively different forms of self-esteem. For instance, a person who is high on explicit but low on implicit self-esteem is described as having defensive self-esteem. A person who is high on both explicit and implicit self-esteem is described as having genuine self-esteem. This work raises questions about the likely success of policies and practices designed to bolster self-esteem that focus only on explicit attitudes toward self (e.g., positive "self-talk").

Furthermore, other important qualitative distinctions in self-esteem indicate that there is more to self-esteem than whether it is high or low. One such distinction is stability of self-esteem, defined as the degree of variability in a person's self-esteem across time. Stability of self-esteem is only modestly associated with level of self-esteem, meaning that people at any given level of self-esteem will vary in the stability of their self-esteem. The combination of level and stability of self-esteem allows for more precise predictions about the role of self-esteem in behavior. For instance, people with high but unstable self-esteem are more likely to react with hostility to provocation than people with stable high self-esteem. Another qualitative distinction is contingency of self-esteem, defined as the degree to which self-esteem is responsive to changes in circumstances. Contingency is moderately correlated with level of self-esteem, indicating that lower self-esteem is accompanied by greater contingency. Contingency of self-esteem typically is indexed at the domain-specific level, allowing for distinctions between people not only in terms of how contingent their self-esteem is, but also in terms of the specific domains in which it is contingent.

In popular usage, self-esteem often is used as a generic label for a variety of similar constructs from which it should be distinguished. Principal among these is self-concept, a much broader term that, according to Rosenberg, is "*the totality of the individual's thoughts and feelings having reference to himself as object*" (1965, p. 7, emphasis in original). Another construct often erroneously referred to as self-esteem is self-efficacy, a narrower construct than self-esteem—even in its domain-specific form—that reflects people's perceptions of their ability to enact a specific behavior. It is directly influenced by prior experience with the behavior and is only indirectly influenced by or reflective of self-esteem.

In popular culture and public policy settings, self-esteem is perceived as critically important to healthy functioning. The strength of this perception is evident in the efforts of groups such as the National Association for Self-Esteem and the California Task Force to Promote Self-Esteem and Personal and Social Responsibility, the latter concluding that "self-esteem is the likeliest candidate for a social vaccine" (1990, p. 232). This conclusion stands in stark contrast to the empirical research literature, which indicates that self-esteem is not strongly associated with behavior—desirable or undesirable—and that, when there is an association, self-esteem is not a causal factor. In an influential *Scientific American* article, "Exploding the Self-Esteem Myth," Roy Baumeister and colleagues summarized this literature by stating, "we have found little to indicate that indiscriminately promoting self-esteem in today's children or adults … offers society any compensatory benefits" (2005, p. 91). This conclusion has led social scientists to examine more closely their assumptions about the origins and functions of self-esteem. Emerging accounts suggest that self-esteem is best viewed as a reflection of other characteristics such as healthy family relationships and social acceptance; it is these constructs that warrant the attention given to self-esteem.

Self-esteem is at once simple and complex. The widely accepted definition of the construct as simply people's attitude toward themselves is at odds with the social and psychological structures and processes that underlie it, as well as the wide range of opinions as to its impor-

tance for individuals and society. Concerns about whether it is important at all have inspired social scientists to probe more deeply the origins and underpinnings of self-esteem to determine how, if at all, it matters. The result is one of the most richly described, frequently studied, and intriguing constructs in the social sciences.

SEE ALSO *Guttman Scale; James, William; Mental Health; Psychology; Rosenberg's Self-Esteem Scale; Scales; Self-Awareness Theory; Social Science; Trait Theory*

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SELF-FULFILLING PROPHECIES

Psychological theory proposes that people's beliefs construct reality. The emphasis on the construction of reality dates back to the 1940s and 1950s. During this time, "New Look in Perception" research challenged the idea that people perceive reality accurately by proposing that what people perceive is heavily influenced by their motives, emotions, and expectations. The *self-fulfilling prophecy* is a quintessential process of this perspective because it involves people's beliefs changing social reality. A self-fulfilling prophecy occurs when one person causes her or his own false belief about another person to become true.

A self-fulfilling prophecy includes three steps. First, one person must hold a false belief about another person. For example, a teacher may overestimate a student's ability, believing that the student is more capable than the student really is. Second, the person holding the false belief must treat the other person in a manner that is consistent with it. A teacher who overestimates a student's ability would have to treat the student as if she or he is highly capable. The teacher may often call on that student, spend extra time with that student, teach that student especially difficult material, and provide that student with feedback contingent on performance (Rosenthal 1973). Third, the person about whom the false belief is held must, in response to the treatment she or he receives, confirm the originally false belief. The student who is treated as if she or he is highly capable may enjoy and value school and, consequently, invest more time and effort on school work than other students do. In turn, this student may ultimately learn more than other students in the class, thereby confirming the teacher's originally false belief that she or he was highly capable.

The term *self-fulfilling prophecy* was introduced to the social sciences by Robert Merton (1948). A sociologist by training, Merton proposed that the self-fulfilling prophecy was capable of creating large-scale social problems such as social inequalities. For example, he described how in the early part of the twentieth century African Americans were barred from joining labor unions on the grounds that they were strikebreakers. This left African American laborers with few job opportunities, forcing them to take any work that presented itself, including work that became available as a result of white laborers going on strike. Thus, according to Merton, the belief that African Americans were strikebreakers caused them out of necessity to become strikebreakers, thereby creating a self-fulfilling prophecy.

SELF-FULFILLING PROPHECY RESEARCH

Merton's contribution to the field's understanding of the self-fulfilling prophecy was purely theoretical, meaning that he explained how self-fulfilling prophecies may operate, but never actually tested whether they occur. Nonetheless, his analysis resulted in hundreds of experimental tests of the process that have provided clear evidence that the self-fulfilling prophecy is a real phenomenon that occurs in a variety of settings.

For example, Robert Rosenthal (a professor at Harvard University) and Lenora Jacobson (an elementary school principal in San Francisco) tested whether teachers' false beliefs about their students' intelligence create self-fulfilling prophecies. Rosenthal and Jacobson (1968) were concerned that one reason disadvantaged students may perform poorly in school is because that is what their teachers expect of them, and they wondered if disadvantaged students might perform better if their teachers expected them to improve academically. To test this, they told elementary school teachers that Harvard researchers had created a new IQ test that could identify "intellectual blooming." They then told the teachers which of their students had been identified by this test as one of these "late

bloomers"—students who would have substantial gains in their IQs over the course of the school year. In reality, there was no special test to measure intellectual blooming; students had simply been administered a typical IQ test, and random assignment determined which students would be labeled as the late bloomers. Because the late bloomers were chosen at random, they were really no different from any other students intellectually. The only difference between the students labeled late bloomers and those not so labeled was their teachers' expectations for them. Therefore, any difference between their IQs at the end of the school year could be attributed only to a self-fulfilling prophecy, which is exactly what Rosenthal and Jacobson found. By the end of the school year, the late bloomers had significantly greater gains in their IQs than did the other students.

THE MAGNITUDE AND IMPLICATIONS OF SELF-FULFILLING PROPHECIES

The large body of research on self-fulfilling prophecies shows that people's false beliefs can influence the behavior of others. However, the magnitude by which they do so is usually modest, meaning that, on average, people's false beliefs only influence other people's behavior through self-fulfilling prophecies a little bit. Even so, there are conditions under which self-fulfilling prophecy effects are larger than average. For example, self-fulfilling prophecy effects are strongest among individuals who are stigmatized, including African American students, girls in math classes, students who are tracked into low-ability groups within their classrooms, and students who have histories of poor academic achievement (Jussim, Eccles, and Madon 1996).

Self-fulfilling prophecy effects can also become larger than average through a process of accumulation. In a typical day an individual interacts with many people, each of whom may hold a false belief about that individual and have a self-fulfilling effect on that individual's behavior. When the false beliefs that different people hold about the same individual are similar, their independent self-fulfilling effects may combine, thereby causing small self-fulfilling prophecy effects to become large. Consistent with this process, research has shown that parents have the strongest self-fulfilling effects on their children's alcohol use when both hold false and unfavorable beliefs about their child's likelihood of drinking alcohol (Madon, Guyll, Spoth, and Willard 2004). The accumulation of self-fulfilling prophecy effects across people has particularly important implications for stereotyped individuals because such individuals are disproportionately exposed to false and unfavorable beliefs from many different people.

Although any single person's stereotypic beliefs may have only a small self-fulfilling effect on another's behavior, that effect may combine with the self-fulfilling effects of other people's stereotypic beliefs to ultimately have a large and harmful impact on the outcomes of stereotyped individuals such as women and minorities.

SEE ALSO *Merton, Robert K.; Pygmalion Effects; Stereotype Threat; Stereotypes*

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SELF-GUIDES

Self-guides are constructs in social psychology that refer to representations of the self. Self-guides are desired self states that have motivational implications and are involved in the process of self-regulation.

The various types of self-guides, proposed by psychologist E. Tory Higgins (1987), are the *actual self*, *the ideal self*, and the *ought self*. The actual self refers to the way individuals view themselves currently. The ideal self refers to the person that individuals would like to be, and the ought self refers to the person that individuals feel they should be. Individuals' ideal self-guides tend to be associated with hopes and wishes, while their ought self-guides tend to be concerned with safety and responsibility. These ought self-guides represent the internalization of expectations of others and society.

The source of self-guides can also be distinguished as being from the self or from an other. For instance, an indi-

vidual might have a self-guide that represents who he would ideally like to be, as well as a self-guide that represents who his father thinks he ought to be.

Comparisons can occur between any of these self-guides. Individuals may compare their own ideal selves with others' ideal selves for them. Or they may compare their own actual self with their own ought self-guide. It is through these comparisons that self-guides are associated with self-regulation. Individuals may experience a discrepancy between their actual self and either their ought or ideal self. Such discrepancies lead to the experience of *negative affect*. It is assumed that this experience of negative affect motivates individuals to change their behavior in the hopes of reducing the discrepancy between their actual self and a self-guide. A reduction in this discrepancy then leads to a reduction in the experience of negative affect. Successful self-regulation is equated with lacking a discrepancy and is associated with experiencing positive affect. Failure to self-regulate is equated with experiencing a discrepancy and is associated with negative affect.

Research has found that the positive and negative affect experienced can be differentiated by the type of self-guide used in comparison. Discrepancies between actual selves and ideal selves are associated with dejection-related affect, such as depression and sadness. Discrepancies between actual selves and ought selves are associated with agitation-related affect, such as anxiety and guilt.

Individuals may differ in regard to the type of self-guide that is chronically accessible for them. These differences carry implications for goal pursuit and information processing. Higgins (1997) expanded his theory to suggest that individuals with chronic ideal self-guides tend to pursue goals that are related to promotion or growth, whereas individuals with chronic ought self-guides tend to pursue goals that are related to prevention or safety. Lisa Evans and Richard Petty (2003) show that individuals pay more attention to and more thoroughly process information that is presented in a way consistent with their more prevalent self-guide.

SEE ALSO *Self-Discrepancy Theory*

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SELF-HATRED

Much of the psychological research in the area of self-hatred owes its origin to the work of the American philosopher and social psychologist George Herbert Mead (1863–1931) and his idea of the "looking-glass self." Mead claimed that people pay attention to the view that others have of them, and when that view is largely negative, a person can internalize it and develop self-hatred. Mead's other major contribution to this area of social research was the importance he placed on the role that language and symbols play in society. A number of later researchers pointed out that American symbols were major conveyers of negative views of blacks and other ethnic groups. At least one prolific author, Sander L. Gilman, has gone so far as to suggest that persecution is inherent in a society's language. Erving Goffman (1922–1982), another influential sociologist, claimed that ethnic (and other minority) groups were often "stigmatized" by society's negative symbolic interaction and the internalization of such stigmatization (often termed "racism") is a major cause of self-hatred.

There is, however, some controversy among scholars concerning the degree to which ethnic group identity affects the development of self-hatred. Some researchers take the position that mere membership in an ethnic group, whether freely chosen or not, is sufficient to cause the individual member to develop feelings of self-hatred if the group is negatively viewed by the majority group. Other researchers take the position that it is not group membership per se that results in self-hatred but the degree to which the individual identifies with the group in question. High or strong identification with one's own ethnic group can sometimes block or ameliorate the kind of psychological damage that results in self-hatred. Ethnic group membership can thus be viewed as a protection against self-hatred as opposed to a cause.

Because of their unique experiences with racism and oppression, blacks and Jews have been the populations most heavily studied in the area of self-hatred. Many of the early researchers were themselves Jews who sought to understand the people in their communities who exhibited visible signs of self-hatred. The founder of psychoanalysis, Sigmund Freud (1856–1939), wrote *Moses and Monotheism* in part to explain Jewish self-hatred produced by external oppression in Europe during the 1930s. The "self-hating" or "self-loathing" Jew has become an archetype in modern American social science, as the term is often used to disparage those Jews who are viewed as anti-Zionist or anti-Israel or for any Jew who is "not Jewish enough." A similar term, "Uncle Tom," has been used to describe the African American who is deemed to possess a high degree of self-hatred. (The term *Uncle Tom* comes from the title character of Harriet Beecher Stowe's antislavery novel *Uncle Tom's Cabin*.) *Apples*, *bananas*, and *coconuts*

are terms that have been used to describe people whose external features are nonwhite (red, yellow, and brown respectively) but whose internal thought patterns are said to be white and reflective of a high degree of self-hatred. The individuals who are the recipients of such negative appellations defend themselves by claiming that it is possible to assimilate some values of the dominant society while at the same time rejecting those (such as white superiority) that they find offensive. Research in support of the possibility of such selective socialization is sparse.

The feminist-oriented research in this area is a reminder that self-hatred is not restricted to members of marginalized groups or subcultures. It is found in the wider society and has been linked to symptoms of depression, substance abuse, and general anxiety. What is perhaps unique about this type of self-hatred is that it does not seem to be related to anything other than a sense of personal failure. It has proven difficult, if not impossible, for researchers to specify a causal link among the possible variables. Self-hatred is as much a cause of as well as a result of depression, anxiety, substance abuse, and gender ambiguity. It can therefore be viewed as both the hub and a spoke of the wheel of social misfortune. As a hub it represents the central role that the self, however damaged or elevated, plays in the dynamics of social life. As a spoke self-hatred represents one of the negative consequences of the socialization process itself.

SEE ALSO *Anxiety; Assimilation; Depression, Psychological; Ethnicity; Feminism; Freud, Sigmund; Gender; Goffman, Erving; Identity; Jews; Looking-Glass Effect; Mead, George Herbert; Multidimensional Inventory of Black Identity; Nationalism and Nationality; Race; Racism; Sexual Orientation, Social and Economic Consequences; Socialization; Stigma; Uncle Tom*

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SELF-HELP ORGANIZATIONS

SEE *Volunteerism.*

SELF-IDENTITY

The notion of the social self has been of particular interest in the social sciences because it reflects a concern with how people's social behavior varies not only as a function of different social roles but also as a function of the kind of social others with whom a person interacts. Within the social sciences, a distinction is made between personal identities, self-identities, and social identities (Hogg, Terry, and White 1995; Thoits and Virshup 1997). Personal identities consist of self-definitions in terms of unique and idiosyncratic characteristics. Social identities, on the other hand, reflect identification of the self with a social group or category. *Self-identities*, the focus of this article, are conceptualized as a definition of self as a person who performs a particular role or behavior.

Self-identity refers to a person's self-conception, self-referent cognitions, or self-definition that people apply to themselves as a consequence of the structural role positions he or she occupies or a particular behavior he or she engages in regularly. Self-identities reflect the "labels people use to describe themselves" (Biddle, Bank, and Slavings 1987, p. 326). For example, a person's self-identities may include the fact that she is a mother, a wife, a daughter, a social worker, and a blood donor. Self-identities provide meaning for the self, not only because they refer to concrete role specifications or behaviors but also because they distinguish roles or actions from counterroles or opposing behaviors (Lindesmith and Strauss 1956). For example, "the role of mother takes on meaning in connection with the role of father, doctor in connection with nurse, and so on" (White and Burke 1987, p. 312).

Theoretically, the importance of the concept of self-identity is derived from identity theory (Stryker 1968, 1980; Burke 1980; Stryker and Serpe 1982; Wiley 1991), which views the self not as an autonomous psychological entity but as a multifaceted social construct that emerges from people's roles in society and the behaviors they perform. Symbolic interactionists such as Mead (1934) and Cooley (1902) considered the self to be a product of social interaction: It is through social interaction that identities actually acquire self-meaning and people come to know who they are. It is important to note that identity theory focuses on the self-defining roles that people occupy in society rather than on the wider range of different social attributes, such as gender, race, or ethnicity, that can be ascribed to the self. Thus, the general perspective of identity theory forms the basis for a relatively large body of microsociological literature concerned with predicting role-related behavior (Simon 1992; Thoits 1991). Within social psychology, however, researchers have been more interested in using self-identity to improve our understanding and prediction of the relationship between attitudes and action.

The concept of self-identity is pivotal in the link between social structure and individual action. Self-identities, by definition, imply action (Callero 1985) and are a set of expectations prescribing behavior derived from a person's social position and considered appropriate by others. Satisfactory enactment of roles or behaviors not only confirms and validates a person's self-identity (Callero 1985), it also reflects positively on self-evaluation. The perception that one is enacting a role satisfactorily should enhance feelings of self-esteem, whereas perceptions of poor role performance may engender doubts about one's self-worth and may even produce symptoms of psychological distress (Thoits 1991; Hoelter 1983; Stryker and Serpe 1982).

THE APPLICATION OF SELF-IDENTITY IN THE ATTITUDE-BEHAVIOR RELATIONSHIP

Within the field of social psychology, the greatest interest in self-identity has been shown by researchers in the attitude-behavior field. Within this field, it has been argued that self-identities can determine intentions and behaviors. For example, political activists may participate in protest actions because activism has become a central part of their self-concepts, and blood donors may give blood because being a donor has become an important part of their self-definition. Self-identity may have a predictive effect on intentions, independent of attitudes and other constructs, because self-identity encapsulates people's goals or interests that are distinct from those expressed by their attitudes. Indeed, as noted by Sparks (2000), the integration of self-identity into the theory of planned behavior "offers the opportunity to examine the social, moral, and emotional dimensions of people's attitudes and behaviour in greater detail" (p. 45).

Several authors have addressed the extent to which self-identity might be a useful addition to the dominant models of the attitude-behavior relationship, namely the theories of reasoned action (Fishbein and Ajzen 1974) and planned behavior (Ajzen 1991). Self-identity has been found to contribute significantly to the prediction of behavior across a number of domains, including altruistic behavior such as blood donation (Charng, Piliavin, and Callero 1988), political behavior such as voting (Granberg and Holmberg 1990), environmental behavior such as recycling (Terry, Hogg, and White 1999), health behaviors such as exercise behavior (Theodorakis 1994) or licit and illicit drug use (Conner and McMillan 1999), and consumer behavior such as food choice (Sparks and Shepherd 1992). On the basis of past research, Conner and Armitage (1998) argued that it is reasonable to assume that there are certain behaviors for which self-identity is an important determinant of intentions (Armitage and Conner, 2001).

THE INTERPLAY BETWEEN SELF-IDENTITY AND PAST BEHAVIOR

One important question for self-identity researchers is the nature of the interplay between self-identity and past behavior. Identity theory assumes that self-identity and past behavior interact to influence intentions. That is, with repeated performance of a behavior, that behavior is more likely to be seen as an important part of the self-concept, increasing the predictive power of self-identity. However, support for this hypothesis has been equivocal: Some studies have found that self-identity is more predictive of intentions at higher levels of past behavior (Charng et al. 1988), some tests have found no evidence that the effects of self-identity vary as a function of past performance of the behavior (Astrom and Rise 2001; Terry et al. 1999), and other tests have found that self-identity is more predictive of intentions at lower levels of past behavior (Conner and McMillan 1999; Fekadu and Kraft 2001). Conner and McMillan argued that the stronger impact of self-identity on intention at lower levels of past behavior may reflect the role that initial experiences play in strengthening the relevance of identity to intentions. However, as behavior is repeated, intentions become less under the control of cognitive factors such as self-identity and more under the control of habitual forces such as past behavior. Given these inconsistencies, more research on the interplay of self-identity and past behavior, using a wide range of populations and behaviors, is needed in order to understand more fully the role of self-identity in the attitude-behavior context.

ASSESSING SELF-IDENTITY

Within the literature, self-identity is assessed in a number of ways. Initially, researchers used direct and explicit statements to measure the extent to which a particular role or behavior was integrated as part of the self. For example, researchers working within the theory of planned behavior have asked people to indicate their level of agreement with statements such as, "I think of myself as the sort of person who is concerned about the long-term health effects of my food choices" (Sparks and Guthrie 1998), "Blood donation is an important part of who I am" (Charng et al. 1988), or "I am not a type of person oriented to engaging in contraception" (Fekadu and Kraft 2001).

Such measures have been found to be reliable and to predict behavioral intention; however, several criticisms have been noted. First, explicit statements require people to declare in public his or her identification with a particular role and behavior, therefore increasing the salience of that behavior (Sparks, Shepherd, Wieringa, and

Zimmermanns 1995). Second, it has been argued that measures of self-identity serve as measures of past behavior, with people possibly inferring their self-identities from an examination of their past behavior (Sparks 2000). Finally, Fishbein (1997) has argued that self-identity measures may essentially constitute measures of behavioral intention.

In the past decade, however, researchers have developed alternate measures of self-identity. Drawing on marketing research, Mannetti and colleagues (2002, 2004) have used an identity-similarity measure that reflects the degree of similarity between the person's self-image and that of the stereotypical or idealized person who engages in the target behavior. After obtaining independent descriptions of the two images, the distance or nearness between them is computed as a difference score, which is then used as an identity-similarity measure. This type of measure, which is less direct and explicit as well as more specific than other measures, does not increase the salience of behavior, and is independent of behavioral intention, has been found to be a large and significant predictor of behavioral intention (Mannetti, Pierro, and Livi 2002, 2004).

FUTURE DIRECTIONS

Theory and research within the social sciences has highlighted the important role that self-identities play in shaping and guiding action, but future research is needed to tease apart its specific roles. One important direction for future research is to examine the interplay among self-identity and other constructs identified as important in attitude-behavior research and to track the development of self-identities over time. Another important research direction, given the criticisms leveled at self-identity measures, is to develop measures that avoid both the conceptual issues highlighted above and the statistical issues involved in using difference scores. Interest in self-identity and its implications for behavior is widespread, and it is likely that interest in this area will persist for a long time.

SEE ALSO *Choice in Psychology; Decision-making; Identity; Self-Concept; Self-Esteem; Social Identification; Social Psychology; Sociology, Micro-*

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SELF-IMAGE

SEE *Body Image; Self-Concept.*

SELFISHNESS

SEE *Generosity/Selfishness.*

SELF-JUSTIFICATION

People are rational beings, highly capable of exercising careful judgment and judicious evaluation before taking action. Research shows that people are often rationalizing creatures as well, quite facile in their ability to justify their own actions, beliefs, and feelings after the fact. This phenomenon, known as *self-justification*, involves convincing oneself (and others) that what one did, felt, or thought was logically appropriate, even going so far as to invent plausible explanations when it is not immediately apparent why one acted, felt, or thought as one did.

The research that first brought attention to people's tendency to self-justify was a study of the rumors that arose after an earthquake in India in the 1930s. The report noted a perplexing pattern of rumor transmission: Individuals who lived in an area minimally affected by the devastating event were the ones spreading various stories of future calamities. Why would people who suffered little or no negative effects of the earthquake engage in concocting and communicating ideas that would seemingly only provoke fear and dread? Upon reflecting on these findings, social psychologist Leon Festinger (1919–1989) had the insight that this behavior was not fear-provoking in nature, rather it was fear-justifying. Festinger reasoned that although these individuals were spared the worst of the earthquake, they nonetheless were afraid. Yet the circumstances in their case, having escaped disaster, could not adequately or fully account for the anxiety they were experiencing, which Festinger argued motivated them to create future bleak scenarios that were more commensurate with the dread they already felt, and thus served to justify it.

Festinger went on to develop his *cognitive dissonance* theory, which provided a conceptual basis for this and other instances of self-justification phenomena. He argued that people have a need for their cognitions (i.e., thoughts, beliefs, and attitudes) to be consistent with one another. When people become aware that an inconsistency exists among two or more cognitions, an unpleasant tension state known as cognitive dissonance arises. People are motivated to reduce the dissonance and do so by changing old, or adding new, cognitions to eliminate the inconsistency.

One of the earliest tests of cognitive dissonance theory and possibly the first systematic demonstration of self-justification consisted of research participants working on an extremely boring task—turning wooden knobs again and again—and then being asked to convince another person that the task was actually quite enjoyable. Participants were offered either $1 or $20 as compensation for agreeing to this latter request, which they all did. Later, participants provided their own evaluation of the knob-turning task. Participants who were promised $20

to convince another person that the knob-turning task was a pleasant experience rated the task very negatively, no different in fact than another group of participants who performed the task but were not asked to misrepresent it to someone else. Those promised $1, however, rated the knob-turning task more positively than did the other two groups of participants. In explaining this result, Festinger and his colleagues argued that unlike $20, $1 in compensation was not psychologically sufficient to justify the discrepancy between what participants really felt about the dull task and their contrary public expression that the task was enjoyable. To diminish this contradiction, and the corresponding dissonance associated with it, participants altered their attitude toward the knob-turning task in a positive direction. Participants' public expression that the task was interesting was now better justified by their "corrected" attitude.

Later research demonstrated that self-justification helps explain the ubiquity of initiation rituals across human cultures. Elliot Aronson and Judson Mills had participants undergo either a severe, mild, or no screening session (effectively serving as an initiation) before being allowed to take part in what was anticipated to be an interesting discussion on the psychology of sex. All participants then listened to a portion of an ostensibly ongoing group discussion of secondary mating habits in lower animals, which was designed to be dull and banal. Finally, participants were asked to provide their reactions to the discussion and group. Participants who underwent the severe initiation, which required them to exert the most effort and endure the most suffering to gain admittance to the group, expressed more positive reactions than did those who experienced only a mild initiation or no initiation at all. Aronson and Mills argued that the severe initiation was too painful for participants to deny; hence they justified their exertions (simultaneously reducing dissonance) by inflating their estimate of the attractiveness of the group. This particular type of self-justification is often referred to as *effort justification*.

A particularly troubling manifestation of self-justification occurs when people engage in what has become known as *victim derogation* or *defensive attribution*. When we observe bad things happening to good people for no apparent reason, we tend to rationalize that they must have had it coming. Blaming the victim enables us to maintain the perception that the world is a just place in which random victimization does not occur. Similarly, perpetrators of harm often belittle their victims in order to convince themselves that the victims deserved exactly what they got.

SEE ALSO *Attribution; Cognitive Dissonance; Festinger, Leon; Natural Disasters; Rituals; Rumors*

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SELF-KNOWLEDGE

SEE *Self-Perception Theory.*

SELF-LOVE

SEE *Narcissism.*

SELF-MONITORING

Self-monitoring is a construct referring to individual differences in the way people monitor and manage their presentations of self, behaviors, and emotions. It was first proposed by psychologist Mark Snyder in 1974 in his article "Self-Monitoring of Expressive Behavior." According to Snyder's formulation, people vary in the degree to which they attend and respond to social and situational cues regarding what behaviors are most appropriate. Essentially, variations in self-monitoring refer to variations in how willing or able people are to regulate their behavior and self-presentations in specific situations.

The Self-Monitoring (SM) Scale, developed by Snyder, captures differences in the kinds of cues to which individuals respond. It consists of items assessing how respondents observe, control, or regulate their expressive behavior in different settings. While there were twenty-five true-false items in the original scale, a revised eighteen-item scale is now more frequently used by researchers.

Individuals who score high on the SM Scale (high self-monitors) are concerned with the situational appropriateness of their behavior and are sensitive to social cues about what is correct behavior. They would agree with a scale item like "I would probably make a good actor." Regardless of how he or she really feels, a high self-monitor might be one of the most mournful of the mourners at a funeral held in the morning and then one of the happiest people at a party or wedding held later that same day. In contrast, those scoring low on the SM Scale (low self-monitors) are controlled more by their perceived internal feelings and attitudes and make little effort to fit the social

situation. They would agree with a scale item like "I have trouble changing my behavior to suit different people and different situations." Low self-monitors might find it hard to hide their good mood even at a funeral. Alternatively, low self-monitors are more likely to show unhappiness at a party if they happen to be in a bad mood that day.

A great deal of research has examined behavioral differences between the two self-presentational orientations. For example, high self-monitors show greater cross-situational variability in their behavior than low self-monitors. Alternatively, low self-monitors are more likely to show high correspondence between inner attitudes and overt behaviors than are high self-monitors. These differences reflect the fact that high self-monitors are more likely to monitor their social environments, whereas low self-monitors are more likely to monitor themselves. Thus, it follows that among high self-monitors, aspects of the social self are more important, whereas the existential, experiential self (i.e., how one experiences oneself) is more important to the low self-monitor.

With regard to how these two self-types are related to psychological health, Snyder considers high self-monitors to be more pragmatic (or sensitive and strategic) across a number of social situations. Low self-monitors, on the other hand, tend to be more consistent with their principles and less responsive to situational or social pressures. Research suggests that personal problems are no more common among high or low self-monitors and that neither type is more susceptible to mental illness. Self-monitoring also seems to be unrelated to measures of neuroticism, anxiety, and depression.

SEE ALSO *Anxiety; Depression, Psychological; Neuroticism; Self-Control; Self-Presentation; Stereotype Threat*

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SELF-PERCEPTION THEORY

Psychology has long recognized that people must know themselves in order to survive and adapt in life. The value of self-knowledge stems from the fact that the self represents the only constant throughout life. Because of this if the self is well defined, it can provide a solid basis of values, preferences, and attitudes to manage the many decisions of daily life. Clear self-knowledge helps people to quickly decide and express their views on issues such as capital punishment, the ideal profession, or their tastes in music, whereas the absence of clear self-knowledge can leave an individual paralyzed by these decisions. Given the importance of self-knowledge, psychologists have spent a great deal of time attempting to understand how people come to know themselves.

Self-perception theory represents one of the most influential theories of how self-knowledge unfolds. Developed by social psychologist Daryl Bem self-perception theory consists of two basic claims. First the theory claims that people come to know their own attitudes, beliefs, and other internal states by inferring them from their own behavior and the circumstances under which they occur. So a student who observes that he or she constantly reads psychology books may infer an interest in psychology. Second the theory claims that when internal cues are weak, the individual is in the same position as an outside observer who must rely upon the external cues of their behavior to infer their own inner characteristics. In this case people's conclusion that they genuinely like psychology will be reinforced if there are no external incentives to explain their behavior (e.g., grades), and they have no clear prior opinions regarding psychology. Thus people simply use their behavior and the circumstances in which it occurs to infer their own beliefs and attitudes.

One reason why self-perception theory has been so influential stems from its simplicity as an explanation for how self-knowledge develops. That is people come to know themselves merely by observing their own behavior. Beyond its simplicity, however, self-perception theory has been so influential because it provides an important contrast to the most famous psychological theory of how behavior shapes self-knowledge: cognitive dissonance theory. Cognitive dissonance theory assumes that people are motivated to maintain consistency between self beliefs and experience an unpleasant state of dissonance when they hold two inconsistent beliefs about the self. Thus the inconsistency between the thoughts "I do not like psychology" and "I constantly read about psychology" arouses dissonance, and people are motivated to reduce dissonance by changing one of those thoughts. The most direct way to resolve dissonance is to change the prior belief ("I do not like psychology") to align with the behavior ("I spend a great deal of time learning about psychology"). That is the person can resolve dissonance by making their initial attitude more favorable (I really do like psychology) and, hence, consistent with their behavior.

There are two differences between cognitive dissonance theory and self-perception theory. First unlike cog-

nitive dissonance theory, self-perception theory does not assume that any motivational state (e.g., dissonance reduction) is necessary for change in self-knowledge. In fact self-perception theory only requires people's willingness to infer their own attitudes and beliefs by considering the environmental and dispositional causes for their own actions for changes in self-knowledge to occur. Second self-perception theory claims that people can use their own behavior to infer self-knowledge when the internal cues of prior beliefs are ambiguous or weak, whereas cognitive dissonance theory assumes that people adjust self-knowledge only when the internal cues of prior beliefs are clear and conflict with their freely chosen behavior. Taken together these two differences have led psychologists to suggest that both self-perception theory and cognitive dissonance theory can explain the adjustment of self-knowledge under different conditions. Self-perception theory explains *the creation of new self-knowledge* following behavior *that does not conflict with clear initial self-views* whereas cognitive dissonance explains *change in existing self-knowledge* following freely chosen behavior *that does conflict with clear initial self-views*.

The resolution of the self-perception theory versus cognitive dissonance theory debate represents one of the greatest contributions of self-perception theory. Indeed psychology only becomes better when old theories are challenged and complemented by new theories. However the contribution of self-perception theory extends beyond cognitive dissonance theory through its ability to account for a wider variety of self-attribution phenomenon. Most notably self-perception theory can explain how people develop self-knowledge from behavior even when there is no inconsistency between prior beliefs and behavior. So self-perception theory can explain how people infer that they intrinsically enjoy engaging in an activity (psychology) that they once found intrinsically unenjoyable (behavior-belief inconsistency) *when there are not* obvious situational incentives to explain their behavior (e.g., money for grades). In addition, however, self-perception theory can explain how people infer that they do not intrinsically enjoy engaging in an activity (psychology) that they once found intrinsically enjoyable (behavior-belief consistency) *when there are* obvious situational incentives that can explain their behavior (e.g., money for grades). Cognitive dissonance theory cannot explain this type of change in self-views because the behavior of task engagement (reading psychology) is not inconsistent with the initial belief that they enjoy the task. Self-perception theory can explain this type of change in self-beliefs because it does not assume that an inconsistency must exist between initial beliefs and behavior for people to adjust self-knowledge. That is people infer that they must be engaging in the task to earn the external rewards rather than to satisfy their intrinsic interest in the activity. Self-perception theory not only explains the change in self-views produced by external rewards that cannot be explained with cognitive dissonance but also emphasizes the dangers of offering people incentives to engage in tasks that they are already interested in. The ability to explain changes in self-knowledge under a wide range of conditions makes self-perception theory one of the most influential theories of how people get to know themselves.

SEE ALSO *Behavior, Self-Constrained; Cognitive Dissonance; Knowledge; Psychology; Self-Control; Self-Justification; Self-Monitoring*

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SELF-PRESENTATION

Self-presentation is the process by which individuals represent themselves to the social world. This process occurs at both conscious and nonconscious (automatic) levels and is usually motivated by a desire to please others and/or meet the needs of the self. Self-presentation can be used as a means to manage the impressions others form of oneself. Strategic or tactical self-presentation (impression management) occurs when individuals seek to create a desired image or invoke a desired response from others.

The concept of self-presentation emerged from the symbolic interactionist (SI) tradition. The SI tradition is a uniquely sociological contribution to the field of social psychology that attends to the processes by which individuals create and negotiate the social world. SI proposes that it is through interaction and the development of shared meanings (symbolism) that individuals navigate the social world. The works of Erving Goffman, especially *The Presentation of Self in Everyday Life* (1959), exemplify the SI tradition and are seminal contributions to the study of impression management and self-presentation.

Goffman employs a dramaturgical metaphor in which he maps elements of social interaction to the stage. Working at the microsociological level, Goffman focused on the process by which actors construct roles and portray them to an audience. The social actor works to create a front that is both believable and elicits the approval of others. Goffman's

work on impression management and self-presentation provides a roadmap for understanding human behavior and the tension between the individual and society.

Subsequent to Goffman's early articulations of ideas of self-presentation, experimental social psychologists such as Edward E. Jones and Barry R. Schlenker devised experimental methods for the study of self-presentation. This fruitful work provided empirical data about self-presentation that fueled the development of theoretical accounts of self-presentation (e.g., Schlenker 1975). Jones's important text *Ingratiation* presented ingratiation as a form of impression management by which actors can elicit positive responses from others (Jones 1964). One taxonomy of self-presentation strategies includes ingratiation, intimidation, self-promotion, exemplification, and supplication (Jones and Pittman 1982).

Self-presentation is an important part of social life and is largely a prosocial way that individuals negotiate social interactions. Yet, for the individual, the process of self-presentation may be fraught with tension. These tensions were presented in Goffman's pioneering work, which provided a sensitive account of internal tensions that can arise in the trade-offs between the need for social approval and the desire for authenticity. Arlie Russell Hochschild's *The Managed Heart* (1983) focuses on the emotional work involved in self-presentation. Other scholars (e.g., Erickson and Wharton 1997) have also addressed the conflicts that can arise in self-presentation. Not all individuals attempt or are willing to portray an inaccurate image to their audiences. For some people, psychological needs other than the need for social approval drive behavior.

Self-presentation is complex: It is both an individual difference variable and a function of social situations. Self-presentation strategies differ across individuals but also are influenced by environmental factors. In addition to self-presentation differences observed according to age, gender, and culture, researchers have observed differences in self-presentation based on environmental factors. That is, individuals may elect to alter their self-presentations in response to cues from the social environment. As used here, cues refer to both environmental cues such as the social context (i.e., how public the setting is) and interpersonal cues such as the perceived responses of others. Individuals may also differ in the extent to which they engage in self-monitoring. Self-monitoring is the extent to which individuals monitor their behavior and self-presentation in response to real or perceived interactional cues.

Self-presentation is both an individual experience and a social phenomenon and highlights the tensions inherent in human interaction.

SEE ALSO *Goffman, Erving; Ingratiation; Self-Concept; Self-Esteem; Self-Monitoring; Self-Representation; Social Psychology*

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SELF-REFLECTION

SEE *Ethnography; Observation, Participant.*

SELF-REGULATION

SEE *Self-Monitoring.*

SELF-REPORT METHOD

Social scientists use many methods to collect data. The most common method is self-report, in which people respond to questions about themselves regarding a wide variety of issues such as personality traits, moods, thoughts, attitudes, preferences, and behaviors. In fact, much of social science knowledge and theory are based largely on self-report data.

ADVANTAGES OF SELF-REPORT

The main advantage of self-report is that it is a relatively simple way to collect data from many people quickly and at low cost. A second advantage is that self-report data can be collected in various ways to suit the researcher's needs. Questionnaires can be completed in groups or individually and can be mailed to respondents or made available on the Internet. Self-report data can also be collected in an interview format, either in person or over the telephone. Researchers can thus obtain data from respondents across a large geographic area or to whom they do not have direct access.

Furthermore, researchers can collect data regarding behaviors that cannot be observed directly or are unethical to simulate in the laboratory (i.e., activities typically done in private and behaviors that would cause embarrassment if done in public). The only person with direct access to mental events and some behaviors is the self; therefore, the self is the best person to report on these variables. Also, respondents completing pencil-and-paper questionnaires with the assurance of confidentiality and anonymity might be more willing to accurately report on a variety of behaviors and characteristics.

DISADVANTAGES OF SELF-REPORT AND POSSIBLE SOLUTIONS

There are several disadvantages of self-report that threaten the reliability and validity of measurement. Researchers must ensure that measures are reliable—meaning the outcomes of measurements are repeatable—and valid—meaning the intended variable is measured.

Some threats to validity derive from the way the measure is designed, such as using ambiguous words or words that are not appropriate for the reading level of the respondents. This is especially problematic when different groups (e.g., men and women, adolescents and adults) are likely to interpret words differently or have different reading levels. Researchers must choose words carefully to convey their desired meaning precisely and at an appropriate reading level. Another way to ensure consistent interpretation of items is to provide respondents with a reference group. For example, respondents may be instructed to indicate their level of shyness in relation to people of their same age and gender. It may also be important to provide additional information to ensure that respondents interpret and use response scales correctly, such as providing examples of portion sizes when asking questions about eating habits.

The order of items may also influence how a person responds. For example, people may report different levels of happiness depending on whether they answer this question before or after reporting how many dates they had last month. Researchers should consider how questions might influence answers to subsequent questions. Furthermore, when asking about controversial or potentially embarrassing information, researchers might plan to ask less controversial questions first so that respondents feel comfortable at the outset and thus will be more likely to provide honest responses to more difficult questions.

Other threats to the validity of self-report are due to respondent characteristics. One such well-known threat is socially desirable responding, or the attempt by respondents to make themselves look good. Researchers avoid this problem by using neutral items; by using the Q-sort method of response, in which the respondents are allowed to rate only a certain number of items as highly descriptive of themselves; and by informing respondents that answers are anonymous and/or confidential, thereby encouraging honest responding. Finally, researchers may choose not to use data from respondents who score high on measures of social desirability.

Respondents may have other biases unrelated to item content. They might tend to embrace or avoid extreme responses, or they might exhibit acquiescence, a tendency to agree with statements. These threats can be reduced by requiring respondents to choose one answer from a list. To reduce acquiescence bias, researchers can use measures with items keyed in different directions so that agreeing with some items lowers the total score.

An especially harmful threat to self-report occurs when respondents are intentionally dishonest. Dishonest responding can be decreased by ensuring confidentiality (and anonymity, if possible). Data from people who score high on measures of lying or faking (in both negative and positive directions) can also be excluded from further analyses.

Experimenters may pose threats to the validity of self-report by unintentionally influencing how people respond to questions, which is especially likely with an interview format. Typically, this threat results from experimenters expecting people to respond in line with hypotheses. To lessen this threat, experimenters and interviewers should be unaware of the research hypotheses, and several interviewers should be used to reduce systematic influences of any one interviewer.

The situation and location of interviews may also influence self-report measures. For example, people interviewed on college campuses may agree with the statement "The government should give more money to education" in greater numbers than people interviewed in a park. The situation may serve as a cue to the respondents about the desirable answer, and they may respond accordingly. Even when the respondent is not consciously aware of contextual cues, he or she may still be influenced by them on a subconscious level.

A final threat to validity can occur if all data have been collected with self-report because this is likely to artificially inflate correlations; this problem is known as method variance. In fact, collecting data with any single method has its pitfalls. Researchers who use a single method for collecting data need to be aware of method variance so they can correctly interpret the magnitudes of the correlations found between various measures.

METHODS OTHER THAN SELF-REPORT

Multiple methods can be used to gain a multifaceted understanding of variables of interest and to determine

consistency between self-reports and other measurements. Other-report (asking another person about the person of interest) is increasingly being used to examine variables that were previously primarily measured with self-report. Behavioral observation is another method for gathering information about variables commonly assessed with self-report, although this method is more time-consuming and expensive than self-report. To check for accuracy, self-reports can be compared with archival data (e.g., criminal records).

Researchers must keep in mind the purpose of their research to determine which method(s) of data collection to use. If researchers are interested in people's subjective experience of their own thoughts and behaviors, then self-report is appropriate. However, if researchers are interested in more than people's subjective experience of themselves, then a multimethod approach should be used to ensure reliable and valid measurement. Social science researchers are often concerned with more than subjective experience and are beginning to embrace multimethod approaches to data collection. This shift in data collection methods is likely to increase the quality of data available to test and revise social science theories.

SEE ALSO *Ethics in Experimentation; Informed Consent; Mood; Personality; Privacy; Reliability, Statistical; Self-Disclosure; Self-Presentation; Self-Serving Bias; Survey; Validity, Statistical*

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Tera D. Letzring

SELF-REPRESENTATION

How people define themselves in relation to others greatly influences how they think, feel, and behave, and is ultimately related to the construct of identity. Self-development is a continuous process throughout the lifespan; one's sense of self may change, at least somewhat, throughout one's life. Self-representation has important implications for socio-emotional functioning throughout the lifespan.

Philosopher and psychologist William James (1842–1910) was one of the first to postulate a theory of the self in *The Principles of Psychology*. James described two aspects of the self that he termed the "I Self" and "Me Self." The I Self reflects what people see or perceive themselves doing in the physical world (e.g., recognizing that one is walking, eating, writing), whereas the Me Self is a more subjective and psychological phenomenon, referring to individuals' reflections about themselves (e.g. characterizing oneself as athletic, smart, cooperative). Other terms such as *self-view*, *self-image*, *self-schema*, and *self-concept* are also used to describe the self-referent thoughts characteristic of the Me Self. James further distinguished three components of the Me Self. These include: (1) the material self (e.g., tangible objects or possessions we collect for ourselves); (2) the social self (e.g., how we interact and portray ourselves within different groups, situations, or persons); and (3) the spiritual self (e.g., internal dispositions).

In the late twentieth century, researchers began to argue that the self is a cognitive and social construction. Cognitive perspectives suggest that one's self-representation affects how one thinks about and gives meaning to experiences. Like James, psychologist Ulric Neisser distinguished between one's self-representation connected to directly perceived experiences and that resulting from reflection on one's experiences. The "ecological self," connections of oneself to experiences in the physical environment, and the "interpersonal self," connections of oneself to others through verbal or nonverbal communication, comprise direct perception of experience. Neisser proposed that these two types of self-representation develop early in infancy. Regarding reflections on one's experiences, Neisser identified three types of self-representation that emerge in later infancy and childhood with cognitive and social maturation. The temporally "extended self" is based on memories of one's past experiences and expectations for the future. The "private self" emerges with the understanding that one's experiences are not directly perceived by others, but rather must be communicated to be shared. The "conceptual self," one's overarching theory or schema about oneself based on one's reflection on experiences within social and cultural context, parallels terms such as *self-concept* and *self-schema*. In a 1977 article, psychologist Hazel Markus showed that one's self-representation or self-schema guides information processing and influences one's behavior.

As psychologist Roy Baumeister pointed out in *Identity: Cultural Change and the Struggle for Self*, because self-representation develops through one's experience of

the world, cultural and social factors are important in who we are and what we think about ourselves. Philosopher George Herbert Mead (in *Mind, Self, and Society*) postulated that acquisition of self-representation emerges from socialization practices. Mead argued that individuals are socialized to adopt the values, standards, and norms of society through their ability to perceive what others and society would like them to be. Psychologists Tory Higgins, Ruth Klein, and Timothy Strauman further suggested that self-representation includes ideas about who we are (actual self), who we potentially could be (ideal self), and who we should be (ought self), both from one's own perspective and from one's perception of valued others' perspectives. Discrepancies between the actual self and the ideal self or ought self may result in depression or anxiety, respectively.

Attachment theory likewise demonstrates how the self is socially constructed and, in turn, affects how people evaluate themselves (i.e., their self-esteem). Thus, relationships with others play an important role in people's self-representation and self-esteem. Psychologist John Bowlby focused on caregiver-child relationships. Securely attached children feel safe in the environment and are able to actively explore their surroundings. Through experiencing secure attachment to a consistent caregiver, children develop a belief that they are good and worthy of love. This forms the basis of self-esteem. In contrast, an insecure attachment, in which the child does not feel confident in the caregiver's protection, may result in feeling unworthy of love, anxious and distressed, and relatively low self-esteem.

The beginnings of self-representation emerge early in infancy, with the recognition that one is a separate physical being from others. Self-representation development continues throughout adulthood. Because self-representation involves social and cognitive constructions, changes in self-representation occur with individuals' cognitive and social development. Psychologist Susan Harter has conducted highly influential research on the developmental course of self-representation. Excerpts from Harter's summary of self-representation development from early childhood through adolescence (Harter, 1988) are presented in the Table 1.

In addition to cognitive and social maturation, changes in one's social context may be equally important influences on self-representation. For example, Susan Cross (in "Self-construals, Coping, and Stress in Cross-cultural Adaptation") notes that cultural values influence self-development. As an individual moves from one cultural context (e.g., Eastern culture) to another (e.g., Western culture), changes in self-representation may emerge. Individuals can learn to adopt a self-representation that embraces multiple cultures.

SEE ALSO *Attachment Theory; Bowlby, John; Child Development; Developmental Psychology; James, William; Mead, George Herbert; Mental Health;*

	Early childhood	Middle childhood	Adolescence
Content	specific examples of observable physical characteristics, behaviors, preferences, etc.	trait labels, focusing on abilities, interpersonal characteristics, and emotional attributes	abstractions about the self involving psychological constructs, focusing on different relationships and roles
Organization	little coherence, due to inability to logically organize single self-descriptors	logically organized, integrated within domains that are differentiated from one another	ability to construct a formal theory of the self in which all attributes across and within role domains are integrated and should be internally consistent
Stability over time	not stable over time	recognition of and interest in continuity of self-attributes over time	Intrapsychic conflict and confusion over contradictions and instability within the self, concern with creation of an integrated identity
Basis	fantasies and wishes dominate descriptions of behaviors and abilities	use of social comparison due to ability to simultaneously observe and evaluate the self in relation to others	intense focus on the opinions that significant others hold about the self, especially peers and close friends

Table 1

Psychology; Self-Awareness Theory; Self-Consciousness, Private vs. Public; Self-Guides; Self-Perception Theory; Self-Schemata; Social Psychology; Stages of Development

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Pa Her
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SELF-SCHEMATA

Psychologists have spent a great amount of time and energy studying the self-concept, or how individuals construe themselves. In research on the self-concept, the construct of self-schemata was introduced by psychologist Hazel Markus (1977). Self-schemata are cognitive representations of the self that have implications for information processing and self-regulation.

Schema are blocks of knowledge that help individuals categorize, organize, and process information. Markus built on this idea by suggesting that individuals possess schemas about themselves. These blocks of self-knowledge were coined *self-schemata*, or *self-schema*. Self-schemata correspond to characteristics or traits that individuals might use to describe themselves. They may also correspond to the social roles individuals would describe themselves as possessing. Taken together, self-schemata describe an individual's self-concept.

Markus and Paula Nurius (1986) expanded on the idea of self-schemata from the present to the future. These possible selves, or representations of who individuals might become in the future, are considered to be an extension of the self-concept. Future self-schemata may be positive (hoped-for selves) or negative (feared selves). Possible selves provide an evaluative context for current behavior. Additionally, they provide motivational directions for behaviors in the future by clarifying specific desired or undesired end states.

A frequent method of measuring self-schemata is to record the response speed of individuals as they respond to characteristics presented on a computer screen. Individuals are asked to hit buttons that correspond to the phrases "me" or "not me." The more quickly an individual is able to respond to an idea, whether the response is positive or negative, the more schematic that individual is in that domain. An alternative way of measuring schematicity is to have individuals list characteristics they view as relevant to their self-concept. The former methodology has the advantage of reducing the influence of social desirability.

John Kihlstrom and colleagues (1988) show that individuals who are schematic are more likely to notice information relevant to that schema and more likely to perceive their own and others' behavior as relating to that schema. Further research by Ann Ruvolo and Markus (1992) shows that both self-schemata and possible selves are associated with increased memory. This research is consistent with the self-referent effect, the tendency of individuals to more easily remember information that is relevant to themselves. The explanation for these effects is that schema relating to the self are highly accessible.

Research on possible selves suggests that future-oriented self-schemata are related to self-regulation. When possible-self standards are salient for individuals, they are more likely to behave in ways that help them approach hoped-for selves and avoid feared selves. Markus and Daphna Oyserman (1990) extended possible-selves theory by showing that self-regulation is most successful for individuals who possess both a salient hoped-for and salient feared self in the same domain.

SEE ALSO *Schemas; Self-Concept; Self-Discrepancy Theory; Self-Monitoring*

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SELF-SERVING BIAS

A self-serving bias is any cognitive or perceptual process that is distorted by the need to maintain and enhance self-esteem. When individuals reject the validity of negative feedback, focus on their strengths and achievements but overlook their faults and failures, or take more responsibility for their group's work than they give to other members, they are protecting the ego from threat and injury. These cognitive and perceptual tendencies perpetuate illusions and error, but they also serve the self's need for esteem.

Self-serving biases are particularly evident when individuals formulate attributions about the causes of personal actions, events, and outcomes. When explaining positive actions and experiences, their attributions emphasize the causal impact of internal, dispositional causes, but when identifying the causes of negative events, they stress external, situational factors. The boy who believes his skillful play earned him his victory, the employee who blames her troubles at work on the boss rather than herself, the student who attributes a poor grade to bad luck or the difficulty of the test, and the A student who traces the grade back to hard work and innate ability are all displaying this self-serving attributional bias. Because failure undermines self-confidence and self-worth, individuals seek an external factor that can be blamed for the failure. When they succeed, however, they can bolster their self-esteem by attributing this positive outcome to personal factors (Weiner 1985).

Some people are less susceptible to this bias than are others. Individuals who are depressed or who suffer from chronically low self-esteem tend to take the blame for their failures but deny responsibility for their successes. People in many non-Western cultures also frequently attribute outcomes that lead to negative consequences to themselves rather than external factors. Individuals with an external locus of control consider both positive and negative outcomes to be caused by factors beyond their control, and those with an internal locus of control assume that they, personally, are responsible for their outcomes (Rotter 1966). Overall, however, the tendency to externalize failure and internalize success occurs in a wide range of educational, athletic, and interpersonal situations. Researchers have also isolated the effects of performance feedback on attributions experimentally by giving research participants false positive or negative feedback about their work on a laboratory task. Invariably, those told they failed attribute performance to such external factors as bad luck, task difficulty, or the interference of others, and those told they succeeded point to the causal significance of such internal factors as ability and effort.

Researchers now recognize that a number of cognitive, motivational, and psychological factors combine to create the tendency to internalize success and externalize failure. As Dale T. Miller and Michael Ross (1975) suggest, individuals internalize success and externalize failure because they are usually optimistic when predicting their outcomes and experiences. They expect to pass tests, get good jobs, and have long-lasting relationships rather than fail, get fired, or divorce. Because negative experiences are unexpected, people tend to attribute them to external factors rather than stable, personal ones. Miller and Ross thus conclude that these biases do not always "serve the self," but are in some cases produced by "cold," cognitive processes as well as "hot" motivations and needs.

SEE ALSO *Attribution; Self-Enhancement; Self-Esteem*

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Donelson R. Forsyth

SELF-SYSTEM

Social scientists have long been concerned with describing the structure and functions of the human self—the con-

stellation of self-referent thoughts, feelings, and motives that constitute the individual's experience of himself or herself in relation to the world. These descriptions range from intrapsychic to cultural in focus, and the accounts of structure and functions range from those that portray the self as a stable, monolithic entity, to those that outline a complex, dynamic system of interrelated elements and processes. These latter accounts typically refer to the self as the *self-system*.

System-oriented accounts of the self comprise two features: (1) They specify a set of self-aspects—constituents of a differentiated but unified whole; and (2) they posit mechanisms that give rise to the different self-aspects, the interplay between them, and the interplay between the self-system and the experienced world. System accounts often trace their origin to the work of philosopher/psychologist William James (1842–1910), who, in his oft-quoted *Principles of Psychology* (1890), first described the self as a differentiated entity. James specified two dimensions of differentiation. One is distinctly social, describing self-aspects as internalized representations of the self in relation to significant others. The other dimension positions these representations in the social self, which, along with the material self and the spiritual self, constitute the full self-system.

Although many models of the self-system draw on James's description, it does not fully describe the self in system terms because it does not posit mechanisms by which the social, material, and spiritual selves arise, and it does not offer a systematic account of the interplay between these self-aspects or between the self-system and the experienced world. In perhaps the earliest fully drawn model of the self-system, Harry Stack Sullivan (1892–1949), in *The Interpersonal Theory of Psychiatry* (1953), outlined the interpersonal processes that give rise to the self-system. The *good-me* arises from positive interactions between the infant and caregiver. The *bad-me* arises from interactions with the caregiver that engender anxiety. Finally, the *not-me* encompasses interpersonal aspects of the self-system that are nonconscious—the "private mode of living." These self-aspects are a joint product of interpersonal reward and anxiety that, in the mentally healthy individual, function cooperatively to promote security and guard against anxiety in interpersonal relations.

The cognitive revolution of the 1960s provided social scientists with the conceptual and methodological tools for developing and studying models that proffer more detailed accounts of the structure of the self-system and richer accounts of processes that operate within the self-system and between the self-system and the environment. In terms of structure, these models generally view the self-system as a highly organized network of knowledge structures that are either activated directly through self-directed attention or by stimuli in the environment or indirectly as a result of their association with other knowledge structures that have been activated. Once activated, these constituents of self-knowledge influence attention, perception, emotion, and behavior, typically, in a manner that ensures the stability and continuity of the self-system across situations and over time.

SEE ALSO *Cognition; Emotion; James, William; Psychoanalytic Theory; Psychology*

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Rick H. Hoyle

SELF-VERIFICATION

Self-verification theory proposes that people want others to see them as they see themselves. For example, those who see themselves as relatively dominant want others to see them as dominant, and those who see themselves as relatively submissive want others to recognize them as submissive. The theory was developed by William B. Swann Jr. (1983). Drawing on earlier theorizing, he assumed that people form self-views so that they can predict the responses of others and know how to act toward them. Thus, for example, those who see themselves as intelligent expect that others will notice their insightfulness and so are inclined to pursue activities that require intelligence. Because self-views play a critical role in making sense of their experiences and guiding their actions, people become invested in maintaining them by obtaining self-confirming information.

Among persons with positive self-views, the desire for self-verification complements another important motive, the desire for self-enhancing or positive evaluations. For example, those who view themselves as "organized" find that their desires for both self-verification and self-enhancement compel them to seek feedback that confirms their positive, "organized" self-view. People with negative self-views, however, find that the two motives conflict: Although the desire for self-verification compels such persons to seek negative evaluations, the desire for self-enhancement compels them to seek positive evaluations. Self-verification theory points to the conditions under

which people with negative self-views resolve this conflict by seeking self-verification rather than self-enhancement.

Considerable evidence supports self-verification theory (Swann 1996). In one study, researchers asked participants with positive and negative self-views whether they would prefer to interact with evaluators who had favorable or unfavorable impressions of them. Those with positive self-views preferred favorable partners, but contrary to self-enhancement theory, those with negative self-views preferred unfavorable partners.

Many replications of this effect using diverse methodologies have confirmed that people prefer self-verifying evaluations and interaction partners. For example, not only do self-verification strivings influence the relationships people enter initially, they also influence whether or not people remain in certain relationships. Research on married couples, college roommates, and dating partners show that people gravitate toward partners who provide verification and drift away from those who do not—even if this means withdrawing from positive partners. And even if people wind up with partners who do not see them in a self-verifying manner, they may correct the situation by changing their partners' minds. College students who were mildly depressed, for instance, were especially likely to solicit negative evaluations from their roommates, and such activities made their roommates more inclined to derogate and reject them at the semester's end. And even if people should somehow fail to elicit self-confirming evaluations, information-processing biases in attention, memory, and interpretation may make their social works appear to be more confirming than they actually are, thus stabilizing their self-views.

Self-verification strivings are adaptive for most people because most people have positive self-views, and self-verification processes enable them to preserve these positive self-views. Also, within small groups, verification of negative as well as positive self-views may also facilitate commitment and performance. Yet for people with negative self-views, self-verification strivings may have undesirable consequences, causing them to gravitate toward partners who undermine their feelings of self-worth.

The major criticism of self-verification theory has been that, relative to self-enhancement, it is a rare phenomenon that is restricted to people with terribly negative self-views. As evidence, critics cite hundreds of studies indicating that people prefer, seek, and value positive evaluations more than negative ones. Such critiques overlook two important things. First, because most people have relatively positive self-views, the fact that they display a preference for positive evaluations may reflect a preference for evaluations that are self-verifying (as well as self-enhancing). Second, self-verification strivings are not limited to people with globally negative self-views; even people with high self-esteem seek negative evaluations about their flaws, and even people with moderately positive self-views withdraw from spouses who evaluate them in an exceptionally positive manner.

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William B. Swann Jr.

SELIGMAN, MARTIN
1942–

Born in 1942 Martin E. P. Seligman is a noted psychologist whose contributions to psychological science include a better understanding of depression and the stimulation of interest in the positive aspects of personal growth and development. He earned his bachelor's degree summa cum laude in philosophy at Princeton University in 1964 and his doctor of philosophy in experimental psychology at the University of Pennsylvania in 1967.

In his early work Seligman focused on animal models of learned helplessness. Among his discoveries he found that when dogs were subjected to inescapable shocks, they later failed to attempt escape or to avoid such shocks, at least temporarily. His research also demonstrated that the learned helplessness could be reduced with appropriate training. According to Seligman and his fellow researchers, the animals had learned that their attempts at escape behaviors were not rewarded, so those attempts were extinguished.

Subsequently psychologists extended his work with the animal model to include discussion of such behavior in people. Psychologists addressed the question of why people sometimes fail to escape from untenable situations when escape is possible. As psychology, as a discipline, moved from behavioral to cognitive explanations of behavior, researchers focused less on reinforcement contingencies and more on thought processes, such as the

expectation with learned helplessness that one could not control one's environment, so action would be futile.

Subsequent to his investigation of learned helplessness and its connections to depression, Seligman began focusing on coping and adaptation, developing the emerging field called positive psychology. This approach has at its heart the idea that people are motivated to thrive; it concerns itself with healthful approaches to life by individuals and by institutions. Positive psychology focuses on understanding (1) positive emotions like contentment with the past and hope for the future; (2) positive individual traits like the capacity for work and love, curiosity, integrity, and self-control; and (3) positive institutions that foster the creation of justice, civility, and tolerance (Positive Psychology Center 2007).

To promote positive psychology Seligman created the Positive Psychology Center at the University of Pennsylvania. The center is designed to promote research and dissemination of positive psychology. The domain has generated research programs and innovative ideas; at the same time, another of Seligman's goals is to foster societal action that promotes psychological growth within communities. The combination of theoretical, empirical, and applied ideas led in 2006 to the creation of the *Journal of Positive Psychology*.

Seligman has written many books including *Biological Boundaries of Learning* (1972), *Learned Optimism* (1991), *The Optimistic Child* (1996), *Authentic Happiness: Using the New Positive Psychology to Realize Your Potential for Lasting Fulfillment* (2002), and *Character Strengths and Virtues: A Handbook and Classification* (2004). Many of his books have been translated into multiple languages.

Seligman has been recognized for his contributions in numerous ways. In 1998 he was elected the president of the American Psychological Association (APA), the largest organization of psychologists in the world. Prior to that he served as president of Division 12 (Clinical Psychology) of the APA. In addition he has been elected fellow of seven APA divisions: General Psychology, Experimental Psychology, Behavioral Neuroscience and Comparative Psychology, Society of Clinical Psychology, Adult Development and Aging, Health Psychology, and International Psychology. Seligman is also a fellow of the Association for Psychological Science, the Behaviour Research and Therapy Society, and the Pennsylvania Psychological Association.

He has received fellow status in nonpsychological organizations as well, including the American Association for the Advancement of Science and the Society of Behavioral Medicine. He has garnered honorary doctorates from Uppsala University in Sweden, Massachusetts College of Professional Psychology, and Complutense University in Madrid.

SEE ALSO *American Psychological Association; Behaviorism; Learned Helplessness; Positive Psychology; Psychology; Reinforcement Theories*

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Bernard C. Beins

SELLING LONG AND SELLING SHORT

In the field of finance selling long (or going long) on a security or an investment means that an investor buys that security or investment with the prospect of keeping it for some time because he or she believes that its price (or value) is going to increase in the long run. This investment action is called a long position in that particular security or investment.

The opposite practice is known as selling short or short selling a security or an investment. An investor who gets involved in short selling believes that the price of the underlying security is going to decrease in the near future. Hence, that investor borrows shares of the security he or she anticipates will have a price decrease and then sells those shares at the current market price, expecting to pay back the loan in stocks when the price of the security drops. This way the investor makes a profit by selling high and buying low, but he or she sells first and buys later. Thus, because the investor does not own the underlying security but only borrows and sells it, it is considered that that investor is in a short position regarding that particular security. Of course, a high risk is involved in such investment actions because the price of the security or investment in which someone has a short position could rise instead of fall, and then the investor has to pay more and loses money instead of gaining as he or she anticipated.

In general, an investor will go long or have a long position in a security or an investment when that investor expects the price to rise and will have a short position when he or she expects the price to drop. However, short selling is not allowed in all countries. The term *short* is used because it indicates an inadequacy, and in finance it is applied to situations in which investors sell securities that they do not own. Therefore, such a sale is called short sale because it creates an inadequacy, a negative position, in the sold security. In a portfolio the percentage that shows the portion of the security that is in a short position is negative. The securities in which a long position is held have positive percentages in portfolio weights. The sum of the portion of each security that makes up a portfolio is always equal to one despite any long or short positions in the participating securities.

SHORT SELLING IN THE UNITED STATES

In the United States the process of short selling proceeds as follows:

1. An investor interested in short selling borrows shares of a security from a brokerage firm. However, in the United States there is a rule that the investor has to deposit cash in his or her brokerage firm amounting to 50 percent of the value of the borrowed shares (this is called a margin).
2. The investor then sells the borrowed shares and credits the proceeds from the sale at his or her cash account in the brokerage firm.
3. At a specified time agreed on with the brokerage firm the investor must close the position by buying back the shares from the market.
4. The investor must return the shares to the broker (lender) as was agreed. If the price of the underlying shares increases, the investor suffers a loss. If that price decreases as expected, the investor makes a profit.

Furthermore, by law since 2005 regulated broker-dealers in the United States do not allow their customers to short sell securities if the customers have not arranged for a broker-dealer to confirm that the brokerage firm is able to deliver the underlying securities. This process is called locating. The brokerage firms can borrow shares in many ways, facilitating locates and delivering the short-selling securities. U.S. brokers can borrow stocks from leading custody banks such as JP Morgan Chase (New York), Citibank (New York), Mellon Bank Corp. (Pittsburgh), the Bank of New York (New York), the Northern Trust Company (Chicago), State Street Corporation (Boston), Robeco (Netherlands), UBS (Zurich), fund management companies, and even their customers who have long positions in those stocks.

In the United States, to avoid a high amount of loss, short sellers can place a stop loss order with the brokerage firm after selling a stock short. Then the broker has to cover the position if the price of the underlying stock increases to a certain level, limiting the loss to the customer.

A short-selling investor has to pay a fee at the brokerage company that facilitates that investor's short-selling activities. Usually this is a standard commission fee, as with buying a security.

If the price of the shares in a short position rises instead of falling, the broker will deduct money from the investor's cash account and transfer it to the investor's margin account. If the price continues to increase and there are not enough funds in the investor's cash account to cover the investor's position, the investor will have to borrow on margin and will begin to accrue margin interest charges. Furthermore, if the stock on a short position pays dividends and the dividend date passes while the investor is short on the stock, the dividend will be deducted from the investor's account.

THE BENEFITS AND HISTORY OF SHORT SELLING

According to Jones and Lamont (2001), short selling makes an important contribution to the efficiency of the stock market. There are limits to arbitrage. Specifically, some stocks can become overpriced. A group of investors may realize this and adopt a short position in those overpriced stocks. When the stocks are sold in the market, their prices are driven downward (high supply, low prices), and eventually they reach an equilibrium price level.

Historically, short-selling practices were reported in the seventeenth century during the scandal that arose after the violent fall of the Dutch tulip market. In the eighteenth century England banned short selling. In the nineteenth century the term *short* was used in the United States. In the early twentieth century the short-selling activities of traders were blamed for the Wall Street crash of 1929. After that time severe regulations on short selling were implemented in 1929, 1938, and 1940. Legislated rules that banned mutual funds from engaging in such activities were lifted in 1997. In 2005 the Securities and Exchange Commission established locate and close-out requirements for brokerage firms.

SEE ALSO *Arbitrage and Arbitrageurs; Banking; Efficient Market Hypothesis; Financial Instability Hypothesis; Financial Markets; Great Depression; Great Tulip Mania, The; Interest Rates; Interest, Own Rate of; Returns; Speculation; Spot Market; Stock Exchanges*

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Katerina Lyroudi

SELLOUTS

The label *sellout* has referents in cultural, social, political, and economic communities. In idiomatic use, sellouts are people affiliated with a person or group (who typically have subordinate social status) who are perceived to have betrayed that person or group, their interests, and/or an ideology or cause. To sell out is to betray a group and/or cause.

Sellouts are often accused of betraying groups to which they had belonged previously, and which have a subordinate status to the group in power. These groups might be family, kin, or friendship-based groups, or larger, socially constructed or imagined communities based on nationality, race, gender, sexual orientation, or class. Or the groups might be collectives, such as musicians of a marginalized style of music, environmentalists, members of business conglomerates, or international business partnerships seeking to maximize national profits in a competitive global economy.

These groups often have a specific ideological orientation that requires solidarity or a cause, and sellouts are said to be traitors to the cause. The sellout's attempt to benefit himself socially, culturally, politically, or economically has negative implications for the subordinate group and a positive effect for the group in power—often referred to as the mainstream.

In their work on the economics of identity, William Darity, Patrick Mason, and James Stewart (2006) imply that there is an underlying relationship of domination and subordination between groups (in their work, racial groups) that leads to conflicts and the creation of alternative social norms. Darity et al. contend that the incentives for conflict relate to inequalities in material resources persistent in a society such as the United States with a racialized economic equilibrium that favors whites over other racial groups. This results in racialized individuals and racialized groups pursuing either a racialist or an individualist identity strategy.

A racialist identity strategy permits access to intragroup altruism while identifying individuals for outgroup antagonism—that is, minorities versus whites and vice versa. People working under this system have strong loyalties to their racial group and the causes of the collective membership, especially members of the oppressed racial group. Thus, sellouts are individuals from the subordinate group who reject the racialist identity strategy in favor of an individualist strategy, opting for alternative social norms for personal gain rather than for the norms and practices of racialist altruism. The sellout's actions often hinder the collective racial advancement toward the group cause.

In Latina/o communities in the United States, *Vendido/a* ("sellout"), *Tío Taco* ("Uncle Taco"), and "coconut" ("brown on the outside and white on the inside") are often used as derogatory labels for sellouts who betray their loyalties to the Latina/o group or their cause against white domination. Similarly, in Asian American communities a "banana" is a person who is said to be "yellow on the outside and white on the inside," and in American Indian communities, an "apple" is "red on the outside and white on the inside." The most articulate definition of the concept and label in the African American community is documented by Geneva Smitherman, who defines a sellout as "an African American who isn't DOWN WITH the Black cause, one who betrays the race and compromises the COMMUNITY'S principles, usually for personal gain.… By extension, anyone who GOES FOR SELF and abandons his or her group's collective mission" (Smitherman 2000, p. 200). Other referents to sellouts in the African American community include "passing" (for white) and the labels "Oreo" (the cookie, "black on the outside and white on the inside") and "Uncle Tom" (from the 1851–1852 Harriet Beecher Stowe novel *Uncle Tom's Cabin*). Studies on this topic in the field of education were originally framed under the concept of "acting white" (Fordham and Ogbu, 1986).

Assimilation and acculturation are forms of selling out on a large scale through dissociating from the cultural,

gender, class, racial, or sexual orientation norms and practices of subordinate group membership.

Besides gaining access to resources denied the subordinate group, sellouts may have a more altruistic motivation, such as a desire to work within the system for change; nevertheless, they may be accused of selling out. Others may be motivated to sell out for personal security—that is, to avoid physical and or ideological persecution by the oppressing group. Sometimes sellouts are co-opted by the dominant group to promote their agenda, then "disposed of" without receiving the expected benefits. Or they may feel guilty for abandoning their original (subordinate) group and never achieve full acceptance by the dominant group.

Luis Urrieta Jr.'s work with Chicana/o activist educators (2005) highlights the complexity of the issue of selling out, illustrating that there is more of a gray area than the "either/or" dichotomy allows. The tipping point of when people are in danger of becoming sellouts is rather arbitrary, and selling out is idiomatically understood differently in various communities, thus eluding a standardized definition.

SEE ALSO *Acting White*

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Luis Urrieta Jr.

SEMANTIC MEMORY

In 1972 the cognitive scientist Endel Tulving (b. 1927) argued that conscious recollection (i.e., declarative memory) is composed of two separate memory domains, each having distinct functionality, knowledge access, and neurological localization. Whereas *episodic memory* involves our conscious recall of past events within some specific context, *semantic memory* involves our recall of factual knowledge that is not context-dependent.

Psychologists have assessed semantic memory through a large array of tests. For example, in recalling a previously studied list of words, participants often recall groups of words in sequence (i.e., cluster) on the basis of thematic or taxonomic relations, even though the words were ordered randomly at presentation. Measures of the time required to make various forms of judgments also reflect semantic memory structure. Variation in the time required to name visually presented words, or to discriminate words from nonwords (lexical decision), reflects access to semantic information about words. Similarly, the time required to make category judgments, such as whether a robin is a bird, can be used to infer some properties of semantic memory structure.

Analyses of lexical access and category judgment tasks have led to the development of network models, which describe how the components of semantic information (e.g., concepts) are organized within semantic memory. In a hierarchical network model, for example, access to each lower-level item depends on the higher-order category (e.g., robin–bird). In contrast, other models propose that semantic memory is not organized hierarchically, though information is related to varying degrees. In these latter models, memory retrieval occurs in parallel, as a result of the activation of related information within the network. Recently, connectionist models have furthered this notion and have depicted semantic memory networks as highly distributed yet unitary systems whose multiple elements work largely in parallel.

The network and connectionist models are based on accounts of behavioral data and mathematical simulation. The question of how semantic and episodic memory abilities are represented in the brain is currently controversial. Studies of neurological patients suggest that damage to medial temporal regions of the brain can impair episodic memory while leaving semantic memory largely intact. Neuroimaging studies of healthy individuals also indicate some degree of differentiation in the pattern of brain activation occurring during episodic and semantic memory tasks, but there is also a substantial degree of overlap. Though details vary according to task demands, neuroimaging research suggests that left prefrontal regions, medial temporal regions, ventral visual processing areas, the hippocampal formation, and parts of parietal cortex can all play a role in semantic memory processing. Accessing semantic information, however, can also be a form of episodic encoding. That is, the best way to prepare for a later episodic test is to encode the meaning of the information to be remembered (as opposed to its physical structure). Typically, the left prefrontal region of the brain is implicated in both semantic retrieval and

episodic encoding, and the right prefrontal region is implicated in episodic memory retrieval. This complex network of cortical involvement reflects the growing recognition among researchers that semantic memory comprises several component processes.

SEE ALSO *Neuroeconomics*

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SEMINOLES

SEE *Osceola.*

SEMIOTICS

Toward the end of the seventeenth century John Locke (1632–1704) partly hoped for, partly prophesied, and partly proposed a new field of inquiry called "semeiotike." That "doctrine of signs," which he characterized as "aptly enough also, logic," invites the reader to "consider the nature of signs, the mind makes use of for the understanding of things, or conveying knowledge to others" (Locke [1690] 1996, p. 337). Locke's proposal was neglected until the American logician-philosopher-mathematician Charles Sanders Peirce (1839–1914) picked up its charge in his writings from1866 until his death in 1914. In keeping with what he considered the "ethics of terminology," Peirce named this effort, which he describes as "the doctrine of the essential nature and fundamental varieties of" possible sign-activity, *semeiotic* (emphasizing the diphthong *ei* in *semeion* [sign] in its spelling to indicate the word's Greek origin), though he sometimes used the term *semiotic*.

Independently of Peirce and Locke, the Swiss linguist Ferdinand de Saussure (1857–1913) determined to study the "life of signs in social life" and named his "new" science *semiology.* In contrast to Peirce's writings, his lecture notes, which were compiled and published posthumously in 1966 by his students as *Cours de Linguistic Générale*, caught the attention of several leading linguists and "signophiles" soon after his death.

NOMENCLATURE

In addition to *semiology*, *semeiotic*, and *semiotic*, there were also available the labels, *semiotics*, *significs*, and *signology*. However, the struggle for recognition was between *semiology* and *semiotics*, and *semiotics* won the day. Apart from the deliberated extension of their inquiries into extralinguistic sign systems and their choice of a label to describe their work, most self-styled semioticians were semiologists by another name and the *Cours* remained their foundational text. Among the rest, *semeiotic* and *semiotic* were to become associated with those whose research followed more or less Peircean lines. Nevertheless, there have been considerable crossovers in the use of labels and some mixing up of theoretical orientations as well. Many Peirceans use *semiotics* and non-Peirceans use *semiotic*, though the latter employ it mostly as an adjective rather than as a noun in their writings. *Semeiotic* is never used by Saussurians, and Peirceans who use that term do so to mark the difference of their approach to the sign from that of the Saussurians.

SAUSSURE AND SEMIOLOGY

A linguistic sign as defined by Saussure is a two-sided phenomenon, a relationship that links an acoustic image and a concept, or a signifier and a signified. The link is not between a thing and its name but between a sound pattern and a concept. That relationship is internal to language, internal to the mind, and independent of external reality. Therefore, a linguistic sign does not "stand for" an external world but construes it. Thus, a tree that is signified by the word *tree* is not an actual tree but the concept "tree." Similarly, a signifier does not stand for the signified but instead construes it. The signifier and the signified are "functives" that are copresent or co-occurrent, although on different strata, with the first being more abstract than the second. In their respective strata they "exist" in a context of other signifiers and signifieds, respectively. Each is held together with and held apart from the other signifieds and signifiers in their respective strata by similarities and differences; that is what makes them part of a system or structure.

Which signifier pairs with which signified is determined by convention; it is arbitrary from an empirical point of view. The external world is brought into a relationship with the internal structure by the projection of the internal structure on the external world. That logocentric view overly simplifies a being's living-in-the-world and its engagement with that world to the point of solipsism. The semiologically structured internal relationship of the signifier to the signified analogically structures, organizes, and orients sign users to the flux of percepts they receive from the external world. This is a nominalistic view of both language and the world.

There are many reasons why the semiological model of the sign—dyadic, nonmaterial and confined to a hermetically sealed system called language—came to assume paradigmatic power over semiotics generally. The foremost reason is structural: Only human beings have culture. Not all the features that constitute culture are uniquely human, but language is. What makes human language unique is *la langue*. The linguistic sign is the defining element of *la langue*. The defining feature of the linguistic sign is its binary structure, in which the elements of the dyad are held together by a relationship that is arbitrary or conventional (as opposed to natural). From this it is hypothesized that even though the uniquely human institution called culture is not identical to language, because its only assuredly human feature is language, the elementary form of culture must be structured along the lines of the elementary form of language: the linguistic or semiological sign.

PEIRCE AND SEMEIOTIC

One can find as many as eighty-eight definitions of the sign in Peirce's published and unpublished writings. Peirce defined and adjusted the definition of the sign to a range of contexts, a short list of which includes mathematics, logic, philosophy, pendulum experiments, chemistry, psychology, language, history, realism-nominalism debates, scholasticism, metaphysics, theories of mind, and discussions of truth. He often bent his definitions for the benefit of his interlocutors and correspondents' comprehension.

Peirce had a pansemeiosic view of the world. The sign easily transgressed such dichotomies as mind-body, nature-culture, human-animal, internal-external, and matter-spirit. For Peirce the universe is "perfused with signs." He considered thought as semeiosic sign activity but "not necessarily connected with a brain. It appears in the work of bees, of crystals, and throughout the purely physical world." He claimed that "not only is thought in the organic world, but it develops there," granting that "signs must have a Quasi-mind." His belief that "there can be no isolated sign" was frustrated by demands for a definition of the sign, for he considered a sign only as part of a semeiotic process (Peirce 1934, vol. 4, para. 551; vol. 5, para. 448).

Peirce held that even "a person is not absolutely an individual" but a state of consciousness. Every state of consciousness was an inference for Peirce, and therefore life itself was a sequence of inferences or a train of thought. "At any instant then man is a thought." Moreover, if consciousness is taken to mean thought, he reminds the reader that thought "is more without us than within. It is we that are in it, rather than it in any of us." Here Peirce anticipates Michel Foucault's idea of episteme and discourse as well as his critique of the overrating of "agency" by modern individualism. Man's "thoughts are what he is 'saying to himself,' that is, saying to the other self that is just coming into life in the flow of time. When one reasons, it is that critical self that one is trying to persuade." Human "thought," he opined, was a sign, "mostly of the nature of language." Given that language is by and large constituted of symbols, and that "at any instant … man is a thought, and … thought is a species of symbol, the general answer to the question what is man? is that he is a symbol" (Peirce 1934, vol. 5, para. 421; 1958, vol. 7, para 583; 1958, vol. 8, para. 256).

DIFFERENCES BETWEEN SAUSSURE AND PEIRCE

There are many differences between Saussure's and Peirce's concepts of the sign. The Saussurian sign is dyadic, originating in linguistics, whereas the semeiosic sign is irreducibly triadic and based on logic. Also, logic as semeiotic is a normative or formal science, in contrast to the empirical sciences such as linguistics and psychology, which Peirce classified as special sciences. As a formal science, semeiotic is concerned with the necessary conditions for what makes something a sign as such, the bases on which to determine its truth, and the conditions that are required for the communication and growth of signs.

Peirce derived the proof for the sign's triadicity from logic, mathematics, and phenomenology. With a certain amount of familiarity with a number of his scattered definitions of the semeiosic sign, one can begin to appreciate the complexity of the sign and the work it does. In the triadic sign, the first thing to know is that the first correlate of the triad is the sign (at times called the representamen), the second correlate is the object, and the third is the interpretant. Thus, the semeiosic *Sign* (uppercase) is constituted by an irreducible triadic correlation in which a *sign* (lowercase) stands for an *object* to an *interpretant*. The sign as the conveyer of meaning mediates between the object and the interpretant; the interpretant mediates between the sign and the object to interpret the meaning; the object mediates between the interpretant and the sign to ground the meaning. If any one of the three correlates is removed, the Sign as such will not be an actual Sign but merely a potential Sign.

Despite his numerous attempts to fix the sign in a definition, Peirce's fundamental conception of semeiotic was the process of "sign-ing" or semiosy rather than the sign per se. This is evident in the following definition: "The *sign* is anything which determines something else (its *interpretant*) to refer to an object to which itself refers (its *object*) in the same way, the *interpretant* becoming a *sign* in turn, and so on *ad infinitum*" (Peirce 1934, vol. 2, para. 303). When defined in this way, the sign brings out the open and dynamic nature of sign activity or semiosy.

Semiosy is the very life of the sign. When semiosy ceases, the sign either dies or goes into hibernation until an interpretant-sign predisposed to receiving its representation of the object arrives. Thus, a potsherd from an antique goblet would "hibernate" until a knowledgeable archaeologist found it, realized it, and represented it as a sign of an antique goblet to a student. The student would, as the next interpretant-sign along the chain of revivified semeiosis who was fit to receive (by training) the representation, then translate and communicate the meaning of the represented object to yet another interpretant-sign (that student's own students, say) even as the professor's representation of the potsherd as representing the original goblet was communicated to the original student. And then the represented object will be represented to someone else, that is, yet another interpretant, ad infinitum. The very structure of the semeiotic sign establishes it as fundamentally and minimally dialogic.

At the most abstract level there are three types of interpretants: the immediate, the dynamic, and the final. Peirce describes the immediate interpretant as the immediate pertinent possible effect in its unanalyzed primitive entirety (Robin 1967). A dynamic interpretant is the actual manifestation of a significant effect. A final interpretant is the teleological growth of a sign that makes its home an interrelated system of signs. The three interpretants that correspond in human experience to these abstract interpretants are the emotional, the energetic, and the logical interpretants. The feeling of déjà vu would be an example of an emotional interpretant; the bodily reaction of a person at whom the command "halt!" is barked out by a soldier after the declaration of a curfew would be an example of an energetic interpretant; the habitualized mode of conditional reasoning such as "if the light turns red, I will not cross the road" would be a logical interpretant. The dynamic interpretant does not possess meaning but is a brute reaction; neither does an emotional interpretant that remains at the level of a mere feeling before being put into words have meaning. A logical interpretant is meaningful. The path a river takes is a final interpretant: a habit carved into the earth. There are many other triadic sets of sign types and other triadic phenomena in Peirce's writings. They are generated by the logic of Peirce's phenomenological categories of Firstness, Secondness, and Thirdness; the possible, the actual, and the general, or "mood, the moment, and mind," respectively (Daniel 1996, pp. 104–134).

SEE ALSO *Anthropology, Linguistic; Culture; Foucault, Michel; Linguistic Turn; Logic; Symbols*

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E. Valentine Daniel

SEMIPARAMETRIC ESTIMATION

Econometrics and other statistical sciences deal with the estimation of various functions (models) such as conditional density function, regression function (conditional mean), heteroskedasticity function (conditional variance), and auto-covariance function (conditional covariance). For empirical research, economic theory suggests the types of variables that can be used in these models under consideration, but often it does not provide the functional form of these models. In view of this, empirical and theoretical work in econometrics is usually done by assuming linear or nonlinear parametric functional forms of these models (see Hartley 1961 and Gallant 1987). However, these parametric models may be false and may therefore provide biased and misleading estimates and inferences. In view of this, econometrics moved in the direction of data-based local modeling for studying these econometric models of unknown functional forms. This approach is also called the "nonparametric (NP) method" or "NP smoothing." There are various NP methods, including spline methods, series methods, differencing methods,

and neural-network methods, but the NP kernel smoothing method has become particularly popular because of its vast applicability, its simplicity, and its well-developed theoretical results. NP kernel methods involve local averaging; for example, a consistent estimate of the regression model is obtained by locally averaging those values of the dependent variable that are "close" in terms of the values taken on by the regressors, and these are determined by a "window width." The NP kernel estimation procedure was developed in the seminal works of Murray Rosenblatt (1956), Elisbar Nadaraya (1964), and Geoffrey Watson (1964). (See also Fan and Gijbels 1996 and Pagan and Ullah 1999 for a detailed development on this subject.)

A major complication in a purely NP method is the "curse of dimensionality." The cost associated with using the NP method is the need for very large data, especially when the number of variables in the model is large, if an efficient measurement of the model is to be made. This problem leads to the idea that one might try to restrict some variables, say in a regression model, to have a linear parametric impact while allowing others to have an unknown functional form. As an example, in the female wage model the wage is considered as being linearly affected by the females' personal characteristics, but the variable, the number of years of job experience, can be of an unknown functional form. Effectively, estimation involves a combination of parametric and NP methods, leading to the estimators being described as semiparametric (SP). In general, SP models contain both parametric and NP models, and over the years, a large class of SP models have appeared in the econometrics literature (see Robinson 1988; Linton 1995; and Pagan and Ullah 1999).

Suppose one wanted to estimate the function g in the regression function

$$y_i = g(x_i) + u_i,\ i = 1, \ldots, n \qquad (1)$$

where y_i is the dependent variable, x_i is a vector of q regressors, and u_i is an additive error. A parametric approach fits the data to a parametric model $g(x_i) = g(x_i, \theta)$, often a linear model with $g(x_i, \theta) = \alpha + x_i\beta$, where θ is a parameter set of the model. The least squares estimator $\hat{\theta}$ is obtained by minimizing

$$\sum_{i=1}^{n} [y_i - g(x_i - \theta)]^2 \qquad (2)$$

over θ, and this estimator is consistent and asymptotically normally distributed (see Gallant 1987). In the NP estimation method, first the regression function $g(x_i)$ is considered as a local polynomial regression, say linear, as $y_i = \alpha(x) + (x_i - x)\beta(x) + u_i$ for x_i in $x \pm h/2$. Then the NP local linear regression estimation method leads to the following weighted squared loss minimization

$$min \sum_{i=1}^{n} (y_i - \alpha(x) - (x_i - x)\beta(x))^2 K\left(\frac{x_i - x}{h}\right) \qquad (3)$$

where $K(\cdot)$, a nonnegative weight (kernel) function, is a decreasing function of distances of x_i from the point x, and h is a window width that determines how rapidly the weights decrease as the distance of x_i from x increases (see Pagan and Ullah 1999).

The SP estimation method deals with the SP models where one component is parametric and the other is NP. A popular SP model is $g(x_i, \theta) = x_{i1}\beta + g(x_{i2})$, where x_{i1} and x_{i2} are q_1 and $q_2 (q = q_1 + q_2)$ sets of variables and the model is linear in x_{i1} but the functional form in x_{i2} is unknown. The SP estimation of β involves the parametric least squares estimation of β in the regression of y_i^* on x_i^*, where $y_i^* = y_i - E(y_i|x_{i2})$ and $x_{i1}^* = x_{i1} - E(x_{i1}|x_{i2})$ are generated by first estimating the conditional means appearing in them by the NP method. Another SP model arises where $g(x_i, \theta)$ is taken to be a known parametric model and where the distribution function of the error u is unknown and not assumed to be normal. In this case, the SP estimation of θ is done by writing the likelihood function of the model under the density specified by its NP kernel estimator. The efficiency properties of these estimators have been extensively studied (see Robinson 1988; Bickel, Klaassen, Ritov, and Wellner 1992; and Pagan and Ullah 1999). Other SP models' estimation includes the situations where $g(x_i, \theta) = x_i\beta$, but $V(u_i|x_i) = \sigma^2(x_i)$ or the serial correlation in u_i is of unknown form. In addition, there is an extensive class of applied SP models with limited dependent variables (see Linton 1995; Horowitz and Lee 2002; and Pagan and Ullah 1999).

Extensive work on the empirical applications of SP models has begun to appear in both cross-section and time-series econometrics, especially in labor econometrics and financial econometrics. Although some related work is being done, several challenging research issues remain. The first is the development of a unified approach toward a data-driven window width and the development of user-friendly software. Others include the systematic development of work on SP estimation of panel-data models, especially when the time-series component is nonstationary, and the development of the theory of SP estimation of models with both continuous and discrete variables (see Racine and Li 2004).

The SP estimation method is a fast-growing area of research in econometrics and statistics. With advances in computer technology the applications of the SP approach are rapidly increasing. In a wide sense, the frontier of this research area has moved on, and it is expected to continue growing in both theory and applications.

SEE ALSO *Nonparametric Estimation; Parameters*

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Aman Ullah

SEN, AMARTYA KUMAR
1933–

Amartya Kumar Sen was born November 3, 1933, in Santiniketan, India. He is a central figure in modern welfare economics, social choice, and development economics. Equal parts philosopher and economist, Sen is unique among modern economists in insisting on the centrality of values and ethics. His most influential works include theoretical contributions to social choice theory, theories of inequality, and the mechanisms underlying poverty.

Sen's early arguments questioned the foundational assumptions of the mainstream approach to social welfare analysis. In 1970, two seminal works greatly expanded social choice theory (the study of the aggregation of individual preferences to form a collective choice). In *Collective Choice and Social Welfare*, Sen showed that Arrow's impossibility theorem (the idea that no voting system meets a desired set of criteria when there are three or more choices) collapses once interpersonal comparisons are allowed. He also established the feasibility of several approaches to constructive social decisions. In "The Impossibility of a Paretian Liberal," he showed that the critical assumption of pareto optimality (an allocation of resources in which no one can be made better off without making someone else worse off) is not value-neutral, as previously supposed. Instead, it conflicts with other fundamental liberal norms, particularly the importance of liberty in the personal domain. Later, in "Rational Fools" (1977), he contested the narrow behavioral assumption that rationality is interchangeable with self-interest, showing it to be an inadequate characterization of human motivation.

These advances in social choice theory allowed for the construction of several non-paretian criteria for social welfare functions. Sen's own explorations (with various authors) were in the areas of inequality, poverty, and distribution-adjusted national income measures. In his explorations of distributive justice and poverty, Sen developed the use of entitlement analysis and the capability approach to development. In *Poverty and Famines* (1981), he presented a theory of famine causation that concentrated on a collapse of people's entitlements (the commodities that different persons can acquire), and he investigated different economic processes that can lead to famines, arguing that they need not necessarily connect with a low or decreasing food supply. He illustrated this theory with detailed case studies of many actual famines, including the Bengal famine of 1943 and the Ethiopian famine of 1973 and 1974.

For Sen, development is seen as the expansion of capabilities and associated human functionings. *Capabilities* are the constituent elements of development, comprising wide-ranging substantive freedoms such as the ability to feed oneself or to participate in economic and political activities. *Functionings* are the actual things humans may wish to do or be. Poverty, therefore, is not simply the deprivation of income, but a deprivation in capabilities.

The growth of additional practical indicators of social welfare and advances in understanding capabilities contributed to alternative methodologies to evaluate development. A direct result of this was the genesis of the United Nations' *Human Development Report*. Sen has also been at the forefront of incorporating discussion of gender inequalities and the role of women in development. In "Missing Women" (1992), he addressed the role of gender

inequalities in mortality in parts of the developing world. This was supplemented by a 2003 study of the new phenomenon of selective abortion of female fetuses.

Sen has taught in India, the United Kingdom, and the United States, and he is the recipient of numerous awards, including the 1998 Nobel Prize in Economics.

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Arjun Jayadev

SENECA

The Senecas are an American Indian group from northeastern North America. One of the six nations of the Iroquois Confederacy, or Haudenosaunee, Senecas call themselves Onodowaga, meaning "People of the Great Hill." Traditional Senecas determine group membership matrilineally (through the mother's line) and speak a language in the Northern Iroquoian language family. It is likely that several previously autonomous groups coalesced to form the Seneca nation in the fifteenth or sixteenth century, prior to Seneca entry into the Iroquois Confederacy. Seneca material culture begins to correspond closely to that found on eastern Iroquois sites slightly after 1600, perhaps reflecting Seneca participation in the Iroquois Confederacy. When first documented by Europeans, Seneca territory stretched across what is now western New York State from the Genesee River to Seneca Lake; the approximately four thousand Senecas subsisted through agriculture (primarily of maize, beans, and squash), hunting, fishing, and gathering.

Seneca life was altered tremendously by the European fur trade, interaction with European colonial powers, and American territorial encroachment. Senecas began trading beaver pelts for European manufactured goods during the sixteenth century, initially using Native intermediaries. Starting in the 1630s, recurrent European-borne epidemics had major impacts on Seneca communities. Jesuit missionaries resided with the Senecas intermittently from 1668 to 1709. Seneca warriors featured prominently in Iroquois conflicts with the Hurons, Eries, Neutrals, and Susquehannocks from the 1630s through the 1670s. During the seventeenth and eighteenth centuries, Senecas also established satellite communities north of Lake Ontario, at the Niagara portage, and in Pennsylvania and Ohio.

After 1680 the Confederacy and the Senecas increasingly became enmeshed in imperial politics. French forces destroyed all four homeland Seneca villages in 1687. After 1701 Senecas and other Iroquois established a policy of neutrality between European powers, receiving diplomatic benefits by playing European groups off one another. Senecas built smaller, dispersed villages across the region and began producing deerskins for trade with Europeans after 1715. Following the 1760 surrender of New France to Great Britain, Seneca opportunities for diplomatic maneuvering diminished. Western Senecas were key players in the multinational Indian revolt against the British from 1763 to 1766. During the American Revolution (1775–1783), the Senecas sided with Great Britain. American expeditions led by John Sullivan (1740–1795) and Daniel Brodhead (1736-1809) razed approximately thirty Seneca villages in 1779; Seneca survivors spent a difficult winter at Fort Niagara under British protection. Many Senecas subsequently reoccupied their homelands, while others founded new settlements, most notably Buffalo Creek.

From the Revolution to the present day, Senecas have faced major pressures on their lands, resources, and culture from the United States. A series of controversial

treaties and agreements, starting with the Treaty of Fort Stanwix in 1784, divided Senecas and confined them to smaller and smaller reservations. A fraudulent 1838 treaty almost transferred the four remaining Seneca reservations to the Ogden Land Company; a renegotiated 1842 treaty still resulted in the loss of the Buffalo Creek reservation. Following passage of the U.S. Indian Removal Act of 1830, Senecas living in Ohio negotiated exchange of their lands for territory in what is now Oklahoma; their descendants officially formed the Seneca-Cayuga Tribe of Oklahoma in 1937.

Christian missionaries became fixtures on Seneca reservations in the 1790s. In 1799 an Allegany Seneca named Handsome Lake (c. 1735–1815) received visions for a new religious code that reconciled Iroquois traditions with the limitations of reservation life. His teachings (the Gaiwiio) eventually spread to other Iroquois communities. In 1848 Senecas at Cattaraugus and Allegany replaced their traditional government with an American-style elective council; Tonawanda Senecas maintained traditional governance, ending political ties between the groups. The Thomas Indian School, a state-run boarding school promoting Indian assimilation, operated at Cattaraugus from 1855 to 1957. From 1959 to 1964 federal officials took one-third of the Allegany reservation for the construction of the Kinzua Reservoir, forcing relocation of 550 people.

Senecas long have fought American encroachments on their territory and rights. Some efforts have succeeded, including the 1990 renegotiation of non-Indian leases of Seneca property in Salamanca, New York, and the 2002 compact between New York State and the Seneca Nation of Indians that allowed casino development in Salamanca, Niagara Falls, and Buffalo. Other efforts, such as the Seneca claim for Grand Island, have been rejected by American courts. Today, approximately 10,000 Senecas reside in several jurisdictions across the United States and Canada. In New York State, the Seneca Nation of Indians controls territories at Allegany, Cattaraugus, and Oil Spring; the Tonawanda Band of Seneca Indians have a separate reservation. Senecas also reside in Oklahoma and on the Six Nations Reserve in Ontario, Canada. Many other Senecas live off reservations, particularly in Buffalo, Rochester, and Erie.

SEE ALSO *American Revolution; Iroquois; Native Americans; Tribe*

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Kurt A. Jordan

SENECA FALLS

SEE *Suffrage, Women's.*

SENILITY

SEE *Dementia.*

SENSATIONALISM

Certain events, even when reported accurately and without exaggeration, elicit intense reactions. Some such sensational stories—illustrated by O. J. Simpson standing trial in 1995 for a double homicide and R. Gordon Wasson's description in 1957 of an ancient religious ritual in which psychedelic mushrooms were eaten—are justifiable given the novelty of the phenomena described. Reports tainted by fraud or disregard for truth deserve censure.

Fraudulent reports are often sensational. For example, a *Washington Post* reporter, Janet Cooke, won a Pulitzer Prize in April 1981 for her tall tale about "Jimmy," an eight-year-old boy allegedly addicted to heroin since age five. Cooke's story aroused considerable pity among readers. Washington, D.C., Mayor Marion Barry and other city officials promptly started searching for Jimmy, the innocent victim of a heroin dealer. Before Cooke's fabricated story was published in the *Post* on September 28, 1980, Cooke lied to enlist her editors' sympathy, claiming she could not reveal her "sources" because she "promised them anonymity and her life was threatened by the drug pushers involved" (Stein 1993, p. 130). Cooke's credibility was shattered after autobiographical information she supplied to the Pulitzer Prize committee was released—and was proven to be false. *Washington Post* editors subsequently scrutinized some 145 pages of notes and tape-recorded interviews but discovered no evidence that "she actually interviewed a heroin-addicted child" (Stein 1993, p. 131). Cooke confessed and resigned, at the

Post's request. The Pulitzer Prize was returned, for the first time in its sixty-four-year history.

Mayor Barry, the Pulitzer Prize committee, and Cooke's colleagues were blinded by their pity for an innocent child, combined perhaps with anger at his mother and the drug dealers blamed for having addicted them. Cooke feigned fear to circumvent her editors' request that she identify Jimmy and other "sources" for her then unpublished story.

Pity, fear, and anger—powerful emotions Cooke exploited to sell her story—are integral to pathos, an emotionally oriented persuasive device discussed in Aristotle's *Rhetoric*. The Greek word *pathos* is the root of the English word "pathetic," a term whose negative connotations imply unjustifiable sensationalism.

Sensational stories often are written by reporters afflicted with excessive pathos, usually arousing the same emotions in their audience that interfered with their own capacity for critical thinking. The "yellow journalism" of William Randolph Hearst and Joseph Pulitzer is a famous example. Their newspapers' coverage of Cuban-Spanish conflicts between 1895 and 1898 routinely exaggerated the suffering of Cuban rebels in order to arouse pity for them and anger at allegedly tyrannical Spaniards. Anti-Spanish media propaganda involved some deceit, as well as outrageous yet unverified reports, as when the American battleship *Maine* exploded and sank in Havana harbor in 1898. Many reporters, especially Hearst employees, rushed to judgment, proclaiming that Spain had mined the *Maine*, killing 260 Americans. Most historians agree that America's decision to wage war against Spain was partly the result of such careless reporting. Research conducted in the 1970s concluded that an accident caused the *Maine*'s destruction.

Pathos-driven accounts of breast implants in the 1990s illustrate irresponsible sensationalism without intentional deceit. The journalist John Stossel has explained how and why victims' anecdotes alleging that silicone breast implants caused cancer and autoimmune disease became fashionable during the 1990s. Scientific facts and evidence were ignored because "the women's fear and anger were palpable" (Stossel 2004, p. 105). According to doctors, about 1 percent of all women who had breast implants had connective tissue disease. Most reporters saw that as proof of causality, ignoring the fact that 1 percent of all women who had not had transplants also got that disease (Stossel 2004, p. 106). If silicone implants truly cause connective tissue disease, then the percentage of women afflicted by that disease would be significantly higher than the percentage of women who never had breast implants. Media hysteria prompted a federal prohibition on silicone breast implants from 1992 to 2006, unless prescribed for reconstructive surgery following mastectomy.

Anthropologists have been implicated in scandals after publishing controversial claims before diligently attempting to verify their facts. Ashley Montagu, commenting on the anthropologist Robert Zingg's acceptance of unverified claims about two feral "wolf-children" allegedly found inside a den near a village in India, warned that "no scientist can accept as true any statement … until it has been independently confirmed by others" (quoted in Zingg 2004, p. 233). Zingg's startling book, *Wolf-Children and Feral Man* (1942), was abhorrent to most social scientists, for whom verification is indispensable to achieving the primary purpose of scientific research: accumulating accurate information.

Margaret Mead's sensational declaration that Samoan teenagers enjoyed premarital sexual freedom was welcomed by most social scientists eager for evidence that nurture rather than nature produced adolescent stress. Mead's book *Coming of Age in Samoa* (1928) was, by the 1960s, the most widely read of all anthropology books (Freeman 1996, p. 105). Mead's seductive story about Samoan sexuality became indefensible after one of her adolescent female informants confessed in 1987 to Derek Freeman (1996, p. viii) that she and a friend had gleefully concocted anecdotes implying that premarital sex was standard Samoan practice. Mead erred by rushing to endorse—and publish—those hoaxers' accounts, even though, as Freeman notes, her own research data indicated that at least 60 percent of the adolescent females in her sample were virgins.

More infamous anthropological examples of sensationalism involve outright deception For forty years Piltdown Man, excavated near Sussex, England, was celebrated as the "missing link"; proof that humans evolved from apes. In 1953, scientific tests showed that this six-hundred-year-old skull was spurious; a new orangutan jaw and teeth had been cleverly filed and attached to the human skull. For financial gain, in 1971 Manuel Elizalde fabricated the Tasaday tribe, an allegedly "Stone-Age" people surviving in the Philippines. Carlos Castaneda's claim, that he was the apprentice of a Yaqui Indian sorcerer, made him a best-selling author and a doctor in anthropology before he was denounced as a hoaxer. Whatever these tricksters' motives, they intended to benefit by using deception to persuade people that their astonishing allegations were true.

Preventing or reducing the number of reports that are concocted (e.g., Elizalde, Castaneda) or careless (e.g., Zingg, Mead) probably requires both the enforcement of harsher professional penalties for such malpractice and increasing the rewards for researchers (debunkers) whose critical thinking and adherence to high scholarly standards

advance social scientific knowledge. Deterring journalists from publishing stories infected with unjustified sensationalism, however, will be difficult given America's deep commitment to freedom of the press and the media's imperative to sell news. Readers need skepticism and intellectual ability to identify unjustified sensationalism and unverified stories, distinguishing those from honest, verified, and important news or scholarly reports.

SEE ALSO *Castaneda, Carlos; Drug Traffic; Journalism; Mead, Margaret; Propaganda*

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Jay Courtney Fikes

SENTIENCE

SEE *Consciousness*.

SEPARABILITY

Separability is a pivotal economic concept introduced independently by Masazo Sono (1945) and Wassily Leontief (1947) in order to deal with aggregation problems in both utility and production theory. Specifically, this concept was employed by Robert Strotz (1957) to analyze two-stage optimization in utility theory: Given separability, the first stage involves partitioning commodities into subsets and optimizing intensities within each subset. While holding the within-subset intensities fixed, the between-subset intensities are optimized in the second stage.

In formal terms, Leontief and Sono defined two factors i and j to be *separable* from factor k if and only if

$$\frac{\partial}{\partial p_k}\left(\frac{\dfrac{\partial C(Y, p_1, \ldots, p_n)}{\partial p_i}}{\dfrac{\partial C(Y, p_1, \ldots, p_n)}{\partial p_j}}\right) = 0 \iff \frac{\partial^2 C}{\partial p_i \partial p_k}\frac{\partial C}{\partial p_j} - \frac{\partial^2 C}{\partial p_j \partial p_k}\frac{\partial C}{\partial p_i} = 0, \quad (1)$$

where $C(Y, p_1, p_2, \ldots, p_n)$ is a twice differentiable cost function with nonvanishing first and second partial derivatives with respect to input prices $p_1, \ldots, p_n$ (Blackorby and Russell 1976, p. 286). A similar definition also applies to any twice differentiable production function $F(x_1, x_2, \ldots, x_n)$ (see, e.g., Berndt and Christensen 1973, p. 404).

For aggregation purposes, the economic literature commonly distinguishes *strong* from *weak* separability, a terminology coined by Strotz (1957). A cost function $C(Y, p_1, p_2, \ldots, p_n)$ or a production function $F(x_1, x_2, \ldots, x_n)$ is said to be *weakly separable* if condition (1) holds for all $i \in N_s$, $j \in N_s$, and $k \notin N_s$, where N_s is a subset of the set of input factors $N = \{1, 2, \ldots, n\}$. Accordingly, cost function is said to be strongly separable if condition (1) holds for all $i \in N_s$, $j \in N_t$, and $k \notin N_s \cup N_t$, where N_t is another subset of N.

Steven Goldman and Hirofumi Uzawa (1964) prove that weak and strong separability impose specific restrictions on the underlying cost and production functions. Weak separability with respect to any partition R of r mutually exclusive and exhaustive subsets $N_1, N_2, \ldots, N_r$ is necessary and sufficient for a production function to be of the form $F(X_1, X_2, \ldots, X_r)$, where the aggregate X_s is a function of only the elements of N_s. Similarly, strong separability implies that the production function is of the form $F(X_1 + X_2 + \ldots + X_r)$.

In empirical applications it is often indispensable to invoke separability assumptions if data on some production factors are lacking. For instance, numerous empirical studies investigating the substitutability of capital (K) and labor (L) have assumed that both inputs are weakly separable from energy (E) and materials (M), implying the so-called "value-added" specification of production technologies, $F(V = G(K, L), E, M)$. This assumption, it is commonly asserted, allows for focusing on the capital-labor aggregate $V = G(K, L)$ when estimating the degree of substitution between capital and labor, whereas energy and materials inputs can be safely ignored (Berndt and Wood 1975, p. 265).

This example illustrates that the concept of separability is intimately associated with the notion of substitutability of production factors and consumer goods (see, e.g., Berndt and Christensen 1973 and Blackorby and

Russell 1976). The natural intuition about the separability of a nonnegligible production factor, such as energy after the oil crises, from all other factors is that the substitution elasticity estimates of nonenergy inputs remain the same, irrespective of whether energy is included in any substitution analysis (Hamermesh 1993, p. 34).

This intuition, however, does not apply to the typically employed substitution measures, such as the Allen and Morishima elasticities of substitution, or cross-price elasticities, because the classical Leontief-Sono condition (1) only implies that the *input proportion* x_i/x_j remains unaffected by changes in the price p_k of factor k:

$$\frac{\partial}{\partial p_k}\left(\frac{x_i(p_1, p_2, \ldots, p_n)}{x_j(p_1, p_2, \ldots, p_n)}\right) = 0, \qquad (2)$$

where Shephard's Lemma $\frac{\partial C}{\partial p_i} = x_i$, has been inserted into condition (1). When replacing the cost function by its dual production function $F(x_1, x_2, \ldots, x_n)$, the primal analogon of condition (1) suggests that the *marginal rate of substitution* between any two 2 inputs i and j, $\frac{\partial F(x_1, x_2, \ldots, x_n)}{\partial x_i} \Big/ \frac{\partial F(x_1, x_2, \ldots, x_n)}{\partial x_j}$, is independent from the input x_k of factor k (Berndt and Christensen 1973, p. 404).

Yet, virtually no empirical study measures the ease of substitution between i and j in terms of either their input proportion or their marginal rate of substitution. Manuel Frondel and Christoph Schmidt (2004) therefore suggest an empirically oriented definition of separability that guarantees the invariance of cross-price elasticities $\eta_{x_i p_j} := \frac{\partial \ln x_i}{\partial \ln p_j}$ and $\eta_{x_j p_i} := \frac{\partial \ln x_j}{\partial \ln p_i}$ due to changes in the price p_k:

$$\frac{\partial}{\partial p_k}\eta_{x_i p_j} = 0 \qquad \text{and} \qquad \frac{\partial}{\partial p_k}\eta_{x_j p_i} = 0. \qquad (3)$$

It can be shown that this definition represents a stronger requirement than the classical Leontief-Sono separability condition (1). In other words, the Leontief-Sono condition (1) is necessary, but not sufficient, for the separability definition (3) to hold (Frondel and Schmidt 2004, p. 221). Frondel and Schmidt (2004, p. 220) argue, however, that only these stronger conditions capture a separability notion coming close to Hamermesh's (1993) intuition.

SEE ALSO *Elasticity; Leontief, Wassily; Optimizing Behavior; Production Function; Utility Function; Uzawa, Hirofumi*

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Manuel Frondel
Christoph M. Schmidt

SEPARATE-BUT-EQUAL

During the post–Reconstruction era, southern states passed laws reestablishing white advantages and privilege by reviving pre–Civil War practices requiring blacks and whites to attend separate schools, ride in separate train cars, and sit in separate sections of theaters. Soon after the Interstate Commerce Commission (ICC) was created in 1887, it received complaints from blacks who had purchased first-class train tickets but were forced to ride in less comfortable dirty train cars reserved for blacks only. In response, the ICC ruled that in trains under its jurisdiction, if racial segregation was practiced, then equal-quality cars must be provided for "white" and "colored" races. Louisiana (and other southern states) then passed laws stipulating that "all railway companies carrying passengers in their coaches in this State shall provide equal but separate accommodations for the white and colored races, by providing two or more passenger coaches for

each passenger train, or by dividing the passenger coaches by a partition so as to secure separate accommodations.… No person or persons shall be admitted to occupy seats in coaches other than the ones assigned to them on account of the race they belong to."

In a U.S. Supreme Court case of tremendous importance, *Plessy v. Ferguson* (1896), Homer Plessy, a black man, challenged that Louisiana law. He argued that determining where people should sit based solely on their race was an unconstitutional violation of citizens' rights; for example, the Fourteenth Amendment prohibits laws that abridge the privileges or immunities of U.S. citizens or deny people equal protection of the laws. The Supreme Court's decision, however, rejected Plessy's claim, and, for the next sixty years, its ruling that "separate-but-equal" segregation is permissible and not harmful was the foundation on which racial segregation was legitimated.

Plessy v. Ferguson's doctrine of "separate-but-equal" racial segregation rested on three closely related arguments, each of which was later challenged by civil rights proponents. First, the Court argued that the Fourteenth Amendment only guarantees that blacks and whites have equality with regard to political rights (e.g., to vote or hold office) and legal rights (e.g., to serve on juries, to own property), not with regard to social rights or social equality. Second, *Plessy v. Ferguson* asserted that state governments had the right to permit or require racial separation provided that the segregation laws are "reasonable" and "enacted in good faith for promotion for the public good, and not for the annoyance or oppression of a particular class." Third, this "separate-but-equal" doctrine contended that enforced separation of the races did *not* stamp the colored race "with a badge of inferiority." Instead *Plessy v. Ferguson* claimed that if the two races are socially unequal, this inequality is the result of "racial instincts" that either put one group lower than the other or cause people to believe they are superior or inferior, and the Court held that altering either of these is beyond the power of legislation or judicial decision-making—that is, that "natural" inequalities and prejudices linked to race can not be overcome by government-required commingling of the two races.

What is evident in *Plessy v. Ferguson*'s "separate-but-equal" doctrine is the absence of a serious concern about whether the separate facilities assigned to "white" and "colored" races really were of equal quality. Nowhere in the Court's decision is there mention of any test to be used to judge whether the separate facilities are in fact equal, nor is there a clear statement directing those in authority to provide equal facilities to both races. In fact, shortly after *Plessy v. Ferguson*, the Supreme Court ruled on whether a board of education in Georgia was required to provide a high school for blacks since they did so for whites. The Court ruled that the school board did not have to do so, and this decision (*Cumming v. Richmond County Board of Education*, 1899) became a precedent for providing "separate and unequal" facilities to blacks.

CONSEQUENCES

The legacy of "separate but (un)equal" was that white-dominated state and local governments created and institutionalized a gulf or color line in public life separating blacks and whites. W. E. B. Du Bois, in the early 1900s, called this color line "the problem of the 20th century" (Du Bois 1901). Gross inequities were permitted under the guise of "separate but equal." In health care, hospitals and doctors in the North and South routinely refused to treat blacks in need of medical attention, and black medical students were denied training and internship experience in "white" hospitals. In education, southern states in the 1930s spent for blacks' education less than one-third what they spent for whites. Residential neighborhoods and housing policies were organized to exclude blacks from the better areas and prevent them from living among whites, for example, by racial zoning ordinances, racially restrictive covenants, discriminatory mortgage lending, and outright refusal to rent apartments or sell homes to blacks. Atlanta blacks comprised one-third of the city's population but resided on less than 20 percent of its land—the most overcrowded and run-down areas. Residential segregation was not just a southern phenomenon; in the 1940s and 1950s many northern cities, including Chicago, Cleveland, and Detroit, were among the most highly segregated cities (and remained so in the mid-2000s).

Perhaps the most visible consequence of the "separate but (un)equal" color line was the demarcation of "white" and "colored" public spaces in parks, beaches, movie theaters, sports stadiums, restaurants, buses and transit waiting rooms, restrooms, and water fountains. People of color who transgressed the color line by using a facility reserved for whites were frequently arrested, jailed, physically beaten, or killed by the police or by secretive groups of whites who took it upon themselves to guard racial boundaries.

Another consequence of racial segregation imposed by the "separate but (un)equal" doctrine was the development of notable African American communities in most large U.S. cities. As migrating blacks were forced into a few neighborhoods, their growing numbers and initiatives for survival and success expanded many black institutions that would greatly influence local (sometimes national) cultural, social, economic, and political life. Amid squalor and poverty in these African American districts arose successful banks and businesses, vibrant churches, innovative music and arts scenes, active social and labor groups, and

organizations devoted to racial solidarity, uplift, and the struggle against racism. In well-known black communities, such as New York's Harlem, and in less well-known ones, the broadened social-class structure, the accumulation of resources, and development of leadership gradually stimulated a movement that would challenge and defeat state-sponsored racial segregation.

Although the "separate but (un)equal" doctrine originated from whites' racial prejudices, once institutionalized it nurtured and amplified racial prejudices, mainly in two ways. First, by denying blacks opportunities for good education, jobs, homes, medical care, and social dignity, it forced many into impoverishment and desperation, and many whites interpreted behavioral symptoms associated with this as a sign of black inferiority. Second, isolating blacks from whites prevented the kind of social interaction that can dispel prejudice, that is, equal-status intergroup cooperation toward common goals, which reveals personal information that disconfirms common negative stereotypes.

OVERTURNING "SEPARATE BUT (UN)EQUAL"

In a limited sense the *Brown v. Topeka Board of Education* (1954) decision overturned the "separate but (un)equal" doctrine. It dealt with de jure segregation in public schools, in which governmental agents (school boards) required blacks and whites to attend different schools. The Court ruled this an unconstitutional violation of blacks' Fourteenth Amendment rights because it "has a detrimental effect upon the colored children" in that it suggests an inferiority among blacks that weakens their motivation to learn and negatively affects their hearts and minds, thereby depriving them of equal educational opportunity. Because of delaying tactics by many state and local officials, little racial integration occurred in schools for ten years. In truth, the *Brown* decision was the tip of the iceberg that punctured the "separate but (un)equal" doctrine. It was based on prior precedent-setting lawsuits by the National Association for the Advancement of Colored People (NAACP) that challenged racial segregation and on the dissemination of psychological and sociological research on the negative effects of racial segregation. Finally, and perhaps most importantly, victory against segregation beyond the schools was the product of social activism and pressure created by public protests, boycotts, and disruptions of the status quo (including the Montgomery bus boycott, sit-ins, and riots after the assassination of Dr. Martin Luther King Jr.) that forced many authorities to see that they had more to lose than to gain in preserving state-sanctioned racial segregation.

SEE ALSO Brown v. Board of Education*, 1954; Discrimination; Discrimination, Racial; Jim Crow; Public Rights; Segregation; Segregation, School; Supreme Court, U.S.; White Supremacy*

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Charles Jaret

SEPARATION AND POOLING GAMES

SEE *Screening and Signaling Games.*

SEPARATION ANXIETY

Separation anxiety is characterized by infants' and toddlers' intense emotional reactions to the departure of a person with whom they have established an emotional attachment. Having its roots in psychodynamic theory, according to which infants' attachment to their mothers is a learned response to being fed, the ethological theory of attachment (Bowlby 1980) frames the development of emotional attachment as an innate behavioral need that not only satisfies infants' hunger, but also keeps them safe from danger and allows for a secure base from which they can explore their surroundings. According to attachment theory, separation anxiety is a normal developmental stage in which infants have formed a representation of their caretakers as reliable providers of comfort and security.

The strange situation procedure (Ainsworth et al. 1978), in which infants and toddlers are observed during brief separations from and reunions with the parent, is often used by researchers to determine if infants have reached the stage of separation anxiety and if their attachments with caregivers are healthy and secure. Using such procedures, researchers have found that separation anxiety is a fairly universal phenomenon that emerges around six to eight months, with signs of distress peaking around fourteen to twenty months, at which age toddlers may follow or cling to caregivers to prevent their departure.

Typically, separation anxiety lasts only a few minutes; however, many factors, such as tiredness, illness, changes in the household routine, family changes such as birth of

a sibling, divorce, death, or a change in caregiver or routine at a day-care center, can contribute to more intense episodes. The intensity of distress also varies depending on: (1) the availability of another person with whom the child has a close bond; (2) the familiarity of the situation; (3) previous experience with the caretaker leaving; and (4) the child's sense of control over the situation. Separation anxiety diminishes as children develop a sense of safety and trust in people other than parents, become familiar with the environment, and trust in the parent's return.

Although separation anxiety is part of normal development for infants and toddlers, for older children, adolescents, or adults such anxieties and behaviors may represent symptoms of a serious disorder known as separation anxiety disorder, or what are also referred to as disorders of attachment. In addition to excessive distress when separated from the primary caregiver, symptoms of disorders of attachment include sleep disturbances such as difficulty falling asleep, nightmares, or fears at bedtime; depressed or withdrawn behavior; apathy; difficulty concentrating; and somatic complaints (e.g., dizziness, nausea, or palpitations). Children may also fear losing the parent or worry about the parent being harmed. Their need to stay close to the parent or home makes it difficult to form healthy relationships with others, such as peers or teachers. Older individuals with separation anxiety disorder may have difficulty moving or getting married and may, in turn, worry about separation from their own children and partner. To reach the diagnostic threshold for this disorder, the anxiety or fear must cause distress or affect social, academic, or job functioning.

SEE ALSO *Anxiety; Attachment Theory; Child Development; Children; Neuroticism; Psychology*

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SEPARATION OF POWERS

The separation of powers is normally understood as a constitutional doctrine according to which political freedom is best guaranteed by separating the powers of government into legislative, executive, and judicial branches, each with its own jurisdiction. The purpose of this arrangement is to ensure that no single group or individual can control all the levers of power and, thereby, rule despotically. The legislature has primary responsibility for lawmaking, while the impartial interpretation of the law and the application of it to particular cases falls under the purview of the judiciary. The executive must obey the rules established by the legislature and enforced by the judiciary.

Charles-Louis de Secondat, baron de Montesquieu (1689–1755), provided the separation of powers with its canonical statement in *The Spirit of the Laws* (1752), but early intimations of the idea can be found in ancient Greece and Rome, where the systematic study of constitutions first began. Aristotle was the first comparative political thinker to notice that all constitutions have deliberative, judicial, and executive elements. Although he did not argue that government should be organized into separate branches, he believed that different types of constitutions (democratic, aristocratic, or monarchic) should be "mixed," so as to counteract the tendencies to corruption inherent in all pure constitutions. Greek historian Polybius (c. 200–c. 118 BCE) used this theory to explain Roman history, as did Renaissance Florentine thinker Niccolò Machiavelli. The immediate precursor to the development of the separation of powers, however, was seventeenth-century English political thought, particularly the work of John Locke.

The separation of powers is an inherently conservative doctrine, in that it was intended to prevent the use of state power to promote radical social change, and yet it contributed to the rise of constitutional democracy. It offered a constitutional design that promised simultaneously to check monarchical abuses of power and limit the growing ambitions of legislators. It appealed to the nobility, who felt squeezed between overweening absolutist monarchs and pressures to expand popular participation. Although the separation of powers is not a theory of democratic government—it can be, and was, adopted by constitutional monarchies—it gave impetus to the spread of democracy by offering a way of reconciling the will of the people with the rule of law. As such, the doctrine was celebrated in the *Declaration of the Rights of Man and the Citizen* (1789) during the French Revolution, and it was the subject of intense debate by the framers of the Constitution of the United States.

Over the course of the nineteenth century the doctrine lost relevance, and its meaning was gradually restricted to a more specific distinction among types of democratic constitutions—specifically, presidential versus parliamentary government. Critics of Montesquieu charged that he had misread the English constitution, by

failing to appreciate how in Westminster parliamentary systems the legislature and executive were fused in the cabinet and in the office of the prime minister. Such a fusion of powers made parliamentary systems elective dictatorships, or so claimed the critics. The Constitution of the United States, with its separate election of president and congress, came to be seen as the closest approximation of the separation of powers.

Montesquieu's critics misunderstood the separation of powers, however. They imagined a watertight separation of branches of government in which no person or group could be a member of more than one branch at a time and no branch could encroach upon the powers of another. This view, which is more of a caricature than a description of any observed political system, had no expositors: No major constitutional theorist ever called for such an absolute separation. James Madison (1751–1836) was the first to reject this caricature, not only because it misrepresented Montesquieu, but, more importantly, because the partial encroachment of branches of government was necessary as a check against the abuse of power: Ambition should counteract ambition; checks and balances, rather than watertight separation of branches of government, would limit tendencies toward abuse of power. Madison was firmly of the same mind as Montesquieu in his conviction that only power can check power.

In the twentieth century the idea of the separation of powers continued to occupy a respected place in legal scholarship and jurisprudence, but lost appeal among social and political theorists. The development of the administrative functions of the state, especially with the expansion of the welfare state, placed more public-sector activity outside the sphere of legislation and into the hands of specialized agencies and experts. The rise of totalitarianism by electoral means in Italy and Germany suggested that the separation of powers was a feeble bulwark against modern antidemocratic and illiberal movements. Political freedom depended more on the degree of social and economic equality, the competitiveness of political-party systems, and a culture of constitutionalism, than on the constitutional separation of powers. Above all, as political science became a more scientific discipline, the language of the separation of powers seemed outdated and formalistic. A new view of institutions arose, building on economic and organizational theory, in which the separation of powers was understood to mean the separate election of executive and legislature in a presidential system of government.

The Anglo-American tendency to treat the separation of powers as a virtual synonym of presidentialism has been resisted by continental political theorists, especially in recent work on deliberative democracy. German philosopher Jürgen Habermas argued that the various branches of government in constitutional democracies correspond to different logics of argumentation, and their separation is necessitated by these discourses. The legislature is the chief deliberative body, yet it has little administrative power. The weakness of the legislature as an administrative body ensures that its deliberations are insulated from the temptations inherent in the exercise of such power and hence oriented toward the production of general laws for the public good.

The purpose of the separation of powers, according to Habermas, is to bind the exercise of administrative power to the deliberative power of citizens acting in concert. The executive administers policies consistent with parliamentary law; it represents the need for action within the rule of law. Equally important is the separation of power between legislature and judiciary. The role of the judiciary is to impartially enforce the law, and court procedures reflect this imperative. The fact that judges can deny citizens their most basic liberties requires that the rules and procedures for doing so be established not by the judges themselves but by the legislature as a body that represents the collective, deliberative power of the whole community. Critics of deliberative democracy object to its highly abstract and normative tone, while exponents see it as a promising beginning for a renewed discussion of the separation of powers.

SEE ALSO *Constitutions; Checks and Balances; Democracy; Government; Habermas, Jürgen; Judicial Review; Judiciary; Locke, John; Parliaments and Parliamentary Systems; Totalitarianism*

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SEPARATISM

Separatism is the ideas or activities advocating separation of a group or a territorial unit from a state (country), state institutions, or a larger group, usually in the form of autonomy or independence. Examination of complex relationships between the intensity of separatism and its goals and motivations cross-nationally or within individual states is one of the central lines of inquiry in social sciences. Systematic analyses of this phenomenon are available in political science, sociology, anthropology, social psychology, and geography.

With regard to intensity, scholars distinguish between latent separatism in the form of beliefs, attitudes, narratives, ideologies, as well as collective memories of past autonomous or independent status, and active separatism that can be peaceful (petitions, noncompliance with national laws, formation of separatist movements, and rallies or demonstrations) or violent (destruction of property, beatings, riots, guerrilla attacks, terrorist acts, and civil wars). The intensity of separatism also relates to the scale and nature of separatist demands. At the lowest end of the scale are group- or community-level demands for a larger share of economic revenues or for enhancing the status of their culture and lifestyle that do not involve changing the constitutions or other legal foundations of a nation-state. Examples are most manifestations of municipal or tribal separatism in the United States; provincial separatism in Europe, China, and the Russian Federation; and sectarian dissidence (e.g., Nation of Islam in the United States, Old Believers in the Russian Orthodox Church). In the latter case, sectarian refers to breaking away from the main arm of the group's base religion and dissidence refers to these groups seeking to stand apart from society and government in important ways.

At a higher level are demands to change constitutions or other fundamental state laws to decentralize government authority within a state in favor of constituent administrative units (provinces), usually with respect to electoral processes, government appointments, taxation, control over natural resources and principal economic activities, language use, education, regulation of churches, and other cultural and symbolic issues. In the late twentieth and early twenty-first centuries this type of separatist demand was systematically illustrated by the movement known as the "parade of sovereignties" in post-Soviet Russia (1991–1999). This movement resulted in a negotiated federal treaty, a redefinition of the political status of Russia's eighty-nine constituent units (provinces, republics, and districts) in the Russian constitution, and the signing of power-sharing treaties between the federal government and more than fifty constituent unit governments.

The strongest form of separatism is demand for independent statehood (full secession), complete with granting the separatist units the monopoly on legitimate use of violence within its borders and international recognition of the new state's sovereignty. Reflecting the drive for self-determination, these demands take the form of civic or ethnic nationalism or, typically, a combination of both. Prominent examples at the global level both past and present are separatist movements in Spain (Basques), Canada (Quebec), Turkey (Kurds), Great Britain (Northern Ireland), the Soviet Union (Estonia, Lithuania, Latvia), the Russian Federation (Chechnya), former Yugoslavia (Croatia, Kosovo, Bosnia, Slovenia), Georgia (Abkhazia, South Ossetia), Indonesia (Aceh, East Timor), China (Tibet, Xingjiang), India (Kashmir), Mexico (Chiapas), Nigeria (Biafra), Ethiopia (Eritrea), the United States (the Confederacy), and elsewhere. In the majority of cases where these types of secessionist claims have had strong social support, they have also been accompanied by mass political action, from demonstrations and referenda to the formation of rebel armies and protracted wars.

SEPARATISM: A COMPLEX AMALGAM

Most separatist ideologies or movements are complex amalgams of political, ethnic/racial, religious, and socioeconomic separatisms. Only rarely does one find any of these distinct forms of separatism in their pure form. Political separatism represents contestation over the design and control of political systems and their constituent institutions. Mobilized political ideologies are paramount. This was the case of monarchist, socialist, and liberal-democratic separatist movements that seized power in provincial governments and mobilized military forces to unsuccessfully contest the Bolshevik takeover of Russia's central government in November 1917. The central element of the separatist movements that later galvanized the disintegration of the Soviet Union was anti-communism. The latter enabled the coming together of pro-democracy and nationalist movements that had few reasons to join forces otherwise. Russia's first elected president, Boris Yeltsin, mobilized a distinctly anti-Soviet separatist movement advocating secession from Soviet institutions, such as the Communist Party, the KGB (the security and intelligence organization of the Soviet Union), and the state planning agency.

Ethnic, racial, and religious separatism presupposes claims for enhanced status, autonomy, or independence of individual ethnic, racial, or religious groups from the state or a larger group. At the center of ethnic/racial movements are claims to cultural and/or linguistic distinctiveness and privilege (as in Quebec, Basque Country, and Corsica). Religious separatist movements arise within major religions (Catholic-Protestant conflict in Northern Island, Shiite-Sunni conflict in Iraq) or across major reli-

gions (Hindu-Muslim conflict over Kashmir, Islam-Christianity distinctions in Bosnia). In their most extreme form these movements claim the need to ensure physical survival of an entire ethnic/racial and/or religious group (Abkhazia, Chechnya, Xingjiang). Separatism of ethnic, racial, and religious minorities may also take a form of resistance to discrimination, oppression, forced resettlement, ethnic cleansing, or mass extermination initiated against them by the politically dominant ethnic or racial groups within a state (i.e., those who control the army, police, security forces, mercenaries, and paramilitaries). In the latter instances, separatist conflicts become particularly intense, brutal, and protracted as action-retaliation patterns escalate, become intractable, and constrain conflict resolution efforts by third parties within or outside the state. One of the prominent empirical questions in social sciences is to what extent the intensity of separatist movements depends on whether ethnic, linguistic, religious, and other identity cleavages in a society are cross-cutting (India) or overlapping (Russia). Economic separatism, on the other hand, is typified by the slogan of the American colonists seeking independence from the British Empire—"no taxation without representation"—but when economic interests are predominant, separatist movements are more likely to end in bargains with central authorities rather than in state disintegration.

MOTIVATION BEHIND SEPARATIST MOVEMENTS

Social scientific research identifies three sources of motivation behind separatist movements: (1) structural conditions (macroeconomic performance and intergroup differentials, demographic trends and distribution of ethnic populations, polity type, ethnofederalism, geography and terrain); (2) behavioral microfoundations (intergroup bias, frustration-aggression psychology, cognitive processes, emotions); and (3) interactivity (bargaining or "games" within and outside the state, conflict precedent, demonstration effects). Debates within and across disciplines are predominantly about the relative importance of these factors. Research methodology includes ethnographic accounts; historical case studies; small-group experiments; and statistical analysis of surveys, aggregate statistics, and event data. Examples of the latter are the Minorities at Risk, State Failure Task Force, and Global Events Data Systems projects based in the United States, which draw on large datasets documenting cases of separatism from nation-states or empires throughout the world from 1800 to the early 2000s.

SEE ALSO *Autonomy; Decentralization; Ethnic Conflict; Ethnic Fractionalization; Ethnicity; Nationalism and Nationality; Partition; Secession; Segregation; Segregation, Residential; Segregation, School; Self-Determination; Self-Determination Theory; Sovereignty*

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SEPHARDIM

SEE *Jews.*

SEPTEMBER 11, 2001

On September 11, 2001, or "9/11," a series of terrorist attacks on the United States killed approximately 3,000 people. On a sunny Tuesday morning four commercial airplanes were hijacked and used as flying bombs to destroy prominent symbols of American economic and political power. The plan, a coordinated attack conducted by four separate teams of hijackers with at least one in each team trained in the basics of airplane flight, commandeered American Airlines flight 11, United Airlines flight 175, American Airlines flight 77, and United Airlines flight 93. They flew two of the aircraft into the Twin Towers of the World Trade Center in Manhattan, New York, and one into the Pentagon in Washington, D.C. The fourth plane, United flight 93, after a violent struggle between the passengers, crew, and hijackers, did not reach its intended target and crashed into a field in rural Pennsylvania.

THE ATTACKS

Two of the early-morning flights, flights 11 and 175 from Logan Airport in Boston and bound for Los Angeles, were hijacked soon after takeoff at 8:00 and 8:15. Flight 77

from Dulles Airport in Washington, DC, also bound for Los Angeles, was hijacked soon after takeoff at 8:10. The fourth plane, flight 93 from Newark Airport in New Jersey, bound for San Francisco, was hijacked after takeoff at 8:40. The planes, loaded with fuel for lengthy cross-country flights, were selected to create maximum destruction on their targets. The hijackers, carrying mace or tear gas and box-cutter knives and claiming to have bombs, took control of the aircraft after killing or assaulting the pilots, flight attendants, and at least one passenger.

Flight 11, reported by morning commuters to be flying at a dangerously low altitude south along the Hudson River in New York, veered east over lower Manhattan before crashing into the North Tower of the World Trade Financial Center (WTC) at 8:46. At approximately 9:02 flight 175 crashed into the South Tower of the WTC. The crash of the second plane was seen live on television by many who were watching the news of the first crash, including the parents of one of the passengers on United 175, who were on the phone with their son, who was calling from aboard the doomed plane. Throughout the day television stations broadcast live images of the morning attacks and the human tragedy that ensued.

Many inside the WTC, believing they would quickly be rescued, were instructed not to evacuate the building. Soon hundreds of New York City firefighters and police and Port Authority Police officers descended on the scene to provide assistance, attempting to fight the fires that quickly engulfed the buildings and evacuate the surrounding area. While some in the office complex fled safely, thousands remained in the building, trapped by fire and smoke. Hundreds watched in shocked disbelief from the streets below as people jumped to their deaths from the burning buildings. Those trapped on the floors above the flames tried to make their way to the roofs of the towers in the vain hope they would be rescued, only to perish as the smoke and heat overcame them in locked stairwells.

At 10:05, the South Tower of the WTC, crippled by the intense jet-fuel-fed fire that destabilized the structure, collapsed. A massive cloud of debris and smoke surrounded the area. Less than thirty minutes later the North Tower collapsed, sending more debris and smoke into the air. Within minutes Lower Manhattan was enveloped in a dark plume of debris and smoke. Most of the rescuers who entered the building lost their lives, including 343 members of the New York City Fire Department, twenty-three New York City police officers, and thirty-seven Port Authority police. Additionally, over 2,000 people in the towers or on the ground were killed. Among those who evacuated the buildings immediately following the attacks, many expressed both sadness and admiration for the rescue personnel who had entered the burning buildings to battle the fires and assist the injured, many of whom had called emergency service operators to plead for assistance until the moment the buildings collapsed.

While these events unfolded in New York City, another hijacked plane, flight 77, crashed into the Pentagon at 9:37, killing all aboard and 125 civilian and military personnel on the ground. At 10:03, about the same time the South Tower of the WTC collapsed, the last of the four hijacked aircraft crashed into a field in rural Pennsylvania, killing all forty-four people aboard. Flight 93 crashed after numerous passengers learned from family and coworkers on the ground through cell phone calls that other planes had been hijacked earlier and flown into buildings. The passengers tried to overpower the hijackers and regain control of the plane to avoid further attacks. The crash was believed to have occurred as a result of the hijackers either deliberately crashing the plane or losing control of it. The National Commission on Terrorist Attacks Upon the United States, referred to as the 9/11 Commission, later issued a report determining that flight 93 was targeted to hit the U.S. Capitol.

The events of September 11 were marked by confusion and error at the highest levels of government and in the media. Conflicting and erroneous reports about additional hijackings or explosions were rife on the morning of September 11. The 9/11 Commission later outlined the national government's breakdown in general command, communication, and control. At the time of the attacks in New York City, Mayor Rudy Giuliani emerged as a symbol of grace under pressure as he appeared throughout the day and into the night on television and radio from the devastated site to reassure New Yorkers that the city would endure. In the days and months to follow New York City was overwhelmed with support and assistance from construction, health care, police, fire, and rescue personnel from governments and individuals around the world, many of whom came to Manhattan with no intention but to selflessly assist in the recovery effort. For months after the attacks, many people sought out assistance from mental health professionals to cope with the events and the impact it had on their lives. New York City residents often refer to their life experiences as either pre- or post-9/11.

MOTIVES

The September 11 attack was not the first terrorist attack against the WTC. In 1993 an explosives-laden truck detonated in the center's underground parking garage, killing six and injuring hundreds. In the aftermath ten men were arrested, tried, and sentenced to life in prison. Investigation revealed that the terrorists intended to damage the WTC enough so that it would collapse. The terrorist organization that funded the attack, Al-Qaeda, initially a collection of loosely aligned Islamic paramilitary organizations, had formed in the 1980s in response to the

Soviet Union's occupation of Afghanistan, later broadening its activities to include the United States for its support of Israel and for having troops stationed in Saudi Arabia. Osama Bin Laden emerged as the leader of this group in 1988.

Al-Qaeda had carried out numerous attacks against the United States dating back to 1992. It bombed hotels in Yemen where U.S. troops routinely stopped; it supported groups battling U.S. forces in Somalia in 1993; it carried out car bombings in Saudi Arabia outside a joint Saudi-U.S. facility in 1995; it detonated a truck bomb outside a residential complex that housed U.S. soldiers in Saudi Arabia, killing nineteen, in 1996; it bombed U.S. embassies in Tanzania and Kenya in 1998; it conducted the attack on the *USS Cole*, a destroyer docked in Yemen, killing seventeen and wounding forty, in 2000. In a 2004 statement, Bin Laden acknowledged Al-Qaeda's involvement in many of these earlier attacks, including the attacks of September 11.

RESPONSE

In the aftermath of the September 11 attacks, President George W. Bush's approval ratings soared. Some criticized the president for not being decisive on the morning of the attacks after he was seen on television visiting with grade school children in Florida and later in the day flew from Florida to Louisiana and then Nebraska before returning to Washington, D.C., in the evening. On October 7, 2001, after the United States declared a war on terrorism, a U.S.-led coalition launched an invasion of Afghanistan called Operation Enduring Freedom in an effort to capture Bin Laden and eliminate his base of support. The invasion failed to capture Bin Laden but did topple Afghanistan's Taliban government, which was believed to have supported Bin Laden and Al-Qaeda. Later, in March 2003, another U.S.-led coalition initiated Operation Iraqi Freedom, an attack on Iraq in an effort to eliminate alleged weapons of mass destruction and Iraq's alleged support for international terrorism. No weapons of mass destruction or evidence of Iraq's cooperation with international terrorist organizations were proven, but Iraq's government under Saddam Hussein collapsed. A French citizen, Zacarias Moussaoui, arrested in August 2001 on an immigration violation after trying to enroll in flight training courses, was convicted of conspiring to kill Americans as part of the September 11 terror attacks. He is now serving a life sentence in a federal prison in Colorado as the only person convicted of the crimes that occurred on September 11.

In the aftermath of the attacks the U.S. Congress passed the USA Patriot Act, increasing the power of the federal government, particularly the executive branch. Congress also created the Department of Homeland Security and facilitated a greater role for the National Security Agency, the nation's leading eavesdropping organization, in the pursuit of terrorism both within the United States and abroad. Some of the president's aggressive assertions in the war on terror, including the establishment of military commissions to try suspected terrorists, were later determined by the U.S. Supreme Court to be unconstitutional violations of executive authority.

SEE ALSO *Al-Qaeda; bin Laden, Osama; Guantánamo Bay; Hussein, Saddam; Iraq-U.S. War; Jingoism; Nationalism and Nationality; Patriotism; Supreme Court, U.S.; Terrorism; Terrorists*

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James Freeman

SEQUOYAH

c. 1770–1843

Sequoyah, a Cherokee also known as George Guess, Guest, or Gist, developed a Cherokee syllabary that brought literacy to his people. Sequoyah's mother was Cherokee and a member of the Paint clan, one of the seven Cherokee clans; she was descended from Oconostota, an eighteenth-century warrior and ruler. His father's lineage is uncertain. Some scholars claim he was George Guess, a German trader, or Nathaniel Gist, friend of George Washington. Sequoyah was born near the ancient capital Echota and Fort Loudon (in the vicinity of Tellico Blockhouse in Monroe County, Tennessee) on the Little Tennessee River among the Overhill or Upper Cherokees. In the early 1800s, seeking to avoid attacks from marauding settlers, he migrated with fellow Cherokees to the southernmost edge of the Cherokee Nation and made his home at Willstown, in present-day Dekalb County (Alabama). Though lame, during the War of 1812 he was a horse-mounted combatant serving in the

Cherokee regiment under Colonel Gideon Morgan. As part of a campaign directed by General Andrew Jackson, he fought against the Alabama Red Stick Creeks in the Battle of Horseshoe on March 27, 1814.

In his private life Sequoyah sought solitude, partly because of his lameness, but also because he wished to develop his talents as a silversmith engraver. Sequoyah's involvement with engraving spurred his intense interest in "talking leaves," the term he used for written material, and in classical and European writing conventions. Though opposed in his efforts by his first wife and neighbors, he began to create his writing method in 1809 and finished his arduous task ten years later, with assistance from his young daughter. He started with a pictograph system and ended up with a system using true phonetic symbols.

Though not an English speaker, Sequoyah recognized the power that written speech, or "talk on paper," could bring to those who had previously only transmitted ideas orally. In 1821 he introduced his syllabary, representing consonant-vowel combinations, six vowels, and the consonant *s*. Sequoyah and his young daughter first showed the system to Sequoyah's cousin, George Lowery. Mike Waters, the brother of Sally Waters, Sequoyah's second wife, was the first person to learn the syllabary. The initial Sequoyahan composition dealt with the boundary lines between the Cherokee Nation, Georgia, and Tennessee. A short time later Sequoyah brought a suit in Indian Court, held at Chatooga (northeastern Georgia), and presented his case by reading aloud from a document written in his syllabary. The audience was amazed and news of his invention spread quickly. Within months, the Cherokees had attained literacy. This was impressive not only for Sequoyah's ability to instill Cherokee literacy, but also for the efficiency with which the Cherokees learned the syllabary.

In 1823 Sequoyah left the Cherokee Nation in the Southeast to live with his kinsmen who migrated westward and settled along the Arkansas River, near present-day Indian Territory. He continued to teach his syllabary to the western Cherokee. In recognition of his contributions, Sequoyah was invited to Washington, D.C., in 1825 to receive $500 from Congress; once there, he had his portrait painted by the famed Charles Bird King. Sequoyah became an Indian activist. In 1828 he traveled to Washington, D.C., as a delegate representing some eight thousand Cherokees in land negotiations with the U.S. government in the Treaty of 1828. He was successful in adjudicating contested Arkansas lands claimed by the Osages for exchange of lands beyond the Arkansas River (present-day Oklahoma).

That same year the Cherokee National Council at New Echota (Georgia) acquired a printing press and had type cases set in both Sequoyahan and English characters, creating the only bilingual Indian newspaper, the *Cherokee Phoenix*. The newspaper, printed partially in the syllabary, contained Cherokee shamans' sacred formulae used for ceremonial purposes, as well as accounts of the manners and customs of the Cherokee. It also featured news of the day and political announcements about district candidates for National Council seats, and printed the 1827 Cherokee Constitution establishing a republican government. The press brought literacy to the illiterate and turned out more than 225,000 pages before Georgia citizens seized it in 1834 because of the *Cherokee Phoenix*'s anti-Indian removal editorials. Because he had already left the Southeast, Sequoyah escaped the bitter factionalism that marked the declining days of the Cherokee Nation (East) after U.S. policymakers forced Cherokees out of their ancestral lands in 1838 in a relocation known as the Trail of Tears.

After Cherokees reunified their nation in Indian Territory, Sequoyah's syllabary was the nucleus of unification for both traditional and acculturated Cherokees. On December 29, 1843, survivors of the removal and Old Settlers, Cherokees who had moved to Indian Territory before mandatory displacement, bestowed upon their beloved scholar a lifetime annual income of $300, probably the first literary pension in American history. Ever mindful of his fellow Cherokees' welfare, Sequoyah constantly taught the syllabary, both to Cherokees in Indian Territory and to those living beyond its borders. Sequoyah left the Cherokee capital, Tahlequah (in Oklahoma), with his son Teesy in an oxcart for Mexico, where he hoped to teach the syllabary to Mexican Cherokees. On his way to Mexico, he visited with Texas Cherokees, who were plotting revenge against Texan residents who had killed many of their relatives, and convinced them to join the members of the recently restored Cherokee Nation (Tahlequah). After reaching northern Mexico, Sequoyah became deathly ill; he died in 1843 and was buried in a cave near San Fernando de las Rosas.

Today, Sequoyah's syllabary is central to the educational programs of both the Cherokee Nation Tahlequah (in Oklahoma) and the Eastern Band of Cherokees (in Cherokee, North Carolina), the latter being remnant Cherokees not included in the compulsory removal of 1838. Cherokee education includes total immersion in the syllabary beginning at a very young age. Literacy in the syllabary is also enhanced by two Cherokee publications, the *Cherokee Phoenix* (Tahlequah) and the *Cherokee One Feather* (Cherokee, North Carolina); both papers print in the historical bilingual tradition. Correspondence between East and West Cherokees is greatly facilitated by the syllabary, both because it is so widely studied and because its efficiency permits Cherokees to become proficient writers after a few days' study. Indeed, Sequoyah's syllabary has contributed in no small way to the cultural

revitalization that reverberates throughout both Cherokee domains.

SEE ALSO *Cherokees; Trail of Tears*

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Rowena McClinton

SERBS

Serbs are South Slavic people who predominantly live in Serbia, Montenegro, Bosnia-Herzegovina, and Croatia. They are also a significant minority in the Republic of Macedonia and Slovenia.

Serbs constitute about 66 percent of the population of Serbia. The largest urban populations of Serbs in the former Yugoslavian region are in Belgrade and Novi Sad (in Serbia) and in Banja Luka (in Bosnia-Herzegovina). Serbs are also present as a sizable minority in all capitals of the former Yugoslavian republics. They make up 2 to 3 percent of the population of Zagreb, Skopje, Ljubljana, and Sarajevo. Another 1.6 million used to live in Bosnia and Herzegovina and 600,000 lived in Croatia prior to the Yugoslav wars, but they have now been largely expelled from the latter.

Serbian culture was largely influenced by the Byzantine Empire starting in the ninth century and throughout much of the Middle Ages. Another source of persistent influence is the Serbian Orthodox Church. However, prior to the Ottoman invasion in the fourteenth century Serbs were strongly influenced by the Catholic Church, especially in the coastal areas such as Montenegro and Croatia. Austrians and Hungarians have also been highly influential among Croatian Serbs, Serbs of Vojvodina, and Bosnian Serbs to a smaller extent. Serbian culture declined during the five-hundred-year rule of the Ottoman Empire. After Serbia became autonomous in 1817, there was a resurgence of Serbian culture that remains strong today in Central Serbia. The Socialist Federal Republic of Yugoslavia, which was formed following World War II and was in existence until the wars of the 1990s, was part of the Soviet Bloc of Communist countries, but in recent decades there has been a growing influence from the West as well as a resurgence in traditional culture.

Serbs have played a major role in world history. In 1914 Gavrilo Princip (1894–1918), a Bosnian Serb, assassinated Archduke Franz Ferdinand (1863–1914), heir to the imperial throne of the Austro-Hungarian Empire. This act precipitated the crisis that would lead to World War I. In more distant history Djordje Petrovic Karadjordje (died 1817) led the 1804 rebellion against the Turks, who were then in power. Serbs have played a significant role in the development of the arts and sciences as well. Prominent Serbs include the scientists Nikola Tesla (a Croatian Serb; 1856–1943), Michael Pupin (1858–1935), Jovan Cvijić, and Milutin Milankovic; the famous composers Stevan Mokranjac and Stevan Hristic; literary authors Ivo Andrić (1892–1975) and Milos Crnjanski; and Vuk Stefanović Karadžić (1787–1864), credited with reforming the Serbian language. Other famous members of the Serbian community are sports stars Vlade Divac, Peda Stojakovic, and Nemanja Vidic; and actor Karl Malden (Mladen Sekulovich). From the entertainment arena there are movie directors such as Dusan Makavejev, Peter Bogdanovich, and Emir Kusturica, and TV producer Paul Stojanovich.

SEE ALSO *Croats; Ethnic Conflict; Ethnicity; Identity; Milosevic, Slobodan; Nationalism and Nationality; Ottoman Empire; World War I*

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Dagmar Radin

SERFDOM

SEE *Servitude.*

SERIAL CORRELATION

Serial correlation is a statistical term that refers to the linear dynamics of a random variable. Economic variables tend to evolve parsimoniously over time and that creates temporal dependence. For instance, as the economy grows, the level of gross national product (GNP) today depends on the level of GNP yesterday; or the present

inflation rate is a function of the level of inflation in previous periods since it may take some time for the economy to adjust to a new monetary policy.

Consider a time series data set $\{Y_t, X_{1t}, \ldots, X_{kt}\}$ for $t = 1, 2, \ldots, T$. Our interest is to estimate a regression model like $Y_t = \beta_0 + \beta_1 X_{1t} + \ldots, \beta_k X_{kt} + \varepsilon_t$. For instance, Y_t is the inflation rate, and $X_{1t}, \ldots, X_{kt}$ is a set of regressors such as unemployment and other macroeconomic variables. Under the classical set of assumptions, the *Gauss-Markov theorem* holds, and the *ordinary least squares* (OLS) estimator of the β_i's is the *best, linear, and unbiased estimator* (BLUE). Serial correlation is a violation of one of the classical assumptions. Technically, we say that there is serial correlation when the error term is linearly dependent across time, that is, the $\text{cov}(\varepsilon_t, \varepsilon_s) \neq 0$ for $t \neq s$. We also say that the error term is *autocorrelated*. The covariance is positive when on average positive (negative) errors tend to be followed by positive (negative) errors; and the covariance is negative when positive (negative) errors are followed by negative (positive) errors. In either case, a covariance that is different from zero will happen when the dependent variable Y_t is correlated over time and the regression model does not include enough lagged dependent variables to account for the serial correlation in Y_t. The presence of serial correlation invalidates the Gauss-Markov theorem. The OLS estimator can still be *unbiased* and *consistent* (large sample property), but it is no longer the best estimator, the *minimum variance estimator*. More importantly, the OLS standard errors are not correct, and consequently the t-tests and F-tests are invalid.

There are several models that can take into account the serial correlation of ε_t: the autoregressive model AR(p), that is, $\varepsilon_t = \rho_1 \varepsilon_{t-1} + \rho_2 \varepsilon_{t-2} + \ldots \rho_p \varepsilon_{t-p} + v_t$, where v_t is now uncorrelated with zero mean and constant variance; the *moving average* MA(q) $\varepsilon_t = \theta_q v_{t-q} + \ldots + \theta_1 v_{t-1} + v_t$; or a mixture model ARMA(p,q). Testing for serial correlation in the error term of a regression model amounts to assessing whether the parameters ρ_i's and θ_i's are statistically different from zero. A popular model within economics is the AR(1) model: $\varepsilon_t = \rho_1 \varepsilon_{t-1} + v_t$. Within this model, the null hypothesis to test is H_0: $\rho_1 = 0$. If we reject the null hypothesis, we conclude that there is serial correlation in the error term. To implement the test, we proceed by running OLS in the regression model. We retrieve the OLS residuals $\hat{\varepsilon}_t$ and, assuming that the regressors $X_{1t}, X_{2t}, \ldots, X_{kt}$ are strictly exogenous, we regress $\hat{\varepsilon}_t$ on $\hat{\varepsilon}_{t-1}$. A t-statistic for H_0: $\rho_1 = 0$ will be asymptotically valid. If the autoregressive model is of a large order, an F-test for a joint hypothesis as H_0: $\rho_1 = \rho_2 = \ldots = \rho_p = 0$ will also be valid. If the regressors are not strictly exogenous, the auxiliary regression of $\hat{\varepsilon}_t$ on $\hat{\varepsilon}_{t-1}$ should be augmented with the set of regressors $X_{1t}, X_{2t}, \ldots, X_{kt}$ for the t-test and F-test to be valid. There is also a very popular statistic, the *Durbin-Watson*, which also requires strict exogeneity that tests for AR(1) serial correlation. The main shortcoming of this test is the difficulty in obtaining its null distribution. Though there are tabulated critical values, the test leads to inconclusive results in many instances.

Once we conclude that there is serial correlation in the error term, we have two ways to proceed depending upon the exogeneity of the regressors. If the regressors are strictly exogenous, we proceed to model the serial correlation and to transform the data accordingly. A regression model based on the transformed data is estimated with generalized least squares (GLS). If the regressors are not exogenous, we proceed to make the OLS standard errors robust against serial correlation. In the first case, let us assume that there is serial correlation of the AR(1) type, that is, $\varepsilon_t = \rho_1 \varepsilon_{t-1} + v_t$. In order to eliminate the serial correlation, we proceed to transform the data by quasi-differencing. For simplicity, suppose that the regression model is $Y_t = \beta_0 + \beta_1 X_{1t} + \varepsilon_t$. The following transformation will produce a regression model with an uncorrelated error term:

$$Y_t - \rho_1 Y_{t-1} = \beta_0(1 - \rho_1) + \beta_1(X_{1t} - \rho_1 X_{1t-1}) + \varepsilon_t - \rho_1 \varepsilon_{t-1} = \beta_0(1 - \rho_1) + \beta_1(X_{1t} - \rho_1 X_{1t-1}) + v_t$$

If ρ_1 is known, it is easy to obtain the quasi-differenced data, that is, $Y_t - \rho_1 Y_{t-1}$ and $X_t - \rho_1 X_{t-1}$, and proceed to run OLS in the model with the transformed data. This will produce a GLS estimator of the β_i's that now will be BLUE as the new error term v_t is free of serial correlation. In practice, ρ_1 is not known and needs to be consistently estimated. The estimate $\hat{\rho}_1$ is obtained from the auxiliary regression of $\hat{\varepsilon}_t$ on $\hat{\varepsilon}_{t-1}$. We proceed by quasi-differencing the data, $Y_t - \hat{\rho}_1 Y_{t-1}$ and $X_t - \hat{\rho}_1 X_{t-1}$, and as before, running OLS with the transformed data. The estimator of the β_i's now is called the *feasible GLS estimator* (FGLS), which is a biased estimator, though asymptotically is still consistent. In practice, the FGLS estimator is obtained by iterative procedures known as the *Cochrane-Orcutt procedure*, which does not consider the first observation, or the *Prais-Winsten procedure*, which includes the first observation. When the sample size is large, the difference between the two procedures is negligible.

In the second case, when the regressors are not strictly exogenous, we should not apply FGLS estimation because the estimator will not be even consistent. In this instance, we modify the OLS standard errors to make them robust against any form of serial correlation. There is no need to transform the data as we just run OLS with the original data. The formulas for the robust standard errors, which are known as the HAC (heteroscedasticity and autocorrelation consistent) standard errors, are provided by Whitney Newey and Kenneth West (1987). Nowadays, most of the econometric software calculates the HAC standard errors, though the researcher must input the

value of a parameter that controls how much serial correlation should be accounted for. Theoretically, the value of this parameter should grow with the sample size. Newey and West advised researchers to choose the integer part of $4(T/100)^{2/9}$ where T is the sample size. Although by computing the HAC standard errors we avoid the explicit modeling of serial correlation in the error term, it should be said that they could be inefficient, in particular when the serial correlation is strong and the sample size is small.

SEE ALSO *Least Squares, Ordinary; Pooled Time Series and Cross-sectional Data; Properties of Estimators (Asymptotic and Exact); Time Series Regression; Unit Root and Cointegration Regression*

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Gloria González-Rivera

SEROTONIN

Serotonin, like dopamine and norepinephrine, is a brain neurotransmitter. When the brain produces serotonin, tension is eased and the subject feels less stressed and more focused and relaxed. In contrast, when it produces dopamine or norepinephrine there is alertness in thinking and acting. Serotonin is called the "calming chemical." It can be obtained naturally by eating sugar or other carbohydrates, which raise the insulin level in the blood, triggering a greater ratio of a chemical (actually, an enzyme) called *tryptophan*. This in turn rushes to the brain, where it produces serotonin. Vitamin C is required for the conversion of tryptophan into serotonin. Tryptophan is found in foods such as bananas, plums, turkey, and milk. A diet poor in omega-3 fatty acids may lower brain level serotonin and cause depression.

CHEMICAL COMPOSITION AND ACTION

Serotonin was isolated and named by Maurice M. Rapport, Arda Green, and Irvine Page in 1948. First, Rapport identified it as a vasoconstrictor substance in the blood serum, and because it is a serum agent that affected vascular tone he called it *serotonin*. Later, in 1950, Rapport identified serotonin chemically and gave it the chemical name 5-hydroxytryptamine. The chemical name of serotonin is 3-(2-aminoethyl)-1*H*-indol-5-ol, and in pharmacological terminology 5-HT.

The chemical formula of serotonin is $N_2OC_{10}H_{12}$. Its molecular mass is 176.2182 g/mol, its monoisotopic mass is 176.0950 g/mol, and its composition is as follows: N (15.8970 percent), O (9.0793 percent), C (68.1598 percent), and H (6.8638 percent).

Specifically, serotonin is a monoamine neurotransmitter that is synthesized in the central nervous system by the serotonergic neurons and in the gastrointestinal tract by the enterochromaffin cells. Serotonin is formed by the hydroxylation and decarboxylation of tryptophan. The greatest concentration of serotonin is found in the enterochromaffin cells of the gastrointestinal tract (90 percent), and the rest is found in platelets and in the central nervous system. The effects of serotonin are mostly felt in the cardiovascular system, with additional effects in the respiratory system and the intestines.

The function of serotonin is exerted upon its interaction with specific receptors. Several serotonin receptors have been cloned, such as 5HT1, 5HT2, 5HT3, 5HT4, 5HT5, 5HT6 and 5HT7. Within each group there are subtypes that affect various aspects of bodily functions.

More specifically, serotonin can be found in the human gastrointestinal tract and in the bloodstream. In the human body, serotonin can be synthesized from the amino acid tryptophan by a short metabolic pathway that consists of two enzymes: tryptophan hydroxylase and amino acid decarboxylase. The first enzyme, tryptophan hydroxylase, has two forms, one that is present in several tissues and the other one in a brain-specific isoform. In contrast, in the central nervous system serotonin can also be synthesized by the neurons of the Raphe nuclei that are distributed along the length of the brainstem in nine pairs. Specifically, there are swellings, called *varicosities*, along the axon that release serotonin into the extraneuronal space. From there, serotonin can be diffused to activate special receptors that exist on the dendrites, the cell bodies, and the presynaptic terminals of the adjacent neurons.

Serotonin plays an important role in the regulation of mood, sleep, appetite, vomiting, sexuality, memory and learning, temperature regulation, cardiovascular function, and endocrine regulation. Low levels of serotonin have been associated with migraines, bipolar disorders, apathy, fear, feelings of worthlessness, insomnia, fatigue, anxiety, and depression (www.chm.bris.ac.uk/motm/serotonin/depression.htm). Autopsies on suicide cases have revealed very low levels of serotonin in the brain. In turn, low levels of serotonin can be caused by an anxiety disorder because serotonin is required for the metabolism of stress hormones. The most concrete evidence for the connection between serotonin and depression is the decreased concentrations of serotonin in the cerebrospinal fluid and brain tissues of people suffering from depression.

Extremely high levels of serotonin in the body cause toxic effects, and are even fatal in some cases; this is termed "serotonin syndrome."

In 2005 scientific evidence emerged that genetic polymorphisms in the enzyme tryptophan hydroxylase in both its forms can affect susceptibility to depression and anxiety (Nash et al. 2005; Zhang et al. 2005). Furthermore, a study in 2006 showed that ovarian hormones can affect the expression of tryptophan hydroxylase, triggering postnatal depression and premenstrual stress syndrome (Hiroi et al. 2006). Also, where infants have abnormal serotonergic neurons—those neurons on the brain stem that synthesize serotonin—there is a high possibility of sudden infant death syndrome (SIDS) (Weese-Mayer, et al. 2003). Based on recent research, by Lesurtel et al. (2006), serotonin mediates liver regeneration and induces cell division throughout the body.

The pharmacology of serotonin is very complex because there is a large and diverse range of serotonin receptors in the human body. At least seven types of such receptors have been identified in different places of the body, and they all have different effects. Serotonin receptors can be stimulated by psychoactive drugs such as ecstasy (MDMA), LSD, DMT, and psilocybin (a substance found in psychedelic mushrooms). A small dose of ecstasy, for example, stimulates a big release of serotonin in the body, causing feelings of well-being, comfort, and tactile sensitivity. High doses of such substances can produce feelings of emotional empathy, or entactogenesis.

The 5-HT3 receptor is an antiemetic agent used mainly in cases of postoperative nausea and nausea caused by anticancer chemotherapy using cytotoxic drugs. It is also used to treat depression and other mental and psychological conditions. The 5-HT 1B/D receptor is an agent to treat migraines. The role of 5-HT receptors is a topic of intense research, so more therapeutic applications may be discovered in the future.

If depression is severe as a result of serotonin deficiency, antidepressants—that is, pharmaceutical agents that increase the level of serotonin in the brain—may be used. If depression is mild, it can be cured without medications because levels of serotonin can be increased with rigorous exercise. Studies have shown that the amount of serotonin in the brain is increased with increased activity, and the production of serotonin is raised for some days after exercise.

TYPES OF SEROTONIN MEDICATIONS

There are certain psychiatric medications that modulate the levels of serotonin in the human body. These have been classified into four general categories: (1) monoamine oxidase inhibitors, (2) tricyclic antidepressants, (3) atypical antipsychotics, and (4) selective serotonin reuptake inhibitors.

Monoamine oxidase inhibitors (MAIOs) are used to prevent the breakdown of monoamine neurotransmitters (one of which is serotonin). Hence, they increase the concentrations of serotonin in the brain. They are used for patients suffering from depression, but they may have serious side effects, including adverse drug interactions such as hypertensive crisis. Trycyclic antidepressants (TCAs) inhibit the reuptake of both serotonin and norepinephrine. Selective serotonin reuptake inhibitors (SSRIs) are also used in the treatment of depression. They are newer drugs and inhibit only serotonin's reuptake, hence they are safer, having fewer side effects and fewer adverse drug interactions. One of their side effects is anorgasmia, or a delay of sexual climax.

SSRIs available in the United States (with trade names given in parentheses) include:

Citalopram (Celexa, Cipramil, Emocal, Sepram, Seropram);

Escitalopram oxalate (Lexapro, Cipralex, Esertia);

Fluoxetine (Prozac, Fontex, Seromex, Seronil, Sarafem);

Fluvoxamine maleate (Luvox, Faverin);

Paroxetine (Paxil, Seroxat, Aropax, Deroxat, Paroxat);

Sertraline (Zoloft, Lustral, Serlain);

Dapoxetine (no known trade name).

SSRIs are prescribed for treatment of major depression, anxiety disorders, panic disorders, obsessive-compulsive disorders (OCD), social phobia, eating disorders, irritable bowel syndrome (IBS), and premature ejaculation (which affects up to 60 percent of men).

Briefly, the mechanism of brain cells is as follows: The messages in the brain are passed between two nerve cells through a synapse, which is a small gap between the cells. The sender (presynaptic) cell releases neurotransmitters such as serotonin, dopamine, and norepinephrine into that gap. These neurotransmitters are recognized by special receptors on the surface of the receiver cell (postsynaptic), which, upon this stimulation, relays the signal. During this process, approximately 10 percent of the neurotransmitters are lost; the remaining 90 percent are released from the receptors to be taken back by monoamine transporters into the sender cell (presynaptic). This process is called "reuptake." When there is a problem in this operation, some type of disorder appears in the person's behavior.

According to some theories, a lack of stimulation of the receiver cell (a postsynaptic neuron) at a synapse can

cause depression. In order to stimulate this receiver cell, SSRIs, as their name implies, inhibit the reuptake of serotonin only from the three neurotransmitters. In contrast, TCAs inhibit the reuptake of both serotonin and norepinephrine. When medication is used, serotonin stays in the synaptic gap longer than it normally would so that it can be recognized again by the receptors of the postsynaptic cell and the process can be repeated, thus the postsynaptic cell can finally be stimulated fully, as it should have been originally.

MEDICATION SIDE EFFECTS

Adverse effects of SSRIs include general side effects, suicidality, sexual side effects, and "discontinuation syndrome." Specifically, during the first four weeks of treatment with SSRIs symptoms may include nausea, drowsiness, headache, changes in weight and appetite, changes in sexual behavior, increased feelings of depression and anxiety, tremors, and increased sweating. These symptoms usually disappear after the adaptation period, but they are highly individual and drug-specific.

Regarding suicidality, there have been many accusations by patients and their families that SSRIs cause suicidal ideation and behavior. However, there is little scientific support for these claims, and manufacturers of SSRIs usually have vehemently denied them. But in early 2006 GlaxoSmithKline announced to the media that new meta-analysis of their clinical trial data revealed a statistically significant higher frequency of suicidality in patients treated with their SSRI, paroxetine (Paxil) (GlaxoSmithKline, May 2006, "Clinical Worsening and Suicide Risk," Press release; www.healthfoundation.healthspace.eu/health/antidepressants-paxil.php).

Regarding the sexual side effects, SSRIs can cause various types of sexual dysfunctions such as anorgasmia, erectile dysfunction, and diminished libido (Landen et al. 2005; Hu Xh et al. 2004). It is believed that sexual dysfunction is caused by an SSRI-induced reduction in dopamine. If the postsynaptic receptors 5-HT2 and 5-HT3 are stimulated, they decrease dopamine release from the Substantia Nigra. Because of these problems, the SSRI fluoxetine (Prozac) was recently classified as a reproductive and developmental toxin by the Center for the Evolution of Risks to Human Reproduction (CERHR), which is an expert panel at the National Institute of Environmental Health Sciences and people were advised to avoid it.

Finally, regarding the discontinuation syndrome, SSRIs have not been found to be addictive. However, a sudden discontinuation of their use may cause both somatic and psychological withdrawal symptoms that collectively are called the "SSRI discontinuation syndrome." These reactions are different from and usually less significant than the withdrawal symptoms of drugs such as opium, alcohol, or cocaine, but occasionally they have been extreme, and some patients can never withdraw completely from the SSRI drugs. In some cases, stopping the use of SSRIs can cause unpredictable and irregular acts and behaviors (e.g., violent rages, suicidal ideation), as well as an intensification of previous symptoms. In Europe, SSRI products cannot be advertised as "non-habit-forming," as they are in the United States. According to the World Health Organization, SSRIs meet the definition of "addictive" (Tamam and Ozpoyraz 2002).

Serotonin toxicity, commonly referred to as "serotonin sydrome," is a toxidrome (a form of poisoning) caused by medical treatment. Increased serotonin levels in the central nervous system can result from the use of archetypal serotonergic drugs, examples being the specific or selective serotonin reuptake inhibitors (SSRIs). The toxicity of SSRIs increases with greater dosages, but overdose of an SSRI alone is not fatal in healthy adults. The toxicity can be fatal, however, when drugs with different mechanisms are mixed together. The most common combination of therapeutic drugs likely to raise serotonin to a fatal level is the combination of MAOIs with SRIs or TCAs (Gillman 2004; Isbister et al. 2004). The duration of an episode of serotonin toxicity depends on the type of drugs that precipitated it. Many of them have durations of less than twenty-four hours, and side effects or toxicity will subside over this time, without specific treatment, if one or all of the offending drugs are reduced or ceased completely. As of the mid-2000s there was no evidence of permanent or long-term neurological effects or damage from serotonin toxicity (Whyte 2004).

In approximate order of seriousness (from least to most serious), the symptoms of serotonin toxicity, according to Dunkley (2003), include:

1. neuromuscular hyperactivity: tremor, clonus, myoclonus, hyperreflexia, and (only in late or severe stage) rigidity, which may effect truncal muscles;
2. altered mental status: excitement, agitation, and (only in late or severe stage) confusion;
3. autonomic hyperactivity: diaphoresis (excessive sweating), fever, mydriasis (eye dilation), tachycardia (elevated heart rate), moderately elevated blood pressure, and tachypnoea (rapid breathing).

The usual clinical picture is of a hypervigilant or agitated patient with tremor and hyperreflexia. Clonus and myoclonus (involuntary muscle contractions) usually begin in lower limbs and may spread and become generalized. Pyramidal rigidity (a rigidity of certain muscles) is a late development (usually it happens when MAOIs have beed mixed with SRIs) and may impair respiration if it affects truncal muscles. Serious toxicity is indicated by

high rigidity, a fever higher than 38.5 degrees Celsius, and an increasing PaCO2 (arterial carbon dioxide pressures).

SEE ALSO *Anxiety; Depression, Psychological; Dopamine; Drugs of Abuse; Emotion; Neuroscience; Psychoneuroendocrinology; Psychopathology; Suicide*

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SERVICE, SELECTIVE

SEE *Selective Service.*

SERVITUDE

Servitude is a relationship between two people in which one person, the servant, has to work for the benefit of another person, the master, without the right to quit and seek other employment freely. Typically, the master may sell or give the servant away under some conditions and may be thought of as having a property right in that person. In some cases, the master may be a corporate entity such as a government or business. Normally, the servant receives only basic food, shelter, and clothing from the master, although the servant's rights to own or receive property vary widely.

Servitude has existed throughout human history, and ancient civilizations organized almost all labor under some type of master-servant relationship. The peak periods for servitude in Western civilization were during the late Roman Republic (late second to mid-first centuries BCE), when almost all productive labor was performed by slaves, and during the seventeenth, eighteenth, and early nineteenth centuries in the European colonies of the Americas, where the majority of workers producing for the market worked under some form of servitude.

The relationship between master and servant is both economic and personal. Masters and servants have an unequal relationship, of course. But this does not prevent masters from seeing servants as social as well as economic assets and taking care of them beyond the minimum required to keep a valuable worker productive. And it does not prevent servants from seeing their masters as patrons as well as employers. These sorts of feudal relationships may be more or less present, depending on a number of variables, including the connection of the plantation or workshop to a wider marketplace; the potential profits to be gained from servants' labor; whether master and servant live together; whether they share a common language, ethnicity, culture, or religion; and the values taught by their culture and religion.

In addition, there are generally capitalist elements to the master-servant relationship: The servant is also a worker who produces the goods that the master needs. Often the master is a participant in a competitive marketplace where productivity is all-important and the servant has little stake in the master's success in the market. The balance between feudal and capitalist elements in the master-servant relationship is responsible for many of the differences in servants' treatment under different forms of servitude.

Servitude and free labor are normally incompatible. Free laborers resent servants and masters because servitude depresses wage rates and because they may feel discriminated against by the feudal relationship to the extent that any exists. For example, working people in the Northern United States in the early nineteenth century opposed slavery in the Southern states not so much because of their belief in universal principles of human rights, but because they feared that the "slave power" of the Southern planters might impair their own freedom. By their response that Southern slaves were treated better than Northern workingmen, Southern apologists for slavery actually fed these fears. Rural landholders who are heavily invested in being masters, both in economic terms and as a part of their identity, tend to resist the end of servitude, but the bourgeois often see servitude as inefficient and ideologically unsound. Thus servitude tends to change forms or decline as capitalist free labor rises.

Servitude has existed in many forms around the world and in virtually all times and places. Among the forms of servitude are slavery, indenture, debt servitude, serfdom, prison labor, conscription or corvée, and ethnic or lineage servitude.

SLAVERY

Slavery is distinguished from other forms of servitude by being lifelong and heritable. In Western traditions, the children of an enslaved woman are usually slaves regardless of the status of the father, although this may not be true in some non-Western slave systems. The slave is the personal property of the master, and that property right can be transferred for cash. Slave systems, like other forms of servitude, have always had legal and customary restrictions on the masters' right to exploit slaves' labor, abuse or neglect slaves, or transfer them to another owner. Free people can be enslaved, most commonly as a result of capture in wartime, but also as a legal punishment. Slaves can be freed, or manumitted, by their masters as a reward for service or in return for payment, although there are often legal and customary restrictions to the practice.

One tends to think of slavery as being tied to race, and in the Americas in the early modern period this was certainly the case. Prior to the fifteenth century, however, most slaves in Europe, Asia, and the Middle East were of similar ethnicity to their masters, and this was commonly true of slaves in antiquity. Certainly the equation of slavery and African origins did not exist before the fifteenth century. Having the same or a similar ethnicity and religion as one's master, however, conferred few or no legal rights enforceable against the master.

Millions of people came from Africa to the Americas, the Middle East, and the Mediterranean as slaves between the fifteenth and nineteenth centuries. The modern African diaspora is mostly the product of the slave trade. In the Islamic world, slaves were commonly employed as personal retainers—household employees, administrators, and soldiers—rather than agricultural laborers. As in the Western world, most Islamic slaves were brutally exploited, but some were able to rise to positions of great power, delegated by their master but no less real. Egypt was ruled by a *junta* of slave soldiers, the Mamluks, for several centuries. The Ottoman Empire was ruled by a sultan but administered by a grand vizier and his assistants, who were the sultan's slaves.

Most countries abolished slavery in the nineteenth century, and as a legally sanctioned system it is very rare today. Most of what is called slavery in modern times, such as the imprisonment of young women in the sex trade or of workers in sweatshops, is more properly classified as indenture or debt servitude. Slavery in the individual, permanent, heritable sense still exists in a few African and Middle Eastern countries. Slavery is formally outlawed everywhere but is accepted by custom and social practice in Mauretania, Sudan, Yemen, Somalia, and many other areas in the region not under the effective jurisdiction of national governments.

INDENTURE

Under indenture, the property right of a master in a servant is transferable but limited in time, and the children of the servant are usually free. The conditions under

which indentured servants work are governed by contract, custom, and sometimes by law. Indenture typically occurs when free people more or less voluntarily agree to indenture themselves for a period of time in exchange for some benefit, usually financial, although they might be tricked or coerced into signing a contract.

Many European immigrants to the Americas in the seventeenth and eighteenth centuries came as indentured servants, having agreed to work for a period of five or seven years in exchange for transportation to America and a small grant of land, livestock, and farm equipment at the end of the contract. Some were prisoners or were forced to accept indenture in order to avoid imprisonment, while others were actually kidnapped off the street; but most signed up willingly enough in order to escape horrible poverty in Europe.

In general, indenture is no longer legal, but it is still quite common. Many people sign employment contracts, and those contracts can legally contain penalties for nonfulfillment, but individuals are not forced to work against their will. Outside the law, however, many illegal migrants from East Asia sign indenture contracts with the smugglers who bring them to the United States, the Middle East, or elsewhere. These contracts are not legal in any country, but they can be enforced by extralegal means by the criminal masters. In some cases, masters have considerable power in local political systems and are able to enforce theoretically illegal contracts using governmental power, so it is harder to claim that indenture has been completely outlawed.

DEBT SERVITUDE

In debt servitude, the master gains a property right over the servant similar to indenture, and that property right can be bought and sold. However, instead of the servitude being limited in time, it lasts until the servant pays off a debt. The master is typically in charge of the accounting so this may take quite a while. In some systems, the debt is heritable, as is the servant status. This is called peonage.

In Spanish America after the collapse of the *encomienda* system (a sort of ethnic servitude) in the sixteenth century, wealthy landowners ensured a steady supply of farm labor by subjecting the local peasants to peonage. The peons were required to buy their goods at the landowner's store and were paid in scrip that could only be exchanged there. They were encouraged to borrow against the value of the coming year's crop, and inevitably found their debt, and thus their labor obligation, increasing year by year.

A modern form of debt servitude is common in the sex industry. Young rural women are sold by their parents in order to satisfy a debt and find themselves working in brothels until the creditor is satisfied. This frequently lasts until age or disease makes the woman unfit for profitable work in prostitution.

As in indenture, the limited nature of debt servitude tends to weaken the feudal ties between master and servant. Masters generally have little compunction about "releasing" servants who become unprofitable, often leaving them destitute. No country's laws permit debt peonage today, but influential masters often get the support of local officials and criminals are able to enforce debt servitude without benefit of police power.

SERFDOM

Serfs were servants tied to the land under a feudal system. Serfs worked for the owner of the land under conditions typically fairly tightly regulated by law and tradition. A wide variety of rules applied, but typically the master could call upon a serf to perform a specific set of tasks (tend a certain field, for example) or provide a certain amount of labor (so many days or so many hours a day, for example) during the agricultural cycle. The serf could not be bought or sold without the land to which he or she was attached. Medieval peasant villages often provided much of their own government, but the master-serf relationship generally gave the master some sort of legal jurisdiction as well as a right to labor service, and the serf gained some right to protection, support in illness and old age, and other social services from his or her master. The serfs' traditional rights to use the soil as they saw fit often kept landowners from developing their land, and the abolition of serfdom proved advantageous to progressive landlords in the early modern period, if not to the serfs themselves.

In seventeenth-century Russia, on the other hand, masters gained the right to transfer serfs fairly easily from one piece of land to another in response to the rapid expansion of agriculture into eastern lands captured from nomadic peoples. Subsequently, by a legal fiction, serfs could be transferred from one master to another without a transfer of land, and the condition of the Russian serf became similar to that of a slave, subject to being bought and sold as an individual. In medieval Western Europe, on the other hand, serfs had stability in their villages and could be locally influential farmers with considerable wealth and security.

No country permits serfdom today, and relationships of this type are rare.

PRISON LABOR

In a prison labor system, property rights to servants are owned not by an individual but by the government. Governments might exercise this right directly or transfer it to a private party in return for rent. The servitude is a

punishment for a real or pretended crime, is limited in time by the prisoner's sentence, and is not heritable.

In nineteenth-century Australia, much of the productive labor was performed by prisoners, whose labor was leased by free settlers. Free laborers resented prison labor, though, as it drove down wages and discouraged free migration, so as each state's economy matured, it stopped accepting transported prisoners. In the American South in the aftermath of the Civil War, imprisonment was a tool of social control over the newly freed black population. Landowners rented prisoners' labor, which helped defray the cost of the huge prison systems. Other prisoners worked on chain gangs to build new infrastructure or produce products the state needed. In Stalinist Russia, prisoners performed much of the labor used to develop the Siberian industrial plants, which produced the weapons that helped win World War II.

Prison labor is very common today. The United States has laws against the importation or transport across state lines of products made by prisoners, but states still use prison labor for many items used by their governments, the most famous being license plates. Chinese factories sometimes contract with the prison system for labor, although this must be concealed if the products are to be exported.

CONSCRIPTION OR CORVÉE

In conscription or corvée systems, free individuals are required to work for their government for a certain period of time as a condition of citizenship or residence. Conscription generally refers to military service, while corvée implies forced civilian service, often as labor on infrastructure projects. The service is generally limited in time, either for the duration of a conflict or for a certain fixed period.

Conscription reached its height in the age of mass armies in the first half of the twentieth century. Millions of conscripts, often serving very much against their will, fought on all sides of the world wars of that period. Conscription into the British navy during the seventeenth and eighteenth century was less organized, accomplished by press-gangs of sailors who would literally kidnap men and force them onto ships, where they would serve for years.

Corvée labor was a feature of colonial practice during the second great wave of European colonialism in the nineteenth century. The most notorious example is the forced recruitment of rubber collectors in the Belgian Congo. Workers' families would be kidnapped and raped or beaten if the worker ran away, and if workers didn't bring in enough product, their hands might be cut off by colonial soldiers. Nazi Germany also used corvée labor in which civilians taken from occupied territories were used to supplement prison labor in the arms industry.

Conscription is still very common today. Many countries consider military service obligations to be a part of civic education for their citizens. Corvée labor is still found in many developing countries on a limited scale, often used for road repair or urban beautification campaigns.

ETHNIC OR LINEAGE SERVITUDE

As with prison labor and conscription, in ethnic or lineage servitude the owner is a group: an ethnic group, a powerful family, or a government. The servants generally owe their labor collectively as well. A particular ethnic group, defeated nation, family, village, or other collective entity will be required to furnish a certain amount of labor to their masters under conditions set by custom or law.

The best-known example of this in European-controlled territories is the *encomienda* system in Spanish America during the colonial era. After the Spanish conquest, the defeated native peoples were required to pay tribute in the form of products and labor: so many bushels of corn and so many men for such an amount of time from each village. The government used some of the labor on its own infrastructure projects, to build cathedrals, fortifications, viceroys' palaces, and the like. Most labor service, though, was assigned to Spanish *conquistadors* on a temporary basis, not as a property right but as a payment for the masters' service to the state. Spanish masters might employ the laborers on their own land as agricultural workers, and the situation of the indigenous people in some cases approached that of serfs under Western European feudalism. Many *encomienda* Indians were sent to work in mines, where they were brutally exploited. The *encomienda* system deteriorated as the native population declined through the fifteenth century. Indians could also escape the *encomienda* system by leaving their villages and moving to the cities or living on lands owned by Europeans, who would employ them as wage laborers or peons.

Lineage slavery was prevalent in west Africa, as, for example, among the Fulani of Guinea. After the conquest of the Fouta Djallon highlands in the seventeenth century, the defeated peoples were adopted into Fulani clans but given distinctive surnames. The members of the "slave" lineage groups were given land to plant crops on, while the descendents of the conquerors continued their pastoral lifestyle. The obligation of farmers to pay in-kind tribute and labor service to herders continued under French colonial rule, but was abolished after independence. The sense of status remains, however, governing marriage choice, leadership within communities, and patron-client relationships, even though as servitude the system has ended.

THE AFTERMATH OF SERVITUDE

It is common for all forms of servitude to have lingering repercussions. Individuals can escape servitude, either at

the end of their term of service, by flight, or by manumission. Whole populations can escape through changes in laws and customs. But even a profound social revolution cannot erase the cultural memories of servitude, which continue to affect relationships between the descendants of masters and the descendants of servants for many generations. When mixed with racial differences, as can be seen in the United States in the twenty-first century, this can produce poisonous social dysfunction.

Sometimes, however, the aftermath is more positive. In the Roman Empire after the first century CE, for example, as the tide of conquest stopped and, with it, the flow of new slaves dried up, the gradual manumission of most slaves led to the establishment of a fairly benign system of patron-client relationships between patricians and the descendents of their freedmen. This patronage system formed the basis for the remarkable strength of Roman culture even after the barbarian invasions starting in the fourth century CE.

SEE ALSO *Capitalism; Exploitation; Feudal Mode of Production; Feudalism; Latifundia; Mode of Production; Prison Industry; Prison Psychology; Prisons; Selective Service; Slave Trade; Slave-Gun Cycle; Slavery; Slavery Industry; Working Class*

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SETTING, PRICE

SEE *Price Setting and Price Taking.*

SETTLEMENT

The term *settlement* has a number of meanings attributed respectively to the areas of law, finance, archaeology, and history. The legal definition generally refers to the act of settling a dispute or disagreement and reaching an agreement on the case, which then settles the claim. Often both sides of a lawsuit have a strong incentive to settle, chiefly to avoid costs. Courts can enforce settlements, and the party in default can be sued for breach of contract. In modern litigation, most suits are either withdrawn or settled, and settlements have become an important feature of the legal process. In rarer instances, the process of giving real estate, land, or some other heritage to someone is called a settlement, as is the respective document.

In finance the term generally describes the settling or payment of an account. More specifically, a settlement delivers securities or interests in securities to fulfill contractual obligations. This is usually preceded by trading and involves a purchase price. Before the introduction of the electronic settlement system in the 1990s, securities settlement was associated with a certain financial risk because it involved the physical movement of paper instruments, which were relatively easy to steal or forge. The transition from paper-based to electronic settlement is accomplished by immobilization, which means that securities are held by depositaries that are electronically linked to a settlement system. The ultimate goal is to dispense with paper instruments entirely (dematerialization).

The term *settlement* is also used to describe a specific human habitat that may include all sizes of human settlements, from hamlets to cities. More specifically, a settlement is the most rudimentary form of human habitation in a formerly uninhabited area. The term also refers to archaeological sites of human habitation. Settlement patterns and landscape approaches, which record material traces of human habitation, have become central for contemporary archaeology because they help explain long-term cultural and behavioral change. Thus archaeologists believe that the first European settlement in North America occurred around 1000 CE, when Viking explorers made their way to Vinland, which is probably modern Newfoundland.

For reasons unknown, European contact with the North American continent was interrupted until the sixteenth century, when the Spaniards reached Florida. In 1565 the Spaniards established the first permanent European settlement at Saint Augustine, a base for missionaries and (slave) traders. A few decades later rival European powers founded settlements along the east coast of the continent. Around 1600 the French assumed control over the Saint Lawrence Valley, founded the settlements of Quebec (1608) and Montreal (1642), and

during the century succeeded in bringing a few hundred settlers to Louisiana. While the Dutch controlled the Hudson River valley for much of the seventeenth century, the major settlements of the English Crown were established in Jamestown (1607) and Plymouth (1620). At the same time the Spanish also started to settle in the Southwest of the continent; however, it took them over 150 years to establish outposts on the coast of the Pacific.

In the Southwest and West the Spanish eventually yielded to American settlers who claimed the territory during the nineteenth century, a claim that not only involved land but also expressed a belief in individual liberty and economic opportunity. The settlement of the West was hastened by the Homestead Act of 1862, which granted 160 acres to any family that lived on the land for five years. In the American West a small village or collection of houses was called a settlement.

In the antebellum South, the term *settlement* sometimes referred to the living quarters of the slaves on a plantation. In urban areas of the United States, the word *settlement* acquired a different meaning. The term *social settlement* originated in London's East End, where Samuel Barnett and a group of Oxford students founded Toynbee Hall in 1884 by "settling" in a working-class area, not only to help their neighbors but to learn firsthand about the mounting problems of urbanization. Only two years later the first settlement house was founded in the United States, and the settlement movement grew rapidly, with Hull-House in Chicago, College Settlement in New York, and South End House in Boston becoming the most famous social settlements. Because settlements mainly worked for and among ethnically diverse urban populations, they became central to the reform efforts of the Progressive Era. The settlement idea also spread to western Europe, South Asia, and Japan; and the International Federation of Settlements and Neighborhood Centres was founded in 1926 as a worldwide association of national, regional, and local organizations working to strengthen communities in society.

SEE ALSO *Agricultural Industry; Cities; Colonialism; Finance; Law; Peasantry; Plantation; Settlement, Negotiated; Settlement, Tobacco; Settlements; Slavery*

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Anja Schüler

SETTLEMENT, NEGOTIATED

A settlement is a contract between two or more parties to resolve a legal dispute without a trial. Most civil cases are decided by settlement, and the contract usually incorporates the desire of the parties to give up their legal claims against one another in return for certain conditions written into the settlement agreement. When a settlement agreement is reached, it is usually submitted to the court with jurisdiction over the dispute in the form of a joint stipulation by the parties to be incorporated into an order. In suits where the plaintiff's claims have been satisfied by the payment of money, the plaintiff can simply file a notice with the court that the case has been dismissed.

Because litigation is expensive and parties may not have the financial resources to afford protracted legal proceedings, settlement is encouraged. A court may request, or order, the parties to a dispute to participate in a settlement conference or mediation to attempt to resolve their dispute before a trial is held. A mediation or settlement conference provides the parties with an opportunity to resolve their differences without a costly and time-consuming trial. Settlement talks also reduce the risks associated with a trial. In many cases, settlement negotiations lead to a more favorable outcome for the parties than a trial because the parties retain more control over the process. Courts tend to favor settlement negotiations as a way to promote judicial efficiency and reduce the backlog of cases on the docket.

In the interest of facilitating settlement, the law treats settlement discussions as confidential and the substance of such discussions as inadmissible at trial and other proceedings. In highly sensitive cases, if a settlement agreement is achieved, the agreement may require the parties to keep its contents confidential. It is important to note, however, that confidentiality is not possible in class action cases in the United States. Pursuant to Rule 23 of the Federal Rules of Civil Procedure and complementary state court rules, all settlements are subject to approval by the courts, and notice to be bound by a settlement must be

directed to all class members. Class action lawsuits are more likely to be resolved by a negotiated settlement given the number of parties and the scale of the potential damages involved. Other types of lawsuits that tend to result in settlement include personal injury lawsuits and product liability actions.

Courts will enforce a settlement in the same way they enforce other valid contracts. If a party breaches a settlement agreement, that party can be sued for breach of contract. In some jurisdictions, the original civil action can be revived if a party breaches the settlement agreement.

Settlements are exclusive to civil cases. In criminal proceedings, a prosecutor and defendant may enter into a plea bargain prior to trial. Similar to the class action context in civil proceedings, the judge in a criminal proceeding must approve the plea bargain reached by the parties.

SEE ALSO *Law; Settlement, Tobacco*

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SETTLEMENT, TOBACCO

From 1954 to 2006 three separate waves of civil litigation in the United States occurred against the tobacco industry based on claims of severe health problems associated with tobacco use. Tobacco industry corporations sued during this period included Philip Morris, R. J. Reynolds, Brown and Williamson, American Tobacco, United States Tobacco, British American Tobacco, Lorillard, and the Liggett Group. Also sued during this period were tobacco industry–affiliated organizations including the Tobacco Institute, Center for Indoor Air Research, and Council for Tobacco Research. All three of these affiliated organizations became defunct in 1999 due to the 1998 Master Settlement Agreement signed by the tobacco industry and attorneys general from forty-six states.

THREE WAVES OF TOBACCO LITIGATION

From 1954 to 1978 the first wave of 125 individual personal injury lawsuits mostly related to lung cancer were filed against the tobacco industry based on the legal theories of negligence, misrepresentation, and breach of warranty. The tobacco industry argued in its defense that there was no proven connection between smoking and disease. Few of these cases went to trial and none were decided against the tobacco industry.

From 1979 to 1993 a second wave of about two hundred individual personal injury lawsuits were filed against the tobacco industry using the legal theories of negligence, misrepresentation, breach of warranty, breach of product liability, and negligent failure to inform. In 1964 after the United States surgeon general's landmark report linked smoking to lung cancer, the tobacco industry continued to maintain in litigation that while there was no proven link between smoking and disease, smokers also assumed the risk when using tobacco due to health warning labels on cigarette packs. Cigarette warning labels were mandated by the federal Cigarette Labeling and Advertising Act of 1965.

Only eighteen of these cases were litigated with only one case filed in 1983 in New Jersey, *Cipollone v. Liggett Group, Inc.*, decided against Liggett Tobacco Company. In 1985 a jury awarded $400,000 to Tony Cipollone, the husband of the original plaintiff Rose Cipollone who had previously died of cancer. This decision was partially overturned when in 1992 the United States Supreme Court ruled there was no liability due to failure to warn of health dangers because of federal cigarette pack warning labels. The United States Supreme Court sent the case back to the New Jersey federal court to rule on the remaining legal claims. However, due to the expense of further litigation the plaintiff dismissed the lawsuit.

In the third wave of cases from 1994 to 2006, several individual and private class action lawsuits primarily in California, Florida, Oregon, Kansas, and Puerto Rico were decided against the tobacco industry using legal theories of torts, fraud, conspiracy, misrepresentation, breach of warranty, breach of product liability, and negligent failure to inform. Legal theories used in state class action cases included using statistics to ascertain if a percentage of Medicaid smokers suffered from disease due to smoking and violation of state tort, consumer protection, antitrust, and racketeering laws. This theory was used to make it easier to sue and win. It was much more difficult to win arguing direct causation between tobacco use and a disease and death. Statistical trends represent an easier form of proof.

The first important private class action lawsuit was *Castano v. American Tobacco* filed in federal court by sixty

plaintiffs' law firms on May 9, 1994, on behalf of all nicotine addicted individuals. While the class was certified by federal district Judge Okla Jones on February 17, 1995, this class was later decertified on May 23, 1996, by the U.S. Fifth Circuit Court of Appeals. The court ruled this class certification was inappropriate because there were too many differences in the plaintiffs' claims and wide differences in state laws making the case unmanageable. This decision initiated several new private and state class action lawsuits. The first state lawsuit was filed by Mississippi in 1994 followed by Florida, Texas, and Minnesota. Florida and Mississippi settled in 1997 and Texas and Minnesota settled in 1998 for a combined total of $40 billion allocated over twenty-five years adjusted for inflation and no spending restrictions.

In 1998 the Master Settlement Agreement with the other forty-six states was signed. Payments of $206 billion over twenty-five years adjusted for inflation were awarded to the states. Due to the lack of spending restrictions in the settlement, most states by 2006 had not provided minimal funding for state anti-tobacco programs as defined by best practices by the Centers for Disease Control and Prevention. These state anti-tobacco programs were to include community programs, school programs, youth enforcement, counter-marketing, cessation, and state anti-tobacco education programs.

2006 FEDERAL COURT DECISION

In the federal district court case of *United States of America v. Philip Morris USA Inc., et al.* filed by the United States Justice Department in 1999 and decided in 2006, Judge Gladys Kessler ruled that the tobacco industry's fundamental defense in litigation from 1954 to 2006 was a purported claim of insufficient evidence linking smoking to disease. Internally, however, the tobacco industry long acknowledged that cigarettes were harmful and also addictive.

Judge Kessler also ruled that those in the tobacco industry were racketeers as defined under the federal Racketeering Influenced and Corrupt Organizations Act. The court decision also ordered the tobacco industry to permanently refrain from making misleading statements regarding the health and safety of cigarettes and to make public corrective statements on the dangers of cigarette addictiveness and the serious health effects of smoking and secondhand tobacco smoke. This ruling was appealed by the tobacco industry and will be reviewed by a higher court.

EVOLUTION OF LEGAL FINDINGS

While the tobacco industry was highly successful in the first two waves of litigation that were filed from 1954 to 1994 on behalf of individual plaintiffs, the third wave of litigation from 1994 to 2006 represented a dramatic reversal of legal fortune for the industry. This reversal of legal fortune has been due to the advent of new legal theories including state Medicaid reimbursement and revelations of significant industry misconduct revealed in previously secret industry tobacco documents.

SEE ALSO *Disease; Foundations, Charitable; Settlement; Settlement, Negotiated; Smoking; Tobacco Industry*

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Michael Givel

SEVEN YEARS WAR

SEE *Quebecois Movement.*

SEX, INTERRACIAL

Public disapproval of and legal restrictions on interracial sex, or racial exogamy, have varied widely in civilization, but sex between members of different racial groups has remained common whenever people of different races have lived together. Attitudes toward interracial relationships have evolved since the Age of Discovery and are connected with trends in society, culture, politics, and economics.

THE SIXTEENTH AND SEVENTEENTH CENTURIES

The few people of color in England and in the English colonies in the late sixteenth century and early seventeenth century seemed to have been able to have white sexual and marital partners without great difficulty. Famously, John Rolfe (not Captain John Smith) married Pocahontas and brought her back to England to live with him in the 1630s. In other European countries at the time, interracial sexual relationships, both informal and sanctified by marriage, were not uncommon. In Spain and Portugal there was a long tradition of *mestizaje*, or race mixing, between whites, Moors (including people from black Africa), and Jews. These relationships were completely unremarkable until after 1492, when increasing restrictions on "New Christians" meant that those in mixed relationships and their mestizo children had a social handicap to overcome. Also after 1492 Spaniards and Portuguese began to have relations with Indians and Africans in the New World, and the mestizos who resulted from these unions often rose to high ranks in their colonial societies. *Limpieza de sangre*, or purity of blood, was an officially defined characteristic that could be purchased by someone whose ancestry was actually partly Indian or African. Nonetheless, mixed ancestry was a handicap for the children of the conquistadores and their Indian partners.

THE EIGHTEENTH AND NINETEENTH CENTURIES

From being somewhat unusual, culturally exotic, and a slight handicap for the resulting children in the sixteenth century, interracial sex and marriage became taboo (although still enthusiastically practiced) by the nineteenth century. White indentured servant women in Virginia in the eighteenth century who had children of color found their own indentures extended and sometimes their children sold into slavery despite the general legal provision that children follow the free or slave status of the mother. Thomas Jefferson's long-lasting relationship with his slave Sally Hemings was potent political ammunition for his opponents. Federalist newspapers at the time brought up the rumored relationship, and even centuries afterward defenders of his reputation try to explain away the evidence and deny that any relationship took place. Jefferson overcame these attacks—he was reelected despite the fact that the rumors were widely heard and apparently also believed. Many white men in the U.S. South before 1865 had unacknowledged informal sexual relationships with their slaves, and these relationships sometimes had negative consequences for the white partners if they became known. The increasing strength of racial separatist ideologies meant that these white men had to engage in a sort of hypocritical doublethink, supporting the idea of racial separation in their public lives while practicing interracial sex in private. By the mid-nineteenth century the southern diarist Mary Chesnut reflected the views of women of her class in her acid criticism of wealthy white men who fathered children with their slaves. In other slave societies in the Americas, the situation was somewhat less difficult for those white men who were involved in long-term sexual relationships with women of color. Men who wished to marry women of color generally had to give up some of their civil rights, and those in acknowledged long-term relationships could suffer in social regard and economic relationships with other whites. Men of color who had sexual relations with white women anywhere in the Americas were in great peril—the penalty could be death or, at a minimum, brutal physical punishment and sale to a faraway master. Outside the United States, white men who had informal sexual relations with women of color (as opposed to seeking marriage with them) faced few penalties in social regard and none at all under law. This led to a situation of considerable license, of which some men took enthusiastic advantage.

The traditional interpretation of interracial sex between whites and African American slaves (and between Spanish conquistadores and Indian women) is that these were rapes. Much recent research suggests that most children of mixed race in the slave societies of the Americas were the product of lasting relationships that produced a number of children. Often these relationships were between poor white men and slave or Indian women they worked or lived alongside, as, for example, that between Toussaint Charbonneau and Sacagawea from around 1800 until her death after 1810. It is unclear what inducements led the women to join and remain with their partners. However, in slave societies, although the children of a slave woman and a free man were born slaves, they had a much greater chance of gaining their freedom than did the children of two slaves. And the social price paid by a poor white man for being in an interracial relationship would be less than that paid by a wealthy planter such as Jefferson. Moreover, the price a slave owner or hacendado paid for regularly raping his slaves or peons was unrest in his workforce, and by the beginning of the nineteenth century there was a price paid in social regard in white society, especially in North America. Indeed the most notorious rake, Thomas Thistlewood of Jamaica, had numerous run-ins with his neighbors because of his general brutality toward slaves.

THE TWENTIETH CENTURY

After the abolition of slavery, restrictions on interracial sex became even more pronounced in most former slave societies in the Americas. These prejudices began to

strengthen even in places where there had been few or no slaves, such as in the northern states of the United States and in Britain and France. In former slave societies an ideology of white solidarity, reinforced by legal segregation, meant that even relationships between poor white men and women of color became less common. In contrast, in areas where there were many native people, such as Mexico and the Andean region of South America, informal relations between the races had always been common, but mixed marriages became more common and tolerated after independence from Spain. In Latin America there was a racial hierarchy, but sexual relationships and marriages between people from different levels of the hierarchy were not harshly punished. In the United States, though, by the early twentieth century antimiscegenation laws were common, affecting all interracial relations, not just those between blacks and whites. These laws remained in force until 1967, when they were ruled unconstitutional by the U.S. Supreme Court in *Loving v. Virginia*. Germany adopted harsh miscegenation laws under National Socialism (Nazism). South Africa had miscegenation laws under apartheid, and Israel in the early twenty-first century does not recognize marriage between Jews and non-Jews, although there is no attempt to hinder informal interracial sex. In other areas there have been no laws against mixed marriages or informal relationships, but in many places people in such relationships and their children have faced significant social handicaps, including active interference by the state in child rearing, as in Australia, where children of mixed native and white ancestry were routinely taken away from their parents by the state and raised in orphanages until the 1970s.

Informal restrictions and bureaucratic impediments to interracial sex have been much more pervasive and long-lasting than formal laws. In many places in the U.S. South and in the former slave societies of the Americas until the middle of the twentieth century, a man of color could be beaten or killed with impunity for having or even suggesting sex with a white woman. "Quadroon balls" in southern cities functioned to pair white men with women of color, but men sought to conceal their participation, and overt relationships with women of color had grave social consequences.

In the early twenty-first century throughout Europe and North America, men of color who are in sexual relationships with white women continue to suffer social penalties from both whites and fellow members of their minority group. Although white men in these societies often seek out women of color for casual sex—taking advantage of still-extant racial power differentials—more formal relationships invite some social consequences. Mixed-race couples in the United States still report cases of housing discrimination at higher rates than same-race minority families. The most serious prejudice in this regard is against relationships between blacks and whites—exogamy between whites and other racial groups is somewhat better tolerated by both those groups and white society. However, even exogamy between groups that are traditionally the targets of racial discrimination—as between blacks and Latinos or Asians in the United States—has attracted opponents within those groups.

However, restrictions on interracial sex and marriage are much weaker in the early twenty-first century than they were even in the mid-twentieth century. Popular culture bears witness, with interracial couples in movies and television not raising any eyebrows, and powerful people have successful political careers while married to members of other races (for instance, Clarence Thomas, associate justice of the U.S. Supreme Court).

EXPLANATIONS

The traditional explanation for prohibitions on exogamy is that people naturally fear the unfamiliar and find it distasteful. This begs the question of why many men from dominant groups in racially mixed societies often seek out women of other races for informal sex. Of course in some cases, as in sixteenth-century Mexico, there were few white women available, but even when there are many white women, white men often seek out women of color for at least informal relationships. Sociobiologists such as Jared Diamond (*The Third Chimpanzee*) argue that men seek to control sexual access to women they control—members of their own group—while undermining such attempts by males of other groups, thus providing a neat explanation for both restrictions on interracial sex and informal white male exogamy. The problem with sociobiological explanations is that human genetics changes slowly, whereas popular resistance to racial exogamy in Europe and North America has waxed and waned during the last five hundred years, a blink of the eye in evolutionary terms.

Much of the explanation for popular opposition to racial exogamy must lie in the realms of socioeconomic, cultural, and ideological changes. In the area of ideology, Christian religious teaching in the 1400s held that human beings had a single origin—as children of Adam and Eve. All people were human and fully eligible for all the sacraments, including marriage. Reformation thinkers did not deny this scriptural analysis, but the period saw the establishment of national churches in Protestant Europe, and membership in the national church meant citizenship. Inasmuch as slave owners and colonial masters were reluctant to grant the rights of citizenship to their racial subordinates, they also were reluctant to think of them as fellow Christians and marriageable. In any case, the Enlightenment reduced the influence of Christian teaching over Europeans and also raised the possibility that the

various races had separate origins. Eighteenth- and nineteenth-century racial ideologies tended to dehumanize the racial other and encouraged whites to preserve racial distinctions in all things, including sex and marriage. The high point of this ideological current was in the early twentieth century, when a harsh racial climate, given scientific sanction by the eugenics movement, spurred the adoption of antimiscegenation laws in most states in the United States that did not already have them. The Virginia law overturned by *Loving*, for example, was enacted in 1924 and specifically cited eugenics as one of its motivations. There had been miscegenation laws on the books in a number of states in the South before the Civil War, but all such laws in former Confederate states were wiped off the books during Reconstruction. (Maryland was an exception since it remained loyal during the Civil War and was not "reconstructed.") When the laws returned in the period of Jim Crow, they generally used eugenic arguments. The eventual failure of these laws is a signpost of the generalized decline in the power of racist ideologies in the late twentieth century.

Larger historical forces also had an impact on public attitudes toward interracial sex. At the end of the fifteenth century Europeans had little contact with the racial other outside of Iberia, and it was precisely in Spain and Portugal where there were some restrictions on interracial sex. Those few non-Europeans who lived outside of Spain and Portugal had no difficulty selecting partners of other races. As Europe spread its economic and political control over the entire globe, Europeans felt a need for racial solidarity in the face of much more numerous subject peoples. Support for racial endogamy can be seen as part of a package of ideological responses to the problems presented by colonialism. One strong argument for this point of view is that restrictions on interracial sex and marriage were strongest in those places where Europeans (or their descendants born in the Americas) ruled over large numbers of non-European peoples: in Spanish and Portuguese America in the sixteenth and seventeenth centuries and in the United States and South Africa in the late eighteenth century, the nineteenth century, and the early twentieth century. As non-Europeans gained political power in the late twentieth century, these restrictions began to diminish. However, this explanation does not account for the persistence of popular resistance to racial exogamy or for the opposition among groups traditionally the subject of racial discrimination.

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Stewart R. King

SEX AND MATING

Humans in all cultures engage in various forms of mating, including marriage or committed pair-bonding as well as short-term, casual sexual relationships. Given that reproduction is at the heart of natural selection, decisions about mating are of central adaptive significance. Accordingly, mating is one of the most heavily studied areas in the biological and social sciences. Recent theoretical and empirical findings in human mating research have identified key sex differences in mate preferences, as well as neural and hormonal correlates of mating.

ENTERING RELATIONSHIPS AND THE TRAITS THAT ARE VALUED

Mate preferences may be separated into broad questions of "whether and what" (Li and Kenrick 2006). For long-term relationships, the sexes tend to be equally careful about *whether* to enter. When considering minimum requirements for a marriage partner, both sexes have equally high standards. However, men tend to be more eager than women to enter short-term sexual relationships, and report significantly lower standards for them, especially for one-night stands. When approached by an opposite-sex stranger who immediately makes an invitation for casual sex, 75 percent of men said yes whereas 100 percent of women said no.

To explain men's lower short-term mating thresholds and mate preferences in general, at least two major theories have been proposed. Though often presented as competing explanations and hotly debated, sociocultural and evolutionary theories may be compatible in that the former focuses on more immediate, proximate causations, whereas the latter looks to more distal, ultimate explanations. Sociocultural theories explain sex differences by looking to social norms and the influence of larger groups. According to this view (Eagly and Wood 1999), societal

norms tend to influence men to be more agentic and women to be more passive across many endeavors, including sexual behaviors. Thus, the difference in willingness to enter short-term relationships may be due to gender role differences, whereby men are socialized to be sexually autonomous and women are socialized to be sexually restrained.

According to evolutionary theorists (Buss and Schmitt 1993; Gangestad and Simpson 2000), mating psychologies may have developed in response to specific adaptive issues that long- and short-term mating pose to women and men. Men's eagerness for sex can be traced back to differences in minimum obligatory parental investment. Whereas men are physiologically required to contribute only a few sex cells to offspring, women must provide substantial pre- and postnatal resources if offspring are to survive. Because offspring present much higher potential costs to women if they are the results of uncommitted sex, short-term relationships are reproductively less favorable for women than for men. For long-term relationships such as marriage, both sexes invest substantially in the relationship and in raising children, so both sexes may have evolved to be selective about taking on a long-term partner.

Given that a relationship will occur, an equally important consideration concerns *what* characteristics are valued. When considering long-term mates, men not only value physical attractiveness more than women do, but they also prioritize finding a minimum level of physical attractiveness in their partners. Women value social status more than men do, and women prioritize obtaining a minimum level of social status in long-term mates. Beyond satisfying these priorities, both sexes favor other characteristics such as kindness and intelligence, and ideally prefer a well-rounded mate. For short-term mates, both sexes tend to prioritize having a certain level of physical attractiveness before being concerned about other characteristics.

From a sociocultural perspective, women have less access to status, power, and economic resources than men do. To achieve upward mobility, women place relatively greater emphasis on status-related traits in their marriage partners. However, if the intended mating duration is short-term, then economic constraints should be less relevant and both sexes should be free to prioritize the physical attributes of their potential short-term mates, as men do for long-term mates.

Why is physical appearance prioritized over other desirable traits? Because of time constraints and variation in women's reproductive capacity, ancestral men may have had a need to first and foremost identify long- and short-term partners who were healthy and fertile. Accordingly, men are inclined to place initial value on physical features that signal youth, sexual maturity, and fecundity. However, other characteristics are also important for long-term relationships, and once a moderate amount of physical attractiveness has been verified, more attention is paid to other desirable characteristics.

In contrast to female fertility, male fertility remains relatively constant over the life span. However, men vary in their ability to provide resources for offspring. Because ancestral men who were higher in status had better access to resources, women may have evolved to prioritize social status in long-term mates to ensure essential resources for offspring. For short-term mates, resources are less relevant, and women may value physical attractiveness in response to the adaptive issue of identifying partners with desirable heritable characteristics.

According to this "good genes" theory (Gangestad and Simpson 2000), pathogens encountered during development can lead to visible deviations from bilateral symmetry. A healthy set of genes and immune system allow a person to resist such pathogens. Because testosterone suppresses the immune system, those who simultaneously exhibit testosterone-rich features and bilateral symmetry effectively advertise having genes that are resistant to local pathogens. That is, only those with desirable good genes can afford to be loaded with potentially damaging testosterone *and* remain symmetrical in appearance. Indeed, male symmetry is correlated with testosterone-mediated secondary sexual characteristics such as muscularity and masculinity, and men whom women consider physically attractive exhibit more facial masculinity and bilateral symmetry. Symmetrical men are more desirable as short-term affair partners and have more sexual partners than asymmetrical men. In ancestral environments, women who mated with physically attractive men may have accrued reproductive benefits by passing on good genes to offspring.

PHYSIOLOGICAL MECHANISMS INVOLVED IN MATE CHOICE

For humans and other biparental species, trade-offs exist between parenting and mating, and individual hormonal profiles likely mediate both male and female reproductive strategies along these lines (Clutton-Brock 1991). In order for conception to occur during a woman's menstrual cycle, a set of hormonal conditions must be present. First, a mid-cycle rise in luteinizing hormone must occur, signaling impending egg maturation. Second, the ovarian hormones estradiol and progesterone must be at optimal levels, with estradiol rising prior to ovulation and progesterone hitting peak levels after ovulation has occurred. Natural selection may have shaped women's mating psychologies to parallel such changes in physiology.

For females, it would be reproductively ideal to find mates who can provide both material and genetic benefits to offspring; however, obtaining both sets of features in one male is difficult. Therefore, most women may need to make strategic trade-offs by selecting long-term partners who are higher in investment potential than sexual attractiveness. Moreover, these trade-offs may have selected for a dual-mating psychology in which women seek primary partners who provide investment while obtaining better genes through extra-pair mating (i.e., mating with individuals other than one's primary partner).

Indeed, around ovulation, female sexual desire becomes stronger and the number of sexual fantasies increases. However, these are directed not toward primary partners, but toward potential affair partners. This is particularly true if the primary partner is less physically attractive and lacks indicators of genetic fitness, including strength, social dominance, and symmetry. When near ovulation, women prefer masculine and symmetrical faces in men, and the scent of symmetrical men. For women who are in a steady relationship, in-pair sex tends to occur consistently across the cycle, whereas extra-pair sex occurs significantly more often on high-fertility days.

Males also face strategic trade-offs involving differential allocation of effort to mating or parenting. The resolution of these trade-offs depends on cues from the environment. Men tend to allocate more effort to mating to the extent to which they possess indicators of good genotypic quality. When men do not have the attributes that make them attractive to females, or otherwise face limited sexual opportunities, they tend to invest more heavily in a single mate's offspring. For example, African tribal evidence shows that men of high status have more wives and spend less time on parenting than men of low status.

Testosterone is a steroid hormone that plays a key role in mediating trade-offs in male mating strategies. Higher testosterone levels are associated with greater promiscuity and less parenting. Men with higher testosterone are less likely to have ever married and, if they do marry, are more likely to engage in extramarital sex. The testosterone of men who marry falls as they transition from bachelor to husband, and testosterone remains low among stably married men.

At the neural level, the hormones oxytocin and vasopressin appear to be involved in the formation of pair bonds between males and females. Recent insight into the neuroendocrine basis of monogamous pair bond formation comes from the comparative study of two rodent species. The prairie vole and the meadow vole are two very closely related species that differ markedly in mating strategies. Male and female prairie voles form lifetime pair-bonds, whereas meadow voles are highly promiscuous. During copulation, oxytocin and vasopressin are released in the brain. Oxytocin facilitates affiliation and partner preference behavior in female prairie voles, and vasopressin facilitates affiliative and parenting behavior in male prairie voles. Exogenous injections of vasopressin to the male prairie vole and oxytocin to the female facilitate mate preference behavior without the occurrence of mating. Likewise, blocking the receptors for these hormones will prevent pair-bonding from occurring after copulation. In contrast, similar injections do not influence social behavior in the meadow vole.

Though human brains release oxytocin and vasopressin during sex, relatively little is known about their precise functions in humans. Nevertheless, findings from other species provide a starting point, and ongoing efforts to understand the changes in gene expression for oxytocin and vasopressin receptor density may help to clarify individual differences in human mating strategies.

SEE ALSO *Evolutionary Psychology; Romance*

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SEXISM

Sexism commonly describes attitudes, statements, acts, strategies, or methods that lead to the discrimination, marginalization, or oppression of individuals or groups based on their sex. Coined by the New Women's Movement during the 1970s, the term was rapidly employed by the newly developing fields of women's and gender studies as a tool to analyze processes that discriminated against and marginalized women. Sexism against women pervades all areas of their lives, public and private, legal and economic, educational and social, religious and psychological, and gender relations in particular. It chiefly manifests itself in disparaging attitudes and behavior toward women and can legitimize their harassment, rape, and trafficking. Like racism, sexism has affected the lives of women worldwide and throughout history.

In philosophical thought, sexism is considered a subcategory of *essentialism*, a term British philosopher Karl Popper (1902–1994) introduced in 1935. In present-day women's and gender studies, the term essentialism usually has a pejorative, or derogatory, meaning, due to the models of biological determinism associated with it. For example, essentialist positions claim that all members of a group share a permanent and inalterable list of characteristics, such as the idea that women across all historical and cultural boundaries exhibit certain "womanly" attributes like motherliness. Essentialist thought has contributed to establishing gender as a distinct category of analysis, a distinction that a number of feminist authors, most notably Judith Butler (b. 1956), started to dismiss in the 1990s. Essentialist arguments, especially in gender discourses, tend to side with conservative political thought and the upholding of the status quo, thus often contributing to sexism. They are, however, sometimes used by progressive political groups such as the gay rights movement, which claims that homosexuality is rooted in biology.

Extreme forms of sexism against females are called *misogyny*, or hatred of women. Misogyny, or its weaker form, *gynophobia* (fear of women or femininity), is usually ideologically or psychologically founded. It is expressed in sexist attitudes and practices and can be institutionalized in political or social structures. Unlike antifeminism, a term that is often used synonymously but refers to attitudes against women's emancipation, misogyny implies an inherent inferiority of women and thus represents essentialist ideas of femininity. A second form of sexism commonly identified is sexism against men, also known as *reverse sexism*. Like sexism against women, it can develop extreme forms, called *misandry*, or hatred of men. A milder form is called *androphobia* (fear of men or masculinity). While the sexist view that women are superior to men is not as prevalent, it has become part of the public discourse.

The publication of Kate Millet's *Sexual Politics* (1970), which challenged the myth of a "natural" difference between the sexes and the resulting hierarchical social structures that considered men superior, laid the groundwork for a comprehensive critique of sexism by feminists, mainly in the United States and Europe. Millet's book focused on dominant theories in literary analysis and revealed the sexist nature of the literary canon, but she also analyzed psychological, sociological, and anthropological theories that cause and reinforce existing hierarchies between the sexes and define a woman as something that deviates from the (male) norm.

In the 1970s other feminist scholars and activists in the United States and Europe began to analyze and challenge sexist practices in schools and other educational institutions and identified various ways schools discriminated against girls. Among their most important grievances were sex-biased curricula and textbooks, practices of

classroom interaction favoring boys, sex-typed course and career counseling, and male domination in math and science classes as well as in educational administration. Obviously, some of these problems are easier to rectify than others—policy decrees, for example, can successfully be employed to change the contents of textbooks but may be less effective in altering sexist classroom interaction.

The study of sexist language, gestures, and behavior became another focus of feminist academics and activists who identified various strategies employed to ignore women in academic and everyday discourse to make them "invisible" or silence them by sexist jokes or male "codes." Other studies found that sexist attitudes and practices were widespread in the workplace to marginalize women and keep them away from higher paying jobs, both white and blue collar, which are considered fields reserved for men.

SEXUAL HARASSMENT

Feminist legal scholars and lawyers started to battle sexism, specifically sexual harassment, in the economic world. Originally defined as treatment that persistently provokes, pressures, frightens, and otherwise discomforts coworkers, harassment has increasingly acquired a sexual component not restricted to demanding sexual favors but rather identifying discriminatory demands such as wearing gendered forms of dress or performing stereotypical feminine duties not included in the job description. In 1991 the media coverage of Supreme Court Justice Clarence Thomas's confirmation to the U.S. Supreme Court, which spotlighted the claims of sexual harassment alleged by his former employee Anita Hill, was central to installing both forms, *quid pro quo* and hostile work environment harassment, into the public mind. Largely an American invention, sexual harassment continues to generate much controversy. While a narrow sexual definition of harassment has undergone some criticism in the United States, chiefly due to supposed vague standards and an infringement of the right to free speech, this definition has begun to spread to other nations around the globe.

In the United States in particular, the antidiscrimination measures of the 1970s and 1980s have largely succeeded in making sexist attitudes and practice socially unacceptable. Many experts think, however, that the rapid changes in gender roles that occurred in the family and the workplace during those decades were the main cause for the transformation of gender relations in other areas of social life. Some scholars find that at the beginning of the twenty-first century, sexism ceased to be an exclusively female problem and sexist attitudes against men are on the rise. Masculinist movements and fathers' rights organizations, for example, have started to promote men's rights and have addressed a number of legal issues in particular, such as paternity leave and equal access to children. Other experts contend that sexism is becoming less relevant altogether, at least in industrial societies. Undoubtedly, gender biases and sexist practices remain more intact in societies where women are limited to the private sphere.

SEE ALSO *Affirmative Action; Discrimination; Discrimination, Wage, by Gender; Essentialism; Family; Family Functioning; Family Structure; Femininity; Feminism; Gender; Gender Studies; Masculinity; Misogyny; Motherhood; Political Correctness; Women's Studies*

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Anja Schüler

SEXUAL ABUSE

SEE *Torture.*

SEXUAL HARASSMENT

Sexual harassment is the creation of an overtly sexualized work or school dynamic that adversely affects the experience of one or more workers or students. The "sexual" in *sexual harassment* relates to motive rather than content; while sexual harassment may involve sexually explicit language, images, or actions, the key is that the person being harassed is targeted because of his or her gender. Sexual harassment may be perpetrated by an individual or a group; perpetrators and victims may be of opposite genders or the same gender, men or women. In many jurisdictions, sexual harassment is illegal; workers or students who are adversely affected by harassing behavior may seek compensation through the courts.

In the United States, Title VII of the Civil Rights Act of 1964 prohibits gender-based discrimination in the context of employment and imposes civil liability on employers who engage in or tolerate such behavior. The text of Title VII makes it "an unlawful employment practice for

an employer … to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's … sex." Originally, lawmakers and judges understood the statute to prohibit disparate treatment of men and women with respect to the tangible and economic aspects of employment: hiring, promotion, retention, pay, and economic benefits.

Even under this limited understanding of Title VII, courts recognized that one form of sexual harassment—called "quid pro quo sexual harassment"—was prohibited. This most explicit form of sexual harassment involves a person in a position of authority making express sexual demands on a subordinate with an implied or overt threat of retaliation if the sexual demands are not met. For example, if a supervisor tells a subordinate that he can keep his job only if he is willing to engage in sexual acts with the supervisor, that is quid pro quo sexual harassment.

In 1986, the U.S. Supreme Court recognized a more subtle—and more controversial—form of actionable sexual harassment: "hostile work environment" sexual harassment. A hostile work environment may be created through unwanted sexually suggestive remarks, sexually charged jokes, or sexual touching. The key difference between a claim of quid pro quo sexual harassment and hostile work environment sexual harassment is the injury or harm experienced by the victim; in a hostile work environment claim, the alleged harm is psychological stress rather than an explicit deprivation of job benefits. Sometimes hostile work environment claims involve an allegation of "constructive discharge": The work environment was so hostile, so unbearable, that the victim felt compelled to quit and was thus constructively discharged from employment.

Champions of equal rights hail laws prohibiting both quid pro quo and hostile work environment sexual harassment as important tools for equalizing the economic opportunities of men and women. One of the more controversial sexual harassment cases in U.S. history, *Jensen et al. v. Eveleth Taconite Company*, involved women hired to work in a taconite processing facility in Eveleth, Minnesota; the case was significant because it was the first sexual harassment case successfully brought as a class action. In journalistic accounts of the litigation, many of the women noted that the mines offered wages dramatically higher than those offered by any other employers in the area. For many of the women involved in the litigation, they had to work at the mine or collect welfare benefits to feed their children.

Critics of hostile work environment claims charge that the line between a relaxed and collegial work environment and a hostile environment is not clear enough for employers to develop workable human resources policies. The U.S. Supreme Court has attempted to address this issue by insisting that Title VII is not a "general civility code" (*Oncale v. Sundowner Offshore Services, Inc.*, 523 U.S. 75 [1998]); "[w]hen the workplace is permeated with discriminatory intimidation, ridicule, and insult that is sufficiently severe or pervasive to alter the conditions of the victim's employment and create an abusive working environment, Title VII is violated" (*Harris v. Forklift Systems, Inc.*, 510 U.S. 17, 21 [1993]).

Although most sexual harassment law focuses on the work environment, sexual harassment can occur and even be legally actionable in other contexts. Most notably, as mentioned above, sexual harassment may occur in a school environment. In the United States, Title IX of the Education Amendments of 1972 prohibits gender discrimination in education. Courts have construed Title IX to prohibit sexual harassment; students who are sexually harassed by teachers, administrators, or even other students may have a cause of action against the school that tolerated the harassment.

SEE ALSO *Discrimination; Inequality, Gender; Law; Patriarchy; Political Correctness; Sexism; Workplace Relations*

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Wendy L. Watson

SEXUAL ORIENTATION, DETERMINANTS OF

A person's sexual orientation concerns whether he or she is sexually attracted to people of the same sex, the opposite sex, or both. Starting in the nineteenth century, scientists, physicians, and mental health specialists have offered numerous theories of how people develop sexual orientations. What determines a person's sexual orientation remains a question of much scientific, psychological, and social scientific controversy. Current biological theories focus on genes, brains, and hormones.

For much of the twentieth century, scientists believed that gay men and lesbians had gender-atypical hormone levels in their bodies; for example, they thought that lesbians had more testosterone and less estrogen in their systems than did heterosexual women. Recent studies have shown that almost all lesbians and gay men have the same

circulating hormone levels as their heterosexual counterparts. In response, current hormonal theories propose a link between sexual orientation and prenatal hormone levels. As prenatal hormone levels play a role in the organization of the developing brain, the idea is that different prenatal hormones levels could explain sexual orientation differences among adults. This prenatal hormonal hypothesis is premised largely on observations that early hormone exposure determines both the repertoire of mating behaviors exhibited by laboratory animals and the morphology of particular brain regions believed to modulate those behaviors.

BRAINS

Over the past few decades, confirmed sex differences in the size of several brain structures in various laboratory animals have lead to speculation regarding parallel differences in the human brain associated with sex and sexual orientation. Several of the structural sex differences identified in animals involve specific cell groups in a region of the rodent hypothalamus involved in regulating particular mating behaviors. One such anatomical sex difference in rodents develops in response to sex differences in early exposure to sex hormones and involves a part of a rodent's hypothalamus called the sexually dimorphic nucleus of the preoptic area (SDN-POA). In the laboratory, damage in the vicinity of the SDN-POA decreases mounting behavior, and electrical stimulation of the region elicits mounting behavior. These observations established the belief that the SDN-POA participates in regulating male sexual behavior. That belief lacks critical support because the destruction of the SDN-POA of male rats does not, however, disrupt mounting behavior. The function of the SDN-POA remains to be elucidated.

The belief that the SDN-POA participates in regulating sex behavior in rats led to the search for a comparable nucleus in humans. The human third interstitial nucleus of the anterior hypothalamus (INAH3) has been identified as the most promising candidate. This nucleus is much larger and contains substantially more neurons in presumed heterosexual men than in women. By extrapolation from animal work, this human sex difference is widely believed to reflect sex differences in early hormone exposure, but this hypothesis is exceedingly difficult to test in humans. The AIDS epidemic has, however, made it possible to study this nucleus in men whose medical records indicate homosexual behavior. These studies suggest that the volume of INAH3 may be smaller in homosexual men than in heterosexual men; however, that finding must be viewed tentatively for various reasons, including that all the homosexual men in these studies died from complications of AIDS.

Researchers have also sought to identify variation with sex and sexual orientation in the bundles of fibers that connect the left and right hemispheres of the brain. These studies have produced conflicting results regarding variation with both sex and sexual orientation.

GENES

Inside each person's cells are chains of DNA that act as a recipe for making that person. Determining the role a portion of genetic material plays in the development of a particular human trait is complicated, although there has been some success for specific anatomical and physiological traits. It is much more difficult to identify genetic material that influences complex psychological traits such as sexual orientations. One way to infer the extent to which a trait is genetic is to study twins. Identical twins share 100 percent of their genetic material. Fraternal twins are genetically only as closely related as non-twin biological siblings, sharing only 50 percent of their DNA. Because identical twins are genetically identical, differences between them are due to their pre- or post-natal environment, not genes. This inference does not work in the other direction. If identical twins have the same trait, it might be because they were raised in the same environment.

Sophisticated studies have assessed sexual orientation in identical twins, same-sex fraternal twins, non-twin biological siblings, and similarly-aged unrelated adopted siblings. The idea is that if sexual orientation is genetic, identical twins should have the same sexual orientation, and the rate of homosexuality among the adopted siblings should be equal to the rate in the general population. If, on the other hand, identical twins and adopted siblings are as likely to have the same sexual orientation, then genetic factors make very little contribution to sexual orientation. Subjects recruited through ads in gay publications looking for volunteers with twins of the same sex were asked to rate their own sexual orientation, the sexual orientation of their relatives, and for permission to contact their siblings. In these studies, identical twins of gay men and lesbians were substantially more likely to share their sibling's sexual orientation than were fraternal twins.

The result of such twin studies are difficult to interpret because gays and lesbians seem more likely to volunteer themselves and their twin siblings for such studies when they have gay or lesbian siblings. When the proportions of identical and fraternal twins who are concordant for homosexuality are examined in databases of twins who were not selected on the basis of sexual orientation, the estimates for heritability of homosexuality are much lower than when subjects are selected from newspaper ads recruiting on the basis of sexual orientation.

Building on the twin studies, scientists have tried to isolate the portion of the human genome that hypotheti-

cally influences sexual orientation. One such study began with the observation that some studies had found that homosexuality in men seems to follow the maternal line of the family. Some have interpreted this pattern among gay men's families, which has only sometimes been observed, as suggesting that male homosexuality, similar to color blindness, is inherited from one's mother on the X chromosome. To test the hypothesis that the X chromosomes contains genes that influence sexual orientation, families with at least two gay brothers were recruited from a sample of families in which homosexuality appeared to follow the maternal line. DNA samples were obtained from two gay brothers in each subject families. Samples were then analyzed using linkage analysis to determine how frequently the gay brothers had inherited markers from the same X chromosome of their mother. Because mothers have two X chromosomes but only pass one to their sons, one would expect two sons to have a 50 percent chance of sharing markers from the same maternal X chromosome. One research team, however, reported that when both sons were gay, 64 percent appeared to have inherited a particular portion of the same maternal chromosome (known as the Xq28 region). This finding was interpreted as suggesting that genes influencing sexual orientation in men may reside on the Xq28 region. That suggestion must be viewed cautiously because it has been criticized on the basis of multiple technical and statistical concerns, and two independent research teams have failed to replicate it.

More generally, linkage analysis is best suited for discovering the genetic basis of traits determined in a genetically simple manner rather than traits that are influenced by several genes working in concert. This technique has mistakenly indicated that a specific genetic sequence plays a role in the development of a particular trait. Such mistakes are especially likely in the case of genetically complex traits, cognitively mediated psychological/behavioral traits, or those traits strongly affected by environmental factors.

In addition to linkage analysis, some studies have looked for differences related to sexual orientation in candidate genes chosen on the basis of their involvement in the hormonal mechanisms of sexual differentiation and development. To date, these studies have not produced positive findings.

In any event, genes in themselves cannot directly cause a behavior or a psychological phenomenon. Genes direct RNA synthesis that in turn leads to the production of a protein that may influence the development of psychological dispositions and particular behaviors. There are many intervening pathways between a gene and a behavior or a behavioral disposition and even more intervening variables between a gene and a cognitively mediated behavior.

None of the most popular scientific theories of the determinants of sexual orientations are well supported. This does not mean, however, that sexual orientations are not biological in the sense that all psychological phenomena require the activity of a living brain. Rather than asking whether or not sexual orientations are biological, the more salient question is what role biology plays in the development of sexual orientations. Biology would still be a factor in sexual orientation if there are multiple pathways to the development of a particular sexual orientation. Biological factors may also play a role if they influence temperamental or personality factors that shape how a person interacts with the environment and experiences of it, which in turn affects the development of one's sexual orientation.

SEE ALSO *AIDS; Gender; Gender, Alternatives to Binary; Sexual Orientation, Social and Economic Consequences; Sexuality; Twin Studies*

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Edward Stein
William Byne

SEXUAL ORIENTATION, SOCIAL AND ECONOMIC CONSEQUENCES

Sexual orientation is generally considered a personal characteristic that reflects an individual's sexual behavior, attraction, or self-identity. Individuals can have a primary orientation toward others of the same sex (gay, lesbian, or

homosexual people), toward people of both sexes (bisexual people), or toward people of a different sex (heterosexual people). Social scientists have studied the influence of sexual orientation on social and economic outcomes by comparing the experiences of lesbian, gay, and bisexual (LGB) people with those of heterosexual people. Overall, research shows that sexual orientation is an important influence on health and on economic and social well-being.

In discussions of the social and economic effects of sexual orientation, most interest is focused on LGB people. While controversy exists over exactly how many LGB people live in the United States or other countries, most studies find that 2 to 6 percent of people report sexual behavior, attractions, or a self-identity toward people of the same sex, making people who are LGB a clear sexual minority in numerical terms. Furthermore, heterosexuality is generally the socially accepted sexual orientation, while being LGB is often considered an inferior and stigmatized status. Stigma puts LGB people at a social and economic disadvantage and implies that their lives may be affected by prejudice and discrimination.

One important characteristic of sexual orientation influences the kind of disadvantages experienced by LGB people. Sexual orientation is not a visible characteristic, unlike age, race, or sex, and therefore LGB people can sometimes keep their sexual orientation invisible or allow others to assume that they are heterosexual. Invisibility sometimes allows LGB people to escape ill-treatment, but the activities and effort required to hide sexual orientation—commonly known as being "in the closet"—may be considerable and can cause psychological and physical stress, not to mention social discomfort.

When LGB people "come out" of the closet and become more visible in their families, workplaces, and communities, they may be subjected to behavior that reflects prejudice, such as vocal disapproval, social rejection, discriminatory treatment, or even physical violence. Both actual rejection and disapproval and the fear of rejection and discrimination reduce the participation of LGB people in their families, in religious organizations, and in some community activities. The personal effects of prejudice also sometimes include increased depression and anxiety, as well as other physical and mental health conditions. Numerous studies also show that LGB young people are more likely to consider suicide. In contrast, studies show that supportive workplace policies, laws, and coworkers create environments that encourage LGB people to come out, which often improves their workplace lives and mental health.

When some businesses tried to tap into an affluent untapped market by wooing LGB consumers beginning in the 1990s, some people and policymakers wondered whether LGB people actually face economic discrimination. However, many studies by economists show that the reality of economic disadvantage trumps the myth of gay affluence. Gay men earn less than heterosexual men with the same job-related characteristics, with a pay gap of 10 to 32 percent in the United States. Lesbians earn no more than comparable heterosexual women, and in some studies they earn more than heterosexual women. However, the gender pay gap means that a lesbian couple always earns less than a heterosexual married couple and less than a gay male couple, so lesbians are also not the "dream market" that businesses are said to seek. Also, many employer benefits policies extend health care or survivor benefits to the spouses of employees, but only a minority of employers grant those same rights to LGB employees' same-sex partners, resulting in lower total compensation for LGB employees.

Scholars do not agree on the causes of the wage patterns. Some argue that gay men's earnings disadvantage reflects discrimination in the labor market, an argument bolstered by the fact that few states (or countries) forbid employment discrimination based on sexual orientation. Others argue that the wage variances stem from variations in family formation for LGB and heterosexual people. A gay man who partners with another man may not need to support a partner and children, reducing gay men's incentives to gain added job skills and experience and eventually reducing gay men's earnings relative to heterosexual men who might plan to be a sole provider for a family. However, the fact that gay men have more education than heterosexual men suggests that gay men's commitment to investing in job-related skills is at least as strong as for heterosexual men. Likewise, lesbians know that they will not have a male partner, so they might have more skills and experience than heterosexual women, who might also be more likely to leave the labor market for short periods to raise children or do other family-related work. This compensation for differences in family structures could disguise or compensate for any less visible discrimination that lesbians might face that would otherwise reduce their earnings.

The issue of partnership highlights another realm of social and economic disadvantage for LGB people in creating families. Census 2000 counted roughly 600,000 same-sex couples in the United States, with one in three female couples and one in five male couples raising children under eighteen years old. However, in most places LGB people form these families in the absence of access to marriage or full parental rights. Several countries (beginning with the Netherlands, Belgium, Spain, and Canada) and the state of Massachusetts allow same-sex couples to marry, while some other states and European countries provide a different and usually lesser form of legal recognition for same-sex couples. Without the right to marry,

couples have no access to important legal rights and benefits that enhance family security and economic well-being.

The social and economic differences in treatment across sexual orientation outlined here have prompted a growing social and political movement around the world to reduce stigma and prejudice and to improve the well-being of LGB people. As a result of these efforts, more LGB people are living open lives, more jurisdictions forbid discrimination based on sexual orientation, more employers treat LGB and heterosexual employees equally, and more states and countries are granting rights to same-sex couples.

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M. V. Lee Badgett

SEXUAL SELECTION THEORY

Although Charles Darwin is best known for his theory of evolution by natural selection, he was also fascinated by the differences between males and females in all species. His 1871 book, *The Descent of Man and Selection in Relation to Sex*, documented these differences and suggested an explanation for them. Darwin pointed out that traits such as peacock tails that occur in only one sex could be of two types: The primary sexual characters enable males to produce sperm and females to produce and nurture eggs; the evolution of these traits is easy to explain via natural selection. The secondary sexual characters, such as the long tails and bright colors of many male birds or antlers on male deer, are often detrimental to survival, either because they make males more conspicuous to predators, or because they are physiologically costly to produce.

Darwin said that secondary sexual characters could evolve in one of two ways. First, they could be useful to one sex, usually males, in fighting for access to members of the other sex. Weapons like the antlers on male ungulates or horns on male beetles are advantageous because better fighters get more mates and have more offspring. The second way was more problematic. Noting that females often pay attention to traits like long tails and elaborate plumage during courtship, Darwin concluded that the traits evolved because the females preferred them. The sexual selection process, then, consisted of two components: male-male competition, which results in weapons, and female choice, which results in ornaments.

Although competition among males for females seemed reasonable to Darwin's Victorian contemporaries, the idea that females could do anything as complex as discriminate between males with different degrees of development of a character like colorful plumage was one they could not swallow. Alfred Russel Wallace, who independently arrived at some of the same conclusions about evolution and natural selection as Darwin, was particularly vehement in his objections.

Largely because of this opposition to the idea of female choice, sexual selection as a theory lay dormant for several decades. It was not until the 1960s that evolutionary biologists began to reconsider the portrait they had painted of animal social life. Probably the most important new insight came from work by Robert Trivers, who pointed out that females and males differ in how they put resources and effort into the next generation, which he termed parental investment. Females are limited by the number of offspring they can successfully produce and rear. Because they are the sex that supplies the nutrient-rich egg and often the sex that cares for the young, they leave the most genes in the next generation by having the highest quality young they can. Which male they mate with is important because a mistake in the form of poor genes or no help with the young could mean that they lose their whole breeding effort for an entire year.

Males, on the other hand, can leave the most genes in the next generation by fertilizing as many females as possible. Because each mating requires relatively little investment, a male mating with many females sires many more young than a male mating with only one female. Hence males are expected to compete among themselves for access to females, and females are expected to be choosy and to mate with the best possible male they can.

A classic example is the elephant seal. These animals spend most of the year at sea. In late fall males arrive at isolated beaches and establish a dominance hierarchy, often by vicious fighting and throwing around of their weight, which can exceed three tons. Female elephant seals, about a third the size of males, arrive later, already

pregnant. Males herd them when they get to shore; after having her pup, a female is sexually receptive and mates with (usually) the male who has herded her and controls her movements. Males that can sequester more females have a chance for enormous payoffs: A study of an elephant seal colony showed that, in one year, a single male fathered about 90 percent of the pups in the colony. It thus pays to compete with other males because males that do so leave more genes in succeeding generations. Females, on the other hand, have one pup regardless of how many males they mate with. This species is oriented more toward male-male competition than female choice, and the best fighter wins.

In other species female choice predominates. For example, satin bowerbirds are members of a family in which males build elaborate structures during the breeding season. The male collects objects and carefully places them around the bower, after which he waits by it for a female to appear. If she does, he begins a species-specific display that may involve song, complicated courtship dances, or other enticements. Sometimes the female is won over, stays with the male, and mates. Sometimes she watches for a while and leaves. Either way, her choice determines the outcome.

In a handful of species the usual pattern is reversed: Males provide a large contribution to females and offspring, while females benefit by mating with many different males. Katydid males, for instance, sing to attract females for mating. But once a female arrives, she stands to gain much more than a fertilization of her eggs. The males of many katydids produce a gelatinous, nutrient-rich structure called a spermatophylax, which is given to females along with a packet of sperm and which the female eats while the sperm is fertilizing her eggs. It supplies her with protein she often does not get in her usual diet, which enables her to lay more eggs. Females with larger nuptial gifts, as they are called, have more offspring.

But the gifts have an even bigger return if the female recipient is herself relatively large, because larger females lay more eggs. A male cannot give many spermatophylaxes to females in a season, as they can average up to 30 percent of his weight. Therefore, in many species of katydids, male choice rather than female choice occurs, with males seeming to gauge the size of prospective mates and rejecting them if they are too light. Male competition in katydids is much less important than male mate choice; instead, female competition may be a major force, and males choose from among available females. This further supports the notion that the crucial factor is which sex limits the reproductive capacity of the opposite sex.

SEE ALSO *Alpha-male; Darwin, Charles; Fertility, Human; Hierarchy; Natural Selection*

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SEXUAL TRAFFICKING

SEE *Pimps; Prostitution.*

SEXUALITY

Surveys of human sexuality serve several purposes. They provide reports of sexual norms to supplement information from sources such as media, church, and medicine. They expand the vocabulary for discussing sexual desire and behavior. They offer a unique and fascinating lens through which to examine social trends. Finally, findings from scientific sex surveys provide evidence for public policy initiatives, education, treatment, and funding regarding sexual health and the prevention of sexually transmitted infections.

Nearly 750 sex surveys were conducted in twentieth-century America. These range from massive nationwide investigations to small scholarly studies to questionnaires in consumer magazines such as *Redbook*, *Cosmopolitan*, and *Playboy*. The focus of these surveys ranges widely as well, covering subjects as diverse as marriage, divorce, fertility, contraception, masturbation, intercourse, orgasm, abstinence, gender equality, homosexuality, rape, adolescence, aging, sex education, pornography, and sexually transmitted infections. This entry highlights a few of the large American sex surveys and indicates their contributions and the story they tell about our culture.

OUR VICTORIAN FOREMOTHERS

The earliest American sex survey was a study of forty-five wives by Stanford physician Clelia Mosher (1863–1940), conducted between 1892 and 1912. Mosher's findings

Notable twentieth-century sex surveys

How the questionnaires were focused

Survey author	Date	Survey sample	Number of respondents	Men's attitudes	Women's attitudes	Physical aspects of sex	Social aspects of sex	Spiritual aspects of sex
Clelia Mosher	1892–1912	Married women	45		X	X	X	X
Katharine B. Davis	1929	Women	2,200		X	X	X	X
Gilbert Hamilton	1929	Married couples	200	X	X	X		
Alfred Kinsey et al.	1948	Men	5,300	X		X	X	
Alfred Kinsey et al.	1953	Women	5,940		X	X	X	
Morton Hunt	1974	Women and men	2,026	X	X	X	X	
Shere Hite	1976	Women	3,019		X	X	X	
Alan Bell and Martin Weinberg	1977	Gays and lesbians	4,639	X	X	X	X	
Carol Tavris and Susan Sadd	1977	Women	100,000		X	X	X	
Karla Jay and Allen Young	1979	Gays and lesbians	5,000	X	X	X	X	
Philip Blumstein and Pepper Schwartz	1983	Heterosexual and gay couples	6,066	X	X	X	X	
Edward Brecher	1984	Women and men over age fifty	4,246	X	X	X	X	
Edward Laumann et al.	1994	Women and men	3,432	X	X	X	X	
Carol R. Ellison and Bernie Zilbergeld	2000	Women	2,632		X	X	X	
Gina Ogden	1999–2002	Women and men	3,810	X	X	X	X	X

Table 1

suggest that women at the turn of the twentieth century may have been much more erotically responsive than the stereotypical corseted, repressed Victorian housewife. In fact, for Mosher's respondents, marital unhappiness was caused less by wifely frigidity than by sexual desires their husbands were unable to gratify.

In 1929 another female physician, Katharine Bement Davis (1860–1935), surveyed 2,200 women, including unmarried women and lesbian women. Her findings reveal how little sex education was available to women at that time. Although 56 percent of her sample reported that they had had "adequate instruction" before marriage, their responses show that information was limited to anatomical facts and that these women longed for more knowledge about the relational aspects of sex and the "sex emotions." (Davis 1929, p. 64). Again, these women were more sexually responsive than one might predict of early twentieth-century women. Nine percent of Davis's respondents reported intercourse daily or more often, some over a span of many years. Many reported sexual fantasies, frequent masturbation, and also mutual masturbation with male and with female partners. One woman reported experiencing sleep orgasms (Davis 1929, p. 359), another said she became "drunk on erotic passages in books" (p. 291), and another reported the ability for spontaneous orgasm, that is, orgasm without physical touch: "I can induce 'that queer feeling' almost any time by thinking about it" (p. 191). The sexological literature did not investigate the phenomenology of spontaneous orgasm until more than sixty years later, when researchers Gina Ogden and Beverly Whipple did so (Whipple, Ogden, and Komisaruk 1992).

INVESTIGATING MARRIAGE: NARROWING THE DEFINITION OF SEX

During the 1920s, 1930s, and 1940s, sex surveys were generally conducted by male researchers and funded by universities or government agencies, practices that have continued into the first decade of the twenty-first century. The best-known surveys of this period focused on preserving the institution of marriage—at a time when social values had been disrupted by economic depression, two world wars, and increased independence for middle-class women, who were moving into workplaces traditionally occupied by men. While Davis was conducting her survey, psychiatrist Gilbert Hamilton (1877–1943) surveyed one hundred white, married, "highly cultured" New York couples. His questions were based on assumptions that narrowed the definition of sex and laid down the pattern for subsequent surveys. Some of these assumptions were:

- *Sex* meant penis-vagina intercourse, whereas romance, kissing, and petting meant preparation for intercourse (hence the notion of *foreplay*).
- *Sexual satisfaction* meant physiological orgasm with vaginal spasms that could be measured.
- *Sexual interest* was proportional to the number of partners a respondent reported.

Hamilton's survey did not inquire about physical aspects of sexual response beyond intercourse, or about the emotions or meanings of sex. This and subsequent surveys found men to have more interest in sex than women—more partners, more frequent intercourse, and earlier first intercourse. Women were found to be less interested and satisfied—with some 80 percent anorgasmic on intercourse.

KINSEY AND FOLLOWERS: THE QUANTIFICATION OF SEX

Alfred Kinsey (1894–1956) and his colleagues introduced quantitative methods and random sampling that set the gold standard for all future sex survey methodology. The Kinsey Reports were the first massive investigations of American sexual behavior. *Sexual Behavior in the Human Male* (5,300 men) was published in 1948. *Sexual Behavior in the Human Female* (5,940 women) was published in 1953. These Kinsey surveys addressed six "outlets" of sexual response: masturbation, petting, homosexuality, premarital intercourse, extramarital intercourse, and intercourse with animals. Perhaps Kinsey's best-known contribution was his notion that sexual orientation is not necessarily fixed, but often fluctuates over a range of behaviors and fantasies during the lifespan. He placed heterosexuality and homosexuality on a continuum—using a zero-to-six scale. On this scale, "zero" indicates that sexual desires and behaviors involve only partners of the opposite sex, and "six" indicates that sexual desires and behaviors involve only same-sex partners. Most of us fall somewhere between, said Kinsey—hence a "Kinsey-three" indicates bisexuality.

The Kinsey questionnaires were exhaustive, with hundreds of questions, many doubling back to validate earlier ones. In addition, Kinsey trained interviewers to ask questions that were designed to be nonjudgmental and to minimize yes-or-no evasions. He assumed that all of his respondents had rich sexual experiences. For instance, to explore the still taboo subject of masturbation, Kinsey instructed his interviewers to ask: "How do you masturbate?" rather than "Do you masturbate?" This technique placed the burden of negative proof on the respondents—and as illustrated in the 2004 movie *Kinsey*, gave permission for even shy respondents to tell eloquent stories.

Far-reaching as these Kinsey questions were, they nonetheless focused on the performance aspects of sex and omitted emotions and meanings, which Kinsey stated had no place in scientific inquiry. For Kinsey, orgasm was the index of sexual health, and number of partners was the index of sexual interest.

Two large random surveys acted as follow-ups for American sexual attitudes in the generations after Kinsey. Morton Hunt's 1974 survey of 2,026 women and men, *Sexual Behavior in the 1970s*, was sponsored by *Playboy* magazine and showed an increase in oral sex and intercourse outside of marriage. Edward Brecher's (1911–1989) survey of 4,246 women and men, *Love, Sex, and Aging* (1984), sponsored by the Consumer's Union, showed that the Kinsey generation, now age fifty and older, was still sexually active.

THE SEXUAL REVOLUTION: GAYS, LESBIANS, AND WOMEN

In 1969 the Stonewall riots in New York City ignited national consciousness about gay rights (Carter 2004). During the 1960s and into the pre-AIDS 1980s, a number of sex surveys focused on gay and lesbian behaviors. Allen Bell and Martin Weinberg (1977) surveyed 4,639 gay men and lesbian women. Their questionnaire, too, was based on performance; the findings suggested that gay men were more interested in sex—as defined by genital stimulation, physical orgasm, and number of partners—and that lesbian women were more interested in romantic emotional commitment. *The Gay Report* (1979) by Karla Jay and Allen Young surveyed another 5,000 gays and lesbians and came to a more complex conclusion: that lesbians engaged in plenty of sex, but defined it more broadly than gay men did—including love, relationship, and their partners' pleasure, as well as genital stimulation and multiple partners. In 1983 sociologists Philip Blumstein and Pepper Schwartz corroborated this view in their survey of heterosexual and gay couples—a total of 6,066 individuals. In their report, *American Couples*, they wrote that lesbians' reports of sex were usually not genitally focused and that heterosexual men and women diverged on what they considered sexual experience to include.

The changing roles of women were a major focus of this period. Sociologist Shere Hite's 1976 survey of 3,019 women popularized the notion of clitoral orgasm to challenge the male-centered focus on penis-vagina intercourse. Her findings were criticized by the scientific establishment because her respondents, drawn largely from the National Organization for Women (NOW), were self-selected rather than randomly selected. Nonetheless, *The Hite Report* became an international best seller as it reflected women's political and medical advances toward sexual

freedom. In 1960 the birth control pill had provided a means of avoiding unwanted pregnancy, in 1973 the U.S. Supreme Court's *Roe v. Wade* decision legalized abortion throughout the country, and various sex-positive books for women had paved the way for Hite's material, especially *Our Bodies, Ourselves* (1970), Betty Dodson's *Liberating Masturbation* (1974), and Lonnie Barbach's *For Yourself* (1975).

Hite's popularity ushered in a boom of further sex surveys by women in the 1980s and 1990s, especially questionnaires in large-circulation women's magazines. *The Redbook Report on Female Sexuality* (1977) by social psychologists Carol Tavris and Susan Sadd had over 100,000 respondents—married women, who disclosed "the good news about sex." Yet these women's surveys reverted to the usual indicators for sexual satisfaction: interest in intercourse, number of partners (usually heterosexual), and orgasm as goal.

THE GENDER GAP IN SATISFACTION

The last large institutional sex survey of the twentieth century (3,432 men and women) was conducted by Edward Laumann and three colleagues: John Gagnon, Robert Michael, and Stuart Michaels. Published in 1994 as *The Social Organization of Sexuality*, the survey's purpose was to research risk factors for HIV/AIDS and other sexually transmitted infections. But the findings harked back to pre-Kinsey surveys that focused on commitment and marriage while downplaying affairs, casual sex, and gay and lesbian relationships. Also like the pre-Kinsey surveys, the Laumann findings underscored the sexual shortcomings of women. The highly publicized statistic that emerged from the Laumann findings is that 43 percent of the women respondents reported sexual dissatisfaction or dysfunction, as distinct from 31 percent of the men. This gender discrepancy in satisfaction was reaffirmed in Laumann's 2006 survey of 27,500 people in twenty-nine countries and reflected what has become a thematic limitation of sex survey research: focus on intercourse and omission of meaningful issues such as attraction, love, intimacy, and commitment.

In the late 1990s, two large independent surveys were conducted by sex therapists. Their survey questions, largely drawn from their clinical practices, focused on feelings and meanings. Carol Rinkleib Ellison's 2000 study of 2,632 women, *Women's Sexualities*, conducted with Bernie Zilbergeld, underscored the developmental and intergenerational aspects of sex and love. Gina Ogden's study, "Integrating Sexuality and Spirituality" (ISIS) (2002), showed that for 3,810 American women and men, sexual experience involved emotional, intellectual, and spiritual dimensions as well as physical. Her multidimensional ISIS model is in *The Heart and Soul of Sex: Making the ISIS Connection* (2006).

Into the first decade of the twenty-first century, however, institutional sex surveys continued to explore intercourse as the primary index of sexual behavior—as evidenced by the fourth cycle of the Guttmacher Institute's National Survey of Family Growth from 1982 to 2002 (38,000 men and women), which reported that nine in ten Americans engaged in premarital intercourse. But this study did not explore the emotional or cultural dynamics that might help us understand the motivations for premarital sex, or why it is important for us to know about this behavior.

CONCLUSIONS

Sex surveys influence the national conversation about sex, but their definitive value is limited. First, these surveys skew the overall understanding of human sexual experience by omitting significant portions of the population, such as the immigrant, uneducated, and poor, who are also most at risk of sexual violence and disease, and also top echelons of the upper class, who control many of our ideas and institutions. Another limitation of sex surveys is their attempt to reduce sexual experience to numbers, which tends to reinforce stereotypes and assumptions rather than provide the nuanced information needed for assessing norms, medical interventions, and public policy initiatives. Another limitation is researcher bias. Institutional sex surveys, such as the Kinsey and Laumann studies, profess scientific objectivity. But true objectivity is impossible; all sex surveys are effectively prejudged by the questions they ask and by how the results are interpreted.

For sex surveys to expand their usefulness and influence, researchers at the institutional level need to acknowledge the intrinsic complexity of sexual experience and broaden their focus to include feelings and meanings as well as intercourse-related frequencies. In addition, they need to reach populations previously undersurveyed. Perhaps some may be reached via the Internet if the constraints of electronic reporting do not further oversimplify questions, answers, and analysis of results.

SEE ALSO *Gender; Gender Gap; Hite, Shere; Kinsey, Alfred; Marriage; Romance; Sexual Orientation, Determinants of; Sexual Orientation, Social and Economic Consequences*

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Gina Ogden

SHADOW PRICES

A shadow price of a resource is its value to the decision maker. Shadow prices frequently equal market prices, but there are many instances in which they differ from each other. Methods for measuring shadow prices are closely related in the constrained optimization literature of mathematical programming, and in the econometrics literature. Within the constrained theoretical optimization framework, the shadow price (often called a "dual value") is the change in the objective function of the optimal solution, which is the result of a small change in the value of a constraint. Each constraint has an associated shadow price, which is represented by a Lagrange multiplier. This can be illustrated by considering the Lagrange multiplier associated with revenue maximization based on the sale of a commodity x at price p, where the firm faces the constraint that the amount available to sell cannot exceed X. The optimal solution is for the firm to sell X units of x, and the shadow price of x is p. If one considers this same problem, but subject to a production function constraint, namely $x = f(L)$, where L is the quantity of labor employed, the intuitive result is that the shadow price of a unit of output equals its marginal cost.

If the individual is assumed to maximize utility, then the interpretation of a shadow price becomes less intuitively obvious. Let us assume that the individual wishes to maximize the utility derived from leisure and consumption of good x, subject to two constraints: (1) money stock plus earned income must equal or exceed his expenses, and (2) leisure plus work hours cannot exceed total available hours. In this case, each constraint will be binding (since neither money nor time will be wasted), and each shadow price has an interesting interpretation. The shadow price of time equals the marginal utility of leisure. The shadow price of money (expressed in "utils" per dollar) equals the marginal utility of consumption divided by the price of the good x. This outcome shows that all scarce resources have a positive price, even if it is only expressed in terms of utility. That is, even if a scarce good or input is not sold directly in a market, it still has a shadow, or implicit, price. In a decentralized market, the ratio of market prices equals the ratio of shadow prices, and shadow prices are expressed in terms of utility, while actual prices are expressed in terms of dollars. When the Lagrangian takes the value of zero, its associated constraint is nonbinding. With more than one constraint, additional Lagrangian multipliers are used, each with a shadow price interpretation for that resource. In economics, it is assumed that both goods and time are scarce, so that zero shadow prices do not occur.

In many cases, the shadow price differs from the actual price for a good or an input. In the industrial organization literature, this could be due to rate-of-return regulation as illustrated by Scott Atkinson and Robert Halvorsen (1984). Further, monopoly power, monopsony power, labor union regulations, distortionary taxes, sticky prices, and export/import regulations are just some of the many constraints that can cause divergences between actual and shadow prices. In the case of rate-of-return regulation for electric utilities, the shadow price of capital

exceeds the actual price of capital, causing the utility to over-invest in capital. (Färe and Primont [1995] and Mas-Colell et al. [1995] provide many more examples of constrained cost minimization, utility maximization, profit maximization, and revenue maximization in a mathematical programming framework. In particular, Färe and Primont stress the dual relationship between various constrained optimization models.)

Econometricians have focused on estimating shadow prices (sometimes called virtual prices) for inputs and outputs that are not marketed, so that actual prices are not observed, and for inputs and outputs where shadow prices differ from actual observed prices. Robert Halvorsen and Tim Smith (1991) employ a restricted cost function to estimate the time path of the shadow price of an unextracted resource, whose actual price is not observable because of the prevalence of vertical integration in the industry. The basic technique involves taking partial derivatives of the restricted cost function with respect to the quasi-fixed input, and then employing Hotelling's lemma.

Hedonic prices have also been estimated as shadow prices of attributes whose market prices are not available due to bundling. Hedonic regressions have a reduced form: The equilibrium price of a commodity is regressed on its attributes, which are typically not available in an unbundled form, and therefore are not separately priced. Examples are automobile price as a function of automobile attributes and housing price as a function of housing attributes. (For examples of these regressions see Atkinson and Halvorsen [1990] and Atkinson and Crocker [1987].) Hedonic prices have also been calculated to determine the value of human life, as shown by W. KipViscusi (2004).

Atkinson and Jeffrey Dorfman estimate the shadow price for tradable sulfur dioxide emission permits by calculating partial derivatives of the distance function with respect to sulfur dioxide emissions. Following Rolf Färe and Daniel Primont (1995), one divides the partial derivative of the distance function with respect to a good by its derivative with respect to sulfur dioxide, and then equates this to the ratio of the market price of this good to the unknown shadow price of sulfur dioxide. One then solves for the latter. The estimated shadow price can then be usefully compared to the market price for traded permits, as this market is quite thin.

A large additional literature has developed that maintains the hypothesis that shadow prices to the firm may differ from actual or market prices in instances where actual prices are observed. Shadow cost, shadow distance, and shadow profit systems have been developed and estimated. With shadow-cost systems, if ratios of estimated shadow prices differ from ratios of actual prices, then the firm is allocatively inefficient. Atkinson and Halvorsen (1984) and Atkinson and Christopher Cornwell (1994) assume shadow-cost minimization and estimate shadow-cost functions to compute the allocative efficiency of electric utilities and airlines, respectively. Panel data facilitates the estimation process, as shown by Atkinson and Cornwell. Atkinson and Primont (2002) extend this analysis to an estimation of a shadow-distance system, which employs the first-order conditions for cost minimization. A shadow-distance system estimates the dual to a shadow cost system by computing shadow quantities rather than shadow prices. After assuming shadow-profit maximization by firms, a shadow-profit system was devised by Atkinson and Halvorsen (1980) and Atkinson and Cornwell (1998). This system is used to estimate the shadow prices of inputs and outputs, where the latter are measures of monopoly power. Shadow prices for inputs and outputs have also been estimated to compute the extent of monopoly and monoposony power by Atkinson and Joe Kerkvliet (1989).

Attempts have been made to translate shadow-price estimates into the potential savings from eliminating allocative inefficiency. (See, in particular, Kumbhakar [1997].) However, Atkinson and Dorfman (2006) show that any such decomposition is not unique, unless at least one input's shadow price can be related to its actual price via a factor of proportionality.

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Scott E. Atkinson

SHAMANS

Shamans represent humanity's most ancient forms of healing, spirituality, and community ritual. In *Shamanism: Archaic Techniques of Ecstasy* (1964), Mircea Eliade characterized the shaman as someone who enters ecstasy to interact with spirits on behalf of the community. Although some have challenged his suggestion of the universality of shamanism, the cross-cultural research of Michael Winkelman has established the universal validity of the concept of the shaman, as well as the characteristics of Shamans, particularly their differences with respect to other types of magico-religious practitioners. In *Shamanism: The Neural Ecology of Consciousness and Healing* (2000), Winkelman illustrates how the cross-cultural similarities in shamans relate to humans' evolved psychology. Shamanism was an important evolution of human culture and consciousness and created practices to expand ancient primate activities for ritual healing and group integration.

THE NATURE AND UNIVERSALITY OF THE SHAMAN

While shamans and priests are both religious practitioners, they differ in many basic ways. Shamans enter into a direct relationship with the spiritual world, for example, while priests mediate with respect to deities. Winkelman's research, particularly in *Shamans, Priests, and Witches: A Cross-Cultural Study of Magico-Religious Practitioners* (1992), provides empirical evidence for these differences: Shamans of hunter-gatherer societies reflect biological adaptations to an evolved psychology involving altered states of consciousness (ASC), while priests reflect adaptations to the social leadership needs of agricultural groups.

Unlike priests who generally acquire their positions by virtue of social position in class or kinship ranks, the shaman is thought to be chosen by the spirits. Shamans acquire their special status through experiences of the spirit world. While most people in shamanic cultures may deliberately seek contact with the spirit world in a vision quest, only a few will have the benefit of being chosen by the spirits for special experiences and powers. Spirit-world experiences occur spontaneously in illness, hallucinations, dreams, and visions, and they are further induced through vision quests involving prolonged fasts; the ingestion of emetics, tobacco, and hallucinogen drugs; and other arduous techniques that provoke profound alterations of consciousness, which are interpreted as entry into the spirit world. Ritual inductions of spirit-world experiences generally employ drums, rattles, and other percussion, as well as singing and chanting.

The universals of human culture associated with shamanism involve the use of techniques for altering consciousness to produce an experience of interacting with the spirit world. These experiences are key to providing healing and information for the community. The altered states of consciousness associated with shamanism are a human universal derived from human biology, reflecting extraordinary aspects of normal systemic reactions of the brain and nervous system in maintaining homeostasis, or internal balance (Laughlin, McManus, and d'Aquili 1992; Winkelman 2000). The psychiatrist Arnold Mandell has characterized this neurobiological transcendence in terms of activation of the serotonergic linkages between the limbic (emotional) brain and the R-Complex (behavioral) brain (1980). This activation produces strong slow-wave (theta, 3-6 cycles per second) brain discharges that induce synchronized brain waves across the levels of the brain and between the frontal hemispheres.

The particular form of altered consciousness associated with shamanism is called a *soul journey*, *soul flight*, or some other similar term referring to the departure of some aspect of the self, particularly one's soul or spirit, from the body in order to journey to the spirit world. This shamanic soul journey is distinct from the possession experiences associated with the altered states of consciousness of more complex societies. Possession involves experiences in which a person's sense of personal consciousness and volition is replaced by the controlling influences of a spirit entity who possesses the person's body and controls it (Bourguignon 1976). This divine control of one's person is not typically associated with shamanic practice. The shaman remains aware of self during the soul journey, while possessed people typically report a lack of awareness of the experience following possession. Winkelman has

integrated cross-cultural and interdisciplinary explanations that suggest important influences on the nature and form of altered states of consciousness from a variety of dietary, social, political, and ritual practices. The shaman's awareness during the soul journey reflects the active engagement in altered states through early ritual practices, while the possessed person's sense of external dominance by the possessing entity reflects influences external to the self, such as endocrine imbalances from nutritional deficiencies and dissociate experiences induced by oppressive social conditions.

ASPECTS OF SHAMANIC PRACTICE

Shamans have additional universal characteristics that differentiate them from the priests and possessed mediums of more complex societies. Cross-culturally, shamans are characterized as charismatic leaders whose community rituals generally involve healing and divination. Other characteristics of shamans are:

- They undergo an altered state of consciousness (ASC), characterized as a "soul journey."
- They perform rituals involving chanting, music, drumming, and dancing.
- They have had initiatory death-and-rebirth experiences and guardian spirit encounters.
- They have close relationships with animals in control of spirits and development of personal powers.
- They use therapeutic processes to recover lost souls, defined as the separation of some vital aspect of personal essence due to attacks by spirits and sorcerers.

Shamans typically engage the entire local community in all-night ceremonies. During hours of dancing, drumming, and chanting, the shaman may dramatically recount mythological histories and enact struggles in the spirit world. Shamans also have the capacity to engage in sorcery and malevolent magic to harm others.

VISIONARY TECHNIQUES EMPLOYED FOR SUPERNATURAL ENGAGEMENT

Shamans use rituals to induce the altered state of consciousness (ASC) typified in a soul journey, where a spiritual aspect departs the body and travels to the spirit world. The ASC is typically produced through drumming and dancing to the point of collapse (or deliberate repose), and it may be potentiated by dietary and sexual restrictions and medicinal plants. The overall physiological dynamics of ASC induction involve excitation until exhaustion, which induces the relaxation response, a natural recuperation process. The shaman's ASC includes: a death-and-rebirth experience, producing a self-transformation; a flight to the lower, middle, and upper levels of the spirit world, reflecting transformations of consciousness; and personal transformation into an animal, enabling the shaman to travel and use special powers.

The shamanic ASC stimulates the reptilian and paleomammalian levels of the brain, and the associated preverbal processes. The ASC synchronizes diverse brain regions with theta brain wave discharges, which are produced by serotonergic linkages that propel these discharges from the brain stem and limbic areas into the frontal cortex. This produces an integration of lower brain processes into consciousness; an interhemispheric synchronization of the frontal cortex; and a synthesis of emotion, thought, and behavior. ASCs induce information integration, social bonding, stress reduction, and healing through enhancement of visual representation faculties. Humans have a visual symbolic system utilized in the dream mode of consciousness and illustrated in the typically visual (as opposed to verbal) material manifested in dreaming. This visual presentational symbolism (as opposed to the verbal representational system) provides a medium for manifestation of information from the preverbal levels of the unconscious. Winkelman (2000, 2002) discusses how shamanic rituals elicited and integrated this symbolic capacity to produce a new level of mental evolution underlying the development of the modern cultural capacity during the Middle/Upper Paleolithic transition approximately 40,000 years ago.

Shamanism focuses on internal mental images, evoking them through ASC and ritual practices for integrating dream processes, particularly overnight ritual activities. Shamanic visions engage psychobiological communication processes that integrate unconscious psychophysiological information with affective and cognitive levels. Shamanic images provide analysis, synthesis, and planning through integrating the informational and personal processes associated with dreaming, a visual symbolic system of self-representations involving the paleomammalian brain. Shamanic traditions recognize this use of the dream capacity in terms such as *dream time*. This process engages ASC induction activities that produce theta waves and induce awareness of this emotionally salient material. This integration of normally unconscious content into conscious processes produces a sense of interconnectedness and transpersonal healing experiences.

SHAMANISM AND HEALING: PSYCHOINTEGRATION

Shamans are the preeminent healers of premodern societies. Their roles as healers include medical and psychi-

atric functions, addressing physical disease as well as a variety of psychological conditions. Shamanism provides mechanisms for inducing healing through systemic psychological integration using ritual, symbols, and ASC. Shamans' practices represent the evolution of a "holistic imperative," a drive toward more integrated levels of consciousness (Laughlin, McManus, and d'Aquili 1992). Shamanic traditions produce integrative responses that synchronize divergent aspects of human cognition and identity through several mechanisms, including: (1) using ASC, ritual, and symbols to activate synchronizing brain processes; (2) the stimulation of processes of lower-brain structures and subconscious aspects of personality and self; and (3) incorporating people into community rituals that strengthen social support and identity. These therapeutic processes still have relevance in the modern world, as evidenced by the modern resuscitation of the ancient shamanic practices.

SEE ALSO *Animism; Magic; Mental Health; Mental Illness; Miracles; Purification; Religion; Rituals*

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Michael Winkelman

SHAME

Shame occupies an important place both among the emotions and as a key component in social relationships. It might well be called "the master emotion" for reasons to be discussed below. But why so much attention to one emotion? This emphasis has been difficult for many people to follow. What about other primary emotions, such as love, fear, anger, grief, and so on? To the average reader in modern societies, the focus on shame seems arbitrary.

Not so, however, in traditional societies. These societies, because of their exclusive concern with social relationships rather than individuals, overemphasize shame. An excellent introduction to the consciousness of shame in a traditional society can be found in Joan Metge's 1986 study of the emotion lexicon in the Maori language.

Modern societies, since they emphasize the isolated, self-reliant individual, hide shame. Consciousness of this emotion would betray the extent of each individual's dependence on the views of others, and therefore the social nature of the self.

C. H. Cooley's (1864–1929) idea of the "looking-glass self" suggested an elementary link between shame and selfhood: "A self-idea of this sort seems to have three principal elements: the imagination of our appearance to the other person; the imagination of his judgment of that appearance; and some sort of self-feeling, such as pride or mortification (shame)" (Cooley 1922, p. l84).

Erving Goffman (1922–1982), whose work often centered on embarrassment, provided another justification. He argued that embarrassment, and by implication shame, had universal importance in social interaction: "Face-to-face interaction in any culture seems to require just those capacities that flustering seems to destroy. Therefore, events which lead to embarrassment and the methods for avoiding and dispelling it may provide a cross-cultural framework of sociological analysis" (Goffman 1956, p. 266).

Christian Heath further justifies this focus:

> Embarrassment lies at the heart of the social organization of day-to-day conduct. It provides a personal constraint on the behavior of the individual in society and a public response to actions and activities considered problematic or untoward. Embarrassment and its potential play an important part in sustaining the individual's commitment to social organization, values and convention. It permeates everyday life and our dealings with others. It informs ordinary conduct and bounds the individual's behavior in areas of social life that formal and institutionalized constraints do not reach. (Heath 1988, p. 137)

Beyond these considerations, there is another, broader one that is implied in Goffman's ideas, particularly the idea of impression management. Most of his work implies that every actor is extraordinarily sensitive to the exact amount of deference being received by others. Even a slight difference between what is expected and what is received, whether too little or too much, can cause embarrassment.

Thomas J. Scheff (2006) followed Goffman's lead by proposing that embarrassment and shame are primarily social emotions, because they usually arise from a threat to the bond, no matter how slight. The degree of social connectedness, of accurately taking the viewpoint of the other, is the key component of social bonds. A discrepancy in the amount of deference conveys judgment, and so is experienced as a threat to the bond. Since even a slight discrepancy in deference is sensed, embarrassment or the anticipation of embarrassment would be a virtually continuous presence in interaction.

In most of his writing, Goffman's every-person was constantly aware of her own standing in the eyes of others, implying almost continuous states of self-conscious emotion—embarrassment, shame, humiliation, and in rare instances pride—or anticipation of these states. Their sensitivity to the eyes of others makes Goffman's actors seem three-dimensional, since they embody not only thought and behavior, but also feeling.

Helen Lynd (1896–1982) was one of the first to focus on shame as a key to personal identity (1958). Silvan Tomkins (1911–1991) devoted an entire book (1963) to describing the concept of shame and its psychological and social functions. Helen Lewis (1913–1987) has shown the key role of unacknowledged shame in failed psychotherapy sessions (1971), and John Braithwaite's work (1989) on the role of reintegrative shame in restorative justice has attracted a considerable following.

Shame and embarrassment are crucial because they have both psychological and social functions. For brevity, this entry will discuss only the three most important functions. First, for individuals, shame appears to be an automatic signal of moral trespass; the conscience has an instinctive shame component (Scheff and Retzinger 1991). This type of shame can be suppressed, but only at great cost. For most people, shame provides unmistakable signals of where they stand in their moral universe at any particular moment.

Second, normal shame signals the state of the social bond. Embarrassment and other shame signals warn us when the self or other is feeling too close (exposed, violated) or too far (invisible, rejected). If these signals are suppressed or ignored, it may be almost impossible to know where one stands with another person. Interaction takes on a stiff and formal character, with individuals flustered or distracted, which interferes with understanding and trust. Engulfment and isolation produce, and are produced by, the denial of shame. Recognition of shame and embarrassment signals in others is a way of becoming aware of their humanity. Seeing that the other is embarrassed or ashamed is an elemental path toward understanding that they are persons much like ourselves.

It now seems likely that shame is a genetically inherited emotion that is a human universal. Since shame identifies threats to the social bond and to the integrity of the self, it makes sense that sensitivity to shame signals would be adaptive, and that this kind of sensitivity would have survival value for the individual and the group.

Third, shame seems to be the primary regulator of all emotions, including shame itself (shame about shame). This kind of regulation poses no problem with normal shame, because it is easily acknowledged and resolved. As indicated above, it is merely a signal of the state of the bond. But unacknowledged shame can interfere with the resolution of all the emotions, including anger, fear, grief, and shame itself. The basic reason that people hide their emotions is that they have learned to be ashamed of them. The exception is angry displays: Most people, especially men, have learned to flaunt anger and aggression as a way of masking vulnerable emotions (such as fear, shame, and grief) because they have been taught that these emotions are signs of weakness.

Since shame is a self-conscious emotion, persons and groups may fall into traps of self-consciousness that interfere with normal biological, psychological, and social paths that allow the resolution of painful emotions. For example, in the absence of unacknowledged shame, persons and groups with conflicting interests are able to find the most-beneficial or least-destructive compromise. Unacknowledged shame paralyzes both the ability and desire to reach a compromise. For this reason, unacknowledged shame and alienation may be keys to understanding interminable impasses and quarrels (Scheff and Retzinger 1991; Retzinger 1991; Scheff 1994).

For these reasons, pride and shame play an equal part with solidarity and alienation in determining the degree of social integration in a society, its capacity for cooperation and survival under stress, and its potential for fragmentation or violent disruption. Because we live in a highly individualized society, these matters have only recently come to our collective attention. Denial of shame goes hand in hand with denial of interdependence. An accurate and effective social science requires that shame and interdependence be brought to the light of day.

SEE ALSO *Alienation; Emotion; Goffman, Erving; Humiliation; Looking-Glass Effect; Self-Consciousness, Private vs. Public; Self-Hatred; Sin; Social Psychology; Stigma*

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Thomas J. Scheff

SHARECROPPING

A sharecropping arrangement is an agrarian contract between a landlord and a tenant in which the tenant pays a fraction of the crop to the landlord in exchange for the right to exploit the landlord's plot of land. In addition to the crop rent, there may or may not be a fixed component to the contract in the form of a side payment either from the landlord to the tenant (a wage) or from the tenant to the landlord (a fixed rent). As a result, sharecropping (or share tenancy) is an alternative to (1) a wage contract, in which the landlord pays the tenant a wage but gets to keep all of the crop; and (2) a fixed rent contract, in which the tenant pays the landlord a fixed rent (either in cash or in kind) but gets to keep all of the crop. Sharecropping should therefore not be confused with a crop fixed rent contract, in which the tenant exploits the land in exchange for a fixed amount of crop per unit of land paid as rent (e.g., 1 ton of grain per hectare).

Terence J. Byres in his introduction to a collection of essays and case studies on sharecropping (1983) provides a historical perspective on share tenancy and recounts how the institution is mentioned in historical documents from ancient Greece (594–593 BCE); ancient China (722–481 BCE); ancient India (fourth century BCE); the Roman Empire (61–112 CE); western Europe, especially France, where the institution is referred to as *métayage* (ninth century CE); southern Europe, especially Italy, where the institution is referred to as *mezzadria* (ninth century CE); Russia, where the institution is referred to as *polovnik*, under the Mongol Empire (thirteenth and fourteenth centuries); and China and India during the twentieth century.

Sharecropping has long been reviled by social scientists—most notably by Marx-inspired economists such as Amit Bhaduri (1973) and Robert Pearce (1983), who perceived it as a mechanism by which capital (i.e., landed individuals or households) exploits labor (i.e., landless individuals or households)—but also by most economists up to Joseph E. Stiglitz (1974), as related by Alexander F. Robertson (1980). Although the Marxist critique of share tenancy may have been true during some historical periods and in some regions of the world (e.g., in the postbellum southern United States; see Reid 1973), it does not explain the persistence of sharecropping contracts that both parties enter into voluntarily, in places as diverse as the United States (Young and Burke 2001), Brazil (Stolcke and Hall 1983), Ethiopia (Pender and Fafchamps 2006), Madagascar (Bellemare 2006), India (Pandey 2004), Pakistan (Jacoby and Mansuri 2006), and so on.

THEORIES OF SHARECROPPING: THE QUASI MONOPOLY OF ECONOMICS

The study of sharecropping by social scientists has been almost the exclusive preserve of economists, and it dates back to Adam Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776, 1976), which viewed *métayage* (Smith used the French term for sharecropping, since share tenancy was still unheard of in England) as an inefficient contract between slavery and the English (i.e., fixed rent) system. Alfred Marshall, in the eighth and last edition of his *Principles of Economics* (1920), was the first social scientist to apply a rigorous analytical framework to the study of sharecropping, allowing him to identify the moral hazard problem associated with share tenancy. Assuming that supervision of the tenant by the landlord is prohibitively costly, the tenant will provide labor only up to the point where the value of his marginal product of labor equals the opportunity cost from entering the contract (i.e., the wage the tenant would derive from alternative employment). But then, because the tenant receives only a fraction of the value of the marginal product of labor, and given that the marginal product of labor is assumed to be decreasing, the tenant

will underprovide labor with respect to a fixed rent contract. In the years following the publication of the last edition of *Principles of Economics*, the moral hazard problem associated with sharecropping—that is, the underprovision of labor by the tenant due to the fact that the landlord cannot supervise labor—has thus come to be known as "Marshallian inefficiency."

It was not until much later, in the 1960s, that Steven N. S. Cheung, then a graduate student at the University of Chicago, sought to reestablish the efficiency of share tenancy, although an effort had been made in that direction by D. Gale Johnson, who argued that tenants have every incentive to produce efficiently given the threat of eviction by the landlord in a repeated interaction setting (Johnson 1950). By assuming that the landlord can costlessly enforce the tenant's level of effort, Cheung showed that sharecropping can be as efficient as a fixed rent contract in a static framework (1968).

Two schools of thought were thus born. On the one hand, the Marshallian view argued that sharecropping was inefficient because it assumed that enforcing the landlord's preferred level of effort was prohibitively costly. On the other hand, the Cheungian (or "transactions costs") view argued that sharecropping was efficient because it assumed that the landlord could costlessly enforce her preferred level of effort.

Taking a deliberately Marshallian view, Stiglitz was the first to fully formalize the institution of sharecropping using the tools of microeconomic theory (1974). In a paper that presents and solves one of the first complete principal-agent models in economics, Stiglitz asked why sharecropping in developing countries was perceived as an inefficient (and often irrational) arrangement when the same type of contract did not raise any questions when observed under the form of commission sales in industrialized countries. Stiglitz showed that when the absentee landlord is risk-neutral and the tenant is risk-averse, sharecropping provides a useful trade-off between incentives and risk-sharing. In this case, a wage contract provides the weakest incentives to the tenant, who is also fully insured against production risk, whereas a fixed rent contract provides the strongest incentives to the tenant, who is also exposed to all the production risk. By trading off the tenant's comparative advantage in labor supervision with the landlord's comparative advantage in risk-bearing, a sharecropping contract remains the optimal choice among the set of inefficient contracts, i.e., it is second-best, following the terminology of contract theory. Stiglitz's work, which contributed to the birth of the so-called information revolution in economics along with that of George Akerlof (1970) and A. Michael Spence (1973), also reestablished the rationality of sharecropping.

The theory of share tenancy put forth by Stiglitz provided the canonical model of sharecropping, but it has been refined in many ways. David M. G. Newbery incorporated a second type of uncertainty, namely uncertainty over the tenant's wage from alternative employment, in the framework (1977). Mukesh Eswaran and Ashok Kotwal in 1985 considered the contracting problem under two-sided moral hazard—that is, moral hazard in the provision of managerial ability by the landlord and moral hazard in the provision of labor by the tenant—and showed that when each party is highly inefficient in providing the other party's inputs (i.e., when the tenant is highly inefficient at providing managerial ability and when the landlord is highly inefficient at providing labor supervision), sharecropping emerges as the optimal contract. Clive Bell and Pinhas Zusman, instead of adopting the principal-agent framework, used the tools of cooperative game theory to study sharecropping (1976). William Hallagan abstracted from moral hazard considerations and instead chose to introduce adverse selection into the model to explain selection by the tenants into different contracts (1978). Douglas Allen and Dean Lueck took into account the fact that, in certain parts of the world, the landlord and the tenant share the cost of inputs, and that when the crop share is set equal to the cost share, sharecropping is again an efficient arrangement (1992, 1993). Maitreesh Ghatak and Priyanka Pandey showed that in the presence of limited liability, if the tenant can choose between agricultural techniques that differ in their levels of expected yield and variance, the landlord may choose a sharecropping contract in order to curb the tenant's risk-taking behavior (2000). Marc F. Bellemare developed theoretical explanations to account for the emergence of reverse share tenancy (i.e., sharecropping between a poor, risk-averse landlord and a richer, risk-neutral tenant), a contract that remains a theoretical impossibility under the canonical Stiglitzian theory of share tenancy (2006). This list of works is nonexhaustive, given that sharecropping is one of the most studied problems in economics and in the social sciences.

EMPIRICAL EVIDENCE ON SHARECROPPING

Empirically, social scientists have sought to answer two major questions regarding sharecropping: (1) Do incentives matter in land tenancy agreements—that is, are tenants less productive under share tenancy than under fixed rent, or is there Marshallian inefficiency?; and (2) Do the contract shapes observed in the data correspond to theoretical predictions? As in much of the applied literature on contracts (Prendergast 1999), the second question has received much less attention, mostly because of lack of data. Most empirical researchers asking the first question

have found at least partial support for the hypothesis of Marshallian inefficiency (Bell 1977 and Shaban 1987 in India; Laffont and Matoussi 1995 and Ai, Arcand, and Éthier 1996 in Tunisia; Jacoby and Mansuri 2006 in Pakistan). As regards the second question, Daniel Ackerberg and Maristella Botticini found that risk-sharing concerns indeed do drive contract choice once the possibility that landlords and tenants match endogenously is taken into account in a data set of land tenancy contracts in early Renaissance Tuscany (2002); Pierre Dubois found that fertility considerations make landlords more likely to choose a sharecropping contract in an effort to curb tenants' incentives to overuse the land and deplete soil fertility in a dataset of land tenancy contracts in a rural area of the Philippines (2002); and Bellemare found that asset risk (i.e., the possibility of losing their claim to the land) makes landlords more likely to choose sharecropping over fixed rent in a dataset of land tenancy contracts in Madagascar (2006).

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Marc F. Bellemare

SHARON, ARIEL

1928–

Born on February 27, 1928, in the British Mandate of Palestine, Israeli leader Ariel Sharon's long and controversial military and political career embodies the tension between pragmatism and idealism inherent in modern nationalist movements. Oscillating between extremist Jewish ethno-nationalism and pragmatic secular Zionism, Sharon's leadership has triggered strong and contradictory responses. It provokes hate and revulsion among the many who see him as a dogmatic and reckless bully and a war criminal. Others view Sharon with great appreciation as a brilliant strategist and pragmatic statesman who took courageous steps toward making peace with Egypt and ending the Israeli occupation in Gaza.

Sharon joined the Israeli Haganah, an underground paramilitary organization, at age fourteen. In the 1948 Arab-Israeli War he served as a platoon commander and was severely wounded in the Battle of Latrun against the Jordanian Legion. In 1953 Sharon commanded a special commando unit ("101"), which carried out retaliatory military raids against Palestinian infiltrators from refugee camps who harassed the new border settlements, trying to reappropriate property or kill Israelis. Because of the political impact of Unit 101's controversial operations, which targeted both civilians and Arab soldiers, Sharon obtained direct access to Prime Minister David Ben-Gurion (1886–1973) and to Army Chief of Staff Moshe Dayan (1915–1981).

Throughout his career, Sharon exploited his privileged position to undertake military operations, often despite the objections of his direct superiors. In the 1956 Suez War, Sharon led a controversial operation to conquer the Mitla Pass against orders. In the 1967 Six-Day War, Sharon distinguished himself as a strategist commanding the most powerful armored division on the Sinai front.

Sharon resigned from the army in June 1972 and was instrumental in creating the right-wing Likud Party. In October 1973 he was recalled to service following the Yom Kippur War. Commanding a reserve armored division, Sharon located a breach between the Egyptian forces, which he then used to capture a bridgehead and lead a crossing of the Suez Canal. Sharon again violated his orders by exploiting this success to cut off and encircle the Egyptian Third Army. Because of this move, which was regarded as the turning point of the war, Sharon is considered by many in Israel as a war hero who saved Israel from defeat.

After Likud won the 1977 elections, Sharon became the minister of agriculture. In all his subsequent ministerial posts—defense (1981–1983), industry and commerce (1984–1990), construction and housing (1990–1992), infrastructure (1996–1998), and foreign affairs (1998–1999)—Sharon found ways to support and encourage the settlement activities in the occupied territories to prevent the possibility of returning them. Yet, during the peace negotiations with Egypt, he persuaded the Likud government to remove the settlements in Sinai.

As minister of defense, Sharon was the architect of the 1982 Lebanon War, bringing about the destruction of the Palestine Liberation Organization (PLO) infrastructure in Lebanon. What started as a limited operation developed under Sharon's command into a full-scale war with controversial military operations and far-reaching political goals, many of which were never approved by the Israeli cabinet. Sharon was forced to resign as defense minister after a government commission found him indirectly responsible for the Sabra and Shatila massacres, in which hundreds of Palestinian civilians in refugee camps were killed by Lebanese Christian-Maronite militias.

In 2000, shortly after the breakdown of the Camp David peace negotiations, Sharon visited the Al-Aqsa Mosque (Temple Mount) in Jerusalem. His visit was followed by a bloody Palestinian uprising (the Al-Aqsa Intifada), marking the end to the Oslo peace process and the fall of Ehud Barak's left-wing government.

In February 2001 Sharon was elected prime minister of Israel. With Palestinian violence escalating, Sharon ordered in 2002 the reoccupation of West Bank towns and the building of a controversial security fence between Israel and the occupied territories. Sharon later accepted, however, the internationally supported "road map" to peace in 2003, and in 2005 he withdrew the Israeli Army and settlers from the Gaza Strip, citing security issues. This move was opposed by many in Likud and forced Sharon into a coalition with the Labor Party. He eventually formed a new centrist party, Kadima, and declared a new election. In January 2006, just two months before the election, Sharon suffered a stroke that left him hospitalized in a coma. Kadima was temporarily leaderless until Ehud Olmert took over the party and won narrowly in the ensuing elections.

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Nadav Gabay

SHARP, GRANVILLE
1735–1813

Born in Durham, England, on November 21 (November 10, old style), 1735, Granville Sharp is best known as being the prime mover in the abolition of slavery in England; one might even say that he was the force behind the British abolitionist William Wilberforce. He also launched a Bible society, saved a Christian denomination from annihilation, and even founded a nation. Such activities were matched only by his literary efforts. Although he had little formal education, his writings covered seemingly disparate topics—from Greek and Hebrew to theology, music, agriculture, and social causes, especially the cause of freedom for the black slave. An Englishman who never set foot outside his homeland, Sharp influenced the causes of liberty in three American wars (the Revolutionary War, the War of 1812, and the Civil War) by his theological-political writings.

As an indefatigable abolitionist, Sharp initiated a legal case in 1772. A slave from Virginia, James Somerset, had come to England with his master. Sharp successfully argued that either none of the laws of Virginia applied in England or all of them did. The verdict was pronounced on June 22, 1772: "As soon as any slave sets his foot on English ground, he becomes free."

On May 22, 1787, he was elected the chairman of the newly formed Society for the Abolition of the Slave Trade because he was, in the words of his biographer, the "father of the cause in England." Although Wilberforce was the spokesman for the society before Parliament, Sharp was especially active in getting public opinion on its side. After a twenty-year battle, in March 1807 Parliament banned the slave trade. However, the abolition of slavery from the British Empire—Sharp's ultimate goal—would not occur until 1833, twenty years after his death, on July 6, 1813, in London.

After the American Revolution, many former slaves who had fought on the side of the British in exchange for their freedom were now homeless in the streets of London. Several of them wanted to return to their native continent, and they sought Sharp for advice. He was able to procure ships and funds from the British government, as well as a large piece of land in West Africa. The new colony, Sierra Leone, was founded in April 1787. Granville Town was the name they gave their first settlement in honor of Sharp, though the name was later changed to Freetown. In 1961 Sierra Leone became an independent state.

Sharp made three major contributions to the Christian faith, to which he was deeply committed. First, he rescued the Episcopalian denomination in America. The clergy were required to swear allegiance to the crown, an ethical impossibility after the Revolutionary War. Even as early as 1777, Sharp worked toward an independent Episcopacy in America. Ten years later, principally because of Sharp's influence, American clergy could be ordained without taking such an oath of allegiance. Second, in 1804 he became the first chairman of the British and Foreign Bible Society, the first Bible society in the world. Third, Sharp's many writings (nearly seventy books and pamphlets) focused especially on integrating social causes with Christian beliefs, as well as on the original languages of the Bible (Greek and Hebrew). He is especially known for the "Granville Sharp rule," a principle of Greek syntax that he discovered as affirming the New Testament teaching of the deity of Christ.

SEE ALSO *Slavery*

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Daniel B. Wallace

SHARPEVILLE MASSACRE OF 1960

SEE *Apartheid.*

SHEPPARD'S LEMMA

SEE *Separability.*

SHERIF, MUZAFER
1906–1988

Born in Turkey, Muzafer Sherif built a productive career as an experimental social psychologist. Upon receiving his master's degree at Istanbul University, he continued his studies in the United States, earning a master's degree at Harvard in 1932 and a PhD at Columbia in 1935. After spending the World War II years (1939–1945) in Turkey, Sherif returned to the United States as a postdoctoral fellow at Princeton and Yale. He then became a research professor of psychology at the University of Oklahoma and

later a distinguished professor of sociology at Pennsylvania State University. His tenure in these two rather different departments illustrates his unwavering commitment to social psychology as an interdisciplinary enterprise.

SHERIF AND NORM FORMATION

Sherif produced many creative studies, and his publications spanned five decades. He was most noted for three lines of research. The first was the focus of his doctoral dissertation, "A Study of Some Social Factors in Perception." Inspired by the work of the French sociologist Émile Durkheim (1858–1917) and the British anthropologist Bronislaw Kasper Malinowski (1884–1942), Sherif recognized the importance of the process of norm formation in a group situation. The dynamics of this process occurred when individuals faced a recurrent situation in which they were interdependent. In one of his studies Sherif looked at people's judgments of the extent of movement of a pinpoint of light. He noted that when a person sees a small light in an otherwise completely dark room, it appears to move even though it is stationary. This *autokinetic effect* provided a suitable setting since it was an ambiguous situation when estimations were made of how far the light moved, thus lending itself to a variety of judgments.

Sherif had subjects give their perceptions individually over 100 trials and then in subsequent sessions in group situations. When estimating individually, subjects tended to form their own personal reference scales, but when brought together in a group, they tended to converge in their estimations. This *convergence* was regarded by Sherif as the essence of *norm formation*, one of the basic forms of social influence. In a variation in design Sherif sought to demonstrate that norms formed in a group situation would carry over into a situation in which other group members were not present.

INTERGROUP STUDIES

The second line of research for which Sherif is responsible involved a series of intergroup summer camp studies. This series culminated in a 1954 study at Robbers Cave State Park, Oklahoma. There, twenty-two eleven-year-old boys faced tasks that divided them into groups. Those groups then competed vigorously for mutually exclusive goals and finally cooperated to achieve *superordinate goals*. The latter refers to goals that are highly desired by two groups but that can only be achieved through cooperation.

Groups grew into units with their own distinctive norms and status structure as a result of repeated interaction in situations of interdependence. When the groups interacted with antithetical goals, they formed negative stereotypes of each other and gave vent to hostility and aggression in many forms. Most importantly, when hostile groups interacted in a series of superordinate goals, hostility was diminished, and the stereotypes became more positive. Sherif's interest in intergroup relations was undoubtedly influenced by the turbulent events he witnessed as a Turkish youth as well as the American psychologist and philosopher William James's (1842–1910) 1906 essay "The Moral Equivalent of War" (1910).

SHERIF AND ATTITUDE CHANGE

The third line of research Sherif was responsible for initiating was his unique take on the subject of attitude change. His social judgment theory held that one's reaction to a communication, in terms of positive or negative attitude change, would depend on where one placed the communication. Misplacing a communication in the direction of one's own attitude, called *assimilation*, facilitated positive attitude change. Distortion of a communication away from one's own attitude position was called *contrast*, and when that occurred, attitude change in the direction opposite to that advocated by the communicator was predicted. *Ego-involvement* and *discrepancy* were also important concepts in social judgment theory. As involvement increased, positive attitude change decreased. As discrepancy increased, positive attitude change increased up to the point of inflection and decreased beyond that. Sherif's view was that it is more useful to think of an attitude as a series of zones (*latitudes of acceptance*, *noncommitment*, and *rejection*) than as a single point on a numerical scale. In connection with this theory, two innovative measuring instruments were devised, the *own categories procedure* and the *method of ordered alternatives.*

SHERIF'S OTHER CONTRIBUTIONS

Although Sherif is best known for his empirical contributions, he did have an overarching theory. That theory was centered on the concept of a *frame of reference*, conceived as the totality of external and internal factors operating at a given time. This concept was accompanied by a set of twelve propositions, as he outlined in his 1969 book published with Carolyn Wood Sherif. In that book he noted, "The more unstructured the external stimulus situation, the greater the contribution of internal factors" (Sherif and Sherif 1969, p. 62).

Another of Sherif's contributions to social psychology had to do with the role of experimentation in the research process. For Sherif, experimentation came late in the research process, only after one had gained an intimate knowledge of the phenomenon under consideration. In this way Sherif believed one could be confident that his or her research would have a bearing on real world events. Sherif saw himself as committed to doing basic research, but the implications were there for anyone interested in applied research.

SEE ALSO *Attitudes; Durkheim, Émile; James, William; Malinowski, Bronislaw; Norms; Superordinate Goals*

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Donald Granberg

SHINING PATH

SEE *De Soto, Hernando.*

SHINTO

Shinto is the indigenous religion of Japan. Although its origins extend back into Japan's prehistory, Shinto has undergone significant periods of development throughout the country's history, and it continues to be an important part of Japanese culture.

ORIGINS AND HISTORICAL DEVELOPMENT

Although Shinto can be traced back to Japan's Jomon period (c. 11,000–400 BCE), it was during the Yayoi period (c. 400 BCE–250 CE) that the key elements associated with its development—wet rice agriculture, fertility rituals, and stable, long-term communities—appeared. During this time, local shrines were established and many of the beliefs and practices seen in Shinto today came into existence. During the Kofun period (c. 250–592 CE), Shinto became associated with a large-scale process of political consolidation. Although there remained small shrines in local communities, large Shinto shrines were built at Ise and Izumo on the eastern and western sides of the central Japanese island of Honshu, reflecting the more centralized political structure that was emerging. By the early Nara period (early eighth century), the first written histories of Japan—the *Kojiki* (712) and the *Nihon shoki* (720)—included myths associated with Shinto that served to legitimize the imperial line and the leadership of the Japanese state. Primary among these was the mythic descent of the first Japanese emperor, Jimmu, from the sun goddess, Amaterasu.

The introduction of Buddhism into Japan from China around the middle of the sixth century also brought a new dimension to the development of Shinto. Buddhism, which had a much more extensive theology and culture (art, architecture, and literature) associated with it, came over time to coexist peacefully with Shinto, rather than to compete with it. The two religions—Shinto, with its connections to fertility and life, and Buddhism, with its theology reaching beyond the present world—grew to support one another. Beginning in the eighth century, Buddhist temples and Shinto shrines were often located together on the same site. In 743 the Shinto deity Amaterasu and the cosmic buddha Vairocana were officially declared to be two dimensions of the same reality. In the centuries that followed, the syncretistic relationship between Shinto and Buddhism continued to develop.

During the Tokugawa period (1600–1868), a shift away from Buddhism occurred, and a stronger connection to Confucian thought (introduced into Japan during earlier contact with China) developed. During this time, Shinto came to be used as a mechanism of support for political and social unity. This role of Shinto reached its peak during the Meiji period (1868–1912) and the pre–World War II and wartime portions of the Showa period (1926–1989), when Shinto branched off into Sect Shinto (retaining its local characteristics and Buddhist connections) and State Shinto (which became an official state religion and was used to instill a sense of loyalty to the country). Under State Shinto an Office of Shinto Worship (Jingikan) was established, and a system of national shrines was given official support and patronage. Reverence for the emperor, who was now considered to be a Shinto deity—"sacred and inviolable" in the words of the Meiji Constitution (1889)—and support for the Shinto concept of *kokutai* (body politic or national essence) was required in Japanese schools. Following Japan's defeat in World War II (1939–1945), State Shinto was banned, the emperor was forced to renounce his divine status, and Shinto in large degree returned to its earlier pattern of local shrines and its connections with Buddhism. With key modifications, the religion continues in modern times to play a significant role in Japanese culture.

CORE BELIEFS AND PRACTICES

A central feature of Shinto lies in a belief in the existence of spirits or deities in nature known as *kami*. These spirits are usually associated with natural phenomena, such as a mountain, a waterfall, a large tree, or an unusual rock.

The surrounding area then comes to be considered sacred, and a shrine (*jinja*) is erected there. Various rituals are performed at the shrine, among the most important being food offerings and rites of purification. In the beginning, the shrines were strictly local in character, and agricultural fertility was a central purpose of the rituals performed there. Annual shrine festivals (*matsuri*) were events of great importance in the local community. Over time, certain shrines came to be thought of as connected with particular needs and serve as places to pray for human fertility, success in business, or even (in modern times) success in passing college entrance exams. Some shrines assumed regional significance. Other shrines—as mentioned in the preceding section—reflected a larger, national purpose.

Over time also, shrine architecture came to follow certain basic styles or types. The earliest shrines (exemplified today by the great Ise Shrine dedicated to Amaterasu) were constructed of unpainted wood, but after the introduction of Buddhism, many shrines were painted a brilliant vermillion red, displaying the Chinese Buddhist influence. Large gateways (*torii*)—also of varying styles—mark the entrance or approach to a shrine. Other important shrine features include stone dogs (*komainu*) guarding the shrine entrance, a place of purification (*chozuyu*) where worshippers stop to wash their hands and rinse their mouths prior to approaching the main shrine building, the main sanctuary (*honden*) where the *kami* is believed to reside, the collection box (*saisen-bako*) where money is thrown to express gratitude to the *kami*, and a special bell (*suzu*) connected to a rope, which worshippers ring to announce their arrival.

In addition to participation in the annual shrine festival, people also visit shrines on national holidays such as New Year's (*shogatsu*) or the summer Bon festival (*obon*). Most Japanese are married in a Shinto wedding ceremony, and there are other shrine ceremonies celebrating various life passages, such as the first shrine visit for a newborn child (*hatsu-miyamairi*) or national Coming-of-Age Day (*seijin-no-hi*) for twenty-year-olds, which takes place on January 15. Finally, many traditional Japanese sports (*sumo*, for example), as well as other forms of traditional culture, have their roots in Shinto.

IMPORTANCE TODAY

Since the end of World War II and the banning of Shinto as an official state religion, Shinto practice has focused primarily on its role as an aspect of traditional culture. More than 100,000 shrines existed in the country in 2003, ranging from small neighborhood shrines to large shrines of national significance. Japanese tourists flock to the famous shrines in historic cities like Kyoto and Nara. National holidays and family rites of passage, as well as *matsuri*, are celebrated at local or neighborhood shrines. It remains common for people to have a small Shinto family altar (*kamidana*, "god shelf") located above the entrance to their homes. Although occasional controversies surface regarding holdovers from Shinto's earlier role as a state religion—the periodic controversy, for example, surrounding the Yasukuni Shrine commemorating the war dead in Tokyo—Shinto, for the most part, is a colorful and happy form of religious expression, the darker side of human existence being left to Buddhism with its funeral rituals and ideas concerning the next life. Most Japanese consider themselves, at some level at least, adherents of both religious traditions.

SEE ALSO *Buddhism; Imperialism; Meiji Restoration; Nationalism and Nationality; Religion; Rituals; Symbols; World War II*

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Scott Wright

SHIPPING INDUSTRY

Shipping has been a major means of transporting bulky commodities since prehistoric times; the stones used to construct Stonehenge were moved by sea and those used in the Egyptian pyramids came by barge down the Nile. The shipping sector was central to the economies of many early Mediterranean civilizations and, for example, provided the bulwark for Minoan power. Shipping became entwined with early financial institutions as individuals in Athens financed the long lead times between investments and returns, although it was not until the ninth century that the first mercantile bank was established. The Roman Empire and those in China depended extensively on their commercial shipping for trade and to bring the fruits of distant domains back to the core regions.

The role of shipping was subsequently a facilitator in the growth of the more explicit maritime powers after the fall of Rome. The Vikings exerted their influence from Greenland to Russia and down into modern Turkey almost exclusively through their control over trade and the quality of their military vessels. Commercial shipping has

always been entwined, because of the lags and uncertainties involved in voyages, with insurance and banking; and the emergence of sophisticated finance markets in Italy in the fourteen and fifteenth centuries led expansions in Mediterranean maritime activities. The Spanish financed their sixteenth-century European wars more directly with gold brought back by galleons from their colonies in the New World.

Subsequently the Dutch and British empires were founded upon powerful navies that complemented and protected extensive civilian trading fleets. In particular, in the early phases of the Industrial Revolution when land transportation remained difficult, maritime trade allowed new export markets to be served and new sources of raw material to be exploited. Many of the major seaports in Britain, such as Liverpool and Bristol, and in the southern states of the United States, such as Charleston, South Carolina, grew on the back of the triangular trade routes carrying manufactures, raw materials, and slaves that linked Europe, Africa, and the Americas. In Asia, the growth of maritime trade in spices and commodities using oceangoing junks underlaid the prosperity of Indian and Chinese coastal areas. In addition to the transportation role, the shipping industry made direct contributions to production in the fishing and whaling industries that grew to feed and supply industrializing nations with food and oil.

The advent of the steam engine made for more reliable and safer shipping services but also, in the context of its linking with the railways that provided feed and distribution service to ports, increased the potential markets that could be served. Technological developments (such as refrigerated ships and steel hauls), the demands for new products (such as oil) in the late nineteenth century, and the emergence of new technologies (such as the container and the mega-ships) in the late twentieth century have helped to maintain the momentum of the industry.

Much of the emergence of the scale of the modern shipping industry can also be traced by the impetus given it by World War I and World War II that not only required a large mercantile marine for military logistics reasons, but also subsequently dumped a stock of vessels on the market that allowed entrepreneurs to build up commercial fleets at relatively low capital costs and with suitable discharged sailors available to man them.

In the early twenty-first century the international shipping industry carries about 90 percent of global trade by weight. While much of this involves transoceanic movements, short-sea shipping plays an important role in many large freight markets. Shipping also provides important ferry and passenger services. In 2005 globally there were approximately 42,200 registered ships with a combined tonnage of nearly 600 million gross tons. Of these more than 20,000 were general cargo vessels, 6,100 bulk carriers, 3,200 container vessels, 11,300 tankers, and nearly 5,700 passenger ships. This pattern reflects the changing technologies and production priorities of the larger supply chain (e.g., the advent of containers from the 1960s and just-in-time production) and the types of commodities carried (e.g., the increased demands for oil.) The global fleet is registered (flagged) in a variety of countries with registration often depending on local tax structures rather than the locations of shipping activities. The widespread registration under "flags-of-convenience" reflect these financial considerations.

Cargo activities can be divided between unscheduled, tramp shipping, which involves the leasing of a ship for a particular trade, and liner activities. The latter provide regular sailings and carry partial loads. Liner activities have existed from the 1870s when steamship technology allowed for reliable scheduling of sailings and often involved some form of cartel arrangements between shipping companies. These have evolved through "conferences" that coordinate services and rates, allocate capacity between members, and offer loyalty discounts for specific, often unidirectional, routes; through "consortia" from the 1970s whereby some conference members offered joint services; and through alliances that engage in cross-route rationalization and do not issue a common tariff. These tendencies toward a degree of collusion are often seen as important to ensure that regular services can be provided and that shipping companies can make a reasonable return on their large capital investments in what would otherwise be an excessively competitive market. Economic regulatory bodies, especially in the United States, however, have regularly been concerned about the potential monopoly power they might create.

Policy challenges remain, and many extend beyond conventional market regulation. Shipping has always been closely associated with the environment. Classical times saw Greece being denuded of trees to build fleets and a similar fate nearly befell the British oak tree in the eighteenth century. From a different perspective, it was shipping that brought the Black Death pandemic to Europe in the fourteenth century that killed one-third of the population. In the early twenty-first century, the high visibility of major maritime disasters, especially when there are major adverse environmental implications, poses challenges, as does the concern that ships or their cargos may form the basis for terrorist actions. The problems are seen to be growing as scale economies stimulate the use of larger vessels (e.g., post Panamax ships), which have the potential for inflicting massive environmental damage in the event of an accident, and as the general growth in world trade, both in aggregate and in the diversity of nations involved, makes policing the shipping industry more complex. The growth in the number of vessels operating under flags of convenience adds to these difficulties.

In order to confront the more traditional challenges posed by the shipping industry, as well as the newer ones, industry is heavily regulated at several levels—most notably at the global level by the United Nation's International Maritime Organization (IMO) that oversees safety and environmental matters and the International Labor Organization (ILO) that focuses on labor standards in the shipping industry. National governments control movements within territorial waters, register vessels, and regulate within their antitrust policies the nature of the services that can be used for their trading activities, for example, the particular features of any cartel arrangements. But shipping is also regulated in a de facto way by local governments that often own and, inevitably, control ports that form the terminals for shipping operations. Integrating the roles and activities of this hierarchy of institutions so that effective maritime policies can be achieved has often proved elusive.

SEE ALSO *Automobile Industry; Aviation Industry; Railway Industry; Transportation Industry*

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Kenneth Button

SHKLAR, JUDITH
1928–1992

Judith Nisse Shklar was Cowles Professor of Government at Harvard University and one of the most influential political theorists of the late twentieth century. Though her studies were wide-ranging in focus, her work centered on the problems of cruelty, exclusion, oppression, and fear in liberalism.

Born in Riga, Latvia, to Jewish parents, Shklar was still fairly young when her family fled Europe to avoid Nazi persecution. Perhaps accordingly, her first major work, *After Utopia: The Decline of Political Faith* (1957), wrestles with the intellectual legacy of twentieth-century totalitarianism. In a time when the political application of comprehensive ideologies has led to so much horror, is there any future for the discipline of political theory? Shklar found it unlikely that its future would look like its past; political theory had little chance of returning to the high levels of hope and optimism that had once marked it, particularly during the Enlightenment. In this postfanatical age, she argued, political philosophers would do best to take up the gauntlet of intellectual history and avoid future entanglements with "-isms." Shklar thus articulated an argument that would mark her career: Philosophy needs to separate and extricate itself from ideology.

Shklar herself found much to defend in classical liberalism, which she described in her seminal essay "The Liberalism of Fear" as resting on the proposition that "every adult should be able to make as many effective decisions without fear or favor about as many aspects of her or his life as is compatible with the freedom of every other adult." For Shklar, unlike others who find more aspiration in the liberal framework, liberalism has no positive, moral aim outside this basic commitment to political and social freedom.

In that sense, Shklar's liberalism rests upon a pessimistic or skeptical sensibility. Her version of liberalism does not aim for the best; rather, it is concerned with averting the worst. And the worst, for Shklar, is the kind of partisan injustice and cruelty that might also be called political evil.

Shklar's dedication to this kind of "barebones liberalism," as she called it in her second and favorite book, *Legalism: Law, Morals, and Political Trials* (1964), is evident throughout her corpus. Even in her treatments of individual thinkers—she composed full-length books on the political theories of Georg Hegel, Montesquieu, and Jean-Jacques Rousseau—Shklar remained invested in supporting liberalism but divesting it of any perfectionist associations.

Any account of Shklar's life and works would be remiss not to mention that she was one of the first women to achieve success in the field of political philosophy—and, in fact, the first woman to serve as president of the American Political Science Association. Though Shklar acknowledged that her career, especially in its earliest days, had been made more difficult by the pervasive sexism of the age, she resisted being classified as what she called a "real feminist." To identify herself with a collective ideology, she argued, would be to undermine her own intellectual project.

SEE ALSO *American Political Science Association; Enlightenment; Freedom; Holocaust, The; Law; Liberalism; Nazism; Political Theory; Sexism; Social Exclusion; Totalitarianism*

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Susan J. McWilliams

SHOCKS

In economics a shock is an unexpected change in the economy or a component of the economy. The hypothesis of rational expectations holds that individuals will incorporate all available and relevant information into their decision-making processes. From a behavioral standpoint, shocks are important in that they alter individuals' behaviors by altering the information that goes into their decision-making processes. This alteration in behaviors in turn has economic consequences.

Because of people's ability to anticipate changes in the economy, shocks are difficult to measure. In the past, changes in economic measures have been taken as proxies for shocks. For example, if inflation increased from 3 percent to 4 percent, economists would say that a 1 percent positive shock to inflation had occurred. This approach is not entirely satisfactory as the greater the ability of individuals to anticipate the change, the less the change represents a shock. For example, a rise in the price of gasoline from $2.50 to $2.75 would have represented a shock of $0.25 only if people expected that the price of gas would remain at $2.50. If people had expected the price of gas to rise from $2.50 to $2.75 and the price of gas actually did rise from $2.50 to $2.75, then the change in the price would have represented no shock at all. If, however, people had expected that the price of gas would rise from $2.50 to $2.75 but in fact the price only rose from $2.50 to $2.60, then the change in the price of gas would have been $0.10 and the shock would have been *negative* $0.15. That is, people would have anticipated an additional $0.15 price increase that never materialized. The difficulty in measuring shocks lies in the difficulty of knowing how much of a change in an economic measure was anticipated and how much was unanticipated.

While an unanticipated change in any economic measure can be described as a shock, economists give most attention to inflationary shocks (unanticipated changes in inflation), production shocks (unanticipated changes in the growth rate of real gross domestic product [RGDP]), and leading shocks (unanticipated changes in leading economic indicators). Positive inflation shocks represent unanticipated price growths and lead to reduced real wages and a slowdown in consumption. Positive production shocks represent unanticipated increases in real economic activity and can lead to an unanticipated reduction in inflation and growth in real wages. Leading economic indicators typically change direction prior to a turning point in business cycles. Unanticipated changes in leading economic indicators can indicate the approach of a turning point in the business cycle.

Methods for measuring economic shocks require *multidimensional panel forecasts*. A multidimensional panel forecast data set is a set of forecasts generated by multiple forecasters over multiple time periods and forecasting at multiple time horizons. For example, forecasters A, B, and C (multiple forecasters) will forecast inflation for the year in January, again in February, again in March, and so on (multiple horizons), and they will repeat this every year over a number of years (multiple time periods). Assuming that economic forecasters are rational, the forecasts can be taken to be reasonable measures of people's expectations about the future, and even if the forecasters are biased, the biases can be filtered out such that estimates of economic shocks can be extracted from what is left. Measures of shocks and volatilities of shocks can be extracted from multidimensional panel forecasts via econometric methods.

The volatility of shocks is the variance of the shocks hitting the economy over time. For example, the economy may experience a sequence of large positive and negative shocks that mutually cancel each other out such that the net shock over the period is zero. However, the volatility of the shocks over the period will be nonzero as the shocks rose to positive levels then fell to negative levels. Consumer and investor uncertainty is a function of both shocks and the volatility of shocks. Uncertainty in turn impacts economic growth. The more uncertain consumers are about the future, the less likely they are to engage in transactions and so the slower is economic growth. Similarly the more uncertain investors are about the future, the less likely they are to invest and so the slower is economic growth. Studies indicate that the relationship between shocks and volatility is asymmetric. Negative shocks tend to be associated with greater volatility than positive shocks. This is typically interpreted as individuals regarding bad news of a given magnitude as being more influential on their decisions than is positive news of the same magnitude.

SEE ALSO *Business Cycles, Empirical Literature; Business Cycles, Real; Expectations; Expectations, Implicit; Expectations, Rational; Involuntary Unemployment; Natural Rate of Unemployment; Phillips Curve; Risk; Say's Law; Uncertainty; Voluntary Unemployment; Walras' Law*

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Antony Davies

SHORT PERIOD

Economists measure periods in units of economic time. In the market period, time is compressed so that supply cannot vary. In the short period (SP), time occupies an interval in which fixed investments cannot change; in the long period, time is sufficient to allow all inputs to vary. Fixed investments include specialized skill and ability, machinery, and organizational structure. In the SP, one can only mix and match fixed investment to meet changing demand and supply conditions. Alfred Marshall (1842–1924), the reigning British economist of his day who is credited with these views, was aware that no sharp line of demarcation could be drawn between the short and the long periods ([1929] 1982). A day gives an intuitive feel for the market period. For the SP, one considers not only the given supply of, say, bread for that day, but goes back to the planting of wheat, which started approximately a year before, and the expected prices set at that time. The expected price may reach its normal values from two months to a year, bracketing the SP.

One problem with the SP is whether fixed investments should extend beyond the production period. Plough or die-casting equipments may last for only one production period, and the stock of capital should reflect the life of such short-lived equipment. If the adjustment spreads over time based on available price signals, then the SP definition is in jeopardy. Alternatively, one can deduct values from equipment in the previous period. Another problem in the SP is that various industries take different time intervals to produce a product with the same plant units, making it impossible to have an aggregate SP for the whole economy. The preeminent economist John Maynard Keynes (1883–1946) answered these problems by using the concept of prime cost, which is the sum of factor and user costs in defining income and its components of savings and investments; by using the concepts of *exante* vs. *expost* for equating saving and investment; and finally by settling on the more logical concept of national income identity.

Post-Keynesians have many interpretations of the Keynesian short period. A counter long-period view is that long-period expectations are not realized yet. One argument is that Keynes's view is a special case of the classical system. Richard Kahn's (1989) view that short run average cost was constant with a reversed L-shape up to a maximum level of output seems to counter Keynes's view of a Z curve in chapter 3 of the *General Theory*. On the special case characteristics, Lawrence Klein (1966) stated that the SP Walrasian (named for the French economist Léon Walras [1834–1910]) equilibrium might not exist in the Keynesian model because of interest inelastic investment or very high interest elastic demand for money due to market imperfections. Marshall's protégé Arthur Pigou (1877–1959), in correspondence with Keynes, was the first to draw a reversed L-shape labor supply curve for the SP. From the dominant textbook perspective, Keynes's SP solution made output and employment depend on investment through a multiplier and made the equality between saving and investment follow from two logical premises—income is the sum of consumption and investment, and saving is income less consumption. Keynes appears to fix all capital stock for the whole economy in the SP, analogous to Marshall's fixing production units for a single industry. Although Keynes dealt with liquidity preference and marginal efficiency of capital schedules that vary with long-term expectation, he defined SP expectation as a day and restricted long-period expectation to the view of mass psychology, which plays out in three months to a year, corresponding to Marshall's market period and SP, respectively.

Following Keynes, John Hicks (1904–1989) created a temporary (sequential) equilibrium model that reflected Keynes's SP. Prices are determined in the market period, Monday, and production varies during the rest of the week to meet varying market conditions. The past week, $t - dt$ to t, or the future week, t to $t + dt$, is an infinitesimal period during which production can change. The long period is a link of various Mondays and weeks together.

For modern policy analysis, the SP equilibrium is reflected in a downward sloping Phillips curve at a position of nonaccelerating inflation rate of unemployment (NAIRU). For the monetarists and the new classical school, adjustments for SP differences between actual and expected prices enables convergence of the aggregate SP supply schedule to the long-period natural level where desired expectations are fulfilled. Robert Lucas and Thomas Sargent (1981), who extended the Walrasian and Marshallian concepts of price taking to the case where price provides information, were not concerned with long- and short-run characterizations, but with drifts in structural parameters of their models. The modern literature also developed an SP non-Walrasian equilibrium concept that depends on current prices and the expectation of

future prices based on past and current prices. Thus the economic agents are able to carry out all their preferred actions in current markets.

SEE ALSO *Capital; Demand; Expectations; Long Period; Long Run; Long Run Prices; Market Clearing; Short Run; Supply*

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SHORT RUN

The term *short run* refers to a period of time in which at least one factor (input) of production cannot be immediately modified. This concept determines exactly how a firm's decision-making is constrained. Factors of input may be constrained by past decisions or a decision that cannot immediately be implemented. The short run contrasts with the long run, in which all input factors that can be variable are variable. The short run does not specify any exact length of time, such as three months or one year. The short run can be five minutes or five years, depending on the exact characteristics of the fixed factors. Examples of circumstances that would place a firm in a short-run situation include but are not limited to: contracts that cannot be broken on rented machinery, the time required to build a bigger factory, rental agreements on factory space, the time required to purchase and assemble additional machinery, and the time required to find a renter for owned capital.

In the perfectly competitive model, the short run constrains firms to change only the amount of variable costs, typically the amount of labor employed. In the classic example, a firm can increase (decrease) production only by increasing (decreasing) its labor force. The amount of capital is fixed in the short run because the rental or purchase of large machinery and factory space requires long-term contracts that are not immediately revised. Contrasting this to the long run, labor is still variable, but now each individual firm has the option to purchase more capital or to not renew contracts and employ less capital.

In the short run, a firm will choose the level of variable inputs that maximizes its profit taking given its level of fixed inputs. The profit-maximizing output level may be chosen at zero, implying the short-run shutdown decision. In this case when the price at which a firm can sell its goods lies below the average variable costs of the firm, the firm would lose money on each additional unit of good that it produces, leaving it better off not to produce at all. A firm may not exit the industry in the short run, however, because of existing fixed costs. Once all fixed costs become variable, the firm has entered the long run, and is no longer in the short run. This gives the firm more opportunities to lower costs and increase profits by altering its inputs to achieve the most efficient production techniques. If the firm is unable to become profitable in the long run, it has the long-run option to exit the industry.

There are short-run and long-run versions of supply, demand, and the entire family of cost curves (marginal cost, average cost, total cost). It is important to recognize that in the short run, a firm has variable costs and fixed costs, represented by two separate curves. In the long run, all fixed costs become variable, eliminating the fixed cost curve and causing the variable cost and the total cost curves (and thus the corresponding average variable and average total cost curves) to collapse into one total cost and average cost curve. Typically, the short-run version of each curve is *less* elastic than its corresponding long-run version.

Jacob Viner presented these concepts in his 1931 work, "Cost Curves and Supply Curves," which formalized the graphical and analytical analysis of short-run and long-run cost curves. This work is visible in the economics textbooks of the early twenty-first century as the graphical representations of markets and firms that are used to determine market equilibrium and firm behaviors.

In the field of macroeconomics, Milton Friedman (1912–2006) developed short-run and long-run concepts

differentiated from one another with respect to expectations. In the short run, expectations about the future are not fully realized, and conversely in the long run, expectations are fully realized. For example, Edmund S. Phelps (b. 1933) and Friedman provide a distinction between the "short-run" and "long-run" Phillips curves. The Phillips curve, originally formulated by the New Zealand economist A. W. H. Phillips (1914–1975), displays the inverse relationship between unemployment and inflation. In the short run, expansionary monetary or fiscal policies will raise nominal wages as the demand for labor increases. These same policies will also have the effect of raising the overall price level, resulting in smaller real wage changes relative to the nominal wage change. Workers will eventually realize the inflationary effect on their real wages and insist on wage changes that keep pace with inflation. Those who entered the labor force because of higher nominal wages will exit once they realize that real wages are no higher than before the policy modification. The result is that in the short run, workers may supply more labor in response to expansionary policies in the absence of fully realized expectations, but in the long run, once expectations of price inflation have adjusted, unemployment will increase back to the previous natural level, while nominal prices and wages remain at their higher levels because of the original expansionary stimulus. This results in a deviation from the traditional Phillips curve, which Friedman refers to as the expectations-augmented Phillips curve. The faster the worker's expectations are realized, the sooner the short run transitions into the long run, and the less effective expansionary policies will be.

In conclusion, the short run and the long run may be summarized as follows:

- Short run: Some inputs variable, at least one fixed. Firms can choose a level of production only by changing the amount of a variable input. Choosing an output of zero implies the shutdown decision. New firms do not enter the industry, and existing firms do not exit. Supply, demand, and cost curves are less elastic (more inelastic).
- Long run: All inputs variable, firms can enter and exit the marketplace. Supply, demand, and cost curves are more elastic.

SEE ALSO *Long Period; Long Run; Phillips Curve; Short Period*

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SHTETL

The *shtetl*, Yiddish for "small town" (plural *shtetlekh*), was the archetypal eastern European Jewish community for over half a millennium. Moreover, it emerged during the twentieth century as a social paradigm of Jewish communal life and became the subject of extensive Jewish memory practices in the wake of the Holocaust. As early as the thirteenth century, Jews settled in small towns in Poland, where they played a central role in the local economy as merchants, artisans, and managers of property owned by the aristocracy. Eventually these towns, in which Jews sometimes comprised the majority population, stretched the length and breadth of eastern Europe. Here the Jewish population surged during the eighteenth century, making shtetlekh home to the majority of world Jewry for over a century.

Jewish shtetl life received little analysis until Jews began leaving these towns in large numbers during the latter half of the nineteenth century as a result of urbanization and immigration. The shtetl figured centrally in early works of modern Yiddish literature—most famously by Sholem Aleichem (Sholem Rabinovitsh, 1859–1916)—many of which offered astute critiques of traditional Jewish mores and provincial society through satire. The early twentieth century witnessed a new interest in traditional eastern European Jewish life among modernizing Jews, prompting early ethnographic efforts to collect folklore in both the shtetl and the rural village (Yiddish: *dorf*). The most famous early example was the 1912–1914 expedition in Ukraine led by S. Ansky (Solomon Rappoport, 1863–1920), who subsequently drew on the materials collected to write *The Dybbuk* from 1912 to 1917, the best known work of modern Yiddish drama.

During the interwar years, scholarly efforts to study shtetl life were organized by the YIVO Institute for Jewish Research in Vilna, Poland (now Vilnius, Lithuania), and researchers in state-supported institutes in the Soviet Union. These undertakings included grassroots projects, such as a pamphlet published in Minsk in 1928, which exhorted amateur folklorists, *"Forsht ayer shtetl"* (Research your town). Individual ethnographies, memoirs, literary works, and journalistic accounts of shtetl life also appeared during this period in Yiddish, Hebrew, Polish, Russian, German, and other languages.

Following the genocide of European Jewry during World War II (1939–1945), many former residents of

shtetlekh initiated efforts to memorialize their own local histories, customs, and murdered townsfolk, most notably by compiling *yisker-bikher* (communal memorial books). At the same time, American anthropologists undertook a major project to write a composite study of prewar eastern European Jewish life based on research from a pioneering wartime "anthropology-at-a-distance" project overseen by Margaret Mead (1901–1978) and Ruth Benedict (1887–1948). The resulting book, *Life Is With People* (1952), quickly became the standard work in English on shtetl life. As folklorist Barbara Kirshenblatt-Gimblett has observed, this book's approach offers an idealized, paradigmatic vision of the shtetl—timeless, uniform, insular—that is as problematic as it was appealing in the aftermath of the Holocaust. The impact of *Life Is With People* has been extensive, influencing, among other works, *Number Our Days* (1978), anthropologist Barbara Myerhoff's (1935–1985) study of elderly American Jewish immigrants from eastern Europe. More recently, return travel to shtetlekh has been the subject of ethnographic films (e.g., Marian Marzynski's *Shtetl* [1996]) and studies of Jewish memory practices.

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Jeffrey Shandler

SHYNESS

Shyness can be defined by the presence of anxious reactions, excessive self-consciousness, and negative self-evaluation in response to real or imagined social interactions to the degree that it produces enough discomfort to interfere with and inhibit one's ability to perform successfully in social situations and also to the extent that it disrupts one's personal and professional goals. The symptoms of shyness can be affective (e.g., heightened feelings of tension and anxiety), physiological (e.g., racing heart, dryness of the mouth), cognitive (e.g., heightened self-consciousness and excessive thoughts of critical self-evaluation), and behavioral (e.g., increased interpersonal distance, inhibited verbal participation, and lack of eye contact). The number of adults who consider themselves to be chronically shy (e.g., shy their entire lives) is approximately 40 percent (Carducci 1999).

Subtypes of shyness include situational shyness (temporary shyness triggered by specific situations such as meeting a famous person), shy extroversion (outgoing appearance coexisting with a high degree of anxiety and negative self-evaluation, often experienced by entertainers), and transitional shyness (an extended period of shyness brought on by life changes such as moving to a new town). Introversion is not considered a subtype of shyness. Although shyness and introversion are similar in their overt expressions of behavior, they differ in their underlying motives. Introverts do not necessarily fear social situations, but simply prefer more solitary activities. Shy individuals, like extroverts, prefer social activities but are restrained in their participation by the experience of shyness. This approach-avoidance conflict is a source of distress for shy individuals.

The characteristic features of shyness include an excessive degree of self-consciousness, negative self-evaluation, and negative self-preoccupation. Shy individuals also demonstrate a slow-to-warm tendency characterized by an extended period of adjustment to social situations, especially those that are novel. Situational shyness is the transitory experience of shyness that can be triggered by a variety of situations, the most frequent being interactions with authorities, one-to-one interactions with members of the opposite sex, and unstructured social settings.

The most frequently used measure of shyness is the Revised Shyness Scale (RSS). The RSS contains fourteen items assessing the three principal dimensions of shyness: affective/physiological (e.g., "I feel tense with people I don't know"), cognitive (e.g., "I feel painfully self-conscious when I am around strangers"), and behavioral (e.g., "it is hard for me to act natural when I am meeting new people"). The RSS uses a five-point Likert scale, with responses ranging from 1 ("very uncharacteristic or untrue, strongly disagree") to 5 ("very characteristic or true, strongly agree"). Scores on the RSS demonstrate acceptable test-retest reliability and validity by correlating highly with other measures of shyness, social avoidance, and interpersonal difficulty.

Distinctions have been made between shyness and other socially related constructs. Like shyness, embarrassment is characterized by heightened self-consciousness, but unlike shyness, embarrassment includes feelings of guilt and is a response that occurs after an inappropriate social response in the presence of others. Individuals do not experience embarrassment prior to the performance of an inappropriate response or when others are not present. In contrast, the affective (e.g., anticipatory feelings of anxiety), cognitive (e.g., assuming one's comments will be judged unfavorably by others), and behavioral (e.g., not approaching others) responses characteristic of shyness can occur prior to the actual performance and in the

absence of others (e.g., before entering a social situation). Social anxiety, like shyness, involves anxiety and self-critical evaluation in novel social settings, but to a greater degree: Individuals affected by social anxiety have greater difficulties in social situations (e.g., parties) and therefore may avoid them, but there is little disruption in other social aspects of their public lives (e.g., riding on public transportation, eating in a restaurant, or going shopping). Social phobia, which is experienced by approximately 8 percent of the population, is a clinically diagnosed psychiatric condition that, like shyness and social anxiety, involves feelings of anxiety and excessive critical self-evaluation, but to such a greater degree that it has a much more pervasive and disruptive influence on one's ability to participate in everyday situations.

Causes of shyness can be psychological (e.g., the result of family dynamics), biological (e.g., determined by hormonal and neurotransmitter levels), genetic (e.g., inherited temperament), neurological (e.g., bed nucleus of the striate terminals), or cultural (e.g., prioritizing the individual over the collective). The evolutionary benefits of shyness include cautionary behavior in novel and potentially threatening situations and the facilitation of social exchange and cooperation through the reduced tendency for self-serving expression. The personal costs of shyness include increased personal blame for interpersonal failures, loneliness, and substance abuse; the social costs, particularly for males, include less stable marriages, career delay, and lower levels of career advancement.

Interventions available for dealing with shyness include informational Web sites, self-help books, self-directed programs, online and offline social support groups, and structured clinical programs. Different treatment approaches are utilized depending on which component of shyness is targeted. Approaches for dealing with the affective component of shyness tend to focus on the reduction of bodily arousal, such as progressive relaxation techniques and biofeedback. Approaches for dealing with the cognitive component of shyness typically emphasize cognitive modification, such as revising self-perceptions, altering attributions, and adjusting expectations for defining success in social situations. Approaches for dealing with the behavior component of shyness emphasize the acquisition and development of social skills, such as strategies for approaching others, techniques for initiating and maintaining conversation, and procedures for entering ongoing conversations. Structured clinical programs typically involve combining elements from all the approaches, such as cognitive modification to identify which situations produce the most critical self-evaluations and structured role-playing exercises within the context of systematic desensitization to reduce anxiety, teach appropriate behavioral responses, and build self-confidence. An emerging, controversial view of shyness links it to more serious psychiatric conditions such as social phobia and emphasizes its treatment with prescription drugs, such as those based on selective serotonin reuptake inhibitors (SSRIs).

SEE ALSO *Anxiety; Neuroscience; Personality; Psychotherapy; Temperament; Trait Theory*

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SIBLING RELATIONSHIPS

Sibling relationships are the longest lasting relationships of most people's lives, and about 85 percent of all people have at least one sibling. Studies by researchers such as Judy Dunn, Victor Cicirelli, Wyndol Furman, and Susan McHale have contributed to our understanding of how sibling relationships develop from early childhood to adulthood, and how siblings influence each other. Research has focused on four broad areas: development of the relationship across the life course, the links between sibling and other family relationships, the impact of siblings on individual health and well-being, and the ongoing discussion of why siblings are so different.

Sibling relationships begin the day the second child arrives, and sometimes even earlier as parents talk about the arrival of a new baby. Judy Dunn and Carol Kendrick (1982) used interviews and in-home observations of mothers, firstborns, and infant siblings to understand why some sibling pairs develop relationships that are warm and supportive while others develop relationships that are hostile and conflictual. Their research, along with other studies, finds that a positive sibling relationship is more likely to develop when parents include the firstborn child in care of the baby and when they talk about the new baby as a person with needs and feelings just like their "big sister or brother." At the other end of the life span, researchers

such as Victoria Bedford, Victor Cicirelli, and Ingrid Connidis have demonstrated that social support is an important function of sibling relationships in adulthood and that childhood rivalries can reemerge when siblings spend more time together as adults. More recently, research is growing on siblings during adolescence and early adulthood. For example, Katherine Jewsbury Conger, Chalandra M. Bryant, and Jennifer Meehan Brennom (2004) used observations of sibling interactions and information reported by siblings to explain the changing nature of the sibling relationship in adolescence and the implications for social support in adulthood.

Parents are clearly recognized as important figures in the lives of young children, but for many, siblings are also important. Older siblings play many roles as playmates, teachers, role models, advisors, therapists, friends, and even bossy babysitters. Younger siblings play complementary roles as playmates, students, advice seekers, competitors, friends, and unwilling participants in activities devised by helpful older siblings. In fact, studies of cultures around the world find that four- and five-year-old siblings in some societies begin teaching their younger siblings as early as two and three years of age about language and proper behavior (Zukow 1989). Thomas S. Weisner (1989) presents a theoretical framework that takes family relationships and culture into account in explaining the unique contribution of siblings to social, emotional, and cognitive development. Cicirelli (1995) provides a comprehensive review of the varied theoretical and methodological approaches that researchers have used to study the association between parent-child and sibling relationships and the link between sibling relationships and those with friends and classmates. Laurie F. Kramer and Amanda K. Kowal (2005) report that positive behaviors between firstborns and their friends in early childhood are related to positive relationships with their younger siblings in childhood and early adolescence. Kramer's research on resolving conflict between siblings will be of particular interest to parents.

The parents' marital relationship is another important factor in the lives of siblings. Research by Clare Stocker and others reports that spousal conflict is related to conflict between siblings and can interfere with siblings' ability to develop a positive relationship. Other research finds that some siblings bond more closely during difficult times such as a divorce or death of a parent. And research on stepfamilies finds that sibling relationships often suffer when parents divorce and remarry. Remarriage also adds the complexity of half-siblings and step-siblings.

Evidence is accumulating that siblings can promote competent behaviors as well as encourage problem behaviors. A special issue of the *Journal of Family Psychology* (December 2005) was devoted to research on siblings, and the studies demonstrate the exciting new advances made in this area. The editors, Laurie Kramer and Lew Bank, selected eighteen articles designed to "illustrate the ways in which sibling relationships serve as important contexts for both individual development and family functioning" (p. 483). Many of the studies use sophisticated statistical analyses that allow social scientists to examine sibling relationships within families across multiple points in time. These studies, conducted with a broad range of ethnically diverse families, demonstrate the increased appreciation for the importance of siblings' roles in family life and individual development. Interested readers will also want to refer to Frits Boer and Judy Dunn's 1992 book, *Children's Sibling Relationships: Developmental and Clinical Issues*, which provides a summary of clinical and developmental issues, including the impact of a sibling's illness or disability on individual development and sibling relationships.

One frequently asked question is why siblings are so different if they grew up in the same family. The ongoing debate centers on nature (a person's genetic makeup) and nurture (shared and nonshared experiences in the family such as parenting and other social settings). The field of behavior genetics uses comparisons between twins, full siblings, and adoptive siblings to explain individual similarities and differences in personality and behavior (Dunn and Plomin 1990; Lytton and Gallagher 2002). One example illustrates why there are no easy answers to this ongoing debate. Everyone can understand why identical twins (monozygotic, or conceived with one egg) are similar because they share 100 percent of their genetic material, so if differences are observed they are the result of the environment such as experiences with parents and friends. However, their environment also is likely to be more similar because these twins are the same sex and arrive at the same time in the family. Fraternal twins (dyzygotic, or conceived with two eggs) also arrive in the family at the same time but share only about 50 percent of their genes and they may be the same or opposite sex. For these siblings, some factors are pushing them toward similarity and others toward difference. Full siblings (the most common variety) also share about 50 percent of their genetic material, but each sibling arrives at a different point in the family's life. Even though they all live in the same family, the experiences of one sister may be quite different from those of her sister or brother.

Differential parental treatment has been identified as one factor that explains why siblings in the same family might be so different (McGuire 2001). Parents, and most children, agree that parents should treat siblings differently because of age, sex, temperament, and other individual characteristics. However, if parents play favorites and the siblings feel the treatment is unfair, then there can be negative consequences. Several researchers (e.g., Gene

Brody, Katherine Conger, Shirley McGuire, Susan McHale, and Robert Plomin) have found that differential parental treatment may be related to negative relations between siblings, child behavior problems, and conflictual family relations. Moreover, siblings can also influence the parenting behaviors. The exploration of shared and nonshared environments as explanations for sibling similarities and differences continues to be a promising area for research.

SEE ALSO *Child Development; Children; Determinism, Biological; Determinism, Environmental; Family; Family Structure; Heredity; IQ Controversy; Marriage; Nature vs. Nurture; Parenting Styles; Twin Studies*

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Katherine Jewsbury Conger

SIBLING RIVALRY

SEE *Sibling Relationships.*

SICKNESS

SEE *Disease.*

SIGNALING MODELS

SEE *Screening and Signaling Games.*

SIGNALS

The word *signal* comes from the Latin word *signum*, meaning "sign," and from the Late Latin word *signalis*, meaning "of a sign." A *signal* is an event, message, activity, or, generally, any means of communication that encodes or transmits a message or some information between at least two parties, the sender and the receiver of the message.

In economics, a signal is a means by which one party (the agent) conveys some meaningful information about itself to another party (the principal). The action of sending a signal is called *signaling*. In business, a signal is a means by which a firm conveys to the market (investors, financial analysts, banks, bondholders, stockholders, and all stakeholders) information about its current position and future prospects.

In a perfect market, all information is accessible to all at zero cost and simultaneously. However, markets in reality are not perfect and manifest a deviation from perfect information called *asymmetric information*. In some economic transactions, the participants have different access to information pertinent to their decision-making: One party has more or better information than the other, and

this inequality of information access disrupts normal market behavior. Michael Spence (1973, 2002) suggests that two parties with different exposure to needed information could overcome this problem of asymmetry by having one party send a signal to the other, revealing some pertinent information. The receiving party could interpret this signal and adjust their behavior accordingly. Interpretation, of course, is subjective and can lead to erroneous inferences. Thus, there is need for a lot of caution in signal interpretation.

There are types of sellers who usually have better information than buyers, such as used-car dealers, salespeople, mortgage brokers, loan originators, stockbrokers, real estate agents, and company insiders (managers). There are also circumstances in which the buyer usually has better information than the seller, such as estate sales as specified in a last will and testament, sales of old art pieces without prior professional valuation, and purchases of health insurance by consumers (or clients) with various risk levels. Asymmetric information can result in one party being defrauded by the other. Because information is easy to create and spread, but difficult to control and trust, it complicates many standard economic theories.

In finance, signaling theory has been applied to the problem of asymmetry of information between a firm's insiders (managers) and outsiders (stockholders, stakeholders, bondholders, and investors). This theory mainly concerns two aspects of a firm's strategic decisions: capital structure and dividend policy decisions. Stephen Ross (1977), the first to apply signaling theory to finance, argues that the market values a firm's perceived returns, not its actual returns. Managers, as insiders, have monopolistic access to pertinent information about a firm's prospects and expected cash flows. Therefore, when it is in their strategic interest, they can use project financing or dividend policy to send signals to investors about their firm's future. For instance, increased financial leveraging can be used by managers to signal optimistic future prospects. Hayne Leland and David Pyle (1977) assume that owners (entrepreneurs) have better information about the expected value of their firms' future investment projects than outsiders have. If a firm increases its dividend payout, this is perceived as a positive signal about expected future cash inflows. The market interprets this increase as a sign that the firm will be able to generate enough cash inflows to cover all its debt payments and its dividend payments without increasing the probability of bankruptcy (see Fama, Fisher, Jensen, and Roll 1969; Asquith and Mullins 1983; Richardson, Sefcik, and Thompson 1986).

SEE ALSO *Finance; Information, Asymmetric; Information, Economics of; Screening and Signaling Games*

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Katerina Lyroudi

SIKHISM

Sikhism, a religion that emerged in the Punjab region of India in the fifteenth century, can be said to be the cultural product of the collision between Hinduism and Islam. As such, it combines elements of Islam, such as monotheism and iconoclasm, with certain features of Hinduism, such as the doctrines of reincarnation, karma, and nirvāna. While Sikhism is often regarded as a syncretic religion, this interpretation is offensive to Sikhs, who regard their religion as a direct and separate revelation. Crucial to the distinctive character of Sikhism, however, was the rejection of the caste system and its associated rituals and legal apparatus by the Sikh Gurus, or teachers.

Sikhism was founded by Guru Sri Guru Nanak Dev Ji (1469–1539), who was born at Talwandi, a village that is now known as Nankana Sahib, near Lahore in Pakistan. Leaving home to gain religious knowledge, Nanak is said to have encountered Kabir (1440–1518), a saintly figure who was revered by the followers of many religious traditions. Nanak promoted religious tolerance and the equality of women. His most famous saying was: "There is no Hindu, there is no Muslim." Nanak undertook four extensive journeys around and beyond India, spreading his teaching in Bengal and Assam, in Shri Lanka via Tamil Nadu, in the north toward Kashmir, Ladakh, and Tibet, and finally toward Baghdad and Mecca.

As a system of religious philosophy, Sikhism was traditionally known as the Gurmat (the teachings of the gurus) or Sikh dharma. There were ten Gurus who led the community from the time of Nanaka until 1708. These Gurus came from the Khatri *jati*, a mercantile caste. The term *Sikhism* comes from the Sanskrit root *sisya,* signifying a "disciple" or "student." Sikhs, who now number over twenty-three million adherents around the world, are predominantly inhabitants of the Punjab, where they represent 65 percent of the population. In practical terms, Sikhs are distinguished by the custom in which baptized Sikhs wear the *panj kakke* (the Five Ks): uncut hair, a small comb, a metal bracelet, a short sword, and a special undergarment. Sikhs served in the British army between 1870 and 1947, and many of them settled outside the Punjab after they were discharged. Thus, there is now a large Sikh diaspora.

Nanak emphasized personal devotion to and intimate faith in God. The principal belief is faith in *Vahiguru*, or God, who is conceived without gender as a single, personal, and transcendental creator God. *Vahiguru* is omnipresent and can be comprehended by the "heart" of the true disciple, who achieves religious enlightenment through meditation. The chief obstacles to knowledge and salvation are human attachment to worldly pursuits and interests that determine human involvement in the endless cycle of birth and death, or *samsara*. This collection of beliefs about sin, responsibility, rebirth and release can be referred to as the *dharma-karma-samsara* system that Sikhism shares with other religions of the Indian subcontinent. The pursuit of material interests is an illusion, or *maya*, which is evident in the Five Evils of egoism, anger, greed, attachment, and lust. These evils can only be avoided by intense meditation and verbal repetition of the name of God. In terms of its social teaching, in addition to rejecting caste, Nanak taught that Sikhs should respect the rights of all creatures, especially of human beings. Sikh teaching also underlines egalitarianism, charity, and the sharing of resources.

There are two sources of scriptural authority in Sikhism: the Guru Granth Sahib and the Dasam Granth. The Guru Granth Singh may be referred to as the Adi Granth, or the First Volume. The Adi Granth is the scriptural version created by Arjun Dev in 1604, while the Guru Granth Sahib is the final version produced by Gobind Singh. These teachings take the form of hymns arranged into thirty-one *ragas* (musical forms) in which they were originally composed. These hymns were originally written in many different languages, and there are both Sanskrit and Arabic portions. The Granth is regarded as the living embodiment of the eleven teachers, and great respect is required in reading them, such as covering the head with a turban or piece of cloth.

Under the guruship of Nanaka, Sikhism was an informal collection of followers, but it eventually came to have a political identity. Guru Ram Das (1534–1581) created the city of Ramdaspur, subsequently known as Amritsar. Guru Arjun Dev (1563–1606) built the Golden Temple (Harimandir Sahib), which was completed in 1601, and prepared the sacred text of the Adi Granth. As a result of conflicts with the Mughal authorities, the Sikhs founded the Khalsa (brotherhood and sisterhood of followers who join the community at puberty by undertaking certain rituals) in 1699 to provide for the defense of the community or *Panth*. As the Sikh community developed a military and political organization, Sikhism became a considerable force in medieval India.

With the death of Banda (Guru Tegh) Bahadur (1621–1675), the ninth Guru of the Sikh faith, the *misls,* a confederation of Sikh warrior bands, was formed. Toward the end of the Mughal Empire (1526–1858), a Sikh kingdom arose under Maharaja Ranjit Singh, with a capital in Lahore and outer boundaries from the Khyber Pass to China. Eventually, this kingdom (1799–1849) came under British control after the Anglo-Sikh Wars (1845–1846 and 1848–1849).

The partition of India occurred in 1947, and the Sikhs suffered greatly from the resulting violence. Millions were forced to leave their ancestral homeland in the West Punjab. Although the Sikhs eventually prospered, there has been a movement (*Damdami Taksal*), led by Jarnail Singh Bhindranwale (1947–1984), to create an independent state of Khalistan. This movement led to clashes with the government and communal violence. Bhindranwale was killed in June 1984 in the Golden Temple during a clash with the Indian army. In retaliation, Prime Minister Indira Gandhi was assassinated by her Sikh bodyguard in October 1984.

The attempt to remove Bhindranwale was known as Operation Blue Star in the Indian army, but for Sikhs it represented a desecration of the sacred Golden Temple and the Sikh community. As a result of the military attack, Bhindranwale acquired the status of a martyr, and following Indira Gandhi's assassination there was further communal killing of Sikhs. The consequence of these conflicts was to reinforce the sense of Sikh identity, but also to stimulate the exodus of Sikhs to Europe, North America and East Africa, thereby augmenting the already large Sikh diaspora.

SEE ALSO *Gandhi, Indira; Hinduism; Islam, Shia and Sunni; Monotheism; Reincarnation; Religion; Secession; Supreme Being*

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SILICON VALLEY

Silicon Valley, California, USA, is widely hailed as the driving force behind the new high-tech economy. This region has a long history of economic and social struggle that predates and sets the stage for the contemporary terrain of sleek high-technology firms with billionaire chief executive officers (CEOs). Santa Clara Valley (as the region is also known) has been the site of continuous struggles between Native Americans and newcomers, wealthy business owners and low-income workers, and Anglos and people of color and immigrants. This includes the time of the Spanish conquest (beginning in 1769), the gold-rush period (during the mid-1800s), the agricultural period (during the late 1800s through the mid-1900s [Zavella 1987]), and the present-day electronics or high-technology era. During each of these periods, the Santa Clara Valley has been the site of battles over economic and political power that resulted in the relegation of indigenous peoples, immigrants, and people of color to the lowest positions in the social hierarchy. Each period of struggle also saw enormous harm visited upon the natural environment as corporations extracted raw materials for production and sale in global consumer markets (Park and Pellow 2002).

International Business Machines (IBM) built its first West-Coast plant, its Pacific headquarters, in San Jose, California, in 1943. Soon companies such as FMC, Lockheed, General Electric, Sylvania, Fairchild, Memorex, National Semiconductor, and dozens of others located to the area and built what eventually became known as Silicon Valley, producing industrial and consumer electronics that constituted the high-tech revolution.

While a number of industrialists became extraordinarily wealthy as a result of the electronics boom, social inequality was a continuous hallmark of economic development in the region. By 1995, although there was great racial diversity in Santa Clara County (as the total Latino population constituted 23 percent of the county's residents, Asian Pacific Islanders were 20 percent, and the white population less than 53 percent), Silicon Valley was experiencing ever-increasing wage inequality by race, class, and gender at rates much greater than in the United States as a whole. In 1970 women and people of color constituted an exceedingly small fraction of professional and managerial positions in the valley while these same groups were concentrated in the lower-paid, higher-risk occupations of craft worker, operative, and laborer. As of the early twenty-first century, these patterns remained virtually unchanged, except for class bifurcation among Asian populations as many skilled Chinese and South Asian immigrants moved into higher-paid positions while the Vietnamese population remained concentrated in the lowest-paid positions. Thus, race, class, and gender each operated in ways that generally disadvantaged people of color and women in Silicon Valley.

Despite these social inequalities, Silicon Valley promoters were always able to boast about the environmentally safe image of the high-technology industry and how this sector was distinct from other manufacturing industries because it was "pollution free." The pollution-free image was shattered in December 1981 when it was discovered that the well that supplied drinking water to homes in south San Jose was contaminated with thousands of gallons of the deadly chemical trichloroethane (TCA), a solvent used to remove grease from microchips and printed circuit boards after they are manufactured. The toxic waste materials had been leaking from an underground storage tank for at least a year and a half. The responsible party was the Fairchild Semiconductor Corporation, a major firm in the valley.

Most persons working to produce computers and semiconductor chips inside Silicon Valley's electronics firms are women, immigrants, and people of color. Much of the ethnic and gender segregation in the industry is the result of conscious and selective recruiting on the part of managers (Hossfeld 1990). Compounding the exposure of these workers to the pollution in their neighborhoods is the fact that they hold jobs that are more toxic than those found in any other basic industry. Up to 1,000 different chemicals and metals are used in the various processes required to produce semiconductor chips around the world. Toxic spills that have enraged communities located near chip plants have also impacted the health of workers inside the plants.

Outsourcing of jobs overseas has been a major concern among Silicon Valley workers since the 1980s. Despite earlier *no lay-off pledge* declarations by high-technology industry leaders, this sector is not fundamentally different from any other with regard to the impact of globalization. The electronics industry is a global industry with investors, owners, factories, workers, and consumer markets the world over. Firms have worked to continuously minimize costs and maximize profits, and this often means importing workers through the H1B visa program (the program that allows foreign workers to come to the

United States to work for one company for a set period of time before they return home, which some critics have labeled a modern form of indentured servitude) or moving factories overseas to find cheap labor in other countries. Electronics firms have moved from the United States to Mexico and then to China, for example, in an effort to hold down costs and boost earnings. Predictably, these practices are accompanied by low-wage, hazardous working conditions and often result in serious occupational health hazards and environmental harm. If Silicon Valley (and those communities around the globe that host a high density of electronics firms) is to have a hopeful future, it will have to be transformed and characterized by social equity and ecologically sustainable economic practices.

SEE ALSO *Technological Progress, Economic Growth; Technology*

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SILK ROAD

The term *Silk Road* (*die Seidenstrasse*) was first coined by the nineteenth-century German explorer Baron Ferdinand von Richthofen (1833–1905). It broadly describes the ancient trading routes stretching across the Eurasian continent from China to Europe. While silk was clearly one of the earliest and most important commodities traded along the route, precious metals and stones, spices, porcelain, and textiles also traveled the road. More significantly, the Silk Road was an avenue for the exchange of ideas. The technologies of silk production, paper making, gunpowder manufacture, and block printing made their way west across Asia via this highway. Buddhism, Islam, and Christianity entered China via the Silk Road. Migrants, merchants, explorers, pilgrims, refugees, and soldiers brought along with them religious and cultural ideas, products, flora and fauna, and plagues and disease in this gigantic cross-continental exchange. Thus, the Silk Road is a symbol of the globalization of trade, technology, and ideology for the premodern world.

Although Chinese silk was found in Europe as early as 500 BCE, well recorded trading started only when China gained control of its western frontier during the Western Han dynasty (202 BCE –9 CE). The first route started from China's capital at the time, Chang-An (now Xian), and continued through the northwest frontier of China and the elaborate trading networks of major Eurasian civilization zones in Central Asia, Persia, and Roman Europe. Traffic along the Silk Road was disrupted at times of political disintegration, such as the collapse of the Han dynasty around 220 CE. A second, "southern" Silk Road started in southwest China, passing through China's Sichuan and Yunan provinces and Burma to reach India. Trade in silk between China and India increased substantially between the fourth and sixth centuries when the northern route became unstable.

During the first two hundred years of the Tang dynasty (618–907 CE) silk trade via the northern route thrived again, only to decline toward the end of dynasty when Tang lost control of the northwestern territories to the Arabs. The route was significantly revived under the Mongol Empire established by Genghis Khan (1167–1227). Safe trade routes, effective post stations, the use of paper money, and the elimination of trade barriers marked the high stage of East-West exchange, which saw the famous travels of Marco Polo.

As shipbuilding technology progressed, maritime routes became easier and safer; this was the most important contributing factor to the relative decline of the overland Silk Road from around the fourteenth century. A significant breakthrough came in 1488 when Portuguese ships found their way to East Asia by bypassing the mighty Ottoman barrier and rounding the Cape of Good Hope. Meanwhile, in China the centers of economic and cultural activities began to shift decisively southward, with the lower Yangzi delta area (roughly in the Jiangsu and Zhejiang provinces) emerging as the most important center of production of luxury goods, including silk. This development helped accelerate the geographic shift in Eurasian trade from the overland to the sea route, which is sometimes called the maritime Silk Road.

Accompanying the trade in silk was the slow but cumulative diffusion of the craft of silk-making, which traveled from China through Central Asia, Persia, Anatolia, North Africa, and Eastern and Southern Europe, and finally, in the seventeenth and eighteenth centuries, took hold in the newly discovered American continent.

SEE ALSO *Trade*

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Debin Ma

SILVER INDUSTRY

The world silver industry consists of miners, refiners, traders, and fabricators. Generally speaking, the silver industry overall grew in the decade from 1996 to 2005, with mine supply increasing to meet rising fabrication demand and refiners and traders handling greater volumes to facilitate this growth.

While silver prices were generally flat through most of this decade, prices began rising out of the US$4 to US$5 per ounce range where they had been trapped in 2003. During 2005 and the first half of 2006, silver prices rose sharply, reaching a decade-long high of more than US$9 per ounce in late 2005 and soaring further to nearly US$15 per ounce by April 2006. While low prices hurt the mining sector through much of the 1990s and early 2000s, they had a long-run effect of spurring fabrication demand, particularly nontraditional uses of silver in diverse areas from electronics to medicine.

According to a 2006 report by Peter Klapwijk, world mine production of silver was generally on the increase between 1996 and 2005, during which time production rose from just under 500 million ounces to approximately 642 million ounces. William E. Brooks reported in 2006 that approximately two-thirds of mined silver worldwide is produced as a by-product of copper, lead, zinc, and gold production. As a consequence, silver is mined and enters the market regardless of the price.

Silver resources are spread over all continents (excluding Antarctica and Greenland, where resource estimates are unavailable). The largest producing country in 2005 was Peru, which accounted for slightly more that 15 percent of world output. Peru was followed by Mexico, Australia, China, Chile, Russia, Poland, and the United States. Estimated minable world silver reserves—that is, silver contained in ore that can be mined at a profit—amount to approximately 8.7 billion ounces (Brooks 2006). It is not known, however, how many of these ounces could be recoverable through primary rather than by-product production.

LABOR CONDITIONS AND ENVIRONMENTAL ISSUES

Labor conditions and the degree of unionization in the silver mining industry vary widely around the world. In the United States, for example, every mine worker undergoes safety training before being employed and takes a periodic refresher course. Silver mining, and hard-rock mining in general, however, is significantly safer than coal mining. Coal mining involves digging into a combustible material, which is the cause of many coal mine accidents. This is not the case with hard-rock mining.

Because silver mines tend to be fairly large-scale operations employing several hundred workers at a moderate size mine, the workforce is amenable to unionization. The degree of unionization, however, varies widely depending on national and state or provincial laws. In the western United States, where most of U.S. output comes from, mine workers tend not to be unionized, but many of the specialized tradespeople, such as electrical workers, pipe fitters, and some construction workers, do tend to be unionized. In general, whether union members or not, mine workers are typically among the highest paid industrial workers.

Environmental reclamation laws also vary widely around the world. In the United States environmental laws concerning discharge of pollutants and reclamation are generally administered by state agencies in compliance with U.S. Environmental Protection Agency regulations. In other countries similar regulations may or may not be in force. Nevertheless, international banking concerns typically make compliance with U.S. environmental standards a general condition of financing mine development in other countries. These conditions are generally imposed by lenders to prevent environmental degradation being used as a rationale for nationalization and confiscation of a mining property. Not all mines, however, are financed through international lenders, and in these cases compliance is less certain although there is still an incentive for operators to avoid confiscation and nationalization.

REPROCESSING, REFINING, AND COMMODITY EXCHANGES

In addition to mining, silver also makes its way into the world supply chain from the reprocessing of scrap metal that comes from various fabrication processes and via sales from government stockpiles. In 2005 mined silver accounted for approximately 70 percent of the total supply, while scrap accounted for 21 percent. Historically, reprocessing photographic wastes has been the major

source of scrap, but this is changing because of a variety of factors. Other major sources of scrap include jewelry and silverware manufacturing. In addition to reprocessing scrap, government sales account for 7 percent of the silver supply and producer hedging for 2 percent (Klapwijk 2006). All of these sources combined for a total supply of 911.9 million ounces in 2005 (Klapwijk 2006).

In the case of mined silver, producers ship unrefined product to a refinery for reduction to a commercial grade product. There are many refineries around the world that can process unrefined product, with more than twenty of them located in the United States. These refineries also melt down and refine other types of scrap material to produce a commercial grade product. These commercial grade products can range from products that are alloyed with other metals for special purposes and sold under contract to jewelers and other fabricators to silver bullion that is 99.99 percent pure silver.

Many major commodity exchanges around the world make a market in bullion silver. These include markets in London, New York, and Tokyo, but perhaps the largest is the London Bullion Market Association. Traders in these markets sell silver in "spot" markets, that is, for immediate delivery, and deal in futures and options contracts for delivery in the future.

PRODUCTS

As noted, fabrication demand has increased since the mid-1990s. The more interesting story behind this increase, however, has been the change in the mix of products fabricated. Historically, the major uses of silver were the minting of coins and the fabrication of jewelry, silverware, and objects of art such as candlesticks and bowls. During the twentieth century photographic processing emerged as a major use of silver, and from the middle of the twentieth century the use of silver for coinage diminished, though substantially only in the United States. Fabrication demand for photography has started to decline as consumers shift from film-based photography to digital cameras. At the same time, however, in spite of the decline in the traditional uses of silver in coinage and photography, demand for silver has been growing as new uses have been found for this metal based on its particular qualities, such as its being an excellent electronic conductor and having high degrees of malleability and reflectivity.

Silver is commonly used in a variety of batteries, from most quartz watch batteries to batteries used in the aerospace industry. Silver batteries are lighter weight and can deliver more power per weight than traditional lead-acid batteries.

Because silver alloys or combines with other metals well, it is commonly used as a coating for bearings in jet engines and for brazing and soldering in electronics and other manufacturing. Perhaps one of the most common uses of silver as a coating is in the manufacture of mirrors. Silver is also used in windows that reflect solar radiation and heat and in eyeglasses. In addition the metal is also an important catalyst used in manufacturing a variety of plastics and chemicals.

The use of silver in the electronics industry is also growing. Because of its conductivity and resiliency, silver contacts are widely used in many industries. High-voltage contacts at power plants and in manufacturing plants frequently are made of silver or are silver coated. Automobiles have silver contacts in ignition systems, other electronic systems, and safety systems, such as air bags. Silver is also widely used for contacts and circuitry in computers, including the contacts under computer keyboard keys.

In medicine silver has long been used as a biocide. Since before 500 BCE it has been known that water, milk, vinegar, and other foods resist spoilage better when stored in silver vessels than in other containers. This characteristic of silver has led to its use in water purification systems, bandages, and other antibacterial, antifungal, and antiviral applications.

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John L. Dobra

SIMILARITY/ ATTRACTION THEORY

Similarity/attraction theory posits that people like and are attracted to others who are similar, rather than dissimilar, to themselves; "birds of a feather," the adage goes, "flock together." Social scientific research has provided considerable support for tenets of the theory since the mid-1900s. Researchers from a variety of fields such as marketing, political science, social psychology, and sociology have contributed to and gleaned information from empirical tests of similarity/attraction theory. The theory provides a parsimonious explanatory and predictive framework for examining how and why people are attracted to and influenced by others in their social worlds.

A large body of research investigates the role that similarity of attitudes plays in attraction. According to stud-

ies by Ellen Berscheid and Elaine H. Walster (1969) and Donn Byrne (1971) in general people are most attracted to others who share similar attitudes. Additionally people who share similar important attitudes (e.g., attitudes concerning home and family) are more likely to be attracted to each other than those who share less important attitudes (e.g., attitudes toward certain fabric softeners).

There are several reasons why people prefer the company of others who espouse attitudes, especially important attitudes, which are similar to their own (Berscheid and Walster 1969; Byrne 1971). Most importantly perhaps, sharing similar attitudes provides corroboration that a person is not alone in his or her belief; they might even be correct to hold the attitude in question. Other possible reasons suggested for why people prefer others who are similar to themselves are that (1) knowledge of similar attitudes may help people to predict others' future behaviors, providing a predictive "window" into the other's behavioral predilections, and (2) people may be more likely to assume that others who hold similar attitudes to themselves have a greater chance of being attracted to them, a "likeness begets liking" explanation.

In addition to people's inclinations to be attracted to those who share similar attitudes, people are also attracted to others who manifest personality characteristics (e.g., optimism, self-esteem, shyness, conscientiousness) that are similar to their own. In fact people may choose to associate with certain others because they have similar personalities. For example friends are more likely to share personality traits than nonfriends. Moreover, marital partners share more similar personalities than people in randomly assigned pairs. Indeed personality similarity may play a key role in marital happiness and longevity (Berscheid and Walster 1969; Byrne 1971).

Furthermore people are attracted to romantic partners who share similar physical characteristics and levels of physical attractiveness. Tall people are more likely to marry tall partners than short ones, and attractive people are more likely to marry attractive partners than unattractive ones.

People's preference for similarity in social partners is not limited to the aforementioned domains, though. Research has demonstrated that people report greater liking for and attraction to people who are like them in the following areas as well: socioeconomic status, religious beliefs, social habits (e.g., frequency of attending parties), bad habits (e.g., drinking and smoking), ethnicity, and intelligence.

Similarity/attraction theory may not hold in all social instances, however. For example some scholars have suggested that people may be more likely to be attracted to partners who complement rather than replicate certain attributes. This *complementarity* view of attraction explains, for example, why attractive younger women may form successful marital unions with much older, wealthier men. Along similar lines people may not like others who share negative personality traits with them. Rather than be constantly reminded of their faults in a given dimension through the presence of someone similar, people may prefer to interact with others who they believe will "bring out the best" in them.

Additionally some researchers, such as Milton Rosenbaum in a 1986 study, have suggested that attitudinal dissimilarity, rather than attitudinal similarity, drives the similarity-liking link. According to the *dissimilarity-repulsion* view people's motivation to avoid social interactions with dissimilar others is stronger than, or at least as strong as, people's desire to affiliate with like-minded others. Indeed a 2000 study by Ramadhar Singh and Soo Yan Ho revealed that, under certain circumstances, the influence of attitudinal similarity and dissimilarity may exert equivalent and opposite effects on liking. Further in some cases, dissimilar attitudes may have a stronger influence on interpersonal attraction than similar attitudes (Singh and Ho 2000).

In summary similarity-attraction theory attempts to explain and predict interpersonal liking by asserting that people are attracted to others who are similar to themselves. Consistent with this view, research has revealed that people prefer to affiliate with those who share similar attitudes, personalities, physical attributes, and a host of other characteristics compared to others who do not. Though similarity/attraction theory explains many cases of interpersonal attraction, it may not accurately predict all attraction outcomes. In some cases complementarity or avoidance of dissimilar others may better explain certain patterns of human liking.

SEE ALSO *Attitudes; Friendship; Personality; Personality, Cult of; Psychology; Romance; Social Relations; Trait Theory*

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SIMON, HERBERT A.
1916–2001

Born on June 15, 1916, in Milwaukee, Wisconsin, Simon was the second son of Arthur Simon, an immigrant German who was an electrical engineer and inventor, and Edna Merkel Simon, a third-generation American who was an accomplished pianist. Determined to become a mathematical social scientist, he bid farewell to Milwaukee at age seventeen to enter the hall of academe in Chicago, where he obtained his BA in 1936 and his graduate degree in 1943, both in political science. During his professional career, he was affiliated with the University of California at Berkeley, the Illinois Institute of Technology, the Cowles Commission, the Rand Corporation, and Carnegie-Mellon University, which was still known as the Carnegie Institute of Technology when Simon moved there in 1949. At the time of his death, he was the Richard King Mellon Professor of Computer Science and Psychology at Carnegie.

Starting off in political science and then moving through several disciplinary domains such as management theory, economics, cognitive psychology, and artificial intelligence, Simon's entire academic career was focused on understanding human decision-making and problem-solving processes and their implications for social institutions. In economics, Simon has become mostly known for his psychology-inspired criticism of the rationality postulate. In particular, he criticized the four basic assumptions of neoclassical economics: (1) the presupposition that each economic agent had a well-defined utility or profit function; (2) the idea that all alternative strategies were presumed to be known; (3) the assumption that all the consequences that follow upon each of these strategies could be determined with certainty; and (4) the presumption that the comparative evaluation of these sets of consequences was driven by a universal desire to maximize expected utility or expected profit. For Simon, these four assumptions clashed with insights from psychology that there were external, social constraints and internal, cognitive limitations to decision-making, upon which he based the opposing assumptions of his bounded rationality program.

Simon argued that, first, the bounded rationality program assumed that decision-makers were confronted by the need to optimize several, sometimes competing, goals. Second, Simon's bounded rationality program postulated a process for generating alternatives. Third, Simon argued that individuals mostly applied approximate solutions to problems. Finally, Simon's bounded rationality theory proposed a satisficing strategy. It sought to identify, in theory and in actual behavior, procedures for choosing that were computationally simpler and argued that individuals picked the first choice that met a preset acceptance criterion. Simon also became known for contributions such as the so-called Hawkins-Simon conditions for stability, his findings on certainty equivalence, his research on size distributions of firms and organizations, and his insights on causality, identifiability, and aggregation.

In 1978, Simon received the Nobel Prize in economics for what the Nobel committee called "his pioneering research into the decision-making process within economic organizations." Bounded rationality has received renewed attention in recent years from, among others, behavioral economists, game theorists, and rational expectations economists. Yet, whereas Simon saw bounded rationality as an alternative to mainstream economics, many contemporary theorists attempt to use his ideas to solve some of the problems in their neoclassical program.

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Esther-Mirjam Sent

SIMULTANEOUS EQUATION BIAS

Simultaneous equation bias is a fundamental problem in many applications of regression analysis in the social sci-

ences that arises when a right-hand side, X, variable is not truly exogenous (i.e., it is a function of other variables). In general, ordinary least squares (OLS) regression applied to a single equation from a system of simultaneous equations will produce biased, that is, systematically wrong, parameter estimates. Furthermore, the bias from OLS does not decrease as the sample size increases. Estimating parameters from a simultaneous equation model requires advanced methods, of which the most popular today is two-stage least squares (2SLS).

UNDERSTANDING OLS AND BIAS

Consider the following single-equation regression model:

$$y_i = \beta_0 + \beta_1 x_i + \varepsilon_i.$$

This data generation process (DGP) says that each value (denoted by the i subscript) of the dependent variable, y, is produced by taking β_0 and adding β_1 times the value of the independent variable, x, and adding a draw from the random error distribution, ε_i.

To estimate the value of the slope parameter, β_1, from a sample of x, y observations, we fit a line using ordinary least squares, so named because coefficients are chosen to minimize the sum of squared residuals. A residual is the vertical distance between the actual and predicted value. The equation of the fitted line is

$$\text{Predicted } y = b_0 + b_1 x.$$

The slope coefficient from the OLS fitted line, b_1, is our estimate of the unknown parameter β_1. Because we are dealing with a finite sample, we know that our estimate, b_1, is probably not exactly equal to the parameter value, β_1. If we generated another sample, we would get another value of b_1 for that sample. This shows that the slope coefficient from the OLS fitted line is actually a random variable.

Figure 1 provides a concrete example of the abstract ideas underlying OLS. The points in the graph correspond to those in the table. The estimated slope, 4.2, does not equal the true slope, 5, because of the random error term, which in this case is normally distributed with mean zero and standard deviation of 50. A new sample of ten observations would have the same X values, but the Ys would be different and, thus, the estimated slope from the fitted line would change.

There are other estimators (recipes for fitting the line) besides OLS. The circle in Figure 2 represents all of the possible estimators. The vertical oval contains all of the linear estimators. This does not refer to the fitted line itself, which can have a curved or other nonlinear shape, but to the algorithm for computing the estimator. All of the unbiased estimators are included in the horizontal oval. *Unbiasedness* is a desirable property referring to the accuracy of an estimator. Unbiased estimators produce estimates that are, on average, equal to the parameter value. *Bias* means that the estimator is systematically wrong, that is, its expected value does not equal the parameter value. The area where the ovals overlap in Figure 2 is that subset of estimators, including OLS, which are both linear and unbiased.

According to the Gauss-Markov Theorem, when the DGP obeys certain conditions, OLS is the best, linear, unbiased estimator (BLUE). Of all of the linear and unbiased estimators, OLS is the best because it has the small-

An example OLS regression

X_i	Y_i
10	87.35
20	75.31
30	144.09
40	260.45
50	243.45
60	211.76
70	306.17
80	333.08
90	371.28
100	508.81

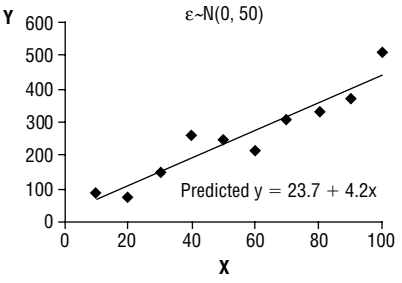

Figure 1

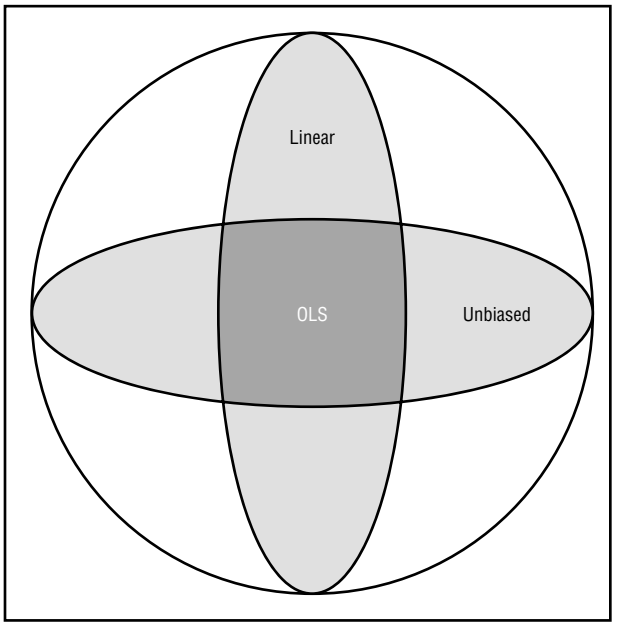

Figure 2

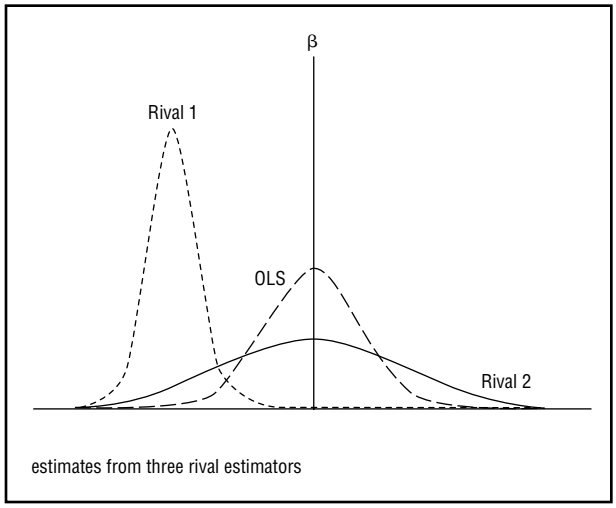

Figure 3

est variance. In other words, there are other estimators that are linear and unbiased (centered on β_1), but they have greater variability than OLS. The goal is unbiased estimators with the highest precision, and the Gauss-Markov Theorem guarantees that OLS fits the bill.

Figure 3 shows histograms for three rival linear estimators for a DGP that conforms to the Gauss-Markov conditions. The histograms reflect the estimates produced by each estimator. Rival 1 is biased. It produces estimates that are systematically too low. Rival 2 and OLS are unbiased because each one is centered on the true parameter value. Although both are accurate, OLS is more precise. In other words, using OLS rather than Rival 2 is more likely to give estimates near the true parameter value. The Gauss-Markov Theorem says that OLS is the most precise estimator in the class of linear, unbiased estimators.

SIMULTANEOUS EQUATION BIAS

Suppose one faces a simultaneous equation DGP like this:

$$y_{1i} = \beta_0 + \beta_1 x_i + \beta_2 y_{2i} + \varepsilon_{1i}$$
$$y_{2i} = \alpha_0 + \alpha_1 y_{1i} + \varepsilon_{2i}.$$

There are two dependent (or endogenous) variables, y_1 and y_2. Each equation has a regressor (a right-hand side variable) that is a dependent variable.

If one is interested in the effect of y_1 on y_2, can one toss out the first equation and treat the second equation as a single-equation model? In other words, what happens if one ignores the simultaneity and simply runs an OLS regression on an individual equation? One gets simultaneous equation bias. The OLS estimator of α_1, the slope parameter in the second equation, will be biased, that is, it will not be centered on α_1. With every sample to which one applies the OLS recipe, the resulting estimates will be systematically wrong. OLS is now behaving like the Rival 1 estimator in Figure 3 (although one does not know if the bias centers OLS above or below the true parameter value).

Consider the following concrete example. A researcher is interested in estimating the effect of the crime rate (number of crimes per 100,000 people per year) on enforcement spending (dollars per person per year). As the crime rate rises, more police officers and prison guards are needed, so enforcement spending will rise. The researcher is interested in estimating the slope coefficient, β_1, in the following model:

$$Enforcement\ Spending_i = \beta_0 + \beta_1\ CrimeRate_i + \varepsilon_i.$$

Unfortunately, in this situation, as in most social science applications, the real world does not follow a single-equation DGP. Although it is true that government policy makers allocate resources to enforcement spending depending on the crime rate, criminals make decisions based on enforcement spending (and other variables). Increased crime causes more enforcement spending, but more enforcement spending causes less crime. This kind of feedback loop is common in the social sciences. The appropriate model is not a single-equation DGP because the crime rate is not a truly exogenous variable. Instead, the researcher must cope with a simultaneous system of equations where both enforcement spending and crime rate are dependent variables.

If the researcher naively applies OLS to the single equation, her estimate of the effect of crime on enforcement spending, β_1, will be biased. Because ignoring the fact that the crime rate is actually a dependent variable with its own DGP equation causes this bias, it is called *simultaneous* equation (or simultaneity) bias.

The source of the poor performance of the OLS estimator lies in the fact that we have a violation of the conditions required for the Gauss-Markov Theorem: The crime rate is a right-hand side variable that is not independent of the error term. In a given year a high crime rate will result in high enforcement spending, but that will trigger a low crime rate. Conversely, a low enforcement spending year will lead to more crime. When the error term is correlated with a regressor, OLS breaks down and is no longer an unbiased estimator.

AVOIDING SIMULTANEOUS EQUATION BIAS

Estimating an equation with dependent variables on the right-hand side requires advanced methods. It is important to recognize that increasing the sample size or adding explanatory variables to the single-equation regression will not solve the problem.

The approach typically taken is called two-stage least squares (2SLS). In the first stage, an OLS regression utilizes truly exogenous variables (called instrumental variables) to create artificial variables. In the second stage, these artificial variables are then used in place of the endogenous, right-hand side variables in each equation in the system.

In the enforcement spending and crime rate example, the researcher would first regress the crime rate on a set of truly exogenous variables to create a Predicted Crime Rate variable. Determining the instruments to be used in the first stage regression is a crucial step in the 2SLS procedure. In the second stage, she would substitute the Predicted Crime Rate for the Crime Rate variable and run OLS. It can be shown that as the sample size increases, the expected value of the 2SLS estimator gets closer to the true parameter value. Thus, unlike OLS, 2SLS is a consistent estimator of a parameter in a simultaneous equation model.

In practice, two separate regressions are not actually run. Modern statistical software packages have an option for 2SLS that performs the calculations, computing appropriate standard errors and other regression statistics, in one step. As a practical matter, even if there are strong theoretical reasons to suspect the presence of simultaneous equation bias, it need not be a particularly large bias.

A BRIEF HISTORY OF SIMULTANEOUS EQUATION BIAS

Attempts to estimate demand curves in the first quarter of the twentieth century led economists to model supply and demand equations as a simultaneous system. This work culminated in the probabilistic revolution in the 1940s. In "The Probability Approach in Econometrics," Trygve Haavelmo called for explicit description of the data generation process, including the source of variation in the error term and the use of a simultaneous system of equations to model complicated interrelationships among variables.

Haavelmo's program was supported by Tjalling Koopmans and others at the Cowles Commission, a research think tank housed at the University of Chicago from 1939 to 1955. These econometricians made progress in several key areas, including the identification problem, understanding the nature of simultaneous equation bias, and methods for properly estimating an equation embedded in a simultaneous system. They concentrated their simultaneous equation estimation efforts on full- and limited-information maximum likelihood. Two-stage least squares, a much more efficient computational approach, was not discovered—independently by Henri Theil and Robert Basmann—until the 1950s.

SUMMARY

Simultaneous equation bias occurs when an ordinary least squares regression is used to estimate an individual equation that is actually part of a simultaneous system of equations. It is extremely common in social science applications because almost all variables are determined by complex interactions with each other. The bias lies in the estimated coefficients, which are not centered on their true parameter values. Advanced methods, designed to eliminate simultaneous equation bias, use instrumental variables in the first stage of a two-stage least squares procedure.

SEE ALSO *General Linear Model; Instrumental Variables Regression; Least Squares, Three-Stage; Least Squares, Two-Stage; Ordinary Least Squares Regression; Regression; Regression Analysis*

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Humberto Barreto

SIMULTANEOUS EQUATIONS, SYSTEM OF

SEE *Linear Systems; Nonlinear Systems.*

SIN

Sin, in most religions, may be rooted in human "being" but shows itself in human action. This action is of a negative character and represents what the Catholic theologian Karl Rahner (1904–1984) described as an awareness

that "things are not the way they ought to be" (Rahner 1961–1979, p. 164). In some faiths the stress is on the corporate character of sin: what causes it, how it is manifested, and what a community does with it. Thus when ancient Israel offended against the way "things ought to be" as prescribed by Yahweh, the people together experienced punishment by this God and recognized a need to atone for sin, to bring the lives of the community and individuals in it in line with the way "things ought to be."

The source of that sense of "ought" may relate to the ways humans in the earliest and simplest of circumstances sensed that there must be a right way, but they were not able to attain it or resisted attainment. Or the source may be in conscience. How the separate faiths account for conscience or any other inner apparatus that inspires and informs conduct tells much about what each considers to be sin and what each prescribes to be a remedy, often called *atonement*. Alongside a primitive sense of "oughtness" and "conscience," a third way of discerning the source of sin is in divine revelation. Ordinarily this means that gifted and charismatic individuals, prophets within the tradition, judge people against the standard of what some holy book has described as conformity to the proper way or prescribed as atoning action.

In cultures informed by the Bible of the Jews and Christians, the definitions and experiences of sin come to focus in a witness to a living creator God who interacts with people, stipulating how they should live, and who in a sacred scripture sets forth a covenant, a divine-human pact that must be followed if God is to be pleased or given an opportunity to show mercy. Whether on a communal or an individual level and whether on gross or trivial scales, sin is seen as a free violation of what God commands and expects. In Christianity there is a similar stress on locating the errant individual in light of how he or she affirms or departs from a divine-human covenant. Christianity preaches that God is both just and merciful. Being merciful, God can recognize value in the efforts of those who try to live in accord with divine commands and can extend mercy even where there is failure.

Sin in most Christian traditions is seen against the background of what Christians call *original sin*, which they perceive as a reality even if they have difficulty accounting for it along with other negative features and experiences in a universe created and governed by a good God. Traditionally original sin, the factor in human experience that makes it impossible for anyone to live a perfect life, is traced to Adam and Eve, the first humans, according to the account in Genesis. Tempted by an external agent, "the serpent," they willingly responded and went against the express decree of God. When, acting upon this evil agency in and around them, their heirs, all humans, engage in *actual sin*—also a technical term—they are breaking the covenant. In some biblical language, *sin* means "missing the mark" or "transgressing God's boundaries."

In Judaism and Christianity various paths of return to the covenant and God's good graces are prescribed and are called *atonement* or *reconciliation* to God. The same God who set forth the mark that was missed or the boundary transgressed and who can be wrathful and will exact punishment is also witnessed to as merciful. Through atoning activities, for Christians in the agency of Jesus Christ as God's Son who is offered up in a loving sacrifice for others, believers are set on a path that allows them to approach hitting the mark, staying in the boundaries, pleasing God, and receiving a reward, thanks to the grace of this covenanting God. One of the main differences between Roman Catholic and Protestant varieties of Christianity is the stress in the former on human participation in redeeming activities through "good works," while for Protestantism, which also expects good works, the accent is more on God's grace.

In virtually every faith, though terms like *original sin* and *transgressing* may be absent, there is some pattern or ideal to be followed to place human individuals or the community in a positive relation to the highest power or source. This is usually "God," under a variety of names, such as for Muslims Allah. Allah has created an ordered universe, but humans who violate the laws of Allah cause disorder and are evil or act evilly. While Islam does not employ concepts such as original sin, Muslims know that they are in a universe where something is expected of them that they do not and cannot achieve on their own. Practicing rites of prayer, almsgiving, and submission to Allah represents a turning from sin and the threat of punishment and makes room for Allah the All-Merciful to show mercy.

Religious communities that either do not witness to God or gods, such as Buddhism, or where deity is represented by various supernatural beings, as in Hinduism, will not speak in terms of a covenant with a merciful God that humans choose to follow or break. Thus in Buddhism, which cannot connect human evil with a covenanting God because there is no witness to God, the concern is to deal with negative forces and actions, summarized in the term *karma*. Individual actions are measured in the light of whether the intention of an act was positive or negative, with the goal of dealing with suffering, which is a universal human experience, by disciplines and practices that in their intention make room for good and positive karma and actions.

In Hinduism there is also no covenant with the one God (monotheism) or original sin, yet there are also prescribed paths for conduct pleasing to the deities adored in Hinduism. In Hinduism, as well as most other faiths, there are actions equivalent to atoning ones in monothe-

istic faiths, actions that through conduct and proper ritual or meditation lead one to positive conduct and reward. In almost all faiths atoning activities that counter sin or bad karma have positive rewards in this life and, in many faiths, in life after death. This is so in Christian resurrection or Hindu reincarnation. In none of the faiths is the realistic note wholly lost. That is, they do not envision a complete overcoming of evil as expressed in human sin but teach ways to live and think in the face of such evil that resides in the external world and in the self.

SEE ALSO *Christianity; Hell; Hinduism; Judaism; Punishment; Purification; Reincarnation; Religion; Supreme Being*

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Martin E. Marty

SINGER, HANS
1910–2006

Hans Wolfgang Singer was born on November 29, 1910, in Elberfeld, Germany, into a Jewish family. When the Nazis rose to power, he fled Germany to study at Cambridge University, where he completed a PhD in economics on a refugee scholarship. After a brief academic career, he joined the United Nations (UN). After his extensive work (1947–1969) with the UN, he joined the newly established Institute for Development Studies (IDS) at the University of Sussex. Until his death on February 26, 2006, he maintained his academic contact with IDS.

Singer was widely acclaimed because of his association with the Prebisch-Singer hypothesis. He got the idea while preparing a UN report in 1949. The report was a follow-up of the League of Nations 1945 report noting that during the sixty years preceding 1938, primary product prices had fallen relative to prices of manufactures. On the basis of the UN report, the Argentine economist in charge of the UN Economic Commission for Latin America (ECLA), Raul Prebisch, and Singer raised the issue of declining terms-of-trade of primary products and the primary-producing less developed countries (LDCs) vis-à-vis manufactures and the manufacture-exporting developed countries (DCs). They questioned the dominant classical policy prescription of free trade and international division of labor according to the Ricardian dictum of comparative advantages.

The Prebisch-Singer hypothesis was virtually discarded in mainstream economics in the face of strong statistical objections against it. Nevertheless, Singer continued to believe it to be a fact, although he did not necessarily know how to go about proving it. In 1986 the economist Prabirjit Sarkar provided a strong statistical support in favor of it. This encouraged Singer to collaborate with Sarkar to work further in this field, which led in 1991 to the Sarkar-Singer extension of the hypothesis in the field of manufacture exports of the LDCs to pay for their manufacture imports from the DCs. This extension provided a further support to the Prebisch-Singer hypothesis, particularly its core that is primarily concerned with the relationships between types of *countries* (unequal relationships between the LDCs and the DCs)—not just with the relationships between types of *commodities* (primary products and manufactures). In the process it has become more relevant to the early twenty-first century world with increasing trade of manufactures between the LDCs and the DCs.

Throughout his life Singer maintained a voluminous flow of professional publications on all aspects of development—from long-term trends in prices to short-term commodity price instability, food security, and welfare of children. He advocated food aid, concessional loans for the development and management of the affairs of debt-ridden LDCs.

Singer was a follower of the original scheme of the English economist John Maynard Keynes regarding the then future world economic system tabled at the Bretton Woods Conference (1944) for its consideration. He shared Keynes's concern for commodity price stability for the sake of stability of the world economy. Like Keynes, he believed that surplus and deficit in balance of payments were two sides of the same coin, and so both sides should bear the burden of adjustment in balance of payments disequilibrium. But the system that came up with the International Monetary Fund (IMF) and the World Bank penalizes the deficit countries in spite of their role in increasing effective demand and thereby promoting world output and employment. He identified this as one major cause of the agony of the LDCs. He was critical of the neoliberal one-size-fit-for-all policy prescriptions of the IMF and World Bank for the debt-ridden LDCs. He anticipated much of the writings of the dissident World Bank economist Joseph Stiglitz on the discontents of globalization.

SEE ALSO *Prebisch, Raúl; Prebisch-Singer Hypothesis; Terms of Trade*

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Prabirjit Sarkar

SINGH, V. P.
1931–

V. P. Singh is a senior leader of the Janata Dal political party. He was a cabinet minister in the Janata Party–led central government of India from 1977 to 1980, and later he was prime minister of India briefly in 1989–1990.

Born in 1931, V. P. Singh came from a north Indian aristocratic Hindu princely family. His political rise began when Prime Minister Indira Gandhi picked him to be the chief minister of the Hindi-speaking state of Uttar Pradesh, India's most populous state. When Rajiv Gandhi won an overwhelming victory in the 1984 national elections, Singh was appointed finance minister by the new prime minister. Known for his honesty and courage, Singh began to crack down on corruption, alienating a number of wealthy supporters of Rajiv Gandhi and the Congress Party. As finance minister, he began investigations into various defense procurements, including allegations of bribes and payoffs in the Swedish Bofors gun purchase contract that threatened to expose even Prime Minister Rajiv Gandhi. Because he was a Congress Party member of the Lok Sabha (the lower house of parliament) since 1971, and then prime minister of India from 1989 to 1990, he was instrumental in implementing the recommendations of the Mandal Commission.

Singh was dismissed from his post and subsequently left the Congress Party. He started a new party called the Jan Morcha, which later merged with the Janata Party, the Lok Dal, and the Congress Party's socialist faction to form a new party called the Janata Dal. The Janata Dal forged a coalition with the Bharatiya Janata Party (BJP) on the right and the Communist Party on the left and defeated the Congress Party in the 1989 general elections. After various political struggles among the coalition groups, Singh was asked to take the mantle of prime minister of India. His minority Janata Party government was dependent on support in parliament from the Congress Party and the Communist Party. When the Congress Party withdrew its support, the Singh government fell.

Singh was known for his promotion of just causes, calling for justice for Muslims in Kashmir and Sikhs in Punjab while maintaining the territorial integrity of India. After serving as prime minister for less than a year, he faded from state and national politics, especially when he was diagnosed with cancer, which remained in remission in early 2007.

SEE ALSO *Caste; Congress Party, India; Ethnic Conflict; Ethnic Fractionalization; Gandhi, Indira; Janata Party; Quota Systems*

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SINGLE MOTHERS
SEE *Female-Headed Families.*

SINN FEIN
SEE *Irish Republican Army.*

SISTERHOOD
SEE *Feminism, Second Wave; Women's Liberation.*

SIT-INS
SEE *Civil Rights Movement, U.S..*

SITTING BULL

1831–1890

Sitting Bull was most likely born in the winter of 1831 at Many Caches, along the Grand River near present-day Bullhead, South Dakota. Originally named Jumping Badger, he was the son of a Hunkpapa Lakota chief, Tatanka Iyotanka (Sitting Bull), and Her Holy Door. The son would become one of the most famous American Indian leaders in history, a great war chief and spiritual leader who earned lasting fame as the man most responsible for the defeat of Colonel George Armstrong Custer at the Battle of Little Big Horn in 1876.

After counting his first coup at the age of fourteen, Jumping Badger received his father's name, Sitting Bull. He early established himself as a courageous warrior and a highly skilled hunter. He also earned the status of a *wichasha wakan*, or holy man, who could interpret visions and dreams from the spirits. He was also known for his generosity and for his devotion to family members. All of these qualities collectively earned him widespread esteem and helped him to rise to the position of perhaps the most revered Indian leader of the Plains.

As the United States government sought to force tribes onto reservations, Sitting Bull increasingly came to represent, for both Indian and Euro-American, resistance to United States expansion into the Plains. However, he adopted a defensive strategy, fighting only when he perceived a clear threat to his people.

That strategy worked reasonably well until 1876 when General Alfred H. Terry led an expedition against Sitting Bull's camp. Terry's plan was for Colonel John Gibbon (accompanied by Terry) and the Seventh Cavalry under Custer to converge simultaneously on the camp from different directions.

By late June, seven thousand or more Lakotas and Cheyennes had joined his village, and Sitting Bull's vision in which he saw soldiers falling upside down into the camp had helped convince his people of their coming victory. In addition, a successful battle against General George Crook's troops along the Rosebud River in southeastern Montana had further bolstered their confidence.

When Custer arrived at Sitting Bull's encampment along the Little Big Horn, he chose not to wait for Terry and Gibbon. Instead, he attacked on June 25 after further eroding his chance for victory by dividing his forces. Custer and everyone with him died in what would become perhaps the most famous defeat in U.S. military history and be immortalized as Custer's Last Stand.

A lingering controversy regarding Sitting Bull's role in the battle originated with accusations by Gall, a rival of Sitting Bull's, that the Hunkpapa chief was not present during the battle and played no role in it. Historians now agree that Gall was wrong.

The victory for Sitting Bull was short-lived. Faced with a relentless pursuit by Colonel Nelson Miles, Sitting Bull made his way to Canada, arriving in May 1877. Finally, he surrendered to U.S. officials at Fort Buford in northwestern Dakota Territory on July 20, 1881. He spent most of his remaining years on Standing Rock Reservation, located in central North and South Dakota.

For about four months in 1885, Sitting Bull toured with Buffalo Bill Cody's Wild West Show. During this time, he befriended the young shooting specialist Annie Oakley.

By 1890, a mystical ceremony known as the Ghost Dance was spreading across reservations. Proponents believed that the dance would reverse time, removing soldiers from the land, bringing the buffalo back, and restoring the Indian way of life.

Questions have lingered regarding Sitting Bull's attitude toward the Ghost Dance. He seemed to believe that the new religion might possess some truth and had encouraged the dance at Standing Rock while not participating himself. Perhaps to test the validity of the dance, he was planning a trip to Pine Ridge Reservation in southwestern South Dakota, a hotbed of Ghost Dance activism. Officials grew concerned that Sitting Bull might use the movement as a means to stir up resistance, even war, against the government.

To prevent Sitting Bull from leaving, James McLaughlin, the Standing Rock agent, ordered his arrest. Early in the morning of December 15, 1890, a contingent of Lakota police arrived at his cabin. As they attempted to arrest Sitting Bull, supporters came to his defense. Violence soon erupted, and Sitting Bull was shot twice, the second time in the head, and killed. As historians learned more about his life, Sitting Bull gradually emerged during the twentieth century as a great American leader—a complex man who did much more than defeat the Seventh Cavalry at Little Big Horn.

SEE ALSO *Battle of the Little Big Horn; Mysticism; Native Americans; Resistance*

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Edward J. Rielly

SIX-DAY WAR

SEE *Arab-Israeli War of 1967.*

SKEWNESS

SEE *Descriptive Statistics.*

SKILL

Skill is usually understood as an ability to do something well, either manually, mentally, or both. In contrast to terms that denote only potential for acquiring some ability (such as natural ability, talent, aptitude, or capacity), the term *skill* usually means actual competence that has been acquired by training, schooling, or practice. The concept is used in several disciplines (most importantly economics, sociology, psychology, education, and ergonomics), has many meanings, and is applied for different purposes and in a variety of contexts.

The term *skill* is used mainly to refer to (1) a level of individual performance, in the sense of accuracy and speed in performing particular tasks, or (2) qualities required for successful performance in particular jobs and tasks. Economists and educational psychologists tend to use the concept of skill in the first sense: to describe the abilities acquired by an individual such as a worker, which may include cognitive skills, manual dexterity, knowledge, and social skills. These researchers often take skill as an independent variable and use it, for example, in predicting wage levels. In sociology, on the contrary, skills are often taken as qualities required of a particular job, in terms of the range and complexity of the tasks involved, level of discretion over work and time, and the knowledge and training needed to learn the job. Many sociologists thus view skill as a dependent variable and try to explain variations in the level of skill within occupations, economies, and/or over time. For analysis of changing skills levels over time, the historical example of craft workers often stands as a benchmark.

Although *skill* has always been a somewhat ambiguous and rarely precisely defined term, in the past it had a much narrower meaning than today. It tended to be equated with craft, technical know-how, and manual dexterity. Gradually, however, the importance of mental qualities was acknowledged and motor skills and cognitive skills were distinguished. While motor skills require voluntary body movement to achieve a goal, cognitive skills do not involve muscular movement and involve activities such as problem solving, memory, or reading (Tomporowski 2003). More recently, the concept of skill was further broadened. In addition to "hard skills" (both motor and cognitive), the importance of "soft skills" was underlined. They include effective communication, creativity, flexibility, change readiness, leadership, team building, and so on. Much discussion has also been given to the distinction between "generic" (also "transferable" or "key") skills on the one hand and occupational or job-specific skills on the other. While occupation-specific skills have value only in one particular sector or industry, generic skills have value in a number of sectors. The tendency to re-label as skills personal traits and attitudes and to term many concrete and abstract human dispositions as "skills" further broadened and blurred the concept.

THEORIES

In social theories, the concept of skill is usually linked to the labor market, education, and technology. Authors, however, differ fundamentally on the role skills are supposed to play. The origins of the skill concept are often connected with Karl Marx. The dominant interpretation of Marx's work suggests that capitalists, through mechanization of labor and the manufacturing system, reduced skills requirement to increase productivity and profits and to increase control over workers and work organization. This line of reasoning was followed in so-called de-skilling theory, assuming a process of job degradation (Braverman 1974). In sharp contrast, the thesis of postindustrial and/or knowledge societies posits a general upgrading of skills and stresses the growing importance of cognitive skills. Human capital theory also stresses the importance of knowledge and skills to economic performance and assumes that employers adjust earnings to reflect both skills and educational attainment. Workers with scarce skills are supposed to obtain better-paid and more secure jobs than those without them, and skills and education are assumed to be highly correlated. In contrast, credential theory (Collins 1979) views education as a biased indicator of skill and asserts that colleges function more as a rationing device in job allocation than as skills provider. Educational credentials are supposed to be a much more important determiner of labor force reward than skill.

Theoretical positions also differ in the extent to which skill level is supposed to be objective or socially constructed (Spenner 1990). Neoclassical demand-side perspectives (for example, the theory of the firm) as well as supply-side perspectives (such as human capital theory) tend to take the nature of skills as objective, determined by market mechanisms and the logics of efficiency and return on capital. An opposing view is that skill level is not an objective phenomenon but a social construct. Occupations and jobs are labeled as skilled, semiskilled, or unskilled on the basis of custom and practice, such as union negotiation or job regulation. The most direct method of enhancing an occupation's power is to remove

itself from market competition (so-called social closure), establishing a monopoly over some tasks and thus gaining the ability to increase the price of services and therefore prestige (Attewell 1990). Occupations that can restrict entry, require a lengthy period of training, and remove themselves linguistically from lay language (consider Latin in medicine or slang in many professions) can create a public perception of work that requires exceptional knowledge and skill. In contrast, certain types of work may thus objectively require a high level of technical skill but go unrewarded in the labor market.

APPROACHES TO MEASUREMENT

From the epistemological point of view, positivists and ethnomethodologists can be determined (Attewell 1990). Positivists treat skill as an attribute that has an objective character independent of the observer and is amenable to more or less objective measurement. They also reflect the Cartesian division of intellect and body and regard the former as superior. Skill is acquired when one achieves knowledge about general and abstract principles and rules that are context free. Not surprisingly, they take cognitive skills, especially the most complex and abstract ones, as higher-level skills. In sharp contrast, ethnomethodologists suggest that all human activities, even the most mundane such as walking or carrying on a conversation, are quite complex and require a complex coordination of perception, movement, and decision. Because these mundane activities are extraordinarily complicated, they cannot be attended consciously. Conscious reflection of activity is thus an indication of incomplete learning rather than mastery. Skill means the ability to do things without thinking about them. A master's skills are not based on conscious, abstract, and context-free knowledge but rather on tacit and context-bound knowledge. In consequence, ethnomethodologists consider abstract rules as being at a much lower level of skill and challenge positivist and quantitative approach to measuring skills.

Empirical research on skills usually follows the positivist approach. Based on the distinction between skill as an individual competence and as a job requirement, skill supply and skill demand measures are usually distinguished. Both skill supply and skill demand can be measured both directly and indirectly. As for skill demand (that is, skill requirements of jobs), direct measures involve (1) job classification based on some kind of external judgment, and (2) self-reported (by the jobholder) requirements. Indirect measures include the average or typical education among job incumbents. Because of lack of data, many researchers use indirect measurement or infer skill demand from data on skill supply (usually education) and wages. This approach, however, has an important limitation—it conflates the supply and demand sides of skill (workers and jobs). Many studies have found that education, skill, and labor reward are not equivalent concepts and that their interchangeability precludes testing of the various theories stated earlier. Thus, direct measures of skills requirements, though not without problems, are preferred. The most widely used direct measures of skill demands are occupational schemas, such as the American Dictionary of Occupational Titles (DOT). As for skill supply (workers' skills), only indirect measures are usually available. These include the sum of years of vocational or formal education, years of on-the-job experience, or wage rates. In the 1990s large-scale international surveys such as International Adult Literacy Survey (IALS) were introduced, allowing direct and international measurement of cognitive skills (OECD 2000).

IMPLICATIONS

The concept of skill must be always used with care, and one must bear in mind that different theoretical approaches define and measure skills in quite different ways, especially since skill theory and measurement have several fundamental and direct policy implications. From the policy point of view it is important to know (1) whether capitalism and/or new technologies are deskilling or up-skilling work, how skills needs change over time, and what skills will be needed in the future; (2) how much (and what type) of education is needed in the labor market and what causes skills mismatches; (3) to what extent unequal labor force rewards are determined by education, skills, or discrimination; (4) how skills are distributed within and between countries, and whether the distribution is increasingly polarized; (5) how skills are created in different education and training systems; (6) how to measure and classify skills in a standard way to ensure labor mobility and qualification recognition; (7) what type of skills are needed in nonmarket relationships, such as family or community; and (8) to what extent education should provide students with generic or specific skills. Because the concept of skill is difficult to define and started to be measured directly only very recently, it is not possible to give a definite answer to any of these eight questions. Analyses done so far (e.g., Kerckhoff, Raudenbush, and Glennie 2001), however, confirmed that skill is not a redundant term but an empirically independent factor, one that needs to be taken as a separate theoretical construct.

SEE ALSO *Credentialism; Knowledge Society; Labor Market; Soft Skills*

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Arnost Vesely

SKINNER, B. F.
1904–1990

B. F. Skinner, an American psychologist, provided the experimental foundations of contemporary behavior analysis and its applications. He introduced the terminology of operant behavior and elaborated on the concept of reinforcement. He interpreted verbal behavior in terms of those foundations and was outspoken about the differences between the methods of behavior analysis and those of cognitive psychology. His contributions provided the foundations for extensions to a variety of applications both within and outside of psychology (e.g., education, psychopharmacology, behavioral economics).

Born on March 20, 1904, in Susquehanna, Pennsylvania, Burrhus Frederic Skinner (later known mostly as B. F.) grew up while the inventions of Thomas Edison and others were changing life in small-town America. From an early age, Skinner was a tinkerer, building gadgets and devices. At Hamilton College, he majored in English, also taking courses in science and philosophy. He sent some short stories to Robert Frost after graduation. Frost's reply encouraged him to take a year off from academic pursuits to try a career in writing. But Skinner concluded that he had nothing to say and called the time his "dark year."

Having read Pavlov and others, Skinner turned from English to psychology and entered the doctoral program at Harvard University, where he began experiments on the behavior of rats that led to more than two dozen journal articles and culminated in his 1938 book, *The Behavior of Organisms*. In 1936 he moved to the University of Minnesota, where he continued basic research. World War II occasioned a project on training pigeons to guide missiles that got only to the point of a demonstration of feasibility, but a fringe benefit was the discovery of shaping, a technique for teaching new behavior. One other consequence was that pigeons began to replace rats as the dominant organism of the operant laboratory.

Another product of those days was the Aircrib, which Skinner built for his wife and second daughter. The windowed space with temperature and humidity control improved on the safety and comfort of ordinary cribs while making child care less burdensome. Rumors to the contrary, it was not used for experiments with the infant. Skinner noted that there was nothing natural about standard cribs; he had simply invented a better one.

In 1945 Skinner became Chair of the Department of Psychology at Indiana University. After his 1947 William James Lectures at Harvard University, on verbal behavior, he returned permanently to Harvard. His 1948 novel, *Walden Two*, which at first received little notice but later became widely read, described a utopia the most important feature of which was its experimental character: Any practice that did not work was to be modified until a more effective substitute was found.

Meanwhile, at Columbia College, Fred S. Keller and W. N. Schoenfeld created an undergraduate psychology curriculum based on Skinner's work, including a one-year introductory course with a laboratory. With research now located at several universities, meetings of those interested in behavior analysis became a series of annual conferences. Eventually a formal division for the Experimental Analysis of Behavior (Division 25) was established within the American Psychological Association. During those years, while the Harvard Pigeon Laboratory provided students of operant behavior opportunities to develop their own independent lines of research, Skinner created the subject matter of reinforcement schedules in collaboration with Charles B. Ferster and built the first of his teaching machines. Soon after, Keller began his innovations in college teaching that introduced self-paced courses and behavioral definitions of teaching objectives. The *Journal of the Experimental Analysis of Behavior* began publication in 1958; within a decade, the increased activity in applications of operant theory led to a companion journal, the *Journal of Applied Behavior Analysis*.

In 1953, in his book *Science and Human Behavior*, Skinner dropped the formal structures of his early theorizing, modeled after theory in the physical sciences, and made the ties to biology explicit in his many references to evolutionary contingencies. He also began explicitly to extend the principles of his early research to human behavior. Here were treatments of self-control as competition between short-term and long-term contingencies involving consequences of different magnitude, of think-

ing as covert behavior, of reports of private events as verbal behavior shaped by verbal communities that had access only to public correlates, of social behavior, and of selves as functionally organized systems of responses. There was hardly a significant aspect of human endeavor that was not captured in one way or another by the net that Skinner had so widely cast.

Skinner retired from the laboratory in 1962, returning to it only briefly nearly 20 years later, but continued his writing throughout his life. His books include the controversial *Beyond Freedom and Dignity* in 1971, *About Behaviorism* in 1974, and a three-volume autobiography. In *Beyond Freedom and Dignity*, Skinner pointed out that some controversies about freedom result from confusions between two sources of the language of freedom. The issue of freedom versus determinism is a philosophical question with a long history, but the issue of freedom from coercion is an empirical problem that involves the consequences of various social and political practices. In our daily lives, we are typically concerned not so much with whether our choices are determined as with how our choices are determined and by whom. Doing something at the point of a gun is different from doing it under other circumstances.

Skinner learned of his leukemia in 1989. On August 10, 1990, at his final public appearance, he accepted a Lifetime Achievement Award from the American Psychological Association. His remarks criticized cognitive science as the creationism of the twentieth century, in that it sought causes of behavior inside the organism instead of in the organism's environment. A week later, in hospital, Skinner put finishing touches on his last journal article, "Can psychology be a science of mind?," for the *American Psychologist*. He died the next day, August 18, 1990. His last word, upon receiving a drink of water, was "Marvelous."

THE ANALYSIS OF BEHAVIOR

Skinner followed Pavlov in insisting on the primacy of data and the study of individuals rather than groups but diverged from Pavlov in many ways. For Skinner, behavior was not to be taken as a symptom of something else. As interaction between organism and environment, it should be studied in its own right, not to resolve problems of physiology or to open the way to cognitive or other levels of analysis. Skinner did not disapprove of physiology but argued that without a science of behavior neuroscientists would not know what to look for in the nervous system.

In Pavlovian conditioning, a conditional stimulus comes to produce responses related to those elicited by an unconditional stimulus. The prototypical example is the elicitation of salivation by some stimulus that consistently precedes food. In Skinner's operant behavior, the contingencies are different: A stimulus sets the occasion on which responses have some consequence; absent that stimulus, responses do not do so. The prototypical example is the rat whose lever presses produce food only in the presence of a light. The rat comes to press the lever only when the light is on. Such stimuli, colloquially called signals or cues, do not elicit responses; instead, they set the occasions on which responses have consequences. Such behavior, called operant because it operates on the environment, does not entail associations or stimulus-response connections. The three-term contingency, in which stimuli set the occasion upon which responding has consequences, is not reducible to pair-wise stimulus and response relations.

Here was a profoundly simple concept: The consequences of current behavior reinforce or select the behavior that will occur later. Associationism had been replaced by selectionism. Reinforcement operates on populations of responses within individual lifetimes much as evolutionary selection operates on populations over successive generations in Darwinian natural selection. The populations, operants, are classes of responses defined by their effects rather than by what they look like (Skinner also considered implications of a third variety of selection, sometimes called cultural or memetic selection, that occurs when behavior is passed on from one organism to another, as in imitation).

Shaping, which creates novel behavior through reinforcement of responses that successively approximate it, illustrates reinforcement as selection. For example, if the strongest of a rat's initially weak lever presses are reinforced, the force of pressing increases and the reinforcement criterion can be moved up to the strongest of the new population. With continuing force increases and criterion changes, the rat soon presses with forces that would never have been observed without shaping. Shaping opened up education, developmental disabilities, behavioral medicine and even the training of pets to applications of behavior analysis. When research produced variable results, solutions were sought not by averaging over more subjects but by refining procedural details to identify sources of variability. The applied analysis of behavior is recognized for both effectiveness and accountability; treatment of early autism is among its several notable successes.

The discovery that behavior could be maintained easily even when responses were reinforced only occasionally led to schedules of reinforcement, which arrange reinforcers based on number of responses, the times when they occur, or various combinations of these and other variables. Different schedules produce different temporal patterns of responding. A device that Skinner called the

cumulative recorder allowed these temporal patterns to be visualized in considerable detail. Schedules are now used widely in studies ranging from psychopharmacology to behavioral economics.

VERBAL BEHAVIOR

In his 1957 book, *Verbal Behavior*, Skinner extended his analyses to the functions of words. His approach differs from linguistics, the study of language, in that linguists describe practices of verbal communities in terms of the grammars, vocabularies, and phonetic units characterizing different languages; these descriptions of language structure tell little about their functions. This behavioral distinction is analogous to that between physiology (function) and anatomy (structure) in biology. Behavior analysis, following from Skinner's work, deals mainly with function (i.e., how does behavior work, what does it do), whereas cognitive science deals more often with structure (e.g., organization in what is perceived or learned).

Skinner's book was mainly about language function. A critical 1959 review by the linguist Noam Chomsky was more concerned with language structure than with the functional content of Skinner's account. *Verbal Behavior* provided a taxonomy of function rather than structure (for example, identifying verbal classes by their effects rather than by their topographies), applying it to a broad range of verbal phenomena. Later expansions extended the taxonomy to the origins of novelty in verbal behavior. Skinner did not reply to Chomsky's review because it had missed the point, but unfortunately some interpreted his failure to reply as a sign that he could not do so. Skinner and others addressed Chomsky's review only long after.

One function of verbal behavior is instruction; people often do things because they are instructed to do them. Following instructions has social consequences and is crucial to many social institutions—families, schools, industry, the military—so it is important to understand not only how instructions work but also how they can go wrong (e.g., as in following unethical orders without question). Skinner called behavior that depended on words rule-governed behavior, though it is now more often called verbally governed behavior. In verbal governance, what we say about what we do often determines what we do. Contemporary analyses of verbal behavior include experimental studies of how verbal governance comes about and the conditions under which it occurs.

BEHAVING AND KNOWING (BEHAVIOR AND COGNITION)

Skinner's analyses were also about how we come to know ourselves. We think we have privileged access to private events such as feelings and thoughts, but how do we learn to talk about them? Parents who see the colors that a child sees can respond appropriately to the child's color naming and so can teach the names, but how can a verbal community without access to relevant stimuli create and maintain verbal responses? In referred pain, a bad tooth in the lower jaw may be reported as a toothache in the upper jaw; here the dentist is a better judge than the patient of where the bad tooth really is. If we can be mistaken even about the location of a toothache, how can other reports of private events be reliable?

Skinner did not deny the private, but noted that common vocabularies can be based only on what is mutually accessible to both speakers and listeners. If private feelings do not have public correlates, how can one tell when anyone else has them? If one cannot tell, how can one ever teach appropriate words? This is a problem because much of the language of cognitive thought originates in the vocabulary of private events.

According to Skinner, processes called cognitive (e.g., thinking, visualizing) are kinds of behavior. Skinner did not deny events taking place inside the skin, but maintained that they should be called private rather than mental. When Skinner criticized representations in cognitive psychology, the issue was not whether lasting effects are produced by stimuli (an organism that has responded to a stimulus is a changed organism). Rather, it was about the form the change takes. Skinner opposed copy theories of behavior or perception. A representation is not necessarily a copy (a spoken letter may represent a seen one but has no visual properties in common with it), so it is of interest that the most successful cognitive accounts do not involve representations that function as copies. In this regard, behavior analysis shares its views with cognitive scientists who are advocates of neural nets and connectionist systems.

SEE ALSO *Behaviorism; Cognition; Determinism; Linguistic Turn; Operant Conditioning; Pavlov, Ivan; Reinforcement Theories; Skinner Box*

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SKINNER BOX

In behavioral studies, researchers study the relationship between environmental events and measures of a target behavior, termed a *respondent* (in classical conditioning) or *free operant* (in operant conditioning). In the 1930s, as B. F. Skinner was developing the laws of operant conditioning, he constructed an apparatus, technically called an *operant chamber* but popularly known as a "Skinner box," that deprives an animal of all external stimuli other than those under the control of the experimenter (Skinner 1935). Generally, a Skinner box is soundproof and light-resistant, and usually contains a bar or lever to be pressed by the animal to either gain a reward or avoid a painful stimulus. An operant chamber allows the researcher to experimentally manipulate environmental stimuli and measure their impact on operant behavior. Additionally, the use of the chamber allows data on the animal's responses to be monitored and collected electromechanically twenty-four hours a day, seven days a week, thus eliminating the need for an external observer to record behavior.

Employed for more than seventy years in basic operant research, the operant chamber recently has been used to study topics such as how previous conditioning influences the acquisition of new responses under delayed and immediate reinforcement (Snycerski, Laraway, Huitema, and Poling 2004); discrimination training (Nevin, Davison, and Shahan 2005); how drugs affect responding (Pinkston and Branch 2004); concurrent schedules (Sealey, Sumpter, Temple, and Foster 2005); and sophisticated data analysis techniques (e.g., Li and Huston 2002).

Although there have been organized contests to train a rat to complete a series of complex activities using live animals and an operant chamber (Banister-Marx 1996), maintaining an animal laboratory with operant chambers is expensive, and often beyond the resources of those not engaged in ongoing research programs. As a result, researchers have developed software such as "Sniffy the Virtual Rat" (Alloway, Willson, and Graham 2005) to simulate how schedules of reinforcement and extinction effect responding. Another software simulation program allows students to learn to modify a bird's behavior (Hay 2004). Nick Yee suggests that role-playing games such as "EverQuest" have all the elements of a virtual Skinner box (2001a, 2001b).

The Skinner box is sometimes confused with the baby tender, a device Skinner developed to provide one of his infant daughters with a comfortable, protective environment in which to sleep (Skinner 1945). The rumor that Skinner left his infant daughter in the device for such long periods of time that she was traumatized and later committed suicide in her twenties is completely untrue—in fact, Deborah Skinner Buzan wrote an article in 2004 about the myth (Buzan 2004). Nevertheless, the story has continued to circulate and is included in an historical account of major events in psychology (Slater 2004).

SEE ALSO *Behaviorism; Classical Conditioning; Operant Conditioning; Pavlov, Ivan; Reinforcement Theories; Skinner, B. F.*

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SKOCPOL, THEDA

1947–

Victor S. Thomas Professor of Government and Sociology and director of the Center for American Political Studies at Harvard University, Theda Skocpol was president of the American Political Science Association (2001–2003) and of the Social Science History Association (1996). She has made major contributions to historical and comparative sociology and to political science in her work on revolutions. Her theory of revolutions and the state has been influenced by the approach of sociologist and political scientist Barrington Moore (1913–2005) in his *Social Origins of Dictatorship and Democracy* (1966).

In *Vision and Method in Historical Sociology* (1984), Skocpol advocated the use of secondary data and sources to undertake macrohistorical and comparative work—an approach that she pioneered in her major work, *States and Social Revolutions: A Comparative Analysis of France, Russia, and China* (1979), which received the C. Wright Mills Award of the Society for the Study of Social Problems, as well as the American Sociological Association Award for a Distinguished Contribution to Scholarship. With this work, Skocpol produced a distinctive theory of revolution through the study of three *anciens régimes*. Skocpol argued that revolutions occur because states are exposed to endogenous socioeconomic processes, particularly class conflict. Her theory rejects any significant role for human agency in such revolutions. They are not produced by the revolutionary will of revolutionaries themselves, but they are the unintended consequence of the decomposition of the state system and its agrarian bureaucracy. Skocpol examined the causal constraints—class relations, the repressive character of the state, and the external military—on state activities resulting from objective historical circumstances. The distinctive aspect of her initial theory was to reject any attempt to absorb the state into society, since the repressive actions of the state have independent causal consequences for revolutions.

Skocpol conducted research on the historical origins of American social policy in *Social Policy in the United States: Future Possibilities in Historical Perspective* (1995), *Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States* (1992), and *The Missing Middle: Working Families and the Future of American Social Policy* (2000). In *Diminished Democracy: From Membership to Management in American Civic Life* (2003), Skocpol criticized liberal theories that claim that the vigor of civic life depends on the absence of the state. By contrast, her study of voluntary associations demonstrates that vigorous democratic politics nourish a participatory civil society. She contributed to the study of contemporary political life in *Boomerang: Clinton's Health Security Effort and the Turn Against Government in U.S. Politics* (1996) and (with Morris P. Fiorina) *Civic Engagement in American Democracy* (1999).

Skocpol's "state autonomy theory" was severely criticized by G. William Domhoff (1996), who claims that she abandoned her original position, increasingly putting emphasis on social movements, women's lobby groups, and voluntary associations in civil society. By contrast, Domhoff argues that support for disability pensions for Civil War veterans is explained by the interests of the corporate community (or capitalists). The differences between welfare provision in the United States and Europe is explained by the strength of the American capitalist class and the racial and ethnic divisions in the American working class.

SEE ALSO *Capitalism; Civil Society; Democracy; Mills, C. Wright; Power Elite; Volunteer Programs; Volunteerism*

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Bryan S. Turner

SLAVE LIVES, ARCHAEOLOGY OF

The archaeology of slavery is a branch of historical archaeology focused on the analysis and interpretation of slavery through the use of material remains. The archaeology of slavery was originally referred to as *plantation archaeology* because the excavations were concentrated on former plantations throughout the southern United States. In the early days of plantation archaeology, the primary focus was on the maintenance and promotion of nationally significant historic sites; however, as a result of a movement to develop a deeper understanding of ethnicity and diversity within American society, in the late 1960s there was a shift in the field to include a broader understanding of the lives of enslaved Africans. Archaeological studies of slavery provide information on the living conditions of enslaved people by looking at housing and household composition, diet, personal possessions, household goods, health care, and other aspects of their material world. This subset of historical archaeology is used to understand the human experience of African American life and positively contribute to the ever-expanding notion of black cultural identity. Although the first archaeological sites that

focused on slavery were in the southern United States, there has been a great deal of work conducted in other parts of the African diaspora, including such regions as Central and South America and the Caribbean.

THE ARCHAEOLOGY OF RACE AND GENDER

Early archaeological interpretation took its lead from traditional history. Much of the analysis was based on the search for general patterns that reinforced accepted notions of the experience of slavery. These early sites highlighted archaeology as a method to fill in the gaps of historical analysis with the use of artifacts. The archaeology of slavery, however, shifted from a general perspective of plantation life to the examination of specific enslaved communities.

The archaeological study of plantations has begun to employ an anthropological methodology known as *critical theory*. As an ideology, critical theory encourages movement beyond the boundaries of academia into the community. Critical theory is an approach that engages contemporary social issues in various ways. The form of critical analysis used in the archaeology of slavery is a form of activist archaeology that recognizes and supports the role of descendant communities in order for them to retrieve histories from their own perspectives. The archaeology of slavery has become much more visible to the public, and the interpretations and contributions the field makes take into consideration groups of people traditionally marginalized.

The shift toward a more collaborative research methodology that allows archaeology to become a respected voice in public discourses about contemporary notions of race and racism was a direct response to the events surrounding the African Burial Ground project in New York City in the early 1990s. The political struggles between the local African American community and archaeologists marked a turning point in the relationship between the archaeological community and the public. The practice of engaged or activist archaeology became synonymous with the field as a result of this site.

In an effort to understand the lives of enslaved communities, archaeologists investigate the multiple meanings of environment and space. Plantation landscapes often include areas of domestic production, also known as slave quarters, and other sites where the everyday activities of enslaved communities took place. These household-related activities included basic food preparation, childcare and health care, laundry, clothing repair, recreational storytelling, music making, and game playing. These quartering areas ultimately became sites to strengthen social relationships and ensure the survival of the enslaved community.

In 2001 Maria Franklin first proposed a black feminist archaeology that would contribute to a deeper analysis of multiple forms of oppression and pay closer attention to the role of gender by highlighting the unique experience of enslaved women. A black feminist approach emphasizes how gender and race affect a specific community. This approach also demystifies contemporary misconceptions of the role of enslaved women within the household, taking into account the fluid nature of the enslaved family and alternative ways to understand how enslaved women were integral yet not solely responsible to black cultural production. When archaeological investigations of plantation societies during the colonial and antebellum period have focused on households, there is an emphasis on spaces dominated by women. However, enslaved communities performed domestic tasks communally. A gendered approach identifies how enslaved women played an essential role in social and cultural reproduction and acknowledges the role of gender and race in analyzing the multiple forms of oppression experienced by all members of the enslaved community. The result of this methodology inherently serves as a means to produce holistic and politically aware accounts of the African-American past.

ATLANTIC AFRICA AND THE AMERICAS: AFRICAN DIASPORA ARCHAEOLOGY

The archaeology of the African diaspora has expanded the scope of research and established a dialogue between Africa and the Americas during the slave trade era. This dialogue has allowed for a comparative and transnational methodology that produces a new direction in the archaeological interpretation of slavery. Current trends in African diaspora archaeology acknowledge the complexity of how Africans in the Americas negotiated their identities and incorporated aspects of African culture in the African experience throughout the diaspora. Archaeologists also recognize ways in which the diaspora influenced the continent of Africa. Archaeologists therefore, are considering the global dimensions of African cultural transformations throughout the modern era.

The social memory of people of African descent is linked to the experience of slavery, from the way a community shaped its built environment, the material remains of social and cultural activity, and how the distant past acts as the foundation of contemporary notions of black identity. The artifacts, architecture, and archaeological deposits at different sites allow for a close and unique way of looking at the institution of slavery. The archaeology of slavery has moved beyond the boundaries of plantations in the southern United States. After more than twenty years of excavations, the conversation between

archaeologists working in the Caribbean, United States, and Western Africa has resulted in an enhanced study of the system of slavery. These links are essential to the future of the field; the things that have been shared between sites across the diaspora and continental Africa have led to a more holistic approach to the study of African people.

SEE ALSO *African American Studies; African Diaspora; African Studies; Archaeology; Burial Grounds; Burial Grounds, African; Collective Memory; Critical Theory; Feminism; Plantation; Slavery*

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Whitney Battle-Baptiste

SLAVE MODE OF PRODUCTION

Although one of the least developed Marxist concepts, slave mode or organization of productive relations has spawned rich intellectual debate. There are four major lines of inquiry. Must the number of productive workers be the dominant form of labor? What is the significance of surplus extraction (profit through exploitation) in the organization of production, and how does it define a social formation? Is there one mode of production or several competing social formations at any one time? What was the historical evolution of the slave mode of production?

Although Karl Marx's primary concern was with the historical evolution of capitalism, not pre-capitalist social formations, he occasionally referred to the slave mode of production. The *German Ideology* identified the first historical form of property as communal, containing within it familial and slave relations (1978, p. 151). The *Communist Manifesto* recognized three forms of class society: capitalist and proletarian during the bourgeois epoch, lord and serf during feudalism, and master and slave during antiquity (1978, p. 474). The *Grundrisse* described the second system of historical development as antiquity characterized by dynamic, urban, warlike conditions, with chattel-slave relations (1965, pp. 36, 71–75). Despite these references, Marx provided little conceptual explanation for the origins and nature of slavery. In contrast to his analysis of the conditions of modern capitalism, he gave little attention to the internal dynamic of the slave mode of production and how this mode rises out of past social formations and dissolves under new historical conditions.

SLAVES IN ANTIQUITY

Unlike Marx, scholars of antiquity have long debated the nature of classical slavery. According to Moses Finley, slavery was insignificant both temporally and geographically in the Greco-Roman world. The dominant labor force produced under various degrees of "unfreedom" in a society with different relations of production. The key question, concludes Finley, is "whether the relations of production were sufficiently different to preclude the inclusion of such societies within a single social formation in which the slave mode of production was dominant" (1991, p. 496). On the one hand, Ellen Meiksins Wood argues that peasant-citizens rather than slaves constituted the productive basis of Athenian democracy and that forms of tenancy, leasing, and management, not slavery, formed the basis for surplus extraction (1988, pp. 64–82). Geoffrey E. M. de Ste. Croix agrees that non-slave producers accounted for the demographic majority during antiquity, but argues that the dominant form of exploitation was slavery because slaves provided the surplus extraction for a wealthy elite. According to Ste. Croix, Marx's concentration on the distinctive feature of society "is not the way in which the bulk of the labour of production is done, but how the extraction of surplus from the

immediate producer is secured" (1981, p. 52). It was slavery's increase in surplus extraction that accounts for "the magnificent achievements of Classical civilization" (1981, p. 40). Perry Anderson agrees on the importance of slave surplus extraction during antiquity, although he argues that the imperial state played a more important role in organizing the actual process of extraction (1992, pp. 19–22).

Another key question concerns the historical evolution of ancient slavery into new social formations. Marx simply described the movement of "progressive epochs in the economic formation of society" (1978a, p. 5). In contrast, Ste. Croix explains that slavery as the most efficient form of surplus extraction was transformed once Roman frontiers stabilized and the number of war-supplied slaves trailed off. The consequence was increased slave-breeding as landowners sought to maintain their labor force. The crucial factor was female slave reproduction over slave production. To make up for the lost surplus, landowners extended exploitation to hitherto free laborers, with the result of the emergence of a uniform class of coloni whose rate of exploitation was down, but volume had expanded. Thus, the ancient world was destroyed by a social crisis from within and finished off by the so-called barbarians from without (1991, p. 503). Anderson agrees on the internal social crisis but pays equal attention to external factors. "The dual predecessors of the feudal mode of production," he argues, "were the decomposing slave mode of production on whose foundations the whole enormous edifice of the Roman Empire had once been constructed, and the distended and deformed primitive modes of production of the Germanic invaders" (1974, pp. 18–19).

NEW WORLD SLAVES

Although Marx's own historical moment was dominated by the capitalist mode of production, slavery was not a peculiar institution in the mid-nineteenth century. When Marx was forty-two years old in 1860, there were about six million enslaved Africans in the New World, two-thirds of whom were imprisoned in the American South. Numerous scholars have debated this duality. Eugene Genovese argues that southern slavery was in conflict with capitalism and created a "powerful and remarkable social class" (1967, pp. 3–4). In contrast, John Blassingame has focused upon slave non-productive relations, especially communal and cultural formations. Other scholars insist on the centrality of productive relations. Ira Berlin and Philip Morgan insist that work "engaged most slaves, most of the time" (1993, p. 1). Still others insist on the exploitative nature of slavery and the role of surplus extraction. Eric Williams argued that slavery built up capitalism, while capitalism destroyed slavery. Robin Blackburn has recently argued that the profits from colonial slavery's surplus extraction—what he dubs "extended primitive accumulation"—fueled Britain's remarkable industrial takeoff. The passage from pre-modern to modern society was not that of the classic Marxist transformation of agrarian property relations, but rather "exchanges with the slave plantations helped British capitalism to make a breakthrough to industrialism and global hegemony ahead of its rivals" (1997, p. 572). Unlike economic arguments for the shift from antiquity to feudalism, political explanations for passages from slavery to modernity, especially slave revolts in the New World, have been persuasively made by W. E. B. Du Bois, C. L. R. James, Robin Blackburn, and others.

SLAVES IN AFRICA

The debates on slave surplus extraction, competing social formations, and historical evolution have been extended to Asia and Africa. Walter Rodney argues that there was no "epoch of slavery" in pre-fifteenth-century Africa because of the absence of "perpetual exploitation." He prefers the notion of competing social formations to one mode of production with pre-colonial Africa in transition from communal agriculture to feudalism (1982, p. 38). Claude Meillassoux agrees that the absence of perpetual "relations of exploitation and the exploiting class" ensured there was no system of slavery in Africa and that there were several social formations (1991, pp. 36, 235). But he goes further. Slavery was not only a relationship of production, but also a "mode of reproduction" (1991, p. 324). In contrast to Ste. Croix's argument for antiquity, this reproductive slavery had little to do with procreation and much more to do with the economy of theft through war, abduction, and brigandage (1991, pp. 76, 92). "Wars of capture and markets," Meillassoux argues, "had their counterpart in the sterility of the women slaves who, despite their sex and their numbers, were deprived of reproductive functions" (1991, pp. 85, 278). Although John Thornton does not subscribe to Marxist concepts such as mode of production and surplus extraction, he does insist on the centrality of slavery to the continent's historical development, and his argument has been quite influential. Specifically, ownership or control of labor (in contrast to land ownership in feudal Europe) was the dominant principle of property relations in African societies, and "slavery was rooted in deep-seated legal and institutional structures of African societies" (1998, p. 74). This view has been correctly criticized for downplaying the qualitative change wrought by the advent of the Atlantic slave trade.

Returning to the lines of inquiry above, there are some key points. The number of productive workers does not have to be dominant. This was as true of slaves in antiquity as of slaves in the New World. Surplus extraction is critical to particular social formations.

Slaves in antiquity and the New World helped build magnificent civilizations. Slavery is a modern as well as an ancient social formation. Kevin Bales counts twenty-seven million slaves today operating as part of the global economy (1999, p. 9). Slavery plays a role in the historical evolution of social formations in terms of both reproduction and production. There is no one passage from slavery into other social formations.

SEE ALSO *Anderson, Perry; Capitalist Mode of Production; Conjunctures, Transitional; Du Bois, W. E. B.; Feudal Mode of Production; James, C. L. R.; Labor, Surplus: Marxist and Radical Economics; Marx, Karl; Marxism; Mode of Production; Surplus*

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J. R. Kerr-Ritchie

SLAVE RESISTANCE

Demographic realities and power relationships in the British mainland colonies and later, following independence, in the United States, militated against the type of large-scale slave conspiracies that took place in South America and the Caribbean. The presence of a heavily armed white majority in every state except South Carolina (and, toward the very end of the antebellum period, Mississippi), the lack of an impregnable hinterland in which to create maroon colonies from which runaways could besiege plantations, the relatively dispersed nature and small size of slaveholding, and the fact that the landlord class was in residence (not absentee) combined to make massive slave rebellions far less common than day-to-day resistance or individual acts of self-threat. In the years after the Revolution, as harsher forms of colonial patriarchalism began to metamorphose into paternalism—a complex and ongoing process of negotiation and brutality that many scholars regrettably reduce to a simplistic model of accommodation—slaves achieved enough living space to build stable families and rich spiritual communities. Given the odds against success, it is hardly surprising that the handful of slaves bold enough to rise for their freedom found their rebellions reduced to unsuccessful conspiracies and their fellows doomed to die in combat or on the gallows.

Despite persistent attempts by historians to force a uniformity of vision and goals on rebel leaders, insurgent slaves in the eighteenth and nineteenth centuries differed from one another fully as much as white revolutionaries in the same era. Jemmy, an Angolan who led an agrarian uprising in 1739 near Stono River, South Carolina, tried to hasten his African followers across the border into Spanish Florida. Caesar Varick, who only two years later in 1741 conspired to burn New York City, lived in one of

North America's largest urban centers with an Irish wife. Gabriel, a young, secular rebel who had turned away from African traditions, hoped to stay and work in a more egalitarian Virginia. Denmark Vesey, an aged free black who bought his freedom the year before Gabriel died in 1800, expected to achieve a limited exodus for his family and followers out of Charleston to Haiti. Vesey and his chief lieutenant, "Gullah" Jack Pritchard, an East African priest, fused African theology with the Old Testament God of wrath and justice, whereas Nat Turner relied on Christian millennial themes and hoped to bring on the day of jubilee for black Virginians. Beyond their obvious abilities as leaders and their equally obvious desire to breathe free, bond rebels in the United States fit no simple pattern.

If slave rebellions in North America correspond to any one model, it is that they proliferated during times when the white majority was divided against itself in significant ways. Colonial insurgents in South Carolina and New York City turned to violence at a time when their masters were at war with France and Spain. Gabriel, the most politicized of all the slave rebels, formulated his plans during the divisive election of 1800, when Federalists and Republicans threatened to take up arms against one another. The rebels in the Tidewater area of Virginia, despite the memory of the repression that followed Gabriel's death, began to organize again during the chaos of the War of 1812. Having read of the Missouri debates in Charleston newspapers, Vesey prayed that northern whites would prove tardy in riding to the rescue of the estranged Southerners. Slaves near Natchez, Mississippi, began to plan for their freedom in 1861, following the outbreak of the Civil War.

Most of all, slaves, who well knew what they were up against and rarely contemplated suicidal ventures, plotted for their freedom only when safer avenues had been closed to them. For most of the seventeenth century, for example, when the high death rate in the Southern colonies made inexpensive white indentured servants far more numerous than costly African slaves, enterprising bondpersons relied more on self-purchase than the sword. The economic possibilities in early Virginia produced more runaways than rebels; the practice of buying one's own body even produced several black entrepreneurs—such as Anthony Johnson, a former slave who became a wealthy planter and who named his estate Angola after the land of his birth. It was only after landless whites and hard-used white indentured workers under the command of Nathaniel Bacon burned Jamestown in 1676 that Southern planters made a concerted effort to replace white servants with African slaves. The comprehensive Virginia Slave Code of 1705, the first of its kind in colonial North America, crushed the hope of industrious slaves that they might be upwardly mobile. Only then, as North American racial walls rapidly hardened, did desperate slaves turn to physically hazardous paths toward freedom. During the last days of Queen Anne's War in April 1712, a determined band of twenty-five Coromantee Africans burned several buildings in New York City and killed nine whites. (Unfree labor had been legalized in New York by the Duke's Law of 1665.) Having made a commitment to unfree labor, equally determined whites revenged themselves on the rebels. Several rebels committed suicide before they could be captured, but those taken alive were broken on the wheel and hanged in chains as a warning to future rebels.

In the early eighteenth century, even though the constant threat of war between Britain and its continental neighbors provided endless opportunities for daring slaves, mainland revolts rarely posed much real danger to the slaveholding regime. Because the Atlantic slave trade was at its peak, every colony included large numbers of native Africans who sought to escape from bondage by building isolated maroon communities. Most runaways fled into the hinterland, where they established maroon colonies and tried to re-create the African communities they had lost. Even the two most significant rebellions of the period—that of Stono, South Carolina, and the subsequent attempt to burn New York City—were led by Africans who dreamed only of ending their own bondage, not of ending unfree labor in general. Aware of Spanish promises of freedom in colonial Florida, Angolan soldiers under Jemmy tried to escape across the border. To the north, New York City bondmen planned to torch the wooden city and flee to French Canada, which was then at war with the rebels' masters. The price of failure was high. New York authorities ordered Caesar Varick and twelve of his followers burned alive; eighteen others were hanged—two of them in chains—and seventy more bondmen were banished from the colony.

Given the odds against them, most enslaved men and women resisted their condition through other methods. Young men, especially those who had not yet married, ran away, often in homogenous groups. Before the early nineteenth century, slaves in the Southern colonies fled toward Spanish Florida, while those in the North sought freedom in French Canada; with the gradual emancipation of slavery in the Northern states and the American acquisition of Florida, bondmen journeyed toward the free states or remained truants within the South. Some women, particularly domestic servants, occasionally fought back through poison. Although it is hard to know whether the illness of white masters was due to toxins or natural causes, colonies like South Carolina passed legislation in 1751 against "the detestable crime of poisoning [that] hath of late been frequently committed by many slaves" (Rucker 2005, 112).

The onset of the American Revolution alternately discouraged and stimulated slave rebellions. Although the

British invasion and the animosity between patriots and Tories presented slaves with a unique opportunity to organize, most slaves chose instead to take advantage of the dislocation of war to escape with their families into the growing cities or behind British lines. (The Revolution was the one time in North American history when as many female slaves as males ran away.) Because the aggressive bondmen who cast their lots with the military forces of King George were precisely the sort of bold, determined slaves who normally tended to organize slave conspiracies, the bloody fighting in the Southern states after 1778 actually diminished the prospect that a mainland counterpart of Toussaint Louverture would rise out of the tobacco plantations.

Nonetheless, as Eugene D. Genovese suggested in his influential study *From Rebellion to Revolution* (1979), the age of revolution, and especially the slave revolt in Saint Domingue in 1791, marked a change in patterns in black resistance. The Caribbean rebels under the leadership of Boukman and Toussaint Louverture sought not only to destroy the power of their Parisian absentee masters but to join the societies in which they lived on equal terms. For black Americans determined to realize the egalitarian promise of the American Revolution, the news from the Caribbean reminded them that if they dared, the end of slavery might be within their reach. Whereas Jemmy and his African recruits hoped only to escape the chains of colonial South Carolina, the slave Gabriel of Virginia, born in the year 1776, wanted to join political society on equal terms. Gabriel and his lieutenants, who instigated the most extensive plot in Virginia history, hoped to force the white patriot elite to live up to its stated ideal: that all men were created free and equal. Leading a small army of slaves in Henrico County, the young blacksmith planned to march into Richmond under a banner emblazoned with the words "Death or Liberty." He assured one supporter that "poor white people," who had no more political power than the slaves, "would also join" them in the struggle for equality. Although trial testimony makes little mention of events in Saint Domingue, white authorities like Governor James Monroe harbored no doubts that Toussaint Louverture's victories had an enormous "effect on all the peoples of colour" in the early national South (Egerton 1993, 169).

In several cases, bondmen who had been carried from revolutionary Saint Domingue by their masters participated in North American slave revolts. In 1792 slaves on Virginia's eastern shore proposed to "blow up the magazine in Norfolk, and massacre its inhabitants" (Aptheker 1943, 228).

Norfolk County had a white majority, but Northampton and Elizabeth City counties, just across the Chesapeake Bay, had an enslaved majority. Although the rebel leader Caleb, a favored servant and driver, was evidently American-born, several of his recruits were Haitian refugees, and all—according to the trial testimony—had been inspired by the example of Saint Domingue. Two decades later, in 1811, one of the most extensive conspiracies in the history of the United States erupted in southern Louisiana, only a few miles upriver from New Orleans. Slaves led by a mixed-race driver named Charles Deslondes announced their intention of marching on the city "to kill whites" (Aptheker, 249). Although Deslondes, contrary to myth, was not Haitian, many of the roughly two hundred slaves who rose with him had resided in the French Caribbean.

After Gabriel's execution and the death of twenty-five of his followers in the fall of 1800, slave rebellions on the eastern seaboard became both less common and less politically conscious. Slaves who worked along the rivers in southern Virginia and Halifax County, North Carolina, under the leadership of Sancho, a ferryman, formed a highly decentralized scheme to rise on Easter Monday of 1802. But Sancho, despite having been involved in Gabriel's plot, shared little of Gabriel's dream of a multiracial republic. The lack of an ideological dimension appeared even when the dislocation brought on by the War of 1812 and a second British invasion of the Chesapeake once more gave bondmen in Virginia an opportunity to rise for their liberty. Gloucester County authorities jailed ten slaves in March 1813, and the following month found rebels in Lancester County and Williamsburg "condemned on a charge of conspiracy & insurrection" (Aptheker, 255). By the late summer and early fall, rumors of revolt unnerved inhabitants of Norfolk and Richmond as well.

If the relative ease with which white authorities crushed these isolated rebellions did not extinguish the desire for freedom, it nonetheless reminded leaders in the slave community that the determined white majority in the American South presented insurgents with a formidable obstacle. Denmark Vesey of Charleston, perhaps the most pragmatic of all the rebel leaders, realized that Gabriel's dream of forcing mainland elites to accommodate blacks' aspirations to freedom and economic justice was impossible.

Vesey plotted, therefore, not to end slavery in South Carolina, but instead to lead a mass escape from Charleston to the Caribbean, where he had lived and worked as a boy. Hoping to take control of the city on the night of July 14, 1822, Vesey's recruits—many of them Africans—intended to slaughter the inhabitants of the city and seize bank reserves before fleeing to Haiti, an embattled black republic sorely in need of capital and skilled labor. If Vesey, a prosperous freeman, doomed those who remained behind to renewed repression by

whites, he can scarcely be faulted: He understood that his followers had virtually no hope of bringing down the peculiar institution in South Carolina.

Even Vesey's unsuccessful exodus, which may be regarded more as mass flight than a revolution, indicated the difficulties of planning an effective strategy amidst large numbers of ever-vigilant whites. Like virtually all rebel leaders in the United States, Vesey recognized the danger of openly recruiting in the countryside. Word of the Charleston plot probably reached several thousand slaves—which is not to say that even half that number committed themselves to the struggle—and there was always a danger that a black Judas would hear the whispers and inform the master class. White authorities had long ago perfected the art of dividing the slave community by offering a tempting reward—freedom—to those who would turn their coats. Like Jemmy and Gabriel before him, Vesey, whose army had more officers than soldiers, planned to rise quickly and present the low country's black majority with a fait accompli. The victorious armies would not be recruited or armed in advance but raised by the captains as they marched.

Ironically, the bloodiest slave revolt in the United States took place in the decade after Vesey's failure, at a time when rebellion—as opposed to other forms of resistance—had become virtually suicidal. The slaves in Southampton County, Virginia, who rose with Nat Turner in 1831 shared neither Gabriel's trust in a second American Revolution nor Vesey's hope of fleeing to the Caribbean. Although Turner may have expected to establish a maroon colony in the vast Dismal Swamp, his plot gave little evidence of planning or rational preparation. Most likely, the messianic Turner hoped that God would protect and guide his army as the Lord had guided the Israelites. At least fifty-seven whites perished in the revolt, but local militiamen easily routed the ill-equipped rebels; three companies of federal artillery, together with seamen from two warships in the Chesapeake, reached Southampton only three days after the insurrection began.

Although the secession of the Southern states in the winter of 1860–1861 presented militant blacks with precisely the sort of division that rebel leaders typically tried to take advantage of, the Civil War channeled black resistance into patterns acceptable to the politicians of the free states. During the first year of the conflict, as Confederate soldiers repulsed northern invasions, militant slaves across the cotton-growing South saw few options but to pull down the rebel government from within. The plot in Natchez, Mississippi, still shrouded in mystery, stands as but one example of collective resistance during the months before the Confederate debacle at Antietam Creek. Rumors of black resistance spread in New Orleans and Columbia, South Carolina. Seven slaves swung from the gibbet in Charleston in April 1861. The Confederate brigadier general R. F. Floyd urged the governor of Florida to declare martial law in the hope of eradicating a "nest of traitors and lawless negroes" (Aptheker, 301).

Most slaves, however, understood, as Herbert Aptheker suggested in his definitive work on *American Negro Slave Revolts* (1943), that "the Army of Lincoln was to be the Army of Liberation" (p. 84). Aged slaves with long memories counseled patience and waited for the arrival of Northern forces. Following the Emancipation Proclamation, Northern freemen and Southern runaways, eager and willing to fight, donned blue uniforms in the name of liberty for blacks. Despite the Confederates' threat to execute black soldiers as slave insurgents, thousands of bondmen fled the countryside, planning to return and liberate their families. By the end of the war, 180,000 African Americans (one out of every five males in the republic) had served in Union forces. Those former slaves who marched back toward the plantations of their birth singing "General Gabriel's Jig" rightly understood themselves to be a part of the largest slave rebellion in the history of the United States.

SEE ALSO *American Revolution; Gabriel (Prosser); Haitian Revolution; Toussaint Louverture; Turner, Nat; U.S. Civil War; Vesey, Denmark*

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Douglas R. Egerton

SLAVE TRADE

The history of most modern societies has involved, in some form or fashion, the use of coerced labor, including the institution of slavery and the exploitation of slave labor. And where slavery existed—defined as a system in which the production process is carried out by human beings owned by other human beings—a mechanism for supplying slaves was necessary. This mechanism is called the slave trade. While slavery and the slave trade as concepts and as practices have an ancient pedigree and global itineraries, their relationship to the history, practices, and realities of modern societies continues to stir considerable concern and controversy. The tools of historians must be combined with tools and insights from economics, political science, and other social sciences to explore how empirical data and theoretical debates have animated our understanding of the slave trade's global history, especially the transatlantic slave trade.

Slavery was commonplace in many ancient societies, including Greece, Rome, and Egypt. Slaves were forced to work in almost all sectors—agriculture, mining, domestic service, and even as gladiators and soldiers. Many of these slaves were captured in war, but formal mechanisms to supply slaves were also well established. Rome drew its slaves from all over its expanding empire, for example, and at one point there were as many slaves as there were Roman citizens. The slave trade was also a prominent feature of medieval societies, with Africans being enslaved and shipped to the Muslim world across the Sahara, the Red Sea, and the Indian Ocean. Scholars have estimated that as many as 19 million people from sub-Saharan Africa were shipped to the Muslim world between 650 and 1890.

Until the fifteenth century, the major destination for the slave trade was the Muslim world, with slaves coming from Africa and from Europe. In fact, the word *slave* is derived from the word *slav*, the name for a large ethnic and linguistic group residing in eastern and southeastern Europe, including Russians, Ukrainians, Poles, Czechs, Slovaks, Bulgarians, and others. In the fifteenth and sixteenth centuries, Africa became the major source of slaves, and the international slave trade was dominated by Portugal, reflecting the development of European colonies in the Americas that needed labor. In the seventeenth century, Britain emerged as the largest carrier of slaves.

THE NUMBERS

There have been three waves of estimates regarding the numbers of Africans who were traded as commodities in the slave trade across the Atlantic Ocean. The first wave included estimates ventured by scholars who repeated earlier numbers gleaned mainly from popular writing and not based on systematic analysis—W. E. B. Du Bois's approximation of 100,000,000 Africans lost to the slave trade was a prime example. Such estimates were the main target of Phillip Curtin's *The Atlantic Slave Trade: A Census* (1969), one of the pioneering studies seeking to provide more accurate numbers. The second wave of estimates, to which Curtin contributed, was based on more extensive compilation and synthesis of available data and estimates using statistical inferences based on population changes in importing countries, but not on research into original sources. Curtin provided an estimate of 9,566,100 Africans between 1451 and 1870, concluding provocatively that it was unlikely that new scholarship would alter his estimate by a number greater than 10 percent. Noel Deerr's *The History of Sugar* (1949–1950) was an earlier representative of this tradition extended but not initiated by Curtin's census. The major impact of Curtin's work was not its originality but its method, comprehensiveness, and timing, appearing at a time when concerns over race and race relations were mounting, and drastically lower estimates of the number of Africans traded were bound to provoke controversy.

Joseph Inikori (1976, 1982) provided one of the earliest critiques of these census efforts. He pointed to his own research and synthesized the work of other scholars as the basis for concluding that Curtin's estimate required a 40 percent upward adjustment. Most important was his discovery of new shipping data that provided more accurate numbers of slaves carried. Beyond confirming that all such estimates are far from complete or final, the continuing debate underscores the centrality of intellectual history in exploring heated disagreements in historical interpretation where perspectives are shaped by the dynamics of color, class, nationality, morality, disciplinary paradigms, ideological orientations, and claims about objectivity.

A third wave is represented by scholars who have compiled the Trans-Atlantic Slave Trade Database (TSTD), sponsored by Harvard University's Du Bois Institute and published in 1999. With data on more than 27,000 slave voyages, TSTD concluded that 11,062,000 Africans were transported from Africa between 1519 and 1867, with 9.6 million landing in the Americas, figures not substantially different from Curtin's. More than half were carried between 1700 and 1799, and about 30 percent after the abolition of the slave trade by Great Britain and the United States in 1807. Beginning with Prince Henry's traders in 1441, Portugal was the major carrier in the trade involving Africans, and 75 percent of all slaves were carried by the Portuguese in the first 150 years of the trade. Overall, however, British citizens transported 46 percent of all Africans, followed by the Portuguese (29.1%), France (13.2%), Spain (4.8%), the Netherlands (4.7%), and Denmark (1%). Only 2.5 percent of all slaves were transported by slave merchants based in the United States and British

Caribbean. Up until 1820, more Africans were transported across the Atlantic than Europeans—8.4 million Africans to 2.4 million Europeans.

TSTD enables more detailed attention to the geographical distribution of the origins and destinations of enslaved Africans and the resulting demographic and cultural shape of the "diaspora" in which Africans were dispersed or scattered. Almost 45 percent of all slaves came from the West African coast that is today Ghana, Togo, Ivory Coast, Burkina Faso, Benin, and parts of Nigeria, for example. As destinations, 41 percent of enslaved Africans were shipped to present-day Brazil, 27 percent to British America, 11 percent to French territories, and 13 percent to Spanish territories. And there was method in the madness, with European slave traders and slave-purchasing areas in the Americas showing preference for Africans from particular regions (e.g., rice-growing South Carolina preferred slaves from Gambia and rice-growing regions of West Africa).

There have also been substantial updates to TSTD, bearing out earlier and unwelcome insistence that all such estimates were only provisional. A new revised TSTD now includes over 34,000 slaving voyages. It recognizes "major gaps" in the 1999 database, especially with regard to the early history of the slave trade and that of Brazil, the largest importing nation. It adds 7,000 new voyages and provides additional information on more than 10,000 voyages in the 1999 database.

POLITICAL ECONOMY

Political economy generally denotes an approach that focuses on the relationship of economic activity—trade and commerce as well as production—and their interrelationships with the activities of government, politics, and the broader society. To paraphrase Adam Smith's 1776 title for his pioneering volume in this tradition, the slave trade and slavery's contribution to "the wealth [and poverty] of nations" was critical. This line of thinking was continued in the next century by Karl Marx, who pondered in Vol. 1 of *Capital,* "the turning of Africa into a warren for the commercial hunting of Black skins" as an initial source for early investment in capitalist production. The approach is also closely related to Walter Rodney's *How Europe Underdeveloped Africa* (1974) and similar discussions by such scholars as J. M. Blaut (1992, p. 206) of "the role played by colonialism in industrial production."

Meeting the need for labor in the Americas was essential if European nations were to realize the goals of mercantilism—favorable trade balance, increased amounts of precious metals, and the like. Therefore, beyond the issue of how many Africans were taken from the continent into slavery in the Americas—especially the horrendous treatment during the middle passage between Africa and the Americas—and who played what role in enslaving them, is the need to understand the contribution of African labor to wealth production in the various nations that were carriers of slaves and beneficiaries from the economic productivity of slave labor.

Expectedly, sharp differences have emerged as well over this area, generally termed "profitability" of the slave trade, an assessment dependent in part on calculations of the number of slaves traded. For example, Roger Anstey (1975) suggested 9.6 percent as the rate of profit in the British slave trade between 1761 and 1897, calculating profits by using data on the number of slaves landed, slave prices, and other data on cost and revenue. Inikori (1976) provided evidence pointing to underestimations in the number of slaves landed in the West Indies and the average price for which slaves were sold. William Darity (1985) used these corrected figures to demonstrate a plausible increase in the rate of profits from 9.6 percent to 30.8 percent, a figure consistent with the conclusion of Eric Williams in *Capitalism and Slavery* (1944).

Efforts to calculate the contribution of the slave trade to economic development became more controversial when prominent scholars concluded that profits from the slave trade were not large enough to make a significant contribution to British industrialization, a view that diverged from the long-held conventional wisdom about the impact of what had been called "the triangular trade" (Anstey 1975; Engerman 1972; Davis 1984, p. 73). Darity (1990), Barbara Solow (1991), and others highlighted the impact that different definitions, theoretical assumptions and economic models can have in calculating rates of profits, concluding that the slave trade was a relatively important source of industrial capital. Moreover, Ronald Bailey (1986, 1990) has given the term "slave(ry) trade"—activities related both to the slave trade and slavery and closer to the "multiplier effect" concept used by some economists—as the source of profits that should be utilized in calculating contributions to industrialization and not just profits from buying and selling slaves. Substituting profits from the Caribbean trade in place of profits solely from the sale of slaves, he concluded that enough profits could have been generated to finance the British industrial revolution several times over. (As an additional example, the 7,000 new voyages added to the 1999 TSTD database discussed above requires a recalculation of the slave trade's impact on the expansion of the ship-building and shipping industry.)

In this approach, this contribution from the "slave(ry) trade" would include the important role and economic significance of agricultural crops produced by slave labor in the colonies, including sugar, tobacco, rice, coffee, and cotton, as well as profits generated in related shipping, banking and insurance, and manufacturing, a

central thesis in Williams's *Capitalism and Slavery* and argued by Inikori (2002). Importantly, this approach facilitates a sharper focus on the role of slavery and the slave trade in U.S. history, an emphasis admirably treated, for example, by Du Bois (1896) and in the chapter on "Black Merchandise" in Lorenzo Greene's *The Negro in Colonial New England* (1942).

MORALITY OF THE SLAVE TRADE

Ships in the transatlantic slave trade rarely carried Europeans and were rarely owned and operated by Africans. This color/race and class dynamic helps to explain why the controversy over the slave trade provokes sharp debates over morality and ethics. It is so potent because modern capitalist nations, which early prohibited the enslavement of Europeans, were the world's leaders in the enslavement and trade of Africans, a legacy related to both poverty and racism that hovers over world history and the history of many nations and peoples. Even more perplexing, the slave trade and slavery were consolidated and expanded at the same time as the rise of the progressive transatlantic philosophical movement called the Enlightenment in the late eighteenth century, and such practices were enshrined and extended, not abolished, by the American Revolution and the U.S. Constitution. Edmund S. Morgan, a scholar of early America, was provoked to probe the paradoxical marriage of convenience he called "American slavery/American freedom."

Ideas about abolition surfaced as early as the late 1600s with the work of the Quakers and other religious groups, but it was not until 1807 that legislation to end the slave trade was enacted in Great Britain and in the United States. It was another eighty years before such practices were finally outlawed by all of the nations whose citizens had been involved as slavers and beneficiaries of slavery. Scholarly debates regarding the root causes of abolition and the slow unfolding of its success have been as intense as those regarding the causes and consequences of slavery and the slave trade, with some scholars emphasizing humanitarian motives and others stressing economic and political dynamics. That the system of U.S. slavery that fueled the transatlantic slave trade necessitated for its abolition a civil war resulting in the deaths of more than 620,000 people will guarantee that discussion and debate will continue in the decades to come.

Two hundred years after the 1807 abolition of the slave trade in Great Britain and the implementation of a similar measure in the U.S. Constitution, the slave trade continues to rest uncomfortably in scholarship and in social memory. In recent times, the controversy has taken the form of calls for and debates over apologies for participation in the slave trade and slavery, and over the payment of some form of "reparations" similar to what was provided to Jews and other victims of the Holocaust and to U.S. citizens of Japanese ancestry incarcerated in World War II camps. And there are growing contemporary movements to grapple with new forms of slavery, poverty, and economic coercion in a deepening globalized economy. Research, thinking, and writing about the history of the slave trade should provide a solid foundation for understanding and acting in the present and future.

SEE ALSO *Caribbean, The; Cotton Industry; Du Bois, W. E. B.; Engerman, Stanley; Holocaust, The; Immigrants to North America; Incarceration, Japanese American; Inikori, Joseph; James, C. L. R.; Jews; Marx, Karl; Mercantilism; Plantation; Race; Racism; Rodney, Walter; Roma, The; Slave-Gun Cycle; Slavery; Slavery Industry; Smith, Adam; Sugar Industry; White Supremacy; Williams, Eric; World War II*

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Ronald W. Bailey

SLAVE-GUN CYCLE

For the first two centuries of European trade in western Africa (roughly 1441 to 1650), gold was the main product of trade. But as demand for slave labor in the Americas expanded following the phenomenal growth of plantation agriculture and mining from the seventeenth century, European demand in western Africa shifted decisively from gold and other products to captives, leading to the transportation of millions of Africans for enslavement in the Americas between the 1650s and the 1860s. The impact of this trade in captives on African societies has been debated since the late eighteenth century—first, between the abolitionists and the slave traders and, later, among modern historians. One contested issue is the role of the trade in the scale and frequency of wars in western Africa between the 1650s and the 1860s. This is the context for the notion of the *slave-gun cycle*—that guns were employed in wars that generated captives for export, the proceeds from which were employed to buy more guns to fight more wars that generated more captives. Historians disagree on the quantity of firearms imported during the period and their contribution to the scale and frequency of wars. This entry examines the issue of quantity and the linkages to war. It argues that the linkages presented by both sides of the debate appear to be simplistic. A combination of new evidence and a more complex analysis sheds more light on the subject.

Because of inadequate evidence and the difficulty of interpreting what is available, quantifying various aspects of the transatlantic slave trade is fraught with controversy. An estimate based on a variety of British records—merchants' private papers, customs records, and parliamentary papers—puts the mean total annual import into western Africa from all regions of the Atlantic basin at between 300,000 and 400,000 guns in the second half of the eighteenth century (Inikori 1977). Other estimates based on more limited archival sources are smaller—190,000 for the 1780s; 140,000 for the 1820s; about 200,000 for the 1860s (Eltis and Jennings 1988).

The debate on the contribution of imported guns to the scale and frequency of wars in western Africa during the era of the transatlantic slave trade has been conducted largely within short time periods with all of western Africa taken as a unit of study. This methodology conceals information that region-specific study covering long time periods reveals. This entry, therefore, takes the major subregions of western Africa involved in the transatlantic slave trade, comprised of the Gold Coast (modern southern Ghana), the Bight of Benin (modern Togo, Republic of Benin, and southwest Nigeria), the Bight of Biafra (southeastern Nigeria and southern Cameroon), and West-Central Africa (the area from modern Gabon to modern Angola); discusses changes in the commodity composition of their imports from the early years of their trade with the Europeans; and combines the information with other relevant evidence. The Gold Coast and West-Central Africa began significant trading with the Europeans early in the fifteenth and sixteenth centuries; the Bights of Benin and Biafra came in relatively late during the middle decades of the seventeenth century. For this reason, British records employed in the analysis provide better coverage for the commodities imported into the Bights of Benin and Biafra in the early years.

For the Bight of Benin, cowries (sea shells employed in local trade as all-purpose currency) overwhelmingly dominated the imports in the seventeenth century, being consistently more than one-half of the total value of imports before the last decade of the century. The invoices show no firearms, again, until the last decade of the century. From the latter period, the volume and ratio of imported cowries declined continuously, while that of firearms rose—from approximately 3 percent in 1690/

1692 to 9 percent in 1724. In the Bight of Biafra, copper rods, weighing about one pound each (employed in local trade as all-purpose currency), constituted about two-thirds of the total value of imports in most years between the 1660s and 1680s. In most years from the 1660s to 1690s, there were no firearms at all in the invoices; the ratio of firearms in the invoices for 1661 and 1662 is approximately 7 percent each. Like the Bight of Benin, currency imports declined over the eighteenth century, while firearms increased—from approximately 3 percent in 1701 to 40 percent in 1790. From 1827 to 1839, firearms imported into both regions ranged between 21 percent and 35 percent of total imports, and 14 to 18 percent from 1840 to 1850. During these twenty-four years (with data unavailable for 1844), a total of 1.2 million guns were imported into the two regions from Britain alone, the bulk of which went to Yorubaland, where European traders' choice of Lagos as their headquarters in the late eighteenth century and the collapse of the Oyo Empire in the early nineteenth century led to almost a hundred years of wars (Inikori 1992).

Detailed study of imports into the Gold Coast and West-Central Africa in the fifteenth and early sixteenth centuries is yet to be conducted. However, a Portuguese gold trade ledger for Elmina (Gold Coast), covering 1529 to 1531, shows that metals (without guns) made up 50 percent of imports and cloth 25 percent; no firearms were imported. From the seventeenth century, firearms flooded into the Gold Coast and West-Central Africa, at a time when the Bights of Benin and Biafra hardly imported any firearms.

When the import data is combined with other evidence, we get a much clearer linkage between imported firearms and wars in western Africa during the transatlantic slave trade era. There is clear evidence showing that local and interregional long-distance trade was expanding in western Africa (the geographical region from Mauritania to Namibia), especially West Africa (the political region from Mauritania to Nigeria), at the time Europeans arrived in the mid-fifteenth century. The early European trade in African products, particularly gold, further stimulated the ongoing trade expansion. Cowries and copper rods were already all-purpose currencies in the pre-European trade. The proportionately large import of these currencies in the early decades of European trade is a reflection of the growing local demand for currency to meet the needs of the expanding local and interregional trade. The low demand for firearms in the early years of European trade shown by the commodity composition is, again, a reflection of the general prevalence of peaceful conditions in the kin-based small-scale polities on the coast and in the hinterland. The minor skirmishes that broke out occasionally between neighbors were brief in duration, and prisoners (if any) were ransomed at the end (Meillassoux 1991, p. 33). For as long as European demand was overwhelmingly dominated by African products, the situation remained largely unchanged.

The massive shift of European demand from products to captives changed everything. As individuals and groups of bandits engaged in kidnapping and raids within polities and across political boundaries in response to growing export demand for captives, the small polities were unable to maintain law and order within, while raids across political boundaries provoked wars between neighbors, wars whose scale and consequences increased considerably. These wars disrupted the preceding interregional trade and shifted demand from currency to firearms. Initially, therefore, the wars were not caused by the import of firearms. The shift of European demand from products to captives was the main cause. However, in due course, the massive import of firearms and their distribution among bandits created conditions that fueled the wars and made them endemic. Because exporting captives provided virtually the only access to firearms, given the nature of European demand, polities in conflict were compelled to sell captives for export, which by itself provoked retaliation and continuation of hostility. On the other hand, the sale of war captives in exchange for firearms made war self-financing, which helped to prolong wars. All these developments were experienced by virtually all the polities in western Africa from Senegambia to Angola at different points in time between 1450 and 1850.

A combination of import data and other evidence thus makes it clear that the slave-gun cycle notion, as often employed in the literature, is simplistic. So, too, is the attempt to distinguish between economic and political causes of war during the Atlantic slave trade period. In the main, the wars were political in nature, but were caused largely by the political complications arising from the actions of individuals and groups of bandits responding to the growing export demand for captives, in the first instance (Inikori 1992, pp. 25–39). Given the small size and the politico-military weakness of the polities on the coast and in the hinterland when the Europeans arrived in the mid-fifteenth century, comparative arguments based on the ratio of imported firearms to population (Eltis and Jennings 1988) are not well-founded. Also erroneous is the argument that Europeans and their firearms made no difference to the wars of the slave trade era because before the arrival of Europeans political leaders in western Africa were regularly engaged in wars for the accumulation of slaves as a form of wealth owing to land laws that prevented private accumulation of land and capital as wealth (Thornton 1992). Linguistic and other evidence from West-Central Africa (Hilton 1985; Vansina 1989) and archival and oral evidence from other regions show that the largely kin-based polities on the coast and in the hinterland, and even the Kongo kingdom in West-Central Africa, were not engaged in slave gathering wars in the fifteenth century,

and they had no accumulated slaves for domestic use or for sale when the Europeans arrived. A few captives were being exported across the Sahara at the time, but that trade was centered in the interior savanna; most coastal polities and their hinterlands were not involved. What is more, the evidence shows unambiguously that there were no legal barriers to the private investment of capital in land and agriculture when market conditions were appropriate. Finally, wars continued in western Africa for some decades after the abolition of the transatlantic slave trade in the mid-nineteenth century because the conditions for sociopolitical conflict created by the export demand for captives continued to exist even after abolition.

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Joseph E. Inikori

SLAVEOWNERS

SEE *Slavery.*

SLAVERY

It has been common for many generations to begin essays on American slavery by noting how commonplace slavery is: It is sanctioned in the Old Testament and has appeared in some form throughout recorded human history, from ancient Egypt to the capture and enslavement of European Christians by Muslims in the Middle Ages to the present. Writers also commonly note that slavery existed in Africa, that Africans sold other Africans into slavery, and—though this is a relatively recent addition to the "stock" essay—that western Europeans ended slavery in a relatively short compass, from about the time of the American Revolution, when northern states began to adopt abolition statutes, through the 1860s.

All of this is true. However, the emphasis has important political implications. For that picture of slavery makes it look natural. It employs the "everybody does it" argument to demystify a practice of immense horror. In fact, those arguments were employed with great facility by proslavery thinkers to justify the continuation of the institution. During debates over the Fugitive Slave Act, Senator John Bell of Kentucky said that slavery has been "contributing in a hundred various forms and modes, through a period of thousands of years, to the amelioration of the condition of mankind generally, though sometimes abused and perverted, as all human institutions, even those of religion, are" (U.S. Congress 1850, 1105).

Senator Bell (who ran unsuccessfully for president of the United States in 1860) found that slavery was "still contributing to advance the cause of civilization through, if you please, having its origins in individual cupidity, still mysteriously working out a general good" (U.S. Congress 1850, 1105). He went so far as to reason from there that slavery was not inconsistent with God's law.

Moreover, saying that every society engaged in slavery is misleading. The nature of African American slavery was different in kind from slavery in many other societies. This is frequently lost on those who seek to make African American slavery look commonplace and thus minimize the nature of the harm. Grecian and Roman slavery was nonracial and temporary, for example. The children of people enslaved in one generation might rise to the ranks of free people, and slaves were incorporated into the society more generally.

It is now becoming more common to emphasize other parts of the institution of slavery that resulted in the forced migration of 11 million people to America, nearly one-half million of whom came to English-speaking

North America from the seventeenth through the mid-nineteenth centuries. (The importation of slaves into the United States was outlawed in 1808, although some people were imported illegally after that.) The institution built on centuries of European experience with slavery. Slavery survived in parts of Spain through the 1500s; soon slavery spread to Spain's colonies in America. In fact, in 1495 Columbus brought 500 Native American slaves back to Spain. But there were important differences. The slavery that developed in the Americas was brutally violent and perpetual. Slaves were often isolated from free people and left with no hope of having even their children escape from slavery.

The institution was revived and expanded in light of extraordinary needs for labor. Violence permeated it, including the forced separation of families, wars of conquest in Africa encouraged by the European market for humans, the middle passage to America, and brutalization on plantations in America.

ORIGINS

Many historians debate the origins of slavery: in European practices such as slavery in Spain in the 1400s, in a legal tradition that stretched back to Roman law, in cultural patterns that encompassed slavery in the Old Testament, in economic needs, and in race prejudices. The legal traditions came largely from Spain—and through Spanish law, from Roman law. European-imposed slavery came ashore in the West Indies in the late 1400s and early 1500s, then spread from the Caribbean to the mainland. Historians have spent much time trying to discern how and when slavery came to British North America. The first black people brought to Virginia in the 1620s seem to have had a status similar to that of indentured servitude, where they worked for a limited period of time and then became free. But by the 1660s, it appears that a system of inherited slavery had emerged in Virginia and elsewhere in mainland British North America. Children's status followed that of their mothers, so the offspring of slave mothers were also slaves. The best answer as to why appears to be that a combination of economic interests, racism, and cultural practices created the American slave system. And while race lies at the center of the institution of slavery, not all blacks were slaves. No whites were slaves, either.

And yet the human spirit longed to be free, even as the system of slavery grew in British North America and statutory laws grew up around it. In 1739 the Stono Rebellion took place along the coast of South Carolina. Something like sixty slaves began the rebellion by stealing weapons along the Stono River. In the wake of the rebellion, the statutory law of South Carolina became harsher and working conditions deteriorated. Shortly afterward, in 1741, there was an alleged plot by slaves in New York City, where 10 percent of the population was enslaved. The extent of the plot remains in dispute, but more than two dozen slaves were executed in the aftermath.

SLAVERY AND AMERICAN REVOLUTION

Even as the slave population and the importance of slavery as a labor system were increasing, many in British North America began thinking in the Enlightenment's terms of a universal right to freedom. American revolutionists gave consideration to the terms of slavery. In a draft of the Declaration of Independence, Thomas Jefferson included the slave trade as one of the offenses of the English Crown, but that indictment was subsequently removed. Like the delegates to the Continental Congress, Americans at the time of the Revolution were more generally unwilling to act on antislavery values. One of the great paradoxes of American history is the question of how Americans could fight a war based on the idea of freedom while still maintaining slavery. Or, in the words of Dr. Samuel Johnson, "How is it that we hear the loudest yelps for liberty among the drivers of negroes?"

There was, then, in the ideology of republicanism popular in early America—that conjunction of faith in widely spread property holdings, independence from economic dependency, and political independence as well—a strange relationship with slavery. Harriet Beecher Stowe drew out the contradiction in her 1852 novel *Uncle Tom's Cabin* when a boy beat his slave. The boy's uncle asked whether that was consistent with the republican principle that "men are born free and equal." The boy's father said that the phrase was

> [o]ne of Tom Jefferson's pieces of French sentiment and humbug. It's perfectly ridiculous to have that going the rounds among us, to this day.… we can see plainly enough that all men are not born free, nor born equal; they are born anything else. For my part, I think half this republican talk sheer humbug. It is the educated, the intelligent, the wealthy, the refined, who ought to have equal rights and not the canaille. (Stowe 1852, p. 74)

Such an exchange pointed out one of the abolitionists' arguments: that slaveholders cared little for the equality of anyone, white or black. Some abolitionists argued, instead, that the slavery of Africans was but a step on the way to further inequality.

Historian Edmund Morgan's 1975 book, *American Slavery, American Freedom*, takes up the paradox of Americans' claims for freedom in the Revolution and their concomitant respect for slavery. His answer is that slavery

provided the social and intellectual setting for whites' freedom. In essence, slaves made it economically possible for white men to have democracy. Moreover, the presence of slavery alerted white men to how awful servitude might be—and thus led them to be vigilant in the protection of their rights. This draws in some ways from the insight of South Carolina senator James Henry Hammond, who spoke in 1858 about slaves as the "mudsill class" who made white freedom and equality possible. Though Hammond turned to this argument as a basis for continuing slavery, later historians have used his theory for insight into the nature of political ideology and slavery. In essence, they looked to Hammond to decode why slavery, so inconsistent with the American language of freedom, had such a powerful hold on the minds of white men.

POSTREVOLUTIONARY CHANGES

In the aftermath of the American Revolution, the institution of slavery grew in popularity in the United States, even as the movement opposing slavery also grew. In the northern states, gradual abolition plans began the process of ending slavery. For example, Massachusetts and Pennsylvania passed statutes that would emancipate slaves born afterward, following a period of apprenticeship. The statutes also freed slaves brought into the states. Thus, by about the middle of the nineteenth century, no more slaves would live in those states; those who were enslaved prior to the enactments would have died, and the others would have been freed. One effect of this was to encourage owners to sell their slaves to southern states, where they and their children would continue to be slaves.

The Enlightenment continued to have some adherents. Thomas Jefferson noted in 1784 in his *Notes on the State of Virginia* that "The whole commerce between master and slave is a perpetual exercise of … the most unremitting despotism on the one part, and degrading submission on the other. … I tremble for my country when I reflect that God is just; that His justice cannot sleep forever" (Jefferson 1984, pp. 288–289). Events elsewhere also contributed to the debate over slavery. In Haiti, Enlightenment ideas and the human impulses to resist slavery led to a revolution among the half-million slaves in 1791, which resulted by 1803 in the end of slavery in Haiti. The free black state was close to alone in the world; the United States would not receive an ambassador from Haiti or even recognize Haiti. The revolution included extraordinary violence. Hundreds of whites died; some white refugees fled from Haiti to South Carolina, where they provided living reminders of what might happen in a slave society. The United Kingdom ended slavery in its colonies in 1833, at a great financial cost, following decades of abolitionist agitation.

CAPITALISM AND ANTISLAVERY SENTIMENTS

There remains substantial question about the origins of antislavery sentiments. They grew in conjunction with the development of the market economy, which has led some historians to ask, "What is the relationship between capitalism and abolitionism?" One might think at first that there is some tension, in that the institution of slavery seems to have been a fairly effective way of obtaining (relatively) inexpensive labor. Anyone wondering about how important slavery was in the development of the southern agricultural economy might perform a simple experiment: Spend an afternoon—just an afternoon—working in a field in Alabama in July. Then ask, would anyone perform this kind of labor unless forced to do so?

However, the market economy seems to have had a positive effect on antislavery sentiments; in part it made people aware of their fellow humans, in part it led to competition with free labor. Thus, free laborers had both sentimental and economic reasons for opposing slavery. That did not necessarily mean that white voters always welcomed the idea of recently freed slaves living in their community; but for reasons of self-interest, they often had a desire to end slavery. In these cases, the economic interests of many voters merged with the humanitarian sentiments of others to give strength to the antislavery cause, even as proponents of property rights in the South clung tightly to the institution.

One might also consider that Adam Smith was the author of an important treatise, *Theory of Moral Sentiments*, as well as *The Wealth of Nations*. As the market economy led the way for the development of middle-class sentiments that recognized the need for promotion of humanity (Harriet Beecher Stowe's *Uncle Tom's Cabin* is a prominent example here), it also led the way for economic competition by free workers with slavery. The Republican Party's slogan in the 1850s, for example, was "Free Soil, Free Labor, Free Men."

W. E. B. Du Bois discussed this in his 1935 book *Black Reconstruction*, one of the most important works ever written on slavery and its aftermath. The book was an important corrective to the then-dominant school of historical scholarship that relegated slavery to the sidelines in the discussion of the Civil War and that decried the domination of the South by corrupt and lawless Yankees and blacks during Reconstruction. Du Bois dealt with the differing meanings of slavery for white workers—the impact of slave labor on driving down wages, as well as the presence of free black workers in driving down wages. Du Bois wrote, for example, that white immigrants "blamed blacks for the cheap price of labor. The result was race war; riots took place which were at first simply the flaming hostility of groups of laborers fighting for bread and butter" (Du

Bois 1935, p. 18). Du Bois pointed out the complex relationship between white workers and slaves and free blacks, which made it sometimes difficult to tell how voters would define and express their preferences.

GROWING TENSIONS OVER SLAVERY AND ANTISLAVERY

In the United States there was other action. Congress outlawed the importation of slaves from outside the United States in 1808 (the earliest date permitted under the Constitution). That had the effect of increasing the prices of enslaved people and also encouraging better treatment because of their increased value. The controversy over the extension of slavery to newly acquired territories continued as well. The Northwest Ordinance of 1789 had prohibited slavery in the Northwest Territory (including Ohio and Michigan), which Virginia had ceded to the United States. Southern states worried that if free states were admitted, the South would gradually lose political power. In 1820, Congress passed the Missouri Compromise, which prohibited slavery in territories north of Missouri's southern border. For a while that contained discord over slavery. Thomas Jefferson wrote—with great foresight—about the compromise that "this momentous question, like a fire bell in the night, awakened and filled me with terror. I considered it at once as the knell of the Union." He predicted that although sectional divisions over slavery were quelled for the time being, "a geographical line, coinciding with a marked principle, moral and political, once conceived and held up to the angry passions of men, will never be obliterated; and every new irritation will mark it deeper and deeper" (Ford 1904–1905, vol. 12, pp. 158–160).

Subsequent events proved Jefferson correct. By the early 1830s, the politics of slavery grew more divisive. Nat Turner's August 1831 rebellion in southern Virginia led to the deaths of at least fifty-five white people—and to a serious debate in the Virginia legislature about a gradual abolition plan. The plan failed, narrowly; in other southern states, there was growing reluctance even to discuss the possibility of termination of slavery. In 1835, when abolitionists attempted to use the U.S. mail to deliver abolitionist literature, southern states further closed ranks. After 1835, there was little serious antislavery talk in the South; the nation was on a course toward Civil War and then, emancipation.

After 1835, southern congressmen imposed the "gag rule," which prohibited discussion of the abolition of slavery (or even the receipt of abolitionist petitions) in Congress. Southerners seem to have made an already degrading slavery harsher as well, for instance, by taking seriously statutes prohibiting the teaching of slaves how to read and by generally policing slaves more closely than they had before. Moreover, in the nineteenth century southern states moved to make emancipation of slaves harder and in some cases to require them to leave the states shortly after receiving freedom. College professors in southern institutions wrote important proslavery tracts, including Thomas R. Dew of William and Mary, Albert Taylor Bledsoe of the University of Virginia, R. H. Rivers of Alabama Wesleyan College (now the University of North Alabama), and William Smith of Randolph Macon College. Staples of the proslavery argument were that slavery was ubiquitous in history and that slave societies profited greatly from the institution. They concluded that slavery was not a drag on society but a principle cause of civilization. Moreover, they argued that economic and social stability required slavery. They pointed to Haiti and suggested the dangers to white society from the abolition of slavery.

In 1850, Congress again passed a comprehensive compromise (known as the "Compromise of 1850") that, among other things, required northern states to assist in the return of fugitive slaves. But that could not settle the issue for long. The Supreme Court invalidated the Missouri Compromise in 1857 in the *Dred Scott* case, as it attempted to install southern constitutional thinking on slavery as the law of the land. In 1860, Abraham Lincoln won election, and shortly thereafter South Carolina, fearing for the future viability of slavery, seceded. Other southern states followed and the Civil War began in 1861. During the secession discussions, southern politicians frequently spoke about the importance of preservation of slavery, and some advocated the reopening of the slave trade.

DIFFERENCES OF SPANISH AND FRENCH AMERICAS

Slavery was present in Spanish and French America, as well as in English-speaking America. In Spanish and French America, unlike English-speaking America, there seems to have been intermarriage between owners and slaves, and slaves seem to have had more formal legal protection. That has led to much discussion of whether the slave systems of Spanish and French America were more benign than in English-speaking America. There was, as many have pointed out, extraordinary violence in the slave systems throughout the Americas. After the Civil War finally ended slavery throughout the nation in 1865, slavery continued for a few more years in other parts of the Americas. Brazil finally ended slavery in 1888, which marked its termination in the Americas.

SEE ALSO *American Revolution; Cox, Oliver C.; Declaration of Independence, U.S.; Engerman, Stanley; Fogel, Robert; Freedom; Haitian Revolution; Human Rights; Jefferson, Thomas; Liberation*

Movements; Liberty; Lincoln, Abraham; Liverpool Slave Trade; Migration; Race; Racial Classification; Racism; Republicanism; Revolution; Slave Mode of Production; Slave-Gun Cycle; Smith, Adam; Social Movements; Stigma; U.S. Civil War; Williams, Eric

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Alfred L. Brophy

SLAVERY HYPERTENSION HYPOTHESIS

Early in the twentieth century, before chronic high blood pressure (hypertension) was even recognized as a serious medical condition, colonial physicians in Africa had already developed an interest in the apparent absence of hypertension among indigenous black populations. Rather than interpreting these observations as some sort of natural advantage possessed by Africans, they attributed the difference to a carefree traditional life, uncomplicated by the stresses of industrialized society. In the United States, on the other hand, evidence emerged by the 1930s that black Americans had a higher prevalence of hypertension than whites, and this observation spawned many theories about anatomic and physiologic differences that might explain the disparity.

Despite extensive research since the mid-twentieth century on social and behavioral factors that contribute to hypertension, there has been a persistent impulse in American biomedicine to view racial groups as representing human subspecies. Explanations for racial health disparities therefore tend to be couched reflexively in terms of hypothesized genetic factors. This tradition of racial essentialism led to a surfeit of ad hoc hypotheses about hypertension, such as relating blood pressure levels directly to skin pigmentation or to excess testosterone levels in black men. Some authors suggested that because blacks originated from hot and humid environments, they possessed innate capacities for sodium retention that proved maladaptive in other settings. Others proposed that salt supplies for the sub-Saharan progenitors of African Americans were historically limited.

A POPULAR HYPOTHESIS

One of the most widely disseminated of these "just so" stories is the "slavery hypertension hypothesis," an evolutionary theory that relates excess hypertension risk in New World blacks to natural selection during the "Middle Passage" for the trait of retaining sodium. The theory was posited at least as early as 1983, and it was adopted in the late 1980s by the hypertension researcher Clarence Grim, who has championed the idea energetically in the subsequent decades. Grim speculated that sodium loss from sweating, diarrheal stools, and vomit during the transatlantic voyage led to high levels of mortality from dehydration, and therefore to selection pressure against genes coding for greater sodium excretion in the kidneys.

As this hypothesis grew in popularity, some researchers began to voice skepticism, arguing against the theory on the basis of population genetics, details of the physiology of hypertension, and basic evolutionary biology. For example, Philip Curtin, a historian of the slave trade on whose work Grim had drawn heavily, denied any historical validity to the proposition that Africa had traditionally been "salt-scarce." Curtin asserted that his own work had been misquoted on this point. He also disputed the mortality estimates cited by Grim, noting that these figures were not only incorrect or outdated, but that they

were referenced so poorly that their original source could not be identified. Curtin argued that Grim's proposition that a majority of deaths were due to diarrheal disease was equally baseless, and he concluded that Grim's hypothesis not only lacked supporting evidence, but that what little evidence did exist directly contradicted the theory.

Grim has largely avoided responding to specific criticisms, and in response to these arguments he countered vaguely that Curtin had "failed to grasp several key physiological and epidemiological principles underlying the hypothesis." Other defenders of the hypothesis have been similarly oblique in print. The editor of the journal *Psychosomatic Medicine*, for example, dismissed critics of the Slavery Hypothesis as "left-thinking" people, admonishing them that race and ethnicity are "too important to be ignored or politicized" (Dimsdale 2001, p. 325).

THE SLAVERY HYPOTHESIS TODAY

The slavery hypertension hypothesis remains widely accepted, as evidenced by the numerous hypertension textbooks that describe the theory in detail, often without mention of any criticism. The hypothesis is frequently invoked in the medical literature to justify the more general proposition of innate biologic difference in cardiovascular disease risk and treatment efficacy. For example, the editor of the *American Journal of Cardiology* wrote in 2001 that "[i]t is this selective survival among the descendants of surviving slaves of genes responsible for an increased ability to hold on to salt that is now responsible for the exceptionally high prevalence of hypertension in African-Americans" (Roberts 2001, p. 1344).

The theory also reappears periodically in the popular press. In a 2005 feature about the Harvard economist Roland Fryer Jr. for example, the *New York Times Magazine* depicted the slavery hypothesis as a new and exciting idea from the young academic superstar. "Fryer's notion that there might be a genetic predisposition at work was heightened when he came across a period illustration that seemed to show a slave trader in Africa licking the face of a prospective slave," wrote the profile's author, Stephen Dubner. He continued, "a person with a higher capacity for salt retention might also retain more water and thus increase his chance of surviving. So it may have been that a slave trader would try to select, with a lick to the cheek, the 'saltier' Africans. Whether selected by the slavers or by nature, the Africans who did manage to survive the voyage—and who then formed the gene pool of modern African-Americans—may have been disproportionately marked by hypertension" (Dubner 2005, p. 56).

In this instance, the reasoning happens to be exactly backwards, as the "saltier" Africans would be exactly the ones who were not retaining sodium. Disregarding this logical error, what is remarkable is the perpetual recurrence of the theory as so new and exciting that no actual data (e.g., a measurement of a genetic marker for sodium metabolism) is required. The single piece of "evidence" cited in this account is a 1764 antislavery engraving, the interpretation of which as a depiction of tasting for salt is dubious at best.

BEYOND THE SLAVERY HYPERTENSION HYPOTHESIS

In the case of the slavery hypothesis, a vague suggestion has achieved considerable scientific and popular dissemination, despite a dearth of evidence and denunciations by many critics that have generally gone unanswered. Respected researchers cite the theory readily, in many cases even expressing their aesthetic attraction to the idea. This is echoed in the popular press, where writers have further exaggerated the simplistic genetic determinism and essential black abnormality that are implicit in the hypothesis. Racial groups have been portrayed as fundamentally distinct in physiology, conforming to the stark distinctions that are common in the social sphere. Moreover, the casual acceptance of this outright speculation has become an edifice upon which to construct further elaborations, such as race-specific therapies, and the many facets of this mythology have come to reinforce each other and create the impression of evidence, when in fact there is little or no evidence at all.

SEE ALSO *Disease; Hypertension; Race; Slavery*

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SLAVERY INDUSTRY

The word *industry* (from the Latin *industria*, meaning "diligent activity directed to some purpose") generally refers to a combination of business operations related to a

primary economic product or process. Hence, *slavery industry* refers to business activity related to the institution of slavery, including not just the process of supplying slaves but also the relationship of slavery-related activity to linked activity in manufacturing, agricultural production, commerce, shipping, and financial institutions. The main issue involves exploring whether Africa, the slave trade, and slavery-related economic activity—conventionally characterized as the *triangular trade* or what Ronald Bailey (1992) calls the *slave(ry) trade*—was important to the development of commerce and industry in Europe, especially Great Britain, and the United States.

An estimate of the numbers of Africans taken as slaves was produced by Harvard University's Transatlantic Slave Trade Database in 1999. It provided up to 226 pieces of information for more than 27,233 slaving voyages. Some 11,062,000 Africans were transported between 1519 and 1867, though these numbers are constantly revised upward. About 55 percent were transported between 1700 and 1799, and 29.5 percent between 1800 and 1849. Surprisingly, about 30 percent were transported after Britain's slave trade abolition acts of 1807.

British slave traders (including those living in British colonies) carried almost 46 percent of all slaves, and the Portuguese were responsible for about 29.1 percent. The remaining Africans were carried by France (13.2%), Spain (4.8%), the Netherlands (4.7%), and the United States (2.5%). British slave traders dominated in the all-important period in the eighteenth century when European industrialization surged. Some 280,000—about 2.5 percent of all slaves—were imported into the United States, and 48 percent of these were imported after the beginning of the American Revolution (1775–1783).

Some scholars have called the forced importation of Africans into the New World cauldron before the nineteenth century "the Africanization of the Americas," one of the most significant demographic transformations in world history. Up to 1820, Africans outnumbered Europeans by a ratio of over 3 to 1 among those people who were transported across the Atlantic: almost 8.4 million Africans and 2.4 million Europeans. This had an obvious impact on population trends in Africa (depopulation) and in the Americas. The black population of the West Indies, for example, grew from 15,000 to 434,000 between 1650 and 1770—an increase of almost 2,793 percent—while the white population remained almost static, increasing from 44,000 to 45,000. The need to "repeople" the Americas resulted in part from the demand for labor and the almost genocidal impact that European settlement had on the Native American population. Thus, African peoples composed an even larger proportion of the labor force in all of the American regions associated with expanded Atlantic commerce than is generally known.

Beyond the number of Africans who were enslaved, the most hotly debated issue has been the impact that enslaved African labor had on the economic development of slave-trading nations. This was the central thesis in a book by Eric Williams (1911–1981), historian and former prime minister of Trinidad and Tobago, titled C*apitalism and Slavery* (1944). Williams's book is, in his words, "strictly an economic study of the role of Negro slavery and the slave trade in providing the capital which financed the Industrial Revolution in England and of mature industrial capitalism in destroying the slave system" (1944, p. v). Both aspects of his argument continue to provoke considerable debate, especially whether or not British abolition resulted more from economic forces than from humanitarian impulses. This issue has particular relevance to the late eighteenth and early nineteenth centuries, when large-scale manufacturing using machines became the dominant activity in industrial capitalist economies, especially in Great Britain and the United States, with cotton textiles as the leading sector.

For example, British colonies in the Caribbean and in the South, where slavery thrived, produced an average of more than 80 percent of the total value of British America's exports in the seventeenth, eighteenth, and nineteenth centuries. Enslaved African labor played a central role in the production of rice, sugar, tobacco, and cotton and in other key sectors, including the mining of gold, silver, and precious metals. Sugar and cotton, however, are the two most important sectors, and data in Joseph Inikori (2002, p. 489) bear this out: from 1752 to 1754, sugar's share of British American imports into Britain was 49 percent as compared to cotton's 2 percent. By 1814 to 1816, sugar's share was 52 percent and cotton's only 22 percent. By the 1854–1856 period, however, cotton dominated with 48 percent as compared to sugar's 15 percent.

Sugar and its cultivation provide the first context and a key link in the story of the evolution of racial slavery in the Americas, a point early recognized by Noël Deerr, who concluded that trying "to write a history of sugar without at the same time treating of slavery was like trying to produce Hamlet with the part of Laertes omitted" (1949–1950). Sugar was the crop for which large-scale plantation slavery was constructed, first on European islands in the Atlantic and then in the Caribbean. It was brought over to Hispaniola (now Haiti) in 1493 by Christopher Columbus (1451–1506), who had learned about its cultivation from his Italian father-in-law on Madeira Island, a Portuguese territory. Once transferred to the so-called New World, sugar production became a crucible with an incessant demand for labor of any type—first Native American and then European indentured servants, before the industry fastened onto African labor that was more accessible, available, abundant, and cheap. Scholars have estimated that between 60 and 70 percent

of all the Africans who survived the transatlantic slave trade ended up as slaves on the sugar plantations of the Americas.

Cotton was the most decisive raw material for the British and U.S. industrial revolution in textiles, the leading industrializing sector in both nations. The industry was spurred by the invention and improvement of such technologies as the flying shuttle (1733), the spinning jenny (1764), the mule (1779), and the power loom (1785). But the labor of enslaved Africans was also crucial. In 1860 enslaved Africans working on only 3 percent of the earth's land mass in the South produced 2.3 billion pounds of cotton, or 66 percent of the world's total crop, up from 160 million pounds in 1820. This was the sole source for 88.5 percent of British cotton imports in 1860, and even supplied the growing needs of a rapidly expanding cotton textile industry centered in New England after 1790. African and slave-based economies in the Caribbean also provided important markets for British and later American manufactured cloth. Moreover, economist Robert North and others concluded that incomes from marketing slave-produced cotton, tobacco, rice, and sugar—products "sold in the markets of the world"—shaped the pattern of regional specialization and the division of labor that helped to consolidate the U.S. national economy before the Civil War (1861–1865).

Beyond its pivotal contribution to consolidating the first global commercial and industrial economies centered around the Atlantic Ocean, the "slave(ry) trade" was also a focal point of intense national rivalries among European powers. Such rivalries were part and parcel of the rise of new nation-states, initial "testbeds" in which the policies and techniques associated with mercantilism, international diplomacy, colonial administration, and war were refined.

Many historical aspects of the slavery industry involving people of African descent from the fifteenth century to the nineteenth century continue to have contemporary consequences. Slavery and the slave trade helped shape the persisting inequities that have historically existed in the economic and social conditions of peoples of African descent all over the world, a theme provocatively captured in the title of Walter Rodney's *How Europe Underdeveloped Africa* (1972). Second, the slavery industry played a key role in fostering and sustaining racism, an ideology that groups human beings into socially constructed biological categories labeled *races*, and then treats these groups as if they are inherently "inferior" or "superior" in the allocation of economic, political, and social resources and opportunities.

Inequality based on class and race has historically been the target of social protests from the earliest days of the slavery industry and continuing through the civil rights and Black Power movements up to the present. Recent calls for reparations—which demand apologies and various forms of compensation to "repay" people of African descent for their contribution to the profits and developmental success of nations, companies, and citizens with historical ties to the slave trade and slavery—have sparked considerable controversy. Some governmental units have demanded full disclosure of corporate ties to the slave trade and slavery as a precondition for granting contracts. Other recent movements, however, do not distinguish between historical forms and consequences of slavery and the slave trade that linked African peoples to the rise of capitalism from more recent systems of exploitation and oppression, such as the growing international traffic in human beings associated with contemporary globalization. Such continuing debate and ongoing struggles will undoubtedly shape these movements for social change for many decades to come.

SEE ALSO *African Americans; Cotton Industry; Industrialization; Liverpool Slave Trade; Reparations; Servitude; Slave Trade; Slavery; Sugar Industry*

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Ronald W. Bailey

SLAVS

SEE *Croats; Serbs.*

SLEEPER EFFECTS

People receive hundreds of persuasive messages on a given day. Naturally, they discount a great majority of these messages by relying on cues such as the credibility of the message source. In general, it is expected that noncredible sources present invalid arguments. Therefore, communications associated with noncredible sources generally do not bring about substantial attitude change in response, and may be regarded as ineffective influence attempts. Decades of research on the *sleeper effect*, however, suggests that it would be misleading to reach that conclusion without measuring attitudes down the line again. People are not very good at remembering the original context of everything that they learn, and as a result, it is possible that they may continue to remember the message well but have a hard time remembering its source. Thus, forgetting the noncredible source of the message or simply dissociating it from the message may bring about a delayed increase in persuasion. This possibility, known as the *sleeper effect*, is counterintuitive because the impact of a persuasive message is usually greater at the time of exposure than some time after exposure.

As a data pattern, the sleeper effect was identified in the early 1930s. However, systematic study of the effect and its mechanisms started much later, in the 1950s (e.g., Hovland and Weiss 1951). During World War II Carl Hovland and colleagues were interested in evaluating the impact of propaganda films commissioned by the army on the morale and opinions of enlisted U.S. soldiers. In one of their studies (Hovland, Lumsdaine, and Sheffield 1949), soldiers watched a film from the *Why We Fight* series and reported their opinions either five days or nine weeks after exposure to the film. Measures of opinions taken five days after the presentation of the film suggested that the film did not have an impact on the opinions of the soldiers. When measured again nine weeks after exposure, however, the researchers found that the opinions of those who had watched the film shifted in the direction of advocacy, whereas the opinions of those who had not watched the film remained unchanged. Thus, the film had an effect, but it required some time to surface. The term *sleeper effect* was coined after this observation.

Several mechanisms have been considered to account for the effect. However, variants of the *discounting cue explanation* have been especially popular (for a review of primary explanations, see Kumkale and Albarracín 2004; see also Pratkanis, Greenwald, Leippe, and Baumgardner 1988). According to this theory, a noncredible message source induces suspicions of invalidity and temporarily decreases the impact of an otherwise persuasive message; consequently, little or no persuasion takes place at the time of exposure. Over time, though, the attitudes of the recipients shift in the direction of advocacy, either because the recipients forget the discounting information (*forgetting hypothesis*) or because they do not spontaneously associate the discounting cue with the message any longer (*dissociation hypothesis*). When they identified the sleeper effect for the first time, Hovland and colleagues (1949) suggested that the recipients might have forgotten the noncredible source of the message but remembered the message itself. In a follow-up study Hovland and Weiss (1951) found evidence for the sleeper effect again, but measures of recall for the message source suggested that the recipients could still remember the source of the message. Based on this finding, Hovland and colleagues proposed that forgetting the discounting cue was not necessary for the sleeper effect to take place; a weakened association between the message and the discounting cue could generate the effect as well. To the extent that the discounting cue becomes less accessible than the message over time, the likelihood of observing the sleeper effect should increase significantly. For several decades researchers concurred that the sleeper effect could be guided by either of these processes. Despite widespread acceptance of these earlier findings, subsequent research revealed that the effect might not be as strong or reliable as once thought. A recent synthesis of the relevant literature, however, revealed that the sleeper effect takes place reliably under certain circumstances, such as when the recipients deeply think about the communications at the time of receiving the communications (Kumkale and Albarracín 2004). At the very least, this synthesis verified that there is evidence for the sleeper effect in persuasion.

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G. Tarcan Kumkale

SLUMS

Slums are squalid sections of a city or town, areas in which most inhabitants are in or near poverty, stores and residences are cheap and dilapidated, and streets are narrow and blighted. Slums have been created in various locations; where they arise depends upon political and economic conditions in a community. In early industrial cities of England and the United States, slums housed the lowest paid workers not far from the center of the city, close to factories gates. To this day, slums in English and U.S. cities are typically located in these areas, though often the factories have closed down. In other cities, where central areas retained high land and rent value, large public housing projects were built on the outskirts and slums developed and still exist on peripheral areas (e.g., Paris). Perhaps the world's largest slum (Dharavi) is on the northern edge of the city of Mumbai (formerly Bombay). In Mexico City and other cities of Latin America, Africa, and Asia, slums exist both near the heart of the city and on the outskirts. The latter are impoverished shanty settlements created and inhabited by squatters, many of whom are relatively recent migrants.

SLUM CONDITIONS AND CAUSES

Slums are usually the most stigmatized parts of a city or town (other areas carrying high social stigma, such as skid rows, red-light districts, and docks, often are located near slum neighborhoods). In the mind of the general public, the disrepute and stigma of the slum area washes onto the people who frequent or inhabit it. When most people think of a slum they think of residents who deviate from the morals, norms, and standards of public decency held up by the wider conventional community (i.e., people involved in serious crime, drug and alcohol abuse, juvenile delinquency, gang violence). People also frequently invoke the concept of "social disorganization" to describe the slum; in other words, they see it as an area lacking the sociocultural institutions, order, coherence, and predictability found in more economically stable environments.

Sociologists and anthropologists, however, paint a more nuanced picture of slum life. Research shows that a broad range of individuals and households live in slums, from the "routine-seekers" and "decent" residents, who abide by the norms and values of the larger society, to the "action-seekers" and "street" folk, who are more likely to flout or reject those standards (Gans 1962; Anderson 1999). Additionally, research on slums often highlights the ways in which ongoing life is organized rather than disorganized. Communication channels, interpersonal obligations, status symbols, local institutions, and public etiquette usually do exist in a slum, although these may be quite different from those of middle-class neighborhoods in a city or suburb. As the literature on local community organizing in slum areas shows, outsiders often are surprised at how much potential or actual organization exists (e.g., in the form of leadership and engagement in local social networks) even in allegedly disorganized poor neighborhoods. Having said this, one must not romanticize slums as bastions of salt-of-the-earth authenticity; all too often life in them is short and brutal, with miserable living conditions and wasted human potential.

It is tempting to think that slums are an urban anomaly produced only when something goes terribly wrong in a city. However, the high prevalence of slums and the ease with which they grow suggests that their causes lie in conventional and institutionalized routines of business as usual. Urban space is stratified as the most powerful people or those with the greatest wealth occupy the most desirable parcels of land. In cities where land and housing are commodities, the most desirable land is expensive, and the worst locations (e.g., noisy, wet, polluted) are cheap. Early slums developed when people built crowded substandard housing on the cheapest land and rented it to poor households with earnings too low to allow them to live in better but more costly areas. Beyond that simple process, the creation of slums involves more subtle causes of concentrated poverty and property decline.

By definition, cities and towns that have in their neighborhoods a mixture of housing types and the full price range in housing, from cheapest to most expensive, are places that do not have highly concentrated poverty, since the poor can live dispersed in fairly close proximity to the nonpoor. Also by definition, places where only the affluent reside are places that have no concentrated poverty in them; although, by excluding the poor, such places may contribute to the concentration of poverty in other locales. For concentrated poverty to occur, the nonpoor must have the desire and ability to distance themselves from the poor. This desire arises from several sources. One is the search for status (prestige and respectability); the poor are often perceived as uncouth, ignorant, or disreputable, and the nonpoor gain status by disassociating themselves from the poor. This is especially true if, as is often the case, the poor belong to a stigmatized racial or ethnic group. One's address becomes a prestigious status symbol if one lives in an area reserved for the "right" kinds of people. Such class consciousness coupled with aversive racism creates a related motive for concentrated poverty: fear of declining property value and/or the desire for property value appreciation. When the poor and/or racial-ethnic minorities are seen as harmful threats to community health and stability (e.g., lowering the quality of schools, raising the crime rate, spreading disease, not keeping up their yards or homes), then attempts to exclude them are made, which if successful leaves them in areas of highly concentrated poverty. On the other

hand, if efforts to exclude the poor are unsuccessful and some do enter a neighborhood, then under certain conditions, a self-fulfilling vicious circle of out-movement and avoidance of the area by the affluent coupled with declining property values occurs, as affluent people refuse to pay "top dollar" for housing in or close to areas in which "the undesirables" live and instead move to other more secure, better locations.

METHODS OF EXCLUSION

Historically, the institutionalized mechanisms the affluent have utilized to distance themselves from the poor, thereby relegating those with low incomes to impoverished areas, are restrictive covenants, zoning ordinances, building codes, and political control over the location of public housing projects. With these devices (which control the types and size of housing units that are built, the size of the lots homes are built on, and whether or not apartments are allowed to be built) those in control create sections of cities or whole towns that are simply too expensive for poor people to live in. Beyond these forms of class exclusion, African Americans have faced racial exclusion (e.g., denial of mortgage loans for homes in suburban areas). This combination of restrictions forced most middle- and working-class black households to live near or in predominantly poor black areas, thereby minimizing their ability to accumulate wealth through appreciating values of their homes. Since 1980, as successful blacks became able to obtain better housing outside old black city neighborhoods, the out-movement of the middle- and working-class—in combination with loss of jobs due to deindustrialization, plus minimal investment in poor urban areas by government and the private sector—left many areas devastated with extraordinarily high rates of poverty. In rare instances, such as in Mt. Laurel, New Jersey, some state courts have ruled that suburban towns' reliance on exclusionary land use control to keep the poor out of their towns and penned up in high poverty sections of cities, like Camden or Newark, is illegal. In the 1990s, programs aimed at increasing home ownership among blacks and replacing public housing projects with mixed income developments have reduced the extent of concentrated urban poverty.

CAUSES OF DETERIORATION

A slum is more than an area of concentrated poverty; it is an area of physical and social deterioration. Several mechanisms cause this deterioration. One is "red-lining" by financial and insurance institutions. Older areas with less affluent residents are perceived as not profitable enough for home or business loans and insurance coverage, which prevents the repair and improvement of dwellings and buildings. Inability to obtain insurance coverage makes it difficult or unwise for businesses or home owners to remain in red-lined neighborhoods. Absentee landlords and speculators also play a role if they are unwilling or unable to properly maintain properties and instead extract from their buildings maximum rent while investing the minimum in upkeep, until they become dilapidated or uninhabitable. Boarded up or semi-abandoned buildings get used by transients or for drug use and become the objects of arson (for insurance money or "kicks"), and a "broken windows" phenomena may emerge as residents or outsiders commit further damage and criminal acts because they see nothing to restrain destructive impulses (Wilson and Kelling 1982). Outsiders dump garbage in the neighborhood, crime increases, and most people who seek to better themselves leave the area if they are able.

SEE ALSO *Ghetto; Segregation, Residential*

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Charles Jaret

SMITH, ADAM

1723–1790

The eighteenth-century Scottish economist Adam Smith is widely acknowledged as both the father of modern economics and the apostle of free trade. His cornerstone work, *The Wealth of Nations* (1776), was popular in Smith's era (six editions were published before Smith's death in 1790) and figures prominently in modern discussions of economic theory.

LIFE AND CHARACTER

Adam Smith was born on June 5, 1723, in Kirkcaldy, Scotland, a posthumous child. His mother was in her early twenties, and she was widowed after less than three years of marriage. The bond between mother and son was very close, and as Smith never married, those who believe in psychoanalytic explanations have seen significance in this. Whenever it was feasible he lived with his mother, and a spinster cousin joined them in the 1760s.

Smith went to Glasgow University in 1737 at age fourteen. In 1740 he was sent to Balliol College, Oxford, where he stayed until 1746. Smith declined entering the church, a profession many thought advisable, and spent two unemployed years back at home in Scotland. Lord Kames and other friends then invited Smith to lecture on Rhetoric and Belles-Lettres in 1748, as a reigning Scottish fashion was to learn how to speak and write English like the English. Smith was considered a capital instructor for this purpose, and his lectures were well attended.

In 1751 Smith succeeded in being appointed to the professorship of moral philosophy at Glasgow. For the next twelve years his fame grew steadily, especially after the publication of his first book in 1759, *The Theory of Moral Sentiments* (*TMS*). *TMS* not only gave Smith a European reputation, it also appears to have gained him the position of tutor to the Duke of Bucceluch. This was a lucrative appointment, and it guaranteed Smith financial independence. Scottish University students paid their individual professors, and Smith behaved admirably in repaying his students their fees.

Smith had provided distinguished and valuable services to the university, not only as a teacher but also as an administrator. Since Smith's absentmindedness and lack of address are undoubted, having been noted in a variety of historical sources, Smith's success as an administrator shows that he had the ability to concentrate fully on a given task and to persuade his colleagues to do the same. He was college quaestor (treasurer) for six years, an unusually long term, and at the end of his time at Glasgow he was dean of faculty, vice-rector, and chairman of a special committee on internal university affairs. On accepting Smith's resignation, the university minutes record sincere regret "at the Removal of Dr. Smith, whose distinguished Probity and amiable qualities procured him the esteem and affection of his Colleagues" (Campbell and Skinner 1982, p. 125).

The European tour with the Duke of Bucceluch took nearly three years, and from 1764 to 1767 Smith had the opportunity to meet most of the eminent European literati, including the school of French economists known as the physiocrats. The lectures Smith delivered at Glasgow had dealt, in part, with economic topics, but it was during his stay in France that Smith appears to have begun writing *An Inquiry into the Nature and Causes of the Wealth of Nations* in earnest. Perhaps from 1764 onward, and certainly from 1767 to 1776, with very few interruptions, Smith's constant concern was the writing of his most prominent work.

Smith's appointment as commissioner of customs in 1777 was due to the influence of the Duke of Bucceluch with the prime minister, Lord North. A humorous consequence of his new position was Smith's realization that he had "scarce a stock, a cravat, a pair of ruffles, or a pocket handkerchief which was not prohibited to be worn or used in Great Britain." In order to set an example he "burnt them all" (Smith 1987, p. 245). As Smith's duties involved the control of smuggling, scholars have wondered how Smith could wish to punish the smuggler, who was not really blamable according to the dictates of natural liberty set out in *The Wealth of Nations*? The issues raised by Smith's acceptance of such a position have been most forcefully posed by the scholars Gary Anderson, William Shugart, and Robert Tollison: "The author of the *Wealth* and Commissioner Adam Smith were one and the same person … there is strong evidence that Smith sought the position and that it represented a reward not so much for intellectual accomplishment as for services he had rendered to the government" (1985, p. 742).

Consciously assertive of his originality, as early as 1755 Smith read a lecture strongly defending his priority for the idea of a system of natural liberty. Smith believed that several of his contemporaries, all major figures of the Scottish enlightenment, had plagiarized some of his thoughts. Adam Ferguson's (1723–1816) work on the division of labor and William Robertson's (1721–1793) economic interpretation of history provide two well-known examples of potentially plagiarized work while Hugh Blair (1718–1800) may have cooled relationships by his (acknowledged) use of Smith's lecture notes on the subject of rhetoric in Blair's *Lectures on Rhetoric* (1783). Smith had several eccentricities; among his personal habits, it was the absentminded consuming of sugar lumps, even in company; in conversation, he is said to have often taken opposite views of the same subject, according to his humor. Smith ended his days among admiring friends in Scotland, busy in his official duties and revising his publications, the last substantial revision being that of *TMS*. After ailing visibly for a while, Smith died on July 17, 1790.

EARLY WRITINGS

Smith's first love was rhetoric and literature. Dugald Stewart, Smith's successor to the Edinburgh chair, records that "the variety of poetical passages which he was not only accustomed to refer to occasionally, but which he was able to repeat with correctness, appeared surprising even

to those whose attention had never been attracted to more important acquisitions" (Rae 1965, p. 34). One of Smith's most pleasant and instructive writings is the *Essay on the History of Astronomy*, which was published by Smith's executors some five years after Smith's death. The most interesting feature of the essay is Smith's discussion of the principles that guide good philosophy and that hence serve to persuade readers. Smith asserts that "philosophy is the science of the connecting principles of nature" (Smith 1982, p. 45) and so good philosophy provides individuals connections from the familiar to the unfamiliar in such a natural manner that they are convinced of its truth. The essay considers the subject of astronomy from this perspective and concludes by praising the English physicist and mathematician Sir Isaac Newton (1642–1727) for providing "the greatest and most admirable improvement that was ever made in philosophy" (Smith 1982, p. 98). Smith was coy about the reality of the Newtonian system; his own principles suggest that all such systems are imaginary but he also wrote that the weight of evidence is such that one is forced to admit that the principles seem so natural, the arguments so well connected, and the evidence so overwhelming that one is insensibly led to speak of Newtonianism as real.

The most careful and sustained expositions of *TMS*, by twenty-first-century analysis the standard view, have been articulated by Alec Macfie, Roy H. Campbell, and David D. Raphael; the most interesting contrasts in the last two decades are those of Laurence Dickey and John Dwyer. Dickey argued forcefully that Smith changed his mind on the virtue of selfishness in the last edition of *TMS* (1986), while Dwyer showed how the circles Smith moved in were emphatic in asserting that the sympathetic passions were the most beneficial for society (1998).

Smith viewed moral philosophy as facing two main questions: What is the content of ethics and how does one come to accept one's ethical precepts? He was very perceptive on the second question but only marginally illuminated the first. In modern language, *TMS* is probably best appreciated as a book on the socialization of morality rather than on the nature of right and wrong, which also explains why sociologists have been more struck with *TMS* than philosophers of ethics. Even though Smith did not illuminate practical ethics, it is notable that he insisted upon virtue being instinctive and not based upon calculation, as well as upon the reality of benevolence.

In *TMS*, humankind's acceptance of moral rules is grounded upon the need for social approval. Individuals internalize morality by looking for the admiration of those who see them. This explanation serves well for children, or when adults are in company. Smith extended the application to adults who debate moral problems when alone by introducing the concept of an "impartial spectator"—someone who examines one's moral quandaries with detachment and whose approval serves to sustain us when we suffer reverses of fortune.

The standard view argues that the sympathetic imagination of *TMS* leads to humankind's codes of ethics and of law, while self-interest is the basis of economic behavior; the conflict between *TMS* and *The Wealth of Nations* is only apparent because the two books deal with different levels of social reality. Posterity has accorded fame to *The Wealth of Nations* and only appreciation to *TMS* because the link between self-interest and economic phenomena can be satisfactorily indicated, while a link of similar clarity between sympathy and ethics still awaits us. A late twentieth-century trend to interpret Smith's economics through the lens of *TMS* faces the difficulty that only in the preface to the last edition of *TMS*, shortly before his death, did Smith make any public attempt to mention the two books together. Five editions of *The Wealth of Nations* (and of *TMS*) came and went without Smith ever trying to soften *The Wealth of Nations* with *TMS*. Scholars argue that if Smith had wanted modern-day readers to qualify the selfishness of *The Wealth of Nations* with the stoicism of *The Theory of Moral Sentiments* he would have done so himself.

THE WEALTH OF NATIONS

The manner of writing of *The Wealth of Nations* is modern in its frequent separation of theory from policy. In Books I through IV, Smith explained that free trade is the ideal policy for all nations. In Book V he explained the obvious practical requirement that governments must raise taxes to meet essential expenses. So the combined effect of all five books is to advocate a policy that imposes taxes for revenue but not for protection. This is the same policy that was supported in the popular literature of the 1740s in the pamphlets of William Richardson and Sir Matthew Decker. However, the separation of pure theory, which supports free trade, from practical policy, which recognizes the need for taxes, makes the ideas of *The Wealth of Nations* more attractive.

Much of the charm of Smith's work arises from the casual fluidity of his language. He expressed commonplace ideas forcefully and provided homely illustrations; Smith's arguments are axiomatic, but he interrupted his exposition with much ordinary illustration. These nuances in his writing have led modern-day scholars to frequent, and perhaps endless, discussion about whether he was really inductive or deductive. Perhaps the most effective use of everyday thought was the phrase "invisible hand" to describe the harmony of the market. Moral philosophers had consistently rejected the use of the market as socially beneficial because they could not fathom how the universal prevalence of selfishness—the motiva-

tion of the market—could lead to a harmonious society. It was one of several euphemisms used by contemporaries to refer to God as the beneficent controller of the universe. When Smith came to proving this difficult point, he found it convenient to finesse the argument by referring instead to the invisible hand as one that provides coherence through the market. Smith knew he could count on the subliminal persuasiveness of the "invisible hand" to quash any doubts readers might have about the goodness of the market. Ferguson and Robertson, while serving as army chaplains, had each used the phrase to exhort their soldiers in 1747. Whether Smith himself believed in a Christian God is beside the point; it is his rhetorical skill that needs to be appreciated.

The fairest treatment of Smith's contributions to economic theory would portray Smith's ideas along with those of his contemporaries. Space does not permit and readability perhaps does not require such discussion. With a brief glance at contemporary thought, the focus herein is on the internal logic of Smith's arguments, with the topics being chosen by their importance for modern economics. In considering Smith's contributions to economic theory it is useful to begin with microeconomics, then to macroeconomics, and finally to international trade.

Jacob Viner provided a penetrating assessment of Smith's contributions to micreconomics when he wrote, "On every detail, taken by itself, Smith appears to have had predecessors in plenty. On a few details was Smith as penetrating as the best of his predecessors" (1928, p. 118). The theoretical constructs of demand and supply, used by modern economists, had been widely and effectively used by economists for more than a century when Adam Smith wrote. A brief overview of Smith's microeconomic theory shows that Smith's attempted innovations were severely limited.

Smith distinguished between "natural" and "market" price, regarding the former as clearly the more fundamental of the two. What then determines natural price? Smith began by explaining to readers that in every society, at any given time, there exists an ordinary or average rate of wages, profits, and rent; these average rates for each factor of production Smith called the natural rate. He then defined the natural price as the sum of the natural rates of wages, profits, and rents. This price is distinguished from the market price, which is merely another name for whatever price reigns in the market at any given time. The demand of those individuals who are willing to pay the natural price of a commodity constitutes what is called the "effectual demand," and market price is said to arise out of the interplay of the *actual* supply and the desires of the *effectual* demanders. The explicit theoretical construct thus consists of an awkward juxtaposition of a point supply and a point demand. If, however, one glosses over the location of equilibrium, that is, the natural price, and asks instead how Smith described what happens when the world is not in equilibrium, the treatment is excellent.

Since natural price is defined as the sum of natural wages, profits, and rents, this requires an explanation of the natural rates of wages, profits, and rents. The natural rates are naturally regulated by the structure of the economy and its growth, "partly by the general circumstances of the society, their riches or poverty, their advancing, stationary, or declining condition; and partly by the particular nature of each employment" (1976, I, 72, 159). The subsequent chapters, however, fail to show readers how to use structure and growth to find natural wages or profits in any particular situation.

Smith had claimed that product prices are to be explained by factor prices; this dichotomy between the forces determining product and factor prices was an innovation. He subsequently claimed that factor prices, and hence product prices, are to be explained by structural and growth factors. Somehow, microeconomics has disappeared. The procedure has led some rigorous critics such as Mark Blaug, to exclaim, "To say that the normal price of an article is the price that just covers money costs is to explain prices by prices. In this sense, Adam Smith had no theory of value whatever" (1985, p. 39).

How did Smith convince so many ordinary readers of the merits of the market? He does provide readers many convincing illustrations of opportunity cost and of the equalization of returns in different uses. Chapter X of Book I deals with the inequalities of wages and profits across different occupations. It is a beautiful exercise in tracing how differences in prestige or risk can account for such inequalities in money wages. While such explanations can be couched in the modern language of demand and supply, since Smith did not apply the modern apparatus, one has to ask if there are other, perhaps simpler, ways of getting to such results.

Suppose Smith began by *assuming* that any violation of natural liberty was both morally wrong and economically harmful; such a position could itself provide the grounds to condemn several institutions of Smith's day. Such "politically based" arguments are convenient in that they need to consider the absence of competition on only one side of the market. For example, in the case of the Law of Settlements, which hindered the mobility of workers, it was enough to condemn the Laws that the rights of workers were being violated. Second, if one assumes that a market reaches a stable equilibrium, then the belief in one-sided competition alone suffices to provide several analytical results. For example, in the usual version of Ricardian rent theory, the same final outcome is reached whether only farmers compete (for land) or only landlords compete (for farmers). This one-sided analytical proce-

dure works best when there are constant returns to scale and the assumption of fixed proportions, used on several occasions by Smith, is perhaps a consequence of his analytical method.

Smith's contribution to microeconomics requires some care to elucidate: He did not advance scholars' understanding of the equilibrium theory, involving demand and supply; he even confused matters by dichotomizing product and factor prices. But, from his very earliest lectures, Smith thoroughly appreciated the fundamental fact that liberty and competition lead to zero-profits. This observation was repeatedly and successfully applied to such fields as the choice of occupations, the preference for pasturage over tillage, and the determination of joint prices. It even sufficed to move analysts toward the "natural price," wherever that might be. It is a form of argument that is attractive, easy to learn, and independent of the more intricate demand-supply apparatus, and accounts for Smith's hold on the general public.

There is no direct concern for macroeconomic problems in *The Wealth of Nations*. By omitting any systematic discussion of unemployment in *The Wealth of Nations*, Smith made macroeconomic concerns seem chimerical and succeeded in focusing attention on capital accumulation and upon long-run issues. So perhaps the most notable victory of *The Wealth of Nations* was a silent one. When Smith did touch upon unemployment, the primary concern for his contemporaries, he used three separate arguments to de-emphasize that concern. Smith provided readers with a model of the economy as a giant corn farm, which employs workers by keeping aside a portion of last year's harvest in order to feed the workers until the next harvest. Smith called this the "wages fund," and since it is predetermined by last year's decision, one cannot increase the numbers to be employed since the model provides the food for only so many. A second argument claimed that the soldiers disbanded after the Seven Years' War found new jobs within a short space of time, and Smith used this as proof that persistent unemployment is not a real possibility. Finally, Smith made the "global" assertion that "what is annually saved is as regularly consumed as what is annually spent, and nearly in the same time too; but it is consumed by a different set of people" (1976, I, 337-338). The implication that aggregate demand always equals aggregate supply, regardless of how much or little is saved, probably had great impact upon Smith's contemporaries. The cumulative impact of the several arguments was to suggest to readers that the market economy is globally stable, and if only it were left free, it would also be efficient.

An important idea, never quite explicitly stated yet pervading the entire book, is the superiority of commercial society over feudalism. This led Smith to the concepts of productive labor, which roughly correspond to economic activity that produces a measurable output, and to contrast it with unproductive labor or services. Without such a framework, one would be hard pressed to explain why a fully employed commercial society, making cloth and machines, is superior to a fully employed feudal one, making swords and monasteries. Much of the framework of modern national income accounting is set up at different points of *The Wealth of Nations*. To grasp the concept of national income one has to have all of a nation's economic activity in one's mind. A very important by-product, appropriate to someone who believed in unintended consequences, was the image of the economy as a whole. This constantly recurring background to all parts of *The Wealth of Nations*, the image of the economy as a complex machine always working away, has led scholars, such as Samuel Hollander, to argue that Smith was an early general equilibrium theorist (1976).

The effort to conceive of the economy as a whole and represent it by some number had a second potent conclusion. Since bundles of apples and oranges cannot be compared physically but only as economic values, the numerical concept led to a focus upon monetary values. In turn, this enabled Smith to conclude that growth is not based upon acquiring a surplus of some physical balance, as with mercantilism and bullion or with physiocracy and agriculture, but rather a value surplus—that of income over expenditure. In this sense, it has been well said that Smith's novelty lay in the cumulative "shifts of focus" in *The Wealth of Nations* (Winch 1996, p. 22).

The issue that bridges macroeconomics and trade is monetary policy. Smith broke cleanly with the past and argued that the market was sufficient to provide whatever amount of circulating medium was necessary. Mercantilist arguments in favor of an influx of metals as a wartime buffer or for providing ample liquidity to the markets were all specious. Just as one does not try to regulate trade in pots and pans but trusts the market to provide them as needed, so too could the market suffice for money.

> To attempt to increase the wealth of any country [by interfering with the trade in gold and silver] … is as absurd as it would be to increase the good cheer of private families, by obliging them to keep an unnecessary number of kitchen utensils (Smith 1976, IV, pp. 439–440).

From the time of publication of *The Wealth of Nations* until the middle of the twentieth century, Smith was viewed primarily as the source of laissez-faire ideas. According to Wesley Mitchell in his *Types of Economic Theory* (1967), the benefits of economic freedom can be argued on the basis of three axioms:

1. Individuals desire to maximize their wealth.

2. Individuals know better than governments how to maximize their own wealth.
3. National wealth is the sum of individual wealth (1967, pp. 61–64).

Axioms 1 and 2, in conjunction, prove that individual wealth is maximized when government leaves individuals alone. Axiom 3 then says that maximizing individual wealth suffices to maximize national wealth. If one describes the axioms loosely as greed, knowledge, and additivity, then greedy and knowledgeable individuals surely do not need government in order to maximize their wealth, and additivity suffices to assure one that, since the aggregate is the simple sum of the individuals, the aggregate also does not need government to maximize economic growth. Modern readers, familiar with externalities in the form of, say, pollution, will probably be most curious about the validity of axiom 3, but in most developing economies axioms 1 and 2 are also worth questioning.

The two most important policy measures of Smith's time were bounties for infant industries in foreign trade and preventing speculation in food markets in domestic trade. Smith firmly rejected both bounties for infant industries and interference in food markets. He argued the case against bounties as follows: He noted that no one argues against natural advantages, and he went on to illustrate this with his famous example of growing grapes in hothouses in Scotland. Then he transferred the argument without any further reasoning to cases where there is no suggestion of natural advantage. "Whether the advantages which one country has over another, be natural or acquired, is in this respect of no consequence" (1976, IV, p. 458). One could ask how others acquired such an advantage and why anyone might not acquire it as well? This is just what all economists who urged "catch-up" to their countries did argue. Smith could have said that choosing which infant industries have promise requires too much knowledge and discrimination or that such infants have a persistent tendency not to want to grow up. He did neither. So strong was his feeling on the matter that he simply bypassed the argument.

If one wonders about the incongruity of the putative father of economics providing so many examples of indifferent economic analysis, one should remember that a critic found many proofs in Euclid's Elements to be "more complicated than older versions … essential axioms of order and separation are entirely overlooked, the postulates inadequate to prove even the first theorem" (Goodstein 1951, p. 3). Modern-day scholars seem to remember historical figures as much for their intentions as for their achievements. Smith wrote at a time when his liberal cosmopolitanism won him many converts, especially outside Britain; the support of elite politicians probably mattered, especially when Smith could be used in support of conservative economic policies during scarcities; and the benefits to Britain of appealing to free trade when Britain was the leader in manufacturing meant that economic truth was supported by self-interest. How far Smith's superior fame was due to these noneconomic factors is a question that only bias can solve.

It is appropriate to close by continuing with the words of Jacob Viner who wrote of Smith that he was only applying to society forms of reasoning that had long been utilized by theologians and philosophers to general phenomena and that only on a few details was Smith's analysis superior: "But Smith made an original forward step when he seriously applied himself to the task of analyzing the whole range of economic process with the purpose of discovering the nature of the order which underlay its surface chaos" (1928, p. 118). It was not so much any refinement in analysis but Smith's ambitious undertaking and his faith in the overall harmony of free trade that constitute his principal legacy.

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Salim Rashid

SMITH, VERNON L.
1927–

American economist Vernon Lomax Smith was born in Wichita, Kansas, on January 1, 1927. In 2002 Smith became the co-laureate of the Nobel Prize in Economics "for having established laboratory experiments as a tool in empirical economic analysis, especially in the study of alternative market mechanisms" (Nobel Foundation 2002). In awarding Smith the prize, the Nobel committee recognized the well-known observation that Smith is the father of the discipline of experimental economics.

Smith's official Nobel autobiography (Nobel Foundation 2002) provides a moving description of life in the Depression-era Kansas of railroads, farming, oil drilling, and relatives who die too young. This was also a world in which a graduate of a one-room schoolhouse who became a distracted "C" student in high school could gain admission to one of the world's finest universities, the California Institute of Technology (Caltech), by passing the rigorous admission exam. By 1955 Smith was a graduate of Caltech (B.S., 1949), the University of Kansas (M.A., 1951), and Harvard University (Ph.D., 1955), with a faculty position at Purdue University in Indiana.

Smith's initial research areas were in capital theory, investment, and financial economics. At about this time, a fortunate synergy among teaching and research emerged. The behavior of the stock market is certainly relevant to capital theory and financial economics, and Smith pondered how to get these ideas across in his classes. He recalled from his days as a graduate student at Harvard that economist Edward Hastings Chamberlin (1899–1967) had created a simulated "random meetings" market in a classroom, in which demand and supply curves were constructed from hypothetical benefits and costs assigned to the students. Chamberlin's markets famously failed to find the competitive equilibrium. Smith's changes were initially to use a different trading institution, the oral double auction (an analog of stock exchange trading rules), and to repeat the markets across time. Later, after conversations with psychologist Sidney Siegel (1916–1961), Smith made a third important innovation: costs and valuations were no longer hypothetical, and participants were actually paid according to their earnings. The Chamberlin findings dissolved; the markets converged to the competitive predictions. Smith's first research results in experimental economics were published in the *Journal of Political Economy* in 1962. Further exploration of the double auction institution followed. Then, Smith applied the methodology to a different institution, the sealed bid auction (as used in U.S. Treasury securities auctions). Along the way, Smith continued to make seminal contributions in financial economics, environmental economics, and economic anthropology.

During a visiting appointment at Caltech in 1974, Smith found that a former Purdue faculty member, Charles Plott, had moved to Caltech and become an enthusiastic proponent of experimental methodology. This began a period of fruitful collaboration between them. Smith left for the University of Arizona in 1976 and then George Mason University in 2001. Smith's reputation as the "father of experimental economics" coalesced, due not only to the original Purdue innovations but also to the breadth of his new applications and the development of key methodology treatises on laboratory experiments. In the former category, Smith's work expanded to include public goods provision mechanisms, oral auctions, industrial organization, asset pricing, and the concept of computer assisted "smart markets." His methodological articles address the concept of "induced valuation" (reflecting his earlier decision to pay subjects based upon earnings). In 1982 his tour de force, "Microeconomic Systems as an Experimental Science," was published. Nationally and internationally, the number of researchers adopting the methodology increased dramatically. Smith was the driving force behind the founding of the Economic Science Association in the mid-1980s.

In his Nobel autobiography, Smith singles out two books in economics that attracted his attention prior to graduate school, one by American economist Paul Samuelson, the other by Austrian economist Ludwig von Mises (1881–1973). This observation is a foreshadowing of Smith's career. His lifetime of contributions to traditional mathematical microeconomic theory (the Samuelson stream) by themselves would be stellar, but his work in experimental economics is equally important. For Smith, experimental economics is immersed in a different way of looking at the world. Smith's mother had strong socialist leanings, and his graduate training at Harvard in the early 1950s was hardly an incubator for a libertarian worldview, certainly not foreshadowing his later active involvement with the Mont Pelerin society. But Smith's economics (not merely his experimental economics) are very different from that which his early background might suggest. This could be due to his early reading of von Mises

and German economist Friedrich von Hayek (1899–1992). It could also reflect the striking observation from his first experiments: markets that do not efficiently capture gains from exchange under one institution will do so under another. Whatever the history, there is no better place to find Smith's views than in his 2002 Nobel lecture, "Constructivist and Ecological Rationality in Economics." The lecture has obvious overtones of Austrian economics, but Smith presents a tantalizing paradox. Experimental economics can be viewed as buttressing a Hayekian view of economics, but Hayek himself seemed to anticipate, and then reject, the methodology of experiments.

SEE ALSO *Austrian Economics; Constructivism; Economics, Experimental; Hayek, Friedrich August; Mises, Ludwig Edler von; Mont Pelerin Society; Samuelson, Paul A.*

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Robert Mark Isaac

SMOKING

Cigarette smoking has great societal and clinical significance. It is a major cause of several diseases, including a variety of cancers. The practice of cigarette smoking is pervasive; about a quarter of all adult Americans smoke cigarettes, and smoking rates are even higher in many other countries. Despite the high personal cost associated with cigarette smoking, it is a prototypical addictive disorder manifesting such features as tolerance, withdrawal, and chronic use. The peak age for smoking prevalence is between eighteen and twenty-five years. Retrospective data from the National Household Survey on Drug Abuse suggests that the average age of first use of tobacco products in 1999 among all persons who ever used in their lifetime was 15.4 for cigarettes, 20.5 for cigars, and 16.7 for smokeless tobacco across all age groups (Kopstein 2001). Data from the National Comorbidity Survey suggests that the onset of nicotine dependence is delayed for at least one year after the onset of daily smoking. Smoking rates decline among people who have reached their mid-twenties, but these declines are modest in comparison to other forms of substance use. This may be due to the fact that cigarette smoking is highly addictive, legal, and not immediately performance-impairing.

BIOLOGICAL ASPECTS OF NICOTINE ADDICTION

Nicotine, independently, yields the trademark effects of an addictive drug. It produces tolerance and physical dependence, and heightened doses produce euphoria and satisfaction (Corrigall 1999; USDHHS 1998). Smokers will not self-administer tobacco on a chronic basis if it does not contain nicotine. Nicotine is essential for the development and maintenance of a smoking habit. However, once nicotine dependence is established, cues related to nicotine release become greatly influential in controlling self-administration behaviors. When a cigarette is smoked, about 80 percent of the inhaled nicotine is absorbed in the lungs (Armitage et al. 1975). Absorption is both efficient and extremely rapid. Despite the overall recognition that the rapid onset of drug action promotes addictive drug use, it remains unclear why this is so. Researchers do not fully understand which characteristics of drug pharmacokinetics are most determinant of addictiveness.

BEHAVIORAL ASPECTS AND ENVIRONMENTAL INFLUENCE

Data published in 2002 suggest that smoking among American adolescents is fairly common, with 27 percent of twelfth graders, 18 percent of tenth graders, and 11 percent of eighth graders reporting that they had smoked in the past month (Johnston et al. 2002). This level of smoking prevalence represents a decline from peaks in the mid-1990s. Much less is known about the epidemiology of tobacco dependence in adolescents. *Dependence* is a term often correlated with addiction, and adolescent smokers are less likely to be diagnosed with tobacco dependence than are adult smokers (Colby et al. 2000), although many adolescent smokers consider themselves addicted. Adolescents who are dependent report the same symptoms as do dependent adults, including cravings, withdrawal, tolerance, and a desire to reduce smoking (Colby et al. 2000). Compared to adults at the same level of self-reported intake, adolescents who smoke are more likely to be diagnosed as dependent, which suggests that adolescents may be especially vulnerable to dependence or sensitive to the effects of nicotine (Kandel and Chen 2000).

Before they experiment with cigarettes, adolescents form beliefs and attitudes about the effects of smoking. These attitudes and beliefs prospectively predict both the onset and escalation of smoking. Many adolescents believe that there are no health risks related to smoking in the first few years, and they believe that they will stop smoking before any damage is done. Existing evidence suggests that adolescents and adults exhibit unrealistic optimism about the personalized risks of smoking (Arnett 2000; Weinstein 1999). Whether adolescents are any more likely than adults to underestimate the personalized risks of smoking is unclear.

Evidence indicates that as smokers become more dependent, there is a shift in the motivational basis for their tobacco use. Social motives and contextual factors are rated as influential to beginner smokers, while heavy smokers emphasize the importance of control over negative moods and urges, and the fact that smoking has become involuntary (Piper et al. 2004). When smoking becomes less linked to external cues and more linked to internal stimuli, smokers are classified as *dependent*. There is also evidence suggesting that smoking cigarettes may lead to the use of illicit drugs. Cigarette smoking is endemic among substance abusers, with rates as high as 74 percent to 88 percent (Kalman 1998), compared to 23 percent of the general population (CDC 2002).

Greater parental education is associated with less likelihood of smoking in offspring. Additionally, girls appear to be more influenced by peer smoking than boys (Mermelstein 1999). In the United States, the highest smoking rates are among American Indian and Alaska Native adolescents, followed by whites and then Hispanics, with lowers rates among Asian Americans and African Americans. While studies that sample multiethnic groups are sparse, research has suggested that African American and Asian American adolescents report stronger antismoking socialization messages from parents and that African American parents report feeling particularly empowered to influence their children's smoking (for reviews, see Mermelstein 1999; USDHHS 1998). Peer smoking is a relatively weak predictor of smoking for African American adolescents compared to white adolescents.

Adolescents sometimes start smoking as a result of self-image. The social image of an adolescent smoker is an ambivalent one, with negative aspects but also images of toughness, sociability, and precocity that may be particularly valued by "deviance-prone" adolescents who are at risk to smoke (Barton et al. 1982). Additionally, adolescents may start smoking and continue smoking because of their perception of the effect that smoking has on weight control and dieting. The belief that smoking can control body weight has been shown to predict smoking initiation among adolescent girls, but not boys (Austin and Gortmaker 2001). In addition, this belief is held more widely by white girls than by African American girls (Klesges et al. 1997). Despite the above-mentioned indicators, peer smoking is the most consistently identified predictor of adolescent smoking (Derzon and Lipsey 1999). In addition to cigarette smoking by peers, affiliation with peers who engage in high levels of other problem behaviors also prospectively predicts smoking initiation, as does self-identification with a high-risk social group (Sussman et al. 1994).

SMOKING CESSATION AND PREVENTION

The tobacco industry spends millions of dollars per day on advertising and promotional materials to keep their products in the public eye. Beyond such reminders of the availability of tobacco products, smoking is not an easy habit to break. Smokers must not only break the physical addiction to nicotine, but also the habit of lighting up at certain times of the day. Successful quitters confess that quitting is often a lengthy process that involves several unsuccessful attempts. Although one-third of smokers attempt to quit each year, 90 percent or more of those who attempt to quit will fail.

Nicotine replacement therapies (NRTs) have been used to help some people quit smoking. The two most common forms of NRTs are chewing gum and the nicotine patch, both of which are available over the counter. Nicorette, a prescription chewing gum containing nicotine, is often used to help reduce the consumption of nicotine over time. Users have reported experiencing fewer cravings for nicotine as the dosage is reduced, until they are completely weaned. The nicotine patch was first marketed in 1991 for smokers with a desire to quit. Generally, the nicotine patch is used in conjunction with a comprehensive smoking-behavior cessation program. Additionally, a nicotine nasal spray, nicotine inhaler, and nicotine pill have been approved by the FDA to help cigarette smokers quit smoking. In order to prevent the initiation and maintenance of smoking, there has been an increase since the mid-1980s in the development and implementation of smoking cessation and prevention programs, especially for young people and adolescents.

GLOBAL ECONOMICS OF SMOKING

Approximately 80 percent of the world's 1.1 billion smokers live in low- and middle-income countries. In 1998 about four million people died of tobacco-related disease worldwide (WHO 1999). This number is projected to increase to ten million annually by 2030, with 70 percent of these deaths occurring in low-income countries. Death counts of this magnitude could be prevented if current smokers quit, but it is rare for smokers living in low- to

middle-income countries to attempt to quit smoking (Jha and Chaloupka 2000). Although few dispute that smoking is damaging to human health on a global scale (Peto and Lopez 2000), governments have avoided taking action to control smoking. This is mainly due to concerns that such interventions might have harmful economic consequences, such as permanent job losses. Despite these concerns, several common measures aimed at the control of smoking, such as higher tobacco taxes, consumer information, bans on advertising and promotion, and regulatory policies, have had a significant impact. Each will be discussed below.

An increase in tobacco taxes is the single most effective intervention to reduce the demand for tobacco. A review by Prabhat Jha and Frank Chaloupka (2000) suggests that a price increase of 10 percent would reduce smoking by 4 percent in high-income countries and by about 8 percent in low- and middle-income countries. This evidence also implies that young people, individuals on low incomes, and those with less education are more responsive to price changes (Chaloupka et al. 2000). Policies to improve the quality and extent of tobacco information can also reduce smoking, particularly in low- and middle-income countries. For example, in the 1960s and 1970s, the promulgation in the United States and Britain of new evidence on the health risks of smoking helped reduce consumption between 4 and 9 percent. In addition, warning labels on cigarette packages were also found to reduce consumption during that era (Kenkel and Chen 2000). In a review of 102 countries and econometric analyses of income, Henry Saffer and Chaloupka (2000) revealed that bans on advertising and promotion led to considerable reductions in tobacco consumption.

Enforcing regulatory policies designed to prevent smoking in public places, worksites, and other facilities can also significantly reduce cigarette consumption worldwide (Yurekli and Zhang 2000). Attempts to impose restrictions on the sale of cigarettes to young people in high-income countries have mostly been unsuccessful (Siegel et al. 1999). Furthermore, it may be difficult to implement and enforce such restrictions in low-income countries. Evidence indicates that freer trade in tobacco products has led to an increase in smoking and other types of tobacco use. One solution is for countries to adopt measures that effectively reduce demand and apply those measures to both imported and domestically produced cigarettes (Taylor et al. 2000).

SEE ALSO *Addiction; Adolescent Psychology; Disease; Peer Effects; Tobacco Industry; Tolerance, Drug*

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Daphne C. Watkins

SNCC

SEE *Student Nonviolent Coordinating Committee.*

SOCIAL ACCOUNTING MATRIX

A social accounting matrix (SAM) gives a snapshot of all the transactions between different actors or agents in an economy (Pyatt 1988). The economy can be that of a nation, a province, or even a city. The scope of a SAM—that is, how many groups of actors are considered or the level of disaggregation within a group—depends on the availability of data. Transactions are organized in the form of a square matrix. The (i, j) element of the matrix represents the expenditure of actor j on actor i. Equivalently, it is also the income of actor i that originates from the activities of actor j. Expressed in accounting jargon, the concept of SAM is simply that of a double-entry bookkeeping in which the incomings of an actor are also the outgoings of another actor. Thus each row sum must be equal to the corresponding column sum.

It is the choice of actors that distinguishes SAM from both traditional national accounts and an input-output matrix. In terms of broad groups of actors, SAM typically considers production sectors, households, factors of production, and institutions. Each broad group is further disaggregated. For example, a typical SAM involves specific types of households and specific factors of production in order to reflect the economic and social structure of the economy under consideration. Production activities create incomes for various factors of production. These incomes then get distributed to different types of households and corporations. Household and corporate incomes generate private consumption and savings/investments. Government income is generated from direct taxation of household and corporate incomes and from indirect taxation and is translated into public expenditure and investments. The actual task of collecting and collating the information necessary to construct a SAM is quite formidable. Often data from different sources need to be combined. For this and many other reasons, the row and column sums frequently differ. There are, however, numerical methods to reconcile these differences.

The concept of representing transactions between actors in an economy in the form of a matrix was first introduced by Wassily Leontief in his classic work *The Structure of American Economy* (1941, 1951). For Leontief, the actors were mainly producing sectors, and the matrix represented intermediate inputs in production. However, in one of his later reviews of input-output analysis, he writes:

> Households must not necessarily be considered to be part of the exogenous sectors. … In dealing with problems of income generation in its relation to employment, the quantities of consumers' goods and services absorbed by households can be considered (in a Keynesian manner) to be structurally dependent on the total level of employment in the same way as the quantities of coke and ore absorbed by blast furnaces are considered to be structurally related to the amount of pig iron produced by them. (Leontief 1966, pp. 141–142)

From these conceptual foundations, Leontief extends the input-output matrix to include transactions between households, factors of production, and so on.

The applications of SAMs can be wide-ranging. They can, and often do, form the backbone of computable general equilibrium models. SAMs are particularly useful for any exercise in which a researcher or policy maker is interested in analyzing the distributional implications of particular policy measures (Pyatt and Round 1979, 1985, and 2006). In such cases, the overall matrix multiplier (which gives the total "activity" level of all the actors in an economy to produce a given level of final use as the sum of direct activity levels and an infinite series of indirect ones) is typically broken down into a number of multiplicative components (Pyatt and Round 1979). Each of these components represents a particular connection between or within groups' effects. An analysis of these disaggregated multipliers not only tells us the effects of an injection of a particular shock to various socioeconomic groups, it also tells us the mechanisms through which such effects come about. There are now many studies that construct SAMs for developing countries and examine the distributional consequences of policy measures (Pyatt and Round 1985). One hopes that as time goes by, SAMs for more and more countries will be constructed, as they could only help in the formulation and effective implementation of development policies benefiting the poor.

SEE ALSO *Development Economics; General Equilibrium; Income Distribution; Input-Output Matrix; Leontief, Wassily; Macroeconomics; Models and Modeling; Multisector Models*

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Sajal Lahiri

SOCIAL ANXIETY

Social anxiety refers to the fear of being humiliated, embarrassed, negatively evaluated, or rejected in social situations. A common human experience, social anxiety exists on a continuum of severity from infrequent and mild feelings of discomfort in social situations to chronic and pervasive distress in many different social settings. An individual's experience of social anxiety may be limited to one specific type of social situation, such as public speaking, or it may be so pervasive that anxiety and fear are experienced in nearly any situation in which other people are present. When an individual's social anxiety is excessive and results in significant distress or impairment, the person may be diagnosed with social anxiety disorder (or social phobia).

Social anxiety disorder is the third most prevalent psychiatric condition in the United States, with a lifetime prevalence rate of approximately 13 percent in the general population. The majority of individuals with excessive social anxiety, or social anxiety disorder, also report comorbid anxiety, mood, or substance abuse (e.g., alcohol) conditions. Although excessive social anxiety is a relatively common psychological condition, the exact cause of the phenomenon remains unclear. Several researchers have noted the possibility of a genetic predisposition for social anxiety that appears to contribute to familial patterns of the condition. Developmental researchers point to temperamental characteristics in shy, fearful, and behaviorally inhibited children and the increased likelihood that these children will develop excessive social anxiety later in life. Other researchers believe that a predisposition may interact with early learning to reinforce the perception that social interactions are threatening and that estimated costs of social failures outweigh the possible benefits (e.g., intimacy).

As a coping strategy, people with excessive social anxiety often attempt to alter or control negative feelings associated with social evaluative concerns and avoid or escape situations in which these feelings may occur. These efforts may lead to increased apprehension of future social events, increased use of alcohol and other maladaptive coping strategies (e.g., rumination), and social withdrawal and isolation. As a result, excessive social anxiety is related to functional impairment in a variety of domains including school, work, leisure, and physical health. Socially anxious individuals also report a number of interpersonal problems, including fewer friends, less perceived social support, an increased likelihood of being single, and less romantic relationship satisfaction. Thus excessive social anxiety may be what therapists call a "life-limiting" condition in that it interferes with interpersonal functioning and results in fewer positive emotional experiences and events.

Social anxiety may be treated effectively with a variety of psychological and pharmacological interventions. Evidence suggests that both individual and group cognitive-behavioral therapy may be effective in reducing symptoms and distress associated with social anxiety. Cognitive-behavioral therapies tend to target dysfunctional thoughts, beliefs, and behaviors and teach individuals different, more adaptive, ways to manage their behavior and respond effectively in social situations. In addition, several medications, including benzodiazepines and the class of antidepressants called SSRIs (selective serotonin reuptake inhibitors) appear to be effective and well-tolerated.

SEE ALSO *Addiction; Anxiety; Neuroticism; Psychology; Psychotherapy; Stages of Development*

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SOCIAL CAPITAL

In a broad and nonessentialist sense, social capital means that the relations humans enter into are a potential source of utility and benefit for them. However, the concept of social capital is perceived in divergent ways with a plurality of approaches and empirical operationalizations. Unfortunately, there is little discussion among dissenting viewpoints.

After an earlier emergence in the work of Lydia Hanifan (1916) or Jane Jacobs (1961), the term *social capital* resurfaced in the 1970s in the work of economist Glenn Loury. For Loury, the social context in which one finds oneself embedded strongly conditions one's achievement. This is profoundly evident whenever social divisions that structure inequalities, such as race or class, are at play. In such a context, Loury describes social capital as the impact of one's own social position, which acts to further or impede the acquisition of human capital (the market-valued assets of education and skills) (Loury 1977, pp. 175–176).

PIERRE BOURDIEU, JAMES S. COLEMAN, AND SOCIAL CAPITAL

Pierre Bourdieu (1930–2002) was the first to conceptualize social capital in an explicitly sociological manner that is at variance with Loury's view. For Bourdieu, capital consists of accumulated human labor that either assumes a distinct material form or an integrated form as part of an objective or subjective structure, the latter being the predispositions of mind and body (Bourdieu 2001, p. 98). Bourdieu also understands capital in the sense of power and resources (Bourdieu and Wacquant 1992).

Bourdieu is concerned with three forms of capital: economic, cultural, and social, each operating in a different field. Among them, social capital, which neither derives from nor is independent of the other forms, comprises social responsibilities, connections, or linkages, and under certain circumstances is convertible into economic capital. Bourdieu also considers the family to be a basic source of social capital, mainly found among the socially powerful in the upper middle class or *haute bourgeoisie*; the ideal-typical institutionalized form of social capital is the nobility title (Bourdieu 2001, p. 98). By contrast, the lower social strata do not possess capital, including social capital (Bourdieu 1986).

Social capital is formed, more or less consciously, via integration into networks. Unlike economic capital, social capital has no specific material form. It is also characterized by a certain indeterminacy, so that there can be, for example, a residual sense of unspecified obligation. Social capital is, in a sense, "suspended" in midair, like social structures. This, according to Bourdieu, is an inevitable dimension of social capital. If it were clear and specific, it would simply be a series of ordinary nonmarket transactions. Social capital, according to Bourdieu, is "the sum of active or potential resources that are connected through the possession of a network of permanent relations of mutual acquaintance and recognition, which are more or less institutionalized, or, in other words, with the inclusion into a group" (Bourdieu 1994, p. 90). Participation in a group provides each member "with the backing of the collectivity-owned capital, a 'credential' that entitles them to credit in the various senses of the word" (Bourdieu 2001, p. 103). Importantly, the agent of action is the separate individual member of the group.

Transactions between group members require a minimum degree of homogeneity, and the profits that accrue from membership form the basis of the solidarity that makes such transactions possible. Bourdieu clearly holds that the reproduction of social capital requires a continuous effort of "sociability" and continual repeated contacts during which mutual recognition by group members is confirmed in order to sustain group cohesion (Bourdieu 2001, p. 104).

For his part, while studying school failure and aiming at the reinforcement of human capital, James Coleman (1926–1995) came to regard social capital as a means of support. In particular, he claims that social capital strengthens students' school and university performance and, therefore, the generation of human capital. This view is much in line with Loury's conceptualization of social capital, yet here social capital is explicitly a positive and enhanceable quality (Coleman and Hoffer 1987; Coleman 1988).

Coleman uses this notion of social capital in connection with other forms of capital, such as economic-financial, natural, and human capital. Specifically, social capital results from changes that take place between individuals, facilitating social action (Coleman 1990, p. 302).

Coleman defines social capital on the basis of its function, as a range of entities with two common attributes: These entities are all aspects of social structures, and they all facilitate certain actions within structures, by individual or collective agents (Coleman 1988, p. S98). Social capital may assume three forms: "obligations and expectations, which depend on trustworthiness of the social environment, information-flow capability of the social structure, and norms accompanied by sanctions" (p. S119). Coleman, like Bourdieu, stresses the nonconcrete, nonmaterial, and indefinite character of social capital as compared to other forms of capital. However, in contradistinction to Bourdieu, he notes that unlike other forms of capital, social capital is a public good, because those who generate social capital enjoy only a limited part of its benefits (pp. S116–S118). Social capital is not solely a property or benefit of the individual agent who generates it, but also of other individuals, as well as of the community. Because social capital is embedded within the social context, certain characteristics of social relations can facilitate its appearance, including trust and reciprocity among the members of the inner-group, effective normative regulations, and open social structures (pp. S102–S105, S106).

It is important to distinguish resources from the ability to acquire them, through participation in networks or social structures. This distinction is clear in Bourdieu, but vague in Coleman. By equating social capital with the resources through which it is acquired, or which it creates, one is led toward tautology and a vicious circle. In this sense, it can be argued that Coleman's conceptualization gets blurred and eventually loses much of its value.

ROBERT D. PUTNAM, SOCIAL CAPITAL, AND CRITIQUE

Parallel to the ongoing sociological interest in social capital, this notion has also been adopted by other disciplines. Political scientist Robert Putnam, for example, has developed his ideas in relation to social capital especially. He points out that social capital is formed by "features of [*social organizations, or*] *social life*—networks, norms, and trust—that enable participants to act together more effectively to pursue shared objectives" (Putnam 1995, pp. 664–665, emphasis added; Putnam 1993, p. 67).

Putman broadens the notion of social capital from the level of individual and collective actors to the level of organizations and communities (Wollebaek and Selle 2002, p. 34; Portes 2000), and from there to social life as a whole. The latter includes cities, regions, and even entire countries. Coleman had already attempted such an expansion of meaning, as we have seen. However, the problem of silence relating to the supposedly neutral character of horizontal ties, raised in sociological discussions of Coleman's definition of social capital, cannot be tolerated in Putnam's conceptual transference. In the neopluralistic participatory context that the latter has adopted, differences in economic, social, or other forms of power do not raise a significant issue; hence what prevails is participation as such and the extent to which it appears.

Participatory attitudes within the context of community networks seem to generate additional forms of social capital. Thus, social capital can do the "bonding," "bridging," or even "linking" of social groups. This means, respectively, forming ties between people in similar situations, bringing together people in different situations who belong to different social groups (Svendsen 2006), and mustering heterogeneous social groups together (Woolcock 2001). All result in synergies that effect positive outcomes in virtually all fronts. Undoubtedly, in this way networks appear to be vehicles of social capital.

In fact, in Putnam's approach, social capital stock is equal to the participatory attitude in a community. Specifically, social capital is not researched directly, but instead proxies are used: Social capital is operationalized through indices such as, primarily, the degree of participation in volunteer organizations (Welzel et al. 2005, p. 121); trust toward authorities or others; the reading of newspapers, which reflects an interest in public affairs; and similar indices that mostly apply to the mezzo- and macro-levels (Putnam 2000). So, the key in researching social capital is the keenness of participation, or more broadly civic values or the ethos of "civicness" from which willingness to participate originates.

Attempts at deconstruction and critical recomposition of social capital have been made by sociologist Alejandro Portes and his associates, among others. Portes and Julia Sensenbrenner (1993) suggest a clear distinction between the sources of social capital and the results of its action. They recognize four sources from which social capital originates: (1) internalization of values; (2) transactions of a reciprocal character; (3) forms of collective

solidarity; and (4) the trust imposed by negative or positive sanctions. It is accepted that the sources of social capital are embedded in the motives of network/group members to provide resources. These include consummatory motives, and those cultivated within the community, with solidarity strikes being a typical case. They may also originate from instrumental motives involving the expectation of reciprocity and trust (e.g., the sponsor is secured against fraud) (Portes and Sensenbrenner 1993; Portes 1998, p. 8).

The various sources of social capital lead to its composite formation so that social capital is the ability to secure benefits via "participation in networks and other social structures" (Portes 1998, p. 6). Of course, the idea that interconnections favor individual upward mobility may also be found in writers like Mark Granovetter (1973, 1983) who avoid the term *social capital*.

While Bourdieu does not take an interest in whether the effects of social capital are positive or negative, in Coleman's work, social capital is presented as exerting a fundamentally positive social influence, especially in the case of social problems tackled through the effectiveness of social capital. For Putnam too, social capital is a "blessing" that reduces anomie, promotes democracy, and produces wealth. However, Portes and his associates reject this all-positive account of social capital and its effects as one-dimensional, while stressing a number of negative aspects: Of prime importance is the exclusion of nonmembers, and the excessive demands made upon rich members of the social capital network (or group) for compliance, uncensored acceptance, and so forth.

Portes's interventions offer a more balanced understanding of social capital and its potential. The notion is not rejected but rationalized, with emphasis on the need to systematically study the effects of social capital and avoid attributing irrelevant, accidental, or spurious effects to it (Portes 1998, 2000; Portes and Landolt 2000; Portes and Mooney 2002). This perception has led to conceptualizations of social capital more akin to the micro-level that focus on the individual's relationships to her or his network of social connections and the benefits and resources she or he may muster. Such approaches tend to restrict the agentic impact, even if they give a place to it, while underlying that of social structure (Lin 2000, 2001). In such explorations, which tend to utilize qualitative methods, one of the main concerns is to decipher causality in generating and activating social capital (Mouw 2005; Smith 2003).

The wider promotion of the contentious notion of social capital, and the strengthening and broadening of its usage, mainly took place through the work of Putnam, who came to influence key politicians, including U.S. president Bill Clinton, plus a series of international organizations like the World Bank, the Organization for Economic Cooperation and Development (OECD), and the European Union. At the same time, social capital has come to be used in ever-increasing ways as a recipe for non-economic solutions to social problems (Halpern 2005). The overextension of its meaning and the consequent slackening of its application have led to contestation about its true content. It now appears that the notion of social capital has, to a significant extent, been taken over by agents of ideological and political intervention (Koniordos 2006). However, the social capital notion is certainly of social-scientific interest if its use is suitably restricted to what it may substantively explain.

SEE ALSO *Authority; Bourdieu, Pierre; Conformity; Ethnic Enclave; Ethnocentrism; Networks; Networks, Communication; Pluralism; Putnam, Robert; Solidarity; Trust*

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Sokratis M. Koniordos

SOCIAL CATEGORIZATION

Social categorization—the collective definition and naming of categories of perceived phenomena—is fundamental to human cognition and culture. Given that it is so fundamental, it is not surprising to find that it has inspired a range of divergent social science approaches. These can be crudely divided into contrasting emphases on content or process.

To take content first, writing in 1903, Émile Durkheim and Marcel Mauss (1963) argued that social structures generate classificatory systems; culturally specific categorizations of the human body, animals, and the wider world, and the relationships between those categories, symbolize and rework relationships of opposition and alliance within and between groups. Later works in this structuralist vein, such as Claude Lévi-Strauss's *Totemism* (1963), developed the notion that the natural world provides classificatory material that is "good to think with," particularly about social relationships.

The basic axiom, that the social categorization of the world represents or dramatizes social structure, underlies Mary Douglas's anthropological discussions of cosmology, ritual, and symbolism (1966). Pierre Bourdieu took the idea further in analyzing modern French relationships between stratification, consumption, and categories of taste, style, and symbolic value (1984). Other authors, even though abandoning the structuralist underpinnings, have since explored similar territory (Lamont and Fournier 1992). The theme that the categories of culture are systematically related to social structure has inspired the academic fields of cultural studies and social studies of consumption.

Within social psychology, the study of social categorization has emphasized process. The most prominent contemporary theoretical school derives from Henri Tajfel's "minimal group" experiments. These provided evidence that when people are arbitrarily placed in one of two groups in a laboratory setting, with no history of animosity and nothing at stake, intergroup negative discrimination results (1970). Reflecting the human need to create cognitive and social order, social categorization is, it is argued, sufficient in itself to generate identification of and with in- and out-groups. A large literature continues to develop and critique this paradigm (Brewer and Hewstone 2004, pp. 145–318).

Finally, another processual approach hinges upon the distinction, originally methodological, between "groups" and "categories": The first is a human collectivity that is defined by and meaningful to its members, the second a collectivity that is defined from outside (during a census or survey, for example). This leads to a contrast between processes of group identification and of social categorization and the argument that identification is always a matter of internal self- or group identification, external categorization by others, and the relationship between the two (Jenkins 2004). Power—whose definition prevails—thus becomes central to our understanding of social categorization.

SEE ALSO *Racial Classification; Self-Classification*

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Richard Jenkins

SOCIAL CHANGE

The concept of social change is central to the social sciences and, in particular, to sociology. The work of many of the pioneers of sociology, including the central triumvirate (Émile Durkheim [1858–1917], Max Weber [1864–1920], and Karl Marx [1818–1883]), involves a sustained reflection upon the changes they believed that they were witnessing in their societies and the new social forms they saw emerging (e.g., organic solidarity, modernity, bureaucracy, and industrial capitalism).

In certain respects change is an inherent feature of societies rather than a periodic event that they undergo or something extraneous that acts upon or happens to them. At whatever level one pitches the concept, a society is not a thing but a process. It comprises a vast web of interactions that unfold through time and, as such, is in a perpetual state of becoming. Any society is constantly in motion and, like the proverbial river, is therefore never quite the same from one moment to the next. The key question, from this point of view, is not why things change but why many social forms persist for as long as they do: that is, why and how they are reproduced. Nevertheless, forms do change, sometimes on a grand scale, and much social science is focused on the question of why this is so.

A key distinction can be found in classical and early modern social theories between *revolutionary* and *evolutionary* theories of change. This distinction hinges on the question of whether change happens in short dramatic bursts (revolutions) or more gradually, over the long term—the most likely answer being "both ways," as the two modes are not mutually exclusive. Political revolutions, such as the French Revolution of 1789, are obvious exemplars for the revolutionary model, but we also refer to "the industrial revolution," to "scientific revolutions," and to such "cultural revolutions" as the Reformation or Enlightenment. Evolutionary change is more difficult to pinpoint because, by definition, it is gradual and occurs over long stretches of time, but it is easily revealed through comparisons of historically distant snapshots of social life.

Evolutionary theories often refer to interaction between the social form said to be evolving and its wider (social and/or natural) environment. Changing environments are said to "select" the forms that proliferate within them. This position can entail teleology; that is to say, it may rest upon an assumption, generally deemed erroneous by contemporary social theorists, that social forms serve a purpose within the wider systems to which they belong and, more problematically, come into being because they serve that purpose. Functionalist accounts, when not criticized on the grounds that they cannot explain change, are often criticized for making such assumptions. Evolutionary accounts are not necessarily teleological, however, even when they work with the notion of environmental fit. Darwin's theory of evolution by natural selection, for example, is non-teleological. Biological "adaptations" do not emerge because they fit with the environment, in Darwin's view. Their emergence is purely contingent—though they "die out" if they do not fit with their environment or lose out to better-fitting "adaptations" in the struggle for survival. Moreover, insofar as evolutionary accounts do rest upon teleological assumptions, this does not serve to distinguish them from revolutionary accounts, which can be equally prone to teleology. Not only, for example, do some variants of (revolutionary) Marxism adopt functionalist explanations, some also adhere to the teleological notion that history is propelled in the direction of a pre-given endpoint and thus revolution is inevitable. Furthermore, the "laws" of social change, which are said to propel society in a particular direction and which one finds in some Marxist accounts, while not necessarily teleological, are problematic on account of what Karl Popper calls their "historicism." Popper's critique of historicism (1969) defies brief summation. Suffice it to say, however, that he is critical of the claims of some Marxists to have discovered "iron" laws of historical necessity and change because, he argues, our knowledge of these laws inevitably changes our behavior and thereby changes the course of history itself, such that the "laws" could not have been "laws" in the first place. In part this is a claim about the role of knowledge and ideas

in steering the course of change and a critique of materialist theories that ignore or deny their role. More profoundly, however, it is a claim about the role of reflexivity in history. We are not condemned to follow a particular historical trajectory, according to Popper, because we have the capacity to reflect upon the flow of history and this affords us the opportunity to act differently than we would otherwise have done.

Both revolutionary and evolutionary accounts of social change have come under attack in recent social science, particularly in the context of "postmodern" and "poststructuralist" theories. In addition to challenging "grand narratives" of history (i.e., accounts that purport to tell the story of human history *in toto* and in the singular), these theories have challenged the notion of progress that, they argue, underpins such narratives. In part this critique has been informed by a dissatisfaction with the ethnocentric assumptions built into many accounts of progress; that is, the tendency for writers to treat their own society and standpoint as the furthest point hitherto achieved by any society along a continuum that all societies can be measured against. At a deeper level it is informed by a suspicion of all forms of evaluative discourse, centered ultimately on claims regarding the impossibility of arriving at an unprejudiced or rational basis by which to establish criteria of evaluation.

The more extreme claims of postmodernists can be challenged by reference to the pragmatic possibility of deriving local and specific criteria by which to evaluate change: For example, if we are prepared to agree that reducing infant mortality is a good thing, then we can argue that Western societies, insofar as their rates have reduced, have progressed in this respect. We do not need to establish a universal standard against which all societies should be measured or, conversely, to eliminate the value judgment that something is a "good thing" in order to make meaningful claims about progress, as long as we can derive mutually agreeable criteria upon which to base our assessment. However, much contemporary debate on change is framed in postmodern terms. Whereas classical social theory was centered on the emergence of modern society, contemporary social theory is centered on the transition to postmodern society. Paradoxically, postmodernism has become something of a "grand narrative" of history, and a dominant one at that.

SEE ALSO *Marx, Karl; Marxism; Postmodernism; Revolution; Social Movements*

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Nick Crossley

SOCIAL CLASS

SEE *Class.*

SOCIAL CLASSIFICATION

SEE *Social Categorization.*

SOCIAL COGNITION

Social cognition is the branch of social psychology that studies how people think about themselves and other people. It focuses on the steps people take and the conclusions they reach as they strive to make sense of their social environment. The field tends to view people as information processors, something like a computer, who take in information from the outside world, sort that information out and interpret it, calculate a judgment, and then choose a behavior in response. In doing so, the field examines what information people pay attention to, how they analyze it, how they reach judgments based on that information, how those judgments guide their behaviors, and then which parts of the information they remember.

Work in social cognition is wide-ranging and explores a breathtaking diversity of topics. For example, some social cognitive researchers investigate how people develop opinions and attitudes about social issues. Others examine whether people's judgments of others are distorted by stereotypes. Others look at whether people reach decisions that are wise and rational versus faulty and costly. Others study how people reach impressions of themselves that lead to high versus low self-esteem.

Social cognition principles carry a wide variety of implications for real world pursuits. Social cognition principles, for example, explain why people make right versus wrong decisions about their health. It suggests the best ways to teach students to remember school material. It

explains the pitfalls that prevent people in negotiations from reaching harmonious settlements. It explains how people can commit discrimination against people from other ethnic or social groups without even knowing it. It describes why and when people make poor decisions about their money.

One can claim that social cognition has always been a featured part of social psychology, even when the rest of psychology has neglected, or even denied, the importance of people's internal thought processes. In particular, in the early to mid-twentieth century, the bulk of psychology was dominated by the *behaviorist* tradition, led by B. F. Skinner (1904–1990) and others, which emphasized how organisms reacted to rewards and punishments while studiously avoiding any talk of that organism's internal psychological world. During this era, many social psychologists squarely examined that internal life, exploring how people developed their attitudes toward social issues, as well as how they formed stereotypes about social groups, or made attributions about the causes of other people's behavior.

However, in the 1960s, with the advent of the *cognitive revolution*, things changed dramatically. The mainstream of psychology became fascinated with the organism's internal life—how that organism perceived, thought about, and remembered the world around it. Cognitive psychologists, in particular, generated many sophisticated and powerful theories describing thought and memory. Social psychologists quickly adopted these theories and methods to explore in finer detail how people strive to comprehend events in their social world. Today, work on social cognition remains a vigorous and prominent branch of social psychology.

Although work in social cognition is too diverse to be captured in a simple catalogue, one can point to dominant ideas and themes that social cognitive research has repeatedly demonstrated.

SCHEMATA: THE BUILDING BLOCKS OF SOCIAL COGNITION

One prominent theme focuses on the building blocks of people's thoughts. People carry with them information about individuals, social groups, objects, and events arranged in *schemata* (singular: *schema*). A schema is a knowledge structure containing the features and examples associated with a person, group, object, or event. For example, people's schema of *bird* usually contains such characteristics as *wings*, *feathers*, *a beak*, and *flight*, as well as some common examples of birds, such as *robin* and *duck*. Usually schemata are described as *associative networks*, that is, as a web of linked associations. Thus, when the concept of *bird* comes to mind, these associative links activate the relevant features and examples (e.g., wings, duck) connected to the concept, thus also bringing those notions to mind.

Schemata are tremendously helpful for social life. If a friend tells you, for example, that he or she went to a restaurant last night, you can easily surmise, because you possess a special type of schema for an event called a *script*, that the person looked at a menu, ordered food, ate it, paid the bill, and left a tip. Your friend does not need to specify these details; you already know.

That said, schemata can also be misleading or harmful, especially when people try to recall the past. For example, if someone asks George to remember the words *drowsy*, *bed*, *pillow*, *snoring*, and *nighttime*, he will probably remember most of these words. But he will also probably mistakenly recall the word *sleep* because all those terms listed above are linked to *sleep* through the associative network (the schema) of this concept. Memory errors prompted by schemata can be quite profound. For example, people witnessing a crime may misremember that the culprit had a gun, a disguise, or unkempt hair if it fits their schema of the event they witnessed. Schemata also explain how stereotypes can distort memory. If, for example, a friend describes a professor as distant, smart, and assertive, one might also mistakenly recall that the friend said the professor was arrogant—if that attribute fits one's schema of a professor.

The impact of schemata on social judgment, interpretation, and memory has been shown to be profound in a wide array of studies, and there has been a good deal of discussion about the specific form that schemata take. According to the *prototype* view, schemata consist of the features associated with an object or event (such as wings and feathers to a bird). According to an *exemplar* view, schemata consist of typical examples of a concept (such as a robin being a typical example of a bird). Research ultimately suggests, however, that schemata tend to be a blend of both features and examples.

ERRORS AND BIASES IN SOCIAL JUDGMENT

One additional prominent theme in social cognitive research scrutinizes cognitive habits that lead people to make errors and biases in their judgments. For example, one such consequential habit is *confirmation bias*. Research on this bias shows that when people ask a question (e.g., "Is Jerry outgoing?"), they tend to look for information that would confirm the question in the positive (e.g., "He does go to parties") and not for information that would disconfirm it (e.g., "He said last week he hated talking in front of large groups"). When the opposite question is asked (e.g., "Is Jerry shy?"), people instead search for information that would confirm that reverse hypothesis, leading to very different conclusions.

Confirmation bias can lead to several problems in judgment. For example, it can lead people to be *overconfident* in their predictions about themselves and others. When people consider a question soliciting a prediction (e.g., "Will I get a good grade in this class?"), they tend to consider information that suggests that the answer is "yes." This can lead them to overconfidence about the chance that their prediction will prove to be accurate. That is, they may say that they are 90 percent sure their prediction will be correct even when the real chance is closer to 70 percent. Indeed, when people say they are 100 percent certain of their prediction, they tend to be wrong roughly one time out of five. Some researchers have suggested that a valuable habit for avoiding overconfidence is to also ask how an event might go in the opposite direction from that posed in the question (e.g., ask the reasons why one might get a poor grade). This *consider-the-opposite* strategy has been shown to reduce overconfidence in people's predictions.

People also suffer from *illusory correlations*, seeing relationships between variables even when they do not exist. Some illusory correlations are inspired by schemata and stereotypes. For example, in an experiment described in a 1967 article, Loren J. Chapman and Jean P. Chapman showed participants a series of drawings, some of which were purportedly drawn by people suffering from paranoia. Participants in the study tended to conclude that the drawings of paranoid individuals more often than not included people with larger eyes—even when there was no relationship between eye size and mental illness in the drawings they looked over.

Other illusory correlations are inspired by what people find easier to remember. For example, people tend to remember unusual behaviors (e.g., riding a unicycle) performed by rare groups (e.g., Alaskans), as reported by David L. Hamilton and Robert K. Gifford in a 1976 article. Thus, when asked if there is any relation between a rare behavior and a rare group (e.g., do Alaskans participate in odd sports?), people report that such a relationship exists, even if the evidence they have reviewed fails to support this conclusion. Because rare-rare combinations are memorable, they lead to illusory correlations.

People also fall prey to the *fundamental attribution error* (also known as the *correspondence bias*), which means that they give too much weight to a person's personality in explaining, evaluating, and predicting social behavior and too little weight to situational forces. That is, people look primarily to a person's internal character to explain his or her actions, and not to factors outside the person that could have produced the behavior. This bias most commonly arises when people make *attributions* for another person's behavior; that is, they try to identify the causes for why the behavior occurred. For example, if you say that "John stumbled while learning the dance," people tend to leap to the conclusion that John is clumsy (i.e., something about his internal personality) rather than that the dance was difficult (e.g., something about the outside situation).

Several studies have provided powerful demonstrations of the fundamental attribution error. Consider the classic Milgram experiment, completed in the 1960s, in which Stanley Milgram (1933–1984) demonstrated that a majority of participants, if asked, would continue to shock another participant if an authority figure asked them to—even if the other participant suffered heart problems and had stopped answering, and for all practical purposes might be dead. Almost everyone who hears about the study denies that they would "go all the way," complying with the experimenter until the session is curtailed. However, up to two-thirds of people in this situation do go all the way. The situation is extremely powerful even though people do not see it, and there are few indicators from a person's personality that reliably predict whether that person will comply or defy the command to shock another person who has stopped answering.

People also make errors because they rely on quick heuristics to reach their judgments, according to the work of Amos Tversky (1937–1996) and Daniel Kahneman. One such example is the *availability heuristic*, in which people judge the odds, frequency, or truthfulness of an event based on how quickly examples of it spring to mind. For example, if one asks how commonly words of the form ———-n- appear in English, people tend to say that there are not many. However, if asked how many words of the form ——ing appear, people say quite a few, mostly because such words are easily brought to mind. Of course, all ——ing words are also ———-n- words, so the latter type of word, paradoxically, must be more frequent.

People also rely on the *representativeness heuristic*. This heuristic refers to the fact that people judge the odds, frequency, or truthfulness of an event based on how well it matches a schema in their head. For example, suppose you were told that Linda is politically liberal and a philosophy major. Which of the following descriptions do you think is the most likely to be true and which the least: that Linda is a feminist, that she is a bank teller, or that she is both a feminist and a bank teller. Most people rate "feminist" as most likely and "bank teller" as least, although that is necessarily an error. Mathematically, the least likely event must be that Linda is both a feminist and a bank teller. Why? If Linda is both, then she is already a bank teller—and there is an added chance that she might be a bank teller without being a feminist. Thus, the single description of "bank teller" must be more probable than being both a teller and a feminist.

This *conjunction fallacy* (i.e., rating a combination of two events as more likely than one of its two individual

component events) is caused by the representativeness heuristic. People form a schema of Linda and then quickly compare the various events (e.g., is a bank teller) to this stereotype. If the event matches the schema (e.g., is a feminist), it is seen as probable. If it does not (e.g., is a bank teller), it is seen as improbable. However, in using this heuristic, people commonly violate the simple mathematics inherent in the situation, and thus reach conclusions that cannot be right.

In the following heuristics, people also ignore other valuable information that would lead them to more accurate predictions. For example, people tend to neglect the *base rates* of events, even though these rates have a large impact on what will happen. Base rates refer to the commonness of an event. A high base rate means an event is common (e.g., people tend to have ten toes); a low base rate means that an event is rare (e.g., people tend not to have more than ten toes, although some do). The overall base rate of an event is a valuable indicator about whether or not it will occur in the future, but people, relying on availability and representativeness heuristics, tend not to factor base rates into their judgments and predictions. For example, let's say that you know someone who is over seven feet tall and athletic. Is he more likely to be an NBA basketball player or an accountant? Most people quickly predict that this person is an NBA player, because that fits their schema of a professional basketball player (the representativeness heuristic at work), but they should actually predict that he is an accountant, because accountants far outnumber NBA basketball players. That is, the base rate of accountants is several times higher than the base rate of being an NBA basketball player. Because being an accountant is the much more common event, it is the event one should predict.

DUAL SYSTEMS IN SOCIAL THOUGHT

In another predominant theme, social cognitive work has also increasingly recognized that people possess two very different modes of thought. *System 1* is a rapid mode of thought, in which people reach their judgments quickly through simple associations and heuristics, like the availability heuristic. *System 2* is slower, conscious, deliberate, effortful, rule-based, and analytical.

Anyone who has solved a complex math problem is familiar with system 2. This is the system in which people consciously apply rules to compute some sort of judgment. People may not be as familiar with the operation of system 1. Indeed, at its extreme, system 1 may work so rapidly that a person is not even aware of its operation.

System 1 thinking is often associated with being *automatic*. There are many senses in which thought can be automatic. First, automatic thought can be quick. For example, people recognize the faces of their friends and family in an instant, without conscious deliberation. Second, automatic thought can be efficient, in that it does not detract from other tasks that people apply themselves to. For example, people can drive a car along a familiar route while fully engaged in other tasks, such as listening to the car stereo or talking to a passenger. Third, automatic thought can be completed without monitoring. People can form perfectly grammatical sentences, for example, without consciously monitoring the construction of each single phrase. Fourth, automatic can mean that the thought is outside of the control of the individual—that it just happens. Indeed, it often requires no conscious goal to set itself in motion. For example, few Americans can hear the date "September 11" without reflexively thinking of terrorism.

Finally, and perhaps most importantly, automatic thought can occur without one being aware of it. When this occurs, the thought is usually described as *nonconscious* (i.e., below awareness) or *preconscious* (i.e., occurring before any thought reaches consciousness). Ultimately, this means that the conclusions people reach can be shaped by influences they are not aware of.

These influences are most directly shown in studies of *priming*, in which people are exposed to incidental material that later shapes their conclusions about some seemingly irrelevant situation. For example, if people complete a sentence-completion task that contains such words as *hostile*, *mean*, and *unfriendly*, they will judge a person they encounter soon afterward as more unpleasant and aggressive than they would if exposed to the words *kind*, *generous*, and *sociable*. The influence of priming can occur even when people are not aware of the prime. For example, John A. Bargh, Mark Chen, and Lara Burrows (1996) exposed college students to words associated with elderly people (e.g., *wisdom*, *Florida*) so quickly that the students were not aware that they had been shown any words at all. They thought they were merely seeing flashes on a computer screen. Despite this fact, as students left the experiment, exposure to these primes caused them to walk more slowly (a stereotypical attribute of the elderly) to the elevator as they left the experiment.

System 1, and the automatic thoughts that come with it, produces wide-ranging consequences. For example, the accuracy of people's judgments, as described above, is heavily influenced by rapid use of availability and representativeness heuristics. Some forms of system 1 thinking can also be shown to trump system 2 thought. Norbert Schwarz and colleagues in a 1991 article showed how system 1 elements can have more influence than the actual content of conscious thoughts. In one study, they asked college students to write down six examples of their own assertive behavior. Students found this task easy. Another

group was asked to write down twelve examples and found this task difficult. Later, when asked to rate their assertiveness, the first group saw themselves as more assertive than the second group—even though the second group had generated a greater number of examples indicating that they were assertive. Schwarz and colleagues argued that the first group had perceived themselves as more assertive because they were relying on the availability heuristic. Generating six examples was so easy and available that it tended to convince students that they were assertive. System 1 (the availability heuristic) in this case was a more powerful influence than system 2 (the actual number of examples in conscious thought).

The impact of system 1 thought is also evident in social attribution. People appear to reach attributions about others quickly and spontaneously, through system 1, even without a conscious goal of trying to understand those people. For example, if you mention that Janice helped the elderly woman carry her groceries to the car, many people will rapidly and unknowingly classify the behavior as *helpful*. (There is an ongoing debate about whether people think of the behavior or the person, Janice, as helpful.) Indeed, if cued with the word *helpful* later, people will be more likely to remember the sentence that inspired the thought.

Such spontaneous system 1 attributions may explain the fundamental attribution error. Daniel T. Gilbert and colleagues (1988) have proposed that people make rapid attributions to another person's personality. Once made, people correct these quick personal attributions by considering the impact of the situation in a more effortful, conscious, system 2 way. In support of this idea, Gilbert and colleagues have shown that people make greater attributions to someone's personality if they are distracted by some other task, because they are deprived of the cognitive capacity necessary to correct for the quick personal attributions produced by system 1.

System 1 also carries consequences for stereotyping. Patricia G. Devine (1989) has suggested that people apply stereotypes in their judgments of others in a quick, system 1 way. Importantly, these stereotype-inspired thoughts even occur to those who wish not to be influenced by them. People who consciously deny stereotypes based on gender, race, or age know that those stereotypes exist and what they are—and these stereotypes will produce automatic, system 1 associations even among these people. In response, those who wish to avoid using stereotypes must apply more effortful system 2 thought to correct for the impact of those stereotypes. However, when people do not have the cognitive capacity to perform this system 2 correction, they will commit stereotypical thinking even though they wish to prevent it. This may happen when they are tired or distracted by some other task.

System 1 also influences attitudes and persuasion. As Shelly Chaiken and Yaacov Trope (1999) have pointed out, people can be persuaded to hold an attitude via two different routes. Through a heuristic route, people can be persuaded in a system 1 way through rapid associations and rules of thumb. For example, people can be persuaded of a viewpoint if the person trying to persuade them is physically attractive, or has an impressive title, or just rattles off a large number of arguments. This type of persuasion occurs when people are not motivated to think deeply about what they are being told. However, when people are motivated, they more effortfully and consciously deliberate over what they are told. This is the *systematic* route to persuasion, and depends on whether people find the arguments they are given to be strong. (John T. Cacioppo and Richard Petty's *elaboration likelihood model* offers a similar treatment of system 1 and 2 routes to persuasion).

IMPLICIT VERSUS EXPLICIT ATTITUDES

The presence of system 1 also means that people may hold multiple, and sometimes contradictory, attitudes about social groups and issues. For example, at a conscious, *explicit* level, people may harbor no negative attitudes toward people from other racial groups, or the elderly, or the political party opposite their own. However, at an *implicit* level, below conscious awareness or control, people may hold such prejudices. That is, they may hold automatic negative associations to those groups that they are not aware they have.

Much research has shown how attitudes at the implicit level may differ from those at an explicit level. For example, people tend to deny explicitly having any negative opinions of racial groups different from their own. However, if placed in a performance task that assesses their automatic, implicit associations, such negative links are often found. For example, in one version of the *implicit association task*, people are asked to complete two tasks simultaneously. In one task, they are asked whether a face is of a European American or an African American, pressing a button with their left hand if the face is European and with their right if the face is African. Intermixed with this task, they are also shown words (e.g., *puppy*, *disease*) and asked if each is positive or negative in nature, using their left hand to indicate the former and their right the latter. They then perform these two intermixed tasks again, but this time the hands indicating positive and negative words are switched.

Most European Americans find this second version of the task to be more difficult, in that they are using the same hand to indicate *European* and *negative* (an association they may not have at the automatic level) and the

other hand to indicate *African* and *positive* (again, an association they may not possess at the automatic level). African American participants find the second version of the task to be easier than the first, presumably because it matches associations (e.g., *African* and *positive*) that they possess at an implicit level.

NEW DIRECTIONS

Work in social cognition has moved vigorously in several directions since 1990. For example, all the work described so far paints social perceivers as cold, machinelike calculators, calmly using systems 1 and 2 to determine some judgment about their social worlds. More recent work since the 1990s has recognized that cognition need not only be "cold," it can also be "hot," involving vivid and full-blooded emotions. Thus, recent work in social cognition increasingly focuses on the role of emotions in social thought. For example, research has shown that emotional arousal prompts people to pay attention more to the evaluative charge of information in their environment—that is, to whether it is positive or negative—over other aspects of that information. Fear and anxiety also narrow attention to central and salient aspects of a situation, at the expense of more peripheral features.

Emotions also lead people to make different assumptions about a situation. When people become fearful, for example, they perceive themselves to lack control over a situation. Thus, they become more pessimistic and reluctant to take on risks. However, when people are angry, they perceive themselves as more in control and more likely to seek risks out. This was directly shown in a survey taken after the terrorist attacks in the United States on September 11, 2001. Those asked first to describe how the attacks made them fearful perceived the United States to be more at risk for future attacks than did those asked to describe how the attacks made them angry.

Work in social cognition since 1990 has also begun to explore the role played by culture, taking pains to study how social cognition operates around the world. In doing so, researchers have found that culture has a profound impact on the ways people think about their social world and the conclusions they then reach. Differences in culture also appear to extend even to perception of the physical world. For example, if people are shown a scene, North Americans are more likely to describe and remember central components of the scene. East Asian respondents, relative to their North American counterparts, are more likely to describe and remember the context surrounding those central components, better recalling peripheral details of a scene.

This different degree of attention paid to the center versus the context is echoed in social judgment. People from East Asia also tend to avoid the fundamental attribution error, more frequently emphasizing situational factors that may have produced a person's behavior, in contrast to what is emphasized by their North American counterparts. In essence, people from East Asia tend to emphasize the surrounding situational context in their explanations for the behavior of other people, whereas North Americans tend to emphasize the central actor.

Finally, social cognition research since 2000 has increasingly delved into the neurophysiology of social thought, examining the brain structures that support judgments and decision making. By using such techniques as fMRI (functional magnetic resonance imaging) or ERP (event-related brain potentials), psychologists can determine which neural structures in the brain are active as people reach decisions. For example, people who possess negative implicit attitudes toward ethnic groups different from their own (as measured by the implicit association test described above) show more activation of the amygdala, a part of the brain associated with emotional learning and evaluation.

Studies of this type have also begun to map different neural routes that people take to reach conclusions about their social world. In a study on moral judgment by Joshua D. Greene and colleagues (2001), participants were asked how they would respond to the following two moral dilemmas. One dilemma concerned whether participants would switch the track that a train was traveling on to keep it from hitting and killing five people, knowing that the train on its new track would unfortunately kill one other individual. The second dilemma concerned whether participants would push a person in front of a train, killing him, in order to stop the train from killing five people further down the tracks. Although the two scenarios share the same overall structure (i.e., sacrificing one person to save five), people tend to reach different decisions about how to act, being more likely to switch the train track in the first scenario than to push the person onto the tracks in the second.

Participants also tend to reach these decisions via different neural routes. Participants in this study appeared to solve the first dilemma in a calculated system 2 way, analyzing the benefit of switching the train track. In support of this observation, fMRI measurements suggest that as people considered the scenario their parietal lobes, as well as the right middle-front gyrus, were active—areas associated with the "working memory" people use as they think through a decision. In contrast, people appeared to solve the second dilemma by going with their initial emotional reaction, with brain areas associated with emotion (e.g., the right and left angular gyrus, the bilateral posterior cingulate gyrus, and the bilateral medical frontal gyrus) being most active.

CONCLUDING REMARKS

Social cognition is a vibrant area of research. Its influence is also increasingly felt in other scientific and professional disciplines, as scholars in medicine, law, business, education, and philosophy comb its insights to provide knowledge to address questions in those areas of endeavor. In a sense, this vibrancy should not come as a surprise. Every day, people expend a great deal of effort in social cognition, trying to make sense of themselves and the people around them. It is a safe bet that they will never find a point in their lifetime when they can stop doing this task. If this is true of people in everyday life, then it must also be true of the social cognition researcher, who, after all, is also just trying to make sense of what other people do.

SEE ALSO *Attitudes; Attribution; Cognition; Decision-making; Perception, Person; Prototypes; Stereotypes*

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David Dunning

SOCIAL COGNITIVE MAP

In their 1985 study Robert B. Cairns, Jane E. Perrin, and Beverly D. Cairns defined the Social Cognitive Map (SCM) procedure as a peer-report method for identifying social groups of children or adolescents in school settings. The SCM procedure, originated by developmental psychologist Robert Cairns, involves three distinct steps: collecting peer reports of social groups, aggregating those peer reports in a single matrix, and analyzing similarity patterns in the matrix to identify peer groups.

To collect peer reports of groups, each participating youth is asked: "Are there any kids here (at your school/in your classroom) who hang around together a lot?" The question can be posed during an individual interview or with a group administered questionnaire. In either case respondents are encouraged to identify each member of as many groups as they can recall. Sometimes a roster of peers in the setting is provided to facilitate recall, but respondents are never required to classify all peers into groups. Each respondent's report can be considered the individual's "social cognitive map" of the setting. These individual social cognitive maps are aggregated into a symmetric matrix containing one row and one column for each individual in the setting, regardless of whether or not the individual provided a report of groups. Off-diagonal cells summarize conominations: For example, the total number of times that individuals i and j were named to the same group is placed in cell c_{ij}. Each cell along the diagonal (e.g., c_{ii}) contains the total number of times that an individual was named to any group. Algorithms are applied to the conomination matrix to identify dyads that interact more than one would expect by chance or to identify peer groups. Developmental psychologists typically have identified groups based on similarity in conomination patterns

(e.g., intercorrelating the columns of the conomination matrix, then using decision-rules or standard data reduction procedures to identify group structures), but software developed for social network analysis provides a wide range of alternative group-detection algorithms.

The SCM procedure is based on two assumptions: first that there is some degree of consensus among youth regarding peer affiliation patterns, and second that youth are expert participant-observers in peer social networks whose reports have some connection to observable interaction patterns. These assumptions have been validated in several empirical studies. For example, conomination matrices routinely reveal greater than chance levels of agreement among peer respondents; and observational studies document that youth interact with members of their SCM-identified peer groups at rates three to four times higher than with other same-sex classmates.

The SCM procedure focuses on identifying relational ties linking individuals in a setting, which distinguishes it from widely used peer-report methods that focus on measuring the status or behavior of individuals (Cairns 1983). For example aggregating respondents' reports of peers whom they "like most" and "like least" yields powerful measures of peer acceptance and rejection, respectively; and aggregating respondents' nominations of peers who match specific behavioral descriptors (e.g., "starts fights") provides robust measures of aggression. It is possible to derive individual-level measures from the SCM conomination matrix, but the SCM procedure's most unique feature is its explicit focus on relational ties and structures.

Among methods for assessing relational ties among peers, the advantages and disadvantages of the SCM procedure are best understood in the context of alternative procedures. Direct observations have face validity and can produce dense interaction matrices for analysis, but they are costly to gather and may be impractical among older youth because researchers typically lose access to important settings for peer interaction. Self-reported friendships or social groups provide unique information on subjectively valued relationships, but they are vulnerable to self-enhancement biases and result in missing data when individuals decline to participate. There is little data documenting the validity of teacher and parent reports of youths' school-based peer relationships.

In this context the SCM approach has several notable strengths: The necessary data is relatively inexpensive to collect; the multi-informant method produces dense conomination matrices that provide a robust basis for applying a wide range of social network analysis tools (Gest, Moody, and Rulison 2007); and the resulting peer group structures capture reliable and valid patterns of relational ties among all members of the network, even those who do not provide individual reports.

SEE ALSO *Adolescent Psychology; Friendship; Identity Matrix; Peer Effects; Peer Influence; Self-Enhancement*

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Scott D. Gest

SOCIAL COMPARISON

A simple but powerful insight about how people evaluate themselves is that these evaluations often result from comparisons with others. How do people know if they can run fast? Do they run around a track and simply examine their times? No, they compare their times with that of others. How do people know if their opinions are correct? Is there an objective standard to which they can turn? No, people are likely to consult the views of those around them and conform to the majority view.

A THEORY OF SOCIAL COMPARISON PROCESSES

Although an age-old idea and variously found as a building block for many theories of social behavior across disciplines, this insight was first systematically thought through by the social psychologist Leon Festinger in his now classic 1954 paper, "A Theory of Social Comparison Processes." Festinger pointed out that most judgments about the self, in the absence of objective criteria, must be based on social comparisons. In fact, he claimed that this lack of objective criteria was the typical state of affairs, leading to the conclusion that much of what people infer about themselves has relativistic roots.

Festinger also posited a human drive to self-evaluate because accurate self-evaluation should be adaptive. It was to the human organism's benefit to know its abilities accurately and to assess the prevailing attitudes of others.

Another claim of the theory was that similar others are sought for self-evaluation because they are most useful

for accurate self-evaluation. More precisely, people prefer comparisons with others who are similar on attributes that are relevant for the comparison. A male high school student would not compare his running time with that of an inexperienced, female middle school student. He would use the running times of other male runners of similar age and training. Likewise, with regard to opinions, people seek out and usually conform to the opinion of people with whom they share important group characteristics.

Festinger's claim for the adaptive implications of seeking social comparisons fits well with evolutionary psychology. Ranking on various characteristics often determines survival and access to resources that lead to reproductive success. Human beings, by this logic, should be highly attuned to social comparisons and the variations in rank that they reveal.

ADVANCES IN SOCIAL COMPARISON THEORY

Social comparison theory has evolved in a number of directions. Philip Brickman and Ronnie J. Bulman (1977) pointed out that the potentially weighty implications for the self resulting from social comparisons mean that these comparisons can produce both pain and pleasure. Upward social comparisons, with individuals who are superior to oneself, can often undermine feelings of self-worth. Such social comparisons might often be avoided as much as sought. Downward social comparisons, with individuals who are inferior to oneself, may bolster feelings of self-worth. Social comparisons of this sort may be sought and savored. Thus, because of either their self-threatening or bolstering effects, social comparisons may serve as much to protect or enhance the self as to further accurate self-evaluation.

Brickman and Bulman focused largely on the pain of inferiority and the pleasures of superiority, but more recent thinking emphasizes that people are quite capable of having either positive or negative reactions to both upward and downward social comparisons. One might suppose that upward comparisons would typically lead to contrast effects, that is, the conclusion of relative inferiority. But partly because of robust judgmental biases allowing individuals to construe themselves as better than they are, an upward comparison can actually boost self-evaluation. In this sense, people assimilate toward the social comparison target, enhancing self-views. Also, one might think that downward comparisons would typically lead to contrast effects and the conclusion of relative superiority. But, downward comparisons, despite self-serving biases, can also produce assimilation effects. This might occur when another person's inferior status suggests a similar fate for oneself, producing anxiety rather than a pleasing sense of superiority.

What determines assimilation versus contrast? Perceptions of control seem to be especially important. In the case of upward social comparisons, if people believe that another's superiority suggests something attainable, then pleasing assimilative reactions can occur. If the superiority suggests an unattainable goal, however, then displeasing contrastive reactions should result. Thus, a freshman might look at the success of a senior as hopeful indication of what he or she might end up achieving; but an underachieving fellow senior might experience this comparison in a depressive, contrastive fashion. Indeed, one way of suggesting how much social comparisons influence everyday life is to note the many emotions that people feel as a result of social comparisons, depending on whether the comparisons are upward or downward, contrastive or assimilative. Upward comparisons, when they produce contrastive effects can lead to the painful, often hostile emotions of envy, resentment, or shame. When they are assimilative in nature, they can lead to the pleasing, beneficent emotions of admiration and inspiration. Downward comparisons, when contrastive, can produce such emotions as pride and contempt; when they are assimilative, they can produce worry, fear, or pity.

Social comparison processes continue to find a central place in many efforts to explain social behavior. One example is the vast amount of influential research inspired by social identity theory (Tajfel and Turner 1979), which assumes that a large part of a person's identity follows from social comparisons between in-group and out-group. Another example is the research on social norms and social influence (Blanton and Christie 2003). Yet another example is the extensive, developing literature on the implications of social comparison for subjective well-being and health (Buunk and Gibbons 1997).

Research and theorizing on social comparison processes continue unabated. Festinger's claims about why and how social comparisons influence people's self-evaluations has received considerable support and has moved far beyond its original scope. There is little doubt about the pervasive and foundational role of social comparisons in determining self-evaluations, in influencing people's behavior, and in shaping people's understanding of their experiences.

SEE ALSO *Cognition; Locus of Control; Motivation; Self-Esteem; Self-Perception Theory; Social Identification*

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Richard H. Smith

SOCIAL CONSTRUCTIONISM

The process of creating social reality by individuals, groups, or organizations in interaction with social structure is often termed social construction. Sociologist W. I. Thomas defined the concept of the situation as, "If men define situations as real, they are real in their consequences" (Thomas and Thomas 1928, p. 572). And this theorem demonstrates that human perceptions in large and small ways create the social world.

While individuals actively participate in creating social reality, simultaneously, they are influenced by social reality. Human behaviors, everyday interactions, and social life do not occur in random fashion; rather daily experiences in the social world are patterned based on the organizing of individuals, groups, and organizations. As Peter Berger and Thomas Luckman presented, "Society is a human product. Society is an objective reality. Man is a social product" (Berger and Luckman 1966, p. 61).

Different perspectives and research approaches are used to investigate social construction and its results. Social scientists have used the term *social construction* to emphasize how identity, roles, statuses, knowledge, and institutions are created and maintained relating with other members of society in socio-historical context. Postmodern theorists demonstrate how social reality is constructed by deconstructing in various ways what is taken as reality. For instance, some postmodern researchers deconstruct knowledge to demonstrate a totalizing general theory or an ultimate truth is misguided.

The creation of identity, the sense of self, demonstrates how the social construction works at the individual level, how significant it is to an individual in various contexts, and how individual identity creation is a reflection of social structure. Individual identity is formed by social processes in different socio-historical contexts. So identity can be fluid, situated, multidimensional, and interactive between individual consciousness and social structure. Identity is created, re-created, and maintained by reacting upon the given social structure and personal characteristics.

Social psychological studies have focused on how social structure intersects with individuals' construction of identity. Many studies focus on people experiencing identity struggles, especially managing lower status in the hierarchical order of social life. For example, creation of sexual identity in relation to majority culture is complicated and is a particular struggle for those belonging to marginalized or stigmatized groups, such as homosexuals. It is through interacting with others and by learning cultural norms and values that individuals become aware of which sexual identity is desirable and appropriate in society. Thus, for homosexuals, construction and maintaining of their sexual identity is the socio-political process of obtaining legitimacy.

Social scientists have incorporated various types of research methods to explore the process and consequence of social construction. These include in-depth interviews, participant observation, ethnomethodology, documentary-historical studies, discourse analysis, experiments, and surveys.

SEE ALSO *Interactionism, Symbolic; Sociology, Micro-*

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Hyejin Iris Chu

SOCIAL CONSTRUCTS

Social constructs or social constructions define meanings, notions, or connotations that are assigned to objects and events in the environment and to people's notions of their relationships to and interactions with these objects. In the domain of social constructionist thought, a social construct is an idea or notion that appears to be natural and obvious to people who accept it but may or may not rep-

resent reality, so it remains largely an invention or artifice of a given society.

Games are an example of socially constructed entities and often exist because of certain sets of conventional rules. These sets of social conventions and agreement to abide by them give games their meaning in any given social context. The game of football could be played in any way, but there have developed over the years known conventional rules governing the players, spectators, and the game's organization. The meaning given to games is therefore socially constructed.

Gender, which represents ways of talking, describing, or perceiving men and women, is also a socially constructed entity. Generally distinguished from sex (which is biological), notions of gender represent attempts by society, through the socialization process, to construct masculine or feminine identities and corresponding masculine or feminine gender roles for a child based on physical appearance and genitalia.

Social class is yet another socially constructed entity. While most scholars agree that class appears to represent a universal phenomenon, its meaning is often contextually located because what determines class varies from one society to another, and even within a culture different people may likely have different notions of class determinants.

Depending on the constructionist perspective, social construction may be the outcome of human choices rather than of immutable laws of nature. Here, then, lies the core issue over which social scientists diverge. Are human ideas and conceptions generated more on subjective criteria than on objective realities? Debates have raged in the social sciences along the divide of science versus objective truth. In the social construction of reality, the question has often been asked: To what extent is our claim to knowledge supported by reality? In other words, to what extent is this claim a social construct? Some writers believe that to the extent that knowledge is aligned with reality, it approximates objective truth; anything less represents a social construct. According to this thinking, even morality is a social construct. However, others believe that all knowledge is social construction.

The basis of this debate—in fact the point of departure among scholars—is the claim that social constructions are based on social facts and surrounding social conventions. Thus constructions based on "facts"—facts that are not ontologically dependent on the social structures and conventions of society—are not. However, Ian Hacking (1999) believes that there are few if any "universal constructionists," in which case few people would argue that the sun or DNA are socially constructed, existing entirely independently of that construction. On the contrary, the social arena is quite different, as vital social realities are socially constructed, existing by virtue of that social construction by people over time and space. This seeming narrow threshold between scientific construction and social constructs presents problems in social analysis—indeed hard nuts that need to be cracked and cracked satisfactorily.

In the resulting ongoing science wars, one side argues that scientific results, including even those of basic physics, are socially constructed. Others protest, arguing that these results are usually discoveries about our world; they are not the production of society but exist independently of consciousness. However, some sociologists, such as Barry Barnes and David Bloor (1982), have taken a relativist view of social construction, claiming that any notion is as good as the other. Thus, for instance, if a new social construction of the Holocaust emerges, arguing that claims about Nazi extermination camps are exaggerated and that the gas chambers are a fiction, that view may well then be at par with other beliefs about the same phenomena, though this may represent historical revisionism. Nevertheless, the fact remains that constructionists attempt to sort out their notions and beliefs using standards of their own convictions and culture.

Peter Cohen (1990), in his discussion of drug use as a social construct, argues that concepts used to describe and explain the phenomenon of drug use are surrounded by bias, a bias produced by a cultural dependency rather than drug use itself. The so-called scientific analysis of drug use, he argues, has often been used as an instrument for survival of the most powerful; power is not only relevant to decision making and resource allocation but also to the social construction of ideology and morality. Scientific constructions and concepts are thus developed according to the interests and tastes of people in power (a trend that is inescapable though may not be justified), and so these constructions often fit into conventional standpoints on topics of research.

The implications of these varying constructionist positions is that, once again, it is not often clear what is, or what should be, socially constructed. Radical constructionism best underscores this basic problem in social construction. Radical constructionists are concerned, for instance, with the domain of technology, with showing how social processes affect the content of technology and what it means for technology to be seen as working. They claim that the meaning of technology, including facts about its workings, are themselves social constructs. Similarly, on the social construction of reality, radical constructionists believe that the process of constructing knowledge regulates itself and that knowledge is a self-organized cognitive process of the human brain, a construct rather than a compilation of empirical data. If this is so, it is impossible to determine the extent to which knowledge reflects an ontological reality.

The problem of social construction has become more pronounced in different constructions of race based on diverging claims on racial distinctions. For instance, while William A. Darity Jr. (2003) has argued that race does not exist because there is no biogenetic basis for racial classifications, studies from Stanford University tend to contradict this claim by suggesting that the way people classify themselves by race reflects real and clear genetic differences among them. They argue that people of different races, even within the same population, have different ancestries, meaning that different genes are inherited from ancestors. However, Hacking (1999) insists that research studies have tended to challenge the idea of race by presenting evidence that the scientific basis for racial distinctions is based on shaky grounds.

Attempts to confine race to social construction appear to be based on the potential dangers of emotions that may be triggered by suggestions that racial differences reflect meaningful biogenetic differences. This has meant that some experts are inclined to publicize the idea that race does not exist. For instance, the *New England Journal of Medicine*, a prestigious medical journal, editorialized on May 3, 2001, "In medicine there is only one race, the human race."

But as a social construct, connotations of race change as social, political, historical, and economic structures of society change. Rodney D. Coates (2004) argues that notions of race are created for people to fit into, to raise consciousness in line with conceptual boxes so created, and often to generate racial outcomes, for instance, notions of racial inequality to produce racial superiority. He observes that the construct "black" has in fact changed over time and space, and he questions whether our conceptions of "blacks" have correspondingly changed with the lived experiences and reality of blacks. This invariably reveals the dynamic nature of social reality. If constructions of this lived reality fail to reflect that dynamism, it may become an invalid analytic or discursive unit, that is, a unit or object of analysis or discussion and debate.

Stephen Spencer (2000) has further asked: If race is a social construct, of what is it precisely constructed if not the scientifically invalid false consciousness of biological race? He argues that it is as necessary to problematize the social construction of race as it is to question its scientific construction. He concludes that for those who believe in biological construction of race but not in its social construction, the basis of their construction has an underlying biological conception, whether or not they admit that. Such constructions often create false consciousness, producing uncertainty as to what are or are not social differences and ultimately creating a new consciousness, a new social reality.

These questions highlight the problem of what is and what is not a social construct. The answer may well lie in the fact that it all depends on the researcher's politics, theoretical orientation, discipline, position in the class structure, or cultural context. It remains that people may often attempt to justify self-serving definitions, but this raises yet another fundamental question: Can this alter consensus on the validity of concepts? It is apt at this point to note that the use of invalid concepts in social research, public discourse, or policy debates may in fact lead to reification. However, in scientific construction, researchers must move outside the boxes of existing notions of matters of investigation to evaluate and analyze issues on such matters from radically different assumptions, even the assumptions of their disciplines (Coates 2004).

SEE ALSO *Communication; Critical Theory; Femininity; Gender; Linguistic Turn; Masculinity; Meaning; Race; Social Theory*

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SOCIAL CONTRACT

A social contract is an agreement that can explain and justify a citizen's rights and responsibilities. It can also give an account of our moral obligations and the legitimacy of the state. Social contract theory explores the scope, content, role, and possible justification of any such social contract.

In his dialogue *Crito*, Plato (c. 427–347 BCE) illustrates the power of the notion of a social contract. He depicts Socrates (c. 469–399 BCE) arguing against escaping his prison cell on the eve of his execution. His voluntary residence in Athens and acceptance of the benefits of Athenian society, Socrates claims, show he has implicitly agreed to do the state's bidding—including accepting its unjust death sentence.

Writers often describe the state of nature as the human condition outside political society. Thomas Hobbes (1588–1679) famously argued that the state of nature is a state of war where life is "solitary, poor, nasty, brutish, and short" (1968, p. 186). Without any settled conceptions of justice, people come to universal and violent conflict. In *Leviathan* (1651) Hobbes describes how individuals secure safety and prosperity only by agreeing with one another to submit themselves completely to an absolute sovereign power. Despite his authoritarian conclusions, Hobbes is one of the founders of the liberal political tradition, which traces political legitimacy and political obligation to the free consent of the governed.

John Locke (1632–1704) denied that the state of nature is necessarily a total war but admitted it has inconveniences (e.g., unfair enforcement of the law of nature). People thus agree to a limited state whose right to rule they may rescind if it is abused. Lockean liberalism thereby justifies a right of revolution. Not all subjects explicitly agree to a state's rule, so Locke argued that residence in a state's territory is implicit consent to the state's authority. Later commentators, such as David Hume (1711–1776) and, more recently, A. John Simmons (b. 1950), criticized the idea that such tacit consent can make a state legitimate or obligate individuals to obey the laws.

Jean-Jacques Rousseau (1712–1778) believed that both Hobbes and Locke built distorting effects of civilization into their accounts of the state of nature. In Rousseau's view, civilization introduces all pernicious inequalities (such as in wealth and status), so society should fashion a social contract in order to secure human freedom. The "general will" is properly sovereign; it wills neither private goods nor aggregates of them but wills the common good. Individuals who then voluntarily will the general will best realize their own freedom by sharing in the public good.

More recently, John Rawls (1921–2002) rooted a theory of justice in a social contract whose participants are in an "original position" marked by a fair bargaining situation. Behind a "veil of ignorance" where they are denied knowledge of morally irrelevant features about themselves such as race, sex, class, or religion, individuals unanimously select two principles to govern the basic structure of society. First, everyone has an equal right to maximal basic liberties consistent with a similar amount for all others. Second, once fair equality of opportunity is secure, any inequalities in social and economic goods must advantage all—especially the least well-off.

Contemporary social contract scholarship explores the scope, number, and power of the agreements. Scholars consider, for instance, whether the social contract is national or international, whether participants are actual or hypothetical persons, and whether and how the contract includes nonhuman animals and the disabled.

SEE ALSO *Liberalism; Locke, John; Rawls, John; Rousseau, Jean-Jacques; Sovereignty*

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SOCIAL COST

Social cost and social benefit constitute two parts of one phenomenon. They reflect the effect of an economic activity of someone (producer or consumer) on the economic position of someone else who is not directly involved in that activity. Any individual economic decision, and its resulting activity, implies cost in terms of an opportunity foregone, such as opportunity cost. For instance, the labor used for the production of "x" excludes its use for the production of "y." If the activity causes cost to a third party, this cost must be added to the privately

borne opportunity cost. An activity that benefits a third party's economic position may be defined as a negative cost. The sum of the private cost and the third-party cost is the social cost. The concept of social cost results from economic interdependence.

THE DEVELOPMENT OF INTERDEPENDENCE

British economist Alfred Marshall (1842–1924), in his *Principles of Economics*, introduced the interdependence phenomenon as "external economies." Marshall restricted himself to production. For example, external economies concern a localized industry that benefits from the neighborhood of a pool of skilled workers (Marshall [1890] 1920, pp. 266–267). The growth of an industry creates a pool of skilled workers that changes the production technology and its costs. Marshall also gave an external-diseconomies example: "English miners have opened out mines of ore which diminished the foreign demand for many of England's products" (Marshall [1890] 1920, p. 274). English miners and mechanics have aided foreign countries to compete successfully with England's products. For England its reduced competitiveness will be seen as negative external economies.

In 1931 economist Jacob Viner (1892–1970) launched a distinction in the term interdependence that is relevant to the concept of social cost; technological versus pecuniary external effects. A technological external effect concerns the indirect effect of an activity on consumption bundle, utility function, or production function of someone else. Marshall's skilled-workers example regards a technological external effect. It implies that privately borne marginal costs differ from social marginal costs. Marginal cost is the extra total cost of an additional unit of production. The disparity between private and social marginal cost results in inefficiency, as the economic decision does not take into account all the relevant costs. Efficiency will be reached if marginal benefits equalize marginal costs, without ignoring the social marginal cost (both positive and negative) on others. The equality concerned is called a Pareto-efficient social-welfare situation. It is a social welfare optimum in which it is impossible to improve someone's welfare without harming the welfare of someone else. Therefore, disparity between private and social cost offers room for Pareto-efficient changes. Social welfare may profit from changing production or consumption until private marginal costs and social marginal costs are equal to each other, without a loss for anyone. This demonstrates the relevance of the concept of social cost.

A pecuniary external effect concerns an activity of some that has a direct impact on the market prices of others. Person A's purchase may increase Person B's input prices. It is similar to a zero-sum game: A's benefit is B's loss. Marshall's miners example is a pecuniary effect. Pecuniary external effects concern redistribution of rent, irrelevant to the concept of social cost. However, in an international context this redistribution may result nationally in welfare effects and social cost.

EXTERNAL EFFECTS THAT RELATE TO SOCIAL COST

In the 1920s British economist Arthur C. Pigou (1877–1959) formulated a remedy to welfare inefficiencies due to inequalities between private and social marginal cost. If private marginal cost exceeds social marginal cost, there is a positive external effect. A subsidy that equalizes private and social cost enables governments to prompt social welfare. For instance, the privately borne cost of education may exceed its social cost due to the social benefits of education, i.e., negative social costs. A subsidy to the education consumer will prompt education, equalizing private to social cost, enhancing Pareto-efficiency. The subsidy will induce additional activity that promotes social good. In the reverse case, there is a negative external effect that ought to induce governments to levy a tax on the activity that causes a negative effect on society.

The Pigovian procedure is beset by a multitude of difficulties. First, the discrepancy between private and social cost depends on the scope of the external effect. Should future generations be taken into account as being part of the harmed or favored third party? Second, cost differs substantially over time. In the short run it is hard to adapt to an effect. Therefore, in the long run the cost issue of an external effect will weaken. Third, costs and benefits pertain to individuals who may value these in a subjective manner. This subjectivity blocks an objective aggregation.

Even a compensation test in which winners compensate losers is not possible without a normative element. After compensation, winners as well as losers might reverse their valuation. While applying the compensation test, a normative assumption about the distribution desired must be made. All these implementation difficulties turn the Pigovian welfare device in what, later on, economist Ronald H. Coase (b. 1910) typifies as "blackboard economics" (Coase 1988, p. 19). Pigou does not take the informational problems into account that surround his proposal. In particular, the tax-subsidy instrument becomes arduous because of diffuse external effects.

Nevertheless, the Pigovian approach is a popular line of thought in designing public policy. In particular cost-benefit analysis endeavors to cope with the measurement and aggregation problems discussed, making explicit the integral (net) sum of private and social cost. Such an analysis may, for instance, imply an appraisal of the negative social cost of safety investments in terms of the cost of a human life.

THE PROBLEMS OF SOCIAL COST

In 1960 Coase wrote *The Problem of Social Cost*, a paper that addressed the basic cause of the discrepancies between private and social cost. Why do markets fail to bring parties together that might be mutually profitable? For instance, Person A's activity inflicts a harm on Person B. It is in line with the Pigovian approach to tax Person A, to prohibit A's activity, or to make A liable for the harm inflicted on Person B. However, according to Coase, this "traditional approach has tended to obscure the nature of the choice that has to be made" (Coase 1960, p. 2).

The choice in the social-cost issue is a reciprocal choice. For example, to prohibit Person A's activity will certainly favor Person B, but, simultaneously, it will harm A. If A's activity brings in a benefit of $50, and if this activity harms B for $20, banning A's activity is socially inefficient. This perspective opens new insights. Person A's activity and Person B's harm should be formulated in terms of property rights. Consequently, A and B will start negotiations about their conflicting rights. A market emerges, and the social-cost concept turns out to be irrelevant. A precondition is that the transaction cost is zero. This is the Coase Theorem in a nutshell.

His theorem aims to underline that in reality, transaction cost is positive. In particular, transaction cost will be substantial if great numbers of parties are involved in an external effect. These abound in modern industrialized economies (e.g., air pollution due to production and consumption). The Coasean program aims to design social arrangements that internalize social cost and minimize transaction cost. Internalized social cost will be borne by optimizing economic agents and, consequently, minimized. The Kyoto Protocol in 1997, which established CO_2-emission rights among nations, is such a social arrangement. Trade on emission rights has emerged, which reduces social cost.

SEE ALSO *Coase, Ronald; Coase Theorem; Cost-Benefit Analysis; Externality; Welfare Analysis; Welfare Economics*

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SOCIAL DEVIANCE

SEE *Deviance.*

SOCIAL DISTANCE

SEE *Social Isolation; Tolerance, Political.*

SOCIAL DOMINANCE ORIENTATION

Social dominance theory proposes that humans have an evolved tendency to form group-based social hierarchies because such social structures were adaptive in evolutionary history. Influenced by Marxism, the theory observes that group-based hierarchies are cross-culturally universal and are stratified according to three criteria: age, gender, and arbitrary-set group memberships, including socially constructed categories such as ethnicity and social class. Social dominance theory describes how sociostructural, psychological, institutional, and ideological factors interact to produce and maintain hierarchically organized social structures that foster discrimination and oppression within society.

Social dominance orientation is the psychological component of social dominance theory. According to Jim Sidanius and Felicia Pratto (1999), social dominance orientation reflects the degree to which people are predisposed to achieve and maintain hierarchically organized social structures in which some groups dominate and have more power than others, versus social structures in which all groups are equal and no one group has more power than any other. This global orientation encompasses the competitive-driven motivation to achieve and maintain group-based dominance and unequal power relations between any given set of social groups, regardless of the particular categories or characteristics used to define those groups (e.g., gender, ethnicity, social class). Social dominance orientation is measured by assessing the extent to which people agree with ideological/attitudinal items such as "Some groups of people are simply inferior to other groups" and disagree with items such as "No one group should dominate in society."

Social dominance theory states that the motivation for group-based dominance and superiority (indexed by

social dominance orientation) is a proximal cause underlying the many different manifestations of prejudice and discrimination (e.g., sexism, racism, homosexual prejudice), and also explains why some people are more likely to seek out positions of power and status. Consistent with this perspective, research demonstrates that people who are prejudiced toward one group will also tend to be prejudiced toward other (often unrelated) groups, and that the generality of prejudice toward multiple groups is reliably predicted by individual differences in social dominance orientation. These effects occur because, regardless of qualitative differences in content, prejudice and related ideologies (such as meritocracy and cultural elitism) function as legitimizing myths that produce and maintain hierarchically organized social structures. Accordingly, group-based hierarchies should tend toward stability to the extent that such ideologies are consensually shared across both dominant and subordinate groups within society (a phenomenon referred to as behavioral asymmetry).

Social dominance orientation explains an aspect of prejudice that is not accounted for by other constructs, such as right-wing authoritarianism or political conservatism. Individual differences in social dominance orientation are caused by a combination (and possible interaction) of biological factors (men are typically higher in social dominance orientation than women), sociostructural factors (group membership and exposure to competitive social environments), personality or temperament, and schematic beliefs about the competitive (versus cooperative) nature of the social world. Although there is some debate regarding the extent to which social identity might contextually activate social dominance orientation, most researchers nevertheless agree that the orientation functions as a mechanism through which the aforementioned factors produce individual differences in prejudice and hence institutionalized discrimination and oppression.

SEE ALSO *Authoritarianism; Conservatism; Cults; Discrimination; Elitism; Evolutionary Psychology; Groups; Hierarchy; Identity, Social; Marxism; Measurement; Meritocracy; Prejudice; Racism; Scales; Sexism*

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SOCIAL ECONOMY

The social economy is generally taken to be a third sector of mixed capitalist economies distinct from the private and public sectors. The social economy is based on cooperative, not-for-profit, and voluntary rather than paid activities carried out within communities, across national economies, and internationally. It is variously referred to as the *nonprofit sector*, the *économie sociale*, and the *Gemeinwirtschaft*, and has a long history coincident with the rise of market economies (Nitsch 1990).

The social economy is defined by the collection of different social objectives of the various organizations that make it up. According to the European Commission, social economy organizations are classified as cooperatives, mutual societies, voluntary organizations, foundations, and social enterprises. All are based on voluntary participation and membership, and are guided by their social objectives rather than a need to make a return on capital. Many social economy organizations simply deliver services to their members or others they aim to serve without making use of the market. Other social economy organizations, known as *social enterprises*, engage in trade activities in order to benefit their members or those they serve. In this latter case, any surpluses or profits earned are reinvested in the enterprise, distributed to stakeholder groups, or used for the benefit of those served by the enterprise. Governance typically operates through the "one member, one vote" principle or through enterprise trustees.

A diverse range of examples of social economy organizations includes building and mortgage societies, credit unions, charities and philanthropic organizations, neighborhood organizations and community groups, trade unions, insurance mutuals, sports associations, hospitals, self-help groups, school organizations, religious groups, environmental groups, arts groups, clubs of many kinds, political organizations, producer cooperatives, trade and professional associations, and job-training organizations.

Recognition of the economic importance of social economy enterprises—treated as nonprofits in the economics literature—is relatively recent (e.g., Rose-Ackerman 1986; Weisbrod 1988; Ben-Ner and Gui 1993). But social economy enterprises, or nonprofits, are now seen to play significant economic roles in addressing needs unmet by the private and public sectors, competing with for-profit enterprises, enhancing economic productivity, improving delivery of public services, promoting economic and social development, and providing employment. In addition, because worldwide trends are toward both increasing services production and privatization of government services, social economy or nonprofit enterprises, many of which address these domains, are likely to play larger economic roles in the future. This is reflected in more explicit recognition of the social economy in the

national economic policies of many countries, including the United Kingdom, Spain, France, Canada, and a number of Latin American countries.

SEE ALSO *Associations, Voluntary; Community Economic Development; Development; Foundations, Charitable; International Nongovernmental Organizations (INGOs); Justice, Social; Nongovernmental Organizations (NGOs); Philanthropy; Social Capital; Volunteer Programs; Volunteerism*

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SOCIAL EXCHANGE THEORY

While the general study of market exchange is the domain of the discipline of economics, the social, interactional components of exchange (in a market context or not) interest other social scientists. As German sociologist Georg Simmel noted: "Exchange is not merely the addition of the two processes of giving and receiving. It is, rather, something new. Exchange constitutes a third process, something that emerges when each of those two processes is simultaneously the cause and the effect of the other" ([1907] 1971, p. 57).

Noneconomic investigations of exchange appeared in anthropology in the 1920s. For example, in 1922, Bronislaw Malinowski published a study of islander life that analyzed status components of exchanges that were different from (although related to) simple consumption or material interests. Other anthropological studies followed that emphasized the importance of gift giving and reciprocity for the maintenance of cohesive relationships.

A series of sociological and psychological studies of exchange emerged in the 1950s. George Homans adapted behavioral or operant learning tenets to describe behavior among individuals. Because operant principles emphasize how individuals act on the basis of previous experience, Homans's formulation also focused on the past as predictive of future behavior. He presented human exchanges as involving rewards and costs and argued that people responded to these exchanges so that benefits outweighed costs. Somewhat different from Homans's approach, Peter Blau developed a more economic framework in his exchange formulations. So, for example, in his analysis of bureaucracies, he pointed out that people compete for scarce resources and trade different social commodities (such as advice).

In psychology, John Thibaut and Harold Kelley developed their theories of social power that involved the idea that the amount of power one individual or group possesses is determined, in part, by the alternatives present. Thus, individuals gauged whether to engage in exchanges dependent upon the value of the exchange itself and if alternatives were available. Alternatives also affected the way comparisons among activities were perceived; that is, what was experienced in the past affected how attractive or unattractive a particular option appeared.

Richard Emerson's formulation of power-dependence theory in social relations took these previous conceptualizations and developed an overarching theory. It specified a relational aspect to power that placed the exchange relation as central. Power was inversely related to dependence: For a given exchange relation, the more powerful an individual or group, the less dependent on the relation. Further, Emerson's theory posited a continual balancing mechanism in exchange relations. If people had power, they used it because it gave them advantage. But, if power was used, it was (incrementally) lost. This shift of power leads to *balancing*.

Further distinctions in different kinds of exchanges emerged in work that followed. Specifically, Linda Molm distinguished two types of exchanges that had different properties. Negotiated exchange involves bargaining and negotiation and then agreement upon the terms of the exchange. In contrast, reciprocal exchange does not involve negotiation but, instead, is comprised of individual acts performed for an other or others without knowledge about future reciprocation. Given equivalent costs and benefits, reciprocal exchanges generate more trust and affect than do negotiated exchanges. Part of the reason for this is that, at least under some conditions, risk generates trust.

Molm investigated coercive power in these nonnegotiated exchanges as well. Coercive power (in the sense of punishing others) is seen by participants as intentional and most likely to be used when an actor has little reward power. This is probably the case because coercion is risky and can decrease the possibilities of future beneficial exchanges. So, even though punishment can be an effective strategy if it is consistently and contingently applied, actors do so relatively infrequently.

While there are differences between negotiated and reciprocal exchanges, there are similarities as well. One important similarity rests with the negative emotion that can be generated with power use. For example, the conflict spiral, a theory about bargaining processes, documents that unequal power, even without punishment, can produce negative emotion.

Much of the research on negotiated exchange has focused upon the idea of alternatives to valued resources and so has considered exchange networks. Relative power of positions in simple networks can be analyzed by calculating the alternatives to a given position. Depending upon the number and extent of alternatives within the network, different kinds of relationships can be defined. Particularly important for the exercise of power is the ability to exclude others. The network then can define strong, equal, or weak power. There have been a number of attempts to find methods of predicting power in networks that vary in structure and size. There is the graph theoretic approach, a game theory approach, and an expected value mode, among others.

Emotion is also implicated in the exchange process. The affect theory of social exchange, for example (see, in particular, Lawler 2001), maintains that while social exchange has an instrumental and individual function, the exchange itself involves a group product that fosters emotional, affective processes. While rational choice formulations had examined how commitment in exchange networks was fostered by uncertainty reduction, it has been demonstrated that affect, in and of itself, can also generate commitment. Productive exchanges provide particularly strong arenas for emotion. These exchanges occur in settings in which group members have equal power, coordination issues exist and must be solved, and interdependence of group members is necessary for production of the outcome.

While the study of exchange has always been important to group dynamics, the addition of emotion and notions of risk, trust, and uncertainty has transformed early investigations of simple cost and benefit. The transformations have expanded both the depth and scope of exchange formulations. For example, depth has been transformed by analysis of actors' strategies in the face of contingencies, and scope has been transformed by analysis of the network configurations under which exchange occurs. In this regard, different disciplines have contributed different insights to the study of social exchange: game theory in economics has focused upon strategies, anthropology has emphasized the cultural components implied in cohesive groups, psychology has investigated issues related to risk and uncertainty, and sociology has focused upon the network structure under which exchange occurs.

SEE ALSO *Blau, Peter M.; Groups; Norms; Reciprocity*

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Jane Sell

SOCIAL EXCLUSION

Social exclusion is less a single issue capable of empirical exploration than a way of viewing, or an orientation toward, society. The term itself implies on the one hand groups of people who are in some sense marginalized from society and on the other a societal mainstream composed of people who are not excluded. The range of excluded groups is very wide, extending from those subject to racism to older people, from those who are unemployed to those subject to homophobia, from those who are disabled to disillusioned youth, from the mentally ill to teenage mothers (Sheppard 2006).

There are, perhaps inevitably, an equally large number of definitions, although most contain the common "mainstream-marginalization" theme. The definition that perhaps best expresses the meaning of social exclusion was provided by the Child Poverty Action Group: Social exclusion "refers to the dynamic process of being shut out,

fully or partially from any of the social, economic, political and cultural systems which determine the social integration of the person in society" (Walker and Walker 1997). This definition gives the sense of being "outsiders," unable to participate fully in society, and that the problem was systemic, in that it involved—whatever the cause—social systems.

THE CONCEPT

Discussions of social exclusion reflect the effects of the great range of groups to which the term is applied. As a response to the conceptual difficulty of embracing such a range, one approach is to focus on a particular group, providing a "practical marker" for social exclusion. Unemployment, in particular, has provided such a focus, as it is regarded by many as the key issue liable to be associated with social exclusion, and also to be part of the situation confronted by many excluded groups such as the racially disadvantaged, disillusioned groups, and poor families.

The primary factor in social exclusion, from this perspective, is unemployment. At an individual level it has a profoundly demoralizing effect when sustained, and at societal level, it provides a threat to social cohesion and stability. The experience in pre–World War II Europe of the political effects of unemployment, and its association with the rise of fascism, provides a background in recent history of the societal threat presented to social order, both within and between [nation-] states. Late-twentieth-century structural changes in the European economies, which saw higher rates of long-term unemployment, fueled a concern for social inclusion policies (Commission for the European Community 1992).

In Britain, France, Germany, and the Netherlands, social exclusion policies have emphasized unemployment and reemployment. By this logic, policies promoting social inclusion should first and foremost be focused on reintegrating the unemployed into the workforce and enabling this to occur through appropriate economic and social measures. In doing so, such policies would be expected to have a secondary effect on other features of social exclusion. Unemployment often has been used as a practical "shorthand" for poverty, underlying a range of issues of social concern relating to poor workforce skills, low income, poor housing, high crime environments, bad health, and family breakdown (Atkinson and da Voudi 2000, p. 435).

A more abstract, and hence more embracing, notion has connected social exclusion and inclusion to the "realization of human potential." Individuals and groups suffer social exclusion to the extent that society does not offer them the opportunity to realize their potential. This notion of rights—that people have a right to achieve their potential, in conjunction with their fellow citizens—is embedded in the very heart of the European Union (EU). It takes precedence over, and makes sense of, some of the union's most fundamental aims: "economic and social progress," states the Comité des Sages, an official group of prominent experts from the EU whose task is to inform policy development, "must be subordinate to this aim" (1996, p. 26). It also links social exclusion with equality of opportunity. In Britain this was formulated by Chancellor Gordon Brown, who argued that everyone deserves to be given an equal chance to fulfill "the potential with which they are born" (1997). Poverty and unemployment could provide obstacles to this, but so could other disadvantages, which are multidimensional, such as health, disability, and age.

A range of responses could be made to these obstacles to inclusion and full social participation in the spheres of education, welfare, and the economic sector. For example, good educational provision, universally provided, provides a strong basis of opportunity for individuals to achieve their potential. All these strategies help promote an idea of "citizenship," which is closely associated with the realization of potential. Citizenship involves participation and involvement in society, and hence the realization of human potential becomes, in part, an active concept focused on social participation.

Education can actively enhance the capacity for citizenship. However, other provisions, for example, the range of welfare support, can counteract or ameliorate the effects of disadvantage that prevent individuals or groups from being citizens. Citizenship stands as a means for curbing the excesses of the market, particularly through the welfare state (Marshall 1963). Material issues of economic inequality are important in this respect, but so too are prejudice and stigma suffered by some groups, affecting their life opportunities, sense of identity, and self-esteem.

Social citizenship involves living "the life of a civilised being according to the standards prevailing in society" (Marshall 1963, p. 74; Kymlicka and Norman 1995). What, it is asked, do people need in order to participate in society fully as citizens? One approach is that of "passive recipient," in which professionals, as experts, identify and design responses to need. The doctor, counselor, or social worker is entrusted with ensuring that an individual's needs are met. An alternative—with more active involvement—emphasizes the capacity of citizens to define, and act upon, their own needs. This rebalances the relationship between service provider and recipient. The service user becomes the "expert" in assessing his or her own needs, and the service provider becomes the facilitator of the response to that need (Smale et al. 1993). This covers the individual level, but it can apply also to groups

or communities. In such a scenario, local communities come together in groups actively to improve their own lives, involving, say, community action in relation to run-down neighborhoods or local crime. When a group is active, they are taking up and enacting their rights as citizens. This notion of citizenship involves "realization of potential" in two respects. First, it becomes an aim of their actions, and second, it is embedded in the processes by which they seek to achieve these aims. As active citizens they are enacting their potential.

SOCIAL EXCLUSION AND THE PROBLEM OF ORDER

Human potential may underlie one aspect of social exclusion. Another aspect is the problem of order. One (politically liberal-left) approach relates social exclusion and social order to the notion of the "just society." Walter Runciman suggested that peoples' sense of justice, and hence their sense of grievance, arose in the context of reference groups (1972). They measure their own situation, and rewards, by reference to others whom they consider to be like them. For example, plumbers might compare themselves with electricians, and expect similar rewards, but be unworried by being rewarded less than doctors.

A sense of justice and fairness, and therefore of inclusion and exclusion, involves those to whom people make reference. They do so in two ways. First, there are groups within society with whom people compare themselves, and second, on a wider basis, the general wealth of their own society, and its distribution, provides a reference. No one expects standards appropriate to nineteenth-century European societies to provide a reference for those same societies in the twenty-first century.

Runciman argued that three principles could justify distribution of wealth and status: those of need, merit, and contribution to the common good. However, there should be a limit to the degree of inequality. Following John Rawls (1971), he argued that the test of inequality was whether it could be justified to the losers, and for the winners to do this, they must be prepared, in principle, to change places (Runciman 1972, p. 307). It is also a test for a sense of inclusion, because acceptance would indicate commitment to a set of common fundamental norms and expectations widely accepted in society.

A just distribution of resources, then, is necessary to avoid a sense of social exclusion liable to feed political instability. The danger presented by poverty relative to others is that it could lead to a feeling of exclusion "from normal living patterns" (Townsend 1979, p. 32) and hence of alienation from participation in social life. Poverty, therefore, is not just material but emotional. The promotion of social inclusion should be at societal level, including incomes policy, full employment, higher social security, and a more redistributivist tax structure.

A (liberal-right) alternative to this societal distribution approach is one that emphasizes personal responsibility. A range of writers (Murray 1994; Field 1996; Etzioni 1995, 1998) have expressed concern about the development of a "moral underclass" not committed to the values of mainstream society, which might have a corrupting impact on mainstream society. According to these writers, welfare dependency, high crime rates, single parenthood, teenage pregnancies, and a decline in traditional family values characterize this underclass.

Amitai Etzioni considered parenting deficits to be the underlying feature in the development of a moral underclass (1998): When parents do not commit themselves enough to their children, a moral deficit amongst the young emerges. Children from single-parent and broken (particularly divorced) families are particularly vulnerable. Etzioni emphasized the need for moral renewal based on socialization, which would create shared norms helping bind society together. The key agencies of this [re]socialization are education and child welfare. Policies supporting parents—including welfare-to-work and penalties for parents whose children are school nonattendees—also would encourage them to engage better with their moral responsibilities.

Charles Murray considered a large proportion of welfare-dependent families were in circumstances of their own making (1994). According to Murray, on the one hand, this group increasingly makes the wrong moral choices, including sustained unemployment, crime, and illegitimate childbirth; on the other, welfare policies, specifically social security benefits, create perverse incentives for them to remain welfare-dependent. For example, teenage pregnancy (and motherhood) is encouraged by the state's giving the impression that once a child is born, housing and other financial benefits will be made available. Social policy needs to be directed not just at resocialization at the personal level, but also in policies (such as low benefits) that are a disincentive to welfare dependency.

Although undoubtedly influential on government policy making (Prideaux 2005), Murray's concept of the underclass has been heavily criticized. The concept, it is argued, diverts attention from wider social, economic, and political causes of poverty (Williams and Pilinger 1996). A commonly accepted assumption about the underclass is that poverty is "intergenerationally transmitted" (i.e., that it passes down from generation to generation), but Murray has emphasized culture, and more recently genetics, as key factors (Fitzpatrick 2001). However, evidence indicates that the benefits bestowed by wealth (or disadvantages associated with its absence) and "networks of association"

(who you know) also are important features (Bartholomae et al. 2004). Where these facets are not recognized, the danger arises of "blaming the victim"—that is, erroneously presenting the victim's poverty, disadvantage, and welfare dependence as being his own fault (Ryan 1976).

Teenage pregnancy, an example of an issue of wide concern in developed countries, shows the impact of these two (liberal-left and liberal-right) orientations. It is associated with other social concerns—poverty, unemployment, criminality, and so on—and has a negative impact on life chances. Countries with social policies that reduce inequalities, including Norway, Sweden, and Holland, have the lowest rates of teenage pregnancies, whereas more unequal countries, such as the United Kingdom and United States, have much higher rates. Nevertheless, even countries that have been only moderately successful at reducing teen pregnancies have included education and contraception as policy responses, underlain by normative, personal responsibility features (UNICEF Innocenti Research Center 2001).

THE FUNCTIONALISM OF SOCIAL EXCLUSION

Underlying all these approaches is a consensus functionalism that would be recognizable to Talcott Parsons (1951) and Émile Durkheim (1947). This is reflected in an emphasis on the widespread adoption of common norms that would create order and stability in society, which would also be in the interests of individuals and groups. The means by which this would be achieved vary, depending on the ideological commitment of the protagonists.

Criticisms of social exclusion as an approach arise because of the ideological nature of the very term. Its use, some think, does a disservice to the vast range of phenomena with which it deals, drawing attention away from the specific issues attached to each of them. Furthermore, it assumes that those who are socially excluded should aspire to the values of mainstream society: This may not be what they want, and they may see no reason to do so. Lastly, it has an implicit notion of the "good society" encapsulated in these mainstream values. This notion may itself be contested.

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SOCIAL EXPERIMENT

A social experiment is the random assignment of human subjects to two groups to examine the effects of social policies. One group, called the "treatment group," is offered or required to participate in a new program, while a second group, the "control group," receives the existing program. The two groups are monitored over time to measure differences in their behavior. For example, a social experiment can compare a program that gives unemployed individuals a financial reward for finding a job with one that does not. Or, a social experiment might compare students in schools that receive a new curriculum with students in schools that do not. Because the randomization procedure guarantees that the two groups are otherwise similar, the measured differences in their behavior can be causally attributed to the new program. The behavioral differences are sometimes called the "impacts" of the program. Commonly measured behavioral outcomes in social experiments include earnings, employment, receipt of transfer payments, health, educational attainment, and child development. Sample sizes in social experiments have ranged from under 100 to well over 10,000.

Some social experiments have more than one treatment group. In such cases, each treatment group is assigned to a different program. The various treatment groups may be compared to each other to determine the *differential* impacts of two of the tested programs, or they may be compared to the control group to determine the impact of the program relative to the status quo. The human subjects may be chosen randomly from the general population or, more commonly, may be chosen randomly from a target population, such as the disadvantaged.

Social experiments have been used extensively since the late 1960s. According to Greenberg and Shroder (2005) almost 300 social experiments have been conducted since then. Social experiments are very much like medical laboratory experiments in which the treatment group is given a new drug or procedure, while the control group is given a placebo or the standard treatment. Laboratory experiments have also been used extensively in the field of economics, since the 1970s (Smith 1994), but they differ from social experiments in that they are used mainly to test various aspects of economic theory, such as the existence of equilibrium or the efficiency of market transactions, rather than the effects of a social program. Also, economics laboratory experiments usually do not have a control group; instead, cash-motivated members of a treatment group are given the opportunity to engage in market transactions in a controlled environmental setting to determine whether they behave in a manner consistent with the predictions of economic theory. Some laboratory experiments in economics have been used to test public policy alternatives.

HISTORY OF SOCIAL EXPERIMENTS

Much of the foundation of the modern approach to social experimentation can be traced back to the work of the famous statistician Ronald Fisher in the 1920s. Fisher refined the notion of random assignment and pointed out that no two groups could ever be identical. He noted that allocation of subjects to treatment and control groups by pure chance (by the flip of a coin or from a table of random numbers, for example) ensures that differences in the average behavior of the two groups can be safely attributed to the treatment. As a result, the direction of causality can be determined using basic statistical calculations. Fisher also recognized that randomization provides a means of determining the statistical properties of differences in outcomes between the groups.

The first major social experiment was the New Jersey Income Maintenance Experiment, which was initiated in the United States in 1968. Although a few smaller social experiments preceded the New Jersey Experiment (such as the Perry Preschool Project in 1962), they were much smaller in scope and much less sophisticated. The New Jersey Experiment tested the idea of a negative income tax (NIT), first proposed by the economists Milton Friedman and James Tobin in the 1960s. The New Jersey Experiment was the first of five NIT experiments conducted in North America (four in the United States and one in Canada) that had very sophisticated designs and many treatment groups. Problems evaluating certain aspects of these complex experiments led to much simpler experimental designs in ensuing years.

From the 1970s to the present, social experiments have been conducted in numerous social policy areas, including child health and nutrition, crime and juvenile delinquency, early child development, education, electricity pricing, health services, housing assistance, job training, and welfare-to-work programs. Notable experiments include the Rand Health Insurance Experiment, which tested different health insurance copayment plans; the Moving to Opportunity Experiments, which tested programs enabling poor families to move out of public housing; four unemployment insurance experiments that tested the effects of various financial incentives to induce unemployed individuals to return to work; and a number of welfare-to-work experiments that tested ways of helping welfare recipients find jobs.

LIMITATIONS OF SOCIAL EXPERIMENTS

Although widely acknowledged as the ideal way to determine the causal effects of proposed social policies, social experiments have several important limitations. First, and perhaps most importantly, social experiments require that a control group be denied the policy change given to the

treatment group. Because control groups in social experiments are typically disadvantaged, denial of program services may be viewed as constituting an ethical breach, thus limiting social experiments to places where resources prevent all eligible individuals from being served. Also, treatments that make a participant worse off are also viewed as unethical and politically infeasible.

Second, although well-designed experiments have a high degree of *internal validity* (inferences are valid for the tested sample), they may not have *external validity* (they are not generalizable to other settings). One common criticism of experiments is that because of their limited size, they do not generate the macroeconomic, "community," effects that a fully operational program would generate. For example, a fully operational job training program may affect the wages and employment of nonparticipants and may affect social norms and attitudes, whereas a limited size experiment would not. Additionally, there is no way of knowing for sure whether a successful experiment in one location would be successful in another location, especially because social experiments are typically conducted in places that are chosen not randomly, but for their capability and willingness to participate in an experiment.

Third, social experiments take time to design and evaluate, usually several years. Policymakers may not want to wait the required time to find out if a particular program works.

Finally, in practice, it has often proven difficult to implement random assignment. For one reason or another, individuals may not be willing to participate in a research study, and in cases where collaboration between researchers and government agencies is required, some may be unwilling to participate. As a result, the treatment and control groups that are tested may turn out to be unrepresentative of the target population.

Because of the various limitations of social experiments, other means of evaluating the effects of social policies have been developed. These are generally termed "nonexperimental" or "quasi-experimental" methods. Nonexperimental methods monitor the behavior of persons subjected to a new policy (the treatment group) and select a "comparison group" to serve the role of a control group. But because randomization is not used to select the two groups, it is never known for sure whether the comparison group is identical to the treatment group in ways other than receipt of the treatment. Many researchers match treatment group members to persons in the nonparticipating population to make the groups as similar as possible. The matches are usually done using demographic and economic characteristics such as age, education, race, place of residence, employment and earnings history, and so on. One popular matching technique is *propensity score matching*, which uses a weighted average of the observed economic and demographic characteristics of the nonparticipating population to create a comparison group.

A particularly attractive nonexperimental method is the "natural experiment." Natural experiments often are used to test the effects of social policies already in place. The natural experiment takes advantage of the way a new policy has been implemented so that the comparison group is almost a true control group. For example, military conscription (being draft eligible) during the Vietnam War was done by a national lottery that selected individuals for military service solely according to their date of birth. Thus, theoretically the group selected for military service should be identical to those not chosen, because the only difference is date of birth. Researchers wanting to test the effects of military conscription on individuals' future behavior could compare outcomes (for example, educational attainment or earnings) of those conscripted with those not conscripted and safely attribute the "impacts" to conscription (Angrist 1990). Because not all conscripted individuals actually serve in the military and because some non-conscripted individuals volunteer for military service, it is also possible to estimate the impact of actual military service on future behavior by adjusting the impacts of conscription for differences in the proportion serving in the military in the treatment and comparison groups. However, the validity of this procedure rests crucially on the comparability of the military service veterans in the two samples.

THE FUTURE OF SOCIAL EXPERIMENTS

Social experiments have changed in character since the late 1960s. Many early social experiments such as the NIT experiments, the Unemployment Insurance Experiments, and the Rand Health Insurance Experiment tested a "response surface" in which subjects were given "quantifiable" treatments of varying tax or subsidy rates. In contrast, most of the more recent social experiments are "black box," meaning that a package of treatments is given to the treatment group, and it is not possible to separately identify the causal effects of each component of the package.

Black-box experiments have been criticized because they tend to have much less generalizability than response-surface experiments. Hence, many researchers have called for a return to nonexperimental evaluation as the preferred method of analyzing the effects of social policies. However, those favoring experimental methods have countered that social experimentation should remain the bedrock of social policy evaluation because the advantages are still great relative to nonexperimental methods (Burtless 1995). In an attempt to "get inside the black box," those sympathetic with the social experiment as an evaluation tool have proposed ways of combining experi-

mental and nonexperimental evaluation methods to identify causal effects of social policies (Bloom 2005). Nonexperimental methods are necessary because of a selection bias that arises when members of the treatment group who receive certain components of the treatment are not a random subset of the entire treatment group. In the future, social policy evaluation may make greater use of both evaluation methodologies—using experiments when feasible and combining them with nonexperimental methods when experiments cannot answer all the relevant policy questions.

SEE ALSO *Negative Income Tax*

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Philip K. Robins

SOCIAL FACILITATION

In 1898 Norman Triplett reported an experiment in which schoolchildren turned a fishing reel under two conditions: first alone and then standing beside a competitor. Triplett claimed that the competitor's presence inspired many of his subjects to perform the reel-turning task more quickly. In his 1924 textbook *Social Psychology*, Floyd Allport offered a behavioral interpretation of Triplett's result. As Allport explained, responses elicited by a nonsocial stimulus can be augmented by a social stimulus. Allport regarded Triplett's finding as evidence of this *social facilitation* and offered some evidence of his own. In Allport's research, college students solved simple multiplication problems and cancelled vowels from English text more quickly when working alongside other students than when alone.

In contemporary usage, the term *social facilitation* has a broader meaning, referring to any influence of the presence of others on the individual. The others who are present may be doing the same thing as the individual (that is, coacting), or they may simply be observing. Most often, researchers study influences on the individual's performance of a task. Sometimes they find that individuals perform tasks better in the presence of others than when alone, but often they find the opposite: worse task performance when others are present. Both performance improvements and performance degradations are termed *social facilitation*, as the phrase is currently used.

When does the presence of others benefit task performance and when does it impair task performance? Robert Zajonc offered an answer to this question in 1965. According to Zajonc, the presence of others improves the performance of simple tasks and disrupts the performance of complex tasks. Although subsequent research provided some support for Zajonc's assertion, a large-scale review showed in 1983 that the presence of others impairs complex performances more strongly than it facilitates simple performances (Bond and Titus 1983).

What accounts for these effects? Zajonc proposed an answer to this question too. Zajonc wrote that the presence of others functions as a source of generalized drive, enhancing dominant response tendencies. According to this analysis, the dominant tendency is to give the correct response on simple tasks and to make mistakes on complex tasks. By enhancing these tendencies, the presence of others facilitates simple task performance and impairs complex performance, Zajonc's drive theory claims.

Other theories of social facilitation have been proposed. These note that the presence of others can induce many psychological states, including self-awareness, distraction, and evaluation apprehension. Psychophysiological theories have been proposed. Whereas an older theory claimed that the presence of others increases general arousal (Guerin 1993), Jim Blascovich and colleagues offered a different view in 1999: When others are present, people who are performing simple tasks manifest physiology indicative of challenge; those who are attempting complex tasks manifest physiology indicative of threat.

The presence of others influences more than task performance. It can encourage the display of prejudice. It can increase, and sometimes decrease, how much people eat. It has many effects on animal behavior. A rudimentary form of social influence, social facilitation has captured psychologists' attention for more than a century.

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Charles F. Bond Jr.

SOCIAL HISTORY

SEE *History, Social.*

SOCIAL HUMANISM

SEE *Humanism.*

SOCIAL IDENTIFICATION

How do people perceive the self and what do they perceive as the self? People look outside of the self to the social context because the views of the self are shaped by the world individuals encounter. Social identification theories demonstrate how identity is defined, as a conception of the self, the content of the self, or the knowledge about who I am, constructed in terms of rules and orders applying to social contexts.

Symbolic interactionists have delineated the procedure of constructing the self-concept by evoking the significance of the relationship between the individual and the social structure. George Herbert Mead (1984) differentiates "me" from "I" to explain the concept of social self and how self is constructed through interactions with others. Charles Horton Cooley (1998) presents the concept of the "looking-glass self," noting that the self is constituted through interaction with its surroundings and that the self-concept is achieved by speculating the imaginative evaluation from others. For Mead and Cooley, self is not an a priori or pre-given because it develops only through contact with others.

For Erving Goffman the construction of self is a series of presentations or performances to others: "The very structure of the self can be seen in terms of how we arrange for such performances" in the society (Goffman 1997, p. 23). Social interaction is viewed as a performance influenced by cultural environment, concerning the other people, constructed to provide appropriate impressions. In this way, the individual develops identity by interacting with others, through presenting desirable impressions according to the social expectations in a particular sociocultural context.

In *The Reproduction of Mothering* (1999) Nancy Chodorow provides a psychological analysis of the construction of gender identity in the intimate social surroundings of family. According to Chodorow, gender identity is the consequence of a specific family form in which women are exclusively responsible for the nurturing of children. Children build their gender identity by differentiating themselves from their primary caregivers, usually their mothers. Because the early social environment differs and is experienced differently by male and female children, Chodorow argues that individuals develop different gender identities based on sex. Her research has been particularly influential in explaining how patriarchal practices of Western cultures affect individual identification processes.

Individuals understand and identify themselves in reference to groups. Social identities—national, ethnic, racial, gender, religious, occupational, and so on—comprise critical aspects of the self-concept and are derived from perceived membership of particular social groups. Originally developed to understand the psychological basis of intergroup discrimination, Henri Tajfel and John C. Turner's social identity theory describes processes significant for an individual's identification with large-scale social groups or categories. The social identification process starts from an "individual's subjective location" in the network of social relationships (Tajfel 1982, p. 503). Identification processes are experienced differently by individuals in terms of their locations in the hierarchically organized social relations of a society—as members of nations; as members of gender groups; as members of racial/ethnic groups; as members of religious groups; and in other social locations. After being categorized based on group membership, individuals seek to achieve positive self-esteem by differentiating their in-group (we/us) from a comparison out-group (them/others). This in-group/out-group comparison process reflects commonly shared ideas or attributions applied to social groups. In other words, the in-group bias leads to discrimination toward out-groups; at the same time, though, some group members identify themselves based in part on socially assigned but negative or undesirable attributions.

In her study of racial-identity development of minority adolescents, Beverly Tatum argues that adolescents of color are more likely to be actively engaged in exploration of their racial or ethnic identity than are white adolescents because they receive more intensive "racial content" messages from their surroundings and they perceive how their racial identity is presented to other racial group members (Tatum 1997, p. 54). In contrast, whites in the United

States often deemphasize explicit racial content, partly because they take it for granted and are privileged through various social domains. Illustrating this, Eduardo Bonilla-Silva (2003) explores different dimensions of white privilege and demonstrates how whiteness is constructed in the U.S. society through narratives.

In a wide range of social settings, individuals struggle to establish social desirability or legitimacy of the identities they possess. Individuals recognize how the groups they belong to are perceived by other group members, and they react to this. Being a member of a particular group sometimes results in exaltation for the individual, but it can also result in unequal treatment, punishment, or marginalization. Distinctiveness often relates to the political boundaries established by the society. For example, identity politics postulates that difference is taken as a political motivation for action. Lesbian and gay activists struggle over their sexual identities to claim the same rights as heterosexuals to marriage, child-rearing, property ownership, and other social practices often forbidden to them.

In recent years social identification theories have expanded the range of research into interdisciplinary areas. Various social-scientific concepts and perspectives are increasingly incorporated as central aspects of social identification processes such as collective protest, political rhetoric, diversity, and system-justification beliefs (Hogg and Ridgeway 2003). However, social identification theories have been criticized for the treatment of identities as individual status categories, such as race/ethnic or gender categories. By focusing on the development of particular social-status categories, identification theorists often ignore structural issues, such as specific historical and cultural backgrounds or the political consequences of identification experiences in a given society. For instance, individual development of racial identity in the United States is deeply associated with the historical and cultural contexts of the United States. Through history, particular racial or ethnic groups have been projected with specific images, cultural notions, and political practices by other racial or ethnic groups. Thus, racial/ethnic identification processes not only mean developing social status categories at an individual level, but also imply structural power relations among racial/ethnic groups directly related to the historical and cultural context.

In the social sciences, studies use various methods—interviews, participant observation, ethnomethodology, discourse analysis, survey, and experiments—to investigate the social identification process at the individual level and how this process is related to the social structure.

SEE ALSO *Blackness; Ethnicity; Goffman, Erving; Groups; Identity; Mead, George Herbert; Nationalism and Nationality; Race; Religion; Social Movements; Sociology; Stigma; Whiteness*

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SOCIAL INFLUENCE

Of the myriad topics, questions, and issues of greatest moment to social psychologists, social influence has been the cornerstone of the field. From the earliest inception of modern social psychology, it has been the defining issue. For example, the first experiment in social psychology (Triplett 1898) probed a phenomenon referred to as *social facilitation*—or the tendency for individuals engaging in like behavior to spur on the actions of one another. In this study, Norman Triplett determined that the presence of a competing cyclist upped the level of performance of bicycle riders when compared to their performance levels as they pedaled against the clock. Similarly, Triplett observed school-aged children who were instructed to turn fishing reels as fast as they could. He found that when they

worked in pairs, their performance was superior to what it was when they worked alone.

As Aristotle (384–322 BCE) noted in detail, we are indeed social beings. The mere presence of others affects us beyond our awareness of those effects. The study of social influence has branched from simple demonstrations of socially facilitated behavior to research on such topics as attitude formation and change, conformity, group consensus, obedience, groupthink, prestige suggestion, political socialization, stereotype formation, and many other socially embedded consequences of social influence. This entry will focus on a description of social influence phenomena in the "classic" studies of and approaches to such influence. These classic studies will be separated into two categories: laboratory-experimental research and field-nonexperimental research.

CLASSIC LABORATORY-EXPERIMENTAL RESEARCH—SHERIF'S AUTOKINETIC EFFECT

If a stationary pinpoint of light is viewed in an otherwise completely dark room, the light will appear to move. This illusory effect, known as the *autokinetic effect*, was used by Muzafer Sherif (1935) in early studies of social influence. Participants, who were not told that the light was actually stationary, were asked to indicate any movement they perceived by pressing a key that turned off the light. When a group of participants viewed the light at the same time, the fastest-acting participant turned off the light. After the light was turned off, the participants reported orally on the extent of movement. The results indicated that participants who viewed the light in groups showed a gradual convergence toward an agreed-upon extent of movement. Later, when tested alone, individuals continued giving the group-established judgment.

Sherif interpreted his results as indicating that the groups established a norm that influenced judgments. As will be discussed below, later researchers also emphasized the importance of norms as a determinant of social influence.

Asch's Perceptual-Judgments Research Because Sherif's demonstration of social influence involved public communication, it was more dramatic than the social influence that occurred in the social-facilitation paradigm. Still, the judgments were of an illusion. This was not the case, however, in an influential series of studies by Solomon Asch (1952). In Asch's initial study, eight individuals, all but one of whom were confederates of the experimenter, made eighteen consecutive judgments in which they matched the length of a standard line with one of three comparison lines. On each of the eighteen trials, judgments were publicly announced in the order in which the group members sat, and the single naïve participant always sat next to last. On twelve of the trials, the confederates responded incorrectly. The results revealed marked individual differences, with three-fourths of the participants being influenced on at least one trial and one-third influenced on half or more of the trials.

Asch later reported a series of interesting follow-up experiments. In one such study, he found that the *conformity effect* was maximized with three confederates, was greatly reduced with two confederates, and all but disappeared with one confederate. In another study, he found that when a single confederate responded incorrectly in a group of participants, the confederate's incorrect judgments created amusement and laughter. In still another study, he found that when the confederate who sat in the fourth position responded correctly, the social influence of the group on the participant sitting next to last was dramatically reduced. This latter finding is an early demonstration of *minority influence*—a topic later pursued by Serge Moscovici (1976, 1980) and others.

Milgram's Obedience-to-Authority Research Asch's research on perceptual judgment did produce dramatic results. However, momentary judgments regarding the perceived length of lines may, in the final analysis, be of no great import. Such is not the case, however, for Stanley Milgram's (1965) research on obedience to authority.

Milgram's initial idea was to provide a test of the extent to which individuals would harm someone when given direct orders to do so. History is replete with instances in which such cruelty has occurred. One of the more notable examples was the mass murdering of Jews at such German concentration camps as Auschwitz, Buchenwald, and Dachau during World War II (1939–1945). During the Vietnam War (1957–1975), there is the example of the 1968 My Lai massacre by American troops. A still more recent example is the murdering in 1978 of children and infants by parents and "nurses" at Jonestown in Guyana.

Milgram's participants had responded to a newspaper advertisement to take part in a study of learning and memory at Yale University. They were all male and ranged in age between twenty and fifty years, and were of both white-collar and blue-collar backgrounds. Participants believed they were being tested in pairs, but one member of the pair was actually a confederate of the experimenter. Following a rigged drawing, the participant was assigned the role of "teacher" and the confederate was assigned the role of "learner" in a supposed test of the effect of punishment on memory. The participant-teacher witnessed the confederate-learner being strapped into an "electric chair" in a room immediately adjacent to the room containing the "shock-generator"—an apparatus containing a series

of thirty switches that supposedly delivered increasingly intense shocks to the confederate-learner. The switches were accompanied by labels indicating increasing danger, finally ending with the label "XXX." The participant-teacher's task was to deliver increasingly intense shocks whenever the confederate-learner made an error in memory for the word that had been previously associated with a paired stimulus word. The confederate had been trained to make a standard series of errors. If the participant-teacher hesitated, the experimenter delivered a series of four prods, beginning with "please continue" and ending with "you have no other choice, you must go on." The experiment was terminated if the participant-teacher refused to continue after the fourth prod.

Milgram asked forty psychiatrists from a "leading medical school" to predict the results of the study. These experts on human behavior expected that only 1.25 percent of participants would continue to the top step. In fact, Milgram found that 62.5 percent proceeded to that level. The sizable error in the psychiatrists' predictions provides evidence that even among "experts" there is a tendency to underestimate the extent of social influence.

Zimbardo's Stanford Prison Experiment One might suppose that no one could "top" Milgram's research on obedience to authority. However, that was arguably accomplished in Philip Zimbardo's Stanford Prison Experiment (Zimbardo et al. 1973). The participants in this study were twenty-one males between seventeen and thirty years of age who responded to a newspaper advertisement to take part in a study of prison life. Participants were randomly assigned to be either prison guards or prisoners. Zimbardo and colleagues arranged for the prisoners to be unexpectedly arrested by local police officers, fingerprinted, and jailed. After remaining in a cell for a while, the prisoner's were blindfolded, taken to a mock jail (actually the basement of the Stanford psychology building), "stripped naked, skin-searched, deloused and issued a uniform, bedding, soap and towel" (Zimbardo et al. 1973, p. 38). On the first day, the guards began the routine of having the prisoners line up, cite the prison rules, and repeat their individual ID numbers. On the second day, the prisoners rebelled but the rebellion was put down harshly by the guards, who first called in other guard shifts for reinforcement. On subsequent days, the cruelty and abusiveness of the guards intensified, and the prisoners became increasingly passive and demoralized. Not all guards acted the same way. Some were cruel and some were not, but the "good" guards did nothing to protect the prisoners from the cruel guards. Likewise, not all prisoners acted, or reacted, in the same way. On progressive days, five of the prisoners had emotional breakdowns requiring that they be released. The experiment was terminated after six of the originally planned fourteen days.

In this experiment, the social influence came not from the experimenter, as in the Milgram experiment, but was a dynamic consequence of the interaction between two groups and the learned roles associated with these groups. Following this most dramatic demonstration of social influence, there have been no further attempts at even more dramatic demonstrations of social influence, and, primarily for ethical reasons, there have been no further experimental studies of a prison-like environment.

A CLASSIC FIELD-NONEXPERIMENTAL STUDY—NEWCOMB'S BENNINGTON STUDY

One field-nonexperimental study that has, quite deservedly, received wide attention is Theodore M. Newcomb's (1943, 1958) research on Bennington College students and subsequent follow-ups of those students (Newcomb et al. 1967; Alwin et al. 1991). Newcomb collected the initial data in 1935, the first year in which the then new Bennington College had a senior class, and data collection was continued until 1939. Since the student body was small, approximately 250 women, it was possible to collect data from almost all of the students and to follow the initial freshman in 1935 until they were seniors in 1939. An important circumstance was that the college was physically isolated and relatively self-sufficient. Tuition was high and the majority of the students came from wealthy families with conservative social attitudes. On the other hand, the faculty was relatively liberal and "felt that its educational duties included the familiarizing of an oversheltered student body with the implications of a depression-torn America and a war-threatened world" (Newcomb 1958, p. 421).

Data collected from most of the students, and in-depth interviews with a subsample of them, indicated that there was an increasing trend toward liberalism with each additional year in college. A questionnaire assessing various social and economic issues (e.g., public relief and the right of labor to organize) revealed a consistent trend toward liberalism. A straw vote in the 1936 presidential campaign indicated that 62 percent of Bennington's freshman favored the Republican candidate (Alfred Landon), while only 15 percent of the juniors and seniors did so. Consistent with this difference, 29 percent of freshman favored the Democrat candidate (Franklin D. Roosevelt), while 54 percent of the juniors and seniors did so. An even greater ratio of difference occurred for the Socialist and Communist candidates; this varied from 9 percent for the freshman to 30 percent for the juniors and seniors. In observing changes from the freshman to the senior year, Newcomb documented changes toward liberalism that were particularly marked among the more popular students. Newcomb interpreted his results as indicating that

the Bennington College community became a positive reference group for most of the students.

Newcomb's initial data are striking, but the profound effect of social influence was made more obvious by the results of two follow-up studies. Interview data from the first follow-up study (reported in Newcomb et al. 1967) were collected from 1959 to 1960 when the women were in their mid-forties. The results indicated that over the twenty to twenty-five year period, most of the women had retained their liberal political attitudes. Newcomb and colleagues pointed out that the persistence of these liberal attitudes might be partially explained by the fact that they had married men with similar liberal attitudes. Data for the second follow-up study were collected in 1984, the year of Newcomb's death, when the women were sixty-five to seventy years old (Alwin et al. 1991). Interviews were conducted with 335 of the original sample of 527 women. Most of the interviews were conducted by telephone, but twenty-eight of the interviews were conducted in three-hour, face-to-face sessions. The results indicated that 70 percent identified themselves as "liberal" and agreed with the positions of the 1984 Democrat presidential candidate, Walter Mondale, on such issues as the responsibility of government to improve the social positions of African Americans and other minorities. The women furthermore confirmed that their attitudes had grown more liberal while they were at Bennington.

The persistence of acquired liberal attitudes over an approximately fifty-year period provides strong evidence for the potentially profound effect of social influence. The Bennington study and the follow-up interviews make clear that social influence is not restricted to short-term judgments or behaviors (for example, judgments regarding which line is longer), but can be life changing.

DEUTSCH AND GERARD ON NORMATIVE AND INFORMATIONAL SOCIAL INFLUENCE

Morton Deutsch and Harold Gerard are widely referenced for interpreting social influence as due to two factors: *normative* social influence and *informational* social influence. They define normative influence as "influence to conform to the positive expectations of another" (Deutsch and Gerard 1955, p. 629). The idea is that agreement with another person, another group, or even the self (in the case of internalized norms) leads to expectations of positive feelings. For conformity to internalized norms (and resistance to the influence of others), they add another process. This is that such conformity "leads to feelings of self-esteem or self-approval" (p. 630). As speculated below, acceptance of the influence of others may also be related to self-esteem.

Deutsch and Gerard define informational influence as "influence to accept information obtained from another as evidence about reality" (Deutsch and Gerard 1955, p. 629). They rely on Leon Festinger's (1950) argument that "where no physical reality basis exists for the establishment of the validity of one's belief, one is dependent upon social reality (i.e., upon the belief of others)" (Deutsch and Gerard 1955, p. 630). Following his 1950 article, Festinger (1954) elaborated his basic argument into a theory—*social comparison* theory—which became one of the more influential theories in social psychology. The theory assumes that we have a drive to evaluate our beliefs in terms of their correctness or validity. The validity of our beliefs can sometimes be determined through simple observation, but, when this cannot be done—and only when this cannot be done—we evaluate the validity of our beliefs through social comparison with the beliefs of others.

The idea that the beliefs of others are a source of information determining social influence has become very influential. However, one could argue that even social comparison theory underestimates the informational value of social influence. For example, a dramatic study by Bibb Latané and John Darley (1970) demonstrated that the assumed danger indicated by an increasing amount of smoke pouring into a room was influenced by the number of seemingly unconcerned others. The greater the number of unresponsive others—actually confederates of the experimenter—the longer it took for the single participant to leave the room. This experiment provides a clear example of how, contrary to social comparison theory, social influence can alter even the judgments of physical reality.

Despite the fact that Deutsch and Gerard speculated about both informational social influence and normative social influence, their research primarily focused on normative social influence. As in Asch's research, Deutsch and Gerard had participants and confederates make length-of-line judgments. They made a number of comparisons among their various conditions, but two of these bear most directly on the influence of group norms. One comparison was between a condition in which the groups were told that each member of the five (out of twenty) groups that made the fewest errors would receive a pair of tickets to a Broadway play versus a condition in which there was no mention of competition among the groups. There was more conformity in the former, competitive condition—presumably because the competition increased the anticipated positive feelings resulting from conformity to the group norm.

The second comparison was between a condition in which the participant (and the confederates) responded publicly, and a condition in which the participant (but

not the confederates) responded privately on sheets of paper that were subsequently discarded. There was more conformity in the former, public condition—presumably because only with public responding could the participant's feelings be influenced by the anticipated reactions of the group members.

What about evidence for informational social influence? Deutsch and Gerard provide no evidence directly bearing on informational social influence, but they do point out that such influence is suggested by a further comparison between the private condition and a control condition in which the participants were alone. Participants made fewer errors in the direction of the group in the alone condition.

THE IMPORTANCE OF BEING RIGHT AND THE IMPORTANCE OF BEING LIKED

Chester Insko and colleagues (Insko et al. 1983; Insko et al. 1985) completed research that they believed could show whether individuals would in fact go along with obviously erroneous opinions of others if they had a chance to learn the true answer subsequently. They set forth a related, but alternative, account of Deutsch and Gerard's (1955) explanations in which they argued that going along with others involves joint concerns of being right (or not being wrong) and being liked (or not being disliked), and that both are consistent with the general tendency of people to think—or want to think—well of themselves. Specifically with regard to informational influence, and following from the social comparison theory assumption that others' beliefs provide a social reality for validating one's own beliefs, they argued that such validation is important because being right, or being correct, is consistent with positive self-esteem, or the general tendency of people to think well of themselves. Similarly, with normative social influence, they argued that agreeing with others creates not only the anticipation of being right but also the anticipation of being liked, and that being liked is consistent with positive self-esteem, or, again, the general tendency of people to think well of themselves.

Insko and colleagues (1983, 1985) conducted two studies, both of which followed the Asch procedure of having a series of confederates and a single participant seated in a row of chairs, with the true participant seated next to last. Unlike in Asch's research, the judgments were not of line lengths but of colors—for example, whether the blue-green in the middle was more like the blue on the left or the green on the right. On twelve of the eighteen trials, the confederates responded incorrectly. Both studies included two cross-cutting independent variables, thereby creating four cells or conditions. One independent variable was whether the participants responded publicly or privately.

The other independent variable related to whether or not the correct answer supposedly could be accurately determined by a spectrometer. In the so-called determined condition, it was explained that a printout of the spectrometer reading would be available for examination at the end of the experiment. In the so-called undetermined condition, no printout was made available and it was explained that spectrometers could not accurately read mixed wavelengths. Assuming that the judgments of the confederates were used as a valid source of information, and assuming that participants were concerned with being right or being correct, it follows that there should have been more conformity to the confederates' judgment in the determined than the undetermined condition.

The results indicated that there was more conformity to the confederates' judgments when the judgments were made publicly rather than privately (regardless of whether the correct answers supposedly could or could not be determined), and there was more conformity when the correct answers supposedly could be determined rather than not determined (regardless of whether the participants responded publicly or privately). These results are consistent with expectations based on the assumed joint concerns of being right (or not being wrong) and being liked (or not being disliked). Thus, both the reduction of epistemic uncertainty and the desire to be liked seem to be factors promoting the power of social influence.

THE SOCIAL CONFORMITY DILEMMA

While social psychologists have typically studied the darker side of our dependence on social norms and collective information such as slavish conformity, destructive obedience, normative error, interpersonal cruelty, and bystander "apathy," there are instances of the collective benefits of social influence that are abundantly evident—for example, in the acquiring of knowledge, the prevention of harmful behavior, and the coordination of activities. The fact that research on social influence has tended to focus on negative consequences should not be taken as an indication that social psychologists necessarily subscribe to the bias implicit in Western, individualistic culture that individual action and choice are always preferable to social conformity. It is obviously the case that many norms are adaptive, and that conformity to such norms, and social learning generally, can be beneficial. One of the profound dilemmas of human existence relates to when we should, or should not, conform to the behavior and judgments of others.

SEE ALSO *Asch, Solomon; Attitudes; Authority; Cognitive Dissonance; Conformity; Experiments; Experiments,*

Human; Experiments, Shock; Groupthink; Milgram, Stanley; Norms; Obedience, Destructive; Persuasion; Prisons; Reality; Sherif, Muzafer; Social Comparison; Social Facilitation; Social Psychology; Socialization; Sociology; Zimbardo, Philip

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SOCIAL INFORMATION PROCESSING

Social information processing theory describes a set of cognitive-emotional mechanisms specifying how the way in which children interpret a particular event influences how they will respond to that situation. This framework takes into account the database of prior experiences with parents and peers that children bring to new situations. As a result of prior social interactions, children develop cognitive schemas that influence their processing of social information in new situations.

Nicki R. Crick and Kenneth A. Dodge (1994) have proposed six steps in a model of social information processing. First, encoding of external and internal cues is the process of taking in information from the environment. Second, making attributions (or interpretations and mental representations of cues) involves deciding what motivates the behavior of other people. On the basis of information children encode from a particular situation, they could decide that others acted with benign, hostile, or

ambiguous intent. Third, selecting a goal involves deciding what the desired outcome is in a given situation. Fourth, generating responses is the process of thinking of possible behavioral actions. Fifth, evaluating responses occurs when children assess whether a response is a good one to use in a particular situation and whether that response will bring about desired outcomes. Sixth, enacting responses is the manner in which a child actually behaves.

Deficits at each of these steps have been found to be related to aggressive behavior. At the first step, aggressive children, compared to nonaggressive peers, encode a smaller number of social cues, seek additional information in ambiguous social situations less frequently, and attend selectively to hostile and threatening social cues. At the second step, aggressive children are more likely than nonaggressive children to interpret ambiguous social cues as threatening. At the third step, selecting instrumental (e.g., winning a game) rather than interpersonal (e.g., maintaining a friendship) goals is associated with behaving more aggressively. At the fourth step, generating fewer behavioral responses overall and a higher proportion of aggressive responses to problems is related to behaving more aggressively. At the fifth step, positively evaluating the likely interpersonal and instrumental outcomes of aggression is related to behaving more aggressively. At the sixth step, skill in enacting aggressive responses is related to behaving more aggressively.

Social information processing mechanisms deal with specific links among environments, cognition, and behavioral outcomes. For example, problematic parent–child and peer relationships are associated with a host of social information processing deficits. Children who have been physically maltreated, for instance, become more attentive to hostile cues in the environment and less attentive to other relevant social cues; poor encoding is, in turn, related to higher levels of subsequent aggression. Similarly, children with insecure attachments to their parents are more likely to have social information processing problems than are securely attached children; these problems appear to stem from relationship schemas involving others' lack of emotional and instrumental availability. Children who are rejected by their peers also are more likely to have social information processing deficits that then carry over into future social and behavior problems. Thus, social information processing problems serve as cognitive mediators of the association between environmental risk factors and subsequent behavioral outcomes.

SEE ALSO *Aggression; Attribution; Information, Economics of; Script Models*

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SOCIAL ISOLATION

In the social sciences, the term *social isolation* has two distinct usages. When applied to individuals, social isolation refers to a lack of social ties in general. When applied to social groups, social isolation refers to a lack of social and institutional ties to mainstream society. A group can be socially isolated even if the individuals within the group share a dense network of social ties with one another.

Individual social isolation is a relatively straightforward concept. It can be measured by either the percentage of the population in question that lives alone as calculated from census data or an index of social isolation constructed from survey-based social network data (e.g., the Berkman-Syme index). Given such measurements, researchers in social psychology, gerontology, public health, and many other fields have evaluated trends in social isolation and used standard methods of cross-sectional data analysis to measure the apparent effect of social isolation. This research owes much to the analysis of social isolation and schizophrenia by the Chicago school sociologist Robert E. L. Faris in the 1930s. Social isolation has been found to be a significant risk factor for many health problems and is a particular health issue for the elderly. This literature is often subject to the criticism that the simple relationship between isolation and outcomes may actually be an artifact of some unmeasured third factor (for example, alcoholism may produce both social isolation and heart disease). However, ethnographic and clinical research has also tended to support the idea that individual social isolation matters.

Group-level social isolation has been a key theoretical concept in urban sociology since the publication of William Julius Wilson's *The Truly Disadvantaged* (1987), an influential study of troubled inner-city communities. Wilson argues that the limited social contact of residents with the institutions of mainstream society is the primary cause of various community social pathologies such as high rates of out-of-wedlock births, welfare dependency, school dropout, crime, and exit from the labor force. Wilson's later work more explicitly identifies the role of high community rates of joblessness in producing social isolation. In this analysis, macroeconomic changes such as

the decline in manufacturing employment combined with the departure of the black middle class from the inner city become the underlying source of inner-city social isolation and social pathology. Wilson's focus on social isolation is distinct from those theories that trace high rates of inner-city social pathology directly to racial discrimination or individual poverty. It is also distinct from "culture of poverty" theories that argue that a substantial proportion of ghetto residents have internalized a pathological set of social values. Wilson's work has inspired a vast empirical literature on "neighborhood effects" in sociology and in other social sciences. This literature only rarely has aimed to measure group-level social isolation directly; typically it focuses on the relationship between neighborhood-level measures of poverty concentration and various individual or family outcomes.

Wilson's work has also influenced economists to incorporate social isolation into economic models of inequality. Work in this literature, surveyed by Yannis Ioannides and Linda Datcher Loury (2004), usually combines formal social network theory with microeconomic models of search and matching. Group social isolation is conceptualized here in terms of the properties of a network of connections between individuals, rather than Wilson's more holistic but difficult to quantify concept of connections between individuals and both institutions and values. One key insight from the economics literature on group social isolation is that group-level isolation, unlike individual-level isolation, is characterized by externalities. That is, a group member who takes costly effort to form social ties with mainstream society will provide benefits to other group members, and these benefits cannot be appropriated by the individual who forms the social tie. As a result, the number of social ties to the mainstream will tend to be inefficiently low.

The closely related concept of social exclusion can be considered a special case of social isolation in which blame is assigned. Brian Barry (2002) notes that "exclusion" implies that the larger society prevents social integration, whereas "isolation" in principle can be voluntary or involuntary and beneficial or malevolent. The concept of social exclusion originated in continental Europe, whereas the notion of social isolation is associated with social scientists based in the United States.

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SOCIAL JUDGMENT THEORY

Social judgment theory was developed by psychologist Muzafer Sherif, with significant input from Carl I. Hovland and Carolyn W. Sherif. Rooted in judgment theory, which is concerned with the discrimination and categorization of stimuli, it attempts to explain how attitudes are expressed, judged, and modified. The theory details how attitudes are cognitively represented, the psychological processes involved in assessing persuasive communications, and the conditions under which communicated attitudes are either accepted or rejected. It offers a commonsense plan for inducing attitude change in the real world.

There are five basic principles in social judgment theory. The first asserts that people have categories of judgment with which they evaluate incoming information. When an individual encounters a situation in which he or she must make a judgment, a range of possible positions can be taken in response. For example, if an individual is asked to make a monetary contribution to a charity, the possible positions range from "absolutely not" to "most certainly." Along this inclusive continuum there are categories of positions that an individual may find acceptable or unacceptable, and also a range for which no significant opinion is held. These ranges are referred to as the *latitude of acceptance*, the *latitude of rejection*, and the *latitude of noncommittment*, respectively. An individual's most preferred position, located within the latitude of acceptance, is referred to as the *anchor*.

The second principle states that as people evaluate incoming information, they determine the category of judgment, or latitude, to which it belongs. In the abovementioned example, individuals with a favorable view of the charitable cause would most likely place the request for a donation within the latitude of acceptance. Conversely, those who hold an unfavorable view of the charitable cause will locate their attitude within the latitude of rejection. Those with no significant opinion either way will locate it in the latitude of noncommitment.

The third principle asserts that the size of the latitudes is determined by the level of personal involvement,

or *ego-involvement*, one has in the issue at hand. People may or may not have opinions regarding the communicated information, and this will affect whether or not the persuasive message is accepted or rejected. These same opinions (or their lack) also affect the size of latitudes. The higher the level of ego-involvement, the larger the latitude of rejection becomes. For instance, an individual who is solicited for a donation to a cancer society will have a smaller latitude of acceptance if his or her mother suffers from cancer, as compared to someone who has no personal connection to the malady. For that individual, contributing to the charity is imperative, and any other response is unacceptable. Therefore, the latitude of acceptance and noncommitment will be small compared to the latitude of rejection.

Principle four states that people distort incoming information to fit their categories of judgment. When presented with a persuasive message that falls within the latitude of acceptance, and is close to the individual's anchor, people will *assimilate* the new position. That is, they will perceive the new position to be closer to their attitude than it actually is. When the persuasive message is relatively far from the anchor, however, people tend to *contrast* the new position to their own, making it seem even more different than it actually is. In both cases, individuals distort incoming information relative to their anchor.

These distortions influence the persuasiveness of the incoming message. If the message is too close to the anchor, assimilation will occur and it will be construed to be no different than the original position. If contrast occurs, the message will be construed to be unacceptable and subsequently rejected. In both cases, social judgment theory would predict that attitude change is unlikely to occur.

The fifth principle asserts that optimal persuasion occurs when the discrepancies between the anchor and the advocated position are small to moderate. In such cases, assimilation or contrasting will not occur, allowing for consideration of the communicated message. Under these conditions, attitude change is possible.

A major implication of social judgment theory is that persuasion is difficult to accomplish. Successful persuasive messages are those that are targeted to the receiver's latitude of acceptance and discrepant from the anchor position, so that the incoming information cannot be assimilated or contrasted. The receiver's ego-involvement must also be taken into consideration. This suggests that even successful attempts at persuasion will yield small changes in attitude.

SEE ALSO *Attitudes, Behavioral; Cognitive Dissonance; Persuasion; Psychology; Sherif, Muzafer; Social Psychology*

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SOCIAL JUSTICE

SEE *Justice, Social.*

SOCIAL LEARNING PERSPECTIVE

From the 1930s through the 1950s the behavioral theory of operant conditioning, with its emphasis on the application of consequences to influence behavioral change, was the dominant perspective in U.S. psychology. With the reintroduction of a cognitive perspective in the 1950s (e.g., Miller 1956; Miller, Galanter, and Pribram 1960), researchers began to look for ways to integrate the behavioral and cognitive perspectives. Social learning theory, as developed by Neal Miller and John Dollard (1941), Robert Sears (1951), and Albert Bandura (1977), contributed to connecting behavioral and cognitive approaches to learning and is an important step toward modern versions of learning theory.

Bandura (1962), building on the earlier work of Miller and Dollard (1941), proposed that learning first occurs cognitively through imitation and then is modified through the application of consequences. In contrast to a purely behavioral approach, social cognitive theorists propose that individuals are active participants in their own learning. Based on a series of studies during the 1960s and 1970s (e.g., Bandura 1963, 1965a), Bandura in 1977 proposed a four-step process for how individuals learn through observing others' behavior. This process has been referred to as observational learning, or modeling, and involves:

attention—the individual notices something in the environment;

retention—the individual remembers what was noticed;

reproduction—the individual produces an action that is a copy of what was noticed;

motivation—the environment delivers a consequence that changes the probability that the behavior will occur again (reinforcement and punishment).

Through the careful observation of others, individuals learn numerous new behaviors such as emotional reactions and how to use tools in their environments. Bandura (1965b) demonstrated that individuals modify their own behaviors based on the consequences (e.g., reinforcement or punishment) that others receive. He called this phenomenon *vicarious learning*. Individuals tend to model their behavior on persons who are similar to themselves, persons who are of higher status than themselves, and persons who are either reinforced for their behavior or not punished for it. One example of the power of imitation is found in the results of the infamous "Bobo doll study" (Bandura, Ross, and Ross 1961). In this study preschool children who observed adults mistreating a Bobo doll were more likely to engage in similar aggressive behavior than children who had not observed the adults' aggressive behavior.

In more recent years, Bandura turned his attention to the importance of self-efficacy, self-regulation, and the desire of individuals to develop agency over their lives (Bandura 1986, 1989, 2001). To describe the learning process from this perspective, Bandura developed a concept called *reciprocal determinism*, which details a three-way relationship between a person, his or her behavior, and the environment. In the social-cognitive model each of the three elements are equally important and influence the other elements. Thus, an individual's unique characteristics interact with overt behaviors and environmental models and feedback.

SEE ALSO *Bandura, Albert; Behaviorism; Determinism, Reciprocal; Motivation; Psychology, Agency in; Self-Efficacy; Social Cognition; Social Cognitive Map*

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SOCIAL MEMORY

SEE *Collective Memory.*

SOCIAL MOVEMENTS

A *social movement* can be defined as a collectivity with mutual awareness in sustained interaction with economic and political elites seeking to forward or halt social change. Social movements are usually comprised of groups outside of institutional power that use nonconventional strategies (e.g., street marches, sit-ins, dramatic media events) along with more conventional ones (e.g., petitions, letter-writing campaigns, etc.) to pursue their aims (Tarrow 1998; Snow et al. 2004). The outsider status and nonconventional tactics of social movements distinguish them from other political entities such as lobbying organizations and political parties (though these more formal organizations may originate from social movements). Most people participate in movements as volunteers and offer their time, skills, and other human resources to maintaining movement survival or achieving goals. Examples of social movements range from community-based environmental movements to transnationally organized economic-justice movements

attempting to place pressure on national governments and international financial institutions. The modern social-movement form arose with the spread of parliamentary political systems and nationally integrated capitalist economies in the nineteenth century (Tilly 2004).

EMERGENCE

Social movements are most likely to arise when a particular collectivity comes under threat or receives signals from the political environment that advantages may be forthcoming if groups decide to mobilize. In other words, either "bad news" or "good news" may motivate episodes of collective action (Meyer 2002). Under bad-news conditions, a community or population perceives that its situation will become worse if it fails to act and that it may lose collective goods (e.g., loss of land, rights, employment, etc.). In the good-news political environment, groups sense that they will acquire new collective goods if they act in concert (e.g., new rights, higher wages, greater environmental quality, etc.). Often, bad-news and good-news protest campaigns are triggered by government policies that signal to would-be challengers that the state is becoming less or more receptive to the issues that are most meaningful to the population in question.

Besides these motivations for movement emergence, some type of organizational base needs to be in existence to mobilize large numbers of people (McAdam 1999). These organizational assets may be traditional, such as solidarities based on village, religious, regional, or ethnic identities, or they may be associational, rooted in secondary groups such as labor unions, social clubs, agricultural cooperatives, educational institutions, and more formal social-movement organizations (SMOs) (Oberschall 1973). Without preexisting solidarity ties and organizational links, either formal or informal, it is unlikely that threats or opportunities will convert into social-movement campaigns. Hence, social-movement scholars give special attention to variations in organizational resources across localities and over time in explaining social-movement emergence (Edwards and McCarthy 2004).

OUTCOMES

Perhaps the most important social-movement arena involves movement impacts. That is, what kinds of changes in the political environment can be attributed to the existence and actions of a social movement? What aspects of social change can be explicitly associated with the activities of a movement? Students of social movements examine various aspects of social-movement outcomes. The enduring changes associated with movements include the impacts on movement participants, changes in the political culture, influence on state policies, and "spillover" into other social movements (Meyer and Whittier 1994). In comparison to movement emergence, there is less scholarly consensus on social-movement outcomes (Jenkins and Form 2005). Often, it is difficult to decipher the particular contribution of a social movement to a specific outcome while attempting to control for non-movement influences. Despite these scientific shortcomings, major movements of oppressed social groups in the United States greatly improved their social standing. Participants of such movements obtained major policy changes because they engaged in social-movement-type struggles, especially the women's movement and the African American civil rights movement in the late twentieth century.

A classic study on movement outcomes by William Gamson (1990) found in a representative sample of fifty-three voluntary associations in the United States between 1800 and 1945 that groups that maintained single-issue demands, used more assertive strategies and tactics, and organized themselves along more bureaucratic lines were more successful in achieving their goals than movements that lacked these properties. In terms of state-oriented social movements, or movements with political aims that largely target the government, linking with sympathetic groups inside the state enhances probabilities of movement success (Banaszak 2005). For example, a 2004 study of national environmental politics in Japan by Linda Brewster Stearns and Paul Almeida found that antipollution movements were much more successful in winning new environmental policies when they formed loose alliances with actors inside the government, such as city councils, sympathetic federal agencies, oppositional political parties, and the courts.

THEORIES OF SOCIAL MOVEMENTS

Between the 1960s and the 1980s, a clear succession of social-movement theories took shape—from collective behavior to resource mobilization to political-process perspectives. Since the mid-1990s, social-movement scholarship places much more emphasis on a synthetic approach that combines resource mobilization, political opportunity, and framing perspectives into a larger comprehensive framework of social-movement dynamics. Individual scholars, though, still tend to specialize in one of the three subareas of this larger synthesis.

Resource mobilization scholarship emphasizes the role of formal and informal organizations in collective action. Resource mobilization scholars also attempt to define the population of SMOs within movements and societies using such terms as *social-movement sector, social-movement industry*, and *organizational field* (McCarthy and Zald 1977; McAdam and Scott 2005; Minkoff and McCarthy 2005). More recent work in the resource mobi-

lization subfield has expanded into sophisticated network analysis of the means by which different components of SMOs, participants, and sponsoring organizations are structurally connected to one another and how the variations in those structures affect collective-action dynamics (Diani and McAdam 2003).

The political-process tradition centers on the larger political environment and how differentially configured political contexts shape social-movement emergence, forms of mobilization, and movement outcomes. Important features of the political environment are referred to as *political opportunities*. Five key dimensions of political opportunity shaping collective action within political-process theory include:

1. institution access (i.e., the opening of state agencies)
2. elite conflict (between political or economic elites)
3. electoral realignments (i.e., changing electoral coalitions)
4. influential allies (i.e., experts, mass media, religious institutions, etc.)
5. a relaxation in state repression.

The more these five elements of opportunity are present in a political environment, the greater the probability of the emergence of a large and efficacious social movement. Some versions of political-process theory contend, however, that high levels of political opportunity lead to more institutional forms of politics and less need for social-movement mobilization (Eisinger 1973; McAdam 1996; Meyer 2004; Tarrow 1998).

The *framing perspective* derives from the interpretive tradition in sociology with a special concern for how activists construct social grievances. It is now largely understood that injustice and organizational resources alone do not explain the timing and location of social-movement-type mobilization. Movement leaders and activists must construct norm violations, grievances, and experiences of oppression and injustice in socially meaningful and convincing ways that will motivate the targeted populations to participate in collective action (Snow et al. 1986; Snow and Benford 1988). In other words, social and political activists must "frame" the social world in such a manner that it resonates with rank-and-file movement supporters as well as sympathizers and fence-sitters.

Students of social movements often discuss the ability of political movements to develop *collective-action frames* that will generate large-scale support for the challengers' objectives. The collective-action frame of "civil rights" in the African American freedom struggle in the 1950s and 1960s is considered a particularly potent frame consonant with the political culture and values of the United States, bringing in large numbers of white Americans in solidarity with the grievances of black Americans. In addition, the success of the "civil rights" frame led to several other movements adopting a variant version in subsequent decades. Such movements include the women's, gay/bisexual, Mexican American, Asian American, and disability movements, as well as more conservative movements, such as the pro-life, home schooling, or pro-creationism movements, which invoke civil rights in their claims-making activities.

One avenue for categorically deciphering collective-actions frames is to divide them into their diagnostic, prognostic, and motivational functions. A diagnostic frame defines particular social problems and injustices and assigns blame to the agent(s). Prognostic framing develops an action plan to resolve the social problem or grievance, while motivational framing includes the actual mobilization appeals to persuade people to join the movement or participate in a particular action. David Snow and Robert Benford (1988) view these three core framing tasks as a fundamental part of sustaining social-movement mobilization.

RECRUITMENT

Social-movement recruitment and individual-level participation draw on microlevel models of collective action. Early explanations of social-movement recruitment and participation emphasized the irrationality aspects of mass movements. Political movements of the unruly were viewed as fulfilling psychological deficits for movement participants—a kind of therapy to overcome sentiments of alienation and social strain inherent in fast-paced industrialized urban societies (McAdam 1982). By the late 1970s and early 1980s, scholars began to look at more than just the beliefs and psychological profiles of movement participants. They also examined the microstructural context of mobilization, namely the social ties and networks of potential movement recruits (Snow et al. 1980; McAdam 1986). This newer empirical research found that movement participants were often highly socially integrated in their everyday lives and more likely to belong to civil society associations and clubs than those who did not participate in social movements. In addition, the connections individuals maintained with movement sympathetic organizations and individuals made them much more likely to join a protest campaign, whereas those connected to organizations and individuals opposed to such activities were much more likely not to participate (McAdam 1986). Finally, movement mobilization occurs at a faster rate when entire groups and organizations are recruited en masse as opposed to organizing single individuals one at a time—a process termed *bloc recruitment* (Oberschall 1973).

Movement-recruitment research also distinguishes between low cost/low risk activism versus high cost/high risk activism (McAdam 1986). *Cost* refers to the time and resources put into a particular movement campaign. *Risk* involves the level of personal harm that may result from activism (e.g., reputation, imprisonment, physical safety). For high cost/high risk activism, such as occurs in extremely oppressive regions or societies (e.g., a racially segmented society, a military dictatorship, etc.), a deeper level of integration into a social-movement culture by the individual needs to take place, including previous participation in several rounds of low cost/low risk activism.

NONDEMOCRACIES AND STATE REPRESSION

The majority of social-movement studies focus on movements in industrialized democracies in the global north (McAdam et al. 1996). However, a growing body of literature now exists for political contexts outside of the democratic West. The more stable forms of government in Western democracies allow for a greater upkeep of social-movement-type organizations and more space to launch largely nonviolent campaigns. In nondemocratic and quasi-democratic nations (e.g., monarchies, dictatorships, military juntas), where associational freedoms are proscribed and regular multiparty elections do not occur, scholars face challenges in explaining when social movements will arise and what forms they will take. One fruitful avenue investigates "cracks in the system," small political openings, or larger moves toward political liberalization in nondemocracies. These conditions often provide a conducive environment for a few entrepreneurs in civil society to attempt to form civic associations and possibly even begin to seek small reforms. Other movements may be launched in institutions outside the purview of state control, such as religious institutions (mosques, religious schools, Catholic youth groups, etc.) or remote territories not completely controlled by the administrative state apparatus and army. Foreign governments and movements may also support a fledgling movement in a nondemocratic context.

In the twentieth century, nondemocratic countries were much more likely to experience a radical revolutionary challenge from below than democratic states (Goodwin 2001). Revolutionary movements can be seen as a special type of social movement that seeks the overthrow of the government as its central goal, rather than piecemeal policy change. Often, revolutionary movements begin as reformist movements during a period of regime liberalization and only radicalize once the regime closes down the reform process. The violent repression of reform-minded groups transforms popular conceptions of the entire political system and provides incentives for the formation of more radical and revolutionary political organizations. Such a scenario developed in El Salvador during the 1960s and 1970s, as well as in Guatemala in the 1950s and 1960s, and more recently in Algeria and Nepal.

CONSERVATIVE MOVEMENTS

In the United States, conservative social movements have been on the rise since the 1980s. The emergence of an evangelical protestant Christian Right in alliance with the Republican Party has provided a favorable political context for conservative movements that seek to halt certain social policies perceived as morally reprehensible (e.g., same-sex marriage, legalized abortion, secularism in public schools, etc.). The movement's success resides in its capacity to form coalitions with different levels of government and to employ bloc recruitment strategies (e.g., mobilizing entire church congregations). Since the early 1990s, the Christian Right has won seats in hundreds of school boards, city councils, and state and national legislatures. The movement has also influenced the selection of Supreme Court justices (Micklethwait and Wooldridge 2004). In the 1990s and early 2000s, researchers found that extremist right-wing activity in the form of hate crimes and paramilitary militia groups in the United States was associated with job loss, economic restructuring, and lack of contact between educated and less-educated populations in the regions where these movements arise (Van Dyke and Soule 2002; McVeigh 2004).

TRANSNATIONAL SOCIAL MOVEMENTS

A major area of research involves the expansion of transnational social movements that link members and organizations across more than one country. Two noteworthy transnational movements in the early twenty-first century include international Islamic solidarity and the global justice movement. Internationally connected Islamic movements benefit from the concept of *umma*—the larger community of believers that links the Muslim world beyond national borders (Lubeck 2000). With global migration flows and new communications technology, Islamic-based social movements easily mobilize internationally. Early signs of this emerging process occurred in the 1980s during the Afghan-Soviet war. Thousands of Muslims and Arabs traveled from dozens of countries in the Middle East, North Africa, and beyond to Afghanistan to fight in a jihad (holy war) as the mujahideen (guerrilla fighters) against the secular Soviet Union, which invaded the country in 1979. The foreign Islamic fighters felt an international sense of solidarity with their fellow Muslim Afghans suffering under Soviet occupation. This struggle served as the base of the Al-Qaeda movement, which built a large multinational net-

work out of the social contacts made in Afghanistan. This network of transnational Islamic insurgents has since been used to send foreign contingents to wars in Bosnia, Chechnya, Iraq, Somalia, and other places.

The global justice movement (sometimes referred to by critics as the antiglobalization movement) is another major transnational movement that emerged in the late twentieth century. Supporters of this movement use global communications technologies to mobilize constituents. The global justice movement arose almost simultaneously with the expansion of the global Internet infrastructure between the mid-1990s and the early 2000s. Several organizations in Europe and Canada, including the Council of Canadians, Jubilee 2000, People's Global Action, and ATTAC, began to work with nongovernmental organizations in the developing world to place pressure on newly emerging and older transnational governing bodies and economic institutions such as the United Nations, the World Trade Organization (WTO), the International Monetary Fund, the World Bank, the Group of Eight (G8), and the European Union.

The demands of the global justice movement vary but tend to focus on third world economic justice, environmental protection, and the need for more transparency in decision making among the elite transnational economic and political institutions mentioned above. Though the movement held several major protests in the late 1990s outside of WTO and G8 meetings in Europe, a massive demonstration at the 1999 WTO meetings in Seattle, Washington, served as a breakthrough for the global justice movement. It was the largest sustained protest in an American city in several decades (Almeida and Lichbach 2003). Global justice activists coordinated the arrival of participants around the country and world via the Internet and organized the protests in the streets of Seattle with cell phones. Dozens of countries across the globe also experienced protests in solidarity with the actions in Seattle. The success of the Seattle mobilizations provided a template for organizing dozens of similar global days of action during major international financial conferences or free trade meetings in the first years of the twenty-first century.

SEE ALSO *European Union; G-8 Countries; Globalization, Social and Economic Aspects of; Justice, Social; Mobilization; Revolution; United Nations; World Bank; World Trade Organization*

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Paul Almeida

SOCIAL NORMS

SEE *Norms.*

SOCIAL POLICY INTERVENTIONS

SEE *Interventions, Social Policy.*

SOCIAL PSYCHOLOGY

Social psychology is the scientific study of how people think about, influence, and relate to one another. By studying social thinking, social psychologists examine how, and how accurately, we view ourselves and others. By studying social influence, social psychologists examine subtle forces related to conformity, persuasion, and group influence that pull our strings. By studying social relations, social psychologists examine what leads people to hate and hurt one another, or to love and help one another.

Social psychology as a field lies between personality psychology and sociology. Metaphorically speaking, personality psychologists study boats, sociologists study the ocean, and social psychologists study how those boats float. When a person (boat) arrives in an environment (ocean), social psychologists want to understand how they move on the winds and currents.

Social psychology considers many of the same questions as those sociology considers but favors answers that focus on the individual actors (such as the way they perceive their situations) rather than on answers that apply to the group level (such as poverty or family cohesion). It is also distinct from personality psychology, being less interested in individual differences (such as in aggressiveness or unhappiness), though it often considers individual differences that interact with situations (such as when a person with high self-esteem responds to a relationship threat by liking his or her partner more).

Compared to other social sciences, social psychology has few grand theories or revered old masters; it has no Freud or Durkheim. Instead it interweaves smaller, more focused studies that cover topics as diverse as the self, culture, persuasion, group dynamics, prejudice, and eyewitness identification. Despite its enormous scope, social psychology has several themes running through it, including:

- We construct our social reality
- Our social intuitions are often powerful but sometimes perilous
- Social influences shape our behavior
- Personal attitudes and dispositions also shape behavior
- Social behavior is also biological behavior
- Social psychology's principles are applicable in everyday life

As practiced in North America, social psychology is overwhelmingly experimental. It has also exhibited a willingness to engage social issues such as prejudice, violence, and public health.

HISTORY

Norman Triplett's 1898 experiments are generally regarded as the first social psychological studies. He showed that people would wind reels faster when others were present, an effect now referred to as *social facilitation*. Social psychology remained a small field until World War II, at which point the U.S. Army's sudden interest in personnel selection and stress responses led it to sponsor some highly innovative work. In the decade after the war the field exploded: Gordon Allport wrote an enormously influential book called *The Nature of Prejudice* (1954), Solomon Asch (1951) conducted experiments on conformity, Stanley Milgram (1974) conducted his famous experiments inducing people to give supposedly powerful electric shocks to a mild-mannered man, and Leon Festinger (1957) proposed his influential cognitive dissonance theory.

In the last quarter of the twentieth century, social psychology was dominated by a cognitive perspective that asked how we process social information. During the 1990s and beyond, it also has had a growing interest in "warmer" motivational processes and broad cultural influences.

METHODS AND ETHICS

Modern social psychology favors experimental research, with many published articles describing two to seven experiments or quasi-experiments that explore and refine some central idea. Correlational studies are also used, but often given short shrift in favor of experimental evidence. The field also puts great stock in meta-analyses that combine many previous empirical studies. Experiments use diverse manipulations, ranging from the subliminal presentation of words, to interaction with confederates, to false feedback on IQ tests.

Social psychological research is now subject to oversight by institutional review boards that safeguard ethical standards. While these are widely regarded as necessary in light of the ethical controversies that centered on some prominent early studies, social psychological experiments are almost never, in any real sense, hazardous.

PARTS OF THE SOCIAL MIND

Psychologists separate affect (emotions), from behavior, from cognition (thoughts), then study how they interact. Affect has broad consequences. People who are in a good mood tolerate more frustration, choose long-term rewards over immediate small payoffs, and see others in a more optimistic light. A growing movement in psychology known as positive psychology focuses specifically on well-being and how it can be enhanced.

Attitudes, in social psychological parlance, are the affect people bear toward some object or activity. Social psychologists study how attitudes form and change, how strong and durable they are, and how much they predict actual behavior. The answer to the latter question, under many circumstances, is "somewhat, but not as much as you might think."

Since the 1980s cognition has increasingly become a focal point for social psychologists. They study when cognitions are activated (come to mind), how they are organized into schemas, and when people are motivated to think things through systematically as opposed to using heuristic mental shortcuts. Some influential models, such as the theory of reasoned action, describe how a person's beliefs about an object ("it's big, loud, and emits black smoke") are combined to produce an overall attitude ("I hate it").

Affect and cognitions influence behavior, but behavior can also influence affect and cognition. Under the right conditions, both saying and doing can lead to belief (if you say that you like something enough, or just keep buying it, and you might really end up liking it). Even just arranging your face muscles into the shape of a smile can make you feel happier.

Although affect, behavior, and cognition are social psychologists' central organizing principles, other parts of the mind have also been of interest, such as memory and physiological arousal. The self is an enormous area of study, encompassing thoughts about who one is (self-concept or identity) and attitudes toward oneself (self-esteem).

People organize knowledge about themselves into well-integrated pictures, or self schemas, that help them quickly sift and sort the world. People better remember things that are relevant to their self schema, and spontaneously make social comparisons between themselves and others. Self-serving biases describe the ways we distort the world to make ourselves look better (for example, by taking more responsibility for our successes than our failures). Self-monitoring describes people's tendency to engage in impression management—altering their social identity to fit different roles in different places (friend at school, son at home, employee at the office). Manipulations that affect people's self-awareness (the presence of mirrors, seeing one's own name) encourage people to act more in line with their stated attitudes.

DYNAMICS OF THE SOCIAL MIND

Scholars have devoted much attention to social influence—the ways in which individuals and groups come to change others' thinking or behavior. Early dramatic studies showed that people seemed remarkably vulnerable to social influence. In Asch's famous experiment, they doubted their own eyes when others claimed to see things

that were patently untrue, and in Milgram's experiment, they gave extremely painful electrical shocks on command. People can, however, resist social influence. Even in these seminal studies compliance was far from universal, and rates of conformity were rapidly deflated by small changes, such as a lack of unanimity among influencers and a greater distance from authority figures. Much work has gone into who conforms to what, when, and why, with several important factors identified in the study of persuasion. These include who (attractive person, authority figure) says what (reasoned vs. emotional message, one- or two-sided appeals) to whom (audience pays close attention or not).

In the 1990s social psychologists started directing their attention more towards "warm" or motivated cognition—people's attempts to arrive at the answers they would like to. People bring this convenient brand of reasoning to many tasks, including forming impressions of themselves and others, attributing motives for actions, and judging the desirability of various outcomes. They do this, though, with some constraints imposed by reality—most consider themselves more moral than average, but few claim saintliness.

Scholars have become increasingly interested in automatic processing, in which judgments, associations, or even actions are made quickly and efficiently with little conscious guidance. For example, work has focused on negative stereotypes that rapidly come to mind when people encounter minority groups. A number of "dual-process models" have been proposed for processes like impression formation, attitudes, persuasion, and stereotyping. In these models people first have a fast, efficient, automatic and uncontrolled reaction that is later adjusted, if the person is so motivated, by conscious thought. Upon seeing a stranger fall over, for example, a fast, effortless inference might be drawn that this person is clumsy. If one liked the person, however, within less than a second one might start searching more deliberatively for outside factors and conclude that the person was pushed, or that the floor was slippery, overruling (at least partly) one's initial verdict.

Attraction and intimacy form another major dynamic of interest. Liking is influenced by factors such as proximity, familiarity (the "mere exposure" effect), physical attractiveness, and the sharing of things about one's self. One of the more prominent models of intimate relationships, Robert Sternberg's triangular theory (1988), describes any given relationship in terms of passion (infatuation), intimacy (liking), and commitment (a desire to stick it out). Sternberg argues that a relationship may have only one of these (friends typically have intimacy but no passion), two (good friends would add commitment), or all three (which he calls "consummate love").

When people get together, the resulting groups take on dynamics of their own. People in them work harder when their contributions are visible (social facilitation), but coast when their contributions are unidentifiable (social loafing). Group discussions also sometimes accentuate initial attitudes and actions (group polarization). Sometimes large groups of people will engage in behaviors that none of their members would have contemplated doing on their own (such as chanting for suicidal people to jump), partly because the individual members become "deindividuated"—they lose the self-awareness that anchors them to their personal standards.

APPLICATIONS

Social psychological work has been applied to a great many real-world settings. Researchers have brought it to the study of health behaviors, such as smoking and use of condoms, and in doing so have offered practical advances. They have spearheaded, for example, graphic pictures of decayed teeth and lungs on boxes of cigarettes in Canada. Political psychologists have, likewise, been interested in models of persuasion and attitude formation and change. Organizational psychologists have applied social psychological theories of group processes, satisfaction, and enjoyment to the context of the work place.

Law is another area that has seen widespread application of social psychological research. Psychological work has revealed that eyewitness identification, long a linchpin of legal evidence, is often flawed. It is often very difficult for people to accurately identify even those at whom they have had a good long look. Research has been used to improve identification lineup procedures to produce fairer results with fewer false positives, for example by instructing witnesses that the suspect may or may not be in the lineup. Social psychologists have also been involved in great controversies over the accuracy of "recovered memories"—recollections of past abuse that people believe they have rediscovered later in life. Research shows that, though some such cases may be genuine, some are almost certainly not, as it is not difficult to create false memories in people.

HOT AREAS

As brain imaging technology advances, rapid strides are being made into understanding the brain functioning associated with attitudes, emotions, and behaviors. Early attempts were sometimes dismissed as "color phrenology"—attempts to put people in a scanner and simply catalogue which areas lit up. Newer work compares the known functions of brain regions with their activation during social behaviors. For example, researchers might note that in some types of people subliminal exposure to African American faces simultaneously activates areas

associated with alarming stimuli and areas associated with cognitive control. They might infer from this that an emotional reaction is taking place, alongside an effortful attempt to control it.

SEE ALSO *Allport, Gordon; Asch, Solomon; Cognition; Conformity; Emotion; Experiments, Shock; Festinger, Leon; Groupthink; Herd Behavior; Lay Theories; Milgram, Stanley; Neuroscience; Persuasion; Prejudice; Psychology; Role Conflict; Schemas; Self-Consciousness, Private vs. Public; Social Facilitation; Social Science; Socialization; Sociology*

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SOCIAL RELATIONS

Social relations are patterned human interactions that encompass relationships among individuals, informally organized groups, and formally organized groups, including the state. Modern-day approaches to social relations are represented by individualist, structuralist, and institutionalist theoretical frameworks. Exemplary thinkers have been selected in the field of labor relations and in the study of political processes to illustrate these different approaches.

Individualist theories explain social relations as the response of the rational individual to the outside environment. Individuals are assumed to be able to determine, and then act, on their personal self-interest. Thomas Malthus (1766–1834) and John Stuart Mill (1806–1873) were key figures in systematizing individualist thought. In the social sciences, particularly in economics, individualist explanations have historically exerted great influence, and since the 1960s they have enjoyed renewed popularity in political science and sociology in the form of rational choice theory.

Structuralist theories emphasize the presence of underlying structures in human relations. These structures have a systematic character, including mechanisms of self-regulation and self-transformation. Karl Marx's theory that capitalist development is driven by a contradiction between the forces of production and the social relations of production is a prime example of a structuralist theory. The *forces of production* refer to labor processes, such as mechanization, the reorganization of the workplace, and the education of the working class. The *social relations of production* refer to the relations between capitalists, who enjoy a monopoly control over the means of production, and workers, who rely exclusively on their own labor power. When the forces of production and the relations of production get seriously out of joint, revolution occurs and leads to the creation of a new system of production with different social relations of production.

Institutionalist theories, in contrast, focus on the role of institutions possessing organization, rules, and shared goals in the shaping of social relations. Institutions are not seen as reflections of underlying structures but as at least partially autonomous units. John R. Commons (1862–1945), Karl Polanyi (1886–1964), and Thorsten Veblen (1857–1929) are among the founders of institutionalism. Long a minority current and largely confined to economics, since the 1990s a "new institutionalism" has won growing support among economists, sociologists, and political scientists.

LABOR RELATIONS

These different approaches can be seen in labor relations, a field to which individualists, structuralists, and institutionalists have contributed significantly. They have all been concerned with labor militancy, but each analyzes militancy in distinctive ways and poses different central questions. Individualists ask why a rational worker would join a trade union or participate in strikes. The economist Mancur Olson, in *The Logic of Collective Action* (1965), questions why workers would join a trade union when the results of collective actions are "collective goods" (defined

as goods that benefit all). These results are thus shared by all workers, whether or not they participated in the collective action. A rational worker would let others join and pay the costs of striking, while waiting to achieve any collective good their action might produce. To overcome a rational worker's objections to collective action, Olson suggests that unions often use selective incentives, or benefits confined to group members, such as the exclusion of nonunion workers from employment (closed shops), to make sure that the rewards of collective action are confined to participants in collective action. While Olson's analysis offers insights into some problems of labor relations, it conflicts with observed worker behavior. Strike-prone French and Italian workers have historically lacked benefit packages and closed shops.

In contrast to Olson's individualist focus, John Kelly's Marxist approach asks how militant collective identities are formed at the workplace. To Kelly, social relations play a big role. In *Rethinking Industrial Relations* (1998), he argues that capitalists' monopoly over the means of production enables them to exploit workers, and that workers' experiences at work give them a limited consciousness of their own exploitation. But when do workers come to see their exploitation as class injustices rather than as flaws of particular employers or the products of local circumstances? Emphasizing that consciousness emerges from the interaction of labor processes and social relations, Kelly focuses on the role of ideologically motivated activists on the workshop floor who persuade workers through talk and by collective action that their fate is inextricably bound up with that of the class collectivity. Kelly emphasizes that workers' ideologies and workplace struggles—their social relations—are as important as productive forces in the evolution of worker radicalism.

While social relations play a major role in Kelly's Marxist analysis of labor relations, structural forces also remain crucial. Kelly argues that the decline in labor militancy in the United Kingdom and much of the contemporary Western industrial world is a cyclical phenomenon produced by Kondratieff waves, which are decades-long waves of economic activity. During the upswing of Kondratieff waves, employment increases and the workers' bargaining position strengthens. The opposite occurs during downswings, however, and turning points correspond to historical changes in systems of labor organization. The contemporary decline in unionism in the private sector in the United Kingdom and many industrialized nations does not constitute a dissolution of class as much as it represents the triumph of aggressive capitalism during a favorable historical period.

Kelly's argument puts a good deal of weight on the role of radical political action within trade unions in promoting class identities, but little information is presented about what motivates activists or how militant organizations are sustained. A Kondratieff wave is a good example of a deep structure, one that exerts great influence but that may escape detection entirely by contemporaries. But Kondratieff waves are also problematic because so little is known about their causes. In addition, because the number of cycles is so small, the possibility exists that random forces are at work.

Institutionalist labor relations acknowledge both class and individualist concerns, but they focus major attention on institutional regulation, emphasizing the constructed character of social relations. Institutionalists ask why various industrialized nations possess very different systems of industrial relations. A good example of an institutionalist approach is that of Bo Rothstein, who argues that the character of unemployment insurance programs explains why Scandinavians have significantly higher union membership than other Europeans (1992). According to Rothstein, government-subsidized, union-controlled unemployment insurance programs prevail in Scandinavia, while compulsory national unemployment systems dominate elsewhere. A union-organized unemployment system, the so-called Ghent system, allows Scandinavian unionists to limit benefits to unionized workers, to decide what jobs are suitable for unemployed workers and, as a consequence, to increase labor's control over the labor supply. In Sweden, for example, the union-dominated Ghent system was implemented by Social Democrats with these ends in view. The welfare system actually promotes unionization, accounting for as much as 20 percent of Sweden's lead in unionization over major non-Scandinavian European nations.

Although individualists, structuralists, and institutionalists pose different questions about labor relations and pursue different research agenda, there is some room for common ground. Rothstein underlines the importance of the autonomous creation of Ghent system type welfare programs but also stresses that such institutions may be seen as an example of the selective incentives dear to Mancur Olson. Rothstein also adds that Marxist theories of class formation help explain why trade unionists entered politics to pursue class objectives in the first place.

POLITICAL PROCESSES

Social relations concern not just questions of collective action but also issues of political process of concern to social scientists. Recent debates over the evolution and effects of democratization show how individualist, structuralist, and institutionalist approaches can be applied to political issues.

Many individualists emphasize the importance of reciprocity in understanding political processes, as well as the role of democratic polities in fostering norms of reciprocity. In democracies, such norms are formed in repeated

social exchanges that define appropriate behavior and promote collective benefits. Over the course of repeated interactions, individuals learn the value of cooperation and can reasonably expect that their contributions will be rewarded by others' contributions at a later stage of the game. An application of an individualist approach to politics processes can be seen in *Consent, Dissent, and Patriotism* (1997), Margaret Levi's study of conscription and conscientious objection. Levi argues that, however patriotic, rational draftees might be expected to stay home and let others bear the brunt of the battle. Patriotism makes sense when prospective conscripts can be sure that others will also answer the call. Surveying military service in six countries over extended periods of time, Levi found that young men are most likely to respond when they trust that the government is making policy and implementing it fairly, when they see that others are obeying, and when they receive information that confirms government trustworthiness and popular responsiveness. Thus, faith in government's equity and capacity breed civic trust.

A structuralist perspective on democratization and distrust can be seen in Quintan Wiktorowicz's book *The Management of Islamic Activism* (2001). Wiktorowicz studied the response of Islamic movements to Jordan's post-1989 democratic reforms, and he shows how Islamic movements that have adopted formal organizational structures and subjected themselves to state regulation have been systematically manipulated and denied the ability to articulate independent political positions. Charitable societies, religious judges, Mosque preachers, and the Ramadan religious period are carefully policed and regulated by the Jordanian state. One important political-religious group, the Muslim Brotherhood, benefits from state largesse, encouragement, and even facilitation, and it has become a politically moderate ally of the Jordanian state. In contrast, Salafi Muslims have avoided integration and have remained informally organized. Salafi networks possess significant influence in religious education where they advocate social justice and Islamic practices that contrast with the regime's support of the status quo. Rejecting efforts at government control, Salafis have resisted formal organization and, in the underworld of informal organization, reformist Salafis have often established contacts and have been influenced by more radical Islamic Salafis.

Wiktorowicz shows that Jordan's allegedly democratic reforms have not produced democracy. Still, changes in state structure have not been ineffectual. Changes in state structures have profoundly affected the character not only of Jordan's quiescent formal political organizations, but also that of the government's rebellious, informally organized opposition.

From an institutionalist perspective scholars have also been interested in how allegedly democratic reforms can actually restrict democratic politics and undercut the agents of state capacity. Ezra Suleiman's book *Dismantling Democratic States* (1997) is a "new institutionalist" study of governmental deregulation and de-democratization in some important industrial nations. Suleiman suggests that debates over governmental reform changed in the 1980s and 1990s. During these decades, encouraged by advocates of a "New Public Management" policy, attacks on bureaucratization no longer focused on creating a more efficient public civil service but on championing a privatization that, Suleiman believes, weakens democracy. Privatization, he argues, necessarily destroys the public space in which contemporaries can debate political options, while broadsides against bureaucratization undermine faith in the civil servants and governmental institutions that represent the most practical civic alternative to markets. At the higher levels of government, there is increasingly little place for the career civil servant, while business experience is taken as a desirable and sufficient qualification for those charged with serving the public good. But if states no longer foster institutions that possess autonomous power, why debate politics at all? When consumers replace citizens, political authority and democratic politics necessarily contract.

In the case of political processes, as in that of collective action, individualist, structuralist, and institutionalist theories all offer valuable insights. Levi's study of conscription shows how democratic governments can build trust by creating institutions that treat citizens equally and that are sufficiently transparent to let citizens see they are being treated fairly. Wiktorowicz's study of political integration in Jordan shows what happens when state administration is inequitable and when it denies equal treatment to political groups, bringing some into the government and condemning dissenters to the murky world of informal organization and secrecy. Finally, Suleiman demonstrates the growing danger of replacing democratic institutions with markets. Such a situation provides little room for citizens to engage in the kind of debate and civic interaction that Levi argues builds trust, and it provides no vehicles for integrating dissent into the political order.

In conclusion, a look at individualist, structuralist, and institutionalist theories shows a clear difference in their central organizing questions and their root conception of fundamental social relations. Yet each offers valuable insight into important aspects of collective action and political process. The current challenge seems to be not so much to dismiss or discard theories, but to look for new ways to integrate significant contending theories.

SEE ALSO *Democracy; Institutionalism; Interactionism, Symbolic; Labor; Labor Union; Malthus, Thomas*

Robert; Marxism; Mill, John Stuart; Sociology; Structuralism; Workplace Relations

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Michael Hanagan

SOCIAL SCIENCE

An eclectic and sometimes polarizing term, *social science* is a broad umbrella linking multiple fields, with contention regarding which fields should be included under its purview. Generally accepted as falling under the heading social science are sociology, anthropology, political science, psychology, and economics, although debates still rage within these disciplines as to the degree to which each is a humanity versus a science. Disciplines such as history and linguistics, while still addressing social life, are less often included as social sciences. In general, social science can be regarded as the scientific method's application to all things social. It should be noted, however, that most social sciences manifest, to a greater or lesser degree, a humanities emphasis as well as a scientific one.

There is still some debate regarding the use of the term *social science*, with criticism generally aimed at the word *science*. Traditionally, the natural sciences, or "hard sciences," have been characterized by the use of the scientific method, which involves generating testable hypotheses in order to predict future outcomes and the ability to falsify these hypotheses. When applied to the natural world, the scientific method allows for high degrees of predictability, due to science's ability to recognize and understand universal laws governing empirical reality. When applied to the social world, however, comparable levels of prediction and discoveries of analogous universal laws governing human behavior have proven to be more allusive. Due to the social sciences' limited success in employing the scientific method, they are often referred to as the "soft sciences."

ORIGINS

No definitive date can be given for the birth of social science—its emergence is in fact due to a large number of circumstances spanning centuries and some of its rudimentary ideas can be traced to multiple origins, some dating as far back as Plato. It is generally accepted that an important era in the emergence of contemporary social science began with the Enlightenment and its emphasis on rationality, logic, and methodology as applied to the empirical world. There are scholars, however, such as Lynn McDonald, who contend that the foundation of social science should be traced back to the sixth century (McDonald 1993). Maurice Duverger (1961) has argued that the social sciences, despite early roots in Grecian inquiries into the nature of man, did not emerge as a distinct form of research until the eighteenth century, when social philosophy bearing a "philosophical attitude" gave way to a new scientific emphasis. This shift from social philosophy to social science was given impetus by the emergence of positivism as a widely accepted mode of knowledge. First articulated by August Comte and best described in his 1848 work *A General View of Positivism*, positivism moved almost entirely away from metaphysical speculation and instead focused on the scientific method's ability to produce facts and falsifiable statements about the empirical world.

At first, much of this new scientific inquiry focused nearly exclusively on the natural world. Great gains were made in physics, chemistry, biology, astronomy, and other fields dealing with the natural environment. It was not long, however, before the methods employed to achieve these gains were utilized in attempts to describe, explain, and predict human behavior. Hewing closely to positivism's tenets, the social sciences sought to discover laws governing the social realm—in effect, laws that allow the predictability of human interaction. Subsequent years

have shown just how elusive are the levels of predictability and precision found in the natural sciences when sought in the social sphere.

MORAL COMPONENTS

The need for a social science also emerged from widespread and often violent revolutions sweeping European intellectual, political, and economic spheres beginning in the seventeenth century. Economic crisis spurred on by widespread migration to urban centers, widening inequality, and the imperialist ambitions of some European states led many to apply scientific approaches to social behavior, in an attempt to understand and predict social phenomena. Implicit in this project was a distinctly moral component, which scholars such as Alan Wolfe argue is still central to the social sciences, even if it is not always evident in their practice (Wolfe 1989). While social science attempts an objective evaluation of human and social behavior, by its very nature it must grapple with questions of equality, fairness, cohesion, and happiness, and thus with moral issues.

SOCIAL SCIENCE'S METHODOLOGIES

As was the case with the natural sciences, much of the early social science literature relied heavily on human observation in deriving its conclusions. Not until the publication of Émile Durkheim's *Suicide* in 1897 was statistical analysis incorporated into social scientific writings. With the subsequent increase in statistical analysis looking at all forms of social behavior, a divide was created within the social sciences between those using quantitative and those using qualitative methods. The proponents of quantitative methods often cite their predictive powers and the ability to develop generalizable properties via random samples—allowing social scientists the ability to sample the behavior, opinions, or values of a relatively small number of individuals and apply their findings fairly accurately to larger populations. Qualitative methodologists argue that their approach results in a more detailed and specific understanding of a given area of study. While at the start of the twenty-first century this divide still exists within the social sciences, a recognition of the need for a more integrative approach is beginning to emerge.

A third and somewhat distinct methodology emerged during the 1800s from the work of Wilhelm Wundt, generally considered to be the father of psychology. Wundt was one of the first intellectuals to utilize human experiments as a methodological tool for the social sciences—a method still predominant within psychology, but found to a lesser degree in the other social sciences.

ETHICAL CONSIDERATION

Throughout social science's history, ethical as well as moral considerations have played an important and interesting role in shaping types of studies and areas of inquiry. It is this ethical and moral dimension that to a degree sets the social sciences apart from the natural sciences. With its main area of inquiry being the human animal, it has long been recognized that social science, if misused, poses a certain level of danger.

While they are rare, there have been social scientific studies that were physically or emotionally harmful to the individuals under study. Stanley Milgram's electrical shock experiments in the early 1960s and Philip Zimbardo's 1971 Stanford prison experiment are two of the more infamous cases of disregard for the ethical treatment of study subjects. Milgram, conducting authority experiments, led test subjects to believe they were applying dangerously high levels of electric shocks to other experiment volunteers. In reality, volunteers seemingly receiving shocks were accomplices who only acted as if they were being shocked. Despite being told of the deception after their participation in the experiment, some of the volunteers who were instructed to apply electrical shocks continued to suffer emotional stress caused by their initial belief that they had severely harmed or even killed another individual. Likewise, in 1971 Zimbardo, hoping to explore the nature of human evil, created a mock prison at Stanford University, subdividing volunteers into two groups—prisoners and guards. After only six days the experiment was shut down due to sadistic behavior on the part of the guards and the onset of depression in many of the prisoners. Much was learned from both of these classic social scientific investigations—which are still being studied several decades after they ended—but both also dramatically highlight the potential harm experiments can cause tests subjects.

Another ethical issue confronted by social scientists concerns the use of scientific evidence to further dangerous or prejudiced ideologies, and the ways in which such ideologies can shape research results. In *The Mismeasure of Man* (1981), Stephen Jay Gould argues that racial and ethnic prejudices can influence social scientific research in such a way that the scientist's ideological beliefs are reified by flawed research results. Gould shows how early craniometrical research attempting to link skull size to intelligence, and ultimately to a hierarchical ordering of races, produced severely flawed results that mirrored the preconceived prejudices of the scientists conducting the studies. The racist undertones of these and other early attempts at blending biology and the study of human behavior (to produce what was later coined sociobiology) have made many social scientists suspicious of biological explanations for social behavior. Nonetheless, by the second half of the

twentieth century achievements in evolutionary biology and genetics had sparked new interest in the link between genetics and social behavior.

Social scientists must also consider who will use their findings and the manner in which the findings will be used—especially when utilized by government and military institutions. While social science can provide much insight useful for the formulation of beneficial public policy, it also has the potential to be utilized in unethical ways. Such was the case in the United States after the September 11th attacks of 2001 which led to the War on Terror. The U.S. military turned to the social sciences, mainly psychology, to aid them in extracting information from combatants in custody. Questions were raised regarding the ethics of social scientists utilizing their expertise on human behavior to aid military and government interrogators extracting information from detainees in coercive ways, possibly amounting to torture. Ultimately, the American Psychological Association ruled its members could participate in the interrogations as consultants so long as noncoercive methods were utilized (American Psychological Association Task Force 2005, Behnke 2006).

SOCIAL SCIENCE'S BRANCHES

Differing perspectives on how social scientific inquiry should be applied and what it should be applied to led to the advent of several branches of social science, which, however, display greatly overlapping interests and methods and share a number of major thinkers in common.

Psychology Psychology, or the science of the mind, which is often traced to the work of Wilhelm Wundt in the mid- to late 1800s, attempts to explain the behavior of individuals through the mechanisms of the psyche. The related field of social psychology explores the mind's operations in the context of interactions within a group. Increasingly, however, subfields within psychology have come to be seen as more akin to the natural than to the social sciences. With its increasing emphasis on biological development and on functions within the brain, psychology, perhaps more than other social sciences, is beginning to blur the line between the natural and social sciences.

Anthropology Anthropology is generally regarded as the scientific study of the origin, the behavior, and the physical, social, and cultural development of humans. According to Wolfe (1989) and others, anthropology's general emphasis on origins has tended to make it only indirectly focus on contemporary society. While it is a broad field, most of its studies can be classified as belonging to one of four subfields: cultural anthropology, physical anthropology, linguistic anthropology, and archaeology.

Economics As with the other social sciences, there are multiple—if similar—definitions of economics. It is perhaps best defined as the study of the creation, consumption, and distribution of scarce resources. The field is broadly categorized into one of two subfields: macroeconomics and microeconomics. Macroeconomics emphasizes national-scale economies and their interactions, whereas microeconomics tends to focus on interactions between agencies, corporations, and individuals. While focusing primarily on markets, economics also explores how markets influence and shape other cultural phenomena.

Political Science Like social science's other branches, political science is a diverse and broad field of inquiry. It is best understood as the study of power and its transfer through political behavior. Political science as a coherent and recognized branch of social science did not develop until the mid-1800s, although it is widely acknowledged that scholars and intellectuals before that time had been pursuing insights into political behavior for many centuries.

Sociology Sociology as a coherent and established field of study is the newest of the social sciences, and perhaps the most difficult to define. With its area of scientific inquiry being all things social, sociology is often seen by its practitioners as analogous to social science itself and as integrating the work done in anthropology, psychology, political science, and economics. Such a view is confirmed by the diversity of the thinkers sociology considers influential—many of whom came from other social-scientific disciplines. Karl Marx and Max Weber, recognized as two of sociology's founders, were trained as an economist and a lawyer, respectively. George Herbert Mead, a philosopher, has had a lasting influence on sociology, as has Talcott Parsons, who had graduate training in economics. Likewise, anthropologist Margaret Mead, psychoanalyst Sigmund Freud, and many other non-sociologists continue to influence sociological research.

While at the start of the twenty-first century sociology, anthropology, political science, psychology, and economics are seen as separate and distinct branches within the social sciences, these disciplines continue to be linked together by a common grounding in the writings of a number of key thinkers. Among those that are still read by more than one social science branch are Adam Smith, John Locke, Sigmund Freud, Karl Marx, Émile Durkheim, and Erick Erickson, to name only a few.

CONTEMPORARY ATTACKS ON SOCIAL SCIENCE

During the 1960s, two then-emerging intellectual movements known as *poststructuralism* and *postmodernism* first articulated an attack on some branches of social science

that continues to this day. As Pauline Marie Rosenau argues in *Postmodernism and the Social Sciences* (1992), from their birth both poststructuralism and postmodernism took very similar positions, and by the end of the twentieth century they were generally seen as synonymous with each other. Poststructuralism emerged from continental Europe in the 1960s in reaction to *structuralism*—the belief that basic structures governing human interaction can be found, despite its changing and oftentimes contradictory nature. Postmodernists shared the same reaction against structuralism but applied their critique to larger cultural entities. Because of their many commonalities, by the end of the twentieth century the term *postmodernism* was often used as an all-encompassing word to refer to both movements.

Postmodernism has many historical roots, but its direct origins can be traced to the work of poststructuralists such as Michel Foucault. By the late twentieth century, Jean Baudrillard had emerged as postmodernism's leading theorist. Baudrillard as well as other postmodernists often draw inspiration from Friedrich Nietzsche's nihilistic anti-Enlightenment philosophy, which questioned notions of truth. All claims to objective truth or knowledge, especially those produced through scientific inquiry, are seen by postmodernists as subjective "narratives" that need to be deconstructed and decentered, to reveal them as attempts at exercising and enforcing social power. Furthermore, the existence of ordered reality is denied, and the concept of "evidence" is attacked.

While postmodern thought can largely be attributed to French philosophers such as Baudrillard, Jacques Derrida, and Foucault, there are also American forerunners of postmodern discourse—namely C. Wright Mills, David Riesman, and Berger and Luckmann. Though not generally seen as postmodern thinkers, these Americans hinted at many aspects of postmodern thought prior to the emergence of the postmodern label.

THE SOCIOLOGY OF SCIENCE

Questions about the objectivity of social science have been raised not only by its critics, but from within the social sciences as well. Recognizing the inherently social nature of scientific inquiry, social science has been able to apply its methodology to the practice of science itself—and in so doing has called into question the claims of science, both natural and social, to be objective. Work by academics such as Thomas Kuhn, particularly his landmark publication *The Structures of Scientific Revolutions* (1962), as well as advances in the subfield of the sociology of knowledge, have called into question how objective scientific practices really are, and have begun to show that politics, personalities, and larger cultural trends often inform scientific endeavors. Science (and by default social science) is no longer seen as a steady accumulation of more and more data leading to incremental advances in knowledge. Instead, science and the knowledge it produces are seen as the product of social forces that often lead to revolutions within scientific fields, and dramatic paradigm shifts in what any particular science claims to be true at a given point in time. This realization during the mid-twentieth century marked a dramatic turning point in social science's development. Social science, which previously had relied on the natural sciences as a model to emulate in its own development, could now apply its own knowledge and methods to the natural sciences—which were seen as areas of social behavior in need of study.

SOCIAL SCIENCE IN THE UNITED STATES

Social science achieved perhaps its purest form in America. For a number of reasons, metaphysical and epistemological concerns have largely been ignored within the United States, leaving such "philosophical speculation" to European counterparts—although British social science is more akin to that found in the United States. Academics such as Dorothy Ross in her 1991 work *The Origins of American Social Science* have argued that America's particular brand of social science is the result of pre–Civil War American exceptionalism—the belief that America held an exceptional place in the world, outside of the historical currents that were leading to class uprisings and mass poverty elsewhere. By the mid-1800s, with the rapid industrialization of the United States, American social scientists were, however, finally forced to recognize the influence of historical forces on American society.

SOCIAL SCIENCE IN THE TWENTY-FIRST CENTURY

Social science's direction at the start of the twenty-first century is difficult to discern. Increasing attacks from postmodernist thinkers provide some reason for concern. Perhaps more alarming, however, are the internal divisions confronting the social sciences. A wide array of sometimes competing methodologies and theories has led to frequent infighting among social science practitioners, and the absence of an accepted grand theory creates some level of worry about future directions. Some of social science's branches, however, namely economics and psychology, seem to be gaining in prestige. In the case of economics, this is mainly due to the increasing weight given to the marketplace as a predictor of many facets of human behavior; in the case of psychology, it is due to the field's growing ties to the biological sciences.

There are other positive developments afoot as well. Social science, especially within sociology and anthropology, has increasingly recognized the need for minority per-

spectives. As a result, an increasing number of minority scholars have made their way into the social sciences since the 1960s. New areas of study loosely affiliated with the traditional social science disciplines have also emerged: African American studies, Chicano studies, queer theory, and women's studies, all of which have made important contributions to the social sciences. Furthermore, the social sciences have increasingly found a place in governmental and corporate entities, tackling everyday issues confronting society.

SEE ALSO *Anthropology; Economics; Political Science; Social Psychology; Sociology*

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Keith Kerr

SOCIAL SCIENCE, VALUE FREE

The German sociologist Max Weber (1864–1920) is the originator of the demand for freedom from value judgments in the social sciences, an ideal he referred to as *Werturteilsfreiheit* (value-freedom). Weber argued that there is a logical gulf—it is not a matter of degree—separating the causal hypotheses and empirical generalizations of science from value judgments, that is, one's moral, political, and aesthetic preferences. The "truth" of a social scientific hypothesis is in no way a matter of these preferences. No preference is, in turn, "required" by any given set of facts. Since this is so, it behooves social scientists to keep the two realms—fact and value, is and ought, science and values—separate.

In Weber's day, this separation was not observed by everyone. "Professorial prophets," as Weber called them, preached worldviews (*Weltanschauungen*) from university lecterns as if from the pulpit. It was for Weber a matter both of personal integrity and professional duty that this propagation of practical political ideals be brought to a stop (although he found it immensely hard to persuade his colleagues, who represented a range of "human" disciplines, to accept this view). These self-appointed "prophets," Weber argued, indulged in a form of showing off. Worse, their pronouncements impaired the clear perception of reality (Weber's own scientific vocation): Ultimate questions were addressed "in the name of science," which is a logical impossibility. Such professorial "prophets" were paid from state funds (unlike religious preachers), were unsupervised, and did not anticipate any debate; the student audience in the lecture hall could not answer back, so academic power was abused. According to Weber, scholars and teachers should stick to their scientific vocation, for they have a job to do that requires addressing in a businesslike manner. In Weber's philosophy, meaning cannot be given to the whole of existence, as the "prophets" seemed to believe. The teachers' task is instead to present facts, even ones they may find personally unpalatable, and to always see these facts as separate from their own evaluations.

Weber was influential because he called attention to the vocation of the scholar in the human sciences—a job that demands a professional approach—at a time when such a view was rare. What, he asked, is the responsibility

of scholars to their discipline and to themselves, both as scholars and as political or moral beings?

VALUE-RELEVANCE

Weber held that values influence the way in which research is conducted in the social sciences (in addition to other non-essential ways common to natural and social science) and that values themselves could be affected by the results of research. The holder of a value position may learn that a course of action is unworkable or that, if pursued, other values might, collaterally, be infringed or impeded. Facts can be brought to bear on values, potentially affecting one's holding of them. However, this does not weaken by one iota a given value's freely-chosen status. On the research side of the human disciplines, evaluations enter into the subject matter. Using *verstehendes Erklären* (understanding explanation), that is, the subject's evaluations seen in relation to the conditions of his or her action, the researcher can hope to sort out the decisive motives of the actor studied. In research, the scrutiny of values permits a discussion between investigators that can clarify the (evaluative) points of view each brings to bear.

Science is served, Weber believed, by an empirical, critical treatment of values. Ultimate values can come into view, and the implications of such values, when particular situations are judged in practical terms in their light, can be traced. In addition, the factual consequences of such judgments can be seen, and new ultimate values can be revealed (with their own implications) of which the maker of the judgment was not at the time aware. The choice of any given value is always, of necessity, "free," that is, incapable of being determined by any fact. It is free because it is a value. It is a choice because there are many values and they are radically at odds, in Weber's view (he called them "warring gods"), in the modern, areligious world.

Both the investigator and the investigated are caught up in culture. "We are," Weber says, "cultural beings" (1968, p. 180). If culture is to be their object, social scientists must recognize that the precondition for a cultural science is that, as cultural beings, humans can take up an attitude to the world and give it meaning and significance—some part of the world becomes culture for them. It is "values" that permit this. And, of course, concrete cultural values and hence "problems" in cultural science change with culture, shifting over time. "Value-relevance" (*Wertbeziehung*) was an idea Weber took from his friend Heinrich Rickert (1863–1936), a philosopher, although he modified it in the process. But his basic attitude to all of science is neo-Kantian in cast. Values are a component of human action and can be empirically investigated. Only their validity is unprovable empirically. It was Weber's intense concern for reality that convinced him of the heterogeneity and historical nature of values, despite the teachings of the dogmatists who believed the world as a whole had but one meaning and of those philosophers who were striving to provide the means for finding such a meaning on the transcendental level. Weber believed that human beings must choose for themselves. Science must accordingly be kept value free. A concern for values underlaid Weber's commitment to freedom from value judgments in science (and teaching).

THE VALUE-FREEDOM DEBATE

Weber's idea of value-freedom and value-relevance has been an object of continuous discussion since he formulated it. Critics have appeared in several guises. Analytical philosophers, for example, are concerned with the is/ought distinction; descriptivists maintain that all qualities of objects are assimilable to their factual properties; and some empirical sociologists argue that value-freedom is a conservative professional ideology. Given that society is dichotomously divided—between, for example, men and women, white and black, bourgeoisie and proletariat—and the dominant is biased, the sociologist must take sides; if the sociologist falls on the side of the weaker, he or she must be biased too. For critical theorists, Weber advocates "decisionism," that is, he implies that value choice is blind faith and "private"; Weber is thus a (subtle) positivist. A public consensus on value matters (ideals and projects) is, however, possible via human action.

Similarly, but from the perspective of natural law theory, Leo Strauss (1899–1973) argued that Weber was ultimately a nihilist in moral matters, whereas a return to the tradition of classical political philosophy would make it possible to settle whether or not values are heterogeneous and in conflict, as Weber maintains. Weber provided a middle way between positivism and idealism that was itself a finely wrought solution to the key questions involved in the possibility of a "social" science. These questions continue to be asked, and Weber's answers continue to be dissected by fresh generations faced with the conflict between reason and faith, science and values, theory and practice, and detachment and involvement. They share Weber's insight that science "cannot save us" but believe, with him, that commitment alone is not enough.

SEE ALSO *Methodology; Positivism; Weber, Max*

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Ian Varcoe

SOCIAL STATICS

The concept of social statics relates to the assumption that the order of society is knowable. Without this basic premise, the study of the social sciences lacks rational predictability.

Social statics is the order of society. This order includes structural components (e.g., family, government, and economics) and the interaction between these components. Auguste Comte, the father of sociology, based social statics on the positivistic philosophy. In creating the science of sociology, Comte moved the explanation of the hows and whys of society away from the theological and metaphysical toward the rational and scientific. This is similar to Plato's basic assumption that the order of society is knowable and explainable, as illustrated in *The Republic*.

Comte identified the elements of "spontaneous order" of social statics as the individual, family, and society. Sociology does not focus on the study of the individual in the way that psychology does. For Comte, the simplest form of a social unit is the family. All other social units build upon the family unit. The reason Comte included the individual as one of the elements in social statics was to illustrate a primary function of the family as a social unit: to socialize the individual into a functioning member of society. The result of successful socialization is the expression of appropriate forms of interaction with all elements of society.

The interaction of the family social unit with the rest of society illustrates Comte's concept of the division of labor. The division of labor is an operational definition of social statics. The interdependency of the division of labor holds together social structure and interaction in an orderly fashion. In the family structure there are roles that the husband, wife, and offspring play. For example, the role of the husband is interdependent upon the role of the wife. The family unit cannot fulfill its defined social purpose to reproduce and socialize offspring without the interdependency between husband and wife. Interactions focus on socialization of the members of the family unit for the benefit of the greater society as a form of social control. The division of labor creates not only interdependency but also social control through the socialization process. Social control of sexual relations and reproduction is limited to the family unit, since this is the ideal method for providing for the basic needs of offspring and socializing them.

Social dynamics is the progressive change in social statics. Comte's "law of human progress" is the foundation for social dynamics. The order of society changes over time in a progressive, positive direction. A new social order succeeds an existing social order. In Comte's law of human progress, society had moved from the stage of theological to metaphysical and then to positivistic.

For Herbert Spencer, society is superorganic, which tends toward a state of equilibrium. This biological concept defines social statics as the major institutions of society (e.g., familiar, governmental, religion, and industrial) and interaction represented by the division of labor. Spencer expanded the detailed explanation of social statics to include regulatory, operative, and distributive components. Social dynamics is a progressive evolutionary process. As society progresses, new elements of society are created, and unfit elements decay and drop away. The nature of society moves from homogeneity toward heterogeneity; there is greater differentiation. In primitive times the structure of society was very simple with a minimal division of labor. As society progresses, the division of labor becomes more complex with the addition of new elements of social structure and new customs (interactions). In addition the level of interdependency increases as there is greater differentiation through increased stratification. Stratification is the ranking and ordering of this interdependency and is usually the first social static to change due to increased differentiation. In modern terms stratification is the ranking of abilities and training to fulfill the needs of society. The purpose of stratification is to identify the most important resources needed for societal survival and progress.

Social statics is the foundation for the structural-functionalist tradition in sociology. This tradition studies society at a macro level, identifying the components of social structure and their corresponding functions. Within this tradition, Émile Durkheim's expanded theory of the division of labor incorporates social statics and social dynamics based on social solidarity. Structural components and their functions hold society together and create organic solidarity through increasingly complex interdependency. Talcott Parsons's theory of social system and social action continues in the structural-functionalist tradition by using the concepts of social statics and social dynamics to explain social structure, social order, socialization, and social change.

SEE ALSO *Comte, Auguste; Division of Labor; Durkheim, Émile; Hierarchy; Parsons, Talcott; Prediction; Social*

Science; Society; Spencer, Herbert; Stratification; Structuralism

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SOCIAL STATUS

Social status has been used throughout history to differentiate individuals and groups of people in order to maintain hierarchical systems of inequality between and among people and to enforce the idea that certain groups of people are, by nature, born to a certain level of existence.

Social status is often described as one's "standing" in society; the word *status* is derived from the Latin *statum*, meaning "stand." In a narrow sense, the term refers to one's legal or professional standing within a group; in a broader sense, it means one's value and importance in the eyes of the world (de Botton 2004, p. vii). At various points in history, the belief that inequality was a way of life was subscribed to by both the oppressed and their oppressors in terms of religion, law, and cultural norms. History, law, and cultural artifacts show that in nearly every society, certain groups of people were held in high esteem while others were ignored or ridiculed. Historical events such as the French Revolution, the American Revolution, and the civil rights movement largely transformed societies, moving them away from hierarchical ladders that restricted upward mobility because of heredity, lineage, family, gender, race/ethnicity, skills, physical attributes, religion, accent, and temperament.

The desire for social status can spur individuals to act on their dreams, achieve goals, and form a common bridge with others. Often, though, individual achievement has not been considered a factor when comparing one's social standing in a community. According to Alain de Botton in *Status Anxiety* (2004), "what mattered was one's identity at birth, rather than anything one might achieve in one's lifetime through the exercise of one's faculties. What mattered was who one was, seldom what one did" (p. 87).

HISTORICAL PREVALENCE

According to de Botton, the characteristics of groups that historically have been considered high status can be traced from Sparta in 400 BCE to Brazil in 1960. Such characteristics have ranged from military training, wealth, power, sainthood, knighthood, social graces, and hunting ability to those with the ability—physical, intellectual, and artistic—to persuade and/or bully other groups into offering respect or a redistribution of favor. Derrick Bell, in *Silent Covenants: Brown v. Board of Education* (2004), relates social status to race/ethnicity, access to opportunity, and the reflection of persons of color when discussing issues of privilege and status. According to Bell (2004), "Du Bois reminds us that to compensate their low wages, segregation gave whites a 'public and psychological wage'.... David Roediger adds that status and privileges could be used to make up for alienating and exploitative class relationships, North and South" (p. 81).

THEORETICAL DEVELOPMENT AND RESEARCH

Theories have been developed to describe social status, class, and identity. Similarly, social status has been described in terms of international dominance and competitiveness between countries. Thye and Lawler (2005) note that "status characteristics theory investigates the effect that individual properties such as age, gender, and ability have on interaction. The theory asserts that these status characteristics are indicative of task ability. In collective task settings, members act as if status characteristics give clues suggesting how capable each individual is of contributing to the successful completion of the group's task" (p. 126). Status characteristics theory, in essence, attributes rewards, influence, and value to certain groups based on characteristics and expectations of competency. Edward Said (2003) has described the use of social status to plunder other nations in the quest for international superiority. Said frames social status in terms of a country's plunder and conquest under the aegis of "a civilizing mission, the idea that some races and cultures have a higher aim in life than others; this gives the more powerful, more developed, more civilized the right to colonize others in the name of a noble ideal" (p. 333). The historical underpinnings of social status can be traced to the Greeks. Said states that "each culture defines its enemies, what stands beyond it and threatens it. For the Greeks beginning with Herodotus, anyone who did not speak Greek was automatically a barbarian, an Other to be despised and fought against" (p. 335).

Social status is often viewed through the lens of comparing groups along specific criteria and the relationship between groups. According to Suls and Wheeler (2000), Newcomb's 1943 analysis of college student political atti-

tudes revealed that "people use groups or social aggregates as standards or frames of reference when evaluating their abilities, attitudes, or beliefs" (p. 85). Similarly Suls and Wheeler state that "Roper (1940) first introduced the idea of a reference group by suggesting that individuals' perceptions of their own status depends on where they stand in relationship to other people" (p. 85). Abowitz (2005) conducted a recent study of undergraduate college students to ascertain their views of the American class system. Based on a survey of a random sample of 154 undergraduate students, Abowitz reported that college students believe that they can achieve a certain social status through individual factors that are part of, as the author states, an achievement ideology, "the idea that success and social standing are largely a product of individual effort and not a product of family privilege and connections" (p. 716).

SOCIAL STATUS MEASUREMENT

According to classical research conducted to understand the role of student persistence in college, background characteristics of students and their social status were some of the most reliable predictors of success. Similarly, Toutkoushian and Curtis (2005) found that the socioeconomic status of specific school districts can help explain variations in students' average standardized test scores, college attendance, and school rankings. Sociometry, a systematic method for investigating relationships, was used in Kosir and Pecjak's (2005) study to determine whether students were categorized by their peers as having social status and popularity. Based on the results of their research, Kosir and Pecjack found that peer-perceived popularity is a construct that is distinct from sociometric popularity.

Other studies of social status involve the predictive value of subjective assessments of social status with an individual's health status. Research by Operario, Adler, and Williams (2004) based on a national sample of 500 adults, ages eighteen and over, used the Scale of Subjective Status. Participants were instructed to do the following:

> Think of a ladder with 10 steps representing where people stand in the United States. At step 10 are people who are the best off—those who have the most money, the most education, and the most respected jobs. At step 1 are the people who are worst off—those who have the least money, least education, and the least respected jobs or no job. Where would you place yourself on this ladder? (p. 241)

For this portion of the research, "the sample rated themselves on average above the midpoint of the scale at both baseline and follow-up" (Operario et. al. 2004, p. 241). Including measures of global health and health risk factors, the authors found predictive utility in self-report measures of socioeconomic status and individual health status.

Levin (2004) measured social dominance by groups that want to have a higher status than other groups using such distinctions as religion, ethnicity, and gender. Using a social status questionnaire, Levin found that differences in social dominance between arbitrary groups (e.g., ethnicity and religion) was greater when the status gap between the groups was perceived to be larger.

Thus, social status, depending on the historical time frame, country, and culture, can be delineated through one's resources and achievement. However, the hierarchy suggested by comparing one's standing with others still exists and is prevalent in societies where resources and power define the influence that one or a group has. This power and influence permeate aspects of governance and the place each person subscribes to with reference to an individual's or a group's relative value and standing.

SEE ALSO *Lifestyles; Sociometry*

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SOCIAL STRATIFICATION

SEE *Stratification.*

SOCIAL STRUCTURE

Social structure refers to durable features of sustained, large-scale, social coexistence that shape individual conduct. Attempts to summarize the nature of human society are often said to offer accounts of social structure. Such accounts vary but typically include claims addressing five facets: (1) collective features, process, or patterns that are (2) consistent across large populations and (3) persist for long periods and that are (4) manifest as impersonal and implacable influences that strongly condition (5) the lives that individuals can lead. Claims to priority for particular accounts are sometimes advanced as "structuralism"—assertions of precedence for particular impersonal, extra-individual, or collective features. In polemic usage, the label has accompanied wide and varied claims of displacing superficial or shallow alternatives in favor of deep, overarching generalizations about human conduct, language, or cognitive capacities.

All social sciences incorporate some variants of the concept, but the issues posed by social structure roughly coincide with the disciplinary charter of sociology. Seminal contributions (and their authors) are often lauded for providing distinctive visions of social structure. Since such efforts address the ultimate nature of human society, they are best understood as charter statements that unite followers (and antagonists) into schools whose agreements (and disagreements) extend to the nature, content, and value of the master texts.

Karl Marx (1818–1883) traced the origin of social structure back to the necessity for humans to wrest sustenance from nature through labor. However, the results of labor include matter that has been gathered and reshaped and that if put aside today will add to the fruitfulness of any further labor. Thus fields cleared of forest, iron forged into plows, or grain not eaten but kept for seed become means of production—products of past labor that can be added to future labor to make it more fruitful.

Any society thus must address the problem of who will be assigned control of the means of production. Marx observed that the products of work, built up over generations, became the property of a relative few, who could then assign to themselves the lion's share of the product of future work, without themselves having to do it. He suggested that collective life, including religion and politics, would be constrained to perpetuate such a division of the population into unequal classes. Individual outlooks and actions would tend to conform to interests arising from class positions. And the classes would be linked into antagonism until the growing scale of factories would insure the ascendance of the propertyless in a revolution abolishing property and bringing on a new social structure of a classless society.

Émile Durkheim (1858–1917) underscored that matter was not property unless nonowners respected owners' claims. Markets required moral solidarity to ensure that contracts were honored, for example, constraining buyers and sellers from grabbing away goods or payments without relinquishing what they had offered in return. More broadly, Durkheim argued that absent moral limitation supplied by society, humanity's inherently insatiable desires would lure humans into vice and unreliability as workers, family members, or citizens.

Durkheim argued that moral sentiments shared in common formed social facts—enduring, extensive, external forces that constrained individuals into moral conformity. He offered three complementary accounts of how this might work.

First, Durkheim suggested that the force of society would wax and wane with the overall volume of interaction in a population, suggesting that the impact on individuals rises and falls as moral messages are repeated to them more or less frequently. In turn, the average frequency (and consistency) of moral messages arriving at each individual reflects the totals received and retransmitted by the individual's interaction partners, taken en masse. In this manner, the moral sentiment impinging on individuals arises from collective, accumulated experience that is external and beyond individual control. Second, Durkheim also suggested that participation in collective celebrations, notably religious worship, would amplify and reinforce moral sentiments expressed through such ceremonies. Third, Durkheim feared that inconsistent messages, generated by participation in diverse groups that upheld contrasting normative outlooks or participation in groups unwilling to specify clear moral standards, would result in a state of normative dissonance and weakened moral regulation that he termed *anomie*.

Max Weber (1864–1920) also took issue with Marx's insistence on the primacy of economic factors. He called attention to contrasts rooted in religious outlooks and in other sources of diverging worldviews. Weber thought the common element uniting social structures was learned adherence to schemes of values—abstract ideals spelling out goals and pitfalls. These might include how to serve God (after specifying what God or gods to serve), or the unlimited pursuit of gain, or putting obligations to kin ahead of obligations to the ruler.

Values are highly abstract and often are only expressed indirectly through parables, stories, sermons,

and the writings of sages. From these, readers, commentators, and legislators work at deriving further rules that people should follow. For Weber, uniform or structural regularity across a population was the result of enmeshing in a web of norms—morally binding rules that reflected values held in common. While Weber recognized that values and their derivative norms could derive from tradition, or from religious inspiration he termed *charisma*, he also emphasized that rules were subject to extension and elaboration through reasoning by experts who were learned in the code. He feared that such expanding rationality would come to confine humanity in an "iron cage" of intricate but colorless regulation.

Specialists continue to seek to purify and refine seminal visions. Most sociologists accept that many categorical contrasts, such as race, class, and gender, are collective durable features of large populations that shape lives. Many would extend this list to include the principle categories used to sort and count people in censuses and surveys—the demographic variables including age, ethnicity or national origin, religion, education, and so forth. All of these variables strongly condition a wide range of behaviors including friendship, marriage, political preferences, consumer choices, and much more.

Why and how this occurs remains open. Some would insist that such regularities require that individuals act as if extant rules and social definitions are binding. The puzzle is what (if anything) is adequate to account for assent to unequal outcomes on the scale that is required.

An alternative is that durable features reflect how (and in what degree) categories channeled persons into different settings, social pairings, and uses of time. A principal motive is that power-holders can address recurrent organizational dilemmas by drawing on widely understood social classifications to allocate work, authority, or rewards. Any population consists of individual histories that incorporate the (variable) past degree of such sorting, along with assorted consequences and correlates. Classifications are guides (of varying accuracy) to similarities and contrasts in past experience that, in turn, influence individuals and power-holders in subsequent choices over settings, pairings, and time use.

SEE ALSO *Caste; Culture; Hierarchy; Marxism; Stratification; Structuralism*

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SOCIAL SYSTEM

The concept of social systems became central to sociology with *The Social System* of Talcott Parsons, published in 1951. Parsons's formulations were modeled on concepts of homeostasis developed in physiology rather than simpler notions of equilibrium used by Vilfredo Pareto and other earlier theorists. Parsons portrayed equilibria in social systems not as static balances among forces but as complex interdependencies involving mutual adjustments among many independent components. He emphasized that social systems are moving equilibria that accommodate change while maintaining overall stability. He noted that equilibria can break down, resulting in anomie, strain, and conflict.

SCOPE OF THE CONCEPT

For the system concept to be useful in sociology, Parsons held, it required adaptation to the empirical nature of social reality. Social systems are not concrete, directly observable entities but rather analytically defined domains of objects. They can be identified only by abstracting social interaction, relationships, and institutions from environing phenomena—physical-chemical, biological, psychological, and cultural. Yet, social systems also interpenetrate, or share elements with, their environments. They exist in time, space, and ecological settings. They gain structure by institutionalizing values and norms that have their sources in cultural systems. Their members' affective attachments to normative orders and motivation to pursue socially validated goals derive from personality systems.

Social systems vary in size and duration. Brief interactions between individuals can be treated as social systems. So can large-scale societies that endure for centuries, such as Chinese civilization. Institutions of intermediate scale—the business corporation, medical practice, or electoral politics—are social systems. Complexes of institutions, such as modern metropolises or global trade, may be analyzed as social systems. Individuals participate in many social systems, typically adopting different social roles in each—employees in business firms, members of political parties, fathers or mothers in families.

Parsons viewed social interaction as a dynamic give-and-take of expectations among independent actors. Actors support their expectations with sanctions, invoked

contingently on others as rewards when expectations are met or as punishments when expectations are broken. Parsons held that an actor's behavior, even in simple relationships, is doubly contingent, dependent on expectations and sanctions held by both the actor and other parties. Because of different experience and exposure to social strains, actors often hold conflicting expectations for performance of their own or others' roles. Conflicts in expectations emerge in everyday interaction, as between parents and children, and in role relations of macrosocial importance, as between a president and members of Congress over legislative oversight.

Conflicts over role expectations may release powerfully motivated pressures to change roles and the institutions that coordinate them. After adjustment in roles and underlying norms and values, new equilibria may emerge. Motivation that is deviant from previous role expectations may thus be a source of creative social change. Yet, role incumbents mobilize sanctions to counter deviant expectations and are generally able to suppress potential change. Social institutions tend to reimpose established equilibria, whether through informal interaction, the procedures of formal organizations, or legal procedures.

THE FOUR-FUNCTION PARADIGM

Parsons identified four general system problems that all social systems confront. He called them functions and treated them as general dimensions of the organization of social systems. The idea of a closed and ordered set of functions applicable to all social systems was a radical innovation. Previous functional theories had been based on open-ended lists of functions without limitation in theoretical principle. The *four-function paradigm* provided the conceptual frame for Parsons's work after the mid-1950s.

The four functions are:

1. Adaptation, or the gaining of control over conditions in environments of the system. Adaptive processes involve developing new resources or improving allocations of resources to strengthen a system's capabilities and efficiencies.
2. Goal attainment, or the processes of organizing the activities of social units to bring about a valued state in the system's relationships to its environments, typically including other social systems.
3. Integration, or the processes of mutual adjustment among a system's components to promote their long-term dependence on one another and attachment to the system.
4. Pattern maintenance, or the processes of developing long-term commitment to values and other principles that distinguish the system from its environments.

Parsons proposed that the four-function paradigm might outline the primary dimensions of structural differentiation in societies. He thus developed a theory of four functionally specialized subsystems of society, with each subsystem treated as a complex set of interdependent institutions, even subsystems of their own. The four subsystems of society are:

1. The economy serves the adaptive function. In modern societies, it includes the markets for labor and capital, the business corporation, entrepreneurial roles, and the legal institutions of property, contract, credit, and employment.
2. The polity serves the goal-attainment function. In modern societies, it includes government agencies, including administrative, executive, legislative, and judicial authorities.
3. The societal community serves the integrative function. It encompasses ties of social solidarity, including social classes, status groups, voluntary associations, lifestyle groups, ethnic groups, and extended kinship groups. Phenomena of integration, stratification, and conflict are shaped largely by institutions of class structure, status order, and primordial ties, but also by common law, informal normative orders, and public opinion.
4. The fiduciary system serves the pattern-maintenance function, centering on development of the shared values and culture of a society. Its major institutions concern religion, family, socialization, and education. Following Max Weber's emphasis on religious ethics, Parsons argued that change in fiduciary systems has been the greatest source of long-term macrosocial change.

Parsons's theory of societal subsystems was never fully detailed, despite two decades of efforts to analyze the institutional structures of the four systems. He argued that each subsystem has its own forms of inequality, and the chief institutions of the respective subsystems—economic exchange, relationships of political authority, solitary ties in status groups, and socialization in family life—are intertwined with factors such as race and ethnicity, gender, cultural background, and educational differences, although in historically variable ways. He also argued that institutions in each subsystem integrate normative and interest-driven elements and ideal and material factors. Where social control is effective, the pursuit of self-interest reinforces the controlling normative institutions, as when the conduct of business relies on institutions of property, contract, and employment.

THE GENERALIZED MEDIA

Functional theory holds that the differentiated subsystems of society are mutually dependent. Each subsystem can fulfill its specialized function only if the other subsystems fulfill their functions. Applying this proposition to social processes as well as structures, Parsons hypothesized that each subsystem needs resources from the other subsystems to carry out its own processes. He developed a model in which the four subsystems are linked through six *double interchanges*, or exchanges of resources, between pairs of subsystems. A basis of this model was the economists' treatment of *circular flow* between business firms and households (wages for labor, consumer spending for goods and services), which Parsons identified as the interchange between the economy and the fiduciary system. He then outlined five other double interchanges.

Noting that money is an essential mediator of economic processes, including circular flow, Parsons identified additional *symbolic media* that regulate processes for the other three societal subsystems. He proposed that power is the symbolic medium of the polity, influence is that of the societal community, and commitments are that of the fiduciary system. Identifying the set of symbolic media that regulate processes within and across the boundaries of the four subsystems greatly advanced theoretical analysis of equilibrium processes in society.

LUHMANN AND AUTOPOETIC SYSTEMS

In the years after Parsons's theory of social systems reached maturity with the concepts just discussed, the most original thinking about social systems came from German sociologist Niklas Luhmann. Luhmann was influenced by Parsons and retained some of his terminology but developed a distinct theory.

Luhmann's conception of social systems emphasizes not equilibrium but *autopoesis*, a term he adopted from biological theory. Autopoetic (literally, self-producing) systems are capable of self-reproduction of their components. Luhmann emphasized the self-organizing, self-sustaining qualities of social systems and their components, not balances among components, as in equilibrium theories. Luhmann adhered to functional analysis but treated function as a relationship between a system and its multiple environments. Presenting his conception as continuous with Darwinian natural selection, he suggested that autopoetic systems are adaptive within specific ecological settings.

Luhmann emphasized that autopoetic systems of all kinds emerge by reducing the complexities of organization among the various systems in their environments. Every system represents a reduction of antecedent environmental complexities. Biological systems reduce the complexities of their physical and chemical environments. Psychic and social systems emerged as reductions of biological as well as physical-chemical environments. Once social systems evolved, they maintained intricate dynamic relationships with their environments—psychic, biological, and physical-chemical. The relationships with psychic systems are especially important as they, too, are systems of meaning, and meanings pass back and forth between psychic and social systems. Social systems themselves evolve to complexity as a natural process of adapting to their varied and intricately organized environments. Their complexity then creates opportunities for the emergence of new systems within themselves—subsystems—by the same principle of reduction of complexity.

COMMUNICATION AND SOCIAL SYSTEMS

Luhmann, defining social systems as systems of communication, used information theory and cybernetics to analyze processes of communication. He criticized *transfer* theories of communication, emphasizing that one does not give up anything when communicating ideas to another. Moreover, what the other receives is not necessarily the message originally intended. He accordingly focused the analysis of communication on how it changes the recipient. Communication in this view selects among open possibilities, confirming some possibilities while ruling out others. After receiving a communication, a person knows to orient future conduct to certain possibilities and leave others aside. Communication often occurs simply in physical gestures, but its meaning may be shaped, conveyed, or amplified through three classes of media: language, as used in everyday exchanges between individuals; the media of dissemination in written, print, or electronic forms, which can reach large or specialized audiences over extended times and places; and the symbolically generalized media that act on the relation between motivation and the selective effects of communication. The symbolic media help to connect communication with macrosocial structures, but Luhmann did not match the media to specific subsystems of society, as did Parsons. He gave different lists of symbolic media in his works, but generally included truth, love, money, power or law, and religious or ideological belief.

The symbolic media also serve, Luhmann suggested, as catalysts for the differentiation of society. He rejected Parsons's four-function theory of societal subsystems, maintaining that subsystems emerge only by exploiting particular opportunities to reduce complexity in environing systems. Thus, the emergence of subsystems in particular societies can be identified only through analysis of the historical conditions that created the opportunities for reduction of complexity. Nevertheless, Luhmann identi-

fied law, politics, economy, religion and ideology, and science as common subsystems of modern societies. Each of the subsystems contains historically evolved semantic codes for regulating communication, codes that also regulate uses of the symbolic media. Issues of discrimination by race, ethnicity, gender, or cultural background can be understood by analyzing the semantic codes of specific media.

CONCLUSION

Parsons's conceptual scheme was designed to guide empirical research in sociology and related social sciences. Over a period of several decades, a substantial body of empirical studies has been conducted in its terms, with many of the studies standing as major contributions. Luhmann developed his theory of social systems with greater concern for meta-theoretical issues than empirical research. Its long-term influence will likely derive from the critical perspective it provides on other theories. Both bodies of theory demonstrate the importance of theoretical analysis of social systems, yet both also leave significant issues open to further investigation.

SEE ALSO *Communication; Discrimination; Functionalism; Media; Pareto, Vilfredo; Parsons, Talcott; Role Conflict; Role Theory; Sociology, Parsonian; Structuralism; Systems Theory*

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SOCIAL THEORY

Social theory begins with ordinary questions, like why do some passively accept authority while others respond with political violence? Religions provided answers in a distant past. Social theory emerged as a secular alternative, often joining ethical and positive elements. Three traditions of social theory are important for the social sciences.

A first tradition comes from Thomas Hobbes (1588–1679). After years of bloody warfare between Catholics and Protestants, Hobbes's *Leviathan* (1651) offered a worldly theory of social order. What was really at issue was power. As an early example of what would be termed *ideology critique*, Hobbes asks "cui bono?"—whose interest does this idea serve? People obey, he argued, because of fear of violent death. Social order thus turns on who has ultimate power over violence. If there is not one final authority, there would be war of all against all, and life would be "solitary, poor, nasty, brutish, and short." Better, he argued, is a society founded on fear of a great leviathan, whose power guarantees stability.

Leviathan relied on no Absolute Good, whether God or Nature. In tracing all "higher" ideas to "lower" things—power, fear, death, the body, violence—Hobbes set the tone for one main strand of social theorizing. This approach continued in writers from Karl Marx (1818–1883) to Michel Foucault (1926–1984) and Pierre Bourdieu (1930–2002). While each differs, they are Hobbesian in asking "cui bono?"—and answering with a complex power struggle, even if it is denied, for example, in art, religion, and morality. This first type of social theory ferrets out hidden power structures behind everyday interactions and institutions.

Hobbes's stress on fear led others to ask: Does not social order depend on more? What of obligation or love? How could the passions of a millennium and a half of Christianity be redirected onto earth, without producing the disastrous consequences Hobbes feared?

Such questions led to a second strand of social theory, stemming from Jean-Jacques Rousseau (1712–1778). He emphasized not fear but devotion as the foundation of social order. In our long-forgotten natural condition, Rousseau argued, we were independent, loving ourselves for ourselves; but society creates new needs, *amour propre*: We love ourselves based upon how much others love us. Not power, but the struggle for recognition and status regulates social order.

For Rousseau, justice can transcend nature and inequality. Justice depends in turn on the *social contract*, wherein each person must totally submit to the general will. Private freedom, he argued, depended on public equality, which required a "lawgiver." Moreover, the social bond, to last, should be held sacred.

Karl Marx (1818–1883) and V. I. Lenin (1870–1924) transformed the lawgiver into the revolutionary vanguard; the redefined social contract was the abolition of private property, as the condition of freedom and justice. Émile Durkheim (1858–1917) later pursued Rousseau's connections between social solidarity and religious sentiment.

Critical theorists—Theodore Adorno (1903–1969), Max Horkheimer (1895–1973), Herbert Marcuse (1898–1979), Axel Honneth—explored how modern societies create vast inequalities, not only in wealth, but respect and self-worth. They expanded Rousseau's ideas that culture can create unnecessary dependencies, focusing on the "culture industry"—the popular press, music, movies, advertising, and fashions. These sought to promote "needs" like Marx's false consciousness, where people became blinded to their own interests and dependent upon corporate and political masters. Some, like David Riesman (1909–2002), extended Rousseau's *amour propre* to the 1950s conformism of American "other-directedness," while others, like Daniel Bell, analyzed how politicians and corporations could shift the erotic into a political ideology. Thus social theory identified key foundations of power, even if exercised in subtle arenas.

These first two traditions invoke a strong state to right social wrongs, as theoretically defined. The third tradition is more cautious. Alexis de Tocqueville (1805–1859) was equally concerned with the roots of order and governance, but took a different course. Writing after the French Revolution (1789–1799), Tocqueville the aristocrat pondered the implications of equality. Societies emphasizing equality—like postrevolutionary America and France—were hostile toward exceptional talent and excellence; they could level out uniqueness and difference, generating a middling mediocrity. Moreover, equality threatened social identity and meaning: In a hierarchical society, one knew one's place and did not have to anxiously make one's place. In equalized societies, all is in doubt: Foreign observers regularly noted that Americans suffered a permanent "identity crisis," which was spreading globally at the beginning of the twenty-first century.

Traveling across America, Tocqueville commented on the deleterious effects of equality, and potential remedies. Loosed from primordial hierarchies, Americans, he argued, developed a passion for voluntary associations. The town hall and the local church were key examples, sustained by their members' voluntary efforts more than the weight of tradition or the power of elites (or a leviathan or lawgiver). What mattered was commitment by each participant, and Americans were joiners. The strongest social structures, Tocqueville argued, emerged not just through struggles for power or regard of others, but by citizens voluntarily developing shared commitments in local associations, which trained future leaders.

Tocqueville's voluntaristic, bottom-up approach informs a third strand of social theorizing. Max Weber (1864–1920) stressed voluntarism in probing the religious roots of capitalism. Capitalists did not just strive to make money. Rather, Weber argued, Puritan sects encouraged their members to seek salvation in voluntary, committed "good works"—against the old nobility that valued leisure over work. Capitalism was the unintended consequence. Though Weber felt we inherited an "iron cage" of capitalist society that we did not choose, his response was voluntaristic: If you are a scholar, do it as a "vocation," not as a heartless specialist; if you are a politician, lead, do not act as a technocratic bureaucrat. Voluntary commitment was key. In egalitarian America, every social interaction among equal citizens became a source of identity, obligation, and meaning, following G. H. Mead (1863–1931), C. H. Cooley (1864–1929), and Herbert Blumer (1900–1987). Talcott Parsons (1902–1979) extended voluntarism to critique past social theories, but like Weber joined basic values with individual choices. Edward Shils (1911–1995) and Daniel Elazar (1934–1999) continued Tocqueville's concern for hierarchy, honor, and glory, noting that even within an egalitarian society, they remain social powers. Still others, such as Robert Putnam, suggest that the individualistic strain in voluntarism has gone so far in contemporary American life that the commonwealth Tocqueville saw had weakened, as more Americans "bowl alone." Some postmodernists are so individualistic and egalitarian that they deny the possibility of meaning beyond the minds of separate individuals.

These three traditions have been revised and combined in efforts to interpret deep social changes. Consider the rise of industry, the division of labor, and bureaucratic organization in the theories of Marx, Durkheim, and Weber.

Marx, working in London, wrote of the English countryside transformed by industrial manufacturing; he saw people from all races and religions living near factories. These proletarians were a nascent class, opposed to capitalist/owners of the forces of production. In his theory, conflicts between such classes drove history.

Durkheim saw similar changes, but focused on the division of labor. Traditional societies, he argued, held together from pressures toward homogeneity. Modern societies are more like organisms. Social cohesion arises from interdependence; individuals perform specialized functions and develop a heightened sense of uniqueness. But without some firm social regulation, normlessness or "anomie" can undermine differentiated societies. Talcott Parsons and Niklas Luhmann (1927–1998) extended Durkheim's social differentiation into multiple, interconnected subsystems that fill different social functions, while

others, such as Robert Merton (1910–2003), developed the idea of anomie and deviance as central to modern life.

Max Weber, writing in Germany, stressed the hierarchical rationality of government bureaucratic officials. Bureaucracies are ancient, but Weber stressed how modern organizations grew ever larger, more rational, and more hierarchical. Not only was the bureaucrat's personality stunted by his duties, everyone risked bureaucratization—since it was balanced increasingly less by the charisma of religion or respect for tradition. Seeking a "value-neutral" perspective, Weber posited that modern society is increasingly subject to "rational authority," as opposed to "traditional" or "charismatic authority." But the theory also had a quasi-moral intent, namely, to provide modern models for styles of action—rooted in the bonds of tradition or the electricity of charisma—which Weber saw threatened by the cold, abstract rationalism of bureaucracy.

Rationality was a political weapon that Enlightenment philosophers used to attack the "irrationality" of the ancient regime before the French Revolution of 1789. The secular theories of Hobbes and Rousseau helped refocus thinking on specific secular arrangements, rather than divinities or kings. But the legacy of this rational approach proved so powerful that Weber feared its excess. Analysis and criticism of rationalism in modern society have been among the most doggedly pursued strands of twentieth-century social thought, especially by Jürgen Habermas and other critical theorists and postmodernists.

Since Marx, Durkheim, and Weber, social theories have continued to stretch the imagination, seeking to capture the times and perhaps guide them. New topics emerge with new social forces: the massive rise of cities and new urban lifestyles; mass media, electronic media, and mass education; increased global interconnection; general increase in leisure time across societies; and a resurgence in the global power of religions are but a few of the subjects whose causes and meanings social theorists continue to pursue.

SEE ALSO *Associations, Voluntary; Blumer, Herbert; Bourdieu, Pierre; Bureaucracy; Class; Critical Theory; Durkheim, Émile; Egalitarianism; False Consciousness; Foucault, Michel; Hobbes, Thomas; Identity Crisis; Individualism; Lenin, Vladimir Ilitch; Lonely Crowd, The; Marcuse, Herbert; Marx, Karl; Mead, George Herbert; Nationalism and Nationality; Parsons, Talcott; Protestant Ethic; Revolution; Rousseau, Jean-Jacques; Social Psychology; Social Science; Sociology; Tocqueville, Alexis de; Weber, Max; World-System*

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SOCIAL TRANSFORMATION

SEE *Social Change.*

SOCIAL WELFARE FUNCTIONS

Social welfare functions have occupied the center stage of welfare economics since the philosopher Jeremy Bentham (1748–1832) and other utilitarian theorists advocated that humans should seek the greatest total welfare, understood as the sum of individual utilities. The noted economists Abram Bergson (1914–2003) and Paul A. Samuelson (b. 1915) generalized the concept. Following the seminal work of the economic theorists Kenneth J. Arrow (b. 1921) and Amartya K. Sen (b. 1933), the theory of social choice has examined the various possible forms of such functions in detail.

In the most standard form, a social welfare function is a mapping that determines the level of social welfare as a function of individual levels of welfare. In fact, a numerical measure of social welfare is not really needed for the evaluation of social situations; the only relevant part of a social welfare function is how it ranks social situations from the best to the worst.

The theory of social choice analyzes two important features of a social welfare function. The first feature is its degree of aversion to inequalities between individual levels of welfare. For instance, the utilitarian function, computed as the sum of individual indices of welfare, is indifferent to inequalities because only the total matters. In contrast, the maximin function, which identifies social welfare with the welfare of the worst-off individuals in the population, displays an infinite aversion to inequalities since it gives absolute priority to the worst off. There are countless intermediate possibilities between these two extreme functions. The second important feature of a social welfare function is the information about individual indices that is used by the function. For instance, the utilitarian function focuses on individual gains and losses when it compares two situations: A situation is better than another if the sum of welfare gains when one moves to it is greater than the sum of

losses. By contrast, the maximin function focuses on individual levels: A situation is better if the level of welfare of the worst-off individuals is greater. The link between the two features—inequality aversion and informational basis—has been thoroughly scrutinized by the theory of social choice. For surveys, see Walter Bossert and John A. Weymark's "Utility in Social Choice" in the *Handbook of Utility Theory* (Barberà, Hammond, and Seidl 2004, pp. 1099–1178) and Claude D'Aspremont and Louis Grevers' "Social Welfare Functionals and Interpersonal Comparability" in the first volume of the *Handbook of Social Choice and Welfare* (Arrow, Sen, and Suzumura 2002, pp. 459–542).

The link between the measurement of social welfare and the measurement of inequalities has also been clarified. The level of social welfare in a given situation can be decomposed into the positive contribution of total welfare and the negative contribution of inequalities. More precisely, it is generally possible to write social welfare as the difference of two terms. One is the sum of individual indices of welfare. The other, which comes as a deduction, is computed as the product of an inequality index and the sum of individual indices. In other words, one can typically say that inequalities reduce social welfare by a certain percentage, and this percentage itself is the value of an inequality index. Classical analyses of this link are provided by Anthony B. Atkinson in his essay "On the Measurement of Inequality" (1970) and Amartya K. Sen and James Foster in their book *On Economic Inequality* (1997).

A controversial issue has been the possibility of constructing social welfare functions on the sole basis of individual ordinal and noncomparable preferences over the social situations. The standard social welfare function relies on individual indices of welfare, but in its most general form it can simply define a ranking of social situations as a function of the preference rankings of these situations for each member of the population. This is important because there is much skepticism in economics about the possibility of making interpersonal comparisons of welfare in a consensual way. Bergson and Samuelson argued that the construction of a purely ordinal social welfare function was possible, but Arrow, in *Social Choice and Individual Values* (1951), provided an impossibility theorem and identified a deep problem in the idea of "aggregating" individual ordinal preferences. This problem has been questioned, however, because Arrow's theorem involved restrictive conditions that do not appear compelling and are not even considered in important branches of welfare economics, such as the theory of fair allocation or cost-benefit analysis. It is now emerging that interesting social welfare functions can be based on individual ordinal and noncomparable preferences, in particular on the basis of the equity concepts developed by the theory of fair allocation. Overviews of the controversies can be found in Marc Fleurbaey and Peter Hammond's contribution, "Interpersonally Comparable Utility," to the *Handbook of Utility Theory* (Barberà, Hammond, and Seidl 2004, pp. 1179–1285) and in an article by Marc Fleurbaey and Philippe Mongin (2005).

RECENT DEVELOPMENTS

Recent developments have dealt with the refinements of social welfare functions to incorporate a variety of fairness concepts or to make it possible not only to compare social situations for a given population, but also to compare social situations across different populations. The latter is important to make judgments about the desirable size of the population, and deep dilemmas plague this issue. A social welfare function such that every addition of an individual with positive welfare is considered to improve the social situation will generate extreme populationist evaluations—for example, the judgment that a larger population always makes a situation better, provided the larger population is large enough, no matter how low individual welfare is in this situation. However, a social welfare function that is based on some notion of average individual welfare is likely to be Malthusian because any addition of an individual with less-than-average welfare is considered undesirable. The compromise proposed in *Population Issues in Social-Choice Theory, Welfare Economics, and Ethics* (Blackorby, Bossert, and Donaldson 2005) is to define a critical level such that the addition of an individual is good only if his welfare is above this threshold.

An important issue in fairness concepts has been the incorporation of considerations of freedom and individual responsibility, motivated by theories of justice such as that of John Rawls (1971). Social welfare functions have been developed that are based on the idea of measuring individual situations in terms of opportunities or resources rather than ultimate welfare. A variety of functions have been proposed, in particular because there are different possible interpretations of the implications of individual responsibility. In one interpretation, individual responsibility removes the need for redistribution, which has motivated the construction of social welfare functions that disregard individual characteristics for which the individuals are responsible and focus on the compensation of inequalities for which individuals are not responsible. In another interpretation, individual responsibility removes the need for inequality aversion in the evaluation. Along this vein, social welfare functions have been proposed that are of the utilitarian sort along the responsibility dimensions of individual characteristics and of the maximin sort along the non-responsibility dimensions. Surveys of this field can be found in John E. Roemer's book *Theories of Distributive Justice* (1996).

SEE ALSO *Arrow Possibility Theorem; Objective Function*

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Marc Fleurbaey

SOCIAL WELFARE SYSTEM

The social welfare system refers to "the whole set of modern social programs offering income maintenance in cases of unemployment, industrial accident, illness, forced retirement, loss of a family breadwinner, or extreme deprivation, as well as various sorts of educational, preventive, and regulatory programs" (Orloff 1993, pp. 4–5). President Franklin D. Roosevelt's New Deal policies, especially the Social Security Act of 1935, are regarded as the inauguration of the modern social welfare system in the United States. Social scientists and historians tend to have a much more expansive view of welfare than that put forth in the popular media, which associates welfare with certain types of aid to the poor. From the 1950s to the 2000s, scholars have been concerned with explaining both the origins of social welfare systems and the substantial variation in its form among advanced industrial countries.

THE EMERGENCE OF WELFARE STATES

An early and influential approach to understanding the origins of welfare states argued they emerged as part of the "logic of industrialism." That is, scholars such as Harold Wilensky and Clark Kerr, among others, stressed that complex societies require a modern social welfare system in order to ensure a healthy, well-trained workforce and care for retired workers. Scholars criticized this view on a number of grounds. For example, in *Protecting Soldiers and Mothers* (1992) Theda Skocpol noted that in some places welfare provisions predated industrialization. In addition, Skocpol and other scholars such as Gøsta Esping-Anderson noted that the logic of industrialism approach failed to explain the variation among welfare state systems.

Another group of scholars emphasized the humanitarian or idealistic motives for the expansion of welfare programs in the 1960s. This perspective argued that President Lyndon B. Johnson and other proponents of the Great Society programs implemented these policies and programs in response to the needs of the poor and oppressed. In *Regulating the Poor* (1971) Frances Fox Piven and Richard Cloward criticized this view, emphasizing that political and economic elites were primarily concerned with controlling the poor, not helping them out of poverty. Through an historical discussion of early reform efforts in England and the New Deal era in the United States, Piven and Cloward noted that welfare relief expanded during times of crisis so as to quell social unrest and then was retracted after the crisis was averted.

THREE WORLDS OF WELFARE CAPITALISM

Whether or not and to what extent elites could roll back welfare provisions depended, according to Esping-Anderson, on the strength of political class coalitions. In his *Three Worlds of Welfare Capitalism* (1990), Esping-Anderson argued modern welfare state systems emerged in response to the political class coalitions of workers and farmers in the late nineteenth and early twentieth centuries. Then welfare states expanded or contracted depending on the strength of the coalition of the working and middle classes. These political class coalitions sought state policies that enabled individuals to live outside the demands of the market, what Esping-Anderson termed *decommodification*. For example, workers have historically organized to demand unemployment compensation, pensions, health care, and other programs. These provisions enable individuals to exist without having to work. This improves the quality of life for workers and enables them to demand better work conditions from their employers.

Furthermore, welfare states in advanced capitalist countries display significant variation in the levels of decommodification each system provides for its citizenry. In fact, Esping-Anderson argued they can be grouped together into what he called three worlds of welfare capitalism: the conservative (e.g., Germany), the liberal (e.g., United States), and the social democratic (e.g., Sweden).

For example, in liberal welfare regimes, such as the United States, working class movements and parties have been historically weak. In these countries workers were unable to forge durable coalitions with farmers and later with the new middle classes. As a result, the welfare system in liberal regimes is relatively small and dualistic. That is, instead of a universal system where everyone benefits from welfare policies and programs, it creates two segments in society: one group receives benefits based on their tax contributions while a second group receives benefits regardless of whether or not they pay into the system. In the United States, social security and unemployment insurance are considered contributory entitlements. For most workers, a portion of each paycheck goes toward funding these programs. The second group of welfare recipients is comprised of those who receive aid without making a contribution. This type of aid is means-tested; that is, recipients have to demonstrate they qualify for relief and have to submit to government surveillance, else forfeiting the aid. In addition, in this dualistic system recipients of entitlements (e.g., Social Security) are not stigmatized while those who receive non-contributory aid (e.g., Aid to Families with Dependent Children [AFDC]) are heavily stigmatized. This stigma is supposed to provide a disincentive to receiving aid. For Esping-Anderson decommodification in liberal welfare regimes is low.

In conservative welfare regimes, such as Germany, working class movements are stronger and successfully forge coalitions first with farmers and later with the middle class. However, all social policy is cast in the light of Catholic ideals of tradition and stability. Emphasis is placed on maintaining the traditional family, with a male breadwinner and female homemaker. Thus decommodification is higher than in liberal regimes; yet feminists have pointed out that conservative regimes maintain a subordinate role for women.

In social democratic welfare regimes, such as Sweden, working class movements are strong and successfully forge alliances with farmers and the middle class. Thus for Esping-Anderson decommodification is the highest in social democratic welfare regimes. In these countries, taxes are relatively high, and instead of a dualistic system, benefits are granted on a universal basis, thus preventing the negative consequences of dualism and assuring continued support from the middle classes.

MODERN INTERPRETATIONS

Feminists such as Skocpol have criticized class-based explanations of welfare state systems for failing to take seriously the role of state managers in the production of social policy. Skocpol argued that class-based scholars have emphasized the role of working class (male) movements in provoking the rise of welfare states. As such, they have offered an explanation of the so-called paternal welfare state. Skocpol argued that in the United States a maternalist welfare state predated the paternalist one.

Skocpol found that the earliest efforts at social provision focused on taking care of Northern Civil War veterans in the late 1800s. This was an early and important form of old age pension. In addition, she traced the efforts of early feminists who played key roles in gaining pensions for women and policies that helped children in the early twentieth century. These feminists successfully influenced the creation of a welfare state that sought to protect soldiers and mothers.

Linda Gordon studied many of the same early feminists as Skocpol and offered important insights into maternalist welfare states and the origins of welfare in the United States. In *Pitied but Not Entitled* (1994) Gordon argued that feminists played key roles in agitating for and making governmental policy, noting that early welfare policies sought to reinforce traditional understandings of femininity, especially those that emphasized homemaking and caregiving. Thus the maternalist policies aimed at "protecting soldiers and mothers" were also paternalist, premised on the idea that men should work and women should be subordinate to them, taking care of the housework and the children. Moreover, Gordon demonstrated how welfare policies of the early twentieth century emphasized care for white women who were married with children. Single mothers and women of color were excluded from policies that were designed to complement the "family wage" earned by male husbands/workers. As such, the role of welfare aid was to help maintain the integrity of the traditional white family without usurping the role of male breadwinner. However, a substantial number of male workers had a very hard time earning enough money to support their families, a situation even more pronounced for single mothers.

In addition, Gordon maintained that New Deal welfare policies did more to help the nonpoor than the poor. Policy makers restricted the kinds of jobs that could contribute to Social Security and unemployment insurance. Due to the kinds of jobs they had, such as in agriculture or as domestic help, most women and blacks, for example, were not eligible for these benefits. This gendered and racialized nature of early welfare policies in part reflected the power of southern elites who influenced social policy so as to maintain a loose agricultural labor market in the

South. As a result of concerted political behavior of southern elites, the New Deal welfare policies were enacted unevenly in the South, if they were enacted at all. In the South, welfare provisions were meager, while in the industrialized North they were more generous.

This point is expanded upon by Jill Quadagno, who studied welfare policies from the New Deal through President Johnson's Great Society programs of the 1960s. In *The Color of Welfare* (1994), Quadagno showed how the Great Society programs sought to incorporate blacks and other minorities into the welfare state for the first time. However, such efforts resulted in a conservative backlash that pushed for a retrenchment of welfare to deny blacks an equal footing in society. This retrenchment, inaugurated by President Jimmy Carter, became a key platform of President Ronald Reagan, and was capped off by the signing of President Bill Clinton's "End Welfare as We Know It" bill in 1996, which ended the U.S. government's commitment to providing a safety net for the poor. The 1996 welfare reform bill transformed the pivotal AFDC program into TANF (Temporary Assistance to Needy Families), premised on the belief that instead of aid the government should provide inducements to work. Under these so-called workfare programs, there is a lifetime limit of five years of support, recipients must find work within two years or perform free community service, unmarried mothers must identify fathers to receive aid, and immigrants as well as unmarried teen parents are denied access to welfare programs.

SEE ALSO *Poverty; Welfare; Welfare State*

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Robert Sean Mackin

SOCIAL WORK

Social work is a both an academic discipline and a profession. The discipline of social work teaches theory, methods, and practice of the profession. Like many other disciplines within the social sciences, social work studies human behavior in a social environment. Social work is also a practice where individuals can work with individuals, families, groups, organizations, and communities in various settings, such as schools, hospitals, mental health clinics, domestic violence shelters, senior centers, elected offices, private practice, advocacy organizations, and a host of other public and private agencies. The ultimate goal of social work is to enhance the well-being and level of functioning for all people and to create positive social change by improving social conditions and creating more humane practices and policies for vulnerable populations.

Despite the overlap among social work, sociology, and psychology, there remain distinct differences between the disciplines. Social work seeks to intervene between people and their environments. Further, social work addresses social and economic conditions that affect individuals, families, groups, organizations, and communities and highlights the importance of a multicultural understanding of both people and communities. Sociology is an academic discipline—not a professional activity—that studies social groups, organizations, institutions, and societies. Psychology studies and treats individual behavior and mental processes.

Social work is driven by various ideological perspectives. The three most prevalent ideologies are conservative, liberal, and radical. The conservative ideology within social work focuses on a microlevel analysis of the individual, and the primary goal is to assist an individual and perhaps a family with their individual difficulties. This view holds the individual and family responsible and embraces private over public solutions. A liberal orientation in social work holds that social and institutional arrangements affect individual and societal well-being. A liberal view holds that government intervention is crucial and that a private response is insufficient: Government should provide a safety net, according to liberal ideology. This focus is typically considered a mezzo-level analysis. Lastly, the radical tradition of social work adopts a macro focus that confirms the need to restructure social, political, and economic institutions so they may provide a more equitable, universal, and democratic system. This radical view can be critical of the profession, most often targeting the conservative view as reproducing societal inequities and abandoning the historical roots of social work. Further, the radical tradition within the profession has been critical of social work practice as being tied to the state apparatus, which ultimately perpetuates poverty and inequality.

Ideological tension within the profession has historical roots, and there continues to be conflict today about the relevance and effectiveness of micro versus macro practice, although contemporary social workers have

begun to recognize that what makes social work unique is the ability to locate social problems within the complex interconnectedness of individuals, families, communities, and societies. This multiple perspective of understanding social problems is one of the profession's assets.

Another view of the social work profession offers poignant criticism. Many authors have addressed the unique quandary that social workers face given the complexities of the U.S. social welfare system and its relationship to capitalist ideology and institutions. In Frances Fox Piven and Richard Cloward's seminal work *Regulating the Poor* (1971), they highlight that social welfare does not curb capitalist institutions; instead, it supports and enhances them. Moreover, the social worker is often the vehicle to ensure capitalism's survival. The profession must deal with this contradiction spelled out by Piven and Cloward, along with others, whereby social workers work in and are committed to the very institutions and agencies that perpetuate inequality, yet social workers rely on these same agencies for their livelihood.

As the various ideological perspectives of the profession reveal, there are numerous and varying accounts of the social work profession. In sum, many believe the profession to be driven by altruistic and humanistic motives, whereas others focus on the history's middle-class do-gooder who seeks professionalization. Still others describe social work as a profession that exerts social control over the poor, further legitimizing capitalism. In fact, social work's historical development embodies each of these realities.

HISTORY OF THE PROFESSION

The profession of social work dates back to the mid-1800s, when state charities began and institutions were established to deal with dependent populations such as the mentally ill, poor children, and people with disabilities. Prior to state intervention, mostly local churches and philanthropic organizations attempted to tackle social problems. But by the end of the nineteenth century these state-run institutions were failing and no longer providing quality care. Simultaneously, two movements emerged offering new ways of dealing with the poor and vulnerable in society: Charity Organization Societies and the Settlement House Movement. Each of these movements, both of which had roots in England, had approaches of dealing with social problems that embraced an ideological stance. The former adopted a conservative view that held that eradicating poverty meant that individual behavior had to be changed. The latter embraced a radical ideology that confirmed the need for fundamental social change.

Abraham Flexner (1866–1959), an educator who was considered an expert in evaluating professional standards and advocated for radical change in the way that medical schools trained doctors in the United States and Canada, said in 1915 that social work had not yet achieved profession status due to its lack of professional standards. Flexner was the author of the famous *Flexner Report* (1910), which had argued for increased standards in medical schools. He concluded that in order to be considered a profession, social work, like medicine, must have its own set of skills and specialized education that is based on scientific knowledge. Social work used this conclusion as an impetus to create and expand the types of setting for social work practice and paid attention to developing a knowledge base that was unique to social work. As a result of new practices, partly driven by the expansion of social welfare provisions in the 1930s, social work became acknowledged as a legitimate profession.

During the Great Depression of the 1930s the field witnessed an expansion in both the number of social workers and the type of work they did. Social work played a crucial role in helping shape and develop the United States's first institutional welfare program. In fact, a notable social worker, Harry Hopkins (1890–1946), headed Franklin Delano Roosevelt's emergency relief program, and another social worker, Jane Hoey (1892–1968), was the head of the Federal Bureau of Public Assistance. Since the 1930s social workers have been central in organizing and running governmental programs that aid the poor and needy.

After the New Deal and Social Security Act were passed, public perception about the profession of social work became more positive, and social work practice expanded greatly. Professional standards increased as well as academic requirements. Given the proliferation of services available to the public, the numbers in the profession increased greatly during these years. Social workers had a renewed sense that social reform was fundamental to their mission. From the 1940s to the 1970s social work was a growing field, expanding into many new arenas and continuing its professionalization project. The 1980s and 1990s were difficult for the social work profession, with massive government cuts to social spending and social welfare services. New social problems emerged that posed new challenges to social workers, such as high rates of incarceration, HIV/AIDS, and the crack epidemic. Some social problems that had been around for centuries—homelessness and domestic violence—increasingly became more politicized and addressed. The 1990s brought decentralization, whereby the federal government assumed less responsibility for the poor and needy, and states were required to do more to respond to vulnerable populations. This historical shift had implications for the social work profession, such as less federal funding and less support, and, as a result, social workers have had to continue developing creative alternatives to remedy social problems.

SOCIAL WORK EDUCATION

Social workers can be trained on a bachelor's (BA or BSW), master's (MSW), or doctoral level (PhD or DSW) of education. Each level produces a specialty of knowledge and depth of skill. Bachelor-level social workers are typically referred to as "frontline workers" who adopt a generalist orientation to social problems and who work in fields ranging from child welfare to domestic violence to services for the aging. Masters-level social workers are also educationally trained as generalist practitioners, but they receive additional training in a particular field such as clinical practice; children, youth, and families; gerontology; substance abuse; public policy; and not-for-profit management. Doctoral-level education in social work provides students with all of these, as well as training to assume leadership positions in agency work or to become faculty members at colleges and universities. In 1952 the Council on Social Work Education (CSWE) was established to oversee curricula within schools of social work. The council is the accrediting body of schools of social work on both the bachelors and masters levels.

SOCIAL WORK'S PUBLIC IMAGE

Today there are approximately 600,000 people who hold social work degrees. According to the Bureau of Labor Statistics, social work is one of the fastest-growing careers in the United States. Given this rise, the profession has received increased public attention, both positive and negative. Public perception of the profession is often misinformed. According to the 2000 census, 845,000 individuals self-identified as social workers. Many individuals who work in the field of human services identify themselves as social workers, yet they do not have any formal social work education. This contributes to the misinformation about the profession, its scope of work, and the educational training required by schools of social work. Many states have passed legislation to protect the title "social worker," restricting it to those who have completed a social work degree from an accredited institution of higher learning.

In 1955 the National Association of Social Workers (NASW) was formed. NASW is the largest membership organization representing professional social workers. It "works to enhance the professional growth and development of its members, to create and maintain professional standards, and to advance sound social policies" (National Association of Social Workers 2006).

Social work is a complicated profession. Like sociology and psychology, there are competing views and traditions, ranging from conservative to liberal to radical, each of which embraces a different ideology and set of practices. Social work has a long and rich history, becoming institutionalized in state programs and during the New Deal in federal programs. Today, there are nearly one million social work professionals in the United States practicing in nearly every setting. Social work's growth is likely to continue, producing positive outcomes in the lives of individuals as well as institutions.

SEE ALSO *Interventions, Social Skills*

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Susanna Jones

SOCIALISM

Socialism can be defined as a political ideology that endorses the equality of power. Socialists believe that the existence of unequal material relationships is evidence of unequal political and social power in any given society. The goals of all socialists are the same: collective living and working arrangements, equal distribution of wealth, and equality of power. The attainment of these goals would guarantee a moral human society with happiness, equality, brotherhood, and community as foundational values.

The methods used to attain these goals have differed according to unique historical circumstances. Some socialists have endorsed industrial efficiency, while others have argued for a return to a "primitive," nonindustrial stage of human history. Additionally, certain socialists have valued

organization, control, discipline, hierarchy, leadership by experts, compulsion, violent revolution, and messianic elitism over gradual change, democratism, and pacifism to develop a socialist society. Socialists have sometimes appealed to nationalism and patriotism to recruit supporters. Other times they have proposed a more cosmopolitan philosophy of human organization. The role of the state has often been at the heart of these contradictory approaches. Some socialist states have created dictatorial governments to destroy traditional society and replace it with a pseudosocialist one. Other socialist movements have called for the creation of a just welfare state to take the primary responsibility for providing adequate housing, health care, pensions, and unemployment benefits to all citizens. Alternately, Communists have worked to eradicate the state apparatus entirely, instead offering a purely democratic structure of power relationships.

HISTORICAL EXPLANATION FOR THE RISE OF SOCIALISM

The formulation of socialism as a political ideology occurred between 1815 (the end of the Napoleonic era) and 1848 (the publication year of Karl Marx's *Communist Manifesto* and a year of liberal, nationalist revolutions across Europe) as a particular response to the French Revolution and the Industrial Revolution. The French Revolution of 1789 began the slow destruction of the ancien régime in Western Europe and ushered in the modern period of liberal democracy and industrialization. During this process, the bourgeoisie replaced the aristocracy as the dominant social class, and as the abolition of serfdom swept across Europe during the Napoleonic Wars, European peasants left the villages and migrated to the cities to work in the new industries of the nineteenth century. The population of European cities exploded during this era of urbanization, and the new industrial working classes suffered tremendously from horrid living and working conditions.

The "dual revolution," as the simultaneous liberal and industrial revolutions of the nineteenth century are called, created a social, political, and economic system that destroyed the traditional identities of Europeans, a system that had been founded on values of community, and instead legitimized an individualism that favored white, male property owners. The promotion of a minority of the European population at the expense of the workers, peasants, and women of all social classes angered socialist intellectuals, who criticized the failure of liberal democracy to extend fundamental human rights to all peoples. Though professing that liberalism would bring about progress in Europe through the destruction of legally defined social groups and the introduction of the right to vote, the right to free assembly, an end to censorship, equality before the law, social mobility, and economic freedom, socialists charged that liberal democracy merely created a new bourgeois-dominated social hierarchy that exploited the working classes for personal gain. They saw the liberal promise of economic freedom as a dangerous one because it guaranteed only workers' rights to sell their labor to the highest bidder, and since wages in a capitalist system are tied to market forces, industrial society justified its exploitation of workers as being a kind of natural economic state. Socialists thus viewed liberal capitalism as an immoral system.

Liberal democracy and socialism in the nineteenth century were therefore antithetical: Whose rights should be protected—those of the bourgeoisie to possess private property or those of the working classes against the vagrancies of capitalism? At the heart of this dispute were differing ideas of the intrinsic goodness and value of private property. Liberal capitalists viewed private property as the most sacred of all human rights, while socialists viewed it as the root of all evil in the modern world. Another controversial debate was the natural state of humanity: Is communal organization the foundation of natural law? Can and should we use some definition of natural law to judge existing social institutions? Early nineteenth-century socialists agreed with Enlightenment thinker Jean-Jacques Rousseau (1712–1778), who argued that men are social by nature and naturally want to do and be good. Humanity therefore had the ability to return to this "natural" state through a process of purification. Rousseau also argued that the fall of humanity began with the introduction of private property.

Rousseau inspired the first French socialists, the egalitarians, who reacted violently to the fact that the French Revolution did not bring about social equality or abolish material wealth in the early nineteenth century. Egalitarians urged the people to seize power, do away with social hierarchy, and institute a commonwealth. They also advocated the use of terrorism to dispossess the wealthy and redistribute private property equally among all members of society. In this early stage of socialist development, the abolition of private property was not yet part of the political agenda and the goal was to end the misery of the poor. The egalitarians introduced the idea that the community was more valuable than individuals in isolation. Egalitarianism also endorses a pure democracy without party divisions. Service, devotion, and sacrifice for the sake of community were the hallmarks of egalitarianism.

Socialism took on a more organized form with the rise of utopianism in the 1830s. Charles Fourier (1772–1837), often referred to as the father of utopian socialism, argued that industrialization and liberal democracy did not constitute historical progress. He firmly placed the critique of bourgeois society in the greater context of the

rise of the materialization of humankind. Bourgeois society, he argued, reflected a fundamental departure from the foundation of human social life. Fourier rejected the progressive function of industry and technology and instead advocated for the creation of communal organization based upon agricultural units he called *phalanstères*. Along with this rejection of industrial capitalism, Fourier demanded minimum public regulation of individuals and a maximum level of individual freedom. Total gender equality, guaranteed by the destruction of marriage as a social institution, was also a major component of his philosophy.

Fellow utopian socialist Henri de Saint-Simon (1760–1825) rejected Fourier's denunciation of industry and focused his critique of liberal capitalist society on increasing workers' economic and political power, clearly defining socialism as an economic doctrine. Saint-Simon argued that order and efficiency were natural characteristics of humans. Since the interests of entrepreneurs and workers were identical—to increase political status through productivity—human beings would naturally agree to a collective social and economic construction once they realized how profitable such an arrangement could be. Private property, Saint-Simonians charged, was therefore incompatible with the efficiency of the industrial system. By transferring private property to the state, which would be controlled by an association of workers, privileges of birth would disappear. Additionally, the banking system, acting as a social institution, would coordinate the economy for the entire society. Saint-Simon also advocated for female emancipation and special care for paupers and criminals, all of whom he considered to be victims of the immoral bourgeois capitalist state. These radical changes would allow for the moral regeneration of society to occur. Fourier's and Saint-Simon's contradictory critiques of industrial society and visions of the future illuminated the controversial aspects of socialist thought in its early years.

The French utopian socialists greatly influenced German philosopher, historian, sociologist, and economist Karl Marx in the mid-nineteenth century. The *Communist Manifesto*, published by Marx and his partner Friedrich Engels in 1848, presented a theory of history in which an inevitable communist revolution led by industrial workers, the proletariat, would destroy bourgeois capitalist society. While utopian socialism in its various manifestations can loosely be defined as a worldview that promised individuals a full sense of belonging to a progressive communal society, Marx's Communist theory at this early point in his career outlined a specific path toward the attainment of this goal. Marx viewed the history of mankind as being propelled forward by class warfare. He argued that human beings' identities are defined by their economic relationships to one another, not by religion or other social constructs. The dominant social class, therefore, uses its political and economic position to exploit the subordinate social classes. The struggle between social groups, and the revolutionary attempts of the subordinate classes to destroy the ruling class, is what moves history forward. He called this process dialectical materialism.

In the context of nineteenth-century European industrial society, Marx forecast that the industrial proletariat would overthrow the capitalist bourgeoisie and the revolutionary cycle would end because, for the first time in history, the revolutionary class would represent the majority of the population. The revolution, Marx predicted, would occur on a worldwide scale as members of the proletariat in every industrialized country would spontaneously revolt. Industry would quickly spread to nonindustrialized portions of the world and all societies would become one large "workers' paradise." In the process, nations would cease to exist as primary determiners of an individual's identity. The new communist system would guarantee total equality among all people through collective ownership of the means of production (such as land, machines, factories, tools, and animals), the abolition of private property, and collective living arrangements. The establishment of a complete democracy under such conditions would allow for the "withering away" of the state apparatus and the complete spiritual fulfillment of each individual.

The failure of the Paris Commune (1871) to install a socialist society in France prompted Marx to question this early assertion that a spontaneous and violent revolution was the only path toward socialism. In his later works, Marx tacitly acknowledged the possibility of a peaceful transition to socialism in those societies with mature democratic political systems. This move away from the notion that the excesses of liberal capitalism would naturally produce a proletariat revolution laid the foundation for democratic socialism to emerge as a Marxist political ideology in the late nineteenth century. This inconsistency in Marx's philosophy of revolution allowed future communists and social democrats alike to claim him as the founding father of their radically different processes of revolutionary change. However divergent in their methods, atheistic socialist revolutionary movements around the world shared a common belief in Marx's materialist interpretation of the human experience, one that charged religion with being the "opiate of the people" in the twentieth century.

HISTORICAL EXAMPLES OF SOCIALISM

Vladimir Ilyich Lenin led the world's first socialist revolution in Russia in 1917. Lenin compromised the demo-

cratic foundation of Marx's vision by using dictatorial revolutionary tactics to destroy the Russian autocracy and establish socialism. Because Russia lacked the large industrial proletariat needed to complete the Communist revolution, Soviet leaders created a totalitarian version of socialism. Each individual was equally submissive to the dictator—stripped of basic human rights, controlled by secret police forces and spy networks, educated by socialist propaganda, and forced to conform to a new identity as a Soviet socialist citizen. With its focus on industrialization, Marxian socialism in the Soviet Union became an ideology of modernity instead of communism.

The Soviet revolutionary model was widely adopted around the world in the 1940s and 1950s. After World War II, Stalin's takeover of Eastern Europe imposed Soviet communism there. In 1949, Mao Zedong led a nationalist and anti-imperialist Communist revolution in China where the peasantry, rather than the proletariat, was considered to be the revolutionary class. Mao's socialist revolution was also a political and military struggle against imperialist powers (most notably Japan) instead of a Marxist class struggle. Guerrilla warfare, therefore, drove the revolution, rather than the organization of a labor movement or a political party. This pattern of socialist revolution was repeated in North Vietnam in 1954 by Ho Chi Minh. In both the Chinese and Vietnamese cases, the Soviet Union offered heavy support to the revolutionaries in order to extend its sphere of influence across Asia.

In 1959, Cuban leader Fidel Castro established the first socialist government in Latin America. Castro's revolution, however, concerned itself more with the conquest of power than ideology. After a short period of euphoric hope that Latin America might be able to throw off imperialist control through the adoption of Castro's socialism, many Latin American socialists in the 1960s and 1970s rejected his dictatorial model. They also repudiated Marx's atheism and used the power of their Catholic faith to fight against unjust socioeconomic structures. Liberation theology, as the movement was called, argued that the Church's preferential treatment of the poor be involved in political struggles.

Socialism in Africa emerged after the exit of colonial powers in the 1960s. African socialists generally condemned capitalism and worked to protect human dignity, though their goals and methods varied from region to region. Africans' desire to create a postcolonial national identity free from imperialist economic exploitation accounts for this variety.

Alternatively, revisionist socialists in Eastern and Western Europe in the 1950s and 1960s attempted to resurrect the social democratic foundation of Marxism. They rejected the Soviet dictatorial model of communism as well as the Western liberal capitalist model of modernity. Supporters of the New Left of the 1970s and 1980s dedicated themselves to establishing just social, economic, and political domestic and international structures. The fall of the Soviet Union in the early 1990s effectively destroyed the dictatorial socialist model in Europe, with most European countries working to develop liberal capitalist societies that guarantee freedoms and rights for all individuals.

SEE ALSO *Capitalism; Castro, Fidel; Communism; Cuban Revolution; Egalitarianism; French Revolution; Left and Right; Lenin, Vladimir Ilitch; Liberalism; Marx, Karl; Marxism; Materialism; Minh, Ho Chi; Nationalism and Nationality; Patriotism; Peasantry; Philosophy, Political; Planning; Political Theory; Russian Revolution; Stalin, Joseph; Totalitarianism; Union of Soviet Socialist Republics; Vietnam War; Welfare State*

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Tracey A. Pepper

SOCIALISM, AFRICAN

There are two basic models of African socialism that represent its variations and development on the continent (Rosberg and Callaghy 1979). The first, more populist type refers to a "first wave" of socialist regimes that emerged during the early years of independence—from the late 1950s throughout the following decade. Flexible, pragmatic, and attuned to local conditions, these first socialist governments in Africa recovered the communalism of traditional culture after breaking free from colonial domination. The second leading model represents a "sec-

ond wave" of more militant regimes that consolidated power during the 1970s, favoring scientific socialism, an exclusive vanguard party, and a command-style economy while renouncing the false consciousness of traditional culture. These two models are of course abstractions and should not obscure the discrepancies between theory and practice, rhetoric and realpolitik, as well as principles and personalities found within each "ideal type." If a populist-socialist such as Julius Nyerere (Tanzania) could force resettlement in Ujamaa villages (Khapoya 1994, p. 202), a vanguard Leninist such as Marien Ngouabi (Congo-Brazzaville) could protect French interests in phosphates and timber (Decalo 1979, pp. 258–259). Indeed, given that all African economies remain fundamentally mixed and export oriented, African socialism may well be more about the political manipulation of ideological resources than the public ownership of the means of production, particularly in the geopolitical context of the cold war. Nonetheless, the rise and fall of such powerful ideologies illuminates the broader historical forces that shaped African socialism and account for its different forms. One must begin with a discussion of the ideological origins of African socialism before moving on to its first and second "waves" of implementation.

HISTORICAL ANTECEDENTS: THE GENEALOGY OF AN IDEA

The mythic origins of African socialism are found in Victorian evolutionism, with primitive hordes, group marriages, and the glaring absence of private property representing the earliest stages of society. Ethnologists such as E. B. Tylor and Lewis Henry Morgan established unilineal pathways from savagery to civilization that reinforced the racial hierarchies of imperial ideology with blacks at the bottom and whites at the top. The influence of this evolutionary perspective was pervasive, informing Sir Henry Maine's transition from status to contract in comparative law, Ferdinand Tönnies's sociological distinction between *Gemeinschaft* and *Gesellschaft*, and of course the "primitive communism" of Marx's pre-alienated man. When mapped onto the ur-terrain of the Dark Continent, a romanticized image of an original socialist Africa took shape, laying the foundation for the varieties of Pan-Africanism that developed in the first half of the twentieth century.

Edward Blyden (1832–1912) is generally acknowledged as a founding father of Pan-Africanism and its associated socialist traditions. Born in Saint Thomas and raised in Venezuela and the United States, Blyden moved to Liberia, where he advocated the repatriation of blacks to Monrovia. His ethnographic forays into West African hinterlands—commissioned by the British Crown—inspired such important works as *Christianity, Islam, and the Negro Race* (1887) and *African Life and Customs* (1908), in which he moved away from Christianity toward Islamic and indigenous frameworks for African government and self-determination. Of "pagan Africa" he wrote: "Social life … is communistic or co-operative. All work for each, and each work for all," citing such proverbial wisdom as "What is *mine* goes; what is *ours* abides" (Blyden 1979, pp. 81, 89). Challenging Victorian myths of primitive savagery with utopian counter-myths of African socialism, Blyden's stylized portrait of the continent would be refined in the writings of W. E. B. Du Bois (1939), Carter G. Woodson (1936), and in the Négritude of Leopold Sédar Senghor, all of which effected an important ideological transformation. Reworking the imperial opposition between civilization and barbarism, in which racial stereotypes between whites and blacks were largely preserved, Pan-Africanism reversed the hierarchy itself. The individualistic, hyperrational, industrializing societies and economies of the West were no longer signs of superior civilization but symptoms of profound alienation, expressed by the very separation of mind and body diagnostic of Western enlightenment. Africans, by contrast, were more "organic," integrating mind and body, feeling and thought, and most importantly, self and community into collective forms of ownership and everyday life. Africa emerged as a positive foil against which the West was negatively recast, with its crime rates, rapacious greed, and growing inequality. The historical arrows were similarly reversed. Whereas the racist Hamitic Hypothesis of imperial discourse attributed the cultural achievements of Africa—such as political centralization or the invention of iron—to exogenous infusions of "Hamitic" or "caucasoid" blood, the Pan-African vision attributed Africa's decline to the depredations of foreign conquerors and slavers who undermined the traditional fabric of economy and community. Identified and recovered, the socialist underpinnings of Pan-African culture would restore Africa's rightful place in the world.

The Pan-African project took shape against the formal frameworks of European colonization at the turn of the twentieth century. The important Pan-African philosophies of this movement, including Léopold Senghor's "Négritude" and Kwame Nkrumah's "African Personality," cannot be separated from the congresses and colloquia that brought together activists and intellectuals from Africa and the African diaspora. (One of the best comparisons of Négritude and African personality remains Irele [1990]). The four Pan-African congresses organized by Du Bois in 1919, 1921, 1923, and 1937 were framed primarily in terms of race, challenging the "color-bar" through Pan-African alliances that included British socialists such as Sidney and Beatrice Webb, Harold Laski, and H. G. Wells. But the fifth, so-called Manchester Congress held in 1945, reflecting the rising

influence of George Padmore, signaled an explicit shift toward decolonization, mobilizing Africans in discourses of trade unionism, socialism, and self-government. It also influenced the careers of Nkrumah, Azikiwe, and Kenyatta, who became icons of independent nationhood. Nkrumah went on to organize the Union of African States (1960) with Guinea and Mali joined by Morocco, Algeria, and Egypt to form the Casablanca group (1961) with a militant commitment to continental unity.

Thus formed a "militant wing" of the Pan-Africanist movement, countered by the more pragmatic Brazzaville and Monrovia groups seeking socialist solutions through economic regionalism. Tensions between militant and moderate socialisms; between national, regional, and continental priorities; between North African and sub-Saharan "cultural" divides; and between inherited colonial philosophical dispositions persisted within the Pan-African community, not only in the Dakar Colloquium (1962), where Senghor reasserted Négritude's universalism, but also within the Organization of African Unity after it was founded in 1963. Nonetheless, a general model of "open" African socialism emerged (Senghor 1964), emphasizing state-directed public-sector development, trade unionism, marketing cooperatives, people's banks, limited land reform, independence from foreign export markets, political mobilization through mass party organization, commitment to egalitarianism, and relative geopolitical autonomy based on the indigenous values of African cultural unity. Principled autonomy from the Soviet Union was also a major theme of the Afro-Asiatic Bandung Conference in 1955, a conference considered by Senghor (1959, p. 3) as the twentieth century's equivalent of the 1847 Congress of the Federation of Communists, which commissioned "The Communist Manifesto." Pan-African in rhetoric, African socialism took root after independence within the political confines of the new nation-states.

THE FIRST WAVE: POPULIST-SOCIALIST REGIMES

It is difficult to separate the first socialist experiments in Africa from the charismatic leaders who brokered independence, such as Kwame Nkrumah in Ghana, Léopold Senghor in Senegal, Sékou Touré in Guinea, Modibo Keita in Mali, Amilcar Cabral in Guinea-Bissau, Kenneth Kaunda in Zambia, and Julius Nyerere in Tanzania. Nkrumah's brand of socialism is hard to pin down as it shifted between nationalism and Marxism, public-sector development and multinational capital, respect for traditional socialist values and disdain for traditional "reactionary" chiefs, and finally, between the mass principles and exclusionary practices of its ruling Convention People's Party (Apter 1972). Squeezing cocoa farmers through its extractive marketing boards, the state sought to underwrite industrialization and infrastructural development, but as debt increased and productivity dropped, the economy slid into a downward spiral. Fearing political conspiracies within and neocolonial enemies from abroad, Nkrumah became increasingly radicalized and isolated and was ousted by a coup d'état in 1966. In similar trajectories of socialist development and decline, Modibo Keita in resource-poor Mali and Sékou Touré of mineral-rich Guinea collectivized agriculture, nationalized banking, and blended Marxism with African cultural models. In both cases, peasant producers lost out in the reforms, and agriculture stagnated. Whereas Keita was overthrown by a coup in 1968, Touré, who died in 1984, gradually abandoned his socialist policies for Western economic investment.

The most extensive socialist project based on "African" principles was Nyerere's Ujamaa villagization scheme, in what became the hallmark of Tanzania's commitment to self-reliance. In *Ujamaa: Essays on Socialism* (1968), Nyerere offers a doctrine of traditional extended "familyhood" (*ujamaa*) as a blueprint for African unity and development. Enshrined in the Arusha Declaration of 1967, this doctrine rejected heavy industrialization, with its dependency on foreign capital, in favor of collectively organized agricultural production in newly formed Ujamaa villages. What began as "voluntaristic, grass-roots, cooperative socialism," however, became "socialism imposed from above" (Young 1982, pp.114–115) as recalcitrant peasant producers in scattered peasant homesteads were relocated into cooperative communities. Dean McHenry (1979, p. 43) estimates that 91.3 percent of the rural population was living in ujamaa villages by 1976. Although villagization, combined with Scandinavian aid, improved education, medical care, and public utilities in the rural areas, an overall decline in peasant production, including severe food shortages in 1974, eventually brought the experiment to an end. Nyerere resigned in 1985 to make way for neoliberal reforms, but his legacy of national unity and the correlative absence of ethnic politics in Tanzania has endured.

THE SECOND WAVE: SCIENTIFIC-SOCIALIST REGIMES

If the first wave of African socialist states in the 1960s sought the recovery of cultural traditions (Senegal and Tanzania more than Ghana and Guinea), the scientific socialist regimes of the 1970s emphasized more radical ruptures—from the shackles of tradition, from colonial domination, and from preceding military juntas. Elevating a Leninist-styled vanguard party to control the state, these more centralized regimes used the language of class analysis in claiming peasants and workers as their social base, attacking incipient class formation, and

thereby justifying coercion in the persecution of political dissidents and internal enemies. In many areas, however, ideological principle was tempered by realism: If foreign owned banks and insurance companies were easily nationalized, more capital-intensive and productive multinationals were given freer rein as revenue-generating engines of growth. In geopolitical terms, greater solidarity with the Soviet bloc in the United Nations did not translate into firm Soviet trade relations and aid. Many of the Afro-Marxist regimes remained interested in Western capital investment, and thus economically nonaligned.

Crawford Young (1982) distinguishes military Marxist regimes from those that grew out of national liberation movements against Portuguese colonialism. Among the former, Congo-Brazzaville was the first to establish a Marxist regime in 1969, when Marien Ngouabi declared a People's Republic and inaugurated the Parti Congolais du Travail (PCT). Somalia followed under Mohammed Siad Barre in 1970, when Soviet military interests enabled Somali national consolidation within an enduring Islamic idiom. In the Republic of Benin, Major Mathieu Kerekou created the Leninist Parti Révolutionaire du Peuple Beninois (PRPB) in 1975, developing new public corporations and peasant cooperatives without sacrificing economic relations with France. A more radical Marxist-Leninist state was implemented in Ethiopia by the revolutionary Derg ("committee"), a secret inner circle of the military who deposed Emperor Haile Selassie in 1975 and instituted major reforms, including the nationalization of land ownership and tenancy to undermine the Amharic feudal aristocracy. Given its notorious "Red Terror" and rule through fear and intimidation, however, the Derg never secured popular legitimacy (Donham 1999).

Notable among national liberation movements were the protracted struggles in Angola and Mozambique against entrenched Portuguese settlers and political overrule that lasted until 1975. In Angola, a bloody civil war became a cold war battleground where a sizable force of Soviet and Cuban soldiers (20,000) and technicians (17,000) backed the Movimento Popular de Libertação de Angola (MPLA) against Jonas Savimbi's reactionary União Nacional para a Independencia Total de Angola (UNITA), supported by South Africa and the United States. (Angola's political identification with the former Soviet Union still resonates from the hammer and sickle on its national flag.)

By the 1990s, the Leninist role of the MPLA degenerated into coveted disbursements of economic and political patronage based on control over oil and diamonds (Hodges 2004). In Mozambique, socialism developed through similar struggles against the Portuguese and, after independence, during a long civil war with South African-backed Renamo rebels. Samora Machel's revolutionary vanguard party, FRELIMO, emerged as a highly disciplined organization supporting liberation movements in former Rhodesia and South Africa while promoting women's rights, peasant collectives, state farms, and heavy industry at home. The dislocations of the civil war, however, and the atrocities of the Renamo fighters, exacted a heavy toll on the country and economy after a cease-fire was signed in 1992.

If socialism in Africa, like elsewhere, lost ground after the collapse of the Eastern bloc and the rising tide of neoliberal reforms, its central concerns have not withered away (Saul 2001). These remain the role of the state in regulating trade, the growing inequalities associated with economic liberalization, the political economy of "tribalism," and the complex character of class formation in postcolonial Africa. Like the colonial heritage that it fought and opposed, socialism in Africa—even when disavowed—remains deeply embedded in the politics of national development (Pitcher and Askew 2006).

SEE ALSO *Anticolonial Movements; Capitalism; Christianity; Civilization; Collectivism; Colonialism; Decolonization; Dependency Theory; Du Bois, W. E. B.; Ethnology and Folklore; Gemeinschaft and Gesellschaft; Leninism; Liberalization, Trade; Liberation Movements; Neocolonialism; Neoliberalism; Nkrumah, Kwame; Nyerere, Julius; Pan-Africanism; Primitivism; Socialism; Socialism, Christian; Socialism, Islamic; Union of Soviet Socialist Republics*

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Andrew Apter

SOCIALISM, CHRISTIAN

In 1848 Karl Marx dismissed Christian Socialism as "the holy water with which the priest consecrates the heart-burnings of the aristocrat" (Marx [1848] 1967). His immediate, if unstated, target was the group of Anglicans around the theologian F. D. Maurice, who that year in London began a short-lived publication, *The Christian Socialist*. The occasion for their emergence—sympathy with Chartism—was political, and an important part of their activity was practical social witness, such as Maurice's foundation of the Working Men's College in 1854. Their Christian Socialism was thus reformist rather than radical and operated within a theological as well as a political context. As Maurice explained, he chose the term Christian Socialist to differentiate them from both "the unsocial Christians and the unChristian socialists" (quoted in Wilkinson 1998). The former were targets because of the pietistic emphasis on individual salvation of contemporary evangelicalism, and for political reasons. At the time Christian views of political economy were primarily shaped by emphases on responsibility: either in Malthus's warnings about the demoralizing effects of the Poor Law or in the comforting commonplace of the time that he who pursues his own best interests is also supplying the interests of the community as a whole. Maurice attacked such views and the laissez-faire orthodoxy they reflected. Socialism for him, however, seems to have been largely about the church addressing the people inclusively rather than individually, not least through reformist social activity rather than the establishment of an alternative political economy.

Although the term *Christian Socialism* was popularized in this distinctive nineteenth-century context, it drew, as even Marx acknowledged, upon both biblical and ecclesiastical precepts. It may have been at this point that Christian Socialism began to emerge as a distinct witness, but those who followed in Maurice's footsteps could associate their views with a much longer tradition. From the Old Testament the providence of land and the Jewish institution of Jubilee implied divine sanction of equal shares in the means of production and divine prohibition of private accumulation, while the prophets provided examples of denunciations of injustice. The New Testament furnishes strictures against the rich and the money changers, while Christ's message that, instead of the love of self implied by such accumulation, people should love one another became, by the late nineteenth century, the basis for claims that Jesus was the first socialist. And the sharing of all things in common and their distribution according to need in the early church (Acts 2: 44–47; 4: 32–37) suggested protosocialist communities.

There were a number of attempts to re-create such communities in the early nineteenth century. Étienne Cabet in France saw the rise of the medieval church as having corrupted early Christianity, the ideals of which he sought to recapture in utopian communities. The non-Christian Robert Owen simultaneously experimented with such communities in Britain and America. Although his ideas were to influence Maurice, both his and Cabet's communities ended in failure. Meanwhile, the shadowy League of the Just founded in 1836 and largely composed of German exiles in London was transformed from a body calling for the realization of the Kingdom of God on Earth through universal brotherhood in 1847 into the purported commissioners of Marx's *Communist Manifesto*, which sought to achieve the ideal society through class struggle instead.

Some Christians accepted this diagnosis, while rejecting both the materialistic basis of Marxism and its facile assumption that an ideal society requires merely the expunging of class exploitation. They were, however, in a new situation, in which positivistic secular creeds sought to explain the human condition or express social ideals

without necessarily having recourse to religious frameworks. Socialism could still benefit from the imprimatur of Christianity, but it could also become a rival creed to churches seen as more focused on salvation in the next world rather than this one. In continental Europe, as well, papal hostility to this challenge in Pius IX's *Syllabus of Errors* (1864), as well as the extent to which Catholicism had become associated with defense of the established order, meant that nineteenth-century socialism there frequently had a distinctly anticlerical flavor. Despite the efforts of, for instance, Bishop Kettler of Mainz in the 1860s, this antipathy was not to be mitigated until after Leo XIII's encyclical *Rerum Novarum* in 1891, which, while still condemning socialism, was much more open to labor organizations.

The more pluralistic political and religious culture of the Anglophone world produced different effects. An emphasis on the Incarnation and the corporate life of the church led Anglo-Catholics such as Stewart Headlam to revive Christian Socialism in the 1870s and 1880s. Walter Rauschenbusch's emphasis in the 1890s on the Kingdom of God as an endeavor for this life, not the next, was also to have wide influence. It led to a positive view of state intervention. Contemporary economic and social developments, especially the emergence of more rigid class differences and secular socialist parties, were also prompting this trend. A "Social Gospel," intended to bridge the gulf to the working classes by a mixture of social work in poorer areas and a generalized language of social welfare, appeared in both Britain and America around the end of the nineteenth century.

In America such figures as Washington Gladden emphasized a new concordat between capital and labor, not least through just wages and profit sharing. Meanwhile, in Edwardian Britain, the more radical idea of Guild Socialism came into vogue. This was an attempt to find ways for workers themselves to directly control their production and entrench the dignity of labor against the materialism of collective socialism. Grounded in part in medieval romanticism, practical expression was most nearly achieved by the guild organization in the building trades established by Quaker businessman Malcolm Sparks after World War I. Such ideas, however, did not long survive in the difficult economic climate of the interwar years.

Anglo-Catholic enthusiasm for a corporate and social expression in faith led instead to experiments such as the Christendom Group around Maurice Reckitt. Meanwhile, within the Roman Catholic Church, while the rise of Catholic Action as a means of engaging with modern conditions prompted a growing accent on social welfare by the 1930s, the theocratic nature of much of Catholic political thought militated against its being expressed in radical political ways. Exceptions included the Catholic Worker Movement founded by Dorothy Day and Peter Maurin in New York in 1933.

Significant change came with Vatican II in the early 1960s. In particular, its more active approach to pastoral care opened the way for political engagement. This was particularly true in Catholic Latin America, where popular protest against the extreme social inequalities of the Continent were already gathering strength in the wake of the 1958 Cuban revolution. Bishops meeting in Medellín in 1968 concluded that the Church had to be not only for the poor but of the poor. The focus, as developed in Gustavo Gutiérrez's *A Theology of Liberation* (1971), was on God's preferential love for the poor and oppressed, expressed, not least, by Christ himself identifying with their suffering on the cross. This perspective was subsequently to find wide application, particularly in the developing world.

Christian Socialism, then, is to some extent contextual and does not involve a single political or theological viewpoint. It has developed in relation both to secular socialist movements—some of which, like the British Labour Party, now have affiliated Christian organizations—and the wider churches. What is distinctive throughout, however, is the view that a more socially just society requires changes in people's attitudes toward one another rather than simply in the social system.

SEE ALSO *Christianity; Egalitarianism; Jesus Christ; Labour Party (Britain); Liberation Theology; Malthus, Thomas Robert; Marx, Karl; Roman Catholic Church; Socialism; Vatican, The*

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SOCIALISM, ISLAMIC

Islamic socialism is a discourse that seeks to integrate Islamic spirituality and socialism, promoting religious

behavior, state ownership, and greater distribution of resources. Some of the most prominent examples of Muslim nation-states associated with the ideology are discussed below.

One of the first attempts was developed by Pakistani statesman Zulfikar Ali Bhutto (1928–1979) and the Pakistan People's Party (PPP), who adopted the term in response to severe criticism from conservative *ulema* about their un-Islamic socialism. To help alleviate criticism, Bhutto often referred to the "equality of Islam" (Raza 1997). From 1971 he introduced a range of socialist populist policies aimed at greater redistribution of resources. Overall though, particularly after 1973, Bhutto failed to reconcile the differing expectations of his supporters and urban industrialists and rural landlords, and he became ideologically distanced from Islamic socialism (Noman 1988; Raza 1997; Syed 1992) until he was overthrown in a military coup in 1977.

Islamic socialism is most widely associated with Muammar Abu Minyar al-Qadhafi of Libya, who came to power in 1969. He had been heavily influenced by the leadership of, and Arab socialist nationalism expounded by, the Egyptian leader Gamal Abdel Nasser (1918–1970). Qadhafi sought to bring about political, social, economic, and cultural change. The Third Universal (or International) Theory was introduced and expounded in Qadhafi's *Green Book*, which was published in three parts (1975, 1977, 1978). Qadhafi was critical of the excessive materialism and inequalities associated with capitalism, as well as communism's atheism and stifling of individual development. His new doctrine was to be an alternative to the dominant metanarratives, and he incorporated elements of Arab nationalism, Islam, and socialism. The *Green Book* addressed perceived problems within liberal democracy, economics, and social relations. A number of key concepts and practices were promoted, including *Jamahiriya* (state of the masses), "popular democracy" through direct participation in congresses and committees (Qadhafi 1975, p. 25), state welfare, equity, and religious behavior and morals. Large-scale private ownership and opportunities for "exploitation" were restricted (El-Kikhia 1997; Monti-Belkaoui and Riahi-Belkaoui 1996).

Since 1969, modernization processes have been implemented in Libya that have resulted in vastly improved communication and transportation networks and health and education facilities. However, the economy is overreliant on imports and oil revenues that have largely funded the advancements. Qadhafi's regime has been widely associated with repression of political dissidents, armed interference in neighboring states, and international terrorism. Following the drop in oil revenues in the 1980s, the onset of trade sanctions, periodic shortages of basic goods, and political isolation, Libya's economic and political policies were revised. Measures of economic liberalization have been introduced at the expense of Islamic socialist doctrine; these include privatization, expansion of public sector companies, and foreign investment, particularly after the lifting of United Nations sanctions in 2003.

During the 1970s, Islamic socialism, or *scientific socialism* as it was called by the regime, was also implemented by President Mohammed Siad Barre (1919–1995) in Somalia. Scientific socialism also sought to integrate religion and socialism and placed emphasis upon community development through self-reliance. But shifting alliances in the late 1970s contributed to closer ties with the West and a restructuring of debt that resulted in a loss of state macroeconomic control, greater liberalization, and the effective end of "scientific socialism."

Today, Islamic socialism attracts little support. The inability of "Islamic socialist" regimes to deliver their promises contributed to the doctrine losing credibility and being replaced by political Islam as the "third way."

SEE ALSO *Pan-Arabism; Qadhafi, Muammar al*

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SOCIALISM, MARKET

Market socialism became recognized as a concept in the 1960s as a result of the ferment in Soviet bloc countries, whose economies were administered nonmarket entities.

As a concept it generally embraced the idea of a nationalized economy embedded in a market.

The process began in 1952, when Josef Stalin's *Economic Problems of Socialism in the U.S.S.R.* announced that a market existed in consumer goods. In the Soviet Union Professor Evsei Liberman (1897–1983) of Kharkov University put forward market-type proposals in 1962. These were taken up briefly by Alexey Kosygin (1904–1980) when he was the Soviet Union's premier, but were dropped again in 1968. In Czechoslovakia the reform ferment under Alexander Dubček (1921–1992), the Communist Party secretary, led to proposal of a limited market in 1968. This was aborted by the Soviet invasion of that year. Poland and Hungary proceeded more slowly toward the introduction of market-type reforms. The final denouement came when Mikhail Gorbachev (b. 1931), general secretary of the Soviet Communist Party, passed a series of laws in the Soviet Union that were intended to introduce the market, beginning in 1986 with the Law on the State Enterprise.

For most economists market socialism ceased to have any meaning because the issue had been settled in favor of capitalism. The Polish economist Wlodzimierz Brus and the Hungarian economist János Kornai effectively accepted capitalism. The concept, however, has continued to play a role in debates among Marxists and socialist theorists. Historically there were, and remain, two debates. The first concerns the possibility of the market being embedded in socialism. The debates in the U.S.S.R. and in other East European countries were variants of this question. The second concerns whether the market could coexist (or would be in conflict) with planning in a transition period to socialism. Nikolai Bukharin took the first view and Yevgeni Preobrazhensky the second. As an orthodox Marxist, however, Preobrazhensky rejected the view that a market (law of value) could exist in a communist society. At a 1924 debate on the subject in the Communist Academy, Ivan Stepanov-Skvortsov, the main speaker, appeared to argue for market socialism, but Preobrazhensky and Bukharin both opposed the concept very strongly, though they differed as above.

The Austrian Ludwig von Mises (1881–1973) argued in *Socialism: An Economic and Sociological Analysis* (1922) that calculation was impossible under socialism because value would be abolished. Oskar Lange (1904–1965), a Polish economist and later a member of the postwar Polish Communist government, took up the cudgels to argue that it was possible, writing in reply "On the Economic Theory of Socialism" (1936), as well as an essay with Abba Lerner. His argument hinged on a hypothetical pricing scheme worked out by planners, who in turn would base their studies on minimum costing. The idea that the market economy could be written into a series of equations, assuming equilibrium pricing, was already well established in orthodox economics. Lange was arguing that economic calculation was possible under socialism because it would plan as if it were a market economy. Lange was not a Marxist economist and therefore could not see that the essence of socialism, as perceived by Marxists, would be negated by this form of top-down "planning" because it involved control and discipline of workers by the planners. Leon Trotsky (1879–1940) writing at the same time argued that planning had to be democratic or else it would malfunction.

In a sense, Lange's concept of socialism anticipated the later Soviet bloc reformers and their critiques. One of these was taken up by von Mises's fellow countryman the Austrian Friedrich von Hayek (1899–1992), who pointed to the difficulty in calculating the millions of prices involved, a problem which the Soviet Union could not solve: At the time, the Soviet Union had 25 million prices that involved a huge process of calculation, given the interrelationships involved. Today Hayek would receive the reply that modern computing advances could solve the issue. However, few would want a central planner or planning ministry to decide all economic and social issues, even if computing would ensure consistency. In principle, computing could use either the Lange system of administered shadow prices or its own alternative schemes; that debate continues. Logically, in the interests of maximum control from below, there has to be a high level of devolution. The role of the market in a devolved economy is also a matter of continuing debate.

Alec Nove's 1983 book *The Economics of Feasible Socialism* prompted a series of debates, most particularly with Ernest Mandel, in the *New Left Review*, and with others in the pages of the *New Statesman*. Nove argued that the central premise of a communist society—that it would be a society of relative abundance—was utopian, and hence it could not exist. Instead, it was necessary to adapt market forms and criteria to an economy with nationalized property. His book was a recipe for market reforms in the Soviet Union, and he later provided advice to the Soviet Union under Gorbachev.

The Soviet bloc countries of Hungary, Poland, and Czechoslovakia experimented with market forms, as did the Soviet Union. However, the reforms were always suspect among the working class, for whom they meant rising unemployment, greater inequality, and harder work, even if consumer goods were generally more available at lower prices. Reformers argued that the partial reforms were insufficient.

Departing from the classic case of market socialism, which presupposes an economy with most or all enterprises nationalized, but operating within a simulated or real market, the Scandinavian countries, Sweden in partic-

ular, generally have been regarded as successful examples of the coexistence of a large state sector and a developed welfare system, with a market economy. But the relatively high level of taxation and large state sector are regarded by some economists as responsible for lessening Swedish competitiveness in a global economy. The election in 2006 of a right-wing government that complained of a very high level of unemployment and promised to privatize and alter the taxation system seems to indicate a limit to the experiment. Debate continues on the reasons for the relative stability of the Swedish case.

The discussion on the role of the market, whether in the transition period to socialism or in socialism/communism, continues among Marxists. Debates around the subject of market socialism were held at the New York–based Socialist Scholars Conferences in the late 1990s and after. Most anti-Stalinist orthodox Marxists continue to maintain that the market will be abolished in socialism/communism. The difference among theorists as to whether the market is inimical to planning or whether it can exist in socialism/communism mirrors degrees of acceptance of orthodox economics.

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SOCIALISM, NATIONAL

SEE *Nazism.*

SOCIALIZATION

Socialization is a concept that is studied in many different areas of social science and can be adequately explained by any number of disciplines. The general topic of socialization forms the backdrop for numerous lines of research in diverse academic areas such as anthropology, sociology, criminology, and all areas of psychology. The study of socialization differs according to academic domain. For instance, in sociology, socialization is studied in terms of groups of institutions where socialization occurs, whereas anthropology looks at socialization in the larger culture. In this entry, socialization is approached from a psychological perspective, focused on the development of characteristics related to social behavior in individuals.

The term *socialization* refers to the process by which people learn culture, roles, and norms in order to function within a society. The socialization of culture includes learning the language, beliefs, and social structure of the culture in which an individual lives. The socialization of roles includes providing structure and instruction as to how to act in different situations individuals are likely to encounter within their culture. Finally, socializing group norms refers to learning the expected and appropriate behavior in a society in order to productively interact with others. Each of these three elements is integral to successful participation in society.

Though socialization is essential to functioning in society, it sometimes may have negative consequences. Some socialization experiences induce conformity and discourage independent thought: An example of this occurs in certain religious cults where conformity is encouraged and dissent is viewed harshly. Another example of the negative consequences of socialization is the internalizing of various stereotypes. Regardless of whether the socialization experience encourages conformity or independent thought, the end goal is to have individuals who are able to successfully interact within a given society.

Socialization occurs throughout one's lifetime, but it is particularly important during childhood, when the child's personality is taking shape. In early childhood children are socialized to learn the fundamentals of language and culture, which will affect behavior and outcomes throughout their lives. In addition, the way children are socialized and what behaviors are learned as appropriate and acceptable affect personality development with consequences that affect their entire lives. But socialization continues throughout one's entire life as new roles are undertaken and expected behaviors in each role are learned.

In many cultures, women are the first socializing agents in their capacity as the infant's primary caregiver. Primary caregivers of infants and young children have the unique task of socializing the child into the culture and society in which the child lives. These caregivers often are influential in teaching acceptable behaviors and rules as well as fundamental skills such as language development.

Beyond the primary caregiver, the family as a whole has a large role in socialization. This venue is the first social structure for the child, and much social behavior is learned in this arena. As the child develops, teachers, schools, and peer groups become important socializing agents. Mass media also socializes throughout the life span, and religious influences are also important. Each of these domains is somewhat controlled by the family. Family influence on children's neighborhoods and peer groups affects what types of socializing agents the child has access to. On a wider level, each of these domains is influenced by the government. The government exerts influence on socialization through creating experiences common to all children, such as schooling. In this domain, government has a powerful role in determining what can and cannot be learned, thus implicitly socializing the child to what things are and are not acceptable. Through the creation of laws and enforcement of acceptable behaviors, government also affects the family; for example, by enforcing laws that state that parents are not permitted to physically harm their children, the government dictates what types of behaviors children are subject to and, more generally, what types of behaviors are desirable and undesirable in society.

Research has suggested that socialization is not a unidirectional phenomenon. In *reciprocal socialization* parents socialize children and children in turn socialize parents. Children act as socializing agents to parents in a most basic sense as parents must be socialized to the parent role—infants demand certain care and have fundamental needs of their parents. In addition, various outside influences act on children in ways that affect parents and change their behaviors as well. For example, schooling may affect parental behaviors by placing increasing demands on children which parents must accommodate. In addition, increasing peer influences may require parents to modify strategies and behaviors in interacting with their child. Individual characteristics of children, such as their levels of attractiveness and temperaments, may also be factors in the socialization of parents. Newly arrived immigrant families provide a clear example of reciprocal socialization. Parents in these families may learn much of the new country's language and culture from their children as the children have more opportunities to learn (e.g., in school) and are more able to learn new expected roles. In this way, children socialize parents to new roles, and parents socialize children in basic behaviors.

MECHANISMS

Socialization occurs through a variety of mechanisms, both directly and indirectly. Direct socialization occurs through the formal teaching of behaviors and includes reinforcement of accepted behaviors. Schooling, an important source of direct influence, is very controlled: Roles are highly defined and behaviors are explicitly taught and reinforced. Direct socialization occurs throughout one's life. In professional socialization individuals are explicitly taught new behaviors and accepted patterns of social interaction. Although socialization during childhood provides the backdrop for which individuals can successfully maneuver within society, as people age, their socialization becomes more specialized as they learn how to act in specific social situations and be successful in specific arenas.

Indirect socialization, on the other hand, is more informal. This type of socialization may occur anywhere and at any time. Noting what behaviors are successful for others and then imitating these behaviors is an example of indirect socialization. By providing access to situations and restrictions from other situations, socializing agents informally affect what roles and behaviors are learned. Through this method, children are not explicitly taught about acceptable behaviors, but nonetheless are socialized to them.

The psychologist Albert Bandura proposed a theory often used to understand socialization experiences, advocating a social-learning approach in which children learn social behaviors via a variety of ways. Children learn through observational learning of others' behaviors and through modeling these behaviors, as well as through reinforcement. This reinforcement can be directly given to the child, or the child may learn through vicarious reinforcement, in which another individual is observed to be rewarded or punished for behaviors; through this process the child learns which behaviors are acceptable and which are not.

In both direct and indirect methods of socialization it is important to note that socialization is a process both of learning and of being taught. Both experiences are important socializing influences. The process of learning emphasizes the active role of children, who must make sense of their social world in active ways that allow them to explore possible avenues of behavior. In addition, children have individual traits that affect socialization such as temperament, which predisposes each individual to different types of socialization and socializing agents.

Different factors have been found to affect the effectiveness of socialization. Two often studied factors are attachment to parents and parenting style. Attachment theory suggests that infants' relationships with their caregivers form working models of relationships in general that in turn affect children's understanding of the world and their interactions within social arenas. How children form these attachment relationships is an important factor in socialization in that it is through these relationships that they indirectly learn how to behave in the world

interpersonally and to form expectations about other people. This process provides an important source of experience upon which children draw to learn to act within their social worlds.

Diana Baumrind (1967) studied parenting style in terms of two dimensions: demandingness and responsiveness. She initially proposed three parenting styles: authoritarian (demanding but unresponsive parenting), authoritative (demanding and responsive parenting), and permissive (not demanding but responsive). Maccoby and Martin (1983) later added a fourth category, neglectful, encompassing parenting styles that are neither demanding nor responsive. In relation to socialization, parenting styles influence the methods by which the parents socialize their child and the effectiveness of the messages parents attempt to transmit. The emotional climate that is created through parenting style affects how children receive messages and how they are interpreted.

EFFECTS

Socialization has many effects on individual behavior and personality. First, it is integral to forming personalities in children. The very nature of socialization dictates that some beliefs and attitudes are reinforced and that there is only selective exposure to other possible attitudes. Children are thus given a set of acceptable behaviors and attitudes from which to form their personalities, creating a firm boundary of possibilities for personality formation.

Children also learn values through the process of socialization. Different sources of socialization including parents, teachers, and the media all have influences on what values the child learns are important. For example, from watching various sources of media in western cultures, most children learn that physical appearance is highly valued, and they mirror this belief in their own value systems. These influences provide the lens through which children view their social world and shape how they will continue to view the world into adulthood.

Socialization processes also affect the developing child through the learning of social and automatic biases about individuals and groups of people. As a part of socialization, children may learn what behaviors are expected and acceptable for different groups of people and may thus form stereotypes about these groups; a common set of stereotypes formed in this way are gender stereotypes. Through these socialization processes the roots of various psychological phenomena studied in social psychology, such as in-group biases, may be found.

TYPES OF SOCIALIZATION

Socialization is often studied in relation to specific roles that individuals take within society. Two primary examples of this line of research are gender socialization and racial socialization. The term *gender socialization* refers to the process by which children learn expectations of behavior for males and females. In children, gender socialization begins through differential treatment based on sex. Boys and girls are treated differently by important adult socializing agents according to what is considered to be acceptable gendered behaviors. Social learning theory is often applied to gender socialization as children are seen to be rewarded and punished for acceptable behaviors, and because they imitate same-sex gender models. This theory posits that children are passive recipients of these messages, but evidence suggests that children selectively and actively process the information they choose to imitate. A more active theory of gender socialization, gender schema theory, posits that children actively form cognitive sets of ideas about gender that help to organize information within their social world.

Racial and ethnic socialization refers to the transmission of messages about how different racial groups fit within society and the relationships between different racial and ethnic groups. Racial socialization is heavily emphasized within some families and in other families it is not considered an important aspect of socialization. As a part of this process, children are taught what behaviors to expect from others based on the race or ethnicity of individuals the child encounters, and they are taught various strategies with which to respond. Racial socialization is directly related to the racial identity that an individual adopts as he or she ages.

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Melanie B. Hoy

SOCIALIZATION OF INVESTMENT

The idea of socializing investment was introduced in 1936 by John Maynard Keynes in his *General Theory of Employment, Interest, and Money*. In the concluding chapter of the book, Keynes identified three major tasks to be undertaken in order to save capitalism from its own demise: "parting with liquidity," "euthanizing the rentiers," and socializing investment. The three are inevitably interrelated in Keynes's theory, as he argued that effective demand is the engine of the capitalist economy and that spending by consumers, firms, and the government is what keeps the economy going.

According to Keynes, economic agents operate in real historical time under conditions of uncertainty in which the future is unknowable and the past is unchangeable. Faced with such an environment, individuals make arbitrage decisions with regard to which asset they wish to hold over time. Each asset gets a return composed of four components: $q - c + l + a$; where q is the expected yield, c is the carrying cost, l is the liquidity premium, and a is the appreciation or depreciation.

At equilibrium, all assets earn the same expected return. If an asset has a demand price higher than its supply price, then firms will produce more of it, but as its production increases, its return will fall and becomes equal to the returns of all other assets. When consumers and firms are optimistic about the future and feel confident about their financial situation, the expected returns on capital equipment rises above the expected return on money (the interest rate), which leads to an increase in investment, thus boosting output and employment. Conversely, when the economy is overtaken by pessimistic expectations, consumers and firms prefer to remain liquid, thus abstaining from spending on consumption and investment goods, which leads to a rise in unemployment. According to Keynes, this is due to money's very specific nature as the most liquid asset in the economy with a near zero elasticity of production, small elasticity of substitution, and no carrying cost. In other words, when people want to hold more money (liquidity), no significant amount of labor is directed to producing it (unlike, for instance, capital equipment).

Therefore, Keynes's conclusion was that an environment must be created that is conducive to more investment and less hoarding of money. Hence his three policy recommendations: (1) "parting with liquidity" (giving up liquid assets in exchange for employment-creating illiquid assets); (2) "euthanizing the rentiers" by lowering the interest rate so much that nobody will find it profitable to save money (because expected returns on money are less attractive than expected returns on capital); and (3) socializing investment through the creation of a new kind of capitalist culture of cooperation between private and public authorities.

Keynes's overall preference for discretionary fiscal spending led many to misunderstand his use of the term *socialization of investment*, despite the fact that Keynes made it very clear that he did not mean "socialism." Keynes explained that socializing investment does not require that the government assume ownership of the means of production and dictate the terms of economic activity to the rest of the economy. According to Keynes, "[i]t is not the ownership of the instruments of production which it is important for the State to assume. If the State is able to determine the aggregate amount of resources devoted to augmenting the instruments and the basic rate of reward to those who own them, it will have accomplished all that is necessary" (Keynes 1936, p. 378).

Furthermore, Keynes emphasized the fact that the socialization of investment does not conflict with the basic features of capitalism. He repeatedly stressed the importance of protecting individualism, private property, freedom of choice, and competition. According to Keynes, the socialization of investment calls for no revolution—it is, rather, a gradual adjustment between the propensity to consume and the inducement to invest for the sole purpose of ensuring an adequate level of effective demand that is consistent with full employment.

The policy framework that is closest to Keynes's idea of socializing investment is to be found in the Swedish (corporatist) model developed after World War II by trade union economists Gösta Rehn and Rudolf Meidner, who envisioned two essential elements that would characterize the Swedish economy for more than four decades: (1) highly centralized wage bargaining; and (2) active labor market policies. The model focused on the socialization of investment and offered a practical alternative to welfarism by putting a strong emphasis on "the right to work" rather than "the right to income." The model strongly encouraged private investment despite high tax rates on profits. Firms were allowed to put their "excess profits" into tax-exempt "investment funds," thus encouraging capital accumulation. Under this model, Sweden was able to keep

its unemployment rate below 3 percent for decades without any significant inflationary pressure.

SEE ALSO *Aggregate Demand; Economics, Keynesian; Government; Investment; Keynes, John Maynard*

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Fadhel Kaboub

SOCIETY

A society is a system for facilitating interdependent social relationships according to the values, norms, and ideologies of a shared culture while, at the same time, providing sanctions against individuals who engage in what are seen as antisocial behaviors. Among the primates, humans are unique in their capacity to develop large-scale systems of interdependence by means of culturally transmitted, group-level social systems; in other primate species, cooperation is generally limited to relatives, there is little division of labor, there is little or no social cooperation to care for the sick or wounded, and there are no formal social mechanisms (let alone cultural norms) to stop dominant males and females from taking whatever they wish from weaker members of their group.

As the term is generally understood in sociology as well as in commonsense usage, a *society* is assumed to have three fundamental characteristics: (1) it is bounded by readily discernible territorial borders; (2) it is structurally and culturally distinctive; and (3) it possesses an objective existence that is independent of the wills or actions of individuals.

Generally (if problematically), a society's boundaries are assumed to be those of a nation: Thus we speak of "Canadian society" versus "American society." Moreover, the boundaries of all of a society's institutions, including economics, kinship, and religion, as well as politics, are assumed to be roughly coterminous. A society is not hermetically sealed from others, of course; every day, thousands of Americans and Canadians cross the U.S.-Canada border, and U.S.-Canadian trade is a vital component of the economies of both countries. Still, the fact that a society is essentially a culturally mediated system for facilitating interdependence means that, in principle, such relationships are more easily undertaken within the society rather than with outsiders. At the same time, it is clear that, with the advent and gathering momentum of globalization, a global society is emerging that is characterized, in part, by the formation of mutually beneficial social structures of unprecedented scope and size, including a new international division of labor in manufacturing.

Each society is unique in the way its various components have been altered and adapted so that they can be integrated with each other. Canada's system of parliamentary democracy is modeled after the British system; however, it has had to adapt to the existence within Canada of a large, French-speaking, and potentially separatist regional minority, centered in Quebec. In part to address the legitimate language discrimination grievances that fuel Quebec separatism, the Canadian system has moved away from the British model toward that of a constitutional democracy with enumerated rights for French speakers. Despite their internal differences, the members of a society are aware of their society's distinctiveness and their vast store of shared experience, and this awareness informs their identity. When asked what is important or very important to their identity, many Canadians mention language, but nearly all of them stress the uniqueness of their society and their country's unique historical experience.

Society has an objective existence that precedes the individuals who live within it, exists independent of their will and subjective perception, and constrains their thought, beliefs, and behavior. This is so because a society consists not only of one-to-one relationships, which to some extent can be negotiated and altered, but also of organizations (such as courts, schools, legislatures, and hospitals) that possess vastly greater power and resources than any individual could muster. In addition, the members of a society are affected by collective outcomes of one-to-one relationships, such as economic recessions and depressions, which again are beyond the capacity of individuals to control.

Taken together, these assumptions argue strongly for a social science that seeks social explanations for social phenomena, and these assumptions collectively define what might be termed the classical sociological perspective (c. 1880s to 1960s). At the same time, each assumption is problematic. Contemporary sociology examines these assumptions critically and asks whether they can be shown to apply empirically.

LINGUISTIC ORIGINS

The English word *society* has its origins in the Indo-European sek^{w}–^{1}, "to follow," from which derives the Latin *societas*, "partnership, fellowship, association, alliance"—that is, followers of a common, mutual interest or common

ideal. In line with its Latin origins, the English word can be applied not only to collective historical formations such as "Canadian society," but also to *de novo* associations that are deliberately created to provide mutual benefit, such as professional societies or mutual assistance societies. In popular usage, *society* is sometimes intended to refer to a leisured, cultured, wealthy, and fashionable elite ("high society").

The word *society* can be used scientifically only with caution and critical reflection. It connotes systems of mutually beneficial relationships into which individuals, perceiving the benefits, freely engage. Whether social interdependence is indeed mutually beneficial, let alone entered into freely, is an empirical question.

SOCIETY VERSUS COMMUNITY

All modern societies are capable of creating large-scale structures that facilitate interdependence, such as markets and the division of labor. The resulting structure extends to *communities* within the society, but more importantly, it also draws into its web of interdependence people who have never met each other and never will. As traditionally defined, a community is a group, such as a neighborhood or the congregation of a synagogue, that is characterized by face-to-face interaction in the context of shared local customs and traditions. As understood in classical sociology, communities are necessarily limited both in population and geographic extent because they depend on face-to-face interaction (rather than large-scale interdependence) as a means of achieving group solidarity,

In classical sociology, the modern distinction between society and community owes much to Ferdinand Tönnies (1855–1936), who redefined two German words to capture the distinction. *Gemeinschaft* (community) and *Gesellschaft* (society). In the *Gemeinschaft*, people are held together by organic ties and communal ideology; in the *Gesellschaft*, social relations are impersonal and based on a perception of mutual interest. Tönnies believed, pessimistically, that *Gesellschaft* would obliterate the remnants of *Gemeinschaft*, to the detriment of the human social experience.

Today, most sociologists accept that communities arise, not necessarily from face-to-face interaction, but rather from shared meanings. Because they are capable of promulgating shared meanings on an unprecedented scale, new communication and media technologies (including newspapers, motion pictures, radio, television, and computer-based communications) are capable of creating communities that vastly transcend the limits of face-to-face interaction.

SOCIETY VERSUS THE STATE

In contemporary usage, a society's boundaries are frequently assumed to be the same as that of the nation-state with which it is equated, a fact that testifies to the growing ability of states during the past two centuries to circumscribe the sphere of social relationships in which their subjects engage. It should be noted, however, that the concept of society is by no means synonymous with the concept of a state. A state is a political formation that is fundamentally concerned with the acquisition, use, and protection of power. In contrast, the term *society* refers to all the culturally mediated, patterned forms of social interaction, including political interaction, that create the conditions for interdependence among a society's members.

The term *civil society* is often used to differentiate between the state and society. Classically, the term refers to a zone of public social interaction that is positioned between the state, on the one hand, and the private lives of individuals and families, on the other. It consists of a variety of public but nongovernmental institutions and organizations such as voluntary associations, clubs, youth organizations, mutual benefit societies, community organizations, coffeehouses, charities, trade unions, social movements, and media such as newspapers. In a prosperous society, it is assumed, civil society is vibrant.

One of the most crucial functions of civil society lies in its capacity to foster the *public sphere*, a zone of public social communication in which free, open, rational, and critical conversation can take place concerning the proper ends of society—and, especially, whether the state's policies are serving those ends. For some theorists, especially Jürgen Habermas, a healthy public sphere is a vital component of democratic self-governance.

THEORIES OF SOCIETY

It is possible to find antecedents of the society concept in classical Greek philosophy and, especially, in the work of the Islamic social historian Ibn Khaldun (1332–1406); however, the concept of society as it was understood in classical sociology is generally traced to the mid-nineteenth-century work of Auguste Comte (1798–1857), who is also regarded as the founder of sociology, the English social philosopher Herbert Spencer (1820–1903), and especially Émile Durkheim (1858–1917).

Observing what Durkheim took to be the decline of communities held together by religion and tradition, the anonymity of an increasingly urbanized society, and the prospect of endemic conflict caused by the increasingly violent confrontation between capital and labor, he asked whether modern societies possessed a core of common sympathies that could serve the integrative function formerly provided by rural folk communities and traditional cultures. Of crucial concern to Durkheim was the increasing division of labor generated by urbanization and industrialization. To the cynics of the time, the widening gulf between capital and labor presaged the collapse of social

solidarity and, ultimately, the end of European civilization; for example, Karl Marx (1818–1883) believed that the conflict between capital and labor testified to a fundamental contradiction in capitalist society that would inevitably result in revolution, peaceful or otherwise. Yet Durkheim had read Comte and Spencer, and was able to counter this view with the *organic analogy*, which interprets the various components of society as if they were organs in a body: Each of them contributes, in its own differentiated way, to the mutual benefit that stems from their cooperation.

From this analogy, Durkheim went on to argue that the widening division of labor in industrial society did not necessarily raise the specter of social disintegration. On the contrary, Durkheim argued, to the extent that society is understood as an interdependence-fostering structure, the widening scale and scope of industrializing societies would require a corresponding intensification of new modes of social differentiation to serve as the foundation for subsequent, mutually beneficial interdependence. In addition, Durkheim argued that, despite the apparently widening gulf between capital and labor, there still existed enough shared culture and shared identity to overcome the divisiveness seemingly inherent in the new industrial economies. The key, Durkheim argued, lies in recognizing that shared culture and shared identity are not causal factors in themselves, but rather epiphenomena that result from sustained, mutually beneficial, and socially structured interaction. For this reason, Durkheim did not doubt that industrial societies would generate cultural and moral orders capable of social integration on an unprecedented scale, and history has vindicated his prediction.

Durkheim's understanding of society was informed by likening its constituent elements to an advanced, highly differentiated organism. Scientific and technological advances in the twentieth century made new metaphors available to sociological theorists. Drawing on the emerging fields of cybernetics and systems theory, in the 1930s American sociologist Talcott Parsons (1902–1979) depicted the interdependence of social phenomena in terms of a hierarchy of intercoupled systems and subsystems. Niklas Luhmann (1927–1998), a student of Parsons, drawing on chaos theory, depicted society as a complex, self-organizing system.

Beginning in earnest in the 1960s, sociologists revisited and often criticized or rejected the core assumptions of Durkheimian sociology, often adopting new metaphors to capture their perspectives. With the rise of symbolic interactionism, ethnomethodology, and particularly the work of Erving Goffman (1922–1982), society could be understood as a stage on which performers create and shape social reality. Drawing increasingly on resource mobilization theory, work on social movements suggested that society is like a game in which teams compete with each other, both to acquire necessary economic, social, and political resources and also to frame their activities symbolically in a winning way. As Marxist perspectives found their way into universities in the 1960s, society came to be seen as a battle between social classes with fundamentally opposed interests. Still, rational action theorists, such as James Coleman (1926–1995), depicted society as an economy in which actors develop elaborate networks as they attempt to maximize their self-interest.

Influenced by developments in semiotics and French literary criticism, some postmodern sociologists have likened society to a battle between contending texts or a discourse of signs; others have argued that capitalism has so infected our consciousness that virtually all social activities can be understood by comparing them to producers and consumers in a media-driven marketplace. The production of new analogies shows no sign of abating; for example, society has recently been compared to a restaurant menu, a theme park, a collection of machines, and a set of warring tribes.

CRITICISMS OF THE CONCEPT

Criticisms of the classical concept of society focus on its several problematic aspects, including the assumptions that societies are neatly bounded, that the interdependence fostered by social relationships is mutually beneficial, that society has an objective existence, and that meaning and affect are mere epiphenomena of social relations.

Until recently, sociologists have paid little attention to the problems created by uncritical assumptions regarding a society's boundedness. To the extent that it is meaningful to talk about "Canadian society," for example, it is because Canadian society constitutes a field of social interaction within which Canadians are more likely to interact with each other than with outsiders. Yet, in the context of globalization, Canadians will increasingly interact with foreigners; at the same time, it is clear that Quebec could be seen as a society within a society. For some critics, sociology's willingness to equate societies with nations shows that the discipline has made an uncritical accommodation to nationalist ideology. New directions in sociological theory employ spatial and ecological analogies to tackle the boundedness problem; the boundaries of social interaction are seen as a matter to be determined by empirical investigation rather than facile assumption. In addition, cultural sociologists are developing new approaches for understanding the dynamics of multicultural societies.

At the core of the concept of society is an assumption that amounts to a quid pro quo: By giving up the opportunity to pursue private interest without constraint, people take part in social relations that are, in the end, mutually beneficial. Still, it is obvious that many social

relations are founded on asymmetries of power, and result in concomitantly unequal distributions of benefits. Critical sociologists argue that the quid pro quo concept masks asymmetries of power, which are, in their view, a key component of all or nearly all of society's structures and institutions.

Sociologists readily assume that society has an objective existence that can be scientifically studied, even though there is no physical object in the world that one can point to and say, "That is a society." Within sociology, a field called *symbolic interactionism* begins by rejecting the concept that a society has an objective existence that determines the way individuals behave. In contrast, people are seen to act according to the meanings they ascribe to situations. These meanings are learned by engaging in social relations. Action arises as individuals interpret situations in light of the meanings they have learned. Although symbolic interactionism has been influential, most sociologists believe that societies are quite capable of placing people into situations in which an actor's interpretation of the situation is not the sole determinant of social outcomes. People who live in African American slum communities, for example, interpret their situation in differing ways, but this fact has little effect on the overriding social toxicity of these racially isolated neighborhoods. Still, symbolic interactionism served to alert sociology to the need to take meaning and affect seriously and, in so doing, has contributed to the rise of cultural sociology, which is arguably the most important development within sociology to have taken place in a century. In classical sociology, meaning and affect were seen as the outcome of social relationships rather than their cause. Today's cultural sociology (e.g., Alexander 2003) shares with symbolic interactionism a commitment to taking meaning and affect seriously; however, it also recognizes that some social structures are indeed independent of individual will and are unaffected by the meanings people ascribe to them. Cultural sociology views social relations as the outcome of processes in which meaning, affect, and social forces interplay in ways that must be determined empirically rather than by theoretical fiat.

SEE ALSO *Comte, Auguste; Cooperation; Critical Theory; Durkheim, Émile; Ethnicity; Ethnomusicology; Functionalism; Gemeinschaft and Gesellschaft; Gender; Goffman, Erving; Habermas, Jürgen; Interactionism, Symbolic; Marxism; Mexican Americans; Mills, C. Wright; Parsons, Talcott; Postmodernism; Public Sphere; Race; Semiotics; Separatism; Social Statics; Social Structure; Social System; Social Theory; Sociology; Sociology, Latin American; Sociology, Parsonian; Sociology, Post-Parsonian American; Sociology, Urban; Spencer, Herbert; State, The; Structuralism*

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Bryan Pfaffenberger

SOCIETY, MANAGERIAL

SEE *Managerial Class.*

SOCIOBIOLOGY

The scientific study of the social behavior of biological systems from an evolutionary perspective is known as sociobiology, a term coined by the entomologist and biologist Edward O. Wilson in 1975. Researchers from a diverse array of disciplines including biology, psychology, sociology, anthropology, and archaeology study social behavior from a sociobiological perspective. According to this perspective, the social behavior of animals, including humans, has been shaped by the process of natural selection in which any behavior that increases the ability of an individual to live to reproductive age and to successfully reproduce subsequently becomes more prevalent in future generations. Sociobiologists therefore attempt to understand how current social behavior would have provided a reproductive advantage to individuals of previous generations. To facilitate this process researchers identify problems that social beings recurrently faced over evolutionary history and then determine the behaviors that would have been adaptive to successfully deal with these problems. The term sociobiology has now largely been replaced with the term *evolutionary psychology*. Using this approach, researchers have found empirical support for the evolutionary origins of a number of social behaviors including mate attraction and selection, helping behaviors, and aggression.

MATE ATTRACTION AND SELECTION

One of the most influential theories of mating behavior is the parental investment theory proposed by Robert L. Trivers in 1972. Trivers postulated that in sexually repro-

ducing species the sex that invests the most in offspring will be more selective in whom they choose as mates whereas the sex that invests the least in offspring will compete more with each other for sexual access to the more selective sex. In humans, the minimal parental investment that a woman must expend on a child involves the nine months of gestation and parturition, plus a period of lactation that can last from several months to a few years. For men, the minimal parental investment can conceivably involve a single sexual encounter. Given that women are a more limited reproductive resource, competition among men to mate with women should have been stronger during evolutionary history than competition among women to mate with men. Consistent with the predictions derived from this theory, research has shown that men are more willing than women to take advantage of short-term sexual opportunities with different mates. In comparison, given the higher costs of reproduction for women, they are more selective than men in whom they choose as sexual partners and tend to desire longer-term relationships.

Parental investment theory also makes predictions regarding the traits men and women should find attractive in each other. If men tend to prefer short-term sexual opportunities to maximize their reproductive success, then they face the problem of identifying which women are fertile. Certain physical cues are associated with fertility, and it has been found that men are more attracted to women that possess these physical traits. For example, women with a waist-to-hip ratio around .70 (where the waist is 70 percent the size of the hips, producing a curvy appearance) and women with more feminine facial features (e.g., larger eyes, smaller chin) have been found to possess high amounts of estrogen and thus are relatively more fertile. Men are also more attracted to young women, perhaps because women's fertility continually declines through their adult years. By contrast, if women tend to prefer long-term relationships so that their high parental investment can be offset by investments from their mate, then they face the problem of identifying mates that have the ability to accumulate status and resources that can then be shared with themselves and their offspring. Research shows that women are attracted to men with good financial prospects, men who have social status, and men that are more ambitious. Women are also more attracted to men who are older than themselves, because older men have had more opportunity to turn their ambition into actual status and resources.

Once a relationship is formed, people face the problem of maintaining the relationship. David M. Buss (2000) has suggested that for humans jealousy was an important adaptation for maintaining relationships because people who became upset when they were in danger of losing their partner would have experienced greater reproductive success than those who did not. He also suggested that women and men should differ in the types of cues that activate their jealousy. Whereas a woman can be confident that she is in fact the mother of her children, because of internal fertilization, a man cannot be certain that he is the father. Paternity uncertainty should therefore have made men more sensitive to cues of sexual infidelity of their partners and wary of rivals that are friendly or flirtatious with their partners to ensure that their partner's children are also their own children. For ancestral women, securing the resources to raise highly dependent offspring was a challenge. The ability to raise offspring to reproductive age would be severely compromised if paternal investment were to be directed elsewhere, and therefore women should be sensitive to cues indicating emotional infidelity of their partners.

ALTRUISM AND AGGRESSION

Two behaviors that have also received much attention from sociobiologists are altruism and aggression. When presenting his theory of evolution by natural selection in 1859, Charles Darwin commented that his theory was not able to explain why individuals helped others, particularly when these altruistic behaviors limited the reproductive success of the helper. In 1964 William D. Hamilton addressed this problem with his theory of kin selection. He stated that because individuals share a portion of their genes with genetically related individuals, providing assistance to kin can therefore further one's own reproductive success. Helping behaviors should thus be observed to be directed mainly to genetically related individuals. Kin selection theory, although supported by research, could not account for why individuals were observed to provide assistance to unrelated individuals. Trivers addressed this problem in 1971 by proposing his theory of reciprocal altruism, hypothesizing that an individual will help an unrelated individual when the former expects to be the benefactor of assistance from the latter in the near future. Indeed, help is directed to unrelated individuals with the expectation that these acts of kindness will be repaid.

Aggressive behaviors may also have evolved because of the adaptive benefits they bestowed on the aggressor. According to Mark Schaller and colleagues' intergroup vigilance theory (2003), it was adaptive for human ancestors to develop a fear of strangers and of individuals who were diseased. One consequence of fear is that it can motivate aggressive behaviors to defend against perceived threats. The ancestors of contemporary humans lived in small groups and relied on each other for survival, and the presence of individuals from another unknown group could have aroused fear because of the possible threat of intruders to one's survival. People who did not fear strangers from other groups may have been more vulner-

able to attack, whereas people who did fear intruders and acted to defend themselves and their group would have been more likely to survive. This tendency to respond aggressively to strangers may no longer be adaptive, however, given that humans now live in very large groups that are very diverse. Over evolutionary history people may also have developed a fear of others who were sick or diseased, given that the illness may be contracted and put one's life at risk. Stigmatizing those who were ill and removing them from the group may have been one way to avoid illness given that early humans did not have access to modern-day medicine.

TESTING SOCIOBIOLOGICAL THEORIES

Sociobiological theories are tested in many different ways. Laboratory experiments have been used to test cause-and-effect relationships between variables by manipulating the context study participants are exposed to and then measuring participants' responses. Survey studies that ask people to answer questions about their own personalities or about their likes and dislikes have been used a great deal to study, for example, the mate preferences of men and women all over the world. Field studies have been used to observe the natural behaviors of individuals as they interact in small or large groups. Archaeological records have been used to discover the types of tools human ancestors used to hunt game or to study the evolution of brain size. In addition, public records recording the behaviors of citizens of various countries over hundreds of years exist, and these records have been used to test sociobiological hypotheses regarding homicide (Daly and Wilson 1988) and the effects of birth order on behavior (Sulloway 1996).

Sociobiology is still considered a controversial field by many. Sociobiologists study current social behavior and then make conclusions about what life must have been like for humans living thousands of years ago. Because what happened in the distant past can never truly be known, opponents of sociobiology suggest that researching current behaviors does not provide insights on the evolutionary origins of these behaviors. Sociobiology has also been blamed for justifying negative social behaviors such as male violence against women and intergroup violence. Stated differently, suggesting that social behaviors evolved because they were adaptive implies that these behaviors are natural and acceptable. Although explaining why behaviors exist does not necessarily justify the existence of the behavior, many sociobiologists have not always made the effort to differentiate explanation from justification.

SEE ALSO *Darwin, Charles; Evolutionary Psychology; Nature vs. Nurture; Spencer, Herbert*

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Lorne Campbell

SOCIOECONOMIC STATUS

As social scientists in the twentieth century became more aware of and interested in social stratification and social class as a basis for understanding large areas of human behavior, interest grew in finding direct and useful ways of measuring socioeconomic status when conducting empirical research. Socioeconomic status had been taken into account in early American sociology, and seems to have been conceived as an indicator of social class itself. During the 1920s, the highly influential Chicago school of sociology had developed several creative research techniques in relation to the ecological theories of urban structure and process. Most of their research was carried out in the Chicago area and used a residential approach to social characteristics of the urban population of the Chicago area. This research was predicated on the assumption that physical distance was correlated with social distance, and that people from different ethnic groups and social classes live in different areas or zones of the city. By implication, a person's social class location was at least indirectly indicated by the area of residence, or zone of the city. This approach was part of a larger ecological orientation to the study of urban communities and posited a close correspondence between the utilization of physical space and

the overall urban structure, with tendencies to place the social structure on a broad theoretical map of the city. Social stratification was regarded by these scholars as an ancillary aspect of social structure.

As a measure of socioeconomic status, the residential approach had severe limitations. Type of residence is an imperfect indicator of social-class position, as is residential location. Comparison across cities with different areal patterns of distribution of social and economic activities, including residential patterns, would also be difficult.

Interest on the part of social scientists in social class qua class itself grew during the economic depression of the 1930s. A social anthropologist, William Lloyd Warner (1898–1970), studied a northern East Coast community in the United States and used a *reputational* method applied to individuals. Warner and his research staff employed extensive observations in this small community where most adults had knowledge of the reputations of others residing in the community. These investigators relied extensively on the judgments and relative rankings of the status of community members by others in the small community. The application of the reputational method to Yankee City, the pseudonym accorded to the community, resulted in the designating of six social classes on the basis of reputational rankings of status.

The reputational approach to socioeconomic status applied by Warner has been found to have several problems. As a methodology, it is confined to quite small communities, a serious limitation during this last century of accelerated urbanization. This approach does not enable facile comparisons across communities and hence is limited in contributing to discussions of a national class structure. Also, as other social scientists studied other North American communities and found different numbers of social classes or strata in the other communities, questions were raised regarding reliability. The numbers of classes found in other studies ranged from two to as many as eleven or more, indicating serious problems in comparability. These various difficulties in using the reputational method for studying socioeconomic status pointed toward the need for measures with greater simplicity and precision that could be applied to larger communities, or the nation or a national sample, than was possible with the reputational method.

DEVELOPMENT OF MEASURES OF SOCIAL CLASS AND SOCIOECONOMIC STATUS

The first large-scale study of the stratification of an entire city was carried out by Robert S. Lynd (1892–1970) and Helen Lynd (1896–1982) during the 1920s and published in 1929. *Middletown*, the title of their resulting book, was also a pseudonym for a city of 35,000 people in Indiana. Their research method involved the detached observation techniques of social anthropology. *Middletown* was to be the first of two books on the social class structure and its consequences for the life of the citizens of this middle-sized city in Indiana.

The research by the Lynds made an important contribution to the study of socioeconomic status due to the simple, direct measures they used to indicate the social class position of the residents of the city of Middletown. To measure social class itself, the basic distinction the Lynds used was between people who work with *people* in selling and promoting consumer goods, ideas, or services, on the one hand, and people who work with *things*, often using tools in making products or performing services. The first category of occupations was referred to as the *business class*; the second broad category was designated as the *working class*. In Middletown, there were twice as many people in the working class as in the business class. The Lynds found that membership in one class in contrast to the other had large consequences in regard to many areas of life, including whom one married, opportunity for and likelihood of attending a college or university, club memberships, access to bank credit, recreational patterns, and even whether one owned an automobile and, if so, what sort of car was driven.

The Lynds found in their second study of the same city that by the middle 1930s they needed a more complex set of distinctions, and so they used six categories of people in their analysis of social class. These were reported in 1937 in *Middletown in Transition*. The observation of greater complexity in the class structure of Middletown was significant and seems to have revealed subtleties in social stratification that would influence others to follow in later research on social stratification.

Only a short time later the U.S. Bureau of the Census attempted a classification of occupations that reflects the recognition of growing complexity in the way people in the United States earn their living. The classification scheme developed by Alba Edwards (1872–1947) for the U.S. Census moved away from the Lynds' original classification between businesspeople and workers and attempted to designate greater distinctions within categories of business owners, managers, and various categories of workers.

The classification of occupations developed by Edwards in 1943 had the following major categories:

1. Professional, technical, and kindred workers
2. Managers and administrators
3. Sales workers
4. Clerical workers
5. Craftsmen

6. Operatives
7. Laborers, except farmers
8. Farmworkers

The Edwards scale did represent an attempt at the development of a scale of occupations by a ranking method that correlates with income, education, and prestige. Later research in sociology and economics showed that these correlates existed, in a general sort of way. Nonetheless, earnings overlapped considerably across such categories as professionals and managers, with managers outearning professionals, though the latter is a higher category; also the classification of skilled craftsmen contained many who earned more than clerical and sales workers. The categories are actually quite heterogeneous and cover a large number of occupations that are not very similar within a category, as for example, laboratory technicians, nurses, and public educators who are classified with physicians and lawyers, within the highest broad category of professional, technical, and kindred workers.

Edwards had attempted to develop a classification of occupations within the existing census categories, and his effort sought to separate occupations that clustered by similarity of work, educational requirements, and income. The heterogeneity within his major categories prevented him from fully achieving his goal of a national occupational system of categories of jobs based on occupations recorded by the Bureau of Census.

During the late 1950s, August B. Hollingshead (1907–1980) and Frederick Redlich (1910–2004) conducted a major study of social class and its linkages to mental illness. They used a combination of the Edwards classification scheme combined with reported educational levels of respondents that progressed from grade school through graduate education. They also utilized a series of measures of the urban ecology of the community studied. Hollingshead and Redlich not only uncovered clear relationships between social class position and mental health status, but also contributed a measure of socioeconomic status, now sometimes referred to in handbooks on social measurement as the *Hollingshead two-factor index of social position*. The main features of occupational type and educational achievement were retained and the measures of residence and neighborhood used in the original project were dropped to make it a two-factor index.

The first attempt to do research on the national ranking of the prestige of particular occupations resulted in significant advances in 1947. This research was conducted on ninety occupations, with each receiving an estimate of its prestige rather than being categorized into a set of similar occupations represented as a class of one sort or another. This research on occupational prestige was carried out on a national sample by Cecil C. North (1878–1961) and Paul K. Hatt (1914–1953) through the National Opinion Research Center.

A national and representative sample of the entire adult population for the United States was interviewed. This first effort to create a scale of occupational prestige at the national level included 2,920 persons.

Each person was asked to select one of six alternative statements representing their opinion of the "general standing" of a job. The alternatives were:

1. Excellent standing
2. Good standing
3. Average standing
4. Somewhat below-average standing
5. Poor standing
6. Do not know where to place that one

A list of ninety occupations was read to each respondent, with opinions recorded. There was a low proportion of "don't know" responses. Numerical weights were given by assigning a score of 100 for "excellent" and 20 for "poor," and then averaging answers to develop a composite score. The highest-ranking scores ranged from 96 for U.S. Supreme Court Justice and 93 for physicians and state governors, down to a low of 34 for street sweeper and 33 for shoe shiner. In general, professional and managerial occupations ranked the highest and unskilled manual laboring occupations the lowest, with many office and sales positions, as well as more highly skilled blue-collar occupations, in the middle and lower-middle levels.

The respondents were asked the main reason they had ranked the occupations as they did, and income was the most commonly given reason, followed by service to humanity and education. None of these reasons was given by more than 18 percent of the sample, indicating no broad uniformity in bases for rankings.

This scale has become known as the *North-Hatt scale.* The scale was replicated in 1963 with a national sample of 651 adults and showed strong consistency in the prestige ratings of the occupations used in the original North-Hatt scale sixteen years earlier. These scales then began to be widely used in empirical research on social stratification.

It remained for the demographer-sociologist Otis D. Duncan (1921–2004) to expand the original scale with its ninety occupations to a more complete listing. By a weighting of income levels and education of people in various occupations, Duncan was able to construct a list of 425 occupations with composite rankings known as the *Duncan socioeconomic index*. This index was published in a larger work titled *Occupations and Social Status* (1961) by Albert J. Reiss (1922–2006), Otis Duncan, Paul Hatt, and Cecil North.

The question arises as to the benefits and advantages of the various measures of occupational prestige utilized in scales that attempt to measure socioeconomic status. In answer, it can be said that occupation is utilized by large sectors of the public in modern developed societies as an indicator of social position, and hence has some significant meaning in regard to general social status and class position. Second, occupation is clearly an imperfect indicator but nonetheless correlated to some degree with other dimensions of social stratification, such as educational level and income. It is probable that these three dimensions—occupational prestige, education, and estimated income—are utilized in a simplified manner by adult members of modern societies in placing individuals in day-to-day social interaction. A third advantage is that occupation, as scaled in measures of socioeconomic status, can be ascertained directly and without great difficulty. Connected to this third advantage is the inarguable degree of objectivity in the determination of occupation. A fourth advantage of scales that indicate occupational prestige is their ease in use in comparative and international research. This is in stark contrast to the familiarity required with community standards in the studies of status rankings and stratification in smaller cities and towns. Finally, the use of occupational rankings as a socioeconomic index can and has been successfully applied in research on national levels of stratification, as well as in research on smaller communities.

In summary, measures of socioeconomic status that are based on occupation are to be seen most strongly as a methodological index of social stratification with the limitations that an index entails. As will be discussed below, this is greatly preferred over the widespread tendency to utilize occupational rankings as a synonym, or single indicator, of social class. Some scholars have used the scores on socioeconomic status measures as an alternative to making a theoretical statement about their own position on the nature of social classes, with the effect of limiting the degree of investigation of the character and impact of social classes in social life.

There is another methodological limitation in the use of socioeconomic scales. They are widely used in correlation and regression analysis and treated as interval and ratio scales of measurement. These statistical applications utilize the arithmetic operations of addition, subtraction, multiplication, and even division. The assumption of equal-appearing intervals between the score values of the prestige ratings is a dubious assumption, as is that of an absolute zero point on the scale. No occupation has been scaled with zero prestige. The effect is the violation of some of the basic assumptions of parametric statistics used in the research on stratification.

The interest that social scientists have shown in measures of socioeconomic status is considerable, and scholars in the social sciences and neighboring disciplines have been willing to borrow these measurement scales and use them in correlation analysis with a range of variables in their fields. Perhaps this popularity of the concept of socioeconomic status, and its measurement, is a product of the interest in "status" and "status attainment" in American studies of social stratification. These concepts are most consonant with North American beliefs in personal achievement and recognizable social location or position in a community, and even ideals regarding democratic consensus. Status in popular imagery is contained within the reality of individual influence and control. An emphasis on status and status aspirations is linked with occupation, and features personal achievement and success rather than family heritage, the importance and accident of birth, much less the influence of aristocratic advantage or the more distant, structural, and superindividual effects of "class." Status achievement and status "attainment" can also be analyzed with facility through the use of occupational rating scales that seem to quantify the prestige of occupations and their relative social standing.

The updating of the North-Hatt scale sixteen years later in 1963 by Robert Hodge, Paul Siegel, and Peter Rossi demonstrated longer-range similarity in patterns of prestige evaluations. This consistency—with a few notable exceptional occupations such as nuclear physicist, recognized by only around half of the sample in 1947 in contrast to 90 percent in 1963—was so strong that the expanded lists, along with the Duncan socioeconomic index, established the reliability of these measures. Overall, these studies have demonstrated that large sectors of the American public agree on the prestige ranking of occupations in the United States and that most of these rankings are similar across a large number of industrial societies of the world. The effect was that one or another scale for the measure of socioeconomic status has frequently been used in the interim in sociological and social-psychological research.

THEORIES OF SOCIAL CLASS AND THEIR IMPLICATIONS FOR SOCIOECONOMIC STATUS

As seen above, scholars who study socioeconomic status have conceived the inequality of socially stratified orders in complex societies as consisting of ranked statuses, with the ranks ordered on the basis of shared evaluations of the importance of the various positional ranks. An assumption of shared values is made in the approach. There is also an assumption of continuous gradations in socioeconomic status positions. Sharp breaks between status gradations are not envisioned, nor is there necessarily an individual consciousness of membership in the various status levels,

nor group interactions based on status levels, nor interacting groups based on prestige of position, nor demarked social classes that possess distinctive boundaries and objectively measured social characteristics.

In the mid-nineteenth century, an earlier tradition in social theory developed. This tradition emphasized the reality of social classes as the primary dimension of social stratification. These ideas have European antecedents and are seen most clearly in the scholarly writings as well as political polemics of Karl Marx (1818–1883), a social thinker of German origin. Born to a generation following Marx, another German scholar, Max Weber (1864–1920), offered strong criticism of Marx, but refined certain aspects of this overall approach, which carried a much greater emphasis on conflict, power, and social change in human social life. Since approximately the middle of the twentieth century, American sociologists such as C. Wright Mills (1916–1962) have also been developing conceptual approaches and theoretically informed research projects that analyze the role of power and conflict in social life.

This research continues to the present. To these conflict theorists, social stratification and social classes are among the most important aspects of society and social life, with enormous consequences for society as well as for the individual. This group of thinkers is likely to retain Max Weber's emphasis on social class as economic behavior with consequences for the life chances of individuals. These life chances include the likelihood of experiencing such important matters as living out the first year of life, marrying within a social stratum, attending a college or university, and engaging in certain forms of political activities.

In summary, scholars using these approaches that analyze conflict and power in social life view social classes as real, and as having boundaries. Social classes in this view also have strong consequences for individual members. The relations between classes are an important aspect of social processes in complex societies, and the various social classes and their relations are significant components of social organization, particularly in advanced, industrial societies. Persons may or may not be conscious of membership in a class, and may be confused regarding their status, but the consequences of class are real, nonetheless. In this view, class membership under some conditions can lead to heightened consciousness and organized political activity.

From the standpoint of the conflict approach, the emphasis on socioeconomic status in stratification research has taken the political fangs away from the concept of social class. In their place, the study of socioeconomic status has created an image of individuals who compete for occupations and occupational status in open markets, and through their individualistic actions pursue higher status, with the prestige of these statuses based on shared evaluation of the social import of occupations with their allied skills and contributions to the social life of the society. In much of the earlier American research on socioeconomic status, classes are nominalistic classifications, or exist in name rather than by being distinguishable through definable boundaries. Status gradations are seen as continuous, without sharp breaks—perhaps resembling a ladder—rather than as broken into class components with consequences for action in the politics of redistribution. Research that favors the analysis of socioeconomic status as a continuous line in a status hierarchy is likely to utilize concepts from structure-functional analysis and to emphasize order and integration in the stratification structures of societies. This integration of stratified orders is likely to be viewed as permeating various institutional spheres, such as the family, religion, education, and economy, and to contribute to the stability of the social order.

In conclusion, social scientists whose research and theoretical orientation have convinced them that social classes are real social entities that involve inequality on significant social goods assert that there are severe limitations with the typical use of measures of socioeconomic status. In their view, the research that applies these latter measures of inequality does not grapple with the reality of social classes within the social structure or their consequences for the life chances of individuals. The research that utilizes measures of socioeconomic status is also likely to overlook power in social life and the possibilities for political action that are implied in the historical usage of social classes in analyzing important aspects of social organization.

SEE ALSO *Blau, Peter M.; Blue Collar and White Collar; Class; Duncan, Otis Dudley; Education, Unequal; Hierarchy; Lynd, Robert and Helen; Marx, Karl; Middle Class; Occupational Status; Social Status; Social Theory; Stratification; Weber, Max; Working Class*

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SOCIOGRAM

SEE *Sociometry.*

SOCIOLOGY

Commonly accepted definitions of sociology agree that it is the scientific or systematic study of human society. The focus is on understanding and explaining, and ranges from the individual in social interaction to groups to societies and global social processes. Unique to sociology is its emphasis upon the reciprocal relationship between individuals and societies as they influence and shape each other.

Methods of discovery range from quantitative methodologies patterned after those of natural science with the goals of explanation and prediction to strategies for social reform and service to qualitative methodologies that focus on interpretation and understanding rather than prediction.

HISTORICAL DEVELOPMENT AND THE FOUNDATION THEORIES OF SOCIOLOGY

As a discipline, sociology arose early in the nineteenth century in response to rapid social change. Major transformations in the eighteenth and nineteenth centuries, such as rapid industrialization resulting in a large, anonymous workforce with workers spending most of their time away from families and traditions; large-scale urbanization throughout Europe and the industrializing world; and a political revolution of new ideas (individual rights and democracy), directed a spotlight on the nature of societies and social change.

The French social thinker Auguste Comte (1798–1857) first coined the term *sociology* to describe a new way of thinking about societies as systems governed by principles of organization and change. Most agree that Émile Durkheim (1858–1917), the French sociologist, made the largest contribution to the emergence of sociology as a social scientific discipline. Both empirical research—collecting and quantifying social data—and abstract conceptions of society were major elements of Durkheim's research. Durkheim's work had a major, early impact on the discipline, both quantitatively and qualitatively.

In the nineteenth and twentieth centuries two more of the giants in sociological thought emerged in mainstream German sociology: Max Weber (1864–1920) and Georg Simmel (1858–1918). Additionally, Karl Marx (1818–1883), while on the edge of sociology, had a major impact on German sociology and on the discipline as a whole. Marx was concerned with the oppressiveness that resulted from industrialization and the capitalist system rather than the disorder to which other social thinkers were reacting. Advocating revolution as the only means to end the inequality between the controlling bourgeoisie class and the exploited proletariat class created by the new industrialized society, Marx produced much of his work while in exile from his native Germany (Marx and Engels [1848] 1967). His writing provides a continuous strand of sociological theory, heavily influential in Europe and, at times, in the United States. The importance of Marx's work in shaping early sociology also lies in how German sociology developed in opposition to Marxist theory (Ritzer 2000).

Weber's concern with ideas and systems of ideas (particularly religious ideas) and their effect on a capitalist economic system—specifically with Protestantism as a belief system that encouraged its members to embrace

change—contrasts with Marx's reflection of the economy in ideas. Simmel's influence on sociology, unlike that of Marx and Weber, was through his studies of small-scale social phenomena. Focusing on forms of social interaction and types of actors who interact, his work was most influential on early sociologists at the University of Chicago.

In response to the poverty of immigrants and African Americans in the urban United States, projects of social reform and settlement house movements provided solutions. Much of this work was based in Chicago, where early social reformers and social thinkers combined to conduct field research and organize the first major sociology department at the University of Chicago. The sociology department, founded by Albion Small (who also founded the first sociology journal in the United States, the *American Journal of Sociology*, in 1895) dominated the discipline for fifty years. American students of sociology had easy access to Simmel's ideas, which fit with the micro, symbolic interactionist perspective, through his followers (and, in some cases, translators) Small and Robert Park.

During the early years of sociology in the United States, theoretical influences of the period were combined with empirical research and the social reform projects and service conducted in the Chicago area. Trained as a social worker, Jane Addams spoke out about the inhumane treatment of immigrants who were entering the United States at increasingly higher rates. She founded Hull House in Chicago to provide assistance to immigrant families and gathered a community of sociologists and politicians to discuss and act on urban problems. W. E. B. Du Bois, an African American sociologist at Atlanta University, studied similar social problems for the black community in the United States and wrote and spoke out against racial inequality.

SYMBOLIC INTERACTIONISM

Symbolic interactionism, the dominant perspective championed by the philosopher George Herbert Mead (1863–1931) and others influenced by Simmel at the Chicago school, was the first foundation theory in American sociology. Although the symbolic interactionist perspective emphasizes the reciprocal relationship between the individual and society, its critics complain that it overlooks the widespread effects of culture and important sociological factors such as race, class, and gender.

In the 1930s, as the influence of the Chicago school lessened, state universities throughout the midwestern United States began to incorporate sociology departments into their curriculum, with a strong focus on rural sociology. In the 1940s the emphasis in sociology shifted away from the type of descriptive research done at Chicago to sociological theory and empirical inquiry, with the rise of influence from departments at Columbia, Harvard, and other Ivy League universities. European theorists such as Durkheim and Weber were translated and (re)introduced, and their work inspired large growth in sociological theory, particularly structural functionalism, the dominant theory in American sociology until the 1960s.

STRUCTURAL FUNCTIONALISM

Another foundation theory within sociology, the structural functional paradigm provides a view of society as a complex system of parts working together to promote both solidarity and stability for society as a whole. This perspective owes much to Comte and his concern for social integration during the rapid social change of the period. While Comte advocated social reform, in Britain the social philosopher Herbert Spencer (1820–1903) rejected social reform as intervention in the natural process of the evolution of society. Applying the principle of "the survival of the fittest" to the adaptation of societies rather than of organisms, Spencer's ideas initially gained a large following throughout England and the United States.

Functionalists, following Durkheim, emphasized the study of social order and how social reforms could provide remedies for social disorder. Social structures (relatively stable patterns of social behavior) function together to preserve society. In the United States, Talcott Parsons (1902–1979) at Harvard was the primary proponent of the structural functionalism theory that dominated American sociology until the 1960s. A student of Parsons's, Robert K. Merton (1910–2003) distinguished between manifest and latent functions of social structures, while allowing that there are also societal social dysfunctions for some. The influence of structural functionalism has declined since the 1960s with criticism for its focus on stability and static structures, its inability to deal with social change, and its failure to acknowledge how inequalities based on social class, race and ethnicity, and gender may lead to tension and conflict.

Following World War II the strong influence of sociological theory championed by Parsons and others concerned with the prestige of the discipline continued. Quantitative data methods were seen as the best way of making the discipline more professional and increasing prestige. Demography and survey research became more important with the availability of governmental funds for financing large research projects. Major advances in quantitative research eventually led to a variety of formal analyses for survey data, including multivariate statistics, path analysis, multiple regression, and complex causal models. In the late 1950s, however, traditional sociology came under attack for its preoccupation with theory and empiricism. The 1960s also brought challenges from field researchers and reformers to focus more on social problems.

SOCIAL CONFLICT THEORY

Social conflict theory is, in many ways, a reaction to the structural functionalist perspective. The social inequality pervasive in society and ignored by structural functionalists is seen as a source of conflict and change. Conflict theory examines how society is stratified along class, race and ethnicity, gender, and age categories, and how these categories are linked to the unequal distribution of resources. Patterns of social interaction are inherent with benefits for some and deprivations for others. The goal for conflict theory is to understand the conflict between the advantaged and the disadvantaged while also taking action to reduce inequality. The perspective is certainly influenced by Marx, although critics complain that it does not have a firm enough grounding in Marxism, which was well developed in European sociology but lacked support and understanding in the United States. Critics of the social conflict perspective also complain that its pursuit of political goals shows a lack of scientific objectivity—although this theory had significant influence on contemporary theories, such as feminist theory, which emphasize the importance of political goals.

Sociology since the 1960s has expanded its emphasis to focus more on questions of race and ethnicity and gender. There has also been an incorporation of professional fields such as criminology, industrial relations, and evaluation research. In the 1990s and 2000s a variety of new areas and topics achieved prominence in American sociology: economic sociology; nongovernmental organizations having to do with justice, human rights, the arts, and the environment; immigration and ethnic identities; inequality; the growth and influence of science and technology; and social capital as resources for social mobility, citizenship, and community participation.

MICROSOCIOLOGY AND MACROSOCIOLOGY

Micro and *macro* refer to the level of analysis or the area of theoretical concern. Microsociology is the study of group dynamics and interaction, whereas macrosociology focuses on large-scale social systems and institutional arrangements. One controversy about the level of analysis was often phrased as a discussion of whether phenomena could be reduced to individual level properties or whether, instead, phenomena must be viewed in terms of their "emergent" properties that do not coincide with simply aggregating the individual level. While some formulations still allude to this controversy, it is common for researchers to attempt linkages between the micro and macro by viewing the effects of one on the other.

Macrosociology At the macro level sociologists ask, what are the broad patterns of interaction that shape society as a whole, and how does this influence take place? The most common institutions, found in most societies and most often studied by sociologists, are the following five:

- The family, which meets the needs of societal replenishment and the care and socialization of children. At the macrolevel, sociologists ask how the definition of family is changing and how that affects the larger society.
- Education, which meets the need for the transmission of culture and social and job skills. Sociologists ask how the educational system varies across cultures and nations, how it both mirrors and perpetuates the inequality in society.
- Religion, a third institution, which meets the need for explanations of the unknown. Sociologists are concerned with why religions take various forms and how religious activity affects society.
- The economy, which organizes the distribution of goods and services and is a focus for sociology because it determines who—individuals, organizations, nations—gets what—resources and access to resources in nations and globally.
- Politics (or "the polity," or government), which is also a participant in the distribution of power as well as the maintenance of order. Sociology looks at how the world's political systems vary, who has power and why, and whether there is a global political system.

Both within and outside the context of social institutions, sociologists explore why stratification (systems of ranking into power and prestige hierarchies) exists and how it determines individual societal outcomes. How do social class divisions (based on economic position in society) affect culture, opportunities, and social mobility? What is poverty and who are the poor? Why does inequality exist and how might it be overcome?

A current trend in sociological thought has to do with the process of globalization. Rapid changes in communication and transportation have transformed perceptions of time and space so that the world of personal experience is a global one. Sociologists ask how economic change has taken place, what is a global economy, and what are the implications of globalization? How is economic globalization connected to political development? As political boundaries change, how are cultural boundaries affected? How do local cultures conflict with an emerging global culture and what is the place of women and people of color in that relationship?

Microsociology Many different areas are investigated within microsociology from different perspectives using

different methodologies. Microsociology can be broadly conceptualized as considering issues related to self and identity, status and power, cooperation and competition, exchange, legitimation, and justice.

Fundamental to most areas within microsociology is the insight that individuals define themselves, based in large part on how others see and interact with them. Because interaction is central to the self, different identities are developed and projected. Research in the general area of identity and self includes both qualitative and quantitative investigations of topics such as role taking, role making, altercasting, identity disruptions or deflections, and self-referent behavior.

Much of microsociology is related to the general area of group dynamics. This area had early ties with psychology, which fashioned much of its approach including the acceptance and use of experiments as a research tool. Status and power have been consistently important areas of work within microsociology. One of the most important insights from this line of research is that status is relative to the group; that is, while people might possess the same characteristic from one setting to another, these characteristics might have very different salience in different settings.

Other group-dynamics research included a wide range of studies that could be characterized as examining cooperation and competition. While many of these examined dyads and interaction between one group and another, others examined social dilemmas—settings in which there is some degree of conflict between individual and group interests. Once resources and incentives are under consideration, exchange becomes central. Exchange formulations, some more akin to economics and others more akin to psychology, developed and took on a distinctly sociological focus by examining how the type of exchange affected both the behavior and emotion of the exchange participants. The allocation of different resources is studied within exchange formulations, and the resulting assessments, behavior, and feelings of fairness are the focus of justice and equity formulations. Related to assessment of justice is the degree of acceptance of particular institutional arrangements or legitimation.

Ethnomethodology, or method of the people, is a type of microsociology that focuses upon the everyday practices in which people engage. This field differs from most other microsociologies by eschewing the use of abstraction to summarize observations.

CHALLENGES TO THE SOCIOLOGICAL PARADIGM

Reacting against the dominant paradigm that seemed to take a male, Western European, heterosexual model of the actor as representative of all actors, various critiques developed within sociology. These critiques are extremely varied both in their focus and methodology, but perhaps the most well known were feminist critiques. Although there had been early sociological analysis of the subordination of women (Ward 1883), most of the feminist analyses of sex and gender coincided with what is usually called the second wave of feminism, dating from the 1960s. During this period there was also increased attention to race and ethnicity.

Many of the sociological feminist writings emphasized the subordination of women and the institutionalization of patriarchy. Some of this work questioned the sex and gender association and sexual categorizations as well. One branch of this developed into "queer theory," a critique of heterosexual assumptions and power.

For the most part, feminist and other critical approaches did not question the fundamental approaches to the study of sociological phenomena. Rather, the feminist literature emphasized substantive issues that centered on societal power differentials that lead to a wide variety of life experiences that constrain almost every aspect of women's lives. Another literature emphasized how "taken for granted" assumptions of gender and sex affected what observers saw and how they interpreted it. However, there was another group of feminists who challenged traditional epistemologies and argued that who the observer was determined what could be known. This is a radical claim because it violates a traditionally accepted tenet of most sciences that intersubjectivity can be obtained: that different people can be taught to see what others can see.

Postmodernism Sometimes closely aligned with feminist critiques are postmodern critiques. These critiques emerged in the late 1970s and into the 1980s. Postmodernism is a set of sensitizing concepts and ideas rather than a well-developed and agreed-upon set of premises. These concepts challenge traditional views associated with the Enlightenment. In particular, the concepts of objectivity, the transparency of language, and the separation between science and politics are questioned. Postmodern critique has been important across most of the social sciences and the humanities, alerting sociologists to how the political becomes enmeshed in the way questions are asked and subsequently answered. Along with this is attention to grand "narratives," or ways of telling particular types of stories. From this perspective, science is one type of narrative and does not necessarily have a status different from other types of narratives such as folklore. The emphasis is upon how scientists come to believe what they believe. Some particularly radical versions of postmodernism suggest that empirical reality has little effect upon the development and testing of theories.

THE ROLE OF SOCIOLOGISTS

There is a continuing debate within sociology about the proper role of sociologists. This debate echoes questions that have always been associated with sociology: Are sociologists scientists? Are sociologists advocates and reformers? Are sociologists scholars who practice a social science, whose methodology differs from that of the natural sciences?

Because sociologists vary in their orientation, their perceived and expressed views also vary. There are some who steadfastly claim that sociologists should not become involved in political agendas or arguments lest they jeopardize their dedication and reputation for being oriented toward the truth rather than toward advocacy. There are others who argue that the subject matter of sociology dictates that sociologists become involved in providing information that reflects upon different policy initiatives. This approach separates advocacy for a particular position from provision of information. Still others argue that sociologists should be advocates for particular policies, given sociological evidence. An example of such advocacy was the American Sociological Association's filing of a brief to the U.S. Supreme Court on behalf of the University of Michigan Law School and the Student Intervenors in *Grutter v. Bollinger* (2003). In this case, the Association argued that sociological research clearly and consistently documented the pervasiveness of race in life experience such that universities cannot adequately assess candidates or their potential without considering it.

Decisions about the role of sociologists are frequently contested among sociologists themselves—a clear indication that perspectives, methods, and approaches vary considerably. However, because these contestations are often in public sociological forums, it is also a demonstration of the tolerance, or at least acceptance, of the variability within the discipline.

SEE ALSO *Groups; Methodology; Norms; Parsons, Talcott; Social Science; Social Theory*

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SOCIOLOGY, AFRICAN

The defining basis of African sociology is that it takes African *ontological standpoints* as its point of departure, not just the description or analysis of the African conditions. As the systematic study of sociational life and dynamics, sociology can neither be restricted to the study of societies created in the wake of the Industrial Revolution nor accommodate the Enlightenment's spatial division of labor between sociology and anthropology—with the latter as the study of nonindustrial societies. Similarly sociological analysis predates nineteenth-century Europe.

AFRICAN SOCIOLOGY IN ANTIQUITY

'Adb al-Rahmān Ibn Khaldūn's three-volume *Kitab Al-'Ibar* is a major sociology work on African antiquity (Dhaouadi 1990, Alatas 2006). In the first volume, *Muqaddimah* (1967 [1378]), Ibn Khaldūn set out the framework for adjudicating between competing data sources; the volume was self-consciously sociological. He outlined his new "sciences" of human organization and society 452 years before the first volume of Auguste Comte's six-volume *The Course of Positive Philosophy* (1830) was published. Ibn Khaldūn also discussed the concept of *asabiyyah* (group feeling), or the normative basis of group cohesion, how it decomposes and is reconstituted, and the ways it manifests at different levels of social organization and among different groups. This was 515 years before Émile Durkheim's *The Division of Labour in Society* (1893) was published.

TWENTIETH-CENTURY AFRICAN SOCIOLOGY

In contemporary Africa, sociology is perhaps the social science discipline that has benefited most from the "nationalist" project, both as a state-building project and as an intellectual endeavor. Sociology benefited from the state-building project as the number of universities and student enrollment grew exponentially. As an intellectual project, sociology flourished in the wake of the rebellion

against anthropology and its "epistemology of alterity" (Mafeje 1997). In a series of articles published between 1967 and 1971, Bernard Magubane (1971, 2000) led the charge against social anthropology and its alter ego *Sociology in Africa*. Magubane's works involved the articulation of African ontological standpoints in the face of Eurocentric discourses of "othering." While most of the early academic African sociologists were trained as anthropologists, Omafume Onoge's rejection of the feasibility of being "a native anthropologist" (Onoge 1977) reflected a wider revolt. African sociology, he argued, must break with the alterity and negation endemic in "applied anthropology." Archie Mafeje's "The Ideology of 'Tribalism'" (1971) was a partial and situational rejection of the concept of "tribe" and a substantive rejection of "tribalism" as a viable concept for explaining political relationship in Africa. The paper was part of a wider rebellion against alterity.

In many ways Amílcar Cabral prefigured the concerns expressed by Magubane and others. Cabral's "Brief Analysis of the Social Structure in Guinea" ([1964] 1970) and "The Weapon of Theory" ([1966] 1979) are exemplary sociological analyses and products of field methods. The former served as the source codes for "The Weapon of Theory," which set an important departure from the dominant Marxist discourse of the time; it derived from a specific African ontological standpoint. If for Karl Marx and Friedrich Engels the history of humankind is the history of class struggle, Cabral argued that "the true motive force of history is the mode of production." The mantra of class struggle not only runs against the grain of observed historical patterns, it produces "for some human groups in our countries … the sad position of being people without history … [and negates] the inalienable right of every people to have its own history" (Cabral 1979, p. 125).

FROM REVOLT TO AFFIRMATION

Beyond revolt, sociology also involved the affirmation of African ontological standpoints. N. A. Fadipe ([1939] 1970), Cabral, Magubane, and Mafeje reflect such affirmation. Here Mafeje's *The Theory and Ethnography of African Social Formations* (1991) signaled an epistemic shift. The concept of "*tributary modes of production*," originally developed by Samir Amin (Mafeje 1991, p. iv), was the organizing framework for Mafeje's study of the interlacustrine kingdoms of the Great Lake region. The idea of "tributary modes of production" was meant to capture what was "outside the purview of European history" and needed to "be understood in their own terms" (Mafeje 1991, p. iii). What Mafeje produced was a concept of tributary relations that transcended several dimensions of the contents that Amin gave it.

Ruth First's *The Barrel of a Gun* (1972 [1970]) was an important development in political sociology; it was such a nuanced deployment of the category of class in explaining coup d'état on the continent that it fundamentally altered the debate. This was against the dominant Africanist explanation that gave primacy to ethnicity or "tribalism." Peter Ekeh's "Colonialism and the Two Publics in Africa" (1975) represented a similarly important deployment of grounded scholarship and a sociological mind-set in making sense of contrasting behaviors of the "political elite" in the realm of the state, on the one hand, and the "primordial public" of familial domain, on the other. In spite of the sociological contents of Ekeh's analysis, it has taken an essentialist form in the hands of several Africanists.

A major development in African sociology since 1980 is the effort to use endogenous ontological narratives as source codes for sociology. A major strand was pioneered by Akínsolá Akìwowo; another was inspired by what Oyèrónké Oyěwùmí called the African "world-sense" (Oyěwùmí 1997, p. 3). Akìwowo's works (1983, 1986, 1988a, 1988b, 1999) involved distilling sociological concepts from the *Ifá* literary corpus (a system of life commentaries, discourses, and divination among the Yoruba). Jìmí O. Adésínà (2002, 2006) extended the insights from Akìwowo's works, arguing that *Ifá* texts and the wider Yoruba ontological narratives offer distinct epistemic insights: Ti'bi-Ti're logic, the "mutual self-embeddedness of seemingly contradictory things" (Adésínà 2006, p.13). The implications for sociology are conceptual and methodological. These involve a sociological orientation to sociational life that embraces the coexistence of "opposites" and the open-endedness of outcome in social interaction or between contending social forces, nuanced discourse, and embracing senses, reason, and inspiration in sociological research.

In the early twenty-first century the most exciting area of sociological work is in the field of African gender scholarship. Much of these derive works from using African "world-sense" in sociological inquiry. The works of Ifi Amadiume (1987) and Oyěwùmí (1997, 2003, 2005) represent distinct sociological insights and allow for epistemic ruptures from the dominant North American and European feminist scholarship. As Oyěwùmí noted, "Gender categories are [not] universal or timeless … [or] present in every society at all times" (Oyěwùmí 1997, p. xi). The inscription of gender ordering in the anatomical body or the coincidence of anatomical maleness and anatomical femaleness does not reflect the experience historically or even contemporarily in the two contexts in which they worked. Igbo and Yoruba languages are gender neutral, and their social structures privilege age seniority over gender difference. Seniority within a consanguine relationship is the primary marker of social position.

Amadiume and Oyěwùmí demonstrated across the spectrum of social, occupational, political, and economic ordering in both contexts that "biology [did not and does not] determine social position" (Oyěwùmí 1997, p. 17). Both have inspired other African scholars to explore other cultural contexts. Beyond scholarship, these works are valuable for women's rights struggles. Much of the androcentric power plays and diminution of women that is often claimed in the name of "tradition" is not traditional.

SEE ALSO *African Studies; Sociology, Third World*

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Jìmí O. Adésínà

SOCIOLOGY, AMERICAN

American sociology is generally viewed through the prism of accomplishments made by native-born white males at predominately white institutions in theory, methodology, and various substantive areas of research. The history of American sociology often begins by noting that William Graham Sumner (1840–1910), during the 1872 to 1873 academic year, taught the first sociology course in this nation, Principles of Sociology (Bernard 1948). Further investigation into the history of the discipline highlights Arthur B. Woodford, who, in 1885 at Indiana University, became the first faculty member in the United States to have the word *sociology* in his official title (Himes 1949). While the first named department of sociology was established at the University of Kansas in 1889, it is generally accepted that American sociology began in earnest upon

the emergence of the Chicago school of sociology, the moniker bestowed on scholars led by Robert Park (1864–1944) and Ernest W. Burgess (1886–1966), who were engaged in sociological activity at the University of Chicago between 1915 and 1930. Parallel with the origin of the sociology department at the University of Chicago in 1892 was the strengthening of the social gospel movement in the United States. The social gospel movement placed the salvation and uplift of American society above the salvation of one's individual soul. While proponents of the social gospel were interested in ameliorating urban problems, early American sociologists were interested in studying the demographic transition from rural to urban society through scientific inquiry and practical sociology, as practiced at Hull House in Chicago by Jane Addams (1860–1935) and by the antilynching activity of Ida B. Wells-Barnett (1862-1931). It was a common interest in issues such as the expanding urban population that led a group of like-minded sociologists to organize their own professional association.

The American Sociological Society (now called the American Sociological Association) was established in 1905 with Lester F. Ward (1841–1913) as its first president. Seeking to separate itself from closely related disciplines, men such as E. A. Ross, Albion Small (1854–1926), and C. W. A. Veditz (1872–1926) spearheaded the founding of this organization. While the accomplishments of early Chicago sociologists such as Park and Burgess and notable early American sociologists such as Ward, Small, Sumner, Ross, and Franklin H. Giddins are laudable as they helped define this emerging field during its infancy in the United States, few are aware that there existed during this era a parallel world of unacknowledged sociologists whose contributions to the discipline were equally, if not more, significant than those traditionally revered as the fathers of the American brand of sociology.

The teaching of sociology at black institutions began in 1894 at Morgan State University. It is provident that the emergence of this discipline in America coincided with the birth of black colleges that, in many respects, were borne from black Americans' attempts to improve their condition in this nation. According to L. L. Bernard, "Sociology [in America] was first accepted by the smaller institutions of the South and by the Negro colleges. The reasons for the Negro interest is, I think, sufficiently evident in the fact that a minority group was trying honestly to understand the social situation in which it found itself" (1948, p. 14). Ultimately, black American scholars viewed sociology as a tool with which to challenge their second-class citizenship through the establishment of research programs designed to formulate strategies to ameliorate the social, economic, and physical conditions uncovered through objective scientific research. Foremost among the institutions that established research programs on the "Negro problem" were Tuskegee University, Howard University, Fisk University, and Atlanta University.

Tuskegee University established the Department of Records and Research, under the direction of Monroe N. Work between 1904 and 1945, for the purpose of conducting research on black Americans. Foremost among Work's accomplishments as the director of this program was the publication of the *Negro Yearbook*. This pamphlet periodically detailed the horrific and gruesome practice of lynching and other forms of violence against black Americans and was instrumental in the eventual demise of the barbaric practice. At Howard University, where Kelly Miller (1863–1939) taught the institution's first sociology course in 1895, the leadership of E. Franklin Frazier (1894–1964) during the 1930s was the driving force behind the "Howard school of thought." This concept refers to the school's "transitional [theory] that broke away from the dominant biological/genetic [racial theory] paradigm" (Henry 1995, p. 49) that was influential in introducing a multiculturalist perspective on race relations. Inquiry into the substantive area of race was also undertaken at Fisk University during the United States's Jim Crow era. Under the direction of Charles S. Johnson (1893–1956), the Race Relations Department was established to develop effective strategies by which relations between blacks and whites could be strengthened. It was at the annual institutes held at Fisk that, for one of the first times in the South, black and white Americans were able to intelligibly discuss the "Negro problem" in a safe environment, where action plans directed at bettering relations between blacks and whites were developed and implemented. While the research programs established at Tuskegee, Howard, and Fisk deserve increased attention from contemporary sociologists analyzing significant contributions to the discipline by early American sociologists, to a growing number of scholars Atlanta University stands alone as the most significant and important research center, regardless of race, during the early years of American sociology. In 1895 Atlanta University initiated a program of research, directed by W. E. B. Du Bois between 1897 and 1914, into the social, economic, and physical condition of black Americans. According to Earl Wright II (2002), the Atlanta Sociological Laboratory, the name bestowed on the group of scholars engaged in sociological activity at Atlanta University between 1895 and 1924, rightfully deserves the distinction of the first American school of sociology and birthplace of urban sociological inquiry, given that the establishment of the Atlanta school and its institutionalized program of urban sociological inquiry predates the Chicago school by almost twenty years.

In addition to serving as a resource in the struggle for human rights in the United States, black colleges were often the destination, and salvation, for many Jewish scholars forced into exile upon Adolf Hitler's ascension to power in Germany in the early 1930s. Scapegoated for

Germany's problems, Jewish sociologists such as Ernst Borinski (Tougaloo College), John Herz (Howard University), Viktor Lowenfeld (Hampton Institute), Ernst Manasse (North Carolina Central University), Fritz Pappenheim (Talladega College), and Donald Rasmussen (Talladega College) obtained positions at black colleges where their experience as minorities was an educational asset in their professional and personal interactions with black college students, faculty, and the community (Cunnigen 2003).

The history of sociology has traditionally minimized the contributions of people of color, women, gays and lesbians, and other minorities. Consequently, it is of manifest importance that contemporary and future sociologists utilize alternative theoretical frames to support the recognition and canonization of marginalized scholars. Repudiation and revision of the traditional means of canonizing sociologists will result in the overdue and deserved recognition of the contributions of scholars who, by virtue of their race, sex or gender, or sexual preference, existed as "outsiders within" their own profession.

SEE ALSO *Chicago School; Du Bois, W. E. B.; Sociology*

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Earl Wright II

SOCIOLOGY, ECONOMIC

Economic sociology (ES) forms a specific sociological subfield. As with sociology—its genus—itself a multiparadigm discipline, there is some disagreement about what exactly falls under ES's rubric. To counter this difficulty ES has been defined broadly as "the sociological perspective applied to economic phenomena" (Smelser and Swedberg 2005, p. 3).

While both ES and economics study the economy in its multiple expressions, they are at variance with each other. At the risk of oversimplification, the starting point for economics is the isolated rational economic actor; whereas for ES, actors always operate in social, thus relational, contexts and do so reflexively.

EARLIER PERSPECTIVES

The sociological look upon economic phenomena has marked sociology from its outset, so it is meaningful to distinguish ES into *old* and *new* segments. Old ES refers largely to the relevant parts in the work of sociology's founding fathers, for example, Karl Marx, Émile Durkheim, Max Weber, and Georg Simmel. Indeed, Marx was concerned with the social designation of the commodity and with commodity fetishism. He also analyzed capitalism's origins as well as *capital* as a social relation. Durkheim was directly interested in this field, which he—along with Weber—named as such. He was particularly concerned with the development of the division of labor while he criticized economists for their tendency to construct an exclusive economic world, which was arbitrary and one-sided because the social dimensions were excluded or neglected, whereas he linked anomie to modern economic activity. For his part, Weber delved at length in the sociological study of economic institutions and of processes pointing out that economic action is a special form of social action. Weber advocated considering both the meaning with which actors imbue their economic action (e.g., in his *Protestant Ethic and the Spirit of Capitalism* [1904–1905]) as well as the social dimension of economic phenomena. By contrast Simmel's work is not systematically concerned with ES and is only dotted with references of an ES concern, such as analyses of interest, competition, and interlinkages between money and modernity.

Sociological interest in the economy subsided during the 1920s, although authors such as Joseph A. Schumpeter, Talcott Parsons, Neil Smelser, and Karl Polanyi offered contributions to the discussion. Since the 1960s, the attempts of some economists to extend economic interpretations into social phenomena—an approach called *economic imperialism*—challenged the established division of labor between economics and sociology. This provoked sociologists' response, which culminated in the reemergence of ES. The wider frames of the new ES, as Jens Beckert (1996) pointed out, are delineated by two parameters: It aims towards a sociological understanding of economic processes and structures, and critiques established economic types of analysis. In the meantime, increasingly, mainstream economics has come to accept a role for the social dimension, although conceptualized quite differently than it is in ES.

CONTEMPORARY PERSPECTIVES

Mark Granovetter first discussed the new ES in "Economic Action and Social Structure" (1985). Granovetter, a key figure in ES, has pointed out that all economic action and phenomena are embedded in concrete networks of social relations, social structures, normative arrangements, and institutions that constrain and channel them in particular ways. Unlike the view of Karl Polanyi, for Granovetter these actions and phenomena are more thoroughly embedded in modern societies than in premodern ones. The concept of *social embeddedness*, which is identified with ES, despite some attempts to define it narrowly, remains a general concept.

Granovetter's own work on how people obtain a job at the local level was an early application of the social embeddedness idea. He argues that getting a job, or accessing the labor market, is intrinsically a social process linked to the job seeker's social ties in specific social milieus, which are formulated and distributed under the overdetermining impact of social class. This thesis, known as the *strength-of-weak-ties thesis*, has found corroboration in a wide range of social contexts in the United States and elsewhere, for instance in Greece and Russia. Recent U.S. research with respect to other social divisions, such as gender, race, and ethnicity, on matters pertaining to employment and work have identified the prevalence of continuities in the transmittance of social inequalities rather than of discontinuities, which highlights the multifaceted social dimension in labor markets.

Another key concept in ES is that of the *social construction* of economic phenomena, which draws from the theory of constructivism advanced by Peter Berger and Thomas Luckmann in 1966. Social construction refers to the fact that economic arrangements, institutions, and regulations do not have an a priori independent existence. Instead, they are formulated as a result of human social interaction and purposeful intervention that take place in a specific social context. Once, however, an economic structure comes into being it may assume an objectivity that constrains and impacts upon economic action and practices.

Thematically, research in ES has expanded to include analyses at the micro-, mezzo-, and macro-levels of firms, markets, consumption, entrepreneurship, business groups, money, migration, networks, trust, development, formal/informal work, varieties of capitalism, forms of capital, other economic institutions, the role of culture, and other areas, with most interesting results. Such research has contributed to the deciphering of aspects of the economy, and some of the most attractive examples of ES's fruition are to be found in the work of, among others, Viviana Zelizer on the shifting meaning of money (1994), Richard Swedberg on Weber's ES (1998), and Neil Fligstein on contemporary market societies (2001).

While the expansion of empirical research continues, ES's theoretical production is currently not keeping up with expectations and needs to advance. Accordingly, researchers such as Swedberg suggest that elaborations on the sociological concept of *interest* and on an *interest-based concept of institutions* may provide new vistas for ES.

SEE ALSO *Sociology*

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Sokratis M. Koniordos

SOCIOLOGY, EUROPEAN

European sociological thought can be traced to three major sources: the Enlightenment, or Age of Reason, of the eighteenth century; the Industrial Revolution; and the romantic period's counterreaction to these ideological, social, and political changes. Although there are important prefigurations of sociology (for example in the thought of Montesquieu, Marquis de Condorcet, Adam Smith, and others), the roots of modern sociology lie in the work of Auguste Comte (1798–1857), who coined the term *sociology*, Karl Marx (1818–1883), Émile Durkheim (1858–1917), and Max Weber (1864–1920). The last three are conventionally represented as the founding fathers of the discipline.

The great question posed by these thinkers is that of understanding the history and consequences of the seismic changes associated with the origins of modern capitalism (Marx and Weber), industrialization and individualization (Comte and Durkheim), and the new social order of modernity (Weber). For Marx the central focus is upon the global effects of the capitalist mode of production with its new classes and class conflict, the alienating impact of new forms of factory production, and the rise of the working class movement. For Weber, the concern shifts to understanding the ethical and religious roots of rational conduct and institutions in Europe and North America, comparative analysis of earlier European social structures and non-European civilizations, and characteristic features of modern society (the modern state and rational administration, modern capitalism, democratic politics, bureaucracy, and so on). With Durkheim the central problem is the changing basis of social solidarity (from *mechanical* to *organic* solidarity) and the corrosive impact of individualism upon traditional social orders.

Sociology adopted two related perspectives, one focusing upon the structure and dialectics of social relations (the European paradigm) and the other emphasizing the evolution of whole societies along social Darwinian principles. The latter is best represented by early American sociology, especially in the writings of William Graham Sumner (1840–1910), Lester Frank Ward (1841–1913), and Franklin H. Giddings (1855–1931). The guiding source is not Marx or Durkheim but the English evolutionist and individualistic thinker Herbert Spencer (1820–1903). Evolutionism informed by individualism and native pragmatism provided the framework for speculations about social organization, institutional adaptation, and change. However, the European tradition was not totally ignored. It entered into the texture of American sociology through the work of Albion Woodbury Small (1854–1926), the founder of the first American department of sociology at the University of Chicago in 1892 and influential editor of the *American Journal of Sociology* (from 1895). Through Small's teaching American students gained access to the conflict tradition of Georg Simmel (1858–1918). Small also helped shape the Chicago School of W. I. Thomas (1863–1947), Robert Ezra Park (1864–1944), and Ernest Burgess (1886–1966). This is the context in which American sociology discovered its unique philosophical voice in the *symbolic interactionist* philosophy of George Herbert Mead (1863–1931).

After Durkheim's death, Marcel Mauss (1872–1950) and Maurice Halbwachs (1877–1945) continued his legacy. This would prove decisive in shaping the structural anthropology of Claude Lévi-Strauss. In Germany, Marxism regressed to a dogmatic evolutionism in the form of Second International Marxism (best represented by the Soviet theorist Nikolai Bukharin [1888–1938]) but was reinvigorated by the Frankfurt School (Theodor Adorno [1903–1969], Walter Benjamin [1982–1940], Max Horkheimer [1895–1973], and others). Weber's legacy was more diffuse, transformed into the traditions of conflict theory (later represented by such thinkers as Lewis Coser [1913–], Ralf Dahrendorf [1929–], and John Rex [1925–]), action theory, phenomenological thought (through Alfred Schutz [1932–1998]), and figurational sociology (Norbert Elias [1897–1990]).

Post–World War II sociology marks a decisive shift to the American context both in the volume and quality of empirical research (associated with the Chicago School of ethnography, the Columbia School of Robert Merton [1910–2003], Paul Lazarsfeld [1901–1976], Samuel Stouffer [1900–1960], and others) and the emergence of the most original synthesis of European action theory in the work of Talcott Parsons (1902–1979). Parsons's model of social action theory in *The Structure of Social Action* (1937) was later elaborated into a rather rigid form of structural functionalism and toward the end of his life into a general systems model of societal evolution. American empiricism and Parsonian sociology are often described as the orthodox consensus of post–World War II sociology.

The breakdown of the functionalist consensus came in myriad forms: rejection of Parsonian conservatism (C. Wright Mills [1916–1962] and Alvin Gouldner [1920–1980]), the behaviorist alternative formulated by George Homans (1910–1989), the exchange theory of Peter Blau (1918–2002), symbolic interactionism (represented by Herbert Blumer [1900-1987] and Erving Goffman [1922-1982]), phenomenological and interpretive sociology (Alfred Schutz [1899–1959], Aaron Cicourel [1928–], and Harold Garfinkel [1917–]), and the resurgence of interest in conflict sociology (Randall Collins [1941–]), European critical theory, and reflexive sociology (Alvin Goulder, Alan Blum, Peter McHugh, and others). This is the period of the *theory wars* characterizing the late 1960s and 1970s. The result was the demise of structural functionalism as the sole framework for sociological thought and research and the emergence of alternative perspectives from within the European tradition. The most prominent of these are the *structuration* theories of Anthony Giddens (1938–) and Pierre Bourdieu (1930–2002) (essentially trying to overcome the separation of *action* and *structure* in sociological explanation), the reformulation of critical theory as a paradigm of communicative action (in the work of Jürgen Habermas [1929–]), the globalization and world-system perspective associated with Immanuel Wallerstein (1930–) and Manuel Castells (1942–), the revival of reflexive sociology (for example in reflexive approaches to science, ethnomethodology, and reflexive modernization theory), and the appearance of *postmodern* and *poststructuralist* discourses (associated with the names of Michel Foucault [1926–1984], Jean Baudrillard [1929–], Jean-François Lyotard [1924–1998], and Jacques Derrida [1930–2004]). In the twenty-first century ideological differences between European and American social thought are less entrenched, and the future promises new dialogues with the classical thinkers and new forms of thinking in response to the postmodernization of the global economy.

SEE ALSO *Blau, Peter M.; Blumer, Herbert; Bourdieu, Pierre; Chicago School; Comte, Auguste; Condorcet, Marquis de; Derrida, Jacques; Durkheim, Émile; Empiricism; Ethnomethodology; Foucault, Michel; Giddens, Anthony; Goffman, Erving; Habermas, Jürgen; Lévi-Strauss, Claude; Marx, Karl; Marx, Karl: Impact on Sociology; Mead, George Herbert; Mills, C. Wright; Smith, Adam; Sociology, Parsonian; Spencer, Herbert; Wallerstein, Immanuel; Weber, Max*

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Barry Sandywell

SOCIOLOGY, FEMINIST

Sociology can be understood as a field that focuses on the interaction of individuals within society, examining the diversity of men's and women's lives and the fundamental structures of power, inequality, and opportunity that shape their experiences. Numerous feminist theories have entered sociological discourse through textbooks, scholarly articles, and at conferences. However, as Judith Stacey and Barrie Thorne (1985) conclude in their far-reaching critique of the discipline, sociology, unlike history and anthropology, has not undergone the conceptual transformation necessary for a feminist revolution. Similarly, Joan Acker's 1989 article argues that the extensive knowledge and critiques of recent feminist scholarship "neither have been integrated into, nor have they transformed the old, 'general' theories of society" (Acker 1989, p. 65). Although feminist work challenges theories based on a normative male subject, mainstream sociological research

often does little more than add women and stir into existing frameworks.

Feminist studies, which seeks to interpret women's position and identity in society, is inherently fused with sociological questions surrounding social structure, culture, and economic stratification. Feminist scholars within sociology, like their counterparts in other disciplines, have asked how gender is constructed, how it is organized in social institutions, and how social change is possible. It has been argued that gender differences are not natural or biological but learned from infancy. Gender differences are maintained by key social institutions such as education, marriage, popular culture, news media, religion, government, and law. The concept of patriarchy, the systematic organization of male supremacy, is one that many feminist theorists find useful. This concept does not refer simply to a collection of individuals but a system whose core value is control and domination. Everyone is involved and implicated in this system, but each can choose how he or she participates. This emphasis on a wider system is crucial. Without it, one's thinking and discussion are reduced to the personal level, resulting in accusations, defensiveness, and hurt feelings.

Sociology's own male bias and Western foundation structures academic scholarship and theory within a male interpretation. From its inception, the discipline was conceptualized and articulated by men with interpretations of social issues and phenomenon grounded in their own experiential backgrounds. The epistemological issues that feminist researchers address when applying research methodologies are rooted in ideas and methods influenced by male hegemony over academic and scientific discourse. These issues encompass, but are not limited to, examinations of the multiple dimensions and processes that generate women's social standing, as undertaken by Niara Sudarkasa (1973), Rae Blumberg (1984), and Susan Tiano (1987). Such examinations allow for the understanding that women may have autonomy but little power, economic resources but limited autonomy, or power as members of kin groups but no access to economic resources independent of kin ties. Without an awareness of such multidimensionality in classic stratification models, inequalities seem reducible to natural differences between men and women.

Much of the work of liberal, socialist Marxist, and radical feminist theories and some of the paradigms developed, such as the *woman as other*, *woman as victim*, *woman as private property*, and *woman for exchange* are consistently found in sociological works. Gender inequalities play a significant role in the triangle of sociological stratification—race, class, and gender—in addition to the stratification among feminist theorists themselves. For example, debates within the women's movement have highlighted some of the original notions of feminism as supporting a white, middle-class ideology that negated women of color and those with lower economic positions. The effect of this stratification among feminist theorists themselves has had an impact on feminist sociology's role in the twenty-first century, rendering it difficult to address feminist issues for women all over the world and bringing forth the field's own Western female bias.

The feminist movement, from its inception, has often been critiqued by African American women and other nonwhite women, such as Willa Hemmons (1980), Vivian Gordon (1987), and Rebecca Walker (1995), as being racist and exclusive. "Contemporary feminist theory, however," as Delores P. Aldridge notes, "attempts to embrace multiculturalism, which mandates curricular attention to the experiences, historical and contemporary, of women and men of color, lesbians and gay men of all racial and ethnic groups, and women with diverse sexual, racial, and ethnic identities" (2005, p. 405). Nonetheless, feminist theory continues to face challenges as it attempts to explain the realities of these various groups of color. Many nonwhite women are calling for new theories with new names such as Africana womanist theory, Latina feminist theory, and Chicana feminist theory.

SEE ALSO *Epistemology; Feminism; Feminism, Second Wave; Gender; Gender Gap; Identity; Inequality, Gender; Intersectionality; Multiculturalism; Patriarchy; Racism; Sexuality; Sociology; Stratification; Women's Liberation; Women's Movement; Women's Studies*

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Delores P. Aldridge

SOCIOLOGY, INSTITUTIONAL ANALYSIS IN

Institutional analysis addresses the processes by which social structures—including both normative and behavioral elements—are established, become stable, and undergo change over time. It addresses the fundamental issues of social order and shared meaning. The normative elements include schemas, values, norms, and rules; the behavioral elements include activities, routines, interactions, and the use of resources. More so than the other social sciences, sociology has from its origins to the present time steadfastly placed the examination of institutional structures and processes at the center of its scholarly agenda.

Although attention from sociologists has been steady, the ways in which institutions are viewed and explained have varied substantially among scholars and over time. Leading classical European scholars reflect, and were no doubt partly responsible for, this diversity. Karl Marx argued that materialist structures gave rise to ideologies justifying their legitimacy—in effect, that behavioral systems determined normative frameworks. By contrast, both Max Weber and Émile Durkheim insisted that normative (symbolic) elements played an independent role in the structuring of social orders. Durkheim, particularly in his later work, stressed the important role that shared cognitive frames and belief systems—"collective representations"—played in the stability and meaning of social life. And Weber stressed the importance of "interpretation"—the employment of shared meanings by the social actor that mediate between the actor and the materialist conditions confronted.

Scholars such as Herbert Spencer and William Graham Sumner treated institutions as providing the specialized "organs" of societies, performing distinctive functions. The rules and relations defining appropriate behavior were observed to vary across political, economic, religious, and kinship sectors, and thus to give rise to diverse institutional complexes. This vision of functionally specialized subsystems organized around distinctive norms and values provided the basis for much of the research agenda for sociologists throughout the twentieth century, culminating in the theoretical codification of Talcott Parsons (1951), with his view of societal sectors differentiated by distinctive "pattern variables" (value dichotomies, such as universalism/particularism and ascription/achievement). While most sociologists pursued this macro-orientation, a few, such as Charles Horton Cooley and George Herbert Mead, emphasized the microfoundations of institutions, arguing that it is in the minds of individuals that connections between symbols and actions take place.

In the latter part of the twentieth century, two developments have been of special significance. First, the insights of Cooley and Mead were revived and reformulated by phenomenological scholars, especially Alfred Schutz and Peter Berger and Thomas Luckmann (1967). They stress the extent to which (1) social reality is a social construction; and (2) the relative importance of shared cognitive conceptions (ideas, schema) rather than normative commitments (emphasized by Parsons among others) in the establishment and preservation of social order. Meyer and Rowan (1977) applied these ideas to help account for the similarities observed in the structures of both nation-states and formal organizations. The second important development is the theoretical work of Anthony Giddens (1984), who asserts the value of privileging social processes over social structure—"structuration" versus structure. He emphasizes the "duality" of social structure, which operates both as social context—providing the framework within which all social action takes place—and as social outcome: a product that incorporates earlier understandings and practices, but also modifications introduced by present users.

DiMaggio and Powell (1983) applied these insights to analyze the structuration of *organizational fields*—collections of dissimilar organizations engaged in interrelated activities in some specialized social arena (e.g., automobile production or delivery of mental health services). DiMaggio (1991) first examined the often contentious processes by which such fields come into existence, select appropriate logics and forms, and begin to operate as a taken-for-granted part of the social world. These twin emphases on cognitive systems influencing structuration processes have been pursued productively in the past two decades by scholars examining the emergence and dominance of organizations as actors in modern societal structures and their coevolution within specialized organizational fields (Scott 2001).

SEE ALSO *Social Structure; State, The*

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W. Richard Scott

SOCIOLOGY, KNOWLEDGE IN

The nature of knowledge has been a central problem of philosophy at least since Greco-Roman times. Plato (427–347 BCE), for example, in *Theætetus* adopted a scientific approach to knowledge and cognition. Centuries later, the philosophers of the French and Scottish Enlightenment recognized that all social differences had social origins and were thus the result of factors subject to human control.

In general, however, philosophers have attempted rather to demonstrate that a sociology of knowledge is neither possible nor desirable. Immanuel Kant (1724–1804) thus argued that while there cannot be perception without conception, the constitutive components of cognition are a priori. Similarly, empiricists of various persuasions have maintained that scientific knowledge in particular is warranted by direct experience unaffected by social conditions. At most, the philosophies concede that extra-theoretical factors influence the genesis of ideas but not the structure or the validity of thought (context of discovery). Otherwise, quite different epistemologies—for example, that of Karl Popper (1902–1994)—have shared a rejection of the possibility of a sociological analysis of knowledge, particularly scientific knowledge, and warned against any relativism, not only in science but also for society, that was seen as associated with the modern sociology of knowledge.

The modern sociology of knowledge, by contrast, investigates the interconnections between categories of thought, knowledge claims, and social reality—that is, the *Seinsverbundenheit* (existential connectedness) of thought described by Karl Mannheim (1893–1947). Karl Marx (1818–1883) was a significant precursor of the field, with his theory that, at least under certain historical conditions, economic realities ultimately determine the ideological "superstructure" by way of various socioeconomic processes. Émile Durkheim (1858–1917), too, is an important pioneer of the sociology of knowledge, even though he failed to develop a general model of the classificatory process. He argued, especially in *The Elementary Forms of the Religious Life* (1912) and *Primitive Classification* (1903, written with Marcel Mauss [1872–1950]), that the basic categories that order perception and experience (space, time, causality, and direction) derive from the social structure, at least in simpler societies. Durkheim, Mauss, and also Lucien Lévy-Bruhl (1857–1939) examined the forms of logical classification of "primitive" societies and concluded that the basic categories of cognition have social origins. However, they were not prepared to extend this kind of analysis to modern societies.

The sociology of knowledge owes its decisive development to the work of Max Scheler (1874–1928), Alfred Weber (1868–1958) (the *freischwebende Intelligenz* or "free-floating intelligentsia"), and especially Mannheim in the 1920s. It may be seen as the symptomatic intellectual expression of an age of crisis, and the recognition of its own rootedness in social structure and determination by social factors is perhaps its most characteristic trait. The mood of the German historical and social sciences during the period in which the sociology of knowledge developed in Germany may be described as one of "tragic consciousness." Georg Simmel's (1858–1918) view of the "tragedy of culture," as well as Max Weber's (1864–1920) assertion that an inescapable process of rationalization leads to the disenchantment of the world and to new forms of bondage, are symptomatic expressions of a period in which historians, philosophers, and especially social scientists argued intensely about the issues raised by historicism, relativism, philosophical skepticism, and the pervasive distrust in *Geist*.

It was during this period that the sociology of knowledge emerged as an analysis of the regularities of those social processes and structures that pertain to intellectual life and to modes of knowing (Scheler) and as a theory of the existential connectedness of thought (Mannheim). Both orientations distance themselves from the Marxist critique of ideology, which sees ideologies as mystifying

representations of social reality and as disguises of the interests of powerful groups in society. The sociology of knowledge, by contrast, is concerned with intellectual and spiritual structures as inevitably differently formed in different social and historical settings (Mannheim).

Scheler first introduced the term *Wissenssoziologie* (sociology of knowledge) in the early 1920s, and in *Problems of a Sociology of Knowledge* (1926) he provided the first systematic introduction. Scheler extended the Marxist notion of substructure by identifying different "real factors" (*Realfaktoren*), which, he believed, condition thought in different historical periods and in various social and cultural systems in specific ways. These "real factors" have sometimes been regarded as institutionalized instinctual forces, and as representing an ahistorical concept of superstructure. Scheler's insistence on the existence of a realm of eternal values and ideas limits the usefulness of his notion of real factors for the explanation of social and cultural change.

Mannheim provided the most elaborate and ambitious programmatic foundation for a sociological analysis of cognition. Like Scheler, Mannheim extended the concept of substructure, suggesting that biological factors, psychological elements, and spiritual phenomena might take the place of primary economic relations in the substructure, but (just like the dominant theory of science) he did not think that scientific and technical knowledge could be subjected to sociological analysis. He conducted research into the social conditions associated with different forms of knowledge, and some of his studies are still considered first-rate examples of the kind of analysis that the sociology of knowledge is capable of. In addition to *Ideology and Utopia* (1929), these include Mannheim's studies of competition as a cultural form, of conservative thought, of the problem of generations, and of economic ambition.

Mannheim believed that the sociology of knowledge was destined to play a major role in intellectual and political life—particularly in an age of crisis, dissolution, and conflict—by examining sociologically the conditions that give rise to competing ideas, political philosophies, ideologies, and diverse cultural products. He persistently pursued the idea that the sociology of knowledge is somehow central to any strategy for creating a rapprochement between politics and reason, and this pursuit connects his various essays in the sociology of knowledge. But Mannheim's conception of the specific ways in which such a sociology might affect the state of political knowledge fluctuated and changed. There are three main versions: (1) sociology of knowledge as a pedagogical but also political mode of encountering and acting on the forces making up the political world; (2) sociology of knowledge as an instrument of enlightenment related to the dual process of rationalization and individuation identified by Max Weber and comparable to psychoanalysis, acting to set men and women free for rational and responsible choices by liberating them from subservience to hidden forces they cannot control; and (3) sociology of knowledge as a weapon against prevalent myths and as a method for eliminating bias from social science, so that it can master the fundamental public problems of the time and guide appropriate political conduct.

The sociology of knowledge has recently experienced a reorientation in the direction of an analysis of everyday life and of natural scientific and technical knowledge. Peter Berger and Thomas Luckmann's *The Social Construction of Reality* (1966), written in the tradition of Alfred Schutz's (1899–1959) phenomenology and Arnold Gehlen's (1904–1976) philosophical anthropology, represents a clear departure from the preoccupation of the classical sociology of knowledge with issues of epistemology, methodology, or ideologies. Everything that is regarded as knowledge in society is now accepted as a legitimate subject matter for sociological investigations.

Inspired by developments in the history and epistemology of science—by, for example, Thomas Kuhn (1922–1996)—the sociology of knowledge in the 1970s turned in the direction of empirical analyses of the social construction of scientific facts, frequently by way of ethnographic studies of laboratory life. Such research on the "manufacture" of natural-scientific knowledge has led to a reassessment of traditional assumptions about the unique rationality of scientific knowledge. Seen through the lens of the "strong program" of the sociology of knowledge, scientific knowledge and everyday knowledge are in fact extraordinarily similar. In general, the cognitive turn in the sociology of knowledge has had little impact on science or the so-called division between the two cultures (C. P. Snow [1905–1980]) in the scientific community. Moreover, the sociology of scientific knowledge has been criticized from within the field of science and technology studies as reductionist, as overemphasizing the role of controversies in science, and as stressing a universe of inquiry that is void of nonhuman entities (e.g., instruments, measuring devices, laboratories).

The sociology of scientific knowledge also has encountered a strong reproach from philosophers of science and scientists who attempt to overcome doubts and skepticism engendered by a sociological analysis of science by placing knowledge on a firm, uncontested foundation, even outside the realm of sociohistorical experience. The dispute about the apparent attack by sociology on the validity and objectivity of scientific knowledge culminated in the 1990s in the so-called science wars. Sociologists were accused of favoring a stance of anything

goes. In the end, the social nature of science and its role in society remain essentially contested.

SEE ALSO *Durkheim, Émile; Epistemology; Kant, Immanuel; Lukacs, Georg; Mannheim, Karl; Philosophy of Science; Relativism; Sociology*

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Nico Stehr

SOCIOLOGY, LATIN AMERICAN

Sociology did not gain a foothold in Latin America until after World War II when Latin American universities opened sociology departments. Latin American sociology has, in general, a number of features that make it distinct from U.S. or European sociology. First, Latin American sociologists have been concerned with understanding issues of poverty and inequality. In general, they have been less concerned with value-neutral research than with research that is concerned with analyzing and improving the quality of life for the poor. As the Brazilian sociologist Fernando Henrique Cardoso stated, "The intellectuals in Latin America are important because they are the voices of those who cannot speak for themselves" (Kahl 1988, p. 179).

The scholar Alejandro Portes pointed out that in contrast to North American or European sociologists, Latin American sociologists are frequently marginalized, having little access to government and/or private institutions that fund research in wealthier nations. He also noted that the intellectual and political commitments of Latin American sociologists mean that they are frequently the first academics to suffer under authoritarian regimes. For example, sociology was outlawed in Cuba following Fidel Castro's revolution in 1959 and in Chile following the military coup d'etat of 1973. In the 1980s and 1990s, sociology made a strong comeback in Latin America in sync with its return to democracy.

DEPENDENCY THEORY

Latin American sociologists are probably best known for dependency theory, a school of loosely Marxist thought that arose in the 1960s and 1970s as a critical response to modernization theory. In the 1950s and 1960s, modernization theory was the dominant approach to questions of third world development. It was the policy prescribed by the United Nations and informed by the work of U.S.-based academics. In essence, modernization theory argued that underdeveloped countries, such as those in Latin America, could develop along lines similar to the United States and other developed countries in Europe. Raúl Prebisch, an influential Argentine economist, noted that the policy prescriptions of the modernization theorists were flawed because underdeveloped countries were exporting raw materials (agricultural products and minerals) with declining rates of profit while they imported finished goods from advanced countries that were more expensive every year.

Drawing on the work of Prebisch, but also Gino Germani, an economist based in Argentina, Latin American sociologists began developing dependency theory as a critical response to modernization theory. Dependency scholars argued that the underdevelopment of the third world was generated by the expansion of capitalism in advanced countries. That is, first world development occurred at the expense of the third world. Thus, underdeveloped countries could not follow the path of advanced countries because they lacked another set of countries to exploit; in addition, they could not compete with the more advanced economies and firms of the first world.

There were two schools of thought in dependency theory. The first, associated with the work of Andre Gunder Frank (but also Celso Furtado and Theotonio dos Santos), is considered the radical version of dependency theory. These scholars emphasized that third world economies were bound to stagnate because first world firms repatriated profits gained in the third world. Thus, third world countries would never benefit from opening their countries to multinational corporations. Consequently, they recommended either socialist revolution or autarky; that is, delinking from the global economy as the best means to promote national development. Critics of dependency theory have been quick to point out that this strategy, seen in cases such as Cuba and North Korea, has failed.

A second strand of dependency theory, associated with the work of Cardoso and Enzo Falleto, suggests a

much less radical view. These scholars argued that external constraints (competition in a global capitalist market) and internal factors (such as class relations and political alliances) explain the trajectory of individual third world countries. They argued that "associated dependent development" was possible; that is, that less developed countries could have simultaneously participated in the global economy and improved the lives of their citizens. In essence, national leaders enjoyed more room to maneuver than the radical dependency scholars allowed.

VARIANTS OF DEPENDENCY THEORY

In addition to the aforementioned scholars, the work of the Mexican Pablo González Casanova should be discussed. His widely read book *Democracy in Mexico* (1970) offers a complex portrait of the ruling PRI party (Party of the Institutional Revolution) in Mexico. González Casanova acknowledged the advances made by the PRI (including land reform and a booming economy). However, he pointed out that a growing number of people, especially the indigenous, were left out of the PRI's benefits. González Casanova noted that the indigenous were experiencing what he called "internal colonialism," which acknowledges that they had traded one set of colonial powers (the Spanish) for a new one (the Creole-Spanish descendants who ruled Mexico after the War of Independence). González Casanova offered a critique of the PRI, calling for a democratic opening from within the party so that more Mexicans could benefit from its legacy.

Dependency theory played an important role in Latin American intellectual life, influencing the thought of activists in the liberation theology movement and in the United States among scholars of third world development. Dependency theory faced criticisms on the one hand from Marxists, such as the scholar Robert Brenner, who in the late 1970s underscored that dependency theorists betrayed an implicit intellectual tie, not to the German political philosopher Karl Marx but to the Scottish economist Adam Smith. Mainstream scholars criticized dependency theory because it failed to explain the trajectory of a number of newly industrialized countries (such as Hong Kong, Singapore, South Korea, and Taiwan). That, in combination with the eclipse of the Soviet Union in 1989, suggested dependency theory was doomed for the dustbin of history. In fact, a parting shot was provided by Cardoso himself, who was elected president of Brazil from 1995 to 2003 and implemented policies that differed greatly from the positions he outlined earlier in his academic career.

While the more radical variants of dependency theory have been abandoned, in the 2000s the theory is somewhat influential among scholars of development, much to the chagrin of its critics. As Portes noted in his reflection on sociology in Latin America in 2004, radical dependency theory was easily rebutted by the course of history; however, radical neoliberal development policies should also be criticized for their poor results, including increasing levels of inequality and the immiseration of the working class.

SEE ALSO *Sociology*

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Robert Sean Mackin

SOCIOLOGY, MACRO-

Macro-sociology is an approach to the scientific study of social life that focuses upon the large-scale social patterns of human behavior. Societies are considered as totalities, with a particular emphasis on major institutions of social life, such as the economy, the political system, the family unit, and systems of religious belief. Macro-sociology is typically concerned with the systematic examination of the major similarities and differences among societies, in particular the nature and scope of the changes that societies undergo.

Methodologically this tends to mean that macro-sociological studies focus upon a single society in a single given historical period, adopting large-scale surveys as a way of gathering data. However, many macro-sociologists have an abiding concern with how such social systems are interlinked across the world and in particular how single societies change over time. Historical-comparative methods are thus frequently used in analyzing how social systems within a given society, for example, the United States, have changed and developed throughout the nation's history.

Macro-sociology is often regarded as standing in opposition to micro-sociology. Micro-sociology typically investigates the patterns of thought and behavior that occur in relatively small-scale social groups, with a particular emphasis on different styles and codes of verbal and nonverbal communication. Micro-sociologists analyze the ways face-to-face interaction is managed and maintained and how this helps develop shared understandings within social groups. However, in the early twenty-first century this distinction is increasingly called into question as the micro-foundations of macro-sociology are made explicit (Alexander et al. 1987; Sanderson 1995). Nevertheless, macro-sociological approaches continue to play a part in international social science research, and two of the most prominent approaches are structural functionalism and conflict theory.

Structural functionalism sees societies as complex social systems of interrelated and interdependent parts that shape and influence each other. These different parts of the social system are interrelated by a commitment to the norms, values, and beliefs that integrate the entire system, which structural functionalists believe tends toward a state of equilibrium. As such, disturbances to any one part of society will require adjustments elsewhere in order for balance to be restored and for the system to avoid disintegration. Each interrelated part of the social system exists therefore precisely because it has a vital function to perform in helping to maintain the equilibrium of the system as a whole.

Conflict theory stands in opposition to structural functionalism by typically rejecting the idea that societies tend toward a state of equilibrium. This is based upon the belief that societies do not share a basic consensus over norms, values, and beliefs that operate in everyone's best interest. Rather, conflict theorists point to the various ways different individuals and social groups have competing and antagonistic interests and concerns and emphasize that these basic oppositions shape the organization of social life.

In the early twenty-first century macro-sociology is less influential in international social science than it once was. Nevertheless, it continues to provide an important foundation for approaching the study of human social life, especially in contemporary sociological theory.

SEE ALSO *Conflict; Critical Theory; Functionalism; Sociology; Sociology, Micro-; Sociology, Parsonian; Structuralism*

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SOCIOLOGY, MICRO-

The study of group dynamics and interaction is often termed microsociology. There are many different areas investigated within microsociology, and there are different perspectives and methodologies. The area can be broadly conceptualized as considering issues related to self and identity, status and power, cooperation and competition, exchange, legitimation, and justice.

The self is one of the most important concepts in microsociology, particularly in the general perspective of symbolic interaction. The self, as distinct from the psychological conceptualization of the personality, is fluid and adaptive to context. So the roles that an individual must fulfill might require him or her to be very structured in one context and very flexible and adaptive in another context. From the symbolic interaction perspective, individuals learn to define themselves in large part based upon how others see and interact with them. In this way individuals are constantly assessing and projecting different identities to themselves and others. This makes interaction fundamental to self-identity. Research within this area has focused on both qualitative and quantitative investigations of such topics as role taking, altercasting, identity disruptions or deflections, and self-referent behavior.

Group interactions themselves or types of encounters with others constitute other aspects of microsociology. Cooperation and competition were some of the earliest topics in microsociology, and they have endured in their importance. Early studies of group cohesion and identity were featured in Émile Durkheim's study of suicide, for example. More recent developments in the area examine differing incentive structures that lead toward or against cooperation. Much of this work has focused on social dilemmas, settings in which there is a conflict between individual short-term incentives and overall group incentives. Such dilemmas range from those found in dyadic relationships to larger groups such as those involved in collective movements.

Sometimes implicated in the level of cooperation and conflict or competition are characteristics of the individuals or of their positions within the group. Status is usually defined as a position in a social network, and the investigation of the development, maintenance, and diminishment of status has been pivotal in examining how groups organize and how resources are allocated. Commonly

examined aspects of status are diffuse status characteristics such as ethnicity or sex and specific status characteristics such as accounting ability or ability to score soccer goals. Allocation of different resources is studied within exchange formulations, and the resulting assessments, behavior, and feelings of fairness are the focus of justice and equity formulations. Related to assessment of justice is the degree of acceptance of particular institutional arrangements or legitimation.

Microsociology incorporates many types of research methods, including case studies, documentary–historical studies, ethnomethodology, participant observation studies, surveys, and experiments. A particularly promising trend in research is the examination of the interrelationships between micro and macro phenomena. These developments do not begin with the assumption that either the micro or the macro *cause* the other; rather, they investigate how the different levels affect and are affected by each other.

SEE ALSO *Durkheim, Émile; Groups; Interactionism, Symbolic; Sociology*

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Jane Sell

SOCIOLOGY, OBJECTIVITY IN

SEE *Social Science, Value Free.*

International Encyclopedia of the Social Sciences, 2nd edition

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VOLUME 8

SOCIOLOGY, PARSONIAN–VULNERABILITY

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SOCIOLOGY, PARSONIAN

Talcott Parsons was an American sociologist whose work dominated English-speaking social theory from the end of World War II (1939–1945) until the mid- to late 1960s. Parsons elaborated a general theory of society believing that it would give sociology a distinctive subject matter of its own, while also securing a scientific status for the discipline alongside those other social sciences concerned with the activities of the individual as a member of a group. Parsons's work focused attention on the power of the social system to influence the social behavior of individuals.

THE PARSONIAN PERSPECTIVE

In Parsons's view, the primary task of sociology is to develop a set of abstract generalizing concepts capable of describing the social system. This provides all investigators with a common conceptual framework for empirical work in order to enable cumulative inquiry. These generalizing concepts are to be judged through their rational coherence as a basis for then making propositions about the world. Parsons's first major publication, *The Structure of Social Action* (1937), reviewed the work of some European theorists, namely Max Weber (1864–1920), Émile Durkheim, Vilfredo Pareto, and Alfred Marshall, whose works, Parsons claimed, converged around basically "the same system of generalized social theory … the voluntaristic theory of action" (p. 720). This theory views human beings as making choices between ends (or goals) and means (or ways) of achieving particular ends. These choices, Parsons argued, are limited by shared values contained within the social environment. It is because individuals embrace values concerning the sacredness of human life and the family that tendencies towards pure self-interest are curbed and the need for external sanctions including legal punishments are reduced, though never totally eliminated. These values are expressed through concrete norms, or rules of behavior, which limit the lengths to which individuals will go when pursuing their chosen ends or goals.

Parsons's early critical investigation of the work of classical European sociologists provided a foundation for his later work, *The Social System* (1951), which asked, "how is order possible?" Parsons argued that values and normative expectations provide the context in which actors seek to maximize their personal desires. Behavior and relationships that facilitate the achievement of individual needs and desires become institutionalized into a system of status roles and sanctions that are articulated through the social system. The social system, in turn, includes a personality system (the individual actor) and a cultural system (broader values that make sense of the norms linked to status roles). These three systems form the general theory of action. Each system is linked to a functional prerequisite or set of needs that must be met in order for the system as a whole to continue working. Pattern variables are also closely bound up with this general theory of action. They refer to the choices that actors must make between alternative options as a necessary condition for meaningful action in any given situation. Pattern variables are important because they classify actors' modes of orientation in the personality, social, and cultural systems. This theory also provided the foundation

for Parsons's concept of structural functionalism, which attempted to categorize any level of social life at any level of analysis.

INFLUENCE ON SOCIOLOGICAL THEORY

Parsons's major works have influenced the development of sociological theory in a number of ways. *The Structure of Social Action* introduced American sociologists to the work of Durkheim and Weber as general theorists, which not only established a common vocabulary for modern sociologists but also provided them with an important frame of reference. Parsons's analysis of convergence in the works of certain European theorists also set a precedent for other sociologists, for example Anthony Giddens, to make links between oppositions such as conflict/consensus, action/structure, and micro/macro in contemporary social theory. *The Social System* helped develop and further a systems analysis, or large-scale macro, approach in sociology in place of one that stressed the importance of individual or micro elements.

The dominance of Parsons's ideas in sociology declined around the mid- to late 1960s. A resurgence of interest in Parsons's work took place, however, in the 1980s. Jeffrey Alexander in the United States and Richard Münch in Germany, for example, attempted to build upon and resolve certain problems implicit in Parsons's original systems theory through their own distinctive works on neofunctionalism. The theory of neofunctionalism stresses the need to bring together action theory and systems theory while also emphasizing the key importance of collective or macro phenomena in establishing the conditions within which social action takes place.

Critics of Parsonian sociology have focused on its failure to engage with practical reality and empirical social problems. Parsons's work has been stigmatized as merely grand theory. Parsons's excessive concern with the power of the social system also led certain critics to argue that he saw human beings as oversocialized conformists whose individual behavior was largely determined by system constraints. Other commentators have suggested that Parsons's emphasis on social integration, conformity, and harmony disregarded inequalities and those material interests, power, and ideological elements that supported them.

SEE ALSO *Parsons, Talcott; Social System; Sociology, Macro-*

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SOCIOLOGY, PIONEERS IN

SEE *Ibn Khaldūn; Weber, Max.*

SOCIOLOGY, POLITICAL

In a seminal article from 1969, Giovanni Sartori drew a sharp distinction between the sociology of politics and political sociology. The sociology of politics, Sartori argued, involved a reduction of politics to its social conditions and thus formed a subfield of sociology much like the sociology of religion or of the family. While a comprehensive analysis of political institutions and processes certainly would involve an analysis of social conditions, the sociology of politics was insufficient, Sartori argued, because it lacked political science's understanding of politics in its own terms and as a fundamental activity. Sartori's solution was thus that political sociology should be a genuine hybrid, though his main concern was to defend against "sociologists eager to expand to the detriment of political scientists" (1969). More interesting, however, was Sartori's argument that the reason this synthesis was so important was that the objective role of politics was increasing and hence the necessity of political analysis for larger social theory was as well: "The power of power is growing at a tremendous pace," he wrote. As a result, "the greater the range of politics, the smaller the role of 'objective [read sociological] factors'" (1969).

It is perhaps ironic, then, that virtually the only scholars who regularly use the term *sociology of politics* today are political scientists, when they want to highlight social variables, such as class or family structure. *Political sociology* is indeed usually used to refer to a subfield of sociology, but one that has long since adopted the kind of hybrid approach Sartori thought sociology lacked. Political sociologists thus study an array of political processes in their own terms, in terms of their social conditions, distributions, and effects, and in terms of their

combination of these two sides. Moreover, in light of the robust theories of power that have developed since the late 1960s in virtually all varieties of social theory, political sociology has long since abandoned any clear separation of the social from the political.

The intellectual roots of political sociology reflect its cross-disciplinary reach from a time even before disciplines. The philosophers of classical antiquity, for instance, wrote extensively about the varieties of political possibility, including kingship, aristocracy, and, most important for modern discourse, democracy. But the ancients did not yet have a clear concept of society, such that politics and society could be seen to interpenetrate and covary in interesting ways. This conceptualization awaited the thinkers of the European Enlightenment, who theorized society as distinct from, but shaping and shaped by, political institutions. Thus Montesquieu (1689–1755) proposed a theory emphasizing the role of climate in shaping the basic forms of governance—republican, monarchic, and despotic; behind each of these forms was a particular "spirit," comprising the distinct manners and morals of people living in these particular conditions. A. R. J. Turgot (1721–1781), Condorcet (1743–1794), and others—perhaps most importantly the great Scottish economist Adam Smith (1723–1790)—advanced historical accounts emphasizing different aspects of social and economic development that corresponded to transformations in basic forms of governance. Jean-Jacques Rousseau (1712–1778) in particular introduced the contemporary notion of civil society, and outlined the ways in which the "General Will" of the collectivity might be propagated through "political religion."

Like their predecessors, social thinkers in the nineteenth and early twentieth centuries—the forerunners of contemporary political sociology—variously developed broad explanations by reconstructing the historical process, theorizing its motors, and delineating the features of key contemporary social structures and institutions. While a wide variety of thinkers—including philosophers, economists, politicians, natural scientists, and sociologists—contributed to the development of political and social thought in this period, Karl Marx (1818–1883) and Max Weber (1864–1920) have been the most important for the subsequent development of political sociology.

Beyond the political effects of his work, Marx's legacy for political sociology consists mainly in his approach to "political economy," which nevertheless in many respects most clearly embodies the reductionistic "sociology of politics" approach Sartori bemoaned. Because Marx saw the "material"—including the means and relations of production—as the key foundation for social forms, including the state, Marxist political sociology has always emphasized the basis of all politics in economic interests (though the "economic" has sometimes been understood more narrowly, and sometimes more broadly). In the Marxist tradition, the modern state is thus conceived as an expression of the "interests" of the ruling class—the bourgeoisie. Nevertheless, the Marxist tradition—always more complex than either its denigrators or doctrinaires portrayed it—has evolved important accounts of the complex relations between state and civil society in the capitalist and postindustrial eras, of the state as a powerful player in class conflict, as well as an emphasis on the role of power, both economic and political, in the process of social reproduction.

Usually taken as a contrasting figure, Max Weber also developed a powerful account of social stratification in capitalism. But for Weber, disparities in wealth were not the only driving force behind this stratification; rather, differences in status and political power also came into play, potentially forming complicated groupings not reducible to class. In contrast to orthodox readings of Marx, Weber held that in modern times political institutions have become separated from economic and social structure, and thus developed a powerful analysis of the state as an agent and product of bureaucratic rationalization. Perhaps most famously, Weber developed a typology of political power, distinguishing traditional, bureaucratic, and charismatic legitimation as ideal types. In his pessimistic account of modernization, Weber traced a general trend toward bureaucratic rationality tending toward complete domination—the so-called iron cage—though the move from traditional to bureaucratic legitimation was punctuated, and would likely continue to be, by moments of charismatic consolidation. Over time, however, this charismatic authority also succumbed to the rationalization process, what Weber termed "the routinization of charisma."

While many-facetted, three legacies in particular define Weber's influence on political sociology: first, his broad comparative-historical method; second, his multidimensional theory of class, status, and party, which is usually taken as a refutation of Marxist reductionism; and third, his analysis of the bureaucratic operation of the state as part of his overall account of the "rationalization" process. One subsequent development adapting elements of Weber's theory was the theory of "the circulation of elites" by Gaetano Mosca (1858–1941), which emphasized the power exercised by competing small groups with superior knowledge and technical expertise, as well as the trenchant analysis of political parties as organizing forces of these elites by Robert Michels (1876–1936). But these are only two prominent immediate examples, and nearly all political sociology since Weber has manifested various residues of and engagements with his thought.

In the United States during the twentieth century, scholars in political sociology continued the traditions established by Marx and Weber, among other nineteenth-century thinkers, of conceptualizing their subject matter in broad, macrohistorical terms. For the two decades following World War II (1939–1945), political sociology thus reflected the broader division in sociology between *functionalism* and *conflict theory*.

Amalgamating insights developed by Émile Durkheim (1858–1917) into the forms of social solidarity with Weber's account of rationalization, as well as more traditional Anglo-Saxon liberal political thought, functionalism created a model of reality in which various social institutions exist in and sustain an orderly interrelated whole. A facet of this whole was a perceived clear analytical distinction between state and society, a perspective expressing the liberal outlook of this school. Political parties, according to this view, were the main institutions connecting state and society. A central aspect of this agenda, particularly as applied by political scientists, was the comparison between liberal-democratic regimes and communist regimes, in terms of multiple interrelated spheres of polity, economy, society, and culture. The functionalist approach to national socialism and communism, for instance, was associated with the theory of "totalitarianism," which was drawn in distinction to Marxist accounts that portrayed "fascism" as an extreme outgrowth of capitalism; totalitarianism theory saw the Nazis and the Soviets as one type, while fascism saw them as distinct. Where fascism theory gave overwhelming precedence to the economic sphere, functionalism saw "totalitarian" states as polycratic, and ascribed their power to homologies among analytically distinct societal subsystems. In less dramatic and politically charged efforts, functionalist research investigated "political culture"—first the norms and values that supported particular political institutions, then later a more interpretive analysis of political symbols and meanings—as well as topics relating to American institutions, such as the bureaucracy, media and information, the military, and political parties.

In contrast to functionalism, conflict theory borrowed basic tenets from Marx and many of its variants are characterized as "Marxist," particularly those that take a critical stand on the connection between social science and political action. Not all conflict theory is Marxist, however, since one can accept on purely analytical grounds that conflict is pervasive in social and political life. Nevertheless, holding conflict to be paramount, conflict theory questioned functionalism's emphasis on order and individual autonomy from politics. Social order, for conflict theorists, was not the result of functional interdependence but, where present, the outcome of competing social forces. Conflict theorists thus charge that the liberal separation between state and society was unfounded, and pursued an analysis of many different bases of conflict, including race and gender along with class and other factors.

In contrast to the Manichean distinction between conflict and functionalist perspectives in the 1960s and 1970s, the theoretical landscape since then has been more inclusive of diverse theoretical perspectives. Beginning in the 1970s, then, and continuing in the 1980s and 1990s, political sociology developed a variety of thematic orientations, as opposed to building and defending a few grand theoretical positions. Thus new research agendas emerged. One such agenda argued that the state should be the central subject of comparative sociological and political inquiry. Studies in this vein examined the historical formation of the state with renewed comparative focus on states as autonomous actors with their own interests, while other studies put the state's organizational profile under comparative scrutiny.

A somewhat different research agenda was one that had primarily concerned historians earlier: the study of nationalism. While the methods and ideological orientations of studies of nationalism varied, they tended to have a broad historical scope that sought the genesis of what was usually taken to be a modern phenomenon.

A third research agenda regarded questions of economic-political development around the world, including differential patterns of development. Dominated by so-called dependency theory and world-systems theory, this approach produced a wide array of findings that, though typically having a historical outlook, found a place in more standard debates in sociology and comparative politics.

Yet a fourth research agenda gaining momentum during this period was one that focused on social movements and collective action—to many, the quintessential topic for political sociology. Though a key impetus for the spread of this research agenda was the interest in investigating the civil rights movement of the 1960s, research on social movements grew to cover diverse geographical, political, and historical contexts. Finally, a fifth research agenda pertained to the conceptualization and historical evolution of civil society and its related concept of social capital. Again, with considerable divergence in terms of theoretical and political vantage points, this line of inquiry has attracted attention from sociologists, political scientists, and historians, as well as philosophers and political practitioners, particularly since 1989, when political sociologists saw the development of a vibrant public sphere between the individual and the state as the linchpin of democratization after the collapse of communism in Eastern Europe.

Perhaps the most important topic toward which social scientists in general and political sociologists in particular

have turned their attention since the 1980s is globalization. Referring in general to increasing economic, political, and social interconnectedness across the world, globalization puts many of the traditional concerns of political sociology in a new context. In the face of the expansion of global trade and investment capital, political sociologists have become interested in examining the repercussions of unequal global development, global inequality, and, more generally, the social adjustment to economic change. Political sociologists have extended this critical view to developments in the West as well, such as the spread of neoliberal ideology and the resistance to it through various antiglobalization social movements and other forms of protest. Further, political sociology has adjusted its traditional concerns in the face of emerging political global actors. Thus political sociologists are investigating the role of transnational corporations, nongovernmental organizations, and political and economic intergovernmental organizations. One theme that ties such various facets of investigation together is the question of the challenge these emerging actors pose to the maintenance of the state's modern form. In the face of globalization of culture, finally, political sociology revisits traditional concerns regarding identity, values, political loyalty, citizenship, and migration patterns. Under the influence of poststructural and postmodern theory, political sociology has inquired into the complex processes through which the basic units of its analysis are "constructed" as political actors and entities, including through the disciplinary practices of sciences like political sociology itself.

SEE ALSO *Civil Society; Class; Dependency Theory; Durkheim, Émile; Elite Theory; Fascism; Functionalism; Hierarchy; Inequality, Political; Marx, Karl; Merton, Robert K.; Michels, Robert; Parsons, Talcott; Political Science; Postmodernism; Poststructuralism; Poulantzas, Nicos; Sociology; State, The; Stratification; Structuralism; Weber, Max; World-System*

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SOCIOLOGY, POST-PARSONIAN AMERICAN

Talcott Parson's functionalism became the dominant paradigm in American sociology after Word War II. Talcott Parsons (1902–1979) envisioned society as a coherent and auto-regulating social system separated from its environment by boundaries. A social system itself consisted of relatively autonomous but also interdependent subsystems responsible for the general functional imperatives of adaptation, goal attainment, integration, and latency. Functionalism held that social systems tended toward equilibrium, change being slow and evolutionary, oriented toward increasing complexity and differentiation. Robert Merton had already criticized his mentor's penchant for grand theorizing and assumption of systemic unity and integration in *Social Theory and Social Structure* (1949). This book distinguished between latent and manifest functions in social systems and stressed the unintended consequences of action. But Merton himself, in many respects, operated within the functionalist paradigm, which lost its hegemony only in the late 1960s and the early 1970s. While functionalism had for at least two decades unified sociology with an overarching theoretical framework, competing paradigms emerged as both a cause and a result of its decline. American sociology became much more heterogeneous, pluralistic, and contentious. The main strands of post-Parsonian sociology are reviewed below. Research that is either theory driven or has theoretical implications for the discipline as a whole are privileged in this survey.

CONFLICT AND DOMINATION

A significant group of American sociologists attacked the integration and consensus premises of functionalism and made conflict and domination in society their focus. Inequality and its social reproduction have also become crucial issues. The politically charged environment of the 1960s undergirded this paradigm shift, and many sociologists took their cues from Karl Marx and Max Weber. Eric Olin Wright rejuvenated the classical Marxian theory of exploitation and class by taking into account not only control over the means of production but also control over how things are produced and control over labor power. Other Marxists, such as Michael Burawoy, studied accumulation processes and class conflict on the shop floor. Alvin Gouldner pointed to the ascent of a new social class formed by the cognitive elite. William Julius Wilson elucidated the logics of economic and racial inequality in the United States, and Douglas Massey dissected the segregation patterns in American cities.

In addition to class and race, gender also became a central research area. Nancy Chodorow's *The Reproduction of Mothering* (1978) combined psychoanalysis with

sociology to examine gender dynamics in the nuclear family. Arlie Hochschild studied the feminine nature of emotional work in contemporary society, and Christine Williams undertook ethnographies of gender relations in the workplace. Domination and conflict also stimulated sophisticated theoretical work, such as Steven Lukes's influential treatise on power. The most ambitious theoretical form of conflict sociology has been provided by Randall Collins, who developed over the decades a potent model to study (among many other things) credentialism, geopolitical strife, and intellectual transformation. It is a testament to the empirical soundness of his general conflict model that Collins successfully predicted in the 1980s the breakdown of the Soviet empire.

HISTORICAL-COMPARATIVE SOCIOLOGY

Another strand in the post-Parsonian period focused on wide-scale historical transformations. In contrast with the evolutionary and integrative assumptions of functionalism, the burgeoning field of historical-comparative sociology mostly centered on dynamic political and economic structures and underlined the role of revolution, violence, and contention in social change. Barrington Moore's seminal book *The Social Origins of Dictatorship and Democracy* (1966) outlined the three routes to the modern world (the liberal, the fascist, and the communist) and the mechanisms through which preindustrial agrarian social structures and the course of industrialization mixed to determine regime outcomes. His student Theda Skocpol fashioned a robust theory of social revolution based on state structures, international forces, and class relations.

Immanuel Wallerstein's world-system theory pushed the capitalist division of labor to the global level and examined how the countries in the periphery are exploited by those at the core. Daniel Bell hailed the rise of postindustrial society. He also pointed to the contradictions between the economic and the cultural logics of late capitalism. Charles Tilly created models of contentious politics and state formation; his argument about the positive feedback between state making and war making has attained classic status. In the last decade of the twentieth century he also put forth relational theories of violence and inequality. Michael Mann has been fleshing out since the mid-1980s the interconnections between economic, political, ideological, and military power throughout history, and Jack Goldstone has significantly improved the understanding of revolutions by stressing demographic pressures on states and the role of intra-elite conflict. It is important to note, however, that not all cutting-edge historical-comparative sociology has been about politics. William J. Goode's *World Changes in Divorce Patterns* (1993), for instance, constructed an ambitious theory to cross-culturally analyze and predict divorce.

SOCIAL STRUCTURES AND ORGANIZATIONS

Formal properties of social structures and organizations constituted the main research objects for the third sociological strand in the post-Parsonian era. The Simmelian geometry of social forms was an inspiration to many scholars. In the 1970s Donald Black developed a general social control approach, which he subsequently applied to behavior of law, formation of norms, coalition building, economic consolidation, and deviance. Harrison White's famous study of vacancy chains made a momentous contribution to the literature on organizational forms and mobility. Mark Granovetter's work on the strength of weak ties was decisive in making network analysis a major methodology in sociology. Network analysis has been successfully operationalized since the 1970s to depict and explain phenomena as disparate as collective action, organizational behavior, cultural and scientific diffusion, sexual behavior, and crime. Among the most brilliant practitioners in sociology are Peter Bearman, Ronald Burt, Roger Gould, Edward Laumann, and John Padgett.

Post-Parsonian sociology took an interest in both the formal and the symbolic structures of organizations. Prominent representatives of the neo-institutionalist perspective, Paul DiMaggio and Walter Powell analyzed organizational isomorphism, John Meyer and Brian Rowan considered the mythical and ceremonial dimensions of formal structures in organizations, and Frank Dobbin showed the effects of cultural meanings on industrial policy. There has also been considerable theoretical progress in research on social systems. Andrew Abbott, for instance, proposed an ecological model for studying professions in *The System of Professions* (1988). Abbott viewed ecology, in the Chicago tradition of urban sociology, as an interacting system, and he empirically showed how jurisdictional battles between professions have molded their individual trajectories. Abbott has also laid out an innovative research agenda with a stress on the radical temporality of all social phenomena, and he has created a fractal model to explain social change and even the development of sociology itself. Finally, functionalism itself underwent an overhaul after Parsons. The neo-functionalism of Jeffrey Alexander insisted on open-ended, pluralistic, and creative interactions between subsystems in society and added a conflict orientation to the Parsonian paradigm.

CULTURE

The fourth sociological strand after Parsons was spurred by the linguistic turn in the social sciences. Culture became a key concept, especially in the 1980s and the

1990s. Ann Swidler has claimed that, rather than being preferences or values, culture involves strategies of action incorporated in dispositions, styles, and skills. Bill Sewell worked out a semiotic model of action and a theory of social structure integrating both resources and transposable schemes. His theoretical work explores temporality and underscores the importance of events in the transformational social structures. Viviana Zelizer showed how social meanings govern economic interactions and how people use money to create and maintain intimate ties. Michelle Lamont emphasized the role of symbolic boundaries and moral vocabularies in social stratification. Alexander's cultural sociology highlighted the centrality of meaning systems and performative practices in civil society.

MICRO-SOCIOLOGY

Finally, concomitant with the studies of large-scale structures, institutions, and processes, the post-Parsonian era also witnessed a growing interest in micro-sociology. Two distinct micro paradigms challenged functionalism's vision of the "oversocialized concept of man," to use the words of Dennis H. Wrong (1961). The first of these is interactionism. The symbolic interactionism of Herbert Blumer argued that meaning is construed through social interaction and that individuals are interpretative beings with reflexivity. Howard Becker's labeling theory as well as his later groundbreaking work on art worlds followed, in many respects, the symbolic interactionist research program. In his work resisting all facile theoretical labels, Erving Goffman was probably the most important student of social interaction in the second half of the twentieth century. From the late fifties to his untimely death in 1982, he analyzed social interaction in all kinds of settings using a wide array of dramaturgical, game-theoretic, etological, and cognitive concepts. His studies of impression management, stigma, role distance, embarrassment, and total institutions have all become classics.

Again within the interactionist paradigm, Harold Garfinkel deployed ethnomethodology to uncover the practical and often unconscious rationality that guides quotidian routines, with a particular attention to how people give accounts. Conversation analysts have devised sophisticated tools to capture the logic of verbal interaction. Among signal work in the interactionist tradition are Jack Katz's subtle phenomenological analyses of violence and emotions and Randall Collins's theory of interaction rituals, which is exceptionally promising as it bridges the individual and institutional levels.

Utilitarianism has been the other major micro-paradigm in the post-Parsonian era. This paradigm itself consists of two interacting streams: exchange theory and rational choice theory. George Homans had already done behaviorist work in the 1950s on social exchange. Peter Blau later extended Homans's model by exploring the structural implications of exchange, and Goode built on this paradigm to examine the production and distribution of prestige in society. The ways power relationships affect social exchange have been extensively investigated by Richard Emerson and Karen Cook. Parallel to these developments in exchange theory, an increasing number of researchers (usually referred to as rational-choice sociologists) were drawn to the promise of explaining social interaction and institutions from the assumptions of utility-maximizing actors and methodological individualism. These scholars were influenced by the work of economists such as Mancur Olson, who studied in the 1960s and the 1970s the collective action problems that groups face. In this vein Michael Hechter attempted to account for group solidarity from rational choice premises. James S. Coleman's magnum opus *Foundations of Social Theory* (1990) strived to erect a parsimonious rational choice foundation to explain all kinds of phenomena, including social capital, trust, collective action, and revolutions. Coleman applied his model also to the asymmetry between natural and corporate actors in contemporary societies.

As noted, the post-Parsonian period has been characterized by a multiplicity of theoretical orientations. While some have seen this as a cause for concern, there is reason to think that it is the absence of a hegemonic paradigm like the Parsonian functionalism that has allowed for the immense dynamism in the late twentieth century and early twenty-first century and that both the productive exchanges and the contentious struggles between the different strands sketched above have vastly enriched American sociology.

SEE ALSO *Blau, Peter M.; Critical Theory; Duncan, Otis Dudley; Functionalism; Merton, Robert K; Mills, C. Wright; Parsons, Talcott; Sociology; Sociology, Parsonian; Structuralism*

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Ari Adut

SOCIOLOGY, RURAL

The discipline of rural sociology addresses how communities and areas with few people are socially and economically organized, what patterns of social interaction occur among residents within these areas and elsewhere, and why and how communities change over time. Its early practitioners were active members in the rural sociology section of the American Sociological Society (later renamed as the American Sociological Association) until 1937. In that year, they founded the independent Rural Sociological Society (RSS) to promote teaching, research, and extension outreach. Since then, membership in the Society increased from seventy-nine to slightly less than one thousand academic scholars, professionals, and students in the new millenium. The first newsletter of the rural section appeared in 1925. The RSS published the newsletter as *Newsline* from the 1970s through 1980 and subsequently as *The Rural Sociologist* with the purpose to spread news about the vitality of rural sociology among its practitioners and others interested in the discipline.

HISTORICAL CONTRIBUTIONS

Rural sociological scholarship has a long tradition involving people, communities, and natural resources due in part to its location in the university land-grant system. In 1997 Norwood Kerr discussed the founding of the American land-grant university system by the Morrill Land-Grant College Acts of 1862 and 1890, the latter for traditionally black institutions in southern states. These acts introduced the movement led by Connecticut and thirteen other states to establish agricultural experiment stations to specifically address the development of practical agricultural information for rural farmers and ranchers through scientific investigations. The movement culminated in 1887 with the passage of the Hatch Act that forged the federal-state partnership for funding "scientific agriculture." The public service counterpart to the Hatch Act followed in the Smith-Lever Act of 1914. It assigned to the new cooperative extension service the task providing to ordinary people access to their state universities for assistance regarding a broad array of issues affecting themselves, and their families, businesses, and local governments. Early rural sociology programs and their research were and continue to be mostly affiliated with institutional partnerships between universities and agricultural experiment stations along with cooperative extension both at the state level and with counterparts in the United States Department of Agriculture.

Following the pioneering the work of sociologists such as W. E. B. Du Bois and F. H. Gidding, rural sociology was significantly influenced by the Country Life Commission that was appointed by President Theodore Roosevelt. The Commission's 1909 report on twelve rural communities pointed to problems of poverty, crime, population change, and governance that many rural communities were experiencing at that time and revealed the need for the land-grant system to devote social science expertise to solve these problems. Funding for conducting this research languished for a while, but passage of the Purnell Act of 1925 expanded federal commitment to experiment station research by funding studies in agricultural economics, rural sociology, and home economics. As documented by Olaf Larson and Julie Zimmerman in 2003, this commitment was extended in the United States Department of Agriculture (USDA)'s Division of Farm Population and Rural Life, where rural sociologists such as Charles Galpin, Carl Taylor, and others pioneered national-level studies on social trends and conditions in rural areas. These studies were followed by more locally oriented studies conducted by academic rural sociologists such as Paul Landis, Carle Zimmerman, and Dwight Sanderson. Founded in 1936, the journal *Rural Sociology* became the flagship for reporting much of this research.

During the next quarter-century, the importance of rural sociology to the public policy process and programs diminished with the dismantling of New Deal programs in the 1940s and the Division of Farm Population's successor, the Bureau of Agricultural Economics (BAE), in 1953. The USDA no longer favored what it termed "cultural surveys" nor did it receive well Walter Goldschmidt's study of two rural California communities in 1944 wherein he reported that rural well-being was negatively affected by large farms and powerful farmers. Trends of an increasingly more urban and industrialized U.S. population in the post–World War II (1939–1945) era were among other factors that contributed to rural sociology's loss of stature.

CONTEMPORARY RESEARCH EMPHASES

Interest renewed in rural sociology in the last quarter of the twentieth century. Researchers continued their traditional interests in rural communities, population change, rural poverty, and social inequality. They rejuvenated work begun in the 1950s on the adoption and diffusion of agricultural innovations. In 1983 Everett Rogers, one of the foremost leaders of this area, reported that the number of empirical studies grew from a total of 405 in 1962

to slightly more than 3,000 twenty years later. The "sociology of agriculture" became the new label that drew on this research history. It also staked out new areas regarding the social significance of women in agriculture, new biotechnologies, the expansion of industrialized agriculture and agribusiness, and the globalization of agro-industrialized systems. In their 1988 book, *Rural Sociology and the Environment*, Don Field and William Burch Jr. recognized important connections among agricultural sociology, human ecology, and natural resource sociology. They termed the intersection of these research venues as "agro-ecology" (p. 114) and proposed that it serve in the broadest sense as a definitive guide for rural development and a critical component of applied environmental sociology. The most comprehensive inventory of rural sociological concepts, subject matter, and knowledge about American rural life appeared in 1997. Gary Goreham's *The Encyclopedia of Rural America: The Land and People* includes articles by prominent rural sociologists and other scholars on 232 topics that vary from agriculture and other rural industries to rural youth, the elderly, women and minority groups, crime, culture, technology, and natural resources and the environment.

INTERNATIONAL RURAL DEVELOPMENT

Community and economic development continue to be important research and policy issues that confront and connect rural communities and rural scholars in America and abroad. Economic globalization has stressed and challenged rural communities everywhere. While many businesses and manufacturing companies seek out lower-cost production areas and lucrative markets, rural communities strive to find ways to overcome infrastructural, capital, resource, and policy obstacles to promote development and competitiveness. In 1962 U.S. and European rural sociologists convened at the annual meeting of the RSS in Washington, D.C., to form the Committee for International Cooperation in Rural Sociology to address these issues.

After three world congresses, the Committee organized the International Rural Sociology Association (IRSA) in 1976 to spearhead concern and attention involving the impacts of globalization and rural development. The IRSA is a federation of regional rural sociological societies devoted to foster the development and application of rural sociological inquiry to improve globally the quality of rural life. In addition to the RSS, the Association includes the Australian and Oceania Network, the Asian Rural Sociological Association, the Latin America Rural Sociological Association, and the European Society for Rural Sociology. The IRSA met at the XI World Congress in 2004 in Trondheim, Norway, to explore the unevenness, risks, and resistance related to the globalization of production and to the identification of rural economies' and societies' agency to manage change in this process. IRSA congresses are held every four years.

SEE ALSO *Sociology*

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John K. Thomas

SOCIOLOGY, SCHOOLS IN

In this entry, *school* will be understood as referring to a group of practitioners who are identified in terms of characteristic ways of acting upon the world. Such practices are derived from some general principles (analytical, theoretical, empirical premises of interpreting and putting into

practice some basic ways of viewing reality), often formulated by a central figure or figures and amplified by their students or followers. If not in terms of some defining orientation to the world, a school may receive its identity in terms of either the name of the leader who formulated the basic approach, or else the setting where the group developed its coherence and overall unity.

Schools are fairly common categorizations of groups in the humanities, such as in philosophy (e.g., American pragmatism), the arts (e.g., cubism), and even history (e.g., the Annales school of Lucien Febvre [1878–1956], Marc Bloch [1886–1944], and Fernand Braudel [1902–1985]). In contrast, it is uncommon to find schools in the history and development of the natural sciences, however marked they are by controversies over priorities in scientific discoveries. In between, although it is more common in presenting the history of the discipline to deal with the work of individuals rather than that of schools, in the social and behavioral sciences (social anthropology, clinical and social psychology, and particularly sociology), schools have played a major role. To pursue this topic, however, it is necessary to provide further specification of what is taken to be a *school* by breaking the term into a *weak* sense and a *strong* sense.

By *weak* sense of school is meant a grouping of figures and their research and publications that share a general orientation to reality, a general way of dealing with and interpreting social reality, irrespective of whether these individuals have known or interacted with each other; the strength of their networks is thus weak, and there is no specific locale for their training. The collective identity of such a school is heuristic in providing some organization to the diversity of empirical and research orientations present in the discipline, but it does not have a clear focus. And *school* in this sense may fade into a looser grouping, such as *traditions* that may be analytical (e.g., Collins 1994) or geographical (e.g., Genov 1989).

Perhaps the best approach to schools in the weak sense noted above is the pioneering study of then-contemporary sociological theories conducted by Pitirim Sorokin (1889–1968). He proposed (1928, p. xvi) that social theories seeking scientific merit could be grouped in nine major *schools* (mechanistic, synthetic and geographical, geographical, biological, biosocial, biopsychological, sociologistic, psychological, and psycho-sociologistic), with some important varieties listed under several schools. The taxonomy of his study was intended to establish inductively and critically sociology as a multidimensional discipline seeking to deal factually with its subject matter and correlations between classes of social phenomena and between social and nonsocial phenomena. Fifty years later this perspective of the unity in diversity of sociology still held (as seen in Eisenstadt and Curelaru 1976).

Strong schools are those that have a recognizable central primary figure (or in some cases, figures) who elaborates the basic principles of approaching social reality in the search for valid knowledge (the ontology and epistemology of the research enterprise)—metaphorically, who prepares the basic structure of a cookbook of recipes that may be used by students. In turn, the practices of the students add to the corpus of the initial doctrines and principles, perhaps by taking this into new vistas of research. The networking among members of the school will be strong, and will often show a high degree of citation of works of one another, with the writings of the central figures given privileged attention. While cohesion and mutual support vis-à-vis the discipline is high, for example, in obtaining resources for members and new recruits, such as publication outlets, research grants, and even academic or related positions, it is by no means assured. Yet even strong schools may weaken after one or two generations, either due to internal bickering regarding leadership or intellectual direction, or because of apparent exhaustion of research potential in the basic formulations of the school. Ultimately, the appeal of a school may wane when its central problems and modes of operation become viewed as superannuated in relating to societal reality and its changing conditions.

Some strong schools at peak strength dominate subfields of sociology and take on the general name of their orientation, with subgroups as offings having their own identity. In social psychology-sociology, *symbolic interactionism* (coined by Herbert Blumer [1900–1987]) has stressed the significance of establishing and interpreting how actors make sense (find meaning) in interacting with one another, even if the objective meaning of their situation is ambiguous. This school, drawing on the initial theoretical writings of the pragmatist philosopher George Herbert Mead (1863–1931) and the pioneering social psychological studies of William I. Thomas (1863–1947), had new dimensions introduced in the 1960s and 1970s in the ethnographic studies of Erving Goffman (1922–1982) and Harold Garfinkel (the latter, aided by Aaron Cicourel, developing the frames of ethnomethodology), and further in the 1980s in the studies of Gary Fine on subcultures. Though it is still a viable orientation at the microlevel (of interacting individuals), it has not been an overarching orientation of broader segments of society.

Also in this rubric of strong schools might be included *world-system theory*, which in the 1970s and 1980s had a major formulator, Immanuel Wallerstein (assisted by Terence Hopkins and Chris Chase-Dunn), a center for training (at the State University of New York–Binghamton), and a journal (*Review*). The comparative-historical studies of this school derive from a Marxist perspective of the exploitation of labor, before as well as after the advent of modern capitalism, and the unequal

distribution of world resources operating over time in zero-sum fashion with core capitalistic countries accumulating greater shares at the expense of "peripheries." The emergence of India and East Asia in recent decades has attenuated the appeal of this school, although it has made with its many scholars an important mark in the area of macrosociology.

There is perhaps a further set of *very strong* schools, which have practically dominated the entire field of sociology, or at least established some sort of intellectual hegemony for an entire generation or more. One might speak of the Marxist school drawing on the leadership of Karl Marx (1818–1883) and Friedrich Engels (1820–1895), with a basic presupposition that the social order rests on the expropriation of labor and the exploitation of workers, who are temporarily kept from realizing their true conditions by the smokescreens of the dominant class, but as conditions increasingly worsen, a point will be reached where a socialist revolution will shatter the capitalist system. There have been numerous variations of Marxism claiming legitimacy as successors, but the one that in addition to world-system theory has been most recognized in the United States and Germany is the Frankfurt school, which later evolved under the second-generation leadership of Jürgen Habermas (at the University of Frankfurt) as *critical theory*. The major figures of the school in the 1920s sought to amalgamate a Marxist orientation critical of capitalism (historical materialism) with a Freudian orientation on psychological and cultural maladaptations of the modern world that hinder personal freedom and generate alienation. At the Institute of Social Research, they—notably Theodore Adorno (1903–1969), Max Horkheimer (1895–1973), and Herbert Marcuse (1898–1979)—pursued philosophical and historical investigations, interrupted by the Nazi regime. After World War II (1939–1945), the renovated critical theory orientation found many adepts on both sides of the Atlantic, spearheaded by Habermas, who engaged in the mass media a wide variety of topics and whose writings on *communicative action* considerably widened the theoretical tools by an earnest engagement with non-Marxist orientations such as American pragmatism and Parsonian action theory.

The three other "hegemonic schools" (Tiryakian 1986) to be noted may each be said to have nearly dominated the field of sociology, either in their own country or in the entire discipline. Besides all the characteristics of strong schools noted above, they emerged in periods of national reconstruction following some major crisis, and their basic theoretical and methodological orientations offered new initiatives for sociological action.

The secular government of the French Third Republic (1870–1940), which gave a high premium to public education, science, and civic morality, favored the rise of the Durkheimian school (Besnard 1983), whose intellectual leader, Émile Durkheim (1868–1917), produced foundational works for modern sociology, established the teaching of sociology at the prestigious Sorbonne in Paris, attracted highly gifted students—Marcel Mauss (1872–1950), François Simiand (1873–1935), Maurice Halbwachs (1877–1945), Marcel Granet (1884–1940), Robert Hertz (1881–1915), Henri Hubert (1872–1927)—who later found appointments in major areas of the public sector, and secured major publishing outlets (the publishing house Alcan and the world-class journal, the *Année Sociologique*, which greatly contributed to advancing comparative-historical sociology and tacitly is the model for the American *Annual Review of Sociology*). The school emphasized in diverse analyses the irreducibility of the social to individual causation such as *economic interests*, but sought to bring to light structures of social organization deeply imbedded in cognitive and ritual aspects of the collectivity itself.

In the United States, the University of Chicago became the locale of a new empirical orientation derived from (1) the pragmatism of Charles Sanders Peirce (1839–1914), William James (1842–1910), and George Herbert Mead (1863–1931), and (2) the application of ecology in botany to the study of the dynamics of social organization of the human urban habitat, marked by competition and accommodation of various groups. With brilliant students under the analytical leadership of Robert Park (1864–1944) and the quantitative leadership of his lieutenant, Ernest Burgess (1886–1966), the Chicago school emerged after World War I (1914–1918) as providing outstanding training in field research and participant-observation of interaction processes (Bulmer 1984; Abbott 1999; Chapoulie 2001). It obtained research grants for its students, enjoyed a major publication outlet for doctoral monographs with the University of Chicago Press, and has been the site of the continuous publication of a world-class journal, the *American Journal of Sociology*.

Finally, in the post–World War II era, from the mid-1940s until the mid-1960s, Talcott Parsons (1902–1979) at Harvard University provided the prolific intellectual leadership for a new and systematic analytical perspective intended to integrate sociology, social anthropology, and social and clinical psychology. As the United States took global leadership in a *pax Americana*, Harvard's Department of Social Relations provided new comparative and theoretical training that could be applied at micro- as well as macrolevels of analysis in what came to be termed *structural-functional analysis*. The historical development of this school and some of its major contributors—including Robert Merton (1910–2003), Kingsley Davis (1908–1997), Neil Smelser, and Robert Bellah—as related to but distinct from Parsons (whose later writings

in what he saw as "action theory" went considerably beyond the initial mode of analysis he provided in the 1940s and 1950s) awaits to be written, beyond Parsons's intellectual biography (Gerhardt 2002). Such a history would entail the many resources the school made available (such as the publishing house the Free Press, and the research grants of the Ford Foundation) and the diffusion of many of its central theoretical ideas to related disciplines such as political science and social anthropology.

This necessarily skeletal account of schools needs two final points. First, some of the most important names in the history of sociology are not associated with schools, despite their intellectual worth and significance. Such is the case, for example, with Herbert Spencer (1820–1903), Max Weber (1864–1920), Georges Gurvitch (1894–1965), and Pitirim Sorokin. Second, schools do not flourish in sociology at all times; the contemporary period, for instance, seems to be a quiescent period bereft of a clearly recognized "hegemonic" school. Perhaps this presents an opportunity for a more objective examination of the rise and fall of schools, as well new research on their interconnecting networks.

SEE ALSO *Chicago School; Frankfurt School; Habermas, Jürgen; Marcuse, Herbert; Marx, Karl; Marxism; Mead, George Herbert; Merton, Robert K; Park, Robert E.; Parsons, Talcott; Race Relations Cycle; Sociology; Sociology, American; Wallerstein, Immanuel; Weber, Max; World-System*

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Edward A. Tiryakian

SOCIOLOGY, THIRD WORLD

Any discussion of the "third world" should begin with a definition of the term. *Third world* is commonly used to describe countries that are economically poor, lack adequate educational and health systems, suffer from the digital divide, and exhibit relatively little global political power. Although frequently used, the term is considered out-of-date and even derogatory in some circles. Many scholars, for instance, argue that "third world" implies that poor countries are less important than other ("first world") countries or are somehow not part of the global economic system. In their 2007 book *Global Inequalities*, York Bradshaw, Stephen Scanlan, and Michael Wallace said that instead of "third world" critics often use "developing world" or "developing nations" when referring to countries that are not fully developed from an economic and quality of life standpoint.

In his 1974 publication *The Modern World System*, Immanuel Wallerstein discussed one theoretical perspective concerned with development, which places countries into three different categories. The "core" is composed of rich, industrialized countries that also enjoy a relatively good quality of life in terms of education and health care. The "periphery" is composed of poor countries that lack industrial capacity and well-developed education and health care systems. The "semi-periphery" is composed of middle-income countries that are between the core and the periphery. The periphery and the semi-periphery make up the vast majority of the world's countries.

For this discussion, terminology is not a main concern. Terms come and go over time, but the reality is that *global inequality* remains an enormous problem. Much of the world lives amid extreme poverty. This article describes the developing world and then discusses how sociology studies it.

AN UNEQUAL WORLD

To begin, here is a quiz: What two developing countries account for 37 percent of the world's 6.5 billion people? If you answered China (1.3 billion) and India (1.1 billion), you win a prize. In fact of the ten most populated countries in the world, seven are considered developing and,

together with China and India, they account for nearly 51 percent of the world's population. Of the 210 countries listed by the World Bank, three-quarters are considered low- or middle-income countries, and this represents the vast majority of the world's population. In fact if the issue is studied in reverse, there are only twenty-four true "core" countries in the world (11 percent of the world's countries), and they account for less than 20 percent of the global population. There are a number of other "high income" countries (e.g., Bahrain, Kuwait, Monaco, Slovenia), but they are mostly small and do not possess all of the characteristics of the core (World Bank 2007).

Another way to think about global inequality is to compare the resources of companies, countries, and individuals. Here is another quiz: What country has the twenty-second largest economy in the world, as measured by gross domestic product (output of total goods and services)? The answer: the core country Austria, which has a gross domestic product of $309.4 billion. Twenty-one countries have larger economies, and 188 have smaller ones (World Bank 2007). But wait a minute! Austria is not the twenty-second largest economic entity in the world; Wal-Mart is. That is right. According to Christopher Tkaczyk in his 2007 article "Fortune 500: The Top 50," Wal-Mart, the biggest multinational corporation in the world in terms of total revenue ($351.139 billion), is larger than all but twenty-one countries in the world. Wal-Mart is larger than several core countries, most semi-peripheral countries, and all peripheral countries. And incredibly the combined revenues of the top *two* multinational corporations (Wal-Mart [$351.139 billion] and Exxon Mobil [$347.254 billion]) are greater than the *combined* economic output of all fifty-three sub-Saharan African countries. Together Wal-Mart and Exxon Mobil are larger economic entities than the entire continent of Africa (Tkaczyk 2007; World Bank 2007).

Inequality is also evident when looking at personal wealth across countries and regions. A comprehensive study conducted in 2006 by the World Institute for Development Economics Research at the United Nations University in Helsinki, Finland, revealed that the richest 2 percent of the world's population owns more than half of the world's wealth. And the richest 10 percent of the population owns 85 percent of the world's wealth. By contrast, the bottom 50 percent of the world's population owns 1 percent of the total wealth on the planet. In fact 1.3 billion people around the world live on less than $1 per day, and 3 billion (nearly half the planet's population) live on less than $2 per day. By contrast, pointed out Luisa Kroll and Allison Fass in the 2007 article "The World's Billionaires," the extremely wealthy of the world—the 946 billionaires throughout the globe—are worth $3.5 trillion ($3,500,000,000). That is more than twice the gross domestic product of all peripheral countries in the world combined (World Bank 2007).

And what are the consequences of poverty? One is disease and premature death. A primary development indicator is the child mortality rate in a country—the number of children who die before the age of five for every 1,000 children born. In economically developed countries, the average child mortality rate is only 8 (led by Sweden's 3), but in developing countries the rate is 89. In a pair of 2007 studies by UNICEF, it was found that in Africa the child mortality rate is 174, with a number of countries over 200 and some approaching 300 (UNICEF 2007a, 2007b). Each *day* around the world as many as 35,000 children die primarily from preventable diseases and malnutrition. Respiratory infections, diarrheal disease, tuberculosis, measles, malaria, and HIV/AIDS are some of the leading causes of death among children of the developing world. According to York Bradshaw, Stephen Scanlan, and Michael Wallace (2007), the vast majority of the world's HIV/AIDS cases are in developing countries, led by African countries.

SOCIOLOGY AND GLOBAL INEQUALITY

Sociology was slow to study international inequality and development. Until the 1970s the field was dominated by economists, anthropologists, and political scientists. All of this began to change in 1974, when the sociologist Immanuel Wallerstein published *The Modern World System*. Wallerstein argued that the current world economic and political structures have their origins in sixteenth-century Europe. His book and subsequent work established an entirely new theory (world-systems theory) that divides the world into the core, periphery, and semi-periphery, as mentioned previously. Although some people disagree with Wallerstein, just about everyone agrees that along with finding an innovative theory, he started a movement of young sociologists who wanted to study international inequality and development.

In response to Wallerstein's new theory, a number of sociologists began to conduct sophisticated statistical studies to examine the causes and effects of international inequality. The results of several studies are presented below. All are based on a large sample of developing countries.

- Foreign investment in poor countries does not reach the mass population and therefore creates more inequality in those places. This ultimately harms economic growth in the developing world (Bornschier and Chase-Dunn 1985).
- Expanding foreign debt and the accompanying structural adjustment policies implemented by the

International Monetary Fund (IMF) and others increase child mortality in poor countries (Bradshaw, Noonan, Gash, and Buchmann 1993).

- Likewise structural adjustment policies have increased riots and overall instability in a number of developing countries (Walton and Ragin 1990).
- Education is linked to greater economic growth and less inequality in the developing world (Buchmann and Hannum 2001; Hannum and Buchmann 2005).
- Child labor is detrimental to the quality of life in developing countries. Moreover education reduces child labor, again underscoring the necessity of schooling in developing nations (Bradshaw, Scanlan, and Wallace 2007).

Sociologists use two other types of studies to advance theoretical and substantive knowledge of development. First, some sociologists *compare* a few countries in great detail in order to address difficult questions and issues that often reflect inequalities of wealth and power. For example, in his book *Reluctant Rebels: Comparative Studies of Revolution and Underdevelopment* (1984), John Walton looked at revolts and revolutions in the Philippines, Colombia, and Kenya to answer this question: Why and when do people rebel? And in the book *Child Labor in Sub-Saharan Africa* (2004), Loretta Bass takes us across the continent of Africa to explain the causes and effects of child labor (including slavery). Inequality is again a key component in the explanation of this pressing challenge. Second, other sociologists engage in intensive *case studies* of particular developing countries to investigate especially important issues (Bradshaw and Wallace 1991). For example, in his highly regarded book *Underdeveloping the Amazon: Extraction, Unequal Exchange, and the Failure of the Modern State* (1985), Stephen Bunker relied on extensive fieldwork to show how local and international forces interacted to plunder the Amazon. And in *Growing Up Modern: The Western State Builds Third-World Schools* (1991), Bruce Fuller focused on the poor country of Malawi to demonstrate how the "fragile" national state tried (with mixed success) to implement a Western-style education system. National and global inequalities helped to explain the outcome.

In the early twenty-first century most internationally oriented sociologists are concerned with global inequality in one form or another. Although an occasional sociologist argues that global inequality is shrinking and globalization is a positive force (see, for example, Glenn Firebaugh's provocative book *The New Geography of Global Income Inequality* [2003]), most are concerned about the high level of inequality and its impact on the vast majority of the world's population. In terms of offering solutions to global inequality, sociologists have joined others to advocate for more foreign aid to poor countries and forgiveness of the developing world's crippling debts. Perhaps the most well-known and passionate spokesperson for these positions is Bono, the lead singer for the Irish rock group U2. He has encouraged the United States and other countries to contribute 1 percent more of their federal budgets to the world's poor:

> One percent is the girl in Africa who gets to go to school—thanks to you. One percent is the AIDS patient who gets her medicine—thanks to you. One percent is the African entrepreneur who can start a small family business—thanks to you. One percent is not redecorating presidential palaces and money flowing down a rat hole. This one percent is digging waterholes to provide clean water. (Bono 2007, p. 41)

There is much more for sociologists to study. Over the next ten years sociologists will most likely devote substantial attention to three issues (among others). First, HIV/AIDS continues to ravage large parts of the developing world, and there is a huge need for research to study both the causes and effects of this pandemic in more detail. Second, information technology has the capacity to improve health, education, and overall quality of life in developing regions (Bradshaw, Fallon, and Viterna 2005). Commenting on a new e-school initiative in Africa, South African president Thabo Mbeki said, "Let us use this technology to do things better, develop African brain power that will pull our country and the African continent as a whole out of poverty" (Nepad 2007). Finally, many believe that the darkest side of globalization includes not the sale of products across national borders but the sale of human beings. Hundreds of thousands of people—especially women and girls—are sold each year in both the developing and the developed worlds. Sociologists are primed to lead the way in studying this enormous social challenge, another problem that emerges from an unequal world.

SEE ALSO *AIDS/HIV in Developing Countries, Impact of; Developing Countries; Development and Ethnic Diversity; Development in Sociology; Inequality, Gender; Inequality, Political; Inequality, Racial; Poverty; Sociology; Third World; United Nations; Wallerstein, Immanuel; World-System*

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York W. Bradshaw

SOCIOLOGY, URBAN

As the cutting edge of change, cities are important for interpreting societies. Momentous changes in nineteenth-century cities led theorists to explore their components. The French word for place (*bourg*), and its residents (*bourgeois*), became central concepts for Karl Marx (1818–1883). Markets and commerce emerged in cities where "free air" ostensibly fostered innovation. Industrial capitalists thus raised capital and built factories near cities, hiring workers "free" from the feudal legal hierarchy. For Marx, workers were proletarians and a separate economic class, whose interests conflicted with the bourgeoisie. Class conflicts drove history. Max Weber's (1864–1920) *The City* (1921) built on this legacy but added legitimacy, bureaucracy, the Protestant ethic, and political parties in transforming cities. Émile Durkheim (1858–1917) similarly reasoned historically, contrasting traditional villages with modern cities in his *Division of Labor* (1893), where multiple professional groups integrated their members by enforcing norms on them.

British and American work was more empirical. British and American churches and charitable groups that were concerned with the urban poor sponsored many early studies. When sociology entered universities around 1900, urban studies still focused on inequality and the poor. Robert Park (1864–1944) and many students at the University of Chicago thus published monographs on such topics as *The Gold Coast and the Slum* (1929), a sociological study of Chicago's near north side by Harvey Warren Zorbaugh (1896–1965).

The 1940s and 1950s saw many efforts to join these European theories with the British and American empirical work. Floyd Hunter published *Community Power Structure* (1953), an Atlanta-based monograph that stressed the business dominance of cities, broadly following Marx. Robert Dahl's *Who Governs?* (1961) was more Weberian, stressing multiple issue areas of power and influence (like mayoral elections versus schools), the indirect role of citizens via elections, and multiple types of resources (money, votes, media, coalitions) that shifted how basic economic categories influenced politics. These became the main ideas in power analyses across the social sciences.

Parisian theorists like Michel Foucault (1926–1984), Pierre Bourdieu (1930–2002), and Henri Lefebvre (1901–1991) suggested that the language and symbols of upper-status persons dominated lower-status persons. Others, such as Jean Baudrillard, pushed even further to suggest that each person was so distinct that theories should be similarly individualized. He and others labeled their perspective *postmodernism* to contrast with mainstream science, which they suggested reasoned in a linear, external, overly rational manner. Urban geographers like David Harvey joined postmodernist themes with concepts of space to suggest a sea change in architecture, planning, and aesthetics, as well as in theorizing, although Harvey's main analytical driver is global capitalism.

Saskia Sassen starts from global capitalism but stresses local differences in such "world cities" as New York, London, and Tokyo. Why these? Because the headquarters of global firms are there, with "producer services" that advise major firms, and market centers where sophisticated legal and financial transactions are spawned. Individual preferences enter, via global professionals and executives who like big-city living, but hire nannies and chauffeurs, attracting global migrants, which increases (short-term, within city) inequality. Some affluent persons create gated housing, especially in areas with high crime and kidnapping, like Latin America.

These past theories stress work and production. A new conceptualization adds consumption. Walter Benjamin (1892–1940) theorized that the *flaneur* drove the modern capitalist economy, by shopping. Typified by the top-hatted gentleman in impressionist paintings, the *flaneur* pursued his aesthetic sensitivities, refusing standardized products. Mall rats continue his quest.

Theories have grown more bottom-up than top-down, as have many cities, although this is controversial, as some capital and corporations are increasingly global. The father of bottom-up theory is Alexis de Tocqueville (1805–1859), whose *Democracy in America* (1835–1840) stressed community associations like churches. Linked to small and autonomous local governments, these associations gave (ideally) citizens the ability to participate meaningfully in decisions affecting them. Such experiences built networks of social relations and taught values of participation, democracy, and trust.

In the late twentieth century, Tocqueville and civic groups became widely debated as nations declined and cities competed for investors, residents, and tourists. With the cold war over, globalization encourages more cross-national travel, communication, investment, and trade. Local autonomy rose. But nations declined in their delivery of egalitarian welfare benefits, since ideal standards are increasingly international. "Human rights" is a new standard. Yet the world is too large to implement the most costly specifics, even if they remain political goals.

Over the twentieth century, many organizations shifted from the hierarchical and centralized to the smaller and more participatory. The community power literature from Hunter (1953) to Dahl (1961) and beyond suggests a decline in the "monolithic" city governance pattern that Hunter described in Atlanta. Dahl documented a more participatory, "pluralistic" decision-making process, where multiple participants combine and "pyramid" their "resources" to shift decisions in separate "issue areas."

New social movements (NSMs) emerged in the 1970s, extending past individualism and egalitarianism and joining consumption and lifestyle to the classic production issues of unions and parties. These new civic groups pressed new agendas—ecology, feminism, peace, gay rights—that older political parties ignored. In Europe, the national state and parties were the hierarchical "establishment" opposed by NSMs. In the United States, local business and political elites were more often targeted. Other aesthetic and amenity concerns have also arisen—like suburban sprawl, sports stadiums, and parks; these divide people less into rich versus poor than did class and party politics.

Comparative studies emerged after the 1980s of thousands of cities around the world. They have documented the patterns discussed above, and generally show that citizens and leaders globally are more decentralized, egalitarian, and participatory. *The New Political Culture* (1998), edited by Terry Nichols Clark and Vincent Hoffmann-Martinot, charts these new forms of public decisions and active citizen-leader contacts via NSMs, consumption issues, focused groups, block clubs, cable-television coverage of local associations, and Internet groups. Global competition among cities and weaker nations makes it harder to preserve national welfare-state benefits. This encourages more income inequalities, individualism, and frustrated egalitarianism, which is registered in higher crime rates, divorce, and low trust. As strong national governments withdraw, regional and ethnic violence rises (e.g., in the former Soviet Union or diverse cities like Miami). Voter turnout for elections organized by the classical national parties (which still control local candidate selection in most of the world) thus declined, while new issue-specific community associations mushroomed in the late twentieth century. Urbanism has become global, carried by civic groups, diffused by the Internet, and operating in more subtle ways than past theories proposed.

SEE ALSO *Anthropology, Urban; Assimilation; Bourdieu, Pierre; Chicago School; Cities; Class Conflict; Community Power Studies; Dahl, Robert Alan; Economics, Urban; Elite Theory; Foucault, Michel;*

Geography; Hunter, Floyd; Marx, Karl; Metropolis; Pluralism; Social Movements; Street Culture; Tocqueville, Alexis de; Urban Renewal; Urban Riots; Urban Sprawl; Urbanization; Weber, Max

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Terry Nichols Clark

SOCIOLOGY, VOLUNTARISTIC VS. STRUCTURALIST

Voluntaristic sociology emphasizes the importance of free will, or agency, in social settings. Structuralist sociology emphasizes the importance of social settings in shaping and constraining free will. Tension between the two emphases has bedeviled and inspired sociology and related disciplines since the nineteenth century. Among the first to wrestle with this tension was Auguste Comte, who coined the term *sociology* in the 1830s. Human action is determined by the laws of society, in Comte's structuralist view, but understanding these laws will allow sociologists to help modify human action. Comte recognized the possible contradiction and discussed it in lecture 48 of his *Social Physics* ([1839] 1975, p. 132): if free will is able to make modifications, "what can [they] consist of, since nothing can alter either the laws of harmony or the laws of succession?" Comte's solution reflects his structuralist emphasis: free will can affect only the intensity of the operation of societal laws, not the laws themselves. Comte gives examples of powerful monarchs who had only a meager impact on the lives of their subjects.

Later scholars expanded the scope of voluntarism beyond monarchs and sociologists to encompass all of humanity. The most extreme statement of voluntarism within the sociological mainstream came from Herbert Blumer, who invented the term *symbolic interactionism* in 1937. Human behavior, Blumer insisted, is a creative act that cannot be reduced to structural causes: "even though it may well be a well-established and repetitive form of social action, each instance has to be formed anew" (1969, p. 17). This formulation implies that people may choose *not* to behave as expected. Indeed, while symbolic interactionism generally focuses on conformity, Blumer also helped to establish the field of *collective behavior*, which focuses on deviance. In these writings Blumer argued that voluntaristic deviance, if it comes to be widely accepted, is the main mechanism through which societies evolve.

By the end of the twentieth century, voluntarism had, in one sense, conquered the field. It was considered improperly derogatory to imply that any person's choices are determined by social context. Even explicitly structuralist theories were increasingly concerned to accommodate free will to some degree, often through the use of the concept of *opportunities*. At the same time, the goal of most sociological explanation remained structuralist, focusing on contextual factors that predict individual outcomes. The radical voluntarism of symbolic interactionism and collective behavior analysis was not widely adopted and, indeed, came to be criticized for ignoring the persistent structures of inequality that characterize social life. In short, sociology was equally committed to voluntarism and structuralism. This paradox generated a variety of attempts to view structure and agency as mutually constitutive.

On one hand were efforts at combination. An influential version of this approach was Peter L. Berger and Thomas Luckmann's *The Social Construction of Reality* (1966), which argued that the two *moments* of institution–creation and institution–maintenance are analytically distinct even if they may in practice coincide. The creation of institutions involves the active working of human agency while maintenance involves the socialization of future generations to view the institutions created by their predecessors as legitimate and permanent. A contrasting approach is exemplified by Anthony Giddens's *The Constitution of Society* (1984), which argues that structure and agency should not be considered as distinct from one another but, rather, as two parts of the same process, which he labeled *structuration*. People produce and reproduce the rules of social life in ways that are patterned by the rules of social life.

On the other hand were efforts to privilege structuralism over voluntarism and vice versa while maintaining both. A sophisticated version of the former balance comes from the works of Pierre Bourdieu. Bourdieu argued that human agency is a variable product of social structure mediated by the bodily comportment and criteria of judgment that Bourdieu called *habitus*. Habitus structures individual preferences and actions and is itself structured by training within particular social contexts. Claims of agency—whether among academic observers or the people being observed—are in this view the result of structural processes. Alternatively, voluntarism may subsume structuralism, as in Patricia Hill Collins's *Black Feminist*

Thought (2000). Collins argued that the powerless are frequently canny observers of the workings of society and active agents of resistance. Ongoing subordination is the product of other people's continuous efforts to dominate, and even the powerless participate in this "matrix of domination" when they work to protect their privilege, meager as it may be (Collins 2000, pp. 227–229, 273–277). The implication is that structuralist claims—whether among observers or the observed—are voluntaristic acts of domination that obscure the radical potential of voluntaristic transformation.

These approaches are usually cited as a way of signaling intellectual affiliation and are only beginning to be juxtaposed and compared. It remains unclear what standards one might use to evaluate voluntarism and structuralism.

SEE ALSO *Blumer, Herbert; Bourdieu, Pierre; Comte, Auguste; Giddens, Anthony; Interactionism, Symbolic; Social Constructionism*

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Charles Kurzman

SOCIOMETRY

Sociometry, by definition, measures the "socius"—the interpersonal connection between two people (Moreno 1951). The founder of sociometry, Jacob L. Moreno (1889–1974), conceived three levels of sociometry (Moreno [1953] 1993), applying the term *sociometry* to each (tending to cause confusion). These levels are:

theoretical system (alternately termed *sociatry*)—including role, social atom, spontaneity/encounter, psychodrama/enactment, and sociometry theories;

subtheory of that system; and

assessment method and intervention (Hale 1981; Remer 2006).

Historically sociometry was a central influence in sociology and related areas, even producing several dedicated journals. Over time, though, its influence has diminished to such a point that, at most, one of its central constructs—the sociogram—gets only passing mention in assessment texts (e.g., Cohen and Swerdlik 2005; Cronbach 1970; Gronlund 1971). However, a complete understanding of sociometry provides tremendously powerful structures and tools for use not only in small group interactions but also wherever and whenever interpersonal dynamics come into play.

Grasping the entire sociometric system is optimal, but popularly sociometry theory is focused on measuring relationships, the purview of both social atom theory (long-term relationships and their development and maintenance over time) and sociometry (fluctuation of interpersonal connections over short periods). The sociogram is the representation of sociometry (see Figure 1).

Beyond the conception of humans as essentially social beings, sociometry recognizes and uses the fact that all these connections are perpetually manifest in the social choices we make—for example, with whom we eat lunch; whom we marry; whom we sit next to in classes, receptions, and other meetings; whom we like and do not like (based on tele, warm-up, role reciprocity). Using both positive (choose/acceptance/attraction) and negative (not-choose/rejection/repulsion) choices, the connections between people and the patterns of connections throughout groups are made manifest, explored, and influenced (Remer 1995a, 1995b; Remer and Finger 1995; Remer, Lima, Richey, et al. 1995).

The key to using sociometry as an assessment and intervention (like Heisenberg's principle) most effectively is understanding Moreno's full conceptualization. The misconception is that sociometry stops with the production of the sociogram from choices expressed related to a specific criterion (e.g., "With whom would you most and least want to sit at a wedding reception?"). This level is what Moreno called "near ['weak'] sociometry" (my label). "Strong" sociometry requires two conditions beyond eliciting choices and depicting them: (1) The choices must be implemented (e.g., you must sit with whom you have

chosen), and (2) the reasons for choosing must be made overt and explored. The last two conditions present many possibilities and difficulties.

Implementing the choices makes them real in the sense that the full impact of a choice is experienced (e.g., you can say I'll sit with Aunt Bertha to be nice, but actually sitting with her may inform you fully why others have not opted for that seat). So future choices will be influenced. Arriving at an optimal implementation is challenging because not everyone can have one of his or her positives, and some must endure a negative—regardless of how many selections are allowed (a phenomenon addressed by the theory).

Examining choice rationales presents other challenges. People tend to be uncomfortable with the process because, for example, they believe that feelings may be hurt or they are confused by their own ambivalences and lack of awareness of their reasons. Reservations have some validity but usually not nearly to the degree feared. The benefit derives from probing projections attendant—assumptions about the rationales and/or expectations for the choices. At worst, some perceptions are confirmed; at best and more often, the rationales do not conform to suppositions in informative ways (e.g., you are not chosen by a friend because you see each other frequently and he or she wants to visit with others, or you are chosen by someone because you are seen as the only less talkative person in the group). Negatives are not necessarily "bad," nor are positives necessarily "good." Learning reasons challenges assumptions and/or provides the basis for changing behaviors—a not inconsequential therapeutic value.

The sociograms (Figure 1) and the choices from which it is constructed (Figure 2) clarify these points and introduce terminology to illustrate the strengths of sociometry. The data are real, using the criterion "From whom would you like feedback?" based on two positive and two negative choices.

The pattern of choices shows that D is the "star" (that is, he or she receives the most choices) and F is a "rejectee" (he or she receives no positive choices and a number of negative choices); everyone else is a "member" (receiving some positive and perhaps some negative choices). No "isolate" (someone receiving no choices) appears. C, D,

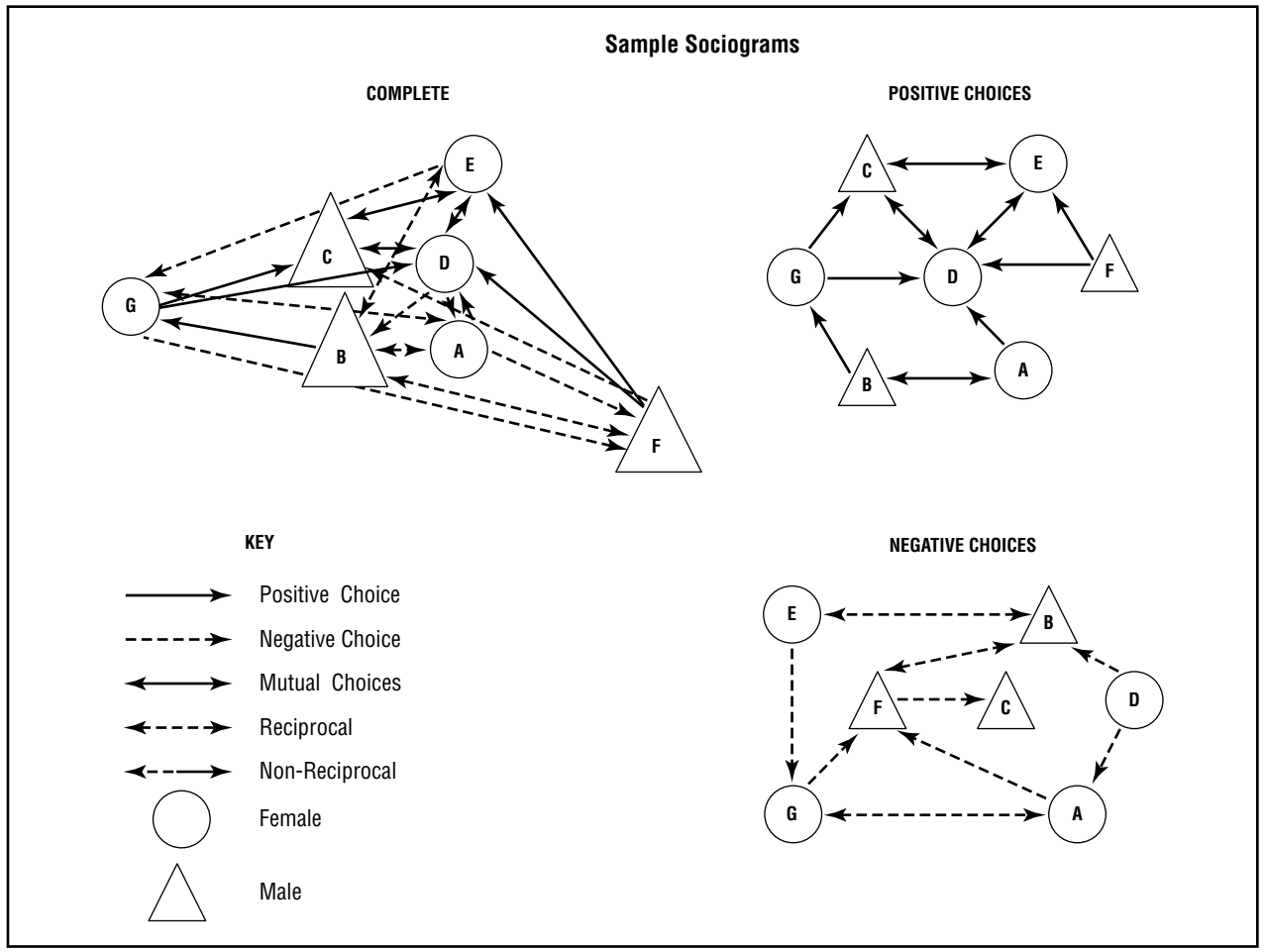

Sociometric Choice Matrix

Chooser	Chosen						
	A	**B**	**C**	**D**	**E**	**F**	**G**
A		+		+		–	–
B	+				–	–	+
C				+	+		
D	–	–	+		+		
E		–	+	+			–
F		–	–	+	+		
G	–		+	+		–	
+ Choices Received	**1**	**1**	**3**	**5**	**3**	**0**	**1**
– Choices Received	**2**	**3**	**1**	**0**	**1**	**3**	**2**
Total Choices Received	**3**	**4**	**4**	**5**	**4**	**3**	**3**

and E form a "subgroup," having each reciprocally positively chosen each other. The centrality of D and F to the group dynamics is more obvious in seeing the positives and negatives separately, illustrating that energy of the group is demanded regardless of choice valence—both D and F have significant impacts.

The criterion implemented dyadically manifests practical difficulties. Who would be paired with D; who would be stuck with F? If C and E were paired, satisfying their desires, what then of D's desires? The optimal implementation satisfies the most choices of either valence. The process makes manifest exactly the dynamics experienced in all group situations (as anyone planning a wedding reception can attest). Knowing the reasons behind the choices and their strength (expanded schema) can help with optimal assignment. Some rationales indicate that "violating" a choice is not as detrimental as assumed (e.g., A and G reciprocally reject because they do not know each other).

With the particular criterion used (and its converse, "To whom would you like to give feedback?"), the implementation and rationale-sharing fit well together (i.e., sharing the rationales is giving feedback). With different criteria the sociometry will change, perhaps not greatly. For example, "To whom would you like to speak?" or "Whom would you like to know better?" could change the valence of the A-G choices and also demonstrates the difference between "actionable" criteria and "near" sociometry ones (e.g., "Whom in the group don't you know well?"). Choice of criteria influences the sociometry, revealing each individual's worth if done skillfully.

Lest sociometry be thought to be only small-group focused, Moreno's work with the U.S. Navy in forming more efficient and safer squads (Moreno 1951) and with the Hudson School for Girls, where cottages were formed and run sociometrically (Moreno [1953] 1993) were both large-scale sociometry interventions.

Sociometry as an assessment and intervention is a powerful tool. Sociometry the theory offers principles to predict and guide. More comprehensive and powerful, sociometry the system applies synergistically to the multiple foci and levels of human relatedness addressed by the interconnected subtheories.

SEE ALSO *Choice in Psychology; Groups; Networks; Prediction; Sociology*

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Rory Remer

SOCIOMUSICAL THEORY

SEE *Music.*

SOFT SKILLS

Soft skills are core abilities and personal attributes that complement hard skills, that is, the technical knowledge required of an individual in the workplace. The term is often used synonymously with *generic skills* or *social competence*, though it refers in the strict sense only to key abilities that can be applied to job performance.

The term *soft skills* originated in the information technology sector and emphasizes the fact that soft skills are difficult to measure compared to technical skills, which have a straightforward or measurable impact on outcome. Due to the interdisciplinary character of the concept—it is used in the economic, social, and psychological sciences—a simple one-dimensional definition does not exist. There is broad consensus, however, concerning the division into *intrapersonal* skills and *interpersonal* skills. The former refer to self-regulating characteristics, such as time- and self-management, improvements in learning and performance, awareness of rights, and responsibility. The latter encompass those abilities and attitudes used in interactions with other people. Interpersonal skills can be further differentiated according to the individual's position in the interactive situation. Firm-internal collaboration requires leadership qualities and conflict-management skills with regard to subordinates as well as successful participation in a team of peers. Communication skills and negotiation competencies are important in interactions with customers and clients and are especially required in service-related activities. The concept also comprises personal attitudes, such as self-confidence, integrity, and respect; technical abilities, such as knowledge in information and communication technology; and language proficiency, even though the latter can be measured and could equally be considered a hard skill.

For the United States, the Secretary's Commission on Achieving Necessary Skills (SCANS) represents an extensive survey of abilities required to meet existing labor demands. Commissioned by the U.S. Department of Labor, SCANS identifies hard and soft skills that are essential in the workplace and ranks them according to the impact they have on job performance in different types of occupations. The survey also lists the most substantive literature on workplace skills for future research. A further important resource is the Occupational Information Network (O*NET), whose design reflects a systematic way to collect and analyze occupational information. Though both instruments show a similar categorization scheme at the broadest level, the term *soft skills* is not explicitly stated. Rather, SCANS uses the terms *personal qualities* and *interpersonal competencies*, while O*NET mainly uses *worker characteristics*. SCANS and O*NET constitute a relevant source for the development and success of education and training programs, job analysis, and job design that goes far beyond the description of entirely technical and cognitive skill requirements.

EMPIRICAL EVIDENCE

The first attempts at measuring personal and interpersonal competence can be traced to the triarchic concept of intelligence introduced by the American psychologist Edward L. Thorndike (1874–1949). Thorndike distinguished between abstract, mechanical, and social intelligence and thus allowed for a multidimensional investigation of knowledge and traits that relied on psychometric procedures (1920). The wide-ranging term *soft skills*, entailing highly personal and subjective traits and qualities, requires a sensitive analysis of assessment tools. A common standard of measurement at the national level is not yet available, and the instruments already existing at the microeconomic level vary with respect to the set and definition of the indicators they use. The information collected from group discussions, simulations, and psychometric questionnaires does not contain all dimensions of soft skills and only considers a small cohort of individuals. Much work has been done in the sector of information systems (IS). The personal and interpersonal skills of workers employed in the IS field have been evaluated using simulated work situations. The findings indicate that work experience does not have a significant effect on self-management strategies or interaction with peers and superiors. However, IS professionals perform better in managing subordinates and interacting with customers (Damien et al. 1999).

At the macroeconomic level, research focuses on the analysis of the impact of soft skills on earnings. Greg J. Duncan and Rachel Dunifon (1998) suggest that soft skills are as good a predictor of labor market success as are levels of formal education.

Interpersonal skills can also be used to explain gender and racial pay gaps (Borghans et al. 2005; Fan et al. 2005). Such skills have a particularly positive impact on the job performance of women. Studies in intergenerational mobility take account of soft skills, but the results derived so far are vague. Samuel Bowles and Herbert Gintis (2001) suggest incorporating personal attitudes that are relevant to economic success into the analysis of intergenerational mobility. The American sociologist Melvin Kohn argued in *Class and Conformity* (1969) that, at least for some traits, experiences are passed via a process of vertical cultural transmission. For example, parents who operate relatively independently in the workplace automatically transfer some of their self-regulating strategies to their children.

SOFT SKILLS AND POLICY SIGNIFICANCE

With the shift in employment from manufacturing to services and with the diffusion of computer technology and information systems, the demand for soft skills in the labor market has increased. Soft skills not only affect the tools for recruitment, they also serve as a predictor for career progression if the type of occupation enforces a high level of social competence. Education programs have been adjusted as a reaction to changing workplace requirements. In addition, studies in the economics of aging emphasize the importance of soft skills as an instrument to compensate for the decline in cognitive and physic abilities with age, since social competencies remain relatively stable over one's lifetime. Numerous surveys indicate that training in interpersonal and communication skills raises individual productivity at all levels of qualification.

In order to assess the progressive potential of soft skills by a common standard, a clear definition that explicitly refers to employment still remains to be developed. However, the effects of soft skills in the workplace have to be analyzed with caution. Though the state of research definitely justifies and stimulates further work in this area, the socioeconomic value of soft skills tends to be overestimated. A pure focus on soft skills neglects their complementary character with respect to technical knowledge.

SEE ALSO *Cultural Capital; Educational Quality; Human Capital; Psychological Capital; Skill; Social Capital*

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SOLAR ENERGY

In a broad sense, most energy that individuals use is some form of solar energy. Other renewable energy sources (such as wind, hydropower, and wood) indirectly harness solar energy by using the atmosphere, oceans, and forests as solar collectors. Even exhaustible fossil fuels (oil, coal, and natural gas) are solar energy that was originally captured by plants and concentrated by geological processes into forms with high energy densities per unit of weight and volume.

In more common usage, *solar energy* refers to the two primary ways in which people harness and directly use solar energy using manufactured collectors: heating, and generating electricity.

Space and water heating systems for buildings can be either passive or active. Both approaches use glass to trap heat, as in a greenhouse. Passive design uses no moving parts or fluids; rather, it involves incorporating features into the siting and design of a building to take advantage of the natural solar radiation available. Such features include large windows facing south, heat-absorbent material such as brick or tile in floors and walls, and orienting a building on its site so as to maximize sun exposure.

Active heating systems use water or another liquid piped through collector units. The most common type of collector is a roof-mounted flat-plate design, consisting of an insulated glass-covered box painted black to maximize heat absorption. Water circulates in a loop between the collectors, where it is heated, and a tank, where it is stored until needed for either domestic uses or space heating.

There are two technologies for converting solar energy to electricity. Solar thermal-electric power plants (also called concentrating-solar-power, or CSP, power plants) use mirrors to gather solar radiation and focus it on a small area to produce high temperatures. The concentrating collectors may be parabolic troughs or dishes, or a system of mirrors that are spread over a wide area and that focus sunlight on a receiver at the top of a tower in what is called a power tower or central receiver system. A

fluid circulates through a receiver unit at the parabola's focal point, where it is boiled. The resulting steam drives a generator as in a conventional power plant. Unlike solar-heating systems, which are installed at the point of energy consumption, CSP plants are typically large, central-station generating facilities.

The other solar-electric technology is photovoltaic cells. Photovoltaic cells are made of a semiconducting material, such as silicon, that releases electrons when struck by light. Cells are typically combined into modules, which in turn are assembled into larger arrays. Arrays can be sized for residential, industrial, or electric-utility use. The most commonly used material is crystalline silicon, but research since the 1970s has produced advances in such newer designs as thin-film cells using noncrystalline (amorphous) silicon, cadmium telluride, and other materials.

Interest in solar energy was stimulated in the 1970s by high oil prices and has been further stimulated by government policies, such as tax credits. Enthusiasm diminished in the 1980s and 1990s as the prices of oil and natural gas fell and many government subsidies lapsed. After the late 1990s interest was renewed by rising energy prices, but the use of solar energy remains limited. In *Renewable Energy* (2002), the International Energy Agency estimates that in the year 2000, solar heating made up 0.3 percent of world energy consumption and photovoltaic cells contributed less than 0.05 percent.

The major impediment to solar energy is cost. Though solar radiation is abundant and nonpolluting, the equipment required to gather and utilize it is expensive. Solar heating systems have found some commercial adoption in sunny locations for certain applications, especially for heating swimming pools. CSP technologies, though technologically proven, are not yet competitive with other sources of electricity. Perhaps the most promising technology is photovoltaics. By 2002, photovoltaic costs had fallen to about 20 to 30 percent of their 1980 levels. They have become cost-effective in some specialized applications, particularly in remote locations far from existing power lines. From 1992 to 2003, installed photovoltaic capacity worldwide grew by about 30 percent annually.

Economic theory predicts that as exhaustible energy resources are depleted, their prices will tend to rise, making renewable sources more attractive over time. The long-run prospects for solar energy will depend on how its cost compares with other energy sources.

For more information on solar technologies and research, see the Web sites for the International Energy Agency and the U.S. Department of Energy's National Renewable Energy Laboratory. On the economics of solar and other energy sources, see *Economics of the Energy Industries*, by William Spangar Peirce (1996).

SEE ALSO *Energy; Energy Sector*

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SOLDIERS

SEE *Militarism; Military.*

SOLIDARITY

Solidarity, often referred to as *social solidarity*, is a fundamental concept in the scientific study of human societies, cultures, and social relations. Researchers who were concerned to discover why societies cohere (and why they may disintegrate) hypothesized that social cohesion may be due to ideas or feelings people have about one another. Alternatively, structural conditions, such as a particular arrangement of social roles and relations, might foster conditions producing human unity.

Social theorist Émile Durkheim (1858–1917) first wrote about the problem of social solidarity in *The Division of Labor in Society* (1893). Durkheim considered society as a moral force characterized by a fundamental duality: Individual consciousnesses comprised the social entity even while society's norms imposed constraint on any single individual. As societies change, the type of solidarity that "glues" society together also changes. Social solidarity of undifferentiated societies, or *mechanical solidarity*, is based on likeness (e.g., the cultural similarity of each member of a tribe). Industrial societies cohere because of *organic solidarity*, based on the interdependency of dissimilar individuals (e.g., occupational diversity due to the division of labor).

Feelings of solidarity are encouraged when individuals strongly identify with a collectivity. Durkheim saw this as one of the bases for religious sentiments. In every religion, boundaries are drawn between the sacred and profane. Through this type of categorization, Durkheim

explains, humans both create a moral ordering for social life and develop the conceptual apparatus necessary for rational thought. "The categories of the understanding" are "born in religion and of religion" (Durkheim [1915] 1965, pp. 21–22). Conceptualizations of time, space, class, causality, and so forth, although linked to brain function, are elaborated and interpreted differently in different cultures. The source of this variation is the social collectivity representing a *collective conscience*. In Durkheim's view, the collective conscience is expressed through "collective representations," or symbols. These cultural symbols "are the result of an immense cooperation, which stretches out not only into space but into time as well; to make them, a multitude of minds have combined their ideas and sentiments" ([1915] 1965, p. 29). Because collective representations express the heritage of an individual as well as provide the intellectual framework for his understandings, the person feels himself linked to a tradition and standards of behavior. Thus, the individual's ideas and feelings stem from a source beyond his personal experience; they come from society itself.

A stable social order rests on the solidarity of its people. What happens when social stability is threatened, through crime, for example? Durkheim argues, somewhat paradoxically, that crime and punishment (the reaction to crime) reinforce the social order. When an infraction is defined as criminal, it places the person who committed the crime outside the social order and deems him worthy of punishment. Those who have not transgressed are affirmed in their status as the law-abiding citizens. Durkheim argues that crime thus builds social solidarity and cohesiveness. Contemporary scholars counter that Durkheim's vision presents an oversocialized conception of humans. For example, Allen Liska and Barbara Warner's (1991) research shows that fear of crime may undermine social solidarity in U.S. neighborhoods where criminal behavior is not checked by authorities. Similarly, Teresa P. R. Caldeira's (2000) research on São Paolo indicates that multiple processes linking crime, poverty, and social status in a context of weak or corrupt policing can lead to increasing social isolation and the fragmentation of public spaces. This, in turn, undermines the potential for democratic development. Liska and Warner's research ultimately supports the Durkheimian position by arguing that the stabilization of crime in certain areas leads to social withdrawal, constraining "opportunities for crime, thereby decreasing both robbery and other crimes" (Liska and Warner 1991, p. 1441). Caldeira's research, by contrast, challenges the Durkheimian argument by suggesting that "social solidarity" under some repressive conditions is merely an expression of class, caste, or ethnic identification.

If excessive crime and lawlessness indicate the breakdown of society and solidarity, utopian or intentional communities present an idealized vision of a cohesive social order. In *Commitment and Community*, Rosabeth Moss Kanter identifies a social order of perfect solidarity where society is maintained through individual commitment, not coercion. This is an "imagined utopia," in which "humankind's deepest yearnings, noblest dreams, and highest aspirations come to fulfillment, where all physical, social, and spiritual forces work together, in harmony, to permit the attainment of everything people find necessary and desirable" (Kanter 1972, p. 1). History abounds with numerous attempts by religious or political idealists to create such societies in miniature. Despite repeated tries, none have found an ideology or set of social arrangements that invariably induces persons to want to do what they have to do: to follow society's rules without question or resistance. In short, there are limits to social solidarity's hold over the individual.

Whereas the ideational approach focuses on symbols, feelings, and identities, a structural approach to social solidarity identifies relational connections among individuals as key for maintaining social order and cohesion. James Moody and Douglas White articulate a social network conception of solidarity that defines structural cohesion formally as "the minimum number of actors who, if removed from a group, would disconnect the group." Society, in their view, is built up "through the hierarchical nesting of … cohesive [network] structures" (Moody and White 2003, p. 103). The structural perspective is theoretically indebted to Durkheim's argument in *The Division of Labor* and Georg Simmel's (1858–1918) research on group formation, but methodologically, network analysis draws from graph theory in mathematics. This combination of theoretical and formal traditions allows for greater operational specification of the concept of social solidarity, as well as empirical analysis of how solidarity functions in reality. Using network analytic techniques, researchers are able to determine where, within a social network, relations are most stable and where they are likely to break down. This represents a scientific advance in the field, which is yielding promising results.

Since the nineteenth century, social theorists have viewed solidarity as a key factor underlying the problem of order in society. Durkheim's writings provided a strong impetus for two lines of theorizing: ideational and structural. Sociologists of religion and anthropologists were most interested in Durkheim's arguments about the religious basis of solidarity feelings, concepts, and symbols. Criminologists followed Durkheim in his interest in the social functions of crime. Social network theorists have drawn from Durkheim and others to develop a formal definition of social cohesion, or solidarity, in order to investigate varying social structures. Each line of investigation has increased human knowledge of the internal dynamics and power of social connection.

SEE ALSO *Caste; Class; Collective Action; Communalism; Communitarianism; Crime and Criminology; Durkheim, Émile; Ethnicity; Identity; Networks; Networks, Communication; Putnam, Robert; Race; Social Capital; Social Movements; Sociology*

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SOLIDARNOŚĆ

The Independent Self-Governing Trade Union Solidarity (in Polish *Niezależny Samorządowy Związek Zawodowy "Solidarność"*) is a Polish trade union federation important historically for the role it played as a nonviolent, anti-communist mass social movement in Poland between 1980 and 1989. Solidarity was formed in Gdańsk, Poland, in August 1980 after a nationwide wave of strikes, sparked by price increases imposed by a government facing economic crisis, forced the ruling Communist Party to acknowledge the constitutional right of workers to form free trade unions. As a non-party-sponsored, legally recognized civil organization, Solidarity represented an unprecedented new development in state-society relations in the former Eastern bloc.

Prior to 1980 Poland had been convulsed by several economic and political crises accompanied by widespread social unrest. In each case, however, the party had been able to weather the crisis either by reorganizing its top leadership and introducing new, liberalizing economic and cultural policies (in 1956 and in 1970) and/or by targeting the most outspoken group with harsh reprisals, as occurred in 1968, 1970, and 1976. Signs of a broader, more concerted opposition to the regime came in 1976, with the formation of the *Komitet Obrony Robotników* (KOR; the Worker's Defense Committee), a group founded to provide legal and financial support to workers arrested in strikes in Warsaw and Radom of that year. Ranging in composition from former revisionist intellectuals and anti-communist left oppositionists to clergy, KOR became the focal point of a movement to establish links among workers, intelligentsia, and the Church and to form and defend an alternative public sphere outside the bounds of official, state-controlled institutions. If in 1970 striking workers had responded to state violence in kind by setting fire to Gdańsk party headquarters, the new opposition's strategy was that of peaceful self-organization, signaled by left KOR intellectual Jacek Kuroń's popular motto: "Don't burn down party committees, found your own!"

By 1980 striking workers were able to draw on a half-decade of experience in one of the most developed underground cultures of opposition in the Eastern bloc. Strikes broke out in Gdańsk's Lenin Shipyards on August 14, and by August 17 an Inter-Enterprise Strike Committee, formed under the leadership of electrician Lech Wałęsa and including KOR intellectuals in an advisory capacity, had drafted a list of twenty-one demands, many of which extended beyond immediate concerns and addressed fundamental injustices of Communist-Party rule in Poland. The demands called for, among other things, acknowledgment of the right to form free trade unions, for freedom of speech, access to government-controlled media, a halt to reprisals against outspoken critics of the regime, and economic and health care reform. Strikes spread quickly throughout Poland and by August 21, a hitherto recalcitrant government announced its readiness to negotiate. Between August 30 and September 1, state representatives signed a series of agreements recognizing the workers' right to self-government and obligating the regime to initiate a nationwide debate on the issues presented in the postulates.

The period of Solidarity's first legal existence (August 1980–December 1981) can be divided into three main stages, as detailed by Timothy Garton Ash in *The Polish Revolution: Solidarity* (2002, pp. 303–308), David Ost in *Solidarity and the Politics of Anti-Politics* (1990, pp. 78–79), and Jadwiga Staniszkis in *Poland's Self-Limiting Revolution* (1984, pp. 17–28). Initially, propelled by its success in Gdańsk, Solidarity emerged as a powerful social movement, while at the same time containing its opposition within the legal structure of the trade union and refraining from competition with the party for political power. In the second stage, confrontations with the state as well as internal disagreements between reformist and revolutionary factions revealed the inadequacy of this for-

mula. Finally, in its third stage, Solidarity moved into the political arena, openly working for regime change.

Solidarity proved to be too much of a direct challenge to the Communist Party's monopoly, itself facing pressure from the Soviet Union, and on December 13, 1981, martial law was declared throughout Poland by recently appointed party secretary General Wojciech Jaruzelski. Prominent Solidarity leaders were arrested and interned, strikes and demonstrations were forcefully suppressed by armed riot police, and Solidarity was subsequently delegalized.

The early and mid-1980s saw Solidarity gradually reconstituting itself, now as an underground organization. In 1988 economic crisis forced the party back to the negotiating table with the opposition. This time, with the effects of *perestroika* being felt throughout the Eastern bloc, politics could be placed squarely on the agenda. Between February and April 1989, in an extraordinary series of negotiations known as the Roundtable Talks, state and Solidarity leaders hammered out an exit from communism for Poland. Free elections were to be held for a portion of seats in parliament, a new senate was to be formed, and a presidency was to replace the role played by the general secretary of the Communist Party. Though the party had insured that key elements of the new government would remain under its control for a transition period, Solidarity won the free portion of the elections by a landslide. With the opening of the Berlin Wall in November 1989, events in Eastern Europe soon outstripped the gradual exit from communism mapped out during the Polish Roundtable Talks, and new, free elections were held in Poland in 1990. Meanwhile, Solidarity, deprived of its opponent, collapsed dramatically as a unified formation, fragmenting into numerous smaller political parties.

The trade union returned to political prominence in 1997 as the animating force behind a coalition of conservative right parties, which won the parliamentary election of that year and governed until 2001.

SEE ALSO *Berlin Wall; Communism; Glasnost; Solidarity; Totalitarianism; Unions; Warsaw Pact; Working Class*

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Christopher J. Caes

SOLOW, ROBERT M.

1924–

The American economist and 1987 Nobel laureate Robert Merton Solow was born on August 23, 1924, in Brooklyn, New York. Several years after his birth, economics, in the United States and globally, launched a great leap forward after the stock market crash of 1929 had created the Great Depression that attracted able minds to the study of economics rather than physics or biology. After Solow returned from army service in Europe during World War II (1939–1945), he joined in this movement under the mentorship of the economist Wassily Leontief (1906–1999) at Harvard. Such has been Solow's originality, wisdom, and energy that his imprint can be found in diverse corners of microeconomics, macroeconomics, and welfare policy.

The awarding to Solow of the Nobel Prize and the American Economic Association's prestigious John Bates Clark Medal (1961) presumably traces primarily to his seminal 1956 growth model that breathed new life into the earlier pioneering attempts of Paul H. Douglas (1892–1976) to explain statistically the growth of a society's real output in terms of its historical profiles of labor and of capital inputs. Because both of these time series were so positively correlated in trend, Douglas's linear-log regressions had been hopelessly ill-conditioned. At Massachusetts Institute of Technology (MIT), where Solow became an assistant professor in 1949 and remained until retiring as institute professor emeritus in 1995, he cut the Gordian knot by introducing into the statistical analysis independent information on market-factor shares. His principal finding was the hypothesis that much of historic gain in outputs was not plausibly connected with "deepening of the Capital/Labor ratio." Instead, an "exogenous residual" of Schumpeter-like technical innovation shifted upward "total factor productivity" to an important degree. A simplest Cobb-Douglas-Hicks example, à la Solow, would be $Q = (1.03)^t L^{.75} K^{.25}$. It is fitting that Solow as a Harvard student in Schumpeter's last lectures put the $(1.03)^t$ Schumpeterian parameter of innovation into growth theory, with emphasis upon rate of growth in total-factors productivity.

Fruitful tools of new mathematics—Dantzig linear programming, Kuhn-Tucker nonlinear programming, Bellman stochastic programming—came into wide use among economists after World War II, and Solow's diverse bibliography illustrates his role as a pioneer. Besides Solow's depth, his width is exemplified by his many analyses of post-Hotelling exhaustible resources. Besides putting his pen where his heart is, at Resources for the Future (a nonprofit organization focusing on the economic and social dimensions of environmental, energy, and natural

resource issues) and similar organizations, Solow has put his shoulder to the wheels of conservation economics.

President John F. Kennedy's Council of Economic Advisers—Walter Heller (1915–1987), James Tobin (1918–2002), and Kermit Gordon (1916–1976)—and staff members Kenneth Arrow, Arthur Okun, and Solow set the high water mark for fruitful academic contributions to public policy in the early 1960s. In addition, Solow's facile pen over the years has reviewed contemporary debates in the public press, and he has expressed criticism of prominent economists, including John Kenneth Galbraith (1908–2006) and Milton Friedman. But his was never an in-your-face attack. Those to the right and the left of Solow generally respected his genial argumentation.

Solow's colleague at MIT and fellow Nobel laureate Paul Samuelson has dubbed Solow the Enrico Fermi (1901–1954) of economics. Fermi was both a great physicist-theorist and a great physicist-experimentalist; Solow has been both a creator of new theoretical economics and also one who subjected basic economic relations to statistical testing. Without his mathematical doodlings, Solow could not have been one of the wisest in the circle of Tobin, Arrow, and Franco Modigliani (1918–2003). Without his native DNA and mentors (Leontief, Talcott Parsons, Richard Goodwin, Abraham Wald), Solow would not have generated the wisdoms that were uniquely his.

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Paul A. Samuelson

SOLOW RESIDUAL, THE

A *growth accounting exercise* is used to break down the growth of output into the growth of the factors of production—capital and labor—and the growth of the efficiency in the utilization of these factors. The measure of this efficiency is usually referred to as *total factor productivity* (TFP). For policy purposes, it may matter whether output growth stems from factor accumulation or from increases in TFP.

The American economist Robert M. Solow set up the grounds for growth accounting in a 1957 article. Solow considered a neoclassical production function,

$$Y_t = A_t F(K_t, L_t) \qquad (1)$$

where Y_t is aggregate output, K_t is the stock of physical capital, L_t is the labor force, and A_t represents TFP, which appears in a Hicks neutral way. After some simple transformations, this equation can be written in terms of the growth rates of these variables. For simplicity, consider a Cobb-Douglas production function $F(K_t, L_t) = K_t^{\alpha} L_t^{1-\alpha}$ with $0 < \alpha < 1$. Then, taking natural logarithms and differentiating both sides of (1) with respect to time t, the growth rate of aggregate output can be expressed as,

$$\dot{Y}/Y = \dot{A}/A + \alpha(\dot{K}/K) + (1-\alpha)(\dot{L}/L) \qquad (2)$$

(For a variable $E = Y, A, K, L$, the term $\dot{E}$ stands for the derivative of E with respect to time t, and so $\dot{E}/E$ stands for the growth rate.) Note that the growth rates of physical capital and labor are weighted by α and $(1-\alpha)$. As is well known, these weights correspond to the respective shares of rental payments for capital and labor in total income. With available data on α and the growth rates for output, physical capital, and labor, TFP growth can be computed from (2) as the residual. Accordingly, TFP growth is the so-called Solow residual.

Solow carried out this exercise for the U.S. economy for the 1909–1949 period, during which output per man-hour approximately doubled. According to Solow's estimates, about one-eighth of the increment in labor productivity could be attributed to increased capital per man-hour, and the remaining seven-eighths to the residual. But the residual seemed too large.

To be sure, TFP is shaped by a broad range of influences—a variety of technological, economic, and cultural factors. These factors include innovations in technology, the shift of underemployed labor from agriculture to more productive sectors, economic policies aimed at liberalization and competition, and changes in shopping habits—from tiny shops to department stores. Usually, these changes will increase TFP, although TFP may fall for other reasons, such as trade union restrictions, environmental regulations, and safety measures that limit the use of production factors. (For example, suppose that to conduct weight-lifting exercises a gym requires a spotter; then, two people are needed for a single task, so this rule would decrease TFP.) Other factors that may influence TFP are

frictions in financial markets, physical and human capital externalities, public expenditures, or any other element that affects the aggregate productivity of the economy.

Measurement is crucial for comprehending the Solow residual. First, observe that aggregate output is roughly the value of market goods and services produced in a society, but for most purposes this measure is too narrow because it leaves out many basic activities that enhance welfare. For instance, from the weight-lifting example we can see that a safety measure will usually decrease output for the benefit of protecting human lives, and it should be clear that the beneficial effects of this rule will not affect output directly. Moreover, output and other aggregate variables may be measured with error; indeed, many Internet activities are not satisfactorily treated in the national accounts. Second, there is the problem of quality adjustment. Various goods and services (e.g., cars, cellular phones) did not exist in the past or are now of much better quality, but these quality improvements are not well recorded in the statistics. Third, there are lags in the processes of innovation, learning, and implementation of technologies. Some current investments will see most of their payoffs far in the future and cannot be evaluated according to today's productivity. From 1973 to 1989, the United States and some other Western economies experienced a slowdown in TFP growth. Presumably, this productivity slowdown happened because these advanced economies were adjusting to the era of information and communication technologies; in the meantime, productivity—as shown in the statistics—was low.

In spite of these measurement problems, various studies have analyzed the determinants of the Solow residual (Denison 1962; Jorgenson and Griliches 1967) with emphasis on embodied and disembodied technological progress. Advances in technology may be embodied in the latest vintages of capital. Thus, new capital is better than old capital, not just because old capital has suffered wear and tear, but because of the quality improvement that comes with new capital. Therefore, a part of technological progress is embodied in K_t and failure to allow for this rise in quality may overstate the growth assigned to TFP. Similar considerations apply to labor: New generations entering the labor force are better educated and by all counts are more productive. In contrast, disembodied technological progress, included in TFP, will be associated with new modes of organization and operation of inputs, as well as other improvements not incorporated into the quality of factors of production. In practice, it has proved difficult to offer reliable estimates for the importance of embodied and disembodied technological progress. Sizable estimates have been reported for the contribution of embodied technological progress in physical capital to growth, but it is puzzling that many cross-country studies (Pritchett 2001) have found that the estimates for human capital to growth are insignificant or do not have the desired sign.

With the availability of broad sets of data in recent years, it has been possible to make cross-country comparisons of Solow residuals. These exercises offer new possibilities to test theories of economic growth. For a broad collection of countries, some studies contend that the growth process can be explained by factor accumulation. For instance, this suggests that the observed high growth rates for output in some fast-growing countries in Southeast Asia may not be long lasting, since there may be decreasing returns in the accumulation of these factors and further investments may become less productive. These studies have been criticized on the grounds of poor measurement of human capital, high physical capital shares, and biased estimates from endogeneity in the variables (Klenow and Rodríguez-Clare 1997; Easterly and Levine 2001). Therefore, the prevailing view is that to a great extent cross-country differences in output levels and growth rates should be attributed to the Solow residual.

In summary, the Solow residual is that part of output growth that cannot be attributed to the accumulation of capital and labor. There is a variety of factors that may contribute to output growth and hence the residual may be sizable. Quantifying the main determinants of the Solow residual may be instrumental in comparisons of growth experiences across countries and in testing theories of economic growth.

SEE ALSO *Accumulation of Capital; Change, Technological; Neoclassical Growth Model; Production Function; Solow, Robert M.*

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SOLOW-SWAN GROWTH MODEL

SEE *Neoclassical Growth Model.*

SOLZHENITSYN, ALEKSANDR

1918–

Born in southern Russia in 1918, Aleksandr Solzhenitsyn was brought up in highly straitened circumstances. By the time he graduated from Rostov University in 1941 with a degree in mathematics and physics, Solzhenitsyn was an enthusiastic champion of Marxist ideology who hoped to describe anew what he considered the glorious advent of the Russian Revolution. To this end Solzhenitsyn intended to pursue postgraduate literary studies, but the outbreak of hostilities in 1941 led to army service and eventual assignment to a sound-ranging battery on the front lines. In early 1945, Solzhenitsyn was arrested for critical comments on U.S.S.R. leader Joseph Stalin (1879–1953) in letters to a friend (the mail was censored) and sentenced to eight years imprisonment, to be followed by "eternal exile" in a remote area of the Union of Soviet Socialist Republics.

Solzhenitsyn served his sentence in various labor camps and prison research institutes, emerging in 1953 with his Marxist faith shattered and his head full of literary plans. *The First Circle*, composed mostly in the 1950s (after his exile was annulled), but published only in 1968, reflects his experience in a Moscow prison institute, *One Day in the Life of Ivan Denisovich* (1962) is based on his incarceration in Central Asia. *One Day*, Solzhenitsyn's first publication, appeared in Moscow by special permission of Communist Party leader Nikita Khrushchev (1894–1971), who deemed it useful for his campaign against Stalin. *One Day* caused a worldwide sensation by its depiction of a Stalinist concentration camp and generated hundreds of letters to Solzhenitsyn from former inmates of Soviet prisons and camps. Much of this material was later incorporated into *The Gulag Archipelago*, a three-volume indictment of the Soviet penal system that Solzhenitsyn published in Paris the following decade.

In the intervening years Solzhenitsyn gained prominence as a resourceful opponent of the Soviet regime, releasing bitterly critical statements that were distributed by the samizdat network and typically beamed back to the Soviet Union by Radio Liberty. *Samizdat* literally means "self-publishing house," an ironic term that refers to a method whereby privately typed materials were distributed chain-letter fashion among opposition-minded individuals who could not get access to the tightly controlled Soviet press. Apart from essays of this type, Solzhenitsyn produced *Cancer Ward* (1968) and an early version of *August 1914* (1971) during this period; both texts were published abroad to the great displeasure of the Soviet regime. In 1970 Solzhenitsyn was awarded the Nobel Prize in Literature, a decision the regime chose to interpret as one more hostile act. The Soviet leadership increasingly viewed Solzhenitsyn as a dangerous political opponent, and an unsuccessful assassination attempt by the KGB was launched in 1971.

The publication of *The Gulag Archipelago* (1973–1976) had a profound impact throughout the world and moved the regime to arrest Solzhenitsyn in 1974 and expel him from the Soviet Union. After two years in Switzerland, Solzhenitsyn moved to the United States, settling in Cavendish, Vermont, until his return to Russia in 1994. Apart from several high-profile appearances during this period (e.g., the commencement address at Harvard University in 1978), the writer's time was almost entirely dedicated to a cycle of narratives describing Russia's slide toward the revolutionary abyss. Entitled *The Red Wheel*, the cycle comprises ten volumes in the Russian edition (1983–1991) and encompasses the period between the outbreak of World War I in 1914 and April 1917. After his return to Russia, Solzhenitsyn published sketches of his two decades abroad, a number of short stories, essays on literary and political matters, and a two-volume study of the interactions of Russians and Jews in Russian history, *Dvesti let vmeste* (2001–2002). A thirty-volume *Complete Works* of Solzhenitsyn's work was published in 2006.

SEE ALSO *Concentration Camps; Gulags; Khrushchev, Nikita; Literature; Marxism; Prisons; Stalin, Joseph; Stalinism; Totalitarianism*

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Alexis Klimoff

SOMBART, WERNER

1863–1941

German economist Werner Sombart was born in Ermsleben near the Harz mountains, the son of a prosper-

ous landowner and liberal member of parliament. He studied law, economics, and history at the universities of Pisa, Rome, and Berlin. In 1888 he earned his doctorate in economics from the University of Berlin. After working for two years at the Bremen Chamber of Commerce, he became professor of political economy, first at the University of Breslau and later at the Berlin Business School. In 1918 he was appointed full professor at the University of Berlin.

Over his entire career Sombart tried to explain the origins and growth of the capitalist system of economic organization. In addition to his multivolume work on modern capitalism, he published four specialized books on the emergence of capitalism, relating it to such diverse factors as the bourgeois mentality, the Jewish people, warfare, and luxury consumption. To ground his theories Sombart employed a massive quantity of secondary historical material, varying from statistics and letters to novels and travel accounts. Because of his historical approach to economic issues, he is often seen as the last member of the German historical school to dominate economic thinking in Germany in the second half of the nineteenth century. It is difficult, however, to place Sombart in any school of thought, because his theories and political views changed repeatedly. He started his career as a Marxian economist, became a conservative, and ended as a sympathizer with Adolph Hitler's Nazi regime.

Undoubtedly, Sombart's masterpiece is *Der Moderne Kapitalismus* (Modern Capitalism), published in 1902, expanded in 1916–1917, and enlarged in 1927. This three-volume work, which has never been translated into English, explored the historical evolution of the European economy in the direction of modern capitalism. It was Sombart, not Karl Marx, who coined the word *capitalism* and described it as a unique economic system in human history characterized by the passion of entrepreneurs to build up pecuniary capital—in other words, to make money. He divided the capitalist era into three stages: (1) early capitalism (1500–1760), dominated by a handicraft mentality, (2) high capitalism (1760–1914), in which the Industrial Revolution spread from England to western Europe and the United States, and (3) late capitalism (starting with World War I), typified by growing state intervention. Next to the entrepreneurial pursuit of profit, Sombart identified major historical events such as the discovery of double-entry bookkeeping and the application of new technologies in industry as the main drivers of capitalist development. With its richness of facts and speculative notions, the book is "highly stimulating even in its errors," as renown economist Joseph Schumpeter (1883–1950) aptly put it.

One of the studies Sombart published in connection with *Der Moderne Kapitalismus* was *Die Juden und das Wirtschaftsleben* (1911), translated as *The Jews and Modern Capitalism* (1951). Unlike the well-known sociologist Max Weber (1864–1920), who linked the rise of capitalism to the Protestant work ethic, Sombart suggested a link between the Jews and capitalist development. As he saw it, the shift in entrepreneurial activity from southern to northern Europe between the fifteenth and seventeenth centuries resulted from the move of Jews from Spain, Portugal, and Italy to Germany, Holland, and England. For Sombart, it was no surprise that areas from which the Jews fled underwent economic decline, whereas those they entered gained strength; as he saw it, the Jewish character and religion had "the same leading ideas as capitalism" (1951, p. 205). Sombart's book did not express outright anti-Semitism; but his discussion of Jews as a group was rife with prejudices that clearly laid the ground for his later sympathy with the Nazis.

Although Sombart was the most productive German economist of his time, he did not achieve fame or earn widespread admiration. His work is overly descriptive, disproportionately concerned with history, sloppy with data, and lacking in theoretical rigor; moreover, his political positions were unsavory. Still, Sombart's historical approach to economic development influenced the first American institutional economists, the French historians of the Annales school, and, most importantly, the economist Schumpeter. For example, Sombart coined the popular term *creative destruction*, which, along with some of his insights on capitalism, is usually attributed to Schumpeter. Since the late 1990s there has been some renewed interest in Sombart's work, owing to the growing emphasis on the role of historical specificity in economics.

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Gert-Jan Hospers

SOROS, GEORGE

1930–

George Soros, Hungarian-born American financier and philanthropist, is the second son of Tivadar and Erzebet Soros. He was thirteen years old when Nazi Germany invaded Hungary. To escape the German genocide of the Jews, the Soros family survived the occupation in secret hideouts under fake identities. In 1946 George Soros immigrated to England from the Russian-controlled country and attended the London School of Economics.

After graduation, Soros managed to break into the nepotistic merchant banking industry in London, where he was hired to be a trainee by a Hungarian managing director at Singer and Friedlander. In 1956 he was hired by another trainee's father to work in international arbitrage at his small brokerage firm in New York. In the European investment boom following the formation of the Coal and Steel Community, Soros made a name for himself as an analyst in European securities at Wertheim and Company and later at Arnold and S. Bleichroeder.

SOROS THE FINANCIER

In 1966 Soros started managing a $100,000 model portfolio of American securities for Arnold and S. Bleichroeder, which was later turned into an investment fund and, in 1969, a hedge fund. In 1973 Soros left the firm to start his own hedge fund, which evolved into the Quantum Fund. Assets under his management reportedly returned 3,365 percent from 1969 to 1980, compared to 47 percent for the Standard and Poor's stock index. The spectacular investment success caught public attention in 1981, when Soros was billed by *Institutional Investor* as "the world's greatest money manager." Unfortunately 1981 became the first year that he lost money. He subsequently left daily management of the fund to outside managers and later an internal staff, satisfied to be the owner and coach.

Soros is probably best known as "the man who broke the Bank of England." His fund bet heavily on the devaluation of the British pound in the fall of 1992 and made over $1 billion from the bet and other related derivatives transactions. The ensuing infamy left Soros undisturbed as he saw the devaluation as something bound to happen and insisted he operated within the rules. He is also widely believed to have been a force behind the currency speculations during the Asian financial crisis in 1997, an accusation he denied. The former Malaysian prime minister Mahatir Mohamad, one of Soros's fervent critics at the time, said in 2006 that he now believed Soros had not been involved.

SOROS THE PHILANTHROPIST AND PHILOSOPHER

Soros's philanthropic activities, which started long before his rise to fame, have centered around his pursuit of open societies. He has written extensively on the subject, which resonated deeply with his teenage experience. He believes that the markets are always wrong and that he himself is just as fallible. Society is inundated with similar fallibilities. He believes that, under an open society where free expression is cherished and differences in opinions are allowed, people are best equipped to keep their own biases to the minimum.

Soros believes the United States has justifiably pursued an open market policy thanks to its economic and political might. Developed legal systems, a business-friendly economic environment, and possession of the world's main trading currency have attracted capital to the United States. The negative effects on certain domestic industries have been limited by trade restrictions posed by the World Trade Organization.

Soon after he earned his first $25 million, Soros started giving his wealth away to promote the principles of open society. In 1979 he provided scholarships to black students at Cape Town University. South Africa's racial segregation policies at the time made it a prominent closed society. Soros thought the university championed open society by treating black students equally. He withdrew support eventually after he found out that scholarships were not all used to fund additional black students as he intended.

In 1984 Soros created the Soros Foundation in Hungary to provide financial support for scholars on a competitive basis. By 2006 the network had expanded to thirty-two foundations spanning eastern Europe, Africa, and Central America. The most profound impact has been in eastern Europe, where Soros funded scholarships for academics to study abroad and supported libraries and health education programs. Although each foundation developed its own program according to its specific needs, all operated under the expectation that they would be prototypes of open society. In 1991 Soros set up and financed the Central European University, with campuses in the early twenty-first century in Budapest, Prague, and Warsaw, to train graduate students in various subjects of the humanities in the hope that they would promote the practice of open society.

SEE ALSO *Apartheid; Currency; Development; Economic Crises; Exchange Rates; Financial Markets; Foundations, Charitable; Freedom; Holocaust, The; Mahathir Mohamad; Nazism; Philanthropy; Segregation*

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Shi Larry Cao

SOUTH, THE (GLOBAL)

SEE *North and South, The (Global).*

SOUTH, THE (USA)

Historically and culturally, the South is the most distinctive region of the United States. Once a center for African American slavery, the South is the only U.S. region to have fought for a separate national existence. Following defeat in the Civil War (1861–1865), poverty and legalized racial discrimination marked the southern states until the last decades of the twentieth century. While slavery and racial strife never dominated all parts of the South, they contributed to the economic, political, social, and cultural isolation of the entire region. As a result, W. J. Cash expressed a broad consensus when he called the South "not quite a nation within a nation, but the next thing to it" (1941, p. xlviii).

Like many other world regions, the South has no precise definition. It includes a variety of climates and geographical features, ranging from subtropical coastal swamps to the Appalachian Mountains, which include the highest peaks east of the Mississippi River. The border between Pennsylvania and Maryland (the Mason-Dixon Line) divides North from South traditionally, but does not define the entire region. Eleven states seceded to form the Confederate States of America in 1861: Virginia, North Carolina, South Carolina, Georgia, Florida, Tennessee, Alabama, Mississippi, Louisiana, Arkansas, and Texas. Four other slave states did not secede: Delaware, Maryland, Kentucky, and Missouri. The modern state of West Virginia broke away from Virginia during the Civil War, creating lasting disagreement over whether it should be considered southern. The U.S. Census defines the South as the former slave states (minus Missouri), plus Oklahoma and the District of Columbia. Accepting the reality that state lines have never circumscribed the cultural patterns of speech, food, politics, religion, and race relations that are widely associated with the South, the authoritative *Encyclopedia of Southern Culture* falls back on a circular definition: " 'The South' is found wherever southern culture is found" (Wilson and Ferris 1989, p. xv).

The South became a discrete region by an extended process linked to African American slavery. Slaves worked in all the American colonies, but especially on plantations growing tobacco in Virginia and rice in South Carolina. By the time of the first federal census in 1790, slaves comprised 31 percent of the U.S. population south of Pennsylvania, but less than 2 percent elsewhere. With the invention of the cotton gin in 1793, cultivation of the fiber expanded widely south of Virginia, spreading slavery and the plantation system across the southern interior and gradually tying the South together as the "Cotton Kingdom."

Representatives of the free and slave states clashed in the Constitutional Convention of 1787, but regional self-consciousness did not spread widely until after 1820, as southern whites reacted to a growing abolition movement in the North and to northern opposition to slavery's expansion. In 1860 a northern majority elected an avowedly antislavery president, Abraham Lincoln (1809–1865), prompting eleven slave states to leave the Union and form the Confederacy. Southern defeat in the ensuing Civil War brought the abolition of slavery, first by the Emancipation Proclamation (1863) and more fully by the Thirteenth Amendment to the U.S. Constitution (1865).

During Reconstruction (1865–1877), native southern whites used violence and intimidation to regain power over their state governments and the ex-slaves. The plantation system continued under tenancy arrangements that left blacks and many whites largely impoverished and uneducated. Beginning in the 1890s, white Democrats used poll taxes and literacy tests to strip most black men of the right to vote, followed by laws requiring the strict segregation of the races in all public facilities. In response, millions of black southerners fled to find better opportunities in the North and West. Until the civil rights movement of the 1950s and 1960s brought new federal legislation, widespread poverty, legal segregation, black disfranchisement, and exclusive control by an all-white Democratic Party characterized the so-called Solid South. Before these reforms, unique social and political institutions—and the prolonged struggle to maintain them—made the South unmistakably different from the rest of the United States, and fed a strong regional identity, especially among whites.

Despite these dominant regional patterns, diverse regional subcultures have long flourished in the South. The Appalachians and similar patches of hill country did

not support plantations, but sustained a distinct white folk culture that became the seedbed of modern country-and-western music. Equally distinct African American cultures developed in the largely black plantation districts. African cultural survivals, including the unique Gullah language, marked the Sea Islands of South Carolina and Georgia, while other black communities developed special musical traditions, especially New Orleans jazz and the Mississippi Delta blues. Lying between the mountains and the coastal lowlands, the Piedmont South fostered industrial development with urban centers like Atlanta and Charlotte.

Isolation and distinctiveness have encouraged southern stereotypes. Racial prejudice and exploitation encouraged images of both black inferiority and universal white racism. Violence, ignorance, and laziness have been attributed to southern whites and blacks alike. Plantation owners have been credited with aristocratic gentility, and poor whites scorned for hopeless degradation. The roots of these stereotypes are slowly giving way, but popular images only die gradually.

The South has changed rapidly since the end of World War II (1939–1945). Vigorous industrial recruitment, often founded on low wages, weak regulations, and hostility to labor unions, attracted outside industry and led to massive urban and suburban growth. The civil rights movement ended legalized segregation and stimulated a two-party political system, as millions of new black voters entered the Democratic Party while many whites switched to the resurgent Republicans. Southerners of both parties acquired leading roles in national politics, as Democrats won presidential elections with Jimmy Carter (1976) and Bill Clinton (1992 and 1996) and came close with Al Gore (2000), while southern Republicans like Newt Gingrich, Trent Lott, and Jesse Helms exercised a powerful conservative influence on Congress from the 1990s onward. Black migration reversed direction, lifting the region's black population by 7.2 million between 1970 and 2000. Prosperity attracted millions of other newcomers as well, including northern-born whites and Hispanic immigrants, but the offshore flight of low-wage manufacturing has distressed many southern industrial communities.

Recent changes have led some observers to worry that the South may disappear as a distinct region, but change has come on top of deep-seated historical experiences that are likely to give distinct characteristics to southern development for a long time to come.

SEE ALSO *Benjamin, Judah P.; Bluegrass; Blues; Civil Rights Movement, U.S.; Confederate States of America; Davis, Jefferson; Democratic Party, U.S.; Desegregation; Jazz; Jim Crow; Johnson, Lyndon B.; Kefauver, Estes; Key, V. O., Jr.; Lincoln, Abraham; Migration; Politics; Politics, Southern; Poll Tax; Reconstruction Era (U.S.); Republican Party; Segregation; Slavery; Southern Bloc; Southern Strategy; Stereotypes; Supreme Court, U.S.; Thurmond, Strom; U.S. Civil War*

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Harry L. Watson

SOUTH SEA BUBBLE

The South Sea Bubble was one of the first famous financial bubbles of modern times. The shares of the South Sea Company rose rapidly to ten times their par value within a few months in 1720, and even more swiftly fell back. These rapid fluctuations arose in the process of creating the first modern fiscal state. It was difficult to manage higher taxes and borrowing, and a bubble was the result.

The Glorious Revolution of 1688 brought King William (1650–1702) from the Low Countries to the English throne, together with his military ambitions and Dutch financial bureaucrats to help finance the resulting wars. The English government dramatically increased its taxes, creating a tax basis that assured investors that the government's bonds could and would be paid.

The English government then tried to figure out how to extend its borrowing. It issued a variety of securities that were not easily transferable; some were irredeemable. While the government's cost of servicing the national debt was substantial, most annuities traded at large discounts. Imitating the French model of John Law (1671–1729), the South Sea Company (which never traded in the South Seas) offered to exchange existing government debt for equity in the company that could be traded easily. The South Sea Company would buy and hold government debt, paying dividends on its stock from the interest it received on the bonds, and profiting by providing liquidity to holders of government debt. The company's first major venture was the debt conversion of 1719 in which it exchanged £1 million for newly issued stock. The government's debt payments fell, former debt holders saw the

value of their securities rise, and the company earned a considerable profit.

The South Sea Company then proposed to exchange about £30 million of the national debt for its own shares, paying the English Treasury for the privilege. Parliament and the king approved the conversion by early April 1720, by which time the stock had more than doubled from January. The company obtained the right to issue new shares to finance the conversion, but the conversion ratio was not fixed, and the company could obtain government debt more cheaply as its share price rose. Public interest and company activities drove the price ever higher. Many investors bought South Sea shares knowing that they were overpriced; they hoped to sell the shares for even higher prices before the shares returned to a more reasonable level. The company issued fresh equity in four subscriptions, at higher and higher prices. It also lent generously against its own shares, reducing their supply and increasing demand for them.

The price of South Sea stock rose from around £140 in January 1720 to £300 at the start of April and £800 at the start of June. The price was near £1,000 in the summer, but it fell precipitously in September, back to £200 by October. The rapid fall of share prices in September 1720 probably was brought about by some small event that made it clear to many traders that buying opportunities based on expected price rises were coming to an end. The bubble collapsed, taking the prices of other stocks in London and Amsterdam down with the South Sea Company. The problem of providing liquid government debt was not solved until the introduction of consols (consolidated English government debt with no due date) a generation later.

SEE ALSO *Bubbles; Manias; Panics; Speculation*

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Peter Temin

SOUTHERN BLOC

The term *southern bloc* refers to a coalition of southern Democratic representatives and senators who united with Republicans to advance shared legislative interests, principally to prevent federal involvement in race relations in the U.S. South. The seniority of many southern bloc members enhanced their legislative influence because they held so many congressional committee chairmanships. The "southern bloc" had political connections to the "southern strategy" in presidential politics that emerged in the 1960s.

The southern bloc was another instance of the sectionalism that had always unified southerners in both houses of Congress. From the beginning of the nation, southern interests had voted together regarding issues of slavery. Beginning in the 1930s in an effort to stop Franklin D. Roosevelt's plan to "pack" the Supreme Court, southern Democrats voted with Republicans against nonsouthern Democrats. The alliance of southern Democrats and Republicans formed a "conservative coalition." The southern bloc and the farm bloc also shared interests, for as V. O. Key Jr. noted about Congress in the 1940s: "Between the extreme of urban industrialism and of prosperous, rural Republicanism, the poor, southern Democracy occupies a position in the political center" (1949, p. 378). Recent instances of the southern sectionalism that shaped the southern bloc include the occasion during the Reagan years when several southern House Democrats ("boll weevils") joined with Republicans to enact the president's budget. In 1993 southern Democrats and Republicans coalesced to pass the North American Free Trade Agreement.

Southern U.S. senators, given the Senate rules allowing filibusters (unlimited debate), have played a critical role in the work of the southern bloc. Tom T. Connally of Texas (1877–1963) was among the first leaders of the bloc in the Senate, and Richard B. Russell Jr. of Georgia (1897–1971) led the Senate's southern bloc between 1945 and 1969. Before the 1960s, virtually all southern senators were members of the bloc. Some did not formally ally themselves with it: Lyndon B. Johnson of Texas, Estes Kefauver of Tennessee, and Ralph W. Yarborough of Texas. The Declaration of Constitutional Principles (March 12, 1956)—the so-called "southern manifesto"—which assailed the Supreme Court's *Brown v. Board of Education* decision (1954 and 1955) was signed by nineteen of the twenty-two southern senators (not signing were Kefauver, Johnson, and Albert A. Gore Sr. of Tennessee) and by 82 of the 106 southern House members.

Southern senators did not have majority support for voting against federal intervention in race relations. As a minority, the bloc resorted to delaying tactics allowed by the Senate rules in order to prevent passage of important civil rights legislation. Filibusters by the southern bloc that succeeded included those against anti-lynching bills in 1935 and 1938; anti–poll tax measures in 1942, 1944, and 1946; fair-employment practices legislation in 1946; and voting rights bills in 1960. In 1957, having significantly watered down a civil rights bill, the southern bloc

did not filibuster it. But one of its members, then-Democrat Strom Thurmond of South Carolina, filibustered the bill for more than twenty-four hours.

Between 1938 and 1963 the southern bloc, allying with some western Democrats and Republicans beat back all eleven attempts to end filibusters on civil rights legislation. Such attempts seek to invoke cloture, a procedure to end debate and vote on the measure being discussed. From its enactment in 1917 to its amendment in 1975, Senate Rule XXII required a vote by two-thirds of the Senate to end debate; in 1975 that proportion was reduced to three-fifths, so that sixty senators could halt a filibuster. On June 10, 1964, after a filibuster lasting seventy-four days, the longest filibuster in history, the Senate successfully imposed cloture for the first time on a civil rights bill. The Senate also invoked cloture on filibusters against civil rights bills in 1965 (voting rights) and 1968 (open housing).

In presidential politics, a "southern strategy" sought to unite the white South and Republicans to mutual advantage. "Southern strategy" was a pejorative phrase charging Republicans with racist or at least political intentions to court southern white support by taking more pleasing positions on desegregation. In 1964 the Republican presidential nominee Barry Goldwater (1909–1998), who had voted against the 1964 Civil Rights Act, carried the five Deep South states with a hard-edged southern strategy, but lost in a landslide to Democratic nominee Lyndon Johnson. In 1968 the Republican nominee, Richard Nixon, employed a softer southern strategy to curb the threat posed by the American Independent Party candidate George C. Wallace (1919–1998). Senator Thurmond, who had run as the States' Rights Democratic Party (Dixiecrat) presidential candidate in 1948 and switched to the Republican Party in 1964, was a key ally in this strategy. Thurmond battled Wallace, claiming a vote for Wallace was essentially a vote for the Democratic candidate, Hubert Humphrey (1911–1978). The winner, Nixon, carried South Carolina and four other southern states not in the Deep South.

In the 2000 and 2004 presidential campaigns, with southern whites identifying more with the Republican Party, the Republican nominee, George W. Bush, abandoned the southern strategy of previous Republican presidential candidates to seek greater black and Hispanic support, and he did make some headway among Hispanic voters, but not among black voters.

Since the 1960s the political bases that supported the southern bloc have been changed by the growing black vote in the South, which is increasingly critical to the election of Democrats; by Republican gains in the former solidly Democratic South; and by the social and economic convergence of the South with the non-South. Conservative southern Democrats have largely vanished as conservative southern voters now ally more with Republicans. In the 1980s and later, civil rights measures received considerable support from southern Democrats, and the conservative coalition appeared less frequently in congressional voting. Indeed, Congressional Quarterly discontinued its annual report on conservative coalition voting after the 1998 session of Congress, in which the conservative coalition appeared on only 6 percent of the roll call votes.

SEE ALSO Brown v. Board of Education*, 1954; Civil Rights Movement, U.S.; Democratic Party, U.S.; Dixiecrats; Johnson, Lyndon B.; Kefauver, Estes; Key, V. O., Jr.; Nixon, Richard M.; Politics; Politics, Southern; Republican Party; Roosevelt, Franklin D.; South, The (USA); Southern Strategy; Thurmond, Strom*

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SOUTHERN STRATEGY

In American politics, the "southern strategy" refers to efforts by the Republican Party and its candidates to win presidential elections since 1964 by appealing to conservative whites (especially white southerners) disaffected with the Democratic Party by its strong embrace of civil rights laws in the 1960s and its racially egalitarian policies since.

BEFORE 1960: THE UNSTABLE DEMOCRATIC PARTY COALITION

While racial discrimination existed nationwide before 1960, it was especially pervasive and severe in the South. Region-wide, but especially in the Deep South (Louisiana, Mississippi, Alabama, Georgia, and South Carolina), the politically and economically dominant white population enforced segregated schools, neighborhoods, and public establishments, severe discrimination in jobs and housing, and denial of voting rights for blacks. Virtually all southern Democratic politicians favored racial segregation and antiblack discrimination; candidates that did not were unelectable. Meanwhile, most white southerners vilified

Republicans as the party of the Union cause during the Civil War and of the hated Reconstruction era, when federal troops occupied southern states after the war. From 1932 into the 1940s, the Democratic Party's majority coalition nationwide was owed in part to intense Democratic loyalties among most white southerners.

Such support remained strong as long as Democrats did not push aggressively for civil rights for blacks. But in 1948 Democratic Party convention delegates supported this plank in the party platform: "The Democratic Party commits itself to continuing efforts to eradicate all racial, religious, and economic discrimination." In vehement opposition, delegate Strom Thurmond, then governor of South Carolina, stalked out of the convention, leading other Deep South delegates in tow (Edsall and Edsall 1991, p. 34). The dissidents formed the States' Rights Democratic ("Dixiecrat") Party, with Thurmond as their presidential candidate. The Dixiecrats carried several southern states in 1948, serving early notice to the national Democratic Party that aggressive action on civil rights would result in the party losing much white southern support. In 1954 Thurmond won a U.S. Senate seat from his native South Carolina; in 1964, he switched to the Republican Party.

1960 TO 1964: RACIAL ISSUES REEMERGE, AND REPUBLICANS MOVE TO THE RIGHT

During the 1950s events such as the Supreme Court's 1954 ruling ordering schools to desegregate (*Brown v. Board of Education*) and the 1957 crisis attending the integration of Central High School in Little Rock, Arkansas, kept civil rights issues on the national agenda. However, the Democratic and Republican parties equivocated on civil rights issues, until 1964. That year, President Lyndon B. Johnson and northern members of Congress from both parties overcame fierce southern Democratic opposition to pass the Civil Rights Act of 1964, which outlawed segregated public places, including most private businesses, and banned employment discrimination. Meanwhile, Republicans moved sharply rightward on racial issues (Carmines and Stimson 1989), nominating Arizona senator Barry Goldwater for the presidency in 1964. Far more conservative on racial issues than previous Republican candidates had been, Goldwater argued forcefully against the Civil Rights Act, emphasizing his view that proper jurisdiction over civil rights policy lay with the states, not the federal government. Goldwater's argument was not openly racist: He neither vilified blacks nor made openly segregationist appeals, as Thurmond and other southern Democratic politicians had for decades. Nonetheless, Goldwater's position was enormously attractive to white southerners enraged by the national Democratic Party's embrace of civil rights laws. President Johnson won a landslide reelection over Goldwater in 1964. But Goldwater carried five Deep South states that had not voted Republican in presidential elections since Reconstruction. The Democratic lock on the South was broken, and issues and developments after 1964 would continue to erode white southerners' loyalty toward the Democratic Party.

The southern strategy, then, first emerged in 1964 to attract white southerners by positioning the Republican Party as the new political home for racial conservatism (Carmines and Stimson 1989). Columnist Robert Novak (1965) described the southern strategy as encompassing staunch anti-Communism in foreign affairs and conservative appeals for a less activist federal government in domestic affairs, and deemphasizing civil rights without endorsing racial segregation or discrimination, to attract white southerners but avoid alienating moderate whites with raw racial appeals. After 1964 the southern strategy flowered, but with a changing issue focus, favoring more covertly racial issues such as social welfare programs, "law and order," school busing, and, in the 1980s, affirmative action and violent crime.

1965 TO 1972: YEARS OF TURMOIL AND NIXON'S SOUTHERN STRATEGY

By 1968 Republicans were refining their 1964 appeals and discourse and extending them to new issues. In 1965 President Johnson signed the Voting Rights Act of 1965, throwing the federal government's full weight into guaranteeing voting rights for southern blacks. The next three years were tumultuous, seeing the rise of black militant groups and major riots in Los Angeles (1965), Detroit (1967), and many other cities in 1966 and following the assassination of Martin Luther King Jr. in 1968. After another assassination—that of Democratic presidential candidate Robert Kennedy—the 1968 Democratic National Convention met in Chicago. Chaotic scenes of police beating demonstrators in Chicago's streets and parks echoed the tumult within the convention hall, as the party's delegates splintered over the issue of continuing the Vietnam War. Republicans sought to capitalize on the turbulence of the late 1960s by calling for "law and order." This appeal resonated strongly with conservative whites nationally, but especially white southerners. By 1965 almost all American homes had televisions, and televised footage of urban riots, assassinations, antiwar protests, black militant groups, recreational drug use and sexual activity among young people, and unrest at the Democratic Party convention fostered perceptions that under Democratic governance the nation and the social fabric were unraveling at the seams.

Guided by former Thurmond political advisor Harry Dent, the 1968 Republican nominee, Richard Nixon, sent unmistakable signals of sympathy to white southerners. Meeting with southern Republican delegates, Nixon supported limiting federal government intrusion into their region's affairs. He assured them his administration would not "ram anything down your throats," said he opposed school busing, promised to appoint "strict constructionists" to the Supreme Court, and opposed federal intervention in local school affairs (Carmines and Stimson 1989, p. 53). Nixon's candidacy was complicated by the American Independent Party candidacy of former Alabama governor George Wallace, who also appealed to white southerners with a populist, antigovernment, "law and order" campaign. Although Wallace carried several southern states, Nixon eked out a win in a divided nation exhausted by war in Vietnam and rocked by protests, assassinations and violence, and racial unrest at home.

1969 AND LATER: THE SOUTHERN STRATEGY EVOLVES, BUT CONTINUES

During the Nixon presidency directly racial issues, such as school busing, and covertly racial issues, such as social welfare spending, assumed center stage. Controversies over school busing arose owing to court rulings such as the 1971 *Swann v. Charlotte-Mecklenburg* decision requiring busing to achieve racial integration. Nixon won a landslide reelection in 1972, winning every southern state. Later Republican candidates continued to make covert racial appeals toward conservative whites nationwide, but especially conservative southern whites. Ronald Reagan launched his 1980 campaign with a speech emphasizing "states' rights" in Philadelphia, Mississippi, where the kidnapping and murder of three civil rights workers had shocked and galvanized the nation in 1964. Reagan also made racially charged remarks about "welfare queens" in stump speeches, tried to dismantle the U.S. Civil Rights Commission, opposed affirmative action programs, and advocated cutting federal aid to cities and social programs that especially benefited blacks.

In 1988 George H.W. Bush's campaign portrayed Democratic candidate Michael Dukakis as "soft" on violent crime in a racially charged campaign designed by Republican advisors including Lee Atwater, a native South Carolinian, protégé of Harry Dent, and former campaign director for Republican U.S. Senator (and 1948 Dixiecrat presidential candidate) Thurmond. The campaign featured the story of William "Willie" Horton, a black convict who, released from prison on a weekend furlough (a controversial program supported by Massachusetts governor Dukakis), escaped to Maryland, where he attacked a couple in their home. Republican strategists openly exploited the Horton case, with one TV ad showing a sinister and unruly-looking Horton in police custody. Political scientists Donald Kinder and Lynn Sanders (1996) and Tali Mendelberg (2001) demonstrate that the effect (if not the intent) of the Horton campaign was to stoke white fears of black violence and criminality for political gain. Atwater promised that "by the time this election is over, Willie Horton will be a household name." Later, he said "the Horton case is one of those gut issues that are value issues, particularly in the South, and if we hammer at these over and over, we are going to win."

In the four presidential elections between 1992 and 2004 racial issues have receded in importance, and moral and religious issues have become more prominent. These developments have fueled continued Republican realignment among white southerners, but generally for reasons remotely related to race. As the first southern conservative president since Andrew Jackson (Lind 2003), George W. Bush has enjoyed very high approval ratings from white southerners. Bush's social conservatism and eager use of force overseas since the September 11, 2001, attacks resonate strongly with the militarism (Nisbett and Cohen 1996) and social and religious conservatism (Smith 1997; Green et al. 2003) common among white southerners. For Democrats, the region is now forbidding territory. In the seven presidential elections since 1980, Republican candidates have swept every southern state four times (1984, 1988, 2000, and 2004), and won all but one southern state, Georgia, in 1980. In 1992 and 1996 Arkansas native Bill Clinton carried some southern states, but most southern electoral votes still went to the Republicans.

The southern strategy, launched in 1964 and refined with a panoply of racially charged issues from 1968 to 1988 and other, generally less race-related, issues since 1992, has borne fruit for Republicans. Most white southerners are now reliably Republican in voting for president, and increasingly in voting for Congress and state offices as well. Meanwhile, as reported by Mike Allen in the *Washington Post* (2005), Republican National Committee chairman Ken Mehlman tacitly admitted the racial basis of the southern strategy. In prepared remarks to the National Association for the Advancement of Colored People, Mehlman acknowledged that "some Republicans [were] trying to benefit politically from racial polarization," adding that "we were wrong" and calling it "not healthy for the country for the political parties to be so racially polarized."

Still, southern Republicans may be continuing efforts to polarize the party system by race. The Republican-led 2003 redistricting in Texas has nearly eliminated white Democrats in Texas's U.S. House of Representatives delegation. After the 2004 election, Texas's U.S. House delegation had eleven Democrats—one white and ten black or

Latino—and twenty-one Republicans—one Latino and twenty white. Similarly, in 2005 Georgia Republicans passed a controversial "Voter ID" law requiring would-be voters to show a driver's license or other state-issued photo identification. Georgia's black lawmakers walked out of the statehouse in angry protest over the law's passage. Civil rights groups charged the law would disproportionately suppress black voting, since blacks are less likely to own cars and thus have drivers' licenses. The law required those without drivers' licenses to purchase a state-issued identification card, but at offices that were scarce in heavily-black Atlanta. An injunction, passed later in the year, blocked the law from further being enforced.

SEE ALSO *Civil Rights Movement, U.S.; Dixiecrats; Nixon, Richard M.; Reagan, Ronald; Republican Party; Thurmond, Strom*

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Fred Slocum

SOVEREIGNTY

Political scientists trace the conventional definition of sovereignty—supreme legal authority exercised over a particular territory and people—to the writings of European legal and political philosophers from the sixteenth to nineteenth centuries. Many view sovereignty as a defining feature of political modernity, and some critical and postmodern theorists regard sovereignty as a discursive practice and, as such, a central problem for contemporary politics, particularly world politics. It is argued that the discursive practice of sovereignty constructs and sustains the state as the supreme authority in a world in which human well being and social justice would be better served by finding ways of simultaneously holding states more accountable to people and by enlarging the role of global civil society. By some accounts, the sovereign state is the cause of war and international anarchy as well as the primary obstacle to the construction of a humane world order.

Writings on sovereignty over the past four centuries reflect two distinct views, one unlimited and absolute, the other restrictive and conditional. The works of Niccolò Machiavelli (1469–1527), Jean Bodin (1530–1596), Thomas Hobbes (1588–1679), and John Austin (1790–1859) fall into the first category. In Austin's view law is "the command of the sovereign." Machiavelli and Hobbes held that the recognition and exercise of sovereignty as supreme authority is necessary to the establishment of effective government. Bodin's conception was so absolute that, in his view, elected officials could not be said to hold sovereign power at all. Such absolute sovereignty was mitigated when it passed historically from the "divine right of kings" in the sixteenth through the eighteenth centuries to the state or government. Though Hobbes and Austin did not deny a role for the people, their emphasis on the state as the locus of sovereignty is evident today, as there are no requirements that states be democratic in order to be recognized as possessing sovereign authority accountable to no higher authority, hence the criticism of state sovereignty by today's human rights advocates. In contrast, John Locke (1632–1704) and Jean-Jacques Rousseau (1712–1778) argued for a shift in the locus of sovereignty from government to people.

Recent criticisms of sovereignty as a discursive practice stem largely from the work of the influential postmodernist Michel Foucault (1926–1984), who sought to unveil how sovereignty discourses both correspond to and constrain the way power is constituted in social relations in specific historical and cultural contexts. This exercise reveals the paradox of modernity, where sovereignty, said to reside within the individual, has a totalizing effect when exercised by the state. Philosopher Jacques Derrida (1930–2004) also notes the contradiction between, on the one hand, sovereignty understood as one group or individual exercising a superior power over others and, on the other, modernity's promise of democracy and equality.

Sovereignty can be viewed within particular contexts such as international law, international political relations, or through a network of legal relations within a federal state, such as the United States. In international law, an absolute concept of sovereignty is less relevant than the "sovereign equality" of states. States freely enter into legally binding agreements through treaties, but in doing so, they in effect agree to a diminishment of sovereignty. An example is the optional clause to the Statute of the International Court of Justice, which imposes compulsory jurisdiction on all states signing the clause. Some argue that the members of the European Union give up some state sovereignty in favor of "pooled" sovereignty. A distinction is also made between de jure sovereignty, that is, the legal status of sovereignty, and de facto sovereignty, which allows a state to act sovereign as a practical matter even if not supported by de jure, or legal, recognition.

Sovereign equality is a legal attribute of states in their legal and political relations with another. New states "come into existence" as a result of being recognized by existing states. Thus the success of a people or a secessionist movement in seeking recognition as a sovereign state will ultimately depend on the political will of existing states. States may also experience diminished sovereignty as a consequence of violating international norms or as a result of the enforcement of international law by other states. Following their defeat in World War II (1939–1945), for instance, Germany and Japan formed postwar governments under the supervision of the international community, and their ability to maintain military forces was curtailed as a condition of their defeat. More recently, following the United Nations Security Council enforcement action in 1991, Iraq's sovereignty was diminished by the International Atomic Energy Commission inspections and the U.N. designation of "no-fly zones."

In a federal system such as the United States, sovereignty can be reserved or shared between the federal and state or provincial governments. Additionally, indigenous peoples within a state can exercise or assert indigenous sovereignty. Although the term *indigenous* has gained widespread use internationally, U.S. law refers to "tribal sovereignty," while Canada and other settler states refer to "aboriginal" sovereignty. The history of tribal sovereignty in the United States has been troubled, uneven, and often inconsistent, in large part because U.S. law asserts congressional "plenary power" over indigenous peoples. U.S. law treats tribal sovereignty as a lesser or subordinate form of sovereignty. Though eroded through many of the court decisions during most of the twentieth century, in the later twentieth and early twenty-first centuries the right of self-determination has been strengthened as U.S. law recognizes that indigenous tribes and nations possess many attributes of sovereignty. A move toward international recognition of indigenous rights may further strengthen the legal and political basis of indigenous sovereignty, which indigenous peoples often regard as the ability to control one's own political destiny.

Sovereignty has no intrinsic moral authority. As a legal doctrine or norm, sovereignty is said to have settled the church-state authority crisis of the sixteenth century. Its legitimacy, however, rested at that time on the notion of divine right, whereby authoritative uses of power were grounded in the moral claims of religious loyalty. With the rise of nationalism in the eighteenth century, the moral basis shifted from the church to the people in the form of the nation, so that divine right gave way to popular sovereignty. It soon became evident that nationalism was exclusionary, and as an ideology it could be used to justify heinous atrocities against "others" who did not belong to the national group controlling the state.

Sovereignty today is the subject of much debate, with some calling for the "deterritorialization" of sovereignty and others heralding the erosion of the sovereign state in favor of a combination of simultaneously more local and more global societal relations.

SEE ALSO *Confederate States of America; Federalism; Monarchy; Totalitarianism*

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Franke Wilmer

SOWETO

SEE *Townships.*

SOWETO UPRISING OF 1976

SEE *Apartheid.*

SPACE EXPLORATION

The sociocultural status of space exploration has been contested for many years and remains uncertain. Although astronomy and related sciences have benefited greatly from the world's space programs, space exploration was motivated not by scientific curiosity but by the romanticism of a social movement and by competition between prestige-conscious nations. By the end of the nineteenth century, astronomy possessed a rough picture of the solar system, including the knowledge that objects like the Moon and Mars were worlds somewhat comparable to the earth, but realistic means for space travel had not yet been imagined. Then, autonomous intellectuals independently developed the correct theories for multistage liquid-fuel rockets.

SOCIAL ORIGINS

Konstantin Tsiolkovsky (1857–1935) was an impoverished schoolteacher in Russia who devoted many years of socially isolated work to developing fruitful ideas about spaceflight. American Robert H. Goddard (1882–1945) independently developed many of the same ideas, and possessing greater resources was actually able to build a working liquid-fuel rocket in 1926. Romanian-German Hermann Oberth (1894–1989) learned of the work of his colleagues just as he was about to publish his treatise, *The Rocket into Planetary Space*, in 1923. On the basis of the work of these pioneers, spaceflight societies were founded in Germany (1927), the United States (1930), Russia (1931), and Great Britain (1933). The German, U.S., and Russian groups independently duplicated Goddard's working liquid-fuel rocket, although Goddard refused to cooperate with the others in the vain hope that he could develop unaided the technology to send an unmanned rocket to the moon. United only by publications and occasional visits, these groups formed an international social movement dedicated to space travel for transcendent motives that were neither economic nor political.

As the financial troubles of the Great Depression deepened, the space-travel movement struggled to survive. Especially in Germany, and later in the United States and Russia, the movement entered into a marriage of convenience with the military. The Treaty of Versailles ending World War I (1914–1918) had limited German artillery and aircraft but did not mention rockets. Members of the movement, notably Oberth's young protégé Wernher von Braun (1912–1977), presented liquid-fuel rockets to the German army as effective weapons, although development of conventional solid-fuel rockets would have been a better choice for military purposes. Near the end of World War II (1939–1945), von Braun's team completed development of the 300-mile-range V-2 rocket, demonstrating the potential of liquid-fuel technology for spaceflight. Starting with the launch of Sputnik I in 1957, the Soviet Union and the United States competed for international prestige through aggressive space programs, until the landing of the Apollo 11 lunar module on the moon in 1969.

On the basis of a huge library of technical and scholarly publications, the facts of the history of space exploration to date are clear, but the social-scientific inter-

pretation is hotly debated. The view around 1960 was that international propaganda competition was the main driver, as has been summarized by Vernon van Dyke (1964). Amitai Etzioni (1965) argued that the American space program was a useless extravagance through which the military-industrial complex looted the national treasury. Then, John Logsdon (1970) argued that President John F. Kennedy's (1917–1963) decision to go to the moon was a means for reviving the political spirit of his New Frontier program after defeats in 1961 with the aborted Bay of Pigs invasion of Cuba and in a meeting with the Soviet leader Nikita Khrushchev (1894–1971). William Bainbridge (1976) took the argument one step further, suggesting that in Germany and the Soviet Union, as well as in the United States, leaders of the transcendental spaceflight movement had cleverly manipulated beleaguered political leaders to invest in space as a symbolic solution to their inferiority in competition with other leaders. Michael Neufeld (1996) has argued against this thesis in the case of Germany, asserting that technically competent military engineers possessed a correct estimation of the military potential of the technology. Walter McDougall (1985) argued against this view in the case of the Soviet Union, stating that Marxist ideology naturally supported visionary technological projects. Most recently, Logsdon (2006) has argued that the American space program has been trapped in a vicious circle, as members of the movement convince political leaders to undertake technically demanding projects, but the public is not willing to invest enough to make them successful.

SOCIETAL IMPLICATIONS

Public opinion has long been generally favorable toward the space program but has never been a driving force in motivating development of the technology. In October 1947, a Gallup poll asked 1,500 Americans, "How long do you think it will be before man will be able to fly to the moon?" Only 21 percent guessed a particular year, 38 percent said "never," and the remainder had nothing to say on the topic. Throughout the Apollo program, a majority tended to feel the project was not worth the cost. Americans' enthusiasm for the actual moon landing faded fast after 1969, possibly accelerated by a general loss of confidence in science and technology that prevailed until the mid-1970s. Since then, majorities have tended to feel that the National Aeronautics and Space Administration (NASA) was doing a good job, but they give space exploration a low priority for funding. The responses of 1,400 Americans to the General Social Survey in 2004 were typical. Only 14.3 percent wanted funding increased, 43.4 percent wanted it kept at current levels, 36.8 percent wanted funding reduced, and the remaining 5.5 percent had no opinion.

Around 1970 there was considerable discussion of the potential terrestrial benefits of space, especially the second-order consequences from technology transfer, often called *spin-offs*. These were popularly conceptualized as distinct inventions made in the space program that found valuable uses in society. Many people count Tang powdered fruit drink, Teflon coatings on frying pans, and Velcro fasteners among these, but all existed before the space program. Real spin-offs actually are rare, but their stories fit popular misconceptions about how technological progress occurs, so they are legends that gain strength in the retelling. Far more important are the intended *applications* of space technology, the most prominent of which are communications satellites, navigation satellites (Global Positioning System), meteorology satellites, and military reconnaissance satellites. Difficult to measure, but probably of equal value, is the general stimulus to scientific and technological development achieved by the space program through increasing the technical expertise in the population, widely disseminating abstract technical ideas that may contribute to innovations far from their original sources, and inspiring young people to study science.

When Bainbridge (1991) asked two thousand students at Harvard University in 1986 to identify the possible goals for the space program, they came up with a list of 125 goals that could be clustered into groups that served different values. Some goals were technical and economic, including the benefits of satellites listed above, spin-offs, possible manufacturing in the vacuum and weightlessness of space, new knowledge for sciences like physics and astronomy, and preservation of the earth's environment. A different set of goals stressed emotional and idealistic values, such as spiritual fulfillment, personal inspiration, artistic and aesthetic transcendence, satisfaction of curiosity, and the building of world harmony. A small group of items concerned national pride, defense, and military capabilities in space. Finally, a number of far-out but reasonably popular goals envisioned colonization of the solar system and the discovery of extraterrestrial life.

The early decades of the twenty-first century appear to be a transition period, in which predictions would be especially hazardous. China has launched men into orbit, thereby demonstrating the quality of its technology, especially to the propaganda disadvantage of Japan, which has pursued a half-hearted and largely unsuccessful space program. Both Russia and the European Union have well-established space launch capabilities but lack ambitious goals. After failing twice to develop a successor to the space shuttle in the National Aerospace Plane and the X-33, and running more than fifteen years overdue in completing the space station, the U.S. space program clearly required fundamental redirection. The initial phase of reorganization, announced in 2004, severely cut back scientific research and technological development in favor of

very long-term plans for adventurous but poorly motivated human voyages to the Moon and Mars.

As any science fiction fan would be happy to explain to any social scientist willing to listen, the long-term social implications of space exploration could possibly be profound. Despite daunting technical and economic hurdles, the colonization of Mars and of several large satellites in the solar system could lead to a time when more humans lived off the Earth than on it. Some think we will transform ourselves radically to become better adapted to those alien environments and better prepared for interstellar travel. If so, space travel could bring about a new adaptive radiation event comparable to that which produced the human species five million years ago in East Africa, what the science fiction writer Alfred Bester (1913–1987) called "arrival of the fittest" in his novel, *The Stars My Destination* (1956). If the social scientist scoffed at such ideas, the science fiction fan might comment there must have been chimpanzees five million years ago who scoffed as well.

SEE ALSO *Bay of Pigs; Industry; Mars; Science Fiction; World War II*

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William Sims Bainbridge

SPACESHIP EARTH

SEE *Fuller, Buckminster.*

SPANCE, MICHAEL

SEE *Signals; Screening and Signaling Games.*

SPANISH CIVIL WAR

The Spanish Civil War broke out on July 17, 1936, as a result of the revolutionary process begun under the democratic Second Republic of Spain, which had been inaugurated in 1931. Democracy had brought large-scale political and social mobilization, while the left launched a series of four revolutionary insurrections between 1932 and 1934. In 1935 an alliance of the moderate and the revolutionary left formed a Popular Front that won the election of February 1936. This produced a weak minority government of the moderate left that could not restrain the revolutionaries, whose violence, disorder, seizure of property, and corruption of electoral processes provoked a military revolt.

Though Spanish political society was strongly polarized between right and left, each polarity was badly fragmented. The military revolt brought scarcely more than half the army out in revolt, though it was assisted by rightist militia. The leftist Republican government in power abandoned constitutional rule and engaged in what was called "arming the people," which meant giving weapons and de facto power to the revolutionary organizations.

The result was the Spanish revolution of 1936–1937, the most intense and spontaneous outburst of worker revolution seen in modern Europe, not excepting the Russian Revolution of 1917. It collectivized much farmland and most of urban industry, and it was marked by an extensive Red Terror—the mass execution of political opponents, directed against all conservative organizations, and especially the Catholic Church—which destroyed countless churches. Nearly 7,000 clergy were killed, and at least 55,000 people perished in the Republican zone.

After two months, the military insurgents elected General Francisco Franco as their commander-in-chief. Franco also acted as dictator and permanent chief of state. By the second week of the Civil War, he had successfully sought military assistance from Nazi Germany and Fascist Italy, and he mounted a military drive on Madrid. The rebels quickly termed themselves Nationalists and mounted a savage repression of their own, which was more concerted and effective than that of the Republicans and eventually claimed even more victims.

General Franco organized a single-party state, partially modeled on that of Fascist Italy, in April 1937. He combined the Spanish fascist party with rightist groups to form the Falange Española Tradicionalista (Traditionalist Spanish Phalanx, or FET). Franco succeeded in establishing almost complete political unity among the rightist forces, enabling him to concentrate almost exclusively on the war effort, and in the process he developed a more effective and professionally led military force than did his opponents.

The revolutionary Republic proved ineffective militarily, relying on disorganized revolutionary militia. After the first two weeks it lost battle after battle, resulting in the organization of a new Republican government on September 4, 1936, led by the Socialist Francisco Largo Caballero. It eventually included all the leftist forces in a single government and began the creation of a new centralized Ejército Popular (People's Army).

Though France was led by a Popular Front government at this time, it was becoming dependent on Great Britain, which counseled against involvement in Spain. The French government therefore took the lead in organizing the Non-Intervention Committee, which gained the collaboration of nearly all European governments and took up deliberations in London in September 1936, though it was unsuccessful in ending the involvement in the war of the three major European dictatorships.

Germany and Italy were already intervening on behalf of Franco, and the Republicans urgently requested military assistance from the Soviet Union, the only other revolutionary state in Europe. Stalin finally decided to send assistance in September 1936, and Soviet military assistance began to arrive soon afterward. This assistance was paid for by shipping most of the Spanish gold reserve (the fifth largest in the world) to Moscow. Late-model Soviet planes and tanks, which arrived in large quantities, outclassed the weaponry provided by Hitler and Mussolini. These weapons, together with hundreds of Soviet military specialists, were accompanied by the first units of the International Brigades, a volunteer force organized by the Communist International, which eventually numbered approximately 41,000. By the end of 1936 the war was turning into a stalemate, and it promised to become a long struggle of attrition.

In this situation, the Spanish Communist Party, which had been weak prior to the war, expanded rapidly. Soviet assistance helped it become a major force on the Republican side, emphasizing the importance of restraining the revolution of the extreme left and concentrating all resources on the military effort. This provoked great tension, leading to the "May Days" of May 1937 in Barcelona, the center of the revolution. This was a mini–civil war within the civil war, with the extreme revolutionary left fighting the more disciplined forces of the Communists and the reorganized Republican state. The latter dominated, leading to the formation that same month of a new Republican government led by the Socialist Juan Negrín, which deemphasized the socioeconomic revolution and sought to concentrate all its activity on the military effort.

The Soviet escalation of military intervention in October 1936 was quickly countered by a counter-escalation from Mussolini and Hitler, who sent an Italian army corps of nearly 50,000 men and a 90-plane German aerial unit, the Condor Legion, to Spain. This guaranteed that Franco would continue to receive the support necessary to maintain the military initiative. In 1937 he conquered the Republican northern zone, and in April 1938 his army sliced through Aragon to the Mediterranean, dividing the remaining Republican zone in two. During the conquest of the northern zone, the most famous (and infamous) incident of the war occurred. This was the bombing of the Basque town of Guernica by German and Italian planes in April 1937.

Though Mussolini desired a quick and complete Nationalist victory to strengthen Italy's position in the Mediterranean, Hitler was in no hurry. He preferred that the Spanish war continue for some time. It had become the main focus of European diplomacy during 1936-1937, and it served to distract attention from the rearmament of Germany and the beginning of its expansion in central Europe. The French government covertly supported the Republican cause in a policy of "relaxed nonintervention," which served as a conduit for military supplies from the Soviet Union and other countries. By 1937, Stalin was in turn increasingly distracted by the Japanese invasion of China. In 1938 he sought disengagement from Spain, but he could find no terms that would not involve a loss of face.

Franco's forces slowly but steadily gained the upper hand. His government in the Nationalist zone maintained a productive economy and a relatively stable currency. The revolutionary Republican zone, by contrast, was wracked with inflation and suffered increasingly severe shortages, producing widespread hunger by 1938. The Communists,

in turn, developed a political and military hegemony under the Negrín government, though never complete domination. The policy of both Negrín and the Communists was to continue resistance to the bitter end, hoping that a general European war would soon break out, during which France would come to the relief of the Republicans. This was increasingly resented by the other leftist parties, however, who finally rebelled in Madrid in March 1945, overthrowing Negrín and the Communists, and then soon surrendering to Franco, who declared the end of the war on April 1, 1939.

The Spanish Civil War was a classic revolutionary-counterrevolutionary civil war, somewhat similar to those that occurred in eastern and southeastern Europe after each of the world wars. It became a highly mythified event, often presented as a struggle between "fascism and democracy," "fascism and communism," or "Christian civilization and Asian barbarism." It has also been viewed as the "opening battle of World War II (1939–1945)." All such epithets are exaggerated, however. While there was fascism on the side of Franco's Nationalists, there was no democracy on the Republican side. In Spain, Hitler and Stalin were on opposite sides, but they joined forces in August-September 1939 to begin World War II in Europe. Germany and Italy did gain their goals in Spain, however, while Soviet policy failed.

Militarily, the war was notable for the introduction of late-model weaponry, especially new warplanes and tanks. The Soviet military studied the war with great thoroughness, but they sometimes drew the wrong conclusions from it, as did some other countries. Germany learned important lessons on the use of combined arms and air-to-ground support, but it failed to improve its armored forces. The victorious Franco regime skirted with involvement in World War II, but it never entered that conflict and endured until Franco's death in 1975.

SEE ALSO *Civil Wars; Fascism; Franco, Francisco; Hitler, Adolf; Mussolini, Benito; Stalin, Joseph; World War II*

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Stanley G. Payne

SPANISH-AMERICAN WAR

SEE *War of 1898.*

SPATIAL MAPPING

SEE *Geography.*

SPATIAL THEORY

Spatial theory is built on the concept of distance; this distance may be of an economic or ideological form. The foundations of spatial analysis span many disciplines, such as economics, urban studies, and political science. The seminal paper by Hotelling (1929) studied the equilibrium location of two sellers of a homogenous product in a *linear* town where all consumers are located on a single road. Hotelling's model is based on physical distance and demonstrates that if the sellers compete only in terms of location (spatial competition) and they are identical in all other dimensions such as quality, costs, and prices, then their optimum location will be the *median* of the town. Consumers try to minimize travel time when they choose between similar stores. The result is that the stores locate next to each other at the center of the town to capture the most customers. The implicit assumption of spatial models is that people are motivated mainly by self-interest—firms maximize profit and consumers maximize utility.

The notion of space can be extended beyond physical space to include "position" in product characteristics, as described by Lancaster (1979), and "position" in political platforms, as elaborated by Downs (1957). Similarly, in Chamberlain's (1933) model of monopolistic competition, space is seen as a tool to derive the demand curve faced by the monopolistic firm. Although Hotelling and Smithies (1941) are credited with originating the idea, Downs established spatial theory as a conceptual tool. The modern applications of spatial theory in economics, urban studies, and political science are based on the trade-offs

between gains and losses as a result of changes in spatial position. Smithies modified Hotelling's model by introducing elastic demand so that people at the edges of town might stop shopping at the store if it moved too far to the center. Under perfect inelastic demand conditions, as suggested by Hotelling, consumers are assumed to travel to the center of the town regardless of the opportunity cost of transportation. To introduce a trade-off between the access and transportation cost, Smithies suggested that transportation costs lead to elastic demand at each point on the linear road. Thus, when consumers face an inverse demand function with respect to the distance from the center, they will stop traveling to the center if the cost of travel outweighs the benefit of access. Mills (1972) suggested that allocation of land to differing uses is determined primarily by transportation costs. He argued that variability in transportation costs is a key determinant in the distribution of people across a metropolitan area. The lower transportation costs are, the more decentralized the area is.

Political applications of the spatial model closely followed the spatial theories of economic competition. The electoral models developed by Downs essentially adopt the same principles that economists and social choice theorists use to analyze people's actions in the marketplace and collective decision making. The economic concept of locational equilibrium has been applied to the political world. Downs assumed that voters were distributed over policy dimensions and that political parties played the role of stores. The tendency of competing businesses toward imitation is applied to political parties during elections. When voters vote for the party closest to them on a single policy dimension, the parties converge to the median voter's preferences. Since the goal of a political party is to maximize votes, parties and candidates purposefully take positions in the center of the distribution of voter preferences. Restricting issues to a single policy dimension and assuming single-peaked preferences, the expected result is a spatial equilibrium at the position of the median voter (Downs 1957; Black 1958). Since the voters choose to support the candidate nearest to them on the ideological scale, the parties and candidates should adopt platforms that appeal to the median voter to win a majority of the votes. The Downs/Hotelling spatial theory of competition assumes that each voter votes for the candidate from whom he or she derives the highest utility. Downs's model is an example of the social choice theory; it introduces the electoral trade-off between the number of extremists each party loses by moving toward the center, as compared with the number of moderates it gains. As parties move toward the center of the political spectrum, the voters at the extremes are less likely to identify with mainstream parties and thus choose extremist alternatives or abstention.

Modern monocentric models were developed in the 1960s, largely by Alonso (1964), Muth (1969), and Mills (1972). These models assume the existence of a center in a geographic space to which access is scarce, and therefore valuable. To be close to the center for better access, businesses and consumers bid for land. Land prices are inversely related to distance to the center. Businesses and consumers face a trade-off between land prices and transportation costs. Those who value access to the center more will outbid the others and face higher land prices and lower transportation costs. In Beckmann's (1973) family choice model, distance to the center is inversely related to the number of dependents in a family unit. Similarly, the smaller size of the ratio of wage earners to family size determines an equilibrium location further from the center. Monocentric models are not concerned with why access is desirable but rather with its consequences, especially the manner in which the market allocates access. However, the need to interact turns out to be sufficient to generate a dense center that exhibits a single peaked-distribution of (homogenous) people across locations. There are many theories of why people want to develop and maintain lasting and positive relations. Beckmann (1976) was the first to focus on the trade-off between the average distance to those with whom one interacts and the amount of the land one consumes. In this model, the city or downtown emerges as a magnet for social relations.

Note that the spatial electoral model (Downs 1957) and the monocentric model (Alonso 1964; Muth 1969; Mills 1972) are also single-peaked as long as the voters are voting on one issue, the city has one center, and the spatial competition has only one dimension. In the real world, however, political discourse and campaign issues seldom fall into a single dimension and goods are different in other dimensions than distance. In this case single-peaked distributions are not possible and multiple equilibria result instead.

SEE ALSO *Borders; Cities; Geography; Metropolis; Mills, Edwin; Political Science, Behavioral; Political Theory; Public Choice Theory; Public Goods; Trade; Transportation Industry*

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Haydar Kurban
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SPEARMAN, CHARLES

SEE *Intelligence.*

SPEARMAN RANK CORRELATION COEFFICIENT

The Spearman rank correlation coefficient is a nonparametric (distribution-free) rank statistic proposed by Charles Spearman in 1904. It is a measure of correlation that captures the strength of association between two variables without making any assumptions about the frequency distributions of the underlying variables.

The computation of the Spearman rank correlation coefficient requires first that the values of the two variables be assigned ranks. When the data are not initially ranked, the first step is to separately rank the two variables (X and Y) under examination. Then the Spearman coefficient is calculated as the ordinary Pearson correlation coefficient r between the ranked values of X and Y. After ranking the two variables, for each case i we take the difference $d_i = X_i - Y_i$ for each pair, and then we calculate the Spearman coefficient. This coefficient of rank correlation measures the degree of association between the two sets of ranks. The formula of this statistic is

$$r_s = 1 - \frac{6\sum_{i=1}^{n} d_i^2}{n(n^2-1)}$$

where r_s = the Spearman rank correlation coefficient, d = the difference between each pair of ranks of corresponding values of the variables X and Y, and n = the number of pairs of values in the sample.

There are two properties of this coefficient. First, the values of the Spearman correlation coefficient will always vary between –1 and 1. When the value of the coefficient is 1, there is a perfect positive correlation or direct correlation. That is, large values of the one variable, for example, X, are associated with large values of the other, for example, Y, and small values of the X variable are associated with small values of the Y variable. When the coefficient is –1, there is a perfect negative correlation or indirect correlation. In this case, large values of the X variable are associated with small values of the Y variable and vice versa. When the value is equal to zero, it means that there is no relationship or correlation. This statistic shows only that two variables X and Y correlate positively or negatively; it does not offer any indication that one variable affects the other.

The second property of the Spearman rank correlation, and of its parametric counterpart, is that it is a pure number without units or dimensions. In using this coefficient we deal with two sets of ranks assigned to the variables X and Y. The original observations on the variables may be ranks, or they may be numerical values ranked by magnitude.

In addition to interpreting the magnitude and the direction of a correlation coefficient, the significance of a given value of correlation should also be tested. The null hypothesis states that no correlation exists and that whatever value of correlation is found between the two examined variables is due to sampling error.

A modern approach to testing the hypothesis that the value of the Spearman coefficient is significantly different from zero is to calculate the probability that it would be greater than or equal to the observed r by using a permutation test. This method is superior to the traditional ones in most cases, even when the dataset is large, because modern computing has the power to generate permutation.

The traditional approach for determining significance is still widely used. It involves the comparison of the calculated r with published tables for various levels of significance. It only requires that the tables have the pertinent values for the desired ranges.

An alternative approach for samples of large sizes is the approximation to the Student's t-distribution that is given by the following formula:

$$t = r_s / [(1 - r_s^2) / (n - 2)]^{1/2}$$

When the sample size (n) is less than 10, the above is not appropriate. For values of (n) less than 10, table 1 shows the critical values of r_s required for the significance

Critical values of Spearman rank correlation coefficient for N<10

N	Nondirectional test	Directional test
5	1.00	0.90
6	0.89	0.83
7	0.79	0.72
8	0.72	0.62
9	0.70	0.60

SOURCE: http://faculty.vassar.edu/lowry/corr_rank.html.

Table 1

at the 0.05 level for both a nondirectional and a directional test.

APPLICATIONS AND SHORTCOMINGS

The Spearman rank correlation coefficient can be used when the normality assumption of the two examined variables' distribution is violated. It also can be used when the data are nominal or ordinal. It may be a better indicator that a relationship exists between two variables when the relationship is nonlinear, even for variables with numerical values, when the Pearson correlation coefficient indicates a low or zero linear relationship. When there are three or more conditions, a number of subjects are all observed in each of them, and we predict that the observations will have a particular order. In this case, a generalization of the Spearman coefficient is useful.

As with all other nonparametric or distribution-free procedures or tests, the Spearman rank correlation coefficient is less powerful than its parametric counterpart, the Pearson product-moment correlation coefficient. In addition, there is no evidence of causality between the two variables that have been found to be related by this coefficient.

ALTERNATIVE CORRELATION COEFFICIENTS

There are other examples of correlation coefficients, including the Pearson product-moment correlation coefficient, which is used for making inferences about the population correlation coefficient, assuming that the two variables are jointly normally distributed. When this assumption cannot be justified, then a nonparametric measure such as the Spearman correlation coefficient is more appropriate. The Pearson correlation coefficient measures the linear association between two variables that have been measured on interval or ratio scales. The formula that determines the Pearson product-moment correlation coefficient (r_{XY}) is

$$r_{xy} = \frac{\sum_{i=1}^{n}[X_i - E(X)][Y_i - E(Y)]}{\left\{\sum_{i=1}^{n}(X_i - X)^2(Y_i - Y)^2\right\}^{1/2}}$$

The significance of r, where the null hypothesis states that no correlation exists between the two variables X and Y ($r_{XY} = 0$), is found by the following t-statistic, with $(n - 2)$ degrees of freedom:

$$t = \frac{r(n-1)^{1/2}}{(1 - r^2)^{1/2}}$$

Another measure of degree of concordance that is closely related to the Spearman correlation coefficient is the Kendall tau rank correlation coefficient, given by the formula

$$\tau = \frac{1(4Q)}{n(n-1)}$$

Similar to the Spearman coefficient, Kendall's tau lies between –1 and 1. When it is equal to +1, we assume that there exists complete concordance, whereas when it is equal to –1, there exists complete disagreement. This Kendall tau (τ) coefficient uses the same data as the Spearman correlation coefficient (r_s) but differs arithmetically, so they are not exactly similar.

In order to calculate the tau (τ) coefficient we go through the following steps.

We rank the values of variable X from 1 to n; similarly, we rank the values of variable Y, both in an ascending order.

We make pairs for every ranked value of X_i the equivalent Y_i.

We compute the variable S, which is equal to $S = \Sigma c_{ii}$ where $c_{ii} = 1$ if X_i and X_j have the same rank with the Y_i and Y_j and $c_{jj} = -1$ in the opposite case.

If there are no same-value cases among the X_i and Y_i (or there are few compared to the sample size (n)), then Kendall's tau coefficient is equal to $\tau = 2S / [n(n-1)]$.

An advantage of the Kendall tau coefficient compared to the Spearman correlation coefficient is that the former can be generalized in order to determine the Kendall partial correlation coefficient, which is equivalent to the Pearson partial correlation coefficient in cases where nonparametric statistics are appropriate.

Another correlation coefficient, the correlation coefficient C of rank matrices (or "double-entrance matrix"), examines the degree of dependence between two variables X and Y, despite the facts that these variables could be ranked or not, that they could be continuous or discontinuous, and that they could have normal distributions or not. It can be calculated by the formula:

$$C = \left[\frac{x^2}{(n + x^2)}\right]^{1/2}$$

and it follows the chi-squared (χ^2) distribution with $v = (r - 1)(q - 1)$ degrees of freedom, where r and q are the numbers of rows and columns, respectively, of the rank matrix under examination. In order to test the null hypothesis that $C = 0$, or that the two variables X and Y do not have a significant relationship, we calculate the χ^2 and the χ^2_a, which is the critical value. The latter can be found in the tables of the χ^2 distribution for $v = (r - 1)(q - 1)$ degrees of freedom. If $\chi^2 \chi^2_a$, then the null hypothesis is rejected.

SEE ALSO *Pearson, Karl; Statistics*

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Katerina Lyroudi

SPECIAL PERIOD

SEE *Castro, Fidel.*

SPECIFICATION

The term *specification* is used in economics to denote the choice of a model in the context of empirical modeling. Unfortunately, the use of the term since the late 1950s (Theil 1957, Leamer 1990) is confusing because different types of models are conflated; the crucial confusion being between a *statistical* (a set of probabilistic assumptions) and a *structural* (substantive) model. The distinction between these two types of models is important because they raise very different issues with respect to the premises of inference in empirical modeling (see Spanos 2006a).

THEORY AND STRUCTURAL MODELS

It is widely recognized that most stochastic phenomena (the ones exhibiting chance regularity patterns—see Spanos 1999) are commonly influenced by a very large number of contributing factors, and that explains why theories are often dominated by *ceteris paribus* clauses. The idea behind a theory is that in explaining the behavior of a variable, say y_k, one demarcates the segment of reality to be modeled by selecting the primary influencing factors $\mathbf{x}_k$, cognizant of the fact that there might be numerous other potentially relevant factors $\boldsymbol{\xi}_k$ (observable and unobservable) that jointly determine the behavior of y_k via a *theory model*:

$$y_k = h^*(x_k; \xi_k),\ k \in \mathbb{N} := \{1, 2; \ldots, n; \ldots\} \qquad (1)$$

where $h^*(.)$ represents the true behavioral relationship for y_k. The guiding principle in selecting the variables in x_k is to ensure that they collectively account for the *systematic behavior* of y_k and the *unaccounted factors* ξ_k represent nonessential disturbing influences which could only have a *nonsystematic* effect on y_k. This reasoning transforms (1) into a *structural model* of the form:

$$y_k = h(x_k; \varphi) + \epsilon(x_k, \xi_k),\ k \in \mathbb{N}. \qquad (2)$$

By definition the error term process is:

$$\left(\varepsilon(\mathbf{x}_k, \xi_k)\Big|^{control}_{design}\right) = \varepsilon_k \sim IID(0, \sigma^2),\ k = 1,2, \ldots, n. \qquad (3)$$

and represents all unmodeled influences, *intended* to be a nongeneric *white-noise* (nonsystematic) stochastic process; that is, $\{\varepsilon(\mathbf{x}_k, \boldsymbol{\xi}_k),\ k \in \mathbf{N}\}$ has (i) mean zero, (ii) variance $\sigma^2_\varepsilon < \infty$; (iii) uncorrelated over k, and (iv) orthogonal to $h(\mathbf{x}_k; \varphi)$ for all possible values $(\mathbf{x}_k, \boldsymbol{\xi}_k) \in \mathbf{R}_x \times \mathbf{R}_\xi$. Note that (iv) aims to demarcate a "near isolation" condition for the phenomenon of interest.

In summary, a structural model provides an "idealized" substantive description of the phenomenon of interest, in the form of a "nearly isolated" mathematical system (Spanos 1995). The specification of a structural model comprises several choices: (a) the demarcation of the segment of the phenomenon of interest to be captured, (b) the important aspects of the phenomenon to be measured, and (c) the extent to which the inferences based on the structural model are germane to the phenomenon of interest.

The kind of *errors* one can probe for in the context of a structural model concern the choices (a)–(c), which include the form of $h(\mathbf{x}_k; \varphi)$ and the circumstances that render the error term $\varepsilon(\mathbf{x}_k, \boldsymbol{\xi}_k)$ potentially systematic, such as the omission of relevant factors, say w_k, in ξ_k that might have a systematic effect on the behavior of y_t (see Spanos 2006b for further discussion).

The problem with (3) is that assumptions (i)–(iv) of the structural error are nontestable because their assessment would involve verifying these assumptions for all possible values $(\mathbf{x}_k, \boldsymbol{\xi}_k) \in \mathbf{R}_x \times \mathbf{R}_\xi$. To render them testable one needs to embed this structural into a statistical model with a generic error term; a crucial move that often passes unnoticed. Not surprisingly, the nature of the embedding itself depends crucially on whether the data $\mathbf{Z} = (\mathbf{z}_1, \mathbf{z}_2, \ldots, \mathbf{z}_n)$ are the result of an experiment or they are nonexperimental (observational) in nature.

STATISTICAL MODELS WITH EXPERIMENTAL DATA

In the case where one can perform experiments, "experimental design" techniques might allow one to operationalize the "near isolation" condition, including the *ceteris paribus* clauses, and ensure that the error term is no longer a function of $(\mathbf{x}_k, \boldsymbol{\xi}_k)$, but takes the generic form

$$\epsilon(x_k, \xi_k) = \epsilon_k \sim \text{IID}(0, \sigma^2),\ k = 1, 2, \ldots, n, \qquad (4)$$

where "IID" stands for Independent and Identically Distributed. For instance, *randomization* and *blocking* are often used to "neutralize" the phenomenon from the potential effects of $\boldsymbol{\xi}_k$ by ensuring that these uncontrolled factors cancel each other out (Fisher 1935). As a direct result of the experimental "control," via (4) the structural model (2) is essentially transformed into a *statistical model*

$$y_k = h(x_k; \theta) + \epsilon_k,\ \epsilon_k \sim \text{IID}(0, \sigma^2),\ k = 1, 2, \ldots, n. \qquad (5)$$

The statistical error terms in (5) are qualitatively very different from the structural errors in (2) because they no longer depend on $(\mathbf{x}_k, \boldsymbol{\xi}_k) \in \mathbf{R}_x \times \mathbf{R}_\xi$. The most important aspect of embedding the structural (2) into the statistical model (5) is that, in contrast to (i)–(iv) for $\{\varepsilon(\mathbf{x}_k, \boldsymbol{\xi}_k),\ k \in \mathbf{N}\}$, the probabilistic assumptions $\varepsilon_k \sim \text{IID}(0, \sigma^2)$ concerning the generic *statistical error term* are rendered *testable*. That is, (4) has operationalized the "near isolation" condition and the statistical model has been created as a result of the experimental design and control.

A crucial consequence of (4) is that the *informational universe of discourse* for the statistical model (5) has been demarcated to the probabilistic information relating to the observables $\mathbf{Z}_k := (y_k, X_k)$ as described by the joint distribution $D(\mathbf{Z}_1, \mathbf{Z}_2, \ldots, \mathbf{Z}_T; \varphi)$. A statistical model can be viewed as a parameterization of the presumed probabilistic structure of the process $\{\mathbf{Z}_t,\ t \in \mathbf{T}\}$ (Spanos 1986, 1999). This probabilistic structure is chosen so as to render the observed data $Z := (z_1, z_2, \ldots, z_n)$ a truly typical realization thereof. This introduces into the empirical modeling a *probabilistic perspective* which treats the data as realizations of generic stochastic processes devoid of any substantive information.

In contrast to a *structural model*, once $\mathbf{Z}_t$ is chosen by some theory or theories, a statistical model relies exclusively on the statistical information in $D(\mathbf{Z}_1, \mathbf{Z}_2, \ldots, \mathbf{Z}_T; \varphi)$ that "reflects" the chance regularity patterns exhibited by the data. Hence, a statistical model acquires a life of its own in the sense that it constitutes a self-contained generic generating mechanism defined exclusively in terms of the observables $\mathbf{Z}_k := (y_k, X_k)$. For example, in the case where $h(x_k; \varphi) = \beta_0 + \beta_1^T x_t$, the error assumptions $\varepsilon_k \sim \text{NIID}(0, \sigma^2)$ give rise to the *Gauss Linear* model which is given in table 1 (Spanos 1986).

In summary, a *statistical model* constitutes an "idealized" *probabilistic description* of a stochastic process $\{\mathbf{Z}_t,\ t \in \mathbf{T}\}$ giving rise to data $\mathbf{Z}$ in the form of an internally consistent set of probabilistic assumptions chosen to ensure that this data constitute a "truly typical realization" of $\{\mathbf{Z}_t,\ t \in \mathbf{T}\}$. Specification for the statistical model refers to choosing a parameterization and an associated complete set of testable probabilistic assumptions constituting the premises of inference. Specification error denotes departures from assumptions [1]–[5].

STATISTICAL MODELS WITH OBSERVATIONAL DATA

This is the case where the observed data on (y_k, x_k) are the result of an ongoing data generating process, undisturbed by any experimental control or intervention. In this case the route followed in (4), in order to render the statistical error term (a) free of $(\mathbf{x}_k, \boldsymbol{\xi}_k)$, and (b) nonsystematic in a statistical sense, is no longer feasible. However, as shown in Spanos (1986), sequential conditioning provides a general way to transform an arbitrary stochastic process $\{\mathbf{Z}_t,\ t \in \mathbf{T}\}$ into a *martingale difference process*, a modern form of a white-noise process. This provides the key to an alter-

Table 1 – The Gauss Linear (GL) Model

$$y_t = \beta_0 + \boldsymbol{\beta}_1' \mathbf{x}_t + u_t,\ t \in \mathbf{N},$$

[1] Normality: $y_t \sim \mathrm{N}(.,.)$.
[2] Linearity: $\varepsilon(y_t)\beta_0 + \boldsymbol{\beta}_1' \mathbf{x}_t$, is linear in $(\beta_0, \boldsymbol{\beta}_1)$,
[3] Homoskedasticity: $Var(y_t) = \sigma^2$, free of $\mathbf{x}_t$,
[4] Independence: $\{y_t,\ t \in \mathbf{N}\}$ is an independent process,
[5] t-invariance: $\theta = (\beta_0, \boldsymbol{\beta}_1, \sigma^2)$ do not vary with t.

native approach to specifying statistical models in the case of nonexperimental data by replacing the controls and interventions with the choice of the *relevant conditioning information set* D_t that would render the error term nonsystematic—a martingale difference. The technical aspects of specifying statistical models using sequential conditioning are beyond the scope of the present discussion (Spanos 2006b), but an example of how one can specify a statistical model as a reduction from $D(\mathbf{Z}_1, \ldots, \mathbf{Z}_T, \varphi)$ can shed some light on its practical aspects.

The *Normal/Linear Regression* (LR) model results from a reduction of $D(Z_1, \ldots, Z_T, \varphi)$ by assuming that $\{\mathbf{Z}_t, t \in \mathbf{T}\}$ is a NIID process. These reduction assumptions ensure that the appropriate conditioning information set is $D_t = \{X_t = x_t\}$, giving rise to a statistical error term:

$$(u_t | \mathrm{X}_t = \mathrm{x}_t) \sim \mathrm{NIID}(0; \sigma^2); k = 1; 2; \ldots, n. \qquad (6)$$

This is analogous to (4) in the case of experimental data, but now the error term has been operationalized by a judicious choice of the conditioning information set $D_t = \{X_t = x_t\}$. The complete specification of the Linear Regression model is similar to the Gauss Linear model (table 1), but instead of $D(y_t; \theta)$, the underlying distribution is $D(y_t | X_t; \theta)$—assumptions [1]–[5] pertain to the probabilistic structure of $\{(y_t | X_t = x_t), t \in T\}$ (Spanos 1986). In this sense, $D(y_t | X_t; \theta)$ brings to the table the statistical information which supplements, and can be used to assess the appropriateness of, the substantive subject matter information carried by the structural model.

CONFRONTING SUBSTANTIVE WITH STATISTICAL INFORMATION

An important aspect of embedding a structural into a statistical model is to ensure (whenever possible) that the former can be viewed as a *reparameterization/restriction* of the latter. The structural model is then tested against the benchmark provided by a statistically adequate model. *Identification* refers to being able to define φ uniquely in terms of θ. Often θ has more parameters than φ and the embedding enables one to test the validity of the additional restrictions, known as overidentifying restrictions (Spanos 1990).

SEE ALSO *Specification Tests*

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Aris Spanos

SPECIFICATION ERROR

In the context of a statistical model, *specification error* means that at least one of the key features or assumptions of the model is incorrect. In consequence, estimation of the model may yield results that are incorrect or misleading. Specification error can occur with any sort of statistical model, although some models and estimation methods are much less affected by it than others. Estimation methods that are unaffected by certain types of specification error are often said to be *robust*. For example, the *sample median* is a much more robust measure of central tendency than the *sample mean* because it is unaffected by the presence of extreme observations in the sample.

For concreteness, consider the case of the linear regression model. The simplest such model is

$$Y = \beta_0 + \beta_1 X + U, \qquad (1)$$

where Y is the regressand, X is a single regressor, U is an error term, and β_0 and β_1 are parameters to be estimated. This model, which is usually estimated by *ordinary least squares*, could be misspecified in a great many ways. Some forms of misspecification will result in misleading estimates of the parameters, and other forms will result in misleading confidence intervals and test statistics.

One common form of misspecification is caused by nonlinearity. According to the linear regression model (1), increasing the value of the regressor X by one unit always

increases the expected value of the regressand Y by β_1 units. But perhaps the effect of X on Y depends on the level of X. If so, the model (1) is misspecified. A more general model is

$$Y = \beta_0 + \beta_1 X + \beta_2 X^2 + U, \quad (2)$$

which includes the square of X as an additional regressor. In many cases, a model like (2) is much less likely to be misspecified than a model like (1). A classic example in economics is the relationship between years of experience in the labor market (X) and wages (Y). Whenever economists estimate such a relationship, they find that β_1 is positive and β_2 is negative.

If the relationship between X and Y really is nonlinear, and the sample contains a reasonable amount of information, then it is likely that the estimate of β_2 in (2) will be significantly different from zero. Thus we can test for specification error in the linear model (1) by estimating the more general model (2) and testing the hypothesis that $\beta_2 = 0$.

Another type of specification error occurs when we mistakenly use the wrong regressor(s). For example, suppose that Y really depends on Z, not on X. If X and Z are positively correlated, we may well get what appear to be reasonable results when we estimate regression (1). But the correct regression

$$Y = \gamma_0 + \gamma_1 Z + U, \quad (3)$$

should fit better than regression (1). A number of procedures exist for deciding whether equation (1), equation (3), or neither of them is correctly specified. These are often called *nonnested hypothesis tests*, and they are really a way of testing for specification error. In the case of (1) and (3), we simply need to estimate the model

$$Y = \beta_0 + \beta_1 X + \beta_2 Z + U, \quad (4)$$

which includes both (1) and (3) as special cases. We can test whether (1) is correctly specified by using the t-statistic for $\beta_2 = 0$, and we can test whether (3) is correctly specified by using the t-statistic for $\beta_1 = 0$.

Of course, it is possible that Y actually depends on both X and Z, so that the true model is (4). In that case, if we mistakenly estimated equation (1), we would be guilty of omitting the explanatory variable Z. Unless X and Z happened to be uncorrelated, this would cause the estimate of β_1 to be biased. This type of bias is often called *omitted variable bias*, and it can be severe when the correlation between X and Z is high.

Another very damaging type of specification error occurs when the error term U is correlated with X. This can occur in a variety of circumstances, notably when X is measured with error or when equation (1) is just one equation from a system of simultaneous equations that determine X and Y jointly. Using ordinary least squares in this situation results in estimates of β_0 and β_1 that are *biased* and *inconsistent*. Because they are biased, the estimates are not centered around the true values. Moreover, because they are inconsistent, they actually converge to incorrect values of the parameters as the sample size gets larger.

The classic way of dealing with this type of specification error is to use *instrumental variables* (IV). This requires the investigator to find one or more variables that are correlated with X but not correlated with U, something that may or may not be easy to do. The IV estimator that results, which is also called two-stage least squares, is still biased, although generally much less so than ordinary least squares, but at least it is consistent. Thus, if the sample size is reasonably large and various other conditions are satisfied, IV estimates can be quite reliable.

Even if a regression model is correctly specified in the sense that the relationship between the regressand and the regressors is correct and the regressors are uncorrelated with the error terms, it may still suffer from specification error. For ordinary least squares estimates with the usual standard errors to yield valid inferences, it is essential that the error terms be uncorrelated and have constant variance. If these assumptions are violated, the parameter estimates may still be unbiased, but confidence intervals and test statistics will generally be incorrect.

When the error terms do not have constant variance, the model is said to suffer from *heteroskedasticity*. There are various way to deal with this problem. One of the simplest is just to use *heteroskedasticity-robust* standard errors instead of conventional standard errors. When the sample size is reasonably large, this generally allows us to obtain valid confidence intervals and test statistics.

If the error terms are correlated, confidence intervals and test statistics will generally be incorrect. This is most likely to occur with time-series data and with data where the observations fall naturally into groups, or clusters. In the latter case, it is often a good idea to use *cluster-robust* standard errors instead of conventional ones.

When using time-series data, one should always test for *serial correlation*, that is, correlation between error terms that are close together in time. If evidence of serial correlation is found, it is common, but not always wise, to employ an estimation method that "corrects" for it, and there are many such methods. The problem is that many types of specification error can produce the appearance of serial correlation. For example, if the true model were (4) but we mistakenly estimated (1), and the variable Z were serially correlated, it is likely that we would find evidence of serial correlation. The right thing to do in this case

would be to estimate (4), not to estimate (1) using a method that corrects for serial correlation.

The subject of specification error in regression models and other statistical models has produced a vast body of research in statistics, econometrics, and other fields. A graduate-level textbook that covers this topic extensively is *Econometric Theory and Methods* (2004) by Russell Davidson and James MacKinnon. A less-advanced book that treats many of the same topics at a lower level is Jeffrey Wooldridge's *Introductory Econometrics* (2006).

SEE ALSO *Least Squares, Ordinary; Measurement Error; Properties of Estimators (Asymptotic and Exact); Specification Tests*

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James G. MacKinnon

SPECIFICATION TESTS

The term s*pecification tests* is used in economics to denote tests for departures from the premises of inference in empirical modeling. This use of the term, however, is confusing because it conflates statistical with substantive specification errors (misspecifications), rendering the discussions of specification tests problematic (see Theil 1957).

In the context of a statistical model, the relevant misspecifications concern departures from the probabilistic assumptions constituting the statistical premises, such as [1]–[5] in Table 1.

In contrast, *specification errors* in relation to a structural model concern the model's inadequacies in relation to: (a) the demarcation of the segment of reality to be modeled; (b) the crucial aspects of the phenomenon to be quantified; and (c) the extent to which the inferences based on the structural model are germane to the phenomenon of interest. In addition, reliable probing for such specification errors can only take place in the context of a statistically adequate model, that is, an estimated statistical model whose assumptions are (approximately) true for the data in question. Statistical inadequacy renders inference procedures (estimation, testing, prediction) unreliable because the procedures nominally differ from the actual error probabilities. A statistically adequate model provides reliable inference procedures to probe for substantive inadequacies.

Normal/linear regression model

Statistical Generating Mechanism (GM): $y_t=\beta_0+\beta'_1x_t+u_t$, $t \in \mathbb{N}$,
[1] Normality: $(y_t \mid X_t= x_t) \sim \mathrm{N}(.,.)$
[2] Linearity: $E(y_t \mid X_t= x_t)=\beta_0+\beta'_1x_t$
[3] Homoskedasticity: $Var(y_t \mid X_t = x_t)=\sigma^2$,
[4] Independence: $\{(y_t \mid X_t = x_t), t \in \mathbb{N}\}$ is an independent process,
[5] t-invariance: $\theta = (\beta_0,\beta_1,\sigma^2)$ are not changing with t.

Table 1

Specification tests in the context of a structural model refer to assessing the adequacy of the three choices described above, including incongruous measurement and external invalidity (see Spanos 2006a). The quintessential form of a substantive specification error, however, is the omitted-variables problem. The issue is one of *substantive inadequacy* insofar as subject-matter information raises the possibility that certain influential factors W_t might have been omitted from the relevant factors X_t explaining the behavior of y_t (Leamer 1990). That is, omitting certain potentially important factors W_t may confound the influence of X_t on y_t, leading to misleading inferences. Stating the problem in a statistically coherent fashion, one is comparing the following two models:

$$[M_0]: y_t = x'_t\beta + u_t,\ (u_t \mid X_t = x_t) \sim \mathrm{NIID}(0,\sigma^2),\ t \in \mathbb{N}, \quad (1)$$

$$[M_1]: y_t = x'_t\alpha + w'_t\gamma + \varepsilon_t,\ (\varepsilon_t \mid X_t = x_t,\ W_t = w_t) \sim \mathrm{NIID}(0,\sigma^2\varepsilon),\ t \in \mathbb{N}, \quad (2)$$

using the hypotheses:

$$H_0: \gamma = 0 \text{ vs. } H_1: \gamma \neq 0. \quad (3)$$

Models (M_0, M_1) are based on the same statistical information $Z:= (y, X, W)$, but M_0 is a special case of M_1 subject to the *substantive restrictions* $\gamma = 0$; M_0 can be viewed as a *structural* model embedded into the statistical model M_1. Assuming that the statistical model M_1 is statistically adequate, these statistical parameterizations can be used to assess the relationship between W_t, X_t, and y_t by evaluating the broader issues of *confounding* and *spuriousness* using hypothesis testing (see Spanos 2006b).

The statistical parameterizations associated with the two models, $\varphi = (\beta, \sigma_u^2)$ and $\theta = (\alpha, \gamma, \sigma_\varepsilon^2$, take the form:

$$\alpha = \beta - \Delta\gamma, \quad \gamma = \delta - \mathrm{D}\alpha, \tag{4}$$

$$\sigma_\varepsilon^2 = \sigma_u^2 - [(\sigma_{13} - \sigma_{12}\Delta)\Sigma_{3.2}^{-1}(\sigma_{13} - \sigma_{12}\Delta)'],$$
$$\sigma_\varepsilon^2 = \sigma_{11} - \sigma_{12}\Sigma_{22}^{-1}\sigma_{21}, \tag{5}$$

$$\beta: = \Sigma_{22}^{-1}\sigma_{21}, \ \delta: = \Sigma_{33}^{-1}\sigma_{31},$$
$$\Delta: = \Sigma_{22}^{-1}\Sigma_{23}, \ \mathrm{D}: = \Sigma_{33}^{-1}\Sigma_{32},$$
$$\Sigma_{3.2} = \Sigma_{33} - \Delta'\Sigma_{23}, \ \Sigma_{2.3} = \Sigma_{22} - \mathrm{D}'\Sigma_{32}, \tag{6}$$

where $\sigma_{11} = Var(y_t)$, $\sigma_{21} = Cov(X_t, y_t)$, $\sigma_{31} = Cov(W_t, y_t)$, $\Sigma_{23} = Cov(X_t, W_t)$, $\Sigma_{33} = Cov(W_t)$. The textbook omitted-variables argument attempts to assess the seriousness of this unreliability using the sensitivity of the estimator $\hat{\beta} = (X'X)^{-1}X'y$ to the inclusion/exclusion of W_t by tracing that effect to the potential *bias/inconsistency* of $\hat{\beta}$. Spanos (2006b) argues that the sensitivity of point estimates provides a poor basis for addressing the confounding problem. Although the confounding and spuriousness issues are directly or indirectly related to the parameters α and β, their appraisal depends crucially on the values of all three covariances (σ_{21}, σ_{31}, Σ_{23}), and it can only be addressed adequately in a hypothesis-testing setup supplemented with a post-data evaluation of inference based on severe testing (see Spanos 2006b for details).

Specification (*misspecification*) *tests* in the context of a statistical model refer to assessing the validity of the probabilistic assumptions constituting the statistical model in question. Taking the normal/linear regression as an example (Table 1), *specification error* denotes any form of departures from assumptions [1]–[5] arising from viewing the observed data $Z:= (y, X)$ as a truly typical realization of the stochastic process $\{(y_t \mid X_t = x_t), t \in N\}$. This takes the form of Mis-Specification (M-S) tests, probing for departures from assumptions [1]–[5] (Spanos 1986, 1999).

To get some idea as to how these M-S tests can be viewed as probing for departures from the model assumptions, consider the linearity assumption [2]

Linearity: $E(y_t \mid X_t = x_t) = \beta_0 + \beta'_1 x_t$

When this assumption is invalid, $E(y_t \mid X_t = x_t) = h(x_t) \neq \beta_0 + \beta'_1 x_t$, for some non-linear function $h(.)$. For the comparison to be operational, we need to specify a particular form for $h(.)$, say:

Nonlinearity $\Rightarrow E(y_t \mid X_t = x_t) = \alpha_0 + \alpha'_1 x_t + \alpha'_2 \psi_t(x_t)$

where $\psi_t(x_t)$ includes, say, the second order terms $(x_{it}x_{jt})$, $i, j = 2, \ldots, k$; note that $x_{1t} = 1$. This comparison creates a situation of two competing models:

Model 1: $E(y_t \mid X_t = x_t) = \beta_0 + \beta'_1 x_t$,

Model 2: $E(y_t \mid X_t = x_t) = \alpha_0 + \alpha'_1 x_t + \alpha'_2 \psi_t(x_t)$

which, superficially, resembles the initial setup of models (1) and (2) but is fundamentally different in the sense that $\psi_t(x_t)$ does not comprise different variables but functions of x_t. Subtracting Model 1 from Model 2 gives rise to the following auxiliary regression:

$$\hat{u}_t = (\alpha_0 - \hat{\beta}_0) + (\alpha'_1 - \hat{\beta}_1)\mathrm{x}_t + \alpha'_2\psi_t(\mathrm{x}_t) + \varepsilon_t \tag{7}$$

where $\hat{u}_t$ denotes the residuals from Model 1, which can provide a basis for testing the linearity assumption using the hypotheses:

$$H_0: \alpha_2 = 0, \ vs. \ H_1: \alpha_2 \neq 0. \tag{8}$$

The test of choice is the *F*-test (see Spanos 1986). Using the same type of reasoning, one can argue that the regression function will be affected by departures from other assumptions, such as [4] independence, leading to the auxiliary regression:

$$\hat{u}_t = (\gamma_0 - \hat{\beta}_0) + (\gamma'_1 - \hat{\beta}'_1)\mathrm{x}_t + \gamma'_2\mathrm{z}_{t-1} + \varepsilon_t, \tag{9}$$

where $z_{t-1}:= (y_{t-1}, x_{t-1})$ (see Spanos 1986).

Pursuing the same reasoning further, one can derive an auxiliary regression to provide the basis for a joint test of how certain departures from assumptions [2] and [4] might affect the assumed regression function. This constitutes a combination of the previous two auxiliary regressions, leading to:

$$\hat{u}_t = (\delta_0 - \hat{\beta}_0) + (\delta'_1 - \hat{\beta}'_1)x_t + \delta'_2\psi_t(x_t) + \delta'_3 z_{t-1} + \varepsilon_t, \tag{10}$$

expressed in terms of the hypotheses:

$$H_0: \delta_2 = 0 \ and \ \delta_3 = 0, \quad vs. \ H_1: \delta_2 \neq 0 \ or \ \delta_3 \neq 0. \tag{11}$$

All the M-S tests introduced above are *F*-type tests based on the joint significance of the coefficient of the omitted factors. The only reliable conclusion one can draw on the basis of each of these M-S tests is whether there is evidence that Model 1 is misspecified in the direction being probed (see Spanos 1999; Mayo and Spanos 2004).

SEE ALSO *Hausman Tests; Specification; Specification Error*

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Aris Spanos

SPECULATION

Speculation is the acquisition of an asset exclusively for resale motivated solely by the anticipation of capital appreciation and gain. Most commonly, speculation occurs in anticipation of a price increase such that buying temporally precedes selling as speculators temporarily hold title to ("go long in") an asset. The possibility exists, however, of temporally reversing the trades in anticipation of a price decline through forward contracting. Here speculators would "short" an asset by agreeing to sell that to which they do not yet have title, planning the future acquisition of the anticipated cheaper asset in advance of the contracted delivery date. Speculation is similar to arbitrage insofar as arbitrage too involves the trade of commodities exclusively for capital gain. Arbitrageurs, however, trade across markets at a point in time so that opportunities for capital gains are much less risky than they are for speculators who conduct trades over time.

Any asset—as something that is capable of producing a stream of future material benefits—has the potential to be an object of speculation. Historically, real estate, precious metals, and financial instruments (stocks, bonds, currencies, and the like) have been the most common objects. At times, speculation in such assets has advanced at an especially feverish pace as Charles P. Kindleberger (2001) demonstrates in his discussion of the many historical episodes of speculative manias and their recoil in panics and market crashes.

SPECULATION AND MARKET STABILITY

There is considerable debate centered on whether speculation will act as a stabilizing or destabilizing market force. A long-standing dispute about the desirability of flexible versus fixed exchange rates has been periodically most vigorous, turning on precisely this question. Since the 1980s, researchers have debated the presence of destabilizing speculation in the form of a speculative bubble—as a process denoting movements in asset prices that cannot be justified on any reasonable economic grounds—as an explanation for observed volatility in equity markets.

The question of whether speculation will stabilize or destabilize a market hinges critically on the manner in which speculators form their expectations of future price changes. It was thought originally that if speculators based their expectations of capital gains on anticipated future changes in the conditions affecting the demand for or supply of an asset, then the act of speculation would even out price fluctuations over time. If instead speculators extrapolated from recent price trends, their actions would serve to increase the amplitude of price fluctuations rather than dampen them down. While such a characterization remains broadly accurate, subsequent research in rational expectations modeling has shown that speculation will be destabilizing even with some forms of forward-looking expectations of price changes.

Extreme volatility in currencies, stocks, and other financial markets in the mid- to late 1920s stimulated an effective challenge to the traditional classical way of thinking about speculation. Logic had previously held that speculation of any significance must be a stabilizing force; otherwise, if speculators were indeed a destabilizing force in the market, it would mean that speculators had worse foresight than average, their losses would then be greater than average, and so their existence would be short-lived. As Milton Friedman (1953) would later argue, "speculation can be destabilizing in general only if speculators on the average sell when the currency is low in price and buy when it is high" (p. 175).

For such reasoning to be sufficient grounds on which to deduce the absence of destabilizing speculation, several conditions must hold. Price expectations must be formed independently of the opinion of others, there must be a consistency between short-term and long-term anticipated gains, and the act of speculation itself must not alter the underlying economic value of the asset. If the future is known or equivalent to such, as in the case when one can define the full range of outcomes and associated probabilities, speculation is essentially an exercise in inter-tempo-

ral arbitrage, and the foregoing conditions could reasonably hold. The opportunity to speculate would be then a constructive market force wherein producers with greater risk aversion shift price risk to less risk-averse speculators. Otherwise, when the future is uncertain (as distinct from risky), the problem is much more complicated and the dichotomy between stabilizing and destabilizing speculation unclear.

Addressing the implications of true uncertainty in the formation of long-term expectations, John Maynard Keynes (1936) discusses the manner in which interdependent opinions may confuse and complicate the expectations formation process. In his famous beauty contest metaphor, Keynes likens investment to a beauty competition in which the winner is the one who most closely predicts the outcome that will be the opinion of the majority. The challenge for contestants then "is not a case of choosing those which, to the best of one's judgment, are really the prettiest, nor even those which average opinion genuinely thinks is the prettiest. We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be" (p. 156). Keynes reserves the term *speculation* for this activity of forecasting psychology to underscore the important influence of social convention in the determination of outcomes and differentiates it from the "activity of forecasting prospective yield of assets over their whole life," which Keynes terms *enterprise* (p. 158).

Nicholas Kaldor (1939) carefully examines the implication of speculation for market stability by distinguishing between price stability and income stability. Even if speculation can be shown to stabilize prices, depending on the reactions of producers and elasticities of supply, the action may yield a greater instability in economic activity and incomes. Kaldor further argues that where the proportion of speculative transactions in the total is large, it may well be more profitable for individual speculators to focus on forecasting the psychology of other speculators rather than on the trend of nonspeculative elements. "Even if speculation as a whole is attended by a net loss, rather than net gain, this will not prove even in the long-run, self-corrective" (p. 2). Rudiger Dornbusch (1976) captures mathematically this inconsistency between short-term and long-term anticipated gains in a model of exchange rate "overshooting" driven by speculators with myopic perfect foresight.

Alongside the debate about the effects of speculation on the stability of currency markets is a parallel debate about the effects of speculation on the stability of equity markets. In a mathematical approach similar to that of Dornbusch, Robert P. Flood and Peter M. Garber (1980) examine a model of the speculative bubble in which forward-looking "rational" expectations may or may not motivate destabilizing speculation. The source of instability is a fundamental indeterminacy in the formal mathematical model, which is resolved in the literature by variously reducing the liquidity of the traded asset, introducing slow to adjust expectations, or imposing what is in effect a transversality condition that precludes by assumption anything but stability and convergence to a steady state. The steady state outcome is "efficient" in the sense that market prices fully and accurately reflect all relevant information about the future net income earning prospects of the assets discounted to the present. Viewed differently, the various "solutions" serve, in one way or another, to alter either the elasticity of expectations or the elasticity of speculative stocks, which together, as Kaldor had earlier argued, determine "the degree of price-stabilizing influence of speculation" (p. 9).

NONORTHODOX VIEWS

Where the orthodoxy focus on debating the stability implications of speculation in a probabilistic framework, heterodox economists concentrate on the implications for economic stability of speculation under conditions of true uncertainty. For Hyman Minsky (1982), financial fragility occurs in a world in which speculation in fixed assets is debt-financed and investors have both severely constrained foresight and limited memories of past distress. In his financial instability hypothesis, the evolving margins of safety between the streams of asset income in relation to the contemporaneous changes in debt service costs (rather than discounted present values) both characterize and explain the path of business fluctuations.

In a similar framework, Brenda Spotton Visano (2006) explores how the norm of speculation—as a collective dynamic—emerges when a revolutionary innovation shatters common understandings of the economic environment. The rate at which speculation in liquid financial assets related to the innovation becomes fashionable and spreads—thus sending asset prices spiraling upward—parallels the nonlinear, path-dependent diffusion course of the precipitating innovation itself. Because here the speculative activity materially affects an innovation's potential, the material outcome is dependent on the collective assessment of that potential. In this case, what constitutes "excess" speculation is wholly unclear; in such environments, no criteria exist on which to base independent estimates of an asset's fundamental value.

It follows that those who believe that speculation causes greater market volatility and misallocations of investment will advocate for some form of market intervention. Minsky recommends the presence of a lender of last resort in critical credit markets. Paul Davidson (1998) argues for a buffer stock mechanism in the control of a market maker. It is James Tobin's proposal (1978) to levy

a tax on foreign currency transactions, however, that has attracted the greatest attention. As a means of raising the cost of speculative transactions, levying a "Tobin tax" would "throw some sand in the wheels of our excessively efficient international money markets" (p. 154)—a proposal that is similar in practice and in purpose to the long-standing policy of levying stamp duty on the buying and selling of British property and shares.

By contrast, those who believe that speculation is predominantly a stabilizing market influence continue to advocate for less market intervention. The theoretical and policy debates persist with no clear agreement in sight.

SEE ALSO *Bubbles; Efficient Market Hypothesis; Finance; Financial Instability Hypothesis; Keynes, John Maynard; Manias; Panics; Stability in Economics; Tobin, James*

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Brenda Spotton Visano

SPECULATIVE FICTION

SEE *Science Fiction.*

SPECULATIVE MOTIVE

SEE *Money, Demand for.*

SPEECH ACT THEORY

Although the reflection on the performative dimension of language can arguably be traced back to the Sophists (Corax of Syracuse, Tisias, Gorgias, Protagoras, and Isocrates) of the fifth century BCE and their (lost) treatises on rhetoric and argumentation, it is John L. Austin (1911–1960) who usually is credited with being the first philosopher to systematically address this question. In his postmortem book titled *How to Do Things with Words* (1975), Austin showed that language can be used not only to *describe* states of affairs (as in *This kitchen is very clean*), but also to *do* things (in this case, *to note* that this kitchen is very clean). More specifically, Austin named the type of action a person performs *in* saying something an *illocutionary act*. For instance, in saying *Come here!* in specific contexts, I can be said to be giving my interlocutor an order, which is an illocutionary act. This act can also have consequences, such as my making my interlocutor come when I say *Come here!* Austin named this type of action a *perlocutionary act*, which is an act that comprises the intentional or nonintentional consequences that result from the illocutionary act.

Although Austin provided a detailed classification of speech acts, it is John R. Searle who developed the most thorough systematization of this theory of language (Searle 1969, 1979; Searle and Vanderveken 1985; Vanderveken 1990–1991). Searle identified five different types of illocutionary acts, which he called assertives (i.e., holding something to be true, as in *This kitchen is very clean*), commissives (i.e., committing oneself, as in *I'll be there*), directives (i.e., getting someone to do something, as in *Come here!*), expressives (i.e., expressing a psychological state vis-à-vis something that was done previously, as in *Sorry for stepping on your toes*), and declarations (i.e., transforming the world by making it conform to the propositional content, as in *I hereby declare that the session is open*). Searle also identified what he called *indirect* speech acts, which correspond to the speech acts by which one says more than what is literally said. For instance, when I say *Would you mind bringing me this chair?* I am *literally* asking my interlocutor if she is willing to bring me a chair. Searle calls this type of literal speech act a *secondary illocutionary act* by which a *primary* illocutionary act (or *indirect* speech act) is performed. In this case, the indirect speech act consists of (politely) asking my interlocutor to bring me a chair.

Several critiques have, of course, been addressed to this theory. For instance, Stephen C. Levinson (1981,

1983), Marina Sbisà (1984, 1987, 2002), and Emanuel A. Schegloff (1988) deplore that the orthodox speech act theory fails to capture the complexity and sequential character of human interaction, which, at first sight, renders its use relatively sterile to people interested in the detailed study of interaction (but see Cooren 2000, 2005; Geis 1995; Jacobs 1989; Sanders 1987; van Rees 1992). Another critique, coming from Jacques Derrida (1988), consists of highlighting the iterable character of speech acts, that is, their capacity of being repeated (or iterated) in a potentially infinite number of contexts. According to Derrida, this iterability undermines the identification made by Searle between what a speaker/writer means and the type of speech acts he or she produces (a monologism also denounced by Sbisà). According to this perspective, what the producer of a given speech act means is something that is conventionally reconstructed a posteriori by the participants and not something that defines a priori what a given speech act will count as. This reflection paves the way for a model of speech acts that would take into account the *speech agency* of things as diverse as documents, as in *This announcement invites a bid for the construction of their building*, where we attribute to a text the action of inviting; or spoken words, as in *His words blessed their union*, where the focus is on the agency of pronounced words (Cooren 2004).

SEE ALSO *Communication; Psycholinguistics*

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François Cooren

SPEED OF ADJUSTMENT

SEE *Flexibility.*

SPENCER, HERBERT

1820–1903

Herbert Spencer (1820–1903) was a nineteenth-century English social philosopher who sought to explain all domains of the universe in terms of some "cardinal" or "first principles" of evolution. He termed his approach "synthetic philosophy," and before he was done he wrote treatises on ethics (1851, 1892–1898), psychology (1855), biology (1864–1867), and, eventually, sociology (1874–1896). He also wrote a major work on methodology in the social sciences (1873) that was far superior to anything written at the time, and he commissioned the

largest collection of data by a sociologist on human societies in the sixteen volumes of his *Descriptive Sociology* (under various authors from 1873 to 1934). This latter project served as the inspiration for the Human Relations Area Files initiated by George P. Murdock, which sought to categorize and quantify qualitative data from ethnographic studies of societies.

Spencer coined the phrase "survival of the fittest" almost a decade before the English naturalist Charles Darwin's analysis of natural selection appeared; in many ways, modern views of Spencer are colored by this phrase and the social advocacy it contains. In fact, Spencer's arguments about "ethics" taint present-day perceptions of his work because by today's political standards they appear conservative, although they were liberal in Spencer's time. Perhaps the most unfortunate impression of Spencer's sociology is its association of the rise of social Darwinism and the eugenics movement with Spencer's advocacy. Both of these movements gained traction long after Spencer's death; thus, Spencer cannot be seen as a key player in what they advocated.

Spencer's ideas were, however, used by some key advocates of social Darwinism or eugenics. For example, in his key work, *The Genetical Theory of Natural Selection* (1930), the English evolutionary biologist Ronald A. Fisher significantly advanced the field of genetics in the first half of the book, but used Spencer's ideas to promote a version of eugenics in the second half. The same is true for social Darwinists who often invoked Spencer's (and, more often, Darwin's) name to legitimate their advocacy that the natural competition among individuals should be allowed to play itself out within societies just as it does in the natural world. Spencer used the phrase "survival of the fittest" most often within sociology to address the topic of how war had historically allowed societies to evolve, with the more organized and fit society generally winning a war and advancing the level of organization of human societies. Still, he did advocate that competition among individuals and collective actors within societies should go unregulated, letting the more fit survive. In reading Spencer's more scholarly works, however, and particularly his sociology, there is very little of this latter form of advocacy. And yet, in the twenty-first century Spencer's reputation is often tied to discredited intellectual movements. Spencer was an ideologue when he wrote on ethnics, to be sure, but he was also a scientist and scholar whose works have not received the attention that they deserve because of the prejudices against his ideological moments.

Thus, Spencer was more than an ideologue. His collected works comprise one of the most comprehensive collections of scholarship ever produced in the social sciences. His sociological works, which came late in his career, are perhaps his most important because they draw upon the vast body of data assembled by scholars under his financial sponsorship and patronage into the volumes of *Descriptive Sociology*. *The Principles of Sociology* (1874–1896) presents a functional approach, emphasizing that the evolution of human societies is the result of population pressures for structural and cultural differentiation around three main axes: operation (functional needs for production and reproduction), regulation (needs to consolidate power), and distribution (needs to create infrastructures and exchange systems for moving people, resources, and information about a society). What scholars often overlook in this analysis is the emphasis on power. Most of *The Principles of Sociology* examines the effects of concentrated power on increasing inequality which, in turn, shapes the structure of key institutional systems: economy, kinship, religion, and polity. He also developed a theory of microdynamics, revolving around ceremony under varying levels of concentrated power and inequality.

In *The Principles of Sociology*, Spencer presented a geopolitical theory of human evolution, emphasizing the effects of inter-societal conflict on social complexity and on concentrated power. War was the main referent for the phrase "survival of the fittest" in Spencer's sociology; with this idea, he documented that, in general, the more complex and better organized society will generally defeat the less complex and less organized society. With conquest, then, comes the successive ratcheting up of the level of societal complexity. However, war forces the centralization of power that, in turn, increases the level of inequality. Inequalities pose internal threats that, ironically, force more centralization of power to manage them—thereby escalating inequality in a cycle that ultimately leads to societal dissolution or deevolution. Still, despite this cyclical dynamic, societies have become larger and more differentiated over the long course of history. When differentiation of societies has produced free markets as the main mechanism for distribution, Spencer felt that war and its effects on centralization of power and inequalities in all institutional spheres work against further societal evolution. War and concentrated power create what in the 2000s is termed the "military-industrial complex" that deprives the economy of capital and limits innovation, thus serving as a drag on societal evolution.

Spencer was the most-read social philosopher of the nineteenth century, yet modern social scientists rarely consult his work because it is associated with discredited intellectual and social movements in which Spencer was not an active participant. In many ways, this state of affairs is a bit unfair to Spencer's legacy but it is also understandable given the extremes to which Spencer's ideas were taken by later ideologues. Still Spencer's collective works contain many useful insights that can still serve social science (for a detailed analysis of Spencer's sociology

see Turner 1985; for a complete primary and robust secondary bibliography on Spencer's work see Perrin 1993).

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Jonathan Turner

SPENCER, MARGARET BEALE

SEE Brown v. Board of Education, *1954*.

SPHERE, PUBLIC

SEE *Public Sphere*.

SPIRITUALITY

The term *spirituality* is at the center of much debate on the shape and meaning of religion in the modern, or postmodern, world. Yet the term defies an easy or singular definition—it is an "attitude or principle that inspires, animates, or pervades thought, feeling, or action," to quote *Random House Webster's Unabridged Dictionary* (2nd ed., 1997). It is worthy of note that both the verbs and the spheres of activity to which the verbs point in this definition vary. Beyond spirituality's broad sweep in thought, feeling, and practice, all pointing to the inner, subjective world of religion, spirituality is also viewed as having emerged, as Ursula King points out, as "a general code word for the search of direction, purpose, and meaning related to the deepest dimension of human existence" and is thus "no longer exclusively based on an a priori theological standpoint, but is rooted in a search, in experimentation, questioning and exploring" (1998, p. 96).

Writing more than a century ago, the American psychologist William James (1842–1910) privileged this inner space in his classic definition of religion as "the feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine." James distinguished this personal, experiential element within religion from the "theologies, philosophies, and ecclesiastical organizations [that] may secondarily grow up" around the experience ([1902] 1985, p. 31).

Viewing religion broadly as a transcendent and often transforming experience, he left open the form of the experience itself and the devotional object at the center of that experience. Spirituality is thus the primary and motivating quality of religion—"whether the religion in question," writes Catherine L. Albanese commenting not specifically on, but in keeping with James's outlook, "is organized or of movement status or mostly individual; and whether it involves God, or other-than-human guides and spirits, or the center of the Self, or an almighty Nature, or an Ideal held to be worth living or dying for" (2001, p. 11).

Spirituality thrives in the context of a living religious tradition; indeed, the latter's constituent elements of symbol, doctrine, myth, ritual, text, and story all shape an experiential religious world. Belief and practice embedded within tradition "keep alive" a sense of transcendence, sacrality, and ultimacy. Put differently, religion is a symbolic and linguistic system that by its nature is powerfully evocative—it triggers experiences and emotions and at the cognitive level defines a meaningful universe including proper strategies of action. Encoded signs and symbols are the means by which experiences not only are generated but are described, even recognized and labeled, as religious. Historically, the major world religious traditions have relied upon symbolic forms for breaking outside of the profane world and into an alternative reality known only through its ecstatic qualities and interpretive frames. Even within contemporary, more secular social settings, research suggests that those persons most involved in their religious traditions are more likely to report having strong religious experiences (Yamane and Polzer 1994, pp. 1–25).

More appropriately, we should speak of spiritualities—emphasizing the plural—since they vary by tradition and social and personal circumstance. Monotheistic,

and typically highly monarchical religious traditions such as Christianity, Judaism, and Islam image God as a distant powerful being, as a male, kinglike lawgiver and judge, and locate the central human problem as one of sin and guilt as measured against divine standards. Emphasis is upon what Marcus J. Borg describes as a "performance model" of spiritual practice, of trying to meet the requirements God expects (1997, pp. 62–71). Hence the dominant God is somewhat more distant as traditionally conceived. But in the many Hindu and Buddhist traditions with their numerous gods, male and female, or no god, stress is upon devotion and meditation in quest of inner peace, joy, and liberation. There are many spiritual paths toward a higher consciousness through the cultivation of experiences of connection, belonging, wholeness, and selflessness. Eastern spiritual diversity thus stands out in contrast to the more monotheistic Western styles.

Religious symbols, belief, and community generate spiritual energy, but social factors shape the form the spiritual dynamic will take. As Max Weber (1864–1920) observed, the spiritual styles and theodicies for ruling elites differ markedly from those who are either weak and powerless or socially mobile. The spiritual dynamics of elites typically focus more upon the blessedness and naturalness of the existing order; the powerless on otherworldly rewards that should come in the next life; and the socially mobile on the importance of getting ahead and doing well. Metaphysical spiritualities acknowledge these same features of the natural order but usually without full-blown justifications for dominance. Minorities are often, though not always, characterized by otherworldly spirituality. At times they are motivated spiritually by religiously inspired ethical ideals to engage in struggles against oppression and inequality, an obvious example being the civil rights movement led by the Reverend Martin Luther King Jr. (1929–1968). Rooted in the African American Christian experience, King exposed the gap between ethical ideals and social injustice; addressing a deep psychological dissonance between ideals and practice, he thereby mounted a "spiritual protest" without having to resort to the use of violence as a means of bringing about constructive social change.

In the contemporary world, spirituality takes increasingly diverse forms in response to changing social and cultural realities. One emerging pattern is described as *post-traditional*, characterized by the searching and experimenting Ursula King speaks of. Individuals acting with a great degree of autonomy explore spiritual truths from many sources, mixing and matching elements to their own choice. High levels of exposure to religious diversity contribute as well to a mixing of the codes. Cross-national research in Western countries suggests that this pattern holds broadly for the post–World War II (1939–1945) generation (Roof et al. 1995), and especially so in the United States. Seeker-oriented spirituality is compatible with life in modern, rapidly paced societies. Also, in these settings, ties to faith traditions are often weak. Social and religious conditions thus make for a thriving "spiritual marketplace" where innovative entrepreneurs compete with one another in defining spiritual needs and in supplying meaning and practice—all intended to assist the individual in his or her spiritual journey. Drawing upon the spiritual resources available to them, both within and outside of organized religion, people assume a considerable amount of self-direction in cultivating their spiritual lives.

A distinction between *spiritual* and *religious* is becoming more commonplace in advanced modern societies. Within the United States, for example, the number of people claiming to be "spiritual but not religious" is estimated variously (but with differing empirical measures) as 14 percent (Roof 1999) and 31 percent (Wuthnow 2005) of the adult population. To be religious implies faith in God or the divine, participation in institutionally based practices, and respect for the teachings of a tradition; to be spiritual puts emphasis upon the experience of connectedness, relationship, or oneness with God/Christ/a higher power/the sacred/nature and appreciation for personal growth and inner awareness in one's life journey. Various empirical measures of self-rated religiousness and spirituality are increasingly used by social scientists as a means of taping these differing responses. Self-rated religiousness is related to attendance at religious services and orthodox belief, whereas self-rated spirituality is associated with mystical experiences and New Age beliefs and practices, particularly among those with higher levels of education and income. An expanding body of research links these two to a broad range of social, psychological, and behavioral correlates, particularly in areas of psychotherapy, child-rearing philosophy, and lifestyle research (see Zinnbauer et al. 1997).

Research suggests that the vast majority of those claiming to be religious are also spiritual—indeed, the spiritual lies at the core of religious life. But if the post-traditional spiritual quests described above represent shifting styles of individual religious expression, a second pattern might be called *retraditionalizing*, or the deliberate cultivation of spiritual meaning through committed religious life and practice. Described as *engaged spirituality*, this effort is deeply grounded within congregational religious life and thus is less individualistic in style, and seeks to combine spiritual depth with social concern and responsibility (Wuthnow 1998; Stanczak 2006). A third, quite different pattern is the *neotraditional* response, or the attempt at reconstructing and enforcing older religious beliefs and values throughout a sociopolitical order. Protesting the erosions of modernity, efforts such as these typically arise in close alignment with political ideologies and mass movements, as with the mobilization of the

Religious Right in the United States or the rise of radical Islamic militants in various parts of the world. Spirituality of this kind arises out of a remythologizing of narratives of God, people, and nationality in search of religious certainty and a more secure moral universe.

SEE ALSO *Fundamentalism; Religion*

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Wade Clark Roof

SPIVAK, GAYATRI

SEE *Representation in Postcolonial Analysis.*

SPOCK, BENJAMIN

1903–1998

Benjamin Spock was, for a generation, the canonical authority in America on the raising of children. Even after Spock passed the apogee of his influence, he continued to be the point of reference for almost all writers on the subject for the next forty years and into the early twenty-first century. By almost any standard Spock was the most important American author of child-rearing advice of the twentieth century. His principal work, *Baby and Child Care*, went through seven editions, was translated into thirty-eight languages, and sold more than fifty million copies around the world. Aside from the Bible, it was the best-selling book of the twentieth century in America.

THE EARLY YEARS

Spock was born in New Haven, Connecticut, the son of a successful corporate lawyer. He graduated from Yale University, won a gold medal as an oarsman at the 1924 Olympics, and went to medical school at Columbia University. In the 1930s Spock studied at the New York Psychoanalytic Institute. He was the first psychoanalytically trained pediatrician in New York, where he maintained a private practice from 1933 to 1943.

Spock's Park Avenue practice brought him overtures from publishers, who pressed him to write a book setting forth his distinctive combination of pediatrics and child psychology. In 1946 he did. The first edition of *The Common Sense Book of Baby and Child Care* began, as did all subsequent editions: "Trust yourself. You know more than you think you do." It invited mothers to indulge their own impulses and their children's, assuring them on the basis of the latest scientific studies that it was safe to do so. In the process, the book overturned the expertise of the previous generation and authorized mothers to express their "natural" feelings toward their children.

Earlier advice, embodied in the convergence of the psychologist John Watson's *Psychological Care of Infant and Child* and the U.S. government's *Infant Care* pamphlets of the 1920s and 1930s, warned against parental deviation from rigid disciplinary schedules and undue display of fondness or physical affection. Spock urged spontaneity, warmth, and a fair measure of fun for parents and children alike. He insisted that there were no infallible rules and that each child had to be treated as a distinct individual.

A CHILD-CENTERED APPROACH

Baby and Child Care seemed predicated on an unprecedented child-centeredness that celebrated instinct in youngsters and their mothers as well. After decades during which parents had been told they would spoil the child disastrously if they yielded to the child's demands, Spock told parents they could trust the child's desires and their own. "What you instinctively feel like doing is best," he promised his readers, in deliberate defiance of Watson. If you "feel like comforting the child, do it." The very feeling would make it "natural and right."

Spock found parables of the reliability of desire in what was at the time the most current research on sleeping and eating. Those studies showed that infants stabilized a bedtime schedule on their own, without parental coercion, if given a little time. The studies demonstrated that somewhat older children worked out a feeding routine on their own, if they were indulged while they came to it. Older children even chose a balanced diet once past the first rush to sweets. Afforded free run of a smorgasbord, children pigged out for a few days on candy, cake, and ice cream but then of their own volition turned to proteins, greens, and grains. It turned out that, as Spock put it, the child "knows a lot." Parents could give in to their child "without worrying about the consequences," hard though it might be for them "to have this kind of confidence in [the child's] appetites." Modern mothers and fathers were "lucky" to be able to let go and be "natural."

Impulse—of both the child and the parents—could be safely followed. Spontaneous inclination was a virtue, deliberate control a vice. A mother angry at her child would do better to express her anger at once. Waiting until she calmed down and came to conscious mastery would be "grim" and "unnatural."

Conservative critics later complained that Spock promoted what they called permissive child rearing. In one of the earliest expressions of the "culture wars" that marked the last quarter of the twentieth century, critics held Spock responsible for the counterculture and the collapse of conventional morality. On their face, such charges were difficult to sustain. Spock never counseled permissiveness and soon enough advised against it. He simply had no stake in permissiveness per se. When critics of the 1946 edition assailed what they took to be Spock's undue indulgence of the child, Spock rewrote the permissive passages without a pang in the second edition. As Spock said in that revised version and in every revision that came after, the issue was not intrinsically important. Both strictness and permissiveness would work for "goodhearted" parents, neither for "insecure" ones. The only matter of any real moment was "the spirit that the parent [put] into managing the child."

Discipline and indulgence were not, for Spock, at odds. He trained as a psychoanalyst, but he never permitted Sigmund Freud's (1856–1939) tragic vision to inflect his advice. Civilization, in Spock's view, did not entail discontents. Conflict was not in the nature of things. Antagonism only appeared when parents mismanaged.

Spock's essential endeavor was to keep parents from activating the infantile ego. His deepest concern was to prevent pitched battles of will between mother and child. He resorted to permissiveness only as a tactic—one among several—in a larger strategy of conflict management. It was never a principle, only a ploy, driven by fear of the fallout of contention.

AN ACTIVIST LIFE

But if Spock did not espouse opposition in his pediatrics, he embraced it in his politics. Even before the war in Vietnam, he warned against the dangers of nuclear testing and served as cochairman of the National Committee for a Sane Nuclear Policy. He was a vocal opponent of the war, helped lead the march on the Pentagon in 1967, and was convicted and sentenced to jail for conspiracy to aid draft resisters in 1968. (His conviction was reversed on appeal.) He ran for president in 1972 as the candidate of the People's Party and continued as an activist long after. Past the age of seventy, Spock was arrested for protesting against a nuclear power plant in New Hampshire, budget cuts at the White House, and nuclear weapons at the Pentagon. Past eighty, Spock still gave as many as a hundred talks a year on the nuclear arms race.

Spock's child-rearing advice changed as his political views and American family life evolved. In successive editions of *Baby and Child Care*, he made a place for fathers as well as mothers in child care, allowed new gender roles for boys and girls, acknowledged divorce and single parenting, and explicitly urged vegetarianism on his readers.

But in essentials Spock's advice never changed. He always aimed to write a guide for living more than a medical reference book. He always challenged conventional notions of normality and sought to alleviate anxiety, in parents and children alike. He always offered reassurance in the down-to-earth manner in which he set forth his advice. He had a genius for popularization. No one ever explained Freud better in everyday language. No one ever wrote better gender-neutral prose.

Even as Spock set himself in militant antagonism to the status quo in politics, he endeavored to help parents accommodate their children to fit in the society and the economy the children would encounter. However inadvertently, he pushed mothers and fathers to prepare children for the corporate bureaucracies in which they would make their careers. He emphasized the cooperativeness and congeniality that organizational life demands. He held that parents "owe it to the child to make him likeable" and that they had to make the child be like others to be likable. He never did reconcile his dissident politics and his conformist child rearing.

SEE ALSO *Brazelton, T. Berry; Child Development; Parent-Child Relationships; Parenting Styles; Psychology; Socialization*

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Michael Zuckerman

SPOILS SYSTEM

SEE *Patronage.*

SPONTANEOUS ORDER

SEE *Hayek, Friedrich August von.*

SPORTS

Sport is a social phenomenon that deeply permeates societies throughout the world. Millions of people view, participate in, or discuss sporting events on a near daily basis. Further, sport has become a multibillion-dollar industry that employs thousands of people. As sport has become more pervasive and as the size and magnitude of the sport industry has grown, it has increasingly come under the scrutiny of sociological researchers. The purpose of this entry is to overview some of the major issues and insights developed from a sociological analysis of sport. This overview is categorized into two sections. First is a discussion of sociological studies of sports as an institution that has significant implications for the lives of participants, their families, and the communities in which they live. The second category of studies views sports as a microcosm of society, which provides a fertile field to test sociological theory and gain insights about society. This entry continues with an overview of both of these research agendas.

SPORT AS A SOCIAL INSTITUTION

Research on sports as a social institution has been guided by two very different theoretical perspectives. On the one hand, researchers using a systems model, largely derived from functional theory, tend to see sport as an institution that contributes to society by reinforcing major cultural values such as success, achievement, competition, work, and cooperation, and also increases community or school unity. Other sociologists examine sport from a conflict perspective where it is viewed as an "opiate of the masses" (Coakley 2001; Eitzen 2001).

Sport as an Inspiration: The Functional Perspective

Numerous studies have been conducted that seek to determine the consequences of sports involvement for participants. Prominent among this research are studies seeking to understand the relationship between involvement in sports during childhood and adolescence and a variety of simultaneous and adult outcomes. While a variety of possible outcomes have been explored, two representative examples of this line of research are described herein. These examples include the relationship between sports participation and adult income and sports participation and the sexual behavior of teenage females.

A number of researchers have empirically explored the relationship between sports participation and adult income. These studies have consistently found that individuals who participate in youth or high school athletics generally have adult earnings that are higher than individuals who do not participate in sports. For the most part, these relationships remain significant when factors such as race, parents' socioeconomic status, and parents' educational attainment are statistically controlled.

Similarly, researchers such as Tamela McNulty Eitle and David J. Eitle (2002) have determined that sports participation is strongly associated with the sexual behavior of adolescent females. This research found that adolescent females who play sports are less likely to have ever had sexual intercourse (Miller et al. 1999), have an older age of onset of sexual activity (Brown et al. 1997; Miller et al. 1998), and have higher rates of contraceptive use (Miller et al. 1999). Even after adolescence, Eitle and Eitle found that those who participated in sports were less likely to become pregnant outside of marriage and to have had fewer lifetime sex partners.

Researchers have attempted to explain why participation in athletics tends to have these positive outcomes. Explanations include physical appearance; it is argued that being stronger and healthier provides advantages in both athletic participation and the work force. Christopher Shilling's 1992 findings maintain that the physical capital accrued through sports participation is convertible to other forms of advantage in other areas of life. Researchers James Curtis and colleagues argued in their 2003 work that athletes gain self-confidence, which leads to better choices; they learn important interpersonal skills, and athletic involvement provides visibility and social networks.

Sport as an Opiate: The Conflict Perspective Some scholars argue that sport is an institution that provides the illusion that success can be achieved by anyone with talent and who is willing to work hard. As a result, sport is one of the institutions that allows deep and persistent patterns of prejudice, discrimination, and inequality to continue. Thus, because a few minority athletes have become extremely famous and wealthy, society is lulled into thinking that prejudice, discrimination, and racism are largely problems of the past. In addition, some maintain that sport is a powerful reinforcer of a racist ideology. For example, African Americans are typically represented as being athletically superior. Unfortunately, concomitant is the belief that they are mentally inferior. Thus from an observation of sport one is given the impression that minority athletes succeed because of physical prowess, while white athletes succeed through perseverance, hard work, and intelligence. To show that this racist ideology persists into the twenty-first century, in 2004 J. R. Woodward examined the sports guides dedicated to critiquing collegiate players eligible for the annual National Football League draft. He found that African American players were more likely than white players of their same position to be described in physical rather than mental terms.

Also from the conflict perspective, sport can be viewed as a tool used by the advantaged to help them maintain their privileged positions. In his book *Beer and Circus* (2000), Murray Sperber discussed how modern college sports are used as an "opiate of the masses." He noted that since the mid-twentieth century the cost of college education at large state universities has increased dramatically. At the same time the quality of that education has diminished as class sizes have significantly increased and a much higher proportion of the classes are taught by graduate students or part-time faculty. Sperber argued that to distract students from the fact that they are paying more and getting less, colleges have placed greater emphasis on sports. Thus, rather than demanding academic change, students focus on the upcoming football or basketball game. Meanwhile, so-called "student-athletes" are recruited to fill the stadium and keep alumni donations flowing. The exploitation of these student-athletes is evident as the vast majority will not have the benefits of a career in professional sports and are placed in circumstances where academic success is unlikely. When their eligibility has expired, these former student-athletes leave college, often without a degree and lacking the skills necessary for success in life outside of athletics. Similarly, Douglas E. Foley's 1994 ethnographic study of a Texas high school describes how high school football is an agent of socialization that reinforces existing patterns of race and gender inequality.

SPORT AS A MICROCOSM OF SOCIETY

Some researchers in the sociology of sport argue that sport is a microcosm of society. A 2004 book by Franklin Foer (2004) describes how soccer can explain the world. Thus sport, like society, has become increasingly bureaucratized and commercialized and continues to exhibit patterns of racism and sexism. Further, because sport tends to be open and visible, it provides an excellent lens to study these issues and test relevant theories. To follow are several examples showing how studies of sports are used to gain insight about society.

Professional sport represents the epitome of capitalism, and much can be learned about labor relations in general by watching the conflict between professional sports team owners and athletes. The actions of professional athletes closely parallel the actions of other workers as they seek higher wages and better working conditions. Like other workers, professional athletes have sought redress in the courts and they have formed unions and organized strikes. At the same time, owners attempt to keep wages low so their profits will be greater.

In addition, much can be learned about race relations in the United States from sports as circumstances in sport generally reflect circumstances in the remainder of society. While sport appears on the surface to be a very meritocratic institution, where participants are rewarded strictly on the basis of their accomplishments, a careful examination reveals extensive patterns of inequality. For example, while minority athletes are visible and numerous in sports such as basketball and football, they are underrepresented in many other sports. Further, minorities are underrepresented in positions of power in virtually all sports. The owner of nearly every professional sports franchise is white, minorities are rare in the upper management of sports, and most coaches are white. For example, during the 2005 college football season, only 3 of the 117 teams playing Division I football had a minority head coach. Given these circumstances, it is not surprising that minority assistant college football coaches perceived less career-related opportunity, were less satisfied with their careers, and had greater occupational turnover expectations than their white counterparts.

Among players, sociologists have detected a phenomenon called "stacking." Racial stacking is the over- or underrepresentation of players of certain races in particular positions in team sports. For example, quarterbacks in football and pitchers and catchers in baseball have traditionally been white, while running backs and defensive backs in football and outfielders in baseball are much more likely to be minority. Again, this pattern reinforces a racist ideology as white athletes dominate positions of power where mental skills and leadership are essential,

while minority athletes dominate positions where pure athletic skill is more critical.

There are also extensive differences by race in the sports that individuals play. In 2003 Pat Goldsmith conducted a study of the racial patterns of school sports participation and used these differences as a forum to test economic and cultural theories to explain these differences. Economic or structural theories predict that differences by race exist because of economic differences across races. Cultural or racial theories would predict that differences would exist even when socioeconomic status was equal. He found that economic theories best predict the sports that whites play, while cultural theories best predict the sports that blacks play.

It should also be noted that similar patterns of inequality in sports are found relative to gender. In college and high school, female sports generally receive only a minority of the athletic budget and the coaches of female teams have significantly lower salaries. In sum, the sociology of sport is a new and dynamic subdiscipline with the potential for significant insights about sociological theory and about societies in general.

SEE ALSO *Sports Industry*

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SPORTS INDUSTRY

Athletic activities have long been part of all societies, but it was not until the early twentieth century that professional team sports began to develop. Since then, the top levels of basketball, football (soccer in North America), baseball, hockey, and North American football have

become widely popular professional activities that have attracted the attention of economists.

While professional sports grew in the first half of the twentieth century, a major turning point came in the 1960s when lucrative television contracts began to greatly increase team revenues. Revenues were no longer limited by the number of seats in the stadium or arena. Players' salaries later increased rapidly. Economists' interest in the sports sector did not begin in earnest until the 1990s, largely as a result of the increased involvement of the public sector in financing professional sports facilities in the United States. The first economics journal in the field, the *Journal of Sports Economics*, began publication in 2000.

GROWTH OF PUBLIC FUNDING

The policy issue that has attracted the most attention from economists is the growth of public funding of stadiums and arenas in the United States, funding that is based on the proposition that professional teams have a significant economic impact on a city.

The sports industries argue that teams raise incomes and employment in host cities and that publicly funded facilities, and perhaps tax concessions, are a good investment for an urban area. If these benefits are the carrot, the stick is the threat to move a team to a more hospitable city. To make this a credible threat, leagues typically keep in reserve at least one city that is anxious to host a team. As a result, many cities have provided subsidized facilities, with price tags in the hundreds of millions of dollars.

Economists have undertaken many studies of whether these subsidies are warranted. There is little difference in their results, which conclude that teams have either a slightly negative or no discernable impact on a city's economy. Rodney D. Fort discussed some of these studies in his book *Sports Economics* (2006).

A number of factors explain these findings. Perhaps the most important is that team-related spending by local residents is still spent, but on other goods and services, in the absence of a local team. In addition, professional sports as a tourist attraction are overrated; while visitors attend games, they usually come to the city for other reasons and enjoy games while they are in town. Finally, much of a team's revenue is spent outside its city, both for away games and for the earnings of players who live elsewhere in the off-season.

PLAYER MARKETS

A second major area of interest to economists is the analysis of the markets for players. These markets provide examples of shifting market structures and changing claims to income. For many years, teams held monopsony power, the power that comes to a single buyer, in the market for players. This power came from player drafts and reserve clauses.

The player draft is a system in which teams in a league select ("draft") incoming players in an ordered fashion, usually in reverse order of finish in the last season: the team that finishes last gets the first draft choice for the next year. A player may sign only with the team that drafts him, and that rule applies even when a team trades or sells a draft choice to another team.

The reserve clause, which originated in professional baseball in 1877, bound a player to the team with which he signed his first contract, usually the team that drafted him. While the team had the power to trade the player or to sell his contract, the player was not able to sign with another team even when his contract expired. As the only buyer, a team held complete monopsony power and was thus able to keep salaries low.

Leagues argued that these restrictions on player movement improved competitive balance across teams. In fact, however, economic markets still functioned. Teams traded both draft choices and players. As Fort pointed out in *Sports Economics*, there is no statistically significant difference in competitive balance before and after draft systems were in place in the National Football League and in Major League Baseball. Rich, winning teams have tended to buy good players and maintain their winning ways.

Teams' monopsony powers were reduced by the growth of player unions in the 1960s and 1970s. There have been player strikes and owner lockouts in several sports. As a result, the markets for players have changed.

Reserve clauses began to break down in baseball in the late 1970s, and other sports followed. While player drafts still operate, reserve clauses bind a player to a team for a limited number of years. Players now become free agents after several years in the league and are able to change teams and to negotiate their own contracts.

As a result, salaries are much higher than they once were. Michael Leeds and Peter Von Allmen cited examples in *The Economics of Sports* (2005). Average annual salaries in the United States in 2002 ranged from a low of $1.3 million in the National Football League to a high of $4.5 million in the National Basketball Association. At the same time in Europe, ordinary soccer players earned from $600,000 to over $1 million dollars annually, plus bonuses. Star players in all sports earn far more, as they attract more fans and increase box office and television revenues. It is not clear whether these salary levels will continue in all sports, as the 2004 to 2005 season-long lockout in the National Hockey League has resulted in team salary caps.

SCANDALS

Two problems continue to plague major league sports, despite the efforts of many organizations. First, there are scandals arising from the use of performance-enhancing drugs; in 2006 alone, for example, there were widespread doping allegations in major league baseball and in the Tour de France cycling race. Doping scandals have led to questions regarding the legitimacy of records set by players or teams later found to have been using performance-enhancing drugs. Second, and more infrequently, there is game fixing, usually associated with gambling. In 2006, for example, a widespread game fixing scandal arose in football (soccer) in Italy, involving several of the country's top-level teams.

There are similar problems in amateur sports, where success may bring present or future financial rewards. In some sports it is lucrative advertising contracts for "amateur" athletes. In others, such as American football, universities are training grounds for professional athletes, and it is the promise of future benefits that tempts some players to use performance-enhancing drugs.

Politics plays a key role in international sports. At various times, countries have boycotted the Olympic Games, as in the Moscow Games of 1980. Votes to award the Olympic Games to a city are often a very political matter, sometimes associated with charges of bribery, as in the case of the 2002 Winter Games awarded to Salt Lake City, Utah.

These problems aside, markets in sports industries operate as understood by economic theory. Each team in a professional sport has some monopoly power as the only seller of the sport in its home city. A team also has some monopsony power as one of a small number of buyers of player talent. After a few years, ordinary players have market power in the sale of their services, augmented by union contracts. A very good player has considerable power as his marginal revenue product exceeds that of other players. But all this likely matters little to fans, the final purchasers of the industries' outputs. Fans, after all, do not cheer for markets, they cheer for their home team.

SEE ALSO *Entertainment Industry; Industry; Olympic Games*

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Lewis Soroka

SPOT MARKET

The point in time when a buyer and a seller agree to the terms of a transaction (the *contract date*) need not be the same as the point in time when the transaction occurs (the *execution date*). For example, on January 1 a buyer and a seller can agree on the terms of a transaction to be conducted on February 1. When the buyer and the seller agree to the terms of the transaction prior to the execution of the terms of the transaction, it is said that the transaction occurs on a *futures* or *forward* basis (wherein the distinction between the two involves specific terms as to how the transaction is to be handled). The agreed price is called a *futures* or *forward price*. Alternatively on January 1 a buyer and a seller can agree on the terms of a transaction to be conducted immediately. When the buyer and the seller agree to the terms of the transaction at the same time that the transaction is executed, it is said that the transaction occurred on a *spot basis*. The agreed price is called a *spot price*. Most consumer transactions, with the exceptions of major transactions such as home purchases, are conducted on spot bases.

The *spot market* is a formal market for buying and selling securities and commodities on a spot basis. In practice, while the physical transfer of the securities or commodities (called *settlement*) may take a day or more, for legal and accounting purposes the transaction is assumed to have occurred instantaneously. In a futures or forward market, it is not the securities and commodities that are sold but rather contracts for the purchase or sale of securities and commodities at some future date. The purpose of the futures or forward markets is to enable the buyers and the sellers to mitigate the risk of future price fluctuations by locking in the price prior to the transaction occurring. Forward and futures markets evolved as a means of transacting business when the physical delivery of the product was forced to take place in the future. Examples include selling a crop prior to the harvest and buying a product that must be shipped from overseas. If sellers seek to mitigate risk, then they will be willing to sell their products on a forward or futures basis for less than they would otherwise sell them for on the spot market. If buyers seek to mitigate risk, then they will be willing to pay more on a forward or futures basis than they would be willing to pay on a spot basis.

The purchase of a security on a spot market with the intent of reselling the security at a later date on a spot market resale at a higher price is called *speculation*; the purchase of a security on a spot market with the intent simultaneously to sell the security at a higher price on a different spot market is called *arbitrage*. For example, in arbitrage one might purchase €1,000 at a price of $1.25 per euro on the New York spot market and simultaneously sell the €1,000 at a price of $1.26 per euro on the

London spot market, making a profit of $10. In speculation one might purchase €1,000 at a price of $1.25 per euro on January 1 and sell the €1,000 at a price of $1.26 per euro on February 1, making a profit of $10.

Arbitrageurs (those who conduct arbitrage) serve an important role in financial markets. By constantly looking for and exploiting pricing discrepancies, arbitrageurs force prices in different markets to equate. For example, if euros sell for a higher price on London markets than on New York markets, arbitrageurs will step into the market, buying up euros on the New York spot market and simultaneously selling them on the London spot market. This increase in the demand for euros in New York causes an increase in the price of euros on the New York market. Simultaneously the increase in the supply of euros in London causes a decrease in the price of euros on the London market. The arbitrage will continue, and the prices will continue to move until the prices on the two spot markets become equal. (In practice the prices will not become exactly equal due to small costs for conducting the transactions.) At that point there is no further incentive to arbitrage, and so the arbitrage stops. There are enough people attempting arbitrage and financial markets are efficient enough that computers are usually required to conduct arbitrage because price discrepancies, when they occur, are quickly arbitraged away. The benefit that arbitrageurs play is to alleviate people seeking to buy currency on spot markets from having to compare prices across many markets. Virtually all the time (non-arbitrage) buyers and sellers are guaranteed that the price they see on one spot market is identical to the prices they would find on all other spot markets.

SEE ALSO *Arbitrage and Arbitrageurs; Equity Markets; Euro, The; Financial Markets; Interest Rates; Interest, Own Rate of; Returns; Speculation*

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Antony Davies

SPOT PRICES

SEE *Spot Market.*

SPRAWL

SEE *Suburban Sprawl; Urban Sprawl.*

SPREADS

In economics and finance the term *spread* is used in many different contexts. Generally, a spread involves calculating the difference between two related values. In the context of option contracts, for example, spreads involve the buying and/or selling of options of the same type with various exercise prices and expiry dates. John Hull, in his 2006 book, discusses a number of spreads—bull spreads, bear spreads, box spreads, butterfly spreads, calendar spreads, and diagonal spreads. For example, a bullish vertical spread can be constructed by buying one call option and writing one call option with the same expiry date but a larger exercise price. This is called a spread because it is made up of the same type of option, in this case call options. It is bullish because the investor profits from a rise in the price of the underlying asset and is called vertical because there are two different exercise prices involved. As an example, suppose that for $2 you buy a call with an exercise price of $20 and sell for $1 a call with an exercise price of $30. The cost of this bull strategy is $2 - $1 = $1 and the payoff is $10 if the stock price (at expiration) is greater than $30, zero if the stock price is below $20, and the difference between the stock price and $20 if the stock price is between $20 and $30.

In the context of bonds, the spread between the interest rate on risky corporate bonds and the interest rate on risk-free government bonds, both of the same maturity, is called the risk spread (or risk premium). Bonds with default risk always have a positive risk spread, and there is a positive relation between the risk spread and the risk of default. Moreover, the risk spread is a good measure of general economic activity because it is negatively correlated with the overall growth rate of the economy. For example, when the growth rate of the economy slows, the risk of default increases and the immediate impact is an increase in the risk spread. Because default risk is important to the size of the risk spread, credit rating agencies, such as Standard & Poor's, provide information on default risk by rating the quality of corporate bonds in term of their probability of default.

The spread also refers to the slope of the yield curve—the difference between long- and short-term interest rates. This spread is referred to as the term spread and describes the term structure of interest rates—the relationship among interest rates on bonds with the same risk of default but different terms to maturity. When the yield curve is upward-sloping (the most typical case), the term spread is positive (the long-term interest rate is above the short-term

interest rate); when the yield curve is downward-sloping (referred to as an inverted yield curve), the term spread is negative (the long-term interest rate is below the short-term interest rate); and when the yield curve is flat, the term spread is zero (short- and long-term interest rates are the same). Frederic Mishkin and Apostolos Serletis, in chapter 6 of their 2007 study, discuss the yield curve and the term structure of interest rates.

Early investigations into the risk and term structure of interest rates looked at whether the slope of the yield curve—the spread between long- and short-term interest rates—helps predict future short-term interest rates. Studies, such as those by Robert Shiller and colleagues (1983) and Gregory Mankiw and Lawrence Summers (1984), found that the yield curve does not always help predict future short-term interest rates. Subsequent research, however, using better testing procedures, supports a different view. Studies by Eugene Fama (1984) and John Campbell and Shiller (1987, 1991), for example, show that the spread between long- and short-term interest rates contains useful information about future interest rates over the short run and the long run, but not over the intermediate term.

The slope of the yield curve also contains information about overall economic conditions. In fact, an extensive literature documents the usefulness of the yield curve in predicting future economic activity, such as Arturo Estrella and Gikas Hardouvelis's 1991 study and Estrella and Mishkin's 1996 and 1998 studies. However, twenty-first-century monetary policy procedures and globalization may be causing this relationship to loosen. In particular, the Federal Open Market Committee in the United States raised the target federal funds rate in seventeen consecutive meetings from June 2004 to July 2006, from 1 percent to 5.25 percent, but long-term interest rates in the United States declined for most of this period. In fact, long-term interest rates around the world have recently exhibited similar declines despite steady increases in short-term interest rates.

As Tao Wu argues in his 2006 study, the reason long-term interest rates have not been responding during the worldwide round of monetary tightening since the turn of the century is the adoption of an inflation-targeting approach to monetary policy as well as globalization. In particular, inflation targeting by many countries, including Australia, Canada, New Zealand, Sweden, and the United Kingdom, and increased international competition in labor and product markets have contributed to price stability and have put downward pressure on long-term interest rates. This has led to the decoupling of long-term interest rates from short-term interest rates with significant implications for monetary policy. In particular, most central banks use short-term interest rates as their operating instruments, but the effects of monetary policy on economic activity stem from how long-term interest rates respond to short-term interest rates. Hence, a deeper understanding of how inflation targeting and globalization affect the spread between long- and short-term interest rates is needed to evaluate the impact and timing effects of monetary policy.

SEE ALSO *Spreads, Bid-Ask; Yield*

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Apostolos Serletis

SPREADS, BID-ASK

The bid-ask spread is the difference between the ask (the lowest price at which someone is willing to sell an asset or security) and the bid (the highest price at which there is someone in the marketplace ready to buy it). The spread is often used as a measure of market uncertainty as well as market liquidity. The average of the bid-ask spread is also

used as a measure of the consensus value of an asset. The term dates back to at least James Dolley, who used it in his March 1938 *American Economic Review* article to measure discontinuity in stock trading on the New York Stock Exchange, although the concept was probably in use before then.

The intuitive reason for the existence of a bid-ask spread is that there is disagreement among market participants as to the value of a security. However, there are other reasons for a bid-ask spread. For example, because buyers and sellers need not arrive simultaneously, market makers stand ready to buy securities from sellers and sell securities to buyers; the bid-ask compensates these market makers for the cost of holding inventory. Other causes could include the existence of an order-processing cost, or market makers might have to adjust their prices to protect themselves against the risk of trading with better informed agents; this is the *adverse selection cost*.

One problem with the use of the bid-ask spread is that the market might lack depth—that is, the ability of a trader to trade a large number of shares at the quoted price. Consequently, for average-sized trades, the bid-ask spread might not indicate expected transaction costs. Furthermore, if the potential price impact is asymmetric, the average of the bid-ask spread may not be useful as a measure of the current consensus value of the asset, either.

Alternate measures of liquidity have been suggested. Some of these are: (1) net trading range—that is, the difference between the high and low price less the change in price during a given trading period; (2) the effective bid-ask spread—that is, the distance between the average of the quoted bid-ask spread and the price at which the deal transacts; (3) turnover; and (4) the ratio of absolute returns to trading volume.

Empirically, bid-ask spreads have been linked to various factors such as the volume of trade, the cost of holding inventory, the degree of information asymmetry, and tick size. The first three factors follow immediately from the discussion above. The notion of tick size as a determining factor has acquired more prominence since the introduction of decimalization in secondary equity markets. Decimalization has led to smaller quoted and effective bid-ask spreads for most stocks. However, concomitantly, there have been more small trades and fewer large trades, and the depth of the market has suffered, exacerbating the problems listed above with the use of the bid-ask spread as a measure of liquidity.

SEE ALSO *Spreads*

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P.V. Viswanath

SPYING

SEE *Hoover, J. Edgar.*

SRAFFA, PIERO

1898–1983

Piero Sraffa was born in Turin, Italy, on August 5, 1898. His father, Angelo Sraffa, was a well-known professor of commercial law and then rector of Bocconi University. Sraffa studied law in Turin and graduated with a dissertation titled "Monetary Inflation in Italy during and after the War," written under the supervision of future Italian president Luigi Einaudi.

INVOLVEMENT WITH KEYNES

During a stay as a research student at the London School of Economics from 1921 to 1922, Sraffa was introduced to the eminent University of Cambridge economist John Maynard Keynes, who was deeply impressed by the young Italian scholar. Keynes invited him to write an article on the Italian banking system for the *Manchester Guardian*. Upon receipt Keynes decided to publish the piece, titled "The Bank Crisis in Italy," in the *Economic Journal* and asked Sraffa to prepare a shorter version for the *Guardian*. Provoked by the article, Benito Mussolini asked Sraffa's father to make his son recant the opinion expressed in it, a request that was rejected. In 1923 Sraffa was appointed to a lectureship in political economy and public finance at the University of Perugia. In 1925 he published the influential paper "Sulle relazioni fra costo e quantità prodotta" (in *Annali di Economia*), which contains an analysis of the foundations of decreasing, constant, and increasing returns in the English economist Alfred Marshall's theory and a devastating criticism of the partial equilibrium method. Not least because of this essay, Sraffa obtained a full professorship in political economy at the University of Cagliari (Sardinia), a post he held in absentia to the end of

his life. The English economist Francis Y. Edgeworth's high opinion of the essay led to an invitation to publish a related version in the *Economic Journal* in 1926 titled "The Laws of Returns under Competitive Conditions." The paper triggered a debate on monopolistic competition.

In 1927 Keynes arranged for a lectureship for Sraffa at Cambridge. Sraffa began teaching in 1928 on advanced theory of value. He also in the late 1920s began his interpretative and reconstructive work on the classical economists and his criticism of marginalist theory, which finally materialized in his 1960 book, *Production of Commodities by Means of Commodities*. His breakthrough, in the winter of 1927 to 1928, in regard to his novel interpretation of the classical theory of value and distribution, rendered the task of lecturing increasingly difficult for him. He resigned as lecturer and in 1931 was appointed to the position of librarian of the Marshall Library. In addition he was also placed in charge of the Cambridge program of graduate studies in economics. He gave up lecturing on value theory for good. The only lectures he was to give were devoted to continental banking in 1930 and to industry starting in 1942. In 1939 he joined Trinity College. He was on friendly terms with the Austrian-born British philosopher Ludwig Wittgenstein, who acknowledged to have been deeply influenced by Sraffa.

EDITORSHIP OF RICARDO PROJECT

In 1930 Sraffa was appointed to the editorship of *The Works and Correspondence of David Ricardo* on behalf of the Royal Economic Society. The project turned out to be much more difficult than Sraffa thought it would be when he assumed the task, not least because a well-known Ricardo scholar, Jacob H. Hollander, effectively boycotted the project for a while. Hollander did not disclose that several "Ricardiana" were in his possession, and when Sraffa proved that they must be, Hollander refused to show them to Sraffa (Gehrke and Kurz 2002). In preparing the edition, the first volumes of which were finally published in 1951, Sraffa was assisted by his friend Maurice H. Dobb. The last volume of the eleven-volume work, containing the general index, was not published until 1973. Sraffa's introduction to the first volume contains his novel, *surplus*-based interpretation of the classical approach to the theory of value and distribution. Sraffa held that the classical approach is fundamentally different from the marginalist, demand and supply one and cannot be interpreted as an early version of it. The Ricardo work is widely acknowledged to be a scholarly masterpiece. Interestingly, in 1961, long before the project's completion, the Swedish Royal Academy honored Sraffa for his work on the project by awarding him a Söderström gold medal in economics, an award that is considered to be a precursor of the award commonly called the Nobel Prize in economics.

In the early 1930s Sraffa was also involved in the so-called Cambridge Circus discussing Keynes's 1930 work, *A Treatise on Money*, and his 1936 work, *The General Theory of Employment, Interest, and Money*. In his paper "Dr. Hayek on Money and Capital," published in the *Economic Journal* in 1932, Sraffa managed to effectively ward off an attack on Keynes's project by the Austrian-born economist Friedrich August von Hayek.

CRITICISM OF MARGINALIST THEORY

From an early time onward Sraffa was particularly critical of two closely related elements of contemporary economic theory. His critical attitude reflects the objectivist or materialist point of view he had developed in discussions with the Italian philosopher and politician Antonio Gramsci and during his intensive reading about recent breakthroughs in the sciences, especially quantum physics (Kurz and Salvadori 2005). The first element concerned the question of whether the parts should be seen as constitutive of the whole, or vice versa. Marginalist economics, starting from methodological individualism, advocated the former view. Sraffa implicitly rejected this position by developing his analysis not from given individual agents but a given "system of production." To take the whole as constitutive of the parts was also advocated by contemporary scientists, including the English mathematician and philosopher Alfred North Whitehead. Second, Sraffa was critical of the subjectivist element permeating contemporary economic theory and the corresponding concept of "real," that is, "psychic," cost (as advocated by Marshall). Sraffa deliberately sought to elaborate an *objectivist* alternative to marginalist theory revolving around the twin concepts of *physical real cost* and *social surplus* within the framework of an analysis that conceives of production as a *circular flow*.

Sraffa related his reconstructive work explicitly to the works of the English economist William Petty (1623–1687) and the French economist François Quesnay (1694–1774). In his *Political Arithmetick* (1690), Petty had insisted on expressing himself only "in Terms of Number, Weight or Measure; to use only Arguments of Sense, and to consider only such Causes, as have visible Foundations in Nature" (Petty 1986, p. 244). With the *Tableau économique* (1758), Quesnay had for the first time put forward a view of the processes of production and distribution of the economic system as a whole. Initially, Sraffa was highly critical of the labor theory of value, as advocated by Ricardo and Karl Marx, because in his view it involved a "corruption" of the earlier concept of *physical real cost* (Petty's "food"). It was only after Sraffa had

turned to the case of an economic system with a surplus that is partly distributed to workers in proportion to the time worked that he realized he needed a concept of labor and that in very special conditions relative prices are proportional to labor values. This did not mean, however, that the labor theory of value played any constructive part in his analysis. On the basis of purely objective data (including the share of wages in net income), Sraffa showed that the general rate of profits, the rents of land, and the necessary prices corresponding to the given distribution of the product could be determined. This was an important finding in itself, which at the same time served as the basis for a critique of the alternative marginalist conceptualization. In particular, Sraffa showed that the rate of profits cannot generally be conceived of as determined by the "marginal productivity" of a given "quantity of capital."

In the second half of the 1950s Sraffa eventually found time to put together, revise, and complete his notes on the classical approach to the theory of value and distribution and publish them as *Production of Commodities by Means of Commodities* (1960). This book became one of the most often cited books in economics and was translated into several languages. Its findings played an important role in the so-called Cambridge controversies in the theory of capital. The importance of Sraffa's contribution lies in the fact that he pointed out the dark spots in the marginalist theory of value and distribution and elaborated an alternative to it rooted in the analyses of the classical authors.

Sraffa died on September 3, 1983, in Cambridge. An edition of Sraffa's hitherto unpublished papers is currently in preparation on behalf of Cambridge University Press.

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Heinz D. Kurz

SRAFFIAN ECONOMICS

SEE *Economics, Neo-Ricardian.*

ST. PETERSBURG PARADOX

SEE *Expectations; Utility, Von Neumann-Morgenstern.*

STABILITY, POLITICAL

Political stability can be defined as the reproduction of the status quo in political life. The term and its mirror image—*political instability*—have a decidedly behavioral connotation in most contemporary social science research. As seen by many scholars, political stability is the outcome of interactions by relevant political actors that reproduce the status quo in political life. Conversely, political insta-

bility results from interactions that challenge the status quo. To be empirically useful, however, the character of political behavior and whose values or expectations it fulfills (or violates) have to be specified.

The earliest theories of political stability concerned themselves with its societal prerequisites. The prominent sociologist Talcott Parsons (1902–1979) equated political stability with collective legitimacy and the systemic support it afforded. According to Parsons, legitimacy is "the higher normative defense against the breakdown of a system of social order" (Parsons 1963, p. 57). Parsons argued that if citizens did not view the political system as legitimate, they would be particularly prone to support political protest and other forms of antigovernment action. David Easton (b. 1917) further broadened the meaning of legitimacy to include citizen's perceptions of government institutions as fair, responsive, and valuable.

The difference between citizens who viewed the government as illegitimate but did not join in collective action and those who took part in political protest did not figure prominently in Parsons's work. For Parsons, the potential for disorder increased with the loss of public confidence in the government. Likewise, Easton argued, only diffuse support through the population gives the system political stability. In their concern with mass political attitudes, these social scientists went beyond a narrow focus on mass political behavior. Their theories, however, were judged as status quo–oriented and suffused with expectations of political behavior and functional roles characteristic of advanced industrialized democracies.

Beginning in the 1970s, social scientists turned their attention to political institutions and the patterns of political behavior they generate. Work on political stability has linked the durability and survival of political regimes with patterns of political behavior. The literature emphasizes institutional consistency and how it affects the behavior of political elites, but mass political attitudes can be used to explain the choices elites make given particular institutional configurations.

Scholars of political institutions have classified polities based on three attributes: (1) procedures for selecting the chief executive; (2) constraints on executive decision-making authority; and (3) extent of political participation. This classification results in three basic types of political systems: autocracies, anocracies, and democracies. Autocracies are politics where authority is concentrated and unchecked, whereas democracies are politics where power is diffused. According to scholars of political conflict, anocracies are institutional hybrids combining characteristics of both democracy and autocracy.

Fully autocratic and democratic regimes exhibit the greatest stability. This stability results from the compatibility of their institutions with the behavior of politically relevant actors. Institutionally inconsistent regimes (those exhibiting characteristics of both democracy and autocracy) lack these self-enforcing characteristics. Accordingly, the least stable political systems are autocracies with highly regularized procedures for selecting the chief executive but with high levels of political participation. The most unstable configuration for polities with an elected executive is one where the executive is highly constrained, but the electorate is very small.

The conclusions of institutional scholars can be summarized by a curve with an inverted-U shape: low and high levels of institutional development result in political stability; intermediate levels stimulate political instability. Institutions affect the cost-benefit analysis associated with challenges to authority. The interaction of political actors, in other words, is conducive or detrimental to the distribution of authority in a system of governance.

The work of institutional scholars highlights elite interests and behavior. Mass political behavior, as Parsons and Easton demonstrated, is also necessary to understand patterns of political stability. As the expectation that elites will respect the outcomes of democracy increases, the rewards for compliance with the rules of democracy also increase. This is another way of saying that what is important for a political system is whether institutional continuity is in the interest of the relevant political elites. By raising the cost of noncompliance with the democratic rules of the game, the public has a role to play in the cost-benefit analysis of elites.

One question that was not addressed in studies of political stability until the early twenty-first century is the compatibility of leadership survival with regime stability. Scholars have noted the apparent paradox that while democratic polities are durable forms of government, democratic leaders exhibit a high turnover rate. At the same time, autocratic leaders remain in office for remarkably long periods. The puzzle then is why autocrats tend to remain in power longer than democratic leaders even though autocracies as a group are not more stable than democracies.

According to the selectorate theory of political survival, elites and their supporters in stable democracies have more to lose in the long run by clinging on to power and suppressing their political opponents than by waiting for their turn to be (re)elected to office. Consequently, they choose democracy instrumentally and in the process help increase its legitimacy as a form of government. Autocrats, on the other hand, depend on a narrow coalition to win and remain in power and are widely perceived as illegitimate. As a result, democracies constitute a remarkably stable form of regime even though their leaders last half as long as autocrats.

The selectorate theory explains why protest is prevalent in democracies and rebellion predominates in authoritarian regimes. Because democracies are seen as more legitimate forms of government than autocracies, political protest does not level off as a country democratizes. Yet democracies do not have a demonstrable need to repress peaceful or routine protest. By reducing levels of socioeconomic and political inequality, democracies dampen the temptation to engage in rebellion, which is prevalent in authoritarian settings. Finally, democratization creates political opportunities to engage in more conventional forms of collective action, a point the selectorate theory is well equipped to explain.

SEE ALSO *Authoritarianism; Autocracy; Cold War; Democracy; Elections; Parsons, Talcott; Participation, Political; Political Instability, Indices of; Political Science; Political Science, Behavioral; Protest; Revolution*

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José A. Alemán

STABILITY, PSYCHOLOGICAL

Within any group at every age, human beings vary dramatically among themselves on any given psychological construct, structure, function, or process (let ψ stand for any such entity). It is commonly understood that variation in ψs, whether physical attributes or personality traits, appear in normal distributions in the population. It is important to assess whether differences between individuals in a ψ are fleeting or are stable through time. Thus, psychological science is centrally concerned with assessment of the stability of individual variation. Stability is consistency in the relative standing or rank of individuals in a group on some ψ through time (Figure 1). Stability is particularly pertinent to developmental science and the study of individual variation within a developmental trajectory. An individual with a stable personality trait (say, openness) will display a relatively high level of openness at one point in time vis-à-vis his or her peers and will continue to display a high level at a later point in time, where other individuals display lower levels at both times. Individuals show instability in a given ψ if they do not maintain their relative standing or order in the group through time.

Although developmental science emphasizes overall change and growth, the study of psychological stability is important for several reasons. First, the physiological systems of humans and other living organisms require certain stable conditions—physical, chemical, psychological, and environmental—to survive. These systems also allow for the maintenance of these conditions even in the face of ever-changing circumstances; stability in living organisms is generally in a state of *dynamic* and *adaptive equilibrium*. Second, stability provides basic information about the overall developmental course of a given ψ, insofar as individuals do or do not maintain their standing or order on ψ vis-à-vis others in the group through time. Third, it is generally assumed that to be meaningful, a ψ should show substantial consistency across time: a major predictor of ψ at a given age is ψ at an earlier age. Fourth, psychological stability affects the environment: Interactants often adjust to match a consistent ψ in another individual.

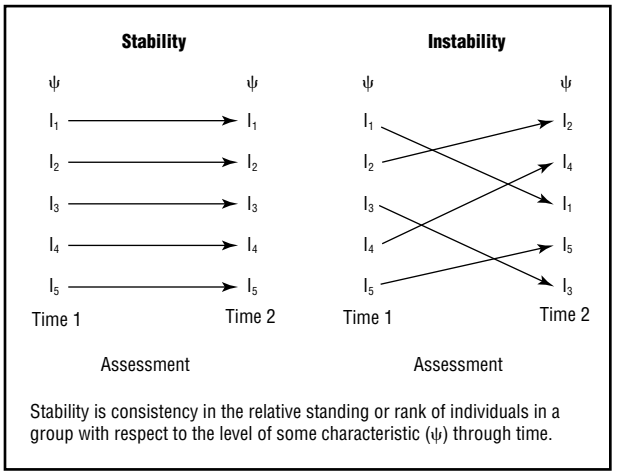

Figure 1

Development is governed by genetic and biological factors in combination with environmental influences and experiences. Stability of any ψ could be attributable to genetic or biological factors in the individual, or stability might emerge through the individual's transactions with a consistent environment. Personality traits tend to be stable across time and can serve as examples of a developmentally stable ψ. Current models describe personality as consisting of five factors, openness, neuroticism, extraversion, agreeableness, and conscientiousness. According to this five-factor trait theory, traits are endogenous dispositions that follow intrinsic paths of development essentially independent of environmental influences.

In the context of developmental science, consistency may have many applications and its evaluation may take many different forms. Longitudinal developmental design is requisite to addressing questions about consistency. Furthermore, it is desirable to distinguish between consistency among individuals, or *individual order consistency* (stability/instability), and consistency in a group, or *group mean level consistency* (continuity/discontinuity). Order consistency and mean consistency are independent or orthogonal constructs. Conceptually and empirically, the two can exist simultaneously, and both have been reported in the same longitudinal study of different ψs. Normally, stability is assessed using (Pearson or Spearman) statistical correlation.

It is further desirable to distinguish among types of stability. There are three prominent models of possible temporal association. One model describes *homotypic* (sometimes called *complete*) *stability*: the maintenance of order among individuals in the same ψ through time. This applies to some personality traits; individuals displaying high levels of openness in relation to others at Time 1 will display relatively high levels of openness relative to others at Time 2. A second model describes *heterotypic stability,* which is the maintenance of order among individuals on different manifest ψs through time where the different ψs are theoretically related and presumably share the same latent process (e.g., positive affectivity in personality, say, underlying the traits of openness and sociability). Thus, ψ_a (e.g., openness) at Time 1 relates to ψ_b (e.g., sociability) at Time 2. Models of heterotypic stability typically postulate that some shared ψ_c in the individual underlies stability between ψ_a and ψ_b. A third model of *mediated stability* describes the stability in ψ, or the stability between ψ_a and ψ_b, as explained by a mediating variable ψ_x that is not in the individual but remote from ψ. For example, ψ_a (e.g., openness) at Time 1 relates to ψ_a (e.g., openness) or ψ_b (e.g., sociability) at Time 2 because some ψ_x that is shared with each is itself stable (e.g., a positive environment). This model predicts that, once the contribution of ψ_x is removed, stability in individuals will attenuate.

Stability itself varies, and variation in stability depends on the ψ (some ψs may be more stable than others); on the age of the individual when the stability of ψ is assessed (a ψ may not be stable in infancy, but stabilize in adulthood—people are thought to become increasingly consistent in relation to one another as they age); on the assessment of ψ (the less information about ψ, the lower its stability estimate); on the temporal interval between assessments of ψ (the shorter the interassessment interval, the greater the stability estimate of ψ); and on whether assessments are made across consistent or inconsistent contexts (the former improves stability, and the latter attenuates stability).

Why might stability fail? If a ψ is not stable, there are two possible explanations: Either ψ is not stable, or ψ has not been assessed adequately. Barring measurement imprecision, we attribute instability to genetic and biological as well as environmental and experiential forces. The timing of biological phenomena is partially driven by genetic factors and tends to happen within a specific period of the life course for most people in any particular population. Change also arises because people engage in normative life tasks and roles, such as leaving home, establishing a family, and starting a career. The life span perspective in psychology specifies that human beings are open systems, and the plastic nature of psychological functioning ensures that people exhibit both stability and instability in many ψs throughout the life course.

SEE ALSO *Developmental Psychology; Equilibrium in Psychology; Personality; Psychology; Trait Theory*

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STABILITY IN ECONOMICS

The concept of stability in economics is closely related to the concept of equilibrium and is one of the three properties of equilibrium that is routinely studied by economic theorists (the others being uniqueness and existence). Economists typically use the term *stability* to denote what mathematicians call *asymptotic stability*. Hence an economic system (such as a firm, a market, or even an entire economy) is stable if, following some displacement of the system from equilibrium, it adjusts so as to regain its original equilibrium position. The concept of stability can be demonstrated by the behavior of a conventional (Marshallian) commodity market, in which supply and demand interact to determine both price and quantity traded. If the price level in such a market is dislodged from its equilibrium (market-clearing) value, the resultant excess demand (or supply) gives rise to subsequent changes in the price level that will restore conditions of equilibrium.

A stable equilibrium may be either a point (such as a particular value of the unemployment rate) or a path (such as a limit cycle describing regular fluctuations in national income). Furthermore, an equilibrium may be either stable or unstable depending on initial disequilibrium conditions. Indeed, if stability is observed only when an economic system is not displaced "too far" from equilibrium, then the system is described as being only locally stable. In economic systems with multiple equilibria, for example, individual equilibrium positions can only be locally stable. If stability is observed regardless of the initial distance from equilibrium, however, the system is said to be globally stable.

Stability is not always regarded as an important or good thing in economic theory. For example, instability is sometimes essential to the motion of the economic system that is being theorized, as in the English economist John Hicks's famous theory of the business cycle. Elsewhere, saddle-point instability is important for solving the problem of the choice of disequilibrium adjustment path in certain models involving rational expectations. Some economists, meanwhile, argue that stability is an unnecessary feature of equilibrium analysis. They suggest that unstable equilibrium models generate the useful empirical claim that the current outcomes of an economic system will *not* persist in the future. Finally, as will become clear in the discussions of path dependence and resilience below, other economists regard stability as an analytical straitjacket that discourages routine exploration of the possibility that economic systems display richer dynamics.

SPEEDS OF ADJUSTMENT AND THE USEFULNESS OF EQUILIBRIUM

This having been said, the prevalence of equilibrium analysis in economic theory means that most economists seek to prove (or, very often, simply assume) the stability of equilibrium most of the time, and with good reason. First, it is essential that an economic system be able to "get into" equilibrium if the latter is to be useful as a description of the actual configuration of the system at any point in time. Second, the method of comparative statics/dynamics, on which so many of the results and policy conclusions of economic theory are based, is predicated on the stability of equilibrium.

The usefulness of equilibrium for describing the outcomes that one might expect to observe in an economic system depends, in fact, not just on stability but also on the speed of disequilibrium adjustment. Unless equilibrium is reached sufficiently rapidly, it may not be interesting as a description of system outcomes over a particular time horizon. Indeed, if adjustment is so slow that the data defining an equilibrium configuration autonomously change before the equilibrium itself is attained, then even an analytically stable equilibrium may never be reached in practice, rendering it meaningless as a description of system outcomes over *any* time horizon. The speed of disequilibrium adjustment is an issue to which economists who rely on equilibrium analysis seldom pay sufficient attention.

STRUCTURAL STABILITY AND PATH DEPENDENCE

The potential for the data defining an equilibrium position to change in the course of disequilibrium adjustment draws attention to two further issues connected with stability in economics. First, a stable economic system must also be structurally stable if it is to attain equilibrium. This means that, over the course of disequilibrium adjustment, the data defining the system must be subject to only small variations that do not fundamentally alter the character of the system's motion (by converting a stable system into an unstable one, for example). Structural stability is rarely addressed by economists, who instead usually assume that data remain literally constant in the course of disequilibrium adjustment.

Second, the adjustment dynamics of a system may be affected by path dependence. A conventional, stable equilibrium can be described as determinate in the sense that it is both defined and reached independently of the path taken toward it. But if disequilibrium adjustment changes the data defining an equilibrium and hence changes the equilibrium configuration itself, then the equilibrium is indeterminate or path-dependent. For example, if disequilibrium trading results in a particular consumption experience that would not have existed in the absence of disequilibrium conditions, and if this experience alters household preferences (a shortage may enhance the perceived desirability of a commodity, for instance), then the

exact equilibrium configuration of a Marshallian commodity market will be affected by the history of its disequilibrium adjustment, and will thus be path-dependent. As this example illustrates, an indeterminate or path-dependent economic system may eventually reach an (historically contingent) equilibrium position, in which case it is said to be definite-indeterminate. Such a system may be said to display "weak" stability in the sense that, although its outcomes are path-dependent, a position of equilibrium is eventually attained. This contrasts with the "strong" stability characteristic of determinate systems, which converge onto fixed points or paths defined independently of the system's prior adjustments.

However, an indefinite-indeterminate system will never "settle down" into a state of equilibrium (thus lacking even "weak" stability), but will instead remain in continual, path-dependent motion. A path-dependent equilibrium position may exist at any point in time in an indefinite-indeterminate system, but such positions are continually being redefined and are never reached, so that they never serve as interesting descriptions of the system's outcomes. Note that indeterminacy or path dependence is not the same as instability. The latter involves movement away from a fixed point or path. Path dependence, on the other hand, involves redefinition of the equilibrium point/path in the course of disequilibrium adjustment. In path-dependent systems, an equilibrium may exist and attract the system toward itself. But the equilibrium will be redefined by the resulting motion of the system and, as a consequence of the system thus "chasing a moving target," may never be reached. Unfortunately, economists typically assume away path dependence when dealing with the stability properties of equilibrium models, with the result that any sense of the historical contingency of economic outcomes is lost. Work on hysteresis and lock-in in economics—concepts that show how events in the past can permanently affect current and future economic behavior and outcomes—can be understood as attempting to rectify this state of affairs.

STABILITY OR RESILIENCE

Finally, the behavior of indefinite-indeterminate systems prompts the question as to whether economists should pay more attention in future research to the *resilience* rather than the stability of economic systems. Stability analysis focuses on a precise outcome or configuration of a system, and the capacity of the system to return to this constant point or path over time. The concept of resilience, meanwhile, focuses on the durability of the system itself and hence its capacity for longevity. The key question addressed in the study of resilience is coarser and more qualitative than that addressed by stability analysis: Can the system as a whole reproduce itself in a sufficiently orderly fashion, and thus persist over time? Hence an indefinite-indeterminate system—which displays neither "weak" nor "strong" stability properties—may nevertheless be very resilient. Whether stability or resilience is the more important property of an economic system is likely context-dependent. For example, if a concert hall is to be economically viable, it may be very important for that hall to ensure that the volume of its public address system remains essentially constant and that any variations in volume are rapidly eliminated by movement back toward equilibrium. However, it may be far more important for an exchange-rate regime to help reproduce orderly conditions of international trade and finance over time, than for it to ensure the movement of a particular exchange rate toward some predefined value identified by economists as an equilibrium.

SEE ALSO *Equilibrium in Economics; Steady State*

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Mark Setterfield

STABLE NODE

SEE *Node, Stable.*

STAGES OF DEVELOPMENT

Stage theories of development are sometimes called discontinuity theories. The premise is that development occurs in discontinuous stages: During a particular stage, a child will go through no significant changes in his or her abilities or capacities, and behavior will remain fairly stable within that stage. Later development will take the

individual to a more mature stage, at which point there is again a kind of stability. This view is in direct contrast to continuity theories, which describe development as a continuous process without stages or phases.

FREUD

Freud presented one of the first stage theories of development, with different components of the personality developing in each. The theory focused on psychosexual development and described five stages: the oral stage, birth to eight months; the anal stage, eight to eighteen months; the phallic stage, eighteen months to six years; the latency stage, six to eleven years; and the genital stage, which is, in a sense, maturity. The id, a reflection of instinct and libido, is all important in the oral stage. The ego develops in the second stage. Both the Electra and Oedipal complexes occur in the third stage, as does the superego and thus the individual's conscience. The latency stage reflects a kind of loss of interest in sexual gratification; more important in this stage is the child's identification between him- or herself and the parent of the same sex. The genital stage allows the individual to develop adult sexual concerns. An individual may develop a fixation that prevents moving from one stage to another; for example, an individual with an oral fixation continues to seek pleasure through the lips and mouth, even as an adult. Various forms of regression may also occur when an individual returns to an earlier, less mature mode of psychic functioning.

ERIKSON

Although Freud's theory has been widely criticized and has remained the subject of much debate, its impact on subsequent developmental psychologists and clinicians is beyond doubt. Erik Erikson, the German developmental psychologist, studied with but then broke away from Freud to develop his own stage theory. Whereas Freud emphasized childhood and preadolescent development, Erikson's theory covers the life span, with eight stages; whereas Freud's psychosexual theory emphasized the libido and its expression in the different stages of development, Erikson's psychosocial theory emphasized the social environment. Each stage is characterized by a conflict or crisis, and each crisis has its origin in the interaction between the individual and the social environment. For example, in the first stage the crisis involves trust versus mistrust; Erikson felt that the individual must learn to trust others and him- or herself to develop a healthy personality. The eighth and final stage involves the crisis of integrity versus despair.

PIAGET

The most commonly cited cognitive stage theory was developed by the Swiss psychologist Jean Piaget. Piaget described four stages of development, each of which involves an idiosyncratic kind of thinking. Movement through these stages is typically completed sometime during adolescence. The first stage, the *sensorimotor*, lasts approximately two years, during which time the individual's cognition is processing only sensory and motoric information; he or she does not think beyond the here and now and cannot contemplate anything abstract or hypothetical. The individual adapts to the environment through the processes of *assimilation* (the individual manipulates information such that he or she can think about it and perhaps adapt to it) and *accommodation* (the individual's cognitive structures change in response to the experiences). Piaget used this adaptive process to explain all cognitive growth, deeming other kinds of what he termed *learning* superficial, almost a kind of memorization. Adaptation, on the other hand, requires a change in the individual's cognitive structures, and this depends on the adaptive process.

In the second stage, the *preoperational*, approximately ages two to seven, the individual moves beyond the here and now but still is not capable of cognitively operating on information. The third stage is the *concrete operational*, approximately ages seven to eleven, in which children begin to apply logical thinking to concrete events and objects. The fourth and final stage is the *formal operational*, from about age eleven on, at which point individuals are, for Piaget, "little scientists": they can take a number of variables into account when making logical decisions, and sometimes they are even scientific in the sense of reasoning about certain factors in isolation. The formal operator is, for Piaget, cognitively mature and able to apply logic to hypothetical (not just concrete) things, to reason sociocentrically (not egocentrically), and to think about various propositions. The formal operator also can be very effective with deductive logic. Piaget described how thinking in a deductive fashion (rather than relying on the less mature forms of transductive or inductive thought) depends on and supports hypothetical thinking. He referred to them as one process, the hypothetico-deductive process.

Several neo-Piagetians have proposed fifth and sixth stages of development in an effort to describe cognitive changes occurring in adulthood. Neo-Piagetians have also pointed to other skills, including *relativistic thinking*, a *problem-finding* capacity, and *dialectical thinking*. The first of these implies that the individual does not think in black and white or absolutes. The second implies that the individual not only can solve problems logically but can also identify them and define them in a manner that allows creative solution. The third, an ability to accept and reason dialectically, allows the individual to accept a thesis as well as its antithesis and integrate them, the result being a useful synthesis.

Piaget recognized that stages do not develop without particular experiences. They are dependent on genetic potentials, and indeed Piaget referred to his theory as a genetic epistemology. Epistemology is the study of knowledge; but by genetics Piaget was referring not to the chemical makeup of life—he was writing before technologies existed for the identification of genes themselves—but rather to the biological basis for development, and to potential. But adaptation is necessary for development. This is very important because it implies that individuals will not necessarily move through these stages; they move through them only when they are biologically ready and have had appropriate experiences. These experiences must challenge an individual and elicit adaptations.

In contrast to stage theories, continuity theories hold that development occurs unrestricted by stages. Learning theories reflect continuity theories, for they typically suggest that individuals have a stable potential to learn: the more experience one has, the more mature and capable the individual will become. In stage theories, biological or perhaps psychological factors interact with experience such that individuals can benefit from experience only if they are ready to do so.

SEE ALSO *Adolescent Psychology; Child Development; Erikson, Erik; Freud, Sigmund; Maturation; Oedipus Complex; Personality; Piaget, Jean; Psychology; Sexuality*

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STAGES OF ECONOMIC GROWTH

The attempt to search for a common set of general stages in the historical development of nations and their economies goes back to Adam Smith, who defined four stages of societal organization: the original stage of hunters, a second stage of "shepherds" or nomadic agriculture, a third stage of feudal "farming agriculture," and a fourth and final stage of commercial society.

The most commonly accepted set of stages are those postulated by Walt Whitman Rostow, who in *The Stages of Economic Growth* (1960) proposed the stages as a general model of economic change. Rostow's model assumes that it is possible that all societies during their development appear in one of five stages of economic development: the traditional society, the preconditions for takeoff, the takeoff, the drive to maturity, and the age of high mass-consumption. While this discussion will only consider the economic dimension of the stages, Rostow also outlined non-economic social, political, cultural, and psychological factors. However, in the classification of particular countries' development, he emphasized the economic factors.

DEFINITIONS OF ROSTOW'S STAGES

The first stage, the traditional economy, is characterized only by basic industries: agriculture and mining. The economy is unproductive, society is based on pre-Newtonian science and technology, and the labor force is unskilled. The attainable level of output per capita is limited. The second stage of growth, the preconditions for takeoff, finds economies in the process of transition, as the traditional society starts to exploit the results of modern science. While the society can still mainly be characterized by traditional low-productivity, there are already productivity improvements in agriculture and extractive industries that create savings that can be invested in infrastructure. The supportive role of government is very important at this stage. During the third stage, the "takeoff" stage, the rates of productive investment and saving rise further and new industries grow rapidly, using new techniques of production. The process of industrialization is driven by the leading sectors of industry, such as railroads and steel, and stimulates the growth of other industries. The fast growth of productivity in agriculture is an important condition for successful takeoff. The economy and its social and political structure are transformed so that the growth can be sustained. After the takeoff stage, as new and more advanced industries develop and modern technology is applied to all industries, the economy enters the fourth stage, the drive to maturity. The fifth and final stage of growth is that of high mass-consumption, when all the leading sectors move toward durable consumer goods and services and the service sector experiences rapid growth. The most developed countries, like the United States, are now considered to be in this stage.

Rostow tried to establish a general "theory" of development, based on a dynamic neoclassical theory of production. He did not, however, provide a formal "model" of the stages, but only a set of narrative descriptions, so that the result was "less a theory than a language" (Supple 1984, p. 114). Rostow "linked theoretical constructs (like production functions, capital-output ratios, propensities to invest and to consume) to the dynamics and narrative of historical change, and acknowledged the vital significance of sociopolitical attitudes, groupings, and discontinuities" (Supple 1984, p. 108).

Rostow presented and described empirical and historical evidence for the most advanced countries, especially Great Britain, to support the view that the modern development of these countries had gone through the same stages. This work gave impetus to more careful, longer-term empirical research that ultimately failed to support Rostow's conclusions—for example, it failed to "identify a takeoff in the economic history of countries such as France" (Crafts 2001, p. 308).

Aside from these theoretical criticisms, there were more general criticisms that may also be applied to current-day economic theories of growth and development. According to Edward S. Mason (1982), principal flaws include an overemphasis on discontinuity in historical processes, the teleological character of the conception of development, and problematic generalizations of political processes. R. de Oliveira Campos (1982) criticizes the presumption of the universality of economic motivations and of the inevitability of growth, without any space for economic decline and reversals. For W. Arthur Lewis (1982), what is missing is the crucial role of institutions; for Douglass C. North and Peter Temin (1982), it is the concept of transaction costs. Despite all these criticisms, Rostow's stages of growth undoubtedly contributed to or at least were consonant with the early thinking about economic development as a process, and concepts such as the *takeoff* or *leading sectors* have been accepted by the profession. As Supple remarks, "even Rostow's critics adopt his terminology" (1984, p. 108).

STAGES OF ENDOGENOUS GROWTH

Rostow's stages of growth have stimulated recent attempts in the field of growth theory to construct more general formal models able to capture the behavior of developed and less-developed economies. One of the first such models was developed by Costas Azariadis and Allan Drazen (1990), who used the endogenous growth model with human capital as an engine of growth, an approach first suggested by Robert Lucas (1988), but amended it by adding "threshold" externalities in the human capital sector. Such a model exhibited two steady states: the regime of the zero-growth, underdevelopment trap, and the regime of sustained growth. When the underdeveloped economy manages to accumulate a critical amount of human capital, it reaches an area of increasing returns stimulating even more investment in human capital, and the economy takes off into sustained growth. By explicitly modeling knowledge-diffusion, Fabrizio Zilibotti (2005) in the AK model and Michal Kejak (2003) in Lucas's model construct a model able to exhibit different stages of growth. (Mentioned here are only a handful of the numerous growth models with multiple steady states, as many of the others are not linked to Rostow's stages of growth.)

UNIFIED THEORY OF GROWTH AND DEVELOPMENT

Growth-theory literature on models with multiple steady states laid the grounds for the establishment of a "unified" theory of growth and development that aims to capture in a single unified framework the era of Malthusian stagnation, the modern stage of sustained growth, and the transition between these two regimes—industrial revolution. Lucas (2002) offers such a model of the industrial revolution, in which human capital serves as an engine of sustained growth. An important part of this model's mechanics is a Beckerian trade-off between the quantity and quality of the children responsible for demographic transition. A similar model with non-homothetic preferences is presented by Oded Galor and David N. Weil (2000). An alternative model of the industrial revolution in which new ideas are seen as an engine of growth can be found in the work of Charles I. Jones (2001). An even simpler model with exogenous growth in technology improvements is presented in works by Gary D. Hansen and Edward C. Prescott (2002) and Stephen L. Parente and Prescott (2004).

POLITICAL AND POLICY CONSEQUENCES

Rostow wrote *The Stages of Economic Growth* as an "Anticommunist Manifesto" (to quote the book's subtitle)—that is, as a liberal's reply to Marxist analysis (Solivetti 2005). He considered those societies in the transition from a traditional to a modern state especially vulnerable to communist development, which he calls "a disease of transition." Rostow's aim was to offer an attractive and achievable means of development for less-developed countries, as an alternative to dependency theory and development toward communism.

The ideological and political consequences of Rostow's stages of growth can best be guessed from his own political and policy-making activities. After publishing *The Stages*, he became an adviser to the American presidents John F. Kennedy and Lyndon B. Johnson and later

the chairman of the policy Planning Council at the State Department. Rostow's theory "became a cornerstone in American international policy towards the Third World" (Solivetti 2005, p. 722).

The only policy recommendation derived from Rostow's stages of growth has been the principle that take-off into "self-sustained growth" requires a large increase in investment. Unfortunately, aside from the Marshall Plan for the reconstruction of Western Europe after World War II, this policy has not been successful in dealing with underdeveloped economies. As William Easterly (2001) points out—according to Solow's original insight—"capital fundamentalism" has failed to advance growth in poor countries. The foreign aid based on "financing the gap" has not delivered any results, and it has created wrong economic incentives.

Recent achievements in the unified theory of growth and development, besides contributing to a better explanation of past economic development, have also created strong claims for the effects of government policies on economic development. Despite the fact that empirical work on policies and growth, embodied mainly in cross-country growth regressions, has tended to confirm these claims, real-world experience has not satisfied expectations. In recent debates over this failure several shortcomings have been identified. In empirical studies on growth, it has been claimed, the conventional approach suffers from several statistical problems (Durlauf 2002), results are often driven by extreme observations (Easterly 2005), and there are nonlinear interactions between policy and growth once institutions are controlled for (Aghion and Howitt 2006). Furthermore, most existing theoretical development models ignore the informal sector (Easterly 2005) and/or do not properly model technological change (Aghion and Howitt 2006).

SEE ALSO *Capitalism; Communism; Development Economics; Economic Growth; Investment; Stagflation; Stagnation*

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Michal Kejak

STAGFLATION

Two main yardsticks of a modern economy's performance are the rate of growth in the production of goods and services and the inflation rate. When the production of goods and services is growing slowly or is falling (generally accompanied by a rising unemployment rate), stagnation occurs. When the prices of goods and services are rising, inflation occurs. *Stagflation*, a term attributed to the British politician Iain Macleod, refers to a situation in which an economy experiences stagnation and inflation simultaneously.

As recently as the 1960s, the conventional wisdom in macroeconomics was that inflation and stagnation could not appear at the same time. Economists generally believed that there was a stable, inverse relationship between the rate of inflation (the percentage change in the average level of prices) and the unemployment rate (the percentage of the labor force that is unemployed) as illustrated by the Phillips curve, made famous by the New Zealand economist A. W. H. Phillips (1914–1975). The Phillips curve presented policymakers with a trade-off: They could lower unemployment by stimulating demand but at the cost of higher inflation; or they could lower inflation but at the cost of higher unemployment. Policy discussions in the 1960s centered on which point on the Phillips curve was most desirable.

Consistent with the Phillips curve trade-off, the 1960s saw inflation in the United States increase and unemployment decline, with the unemployment rate falling to 3.5 percent by 1969 while inflation rose to 6.2 percent. In 1970, however, the unemployment rate increased substantially to 4.9 percent with little decrease in inflation. This was the start of a dismal decade for the large industrialized economies. As a whole, the Group of Seven (the seven largest capitalist economies) saw inflation double and real growth halve compared to the 1960s. This experience of relatively high inflation, slow growth, and high unemployment kindled interest in the causes of stagflation.

EXPLANATIONS FOR STAGFLATION

Economists developed two explanations for stagflation in industrialized economies. The first sees stagflation as a phase in an economic cycle that begins with excessive growth in spending, typically fueled by higher-than-normal growth in the money supply. Initially the growth in spending causes prices to rise and, in response, firms to expand production and employment so that the economy experiences higher inflation and lower unemployment. As argued by the American economists Milton Friedman (1912–2006) and Edmund S. Phelps (b. 1933), the decline in unemployment results from the higher inflation being unexpected so that real wages (i.e., wages adjusted for inflation) fall. Lower real wages lead workers to demand higher real wages, commensurate with higher expected inflation, in the second phase of the economic cycle, causing the unemployment rate to rise back toward what Friedman called the natural rate of unemployment, the level of unemployment that occurs when actual and expected inflation are equal.

The first explanation fits the U.S. stagflation of 1970. According to this view, the rising inflation of the 1960s caused expected inflation to increase, shifting the Phillips curve up in 1970, with the result that inflation remained high while the unemployment rate rose. The U.S. wage-price controls of the early 1970s were an attempt to lower expected inflation and shift the Phillips curve downward, in the hope of reducing inflation without having to increase unemployment.

The second explanation for stagflation focuses on autonomous events that make production more expensive and cause firms to raise their prices. This view is more relevant to the general stagflation of the later 1970s, the source of which is thought to have been the large increases in oil prices in 1973 and 1979. Given that energy is an important component of most goods, a large increase in energy prices increases the costs of production for most firms. Firms are willing to supply the same level of output only if their prices rise. The oil price increase is referred to as an *aggregate supply shock*. It triggers firms to raise prices and lower output. An adverse supply shock such as a large increase in energy prices shifts the Phillips curve upward and again results in both inflation and rising unemployment.

Not all economists believe that the stagflation of the later 1970s can be blamed on oil prices. Robert B. Barsky and Lutz Kilian (2002), for example, believe the first explanation holds for this episode too. They argue that the stagflation occurred largely because policymakers believed the natural rate of unemployment was lower than it actually was, leading them to overstimulate spending in a misguided attempt to push down the unemployment rate. The explanations are not mutually exclusive so that both may have contributed to the stagflation of the 1970s. An adverse supply shock should not cause sustained higher inflation unless accompanied by higher rates of growth in the money supply.

Developing countries, particularly in Latin America, have often suffered bouts of stagflation. An alternative explanation for stagflation in such economies focuses on the macroeconomic effects of exchange rate devaluations, as analyzed for example by Paul Krugman and Lance Taylor (1978). Most developing economies have fixed nominal exchange rates. If there is a balance of payments deficit, international agencies often prescribe a devaluation of the currency in order to reduce trade deficits. Such devaluations, however, may lead to short-run decreases in output along with higher inflation. Given rigidity in nominal wage rates and prices marked up from costs, the devaluation can result in reduced domestic aggregate demand because of the redistribution of income away from labor, which is assumed to have a higher marginal propensity to spend. Domestic demand can also fall from the decline in real money holdings as prices rise in response to higher import costs and from the increase in ad valorem taxes on imports. Thus devaluations can lead to periods of stagflation.

POLICY RESPONSES

The appropriate policy response to stagflation depends on its cause. If the stagflation is the result of policy-initiated excessive stimulation of spending so that the unemployment rate falls below the natural rate initially and then rises along with inflationary expectations, policymakers need to admit their error and to convince people that they should not build higher inflation rates into contracts. The problem, of course, is that people will be skeptical, so that the policymakers will need to establish credibility that they are truly adverse to inflation.

The suitable response to stagflation caused by aggregate supply shocks is less clear. One response is to do nothing and let the economy adjust as best it can to the shock. If energy prices will be permanently higher, the economy needs to make the changes to the new environment. The likely outcome is a short burst of inflation and a rise in unemployment followed by a gradual return to lower unemployment and stable prices. If energy price increases are temporary, policymakers may choose either to reduce the unemployment effects (by stimulating spending and increasing inflation) or to reduce the inflation effects (by restricting spending and increasing unemployment). The latter choice was the one taken by the administration of Gerald R. Ford after the 1973 oil price shock when it tightened monetary and fiscal policy in 1974 and exhorted households to cut spending as part of President Ford's famous "Whip Inflation Now" (WIN) campaign. The result was a large increase in unemployment with a peak unemployment rate of 8.5 percent in 1975.

Beginning in the early 1990s, inflation targeting by central banks has been advocated as a solution to the first cause of stagflation. If adopted, however, this policy will make the unemployment effects of supply shocks more severe because the response of policymakers will be to reduce spending growth in order to slow the inflation rate. A flexible inflation target that allows for short-run bursts of inflation from supply shocks is one possible remedy.

SEE ALSO *Inflation; Phillips Curve; Recession; Unemployment*

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STAGNATION

Stagnation is a condition of an economy in which its rate of total output, or per capita output growth, is at—or close to—zero for a relatively long period of time. (Sometimes the term is applied to particular sectors, but in this entry it refers to the entire economy.) Stagnation is sometimes characterized by high rates of unemployment. It can be distinguished from other terms such as *recession* or *depression*, which usually refer to periods of low or even negative rates of growth but which are relatively short-lived phases of the business cycle. If stagnation is accompanied by high inflation, the phenomenon is called *stagflation* (although this may sometimes merely be a phase of the business cycle). The term *stagnation* is used both for economically advanced countries that have experienced growth in the past and have a high level of per capita income and for less-developed countries that have failed to grow.

The analysis of stagnation in this economic sense, as well as in broader terms, has a long history. The fourteenth-century Arab scholar Ibn Khaldun discussed the tendency of empires and societies to stagnate due to the erosion of solidarity and the spread of habits of luxury among rulers. In the twentieth century, this broad view about the rise and inevitable decline of civilizations was pursued by German philosopher Oswald Spengler (1880–1936), who analyzed

stagnation in terms of factors like the domination of politics by the power of money and the concentration of populations in "barrack-cities" that turn people into mobs susceptible to demagoguery. This view was also explored by historian Arnold Toynbee (1889–1975), who examined how mature civilizations, due to the "intractability of institutions," for instance, are unable to respond appropriately to challenges and therefore suffer stagnation. Heavy tax burdens and the corruption and excessive luxury of the ruling classes have often been highlighted in historical studies of stagnation. Stagnation in precapitalist countries was attributed by Adam Smith (1723–1790) to inadequate laws and institutions and to the neglect of foreign trade. Broad analyses of the problems of less-developed countries explain stagnation in terms of political and social factors. For instance, those enjoying political power and doing well outside of the economy are argued to be unwilling to makes changes to institutions and policies that are likely to worsen their own positions.

In more narrowly economic terms, stagnation in advanced economies has been explained both in terms of supply-side and demand-side factors. Factors on the supply side were stressed in the classical theory of the stationary state. In David Ricardo's (1772–1823) analysis of the growth process, as more capital is accumulated and more workers are hired, the demand for food to be consumed by workers increases, which drives agricultural production onto increasingly less fertile land, increasing the competition for land, driving up land rent, and reducing the profits out of which capital is accumulated, which eventually brings capital accumulation to a halt. While Ricardo may have underestimated the extent to which diminishing returns to agriculture can be offset by technological improvements, the main reason for his stationary state—that is, diminishing returns—continues to be stressed. In Robert M. Solow's 1956 model, for instance, as capital is accumulated, diminishing returns to capital set in to make saving and investment sufficient only to keep the capital-labor ratio constant, which implies a constant level of per capita income, unless exogenous technological change makes per capita output grow. The assumption of diminishing productivity of capital and other produced inputs has more recently fallen into disfavor, with empirical evidence suggesting that technological change and external economies can defeat the effects of diminishing returns, as usually assumed in new growth theory models. But structural changes increasing the weight of technologically lagging service sectors and environmental constraints remain possible causes of stagnation.

For the demand side, it was argued by John Maynard Keynes (1883–1946) that, in advanced economies, saving as a ratio of output tends to rise with increasing output and income as consumer wants are increasingly satiated, while investment incentives progressively decline with capital accumulation. With lower rates of investment and consumption, aggregate demand declines, and the rate of growth of output slows. These insights were used by Alvin Hansen (1887–1975) to develop a theory of U.S. stagnation in the 1930s due to inadequate aggregate demand. Subsequent events have shown that government aggregate demand policy can rescue economies from deficient aggregate demand and that there seems to be no inherent tendency for satiation in consumption. Nevertheless, governments may be unable or unwilling for political reasons to solve the problem of demand deficiency, and structural changes rather than any inherent tendency for consumption demand to become satiated may continue to make demand factors relevant. Josef Steindl (1912–1993) argued that the rise of monopoly power made possible by increasing industrial concentration tends to increase profit markups, which tends to increase saving in the economy, leading to a reduction in aggregate demand, a decline in capacity utilization, and a consequent decline in investment. Paolo Sylos-Labini (1920–2005) stressed problems created by the growth of oligopoly on the nature and consequences of technological change, which tended to increase profit margins of large firms and reduce aggregate demand.

Explanations of stagnation in less-developed countries sometimes focus on the demand side, for instance, stressing the absence of investment incentives due to the small size of markets and the high levels of uncertainty caused by external and internal shocks, and sometimes the supply side, emphasizing low saving and productivity. Many of the explanations invoke the concept of the vicious circle, according to which low per capita income, through a variety of channels, implies its persistence (see Nurkse 1953; Leibenstein 1957). The plethora of such mechanisms under discussion, in addition to low saving and investment incentives, include: poor nutrition and health and low productivity; low income, absence of collateral, and the inability to borrow and finance economic projects; and poverty, child labor, and low levels of education and human capital accumulation. More recently, vicious circles have been related to poor institutions, governance, corruption, and violence. Low levels of income may make corruption and violence more attractive, leading to poor economic performance. Some approaches examine how increases in per capita income may set off forces that lead to subsequent declines. Examples of such mechanisms include increases in population caused by better living conditions, which reduce per capita income; increases in consumption from very low levels when income increases; and the inability to adopt increasing-returns technologies that require a minimum size of the market (see Azariadis and Stachurski 2005). These mechanisms produce low-level poverty traps: if per capita income is initially below a critical minimum level, the

economy will converge to a poverty trap, whereas if the economy happens to attain a level beyond that critical minimum, it sets off into self-sustained growth.

The newer approaches suggest that stagnation is not inevitable for advanced economies, and poor countries can escape from their low-level traps under certain circumstances. However, these approaches also suggest that broader political, social, and institutional factors emphasized in earlier approaches have continued relevance insofar as they interact with more narrowly defined economic factors in explaining stagnation.

SEE ALSO *Depression, Economic; Great Depression; Macroeconomics; Macroeconomics, Structuralist; Recession; Stagflation*

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STAKEHOLDERS

Stakeholders are constituencies who are affected, voluntarily or involuntarily, by the actions taken by an organization, such as a corporation. Commonly cited examples of corporate stakeholders are employees, financial intermediaries, shareholders, customers, and suppliers, all of whom are affected by, respectively, a firm's compensation and hiring decisions, investment choices, dividend and share repurchase policies, product-related issues, and material purchases. The term, however, is often more broadly applied to include local, state, and federal governments because firms pay taxes and use public resources; it can also be extended to include the local community because firms interact with the natural environment and engage in philanthropic activities; and furthermore, because many firms operate on an international scale, it may even include the global community.

Stakeholders may raise issues of concern with corporations and suggest actions that corporations should take. For example, if shareholders are concerned that a corporation is holding too much money, they may argue for increased dividends. Constituents from a local community concerned with air quality may urge a corporation to invest in cleaner technologies. Even though they are not legally required to do so, corporations may consider and implement stakeholders' ideas because they provide a host of resources to corporations. Lenders and shareholders make financial resources available, employees and suppliers provide physical inputs, governments supply regulatory oversight, and citizens contribute to the social environment in which operations occur. In short, a corporation cannot exist without the support of a diverse set of stakeholders.

A corporation must consider the principles of stakeholder theory or stakeholder management when it decides which stakeholders to acknowledge and how to best respond to their often incompatible requests. The notion of stakeholders originated in the mid-1960s, but it was in the 1980s that, as evidenced by Edward Freeman's 1984 book *Strategic Management*, the idea of stakeholder management began to gain ground in the field of economics. Stakeholder theory represents a significant departure from the older principal-agent view of the firm, which effectively recognizes shareholders as the only legitimate constituency by nature of their ownership position. Stakeholder theory, in contrast, understands the corporation in law and in practice as more than an extension of shareholders with narrow, well-defined goals. Rather, the corporation is viewed as its own entity with its own rights and obligations. As the trustees of the firm, usually its board of directors, are responsible for the firm, they can and should serve other constituencies for the benefit of the corporation. Furthermore, in practice, the distinction between shareholders' and other stakeholders' concerns may not be so clearly defined: Shareholders themselves are often employees, consumers, and residents in the communities where corporations operate. Consequently, as James

Hawley and Andrew Williams argue in their 2000 study *The Rise of Fiduciary Capitalism*, shareholders may not be best served by the maximization of the share price alone and may be more concerned with a firm's employment opportunities, quality of goods, and impact on the environment.

It is not clear which stakeholders will most benefit and what changes in corporate activities are likely to result when corporations acknowledge them. The outcomes could range from managerial opportunism, as Michael Jensen notes in his 2000 article "Value Maximization, Stakeholder Theory, and the Corporation Objective Function," to economic democracy, as Paul Hirst suggests in his 1997 essay "From the Economic to the Political," and anything in between these extremes. In any case, the concept of stakeholders greatly broadens the theorization of the corporation in terms of its governance, objectives, and conditions of existence.

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David M. Brennan

STALIN, JOSEPH
1878–1953

Joseph Stalin (Ioseb Jughashvili) was born in the Georgian town of Gori on December 6, 1878. The son of a shoemaker, he rose through the Russian revolutionary movement to become the unchallenged leader of the Soviet Union. He adopted the name "Stalin" from the Russian word *stal'* (steel) and advanced through the Bolshevik ranks after the movement's leader, Vladimir Lenin, commissioned him to write a pamphlet titled *Marxism and the National Question* (1913). When the Bolsheviks seized power in October 1917, Stalin was named People's Commissar of Nationalities. His rivalry with the head of the Red Army, Leon Trotsky, contributed to the growing fractures within the party. Just before a stroke incapacitated him in March 1923, Lenin fought with Stalin over the formation of the new Soviet Union, and he advised his comrades to remove Stalin from his post as General Secretary of the Communist Party. The other leaders did not heed Lenin's warning, however, and most of them paid with their lives a decade and a half later.

Stalin accumulated enormous power within the party through his skillful political manipulation and his willingness to resort to ruthlessness. By the early 1930s he had defeated all of his rivals for power. During the "Stalin Revolution" of 1928 to 1932, the state forced millions of peasants onto collective farms, exiled or killed the most productive peasants (the so-called *kulaks*), and rapidly industrialized the economy. The height of Stalinist terror was reached in the Great Purges of 1937 and 1938, when approximately 700,000 people were executed and millions more were exiled, imprisoned, or died in labor camps.

Despite Stalin's industrialization and militarization programs, the Soviet Union was not prepared for the German invasion of June 1941. Ultimately, the war was won by the tenacity and enormous sacrifice of the Soviet people, but Stalin provided inspiration for many, as well as the fear that one step backward would end in death. The Soviets lost some twenty-seven million people, but in the end the triumph over fascism provided the Communists with a new source of legitimation, and Stalin emerged with a new, uncontested authority.

Stalin's postwar policies were repressive at home and expansive abroad. While he sporadically used repression against individuals and groups and deported ethnic minorities from newly annexed territories, he did not engage in mass killing on the scale of 1937. In dealing with his former allies during the cold war, Stalin attempted to maintain the Grand Alliance with the Western Great Powers while maintaining a sphere of influence in Eastern Europe, where he could impose "friendly" governments. Western leaders refused to acquiesce in the expansion of Soviet influence, and the cooperation of the war years disintegrated into two hostile camps, each armed with atomic weapons.

In his last years, Stalin was enfeebled by strokes, and he deteriorated physically and mentally. His growing isolation, arbitrariness, and inactivity affected the entire country. The ruling elite engaged in plots and intrigues, while Stalin threatened his closest associates. He died of a massive stroke on March 5, 1953.

SEE ALSO *Bolshevism; Cold War; Communism; Iron Curtain; Lenin, Vladimir Ilitch; Russian Revolution; Trotsky, Leon*

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Ronald Grigor Suny

STALINISM

What is Stalinism? It is not the same as Communism. For if all Communist regimes were Stalinistic, how could one distinguish between Joseph Stalin's (1879–1953) mass terror, his annihilation policy, and the authoritarian Communist dictatorships in the Soviet Union and Eastern Europe after 1953? It is important to define the concept of Stalinism precisely, so that it can be clearly demarcated from other terms.

Several contemporaries observed that the Communist dictatorship in the Soviet Union of the 1930s and 1940s was different from other authoritarian dictatorships. Rather, it resembled the National Socialist regime in Germany, for it was characteristic of Bolshevik rule in the Stalin era to assert its claims to subdue the societies of the multiethnic empire, to dominate and control them. The Bolsheviks were trying to create new people and new orders from nothing, annihilating those they perceived as enemies of their new social order. The Bolsheviks allocated their enemies into social and ethnic groups, which were later to be isolated and annihilated. Already in the course of the civil war between 1918 and 1924, the Bolsheviks tried to stigmatize and annihilate ostensible class enemies. From 1929 to 1933 more than two million peasants were registered as *kulaks* (better-off farmers) and deported to Siberia, and more than ten thousand of them were killed. Former czarist elites and members of national minority groups suffered a similar fate. In 1937 and 1938 over a million people were arrested on Stalin's order; some of them were shot according to quotas. More than 680,000 people found their death simply because they belonged to a social or a national group that the leadership imagined to be on the side of its enemies.

The terror was not only directed against the subjects of the regime; it also destroyed the party and the political elites of the Soviet state. After the end of World War II (1939–1945), the violence and terror were directed primarily against ethnic minorities, collaborators, and former Soviet soldiers who had been in German captivity. Therefore, one can say that Stalinism was a regime of terror, violence, and annihilation. It started with the rise of Stalin as an autocrat and ended with his death in 1953.

The first people to speak about Stalinism were its contemporaries. Leon Trotsky (1879–1940), who lost the struggle for power to Stalin in the 1920s, interpreted Stalinism as the rule of a bureaucratic caste that had replaced the proletariat. In this view, Stalinism was a betrayal of the principles of "true" socialism, allegedly represented by Vladimir Lenin (1870–1924). This interpretation, however, could not explain why the party and the state apparatus would destroy themselves in the late 1930s; furthermore, it offered no explanation for the role of Stalin in Stalinism.

Hannah Arendt (1906–1975) and Carl J. Friedrich (1901–1984) were also influenced by the idea of the modern dictatorship of the twentieth century. They claimed that Stalinism was a form of totalitarian dictatorship, thus differentiating it from other traditional authoritarian dictatorships. According to this theory, Stalinism was a totalitarian dictatorship because it claimed total dominance, led to the disintegration and transformation of the society, subjected the society to total control, and atomized and effaced the individual as a subject. It has been argued that this interpretation mistook the claims of the regime for reality and assumed that the Stalinist state was capable of exercising total control over the society. Revisionists in American historiography claimed, in their turn, that the destructive potential of Stalinism resulted from the dynamics of a "society in motion." According to this concept, Stalinism was a result of the activity "from below" of competing groups within the power apparatus, which created social pressures to which the leadership had to respond.

After the opening of the Russian archives in the 1990s, the discussion about Stalinism took a new turn. There can be no further doubt that it was Stalin and his retinue who designed the strategies of mass terror and annihilation, although they could not consistently control the execution of those "policies." The origin of Stalinism was the desire of the leadership to transform the society and subject it to total control. In this respect, Stalinism was totalitarian in its claim. But the Bolsheviks only disposed of a weak state and thus were not capable of realizing their demands in a heterogeneous multinational empire. This was the reason they exercised violence to break resistance. Terror and annihilation occurred, how-

ever, under the conditions of premodern, personified power structures. Not only did these power structures make possible the rise of Stalin to the head of the party, they were also a prerequisite for a system in which a despot like Stalin could realize his violent fantasies. Stalinism bears the name of Stalin, who was the embodiment of the system; it is not possible to discuss Stalinism without considering Stalin himself.

SEE ALSO *Authoritarianism; Bolshevism; Bureaucracy; Communism; Lenin, Vladimir Ilitch; Leninism; Marx, Karl; Marxism; Oligarchy; Power; Russian Revolution; Socialism; Stalin, Joseph; Terrorism; Totalitarianism; Trotsky, Leon; Union of Soviet Socialist Republics; World War II*

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Jörg Baberowski

STALKING

SEE *Obsession.*

STANDARD CROSS-CULTURAL SAMPLE

The Standard Cross-Cultural Sample, or SCCS (Murdock and White 1969), is a cumulative and collaborative database of coded variables on maximally diverse and ethnographically best-described societies used by scholars in the social sciences. The champion of modern cross-cultural and statistical methods, George P. Murdock, in preparation for a standard sample, had classified the 1,267 societies in his coded *Ethnographic Atlas* into 200 distinctive world cultural provinces (Murdock 1962–1967, 1968). Douglas R. White (1968) had compiled a database of coded cross-cultural studies and done a concordance of previous samples (repeated by Ember 1992) that showed the fruitlessness of testing hypotheses that involved variables from different studies because there was little overlap between randomly drawn or ad hoc samples. White (1969), linked to the Columbia-Michigan historical-evolutionary successor to the Boasian school, had just completed the first comparative historical study to use Murdock's *Ethnographic Atlas* codes in a regional study. The dual-authored approach to the SCCS signified a rapprochement between the Yale school of evolutionary functionalism and the historical anthropological schools at Columbia, Michigan, and Berkeley. Their founding of the Cumulative Cross-Cultural Coding Center (CCCCC) for the SCCS at the University of Pittsburgh (1968–1973), like their 1969 authorship, was coequal, although they were born nearly fifty years apart.

Both Murdock and White (1969) were advocates of multiple competing hypotheses (Chamberlain 1897). They designed the SCCS to be sufficiently large to test multivariate and competing hypotheses and sufficiently small to allow different investigators to code all the cases and so contribute to a cumulative database. Their evaluation of the literature on the 1,267 *Ethnographic Atlas* societies and other ethnographies led to their selection of the best and preferably earliest described representatives for 186 of Murdock's cultural provinces that were most independent of one another. Each society was pinpointed to specific dates and communities (White and Murdock 2006). Bibliographic recommendations for ethnographic sources (White 1986) were classified by focus and pertinence. The SCCS—the goal of which was to represent the cultural diversity of well-described human societies—ranges from contemporary hunter-gatherers such as the Kung to historical cities (e.g., Babylon, 1750 BCE; Rome, 110 CE; the Khmer capital of Angkor, 1292; Erevan, 1880; Abomey 1890) to communities of industrial nations (e.g., an Irish village, 1932; a Russian commune, 1955).

Construction of the SCCS reflected Murdock and White's concerns for sorting out alternative hypotheses. Correlations among variables in the SCCS cannot be taken as necessarily causal or functional relationships. As with similarities between the SCCS societies, they are affected by many factors, and the challenge is to separate out the different strands of influence, including measurement biases that may be studied by data quality controls (Naroll 1962; Whyte 1978b). Correlations or similarities may be influenced by functional associations, diffusion or borrowing from one society to another, or shared characteristics passed along through common ancestry. It is only the assumption of parallel independent inventions that supports the interpretation of a correlation between traits as functional adhesions in cultural systems. Murdock (1956), Harold E. Driver (1956), White (1968, 1975), and many other social scientists have long recognized the complementarities of different processes and the problems of inferences from correlational tests. History and science are integrally connected in this respect (Lyman and O'Brien 2004). The interpretation of intersocietal similar-

ities and correlational analysis and of comparative distributional findings necessarily involves the different kinds of networks that mediate the effects of diffusion or borrowing on correlations or similarities: Intermarriage, migration, economic exchange, political, and other interactions may be involved. Likewise, shared "ancestry" may include common "stock" that is linguistic, political, or the result of outmigration or genetic origin, such as mitochondrial genes passed entirely through the maternal line, which have strong adaptive correlates to environment (Mishmar et al. 2003). A similar principle applies to strictly paternal genetic origin passing through the Y chromosome. Assortative genes also may be implicated in selection for correlates or similarities. Without large samples of cases, such as the SCCS, or even larger, such as Murdock's *Ethnographic Atlas*, the data are likely to be insufficient to separate or tease out different kinds of effects. From a statistician's point of view, many of the alternative kinds of effects fall under the general term of historical nonindependence of cases. Only one major attempt has been made so far, however, to implement a diachronic coding of variables such as those studied by Eric Wolf (1982), but there is no intrinsic constraint against doing so for researchers ambitious enough to try. Such an approach would remedy the defect of using the SCCS exclusively for a synchronic or snapshot approach to comparison rather than coding changes over time at spatially pinpointed and related sites.

Edward B. Tylor, although very familiar with diffusion and issues of common ancestry, was rightly critiqued for asserting that cross-cultural correlations represented functional evolutionary parallelisms in how traits are linked. Following Tylor's 1889 paper, statistician Francis Galton objected that because his cases were not historically independent, Tylor was not warranted to apply the usual tests of statistical significance to his correlational results. This is because when duplicates of the same originals are included in a sample (which does not necessarily change correlations, since that would depend on which kinds of cases are duplicated), the variance among the originals is much greater than it would appear from computing ordinary standard deviations. Variance is an *average*, divided by the number of cases, and so the variance increases in dividing the observed deviations by a smaller number of originals. The statistical significance of any correlation so affected is diminished accordingly. This critique, however, allows for a sample-size adjustment to recompute the effective variance for a smaller estimated number of independent cases. All this was well understood in the 1880s. In the 1889 oral discussion, H. W. Flower made an additional important comment: that any cross-cultural method "depended entirely upon the units of comparison being of equivalent value" (Tylor 1889, p. 272) as, for example, the contrast between individual communities and larger religious, political, or regional units. The Galton and Flower problems may be linked in that if the traits of the smaller communities reflect those of the larger units, then the statistical significance of correlations of traits for the communities must be adjusted by reducing the effective n (estimated number of independent cases) to those of the larger units.

Galton's problem, as named by Raoul Naroll (1961)—that is, the problem of historically nonindependent cases—is not limited to cross-cultural research. It entails foundational statistical problems endemic to nonexperimental research in which the variance of statistics is underestimated when common historical factors or network interactions influence similarities of cases. Samples with historically nonindependent cases can still yield unbiased statistics (means and correlations, for example), but incorrect variance estimates of statistical estimates (and thus significance tests) require appropriate adjustment for Galton's problem, independently of the question of how to interpret statistics in the light of alternative hypothesis. Random sampling provides no escape.

There remains an unfortunate Tylorian tendency in cross-cultural research today, however, to try to interpret cross-cultural correlations as evidence of functional associations among traits *if* the sample is both small and random. Carol R. Ember and Melvin Ember (1998), for example, incorrectly argue that the independence of cases is strictly a matter of independent *selection* of cases in the sample, as if historical independence did not matter. This view (1998, p. 678)—that "independence of cases means only that the choice of one case is not influenced by the choice of any other case (which random sampling guarantees)"—is fundamentally mistaken. Simple random or cluster sampling of one or multiple cases from a sampling frame of well-described societies (e.g., Naroll 1967; Lagacé 1979) does not solve nonindependence problems. Nor does it solve the problem of representation of diversity where data for comparable descriptive coverage are lacking for the vast majority of cases in the underlying universe, as in cross-cultural research. The mistaken view that random sampling solves Galton's problem by guarding against sampling bias ignores the real problems, those of variance underestimates that skew significance and other tests in favor of the theory being tested. Malcolm Dow (1993) discusses the effects of ignoring Galton's problem on unwarranted saving of incorrect hypotheses, and shows that appropriate statistical controls can also help identify results that would otherwise be rejected. Without appropriate variance estimates, two independent tests of the same correct hypothesis can easily fail to replicate if confidence limits are underestimated.

Some researchers now refer to nonindependence of cases as "Galton's Opportunity" (Witkowski 1974) or

"Galton's Asset" (Korotayev and de Munck 2003) because historical nonindependence and network interactions invite further research into alternative hypotheses. More recently, cultural anthropologists have used the SCCS, along with methods from evolutionary biology, to address common historical ancestry, horizontal transmission, environmental adaptation, and functional interrelations in the distributions of cultural traits (Mace and Pagel 1994; Borgerhoff Mulder et al., 2001). Methods of independent contrasts (Nunn, Borgerhoff Mulder, and Langley 2006), for example, are sensitive to even small amounts of horizontal transmission in cultural datasets.

The SCCS was designed to provide some of the appropriate measurements for Galton's problem controls and for adjusting estimates of variance and significance tests accordingly. Murdock and White (1969) provided simple tests, following those proposed by Naroll (1961, 1965), to detect similarities among societies that depended on their relative geographic closeness and overall cultural affinities. They also provided a provisional phylogenetic language classification to help detect one of the types of common origin that might account for similarities among nonindependent cases. These allowed for estimates of the effective sample size of different variables. Benefits could increase for multivariate analysis if some of the new coding studies would expand ethnographic coverage to a new Extended SCCS, yet to be designed, with double the number of cases.

Hundreds of cross-cultural studies have by now contributed new codes for the pinpointed societies in the SCCS. Those resulting from Murdock and White's 1968–1973 CCCCC research projects are published along with others in Barry and Schlegel (1980). The thousands of authors who have used SCCS data for their research cover virtually every area in which cross-ethnographic comparisons are useful, including a great many subdisciplines of the social and related sciences. Assuming that a researcher avoids spurious findings that result from mistaken strategies such as cherry-picking high correlations and significance or ignoring Galton-type problems and opportunities, cumulativity can have exponential benefits when researchers, typically coding thirty or more new variables, can test relationships in a database with thousands of variables.

A sample of some findings of authors who treat their subject comprehensively at book length, using the SCCS, and who added coded data on their specialties, will illustrate how the SCCS is sufficiently large to test multivariate hypotheses. Sociologist Orlando Patterson (1982) carried out a magisterial study of the internal dynamics of slavery based on his own codings of slavery variables for the sixty-six slave societies in the SCCS. This was a first-of-its-kind study on the nature of slavery over time, world and historical-comparative in scope: tribal, ancient, premodern, and modern. Slavery is shown to be "a parasitic relationship between master and slave, invariably entailing the violent domination of a natally alienated, or socially dead, person," and its internal dynamics to involve "a single process of recruitment, incorporation on the margin of society, and eventual manumission or death."

Economist Fred Pryor (2005a) carried out a similarly broad program of research in his comparative study of world economic systems. In his article (2005b) on the forty-one agricultural societies in the SCCS, he used clustering analysis of variables to cover a full range of variation in production, property, and distribution. He found evidence for only four basic agricultural systems among thirty-six clusterable cases and apart from the five that were unclusterable: herding plus, egalitarian farming, individualized, and semimarketized farming. Although "many anthropologists and historians consider agricultural systems to be the outcome of environmental, social, social-structural, and political variables, a statistical analysis indicates that very few such variables are correlated with the derived economic systems. The systems are thus revealed to stand as independent entities and worthy of more intensive study" (2005b, p. 2).

Anthropologist and Islamic specialist Andrey Korotayev (2004) was the first to code world religion for the SCCS. Two of the most powerful of his fertile set of findings are that world religion is the best predictor of large regional similarities in social structure, and that many of the major types of social structure (like Pryor, identified by a cluster analysis on the relevant variables) closely follow enduring regional boundaries such as the extent of the eighth-century caliphates resulting from the Arab/Islamic expansion.

Karen Paige and Jeffrey Paige (1981), teamed as sociologist and political scientist, succeeded in identifying systemic patterns in their study of gender roles by restricting their focus to the 108 prestate societies in the SCCS. They sharpened their hypotheses to focus on three determinative levels of resources: low-value, unstable, and stable. The hypotheses they tested showed how resource levels affect women and the womanly interests of men either in identification with females or in surveillance over female reproduction. With low material resources, females tend to be food producers and highly valued for the reproduction of children who add labor and enlarge the kin group and its prestige. With stable resources, property and inheritance become major issues for men as regards women: Children's paternity comes to be at stake, and men often form conflicting fraternal interest groups. The findings of these authors show high coherence with respect to their theory of the politics of reproductive issues and the effects of these issues on social organization generally.

Evolutionary biologist Laura Betzig (1986) focused on the starkest of Darwinian issues, power and the differential extremes of open or sub rosa control over female reproduction in harems and among concubines and mistresses, as documented by her coding of the 186 cases in the SCCS. Like Paige and Paige, she regarded men in societies with property as strongly concerned with the fidelity of their wives, but she went further to explore the vicious circle of links between differences in power and differences in reproductive success that are virtually without limit for the most powerful males in the historical era. Controversial and starkly sociobiological, her explanation as to why modern states become less despotic is that to attract mercenaries, specialists in defense, craftsmen, and those who run the state, people in power are forced to make concessions to others who still serve, directly or indirectly, to contribute to the reproductive efforts of men in power. Her philosophical predilection is to reject theories of further checks and balances in favor of an extreme: that the powerful dictate the laws in their own (reproductive) interests even in the absence of absolutist despotism.

Peggy Sanday (1981), exploring feminist issues, rejected arguments of universal female subordination, and after coding variables for different measures of relative male domination and female power, argued that dominance is not inherent in human relations but is socially constructed through deep symbolic mechanisms and not only as instituted in a people's secular power roles and behavior. Symbolic sources of male dominance, she argued, derive partly from ancient concepts of power, as exemplified by origin myths. Her hypotheses were designed to test the extent to which female power and male dominance are further determined by a people's adaptation to their environment, social conflict, and emotional stress. She illustrated her thesis through case studies of the effects of European colonialism, migration, and food stress, supported by statistical associations between aspects of sexual inequality and diverse forms of cultural stress.

The advantage of a database like SCCS is that, in spite of what theories authors are hoping to test, in so doing they contribute coded data and statistical hypothesis tests that can be revisited and challenged by others, using new data and that cumulated from the past. Some researchers are intent on coding variables that reflect the range of variability in the phenomena they study and on working more inductively from their findings, guided by theoretical questions. An example of a strongly inductive approach is that of Martin K. Whyte, who instructed his researchers to code half the SCCS societies for each of hundreds of gender-related variables relevant to the literature on gender roles. He summarized how his findings on male dominance contrast with those of Sanday, noting that his variables

> have divergent cross-cultural distributions. Some, such as items for political leadership, are highly skewed in favor of men; others, such as property inheritance…, are more moderately skewed toward men; still others, such as the elaborateness of funerals or final authority over infants, show little or no male bias cross-culturally.… [Further], these different indicators are not associated with each other.… [and] some things that have been assumed in the … literature to have status implications for women may not. For example, there now seem to be no grounds for assuming that the relative subsistence contribution of women has any general status implications. (Whyte 1978a, p. 169)

Many of these authors address the Galton problem of controlling for nonindependence of cases. How prevalent is autocorrelation among the variables studied in cross-cultural research? Econometrician Anthon Eff (2004) tested 1,700 variables in the SCCS database to measure Moran's I for spatial autocorrelation (distance), linguistic autocorrelation (common descent), and autocorrelation in cultural complexity (mainline evolution). "The results suggest that … it would be prudent to test for spatial and phylogenetic autocorrelation when conducting regression analyses with the Standard Cross-Cultural Sample" (Eff 2004, p. 153). He illustrated the use of autocorrelation tests in exploratory data analysis, showing how all variables in a given study can be evaluated for nonindependence of cases in terms of distance, language, and cultural complexity. He explains the methods for estimating these autocorrelation effects, illustrates ordinary least squares regression using the Moran I significance measure of autocorrelation (options for Durbin-Watson tests are commonly available as an alternative), and shows how, when autocorrelation is present, it can often be removed so as to get proper estimates of regression coefficients and their variances. This is done by constructing a respecified dependent variable "lagged" by weightings on the dependent variable on other locations, where the weights are degree of relationship. Ordinary least squares regression will still bias the estimated coefficients when the dependent variable is respecified, but maximum likelihood methods (Anselin 1988) will give unbiased statistics and variances in which the effects of autocorrelation have been removed.

Use of the SCCS seems to encourage good research practices. Other methodological advances that would not have been made without the shared SCCS database include statistical entailment analysis, for example, of the sexual division of labor (White, Burton, and Brudner 1977; White 2000) and Murdock's (1980) use of this discrete-structure statistical method in his study of cultural theories of illness and their sociological entailments.

All of the cross-cultural articles and data published in the journal *Ethnology* for the SCCS and all the bibliographic, pinpointing, and coded data sets of the SCCS are in the public domain so as to facilitate scientific research. The journal *World Cultures*, edited by White from 1985 to 1990, has continued to publish SCCS cross-cultural codes and analytical articles. Google Scholar as of 2006 cites 413 online citations to articles referencing the SCCS, and the number unreferenced is perhaps four to six times that estimate. These works address a huge variety of topics. Their diversity, and their common references to a framework of variables and sample cases, along with the agreements and relatively clear bases for disagreements among authors, can be taken as indicators of success in the research design and cumulativity of the SCCS.

The SCCS is not about statistics or method but about science, and about broadly encompassing anthropological-cum-historical science that encompasses contending and often complementary theories of the social, biological, and physical sciences as they interact with questions about human societies and culture. The SCCS does not represent a narrowly conceived school of thought about what the assumptions or methods of this science ought to be, other than a good and far-ranging combination of science, history, and humanities. If one draws today from new findings about mitochondrial inheritance of energetic-environmentally adaptive genes in the maternal line, for example, and reconstructs the human matriline in its geographic migrations (and similarly for the Y chromosome patriline), is the SCCS a place to try to develop approaches to understanding the complexities and testing hypotheses about how human evolution has proceeded to the present? Or, taking Wolf's (1982) approach to world sociopolitical comparisons through a diachronic lens of world system histories and interactions: Is the SCCS not a suitable sample for entirely different kinds of codes that compare what is known about these societies through time, and through networks of interaction, not with one another but with larger entities of the global system and through the larger networks of sociopolitical and military interactions?

Recognizing that "each society is a process in time" (quoting Edmund Leach), Robert McC. Adams (2004 p. 353) reviews the vexing problems of using a mix of textual sources and archaeological data in coding or process modeling. To code or comprehend through space and time, however, also involves attention to the subjective positioning to the different texts that provide perspectives on history, and so opens into a whole set of other classical problems in anthropology that remain to be successfully integrated—at the level of the individual investigator, the research team, or a larger and more cumulative enterprise. Part of the success of the SCCS collectivity of researchers in relation to those who publish the data from investigators and from difference sources is not to try to edit out or reedit data but to respect the integrity of original data in correct form as originally presented from a particular standpoint. Thus different streams of data coming from different sources and investigators are not compromised. Rather these independent streams themselves can be compared for indicators of what might be missing, hinted at, biased, or interpreted as reliable through cross-validation and triangulation of methods of analysis.

Mindful of Flower's observation that any cross-cultural method depends entirely on the units of comparison and the problem under study, Murdock and White did not regard the SCCS as a unique touchstone for theory testing but only as a worthy example of what could be accomplished with collaborative construction of shared databases and efforts at comparable codings from ethnographic materials to facilitate new understandings in the human sciences.

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Douglas R. White

STANDARD DEVIATION

The standard deviation is found throughout the behavioral and social science literature. It is the average spread among a set of scores around their mean, and it is the most frequently used measure of variability in parametric datasets. Researchers analyze their data by looking at the variability and breaking that variability down into its component parts.

When we describe any set of data we use three characteristics: (1) the form of the distribution, (2) the mean or central tendency, and (3) the variability. All three are required, since they are generally independent of each other. In other words, knowing the mean tells us nothing of the variability.

Variability is a characteristic of all measures. In the social sciences, the people or groups that researchers study may be exposed to the same treatment or conditions, yet they show different responses to that treatment or condition. In other words, all the scores of the people or groups would be different. The goal of the scientist is to explain why the scores are different. If everyone were exactly the same, the standard deviation would be zero.

In addition to describing their data, researchers use the standard deviation in inferential statistics. When they manipulate conditions or treatments, researchers attempt to explain different scores between groups by looking at the variability between the groups. If the groups are different enough, then they are said to be statistically significantly different. This conclusion may be drawn based on the probability (odds) that the difference could have occurred by chance. Researchers use these samples as estimates of the true parameters in the population of interest, and the standard deviation is used (along with the sample size) to establish the precision of the estimates (Winer 1971). The smaller the standard deviation, the smaller the error (or the greater the precision of the estimate).

We also find variability that cannot be explained by the treatments or conditions applied to the people or groups. This variability must also be a part of all the explanations. This part of the variability is often called *error,* since experiments or studies do not indicate why it occurs.

The English mathematician and statistician Karl Pearson (1857–1936) introduced the procedure and the term *standard deviation* to statistics in 1892 (Magnello 2005). The standard deviation calculation is very straightforward. The standard deviation is defined as the square root of sum of the squared deviations from the mean, divided by the number of squared deviations. The equation for the standard deviation is $stdev = \sqrt{\frac{\Sigma(X-M)^2}{N}}$ where *stdev* is the standard deviation, X is a raw score, M is the mean of the scores, $X - M$ represents the deviation of a score from the mean, and N is the number of scores. Many different symbols have been used to represent the elements of the equation, but in all cases the standard deviation is the square root of the average of the squared deviations from the mean.

At this point, new students of statistics often ask why researchers do not use the deviations from the mean directly. The deviations from the mean cannot be averaged since the sum of the deviations from the mean is always zero. It is possible to use the mean deviation score, which avoids the zero sum by employing absolute values, but this tends to be mathematically cumbersome (Weisstein 2003).

An example will illustrate the calculation of the standard deviation. Let us assume we have five scores for five individuals. The N is equal to 5. The scores are 10, 8, 6, 4, and 2. We must first calculate the mean, so we add all the scores and then divide by N. The sum of the scores (10 + 8 + 6 + 4 + 2) is 30, and the mean is 30 divided by 5, or 6. Next we must subtract the mean from each score to get the deviation score (10 – 6 = 4, 8 – 6 = 2, 6 – 6 = 0, 4 – 6 = –2, and 2 – 6 = –4). Note we cannot get the mean deviation score because the sum of the deviations is zero. This is always true. We solve this problem by squaring each deviation score (which eliminates the negative signs), then summing and dividing by N ($4^2 = 16$, $2^2 = 4$, $0^2 = 0$, $-2^2 = 4$, and $-4^2 = 16$; the sum of these deviation scores squared is 40; dividing 40 by 5 gives us 8). Since this result is the average of the squared deviations (also known as the *variance*), we must get back to the original score units by taking the square root of 8. The final result is a standard deviation of 2.8284 (rounded to four decimal places). We can say the average spread in the set of scores is about 2.8 (or as precise as we need to be).

A common way to help students and others visualize the standard deviation is to show a graph of a normal distribution, with the standard deviations as lines above and below the mean. We do this because many variables of interest to science are distributed normally (or approximately so) in the population of interest. In a large distribution (and a population), there are about three standard deviations above the mean, and three below the mean. Given these assumptions, we can say that approximately 68 percent of a population falls between –1 and +1 standard deviation of the normal curve; approximately 95 percent falls between –2 and +2 standard deviations; and better than 99 percent of the population falls between –3 and +3 standard deviations.

When the distribution of scores is not approximately normal, the use of the standard deviation, and the mean itself, may not be the preferred approach for describing the data. The reason for this is that extreme scores will have a large impact on the squared deviations from the mean, making the spread among scores appear quite large.

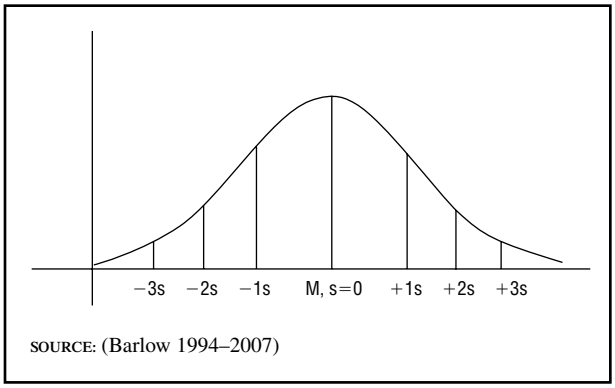

SOURCE: (Barlow 1994–2007)

Figure 1

Skewed population data, such as income, may best be described using the median for central tendency and the mean absolute deviations from the median as the measure of spread. Another approach is to use the semi-interquartile range (also called the interquartile range) to describe the spread in skewed distributions. Extreme scores do not particularly affect this index, but it is more susceptible to sampling fluctuation and should not be used if the distribution is approximately normal. Box plots are often used to show both central tendency and dispersion using the semi-interquartile range. Unfortunately quartiles and box plots do not have the mathematical properties of the standard deviation and limit further analyses.

The standard deviation is used widely throughout the social sciences. In economics, the description of variations in stock prices employs the standard deviation. In political science, the assessment of voter preference is described as a percentage plus or minus, where the plus or minus amount is derived from the standard deviation. In psychology and sociology, variability among individuals and groups is routinely expressed in standard deviation units. In these days of powerful computer-based statistical tools that are available for laptop computers (arguably the two most widely used are SAS and SPSS), obtaining standard deviations (and most other statistical results) is quick and precise. Other programs, designed more for business use, also provide built-in formulas for calculating the standard deviation (often these are not considered accurate for scientific reporting).

SEE ALSO *Frequency Distributions; Measurement; Pearson, Karl; Social Science; Statistics; Test Statistics; Variance; Variation*

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Samuel K. Rock Jr.

STANDARDIZATION

SEE *Modernism.*

STANDARDIZED TESTS

Standardized testing as a gateway to higher education was first established in the United States with the development of the College Entrance Examination Board in 1900. This board created a test designed to standardize admissions to elite universities in the northeastern United States and to encourage the development of a common curriculum among elite boarding schools (Chandler 1999; Lemann 1999). The original test consisted of essays and was not designed for mass testing. The College Board, however, created a broader test of IQ in 1926, the Scholastic Aptitude Test, commonly known today as the SAT I. This test was intended to help elite schools identify high-achieving students in nonelite high schools. In the early years, it also distinguished between white-collar students who were suitable for college and blue-collar students presumed to be ill prepared for such an education (Blau et al. 2003). By the mid-1950s, the demand for college education soared, spawning the development of the American College Testing Program (currently known as the ACT) in 1959. This test is the main alternative to the SAT. The origins of the SAT and ACT clarify their differing approaches. The SAT test was originally based on Army IQ tests as a measure of intelligence, whereas the ACT was historically designed to measure achievement rather than intelligence or aptitude.

Despite these differences in intent, the tests are similar in structure. The SAT I (also known as the SAT Reasoning Test) is designed to measure students' critical thinking and problem-solving skills. The test consists of three sections. The critical-reading section includes ques-

tions on analytical reading, reading comprehension, and sentence completion. The writing section evaluates students' ability to write clearly, concisely, and competently. It also assesses students' ability to critically assess sentence and paragraph structure, as well as grammar. Finally, the mathematics section includes questions covering algebra, geometry, statistics, and advanced data analysis.

The ACT is similar to the SAT, but it has four broad sections. The English section evaluates writing and rhetorical skills. The mathematics section includes questions on algebra, geometry, and trigonometry. The reading section measures reading comprehension. The science section tests scientific skills including reasoning, analysis, and problem solving. Finally, the writing section tests writing skills.

The SAT and ACT are widely utilized among students and colleges. In 2006 about 1.5 million high school seniors took the SAT and approximately 1.2 million students took the ACT. Most colleges accept either the SAT or ACT for admissions since standards for comparing these scores are easily accessible.

The importance to higher education of standardized testing persists into graduate school, but testing tools are more diverse for graduate admissions than for undergraduate admissions. Professional schools require standardized tests that emphasize skills required by their specific disciplines. These include the Law School Admission Test (LSAT), the Medical College Admission Test (MCAT), and the Graduate Management Admission Test (GMAT). A more general and widely used standardized testing tool is the Graduate Record Examination (GRE). In 2005 nearly 500,000 persons took the GRE, accounting for 35 percent of persons with bachelor's degrees (National Center for Education Statistics 2006). The GRE has three sections. The verbal-reasoning section tests the respondent's ability to recognize concepts and to analyze information and relationships among parts of sentences. The quantitative-reasoning section tests algebra, geometry, data analysis, and quantitative reasoning. Finally, the analytical-writing section assesses the respondent's ability to write clearly, effectively, logically, coherently, and competently.

Key criticisms of standardized testing that have generated widespread sociological interest are: (1) the neglect of environmental differences among students, particularly those associated with cultural and racial differences; and (2) testing bias and validity. Criticisms of cultural and racial bias abound within the literature. One notable example is Tukufu Zuberi's *Thicker than Blood* (2001). Zuberi contends that the IQ test, the predecessor of modern standardized testing, developed out of the eugenics movement. This movement was committed to identifying biological differences between the races and classes. Proponents posited that racial inequalities in society were biologically determined because whites were perceived to be genetically superior. According to Zuberi, IQ tests provided statistical support for eugenics because white students scored higher on these tests than black and immigrant students.

During this period, many scholars argued that IQ tests, which measured math and verbal skills, accurately reflected biological differences in intelligence. Scholars influenced by this tradition purport that differences in test scores between blacks and whites reflect inherent biological differences between the races (Herrnstein and Murray 1994). However, sufficient data have not been provided to support this hypothesis. Today, most scholars acknowledge that standardized testing is biased and reflects more than biological differences between students.

Christopher Jencks, an influential scholar in this debate, has identified multiple biases in standardized testing. First, he argues that standardized tests neglect environmental differences between students, which creates bias. Comparisons of scores among racial groups are problematic because the IQ test was originally designed to compare the mental ability of students who were raised in comparable environments with similar levels of educational opportunity. Yet mass testing neglects environmental differences between students. This proposition has received widespread empirical support. William Rodgers and William Spriggs (1996) offer one of the most methodologically sophisticated assessments of environmental background factors by showing that a consideration of family and educational background reduces racial differences in test scores. However, they also find that the impact of the environment on test scores varies by race. Furthermore, racial biases exist in the measurement of standardized tests because components of these tests have different long-term effects on individuals' wages, depending on race and gender. Thus, Rodgers and Spriggs argue that standardized tests are racially biased because they measure different factors for different races.

Standardized tests are also biased in content (Jencks 1998). This is obvious when considering the language of the test. For students whose primary language is not English, standardized testing measures both English proficiency and scholastic achievement. As a result, these tests do not accurately reflect the achievement or readiness for college of language-minority students (LaCelle-Peterson 2000). Less-obvious content biases are prevalent in vocabulary words and essay topics.

Standardized tests are also biased methodologically if they claim (or are assumed) to measure ability because groups historically subjugated in society, including blacks, women, and the poor, are disadvantaged in this situation (Jencks 1998). Indeed, researchers have found that these tests create anxiety among African Americans and students of low socioeconomic status, who underperform on

tests perceived to measure intellectual ability (Croizet and Dutrevis 2004; Steele and Aronson 1998). Additionally, women underperform when gender stereotypes are made salient (Benbow 1988).

Judith Blau and colleagues argue that blacks and whites place different significance on achievement tests. Whites believe that these tests measure ability, while blacks perceive unfair discrimination in testing practices. Thus, they conclude that black students and their parents place less weight on standardized test scores when considering postsecondary educational goals. Blau finds that test scores are a better predictor of educational attainment for white students than for black students. Furthermore, low-scoring black students are more likely than low-scoring white students to pursue postsecondary education. Thus, low scores are more likely to discourage white students, suggesting cultural differences in the value placed on tests (Blau et al. 2003). Further research is needed to determine how Blau's theory applies to gender and class issues. Preliminary research suggests that females place less value on mathematical portions of standardized test scores due to stereotype threats (Lesko and Corpus 2006).

Differences in the ability of standardized tests to predict future outcomes highlight an additional criticism of standardized testing: The tests are not valid because they are not accurate predictors of students' success in college or graduate school (Jencks 1998). Indeed, many scholars have found that standardized test scores do not predict grade point average in college (Gandara and Lopez 1998; Fleming 2000, 2002) or in graduate school (Oldfield 1994, 1996), and they do not predict success in the labor market (Blackburn 2004; Rodgers and Spriggs 1996).

The effect of the debates on standardized testing is evident. The title of the SAT has changed multiple times from the Scholastic Aptitude Test (a test of ability) to the Scholastic Assessment Test (this more general term suggests that the test measures more than ability) and finally to simply the SAT. In addition, the College Board has altered testing questions on the SAT to reduce cultural bias introduced from disparate knowledge and interests between groups in society. Furthermore, it has cut sections of the test to reduce reliance on vocabulary and increase reliance on verbal problem-solving skills. Even with these changes, however, racial and gender disparities persist. In 2004 the average SAT verbal score was 508 for college-bound high school seniors, ranging from 430 for black seniors to 451 and 528 for Mexican American and white seniors, respectively. Similarly, mathematics scores ranged from an average of 427 for black students to 531 for white students. ACT scores also vary by race. Average English ACT scores were 20.4 in 2004, ranging from 17.2 for black students to 18.3 for Mexican-American students and 22.5 for white students (Freeman and Fox 2005).

The persistence of the race gap is attributable to differences in family background and educational opportunity. Black students are generally raised in families with fewer resources than white students. Indeed, according to Melvin Oliver and Thomas Shapiro (1995), 63 percent of black households have zero or negative financial assets, meaning that their debt outweighs their assets. Only 28 percent of white families have negative financial assets. Furthermore, white median net worth (defined as the sum of all assets minus debt) is nearly twelve times black median net worth. This has important implications for test scores because students raised in families with greater wealth have the financial resources to prepare for standardized testing and attend college. Indeed, parental wealth and education are the two most important predictors of college attendance (Conley 1999).

The racial gap in test scores also persists because black students have fewer opportunities to prepare for the test. Schooling in the United States is highly segregated by race and socioeconomic status. Roslyn Mickelson (2006) found that predominantly black schools offer fewer SAT prep courses than integrated or predominantly white schools. Furthermore, even when black and white students study in the same schools (i.e., in integrated schools), they are offered different educational opportunities because they are grouped into classes by ability. Black students are more likely to be assigned to "lower-ability" classes than white students with the same grades and test scores. These classes are often taught by less-experienced teachers, and the courses offer a more general education rather than a college-preparatory education. Thus socioeconomic resources and educational opportunities explain the existing gap in standardized test scores by race.

As for gender, the standardized test score disparity is not uniform. Historically, boys and girls had equivalent verbal scores, but boys scored higher in math (Benbow 1988). The math score gap has diminished over time, in part because girls' educational opportunities have expanded, and they are taking more advanced math courses in high school. In 2004 boys and girls scored 538 and 504, respectively, on the math section of the SAT. Much of this remaining gender gap in test scores develops during high school because women continue to study in less rigorous math courses, and they are less likely than boys to participate in mathematically oriented extracurricular activities (Leahey and Guo 2001; Pallas and Alexander 1983; Vogt Yuan 2005).

It is important to understand what standardized tests measure because standardized testing has gained national recognition with the passage of the No Child Left Behind Act in 2002. This policy initiative requires standardized testing for students in the third through eighth grades and at least once during high school. The primary goal of the

legislation is to reduce achievement gaps between students, particularly by race, poverty status, disability, ethnicity, and English proficiency. This act magnifies the significance of standardized testing. By neglecting the impacts of the environmental differences, testing biases, and validity issues discussed here, standardized testing will be of limited use to educators and policymakers as they seek to close achievement gaps.

SEE ALSO *Education, USA; Race and Education*

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Stephanie Moller
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STANFORD PRISON EXPERIMENT

SEE *Prison Psychology; Zimbardo, Philip.*

STANTON, ELIZABETH CADY

SEE *Suffrage, Women's.*

STAR TREK

Although not popular during its original run in the late 1960s—it was cancelled after three low-rated seasons—the television program *Star Trek* developed a cult following that is still vibrant forty years later. Over the years, fans have appreciated the *Star Trek* saga's compelling stories and characters, idealistic and progressive view of the future, and confrontation with relevant political and cultural issues.

Gene Roddenberry created *Star Trek*, and the NBC network launched it in September 1966. The show centered on the twenty-third-century pangalactic travels of the USS *Enterprise*, the flagship of Starfleet—the military sector of the United Federation of Planets. The composition of the *Enterprise* crew itself was a social commentary on the advancements in civil rights and the nascent, albeit modest, recognition of gender equality. The ship was commanded by a white male, Captain James T. Kirk (William Shatner), but his supporting crew was considerably more diverse than the casts of other contemporary television shows. Using the fictional *Star Trek* universe, the show's episodes addressed the controversial issues of the late 1960s, including the Vietnam War, the cold war, and race relations. The show also broke new ground, most notably in featuring the first televised interracial kiss. Despite *Star Trek*'s critical success, NBC cancelled it in 1969 because of low ratings.

Cancellation after only three seasons would be the death knell for most television programs, but *Star Trek*'s cancellation marked only the beginning of one of the most successful science fiction ventures ever. Almost immediately, *Star Trek* reruns aired in syndication, earning high ratings and drawing new fans, known as "Trekkies" or "Trekkers." This fan base grew larger and more organized, and in 1972 Trekkies began holding *Star Trek* conventions. The show's actors, writers, and producers, along with thousands of fans, attend these conventions to discuss *Star Trek*, to trade memorabilia, and to socialize. With this demonstrable level of support, in 1979 Paramount Studios released a movie, *Star Trek: The Motion Picture*, which was produced by Roddenberry. The movie reunited the original cast, and it allowed the *Star Trek* legacy to continue. Throughout the 1980s subsequent *Star Trek* movies tackled social issues; for example, *Star Trek IV: The Voyage Home* (1986) was a parable on environmentalism and species protection.

Star Trek's increasing popularity gave Roddenberry the opportunity to create a new television program, *Star Trek: The Next Generation*, which debuted in September 1987. *The Next Generation* featured the twenty-fourth-century crew of the *Enterprise*, commanded by Captain Jean-Luc Picard (Patrick Stewart). As with the original *Star Trek* series, *The Next Generation* addressed important political, cultural, and social issues of its time. Anticipating the end of the cold war, the United Federation of Planets made a lasting, albeit tenuous, peace with its former archrivals the Klingons. In addition, *The Next Generation* reflected advancements in gender equality that had been achieved since the 1960s; whereas the original series relegated women to supporting roles, women in *The Next Generation* served as ships' doctors, security chiefs, and even admirals. *The Next Generation* episodes also addressed sexual orientation, the struggles of subjugated peoples, and ethical issues concerning animal experimentation. Unlike the original series, *The Next Generation* was well funded and highly rated, and it aired for seven seasons. Gene Roddenberry died in 1991 and did not see the full run of *The Next Generation*, but others ensured that the *Star Trek* legacy would continue.

The Next Generation's success led to more movies during the 1990s featuring the cast of *The Next Generation*. By 2006 there had been ten *Star Trek* movies. Additionally, *The Next Generation*'s success spawned two more television series: *Star Trek: Deep Space Nine* (1993–1999) and *Star Trek: Voyager* (1995–2001). Neither show took place on the *Enterprise*, but each continued with the basic *Star Trek* themes; for example, at a time when few television programs featured women in charge, a woman commanded the *Voyager* ship. In 2001 yet another *Star Trek* series, *Star Trek: Enterprise* (2001–2005), was launched. This show took place in the twenty-second century, during the early years of the *Enterprise* and Earth's entry into the United Federation of Planets. Low ratings and less popularity among fans brought the cancellation of *Enterprise* in 2005. Although to date there are no more television programs planned, *Star Trek* remains part of the American cultural lexicon, with academics using the show as a vehicle for their social criticism (e.g., Johnston 2002; Roberts 1999). Reruns of the television programs and movies remain popular, and *Star Trek* conventions are still held worldwide.

SEE ALSO *Science Fiction; Television*

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Steven Tauber

STAR WARS

George Lucas's film *Star Wars* (1977) had a lasting impact on the genre of science fiction films, the film industry in general, popular culture, and the political culture during and after Ronald Reagan's presidency. Lucas had established Lucasfilm Ltd. in 1971 and later founded Industrial Light and Magic, a special effects company. The revolutionary special effects in Lucas's films set a standard for future science fiction and action films. The new technologies used to make *Star Wars* included a new type of motion camera, innovations in sound technology, and developments in digital and computerized sequencing. Before *Star Wars*, possibly the last science fiction film to revolutionize the genre was director Stanley Kubrick's *2001: A Space Odyssey* (1968). The financial success of *Star Wars* changed Hollywood's negative perception of science fiction films, making possible the production of other such films, including *Star Trek: The Motion Picture* (dir. Robert Wise, 1979).

Lucas eventually made six *Star Wars* films, the original trilogy and a prequel trilogy. The titles and years of release are: *Star Wars* (later retitled *Star Wars: Episode IV–A New Hope*, 1977); *Star Wars: Episode V–The Empire Strikes Back* (1980); *Star Wars: Episode VI–Return of the Jedi* (1983); *Star Wars: Episode I–The Phantom Menace* (1999); *Star Wars: Episode II–Attack of the Clones* (2002); and *Star Wars: Episode III–Revenge of the Sith* (2005). By 2005 the two *Star Wars* trilogies and all merchandising and franchising had earned close to $20 billion, making it among the most popular and profitable film series in U.S. film history. Many of the episodes were nominated for and won Oscars and other film awards.

The plot of the films centers around Luke Skywalker, his family, the Jedi Knights, and the turbulent history of an intergalactic empire struggling from opposing totalitarian and democratic forces. Luke's character, his independent spirit, and tensions between him and his father (and surrogate fathers) hearken back to stories from the American West, Dickensian tales, and chivalry and medieval romances. The films also embody Joseph Campbell's structuralist approach to mythology. A subtext underlying the films pits a romantic notion of mysticism and the divine in nature against an overreliance on technology. Though futuristic and featuring such "technology" as light sabers, warp drives, androids, and sky cities, the story takes place "a long time ago in a galaxy far, far away," a setting that shrouds *Star Wars* in an ambiance of legend and mythology. In technical terms, the films are more science fantasy than science fiction and created a genre labeled "space opera."

A variety of influences have been identified. These include Japanese director Akira Kurosawa's *The Hidden Fortress* (1958); author Isaac Asimov's *Foundation* trilogy (1951–1953); Frank Herbert's *Dune* books; and Jack Kirby's *Fourth World* series published by DC Comics in the early 1970s. The relationship between Luke and his Jedi mentor Yoda is reminiscent of author Carlos Casteneda's *Don Juan* books about shamanistic initiation. The films' opening credits, with a scrolling tilted text that moves outward, is an homage to the *Flash Gordon* cinemagraphic serials from the late 1930s. Lucas indicated that he wanted to create a modern mythology, and the popularity of the films suggests that he succeeded. As evidence of this popularity are the many *Star Wars*–themed books and novelizations, comic books, syndicated comic strips, video and computer games, Web pages, and blogs, in addition to action figures and other *Star Wars*–related franchising and merchandizing.

Perhaps the most striking influence of Lucas's films was on American political culture during and after the Reagan administration (1981–1989). Reagan was at times dubbed "Ronald Ray-Gun" in underground comic strips from the 1960s because, as an actor, he had played Steve Coe in Lewis Seiler's *Murder in the Air* (1940). In this film, Reagan's Coe tests an experimental "ray" weapon called the Inertia Projector. Reagan was reportedly a fan of *Star Wars*, and he incorporated various allusions to the film into his foreign policy. In particular, he referred to the Soviet Union as the "Evil Empire," advocated a missile defense system that was later labeled "Star Wars," and drew parallels between communism and the Rebel Alliance of *Star Wars*.

Reagan's two Evil Empire speeches were delivered on June 8, 1982, at the British House of Commons and on March 8, 1983, to the National Association of Evangelicals. On March 23, 1983, Reagan delivered what became known as the "Star Wars speech," in which he enjoined "the scientific community … those who gave us nuclear weapons … to give us the means of rendering these nuclear weapons impotent and obsolete." Reagan's Strategic Defense Initiative, which proposed the development of ground- and satellite-based laser weapons that could target and destroy ballistic missiles, was termed "Star Wars" by a skeptical press and scientific community. The program was seen as heightening cold war tensions and militarizing space.

Star Wars allusions continued during the George H. W. Bush and George W. Bush administrations. During the Persian Gulf War (1991), for example, military officials called themselves Jedi Knights. Research, development, and funding for "Star Wars" missile defense technology continued through 2006, generating several books, including Francis FitzGerald's *Way Out There in the Blue: Reagan, Star Wars, and the End of the Cold War* (2000); *The Phantom Defense: America's Pursuit of the Star Wars Illusion* (2001) by Craig Eisendrath, Melvin A.

Goodman, and Gerald E. Marsh; and Loring Wirbel's *Star Wars: US Tools of Space Supremacy* (2003).

SEE ALSO *Popular Culture; Science Fiction*

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Jeff Williams

STARE, THE

The ancient Greeks explored the dialectics of the gaze in the form of the myth of Medusa, who can turn people to stone with a single glance. The Medusan story symbolically condenses a range of experiences of looking and being looked at in the graphic image of the "petrifying gaze" (*petrification* meaning literally the turning of the other into an inert object), and the Medusa, being a female deity, introduces the idea that "looking" implicates sexual and gendered phenomena of some social and cultural importance.

The human sciences have demonstrated that "looking" is a profoundly social and political phenomenon that obliges the analyst to distinguish between different modalities and practices of seeing ("looking," "gazing," "staring," "glancing," and so forth). It is thus important to distinguish the physical and physiological properties of "seeing" from the culturally defined forms of "looking." For example, very young infants tend to stare at objects and others (particularly other persons with a distinctive physical attribute); as children are socialized they learn to sublimate this natural inclination into the more civil act of glancing and looking away. Children are taught that certain forms of eye contact are regarded as impolite, that looking is subject to appropriateness norms.

We are not far from Jean-Paul Sartre's analysis of voyeurism and the attendant social relations of masochism and sadism in his work *Being and Nothingness* (1956). Here the Medusan imagery is elevated into a description of the human condition as consciousness seeks to objectify the other person and thereby escape from the petrifying glance of another consciousness. Simone de Beauvoir (1908–1986) built upon Sartre's phenomenology of the gaze by formulating the topic in explicitly gendered terms, distinguishing between the aggressive masculine gaze and the defensive feminine look. Frantz Fanon explored similar phenomena by identifying the racialized perspective that projects the other as the object of racial oppression and prejudice (Fanon 1967).

Today the cultural construction of the gaze has led to a number of significant lines of research. Feminism's critique of patriarchal modes of experience, including the phallocentric ways in which women's bodies and female experience are cast into "objective" terms, is frequently formulated in "objective" terms, resulting in representations of women as an "object" of male desire. In a similar vein, John Berger has explored the male gaze and its role in creating representations of the female body in the history of Western art and, more particularly, in the history of the two- and three-dimensional nude figure (Berger 1972). Noteworthy in the field of media and film studies is Laura Mulvey's psychoanalytically inspired work on the voyeuristic conventions of Hollywood cinema, and more especially her theory of the phallocentric links between male visual pleasure and narrative cinema (1989). Erving Goffman's investigations of the "interactional work" of seeing and being seen—for example, the blank "stare-into-the distance" assumed by urban passengers (the kind of neutral stare adopted in situations such as sharing an elevator, traveling on the subway, standing in line, etc.)—led him to his concept of "civil indifference." Goffman's research (1963, 1970) was prefigured by the German sociologist Georg Simmel (1858–1918), who is well known for pioneering work in the social phenomenology of the blasé attitude of cosmopolitan life. For Simmel, the urban metropolis creates forms of life where the self lives in a world of strangers, is continuously observed by the disinterested eyes of crowds, and loses the potential of creativity envisionment.

The look and its social analysis continues to play an important role within the field of visual culture theory and research. Popular culture is increasingly defined as a culture of global visuality, where all signifiers are either explicitly or implicitly reconfigured in voyeuristic terms—a multimedia world-industry of images designed to be looked at. Today computer-based communications, TV, film, and digitized multimedia provide the ultimate technological means that extend the social relationships embodied in gazing to a planetary stage. The related concepts of "the society of the spectacle," "simulacral culture," and the surveillance society have been developed to explore new geographies of power as these are redefined by the electronic media of watching, staring, and controlling the social field.

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Barry Sandywell

STATE, THE

All human communities have some type of political organization that governs the behavior of its individual members. However, state forms of government are distinct from other forms of political organization such as tribes, clans, and gens. As Brian Nelson states in his 2006 study, the state is best defined in terms of its basic structural characteristics, which are territoriality, sovereignty, law, centralization, legitimation, and class stratification. And as both Elman Service (1975) and Ted Llewellen (1983) note, in contrast to earlier forms of political organization, which were based on lineage and heredity, the state is a form of political organization based on territorial jurisdiction. The state is also a sovereign entity, which means it claims a monopoly of the legitimate use of physical force within a given territory, as argued by Max Weber (1978). The state's sovereignty depends on its ability to successfully enforce a monopoly of coercive force in relation to all inhabitants of its territory, against the claims of neighboring states, and against the claims of competing forms of political organization (e.g., tribes) within the same territory. Thus, for a state to exist, it must centralize the coercive powers of law, administration, and military force because sovereignty does not exist when governmental authority is retained by competing social units, such as clans or tribes, or where inhabitants' political loyalties are retained by local units of government that function independently of the state's central authority. Consequently, Charles Tilly observes (1975), "state-building" has been a lengthy and violent historical process involving the subordination of competing forms of political organization to the state's sovereign authority and the defense of its territorial boundaries against rival states.

The state's structural characteristics of territoriality, sovereignty, and centralized government are exercised through the application of general laws that are considered authoritatively binding on the territory's inhabitants. These laws are always reinforced by a corresponding form of state consciousness or ideology of legitimation. The state always derives its legitimacy from an operative myth of the state's origin or foundation, such as a belief that the law is received by a state's priests or wise men directly from the gods, or that the state is founded by heroes with exceptional virtues, or that the state was established by contract among its citizens. Yet, as a matter of fact, all states arise from a system of class stratification, which is reproduced by the state as one of its main political and economic functions. Class, as Friedrich Engels (1972) argued, is not the only kind of social stratification that exists in state societies—it generally coexists with gender, racial, or ethnic forms of stratification—but class stratification is a unique attribute of state forms of governance.

ORIGINS AND FORMS OF THE STATE

Scholars have proposed many different typologies of state forms, but historically, as Nelson (2006) states, there are four fundamental forms of state: (1) ancient city-states, (2) ancient empire-states, (3) modern city-states, and (4) the modern nation-state. The origins of the state are generally traced to the late Neolithic period (3000–4000 BCE), or about 34,000 years after the first *homo sapiens*. The first archaic states emerged on the banks of the Tigris and Euphrates Rivers (Mesopotamia), the Nile River Valley (Egypt), the Yellow River Valley (China), and the Indus River Valley (India).

Geography was a key factor in the origins of the state, because the fertility of these river valleys supported large settled agricultural populations, while the agricultural surpluses generated by these peoples made it possible to store and redistribute crops and to support the specialized craftsmen, warriors, priests, and administrators critical to state formation. Karl Wittfogel's (1957) hydraulic thesis of state formation notes that complex irrigation and flood control systems were necessary to realize these agricultural surpluses, while the construction and maintenance of these systems required increasingly centralized forms of political control. As Morton Fried (1967) and Jonathan Haas (1982) observe, this centralization of political authority and the emergence of social differentiation based on function mark the origins of the archaic state.

ANCIENT CITY-STATES

The first archaic states were created by the Sumerians of Mesopotamia about 3500 BCE, but within a few hundred years (3100–2320 BCE) many of these archaic states had

evolved into fully developed city-states. The first real states were city-states, and the largest among them sometimes had tens of thousands of inhabitants. The ancient Sumerian city-states were typically warlike and in some cases expansionary. The fact that many ancient cities were defended by walls and fortifications suggests that the city-state, which quickly spread to other parts of Mesopotamia, did so partly as a result of the conquest of other peoples and partly as a way to defend against the threat of the Sumerian city-states. Significantly, these states not only centralized political authority within a defined territory, but eventually developed concepts of law that were first enunciated in the Hammurabic Code, a code of written law promulgated by Hammurabi, a king of Babylonia (1792–1750 BCE). Hammurabi's Code influenced the emergence of legal systems in other Near Eastern states and was transmitted as a model to other empires in the Near East, Mediterranean, and later Europe.

The Egyptian state emerged almost simultaneously with the Sumerian city-states in 3100 BCE. In both regions, the sovereign authority of the state and its legitimizing religious myth were embodied in the person of a king, who claimed power either as a deity (Egypt) or as the voice of the gods (Sumeria). The centralized bureaucratic, military, economic, and ideological power of these kings far surpassed that of any previous tribal chieftain or clan elder. These kings commanded a formal state-military hierarchy, sat atop a rigid class system, and exercised preeminent religious influence within the state.

The Indus Valley Civilization emerged at about the same time (3300 BCE) on the Indian subcontinent, but this civilization did not achieve a state-level society until about 2600 BCE. Romila Thapar (2002) explains that, as in Sumeria and Egypt, the irrigation of the Indus River Valley generated large agricultural surpluses that supported burgeoning urban centers by 2500 BCE, and, over the next six hundred years, Indus Valley Civilization spread to the Ganges River basin and northern Afghanistan. However, it was not until 1000 BCE that the first recognizable city-states appeared on the Indian subcontinent, although by 500 BCE there were sixteen monarchies known as the Mahajanapadas covering the Indian subcontinent. These city-states, Vincent Smith (1981) notes, followed the earlier pattern of legitimizing the right of a king to his throne with genealogies devised by priests that ascribed divine origins to the rulers.

In their history of China, John Fairbank and Denis Twitchett (vol. 1, 1978) note that the Huang He Valley emerged as the first cultural center in China in the late Neolithic period (2100–1800 BCE); by the end of the second millennium BCE, the Zhou Dynasty (1027–771 BCE) was established in the Yellow River Valley and later in the Yantgtze River Valley (770–221 BCE). The first Zhou king invoked "the Mandate of Heaven" to legitimize his rule, a concept that would influence almost every subsequent Chinese dynasty. During the Zhou Dynasty, the city-state spread throughout China until several hundred warring states were finally consolidated into seven states toward the end of the fifth century BCE.

ANCIENT EMPIRE-STATES

The ancient city-states were aggressive and expansionary regardless of where they originated, and their wars resulted directly in the formation of the first ancient empire-states. In most cases, Nelson (2006) observes, the basis of early state formation was the city, with empires arising as a secondary state formation from a city-state's imperial expansion. The Assyrians built the first empire-state, starting with Sargon of Akkad, who became the first king to successfully assert political control over inhabitants living beyond his city-state (2371 BCE). Assyrian kings gradually asserted hegemony over all of Mesopotamia and the Fertile Crescent (2371–612 BCE), including Egypt for a short period (745–612 BCE). In building an empire of city-states, the Assyrians established the model for all subsequent ancient and classical empires, including the Persian, Macedonian, and Roman Empires, as well as many smaller empires, such as the Athenian, Phoenician, and Carthaginian Empires.

In India and the Far East, comparable configurations emerged from the warring city-states. During the time that large parts of India were subjected to the Persian and Macedonian Empires, the first Indian empire-state was the kingdom of Magadha, which emerged as a major power in northeastern India after subjugating two neighboring states (684–26 BCE). Numerous empires rose and fell in different parts of the Indian subcontinent, including the Satavahana Empire (230 BCE–199 CE) in southern and central India, and the Gupta Empire (240–550 CE), which united northern India. In 1526 Babur established the Mughal Empire, which was the first empire-state to unite most of the Indian subcontinent by 1600 CE. Its successor, the Maratha Empire, stretched across the entire subcontinent by 1760 but was eventually displaced by the British Empire (1757–1947 CE).

In China, the Qin Dynasty (221–207 BCE) was the first to subdue large parts of the core Han Chinese homeland and unite them under a centralized Legalist government. It also imposed a common system of writing and developed a state ideology based on Confucianism. China was an empire-state for most of its history, although historians generally divide its political development into early imperial (221 BC–588 CE), classical imperial (580–1234 CE), and later imperial (1279–1911 CE) phases. However, as Peter Farb (1968) explains, there is

considerable debate as to whether the Meso-American empires, including those established by the Olmecs (1200–400 BCE), Mayans (250–900 CE), Incas (1197–1533 CE), and Aztecs (1248–1521 CE) should be considered ancient empire-states, archaic states, or a distinct tribal (i.e., non-state) form of tributary empire.

MODERN CITY-STATES

The ancient empire-states were often disorganized and short-lived in comparison to modern states. As S. N. Eisenstadt (1963) observes, it was not uncommon for empires to be conquered by rival empires, nor was it uncommon for empires to disintegrate back into warring city-states or into forms of feudalism because of weak political leadership, natural catastrophe, invasion, or rebellion. However, city-states and empire-states are the only known forms of state until the emergence of the modern state.

The basic structural characteristics of the modern state are identical to those of earlier state forms. However, most modern states tend to manifest these characteristics on a different territorial scale (the nation) and to vest sovereignty in an impersonal legal system. In the modern state, sovereignty is asserted to reside in the impersonal state form, and not in the ruler as conceived in the archaic and ancient states. Thus, in the modern state, there is a firm distinction between the state and its government (rulers), which is a distinctive ideological characteristic of the modern state compared to earlier forms of state. As Nelson (2006) notes, the modern state has also evolved in tandem with the capitalist form of economy and is therefore generally linked to the reproduction of specifically capitalist forms of class stratification.

The origins of the modern state are found in the medieval towns of Europe, which, as a general rule, stood outside the stateless feudal system of political relationships based on personal rule. The medieval towns developed their own governing system based on the idea that the town (i.e., the state) was an abstract entity (corporation or *universitas*) that was by right free from outside control. Joseph Strayer (1970) notes that these commercial centers evolved into independent states, most notably in Italy and Germany in the fourteenth and fifteenth centuries. The German city-states of the Hanseatic League, which emerged from the mid-fourteenth century onward, constituted a trading and military alliance of modern city-states but never became a true state in itself. Venice is the only modern city-state to build a commercial empire-state (800–1797 CE) by asserting control over other cities and islands in the Mediterranean and Aegean Seas. Despite being largely displaced by the nation-state, Singapore, Monaco, and Luxembourg survive today as successful and prosperous modern city-states.

THE MODERN NATION-STATE

The modern state became largely synonymous with the nation-state beginning in Europe in the early 1300s. In parts of the world, such as Europe in the medieval era, China, and Japan, there was sometimes a concept of "the nation" or "the people," which was united by geography, language, literature, custom, and religion; but there were not actual states with territorial boundaries coinciding with this legitimating idea. Indeed, following the collapse of empires in Europe, China, Japan, and India, and their disintegration into feudalism, the state often ceased to exist as a form of political organization. Feudal forms of political organization were premised on structural characteristics that are the opposite of a state: (a) extreme decentralization *and* (b) the privatization of social, economic, and political power.

The modern nation-state originated in Europe as powerful monarchs in France, England, Russia, Spain, Sweden, and Denmark waged continuous wars to unify their "nations." The political and religious wars that engulfed Europe for four centuries finally culminated in 1648 in the Peace of Westphalia, which codified the modern system of nation-states as international law by recognizing fixed national boundaries and the sovereignty of states within their territories. However, the system of European nation-states was not actually completed until the unification of Germany and of Italy in 1871.

It has been argued that, because most of the major and minor European nation-states were all colonial and imperial powers from the 1500s onward, the major nation-states have always been nation-state-empires. In fact the nation-state as codified in the Westphalian system was largely transferred to other regions of the world through European colonial and imperial expansion. Some of these postcolonial states, such as those in North America (1700s), Latin America (1800s), China (1911), India (1947), and Africa (1950s–1970s), were established by revolutions of national independence. Other states established in Africa and the Middle East were artificial "nations" created by the retreating colonial powers after World War I and World War II. For this reason, however, many of the postcolonial states lack the fundamental characteristics of either a nation or a state, such as a founding or heroic myth to legitimize the state. These "nations" often have a stronger history of internal tribal and religious conflict, while they sometimes lack a common language or religion except as a legacy of the colonizing state. The shared characteristics of nationhood are often most common among political and economic elites but are not shared evenly by inhabitants, who continue to speak local dialects, follow traditional religious practices, or retain political loyalties to local tribes and clans.

THE FUTURE OF THE NATION-STATE

New nation-states have proliferated in the late twentieth and early twenty-first centuries as resurgent nationality and ethnic groups withdraw from artificially constructed nation-states or reassert their independence from nation-state empires. Membership in the United Nations increased from 51 members in 1945 to 191 members in 2002. However, as Martin Van Creveld argues in his 1999 study, the future of the nation-state appears uncertain: Many existing states are combining into new forms of transnational political association, while many of the state's economic and military functions are being taken over by organizations that are not states.

The reassertion of ethnic and religious identities within and against established nation-states has also led to the proliferation of failed states among many of the artificial postcolonial states. This has resulted in a number of tenuous governing entities best described as quasi-states or proto-states; in other cases it has resulted in long periods of stateless anarchy, where small areas are governed by competing warlords in a system sometimes described, as by Gianfranco Poggi in his 1990 study, as modern feudalism.

On the other hand, many nation-states are responding to the contemporary challenges of a new era of globalization by delegating or ceding partial sovereignty to transnational, international, or supranational organizations that perform the statelike functions of internal governance (European Union), economic regulation (World Trade Organization), health and welfare provision (United Nations), and military defense (North Atlantic Treaty Organization); but these organizations, as both Kenichi Ohmae (1990) and Martin Shaw (2000) point out, are neither nations nor states. It is not yet clear whether this emerging network of political, economic, and military organizations foreshadows the end of the nation-state or the establishment of a new global state.

SEE ALSO *Authority; City-State; Ethnicity; Gender; Globalization, Anthropological Aspects of; Globalization, Social and Economic Aspects of; Government; Law; Military; Nationalism and Nationality; Political Science; Political System; Politics; Race; Sovereignty*

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Clyde Barrow

STATE, STATIONARY

SEE *Stationary State.*

STATE ENTERPRISE

A state enterprise is a large, complex economic organization owned and operated by a government rather than by a private individual or organization. Though an economic entity, it is totally encapsulated by the polity, with no separation of state and market. And very importantly, it also may transfer goods and services among suborganizations without explicit pricing of those transactions.

The problem posed by state enterprise is determining a single decision rule governing the economic behavior of multiple suborganizations controlled by a single decision maker, a rule that will lead to the realization of maximum profit for the entire group. It has been proven in the socialist calculation debate that maximizing the excess of revenue over cost from operations is the most fundamental economic problem, whether the economy is centralized or decentralized, privately or publicly owned, and whether this excess is labeled surplus, surplus value, or profit.

Although this form of economic organization dates to ancient times, this article will (1) trace briefly the development of such enterprises, and (2) trace equally briefly the development of the economic theory underlying the management of such enterprises from the Industrial Revolution in Europe to the present. Although state enterprises have developed in former European colonies in Africa, America, and Asia since decolonization, these are derived largely from metropolitan examples.

THE ECONOMIC HISTORY OF STATE-OWNED ENTERPRISES IN EUROPE, 1600–2000

In the early seventeenth century, the Dutch, Portuguese, Spanish, English, and French developed large, state-chartered multinational trading companies that lasted until the late eighteenth century.

The best example of the potential of state enterprise in this period was in ancien régime France. Richelieu established the model for an autarchic mercantilist state with new industries, a network of canals, and international trading companies on the model of the Dutch East India Company. He formed four chartered companies for the purpose of colonization but was unable to effectuate the entire system. His successor, Mazarin, appointed as finance minister Colbert, who expanded the principle of government control of enterprises to a wider range of industries and activities, enacting a much greater part of the system. Colbert established ten more trading companies. He systematically established royal monopolies for the production of luxury goods and government regulation of all commerce and production. The heyday of this policy, called mercantilism by its critics and later by economic historians, was between 1613 and 1767. Colbert was so successful at it that it is sometimes known as Colbertism. To conceptualize this French mercantilist economy mathematically, Quesnay, a critic of the system, developed his *Tableau Économique*. In 1954 Joseph Schumpeter called this a *planned economy*.

The practice of state control of enterprises survived the French Revolution and continued through the nineteenth, twentieth, and early twenty-first centuries, the state assuming ownership of such enterprises as canals, toll roads, toll bridges, toll tunnels, railroads, energy and electric utility companies, and airlines. In the post–World War II era, the state controlled over 50 percent of new investment based upon its ownership of enterprises. To optimize the output of these enterprises, it instituted an indicative central economic plan. That is, although private investors and consumers were not obligated to follow the government's economic plan because of the overwhelming government importance in the economy, there were strong incentives to do so.

Prussia under Bismarck in the nineteenth century showed the greatest reliance on state enterprise to finance the operation of the state. In one year in the 1870s, Prussia received 398 million francs from state enterprise, most from state railways but also from state-owned mines, factories, salt works, state forests, and state farms. The Bank of Prussia, state mint, toll roads, and toll canals also yielded substantial revenue to the state. This Bismarckian system of enterprise ownership was continued and extended by all subsequent German governments and included such important state enterprises as Lufthansa, VEBA, VIAG, Volkswagen, and Salzgitter. After World War II, the United States enforced a quasi-competitive economy on the West Germans under their control that did not require the dismantling of the state enterprises just named. In contrast, the Soviet Union forced a system of state enterprise upon East Germany, largely the former Prussia. In its centrally planned economy, state-owned enterprises produced about 97 percent of total net national income in 1985, this proportion continuing until about 1994.

The Marx-Kautsky concept that the economy was a single enterprise that should be controlled by the state was adopted by the Bolshevik Party in Russia and applied to the Soviet economy after 1917. Between 1917 and 1921, the Bolshevik government transferred 37,000 enterprises from private to state control in Russia, including all firms employing over ten workers. Among these enterprises were Aeroflot and those of the Oil Syndicate, Petroleum Syndicate, or Naphtha Syndicate, organized in 1918. In 1965, there were about 200,000 enterprises in operation in the USSR. In 1988, Aeroflot was split into smaller groups of enterprises. Azneft, Grozneft, and Embaneft, the state production trusts in the Oil Syndicate, were privatized after 1991.

The economic planning agency in the USSR, established in February 1921, was known as Gosplan, an advisory agency to the Council of Labor and Defense (STO). From 1925 until 1927, Gosplan was structured with two levels of central ministries above production enterprises. Cycles of decentralizing restructuring occurred, with peaks in 1957 under Khrushchev, in 1961–1965 under

Kosygin, in 1985–1990 under Gorbachev, and in 1991–2000 under Yeltsin. Putin succeeded Yeltsin in 2000 and remained in office as of 2007. He attempted to arrest the free-market trend and reestablish some state enterprises.

ECONOMIC THEORY OF STATE ENTERPRISES

Economic theories associated with the historical development of state enterprises include those of Augustin Cournot, Jules Dupuit, Léon Walras, Maurice Allais, and Gérard Debreu in France; Vilfredo Pareto and Enrico Barone in Italy; Karl Marx and Karl Kautsky in Germany; Vladimir Groman, Vladimir Popov, Wassily Leontief, and Leonid Kantorovich in the USSR; Jan Tinbergen in the Netherlands; Ragnar Frisch in Norway; Oskar Lange and Leonid Hurwicz in Poland; and Donaldson Brown, Alfred Bradley, Paul Samuelson, and Kenneth Arrow in the United States. Of these theorists, eight have been awarded the Nobel Memorial Prize in Economic Science since its establishment in 1969.

Interestingly, given the lead taken by France in the practice of mercantilist policy, there were few French academic writings on the doctrine in the sixteenth, seventeenth, and eighteenth centuries. Cournot in his 1838 *Recherches* introduced marginal cost pricing in government enterprises (toll roads, toll canals, and railroads, which were completely state owned by the 1870s), defining the marginal revenue and marginal cost functions to be the derivatives of the total revenue and cost functions, and prescribing a most efficient price as that attained at the equality of these two derivatives.

Dupuit in 1844 extended Cournot's marginal analysis from production to consumer utility. Using taxation as an example, he argued that total revenue from a new public utility (state enterprise) would be greatest where marginal revenue from a change in a price (toll) was zero. He distinguished between the utility to the nation as a whole (social or state utility), and the utility of a consumer of a service (private utility). Private utility varied with the consumer, and state utility could be maximized by price discrimination, charging different prices to consumers based on their individual utility functions.

Following Marx's 1859 lead in theory and the policy of the First International, which he cites, Walras from 1874 to 1877 developed a static model of a pure exchange economy of many sectors arrayed as an *m*-by-*n* plane matrix of linear demand and supply equations. When solved as a simultaneous equation system, this model yielded the quantity of output of all sectors used as inputs to each other sector and the prices at which these transactions took place. To begin operating the model, one was required to guess at the initial quantity of commodities held by each participant in the economy, and the prices of those commodities. The model then proceeded to final equilibrium by successive approximation.

The first explicit theoretical extension of the Marxian and Walrasian models was undertaken by quasi-socialist engineers Pareto and Barone in the 1890s. Pareto approved of the theory of class struggle and historical materialism but questioned the labor theory of value. In his 1896–1897 *Cours d'economie politique*, Pareto argued, using Walras's general equilibrium model, that as an equilibrium was simply the solution to a set of equations, this solution could be calculated by a socialist planner as well as worked out in practice through a market. In 1897, Pareto said he had been able "vigorously to prove that the coefficients of production are determined by the entrepreneurs in a regime of pure competition precisely in the same way as a socialist government would have to fix them if it wanted to realize a maximum of ophelimity" (Pareto 1897, pp. 485–502). In his 1906 *Manuel d'economie politique*, Pareto, analyzing only production in a collectivist economy, stated that "prices and net interest on capital disappear as actual entities … but they will remain as accounting entities; without them the ministry of production would proceed blindly and would not know how to plan production." Therefore, "[t]he phenomena we have just studied suggest, in an abstract way and without taking into account the practical difficulties, is an important argument in favor of collectivist production." In the 1909 French revised edition of this book by Bonnet, all four sets of Walrasian mathematical equations, including the consumption set, were presented explicitly, but only in a 113-page appendix. For consumer utility, however, he substituted an Edgeworth indifference curve for a Walrasian (cardinal) utility function. Mathematically, this substitution made no difference in the equilibrium equations. However, the ordinality of the utility or individual preference equations meant that no empirical (numerical) solution could be calculated representing his maximum of ophelimity. His focus thus shifted from the Walrasian problem of proving the existence of a solution to a set of equations to maximizing satisfaction, a preliminary statement of economic optimization, the linear programming problem. This optimum was defined as the state at which no one can be made better off without making someone else worse off. The solution assumed that all equations in the system were differentiable.

French economic planning after World War II was based on the theory Allais provided in 1943. He proved that a general equilibrium was Pareto optimal and that it could be attained by a centrally planned economy. If monopoly exists, however, these results are vitiated, for Walrasian general equilibrium assumes perfect competition in all markets. From 1937 to 1943, he was adminis-

trator of Nantes state enterprises, in control of railroads for five of the eighty-nine French departments.

Debreu in 1951 published an article in which he stated: "In an economy provided with a central planning board incarnating a social welfare function there is only one consumption unit. The whole economic system can be divided into nations among which consumption units are distributed." In 1959, objectively following Hegel and Arrow, Debreu published an axiomatic analysis of the development of a perfectly competitive economy. He utilized topology to extend the input-output analysis from the Euclidean plane to the solid, from two dimensions to a potentially infinite number of dimensions. Arrow and Debreu went on to show that a Pareto optimum could be calculated based on an analysis of ordinal preferences.

In 1908, Barone set up a general equilibrium model with four groups of linear equations similar to that of the Walras-Pareto model, and set up successive approximations as the solution process. The number of variables was found to be equal to the number of equations so that the system was formally (mathematically) solvable, that is, determinate. The market prices of the purely competitive system were found to be equivalent to the Paretian accounting exchange ratios among commodities in a collectivist system established solely by the Ministry of Production.

Unlike Walras and Pareto, Barone in his mathematical model focused solely on the production sector. His equations represented empirically observable magnitudes—quantities, costs, and exchange ratios (accounting prices) among the *n* kinds of capital (enterprises) in this sector. Cournot marginal cost equality in all two-by-two-enterprise transactions was required for equilibrium. This represented Walrasian classical economics and Austrian capital theory

Marx and Engels in 1848 called for the centralization in the hands of the state of the means of production, credit, transportation, and communication. In 1859, Marx referred to Petty's 1699 statement that the entire country is "one large scale industrial establishment." Marx here stated, "The exchange-value of this particular commodity can therefore be exhaustively expressed only by the infinite number of equations in which the use-values of all other commodities form its equivalent." In 1863 and 1885 the first and second volumes of *Das Kapital* appeared, in the second of which Marx stated, "from the standpoint of society as a whole, the aggregate capital appears as the capital of a single joint-stock company." This was all a neomercantilist analysis, a systematic updating of Colbertism in mathematical terms.

Kautsky, the leading socialist theoretician after Engels's 1895 death, argued in the 1891 Erfurt Program, "The whole machinery of production will be turned into a gigantic concern subject to a single master [the state]." In a 1902 speech, he added that this required "systematic direction of production from a single point."

The earliest attempt to construct an empirical table of the Quesnay sort, as suggested by Marx, was by the Menshevik V. G. Groman in 1923. STO ordered the Central Statistical Administration to construct a "balance of the national economy" for 1923–1924. Preliminary results were released in 1925. In 1926–1928, Pavel I. Popov, assisted by Lev N. Litoshenko and M. Barenholz, developed a rudimentary input-output model based upon Quesnay's Tableau and Marx's two-sector model of expanded reproduction. It attempted to build an "inter-branch balance of productive links." In 1935 Leontief began research that led to the development of the input-output table and an economic theory underlying it. He recast the Walras model into an "input-output" form that facilitated actual calculation. Defining industries and sectors in terms of available statistical data series, he then constructed such a table to estimate coefficients of the U.S. economy in 1941 and 1953. In 1949, he constructed a 500-sector model of the U.S. economy, each sector modeled as a linear equation.

Kantorovich in 1939 showed that problems of economic allocation of resources can be reduced to maximizing a function subject to constraints, a linear programming approach to determining the optimum price in enterprises, a procedure foreshadowed by Pareto. He also introduced the distinction between the primal and dual in linear programming. He developed the "method of decisive multipliers," which were interpreted as "shadow prices." With regard to the necessary use of prices to achieve an optimum under socialism, he was objectively a follower of Lange, and through him of Pareto and Barone.

Tinbergen in 1936 constructed a twenty-four- or twenty-seven-equation input-output (econometric) model of the Dutch economy and in 1939 developed a thirty-eight-equation model of the U.S. economy for the League of Nations. These models used prices imposed by the central planner to imitate the operation of the purely competitive market, thus creating what came to be called *market socialism*. After World War II, he served for a decade as head of the central planning bureau of the Netherlands.

Frisch constructed theories of a price-driven socialist plan, a form of market socialism, but never actually held an official position in the planning office. To solve the input-output matrix, he developed in the early 1930s aspects of the technique later called *linear programming*.

In 1936 and 1937, Lange set out a socialist economy in which there were markets for consumer goods and labor services but not for capital goods. Prices for capital and nonlabor goods were not market prices but "mere

indices of alternatives available, fixed for accounting purposes." He thus adopted the Pareto-Barone focus on accounting prices. For equilibrium, both market prices and accounting prices were determined by the condition that the quantity of each commodity demanded is equal to the quantity supplied. Each plant must produce the quantity of output that minimizes average cost, and each industry must produce the quantity that can be sold to consumers at that minimum average cost of production. These two rules make prices given by the Central Planning Board appear to consumers precisely as prices given by a perfectly competitive market. The solution to the allocation problem begins with random (guessed) prices chosen by the Central Planning Board and proceeds by iteration to a final solution. In a centrally planned economy without any markets, prices would be determined in precisely the same way. The socialist planning method, in either the decentralized or centralized form, would reach an equilibrium faster than a perfectly competitive market because the Planning Board would have more information about the network of prices and quantities than any individual enterprise could possibly have.

In the 1920s, Donaldson Brown and Alfred Bradley, economists at General Motors Corporation (GMC), took on the task of developing a price policy for the recently divisionalized firm, and following the lines of Pareto and Barone, they visualized GMC as a socialist economy of the Marx, Kautsky, and Soviet kind. Each division was viewed as an independent enterprise. All transfers between divisions within the firm were therefore priced, as previously all transactions between GMC and outside firms had been priced. This allowed GMC to allocate resources within the firm more precisely and hence to function more efficiently. The Brown-Bradley program corroborated from the capitalist side the theory being developed nearly simultaneously in the Soviet Union. Clearly implicit in all these findings was that the method of optimizing returns was the same for a privately owned enterprise as it was for a collectively owned (state-owned) one. Optimization required a "visible hand," that is, management of the enterprise, or economic planning.

Samuelson in 1941 and 1947 defined economic equilibrium to be a mathematical optimization problem, following Pareto. He introduced from physics the use of Langrangian multipliers in solving constrained optimization problems, defining these as either prices or costs. He explicitly equated this price to conceptions of Pareto, Barone, Hotelling, and Lange in the socialist planning debate. He attributed the compensation principle to Barone and not as have others to Kaldor and Hicks. He adopted Pareto's differentiability assumption and showed that the operation of the model was equivalent to solving a system of differential equations.

Arrow in 1951 amalgamated many individual preferences into one social preference, setting the problem as one of choosing alternative "social states," that is, income and wealth distributions, and concluding that the rational decision criterion is Pareto optimality. In 1959 Arrow introduced the concept that for exchanges between the divisions of a capitalist firm, "the same price should be charged as if it were a transaction with another firm." Adopting von Neumann's proof that the Lagrange multiplier was equivalent to the shadow price, he argued that only a process of successive approximations could determine the shadow price. He also redefined the concept of profit maximization as maximization of "the sum of the discounted profits" of the firm over time. This made profit maximization a dynamic rather than a static process. In 1969, he returned to the application to enterprises, stating, "An incentive for vertical integration is the replacement of buying and selling on the market by the cost of intrafirm transfers; the existence of vertical integration may suggest that the costs of operating competitive markets are not zero, as is usually assumed in our theoretical literature."

The chief mathematical tool used by all those writing from 1838 to 1956 was calculus and matrix algebra. Samuelson in the 1940s, and Arrow, Debreu, Hurwicz, and Hirshleifer in the 1950s, experimented with more powerful methods of analysis, including dynamical systems and topology. The last four showed that it is possible to reach a solution to the general equilibrium model without the assumption of universal differentiability.

SEE ALSO *Arrow, Kenneth J.; Communism; Debreu, Gerard; Enterprise; Entrepreneurship; Frisch, Ragnar; General Equilibrium; Hicks, John R.; Hurwicz, Leonid; Lagrange Multiplier; Markets; Marx, Karl; Mercantilism; Pareto, Vilfredo; Petroleum Industry; Planning; Prices; Programming, Linear and Nonlinear; Russian Economics; Samuelson, Paul A.; Socialism; State, The; Tinbergen, Jan; Union of Soviet Socialist Republics; Walras, Léon*

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Julian Ellison

STATE OF NATURE

State of nature refers to a condition in which there is no established political authority. It is essentially a state of complete freedom. Political theorists have used it to better understand human nature and, typically, to justify the rationality of a particular type of government. Proponents claim that the state of nature provides insight into the inherent dispositions and inclinations of human beings. Because individual conduct is not coerced by political authority, it will reflect how humans behave naturally.

Social contract theorists commonly speculate about what life would be like in the state of nature. Based on their understandings of human nature, they argue that individuals in the state of nature face certain threats to their well-being. Consequently, rational people should consent to recognize the authority of a state in exchange for protection from these threats. The extent of the state's authority and the safeguards it is responsible for providing are functions of the theorist's view of human nature. Generally, an optimistic view of human nature leads to the advocacy of a state with limited powers, while a more pessimistic view is associated with a more powerful state.

Thomas Hobbes (1588–1679), in *Leviathan* (1651), first used the state of nature to justify the authority of the state. He claims that the state of nature would be a war of "every man against every man" (p. 76). Hobbes's characterization of the state of nature results from his view of human nature (see chapter 13). He believed that all people are basically equal physically and mentally, so no individual is safe from the machinations of others. Moreover, humans are innately competitive, diffident, and glory seeking. Therefore, they are prone to attack others for gain, preemptive self-defense, and recognition. Given this view of human nature, he envisioned the state of nature as a place in which violence would always be a threat, that is, a state of "war." There would be no industry, culture, knowledge, or society and "worst of all, continual fear, and danger of violent death" (p. 76). Hobbes famously concludes that, in the state of nature, "the life of man" is "solitary, poor, nasty, brutish, and short" (p. 76).

The solution to this state of war, according to Hobbes, is the creation of an overawing government, that is, a leviathan. Because human nature disposes people to conflict and violence, only an all-powerful state can maintain order. Consequently, people should give up almost all personal autonomy, retaining only their right to self-defense. Hobbes contends that an authoritarian government is not only necessary but preferable to a state of nature.

John Locke (1632–1704), in *Two Treatises of Government* (1690), also uses the state of nature in his justification of limited government. He claims that the state of nature would be characterized by "inconveniences" (p. 276). Human beings, according to Locke, are rational creatures able to understand the law of nature using reflective reason (see chapter 2, *Second Treatise*). This law requires that people not harm another individual's natural right to "Life, Health, Liberty, or Possessions" (p. 271). It also obligates them to help preserve the lives of others when possible. Finally, it gives people the right to enforce the law and punish transgressions only so far as to deter future crime. Locke believes that humans in the state of nature are typically inclined to respecting the natural right of others. The problem is that people are unable to be objective when their own interests are at stake. Humans

are naturally disposed to overpunishing transgressions against themselves, family members, or friends. Retaliation inevitably creates an escalating cycle of violence.

Government, according to Locke, can provide a remedy, restraining "the partiality and violence of Men" (pp. 275–276). By objectively adjudicating violations of natural law, it can prevent the cycle of violence resulting from subjective enforcement. Rational people should be willing to give up their natural right to enforce the law of nature to the state. In exchange, the state becomes responsible for enforcing their natural rights to life, liberty, and property. Because the state of nature is merely a state of inconvenience, it does not warrant the establishment of a more intrusive and powerful government.

Jean-Jacques Rousseau (1712–1778), in the *Second Discourse on the Origin of Inequality* (1754), provides a much more brutish understanding of the human condition in the state of nature. He claims that previous theorists mischaracterized the state of nature because they had mistaken socialized inclinations for natural attributes. "They spoke about savage man, and it was civil man they depicted" (p. 38). Rousseau claimed that humans in the state of nature have only three basic physical desires: food, sex, and sleep. Their only fears are hunger and pain. No significant human conflict arises in the state of nature because people have very limited desires and an inborn sentiment of pity, which inspires a form of natural goodness. All other human passions and desires, along with such qualities as rationality and virtue, are acquired in society. Human beings in the state of nature, therefore, are simply animals, albeit with unrealized civilizing potential. They are in essence noble "savages."

The state of nature is a thoroughly modern approach to studying human nature and justifying the responsibilities of the state. It embodies three basic principles of liberal political theory: the priority of the individual, equality, and personal freedom. First, the state of nature's asocial condition suggests that humans should ultimately be understood as abstract individuals. Second, humans in the state of nature are considered morally equal, with no person having the authority to dominate anyone else. Third, people are portrayed as autonomous, self-determining creatures, thus emphasizing freedom as a natural human quality. This depiction of the human condition is quite contrary to the classical view, which assumes that human beings cannot be understood outside of the society in which they live.

The state of nature was a particularly popular thought experiment during the seventeenth and eighteenth centuries before falling out of vogue. Nonetheless, it continues to influence contemporary academic and public discourse. For example, the "original position" in John Rawls's *Theory of Justice* (1971) is a conceptual variation of the state of nature. In international relations, some scholars use the idea of a state of nature to theorize about the relationships and interactions between political states. The imagery produced by state-of-nature theories also maintains a grip on the popular imagination, from Hobbes's nightmarish war of all against all to Rousseau's romanticized noble savage. Locke's natural rights in the state of nature have also been passed down through the American Declaration of Independence as unalienable rights to "life, liberty, and the pursuit of happiness."

SEE ALSO *Civilization; Discourse; Enlightenment; Government; Hobbes, Thomas; Law; Locke, John; Philosophy, Political; Property, Private; Representation; Rousseau, Jean-Jacques; Social Contract; Society*

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Johnny Goldfinger

STATE-DEPENDENT RETRIEVAL

State-dependent retrieval describes the experimental finding that subjects who learn something in one state (e.g., a drug, nondrug, or mood state) remember more if they recall in the same state, rather than in a changed state. *Context-dependent retrieval* describes the same phenomenon. Numerous states or contexts can act as retrieval cues to facilitate remembering if reinstated at recall. Graham Davies and Donald Thomson (1988) provide an excellent reference source describing the different contexts found to influence memory. These include external states, where the learning environment is reinstated (e.g., the room, or a crime scene), and internal states, where the inner experiential state is reinstated (e.g., with alcohol, drugs, or mood states). In one experiment with subaqua divers, the divers who learned and recalled word lists in the same context (on land or under water) remembered 50 percent more words. In another experiment, subjects performed memory tasks while sober or under the influence of alcohol. Twenty-four hours later they were tested under the same or different conditions; those who learned and recalled in the same state remembered more than those

who changed states. Endel Tulving and Donald Thomson proposed that specific retrieval cues facilitate recall if the information about them is encoded and stored at the same time as the material to be remembered (Tulving and Thomson 1973). Their "Encoding Specificity" principle states that a cue must reinstate information present in the original memory trace to be effective at retrieval.

State-dependent retrieval has been studied extensively in animals using drugs to induce state changes. Donald Overton (1974) commented that many experiments using pharmacologically induced states suffer from methodological problems. Eric Eich (1980) reviewed fifty-seven experiments of human drug state-dependent retrieval and noted that the phenomenon is not always reproducible; it is also unclear whether drugs exert an influence directly on memory or indirectly through changes in mood.

Researchers became interested in the effects of mood on memory, particularly the perpetuation of depressive mood states. Mood was thought to have a state-dependent effect on memory. This suggestion arose from the findings of studies in the 1980s by John Teasdale (1983) and others that happy past memories were significantly more likely to be retrieved in happy moods and sad memories more often in depressed moods. These *mood congruity* effects were thought to result from mood state acting as a context; support for the mood-state-dependent retrieval explanation came from experiments demonstrating that similarity of mood state at time of encoding and retrieval produced less forgetting of emotionally neutral material than changed mood states. Gordon Bower (1981) advanced his "Associative Network Theory of Memory and Emotion" to explain these findings, but controversy surrounded mood-state-dependent retrieval; the effect was elusive and unpredictable (Blaney 1986; Kuiken 1991). Analysis of experiments investigating mood-state-dependent retrieval identified methodological problems that contributed to the controversy surrounding the reliability of the effect (Kenealy 1997). In particular, designs confounded encoding and retrieval by not measuring (or reporting) initial learning scores; some lacked objective measures of mood manipulation; and others used the same method of mood induction at encoding and retrieval, confounding the effects of mood and induction procedure. The phenomenon is intriguing, but the evidence does not allow definitive statements to be made concerning the generality and reliability of state-dependent retrieval.

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Pamela M. Kenealy

STATELESSNESS

A state, or more broadly in the Anglo-Saxon tradition, a nation-state, comprises a population living on a delineated territory with internationally respected boundaries and under a state apparatus whose prime and most distinguishing characteristic is the monopoly of violence. This definition follows that of Max Weber, whose original 1922 formulation of the monopoly of *Gewaltsamkeit* (physical violence) implies a potential use of that violence. At best a state carries international and internal legitimacy and thus is widely respected.

Stateless people are without legally enforceable claims to any internationally recognized state. The "host states" usually withhold the supply of public goods like security, law and defense from stateless people, at least to some extent. People can be or become stateless, i.e., are not recognized as belonging to a specific territory that meets the initially stated requirements. Stateless persons may be registered as nonnational residents, foreigners or categorized as nationals of another state even when that state does not accept them as nationals and thus will not protect them.

On the other hand, they might have advantages in avoiding taxes and the military draft.

The United Nations, early in 2006, reported 2,381,900 stateless people around the world, which was more than a 50 percent increase over 2005. The United Nations High Commissioner for Refugees (UNHCR) notes that precise numbers are difficult to ascertain, and that the actual number may be much higher, of even more than 11 million stateless people.

Four broad categories emerge: first, people that never were taken care of in their own state or that never have raised such claims. These are mostly members of small ethnic tribes living at a subsistence level, such as natives of the Amazonas region or the Pygmies of Africa. Frequently, these people were driven into their current settlement areas by more powerful contenders (e.g., Brazilian settlers or colonists in South Africa). In cases like the Aborigines of Australia and the Maoris of New Zealand, the new conquering state eventually granted them passports.

Second, people lose their attachment to their state for temporary reasons such as external conquest or internal strife, epidemic diseases or natural catastrophes. They may still have their personal documents but their state territory may not be accessible for them due to the given reasons. Losing personal documents in these situations makes claims for return even more difficult.

Third, a state may have ceased to exist due to external subjugation or exhaustion of the soil. This either forces the indigenous population to become (second-class or slave) citizens of the new state as, e.g., under Mongolian rule, leads to their annihilation in that territory, as with most of the Jews after Titus' victory in the first Jewish-Roman War (66–73 CE), or forces them abroad. If the new state will be widely recognized internationally, the third category of stateless people merges to refugees who carry no longer internationally recognized documents.

In cases of state collapse (Rotberg 2004) citizens may still carry a passport but have no state authority to protect them. A partial recovery of a state as in Lebanon or sort of a foreign protectorate is one of the possible outcomes here, as in Somalia on the part of the Ethiopian governernment in 2007, as is the permanent intermingling of internal and external ethnic divisions (Carment and James 2004).

There is a fourth category of people who cannot guarantee their economic survival in their home state, throw away all their documents (*Sans-Papières*) to avoid sanctioning on the part of the recipient states, and try to enter another state illegally as a refugee. From these four basic categories many more combinations can be derived, in particular with respect to forms of diaspora (Shain and Sherman 1998).

The lower the level of development in the lost or given up territory, the fewer and less recognized the documents and skills of these refugees, the harder the economic consequences for them in having to accept *Lumpenproletariat* jobs in their new states. Their status of illegal (and often unwanted) immigrants is permanently insecure. The numbers of these immigrants swell (now a sizable nine-digit figure), the larger the persistence of the North-South divide (Mediterranean connex, influx from Mexico, and *mutatis mutandis* of the Chinese in Eastern Russia). In general, the somatic and psychic illnesses are severe among these exile-driven people, even though a sizeable portion of this group is composed of rather robust and resilient young men. Their success for integration into a new culture depends on family networks and middlemen-minorities helping out with jobs and shelters, and, last but not least, on the pull-effects a generous and highly-developed welfare-state exerts on citizens of underdeveloped economies.

There can be vast overlap between these four categories of stateless people. The first dividing line is whether these individuals possess a valid passport. Otherwise the likelihood diminishes rapidly that any state will claim these people. There is also a small numbers effect here making for more benevolent reactions on the part of recipient states. Sometimes, e.g., with the Vietnamese boat-people or the Algerian Harkis, this is an offspring of joint fighting in an external war. Thus, there is a two-dimensional space formed by the dimension of passport-ownership (yes, restricted in various degrees, no) and the dimension of a claiming/recipient state (yes, with restrictions, no). The matter becomes more complicated when some family or clan members of an ethnic group that does not have its own state, like the Roma or the Kurds, live with their passport-owning brethren. A continuum of severity, or in a different terminology: a property space of legality and legitimacy, stretches from (1) no passsport and no-state-claim people (like the Bushmen) via (2) (restricted) passport-ownership and no state claim (German Jews driven into exile under Nazi rule), (3) the lack of a passport, but a claiming state (e.g., tourists abroad in a catastrophe like the tsunami of 2004) to the (4) full protection of a passport and a claiming state.

In any case, a claiming state is more important for ultimate safety than possession of a formal passport. In that respect, emphasis has been duly laid on a functioning state apparatus as a variable in its own (Linz and Stepan 1996).

As to Kurdish and Palestinian refugees, it is not only their stronger "host" states that do not concede a joint state for the across-border population. The major powers of the world in this power rivalry, above all the United

States, turn down claims for an independent state on the historically claimed territory.

Under conditions of globalization with workers and tourists seeing the world, the need for shelter in a home state with its guaranteed jurisdiction becomes even more important, paradoxically the more often the boundary of one's own state is crossed. The risks intensify for children born and raised in a third country that has not issued a passport to either parent.

SEE ALSO *Civil Rights; Diaspora; Human Rights; Jews; Lumpenproletariat; Migration; Nationalism and Nationality; Nation-State; Palestinians; Refugee Camps; Refugees; Roma, The*

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Ekkart Zimmermann

STATIONARY PROCESS

A *times series* is a set of data ordered in time, usually recorded at regular time intervals. In probability theory, a time series $\{x_t\}$ is a collection of random variables indexed by time. In the social sciences, examples of time series include the quarterly level of the gross domestic product, the monthly inflation rate, the annual level of crime, and the annual population growth. One of the main features of time series is the interdependency of observations over time. This interdependency needs to be accounted for in the modeling of time series data, in order to improve understanding of their temporal behavior and forecasting of their future movements.

The class of all models for time dependent data is far too large to enable methods of analysis to be designed that would be suitable for all these models. The modeling of the interdependence becomes an impossible task, and a certain degree of stability or invariance in the statistical properties of the time series becomes essential for its modeling.

Stationarity broadly refers to some form of statistical stability or equilibrium. Stationarity is a key concept in the analysis of time series data, as it allows powerful techniques for modeling and forecasting to be developed. There are different forms of stationarity, depending on which of the statistical properties of the time series are restricted. The two most widely used forms of stationarity are: *weak stationarity* and *strict stationarity*.

WEAK AND STRICT STATIONARITY

A time series $\{x_t\}$ is said to be *strictly stationary* when the *probability density function* of the collection of the random variables $x_{t_1}, \ldots, x_{t_k}$ is the same as that of the random variables $x_{t_1+h}, \ldots, x_{t_k+h}$ for all integers $t_1, \ldots, t_k$ and positive integers k and h. The strict stationarity property restricts the probabilistic properties of any collection of random variables to be invariant to time shifts, which implies that the probabilistic behavior of each random variable is the same across time.

A time series $\{x_t\}$ is said to be *weakly stationary*, sometimes referred to as *second-order* or *covariance stationary*, when

$E(x_t) = \mu \prec \infty$, for all integers t,

$Var(x_t) = \sigma^2 \prec \infty$, for all integers t,

$Cov(x_t, x_{t+h}) = \gamma(h)$, for all integers t and h.

The weak stationarity property restricts the *mean* and *variance* of the time series to be finite and invariant in time and takes the linear dependence between two distinct observations (as measured by the *covariance*) to be a function of the time distance between them. The function $\gamma(h)$, for integers h, is called the *autocovariance function*. The function $\rho(h) = \gamma(h)/\sigma^2$, for integers h, is the *autocorrelation function*.

Strict stationarity implies weak stationarity when the mean and variance of the time series exist. The two forms of stationarity are equivalent if the time series follows the *normal* distribution. Overall, weak stationarity is less restrictive than strict stationarity. Moreover, it turns out that the weak stationarity condition is sufficient for most of the statistical results derived for *cross-sectional* data to hold. For these reasons, weak stationarity is employed more often than strict stationarity. Various authors use the term *stationarity* to refer to weak stationarity. Figure 1 shows one hundred simulated data from a weakly stationary time series.

A simple example of a weakly stationary time series is the *white noise* sequence, a sequence of zero mean, con-

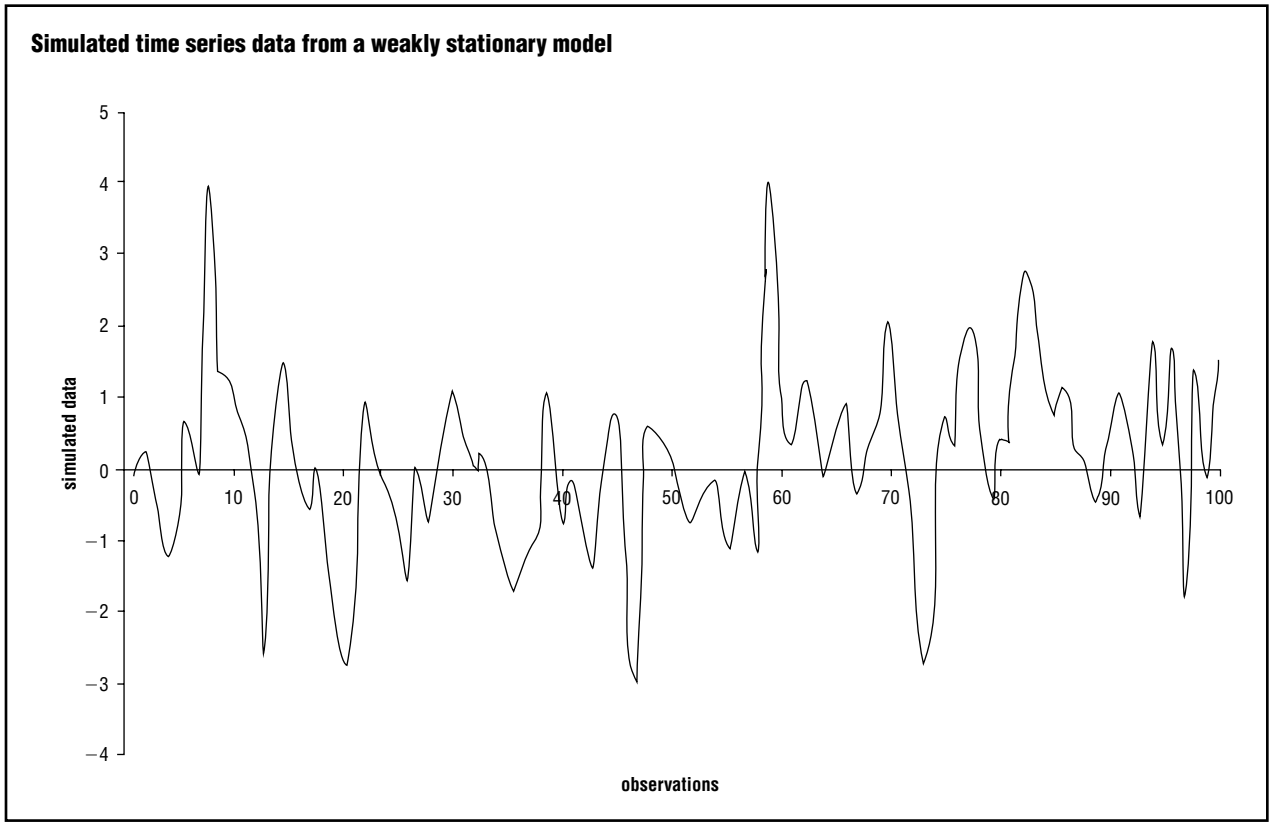

Figure 1

stant variance, and *uncorrelated* random variables. Probably the most well-known model for weakly stationary time series is the *autoregressive moving average of orders p and q*, or ARMA(*p,q*), model with appropriate restrictions on its coefficients, where the variable under consideration is written as a linear combination of its own *p* past values, an error term (usually taken to be a white noise sequence), and *q* past values of the error term. The ARMA(*p,q*) model was popularized by George Box and Gwilym Jenkins (1970).

Stationarity plays an important role in the forecasting of time series data. Suppose that at time *t* we are given a set of data $x_{t-n}, \ldots, x_t$ and we wish to forecast the future value x_{t+h}. In predicting the value x_{t+h}, we would make use of the given data, and we would predict the value x_{t+h} by some function *f* of the given data. To determine which function *f* gives the best forecast, a measure of accuracy or *loss function* is needed to evaluate how accurate a forecast is. The most commonly used measure in prediction theory is based on the *mean squared error* (MSE) of the forecast, and the function *f* is chosen so that the MSE is minimized. It turns out that the function *f* that produces the smallest MSE is the *conditional mean* of x_{t+h} given the available information $x_{t-n}, \ldots, x_t$, $E(x_{t+h}|x_{t-n}, \ldots, x_t)$. If the time series were normally distributed, then the conditional mean $E(x_{t+h}|x_{t-n}, \ldots, x_t)$ is a linear combination of the data $x_{t-n}, \ldots, x_t$. In general, the conditional mean is unknown, and it is common in prediction theory to consider only predictors $\hat{x}_{t+h}$ for x_{t+h} that are a linear combination of the available data $x_{t-n}, \ldots, x_t$,

$$\hat{x}_{t+h} = a_0 x_t + a_1 x_{t-1} + \ldots + a_n x_{t-n},$$

where $a_0, a_1, \ldots, a_n$ are parameters that need to be estimated. The assumption of weak stationarity of the time series $\{x_t\}$ guarantees that the parameters $a_0, a_1, \ldots, a_n$ are invariant in time and therefore can be easily estimated from the data.

A detailed discussion of the properties, modeling, and forecasting of stationary time series can be found in Peter Brockwell and Richard Davis (2002).

NONSTATIONARITY

The conditions for stationarity, weak or strong, can be violated in many different ways. Time series that do not have the stationarity property are called *nonstationary*. Examples of nonstationary time series data include the

levels of the gross domestic product and population, which do not fluctuate around a constant level, but show overall an upward time trend. For these series, the average behavior for the beginning and the end of the sample differs, which rules out the possibility that the time series is stationary. A trend component in the data is one of the most common cases of nonstationarity in economic time series. Popular models for capturing trend behavior are the *linear trend* and *random walk* models.

The linear trend model assumes that the random variable x_t of the time series can be written as the sum of a deterministic linear trend $\alpha + \beta t$ and a white noise random variable ε_t,

$$x_t = \alpha + \beta t + \varepsilon_t, \qquad (1)$$

where α and β are constant parameters. Under the linear trend model (1), x_t is regarded as being scattered randomly around the trend line $\alpha + \beta t$, with the fluctuations around the trend line having no obvious tendency to increase or decrease. It follows that the mean of x_t depends on time t, $E(x_t) = \alpha + \beta t$, so that the time series $\{x_t\}$ is nonstationary. Deterministic nonlinear functions of time t could also be considered to describe the trend of $\{x_t\}$.

The random walk model assumes that the random variable x_t of the time series can be written as the sum of its previous value x_{t-1} and a white noise random variable ε_t,

$$x_t = x_{t-1} + \varepsilon_t. \qquad (2)$$

Under the random walk model (2), from one period to the next, the current observation of the time series takes a random step away from its last recorded value. The random walk model (2) can be extended to include an additive constant δ, and becomes the *random walk with drift* δ model,

$$x_t = \delta + x_{t-1} + \varepsilon_t. \qquad (3)$$

If it is assumed that the time series $\{x_t\}$ starts from some initial value x_0, then it can be shown for the random walk with drift model (3) that the mean and variance of x_t depend on time t, $E(x_t) = x_0 + \delta t$ and $Var(x_t) = tVar(\varepsilon_t)$. Therefore, a time series $\{x_t\}$ following the random walk without or with drift models (2) and (3) is nonstationary.

The trend component in the linear trend model (1) falls in the category of *deterministic trends*, as it is assumed that the trend of the time series is a deterministic function

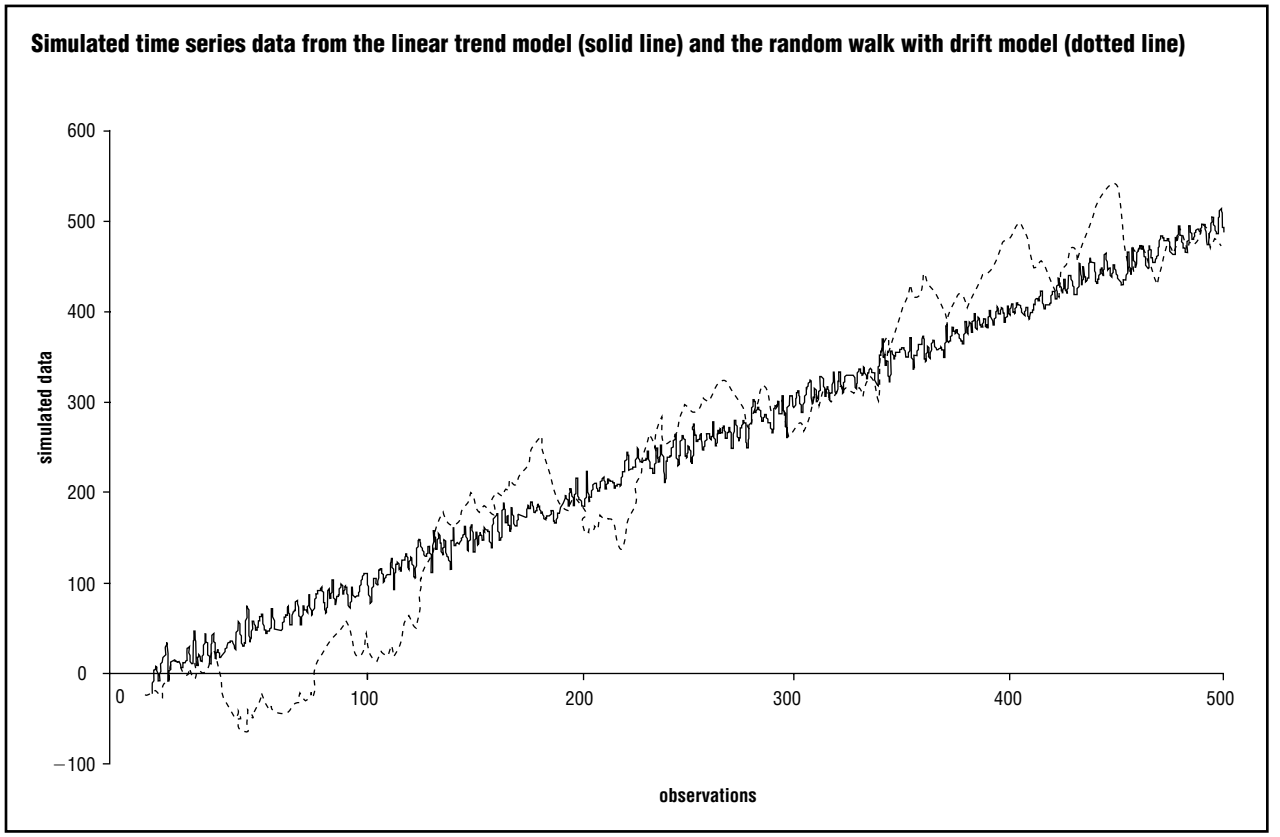

Figure 2

of time. On the other hand, the trend component in the random walk without or with drift models (2) and (3) belongs in the category of *stochastic trends*, since for these models the trend of the time series is taken to be driven by the lagged time series, which is stochastic.

The difference between deterministic and stochastic trends can be seen from the models (1) and (3). The mean of x_t is a linear function of time t for both the linear trend and random walk with drift models (1) and (3), but the variance of x_t is increasing in time t for the random walk with drift model (3), and is constant in time t for the linear trend model (1). Another difference between the two models is the nature of the effect of shocks to future values of the time series. For the random walk with drift model (3) the effect of a shock is permanent, while for the linear trend model (1) it wears off. Figure 2 shows five hundred simulated data from the linear trend and random walk with drift models (1) and (3) with parameters $\alpha = x_0 = 0$ and $\beta = \delta = 1$.

A detailed discussion on nonstationary time series and the various models for the trend can be found in James D. Hamilton (1994).

TRANSFORMING NONSTATIONARITY TO STATIONARITY

The analysis of nonstationary time series is more complicated than that of weakly stationary ones. Moreover, statistical inference that involves nonstationary data is usually nonstandard, in contrast to weakly stationary ones. For these reasons, if nonstationarity is evident in the data, it is common practice to apply some transformation to the data that makes them weakly stationary and then apply statistical analysis on the transformed data.

For example, if a time series $\{x_t\}$ follows the linear trend model (1), then if one subtracts the trend $\alpha + \beta t$ from x_t, the transformed series is a white noise sequence, which is weakly stationary. Nonstationary time series that become weakly stationary after extraction of a deterministic trend are described as *trend-stationary*.

Another important transformation that can make nonstationary data into weakly stationary is the *difference* operator. The difference operator, denoted usually by Δ, is such that when applied to x_t the result is $x_t - x_{t-1}$,

$$\Delta x_t = x_t - x_{t-1}.$$

If it is assumed that the time series $\{x_t\}$ follows the random walk without or with drift models (2) and (3), then the difference operator transforms the data into a white noise sequence without or with an additive constant (the drift), which is weakly stationary. In some cases, it could be required that the difference operator is applied more than once to the data to achieve weak stationarity. Nonstationary time series that become weakly stationary after applying the difference operator are referred to as *difference-stationary*.

Difference-stationary time series are often described as being *integrated of order d*, denoted as I(*d*). The parameter *d* is the *order of integration* and is the number of times that the difference operator has to be applied to the data in order to achieve weak stationarity. In the case that we take *d* differences and the resulting time series follows a weakly stationary ARMA(*p,q*) model, then the original time series follows the *autoregressive integrated moving average of orders p, d, and q,* or ARIMA(*p,d,q*), model of Box and Jenkins (1970).

For nonstationary economic time series, it is common that the order of integration is $d = 1$, and in a few cases is $d = 2$. Time series that are integrated of order 1 are referred to as having a *unit root*. Examples include the random walk with or without drift and the ARIMA(*p,d,q*) with $d = 1$ models. Time series having a unit root have attracted particular attention in the literature of theoretical and applied econometrics.

More information on the topic of unit root time series can be found in William Greene (2003), including testing procedures to discriminate between weakly stationary and unit root time series.

SEE ALSO *General Equilibrium; Nash Equilibrium; Partial Equilibrium; Stability in Economics; Steady State; Unit Root and Cointegration Regression*

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Violetta Dalla

STATIONARY STATE

Classical political economy, from William Petty, the Physiocrats, Adam Smith, and David Ricardo, to John Stuart Mill and Karl Marx, analyzed the dynamics of capitalist economies and investigated the sources of economic growth and development. In this analysis, a *progressive* or *advancing* state is one in which capital accumulation is proceeding, whether smoothly or erratically—in other

words, it is a condition of positive economic growth, usually associated with high and rising profits and wages. An economic system experiencing negative growth is said to be in a *declining* state. Thomas Malthus and Ricardo focused much attention on various scenarios associated with decline—leading Thomas Carlyle to dub political economy "the dismal science"—while Marx made prognostications about its inevitability. A *stationary* state is one in which growth is neither positive nor negative. Until John Stuart Mill, the stationary state was, like the declining state, considered unwelcome, and growth was thought to benefit all three great classes of society: capitalists, landlords, and workers.

In his *Principles of Political Economy* (1848), Mill for the first time raised the possibility that the stationary state could be desirable (and economic growth undesirable). In addition, whereas in all the earlier classical authors the system's movements were seen as governed by internal "laws of motion" that, while they could be identified and interpreted, *could not be altered*, in Mill, for the first time, the possibility that human intervention into the system could affect its outcomes was contemplated. Marx, of course, also put forward the idea that people make their own history (though "not exactly as they please"), but for Marx capitalism must grow ("Accumulate or die!"), and his analysis also viewed capitalism as incapable of being reformed, so change meant a transition to socialism. Strictly speaking, outcomes could be influenced by human interference even in Ricardo, where, for example, repeal of the corn laws could allow cheaper corn to be imported, supporting profits that otherwise were being squeezed by the artificially high price of corn—but this is a case not of affecting the laws themselves, but of clearing the way for the "laws of motion" to operate to their fullest.

In *Principles*, Mill begins by affirming that the laws of production are, like the laws of physics, unalterable (although some might be guided within strict limits), but then suggests that the laws of distribution are capable of being guided by human institutions. For Mill, distribution is governed by the laws and customs of society. The nature of distribution varies from society to society and is subject to historical change. Like his predecessors in Classical political economy, Mill saw a tendency toward a falling rate of profit that would lead to a stationary state. However, whereas the earlier writers associated the stationary state with gloom and poverty, Mill saw it as the blissful final result of economic progress. Mill also considered the idea that a society could *choose* to adopt a stationary state, rather than wait for a stationary state to be imposed on it.

In the ideal stationary state, society would have achieved a sufficiently high level of wealth accumulation. Workers would be educated to realize the negative effects of population growth, and they would control their numbers voluntarily. As population growth reached a stationary stage, there would be no tendency for wages to fall and no reason for further growth in production. Mill was sure to note that a "stationary condition of capital and population implies no stationary state of human improvement" (Mill [1848] 1987, p. 751), thus making the distinction between quantitative growth and qualitative development. He also pointed out that his analysis applied only to the presently industrialized nations, and that what would later be called "developing" countries have not yet reached the level of economic well-being necessary to turn to zero growth.

Recently, ecologically oriented economists have cited Mill and put forward their vision of a *steady-state economy*, which is more or less the same idea conceived by Mill (see, for example, Daly's notion of "an economy with constant stocks of people and artifacts" [1978, p. 17]). This is somewhat confusing, because in traditional growth theory the term *steady-state* refers not to zero growth, but to proportional growth. Frank Knight (1921) noted, for example, that John Bates Clark's "static state," which is an abstraction for methodological purposes, is not the same as the classical authors' stationary state. Ludwig von Mises also expressed the sentiment that "[t]he idea of a stationary state is an aid to theoretical speculation. In the world of reality there is no stationary state, for the conditions under which economic activity takes place are subject to perpetual alterations which it is beyond human capacity to limit" ([1922] 1951, p. 196]). In neoclassical economics, the term *steady-state* is used to indicate not a state of zero growth, but rather a kind of equilibrium growth, as in the "golden rule," in which the propensity to save is such that per capita consumption is equalized across generations. This is obviously not what the classical economists meant by the stationary state.

SEE ALSO *Development Economics; Economic Growth; Economics, Classical; Equilibrium in Economics; Malthus, Thomas Robert; Mill, John Stuart; Mises, Ludwig Edler von; Ricardo, David; Stability in Economics; Steady State*

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Mathew Forstater

STATISM

Statism is a more complex, quirky phenomenon than is often supposed. It is a more cerebral, less emotive concept—and a more recent one—than nationalism, patriotism, and xenophobia. Quentin Skinner, a prominent contemporary political theorist, regards the very use of the word *state* in early modern theory as a "decisive confirmation" of his thesis that "the state," as opposed to "the ruler," as the monopolizer of "legitimate" disposition over the means of violence, is foundational to what he terms "modernity" (Skinner 1978). Henceforward, rulers alternate in manning the state apparatus, but the state itself persists *en permanence*. Skinner explicitly follows Max Weber: "Modernity" involves the separation of the ruler from ownership of the means of rulership.

This leads to a problem. Whereas, in the words of Jens Bartelson (2001), "Skinner and other(s) … have accounted for the emergence of the modern state concept … it could be argued that their accounts … are themselves inherently statist, since they have posited a modern notion of the state as the end towards which early modern political reflection evolved.… It is as though all roads in the past led to Weber but none further beyond" (p. 9). Moreover, if one characterizes statism as predicated not just on the presence but also on the centrality of the modern state, one runs into an unexpected paradox. This paradox assumes a variety of guises, all of them marked by denial and avoidance. The USA Patriot Act of 2001, to give one egregious example, was designed to bolster the national security state, but did so by transposing "state" into "homeland." The verbal legerdemain involved here is by no means without precedent: Euphemisms for "state" (Motherland, Fatherland, *la patrie*—the list goes on) have long abounded. This in turn is part of the reason why the unwieldy (and often inaccurate) composite, the "*nation*-state," has become so familiar, as have such formulations as the United *Nations*, the Inter*national* Monetary Fund, and the Communist Inter*national*. None of these could have been engendered by nations; all are examples both of inter-state organization and, once again, of an intriguing, fastidious avoidance of the word "state." Political scientists have proved adept at introducing semantically equivalent locutions for the state (e.g., the "governmental process," the "political system"). These subterfuges are invariably unconvincing. By reintroducing the state through the back door, they inadvertently attest to the hold or centrality of a concept they had started out by trying to avoid. Not for nothing was there a recent debate within the recondite reaches of political science about "bringing the state back in": Where, one has to ask, did participants in this debate think it had ever gone away to?

But if the state was there all along, we must at this point ask questions about its oddly elusive centrality. Nothing sensible can be said about statism without doing so. As Bartelson (2001) states, "within large parts of our legacy of political theorizing, the state is both posited as an object of political analysis and presupposed as the foundation of such analysis.… [This] makes it inherently difficult to take political theorizing out of its statist predispositions" (p. 5). Anarchist theorizing, to take one extreme, fails at the level of significance in that "the state" is both the object and the condition of its critique (Thomas 1985). At another extreme, to regard "the state" as the *telos* (ultimate end) toward which political reflection as well as political innovation was moving would make early instances of state institution-building, such as cameralism, presentiments of statism too—which would make about as much sense as regarding the Magna Carta of 1215 as the fountainhead of present Western liberties. The state, one should remember, is an institution. Statism is a concept, one that would make of the state what it is not: the be-all and end-all of political life, or "the sole source of its intelligibility."

States differ. All of them may appear as unitary entities when viewed from the outside, looking in: They are conditioned by the absence of their features—authority and sovereignty—in what is (incorrectly) called the "international" sphere. The state is also distinct from civil society, when viewed from the inside, looking out. The state and the international sphere, on the one hand, and the state and civil society, on the other, are binaries in which each term is always already defined in terms of the other term of the couplet. But it follows from none of this that states are best understood as constructs or resultants of parallelograms of forces that predated them, constructs that, once established, change the rules of the game once and for all. States are also entities that have tasks to perform—things to do, that is, other than satisfy definitional requirements. States do not often do these well. They make universalist claims on their own behalf while restricting popular participation in "their" affairs. Their record in addressing, let alone confronting, citizens' claims are at best mixed. These claims are themselves not of a piece. Personal rights (such as freedom of speech and assembly) are distinct from political rights (which center around claims to participate in the workings of the state), and both are distinct in their turn from what T. H. Marshall (1964) calls the rights of "social citizenship" (guaranteed education, full employment, decent housing, free medical care—the foundation of the twentieth-century "welfare state").

It is noteworthy that the early-twenty-first-century U.S. national security state (the "homeland") trumps the rights of social citizenship (which have never counted for much in the United States) with a mixture of personal and political rights that are trumpeted and reified as the consummation of what is called "freedom," this being one of

many stratagems to which modern states can, with frightening ease, resort. Statism is of great help to such sleight of hand. It is content to award the state a set of purely formal credentials. Citizenship as outlined above is, nevertheless, not a formal category but the site of substantive demands and rights. Because it is the state's job to deliver on these, and not to fulfill formal definitional requirements, states on all but statist characterizations may be found wanting—and this gives everyone a great deal of work to do.

SEE ALSO *Anarchism; Citizenship; Corporatism; Cosmopolitanism; Internationalism; Magna Carta; Modernity; Monarchy; National Security; Nationalism and Nationality; Nation-State; Patriotism; State; Weber, Max; Xenophobia*

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Paul Thomas

STATISTICAL BIAS

SEE *Properties of Estimators (Asymptotic and Exact).*

STATISTICAL EFFICIENCY

SEE *Properties of Estimators (Asymptotic and Exact).*

STATISTICAL NOISE

Statistical noise refers to variability within a sample, stochastic disturbance in a regression equation, or estimation error. This noise is often represented as a random variable.

In the case of a regression equation

$$Y = m(X \mid \theta) + \varepsilon,$$

with $E(\varepsilon) = 0$, the random variable ε is called a disturbance or error term and reflects statistical noise. Noise in this context is usually viewed as arising from omitted explanatory variables; as such, the error term is a proxy for variables not included in the regression. Variables may be omitted from the regression for several reasons. The theory determining the behavior of the dependent variable Y may be incomplete, or perhaps some variables known to influence Y are unavailable to the researcher. Variables that have only slight influence on Y might be eliminated from the regression in order to maintain a parsimonious model. If the conditional mean function $m(x \mid \theta)$ is specified parametrically (e.g., as in ordinary least squares), the error term might reflect error in this specification, which is perhaps only an approximation to the true form of $m(x \mid \theta)$.

Even if the regression equation includes all relevant variables, and if the conditional mean function is correctly specified, the error term may reflect either measurement error in Y or intrinsic randomness in Y. Intrinsic randomness might be the result of nonsystematic variation in human behavior if Y describes the action of individuals. Tastes, preferences, and the like may be explained partly by other variables, but notions of bounded rationality in microeconomic theory suggest that some behavior is inexplicable.

In the typical estimation paradigm, a finite sample of size n is drawn and used to compute an estimate $\hat{\theta}$ of some quantity θ that is of interest. Even if the estimator is statistically consistent, the estimate that is obtained will typically differ from the true quantity θ because the researcher does not have an infinite amount of data, but only a finite sample. The difference between $\hat{\theta}$ and θ can be expressed by writing

$$\hat{\theta} = \theta + \varepsilon,$$

where again ε represents statistical noise, which can be positive or negative. In principle, one could draw many samples of size n and compute estimates of θ from each sample; each estimate would differ from the true θ. These random differences constitute a form of statistical noise. In this case, the noise arises from the fact that each sample of size n will not have exactly the same characteristics (e.g., the means, variances, etc. of observations on individual variables will differ across samples, and will also differ from the mean, variance, etc. of the underlying population from which the data are drawn).

Statistical noise plays a large role in determining what can be learned from a sample of data in any estimation setting. The variance of regression residuals determines, in part, the goodness of fit of an estimated regression line as well as the variance of estimators of regression parameters and other quantities. The variance of an estimator determines the precision of estimates that are obtained from data, which in turn affects the width of confidence intervals and the ability to reject null hypotheses of the form H_0: $\theta = 0$. Statistical noise is often assumed to be normally

distributed, but this assumption is inappropriate in many settings.

SEE ALSO *Least Squares, Ordinary; Measurement Error; Properties of Estimators (Asymptotic and Exact); Sampling; Semiparametric Estimation; Specification Error; Variables, Random; White Noise*

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Paul W. Wilson

STATISTICS

Statistics is a discipline that deals with data: summarizing them, organizing them, finding patterns, and making inferences. Prior to 1850 the word *statistics* simply referred to sets of facts, usually numerical, that described aspects of the state; that meaning is still seen in the various sets of government statistics, for example the monthly report on the nation's unemployment rate and the voluminous tables produced in the wake of each decennial census. During the twentieth century, as a result of the work of Karl Pearson, Ronald Fisher, Jerzy Neyman, Egon Pearson, John Tukey, and others, the term came to be used much more broadly to include theories and techniques for the presentation and analyses of such data and for drawing inferences from them. Two works by Stephen Stigler, *The History of Statistics: The Measurement of Uncertainty before 1900* (1986) and *Statistics on the Table: The History of Statistical Concepts and Methods* (1999) offer broad and readable accounts of the history of statistics.

Although often taught in departments of mathematics, statistics is much more than a branch of applied mathematics. It uses the mathematics of probability theory in many of its applications and finite mathematics and the calculus to derive many of its basic theoretical concepts, but it is a separate discipline that requires its practitioners to understand data as well as mathematics.

VARIABILITY

In a sense, statistics is mainly concerned with variability. If every object of the same class were the same, we would have no need for statistics. If all peas were indeed alike, we could measure just one and know all about peas. If all families reacted similarly to an income supplement, we would have no need to mount a large scale negative income tax experiment. If all individuals held the same opinion on an issue of the day, we would only need to ask one person's opinion and we would need to take no particular care in how we chose that person. Variability, however, is a fact of life and so statistics is needed to help reveal patterns in the face of variability.

Statistics is used in the collection of data in several ways. If the data are to be collected via an experiment, statistical theory directs how to design that experiment in such a way that it will yield maximum information. The principles of replication (to allow the measurement of variability), control (to eliminate known sources of extraneous variability), and randomization (to "even out" unknown sources of variation) as enunciated by Fisher in his 1935 book *The Design of Experiments* help ensure that if differences are found between those receiving experimental treatment(s) and those in control group(s), those differences can be attributed to the treatment(s) rather than to preexisting differences between the groups or to experimental error. If the data are to be collected via a sample survey, the principles of probability sampling ensure that the findings can be generalized to the population from which the sample was drawn. Variations on simple random sampling (which is analogous to drawing numbers out of a hat) take advantage of known properties of a population in order to make the sampling more efficient. The technique of stratified sampling is analogous to blocking in experimental design and takes advantage of similarities in units of the population to control variability.

Once data are collected, via experiments, sample surveys, censuses, or other means, they rarely speak for themselves. There is variability, owing to the intrinsic variability of the units themselves or to their reactions to the experimental treatments, or to errors made in the measuring process itself. Statistical techniques for measuring the central tendency of a variable (e.g., means, medians) clear away variability and make it possible to view patterns and make comparisons across groups. Measures of the variability of a variable (e.g., ranges and standard deviations) give information on the spread of the data—within a group and in comparisons between groups. There are also summarization techniques of correlation and regression to display the patterns of relations between variables—for example, how does a nation's GDP per capita relate to its literacy rate? These numerical techniques work hand in hand with graphical techniques (e.g., histograms, scattergrams) to reveal patterns in the data. Indeed, using numerical summaries without examining graphical representations of the data can often be misleading. Of course, there are many more complicated and sophisticated summary measures (e.g., multiple regression) and graphical techniques (e.g., residual plots) that aid in the summarization of data. Much of modern data analysis, especially as developed by John Tukey, relies on less conventional measures, on transformations of data,

and on novel graphical techniques. Such procedures as correspondence analysis and data mining harness the power of modern computing to search for patterns in very large datasets.

FREQUENTIST AND BAYESIAN INFERENCE

Perhaps the most important use of statistics, however, is in making inferences. One is rarely interested merely in reactions of subjects in an experiment or the answers from members of a sample; instead one wishes to make generalizations to people who are like the experimental subjects or inferences about the population from which the sample was drawn. There are two major modes of making such inference.

Classical or frequentist inference (the mode that has been most often taught and used in the social sciences) conceptualizes the current experiment or sample as one from an infinite number of such procedures carried out in the same way. It then uses the principles codified by Fisher and refined by Neyman and Pearson to ask whether the differences found in an experiment or from a sample survey are sufficiently large to be unlikely to have happened by mere chance. Specifically it takes the stance of positing a null hypothesis that is the opposite of what the investigator believes to be true and has set out to prove. If the outcome of the experiment (or the sample quantity) or one more extreme is unlikely to have occurred if the null hypothesis is true, then the null hypothesis is rejected. Conventionally if the probability of the outcome (or one more extreme) occurring when the null hypothesis is true is less than .05 (or sometimes .01), then the result is declared "statistically significant."

Frequentists also carry out estimation by putting a confidence interval around a quantity measured from the sample to infer what the corresponding quantity in the population is. For example, if a sample survey reports the percentage in the sample who favor a particular candidate to be 55 percent and gives a 95 percent confidence interval as 52 to 58 percent, the meaning is that a procedure has been followed that gives an interval that covers the true population percent 95 percent of the time. The frequentist does not know (and is not able to put a probability on) whether in any particular case the interval covers the true population percent—the confidence is in the procedure, not in the interval itself. Further, the interval takes into account only what is known as *sampling error*, the variation among the conceptually infinite number of replications of the current procedure. It does not take into account non-sampling error arising from such problems in data collection as poorly worded questions, nonresponse, and attrition from a sample.

In order for these mechanisms of classical statistics to be used appropriately, a probability mechanism (probability sampling or randomization) must have been used to collect the data. In the social sciences this caution is often ignored; statistical inference is performed on data collected via non-probabilistic means and even on complete enumerations. There is little statistical theory to justify such applications, although superpopulation models are sometimes invoked to justify them and social scientists often argue that the means by which the data were accumulated resemble a random process.

Since the 1970s there has been a major renewal of interest in what was historically called inverse probability and is currently called Bayesian inference (after the English nonconformist minister and—during his lifetime—unpublished mathematician Thomas Bayes [1701?–1761]). Admitting the experimenter's or analyst's subjective prior distribution formally into the analysis, Bayesian inference uses Bayes' theorem (which is an accepted theorem of probability for both frequentists and Bayesians) to combine the prior distribution with the data from the current investigation to update the probability that the hypotheses being investigated is true. Note that Bayesians do speak of the probability of a hypothesis being true while frequentists must phrase their conclusions in terms of the probability of outcomes when the null hypothesis is true. Further, Bayesians construct credibility intervals, for which, unlike the frequentists' confidence intervals, it is proper to speak of the probability that the population quantity falls in the interval, because in the Bayesian stance population parameters are viewed as having probability distributions. For a frequentist, a population parameter is a fixed, albeit usually unknown, constant. Much of the revival of interest in Bayesian analysis has happened in the wake of advances in computing that make it possible to use approximations of previously intractable models.

While the distinction between Bayesians and frequentists has been fairly sharp, as Stephen E. Fienberg and Joseph B. Kadane (2001) note the two schools are coming together, with Bayesians paying increasing attention to frequentist properties of Bayesian procedures and frequentists increasingly using hierarchical models.

Two much more detailed descriptions of the field of statistics and its ramifications than is possible here are given by William H. Kruskal (1968) and Fienberg and Kadane (2001).

SEE ALSO *Bayes' Theorem; Bayesian Econometrics; Classical Statistical Analysis; Econometric Decomposition; Mathematics in the Social Sciences; Methods, Quantitative; Path Analysis; Pearson, Karl; Probability; Random Samples; Recursive Models; Sampling; Surveys, Sample; Variance; Variance-Covariance Matrix*

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Judith M. Tanur

STATISTICS, BAYESIAN

SEE *Bayesian Statistics.*

STATISTICS, INFERENTIAL

SEE *Hypothesis and Hypothesis Testing.*

STATISTICS, TEST

SEE *Test Statistics.*

STATISTICS IN THE SOCIAL SCIENCES

Social science research generally relies on statistical analyses for the understanding of behavioral phenomena. Data analysis generally begins with an examination of descriptive statistics, then proceeds to inferential statistics.

DESCRIPTIVE STATISTICS: CENTRAL TENDENCY AND VARIABILITY

The arithmetic *mean* is the most common measure of central tendency. It is calculated by adding all the scores in a distribution and dividing by the number of scores. A less frequently used average is the *median*; it is calculated by ordering the numbers by size and identifying the middle-most score. The least used measure of central tendency is the *mode*, the most frequently occurring score.

When scores fall in a normal distribution, the mean is the most useful average because it gives a good sense of typical scores and because researchers can use it in subsequent sophisticated statistical tests. However, if a group of numbers is non-normal or has extreme values, the mean may not give a good sense of typicality; extreme scores have an inordinate impact on the mean, elevating or reducing it to give a false sense of typical values. In such a situation, researchers may use the median. Finally, the mode can be useful when an investigator is interested simply in getting a count of the number of observations in a given category.

To get a sense of the degree to which scores disperse, researchers calculate a measure of variability. The most common measures of variability are the *variance* and the *standard deviation* (SD); the SD is the square root of the variance. The SD tells, on average, how far any given score is likely to fall from the mean. Researchers prefer these measures with the mean because they can be used with sophisticated data analyses.

When investigators compute the median, they are likely to make use of a different measure of variability, the *semi-interquartile range* (SIQR). To compute the SIQR, the researcher identifies the scores at the twenty-fifth and the seventy-fifth percentile ranks and averages the two.

The least sophisticated, and least employed, measure of variability is the *range*. It is simply the difference between the highest and lowest score. It is greatly affected by extreme scores, so the range does not provide a useful measure of the degree to which scores cluster.

A final type of descriptive statistic is the *standardized score*, commonly the *z*-score. A standardized score indicates how far a given number in a distribution falls from the mean in standard deviation units. Thus, if a score fell one standard deviation above the mean, its standardized *z*-score would be +1.00. Or if a score fell half a standard deviation below the mean, its *z*-score would be –0.50. This descriptive *z*-score is used differently from the inferential statistic by the same name.

INFERENTIAL STATISTICS FOR TESTING DIFFERENCES BETWEEN MEANS

After an assessment using descriptive statistics, researchers conduct inferential tests designed to determine whether the obtained results are likely to generalize beyond the sample of subjects tested. Most of the statistics are based on certain assumptions regarding the data. In order for the tests to be maximally informative, data should be normally distributed and the variances of different groups should be equal. For some tests, there is an additional assumption of

equal sample sizes across groups. Although the tests are robust enough to permit some violation of assumptions, the greater the departure from the assumptions, the less optimal the information provided by the tests.

The most commonly used statistical tests in the social and behavioral sciences are the analysis of variance (ANOVA) and related tests, including the Student's *t*-test; Pearson product-moment correlation; regression analysis; and the chi-square test. All of these except the chi-square test fall conceptually within the domain of the general linear model (GLM). ANOVA is a specific case of linear regression that is, in turn, a special case of the GLM. The basic premise of the GLM is that one can express the value of a dependent variable as a linear combination of the effects of a set of independent (or predictor) variables plus an error effect.

For historical reasons, researchers have treated ANOVA and related models and linear regression as different statistical approaches. Theoretically, these various tests are closely related, but in application, they are algebraically different. Hence, many researchers have not known of the close relation between them. As computer-based analyses have become nearly ubiquitous, however, a merging of the different approaches has begun (Howell 2007).

Researchers use the ANOVA and the Student's *t*-test to assess whether reliable differences exist across groups. Historically, the *t*-test is the older of the two approaches, but the ANOVA is used more frequently. The two tests lead to identical conclusions. In fact, for a two-group *t*-test, there is an identity relation between an obtained *t*-value and the *F*-value, namely, $t^2 = F$.

The *z*-test is conceptually similar to the *t*-test, addressing the same questions, but is much less frequently used because the *z*-test requires that the investigator know the population mean and variance (and standard deviation). The *t*-test requires only estimates of the population mean and standard deviation, which the researcher can discern from the data. It is rare for researchers to know the population parameters.

The ANOVA is useful for comparing means of multiple groups in studies with a single independent variable and for comparing means of two or more groups in studies with multiple independent variables. The advantage of ANOVA for single-variable research is that it permits a global assessment of potential differences with a single test. The advantage of ANOVA with multiple independent variables is that the investigator can spot interactions among variables.

The ANOVA lets the researcher know if means of any two groups differ reliably, but it does not specify exactly which of the means differ. In order to determine which of multiple means differ from one another, researchers employ post hoc analyses. When a study has multiple dependent variables, or outcome measures, researchers use an extension of the ANOVA, the multivariate analysis of variance (MANOVA).

INFERENTIAL STATISTICS FOR IDENTIFYING RELATIONS AMONG VARIABLES

Sometimes investigators are interested in whether two factors covary. That is, is there an association between them such that by knowing a value of a measurement on one variable, one can make a reasonable prediction about the value on the second variable? Researchers use the Pearson product-moment correlation to identify the strength of an association between variables and regression analysis for making predictions.

Correlations can be positive, wherein as the score by a subject on one variable increases in magnitude, so does the magnitude on the second variable. Correlations can also be negative, as when increasing scores on one variable are paired with decreasing scores on the other variable. Or there can be no relation between the two variables. The sign, positive or negative, of the correlation does not indicate the strength of a relation, only the relative direction of change of scores on the two variables. The strength of a relation between variables is signaled by the absolute value of the correlation coefficient. These coefficients range from –1.00 to +1.00.

In some research, the investigator tries to predict a dichotomous outcome (e.g., success versus failure). In this instance, the appropriate test is known as logistic regression.

NONPARAMETRIC STATISTICS

The commonly used statistical tests make assumptions about characteristics of data. When the assumptions are not tenable, researchers can use nonparametric statistics, sometimes called distribution-free tests because they do not make any assumptions about the nature of the data in a distribution. Their advantage is that they do not require that data be normally distributed or that different groups have equal variability. Their disadvantage is that they discard some information in the data; thus they are, statistically speaking, less efficient. There are nonparametric statistics that correspond to the commonly used parametric tests.

When a two-sample *t*-test is inappropriate because of the nature of the distribution of scores, researchers can use either the Wilcoxon rank-sum test or the Mann-Whitney U. Instead of a one-sample paired *t*-test, one could use Wilcoxon's matched-pairs signed-ranks test or the sign test.

A replacement for the ANOVA is the Kruskal-Wallis one-way ANOVA for independent samples. When there

are repeated measurements of subjects, Friedman's rank test for *k* correlated samples can be appropriate to replace the ANOVA.

When a study involves observations of the frequency with which observations fall into various categories, a common nonparametric test is the chi-square test. There are two varieties in common use, depending on whether the research design involves a single variable or two variables. The one-variable chi-square is a goodness of fit test, indicating whether the predicted number of observations in specified categories matches the observed number. The two-variable chi-square test assesses whether the frequencies of observations in different categories are contingent upon values of the second variable.

HYPOTHESIS TESTING

The logic of inferential tests of statistical significance is to establish a null hypothesis, H_0, that specifies no relation between variables or no differences among means, then to see if there is enough evidence to reject H_0 in favor of the experimental (or alternate) hypothesis. Rejection of H_0 is associated with an a priori probability value that the researcher establishes. Most researchers select a probability value of .05, meaning that they will reject H_0 if the probability of having gotten the obtained results is less than 5 percent if H_0 is actually true.

When rejecting H_0, researchers note that their results are *statistically significant*. Nonscientists often erroneously interpret the word *significant* to mean *important*. This technical wording is not intended to convey a sense that the results are important or practical. This wording simply means that the results are reliable, or replicable.

One objection to null hypothesis testing is that the cutoff for statistical significance is traditional and arbitrary. A probability value of .051 conveys much the same effect as a statistically significant value of .05, yet researchers have traditionally claimed that the slightly higher probability value puts their results into a different category of results, one reflecting no interesting findings and insufficient information to reject H_0.

The approach of most researchers is to question the likelihood of obtaining the results if H_0 is true. Thus, any conclusion specifies how rare the results were if the H_0 is true, but, logically, this approach says nothing about whether H_0 actually is true. The logic of traditional tests of the null hypothesis is often confused with the question of whether H_0 is true, given the results that were obtained. These two questions are conceptually very different. As a result, the traditional tests also say nothing about whether an experimental hypothesis, presumably the one of interest, is true.

Controversy currently exists regarding the adequacy of such tests of the null hypothesis. Theorists have argued that H_0 is, strictly speaking, never true. That is, there will always be differences across groups or relations among variables, even if the differences are small or the relations weak. As a result, researchers have proposed alternate strategies for answering research questions.

One suggestion is to report effect sizes rather than simple probability values. Generally speaking, there are two families of effect sizes, *d-families* for questions of difference and *r-families* for questions of association (Rosenthal 1994). In an experiment, an effect size is a statistic that assesses the degree of variability due to treatments compared to variability caused by unknown factors like measurement error. A common measure of effect size when two groups are compared is Cohen's *d*. For more complex designs, investigators assess effect size through measures like eta-squared, η^2, and omega-squared, Ω^2.

Effect sizes in correlational analyses include r^2, which indicates the percentage of common variability among correlated variables. (In linear regression analysis, r^2 has a different meaning, relating to error in predicting the value of a criterion variable from predictor variables. It is conceptually related to the similarly named statistic in correlations.)

A different supplement to traditional hypothesis testing involves the use of confidence intervals (CI). A CI specifies the range of scores that can be considered plausible estimates of some population parameter. The parameter most often estimated is the mean. Thus a CI for a mean gives the investigator a sense of values of the population mean that seem reasonable, given sample values.

Some investigators have suggested that CIs be used to increase the information provided by null hypothesis testing because CIs give information about potential effect sizes, about the statistical power of a study, and about comparability of results across different studies. As with any emerging statistical technique, there are controversies associated with the use of CIs (Cohen 1994; Cumming and Finch 2005), including the fact that researchers in the social and behavioral sciences are still relatively untutored in the use of CIs (Belia et al. 2005).

One recent approach to hypothesis testing has been to replace the traditional probability value (i.e., what is the probability that the result occurred given that H_0 is true?) with the probability that an effect can be reproduced if a study were replicated (Killeen 2005). Theorists have argued that social and behavioral researchers are typically interested in whether their effects are real and will replicate, not whether the researcher can reject a statement of no effect. Thus it makes more sense to use a statistic that allows a prediction about how likely a result is to recur if a study is repeated.

A final, alternate approach to hypothesis testing involves Bayesian statistics. This approach relies on an

investigator's prior knowledge and beliefs about the outcome of research. Given certain a priori assumptions, it is possible to compute the probability that H_0 is true, given the data, instead of merely the likelihood of obtaining the data, assuming that H_0 is true. Unfortunately, accurate probability values that would make the Bayesian approach feasible in the social and behavioral sciences are very difficult to ascertain, so few researchers have adopted this approach.

SCALES OF MEASUREMENT

The noted psychologist S. S. Stevens (1906–1973) identified four scales of measurement, each in increasing order of mathematical sophistication. Nominal scales are simply categorical (e.g., female-male). Ordinal scales are ordered in magnitude, but the absolute magnitude of the difference between any two observations is unspecified (e.g., the number of votes of the first-, second-, and third-place candidates in an election). With interval scales, a given difference between any two scores means the same at all points along the scale (e.g., the difference on a seven-point rating scale from one to two is equivalent to the difference between six and seven). A ratio scale involves the equality of differences between scores but also equality of ratios among scores (e.g., a task taking four seconds requires twice as much time as a task taking two seconds, and ten seconds is twice as long as five).

Behavioral researchers have sometimes claimed that parametric statistics require interval or ratio data. In reality, determining the scale of measurement of data is not always straightforward. Furthermore, statisticians do not agree that such distinctions are important (Howell 2007; Velleman and Wilkinson 1993). In practice, social researchers do not pay a great deal of attention to scales in determining statistical tests. Furthermore, some tests that purport to be useful for one type of scale (e.g., the phi coefficient for categorical data) are actually algebraic variations on formulas for parametric tests (e.g., Pearson's *r*).

SEE ALSO *Bayesian Statistics; Central Tendencies, Measures of; Chi-Square; Classical Statistical Analysis; Cliometrics; Data, Longitudinal; Data, Pseudopanel; Econometrics; General Linear Model; Hypothesis and Hypothesis Testing; Least Squares, Ordinary; Logistic Regression; Mean, The; Measurement; Methods, Quantitative; Mode, The; Probability; Psychometrics; Regression; Regression Analysis; Social Science; Standard Deviation; Statistics; Student's T-Statistic; Test Statistics; Variability; Variance; Z-Test*

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Bernard C. Beins

STATUS SYMBOLS

SEE *Prestige.*

STATUS-BEHAVIOR LINK

SEE *Role Theory.*

STEADY STATE

The concept of the "steady state" refers to a long-term, dynamic equilibrium, where diminishing returns have exhausted all the gains from capital deepening (i.e., increasing capital per worker). In the absence of technological progress, growth in per-worker output stops. A related concept of "dynamic equilibrium" was central to classical theory, particularly to David Ricardo's growth theory. This dynamic equilibrium was called the "stationary state." In the stationary state, all growth ends; both income and the size of the population are static. The stationary state occurs because diminishing returns in agriculture eventually lead to the end of growth. In this state the rate of profits is driven to zero, and rent captures all the economic output in excess of the output required to support the population at a subsistence wage rate. Policy

proposals were often justified in part by whether they would postpone the emergence of the stationary state.

After a century of neglect, interest in growth theory reemerged with the Harrod-Domar model, which was developed independently by Roy Harrod in 1939 and Evsey Domar in 1946. This model did not have a dynamic equilibrium, however, because it did not allow for the possibility of diminishing returns. It was not until the Solow model emerged in 1956 that a dynamic equilibrium was introduced into neoclassical economics. The steady state in the Solow model occurs because the production function has diminishing returns. In this model, growth potentially has three sources: growth in capital per worker, growth in the labor force, and technological change. The latter two sources of growth are exogenous and are constant, as is the saving rate. For a linearly homogeneous production function, growth rates will converge to a steady-state growth rate, where all the positive effects of saving and investment on growth have been exhausted and where only the rate of population growth and the rate of technological progress impact the growth rate. This steady-state growth rate is expressed as $g = \dot{Y}/Y = \lambda + n$, where g is the rate of growth of income (GDP), λ is the rate of technological change, and n is the rate of growth of the labor force.

This steady-state growth rate can best be understood by considering a linearly homogeneous production function, $Y = F(K, L)$, where K is capital and L is labor. Output per unit of labor is $Y/L = y = f(k)$. The labor input can increase either because the number of workers, N, rises, or because Harrod-neutral technological change makes each worker more productive. Assume that N grows at a constant rate, n, and that there is a constant rate of technological change, λ. Then L will grow at the rate $n + \lambda$. With a constant marginal and average propensity to save and invest, s, capital per worker, k, will change by $\dot{k} = sy - (n + \lambda + \delta)k$, where δ is the rate of depreciation. Increases in k will increase $y = f(k)$, and k will increase if $sy > (n + \lambda + \delta)k$. In other words, there will be capital deepening, which increases capital per augmented worker, L, if investment is sufficient to offset depreciation and provide each augmented worker with the same capital as before.

Policies that affect saving and investment will only have a temporary impact on growth, but since s does not affect steady-state growth, policy will have no impact on growth in the long run. Policy will, however, affect the steady state level of income per augmented worker, y. Consider an economy that is at a steady state. An increase in the saving rate will temporarily increase the growth rate because it will increase sy. Eventually a new steady-state level of y is reached and the growth rate will fall to its original level of $\lambda + n$. The economy is said to conditionally converge to an equilibrium y. The level of y is conditional on the saving rate, the labor force growth rate, and the technology.

Endogenous growth models have challenged this notion of the steady state by introducing models where policy matters in the long run because certain types of saving and investment affect λ through positive externalities. If these externalities exhibit constant returns, then policies that affect the saving rate will influence steady-state growth, and growth rates will not converge. Convergence is one of the most tested implications of the neoclassical steady state. If all countries share the same technology because knowledge is freely available, then per capita income should depend only on the rate of saving. Furthermore countries or regions that were late to develop should conditionally converge to countries that began to develop earlier. In other words, everything else being equal, poor countries should experience faster growth than rich countries. Robert Barro and others have tested for this convergence in cross-sectional estimates of growth. One of the explanatory variables is real per capita income for some earlier year. A negative coefficient for past income is evidence that convergence is occurring. Many empirical studies have found a negative coefficient, indicating conditional convergence, but they have also found that the rate of convergence is slow.

Conditional convergence does not necessarily imply a narrowing of gaps in per capita income between rich and poor nations. Many countries, both rich and poor, may be at or close to their conditional steady state, where per capita income is determined by structural variables, such as population growth rates, saving rates, and structural and institutional factors that determine λ, the rate of technological change (see Jones 1997; Darity and Davis 2005). Structural, institutional, and historical differences are receiving attention in the literature on economic development (see Grabowski, Self, and Shields 2007).

SEE ALSO *Stability in Economics*

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Michael P. Shields

STEEL INDUSTRY

The steel industry has a rich history. It exhibited remarkable technological dynamism and entrepreneurship and enjoyed significant economic, political, and strategic importance. With globalization and emergence of high technology sectors the industry has lost its clout. Western nations no longer dominate the industry due to changing costs and diffusion of technology and favorable government policy by selected high growth developing countries.

RISE OF AN INDUSTRY

The modern steel industry is inseparable from the second Industrial Revolution of the nineteenth century. From simple, small-batch production, new technologies such as the Bessemer process (developed in England in 1854) contributed to the mass production of steel. The industry diffused throughout Europe and the United States. The depression of the 1890s and subsequent mergers consolidated the American industry. In 1901 U.S. Steel, then the world's largest company, was formed. Scale of production increased dramatically in the twentieth century with large-scale blast furnaces to melt iron ore, its reduction in open hearth furnaces, followed by larger and more efficient basic oxygen furnaces (developed in Austria in 1954), continuous casting of molten steel, and port-based mills (in Japan and South Korea), which relied on massive ships capable of transporting imported raw materials and exports of finished steel products inexpensively. In the United States in the 1980s Kenneth Iverson adopted German innovations in electric arc furnace (EAF) technology. These mini-mills relied on recycled scrap or natural gas–based directly reduced iron (DRI) and thin slab casting. Mini-mills' smaller scale added to its flexibility and competitiveness compared to blast furnace–based integrated producers.

The geographical location of steel mills was dictated by the availability of coal and iron ore. For the United States in the mid-1800s coal fields in eastern states such as Pennsylvania, Ohio, New York, and New Jersey attracted major iron works. Similarly, the availability of iron ore and coal around Birmingham, Alabama, and later in the late nineteenth century in Minnesota and Michigan influenced the location of steel mills in the Great Lakes region with Chicago as a major market. Such patterns have been found in other countries such as Brazil and India where mills were located near mines. However, in East Asian countries such as South Korea, Taiwan, and Japan, devoid of raw materials, a new pattern of plant location emerged, targeting coastal locations to source raw materials from and export finished steel to the world economy.

The post–World War II (1939–1945) American industry was characterized by oligopolistic competition at home, slow technological change, and little international competition. A handful of firms led by U.S. Steel dominated the industry. Supportive Keynesian policies propped up the U.S. economy, maintained industry profits, and accommodated high wages for steel workers. A major steel strike in 1959 paralyzed the economy, which was soon followed by brief controls of steel prices during the Vietnam War under the Kennedy administration (1961–1963) to stem inflationary pressures. John F. Kennedy asked steel workers to restrain their wage demands on the condition that steel corporations such as U.S. Steel would not raise prices. While workers kept their part of the bargain the companies did not as prices increased by $6 a ton. An infuriated Kennedy found such action as "wholly unjustifiable and irresponsible defiance of the public interest" (Kennedy 1962). Such price controls have been maintained worldwide through subsidies and public ownership because of the industry's dense intersectoral linkages. Not only are investments and employment encouraged in other industries but also economy-wide inflation is restrained. Steel is also a strategic industry with direct links to the defense sector.

GOVERNMENT POLICY AND SHIFTS IN THE INDUSTRY

Strikes in the steel industry were commonplace as conflict over wages and working conditions became paramount under rapid growth. The violent Homestead strike of 1892 in Pennsylvania turned into a complex battlefield with Andrew Carnegie using scab African American labor to crush the largest craft union, the Amalgamated Association of Iron and Steel Workers. In 1919 steel workers fought U.S. Steel and the movement was labeled a "Red Scare," unleashing an anti-Bolshevik and anti-radi-

cal hysteria. In Europe and in India, pro-labor social democratic governments and public ownership of many steel mills protected workers, while in South Korea unions were either banned or co-opted by the government-controlled Federation of Korean Trade Unions (FKTU), which was also infiltrated by the Korean Central Intelligence Agency. In the early twenty-first century, steel unions persist but most have lost their clout due to global competition from developing countries, declining membership, and the relative insignificance of the industry in economies driven by services and high technology. Unionization of American workers as a whole declined from 50 percent in the 1950s to about 13 percent by 2004.

Reconstruction of Western Europe and Japan and the rapid adoption of new steel technologies around the world eroded the American industry's competitiveness. The industry has been protected and promoted by governments worldwide as it has dense backward (ore, coal, heavy equipment) and forward linkages (construction, machinery, automobiles, shipbuilding). Some of the leading steel firms in Western Europe, such as British Steel and French Usinor-Sacilor, have been state owned. In late industrializing countries state ownership was routine as part of their import substitution industrialization strategy. Steel Authority of India (SAIL) in India, Siderurgia Brasileira (SIDERBRAS) in Brazil, the highly successful Pohang Iron and Steel Corporation (POSCO) in South Korea, and China Steel Corporation (CSC) in Taiwan were all state-owned. The former Soviet Union, Eastern bloc countries, and China, though outside the capitalist world economy until the late twentieth century, also relied on the industry for national development. The American industry was caught off guard by new mills, often with newer technologies. Since the late 1950s, the United States has been a net importer of steel. By 1987 Japan and South Korea supplied 28 percent of U.S. imports, mostly in high value flat products, while Western Europe, saddled with excess capacity, had a similar U.S. share. In the mid-2000s imports constitute 21 percent of the U.S. market.

In periods of high economic growth steel unions in the United States secured high wages, exceeding the average industry wage. Employment in the industry ensured working-class members middle-class living standards. However, by the 1970s technological obsolescence in the United States, excess global capacity, and lower operating costs in East Asia and Brazil made American steel jobs insecure. As foreign companies targeted the large U.S. market in cyclical downturns, the United States adopted a variety of protectionist policies. It started with voluntary restraint agreements (VRAs) in 1968, then the Trigger Price Mechanism (TPM) during the Carter administration (1977), and additional VRAs during the Reagan, Clinton, and the Bush Sr. administrations (1982–1992). The TPM was designed to penalize countries selling below cost, while VRAs forced foreign firms to restrain exports to a preset market share. Plagued by cumulative losses, including large debts and pension fund obligations, these policies merely deferred restructuring but did not prevent plant shutdowns and investments in non-steel sectors. The ensuing production imbalances compelled U.S. producers to obtain new technologies from capital surplus Japanese producers to supply better quality steel to auto producers in the United States, including Japanese auto transplants, while debt-ridden countries such as Brazil sought foreign investments for steel exports. Unable to maintain the high-wage workforce, the American steel industry shed nearly 300,000 steel jobs over the past quarter century and consequently improved labor productivity considerably. U.S. productivity also increased due to the diffusion of mini-mills. With lower capital and labor costs than the integrated segment and the hiring of nonunion workers in the southern United States, about 54 percent of American steel is produced with mini-mill technology.

STATE OF THE INDUSTRY AND FUTURE TRENDS

In the mid-2000s the major steel-producing countries are China, Japan, the United States, Russia, and South Korea with 272, 113, 99, 66, and 48 million metric tons respectively. Major exporters are Japan, Russia, Ukraine, Western Europe, South Korea, and Brazil. The most noteworthy development is the unprecedented growth of the Chinese economy since economic liberalization in 1979. Not only does China produce two-and-one half times more steel than Japan, but between 1998 and 2004 Chinese consumption of steel increased from 111 to 265 million metric tons. High demand in China moderates competition arising from excess global capacity and could prompt occasional shortages. While there is considerable intra-European steel trade, Russia, Japan, and South Korea have found the Chinese market attractive.

Globalization and neo-liberal policies have increased steel trade, cross-national investments and mergers, and privatization of state firms. Mittal Steel, founded by an Indian entrepreneur, has become the world's largest steel company through its acquisition of mills in the United States, Europe, Central Asia, and Mexico. In 2006 after many rebuffs, Mittal Steel acquired Arcelor, the world's largest steel firm revenue-wise, located in Luxembourg. Arcelor itself is a product of a merger between Spanish Aceralia, French Usinor, and Luxembourg's Arbed. Arcelor-Mittal is the largest steel venture with considerable expansion plans in India and elsewhere. In 2005 POSCO of South Korea, with several steel ventures in Asia and Latin America, announced a $12 billion iron and steel project in India. With declining steel intensity (share of steel to gross domestic product) in mature economies

such as the United States, the growth of services, high technology industries (the new economy), and material substitutions, the steel industry is unlikely to witness a major resurgence in OECD economies. Both investment requirements and environmental concerns have dampened construction of large steel mills. The Clean Air Act implemented by the U.S. Environmental Protection Agency has made substantial improvements in steel plant emissions. Smaller plants using alternative technologies are feasible, but the supply of scrap, natural gas, and electricity may limit their diffusion in developing countries.

As long as mature economies are saddled by excess capacity, trade conflicts will persist. The use of Section 201 to assist American steel workers allegedly injured by subsidized steel imports is perceived by foreigners to be hypocritical since trade barriers and bailouts of firms of their pension obligations slow industrial adjustment. Higher steel prices resulting from protection could lead to job losses in steel-using industries, benefiting shareholders rather than workers. In the end, shared global prosperity is likely to ease the adjustment process, while any slowdown in China will exacerbate the excess capacity problem. High growth developing or exporting countries such as China, India, and Brazil are good candidates for the future expansion of the industry, while Japan and South Korea will remain important global suppliers of steel and steel technologies.

SEE ALSO *Industry; Railway Industry; Transportation Industry*

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Anthony P. D'Costa

STEELE, CLAUDE M.
1946–

One of the most influential social scientists of the past five decades, the American social psychologist Claude Mason Steele is best known for two conceptually related lines of research and theorizing: the effects of negative stereotypes on the achievement and identities of minorities and women and people's psychological adaptation to self-image threats. He has also conducted research on the psychological effects of alcohol consumption.

SELF-AFFIRMATION THEORY

In 1988 Steele published what would become the most widely embraced modification of Leon Festinger's theory of cognitive dissonance, arguably social psychology's most influential theory of human motivation. Festinger (1957) had proposed that when people become aware of holding two inconsistent cognitions (e.g., I smoke cigarettes and smoking is unhealthy), they are motivated to reduce the resulting psychological discomfort by restoring consistency (e.g., by persuading themselves that smoking is not really very harmful). Steele challenged the central tenet of dissonance theory—that people find inconsistency per se uncomfortable and have a fundamental need for consistency between cognitions. Steele proposed that people are bothered not by mere psychological inconsistency but by the negative portrayal of the self that the inconsistency implies. Like earlier dissonance revisionists (e.g., E. Aronson 1969), Steele stressed the critical role of the self-concept in mediating the induction and reduction of dissonance, but unlike them, he rejected any inherent human preference for consistency, relegating inconsistency to a mere signal that the integrity of the self-image is under threat. For Steele, the psychic origin of dissonance phenomena is the actor's desire to maintain a sense of global "self-integrity," and this desire supersedes any need for consistency.

Steele further posited a self-system comprising self-conceptions, values, talents, and so on, which make up a pool of resources upon which the actor may draw to restore a sense of self-integrity when self-image threats arise. This fact, Steele proposed, gives the actor a great deal of flexibility in responding to self-threats. Employing Festinger's oft-used example of the cigarette smoker who reduces dissonance by downplaying the risks of smoking,

Steele argued that the smoker can maintain a sense of global integrity by reminding himself or herself of virtues in other domains of his or her life (I'm a great father, I'm a valuable member of the church, etc.). Such self-affirmations restore global self-esteem, thus allowing the individual to tolerate the self-threat implied by smoking despite the evidence that smoking is unhealthy.

Steele and his students tested the self-affirmation formulation by replicating standard dissonance paradigms in which a person is induced to engage in dissonance-arousing behavior (choosing between equally attractive gifts, writing a counter-attitudinal essay in support of an unpopular social policy, etc.) and then has his or her attitudes (e.g., toward the gifts or social policy) measured. If participants were given a self-affirmation of some sort (e.g., writing a few sentences about an important value), they showed no evidence of dissonance; in a wide variety of studies (Steele 1988), self-affirmations eliminated the attitude change that typically results from inducing dissonance.

Self-affirmation became influential as much for its highly transportable methodological paradigm—using value affirmations, for example—as for its theoretical alternative to dissonance. Examining the role of self-esteem threat has since become a thriving enterprise, as researchers can easily induce self-affirmation into the study of a variety of social-psychological phenomena, such as persuasion (e.g., Cohen, Aronson, and Steele 2000), prejudice (e.g., Fein and Spencer 1997), health (e.g., Creswell et al. 2005), and underachievement (e.g., Cohen et al. 2006). Although debate still continues on the role of inconsistency in cognitive dissonance, self-affirmation theory has established itself as a staple in current social psychology.

STEREOTYPE THREAT

Dissatisfied with the standard explanations for African Americans' lagging test scores and achievement and viewing many phenomena through the hospitable lens of self-affirmation theory, Steele proposed a social-psychological alternative to the standard explanations that focused either on poverty or genetic differences in average intelligence. Steele proposed that black students face a self-threatening situational predicament that occurs as a result of their awareness of unflattering racial stereotypes. In a widely read article published in the *Atlantic* (Steele 1992), he proposed the possibility that African Americans are hampered by the stigma of intellectual inferiority—a phenomenon that later came to be called "stereotype threat" (Steele and Aronson 1995). In situations where the stereotype is applicable, such as during an intelligence test, African Americans face an extra psychological burden not felt by a comparable white student taking the same test, a sense of risk that the test may confirm a racial inferiority coupled with a heightened motivation to disprove the stereotype. Such a situation, Steele argued, generates anxiety, distraction, and other psychological impediments to test performance. Steele further proposed that, over time, students would defend against stereotype threat by disidentifying with academics, that is, reducing the extent to which they based their self-esteem on doing well academically.

A series of experiments performed with Joshua Aronson (Steele and Aronson 1995) offered strong support for the predictions about test performance. In each of the experiments African American college students performed significantly better on a standardized verbal test when the test was presented in a way that minimized the concern with confirming the stereotype. For example, in one experiment the test takers were told that the test was either a measure of their intelligence or that it was a nonevaluative laboratory problem-solving exercise. While this difference had no effect on white test takers, African American test takers performed nearly twice as well when the test was portrayed as nonevaluative.

These experiments drew national attention among educators and were referred to in two U.S. Supreme Court cases debating the use of affirmative action policies in hiring and college admissions. A publicized disagreement about the wisdom of affirmative action between Steele and his twin brother, Shelby Steele, the noted conservative scholar, drew additional attention to the research. Subsequent research confirmed the utility of the theory for understanding gender gaps in mathematics achievement, demonstrating that stereotype threat had similar effects on the mathematics performance of females (Spencer, Steele, and Quinn 1999).

In the decade after 1995 well over a hundred replications of stereotype threat effects on test performance were published, marking it as one of the most influential theories in the history of social psychology. Critics of the theory debate the degree to which stereotype threat underlies test-score gaps in the real world, but the theory has generated a handful of successful intervention studies that demonstrate that by reducing stereotype threat, race and gender test-score gaps are significantly reduced (Aronson, Fried, and Good 2002; Cohen et al. 2006; Good, Aronson, and Inzlicht 2003).

ALCOHOL MYOPIA

Steele and his students also conducted research on the psychological effects of alcohol consumption, documenting what they referred to as "alcohol myopia," (Steele and Josephs 1990), the effect of narrowing the drinker's focus upon immediate events and stimuli and reducing focus upon distant events, stimuli, or thoughts. Steele and his students documented that this narrowed focus plays a role

in alcohol's well-known reduction of social inhibitions and reduction of emotional stress. After holding positions at the University of Utah, the University of Washington, the University of Michigan, and Stanford University, Steele became the director of the Center for the Advanced Study in the Behavioral Sciences.

SEE ALSO *Achievement Gap, Racial; Alcoholism; Cognitive Dissonance; Festinger, Leon; Intelligence; Motivation; Priming; Self-Affirmation Theory; Self-Concept; Self-System; Social Psychology; Stereotype Threat; Stereotypes; Underachievers*

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Joshua Aronson

STEELE, SHELBY

SEE *Race-Blind Policies.*

STEINEM, GLORIA

1934–

Gloria Steinem, a leader in the twentieth-century struggle for women's rights, was born on March 25, 1934, in Toledo, Ohio. Because of her father's penchant for traveling to warmer climates each winter, Steinem and her sister, Suzanne, had little time for formal schooling. Her mother, who had been educated as a teacher, provided some homeschooling for the girls, long before homeschooling was widely accepted. When Steinem was eleven years old, her parents divorced, and with her older sister away at college, Steinem was left alone to care for her mother, who suffered bouts of deep depression, accompanied by dementia. At seventeen, Steinem went to live with Suzanne in Washington, D.C., where she finished high school and completed her education at Smith College, where she graduated Phi Beta Kappa in 1956.

After spending a year in India, Steinem returned to the United States and worked as a public relations officer for a group later associated with the Central Intelligence Agency (CIA), although she claims to have had no knowledge of the association at that time. She later wrote for *Esquire*, *Glamour*, and *Show* magazines, where her exposé of life as a Playboy bunny earned her not only accolades but also fame. At *New York* magazine she worked with many of the budding writers of the New Journalism movement, including Tom Wolfe, Norman Mailer, and Gay Talese.

When the National Organization for Women was founded in 1966, Steinem, like many other women, saw the movement as a vehicle for white, middle-class housewives wanting to achieve independent goals outside traditionally male-controlled marriage. She saw no merit in the

movement for herself, a single sophisticate, working in New York. But in 1969, Steinem attended a rally on abortion held by the feminist organization the Red Stockings, and after hearing other women detail the pain and humiliation they had endured, she had an epiphany. She had had an abortion herself and was harshly judged by the medical personnel who attended her procedure. Stories told by the women at the rally were even more horrific and included tales of emotional and physical pain and even death. Through the rally, Steinem came to see that not only married middle-class white women, but all women, including women of color, deserved to be treated as individuals, with rights equal to those enjoyed by men.

From that time forward, Steinem would devote much of her time and energy to furthering the cause of "reproductive freedom" and spoke at rallies around the country, recruiting women for the cause. She was a major catalyst in the movement's long-term success and provided a strong voice in the ongoing struggle through *Ms.* magazine, which she and her partners founded in 1971.

By that time, Steinem had also become respected as a political writer and activist, and in 1972 she helped found the Women's Action Alliance. She backed presidential candidates Shirley Chisholm and George McGovern, for whom she wrote several speeches. She also wrote five books, *Outrageous Acts and Everyday Rebellions* (1983), *Marilyn: Norma Jeane* (1986), *Revolution from Within: A Book of Self-Esteem* (1992), *Moving Beyond Words* (1994), and *Doing Sixty and Seventy* (2006).

Though she was credited with saying that "a woman needs a man like a fish needs a bicycle," Steinem was not the originator of this phrase. She told *Time* magazine in 2000, "In fact, Irina Dunn, a distinguished Australian educator, journalist and politician, coined the phrase back in 1970 when she was a student at the University of Sydney." Yet, the quip did define Steinem's outlook on marriage until 2000, when she married David Bale, a British entrepreneur and avid animal rights activist. The marriage, however, was to be short-lived. Bale died of brain cancer at the end of 2003, leaving Steinem to her lifelong quest of helping women find personal power and inner peace.

SEE ALSO *Feminism; Journalism*

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Patricia Cronin Marcello

STEM CELLS

A stem cell has two special qualities: the ability to produce offspring of itself indefinitely, and the ability to differentiate into different types of specialized cells. "Adult" stem cells are found in various organs of fully formed organisms. For example, umbilical cord blood and bone marrow contain stem cells capable of producing the various cells found in the blood, such as red blood cells, white cells, and platelets.

Public debate about ethical, social, religious, and legal issues involving stem cells has centered on a different kind of stem cell, so-called embryonic stem cells, usually obtained from excess embryos created by in vitro fertilization (IVF), but sometimes created specifically for research or therapeutic purposes. These human embryonic stem cells (hESCs) have the capacity to form any tissue in the body; that is, they are totipotential.

HESCs are of scientific and medical interest for three reasons: (1) they provide an opportunity to do laboratory research on normal and abnormal differentiation; (2) they provide an opportunity to test experimental therapies, including drugs and genes, at a cellular level, without exposing living animals or humans to risk; (3) they present an opportunity to develop and transplant cell lines that can replace vital molecules such as insulin (for patients with diabetes mellitus) or dopamine (for patients with Parkinson's disease), or to replace damaged tissue in the heart, nervous system, or elsewhere.

HESCs from residual IVF embryos are unlikely to be sufficient for all research and therapeutic interests. If, for example, stem cells are to be useful in treating diabetes, it will be important to create a cell line that is genetically identical to the recipient, so that it will not be rejected after transplantation. This can be accomplished by removing the nucleus of an egg, replacing it with the nucleus from a cell obtained from the potential recipient, and allowing the egg to grow to a stage when stem cells can be removed. This is called "somatic cell nuclear transfer" (SCNT).

SCNT is also of interest for laboratory research on genetic disorders such as cystic fibrosis or Tay Sachs disease. An embryo is created using the nucleus from a somatic cell of a patient with the disorder being studied, and then stem cells with the abnormal gene are obtained from the early embryo. This is sometimes called "research cloning." SCNT for the purpose of creating a cell line that would be used for treatment is sometimes called "therapeutic cloning."

Objections to research involving hESCs involve several concerns. First, some believe that an embryo has the same moral status as a fully formed human and is entitled to the same protections. Destruction of an embryo, in this view, is morally equivalent to murder. Proponents of

hESC research point out that residual embryos are used only when the parents intend to destroy them anyway, and are not destroyed because of the interest in stem cell research. They also point out that tens of thousands of residual IVF embryos are destroyed annually without similar objection.

Second, opponents also argue that there are alternative approaches to obtaining totipotential stem cells, such as using adult stem cells. Most experts believe adult stem cells are not totipotential and therefore should not divert research funds from the more promising embryonic stem cells.

Third, opponents object to SCNT combined with hESC research because of concerns that it is a critical technical step for reproductive cloning, the creation of genetically identical replicas of existing persons. Advocates of hESC research argue that reproductive cloning is nearly universally opposed at the present time, largely because of concerns about biologic safety, and that "slippery slope" arguments are insufficient to prohibit research that can help alleviate suffering, disability, and death from diseases affecting large numbers of existing persons.

Fourth, concerns have been raised that the transfer of human cells into the developing brain of laboratory animals could result in an animal capable of human experience and therefore with moral status comparable to a human. Although most neuroscientists consider this to be unlikely, some groups have proposed prohibiting full gestation of nonhuman primates if human stem cells have been implanted in their central nervous systems early in embryonic development.

Governmental policies reflect a range of approaches in different countries and states, and policies within any jurisdiction are often in flux, subject to the success of politicians with various views. Some prohibit human embryonic stem cell research; some permit it but have restrictions on use of public funds; some permit research using existing embryos but prohibit creation of embryos for research; and some restrict somatic nuclear cell transfer because of concerns that it may accelerate human reproductive cloning.

SEE ALSO *Ethics in Experimentation; Medicine; Neuroscience; Public Policy; Reproductive Politics*

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Norman Fost

STEPFORD WIVES

The 1975 film *The Stepford Wives* begins with photographer Joanna Eberhart (Katharine Ross) leaving the urban malaise of New York City with her two children and her husband Walter (Peter Masterson) and moving to the picture-perfect village of Stepford, Connecticut, ready to start life anew and raise their brood in peace and tranquility. Strong, intelligent, with an independent streak, Joanna, we learn, has been a proponent of equal rights for women if not a strident feminist, and she is surprised to find that the housewives she meets are throwbacks to the 1950s, obsessed with homemaking and wanting nothing more from life than to please their husbands. Only her like-minded friend Bobbie Markowitz (Paula Prentiss) appreciates that something is clearly wrong here. Bobbie, too, thinks that the wives of Stepford are behaving more like life-size Barbie dolls than women of their own generation, and Bobbie is suspicious as well of why all their husbands spend so much time at the local men's association.

Gradually, Joanna learns. Threatened by the women's liberation movement, the men of Stepford have taken matters into their own hands. They are doing away with their wives one by one and replacing them with "gynoids," android duplicates. Unfortunately, by the time Joanna discovers this, Bobbie has become the latest of these "trophy wives," and the movie's epilogue, delivered at the supermarket no less, suggests a similar fate for Joanna.

Directed by Bryan Forbes and scripted by William Goldman, this first movie version of Ira Levin's best-selling 1972 novel did very well at the box office, earning a substantial $4 million from its domestic release alone, and it introduced into the American lexicon the term *Stepford wife*, a phrase meaning not simply "mindlessly deferential" but also "robotically conformist."

The 2004 remake, also titled *The Stepford Wives*, fared less well, both with critics and the public. Frank Oz, who was chosen to direct, and Paul Rudnick, who wrote the script, both were best known for their ways with a comedy, and together they created a broad, campy farce. In their version, Joanna Eberhart (Nicole Kidman) is a cold, driven television executive who has been fired when

one of the reality shows she produces ends in disaster. Joanna and her ineffectual husband Walter, here a network vice president played by Matthew Broderick, move to a gated Connecticut community where they are immediately greeted by a Martha Stewart–perfect realtor, Claire Wellington (Glenn Close), and her husband Mike (Christopher Walken), who welcome them into their plastic paradise.

Once again, Stepford proves to be a community where all the women Joanna's age seem to awaken each morning wearing makeup, wanting nothing more than to bake their brownies and scrub their toilets and be there at the door when hubby gets home. The husbands are different, however. Goldman's script depicted the husbands as sinister, manipulative, eerily efficient corporate types, whereas Rudnick's makes them out to be men whose masculinity has been diminished by the highly successful women they married.

Joanna cannot understand why these women have forfeited their careers and embraced a model of pliant domesticity last seen in the Eisenhower era. Only two others in Joanna's circle think this is odd as well: a feminist author, Bobbie Markowitz, and half of a newly arrived gay couple, Roger Banister. Rudnick's specialty is sarcastic dialogue, the piercing one-liner, and the movie is well cast in this regard, for Bette Midler (Bobbie) and Roger Bart (Roger) deliver their lines with perfect aim as if they were poisonous darts. It is a truly funny movie, and, to their credit, the filmmakers achieve this without mocking the original. There is little or no suspense in this version, however. How could there be? The term *Stepford wives* is so deeply imbedded in the American psyche that everyone in the audience already knew the story. That may well be why Oz and Rudnick chose to end the film as they did, to catch the audience off-guard.

Their ending, which reportedly had to be rethought and then reshot before the film was released, is more upbeat than the original's, for theirs spares Joanna, and it has a brilliant woman behind the scheme in question. But such departures from the original are problematic. What does it say about us that a cautionary tale about the gender war has been turned into a battle of the sexes fought for laughs? Is it somehow a tribute to female capability that it is Claire who is the villain, rather than her husband Mike, as the script leads us to suspect for much of the movie? What are we to make of men so desperate to wear the pants in the family that they would "cybertize" their wives? What made those pants worth wearing to begin with? The first third of the movie is the movie at its best, for Kidman reprises much of what she achieved in *To Die For* (1995), once again giving a dangerously ambitious woman a high, lethal sheen. Joanna is not a particularly sympathetic character though. Nor is Bobbie in this version. Nor is anyone else.

Viewed decades later, the original, with its hip clothes and burn-your-bra politics, seems seriously dated. The remake, on the other hand, gives us pause to think about how much has changed between men and women in the past quarter century, and whether those changes were all for the better. One can only hope that was what the filmmakers intended.

SEE ALSO *Conformity; Feminism; Feminism, Second Wave; Gender; Inequality, Gender; Marriage; Women and Politics; Women's Liberation; Women's Movement*

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Jay Boyer

STEREOTYPE THREAT

Stereotype threat is a term coined by social psychologists Claude Steele and Joshua Aronson that refers to the fear people experience when they are at risk of confirming a negative stereotype that is held about their group. This psychological threat can undermine successful performance of tasks and activities.

Typically stereotype threat is examined by asking people to perform a challenging task that evaluates their ability in an area. Before the task, some people are given a prompt designed to activate a stereotype. For example, when women are reminded of the stereotype that men are better than women at math, they score lower on a difficult math test. Similarly African American students who are told that a test reflects their verbal ability perform worse on the test than do equally capable white students. Mere mention that the test diagnoses verbal ability is enough to conjure up a debilitating belief among some African American students that their score will be lower. But a person need not be socially stigmatized, feel intellectually inferior, or belong to a minority group to be vulnerable to stereotype threat. In one study, white men from a prestigious university were asked to take a difficult math test on which, some were told, Asians typically perform better. The men in this *threat* condition performed worse on the exam than did those who received no information about how others perform. Indeed stereotype threat can impair the cognitive functioning of anyone who is in a negatively

stereotyped group (e.g., drug users, the elderly, athletes, the economically disadvantaged).

Stereotype threat is situation-dependent and is not a general attitude or expectancy that affects individuals across contexts. A threatening situation can occur any time a negative stereotype is brought to mind, even when a person is alone. Experimenters have also shown that priming positive stereotypes about one's group can actually enhance performance. In one experiment, for example, Asian American women performed well on a mathematics test when their ethnicity was made prominent, but poorly when their gender was made prominent.

What makes people vulnerable to the threat of fulfilling a stereotype? First, people are likely to experience a threat in those areas in which they care about performing well. When a woman who values success in math is being evaluated, she will feel more threatened by a stereotype than will someone who dismisses math as unimportant. Also at risk are people who feel a strong sense of identification with and attachment to their group. Merely having to indicate one's race on the first page of an evaluation can be enough to activate a threat and impair performance. When one is in the numerical minority (e.g., the only African American student in a group of white students), group identity is made even more salient. People who expect discrimination or suspect that a stereotype may be valid are also more easily triggered by threatening situations.

The fear of confirming a negative stigma has been shown to lower students' performance on items from the Graduate Record Examination (GRE), the Texas Assessment of Academic Skills (TAAS), Raven's Progressive Matrices, and high school Advanced Placement (AP) exams. Stereotype threat has also been shown to limit important cognitive resources such as working memory and self-monitoring capabilities. Students who feel threatened may enlist strategies to safeguard their self-esteem, such as opting for less challenging school work, making excuses for their school failures, resisting feedback others give them about their work, or disassociating with school-related activities altogether. As a consequence, the effects of stereotype threat may be far-reaching, influencing placement in advanced classes, college admissions, people's career choices, and, ultimately, their earnings. Some argue that stereotype threat is in part to blame for the black-white achievement gap prevalent in U.S. schools.

Researchers have suggested a number of ways in which people can offset the detrimental effects of stereotype threat. Leaders and decision makers, whether in schools or elsewhere, can emphasize cooperative working environments that reduce prejudice, foster trusting interpersonal relationships, and value others as individuals. Placing an emphasis on the malleable nature of academic ability will also help individuals see the potential for intellectual growth and academic success. Researchers have also shown that individuals who are good self-monitors—that is, those who are sensitive to their social surroundings and able to regulate their behavior to negotiate them—show resilience in the face of stereotype-threatening situations. Helping individuals to become self-affirming may provide them with an interior source of strength and assurance needed to withstand environmental stressors.

SEE ALSO *Achievement Gap, Racial; Cognition; Diathesis-Stress Model; Prejudice; Priming; Racism; Self-Esteem; Self-Monitoring; Standardized Tests; Steele, Claude M.; Stereotypes; Stigma; Stress; Stress-Buffering Model*

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Ellen L. Usher

STEREOTYPES

Stereotypes constitute a person's set of expectations about a social group's characteristics, including traits, behaviors, and roles. They are the categorical associations perceivers make to group members based on their membership. Although cognitive in form, stereotypes are interlocked with affect and behavior: Along with prejudice and discrimination, stereotypes make up the tripartite foundation for the breakdown of intergroup relations.

Stereotyping stems from categorization processes that involve the self. Social identity theory contends that people conceptualize the self at different levels of inclusiveness that range from the subordinate to the superordinate. At each level of abstraction, the corresponding identity (personal, social, or collective self) is salient, with reference to each varying by context. In perceiving the self through a social identity, the person views the self as part of an in-group that is distinctive and, under many circumstances, more subjectively positive than out-groups. Self-categorization theory continues this narrative:

Depersonalization of the self via in-group and out-group differentiation triggers group phenomena that include stereotyping.

Two principles of self-categorization theory structure stereotypes: comparative fit and normative fit. In the former, also known as meta-contrast ratio fit, the smaller the perceived intragroup difference in comparison to intergroup differences, the more the group embodies a coherent unit. Thus, people are categorized into groups that minimize within-group differences and maximize between-group differences. Furthermore, normative fit requires that these differences, both within and between, align with the perceiver's normative beliefs about the group—that the group fits expectations. An interaction between comparative fit and normative fit processes guides stereotype construction. Under the first principle, within-group variability decreases, increasing perceived homogeneity between group members; under the second, perceived group categories reflect a perceiver's expectations about that group or the content of normative beliefs.

A two-dimensional framework inherited from person perception literature illustrates the content of stereotypes. Person and group perception use two recurring dimensions that are variations of warmth/morality and ability/competence. One example, the stereotype content model, argues that stereotypes immediately answer two key questions for the perceiver: Do out-group members intend good or ill toward me and my group? and Are they able to act on these intentions? The answers to these questions produce stereotypes in four quadrants: ambivalent (or cross-dimensional) stereotypes (e.g., elderly people are stereotypically nice but incompetent, rich people are stereotypically competent but not nice); stereotypically neither warm nor competent (e.g., poor people); and stereotypically both warm and competent (e.g., middle class).

UTILITY: FORM FITS FUNCTION

Because stereotypes stem from the differentiation of "us" from "them," stereotype targets usually fall outside the cultural default (in the United States): not young, not white, not male, not heterosexual, not middle class, and not Christian. Groups whose members are the least (visibly) representative of the default receive the most stereotypes. The high prevalence of age, racial or ethnic, and gender stereotypes results in part from the speed of categorizing people on these dimensions.

Stereotyped targets are not exclusive to the visibly different. Stereotypes also form when a person perceives an *illusory correlation* between a group and a particular characteristic; in actuality, group membership and the characteristic might covary by chance or because of historical development, or not even covary at all, but perceiving a fundamental connection strengthens the stereotypic quality of the characteristic for that group. Stereotypes may reflect the perceiver's knowledge of power relations in society. Some national stereotypes exemplify such contextual influences on stereotype formation, with perceivers relying on features of a nation—political, economic, religious, geographic, and status vis-à-vis one's own nation, among others—to characterize its residents. Because they are shaped by the social context, stereotypes reflect cultural beliefs. As such, they shift over time—when social conditions change, societies update their stereotypes of groups because the social relations of those groups transform. As an example, many ethnic groups in the early twenty-first-century United States receive more favorable stereotypes than they did in the 1930s, including originally mistrusted immigrants (e.g., Irish, Italian, Jewish) who now join the mainstream.

Whatever their origins, stereotyping serves cognitive, motivational, and social purposes. For example, in the *cognitive miser* view, stereotyping saves mental effort. Facing cognitively overwhelming tasks and limited attention and effort, people rely on stereotypes to increase available on-line resources. People's social interaction priorities also influence stereotyping. Many models of stereotyping posit two modes of impression formation, with some models arguing for an either-or competition between the two, and others placing them on the ends of a continuum. In either case, one mode emphasizes the need to make quick decisions through categorical information, whereas the other underscores the need to be accurate through effortful use of individuating information. The perceiver who must prioritize between these interaction goals is dubbed the *motivated tactician*. Using stereotypes can smooth interactions if both people agree on the stereotype or if the interaction is brief and inconsequential for the holder of the stereotype.

Because they are convenient, stereotypes often actively motivate perceivers to maintain them. Creating exceptional subtypes is one way to maintain an overall stereotype despite a few salient people who do not conform neatly to the group. Subtyping allows the perceiver to cognitively isolate people who are stereotype-inconsistent by explaining that while they belong to the stereotyped group, they do not entirely represent the group.

At the societal level, system justification theory argues that people stereotype to maintain the status quo, even at the expense of one's own group. Some researchers argue that minority groups' own negative stereotypes demonstrate the system-justifying effects of stereotypes. Some researchers also suggest that complementary stereotypes (e.g., poor but happy, rich but miserable) increase support for the status quo because they satisfy people's desire to perceive their world as fair and legitimate.

MEASUREMENT: THE EXPLICIT AND THE IMPLICIT

Although stereotypes may reflect a cultural belief, the individual with that knowledge does not necessarily endorse such a belief, as argued by the dissociation model of stereotypes. Nevertheless, regardless of one's explicit prejudice level, a person may be primed to think of groups stereotypically. For example, the presentation of a group label facilitates the activation of subsequent stereotype-consistent associations for both low- and high-prejudiced people. Implicit stereotypes can persist, even when explicit stereotypes do not.

Incongruent results from explicit and implicit stereotype measures illustrate the dissociation between personal endorsement and cultural knowledge. They also demonstrate that perceivers are often unaware of their own cognitive associations, particularly if they are automatic. In addition, when egalitarian cultural norms discourage unfavorable prejudgments of others, and perceivers have a self-interest to refrain from these expressions, implicit measures can extract more information than can explicit measures. In short, implicit measures may detect what remains elusive from explicit measures. Regardless of whether a measure is explicit or implicit, stereotype measures reveal biases toward stereotype-consistent information.

Explicit measures are straightforward. As with other attitude measures, researchers can assess stereotypes through self-reports of impressions about target groups. For example, perceivers can express their impressions of immigrants in their own words, which the researchers then code into manageable categories. Stereotypes might include immigrant groups' traits, behaviors, socioeconomic status, and life satisfaction, for example. Alternatively, perceivers can rate on a scale of how characteristically immigrants are hard-working, engage in criminal behaviors, experience poverty, feel welcome in the host nation, and so on.

Implicit measures reveal attention, attribution, and memory biases toward stereotype-consistent information. People prefer to confirm their stereotypes, at an immediate perceptual level, detecting stereotype-consistent information more easily. Although they then attend to stereotype-inconsistent information, if present, they tend to explain it away: The out-group's success was a fluke, the successful out-group individual is not typical, and so on. In general, an out-group's stereotype-consistent behavior elicits internal attributions to the group's enduring dispositions; stereotype-inconsistent behavior elicits external attributions to chance or temporary circumstances. If a particular negative trait stereotype afflicts a target group, that group's failures could be attributed to the supposed negative trait. If an out-group member does behave negatively and stereotypically (e.g., the criminal activity of a black person), situational factors will likely be disregarded in explaining that person's behavior. People also better recall and recognize stereotype-consistent information than stereotype-inconsistent information if they are busy and operating in the complex environments typical of everyday interactions.

Researchers also devise priming methods to study automatic stereotypic associations. Some involve subliminal presentation of priming stimuli. Study participants then perform various tasks—including word searches, lexical decision tasks, fluency-manipulated tasks, and interpretations of ambiguous behaviors—in which they might produce responses that indicate stereotypic associations to the primes. Reaction speed, performance quality, and stereotypicality of responses indicate level of stereotype activation. Compared to this preconscious (subliminal) presentation of stimuli, other priming manipulations explicitly present stimuli; thus the perceiver postconsciously produces the activated associations. The implicit association test consciously primes two categories and then measures differential reaction times to concepts that are stereotype-consistent to one of the primes but not the other. People often react more quickly to negative words following out-group primes and to positive words following in-group primes. Also using postconscious priming, neuroimaging studies show increased amygdala (vigilance) activation to images of out-groups. Automatic associations escape a person's conscious awareness, but implicit measures subtly detect what lurks beneath the surface.

CONSEQUENCES: THE GOOD, THE BAD, AND MORE BAD

Stereotypes might result from historical accidents, unduly generalize across people, and mostly derogate, yet they persist. Nevertheless, the costs of stereotyping have more extensive effects, especially for the target. First, the perceiver glosses over individuating information about a target (preference for stereotype-consistent information foregoes potential knowledge gain). On their side, targets are evaluated at the category level and not according to individual characteristics. They might even be classified with others in a group with which they do not identify.

Inaccuracies of three types plague stereotypes. Stereotypic inaccuracy refers to the overestimation of the target group's stereotypicality or the underweighing of its stereotype-inconsistent qualities. Valence inaccuracy entails exaggeration of the negativity or positivity of the group's stereotypes. Dispersion inaccuracy results from over- or undergeneralizing the variability between group members. Nonetheless, some other researchers argue for studying the accuracies contained within stereotypes because in this view they reflect reality.

The effects of stereotyping increase concomitantly with prejudice. Stereotypes along with prejudice strongly predict discrimination, so prejudiced perceivers are much more likely to act on their prejudice to negatively stereotyped groups.

Stereotypes reach beyond themselves. *Stereotype threat* describes targets' awareness of their group's negative stereotypes in a particular and consequential performance domain; they can ironically perform worse than those who do not care about that domain. Furthermore, stereotype threat leads to the targets fulfilling the stereotype that haunted them in the first place. Some examples are black students in an academic setting and women in mathematical tasks, for whom performance was labeled as diagnostic of their ability. Stereotype-threat effects differ from self-fulfilling prophecies because they affect people without encountering a prejudiced person.

Self-fulfilling prophecies, also called *behavioral confirmation*, perpetuate stereotypes through the perceiver's expectancies of confirmation and the target's behavioral confirmations of the expectancy. For the perceiver, one utility of stereotypes is in making the cognitive and social load more manageable. Stereotypes may also be useful for targets who want to fulfill their interaction partner's expectancies so that they can avoid conflict or focus on an aspect of the interaction they deem more important. The process, however, perpetuates stereotypes in society.

SEE ALSO *Attitudes; Attribution; Discrimination, Racial; Merton, Robert K.; Perception, Person; Prejudice; Self-Fulfilling Prophecies; Steele, Claude; Stereotype Threat*

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STERILE CLASS

SEE *Physiocracy.*

STERILIZATION, ECONOMIC

The term *sterilization* is used in international economics and macroeconomics to describe the actions a central bank undertakes in order to neutralize the effects of central bank interventions in the foreign exchange market on the supply of domestic currency in the economy. Sterilization usually takes the form of an open market operation, in which a central bank sells or purchases government bonds on an open market in the amount it purchases or sells foreign currency on the foreign exchange market, so that the amount of domestic currency in circulation remains unchanged.

Suppose for example that it takes $1.35 to purchase €1; that is, it takes 1.35 American dollars to purchase 1 euro (the currency of the European Union). Suppose further that the Federal Reserve System (the United States' central bank) wishes to keep the exchange rate from rising from its current level to say $1.50 for €1. To accomplish this task the American central bank must sell euros (foreign exchange) out of its reserves. Since the euros will be purchased with dollars, the supply of dollars in circulation will decrease and the supply of euros in circulation will increase. Thus the value of the euro will not rise relative to the dollar. But this action reduces the amount of domestic currency in circulation in the United States, which might not be desirable. For example interest rates might rise. In order to counteract this effect, the central bank may simultaneously purchase domestic (American) bonds in order to put domestic currency back in circulation. Similarly if a central bank is buying foreign currency to keep the value of domestic currency low, it can sterilize such intervention by selling bonds and removing from circulation domestic currency that was introduced by such foreign exchange market intervention.

If an intervention in a foreign exchange market is accompanied by a sterilization operation, it is called a ster-

ilized intervention. International economics theory states that a sterilized intervention has occurred when: (1) international assets are perfect substitutes; (2) there is full capital mobility; and (3) the uncovered interest parity holds (that is, if one tries to make money by borrowing at a low interest rate in one currency and investing at a high interest rate in another currency, any gains will be offset by the change in the exchange rate). However if international assets are not perfect substitutes, or there are barriers to the flows of capital across borders, sterilized intervention can be effective in maintaining a certain level of exchange rate while minimizing the effect of interventions on the supply of domestic currency. In his 2003 article "Is Official Foreign Exchange Intervention Effective?" Michael Hutchison argued that in practice sterilized interventions have been effective.

One recent example of a central bank actively engaged in sterilized interventions is the People's Bank of China, China's central bank. In order to prevent the value of RMB, Chinese currency, from rising too fast against the U.S. dollar in the early 2000s, the People's Bank of China was actively purchasing dollars while at the same time issuing its own central bank bills. As a result the effect of foreign exchange interventions on the supply of domestic currency was neutralized, and the People's Bank of China accumulated foreign reserves, while Chinese commercial banks accumulated their holdings of central bank bills, claims on the People's Bank of China. The reason sterilized interventions were effective in China is limited capital mobility in and out of China, as a result of which Chinese and foreign assets are not perfectly substitutable.

Less frequently the term *sterilization* is used to describe the actions a central bank might take in order to reduce the effects of international capital inflows on the supply of domestic currency in the country. This type of sterilization was important during the lending boom of the 1990s when many emerging markets experienced a surge in international capital inflows, which was accompanied by the rise in domestic money supply and therefore inflation. In his 1997 article "Sterilizing Capital Flows" Jang-Yung Lee provided a detailed discussion of the sterilization of international capital inflows.

SEE ALSO *Capital Controls; Capital Flight; Economics, International; Euro, The; Federal Reserve System, U.S.; Macroeconomics; Policy, Monetary*

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STERILIZATION, HUMAN

Sexual sterilization can be effected through various surgical operations designed to prevent a person from reproducing. In its most radical form, sterilization involves castration, which is the removal of the testes (male) or ovaries (female) and the consequent destruction of the capacity to produce human germ cells (sperm or ova). Late in the nineteenth century advances in surgical technique provided alternatives to castration as the sole means of sterilizing humans. These new operations were simpler for surgeons to perform, were less dangerous for patients to endure, and had a much more limited impact on health.

In the 1880s the Scottish surgeon Lawson Tait initiated the operation of salpingectomy for women. Tait's technique was introduced as a therapy for ectopic pregnancy, a potentially fatal condition that sometimes occurs when a fertilized ovum lodges unexpectedly in a fallopian tube. Removal of a section of each fallopian tube prevents any ovum from traveling to the uterus (womb), hence ruling out any future pregnancy.

Soon after Tait introduced salpingectomy, the Chicago surgeon Albert Ochsner developed the operation of vasectomy as a treatment for problems of the male prostate gland. Ochsner described how he removed a portion of the cord known as the *vasdeferens*, removing the route a sperm travels. He endorsed vasectomy as a surgical option that would avoid objections raised against castration. Ochsner's surgery was also innovative because he specifically prescribed it as a means of preventing convicted criminals from having children. Soon the operation was being recommended as a way to prevent parenthood among chronic alcoholics, sex criminals, the mentally impaired, and the poor.

Ochsner's technique became popularized just as the eugenics movement began to take root in the United States. The term *eugenics* was coined by the English scientist Francis Galton in 1883. Galton believed that most human characteristics, from physical and mental traits to moral predispositions, were inherited. *Eugenics* was his name for the science that aimed to increase the number of "well-born"—healthy and productive people—in future generations. Many of Galton's followers believed, as he did, that societies should eliminate the future births of

hereditarily tainted unhealthy and dependent people. The emergence of new technologies for surgical sterilization during Galton's lifetime made that goal appear more feasible.

In the last decade of the nineteenth century, the state of Michigan debated the adoption of a law to mandate "asexualization" (castration) of some repeat criminals as well as inmates of asylums and homes for the mentally impaired to prevent the birth of children with similar disorders. That law and similar efforts in Kansas and Pennsylvania were rejected between 1897 and 1905.

Two years later the Indiana prison doctor Harry C. Sharp, working in collaboration with J. N. Hurty, secretary of the Indiana Board of Health, convinced their state legislature to adopt what became the first involuntary sterilization law in the world. Sharp had introduced vasectomy into his practice at the Indiana Reformatory as a therapy to cure male inmates of *onanism* or habitual masturbation. After several hundred experimental surgeries, Sharp convinced legislators that the procedure was also valuable as an efficient means to prevent the reproduction by hereditarily diseased parents of criminals and similarly "defective" children. Following Indiana's lead, by 1926 twenty-one other states had passed laws that allowed governmental boards, commissions, or officials of state prisons, asylums, or other institutions to choose people who would be sterilized.

In 1927 the practice of salpingectomy for "eugenic" purposes was endorsed by the U.S. Supreme Court in the case of *Buck v. Bell*. The lawsuit pitted the Virginia teenager Carrie Buck against the state doctor who directed the Virginia Colony for Epileptics and Feebleminded. Buck was sent to the colony because she was an unmarried mother—a "moral degenerate"—whose condition was supposedly inherited from her mother, Emma Buck, already a colony inmate. Testimony in the case suggested that Carrie Buck's seven-month-old baby was abnormal as well, prompting an opinion for the Supreme Court by Justice Oliver Wendell Holmes Jr. that upheld the Virginia sterilization law, concluding: "Three generations of imbeciles are enough." Later research disclosed that Carrie Buck had no hereditary "defects," and her daughter Vivian eventually earned a spot on her grade-school honor roll.

With the *Buck* decision as precedent, ten more American states passed eugenic sterilization laws by 1937. More than 60,000 surgeries were performed in the United States under the authority of eugenics laws between 1907 and the late 1970s. Ten other laws sanctioning involuntary sterilization were enacted in countries in the Americas, Europe, and Asia. The most notable was the 1933 German law that was applied to almost 400,000 people in less than ten years.

In 1942 the U.S. Supreme Court revisited the issue of coercive sterilization, striking down an Oklahoma law that authorized surgery on habitual criminals. Jack Skinner, the prisoner who challenged the law, had convictions for armed robbery and chicken theft. He argued that no scientific evidence proved the trait of "criminality" to be an inherited characteristic. The Court overturned the sterilization law, calling it a violation of the Constitution's equal protection clause because it applied to common crimes like Skinner's chicken theft but provided an exception for tax evasion, embezzlement, or political graft. At the same time the Court did not disturb the *Buck* ruling, which stood as continued justification of operations on the disabled.

Other operations, often targeting ethnic or racial minority populations, occurred without legal sanction. Jews and the Sinti and Roma ("Gypsies") were sterilized using X-rays or caustic chemicals as part of the Nazi death camp program of "research" during World War II (1939–1945). From the mid-1950s until the 1970s, reports surfaced of widespread sterilization of Latinas, African Americans, and American Indians in several states. In the wake of these revelations, most American laws with "eugenic" language were repealed in the 1970s. Several European countries instituted programs of restitution for victims of sterilization policies; the Canadian provinces of Alberta and British Columbia later paid reparations following lawsuits. In the United States, the Virginia General Assembly, which in 1924 had enacted the law used to sterilize Carrie Buck, became in 2001 the first state legislature to condemn the sterilization law it had passed in the name of eugenics. Apologies followed in Oregon, North and South Carolina, and California, the state where more than one-third of all U.S. sterilizations took place. In 2007, to mark the centennial of U.S. sterilization laws, both the first state to pass such a law (Indiana, 1907) and the last state (Georgia, 1937) repudiated their earlier sterilization laws. Reports of sterilization abuse focused on minority populations in Peru, the Czech Republic, and Brazil have continued to appear in the first decade of the twenty-first century.

SEE ALSO *Crime and Criminology; Determinism, Biological; Determinism, Genetic; Ethics; Eugenics; Fertility, Human; Galton, Francis; Genocide; Heredity; Mental Retardation; Morality; Reparations; Reproduction; Reproductive Politics; Reproductive Rights*

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Paul A. Lombardo

STERNBERG, ROBERT

SEE *Multiple Intelligences Theory; Intelligence.*

STEROIDS

The generic term *steroids* refers to a group of substances sharing a common basic chemical structure, many of which function as hormones in the human body. The two best-known classes of human steroid hormones are *corticosteroids* and *anabolic-androgenic steroids.* Corticosteroids are hormones secreted by the adrenal gland, such as cortisol, which modulate a range of physiologic functions, such as inflammatory responses and blood pressure. Many synthetic corticosteroids have been developed, such as hydrocortisone, beclomethasone, and dexamethasone; these synthetic substances have effects similar to those of naturally occurring corticosteroids and are widely prescribed in medicine for a range of conditions. For example, hydrocortisone is often a component of skin creams used to treat poison ivy reactions or other inflammatory skin conditions; beclomethasone is a common component of inhalers used in the treatment of asthma; and high doses of corticosteroids are administered to recipients of organ transplants to prevent rejection of the foreign tissue. In low dosages, corticosteroids have few psychiatric effects, but higher doses may sometimes cause manic symptoms (e.g., euphoria, hyperactivity, increased self-confidence, and impaired judgment) or even psychotic symptoms (e.g., delusions or hallucinations) in some predisposed individuals. Corticosteroids have very little potential for abuse and are rarely ingested by illicit substance abusers.

Anabolic-androgenic steroids represent an entirely different class of hormones. The prototype hormone of this class is the male hormone testosterone, which is secreted primarily by the testes in males. Anabolic-androgenic steroids produce masculinizing (androgenic) effects—such as beard growth, male pattern baldness, and male sexual characteristics—together with muscle-building (anabolic) effects. These latter effects account for the greater muscle mass and lower body fat of men as compared to women. Many synthetic anabolic-androgenic steroids have been developed over the last fifty years. Like testosterone, these synthetic substances produce both anabolic and androgenic effects; there are no purely anabolic or purely androgenic compounds. In medical practice, the principal use of testosterone is in the treatment of hypogonadal men—men who do not secrete sufficient testosterone in their own bodies, and who therefore require testosterone supplementation to maintain normal masculine characteristics. Aside from this application, anabolic-androgenic steroids have only very limited medical uses, such as in the treatment of certain forms of anemia.

Unlike corticosteroids, anabolic-androgenic steroids are widely abused by individuals wishing to gain muscle and lose body fat. The great majority of these illicit users are male; women generally do not abuse anabolic-androgenic steroids because of the drugs' undesirable masculinizing characteristics, such as beard growth, deepening of the voice, and shrinkage of the breasts. Men generally do not have to worry about these masculinizing effects and therefore may take doses far in excess of the amounts naturally present in the body. Specifically, an average man secretes between 50 and 75 milligrams of testosterone per week in his testes, whereas illicit anabolic-androgenic steroid abusers often ingest the equivalent of 500 to 1,000 milligrams of testosterone per week. When taken in these very high doses, anabolic-androgenic steroids can produce dramatic increases in muscle mass and strength, making it possible for users to far exceed the upper limits of muscularity attainable under natural conditions, without these drugs. Because of these properties, anabolic-androgenic steroids are widely used by athletes in sports requiring strength or muscle mass for feats such as hitting home runs in baseball or playing line positions in American football. In the United States there have been many recent well-publicized cases of prominent professional athletes who were found to be taking anabolic-androgenic steroids, and this issue became a subject of several congressional hearings in 2005. In addition, anabolic-androgenic steroids are increasingly abused by boys and young men who have no particular athletic aspirations, but who simply want to look more muscular. This pattern of abuse is particularly prevalent in North America, Australia, and some European countries—cultures where muscularity is sometimes portrayed as a measure of masculinity. By contrast, anabolic-androgenic steroids are rarely abused for purposes of body image in Asia, probably because Asian cultural traditions do not emphasize muscularity as an index of masculinity. However, anabolic-androgenic steroids are certainly used by some Asian athletes, especially at the elite level because these individuals are seeking a performance advantage, rather than a body-image effect.

In Europe and North America illicit anabolic-androgenic steroid use represents a significant and probably

growing public health problem. Taken in massive doses, these hormones may pose long-term medical risks, especially because of their adverse effects on cholesterol levels, which may greatly increase the risk of heart attacks or strokes at an early age (sometimes in the forties or fifties). In addition, high doses of anabolic-androgenic steroids may have psychiatric effects such as irritability, aggressiveness, and even violent behavior (sometimes popularly called "roid rage") in some individuals. Thus, these drugs may pose a danger not only to users themselves, but even to some nonusers—particularly women—who may become victims of such violence. Men who use anabolic-androgenic steroids for long periods may also suffer depressive symptoms, sometimes accompanied by suicidal thoughts or even successful suicide, if they abruptly stop these drugs. Despite these risks, however, it appears unlikely that illicit anabolic-androgenic steroid use will decline in the near future because these drugs are readily available on the black market and offer a great temptation to men seeking muscle and strength gains.

SEE ALSO *Masculinity Studies; Sports; Sports Industry*

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STICKY PRICES

Price stickiness, the failure of prices to adjust fully in the face of evolving equilibrium conditions, reflects a lack of responsiveness to changes in supply and demand. This phenomenon has received considerable empirical and theoretical attention. To begin with, Barro and Grossman (1980), an early New Keynesian exposition on general disequilibrium, establishes the potential macroeconomic implications of such stickiness as divergence from equilibrium in the form of price rigidity in one market spilling over to others. For instance, they demonstrate how excess demand or supply in labor or commodity markets can stimulate more general macroeconomic shifts. Approaching the question from a slightly different perspective, John Taylor (1980) adopts a rational expectations framework with staggered wage contracts (the sole source of wage rigidities in his model) to explain the persistent unemployment observed during postwar business cycles.

While Barro and Grossman (1980), Taylor (1980), and related work generally takes for granted price stickiness (typically by assuming some mechanism for it), to explore its larger macroeconomic implications, most theoretical work has been concerned with finding plausible microeconomic foundations for the emergence of price rigidities. These efforts have generated two principal veins of inquiry: one focused on price stickiness as a possible consequence of government intervention and the other on rigidities introduced by contractual commitments set by optimizing agents.

Several avenues of state intervention have received theoretical attention. First, governments frequently regulate the prices of various goods and services. To be meaningful (i.e., consequential), these restrictions must be binding in the sense that the resulting price in the market differs from what might otherwise have emerged under ordinary equilibrium circumstances. For instance, a legally mandated minimum wage (a kind of price floor) would influence prevailing wages only in sectors of the labor market where the equilibrium wage is below that mandated minimum. Such regulations undermine the full impact of many potential shifts in supply and demand, as changes in equilibrium price that would be evident in the absence of them are no longer so in their presence. Another important form of government interference with market prices comes in the form of attempts to fix (or peg) exchange rates. This has given rise to a literature (e.g., Krugman 1979, who builds on the work of Salant and Henderson 1978) focusing on the idea that such policies drive a wedge between the prevailing exchange rate (which is determined by the government's peg) and the "fundamental" exchange rate (that which would prevail in an unfettered foreign exchange market). If the two diverge sufficiently, the government's ability to defend the fixed rate may be overwhelmed by speculative pressure.

On balance, however, more theoretical attention has been directed toward the possibility that stickiness might arise as a result of contract setting (the consequences of which in terms of price rigidities are straightforward) and other purposeful behavior by optimizing agents. For instance, "menu costs" have received a great deal of attention (see, for instance, Mankiw [1985] for a thorough review of menu costs). Essentially, this approach is rooted in the idea that prices might not respond to shifts in supply and demand if the transaction costs (in a variety of senses) associated with adjusting prices are sufficiently

high. At the most trivial level there is a cost associated with adjusting menus and price labels. For instance, in markets characterized by monopoly or oligopoly, shifts in demand might yield changes in the prevailing market price only if the transaction costs associated with adjusting price are less than the erosion of profits that would occur if firms simply maintained their prices. On a more subtle level, frequent adjustment in prices might undermine consumer confidence or trust (e.g., if they believe that the frequent price changes represent some effort at manipulation).

Another popular line of inquiry revolves around "efficiency wages" (see Akerlof and Yellen 1986), which are set above the labor market equilibrium with the intention of promoting higher worker productivity. Frequently cited justifications for paying efficiency wages include discouraging shirking (because the financial penalty associated with being fired is greater), avoiding adverse selection (since workers with higher capabilities may be more inclined to apply for jobs with a higher wage), and reducing turnover costs (as individuals may be reluctant to quit a job with a higher-than-market wage).

A large body of empirical work is concerned with price stickiness. The principal objectives of this literature are to determine whether price stickiness actually arises in practice and whether the various theoretical explanations of price stickiness are consistent with observed empirical patterns. Rotemberg (1982) is one among many reporting evidence of price stickiness. Using U.S. data, he finds that it arises because of the transaction costs that firms incur when they change prices.

Despite the extensive empirical and theoretical literature concerned with it, the concept of price stickiness has met with skepticism. Lucas and Sargent (1978) and other New Classical economists challenge the idea that prices (or wages) are slow to adjust, suggesting instead that rational agents formulate price expectations using all available information in such a fashion that prices and wages should quickly readjust to equilibrate the market.

SEE ALSO *Adverse Selection; Akerlof, George A.; Distortions; Economics, New Classical; Economics, New Keynesian; Expectations; Expectations, Rational; Lucas, Robert E., Jr.; Macroeconomics; Microeconomics; Sargent, Thomas; Transaction Cost; Wages*

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Mai Noguchi Hubbard

STIGLER, GEORGE JOSEPH

1911–1991

The years following World War II (1939–1945) saw a generation of remarkable economists who managed among themselves to remake the economics discipline and profession. Of this group, perhaps none possessed a better economic intuition or a keener economic mind than George Stigler. Though not as much of a public figure as his close colleague and longtime friend, Milton Friedman (1912–2006), Stigler did as much, if not more, to form what became known as the Chicago school of economics. It was at Chicago that Stigler would conduct research that not only gained him a Nobel Prize in 1982 but also ultimately changed the course of economic analysis. He had a rare talent for asking the right questions and putting forth provisional answers that inevitably provoked the profession and caused it to reconsider commonly held truths. At the same time, no economist was more a reflection of the ideological struggles of postwar America than Stigler.

George Joseph Stigler was born in Renton, Washington, on January 17, 1911, to immigrant parents. His choice to attend the graduate program at the University of Chicago in 1933 was perhaps his most fateful decision. It was there that he formed a lasting friendship with Friedman as well as becoming acquainted with Aaron Director (1901–2004), a young lecturer in the Department of Economics. These two would be among

the very few who ever managed to significantly influence Stigler's thinking.

Despite his early and continuing contributions in the field of the history of economic thought, his lasting contributions were in industrial organization and government regulation, two fields he essentially helped form. It is perhaps easiest to understand Stigler's lifework by grasping its essential consistency. In some sense he was a self-appointed white knight dedicated to defending the innocent damsel of traditional price theory against all and any attacks. He developed a knack for demonstrating the efficiency of markets despite and against all appearances to the contrary.

His pioneering work in industrial organization reinforced the core idea that markets work. Two noted works make this amply clear. "The Economics of Information" (1961) analyzes how markets use available information in the most efficient way. His "Theory of Oligopoly" (1964) essentially concludes that the traditional theories of perfect competition and monopoly could amply handle any issue dealing with market structure. (He would later push this further and eliminate the need for monopoly theory as well, indicating that competitive markets were sufficient to encompass the needs of economic analysis.)

If the first part of his postwar research helped to define the field of industrial organization by emphasizing the efficiency of markets, the second half demonstrated the inability of governments to improve outcomes through regulation. "What Can Regulators Regulate? The Case of Electricity" (1962), jointly written with his longtime associate Claire Friedland, empirically indicated that government regulation of public utilities made no real difference in cost. What were then unexpected results helped to precipitate research that ultimately led to the deregulatory movement in public policy. In the same way, Stigler's analysis of the political market for government regulation, "The Theory of Economic Regulation" (1971), led to new research exploring how politicians operated and how and why government regulation became law. By ascribing narrow self-interest as the motivation for politicians, Stigler made a major contribution to the expanding field of public choice.

His final work on the role of government, exemplified by the posthumously published "Law or Economics," is perhaps his most controversial. Logically, political markets should resemble economic ones in that they are both under the sway of the test of time. If an existing arrangement is not the most efficient one, then this should create a situation in which economic agents could benefit through improving the status quo. Therefore whatever is, must by definition be efficient. Otherwise it would change. Such an approach follows perfectly from Stigler's lifetime drive to become increasingly more consistent in his analysis. At the end of his career, he surveyed an economic world where competitive markets ruled and provided the only useful analytical key.

Unlike Friedman, his close friend, Stigler deliberately eschewed a public presence. Yet without Stigler providing micro-based research, Friedman and his counterrevolution against the forces of Keynesianism and other nonmainstream approaches would have failed to achieve its singular success. Stigler remained active and at his beloved University of Chicago from 1958 until his untimely death on December 1, 1991. He was a scholar of great but cutting wit who had a talent for forming either fierce friendships or lasting animosities. Anything lacking intensity was never his style.

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Craig Freedman

STIGLITZ, JOSEPH E.
1943–

Joseph E. Stiglitz, born in Gary, Indiana, received his PhD from the Massachusetts Institute of Technology in 1967. A winner of the John Bates Clark Award for young economists, he has taught at Yale, Princeton, Stanford, MIT, Oxford, and Columbia University. In 1986 he founded the *Journal of Economic Perspectives.* In 2001 he was awarded the Nobel Prize in economics.

Stiglitz's initial academic output, including his first two published articles in 1967, focused on how economic growth is affected by investment, risk, and income and wealth levels. In the early 1970s he and Michael Rothschild developed important insights into the nature of risk in financial and insurance markets. By the mid-1970s he was exploring problems of exhaustible natural

resources, sharecropping, efficiency wages, and discrimination, even while looking more deeply into the nature of information and risk in insurance and financial markets.

Working simultaneously on theoretical problems and on applied issues led Stiglitz to his breakthrough insight regarding the importance for economics of *imperfect information*, a term Stiglitz first used in two 1976 papers. As discussed by Stiglitz and Andrew Weiss in their 1981 article, this notion, sometimes denoted *asymmetric information*, refers to situations in which some participants in a market know more than others and can use their informational advantage to affect the efficiency of market outcomes. This informational advantage is often held by "agents" who hope to contract with "principals" controlling scarce resources—for example, applicants seeking jobs from potential employers and prospective borrowers seeking credit from lenders. Principals can then often best achieve their goals by supplying fewer loans (or fewer jobs) than are demanded. As Stiglitz argued in his 1987 article, prices are not in these cases permitted to rise to levels at which demand equals supply; indeed, in these models the quality of the commodity traded (the productivity of workers or default level of borrowers) depends on price. Their profits are often largest at a "rationing equilibrium"—a price wherein the quantity that agents seek to buy (or sell) exceeds the quantity that the principal supplies (or buys). At rationing equilibria, market forces will generally not equalize supply and demand.

These insights generated what Stiglitz calls the *economics of information*, which explores the consequences of information asymmetries in credit, financial, product, and labor market. New information-based paradigms have been developed in development economics, trade theory, and other fields; and information-based models have been central to the emergence of the microfoundational "New Keynesian" (named for the preeminent economist John Maynard Keynes) approach to macroeconomics.

The economics of information suggests that selective government interventions and/or nonmarket institutions can enhance growth and reduce poverty. Stiglitz became increasingly involved in the policy implications of these ideas, triggered by an extended period in public service. He served on the Clinton administration's Council of Economic Advisers from 1993 to 1997, the last two years as chair. He then became chief economist and senior vice-president of the World Bank from 1997 to 2000. While at the World Bank, he publicly challenged the so-called Washington Consensus, that is, the then-prevailing practice at the World Bank and International Monetary Fund of using full-information, competitive-economy models to understand global and developing-country economic outcomes. In Stiglitz's view, more realistic models would show that global economic forces have often jeopardized viable local governmental and institutional economic arrangements. Amid considerable controversy, as Ha-Joon Chang notes in his 2001 book, the World Bank made some changes in its modeling and policy approaches. Stiglitz tells his side of the story in his bestselling 2002 book, *Globalization and Its Discontents*.

Two articles summarizing Stiglitz's work in light of his Nobel prize are Chang's (2002) and J. Barkley Rosser's (2003); Stiglitz's own summary of his ideas and their implications for the change in the economics paradigm appears in his 2003 and 2004 articles.

SEE ALSO *Discrimination; Economics, New Keynesian; Economics, Nobel Prize in; Information, Asymmetric; Information, Economics of; Insurance; International Monetary Fund; Natural Resources, Nonrenewable; Risk; Sharecropping; Structural Adjustment; Uncertainty; Wages; Washington Consensus; World Bank, The*

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STIGMA

Although the term originally described a mark made through branding to designate a person of undesirable moral character, *stigma* was introduced into the psychological literature by Erving Goffman in 1963 to refer more broadly to any attribute or characteristic that makes its

bearer tainted or devalued by others. Jennifer Crocker, Brenda Major, and Claude M. Steele (1998) refined the definition, noting that stigmatized characteristics convey "a social identity that is devalued in a particular social context" (p. 505). This definition highlights two important properties of stigma. The first is that the stigmatized characteristic is attributed meaning beyond the characteristic itself—it is often assumed to be broadly reflective of the person or his or her identity. The second property is that personal characteristics lead to stigma through their context-specific symbolic value, rather than through inherent properties of their own. Wrinkles and white hair, for example, may be revered as a sign of wisdom and experience when it comes to relationship advice, but may lead to undeserved assumptions of incompetence when it comes to navigating computers.

Goffman distinguished among three types of stigmas: tribal stigmas (e.g., racial, ethnic stigmas), blemishes of individual character (e.g., drug addict, criminal offender), and abominations of the body (e.g., weight, body scars). Despite enjoying wide recognition, Goffman's typological approach has given way to a more dimensional approach to stigma, one relying more on general principles that help understand the underlying differences and commonalities among stigmas. In 1984 Edward E. Jones and colleagues proposed six such dimensions: degree of concealability, degree of change over time, degree of disruptiveness, how aesthetic others find the attribute, how the stigma originates, and degree of peril the stigma poses.

IMPACT OF STIGMA ON ITS TARGETS

The psychological impact of these dimensions, particularly concealability and responsibility, has been a topic of intense study. Research on the dimension of responsibility in particular has shed light on the *internalization hypothesis*—the notion that people internalize society's negative ascriptions about their group, with negative consequences for their self-concept. Early studies included Kenneth B. and Mamie P. Clark's 1947 doll study, which found that young African American children preferred to play with white dolls rather than black dolls. Although the children's responses may have stemmed from their efforts to please the researchers or an unfamiliarity with black dolls, the findings were widely interpreted as evidence for the deleterious effects of stigma on the self-concept.

This interpretation remains popular despite empirical evidence to the contrary. Research consistently shows that the self-esteem of African Americans is, on average, higher than the self-esteem of U.S. whites. In 1989 Crocker and Major proposed that stigmatization may actually protect self-esteem, such that when people know they are the targets of stigma, negative outcomes can be attributed to the prejudice of others rather than to one's talents or efforts (thereby protecting self-esteem). Nevertheless, attributions to prejudice are protective only to the extent that people believe that they are not to blame or that the prejudice is undeserved. For example, overweight women, when rejected on the basis of their weight, nevertheless show a drop in self-esteem, presumably because they endorse the notion that weight is controllable and a matter of willpower. Thus perceptions of responsibility/controllability may influence the impact of stigma on the self. A thus-far unresolved puzzle is whether and how stigma affects the self-esteem of Asian Americans, Latinos, and Native Americans in the United States, who show lower self-esteem than U.S. whites.

Importantly, one does not need to believe or internalize relevant stereotypes in order for them to have adverse consequences. This is evident from research on *stereotype threat*, which shows that performance (e.g., on tests) is affected following the mere awareness that one might be viewed or judged according to a stereotype. For example, whereas women underperform relative to men in a math task when reminded about gender differences, performance differences disappear when the same task is framed as gender-neutral—that is, when the threat is removed. These data, also replicated among stigmatized minorities in the academic domain, are powerful demonstrations against nativist views of performance differences. Subsequent research shows that the cognitive and emotional disruption of having to contend with stereotypes plays a critical role in explaining group-based performance differences where stereotypes are involved.

Individuals may use a variety of strategies to cope with the threat of stigmatization. Behaviorally, people may avoid situations or contexts in which a particular identity is devalued. Psychologically, individuals may disengage, and ultimately disidentify, from the domain in which their group is stigmatized. Proactive strategies may include efforts to disprove the stereotype, as well as social activism. Thus, people are not merely passive recipients of social judgments and evaluations, but rather they psychologically construe and physically shape their social worlds to actively cope with the problem of stigma.

WHAT LEADS PEOPLE TO STIGMATIZE OTHERS?

Approaches to stigmatization from the perceiver's perspective have a longer history and fall into two broad approaches: motivational and cognitive. They both encompass stereotypes, prejudice, and discrimination, terms that roughly correspond respectively to beliefs, attitudes, and behavior. The cognitive approach conceptualizes stigmatization as a by-product of human information-processing biases. The basis for this approach is that people naturally

use schemas, or mental categories, to reduce the potentially limitless number of stimuli in the world into more manageable groupings. Schemas provide not only an organizing principle to help individuals navigate the world, but also a way for people to "fill in the blanks" as needed: A person assumes a new chair will have the properties to support his or her weight, even though the person has never sat on it. According to the cognitive approach, similar processes apply when a person stigmatizes others: A person may assume, for example, that a new female acquaintance cannot read a map though the former has no experience or information on this woman's map skills. Despite being unfair or even harmful to the perceived (by eliciting stereotype threat, for example), these cognitive processes perpetuate stigma because they confer to the perceiver the benefit of having to use relatively few mental resources. Further, some mental associations may be relatively automatic, that is, outside of awareness, so that even people who are motivated to be egalitarian and sincerely believe they are not prejudiced can stigmatize others unwittingly.

By contrast, the central idea behind the motivational approach is that people stigmatize others to feel better about themselves. Research shows that individuals receiving negative feedback about themselves are more likely to discriminate against stigmatizable others, and that this restores self-esteem. Existentially oriented work proposes that people use symbolic means, including a deep investment in cultural or societal ideals, to transcend death. Thus, when reminded of their mortality, people are more likely to be less tolerant of others who subscribe to different worldviews (e.g., religion, political orientations). Newer views suggest that specific intergroup attitudes and behavior depend on the amount of intergroup competition as well as the group's perceived status. A high-status group that one competes for resources with, for example, tends to be viewed as competent and cold, eliciting envy. By contrast, a low-status group that does not represent a competitive threat tends to be seen as incompetent and warm, eliciting pity. Thus the field is moving toward identifying specific emotions and attitudes associated with different manifestations of stigma. Together with an increasing volume of research identifying processes related to being the target of stigma, the field is moving toward a more precise, balanced science.

SEE ALSO *Clark, Kenneth B.; Discrimination; Goffman, Erving; Prejudice; Racism; Stereotype Threat; Stereotypes*

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STIMULUS, UNCONDITIONED

SEE *Classical Conditioning.*

STOCHASTIC FRONTIER ANALYSIS

Stochastic frontier analysis (SFA) refers to a body of statistical analysis techniques used to estimate production or cost functions in economics, while explicitly accounting for the existence of firm inefficiency. The operative word in this definition is *inefficiency*, which implies producers may behave suboptimally in their decisions to maximize or minimize some objective function (e.g., profits, production, revenue, or costs). The intellectual underpinnings of inefficiency in economics can be traced to the writings of John Hicks (1938), who argued that monopolists possess motivations other than those of pure profit maximization; these motivations may lead to suboptimal production. (See Kumbhakar and Lovell [2000] for other rationalizations for inefficiency in equilibrium and a discussion of its intellectual underpinnings.)

The empirical departure point for SFA is the production frontier model, originally formulated by Aigner,

Lovell, and Schmidt (1977) and Meeusen and van den Broeck (1977). Let

$$y_i = x_i'\beta + v_i - u_i,$$

$$i = 1, \ldots, N$$

where firm i seeks to maximize production of observable output y_i, employing linear production function $x_i'\beta$. Observable production inputs (e.g., labor and capital) are in column vector x_i and marginal products are the corresponding column vector of unknown parameters, β. The v_i is a zero-mean, symmetric error. The salient feature of the model is non-negative error, u_i, representing unobserved inefficiency, so the specification is a leading case of an error-component model. The deterministic portion of the specification, $x_i'\beta$, represents the frontier of maximal output for a given set of inputs x_i. The symmetric error, v_i, causes the frontier to be stochastic. The one-sided inefficiency term, u_i, can only reduce output and represents departure from this frontier.

If the inputs and outputs are in natural logarithms, then equation 1 is a Cobb-Douglas production function. Other common functional forms, such as the translog, can be modeled with appropriate selection of the components of x_i. For example, a cost frontier can also be estimated if y_i is total cost and x_i are total output and input prices. Depending on the specification, u_i can be technical (production), revenue, profit, or cost inefficiency.

Estimation of the parameters in equation 1 is complicated by the fact that the mean of inefficiency is nonzero, but either a modified ordinary least squares or a maximum likelihood algorithm are typically employed. For this particular specification, identification is achieved from an independence assumption on x_i, v_i, and u_i and by specific distributional assumptions on the error components, such as v_i normal and u_i truncated normal, exponential, or gamma (Greene 1990). These assumptions may be difficult to justify. In particular, it has been argued that inefficiency is correlated with input mix and that specific distributions for the errors are too restrictive. Schmidt and Sickles (1984) relax these assumptions by considering panel data (firms observed over multiple time periods) and fixed-effect estimation, where inefficency is nonstochastic and time-invariant.

Methods for quantifying inefficiency itself are due to Jondrow et al. (1982), whereas Horrace and Schmidt (1996, 2000) develop methods from inference on inefficiency. Generalizations of the basic model are plentiful. Semi- and nonparametric estimation techniques have been considered (Fan, Li, and Weersink 1996). Time-varying inefficiency was first considered by Cornwell, Schmidt, and Sickles (1990) and Kumbhakar (1990). Applications are unlimited but include estimation of frontiers for industries in the manufacturing and services sectors, for government entities, and for samples of countries. There is also a complementary Bayesian estimation literature (van den Broeck et al. 1994). Finally, there is a competing, purely deterministic methodology called *data envelopment analysis*, or DEA, developed by Charnes, Cooper, and Rhodes (1978).

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STOCHASTIC TREND

SEE *Unit Root and Cointegration Regression.*

STOCHASTIC VARIABLE

SEE *Variables, Random.*

STOCK EXCHANGES

Stock exchanges are organized markets where investors buy and sell shares of corporate stock and bonds. Some of the better-known stock exchanges are the New York Stock Exchange (established in 1792), the Tokyo Stock Exchange (1878), and the London Stock Exchange (1698). Stock exchanges are important insofar as they promote economic efficiency. They offer private investment opportunities to individuals and direct a large part of production in capitalist societies. If stock exchanges work well, this efficiency will promote efficiency in the general economy.

Corporations promote economic efficiency by producing goods that consumers want most urgently and keeping production costs to a minimum. Investors speculate over which corporations will be most efficient and profitable before they buy corporate stocks. After buying shares of stock, investors must monitor the activities of corporate officers to see that their company is operating efficiently to earn the highest potential profit. Corporate officers can mismanage their businesses in several ways. First, they can form faulty business plans. Management can invest in producing products that consumers do not want or invest in a production plan that is excessively costly. Second, corporate officials can mismanage the execution of essentially sound business plans. Third, corporate officials can commit deliberate fraud or deception for personal gain. In any case, stockholders in a mismanaged corporation will lose money.

Competition in stock exchanges determines who plans much of production. When corporate executives plan and carry out efficient production, profits rise and the price of the corporation's stock increases. When corporate executives form defective business strategies or mismanage the execution of sound strategies, stockholders have an interest in replacing them. If stockholders do not replace incompetent corporate executives, then the price of the stock will likely fall. That is, if stockholders do not deal with inefficient corporate executives, the stock exchange can penalize stockholders by cutting the value of their stock. This is how stock exchanges pressure corporate shareholders to terminate incompetent corporate managers. Of course, stockholders may not respond to such pressure from the stock market. However, if stockholders fail to remove incompetent corporate managers, the low price of that corporation's stock will make it an easy target for a takeover bid or leveraged buyout. In other words, a new group of investors could move to buy out some or all of the old stockholders and replace the existing management. Takeovers and leveraged buyouts often transfer ownership of a corporation from a large number of inattentive stockholders to a small number of large investors, who demand better performance from their executives. One of the more famous examples of such a move is when Henry Kravis bought out RJR Nabisco for $25 billion in 1989 and ejected CEO Ross Johnson.

Investors compete in stock exchanges to earn money for themselves. Yet competition between investors promotes the careers of efficient corporate executives and ruins the careers of incompetent ones. This is how stock exchanges determine who plans production. Of course, it always takes some time for pressure from the stock exchange to remove inept management from any particular corporation. However, stock exchanges do not tolerate incompetence indefinitely.

There are reasons to question the efficiency of stock exchanges. The key issue in stock exchange efficiency is information. A stock exchange is efficient if the price of each stock reflects all relevant and available information on that stock. Any stock that is undervalued, given available information, will be coveted—and its price will rise. Any stock that is overvalued will be sold off and its price will fall. In theory, such buying and selling of stocks will push stock prices to their true values.

Ideally, stock prices will reflect the actual performance of the corporate management. In actual stock exchanges, the price of corporate shares can overestimate or underestimate the performance of corporate management. Since investors have incomplete, and sometimes inaccurate, information regarding corporations, there will always be some inaccuracy in stock prices. Investors do, however, profit from being accurately informed, and this prompts them to eliminate serious deficiencies in their information. Stock prices move toward levels that reflect the true performance of corporate officers, but it always takes some time for pertinent information to be uncovered.

Efficient stock exchanges adjust to a continuous flow of new information, but the fact that this information is always incomplete means that stock prices are never perfectly accurate measures of executive performance. Trading with incomplete information is speculative, but unavoidable. The lack of perfect information means that stock exchanges can never achieve 100 percent efficiency, yet stock exchanges are *relatively* efficient if they adjust to new information as it becomes available. Some studies indicate that stock markets are efficient. Yet other studies

of stock exchanges indicate inefficiency. Stocks of small firms tend to earn excess returns in January, and returns tend to be low on Mondays. Also, upswings and crashes in aggregated stock prices (bull and bear markets) indicate that stock prices deviate from their true values, based on market fundamentals. For example, on October 19, 1987, the Dow Jones Index declined 22 percent. Some argue that this and other crashes are evidence of irrationality in stock exchanges, while others claim that the October 19 crash was triggered by the proposal by the House Ways and Means Committee to limit the deductibility of interest on corporate debt.

While it is obvious that stock exchanges are not perfect, the case for regulating stock exchanges is less clear. Some insist that anomalies in stock exchanges indicate a need for government regulation. Given the importance of stock exchanges in modern economies, governmental regulation that improves stock exchange performance can improve overall economic conditions. On the other hand, government regulation is sometimes flawed and will sometimes impair market performance. Expert opinion is divided over the issue of stock exchange regulation, but there is a considerable amount of evidence indicating that current regulations are excessive.

We can illustrate the importance of stock exchanges by examining the economic performance of countries where they do not exist. Stock exchanges are particular to capitalism. Socialist economies prohibit private ownership of stocks, private dividends, and stock exchanges. In a socialist society, all citizens have an equal stake in all parts of industry and all are paid a *social dividend* as equal owners of industry. Since socialist societies lack stock and other financial markets, socialist production gets directed by central authorities. This is a critical difference between socialism and capitalism. Twentieth-century experience with Soviet-style central planning indicates that Wall Street does a better job of directing industry than do central authorities. While there is room for doubt concerning the need for regulation of stock exchanges, there is far less doubt about the need for some kind of market for trading equities. Stock exchanges are an indispensable part of modern economies because they provide an efficient means of planning production in an efficient manner. Without stock exchanges, capital investment would be far less efficient.

Some recent proposals for socialism would allow people to own shares of stock in particular businesses. However, every citizen would be limited to an equal amount of stocks that could be traded only for other stocks. Advocates of this proposal believe that this sort of limited stock exchange would improve managerial performance, while approximating equal ownership of the means of production. However, a "socialist stock exchange" would not be as effective at removing inept managers, simply because it would eliminate hostile takeovers and leveraged buyouts at the hands of large professional investors.

Stock exchanges promote overall economic efficiency, despite the occasional appearance of significant flaws. Improvement in information technology has improved the efficiency of stock markets, and this trend will most likely continue. The general public often misunderstands the role that stock exchanges play in modern economies. People often see stock trading as a purely financial matter, but stock exchange activity is important for planning real production. Stock exchanges have and will continue to play a central role in modern economies because of their indispensable role in promoting economic efficiency.

SEE ALSO *Bubbles; Capitalism; Corporations; Efficient Market Hypothesis; Finance; Financial Instability Hypothesis; Financial Markets; Information, Asymmetric; Lender of Last Resort; Modigliani-Miller Theorem; Panics; Socialism; South Sea Bubble; Speculation; Stock Exchanges in Developing Countries; Stocks; Tobin's Q; Veblen, Thorstein*

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STOCK EXCHANGES IN DEVELOPING COUNTRIES

Stock exchanges play an important role in developing countries. One of the major challenges that developing countries face is capital formation. In economic terms,

capital consists of equipment and machinery used to make consumer goods. The capital structure of developed nations consists of many different types of capital goods organized in factories and industries. Developed countries have capital goods arranged in stages of production. For example, iron ore is first mined, then it is refined, then it is made into steel. Steel is then shaped and assembled into final products, like cars and buildings. Workers use capital equipment at each stage to produce final goods for consumers.

Capital goods derive from financial investment. In order to develop a modern capital structure, someone must invest in buying capital goods. Stock exchanges provide a source of funding for capital investment. When a corporation forms or expands, it needs money to invest in capital (as well as labor and other supplies). The executives of the corporation can raise money for capital by selling new shares of stock in a stock exchange. Each share of stock entitles its owner to part of a corporation's future profits. Sales of new shares in stock exchanges serve two purposes. Stock exchanges enable individuals to invest their own money for private gain. Stock exchanges also enable businesses to raise money to buy capital equipment. This is important for many developing countries that lack advanced capital equipment. The alternative to development through private investment is government funding for investment projects. Government-funded investment projects can be financed either by a nation's own government or through direct foreign aid.

Stock trading also determines who runs corporations. If a corporation is run well, its stockholders will earn a high dividend or capital gains on the price of their stock. If corporate management runs a corporation badly, the price of the corporation's stock will fall. When a corporation's stock price falls dramatically, it is easy for new investors to buy up shares of the stock and replace the management. This is how stock exchanges get rid of incompetent corporate executives. Stock exchanges thus help developing countries to avoid waste from incompetent corporate management.

Stock exchanges played an important role in the development of industrial western Europe and North America. The London Stock Exchange emerged in the eighteenth century. Initially, brokers traded stocks in coffeehouses and private clubs. The stock market in Amsterdam emerged in the seventeenth century. The financial system of Belgium dates to at least the fourteenth century, but the Brussels Stock Exchange opened in 1801. Initially, these stock exchanges were informal and simple. With the passage of time, these early stock exchanges developed into sophisticated institutions with formal rules. Eventually, stock exchanges in major cities began to direct capital investment throughout the West and in parts of Asia. For example, Belgium developed rapidly during the nineteenth century. Statistical studies indicate that the economic development of Belgium was driven by the development of Belgian financial markets, including the Brussels Stock Exchange. Financial development in Belgium began with the country's independence in 1830, and was accelerated by the liberalization of the Belgian stock market in 1867. This pattern was paralleled in many nations. Statistical studies show that well-developed stock exchanges have enhanced long-run economic growth, increased capital investment, and raised productivity throughout the industrialized world.

Since the 1970s many developing nations have begun to form more advanced financial markets. One study (Agarwal 2001) of nine African nations indicates that stock exchange development has led to increased economic growth. Another study (Mohtadi and Agarwal 2007) of twenty-one developing nations shows that the development of stock exchanges increases private investment and economic growth. This study indicates that stock exchanges contribute to economic development by stabilizing productivity and liquidity shocks.

As stock exchanges develop, the issue of financial regulation arises. Some evidence supports the case for liberalization of stock exchanges. Peter Henry (2003) finds that deregulating stock exchanges reduces capital costs and increases investment and per worker productivity. Liberalized stock exchanges can also facilitate the adoption of new technologies in developing nations. Some distortions in the international financial system led investors to hold too much debt and too little equity (Henry 2006). The liberalization of stock exchanges has caused a shift from debt to equity holding during the 1990s. This shift from debt to equity caused a short run increase in economic growth. Henry (2000) also finds that liberalizing stock exchanges can reduce the cost of equity capital by allowing risk-sharing between foreign and domestic investors.

Some scholars point to examples of stock market crashes as evidence of need for regulation. The 1929 crash on Wall Street is well known, but there are more recent examples of stock exchange panics to examine. The Kuwaiti stock market crash of 1982 is often cited as an example of how stock markets need regulation. The Kuwaiti crash left investors with over $90 billion of debt and put serious strain on the Kuwaiti banking system. The Kuwaiti example indicates that stock exchanges can malfunction badly. It should be noted that the Kuwaiti crash represents only a single incident of stock exchange failure. While the Kuwaiti crash supports the case for stock exchange regulation, this incident does not prove the case for regulation.

Investment in stock exchanges typically leads to financial inequality as some investors earn fortunes, but stock exchange activity also promotes economic development and rising living standards for all. The inequality that arises from stock exchange activity may be an unavoidable part of economic progress. Stock exchanges appear to contribute to economic development in developing nations significantly. Regulation of emerging stock exchanges might yield some benefits, but there is a strong case for opening stock exchanges up to free competition and foreign investment.

SEE ALSO *Bubbles; Developing Countries; Development Economics; Equity Markets; Finance; Investment; Speculation; Stock Exchanges*

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STOCK OPTIONS

A stock option, also known as a derivative, is a contractual right, but not an obligation, to purchase (call) or sell (put) shares of a company's stock at a future date and at a predetermined, or strike, price. A stock option fulfills two purposes simultaneously: It serves as a hedging instrument designed to reduce the financial risk of an investor holding a particular financial asset, and it serves as a speculative financial instrument by requiring a second investor to assume more risk in return for a potentially higher financial reward.

Employee stock options are call options and are not publicly traded. Employee stock options must be held by the employee for a specified period of time, termed the vesting period, before the option can be exercised. Employee stock options in the United States consist of two types: incentive stock options and nonqualified stock options. The difference between the two is that the profits from incentive stock options are taxed as a capital gain while those from nonqualified stock options are taxed as ordinary income.

Stock options have long been a component of corporate executive compensation packages. They have become increasingly popular over the past few decades as U.S. companies shifted away from accounted earnings to stock price as the primary measure of corporate performance. Granting stock options to corporate executives, it is argued, helps align their interests with those of shareholders by linking executive compensation to company stock price performance. In the 1990s employee stock options became more widely used in typical employee compensation packages for two reasons. First, unlike salaries,

employee stock options did not cost companies anything. Second, they were used to attract and retain motivated and entrepreneurial employees, especially in booming high-tech and cash-strapped start-up companies.

But employee stock options have been criticized for their potential to become worthless, or "underwater," should the company stock price deteriorate. This was often the case after the dot-com crash in the late 1990s, which left many employees holding worthless stock options. Another criticism claims that the rules for reporting and accounting employee stock options are insufficient. This criticism arose after evidence surfaced that major corporations routinely backdated executive stock options in order to ensure higher financial rewards for those executives. Furthermore, there are criticisms of the Black-Scholes pricing model that is used in valuing stock options, and questions pertaining to whether employee stock options should be valued at the time they are granted or when they are exercised. These criticisms arose after the 2002 Sarbanes-Oxley Act strengthened compensation reporting and accounting measures and required companies to expense employee stock options. The act was a response to the wave of corporate scandals that surfaced in the United States between 1999 and 2001, in which corporate executives at such notable companies as Enron and WorldCom cashed in their stock options after artificially inflating their company's stock price. Finally, employee stock options have been criticized as contributing to the increasing polarization of wealth, since the median total realized compensation (including gains from stock options) of the top *Fortune* 500 chief executive officers since the 1970s has nearly quadrupled while the real wages of workers has declined.

SEE ALSO *Bull and Bear Markets; Equity Markets; Expectations; Financial Markets; Hedging; Risk; Stock Exchanges; Stocks; Stocks, Restricted and Unrestricted; Uncertainty*

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STOCKHOLM SCHOOL

The Stockholm School was a macroeconomic school that was parallel to but independent of the employment theory developed by John Maynard Keynes during the 1930s. It consisted of a number of Swedish economists who were all influenced by Knut Wicksell's theory of the cumulative process of 1898. In Wicksell's theory, increases in the price level are followed period by period, and inflation is assumed to be driven by the gap between the natural rate (profitability of investments) and the loan rate of interest. If the natural rate exceeds the loan rate of interest, investments and consequently demand for goods and labor will increase and so will the price level. This is in contrast to the quantity theory of money, which says that increases in the price level are caused by increases in the supply of money. Gunnar Myrdal's analysis of expectations in his dissertation of 1927 forms a second influence on the Swedish economists.

The Stockholm School developed in three stages. In the first stage Myrdal and Erik Lindahl in the early 1930s discussed Wicksell's criteria of monetary equilibrium (macroeconomic equilibrium), namely, that the natural rate of interest should equal the loan rate of interest, that saving should equal investments, and that the price level should be constant. One outcome of the discussion was that the second condition for monetary equilibrium should be formulated as equality between planned saving and planned investments—that is, ex ante, not between realized saving and investments, that is, ex post.

The second stage is connected with the unemployment commission of the Swedish government and the fact that Sweden during the 1930s was hit by the worldwide Great Depression. Myrdal (1934) wrote a report in which he discussed how fiscal policy (variations of government expenditure and of taxes) could be used to even out the business cycle. Bertil Ohlin (1934) discussed how monetary policy and custom duties could be used for the same purpose. The analyses of Myrdal and Ohlin are rather similar to that of Keynes in *The General Theory of Employment, Interest and Money* of 1936. For example, Ohlin's contribution discusses multiplier effects of public expenditure (i.e., increased public expenditure may increase gross national product more than the original increase of expenditure).

The Swedish government took the advice of members of the Stockholm School, which some believe is the main reason Sweden was comparatively mildly affected by the Great Depression. However, the devaluation by 30 percent of the Swedish krona in 1931 probably had a much greater impact.

The third stage took place in the end of the 1930s when the analysis of the Stockholm School was refined. One example is Erik Lundberg's dissertation from 1937; in anticipation of Paul Samuelson's mathematical analysis of 1939, Lundberg demonstrated numerically that a combination of the acceleration principle (a theory that says that investments depend on the change of consumption) and the multiplier theory can be used to explain the business cycle.

The creative phase of the Stockholm School lasted to the end of the 1930s. After that only a few contributions were published. Like the Austrian business cycle theory of Mises and Hayek, the Stockholm School was surpassed by Keynesian economics. Whereas the Keynesian equilibrium theory was easy to use and to generalize, this was not the case for the Swedish analysis.

SEE ALSO *American Dilemma; Austrian Economics; Cumulative Causation; Economics, Keynesian; Equilibrium in Economics; Expectations; Great Depression; Hayek, Friedrich August von; Keynes, John Maynard; Lundberg, Erik; Macroeconomics; Mises, Ludwig Edler von; Multiplier, The; Myrdal, Gunnar; Quantity Theory of Money; Samuelson, Paul A.; Wicksell Effects*

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Claes-Henric Siven

STOCKHOLM SYNDROME

SEE *Traumatic Bonding.*

STOCKS

Stocks are a type of financial instrument that represent ownership in a business organization. Ideally, the price of any stock is equal to the present value of expected future cash payments to the stockholder. Stocks perform specific and important functions in financial markets and in the economy generally. From the perspective of private investors stocks are a form of financial investment. Ownership of stock in a business entitles a person to part of the profits generated by the operation of that business. When a corporation realizes profits, it pays a dividend to its stockholders, though it will often retain some profits to finance additional business operations.

Stocks differ from other financial instruments mainly in terms of risk. For example, bond owners are paid interest according to their bond's annual yield. Companies that issue bonds enter into a contract with bondholders to pay a specific amount of money over a specific time period. Once a bond matures, the company that issued the bond returns the money that it borrowed to the bondholders. Stockholders, in contrast, are the owners of that company. Since corporations are legally obligated to pay bondholders interest, bondholders risk default if the issuing company goes bankrupt. Since the dividend paid by the company varies with the performance of that company, stockholders can realize a poor rate of return without the company actually going bankrupt.

Economists view stocks as a particular type of institution that performs specific social functions. Stocks, and other financial instruments, play an important role in the functioning of capitalist societies. Stocks, bonds, and other types of loans are alternative means of financing the operations of a business. Stocks represent a means of raising financial capital for business investment. Anytime a business sells new shares of stock, the investors who buy them provide funding for new entrepreneurial business projects. Investors who buy new shares of stock in a company are speculating about the future profits of that company. If the projects that a company undertakes realize or exceed expected profits, its stockholders (unlike bondholders) will earn high dividends and capital gains. So the capitalists who buy shares of stock are speculators who attempt to predict future trends in the economy. Efficient businesses produce products that consumers want most urgently at a low cost. Efficient businesses will earn the most profits for their stockholders.

Capitalists who speculate accurately concerning different businesses can earn new fortunes for themselves by providing finance to efficient businesses. Capitalists who err in predicting future economic trends can lose previously accumulated fortunes. In this way stock ownership can work as a regulating mechanism to direct money into efficient businesses that need additional funding to expand and away from inefficient businesses whose operations should be curtailed.

Most stock trading involves previously owned shares of stock rather than newly issued shares. Trading of existing shares of stock is also important to the functioning of businesses. The price of existing shares of stock tells a company how much money it can raise by issuing new

shares. Of course, businesses need not use this method of finance, and many businesses buy up existing shares of stock to increase the value of the remaining shares. Yet stock ownership still affects the business's performance.

It is important to note that stock ownership implies a separation of ownership and control. Stockholders own a corporation, but the chief executive officer (CEO) or president actually manages the daily operations and plans the future operations of any corporation. Separation of ownership and control in a corporation, though, poses a potential problem. The CEO and other top executives may abuse their authority at the expense of stockholders. Both bondholders and stockholders have an interest in the efficient operation of the corporation in which they have invested. Under specific circumstances, bonds and stocks are virtually identical. If investors have perfect information on the activities of corporate officers, if taxes affect bonds and stocks equally, and if the costs of transacting for stocks and bonds are equal, then stocks and bonds will be perfect substitutes as far as investors are concerned. The logic behind this proposition is simple. If people have perfect information about the activities of corporate officers, then they will know exactly what the future stream of dividends will be. If a stock will pay more than a bond with certainty, then investors will buy more of that stock. When investors own more shares of a stock, its price will rise, and its dividend will fall. The rate of return of a stock will therefore be equal to the interest rate on bonds—if investors have perfect information on the operation of that corporation by its top executive officers. Investors might prefer stocks or bonds for tax reasons or because of differences in transactions costs. But given our three assumptions, bonds and stocks will appear identical to investors.

The idea that investors have perfect information is completely unrealistic, but it does tell us much about the real world. Stocks are different from bonds because of the differences in information needed to profit from these two types of investments. All bondholders need to know is that corporate officers are doing their jobs well enough so that the corporation can avoid bankruptcy and pay interest on its bonds. With stockholders things are different. Every penny that the corporate officers waste or take for themselves is money lost to the stockholders. Consequently, stockholders need to be much better informed about the activities of corporate officers than do bondholders. Bonds are a good investment for people who want a decent rate of return without much bother. Stocks can deliver a higher rate of return but require more attention from investors. Consequently, owners of stocks act as corporate watchdogs to make sure that corporations run efficiently. Of course, some stockholders fail to pay proper attention to their corporate officers. But many stockholders do pressure corporate executives to run their businesses more efficiently, and this pressure contributes to the overall efficiency of the economy.

SEE ALSO *Bubbles; Capitalism; Corporate Social Responsibility; Corporations; Efficient Market Hypothesis; Financial Instability Hypothesis; Financial Markets; Information, Asymmetric; Lender of Last Resort; Modigliani-Miller Theorem; Panics; Risk; Socialism; Speculation; Stock Exchanges; Stock Exchanges in Developing Countries; Tobin's Q; Veblen, Thorstein*

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STOCKS, RESTRICTED AND UNRESTRICTED

Restricted and unrestricted stocks are important components of corporate executive compensation packages. Restricted stocks have particular conditions that must be fulfilled before they can be transferred or sold, whereas unrestricted stocks have no such conditions.

There are two types of restricted stocks. The first type is often referred to as unregistered stocks, which are not legally registered with the Securities and Exchange Commission (SEC) for the purpose of public transactions. The Federal Securities Act of 1933 requires that all stocks be registered with the SEC prior to any public transaction unless the transaction or the stocks are exempt. In 1972 the SEC implemented Rule 144, which identified restricted stocks as any privately issued company stocks, or company stocks publicly purchased by company "insiders" (powerful employees like company executives). According to the SEC, restricted stocks must be held for a certain period of time before they can be publicly sold. However, restricted stocks may be sold privately at any time, though such transactions are strictly regulated.

Restricted stocks are commonly used in executive compensation packages to ensure a balance of long- and short-term incentive rewards. Whereas unrestricted stocks are often considered to be short-term incentive rewards

because they can be immediately sold, restricted stocks are usually considered to be long-term incentives given the length of their vesting periods (the length of time the stocks must be legally held before they can be publicly sold). However, there is disagreement about the actual effectiveness of restricted stocks as long-term incentives. Restricted stocks are also often granted to insiders after corporate mergers and acquisitions to prevent adverse effects on company performance. Venture capitalists are also often given restricted stocks in pre-initial public offerings to help ensure long-term commitment.

The second type of restricted stock is also commonly used in company compensation plans as incentives or rewards for employee performance or service. These stocks are similar to unrestricted stocks in the sense that they are not legally restricted. However, they are restricted in the sense that they cannot be transferred or sold by employees until they have fulfilled certain conditions set by the company. These conditions are often related to specific employee performance goals or are satisfied after an employee remains with a company for a set period of time. For example, a company may grant one thousand shares of restricted stock to an employee who can sell those shares when a certain performance goal is fulfilled. Alternatively, it may grant one thousand shares of restricted stock to an employee who can sell those shares two years after the date the shares were issued.

Although both restricted and unrestricted stocks have long played a role in executive compensation packages, the popularity of restricted stocks increased dramatically in the United States after the passing of the 2002 Sarbanes-Oxley Act, which required companies to expense stock options granted to all employees through compensation plans. The act followed a wave of corporate scandals between 1999 and 2001 in which prominent company executives at companies like Enron, WorldCom, Tyco, and Adelphia artificially inflated their company's stock prices to cash in their stock options for their own financial gain.

SEE ALSO *Stocks*

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STOCKS AND FLOWS

In economics and business, the concept of stocks and flows is crucial to understanding the development of economic variables. It is most commonly used in macroeconomics, labor economics, and accounting. More generally, the concept of stocks and flows is central in system dynamics theory, which describes the development of complex systems.

Most economic variables are either stocks or flows. Stock variables describe the state of the economy at a given point in time, whereas flow variables describe the changes in the economy over a period of time. If one looks at an extremely small period of time, flows will be close to zero, whereas stocks could have any value. Stocks are accumulated or depleted over time by flows, whereas flows represent the rate of movement of items in and out of stocks. Frequently, stocks are characterized by nouns and flows, which represent processes, by verbs.

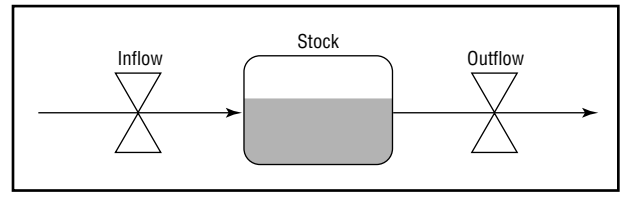

Flows can be divided into inflows—flows that add to stocks—and outflows—flows that deplete the stocks. The difference between inflows and outflows is called net inflows. The figure illustrates the relationship between stocks and flows. If the inflow is greater than the outflow or net inflow is positive, the stock will be rising; if the inflow is less than the outflow, net inflow is negative, and the stock will be falling.

The simplest illustration of stocks and flows is a bathtub. The level of water in the bathtub is a stock, the water coming from the faucet is an inflow, and the draining of the water through the drain is an outflow. If we plug the drain and turn on the faucet, the net inflow will be positive, and the stock of water in the bathtub will be rising. If, instead, we close the faucet and open the drain, the net inflow of water will be negative, and the stock of water in the bathtub will fall.

STOCKS AND FLOWS IN MACROECONOMICS

Economic development cannot be well described or understood without knowledge of which variables represent stock and which variables represent flows. Most macroeconomic variables reported by statistical agencies are flow variables. Gross Domestic Product (GDP) represents the value of final goods produced by the economy

during a given year. GDP is a flow that is measured in dollars, euros, or other currency units per year. GDP is an inflow to the stock of inventory in the economy. The stock of inventory is not large as most of GDP is either consumed by individuals or by the government, invested in production by firms, or exported. Consumption, government spending, and exports are outflows. The remaining GDP is accumulated as additional inventory.

An important stock that plays a big role in macroeconomics is a stock of government debt. It is accumulated by the flows of government budget deficits (the difference between budget spending and budget revenues); it is depleted by the repayment of the debt, through budget surplus (negative budget deficit). If the government runs a budget deficit for many years in a row, it will accumulate a large stock of government debt. Because the interest needs to be paid on the stock of debt and the interest payments are part of budget spending, it becomes harder to stop accumulating the debt when the stock is already large. This provides an example of how the stocks themselves can affect the flows: the larger the stock of debt, the larger the interest spending that is a flow contributing to the stock of debt.

Another important example of stocks and flows in macroeconomics is unemployment. At any given point in time a number of people in the economy are unemployed. The total number of unemployed is a stock. In each period a number of people lose their jobs and join the ranks of unemployed, representing an inflow to unemployment, and a number of unemployed people find jobs and leave unemployment, representing an outflow from the unemployment. If the rate at which workers lose their jobs (job separation rate) is higher than the rate at which unemployed find jobs (job finding rate), unemployment will increase because the net inflow to unemployment will be positive. Thus policies designed to lower the unemployment rate must take into account the effects of certain measures on both job finding rate and job separation rate. For example, if a policy makes it harder for firms to fire workers, it would lower the job separation rate. However, such a policy would also make firms more reluctant to hire new workers, lowering the job finding rate. The overall effect of such a policy on unemployment is uncertain.

STOCKS AND FLOWS IN MICROECONOMICS

Each individual's wealth is a stock. It is accumulated by the inflow of income and depleted by the outflow of spending. The best way to picture this is by thinking about a bank account. The balances in the bank account represent the stock of cash available to the individual; the direct deposit of the salary is an inflow to the account, and check and cash withdrawals are the outflow. If the net inflow is positive, the balances in the bank account will rise. Of course, individuals can hold other assets in addition to bank accounts. Frequently, the largest portion of an individual's wealth is the value of his or her house. Economists believe that the stock of wealth affects the flow of consumer spending—the higher the wealth, the larger portion of income the consumers are willing to spend, which lowers the net inflow of income. This is a mechanism through which economists at the beginning of the 2000s linked the U.S. housing boom to the nation's low savings rate.

Firms also have a stock of wealth, usually referred to as the firm's net worth, or capital stock, which is the difference between a firm's assets and liabilities. If a firm is publicly traded, individuals and financial institutions can buy shares of that firm's stock, which would give the buyer an ownership share of the stock of the firm's wealth. Firms accumulate their capital through the inflow of investment. The stock of capital depletes through the outflow of depreciation and capital that is used up in production.

Galina Hale

STOLEN GENERATIONS (AUSTRALIA)

Stolen Generations, a term coined by Australian historian Peter Read in 1981, refers to those Australian Aboriginal and Torres Strait Islander people who were taken from their indigenous families and communities as children. In its widest interpretation, Stolen Generations might encompass all those indigenous children taken away from their communities since the earliest days of British settlement to the present day, but it is more generally understood to refer to the estimated 100,000 people taken forcibly under extraordinary government legislation targeting children of Aboriginal descent.

Such legislation was first enacted in the 1880s by the Victorian colonial parliament, as the key to its aim of concentrating "full-blood" Aboriginal people, presumed to be on the verge of extinction, on reserves, while forcing off those of mixed descent. Similar legislation was enacted around Australia by the six state governments after federation in 1901, enabling removal and indenturing of Aboriginal and mixed-descent children at the discretion of the authorities, without requiring parental consent or a court ruling. The national Commonwealth government, taking over administration of the Northern Territory in 1911, demonstrated its own commitment to indigenous child removal by introducing such legislation itself. These early policies were couched as "protection." Introduced in

response to Aboriginal land reservation in the southeastern states, child removal under this legislation peaked in the 1920s in accompaniment with a second dispossession as these reserved lands were revoked. Focusing disproportionately on girls, who were placed in private domestic service, the practice revealed an intent to "absorb" the Aboriginal population by removing their children to be brought up as "white."

Authorities used the threat of child removal to ensure submission on the now government-controlled reserves, though the child of *any* person of Aboriginal descent could be taken. Where white settlement was sparser, child removal accompanied the expansion and consolidation of white control, alongside violent destruction of Aboriginal communities, and tended to target children of non-Aboriginal fathers to prevent the growth of a mixed-descent Aboriginal population. Institutions were established around Australia to hold removed children. Aboriginal organizations in the southeast protested, and attempted to raise wider awareness and support in the interwar period, with feminist and humanitarian organizations playing a role in campaigns against child removal.

An important conference of state and federal Aboriginal authorities held in 1937 partly in response to such criticisms prefigured a postwar shift to "assimilation." The influx of non-British migrants from former enemy lands and a shift to cultural theories of race created a new emphasis on the social assimilation of Aboriginal people to an "Australian way of life," even as Australia ratified an international treaty that defined forcible removal of children as a crime in international law in 1949. Boys were now taken in equal proportions to girls, and adoption to white families replaced the older systems of institutionalization and apprenticed labor. Though indigenous people might claim exemption from the provisions of government legislation, subject to proof one had assimilated by having cut ties with the broader indigenous community, a parent's exemption certificate did not cover the children. Indigenous children continued to be arbitrarily removed on no other grounds than their race for decades, with repeal of such discriminatory legislation only starting in 1964, and continuing, slowly, until the last was removed in 1984. By that time, generations of indigenous children had been removed from their families and communities. While many would eventually return to the broader Aboriginal and Torres Strait Islander community, the effects of repeated dislocations, disruption, and trauma were immense, for individuals and for the diverse indigenous communities around Australia. The impact of child expropriation on indigenous Australia has been as devastating as that of land dispossession, if not more so.

Australia entered the millennium with the Stolen Generations at the forefront of political debate. The 1997 Report of a National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children had found that the "actions were genocidal," a number of civil cases had been fought and lost, and there were calls to make restitution a part of the process of national reconciliation. Approximately 250,000 people walked across the Sydney Harbor Bridge in 2000 on Sorry Day, one of the largest public demonstrations in Australian history. State governments and other groups formally apologized to Aboriginal and Torres Strait Islander people. Prime Minister John Howard controversially refused to apologize, arguing that an official apology might constitute liability for compensation claims. Though the term itself was fiercely contested, the history of the Stolen Generations nevertheless became part of the curricula in many schools.

SEE ALSO *Colonialism; Discrimination; Indigenous Rights; Race; Racism; Truth and Reconciliation Commissions; Whiteness*

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STOLPER-SAMUELSON THEOREM

In 1941 Wolfgang Stolper (1912–2002) and Paul Samuelson (b. 1915) put forward a proposition relating changes in the real incomes of workers and of capitalists to changes in the level of protection from import competition. They showed that lowering protection lowered the real income of the scarce factor used intensively in the import-competing sector and raised the real income of the other factor. Previously, international economists believed that opening an economy to international trade would, by increasing the aggregate supply of goods available, enable all income earners to be better off.

Stolper and Samuelson constructed a model of an economy in which only two factors, capital and labor, are used to produce two goods. Households either own capital or supply labor. The home economy cannot change world prices, but it can change the relative price of the two goods by changing the taxes levied on the imported good. In a neoclassical economy in which prices adjust smoothly and all factors are fully employed, a change in goods prices induces a change in the real income of the households owning the factors that produce the goods so that one group of factor owners is better off and the other is worse off.

The crux of the theorem is the link between the changes in the relative price of the goods and the changes in the prices of factors thereby induced. Since 1941 other international economists have stressed that this link has nothing to do with factor scarcity or the cause of the change in goods prices, but rather that it applies generally whenever relative prices change. The importance of the theorem derives from its fundamental message that changes in goods prices necessarily create conflict between households owning different factors. A vast literature developed in response to Stolper and Samuelson seeking to generalize the theorem to a world in which there are many goods and many factors. However, unless very strong restrictions were imposed on the technology of the producers, generating general propositions linking factor income changes to goods price changes proved difficult.

A later model that uses a criterion of real income change corresponding to the change in the utility of the income earner has obtained general propositions. Subject to a weak restriction that there is some diversity among households in their preferences and/or their ownership of factors, a change in any goods price will make some households better off and some worse off. Conversely, for any household there is some goods price change that will make it better off and some that will make it worse off. This generalizes the essential message of the original theorem. It shows that there are universal incentives for households to lobby government to change policies to yield benefits for them, and for other households to oppose them.

As an example, take the original Stolper-Samuelson model in which two factors produce two goods. Suppose the shares of capital and labor in the costs of producing a unit of good 1 (clothing) are 6/10 and 4/10 respectively and that the corresponding shares in producing a unit of good 2 (machinery) are 3/10 and 7/10. Thus, clothing is the good that uses a relatively labor-intensive technique of production. Then, if the price of clothing is raised by 1 percent, the wage rate of workers goes up by 2.3 percent, and the rate of return on capital goes down by 1 percent. Conversely, if the price of a unit of machinery goes up by 1 percent, the wage rate of workers goes down by 1.3 percent, and the rate of return on capital goes up by 2 percent. As predicted by the theory, both workers or capital-owners will benefit if the price of the good which uses their factor intensively rises because of some government intervention in markets.

The theorem has applications to changes in goods prices that originate because of changes in any government taxes or policies or supply shocks. In particular, the theorem is the foundation of models of political economy that seek to explain patterns of government taxes and expenditures. It has been applied empirically to models that explain the structure of national tariffs, other taxes, subsidies, and transfers to households.

SEE ALSO *Economics, International; Heckscher-Ohlin-Samuelson Model; International Economic Order; Rybczynski Theorem; Tariffs*

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Peter Lloyd

STORYTELLING

Storytelling may be broadly defined as an ancient method of conveying ideas, intimations, and emotions in a narrative form with or without the accompaniment of music or visual art. Originally an oral tradition, storytelling has evolved from its earliest form to include a variety of multimedia applications. Folklorists generally do not approve of such inclusive definitions. In her scholarly analysis of the history of storytelling, *The World of Storytelling* (1990), Anne Pellowski defines storytelling as:

> the art or craft of narration of stories in verse/and or prose, as performed or led by one person before a live audience; the stories narrated may be spoken, chanted, or sung, with or without musical, pictorial, and/or other accompaniment and may be learned from oral, printed, or mechanically recorded sources; one of its purposes may be that of entertainment. (Pellowski 1990, p.15)

Storytellers may have also collected stories from various people they encountered while telling the stories they

had learned or created from observations and life experiences. Stories may have been used to entertain, but they were also used to educate audiences. Folklorists discuss oral tales of two main types: *Märchen* and *Sagen*, which are German terms with no exact English equivalents. *Märchen* is both singular and plural, and means something akin to *fairy tale*. These tales, which are not presented as true, are set in the timeless/placeless world of *once-upon-a-time*. The *Sagen*, or legends, however, are presented as factual, with powerfully specific times and places. The common folk may have told their stories at home, at work, and at festival times. Folk stories were told repeatedly and handed down through generations from one teller to the next, making use of storytelling for teaching purposes. Collectors of folktales, such as the Brothers Grimm, Charles Perrault, Joseph Jacobs, Peter Christian Asbjornsen, Jorgen Moe, Andrew Lang, Joel Chandler Harris, and Richard Chase seem to have gathered tales, in part, for the purpose of cultural enrichment.

What is the purpose of storytelling? Pellowski, in line with other theorists, says that storytelling may have started as informal entertainment or play, and only gradually became intertwined with religious rituals, historical recitations, and educational functions. Most theorists suggest that storytelling fulfills the desire for playacting and meets entertainment needs while helping to explain the surrounding physical world or helping honor or placate the supernatural force(s) believed to be present in the world. Storytelling can help explain and express strong emotions and experiences in memorable, long-lasting ways through the intricate use of rhythm, rhyme, and repetition. Storytelling can help preserve traditions, customs, and societal standards, while bestowing immortality on leaders or ancestors. Pellowski notes the earliest evidence of storytelling may be found in the Westcar Papyrus of the Egyptians, which includes tales of encounters between a pyramid builder named Khufu or Cheops and his sons. One of the most famous tales recorded on papyrus is known as *The Shipwrecked Sailor.*

Pellowski traces the development of the bardic tradition, defining the bard as, "a storyteller whose function is to create and/or perform poetic oral narrations that chronicle events or praise the illustrious forebears and present leaders of a tribal, cultural, or national group" (Pellowski 1990, p. 21). The bard was a storyteller, a poet, and a musician. The term *bard* had its introduction through Greek and Roman tales of the Celts. Bards have also been known as *rhapsodes*, *minstrels*, or *jongleurs*.

Tales from a variety of cultures have been preserved because of storytelling traditions. Some examples are: *Beowulf,* an Anglo-Saxon tale of courage in the face of brute strength; *Gilgamesh,* a Sumerian epic tale of the Sumerian king, Gilgamesh, and his friendship with Enkidu, the half-beast, half-man being created to destroy him; *The Iliad,* a Greek epic tale of the Trojan War; *The Odyssey,* a Greek epic tale of Odysseus on his homeward journey from Troy; *Story of Sigurd (Siegfried)*, a Norse legend; *The Volsunga Saga,* the adventures of Sigurd, including the killing of a dragon named Fafnir; *The Merry Adventures of Robin Hood* and *King Arthur and His Knights,* legendary English tales of daring and bravery; *Song of Roland*, legendary French tales; *Sundiata, The Epic of the Lion King*, a legendary African tale of how Sundiata became King of Mali; *The Tain*, an Irish tale of the legendary hero Cuchulain, his birth, battles and ultimate death; and *The Ramayana* of India, a religious tale.

SEE ALSO *Communication; Ethnography; Ethnology and Folklore; Media; Narratives; Tradition*

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Geraldine Cannon Becker

STOUFFER, SAMUEL

SEE *Tolerance, Political.*

STOWE, HARRIET BEECHER

1811–1896

As an active figure of the nineteenth century and the so-called "feminine fifties," Harriet Beecher Stowe lived and wrote, negotiating between extremes of unfolding cultural elements. During that time, young girls commonly learned that the meek could and should inherit the world by practicing self-discipline and humility. As they matured, women might learn that they could through their own wit and activity earn a place in an emerging capitalist economy. Stowe's life and writings approach such cultural contradictions as played out in the realms of race, sex, class, religion, and changing ideas of what constitutes noble identity and behavior.

Stowe's best-selling *Uncle Tom's Cabin; or, Life Among the Lowly,* first appeared as serialized in 1851–1852 in the abolitionist newspaper *The National Era.* In 1852 these "sketches" were published in book form and widely translated into theater and over forty languages. As Stowe states in her preface, "The object of these sketches is to awaken sympathy and feeling for the African race, as they exist

among us; to show their wrongs and sorrows, under a system necessarily cruel and unjust." Appealing to her readers' various faculties, Stowe shows that the institution of slavery is fundamentally incompatible with Christianity. By 1862 when she met with President Abraham Lincoln, the cultural impact of *Uncle Tom's Cabin* had become so great that Lincoln is said to have acknowledged, "So you're the little woman who wrote the book that started this great war!"

Public reaction to Stowe's million-seller in large part reflects debates in American racial history. After receiving scathing contemporary pro-slavery reviews, she documented her sources by publishing the five-hundred-page *A Key to Uncle Tom's Cabin* (1854). Later, Harlem Renaissance writers and others have sharply criticized Stowe's Christ-like portrayal of the martyr Uncle Tom as obsequious and a role model obstacle in the struggle for racial equality.

Born on June 14, 1811, Stowe's early life prepared her well for facing slavery and women's issues head-on and resolutely. She gained rhetorical skills early from her austere and demanding Protestant evangelist father, Lyman Beecher, and later from her brother, abolitionist and theologian Henry Ward Beecher. Available to her were books, sermons, and philosophical discussions. In a home peopled by siblings, relatives, and boarders, she developed a lively mind as well as a reverence for an idealized image of womanhood. Stowe attended the Hartford Female Seminary—founded and run by her sister Catherine Beecher—and later taught there. Unlike other women's schools that prepared women for marriage, Beecher's seminary taught women to use their own judgment and to become socially useful. Such teachings evolve as a concluding lesson in *Uncle Tom's Cabin* as readers are urged to see to it that in their actions they "feel right." In 1836 Harriet Beecher married the Bible scholar Calvin Ellis Stowe and subsequently bore seven children before moving to Bowdoin, Maine, in 1850.

Later in life Stowe spoke and wrote to protect the women's rights movement from those who advocated free love and free divorce. Her later works question the cultural bases of capitalism and consumerism by revisiting the early 1850s virtues of humility, charity, self-discipline, and social usefulness, but these works generally lack the fire that had established her earlier place in literary history. She died on July 1, 1896.

SEE ALSO *Feminism; Slave Resistance; Slavery; Suffrage, Women's; U.S. Civil War; Uncle Tom; Women's Movement*

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Martha L. Henning

STRATEGIC BEHAVIOR

In economics, the term *strategic behavior* usually refers to decision-making that takes into account the actions and reactions of other economic agents. Its essential feature is the recognition of the direct interdependence between one's behavior and that of others.

The difference between strategic and nonstrategic behavior can be highlighted by the following example: Suppose a consumer enters a store and encounters a product with a particular marked price. This consumer's decision to buy or not buy the product depends solely on their preference for the product. On the other hand, suppose the store allows bargaining. In this case, the price for the product is not fixed, but depends rather on the process of negotiation between the buyer and the seller. In this process of negotiation and purchase, the consumer presumably not only takes into account their own likes and dislikes for the product, but also tries to anticipate such factors as the lowest price the seller would be willing to accept. Whereas in the first situation personal preference is the only factor influencing the consumer's decision, in the latter case the consumer also has to take into account the seller's behavior in deciding what offer to make or accept and consequently whether to buy or not. This latter process is an example of strategic behavior.

In economics, the first formal discussion of the concept of strategic behavior is believed to be in Augustin Cournot's 1838 book *Recherches sur les principes mathématiques de la théorie des richesses* (published in English as *Researches into the Mathematical Principles of the Theory of Wealth*). In a chapter on the competition between producers, Cournot considers how each producer, when making output decisions, takes into account the impact their own output and that of other producers has on the market price and thereby on profits.

The concept of strategic behavior is now recognized in many diverse academic fields, ranging from economics and business to politics and international relations. In the present day, a counterpart of Cournot's above-mentioned example with an impact on our day-to-day life is competition between producers of oil. There are only a handful of big oil-producing countries in the world, and in deciding whether to increase or reduce production, each takes into account the impact of their decision on the price of oil in the global market and consequently on their own revenues. R&D races, bidding in auctions, trust in societies, contracts, and social insurance are a few of the many prominent applications of the concept in economics and business. Strategic voting and the formulation of election platforms are two examples of strategic behavior in politics, while in international relations, strategic behavior is found in arms races, trade, and in negotiations between nations. The outcome of interaction between the strategic behaviors of a set of agents is a subject examined by game theory.

SEE ALSO *Competition, Imperfect; Game Theory; Strategic Games; Strategy and Voting Games*

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Sumon Majumdar

STRATEGIC GAMES

The concept of a strategic game forms part of the central idea behind the theory of games. A strategy is a plan of action that a player can use to guide the player in selecting moves throughout the game. It may be trivially simple, such as "whenever you are called on to move, select randomly among the moves," or it may contain detailed complex instructions to cover all contingencies.

With few exceptions, virtually all games of any interest have a strategic component. Even tic-tac-toe, which is often utilized to illustrate an inessential game, or one that is not worth playing, has a strategic component. It is regarded as inessential because with only a little thought both players can enforce a draw; nevertheless, it has a set of strategies from which each player can select his actions. Even in a game as simple as this it is possible to select a losing strategy.

In the formulation and mathematical analysis of games of strategy, John von Neumann and Oskar Morgenstern (1944) made the great contribution of providing a complete language for the study of individual and multiperson conscious strategic choice. Concepts that had been extremely vague were defined precisely and operationally in a manner so that they could be analyzed mathematically. This includes the precise meanings of the terms *choice*, *move*, *information*, *strategy*, *outcome*, and *payoff*. But in many of the social sciences, particularly political science, sociology, and anthropology, some research questions are rather abstract, taking into account context and much of the richness and intangibles of areas of investigation. For many of the critical problems in the disciplines these subtleties cannot be ignored, and unfortunately the formal language of strategic games does not pick them up. With its mass markets and anonymous rational conscious behavior, economics has many more questions that are congenial to the strategic game analogy than do the other social sciences.

When the analogy is made between formal games of strategy and strategic behavior in politics or society, the gap between them is manifested in the assumptions that are made concerning knowledge of the rules of the game and common knowledge. When we consider the game chess, two implicit assumptions are made: It is assumed that all players know the rules of the game, and that each player knows that the other player knows the rules of the game. In society, even the best politicians know that much is unknown.

In the formal definition, strategy is defined as a complete book of instructions that a player could give to a delegate to play for him that describes what he wants the delegate to do under every contingency that might arise. A game as simple as chess has a hyper-astronomical number of strategies, so large that there is no way that they can all be enumerated in practice. It is clear that chess could be considered an inessential game in the sense that if a player could calculate all strategies it would be simple to select an optimal strategy, and if each player did that he would not bother playing—he would merely submit his optimal strategies and the game would be declared a draw or a win for the first mover. Yet years of experience and calculations on the size of the calculations tell us that the way chess is actually played by the best of human chess players is not by the enumeration of all strategies.

The difference between the abstraction of certain concepts and their manifestation in everyday life is nicely illustrated in the formal concept of strategy and how it is manifested in both military and corporate arenas. A strategy in the military or at the top of a corporation is an overall plan that, in its scope, bears some resemblance to the ideal strategy utilized in strategic games, but it has at least two critical modifications: It recognizes the critical role of delegation and aggregation. The general knows

that neither he nor his opponent knows all the rules of the game, and he knows that he has to delegate decision-making to those who have greater special information than he does.

In spite of these caveats, there are many questions in economics, political science, social psychology, and even law, biology, and anthropology that can use the formal game structure profitably. Two basic applications to political science serve as examples. The first is the Condorcet Paradox and the second the Shapley-Shubik Power Index.

The Condorcet Paradox was established in 1785 by Marquis de Condorcet (b. 1743). His *Essay on the Application of Analysis to the Probability of Majority Decisions* describes describes the intransitivity of majority preference. According to the Condorcet Paradox majority wishes can be in conflict with each other. Consider three individuals named A, B, and C and the issues called I, II, and III to be put to the vote. The preferences of A are given by I pr II pr III (where *pr* means "preferred to"), the preferences of B are III pr I pr II, and the preferences of C are II pr III pr I. Consider a simple majority vote between any two social choices. By a 2:1 majority, a vote between I and II selects I, a vote between I and III selects III, and a vote between II and III selects II.

The Shapley-Shubik Power Index (Shapley and Shubik 1954) gives an intrinsic measure for how power varies with the accumulation of votes. Consider a committee with five votes. If there are three individuals with one person having three votes and the other two people having one each, and the rule was simple majority vote, the individual with three votes would have all the power. If there were five individuals, each with one vote, the power would be spread evenly. The index gives the nonlinear formula to measure power as a function of distribution of the votes. For example, in the five-vote simple-majority voting game, if there were four individuals with one having two of the five votes and the others having one each, the first person's power would be one-half, and the others' would be one-sixteenth each. This measure provides a benchmark, assuming that all individuals have equal chances of forming any coalition. In application, a correction for coalition possibilities must be made. A natural application of this is in predicting outcomes in Supreme Court cases.

SEE ALSO *Strategic Behavior; Strategy and Voting Games; Subgame Perfection*

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Martin Shubik

STRATEGIES, SELF-HANDICAPPING

People might be expected to reach for any and every advantage to facilitate performance, including eliminating any obstacle or disability that might interfere with success. Nevertheless, individuals are sometimes willing to strategically create impediments to performance, and this has been termed *self-handicapping*. Self-handicapping is a strategy undertaken to escape the implications of an impending failure, should it occur, on an individual's sense of self-worth. It is an anticipatory self-protective strategy, the goal of which is to guide performance-relevant attributions. Those who make use of this tactic place excessive significance on ability. They feel that competence can be demonstrated but not improved, and while they perceive their own self-worth as hinging on personal aptitude, they are uncertain of their capacity to succeed. Thus, self-handicappers possess a fragile, doubt-ridden sense of self, which they work to bolster. By erecting barriers to achievement, self-handicappers aim to discount personal competence as the causal agent in any subsequent failure. The presence of such obstacles also serves to enhance any personal responsibility for successful outcomes occurring in spite of the handicap.

Two distinct forms of self-handicapping have been investigated: behavioral and claimed. Behavioral handicaps involve actively sabotaging one's own performance. The athlete who fails to practice in the weeks leading up to an important match may be using lack of preparation as an explanation for an impending loss. However, an athlete who complains of illness, fatigue, or injury prior to a match may satisfy the same goal of providing a justification for failure, but these are merely claims, where the individual does not actively undermine his or her performance, but instead provides an a priori excuse. In general, males are more likely to engage in behavioral

self-handicapping than females, but both genders make use of claimed handicaps.

As originally conceptualized, self-handicapping was thought to stem entirely from an individual's desire to sustain positive self-views. However, research shows that impression management or maintenance of esteem in the eyes of others is also an influential motive. As such, self-handicapping can involve self-deception as well as self-presentation.

Some individuals are more likely to employ this strategy than others. Situational factors can also increase the likelihood that self-handicapping will occur. Most notably, situations involving noncontingent success (e.g., undeserved praise, inexplicable victory) or private failure are also more likely to induce self-handicapping. Earned or expected successes are liable to be seen as repeatable (and thus are unlikely to produce the feelings of uncertainty necessary for self-handicapping). Further, whereas private failure leaves open the possibility of being viewed positively by others, public failure leaves no positive image to preserve, and makes the introduction of additional handicaps useless.

Though employed as a means to protect the self from undesirable consequences, in the long run self-handicapping may actually cause more harm than it prevents. Some handicaps are injurious in and of themselves (e.g., drug and alcohol abuse). Further, although self-handicapping does bolster immediate self-regard, habitual use of this strategy actually undermines self-esteem by underscoring a person's self-doubt. In addition, high self-handicappers tend to demonstrate poorer academic performance. Ironically, the desire to appear capable seems to actually drive self-handicappers to undermine their competence over time.

SEE ALSO *Depression, Psychological; Self-Concept; Self-Defeating Behavior; Self-Esteem; Self-Presentation*

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STRATEGY AND VOTING GAMES

In game theory, a player's strategy refers to a complete contingent plan for all possible scenarios that might arise. When voting is modeled in a game theoretical framework, voters are treated as strategic players, and the framework describes the strategic interactions among the voters. A voting game is characterized by three key elements: the set of voters, the set of strategies available to each voter, and each voter's preferences on the set of voting outcomes. The set of feasible strategies in a particular voting game depends on the voting system in use. For example, under the plurality voting system, each voter can vote for only one candidate. With preferential voting, each voter ranks a list of candidates in order of preference. Therefore, a voter's strategy in a plurality voting game specifies which candidate to vote for each combination of other players' votes, whereas in a preferential voting game, a strategy specifies a preference list for each combination of other players' rankings. A voting outcome is determined by all voters' strategies (called a strategy profile) under a particular voting system. For example, in a single-winner plurality voting game, the candidate with the most votes wins the election. In proportional representation systems, the percentage of votes received by a party determines the percentage of seats allocated to the party. A voter's preference on the set of voting outcomes is usually represented by a payoff function that assigns a numeric value to each strategy profile.

The concept of strategy, together with strategic game (or normal form game), was first formally introduced in 1944 in *The Theory of Games and Economic Behavior*, by John von Neumann and Oskar Morgenstern. Later, in 1950, John F. Nash Jr. developed the solution concept of the Nash equilibrium, which describes any stable state in which each player's strategy is optimal (in the sense that it maximizes a player's payoffs among his or her other strategies) given other players' equilibrium strategies. Since then, game theory has become an important tool for analyzing problems in various fields, including economics, biology, and political science. An early application of game theory to voting situations was offered by Robin Farquharson in his influential 1969 book, *Theory of Voting*. Farquharson's approach departed from earlier studies, which usually assumed sincere voting by disregarding the strategic aspects of voting. A voter's strategy is sincere if the person votes according to his or her true preferences regardless of other voters' strategies. In general, a sincere voting profile does not constitute an equilibrium for a voting game. Allan Gibbard (1973) and Mark Allen Satterthwaite (1975) proved a theorem showing that strategic voting is universal in common democratic systems. Consequently, modeling voting as a

strategic game has been widely accepted in economics and political science.

Although strategic voting modeling has its theoretical attractiveness, the degree of empirical support varies for different voting systems. In addition, two lines of criticism of game theoretical voting models have arisen. From a descriptive view, it is not clear whether real-life voters have full knowledge of game structures and are able to perform complex strategic calculus. Normatively, strategic voting rationalizes manipulations of systems by voters who misrepresent their preferences, and accordingly by candidates who use media influence to shape voters' perceptions. Such manipulations are generally considered undesirable for a democratic system.

SEE ALSO *Strategic Behavior; Strategic Games; Strategy*

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STRATIFICATION

The term *stratification* refers to the system of inequalities within and between societies, the processes of assignment to positions within a social hierarchy, and the means by which resources are allocated. Various theories have tried to explain how and why stratification systems emerged. The most prominent of these were developed in the nineteenth and early twentieth centuries following industrialization, which altered the social structures of traditional feudal and agrarian societies and gave rise to more complex urban societies. Before industrialization, societies were more stable and had much less economic inequality, and clear, fixed boundaries separated groups like the nobility from their subjects (see Lenski 1966).

In his pioneering account, Karl Marx explained stratification as a product of the mode of production—the principal system of market organization (e.g., capitalism). He outlined a progressive transition from feudalism to capitalism and finally to socialism. Marx claimed that the organization and development of modern, industrial capitalist societies were driven by class relations. He argued that capitalist societies would grow increasingly divided between a capitalist class that owns the capital and therefore controls the means of production and a growing labor class (proletariat) that sells its labor to capitalists in order to survive. Marx predicted a struggle between capitalists and workers leading to the destruction of the capitalist system and the formation of a socialist society free of classes. Moving beyond his historical prediction, modern Marxists have reconceptualized his class schema to focus on authority, the inherently antagonistic relations between workers and owners/managers, and the exploitative nature of capitalism (see, for example, Wright 1997).

In the early twentieth century, Max Weber added a focus on social status and political power to Marx's more purely economic perspective. He proposed class, status, and party as the three dimensions of stratification in modern societies, though he also discussed the role of castes and professions. Though Weber's writings conceptualizing class were not very developed or novel, he has been deployed widely in class schemas focused on prestige, occupations, status, and skill. Weber's present-day influence can most be seen in the use of his concept of *closure*—that is, the process by which organizations define boundaries that establish which members receive certain benefits and which do not.

Structural functionalism, which traces its roots to the work of Émile Durkheim, perceived stratification systems as universal to every society, from simple hunter-gatherer tribes to complex, modern industrial societies. Kingsley Davis and Wilbert E. Moore (1945) offered a particularly influential account of the "functional necessity of stratification." Structural functionalist theories were criticized for neglecting conflict and for failing to address the possible lack of stratification in small egalitarian tribes or the reduction of stratification in modern social democracies. Today, structural functionalism has few followers in the social sciences.

A common characteristic of these early attempts was the effort to develop general laws. During the post–World War II (1939–1945) period, however, social scientists have moved away from grand, all-encompassing theories of stratification toward more flexible perspectives, which perceive stratification as a result of the interplay between multiple actors and multiple dimensions of inequality. One of the main new issues gaining attention was that of gender. Scholars argued that gender played a central role in the formation and functioning of stratification systems. They showed that women's exclusion from social life

placed them in an inferior position, resulting in lessened life chances and status. While women's standing in social and economic life has improved over the past half-century, women are still restricted by gender roles and patriarchy. Rich literatures examine the impact of family structure, occupational segregation, devaluation of women's work, and sex-based pay gaps.

Other issues that came under greater scrutiny were race and ethnicity. Scholars demonstrated that one's racial and ethnic background greatly influences one's life chances. U.S. sociologists have devoted a great deal of attention to black-white differences in residence, educational achievement, and employment status. Many focused on residentially segregated ghetto communities where unemployment, poverty, and single parenthood were highly concentrated. Though many sociologists have demonstrated that some racial and ethnic differences can be explained by class-based factors like income level, there is an emerging literature on how race, gender, and class intersect to shape disadvantage.

There also has been great interest in the actors and processes that reproduce and maintain social inequalities. Many sociologists focused on the role of elites in the reproduction and maintenance of social inequalities. American sociologist C. Wright Mills (1956) argued that a "power elite" controls the economy, state, and military. Some scholars have described elites as a conscious, homogenous social class, which actively reproduces itself and guards the privileges it possesses. Perhaps the most productive line of inquiry has concentrated on the linkages between social origins and levels of attainment. Peter M. Blau and Otis Dudley Duncan (1967) famously analyzed the relationship between paternal occupation, education, and attained occupation. Debates about modeling techniques and historical and cross-national patterns of mobility and attainment dominated analyses of stratification from the 1970s to the early 1990s. Some scholars took the study of reproduction, mobility, and attainment in new directions and emphasized the role of social ties and culture. French sociologist Pierre Bourdieu argued that access to high culture and learned practices, which he referred to as *cultural capital*, enable the children of the privileged to get ahead and facilitate the reproduction of social inequalities. Bourdieu also offered the concept of *habitus* to account for the embodied disposition that dominant classes exercise instinctively to reproduce their higher status. The concept *social capital* emerged to refer to the resources that flow through social networks.

In recent years, with the rise of globalization and the expansion of neoliberalism across the globe, debates about the global stratification system gained a great deal of attention. World systems theorists, led by Immanuel Wallerstein, contend that industrial core countries have an exploitative relationship with the less-developed periphery. The perseverance of poverty in the Third World, the weakening position of traditional labor classes in industrialized countries, and rising income inequalities within nearly every country lead many to believe that we are now facing a global system benefiting a small minority while hurting the rest. While many note the massive levels of inequality between countries, there has been a lively debate about whether global inequality is increasing or decreasing. Glenn Firebaugh (2003), for example, claims that inequality between countries has decreased, while Branko Milanovic (2005) contends it has increased. Regardless, global inequality in income, health, and well-being remains enormous and in the future stratification scholars are likely to focus more on the plight of the disadvantaged in less-developed countries, where the majority of the world's population resides.

SEE ALSO *Education, Unequal; Inequality, Income; Inequality, Political; Race Relations; Sociology, Political*

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Yunus Kaya
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STRATIFICATION, POLITICAL

If social stratification usually refers to the kind and degree of distribution of resources (e.g., wealth, status, prestige, and privilege) within a social system, then political stratification is best understood as the extent to which such inequalities are encapsulated in, or influenced by, political structures and processes (i.e., involving influence, authority, or power). In this sense power is understood not only in relation to achieving desired results, even against opposing interest, but also in terms of the ability to frame and set agendas. Conceived of and measured as an absolute, or relative, entity, political stratification is often used in studies on societal change, egalitarian opportunity structures, democratization, the distribution of power and equality, and the efficiency of social and political justice. Linking political, economic, and social inequality structures, the concept is central to the social sciences and social policy.

Narrower conceptualizations of political stratification, favored particularly by political scientists in the 1960s and 1970s, usually focus on stratified political activities, positions, and influence of individuals, groups, parties, or nation-states. Studies in this vein tend to explore a variety of topics including political elites, the electorate, conceptions of democracy and citizenship, political activism, and new social movements. However, this narrow conception is rarely accompanied by a clear overarching theoretical model about political stratification. Indeed, attempts to distinguish political from social stratification are only partially successful and not widely accepted in the social sciences, due in part to the complex yet profound interdependence between the political, social, economic, and cultural spheres. Political stratification in a wider sense, however, has permeated the social and political sciences. Indeed, most modern studies on social stratification are steeped in a political discourse.

POLITICAL STRATIFICATION FROM AN INSTITUTIONAL PERSPECTIVE

From an institutional perspective political stratification can be related to norms, values, class structures, status groups, associations, and laws, which structure the relations between individual and collective actors. For example, this perspective would suggest that associations are based on social and economic interests, which in turn give rise not only to a stratification order due to differential capacities and influence, but also to cooperation and conflict according to these pursuits. Based on differing relations to the means of production, the German political philosopher Karl Marx (1818–1883) predicted that the bourgeoisie would protect its economic interests by repressive laws. This would create a class consciousness; cause the resolution of regional, ethnic, and other conflicts among the proletariat; lead to a unified and politically organized labor movement; and ultimately result in the overthrow of the capitalist system by revolution, to be replaced by a classless, communist society. Critics argue that class theory fails to account for the growing presence of a strong middle class, the absence of antagonistic relations between classes, the continued success of elites to set agendas, and the triumph of capitalism over socialism as an economic-political system. This criticism is not as convincing as it appears at first. On the one hand neo-Marxists are able to overcome at least part of these criticisms by emphasizing the exploitative nature of economic interactions also within the growing middle class, which, based on differential access to wealth, authority, skills, or credentials, become at once exploiters and exploited within a capitalistic system. Beyond this, systematic economic exploitations and political paternalism continue to take place based on differential access to resources between nations of differing economic development levels, social groups differentiated by ethnicity or gender, and the transfer of advantage and privilege from one generation to another. On the other hand there exist other class theories that do not share the assumptions of Marxist class structures. For example, class structure can relate to the social positions of actors as identified by their integration into the labor market. This is distinct from a social hierarchy, and usually borrows from German sociologist Max Weber's (1864–1920) notions of class. In this sense, class does not imply a single hierarchical dimension. A nonhierarchical class schema as developed by, for instance, British sociologist John Goldthorpe and his colleagues, differs from class schemata based on some vertical (i.e., ascending/descending) dimension. For example, skilled industrial workers, small proprietors, and minor officials may occupy a similar position in a hierarchy, but may be separated by class in that they are subjected to very different technical and economic realities due to innovations or governmental policies. A second Weberian approach to institutional structures consists of his distinction between different authority-types: traditional, legitimated by heredity and traditions; charismatic, based on inspirational leaders; and legal-rational, based on law and rationality.

Another important tradition from an institutional perspective relates to the subjective assessment of status or prestige. The ranking or rating of occupations according to their subjectively perceived prestige and its resulting access to social, economic, and political resources started most likely with American educator George S. Counts (1889–1974) in the 1920s but was popularized by the National Opinion Research Center (NORC) in the 1940s. While some argue that it is the subjectively attributed qualities to these titles themselves that structure soci-

ety, and while others suggest that subjective aspects are merely proxies for an underlying social and economic structure, Weber emphasized the interdependence between class, status, and prestige. According to Weber power has different bases that interact with each other: class based on economics, status based on prestige and honor, and party based on political power and domination via associations. An important variant to this theme was presented by the French sociologist Pierre Bourdieu (1930–2002), who explored the convertibility between economic, cultural, social, and symbolic capital.

POLITICAL STRATIFICATION FROM A RELATIONAL PERSPECTIVE

From a relational perspective political inequality structures emerge from differentiated interactions between agents. At the base are actors such as individuals, political bodies, associations, and nation-states, which interact with each other. These interactions are patterned not only according to institutionalized rules but such interactions, never a perfect reproduction of institutional blueprints, also create, maintain, and transmute these rules. Societal structures from this perspective are based on and created from the recurring patterns of relations. Based in part on the study of religious and political characteristics of groups, German philosopher and sociologist Georg Simmel (1858–1918) proposed that society exists only as social representations, or collective ideas, which provide the basis for social relations as societies' external form (i.e., rejecting the idea of society as something that can have a substantive existence). Indeed, the objectification of the church or the state is created from complex relations and interactions among the members of large, heterogeneous groups. In this vein democratization and social equality can be understood as the reduction of systematic power differences between group members within a social system, while the distribution of power also gives rise to the structuring of social relations in terms of cooperation, conflict, and competition. Differential relations between agents within a social system were initially studied with simple sociograms in order to understand power structures and relations. These have been replaced by more sophisticated forms of network analysis, in which power structures are explored in terms of differing relations between nodes and their quality, reciprocity, density, intensity, and durability within a network structure. This approach can be found in studies focusing on cliques, associations, interest groups, and elites.

POLITICAL STRATIFICATION FROM AN EMBODIED PERSPECTIVE

From an embodied perspective political stratification can be understood in a number of different ways. Here individuals are at the forefront as they, through continuous acts of self-definition, interpret and make sense of norms and values, and as they interact with each other. Based on the symbolic interactionist perspective of American philosopher and social psychologist George Herbert Mead (1863–1931), the "socio-physiology" of individuals underpins self-awareness, interactions, and behavior. Interactions and the thus-derived structures are based on the interpretation and internalization of rules by individuals. Or structures and stratification are based on interaction according to a system of rules, yet these interactions concurrently reproduce and transform the rules and thus the underlying structures. For French philosopher Michel Foucault (1926–1984), organizations and institutions (e.g., schools, asylums, medicine) are invested within individual bodies through discipline and punishment of their bodily activities. As such, individuals in modern societies no longer require the policing of their thoughts and activities by others but become their own guards. Connected to this notion is governmentality, which also plays a role in conceptualizing political stratification from a poststructural perspective. Governmentality refers to power as tactical and continuous negotiations between actors and institutions (e.g., markets). Meaning and knowledge are shaped via the interconnection between discoursive strategies and practices. From this perspective, power is omnipresent and embedded in all forms of discourse and actions. Knowledge thus produced and internalized has the power to regulate and discipline the self. Also, Bourdieu's notion of different forms of capital could be understood as part of embodied structures because such capitals are connected to personal fields of power and the habitus of the individual.

In sum, political structures can be conceived of in terms of institutions, relations, and bodies, although these perspectives are best understood as ways to organize different theoretical approaches rather than implying differences in kind. Throughout, controversies about political stratification center on questions such as: What is stratified? How is it stratified? What causes such stratification? and What are its consequences? Postmodern, particularly poststructural, theorists would argue that due to technological innovations and the increased speed and efficiency of mobility of information, goods, and people, all social, economic, political, and cultural structures are dissolving. In the absence of dominant political structures and social order, individuals no longer have positions and trajectories but are either encouraged or forced to construct themselves and to interpret their environment according to context-dependent, ephemeral, media-dominated, lifestyle and consumption choices.

Such suggestions may point at important dynamics associated with modernization and globalization, but empirical evidence continues to illustrate the persistence

of structures. Part of the criticisms against structural approaches is based on three misunderstandings: inability for (privileged) individuals to perceive the constraints of structures, structures as something static, and determinacy of structures. However, individuals' subjective experience of structures is not necessary for structures to exist. Structures do not necessary imply stability as even highly dynamic and changing systems can be based on structures. And the presence and influence of structures rarely determines completely the thoughts and actions of individuals. Despite the demonstrable social, economic, and political changes that modern (and all other societies) are experiencing, structures themselves continue to exist as they persist, adapt, or transmute. Modern questions about political structures should not be based on whether they exist but rather in what form and in which context they exist.

SEE ALSO *Class; Foucault, Michel; Globalization, Social and Economic Aspects of; Hierarchy; Inequality, Political; Mead, George Herbert; Modernization; Political Science; Postmodernism; Stratification; Structuralism; Weber, Max*

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Manfred Max Bergman

STRATIFICATION, SOCIAL

SEE *Stratification.*

STREAM OF CONSCIOUSNESS

The science of psychology in large part investigates the activities of individuals and groups as they function in a social system. Many social scientists share the conviction that a psychological understanding requires not only systematic observation of behavior that occurs in a social context but also study of the mental life of the individuals involved. Human beings have access of a direct kind to part of their mental life. They are normally in a position to communicate to others a great deal of firsthand information concerning that part. Specifically they apprehend their own stream of consciousness as it is proceeding within them. William James (1842–1910) is one of the original creators of the science of psychology and is famous for the perspicacious account presented on the stream of consciousness in his masterwork *The Principles of Psychology* (1950 [1890]). The following is from James's *Talks to Teachers on Psychology: And to Students on Some of Life's Ideals* (1916 [1899]) and encapsulates his concept of the stream of consciousness:

> Now the *immediate* fact which psychology, the science of mind, has to study is also the most general fact. It is the fact that in each of us, when awake (and often when asleep), *some kind of consciousness is always going on*. There is a stream, a succession of states, or waves, or fields, (or of whatever you wish to call them), of knowledge, of feeling, of desire, of deliberation, etc., that constantly pass and repass, and that constitute our inner life. The existence of this stream is the primal fact, the nature and origin of it form the essential problem, of our science. (p. 15)

I spell out here James's concept of the stream of consciousness (cf. Natsoulas 1999, 2001) using interchangeably the terms *state of consciousness* and *consciousness state* for the basic durational components that James proposes to constitute the stream of consciousness one at a time in tight succession.

A consciousness state is generally an awareness of a number of items. It is no less an integral state given the number of its "objects." These include states of consciousness as well as, for example, environmental properties and bodily aspects of the individual. A highly recurrent feature of the mental life of humans is the direct apprehension of states of consciousness as they occur. James holds that this "inner awareness" is a matter of one consciousness state's having another consciousness state belonging to the same stream among its objects. It is impossible for a state of consciousness to be itself among the items it directly apprehends. James insists on the latter point notwithstanding his equally central thesis that a consciousness state commonly has many distinct objects. Not every consciousness state is an object of inner awareness. But such a state transpiring unbeknownst is no less a basic durational component of its stream. A sincere report of one's being unaware of *x* does not on its own entail that one did not experience a state of consciousness with *x* among its objects.

A stream of consciousness consists of momentary states of consciousness one after another in a series that subjectively seems tightly adjacent. Inner awareness does not detect any interruption in the flow of consciousness however long or brief it may be. Such a stoppage must subsequently be inferred to have taken place if it is to be known of at all. Some of James's remarks suggest that the stream of consciousness is continuous in the sense of expanding in the dimension of time through internal growth rather than by a series of external accretions. But I argue at length elsewhere that his more consistent view is that pulses of change in the brain yield pulses of mentality (Natsoulas 1992–1993). The latter series is proposed to be continuous. Each state directly follows upon the consciousness state right before it "with absolutely nothing in between" just as long as no "time-gap" intervenes. Such time-gaps do happen, according to James, owing to what is taking place in the brain. But they are not noticeable because consciousness totally ceases during any time-gap. In *The Principles of Psychology* James advances a dualist interactionist theory as to the relation of the mental to the physical (cf. Natsoulas, 2005). The brain generates the consciousness states, but they can in turn influence the ongoing physical process that produces them and thus indirectly affect the course that the stream of consciousness is taking. Yet no state constituting the stream is a state of the brain. Nor is any state of consciousness any kind of feature belonging intrinsically to the brain itself.

One's consciousness is at any moment comprised completely of a single consciousness state. This is James's (1950 [1890]) view with one exception. In the same individual a second consciousness may simultaneously flow, consisting of its own distinct states of consciousness (cf. James 1982 [1902]). Yet every state of consciousness is integral in the sense that each one of them is a unitary awareness, albeit usually possessing many objects but never compounded of distinct mental experiences or mental acts. James describes the individual complexity of the large majority of human states of consciousness (calling them "fields" and "states" interchangeably):

> The concrete fields are always complex. They contain sensations of our bodies and of the objects around us, memories of past experiences and thoughts of distant things, feelings of satisfaction and dissatisfaction, desires and aversions, and other emotional conditions, together with determinations of the will, in every variety and permutation and combination. In most of our concrete states of consciousness all these different classes of ingredients are found simultaneously present to some degree, though the relative proportion they bear to one another is very shifting. (1916 [1899], p. 17)

One should not understand these many ingredients of James's consciousness states to be separate mental acts as traditionally conceived of. They are not mutually distinct cases of someone's being aware of something. Any object of a state of consciousness is apprehended therein in relation to all other objects of that consciousness state. James's ingredients of the states of consciousness are (1) abstractions from individual concrete states that have them among their features, (2) features of how a consciousness state's multiple objects are apprehended altogether, and (3) nonexistent except in the form of features of states of consciousness. Thus an auditory or a visual experience does not exist except as an ingredient of one or more consciousness states (cf. Natsoulas 2001).

From James's standpoint references to someone's being aware of this or that is very likely to be misleading. It is not meant to imply that the experiential features of consciousness states have a subject or an ego who is aware. This is not to say that a stream of consciousness and all of the consciousness states involved are not someone's. Rather it is to maintain that the consciousness states themselves are the only location that there is of consciousness. Neither the brain nor any kind of spiritual entity is what experiences, thinks, feels, apprehends, or issues one's states of consciousness and is in that sense the source or agent of one's mental life. One's brain does indeed bring one's states of consciousness into existence, but it is aware of nothing at all including its doing so and the states it produces. James distinguishes the material self, the social self, and the spiritual self but identifies the spiritual self concretely with the stream of consciousness and not with any entity or operation external to the stream that causes it to be as it is or that oversees it or puts it to use. "The passing Thought [i.e., state of consciousness] itself is the only *verifiable* thinker" (James 1950 [1890], p. 346). It is states of consciousness in themselves that provide mental life with subjective temporal unity. They do so by appropriating immediately past consciousness states that are now objects of inner awareness and more distant consciousness states that are currently objects of remembrance.

Is James's understanding of the consciousness states consistent with its seeming firsthand that consciousness is a "fighter for ends"? That a state of consciousness has a certain goal or type of goal among its objects is owed directly to the brain state responsible for the consciousness state's occurrence. The influence of past states of consciousness is limited to their having reinforced or inhibited (furthered or checked) the ongoing brain process and thereby affected the course it was taking. A state of consciousness and its successors may come to intend some new goal but not as a consequence of their effects on how the ongoing brain process is proceeding. James asserts that a consciousness state can produce nothing absolutely new. But a consciousness state can help to maintain a certain

goal as an object of the stream at the expense of alternative goals and to increase thereby the chance of related actions since the brain process determines such actions and is suitably affected.

Is the stream of consciousness illusory? James (1950 [1890]) raises this question himself as he discusses the spiritual self and concretely identifies the spiritual self to be no other than the stream of consciousness itself. From certain of his own introspective efforts James surmises that all one can know of oneself in an immediate rather than an inferential way is objective (e.g., bodily states) and requires perceptual observation. Consciousness states and the streams of which they are parts are not directly apprehended and therefore are inferred constructs. James sets this skeptical position aside for practical reasons and continues to use the deliverances of inner awareness as though he has no doubts. The following questions indicate what I believe is a better reason for his going on just as he does. How can James be aware of observing *x* if he has no inner awareness of any state of consciousness with *x* among its objects? Can James tell he is observing *x* by making behavioral observations? Would a certain piece of James's behavior give away to him or to others that he is observing *x*? But then how can anyone be aware of observing a piece of James's behavior if there cannot occur in anyone inner awareness of any consciousness state having that piece of behavior among its objects?

SEE ALSO *James, William; Psychotherapy*

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Thomas Natsoulas

STREET CULTURE

A primary issue for urban sociologists is the disproportionate poverty in ghettoes, defined as parts of American cities that are composed of mostly poor African Americans. These economically and socially alienated communities often suffer from high rates of unemployment, crime, and drug use, creating images of these areas and their occupants that mask differences among residents and the structural conditions that affect them. Several studies have attempted to disentangle these issues by identifying systematic inequalities and the ways inner-city residents respond to them. Many note the integral role of street cultures in such neighborhoods, which help disadvantaged residents to cope with inner-city life by offering alternative methods for attaining social order.

In his 1999 ethnography, *Code of the Street*, Elijah Anderson argued that the problems of poor, inner-city black communities are exacerbated by deindustrialization, the outsourcing of jobs, the flight of the middle class, an ineffective law enforcement system, and a prominent underground economy. Anderson argued that these structural changes and the alienation they breed promote an oppositional culture whereby inner-city residents rely on the code of the street, or "a set of informal rules governing interpersonal public behavior, particularly violence" (p. 33) to distribute respect and ensure order. While this code provides residents with a mechanism to organize the community, its success relies on the use of violence to gain social status, creating a culture where the paths to money and respect reflect deviant lifestyles.

Anderson argued that within these neighborhoods, knowledge of the code becomes necessary for all individuals to maintain respect and ensure survival. Familiarity with the code holds whether individuals self-identify as *decent* individuals, or those who tend to hold mainstream values, or *street* individuals, or those who embrace and enforce the code and its use of violence. This requires decent people who do not fully embrace the code to be streetwise, or to engage the code to gain respect and to prevent challenges to their person or status. This may require individuals to challenge someone else's power by taking that person's belongings or through physical attack or to display material possessions, which suggests that they not only have money but also that they are willing to defend it. Such issues are particularly salient for adolescents who must negotiate their identities within public spaces, making them vulnerable to stereotyping by people who live outside these neighborhoods and who are unable to distinguish between residents who engage the code only when necessary and those who always live by it.

As an oppositional culture, the code of the street also has implications for cultural forms created in urban spaces such as hip-hop and rap music. As Mark Anthony Neal

suggested in his 2004 article, "Up from Hustling: Power, Plantations, and the Hip-Hop Mogul," in its onset, hip-hop and rap music offered a critical voice capable of accurately portraying the black urban experience and affecting social change within these impoverished neighborhoods. Over time, however, these musical forms have been transformed into a mainstream and stylized version of black culture that no longer resembles the ghetto public it sought to represent. Neal suggested that, "what is bought and sold in the open market of commodified blackness is anything but authentic, but rather stylized perceptions of black life, packaged for mass consumption" (p. 166). This hip-hop image, which glorifies excessive consumerism, the underground drug economy, and misogynistic practices, fails to affect social change in the ways originally envisioned by hip-hop artists. Instead, these images influence public policies aimed at monitoring black urban youth, providing justifications for further discrimination against impoverished inner-city residents and legitimizing the oppositional culture posed by the code.

While previous works, such as Elliot Liebow's 1967 ethnography, *Tally's Corner*, have reached similar conclusions to Anderson's thesis regarding the role of the street corner in redefining limited life chances, they have also been critiqued for their emphasis on oppositional culture, which suggests that in certain ways, poor, inner-city blacks contribute to their own blocked mobility. Many urban researchers have reached alternative conclusions in studies of inner-city black communities, suggesting instead that street cultures are integral resources used by disadvantaged residents to enhance their abilities to achieve middle-class status. For instance, in his 1980 book, *Alley Life in Washington*, James Borchert wrote that, following the Civil War (1861–1865), alley residents developed invaluable community networks that allowed them to survive through periods of intense urbanization and institutionalized racism. These ideas have also been noted in international works such as Steve Hall, Simon Winlow, and Craig Ancrum's 2005 article, "Radgies, Gangstas, and Mugs: Imaginary Criminal Identities in the Twilight of the Pseudo-Pacification Process." In their study of British, lower-class males, they found that these individuals do not engage in violence and criminality to resist normalization, but instead, to enhance their life chances. Studies such as these suggest that while street cultures have formed in various times and spaces, they do not always exhibit subcultural or oppositional characteristics, providing opportunities for further research that delineates the structural, spatial, and individual relations between street cultures and mainstream values.

SEE ALSO *Anthropology, Urban; Culture; Culture of Poverty; Culture, Low and High; Ethnography; Ethnomethodology; Sociology; Sociology, Urban; Tally's Corner*

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M. Bess Vincent

STRESS

Stress is often used to describe overwhelming or threatening situations or the pressure that human beings encounter when experiencing such circumstances. The American physiologist Walter Cannon introduced the term stress in 1929 as an acute emergency reaction that could help the organism mobilize energy for fight-or-flight responses in dangerous situations. In 1936, the Austrian-born Canadian endocrinologist Hans Selye first used the term stress when describing threatening conditions capable of producing chronic changes in the homeostatic balance of an organism if lasting long enough. It is now known that stress and stressor exposure can elicit a complex array of physiological changes. Stress can be physical or psychological, controllable or uncontrollable, acute or chronic, and the word stress is often used imprecisely referring either to a stressor or a stress response.

Originally, the main stressors for human beings related to physical injury, predators, and starvation. Acute physical stressors required emergency reactions helping the organism mobilize energy for fight-or-flight responses, that is, physiological reactions that prepare an individual for the strenuous efforts required by fighting or running away. Threatening situations usually call for vigorous activity, and the autonomic and endocrine responses that accompany them help mobilize the body's energy responses. During emergencies, the sympathetic branch of the autonomic nervous system is activated to help mediate arousal, activation, and mobilization. The activated sympathetic nervous system speeds up the heart rate and

diverts blood flow to the muscles, and the adrenal glands release epinephrine.

This type of acute mobilization of biological resources is clearly advantageous during short-term physical emergencies. In the contemporary world, however, people often react in this acute manner to stressor exposure that does not involve life-endangering situations. When encountering psychological or social stressors, the same physiological responses may be activated, which is likely not adaptive or appropriate. For example, the acute stress response can occur in relation to academic exams, traffic jams, relationship breakups, family feuds, or simply worrisome situations. Such activations are likely harmless in the short term but can potentially be harmful when chronically provoked. Physiological reactions to stressor exposure are also often accompanied by psychological reactions such as anxiety, worry, anger, inability to relax, and poor concentration, which again may be harmless in the short term but potentially detrimental in the long run.

SOURCES OF STRESS

The sources of stress can be infinite. Research has often focused on major life events, job-related stress, daily hassles, environmental stress, and sociocultural factors as sources of stress, among others. Major life events such as changing careers, getting married, or losing a loved one can entail a serious challenge. Such events luckily rarely occur, but everyday hassles such as having car trouble, getting to work late, missing a deadline, or having to run in order to catch the bus can obviously happen more frequently. Environmental stress such as pollution, noise, or natural disasters can also take its toll on people, as can job-related stress such as an unhappy boss, a manipulating coworker, or simply a stressful and demanding working environment.

Because of evidence that stress responses are specific and may vary based on how a particular stressor is perceived, researchers have proposed models highlighting the interaction of biological and psychological factors in health and illness. One such model, the diathesis-stress model, proposes that two continuously interacting factors jointly determine an individual's susceptibility to stress and illness. One factor involves predisposing (diathesis) factors establishing a person's vulnerability to illness, for example, genetic vulnerability, and the other involves precipitating factors from the environment, such as traumatic experiences. The diathesis-stress model highlights the fact that different people have different vulnerabilities, resulting in possible health consequences because of stress combined with diathesis. Other models have proposed that how people perceive themselves and the stressor at hand may impact how they react mentally as well as physiologically when exposed to stressors. For example, if a stressor is perceived as a serious threat, this will elicit more complex reactions than if the stressor is perceived as a daily event. Another model, the stress-buffering model, posits that certain factors, such as individual differences or social support, may protect, or "buffer," people from the impact of stressful events. In this model, individuals under stress with little or no social support, for example, experience negative health effects, whereas the negative effects of stress for individuals with high levels of social support are reduced or eliminated. Clearly, a number of factors can affect how people perceive and react to stressor exposure.

IMPACT ON HEALTH

Stressors are part of daily life. However, when energy is constantly mobilized at the cost of energy storage, one can never store any surplus energy. If stressor exposure is long term or overtaxes coping resources, stress can have adverse impact on health. For example, the long-term effects of prolonged secretion of glucocorticoids have been shown to involve increased blood pressure, damage to muscle tissue, growth inhibition, and suppression of the immune system. Research has also found links between stressor exposure and physiological health issues such as heart disease and cancer. This is not to say that stress causes heart disease or cancer; it is possible, however, that prolonged stressor exposure may be a contributing factor in the development of a number of physiological problems. Research has also found an effect on wound healing: Studies have found, for example, that stressor exposure can slow the healing of wounds significantly (Glaser et al. 1999), which supports the hypothesis that prolonged stressor exposure may suppress the immune system.

Stressor exposure may also contribute to psychological disorders such as post-traumatic stress disorder (PTSD). PTSD is caused by exposure to a situation of extreme danger and stress, such as acts of war, assault, injury, death of a loved one, and so on. Symptoms of PTSD include recurrent dreams or recollections, and the disorder can interfere with social activities and produce a feeling of hopelessness. Research has also indicated a link between stress and depression, as stress and glucocorticoids appear to be intertwined with the biology of depression. Sympathetic arousal is a relative marker of anxiety and vigilance, while heavy secretion of glucocorticoids is more a marker of depression, and statistically, people who are undergoing significant life stressors are more likely to become depressed, and people who are depressed are more likely to have undergone a recent significant stressor. Symptoms of PTSD as well as depression are often treated with medication to adjust the serotonin and/or epinephrine systems, either alone or in combination with some form of psychotherapy. PTSD and depression can also be treated with some form of psychotherapy alone.

Despite the impact that stressors can have on health, research has not established a clear connection between stressor exposure and health-related issues. In fact, when exposed to the same type of stressor, one person might get sick while another will not. Apparently, stress and the consequences of stress may arise from how people appraise the events rather than from the events themselves. How people appraise and cope with stressor exposure may again depend on factors such as individual differences, coping styles, perception of control, and social support. Individual differences such as dispositional optimism and explanatory style have been linked to better psychological and physiological adjustment to stressors. Dispositional optimists generally expect positive outcomes in life, while explanatory style refers to a person's general propensity to always attribute outcomes either to positive or negative causes. A person's resilience may also impact how stressors are perceived and met. Resiliency often refers to a person's ability to develop coping strategies despite being in a difficult situation or the ability to bounce back when bad things happen. In general, it appears that people who see stressors as challenges to be overcome rather than insurmountable problems tend to cope with stressors in the most adaptive way.

COPING STYLES AND STRATEGIES

Coping usually refers to the cognitive, behavioral, or emotional way that people deal with stressful situations and is seen as a dynamic process involving a series of responses entailing the interaction of a person and the environment. In general, coping styles that approach the problem in order to deal with it have been found to be more adaptive than coping styles avoiding the problem. People with a strong sense of personal control are also more likely to engage in adaptive problem-focused coping. Personal control is the belief that people make their own decisions and also that an individual determines what others do to that person or what the person does him- or herself. The opportunity to control aversive events or the belief that aversive events can be controlled may play a crucial role in determining how a person might react during stressor exposure.

The degrees of social support people receive or perceive may also play an important role in how people cope with stressors. Social support is the companionship of others and the emotional or practical support of others. Research has shown social support to be important for faster recovery and fewer medical complications from surgery or illness, for lower mortality rates, for less distress in the face of terminal illness, and for reduced vulnerability to illness and mortality. It appears that people's outcome expectancies, their coping strategies, their sense of control, and their perceived or actual social support act as factors in how they appraise stressors or as buffers against the impact of the stressor exposure.

Stress appears to be an unavoidable part of life in the contemporary world. Stressor exposure is not necessarily harmful; nevertheless, depending on the characteristics of the stressor, the length of exposure, individual differences, and coping strategies, stressors may have adverse physiological and psychological impacts on a person's life.

SEE ALSO *Coping; Diathesis-Stress Model; Hypertension; Life Events, Stress; Optimism/Pessimism; Psychoneuroimmunology; Psychosomatics, Social; Resiliency; Stress-Buffering Model; Trauma*

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STRESS-BUFFERING MODEL

The concept of the *stress-buffering model* is that certain resources help to reduce the impact of negative life events on an individual's health status. An accumulation of adverse occurrences can be related to health problems, but life stress may have less effect among people who have more psychosocial resources. In this sense, the resource

serves as an insulating factor, or *buffer*, between the stressors and the disease outcome, so that people who have more resources are less affected by stress.

Stress is typically measured by the number of major negative events that a person has experienced in the past year. These include events such as loss of a loved one or experiencing severe financial difficulty. Job strains, in an occupation in which demands are high but control is low, can serve as a stressor, and criminal victimization (assault or theft) can be quite distressing. High levels of stress have been linked to anxiety, depression, and physical health problems in studies of general populations, but buffering resources can reduce the relation between stress and disease.

One type of stress-buffering agent is *social support*. Social support can be defined as resources provided by others that help a person to cope better with problems. Research has shown that persons with more social support are less affected (or unaffected) by negative life events. Supportive relationships contribute to well-being because they provide a source of intimacy, acceptance, and confiding about emotions (emotional support), which provides buffering effects across a broad range of life stressors. Supportive persons may also offer useful advice and guidance (informational support). By providing such resources, personal relationships help to reduce the impact of stress on depression and anxiety. Some studies have also suggested that social support can provide buffering effects that reduce the risk of mortality from cardiovascular disease or cancer.

Personality characteristics also may serve as a stress-buffering resource. For example, a personality complex termed *hardiness* has been found to provide buffering effects. Hardiness is defined as scoring high on attributes of commitment (being involved with other people rather than detached or alienated), control (taking control over one's decisions and actions, rather than passivity and powerlessness), and challenge (the ability to tolerate uncertainty and see life events as a challenge rather than a threat). Persons who score higher on hardiness show less illness at high levels of stress, compared with persons low on hardiness. Thus individuals who score higher on this personality complex are more resistant to stress.

An implication of the stress-buffering model is that interventions to enhance available social support or to teach persons positive attitudes about commitment, control, and challenge can help make persons less vulnerable to negative events. Such interventions can be conducted in school, clinic, or community settings so as to improve people's coping ability and thereby improve the mental and physical health of the population.

SEE ALSO *Anxiety; Coping; Psychosomatics, Social; Stress*

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Thomas Ashby Wills
Don Mendoza

STRIKES

SEE *Unions.*

STRONG AXIOM OF REVEALED PREFERENCE

SEE *Revealed Preference.*

STRONG SEPARABILITY

SEE *Separability.*

STRUCTURAL ADJUSTMENT

Developing or emerging market economies may face periods of severe economic instability. This may involve a stagnant or declining economy, perhaps accompanied by high rates of inflation, a falling currency, and unsustainable foreign debt obligations. In these circumstances and often as a last resort, member countries may look for financial support from the world's two main multilateral aid and financial institutions, the World Bank and the International Monetary Fund (IMF).

Financial support from these institutions often requires the successful negotiation of a structural adjustment loan (SAL) with the member country. These loan programs link disbursements of funds to the meeting of specified conditions (performance criteria) through the implementation of a combination of economic policy reform measures. The International Monetary Fund allows member countries to borrow, subject to agreed-upon conditions, on their economic policies. The IMF

has always had conditions on their loans, but since 1982 the number of these loans has expanded. Similarly, the World Bank pays a great deal of attention to helping countries improve their economic policies. In 1980 the World Bank began to make structural adjustment loans that carried conditions on economic policies—so-called adjustment lending. A significant part of its lending was for structural adjustment, namely loans to support reforms rather than specific investments.

The IMF and World Bank made 958 adjustment loans to developing countries between 1980 and 1998. Argentina alone was the recipient of thirty adjustment loans during this period. While these loans are often negotiated in the context of economic crisis and attempt to restore balance of payments viability and macroeconomic stability, they are geared to increasing international competitiveness and improving economic efficiency in the use of domestic resources—the term *Washington Consensus* is often associated with this reform package.

Often the country in crisis faces considerable economic turmoil and may have no option but to accept painful economic remedies in order to receive external funding. This may involve a menu of higher interest rates, government spending cuts and higher taxes, and the abolition of various subsidies on consumption items. These policies are unlikely to be popular, and so the programs are extremely controversial. The SALs often include trade liberalization measures that place fewer restrictions on foreign trade. These measures include reducing or abolishing tariffs and quotas on imports, a less restrictive stance toward foreign investment, a more realistic exchange rate, and capital account liberalization that reduces controls on capital flows across national boundaries. The internal market-oriented structural reforms promote deregulation of domestic markets and the privatization of government enterprises.

THE EFFECTIVENESS OF STRUCTURAL ADJUSTMENT PROGRAMS

Restoring macroeconomic stability in times of crisis is critical. Indeed the ability to restore and maintain macroeconomic stability in the face of often-turbulent external conditions is one of the most important factors accounting for the diversity of economic performance in the developing world. The effectiveness of SALs in achieving this objective is a hotly debated issue. In his 2001 book, *The Elusive Quest for Growth*, William Easterly notes that

> "In the 1980s, the World Bank and the IMF gave an average of six adjustment loans to each country in Africa, an average of five adjustment loans to each country in Latin America, an average of four adjustment loans to each country in Asia, and an average of three adjustment loans to each country in Eastern Europe, North Africa and the Middle East. The operation was a success for everyone except the patient. There was much lending, little adjustment, and little growth in the 1980s and 1990s. The per capita growth rate of the typical developing country between 1980 and 1998 was zero." (pp. 102–103)

Some studies even suggest that a higher IMF loan-participation rate reduces economic growth and conclude that the typical country would be better off economically if it committed itself *not* to be involved with IMF loan programs.

A number of concerns arise about the effectiveness of SALs. One issue relates to the speed of the structural adjustment required. Should all of these policies be implemented immediately or only gradually? Governments may stall in implementing the required policies, use creative financial accounting to avoid real adjustment, or reverse the policies once the program is over. A second issue relates to the sequencing of structural reforms. Many commentators point to the crucial role of foreign capital inflow during the structural reform period to reduce the frictions that will emerge during the transition. It may be preferable, however, that controls on foreign capital be relaxed only after trade and other industrial-sector distortions have been dismantled. The reason for this is that capital inflow will result in a real exchange rate appreciation that disadvantages exporters. Meanwhile, the tariff reductions will disadvantage domestic producers facing lower-priced imports.

Privatization policies as part of a SAL have also been questioned, particularly in the transitional economies of eastern Europe. Public assets may be sold off below their real value in order to find a buyer and to generate quick cash flow, with a loss of public accountability. Privatization might also mean that income-generating assets are sold, leaving behind all the residual "unproductive" activities, plus a new layer of watchdog agencies to regulate the newly privatized activities.

In the context of the 1997 Asian financial crisis, further debate escalated on the effectiveness of SALs, particularly the financial deregulation requirements. In this context the views of Joseph Stiglitz have been well publicized, particularly his stinging condemnation of the response of the IMF and the U.S. Treasury to the Asian crisis in his 2002 book, *Globalization and Its Discontents*. Stiglitz rails against the IMF's "market fundamentalism," its "one-size-fits-all" approach to crisis management, and "its mistakes in sequencing and pacing, and the failure to be sensitive to the broader social context" (p. 73). Rescue packages were overly contractionary and pushed the economies deeper into recession. Inadequate attention

was given to the social dimensions of the crisis. In particular, greater efforts were needed to ensure food security and preserve the purchasing power of vulnerable households. Finally, there was a lack of appreciation of the potential for irreversible social breakdown in the midst of economic crisis, with rising ethnic and factional violence. The impacts of SALs on social sectors and the poor have been particularly troublesome, and the IMF and World Bank have incorporated social safety nets into their programs (Cornia, Jolly, and Stewart 1987–1988).

The IMF has staunchly defended the economic policies that it recommended to the crisis-affected countries of Asia. It argues that the causes of the crisis were internal or homegrown, reflecting underlying structural distortions and macroeconomic imbalances. The use of high interest rates on a temporary basis was essential to correct the excessive competitive devaluations in the crisis countries. Insolvent financial institutions had to be closed down and belt-tightening was essential. The IMF notes that the recoveries of some of these countries point to the effectiveness of its policy advice.

One of the interesting empirical findings relating to the effectiveness of SALs is that the results often depend on the characteristics of the specific country concerned. Countries have generated a variety of responses to basically similar SALs. This seems to reflect the importance of differences in institutional, social, and historical conditions between countries (Taylor 1988).

A REASSESSMENT

The disappointing response to repeated structural adjustment lending has led to much soul searching. At the IMF, poverty reduction and growth facilities have replaced structural adjustment loans. Reducing the microeconomic interventions and concentrating on core macroeconomic concerns have streamlined conditionality. There is also now a focus on pro-poor growth and social safety nets. There was a perceived need to move beyond Washington Consensus policies to so-called second-generation reforms, following the growing recognition that market-oriented policies may be inadequate without more serious institutional transformation. The expectations placed on lending to developing countries conditional on their making policy reforms proved unrealistic. There is a growing recognition that structural adjustment should promote growth and capacity expansion and not just efficiency. The recommendation now is for a more strategic focus, concentrating on the key barriers to growth, rather than employing a scattergun approach to abolishing all market distortions.

SEE ALSO *Liberalization, Trade; Privatization; Washington Consensus*

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STRUCTURAL EQUATION MODELS

Structural equation modeling (SEM) is a general method for modeling systems of effects among three or more variables. Structural equation models can vary greatly in complexity. At its base, SEM is an extension of linear regression (or, linear regression is a special case of SEM) in which a number of regression equations are solved simultaneously. This process allows for the explicit modeling of many quantities not typically a part of linear regression, including the covariances (or absence thereof) among predictors, the residual variances of the endogenous (predicted) variables, and measurement error in both the exogenous and endogenous variables.

COMPONENTS OF A STRUCTURAL EQUATION MODEL

A full structural equation model consists of a measurement part and a structural part. It is the measurement part that allows for the modeling of measurement error. As in factor analysis, the modeler typically assumes that some latent construct is measured by its influence on one or more (usually at least three, for model identification purposes) observed variables. A latent construct is some unmeasured, and perhaps unmeasurable, variable of substantive interest. In a traditional measurement model, the latent construct is established by its effects on the observed indicator variables; for example, self-esteem as a construct might be measured by several items on a questionnaire covering a range of related content. Each item is modeled as being fully determined by two quantities: the self-esteem latent construct and an item-specific residual, or disturbance, usually considered uncorrelated with the

residuals of the other items and other variables in the model. Thus, the observed covariances among the items are fully determined by their common cause, the latent construct; alternatively, the latent construct is defined by that portion of the variance of the indicators that is in common.

MEASUREMENT MODELS

Such a model, with one or more latent constructs, each with its own indicators, can stand by itself as a *confirmatory factor analysis* (CFA). CFA is a special case of SEM. In CFA, the measurement models for the constructs of interest are estimated, and the covariances among the constructs are freely estimated; that is, there are no hypothesized constraints on relations among the latent constructs. Importantly, these covariances are estimated incorporating correction for measurement error. As the latent variable is that variance which is common among the observed indicators, the indicator-specific residual variances (error) have been removed from consideration. Many social science researchers conduct a CFA on their data before moving to a full structural equation model.

A CFA is distinct from an *exploratory factor analysis* (EFA) in that, for CFA, the latent constructs are conceptualized a priori, as are the patterns of relations between constructs and indicators. EFA is statistically very similar to CFA but has a different purpose. If the researcher does not have an a priori model, or, perhaps, the CFA results in a poor fit to the data, EFA might be used. In EFA, all observed indicators are modeled as having been caused by all latent constructs (of a number specified by the researcher, often based on empirical aspects of the data), with only certain identifying restrictions. In contrast, most CFAs in the social sciences model each indicator as being caused by exactly one latent construct (though there is no statistical necessity to do this), resulting in a more clear definition of the latent construct. Latent constructs in EFA can be more difficult to describe, as the description is determined by the researcher's interpretation of the pattern of loadings (regression coefficients) relating each indicator to the construct.

STRUCTURAL MODELS

The second part of a full structural equation model is the structural part: the model of the relations among the latent constructs. Each construct can be modeled as having multiple effects on and/or multiple causes from other constructs. Thus, each endogenous, or downstream, construct is the outcome variable in a multiple regression equation and may well be a predictor variable in one or more multiple regression equations for other outcomes. These relations are typically represented pictorially in a diagram with directional arrows representing modeled effects, and curved, bidirectional arrows representing covariances among the exogenous variables (as in path analysis; indeed, path analysis is a special case of SEM in which there is no measurement model, for the constructs of interest are the measured variables). In most cases, all the exogenous variables are modeled with all possible correlations among them represented. A failure to include such a correlation would in effect be a hypothesis that that correlation equals zero, which is rarely applicable to exogenous variables. Observed variables (indicators) are usually diagrammed as labeled rectangles, latent variables as ovals.

As in the measurement part, residual variance is explicitly modeled. In all but rare cases, each endogenous variable has an exogenous disturbance associated with it—a latent variable that is the "cause" (actually the pooled causes) of all variance not determined by the regression relations.

MODEL ESTIMATION

When the full model has been established, the next step is to estimate the coefficients for each covariance, effect, and loading (the measurement coefficients). Each effect and loading estimate is a partial regression coefficient: the regression of the specified endogenous variable on the specified "upstream" variable, controlling for the other variables that have effects leading to the endogenous variable. And thus the coefficients are interpretable as partial regression coefficients: the change in the downstream variable per unit change in the upstream variable, holding all other variables constant. Certain hypotheses involving the path coefficients can be tested as in regression, such as the null hypothesis that the path coefficient equals zero, which is tested by the ratio of the coefficient to its standard error.

Structural equation modeling software routinely calculates a number of indices of fit of the model. A fitted model allows for the calculation, from the various path coefficients and estimated variances, covariances, and residual covariances, of a model-implied variance/covariance matrix of the original variables—that is, a covariance matrix that is consistent with the fitted model. Broadly speaking, the fit of the model is an assessment of how well the model, with its estimated coefficients, implies a covariance matrix that matches the original matrix from the data. If there is no significant discrepancy, as measured by a chi-squared statistic, then it may be concluded that the path model is consistent with the data. Note that this does not necessarily indicate that the model is an accurate depiction of causation in reality, but only that it is not inconsistent with reality as indicated by the covariance matrix.

There has been, however, much debate over the utility of the chi-squared statistic. It is widely agreed that, assuming an adequate sample size, a nonsignificant chi-square results in a failure to reject the model. However, there may be cases where the chi-squared statistic is sensitive to small deviations between the actual and implied covariance matrices that are not of practical importance to the researcher; this is especially true when the sample size is large. As a result, numerous statistics have been developed to assess approximate or close fit. Among the more prominent of these are the comparative fit index, the Tucker-Lewis index, and the root mean squared error of approximation.

HYPOTHESIS TESTING

The test of model fit is one of the primary results of estimating a model. Other hypotheses of interest in SEM frequently involve constraints on the structural coefficients: for example, that two coefficients are equal to each other, or that a set of three coefficients are all equal to zero. These can readily be tested in structural equation modeling software by the estimation of *nested models*. In this situation, the fit of a full model (without the constraints) is compared with a restricted model (with the constraints applied in the estimation process). Two such models are nested if the restricted model can be created strictly by imposing constraints on the full model. If the full model fits the data well, then the difference between the chi-squared statistics for the two models is itself distributed as a chi-squared statistic, with degrees of freedom equal to the number of constraints applied. A significant chi-squared statistic indicates that the restricted model fits significantly less well than the full model.

SEE ALSO *Factor Analysis; Hypothesis and Hypothesis Testing; Hypothesis, Nested; Least Squares, Ordinary; Linear Regression; Linear Systems; Methods, Quantitative; Nonlinear Regression; Nonlinear Systems; Regression; Regression Analysis; Statistics in the Social Sciences*

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STRUCTURAL TRANSFORMATION

There is considerable debate across and even within theoretical perspectives and social science disciplines as to the nature of "social structures." Nonetheless, there is also general consensus that structures are more or less fixed aspects of social life that cannot be significantly altered by isolated actions. The division of labor, modes of production, state institutions, and even aspects of symbolic culture, such as language, can all be seen as structures that individuals face as fixed, stable, and resistant to change. Nonetheless, as William Sewell (1992), among others, has pointed out, too often social-scientific notions of structure reify such social forms, implying their domination of agency and their imperviousness to change. Permanent and unmoving as they may seem from any given time or vantage point, structures are far from immutable. Instances of macrosocial change in the foundations or basic architecture of any given social form, and in the patterns of agency associated with that form, are often referred to as structural transformations. The term is too widely and loosely used in the social sciences to give it a precise, comprehensive meaning, but it is possible to speak of some prevalent usages.

Perhaps most famously, Jürgen Habermas wrote of the "structural transformation of the public sphere." Habermas identifies a moment in the histories of Britain, France, and Germany in which there developed public arenas for rational political debate (at least among middle-class men) within emerging democratic cultures. These arenas effectively mediated between private life and the state, cultivating both critical rational discourse among participants and a forum for ideas and debate as to how democratic governance could be achieved. Habermas identifies several key social processes that undermined and transformed the public sphere into something quite different, including the tremendous growth in the size and scale of the public sphere that accompanied democratization, the blurring of the lines between private and public that accompanied the growth of the welfare state, and the development of political parties, professionalized politicians, and a mass media oriented toward marketing rather than public debate.

Habermas's work on the public sphere has sparked a lively literature on the nature of democratic processes, rational discourse, and communication in modern societies. Among others influenced by Habermas, for example, Craig Calhoun (2006) has argued that higher education is currently undergoing a structural transformation characterized by skyrocketing costs, the marginalization of teaching, and the shift in focus from public goods production to private goods distribution, with dramatic consequences for the role of higher educational institu-

tions in the economy and public life. Calhoun identifies three key processes fostering this transformation: (1) the massive increase in the size and scope of universities, which has, among other things, intensified status-driven enrollment competition; (2) declining public funding; and (3) related trends toward privatization, most obviously in the rapidly intensifying pursuit of intellectual property revenues.

In addition to Habermas's and Calhoun's identification of rapid increases in social scale (we might also include Max Weber's account of the rise of bureaucratic organization as a transformative response to this problem of size), other key processes seen as primary contributors to structural transformations involve the intermixing of different kinds of people and the development of new modes of economic, political, and cultural activity. Contemporary observers may connect such social changes to globalization, but of course this is not a uniquely modern phenomenon. Anthropologists speak of the structural transformation of linguistic communities (Silverstein 1998) and hunter-gatherer institutions (Riches 1995) as sometimes wrought by confrontations of new peoples in contexts of exploration, migration, and war.

Economists, of course, are most closely associated with the transformations of economic structures. Used in this context, the term is most often understood to involve the change from one sort of economic production system to another, perhaps most prominently the change from an agriculturally based economy to an industrial one or from a nonmarket to a market-based economy (Johnston 1970; Gollin et al. 2002). The processes involved in such shifts are too numerous, complex, and contested to be discussed here, potentially arising from a host of economic (e.g., the rise of national and international markets, the influence of the International Monetary Fund), political (e.g., elections, revolutions, and wars), and cultural factors (e.g., the rise of the "Protestant ethic"). Nonetheless, such changes, as with other sorts of structural transformations, are commonly seen as having massive consequences for the societies and individuals experiencing them, not the least of which are a fundamentally altered division of labor and the social mobility system. Out of such transformations, new patterns of social relations and social forms arise that condition social action in various but profound ways.

SEE ALSO *Anthropology; Bureaucracy; Development Economics; Development, Rural; Economics; Habermas, Jürgen; Industrialization; Market Economy; Urbanization; Weber, Max*

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Kent Redding

STRUCTURALISM

Structuralism is the theoretical position that finds meaning in the relation between things, rather than in things in isolation. In other words, it gives primacy to pattern over substance. To take a crude example, the colors red, green, and amber take on the meanings "stop," "go," and "caution" in relation to each other, in the context of a traffic light. In some other context, and in opposition to other colors, red may mean something completely different, such as socialism or communism, or humanity or sacrifice. Such meanings may be either part of a universal pattern or culturally determined.

SAUSSURE AND EARLY APPROACHES IN LINGUISTICS

Structuralism began in linguistics and spread to anthropology, philosophy, literary criticism, and other fields. Its founder was Ferdinand de Saussure (1857–1913), a Swiss linguist who wanted to move beyond the historical interests that dominated his field in the early twentieth century. Although the work he published during his lifetime was entirely in the historical tradition, he left behind lectures given between 1906 and 1911 that set the scene for a new synchronic, structural analysis of language. These were published posthumously as the *Course in General Linguistics* (1916).

In the *Course*, Saussure made four distinctions which are now commonplace both in language studies and in many social sciences. The most important is the distinc-

tion between synchronic (at the same time) and diachronic (through time). His own interest in the (synchronic) structure of language was thus contrasted to others' interests in the (diachronic) history of languages. The second was between *langue* and *parole*—the French words always being used for this distinction. *Langue* refers to "language" in the sense of linguistic structure or grammar and, by extension (e.g., later, in anthropology or sociology), to the "grammar" of a culture or society. *Parole* means "speech" or actual utterances of individuals and, by extension, the actual actions of individuals in a social structure. The third distinction was between syntagmatic and associative (later called paradigmatic) relations. The former are relations between words or smaller units within a sentence and, by extension, the relations between elements with a cultural "sentence" such as the traffic light sequence mentioned above. The latter marks the relation between those elements and what they mean. Finally, Saussure considered the relation between signifier (a word or symbol that stands for something) and signified (what it means), these two elements together making up what he called the sign. He stressed that the sign is arbitrary: It depends on knowing the language. In his example, if I speak French, I call the dog *le chien*, but if I speak German, I call him *der Hund*.

Later structuralists in linguistics developed Saussure's ideas further, including, for example, the French Indo-Europeanist Émile Benveniste (1902–1976), who studied under one of Saussure's students. Benveniste added the distinction between *énoncé* (a statement independent of context) and *énunciation* (a statement in context), the latter exemplified by the subject/object opposition of first- and second-person pronouns. This, in turn, suggested the further understanding of language as discourse.

Another major development is credited to Roman Jakobson (1896–1982), Nikolai Trubetzkoy (1890–1938), and others of the "Prague school," active first in Prague in the 1930s and later in the United States and elsewhere. They applied Saussurian distinctions at the level of phones (sounds), which are grouped slightly differently into phonemes (meaningful units of sound) by different languages according to the presence or absence of certain distinctive features. English, for example, distinguishes the *unvoiced* labiodental fricative /f/ from its *voiced* equivalent /v/: "Fat" is a different word from "vat." Jakobson was also important for his emphasis on the distinction between metaphor (relations of similarity, such as a crown as in the trademark of a beer company) and metonymy (relations of contiguity, such as a crown standing for sovereignty). In studies of the acquisition of language, he found that aphasics have difficulty with this aspect of language function.

APPROACHES IN ANTHROPOLOGY

In anthropology, there have been three main approaches in structuralist thought. First, the classic French structuralism of Claude Lévi-Strauss and his followers maintains a search for universal principles. In his kinship studies, for example, Lévi-Strauss sought the system of all possible systems and the structural principles that differentiate one kinship system from another: positive or negative marriage rules, marriage to one kind of cousin or another, and the effects of such marriage principles, when repeated, on relations among social units within a society. A rule of marriage of men to the category of the mother's brother's daughter, for example, would create a system of "generalized exchange" in which group A gives its daughters in marriage to group B, and group B to group C (not to group A). The same pattern is repeated through the generations. Marriage to the father's sister's daughter, however, creates a demographically unstable pattern of "delayed direct exchange" in which women marry in one direction in one generation and in the opposite direction in the next generation. The latter systems are virtually nonexistent or break down easily when created. A system that allows marriage to either of these kinds of cousin, by contrast, fosters "direct exchange" between just two groups, sometimes with men exchanging their sisters with other men.

Second, J. P. B. de Josselin de Jong (1886–1964) and his students from the 1930s onward, working mainly in the East Indies, were interested in patterns occurring within that culture area. Later scholars in Holland, Belgium, and Britain sought similar patterns elsewhere, and the idea was that each cluster of cultures had its own system, and an anthropologist could better understand a society in terms of its contrast to related cultures within that area rather than on its own. There are elements of this regional approach too in Lévi-Strauss's work on South American Amerindian mythology.

Third, British structuralists, such as Sir Edmund Leach (1910–1989) and Rodney Needham (1923–2006), in the 1960s and 1970s emphasized relations between elements within a given culture. Both the Dutch and the British structuralists had an interest in kinship structures, which for the Dutch especially involved a search for regional patterns and large cultural associations, and for the British usually more specific ones, as, for example, in Needham's reanalysis of symbolic associations among Purum in eastern India between wife-givers/wife-takers: superior/inferior, private/public, east/west, life/death, sacred/profane, village/forest, prosperity/famine, and moon/sun.

Much of this work, including Lévi-Strauss's, was based on the application of Jakobson and Trubetzkoy's notion of "distinctive features" to culture. The idea was

that the same structural principles that govern language also govern culture and that simple "binary oppositions" defined by the presence or absence of some feature were significant especially for the understanding of kinship, symbolism, and mythology. Famously, Lévi-Strauss's work on North and South American myths, such as his four-volume *Mythologiques* (literally, "mytho-logics"), sought explanations for the meaning of myth through such simple distinctions and their transformations. Elements in mythology, such as different kinds of animals and their actions, say, one flies up, the other down, can be dissected by the structuralist, who thereby can understand the cultural code of the mythological system from the people who possess it.

OTHER STRUCTURALISTS

Among other structuralists were the psychoanalyst Jacques Lacan (1901–1981) and the Marxist writer Louis Althusser (1918–1990). Lacan stressed the importance of language in defining identity. He reinterpreted Sigmund Freud through Saussure, arguing that the unconscious has a structure not unlike language. Lacan emphasized opposition (e.g., love is the opposite of hate), thereby suggesting that language is never complete but implies what is left out. In a similar vein, Althusser reinterpreted Karl Marx, arguing for a deep "symptomatic" reading to move beyond the "surface" reading of his contemporaries. He suggested that one needs to understand the structure of the whole in order to explain modes of production. For Marx, he says, there is no distinct individual because the individual is embedded in the social context. Likewise, one should not see in Marx economic determinism (the Marxian base as determining the superstructure) because both the base and the superstructure are part of the same system.

At least implicitly, structuralism remains at the root of much of early twenty-first-century thinking in the social sciences, although its specific tenets are often now overshadowed by new interests and its simplistic vision attacked as misleading. It remains a touchstone even for its critics because so much in poststructuralism depends on understanding structuralist thought at its root and so much in postmodernism requires an understanding of what it is that is being rejected.

Linguists moved on from structuralism through Noam Chomsky's work, which from the 1960s has emphasized universals over the structural features of particular languages. Yet in linguistics, phonemes and other structural elements of language, though sometimes defined differently than they were by Jakobson and Trubetzkoy, remain essential. Anthropology has decidedly moved on in several directions, and there have been interesting criticisms of structuralist thought in that field. One of the most important was that of the French anthropologist-sociologist Pierre Bourdieu (1930–2002), who attempted to break down the static notion of structure he saw in Saussure and Lévi-Strauss—dependent on oppositions such as *langue*/*parole*, as well as system/event and rule/improvisation. Bourdieu wished to emphasize individual action, not within the structure, but in what he called the *habitus* or environment of "dispositions." The French historian of science Michel Foucault (1926–1984) had a similar impact. Early in his career, he stressed the absence of order in history and suggested that *parole* rather than *langue* is its essence. Later he came to emphasize "discourse" over structure. Again, this linguistic concept is used in a metaphorical sense, implying a way of talking about something or the body of knowledge implied. Inherent in this, as in much poststructuralist and postmodernist thinking, is a notion of power that is absent in classic structuralist concerns.

SEE ALSO *Lévi-Strauss, Claude; Social Science; Social Structure*

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Alan Barnard

STUDENT NONVIOLENT COORDINATING COMMITTEE

On February 1, 1960, four black freshmen from North Carolina A & T College (now University) went to the Woolworth's 5 and 10 cent store in downtown Greensboro, North Carolina. After shopping for a few items they proceeded directly to the store's lunch counter, their real objective. They all took seats and were promptly

ignored. The students were not surprised by the waitress's refusal to serve them. In fact they knew they were flirting with danger by flagrantly violating the local segregation ordinance barring African Americans from service in white restaurants, because they had recently spent several weeks talking about the options available to them to combat segregation.

The Greensboro students were not the only ones discussing protest strategies during the 1959–1960 school year. On the contrary, black students all over the South were holding discussion groups and workshops on the topic. In the days and weeks following the Greensboro sit-ins, African American students from other schools began to sit in at segregated downtown lunch counters. Adult leaders soon recognized that a full-fledged student movement had begun. One of those who appreciated the effectiveness of the fledgling student movement was longtime activist Ella Baker (1903–1986). Previously, Baker had worked with the National Association for the Advancement of Colored People (NAACP). Some time later she advocated the creation of a permanent organization in the wake of the Montgomery bus boycott in Montgomery, Alabama, resulting in the establishment of the Southern Christian Leadership Conference in 1957.

In April 1960 Baker urged student leaders to attend a conference that she planned to hold at her alma mater, Shaw College (now university) in Raleigh, North Carolina. Before the students left Raleigh they had established the Student Nonviolent Coordinating Committee (SNCC). By the spring of 1961, the young organization became involved in civil rights campaigns of national scope such as the Freedom Rides (when members of the SNCC rode interstate buses through the Deep South to test a 1960 law forbidding racial segregation in interstate transportation). By the end of the summer, two competing strategies emerged in SNCC: nonviolent direct action and voter registration. At a particularly stormy meeting in August 1961, the group decided that it would do both.

As the organization matured over the next few years, SNCC activists were involved in virtually every major campaign of the Civil Rights movement from the March on Washington in 1963 to Mississippi Freedom Summer, a voter registration campaign in African American communities in Mississippi. During these tumultuous years, the young people of SNCC did the grueling and dangerous work of confronting every aspect of segregation from black disfranchisement to black economic inequality. SNCC organizers were threatened, jailed, brutalized, and a few were even killed. Along the way some of them denounced the Vietnam War, as well. The FBI placed them under surveillance, and the organization was harassed by the IRS. After several years of working for reform in some of the most isolated areas of the rural South, some members of the organization began to rethink their position on a number of issues, including their support for integration. This critical philosophical shift soon resulted in a very public expression of support by some members of SNCC for the concept of Black Power, a political movement that sought to bolster racial consciousness among African Americans. Consequently, many members of the group began to shift their focus to issues of black economic equality and black political education. As the 1960s drew to a close, SNCC members drifted to pursue individual goals. For a brief time in the late 1960s, some attempted to form an alliance with the Black Panther Party, a political organization founded to promote civil rights and self-defense, but it was short-lived, and the Student Nonviolent Coordinating Committee soon passed out of existence. But in many of the communities where SNCC worked, black people still remember and appreciate the efforts of the SNCC kids to help them organize for social change.

SEE ALSO *Black Panthers; Black Power; Civil Rights; Civil Rights Movement, U.S.; Davis, Angela; Desegregation; Forman, James; Jim Crow; National Association for the Advancement of Colored People (NAACP); Passive Resistance; Protest*

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Cynthia G. Fleming

STUDENT'S *T*-STATISTIC

In measuring social and economic progression, statistical methods that take into account various magnitudes of uncertainties are used for inference and decision-making. One of the tasks in statistical inference is to estimate population mean from a sample of observations. For example, one may want to estimate the mean value of the retail price (μ) of a gallon of unleaded gasoline based on prices (X_i's) from a few gas stations in a large city. A natural estimate of μ is the arithmetic sample mean $\bar{X} = \Sigma_{i=1}^{n} X_i / n$. The estimator $\bar{X}$ has many desirable statistical properties, especially when X_i's are independent and identically distributed as a normal (Gaussian) random variable with

mean μ and variance σ^2. From properties of normal distribution, the following Z-statistic

$$Z = \frac{\bar{X} - \mu}{\sigma / \sqrt{n}} \tag{1}$$

is a standard normal random variable with mean $\mu = 0$ and variance $\sigma^2 = 1$. This Z-statistic has been used to make statistical inferences and decisions when variance σ^2 is known or the number of observations n is large. However, in most applications, the variance σ^2 is usually unknown and the number of observations n may be small. William Sealy Gosset (1876–1937), a chemist at the brewery of Arthur Guinness Sons and Co. (Boland 1984), studied the small sample property of

$$T = \frac{\bar{X} - \mu}{S / \sqrt{n}}, \tag{2}$$

where $S^2 = \Sigma_{i=1}^{n}(X_i - \bar{X})^2/(n-1)$ is the sample variance. Gosset's work resulted in the birth of Student's T-statistic. Gosset published his work in *Biometrika* in 1908 under the pseudonym "Student" from his 1904 report to the company titled "The Application of the Law of Error to Work of the Brewery." Gosset's employer was against the work done for the company being made public but allowed him to publish it under a pseudonym. Gosset's original statistic was

$$\frac{\bar{X} - \mu}{\sqrt{\Sigma_{i=1}^{n}(X_i - \bar{X})^2/n}}. \tag{3}$$

The Student's T-statistic used in the current formulation in expression (2) is due to English statistician Ronald Aylmer Fisher (1925).

Student's T-statistic was one of the important breakthroughs in statistical sciences in the twentieth century (Kotz and Johnson 1992). The density function of the Student's T-statistic with ν (integer) degrees of freedom is

$$\frac{\Gamma\left(\frac{\nu+1}{2}\right)}{\sqrt{\nu\pi}\,\Gamma\left(\frac{\nu}{2}\right)}\left(1 + \frac{t^2}{\nu}\right)^{-\frac{\nu+1}{2}}, \tag{4}$$

where $\Gamma(a)$ is the Gamma function defined as

$$\Gamma(a) = \int_0^\infty x^{a-1}e^{-x}dx.$$

Density functions of the Z-statistic and Student's T-statistic are bell-shaped curves with Student's T having a heavier tail. The density function of Student's T-statistic relative to the density function of the standard normal is shown in Figure 1.

The distribution of the Student's T-statistic is the Student's T-distribution and statistical tests based on the

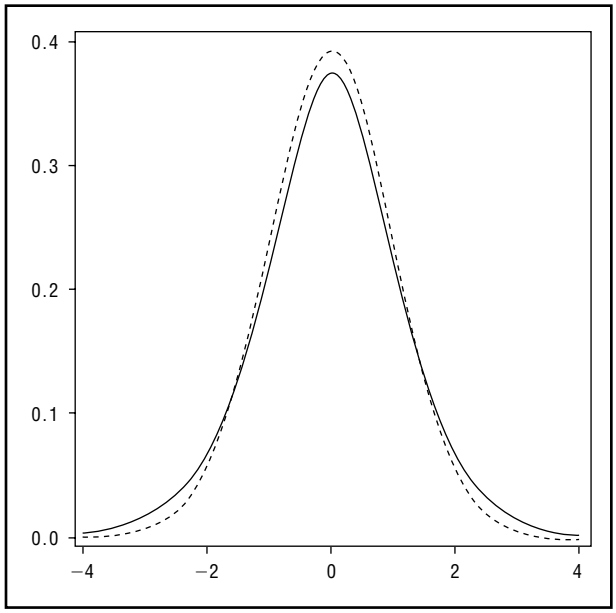

Figure 1: The Density Function of the Student's T Statistic (Solid Line) with 6 Degrees of Freedom Relative to the Density Function of Standard Normal (Dashed Line)

Student's T-statistic form various Student's T-tests. The expectation (mean) of the Student's T-statistic is 0, and the variance is $\nu/(\nu - 2)$ for $\nu \geq 2$. When $\nu = 1$, the Student's T-statistic becomes the Cauchy random variable, which does not have a variance. The Student's T-statistic has infinite variance when $\nu = 2$. The degrees of freedom of the Student's T-statistic defined in expression (2) are $n - 1$.

Student's T-statistic has been used for estimation and decision-making in many fields of science ranging from agriculture, biology, economics, public health, and zoology. As a simple illustration, to estimate the average unleaded retail gasoline price per gallon in a large city, the author of this entry conducted an informal random sample survey on his way (seventeen miles) home at the end of April in 2006. He observed prices of \$2.999, \$2.879, \$2.959, \$2.839, \$2.899, \$3.019, and \$2.919 without including the duplicates. The sample mean ($\bar{X}$) of these seven observations was \$2.930. Under normality assumption of the gasoline price, the sample mean is usually a good point estimator of the underlying mean value μ. Because of the randomness of the sample, a better approach for statistical inference is to construct an interval estimator. A classic method is to find the $100(1 - \alpha)\%$ confidence interval for the underlying mean gasoline price based on the Student's T-statistic:

$$(\bar{X} - t_{1-\alpha/2,\, n-1}S/\sqrt{n},\ \bar{X} + t_{1-\alpha/2,\, n-1}S/\sqrt{n}), \tag{5}$$

where $t_{1-\alpha/2,\, n-1}$ is the critical value that satisfies

$$P(|T| \geq t_{1-\alpha/2,\, n-1}) = \alpha$$

and α is the probability that the confidence interval does not cover the true underlying mean value μ. The critical values of Student's T-statistic for various values of α and degrees of freedom are available in all statistical software packages and in most basic statistical books. A commonly used confidence is 95% ($\alpha = 0.05$) for interval estimation. From our sample observations, the 95% confidence interval for μ is

$$(2.930 - 2.447 * 0.065/\sqrt{7},\ 2.930 + 2.447 * 0.065/\sqrt{7}),$$

which is (2.870, 2.990).

In addition to estimation, Student's T-statistic is also useful for hypothesis testing. The hypothesis to be tested is the null hypothesis. For example, the null hypothesis may be H_0: $\mu = \mu_0$ and the alternative hypothesis can be set as H_α: $\mu \neq \mu_0$ (two-sided test). One may commit two types of errors in testing statistical hypotheses. Rejecting the null hypothesis when it is true is the Type I error and accepting the null hypothesis when it is false is the Type II error. The probability of making Type I error is denoted by α, which is the same value used above for constructing a confidence interval. The probability of making Type II error is denoted by β. Type I error and Type II error are inversely related. The power of the test is $1 - \beta$, which is the probability of rejecting the null hypothesis when it is false. The upper bound of α is the size of the test, and the critical (rejection) region for a given Student's T-test of size α with ν degrees of freedom is $\{|T| \geq t_{1-\alpha/2,\, \nu}\}$. The p-value is the probability of the test statistic as contradictory to the null hypothesis as the observed Student's T-statistic. Using the above seven observations, we can conduct a two-sided Student's T-test on the null hypothesis H_0: $\mu = 3.000$ vs $\mu \neq 3.000$ by constructing the test statistic:

$$T = \frac{\bar{X} - \mu}{S/\sqrt{n}} = \frac{2.930 - 3.000}{0.065/\sqrt{7}} = -2.8493.$$

The absolute value of the observed Student's T-statistic $|T| > 2.447 = t_{1-0.05/2,\, 6}$. That is, the observed Student's T-statistic (–2.8493) is in the critical region, which leads to rejecting the null hypothesis. A very popular way of performing statistical hypothesis testing is by computing the p-value. The two-sided p-value from the above example is $2P(T \leq -2.8493) = 0.0292$, which is less than the commonly used size of 0.05. Therefore, one would reject the null hypothesis of $\mu = 3.000$ and conclude that the underlying mean retail price for unleaded gasoline in that city was different from $3.000 per gallon.

The above simple example on estimation and hypothesis testing is formulated based on a two-sided Student's T-statistic. Similar estimation and hypothesis testing can be done for a one-sided test. In planning a scientific investigation, scientists need to decide how many samples are needed in order to control both Type I and Type II errors. Student's T-statistic plays a fundamental role in designing scientific investigations. Alan Agresti and Barbara Finlay (1997) provide an introduction to statistical estimation and hypothesis testing.

Student's T-statistic can be extended in many directions. For example, if X_i denotes the difference of the gasoline prices of a gas station at two different occasions, one can conduct a paired Student's T-test for quantifying the changes. If one wants to make a statistical comparison of the gasoline prices in two cities, one may construct a two-sample Student's T-statistic

$$\frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_1^2/n_1 + S_2^2/n_2}}, \tag{6}$$

where n_1, n_2 are the number of observations from sample (city) one and two, respectively, $\bar{X}_1 = \Sigma_{i=1}^{n_1} X_{1i}/n_1$, $\bar{X}_2 = \Sigma_{i=1i=1}^{n_2} X_{2i}/n_2$, $S_1^2 = \Sigma_{i=1}^{n_1}(X_{1i} - \bar{X}_1)^2/(n_1 - 1)$, $S_2^2 = \Sigma_{i=1}^{n_2}(X_{2i} - \bar{X}_2)^2/(n_2 - 1)$. If the two samples have equal variances, one can form the pooled Student's t-statistic as

$$\frac{\bar{X}_1 - \bar{X}_2}{S_p\sqrt{1/n_1 + 1/n_2}}, \tag{7}$$

where

$$S_p^2 = \frac{(n_1 - 1)\, S_1^2 + (n_2 - 1)\, S_2^2}{n_1 + n_2 - 2}$$

is the pooled sample variance. Under the null hypothesis of equal means of X_{1i}'s and X_{2i}'s (H_0: $\mu_1 = \mu_2$), the two-sample Student's T-statistic in expression (7) follows the Student's T-distribution with $n_1 + n_2 - 2$ degrees of freedom if X_{1i}'s and X_{2i}'s are independent and identically normally distributed.

For more advanced statistical inferences, such as in correlation analysis, linear regression, and generalized linear models, the estimators of the parameters are approximately of Student's T-distribution. Hence, one can perform a statistical analysis on the estimated parameters based on Student's T-statistic.

As the sample size increases, the degrees of freedom increase and the Student's T-statistic converges to the standard normal random variable (Z). Asymptotically, one may use the Z-test to replace the Student's T-test when degrees of freedom are large ($n \geq 30$). Student's T-statistic is widely used for small sample analysis. One of the fun-

damental assumptions in deriving the distribution of Student's *T*-statistic is the normality of X_i's. This assumption is not easy to check for a small sample size. Many nonparametric (distribution-free) procedures have been proposed for conducting statistical inference without assuming normality of X_i's (Hollander and Wolfe 1999). For multiple sample inferences, Fisher (1925) extended the two-sample Student's *T*-test to analysis of variance (ANOVA) when X_i's are normally distributed. Without assuming normality, many rank-based techniques were developed for nonparametric versions of the two-sample Student's *T*-test and Fisher's ANOVA (Hollander and Wolfe 1999). A great many statistical methods have been invented in the twentieth century. Student's *T*-statistic is one of the most widely used statistical tools not only by professional statisticians but also by all scientists involved in data analysis and decision making.

SEE ALSO *Descriptive Statistics; Distribution, Normal; Hypothesis and Hypothesis Testing; Probability Distributions; Test Statistics*

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Dejian Lai

STUNTED GROWTH

Linear growth or height is influenced by genetic factors, environmental factors, and medical conditions. The National Center for Health Statistics (NCHS) has developed age- and gender-specific growth charts for health professionals to track children's height over time. Height is converted to *height-for-age*, often expressed as a percentile. Children growing between the fifth and ninety-fifth percentiles are considered to be growing within normal limits.

Children whose height is below the fifth percentile may be classified as stunted or of short stature. *Stunting*, defined as height-for-age that is more than two standard deviations below the NCHS or World Health Organization (WHO) International Growth Reference, serves as a general indicator of a child's nutritional status over long periods of time. Growth stunting is a gradual process that occurs in response to chronic biological insults, including malnutrition and infectious diseases, during periods of linear bone growth. It often begins in utero and extends through the first two years. Childhood stunting is closely associated with poverty and is often used as a population-based indicator to compare nutritional adequacy across countries. Without environmental changes, such as adoption, stunting can lead to a permanent reduction in growth. Thus, children who experience stunting early in life are often shorter during childhood and adulthood than peers who had adequate early growth.

The term *short stature* (SS) usually refers to children whose height is compromised by medical problems, such as Turner's syndrome, growth hormone deficiency, renal insufficiency, or Prader-Willi syndrome. The term *idiopathic short stature* (ISS) is used when there is no apparent explanation for a child's short stature. ISS can include children with short familial stature or a constitutional/maturational delay in development.

STUNTING

In the absence of adequate nutrients, a child's body conserves energy by limiting weight gain and then by limiting linear growth. Cross-sectional and longitudinal studies from multiple countries have found associations between stunting and children's health and development, caused by underlying factors such as malnutrition and infections. The consequences associated with early stunting include metabolic changes, depressed immune function, morbidity, mortality, delayed motor skills, delayed and irregular school attendance, low cognitive scores, and poor academic achievement. Adults with a history of stunting are at risk for obesity, reduced glucose tolerance, coronary heart disease, hypertension, and osteoporosis, as well as decreased work performance and productivity, thereby limiting economic capacity. In settings in which stunting is prevalent, the economic capacity of the entire society may be diminished.

The United Nations Standing Committee on Nutrition estimated that in 2004 approximately 148 million preschool children (27 percent under five years of age) in developing countries were stunted. Malnutrition is a serious global concern, and in some countries rates of stunting among children exceed 50 percent. In 2000, 70 percent of stunted children were from Asia, primarily

South Central Asia, and 24 percent were from sub-Saharan Africa.

The primary causes of stunting are nutrient deficiencies and infection. Recent evidence has shown that cow's milk intake is linked to linear growth, primarily by stimulating insulin-like growth factor (IGF-1). Although several nutrients have been linked to stunting, including protein, iron, zinc, copper, calcium, and vitamins D, A, and C, supplementation trials have not yielded clear findings, with the exception of 2002 meta-analysis by Brown et al. showing small but significant effects of zinc supplementation on linear growth. Intestinal infections can lead to stunting by reducing the absorption of nutrients. In environments with poor hygienic conditions, frequent infections can directly impact metabolism, particularly during infancy when nutritional demands are high and complimentary foods are introduced.

Caregiving practices can influence stunting through feeding patterns, food choices, and household stress. In food-insecure households, families may rely on foods low in macro- and micronutrients. When food is readily available, stunting rates are low. Stunting related to nutrient deficiencies can be minimized by exclusive breastfeeding for the first six months of life, as recommended by the WHO. However, in much of the world, complimentary foods are introduced before six months, often with liquids and cereals that are low in nutrients. If animal-source foods are not available, it can be difficult to provide sufficient nutrients for adequate growth. Finally, there is some evidence that severe family stress can result in diminished linear growth.

Stunting can continue into later childhood, adolescence, and adulthood, generally as an extension of prior stunting. Latin America has high rates of stunting in middle and late childhood, particularly in economically depressed areas. Although malnourished girls may have extended growth periods due to delayed menarche, they generally remain shorter than peers due to past stunting. Growth during adolescence does not typically compensate for earlier stunting.

Catch-up growth is defined as growth that is greater in velocity than expected. Although catch-up growth typically occurs during periods of rapid growth in infancy and toddlerhood, it can occur in middle childhood, particularly if there are nutritional or environmental improvements. There is recent controversy about the promotion of catch-up growth, as rapid weight gain has been linked with metabolic syndrome later in life.

Historically, stunting has been addressed through nutrition supplement programs, with inconsistent success in reducing stunting and increasing linear growth. Supplementation, combined with psychosocial stimulation, can also lead to improvements in cognitive performance into early adulthood.

In Peru, where food availability is adequate and stunting is primarily caused by dietary patterns, a randomized controlled trial of a nutrition education intervention from birth found that feeding practices and dietary intake improved, and the stunting rate was reduced by two-thirds among children eighteen months of age.

Economic progress has also been linked with decreased stunting rates. For example, Southeast Asia has seen a significant decrease since 1990 corresponding with economic improvements. National factors such as energy availability, female literacy, safe water rate, amount of economy derived from agriculture, and gross national product largely explain stunting prevalence within nations.

SHORT STATURE

The health and developmental consequences of SS/ISS are generally less severe than stunting, depending on the underlying causes. Although early studies raised concerns about the emotional well-being of SS/ISS children, recent studies with adequate comparison groups have not found difficulties in emotional well-being or self-image related to SS/ISS.

INTERVENTION AND TREATMENT

Children with growth hormone deficiency have been treated effectively with recombinant growth hormone. Growth hormone therapy (GHT) has been approved for treatment of children with ISS, but it is expensive and requires injections six or seven times a week until adult height is achieved. A 2003 Cochrane review by Jackie Bryant, C. Cave, and R. Milne found nine randomized controlled trials of GHT among children with ISS, most with only short-term effects. Although GHT can contribute to short-term increases in height (ranging from 0 to 0.7 standard deviations per year), children with ISS will be shorter than peers in adulthood. There is debate on the merits of GHT among children with ISS, particularly because treatment with GHT does not appear to alter children's quality of life. More research is needed to examine the long-term consequences of GHT, including adult stature, quality of life, and costs.

There have been concerns regarding the relation between long-acting stimulations given to children with attention-deficit/hyperactivity disorder and children's growth. Although most studies have found no long-term negative effects on children's height, the findings are not consistent and there are some data suggesting diminished gains in height after four years of treatment.

OTHER CONDITIONS

Severe dieting and anorexia nervosa result in inadequate weight gain (including weight loss) and may alter the sex hormones and menarche. However, there is not a clear relation between anorexia nervosa and stunting/SS. Growth history, timing of onset (before or after puberty), and duration of anorexia nervosa can impact nutritional status and growth outcomes, but have not been studied systematically.

In summary, stunting occurs early in life and can have lifelong consequences on cognition, academic performance, work capacity, and economic potential. Ensuring adequate nutrition and care through the promotion of breastfeeding; access to nutrient-rich food, including cow's milk; and developmentally and culturally appropriate feeding practices may be effective strategies to prevent stunting.

SEE ALSO *Body Mass Index; Child Development; Development; Disease; Hypertension; Malnutrition; Nutrition; Obesity; Undereating; World Health Organization*

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STYLIZED FACT

The original idea of a stylized fact was introduced by Nicholas Kaldor (1908–1986) and applied to macroeconomic growth theory. Beyond the original application, the idea of a stylized fact is used throughout economics and the social sciences (and also in other scientific disciplines) as a simplifying abstraction of some social or economic process or fact. Being only a stylized fact, it is not a fact proper, but an assertion of what a researcher believes to be more or less true for a whole class of objects in question and with no reference to any concrete empirical finding. As Kaldor stated the problem of empirical observations, these "are always subject to numerous snags and qualifications" (Kaldor 1961, p. 178). Thus empirical observations and statistics distilled from them have always to be interpreted in the light of some theory. "[T]he theorist should be free to start off with a stylized view of the facts" (Kaldor 1961, p. 178)—this stylized view being a mental or verbal and in most cases still informal model of the domain of research. Empirical details, even contradictory ones, can be neglected in this early stage of research. Thus a first hypothesis explaining the stylized (and not the detailed empirical) facts can be generated.

Two stylized facts as quoted from Kaldor's paper illustrate what Kaldor may have meant with this term:

> As regards the process of economic change and development in capitalist societies, I suggest the following "stylized facts" as starting point for the construction of theoretical models: (1) The continued growth in the aggregate volume of production and in the productivity of labour at a steady trend rate; no recorded tendency for a falling rate of growth of productivity. (2) A continued increase in the amount of capital per worker, whatever statistical measure of "capital" is chosen in this connection. (Kaldor 1961/1968, p. 178)

Both of these stylized facts neglect details in the time series for measurements of productivity and capital per worker and are not even interested in the details of measurements ("whatever statistical measure … is chosen"). Moreover, a "steady trend rate" is observed—obviously a continuous deterministic function of time, as the "steady trend rate" can hardly be otherwise formalized.

Obviously, Kaldor's stylized facts are statements about the outcome of some abstract social or economic process, not about the outcome of any concrete or real process. Thus stylized facts are not statements that aggregate the knowledge gained from the statistical analysis of many concrete social processes, but the interpretation of what a researcher distills from his or her experience of some social or economic processes. The problem with this view is that it is in a way immune to falsification, as any real economic process that is not in line with the stylized fact can be declared as something like noise (cf. Boland 1994, p. 536). Robert Solow even commented on Kaldor's paper, saying, "there is no doubt that they are stylized, though it is possible to question whether they are facts" (Solow 1970, p. 2).

Thus, stylized facts can only be seen as starting points for further empirical and theoretical research. Recently, stylized facts have also been discussed as starting points for formal modelling and computer simulation of abstract social processes (compare, e.g., Gilbert 2000; Schwerin and Werker 2003). As Bernd-O. Heine et al. observe, the "value added by simulation models can be assessed by comparing the explanatory power of these models with respect to the relevant stylised facts to those using established methods" (2005, p. 2.11). In this sense the term is also used by Joshua Epstein (2006, p. 16), who lists several "stylized facts" such as the right-skewed wealth distributions (Epstein and Axtell 1996, pp. 7, 33–34) that were generated by the Sugarscape simulation model using a number of specified rules describing the behavior of individual agents. This is in any case an extension of Kaldor's idea of stylized facts, as the simulation models mentioned provide microfoundation for stylized facts on the macro level.

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SUBALTERN

The term *subaltern* derives from Latin *sub-* (below, under) plus *alter* (other) or *alternus* (alternate), which produced *subalternus* (subordinate). It designated a lower-ranking, even an inferior, individual. In the eighteenth and nineteenth centuries, *subaltern* was employed as a military term. In the twentieth and twenty-first centuries, under the influence of Marxism, nationalism, postcolonialist theory, and feminism, *subaltern* has come to be used broadly to represent subordination in social, political, religious, and economic hierarchies. Diverse aspects of societies, histories, and other human situations have been examined at the national, communal, and individual levels to recover the roles of marginalized or subaltern participants displaced by stratification. In particular the term has come to symbolize disruption and distortion of indigenous history, values, and polity in the wake of external conquest, colonization, and prominence given to Westernization at the expense of indigenous mores.

MILITARY USAGE

In martial contexts, the term was applied to commissioned military officers below the rank of captain. Essentially it denoted a junior officer, particularly at the various grades of lieutenant. Temporary command would be handed over to a subaltern officer during "trooping the colors" in honor of a monarch's birthday.

The term was employed regularly by the British army until the Cardwell reforms in 1871. The senior subaltern rank was captain lieutenant. The junior subaltern rank in the cavalry was cornet, while its counterpart in the infantry was ensign. During the American Revolutionary War (1775–1783), the colonial army had ranks such as cornet, subaltern, and ensign—marked by green cockades

in their hats. The rank of second lieutenant eventually replaced that of subaltern.

SOCIOPOLITICAL USAGE

Antonio Gramsci (1891–1937), an Italian political theorist, prominent socialist, founding member of the Communist Party in Italy (the Partito Comunista d'Italia), parliamentarian, and prisoner under the fascist regime of Benito Mussolini (1883–1945), provided the intellectual impetus for transforming the notion of subaltern into a political and social concept through his writings. He wrote of workers in Europe as belonging to classes that had been subordinated through sociopolitical hegemony, were exploited through economic methods, and were excluded from meaningful participation in the offices and benefits of the nation-state. A binary, almost dualist, relationship was said to arise between dominant and suppressed groups. Gramsci noted that such subaltern or proletarian classes could be exploited because they lacked unity and common cause and would remain oppressed unless they developed a unifying ideology that would lead them to alter the balance of power and form a new state or governing institutions that embodied and represented their wills and wishes. Gramsci, elaborating on Karl Marx (1818–1883), postulated that the working classes could and would under conditions of political coercion, economic exploitation, and social marginalization eventually develop a collective consciousness or common philosophy. That collective ideology would serve to transform them by generating self-awareness of their subordinate situations and galvanize them into resistance—thereby relocating the agency of change from the elite classes to the proletariat.

Another important intellectual influence was the notion that all forms of discourse are shaped—both overtly and inadvertently—by ideology. The literary theorist Edward Said (1935–2003) argued that the dominant views of politics, literature, religion, and history plus writings on those topics reflect Occidental, imperialist permutations. The loci of those ideological foundations were supposed to have been England and France during the colonial period of the fifteenth through twentieth centuries and the United States from the mid-twentieth century onward. The consequences of ideologies have permeated individual and collective assumptions and actions, it was suggested.

Drawing upon Gramsci's theories and influenced by Said's writings, an academic subdiscipline called *subaltern studies* developed in the late 1970s and early 1980s. Other influences on the development of the concept of subaltern into a theoretical framework that has displaced previous radical frameworks, such as the notion of history as an accurate record of the past, include postcolonial historiography (on which it became a major influence as well) and deconstructionism. Subaltern studies attempt to offer a theory of change grounded in notions of dominance; colonialism; subservience; alienation, including loss of self-identity; resistance; confrontation; and transformation. It postulates that even when marginalized, those who are oppressed can display agency. The common people are regarded as closely if not completely synonymous with the subaltern classes within each society. The elite of each society, whether of indigenous or expatriate origins, are designated as the dominant groups. Exploitation of the subaltern by the elite is considered an existing precondition that must be acknowledged and investigated in order to comprehend the masses in each society. The field of subaltern studies can therefore be viewed as a form of postcolonial studies.

Ranajit Guha, a historian studying South Asia, has been highly influential in popularizing the term *subaltern*, in defining its mandate and intellectual parameters, and in applying resultant concepts to historical and contemporary sociopolitical issues. He also edited several volumes of *Subaltern Studies* and anthologies drawn from those volumes. Guha and other scholars working on subalterns, such as Gayatri Chakravorty Spivak, Dipesh Chakrabarty, and Homi Bhabha, have suggested that attempts to reconstruct past events—that is, the process of historiography that produces historical accounts—is inextricably bound with and constantly reflects the impact of interactions between dominant or elite and subordinate or subaltern groups. Guha critiqued elitism by colonialists and nationalists while urging that historiography be constructed from below, not above. Spivak raised the issue of agency among the subordinate. Chakrabarty has examined reasons for historical accounts remaining centered on the state. Partha Chatterjee and Gyanendra Pandey have focused on the fragmentary aspects of history, memory, and historiographical accounts. Shahid Amin analyzed relationships between peasants and capitalists in economic production. Amin also demonstrated how and why accounts of the past are reshaped by individual and collective memory to fit new predilections. Focusing largely on the historiographies of colonialism in India and of subsequent Indian nationalism, they have proposed that those accounts were shaped by elitist British feudatory imperialism and by neo-elitist Indian bourgeois patriotism, respectively. As such, they conclude that established historiography and histories should be rejected as unrepresentative and inaccurate. The spotlight of inquiries into societies should be on the contributions of the people rather than on the accomplishments of the elites, according to scholars utilizing methodologies that incorporate the concept of the subaltern.

INTELLECTUAL IMPACTS OF SUBALTERN STUDIES AND SUBALTERN AS A CONCEPT

The term *subaltern* has come to be used to denote the underclasses of societies and often replaces other designations for those lower classes. Those groups are thereby distinguished from members of the ancien régime and from members of the new elites. The term has been employed in the contexts of investigations into political, religious, and social interactions between dominant and subordinate groups. Such studies have examined not only agencies of change but also how and why particular ethnoreligious communities, societal classes, and economic clusters are displaced by the might, convictions, organization, and vitality of other, emergent new elites. Moving beyond a rejection of established methodologies for analyzing societies, the study of subalterns has expanded to include investigations of social transformation and inquiries into how and why some groups developed into elite classes who control resources and perpetuate stereotypes, while other groups become subaltern communities experiencing crisis and displacement. Studies of the subaltern have suggested that the actions of elites and subalterns are affected by regional religiopolitical and socioeconomic factors and that therefore neither group can develop homogeneously. Indeed conflation and separation of modes of domination and subordination seem to have differentially determined the relationships that arose between elites and subalterns living in diverse areas.

It has been recognized that the presence of elitist and subaltern classes affects not only the patterns of interaction between groups but also influences the historiography of each community. The official historical record, often crafted by elites and instilled with a sense of social dominion and political hegemony, must be read not simply as a record of the past but also as an elite ideological product of rule that may have slowly but surely appropriated aspects of the subordinated people's past. This increasing marginalization of subordinate communities and individuals could even eventually reduce references to members of the indigenous confessional group to fleeting stereotypical images.

Examples from historical contexts to which the term has been applied by modern scholars include the *dhimmi* or protected minority communities of Jews, Christians, and Zoroastrians in the medieval Middle Eastern Islamic caliphates of the Umayyads (661–750) and the Abbasids (750–1258), the peasants and workers of early modern France (1492–1789) and tsarist Russia (1721–1917), and the indigenous working classes of British India (1858–1947).

Reassessment of the concept of the subaltern and of the field of subaltern studies has commenced with deliberations regarding their significant contributions and limitations. Indeed the representativeness of subaltern studies can be questioned in terms of selectivity of topics, choice of source materials, and parameters of inquiry. Sumit Sarkar in particular has noted a reductionist tendency that excludes the complexities inherent in historical events while simultaneously being "simplistic and retrogressive" in paying short-shrift to the impacts of precolonial hierarchies (1997, p. 51). An original founder of subaltern studies turned critic, Sarkar perceives subaltern studies as mired among forms of Marxism recast in the guises of cultural, class-based, and minutia or fragment-focused investigations. Achin Vanaik, who approaches disenchantment for subaltern studies from the viewpoint of a political scientist, conflates it with postmodernism and post-structuralism. He notes a tendency to ground many studies on the subaltern in an assumed notion of secularism. Vinay Lal has raised the issue of why studies of the subaltern constantly utilize Western theories to comprehend Eastern data rather than turning to Oriental models to comprehend those who were and are subordinated. Lal also pushed for a more nuanced appreciation of the nexus between history and myth and of influences by the latter on the former's creation, propagation, and preservation. Dane Kennedy and Richard Eaton have critiqued the rigid framework of the subaltern specifically and the amorphousness of cultural studies generally. Moreover the disillusionment and radical dissent with historiography that spawned and shaped inquiry into the situations of subalterns have become relatively mainstream in academia and broader intellectual settings.

Overall it could be suggested that historiography and other analyses of past and present societies benefited from being reshaped through inclusion of the subaltern or subordinate within the basic repertory of historical themes, events, and agents.

SEE ALSO *Fascism; Feminism; Gramsci, Antonio; Hegemony; Hierarchy; Marx, Karl; Marxism; Memory; Mussolini, Benito; Nationalism and Nationality; Postcolonialism; Resistance; Stratification; Working Class*

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Jamsheed K. Choksy

SUBGAME PERFECTION

In a Nash equilibrium strategy profile, every player plays the best response against the other players' strategies specified in the profile. For extensive form games where players move sequentially, one may use this notion, treating players' strategies as complete plans of action before the play begins. However, this concept ignores the sequential structure, and hence, sometimes may not be justifiable.

Consider the entry-deterrence game in Figure 1, in which there are two firms (players): a possible entrant (player 1) to an industry in which there is an incumbent (player 2). The potential entrant moves first and has two choices—to enter (*E*) or to stay out (*O*). If player 1 does not enter, the game ends. If player 1 enters, the incumbent then has two options—to accommodate (*A*) or to fight (*F*).

The game in Figure 1 has two Nash equilibria: (*O*, *F*) and (*E*, *A*). Indeed, in the equilibrium profile (*O*, *F*), the entrant is playing the best response *O*, because the entrant believes that the incumbent will choose *F*. However, this belief is based on an *incredible threat*. *F* is not optimal in the unreached *subgame* (intuitively, the "game" below a nonterminal node) in which the incumbent has to make a choice (the incumbent does not make a choice when the entrant chooses *O* because the game ends).

A subgame perfect equilibrium (SPE), as defined by Reinhard Selten (1965), is a strategy profile that induces a Nash equilibrium in every subgame of the original game, even if it is off the equilibrium path. Clearly, SPE refines the set of Nash equilibria. In the above example, (*E*, *A*) is a SPE, while (*O*, *F*) is not.

Any finite extensive form game with perfect information is solved using *backward induction*. Backward induction finds the optimal actions of the players in the "last" subgame first, and then, given these actions, works backward to the beginning to find the SPE of the game.

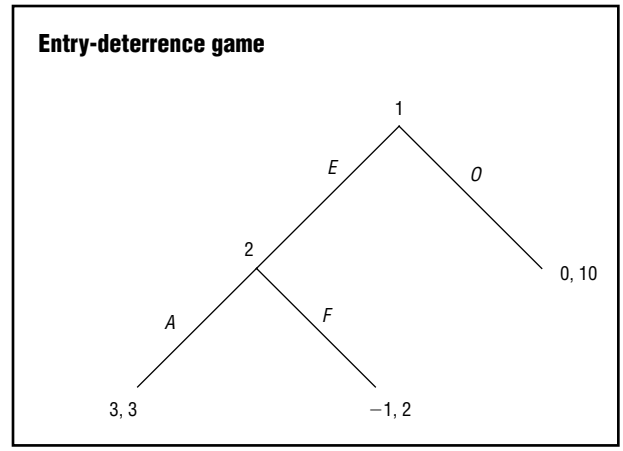

Figure 1

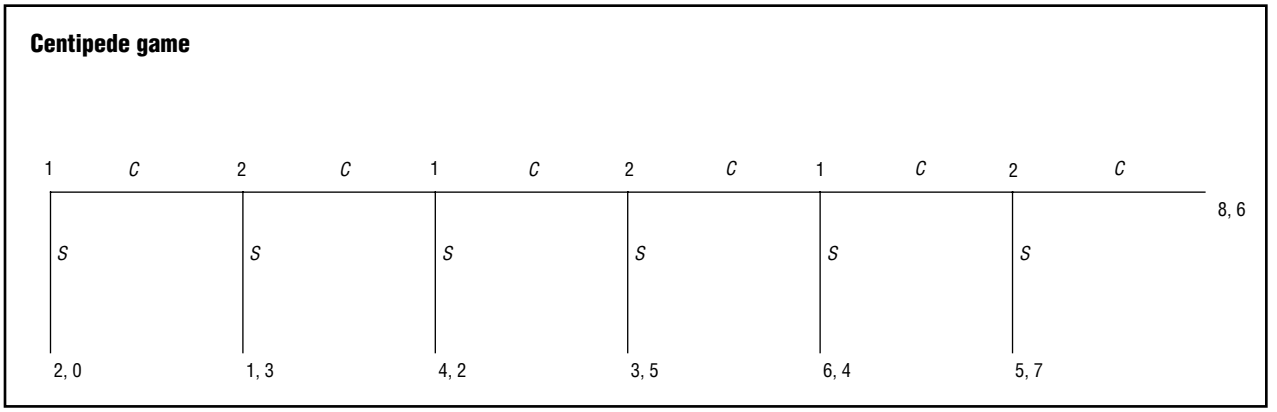

Figure 2

Consider the two-player "centipede" game in Figure 2, in which each player sequentially chooses either to continue (*C*) or to stop (*S*). Backward induction implies that the unique SPE is *S* for both players in every stage.

The backward induction solution is not observed in experiments where the players continue the game for a few stages (McKelvey and Palfrey 1992). This finding questions whether rational players follow backward induction. Robert Aumann (1995), however, proved that "common knowledge of rationality" implies backward induction.

Another criticism of SPE comes from the experiments on the ultimatum game, as in Figure 3, in which player 1 offers a fraction (*x*) of a pot of money to player 2, who has a choice to accept (*A*) or to reject (*R*).

The SPE outcome is for player 1 to offer the smallest money unit (say, 1*c*) and for player 2 to accept it. However, in experiments, offers are about 40 percent, and low offers are rejected (Guth et al. 1982). This is a violation of SPE only if we assume that the players care only about money. One may, however, test the outcomes using revealed preferences in games (Ray and Zhou 2001).

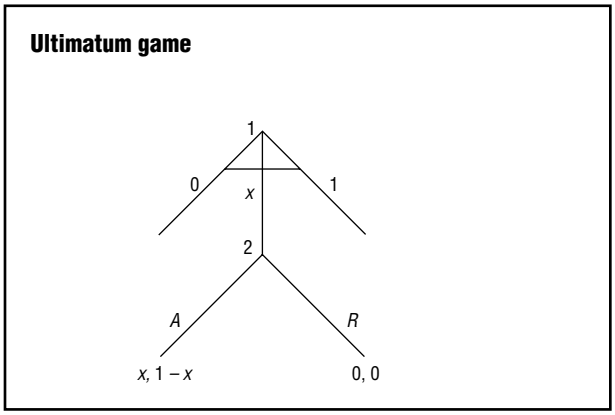

Figure 3

For games with imperfect information, subgame perfection is not enough to justify a solution. One should consider sequential equilibrium (Kreps and Wilson 1982).

SEE ALSO *Game Theory; Nash Equilibrium; Strategic Behavior; Strategic Games; Strategy and Voting Games*

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Indrajit Ray

SUBJECT/SELF

Many social scientists argue that the modern Western conception of the self is a social construction. In "The Subject: The Person" (1979) anthropologist Marcel Mauss wrote that the history of the modern Western self began

with the ancient Roman concept of the persona. Originally *persona* simply meant a "mask," as in the mask that a dramatic actor would wear during ritual performances. But as time went on the notion of persona became inscribed into Roman law as an individual with rights, duties, and obligations. Every male Roman citizen was considered a "person" with ancestors, a name, a clan or family, and a right to the protections of Roman law. At the same time, a slave had no personality, no ancestors, no right to property, no "self." Emerging during the final days of the Roman Empire, the early Christian Church democratized this notion of selfhood by investing every human being with a "soul." While in the human world fundamental differences in social status remained, in the eyes of God all were equal. But this early Christian self was still distant from the modern Western notion of the person as a psychological being.

According to sociologist Max Weber, the next stage in this conceptual evolution came with the Protestant Reformation of the sixteenth century. Within the Catholic Church, persons invested with souls depended upon the mediating power of the priest for salvation. The priest took confession, provided communion, and offered contrite sinners salvation through his power to dispense God's forgiveness. When Martin Luther and John Calvin turned against the Catholic Church, they eliminated the priest's mediating power. The sinner's salvation depended upon individual conscience, not the priest's magic. With this emphasis on conscience and personal responsibility, a new notion of self emerged, a psychological being with a complex interior life visible to God but concealed from the world at large.

The Protestant notion of a rational self invested with personal responsibility became one foundation for the ideas of individuality promulgated by Enlightenment philosophers and the early classical political economists. Beginning with John Locke, the quasi-divine quality of the self became indissolubly linked with private property and a new conception of political rights. For Locke, and later for Adam Smith, a natural object became personal property when the individual mixed his or her labor with the thing. This early "labor theory of value" made it clear that the self was sacred and its holiness could be transferred to things, transforming them into individual possessions. Further, this new sacred self had the capacity to challenge the so-called divine right of the absolutist sovereigns that had ruled Europe for almost a thousand years. Now every individual had the same God-given right to self-government and individual rationality. During the eighteenth and nineteenth centuries, a wave of republican revolutions washed over Europe and the Americas. Under these new republican regimes, the state was considered a servant of the people; the people were thought to be a collection of self-governing, self-possessed individuals.

But beginning in the late nineteenth century, notions of the centered, rational subject were increasingly called into question by philosophers and social scientists. For instance, Friedrich Nietzsche conceived of the individual as an instinctual cauldron propelled by the "will to power." This will to power drove the first human beings to excesses of bloodlust and cruelty as they expressed their individual sovereignty through the domination of others. But this changed as the original sovereigns entered human society. Social discipline no longer allowed the free expression of the will to power, and the instinct for domination turned inward. That repression of instinct led to the rational, centered, subject conscious of her or his guilt—the bad conscience of antisocial desire. Building on Nietzsche's notion of the disciplinary self, twentieth-century scholar Michel Foucault produced a series of historical studies documenting techniques that created the modern subject. In *Madness and Civilization* (1965), Foucault argued that while madness had often been punished in early modern Europe, it was not until the late eighteenth and early nineteenth centuries that the modern asylum took shape. This institution operated differently than earlier forms of incarceration. A disciplinary arrangement, in which the "insane" subject was made to feel guilt for "transgression" against reason, created a new kind of person, a self whose interior life was governed by a persistent internalized self-surveillance. As a site for the inscription of social power, the subject internalized the asylum.

More recently, many feminists and postmodernists argued that the "will to power" itself was the product of this rational, alienated individuality. In her essay "The Feminist Standpoint" (2004), Nancy Hartsock wrote that as "a consequence of this experience of discontinuity and aloneness, penetration of ego-boundaries, or fusion with another is experienced as violent" (p. 46). The self seeks to escape its internalized prison through contact with others, but the only escape seems to be through violence, violation, and domination. Sexuality itself becomes tangled in this process, and the masculine self often sees the object of its desire as a thing to be conquered. But another path is possible. Mutuality, rather than domination, could satisfy the desire for fusion. Such mutuality, however, depends on a new kind of subjectivity, a self decentered, continuous, and open to transformation.

SEE ALSO *Alienation; Feminism; Foucault, Michel; Locke, John; Madness; Nietzsche, Friedrich; Postmodernism; Religion; Sexuality; Slavery; Smith, Adam; Social Science; Subjectivity: Overview; Weber, Max*

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Graham Cassano

SUBJECTIVE PROBABILITY

SEE *Probability, Subjective.*

SUBJECTIVE VALUE

SEE *Value, Subjective.*

SUBJECTIVITY: OVERVIEW

In emulating the success of the physical sciences, the social sciences have traditionally been committed to the paradigm of objective knowledge. The norm of objectivity was understood as an ideal of disinterested, factual, replicable, lawlike knowledge of social reality, a type of knowledge that would demonstrably transcend both ideological controversies and commonsense knowledge, indeed a knowledge wholly independent of human interests, passions, and all subjective entanglements. Not surprisingly, this image of science polarized epistemological disputes into two extreme camps, the objectivist persuasion defending the ideal and a range of dissenting voices questioning the possibility or desirability of a purely objective knowledge of social life. Perspectives from the latter camp shared the belief that an authentic social science must accept the radically subjective nature of its research fields and devise methods and approaches to capture the phenomena of subjective life. What follows is a brief survey of some of these approaches to subjectivity.

Given the importance of human emotions, intentions, and reasoning in modern thought, it is useful to begin with philosophy. The founding moment of modern philosophy lies in René Descartes's (1596–1650) defense of the *cogito*, the irreducible moment of subjective consciousness that persists as a foundation of objective, mathematical knowledge. Following Descartes's lead, we see the "philosophy of subjectivity" branching into its various forms: the explorations of Immanuel Kant (1724–1804) and Johann Fichte (1762–1814) of the transcendental subject; G. W. F. Hegel's (1770–1831) historicized vision of subjectivity as a genetic formation of "spirit" (in the 1807 *Phenomenology of Spirit*); Karl Marx's (1818–1883) materialist account of the subject of history exemplified by revolutionary agency and praxis; and the emergence in the first part of the twentieth century of phenomenology as a descriptive philosophy of lived experience (in the work of Edmund Husserl [1859–1938] and his students).

There were also parallel movements within the human sciences. The debate between objectivism and subjectivism first came to public attention in the dispute at the end of the nineteenth century within German sociology between the *Naturwissenschaft* and *Geisteswissenschaft* images of science. Where the "natural science" model aspired to uncover objective laws, the "human sciences" foregrounded the "spirited" realms of human action, conscious agency, and the intentional life of singular individuals embedded in particular historical contexts. The well-known defense of subjective cognition in the work of Wilhelm Windelband (1848–1915), Heinrich Rickert (1863–1936), and Wilhelm Dilthey (1833–1911) entered modern sociology in Max Weber's (1864–1920) version of a "sociology of action" based upon understanding actors' motives (the so-called *Verstehen* or "understanding" approach to historical and social explanation). The subjective experience of historical agents is not to be reduced or discounted; rather, it is to be recovered through situationally sensitive contextual methodologies. Alongside the legitimate claims of quantitative methodologies, the social sciences must construct new and imaginative "qualitative" approaches to intersubjective experience.

Weber's methodological writings were given a phenomenological grounding in the work of Husserl's student, Alfred Schutz (1899–1959). Essentially Schutz followed Husserl's argument that all scientific knowledge has its foundations in the pretheoretical world of practical action, the *Lebenswelt* or lifeworld of everyday experience (Husserl [1954] 1970). Rather than treating subjectivity as an irrelevance or hindrance to objectivity, the social sciences could only achieve rigorous knowledge by making this "subjective world" of practical life its central topic. The human sciences, in other words, presuppose a phenomenology of the social world (Schutz 1967).

Other traditions had come to the same conclusion from different routes. One of the most notable of these is the tradition of American pragmatism and its sociological

correlate, symbolic interactionism. Theorists such as William James (1842–1910), John Dewey (1859–1952), and George Herbert Mead (1863–1931) viewed the social world as the outcome of the reflexive interaction of conscious agents. Human beings act and relate to one another through communicative, symbolic means. Because individuals symbolically construct their lifeworlds, the interactional processes involved must form the first topic of a genuine social science. When combined, European phenomenological sociology and American interactionist sociology have given rise to a wide range of approaches to subjective experience. Among the most influential of these are phenomenological sociology interpreted as a radical sociology of knowledge (exemplified by the work of Peter Berger and Thomas Luckmann [1966]); the ethnomethodological sociology of Harold Garfinkel (1967) and Aaron Cicourel; the language-based perspectives of conversation analysis; the interactionist sociology of Erving Goffman (1922–1982) (1974) and the microsociology of subcultures and personal worlds influenced by Goffman's work (e.g., Becker 1964; Glaser and Strauss 1967; Sudnow 1972); phenomenological psychology and humanistic psychology (Psathas 1973); social studies of science as a "subjective construction"; and so on. In addition, we might mention the interdisciplinary-wide movements of qualitative methodology, feminist epistemology, structuration theory, and recent forms of critical theory (influenced by the work of Jürgen Habermas).

In the tradition of "continental philosophy," the subject and subjectivity occupy a fundamental role in a number of theoretical perspectives—most notably in the development of semiotic and structuralist ways of thinking that rejected the Cartesian *cogito* and "humanist" subject, and more recently in various strands of poststructuralist thought in which we find something like "the return of subjectivity."

In the tradition of metaphysical humanism, the transcendental subject is thought to constitute the "object" through its active processes of representation (Kant, Arthur Schopenhauer [1788–1860]) or intentional syntheses (Husserl, Max Scheler [1874–1928], Jean-Paul Sartre [1905–1980], Maurice Merleau-Ponty [1908–1961], Paul Ricoeur [1913–2005], and others). The "world" is the totality of phenomenal appearances given to the constituting subject. Objects are "correlated" to subjective activities, functions, representations, and practices. This has been called the "philosophy of consciousness." Questioning the primacy of consciousness produces a range of antisubjective positions. In this context, we might view psychoanalysis as the key to the rejection of the primacy of pure consciousness, with Sigmund Freud's (1856–1939) attempt to dethrone the privileged position of subjectivity by exploring the anonymous functions of desire and unconscious experience. Psychoanalytically oriented thought contests the primacy of the ego, particularly in the guise of the subject understood as a stable, proprietorial center of conscious acts. The structuralism of Roland Barthes (1915–1980) and Louis Althusser (1918–1990), for example, has extended this criticism by seeing the self as a "subject-position" created by ideological practices and social discourses.

This critique of the subject opened the way for a much more complex and diverse problematic of subjectivity—emphasizing the changing historical, institutional, and cultural forms adopted by the subject within different fields of power (here the work of Martin Heidegger [1889–1976] and Michel Foucault [1926–1984] can be mentioned). More recent theorizing has criticized the Cartesian subject as an ideological pillar of masculine, Eurocentric culture. As black feminist and postcolonial theory has argued, the "white mythology" of the occidental subject helps to sustain patriarchy, women's oppression, colonialism, and phallocentric institutions more generally. Rather than positing a disembodied, essentialist, and metaphysical "subject," the task poststructuralist and postmodern thought has set for itself is to deconstruct all essentialist conceptions of the subject in order to investigate the concrete relations and discourses that create different historical forms of embodied subjectivity.

SEE ALSO *Goffman, Erving; Intersubjectivity; Objectivism; Objectivity; Structuralism*

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Barry Sandywell

SUBJECTIVITY: ANALYSIS

The terms *subject* and *subjectivity* are employed in the humanities and social sciences in contradistinction to the notion of the self or selfhood. The latter terms traditionally suggest the idea of identity as a personal possession and of individuality as both unique and autonomous. The notion of the subject is more ambivalent in that the term at once denotes a person under the control or influence of other people or external forces—that is, a being literally or figuratively subjected to such forces and influences—and an individual agency that thinks, feels, perceives, intends, and acts in its interaction with other people and the outside world. In contrast to the self, regarded as a stable human essence and the controlling center of its own actions, the subject in contemporary critical theory is conceived as at once active and passive, and as the product of its inscription in language, politics, and culture. This so-called de-centered subject is the result of a thorough rethinking of the notion of subjectivity during the second half of the twentieth century. As such, it forms a radical break with some of the earlier theories of the subject in which it nonetheless finds its foundations.

The term *subject* in relation to human consciousness finds its origins in German idealism. Idealists, such as Georg Wilhelm Friedrich Hegel (1770–1831) and Immanuel Kant (1724–1804), assume, albeit with considerable differences in their accentuations, that only mental entities are real. Physical things, therefore, exist only in the sense that they are perceived by the controlling center of the mind. Similarly, René Descartes (1596–1650), firmly rooted in the historical intellectual movement the Enlightenment or the Age of Reason, posits that the only immediately and directly perceptible forms and objects of knowledge are those that are part of one's state of mind. External realities merely exist as ideas or pictures in the mind. The only incontestable truth-claim pertains to one's consciousness, hence Descartes's famous dictum: *Cogito, ergo sum*—"I think, therefore I am." Descartes's model forms the basis of all subsequent theories of the subject as an autonomous being that, in being aware of its capacity for thought, is conscious of its existence. Although there are considerable differences between Descartes's position and idealist notions of the subject, they share in common an emphasis on the human powers of perception, rationality, and free agency—on the central position of human consciousness from which all forms of knowledge and meaning are suggested to spring.

MODERNIST INFLUENCES

While philosophers such as Søren Aabye Kierkegaard (1813–1855) and Arthur Schopenhauer (1788–1860) were among the earliest contestants of idealist and rationalist notions of subjectivity, the most immediate precursors of the postmodern de-centering of the subject are three disruptive thinkers who can be jointly associated with the rise of modernism in mid–nineteenth-century western Europe: Nietzsche, Marx, and Freud.

Friedrich Nietzsche (1844–1900) took Schopenhauer's notion of the subject as a figment of the philosophical imagination a step further by claiming that "subjectivity is the product of repressive value systems" (Cavallaro 2001, p. 88). Arguing that there is "no doer behind the deed," Nietzsche attacks the subject in its foundations, exposing the Cartesian notion of its essential autonomy and rationality to be based on a questionable premise since the existence of thinking can never be fully proved. As a grammatical fiction, the subject has no existence as a stable substance or essence but is only the product of dominant ideologies.

The psychoanalyst Sigmund Freud (1856–1939) further undercut the presumed self-presence and unitary nature of subjectivity by introducing the notion of the unconscious and exploring its operations as among the most powerful forces in psychic life. The Freudian subject is split and divided against itself both because of the separation between conscious and unconscious psychic contents and because of the fundamentally contradictory and divisive drives that go into the subject's making. Largely unknowable to itself and profoundly determined by its early experiences within the family situation, the psychoanalytic subject defies any form of self-determination and self-knowledge, explains Mikkel Borch-Jacobsen in *The Freudian Subject* (1988).

The political economist and socialist revolutionary Karl Marx (1818–1883) saw the Cartesian notion of the subject as an ideological ruse that merely served to sustain the liberal theory of the social contract. Instead of conceiving the subject's consciousness of itself as the only ver-

ifiable reality, he argued that the material world is real and that people's ideas about and perceptions of the world are the results, not the causes, of their experience of its realities.

Postmodern thinkers, however diverse in their emphases in approaching the problem of the subject, all take their cues from these three fundamental challengers of Enlightenment thought. Michel Foucault (1926–1984), for example, follows in Nietzsche's footsteps by investigating the processes through which the subject is produced within specific historical and ideological contexts. Ladelle McWhorter explains in *Bodies and Pleasures: Foucault and the Politics of Sexual Normalization* (1999) that Foucault takes structures of knowledge and power to be equally enabling as constraining forces to produce subjectivity. Foucault therefore focuses on the ways in which even the human body cannot be said to have any meaningful and socially intelligible existence outside the discourses—sets of statements that define a cultural object, thereby calling it into being—that produce it.

Jacques Lacan (1901–1981) builds on the Freudian notion of the subject by making language central to psychic development. The Lacanian subject is alienated from its physical reality and the plenitude of its initial indivisibility from the mother in two stages. The first comes when the subject (mis)recognizes itself in the mirror and begins to identify with this image, thus building up an essentially imaginary sense of itself. The second and even more decisive moment at which the Lacanian subject is split from the Real is when it enters the realm of language and can henceforth exclusively identify and know itself in symbolic terms (Grosz 1990).

Taking Marx's analysis of class relations as his point of departure, Louis Althusser (1918–1990) locates the emergence of the subject in ideological structures—or belief systems—which, he maintains, "seduce" individuals to take up their socioculturally determined positions within the system of social relations (Hall 2004, p. 85). Constituted through the process of interpellation—the process by which ideology addresses the individual subject and therewith effectively produces him or her as an effect—the Althusserian subject likewise flies in the face of the classical definition of the subject as cause and substance.

THE POSTMODERN SUBJECT AS SOCIAL CONSTRUCT

Whether defined as the product of power/knowledge (Foucault), language (Lacan), or ideology (Althusser), the postmodern subject is essentially a social construction, the result or effect of systems of meaning and knowledge that always precede him or her, both individually and collectively. Since such systems are both multiple and sociohistorically specific, changing over time, and cross-culturally diverse, subjectivity can neither be seen as unitary nor as a universal phenomenon transcending historical and social boundaries. What is more, the location of the emergence of the subject in systems that precede it, and whose operations necessarily exceed any individual's control, definitively puts paid to the Cartesian notion of human consciousness as the center of control over its own being. While postmodernists thus emphasize the subject's subjugation to the structures that produce him or her, thereby privileging the passive aspects of the term, this is not to say that individual subjectivity is denied any possibility for activity. Since ideological systems and structures of meaning and knowledge can only operate through their bearers, even the de-centered, split subject of postmodernity can be considered potentially endowed with a certain form of agency. The ambivalence of the term *subject* is ultimately maintained by the fact that subjects, though variously produced by external forces and thus by no means masters of their selves, also actively function within their constitutive outsides, whether in conformity with prevailing norms and meanings or in deviation from or actual defiance of their regulatory operations. As a produced effect of discourse, language, or ideologies, the postmodern subject is constituted in a double bind.

SEE ALSO *Althusser, Louis; Enlightenment; Foucault, Michel; Freud, Sigmund; Hegel, Georg Wilhelm Friedrich; Humanism; Idealism; Intersubjectivity; Kant, Immanuel; Marx, Karl; Objectivism; Rationalism; Social Constructs; Subject/Self*

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SUBLIMATE

The Latin word *sublimis* means lifted up, elevated, lofty, eminent, distinguished, a verbal chain containing the movement of going from lower to higher. The *Oxford English Dictionary* defines the verb *sublimate* as "to raise to

high place, dignity or honor"; "to act upon (a substance) so as to produce a refined product"; "elevation to a higher state or plane of existence; transmutation into something higher, purer, or more sublime." In *Civilization and Its Discontents*, Freud uses this metaphorical structure to address how humans sublimate their instincts toward the higher plane of culture, or civilization: "Sublimation of instinct is an especially conspicuous feature of cultural development; it is what makes it possible for higher psychical activities, scientific, artistic or ideological, to play such an important part in civilized life" (Freud 1930, p. 97). In an earlier work, Freud had specified that he was addressing sexual drives: "Sublimation … consists in the instinct's directing itself towards an aim other than, and remote from, that of sexual satisfaction" (Freud 1914, p. 94). The sublimation of instincts—deflecting them away from sexuality—is aided by developmental processes of identification, inhibition, and displacement, which change libidinal instincts into "impulses of affection" (Freud 1924, p. 177). Although many individuals never reach this developmental level, sublimation still plays a role in their lives; hence the wide range of psychoanalytic formulations that attempt to take into account the multiple functions of sublimatory activity.

In Freud's formulations he presumes the individual has already achieved a separate existence from family members and has established his or her status as an individual with stable boundaries. Many other psychoanalytic texts address an earlier set of developmental issues in which stable boundaries between self and other have not yet been established. For example, John Gedo (1996) discusses the role of sublimation in individuals coping with psychotic disintegration. Edward Glover suggests that sublimation is a "process which affords the maximum protection from illness with the minimum expenditure of energy" (Glover 1931, p. 280). Heinz Kohut (1976) notes the function of sublimation in maintaining self-object relations in which an art object serves to restore a sense of self-cohesion by fulfilling a function the self cannot provide. Melanie Klein views sublimation as an attempt to repair the damage done to an internalized object as a result of hate and aggression: "The attempts to save the loved object, to repair and restore it, attempts which in the state of depression are coupled with despair, since the ego doubts its capacity to achieve this restoration, are determining factors for all sublimations" (Klein [1935] 1948, p. 290).

Once stable boundaries have been established, the individual is capable of relating to others as separate, capable of "object relationships" with all their complexity of desire, frustration, approach, avoidance, and expectation. Some formulations address the function of sublimation in sustaining the capacity for object relationships or even providing substitute objects. Michael Balint writes that "all sublimations, and especially the form of sublimation called art, are a kind of deception, are underhand ways of getting back to real personal objects" (Balint 1959, p. 115). For Volney Gay sublimation is a form of "object relatedness" protecting us "from the terrors of schizoid loneliness" (Gay 1992, pp. 292–293). The work of Gedo and Arnold Goldberg (1973) suggests four levels of sublimation: (1) Sublimation serves to prevent psychotic disintegration by providing desperate measures of marking a differentiated status. (2) Sublimation assists in sustaining psychological cohesion by providing self-objects that serve the self's narcissistic needs. (3) Sublimation affords object relationships. (4) In Freud's terms, sublimation enables one to bypass repression and experience gratification without guilt.

In his works D. W. Winnicott describes sublimation as beginning with the union of baby and mother and continuing throughout life "in the intense experiencing that belongs to the arts and to religion and to imaginative living, and to creative scientific work" (Winnicott [1951] 1975, p. 242). This view is "post-Freudian" in the sense that sublimation is not about bypassing repression so as to avoid guilt but rather taking stock of separateness and achieving an experience of re-joining. Hans Loewald views sublimation in these terms, observing that sublimation aims to restore, at least partially, the "original unity" of baby and mother; sublimation "is a kind of reconciliation of the subject-object dichotomy" (Loewald 1988, p. 20). For Jacques Lacan sublimation provides access to an archaic experience preceding the subject-object distinction, the point marking the loss of immediacy with the mother's body.

SEE ALSO *Culture; Freud, Sigmund; Loneliness; Narcissism; Obsession; Oedipus Complex; Psychology; Sexuality*

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John P. Muller

SUBLIMINAL SUGGESTION

Subliminal suggestion occurs when messages or ideas that are perceived below (sub) the threshold or limen of conscious awareness influence thoughts, feelings, or actions. A message, object, concept, idea, or other stimulus is perceived *subliminally* when it is processed at a sensory level (visual or auditory) without an accompanying conscious sensory experience. When environmental stimuli (words, symbols, sounds) are subliminally perceived and encoded, mental representations of these stimuli and associated mental constructs are activated. The internal activation of mental representations makes schematically related constructs, goals, and behavioral tendencies more accessible in memory. Consequently, subliminally perceived messages may be "suggestive" of those behaviors that are mentally activated, as their heightened accessibility increases the likelihood that they will be enacted.

Auditory or visual stimuli may be processed nonconsciously under a variety of conditions. Images embedded within complex patterns and vocal messages that are masked by surrounding noise may not be consciously recognized, but implicit tests of familiarity demonstrate that these messages or signals were subliminally perceived and processed. Laboratory studies investigating the limits of subliminal influence most commonly prime behavioral tendencies by flashing words or images on a computer screen for 100 to 300 milliseconds—too quickly to be consciously perceived.

In the late 1950s, subliminal suggestion was claimed to be a commonly used method of influencing consumer purchase behavior at a nonconscious level. This notion was largely popularized by Vance Packard's 1957 book, *The Hidden Persuaders*. This book detailed a study conducted by James Vicary in which theatergoers were subliminally exposed to the messages "buy popcorn" and "drink Coca-Cola" as they were flashed, for a third of a millisecond, onto the picture screen during the movie. Vicary claimed that subliminal exposure to these advertisements caused a rise in Coca-Cola and popcorn sales of 18 percent and 58 percent respectively.

Vicary later admitted that his study was fabricated and hence there was no substance to the claim that subliminal messages were an effective means of persuasion. In 1973, however, Wilson Bryan Key's book *Subliminal Seduction* generated great public concern that subliminal suggestion was practiced widely among advertisers in the United States. Consequently, the Federal Communications Commission declared that the insertion of subliminal messages in advertising was a form of intentional deception that was contrary to the public interest. Hence, marketing professionals concur that the use of subliminal messages in advertising is unethical and could have potentially disastrous consequences for public relations if uncovered.

Beyond these ethical considerations, the effectiveness of advertising with subliminal suggestions is scientifically questionable. Extensive research into implicit (nonconscious) cognition and behavior in the psychological sciences demonstrates that the "suggestive" influence of subliminally perceived messages is limited to words, images, or sounds that are highly familiar, abstract, and simple.

The meaning of a perceived cue cannot be processed at a subliminal level unless there is a preexisting mental representation of this cue. Consequently, it is unlikely that novel images, words, or concepts will influence thoughts and behaviors when they are subliminally processed. Thus unfamiliar product brands will not reliably influence consumption or purchase behavior if they are not consciously perceived.

The meaning or behavioral message associated with subliminally perceived cues is general, not specific. Mental

representations of the meaning of such perceptual cues are categorical; that is, the meaning of subliminally perceived cues is construed abstractly. Consequently, subliminally perceived messages may only succeed in influencing one to engage in a *related* activity, if at all. For instance, the subliminal perception of a Coca-Cola brand name may bring the idea of "drink" or "thirst" to consciousness and activate a desire to purchase a drink, but the drink purchased will not necessarily be Coca-Cola. Therefore, subliminal messages are at best suggestive, but never persuasive.

Implicit cognition research has consistently demonstrated that the meaning of complex messages cannot be processed at a subliminal level (Greenwald 1992). The meaning of the words *eat* and *drink* may be processed subliminally, thereby increasing the likelihood that the perceiver will engage in these behaviors. However, more complex messages that include brand names, punctuation, or sentences are not likely to have such a suggestive effect.

SEE ALSO *Advertising; Attitudes; Attitudes, Behavioral; Cognition; Consciousness; Hidden Persuaders; Persuasion; Persuasion, Message-based; Want Creation; Wants*

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SUBSIDIES

A subsidy is a benefit, in some form, which one would not otherwise receive, but the concept is more complex than such a simple definition implies. The twin cruxes of the problem are the determination of the basis of comparison by which a subsidy is reckoned and whether the comparison is treated positively or normatively and if the latter negatively or affirmatively. Consider the following examples:

A rich uncle will pay your college tuition and living expenses if you go to college.

Parents arrange for one child to inherit more than the other, where the norm is equal shares.

A polluting firm may be offered a payment if it will stop its polluting activities.

A firm producing multiple outputs allocates costs on paper so that they differ from what they actually are; for example, residential customers pay telephone rates below their cost of service and business subscribers pay more than their cost of service, or, more specifically, poor residential customers benefit from below-cost rates that are financed by the higher rates paid by wealthier customers.

An industry is given payments by government so that it will expand, or not contract, thus providing more employment than it otherwise would.

A shift from one costing procedure to another increases some measured costs and decreases others.

A change from one institution to another changes the distribution of gains and losses.

Whether or not a subsidy exists in each of the examples depends on the choice of basis; in the last two examples, the subsidy depends on the cost procedure or the institution used as the basis of comparison.

Accordingly, a decrease in business telephone rates implies a subsidy to business if one believes the lower residential rates are proper; if one thinks that low residential rates involve an improper subsidy to householders, an increase in those rates (and a decrease in business rates) will end the subsidy. A change in rates based on a shift in costing procedure means gainers are being subsidized if you posit that the initial costing procedure is correct; but if you consider the initial costing procedure to be erroneous, those people are now not being subsidized and others are. A change from one costing procedure to another creates a subsidy to gainers if you assume that the initial costing procedure is proper; they are getting more than they should. If you think the second costing procedure is correct, then the gainers are not being subsidized; they are getting what they should. Non-normatively, changes in costing procedures bring about different net income changes.

The foregoing examples are stated in largely non-normative terms. The concept of subsidy often has a negative normative connotation when it could have an affirmative one—it depends on the choice of base as to what people are entitled. The "choice of base" is illustrated in the following examples.

The rich uncle may be spoiling you or he may be contributing to the family's practice of taking care of its own, depending on what view, or base, one takes.

The parents may be punishing one child or they may be providing for a child so ill that he or she cannot support himself or herself. If one feels that children should be treated equally, the ill child is being subsidized. If one feels that distribution of an estate should be a matter of relative need, then no subsidy in a pejorative, i.e., negative, sense is created.

One may feel that polluters should not be rewarded for polluting by paying them not to pollute; indeed, they should be taxed if they pollute. Yet, the tax and payment policies are analytically equivalent. Imposing a tax on pollution lowers the polluters' profits, thereby inducing them to spend money to install pollution-preventing equipment to avoid paying the tax; similarly, providing a subsidy to install such equipment can induce the firm to enhance its income position by receiving the subsidy. In each case, the firm is led to change its behavior, and the result is less pollution.

An alternate definition of a subsidy is a benefit, in some form, that is not received through the market. This definition posits market distribution as the base. Several problems arise with this definition. Firstly, the market is not the only decisional arrangement in society; government and nonprofit organizations are other modes of distributing gains and losses, and positing market distribution negates these other modes. Secondly, there is no such thing as "the market"; there can be different markets, all of which are the result of the actions, plans, and strategies of firms and of governments to influence the structure and performance of markets. Distribution through one market is a subsidy if an individual considers another market to be proper. Different structures of power lead to different structures of rights and of markets; whether a subsidy exists will depend on the structure posited as proper.

For the rich uncle, one may substitute one's church or the government or other nonprofit educational and charitable institutions. These may receive voluntary donations and transfer the money to people who qualify on the basis of perceived capabilities, needs, or redistributive goals, to create and give effect to a sense of community—payments giving effect to people's social preferences. Programs to encourage the integration of immigrants into the community may involve short-run subsidies, but they avoid the costs of unemployment dislocation and enhance productivity in the long run by improving working and other skills. The benefit so transferred may qualify as a subsidy under the definition of subsidy as a benefit which one would not receive through the market. That privileges market determination, or, more properly, the power structure that produces certain actual markets and not others, and debases other, nonmarket decisional processes.

The negative connotation of a subsidy may be warranted in the case of "pork" politics and the "Christmas tree" collection of payments and other benefits to interest groups having influence in the legislature. This view is only partly in conflict with those that see the role of government as helping to solve problems in the social interest and enabling people to receive their just due. It may be that a distinction has to be made between transfers/subsidies that represent returns to political fund contributors and those that represent putative solutions to social problems; however, the language of political symbolism is elastic enough to blur the distinction.

SEE ALSO *Unemployment*

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SUBSIDIES, FARM

Farm subsidies are monetary transfers from taxpayers and consumers to producers of agricultural commodities, and they are mostly a characteristic of high- and middle-income countries. They were first introduced in the United States on a large scale shortly after the 1929 crisis, mainly in response to fears of inadequate food supplies (Gardner 2002). Since then, subsidies have been renewed by the U.S. Congress every five to six years under legislation, the so-called Farm Bills. Farm subsidies were introduced in Europe after World War II, again as means to prevent food shortages, and were institutionalized after the introduction of the Common Agricultural Policy following the Treaty of Rome. Other countries with considerable levels of farm subsidies are Korea, Japan, Mexico, and Turkey. Farm subsidies achieved their objective of increasing food availability. However, despite huge food surpluses during the last three decades of the twentieth century, not only have they remained in place but they have been increased and applied to more commodities.

Based on their source of funding, farm subsidies are categorized as either taxpayer financed or consumer financed. Taxpayer-financed subsidies are direct transfers

from the treasury to commodity producers; most payments are based on quantity produced or area planted, while some are based on input use or other requirements, such as conservation measures. However, because these types of subsidies cause considerable distortions to world commodity markets, countries have attempted to decouple payments from current production and instead give subsidies in the form of direct income support as a way to make them less trade distortionary (Baffes and de Gorter 2005). Consumer-financed subsidies are typically associated with tariffs imposed on imports or subsidies on exports.

Farm subsidies are monitored by the Organization of Economic Cooperation and Development (OECD), which publishes detailed figures each year. During 2002–2005 total transfers to agricultural producers or consumers of agricultural products in OECD countries averaged $357 billion, of which 56 percent were financed by consumers, while the remaining 46 percent were financed by taxpayers. The European Union accounts for 39 percent of subsidies, while the United States and Japan account for 27 percent and 16 percent, respectively. The remaining 17 percent are accounted for by Korea, Turkey, Mexico, and Canada. On a commodity basis, the largest beneficiary is the milk industry, followed by producers of beef, rice, and wheat.

Because farm subsidies induce overproduction, which in turn depresses world prices, there have been attempts to limit them (Aksoy and Beghin 2004). Limiting the level of farm subsidies was first considered during the Uruguay Round (1986–1994) of multilateral trade negotiations under the aegis of the General Agreement of Tariffs and Trade (GATT). It was agreed that taxpayer-financed subsidies with the most distortionary impact on trade would be gradually reduced from their 1986–1988 level. It was also agreed that export subsidies should be eliminated, while tariffs on imports should be reduced by approximately one-third of their initial level. However, because the formulas for calculating such reductions were complicated, most countries were able to fulfill their obligations by changing the nature of subsidies rather than undertaking real reductions. The issue of subsidies was reconsidered during the Doha Development Agenda, which was launched in 2001. However, farm subsidies turned out to be one of the most contentious issues of the agenda, and the negotiations were suspended.

SEE ALSO *Agricultural Economics; Agricultural Industry; Distortions; European Union; General Agreement on Tariffs and Trade; Subsidies; Tariffs; Taxes*

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John Baffes

SUBSISTENCE AGRICULTURE

The peasant concept of the good life is the minimum expenditure of physical labor. When applied to food production, peasants expend only enough labor to grow enough food to last until the next harvest. Labor expenditures are matched to the food needed for a subsistence diet. This defines the subsistence compromise and explains why peasant societies experience endemic seasonal hunger and are vulnerable to famine conditions in consecutive poor crop years. Seasonal hunger and peacetime famine conditions affect all peasant societies regardless of race, religion, climate, population density, cultivation practices, and subsistence crops grown. Even peasant societies with low population densities that cultivate fertile soils experience endemic hunger and famine conditions.

Three social values govern subsistence agriculture: (1) equalized opportunities for qualifying households to share cultivation rights on village land, (2) minimal labor expenditures in food production (subsistence labor norms) on the assumption that every crop year will be normal, and (3) equalized sharing of harvests in poor crop years to ensure the survival of all village households. Only by analyzing the operation of the subsistence compromise at the village level can scholars and political leaders understand why seasonal hunger is endemic in peasant societies and why famine conditions recur.

LAND

The primary source of subsistence food safety for peasant households is communal land tenure, the equalized allocation of cultivation rights on land controlled by village councils. The purpose of communal tenure is to distribute enough land to qualifying households to grow subsistence amounts of food with subsistence labor norms.

Partible inheritance is the usual way for equalizing subsistence opportunities. Customary law mandates equally dividing land among surviving sons at the death of the household head. Inheriting households acquire cultivation rights to equal portions of each category of land. Each

household gets a parcel in the most fertile field (irrigated or best drained) and in as many other fields as there are variations in fertility. A common result of partible inheritance is households cultivating several parcels that are scattered on village land. As population densities increase, village land is divided into many small parcels (morselation).

Equalized access to land use is also often enforced by periodic redistribution of land by lot. Redistribution may be done annually or every second, third, fourth, or tenth year. Customary law mandates that land in communal tenure is a perpetual reservoir for periodic redistribution. It cannot be sold by occupying households because they do not own it; nor can fences be built because they would impede periodic redistribution.

When a village's land can no longer be physically divided without drastically impairing productivity, the number of parcels is stabilized. Harvest sharing, however, continues. Clifford Geertz in his 1963 book calls land and harvest sharing "agricultural involution" because it seeks to maximize the number of households that can be fed from a fixed area of arable land.

LABOR

As long as communal tenure operates, customary law protects the performance of subsistence labor norms. Control of land use allows landholding households to control labor expenditures through several strategies, the most common of which is parents' transferring as much labor as possible to dependents. All peasant societies have high birthrates because households desire many children so that large amounts of agricultural labor can be transferred to them at a young age. Transferring agricultural labor to dependents also occurs through the use of slaves; the use of sharecroppers; the assignment of gender tasks; having multiple wives; and in India, through the Hindu caste system. These practices rely on the least motivated or physically weakest members of peasant societies to perform agricultural labor. Seasonal hunger is often an annual event in normal crop years because their inefficient labor is combined with minimal agricultural labor performed by adult male heads of households.

Peasants believe that a fixed amount of annual labor will produce adequate subsistence harvests in normal crop years although they know that not all crop years are normal. Nonetheless, they willingly risk seasonal hunger to preserve subsistence labor norms. Households always calculate how much labor is required to feed their households until the next harvest, and after this labor is performed, peasants view indolence as the proper use of time.

HARVEST SHARING

In poor crop years, customary law mandates harvest sharing, which is most clearly visible in densely populated villages that must practice intensive cultivation. Landless households acquire claims to shares of harvests, usually through sharecropping, by performing disproportionately large amounts of agricultural labor for landholding households.

The ethic of harvest sharing dampens the motivation of a small minority of households to respond to commercial incentives to grow enlarged food surpluses for sale on anonymous markets. Harvest sharing is a leveling institution that enforces a near equality in food-producing capabilities. Preventing households from growing enlarged harvests for market sale ensures that food loans (however small) are available for hungry households. The result is that households that are receptive to commercial incentives do not perform the necessary labor to grow enlarged harvests because any surpluses they produce will not be theirs to sell. Although certainly not economic, harvest sharing is the moral economy of the peasantry. It sustains subsistence agriculture because it tries to ensure that all village households will have enough food to survive poor crop years.

CULTIVATION PRACTICES

The fixed amount of agricultural labor required to produce subsistence-sized harvests is proportional to population density. Labor expenditures are minimal in shifting cultivation but increase as land is more intensively cultivated. Shifting cultivation, practiced where land is abundant and people are few, requires less per capita labor than any other cultivation practice because there is no ground preparation. Trees are cut and burned and women and children dibble the seeds of food grains (rice, barley, rye, maize, sorghum) into the ground among charred stumps and a tangle of partially burned branches. Thereafter weeding is haphazard and is done by women and children. Land is cultivated for two, three, or four years and then allowed to revert to secondary forest. In eight to twenty years the canopy of the secondary forest shades grasses to death. The forest is recut and burned and the ground replanted. Yields are low, but so too are labor inputs.

As population increases, shifting cultivation is replaced by continuous cultivation; and as population further increases, continuous cultivation evolves into intensive cultivation. The most visible signs of continuous cultivation are fields and terraces without stumps and ground preparation by plows pulled by oxen or water buffalo. Rice cultivators build terraces to retain a water cover to drown competing weeds, and seeds are broadcast sown. When rice cultivation intensifies, women plant germinated blades one at a time. Further intensification requires irrigation, double cropping, intense weeding, and fertilization. Ester Boserup (1965, 1970) has documented that a high percentage of the additional labor required for intensive cultivation is done by women.

TRADE

All contemporary peasant societies are monetized. As long as peasants control enough land to achieve subsistence diets in normal crop years, their money needs are minimal. Cultural anthropologists have documented that peasant households produce only enough exchange commodities to acquire target sums of money. Typically exchange commodities are one or two bags of grain, but they can be seed cotton, wool, unprocessed coffee beans, tobacco, cinnamon bark, latex sheets, or fowls.

The money acquired through trade is used to purchase a limited variety of manufactured products. Typically these products are textiles, edged tools, cooking pots, plastic pails, and plastic sandals. Manufactured products substitute for fragile handicraft products that need continuous replacement. Peasants compute the durability and utility of manufactured products over handicraft products by comparing the amount of labor required to make handicraft products with the amount of labor required to produce exchange commodities. If the terms of trade are favorable, measured in the amounts of labor saved, peasant households produce commodities specifically for sale. Often these products—coffee, tea, latex sheets—have minimal or no household use, and frequently much of the labor is done by children. Target sums of money are not incomes because in poor crop years little money is acquired and peasant households make few purchases. The welfare of peasant households does not depend on money incomes but rather on control of land use.

ECONOMIC DEVELOPMENT

Economists like Theodore W. Schultz observed subsistence agriculture without understanding the revolutionary differences between subsistence and commercial social values, between subsistence and commercial labor norms, or between communal and freehold tenure. Nor do most economists understand how assured food surpluses came to be produced in some European nations after 1600 with fewer laborers working longer hours.

Schultz's analysis of peasant agriculture is based on the false assumption that commercial social values and commercial labor norms are universal and that they operate in peasant villages. On the basis of this assumption, Schultz claimed that peasants were eager to adopt green revolution technologies, improved seed, mechanical plowing, fertilizers, all of which must be purchased if investments made them available. For Schultz and economists who followed his lead, the green revolution was technology that could magically end peasant privation. But peasant privation was not in fact ended because Schultz and most economists did not understand that peasant societies have huge amounts of unused male labor. Assured food surpluses can be produced by supervising agricultural labor—similar to labor performed on plantations. Some of this labor entails better ground preparation, timely seeding, more weeding, and better feeding of draft animals. Peasants reject green revolution technologies because increased per capita yields require adopting these technologies as a package, and applying the package requires much more labor. Only when more people must be fed from the same area of land are some green revolution technologies adopted, because they are necessary to sustain a subsistence level of food production and consumption.

W. Arthur Lewis was an experienced observer of peasant labor norms. He understood that the first step in ending subsistence privation was more agricultural labor performed by males. Unfortunately, policies prescribed by international aid agencies continue to be guided by Schultz's misconception that peasants are eager to adopt green revolution technologies. In most peasant societies per capita food production remains stationary.

SEE ALSO *Agricultural Economics; Agricultural Industry; Food; Habits; Lewis, W. Arthur; Migration, Rural to Urban; Peasantry; Tradition*

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SUBSTITUTABILITY

Substitutability is a fundamental concept in economics and is encountered in both consumer theory and producer theory. To illustrate, assume a finite number of commodities (say n) and consider the following (direct) utility function,

$$u = f(x_1, x_2, \ldots, x_n),$$

where $(x_1, x_2, \ldots, x_n)$ is the commodity vector. Commodities i and j are said to be *substitutes* if

$$\frac{\partial^2 f(x_1, x_2, \ldots, x_n)}{\partial x_i \partial x_j} < 0,$$

that is, if increased consumption of x_j reduces the marginal utility of x_i, and vice versa. If the second-order partial derivative is positive, then x_i and x_j are *complements*, and if it is zero, then x_i and x_j are *independent*.

Although the sign of the above second-order partial derivative is invariant under linear transformations of the utility function, it is not invariant under monotonic increasing transformations of the utility function. The demand system, however, has the advantage of being invariant under monotonic increasing transformations of the utility function. The demand system is obtained by maximizing $u = f(x_1, x_2, \ldots, x_n)$ subject to the budget constraint,

$$p_1 x_1 + p_2 x_2 + \ldots + p_n x_n = y,$$

where $(p_1, p_2, \ldots, p_n)$, is the vector of prices and y is income. The demand systems is given by

$$x_i = x_i(p_1, p_2, \ldots, p_n, y), \quad i = 1, 2, \ldots, n$$

and gives the quantity demanded (of each commodity) as a function of the prices of all commodities and income.

In terms of the demand system, we can find out how the demand for good x_i changes if the price of good x_j changes. In particular, if $\Delta x_i / \Delta p_j > 0$, then x_i is a *gross substitute* for x_j, meaning that when x_j becomes more expensive the consumer switches to consuming x_i; in other words, the consumer substitutes away from the relatively more expensive good towards the relatively less expensive good. If $\Delta x_i / \Delta p_j < 0$, then x_i is a *gross complement* for x_j, meaning that when x_j becomes more expensive the consumer reduces the consumption of x_j and also of x_i; complements are goods that are consumed together (as, for example, coffee and sugar).

The definitions given above are in gross terms because they ignore the *income effect*—that is, the change in demand of good x_i due to the change in purchasing power as a result of the change in the price of good x_j. The Slutsky equation—see Mas-Colell, Whinston, and Green (1995) for more details—decomposes the total effect of a price change on demand into a substitution effect and an income effect, as follows:

$$\frac{\partial x_i}{\partial p_j} = k_{ij} - \frac{\partial x_i}{\partial y} x_j,$$

where $\partial x_i / \partial p_j$ is the total effect of a price change on demand, k_{ij} is the substitution effect of a compensated price change on demand, and $-\partial x_i / \partial y) x_j$ is the income effect, resulting from a change in price (not in income). Hicks (1956) suggested using the sign of the cross-substitution effect (that is, the change in compensated demand) to classify goods as substitutes whenever k_{ij} is positive. In fact, according to Hicks (1956), $k_{ij} > 0$ indicates substitutability, $k_{ij} < 0$ indicates complementarity, and $k_{ij} = 0$ indicates independence.

One important property of the Slutsky equation is that the cross-substitution effects are symmetric, that is

$$k_{ij} = k_{ji}$$

This symmetry restriction may also be written in elasticity terms, as follows

$$\frac{\eta_{ij}}{s_j} + E_i = \frac{\eta_{ji}}{s_i} + E_j$$

where η_{ij} is the elasticity of demand of good i with respect to the price of good j, E_i is the income elasticity of demand of good i, and $s_j = p_j x_j / y$ is the proportion of total expenditure devoted to good j.

The symmetrical terms in the above equation are the Allen elasticities of substitution, so that the equation can be written as

$$\sigma_{ij}^a = \frac{\eta_{ij}}{s_j} + E_i = \frac{\eta_{ji}}{s_i} + E_j = \sigma_{ji}^a$$

where σ_{ij}^a denotes the Allen elasticity of substitution between goods i and j—see Allen (1938) for more details. If $\sigma_{ij}^a > 0$, goods i and j are said to be Allen substitutes, in the sense that an increase in the price of good j causes an increased consumption of good i. If, however, $\sigma_{ij}^a < 0$, then the goods are said to be Allen complements, in the sense that an increase in the price of good j causes a decreased consumption of good i.

The Allen elasticity of substitution is the traditional measure and has been employed to measure substitution behavior and structural instability in a variety of contexts. When there are more than two goods, however, the Allen

elasticity may be uninformative and the Morishima elasticity of substitution,

$$\sigma_{ij}^{m} = s_i(\sigma_{ji}^{a} - \sigma_{ii}^{a}),$$

is the correct measure of substitution elasticity—see Morishima (1967) and Blackorby and Russell (1989). Notice that σ_{ij}^{m} measures the net change in the compensated demand for good j when the price of good i changes. Goods will be Morishima complements (substitutes) if an increase in the price of i causes x_i/x_j to decrease (increase).

In the producer context, the producer's problem can be formulated as

$$C(w_1, w_2, \ldots, w_n, y) = \min_x w_1x_1 + w_2x_2 + \ldots + w_nx_n$$

subject to

$$y = f(x_1, x_2, \ldots, x_n),$$

where w_i denotes the price for input i, y denotes output, and x_i denotes input i. Inputs i and j are said to be *substitutes* if

$$\frac{\partial^2 C(w_1, w_2, \ldots, w_n, y)}{\partial w_i \partial w_j} > 0.$$

If the second-order partial derivative is negative, then x_i and x_j are *complements*.

As in the consumer context, the degree of substitutability between any pair of factors in the producer context is also measured using the elasticity of substitution. The Allen elasticity of substitution in the cost minimization framework can be obtained by

$$\sigma_{ij}^{a} = \frac{C \times C_{ij}}{C_i \times C_j} = \frac{\varepsilon_{ij}}{s_j},$$

where C_i is the partial derivative of the cost function with respect to the price of the i th factor, and C_{ij} is the partial derivative of C_i with respect to the price of the j th factor. $\varepsilon_{ij} = \partial \ln x_i / \partial \ln w_j$ is the elasticity of the demand for the i th factor (x_i) with respect to the price of the j th factor (w_j). $s_j = w_j x_j / \sum_k w_k x_k$ is the cost share of input j. Again, as in the consumer context, when there are more than two goods, the Allen elasticity may be uninformative and the Morishima elasticity of substitution, calculated as

$$\sigma_{ij}^{m} = \frac{w_j \times C_{ij}}{C_i} - \frac{w_j \times C_{ij}}{C_i} = \varepsilon_{ij} - \varepsilon_{jj},$$

is the correct measure of substitution elasticity—see Morishima (1967) and Blackorby and Russell (1989).

The conceptual foundations of the Allen and Morishima elasticities of substitution are different. The Allen elasticity of substitution classifies a pair of inputs as direct substitutes (complements) if an increase in the price of one causes an increase (decrease) in the quantity demanded of the other, whereas the Morishima elasticity of substitution classifies a pair of inputs as direct substitutes (complements) if an increase in the price of one causes the quantity of the other to increase (decrease) relative to the quantity of the input whose price has changed. For this reason, the Morishima elasticity of substitution leans more toward substitutability. To put it differently, if two inputs are direct substitutes according to the Allen elasticity of substitution, theoretically they must be direct substitutes according to the Morishima elasticity of substitution, but if two inputs are direct complements according to the Allen elasticity of substitution, they can be either direct complements or direct substitutes according to the Morishima elasticity of substitution.

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SUBURBAN SPRAWL

Suburbanization, the movement of resources and people out of cities, has increased sprawl: the overdevelopment, congestion, and environmental degradation of regions. Suburbanization and suburban sprawl are the result of several factors, including economic change—such as deindustrialization—that acts as a centrifugal force that propels private investment and people outward into the suburbs, large public and private investments in highways, government subsidies for low interest mortgage loans, and suburban housing development. Simultaneously, resources and people are pushed outward to the suburbs by the concentration of problems and poverty in urban

America—unemployment, crime, poorly performing schools, poor services, and decaying infrastructure—which are partly due to a dwindling tax base and comparatively low per-capita government spending. Thus, the growth of the suburbs, which tend to be more affluent and mostly white compared to urban areas, not only has exacerbated residential segregation by race, ethnicity, and class, it has also contributed to the creation of suburban sprawl.

The concentration of poverty in central-city neighborhoods—where 20 to 40 percent of a typical region's population lives—destabilizes families, schools, and neighborhoods. It produces dramatic increases in a host of social ills and the loss of economic and social opportunity. As population and businesses flee, poverty and racial segregation grows. Property values and revenue income erode and deplete needed local social services and government capacity.

Older working class inner-ring and middle-income adjacent suburbs—where 20 to 30 percent of a typical region's population lives—soon become riddled with similar problems. While poverty rates are twice as high in central cities than in the suburbs, 30.5 percent of the nation's poor live in the suburbs. Ironically, however, many of these areas—particularly in the older inner-ring suburbs—are less able to address such growing problems because their local governments have fewer resources than the more affluent suburbs. Per capita they have the lowest sales, property, and income tax bases but higher tax rates and lower spending on services. Suburban sprawl spreads out even further to growing middle-class communities—where another 20 to 40 percent of a typical region's population resides—that often do not have a sufficient property tax base to support the growing needs for schools and other public services. Although some of these suburbs are growing in population, they are not always able to maintain levels of tax revenues needed to meet growing demand for services, including schools, police, fire, utilities, and sanitation, particularly in the context of declining fiscal support from the federal and state governments. These fiscally and environmentally stressed communities become declining suburbs.

The stable, secure, and affluent suburbs—where only 15 to 30 percent of a region's population live—captures the lion's share of infrastructural investment and spending, economic growth and jobs, usually paid in part by other parts of the region. They enjoy many benefits: funding for roads, wastewater treatment, airports, shared labor, and product markets. Their tax base expands and per-capita spending soars, while their housing markets exclude others. But their prosperity is not due only to their hard work and good fortune. It has been subsidized by federal and state policies.

The rapid expansion of the number of political jurisdictions to over 90,000 in the early 2000s is mostly due to the creation of new suburbs. Suburban political incorporation allows suburbs to insulate themselves from cities, protect their tax base and property values, build better schools, and siphon off transportation dollars and business investment. Affluent suburbs avoid most regional responsibilities and burdens. They do not pay for central city services and infrastructure that commuters use, including sanitation, police, bridges, airports, sports complexes, and so on. At the same time these affluent suburbs deplete remaining green space and endanger fragile and precious environmental resources.

As a result, the racial composition and quality of life of metropolitan areas has concomitantly shifted dramatically: suburban dwellers, who remain largely white, score higher than inner-city residents, who are predominantly people of color, in nearly every opportunity category—including income, employment, assets, quality of education, and housing—and with lower crime rates.

Conventional explanations of suburban sprawl include: (1) individual choices and cultural differences; (2) poorly designed urban renewal and social programs; and (3) deindustrialization, changing market forces, and globalization.

But others have shown that suburban sprawl is also a consequence of a host of historically created and contemporarily sustained sets of public policies and private practices. Following World War II (1939–1945), billions of dollars wielded by national, state, and local governments provided pathways out of cities for millions of white working and middle-class residents. For example, the GI Bill, the Interstate Highway Act, and home mortgage loan programs contributed to suburban sprawl. Without aid for home buying and highway construction, white middle-class exodus would not have occurred on such a large scale. In short, suburban sprawl has been subsidized. Moreover, inner-city poverty and suburban prosperity are not coincidental; they are two sides of the same coin.

Ironically, the fate of suburbs, central cities, and older suburbs are inextricably linked. Both suburbanites and inner-city residents have a stake in regional developments, partly because regional economies prosper or falter as a whole. Their destinies are intertwined. Thus, regional level solutions may be necessary to address inner-city poverty and suburban sprawl.

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SUBURBS

"Every true suburb is the outcome of two opposing forces, an attraction toward the opportunities of the great city and a simultaneous repulsion against urban life" (Fishman 1987, p. 26). Though suburbs are defined by the U.S. Census Bureau as any territory within a metropolitan area yet outside of the central city, the formation of suburbs is not simply based on geographic location. Suburbs are largely the product of people's desire for separation based on social factors. These factors vary between instances of suburb formation, but frequently include separation of class, religious, cultural, ethnic, or racial groups. The traditional pattern of white populations and wealth found in U.S. suburbs is not mirrored internationally, although the common feature of suburbs around the world is separation of populations. For instance, the suburbs of Mumbai, India, house many of the city's poor, while in Paris the suburbs are ethnically stratified, with suburban ethnic minority populations suffering from high rates of unemployment and other forms of discrimination.

The early suburbs of London, as well as several in the United States, were built around the separation of different economic classes. During the eighteenth century, wealthy business owners in London began to use landholdings around Westminster as a way to avoid the lower classes within urban areas. A century later, the same happened in the United States around the cities of New York, Philadelphia, and Boston. Suburbs such as these, based on class separation, can best be described as bourgeois enclaves. Here the wealthy could establish communities that reflected their own values and beliefs (Fishman 1987).

The formation of middle-class suburbs in the United States beginning in the early twentieth century and expanding rapidly after World War II (1939–1945) is the result of a number of factors. A strong economy at the beginning of the century made the suburban lifestyle more accessible to many Americans. The development of lower-cost homogenized housing, such as the Sears Catalog home, made purchasing a house a realistic prospect for the middle class. In the 1920s, U.S. suburban growth surpassed urban growth for the first time (Weeks 1981). Economic factors during the Great Depression caused the growth of suburbs to decline drastically. In the late 1940s and 1950s, however, suburban growth rates resurged and reached their highest levels (Rothblatt and Garr 1986). This resurgence is frequently attributed to strong economic growth and social programs like the GI Bill that provided opportunities to service members after the war.

In 1947 construction began on Levittown on Long Island, New York, a project considered the start of the middle-class suburban revolution in America. The rapid expansion of the freeway system during the early 1950s made possible the development of many similar communities, as is evident in the expansion of freeways and homes in the Los Angeles area (Fishman 1987; Weeks 1981). *Levittown* has since become a term used to describe various social problems accompanying the formation of suburbs, including white flight, cultural wasteland, and separate spheres of family and economic life (Keller 1998).

Home ownership, achieved through the development of suburbs, is the most important factor of wealth accumulation in American society. While economic factors played a significant role in the formation of suburbs, they do not explain why middle-class Americans felt the need to escape urban areas that had previously been acceptable to them. In fact, economic factors have helped constrain suburban growth that has been driven by other factors, such as race. Prior to the twentieth century, there had been a relatively small African American population in U.S. cities. However, the migration of African Americans from rural areas in the early twentieth century brought significant white resistance and a push for racially segregated housing areas (Massey and Denton 1998). *White flight*, the mass migration of whites out of the cities, was hindered by economic factors during the Great Depression. Following World War II, however, the movement of whites to the peripheral areas around cities, coupled with social and institutional policies of racially restrictive housing, resulted in high degrees of racial segregation. White flight became a major factor in school desegregation policy; in the mid-1970s a debate arose over whether busing for the purpose of school desegregation would lead to increases in white flight.

School desegregation has had numerous effects on the formation and structure of America's suburbs. In the midst of the period of white flight, the U.S. Supreme Court decision in *Brown v. Board of Education* (1954) led to the integration of many schools in neighborhoods that had previously been white enclaves. A number of measures were taken by white communities and conservative local and state governments to resist school integration. School busing during the 1960s and 1970s became a strongly debated issue, and residents of suburbs found they could maintain racial segregation of schools more effectively than had been possible in inner-city areas. Due to the effectiveness of suburbs as residential enclaves, white residents could gerrymander school districts in order to halt integration (James 1989). By the late 1970s, school busing had become a less pressing issue (Woodard 1998). While affirmative action policies remained in effect, opposition to such policies rose during the 1980s with the idea that the United States had transcended racial issues. As a result, there has been an increase in school segregation in suburban areas since 1989 (Reardon et al. 2000). In addition, policies still in place to aid school integration are being challenged throughout the country, despite the fact that public schools remain heavily segregated. In 2006 the Supreme Court heard arguments in two cases regarding school integration policies that some parents considered discriminatory. Cases from Seattle, Washington, and Louisville, Kentucky, reviewed whether public schools can take race into consideration in campus assignments in order to achieve racial integration. In a 5–4 decision the Court declared that schools attempting to achieve or maintain racial integration cannot do so by measures that take explicit account of the students' race (Greenhouse 2007).

Despite the passage in 1968 of the Fair Housing Act, little progress has been made toward racial integration of suburbs (Orser 1998). The Fair Housing Act prohibited owners, real-estate agents, and renters from denying access to housing on the basis of race. The act also outlawed lying about the availability of a dwelling, and prevented *blockbusting* (telling white residents that minorities are moving into a neighborhood in an effort to convince them to sell) (Sidney 2003). As of 1990, only 20 percent of Americans lived in desegregated neighborhoods (Darden 1998). Housing segregation between whites and Hispanics, as well as between whites and Asians, has risen since 1980. However, studies have shown that suburbanization is tied to socioeconomic status among Hispanics and Asians, but suburbs have remained mostly closed to blacks whatever their socioeconomic status (Darden 1998). Housing discrimination has also contributed to higher levels of poverty, a lower average income, and lower life chances for those trapped in declining inner-city neighborhoods.

One result of the formation of suburbs was that people who were left behind in urban neighborhoods were forced to deal with urban decay brought about by the flight of millions out of the cities. Buildings were left empty, and businesses were forced to close and move to more profitable areas. Resources previously available within cities were shifted to peripheral areas as suburbs grew. The 1949 Housing Act was designed to facilitate redevelopment in areas that had been affected by urban decay; this process came to be known as *urban renewal*. The act sparked a debate over how to handle such renewal. Federal subsides were given to private developers in order to generate new business within urban areas. But development was centered heavily around the interests of those in suburban areas, and little attention was paid to the needs of those living within urban areas. In addition, most urban development took place in residential areas, forcing many out of their homes. Eventually, a compromise was reached, and developers were required to find alternative housing for those displaced by urban renewal (Hays 1995). Urban-renewal plans have consistently favored the interests of the suburbs. As far back as 1766 an urban-renewal plan for London was designed around the needs of business owners with little regard for workers and lower-class citizens (Fishman 1987). Today, urban renewal still often functions in the interests of suburban residents over the poor and minorities who remain in inner cities.

From 1970 to 1990, the number of high-poverty metropolitan areas doubled; these areas are more likely to be home to traditionally disadvantaged minorities (Sidney 2003). American suburbs formed out of a desire for racial segregation. In the twenty-first century, continuing housing discrimination in America's suburbs leads to a continuation of racial segregation with increases in economic stratification.

SEE ALSO *Segregation, Residential; Sociology, Urban; Towns*

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SUDRAS

Sudras (also Sudhra or Shudra) are people occupying a position next to the bottom of the Hindu caste system in India. Most Sudras are menial workers. At times it is difficult to distinguish Sudras from untouchables (Dalits), who stand below them and are considered to be so polluted that they are regarded as outside the caste system entirely. The Vaisya (Vaishya) or merchant caste stands directly above the Sudras in India's cast hierarchy.

Identifying a member of the Sudra class is a matter of recognizing subtle distinctions with which one becomes familiar after living around Sudras. They are usually identified by their vocabulary, which may include vulgarities; by the towns where they live or were born; by their occupations or by their personal names, which may include a reference to their occupations; and by other subtle characteristics. By tradition when a Sudra dies, the body is taken to the burial place through a south gate because all other gates are reserved for the upper castes. There have been times when the jobs performed by Sudras were considered to be so polluting that Sudras were considered equivalent to untouchables. Strictly speaking, this would not be their status by birth but by economic actions. In addition Sudras could be exiled or slain at will.

Caste, or *varna* (literally, "color"), is affirmed by the Vedas as an expression of cosmic law (*rita*). Sudras are associated with the color black, which may have originated in the colors assigned to the various *varna*. One Hindu justification for the caste system rests in the belief that people were created from parts of the body of the god Purusha. Social standing is defined by the part of Purusha from which a person and his or her line is descended. Sudras are said to come from the feet.

In the Hindu Rig-Veda, the *dvijas* (twice-born) are identified as members of the Brahman, Kshatriya, and Vaisya castes. At about twelve years of age, members of these castes underwent a ceremony that made them "twice-born," and they were thereafter permitted to study the Vedic scriptures. The Sudras were not *dvijas* and therefore were not allowed to study the Vedas. Such study usually consisted of listening to recitations or readings of the Vedas because the very sounds were believed to have religious power. Some ancient legal books report that Sudras caught listening to Vedic recitations had molten lead poured into their ears. A Sudra could also have been forced to drink boiling oil if he or she claimed to have taught someone something learned from the Vedas.

The ancient Hindu *Laws of Manu* discusses castes in great detail. This text gives names to the offspring of unions of men with wives of the different castes and to those born to unmarried parents. The *Chandalas* were produced by the union of a Sudra father and a Brahman mother. A *Nishada* (or *Parasava*) was produced by a Brahman father and a Sudra mother. A Sudra father and a Vaisya mother produced an *Ayogava*. A Sudra father and a Kshatriya mother produced a *Kshattri*. In addition the son of a Sudra man by a Nishada woman was identified as a *Kukkutaka*, among the many such designations outlined by the *Laws of Manu*.

The powerless Sudras were assigned to the rank of servants in India, and most service and menial jobs became their duties. According to the *Laws of Manu*, a Sudra faced with starvation could engage in handicrafts. However, the best way of life for a Sudra was to serve a Brahman, because this was the best occupation and prepared one for the next life. A Sudra is unable to lose caste, being already at the bottom; however, Sudras can prepare for the next world by imitating the virtuous.

Although Indians traditionally organized people into four major, rigidly defined social classes or castes, contemporary Indian society includes several thousand subcastes called *jati*, meaning "birth," "lineage," or "race." Most *jati* probably developed from hereditary occupational practices. Many *jati* are regionally based. Some *jati* groups comprise only a few hundred families, while others may

include thousands of families. Usually these are endogamous status groups.

Another function of *varna* is that it creates a complex system of purity and impurity. The ritual purity one acquires at birth may be enhanced by the practice of rituals during life. The higher the caste, the purer are its members. However, the higher castes are also considered to face the grave danger of ritual contamination from members of the lower castes. Purity regulations codify many areas of Indian life, especially those involving intimacy, such as drinking, eating, touching, and marriage. According to the *Laws of Manu*, drinking from a vessel after a Sudra used it would cause spiritual pollution of members of the higher castes. Purification requires a three-day regimen of drinking water in which *kusa* grass has been boiled. In addition twice-born Indians are forbidden to eat food prepared by a Sudra because it is considered to be impure. If a Brahman died with Sudra food undigested in his or her stomach, that person would be reborn as a Sudra. Sudras were urged to fast and eat only the leftovers of the *dvijas*. To become Vaisyas in the next life, Sudras had to abstain from meat.

Practices regarding touch have remained a sensitive area. If a Sudra should accidentally touch someone of a higher caste, such as a Brahman, then the Brahman would consider himself or herself contaminated, and extensive rites of purification would be necessary to remove the stain. Marriage is permitted only between members of the *jati* of a particular *varna*. According to the *Laws of Manu*, mixed-caste marriages violate the cosmic law of dharma that orders the world. Such marriages would therefore cause chaos.

In Tamil-speaking areas of South India, the population is made up mostly of Sudras, with only a few Brahmans and almost no Kshatriyas or Vaisyas living in many areas. Tamil-speaking Sudras have developed practices unknown to the original caste system of northern India. Among the numerous rankings of agricultural Tamil, the success of many Sudras has in practice put them above other castes in wealth and power.

Discrimination on the basis of caste has been against the law in India since the country achieved independence from Britain in 1947. However, the Hindu system requires castes, so the lives of many Sudras in tradition-bound rural India have barely changed. Many still belong to agricultural *jati* in which they are landlords or members of particular skill groups, giving them an incentive to maintain the caste system.

In urban areas the pace of life makes it more difficult to practice caste discrimination. While discrimination still exists in many rural areas, it is breaking down in India's cities. Urban Sudras have been able to organize and use political power to advance the status of their caste. Their success has been limited, however, by their numerous *jati* and the continuance in many areas of Hinduism's *varna* belief. Long practice enforces personal and informal discrimination despite the laws, but in many areas prosperous Sudras are marrying into higher castes. When this occurs, Sudras often change their names to disguise their Sudra origin.

SEE ALSO *Brahmins; Caste; Caste, Anthropology of; Dalits; Distinctions, Social and Cultural; Hierarchy; Hinduism; Kshatriyas; Purification; Stratification; Vaisyas*

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SUEZ CRISIS

The Suez Crisis of October 1956, which involved a coordinated attack by British, French, and Israeli forces on Egyptian positions in the Sinai Peninsula and along the Suez Canal, was a pivotal moment not only for interstate relations within the region, but also for interactions between the superpowers within the larger context of the cold war. Triggered by numerous factors and settled by an uneasy cease-fire, the Suez Crisis left a great deal of "unfinished business" on the table between Israel and the Arab States. It also saw the first full engagement of the United States into the region.

The political environment in the region had been deteriorating for an extended period prior to the actual invasion. Among the elements that contributed to this situation were: (1) the 1955 establishment of the Baghdad Pact between Turkey and Iraq; (2) the completion of an extensive arms deal between Czechoslovakia and Egypt; (3) the prospect of the sale of modern weaponry to Iraq and possibly to other future Baghdad Pact members; (4) the nationalization of the Suez Canal by Egypt in June 1956, which included provisions that excluded Israeli

shipping from passing through the canal and a blockade of the Gulf of Aqaba and Straits of Tiran (which cut off all shipping into Israel's southern port city of Eilat); (5) increased incursions into Israel by Palestinian guerillas known as the *fedayeen* (whom Israel labeled as terrorists); and (6) the October 1956 expansion of the Syrian-Egyptian joint military command to include Jordan. As a result of these events, the Israelis believed that they were "under siege" and that action was needed.

For the Israelis, there were three main goals behind any action undertaken in late 1956: (1) the restoration of freedom of navigation through the Gulf of Aqaba and Straits of Tiran, (2) cessation of *fedayeen* raids, and (3) the elimination or reduction of the threat posed by the Egyptian army deployed in Sinai. The British and French were not happy with the situation either, but they were focused on the implications of Egypt's nationalization of the Suez Canal and Nasser's support for Algerian nationalists fighting against the French.

Although their motives were different, the three sides agreed that the situation was intolerable and action needed to be taken. In fact, the Israelis had considered taking unilateral preemptive action, but they were instead "invited" to participate in the action already being planned by the British and French. The timing of the operation was also influenced by perceptions that both the United States and the Soviet Union were distracted or involved with other things at the time, and that they would therefore not "interfere" with the operation. For the United States, 1956 was a presidential election year, and the British, French, and Israelis believed that the Americans would be wrapped up in their own electoral cycle, and that President Eisenhower would not risk his chances of winning re-election by getting involved in an international conflict. It was also believed that the Soviets had their hands full dealing with rising national sentiments in both Poland and Hungary.

The actual invasion of Egyptian territory by Israeli forces began on October 29, 1956. By November 7, a cease-fire was brokered. Part of the cease-fire agreement included the establishment of a peacekeeping force under the auspices of the United Nations. Known as the United Nations Emergency Force (UNEF), these troops were intended to serve as a buffer between Egypt and Israel. They were charged with ensuring that freedom of navigation throughout the Straits of Tiran was maintained, and that there would be no cross-border raids by guerrilla forces. These were two of the primary Israeli concerns that led to the outbreak of armed hostilities. UNEF also supervised the withdrawal of Israeli forces from Egyptian territory, a process that was completed by March 1957. UNEF remained deployed in the area until May 1967, when President Gamal Abdel Nasser expelled the force from Egyptian territory.

The Suez Crisis also had larger implications for the region and for the international system as a whole. For the first time, the United States was brought into the Arab-Israeli conflict, although the Americans tended to view the situation in terms of the larger cold war context. In early 1957, concerns about Nasser and Soviet influence in the region led the Eisenhower administration to formulate what would become known as the Eisenhower Doctrine. According to this policy, the United States would provide assistance, when requested, to any country in the Middle East threatened by international Communism. In this respect, the Eisenhower Doctrine set the stage for active U.S. involvement in the region.

SEE ALSO *Arabs; Eisenhower, Dwight D.; Nasser, Gamal Abdel; War*

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SUFFRAGE MOVEMENT, WOMEN'S

SEE *Suffrage, Women's; Women's Movement.*

SUFFRAGE, WOMEN'S

With few exceptions, women were not allowed to vote before the twentieth century. In 1900, however, only twenty-five nations held regular elections for at least some of their political leaders, and only six recognized the right of suffrage for most of their adult male citizens. Several American states and territorial governments granted women voting rights between 1855 and the 1890s; Sweden and Great Britain offered a limited right in local elections to some women in the 1860s; but New Zealand in 1893 was the first to guarantee a national right of woman's suffrage. About two dozen European nations as well as Australia and Canada extended the right to vote to women by 1919. In 1920 the Nineteenth Amendment to the U.S. Constitution barred gender-based prohibitions of the right to vote in the United States. Other democracies recognized voting rights for women only after World

War II, France in 1944, Italy and Japan in 1945, and other nations still later, India (1950), Switzerland (1971), Portugal (1976), Taiwan (1996), and Kuwait (2005). In 1945 the newly established United Nations recognized "the equal rights of men and women" in its charter, and its 1948 *Universal Declaration of Human Rights* specified that "the will of the people shall be the basis of the authority of government; … [as] expressed in periodic and genuine elections" and "by universal and equal suffrage." Moreover, the declaration continues, these rights and freedoms are to be honored "without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status." At the beginning of the twenty-first century, more than half of all nations and approximately 60 percent of the world's population live under some form of electoral democracy; among these nations, the full recognition of women's voting rights has become a common baseline for assessing the presence of democracy.

The woman suffrage movement in the United States is commonly traced back to a women's rights meeting convened in Seneca Falls, New York, in 1848. This point of origin, although significant, overlooks the ways the idea of women's suffrage extends and gains much of its force from the principles of equality, consent, and liberty that emanate from democratic forms of government, however imperfect these forms or political practices may be at a particular time. For the democratic ideal that requires the equal treatment, consent, and empowerment of more than a select few within a society offers a suggestive logic supportive of efforts to include others, if not ultimately all persons, in the democratic process of self-governance. However self-evident this inclusionary logic may be to some, democratization is almost never self-executing or easy because most social relations in the world have been and remain ordered principally in nondemocratic ways.

EARLY HISTORY

From this perspective, the efforts of Margaret Brent, a Catholic immigrant to the colony of Maryland in 1638, offer the first instructive case of a woman who demanded full recognition of her right to vote along with her male peers. Brent was a prominent, unmarried property owner, businesswoman, and attorney in colonial Maryland. She also served as the legal executor of the estate of Maryland governor Leonard Calvert. Under the leadership of the Calvert family, Maryland was founded in the 1630s as the first American colony to recognize the freedom of religion. In 1645 the colony suffered extensive political and sectarian religious strife after Puritan militants invaded the colony, imprisoned several Catholic leaders, and plundered their estates.

Governor Calvert succeeded in defeating the militants in 1647, but he died the same year, leaving Brent to assume a leading role in restoring order within the colony. To aid her efforts, Brent in 1648 requested two votes in the Maryland colonial assembly. The first vote she claimed for herself, the second she claimed as the legal executor of Calvert's extensive property interests in Maryland. Brent's claims to a right to vote were rejected, but the assembly commended her critical contributions to the survival of the colony. Brent protested her exclusion from the assembly's proceedings and later elected to resettle in neighboring Virginia. Although Brent's attempt to secure her right to vote failed, historical records indicate that at least a small number of American colonial women—most likely all widowed or unmarried property owners—successfully asserted their right to vote in several colonial elections.

The subsequent democratic advances initiated by the American and French Revolutions in 1776 and 1789 supported similarly instructive associations between the principles carried by the democratic form and the advocacy of new women's rights, including the right to vote. On the eve of American independence, for example, Abigail Adams appealed to her husband, John Adams, then a Massachusetts delegate to the Continental Congress and later the second U.S. president. "Remember the Ladies," Abigail famously wrote, "and be more generous and favourable to them than your ancestors…. [For] if perticuliar care and attention is not paid to the Ladies we are determined to foment a Rebelion, and will not hold ourselves bound by any Laws in which we have no voice, or Representation." (Abigail Adams to John Adams, March 31, 1776, Adams Family Papers, The Massachusetts Historical Society).

Although Abigail Adams failed in 1776 to convince her husband that democratic government required the consent of all, including women, the logic of her argument was repeated and became commonplace among subsequent advocates of women's suffrage reform, including the French revolutionary thinker Marquis de Condorcet in the 1790 essay "On the Admission of Women to the Rights of Citizenship." Ironically, the more radical French Revolution never yielded robust efforts to extend voting rights for French women—despite their critical role in national events. American women, by contrast, possessed the right to vote in New Jersey state elections from 1776 until 1807, when a state constitutional amendment limited the suffrage to white, adult males. In addition propertied widows with school-age children were permitted to vote in local school board elections in Kentucky in 1838. These limited and highly exceptional American examples vividly demonstrate how little progress was made on effecting the idea of women's suffrage during the first half of the nineteenth century.

THE SENECA FALLS CONVENTION

Several propitious conditions in the 1830s and 1840s sustained the idea and hope for women's suffrage. The most important of these conditions was the emergence of more activist and organized antislavery and temperance movements in the United States. Women were core elements in both movements, and many in turn gained deeper commitments to the democratic principles of equality and liberty as well as invaluable experiences regarding the organizational mechanics and difficulties of social reform. Coincident with these movements, voting rights and mass forms of political participation expanded to include a greater portion of the adult male populations in the United States, Great Britain, and parts of Europe. Social reformers of all sorts were encouraged by these democratic developments, which paralleled new educational, economic, and social opportunities afforded to a small but growing number of women. The advances of this period, however, also made manifest to some the inequity and democratic contradictions of the continued exclusion of women from voting and other forms of public participation. U.S. women's rights advocates, such as Angelina Grimké and Sarah Grimké, initiated public discussions of these issues, which inspired wide public fascination, numerous critics, and a generation of future woman suffrage activists.

Against this historical backdrop, more than 300 women and men, including Frederick Douglass and other abolitionists, met in Seneca Falls in 1848. Inspired by the abolitionist movement, Quaker egalitarian ideals, and the Declaration of Independence, the organizers of this meeting (Elizabeth Cady Stanton, Lucretia Mott, Mary Anne McClintock, and others) proposed that the convention discuss the "social, civil and religious rights of women." Attendees heard numerous speeches, but the most important was Stanton and Mott's "Declaration of Sentiments," which proclaimed "that all men and women are created equal" and that "it is the duty of the women of this country to secure to themselves their sacred right to the elective franchise." Convention members vigorously debated the latter claim before they ultimately endorsed it and the declaration as a whole. With few exceptions, public reactions were hostile to the convention's advocacy of woman suffrage, and many who endorsed its declaration publicly retracted their support. Over the next decade additional women's rights conventions met, which along with new pro–women's rights publications attracted greater public attention for the movement and strengthened a small but activist network of leaders that included Stanton, Susan B. Anthony, Paulina Wright Davis, and Lucy Stone. Despite these developments, suffragists garnered no additional political advancements before the U.S. Civil War, although Kansas extended school board election voting rights to women in 1861.

THE POST–CIVIL WAR PERIOD

The conclusion of the Civil War opened new opportunities for political, economic, and social change in the United States. Foremost among these widely anticipated changes were the amendments required in the U.S. Constitution and most state constitutions. Woman suffrage leaders appealed directly to those who possessed the most influence over these expected constitutional changes: members of Congress, state legislators, party leaders, and abolitionist groups. Suffrage leaders also founded the American Equal Rights Association (AERA), which jointly promoted women and African American rights within a single "human rights" agenda framed, according to Anthony, by "the farthest bound of the principle of the 'consent of the governed.'" At both the state and federal levels, however, not a single women's suffrage amendment or popular referendum won political support. Stanton moreover ran (although she was not permitted to vote) for a U.S. House seat in New York in 1866. She lost, receiving only 24 votes of 22,450 cast. The political weakness of the woman suffrage movement also was evidenced by the fact that the Fourteenth Amendment to the U.S. Constitution (ratified in 1868) formally recognizes each state's power to limit the right to vote to "male inhabitants," an engendered description of the right to vote not present in the original U.S. Constitution.

Some women suffragists found partial consolation in the language of the Fifteenth Amendment of the U.S Constitution (ratified in 1870) because it used gender-neutral language to prohibit states from denying or abridging voting rights of U.S. citizens based upon race, color, or previous condition of servitude. Other activists, such as Stanton and Anthony, were embittered and radicalized by their political failures, and they withheld support for the ratification of the Fourteenth and Fifteenth Amendments, thereby severing themselves from other suffrage supporters and many of their former abolitionist and Republican Party allies.

After 1868 fissures among woman suffrage advocates grew more prominent. Stanton, Parker Pillsbury, and Anthony founded a new women's newspaper, abandoned the AERA, and led efforts to create the National Woman Suffrage Association (NWSA). Under the leadership of Stanton and Anthony, the NWSA focused on securing a national constitutional amendment, but the two advocates and others aligned with them increasingly became involved in the promotion of other social reforms too. Their efforts won praise from some, greater opposition from entrenched and popular social interests, and no immediate political results related to the suffrage issue. For example, between 1869 and 1889 no women's suffrage constitutional amendment won approval in either branch of Congress. In addition to its constant lobbying of members of Congress, the

NWSA experimented with other constitutional reform tactics, which included civil disobedience and the federal judiciary. The latter hope was encouraged by a novel and expansive interpretation of the Fourteenth Amendment's protections of the "privileges or immunities" of American citizens. In 1872 Anthony and other women were arrested for attempting to vote in state elections. Their trials attracted considerable media attention for the idea of women's suffrage and ultimately the desired opportunity to press their claim before the U.S. Supreme Court. In *Minor v. Hapersett* (1875), however, the Court determined that the term *citizens* in the Fourteenth Amendment did not grant women the right to vote.

Woman suffrage advocates not aligned with the NWSA formed other organizations, including the American Woman Suffrage Association (AWSA). Established in 1869 and led by Henry Ward Beecher, Henry Blackwell, Stone, and others, the AWSA published a weekly national newspaper, the *Woman's Journal*. Unlike the NWSA, its principal focus was state and local suffrage reform movements; yet the record of political achievements also was limited over the next twenty years. Despite sustained organizational efforts, most states did not vote on suffrage amendments or referenda; where they did, the male electorate rejected women's suffrage in Kansas in 1867, Nebraska in 1871, Michigan in 1874, Colorado in 1876, Oregon in 1884, Rhode Island in 1887, and Washington in 1889. Several successes were sufficient to encourage reform efforts in other states, yet only four western American territorial states granted women full voting rights: Wyoming (1869), Utah (1870), Washington (1883–1887), and Montana (1887). In 1867 Michigan women taxpayers received a limited right to vote in school trustee elections; women in Kansas received full voting rights in municipal elections in 1887. By 1889 American women could vote in school-related elections in about a dozen states and territories.

THE TWENTIETH CENTURY AND THE NINETEENTH AMENDMENT

In 1890 the NWSA and AWSA merged into the National American Woman Suffrage Association (NAWSA). Like its predecessors, the new organization continued its lobbying and grassroots efforts, but it too achieved mixed political results. Over the next two decades additional states granted women's suffrage in school, municipal, and tax-related elections, but only five states—Wyoming (1890), Colorado (1893), Utah (1896), Idaho (1896), and Washington (1910)—recognized a woman's right to vote in all elections. Despite persistent opposition to the idea of women's suffrage, progressive social, economic, and political conditions in the United States and Europe accelerated the woman suffrage movement in the 1910s. President William H. Taft spoke to the 1910 NAWSA annual convention. Although he did not endorse women's suffrage, his presence at the meeting was perceived as an endorsement by NAWSA members and the media. In 1912 former president Theodore Roosevelt publicly supported woman suffrage, and the social reformer and NAWSA activist Jane Addams seconded Roosevelt's nomination for president at the 1912 Progressive Party convention. The Democrat Woodrow Wilson won the presidency in 1912 without supporting woman suffrage, but Progressive Party legislators in Illinois proved critical for the passage of legislation in 1913 that recognized women's voting rights in presidential and municipal elections. By mid-decade about one-third of American states fully recognized a woman's right to vote, but only five national democracies did: New Zealand (1893), Australia (1902), Finland (1906), Norway (1913), and Denmark (1915).

World War I (1914–1918) and its aftermath corresponded with renewed efforts by national woman suffrage organizations and a further consolidation, especially in Europe, of the relationship between democracy and recognition of women's voting rights. The United Kingdom recognized the right for women thirty years or older in 1918; Austria, Germany, Hungary, Ireland, and Poland recognized national rights of women's suffrage in 1918, as did Belgium, the Netherlands, and Sweden in 1919. In the United States the NAWSA and the Congressional Union worked to win congressional approval of an amendment to the U.S. Constitution. In addition to lobbying members of Congress and President Wilson, these organizations effectively orchestrated mass marches, petition campaigns, and political candidate endorsements designed to exert electoral pressure on the national political parties and those running for office. In 1917 the National Woman's Party, led by Alice Paul and Lucy Burns, supported widely publicized protests and acts of civil disobedience in which some were arrested and imprisoned for chaining themselves to the White House fence. Publicly President Wilson remained uncommitted, refusing to endorse constitutional amendment efforts in Congress. But by January 1918 Wilson's conceptions of a more peaceful and democratic postwar world were clear, and he argued before the U.S. Senate on September 30, 1918 that a women's suffrage amendment was "clearly necessary to the prosecution of the war and the successful realization of the objects for which the war is being fought" (*Cong. Rec*). The U.S. House of Representatives endorsed the amendment by the required two-thirds majority, but the U.S. Senate stalled the amendment until June 1919, when it too passed the Nineteenth Amendment. By August 1920 three-quarters of the states required by the U.S. Constitution had ratified the Nineteenth Amendment.

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SUFISM

SEE *Islam, Shia and Sunni.*

SUGAR INDUSTRY

Sugar has been an important commodity historically due to a variety of factors, including the human appetite for sweet foods and drinks, the complementarity that sugar brings to the other flavors in food, its preservation and fermentation properties, and the calories it provides. Sugar (or more precisely sucrose) was first prepared in India. It was brought back to the Western world by the Greek conqueror Alexander the Great in 325 BCE. Trade in sugar was further expanded in the Mediterranean region by the Arab conquest of the sixth century CE. Improvements in the crystallization process expanded the sugar trade (especially in the form of molasses) in the twelfth century. However, the limited supply of sugar in the international market caused refined sugar to be relatively costly until the production of sugar by European colonies in the Americas grew after 1700. This expansion, coupled with improvements in refining technologies that reduced unwanted tastes in the sweetener, caused sugar to replace other sweeteners such as honey, becoming the dominant sweetener over time. While demand for sugar remained relatively unaffected by the introduction of non-nutritive sweeteners, in the early twenty-first century the dominance has been challenged, particularly in the United States, by high fructose corn syrup (HFCS). The competition between sugar and HFCS raises several policy questions.

HISTORICAL TRADE PATTERNS

The fact that the expansion of production and trade of sucrose was largely linked to the European colonization of the Americas had significant implications for the institutional arrangements in the international sugar market in place at the beginning of the twentieth century. Specifically colonization of the Americas as well as other parts of the globe in the eighteenth and nineteenth centuries was at least partially driven by economic considerations of the countries involved. Restrictions were placed on the countries with which colonies could trade. Raw goods produced in the colonies were required to be sold in the mother country and significant import restrictions existed to encourage the purchase of manufactured goods to each respective European power. This enabled the European powers economic benefits from the colonization of the New World.

Another byproduct of the rise of sugar in European colonies in general and in the Americas in particular was the linkages between sugar and slavery. As described by B. W. Higman in his 2000 article for *Economic History Review*, the rise of the sugar economies in the seventeenth through the nineteenth centuries in the Caribbean has been labeled as "The Sugar Revolution." This revolution has been associated with several empirical facts, including the increased importance of monoculture, the replacement of small farms with plantations, and the increased use of black slaves. The movement toward monoculture and increased farm size has proven not to be unique to sugar; however, certain characteristics of sugar production may make the crop more susceptible to the establishment of plantations. The relationship between sugar and slavery may be more systematic. The exact reason for this linkage is unclear. One explanation for this linkage could be the presence of scale economies. In 1977 Mark Schmitz found evidence of significant economies of scale in Antebellum sugar production in Louisiana, which used slavery. Further evidence of the economies of slavery-based agriculture can be found in Robert Fogel and Stanley Engerman's 1977 work.

The elimination of slavery in the colonial powers and the United States in the nineteenth century changed the institutions in the labor relationship. Slaves were replaced with contract labor, but the use of contract labor in the sugar plantations implied a radical change in the source of that labor. Before 1770 one-half to two-thirds of the contract labor destined for the British Caribbean and other North American colonies came from Europe. However, the contract labor for the sugar plantations was predominantly non-white. This shift also implied significant

changes in the terms of the labor contract. In addition, the reduction of the availability of contract labor from countries such as India undoubtedly accelerated the introduction of labor-saving technology to the industry.

The entanglement of European powers in the trade of sugar also contributed to the first significant alternative sweetener. The British blockade of European ports during the Napoleonic wars led to the development of a viable sugar beet industry in France. In the twenty-first century sucrose from sugarcane and sugar beets share the global market for refined sugar. The expansion of sugar beet production in the second half of the nineteenth century followed a host of factors—including the abolition of slavery in Britain and France and the expansion of grain imports from Russia—that reduced the profitability of grain crops in Europe.

The decline in the price of sugar had two divergent impacts on the economy. First, lower sugar prices reduced the cost of a primary input for a variety of industries (i.e., bakeries, breweries, and the makers of jams). Second, lower sugar prices impoverished producers in the colonies. The same policy scenario applies to the present-day United States. Sugar tariffs pit the interest of sugar producers against the interests of confectionary manufacturers. The ultimate dispensation of this debate depends on the relative political power of each sector through rent-seeking behavior. One response to the declining sugar prices both in the nineteenth and in the twenty-first centuries is the establishment of import tariffs or quotas to increase the domestic price and, thereby, protect domestic sugar producers.

MODERN SUGAR MARKET

Despite the end of European colonial rule, many of the tariff agreements continue to follow the trade patterns established in colonial times. With the emergence of the European Union (EU) as an economic union in the closing years of the twentieth century, agricultural policy coalesced into the Common Agricultural Policy (CAP) of Europe. The CAP established a system of tariffs to protect domestic producers from foreign competition. Historically, African, Caribbean, and Pacific (ACP) sugar producers were given access to the European market under the CAP through the Sugar Protocol of the Lomé Convention and its successor the Cotonou Agreement.

At the beginning of the twenty-first century, most countries that support their internal sugar price use a form of the tariff rate quota (TRQ) which is allowed under the Uruguay Round Agreement on Agriculture. The TRQ is a system of two tariffs. The first tariff allows the sale of a fixed quantity (or minimum access) of a commodity at a lower or first tier tariff. Any quantity of that commodity imported above this fixed quantity is charged a higher (typically prohibitive) tariff. Given that the second tariff level is prohibitive, the country can increase the price received by domestic producers by reducing the fixed quantity imported under the first tier tariff. This is the policy instrument used by both the United States and the EU to increase the price of sugar for their respective producers. However, apart from supporting domestic producers, the TRQ gives countries in the EU a mechanism to honor its commitments to the ACP. Specifically, former colonies can be allocated portions of the minimum access quantity, in essence giving ACP countries access to a higher internal price of sugar at a low tariff rate. The United States allocates its first-stage quota in a similar way to a group of forty countries.

Apart from its grounding in historical trade patterns, the international sugar market is also affected by a myriad of regional and global trade agreements. Regional trade agreements involve a small number of countries in the same geographic region. In this context, the agreements forming the EU are a regional trade agreement. Other regional trade agreements include the North American Free Trade Agreement (NAFTA) and proposed trade agreements such as the Free Trade Area of the Americas (FTAA). The effect of each of these trade agreements on sugar markets is dependent on the role sugar plays in each group of economies.

An example of the ambiguous role regional trade agreements play in the sugar market can be found in NAFTA. As discussed, the sugar price in the United States is protected by a system of tariffs. From this perspective both freer trade with both Canada and Mexico raise critical issues. First, while Canada does not pose a direct threat to the U.S. sugar industry from production, the TRQ on sugar prohibits pass-through imports of sugar into the United States through Canada. However, NAFTA still allows for the importation of sugar containing products from Canada, increasing the competition for confections in the United States and reducing the demand for sugar. For example, lower sugar prices contributed to Kraft Foods' decision to move the production of Life Savers candy entirely to Canada in 2003.

A different set of problems was raised by the potential effects of Mexican sugar production on the U.S. sugar market. Mexico's government has historically been involved directly in its sugar industry through its ownership of its sugar mills and other policies but had divested these holdings as a part of its economic liberalization program in the late 1980s. In recognition of the potential competition from Mexico, NAFTA includes specific provisions governing Mexico's access to the U.S. sugar market. Many of these provisions are concerned with Mexico's status as a net sugar producer. Specifically, since Mexico imports sugar and other sweeteners, the domestic produc-

ers wanted to be protected from pass-through sugar (i.e., sugar purchased at lower world market prices for sale at protected U.S. prices). Hence, Mexico was granted duty-free access to the U.S. market for 7,258 metric tons of sugar. If Mexico obtained the status of a net sugar-surplus producer, the quota would be expanded to 25,000 metric tons in years 1 to 6 and 250,000 metric tons in years 7 to 15. Some controversies have arisen in the implementation of these provisions. Specifically, the original provisions were restricted to becoming a net sugar-surplus producer, ignoring the potential impact of alternative sweeteners such as HFCS. This raised the possibility of substituting HFCS for sugar especially in the manufacture of soft drinks to enhance Mexico's net surplus of sugar.

In the mid-2000s the URAA of the WTO remains the most relevant multilateral trade agreement facing the international sugar market. Within this context, it is important that the TRQ format of the EU and the United States is the sanctioned agricultural policy and thus completely legal under the WTO. The primary question is then whether significant changes to these accepted instruments will occur in the Doha round of WTO negotiations started in 2001. At its inception, increases in market-access were primary to the Doha round discussion on agricultural trade. One idea is to increase market access by expanding the minimum access portions of the TRQs.

SUGAR PRODUCTION

Various domestic factors affect the production of sugar and institutions within the U.S. sugar market. As discussed, sugar prices in the United States are supported by a TRQ. Adding a layer of complication, the government supports the domestic price of sugar by providing a nonrecourse loan for raw sugar at 18 cents per pound and refined sugar produced from sugar beets at 22.9 cents per pound, according to 2002 statistics (Haley and Suarez 2002). If the market price falls below 18 cents per pound, producers (or more accurately sugar mills) store their raw sugar and receive a loan from the government of 18 cents for every pound of raw sugar placed in storage. If the market price for sugar rises over 18 cents per pound plus any interest accrued, they take the sugar out of storage, sell it at the prevailing market price, and repay the loan. However, if the market price for sugar does not exceed 18 cents per pound plus accrued interest during the marketing year, producers simply forfeit sugar in storage to the government in fulfillment of the loan. While the nonrecourse loan program for sugar is typical for agricultural commodities in the United States, it is encumbered by the Dole Amendment, which requires the sugar program to be operated at no cost to the government.

Certain characteristics of sugar production have implications for vertical integration in the market channel for sugar. Sugar is produced from two different primary crops: sugarcane and sugar beets. While the end product (i.e., sucrose) is identical for each process, each crop implies a different market channel. The production of sugarcane typically occurs in tropical or subtropical climate zones. The stalks containing the sucrose are removed from the field for milling that produces a raw form of sugar that is relatively stable. The raw sugar is then later refined into table sugar, removing impurities that may affect the flavor. Technical considerations require that these mills be located close to production. When the stalks are harvested in the field the sucrose content of the sugarcane starts to deteriorate. Further, the sucrose content of standing sugarcane deteriorates after a freeze.

Following Coases's paradigm (1937) that the boundaries of the firm are determined by the comparison of transaction costs with the diseconomies of scope, the technical characteristics of sugarcane are conducive to the vertical integration of production of processing of sugarcane. Specifically, in Coases's paradigm the boundaries of a firm are dictated by a comparison of transaction costs and diseconomies of scope. In this case transaction costs include the possibility of using a thin market to extract monopolistic rents while the diseconomies of scope involve the economic costs of carrying out an activity that is outside of the firm's specialization. In the case of sugarcane, the potential deterioration of quality gives rise to the possibility of monopolistic rents. The possible economic losses of economic rents more than offset the economic costs of diversification into processing facilities. Viewing the transaction from the other side, the diversification into sugarcane production insures a steady supply of sugarcane into the future, reducing the risk of investment.

Production of sucrose from sugar beets does not face the same climatic constraints as sugarcane. Further, the sucrose content of sugar beets is more stable than sugarcane, extending the period for the extraction of sucrose from sugar beets. Thus sugar beet producers have less impetus for vertical integration than producers and processors of sugarcane.

Finally, any discussion of the sweetener markets, particularly in the United States, is not complete without reference to HFCS. HFCS is a liquid sweetener derived from corn that can be used in production of soft drinks and other industrial uses. It is typically conceded that sugar tariffs in the United States provided the incentives for the commercial development of HFCS production. However, while HFCS is a perfect substitute for sugar in many applications, it lacks the baking quality to replace sugar completely. The interaction between sugar and HFCS prices is then dependent on the saturation of specific sweetener markets. For example, HFCS is easily used in the production of soft drinks and, because it is typically

priced lower than sugar, dominates the sweetener market for this market. Thus the relationship between HFCS and sugar prices depends on the substitutability of the use at the margin.

SEE ALSO *Agricultural Industry; Caribbean, The; Industry; Plantation; Slave Trade; Slavery; Slavery Industry*

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SUICIDE

Suicide can be the outcome of an individual's difficult and stressful experiences or a response to an unbearable situation. Sometimes suicide is complicated by drug and/or alcohol use. The scope of suicide includes all ages, classes, races, and sexes, although some groups are at more risk than others. Children or family members of those who have attempted or completed suicide are more likely themselves to attempt or complete suicide, as suicide has a ripple effect and can convey the idea that self-destruction is an acceptable solution to distress. Casualties of suicide, or those left behind, experience traumatic grief, guilt, shame, stress, and self-doubt—sometimes keeping them from speaking of the event at all. Statistics of suicide are underrepresented and not always reliable because the action can be classified in some other way; legally, suicidal components must be established beyond a doubt. Additionally, it is sometimes difficult to categorize the intentionality of death.

Suicide rates are higher for those who suffer from depression or other psychiatric problems; use drugs or alcohol when depressed; suffer from physical, especially irreversible, illness; are divorced; have lost an important relationship through death or breakup; and live in certain areas. War combatants also face a high rate of suicide because of post-traumatic stress disorders. People with HIV/AIDS are at risk, with the decision of suicide based on the fear of loss of function or increase in suffering and the feeling of being isolated. In "suicide by cop" incidents, an armed suicidal individual forces a law officer to use deadly force resulting in death. Individuals name various other reasons for suicide, including as a means to reunite with the dead, a means to ensure rest and refuge, a way to take revenge, and a penalty for failure.

DURKHEIM'S STUDIES

In 1897 the French sociologist Émile Durkheim (1858–1917) conducted a study of suicide in France. He found lower suicide rates among women, Catholics, Jews, and married people and higher rates among men, Protestants, wealthy people, and unmarried individuals. Based on the data, he argued that categories of people with strong social ties had low suicide rates, and that categories of people with the lowest social integration had the highest suicide rates. Durkheim believed that too much or too little integration or regulation (cohesion) was unhealthy for society and accordingly established four conditions that can lead to suicide: (1) altruism, or too much integration, a willingness to sacrifice the self for the group's ostensible interest (e.g., suicide bombers); (2) egoism, or too little integration (e.g., those not bound to social groups left with little guidance); (3) fatalism, or too much regulation with no perceived way out of a situation

(e.g., slaves); and (4) anomie, or too little regulation and no fulfillment of needs (e.g., those coping with the death of a spouse, economic depression, institutional failure, or wealth insufficient to provide happiness). Durkheim focused on anomie as an unhealthy and destructive pathological state for society, resulting in a "milky-way-galaxy" of choices for normative behavior (read "normlessness") and a lack of social regulation.

AMERICAN DEMOGRAPHIC DATA

In the United States, suicide ranks eleventh on the list of causes of death. Suicides occur most often among white males, and the rate increases with age; older white males have the highest suicide rates in the nation. Females and nonwhite males reach their peak for suicide vulnerability earlier in adult life. Suicide is the third leading cause of death in the age group fifteen to twenty-four. Bad economic times are usually associated with an increase of suicide rates. Rates for Native Americans are the highest of any ethnic population in the nation.

Suicide rates tend to be higher in areas where people live far apart from each other; more densely populated states have lower suicide rates. Accordingly, the highest suicide rates are in the western states, with Wyoming and Alaska at the top of the list, although California is ranked as having one of the lowest rates. The middle and eastern states are ranked lower in suicide rates than the western states (with the District of Columbia and Massachusetts as the lowest), although Vermont, West Virginia, and Oklahoma are ranked as high. Most of the New England states are ranked as having the lowest rates of suicide.

SUICIDE AMONG THE ELDERLY

Since 1990, in the United States there has been an increase in suicide rates in individuals eighty-five years or older, although suicide in the elderly does not elicit the same response as it does in younger individuals. Elderly individuals are more likely to be socially isolated for a longer time before death and are more likely to experience physical illness, other sources of distress and depression, and loss of relationships, making them at higher risk for suicide. Elders are less likely to give warning signs of suicide.

TEEN SUICIDE AND THE FAMILY

Since the 1980s the general incidence of suicide has increased in the United States; the rate for those between the ages of fifteen and twenty-four has tripled. Although suicide among adolescents is seriously underreported, researchers generally consider it to be the second- or third-most common cause of death in that group. More than eight out of ten kids who threaten suicide attempt it; females make more suicide attempts, although more males complete suicide, with firearms or explosives the most common method of self-destruction. Half of all children who have made one suicide attempt will make another, sometimes as many as two a year until they succeed. The majority of suicide attempts are expressions of extreme distress and not merely bids for attention; this distress is often related to others prior to suicide. Additionally, some children who take their own lives are indeed the opposite of the rebellious teen. They are anxious, insecure kids who have a desperate desire to be liked, to fit in, and do well. Their expectations are so high that they demand too much of themselves, thereby condemning themselves to constant disappointment. A traumatic event (such as the loss of a valued relationship or a change of residence), which can seem minor viewed from an adult perspective, is enough to push children and adolescents over the edge into a severe depression. Alcohol and drug use are associated with heightened suicide risk in youth.

The role of the family is also a variable in teen suicide. Two-thirds of suicidal teens report poor relationships with their parents. Increased levels of suicidal behavior in adolescents is associated with certain family characteristics: rigid rules, poor communication, overbearing parents, and long-term patterns of family dysfunction such as alcoholism and mental illness.

PHYSICIAN-ASSISTED SUICIDE

In some cases an individual may be too incapacitated by illness to end his or her life without assistance. The ethics of physician-assisted suicide, or euthanasia, has been the subject of vigorous debate. *Active euthanasia* refers to direct action being used to end a life; *passive euthanasia* refers to not taking steps to prolong life or "letting die." Some argue that active euthanasia respects the principle of individual autonomy and the right to self-determination, that its foremost concert is the patient's well-being, and that it adheres to the physician's Hippocratic Oath to do no harm, where doing no harm means alleviating pain and respecting the wishes of a rational person. Many argue that a decision to kill oneself with the assistance of a physician is a private choice that society has no right to regulate; others argue that assisted suicide threatens the moral foundations of society.

INTERNATIONAL DEMOGRAPHIC DATA

Suicide rates vary from nation to nation, with Belarus, Estonia, Hungary, Kazakhstan, and the Russian Federation having the highest suicide rates in the world. Suicide rates for men are substantially higher in all countries and are also high for indigenous populations who have been exploited, discriminated against, and deprived

of their previous cultural existence. China is undergoing a national suicide crisis, with 21 percent of the world's population, 44 percent of the world's suicides, and 56 percent of the world's female suicides. Those in China at a higher risk of suicide live in rural areas or areas where the government has policies that have increased stress through the disruption of traditional family patterns. Some argue that this level of suicidal behavior has changed attitudes in China about suicide, with self-destruction coming to be seen as an acceptable action.

OTHER MANIFESTATIONS OF SUICIDE

Suicide can also occur as a group response to extreme situations, notable examples being the mass suicide at the Masada fortress in 73 CE by besieged Jews choosing death over defeat by the Romans; the Jonestown cult's mass murder-suicides in Guyana in 1978; and the Heaven's Gate cult suicides in southern California in 1997.

Suicide bombings by terrorist groups became a phenomenon in the late twentieth century. Terrorism constitutes random acts of violence or the threat of such violence as a political or religious strategy, and suicide bombing is one of these strategies. The attacks of September 11, 2001, show how self-destruction can be used as a weapon.

The act of suicide has been interpreted in many ways and given various meanings. In Christianity and Judaism, suicide is sinful and forbidden. Historically, many societies have viewed suicide as a crime and have enacted laws to regulate the act and punish those who attempt it. Those who attempt or commit suicide have often been seen as psychotic or mentally ill; by contrast, in some cultures suicide is viewed as an honorable and glorious death. Some approve of suicide when it is seen as the only option left to alleviate pain and suffering from severe illness. Freud understood suicide as a drive or death instinct; from an existentialist standpoint, suicide removes the necessary choice for authentic existence.

SEE ALSO *Alienation; Alienation-Anomie; Assisted Death; Death and Dying; Depression, Psychological; Durkheim, Émile; Euthanasia and Assisted Suicide; Morbidity and Mortality; Native Americans; Suicide Bombers*

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Ryan Ashley Caldwell

SUICIDE BOMBERS

A suicide bomber (or suicide attacker) is a person who participates in a suicide attack. Boaz Ganor, the cofounder of the International Policy Institute for Counter-Terrorism, has defined a suicide attack as one whose success depends on the death of the person or persons who carry it out. Suicide attacks are one of the tactics employed by terrorists, and since the early 1980s such attacks have become familiar worldwide, having been adopted by some thirty-two terrorist organizations and groups in twenty-eight countries.

The increasing use of suicide attacks by terrorist organizations is explained by the strategic and tactical advantages of such attacks:

1. The bombers themselves plan and carry out the attacks according to circumstances, and, because they operate as "smart bombs," they can delay or cancel an operation if necessary.
2. The attack plan is relatively simple, since there is no need for an escape route.
3. The suicide bomber is a threat to morale and has a significant psychological effect on the target population.
4. The victimized population feels it is facing an enemy who does not budge from death, which in turn leads this population to pressure its government into negotiating with the terrorist organizations.
5. Attacks are also used to make the communities that support the terror organizations appear stronger and more powerful. This implants the idea that such attacks are the best way to fight a more powerful enemy.
6. Suicide attacks cause more casualties than any other types of terror attacks. For example, between 1982 and 2005, the average number of fatalities in shooting attacks worldwide was 3.2, bombing attacks killed an average of 6.92 persons, and suicide attacks killed an average of 81.48.

Historically, suicide attacks predate the modern period. The Moslem Hashashin of the late Middle Ages used this tactic, as did the Sulu who attacked the Spanish colonialists in the Philippines in the eighteenth century. In modern times, the Japanese kamikaze pilots used suicide attacks against the Allied fleet during World War II. From the first attack on October 25, 1944, until the last one on August 15, 1945, kamikaze pilots carried out more than 2,500 suicide attacks.

The first modern terrorist organization to employ suicide bombers was Hezbollah, an Islamic Shiite group based in Lebanon, which attacked the American Embassy in Beirut on April 18, 1983. On October 23, 1983, they attacked again, this time targeting the barracks of American and French soldiers. These attacks caught the attention of the entire world, not only due to the high number of victims (300 killed and 96 wounded), but also because of the consequent withdrawal of the multinational peacekeeping force from Lebanon. According to Robert Pape, a political scientist at the University of Chicago who has made an extensive study of suicide terrorism, this encouraged other organizations to adopt the use of suicide bombers, and throughout the 1980s other guerrilla groups used them against Israeli forces and their allies in Lebanon (2003, 2005).

The Liberation Tigers of Tamil Eelam (LTTE) in Sri Lanka have used suicide bombers more often than any other group. Between 1987 until 2006, they perpetrated over 200 suicide attacks. The frequent use of suicide bombers forced LTTE to adapt and develop the tactics of its attacks, which have ranged from simple attacks on military and civilian targets to more sophisticated attacks on the Sri Lankan Navy and Air Force.

In the late 1990s, and even more so in the early 2000s, other terrorist groups started to employ suicide bombers. During this period, most of these terrorist groups were concentrated in the Middle East region. Groups such as the PKK (Kurdistan Workers Party) in Turkey, the GIA (Armed Islamic Group) in Algeria, and the Egyptian Islamic Jihad used suicide bombers briefly during their struggle against state governments. The Palestinian organizations, however, are the only ones in the region to use this tactic for a long period of time. The first suicide attack in Israel was carried out by Hamas in April 1993, and over the years other Palestinian factions, such as Palestinian Islamic Jihad and PFLP (Popular Front for the Liberation of Palestine), have perpetrated many more attacks, with the peak coming in 2002. During al-Aqsa Intifada (2000–2005) the Palestinian factions carried out 145 suicide bombings. Following the beginning of the second Russia-Chechnya war, Chechen terrorist groups also began to use suicide bombers against the Russian Army, both in Chechnya and in Russia itself.

The group most closely identified with suicide bombings involving a large number of victims, however, is al-Qaeda, whose attacks on the World Trade Center in New York and the Pentagon in Washington, D.C., on September 11, 2001, killed nearly three thousand people. This attack is considered the most deadly suicide attack to date. Moreover, since the American-led coalition troops invaded Iraq in March 2003, al-Qaeda suicide bombers have attacked them repeatedly.

One of the most interesting features of suicide attack in modern times is the large percentage of women used as

suicide bombers. Groups such as PKK, and various Chechen factions, have used mostly women for suicide missions, whereas LTTE and Palestinian organizations have used both men and women. The use of women in such missions stems from the operational advantage of using women, who are considered less likely to be terrorists. In addition, in traditional cultures, women are not obliged to undergo security inspections, so they can often get closer to the target of attack more easily. The use of women in these missions has been justified by various claims, raging from sex liberation and equal rights in nationalistic groups to religious justifications in the case of religious terrorist groups. However, many believe that these women have been forced to participate in suicide bombing against their will.

Car, truck, motorcycle, and boat bombs are all operational variations of the suicide attack. In each case, a vehicle filled with explosives and detonators is driven up to or rammed into the target. The "bag bomb" is carried to the scene of an attack, as is the more frequently used explosive belt. Packed with explosives and scrap metal to increase the damage when the wearer detonates it, an explosive belt has been used in 46.2 percent of terror attacks, while car and truck bombs have been used in 37.7 percent (Database on Suicide Terrorism 1982–2003). The choice of tactics depends on the surroundings, so that Hezbollah has generally used car and truck bombs to attack Israeli army convoys and installations, while LTTE has crashed boat bombs into Sri Lankan military vessels.

Suicide attacks have led to interdisciplinary studies investigating the motives behind them. The first attempts by researchers to explain the suicide bomber phenomenon, in the early 1990s, concentrated on the personal and socio-environmental motives of the individuals involved. More recently, however, the focus has shifted to the motives of the organizations. The increase in terrorist attacks carried out by organizations with a network structure, like al-Qaeda, has led researchers to focus on the immediate environment of the suicide bomber and the social network in which he operates. As a result, the spotlight is now on the dynamics within the social network, and on the effect of this network on the bomber's decision to carry out an attack.

In addition to scientific research, which concentrates on analyzing the phenomenon of suicide attacks, there are a growing number of attempts to analyze the cultural motives behind the bombers themselves. The most widely known such attempt is the movie *Paradise Now* (2005), directed by Hany Abu-Assad, in which two brothers decide to sacrifice themselves as suicide bombers but are unable to follow through with their plan. These attempts have therefore been criticized as glorifying suicide bombers and not giving adequate attention to the perspective of the victims of suicide attacks.

SEE ALSO *Fundamentalism, Islamic; Terrorism; Terrorists; War; World War II*

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SUN YAT-SEN
1866–1925

Born into a peasant family in Canton (Guangzhou), raised in Hawaii, and educated at colleges in Hawaii and Hong Kong, Sun Yat-sen (Sun Wen or Sun Yixian or Sun Zhongshan) played a key role in the overthrow of China's Qing or Manchu dynasty (1644–1911), in the politics of the early Chinese Republic, and in the shaping of post-1949 regimes in Beijing and in Taipei. Sun came to be venerated in Taiwan as the "father of the nation" (*guofu*) and in the People's Republic of China as a "pioneer of the revolution" (*xianxingzhe*). The cult of Sun seems to be one common denominator across the hostile Taiwan Strait. Retreating to Taiwan after his defeat in the civil war, Chiang Kai-shek (Jiang Jieshi, 1887–1975) legitimized his Guomindang (Nationalist Party) by mythologizing Sun. Beijing stresses Sun's anti-imperialist campaign and his cooperation with Soviet Russia and the Communist Party. Such accolade is not shared by Western scholars, who have tried to demythologize Sun. Marie-Claire Bergère, for instance, dubs Sun "a traveling salesman of the revolution" (1998, p. 139), hardly present at the countless late Qing uprisings as he shuttled among nations to raise funds from overseas Chinese communities and foreign sources. It is telling, nevertheless, that Sun was from coastal China, which was long exposed to foreign influence, and that overseas Chinese were considered the "mothers of the revolution." Modernization in China has invariably followed the pattern of spreading from coastal

areas inland, with Sun as an early symbol for what has continued into the twenty-first century.

In the chaotic times of the late Qing and early Republic, Sun, above all else, emerges as a paragon of revolution not necessarily because of his leadership in uprisings and politics but because of his writings. *The Three Principles of the People* is a compilation of his speeches, the 1924 version rendered definitive by his death more than anything else. It is an irony of history that this hodgepodge of ideas, by no means systematic and insightful, and derivative of American government apparatus, should become the sacred text for school children and university programs in Taiwan. Even the first line of Taiwan's national anthem is a dull drone of "The Three Principles of the People." On the other hand, *The International Development of China* (1922) was prescient in merging capitalism with socialism in the wake of World War I (1914–1918). Sun also emphasized international "cooperation," urging Western powers to abolish unfair treaties that subjugated China as a subcolony *(cizhimindi)* and to treat China as a market for investment and a "dumping ground" and factory. The unfortunate choice of "dumping ground" revealed the psychological complex of a Westernized Chinese patriot bent upon saving China, while either pretending to identify or subconsciously identifying with Western interests. Most brilliant is Sun's utopian vision for China's economic and industrial modernization: a network of railways; coastal development based on three major ports in the northern, central, and southern regions; mining and heavy industry; and dams and river transportation. It was yet another unfortunate choice that Sun used *colonization* for his plans regarding Tibet and Xinjiang, but it was a sign of the times. Sun's grandiose dreams have earned him the mocking appellation Big-Gun-Sun *(Sun dabao)* in China, yet Deng Xiaoping's (1904–1997) Four Modernizations program (in agriculture, industry, science and technology, and the military) echoed Sun's plan closely, and the contemporary westward movement to exploit energy reserves and other resources, as well as the economic zones revolving around major Chinese seaports, coincide with Sun's blueprint. In charting out a path for modernization, Sun Yat-sen was indeed visionary.

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Sheng-mei Ma

SUPER MARIO BROTHERS

SEE *Video games.*

SUPEREGO

SEE *Equilibrium in Psychology; Freud, Sigmund; Psychoanalytic Theory.*

SUPERORDINATE GOALS

Social organizations are formed to accomplish specific goals, such as the acquisition of valued resources necessary for the survival of the group in question. Crucial to this process is the recognition that some goals are more important than others, and that some people are better equipped than others to aid in their acquisition. As a consequence, hierarchies of both people and goals are frequently established to facilitate group functioning, whether that group is a small social unit such as a family, or a larger cultural, religious, or political group.

This pursuit of specific goals sometimes results in conflict when a goal involves a valued resource that cannot be shared by competing subgroups. Hostilities are further exacerbated by self-categorization, which uses status or physical attributes to characterize "in-group" people (those like me) and "out-group" people (those not like me) for the purpose of treatment or differential allocation of resources. Such self-categorization occurs in (1) nation-states that compete for human and natural resources, (2) corporations that compete for customers and sales, and (3) other groups that are physically distinguishable and that compete for services and opportunities within the same society. This conflict between groups has no simple cause, and no totally effective solution. Nevertheless, Muzafer Sherif (1958) did demonstrate that it is possible to achieve harmony between opposing social groups, by introducing what he called "superordinate goals." These are goals for both groups that can be achieved only through the cooperation of both.

In Sherif's "Robbers Cave" experiment (so named for its site, Robbers Cave State Park in Oklahoma), boys attending a summer camp were, in the first phase of the study, divided into two groups that functioned independently of each other. In the second phase, the groups opposed each other, participating in competitive and frustrating activities in which only the winning group could have valued resources. The experiment demonstrated that (1) members developed unfavorable attitudes and deroga-

tory stereotypes of the out-group, (2) social distance developed to the point of mutual avoidance, and (3) hostile attacks sometimes occurred. In the final phase of the experiment, the technique—superordinate goals—proved effective in reducing tension between groups by introducing goals that were shared by members of both groups and required collaborative efforts.

Several recent studies have identified aspects of Sherif's technique that contribute to the effectiveness of superordinate goals in reducing conflict. One of the most critical aspects is the ability of superordinate goals to create a sense of shared identity. John Dovidio and colleagues (2001) intervened in the functioning of two groups to change people's conceptions of their membership from that of diverse membership (in different groups) to common membership in a single, more inclusive group. The study revealed that if members of different groups are induced to conceive of themselves more as a single, superordinate group rather than as two separate groups, attitudes toward former out-group members will become more positive. Thus, cooperative relationships between groups, such as those established in Sherif's Robbers Cave study, can reduce bias not only by ameliorating realistic group threat, but also by establishing a more inclusive, superordinate group identity (Gaertner et al. 2000).

There is little doubt among scholars regarding the ultimate benefits of the pursuit of superordinate goals rather than goals peculiar to nationalistic or individualistic interests. Superordinate goals enable people from opposing sides to come together and work toward a common end. In the everyday work environment, for example, the alignment of employer and employee goals with regard to job security can minimize conflict (Worchel and Simpson 1993). Within corporations there are superordinate goals that emphasize, in the words of AT&T's slogan, "being the best." The adoption of such a common goal has served to boost morale as well as minimize labor-management conflict. Superordinate goals also can be introduced to minimize group conflict at the level of large social groupings; at the global level these include activities such as space exploration, medical research, pollution control, and nuclear disarmament (Frank 1983).

SEE ALSO *Conflict; Cooperation; Corporations; Diversity; Interest Groups and Interests; Mobilization; Nation-State; Organizations; Politics; Self-Classification; Sherif, Muzafer; Stereotypes*

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Carolyn B. Murray

SUPPLY

In economic theory, supply is the relationship between the price of a product and the number of units of product that producers are willing to offer for sale per unit time (called *quantity supplied*) when all other relevant factors, excluding the price of the product, remain fixed. The concept of supply ignores the effect of consumers on the market by assuming that consumers purchase as many units as producers offer for sale. The assumption that other factors remain fixed is known as the *ceteris paribus* assumption. For example, suppose that when the price of a product is $10 per unit, producers are willing to offer one million units of product for sale each month (the quantity supplied). Holding all other things constant, if the price of the product were to rise to $12, producers would make more profit on each unit and so producers would be enticed to offer more units for sale—the quantity of units supplied would rise. Similarly, holding all other things constant, if the price of the product were to fall to $8, producers would make less profit on each unit and so producers would be enticed to offer fewer units for sale—the quantity supplied would fall. Supply is this positive relationship between price and quantity supplied. Plotting various prices against the corresponding quantities supplied yields a graph called the *supply curve*. The supply curve is a pictorial representation of supply.

A shift in supply (also called a change in supply, or a supply shock) occurs when the number of units producers are willing to offer for sale changes for a reason unrelated to the price of the product. A shift in supply represents a new relationship between price and quantity. For example, suppose producers are willing to offer one million

units of product for sale each month when the price per unit is $10. An increase in the costs of labor and materials reduces the producers' profit margins and so reduces the producers' incentives to produce. As a result, even if the price of the product were to remain fixed at $10, producers would no longer be willing to offer one million units of product for sale each month. Alternatively, suppose that a change in technology enables producers to produce at a fraction of the cost at which they used to produce. The new technology increases the producers' profit margins and so increases the producers' incentives to produce. As a result, even if the price of the product were to remain fixed at $10, producers would be willing to offer more than one million units for sale each month.

Most supply shocks (or violations of the *ceteris paribus* assumptions for supply) can be categorized as:

- changes in the prices of factors;
- changes in the technology the firm employs; and
- changes in the number of firms in the industry.

Factors are things the firm uses in producing its product. Examples of factors are labor, materials, energy, buildings, machinery, and land, the last three of which are a special type of factor called capital. Capital factors are factors that are used in the production of the product but that are not used up in the production (except in the sense of depreciating). Noncapital factors (labor, materials, energy) are used up in the production. For example, a firm uses steel and robots to produce cars. The steel that is used to produce one car cannot be used to produce a second car because the steel was used up in the production of the first car. The robot, however, can be used to produce one car and then used to produce a second car. The robot is not used up when the first car is produced. Therefore, the robot is a capital factor and the steel is a noncapital factor.

When the price of a factor declines, it becomes more profitable for producers to produce, so quantity supplied increases even if the price of the product remains constant. This is an increase in supply. Similarly, when the price of a factor increases, it becomes less profitable for producers to produce, so quantity supplied decreases even if the price of the product remains constant. This is a decrease in supply.

Technology is an intangible that represents the sophistication of the production process. For example, one hundred workers can produce one car every six months when each worker works on his own car. But, when the workers are arranged in an assembly line with each worker performing a specialized task, the one hundred workers can produce one car every day. The rearrangement of the workers into an assembly line is an improvement in technology. Prior to the invention of the Bessemer process, it was so difficult to refine aluminum that aluminum was more expensive than gold. In the 1800s Henry Bessemer discovered that injecting oxygen into the aluminum while it was melted allowed far more aluminum to be refined for the same cost. This discovery was an improvement in technology.

When technology improves, it becomes more profitable for producers to produce and so quantity supplied increases even if the price of the product remains constant. This is an increase in supply. If technology were to devolve, it would become less profitable for producers to produce, so quantity supplied would decrease even if the price of the product remained constant. This would be a decrease in supply.

The number of firms in the industry typically changes as the industry's profitability changes. If the industry becomes more profitable than other industries of comparable risk, new firms will enter the industry, thereby increasing supply. If the industry becomes less profitable than other industries of comparable risk, existing firms will leave the industry, thereby decreasing supply.

When the number of firms in an industry declines, the quantity supplied decreases even if the price of the product remains constant. This is a decrease in supply. When the number of firms in an industry increases, the quantity supplied increases even if the price of the product remains constant. This is an increase in supply.

Supply (sometimes called industry supply) typically refers to the aggregate production of all firms in an industry. One can refer to the supply of a single firm (the individual supply, or firm's supply). In a perfectly competitive environment, a single firm's supply curve is the portion of the firm's marginal cost curve that is above the firm's average variable cost curve. That is, assuming that the price of the firm's product is high enough so that it is more profitable for the firm to produce than to shut down (i.e., the price is greater than the firm's average variable cost), the minimum price required to entice the firm to offer one more unit of product for sale is the cost to the firm of producing that additional unit (i.e., the marginal cost). Individual supply curves can be combined to form industry supply via the method of horizontal addition. At each price, the quantities supplied by the various firms are added to attain a single quantity supplied for the industry as a whole. When supply is represented graphically, the price is typically shown on the vertical axis and the quantity supplied is shown on the horizontal axis. Thus combining the quantities supplied of the various firms entails adding the quantities shown on the horizontal axis while holding the numbers on the vertical axis fixed. In the example below, when the price of the product is $10 per unit, Firm #1 offers 200 units and Firm #2 offers 100 units. If these are

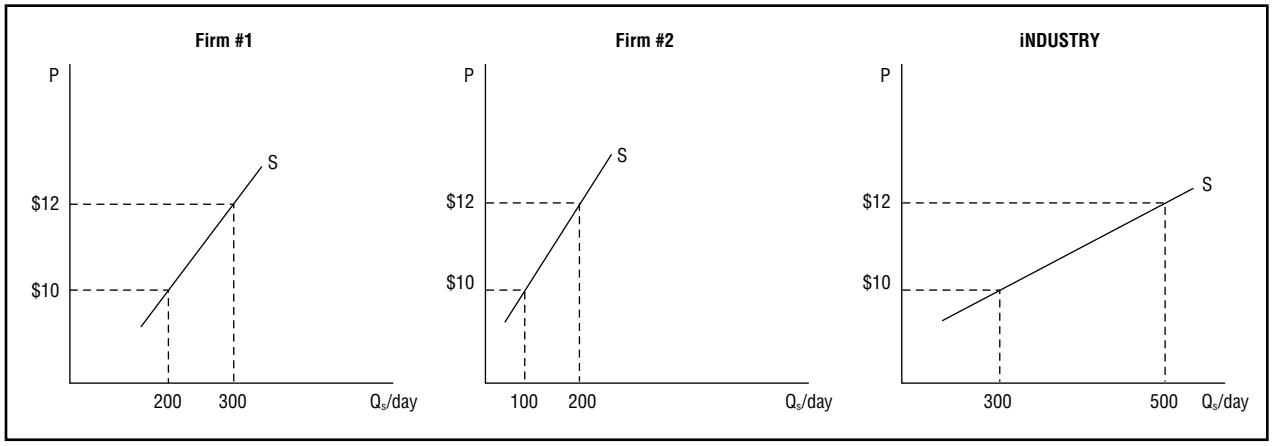

the only two firms in the industry, then the industry as a whole offers 300 units when the price is $10.

The steeper the slope of the industry supply curve, the less responsive the quantity supplied to changes in the price of the product. In the extreme case of a vertical supply curve, the quantity supplied remains fixed regardless of how high or low the price of the product might go. For example, the supply of seats at a stadium is vertical. Regardless of how high the price of tickets might go, the number of seats cannot change (at least not in the short run).

The concept of supply, and its linkage via demand to equilibria, was first formalized by the British economist Alfred Marshall (1842–1924) in his 1890 book *Principles of Economics*. Marshall was one of the first to conceptualize the behavior of producers and consumers independently. The approach, though common today, was not intuitively obvious. The data economists observed was equilibrium data—prices and quantities that arise only after the forces of demand and supply interact. To conceive of supply as an independent force required intuiting the existence of forces that could not be observed directly, but only inferred theoretically. Today, modern econometric techniques allow economists to obtain statistical estimates of supply and demand, but such techniques, even had they existed in 1890, would have been virtually impossible to implement without computers.

In the same way supply ignores the effect of consumers, demand ignores the effect of producers. The result is two behavioral paradigms: Supply summarizes the behavior of producers who exist (relative to consumers) in a vacuum; demand summarizes the behavior of consumers who exist (relative to producers) in a vacuum. Economists then combine demand and supply together to predict what price and quantity will result when consumers and producers are allowed to interact. The resultant price and quantity is called the equilibrium.

SEE ALSO *Average and Marginal Cost; Demand; Equilibrium in Economics; Excess Demand; Excess Supply; Input-Output Matrix; Marginalism; Partial Equilibrium; Productivity; Profitability*

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Antony Davies

SUPPLY, AGGREGATE

SEE *Aggregate Supply.*

SUPPLY, EXCESS

SEE *Excess Supply.*

SUPPLY, LABOR

SEE *Labor Supply.*

SUPPLY OF MONEY

SEE *Money, Supply of.*

SUPREMACY, WHITE

SEE *White Supremacy.*

SUPREME BEING

Supreme being is a seventeenth-century descriptor for God. Given that the social sciences are a modern phenomenon, this designation is appropriate. In an attempt to accommodate the growing awareness of the pluralism of beliefs in the world, *supreme being* became a generic term for the entity that underpins the various world faiths.

CONCEPT OF THE SUPREME BEING

The concept of a supreme being starts with a sense that "something" must be responsible for this world around us. The idea of a creator is key, for this creator requires worship (i.e., an acknowledgement of human dependence on and love for the creator). It is this combination of creator and worship that drives most religious traditions to monotheism. Even in Hinduism, there is an emphasis on the underlying unity of the many in the *one*.

For the sake of simplicity, theistic traditions talk about an omnipotent, omniscient, and perfectly good God. Unlike a limited God (where the issue of the limits of God's power or knowledge could be endlessly debated), theism invites us to affirm an unlimited God, where each attribute is stretched out to infinity.

A crucial area of discussion involves the relationship of the supreme being to time. In Judaism, Moses Maimonides (1135–1204), for example, addressed the issue; in Islam, Ibn Sina (980–1037); and in Christianity, Thomas Aquinas (c. 1225–1274). There is agreement that God is outside time—so there is no duration in the life of God (see Burrell 1986). In addition, God has timeless knowledge of the future—God knows the beginning to the end. However, in the modern period, we find in all three traditions a growing sympathy with the view that God is everlasting (i.e., time is part of God, but there was never a time when God was not and will never be a time when God ceases to be).

Under the influence of Alfred North Whitehead (1861–1947), a movement known as *process theology* emerged that suggests that God's omniscience does not include the decisions of free-will creatures because, by definition, genuinely free decisions are not known until they are made (see Whitehead [1929] 1960). The concept of the supreme being that emerges from this account is often *pantheist* (God and the world are identified together) or *panentheist* (God and the world are identified together, but God is more than the world). This view has more in common with Hindu traditions than with classical Christianity.

ARGUMENTS FOR A SUPREME BEING

For those traditions heavily influenced by Hellenistic thought (i.e., Greek learning), certain arguments emerged to defend the rationality of belief in God. In the Islamic, Jewish, and Christian traditions, two arguments came to the fore. The first is the *design* argument. With its roots in the *Timaeus* of Plato (427–347 BCE), it flourished in the writings of Aquinas and William Paley (1743–1805). The argument seeks to draw a parallel between a human artifact (for Paley it was a "watch") and the world. A watch is clearly intended for and serves certain purposes (even if you do not know what a watch is for, its purpose could be deduced). The cosmos, with all its complexity, is the same. From a watch, we can infer a watchmaker; so from the cosmos, we can infer a designer.

Contemporary defenders of the design argument abound. The Muslim thinker Bediuzzaman Said Nursi (c. 1877–1960) constructs the argument in *The Words* (1928). For many Western philosophers, it is widely believed that David Hume (1711–1776), in *Dialogues Concerning Natural Religion* (1779), effectively undermined the design argument. Hume's first problem is the analogy: Is the world really like a human artifact? The whole argument depends on this analogy: If one likens the world to a giant vegetable, then the human mind does not automatically leap to design and order. Instead, we shall find ourselves thinking of gradual growth—an image that does not require a creator. Hume's second problem is that the argument does not get back to God. At best, explains Hume, the argument takes us back to a designer, but we have no reason to assume that this designer is omnipotent, omniscient, or perfectly good. Indeed, given evil and suffering in creation, we have good reason to assume that the designer is not omnipotent or perfectly good. Hume's third problem is that there are naturalistic explanations for the world's order. Hume was living before Charles Darwin (1809–1882) formulated the natural selection hypothesis. However, other writers have explored the ways in which Darwin undermines the design argument. Richard Dawkins (2006), a biologist at Oxford University, argues that the order in the world is due to the fact that those things that do not fit in do not survive. The world's order is not due to a creator organizing everything in advance.

The *cosmological* argument takes a variety of forms. Among the best known is the Islamic *Kalām* argument for a first cause to the universe. The presumption is that one cannot have an infinite regress of causes. So the universe must have an immaterial first cause that is responsible for everything that follows. Scholars have contested the pre-

sumption that there cannot be an infinite regress of causes; after all, no one complains that 22/7 (pi) must finish somewhere before it can be considered intelligible. In addition, Stephen Hawking (1988) has suggested that the combination of cosmology and quantum mechanics might create the conditions for a universe to just start.

Given all this, there is more interest in the argument of Thomas Aquinas. In the *Summa Theologica*, Aquinas explains that he believes that the universe has a start only because of the Genesis story; his instinct is to follow his Greek masters and affirm that matter is eternal. However, he still accepts that rationally it is necessary to posit the existence of God to explain "why anything is" and "how it continues to be." The third of his "five ways" (arguments) to God's existence insists that the intelligibility of the universe depends on a necessary being. If everything is contingent (could be otherwise), then ultimately it would remain unexplained (because we would still have questions about the "why" and the "how"). So, for the universe to make sense, it depends on a necessary being (a being who contains within itself the reason for its own existence). Debate around this form of the argument hinges on the coherence of the idea of a necessary being. Recent defenders of this argument have linked it with the nature of truth (see Markham 1998).

Brief mention should be made of the *ontological* argument. Formulated by Saint Anselm (1033–1109) and then popularized by René Descartes (1596–1650), the ontological argument is an exploration of the meaning of the word *god*. Anselm points out that even the atheist understands the concept of God (otherwise atheists would not know what they were denying). Given that the concept of God includes perfection—the greatest conceivable being—(or in Anselm's terminology, "that than which nothing greater can be thought"), it follows that an imaginary God would not be the greatest conceivable being because the greatest conceivable being would be one that exists both in the mind and reality. Therefore, if the idea of the greatest conceivable being makes sense, then such a being must exist. This argument continues to provoke considerable debate. Recent defenders include Alvin Plantinga (1965).

There are several other arguments for belief in a supreme being. Immanuel Kant (1724–1804) in his *Critique of Practical Reason* (1788) insists that the existence of a supreme being is a necessary postulate of moral discourse. C. S. Lewis (1898–1963) argued that moral discourse does not make sense unless it is grounded in a transcendent being, which is the locus of such values. More recently, some have suggested that there is a pointer to the transcendent in music, beauty, or art (see Steiner 1989).

One major objection to belief in a supreme being is the problem of evil. The traditional form of the problem is a logical one: If God is all powerful, then God must be able to abolish evil; if God is all loving, then God must wish to abolish evil. Yet evil exists, so God cannot be all powerful and all loving. This problem has generated a vast literature on *theodicy* (an attempt to justify God in the light of evil) (see Hick 1977). For some, the social sciences have undermined religion by providing a naturalistic explanation for the religious phenomenon.

BELIEF IN A SUPREME BEING

It is not clear how influential these arguments are on belief in a supreme being. Belief in God is a result of a web of practices that take an elaborate social form. Despite secular expectations to the contrary, belief in a supreme being is widespread. As children learn a language, so, running parallel, a religious worldview is formed. For many people, the concept of the supreme being is nebulous, and there is little clarity about the arguments for a supreme being's existence. Yet there are rich resources in the different world faiths; these can provide both a coherent account and some strong arguments for the supreme being.

SEE ALSO *Christianity; Church, The; Darwin, Charles; Hinduism; Hume, David; Islam, Shia and Sunni; Judaism; Kant, Immanuel; Lay Theories; Monotheism; Nation of Islam; Natural Selection; Religion; Theism; Totemism*

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Ian Markham

SUPREME COURT, U.S.

Article III of the U.S. Constitution states that "[t]he judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish." While the Constitution establishes a Supreme Court, it does little to describe what the Court will look like or what it will do. Nevertheless, the Supreme Court has developed over time to become a key player in the U.S. policy process.

COMPOSITION AND FUNCTION OF THE COURT

With respect to composition, the Constitution provides that the justices of the U.S. Supreme Court will be appointed by the president, with the advice and consent of the Senate, and absent some malfeasance in office (which might result in their impeachment), they enjoy life tenure. As a result, appointing Supreme Court justices provides presidents with an opportunity to leave an enduring policy legacy; William Rehnquist was appointed by Republican president Richard Nixon in 1972, yet he remained a strong conservative force on the Court until his death in 2005.

The number of members of the Supreme Court is determined by statute rather than spelled out in the Constitution. During the first century of the Court's history, the number of justices varied from five to ten. In 1869, the number was set at nine, and it has held constant ever since.

Of the nine members, eight are associate justices and one serves as the chief justice. The position of chief justice must be filled specifically by the president. Thus, when Chief Justice Warren Burger retired in 1986, President Ronald Reagan nominated William Rehnquist—who was already serving as an associate justice—to the position of chief justice; although the Senate had confirmed Rehnquist as an associate justice in 1972, they had to confirm him as chief justice again in 1986.

People sometimes refer to the chief justice as "first among equals." The chief justice's vote does not count more than that of any other justice. However, regardless of his actual time served on the Court, he automatically has more seniority than any associate justice. As a result, he speaks first at conferences—meetings to discuss the merits of cases—and, if the chief justice is in the majority, he determines who will write the Court's opinion. The position of chief justice also entails some additional administrative and ceremonial responsibilities.

With respect to function, the Constitution provides that the Supreme Court has original jurisdiction—the ability to hear the case first, before any other court—over disputes between states, disputes between states and the federal government, and cases involving foreign diplomats. In all other cases, the Supreme Court exercises appellate jurisdiction; that is, it can only review the decision of another court. Because fact-finding is generally relegated to trial courts—courts with original jurisdiction—the Supreme Court is generally limited to resolving disputes over the meaning and application of the law.

Among the cases over which the Supreme Court exercises appellate jurisdiction, the overwhelming majority are brought to the Court through a petition for a writ of certiorari. The Court has complete discretion over whether to grant the petition and hear the case or not. Indeed, the Supreme Court grants relatively few of the petitions filed with it. During the Court's 2002 term, 8,225 cases (including appeals, original jurisdiction cases, and extraordinary writs) were brought before the Supreme Court, yet the Court granted full review to fewer than 100.

A significant body of scholarship is devoted to determining how and why the Court chooses which cases it will hear. Empirical evidence suggests that the Court chooses to hear cases that give it the greatest opportunity to make policy: cases that present significant legal issues that will have broad impact on the legal landscape and, in particular, cases the court below decided "wrongly." In other words, as long as the state and lower federal courts are deciding legal issues in a way that is consistent with the policy and legal preferences of the Supreme Court justices, the justices will generally let those lower court decisions stand. The Court is far more likely to accept a case to correct a perceived error on the part of the lower courts.

JUDICIAL REVIEW AND U.S. POLICY

While determining who wins and who loses legal disputes is arguably an inherently political activity, the U.S. Supreme Court plays its most active role in the American political process when it exercises judicial review. Judicial review is the power to evaluate whether state and federal government actions, both legislative and executive, comport with the Constitution and, if they do not, declare those actions void.

The U.S. Supreme Court first exercised judicial review in the 1803 case of *Marbury v. Madison*. In February 1801, outgoing president John Adams signed a number of judicial commissions, but his secretary of state, John Marshall, did not deliver them before the end of Adams's term. When the new president, Thomas Jefferson, took office, his secretary of state, James Madison, refused to deliver the commissions. William Marbury, one of the individuals who did not receive his commission, brought a claim directly to the U.S. Supreme Court. Interestingly, by this point, John Marshall had taken office as the chief justice of the Supreme Court.

Marbury brought his claim directly to the Supreme Court because a provision of the Judiciary Act of 1789 gave the Supreme Court the power of original jurisdiction over such matters. When the Supreme Court finally issued its decision in 1803, Chief Justice John Marshall concluded that the Court could not compel the president to deliver the commission to Marbury because Congress could not expand the Supreme Court's original jurisdiction beyond that described in the Constitution. The Court was unable to help Marbury, but it achieved its result by declaring an act of Congress unconstitutional and void.

The *Marbury* decision was relatively uncontroversial when it was issued. Chief Justice Marshall made it clear that the Court's role in exercising judicial review was limited to making legal, rather than political, determinations. In its earliest incarnation, judicial review was considered an almost ministerial function that gave the Court relatively little policymaking prerogative. As time passed, however, the potential for policymaking through the exercise of judicial review became clear.

In the late 1920s and early 1930s, the full power of judicial review was revealed. Specifically, as Congress began to pass social legislation in response to the Progressive movement and as President Franklin Roosevelt began to implement his New Deal economic policies, the Supreme Court stood squarely in the way of elected-branch policymaking. The Court issued a number of decisions striking down social and economic legislation on the grounds that it violated constitutional notions of federalism and individual liberty.

In 1937, following a string of Supreme Court decisions striking down New Deal programs, Roosevelt proposed a plan to "pack" the Court: On the pretext of assisting an overworked and elderly Supreme Court, Roosevelt proposed creating a new seat on the Supreme Court for every justice who was seventy years old or older and who remained on the Court. The result would have been to add six new seats, and those seats would, of course, be filled by judges friendly to Roosevelt's New Deal programs.

Within weeks of Roosevelt's proposal, Justice Owens Roberts abandoned the Court's anti–New Deal faction to create a narrow majority that supported the constitutionality of Roosevelt's programs. Roberts's apparent about-face is often referred to as the "switch in time that saved nine" because his change in position helped preserve the nine-member Supreme Court. Historical examination of the Court's deliberations from this time period indicate that Roberts had cast his pro–New Deal votes on the cases in question weeks before Roosevelt announced his plan; in other words, the coincidence between the threat to pack the Court and Roberts's change of position was just that—a coincidence.

Still, the Court's ability to stall implementation of significant social and economic programs highlights the potential of judicial review as a political force. Moreover, the shift in Supreme Court policy during the 1930s emphasizes the amount of discretion that the Court has in interpreting the Constitution. Although Chief Justice Marshall described judicial review as a mechanical application of clear legal principles, the events surrounding the New Deal demonstrate the extent to which the Constitution is subject to a wide range of interpretation. Indeed, since the 1930s, there has been an increasing awareness of the political implications of Supreme Court membership, and the nomination and confirmation process has become quite politically charged.

Any lingering doubt about the political dimension of the Court's exercise of judicial review was dispelled during the tenure of Chief Justice Earl Warren. Warren was appointed by a conservative president—Dwight Eisenhower—but his time on the Court was marked by a clear liberal agenda. Warren was particularly interested in expanding the rights of criminal defendants, and his time on the Court is marked by numerous decisions that broadly construe the individual rights the Constitution guarantees to criminal defendants.

Among the cases that make up Chief Justice Warren's legacy are *Miranda v. Arizona* (1966) and *Gideon v. Wainwright* (1963). In *Miranda*, the Supreme Court held that the Fifth Amendment protection against self-incrimination requires police to inform any criminal suspect in their custody of their constitutional rights; specifically, *Miranda* requires the police to inform suspects in custody that they have the right to remain silent and decline to answer any questions. The *Miranda* decision is particularly striking because it delves into the nuts and bolts of police procedure, setting fairly "bright line" requirements for the policy to follow.

In *Gideon v. Wainwright* (1963), the Supreme Court ruled that the Sixth Amendment guarantee of effective assistance of counsel requires states to provide attorneys to indigent criminal defendants. In other words, the state must pay attorneys to represent criminal defendants who are too poor to hire attorneys on their own. Implementation of the *Gideon* decision has imposed considerable financial burdens on the states.

Both the *Gideon* and *Miranda* decisions reflect Chief Justice Warren's personal ideological agenda. First, both decisions give higher priority to the rights of the individual than to the rights of the state; procedural and financial burdens placed on government take second chair to the rights guaranteed individuals by the Constitution. Second, both decisions reflect Warren's belief that the U.S. Supreme Court plays a countermajoritarian role in U.S. politics. While the legislative and executive branches

respond to the will of the majority, Warren (and many others) viewed the courts as providing a voice and a forum to those who are socially marginalized, such as the poor.

THE SUPREME COURT AND CONSTITUTIONAL DIALOGUE

Two politically charged issues—race and abortion—highlight both the political aspect of judicial review and the role of the Supreme Court in a broader political dialogue. In both issue areas, the Supreme Court has played a key role in setting U.S. policy. Yet in both issues, the constraints placed on the Court and the dialogue between the Court and other political actors is apparent.

In 1857, the Supreme Court issued a decision in the case of *Scott v. Sandford* (better known as the "*Dred Scott* decision"). Legally, *Dred Scott* was a significant statement about the importance of states' rights. Politically, however, *Dred Scott* was important because the Court held, essentially, that even emancipated slaves could not be full citizens of the United States. In an already tumultuous political climate, the *Dred Scott* decision became a rallying point for abolitionists and contributed to the outbreak of the U.S. Civil War and, ultimately, to the enactment of the Fourteenth Amendment's guarantee of equal protection of the laws.

In *Plessy v. Ferguson* (1896), the Court considered a Louisiana statute that required separation of the races on all railroads. In finding that the Louisiana statute did not violate the Fourteenth Amendment, the Court explicitly rejected Plessy's argument that segregation marginalized African Americans and perpetuated the belief that African Americans were inferior. Yet in *Brown v. Board of Education of Topeka* (1954), the Court outlawed segregated schools precisely because of the social stigma associated with segregation. What changed? The political climate had changed dramatically; between 1896 and 1954, African Americans had gained considerable electoral strength. Moreover, the composition of the Court had changed. Specifically, the *Brown* decision was vetted by a newly appointed Chief Justice Earl Warren.

The change in jurisprudence between *Plessy* and *Brown* illustrates both the importance of the ideology of individual members of the Court and the importance of a favorable political climate for the Court's exercise of power. The Court's decision in *Brown* could be implemented only with the support of the president, who mobilized the National Guard to force southern states to integrate their public schools.

The issue of race provides further illustration of the interplay between the Court and the elected branches. The Supreme Court has struggled to articulate a clear, concise position on the issue of affirmative action, leaving states to formulate their policies through a process of trial and error. In 1978, the Court first addressed the issue of affirmative action in higher education with the case of *Regents of the University of California v. Bakke*. In *Bakke*, the Court indicated that some affirmative action programs might be constitutionally acceptable, but the University of California program was not. Over the next twenty-five years, public universities across the country attempted to develop constitutionally acceptable yet effective affirmative action policies, but the Court failed to provide clear guidance. In 2003, the Court issued two decisions on the issue of affirmative action, and universities hoped that the issue would finally be resolved. In *Gratz v. Bollinger*, the Court struck down the University of Michigan's affirmative action program for undergraduate admissions; in *Grutter v. Bollinger*, the Court upheld the affirmative action program for the University of Michigan's law school. Taken together, the two decisions indicate that diversity in education is a compelling government interest, that public schools can consider racial diversity in admissions decisions, but that race cannot be given any precise, explicit weight in the decision process. The decisions provide guidance, but they are far from defining exactly when and how public universities may consider race in admissions.

While the issue of race illustrates the interplay and interdependence of the courts and elected government over the course of more than a century, the issue of abortion provides a more succinct yet equally compelling illustration. In 1973, following the relaxation of numerous state anti-abortion laws, the Supreme Court issued its landmark decision in *Roe v. Wade*. In *Roe*, the Court held that the right to privacy—which is not enumerated in the Constitution but which the Court had previously inferred from a number of constitutional provisions—protected the right of a woman to obtain an abortion. In a remarkably "legislative" opinion, the Court expounded that a woman's right to privacy completely dominated the state's interests during the first trimester of pregnancy but the two obtained more equal footing as the pregnancy progressed.

The *Roe* decision ignited a firestorm of controversy. It mobilized anti-abortion activists and helped solidify a full-fledged anti-abortion movement in American politics. It prompted conservative state governments to enact increasingly restrictive anti-abortion legislation in an effort to test the boundaries of *Roe* and lead to the Court overturning its decision. It made the issue of abortion and the right to privacy a sort of litmus test in judicial nominations and confirmations. In the wake of *Roe*, the effect of the Court on politics and that of politics on the Court are stark.

SEE ALSO Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Constitution, U.S.;*

Dred Scott v. Sanford; *Eisenhower, Dwight D.; Great Depression;* Grutter *Decision;* Hernandez v. Texas; *Jefferson, Thomas; Judicial Review; Judiciary; Law; Madison, James; Marshall, Thurgood; New Deal, The; Public Policy;* Roe v. Wade; *Roosevelt, Franklin D.; Separation of Powers; Warren, Earl*

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Wendy L. Watson

SURPLUS

In the history of economic thought there are, broadly, two approaches to the study of prices and income distribution. The neoclassical, or marginalist, approach is the dominant modern theory. But there is an older approach rooted in the writings of William Petty and François Quesnay (in his *Tableau Economique*) and in those of authors in the classical school of political economy such as David Ricardo and Karl Marx. Classical economists considered the surplus to be that portion of the annual social product left over after deducting one part to replace the means of production used up and another part to pay workers for their consumption. The classical economists generally took the view that wealth creation is the productive combination of direct human labor and means of production, where the latter was considered to be indirect labor because it was the result of previous periods' labors.

While the centrality of labor in the production process was a theme that was common to the writings of most classical economists (Hunt 2002, chapter 2) it was in the writings of Marx that the labor theory of value (LTV) reached its fullest level of development. The LTV states that the value of a commodity is equal to the total amount of direct and indirect labor time (or *labor value*) that is necessary for its production, given demand and technology. Further, in the Marxian perspective money prices are assumed to be regulated by labor values. It is quite simple to understand this, for if in the production of a good the direct labor productivity rises and/or the labor productivities in the industries that supply its inputs rise, then its unit labor value will fall. Consequently, given wage rates, its unit costs will also fall, thereby allowing firms to lower their unit selling prices.

Let c = labor time needed to produce the means of production used up daily and l = the direct labor time per day needed to produce a given amount of output. If money prices are proportional to the total labor time, as assumed by Marx (*Capital* Volume I), then unit money price will be proportional to $c + l$. Let v = labor time needed to produce wage-goods so that money wages are proportional to v. Then unit money cost of production will be proportional to $c + v$. Thus unit money profits or *surplus value* will arise if and only if $c + l > c + v$, that is to say, $l > v$. Hence collectively workers need to work for a length of time that exceeds the time needed to produce wage goods (Shaikh 1987).

MODERN DEBATES

Nonetheless, not all contemporary authors who subscribe to the surplus approach consider the LTV to be valid. These authors base their position on Piero Sraffa's (1960) reevaluation of the Ricardian LTV. Ricardo's struggles with the LTV can be understood by remembering that the general rate of profit equals the aggregate surplus divided by the aggregate capital advanced. However, in a world of heterogeneous commodities the numerator cannot be divided by the denominator in this equation unless they are rendered commensurate in value terms. That is, one needs to know their prices beforehand. However, prices themselves are affected by changes in income distribution between wage and profit rates, thereby introducing an element of circular reasoning into the theory. This was the basis of Ricardo's attempts to search for an invariant measure of value that would be immune to the changes in the distribution of income.

Contemporary Sraffian authors reject the relevance of labor values and take the position that physical production data and cost structures are sufficient to simultaneously determine relative prices and profit rates (Kurz 2006, p. 9). Authors in this school consider the LTV to be redundant because of the apparent autonomous movements of prices and profits (Steedman 1977). On the other hand, Shaikh (1982, 1984) argues that this autonomy is an illusion, as random fluctuations of market prices around values will bring about transfers of surplus value between different sectors that will result in only limited deviations of actual profits from surplus value.

To understand Shaikh's argument it is necessary to draw on Marx's distinction between the circuit of indus-

trial capital and the capitalist circuit of revenue. In the former *variable capital* is advanced to hire workers who are combined with raw materials and machinery (or *constant capital*) to produce an output. In the latter circuit capitalist households use all or part of the surplus value produced in the first circuit to purchase a portion of the output. One may further subdivide the circuit of capital into three departments that respectively produce raw materials and machinery (Department I), workers' consumption goods (Department IIA), and capitalist households' consumption goods (Department IIB).

Let prices be initially equal to values in all three departments. Then a decrease only in the aggregate price of the output of Department I will lower input costs in all departments, as constant capital is a common input. A price decrease in only Department IIA output will have the same effect because, given real wages, lower prices of Department IIA output will also lower advances for variable capital, another common input, in all three sectors.

The drop of price below value in Department I will squeeze profits only in that department and will create excess profits in the other two departments. The same will hold true for a price decrease only in Department IIB. Then in both situations the price-value deviation will be accompanied by a transfer of value within the circuit of capital from one department to another.

In contrast, a fall in the price of only department IIB output will leave all sectors' production costs unaffected but will entail a revenue gain on capitalists' personal accounts, as the money-value that they pay to purchase goods will be lower than the value of these goods. In other words, there will be a transfer of surplus value from the circuit of capital to the capitalist circuit of revenue, producing a fall of aggregate profits in the latter. However, if such transfers between the two circuits are ignored then an illusion is created that profits vary independently of surplus value (Marx 1971, p. 347).

IMPLICATIONS

It should now be clear that the extent of profits–surplus value deviations will depend on price-value deviations in Department IIB and on surplus value transfers between the two circuits. If all surplus value is consumed as revenue by capitalists the profit–surplus value deviation will be a maximum; conversely if all surplus value is reinvested there is no circuit of revenue and the profit–surplus value deviation will be zero.

More generally, an important implication of this framework is that the balance between production and non-production activities determines an economy's growth rate. Production activities are those that create surplus value while non-production activities are ones that subsequently utilize it or use it up in some way (Shaikh and Tonak 1994, chapter 2). This distinction between these two types of activities has some implications for the role of the State if the aim is to raise the growth rate. First, non-productive expenditures by the State should grow at a rate which is slower than the growth of production activity. Second, there could be a policy of increasing the proportion of production activity (e.g., generation of electricity) by the State. Finally, along the lines discussed by Nicholas Kaldor (Palma and Marcel 1989), taxation policies could be implemented to squeeze (luxury) consumption spending by capitalist households and encourage the retention of a greater proportion of surplus value within the circuit of capital.

SEE ALSO *Class, Leisure; Class, Rentier; Economics, Neo-Ricardian; Labor Theory of Value; Profitability; Profits; Rate of Exploitation; Rate of Profit; Relative Surplus Value; Ricardo, David; Sraffa, Piero; Surplus Value*

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SURPLUS, SOCIAL

SEE *Social Surplus.*

SURPLUS LABOR

SEE *Labor, Surplus: Marxist and Radical Economics.*

SURPLUS POPULATION

For classical political economists, the poverty and unemployment generated in the early stages of capitalist development denoted the existence of a surplus population caused by the inability of the poor to postpone marriage and behave in a rational and virtuous manner.

MALTHUS

The most influential exponent of this view was T. R. Malthus (1766–1834), author of the "population principle," or "the constant tendency in all animated life to increase beyond the nourishment prepared for it" (Malthus [1798] 1933, p. 5)—widely invoked to legitimate poverty and inequality on the grounds of "natural laws." According to Malthus, the principle's "natural and necessary effects [are] … a very considerable portion of that vice and misery, and of that unequal distribution of the bounties of nature which it has been the unceasing object of the enlightened philanthropists in all ages to correct" (p. 5). Malthus based his principle of population on a "natural law," the tendency of all forms of life, including human life, to increase beyond the available means of subsistence: When unchecked, he argued, population increases geometrically, doubling every twenty-five years, whereas food can increase only arithmetically (p. 8). That technological change and growth in the productivity of labor in agriculture and other areas of economic activity have proven Malthus wrong have not undermined, however, the continuing ideological value of his principle as a tool for legitimating poverty, inequality, underdevelopment, war, and human misery in all its forms. For example, Robert Kaplan (1994), writing about the conditions in West Africa in the mid-1990s—which, in his view, portended a twenty-first century engulfed in anarchy, disease, and overpopulation—states: "It is Thomas Malthus, the philosopher of demographic doomsday, who is now the prophet of West Africa's future. And West Africa's future, eventually, will be that of most of the world" (p. 48).

MARX

Marx's alternative to Malthus's principle of population is the principle of the reserve army or relative surplus population, which captures the effects of changing patterns of capital accumulation upon the working population (Marx [1867] 1967, chapter 25). Theoretically, the process of capital accumulation entails increases in the demand for labor, which, in turn, lead to increases in the value of labor power; that is, as the supply of labor declines, capitalists are compelled to offer higher wages to entice workers to their enterprises. The effect of higher wages is a reduction in profits. In practice, wages tend to rise together with capital accumulation, but they never rise enough to endanger the system itself. For the classical political economists and for Malthus, in particular, the mechanism that kept wages equal to their "natural" price (that is, equal to the minimum level of subsistence) is embodied in the principle of population. When wages rise, workers overreproduce themselves, and this increase in the size of the population produces a supply of labor greater than the demand, so wages fall to their "natural" price, that is, to a minimum level of subsistence. Under these conditions, workers could improve their situation only by controlling their numbers, thereby raising the price of labor. Poverty and unemployment are, therefore, the result only of workers "natural propensity" to reproduce beyond the available means of subsistence.

Against Malthus, Marx observes that capital accumulation does not automatically entail increases in the demand for labor because as the forces of production develop, the organic composition of capital changes. From the perspective of its value composition, capital is composed of constant capital (the value of the means of production) and variable capital (the value of labor power). From the perspective of its technical composition, capital is composed of the means of production and living labor. Changes in the technical composition produce changes in the value composition, and this correlation between the two is the organic composition of capital (Marx [1867] 1967, p. 612). In the process of capital accumulation, the organic composition of the total social capital changes; the constant increases at the expense of the variable component, and "since the demand for labor is determined not by the amount of capital as a whole but by its variable constituent alone, that demand falls progressively with the increase of total capital.… It falls relatively to the magnitude of the total social capital and at an accelerated rate" (p. 629). The logic of capital accumulation inexorably produces unemployment, the constant presence of a "relative surplus population" or "reserve army of labor" whose size and composition will vary with the specific needs of capital accumulation in a given social formation. It follows that the relationship between the level of employment and the size of the population is not determined by the latter but by the organic composition of capital invested at a given time: "the more or less favorable circumstances in which the wage-working class supports and

multiplies itself, in no way alter the fundamental character of capitalist production" (p. 615). Capital accumulation, therefore, is indifferent to and independent from rates of population growth (pp. 640–641).

SURPLUS POPULATION IN THE TWENTIETH AND TWENTY-FIRST CENTURIES

In the two centuries after the publication of Malthus's work, the capitalist mode of production has penetrated even more deeply in all social formations. World capitalist accumulation has internationalized the reserve army of labor. Within advanced capitalist social formations, such as that of the United States, changes in the organic composition of capital resulted in automation, downsizing, outsourcing, deindustrialization, decline in the demand for skilled blue-collar labor, growth in the service and information-technology sectors of the economy, and increases in the demand for technical, professional, and managerial labor. As it could not be otherwise, such qualitative shifts in capital investment necessarily contributed to the existence and reproduction, through time, of a surplus population of fluctuating size and composition.

Changes in the organic composition of capital, however, are not the only cause of surplus populations. Welfare-state policies, the product of successful class struggles (especially in western Europe) and of the capitalist classes' effort (especially in the United States) to avert social unrest and even revolution in the aftermath of the Great Depression, had unintended demographic consequences. By providing social services and minimal income payments to the unemployed, disabled, and poor, such policies contributed to the growth, through natural increase, of a large and relatively stable population of poor and near-poor people, unemployed and largely unemployable. Therefore, the surplus population in advanced capitalist societies is heterogeneous, including the recent and the long-term unemployed and a varying proportion of people who have never been employed and are likely to be unemployable. Illiteracy, lack of skills, age, responsibility for the care of small children or elderly relatives, criminal records, drug addictions, disability, mental illness, and so forth are some of the reasons millions of people have never or seldom entered the labor force. Also part of the surplus population are the homeless, prostitutes, and those who make a living through illegal activities, the "lumpenproletariat." Finally, as the effects of globalization are felt more strongly among the more vulnerable sectors of the working classes, Latino immigrants—particularly the undocumented—have become the more visible and stigmatized sector of the surplus population. Even if most of them work in poorly paid manual jobs that most U.S. citizens refrain from doing, they are contradictorily perceived both as dangerous, unhealthy, idle, a burden for the taxpayers, and, at the same time, the cause of declining wages for low-skilled workers.

In racially heterogeneous societies such as the United States, blacks and other "nonwhite" populations have been deemed superfluous by the white elites or managerial classes (Darity 1983), a view reflecting the resilience and pervasiveness of racism across all social classes and the disproportionate presence of racial and ethnic minorities in the poverty population. And, given the economic and political interests of U.S. and European capitalist classes in the so-called developing world, their populations also were deemed superfluous, a drain on the world's resources, the main cause of "underdevelopment," political unrest, and revolutionary, anticapitalist and anticolonial struggles. Consequently, national and international strategies were devised to control the size of these surplus populations (Demerath 1976; Mass 1976; Gimenez 1977; Michaelson 1981; Bandarage 1997).

Within the United States, in the early twentieth century scientists lent support to eugenic theories of racial differences in intelligence and promoted immigration and sterilization policies designed to keep "inferior" (that is, non-"Nordic") races from entering the country and to discourage the "unfit" (that is, the poor, Native Americans, blacks, Puerto Ricans, criminals, the mentally ill, alcoholics) from reproducing (DeFine 1997). While such government-sponsored policies are no longer in place, the practice of government-funded sterilization, made easily available to poor and nonwhite women, continues unabated; it has become the most widespread form of birth control among women older than twenty-five in the United States (Petchesky 1976) and, for all practical purposes, can be viewed as an effect of a "doctrine of preemptive extermination" aimed at the surplus population (Darity 1983). Presumably, sterilization is done with the women's consent, but consent cannot be taken for granted when women are not fully informed of alternatives or when the alternatives—efficient use of contraceptives or abortion—are placed beyond their reach. Furthermore, the women who "choose" sterilization tend to be poor, Puerto Ricans, Latinas, African Americans, and Native Americans (Petchesky 1976; DeFine, 1997). The high incidence of sterilization constitutes a form of abuse and a strategy to control the growth of populations deemed superfluous because it is a form of birth control that, conservative rhetoric about the value of life notwithstanding, is made easily available and paid by federal and state funds. Abortion, on the other hand, though legal, is unavailable for most poor women, for the Hyde Amendment, passed in 1976, "excludes abortion from the comprehensive health care services provided to low-income people by the federal government through

Medicaid … Currently, only seventeen states fund abortions for low income women" (ACLU 2004).

Besides sterilization, poor women, especially women on welfare, are encouraged to use long-term forms of contraception, such as Depo-Provera, Norplant, or quinacrine (Chamberlain and Hardisty 2006) with problematic side-effects. These practices, supported by the political right, have affected the consciousness of people of color, women and men, who become suspicious of family planning programs and even perceive legalized abortion as part of a genocidal strategy against people of color. The political right exploits this perception, claiming to be "allies of these communities … pointing to 'shared values' on abortion and other social issues" (Chamberlain and Hardisty 2006).

Wishful thinking about the role of abortion in cutting down the size of the surplus population is epitomized in the notion that the legalization of abortion caused a decline in the crime rate: "In the early 1990s, just as the first cohort of children born after *Roe v. Wade* was hitting its late teen years—the years during which young men enter their criminal prime—the rate of crime began to fall. What this cohort was missing … were the children who stood the greatest chance of becoming criminals.… Legalized abortion led to less unwontedness; unwontedness leads to high crime; legalized abortion, therefore, led to less crime" (Levitt and Dubner 2005, p. 139). They assumed that, as safe abortions had been available to middle-class women before legalization, the women most likely to have had abortions after *Roe v. Wade* would be poor, in their teens, unmarried, or all three (p. 138) because now "any woman could easily obtain an abortion, often for less than $100" (p. 138). Their findings have been criticized and shown to be misleading because of statistical flaws; they ignored changes in the crime rate that would have undermined their arguments, and by focusing on the crime rates of 1985 and 1997 only, they ignored "the 800-pound gorilla of crime trends: the rise and fall of the crack epidemic during the intervening years … which first drove violent crime up in the late '80s and early '90s, then drove it down in the mid and late '90s" (Sailer 1999). They should have been criticized also because they ignored the effects of the Hyde Amendment, which, after 1976, kept poor women—presumably those likely to give birth to potential criminals—in most states from having access to abortions. Regardless of the flaws in their research, their argument is ideologically powerful, strengthening racial stereotypes among whites and suspicion about abortion among nonwhites. What gets lost in the midst of these arguments is the need of all women, regardless of class, race, or ethnicity, to attain some control over their bodies. Women's reproductive rights, their right to make free and informed decisions about childbearing, are endangered by the contradictions and ideological effects inherent in political discourses and practices that celebrate motherhood and urge white, middle-class women to reproduce and reject abortion while making abortion unavailable and pushing sterilization as the birth control of "choice" for poor, especially nonwhite, women.

Besides population control, prisons (many of them turned into workplaces) and the army are the other two strategies the dominant classes use to deal with the surplus population. The Malthusian spirit, captured in Scrooge's reply to someone requesting a donation for the poor at Christmastime, is still alive: When told that many of the poor and destitute would rather die than go to the work house or prison, Scrooge said: "If they would rather die, … they had better do it, and decrease the surplus population" (Dickens [1843] 1876, p. 12).

SEE ALSO *Labor, Surplus: Conventional Economics; Labor, Surplus: Marxist and Radical Economics; Lumpenproletariat; Malthus, Thomas Robert; Marx, Karl; Overpopulation; Proletariat; Unemployment*

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SURPLUS VALUE

For Karl Marx, surplus value is critical to the expansion of capital. In the money circuit $M - C - M'$, capitalists purchase commodities (C) with money (M) in order to sell these commodities for more than their initial outlay (M'). Surplus value is the difference $M' - M$, the profit that the capitalist makes at the end of the money circuit. Instead of hoarding this profit, as would a miser, the capitalist reinvests it in a new, enhanced circuit of money. The conclusion of each circuit, with more value produced, provides the starting point for the expansion of capital in each subsequent circuit.

The problem that Marx (1867) sets himself in *Capital*, volume 1, is how capitalists can sell for more than they buy. Are some commodities sold for more than they cost? The answer is yes and no. Marx assumes that capitalists pay for the full cost of inputs such as raw materials, which are used in the production process. The yarn that is used by the weaver is paid for at full cost. However, there is one commodity that does beget more value than its cost: labor power.

On the one hand labor power, which is sold by workers to capitalists, has a capacity to produce output. The capitalist makes use of a worker's labor power, say for eight hours per day, adding eight hours of value to the commodity produced. On the other hand it has a cost, which for the capitalist is the outlay of wages that enable workers, and their families, to subsist. Crucially, the value of this labor power is less than the value of the worker's output. The worker may have to work only four hours per day to produce value that is equivalent to the goods required for subsistence. But, exercising control over the labor process, the capitalist requires an eight-hour day: the worker is robbed of four hours of labor power that is extracted by the capitalist as surplus value. For Marx, surplus value entails the exploitation of workers by the capitalist class.

From a political point of view, the theory of surplus value has been an ideological weapon for exposing the injustice of the capitalist production process. The capitalist seeks to extend the working day to extract what Marx refers to as absolute surplus value (a reduction in the value of labor power would increase relative surplus value). To this day, in capitalist economies workers suffer adverse health effects from excessive hours of work. The Japanese have their own word for it: *karoshi*—death from overwork. In response to this problem, the European Union has imposed a forty-eight-hour-maximum workweek. Marx's theory of surplus value provides the basis for arguing for a reduction in working hours. As Philp (2005) has shown, however, the surplus-value approach does not always have to be associated with a sharpening of the class struggle. The reduction in hours can benefit capitalists if less unemployment reduces the burden of taxation.

In making the argument that workers are exploited, the problem is that on the surface, workers seem to be paid a wage for the full working day. Before capitalism, the extraction of a surplus was much more obvious. The feudal peasant gave one day's worth of corn to the landlord, and another to the priest. Under capitalism, however, surplus value is located in the circulation of money, where workers freely exchange their labor power for wages and where capitalists seem to make profits as a natural reward for risking their money in the spirit of enterprise.

Key to the analytical power of surplus value is Marx's assumption, maintained in the first two volumes of *Capital*, that commodities are sold at their values. The money value of consumption goods purchased by workers, using money wages, is the same as the labor embodied in those commodities; the money value of the output produced by workers is the same as the labor embodied in that output. Hence there is an assumed equivalence between surplus value, measured in units of labor time, and money profits, located in the circulation of money.

Critics of Marx, however, have argued that in *Capital*, volume 3, where he allows prices to diverge from values, the equivalence between surplus value and profits is not successfully maintained. Marx develops a procedure for transforming values into prices that is generally considered to be incomplete. Whereas the outputs of each branch of production are transformed from values to prices, the transformation is not carried out for inputs. Inspired by Piero Sraffa, and the earlier input-output approach of Wassily Leontief, Marx's critics have shown that when the values of inputs are transformed into prices the consequences are severe. Total money profits are different from total surplus value, there being no reason why the category of embodied labor value should be at all useful. Since cap-

italists only care about money profits, why should Marxists use the irrelevant category of surplus value?

In recent years, the main reaction to this Sraffian critique of Marx has been to downplay the role of value as embodied labor time. Goods can only have value if they are sold in the marketplace, so what matters is the form that value takes in exchange—the value-form of commodities. Proponents of the value-form approach argue that in *Capital*, volume 1, Marx uses both labor embodied and value-form definitions of the value of labor power. In the "new solution" to the transformation problem, the value-form definition is preferred, with the share of wages in money income interpreted to be the value of labor power. In this approach, the equivalence between money profits and surplus value is established, even when both inputs and outputs are transformed from value to prices. A number of different variants to the value-form approach have emerged, with some dispute over the extent to which labor-embodied categories are replaced across all commodities, not just labor power, and whether the analysis should be recast in a dynamic or non-equilibrium setting (Foley 2000).

A problematic issue with the value-form approach is that by abandoning labor-embodied values, Marx's approach is drained of all content. Is a real exploration beneath the surface offered by interpreting money categories as a form of value? There are two ways in which the value-form approach can provide a useful basis for future research.

First, by emphasizing the importance of money in Marx's economics, it provides an alternative to neoclassical general equilibrium theory, which has limited relevance to a barter-exchange economy. The value-form approach can be used to model a genuinely capitalist system with credit money providing the vehicle for capital expansion (see Trigg 2006). The role of credit in the recent economic boom in the United States, for example, has been related to the extraction of surplus value in China. With no trade-union rights and high productivity, there is a structural relationship between the production of vast quantities of surplus value by the emerging Chinese proletariat and the credit boom associated with China's purchase of U.S. financial assets.

Second, the value-form approach provides a possible starting point for Marxian empirical research. By working with money categories, Marxists are able to interpret national accounts data from a value-theoretic perspective. The secular fall of the rate of profit since the 1960s, which has been observed throughout the developed economies, can be empirically examined in the light of Marx's theory of the falling rate of profit. In contrast to neoclassical economics, in which profits are assumed to be zero under perfect competition, the surplus-value approach offers a systematic analysis of how the rate of profit is determined.

SEE ALSO *Exchange Value; Labor Theory of Value; Value*

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Andrew B. Trigg

SURPRISES

SEE *Shocks.*

SURVEY

Social scientists investigate people who lived in the past or are living in the present. Surveys are one tool they use to gather information about a population of interest. Social scientists use surveys to assess people's behavior, knowledge, opinions, attitudes, or abilities. Surveys can be conducted orally or in written form, and they can be administered to individuals or groups. Group surveys offer an advantage over other methods of investigation, such as interviews or observation, in that they can collect sensitive data while keeping participants' identities confidential. In addition a large amount of data can be collected at once, rather than collecting data from each participant individually. Edward Laumann and colleagues (1994) designed and administered a survey to assess the sexual behavior of American adults. The survey was administered nationwide to over 3,000 men and women, addressing such sensitive topics as typical sex practices, number of sex partners, and contraction of sexually transmitted diseases. Two of the most important properties that must be assessed in the development and use of a survey are its reliability and validity.

RELIABILITY AND VALIDITY

Reliability is the extent to which a survey is accurate, meaning that it is free of measurement error. While this

psychometric property can be calculated using a variety of methods, reliability is theoretically the ratio of true score variance to observed score variance. It is determined by calculating a correlation coefficient on relevant data. Common methods of determining reliability include the *test-retest* method, in which scores from two different administrations of the same test are correlated to detect error from time sampling, and the *split-half* method, in which a correlation coefficient is calculated between two halves of the survey in order to determine internal consistency (Kaplan and Saccuzzo 2005).

Validity is the extent to which the survey measures what it is intended to measure or gathers the information it is designed to gather. A psychometrically sound survey is one that has been shown, through empirical research, to have several kinds of evidence for validity, such as construct-related evidence (the extent to which the instrument measures what it is claimed to measure) and content-related evidence (the extent to which the instrument includes content representative of the construct being investigated) (Mitchell and Jolley 2004). In addition to these types of evidence for validity, a survey is said to have *face validity* if it is obvious from the questions what the survey is designed to measure. Face validity may or may not be a desired quality for a given survey, depending on the nature of the research. That is, some surveys, particularly those addressing controversial or sensitive issues, are more effective when questions address the central topic in a covert manner. This reduces the probability of *response bias*, a potential disadvantage of the survey method discussed below.

SAMPLE

Once a valid and reliable survey has been designed, social scientists must administer it to people. In some situations it is possible to survey all members of the population in question. However, more often researchers are interested in a large population for which it is impossible to survey everyone. In that case, the researcher must acquire a sample of people from the population who are willing to complete the survey. To ensure the accuracy of the data, the sample should be *representative*, meaning it adequately reflects the actual population with regard to variables that are related to the construct(s) in question. For example, the proportion of women and men in the sample should be similar to the proportion in the population, particularly if there is reason to believe that men and women would respond differently to the survey.

There are many sampling strategies aimed at ensuring a representative sample. With the *random sampling method*, the sample is acquired in such a way that each member of the population has an equal chance of being selected, and the selection of each respondent is independent of the selection of all other respondents. A representative sample is important to protect research from *sampling bias*, the tendency for a sample to systematically exclude certain members of the population while overrepresenting others.

ADVANTAGES AND DISADVANTAGES

The survey method has advantages and disadvantages when compared to other methods of investigation. The greatest advantage of this method is the ability to collect a large amount of information from many people simultaneously. Surveys can be administered to a room full of people, a mass e-mail list, or a large telephone pool with relatively little work on the part of the researcher. A second advantage of this method is its ability to gather the exact information that is sought, since researchers write the questions they want answered. However, this advantage assumes that respondents do all of the following when completing a survey: (1) read or hear the question and interpret it as it was meant to be interpreted; (2) reflect on their personal experiences related to the question; and (3) answer the question honestly. The latter is most likely to be a problem, particularly with surveys that ask about sensitive or controversial topics. In such cases, respondents may practice *impression management*, wherein they answer questions so as to present themselves in a particular way. Giving socially desirable responses is a common type of impression management in which respondents present themselves in an unrealistically favorable or virtuous light. In addition to impression management, the validity of survey data may be reduced by response bias, in which respondents tend to respond to questions in a certain way (e.g., in the affirmative or negative) regardless of the actual content of the questions. Finally, because surveys are voluntary, they are subject to the willingness of respondents to complete them. Thus the *response rate*, or the percentage of individuals contacted who complete the survey, is important, particularly since survey response rates have declined since the early 1990s (Tourangeau 2004).

SEE ALSO *Methods, Quantitative; Observation, Participant; Panel Studies; Random Samples; Reliability, Statistical; Social Science; Statistics; Surveys, Sample; Validity, Statistical*

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SURVEY OF INCOME AND PROGRAM PARTICIPATION

The Survey of Income and Program Participation (SIPP) is a continuous panel survey of samples of people aged fifteen and older who reside in households or noninstitutional group quarters (e.g., college dormitories, rooming houses). Each sample person is asked to provide information every four months for a period of three to four years. Information is also gathered for people who join a SIPP sample member's household and for children in the household. The U.S. Census Bureau collects, processes, and disseminates SIPP data. SIPP began in fall 1983 and is scheduled to undergo a major re-engineering beginning with a panel introduced in 2011 or 2012.

EVOLUTION

SIPP's origins date to the late 1960s when government program analysts became increasingly dissatisfied with the available information on household income, assets, tax liabilities, and participation in public assistance programs. A proposal in 1970 for a new income survey led to the inauguration in 1975 of the Income Survey Development Program (ISDP) in the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health, Education, and Welfare (now the Department of Health and Human Services). The ISDP carried out four major field tests, of which the largest and most complex was the 1979 Research Panel.

Plans to implement the full SIPP, under the sponsorship of the Social Security Administration, were derailed when funding for the program was deleted from the federal budget in 1981. The new Census Bureau director, Bruce Chapman, convinced the Reagan administration to revive SIPP at the Census Bureau. The 1984 SIPP panel began in fall 1983; it followed adult members of about 21,000 original sample households every four months for eight or nine waves of interviewing (thirty-two to thirty-six months). Another SIPP panel began each February from 1985 through 1993. A hiatus occurred until April 1996 when a new four-year panel began, followed in 2001 by a three-year panel and in 2004 by a planned four-year panel. The 1990 and 1996–2004 panels oversampled households expected to have low incomes.

The first decade of SIPP was difficult. Budget cuts necessitated reductions in sample size or in the number of interviews, or both, for the 1984–1991 panels. Conversion from paper-and-pencil to computer-assisted personal interviewing (CAPI) drove a decision to forego new panels after 1993 until 1996, when the survey design changed. Instead of an overlapping design with two or three panels in the field at the same time, SIPP adopted an abutting panel design in which one panel ends before another begins.

CONTENT AND DESIGN FEATURES

SIPP's primary purpose is to provide detailed information on the economic situation of people in the United States. The core questionnaire in each wave asks about demographic characteristics, amounts for over seventy sources of cash income and in-kind benefits, health insurance coverage, and labor force activity (most items are asked on a monthly basis). Topical modules included once or twice in each panel cover assets and liabilities, income taxes paid, annual income, program eligibility, and personal histories. A module with variable content included once in each panel to meet the needs of federal agencies has ranged over many topics, including child-care expenses, health-care use, housing costs, child support, and extended measures of well-being.

SIPP has a true panel design in that original sample members are followed for the life of their panel, even if they change addresses, thus permitting longitudinal analysis with the core data. The current abutting design permits longer panels with larger sample sizes than the original overlapping design.

The primary products from SIPP are data files that are available via the Internet. For every panel, the Census Bureau produces files for the core data for each wave and topical module, and a longitudinal file for the entire panel. The Census Bureau also publishes occasional reports from SIPP on such topics as child-care arrangements, changes in poverty status and well-being, and the financial return to schooling. Generally, the release of data files lags considerably behind the completion of data collection for a wave or an entire panel.

ADVANTAGES AND DISADVANTAGES

SIPP is an immensely rich source of data on the social and economic characteristics of the U.S. household popula-

tion and how people's living situations change over a three- to four-year window. Researchers have used the core SIPP data to study spells of poverty and participation in public assistance programs within and across years, the extent to which people rely on multiple assistance programs at the same time or in sequence over time, and family composition changes (for example, the likelihood of young adults leaving and moving back to their parents' households). Researchers have used the topical module data for analyses of many issues of public policy concern.

SIPP data must be used with caution for three main reasons. First is the increasing loss of original sample members over the life of a panel, which not only is greater for low-income households and some other groups, but also has been worsening across successive panels. Thus, 32 to 33 percent of the 1996 and 2001 panels were lost by wave nine, compared with 22 percent of the 1984 panel. Second, a "seam bias" affects the monthly core data; it results because people most often report a transition, such as moving onto or off the food stamp program, at the time of the preceding interview and not within the four-month recall period of the current interview. Finally, the SIPP data are complex and difficult to use. Researchers are urged to consult carefully the file documentation, the *SIPP User's Guide*, and the *SIPP Quality Profile* and to contact other knowledgeable users.

Compared with the Panel Study of Income Dynamics, a heavily used longitudinal survey that began in 1968, the 2004 SIPP sample is almost six times larger, and it provides intrayear data. However, SIPP has a much shorter window of observation. Compared with the Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC), the source of official income and poverty statistics, SIPP has much more information and supports short-term longitudinal analyses that the CPS cannot. However, the CPS ASEC has over twice as large a sample as the 2004 SIPP panel, is released promptly, and is relatively easy to use.

SEE ALSO *Current Population Survey; Panel Study of Income Dynamics*

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C. F. Citro

SURVEYS, SAMPLE

Surveys are instruments that researchers use to measure attitudes, tastes, viewpoints, and/or facts from a specific population. Most populations (or groups) are too large and widespread geographically to allow researchers to obtain information on each group member. To compensate, researchers have devised several methods by which they make inferences about a population by using information gathered from a selected sample of the population.

Various government agencies (including the U.S. Census Bureau) and academic disciplines (including economics, political science, and sociology) make frequent use of survey sampling to better understand the prevailing characteristics of specific populations. This entry examines survey sampling through the two most common formats in which it is conducted: questionnaires and interviews. Before moving to this discussion, however, it is worthwhile to describe the central methodology that makes survey sampling of populations so effective—drawing the actual sample.

The most commonly used procedure in drawing a survey sample is the simple random sampling (SRS) method. In order to make effective inferences about a population, survey researchers must be confident that the sample they are using is representative of the population in which they are interested. If the sample is not representative then bias (the misrepresentation of a population's characteristics) can result. SRS provides assurance that the sample represents the population because each sampling unit (a person) has an equal probability of being selected to participate in the survey.

Though an equal probability of random selection helps mitigate response bias in survey samples, most populations of interest to researchers have such significant variation that SRS alone does not provide enough confidence that the sample is truly representative of a population. In order to address population variation, national polling techniques, such as those practiced by Gallup, require an initial stratification of the population before

the random sample is drawn. Stratification is the division of a population into homogenous groups according to a specific set of dimensions or stratums (e.g., geographic location, age, sex). Once the population is divided in this manner, SRS is applied to each stratum. In most cases, survey researchers draw a proportionate stratified sample, which helps to keep the sampling units from each stratum closely resembling their proportion in the overall population. Most surveys, whether delivered in questionnaire or interview format, make use of a stratified SRS methodology.

QUESTIONNAIRES

Questionnaires are impersonal surveys used to collect data from respondents that have been targeted as part of a sample. Questionnaire surveys have traditionally been delivered through the mail to sample respondents. The growing popularity of e-mail in the late 1990s allowed researchers to employ this method of delivery more frequently. Despite its growing popularity, however, most survey questionnaires do not use the e-mail method because of the relatively large number of people with limited or no e-mail access as of the early twenty-first century.

The primary advantage of questionnaires, regardless of delivery method, is that they are relatively low cost. In stark contrast to interviews, questionnaires do not require the assistance of trained staff. In addition, because it costs the same to mail a survey three miles or three thousand miles, there are financial advantages to conducting national surveys. Access to bulk mail rates can provide even greater savings for researchers. Another advantage to questionnaires is that they reduce bias errors that personal interviewers may introduce. Whenever one person is talking to another to obtain information, an interpersonal dynamic is introduced that can alter the way a respondent answers questions. Since questionnaires are delivered through paper or computer, this missing human element is a welcome absence. Finally, questionnaires provide greater anonymity, in large part because there is no interviewer aware of respondent identity.

There are also disadvantages to questionnaires. Primary among these is that survey questions must be fairly simple so as to be understood by the vast majority of intended respondents. If questions are too complex or vague, respondents may miss the point of a question entirely, thereby introducing response bias. Also problematic is the inability of researchers to probe respondents for more specific information on topics. Question answers are final. In addition, researchers have no control over who actually completes the questionnaire since they have no direct contact with the respondent. Finally, researchers face low response rates (20 percent to 40 percent) when using questionnaire-based surveys. Most published research using data collected from mail surveys reports a response rate between 20 to 30 percent, although the rate is sometimes higher for targeted populations. The Internet's popularity has helped to increase response rates by allowing researchers to follow-up with respondents through a hybrid approach in which both mail and e-mail requests for questionnaire completion are transmitted to respondents.

INTERVIEWS

Personal interviews form the backbone of modern opinion polling. Usually conducted by a team of well-trained interviewers, these interviews enable polling companies to receive respondent data in a much shorter time frame than is required for questionnaires. Most interviews in opinion polling are of the schedule-structured variety, in which all respondents are asked the same questions, in the same order, in the same way so as to reduce response bias. Other interview forms include the focused (which allows the interviewer to ask probing questions depending upon how a respondent answers) and nondirective (in which the interviewer provides little structure or form). The focused and nondirective approaches are usually employed by academics focusing on a small sample of respondents in order to build empirical theories.

The primary advantage of the structured interview is that it gives researchers better control over the interview situation. The most direct improvement of interviews over questionnaires is that it is unlikely someone other than the respondent will provide question responses. Concomitantly, interviews have a much higher response rate than questionnaires (usually 95%), adding to their usefulness when time is of the essence. Of course, there are disadvantages, not the least of which is the interview bias referenced above. Cost is also a disincentive.

SEE ALSO *Attitudes; Internet; Methods, Research (in Sociology); Polls, Opinion; Random Samples; Research; Research, Survey; Social Science; Survey; Tastes*

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Brian Calfano

SURVIVAL ANALYSIS REGRESSION

Survival analysis is a statistical methodology to study the occurrence of an event over time. It is referred to as survival analysis because it was originally derived in contexts where the event was death, but the event under study need not be death. Examples from the social sciences where survival analysis can be used are studies that investigate time from marriage until separation or divorce and intervals between births.

A graphical representation of typical survival data is depicted in Figure 1, which shows study recruitment over time. For each of four participants, study entry is indicated as t_0. Occurrence of an event is indicated by a square. If no event is observed during the study period, the last known event-free time point is marked with a circle. For these participants the "time until the event occurred" cannot be specified. Such observations are said to be censored. A censored observation can arise from the fact that a participant is lost to follow-up during the observation period or from a limited observation period, that is, the event might occur some time after the observation period has ended. Censoring of this type is called right censoring. A right censored observation indicates that occurrence of the event, if it happens, will take place after the time that contact is lost with the participant or after the end of the observation period. Analysis of the data is not based on chronologic time but on a different time scale—the "time from t_0" (Figure 2).

Survival analysis regression aims at investigating and quantifying the impact subject and study factors have on the time until the event occurs. These factors are often measured at study entry (t_0) for each individual participant, and their effect on time to event is quantified via the hazard function of the survival time distribution. The hazard function models the rates at which events occur as a function of subject and study factors. Parametric and semiparametric methods are available for survival analysis regression. For details see Hosmer and Lemeshow (1999) or Kleinbaum and Klein (2005). The most frequently used model for analyzing survival data is the Cox proportional hazards model (a semiparametric model). It assumes that hazard rates are proportional over time but does not make distributional assumptions regarding survival times. Examples of parametric methods are the Weibull and accelerated failure time models, which assume specific statistical distributions for survival times in addition to assuming proportional hazards. Standard models assume independence between observations, but extensions of the models are available to accommodate dependencies (frailty models) between observations. Such dependencies might arise if participants, for example, are family members. Extensions also exist to accommodate multiple events, competing events, and factors that might change over time. On one hand the extension to multiple events and competing events is conceptually straightforward. Analysis involving factors that might change over time, on the other hand, are both technically and conceptually more involved. Survival analysis regression has been

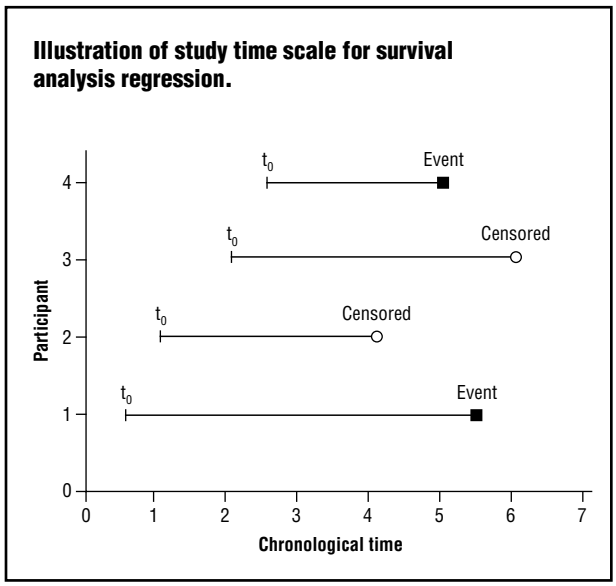

Figure 1

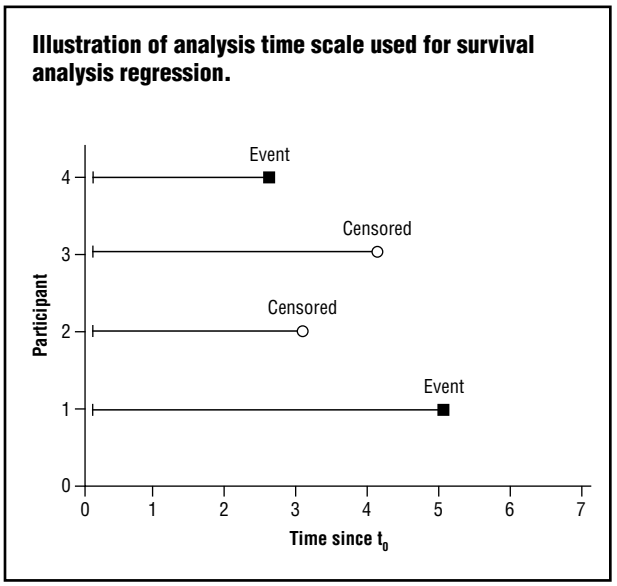

Figure 2

used extensively and successfully in various fields to quantify the impact of different factors on time to event.

SEE ALSO *Censoring, Left and Right; Censoring, Sample; Regression*

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Susanne May
David W. Hosmer Jr.

SURVIVOR FUNCTION

SEE *Duration Models.*

SWASTIKA

SEE *Rituals; Nazism.*

SWEATSHOPS

Sweatshops, commonly defined today as workplaces violating multiple labor laws, have always been a part of the economic landscape, as have attempts to eliminate sweatshop conditions. Public outrage following the 1911 Triangle Shirtwaist fire in New York, for example, led to creation of a Factory Investigating Commission and the passage of thirty-six laws reforming the state labor code.

U.S. federal labor law is embodied in the Fair Labor Standards Act, originally passed in 1938. This act, too, responded to the prevalence of poor working conditions, calling for elimination of "conditions detrimental to the maintenance of the minimum standard of living necessary for health, efficiency, and general well-being of workers" (U.S. Department of Labor 2004, p. 1). Recent laws such as the U.S. Victims of Trafficking and Violence Protection Act of 2000 extend protection from exploitative practices.

Internationally, the 1998 United Nations Declaration on Fundamental Principles and Rights at Work provides the foundation for global labor standards. The Declaration defines four core types of labor standards: freedom from forced (trafficked) labor, nondiscrimination, abolition of child labor, and freedom of association/collective bargaining. Additional standards appear in the United Nations Anti-Trafficking Protocol, which recognizes that trafficked workers are victims of a crime and not illegal immigrants (United Nations 2000).

Despite these laws and agreements, violations of labor standards like those exposed by the Triangle fire persist and may well be increasing with globalization. In the United States sweatshop production is closely related to international flows of labor. Sectors such as agriculture, services, and clothing, in which immigrant labor constitutes larger shares of the workforce, are most likely to violate labor laws (Free the Slaves 2004).

While the extent of trade globalization as a new phenomenon is a subject of much debate (Sutcliffe and Glynn 1999), developing countries indisputably have only recently become major producers and exporters in such labor-intensive sectors as clothing and electronics. Companies in sectors that are very sensitive to wages and other costs of protecting workers may find relocation to low-wage countries a profitable response to global competitive pressure.

In developing countries, labor laws and enforcement are typically weak and labor is highly skewed toward the informal sector (Singh and Zammit 2003), defined by the International Labour Office (2002) as paid work not "recognized, regulated or protected by existing legal or regulatory frameworks" (p. 12). As a result, both wages and nonwage labor costs are lower than in rich countries. While labor costs are not always the only or even primary reason companies move out of developed countries (Chang 1998), for labor-intensive firms, moving offshore and subcontracting to informal producers clearly have become key elements of competitive strategy.

That sweatshop conditions still exist even in the United States is evidence that economic incentives for violating labor standards can be compelling to employers facing competitive threat. Opponents to sweatshops, recognizing the economic incentive to firms of low labor standards, have focused on raising the cost of using sweated labor. The International Confederation of Free Trade Unions and national trade unions emphasize ratification of and compliance with existing national and United Nations labor standards (International Confederation of Free Trade Unions 2006). Additional pressure comes from popular antisweatshop movements, often supported by trade unions, that target consumers. By exposing sweatshop producers and encouraging consumer boycotts, these movements hope to raise the cost of exploitative labor practices.

While the scope of consumer-based economic punishment of sweatshop producers is limited (Gibson 2005; Elliott and Freeman 2003), empirical evidence suggests that consumers in at least some sectors are willing to pay higher prices to support better labor conditions (Pollin,

Burns, and Heintz 2004). In clothing, popular movements have had considerable success in gaining acceptance of codes of conduct designed to raise standards. Many agreements and partnerships specifying in detail acceptable working conditions have emerged between producers and antisweatshop organizations representing consumers, both in the United States and in Europe.

Negotiated agreements and codes of conduct mark a dramatic step forward in recognizing basic human rights at work. A similar change is occurring in economic analysis of labor standards, with leading international institutions now linking protection of core labor standards to democracy and therefore to economic development (International Labour Office 2004; World Bank 2007).

Despite considerable progress, significant challenges remain. Government policy can have a strong impact on compliance, but mainly in large formal-sector firms (Weil 2004). Given the high level of informal labor and the difficulty of monitoring even formal-sector small producers scattered throughout the world, enforcement of laws and agreements continues to be weak.

Countries themselves raise objections to externally imposed standards, fearing loss of sovereignty and competitiveness. As one telling example, the U.S. government has ratified only two of the eight ILO core labor rights: It has not ratified the convention on the right to organize, the convention on equal remuneration, or the convention on discrimination. For poor countries, the economic consequences are not insubstantial. Some standards, such as eliminating child labor and improving health and safety, can be prohibitively expensive in competitive export sectors. Even developing countries strongly in favor of raising labor standards may argue (with much evidence to support their case) that economic growth rather than outside intervention is the best path to sustainable improvement in wages and working conditions (Singh and Zammit 2003). Where intervention reduces competitiveness, growth is retarded and the intervention becomes self-defeating.

In any case, even complete compliance with existing laws and codes of conduct would not settle disagreements over sweatshops. Current laws define core standards but not cash standards (Elliott and Freeman 2003), which would mandate wage minimums designed to establish a living wage, considered by many a critical component of working conditions. Thus, although frameworks for higher labor standards are evolving rapidly, serious limitations persist. A narrow definition of sweatshops excluding cash standards and the difficulty of monitoring working conditions in an increasingly globalized economy both pose daunting obstacles to further progress. Poor countries urgently require international support to finance the improved standards that all too often they desire but cannot afford.

SEE ALSO *Child Labor; Economic Growth; Globalization, Social and Economic Aspects of; Labor Law; Labor Union; Occupational Safety; Unions; Wages*

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SWEDISH SCHOOL OF ECONOMICS

SEE *Stockholm School.*

SYMBOLIC ANALYSTS

SEE *New Class, The.*

SYMBOLIC INTERACTIONISM

SEE *Interactionism, Symbolic.*

SYMBOLIC INVERSION

SEE *Rites of Passage.*

SYMBOLS

Culture is based on symbols. Flags, traffic lights, diplomas, and mathematical notation are all, in their various ways, symbols. So foundational is symbolism to humans that without it communication would be impossible. The most symbolic aspect of culture is language, but symbolism also plays a role in religion, politics, art, and literature as well as in kinship, commerce, and science. Symbolism is basic to the construction and conveyance of gender, ethnic, and national identities. It is the primary way by which humans create meaning, classify knowledge, express emotion, and regulate society. The ineluctably human ability to generate and interpret symbols is, for example, what allows us to differentiate winks from blinks (Sapir 1932, p. 493). Although both are roughly identical movements involving the rapid closing and opening of the eye, the former is a meaningful gesture transmitting the conspiratorial message that the winker is in on a secret, whereas the latter is a meaningless twitch. The difference is significant but wholly symbolic. Because symbolism is fundamental to human thought and interaction, it is of concern to the social and cognitive sciences, particularly anthropology and linguistics, though it is also studied by psychology, philosophy, and sociology, and to a lesser extent political science and even economics.

At its most basic level, a symbol is anything that represents another thing by virtue of customary association due to a conceptual connection or perceived resemblance. The English word *symbol* derives etymologically from the Greek *súmbolon*, meaning "tally," "contract," or "ticket," which referred originally to a token that was broken in two so that each half could be used to confirm the identity of the other. The word stems from the Greek roots *syn-* ("together") and *ballein* ("to throw"), and thus has the approximate connotation of "to throw together."

UNIVERSAL VERSUS CULTURE-BOUND DIMENSIONS OF SYMBOLISM

Because virtually anything can serve as a symbol and because a symbol conveys information only insofar as it has meaning to a specific community, the connection between a symbol and its referent is not intrinsic to the symbol itself but rather is a function of agreed upon use, custom, or convention. It is in this sense that language is symbolic. The word *water* designates the liquid object only insofar as members of the English speech community agree that it does. The liquid has no inherent property that compels us to call it by that name. It could just as well be designated by other sounds, for instance *agua* in Spanish, *mayim* in Hebrew, or *vo'* in Tzotzil Maya. Exceptions to this arbitrariness may exist in ethnobiological classification (see Berlin 1992) and onomatopoeia.

The meaning of political and religious symbols, often charged with emotion, are likewise dependent on cultural contexts, even when the same or similar signs are employed across cultures. For Christians the Eucharist is a holy sacrament symbolizing the Body and Blood of Christ, yet pagans may see the consumption of bread and wine as a representation of ritual cannibalism. Or again, the swastika has come to be taboo in much of Europe and the United States due to its historic association with Nazi Germany and contemporary white supremacists, but elsewhere, as in the cases of Hinduism, Buddhism, and Native American religions, it remains a sacred symbol with positive connotations. In religions of Indic origin it is a symbol of auspiciousness, as reflected by its original Sanskrit name *svasti,* meaning luck, well-being, and fortune; in Hindu traditions it is a solar symbol, and in Buddhist regions it adorns the entrance to some temples. The swastika design is also seen in Native American traditions. To the Navajo the symbol is known as the "whirling winds," and was used in curing ceremonies, and as a motif

woven into textiles; among the neighboring Hopi it was a conventional sign associated with clan migrations. In short, symbols are without specific meanings aside from the connotations assigned to them.

Depth Psychology Still, certain studies suggest that some symbolism is universal, due to its rootedness in unconscious processes, developmental stages, or panhuman experiences of the body, eating, and sexuality. Sigmund Freud (1989) maintained that the symbolism found in dreams, myths, fairytales, and linguistic utterances expresses in disguised form unresolved childhood conflicts or taboo urges surrounding sexuality and violence that are repressed in the subconscious of individuals. Jung (1964) viewed certain symbols as archetypes of the "collective unconscious." Thus, one encounters universal archetypes—the Trickster, Rebirth, the Hero's quest, the Great Mother, and so on—not only in the myths and rituals of tribal peoples, the art of the high Renaissance, and modern science fiction, but also in the dream-work, projective fantasy, and free-associations of the patient involved in psychotherapeutic individuation.

The Human Body Many researchers have posited that the human body provides a template for another set of experiences held in common by all people. Throughout the world, pre-eminence is accorded to the right-hand side in systems of lateral symbolism and dual classification (Needham 1973), while hair is freighted with multiple symbolic meanings and therefore is a focus of ritual in almost all societies. The fact that the same three colors predominate in ritual symbolism cross-culturally may reflect a psychobiological substrate: the common experience of body fluids, through which black is linked to feces, white to semen or breast milk, and red to blood (Turner 1967). However, a caveat is warranted here, for these colors are also worked through local categories of meaning. While black may be associated with feces and therefore ideas of pollution, night, and death in many cultures, in Hinduism it is white, not black, that is associated with death, funerals, and mourning.

Others have suggested that the human body is a "natural symbol" for any bounded system, not the least of them the well-known organic model of society, in which the categories of the physical body provide the model for the experience of the social body and vice versa (see Douglas 1970).

Alimentary Classification Food constitutes another universal plane of symbolic classification. Claude Lévi-Strauss, who founded the structuralist approach to the analysis of symbols, theorized that the opposition between raw food and cooked food, elaborated symbolically in myths and rituals around the world, is an expression of the universal dichotomy between Nature and Culture (1970). Because in all societies people must not only eat but also marry, he overlays the rules of kinship and marriage on the classification of food. Building on the idea that the boundaries of the natural body and social body reinforce each other reciprocally, Lévi-Strauss demonstrates that eating and intercourse are symbolically equated (although not always consciously) in many societies, making culinary and sexual codes mirror images of each other (1966). In a related vein, Mary Douglas famously argued that the dietary laws in the Old Testament reflect a typology in which the animals prohibited as food to the ancient Israelites were taxonomic anomalies that cross-cut the socially construed ideal categories of creation just as "mixed marriages" were prohibited because they similarly would produce "hybrid" children that transected the ideal social divisions ordained by God (1966).

TERMINOLOGY AND THE LOGIC OF SYMBOLISM

The study of symbolism deals with two different but related issues. One concerns *what* symbols mean, the other *how* they work, or the logic by which they come to mean anything in the first place. Analysis depends on a differentiation between *signifier* (the perceptible vehicle or external form), *signified* (the meaning, referent, connotation, etc.) and *signification* (the relation between the two). Some scholars, such as Clifford Geertz, use the word *symbol* as a blanket term "for any object, act, event, quality, or relation which serves as a vehicle for a conception" (1973, p. 91). Yet because the word *symbol* has been used in an enormous variety of ways, other researchers find it necessary to distinguish between *symbol*, *sign*, and *signal*, sometimes making further distinctions by adding *index* and *icon* to the list. Despite a large literature on the topic, there is, however, a lack of uniformity as to how this terminology is employed. Still, if one considers the distinctions between *symbol*, *sign*, and *signal* to represent differences in degree rather than kind, there is some consensus as to the way the definitions are drawn.

Signal, Sign, and Symbol A *signal* generally expresses a relationship between signifier and signified that is dynamic or causal. Animals as well as humans make use of signals, and in both cases the signifiers trigger or incite certain actions—as, for instance, when a male bird arouses the female by signaling with a mating call or car brake lights signal motorists behind to stop. A *sign* tends to have a singular meaning, in that signifier and signified are closely connected and typically come from the same context, and the signification itself is mostly *metonymic*—that is, a part or attribute stands for the whole. When, for

example, a hunter sees a hoofprint of the deer he is pursuing, the hoofprint is a sign of his quarry. In military, technical, and commercial fields signs are often employed as codes, such as Morse code or the North American Industrial Classification System used to designate business type. When signs are used as codes it is because the relation between signifier and signified is conventional rather than intrinsic and because the signification is precise.

Symbols expand the notions of signs and signals. Symbols are characterized by rich meanings that are multiple, fluid, diverse, layered, complex, and frequently predicated on metaphorical associations that assert an analogy between things from different contexts that normally may not be connected. Given that the referents of symbols tend to be general, abstract, and ambiguous, their personally or socially constructed significations may not be apparent except to those who make them.

Whether a signifier is a symbol, signal, or sign is determined not by the object itself but rather by how it is used. In fact, the same signifier can function as all three depending on the situation; for example, the color red functions as a signal in stoplights, as a sign of blood in a painting of the crucified Christ, and as a symbol in a national flag. Moreover, the meanings of symbols, insofar as they are conventional, are context-dependent and variable, both across and within cultures. In ancient Rome red was associated with the god of war, Mars, whereas in China red is an auspicious color associated with luck, money, success, happiness, and traditional wedding attire. In the United States, a red rose is a statement of love, but being "in the red" means one has suffered economic losses, and "seeing red" means one is angry.

Icons and the Problem of "Likeness" Symbols are usually *iconic*—that is, "a sensory likeness-relation is intended or interpreted" (Firth 1973, p. 75). Of course, from an anthropological perspective, what is seen as the associated or analogous "sensory likeness-relation" between signifier and signified is culturally determined; as Victor Turner appositely remarks, "one culture's analogy is another culture's puzzle" (1975, p. 151). Therefore, because iconicity is culturally constructed, many scholars prefer to use the term *icon* only when there is a geometrical similarity between signifier and signified, as with formal pictures, portraits, or models. Typical icons of this sort, which often involve a change in scale between signified and signifier, include maps, the Roman numeral *II*, and religious images of the Buddha, Christ, and saints.

While such icons clearly manifest *likenesses*, or analogous qualities, much symbolism rests on the predication of resemblance between things that are neither ostensibly similar nor physically in contact. Even science relies on symbolism when, associating things that are profoundly unlike, it uses analogies to explain causation, whereas magic uses analogies to connect unlike things through associations of co-occurrence.

Metaphor and Metonym A distinction between *metaphor* and *metonym* is basic to symbolism. Metaphor is "principally a way of conceiving one thing in terms of another, and its primary function is understanding." Metonymy, on the other hand, has "primarily a referential function, that is, it allows us to use one thing to *stand for* another" (Lakoff and Johnson 1980). Metonymy is a form of signification in which an attribute or name of something is used to denote the wider semantic field to which the thing belongs, signifier and signified being drawn from the same general context. Thus, the word *brass* is a metonym for "military officers," just as *crown* is used metonymically for "kingship." Metaphors, on the other hand, are comparisons, similes, or analogies, and rely on a sensory resemblance or asserted conceptual similarity between things belonging to different cultural contexts, and imply the transference of qualities from one context to another. For instance, when a brand of beer uses a crown on its label to assert that it is the "king of beers," it is making a metaphoric association, as royalty and alcoholic beverages belong to different domains (Leach 1976, p. 14). Metonyms and metaphors, like signs and symbols, frequently co-occur in the same communication event, with one level of meaning characteristically being played off the other.

FEATURES OF SYMBOLIC COMMUNICATION

Symbols are especially useful in *showing* what one cannot *say*; that is, they express ineffable concepts, abstract ideas, and particularly complex emotional significations that are difficult or impossible to fully articulate. Because they powerfully sum up many things at once, symbols are frequently deployed in political and, especially, religious domains. While the existence of different political parties shows that not everyone agrees about what their country stands for, everyone does agree that their country's flag stands for their country. One way in which symbols can be used to condense a constellation of meanings is through the invocation of physical attributes that are associated with moral character: The "straight" or "upright" man can be contrasted with a man who is "crooked" or "low."

Multivocality Symbols predominate in political and religious contexts because their wide spectrum of connotations, which permits multiple understandings among subdivisions within a population, allows them to appeal to a broad audience. The more public a symbol is, the wider is its range of referents—and the broader its range of signification, the richer and more complex its meaning

becomes, allowing for diverse and sometimes even contradictory interpretations. "Key symbols" (Ortner 1973), those that characterize whole peoples, nations, religions, and political movements, tend to be among the most abstract and polysemous, yet still provide basic orientations for thought and action—such as with the Virgin of Guadalupe, who is used to symbolize Mexico.

The radical polysemy of symbolic signification led anthropologist Victor Turner to conclude that an outstanding feature of all symbols was what he termed their *multivocality*; that is, "they stand for many objects, activities and relationships; there is not a one-to-one relationship between symbol and referent but a one-to-many relationship" (1967, p. 284). According to Turner, one must consider three fields of meaning: the *exegetical* meaning, or what members of the culture say the symbol means; the *operational* meaning, revealed by how the symbol is used; and the *positional* meaning, which derives from the relation between a symbol and other objects and symbols in the same or related cultural complexes (pp. 20, 284–285). Symbols are further characterized by a *polarization of meaning* (p. 28), one pole having to do with the symbol's sensory aspects or the emotional impulses it arouses, the other indexing related normative values or principles of ideology or social organization.

The Logic of Binary Oppositions For Lévi-Strauss in his studies of symbols in myth, totemism, and other systems of symbolic classification (1966), symbols cannot be interpreted as having meaning in themselves but only in terms of structural opposition, a binary logic that exists in culture because it is in fact a reflection of the binary structure of the human mind. Drawing intellectual capital from the structural linguistics of Saussure (1966) and Jakobson (1956), as well as mathematics and the natural sciences, Lévi-Strauss reasoned that meaning was created symbolically in culture in a way that was analogous to the way it was created in information theory and in language. In the digital world of computers, everything from words to pictures to music is based on a binary logic that involves only two numerical symbols, *1* and *0*. In linguistic phonemic analysis, meaning comes about through discerning phonetic differences within minimal pairs. For instance *b* and *p* in English are both labial stops, the only difference being that the former is voiced and the latter is not, yet it is that minimal difference that allows us to differentiate between a *bat* and a *pat*. So too, in culture, symbols have meaning because they also are based on binary oppositions—raw/cooked, hot/cold, high/low, rough/smooth, light/dark, right/left, and so on—that reflect sensory contrasts and ultimately relate back to the primary symbolic opposition between nature and culture. Moreover, not just oppositions but also the logical relations between sets of oppositions are important to the analysis of symbolic systems. These logical relations may be expressed in terms of reciprocity, analogy, homology, reflection, inversion, isomorphism, and so on.

Models of and Models For Another anthropologist, Clifford Geertz, took his cues not from the sciences but instead from literature, philosophy, and the humanities generally. He takes an "interpretive" approach to culture, which in his view is essentially a system of symbols, the analysis of which is akin to formulating a critical reading of a manuscript or interpreting a poem, as culture itself is likened to an assemblage of texts. Geertz proposes that "cultural patterns, that is, systems or complexes of symbols" are artifacts in the public domain; they are not private cognitions or meanings accessible only through the specialized techniques of psychologists and philosophers (1973, pp. 91–92). Geertz also holds that cultural patterns are models composed of sets of symbols whose relations to one another "model" relations among other psychological, social, and physical entities, activities, processes, and so forth by paralleling or simulating them. Geertz's most novel insight, however, comes from his observation that the term *model* has two senses, an "of" sense and a "for" sense, and it is this dual aspect that gives symbols their special quality, for when they are configured together into cultural patterns they are both a model *of* reality and a model *for* reality; that is, they both reflect the world and shape it. If one sees religion as a "cultural system," as Geertz does, and as a complex of symbols, then the models on which these constructs are based have this dual aspect in that they both *describe* the world as it *is* and *prescribe* the way it *ought* to be.

Multiplex and Transflective Displays Symbols display two other noteworthy characteristics: They are *multiplex* as well as *transflective*. Both ideas derive from the electrical sciences. As used in electronics, telecommunications, and computer networking, the term *multiplex* refers to the simultaneous transmission of two or more signals along one communications channel or the sharing of information in a single medium. Symbols can be thought of as wires or channels. When, for example, a man sends a red rose to the object of his affection, two messages symbolizing love are being communicated simultaneously through the same communications channel, yet they are being modulated via different sensory receptors (namely, vision and smell): The red color connotes the heart and passion and the scent connotes the sweetness of romance. This multiplex modulation or *sensory fusion* causes many symbols, especially metaphors, to evoke experiences comparable to *synesthesia*—the coupling of different bodily sensations or the crossing of sensory wires—compelling persons to hear colors, taste sounds, or in the case of the rose, simultaneously *see* as well as *smell* something *felt*.

The term *transflective* is used in electrical engineering to refer to a type of liquid crystal display (LCD) screen in which the pixels are illuminated from both the front of the monitor's screen by ambient light and from behind the screen by an internal light. Analogously, symbols, especially in ritual, are regarded as both transmitting and reflecting the spiritual effluence that animates them and makes them foci of intense cultural meaning. A symbol is "illuminated from behind" in that it transmits general meanings, moods, energy, and radiance from a source that is internal to it—that is, from a power that is "within" or "behind" the symbol. It is also reflective, or "illuminated from the front," in that it absorbs the particular conditions, meanings, emotions, and intentions projected onto it in a particular moment and reflects these back out again. In the study of ritual, one can think in terms of the dual illumination coming from and reflected on the Christian cross, or coming from and reflected on quartz crystals used in Navajo rituals. In varying degrees all symbols, but especially sacred symbols, both transmit public meanings and reflect private ones, and it is this dual aspect that makes them boundless sources of meaning, energy, and significance.

SEE ALSO *Anthropology; Anthropology, Linguistic; Communication; Critical Theory; Culture; Disease; Food; Freud, Sigmund; Geertz, Clifford; Hinduism; Identity; Lévi-Strauss, Claude; Myth and Mythology; Nazism; Philosophy; Psychology; Rhetoric; Rites of Passage; Rituals; Romance; Science Fiction; Semiotics; Signals; Sociology; Totemism; Turner, Victor; Universalism*

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SYMPATHY

Sympathy is an emotional response that involves both understanding and being moved by the suffering or joy of another. Perhaps the most famous illustration of this response occurs in the biblical parable of the Good Samaritan, where a certain Samaritan stops to help a man left half dead by thieves on the way from Jerusalem to Jericho. Sympathy, then, as this parable suggests, is a kind of positive response to another's suffering and is distinct from other negative responses, such as schadenfreude, a kind of joy or pleasure at another's misfortune. Further, sympathy, as we commonly understand it, is also distinct from empathy—although this distinction is not always observed. Empathy involves the sharing of another's feelings or the processes by which we come to feel as another feels. Sympathy, in contrast, involves, first, an awareness of another's suffering as theirs and not ours and, second, being moved to relieve that person's suffering.

To talk of "positive" and "negative" responses to the suffering of others indicates yet another widely attributed (though contestable) feature of sympathy: that it is a kind of moral emotion or response. Sympathy, or equivalently now compassion, understood as a kind of moral response to the suffering of another, has had a significant influence on moral thought and practice, specifically in the moral theories of several modern philosophers, including in the eighteenth-century David Hume and Adam Smith, in the nineteenth-century Arthur Schopenhauer, and in the twentieth-century Max Scheler. Such figures, however, do not necessarily understand sympathy quite as we would.

Hume, for instance, sees sympathy as a kind of mechanism through which the feelings of others are transferred to us (the two analogies he uses are the reverberation of sound and the reflection of light in a mirror), which seems closer to empathy as described earlier.

The idea that sympathy is an attribute important to morality extends, however, beyond the modern world. One obvious earlier reference to sympathy as a morally significant attribute comes to us from Buddhism, though this is hardly the only one. One explanation of why sympathy should feature in the moral thought and practice of different cultures is perhaps that human suffering is such a basic evil that its relief (except in certain highly specific circumstances, such as those related to criminal punishment) is thought across cultures to be an unqualified moral good. Even in societies where sympathy does not figure prominently in moral thought and practice (as was plausibly the case in various ancient societies, including ancient Greece and Rome), it would generally still be recognized as an important human quality in some sense. A person completely devoid of sympathy would in almost any human society be viewed as lacking a critical human attribute—indeed in terms of modern psychological categories, we would describe such a person as a sociopath, a person devoid of any moral sense or conscience.

Sympathy, then, seems to be a fundamental human psychological attribute or state. Indeed its presence seems central to normal human psychological development. Even infants, for example, become distressed at witnessing the distress of others. While this response may simply be an early form of empathy, it seems plausible to suggest, as some psychologists have done, that sympathy as a more cognitively complex emotional state develops from this simpler emotional response. Thinking of the development of sympathy as a part of normal human psychological development may then be thought to provide support for a kind of naturalistic explanation of morality. It is our natural capacity for sympathy (a capacity that we develop from infancy to adulthood) that makes certain moral cultural practices—including, for example, our recognition of claims on us derived from other's needs—possible. But while a number of moral philosophers (including Hume and Smith) have advanced moral theories in which sympathy plays something like this naturalistic explanatory role, other moral theorists, most notably those influenced by Immanuel Kant, would deny that sympathy has this sort of moral foundational role. According to the Kantian view, morality is founded not on our emotional capacities but on our capacity for reason alone.

SEE ALSO *Buddhism; Developmental Psychology; Emotion; Hume, David; Kant, Immanuel; Moral Sentiments; Smith, Adam; Stages of Development*

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Craig Taylor

SYNDICALISM

Syndicalism—and its cognates, known as anarcho-syndicalism or revolutionary syndicalism—was a radical movement linked to the rise of trade unionism and socialism in the late nineteenth and early twentieth centuries. Syndicalists traced their origins and beliefs to Marxian political thought. They believed that in society and the economy there was a split between capitalists (employers) and labor (workers) and that these two contending classes were engaged in a perpetual struggle over the proper division of an economy's total product. Syndicalists and socialists maintained that the class struggle between capital and labor would persist until workers seized the full fruits of their productivity by eliminating production for profit. Syndicalists differed from socialists in their insistence that workers could liberate themselves from capitalism only through self-activity and direct action at the point of production, without resort to politics and legislation. Syndicalists shared with trade unionists an ideology that stressed worker self-activity and direct action above politics and parliamentarianism; indeed, the term is derived from *syndicat*, the French word for trade union. What most sharply distinguished syndicalists from other trade unionists was the former's commitment to the abolition of capitalism through revolutionary direct action.

Syndicalism achieved its largest membership and peak influence between 1905 and 1919. The first workers' organization to adopt a syndicalist program was the French Confederation Generale du Travail (CGT), which in its 1905 Charter of Amiens declared its autonomy from the Socialist Party and other political bodies that sought parliamentary representation. Instead of seeking to advance workers' interests through electoral activity and legislative reforms, the CGT called upon its members to combat their class enemies through direct action on the job. That

same year a select group of radicals in the United States created the Industrial Workers of the World (IWW). At its 1905 founding convention, the IWW included members of the Socialist Party of America (SPA) and the Socialist Labor Party among its most prominent delegates and platform speakers, but by 1908 the organization had severed all formal relations with socialist and other political parties. During the same years, syndicalist organizations emerged in Germany, the Netherlands, Scandinavia, Great Britain, Italy, Spain, Argentina, Chile, and Mexico, among other places. Yet except for France, Italy, and the Spanish-speaking nations, syndicalism represented only a minority tendency within a much broader worker and radical movement. This was especially true in those nations with more developed economies and powerful trade union movements, such as Germany, Great Britain, and the United States. In Germany, syndicalism was overshadowed by the Deutsche Gewerkshaften Bund (DGB) and the Socialist Party (SPD). In Britain, syndicalism existed largely as the personal cause of a single prominent labor leader, Tom Mann, whose Industrial Syndicalist Education League published pamphlets but lacked members. And in the United States, the IWW rarely built a substantial membership. Only in France, Italy, Spain, and the Latin American nations, which all had far smaller and weaker labor movements, did syndicalism emerge as a dominant tendency, and even in these nations it existed more clearly among leaders than followers.

Between 1905 and 1913, no transnational or international body united the movement's separate national manifestations. Yet syndicalists shared a common ideology and common strategy and tactics. Moreover, syndicalist leaders regularly crossed national borders to promote their cause. Tom Mann traveled often to Australasia, South Africa, and North America; the American syndicalists William D. Haywood and William Z. Foster visited Britain and France; and French, Italian, and Spanish syndicalists crossed their respective borders and traversed the Atlantic. A common set of ideas and assumptions united all syndicalists. Whether they claimed to find their original inspiration in the French anarchist Pierre Proudhon's tirades against property and the state or Mikhail Bakunin's battles with Marx and Engels about the role of political parties and the state, they insisted that workers must liberate themselves from capitalism through direct action, with the strike as the workers' most effective weapon.

For a syndicalist, no strike brought failure or defeat. If workers won their struggle, they learned the lesson of solidarity and worker power. If a strike failed, they discovered that employers were their enemies and that class struggle remained the essence of existence. Thus, even defeated strikers could return to their jobs without relinquishing the class struggle. Back on the job, workers could harass their employers and diminish their profits by strictly applying work rules to slow production, declining to use inferior materials, refusing to maintain machines in optimum condition, regulating the pace of work, and, in some instances, damaging the machinery, tools, and goods with which they worked. Syndicalists defined these tactics as "sabotage," and they taught workers concrete lessons in the application of their power, without casting ballots or seeking legislative reforms. Indeed, syndicalists believed that as workers assimilated the lessons of direct action and applied them in practice, they could eliminate capitalism. The culmination of direct action would be the social "general strike," in which all workers left their jobs or laid down their tools simultaneously, paralyzing the economy and demonstrating that labor, not capital, wielded power. In the aftermath of the general strike, workers' organizations would administer the economy, eliminate production for profit, and reorganize the economy. As a result, political parties and the state would vanish.

In 1913 the separate national syndicalist movements united to create their own international body, a counterpart to the socialist Second International. And like the Second International, the Syndicalist International failed to survive the outbreak of World War I (1914–1918). Another result of the war—the Bolshevik Revolution in Russia—brought more grief to syndicalists. Most syndicalists initially found vindication in the triumph of the Bolsheviks, which they perceived as a victory for workers. Indeed, syndicalists considered the Soviets to be the Russian version of the self-governing workers' institutions that would govern society and economy in the aftermath of revolution, and they enlisted enthusiastically in the Comintern and its trade union affiliate, the Profintern. But as Lenin and his comrades established their dictatorship of the proletariat and used the party and the state apparatus to dominate the new Soviet Republic, many syndicalists felt that the Bolsheviks had subjected workers to new forms of subjugation. Other syndicalists, such as Mann and Haywood, remained loyal to the Bolshevik cause. A majority of syndicalists, however, including the anarchist Emma Goldman, served as the most vitriolic critics of the Bolshevik dictatorship.

In 1923 the anti-Bolshevik syndicalists formed a second Syndicalist International. By then, however, the separate syndicalist national movements formed, at best, marginal and often minuscule worker movements compared to the dominant trade union movements. In Britain, syndicalism disappeared as a living presence, while in Germany, the Netherlands, Scandinavia, France, and the United States it survived as a marginal, minority movement. Only in Spain did syndicalism—in its anarcho-syndicalist form—maintain a vital presence. Here, it dominated the national labor movement until its crushing defeat by Franco and the Falangists in the Spanish Civil War of the 1930s. Since then, wherever syndicalism has

survived, it has done so solely as a concept of worker self-activity esteemed by small circles of intellectuals or as a minuscule movement among workers.

SEE ALSO *Bolshevism; Capitalism; Class Conflict; Labor; Labor Union; Marxism; Socialism; Unions*

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SYSTEM ANALYSIS

System analysis, system inquiry, or systems theory is the study of the interdependence of relationships. A system is composed of regularly interacting or interrelating parts that, when taken together, form a new whole with properties distinct from its constituent parts. Systems are seen to be structurally divisible but functionally indivisible wholes with emergent properties. Central to system analysis is the recognition that the structure of any system—the many interlocking, sometimes time-delayed, sometimes circular interrelationships among its components—is often just as important, if not more important, than the individual components themselves in determining the system's behavior.

Systems are characterized by complexity, a set of boundaries, and the ability to regenerate. Complexity refers to a large number of densely connected parts and multiple levels of embeddedness and entanglement. A system is defined by a set of parametric conditions or boundaries that delimit it or set it apart from its environment. No system can be completely closed or else we could not perceive it; there are only varying degrees of closure set by boundaries. A system regenerates itself through the self-reproduction of its own elements and of the network of interactions that characterize them in a process known as autopoiesis. Thus an autopoietic system renews, repairs, and replicates or reproduces itself in a flow of matter and energy.

Systems can change through an evolutionary process with a tendency toward greater structural complexity and organizational simplicity, more efficient modes of operation, and greater dynamic harmony. Change is enacted through a process of feedback where information concerning the adequacy of the system, its operation, and its outputs are introduced into the system. Negative feedback signals that there is a discrepancy between what the system produces and what it should produce. It tells us that we should change something in the system so that we can reduce the deviation from the norms stated in the system's output model. Positive feedback signals that the whole system should change, that we should increase the deviation from the present state and change the output model. Functionalism is based on this adaptation. To survive or maintain equilibrium with respect to its environment, any system must to some degree adapt to that environment, attain its goals, integrate its components, and maintain its latent pattern, a cultural template of some sort.

A system can be ordered as a hierarchy or a heterarchy. A hierarchy is a vertical arrangement of entities within systems and their subsystems. A heterarchy is an ordering of entities without a single peak or leading element, and which element is dominant at a given time depends on the total situation. Systems may be understood through holism, where attention is focused on the emergent properties of the whole rather than on the behavior of the isolated parts, or reductionism, where phenomena are understood by breaking them down into their smallest possible parts.

Several fields utilize system analysis. Cybernetics, chaos theory, and social dynamics, for example, are among the disciplines that apply system analysis. Some areas of education and environmental sustainability also utilize system analysis. The systems framework is also fundamental to organizational theory, as organizations are complex, dynamic, goal-oriented processes; in anthropological studies, notably those incorporating positive and negative feedback; and in cybernetics, catastrophe theory, chaos theory, and complexity theory, all of which have the common goal of explaining complex systems that consist of a large number of mutually interacting and interrelated parts. In biology the living systems theory of James Grier Miller is a general theory about how all living systems work, maintain themselves, develop, and change. Living systems can be as simple as a single cell or as complex as a supranational organization such as the European Union. In sociology the structural functionalism of Talcott Parsons argues that the largest system is "the action system" consisting of interrelated behaviors of individuals, embedded in a physical-organic environment with others, with each part in a social system arranged in a pattern of interpenetrating relationships influenced by a socializing culture that constitutes standards and channels for guiding actions. Societies (which are highly complex), like systems and organisms, have functional needs that must be

met if the society is to survive. Parsons says that all societies have four basic needs: adaptation, goal attainment, integration, and pattern maintenance (i.e., inertia, latency, or self-maintenance).

The deterministic or restrictive nature of systems is addressed by aspects of structuralism. Structuralism rejects the concept of human freedom and choice and focuses instead on the way human behavior is determined by various structures. Thomas Kuhn, for example, notes how scientists operate under a standard praxis of "normal science," deviating from a standard "paradigm" only in instances of irreconcilable anomalies. In political science the structural realism of Kenneth Waltz describes international politics as a systemic interaction of states within an anarchical environment. States first seek survival and are socialized by an anarchical environment to act and react based on threats to survival and to form self-help alliances with like units. The system effects described by Robert Jervis notes how political relations among states in a system, similar to biological interactions among cells and other scientific phenomena, can produce effects different from the sum of individual actions.

SEE ALSO *Catastrophe Theory; Chaos Theory; Cyberspace; Functionalism; Heterarchy; Hierarchy; Models and Modeling; Parsons, Talcott; Sociology, Post-Parsonian American; Stability, Political; Structuralism; Waltz, Kenneth*

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SYSTEMATIC PROCESSING

SEE *Attitudes.*

SYSTEMIC DESENSITIZATION

SEE *Psychotherapy.*

SYSTEMS THEORY

Systems theory is a philosophy and worldview arising from the belief that aspects of the world are not independent of each other but interdependent on one another. This results in a research view and approach that it is difficult if not impossible to separate components of a question from logically related material in the world at large. "Logically related" depends on the question under examination and changes as the research question changes. Systems theory is sometimes called structural functionalism or holism.

Systems theory approaches understanding a problem as understanding a set of relationships among disparate factors. This contrasts to classic scientific analysis, where a set of independent variables is compared to dependent variables. Examining interactions among the independent variables approaches but is not systems theory. Systems theory requires two things. First, there must be a web of interactions among all the elements under study. Second, there are complex patterns as a result of these interactions. Sometimes systems theory includes such concepts as feedback systems and chaos theory. However, not all systems theorists include these research approaches within systems

theory. Organizational and social network research is included in systems theory.

Because of the interactions among components, systems analysis tends to involve more complex analytical techniques. For example, instead of least squares analysis, systems theory might employ computer modeling and simultaneous equations techniques. System theory's strength and weakness arises from this. The methodology is harder to learn and understand, but the explanatory power can be greater. Also systems theory tends to be interdisciplinary, especially in the social sciences. A planetary system can be isolated for study and still be a system. The reasons behind results in a particular election can involve individual and group psychology, economics and market analysis, history, religion, and communications theory because all of these are known electoral factors.

This can lead to the complaint that systems theory overcomplicates problems and research. This complaint is not without some validity. In certain analysis situations systems theory can be overkill. In other situations systems theory can be necessary for understanding the problem.

The basic concept of systems theory can be traced back to philosophers in ancient Greece and China. As a research approach, systems theory is much more recent. Modern systems theory dates to just after World War II and such researchers as Margaret Mead and Gregory Bateson. Their work is based on concepts developed by Rudolf Virchow, Adolf Bastian, and Franz Boas. In turn this work is based on the philosophic concepts of G. W. von Leibniz in the 1600s. Modern systems researchers include Niklas Lehmann and Robert Axelrod.

Simple systems in modern use include such things as the feedback concept of a household thermostat that turns on or off a heating or cooling unit depending on the temperature inside, the temperature outside, and the desired temperature. Complex systems include chaos theory and its applied forms in different disciplines.

SEE ALSO *Boas, Franz; Mead, Margaret; Social Science; Social System; System Analysis*

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David Conklin

T

TABLEAU ECONOMIQUE

SEE *Quesnay, Francois.*

TABOOS

The term *taboo* is derived from a Micronesian word that means "reserved" and originally alluded to objects or things that contained so much supernatural power that only trained religious specialists could handle them safely. The word *taboo* was first mentioned as a native term in Captain James Cook's (1728–1779) accounts of his voyages to the Pacific islands. It quickly entered English popular usage and has been used in comparative anthropology since then. This conception of taboo is illustrated in Old Testament accounts of laypersons who were afflicted with disease or even killed on the spot after touching the sacred Ark of the Covenant. More generally, however, the term is used to describe a wide range of vernacular beliefs that forbid certain actions for fear that they will lead to a catastrophe afflicting the surrounding community. The seeming disparity between the apparent triviality of the forbidden actions and the extent of the feared consequences distinguishes taboos from the more pragmatic magical beliefs describing contraindicated actions with certain consequences. Psychoanalyst Sigmund Freud (1856–1939), in his influential collection of essays *Totem and Taboo* (1912–1913), also adapted *taboo* to refer to a form of compulsive behavior among modern-day persons.

The most common and best-studied taboos deal with sexual and dietary precautions and may well derive from pragmatic experience. One of the most widespread categories of taboos concerns limiting marriage to partners outside of one's family or clan. The myths explaining these taboos tend to portray the associated disaster in terms of a divine punishment, as in a Zuni myth that associates a catastrophic flood with inbreeding within clans, or the well-known Greek myth of Oedipus, whose unwitting marriage with his mother was the cause of a decimating plague. However, given the ubiquity of such taboos, it is clear that they were based on prescientific observations linking genuinely risky actions to cultural misfortunes that occurred later. It took no knowledge of genetics to recognize that inbreeding among family or clan members was associated with a higher rate of lethal birth defects and genetic illnesses.

Similarly, many dietary restrictions may be based on a recognition that close contact with certain food animals, especially pigs, was associated with a wide variety of diseases, some (like trichinosis) parasitic in nature, others (like influenza) communicated directly from live animals to susceptible humans. However, as Mary Douglas (1966) noted, such food taboos are often associated with images of the culture's own identity. Thus a meal such as the "kid seethed in its mother's milk" (the basis of the kosher division between dairy and meat products), may have been in origin a ritual meal of a rival culture. Hence both marriage and dietary taboos became, in practice, ways of maintaining the boundaries of a culture's membership.

Taboos are often enforced by institutional religions, frequently through dominating secular institutions. In Islamic cultures, religious taboos against the consumption of alcohol and indiscreet behavior by females are strongly enforced by secular authorities, even among non-Islamic visitors. Similarly, restrictions on certain forms of incestu-

ous marriage are normally written into legal codes. But many cultures add to these codes prescriptions against other forms of marriage, such as interracial or same-sex unions, which involve no risk to the partners or their cultures but which are seen as irreligious and so dangerous to the safety of the commonwealth.

However, many taboos are privately enforced, especially among those practicing professions with high degrees of danger or risk, particularly sailors and miners. Violating such a taboo may lead to a spontaneous work stoppage by coworkers, who fear risking a serious accident. A number of these taboos reflect vernacular understanding of religious practices. The Jewish restriction on work during the Sabbath clearly underlies the common superstition tabooing the start of any major project (such as a ship's voyage) on a Friday because the work involved would usually stretch past sundown and so into the forbidden time. The proscription on speaking the sacred names of God, particularly in private rituals of magic, is commonly extended to purely mundane uses of divine words in trivial oaths and exclamations. However, many other words, such as *pig* (often forbidden in mariners' conversations) may show an extension of the dietary taboos into the realm of language. Other taboos, such as miners refusing to work on a day when their hands or feet were unusually cold on rising (the origin of the proverbial phrase "got cold feet") may reflect popular psychology. The common taboo on allowing women to participate in such risky professions, or even to be present onboard ship or in a mine shaft, is probably linked to the common practice of soldiers and male athletes avoiding sex before action, originally a religious act of renunciation in return for divine favor and increased strength.

An especially widespread class of taboos reflects cultural attitudes toward death. Many such practices forbid the explicit mention of dying or overly free use of objects associated with funerals. Hence, in Japan the number four (pronounced "shi," which also means "death") is a common taboo, being omitted in hospital rooms and flight numbers. Similarly, in Italy, the number seventeen is often skipped because it could be expressed in Roman numerals as XVII, which is an anagram of the Latin past perfective verb "VIXI," which literally means "I have ceased to be alive," or, more bluntly, "I died." Flowers associated with funerals, such as lilies (in North America) or chrysanthemums (in Asian countries), should not be given to the living for fear of putting them at risk. Common legends assert that wearing an article of clothing worn by a corpse may lead to one's own death, and buildings or even automobiles in which death occurred may become too contaminated for the living to use. Behind all of these taboos is the belief, especially strong in Western cultures, that the living need to be insulated from the concept of mortality.

Overall, taboos are best understood as parallel to magic: magical actions are ways of managing one's perception of risk or danger by *doing* something, whereas observing taboos minimizes risk by *not* doing something. Of course, refraining from a tabooed action often involves choosing actions with religious and magical overtones (such as the preparation of kosher meals).

SEE ALSO *Cultural Relativism; Disease; Freud, Sigmund; Islam, Shia and Sunni; Kinship; Magic; Norms; Religion; Rituals; Sanitation; Sin; Totemism*

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Bill Ellis

TAINO

The Taino Indians are a subgroup of the Arawakan Indians of northeastern South America. They were living in the Greater Antilles (Hispaniola, Jamaica, Cuba, and Puerto Rico) when Christopher Columbus (1451–1506) arrived in the New World in 1492. The Arawak had a complex and highly ceremonial culture. While they had neither a written language nor an advanced system of counting, the Arawak people had a highly developed culture, including a universal language, a system of ceremonial dances, sculpture, jewelry, weaving, music, and poetry. They grew fruit such as guava, papaya, and pineapple, as well as beans, squash, chilies, and tobacco. They played a ceremonial ball game called *batu*, which, like stickball in many southeastern American Indian nations, was also used as a form of conflict resolution. They were governed by a village-based theocracy and were organized around a three-tiered class structure: Each village had a single *cacique*, or chief; *nitainos*, or noblemen; and *nabo-*

rias, or the working class. Villages also had *bohiques*, who functioned as priests and healers.

Taino culture was integral to the development of the postcontact region. Taino place names are still used in many areas (such as the Puerto Rican towns of Utuado and Mayaguez). The Taino also introduced to Europeans the *hamaca*, or hammock; and the *barbacoa*, or barbecue; the musical instrument maracas, and a way of making cassava bread. Tainos named the *yuca* among other plants and the iguana as well as other animals.

Mostly agricultural, seafaring, and peaceful, the Taino had been engaged in a series of conflicts with the more aggressive Caribs for about one hundred years prior to European contact. The Europeans probably confused the Taino with the Caribs and considered them a threat, subject to the Spanish Crown and liable to forced conversion to Catholicism. There is always considerable debate over the size of precontact indigenous populations and the degree to which those populations were reduced by Europeans. When the Spanish arrived on Puerto Rico (or Boriken) in 1508, it is estimated that there were between 20,000 and 50,000 Tainos. The vicious combination of disease, flight, and the wages of an unsuccessful rebellion in 1511 reduced that number to about 4,000 by 1515.

As with many other indigenous people of the Americas, these numbers allowed Europeans to assume that all Tainos had been decimated and no longer existed, although there was and is debate over whether "absorption" or "extermination" is the cause. However, there is no evidence that the Taino were eradicated. Many contemporary Puerto Ricans claim Taino heritage. The Taino are now asking for official recognition as indigenous and sovereign peoples from the government of Puerto Rico and have formed at least two organizations: the United Confederation of Taíno People and the Jatibonicu Taino Tribal Nation of Boriken. There is also a growing movement of Taino revivalism, connected to a broader movement for indigenous resurgence across the Caribbean. Members of the movement advocate cultural preservation and promotion, correction of historical misconceptions, the preservation and maintenance of sacred sites, and environmental protection.

SEE ALSO *Boricua; Indigenismo; Indigenous Rights; Native Americans; Nuyoricans*

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Mary E. Stuckey

TAIT, LAWSON

SEE *Sterilization, Human.*

TALENT

The social sciences can have an enormous impact on society by identifying talented individuals and finding methods to fulfill the potentials implied by that talent. *Talent* generally refers to particular potentials. It can be contrasted with the general ability estimated with tests of intelligence (IQ). Talent is both domain and culture specific.

Exceptional talents have been studied for many years. In his seminal study titled *Hereditary Genius* (1869), Sir Francis Galton presented data suggesting that talent is inborn. He concluded that talent ran in families, the implication being that there was not much that could be done if an individual was not born into the right family. Galton's data were derived from archival sources, which did indeed show that the more closely family members were related (e.g., sons and fathers versus cousins), the more likely they would share the same level of ability. The data were biased, however, in that only certain fields were represented. Also, gender bias, common in Galton's time, meant that only certain careers were open to women and only certain skills were developed in girls. Indeed, educational advantages were at that point given almost entirely to boys and men. The conclusion about heredity seems to have been unwarranted as well. This is because both nature and nurture run in families. Just because talent runs in families does not mean that it is genetically based. Certain experiences are also more common in some families than others. Socioeconomic status, for instance, shows continuity across generations, and this means that certain families will have educational advantages in every generation, while other families will not. In short, talent might appear to be inherited because it runs in families, but that can just as easily be explained in terms of experiences (e.g., educational) that are common to certain families.

It is most realistic to recognize both nature and nurture as influences on talents. Certain biological givens, for example, characterize the entire human race. There is also some indication that the human nervous system has spe-

cializations for different talents and that these might vary from person to person. Recent evidence suggests that certain talents are tied to particular genes and alleles, such as the dopamine receptor DRD2. Biological influences on talent determine what potentials any one individual will have. Everyone has potentials, but clearly the range of potentials varies dramatically from person to person. If these potentials are recognized, perhaps as a kind of precociousness or giftedness, they may be reinforced and fulfilled through formal and informal educational experiences.

Some talents may require more reinforcement (and more experience) than others. Musical talent, for example, is apparent very early in life, in part because the individual need not master a huge corpus of information. Mathematical talent is not apparent quite as early, but still is manifest by approximately age ten. Other fields may require the individual to master a large knowledge base, and for that reason more experience is necessary. Talent in an area such as physics, then, would not be fulfilled until adulthood.

Although talent often develops to the degree that it is valued and reinforced, sometimes the causality is the other way around and the talent has an impact on the experiences obtained. This occurs when parents or teachers recognize a child's potential and react to it by providing optimal experiences. Talent is not, then, entirely dependent on nurturance; it can also determine what experiences are most likely to occur. In short, talent and experience have a *bidirectional* causal relationship.

One of the most influential theories of talent was presented by Howard Gardner (1983). Often called the theory of *multiple intelligences*, his view distinguishes eight domains of talent: verbal-symbolic, mathematical-logical, musical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic. Gardner's theory is widely recognized in part because it is based on data from experimental, psychometric, cognitive, biographical, and developmental investigations, and in part because it avoids common cultural biases. In Western culture, for example, the emphasis is on verbal-symbolic and mathematical-logical talents. These are emphasized in the schools much more than the other domains. But other cultures (and eras) emphasize other talents.

Even within one culture, views of talent vary with the passage of time. Athletic skills such as hitting or catching a ball, for example, were probably not greatly valued in the early part of American history, though now these skills can lead to scholarships and lucrative careers. What may be most important is the implication that some talents are presently not recognized. This further implies that there are human potentials that are not being fulfilled. Some of these may be extremely important for world peace and the preservation of the environment.

Talent is probably best identified and nurtured by looking beyond cognitive ability. Certainly cognitive ability plays a role, but there is much more to it. A potential talent will not even be fulfilled unless the individual invests time in the domain in question. Joseph Renzulli recognized cognitive and extracognitive aspects of exceptionality. Here, general ability plays a role, as does creative potential and task commitment. The last of these reflects interest, motivation, and persistence. Clearly educators should look for each of these contributions to talent (general ability, creative ability, and motivation).

The domain-specific view of talent is also useful in the educational setting. If educators recognize a variety of different talents, the potentials of each child can be fulfilled. Instead of identifying as gifted only children who are exceptional in verbal or mathematical skills, each individual's talents can be reinforced.

SEE ALSO *Cognition; Creativity; Culture; Gifted and Talented; Heredity; Intelligence; Intelligence, Social; Multiple Intelligences Theory; Nature vs. Nurture*

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TALIBAN

The Taliban is a radically militant Islamic movement that controlled some 90 percent of Afghanistan between 1996 and 2001. The Taliban emerged from their base in Kandahar in southwestern Afghanistan in reaction to the lawlessness caused by infighting between rival mujahideen forces in the wake of the Soviet withdrawal in 1989. The Taliban's declared aims included the restoration of peace, rigid enforcement of Islamic law, disarming the population, and defending the Islamic character of Afghanistan.

In 1994 the Taliban, under the leadership of Mullah Mohammed Omar, began its territorial conquest with the seizure of the Afghan border post of Spin Boldak and subsequent takeover of the city of Kandahar. The fall of Kandahar provided the Taliban with a nucleus of fighters as thousands of Afghan refugees, mostly students at madrassas (Islamic religion schools) near the Afghan-Pakistani border, joined the movement. The Taliban's swift military successes launched a surprising advance that culminated in the capture of the Afghan capital, Kabul, in 1996.

The Taliban set out to create the world's most pure Islamic regime by introducing a disturbing and deeply revolutionary form of Muslim culture that came at a tremendous cost to human freedom. Men were ordered to keep their beards to a specific length, and subjected to punishment for defiance. Members of minority groups wore labels to distinguish them as non-Muslims, a measure the Taliban argued was to protect them from religious police enforcing Islamic law. Frivolities such as television, the Internet, music, and photography were outlawed. Punishments including amputation of the hands of thieves and the stoning to death of women convicted of adultery, considered severe by European standards, were common under the Taliban.

It was the Taliban's anti-woman agenda, however, that caused mounting concern around the world. Under the Taliban women were forbidden to work outside the home, were compelled to wear a head-to-toe covering known as a burka, and could not leave the home without a male guardian. Such issues, along with restrictions on women's access to health and education, caused resentments among ordinary Afghans and drew the ire of the international community. To the Taliban, however, the restrictions served to preserve the honor and dignity of women who had previously been preyed upon.

Despite their strict beliefs and anti-drug profile, the Taliban could not resist using opium to fund its activities, underlining the movement's poor understanding and interpretation of Islamic law. Though the Taliban leaders led an austere life in contrast to the ostentatious lifestyle of the mujahideen warlords, their economic policy was left in the hands of chance and fate, culminating in Afghanistan's slide into economic backwardness.

Only three countries, the United Arab Emirates, Pakistan, and Saudi Arabia, established diplomatic ties with the Taliban government. Both Pakistan and Saudi Arabia distinguished themselves among foreign powers by the scale of their efforts and support for the regime. Although it is officially denied, there is widespread agreement that the Taliban gained crucial early support from the Pakistani army and intelligence services, especially in helping make the Taliban a highly effective military force. Pakistan, influenced by its geopolitical and economic interests, remained a strong diplomatic and economic lifeline for the regime.

In Saudi Arabia the Taliban's push for a pristine Islamic society was in accord with the Saudi's strict form of Wahhabi theology and law. Saudi Arabia bankrolled the madrassas in Pakistan that provided an ideological guide for the Taliban. A great deal of uncertainty remains about the extent of Saudi Arabia's assistance to the Taliban but the consensus appears to be that their aid was largely financial.

The Taliban enjoyed a cozy relationship with Al-Qaeda and found in the group a useful ally, especially in the significant boost Al-Qaeda provided to the Taliban's military campaigns against the Northern Alliance. Al-Qaeda enjoyed a comfortable refuge in Afghanistan under the Taliban regime.

The Taliban made giant strides in uniting the country but ultimately was unable to end the civil war. The strongest opposition to the Taliban came from the Northern Alliance, who controlled the northeast region of Afghanistan. This group backed the U.S.-led coalition that ousted the Taliban from power in 2001.

SEE ALSO *Al-Qaeda; Arabs; Fundamentalism, Islamic; Government; Islam, Shia and Sunni; Muslims; Radicalism; Sexism; Union of Soviet Socialist Republics*

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Charles Ebere

TALLY'S CORNER

Tally's Corner: A Study of Negro Streetcorner Men (1967), by the American anthropologist Elliot Liebow (1925–1994), represented a breakthrough for its time in studies dealing with poverty and race. *Tally's Corner* was originally written as Liebow's PhD dissertation in anthropology for the Catholic University of America.

For twelve months in 1962 and 1963, Liebow and a group of researchers studied the behavior of a group of young black men who lived near and frequently hung around a street corner in a poor black neighborhood in downtown Washington, D.C. Liebow's participant observation revealed the numerous obstacles facing black men on a day-to-day basis, including the structural and individual levels of racial discrimination propagated by whites in society.

Liebow's observations about young black men in the ghetto, a complex system comprised of an overabundance of liquor stores, pool halls, and pawnshops, directly parallel similar research by notable scholars, such as William Foote Whyte (1914–2000) in *Street Corner Society* (1943). In this respect, *Tally's Corner* represents one of the first ethnographic attempts at understanding how groups nav-

igate extreme poverty in the inner cities. The book shares some similarities with W. E. B. Du Bois's (1868–1963) *The Philadelphia Negro* (1899) in that throughout *Tally's Corner*, Liebow elaborates on the cultural deficiencies of blacks in the ghetto and is quick to attribute these deficiencies as the root cause of their perpetual poverty. Unlike Du Bois, however, Liebow fails to factor in the effects of racial discrimination against blacks in the employment sector and in access to quality education and how these structural elements affect the lives of black people living in the ghetto.

Nevertheless, *Tally's Corner* is unique in how it looks at not only poverty and its effects on inner-city people but specifically on the systemic and long-term effects of poverty on black men and black families. In the five main chapters that make up *Tally's Corner*, Liebow discusses how black men deal, on a daily basis, with issues of work, their relationships, their children, and their friends and networks. His portrait of how inner-city blacks navigate the racial waters of their neighborhoods is both gloomy and sad, revealing a number of examples of how whites are apathetic and often discriminatory toward black workers. Black men's constant struggle to succeed and their frequent failures translate for Liebow into a self-perpetuating cycle of doubt, where blacks become tired of trying to beat white society at its own game and thus accept failure as a way of life.

The sociologist and ethnographer Elijah Anderson, following Liebow's tradition of urban ethnographic research into black lives in the inner city, has spent a lifetime studying race and class issues in urban communities. An explicit example of the continuity of Liebow's work is in Anderson's *Code of the Street* (1999), an ethnographic study examining morality, teen pregnancy, the search for respect, and other issues central to people living in the inner city.

Although Liebow's study offers valuable insight into the lives of young and poor black men in the early 1960s, his analysis caters to what the psychologist William Ryan (1923–2002) labeled a "blaming-the-victim" mentality or what the anthropologist Oscar Lewis (1914–1970) referred to as a "culture of poverty," whereby the structural inequalities in society are not questioned. Rather, blame for persistent social ills is placed directly onto the victims themselves. A clear example of the use of a blaming-the-victim argument is in the 1965 Moynihan Report, which argued that unemployment and a lack of educational success among black Americans could be traced to dysfunctional black families. Hence the burden of misfortune is shifted directly onto black Americans.

In a similar vein, Liebow argued that the relentless patterns of racial discrimination by whites had left black men with low self-esteem and thus a desire to remain uneducated and unattached to their children or families. The problem with this argument is that it fails to account for the real and pervasive racial dilemmas faced by blacks in the United States. For example, Liebow argued that as long as black Americans failed to become educated, they would remain ignorant of the opportunities provided many whites. Thus education is a key, for Liebow, in lifting black men out of poverty. However, what is left out of Liebow's equation is that the racial discrimination that occurs in the school system is real and that for blacks education may not necessarily equal opportunities for success. As Joe Feagin, Amanda Lewis, Judith Blau, and many other researchers have noted, the American education system is a racialized institution that fundamentally caters to middle-class whites while routinely denying blacks and other nonwhites equal opportunities for learning and advancement. Likewise, Liebow ignores the impact of racial discrimination in employment as a major factor affecting blacks' opportunities for upward social and economic mobility. Thus for blacks living in the ghetto, the racial structure of society is such that even should they succeed in navigating the educational obstacle course, they will continue to suffer penalties in rewards vis-à-vis comparably educated whites. This fact not only affects the social and economic mobility of black Americans, it also has an adverse impact on the motivation of blacks living in the ghetto to follow through on their education.

Numerous studies have criticized *Tally's Corner* for its failure to consider the impact of institutional and systemic racism on the lives of blacks in the United States. For example, Steven Gregory's *Black Corona* (1998) argues against the idea that the black ghetto is dysfunctional and socially disorganized. Rather, like Kenneth B. Clark (1914–2005) in *Dark Ghetto* (1965), Gregory maintains that the black community has been rendered powerless by urban political processes, even as black Americans continue to organize and fight for social justice. A more direct critique of *Tally's Corner* is in James Borchert's *Alley Life in Washington* (1980). Borchert finds order and stability in his examination of alley housing in Washington, D.C., and he directly rejects the view of lower-class black life as pathological.

SEE ALSO *African Americans; Culture of Poverty; Ethnography; Ghetto; Moynihan Report; Poverty*

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TANGO

SEE *Dance.*

TARIFFS

Tariffs are discriminatory taxes collected at the border on imported goods but not levied on similar goods originating domestically. Tariffs are sometimes very large (everywhere in the 1930s and in some developing countries in the early twenty-first century) and sometimes very low (Hong Kong in the early twenty-first century). Tariffs are substantially discriminatory between international trading partners. Regional trade agreements such as the European Union (EU) and the North American Free Trade Agreement (NAFTA) remove tariffs between the members while imposing tariffs on nonmembers. Tariffs also significantly discriminate between goods. Tariff schedules of most countries contain over 10,000 lines with tariffs ranging in some cases from 0 percent to over 100 percent.

Tariffs come in specific and ad valorem forms. Specific tariffs are charges per unit, for example, $1,000 per automobile. Ad valorem tariffs are levied as a percentage of invoice value. A 5 percent tariff levied on a $20,000 automobile yields a $1,000 specific tariff equivalent. The automobile example also illustrates how to calculate the ad valorem equivalent of a specific tariff: divide the specific tariff by the invoice price. Ad valorem tariffs are much easier to use for comparison purposes across goods and countries. Comparison including specific tariffs requires prices to deflate the specific duties, which is often extremely burdensome.

Both specific and ad valorem tariffs are common. Ad valorem tariffs are the only sensible type when there is no natural quantity unit (boxes of parts). But ad valorem tariffs are disadvantageous where corrupt border officials are suspected; underinvoicing will lower the tax paid, with importer and border official splitting the difference. History also matters: The United States has many specific tariffs despite the likely honesty of its customs officials.

Some tariffs vary with the level of trade. The tariff quota is a tariff that steps upward when trade passes a preset amount. Another example is an antidumping duty, which is equal to the difference between last year's price differential between the exporting firm's cost (or foreign price) and its U.S. sale price.

TARIFF COSTS AND BENEFITS

Tariffs provide revenue to the government that levies them. This benefit is offset by the cost to users of paying the tax. Less obviously tariffs provide a benefit to domestic producers who experience less stringent competition from imports. The balance of these three effects is typically calculated to yield a net loss to the economy. A tariff reduction is typically calculated to reduce net loss by the height of the tariff times the increase in imports induced by the tariff reduction. The marginal net cost of tariffs is thus proportional to the height of the tariff.

A potentially important complication is that import competition may cause periods of unemployment for domestic workers; hence, tariffs provide a benefit by employing more workers. Typical calculations for the U.S. economy show that the costs of employment-increasing tariff hikes per job saved are greater than the wage paid in the job—usually several times the wage.

What explains the use of tariffs in view of their cost to the economy? Politics. The pressure of domestic producers and trade unions that gain from tariffs is largely unopposed. Consumers are unorganized whereas producers who import intermediate goods often refrain from resisting tariffs as they push for tariffs on the import of goods that compete with their output. Two contrary forces push tariffs down. Most importantly, politicians tempted to grant higher tariffs also know that the resulting reduction in general prosperity harms their prospects of retaining power (at the next election or, less certainly, against a coup). More subtly, the interest groups themselves bear a share of the overall cost of tariffs, tending to restrain their demands. Political economy models that view tariffs as objects for sale in political markets with

these forces at work have been fitted to data on the pattern of protection, and the model appears to statistically explain the pattern well.

The discriminatory aspect of tariffs (differing across trading partners and across goods) typically adds to the cost of tariffs. Discrimination across trading partners results in costly trade diversion. The purchase of goods shifts from the lowest cost source (increasing net loss in proportion to the tariff if the source is not a partner) to the favored partner (with marginal net benefit equal to the zero tariff). Discrimination across goods imposes a more subtle cost on the economy with a similar structure. Think about increasing the dispersion of tariffs while preserving the average tariff. The increase in tariffs on already high-tariff goods reduces trade where it is most costly whereas the reduction in tariffs on low-tariff goods increases trade where it is least costly.

Discrimination across trading partners and across goods is substantial and has increased with the overall liberalization of trade since the mid-1900s. Regional trade agreements have proliferated even as multilateral negotiations have reduced overall tariffs. Wide tariff reductions have exempted certain product categories, such as agriculture and apparel, in rich countries.

INTERNATIONAL TRADE RELATIONS

Tariffs tend to reduce prices of exports from foreign economies. This spillover implies that part of the cost of tariffs is borne by foreigners. Since national governments will thus be tempted to overuse tariffs, nations agree to restrict their tariffs in international negotiations and enforce their agreements through international institutions such as the World Trade Organization (WTO). The dispute settlement process of the WTO generates frequent headlines and gives a false impression that international relations are becoming more acrimonious. As with family therapy, if the parties are arguing, it is better than if they are not talking. Imperfections in particular negotiation rounds or institutions should not obscure their very positive role in preventing much worse outcomes, such as the tariff wars of the 1930s.

Two basic principles of the WTO and its predecessor institutions are nondiscrimination between partners and reciprocity. Reciprocity means that the parties alter their tariffs to balance the exchange of market access provided. For example, a round of tariff negotiations might increase U.S. imports by one trillion dollars while reciprocally increasing access to foreign markets by one trillion dollars. Importantly, the WTO permits the United States to withdraw market access of, say, one billion dollars, by raising its tariffs in a particular product while reciprocally authorizing the foreign countries to withdraw one billion dollars of market access by raising foreign tariffs.

Regional trade agreements are the great exception to nondiscrimination. The principles of the WTO permit it on the reasoning that a move toward free trade between the members is better than the move away from liberal trade due to trade diversion. Opinions among trade economists diverge over whether regional agreements are a building block or a stumbling block to multilateral liberalization.

SEE ALSO *Barriers to Trade; Liberalization, Trade; Quotas, Trade*

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James E. Anderson

TARSKI, ALFRED

SEE *Logic, Symbolic.*

TASTES

It is telling that economists use a term reserved for one of the five senses, *taste*, to denote human desires and motives. This indicates first that economists consider human desires as private and therefore not subject to moral valuation. One cannot be scolded for having taste buds that prefer sour cream, for example, to yogurt. Similarly one cannot be scolded for liking pushpin (a triviality, a children's game) better than poetry—the examples used by the founders of utilitarianism, Jeremy Bentham (1748–1832) and John Stuart Mill (1806–1873). Second, this signifies that economists consider human desires as personal and therefore not subject to interpersonal utility comparison. As much as it is supposedly impossible to compare A's taste buds for sour cream with B's, one cannot compare A's utility from consuming an extra automobile with B's. Third, this suggests that economists consider

desires as fixed and therefore not to be tampered with to explain behavioral puzzles.

Whether neuroscientists regard the taste buds as private, personal, or fixed is another matter. At issue is the accuracy of the economists' assumption of tastes as private, personal, and fixed. It is easy to see the limits of each of these assumptions, as many social scientists have shown. Nonetheless, they persist in mainstream welfare analysis and in economics textbooks. They have proved impervious to criticism because they lend themselves easily to the thrust of economic analysis. Namely, it is about rationality: how agents respond to incentives so they can maximize a given end by a given set of means (Robbins 1935).

Economists have identified several axioms as the necessary conditions of rationality. The most important are two axioms concerning how agents compare alternative bundles of goods according to their own tastes; that is, how tastes become "preferences." According to the transitivity axiom, the preferences must be consistent. If an agent prefers A to B and B to C, then he or she must prefer A to C. According to the completeness axiom, the agent must be complete with his or her tastes. He or she must know how to rank all the bundles within his or her feasible set. This allows the agent to be decisive.

Empirical and experimental findings by behavioral-decision researchers in psychology and behavioral economists have questioned the axiom of transitivity. For instance, how one values a product may change depending on whether or not one owns the product, called the "endowment effect" (Thaler 1980) or "loss aversion" (Tversky and Kahneman 1991). It seems that agents value something more if they happen to own the item; the price at which they are willing to sell the item is higher than the price they are willing to pay for it. Some researchers have questioned this endowment effect on different grounds (Shogren, Shin, Hayes, and Kliebenstein 1994; Hanemann 1991; List 2001). Concerning the axiom of completeness, the parable of Buridan's ass illustrates the problem of indecision. Agents may simply fail to rank two equally appealing bundles (Khalil 1997).

Economists are still in disagreement about how to interpret the empirical and experimental findings that question these axioms. This short entry tackles the assumptions about tastes from another angle: by directly examining the assumptions that tastes are private, personal, and fixed.

TASTES AS PRIVATE

The assumption that tastes are private allows economists to treat all tastes—such as pushpin, cockfight, Aristotle's *Politics*, altruism, and poetry—as fungible. This allows economists to place them as elements in a single utility function. In this manner, an agent would buy more poetry if the price of cockfight tickets increased. If an agent holds irreconcilable utility functions, as the multiple-self approach maintains (Elster 1986), the agent's ability to economize across all tastes will be compromised.

The treatment of tastes as private comes at a price. It means that there is no room for educators and public figures to try to upgrade the tastes of the citizens. The upgrade would be deemed as arrogant and constitute interference in the citizens' private lives.

However, this may not be necessarily the case. It is possible to maintain the fungibility of tastes, and hence allow for the calculus of optimization to proceed, without the tastes-as-private assumption. That is, it is possible to recognize a qualitative difference between pushpin and poetry without undermining utilitarianism or the idea of a single utility function. For instance, John Harsanyi (1997) and Yew-Kwang Ng (1999, 2003) distinguish between actual preferences, on the one hand, and informed preferences, on the other. Ng identifies ignorance as one reason, out of several others, that agents would fail to choose the more welfare-enhancing, informed preferences. For Ng, agents would want informed preferences in place of actual ones because the informed preferences would afford happiness. Also one can argue that agents, with sufficient practice and education, would find no discontinuity between coarse entertainment and high-culture entertainment.

TASTES AS PERSONAL

The assumption of tastes as personal permits economists to avoid thorny political issues concerning the distribution of income. Economists usually restrict themselves to policies that avoid interpersonal utility comparison, based on what is known as the Pareto welfare criterion. This criterion stipulates that a policy maker can reallocate resources as long as it makes at least one agent better off without reducing the welfare of anyone else.

However, as Adam Smith (1723–1790) amply shows in *The Theory of Moral Sentiments* (1759), humans have the capacity to place themselves in the shoes of others, a quality he called sympathy. Sympathy, which can be extended to nonhuman animals, is a method of interpersonal utility comparison. It allows the agent to judge whether the pleas of others are justifiable, given the costs involved (see Khalil 2006).

TASTES AS FIXED

The assumption of tastes as fixed involves two separate flavors: first, fixity of tastes across agents or cultures; second, fixity of tastes across time for the same agent.

Fixity across Agents or Cultures The fixity of tastes across agents or cultures allows economists to explain differences in behavior solely on the basis of differences in income and relative prices. This prevents scientists from inventing tastes in an arbitrary fashion. For George Stigler and Gary Becker (1977), to explain differences in behavior in terms of differences in taste amounts to an intellectual retreat. For instance, cohabitation in place of marriage in the United States and western Europe is currently free from stigma. In many other cultures, and in the historical past of Euro-American culture, cohabitation amounts to living in sin. It has been punished by ostracism or even death, known as honor killing. To explain the disappearance of the stigma surrounding cohabitation, it would be an intellectual retreat to state: "Oh, Europeans and North Americans are now humane; they shed the backward values." Also if we see Agent Z suddenly buying more oranges than usual, it would be an intellectual retreat to hypothesize: "Oh, Agent Z suddenly started to like oranges more." Such answers are intellectually unsatisfying because they beg certain questions: Why did the rest of the people in the world not become as enlightened as the North Americans and the Europeans? Why did Agent Z change his or her taste?

It is a better strategy to assume that tastes are stable, that is, the same tastes prevail across cultures and agents and to examine instead changes in incentives. Concerning cohabitation, there are several candidates: the introduction of the contraceptive pill in 1964, the spread of the welfare state, and an increased division of labor that facilitates female participation in the workforce. Each of these factors lowers the risk or cost of pregnancy and therefore lowers the cost of cohabitation relative to marriage. Also, concerning oranges, there are several candidates: lower prices of oranges, higher prices of all other fruits, or new information about the health benefits of oranges, for example. All of these candidates deal with the change of constraints and therefore avoid the intellectual retreat.

It would also be an intellectual retreat to evaluate the economic performance among countries by appealing to differences in cultural tastes (Khalil 2007a). If we witness one economy performing better than another, it would be an arbitrary assumption to suppose that the people of the better-performing economy had different tastes from the other. A more challenging task is to look for differences in climate, endowment, or relative prices. In fact it is crucial for analysis to maintain the fixity of tastes across cultures. Of course cultures have different tastes for how to prepare coffee or what to eat for breakfast. But such differences are trivial in comparison to fundamental issues, such as investment, innovation, and entrepreneurship. These issues are of universal concern for human survival. Given this, it is important to resist the rising tide of culturalist economics that tries to explain the debacles of, for example, Latin America or Islam in terms of fundamental cultural values (North 2005).

In the same vein, if one sees a person indulging in gambling or alcohol to the point of dysfunction, one should not invent new tastes, such as the theory that some people have a weak will toward present consumption while others have a strong will. This would be an intellectual retreat (Khalil 2007b). To see how or why some agents become addicted to or indulge in reckless activity, it is more intellectually appropriate to assume first that agents have the same tastes. Of course agents have different tastes, but such differences should be accounted for endogenously rather than as the entry point of analysis. This is especially the case if one intends to analyze actions that lead to the dysfunction of the agent, broadly called weakness of will, such as addiction and recklessness. It is important, then, to resist the rising tide of behavioral economics that tries to explain weakness of will as simply the result of present-bias tastes, which amounts to quasi-hyperbolic discounting (Laibson 1997; O'Donoghue and Rabin 1999).

Also the behaviorist onslaught has created new tastes, aside from the ones to explain weakness of will. It has created tastes for envy, jealousy, fairness, social preferences, and so on (Gintis, Bowles, Boyd, and Fehr 2005). In this manner, behavioral puzzles are not interrogated in relation to welfare or well-being (Khalil 2000, 2004). Rather, the puzzles are "solved" by the question-begging invention of new tastes. In fact economists are not short of evolutionary stories about the stability of populations with such new tastes (Francois and Zabojnik 2005; Gintis 2003a; Gintis 2003b; Bowles 2004, chap. 2). Such stories fundamentally depend on the variability of lineages of tastes across agents—true to the neo-Darwinian assumption of diverse lineages in the population as the prerequisite of natural selection. Such evolutionary stories then proceed to show why a lineage, such as a social preference toward trustworthiness, can become dominant. Namely, the lineage becomes dominant if it already exists in the population above a critical frequency. But such evolutionary stories amount to establishing the stability of the new taste at hand. They do not provide an endogenous account of the origin of the lineage. Worse, it is unlikely that members of a population would simultaneously experience a mutation of the same kind at a scale that is required to reach a critical mass.

Fixity across Time The fixity of tastes across time for the same agent, which can be called the "economics Archimedean rock," affords the celebrated assumption of consumer sovereignty. This assumption allows economists to undertake a static welfare comparison. If an agent's tastes are manipulated by powerful entities, such as firms

and their advertising arms (Galbraith 1958) or the culture of competitive markets (Bowles 1998), the result is that the tastes of the consumer are not stable enough over time to afford welfare comparisons. If a monopolist M "brainwashes" or "educates" consumers to love C more if it is in its container M than if it is any other container, M'—$U(CM) > U(CM')$, then consumers suffer when CM' replaces CM as a result of the breakup of the monopoly. Thus researchers cannot capture the welfare benefit, such as lower prices of C, as a result of the breakup of the monopoly.

The problem of change of tastes across time is about innate change. The problem, as discussed here, is not about fashion or fad. The issue of fashion deals with a covariation of tastes across consumers that is not prompted by a change of income, relative prices, or the innate change of taste. The change of tastes due to fashion, as Edi Karni and David Schmeidler (1990) suggest, does not threaten the idea of fixed tastes. They trace the phenomenon of fashion to the social aspect of the consumption of the goods under question, which explains the cyclical behavior.

The problem of change of tastes across time discussed here is, rather, due to the development of the agent, which is usually path dependent, where habits play a supreme role. Gary Becker (1996, chap. 1) proposes the notion of personal capital that is augmented through consumption. Past consumption enhances the marginal utility of current consumption, which becomes the basis of habit formation. Becker argues that the endogenous change of tastes across time does not result in unstable tastes. While the subutility function changes as a result of habit formation, the extended utility function is stable. Given the stability of the extended utility function, consumer sovereignty is preserved, so static welfare comparison is possible. Along a different vein, Ng (2003) uses the analysis of happiness, based on informed and nondeceiving preferences, to help researchers to judge welfare when there is a change of tastes.

Robert Sugden (2004) also deals with consumer sovereignty in the face of changing tastes. For Sugden, however, tastes change because they are reference dependent, where the reference can be the endowment (endowment effect) or the present (weakness of will). Given that tastes change with arbitrary factors, such as endowment or temptations afforded by the present, tastes amount to incoherent preferences. The normative economics Archimedean rock cannot be the satisfaction of preferences. Sugden suggests that consumer welfare should be evaluated according to the opportunity or freedom that the consumer has to assert his or her right to take care of himself or herself. Welfare therefore is not primarily about preference satisfaction. It is primarily about the freedom to pursue one's preferences, which can be incoherent. Such freedom, possessed by the individual, should be the true meaning of "consumer sovereignty."

CONCLUSION

Economics would greatly benefit from dropping the assumptions that tastes are private, personal, and fixed across time for the same individual. The only assumption about tastes that, at first approximation, is worth preserving is the fixity of tastes across agents or cultures. This should not mean that, at second and tertiary approximations, cultures and agents have identical tastes. However, for fundamental issues—such as weakness of will, trustworthiness, entrepreneurship, and cohabitation—it is imperative not to explain differences in practice in terms of differences in taste. Such an explanation would be an intellectual retreat.

SEE ALSO *Altruism; Becker, Gary; Behaviorism; Bentham, Jeremy; Cultural Relativism; Distinctions, Social and Cultural; Economics, Behavioral; Economics, Neoclassical; Galbraith, John Kenneth; Happiness; Individualism; Marginalism; Mill, John Stuart; Needs; Pareto Optimum; Rationality; Sen, Amartya Kumar; Smith, Adam; Socioeconomic Status; Stigler, George Joseph; Stigma; Sympathy; Utilitarianism; Utility Function; Want Creation; Wants; Welfare Analysis; Welfare Economics*

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Elias L. Khalil

TÂTONNEMENT

Tâtonnement, a concept introduced by French economist Léon Walras (1834–1910), is a trial-and-error process by which equilibrium prices and stability are reached in competitive markets. Walras found that "the markets which are best organized from the competitive standpoint are those in which purchases and sales are made by auction" (Walras 1954, pp. 83–84).

In an auction market, the *tâtonnement* process starts when the price is fixed (called out), and then demand and supply states are revealed. One possibility is that demand and supply conditions are balanced, establishing normal prices. The most likely state is disequilibrium, where the market will show excess supply or demand, causing deviation of the actual from the natural price. If equilibrium prices are not obtained, then *tâtonnement* requires the auctioneer to increase or lower prices, depending on the demand or supply conditions. In this groping process, the market mechanism would make the actual price gravitate to its natural level, establishing equilibrium. As long as equilibrium is not achieved, no contracts for selling or buying will be executed. The modern literature has conferred the name *nontâtonnement* on the situation where trading does take place at false prices. An unsolved problem with the *tâtonnement* process is whether to make it compatible with the solutions of equation systems by counting equations and unknowns as Walras did, or through more complex general equilibrium solutions such as fixed-point methods.

Walras's analysis of the *tâtonnement* process was challenging because both equilibrium levels and stability conditions were required. Walras compared the stability analysis to a pendulum-like mechanism in which "the center of gravity lies directly beneath the point of suspension, so that if this center of gravity were displaced from the vertical line beneath the point of suspension, it would automatically return" (1954, pp. 109–112). That concept of stability remains in vogue. John Hicks's (1904–1989) research (1946) was an early attempt to make Walras's arguments transparent to economists. With two commodities, X and Y, Hicks explained that equilibrium required that the supply of X be equal to the demand for

X. Stability requires that a fall in the relative price of *X* to *Y*, which will make *X* cheaper, will increase the demand for *X* above its supply. For multiple commodities, Hicks realized that when the relative price of *X* to a standard commodity changed, we need to know what will happen to the prices of the other commodities, which can be assumed fixed, or assumed to move to their equilibrium levels. The classical economist Alfred Marshall (1842–1924) simplified this with his introduction of ceteris paribus assumption, which held changes in all other prices constant.

Paul Samuelson improved the process by making Hicks's contribution more dynamic. For a one-commodity case, Samuelson (1941, p. 102) wrote a price differential equation of the form $\frac{dp}{dt} = H(q_d - q_s)$, where the rate of change in prices, *dp*, with respect to changes in time, *dt*, is a proportion, *H*, to the difference between demand and supply, $q_d - q_s$. This model addresses multiple markets by allowing the demand and supply variables to depend on the prices of say *n* commodities, $p_1, \ldots, p_n$. In the commodities case, the model implies that if we plot excess demand for good 1 against the relative prices, p_1/p_2, we obtain solutions for the prices when the excess demand function crosses the relative price axis. Stable conditions are obtained only when the excess demand cuts the relative price axis from above, implying that the excess demand function is downward. Stability is obtained because if the actual price ratio is higher than the equilibrium price ratio, then excess supply of good 1, and excess demand for good 2, are obtained, and prices will adjust accordingly so that the actual price ratio goes back to equilibrium.

For more than two goods, the Samuelsonian development of the *tâtonnement* process cannot be generalized. While Samuelson improved upon Hicks's model in the dynamic realm, his correspondence principle shows that static and dynamic relations are both useful concepts. Samuelson (1960, p. 368) also developed the Le Chatelier principle to explain adjustment to equilibrium after an initial displacement. Increases in demand will cause the relative price, say, of goods H_n to increase. If the prices of the other goods, H_{n-1}, increase, then it will lower the increase in the price of H_n. The increased price of H_n will be smaller if the price of H_{n-2} is also unchanged. The metaphor for this process is that squeezing a balloon will decrease its volume more with constant temperature than if we let its temperature warm up during the squeezing.

As Franklin Fisher (2006, pp. 143–144) pointed out, this treatment represents the *tâtonnement* process when only prices adjust and trade does not take place at disequilibrium prices. The solution is, therefore, unsatisfactory, because many prices are fixed and auctioneers are not present in all markets.

SEE ALSO *Equilibrium in Economics; General Equilibrium; Market Clearing; Prices; Stability in Economics; Walras' Law; Walras, Léon*

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Lall Ramrattan
Michael Szenberg

TAWNEY, R. H.
1880–1962

Richard Henry Tawney, teacher, social scientist, journalist, and political moralist, was born in Calcutta in 1880. Of upper-middle-class origin, Tawney was sent to Rugby School in England, where he developed something of the moral thoughtfulness for which Thomas Arnold (1795–1842) had made that institution famous. After Oxford University, where he attached himself to reform-minded circles, and social work at Toynbee Hall, a settlement house in London, Tawney found his vocation in education. He spent most of his career at the London School of Economics and Political Science and was also pedagogically and administratively active in the adult education movement. An English patriot, Tawney served in both world wars. His childless marriage to Annette Jeanie Beveridge, sister of a prominent Liberal politician, lasted

from 1909 until her death in 1958. Tawney himself died in London in 1962.

Tawney's discipline was history, specifically economic history, a field that he helped to establish. He produced several scholarly monographs, including *Religion and the Rise of Capitalism* (1926), a study of religious social thought of the sixteenth and seventeenth centuries and its relationship with emergent economic forces. In a celebrated footnote, Tawney questioned Max Weber's (1864–1920) thesis of a simple causal relationship between a homogeneous Protestantism and the growth of entrepreneurialism, suggesting instead that the capitalist spirit, as well as being of older vintage, had additional, nonreligious influences. While its arguments and strongly didactic style were themselves controversial, *Religion and the Rise of Capitalism* became a minor classic that has been translated into at least seven languages.

However, it was in a nonprofessional capacity that Tawney made his greatest mark. He became an important theoretician of the democratic Left, guiding the philosophy and tactics of the Labour Party through books, articles, policy documents, and editorials (principally for the *Manchester Guardian*) as well as by an irreproachable personal example. Two works were outstanding in this regard. *The Acquisitive Society* (1920) challenged the individualism and greed that Tawney associated with the system of industrial capitalism, proposing in their place a society based on principles of cooperation, professionalism, and service. His most important political volume was *Equality*, first published in 1931 and updated in 1938 and 1952. Here Tawney indicted the maldistribution of resources in Britain and set out a strategy for equality comprising progressive taxation, extensive public ownership, and a generous welfare state.

Another key text is Tawney's private diary of 1912 to 1914. Unencumbered by the elaborate, irony-laden erudition of his published writings, Tawney's *Commonplace Book* (published posthumously in 1972) contains in brilliant aphoristic outline the germs of his mature social philosophy. In particular, it reveals that Tawney's political idealism was securely anchored in profound Christian convictions. The final entry, for example, identifies an urgent imperative "to make society, when it is at peace, a field in which mere power, ruthlessness, [and] ambition, can *not* override the merciful and gentle" (p. 83).

Elements of Tawney's approach have been overtaken by such postindustrial trends as the decline of manufacturing (at least in the developed world) and the coming of a global information society. Nevertheless, the essence of his position—an ethically grounded, scrupulously honest argument for a free, fair, and fraternal society—has remained persuasive to many sections of the moderate Left in Britain, the United States, and elsewhere. The passing of time thus confirms Tawney's central place in the canon of democratic socialism.

SEE ALSO *Socialism*

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TAX BURDEN

SEE *Tax Incidence.*

TAX CREDITS

A tax credit is an amount that reduces payable taxes during a specific time period. Tax credits occur because a particular expense is tax deductible or because of a public policy that provides a credit up to a fixed amount. In order to calculate a tax credit, we use the following equation: Tax Credit = (Tax deductible expense) * (Tax rate).

In some countries interest expenses, depreciation, labor costs, and raw materials costs are tax deductible from a company's taxable profits. Hence equivalent tax credits are estimated based on these expenses. Tax credits have a meaning only when a company (or an individual person) has enough profits to be taxed. Specifically in Australia, Canada, the United Kingdom, and the United States, a tax credit is considered a disbursement (payment) toward taxes owed by a company or individual. There is a similar item in the French tax system, though under another name.

A tax credit differs from a tax deduction, tax allowance, or tax relief because the latter three reduce taxable income, whereas the tax credit decreases tax liability unit for unit—in other words, it reduces the tax itself. Tax

credits can be divided into two categories. The first consists of refundable (or non-wastable) tax credits, which can decrease owed taxes below zero and which thus lead to a net payment to the taxpayer, greater than their payments into the tax system. Hence they function like a moderate form of negative income tax. Examples of this type of tax credit in the U.S. tax system are the Earned Income Tax Credit and the Child Tax Credit. In the United Kingdom tax system examples include the Working Tax Credit and the Child Tax Credit. The second category consists of nonrefundable (or wastable) tax credits, which cannot reduce owed taxes below zero and thus do not allow the taxpayer to get a refund in excess of his or her payments into the tax system. Examples of this type of tax credit in the U.S. system include two educational tax credits, the Hope Tax Credit and the Lifetime Learning Tax Credit. Examples in the United Kingdom tax system include the former Children's Tax Credit and the Declared Gifts Tax Credit, given to registered charities under the Giftaid scheme.

TAX CREDITS IN THE UNITED STATES

Principal tax credits in the U.S. tax system include the Child Tax Credit, the Federal Tax Credit for Energy Efficiency, the Earned Income Tax Credit, and the Low Income Housing Tax Credit. The Child Tax Credit (CTC) is based on the number of children in a family. In 2005 an individual could claim $1,000 of CTC per child. According to Internal Revenue Service (IRS) regulations, a child must be claimed as a dependent. To be eligible to be declared as a dependent, a child must have a Social Security number, be related to the taxpayer, be less than seventeen years old, and be a citizen or resident of the United States. The CTC is not available to wealthy people or to those who do not pay any taxes. For a couple (filing a joint return) the maximum adjusted gross income (i.e., combined income) is $110,000. For a single parent it is $75,000, and for a married couple filing separately it is $55,000 each. Finally, it should be noted that if a couple or single parent gets the CTC, this does not prohibit them from getting any other tax credit they qualify for.

The Earned Income Tax Credit (EITC) is a refundable tax credit that decreases or eliminates the taxes paid by low-income people. In some respects it can be considered a wage subsidy for low-income workers. The EITC was established in 1975 and expanded in 1986, 1990, 1993, and 2001. In 2006 this tax credit was one of the major antipoverty tools the U.S. government had and was widely supported.

The EITC has a three-stage structure: the phase-in stage, in which the tax credit increases as earnings increase; the plateau stage, in which the maximum range has been reached and the amount of credit is not affected by an increase in earnings; and the phase-out stage, in which the tax credit decreases as earnings increase. For instance, in 2006 the EITC for a four-member family was equal to 40 percent of the first $10,750 earned, the maximum credit was $4,400, the EITC decreased as earnings passed $15,000, and it became zero when earnings went beyond $35,000.

In 2004 the EITC cost the federal government approximately $36 billion. According to the General Accounting Office and the IRS, 15 to 20 percent of Americans who qualify for the EITC do not claim it. For this reason several nonprofit organizations, with the help of the government, have initiated special programs all over the United States to make the EITC known to taxpayers and to help taxpayers claim it. In addition to the federal EITC, eleven states and some other areas offer local EITC.

Overall the EITC has increased the percentage of people who join the labor force. There is some evidence that this rise in worker supply has caused a decrease in wages (on a per hour basis) for those that qualify for this particular tax credit.

The Federal Tax Credit for Energy Efficiency, which was established by the Energy Policy Act of 2005, applies to people and companies in four categories:

- Consumers who make home improvements to save energy, such as insulation, window replacement, or the instillation of heating or cooling systems; or who buy energy-efficient cars, such as hybrid gasoline-electric, diesel, battery-electric, alternative fuel, and fuel cell vehicles, or who install solar water heating, photovoltaic, fuel cell, and microturbine systems.
- Homebuilders who, in order to construct energy-efficient homes, pay for building-envelope improvements and energy-efficient heating and cooling systems.
- Appliance manufacturers who manufacture energy-efficient washing machines, dishwashers, and refrigerators. This in turn can lead to a price reduction for these types of appliances.
- Owners or designers of commercial buildings in which lighting, heating, and cooling systems meet efficiency standards. Credits in this category go up to $1.80 per square foot.

Another category of tax credit is the Low Income Housing Tax Credit (LIHTC), which was established by the Tax Reform Act of 1986 (TRA86). This tax credit aims to give low-income Americans incentives to own a house rather than rent. TRA86 offered incentives to investors to buy homes by changing the treatment of

imputed rent, local property taxes, and mortgage interest payments. These changes, however, negatively affected low-income people, who usually lived in rented homes. Hence the LIHTC was established along with the TRA86 to mitigate these negative consequences. The LIHTC directly subsidizes the development costs of low-income residential units, excluding land acquisition costs. Tax credits are claimed as an annuity for a period of ten years (the credit period) and not as a lump sum as with other tax credits. Since 2002, 40 to 50 percent of new construction of family residences has been developed under the LIHTC program at a cost to the federal government of approximately $3 billion per year.

TAX CREDITS IN CANADA

In the Canadian tax system, one important tax credit is the Canada Child Tax Benefit (CCTB). The CCTB is a monthly tax-free payment available to qualifying Canadian families made in order to help defray some of the costs of raising children. The CCTB can incorporate the National Child Benefit and the Child Disability Benefit. The former is a monthly payment to low-income families with children. The latter is a monthly payment to families with children that have severe and prolonged mental or physical disabilities.

Another tax credit that has existed since 1980 is the Scientific Research and Experimental Development Tax Incentive Program (SR&ED or SRED). This tax credit applies to businesses in Canada and is intended to support and encourage applied research and experimental development leading to new or improved goods and services. The program costs the Canadian government approximately $1.8 billion per year. The Ministry of Finance is responsible for legislation of the SR&ED tax credit, and the Canada Revenue Agency is responsible for its administration.

Even if SR&ED expenses have already been deducted from revenue, businesses may qualify for Investment Tax Credit (ITC) if those expenses are associated with experimental development, applied research, basic research, or research support work. Relevant expenditures include wages, materials, equipment overhead, and SR&ED contracts arising from the aforementioned activities. The amount of the ITC depends on how much of a business's SR&ED expenses were incurred in Canada and on the business's legal status. Furthermore each region in Canada has the right to provide provincial or territorial tax credits to qualifying businesses that pursue SR&ED activities in those regions.

TAX CREDITS IN THE UNITED KINGDOM

In the United Kingdom tax system significant tax credits include the Working Tax Credit and the Child Tax Credit. To qualify for these credits, a person must be older than sixteen and live in the United Kingdom—either as a British citizen or as a European Economic Area citizen working in the country—or receive a United Kingdom state pension while living abroad. The Child Tax Credit (CTC) is given to people who are responsible for at least one child or qualifying young person. It is paid directly to the person who is responsible for child care. A single parent can claim individually, but a couple must make a joint claim. The Working Tax Credit (WTC) is given to people who are employed or self-employed (either alone or in a partnership) if they meet the following criteria:

- they usually work sixteen or more hours per week;
- they are paid for that work;
- they expect to work for at least four weeks;
- they are older than sixteen and responsible for at least one child, or are sixteen years old and disabled, or are above twenty-five and work at least thirty hours per week on average.

If both people in a couple are working sixteen hours or more per week, only one can receive the WTC. There is, however, also a child care component of the WTC, which is always paid to the person responsible for raising a child, in addition to CTC payments. Before 2003, when the WTC and the CTC were established, the Working Families Tax Credit, created in 1999, combined the functions of the WTC and CTC. Before that, from 1986 to 1999, United Kingdom taxpayers received the Family Credit.

The amount of tax credits received depends on annual income. For instance, a family with income below £58,000 can claim the CTC in addition to child benefits. If a child or children are disabled, higher rates are paid. If the income is below £50,000, the CTC is £545 per year for the family (£1,090 if there is a baby under twelve months old). For low-income families, there is an additional £1,765 per child per year. The CTC can be claimed even by families that are rich. Both the WTC and the CTC are made up of components (elements) according to individual cases that form the basic amount of tax credit receivable. For instance, the basic element is £1,665 for the year 2006–2007, then other elements follow, such as the couple and lone parent element £1,640, the thirty hour element £680, the disabled worker element £2,225, and so on. For the CTC, the family element is £545, and then follow the family element, baby addition £545, the child element £1,765, the disabled child element £2,350, and so forth that are applied according to individual cases. Both these tax credits are paid based on the gross household income earned during the previous tax year.

WTC and CTC tax credits were not well administered when they were first established, and many cases of overpayment were observed. Nevertheless, tax credits are considered an important means of encouraging low-income employees, as they help avoid the disincentive to work that occurs when wages amount to little more than unemployment benefits.

SEE ALSO *Earned Income Tax Credit; Research and Development; Taxes*

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Katerina Lyroudi

TAX EVASION AND TAX AVOIDANCE

Tax evasion is the use of unlawful means by individuals and firms to reduce their taxes. It refers to taxpayers' intentional actions that misrepresent or conceal the true state of their financial affairs to tax administrators. An example of tax evasion is taxpayers' deliberate understatement of their income. Tax fraud is a kind of evasion that involves the falsification of records. In most countries tax evasion is a crime punishable by fines or imprisonment.

Tax avoidance is the use of lawful means by individuals and firms to decrease their taxes. In some countries a distinction is made between tax planning and avoidance. Acceptable tax planning satisfies both the wording and the intent of the tax law. Tax avoidance (abusive tax planning) is consistent with the letter but not the spirit of the law. It usually involves the exploitation of loopholes in tax legislation to the advantage of taxpayers. An example of tax avoidance is transforming highly taxed income into preferentially taxed capital gains. The boundary between tax planning and avoidance is sometimes fuzzy, and so is that between tax avoidance and evasion.

Under the self-interest and rationality assumptions, taxpayers would engage in evasion or avoidance so long as their incremental benefits from such activities exceed their incremental costs. However, many individuals and firms appear to be inherently honest and comply more fully than is anticipated by this approach. This suggests that taxpayers' observed compliance levels depend not only on economic incentives but also on their sense of moral and social obligations. The determinants of tax evasion and avoidance broadly include:

- taxpayers' sense of community association and perception of the tax system's fairness;
- the tax rate (higher rates may induce evasion and avoidance, while the difference between personal and corporate rates encourages avoidance);
- opportunities to evade or avoid taxes (tax withholding and third-party reporting reduce evasion, while access to skilled tax practitioners increases avoidance);
- tax practitioners' approach to reporting decisions;
- taxpayers' compliance costs;
- tax administrators' effectiveness (including detection, penalty, and enforcement).

In developing countries, entry into the formal economy may be blocked by legal, regulatory, and bureaucratic barriers. This blockage gives rise to tax evasion and avoidance.

The extent of tax evasion and avoidance can be approximated by the tax gap, which is the difference between the tax that is meant to be paid and that which is paid. The quantification of the tax gap, especially tax avoidance by businesses, is beset with both conceptual and empirical difficulties. Numerical estimates nevertheless suggest that tax evasion and avoidance are serious in industrialized countries. In the United States the federal tax gap (which includes tax evasion, unintentional errors, nonfiling, and tax underpayment) in 2005 was estimated by the U.S. Treasury to be 14 percent of the total federal tax revenue or $345 billion, most of which is attributable to underreporting of individual incomes (U.S. Treasury 2006). Studies of the black market economy suggest that, generally speaking, countries in the Organisation for Economic Co-operation and Development (OECD) face even higher relative tax gaps than the United States. Although there are no reliable estimates of tax gaps in industrializing countries, it seems plausible to argue that, compared with developed economies, developing nations suffer higher relative tax gaps because of their poorer tax administration and larger informal sectors.

SEE ALSO *Crime and Criminology; Offshore Banking; Taxes*

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Binh Tran-Nam

TAX HAVENS

SEE *Offshore Banking.*

TAX INCIDENCE

The objective of tax incidence analysis is to determine who ultimately bears the burden of a tax. It is therefore an important concept for evaluating the equity of the tax system.

Statutory incidence assigns the burden of paying a tax to either an individual or a business, depending on the tax. However, the burden of the tax may be shifted because individuals and firms adjust their behavior when taxes are introduced or changed. As a result, economic incidence (our subject here) may differ from statutory ("legal") incidence. A simple example is an excise tax on gasoline. As shown in Figure 1, before a tax is imposed, the equilibrium supply (S) and demand (D) is achieved at price P_0 and quantity consumed of Q_0. If a $1 per gallon tax is imposed, the statutory incidence is borne by the consumer when he or she pays "at the pump." However, the consumer will not pay the full amount of the tax, because the supplier will now receive a lower after-tax price per gallon. In effect, suppliers are faced with a new demand curve, D', representing the price they will receive net of tax. This is denoted as the new demand curve, D', in Figure 1. This demand curve is shifted down from the original demand curve, D, by $1 per unit. Per gallon of gas, the consumers now pay P_g (the gross price), producers receive P_n (the net price), and government receives $P_g - P_n$, or the amount of the tax (T). In the case demonstrated in Figure 1, the producer receives a lower price per unit than before the tax is imposed, and the consumer pays a higher price than in the no-tax case. Therefore, part of the tax is paid by consumers in the form of a high pump price, and part is paid by the producer in the form of a lower after-tax price received.

The economic incidence of a tax is largely determined by the elasticities of supply and demand, that is, by

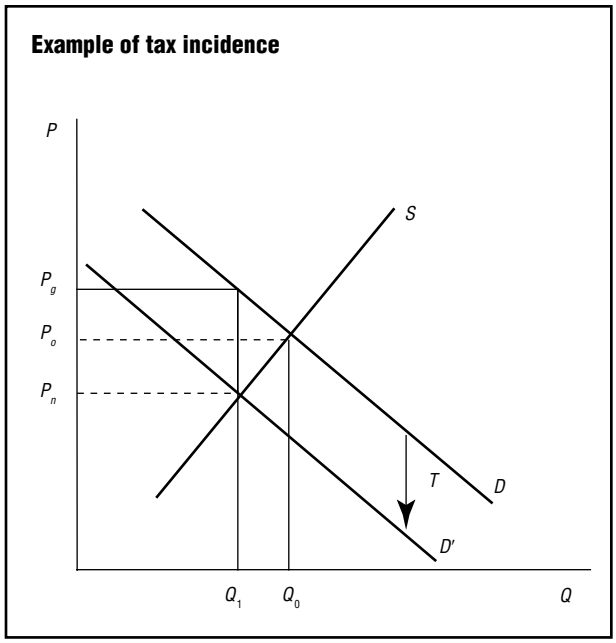

Figure 1

the change in the quantity consumed or produced when the price of that good changes because of the imposition of the tax. When the price elasticity of supply is very small, the supply curve becomes more vertical and the supplier tends to bear a larger portion of the burden of the tax. When demand is very price inelastic, the consumer tends to bear a larger share of the burden of the tax (because there are few substitutes for the taxed good). This type of analysis can also be done for taxes on factors—that is, for taxes levied directly on labor and capital, such as a corporate profits tax or a payroll tax.

The analysis of tax incidence becomes more complicated when we consider the impact of a tax in one market on the supply and demand for goods in other markets. Arnold Harberger (1962), a pioneer of the study of general equilibrium tax incidence, demonstrated the theory that taxes levied in one market can be borne by productive factors in another market. Harberger's model evaluated the impact of a corporate income tax as a tax on capital in one sector of the economy (a "partial factor tax"). By using a model in which the demand and supply for output adjusted to a new equilibrium after a tax was imposed, the impact of a corporate income tax on the price of capital, labor, and output could be analyzed. The results show that, depending on the elasticities of demand and supply and the ability of producers to substitute labor for capital in the production process, the burden of a corporate income tax could be fully or partially borne by labor or capital, or shifted forward in terms of higher output prices. Harberger's model has been used since the 1960s to estimate the burden of taxes, and it is also a model for analyzing the excess burden or "welfare loss" of taxes.

Even more complicated, intertemporal models that consider the incidence of taxes over a lifetime have been developed using sophisticated models of the economy. John Shoven and John Whalley (1984) were among the first economists to use computer models to analyze the incidence of a system of taxes. These types of models are now regularly used as a means to incorporate many markets into the tax incidence analysis.

Joseph Pechman and Benjamin Okner (1974) produced one of the first comprehensive incidence analyses of the U.S. tax system, using incidence assumptions based on general equilibrium results. They compared the distribution of income before and after taxes (imposing various assumptions about the economic incidence of the tax) and showed that at that time, the tax system had little impact on the after-tax distribution of income. The Congressional Budget Office produces regular analyses of the distribution of the burden of U.S. federal taxes. Their 2006 analysis shows that when all federal taxes are considered, the tax system is somewhat progressive—that is, as incomes increase, so too does the percentage of income paid in tax.

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Sally Wallace

TAX RELIEF

The term *tax relief* is widely used to refer to tax cuts, tax rebates, tax subsidies, tax breaks, and tax write-offs that reduce the amount of tax due or otherwise provide concessions to taxpayers. Usually, tax relief is targeted toward income and ownership taxes, consumption taxes, commodity taxes, and taxes on business establishments in apparent need of such financial makeups.

Tax relief is as old as modern-day government and is primarily born out of a government's genuine concern to bridge the wide gap between low-income and high-income earners by exempting those earning below the national minimum income from paying tax. Tax relief is also often meant to protect local infant industries by giving them tax holidays so they can better compete with foreign companies. In addition, tax relief can be informed by the need to redirect the economy toward a path of balanced growth and development. In this light, tax relief can be a useful tool in the hands of economic planners who wish to effect necessary adjustments in development parameters so as to achieve projected development objectives.

Tax relief is premised on the belief that it will be used for policing the economy and for bridging the gap between local industry and foreign industry. In addition, tax relief is seen as having the effect of stabilizing an economy, since a rise in the tax rate is likely to encourage workers to work less, knowing full well that they will be taxed. Tax relief may also stimulate the economy by raising the aggregate level of savings and consequently investment.

Empirical evidence shows that tax relief is often granted to individuals and corporate organizations who are victims of natural disasters. Tax relief may also be granted to citizens of states involved in bilateral or multilateral trade agreements as concessions in response to their

development needs. For example, third world countries such as Gambia and Nigeria have been granted tariff concessions from GATT (General Agreement on Tariffs and Trade).

Tax-break programs may also help reduce the tax obligations of homeowners. In fact, some countries may offer tax relief to individuals who rent the property in which they reside and also to individuals earning a certain level of income. The Republic of Ireland, for example, offers such concessions to renters.

In some cases, tax relief may increase national income because it may encourage more work, saving, investment, risk taking, and entrepreneurship. If taxes are excessively or inappropriately levied, then a tax reduction may motivate people to be more productive and create wealth. Moreover, when people earn more income, they are able to spend more and save more.

Tax relief has been widely criticized for being politically popular despite a lack of clear economic benefits from such policies. After all, what is the rationale for granting tax relief that in the long run will be withdrawn? Tax relief is also criticized for having adverse effects on the economy in the long run. In technical terms, the government faces an intertemporal budget constraint, which means that when taxes are cut, other offsetting adjustments are required to make up for the cut. If the government decides to raise taxes later, effectively making the tax cuts temporary, the initial tax relief could lead to lower economic output over time. Tax cuts put money in people's pockets, but they do not pay for themselves. The government eventually has to pay its bills, and taxes are the primary source of government revenue.

SEE ALSO *Earned Income Tax Credit; Tax Credits; Tax Evasion and Tax Avoidance; Tax Incidence; Tax Revolts; Taxes*

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TAX REVOLTS

Tax revolts are interesting because taxation—a claim made upon the property of individuals—is one of the two distinguishing features of government, the other being its monopoly on the legitimate use of force. Thus, when citizens rebel against taxes, their actions may represent something far more fundamental than when they reject other kinds of public policies. Tax revolts are also interesting because they seem to be ubiquitous. Peasant revolts against land taxes have been documented from medieval Japan (White 1995) to contemporary Africa (Kelsall 2000) and China (Bernstein and Lu 2003). In Europe, voters have rebelled against both British prime minister Margaret Thatcher's poll tax proposal that was regressive in incidence by bearing relatively more heavily on the poor than the wealthy (Burns 1992) and the progressive tax program of the Danish welfare state (Kirschelt 1997). And in the United States, the tax rebellion label has been applied to both the revolution of 1776, as illustrated by the Boston Tea Party, and the wave of tax reduction and tax caps adopted following California's passage of Proposition 13 in 1978 (Sears and Citrin 1985).

Given the importance and ubiquity of tax revolts, it is not surprising that scholars have spent considerable time trying to explain why they occur. The very ubiquity of "tax revolts" suggests that not all of the events so labeled are the same kind of phenomenon. Therefore, no single explanation is likely to explain all tax revolts. Indeed, there seem to be several different kinds that vary in terms of the breadth of issues they address. At the narrowest level are voter rejections of specific referendum proposals to raise taxes or to adopt bond issues. In such cases, the issue is narrowly defined and the forces determining voters' decisions are typically the same kinds of socioeconomic, attitudinal, and partisan variables found to be important in day-to-day politics (Cataldo and Holm 1983; Listhaug and Miller 1985). Thus, we do not need a special kind of explanation for some kinds of tax revolts. Indeed, it is not clear that such events constitute "revolts," since voters are making their preferences heard on specific policies through routine mechanisms of political choice.

The tax revolt label, in contrast, usually refers to something more unusual or unexpected. In some cases, as in voter agitation over property-tax-assessing practices in California in the early 1970s, the focus of the tax revolt might still be narrowly defined as a tax issue, even if it was a somewhat unusual sort (Paul 1975). But in other cases, tax revolts may represent a more general challenge to the government in power, as seems to have been the case in Britain's rejection of Thatcher's regressive poll tax and the Danish People's Party rejection of high levels of progressive taxation to support the welfare state. Even further, tax revolts may represent a rejection of the political regime

itself, as some argue is the case with rural protests in China. In these broader episodes of tax revolution, taxes are merely the specific focus of a larger rebellion. Given this complexity, determining what citizens are saying when they revolt against taxes is easy neither for the politicians who must respond to rebellions or for scholars trying to explain them.

Perhaps the broadest and most unusual type of tax revolt occurred in the United States during the late 1970s and early 1980s, starting with the passage of California's Proposition 13. This event was certainly unusual. Californians had rejected by large margins two similar proposals in the previous decade. And nationally, while no tax revolt referendum had passed prior to Proposition 13, none failed in the ensuing five years, and none were successful thereafter. Within a short period, more than one hundred scholarly papers appeared purporting to interpret what voters were saying to politicians. These explanations covered all of those noted earlier for other tax revolts, from a rejection of big government (Rabushka and Ryan 1982) to symbolic racism (Sears and Citrin 1985). But none proved capable of explaining the boom and bust cycle of the great American tax revolt (Lowery and Sigelman 1981). Or rather, all of these explanations were true to some degree. That is, the U.S. tax revolt was an unusual kind of comprehensive single-issue politics in which grievances of all kinds were linked to a single policy solution—limiting taxes (Lowery 1982). In effect, tax revolution was a magic bullet that would solve a problem, no matter what the problem was. Once the tenuous connection between the many different kinds of grievances motivating voters and the specific tax proposals before them became obvious, support for the movement collapsed.

Irrespective of their origin, the consequences of tax revolts can be significant. Thatcher left office shortly after the failure of her poll tax proposal. In Denmark, the tax revolt movement evolved into the Danish People's Party, which has since taken a lead in promoting anti-immigration policies. In the United States, few tax revolt referendums actually cut taxes. Indeed, only one state followed California's Proposition 13 by sharply cutting property taxes. The other nineteen state referendums passed during the tax revolt period imposed fiscal caps that set limits on the future growth of government. But nearly all state legislatures cut taxes during this period so that for the first time in decades aggregate state tax burdens actually declined for several years. And the results of tax-revolt-induced policies can sometimes be surprising. As yet, the fiscal caps adopted by the states have not seriously impinged on government spending, although they may do so in the future (Cox and Lowery 1990). As for the hundreds of tax cuts adopted by legislatures, their consequences were often surprising. State government budgets were, as expected, highly constrained for several years. But state taxes were also marginally less complex and more progressive and elastic after the tax revolt than before, something that neither supporters nor opponents of tax cut proposals had anticipated (Lowery 1986).

SEE ALSO *American Revolution; Poll Tax; Protest; Social Movements; Taxation; Taxes; Taxes, Progressive; Taxes, Regressive*

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David Lowery

TAXATION

Taxation is as old as recorded history. The earliest forms of writing, pictographs from the ancient Near East, are records of taxpayer accounts, paid and owed, to the king. *Taxation* is the taking of economic resources by a political entity from an individual or collective who is subject to its

authority. It is a *taking* in that taxation is not a freely voluntary exchange, because resources are given under threat of coercion. *Economic resources* can take the form of money, goods, or service. *Political entity* refers to an individual (chief, prince), group (tribe, caste), or institution (state, government) that makes claims on and decisions for those from whom economic resources are sought. Their *authority* to claim economic resources is derived by consent, law, or force. The subjects of taxation are usually territorial based, including social collectives (tribes, villages, colonies, castes), economic collectives (guilds, mercantile companies, incorporated businesses), and individuals and households.

There are two general forms of taxation, direct and indirect. Direct taxation refers to tax claims made on fixed entities, such as a person, a business, land, and property. Indirect taxation refers to tax claims made on economic transactions, such as the sale of goods and services, trade, and commerce. For much of preindustrial history, taxes were direct, such as the poll tax. They were imposed on collectives and paid in kind with service (labor) or goods (a percentage of agricultural harvests). With the rise of capitalist cash economies in the modern period, taxation increasingly was directed toward money and financial assets. The modern state has shown a preference and capacity for indirect taxes as well as direct taxes claimed from individual households and business collectives.

Taxation is a type of exchange relationship between a political entity and its claimed subjects. Exchange is what distinguishes taxation from plunder. The political entity is supposed to provide something in exchange for economic resources. In the earliest forms of taxation, political entities claimed tribute in exchange for protection from physical harm, both from the political entity itself and from others in warfare or robbery. As the relationship evolved historically, taxation became more varied in form and routinized in collection; in exchange, political entities provided more public goods, such as dispensation of justice, enforcement of law and property rights, establishment of economic infrastructure and cultural institutions, and provision of social and economic welfare goods. Some taxes are imposed not just to raise revenue but also to promote or discourage social behavior. For example, a reduced tax burden is meant to encourage charitable donations, while higher tax rates are meant to discourage smoking and drinking.

Taxation serves as the arena where power and wealth collide and connive in society. Each society develops its own system of distribution of tax burdens, progressive or regressive, which inevitably penalizes some and benefits others. Quasi-voluntary compliance occurs when political authorities succeed in providing sufficient goods in exchange and maintain a perception of fairness in the tax burden and a threat of coercion against those who do not pay. If these three factors are not in place, the tendency for evasion and noncompliance increases. Also income tax compliance was enhanced when employers were made to share responsibility for payment with employees. Tax burdens are sometimes effectively hidden in the final costs of goods. Resistance to the revenue claims of political authorities in the form of tax revolts provides some of history's most notable political conflicts, including the English civil war, the French Revolution, and the American War of Independence.

SEE ALSO *Poll Tax; Tax Credits; Tax Relief; Tax Revolts; Taxes; Taxes, Progressive; Taxes, Regressive*

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Gerald Easter

TAX-BASED INCOMES POLICY

SEE *Wage and Price Controls.*

TAXES

Taxation is the principal means by which governments get the resources to pay for activities such as armed forces, a court system, a health care program, and programs aimed at transferring resources to the destitute or the elderly. Taxation is not, however, the only means by which a government gains control of resources; for example, many countries draft people into the military. Among developed countries, taxation accounts for between 25 and 50 percent of national income. Taxation in developing countries generally raises substantially less than this, primarily due to the difficulty the tax authorities encounter in collecting taxes. Although tax receipts in many countries fall well short of covering current expenditures, the resulting deficits do not imply that the expenditures are costless; payment is simply delayed, and future generations bear the costs of the expenditure.

Taxation is as old as government itself. Indeed, the first known written records, made by the Sumerians about 5,000 years ago, are apparently tax records. Before money was widely used, taxes were paid in kind with grain, cattle, labor, and other valuable objects. Compulsory labor is the earliest form of taxation for which records exist; indeed, in the ancient Egyptian language the word *labor* was a synonym for *taxes*.

In Europe before the seventeenth century, most taxes were levied directly on people, depending on their status in society or on the land they owned. About that time, new taxes arose that were associated with the rising tax bases related to commerce, transactions, and urban markets. Some advocated such taxes as a way of introducing equality in taxation, because the privileged classes had managed to obtain virtual immunity from the existing status-based tax system.

Beginning in the nineteenth century, the growing scale and cost of war greatly expanded the revenue needs of many Western countries, and the tax systems expanded to keep up with these needs. The modern income tax began in Great Britain around 1800 to help pay for wars with France. Financing wars was then the major expense of government—from the twelfth to the nineteenth century, between 75 and 90 percent of the English government's expenditure went to financing wars. The income tax was also a response to a concern that a tax system that relied on land as a tax base was failing to reach the growing commercial wealth and income that arose during the Industrial Revolution.

Resistance to taxes was a theme of the American Revolutionary War (1775–1783). In keeping with that spirit, taxes in the United States were relatively low until the twentieth century and are still among the lowest of all developed countries. In 1900 U.S. federal taxes amounted to just 3.1 percent of gross domestic product (GDP), while state and local taxes comprised another 4 to 5 percent. The U.S. income tax was introduced in 1913, after the passage of the Sixteenth Amendment to the Constitution, which set aside the constitutional provision that all direct taxes must be levied across states in proportion to their population.

The role of the U.S. federal government expanded greatly during the first half of the twentieth century, and by 1943 federal taxes increased to 19.7 percent of GDP. World War II (1939–1945) was clearly the critical juncture, although the New Deal years of the 1930s were also important. Many programs, particularly Social Security, were introduced during the 1930s and would require much higher taxes in later years. By 2003 federal tax receipts (including social insurance payroll taxes) amounted to 17 percent of GDP, with state and local taxes adding another 8.8 percent. The total share had been roughly constant since the 1970s, but since 2001 federal taxes as a share of GDP have fallen notably due to a series of tax cuts enacted during the George W. Bush administration.

In modern tax systems, a wide range of activities and circumstances can trigger tax liability—the purchase of a good from a retailer triggers a sales tax, the payment of wages for a business to a worker triggers an income tax, or the passing of wealth from one generation to the next triggers estate and inheritance taxes. Although there are a large variety of taxes, certain kinds predominate. Among developed countries, which raise on average about 37 percent of GDP in taxes, slightly more than one-third of tax revenue comes from income taxes; slightly less than one-third comes from various taxes on consumption, including value-added taxes remitted by all businesses; and about one quarter comes from social insurance taxes. The United States stands out among developed nations for its relatively low taxes and for making much less use of consumption taxes. The United States is also the only member country of the Organisation for Economic Cooperation and Development, a group of thirty developed countries, without a value-added tax.

On average, poorer developing countries collect taxes that amount to a substantially lower percentage of their national income. Of the tax revenue they do collect, a smaller share comes from income taxes and a larger share from both consumption taxes and, especially, taxes on international trade. The reliance of developing countries on trade taxes reflects the relative ease with which goods can be observed and valued as they cross international borders, which is important in countries where administrative resources are scarce. It also reflects the use of import taxes as a deliberate economic strategy to promote domestic industrial development, as well as the prevalence of easily taxed exports of primary products such as oil, food, and industrial crops. This lower reliance on income taxes is largely due to the difficulty of collecting income taxes in countries with large informal sectors; unlike developed countries, only a small proportion of the workforce is employed by well-established, financially sophisticated companies whose existence facilitates collection of taxes on the income of both businesses and employees.

There are two key aspects to all taxes: Who bears the burden, and what is the effect on the economy? Ascertaining who bears the tax burden is not simply a matter of keeping track of who writes the checks to the government. For example, in the United States most of the income tax liability of employees is remitted by employers in the form of withholding, although it is widely believed that it is the employee, not the employer, who bears the burden through lower take-home pay. The filing of an employee's tax return reconciles his or her

actual tax liability to what has already been remitted, on the worker's behalf, by the employer.

Taxes can also impose burdens by changing the prices of what people buy, as occurs with cigarette taxes. Taxes can even have an impact on individuals buying untaxed goods. For example, a tax on butter may cause some consumers to switch to margarine, driving up the price of margarine and shifting some of the tax to people who prefer margarine for health reasons.

Some types of taxes, such as the corporation income tax, are legally owed by a business entity, but the tax burden will be shared among the company's shareholders, workers, and customers to the extent that the company is able to "pass on" the tax burden by, for example, paying lower or charging higher prices for their products. Assessing the burden of the corporation income tax is one of the most controversial questions in the study of taxation, made more difficult by the advent of multinational corporations that have operations, customers, and shareholders in many countries.

The question of who *should* bear the burden of taxes is separate from who *does* bear the burden. It is a perennially contentious issue for which there is no right or wrong answer. One aspect is how the burden should be shared across income classes, an issue often referred to as *tax progressivity*. Intuitively appealing but vague principles—for example, taxes should match the benefits one receives from government activities, or taxes should equalize sacrifice—do not offer much practical guidance, and modern economics has for the most part given up on refining such principles to instead focus on the consequences of different levels of progressivity. Moreover, it is not clear why, in assessing the distributional consequences of government, it makes sense to focus on tax progressivity rather than the progressivity of what the government provides its citizens and how it assesses taxes to pay for those programs.

Aside from progressivity, tax systems should avoid arbitrary distinctions in tax burden based on people's tastes or characteristics, whether intended or capricious. In the past, such arbitrary taxes have been imposed on minorities; examples include the poll tax collected from Jewish communities in the Holy Roman Empire and the poll tax levied on non-Muslims in the eighth-century Abbasid caliphate of Persia. Modern tax systems often make tax-burden distinctions among families of the same income level, based, for example, on such factors as family size, charitable inclinations, or tastes for cigarettes.

The second question to ask about any tax system is what costs it imposes. The first and most obvious cost is that every dollar of taxes remitted to the government leaves one less dollar for taxpayers to spend on goods and services. For this reason, a responsible government will only raise taxes to provide programs whose value exceeds the private consumption that is given up.

But there are costs over and above the money taxed away. For one thing, collecting taxes requires a substantial bureaucracy. The Internal Revenue Service (IRS) budget is over $10 billion per year, although that amounts to only about 0.5 percent of the revenue it collects. Dwarfing that are the costs borne directly by the taxpayers—called *compliance costs*—which include the value of their time spent on tax matters and money spent on tax software and professional tax preparers and planners. This cost has been estimated to exceed $100 billion a year for the U.S. income tax system, ten times the administrative cost for all taxes combined and about 10 percent of revenues collected.

Administration of a legitimate, nonarbitrary tax system is facilitated when there are observable, measurable things that can serve as tax bases. For example, it is notoriously difficult to enforce taxes on food products grown and consumed by farmers and on the income of self-employed individuals. Most modern tax systems rely on businesses that withhold taxes on employees' earnings and provide information reports to the tax authority that can be matched with employees' tax returns. Withholding and information reports are supplemented by random audits, with penalties for noncompliance. In many countries, the employee-withholding system is exact and final so that no tax return need be filed by most employees; the British pay-as-you-earn system is an example.

In spite of these measures, substantial tax evasion occurs. According to the IRS, about 16 percent of the federal taxes that should be paid are not. The noncompliance rate varies widely by the type of income; it is less than 2 percent for wages and salaries and as much as 50 percent for self-employment income, the stark difference reflecting the availability of withholding and information reports for the former but not the latter type of income.

Taxes impose another kind of cost on an economy because they alter the costs and rewards of various behaviors. For example, both income and consumption taxes reduce the incentive to work by reducing the consumption reward per hour of labor supplied to the market. Income taxes, but not consumption taxes, also reduce the reward and therefore the incentive of individuals to save and businesses to invest. These behavioral responses represent costs because they channel resources in socially unproductive directions. For example, from society's point of view it is costly if income taxes dissuade someone from joining the labor force. Much economic analysis has tried to quantify these behavioral responses; the consensus view is that the overall labor supply response is not large and the saving response is not well understood, but certain other behaviors, such as the timing of capital assets sales

to anticipated tax changes, are highly responsive to the tax system. The bigger the behavioral response, the higher the economic cost per dollar raised. Some have estimated that, all in all, the behavioral responses to the U.S. income tax system generate an extra forty cents of social cost for every additional tax dollar raised.

TRADEOFFS

Tax policy is controversial because the objectives often conflict. Although the economic costs could arguably be reduced by making the tax burden less progressive (i.e., reducing how much the tax burden rises with income), many would find such a system to be an unfair shifting of the burden toward low-income people. Simplifying the tax system could save substantial administrative and compliance costs, but a simplified system might render the tax burden less finely tuned to individual circumstances. Many of the debates about tax policy involve such choices. For example, would lowering taxes on entrepreneurial income stimulate enough economic activity to offset the fact that (successful) entrepreneurs are often among society's wealthiest citizens?

The twentieth-century expansion of the role of government, and the associated need for more tax revenues, seems to have peaked in the 1980s, and on average the worldwide ratio of tax collections to GDP has not changed much since that time. Looking ahead, as national economies become more interconnected, it may become more difficult to collect taxes without substantial cross-country cooperation. Furthermore, governments may compete to attract businesses by offering lower taxes. Some view this development as a dangerous "race to the bottom" that will undermine the ability of governments to provide public goods and social insurance, while others applaud it as a way to discipline otherwise profligate governments in the same way that competition among companies promotes cost-minimizing business operations.

Especially in the last two decades, the U.S. income tax system has become much more than a way to raise revenue; it also delivers a wide range of social programs. Thus, it is misleading to associate government expenditure programs with what the government *does* and the tax system with how it pays for what it does because much of what government does is achieved via the tax system. For example, the U.S. income tax subsidizes charitable giving by making it deductible from taxable income. It also promotes homeownership through its favorable tax treatment, and it delivers the country's biggest antipoverty program via the earned income tax credit. These programs add to the complexity of the tax system, and thus to its administrative and compliance costs, and the constituencies that benefit often oppose efforts to simplify the tax system that would eliminate these programs.

SEE ALSO *Earned Income Tax Credit; Inheritance Tax; Negative Income Tax; Tax Credits; Tax Evasion and Tax Avoidance; Tax Relief; Taxes, Progressive; Taxes, Regressive; Transaction Taxes*

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Joel Slemrod

TAXES, PROGRESSIVE

A progressive tax is one for which the rates vary according to one's ability to pay. Thus, those who possess more highly valued economic assets, such as property or income, are taxed at a higher percentage than those whose economic assets are valued less.

Historically, progressive taxes were exceptional in that they were aimed at an elite class that was often exempt from paying certain taxes. In ancient times, progressive taxes were often associated with extraordinary circumstances, especially military campaigns. Republican Rome's *tributum* is an example of a war-related progressive tax.

Progressive taxation became a norm in the modern period with the emergence of a direct relationship between the state and individuals in society. The increased demands of modern states to raise revenue from individuals led to the introduction of citizenship, which brought enhanced political and legal rights to the individual and greater obligations of the individual to the state. These obligations included new revenue claims, such as personal income, capital gains, and inheritance taxes. These individual-based taxes form the basis of a progressive tax

scheme, which is applied at ascending rates relative to the economic value of the targeted assets. The United States's personal income tax was meant to be progressive, with top marginal rates reaching above 90% in the 1960s.

The progressive tax was created as a fiscal means by which political authorities gained greater access to the economic resources of the wealthiest members of society. The arguments in favor of progressive taxation stress a sense of social fairness in that the wealthier members of society have a disproportionately higher ability to pay for those public goods and services from which they benefit, directly and indirectly. These arguments are associated with the ideological programs of political populism and socialism. By contrast, the arguments against progressive taxation stress a sense of individual fairness in that those with wealth are being penalized for their personal ingenuity, risk taking, labor, and luck. These arguments are associated with the ideological programs of free-market capitalism and neoliberalism.

In the advanced industrial economies, progressive tax systems went into place incrementally in the late nineteenth century. By the mid-twentieth century, they reached their limits with extremely high marginal rates and the spread of the progressive tax burden to the middle classes. This tax policy practice caused unintended negative consequences, including a rise in tax avoidance and capital flight and a decline in economic productivity and growth. Progressive taxation was viewed critically less as a fair means of allocating the tax burden and more as an unfair means of reallocating wealth. In the late twentieth century, a political reaction was led by Margaret Thatcher, the Conservative prime minister of the United Kingdom, and Ronald Reagan, the Republican president of the United States, who began a reverse trend to ease the tax burden on the wealthy with tax reforms of a more modified progressive and even regressive character in the advanced industrial economies.

SEE ALSO *Taxes; Taxes, Regressive*

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TAXES, REGRESSIVE

A regressive tax is one that has a disproportionately more negative economic effect on the poorer members of society than the wealthier members. Regressive taxes usually have fixed rates, and are thus not sensitive to one's ability to pay. Likewise, a tax is considered regressive if the wealthy are able to avoid compliance more readily than the poor.

Because of the limited capabilities of premodern political authorities to assess value and monitor transactions, the earliest forms of taxation tended to be regressive. The preference was for taxes that were relatively simple to compute and collect. The head tax, such as the British poll tax and the Russian soul tax, was a direct tax with regressive distributional consequences. It was a levy applied at a fixed rate on each individual, regardless of income and property status. Likewise, the French *gabelle*, or salt tax, was an indirect tax with regressive distributional consequences. This tax was set at a fixed rate and administered by royal agents in the sale of this consumption necessity, even though the cost was a significantly greater burden for poor households.

In the modern period, regressive tax schemes remained common in economies with narrow elites, wide income disparity, underdeveloped industrial bases, and authoritarian political regimes. In the advanced industrial democracies, however, regressive taxation eventually fell out of favor. This was a consequence of political reforms that expanded voting rights, leading to the enactment of more progressive forms of taxation. An additional factor was an increase in technological and bureaucratic capabilities that enabled modern governments to keep track of economic activities and income sources.

More recently, arguments have gained ground in favor of tax reforms with regressive tendencies in the industrial democracies. Fiscal arguments stress the complex and opaque nature of contemporary tax systems and contend that the simplification of tax policy would facilitate taxpayer compliance and state collection. Economic arguments stress that a more regressive tax code would create greater incentives for the investment and activity that would stimulate economic growth to the benefit of all. In the United States, however, the reduction of high progressive tax rates in the 1980s and the first decade of the twenty-first century did not result in a decline in tax-avoidance practices among wealthier taxpayers.

National sales taxes and flat rate income taxes are the most common types of tax reforms that have regressive distributional consequences. The European economies rely heavily on the value-added tax (VAT), which is a kind of national sales tax, where a fraction of the total tax is added at each stage of production and distribution, instead of all at once at the last stage. If the price of necessary goods and services is relatively constant, then a sales tax is regressive. To illustrate, Denmark has a 25% VAT without exception. Thus, if two persons buy an identical

bag of groceries each week for 20 Danish krones (DK), they both pay DK5 in VAT. But if the first person's weekly income was DK100 and the second's was DK1000, then the first person paid a higher percentage of their weekly worth (5%) than the second person (0.5%). Most European governments, however, provide exemptions on the VAT for basic necessities. Support for a flat income tax has grown in Europe and United States with the enactment of flat tax rates in the transition economies of central and eastern Europe, including Estonia, Slovakia, and Russia. The flat tax was instituted in the transition economies largely because of the weakness of the state tax administration to monitor and extract revenue from the emerging private sector and households.

SEE ALSO *Taxes; Taxes, Progressive*

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Gerald Easter

TAYLOR, LANCE

1940–

Lance Taylor is an economist who has contributed widely to development economics and nonorthodox economic theory. After receiving his PhD in economics at Harvard in 1968, he taught at the leading economics departments of Harvard and Massachusetts Institute of Technology and then moved to a self-proclaimed heterodox department at the New School, a university in New York.

Taylor's early work deals with mainstream development topics, such as the econometric and simulation modeling of changes in the sectoral distribution of production in the course of development. He also explored development planning models, including research on numerical methods in nonlinear programming. While working in Chile in the 1970s, Taylor was exposed to the heterodox structuralist ideas of the United Nations Economic Commission for Latin America, and he observed firsthand how distributional conflict affects the economy. His subsequent models are more heterodox, departing from the orthodox neoclassical "closure" with full employment of labor; instead, they stress the role of aggregate demand and distributional conflict.

These ideas crystallized into what Taylor (1983, 1991) calls the *structuralist* approach to development macroeconomics. The starting point is a model of demand-determined output along Keynes-Kalecki lines that examines the relationship between output growth and income distribution. The model is then extended to deal with interactions between industrial and agricultural sectors, asset markets and financial fragility, wage-price inflation due to distributional conflict, fiscal constraints on growth, international issues including debt and foreign exchange problems, and the interaction between rich and poor countries. Drawing on these theoretical contributions, Taylor, with his colleagues, developed structuralist computable macroeconomic models for a number of developing countries. From a sole focus on developing countries, Taylor's (1991, 2004) emphasis shifted to macroeconomic theory more generally, as applied to both developed and developing countries. Thus, while in mainstream economics there has been a trend toward applying theories constructed for developed countries to development issues, for Taylor there is a reverse tendency.

Taylor also worked extensively on economic policy in developing countries, leading numerous projects with collaborators from many countries. He provided some of the most rigorous and comprehensive criticisms of International Monetary Fund stabilization policies (see Taylor 1988). He also addressed the macroeconomic, distributional, and environmental consequences of economic liberalization policies adopted by developing and postsocialist economies, as well as the impact of such policies on the international financial system. This work not only draws on his theoretical models, but also his broader political economy perspective and his deep knowledge of the institutions of developing countries.

Taylor's opposition to neoliberal one-size-fits-all policies has been very influential, both because of his firm analytical grounding and his insistence that appropriate policies should take into account the specific structures and institutions of individual countries. His theoretical contributions, however, have not received the attention from mainstream economists that they deserve because of his departure from their protocol of using optimization as a basis of economic theorizing. But his structuralist alternative—of starting with macroeconomic accounting identities, then adding appropriate equations representing the behavior of relevant groups and the institutional attributes of particular economies based on careful historical and empirical work—may yet prove to be a more productive way of analyzing the operations of actual economies.

SEE ALSO *Economic Commission for Latin America and the Caribbean (ECLAC); International Monetary Fund; Macroeconomics, Structuralist; North-South Models; Structural Adjustment*

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Amitava Krishna Dutt

TAYLOR RULE

In the late 1950s the Phillips curve became the dominant policy model, prescribing a trade-off between the wage and inflation rate against the unemployment rate. In the 1960s the parameters of the Phillips curve began to drift. Adaptive expectation with and without the natural rate and NAIRU (nonaccelerating inflation rate of unemployment) hypotheses was added to the curve. Later, the rational expectations hypothesis, which brought into question the assumptions of full information and variation between the actual and theoretical parameters of models, became popular. In 1979 and 1993, to improve predictions in line with the Phillips curve, the American economist John B. Taylor (b. 1946) introduced the Taylor curve, which specifies variance, rather than rate, in output and inflation to explain the great moderation in macroeconomic data since the 1970s.

Taylor advanced policy arguments—including that the variance of inflation and real gross domestic product (GDP) could be reduced to minimum levels—and empirical justifications for the Taylor rule. The rule is, where r is the federal fund rate, p is the inflation rate, and y is the percentage deviation of real GDP from a potential level. The Federal Open Market Committee (FOMC), the committee within the Federal Reserve that sets the target federal fund rate, can use this rule as a guide. The evidence shows a high correlation between the actual federal fund rate and estimates from the rule for the period from 1987 to 2005, with peaks and troughs matching up closely in most years.

The Taylor rule has many novel features. It transcends the "either/or" nature of the rules versus discretion debate by making room for discretionary policies as well. It is neither a fixed rule nor one that expands the money supply to approximately the growth rate of output as Milton Friedman (1983) proposed. A fixed policy rule would not be useful to the FOMC because, besides lacking a feedback mechanism, it would shun the Fed's responsibility to stabilize cyclical swings, rendering the Fed passive. Even when the public acts with rational expectations and policymakers have full information, the Fed may want to choose a time-inconsistent or suboptimal policy such as when a change in administration occurs. A new administration may want changes, encouraging the FOMC to choose sequentially, such as setting interest rate targets meeting-by-meeting.

Another novelty is that the Taylor rule is not necessarily optimal in the sense of a single point on the trade-off in the production-possibility-like frontier. While Robert M. Solow argued for precise estimates, Taylor inferred robust estimates for a broader group of models. Generally, rules are considered prescriptive or normative in nature, as Taylor originally intended them to be, but the Taylor rule turned out to be very descriptive as well.

One area for further research is to find the reliable equilibrium federal fund rate and potential GDP estimates in a more forward-looking environment. This may mean that changes in the money supply advocated by other rules should be considered. Just as patents require laws to encourage inventiveness, the Taylor rule requires commitment to make it credible. In the early twenty-first century, the Taylor rule is an active research program that is attracting much attention in the literature

SEE ALSO *Economics, New Classical; Economics, New Keynesian; Expectations, Rational; Federal Reserve System, U.S.; Macroeconomics; Monetarism; Monetary Theory; Phillips Curve; Policy, Monetary; Rules Versus Discretion; Variance*

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TAYLORISM

A traditional social science, sociology, informs this entry. Sociology is subdivided into areas of specialization that may overlap. Areas relevant to this topic include historical sociology, economic sociology, organizations and work, and theory.

The term *Taylorism* is synonymous with *scientific management*, both named after the American industrial engineer Frederick Winslow Taylor (1856–1915) and his 1911 monograph, *The Principles of Scientific Management*. Taylor provided the framework for a management philosophy and method and for the organization of work. He based his framework on scientific law, breaking work into parts and separating mental from physical labor. His principles involved the following: (1) Developing a science of production; (2) carefully selecting and training workers; (3) connecting the science and the workers; and (4) splitting responsibility between management and workers. Taylor's ideas contributed to a movement across industrialized countries. The Germans called it the *rationalization movement*.

Taylor's framework rested on the assumption that workers are motivated by money. Through his time-and-motion studies, he established specific standards for how long each particular job should take and which kinds of physical routines it should involve. These efficiency guidelines were used as bases against which each worker's output was measured, and pay was calculated once workers were selected in terms of their work ethic and trained consistent with established standards. The greater the worker's output, the more pay the worker received. Taylor's equation incorporated breaks during the workday at specific intervals and for a specified length of time because he realized breaks increased productivity and workers' stamina. He saw breaks as efficient and effective for both workers and management.

Management was charged with the mental work in this hierarchical division of labor. In planning rooms above the shop floor and sometimes housed behind plate glass windows, management delegated responsibility, designed products, set the production schedule, and checked performance.

As a consequence of Taylorism, the organization of production became compartmentalized and control became centralized. Product design and production were separated. Work became task specific and mechanical as workers were turned into quasi machines. According to some critics, deskilling resulted, and the engineering of workers replaced the engineering of materials. In addition, productivity declined.

This model of economic organization lends itself well to mass production, historically the dominant form of industrial production in the United States. It catered to waves of immigrants and a growing middle class. With its focus on efficiency, the model emphasizes quantity over quality and innovation. This focus affected even the design and production of American machine tools, necessary for the production of most other products. Machine tools were designed for convenience of operation and to minimize motion and the operators' need for skill. These machine tools were adequate for mass production, but not for flexible production or custom production.

The negative outcomes of Taylorism are consistent with Adam Smith's (1723–1790) concerns. While Smith embraced the division of labor because he believed when works specialize, they become more productive, he emphasized that oversimplification of a worker's tasks may have inhuman, demoralizing effects. Although famous for advocating a free market economy, Smith argued for government intervention if it is necessary for enhancing the quality of life, particularly for those with the least resources, to ensure the common good.

Karl Marx (1818–1883) preceded Taylor in history and did not address Taylorism specifically. Marxist theory, however, regards the mode of production as rooted in the economic system. Individuals must consume in order to survive, and they cannot consume unless they produce. They must therefore enter into relations they cannot control, such as economic relations. According to Marx, this differentiates them from nature, from their own kind, and leads to alienation. Marxist theory rejects Taylorism as a strident form of worker exploitation under capitalism that strips workers of control over their work. Workers become mere means to capitalists' ends.

Fordism is a form of mass production linked to Henry Ford (1863–1947) of the Ford Motor Company during the early twentieth century. Fordism adopted the same principles as Taylorism, including the separation of mental and physical labor and the segmentation of work. Both pivot on quantity and speed. Using Taylor's principles, Ford introduced the assembly line, which automated the control of work. The speed of the assembly line controlled workers' movements and output and dictated the timing

of breaks during the workday. The method of Fordism preceded the social scientific concept of *Fordism*, a term coined by the French regulation school. This school arose in the context of the first significant post-war recession during the 1970s as a critique of the capitalist mode of regulation, regarded as co-opting social and political life.

Globalization means interdependence of nations, groups, and individuals around the world. One dimension of such interdependence is economic globalization, which is fueled by capital's search for cheap labor internationally. Cheap labor equals cheap technology; poor countries provide cheap labor and rich countries provide technological innovations. This division of labor between poor and rich countries represents a separation of physical from mental labor that is rooted in Taylorism. Technological innovations, like the Internet, facilitate speed by compressing time and space. A more holistic, flexible, and less hierarchical approach to the economic enterprise is required, however, for continuous innovation. Such an approach may provide the potential for the reintegration of physical and mental labor across the globe.

SEE ALSO *General Motors; Time and Motion Study*

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Brigitte U. Neary

TEA INDUSTRY

Modern tea comes from *Camellia sinensis*, a tree native to China and India. In today's commercial tea trade there are three main varieties of *Camellia sinensis*: China, Assam (northeastern India), and Cambodia, each named for the area in which it was first grown commercially. The China variety is a hardy, 3-meter-high bush with a useful lifespan of one hundred years. The Assam and Cambodia varieties are tall single-stem trees with a commercial life of forty years. Typically, tea trees are kept short through frequent trimming for easy plucking (i.e., the picking of tea leaves). Although tea can be grown in a variety of agroclimatic conditions, the best teas are grown at altitudes between 1,000 and 2,000 meters.

Green leaf, the farm product, is sent for processing at tea factories and becomes *made tea*—sometimes called *black tea* or *dry tea*—the internationally traded commodity. Tea companies then blend tea from various origins to make what is often called *packed tea*, the beverage that consumers drink. The ratio of green leaf to made tea is about five to one, that is 5 kilograms of green leaf are required to make 1 kilogram of made tea. Three processing methods are used to convert green leaf to three types of made tea: black, green, and oolong (Forrest 1985).

To make black tea, tea leaves are spread on racks to dry and then put through a machine that breaks up the leaf cells, frees the oils, and ejects a twisted lump of leaves. These are sent to a fermenting room, where they are spread thinly and left to absorb oxygen. The leaves are then exposed to a continuous blast of hot dry air for fifteen to thirty minutes, which turns them black. Black tea accounts for three-quarters of global tea output and is supplied mostly by East African and South Asian countries.

Green tea has a less processed flavor than black tea. The leaves are steamed and heated immediately after plucking. Because the leaves are dried without going through fermentation, they remain green. After being separated by grade, the leaves are packed in chests lined with aluminum foil. Green tea, which accounts for a quarter of global tea output, is supplied primarily by China and to a lesser degree by Japan, Vietnam, and Indonesia.

Oolong tea is traditionally prepared in South China and Taiwan from a special form of the China tea plant—the *chesima*. It has large leaves and a distinct flavor. Preparation is similar to black tea but with a much shorter fermentation process. Oolong teas, which account for only a small fraction of the global market, are often scented with flowers.

While people often refer to almost anything steeped in hot water as "tea," only *Camellia sinensis* is properly given this designation. Teas made with herbs and berries are more properly called *tisanes* or *infusions*. Leaves from several other plants are consumed like tea. For example, Paraguay tea, often called *yerba maté*, is made from the leaves of a species of holly found primarily in Argentina, Brazil, and Paraguay. The Indians of North Carolina used to prepare a tea called *yaupon* from the leaves of another holly-like tree. *Trinidad tea* is made from the leaves of the pimento or allspice tree.

PRODUCTION AND TRADE

Tea is produced in both tropical and temperate zones. Because it grows at high altitudes, it typically does not compete with food or other cash crops. Asia accounts for

about three-quarters of global production, Africa for half the remainder, and several Middle Eastern and Latin American countries for the rest. During 2002–2005 China and India produced more than half of the world's tea (26 and 27 percent, respectively), followed by Sri Lanka (10 percent) and Kenya (9 percent). Global tea production during this period was 3.25 million tons.

Tea is produced by both smallholders and estates. Tea estates are owned by large companies producing large quantities of tea, normally exceeding 1,000 tons of made tea (sometimes as much as 10,000 tons). Tea estates employ both permanent and seasonal laborers. Often, the permanent laborers reside in living quarters within the estate and receive other benefits, such as basic health care and schooling for their children. The conditions for employment on tea estates are considered very good, and permanent workers are often considered to be "privileged" compared to their seasonal counterparts. Although wages are low compared to Western standards (about $2 per day), they are considered high enough for, say, Africa, where two working adults at this wage rate are able to lift a family of four to five above the poverty level. Conditions of employment are also considered good because estates, often owned by multinational companies, must adhere to international standards and scrutiny concerning wages, hours, and conditions of employment. In addition to the International Labor Organization which sets labor standards, numerous international and local non-governmental organizations and advocacy groups (such as the International Labor Rights Fund) monitor employment conditions.

Global tea production from 2000 to 2004 exceeded three million tons, valued between $4 and $5 billion annually. Growth in tea production, as high as 4 percent in the 1970s and 3 percent in the 1980s, slowed to 1.6 percent in the 1990s. Almost half of global tea production is traded internationally. Sri Lanka (22 percent), China (18 percent), Kenya (16 percent), and India (16 percent) account for almost three-quarters of world exports. The United Kingdom used to be the largest tea importer (during the 1960s it accounted for almost 40 percent of world imports, but by the early 2000s it accounted for only about 10 percent). The dominant tea importer is Russia, which accounted for 12 percent of world imports in 2005.

TEA PRICES

Unlike most primary commodities whose prices are determined in futures exchanges, tea prices are established at auctions (located in tea-producing countries), which trade about one-third of global tea output. India has six auctions, but the two largest are in Colombo, Sri Lanka; and Mombasa, Kenya. Other producer-country auctions are held in Chittagong, Bangladesh; Jakarta, Indonesia; and Limbe, Malawi. The Colombo and Mombasa auctions trade tea mostly for export, and their prices (especially Mombasa's) are considered the world price indicators.

Auctions in consumer countries, which operated during the 1970s and 1980s, have been less successful, with the exception of the London auction, once the world's most influential. Until the early 1970s, London held the world's dominant tea auction. London's last auction took place on June 29, 1998, bringing to a close a 319-year-old tradition. Tea auctions had been held in London since the East India Company's first auction in 1679. Aside from brief interruptions during the war years, auctions had been held at least once a week since 1864.

Kenya's tea auction system began in November 1956 in Nairobi under the auspices of the East African Tea Trade Association. It initially traded small quantities of secondary-grade teas, but following increased interest from producers and buyers the auction moved to Mombasa in 1969 and started trading main grades of tea. A turning point for the Mombasa auction came on October 26, 1992, when, following relaxation of foreign-exchange controls, transactions began taking place in U.S. dollars. With other major tea auctions trading in local currency (including the one in London), this change probably accounts for Mombasa's position as the world's dominant tea auction.

The global tea market is not subject to the types of trade impediments faced by other commodity markets (e.g., cotton). Furthermore, unlike the markets for commodities such as cocoa, coffee, and rubber, there has been no United Nations–backed international price stabilization scheme in the tea market in the post–World War II (1939–1945) period. There have been two voluntary supply-restriction schemes (Wickizer 1951). The first, running from 1920 to 1921, grew out of the sharp price decline of 1920 and was led by India and Sri Lanka (then Ceylon). A second restriction went into effect in 1930, led by the same countries and for the same reason. A five-year International Tea Agreement was launched in April 1933 to support tea prices through export quotas, backed by India, Indonesia, and Sri Lanka. The agreement occurred in response to the collapse of tea prices during the Great Depression—they declined by 70 percent between 1927 and 1932 (Sarkar 1972).

THE OUTLOOK

Because most tea is consumed in low- and middle-income countries, the long-term outlook for tea depends mostly on income growth in these countries. The UN Food and Agriculture Organization (FAO 2001), for example, estimated that the growth in global tea demand for the 2000–2010 decade is unlikely to exceed 1 percent, which is close to the rate of demand growth during the 1990s. Most demand growth is expected to come from increased

imports by countries of the former Soviet Union. On the supply side, the FAO expects China, Kenya, and Vietnam to increase their exports. Because tea competes with coffee, as well as soft drinks such as Coca-Cola, tea consumption depends on the growth of these industries. Some growth is also expected to take place in niche markets, such as organic tea and iced tea, both of which are mostly consumed in high-income countries. Another dimension of tea is its perceived health benefits, implying that as consumers become more health conscious, they are more likely to drink more tea. This may be especially the case for green tea, which undergoes less processing at tea factories, and is hence considered a more "natural" drink.

SEE ALSO *Agricultural Industry; Colonialism; Imperialism; Industry*

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John Baffes

TEACHER EXPECTATIONS

Can the academic expectations that teachers develop for their students become self-fulfilling prophecies? Can predictions made about another individual actually *cause* outcomes that confirm the original prophecy, and if so, how and under what conditions? This question has generated considerable research as well as controversy in the social sciences. The volatile nature of the inquiry stems from the special obligation inherent in teaching. As with the healing professions, teachers are given the responsibility and held accountable to promote positive changes in their charges. If teacher prophecies about *differential* capability among students could explain the observed achievement gap between groups of students (a gap that disadvantages poor and ethnic minority children), this social-influence process carries large societal implications.

The expectancy concept and its potential for confirmation have a long history in literature and social science, beyond education. Categorization of people, settings, and events reduces the complexity of social stimulation. It enables people to quickly sort experiences, identify essential features, predict outcomes, and plan actions. Although categorization can provide clarity, it can also blind a person when faulty or stereotyped beliefs, either positive or negative, are applied. An example of positive expectancy effects is found in the ancient Greco-Roman myth about the sculptor Pygmalion whose love for the statue Galatea brought her to life. Reference to negative expectancy effects is found in a 1948 paper by the sociologist Robert K. Merton, who coined the term *self-fulfilling prophecy*. Using the bank failures of the economic depression as one example, Merton defined the component parts as "a *false* definition of the situation evoking a new behavior which makes the original false conception come *true*" (p. 195).

In *Pygmalion in the Classroom* (1968), the psychologist Robert Rosenthal and the elementary school principal Lenore Jacobson conducted the first experimental test of a positive self-fulfilling prophecy. Teachers were given false test information about a randomly selected group of children who were labeled intellectual bloomers and expected to show greater growth in their learning. At the end of the year, the children identified as bloomers outperformed other children on intelligence tests—an effect documented in the early grades. This study fueled controversy over methodological problems, numerous experimental replications, and interest in the investigation of naturally occurring expectations in classrooms.

Evidence supports a causal connection between teacher expectations and student achievement, although the debate continues regarding the magnitude of the effect. The expectancy effect is more powerful under certain conditions, with the factors that moderate the effect under study (Brophy 1998; Rosenthal 2003; Weinstein 2002). The causal model proves complex, highlighting differences in susceptibility of both teachers and students to such effects and the magnifying role of the developmental stage of the children as well as of contextual features. There exists potential for teacher *perceptual* confirmation regardless of student behavioral confirmation and for student *disconfirmation* of negative or even positive teacher expectations.

Other vital questions include the mechanisms by which expectations can exert effects on student achievement, the factors that shape the formation of academic expectations and for whom, and the methods by which negative self-fulfilling prophecies might be reduced. Many social science fields have explored teacher expectations and expectancy effects, using varied methods at multiple levels of analysis.

Studies have documented that teachers treat high- and low-expectancy students differently, favoring highs with greater opportunity to learn and more positive interactions (Brophy 1998). Even young children are aware of differential treatment by teachers, which communicates information about the relative smartness of students in the classroom (Weinstein 2002). Thus, the mechanisms that bring about expectancy effects include the opportunity structure provided students, which directly impacts achievement, and ability messages, which through their shaping of student self-view and motivation to learn, ultimately impact achievement. Studies have also shown that differential expectations and differential treatment are expressed not only toward individual students but also toward groups of students—members of ability-based instructional groups within classrooms, academic tracks within schools, or high-poverty schools. Further, expectancy communication is evident not only in interpersonal interactions but also in the culture of classrooms and schools, where ability differences may be made publicly salient and instructional differentiation, such as a less rigorous curriculum for some students, may be a pervasive reality.

There also exists evidence of teacher bias in the formation of expectations—less clear with regard to gender, but more apparent in the stereotype-based underestimation of the ability of low-income, ethnic and linguistic minority, and special needs children. There is debate about the accuracy of teacher expectations, when judged against achievement scores, and the appropriateness of differentiated treatment. While it can be argued that expectations may play a larger self-maintaining role than self-fulfilling role, this debate also raises the question about the purpose for education—that is, whether a society is obligated to reach higher for all students.

Far less research has focused on how to reduce the occurrence of negative self-fulfilling prophecies in schooling. Intervention approaches have included increasing teacher awareness of biased expectations and promoting equitable interactions with students, schoolwide reform efforts to alter multilayered components of a negative expectancy climate, and policy mandates to raise academic standards (expectations) and reduce the achievement gap. Multidisciplinary research on this social-influence process has demonstrated the limits of behavioral and social-cognitive explanatory models and the importance of systemic and ecological approaches. When schools are structured to sort students for differential opportunities rather than for the development of talent in all students, expectancy processes no longer lie simply in the minds of teachers but rather are fueled by educational policy.

SEE ALSO *Education, USA; Gifted and Talented; Merton, Robert K.; Pygmalion Effects; Schooling; Schooling in the USA; Self-Fulfilling Prophecies*

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Rhona S. Weinstein

TEACHER-CHILD RELATIONSHIPS

Attachment theorist John Bowlby (1969) argued that self-concept and understanding of relationships are determined, in part, by experiences in early relationships with caregivers, particularly parents. The nature and quality of these relationships are important, specifically the degree to which caregivers are available and responsive to children's needs. Although children's first significant relationships are typically formed with parents, alternative relationships formed with teachers and other primary caregivers are also critical to child and adolescent development. In fact, a national survey of adolescents (Resnick et al. 1997) revealed that the single most common factor associated with positive youth outcomes was a supportive relationship with an adult, and teachers were among the adults most frequently mentioned as the source of this support. The following sections provide a brief overview of what teacher-child relationships look like, the factors associated with the quality of these relationships, and the importance of teacher-child relationships in promoting children's academic and socio-emotional competencies.

WHAT IS A TEACHER-CHILD RELATIONSHIP?

As children enter school, teachers play an important role in shaping children's experiences outside of the home environment and early on can assist in supporting young children's adaptation to new challenges and demands during the transition into a classroom environment. Aside

from their formal role of teaching academic skills, teachers are often responsible for regulating activity level, communication, and contact with peers (Howes and Hamilton 1993; Howes, Matheson, and Hamilton 1994; Pianta 1997). Teachers also provide behavioral support and teach coping skills (Doll 1996). In contrast to parent-child relationships, relationships between teachers and children are more likely to be time-limited in nature. Yet, teacher-child relationships are deemed important by children of all ages (Pianta, Hamre, and Stuhlman 2001) and are associated with later academic and social functioning (Hamre and Pianta 2001).

Teachers' perceptions of their relationships with children typically are shaped by the level of conflict or closeness—that is, the degree of discord or warmth within a relationship (Ladd and Burgess 1999; Pianta 1994; Pianta and Steinberg 1992). Similarly, children's perceptions revolve around the degree of emotional closeness and support, or negativity, within relationships with teachers (Bracken and Crain 1994; Ryan, Stiller, and Lynch 1994; Wentzel 1996). These perceptions of teacher-child relationships also appear to be consistent with observations of teachers and children interacting in the classroom (Howes et al. 1994; Pianta et al. 1997).

FACTORS THAT INFLUENCE TEACHER-CHILD RELATIONSHIPS

Research clearly indicates that the quality of teacher-child relationships is influenced by unique characteristics and previous relational experiences that both teachers and children bring to the classroom. Teacher-child relationships are frequently affected by children's behavioral problems, though there are some important gender differences. Teachers often characterize their relationships with female students as closer and less conflictual than their relationships with male students (Bracken and Crain 1994; Hamre and Pianta 2001; Ladd, Birch, and Buhs 1999; Ryan et al. 1994), which may be related to the fact that boys more frequently display antisocial behaviors, such as verbal and physical aggression. Several studies suggest that children's academic and socio-emotional competencies, or lack thereof, are linked to the quality of their relationships with teachers (Ladd, Birch, and Buhs 1999; Murray and Greenberg 2000). One report showed that teachers are most likely to report conflictual relationships with children whom they also view as having significant problem behaviors.

Several studies support the idea that teacher beliefs, experiences, and expectations also contribute to the quality of teacher-child relationships (Pianta, Hamre, and Stuhlman 2001). For instance, one report shows that teachers who report feeling depressed and unable to influence the development of children in their classrooms, and who are observed to offer less emotional support, are more likely to report significant teacher-child conflict, even in the absence of reports of problem behaviors.

The race or ethnicity of both teachers and children also seems to play some role in determining teachers' perceptions of the quality of teacher-child relationships, though the evidence supporting this view is far from conclusive. In particular, an ethnic or racial match between child and teacher may be influential in the formation of positive, less conflictual relationships (Hall and Bracken 1996; Ladd, Birch, and Buhs 1999; Saft and Pianta 2000). Although teacher-child relationships are to some degree a function of characteristics of and interactions between individuals, it is important to recognize that they also have their own identity apart from specific, individual characteristics and interactions (Sroufe 1989).

IMPORTANCE OF TEACHER-CHILD RELATIONSHIPS

Positive, trusting, and low-conflict relationships with teachers from preschool through high school are key contributors to children's adjustment to their social and academic environment. Bridget Hamre and Robert Pianta (2001) report that teacher-child relationships in kindergarten are highly predictive of long-term educational outcomes (into middle school). Specifically, teacher-child conflict appears to be associated with negative feelings about school and school avoidance, lower levels of self-directedness and cooperation in the classroom, and poor academic outcomes (Birch and Ladd 1997). Additionally, teacher reports of relational conflict are related to increases in children's problem behaviors and decreases in competence behaviors over time (Pianta, Steinberg, and Rollins 1995). In contrast, young children whose teacher-child relationships are characterized by closeness show greater levels of overall school adjustment (Birch and Ladd 1997; Pianta et al. 1995). Similarly, Kathryn Wentzel (1998) reports a correlation for middle school students between teacher support and interest in school and suggests that teacher-child relationships may be particularly predictive of classroom functioning during transition points, such as the move from elementary into middle school. Importantly, children at risk for academic and behavioral difficulties are particularly well served by positive teacher-child relationships (Pianta et al. 1995). In summary, supportive, reciprocal relationships with teachers influence child development in multiple fashions and serve to promote positive emotional and academic outcomes, while protecting children from a variety of potential educational and socio-emotional risks.

SEE ALSO *Achievement; Adolescent Psychology; Bowlby, John; Education, Unequal; Education, USA;*

Mentoring; Parent-Child Relationships; Peer Effects; Peer Influence; Schooling

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TEACHERS

Psychologists and other social scientists since the early twentieth century have been concerned with learning and effective teaching. A century ago, education in the United States was a troubled institution. School curricula were seen as outdated and irrelevant, teachers were often ill-

prepared, and students often displayed low levels of motivation. In light of these circumstances, social scientists began to investigate ways to improve the educational system. The move toward more progressive educational policies based on psychological research has continued to the present.

Early questions revolved around the nature of the classroom. That is, what were the relative merits of lectures, classroom discussions, and demonstrations and activities? When the move from prepared lectures to discussion took place, there was initial enthusiasm for discussions as fostering greater learning. Similarly, the introduction of demonstrations and activities engendered considerable enthusiasm. Unfortunately, the research on the different approaches has been inconclusive; students show an aptitude for learning across a wide variety of classroom formats.

Just as educators have tried to restructure classroom dynamics, they have engaged in a constant quest to adopt the latest technologies for their pedagogy. Teachers have made use of radio, television, and even the telephone for delivery of educational information. The adoption of the Internet in education continues the technological innovation. So far, however, different classroom formats and technologies have not led to systematic improvements in pedagogy. Each technology appears to have strengths, but widespread and generalized improvements in learning resist easy development.

One of the earliest, successful pedagogical innovations was the Personalized System of Instruction (PSI) developed by the psychologist Fred Keller (1899–1996). This approach was based on behavioral theory and featured self-pacing geared toward mastery of a task. Keller proposed including lectures and demonstrations only as vehicles of motivation, not as information delivery systems. Even though the approach was thoroughly grounded in behaviorism, Keller stressed the importance of the personal and social aspects of the learning situation.

Empirical research has documented PSI as an effective pedagogical approach. However, teachers never adopted it universally, even at the height of its popularity. Nonetheless, this system still has adherents who use it successfully.

Theories in cognitive psychology prevalent in the early twenty-first century highlight the idea that the creation of cognitive schemas enhances learning. Further, the use of so-called deep processing (e.g., self-reflective thought, integration of ideas, writing to learn) appears to benefit learners. One little-known, but promising, phenomenon that was rediscovered and applied to educational research in the late 1980s, the testing effect, is explicable in cognitive theory results. The act of taking a test can itself foster better retention than actually studying the material. The advantage of testing accrues when learners must generate answers and process multiple concepts in essay-type items. In contrast, recognition tests, such as those featuring multiple-choice items, and repetitive studying do not reliably lead to as complete learning.

The apparent advantage of repetitive studying is evident for tests taken immediately after studying, but this spurious advantage disappears with delayed testing. Theorists speculate that the immediate reinforcement associated with repeated exposure to material to be learned leads to misplaced feelings of confidence and mastery on the part of students. Further, the difficulty associated with generating answers on tests creates in the learner the impression that learning is incomplete and insufficient, even as it actually benefits the person. Researchers have suggested that learning is enhanced when students have to overcome difficulties. The paradox is that when students encounter such difficulties, it facilitates memory for the material but results in the subjective feeling of lack of progress toward the learning goal.

The fundament that unifies the various types of active learning is the creation of a network of interrelated ideas. In the early twenty-first century, cognitive and learning theory takes it as an article of faith that a cognitive schema provides interconnections among related information, a structure that facilitates assimilation of new information and effective retrieval of already-learned material.

ACTIVE LEARNING

Psychologists and educators have adopted the principles of active learning as critical components of classes. Historically, demonstrations by a teacher that illustrated a particular phenomenon constituted the approach to active learning, even though it may have been only the teacher who was active. Engagement on the part of the students is the concept of active learning that prevails in the early twenty-first century, and it can take a variety of forms. Some common types of active learning include writing to learn, cooperative learning, interteaching, and just-in-time teaching.

In writing to learn, the main purpose is not communication; rather, it is learning. Writing about a topic enables a student to ruminate on the ideas and to synthesize information, thereby solidifying learning. When students engage in low-stakes writing, a teacher does not assess the content or the style. The focus is on the development of ideas. Subsequently, high-stakes writing can be a means of assessing the quality of the writing and the knowledge of ideas. In theory, writing to learn involves students' evaluating ideas and information, which presumably helps them develop schemas and networks of interrelated ideas.

Cooperative learning involves the creation of a social setting to foster knowledge acquisition and retention. Educators have developed several different variations. The actual classroom process may differ significantly across the different types of cooperative learning. Empirical research has revealed a consistent, sometimes large, effect for cooperative learning compared to either competitive learning or individualistic learning. Investigators have documented the advantages of cooperative learning at all academic levels.

In cooperative learning, several students work together, taking responsibility not only for their own learning but also for that of the other group members. The critical components of cooperative learning include shared responsibility so that all members of the group learn, individual accountability for progress toward learning, face-to-face interaction, development of interpersonal skills, and self-monitoring by the group. Thus, cooperative learning relies on elements of cognitive theory and social psychological theory of group processes.

A development originating in the early 2000s that has its origins in Keller's PSI approach and involves structure, active learning, and cooperation is called interteaching. Interteaching places the responsibility for learning largely on the student, rather than on the teacher disseminating information via a lecture. In this approach, the instructor provides questions to guide students in a focused activity, and students then review the material to be learned and discuss it with fellow students in small groups. Finally, the students can request that the teacher address questions they have regarding the material.

Interteaching, like its predecessors, may not introduce elements that do not already exist in the classroom. What it involves is a rearrangement of behaviors and a redistribution of time devoted to individual and group work, discussion, lecturing, and out-of-class preparation. Like the other types of active learning, interteaching draws on cognitive theory but relies on a significant element of behavioral theory in its application.

Just-in-time teaching (JiTT), whose conceptual basis developed in the 1960s but was made practical through computer technology in the 1990s, involves student learning combined with the use of the Internet. Students take responsibility for learning specified material and for recognizing what aspects of that material they do not understand. JiTT relies on students to begin learning the material before class. Then the student communicates uncertainties to the teacher shortly before class time so the teacher can use class time most effectively to address the weaknesses in student learning. Class can be oriented toward what students do not know. Ideally, JiTT also engenders a spirit of cooperation between the students and the teacher.

TECHNOLOGY

Psychologists are often on the forefront of adopting new teaching technologies. The Internet and presentation software have become staples of the contemporary classroom. Preliminary evidence suggests that computer-based teaching can lead to greater learning than standard lectures when multimedia presentations are constructed so that the different components of a presentation are pedagogically integrated. The presence of excessive sound and graphics can lead to cognitive overload and reduced learning.

Theorists have speculated that multimedia presentations can enhance learning because the presentations foster multiple dual coding, that is, a combination of visual and verbal learning. This approach can increase student motivation while helping students encode concepts.

Presentation software can produce increased learning, but it has received criticism as being essentially a static medium that reduces teacher creativity and flexibility in the classroom. Some educators have responded to this criticism by noting that the software itself is not the problem; rather, the use of the software can be problematic if it does not lead students to process the material deeply.

Historically, new technologies have emerged and have become widely used in the classroom. Initial research often supports the efficacy of the new approaches, but sometimes it is not clear whether the increased student achievement stems from the new technology or from the additional enthusiasm of the teacher for the innovation.

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Bernard C. Beins

TEACHING THEORIES

SEE *Teachers.*

TEATRO BUFO

SEE *Blackface.*

TECHNICAL CHANGE

SEE *Change, Technological.*

TECHNOCRACY

Initially and most generally, a technocracy was a form of organizational structure or system of governance in which decision makers were selected on the basis of technological knowledge. In the past, such individuals were called *technocrats*, a term used frequently in the twenty-first century by, for example, journalists, but differently, to refer to individuals exercising governmental authority because of their knowledge rather than political profile (e.g., "a government of technocrats, not politicians"). When used in the twenty-first century, the term *technocracy* is more likely to mean governance exercised by technological systems themselves than by experts.

Sharing connotations with theocracy (government by a divinity or its representatives), autocracy (ruleless governance by a lone individual), and bureaucracy (governance via routinized exercise of authority by humans), technocracy contrasts with democracy, rule by the citizenry. In addition to having a high estimation of applications of science-based learning, advocates of technocracy (such as the engineer/social activist Howard Scott) view governmentality as problematic, the complexity of technological systems being itself an important contributor of difficulty. They believe that, where possible, decisions should be designed into systems, because direct application is most effective and efficient. If humans have to be involved in governance, they should be highly familiar with the systems, rather than those with the authority of office, divinely inspired, with charisma, or by the people at large.

Late twentieth-century social studies of technoscience (such as those of the scholar Bruno Latour) tried to broaden the notion of technology, applying the term to any routinized complex of artifacts, agents, and practices. Users of technocracy generally think of technology in a more restricted sense, as the highly complex systems distinctive feature of "high tech" social formations.

In 1919 the American engineer W. H. Smith claimed to have coined the term technocracy, but Scott, founder of the arguably fascistic social movement Technocracy, Inc., asserted that he had heard the term as early as the 1880s. Used explicitly in this period by diverse Progressive political movements in the United States, technocracy was presumed to be a natural and inevitable consequence of social evolution. Society was dependent on increasingly ubiquitous complex systems—like the railroad, those providing clean water, or those promoting public health—that themselves needed public support to function. Because systems were best understood by experts, technological expertise came to be seen as essential. The social chaos of the Great Depression of the 1930s exacerbated the perceived democracy crisis following from immigrant access to a broadened franchise. Giving governance to those who best understood technology (initially, engineers, such as Thorstein Veblen and Scott), but, later, managers (including James Burnham) would naturally promote scientific governance. Consonant with the positive social sciences, especially political science, technocracy also drew heavily on Western Utopian traditions (as in the work of novelist Harold Loeb) and a long American tradition of technological determinism.

A second period of the concept's popularity came with the 1960s rise of postindustrial theorizing, which fostered talk of an "information society" based in knowledge rather than manufacturing. For Daniel Bell, author of *The Coming of Post Industrial Society* (1973) technocracy was marked by the increasing power of professionals, as a consequence of which society was taking a more self-conscious, planned trajectory. The chief legacy of this second wave period, however, is that technocracy has come to mostly be used critically, to acknowledge an unfortunate necessity, not to be advocated. In his book *Autonomous Technology* (1977), for example, Langdon Winner developed an "alternative conception of technocracy," by adding "reverse adaptation" to the earlier technological imperative. Via technocracy, technologies have become ends, not means, displacing even the experts: "…[I]t matters little who in specific obeys the imperative or enacts the adaptation" (p. 258).

With today's widely shared sense that any human agency is marginalized by technology, technocracy is arguably common sense, even though its negative connotations mean only the critical freely use the term itself. Still, advocates of new systems feel compelled to justify them as democratic. Even though computing's implications for democracy, as in many other social arenas, are contradictory, the democratic implications of automated information and communications technologies (AICTs) were the ones that were stressed. Indeed, if networked, digitized representations at least theoretically democratize access to knowledge, and on-line plebiscites can extend opportunities for direct democracy, their disintermediation lessening the need for representation.

However, increasingly ubiquitous, self-governing smart machines, having artificial intelligence, can govern affairs autonomously, thus decreasing any need for

democracy. Similarly, a perceived technology-enabled, rapidly proceeding globalization seems to lessen the need for any state.

Is computing the triumph of technocracy? This may depend on the ultimate cultural correlates of the new governance model emerging in cyberspace. This model takes institutional form in entities like the Internet Society and the World Wide Web Consortium, as well as in Free/Libre and Open Source Software development networks. Here governance focuses on devising technical standards, decisions about which are made whenever possible by consensus. Ostensibly democratic, such activities are open to the participation, either physical or electronically mediated, of anyone, as long as the participant can demonstrate the requisite technical expertise.

Perception of the technocratic affordances of new technologies has also spawned forms of resistance. As described by Richard Sclove in *Democracy and Technology* (1995) and especially in Scandinavia, AICTs are themselves used to support democratic technology consensus conferences, which aim to achieve broad social agreement before mega-projects begin. In these, cross-sections of the populace are encouraged to draw on their own experience, supplemented by expert responses to the citizens' own questions, to develop independent positions with regard to proposed technological ventures.

As argued by cyberspace ethnographers like David Hakken, technocratic presumptions filter what "impacts" are seen as likely to follow from AICTs. The same presumptions interfere with seeing how social factors shape the technologies themselves. The increased centrality of technological systems to the reproduction of capital is one of several important factors promoting the building of technocracy into computerized life. Still, as the success of consensus conferences show, this tendency can be contested. It must be for democracy to be more than mere posturing. Once implementation begins, the broader social correlates of using complex technological systems can be very hard to reverse. To avoid technocracy, it is essential to insert democratic participation early in the design of complex technological systems.

SEE ALSO *Internet; Technology; Technotopia*

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TECHNOCRAT

A technocrat, according to the most basic meaning of the word, is someone who advocates or governs a technocracy—the rule of technical experts. The roots of the word *technocrat* lie in the classical Greek words for "skill" or "craft" (*techne*) and "rule" (*kratos*). The word *technocrat* is typically used to convey derogatory or ironic attitudes about technology and about the authority or power of those who understand and use technologies. Thus a technocrat is one who advocates technological or technical, rather than political, solutions to collective problems and who fails to consider the humanistic, historical, symbolic, moral, or personal elements of collective decisions. In France, for example, the word *technocrate* ("technocrat") is used by both the political left and right as an epithet for one who is said to administer or manage an organization on the basis of narrow technical expertise, and who lacks class consciousness, democratic commitments, moral conscience, and basic humanity (for example, Hecht 1998).

Daryush Sheyagan in *Cultural Schizophrenia* (1992) characterizes technocrats as "the managers of the technical, political, economic and scientific spheres of a modern society. They … take on the depersonalized, neutral quality of the world for whose efficiency they are responsible. They symbolize pure function stripped of all personal connotations … they are indifferent to the ethical purposes of what is produced" and can serve one type of political regime as well as another (pp. 148–149). However, if, as Jacques Ellul (1964) and Langdon Winner (1977) have suggested, technology is autonomous and technological imperatives determine decision outcomes, then in principle technocracy would not involve the authority of technocrats, for the real sources of authority and power would be impersonal and systemic.

Unlike the term *bureaucrat*, which since introduced by Max Weber has had a well-established place in the conceptual vocabulary and research of the social sciences, *technocrat* has had little use in social science research. Moreover, while a technocrat may also be a bureaucrat, *technocrat* can refer more generally to anyone who exercises scientific, technological, economic, administrative, or environmental authority.

The term is also used to refer to a member of a movement or organization that advocates governance by engineers or other technically trained experts instead of by

politicians. Since 1933 in the United States, Technocracy, Inc. has been the principal research and educational organization representing the technocracy movement. Its predecessor, the Technical Alliance, was founded in 1919 by Howard Scott (1890–1970), who had been inspired by the writings of Thorstein Veblen (1857–1929). The official publication of Technocracy, Inc. is *North American Technocrat*. Henry Elsner Jr. (1967) has traced much of the history of the technocratic movement in the United States.

SEE ALSO *Bureaucrat; Democracy; Technocracy; Technology*

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TECHNOLOGICAL CHANGE

SEE *Change, Technological.*

TECHNOLOGICAL DETERMINISM

SEE *Determinism, Technological.*

TECHNOLOGICAL DIFFUSION CURVE

SEE *Technology, Adoption of.*

TECHNOLOGICAL PROGRESS, ECONOMIC GROWTH

Technological progress is the fundamental force underlying the long run rise in real income per person. Technological progress reflects the growth of human knowledge, from advances in basic science such as the discovery of the laws of thermodynamics to highly practical and applicable ideas regarding production, like the design of an airplane wing or the mechanization of repeated actions or management and workplace organization, like double-entry accounting, just-in-time production, and the techniques of modern inventory management. It is nearly impossible to overstate the role of technology in economic life. Imagine, for example, how one's life would be different without such everyday inventions as computers and telephones, anesthesia and antibiotics, automobiles and airplanes, and electricity and petrochemicals.

Economic growth occurs because individuals have either more resources at their disposal or better ideas for turning resources into goods and services. Increases in resources alone cannot drive persistent economic growth. Natural resources are limited in a finite world, and while education can dramatically increase the productivity of human resources, such gains are constrained by human lifespans. Countries have doubled the education of their workforce, going from five years of schooling to ten, but it is hard to imagine repeating this accomplishment. The gains available from mechanization are also limited. If industry increases the number of machines per worker, growth will slow as each machine adds less to output than the one before. Indeed, estimates pioneered by Nobel laureate Robert Solow attribute less than half of U.S. economic growth to increases in resources. The lion's share of growth stems from technical progress.

In addition to playing a central role in persistently rising income levels, the advance of scientific and technical knowledge have driven a number of important economic trends. In production, technological progress has been the primary force underlying the shifts from manual to mechanized production methods, from natural to synthetic materials, from human and animal to mineral sources of power, and from raw labor to highly educated and specialized workers. The adoption of new technologies often drives the expansion of markets. Larger markets are required to allow workers and firms to concentrate on highly specialized activities and increase the return to innovations that involve investments in specialized knowledge or machinery. Innovations in transportation and communication have induced correspondingly dramatic changes in the organization of economic activity, shifting production out of the home, raising the average size of business enterprises, concentrating production in cities, and

increasing the geographic extent of trade and the role of international transactions in local and national economies.

SOURCES OF TECHNOLOGICAL PROGRESS

The Industrial Revolution, which marks the beginning of a unique economic era of persistent increases in per capita incomes, is inextricably linked to the scientific revolution, and the world's current economic prosperity is difficult to imagine in the absence of fundamental advances in knowledge of biology, physics, and chemistry. Not all new technologies come from the scientific community, however. Private firms devote tremendous resources to applied research and development. In addition, many economically valuable ideas are the result of practical experimentation and the gradual accumulation of production experience. Even such high profile "inventions" as the Fulton steam engine—the mobile power source of the Industrial Revolution—drew on more than one hundred years of incremental improvements on earlier designs.

Unlike a hammer or a tractor, an idea can be used by many people at the same time. Indeed, because commercial success tends to attract attention, good ideas usually are hard to conceal. Once Henry Ford demonstrated that inexpensive cars could be mass produced on assembly lines, his production methods were widely copied. While early gains from an idea go to the inventor, as an idea spreads throughout an industry competitive pressure drives down prices, creating gains for society at large. Indeed, attempts to make use of the constant stream of new ideas generated by their competitors plays an important role in the tendency of firms in a given industry to locate close to each other, forming industrial clusters like Silicone Valley, Wall Street, and Hollywood.

Scientific research often generates insights that are valuable in many lines of business. Because of this, basic research is supported with public funds and new discoveries are widely disseminated. In more narrow and applied areas of knowledge, research is supported through the protection of intellectual property rights. These grant inventors a temporary monopoly on the use of their ideas, allowing them to recoup their research expenditures. Intellectual property rights attempt to balance the desire to reward successful research with the social benefits that derive from competitive markets and the widespread adoption of good ideas. In the pharmaceutical industry, drug prices typically fall by around 80 percent when a patent expires.

In addition to intellectual property rights, an educated workforce is essential to successful public and private research. Perhaps less obvious is the role of international trade. Access to large markets allows firms to spread the fixed cost of inventing a new idea thinly over a large number of units of output, raising the return to resources devoted to research. It is probably no accident that at the time of its Industrial Revolution, England had both the only European system of intellectual property rights and, due to an extensive network of roadways and canals, the most integrated national market in Europe.

INTERNATIONAL TECHNOLOGICAL TRANSFERS AND ECONOMIC DEVELOPMENT

For countries that are not on the technological frontier, technological progress owes more to imitation than innovation. Late industrializers—from the United States in the nineteenth century to China and India in the twenty-first—have always borrowed from the technological leaders of their day. The persistence of dramatic international disparities in income levels, however, testifies to the fact that successfully adopting existing technologies is neither easy nor automatic. Many technologies need to be adapted to fit local conditions including labor force skills, regulatory environment, availability of vital resources, and cultural differences.

Openness to international markets and an efficient legal system that protects the rights of foreign investors play important roles in attracting multinational companies that employ advanced technologies. Many developing countries, including China and India, have seen a marked increase in their growth rates directly following opening to international trade and foreign investment. On the other hand, international trade may lead developing countries to specialize in less technologically dynamic economic activities, such as agriculture and mining, and foreign investment in these areas may do little to promote ongoing technological transfers.

Because the introduction of a new technology generally creates both winners and losers, international technology transfers may also face deliberate and well-organized opposition. New technologies are often opposed by preindustrial elites that fear the loss of leadership to a new industrial class, by existing industries that are invested in older technologies, and by labor unions who fear the loss of jobs.

MANAGING THE CHALLENGES OF TECHNOLOGICAL PROGRESS

While technological progress raises average incomes over the long run, the costs and benefits of new technology are generally unevenly spread, creating a number of challenges for countries experiencing rapid technological progress. The introduction of new goods and processes often competes directly with established economic firms, causing them to adapt or be driven out of business, a process termed *creative destruction* by economist Joseph Schumpeter. The rise of the personal computer in the

1980s provoked a serious crisis at IBM, the leading maker of mainframe computers.

Technologies that raise output per worker are labor-saving by definition. Since the end of the Civil War (1861–1865), ongoing technical progress has reduced the share of agriculture in U.S. employment from 50 percent to less than 2 percent, and a similar process is currently underway in manufacturing. This release of labor from agriculture to other sectors has been an important force in rising U.S. living standards, but these large sectoral shifts have been a painful process for those directly involved.

Because the costs and gains from technical progress are unevenly shared, periods of rapid technical progress often see dramatic increases in income inequality such as characterized the European countries during their Industrial Revolutions. Because they were better able to adapt to the challenges of the computer revolution, educated workers have seen their wages rise quickly while other workers' wages have stagnated.

In addition to managing the labor market turbulence and larger sectoral shifts brought about by technological progress, technologically dynamic economies may face a host of unanticipated challenges that call for innovative economic, legal, and regulatory responses. The spread of the automobile gave rise to the suburbs and fundamentally altered American cities. The development of household appliances reduced the time required for routine housework, contributing to the rise in female labor force participation and changes in family structure. Advances in information technology may require new regulatory and legal responses to protect intellectual property rights in media, deter identity theft, and cope with the challenges of increased global competition.

These are nontrivial challenges, but technological progress has also provided the world with a greater capacity to meet them. Industrialization has provided both industrial pollution and the means to manage it, and the economic surplus created by increasing output per person has provided management with the ability to support and retrain workers who lose their jobs to technical progress. As in the realm of technology itself, the ability to meet the challenges raised by ongoing technological progress is limited ultimately by human creativity itself.

SEE ALSO *Business Cycles, Real; Change, Technological; Research and Development; Technological Progress, Skill Bias; Technology; Technology, Adoption of; Technology, Transfer of*

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TECHNOLOGICAL PROGRESS, SKILL BIAS

This entry will discuss the different approaches to total factor productivity measurement and define skill-biased technical change. Let t denote a technology index and x and y denote inputs and output, respectively. Then the production function can be written as

$$y = f(x, t).$$

Technological change is then defined as a change in the technology index t that affects the relationship between inputs x and output y. Given a change in t (say from t_1 to t_2), technological change is said to take place if

$$\frac{\partial f(x,t)}{\partial t} \neq 0.$$

Assuming that $t_2 > t_1$, technological change is called *technological progress* if

$$\frac{\partial f(x,t)}{\partial t} > 0,$$

that is, if technological change allows the production of more output y with the same quantity of inputs x. Alternatively, technological change is called *technological regress* if

$$\frac{\partial f(x,t)}{\partial t} < 0.$$

Technological progress is usually measured in terms of the *rate of technological progress*

$$\frac{\partial \ln f(x,t)}{\partial t}. \qquad (1)$$

Under the assumption of constant returns to scale (which is the maintained assumption in this article), the rate of technological progress is also referred to as the *growth rate of total factor productivity* (TFP) or *total factor productivity growth*.

There are four alternative approaches to the measurement of the rate of technological progress: growth accounting, the index number approach, the econometric approach, and the distance function approach.

The growth accounting approach to the measurement of the rate of technological progress was pioneered by Moses Abramovitz (1956) and Robert M. Solow (1957). It requires the specification of a neoclassical production function, $y = f(x, t)$. Totally differentiating the production function with respect to t and rearranging yields the rate of technological progress

$$\frac{\partial \ln f(x,t)}{\partial t} = \frac{d \ln y}{dt} - \sum_j \left(\frac{\partial \ln f(x,t)}{\partial x_j} \frac{dx_j}{dt} \right). \qquad (2)$$

As an example, consider the Cobb-Douglas production function $Y = AK^{\alpha}L^{1-\alpha}$, where K is capital, L is labor, α is the share of capital in output, and A is a measure of the current level of technology, referred to as total factor productivity. With this production function, equation (2) implies

$$\frac{\dot{A}}{A} = \frac{\dot{Y}}{Y} - \alpha\frac{\dot{K}}{K} - (1-\alpha)\frac{\dot{L}}{L},$$

according to which the rate of growth of A is just the rate of technological progress (under constant returns to scale). Intuitively, $\dot{A}/A$ is the growth in output that cannot be accounted for by growth in capital and labor and is often called the *Solow residual*, after Robert Solow, who suggested this method of estimating the rate of total factor productivity growth.

Pioneered by W. Erwin Diewert (1976), the index number approach is an extension of growth accounting (from a continuous-time framework to a discrete-time framework). Under the assumption of cost minimization and constant returns to scale, equation (2) can be rewritten as

$$\frac{\partial \ln f(x,t)}{\partial t} = \textit{Total factor productivity growth}$$
$$= \ln (I_y) - \ln (I_x)$$

where I_y is a (real) output quantity index and I_x an input quantity index. Equivalently,

$$\textit{Total factor productivity growth} = \frac{I_y}{I_x},$$

according to which the rate of technological progress is a function of the ratio of an output quantity index to an input quantity index. Clearly, the index number approach does not require the specification of a production function, although we did use it above to establish the equivalency between the growth accounting approach and the index number approach.

The index number approach is widely used by the majority of statistical agencies that produce productivity statistics (see Diewert and Nakamura 2003 for details). One critical issue regarding this approach is the selection of the appropriate indexes. Statistical indexes are mainly characterized by their statistical properties. These properties were examined in great detail by Irving Fisher (1922) and serve as tests in assessing the quality of a particular statistical index. They have been named, after Fisher, as *Fisher's system of tests* (see Eichhorn 1976 for a detailed analysis as well as a comprehensive bibliography of Fisher's "test" or "axiomatic" approach to index numbers).

The econometric approach involves estimating the parameters of a production, cost, or profit function. With a production function, the rate of technological progress can be measured directly using equation (1). With a cost function, $C(r, y, t)$, where r is the vector of input prices and the assumption of constant returns to scale, the rate of technological change can be shown to be

$$\frac{\partial \ln f(x,t)}{\partial t} = -\frac{\partial \ln C(r,y,t)}{\partial t},$$

where $\partial \ln C(r, y, t)/\partial t$ is the "dual rate of cost diminution." With a profit function, $\pi(r, y, t)$, and the assumption of constant returns to scale, the rate of technological progress can be shown to be the product of the dual rate of profit growth and the ratio of profit to revenue, as follows,

$$\frac{\partial \ln f(x,t)}{\partial t} = \frac{\partial \ln \pi(r,y,t)}{\partial t} \times \frac{\pi(r,y,t)}{py},$$

where p is the price of output. While the econometric approach provides deep insights into the production structure (i.e., the price elasticities as well as the elasticities of substitution), it assumes that the firms or industries in question are fully efficient (i.e., operating on the production frontier), which has been proved not to be the case by studies on technical and allocative efficiency.

Finally, the distance function approach to measuring total factor productivity, introduced separately by Ronald Shephard (1953) and Sten Malmquist (1953), seeks to separate total factor productivity into two components: changes resulting from a movement toward the production frontier and shifts in the frontier. Mathematically, the Malmquist total factor productivity index is given by

$$m_o^t (y_t, y_{t+1}, x_t, x_{t+1}) =$$
$$\frac{d_o^{t+1}(y_{t+1}, x_{t+1})}{d_o^t(y_t, x_t)} \times \left[\frac{d_o^t(y_{t+1}, x_{t+1})}{d_o^{t+1}(y_{t+1}, x_{t+1})} \times \frac{d_o^t(y_t, x_t)}{d_o^{t+1}(y_t, x_t)} \right]^{1/2},$$

where the term outside the brackets on the right-hand side measures the change in relative efficiency between years t and $t + 1$ and the geometric mean of the two ratios inside the brackets measures the shift in technology (technological progress) between the two periods evaluated at x_t and x_{t+1}. This approach has several advantages. It does not require a specific functional form, and it does not assume that firms are operating at their efficient level. However, implicit in the approach is the assumption that all units (firms, industries, or countries) being compared have the same production function, when in fact evidence suggests that even firms in the same industry do not have identical production functions.

In our discussion so far of the four approaches to the measurement of technological progress, we implicitly assumed that technological progress is factor-neutral in the sense that the marginal rate of substitution between any two inputs (measured along a ray through the origin) is not affected by technological progress. Studies, however, find that technological progress is not factor-neutral; rather, it is skill-biased. *Skill bias* occurs when a shift in the production function (technological change) favors skilled over unskilled labor by increasing its relative productivity and therefore its relative demand and skill premium.

SEE ALSO *Growth Accounting; Machinery; Production Function; Returns to Scale; Technological Progress, Economic Growth; Technology; Technology, Adoption of*

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Apostolos Serletis

TECHNOLOGY

Technology refers to the underlying production methodology through which inputs or resources are converted into output (goods and services). At a point in time there is one best way to produce a good or service. In other words, there is a well-defined production technology at a point in time. Over time, the technology can change as better, more efficient, and cheaper means of production are invented. Such changes might be due to deliberate attempts by businesses and governments (called "endogenous technical change") or they may be accidental (due to serendipity). In the long term, new technologies build upon previous technologies to yield better, more refined products and process. In that context, it is widely argued that perhaps man's greatest innovation was the wheel.

Sometimes technology is treated as another input in the production process, like labor or capital, and in other instances it is viewed as a catalyst that makes existing inputs more productive. Two unique features that set technology apart from other factors are that it has the potential to yield disproportionate returns for inventors, and there is uncertainty associated with the invention and use of new technology. Inventors are able to earn disproportionate returns when they have a unique product that confers a monopoly upon them. The uncertainty associated with technology might be related to the race to invent first, or it might be with respect to research resources necessary for innovation success, or with the potential audience (who will use the new technology and how fast?).

Some technologies improve the product processes (by making them more efficient and, consequently, cheaper), whereas others introduce entirely new products. The Internet has enabled process improvements in a number of instances (e.g., via online brokerages or online travel agencies), whereas a new pharmaceutical drug for an illness previously without a cure may be viewed as a product innovation. More fundamentally, process technologies affect production costs, whereas product innovations have the ability to create new markets.

The ingredients to new technology are the research and development (R&D) resources. These include scientists and engineers and related physical resources (research laboratories and so on). The output of R&D is generally measured in the number of patents granted. The number of patents, however, is an imperfect measure because it does not account for inventions that are not patented, and it treats patents of varying importance qualitatively the same.

The development of new technology can be seen as a process involving three distinct stages—invention, development, and diffusion. Invention involves the conception of a new idea about a new product or a new process.

Development refers to the building of a prototype and testing its usability, possible side effects, and longevity. Diffusion is the marketing stage, when the new technology is dispersed to the potential audience or users. Cooperation among private firms or between the public and private sectors can occur at one or all of these stages.

Some technologies are more flexible than others. Flexible technologies enable substitution among inputs; for example, grocery stores can employ a large number of checkout clerks and have relatively few (or no) automated checkout machines, or they can have few clerks and more automated machines. Inflexible technologies, on the other hand, do not permit substitution among inputs; for example, a cab company should have at least one driver for each cab to deliver viable service—two (or more) drivers and no cars are as useless as two (or more) cars and no drivers. Over time, however, improvements in technologies can alter the substitutability among inputs—think about what will happen to the car-driver substitutability as "smart" highways become a reality. Furthermore, there might be differences in the nature of technologies as production expands. In some cases there might be an equal bang for the buck as inputs are increased—that is, doubling of all inputs doubles output (technically called "constant returns to scale"); in other cases there might be less than (or more than) proportionate returns—that is, doubling of all inputs less than doubles output—decreasing returns to scale.

As the importance of technologies has come to the forefront, so has the attention of researchers on the process of technological change. One interesting aspect in this regard is the premature technological obsolescence. Joseph Schumpeter foresaw this many decades ago when he referred to this as the "gale of creative destruction" (Schumpeter 1950). In industries susceptible to rapid technological progress (e.g., the electronics industry), successful technologies might become prematurely obsolete as they are overtaken (or "leapfrogged") by newer technologies before full benefits have been realized. While this is somewhat of a concern, governments generally have tried to let the markets work by not blocking or delaying premature obsolescence.

Market competition can play a crucial role in the production and use of technologies. The Schumpeterian hypothesis posits that monopolies, due to their reserves from past profits, are perhaps better equipped than their competitive counterparts to deal with the uncertainties of research and innovation. However, competitive pressures might induce firms to seek out better production methods and new products, either through their own research or via licensing the technology of others. Some software companies choose to develop their own software, whereas others license some software from others. The empirical evidence regarding the role of competition and firm size is rather mixed. Many large competitive firms have been quite innovative (e.g., Canon, 3M), whereas small inventors have also contributed useful technologies. The classic example in this instance is the development of the Apple computer in a garage. Firms might cooperate in the development of technologies among themselves, or there might be cooperation between the public and private sectors. Some governments such as the U.S. government have relaxed laws to check anticompetitive practices to allow cooperation in research. These moves have led to the emergence of consortia to jointly engage in research in pursuit of new technologies.

A number of new technologies can have implications for workers as they tend to be capital-using and labor-saving. Examples of such technologies include online banking, which might affect the jobs of bank tellers, and online travel agencies, which threaten the jobs of travel agents.

Full benefits of technologies are realized when they are optimally diffused. The diffusion of technologies occurs over time, because in some instances users have to incur monetary and learning costs (consider a new type of software that requires the user to spend time to learn what the software can do). Governments sometimes subsidize these learning costs directly (e.g., with cash grants for adopting energy-saving building technologies) or indirectly (e.g., with free user-education clinics by agriculture extension services). The transfer of technologies might occur via legal or illegal means. Legal means include research joint ventures among firms pursuing new technologies or licensing agreements where firms authorize others to use their technologies for a fee. Sometimes, however, these licensing arrangements can have harmful effects when firms refuse to license complementary technologies. In such instances, the pace of technological change is somewhat slowed. Internationally, developing nations generally seek to adopt technologies from developed countries by inviting foreign investments. But developed nations often are reluctant to offer the latest technologies because the existence and enforcement of intellectual-property protection laws is typically lax in developing nations. In recent years international treaties have tried to bring various nations onto a somewhat equal footing in regards to the protection of intellectual property. Illegal transfer of technologies occurs when rival firms are able to copy or use technologies without approval. Such spillovers of technologies are partly driven by the nature of technology (some technologies are easier to copy than others). Common means of technology spillovers include industrial espionage, reverse engineering (unraveling a product or process to learn about its construction), and hiring scientists and engineers from the inventor firm. Governmental ability to check technology spillovers is limited by the nature of technologies and by

jurisdictional constraints. Government-sponsored technologies sometimes overcome these issues by making certain new technologies freely available in the public domain.

Often, choosing between alternate technologies can have long-term implications that can render some choices inefficient and very costly to alter over time. In other words, technological choice can have inertia when production processes are locked into specific technological streams. Two glaring examples of this are the keyboard settings of typewriters (and now computers) and the width of railroad tracks. The QWERTY settings of the manual typewriters were historically chosen so that the keys would be least likely to lock up, hence the choice, given the state of the technology at the time, was efficient. However, over time, the manual typewriters evolved into electric, then electronic, typewriters, and finally into computers. These iterations did not face the problem of keys locking, but the QWERTY format for keys has almost universally persisted, in spite of some alternate formulations that have been shown to be more efficient. In the other example, the choice of the width of rail tracks has implications for how far the rail network can ply and is very costly to change over time. Even today, a number of countries continue to have tracks of more than one width, creating networking problems within the country (these issues are even more pronounced in an intercountry setting). It seems, however, that governments have learned from past mistakes, and in some cases international standardization bodies (such as the one to manage the spread of the Internet) are being formed in early stages of technologies to avoid bottlenecks in the future.

Government involvement in the production, marketing (or diffusion), monitoring, and protection of technologies varies a great deal. Governments might need to monitor certain technologies for their effects. For example, in the United States new drugs have to undergo extensive testing for possible side effects and have to be approved by the Federal Drug Administration (FDA) before being made available publicly. Other technologies have to be tested for their effects on the environment. A key aspect of government technology policy deals with ensuring adequate returns to inventors (to preserve incentives for undertaking the risks of technology development) and creating conditions for long-term technological growth. Governments generally have policies to deal with intellectual-property protection and with subsidies to research. Patents that grant monopolies to inventors for a specific time period (currently twenty years for most patents in the United States) have proven quite popular despite their shortcomings. Patent applicants have to prove their own and the invention's credentials (i.e., uniqueness of their invention and their priority of discovery). The underlying rationale behind patents is that they balance the costs of monopoly grants against the long-term benefits that are realized when the secret patent formulae become public knowledge at the time of patent expiry, spurring future innovations. In practice, there is an interesting difference between U.S. patent policy and how patents are granted in (most of) the rest of the world. The United States grants a patent to the first person (or institution) to invent a new product or process; this person might not be the first to file the patent application. Most other countries, however, award a patent to the first to file, who might not be the original inventor. Both systems have merits and shortcomings. The U.S. system follows the essence of how patents should be granted, but leads to costly and socially wasteful litigation, especially in instances where the social value of patents is rather small. The rest of the world system avoids costly litigation, but can result in grave injustices when original inventors are slow to file the paperwork.

In recent years, the Internet, or more generally, "soft" technologies, have generated an interesting set of issues both for market participants and for governments trying to regulate technologies. Unlike "hard" or physical technologies (e.g., a tractor or an airplane), soft technologies are difficult to monitor (protect) and easy to transfer. Which aspects of a new software are like a language (and thus cannot be protected), and which aspects are like commercial products (and thus can be protected)? Transmission of soft technologies also makes convenient the separation of production and marketing over large geographical areas and eliminates the use of middlemen or substantial transactions costs. For example, soft technologies such as computer software, music, and e-books can be produced in one corner of the world and marketed in another via the Internet without the need of a middleman. Governments in such instances are somewhat powerless to monitor (and tax) these transactions. In effect, innovations in instruments of regulation have failed to keep pace with the speed of technological change.

The United States has been the world leader in technology since the end of World War II (1939–1945). Many important inventions and discoveries originated in the United States, and a number of these were byproducts of the U.S. defense and space programs. In the early 1980s, however, there were some concerns about the United States' declining technological leadership. It became evident that although many inventions were still originating in the United States, other countries were taking the lead in perfecting these technologies by making them more user-friendly. (For example, although the microwave oven was invented in the United States, there are hardly any domestic manufacturers of these ovens left.) These concerns prompted the U.S. government to strengthen intellectual-property protection in some cases and to stress better commercialization strategies for new technologies.

Two noteworthy developments in this regard were the provision of patents to semiconductor chips and the introduction of legislation that makes it easier for federally sponsored innovations to be commercialized. Universities in the United States are also now able to hold patents and benefit from commercialization of the technologies invented by their staff. It remains to be seen, however, how the world's technological leadership will evolve, especially with the advent of soft technologies that are difficult to control and not geographically constrained. Another key issue concerns the extent and speed of technological "trickle down" from developed nations to developing nations.

SEE ALSO *Technology, Adoption of; Technology, Transfer of*

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TECHNOLOGY, ADOPTION OF

The adoption of technology is represented in the popular imagination as a straightforward process whereby the best technology wins in the marketplace, satisfying consumer needs. However, this superficial understanding neglects a number of important issues that shape technological adoption and the mechanisms of the process itself.

TECHNOLOGY AND THE DIFFUSION MODEL

The classic representation of technology adoption is Everett M. Rogers's technological diffusion curve, which he outlines in his 2003 book *The Diffusion of Innovations*. This s-shaped curve is broken up into three phases: innovation and early adoption, accelerating adoption, and saturation. In the first phase the technology is rare, unknown, and untested. First phase users are often very different from the general public or mass consumers, whether in their general interest in novelties and new gadgets, or their specific organizational or occupational needs. For example, "Segway" personal transporters are not moving into mass circulation as fast as their inventor might hope, but airports and others with the need for moving security personnel have adopted them more readily. Similarly, being the first to adopt a fax machine or a cell phone was a risky proposition at first: There was no one to communicate with and it was not clear that the technology would be successful. In accelerating adoption more broad markets for innovations emerge, and new groups of potential adopters engage the technology, which rapidly spreads. At saturation the rate of new adoption slows and the market for a new technology is relatively stable, although economic activities such as replacement, repair, and accessorization may be quite dynamic. The diffusion model of technology adoption is a very effective model for describing successful consumer products, and it originated in Rogers's studies of the communication of new ideas.

The origin of the diffusion model in studies of the dissemination of ideas leads to weaknesses in the model. The first is a pro-diffusion bias that is part of the core language of the model. For example those who are hesitant to adopt new technologies are described as "laggards," which positions them as irrationally risk-averse and resisting new technologies adopted by risk-taking "early adopters," rather than as hesitant to expend scarce resources on an untested new product.

The second problem with diffusion as a model of new technologies is that it leaves the design process for technologies unexamined, as well as the organizational contexts of technology adoption. Bruno Latour found in his 1996 study that when discussing contemporary corporate settings in particular, the designers and inventors interact with many different social groups (which may or may not be end users), and the earliest "adopters" of a new technology are the financiers, designers, managers, and suppliers and manufacturers who must be "enrolled" into supplying the resources for bringing the technology to a point of relative stability and maturity before it can move into the market. Within this process, asserts Robert J. Thomas in his 1994 book *What Machines Can't Do: Politics and Technology in Industrial Enterprise*, the organizational contexts of technology's design and implementation are most important, and internal politics, relationships with suppliers, employment markets and expertise, and other factors shape design and implementation or non-adoption of new technologies.

This points to the final issue with the mainstream diffusionist models of technology adoption: the assumption that the technologies that are moving into the marketplace are somehow the "best" in some unambiguous technical sense. But "best" can only be defined in relation to a

particular group's interests and activities. Any Apple™ user will argue that the near monopoly that Microsoft™ enjoys in the marketplace does not reflect that the "best" operating system has been adopted. Therefore, proposes Wiebe E. Bijker in his 1995 study, social and economic power dynamics shape the processes that produce new technologies to be adopted and defined as "working," and the potential adoption patterns of those technologies across different user groups. Technology adoption discourses also assume that the technology is stable as a material and symbolic configuration: that there is closure of the technology. This assumption is not necessarily warranted: Sometimes in the process of the adoption a technology is adapted both materially changed, in terms of modifications or rebuilding, and certainly symbolically reconfigured, as the imagined and intended meanings and uses of the technology are reworked in different settings. In other cases, such as computers and cellular telephones, rapid changes in versions and models disrupt a smooth diffusion curve, as new features render technologies apparently obsolete, and closure and compatibility are not achieved.

TECHNOLOGY AND COMPATIBILITY

The issue of compatibility points to the complexity of the adoption of technology in varying social contexts. In all contexts of technology adoption, a new technology must fit within existing manufacturing and use infrastructures, meet perceived needs, be nominally affordable, and be convergent with important cultural ideals. Each of these five elements presents different barriers to adoption in diverse cultural, particularly international, contexts. A technically functional technology that disrupts important social processes or relies on scarce resources will not be adopted. This is part of the reason that patent offices are full of descriptions of technologies that "work" in a technical sense, but are not adopted and are not seen as "working" by their intended users.

SEE ALSO *Luddites; Productivity; Solow Residual, The; Technology; Technology, Transfer of; Technophobia*

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TECHNOLOGY, CELLULAR

Japan developed the world's first analog mobile phones in 1979. They spread rapidly, outstripping the world's landline systems within fifteen years. By 2006 the majority of the citizens of Europe, North America, and the wealthier nations of Asia, Africa, the Caribbean, and Latin America owned mobile phones. The United Kingdom had more mobiles than people, and there were 207 million users in the United States. More than twenty manufacturers produced them, and most nations had converged on GSM transmission, which was designed for European compatibility, although it coexisted with CMDA and iDen standards in the United States, Australia, Japan, and South Korea.

Most innovations have come from Japan, where a dense population that commutes to work, a high-tech industry long focused on miniaturization, and conducive social and consumer relationships led to early adoptions of camera and video phones, GPS (global positioning systems), text messaging, Internet, and music player capabilities. In Japan third-generation (3G) systems were the norm by 2005. Europe, South Korea, Taiwan, and coastal China are said to lag behind Japan by eighteen months, and North America lags three years behind. Elsewhere, developing nations rejected landlines in favor of cheaper mobile systems. The rollout of 4G systems is anticipated in Japan around 2010.

Mobile phones are not without problems. Many studies confirm the higher risk of auto accidents while using mobiles, even hands-free systems. Some scientific evidence shows increases in cancerous tumors among heavy, long-time users. Transmission towers are unwelcome sights in residential areas. Mobiles are also used in identity theft and credit card crime, in the coordination of terrorist attacks, and as detonators for bombs. Due to possible radio-wave interference, their use is banned in airplanes, hospitals, and some high-tech facilities. Theft of mobiles is common, with black markets on the Internet and in major cities.

Despite their problems, mobile phones have changed human communication profoundly, freeing it from the ancient constraints of physical proximity and spatial immobility. They have been rapidly adopted across cultures, age groups, and literacy and income levels, though in polyvalent modes. Mobile use initially was similar to the use of pagers by doctors and business people. Later mobiles became status items, especially among teenagers, who engaged in a "personalization culture" that included the use of faceplates, hand cords, stickers, and ringtones. For adults, status shifted to broadband Internet access.

Mobiles have become a basic technology of emergency response. Drivers use them to report accidents,

police and fire departments use them as a back channel in disasters, and the elderly carry them "just in case." Australian studies show that high percentages of mobile users are "cellular Samaritans" who use their phones to summon help for those in difficulty. Camera and video phones allowed instant reporting on the 2005 Indian Ocean tsunami and Hurricane Katrina. Japanese users can even be informed of impending earthquakes.

Sociologists have noted across cultures, genders, and age groups an increase in "grooming calls," by which members of a family or group show concern and "nearness." These short, frequent calls reinforce bonds of affection. Immigrant families and diasporic clans in particular do this. However, the "universal availability" of mobile users also allows the reinforcement of hierarchy. Bosses call employees outside work hours, parents monitor children, and couples monitor each other: "If you are without a mobile phone it means that no one depends on you for urgent direction" (Bautsch et al. 2001, p. 3).

The location of mobile use is problematic. Mobiles have been banned from theaters, religious institutions, funerals, airplanes, and many restaurants, and their use is frowned upon in museums, bookstores, trains, and buses. A dynamic of "civil inattention" has arisen in which bystanders pretend to ignore mobile conversations and speakers use vague or euphemistic language. Mobiles are also used as symbolic bodyguards in public areas to ward off unwanted attention or to refuse to participate in public space: "Public space is no longer lived in all of its aspects, stimuli and prospects, but is kept in the background of an itinerant cellular intimacy" (Fortunati 2000, p. 11).

Receiving mobile calls is an area without norms. Phones may be on, off, or in message-only mode, as users determine their degree of availability. Users decide whom to give their numbers to, whom to block, whom to answer immediately, and who hears a busy signal. Finnish studies show that men are more likely than women to turn mobiles off to avoid social control. Because calls arrive unpredictably but habit dictates that they be answered, face-to-face conversations and other calls must be "suspended." Such interruptions cause anxiety for both parties, leading to anomie and difficult restarts. Users must also manage facial expressions and body language for multiple audiences, indicating primary and secondary importance to those present and absent. Such "managed availability," however, has increased the capacity of parents in particular to coordinate various roles. But managing role conflicts and the discrepant awareness of conversation partners may be difficult for older users, and may promote broad but shallow relationships among younger users.

One alternative is SMS (short message systems), or "text messaging." SMS patterns tend to follow earlier pager use, though today's users can communicate through emoticons or delay responses via timers. Finnish studies, however, show that feedback is expected within 15-30 minutes. In Asia SMS users tend to be young and to belong to linguistic subcultures, and they are often killing time in public places or transport. SMS offers friendship tryouts, invitations without risk, and the cost is shared by sender and receiver. Some Japanese teens maintain multiple personae for hundreds of *meru tomo* (email friends), and SMS is the common channel for arranging *enjo kosai*, or paid "dates," between businessmen and high school girls.

The mobile's impact on individuality is also an area of concern. Traditional feelings of longing, homesickness, sadness, or insecurity are assuaged by calls and thus leveled out. Mobiles diminish the number of true hellos and goodbyes. Lost are reflective periods when people review past actions and plan future ones. This culture of "nomadic intimacy" may portend more peripheral relationships, but fewer deep ones (Fortunati 2000). The deregulation of social life is another implication. "Nights out [are] characterized by endless deferrals and reshuffling of meetings and events which might never occur," writes Sadie Plant (2003, p. 64), and "freedom from punctuality is permitted by constant ability to update other parties as to your status" (Townsend 2000, p. 94). In Italy the popularity of the mobile "seems to be associated with its support for a spontaneous, disorganized lifestyle that has always reigned among most of the country's population" (Geser 2004).

The mobile has also made covert information exchange more possible. Some critics call this gossip, but others see it as decentralizing or democratizing. Parents communicate with other parents about children's attitudes and whereabouts; employees engage in a similar dynamic about bosses; and law officers speak to each other rather than through dispatchers or superiors. In China mobile networks have spread news censored by the government and allowed seemingly spontaneous demonstrations. But studies show that mothers and wives act as the mobile information hubs of most families, so although mobiles may reduce the number of shared family experiences, they seem to be assimilated to traditional roles.

In the future, as the distribution of antennas grows denser, the location of every mobile will be determinable by GPS. In Japan, location within 30 feet was the norm by 2006, whereas in the United States the few GPS-enabled systems were accurate to 300 feet. GPS will be standard in 4G systems and, combined with built-in compasses, will allow users to point phones at buildings to find addresses, businesses, and friends, as well as to navigate roads. One side effect may be a barrage of business advertising. Barcode scanners may also become standard on mobiles, so that consumers concerned about food safety and product origin can "source" their purchases on databases before buying. Pocket-sized mobiles with SIMs (subscriber iden-

tity modules) will serve as credit cards that can be passed over sensors, like RFID (radio frequency interface devices) tags (Kohiyama 2005). Because SIMs are removable, users may have different mobiles for different occasions; they may even use friends' phones, because their SIM carries their rate plans and caller lists. Batteries may become universally available, recharged, or swapped cheaply at kiosks or vending machines. Increased demand for Internet uses will lead to multilayered rate plans, and SMS will prevail underground on trains and in subsurface rooms. South Korea has announced plans to send out traffic tickets, fines, and even indictments by SMS. All mobiles will connect to nearby workplace, school, or community LANs to make use of the Internet when possible. Future architectural designs will change, allowing for ubiquitous mobile phone niches. World cities such as Tokyo, New York, London, and Paris may consist of people whose work requires face-to-face proximity for deals and transactions, whereas mobiles will allow others to work nomadically.

SEE ALSO *Technology, Video*

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TECHNOLOGY, TRANSFER OF

The first humans developed new and better ways of production, and those around them watched and imitated. When the new and better ways became more complex, then the innovator would often teach the innovations to others. Since the beginning the transfer of technology has followed innovation. Technology is transferred from parents to children, from masters to apprentices, from teachers to students, from managers to workers, and from workers to workers. Technology spreads both horizontally (to competitors) and vertically (to suppliers and buyers) from a given innovating firm. It even spreads to seemingly unrelated industries (consider the case of the transistor that was developed for hearing aids but ended up in radios, TVs, computers, and space crafts).

However, the origin of the term *technology transfer* and its study as a separate phenomenon can be traced to the massive gifts of technology from the United States to Europe and Japan immediately following World War II (1939–1945). Many U.S. firms freely opened their doors so that European companies could come and study their production processes. Blueprints and patents were freely shared.

During the cold war between the United States and the Union of Soviet Socialist Republics (USSR), both sides encouraged the transfer of their technology to lesser-developed countries in order to help the recipients develop and to win allies. It was assumed that economic development required acquisition of modern technology. During the 1950s and 1960s, international organizations (such as the United Nations' Expanded Program of

Technical Assistance) and private foundations (such as the Ford and Rockefeller Foundations) were the primary conduits of international technological flows.

Many hoped that the farther a country lagged behind cutting-edge technology the more they would gain from acquiring that technology. Unfortunately this hope was misplaced. Experts discovered that countries closer to the technology frontier were better able to absorb cutting-edge technology than countries that lagged far behind. For example, countries needed reliable electricity before they could efficiently use any technology, such as computers, that was electrically driven. Furthermore, countries needed educated indigenous people who could understand both the new technology and the country's special needs in order to modify the technology so that it could work efficiently in the new environment. In the late 1970s and 1980s, literature emerged on *appropriate* technology where appropriate usually meant small-scale, simpler, and often manually powered technology such as hand pumps instead of electrically driven pumps. However, this appropriate technology was not always well received because it was viewed as inferior to what the developed world used.

During the 1980s and 1990s, some hoped that multinational companies would somehow find a way of successfully taking the most advanced technologies to the poorest countries in order to get the greatest profits from closing the largest technological gaps (and from paying lower wages). Contrary to this hope, most multinationals did not set up operations in the poorest countries; instead, they set up subsidiaries in countries that were already clearly on the path to economic development. Furthermore, multinationals have a strong incentive to keep their technology from any competitors. Some of a multinational's technology is expected to leak to competitors through migration of workers from multinational to domestically owned firms, through reverse engineering, or through industrial espionage. To minimize the risk of competitors acquiring their technology, many multinationals pay their workers significantly more than domestic firms pay (to keep workers from leaving) and do not give their best technologies to their foreign subsidiaries.

In the 1990s and early 2000s, a large literature emerged trying to estimate the relationship between foreign direct investment and growth rates of developing nations via technology spillovers. This literature assumes that technology naturally spills over the borders of a firm to neighboring firms and is plagued by problems with:

1. how to measure technology,
2. determining to what extent the foreign investment caused the growth or the growth attracted the foreign investment,
3. modeling and estimating the interaction between domestic development of technology and the foreign technology, and
4. explaining how and why the spillover effect occurs, especially because the firm has a strong profit motive to stop it.

The policy implication of many of these studies is that governments of lesser developed nations should actively encourage foreign direct investment. However, the problems listed above may invalidate that conclusion. Furthermore, this literature tends to consider only the positive effects of foreign direct investment and ignore potentially negative effects such as dependency, loss of sovereignty, increased corruption, disruption of native culture, and risk of capital flight, which can cause financial crises such as the one that swept Asia in 1997–1998.

SEE ALSO *Technology; Technology, Adoption of*

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TECHNOLOGY, VIDEO

Video technology was developed as an adjunct to centralized television systems. Its widespread adoption since the 1970s has had the profound impact of integrating film and television culture into global everyday life. Initially many hoped that video technology would lead to greater diversity of programming and an expansion of television's function beyond ephemeral entertainment and would empower the ordinary viewer. The empowerment that has occurred has increased cultural fragmentation and an isolation of viewers from each other. Thus video technology contributes to the general post-1970s trend of privatizing life spheres.

Video is not a precise term. It most commonly refers to those technologies that record or download electronic images, but the general reference to all electronic images

remains. In analog systems the recording is achieved by breaking down reflected light into a series of electrical impulses typically recorded on a magnetic tape. In digital systems the electrical impulses are further refined by a computer into a series of numbers that are recorded and that can be retrieved by other computers and displayed as images.

The American corporation Ampex first demonstrated a working video recorder in 1956. In the early 1960s video technology was used for instant replays in sports and the breaking events of President John F. Kennedy's 1963 assassination. Video cameras and systems were developed for surveillance and other uses. The Japanese manufacturers took the lead in developing consumer video recorders. Sony introduced the ½-inch Portapack in 1965 and the ¾-inch U-matic cassette system in 1969. These were adopted in the educational market and also in the adult film market. But it was in 1975 that the ½-inch cassette systems captured the global consumer market. At first there were two formats, Sony's Betamax and JVC's VHS, but within five years VHS dominated. The digital versatile disc (DVD) became the dominant video format after its introduction in 1997.

The video revolution was sparked by a pent-up desire of people throughout the world to change their use of television. Television critics were scornful of television's "vast wasteland" of poor choices in the United States and no choice in other countries. However, enhanced choice was a secondary reason for most VHS purchasers. The most important motivation was to watch shows at the time and place that was convenient for the viewers (*time shifting*). Thus video technology became part of the sociological phenomenon of a time crunch. This function of video was not imposed by corporations but was the result of a "consumption junction" (a term coined by Ruth Cowan in "The Consumption Junction" [1987]) among users, manufacturers, and content providers.

There was some experimentation with original programming for video. But video's overwhelming use was to extend the global market for Hollywood films and television shows and the mainstream values they convey, fitting a general pattern of "suppressing [video's] radical potential" (Winston 1998, p. 11). Raymond Williams's concept of mobile privatization is an influential way to understand video use. He deduced that broadcasting was a culmination of a century-long pattern of privatizing popular culture. People use television to make their homes the center of their lives. Video dramatically accelerated this trend. The additions of downloading movie and television clips on the computer, the cell phone, and the I-pod have gone even further in the private viewing of filmed entertainment.

Diaspora communities use video technologies for ready access to their home cultures. However, this direct access has weakened specialized movie theaters and has lessened the opportunities for theater bookers to introduce the audience to unknown titles.

The art of filmmaking has changed. The mainstream American film industry dramatically merged into transnational media conglomerates attracted by the new video revenue (Wasser 2001). Video became the most important market, surpassing the theatrical box office. Story lines and characters are sold across a variety of media, from games to merchandise.

Video games have influenced narrative film aesthetics toward visceral effects that seduce the audience into experiencing the repetitive thrills and spills of movement and sound at the expense of character development and plot logic. To make people feel the experience of the movie, filmmakers have increasingly turned toward another aspect of video technology, computer generated images (CGI). Video shifted experimental filmmaking from the art house to the art gallery. Adult filmmaking is entirely in video.

Video technology has enabled the large trends of mass culture. On the industrial end, industries have consolidated. The promise of grassroots video making has rarely caught the mass public's attention. One interesting example is the explosion of cheap fictional videos in Nigeria. On the consumer end, audiences have fragmented as viewers use video to facilitate a flexible work and leisure balance focused on consuming culture in isolated domestic spaces.

SEE ALSO *Modernization; Technology, Cellular*

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Frederick Wasser

TECHNOPHOBIA

The word *technophobia* derives from the Greek words *techne*, an art or craft, and *phobia*, fear. As Hal Hellman notes, this word is most often used to refer to fear: "fear of

technology, fear of science, fear of change in general" (Hellman 1976, p. xi). The customary use of the word has been pejorative. Thus Daniel Dinello remarks that technophobia has been "deployed mainly by rabid technophiles who believe that questioning technology's direction is crazy if not satanic" (Dinello 2005, p. 8). However, the word has come to refer not only to fear of technology or dislike of particular technologies but to general critiques of technology.

Champions of technology like Hellman allege that critics of technology are motivated by fear and anxiety, a charge implying that technology critics suffer from a psychological condition. In his 1998 publication the psychologist Mark J. Brosnan elevated this ad hominem approach to academic respectability by developing a model of the cognitive and psychosocial factors that might account for feelings of fear and anxiety about technology.

Like the word *technocrat*, technophobia can be used ironically. Dinello, for example, appropriates the label *technophobe* for the critic of technology. Rather than pursue questions of definition further, however, a brief and selective discussion of critiques of technology follows.

Technology critics represent various ethical and social perspectives. Some, such as Jacques Ellul and Martin Heidegger, see technology as dehumanizing or as an expression of inauthenticity or idolatry. Others, such as Langdon Winner, critique technology because of its political or social effects, for example, its threat to political values such as freedom and democracy. Still others, such as Carolyn Merchant and Nancy Lublin, examine technology largely on account of its gendered qualities or its damaging environmental effects.

All these lines of critique share the view that there exists a unified ensemble called "technology" as such, a phenomenon that is in some sense "autonomous" (Winner 1977), operating through a logic of its own in which human decisions do not count. This view challenges technological optimism on the part of liberals and Marxist socialists (e.g., Karl Marx's optimism that what matters is not technology as such but which class controls technology). "Technophobes" do not merely allege that technologies are evil because oppressors control them and would be beneficial under a different form of social organization. Rather, they claim that an irresistible logic of technological autonomy trumps all forms of social organization and political agency, both individual and collective. The technology critic Winner, for example, refers to "reverse adaptation" (Winner 1977, pp. 226–251), a perverse logic in which political and other social ends have become determined by the means necessary to achieve them. For Winner, this and other characteristics of autonomous technology render democratic self-governance virtually impossible. As Henry Jenkins (1999) notes, technology as such may be said to constitute, not merely reinforce, systems of power and social control, leading to violations of human freedom and civil liberties. Ironically, the claim that technology erodes freedom may be encouraged by technophile arguments that technological development is historically irresistible and hence uncontrollable by political or other means.

The term *Luddite* is commonly used to characterize technophobes. Yet the early-nineteenth-century Luddites did not fear all technology. Rather, they attacked the specific technologies of textile production that they saw as oppressive. Over two centuries, however, technology critiques shifted from a focus on production technology to an emphasis on the technologies of consumption, entertainment, education, and so forth. In the early twenty-first century the technologies especially arousing "technophobic" hostility include biotechnology (genetic manipulation, cloning, and eugenics), nanotechnology and robots, nuclear energy, and of course computers and cyber technology, all of which provoke distrust because of their places in the sphere of consumption.

Whereas in the nineteenth century the Romantic movement was responsible for much technology critique, in the twentieth century technophobia became associated with the political left (Heidegger and Ellul are prominent exceptions), especially those portions of the cultural left not identifying with orthodox Marxism. Social critics, such as Max Horkheimer and Theodor Adorno, and radical environmentalists, such as ecologists and ecofeminists, for example, Merchant, have frequently expressed deep suspicion about technology and its "conquest of nature." Conservatives, such as Thomas R. DeGrigori, especially in the United States with its market-libertarian traditions, tend to embrace technology or at least oppose government regulation of technology. Digital technology in particular flourishes in unregulated markets. On the other hand, certain technologies, such as biomedical technologies, are regarded by many conservatives as incompatible with religious faith. Of course the Old Order Amish are known for their avoidance of technologies associated with electricity and internal combustion on grounds of religion and community life.

The technological revolution shows no signs of abating. Hence technophobia in both senses—the psychological fear of technology and social critiques of technology—can be expected to flourish as well.

SEE ALSO *Bureaucrat; Conservatism; Digital Divide; Globalization, Social and Economic Aspects of; Libertarianism; Luddites; Marxism; Neoliberalism; Post-Traumatic Stress; Technocracy; Technocrat; Technology; Technology, Adoption of; Technology, Cellular; Technotopia*

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Harlan Wilson

TECHNOTOPIA

A technotopia is a governance model in which policy decisions would be made by a technocracy, a depoliticized branch of government that is staffed by highly educated scientific and technical specialists, to the exclusion of politicians or interest groups. Admission is based purely on scientific and technical expertise, as demonstrated in open, competitive examinations. Free from political interference, the technocracy makes decisions based solely on scientific evidence and instrumental rationality. At the core of technotopian thought is the conviction that technocrats will make better decisions than politicians. In their view, scientific and technological advances are inevitable and potentially beneficial, but only if they are managed by experts who can make scientifically driven decisions, free from political interference. In technotopian thought, scientific and technological advances broaden the relevance of scientifically driven decision making until the technocracy wholly supplants conventional political systems. The wealth and abundance created by a correctly managed technological infrastructure, it is argued, would eliminate the inequities that made conventional politics necessary.

The various components of technotopian thought are by no means new. For 1,300 years (605–1905), admission to the civil bureaucracy in dynastic China was based on a rigorous examination system. In *New Atlantis* (1627), the English philosopher and author Francis Bacon (1561–1626) envisioned a utopian society dedicated to fostering science and celebrating the achievements of explorers and inventors. In the eighteenth century, the French sociologist Henri de Saint-Simon (1760–1825) developed a recognizably technocratic governance model, in which an elite class of scientists and engineers would replace existing political institutions and make decisions on rational principles; Saint-Simon's student, Auguste Compte (1798–1857), added a sense of historical inevitability to Saint-Simon's formulation: Because the utility of the scientific method is matchless, it will ultimately be extended to all aspects of governance. In 1888, with the publication of Edward Bellamy's Utopian novel *Looking Backward*, technocratic thought reached mass audiences in the United States and Europe; in the United States *Looking Backward* sold more than 1 million copies by the end of the nineteenth century. The novel describes a future utopian society in which a technocratically controlled industrial sector has been redesigned to serve human needs, resulting in abundance, leisure, learning, and social peace. In the early twentieth century (1919–1933), the Technical Alliance of North America, a group of New York–based scientists, architects, and engineers, called for the restructuring of the entire U.S. economy on scientific principles and the replacement of conventional politics by technocratic rule.

Although there has never been a society in which technocrats have wholly supplanted politicians, technocratic principles inform the civil administration of science and technology in most of the world's advanced industrial economies, if to varying degrees. Closest to the technotopian ideal, arguably, is the modern civil administration of France, founded in 1945 in the wake of the Nazi occupation. Entry into the highest levels of the administration requires a diploma from the École Nationale d'Administration (ENA); its graduates are called *énarques*, and they take positions in one of the two "grand corps of the state," the administrative corps. Graduates of the leading French engineering school, the École Polytechnique, qualify for the better positions in the second of the two

grand corps, the engineering corps. Both are designed to insulate the civil administration from political interference. Entry into either of the two diploma-granting institutions is based solely on competitive examinations. A host of administrative regulations and civil statutes prevent a too-cozy relationship between civil servants and business interests, especially the practice of *pantouflage*, in which bureaucrats who rule in industry's favor are rewarded with lucrative private-sector positions. However, there are no such rules against civil servants going into politics; indeed, Jacques Chirac and Valéry Giscard d'Estaing, who have both served as presidents of France, are graduates of ENA.

The intent of France's regulatory structure is clear: it is far better to have science and engineering affect politics than to have politics affect science and engineering. Although French citizens occasionally chafe at the perceived arrogance of their technocratic elite, it is also true that, in general, they trust the elite to make the right decisions concerning technology, and they take pride in France's impressive record of postwar technological advances. For this reason, French government decisions to commit to nuclear power and to build high-speed rail lines throughout the country have met with little public opposition; in consequence, France is now a net exporter of electricity and is regarded as the world leader in railway technology.

Criticisms of technotopia focus on the risks of taking the public (and their elected representatives) out of the state's decision-making apparatus. As part of their effort to stake out an autonomous zone of technocratic decision making, technocrats are tempted to elaborate and mystify their expertise in ways that make it appear to be far beyond the reach of the less educated; in so doing, they may be trying to cover up their inadequacies. At the same time, some technocrats express contempt for ordinary citizens who try to involve themselves in policy decision processes, believing that people with less-than-stellar educations could not possibly grasp the underlying science. Yet the public may question whether technocrats possess sufficient breadth of vision to make wise policy choices. Ultimately, technocrats must make policy decisions by trying to strike a balance between incommensurable factors, such as safety versus cost; critics of technocracy argue that these decisions need to be made transparently so that the public can evaluate them. Because technocrats are mainly drawn from the middle and upper classes, they may be suspected, as well, of class, gender, and racial biases. In the United States, for example, it has been argued that new hazardous waste disposal sites are disproportionately located within African American and Hispanic communities.

More fundamental criticisms question whether science and engineering are capable of providing an appropriate foundation for public policy decisions. Scholarship in science and technology studies (STS), for example, has repeatedly shown a picture of science at sharp variance with the naïve view of science underlying technotopian thought. STS research has repeatedly shown that, within scientific communities, scientific evidence is susceptible to multiple interpretations, in which political and social values can easily be shown to play significant roles. Even if technocrats are protected from outright manipulation by politicians and political parties, their decisions are nevertheless driven by more subtle political, social, and professional values; these need to be brought to light so that they can be evaluated by affected communities. Still, it seems clear that the public's interests are best served by keeping outright political manipulation out of technocratic decision-making processes. In the United States, for example, staff-recommended scientists were rejected from a Bush administration panel considering acceptable levels of lead in drinking water; they were replaced by appointees with financial ties to the lead industry.

SEE ALSO *Internet; Technocracy*

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Bryan Pfaffenberger

TELECOMMUNICATIONS INDUSTRY

The term *telecommunications* is defined as communicating over distance. Technological advancements in this area have enabled a large share of the world's population to instantaneously communicate with others located all over the globe. Indeed, it is quite common to observe individuals in developed countries using electronic communication devices such as modular telephones, cellular phones, and personal computers to share ideas and information. But the widespread use of such equipment is a relatively new occurrence in the history of communications.

The modern telecommunications system uses a centralized network that relies on transmission facilities to send information between different locations. The origin of this network system developed from postal courier services established as early as the sixth century BCE in China (Xiong-jian and You-nong 1994). Postal service at that time was used primarily by the state to transmit commands and deliver orders to citizens and members of the armed forces. Providing an efficient long-distance communications system was key to governing a large geographic region and promoting economic growth. In succeeding years governments commonly sanctioned a single provider of courier service. Limiting communications services to one provider advanced efficient long-distance delivery of information by reducing costly duplication of services. Origins of a government-sanctioned monopoly can be traced back to Hapsburg's Emperor Maximilian I in 1505. Establishment of the state-owned monopoly soon followed in 1614, as Prussia established a state-run courier service that handled letters and parcels for the entire empire (Stephan 1859). Prussia's postal model served as the prototypical organizational structure for modern communications systems.

Over time, new technology such as the telegraph and telephone were generally integrated into the communications monopolies to form state-run post, telegraph, and telephone (PTT) companies in many countries. The development of the organizational structure of communications services in the United States is a notable exception to this form of integration. By the early nineteenth century privately owned telegraphic services in the United States were provided by Western Union, and postal service remained state-owned. Compared to postal delivery, telegraphy was a much faster way to transmit information because telegraphy used cables to transfer signals between locations. The invention of the telephone in 1876 by Alexander Graham Bell enhanced long-distance communications even further because it provided users the ability to transmit voice information over cable.

TELECOMMUNICATIONS GROWTH IN THE TWENTIETH CENTURY

Following the 1876 patent award for the telephone, Alexander Graham Bell, with support from a group of Boston financiers, established the Bell Telephone company. During its first years of operation Bell Telephone provided local communications services, and Western Union became the sole provider for telegraph communications. Over the next fifteen years Bell strengthened its monopoly status by extending its patent protection and developing a long-distance network to interconnect its operating companies. These operating companies formed the American Telegraph and Telephone Company (AT&T). The Bell system also integrated vertically into equipment production by acquiring Western Electric from Western Union. At the turn of the century Bell was continuing a pattern of acquiring independent companies and also had merged horizontally into telegraphy through partial acquisition of Western Union. These acquisitions contributed to the upsurge in the number of telephones in the Bell system, from 2,231,367 in 1905 to more than 15,000,000 by 1920.

Parallel industry growth occurred in other industrialized countries in western Europe and in Japan. By the late 1950s these countries had developed extensive wireline network systems that provided most of their citizens and businesses access to affordable telecommunications services. Protected from significant international and domestic competition, telecommunications monopolies became major employers offering high-wage jobs to telephone linemen, cable splicers, station installers, switchboard operators, and construction workers. The provision of well-paying jobs contributed to the expansion of these nations' dynamic economies. Providing businesses the ability to communicate instantaneously over long distances created a competitive advantage domestically and internationally that further supported economic growth in industrialized countries.

Although maintaining an affordable and universal telecommunications system benefited society, government regulation of rates and subsidization of services introduced inefficiencies that grew as services expanded. The intent of rate regulation was to suppress price increases. In the United States this was achieved by setting maximum limits on telecommunications carriers' returns on investment. This type of a regulation, however, lowers the incentive to contain costs by encouraging overinvestment in capital and equipment in an attempt to generate greater profits (Averch and Johnson 1962). Government-approved subsidization of less lucrative sectors of the telecommunications monopoly was intended to allow carriers to finance expensive services with revenue from more profitable ones. In the United States relatively high prices in the long-distance sector helped support low prices for local services. Revenue from telecommunications services often supported more costly postal operations in countries with PTT-integrated systems (Noam 1992).

TECHNOLOGICAL ADVANCEMENTS AND TELECOMMUNICATIONS POLICY REFORM

New low-cost microwave technology changed the telecommunications industry because it became an economically attractive alternative to traditional long-distance services. The introduction of this technology in the late 1950s enhanced the competitiveness of long-distance

carriers by nearly removing the additional cost of transmitting information over additional distances (Waverman 1975). In the United States the 1982 AT&T consent decree required Bell operating companies to provide all long-distance carriers the same access to local customers that AT&T enjoyed. The decree also required the 1984 divestiture of the Bell operating companies from AT&T, and provided these companies the option of purchasing telecommunications equipment from suppliers other than AT&T's manufacturing business.

Divestiture had the desired effect of promoting competition in the long-distance market. At the time of the breakup in 1984, AT&T had 96 percent of the business; by 1994 that share had fallen to 61 percent (Hendricks 1998). Long-distance users benefited tremendously from competitive prices offered by AT&T's rivals. Ten years after divestiture, interstate long-distance prices had fallen 22 percent. This competitive pricing environment also promoted significant growth in this sector, as the overall value of long-distance service rose from $34 billion in 1984 to $64 billion in 1994.

Twelve years after divestiture, the 1996 Telecommunications Act continued the shift toward less government intervention in telecommunications by providing additional support for competitive pricing of local services. Encouraged by the increasing array of potential competitors for local telephone service—made possible by technical advances in switching technology, cable, and cellular services—this act allowed long-distance and cable providers access to local markets (Crandall and Waverman 1995). This act also made it easier for local carriers to enter the long-distance market.

REGIONAL TELECOMMUNICATIONS MARKETS

Technological advancements that contributed to the changing telecommunications market in the United States also helped bring about changes in telecommunications services in the rest of the world. Many regions have privatized their PTT monopoly in an attempt to promote greater production efficiency. The pace of change toward privatization varies considerably across regions, though, and is influenced in large part by the quality of their network infrastructures.

Europe By the latter part of the twentieth century, greater demand for specialized telecommunications services made the maintenance of a large integrated system increasingly impractical, especially for European carriers operating extensive wireline systems. Encumbered by the use of older equipment, telecommunications companies faced high costs associated with extending the network system to provide universal service to businesses and residential customers. In addition, heavy reliance on in-house equipment manufacturing limited access to alternative cost reducing technology (Noam 1992, pp. 81–82). Pressure from the United States and the European Union to open markets, and the opportunity to provide low-cost competitive services encouraged privatization of services.

A shift toward market-oriented policy in Europe originated in the United Kingdom with the 1981 British Telecommunications Act. This act separated telecommunications services from the postal service, privatized the public telecommunications network system, and liberalized the equipment sector. Funding accrued from selling shares of British Telecommunications, the newly privatized company, helped to finance acquisition of new equipment. Liberalization of the equipment sector gave British Telecommunications the opportunity to take advantage of competitive bidding from equipment suppliers. In this more competitive telecommunications industry British businesses benefited from lower rates and lower waiting time for phone installation (Noam 1992, pp. 129–131).

Asia Although changes in telecommunications policy and the industry's growing significance as an engine for economic growth is nearly global, since the 1980s the transformations have been most marked in Asia. Societal support for change in this region is tied to overall support for growth in electronics and technology, especially in the Pacific Rim (Noam et al. 1994, pp. v–vi). The geography of this region—where countries along the Pacific Rim are physically separated by vast amounts of water, and immense countries such as China and India have inhabitants that live great distances from each other—underscores the importance of constructing a reliable system for transmitting information over long distances (Noam et al. 1994, p 13).

Policies aimed at developing reliable, low-cost telecommunications operations varied greatly during the last quarter of the twentieth century. For instance, Japan was the Asian front-runner in privatizing its domestic and international services in 1984. Greater competition led to declining rates, to more efficient self-selection of carriers, and to easier interconnection of networks (Ito and Iwata 1994, pp. 449–451). In contrast, the Chinese government limited foreign participation in the operations of telecommunications networks by investing heavily in this industry through the extension of loans and preferential tax policies in the mid 1980s. Carriers in the telecommunications industry were exempt from repaying 90 percent of government loans, and could retain 90 percent of their profits, which translates to a tax rate of 10 percent compared to a rate of 55 percent for nonpreferred industries (Wauchkuhn 2001). Under this policy, telecommunications in China grew at an annual rate of 24.6 percent by 1999.

Latin America The lack of an extensive network system presented a major challenge to the growth of Latin American economies, and the need for funding to finance the upgrading of systems created openness toward privatization. This openness was also influenced by trade liberalization policies such as the North American Free Trade Agreement (NAFTA).

Early privatization during the 1980s saw heavy investment in wireline systems by foreign owners, but the more significant growth in telecommunications services occurred with a second wave of international operators investing in wireless technologies (Hughes 2002). Research on postprivatization telecommunications in Latin America shows appreciable modernization of network systems and marked reductions of phone rates for differing market structures. For instance, following privatization, the Mexican government supported a single dominant provider of telecommunications services, whereas Brazil divested its former state-owned monopoly into separate competing companies (Hughes 2002). Both of these countries enjoyed declining prices for telecommunications services. These findings reveal that a large number of competitors is not always necessary to achieve low phone rates; rather, the low-cost operations associated with modernization contribute to higher profits from increasing customer demand at low prices. This prospect of greater profits creates an incentive for price reductions, even in industries dominated by a single firm. However, for the longer term, price pressures from competitors may be needed to help ensure the continuance of low prices (Hughes 2002).

Africa Countries in Africa, especially those in sub-Saharan Africa, face a daunting task in developing their telecommunications industry. By the late 1990s African nations accounted for only 2 percent of the world's telecommunications, even though these nations comprised 12 percent of the world's population (Noam 1999, p. 3). The absence of an extensive telecommunications network can be traced to the lack of infrastructure investment by colonialists during the early and mid-twentieth century. Following decolonization in the 1960s, African governments were left with outdated telecommunications equipment and a severely undertrained workforce. In response to the need for improved intra-African telecommunications services, African nations agreed to the development of the Pan-African Telecommunications Network (Panaftel) in 1962. This project resulted in significant expansion of the continent's network. Gains from this project slowed dramatically by the late 1980s as problems arose with standardizing switching systems, and incompatibility among carrier techniques hampered further development (Nuruddin 1999, pp. 258–259). These difficulties ultimately led to the discontinuation of international funding for the Panaftel project.

International support for modernizing the telecommunications system in Africa did not stop with the decline of the Panaftel project, though: international development organizations such as the World Bank have pushed cooperation and privatization schemes for public telecommunications operations (Kone 1999, p. 161). Advanced wireless technology that avoids the need for heavy investment in wireline equipment offers the promise of speedy progress toward modernization for developing nations in Africa and elsewhere.

SOCIETAL BENEFITS

Modernization of telecommunication services provides important societal benefits other than simple economic growth; for example, modern systems make it easier to quickly obtain vital information needed to provide quality healthcare, and they provide quick access to critical information needed to lower safety and security risks. In addition, new technologies provide workers with well-paying jobs (Peoples 1998). These employment gains do come at a cost, though, as labor-saving technology such as digital-switching systems have significantly reduced demand for switchboard operators. Jobs as union telecommunications workers are also less prevalent in this industry as liberalization policies facilitated an influx of nonunion carriers in the United States. Nonetheless, policies promoting competition have contributed to increased industry employment.

Despite the impressive societal gains associated with modernization and competition in telecommunications, challenges still remain. The disparity in the quality and availability of telecommunications services between developed and developing countries remains high, even though mobile service has made access to the telecommunications network easier for citizens in developing countries. There is room for greater societal gains even in developed countries. For instance, phone rates for local service increased following liberalization policies in the United States in large part because the high cost of connecting to access lines presents a significant entry barrier into local telecommunications markets. Still, if the recent history of this industry is a reasonable guide, it is highly probable that technological advances will contribute to overcoming these lingering challenges.

SEE ALSO *Communication; Industry*

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James Peoples

TELEOLOGY

The term *teleology* (from the Greek *telos*, meaning *end*) refers broadly to end-directedness, the idea that some things exist, have certain traits, or do certain things for the sake of some end. Many familiar cases of teleology are directly psychological, as when someone goes to the store in order to get milk. Here the behavior is intentional and the end is the object of the agent's intention. In other cases, involving artifacts, psychology plays an indirect but equally crucial role through design and use. For example, a spark plug exists, is present in the engine, and sparks at a certain point in the combustion cycle for the sake of igniting the fuel. Though such objects have no intentions of their own, they have proper functions—things they may be said to do for the sake of some end, as opposed to other things they just happen to do (such as the spark plug's making a noise when it sparks).

The most interesting questions about teleology concern living things. We commonly apply teleological concepts to the parts and features of organisms. The heart, for example, is said to have the proper function of pumping the blood, which in turn occurs for the sake of blood circulation and the biological ends of nutrient distribution and waste removal; pumping the blood is what the heart is *for* in the organism, as opposed to other things it does merely as side-effects (such as making a *lub-dub* noise). This is a teleological claim analogous to claims about artifacts, and it licenses similar function-based evaluations: Just as a spark plug that does not fire under the right conditions is a defective spark plug, so too a heart that fails to pump in certain ways under the right conditions is a defective heart. Similar points may be made even about the parts and features of plants—for example, a color pattern on a flower may have the biological function of attracting pollinating insects, this being what that adaptation is for in the life of such plants. The question is whether it is legitimate to apply teleological concepts to the natural world in this way and, if so, how this application is to be understood.

It might at first seem that all uses of teleological concepts in biology are ruled out by neo-Darwinian evolutionary theory. Certainly the theory does reject the idea that the process of evolution is teleological. It is another question, however, whether the products of evolution—the parts and features of evolved organisms—might stand in teleological relations. In fact, many philosophers of biology agree that natural selection itself provides a basis for teleological judgments about adaptations and their relevant effects. This is because natural selection mimics design in an important respect. A designer makes a spark plug the way it is and puts it in the engine so that it will spark and ignite the fuel, and this means that these effects partly explain (via the designer's intentions) the presence of the spark plug in the engine, setting them apart as proper functions and ends served by the spark plug. Natural selection does not, of course, deliberately do anything or act with any foresight, but it still yields a similar relation between an adaptation and certain effects it has. In the case of the evolved color pattern, for example, the effect of attracting pollinating insects partly explains (via

natural selection) the trait's coming to be a standard feature of the evolved species, setting this effect apart as specially relevant to the formation and life of this species of plant. Many have argued that this provides a basis for sensible talk of proper functions and ends in connection with biological adaptations.

The above approach sharply contrasts with any approach that seeks to explain teleological facts about organisms by attributing teleology to the processes by which species are formed. A common form of creationism, for example, posits direct creation of each species by a divinity, giving organisms a design-based teleology analogous to that of artifacts. Intelligent design theory, by contrast, may accept evolution and common ancestry, but still posits supernatural direction of evolutionary processes on the grounds that neo-Darwinism alone "cannot possibly" explain the evolution of certain complex structures. Proponents of intelligent design argue, for example, that providence guides the genetic mutations upon which natural selection acts.

While the doctrine of special creation has been discredited by a wealth of empirical evidence for evolution, intelligent design theory is trickier. Because there is no way to demonstrate the absence of divine intervention in historical processes, the theory can never be disproved. For this very reason, however, it also falls plainly outside the scope of science. The biological work cited by proponents of intelligent design would remain within science if it were used simply to point out puzzles and shape scientific research projects to try to solve them. But by treating the puzzles as grounds for embracing supernatural hypotheses, intelligent design becomes a religious alternative to the scientific enterprise rather than a scientific alternative to neo-Darwinism, as its proponents often claim it to be when advocating its inclusion in public school curricula.

Historically, the track record for the *God-of-the-gaps* approach—that is, appeals to the supernatural to explain whatever is currently difficult to explain scientifically—has not been impressive, as claims about what science cannot possibly explain are steadily overturned. Still, despite its not being science, intelligent design theory could of course turn out to be true. If it did, it would provide for a partially design-based biological teleology and a purposive direction for evolution itself. Strictly speaking, theists could have this general result even without embracing intelligent design at the level of natural processes. They could, for example, posit divine influence in the shaping of the background laws, allowing for a more general divine purpose behind creation without the micromanagement of evolution. It is worth noting that at least for part of his career Darwin himself was not averse to that idea, and similar claims have been advanced outside of biology as well. Some have argued, for example, that a divine intelligence is necessary to explain the highly unlikely confluence of "finely tuned" physical laws, physical constants, and cosmological conditions that was crucial for the eventual emergence and evolution of life in the universe. According to such a view, which is not logically inconsistent with neo-Darwinian evolutionary theory, there could be a very general design-based teleology in addition to the teleology rooted in natural selection.

SEE ALSO *Creationism; Darwin, Charles; Hegel, Georg Wilhelm Friedrich; Idealism*

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William J. FitzPatrick

TELEVISION

Television is one of the most significant communications inventions. Television has fundamentally changed the political process, our use of leisure, as well as social relations among family and friends.

Television was not developed by any single individual or even a group of people working together. Scientists and visionaries imagined a device that would capture images with sound and transmit them into homes since the 1880s. The word *television* was first used at the 1900 Exhibition in Paris. Scottish inventor John Logie Baird (1888–1946) was the first person to provide a television transmission in October 1925, and he subsequently demonstrated it to the British public on January 26, 1926. On December 25, 1926, Kenjiro Takayanagi (1899–1990) displayed the first image in Japan. The technology improved slowly with athletes participating in the 1936 Olympic games in Berlin able to see some poor quality images of the games. In 1936 France and

Germany began television programming. In Great Britain King George VI's coronation from Hyde Park Corner on May 12, 1937, was the first broadcast of its kind, and the first U.S. election reported on television was on November 8, 1941, where news of Franklin Delano Roosevelt's victory was transmitted to an estimated 7,500 sets.

The development of television was halted during the Second World War in Europe and North America where manufacturers directed their attentions to munitions. Regular television service reached ninety-six countries by 1973.

Many of the things we associate with modern television technology were patented or devised in television's infancy. In 1928 Vladimir Zworyking (1889–1982) owned the first U.S. patent for an all-electronic color television; however, the development did not come to fruition for another twenty-five years. During the 1939 World's Fair in New York, television could not only receive audio and video images, but it was also designed to record those images, foreshadowing video recording devices (VCRs). And Baird later patented a 600-line electronic high definition color system in Britain in 1945.

TELEVISION'S GOLDEN AGE

The golden age of television is associated with the years 1949 to 1960 when American television viewing consisted of a variety of entertainment programming. The burgeoning prosperity and optimism of post–World War II influenced the spread of television. As more people were able to purchase televisions the demand for content grew. Early television programs offered revamped radio programs. There was some news and information programming, but those tended to be of short duration. A similar golden age is associated with British television. Early programs were reworked vaudeville acts and radio shows. Later situational comedies such as *I Love Lucy* and *The Honeymooners* would create new talent and genres.

The shared experience of watching key television programming provided an avenue for discussion and next-day water cooler conversation. As television matured so did the content, with programs such as *All in the Family* offering political and social commentary on issues ranging from race relations to the Vietnam War. Television's depiction of the family changed through time as well. While initial programming presented unified traditional families with bread-winning fathers and stay-at-home mothers, later programs depicted the breakdown of the traditional family dealing in both fiction and nonfiction with divorce, remarriage, blended families, and later, with same-sex unions.

Not only did television provide scripted programming, but it also broadcasted major sporting events. The first televised hockey game between the Montreal Canadiens losing six-to-two to the New York Rangers in Madison Square Gardens was seen on February 25, 1940. Television is also closely associated with the increasing popularity of the Olympic games, soccer, American football, and baseball.

With technological improvements, viewing time increased as well as television's influence on the public and politics. In 1947 there were only 60,000 American homes with television sets; by 1950 this figure grew to 12.5 million. Televisions are now found in nearly every home in the United States and Europe. In the developing world, the allure of television is so great that some want television before other communications devices such as telephones.

The hold of major networks on audiences soon dissipated with the advent of cable and specialty television programming. Rather than having a system where the networks catered to a common denominator of programming, the proliferation of specialty programs allowed people to view content that interested them specifically. Moving from analog to digital signals allowed for a so-called 500-channel universe where any specific interest could be satisfied, from golf to cooking; from sport to fashion; and from all news to pornography. As a result of these technological changes, the era of the mass audience was over. While there remain a few programs that can attain mass audiences, the market has been so fragmented that networks must compete for an ever-shrinking television audience.

EFFECTS ON CHILDREN

The rapid adoption of television fundamentally changed modern society. Television has been blamed for the decline in civil society, the breakdown of the family, suicide, mass murder, childhood obesity, and the trivializing of politics.

Children have been the target of broadcasters since the 1950s. Initially American broadcasters provided twenty-seven hours a week of children's television programming. By the 1990s there was twenty-four hour a day programming available to children. Children in Canada spend fourteen hours per week (Statistics Canada) watching television, while American children spend twenty-one hours per week (Roberts et al. 2005, p. 34). Some surveys suggest that British children have the highest rate of television viewing in the world. There are several concerns associated with television and children's viewing patterns. Many researchers have noted the link between the advent of television and increasing obesity and other weight-related illnesses. The time spent watching television is time not spent playing outdoors or in other physically challenging activities.

High television viewership of violence is linked to an increase in violent children. Prolonged exposure to violent

television programming has shown that children can become more aggressive, become desensitized to violence, become accepting of violence as a means to solve problems, imitate violence viewed on television, and identify with either victims or victimizers.

Despite the negatives associated with television, it remains a powerful tool in shaping and educating children. While many point to the destructive nature of television, there are others who acknowledge television's positive impact. Researchers and programmers have developed content that has positively influenced children. Early studies on the PBS program *Sesame Street* found that children who viewed the program were better readers in grade one than students who had not watched the program. Programs were developed not only to help with literacy, but with other subjects as well as socialization, problem solving, and civic culture.

Notwithstanding the positive effects of children and television viewing, high television viewing has been associated with a decline in civic culture. As people have retreated to their homes to watch television, they have been less inclined to participate in politics either by voting or by joining political parties. In addition television viewing means that people are not interacting as much with friends or neighbors. What is more, television viewing also has been associated with an overall decline in group participation as well as volunteerism.

ADVERTISING AND OWNERSHIP

The issue of ownership of content and transmission was debated from television's onset. In 1927 the U.S. Radio Act declared public ownership of the airways. They argued that the airwaves should "serve the PICN—public interest, convenience, and necessity." Because of this understanding of the public owning the airwaves, it set the stage for regulatory bodies around the world licensing stations according to content regulations. Taking the issue of public interest one step further, the British government founded the British Broadcasting Corporation (BBC) in 1927. Other countries followed establishing their own public broadcasting systems. The United States lagged behind other nations by adopting a Public Broadcasting Service (PBS) in 1968. With the increasing adoption of television, many countries found the need to create new regulatory agencies. In the United States, the U.S. Federal Communications Commission (FCC) was created as an act of Congress on June 19, 1934.

The most successful television enterprises are closely associated with advertising. From the outset the way in which television content was funded was through the pursuit of advertising dollars. As a result it has often been said that television does not bring content to audiences, but instead it brings audiences to advertisers. The *propaganda model* of the media, coined by Edward Herman and Noam Chomsky in their 1988 publication *Manufacturing Consent: The Political Economy of the Mass Media*, argues that the media uphold the dominant ideology in America. The five pillars of the model focus on ownership, advertising, sourcing, flak, and anticommunism. This model has been linked to other western media systems, but is most fitting in the United States where the power of the media rests with the owners.

Television's hold on the public imagination stems in part because of its ease of transmission. No one needs any special skill to receive the messages. All that is required is a television that can pick up a signal. More important, television influences our view of the world precisely because images are transmitted into people's homes. Since its inception, television transmissions have had the power to change our perceptions of world events. Starting with the Vietnam War and continuing to a myriad of events from the arms race to Tiananmen Square, and from the Civil Rights movement to the war in Iraq, television has become synonymous with the phrase "the whole world is watching."

SEE ALSO *Children; Chomsky, Noam; Communication; Cultural Studies; Entertainment Industry; Hidden Persuaders; Internet; Media; Medium Is the Message; Politics; Race Relations; Sports; Sports Industry; Subliminal Suggestion; Vietnam War; Violence*

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Lydia Miljan

TEMPERAMENT

In contrast to theories that attribute variation in behavior primarily to socialization influences, temperament refers to early-appearing emotional, physiological, and attentional tendencies that, in interaction with the environment, organize the development of stable traits. Because a common focus on consistency of traits over time unites concepts of personality and temperament, temperament has been construed as an intrinsic core around which personality emerges.

A useful distinction between temperament and personality is that the latter includes a broader array of constructs involving more socially constructed cognitive attributes, such as morality, self-concepts, and beliefs. Temperament refers to more basic and overt behavioral tendencies. The more specific nature of temperament allows for coordination of adult research with investigations of infants and nonhuman animals, including the exploration of neural systems associated with temperament traits.

Although ideas regarding temperament appear in the writings of Greco-Roman physicians, the preeminence of the socialization models inherent in learning and psychoanalytic theories in the first half of the twentieth century prevented temperament concepts from receiving substantial attention from developmental psychologists until the 1960s. Two developments contributed to increased consideration of temperament during the latter half of the twentieth century. The first involved observations made by Alexander Thomas and Stella Chess (1977) of children experiencing psychological dysfunction despite being raised in well-functioning homes. A second and more recent advance concerns increasing sophistication of neuroscience measures and corresponding theories that have allowed for greater precision in linking activity in the brain to individual differences in behavior.

TEMPERAMENT DEFINED

Subtle differences exist in the boundaries researchers have used to define temperament. Early descriptions of temperament primarily considered susceptibility to, and severity and pervasiveness of, affective displays and included evidence of genetic origins and appearance during the first year as hallmarks (Goldsmith et al. 1987). More contemporary perspectives soften these boundaries, additionally focusing on attentional and behavioral processes that alter the course of emotional responses, and allowing for environmental influences.

In the early twenty-first century, the most frequently cited definition of temperament is that proposed in 1981 by Mary K. Rothbart and Douglas Derryberry: constitutionally based, relatively stable individual differences in emotional, motor, and attentional reactivity and self-regulation. The term *constitutionally* refers to the role of biological underpinnings, shaped by heredity, maturation, and interactions with the environment. *Stable* refers to consistency both over situations and over time. *Reactivity* involves latencies, intensity, and duration of behavioral, affective, and physiological reactions to changes in the environment. *Self-regulation* refers to attentional processes, such as orienting and focusing, and behaviors, such as approach and withdrawal, that modulate reactivity.

METHODOLOGY AND DIMENSIONS OF TEMPERAMENT

Temperament is assessed through structured and naturalistic observations made in the laboratory and the home, and through parent- and self-report questionnaires (the latter from older children and adults). Naturalistic observations maximize external validity but are time-consuming and often demonstrate low consistency across measurement periods. Laboratory assessments allow for tighter control of eliciting contexts, but ethical and practical limitations constrain the type of traits that can be assessed and may result in carryover effects from one procedure to another. The use of questionnaires allows for measurement of child behavior across a wide range of situations but can be contaminated by reporting bias. Despite the differences among assessment strategies, Rothbart and John E. Bates, in their 2006 examination of several studies, demonstrated convergence across measures.

Because of their ability to efficiently assess multiple aspects of behavior, questionnaires have been instrumental in identifying important temperament dimensions. Studies conducted in the late 1990s and early 2000s have used factor analysis of finely differentiated attributes to elucidate high-order traits. In a 2001 paper, Samuel P. Putnam, Lesa K. Ellis, and Rothbart describe three similar factors that have emerged from different questionnaires and across the lifespan. These factors also bridge gaps between personality and temperament traditions, as they bear resemblance to three of the "Big Five" traits commonly reported in adult personality studies. The first, labeled *surgency* and resembling the personality construct of extraversion, includes activity level, sociability, impulsivity, and enjoyment of high-intensity activities. The second, *negative affectivity*, is conceptually similar to neuroticism and includes sadness, anger, fear, and discomfort. The third, referred to as *orienting/regulating* in

infancy and as *effortful control* thereafter, includes enjoyment of low-intensity activities, attentional focusing and shifting, and inhibitory control, and bears similarity to the personality construct of conscientiousness.

TEMPERAMENT STABILITY AND DEVELOPMENT

Rothbart and Bates (2006) review studies of twins and adopted children that indicate significant genetic effects on temperament, as well as describe more recent molecular genetic investigations that suggest specific genes underlying temperamental traits. Evidence of biological underpinnings suggests that temperament traits should be stable across time, and this is true to an extent. Several studies have supported predicted associations between infancy and middle childhood, but these relations are often fairly modest. More robust stability is found after the age of three years, and longitudinal studies conducted by Avshalom Caspi and colleagues (2003) have confirmed relations between temperament at age three and personality at age twenty-six. In their 2000 review, Brent W. Roberts and Wendy F. DelVecchio found that stability estimates increase throughout much of adulthood.

Multiple factors account for increasing estimates of stability with age. The first concerns the difficulty of measuring the same construct at differing developmental points, as both the expressions and elicitors of temperament change with maturation. The second explanation is that real change in the traits may occur because of environmental influences, and plasticity in systems underlying temperament may decrease over time. Finally, it is now recognized that temperament itself develops. Of primary importance is the emergence of regulatory capabilities that modulate earlier-appearing reactive tendencies. One such shift occurs in the second half of the first year, as fear-related behavioral inhibition alters the expression of approach motivation. Throughout the toddler and preschool periods, dramatic increases in effortful attentional and behavioral control allow for greater flexibility in the expression of other predispositions. Individual differences in maturation rates compound the appearance of instability.

The dominance of learning theories in explaining individual differences has given way to greater appreciation for inborn, biologically mediated predispositions that shape personal characteristics. Several temperament characteristics exhibit normative developmental change but also demonstrate interindividual stability over long periods. With advances in both measurement of genetic and neural processes and in theories explaining how biology and environment interact to form developmental pathways, our understanding of temperament is sure to show dramatic gains in the near future.

SEE ALSO *Personality; Trait Theory*

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Samuel P. Putnam

TEMPORALITY BIAS

SEE *Research, Cross-Sectional.*

TEMPORARY ASSISTANCE FOR NEEDY FAMILIES (TANF) 1997

SEE *Culture of Poverty.*

TEMPTATION

SEE *Sin.*

TENDENCIES

SEE *Trait Theory.*

TERM LIMITS

A "term limit" is a rule that prevents government officials from serving for more than a specified number of terms. More than a technical electoral regulation, a term limit reflects the manner in which citizens envision their leaders: Should politicians be temporary servants of the public who rotate relatively quickly into and out of office, or a corps of experts who remain in power as long as they earn majority support? The main rationale behind mandating turnover through a term limit is that it will bring fresh perspectives to government and ensure responsiveness to voter demands, at the potential cost of losing knowledgeable veterans. Term limits have been debated, and intermittently enacted, throughout the history of democracy.

One ancient Athenian legislature, the *Boule*, placed a one-term limit on service, an idea argued for by Greek philosopher Aristotle in the fourth century BCE. There were term limits in the first U.S. Congress established under the Articles of Confederation, although the idea was later rejected at the Constitutional Convention because many of the Founding Fathers thought it made Congress weak. The constitutions of Mexico and Costa Rica impose short term limits on both their legislators and presidents. The president of the United States is limited to two terms in office, as are most state governors. The term limit laws that have provoked the fiercest debate and had the most profound effects in America have been the limits enacted since 1990 on state legislators.

In 1990, voters in California, Colorado, and Oklahoma passed citizen initiatives, which for the first time imposed term limits on their state representatives. Two years later, ten more states enacted limits, all of them through initiatives and many of them spurred by the efforts of the "U.S. Term Limits" organization. Predictably, this reform was much less popular among state legislators themselves. Louisiana's state legislators were the only ones to impose limits on their own term lengths even though they did not face the threat of an initiative. By the end of the decade, twenty-one states had passed term limits. In four of them (Massachusetts, Oregon, Washington, and Wyoming), judges overturned these initiatives on technical grounds, and legislators repealed limits in Utah and Idaho. The term limits that remained in effect in fifteen states varied considerably in lengths and strictness. Michigan's initiative prevented state legislators from serving more than six years in the state's House and eight years in the Senate, banning them for life afterward. Louisiana's law, crafted by legislators themselves, imposed a twelve-year limit in each house, and only mandated that legislators sit out a single term before they are eligible to run again. But regardless of these important provisions, all term limit laws proposed were based on a similar line of reasoning and have faced a common set of criticisms.

Proponents of term limits contended they would bring a return to the ideal of the "citizen legislator" who carries the concerns of average voters into office, then quickly leaves to rejoin their ranks. Mandating turnover would replace entrenched incumbents with representatives who were closer to the people. These new lawmakers would not be tainted by allegiances to interest groups or captured by the bureaucracy, the argument went. Because new lawmakers could not plan a long future representing one district, they would be freed from catering to the whims of a narrow constituency and would make decisions with the common welfare in mind. To the supporters, term limits would make it more likely that exiting legislators "would anticipate careers in the private sector and therefore would, as they legislate, think about what it is like to live under the laws they make" (Will 1992, p. 201).

Those who argued against the imposition of term limits in the states and upon members of Congress warned that these laws would throw out of office many legislators with decades of institutional knowledge. Losing this expertise would leave the legislative branch impotent against a massive and well-informed executive branch. Some opponents predicted that after jettisoning their most senior parliamentarians legislatures would see their lawmaking process grind to a halt. Lobbyists and unelected staff would fill the vacuum of information and power, leaving voters poorly represented. One opponent compared the career paths of termed-out legislators to that of Cincinnatus, a Roman farmer much admired by the founders of the United States, who has become the archetype of the citizen legislator, charging that limits "would put at risk the independence of legislators contemplating exit who, rather than returning Cincinnatus-like to their waiting plow, prefer some sort of future elsewhere. Even Cincinnatus might be tempted to send a farm subsidy or two homeward in advance of his return" (Polsby 1993, p. 7).

Given that term limits have removed hundreds of legislators from office in many states, it is possible to judge the predictions made by both term limits' boosters and adversaries against the empirical record, gleaned from election statistics, surveys of legislators and statehouse observers, and state legislative archives. Not surprisingly, term limits have had their intended effect of greatly increasing turnover. This has brought new faces and perspectives into office, and accelerated gains in representation for racial and ethnic minorities in the states with changing demographics. Yet getting rid of incumbents has not made state legislative elections more competitive; term limits did not cut into the average margin of victory in these contests or lead to more seats changing party hands.

When new legislators come to office after term limits, surveys show, they do tend to think more about

statewide concerns than about the demands of their districts. But they also spend less time keeping in touch with voters and working to solve constituent problems, compared to legislators who do not face limits. Although the legislative process has not devolved into chaos anywhere, committees tend to give bills less scrutiny after term limits and the laws that are ultimately produced are usually shorter and narrower. One of the clearest findings about term limits, confirmed in examinations of archival records as well as in interviews with a range of political observers, is that they dramatically reduce the power of the legislative branch. Governors exert more influence over crafting state budgets once limits are imposed, and legislators spend less time on oversight of the executive branch.

In many states as in the federal government, the chief executive also faces term limits. Since the ratification of the Twenty-second Amendment in 1951, U.S. presidents have been allowed to serve for only two elected terms in office. Thirty-four states imposed term limits on governors, with all but one state preventing governors from serving for more than two terms—Virginia's one-term limit is the exception. Such limits have been motivated less by the desire to bring new perspectives into office and more by concerns about halting the accumulation of power over time into the hands of a single leader. The Twenty-second Amendment was proposed by a Republican Congress not long after Democrat Franklin Delano Roosevelt (1882–1945) had won his fourth term. The amendment was proposed in order to prevent similarly popular future presidents from holding the office for life. Enacted for similar reasons, term limits on governors have had less profound effects than limits on legislators because they rarely bring political newcomers into office and serve to solidify rather than disrupt the normal rate of turnover.

In American statehouses, by contrast, term limits do much to shape the legislative landscape. It appears term limits will be a permanent feature of state political life since the courts have affirmed term limits in principle (in the *Bates v. Jones* decision) and most attempts to repeal or relax limits have met with staunch public opposition. The spread of term limits across the nation has also apparently come to a stop because they have been passed in nearly every state with an initiative process and the courts have made it clear that states cannot impose term limits on their members of Congress (in *U.S. Term Limits, Inc. v. Thornton*). This leaves the nation in the midst of a large-scale experiment with a central rule of democracy. Approximately a third of state legislatures operate under the same sorts of limits that were imposed under the Articles of Confederation, while two-thirds follow the guidance of the Constitutional Convention to leave legislators unhindered. The coming decades will test the wisdom of each system.

SEE ALSO *Aristotle; Democratic Party, U.S.; Elections; Initiative; Interest Groups and Interests; Judicial Review; Republican Party; Supreme Court, U.S.; Voting*

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Thad Kousser

TERM STRUCTURE OF INTEREST RATES

SEE *Interest Rates.*

TERMS OF TRADE

By terms of trade, economists generally mean commodity terms of trade (CTT), or net barter terms of trade (NBTT), given as a price or unit value ratio. For this ratio, it is appropriate to use the term *unit value* rather than *price* because different heterogeneous commodities are aggregated into a single commodity category such as exports or imports.

Commodity terms of trade of a country are defined as the unit value (price) of exports of the country divided by its unit value (price) of imports. Commodity terms of

trade between two regions, say, the North (industrially developed) and the South (less developed), is defined as the unit value (price) of exports of the North to the South divided by the unit value (price) of exports of the South to the North. The commodity terms of trade index measures unit gains from the trade amount—imports (i.e., the volume of imports) that are available for one unit of exports.

INCOME TERMS OF TRADE

The income terms of trade (ITT) is an index of the value of exports divided by the unit value (price) of imports—the value of exports measured in terms of import goods. It corresponds to the commodity terms of trade multiplied by the volume of exports. ITT measures the purchasing power of exports—the amount of imports that can be financed by the total exports.

The use of ITT is often recommended in order to correct shifts in the commodity terms of trade for changes in the volume of exports. A fall in the terms of trade may be desirable if it leads to a significant expansion in export volumes so that the value of exports rises. As a result the capacity to import rises. The income terms of trade index is designed to measure the net effect of a change in the commodity terms of trade on the capacity to import or on the purchasing power of exports.

In the dynamic context of world economic growth, the volume of exports of a country or region often shows a trend growth exceeding the rate of decline (if any) of the commodity terms of trade, leading to a rise in its ITT. The ITT of a country or region can rise along with its trading partner as both can experience absolute gains from trade. To measure the relative gains from trade, Prabirjit Sarkar (1986b) recommended the use of the ITT of one country or region as a ratio of that of the other.

FACTORIAL TERMS OF TRADE

In the process of growth, technical progress takes place and factor productivity improves. As a result, the cost of production may decline and prices may fall. A decline in the commodity terms of trade may be precisely attributable to this technical progress and cost reduction. To net out this effect of technical progress on commodity terms of trade, the concept of factorial terms of trade is used. If the effect of technical progress on export prices or export unit values is taken into consideration, this leads to single factorial terms of trade. If the effects of technical progress on both export and import prices or unit values are taken into account, this leads to double factorial terms of trade.

To construct single factorial terms of trade (SFTT) of a country or region, its CTT is multiplied by some index of factor productivity in its export sector. To construct double factorial terms of trade (DFTT) of a country or region, the SFTT is deflated by the index of factor productivity in the export sector of its trading partner. So DFTT is CTT multiplied by the ratio of the indexes of factor productivity in the export sectors of the trading partners.

Because the factorial terms of trade is used as an indicator of changes in welfare, which means changes in real income per head, labor productivity is often used in the calculation of factorial terms of trade. The SFTT index bears on a country's absolute welfare, while the DFTT index bears on relative welfare between trading countries as pointed out by the British economist John Spraos (1983).

THE PREBISCH-SINGER HYPOTHESIS

There is much controversy regarding the long-term movements of the terms of trade of the South vis-à-vis the North. This dispute centers on the Prebisch-Singer (PS) hypothesis, which is associated with the works of two United Nations economists, Raúl Prebisch and Hans W. Singer. The essence of the PS hypothesis is the long-term decline in the DFTT of the South vis-à-vis the North. In the absence of appropriate historical data since the last quarter of the nineteenth century both Prebisch and Singer used CTT of primary products vis-à-vis manufactures as the proxy of the DFTT of the South vis-à-vis the North for two reasons. First, the South constituted mainly primary-product exporting countries in contrast to the manufacture exporting countries constituting the North. Second, presuming that the technical progress and labor productivity improvements took place at a higher rate in the North than in the South, a decline in the CTT of the South would imply a further decline in the DFTT of the South.

The Prebisch-Singer hypothesis was virtually discarded in mainstream economics in the face of strong statistical objections against it. Since the 1980s, a series of studies undertaken by Spraos (1980), David Sapsford (1985), Sarkar (1986a, 1986b), Sarkar and Singer (1991), Grilli and Yang (1988), and many others questioned the validity of the criticism and provided strong statistical support for the Prebisch-Singer hypothesis, thereby bringing it back into the limelight.

The core of the PS hypothesis has a divergence implication: In the process of long-term decline in the terms of trade of the South, the standard of living of the poor South cannot be expected to catch up with that of the rich North. Both Prebisch and Singer argued that the fruits of technical progress taking place in the northern export sector were distributed among the northern people through higher wages and profits, leading to rising standards of living because of strong labor unions and high monopoly power of the capitalists. But the fruits of technical

progress in the southern export sector were transmitted to the North through lower export prices because of surplus labor, leading to weak labor unions and the lack of monopoly power of the southern capitalists vis-à-vis their northern counterparts. Thus the process of evolution and growth of the world economy through technical progress led to uneven development (as observed by Sarkar in 2000) and a long-term decline in the DFTT of the South.

SEE ALSO *Development Economics; Prebisch, Raúl; Prebisch-Singer Hypothesis; Singer, Hans; Trade; Unequal Exchange*

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Prabirjit Sarkar

TERROR

Although all living things must die, humans are the only species who are aware of this unfortunate fact. How does this knowledge affect us? Inspired by Ernest Becker's influential book, *The Denial of Death* (1973), social psychologists Sheldon Solomon, Jeff Greenberg, and Tom Pyszczynski developed *terror management theory* to explore the role that awareness of the inevitability of death plays in diverse aspects of human behavior. As of 2006, more than three hundred studies conducted in at least fourteen countries have supported the central ideas of this theory and have shown that awareness of death influences a broad range of behaviors that, on the surface, bear no obvious relation to the problem of human mortality.

Terror management theory suggests that the awareness of death in an animal that wants to live creates the potential for paralyzing terror. Humankind "solved" the problem of death by using its sophisticated intellectual abilities to give life meaning, value, and permanence, and by so doing, provided a means of managing the potential for terror that awareness of death creates. People manage terror by immersing themselves in a *cultural worldview* that provides a theory of reality, standards for valued behavior that confer *self-esteem*, and the promise of literal or symbolic immortality to those who live up to these standards. Literal immortality is provided by the religious aspects of the worldview that promise some form of afterlife; symbolic immortality is attained by contributing to and being part of something that continues long after one's individual death, such as families, nations, or other valued groups. To effectively protect against existential terror, cultural worldviews and self-esteem requires ongoing validation by others. Those who share one's worldview and believe in one's value increase faith in the worldview and self-esteem, whereas those who disagree with one's worldview or one's value undermine this faith. To maintain the anxiety-buffering effectiveness of these structures, people exert great effort to keep their self-esteem and faith in their worldview strong and to ward off any threats to these beliefs that might arise.

Consistent with the theory, research has shown that: (1) bolstering self-esteem or faith in one's worldview makes people less prone to anxiety; (2) reminders of death increase one's striving for self-esteem and meaning, one's structuring of information about oneself and the world, and one's favorable reactions to people and ideas that support one's worldview and unfavorable reactions to people and ideas that threaten it; (3) threats to one's self-esteem or worldview bring thoughts of death closer to consciousness; and (4) increasing self-esteem, faith in one's worldview, or belief in an afterlife reduce the effects of reminders of death on defensive behavior. The effect of death awareness on human behavior is largely unconscious. People use self-esteem and their worldviews to defend against death-related anxiety when thoughts of death are on the fringes of consciousness; conscious thoughts of death are defended in ways more directly

related to the problem of death, by denying one's vulnerability to disease or accident and promising to pursue a healthy lifestyle. When death-related thoughts come close to conscious awareness, this signals a potential increase in anxiety, which leads people to cling especially strongly to their worldviews and self-esteem and defend these structures against threat. These defensive reactions occur so rapidly that conscious fear of death is typically averted.

This work suggests that the problem of death lies at the root of the human quest for meaning and self-esteem, and that much human behavior is driven by the protection from existential anxiety that meaning and self-esteem provide. It also suggests that prejudice, hatred, and violence are often rooted in the threat to one's protective shield posed by those with worldviews different from one's own. Support for this view comes from studies showing that reminders of death increase stereotyping, hostility, and aggression toward those with different worldviews, favoritism toward one's group, and prejudice toward those from different cultures, nations, and religions. These processes have been shown to play an important role in international conflict and terrorism. Studies have shown, for example, that reminders of death have led young Iranians, who normally oppose terrorist violence, to increase their support for such tactics, and reminders of death have led young Americans, who normally oppose extreme military action, to support preemptive war and the use of weapons that would kill thousands of innocent civilians as part of the struggle against terrorism. This research shows that fear plays an important role in promoting support for violent solutions to the ongoing conflict in the Middle East.

This research also suggests that individual psychological problems are often rooted in breakdowns in the protection from core human anxiety that results when one's self-esteem or worldview is undermined. Reminders of death increase the severity of psychological symptoms, such as spider phobias and obsessive hand-washing, among those prone to these problems. People tend to be most happy and well-adjusted when they are able to view themselves as valuable contributors to a meaningful world. Although people have little conscious awareness of its impact, the problem of death exerts an important influence on most of what they do.

SEE ALSO *Anxiety; Death and Dying; Self-Esteem*

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Tom Pyszczynski

TERROR MANAGEMENT THEORY

Terror management theory (TMT; Solomon, Greenberg, and Pyszczynski 1991) was derived from the work of the cultural anthropologist Ernest Becker (1924–1974), who in such books as *The Birth and Death of Meaning* (1962), *The Denial of Death* (1973), and *Escape from Evil* (1975) argued that the uniquely human awareness of death underlies a substantial proportion of human behavior. TMT posits that although human beings share with all life-forms a biological propensity toward survival, humans are unique in their awareness of the inevitability of death, that death can occur at any time, and that we are corporeal creatures no more important or enduring than barnacles, beets, and beavers. To assuage the potentially paralyzing terror engendered by this knowledge, humans embed themselves in cultural worldviews: humanly constructed beliefs shared by individuals in groups that provide a sense of meaning and significance and promises of symbolic and literal immortality to those who adhere to the standards of value prescribed by their culture.

While cultures vary considerably, they share the same defensive psychological function: to provide meaning and value and in so doing bestow psychological equanimity in the face of death. All cultural worldviews can ultimately be viewed as shared fictions, in the sense that none of them are likely to be literally true, and their existence is generally sustained by social consensus. Individuals surrounded by people believing the same things as themselves can be quite confident of the veracity of their beliefs. However, when one encounters people with different beliefs, this is posited to pose a challenge to one's death-denying belief systems; TMT proposes that this challenge is a primary reason that people are generally quite uncomfortable around, and hostile toward, those who are different. Additionally, because no symbolic cultural construction can actually overcome the physical reality of death, residual anxiety might well be unconsciously projected onto other groups of individuals as scapegoats, who

are designated all-encompassing repositories of evil. Thus, responses to people with different beliefs might be to scapegoat them or berate them, or try to convert them to one's own system of beliefs. In some instances, these dynamics might well lead to terrorism, war, and killing.

Empirical support for TMT (see Solomon, Greenberg, and Pyszczynski [2004] for a recent review) has been obtained in over two hundred experiments, primarily by demonstrating that reminders of death (mortality salience) instigate cultural worldview defense. For example, after a mortality salience induction, Christian participants reminded of death liked fellow Christians more and Jewish people less, Germans sat further away from a Turkish person and closer to a fellow German, and people were more physically aggressive toward someone with different political beliefs. Research conducted after September 11, 2001, demonstrated that reminders of death or the events of 9/11 increased Americans' support for President George W. Bush and his policies in Iraq and conservative Americans' support for the use of nuclear and chemical weapons in preemptive military strikes. Additionally, Iranians reminded of death were more supportive of suicide bombers and more willing to engage in martyrdom actions.

Most recently, TMT theorists have been devising ways to minimize or eliminate the adverse effects of death denial while exploring how confrontations with mortality can elicit what is most noble in the human animal.

SEE ALSO *Anxiety; Salience, Mortality; Self-System; Terror*

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Sheldon Solomon

TERRORISM

The study of terrorism is complicated by the fact that terrorism is a political rather than an analytical concept. The concept is closely related to major power conflicts, such as the cold war, nationalist conflicts, and—most recently—religious-political polarization; and its political use and academic definitions have changed accordingly. As a result, scholars of terrorism have not only looked at terrorism as a particular kind of political violence, such as assassinations, hijackings, or—most recently—suicide bombings, but have also been sensitive to the discursive use and impact of the term *terrorism*. What both lines of study have in common, however, is the notion that terrorism—both as a practice and a discourse—is meant to terrify. Both the perpetrators of terrorist violence and those who have the power to name a particular kind of violence as terrorism do so to create fear. The study of terrorism has therefore not only focused on those branded as *terrorists* but also on those who do the naming, such as the media, policymakers, and academics, as well as on how the term *terrorism* is itself a highly contested label.

Precisely because terrorism is a political term, there is little consensus on how to define the phenomenon. According to an often-used definition, terrorism resembles guerrilla warfare to some extent while being distinctively different from it in others. Both are unconventional forms of warfare in which the state is attacked by groups of combatants lacking a fully armed military apparatus in order to bring about political change. However, whereas guerrilla fighters primarily target military objects, terrorists also attack "soft" civilian targets in order to paralyze society. According to this definition, the Oklahoma City bombing by Timothy McVeigh in 1995 is terrorist, whereas the suicide attack by Shi'a combatants on American and French U.N. troops in Beirut, Lebanon, in 1983, killing 241 marines, is an act of guerrilla warfare. Similarly, the Viet Cong fighting the U.S. army in Vietnam or the Algerian Front de Libération Nationale fighting the French colonial army in the 1950s were guerrilla fighters, whereas the Irish IRA, the Basque ETA, or the West German Red Army Faction also attacked civilians and are therefore defined as terrorist.

Scholars who have focused on the perpetrators of "terrorist" violence have used various perspectives. Richard Rubenstein (1987), among others, analyzes terrorism as a political strategy with a particular genealogy rooted in the French Revolution's *regime de la terreur* and nineteenth-century anarchism. Maximilien Robespierre and Louis Antoine Saint-Just as well as Sergej Nechaev and Michael Bakunin thus appear as the ideologues of terrorism. The thinking of the latter as to how to fight the all-powerful modern state, including the notion of the revolutionary vanguard, the provocation of the state, and the revolutionary moment, has subsequently influenced nationalist militants and left-wing revolutionaries of the twentieth century.

Another line of study has considered terrorism in relation to utopian belief systems and political eschatology. Rather than a strategy, terrorism is seen as a testi-

mony, an act of faith, and the outcome of radical collective fantasies about ideological, ethnic, or religious purity. These studies focus on processes of radical "othering" and satanization, the political use of traditions of martyrdom and sacrifice, and the "mytho-logics" of political violence. Specific attention is given to the symbolism of the time and space of terrorism, such as the symbolism of particular days, buildings, or public spaces.

Partly in response to this, others have argued that while terrorism is usually informed by strong convictions, it should also be understood in terms of ulterior motives such as status, glamour, friendship, and money. Martha Crenshaw (1988) argues that terrorist groups can be analyzed as communities accommodating a variety of individual needs, such as the needs for recognition, excitement, and material benefits. The militant group is as much driven by the need to maintain itself as by its ideological objectives. These observations are used to argue that those militant groups whose existence is threatened by internal friction or outside aggression are usually the most violent. Others examine individual motives for joining a militant organization. Joseba Zulaika (1988) in a study on the ETA describes militant groups as the continuation of friendship in already existing peer groups. In a similar vein, recent terrorism has been explained as an attempt by religiously inspired militants to overcome existential anxieties caused by alienation, humiliation, and marginalization.

A growing body of work concerned with aspects of terrorism is the study of state terror. Michael Taussig (1984) has used the term *cultures of terror* to denote societies that are under constant threat of state violence and intimidation. This line of work focuses on the systematic use of torture and death squads, rumors, secret intelligence, and other forms of intimidation by state institutions, as well as on individual and collective coping strategies used by the victims of state terror. State terrorism can also include the deployment of terrorist actions by one state against another state, as shown, for example, by Libya's involvement in the explosion of Pan Am flight 103 over Lockerbie, Scotland, in 1988. In terms of numbers of victims, state terror is a much more serious problem than the terrorism of revolutionary or religiously inspired militants.

The study of terrorism-related discourse focuses on the use of the terrorism concept in the media, by policy makers, and by "terrorists" themselves. Studies on the "symbiotic relationship" between terrorists, the media, and state propaganda portray terrorist violence as "spectacle," as "theater" and "performative," or as "ritual." Without denying the reality of death and destruction, these studies focus on how the media frames terrorism in terms of Good and Evil, leaving little room for anything other than one-dimensional conceptions of terrorism and counterterrorism. The way terrorism was reported on during the cold war, for example, created a fear of totalitarianism and of incomprehensible technology. More recently, and especially since the attacks of September 11, 2001, terrorism discourse resonates with the fear of religious fanaticism. Most of these studies also trace the complex relations between the media and state policy. Governments often brand their enemies as "terrorist" in order to legitimize an excessive use of force and the violation of human rights. At the same time, the perpetrators of "terrorist" violence themselves evoke collective fears and fantasies associated with terrorism in an effort to become "larger than life."

Following the September 11, 2001 attacks on the World Trade Center and the Pentagon, the study of terrorism has changed significantly, not only in quantitative terms, but also substantively. Book titles like *Terror in the Mind of God* (Juergensmeyer 2000) and *Terror in the Name of God* (Stern 2003) indicate an increased interest in the relationship between terrorism and religion. Studies of religious militancy largely fall into one of three categories. A culturalist approach tries to explain recent Islamist militancy in terms of long-standing traditions of violence and intolerance in Islam. A more empirical approach examines religious extremism per se, comparing Islamist militants with, for instance, American antiabortionists and Zionist extremists. Rather than being rooted in age-old and supposedly unchanging traditions, recent religious militancy is said to draw inspiration from renewed and redefined notions of purity and holy war, fostered by anxieties and inequalities caused by globalization and political or social marginalization. A historical approach examines religious radicalism as political ideology and religious militant groups as political organizations. Such studies analyze the rise of Islamic radicalism, the history of Al-Qaeda, or the life of bin Laden against the backdrop of geopolitical developments in the Middle East and Asia since the 1980s. Gilles Kepel (2002), for instance, explains the "9-11" attacks by Al-Qaeda as a sign of disillusion and an attempt to reverse a process of decline after various failed attempts to retain political power for the Islamist ideology.

Post-"9-11" studies of terrorism not only center on religion, but also focus on the sites, the organization, and the methods of modern terrorism. Today's terrorism is often transnational in scope, objective, and organization, and transcends the boundaries of the nation-state. Stephen Graham (2004) studies modern terrorism explicitly as an *urban* phenomenon, exploring the ways in which terrorism and counterterrorism are shaped by, and transform, the public life of global cities. As for the study of terrorist organizations, the emphasis has shifted from cell-structured and network organizations to the "rhizomatic" character of transnational terrorism. Some of the best-known terrorist phenomena like Al-Qaeda are franchises, allowing loosely connected "freelancers" to operate

in their name, as much as they are organizations or networks. Finally, Walter Laqueur (1999), among others, in a book predating "9-11," explores the ways in which terrorist methods may evolve from the traditional methods of assassinations and hijacking to new forms of chemical, biological, nuclear, and cyber terrorism.

SEE ALSO *Fundamentalism, Islamic; Guerrilla Warfare; Revolution; Terrorists; Violence; Violence, Frantz Fanon on; War*

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Oskar Verkaaik

TERRORISTS

Terrorists are nonstate actors who pursue random unconventional violence targeted at noncombatants to achieve political objectives. The labeling of who is a terrorist depends heavily on who is making the distinction. President Ronald Reagan's observation that one man's terrorist is another man's freedom fighter implies the difficulty in objectively labeling certain people as terrorists. It is only nonstate actors who are defined as terrorists because according to current standards of international law, governments cannot engage in terrorism. Though some states support and even sponsor terrorism, acts of violence committed by states against noncombatants are considered by international law to be crimes against humanity or war crimes, not terrorism.

The term *terrorist* is pejorative, and implies that persons so-labeled are immoral, evil, and criminal. Whereas criminals are considered innocent until proven guilty in the judicial systems of many democratic countries, there is no defined legal threshold to prove someone is a terrorist. Rather, individuals or groups are identified as terrorists precisely because they are labeled as such, regardless of whether these individuals or groups have actually engaged in random violent actions against noncombatants. Therefore, the burden of proving guilt is not on the government as with nonpolitical criminals. Rather, the burden of proving innocence is on the individuals who are accused of pursuing terrorism. Because it is nearly impossible to prove innocence, governments tend to eagerly label anyone who could be linked to acts of violence as terrorists.

In fact, individuals who engage in violent actions deemed as terrorism often perceive and label themselves as freedom fighters, resistance fighters, soldiers of God, or liberators. They also perceive their actions as the best means available to achieve the political objectives of the group to which they belong. Terrorists do not perceive their actions to be illegitimate or immoral. Rather, terrorists often argue that they must pursue violent actions in order to provoke a response, primarily from the government of a state, because the status quo has prevented them from achieving their political objectives.

Besides the actual individuals who engage in or attempt violent acts, terrorists can also be members of a group that provides tactical support—planning, funding, training, and ordering violent acts. In order to be considered a terrorist, an individual must be a member of a group with some type of political agenda. Individuals acting without any political agenda are not considered terrorists, but rather murderers, kidnappers, or other types of criminals. Though terrorists can simultaneously be guerrillas, the two designations are distinct in that guerrillas are defined as those who deliberately target military targets rather than noncombatants.

Terrorists engage in violence that is criminal in nature and illegal in most countries. Typical violent acts pursued by terrorists include the use of explosives, suicide bombing, the hijacking of an airplane, kidnapping, and murder. Terrorist groups are inherently clandestine due to their need to stay below the radar of government officials seeking to eradicate such organizations. Because it is difficult to remain clandestine, terrorists often seek support and assistance from governments that support their political agenda or objectives. Therefore, many terrorist groups maintain training camps in countries such as Syria, Libya,

Sudan, and Iran, all of which have been known to provide support to terrorists. To prevent discovery, terrorists often use e-mail and temporary cell phones when communicating and false identification papers when traveling. Though all strategic and tactical planning is pursued clandestinely, the actual terrorist activities are by necessity pursued publicly in order to draw mass attention and terrorize society.

The immediate objective of terrorists is to terrorize society by pursuing random violence, while the long-term objective is to persuade a government to change policies or take certain actions. Typical political objectives of terrorist groups include the release of political prisoners, improved political and civil rights, greater political autonomy, and territorial sovereignty.

Many terrorist groups are based in countries with governments that tend to be oppressive, repressive, intolerant of cultural diversity, and sometimes racist, denying political and civil rights to certain groups. As a result, terrorists and their supporters often argue that they have a legitimate right to resist such governments and to throw off the yoke of governmental persecution, just as many revolutions succeeded in doing in Western countries like the United States and France. Many non-Western governments are unwilling to label individuals seeking political freedom, sovereignty, rights, and so on as terrorists, and perceive their embrace of violence as exercising a right of resistance. This has led to a division between Western and non-Western governments and has prevented the United Nations from arriving at an agreed-upon definition of terrorism.

Governments seeking to eradicate or prevent future terrorism and to prosecute terrorists have created extensive counterterrorism policies. Such policies include the sanctioning of states suspected of supporting and hosting terrorist groups; arresting and trying individuals suspected of direct or indirect involvement in activities deemed terrorist; the collection of intelligence internationally and domestically, through monitoring communication, spying, using informants, and so on; increasing security at transportation hubs and government buildings; and sometimes even assassinating suspected terrorists. Though governments spend significant sums of money on counterterrorism efforts, terrorism continues to increase as the political objectives of terrorists expand. As a result, some governments are willing to address such political objectives in order to prevent future terrorist attacks.

SEE ALSO *Coup d'Etat; Defense; Defense, National; Destabilization; Dissidents; Guerrilla Warfare; Stability, Political; Terrorism*

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Krista E. Wiegand

TEST STATISTICS

Hypothesis testing or significance testing is undoubtedly one of the most widely used quantitative methodologies in empirical research in the social sciences. It is one viable way to use statistics to examine a hypothesis in light of observations or sample information. The starting point of hypothesis testing is specifying the hypothesis to be tested, called the *null hypothesis*. Then a test statistic is chosen to summarize the sample information, and its value is taken as an indication of the strength of sample evidence against the null hypothesis.

Modern hypothesis testing dates to the 1920s and the work of Ronald Aylmer Fisher (1890–1962) on the one hand, and Jerzy Neyman (1894–1981) and Egon Pearson (1895–1980) on the other. Fisher (1925) refers to hypothesis testing as *significance testing* (this entry does not distinguish between the two terms). In the Fisherian approach, the observed test statistic is converted to the *P*-value, which is the probability of obtaining the observed or more extreme value of the test statistic under the null model; the smaller the *P*-value, the stronger the sample evidence against the null hypothesis. An early example of Fisher's significance testing was conducted in 1735 by the father and son Swiss mathematicians Daniel Bernoulli (1700–1782) and John Bernoulli (1667–1748). They tested for the random/uniform distribution of the inclinations of the planetary orbits. A detailed discussion of their original results and subsequent modifications of their results can be found in Anders Hald (1998).

In the Neyman and Pearsonian (1928, 1933) approach, an alternative hypothesis is specified and the null hypothesis is tested against this alternative hypothesis. The specification of an alternative hypothesis allows the computation of the probabilities of two types of error: Type I error (the error of falsely rejecting a null hypothesis) and Type II error (the error of incorrectly accepting a null hypothesis).

Type I error is also referred to as the *significance level* of the test, and one minus Type II error the *power* of the test. Given that the two types of error cannot be minimized simultaneously, the common practice is to specify the level of significance or Type I error and then use a test that maximizes its power subject to the given significance level. In the Fisherian approach, the *P*-value is reported without necessarily announcing the rejection or nonrejection of the null hypothesis, whereas in the Neyman and Pearsonian approach, the null hypothesis is either rejected in favor of the alternative hypothesis or not rejected at the given significance level. E. L. Lehmann (1993) provides a more detailed comparison of the two approaches.

In empirical research, a mixture of the two approaches is typically adopted. Consider the linear regression model:

$$Y_i = \beta_1 + \beta_2 X_{i2} + \beta_3 X_{i3} + \cdots + \beta_K X_{iK} + \varepsilon_i,\ i = 1, \cdots, n, \qquad (1)$$

where $\{Y_i, X_{i2}, \ldots, X_{iK}\}_{i=1}^{n}$ is the set of observations on the dependent variable Y and the explanatory variables X_2, …, X_K, and ε_i is the unobserved error term. The parameters β_2, …, β_K measure the *ceteris paribus* effects of the explanatory variables on the dependent variable. The significance of these effects is routinely tested by the *t*-tests and *F*-test. The *t*-test was discovered by William Sealy Gosset (1876–1937) for the mean of a normal population and extended by Fisher in 1925 to other contexts, including regression coefficients. Gosset's result was published in *Biometrika* under the pseudonym "Student" in 1908. The *F*-test was originally developed by Fisher in the context of testing the ratio of two variances. Fisher pointed out many other applications of the *F*-test, including the significance of the complete regression model.

For a given $j = 2, \ldots, K$, the null hypothesis for the corresponding *t*-test is H_{0j}: $\beta_j = 0$ and the *t*-statistic is

$$t_j = \frac{b_j}{se(b_j)},$$

where b_j denotes the ordinary least squares estimator of β_j and $se(b_j)$ denotes the standard error of b_j. Note that if the null H_{0j} is true, the explanatory variable X_{ij} would be absent from the regression model (1) and thus considered to be insignificant in explaining the dependent variable given the presence of the other explanatory variables. This is why *t*-tests are referred to as tests for the significance of individual variables as opposed to the *F*-test, which tests for the significance of the complete regression. The null hypothesis for the *F*-test is

$$H_0 : \beta_2 = \beta_3 = \cdots = \beta_K = 0.$$

There are several equivalent formulas for computing the *F*-statistic, one of which is

$$F = \frac{R^2/(K-1)}{(1-R^2)/(n-K)},$$

where R^2 is the coefficient of determination. Since under H_0, all the explanatory variables can be dropped from (1), the *F*-test is a test for the significance of the complete regression.

Much packaged computer software routinely calculates the *t*-statistics and the *F*-statistic. For a given sample, the observed value of t_j (F) summarizes the sample evidence on the significance of the explanatory variable X_j (the significance of the regression (1)). To either convert the observed value of t_j (F) to the *P*-value or make a binary decision on the rejection or nonrejection of the null hypothesis H_{0j} (H_0) at a given significance level, the distribution of t_j (F) under the corresponding null hypothesis is required. On the basis of the null hypothesis being true and further assumptions on the nature of the sample and on the normality of the error in (1), the distribution of t_j is known to be Student's t with $(K-1)$ degrees of freedom, denoted as $t_{[K-1]}$, and the distribution of F is the so-called *F*-distribution with $\{(K-1),(n-K)\}$ degrees of freedom denoted as $F_{[K-1,\,n-K]}$ (see Goldberger [1991] for details). The known distribution of t_j (F) under the null hypothesis allows the computation of the *P*-value or the computation of the appropriate critical value at a prespecified significance level with which the observed test statistic can be compared.

Like *t*-tests and the *F*-test, standard tests rely on further assumptions in addition to the truth of the null hypothesis, such as the assumption of a random sample and the normality of the error term. These further assumptions may not be met in typical applications in social sciences, and modifications are required of tests designed on the basis of these assumptions. For example, when normality of the error term is not met, the distributions of the *t*-statistic and *F*-statistic are no longer $t_{[K-1]}$ or $F_{[K-1,n-K]}$. Fortunately, their asymptotic distributions are known under general conditions and may be used to perform these tests. Alternatively, resampling techniques, such as the bootstrap and subsampling, may be used to approximate the distributions of the test statistics under the null hypothesis (see Efron and Tibshirani [1993] and Politis et al. [1999] for an excellent introduction to these methods).

The issue that has generated the most debate in hypothesis testing from the beginning is the choice of significance level (Henkel 1976). Given any value of the test statistic, one can always force nonrejection by specifying a low enough significance level or force rejection by choos-

ing a high enough significance level. Although reporting the *P*-value partly alleviates this arbitrariness in setting the significance level, it is desirable to report estimates of the parameters of interest and their standard errors or confidence intervals so that the likely values of the unknown parameters and the precision of their estimates can be assessed.

SEE ALSO *Hypothesis and Hypothesis Testing; Student's T-Statistic*

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Yanqin Fan

TEXTILE INDUSTRY

The textile industry is the world's oldest branch of consumer goods manufacturing and covers the entire production chain of transforming natural and chemical fibers (such as cotton, wool, and oil) into end-user goods, including garments, household goods, and industrial textiles. In the twelfth century China already produced cotton and fabrics. In the early seventeenth century India and Japan had domestic cotton industries. Modern textile manufacturing originated in Great Britain during the Industrial Revolution around 1780. The mechanization of spinning and weaving alongside a rising demand for clothing from the colonies contributed to the growth of "king cotton." In the early nineteenth century textile production spread from Britain over western Europe and the United States. Ever since that time, the textile industry has been one of the most competitive and geographically dispersed industries across the world.

Accounting for 5.6 percent of world trade flows and employing at least twenty million workers worldwide, the modern textile industry is a significant economic sector. Despite its geographical dispersion, large concentrations of textile production can be found in China, followed by India, the United States, the Russian Federation, Japan, and western Europe. Since the 1970s a gradual shift of production has taken place to newly industrializing countries in East and Southeast Asia, Latin America, eastern Europe, and North Africa.

The textile industry is typically the leading sector of industrialization. Usually, textiles manufacturing is labor intensive and employs relatively low skills and simple technologies. Moreover the capital investment needed is only modest in comparison with other types of industry. Some developing countries also benefit from local supplies of raw materials (e.g., cotton) that foster the development of textiles production. Thanks to low labor costs, the newly industrializing countries have become fierce competitors for producers in Europe and North America. This rivalry, combined with saturated home markets, has induced corporate restructuring in the European Union and the United States, making the textile industry progressively an industry of large, transnational corporations.

Growing competitive pressure has led to a variety of corporate strategies in American and European textiles. Some companies attempt to cut costs by producing standardized goods that benefit from economies of scale. Other firms pursue offshore strategies and relocate part of their operations to low-labor-cost countries. Most producers, however, choose for focused differentiation: They search for market niches where specialized goods can be sold for a premium price. For that purpose many textile firms invest in quality improvement, innovation, design, marketing, and retailing. Some of the firms also focus on the production of technical textiles (e.g., artificial grass). All these differentiation strategies ask for sophisticated skills, knowledge of local markets, and flexible production facilities. Textile firms increasingly have to cope with a trade-off between labor costs and the need for market proximity.

Since the 1960s governments in western Europe and America have protected domestic textile producers by means of trade arrangements. After the Long-Term Arrangement in 1962, the Multi-Fibre Agreement was negotiated in 1973. The aim of both agreements was to create an "orderly" development of global textiles trade—not only for developed but also for developing coun-

tries—by restricting imports that "disrupted" domestic markets. In practice merely the European and North American nations profited from the rules, because in most cases the cheap exports from developing countries were considered to be disruptive for the matured textile industry in the developed world. However, thanks to World Trade Organization (WTO) rules, which aim for nondiscrimination between all trading partners, and following a ten-year transition period (1995–2004), the global textile industry is liberalizing more and more. The protectionist strategies of older, established textile nations and the lack of attention of transnational firms for good labor and environmental circumstances at offshore locations are often criticized. Further liberalization should contribute to an improvement of these conditions in the textile industry across the globe.

SEE ALSO *Industrialization; World Trade Organization*

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Gert-Jan Hospers

THANT, U.
1909–1974

U. Thant, the United Nations' third secretary-general and its first non-European, was born in Burma (Myanmar) in the small town of Pantanaw on January 22, 1909. Thant began his career as a schoolteacher in Pantanaw, eventually rising to the positions of headmaster and school superintendent. Following World War II (1939–1945) and the end of British colonial rule, his close friend, U. Nu (1907–1995), prime minister of the newly independent state of Burma, drew him into government service. There followed a number of important government appointments, culminating in Thant's designation as Burma's ambassador to the United Nations (1957–1961). Thant was selected as secretary-general on November 3, 1961, following the death of Dag Hammarskjold (1905–1961) in a plane crash in Africa.

Thant's ten years as UN secretary-general unfolded within the context of a continuing cold war rivalry between the United States and Soviet Union and the emergence onto the world scene of scores of newly independent states, drawn primarily from Africa and Asia. He managed during his two terms to secure the legitimacy of the position of secretary-general, which had come under assault from the Soviet Union during the last year of Hammarskjold's life, but he did little to expand the powers of the office. He proved himself a vigorous advocate for the economic concerns of third world nations and a vocal opponent of colonialism in southern Africa, but when he left office, in December 1971, the inequitable distribution of global wealth and continuing colonial situations in South Africa, Rhodesia, Namibia, and Angola remained as intractable as ever.

Thant's early years in office found him working in cooperation with the United States to quell a secession in the Congo and to fashion major peacekeeping initiatives in West New Guinea, Yemen, Malaysia, Cyprus, and Kashmir. His role as diplomatic facilitator during the Cuban missile crisis of 1962, although modest, earned him the respect of both superpowers and an extended first term as secretary-general. However, by the time of his reappointment to a second term, in 1966, Thant was expressing increasing frustration with his role. The UN's effectiveness was threatened by the refusal of the Soviet Union and France to contribute to peacekeeping operations. The fiscal crisis that emerged escalated into a political crisis when the United States, invoking Article 19 of the UN Charter, sought unsuccessfully to deny the Soviets a vote in the General Assembly. Further frustrating Thant was his inability to broker an end to the Vietnam War (1957–1975), despite his publicly voiced opposition to the American war effort.

Thant's last years in office were characterized by renewed frustrations. In 1967 he quickly surrendered to Egyptian demands that he remove UNEF (United Nations Emergency Force) from Egypt's border with Israel, thus earning widespread blame for the ensuing Arab-Israeli war. In 1971 the United Nations and Thant stood by helplessly as insurrection in the eastern part of Pakistan led to war between Pakistan and India and the dismemberment of Pakistan. Although pressed to assume a third term, Thant retired from office in December 1971.

Thant died on November 25, 1974. Denied a state funeral by the military junta that had ousted U. Nu in 1962, Thant's body was seized by antigovernment students who buried him, with full honors, at Rangoon University and used the occasion to stage antigovernment demonstrations. Government forces reclaimed Thant's body in a bloody confrontation with the student protesters and buried him near a major Buddhist pagoda in Rangoon.

SEE ALSO *Arab-Israeli War of 1967; Cold War; Colonialism; Secession; United Nations; Vietnam War*

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Bernard J. Firestone

THATCHER, MARGARET
1925–

Margaret Thatcher's political career was marked by a series of "firsts." In June 1979 she became the first female prime minister of the United Kingdom. She was the first U.K. prime minister in the twentieth century to win three consecutive general elections (1979, 1983, and 1987), and upon her resignation in November 1990, she had become Britain's longest continuously serving prime minister since 1827.

Thatcher was also unique in having her name associated with a set of ideas, policies, and style of governance known as *Thatcherism*. Yet the extent to which Thatcherism as an ideology guided the policies of Thatcher's governments in office has been disputed. What is not in dispute is that these policies fundamentally altered the trajectory of the United Kingdom's economy, society, and polity and continued to impact upon policy outputs, political discourse, and electoral competition long after the demise of the Thatcher government.

Thatcherite economic policies were broadly labeled *monetarist* even though, technically, a monetarist strategy was only pursued for a limited initial period. In an attempt to reverse Britain's long-term economic decline, Thatcher challenged the basis of the postwar Keynesian social democratic consensus by attempting to restructure patterns of property ownership, taxation, and social attitudes toward welfare. An ambitious program of privatization transferred major state-owned industries and public services into the private sector, and 1.5 million public-sector houses were sold to their tenants. A parallel program of marketization promoted the use of market criteria by public-sector service providers—especially local authorities and the National Health Service. Taxation policies sought to reward "initiative" and "enterprise" through reduced rates of income tax. In parallel, welfare and social benefits were restructured, reduced, and increasingly means tested; and social attitudes toward collective welfare provision were challenged, most famously in Thatcher's phrase "there is no such thing as society" (from an interview with Douglas Keay, 1987).

A hallmark of Thatcher's period in office was her style of governance. She confronted most of the powerful social and political institutions in the United Kingdom. Major state institutions—most particularly the civil service and local government—were reformed, and a wide range of regulatory bodies was introduced. A "community charge" (known as the poll tax) was imposed to reform the system of local government financing. This tax was extremely unpopular and prompted widespread nonpayment and, ultimately, riots in London in November 1990. The legal position and standing of trade unions was altered radically by five major legislative acts. Thatcher's foreign policies also revealed her combative nature. Her condemnation of Soviet-style communism earned her the epithet "the Iron Lady" in the Soviet press. Her support for Ronald Reagan (1911–2004), and for a close relationship with the United States, was reflected in mutual transatlantic perspectives on the cold war. Her general hostility to further European integration and her specific resistance to the creation of a federal European Union earned the United Kingdom the title "the awkward partner." However, the Falklands War, waged in 1982 against Argentina, secured Thatcher's status as a "warrior queen" in the popular press in the United Kingdom. The war lasted for seventy-four days, between April and June, and ended when British troops successfully reclaimed the British dependency of the Falkland Islands in the South Atlantic after an invasion by Argentina. Thatcher's image as a decisive war leader strengthened her poll ratings and was emphasized successfully in the Conservative Party's 1983 election slogan "the resolute approach."

After her resignation in 1990, Thatcher remained a member of Parliament until the 1992 general election. Thereafter she joined the House of Lords as Baroness Thatcher, and after a series of strokes she retired from public speaking in 2002. However, the legacy of Thatcher was profound, not least because of her impact upon her political opponents. Indeed the policies pursued by the Labour Party under Tony Blair were variously described as sub-Thatcherite, neo-Thatcherite, or simply Thatcherite.

SEE ALSO *Blair, Tony; Conservative Party (Britain); Economics, Keynesian; European Union; Falkland Islands War; Inequality, Political; Labour Party (Britain); Monetarism; Nationalism and Nationality; Neoconservatism; Privatization; Reagan, Ronald*

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David Judge

THATCHERISM

SEE *Thatcher, Margaret.*

THEATER

Contemporary British director Peter Brook wrote of theater and its essence in his book, *The Empty Space* (1968), "A man walks across this empty space (a bare stage) whilst someone else is watching him, and this is all that is needed for an act of theater to be engaged" (p. 9). By Brook's reckoning, the actor, the stage space, and the audience are the minimal necessary components for the art of the theater. At its most basic level, *theater* is a story presented in public by a performer or performers, for an audience.

There exists a distinction between the related art forms of *drama* (the written text) and *theater* (the process of performing the written text within a designated space). A difference must also be drawn between theater as a form of artistic or cultural entertainment and the existence of theatrical components within a culture. Performance occurs regularly in daily life (e.g., sporting events, political campaigns, weddings, and other social rituals), but these are not considered theater in the strictest sense. These routine presentations form the basis of performance studies, a discipline that uses terminology from the theater and that of anthropology in an effort to analyze how it is that people and cultures stage rituals and events.

Theater as society has come to think of it is a live artistic form, featuring many artists (dramatist, actor, director, designers, and audience) who collaborate to create performance events. Theater is also considered from a conventional viewpoint to be the most complete of all the art forms, in that it integrates many disciplines (dance, music, acting, visual spectacle, language, sculpture) in the presentation of a story. Theater occurs in a staging space, in front of an audience, regardless of the dramatic location of the event being enacted. Moreover, theater is performed in real time and usually requires a compression of the dramatic timeline, rather than a moment-to-moment literal reenactment of the event. Theater is an imitation of the human experience, drawing its characters and plotlines from dramatic events recognizable to the audience. The Greek philosopher Aristotle, in his critical text *Poetics*, described theater (or drama) as an imitation of men in action. Theater is an artistic form that lends itself easily to critiques of social problems, heralding the possible transformation of society in the wake of a public performance expressing new ideas for change.

One explanation for theater's origins lay in the ceremonial rituals of primitive cultures, usually linked to religious worship. Storytelling is an alternative explanation for theatrical origins, a performance in which a narrator such as a tribal leader or shaman recalled episodes important to the history of the tribe, acting out the events while interpreting the different characters for the shared enjoyment of the audience. The theatrical ritual achieved greater aesthetic sophistication as the cultures advanced, utilizing multiple actors, spectacle, dance, music, and costuming in an effort to make the performances more enjoyable. Society eventually began to prize these performances as much for their inherent entertainment and artistic values, as for their ritual significance.

FORM AND STYLE

Theater has developed different approaches to the creation of dramatic structure, utilizing a multitude of various styles and performance traditions. The play's *form* is the clearly identifiable organization of the plot elements, while the play's *style* is the means by which the form is interpreted for a contemporary audience. A theatrical form (e.g., comedy or tragedy) is a specific identifying plot structure as it demonstrates typical themes of human experience. A theatrical style (e.g., Shakespearian or expressionistic) is the representative interpretation of a form, based on audience expectations determined by place and time. Style may be associated with a specific historical period, playwright, culture, or artistic movement, whereas form is more universal and changes little from one culture to another.

The four distinct dramatic forms are: tragedy, comedy, drama, and mixed-forms. Tragedy concerns the fate of a main character who is caught up in events beyond his or her control, and is subsequently ruined as a consequence of a moral weakness or an inability to cope with difficult circumstances. Comedy—be it satire or farce—requires the happy or ironic resolution of a conflict involving an individual or a community. Aristotle wrote in his *Poetics* that the main difference between the tragedy form and the comedy form is that "one imitates people better, the other one people worse, than the average" (1967, p. 18). Tragedy and comedy were the dominant forms of theater until the eighteenth century. The form of drama emphasizes the moral seriousness of social issues, often through depictions of characters and situations drawn from daily life. Eighteenth-century French dramatic theorist Denis Diderot (1713–1784) advocated in his

Encyclopedia (c. 1755–1780) that this new drama "will encourage the light of reason, which everywhere grows brighter … and the spirit of the century will advance the revolution it began" (1967, p. 91). A mixed-form dramatic text combines elements of the comedy and tragedy forms and is a very uncommon form of theater. Theatrical styles, on the other hand, are many in number. Each style is associated with a specific time period (e.g., Restoration comedy such as William Congreve's *The Way of the World*), author (e.g., Shakespearian tragedy like *Hamlet*), or artistic movement (e.g., realistic drama, as an example Anton Chekhov's *The Cherry Orchard*).

HISTORY

Although the essential nature of theater is constant, the theatrical art form developed differently during various historical periods and throughout the regions of the world. Eastern (Asian) theater traditions predate Western (European) theater and utilize vastly different conventions (i.e., agreed-upon performance techniques). Asian theater forms rely heavily on the elements of musical performance and bodily expression to relate the story line to the audience. Chinese theatrical forms were first recorded in 1767 BCE during the Shang Dynasty. Popular entertainments of the time included shadow-play and puppet theaters, and live entertainers often performed at teahouses. Chinese theater was performed on a bare stage, accompanied by music, and characterized by a strict adherence to traditions. The most prolific contemporary expression of Chinese theater is the *Beijing Opera*, which employs a strictly ordered system of dance, singing, and acting to enhance the performance. Indian theater dates from the first century CE, and included Sanskrit dramas in which Indian actors performed specific codified gestures and chanted intonations with musical accompaniment designed to cultivate a balanced aesthetic, emotional state called a *rasa* within the spectators. Formal Japanese theater dates from the sixth century CE and includes variations such as Noh theater (1374), a stylized musical dance-drama with choreographed movements and masks; Bunraki theater (early seventeenth century), a puppet theater; and Kabuki theater (1603)—the most popular form—in which dance and spoken dialogue are used in conjunction with sets, stylized make-up, and costuming, to achieve the desired theatrical effect.

The formal Western theater tradition began in Greece with the ritual worship of Dionysus, the God of wine and revelry. The word *tragedy* evolved from the Greek word *tragoidia* (goat-song), the performance that accompanied ceremonies of ritual animal sacrifice. In 534 BCE, the city of Athens organized a contest to determine the best tragedy during the religious festival of the City Dionysia. At the festival, tragedies were performed in sets of three linked stories drawn from either history or myth, followed by a satyr play (a short farcical comedy utilizing burlesque). Comedies were introduced at the City Dionysia after 487 BCE. The earliest Greek theaters were temporary wooden structures built into hillsides. Permanent theaters made of stone began to appear in the fourth century and were capable of seating more than ten thousand spectators. Greek actors performed on a small circular area called the *orkestra* (dancing place), which featured a *thymele* (small altar) for the ritual sacrifice, surrounded by the risers of the audience area, called the *theatron* (seeing place). The first *skene* (small scenic house) appeared in 458 BCE. The fifth century is recognized as the Golden Age of Greek Theater, with more than one thousand different plays believed to have been performed. Only thirty-one tragedies survive from the period—all written by three playwrights: Aeschylus (525–456 BCE), Sophocles (c. 496–406 BCE), and Euripides (c. 484–406 BCE). The Athenian playwright Aristophanes (c. 450–c. 388 BCE) is the only comic playwright of the time whose works have survived. Greek tragedies were written originally for just two actors, but in 468 BCE the use of a third actor was established. Each actor would play multiple roles, indicated by distinctive masks and representative props. Greek dramas also were the first to feature the chorus, a group of performers who chanted rhythmically, danced, and commented on the course of the action in the play.

Greek theater was appropriated by the Romans after 240 BCE but eventually gave way to more popular forms of entertainment. Roman citizens preferred spectacular and bloody events such as chariot races, armed contests between gladiators, wild animal fights, and mock naval battles (often staged in flooded amphitheaters). The rise of the Christian Church in the fourth century CE signaled a fierce opposition to theatrical practices, due to their origins in pagan rituals and their licentious subject matter. Organized theater all but disappeared by the sixth century, following the fall of Rome to the Visigoths, though some entertainment forms such as mimes, minstrels, and festivals continued in local communities until the Middle Ages and the re-emergence of theater as an art form. Liturgical dramas were performed during church services as a means of imparting religious doctrine to illiterate parishioners. The earliest recorded liturgical drama occurred during an Easter service around 925 CE, and included monks performing the discovery at the tomb. Plays moved out-of-doors and became part of religious festivals after 1300 CE, with performances staged on small, movable structures known as mansions. Local trade guilds took over the staging and financing of cycle plays (a group of plays featuring biblical story interpretations). Local vernacular language eventually replaced Latin as the spoken language of the performances, which also began to feature more secular subjects.

Religious strife and internal church conflicts changed the face of Europe in the fourteenth through sixteenth centuries. Religious theater was eventually outlawed, and entertainments began to be provided by a new professional theater during the Renaissance. Permanent theaters blossomed in London during the late sixteenth century and were staffed by acting troupes maintained by wealthy noblemen. The performances had a broad and popular appeal and were attended by the titled and commoners alike. The most famous English playwright of the period was William Shakespeare (1564–1616), who is believed to have penned an estimated thirty-eight plays. The English Civil War closed the London theaters in 1642. Meanwhile, opera emerged in Italy as a popular Renaissance form and prompted innovations such as scenic stage sets incorporating perspective drawing, machinery for changing background scenery in view of the audience, and rigging created for the purpose of flying people and scenic pieces around the stage. A new style called neo-classicism emerged in France during the sixteenth and seventeenth centuries, in which drama was made to conform to critical principles based on contemporaneous interpretations of classical theater. Most important were the unities of time, place, and action (each play should have a single plot action that could occur within a twenty-four-hour period and in locations that could realistically be reached during a single day of travel). Neoclassicism also demanded that the characters practice decorum (behaving according to strictly established social etiquette) and was centered on the notion of verisimilitude (the appearance of truth).

This preoccupation with realistic action/behavior onstage foreshadowed the early nineteenth-century development of romanticism. Romanticism was a revolt against the rules of the neoclassical theater and featured plotlines inclined toward emotional truth rather than rational knowledge and characters drawn from the lower social classes rather than the nobility. Romanticism flourished through the 1850s, followed at the end of the century by realism. Realism was the result of two modes of intellectual thought: The first involved the application of scientific thought to theatrical life, resulting in lifelike portrayals; while the second mode centered on democratic political ideals precipitating the need for social transformation. Theater was viewed as a laboratory of humanity, a place to test new ideas of social behavior and reform. The theater of the period exposed contemporary social ills (such as the plight of women in *The Doll's House*, the best known of Norwegian playwright Henrik Ibsen's realistic works), and made suggestions for reform (freedom from outmoded social structures). The director emerged as an artistic force during this period, bringing creative and visual unity to the stage performance. Also important during the late nineteenth century was the origination of musical theater (which uses song, dance, music, and spoken dialogue to relate a story). Musical theater remains one of the most popular entertainments into the twentieth and twenty-first centuries.

TWENTIETH-CENTURY THEATER

The avant-garde theater (also known as anti-realistic theater) was a strong presence in the early twentieth century, as writers and performers rejected realism and tried to reinvent the ideas of what constituted art. Avant-garde art pushed the boundaries of what is accepted as real, while at the same time attempting to document an individual's perceptions of reality. Twentieth-century avant-garde theater styles include expressionism, futurism, dadaism, and surrealism. Absurdism (life cannot be logically explained) is a style of the avant-garde that became very influential in theater following World War II. This eventually led to a backlash of radical experimental theater in the 1960s, meant to mingle political significance with aesthetic creation. This experimentation laid the groundwork for the contemporary post-modernism movement, which signals a break with the modernist movement and traditional portrayals of experience. Post-modernism theater utilizes a mixture of styles and advocates the primacy of the audience response to the formation of the work. Despite this growth and evolution of alternative styles, however, realism and musical theater remain the dominant mainstream theater fare of the twentieth and early twenty-first centuries.

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Margaret Coyle

THEIL, HENRI

SEE *Theil Index.*

THEIL INDEX

The Theil index, named for Dutch econometrician Henri Theil (1924–2000), is a special case of the family of inequality measures called the Generalized Entropy Measures. In its aggregate form, the Theil index is a measure of overall inequality. In addition, it lends itself to additive decomposability, a property that is extremely useful for simultaneously examining three aspects of inequality in a society divided into mutually exclusive and completely exhaustive social groups (e.g., based on gender, caste, race, religion, and so forth). Economists have used the decomposed version of the Theil index effectively to identify and highlight important sources of inequality in a given population. (e.g., Mookherjee and Shorrocks 1982; Conceição and Galbraith 2000). While this exercise is indeed efficacious, it is important to bear in mind that this is essentially an *ex-post* accounting of inequality as constituted by intergroup and intragroup inequalities, rather than a statement of causation.

With the assumption that individuals are grouped into m mutually exclusive and completely exhaustive groups $g_1, \ldots, g_m$, each with n_j individuals, overall inequality can be represented as follows:

$$T = \sum_{j=1}^{m} p_j R_j \log R_j + \sum_{j=1}^{m} p_j R_j T_j \qquad (1)$$

$$T_j \equiv \frac{1}{n_i} \sum_{i \in g_j}^{m} r_i \log r_i \qquad (2)$$

The decomposed version as stated above has two components that are interpreted below. However, it should be noted that inequality measures, such as those in equations (1) and (2), can be defined with respect to any number of classifications. For instance, Pan Yotopoulos and Jeffrey Nugent (1976) report Fisher's index with respect to income classes i, sector j, educational attainment k, age m, and region n. The number of terms in the equation will be equal to the number of levels of stratification considered. For instance, in the expression above, the number of levels is two: society divided into groups, and groups comprising individuals. Fisher's index will accordingly have five levels of stratification.

These equations can be interpreted in multiple ways. For instance, William Darity and Ashwini Deshpande (2000) have interpreted these equations differently from Pedro Conceição and James Galbraith (2000). In both interpretations, T is treated in (1) as a measure of the general degree of inequality in a society or country, but the former characterization of the right side of the equation differs from the latter. The first term on the right hand side of (1) represents the extent of *between-group* inequality (B) across all ethnic groups in the population of focus. R_j is the ratio of the mean income for the jth group to the mean income for the entire population, while p_j is the jth group's population share. The second term represents the extent of *within-group* inequality (W) across all ethnic groups in the population. R_j and p_j have the same definition, but T_j is the *group-specific* Theil index measure, defined in (2). Here n_j is the absolute number of persons in group j. $i \in g_j$ indicates that T_j is generated by summing over all persons comprising group j, and r_j is the ratio of individual income or wealth to mean income or wealth for group j.

Conceição and Galbraith compute the between-group component of Theil's T from wage or earnings data aggregated by industrial sectors in a very large number of countries, and by lopping off the within-industry component of wage variation in Theil's T, they arrive at a lower bound estimate of dispersion (Conceição and Galbraith 2000). Darity and Deshpande, instead of focusing on industrial variations in compensation, consider the Theil's T from the perspective of variations in income or earnings across the major racial and ethnic groups that comprise a given society. They also presume that the identity of the groups is understood within the norms and conventions of the society in question. Note that under this interpretation, the weights in the Theil index virtually compel us to think of subaltern groups as minorities, or at most, modest majorities. Certainly, the interpretative validity becomes cloudy when the subaltern group is a substantial majority, as in South Africa.

The relationship between these three components is of more than just academic interest. The conventional interpretation of this equation would read it from left to right, where overall inequality would be the factor in exacerbating intergroup and intragroup inequality. However, Darity and Deshpande (2000) argue that the right-to-left

reading can be equally important. Thus, *B* and *W* can actually drive overall inequality, or, more broadly, group affiliation and allegiance are independently salient in explaining overall inequality. Seen this way, any analysis of overall inequality will be necessarily incomplete without reference to *B* and *W*. However, given the caveat mentioned above, namely, that this is an ex-post accounting of overall inequality, the decomposed version of the Theil index cannot be used as a basis for inferring any kind of causation. Estimation over time is important to give clues about the relative contribution of *B* and *W* to a change in overall inequality. Darity and Deshpande raise the following questions suggested by this construction of the Theil index: Is it group difference or the general level of stratification across a population that is more decisive in shaping economic disparity? Does a higher degree of intergroup inequality necessarily produce greater levels of general inequality, or is the higher level of intergroup inequality mitigated by lower levels of within-group inequality? Does a higher level of general economic inequality produce greater levels of intergroup inequality?

The calculated values of individual components of *B* and *W* in equation (1) above need to be interpreted with care. Given that the mean incomes of the subaltern groups will necessarily be less than the overall mean incomes, the *R*s will be less than unity. Thus, the logs will be negative, and that, by construction, will make the overall *B* less than the overall *W*. Numerically, this will imply that the relative contribution of *B* to overall inequality will be substantially less than that of *W* (Paul [1999] finds the same for Australian household expenditure survey data). Before drawing the prima facie inference that *W* matters more than *B*, it would be good to remember that this outcome is a consequence of the construction of the index, and does not *necessarily* reflect the relative importance of *B* and *W*.

SEE ALSO *Gini Coefficient; Income Distribution; Inequality, Gender; Inequality, Income; Inequality, Political; Inequality, Racial; Inequality, Wealth; Kuznets Hypothesis*

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Ashwini Deshpande

THEISM

The Greek word *theos* means "god" or "divine power." Hence, *theism* is the belief in a god, or the view that there is a god. Generally, theists think of *god* as a very powerful, personlike being who has control over some or all of the natural universe. To say that a god is personlike is to say that god is capable of thinking, acting, and communicating with other persons, especially human beings. Hence, theists typically refer to god by using pronouns such as "he" or "she" rather than "it." Theists believe that god has a personality, that is, a set of character attributes or traits in accord with which god acts. To varying degrees, theists think of god as interested in some or all of the affairs of human beings.

Theism may be contrasted with *atheism*, *deism*, and *agnosticism*. Atheism is the belief that there is no god. Deism is the belief in a very powerful being who created or designed the world but who is not concerned with the affairs of human beings. Deists tend to conceive of this being as an impersonal force. Agnosticism is the view that one cannot know whether there is a god. Some agnostics hold that it is in principle impossible ever to know whether or not there is a god; others hold more provisionally that it is currently impossible to tell whether there is a god.

There are various forms of theism. *Polytheism* is the belief in more than one or many gods. *Monotheism* is the belief in one god, usually capitalized as "God" and used as proper noun to refer to this one being. This convention is used in the discussion that follows.

Many people in the ancient world were polytheists. Polytheists developed elaborate belief systems according to which there are many gods who rule over different parts of nature. Often, one god is thought to be the supreme ruler, such as Zeus for the ancient Greeks or Jupiter for the Romans. In some cases, a human king or emperor could be identified as a god himself. Polytheists tend to understand the gods as imperfect in both their power and moral qualities. The gods are not in complete control of nature or themselves, and they do not always act with moral consistency. They are not interested in all the affairs of

mankind, but they do intervene on occasion, especially if propitiated by worship and devotion. A hallmark of polytheism is the practice of representing the gods in the form of idols or graven images, which are then used in the context of ritual worship.

The most populous form of polytheism in the world is a certain form of Hinduism. However, at least one form of Hinduism (articulated by Ramanuja in the eleventh century) is monotheistic. If the traditional Hindu gods are viewed as ultimate and independent entities, Hinduism is polytheistic; if the gods are viewed as outward manifestations of one underlying, personlike reality, Hinduism is monotheistic. Buddhism is generally polytheistic, but some forms of Buddhism, such as Zen Buddhism, are usually understood to be atheistic. If the gods are viewed as ultimate powers, Buddhism is polytheistic; if the gods are considered illusory or unreal, Buddhism is atheistic. Aside from Hinduism and Buddhism, many other forms of polytheism are still found elsewhere, such as in sub-Saharan Africa and among Native Americans.

While polytheists tend to understand the gods as limited and imperfect, monotheists tend to understand the one God as unlimited and perfect. Many monotheists think of God as all-powerful, all-knowing, and all good. God is thought to be the creator, king, and judge of the universe. Generally, monotheists believe that God has made certain demands on all humans, and that God directs human history with providence toward some great cosmic end.

Judaism, Christianity, and Islam are the most well known forms of monotheism. In Judaism and Islam, God is conceived as not having bodily form. Linked with this view is a strict ban on any representation of God in the form of an idol and a ban on any form of idol worship. Although the sacred scriptures in these two traditions use bodily language to describe God, these are generally interpreted as metaphors. In Christianity, the oneness and nonmateriality of God is complicated by the belief in the divinity of Jesus, who is understood by traditional Christians to be both divine and human. Traditional Christians maintain that in some sense God is a nonmaterial being who became incarnate in the person of Jesus. Others tend to view the incarnation less literally.

For theists, the highest purpose in life is for humans to develop an interpersonal relationship with God. Precisely what form that relationship takes and how one goes about attaining that relationship differ from one tradition to another. In Judaism, the most intimate relationship with God is found through the observance of the commandments of the Torah, which Jews believe to be God's revealed teaching to the people of Israel. In Christianity, the most intimate relationship is found through good works and through faith in Jesus as the manifestation of God. In Islam, the best relationship is found through submission to God and obedience to divine law as expressed in the Qur'an, which Muslims believe to be the revelation of God's word to the prophet Muhammad. All three forms of theism teach that respect or love for one's fellows is part and parcel of respect and love for God. At the same time, these forms of theism traditionally teach that those who reject God or his commandments are in some sense deserving of punishment.

Over the centuries, philosophers, theologians, and others have debated whether it is rational to believe in God. Some insist that belief in God is not supposed to be rational; it is a matter of "faith." Others argue that it is rational to believe in God. The most popular arguments for monotheism are based on the existence and orderly nature of the cosmos, on the phenomenon of religious experience or revelation, and on purported miracles. Some have argued that it is rational to believe in God because of the potential value of living the life of a believer. Still other philosophers have argued that belief in God is not rational. They argue that the cosmos can be sufficiently explained without belief in God and that religious experience is not a valid source of truth. They point to the existence of evil and suffering in the effort to show there is no God, and they argue that life is meaningful enough without a belief in God. The question of whether it is rational to believe in God remains a contested question to this day.

SEE ALSO *Atheism; Buddhism; Christianity; Hinduism; Islam, Shia and Sunni; Judaism; Lay Theories; Monotheism; Polytheism; Religion; Supreme Being*

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THEMATIC APPERCEPTION TEST

SEE *Achievement.*

THEOCRACY

The term *theocracy* signifies belief in governance by divine guidance, a form of regime in which religion or faith plays the dominant role. It denotes thus a political unit governed by a deity or by officials thought to be divinely guided. The word *theocracy* originates from the Greek *theokratia*. The components of the word are *theos*, "god," and *kratein*, "to rule," hence "rule by god" or "government by god."

The concept of theocracy was first coined by the Jewish historian Flavius Josephus (37 CE–c. 100 CE). Attempting to explain to Gentile readers the organization and political system of the Jewish commonwealth of his time, Josephus contrasted theocracy with other forms of government, such as monarchy, oligarchy, and republics: "Our legislator [Moses] had no regard to any of these forms, but he ordained our government to be what, by a strained expression, may be termed a theocracy [*theokratia*], by ascribing the authority and power to God, and by persuading all the people to have a regard to him, as the author of all good things" (Josephus 1737).

Few concepts have changed more radically over time than the concept of theocracy. According to its oldest meaning, as used by Josephus, the implication is not that ministers assumed political power. However, according to the more modern definition in the *The Shorter Oxford English Dictionary on Historical Principles*, *theocracy* is "a system of government by sacerdotal order, claiming divine commission" (*The Shorter Oxford English Dictionary on Historical Principles*, vol. 2, 1939, p. 2166), a state in which priests exercise political power, or, more precisely, a state ruled by ministers. In this entry, both meanings will be used.

Theocratic forms of government have existed throughout history. Theocracies were known among ancient people, as in Egypt and Tibet, where kings represented and even incarnated the deity. (In pharaonic Egypt, the king was considered a divine or semidivine figure who ruled largely through priests.) This was the case also with early American civilizations, such as the Mayas, Toltecs, Aztecs, and Natchez.

In Islam, the community established by the prophet Muhammad (c. 570–632) in Medina (622–632) was a theocracy in which Muhammad served as both temporal and spiritual leader. The communities established by Muhammad's father-in-law and successor, Abu Bakr (c. 573–634), the first caliph, were also based on theocratic government. The largest and best-known theocracies in history were the Umayyad caliphate (the first Islamic dynasty, 661–750) and the early Abbasid caliphate (the second major Muslim dynasty, 750–1258), in which state and religion were closely intertwined; the Byzantine Empire (fourth–fifteenth centuries), in which the emperor was the head of the church; and the Papal States (Stati Pontificii) during the Middle Ages, in which the pope was the ruler in a civil as well as a spiritual sense.

In Christianity during the early modern period in Europe, the republic of Florence under the rule (1494–1497) of Girolamo Savonarola (1452–1498) became a theocracy in which God was the sole sovereign and the Gospel constituted the law. After the Protestant Reformation of the sixteenth century, there were many attempts to establish theocracy. The most famous is the theocratic regime that John Calvin (1509–1564) established in Geneva when he was at the height of his power (1555–1564); Geneva's civil life was based upon total obedience to God, whose moral order is declared in the scriptures. According to Calvin, a well-ordered Christian community results from a synthesis of rule, cooperation, and order emanating from the divine laws of God; such a community is unified, organized, and structured upon the idea of advancing the glory of God in the world. The same view is evidenced in the theocratic government that Huldrych Zwingli (1484–1531) established in Zurich from 1525 to 1531. In Zurich, the city council was the lawful government of a Christian state (both church and canton) and administrated the divine commands from the Bible. For interpretation of these commands the council sought and acted on the advice of Christian ministers.

With the Puritan migration to New England during the 1630s, theocratic governments were established in what became Massachusetts and Connecticut. For the New England Puritans, theocracy was considered the best form of government in a Christian commonwealth because only this type of government acknowledged Christ as a sole ruler over the people. Spiritually saving grace was the prerequisite for admission to freemanship or citizenship in the Puritan theocracy. The Puritans' goal was not to invest ministers with political power, but rather to appoint civil magistrates who would govern according to God's word and will. Only "visible saints," or those who were able to prove the power of saving grace in their hearts, were allowed to vote, while "the ungodly," or profane people, were excluded from political power. In England too, during the Puritan Revolution (1640–1660), especially after the execution of King Charles I in 1649, many zealous Puritans strove to establish a theocratic government by introducing a "Sanhedrin of saints," or a dictatorship of the godly.

In the contemporary world, the regime that Ayatollah Ruholla Khomeini (1900–1989) established in Iran in 1979 is considered a theocracy because political power and authority is held in the hands of the imams or religious leaders. The purpose of such a fundamentalist regime is to organize society exclusively under Islamic religious law, the *shari'a*. The Taliban state in Afghanistan

(1996–2001) was similar. In the first decade of the twenty-first century, various fundamentalist Muslim groups are striving to establish theocratic forms of government in Algeria, Pakistan, Egypt, Sudan, Turkey, and other Islamic countries. There are also various fundamentalist Christian groups in the United States, Canada, and Australia who advocate aspects of theocratic government. In Israel, too, several ultra-Orthodox factions advocate restoring the theocracy of ancient times.

SEE ALSO *Government; Religion; Vatican, The*

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THEOLOGY, LIBERATION

SEE *Liberation Theology.*

THEORY

The notion of a theory is controversial in social science. A single and simple conception of theory is unlikely to apply across all fields, from mathematical economics to cultural anthropology. Still, construing *theory* broadly as any attempt to systematize and explain certain phenomena, it is clear that theories play a central role in social science. Many social-science pioneers, for example, Karl Marx, Émile Durkheim, Talcott Parsons, Sigmund Freud, Clark Hull, and Paul Samuelson, developed ambitious theories intended to explain a wide range of social phenomena. Today the tendency is toward more modest theories with narrower scope.

Philosophers of science have also adopted a more flexible and eclectic account of theorizing. For much of the twentieth-century, philosophers (and many social scientists) accepted the logical-positivist view that a theory is an axiomatized deductive system consisting of a few basic principles or laws (e.g., Newton's laws of motion constitute his theory of universal gravitation). These principles contain a theoretical vocabulary describing entities that are often unobservable (e.g., electron, utility, social role), and also bridge laws that link the theoretical vocabulary with observable things. Such theories are tested by deriving predictions from basic principles, bridge laws, and statements describing the test situation, and then determining whether those predictions come true.

By the 1960s, every aspect of the positivist view was under attack, and today few philosophers accept it. The notion of laws has come to play a smaller role in philosophical discussion and that of models a larger one. But there remains no consensus about the nature of theories in the social sciences. Some are still expressed in formal, mathematical terms, with basic principles (axioms) from which predictions are deduced. But many are less formal, with a looser connection between theory, on the one hand, and explanation and prediction, on the other. However, even relatively modest theories can be illuminating. To the extent that a theory allows one to make predictions, it provides some measure of control over the social world. Moreover, some theoretical assumptions are needed to guide exploratory research, or even mere observation, since otherwise there are potentially an infinite number of things that might be relevant.

GOALS OF SOCIAL SCIENCE

Views about the nature of theories in social science go hand in hand with views about the nature of social science itself. Naturalists (e.g., in cognitive psychology) see the social and natural sciences as continuous in their goals and methods. They aim to explain human behavior by uncovering its causal mechanisms. As objects of study, however, people are distinctive because they think about, and so guide, their own actions. Given this sort of agency, some social scientists (e.g., in cultural anthropology) hold that mechanistic theories are inappropriate for studying humans. The point of social-scientific theories is, on this

view, to explain actions by interpreting them so that they are intelligible.

Interpretive scientists hold that we already have a scheme for making sense of human action: People act to get what they want (feel obliged to pursue, and so forth), given what they believe. This common-sense pattern is so fundamental that it is considered to be more than a behavioral hypothesis—it is the standard of intelligibility for action. Interpretation is a sort of translation project—people *read* the *text* of other people's actions. To understand their *language* one must empathetically immerse oneself in their concerns and situations. Like languages, conceptual schemes have conventions and norms, and fluency in both is the capacity to follow (and exploit) those conventions and norms.

Naturalists need not reject common-sense psychological principles, though historically some (e.g., behaviorists) have. Now, however, most think that it is desirable to integrate reason-based behavior into the natural-scientific picture of the world, and so they seek to find the mechanisms that underwrite common-sense psychology. It now seems clear that a person's reasons for acting are the causes of her behavior. Causal mechanisms may include preferences, values, habits, reinforcement histories, and the like.

Theories often include terms that ostensibly refer to entities involved in causal mechanisms (e.g., utilities, norms, information flows, social roles). So-called *instrumentalists* do not interpret such talk literally, but see it simply as a tool for predicting the behavior of individuals (organizations, institutions, societies, and others). They are agnostic about mechanisms—tools should pinpoint *what* will happen, but they need not say *why*. Interpreted instrumentally, however, theoretical constructs are fictions that can do no causal work. Hence, many philosophers and social scientists are *realists* about the entities posited by more successful theories.

Contrary to the views of many early-twentieth-century philosophers, causal explanation does not require appeal to, or even the existence of, precise causal laws. One can explain, for example, that the glass broke because someone dropped it, without knowing any general laws about glass or fragility. Of course some general knowledge about how things break is needed, but it need not add up to a precise exceptionless absolute (or precise probabilistic) law. Such generalizations as we do possess typically describe how a given construct or tendency would operate in isolation (e.g., rational choice theory describes how agents would act if they had clear preferences, coherent subjective probabilities, and acted to maximize their expected utility).

Behavioral mechanisms rarely operate in isolation. Outside the artificial environment of the laboratory, most social phenomena are produced by a wide variety of causal factors that differ from situation to situation and interact with each other in very complicated (frequently nonlinear) ways. Prediction in such cases is usually difficult. Even in physics, prediction is often next to impossible, because many systems of interest are nonlinear and hence chaotic. Pure, idealized cases can provide explanatory insight into the role mechanisms play in the generation of behavior despite their predictive impotence.

With the rejection of the positivist view that prediction and explanation are symmetrical (though with prediction occurring before a predicted event and explanation after the event explained), it is now clear that it is possible to have a theory that is good at one but not the other. For instance, theories that simply extrapolate correlations may be good at predicting without offering much explanatory insight into why the predictions come true. By contrast, many theories in the social sciences can offer explanations after the fact, even though they could not have predicted the phenomena beforehand. Typically they do this by pinpointing (or at least conjecturing about) the causal mechanisms that led to the thing to be explained (e.g., the bear market in U.S. stocks in the early 2000s). Even theories that are better at explaining than predicting are typically tested by their predictive power, however, and both explanatory power and predictive power are clearly desirable.

THEORY EVALUATION

Because social-scientific theories rarely underwrite precise predictions (or postdictions), they are often difficult to test. In many cases theories yield only rough qualitative predictions, and these are typically compatible with a number of competing theories. Studies in the real world often allow us to discover correlations among variables (like years of education and income), and a theory gains some support when it makes reasonably precise predictions about the strengths of such correlations. But scientists are often interested in isolating causes, and, as the truism goes, correlation is not causation. Causes are traditionally discovered by carefully designed experiments whose outcomes are evaluated using null-hypothesis significance testing. Such testing, however, has come under increasing fire from methodologists such as Lisa Harlow, Stanley Mulaik, and James Steiger.

Social-scientific theories are useful when they help isolate the mechanisms that subserve behavior. Without some idea about when such mechanisms will be triggered and how they will interact, however, predictive ability is limited. Recent work, such as that of Judea Pearl, attempts to distill causal claims from real-world correlation data (plus a few assumptions about causation). Work on path analysis and other approaches to causal modeling will

probably play an increasing role in testing theories in the future.

ADMISSIBLE THEORETICAL CONSTRUCTS

Debates in the social sciences often center around identifying appropriate theoretical constructs. One classical division distinguishes the *Homo sociologicus* and *Homo economicus* pictures of human beings. A third image—*Homo psychologicus*—might be added. The first picture holds, roughly, that people are shaped by their cultures and (mostly) act in accordance with social norms. Central constructs here include norms, values, and social roles. By contrast, *Homo economicus* is a rational calculator who (normally) acts so as to secure desired outcomes. Central constructs here include preferences and subjective utilities. Thus a sociologist might explain crime in terms of the norms of a criminal's peer group, while an economist might argue that, in the agent's milieu, crime is the most sensible behavior. Those favoring a *Homo psychologicus* account are more likely to employ information-processing constructs.

No single approach has been notably successful in explaining behavior on its own. Many social scientists agree that each account supplies part of the picture: Norms can influence preferences and beliefs; economic outcomes can influence the evolution of norms and social roles. In practice, however, cooperation among social sciences has proven elusive. Integrating the insights of sociology, economics, psychology, and other social sciences is difficult because each appeals to different properties and processes. Rather than attempt any integration, different theories are often offered as competitors. As a result, disciplines often tend to be identified more with their explanatory approaches than with specific areas of interest. Cross-disciplinary theorizing is an important frontier for social science.

Another historically important debate over appropriate constructs concerns the level at which theoretical concepts and generalizations should be framed. Social scientists disagree about whether their investigations should focus on individuals or groups, but clearly they often do care about the dynamics of social groups. Scientists want to know, for example, how price levels change with world events, not just how individual consumers react. When they look for patterns at this level of aggregation they often find them. Supply shortfalls in crucial commodities result in price increases. Researchers can often detect such regularities without considering the idiosyncrasies of individuals.

French philosopher Émile Durkheim went so far as to argue that there are autonomous social facts and that social explanations should cite social properties rather than appeal to the psychology of individuals. This view has led to much fruitless debate over reductionism and the existence of social facts. Recent philosophy may help to clarify these issues. Higher level patterns are best understood as equilibria resulting from a number of actions. In a market system, for example, general price increases result from the predictable decisions of numerous agents. Accounts of supervenience, such as those by American philosopher Jaegwon Kim, make clear that the truth of generalizations at one level of analysis (e.g., biology) may depend on that of generalizations at a lower level (e.g., chemistry) without being translatable into the latter. These accounts permit reconciliation of the claim that social phenomena would not exist without the actions of individual agents with the claim that many important generalizations can only be framed in vocabulary that does not involve specific individuals.

SEE ALSO *Scientific Method*

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THEORY OF MIND

Theory of mind (ToM) refers to the more or less automatic tendency to impute mental states to oneself and

others (Premack and Woodruff 1978). Among alternative terms such as *folk psychology*, *naive psychology*, *mind reading*, and *mentalizing* (Astington and Baird 2005), ToM has emerged as the standard terminology among psychologists, primatologists, and philosophers. ToM is at the heart of human social cognition and underlies virtually every aspect of humanity.

FOLK PSYCHOLOGY AND APE PSYCHOLOGY

Consider, for example, how biological and physical motions are perceived. The motion of a falling apple is governed by Newton's laws, and human infants as young as three months are sensitive to violations of such principles (Spelke 2000). In contrast, most human behaviors are interpreted in terms of desires, beliefs, and emotions. As a classic demonstration of how far we are ready to stretch our folk psychology, Fritz Heider and Marianne Simmel (1944) showed undergraduate students animation movies in which geometric figures moved in coordinated ways that strongly hinted intentional behaviors such as avoidance or helping. When asked to describe the scenes, participants did not hesitate to apply mentalistic attributes to circles and triangles.

Contemporary interest in ToM, however, was sparked by the mind-reading ability of Sarah, a fourteen-year-old chimpanzee who appeared to recognize intentions from behaviors. In a groundbreaking paper titled "Does the Chimpanzee Have a Theory of Mind?" (1978), David Premack and Guy Woodruff showed Sarah video vignettes of a trainer attempting in vain to achieve a goal (e.g., to exit a cage through a locked door) and then a pair of photographs depicting potential solutions (e.g., an intact key along with a broken one). Spontaneously, Sarah "recognized the videotape as problem, understood the actor's purpose, and chose alternatives compatible with that purpose" (Premack and Woodruff 1978, p. 515). The authors attributed her success to the existence of a system that represents mental states, such as desire and intent, and links them to behaviors. They further maintained that "a system of inferences of this kind may properly be viewed as a theory because such states are not directly observable, and the system can be used to make predictions about the behavior of others" (p. 515).

Some thirty years later, the field remains divided over whether chimpanzees (or any nonhuman primates) possess a theory of mind or simply a theory of behaviors. Michael Tomasello and colleagues argue that the great apes understand others as "animate, goal-directed, and intentional agents" (2005, p. 675) even though they fall short in understanding beliefs and other mental states compared to humans (Call and Tomasello 1999). Others, however, caution that we have to first rule out the possibility that their responses are based on behavioral regularities (Heyes 1998; Povinelli and Vonk 2003, 2004). For example, chimpanzees spontaneously follow the gaze of others (Okamoto et al. 2002) and are attuned to what others can or cannot see (Hare et al. 2000; Povinelli and Eddy 1996). Nevertheless, it is unclear whether chimpanzees can link seeing to knowing. When competing for food, subordinate chimpanzees are reported to keep track of what dominant chimpanzees know and do not know about food locations (Hare et al. 2001). This is in stark contrast with an earlier finding that chimpanzees would beg for food indiscriminately from both trainers who could see and those who had a bucket over their head (Povinelli and Eddy 1996).

The current debate on ToM in nonhuman primates is *not* about whether they are capable of sophisticated social behaviors—yes, their abilities to keep track of and manipulate others sometimes rival those of humans. The issue is what can be concluded when their behaviors are compatible with *both* a ToM and a theory of behavioral regularities. Until a consensus is reached on this and other critical issues, the question Premack and Woodruff famously raised in their seminal work will remain unanswered.

FALSE BELIEFS AND THE DEVELOPMENT OF TOM IN HUMAN CHILDREN

In comparison, a consensus did emerge among developmental psychologists. It was suggested that an understanding of "false beliefs" is a sufficient condition for a ToM, because beliefs—unlike behaviors—are private and unobservable, and thus are beyond the scope of a theory of behaviors (Dennett 1978). And thanks to language, beliefs can be identified unequivocally in human participants.

This idea was put to a test by Heinz Wimmer and Josef Perner (1983) when the researchers told young children a story in which Maxi put his chocolate in a kitchen drawer and left. In his absence, Maxi's mom moved the candy to a different drawer. Children had to predict where Maxi would look for his chocolate on his return. While most six-year-old children correctly predicted Maxi's action on the basis of his false belief that the candy was still in the original drawer, most four- and five-year-old children in this study expected Maxi to look in the new location.

Young children's difficulties are not limited to thinking in other peoples' shoes. They appear to be oblivious about false beliefs they held a few moments earlier (Gopnik and Astington 1988). The development of ToM is remarkably consistent and robust, progressing almost uniformly from appreciating that people have different desires to understanding false beliefs, and later to differen-

tiating apparent versus true emotions (Wellman and Liu 2004). A meta-analysis of more than 170 false-belief studies concluded that the transition in false-belief understanding takes place in the preschool years for most children (Wellman et al. 2001).

Although passing the false-belief task attests to a ToM, the converse is not true (Bloom and German 2000). For example, younger children may fail due to their inability to inhibit improper responses (Leslie et al. 2004; Leslie and Polizzi 1998). In addition, children show a range of competences before they pass the false-belief test. At three months of age, infants prefer biological motion to random motion (Bertenthal et al. 1984) and shift their eye gaze after an adult makes an eye movement (Hood et al. 1998). At around twelve months, human infants begin to follow others' line of sight and predict actions according to gaze (Sodian and Thoermer 2004). The second year of life sees the onset of joint visual attention (Butterworth and Jarrett 1991), imitation (Meltzoff 1995), and pretend play (Lillard 2002). There is even evidence that sixteen-month-old infants have an implicit understanding of false beliefs (Onishi and Baillargeon 2005). From three to five, children produce mental words such as *think* or *want*, start to appreciate jokes (Leekam 1991), and attempt to deceive (Sodian et al. 1991). ToM continues to develop; adults still fall victim to egocentrism from time to time (Keysar et al. 2003). Nonetheless, the basic apparatus for reading and reasoning about mind is largely in place early in childhood.

THEORIES OF THEORY OF MIND

What explains children's initial failure and later success in the false-belief task? The *theory theory* postulates that we reason about mental events based on a system of heuristics or if-then rules (Gopnik and Wellman 1994). The child actively constructs and revises the informal ToM based on experience. For instance, a toddler may begin with a prediction that if Maxi wants something, he will act to satisfy his desire. Experiences with false beliefs of others or herself will force the child to abandon this simple heuristic and incorporate *belief* into an adultlike theory of mind (Bartsch and Wellman 1995).

The notion of a *theory* as the basis for mind reading is challenged by the *simulation theory*, which proposes that we compute others' mental states through an automatic role-play simulation ("if I were him …"; Gallese and Goldman 1998; Gordon 1986). Young children find the impersonation difficult in a false-belief task because one has to withhold one's own belief and instead reason with the erroneous belief of the person to be simulated.

If a child has to *discover* a ToM completely on his or her own, as suggested by the theory theory, the acquisition is unlikely to be consistent and universal. Two solutions have been proposed in the literature. One is the hypothesized *theory of mind mechanism* (ToMM; Leslie et al. 2004; Baron-Cohen 1995), an innate neurological module that automatically maps behaviors of self-propelled agents to mental states and vice versa. The ToMM is thought to mature fairly early in life and kick off the subsequent development of folk psychology. Young children's difficulty with the false-belief task is attributed to immature executive functioning, which works in conjunction with ToM to make behavioral predictions.

An alternative view traces the origin of ToM to language and culture. Everyday conversations expose children to the fact that speakers may have different knowledge and beliefs. Language also provides specific lexical terms for mental states (e.g., *see*, *know*, and *want*) and, in some cases, different syntactic structures for different mental states (e.g., "*I want to* …" but *not* "*I want that*…"; however "*I know that* …" but *not* "*I know to*…"; see de Villiers and de Villiers 2000). These linguistic structures invite children to think and talk about mental events in a way that is conventional in the language community. In this perspective, language and culture provide both the blueprint and building blocks for developing a ToM (Astington and Baird 2005).

MINDBLINDNESS AND BRAIN IMAGING

What would the world be without a ToM? Childhood autism is a spectrum of pervasive developmental disorders characterized by deficits in social interaction, verbal communication, and repetitive behaviors. Simon Baron-Cohen and colleagues (1985) hypothesized that autistic children have a severe deficit in the ToMM. For example, Baron-Cohen (1995) showed children a face ("Charlie") surrounded by four different kinds of candy, with Charlie's eyes looking toward one of them. When asked "which candy does Charlie want," most four-year-olds pointed to where Charlie was gazing. In contrast, children with autism responded randomly to what Charlie *wanted*, even though they had no trouble answering where Charlie was *looking*. The problem is a failure to map perception to mental states. Niki L, a high-functioning autistic person, wrote:

> Many [autistic persons] lack some sort of intuition and have a hard time guessing hidden rules many [normal] kids somehow see.… I think I eventually formed a relatively good theory of mind, but it took intentional effort. And I still have to apply it manually. It gets faster and faster as I collect many patterns in my memory, but I'm afraid it won't be automatic forever. (Blackburn et al. 2000)

Brain imaging has begun to shed light on the potential neural mechanism underlying ToM. For example, Kevin Pelphrey and colleagues (2005) reported functional MRI evidence that participants with autism are insensitive to intentions conveyed by other people's eye movements. Other imaging studies contrasted brain activities while processing mental versus physical events, for example, listening to stories involving rich mentalizing (Fletcher et al. 1995; Gallagher et al. 2000; Vogeley et al. 2001) or watching Heider/Simmel-like cartoon animations (Castelli et al. 2000). Consistently, stronger activations are found in the medial prefrontal cortex (MPFC), temporal poles, and the posterior superior temporal sulcus (STS) during mentalizing. For further information, see Frith and Frith (2003) and Baron-Cohen et al. (2000).

CONCLUSION

The prepositional phrase *theory of mind* is a linguistic oddity. Contrary to the expectation of a native English speaker, for example, the "theory of mind mechanism" is not a theory about "mind mechanism" but a mechanism for theory of mind. The strong internal cohesiveness reflects a commitment to two of its core assumptions—that behaviors are understood in mental terms and that this understanding constitutes a theory.

Although both points are under vigorous debate, ToM as a field of scholarship has thrived, and continues to thrive, beyond the imagination of Premack and Woodruff (1978). Recent reports of self-recognizing elephants and dolphins (Plotnik et al. 2006; Reiss and Marino 2001) and deception in scrub jays (Dally et al. 2005), among others, question the view that ToM is unique to a handful of primate species—if not for humans only—and instead suggest similar competences have evolved independently as an adaptation to complex social lives. Meanwhile, computer scientists find ToM essential in developing autonomous, cooperative robotic agents (Scassellati 2002), and economists are tying many aspects of social exchange and decision making to ToM (Singer and Fehr 2005). This brief survey of ToM cannot do justice to a vast and vibrant field of study. But fortunately, motivated readers should not have difficulty finding in-depth and up-to-date readings that connect ToM with their specialty—after all, where there is social interaction, there is theory of mind. At least potentially.

SEE ALSO *Child Development; Developmental Psychology; Lay Theories; Needs; Neuroscience; Primates; Psychology; Stages of Development; Wants*

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THEORY OF SECOND BEST

Consider a stylized economy in which all markets are perfectly competitive, there are no distortions, no externalities, and no public goods. All resources are privately owned and all agents maximize their respective welfare, consumers maximizing utility and firms maximizing their profit. All individuals possess perfect information and there are no impediments to trade so that all markets always clear (i.e., the quantity of goods supplied always equals the quantity of goods demanded). The resulting equilibrium in this idealized world is characterized by a set of optimality conditions, known as *Pareto* optimality conditions. This equilibrium is said to be a first-best optimum in which there is no welfare-improving role for government policy.

In a seminal paper published in 1956, Richard Lipsey and Kelvin Lancaster considered the consequences of introducing into this general equilibrium system a constraint (or distortion) that prevents one or more of the optimality conditions characterizing the first-best optimum from being attained. For example, suppose a firm has monopoly power, causing it to set a price above marginal cost, thus violating one of the conditions for the first-best equilibrium to prevail. Lipsey and Lancaster then showed that while the other optimality conditions characterizing the first-best outcome may still be attainable, in general it is no longer optimal to impose them. In other words, if one of the Pareto optimality conditions cannot be fulfilled, a second-best optimum is achieved only by deviating from all other optimality conditions.

This proposition has profound implications. First, the simple intuitive efficiency conditions characterizing the first-best optimum are replaced by complex nonintuitive optimality conditions characterizing the second-best equilibrium. Consequently in general nothing can be inferred about either the direction or the magnitude of the deviations of the second-best optimum from the first-best outcome. That depends upon the entire underlying economic structure and the extent to which the distortions relate to the rest of the economy. Second, the optimality conditions may introduce nonconvexities, which call into question whether the equilibrium is indeed an optimum. Third, the existence of such constraints restores a potential welfare-improving role for economic policy.

Although the concept of "second best" is identified primarily with Lipsey and Lancaster, it in fact appeared in the economics literature well before that time. References to it in the context of free trade versus protection can be found as early as the beginning of the twentieth century in the Italian economist Vilfredo Pareto's original work on general equilibrium theory, while the concept is also discussed by Paul Samuelson in his 1947 book *Foundations of Economic Analysis* and in more detail by James Meade in his 1955 publication *Trade and Welfare*. The main contribution of Lipsey and Lancaster is to provide a more formal analysis of the concept and to highlight the consequences for policy makers.

IMPEDIMENTS TO FIRST-BEST OPTIMUM

Several types of distortions may prevent the first-best Pareto optimal outcome from being attained. Some, such as returns to scale (the relationship between proportionate changes in inputs and the resulting change in output), are technological in nature; while others, such as monopolistic market structures and barriers to entry, may be created by the private sector. These distortions may be neutralized, at least in part, by some form of government intervention. In some cases this may take the form of economic incentives, designed to discourage the behavior causing the distortion, while in other cases it may simply be an outright legal restriction. It is also possible for the government itself to be the source of the distortion. The need to provide public goods, financed by a distortionary tax, such as an income tax, is a familiar example.

While, as Lipsey and Lancaster highlighted, externalities and distortions generally lead to divergences from the Pareto optimal outcome, simple examples also exist where no divergence is created. For example, in their 2005 study Wen-Fang Liu and Stephen Turnovsky considered a neoclassical growth model with an inelastic labor supply in which utility depends upon the agent's own consumption, together with economy-wide average consumption, a potential distortionary effect. They show that while the consumption externality influences the economy's time path for capital accumulation, for a widely employed class of utility functions it causes no deviation from the Pareto optimal time path.

The presence of the constraints that, all other things being equal, would lead to the violation of the Pareto optimality conditions need not in fact preclude the attainment of the first-best optimum. In some instances the government may be able to neutralize fully the effects of the various distortions and externalities embodied in the constraints and thus mimic the first-best equilibrium. A well-known example of this was illustrated in a 1986 study by Paul Romer. In the study he introduced an endogenous growth model, in which private agents ignore the production externality due to aggregate capital and therefore overconsume and underaccumulate capital, relative to what is socially optimal. By appropriately subsidizing the return to capital, the government can induce the agents to adjust their consumption-savings behavior and thus attain the first-best optimal growth rate.

In most cases the policy maker is likely to have insufficient policy instruments to reach the first-best outcome, in which case the resulting equilibrium will be truly second-best. In such a situation a natural question to consider concerns the policy options available to improve social welfare relative to the second-best equilibrium. In the Romer model, for example, it is likely that to attain the first-best growth rate the required subsidy to capital income is too large to be politically feasible. The policy maker may therefore decide to target a more modest growth objective that can be achieved by different combinations of tax rates and subsidies. The policy maker is faced with several second-best choices and thus with ranking the set of alternatives.

As noted, the optimality conditions characterizing the second-best equilibrium are complex and therefore, as a practical matter, may be difficult, if not impossible, to implement. This issue was addressed by Yew-Kwang Ng in *Welfare Economics: Introduction and Development of Basic Concepts* (1979) when he proposed a "third-best" equilibrium. He suggested that in cases where policy makers have insufficient information to implement the second-best policies, they should seek to correct only the known distortions and leave the optimality conditions in the undistorted markets unchanged at their first-best levels. This is sometimes also referred to as "piecemeal" policy making.

SECOND-BEST VERSUS FIRST-BEST

The issue of second-best versus first-best policy making is pervasive in economics. Early contributions were concentrated in the area of international economics and the debate between free trade versus protection. Subsequently it has played a central role in public economics, where governments face the issue of financing public goods, with the externalities they entail, using various fiscal instruments with their own distortionary effects. It has also been important in the area of applied microeconomics and industrial organization in dealing with issues related to market structure, barriers to entry, and deviations from competitive behavior. Finally, the existence of production externalities is a cornerstone of much of modern economic growth theory, where they have been important in giving the theory of the second best a dynamic dimension.

SEE ALSO *Economic Growth; Economics, Public; Equilibrium in Economics; General Equilibrium; Liberalization, Trade; Market Clearing; Meade, James; Monopoly; Pareto Optimum; Pareto, Vilfredo; Public Goods; Samuelson, Paul A.; Social Welfare Functions; Welfare Economics*

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Stephen J. Turnovsky

THIRD WORLD

The term *third world* was coined by the French economist and demographer Alfred Sauvy to apply to the developing countries that belonged to neither the American nor the Soviet bloc during the cold war. Countries of the "first world" included the United States, its European allies, Canada, Australia, and New Zealand. Countries in the "second world" referred to the Soviet Union and its East European allies. The third world comprised the rest of the countries.

DEFINITIONS

From its very inception, the term *third world* has proven problematic. During the cold war, states such as the Philippines and Cuba, closely aligned to one or the other superpowers, nevertheless were considered third world. Even after the conception of the term broadened to include economic backwardness, poverty, and lack of power, confusion as to its meaning persisted. Included in the third world during the cold war years were states that are among the richest in the world (Saudi Arabia, Kuwait), states whose militaries were larger than those of the North Atlantic Treaty Organization (NATO) powers (Vietnam and Iran), and countries that were major powers in their own right (India). Nevertheless, the term stuck, referring loosely to the countries of Africa, Latin America, and Asia, with Israel, Japan, and China usually omitted.

The third world has always been associated with other groupings of states that share "third world" characteristics. One of the most prominent of these is the nonaligned movement, begun in 1955 by the leaders of

Egypt, India, and Yugoslavia to advance the interests of countries that sought to avoid entanglement in East-West issues. Another prominent organization was the Group of 77 established in June 1964 to promote the economic demands of poorer countries. The Group of 77, now numbering some 130 countries, is a prominent player in international institutions, particularly the United Nations, where it often clashes with the group of developed states known as the Organization for Economic Cooperation and Development (OECD). While the nations that make up these and other groups overlap with the third world, their focused agendas gave substance to what was otherwise an ambiguous term.

Once the cold war was over, whatever meaning *third world* had was further eroded. The collapse of the Soviet Union brought about the end of the second world, making the term *third world* especially difficult to justify. Making matters worse, many saw the term *third world* as pejorative, which in part explains efforts to use other terms, such as *developing countries*, the *South*, and *LDC* (for least or less developed countries).

Despite all these problems, the use of *third world* persists. In large measure this is because of the belief that the term is usefully descriptive of a class of countries that share similar characteristics. While not all third world countries manifest these characteristics to the same degree (or at all), enough do to consider retaining the category of third world.

CHARACTERISTICS

The first characteristic of third world countries is that they are relatively young. Unlike countries outside the third world that have evolved over centuries, most third world states were artificially created by others. The great majority of third world states are ex-colonies. Outside powers created states where none had existed. Although the degree to which the newly formed boundaries coincided with the boundaries of indigenous societies varies in the third world (e.g., high in Southeast Asia, low in Africa), in all cases a formal division replaced what had been a flexible demarcation. Because of the arbitrariness of their borders, many third world states began as and remain more artificial constructs than coherent units.

The artificiality of the third world states and their colonial heritage has created a situation in which groups owe allegiance to and act for interests other than the national interest. Policies by colonial powers of "divide and rule" and the destruction of existing political entities made integration and a sense of nationalism all but impossible. Instead of identifying with their states, individuals identify with ethnic, religious, or regional groupings. This narrow seeking of interests perpetuates itself by preventing the formation of a national consciousness. Rather than transcending the differences among these different groups, the state is often simply the representative of the group that holds power in the capital.

Legitimacy is likely to be weaker for third world leaders than for leaders elsewhere. Many regimes in the third world are narrowly based, came to power through force, and use suppression to remain in power. In part this legitimacy stems from a lack of national identity. When people cannot agree on what constitutes the state, they are unlikely to agree on what constitutes legitimate uses of power within the state. Developing states often lack effective institutions for mediating political disputes, intensifying the internal conflicts that frequently arise. Most third world states are not liberal democracies. Despite the rise of nationalism, meaningful political participation and the acceptance of basic rights, such as freedom of speech and religion, toleration of minority rights, and an independent judiciary, are not found in the majority of third world countries.

The power of the third world states, as in other states, derives from the ability to distribute goods. The state in the third world is distinctive, however, in that it controls a much greater degree of wealth and power than any other group in the society. Gaining control of the state is the only means for the ambitious to meet their needs. Hence a major vulnerability of the state is that it controls a much greater degree of wealth and power than any other group in the society. At the same time those in power will mightily resist attempts at replacement because they do not want to relinquish their only opportunity for wealth and influence and because they fear for their lives.

Third world states are also characterized by economic underdevelopment. It is generally thought that third world countries' citizens are poor, ill educated, and lack access to quality medical care. The World Bank and the United Nations, which categorize nations as to income and other indicators, confirm this view. The World Bank divides countries into four categories: high income, upper-middle income, lower-middle income, and low income. Third world states make up all the low income states and none of the high income ones, with the exception of oil rich Arab countries. Moreover third world countries tend to rank low on measures of human development, such as literacy, access to education, life expectancy, and infant mortality.

One can categorize third world states by means of their self-identification. If a state considers itself to be a third world country, it is likely to have a set of attitudes and goals that are defined by its "third worldness." For example, third world states overwhelmingly supported the huge price increases in Organization of Petroleum Exporting Countries (OPEC) oil in 1974 despite the horrendous economic effects they caused. Third world solidarity has also been displayed in votes at the United

Nations, where countries seen as third world tend to vote similarly. It is possible to speak of a third world therefore because member states do and because they act in at least some ways in terms of their self-identification.

These generalizations are not set forth to suggest that all third world countries share these characteristics equally. Different states manifest different characteristics. Nor do these generalizations apply only to the third world. As demonstrated by the collapse of the second world in 1989, states outside the third world also suffer from problems such as weak legitimacy. What some say justifies considering the third world as a category is that whatever combination of factors may exist in a particular third world state, their cumulative impact makes virtually all third world leaders more vulnerable to overthrow—particularly by internal threats such as coups and rebellions—than other leaders.

Finally, the third world is not a static category. Countries formerly considered to be in the third world have left that status behind, while other states that had been second world countries find themselves increasingly being considered third world. Countries such as Taiwan can become more politically stable, or previously stable countries can plunge into chaos, as occurred with Yugoslavia. Some states, such as South Korea and Singapore, have achieved impressive levels of economic development, while others, such as many of the former Russian republics have descended into "third world" levels of poverty and despair.

There is little question that *third world* is a messy, ambiguous, and vague term. For those who demand rigor in their definitions, the category of third world has long lost its utility. And yet the persistence of the term indicates that it satisfies a need for many in describing the condition of states and peoples that is not met by any other categorization. As long as poverty and instability exist, so too will the relevance of the category "third world."

SEE ALSO *Anticolonial Movements; Cold War; Colonialism; Developing Countries; Globalization, Social and Economic Aspects of; Nation-State; Neutral States; North and South, The (Global); Poverty; South, The (USA); State, The; Union of Soviet Socialist Republics; United Nations; World Bank, The*

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Steven R. David

THOMPSON, EDWARD P.

1924–1993

Edward Palmer ("E. P.") Thompson was an historian and social activist. His first significant publication, *William Morris: From Romantic to Revolutionary* (1955), was produced under the auspices of the Communist Party Historian's Group, of which he was an early and active member. Although this is still an enormously important work, Thompson is best remembered for his writings and activities following his resignation/expulsion from the Communist Party (CP) in 1956, which resulted from his criticism of the party's support for the Soviet invasion of Hungary. Following his departure from the party, Thompson—along with John Saville, with whom he had been publishing *The Reasoner* (renamed *The New Reasoner* in 1956), Raymond Williams, Stuart Hall, and others—founded *New Left Review* in 1960 as one of a number of endeavors to maintain and foster a non-Labour, non-CP left in Britain.

Although generally overshadowed as a theorist by Williams and Hall, Thompson's polemics on culture, history, and power in this period deserve reexamination for the manner in which they presaged developments in anthropology and literary studies some thirty years later, and his own later understanding of class.

CULTURE

Like Williams and Hall, Thompson found in the concept of culture (both in its anthropological and humanistic senses) an alternative to the economic determinism that dominated Marxist thought. Williams endeavored to expand the traditional capital *C* Culture to include the contributions of working people, which were often occluded in such discussions, effecting a mutual interpenetration of this humanistic culture with its small *c* anthropological cousin. Thompson railed against Williams's notion of culture as a "whole way of life" as being invocative of a "cozy consensus" and not going far enough. Thompson instead argued that culture was more fruitfully viewed as a "whole way of conflict"—not a more or less static, atemporal, and apolitical entity, but itself formed by and generative of social struggle.

Secondly, though both Hall and Williams would retain some form of the basis/superstructure model, Thompson sought to jettison it altogether. Thompson viewed the economic "basis" as the product of social struggle, whereby economic activity had been gradually divorced from all moral and social constraints. To this end, he deployed a generous reading of Marx's concept of production, arguing that, in effect, the economy was indistinguishable from the human beings who collectively produce a society with economic laws, and "discover," and are governed by those laws. In this stroke, one glimpses Thompson's distaste not only for political economy, but also for its left opposite number, "Structural Marxism," both of which he saw as abdicating morality, agency, and responsibility by theologizing what was itself a human production.

CLASS

Thompson brought these understandings fully to bear in his *Making of the English Working Class* (1963) (*MEWC*). Though often confused with the "advocacy" histories that came in its wake (which is *not* to say Thompson was not an advocate of his subjects), the *MEWC* should not be viewed as a treatment of how class "ought" to look, but a history of *how* the working class in England came to look as it did on the eve of Chartism. The book ranged across seemingly unconnected domains, from Methodism to the de-skilling of trades to demonstrate both the experience of the working class and its "handling" of these experiences. The emphasis of the book was squarely placed on the concept of *making*, and an argument that class is a relationship and a process, not a "thing" that could be abstracted from its historical context and studied in isolation. Class, he argued, came about over time as a result of struggle, as the realization of mutual and antagonistic interests in human society that come to be articulated in class ways. Because class is an historical process, neither the experience nor the articulation is ever "finished."

Thompson's understanding of class endeavored to bring matters down to earth, to demonstrate the role ordinary people have in making their own history—both in terms of his eighteenth-century subjects and as a sort of *ana-amnesis* for the 1960s, with its early rumblings of what would come to be known as *postmodernism*. For Thompson, history had no preordained "direction"; it was quite literally what people (based "on experiences inherited or shared") made it—that the black hats could (and often did) win out gave a sense of urgency to his subjects and, by extension, to the present. Thompson's *MEWC* was not a mining of the past for justifications in the present, however; it offered little safe ground for the reader (themselves historical subjects)—because struggle is always (at least) two-sided, and ongoing, each victory remains in jeopardy.

Thompson's sprawling, impressionistic opus had an enormous and almost immediate impact in historical studies. From a methodological standpoint, the inclusion of literary sources as a form of historical evidence was novel, as were his attention to anonymous letters and ("fumigate[d]") readings of spy reports. He viewed each in its turn as participating in what he called the "handling" of experience and in so doing managed to reposition politics in terms of the everyday.

Following the publication of *MEWC*, Thompson's historical output was scant—in addition to a study of William Blake, he produced only two further volumes of historical writing in his lifetime—*Whigs and Hunters* (1975) and *Customs in Common* (1991)—the latter consisting largely of essays that had appeared in various forms over the previous two decades. On this count, the two major essays that followed *MEWC*—"The Moral Economy of the English Crowd in the Eighteenth Century" (1971) and "Time, Work-Discipline, and Industrial Capitalism" (1967) (both collected in *Customs*)—rivaled the importance and influence of *MEWC* and deserve special mention.

Both essays drew on concepts and addressed concerns introduced in *MEWC*. In "Moral Economy," Thompson demonstrated that far from being spasmodic eruptions of hunger or "collective psychosis" (LeBon), English grain riots exhibited logic and discipline and were an attempt to enforce moral constraints upon the market. Thompson found a customary sense of fairness, a component of plebeian, and to a great extent also patrician, sensibilities being negotiated in the riots. The riots were not opposition to capitalism *per se*, as the rioters often sold seized grain at what they considered a fair price, giving the money to merchants (occasionally with magistrates looking on), but opposition to a market divorced of all moral and social concerns.

In "Time, Work Discipline, and Industrial Capitalism," Thompson examined the rationalization of labor and time over the course of the eighteenth century. Drawing on a typically impressive array of local sources, which he linked up to anthropological studies of noncapitalist societies, Thompson demonstrated that time and labor, which had been rooted in the human body and natural processes, were gradually estranged from those processes to conform to notions of abstract labor power and clock time, both of which mirrored the money form. Thompson's essay, unlike the more celebrated work of Michel Foucault on similar themes, had the merit of moving beyond the truisms of power and the tendency of human activity to increase its scope (power + resistance = power', power' + resistance = power", …∞) by gearing

analysis toward concrete forms of domination and their attenuation (also, incidentally through human activity). Put simply, while it may be the case that all roads lead to power, people have to live in a world in which the concrete forms and variable severity of "power" matter very much to them.

This sensibility informed his 1975 *Whigs and Hunters: The Origin of the Black Act*. The book was a microscopic study of the 1723 "Waltham Black Act," notorious for exploding the number of capital offenses against property in England by criminalizing traditional forms of plebeian subsistence. Though on one hand granting that the new laws represented a transparent power grab on the part of an emergent capitalist class, Thompson steadfastly refused to see the new laws as merely that. Instead, he argued that, though susceptible to ruling class interest, these laws codified a "ground" that also constrained ruling class interests and could be (and later were) used as a check against the arbitrary power of those interests.

While Thompson was perhaps one of the greatest historians of the twentieth century, his historical work was interrupted by periods of intense political activity, for which he is remembered as both a charismatic speaker and a devastating polemicist. Beginning with his exit from the CP, Thompson polemicized—first in *The New Reasoner* and *New Left Review*, and later in a myriad of mainstream newspapers and magazines—on everything from imperialism to the welfare state, but his central concern remained nuclear disarmament. Thompson, whose involvement with the Campaign for Nuclear Disarmament (CND) was early and continued, viewed the atomic bomb, and the polarization it created, as inimical to democratic institutions. He did not view the bomb as a particularly deadly "add on" to "economic man" (capitalist or "communist"), but as economic man's realization. Thompson envisioned a Pan-European, nuclear-free "third way" (not to be confused with the Blairite vision of the same name) that divested itself both of Soviet and American influence, both of which, he argued, utilized the threat of nuclear war to suppress democratic self-determination the world over. With the arrival of cruise missiles in Britain under Margaret Thatcher, he stopped his historical writing almost entirely, and devoted his energies to Europeans for Nuclear Disarmament (END). He was (to the chagrin of Thatcher, no doubt) the most recognized person in Britain after the Queen in the early 1980s, and both the Soviet Union and United States exerted a great deal of effort in insinuating that he was an "operative" for the other. Nonetheless, END's success was enormous, rallying huge numbers of both "free" and "Communist" Europeans to its cause. Seldom remarked upon in the United States, the movement exerted enormous pressure, particularly in Eastern Bloc countries, and had what historians are beginning to recognize as a significant role in Soviet disengagement from those countries.

CRITICISM AND THE "CRISIS OF CLASS"

Thompson's privileging of the class "concept" as the defining historical experience began to come under fire in the early 1980s and reached something of a fever pitch following his death in 1993. Joan Scott presented "The Women in the *Making of the English Working Class*" at the American Historical Association's session honoring the twentieth anniversary of the publication of *MEWC*. She argued that class as it had been "theorized" by Thompson was a masculine concept, and Thompson had made it more so with his tendency to masculinize "it" by describing his book as a kind of "biography" of the working class from its "youth to early manhood." She further castigated Thompson's book for its treatment of the prophetess Joanna Southcott (who, among other things, claimed to be pregnant with the son of God, and whose followers Thompson had described as "deluded"). If Scott's criticism strikes the reader today as a quaint search for masculine pronouns in the guise of a critique, at the time it was (and it remains) something of a declaration of independence for feminist historians who had had an uneasy relationship with class. Scott's essay raised the possibility for many that "the class concept" was in fact hostile to feminist ambitions.

Further influential criticisms came from Dipesh Chakrabarty and Linda Colley, the first offering a postcolonial critique of Thompson, and the latter attempting to displace the notion of class with that of *nation*. Chakrabarty questioned the suitability for India of the class concept as "theorized" by Thompson, insisting on the primacy of religious identity there (particularly as opposed to the liberal traditions and institutions of "the Freeborn Englishman"). Colley, for her part, argued, by sidestepping class more or less altogether, that over Thompson's period, people came to identify themselves as "Britons" above all else.

In Chakrabarty's case, one questions the depth of engagement with Thompson's work, particularly given the primacy Thompson accords to such things as Methodism, and his insistence that the identity of "Freeborn Englishman" was not stable either in its application or content—just who this applied to and what it meant was a matter of centuries long contest. In Colley's criticism, the notions of *patriot*, *Briton*, and so forth tend to be stripped of their contextual specificity: The very Thompsonian questions of who is speaking, in what context, and how they mean what they are saying were generally ignored or overshadowed by the meta-identity of being "British." Though Thompson allowed in his review

of Colley's *Britons* that nationalism was undertheorized and underexplored in his work, he bristled at the book's tendency to melt all concrete utterances into one nationalist soup.

Though neither Chakrabarty's nor Colley's critiques can be viewed as ultimately satisfactory from an intellectual standpoint, both have enjoyed a great deal of institutional success. Colley's *Britons*, in particular, has opened the closet door for a historical establishment in Britain that was always hostile to studies of class, if consistently unable to outflank Thompson in debate. Thus, where these historians might have been forced to address the question of class previously, they now proceed as though all were on board with the British ship of state and write "Imperial" history as though the thirty years of *MEWC*'s primacy had never occurred.

LEGACY

Thompson's legacy is difficult to determine. His self-appointed heirs have often proven sloppy in research, theoretically uninquisitive, and off-putting in argument. Others who have more closely engaged themselves with the possibilities in Thompson's work have tended to retreat into the cutting-edge hinterlands of historical study, particularly the *Journal of British Studies*, where the sort of interdisciplinary and theoretical engagement Thompson advocated is better received. Even though interdisciplinary study has flourished in recent years, the tendency has been toward a sort of compartmentalization, and for these very institutional reasons, one finds it difficult to imagine again the sort of all-out assault on received historical paradigms that *MEWC* represented.

From a political standpoint, one is again scarcely able to conceive of Thompson's moment. Thompson once wrote of a "peculiar and vengeful kind of bitterness that a certain kind of man feels for an enchanted mistress who has disappointed him" (O'Brien and Vanech 1969), and that hostility to or disenchantment with the possibility of social transformation seems the patrimony of the '68 generation. Between an academic left as convinced of an omnivorous "power" as it is of human impotence or unwitting complicity in the face of it, and a political left that no longer recognizes, much less is able to converse with working people, Thompson appears something of a relic, ironically the very "damned fool in utopia" he was labeled at his expulsion from the CP. It remains to be seen how long human beings can both go on living and being so "smart."

SEE ALSO *Anthropology; Capitalism; Class; Communism; Culture; History, Social; Humanism; Imperialism; Industrialization; Nation-State; Patriotism; Postcolonialism; Tradition; Working Class*

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Christopher J. Lamping

THOREAU, HENRY DAVID
1817–1862

Writer, naturalist, theorist of civil disobedience, and antislavery activist, Henry David Thoreau was born in Concord, Massachusetts, and lived there most of his life. A graduate of Harvard College, his most formative intellectual experience was his friendship with Ralph Waldo Emerson (1803–1882). The central figure of New England transcendentalism, Emerson famously called on individuals to dispense with traditional religious and intellectual authorities and seek truth and divinity for themselves. Thoreau spent his life answering Emerson's call to establish "an original relation to the universe" (Emerson 1983, p. 7).

Thoreau's most concerted effort to connect directly with the universe was his two-year sojourn in the woods at Walden Pond. Thoreau lived in a cabin of his own making, sustained himself by his own labor, looked inward, and observed nature. He recounted his experience magisterially in *Walden* (1854): "I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived" (Thoreau 2004b, p. 90). *Walden* urges mental awakening and original perception; it also urges simple living so that one may free oneself from the relentless acquisition of material goods and the unquenchable thirst for riches.

In 1846, Thoreau had a brush with the law that spawned his other great contribution to American letters. Walking through town, he ran into the tax collector, who demanded that he pay his poll tax. Thoreau refused because he did not want his money going to support the Mexican War, which Thoreau saw as an indefensible attempt to extend the reach of American slavery. The tax collector threw Thoreau in jail; the next day an acquaintance paid the tax for Thoreau, much to Thoreau's irritation. Thoreau's night in jail became the occasion for "Resistance to Civil Government"—his 1849 essay defending his refusal to pay the tax and arguing that morally unconscionable laws are not binding. Eventually re-titled "Civil Disobedience," Thoreau's essay is the foundational text of the modern doctrine of civil disobedience: Citizens may justifiably defy laws which break with higher moral laws or with the moral foundations of the polity. In the twentieth century, Indian leader Mohandas Gandhi and American civil rights leader Martin Luther King Jr. drew inspiration from Thoreau in formulating their respective theories of nonviolent resistance. Unlike Gandhi and King, however, Thoreau was not a committed pacifist.

Thoreau gave three more noteworthy antislavery addresses before his death. In "Slavery in Massachusetts" (1854), Thoreau excoriated the recently passed Fugitive Slave Law, which required free states such as Massachusetts to assist slave-owners in the recovery of their property. In "A Plea for Captain John Brown" (1859) and "The Last Days of John Brown" (1860), Thoreau defended Brown's failed raid on the federal arsenal at Harpers Ferry, Virginia, which was part of Brown's broader attempt to incite a slave insurrection throughout the South. Despite his hatred of slavery, the carnage of the Civil War greatly disturbed Thoreau. Falling ill just before its outbreak in 1861, he said he "could never recover while the war lasted" (Harding 1992, p. 451). Thoreau never did, dying of tuberculosis at the age of forty-four.

SEE ALSO *Citizenship; Civil Disobedience; Civil Rights; Gandhi, Mohandas K.; Human Rights; Inequality, Racial; King, Martin Luther, Jr.; Pacifism; Passive Resistance; U.S. Civil War*

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Jack Turner

THORNDIKE, EDWARD
1874–1949

Although he spent his mature career in educational psychology at Columbia University's Teachers College in New York City, American psychologist Edward Lee Thorndike's most important work was done in animal learning, begun at Harvard under William James (1842–1910). Thorndike, along with Russian physiologist Ivan Pavlov (1849–1936), provided the methodological tools of behaviorism, in which psychologists used animal models to formulate theories of learning and behavior that would include humans.

When Thorndike and Pavlov began their research, comparative psychology used the so-called anecdotal method—collecting stories about animal behavior in natural and seminatural settings—in order to understand conscious animal thinking. Thorndike challenged the anecdotal method for lack of control, overestimation of animal intelligence, and tendencies to anthropomorphize the animal mind. He substituted experiments for anecdotes, establishing one of the two major paradigms for studying learning: instrumental, or operant, conditioning. Contemporaneously, Pavlov established Pavlovian, classical or respondent, conditioning. With regard to animal thought, Thorndike set out to catch the animal mind at work but concluded that animals do not reason their way to problem solutions. Rather, they engage in mindless trial-and-error learning.

In the experiments that defined instrumental conditioning, Thorndike placed young cats inside wooden cages called *puzzle boxes* from which they could escape by working a manipulandum inside the box, such as a foot treadle. Thorndike observed that cats tried out a variety of instinctive responses before accidentally hitting on the correct response. Nor did they show insight. Instead of stepping on the treadle immediately on the next trial, cats repeated erroneous responses, although the correct response emerged sooner as trials progressed until it became dominant. Thorndike described the process of learning as a gradual "stamping out" of connections between the box stimuli (*S*) and the incorrect instinctive responses (*R*), and the gradual "stamping in" of connections between *S* and the correct *R*. Hence, Thorndike called his theory of learning *connectionism*, a behavioral version of associationism.

Thorndike proposed three laws governing learning. The *law of exercise* held that using a connection strengthened it and disuse weakened it, while the *law of readiness* stated that when a connection was available, its use would be satisfying to the organism; these laws were later abandoned. Most important was the *law of effect*. Initially, the law of effect held that when a response to a stimulus led to pleasure, the *S-R* connection was strengthened, and when a response led to painful punishment, the connection was weakened. Thorndike later revised the law of effect, having found that punishment did not weaken *S-R* connections, but inhibited their expression, a view held today.

Because Thorndike never proposed a comprehensive system of psychology, his ideas were subjected to detailed rather than systematic criticism. Most significant were critiques of the law of effect and the methodology of the puzzle boxes. Eager to purge references to mental states from psychology, behaviorists objected to Thorndike's reference to "pleasure"—a subjective conscious feeling—as the cause of learning. They substituted less mentalistic causes such as contiguity of stimulus and response (Edwin R. Guthrie [1886–1959]) or biological drive reduction (Clark Hull [1884–1952]), or they defined reinforcers functionally as events that strengthen the responses that produced them (B. F. Skinner [1904–1990]). Later, as information-processing views of learning gained strength, psychologists questioned Thorndike's law of effect in a new way (anticipated by Edward C. Tolman [1886–1959] in the 1930s). Thorndike assumed that rewards and punishments work via pleasure and pain, but they also provide information (a concept not available to Thorndike) that a response was correct or incorrect. Experiments that separate the two (e.g., making a painful stimulus indicate that a response was correct) have shown that learning depends on the information value of reinforcers more than their subjective quality.

The Gestalt psychologist Wolfgang Köhler (1887–1967) offered an important criticism of Thorndike's puzzle-box method. One of the driving issues in psychology of learning is whether learning occurs gradually or can occur suddenly via insight. Thorndike found no signs of insight in his puzzle-box studies, while Köhler found evidence of insight in his studies of problem solving by chimpanzees. Köhler argued that Thorndike's method was faulty because it made insight impossible: Trapped in the puzzle box, the cat could not see the connection between the manipulandum and the door opening, and so was forced to resort to trial and error. In Köhler's experiments, on the other hand, all the elements needed to solve a problem were available to the subject, who was able to assemble them insightfully into a solution. The force of Köhler's critique extends beyond issues of learning. Psychologists perform experiments in order to discover laws explaining behavior in real life, but experiments are necessarily artificial, and may lead psychologists to propose universal laws of behavior that are in fact laws induced by their experiments.

Nevertheless, Thorndike's influence was enormous. He initiated the *S-R* concept of learning elaborated by Clark Hull and his followers from the 1930s to the 1960s,

which overshadowed the cognitive tradition of the Gestalt psychologists and Edward Tolman, which held that learning consisted of developing internal representations of the world, the main view in cognitive science today. The law of effect provided the basis for Skinner's principles of reinforcement, though Skinner did not view operant learning as making connections. There is today a new "connectionist" (neural network) movement, but it is not linkable to Thorndike.

SEE ALSO *Hull, Clark; Reinforcement Theories; Skinner, B. F.; Tolman, Edward*

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Thomas Leahey

THRESHOLD EFFECTS

According to Eric Naevdal in his 2001 article "Optimal Regulation of Eutrophying Lakes, Fjordes, and Rivers in the Presence of Threshold Effects," the use of *threshold effects* is widespread in natural and social sciences alike. A *threshold* represents a gateway from one description of the world into another, which may be quite different. More precisely a threshold effect describes a process by which the magnitude of the response variable changes significantly as the triggering stimulus exceeds some critical value. One can think of threshold effects as devices to explain nonlinear phenomena.

HOW DO THRESHOLD EFFECTS WORK?

A way of understanding how threshold effects work is by means of an example. In economic growth, one of the main theories developed to explain the process of per-capita income growth in an economy is the one that allows for human capital to affect the production of output overtime. Human capital refers to the stock of knowledge that is accumulated through education and technological progress. These resources make workers more productive and able to adapt to new technologies. Most of the theoretical models that deal with the relationship between human capital and growth assume that this relationship is linear: Increasing the level of human capital should yield a higher rate of economic growth *irrespective* of the level of human capital, something, according to Pantelis Kalaitzidakis, Theofanis Mamuneas, Andreas Savvides, and Thanasis Stengos in their 2001 study, not borne by empirical evidence.

Costas Azariadis and Alan Drazen observe in their 1990 article "Threshold Externalities in Economic Development" that long-run growth rates exhibit persistent differences between more and less developed economies. Historically this derives from the "Big-Push" ideas of P. Rosenstein-Roden (1943) and Ragnar Nurkse (1953) who have noted that an economy can remain stuck in an underdevelopment state unless there is a substantial investment effort. Some low-income economies appear to be caught in a low-growth environment and lag behind countries similar in terms of endowments. The standard growth model cannot account for such persistent differences. While one can seek explanations for this stylized fact in non-economic factors, there is an economic explanation based on the existence of technological externalities with a threshold property that allows for economies with very similar structures to exhibit different growth experiences. Specifically, once human capital attains a certain threshold level aggregate production possibilities may expand especially rapidly. Economies that have not attained this threshold level may languish in a self-perpetuating state of persistent underdevelopment.

Nonlinearities due to the presence of threshold externalities in the production of human capital can lead to different growth experiences, including possible low-growth (or low-development) "traps," where low investment in human capital (education) will discourage further human capital accumulation (acquisition of additional skills) and, hence, result in a low-growth trap. Consequently, a group of countries with unequal initial educational endowments may never catch up to each other; the growth rate of ones with higher endowments will diverge from those with lower initial endowments of human capital. This suggests a role of government intervention in the educational sector to introduce policies (such as educational subsidies) that support skill acquisition and higher educational attainment.

NONLINEARITIES AND THRESHOLD EFFECTS

As explained above, threshold effects are the main cause for the presence of nonlinearities in the process that underlies economic growth. From a modeling point of view, threshold effects only produce a specific type of nonlinearity that is quite restrictive. The process that is induced by thresholds can be described by piece-wise linear segments that are individually defined by thresholds. Thresholds act as the "knots" that connect the different segments together. In that case a threshold effect is an "all

or nothing" effect as values below and above the threshold result in different regimes. Alternatively, such regime change could occur gradually and not as abruptly by means of a smooth transition. The amount of smoothing done to the knots that connect the linear segments will result in different types of nonlinear effects. Assuming that smoothing is arbitrary there is a large class of such smooth transition nonlinear effects that includes threshold effects as a special case. Yet despite their limitations, threshold effects have proven to be powerful devices to introduce nonlinearity in economic modeling, especially growth theory.

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Thanasis Stengos

THURMOND, STROM
1902–2003

Strom Thurmond was born James Strom Thurmond on December 5, 1902, in Edgefield, South Carolina. He was one of six children born to John William Thurmond and Eleanor Gertrude Strom. Thurmond's father was a lawyer, farmer, community leader, and former South Carolina state senator. Strom followed in his father's footsteps by acquiring a self-taught law degree (under the tutelage of his father) and entering politics after his 1923 graduation from Clemson College (now Clemson University). In 1928 Thurmond was elected the superintendent of education for Edgefield County. In 1932 he was elected a state senator of Edgefield County. In 1938 he was sworn in as an elected state judge, but he voluntarily gave up his judgeship in 1942 to enlist in the army during World War II (1939–1945). Thurmond became governor of South Carolina in 1946 when he beat the incumbent governor, Ransome J. Williams, (and nine other candidates) in the South Carolina gubernatorial race.

Thurmond was an avid Democratic Party politician, but the 1948 presidential election became a benchmark year for what became his and southern Democratic politicians' revolt from the national party. Democratic president Harry S. Truman's 1948 reelection campaign advocated pro–civil rights legislation (abolition of the poll tax, support of an antilynching law, the creation of a permanent Federal Employment Practices Commission, and a ban on discrimination in commerce). Southern states reacted negatively to this platform by revolting from the national party to form their own, prosegregation and antiblack civil rights, wing of the party—the Dixiecrats, or States' Rights Party. Thurmond was nominated the Dixiecrat presidential candidate, officially representing the party's position that states had the right to retain segregation. Thurmond lost the election, but his staunchly southern prosegregation and antiblack civil rights positions launched him into the helm of southern political leadership.

Thurmond was elected a U.S. senator of South Carolina in 1954, and during his tenure he opposed the passage of several civil rights bills—the Civil Rights Acts of 1957 (in obstructing the bill's passage he set the record for the longest Senate filibuster—twenty-four hours and eighteen minutes), the Civil Rights Act of 1964, and the Voting Rights Act of 1965, all of which were important in advancing blacks' civil rights. His continued dissatisfaction with the Democratic Party's stance on civil rights issues led him to sever his ties with the party in 1964 and become a Republican.

Despite Thurmond's initial support for Lyndon B. Johnson (a southern Democrat from Texas) as the vice presidential candidate in 1964, Thurmond later openly opposed the national party's liberal plank on civil rights. The summer before the 1964 presidential election, Thurmond decided not to attend the Democratic national convention because of his ideological differences on civil rights, which separated him from the national party's politics. In a 1964 speech to a South Carolina audience, Thurmond denounced the Democratic Party platform and announced his realignment with the Republican Party and his support of Barry Goldwater's (a Republican senator from Arizona) 1964 presidential candidacy. Thurmond found more ideological connections with the conservative Goldwater, who, although he was not a segregationist per se, had outlined in 1961 a "southern strategy" to invite southerners to support the Republican Party as the anticivil rights political party. Thurmond's partisan realignment influenced the eventual realignment of most white southern Democrats to the Republican Party. His realignment with the Republican Party also laid the foundation for what would become a new and lifelong commitment to this political party.

During much of Thurmond's political career, his politics were marred with antiblack interests. He was an avid supporter of "freedom of choice" school desegregation plans (despite their being declared unconstitutional by the 1968 Supreme Court case *Green v. New Kent County*), which were a part of the "massive resistance" that southern governments implemented to avoid desegregation. Often, freedom of choice desegregation plans retained former segregation practices—whites who opposed desegregation chose to attend white schools (in order to avoid contact with blacks) and blacks who more than likely supported desegregation continued to attend all-black schools (in order to avoid intimidation by whites in integrated schools).

The issue of freedom of choice plans was at the center of the 1970 South Carolina gubernatorial race, and the candidate who supported the plan (South Carolina congressmember Albert Watson) lost to the candidate who opposed it (South Carolina lieutenant governor John West). This political victory attested to the significance of the candidate's more moderate views on race and his appeal among a majority of black voters. After witnessing this change in how elections could be won in South Carolina politics, Thurmond became more open to considering blacks' political interests and to broadening his constituent service to South Carolina's black electorate. He even hired a black staff member, Thomas Moss, who informed him about black political issues.

During the 1970s Thurmond continued to build his relationship with the black electorate, but despite this changed political interest in addressing black issues, Thurmond (as chairman of the Senate Judiciary Committee) initially opposed support of the 1982 Voting Rights Act, which would have extended the provisions of the Voting Rights Act of 1965 that protected blacks' voting rights. He eventually supported the act.

Over time, Thurmond climbed the political ladder, achieving high political posts such as chairman of the Senate Judiciary Committee and serving as president pro tempore (1981–1987; 1995). He was the longest-lived and longest-serving U.S. senator, having reached the age of 100 during his service. At his 100th birthday celebration, Trent Lott (R-MS) made controversial remarks about Thurmond's 1948 presidential candidacy that eventually led to Lott resigning from his position as senate majority leader. In January 2003 Thurmond retired from his senate position. He died in the same year on June 26, 2003.

Posthumously, rumors about his having fathered an African American daughter resurfaced and were confirmed when Essie Mae Washington-Williams announced that she was, in fact, Thurmond's daughter. Thurmond's fathering of an African American daughter (with the Thurmond family African American housekeeper, Carrie Butler) conflicts with a major principle of segregation—the prohibition of "race mixing," or miscegenation. According to segregationists, blacks and whites are supposed to be divided in every way of life, especially sexual relations, and antimiscegenation laws in the south banned interracial marriage and interracial sexual relations. Thus Thurmond had covertly defied the racial and sexual social mores that he publicly supported. Thurmond was married successively to Jean Crouch and to Nancy Janice Moore (with whom he had four children); both of them were (white) former Miss South Carolinas.

SEE ALSO *Civil Rights Movement, U.S.; Dixiecrats; Filibuster; Segregation; Sex, Interracial; Voting Rights Act*

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Shayla C. Nunnally

TIEBOUT EFFECTS

SEE *Hedonic Prices.*

TIME

From the perspective of the natural sciences, time in and of itself causes nothing. Being but the interval between the motions of material objects, it is a gauge of change with no natural divisions. Such is not the case for most social

times, where time has a causative role in shaping action and its perception. Humans mark its passage with ceremony, hope, and anxiety. The approach of a bureaucratic deadline or belief in an impending apocalypse can generate a flurry of culminating behaviors. Time is used as a reward, such as being given "time off" or promoted "ahead of time," or as punishment, when one "does time" or is placed in "time out" for moral violations. Time, in addition to space, constructs the very boundaries of social reality by ordering social life and shaping individuals' awareness of its passing.

Born without any temporal instinct or sense, human existence is largely orchestrated by external pacemakers, or *Zeitgebers*. Upon entry into the world, infants' first lessons are largely temporal as they come to internalize the rhythms of their families' language and activity schedules. With maturation, their lives become controlled by the metronomes of school, work, leisure, and community.

The most all-encompassing of these external times come from one's culture, whose tempos underlie its music, poetry, language, sports, and religion. Cultural systems can be likened to massive musical scores whose rhythms, argues anthropologist Edward T. Hall, "may yet prove to be the most binding of all the forces that hold human beings together" (1983, p. 156). Thus state-of-the-art technologies have historically been applied to time's measurement: Just as modern peoples measure time by the vibration of atoms, so prehistoric peoples constructed huge monoliths to coordinate social time with cosmological calendars.

The broadest of cultural time conceptions involve orientations toward the future and past. The "Golden Years," for example, can be collectively understood to exist either in the future (hence, time is seen as progressive and evolutionary) or in some idyllic past (as Paradise lost). The future can be in the past if the flow of time is culturally understood to be recurrent and reversible. A near universal myth holds that the world goes through cycles of destruction and regeneration (Eliade 1949), evident in beliefs about the cyclical nature of both natural and social phenomena. Where time's flow is understood to be linear and irreversible, the future can be either progressive (i.e., the outlook engendered by the Enlightenment and industrialization) or degenerative (i.e., theologians' belief in humanity's growing cultural depravity since the Fall or cosmologists' predictions of a universe increasingly filled with black holes). These two broad orientations underlie distinction between traditional and modern cultures.

Cultural times are interwoven with social needs, the predominant personality types of social members, social complexity, and technology. The smaller and more homogeneous the group, the less the need for temporal precision. Hopi-speaking Pueblo Indians have no tenses for past, present, or future events, and they think of time not as a series of unique distinct instants but rather as cumulative events. Where identities are collectivist and individuals focus on the welfare of their groups as opposed to themselves, often they think in terms of long-term goals. An Iroquois chief describes how his people's decision-making "relates to the welfare and well-being of the seventh generation to come" (Rifkin 1987, p. 65). Such cultures feature people-oriented polychronic time, which stresses human engagements and the completion of transactions rather than rigid schedules. The activities of individualistic selves, such as those in the United States, tend to be governed by monochronic time, doing things one at a time in observance of task-oriented schedules and procedures. Oriented toward immediate rewards, these people are obsessed with punctuality and deadlines (Hall 1983)—and are demeaned when higher status others make them wait (Schwartz 1975).

As the primary form of work historically shifted from the land to the machine, the rhythms of social life were decreasingly dictated by natural times (e.g., cycles of day and night and the seasons) and increasingly by artificial times, such as the sixty-minute hour or the seven-day week, which have no bases in nature. With social differentiation and specialization evolved separate institutional realms, each with its own time schedules, rules, orientation toward the future and past, and patterns of change (e.g., cycles of growth and decay and oscillations between political liberalism and conservatism, bear and bull markets, and religious revivalism and secularism).

Given the growing importance of time, social institutions invariably sought its control through their creations of duration, succession, temporal location, and uniform rates of occurrence (Zerubavel 1981). Religions created prayer times and holy days (to distinguish themselves in time as well as space, Muslims claimed Fridays, Jews Saturdays, and Christians Sundays). One of the early acts of the First Republic of France was to alter time to create a more rational secular society. In 1793 the French Revolutionary calendar was adopted, with ten-day weeks, ten-hour days, and 100-minute hours. In Britain and the United States, national railroad schedules required uniform time because each town could no longer have its own noon when the sun was directly overhead. In 1883, Standard Railroad Time went into effect, creating five time zones to replace fifty regional times. A year later it was made the national legal time. Finally, with the increased rationalities of bureaucratic organizations, time became increasingly regularized and scheduled owing to greater needs for coordination and deadline-dictated precision.

Institutional differentiation was accompanied by the proliferation of social roles, which have become increas-

ingly age graded over the past six decades (Chudacoff 1989). Single-room schools, for instance, became age-segregated classrooms. Each of these roles, in turn, came with its own "social clock" and associated age norms. To be thirteen and still in the third grade is to be "behind schedule" and a source of shame; to be a thirteen-year-old college junior is to be "ahead of time" and a source of esteem. Sequences of these age-graded roles provide biographical pathways and timetables. In the case of the family, there exist normative "best times" for the length of courtships and when to first marry and begin parenting. In addition, there are normative patterns for how individuals' various roles are to be synchronized, such as not getting married before completing junior high school.

Finally, substantial social science research has been devoted to individuals' subjective experiences of time. Temporal orientations are, for instance, shaped by positions within the class structure, with the future-oriented middle-class being more likely than the present-oriented lower class to stress delayed gratification and thriftiness in their children's socialization. The passage of time seems to accelerate with increasing age, density of experiences, and approaching conclusions. Multiple and conflicting role demands produce the stresses of temporal scarcity. Excessive rates of social change, according to Toffler (1970), can produce "future shock." Not surprisingly, mystical significance is attributed to senses of timelessness, such as athletes being "in the zone" and in religious depictions of deathless eternities.

SEE ALSO *Christianity; Clock Time; Cultural Relativism; Industrialization; Iroquois; Machinery; Native Americans; Work; Work Day; Work Week*

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Michael C. Kearl

TIME ALLOCATION

The international comparative time-use surveys organized by Alexander Szalai (1966, 1972) are usually seen as the first modern time-use measurements. These surveys were followed by an increasing number of time-use surveys in many countries. Initially, these data were used descriptively for the valuation of household work and for information about leisure activities, commuting, and travel behavior.

Table 1 gives the average shares of a day allocated to various activities for both males and females aged twenty to seventy-four over two years for three European countries and the United States. Depending on the country and year, market work occupies on average about 15 percent of all available time, as does household work. Tertiary time, about 45 percent, is mostly sleep and personal activities, while the remaining 25 percent is devoted to leisure.

Economic analysis of the rationale for time allocation was inspired by the pathbreaking work of a group of economists at the University of Chicago. They were led by Gary Becker (1965), who saw the household as a unit that produced utility giving commodities from market goods and time input from household members. For surveys of the first decades of time-use analysis, see F. Thomas Juster and Frank Stafford (1991) and N. Anders Klevmarken (1999).

Becker's revised theory of choice assumes that a household derives utility from commodities, say Z_i $i = 1, \ldots, m$, such as meals, a clean house, sleep, and going to a movie, which are produced by the household according to the household production functions,

$$\begin{cases} T_i = t_i Z_i. \\ x_i = b_i Z_i. \end{cases} \qquad (1a, b)$$

The functions specify how much input of market time, T_i, and goods, x_i, is needed to produce Z_i. (The proportionality factors t_i and b_i are not necessarily constant.) The household is assumed to maximize utility subject to its budget and time constraints. These two constraints are not independent because time for consumption can be converted into money income by allocating more time to market work. The two constraints can be combined into one,

$$\sum_{i=1}^{m} p_i x_i + \omega \sum_{i=1}^{m} T_i = V + T\omega. \qquad (2)$$

Total expenditures on market goods and household production time valued at the wage rate ω add up to the sum of nonlabor income V and total time T valued at the wage rate. The latter sum has been called *full income.* Substituting (1a,b) into the constraint (2), it becomes,

$$\sum_{i=1}^{m} (p_i b_i + t_i \omega) Z_i = V + T\omega. \qquad (3)$$

	Germany		Italy		The Netherlands		United States	
	1991/92	2001/02	1988/89	2002/03	1990	2000	1985	2003
Individuals in survey	6,928	7,239	25,490	37,882	1,531	1,586	3,567	17,668
Days surveyed	2	2 or 3	1	1	7	7	1	1
All work	**0.336**	**0.306**	**0.336**	**0.309**	**0.274**	**0.275**	**0.310**	**0.329**
Market work	0.183	0.137	0.172	0.144	0.121	0.131	0.171	0.178
Household Production	0.153	0.168	0.164	0.165	0.153	0.143	0.139	0.151
Family care	0.015	0.021	0.022	0.020	0.026	0.024	0.021	0.031
Shopping	0.029	0.040	0.027	0.030	0.028	0.031	0.035	0.036
Tertiary time	**0.444**	**0.462**	**0.470**	**0.412**	**0.441**	**0.449**	**0.450**	**0.436**
Sleep	0.348	0.350	0.358	0.346	0.347	0.357	0.334	0.349
Leisure	**0.219**	**0.232**	**0.193**	**0.279**	**0.285**	**0.276**	**0.240**	**0.234**
Radio/TV	0.079	0.082	0.071	0.070	0.075	0.075	0.098	0.102

SOURCE: Adapted from Table 1.1. In Burda et al. (2006, p. 17); the source table contains means in minutes and corresponding standard errors.

Table 1. Average shares of a day (twenty-four hours) allocated to activities by country and year. All individuals aged twenty to seventy-four.

The expression in parenthesis is the full price of the ith commodity, and it is the sum of the prices of the goods and the time used per unit of the commodity i. The price of time input is the earnings forgone by using time to produce a unit commodity rather than to work in the market. If all t_i are zero, the model reduces to a conventional model of consumer choice. Becker's model thus generalizes the conventional model by including the cost of time input to produce the utility-yielding commodities.

If the wage rate, the time cost, and the cost of market goods are fixed, it follows from the maximization of the utility function under the constraint (3) that marginal utility is proportional to the full price at maximum. We can now derive a number of predictions from this model: An increase in the wage rate will increase earnings forgone, and the full price of time-intensive commodities will increase more than that of good-intensive commodities. It follows from basic choice theory that the consumer will substitute away from time-intensive commodities and toward good-intensive commodities if the increase in the price of time is income compensated. At the same time, consumption time is freed for market work, which will increase. The effect of an uncompensated increase in the wage rate will depend on the relative size of the substitution and income effects.

If productivity of consumption time increases—that is, if t_i decreases—the relative price of time-intensive commodities will decrease, and consumers will substitute toward these commodities. For instance, when time-saving techniques are introduced into household work, we do more washing, cooking, and so on than we otherwise would have done. Whether or not we use less time in these activities will, as usual, depend on the relative size of the substitution and income effects, but if these commodities also become more good intensive, more market work is needed to generate the income required to buy the goods that go into these commodities.

Becker's model is a good conceptual model for theorizing about time allocation, but it has weaknesses as a model for empirical work: One and only one good contributes to each commodity; the wage rate and the time and good productivities are not necessarily fixed and independent of the consumer's choice; and the definition of a commodity is far from obvious. The model has been generalized to cope with these problems, but a more difficult problem is that the amount produced of each commodity is difficult if not impossible to observe. Without observations on the output from household production, it is in general not possible to identify preference parameters separately from the household production functions. All we can do is estimate mongrel time-use functions that depend both on preferences and household production technology.

In Becker's model, the household is treated as a single decision-making unit, and there is no place for the separate decisions of the household members. Although Becker obtains some results from his model concerning the division of labor within a household—for instance, those who are more efficient at market activities use relatively less time at consumption activities—this issue is better analyzed within a bargaining model (see, for instance, the survey by Behrman [1997]).

Time allocation is not only an issue of how many hours of the twenty-four-hour day or of the 8,760 hours of a year are spent on various activities; it is also an issue of *when* in a day or in a year various activities are done. One could also extend the domain of time allocation research by asking how much time is spent with whom? These issues have only recently attracted the interest of social scientists, but it is clear that when we do things and

with whom is a matter of choice. These choices are sometimes constrained by laws, such as those regulating the opening hours of shops; by nature—for instance, we typically sleep during the night; or by social and religious conventions, such as those associated with Christmas and Easter. For recent contributions in this domain, see Daniel Hamermesh and Gerard Pfann (2005).

SEE ALSO *Becker, Gary; Labor Force Participation; Leisure; Utility Function*

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TIME AND MOTION STUDY

Time and motion study, or motion and time study, is a basic set of tools used by industrial engineers to increase operational efficiency through work simplification and the setting of standards, usually in combination with a wage-incentive system designed to increase worker motivation. Originally developed to drive productivity improvement in manufacturing plants, motion and time study is also now used in service industries.

Motion and time study is associated with the so-called scientific management movement of the late nineteenth and early twentieth centuries in the United States, primarily with the work of industrial engineers Frederick Winslow Taylor (1856–1915), Frank B. Gilbreth (1868–1924), and Lillian Gilbreth (1878–1972). Some time studies had been conducted before Taylor, particularly by French engineer Jean Rodolphe Perronet (1708–1794) and English economist Charles Babbage (1791–1871), both analyzing pin manufacturing. However, modern motion and time study was developed as part of the scientific management movement championed by Taylor and eventually became known as *Taylorism*.

The foundation of Taylorism is a system of task management in which responsibilities are clearly divided between managers and workers. Managers and engineers engage in planning and task optimization, primarily through motion and time study, while workers are responsible for carrying out discrete tasks as directed. The Gilbreths sought to find the best method to perform an operation and reduce fatigue by studying body motions, attempting to eliminate unnecessary ones and simplify necessary ones to discover the optimal sequence of motions. The Gilbreths developed the technique of *micromotion study*, in which motions are filmed and then watched in slow motion. Taylor incorporated early research from the Gilbreths in his *The Principles of Scientific Management* (1911), and subsequent industrial engineers further developed the Taylorist system.

Taylorism played a key role in the continuous productivity improvement generated by the Fordist model of work organization. The Fordist model, which is based on the supply-driven, mass production of standardized goods using semiskilled workers, achieved efficiency improvements via scale economies and detailed division of labor, both accomplished through the Taylorist separation of conception from execution, in which managers plan tasks that workers execute.

Taylor argued that such a division of labor between management and workers was a form of "harmonious cooperation" that ultimately removed antagonisms from the workplace and benefited both managers and workers. However, this process of separating conception from execution is often understood as a form of de-skilling, and Taylorism has been rejected by unions, who have denounced it as a form of speedup that harms workers and hence quality and productivity.

Debates about the effect of motion and time study on workers continue today in discussions of post-Fordism, particularly *lean production*, which employs motion and time study to set standards and achieve continuous improvement in work processes, but in a context of demand-driven production without large buffers of in-

process inventory. Some workers and commentators argue that motion and time study under lean production is simply a form of work intensification that is detrimental to workers, while others argue that under lean production workers are able to contribute to problem solving and standard setting and thus prefer motion and time study under lean production to that under Fordism.

Underlying each system is a theory of worker motivation—that workers need to be coerced (in the Fordist model) or that workers want to do their best and are interested in more intellectual activity (in the post-Fordist model). In reality, there is more likely a distribution of different motivations across workers, and worker well-being is likely to depend more on the interaction between individual orientations toward work and how a given set of methods such as motion and time study are applied in a particular work context.

SEE ALSO *General Motors; Taylorism*

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Matt Vidal

TIME ON THE CROSS

Robert William Fogel and Stanley L. Engerman's two-volume revisionist study, *Time on the Cross: The Economics of American Negro Slavery*, is the most widely known and controversial work ever written on the subject of slavery. Indeed, it is arguably the most widely known and controversial work ever written in the entire field of economic history. The celebrity and controversy surrounding the publication of *Time on the Cross* in 1974 were related not only to its conclusions, but also to its methodology and rhetorical style, and the study has continued to spark debate since it was first published.

By the early twenty-first century, the field of economic history had lost much of the vitality it had in the 1970s. It may therefore be difficult for some to imagine a time when a technical work such as *Time on the Cross* could command space in mass-circulation newspapers and magazines such as the *New York Times*, the *Wall Street Journal*, *Time*, and *Newsweek*, and when economic historians made the rounds on the TV talk-show circuit. But *Time on the Cross* represented a kind of harmonic convergence of method, subject, authors, readers, and cultural milieu.

During the 1960s the venerable field of economic history was reinvented, mainly by small cadres of economists who explicitly and self-consciously brought economic theory, mathematics, and formal methods to a field that had previously been dominated by scholars trained in history departments and in traditional historical approaches. As a result, practitioners of the "new economic history," such as Fogel and Engerman, spent much of the 1960s and 1970s revising and reinterpreting standard accounts of U.S. economic history. Although both Fogel and Engerman wrote on other topics, from the late 1960s on, they, along with many of their graduate students, worked assiduously on the economic history of the "peculiar institution" of slavery. In so doing, they turned the field of slavery studies upside down.

In 1974, the year *Time on the Cross* was published, the general consensus on slavery among historians of the American South was that slavery was a singularly exploitative, inefficient, and unprofitable system of labor organization. Slaves themselves were viewed as reluctant, recalcitrant, and inefficient workers, and the consensus was that their material lives were pinched, their emotional lives were stunted, and their family lives were disjointed and transient, if not incidental. For their part, slaveholders were viewed as "traditional," or "paternalistic," and nonentrepreneurial (or even anticapitalistic) in mindset and behavior. They were believed to be more concerned with aristocratic trappings and conspicuous consumption than with production, prices, and the bottom line. Moreover, despite scholarly outliers such as Frank and Harriet Owsley, who called attention to the importance of yeoman farmers and small slaveholders in the region, most students of slavery in the American South focused their attention on large planters, and this narrow focus served to render normative what was actually a very small and exceptional group. Furthermore, slavery and the slave system were said to have had deleterious long-run developmental consequences for the South as a region, rendering it poor and backward, particularly in comparison to the northern part of the United States.

Fogel and Engerman challenged all of these positions and more in *Time on the Cross*. Basing their "iconoclastic" findings on "the application of quantitative methods" (principally neoclassical economic theory, statistics, and applied mathematics) to historical materials, they concluded, among other things, that slavery was an efficient, profitable, and vibrant system of labor organization; that

African American slaves labored hard and purposively, sharing much the same work ethic that motivated free Americans; that Southern agriculture was highly productive—even more productive than agriculture in the North; that Southern slaveholders, including planters, were capitalistic, entrepreneurial, and bullish on the future; and that slaves, though exploited to a degree, enjoyed relatively good material living standards and, generally speaking, were able to sustain stable families and family ties. More broadly, they claimed that the slave economy of the South was not only healthy and growing rapidly in the antebellum period, but that it was also, in comparative terms, one of the most modern and advanced economies in the entire world at that time.

After a short honeymoon period of prizes, fawning reviews, and unstinting praise, *Time on the Cross* came under heavy critical fire from both traditional historians and some fellow "new economic historians." Fogel and Engerman's critics attacked from several different directions. Some criticized the authors' approach and methods; others attacked both the assumptions and the evidentiary base upon which the authors' findings were based; still others challenged the authors' purportedly condescending and vainglorious rhetoric; and some questioned the implications of the authors' findings, even if valid.

No wallflowers, Fogel and Engerman mounted a robust defense of their findings. In this effort, they were joined by their students and research associates, as well as by many other economic historians who found their approach, methods, and conclusions worth defending. The response to the publication of *Time on the Cross* was unprecedented in the normally quiet little field of economic history. Essays, both pro and con, proliferated in technical journals, and entire books were devoted to attacking Fogel and Engerman's findings. Conferences and symposia on *Time on the Cross* were held throughout the decade of the 1970s, and for a time the study, or at least the nontechnical first volume of the two-volume work, became a staple on reading lists and course syllabi at American universities.

By the 1980s, *Time on the Cross* had taken many direct hits from critics and fallen out of favor among many students of American slavery. Although economic historians challenged parts of Fogel and Engerman's argument on technical grounds—such as finding fault with some of their estimates, measurements, and assumptions—the most damaging blows were struck by traditional historians, who were particularly critical of Fogel and Engerman's conclusions regarding the mindset and behavior of enslaved African Americans, and of what they viewed, rightfully or wrongfully, as the authors' relatively benign depiction of the system of slavery itself.

Fogel issued an impressive rejoinder in 1989 with the publication of *Without Consent or Contract: The Rise and Fall of American Slavery*, which was followed in 1992 by two supplementary volumes of corroborative "technical papers" coedited by Fogel and Engerman. In the 1989 volume, Fogel, writing in a more subdued scholarly tone, defended much of the argument advanced in *Time on the Cross*, albeit with some qualifications, particularly in the section on the workings of the domestic slave trade.

Despite the study's many strengths, *Without Consent or Contract* did not make nearly the splash made by *Time on the Cross* fifteen years earlier. By the 1990s, the "new economic history" was no longer new, and many of Fogel and Engerman's "iconoclastic" 1974 findings on the economics of slavery seemed less jarring. Indeed, some had been more or less absorbed into the master narrative of American economic history.

If greater acceptance among the initiated helps to explain the rather subdued reception to *Without Consent or Contract*, the decline of economic history as a field of study was also a factor. By the early 1990s, few nonspecialists were paying attention to any work being done in this increasingly esoteric and marginalized area of study. Given this fact, it is not surprising that Fogel's receipt (along with Douglass C. North) of the Nobel Prize in Economic Sciences in 1993 for "applying economic theory and quantitative methods to historical puzzles" did not rekindle the high-profile debate over *Time on the Cross*. Even so, outside of the spotlight, major figures in economic history, such as Gavin Wright, have continued to spar with Fogel and Engerman over issues raised in their combustible 1974 study.

SEE ALSO *Cliometrics; Economics, Neoclassical; Engerman, Stanley; Fogel, Robert; Slave Lives, Archaeology of; Slave Resistance; Slavery*

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Peter A. Coclanis

TIME ORIENTATION

For centuries scientists and philosophers have been interested in the question of how the meaning of time is constructed and how people's thoughts, feelings, and behaviors are shaped by time-related considerations. In the *Critique of Pure Reason*, for instance, Immanuel Kant (1781) provides an outline of the psychological significance of time. Thus time perception is an innate ability that shapes the way people perceive the world. The emphasis on innateness, however, does not imply lack of variability across individuals. Indeed most scientists and philosophers in the early twenty-first century concur that time is a social phenomenon that is likely to be perceived and experienced differently across individuals, situations, and cultures.

Another source of inspiration for contemporary theorizing on time is the work of Kurt Lewin (1951). According to Lewin, to understand the behavior of an individual at a given time, it is necessary to consider all the forces acting on the person at that time, including past experiences in similar situations as well as his or her expectations about the future. In line with this reasoning, most models of self-regulation maintain that influences on goal pursuit can be partitioned into three time frames, namely *past experiences*, *present considerations*, and *expectations about the future*. For instance, according to Albert Bandura's (1997) self-efficacy theory, considerations about the past, present, and future are all consequential in determining people's beliefs about whether or not they can perform a behavior. Thus when people engage in a goal-driven activity, relevant past experiences as well as expectations about the future can be brought to the current stream of consciousness and affect the way they pursue their goals.

Considerations about time come into picture when people make decisions as well. Many decisions in everyday life involve a trade-off between the immediate and the delayed consequences of actions. An employee receiving a bonus, for instance, may be torn between saving this bonus for retirement (delayed gratification) and spending it right away for vacation (immediate gratification). Confronting such a dilemma, some people focus on the immediate consequences of their actions (present-time orientation) and choose to spend the bonus for vacation; others are more concerned about the delayed outcomes of their actions (future-time orientation) and choose to add this bonus to the retirement fund. If people prefer one type of orientation over another repeatedly, these preferences may translate into habits or traitlike individual differences, which can in turn serve as cognitive biases toward being past, present, or future oriented.

Indeed various constructs have been proposed to address such differences in time orientations. For instance, the construct of *consideration of future consequences* (CFC) refers to "the extent to which people consider the potential distant outcomes of their current behaviors and the extent to which they are influenced by these potential outcomes" (Strathman et al. 1994, p. 743). Thus individuals low in CFC pay greater attention to the immediate consequences of their behaviors than to the delayed consequences of their behaviors. Individuals high in CFC, in contrast, pay greater attention to the delayed outcomes of their behaviors. The implications of CFC have been explored in a variety of contexts. For instance, future orientation has been consistently related to academic achievement, conscientiousness, less risk taking (e.g., safe sex), greater general concern with health and the environment (e.g., exercise frequently, consume less alcohol and tobacco, recycle), and more responsible consumption practices (e.g., less impulse buying). In line with this, present-time orientation has been shown to predict self-regulatory failures in a wide range of contexts. Presumably resisting temptations in a given context requires the ability to transcend that context, which is something future-oriented people seem more capable of doing than present-oriented people (for a review, see Strathman and Joireman 2005).

The fact that future orientation has been related to many positive consequences suggests that it may be the preferred time orientation. Indeed interventions have been designed to enhance future-time orientation and decrease present-time orientation. According to Philip G. Zimbardo and John N. Boyd (1999), however, encouraging people to focus on the future at the expense of the present time may not be a fruitful strategy because "life is lived in the present." Focusing too much on the future may lead people to miss out on the meaning of life. Thus a *balanced time orientation*, where people flexibly switch temporal frames depending on self-regulatory resources, situational pressures, and personal appraisals, may prove to be more adaptive than a time orientation that is exclusively biased in one direction. The implication is that somebody can be high on both present-time and future-time orientations. Thus unidimensional scales may fall short of capturing the complexity of time orientation.

SEE ALSO *Bandura, Albert; Discounted Present Value; Expectations; Farsightedness; Interest Rates; Lewin, Kurt; Risk; Scales; Self-Control; Self-Efficacy; Time Preference; Zimbardo, Philip*

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TIME PREFERENCE

A person with a time preference favors having a good sooner rather than later. As a result, the person also prefers having a good immediately to having a somewhat greater good later. Having a time preference amounts to discounting the value of future goods. It may be a source of improvident behavior later regretted: Because of a time preference, someone may spend next month's rent money on a party and yet later, when the rent is due, would rather pay the rent than have had the party.

A leading member of the Austrian School of economics, Eugen von Böhm-Bawerk ([1884, 1889, 1921] 1959) appeals to time preference to justify payment of interest. Because people would rather have goods now than have identical goods later, he concludes that people who borrow capital should pay for its use. Refining this view, Irving Fisher (1930) attributes a community's interest rate, an indication of the community's preference for a dollar of present income over a dollar of future income, to time preference together with the value of investment opportunity.

Böhm-Bawerk also uses time preference to explain profits from business ventures. An employer pays for labor and other factors of production. Payments occur before products are sold. The payments plus profits equal the products' price. The profits are the employer's compensation for postponing consumption of the amount of payments until the products are sold. The prevailing rate of profit depends on the prevailing degree of time preference and is equal to the prevailing rate of interest. Although short-term profits may not equal the rate of interest, long-term profits do. Economists elaborating this view argue that time preference is just a partial explanation of profits. Other relevant factors are the uncertainty of a product's sale price and the influence of the supply of money on sale price.

Studies in psychology measure time preference. Harrell Chesson and W. Kip Viscusi (2000) infer the temporal discount rate of subjects from their choices. Subjects stated their choices between an amount of money in a fixed number of years and a gamble that pays either that amount of money in a smaller number of years or in a larger number of years. Chesson and Viscusi discovered that the subjects' choices do not maximize time-discounted expected consumption. More surprisingly, they discovered that some groups have discount rates different from the rates commonly attributed to them. For example, smokers have a lower discount rate than nonsmokers do, and therefore they do not disregard future consequences more than others do. Chesson and Viscusi conjectured that smokers simply have tastes and perceptions of risk different from those of nonsmokers. Also, contrary to the common view that youth is impatient, Chesson and Viscusi found that older subjects have higher discount rates than younger subjects have. Shorter life expectancies may explain older subjects' greater impatience to receive benefits.

Philip Trostel and Grant Taylor (2001) similarly argue that time preference increases as a person ages. Because of declining abilities, an aging person increasingly prefers consumption now to consumption later. Trostel and Taylor find that this effect is independent of a decline in the probability of survival.

Viscusi and Joel Huber (2006) examined revealed rates of time preference for public goods, such as water quality. They measured a person's impatience to receive a public good and divided that impatience into a component due to time preference and a component due to the person's perceived probability of not living long enough to benefit from the public good. According to their data, people display hyperbolic discounting rather than the exponential discounting most theorists assume. According to exponential discounting, if a good arrives in T years and the interest rate is r, then the discount rate for the good is δ^T with $\delta = 1/(1 + r)$. According to quasi-hyperbolic discounting, the form of hyperbolic discounting that Viscusi and Huber investigated, the discount rate is $\lambda\delta^T$

with a parameter λ such that $0 < \lambda < 1$. Their data show a high rate of time preference for immediate improvements and substantially lower rates of time preference for later improvements. This sharp decline in the rate of time preference is inconsistent with exponential discounting, but is consistent with hyperbolic discounting. The rate of time preference also varies among groups of subjects. Subjects who are old especially disliked delays in provision of public goods.

Economists characterize time preference as discounting future goods. Does time preference apply to goods that are dated, for example, dated commodity bundles? Because the value of a commodity bundle with a future date is already discounted for time, discounting the dated bundle for time results in an unwarranted double discount. For generality, philosophers characterize time preference as discounting future desires. A person with a time preference gives less weight now to satisfaction of a future desire than the person will give to satisfaction of the future desire when the desire occurs. The person's discount applies to reasons for acts rather than to consequences of acts.

Philosophers and economists debate the rationality of time preference. Discounting future goods because of uncertainty is plainly reasonable, so the debate considers primarily the rationality of pure time preference, that is, discounting future goods just because they are future. Robert Strotz (1956) finds that clear-thinking people display pure time preference, and so concludes that pure time preference is rational.

Paul Weirich (1981) takes doing what one knows one will regret as a sign of time preference. Acting that way discounts future desires that generate regret. Foreknowledge of regret eliminates discounting because of uncertainty. Treating only future desires that are rational eliminates another reason for discounting. Suppose that in some cases it is rational to do what one knows one will rationally regret; then it is rational to have a pure time preference. One rationally prefers satisfaction of present desires to satisfaction of future desires just because the present desires are present. Basic goals change over time. Suppose that basic goals now and in the future are similarly rational although they differ. Then one may rationally not care now about satisfying a future rational desire. Suppose that one makes decisions using rational, all-things-considered desires that take account of all relevant reasons, including promotion of future desires' satisfaction. A decision to perform an act is then rational, even if it leads to foreseen regret because of foreseen changes in basic goals. Doing what one knows one will regret, a manifestation of pure time preference, may be rational.

Derek Parfit reviews time preference's treatment by Plato, Jeremy Bentham, and David Hume (1984, pp. 158–163). He characterizes time preference as caring less about the further future, and calls it a "bias toward the near." If two future goods that are identical in features an agent cares about are separated by a period of time, a bias toward the near may lead an agent, relative to the first good, to discount the second good. Suppose that the discount increases as the first good comes nearer, and is highest when the first good arrives. Then the agent will have trouble keeping resolutions. The agent may for receipt of a sum of money agree to forego the first good and wait for the second good when both goods are far off. When the first good is imminent, the agent may pay a larger sum to have the first good rather than wait for the second. The agent's temporal discounting causes a preference reversal.

Whether an agent is subject to such preference reversals depends on the agent's type of discounting. If an agent has an exponential discount rate, and discounts the future at the same *n* percent per unit of time, then relative to the first good, the second good always receives the same discount no matter how near the two goods are. Given an exponential discount rate, no preference reversals arise.

Many philosophers hold that a bias toward the near, which is independent of uncertainty concerning the future, arises from lack of imagination. Because of shortsightedness, an imminent pleasure is more vivid than a remote pleasure. The difference in vividness is a poor reason for a preference, however. A person with a bias for the near, for example, postpones pains at the cost of making them worse. It is irrational to care more about the nearer future just because it is nearer. Although Parfit acknowledges that because of a foreseen change in desires one may do what one knows one will regret (p. 189), he concludes that one should care about one's self-interest in a temporally neutral way. This neutrality is incompatible with a pure time preference.

SEE ALSO *Farsightedness; Interest Rates*

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Paul Weirich

TIME SERIES REGRESSION

Consider two random variables, y and x. A *regression* of y on x is a model of the mean (or average) of y, conditional on values of x. It is thus a common statistical tool for analyzing how x might influence y. If a sample of values of y and x is observed in sequence over a period of time, this model is called a *time series regression.*

Time series regressions are distinct from cross-sectional regressions, in which observed values vary across similar units at a point in, or averaged across, time. For example, a researcher interested in the effect of income on consumer expenditures might rely on a cross-sectional regression model of expenditures of individual households during the year 2006 on household income during that same year. On the other hand, other researchers interested in overall consumer behavior might utilize a time series regression of aggregate consumer expenditures and income as they vary from year to year.

The distinguishing aspect of time series regression models is the common presence of *serial dependence*—a correspondence of values at different points in time—which does not typically arise in cross-sectional data. In time series regressions, there is a sense in which the order of the observations matters. Indeed, one of the important functions of time series regressions is to estimate and characterize this dependence on time and to determine how different variables fluctuate together over time. Serial dependence presents practical and conceptual problems that typically do not occur in cross-sectional applications.

Regression models of the mean of a random variable trace back to Francis Galton's 1877 work on the hereditary effects of parent sweet pea seeds on their offspring. The first person to apply regression analysis to economic data is most likely Udny Yule (1895), who investigated the effect of types of government relief on pauperism in England in the late nineteenth century using cross-section data. Time series regressions and correlation analysis in economics begin to appear at about the same time in later work by Yule (1899) and in important studies by Reginald Hooker (1901) and John Norton (1902). This research grappled with many unique issues arising in time series regressions, such as trends and time lag effects (Klein 1997, chapter 9).

In a time series regression of y on x, the random variable y is called the dependent variable, because the model shows how its mean depends on the vector of k regressors, or independent or explanatory variables, x. Formally, we may write the regression model as

$$y_t = \beta' x_t + \varepsilon_t, \quad t = 1 \ldots T, \tag{1}$$

where β is a $k \times 1$ vector of constant parameters or coefficients (independent of time), ε is a random error with mean zero and variance σ^2, and the sample period is assumed to run from period t to period T. The subscript t on the random variables denotes a particular point in time or period of time, so it is understood that these random variables vary over time. Since there are k explanatory variables, the model is in general a multiple regression model. We interpret any particular β coefficient as measuring the marginal effect of a change in the corresponding explanatory variable at time t on the expected value of y at time t, holding all other explanatory variables constant.

The model in effect decomposes the random variable y_t into its mean conditional on x_t and a random error. The conditional mean is given by $E(y_t|x_t) = \beta' x_t + E(\varepsilon_t|x_t) = \beta' x_t$, in light of the zero mean assumption of ε, and is assumed to be linear in the explanatory variables. If y and x are jointly normally distributed, this linearity assumption will hold exactly. Linearity implies that the marginal effects of the explanatory variables are independent of the values of these variables.

Given a sample of time series data on y and x, the regression in (1) can be estimated. Estimation assigns specific values to the unknown parameters to identify the specific probability distribution that most likely generated this sample. Once the regression has been estimated, it can be used for making inference about theory, for forecasting, or for understanding the effects of policy actions.

The key assumption of the regression model is that the expected value of the error term is independent of the explanatory variables

$$E(\varepsilon_t \mid x_1, x_2, \ldots, x_t) = E(\varepsilon_t) = 0, \tag{2}$$

which is assumed to hold for all t in the sample. This assumption is called the *strict exogeneity* of the vector x. It implies that the systematic relationship between y and x is fully captured by the model for conditional mean, so that deviations of y from this mean are purely random. It follows that under strict exogeneity the error term is *orthogonal* to each of the regressors (the expected value of their product is zero) and that the covariances between the error and each of the regressors is zero. It also implies that least squares estimates of β are unbiased in small samples—no

matter the size of the sample, the expected value of this estimator of β is equal to its true value.

A common case in which strict exogeneity does not hold is the autoregressive model, in which the conditional mean of y depends on its past values (for example, $x_t = y_{t-1}$). It should be clear that $E(\varepsilon_{t-1}|x_t) = E(\varepsilon_{t-1}|y_{t-1})$ does not equal zero in this case, as required by strict exogeneity. For such lagged dependent variable models, least squares estimators are biased in small samples. However, they will be unbiased in large samples, even when strict exogeneity does not hold if the regressors are *predetermined*: $E(x_{it}\varepsilon_t) = 0$ for all $i = 1, \ldots, k$.

Both strict exogeneity and predeterminedness often break down in applications in the social sciences because of *simultaneity bias*. Such bias in estimating a time series regression occurs when the explanatory variable is influenced by the dependent variable or when common factors jointly affect both dependent and independent variables. *Instrumental variables* methods are a common approach to dealing with this problem; an instrument for x is a variable related to the dependent variable y only through its association with the explanatory variable x. In general, the appropriate use of theory to guide the selection of instruments and other identifying restrictions is essential to solving the simultaneity problem.

Another important assumption of the basic time series regression model is that the error term is *serially uncorrelated*: $E\,\varepsilon_t\varepsilon_s = 0$ for all $t \neq s$. This condition means that past observations of the error term do not help forecast future values. If this condition holds (along with strict exogeneity), the least squares estimator of β is efficient in the sense that, of all the linear, unbiased estimators of β, the least squares estimator has the lowest sampling variance. If the error term is serially correlated, least squares estimators of β will remain unbiased as long as x is strictly exogenous, but will be inefficient. Generalized least squares methods allow efficient estimation of β in the presence of serial correlation.

The autoregressive model with lagged dependent variables noted above is an example of a more general family of time series regression models that can capture the complex dynamic interactions that typically characterize time series data in the social sciences. A dynamic regression, sometimes called a *distributed lag model* , is given by

$$y_t = a_0 + a_1 y_{t-1} + \ldots + a_p y_{t-p} + b_0 x_t + b_1 x_{t-1} + \ldots + b_q x_{t-q} + \varepsilon_t \quad (3)$$

Note that this model specifically accounts for serial correlation in the dependent variable through the a coefficients, while allowing direct dynamic interactions with x through the b coefficients. For example, the coefficient b_3 measures the marginal effect (holding all other variables at all other times fixed) of a small change in the value of x three periods ago on the current value of the dependent variable.

Many time series variables wander over time without an apparent tendency to revert to mean. A dynamic process exhibiting this type of behavior is called a *stochastic trend* process, an example of which is the *random walk*. The best predictor of the current value of a random walk process is last period's value; the change in a random walk is unpredictable. Time series regressions that involve random walks, or more generally stochastic trends, may lead to invalid results and inappropriate inference.

Suppose that y and x each follow a random walk. As shown by Granger and Newbold (1974), a simple time series regression of y_t on x_t will reveal a strong correspondence between the two variables, even if they are, in fact, unrelated. That is, the estimated relationship between the two independent random walks will be spurious. The common solution to this spurious regression problem in the presence of stochastic trends is to either (1) estimate the time series regression after transforming the data into first-differences (i.e., instead of regressing y_t on x_t, regress $(y_t - y_{t-1})$ on $(x_t - x_{t-1})$; or (2) regress y_t on x_t, but include lagged y and lagged x as explanatory variables.

SEE ALSO *Autoregressive Models; Regression*

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William D. Lastrapes

TIME TRENDS

A *time trend*, or *time index*, is the ordered set of natural numbers, for example, $t = (1,2,3,4 \ldots)$, that measures the time span between observations. The slope of a time-trend line represents the growth of a variable. For example, a time-trend line may be used to illustrate growth in production or industry earnings. To predict or explain economic variables, regression equations often use time trends. There are three main reasons for introducing time trends in regression equations that use time-series data. One reason is that a time trend captures the trajectory of the variable over time, providing forecasts of an economic variable. A second reason is that a time trend captures the effect of relevant variables in the regression equation that change over time and are not directly measurable. For example, in the estimation of production functions, Thomas Cooley and Edward Prescott (1973) use a trend variable as a proxy for technological change. A third advantage is that the time trend may capture specification error in regression equations that stem from functional form choice or variable aggregation.

Both linear and nonlinear time trends may be used in regression equations. The assumption in the linear-trend model is that changes will continue into the future at the same or similar rate. This assumption is particularly restrictive when only more recent observations contribute to explaining the future. A more flexible form is a linear trend under a spline-functional form (nonlinear time trend). The spline function jointly determines the trajectory and the memory of the series by allowing the slope of the time trend to vary across time. For example, the rate of change in the price of gasoline may vary across time. In this case, a time trend in a spline function allows the forecasting model to switch the slope parameters with the current economic regime. Both linear and nonlinear time-trend functions may be used in forecasting economic series such as prices, inventories, productivity, and consumption.

In addition to its uses in forecasting, a time trend serves as a proxy for nonmeasurable variables when explaining economic relationships, and it is commonly used in consumption models as well as in models that explain production, employment, and other factors of production. For example, food consumption is often specified as a function of personal disposable income, the price of food, the price of other goods, and a time trend. The time trend captures changes in consumer preferences.

A time trend also captures omitted information from specification error that stems from functional form choice or variable aggregation in the regression equation. The effectiveness of a time trend as a proxy for the omitted information from specification error depends on its correlation to included and excluded information in the regression equation, as well as the choice of functional form for the time trend in the equation. In a simulation study, Camilo Sarmiento and Richard Just (2005) provide evidence that a time trend is able to capture variation of the aggregation error (a special form of specification error) in aggregate consumption functions more effectively than methods based on conceptually accurate, time-specific approximations.

Clive Granger (2001) indicates the potential and unexplored uses of varying coefficients to approximate functional form in applications that use time series data. A time trend as an interaction variable in the model can be used to introduce time-varying coefficients and, thus, approximate unobserved functional structure in economic models, while reducing dimensionality issues in the specification of the functional form from the *m*-dimensional space (number of explanatory variables in the model) to the simpler one-dimensional space. The functional form for the time trend as an interactive variable in the regression equation could be linear or nonlinear. Significant empirical work and simulation analysis is needed in this area.

The popularity of a time trend in many economic models stems from its simplicity and intuitive interpretation. Statistical tests may be used to evaluate the effectiveness of time trends in forecasting and regression equations. Effectiveness depends largely on the application. The choice of time trend as a tool in model building involves not only whether to include a time trend and its functional form (spline function), but also whether to include it as an interactive variable.

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Camilo Sarmiento

TIME USE SURVEYS

SEE *Time Allocation.*

TIME-AND-A-HALF

Since 1938 the U.S. Fair Labor Standards Act (FLSA) has required that most wage earners be paid one-and-a-half times their regular hourly pay rate for weekly hours

worked above forty. This rate is comparatively high. Whereas South Korea and most Canadian provinces also require a 50 percent overtime premium, France, Germany, and Italy require a smaller 25 percent, collective bargaining sets overtime premiums in the United Kingdom, and New Zealand has no overtime regulation. Countries' overtime regulations also differ in other aspects, such as the standard weekly hours beyond which the overtime premium applies, the types of jobs exempt from overtime regulations, and whether the regulation stipulates maximum weekly hours. An increasing number of countries allow employers to average work hours over the year rather than the week, greatly decreasing overtime payments.

The 1938 FLSA described its rationale as "the maintenance of the minimum standard of living necessary for health, efficiency and general well-being." It gained union support because it made union labor more competitive. However, an additional major motivation behind overtime regulations, both during the Great Depression of the 1930s and the high unemployment of Europe in the 1980s and 1990s, is to increase employment.

Whether overtime regulation indeed has a salutary impact on employment is ambiguous even in the short run. An overtime premium will immediately increase the marginal cost of additional hours per week, thus decreasing the weekly hours of those previously working more than forty hours, decreasing national work hours, and creating many jobs of exactly standard hours (e.g., forty). Whether this also increases employment depends on the substitutability between labor and capital and between different types of labor, scale effects, and on other labor regulations and institutions.

Once contracts can be renegotiated, however, economic theory suggests that an overtime premium can easily be undone by an implicit contract reducing the straight-time wage rate until workers get the same weekly pay and work the same hours as before the regulation. Consequently employment would not change. This does not apply to minimum or near-minimum wage jobs, because straight-time pay rates cannot fall sufficiently to offset the premium.

The best empirical work studies the impact of new or tightened overtime regulations. Average hours decline for those earning at or near the minimum wage or when straight-time wages are not allowed to fall for other regulatory or institutional reasons. Similarly the FLSA permanently decreased overtime hours (over forty) and increased the number of people working exactly forty hours, perhaps because of minimum wage jobs. Extensions of U.S. overtime regulations to new groups of more highly paid workers have not significantly affected weekly hours, corroborating theoretical predictions.

Studies of decreases in standard time in Europe generally find that standard time and average weekly hours move together. These studies, however, do not isolate exogenous changes and therefore should not be used to impute causality. The employment effects of lower standard hours or otherwise tighter overtime legislation in European, U.S., and Japanese labor markets have typically been found to be zero or negative, although these studies are subject to the same criticisms regarding causality.

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Shulamit Kahn

TINBERGEN, JAN
1903–1994

When the Nobel Foundation initiated an award in economic sciences in memory of Alfred Nobel, it was no surprise that the first award in 1969 went jointly to Jan Tinbergen and Ragnar Frisch (1895–1937), two leading figures in the formation of the Econometric Society and the establishment of a new branch of economics early in the twentieth century.

Jan Tinbergen, like other economic scholars, began academic studies in science, but switched to economics and carried the mathematical background that became the hallmark of the new branch of economics. He made numerous original contributions to economic analysis, theory, and practice, but his greatest single contribution was in constructing the first working econometric models of a system as a whole, first for Holland, and later, for the United States. In the latter study, he was searching for a system that would enable economists to find the most satisfactory model of the business cycle. In that respect he tried to find a statistical representation of the ideas expressed by John Maynard Keynes (1883–1946) and his followers at Cambridge University during the years of the Great Depression in the 1930s. Although he did not uncover *the* secret of the cycle, he did succeed in laying the groundwork for empirical macroeconometric model building, in spite of Keynes's dislike of Tinbergen's approach, which Keynes did not fully understand. Tinbergen's U.S. model prominently displayed the role of income distribution, the wealth effect, and some model specifications that would lead eventually to a well-estab-

lished relation between wages and unemployment. The wealth effect, which is now investigated on a broad scale, came about through Tinbergen's idea that price movements on the stock exchange played an important role in explaining the U.S. downturn after 1929.

It is important to note that Tinbergen made his pioneering contribution to macroeconometric model building in a dynamic framework at a time when usable national data were sparse and computational facilities were primitive. His work is being carried on and extended now with unusually better national accounts, frequency of data reporting, improved economic concepts, and enormous computer power with speed, all to make the tasks of econometric model building for the succeeding generation much easier for those who learned basics from Jan Tinbergen.

Tinbergen made early studies of income distribution and elasticity of substitution in international trade. He was dedicated to strong pacifist views. After World War II (1939–1945) he headed the Central Planning Bureau of the Netherlands and devoted his life to many worthy social causes; at the very end of his life he was soliciting help from colleagues and friends worldwide to support efforts against exploitation of children. He had a very systematic mind and conceived principles of economic planning, based on the clever separation, and distinctive properties of economic policy *instruments* and *targets*. Many politicians fail to make the appropriate distinction. In his exposition of policy formation in economics and in his work as director of the Central Planning Bureau, he made such distinctions clear.

Throughout his career, he trained many Dutch students in economics and also attracted many from abroad, especially after World War II. He is remembered as a person who led an exemplary life with simple tastes, great generosity, and a deep social conscience. In addition to his activities aimed at protecting children worldwide, Jan Tinbergen was a founding supporter of Economists Against the Arms Race (ECAAR) during the cold war. In line with his charitable instincts, during the immediate post–World War II period he generally carried cigarettes for a supplement to service fees such as taxi fares, even though he was a nonsmoker.

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Lawrence R. Klein

TITO (JOSIP BROZ)

1892–1980

Josip Broz "Tito" was born in Kumrovec, Croatia, on May 7, 1892. His first contact with political and social issues came in October of 1920 when he joined a union of metallurgy workers. In 1929, because of his active participation as political agitator, he was imprisoned for five years. After his release in 1934, he became a member of the Political Bureau of the Central Committee of the Communist Party, then located in Vienna, Austria, and in 1937 he became the Secretary General of the Central Committee of Yugoslavia.

After the German invasion of Yugoslavia in 1941, Tito became the national leader in the fight against the foreign occupation. It is during this period that his role as the leader of the Yugoslav people became clear, and he was soon able to attract a much wider base of support. His charismatic personality, his successful military guerrilla tactics, and his idea of a united Yugoslavia had a wide appeal. In addition to the Communists, he was joined by various resistance groups, such as the Chetniks of Draža Mihajlović, the Serbian resistance leader. After the liberation of the country in November 1943, Tito negotiated what would become the Socialist Federal Republic of Yugoslavia and became marshall of the new Yugoslav government.

TITO'S LEGACY

Tito ruled Yugoslavia as prime minister and chief of defense from 1945 until 1980. His ruling style appealed to both communists and noncommunists, and he unified Yugoslavia in a more liberal form of communism, commonly referred to as "Titoism." However, this independence from mainstream communism created a schism between Tito and Joseph Stalin, the Soviet Communist Party leader, in 1948.

Although Tito succeeded in unifying the Yugoslav people, he faced many challenges in keeping this unification peaceful. Many viewed Yugoslavia as a single unified nation, but it was actually a federation of different republics and two autonomous regions. Tito was trying to hold this federation together by fighting nationalistic tendencies in both the Serbs and Croats. He also had to heal the wounds accumulated during the area's war-torn past. One way Tito preserved the nation was through a more liberal economic policy that enabled the Yugoslavs to travel and often work in Western European countries. This policy contributed to the stability of the period. Tito's open policy toward both the West and the East contributed to good relations with various nations that were otherwise politically opposed to each other. As a result, citizens of some communist European countries, such as Czechoslovakia or Hungary, could vacation in Yugoslavia, where they were joined by Western European tourists from Germany and Italy. Furthermore, in 1961 the first conference of the states of the Non-Aligned Movement was held in Belgrade. In 1971, Tito established a twenty-two member collective presidency, which was composed of the presidents of the six republics and the two autonomous provincial assemblies, in addition to fourteen members chosen from the republican and provincial assemblies for five-year terms. Tito was elected chairman of the new presidency.

While his policy of openness provided positive economic incentives to Yugoslavs, Croats and Slovenes benefited more than those in the other regions because of their proximity to Western Europe. Being the most economically advanced in Yugoslavia, the Croats and Slovenes resented having to transfer their profits to the poorer regions of Yugoslavia, which was a way for Tito to minimize discrepancies and redistribute wealth. This inequality between republics fueled increased nationalistic feelings from states such as Serbia and Macedonia, which did not benefit as much from the same trade. Croat and Serb nationalists who promoted independence were exiled, and many were assassinated in their new countries of exile, where they were planning insurgencies to break up Yugoslavia. Many were also sent into forced labor camps in different parts of Yugoslavia.

Tito's legacy came under threat in the 1970s. The economic downturn in the 1970s came as a consequence of rising foreign debt, inflation, and economic inefficiencies. Furthermore, Croatian nationalist secessionists were pressuring for independence, and Tito had to crack down on them by tightening the dictatorship. However, upon his death in 1980, the nationalist sentiments came to the surface and exploded in what became the Yugoslav civil war, which led to the breakup of the federation in the early 1990s.

YUGOSLAVIA AFTER COMMUNISM

As a consequence of ethnic tensions, the breakup of Yugoslavia in the 1990s was seen by some as inevitable after fifty years of Tito's suppression of the Croat and Serb nationalist movements. First, Slovenia and Croatia, the two most economically advanced republics of the federation, were no longer willing to be tightly controlled by the central government and share their economic wealth through redistribution to poorer republics. The disappearance of Tito's tight control also created an opportunity for Croats to declare independence, while the Serbian nationalists wanted to preserve a claim over Yugoslav territories, including Croatia. The war eventually spilled into the republic of Bosnia and Herzegovina, which to this day remains divided into cantons.

SEE ALSO *Communism; Non-alignment; World War II*

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Dagmar Radin

TOBACCO INDUSTRY

The tobacco industry's main tobacco products are smoking tobacco (including cigarettes, cigars, and pipe tobacco), chewing tobacco, and snuff. The use of cigarettes as a means of consuming tobacco is relatively recent, beginning around the start of the twentieth century. Six states in the United States produce most of the U.S. tobacco: Georgia, Kentucky, North Carolina, South Carolina, Tennessee, and Virginia. Internationally, the United States is in somewhat of a unique position in that it is simultaneously a big tobacco-producing and a big tobacco-consuming country. On one hand, some countries, such as Malawi and Zimbabwe, produce tobacco at low costs but consume relatively little. On the other hand,

the European Union (EU) and Japan are heavy tobacco consumers but relatively little tobacco is grown there. About 100 countries produce tobacco, but Brazil, China, India, Malawi, Turkey, the United States, and Zimbabwe together produce over 80 percent of the world's tobacco. China is the biggest producer of tobacco, while the United States is the biggest tobacco exporter in the world. In 2002, unfinished tobacco and tobacco product exports contributed $1.7 billion to the U.S. trade balance (Capehart 2001).

Tobacco use across the globe remains significant. According to the World Health Organization (WHO), globally, approximately half the men and about a tenth of women smoke. Smoking in developing nations has been increasing faster than that in the developed world. Since the 1960s, governments across the world have tried to control cigarette consumption (smoking) using various measures. Most governments now have some sort of antismoking policies in place. Initially these policies were driven by concerns regarding the health of smokers, while more recently the health of nonsmokers (dangers of second-hand smoke) has also become a concern.

SMOKING-CONTROL MEASURES

Generally policy makers have used both price and nonprice measures to combat smoking. Whereas there is now a relatively good understanding of the effectiveness of tobacco control policies in developed nations, understanding of the effectiveness of such policies in developing nations is not so good. In addition, smoking behaviors of different population subgroups are slowly being understood. Price measures are primarily based on reducing smoking using higher cigarette prices driven by higher taxes. The responsiveness of cigarette demand to cigarette tax increases is at the heart of how effective tax-based smoking control policies can be. The effectiveness of price measures, however, may be limited by the habit-forming nature of cigarettes and their low price responsiveness of demand. Conversely, demand unresponsiveness provides greater opportunities for tax revenue generation by governments. Relatively speaking the few studies of developing countries have largely found a higher demand responsiveness implying that dollar-for-dollar, there may be greater smoking reduction opportunities in developing nations than in developed countries (Jha and Chaloupka 2000; U.S. Department of Health and Human Services 2000). Nonprice smoking control measures include numerous initiatives such as cigarette advertising bans (Saffer and Chaloupka 2000), health warnings on cigarette packages, and territorial restrictions (such as workplace and public-place smoking bans and restrictions on sales of tobacco products to minors).

In 1964 the U.S. Surgeon General issued a report warning about the negative health effects of smoking. While the United States was at the forefront of legislating smoking-related health warnings beginning in 1965, other countries have since enacted more restrictive requirements. There has been a ban on the broadcast advertising of cigarettes in the United States since 1971. In 1998, forty-six states in the United States and the key cigarette/smokeless tobacco products producers signed a master settlement agreement (MSA) to reimburse states for costs imposed due to negative health effects of smoking. The main provisions of the MSA include cash payments to the states, advertising restrictions, support for antismoking measures, and disbanding of tobacco-industry trade organizations. Payments were also to be made to tobacco growers to compensate them for the decrease in the tobacco demand (Capehart 2001; Viscusi 2002). In 2003 the WHO drafted a framework convention on tobacco control that included numerous restrictions on the sale and marketing of tobacco products.

EFFECTIVENESS OF SMOKING-CONTROL POLICIES

The extent of the effectiveness of these policy measures remains to be seen. Further, in spite of the stringent restrictions imposed by the various measures, technological advances, especially the spread of the Internet, make it virtually impossible to effectively regulate the marketing and sale of tobacco products. Effectiveness may be improved by comprehensive tobacco control policies in which lawmakers pay attention to consumption substitutability among tobacco products as more effective control policies are enacted on one product. At the macro level policy makers face the dilemma of replacing export revenues generated by tobacco products with other revenues. So how can curbs on domestic sales of tobacco be reconciled with encouragement of tobacco exports? The long-term future of the tobacco industry seems somewhat uncertain given all the attention and resources being devoted to smoking control. However, the habit-forming nature of their products, huge industry cash reserves, and the ability to launch newer tobacco products seem to promise a very long tobacco-control road.

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Rajeev K. Goel

TOBIN, JAMES
1918–2002

James Tobin, winner of the 1981 Nobel Memorial Prize in Economics, was among the leaders of postwar economics, with several significant contributions that now bear his name. Tobin was born in 1918 in Champaign, Illinois. Educated in economics at Harvard, he earned an AB in 1939, an AM in 1940, and, after a wartime role as a naval officer, a PhD in 1947. After three more years at Harvard, he departed for Yale's economics department, where he spent the rest of his career save academic leaves and eighteen months in Washington as a member of Kennedy's council of economic advisers. He remained an active member of the profession until his death in 2002.

Much of Tobin's fame is due to his contributions to monetary economics and finance. As of the early 1950s, theorists had identified two main motivations for economic agents to hold cash: a *transactions demand* from consumers, and an *investment demand* based on portfolio considerations. While these two forces had been identified, there were no careful models to justify these demands by utility-maximizing agents. Thus, monetary theory lacked an answer to its most basic question: Why should anyone hold cash at all? In two pathbreaking papers, Tobin built models for each source of demand.

In a 1956 paper Tobin showed how to quantify the transactions demand. Starting with two simple forces—the transactions cost of making cash withdrawals and the opportunity cost of forgone interest—the model shows how the transactions demand is affected by interest rates. All other things being equal, an increase in interest rates induces consumers to make smaller, more frequent withdrawals, which lowers their average cash balances and the aggregate demand for cash. In combination with related work by William Baumol, this approach became known as the *Baumol-Tobin model* and still serves as a benchmark model of transactions demand.

Two years later, Tobin published another foundational paper on monetary theory, this time focusing on the investment demand for cash. In Keynes's General Theory, the investment demand for cash was driven by investors' subjective and nonrandom expectations of future interest rates, with investors holding cash rather than bonds if they expected interest rates to rise by some critical amount. This theory was criticized by several prominent economists for inconsistency with other parts of Keynes's theory. Tobin (1958a) fixed this problem by introducing uncertainty into the portfolio problem, and then solving for the optimal portfolio of cash and bonds for an investor that cares only about the mean and variance of his portfolio returns. This "mean-variance" approach echoed the work of Harry Markowitz (1952) on portfolio optimization, with Tobin notably providing an important linkage between the financial decisions of individual investors and macroeconomic implications for money demand. Markowitz and Tobin shared their Nobel Prize in large part for this work, which provided the key building blocks for the foundational model of modern financial theory, the Capital-Asset-Pricing Model of William Sharpe (1964) and John Lintner (1965).

Tobin continued to build on the portfolio approach of the 1958 paper by adding more assets and increasingly complex economic environments for the portfolio-choice decision. This model-building continued for the remainder of his career. In two papers published in 1968 and 1969 (the first with William Brainard), investment in capital played a direct role in the portfolio decision. As a notational device, these papers used the letter q to represent the price of capital as normalized by its replacement cost. This appellation stuck, and *Tobin's q* is now so ubiquitous that many economists cannot name the original papers from whence it came. In it simplest interpretation, a q greater than 1 indicates that the market price of capital is greater than its replacement cost, and thus rational investors would choose to build new capital rather than buy existing assets. When q is less than 1, investors would prefer the opposite. The large amount of information packed into this simple ratio has enabled an enormous and still-growing literature in macroeconomics and finance, all with Tobin's q as the key valuation measure.

Early in his career, Tobin focused his research on the consumption component of macroeconomic demand. As in his work on monetary economics, Tobin attempted to build more rigorous microfoundations for Keynesian models, and in this attempt he ran into a stubborn econo-

metric problem: For large expenditures on consumer durables such as cars, most consumers have spending of zero in most years. In these cases, ordinary-least-squares (OLS) regression will give biased results. Tobin posited that such estimations require a combination of probit analysis with OLS, and in a paper for *Econometrica* (1958b) he derived an analytical solution for such a combination. Through wordplay based on various literary antecedents, this procedure, which remains a popular tool in econometric analysis, became known as the *Tobit* regression.

In addition to making numerous contributions to economics research, Tobin also maintained an active presence in policy debates. Following his service in Washington in the early 1960s, he generated a stream of policy proposals throughout the rest of his life. The most famous of these proposals, the so-called *Tobin tax*, achieved a life of its own in the twenty-first century over the objections of its originator. Tobin taxes—small taxes on financial transactions—were proposed by Tobin as a possible mechanism for reducing speculation and volatility in foreign-exchange markets. While this proposal never garnered much empirical support and was never an important plank in Tobin's policy platform, his academic reputation made his name a valuable asset for antiglobalization activists, who saw Tobin taxes as a way to reduce international trade. In the last years of his life, Tobin actively distanced himself from this interpretation of his proposal and affirmed his lifelong support for free trade.

SEE ALSO *Economics, Nobel Prize in; Financial Markets; Interest Rates; Investment; Keynes, John Maynard; Macroeconomics; Markowitz, Harry M.; Risk; Speculation; Tobin's Q; Transaction Taxes*

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Andrew Metrick

TOBIN TAX

SEE *Tobin, James; Transaction Taxes.*

TOBIN'S Q

Tobin's Q is the ratio of the stock market valuation of firms to their "replacement" costs. Economists going at least as far back as Thorstein Veblen have noted the possibility of a discrepancy between the stock market value of firms and their replacement costs. Veblen conceived of a historiography of "capital," whereby *capital* took on different meanings in accordance with various historical periods. In reference to the competitive phase of nineteenth-century capitalism, Veblen understood that crisis resulted from a "readjustment of [capital] values" ([1892] 1998, p. 112). New technologies made existing capital installations obsolete so that the "nominal accepted valuation of the capital, on which its returns are computed, exceeds its actual value as indicated by its present earning capacity" ([1892] 1998, p. 112). Here, Veblen compares a measure of capital based on "putative" earning capacity to actual expenditures on plant and equipment. That is, he formulates a measure of Q, without actually naming the ratio. According to Veblen, misalignments of valuations produce a psychological "malady of affections" in the investing class, a psychological fact that produces industrial depression ([1904] 1978, p. 237). In the transition to the great monopolies established during the Great Merger Wave of 1897 to 1903, Veblen contended that high stock valuations relative to replacement costs (i.e., high Qs) were reflective of monopoly power and a "sabotaging of production."

In stark contrast to Veblen's contention that high Qs reflect a monopolistic restriction on output and investment, modern Q theory, as elaborated by William C. Brainard and James Tobin (1977), holds that high Qs are primary forces driving new investment ahead. Tobin and Brainard's modern version of Q theory derives from John Maynard Keynes's remarks in his *General Theory of Employment, Interest, and Money* ([1936] 1953). In this famous work, Keynes noted that stock market booms would encourage investment because new plant and

equipment could be "floated off on the Stock exchange at an immediate profit" (p. 151). In the aggregate, a Q greater than one indicates that the stock value of firms exceeds their replacement costs and so there is an incentive for greater investment. Conversely, stock market slumps should drag Q below one, dampening the rate of building because entrepreneurs could buy similar enterprises on the stock market for less than it would cost to build them.

IMPLICATIONS OF Q THEORY

As an investment theory, Q theory has two clear, potentially testable implications. First, stock market booms should encourage investment. Second, mergers and acquisitions should rise when the stock market slumps and should fall off during stock booms. The first implication—that investment should go up during stock booms—is a virtual truism in that stock booms generally occur during booms in the general economy. It is generally difficult, however, to measure the separate effects of causative variables when many causative variables move together. For example, high profits generally expand both stock valuations and investment, so it is difficult to isolate any separate effect of high stock valuations on investment. In early tests, Tobin found "a good relationship" of investment and Qs (1978, p. 425). Yet in more recent studies, models that have used Q as a variable to explain investment have fared no better and have often done worse than pared down models using variables other than Q (Chirinko 1993; McCarthy 2001). So it is uncertain whether Q theory operates on new investment as predicted.

The other implication—that mergers and acquisitions should move countercyclically to stock booms and busts—is clearly refuted by the evidence. In the stock boom years of the 1920s, the 1960s, the 1980s, and the 1990s, mergers and acquisitions expanded rapidly. And during stock market slumps, mergers and acquisitions declined, often spectacularly as in the Great Depression of the 1930s. Various explanations have been offered to explain these results. Some theorists have postulated that stock booms allow firms additional financing through stock issues or debt collateralized by stock, which together with merger promoters have encouraged more acquisitions (Du Boff and Herman 1989). Other theorists suggest that stock booms encourage a wider divergency in stock valuations of companies (Gort 1969; Shleifer and Vishny 2003), although such an explanation seems at variance with the fact that stock valuations decline much more severely over shorter periods of time than they expand during booms.

MARGINAL Q AND MONOPOLY POWER

In order to fully comprehend how Q operates on investment and mergers, theorists still need to derive credible estimates of what is termed *marginal Q*—the additional stock valuation consequent on additional capital installations. In regard to the building of new firms, the logic of Q theory makes sense if there is "free entry" into industries—that is, new firms can be built and sold on the stock market. But when existing firms have monopoly power, the predictions of Q theory make sense only if marginal Q and Q move together. In contemplating new investment, existing firms would ask if additional capital spending would enhance the share price of the firm by more than the cost of the investment. Estimates of marginal Q have been made, but these estimates have either relied on assumptions of perfect competition in product markets (Hayashi 1982) or assumptions that conceive of capital as separate from technological change (Abel and Blanchard 1986). These assumptions are clearly unrealistic in an economy dominated by oligopolies, which install plant and equipment that often embody certain specific kinds of technology.

Monopoly power permits a divergence of marginal Q and Q. If marginal Q could be estimated accurately, then Q theory might well be able to better predict investment as well as mergers and acquisitions. If existing firms bumped up against new investment limits during stock booms (if marginal Q fell off), then this might explain why mergers and acquisitions expand during these same stock booms (Medlen 2003). Brainard and Tobin (1977) argued that marginal Q and Q moved together, but in the absence of any credible estimates of marginal Q, the question is still open.

Q theory has also been used to gauge monopoly power (Lindenberg and Ross 1981). Industries that have persistent monopoly power would presumably enjoy abnormally high profits over time. Given that industries with persistent monopoly power are protected against new entrants, such industries should exhibit high Qs. Conversely, in competitive markets, the Q ratio should approximate one; if "free entry" exists, then any abnormally high profitability would soon be eroded as new entrants came into the market.

In addition to theoretical problems, Q theory also contains unresolved measurement problems—particularly regarding the "replacement costs" of assets. With ongoing technological change, many assets would not be replaced at all. So the measurement of replacement costs might well be of questionable value. Some theorists also question whether the concept of replacement costs make sense in an information age in which capital often takes the form of knowledge, inclusive of the knowledge of in-house specialized workers (Bond and Cummins 2000). In addition, the very concept of marginal Q has been questioned on the basis that theorists have not yet fully understood the time path of new investment, a necessary precondition for

any possible measurement of marginal Q (Caballero and Leahy 1996).

SEE ALSO *Investment; Profitability; Rate of Profit; Stock Exchange*

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Craig Medlen

TOBIT

Following James Tobin's 1958 article "Estimation of Relationships for Limited Dependent Variables," the tobit is a statistical model that is used to estimate the relationship between a limited dependent variable (y) and a vector of explanatory variables (x), usually by the method of maximum likelihood. The tobit model is warranted when the variable y is censored (i.e., when it is observed for some values above or below a certain threshold, but not in the remainder of the data). The term "tobit" was derived from Tobin's name and by adding the suffix "it," as for the 1964 probit model by Arthur Goldberger.

For example, a tobit model can be used to estimate the relationship between the number of hours worked (y) and education, age, gender, race, number of children, and so on (x). In this case, some individuals do not work at all ($y = 0$) while some work ($y > 0$), but education, age, gender, race, and the like are observed for all individuals, so that the data is censored. The advantage of using the tobit instead of the usual linear regression model is that it yields unbiased coefficient estimates for each of the variables in x. Note that the censoring need not occur at zero, nor does it need to occur below a specific value of y; the tobit also accommodates censoring above a specific value of y, and in a two-limit tobit, the dependent variable is censored both below and above a certain range of y.

CRITIQUES OF THE TOBIT MODEL

The most important critique of the tobit model is that it does not allow for the set of variables used in explaining whether y is positive or zero (say, x_1) to differ from the set of variables used in explaining the value of y conditional on y being strictly positive (say, x_2). James Heckman introduced a model in his 1979 article "Sample Selection Bias as a Specification Error," which allows such a specification as well as control for selection bias in applications. Heckman's model (or "heckit"), however, requires the use of an instrumental variable that can be excluded on theoretical grounds from the estimated equation for the values of y that are strictly positive in order to explain selection into the noncensored sample. Additionally, the tobit model is inconsistent when the error term is not normally distributed (this critique also applies to the heckit model), or when the variance of the error term is not constant, (i.e., it has unequal variances).

In a thorough survey of the literature on the tobit, Takeshi Amemiya (1984) discussed the properties of the model and provided many examples and applications of the tobit. He also outlined various estimation techniques as well as possible departures from the usual statistical assumptions and discussed generalizations of—and extensions to—the basic tobit model. G. S. Maddala suggested in his 2001 book *Introduction to Econometrics* exercising caution when considering the use of the tobit model (i.e., researchers who wish to use the tobit model should make sure that the dependent variable is, indeed, censored).

SEE ALSO *Censoring, Sample; Heteroskedasticity; Logistic Regression; Probabilistic Regression; Regression; Regression Analysis; Tobin, James*

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Marc F. Bellemare

TOCQUEVILLE, ALEXIS DE
1805–1859

The French statesman and political philosopher Alexis de Tocqueville was born July 29, 1805, in Paris and died April 16, 1859, in Cannes. Much of his life was devoted to scholarship and public service. He is most famous for writing *Democracy in America* (1835–1840), a sweeping and perceptive study of American democratic life. His other important work is *The Old Regime and the French Revolution* (1856). As a young man, Tocqueville studied law and began his public service by working at the courts in Versailles. Later in his life, he became active in French politics, holding several elected offices.

Tocqueville's family was part of the French *petite noblesse* and had suffered greatly during the French Revolution (1789–1799). Consequently, it is not surprising that he held some aristocratic sympathies, along with concerns about the hazards of democratic excess. Still, Tocqueville was intrigued by democratic society and its potential for advancing personal liberty. He was also convinced that the spread of democracy was irresistible. For this reason, he wanted to better understand its benefits and dangers. This interest led him to visit the United States between May 1831 and February 1832. His cross-country tour took him to seventeen of the then existing twenty-four states. He spent a great deal of time in the metropolitan areas of the Northeast. He also traveled through such regions as the Great Lakes, the Ohio Valley, the Gulf Coast, and the South Atlantic. After returning to France, Tocqueville spent several years reflecting on his experiences and doing additional research. During this period, he wrote *Democracy in America*, which was published as two volumes in 1835 and 1840.

Democracy in America is considered a classic study because of its shrewd insights into the psychological, sociological, political, and institutional nature of American democracy. The book covers an exceptionally wide range of topics dealing with the democratic condition. Underlying this extensive analysis, however, is a desire to safeguard human freedom by better understanding democratic dispositions, passions, and tendencies.

According to Tocqueville, the most fundamental characteristic of the democratic age is equality. Its effect on democratic society is ubiquitous in both the public and private spheres. "The influence of [equality] extends far beyond political mores and laws … it creates opinions, gives birth to feelings, suggests customs, and modifies whatever it does not create" ([1835–1840] 2000, p. 9). Moreover, it inspires a strong and ardent attachment among democratic citizens. The benefit of equality is that it expands the reach of liberty and opportunity. Consequently, it gives all citizens a chance to take more control of their own lives.

Although equality had a fundamental influence on American society, inequalities did exist. Slavery, in particular, was a well-established practice in the southern states. Tocqueville, however, viewed slavery as a practice in "retreat" and destined to be abolished. He claimed, "Whatever efforts the Americans of the South make to maintain slavery, they will not forever succeed.… Slavery amid the democratic liberty and enlightenment of our age is not an institution that can last" ([1835–1840] 2000, p. 363). Still, Tocqueville was pessimistic about the future of race relations in the United States. Regardless of how slavery ended, he foresaw "great misfortunes." He believed that conflict between the races could only be avoided by isolation or complete intermingling. Once slavery ended, isolation would be impossible, but white racism would prevent significant intermingling. As a result, the races would be left in a condition of precarious coexistence, producing a dangerous struggle for power.

Tocqueville also felt that equality could become dangerous if taken to an extreme. When people become too enamored with equality, they will do anything to maintain it, including sacrificing their liberty. The idea of equality can also be dangerous because it lends a daunting form of moral authority to the opinions of the majority. Because everyone is considered equal, the larger number of individuals in the majority is equated with superior judgment and greater utility. The opinions of the majority carry such great weight that they can lead to political tyranny, social conformity, and intellectual monotony.

Tocqueville argued that two other democratic dispositions, individualism and materialism, can also be threats to liberty. These inclinations are dangerous because they cause citizens to lose interest in public affairs. Individualism compels people to isolate themselves from the greater society and withdraw into small groups of family and friends. Materialism leads people to focus obsessively on their own private prosperity and to disregard public duties. The neglect of civic responsibilities can result in the development of a paternalistic despotism. Personal rights and freedoms are hindered and enervated as citizens become entangled in a network of "petty, complicated rules" ([1835–1840] 2000, p. 692).

Tocqueville claimed that it is possible to overcome these and other threats to liberty with the proper institutions, mores, and values. The presence of numerous and robust civil associations, for example, serves to protect individuals from an overbearing government. An independent press informs the public and facilitates associational activity. Religions that are able to inspire benevolence and instill a strong sense of spirituality can help counter the influences of individualism and materialism. The concept of self-interest properly understood links the performance of civic duties with private advantage. Prudent political leaders protect liberty through statecraft and soulcraft. Educated citizens are aware of the seductive dangers of extreme equality. Tocqueville concludes by noting that the future of democracy is not predestined; the people will determine if equality will lead to servitude or freedom.

The Old Regime and the French Revolution is Tocqueville's attempt to understand the origins of the French Revolution. It examines the nature of French society prior to 1789. His primary claim is that the revolution was prompted by the political centralization of the state. Moreover, the revolution itself was a failure because it also centralized political power. Although *The Old Regime* has not attracted the attention of *Democracy in America*, it is still considered an important account of the social conditions that led to the French Revolution.

Tocqueville's ideas about the democratic condition continue to exert a considerable influence on contemporary academic and political discourse. Of particular importance are his discussions of unchecked individualism and the importance of associational membership, which are frequently referenced in scholarly research on civil society and social capital. His pithy observations about democracy and democratic life are often quoted by politicians and popular commentators. The continuing relevance of Tocqueville's work should not be surprising. He provides a seminal and perhaps the best account of the dangers of democracy and its threats to liberty.

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Johnny Goldfinger

TOILETS

This article is concerned with indoor conveniences: both domestic home toilets and those in the workplace and public buildings. Technological and cultural factors are discussed to understand why everyone, in the West at least, thinks it is quite normal to have a flushing toilet inside the house.

The Romans installed toilets inside their villas over 2000 years ago. But indoor plumbing was not a feature of European cities until the time of Queen Elizabeth I, for whom Sir John Harrington installed the first valve-flushing toilet in the 1590s. The majority of the population used chamber pots or relieved themselves outdoors. The wealthy had no need of domestic toilets; they had chambermaids. The few toilets that existed comprised a "privy" at the bottom of the garden, or on the outside of the castle wall hanging over the river. Privacy was not a major consideration, and men, especially, could relieve themselves anywhere inside or outside the house.

It was not until the Industrial Revolution that toilet provision became an issue. It was no longer acceptable to throw human waste on the midden outside the house. The ruling classes saw it in their own interests to enact public health reforms and to build sewers and drains because cholera is no respecter of class distinctions.

The introduction of water-based sewerage systems required the installation of flushing toilets. New para-

digms of hygiene and social morality arose. The toilet had to be "tamed" and "domesticated" and brought inside the house from the yard. Toilet entrepreneurs such as Thomas Crapper in Britain, and John Randall Mann in North America, capitalized upon this new toilet market, for "every home should have one." Design was based upon the "sit" rather than "squat" style of toilet provision and exported globally. Most people in the world still squat and have no access to modern toilets or toilet paper. To have a flush-toilet in your house is a sign of great wealth, with the increasing scarcity and privatization of water supply in developing countries.

Social prudery made it taboo directly to talk about bodily functions in polite company. Americans say they are going to "the bathroom," (in a bathtubless room?), the British ask for "the little room." In Far East countries bodily functions are not seen to be as culturally and religiously dirty as in the West: So euphemisms are less necessary. Nevertheless, Japanese high-tech toilets that play music to cover embarrassing noises are popular with women users.

In the nineteenth century it was considered so shocking for a woman to need the toilet when out that little "away from home" provision was made for women. Women still have approximately half the number of toilet facilities as men, a last vestige of sex discrimination. Standardized toilet manufacturers make little allowance for different user group needs, in terms of ergonomic design. Factory and office workers also suffer from lack of workplace provision, and there is no constitutional right for employees to urinate during company time.

While householders invest in high-quality designer bathrooms, in contrast the poor quality and lack of public toilets has been the cause of great concern to user groups such as the American Restroom Association (ARA). The ARA argues the business case that "bathrooms mean business" as better public restrooms will result in more tourists, shoppers, and visitors coming to town, staying longer, and spending more.

Public toilets, because they are public, are contested spaces, offering anonymity and seclusion to drug users and deviant groups. News reports of people being born, dying, being raped, trapped, attacked, or arrested in toilets are frequent. They are one of the few places where complete strangers mix and share intimate facilities. They repel those worried about picking up a sexually transmitted disease; women warn their daughters not to sit on the seat for hygienic purposes. They attract men who are "cruising" (cottaging, or looking for a date): the subject of many sociological and criminological studies. Toilet closure is often seen as the way to reduce crime. But closure greatly inconveniences bona fide users, as evidenced by a new generation of research on the practical needs of women and other social groups that are disenabled by the design of the built environment.

One can judge a nation by its toilets. When visiting a foreign country, the first necessity that people are likely to look for is the toilet, and the image and smell remain with them. The nature of toilet provision is an indicator of whose needs are valued in society and what a society thinks about women, babies, children, workers, and its elderly and disabled citizens.

SEE ALSO *Development; Development Economics; Disease; Plumbing; Public Health; Sanitation*

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Clara H. Greed

TOLERANCE, DRUG

Tolerance is a decrease in the effects of a drug dose following repeated administrations. Tolerance is central to the definition of chemical dependence to some drugs (e.g., alcohol, heroin, painkillers), with theorists assigning to tolerance, or the mechanisms that produce tolerance, an important role in the genesis and maintenance of addictive drug use. Drug tolerance can be a symptom of physical dependence and a contributing factor to the severity of the physical and psychological dependence on a drug. For example, as drug users develop tolerance, they have to progressively increase their level of consumption to achieve the "high" they used to feel with lower doses during their initial stages of experimentation with the drug. Tolerance can be described as a homeostatic mechanism, or an organism's adaptive response to foreign substances. Unfortunately, tolerance may decrease the effectiveness of medication regimes, as in the treatment of chronic pain, epilepsy, or depression.

Drug tolerance has been studied as either pharmacological (physiological) or learned (psychological) phenomena. Pharmacological tolerance models distinguish between dispositional (or pharmacokinetic) and functional (or pharmacodynamic) tolerance. *Dispositional tolerance* refers to an organism's increased ability to metabolize and distribute the drug in the body. Thus, with increased dispositional tolerance, more of the drug must be taken to reach a specific concentration at the receptor sites. On the other hand, *functional tolerance* defines changes in neural functioning that result in dose-response decrements at the receptor site (i.e., the receptor responds less to a given concentration of a drug). Functional tolerance that develops to the effects of the first or second drug administration is called *tachyphylaxis* or *acute* tolerance. Functional tolerance that persists after prolonged exposure is called *acquired* or *chronic* tolerance.

Psychological or learning models distinguish between operant (or instrumental) and associative (or classically conditioned) drug tolerance. *Operant tolerance* defines the acquisition of specific skills or responses that compensate for the disruptive effects of a drug on task performance. For example, with other influencing variables being equal (e.g., genetic sensitivity to alcohol), operant tolerance theory predicts that a person who habitually drinks and drives should make fewer mistakes while driving under the influence of a relatively high dose of alcohol than a person with the same level of alcohol-use history who rarely drinks and drives.

Associative or *classically conditioned* models of drug tolerance posit that environmental stimuli reliably paired with drug delivery become conditioned stimuli that elicit conditioned responses that reduce drug effects. Perhaps the most influential of the associative tolerance models is Shepard Siegel's *compensatory response* model. In the 1970s and 1980s, Siegel conducted a number of highly influential studies to test a theory that predicted that conditioned stimuli can produce conditioned responses that are opposite to, and thus cancel or compensate for, the effects of drugs. The compensatory response model of tolerance has been used to explain why some heroin addicts may die from a heroin overdose despite having developed very high tolerance to the effects of the drug. Although overdoses are often a result of mixing heroin with other drugs, many overdose deaths appear to result from a sudden loss of tolerance. Noting that many heroin overdose deaths occurred after the drug was consumed in a new setting or a new set of circumstances, Siegel reasoned that tolerance to heroin must be partially conditioned to the environment where, and manner in which, the drug is usually taken. Therefore, taking the drug in a new environment would eliminate the presence of conditioned tolerance and lead to overdosing.

An important characteristic or difference between pharmacological and learned drug tolerance is their differential resistance to extinction following detoxification or discontinuation of a given drug administration regime. Associative drug tolerance can be maintained or "remembered" for long periods of time, whereas nonassociative tolerance disappears rapidly in the absence of a drug administration regime. This characteristic of associative drug tolerance has been linked to the construct of drug craving. Like tolerance effects, cravings can be elicited by environmental stimuli (e.g., the sight of a lit cigarette for the smoker), a phenomenon that can occur even after years of abstinence (as often reported by smokers). That is, craving and tolerance can be conceptualized as memories associated with drug effects. Future research examining the physiological mechanisms underlying the development of learned tolerance will be invaluable for the development of drug addiction treatments, as well as the creation of medications partially resistant to pharmacological and learned tolerance effects.

SEE ALSO *Addiction; Medicine; Pharmaceutical Industry; Smoking*

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Antonio Cepeda-Benito

TOLERANCE, POLITICAL

In the social sciences, scholars have devoted a significant amount of attention to the conceptualization, measurement, and analysis of one of the primary domains of tolerance, political tolerance. Although disagreements about

the nature of political tolerance remain, most political theorists contend that it is one of the central tenets of democratic theory because democracies are predicated on the assumption that people with widely differing viewpoints should be able to express their opinions and participate in political processes.

The first major empirical work on political tolerance was published in 1955 by sociologist Samuel Stouffer (1900–1960). In *Communism, Conformity, and Civil Liberties*, Stouffer reported the results of two national surveys in which he found that most U.S. adults were unwilling to extend civil liberties to unpopular left-wing groups; community leaders, however, demonstrated greater tolerance than the general public. This presented a conundrum to many political theorists who had thought that widespread tolerance was necessary for sustaining a democratic society. Later studies provided a partial explanation: U.S. adults were very supportive of civil liberties *in the abstract*, but they were much less likely to apply them to specific groups and situations.

In a groundbreaking study published in 1982, John Sullivan, James Piereson, and George Marcus offered a significant reconceptualization of political tolerance. Sullivan and colleagues defined political tolerance as "a willingness to permit the expression of ideas or interests one opposes" (Sullivan et al. 1982, p. 2). Thus, tolerance presupposes disagreement with a particular group's views. Tolerance is demonstrated when one finds a group's views objectionable, yet *still* supports the rights of the group. Sullivan and his colleagues developed the *least-liked group* approach to measuring political tolerance, in which they first asked respondents to identify their least-liked group, and then asked whether they would be willing to extend certain civil liberties to the group (recall that Stouffer had focused on unpopular left-wing groups). Their research found that while the objects of intolerance had changed since Stouffer's original study, the majority of U.S. citizens were still intolerant.

Extensive studies of political tolerance both in the United States and in countries such as Australia, Germany, Israel, New Zealand, and South Africa indicate that although the target (least-liked) groups may differ, the variables that influence tolerance tend to be the same. Individuals who support the abstract norms of democracy (e.g., free speech, majority vote) are more likely to be tolerant. Those who perceive a high level of threat from the target group, however, are less likely to be tolerant.

Tolerant stances tend to be associated with education (high), social status (elite), age (younger), religiosity (more secular), and, to a lesser extent, gender (males). Individuals who demonstrate low levels of dogmatism and authoritarianism and high levels of interpersonal trust also tend to be more tolerant.

Scholars have also identified contextual factors that promote or inhibit tolerance. Stable, longer-enduring democracies tend to provide an environment that supports tolerance; however, conflict, and particularly conflict that threatens one's group identity, tends to decrease individual levels of tolerance.

SEE ALSO *Civil Society; Conformity; Democracy; Education, USA; Groups; Ideology; Intergroup Relations; Political Correctness; Politics*

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Patricia G. Avery

TOLERANCE, REPRESSIVE

SEE *Repressive Tolerance.*

TOLMAN, EDWARD
1886–1959

The American psychologist Edward Chace Tolman was born in Newton, Massachusetts, on April 14, 1886 and died in Berkeley, California, on November 19, 1959. He received a BS in electrochemistry from the Massachusetts Institute of Technology in 1911, and a PhD in experimental psychology from Harvard in 1915. He spent the bulk of his academic career at the University of California, Berkeley, retiring in 1954. In 1937 he was elected to the National Academy of Sciences.

Tolman entered psychology in the first years of John B. Watson's behaviorist revolution, and he even dedicated his best-known book, *Purposive Behavior in Animals and Men* (1932), to the white rat, but he was never a radical behaviorist. Whereas Watson (and, later, B. F. Skinner) rejected mental states as explanatory constructs, Tolman emphasized molar behavior over molecular "muscle-twitches," as well as the importance of goals and expectations intervening between stimulus and response. (Another neobehaviorist, Clark Hull, similarly stressed the importance of internal drive states.) Heavily influenced by Gestalt theory, and especially by Kurt Lewin's notion of

the "life-space," Tolman viewed the behaving organism as acquiring a "sign-gestalt-expectation" that a particular behavior will achieve a particular goal in a particular "behavior space," and a general "means-end readiness," represented by a "belief-value matrix" to engage in similar behavior in the future, under similar circumstances. He construed the rat facing a maze, even on the first learning trial, as entertaining and testing a sort of hypothesis as to what it should do; as engaged in "vicarious trial and error" behavior as it considered the choice of turning right or left; and as actively "searching for the stimulus" that would indicate one choice over another.

The flavor of Tolman's experimental work, and its implications, are best illustrated by his most famous experiment, on "latent learning" (Tolman and Honzik 1930). Over twenty trials, rats who were rewarded with food took progressively less time to traverse a maze, compared to a control group that received no reward. A third group received no reward for the first ten trials, and behaved no differently than the controls. But when reward was introduced in trial eleven, they showed a precipitous drop in running time, behaving just like the rats who had been rewarded all along. Apparently, these rats had formed a "cognitive map" of the maze as a whole, but did not act on what they had learned until they had an incentive to do so. This experiment shattered the traditional view that reinforcement was crucial to learning: Reinforcement may control performance, but learning happens even in its absence. By redefining learning as the acquisition of knowledge, which organisms—rats as well as humans—could use for their own purposes, Tolman's "purposive behaviorism" set the stage for the cognitive revolution in psychology that began in the 1950s.

Tolman was a civil libertarian as well as a psychologist, and served for a time on the national board of the American Civil Liberties Union. Perhaps reflecting his Quaker background, in 1918 he was dismissed from his first faculty post, at Northwestern University, for publishing an article in a pacifist student publication; and in 1942 he published *Drives Towards War*, proposing a set of social controls that could produce a warless society. Nevertheless, he volunteered for military service in World War I, and was offered a commission in the army; and he worked for the Office of Strategic Services, forerunner to the Central Intelligence Agency, during World War II. From 1949 to 1950 Tolman led faculty opposition to a loyalty oath required by the Regents of the University of California. He (among others) was briefly dismissed from his post, taking shelter at Harvard. In *Tolman v. Underhill* (1955) the California Supreme Court invalidated the oath, and Tolman and the others were reinstated. In 1963, in recognition of his contributions to both the discipline of psychology and the cause of academic freedom, the building housing Berkeley's Department of Psychology and the School of Education—an award-winning example of mid-twentieth-century modernism designed by Gardner Dailey—was renamed in Tolman's honor.

SEE ALSO *Behaviorism; Civil Liberties; Gestalt Psychology; Hull, Clark; Peace; Psychology; Skinner, B. F.; War*

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John F. Kihlstrom

TOLTECS

SEE *Pre-Columbian Peoples.*

TOMMING

SEE *Uncle Tom.*

TOOLS

Stanley Kubrick's science-fiction film *2001: A Space Odyssey* (1968) opens with a scene of early hominids hammering with bones, depicting primitive tool use. While we

might consider human tool use as beginning with stones shaped by man for specific tasks, it is likely that found objects such as sticks, stones, and bones were used much earlier than this. With the advent of tools being intentionally formed for specific tasks, tools not only assisted, but also represented, particular ways of doing things. In other words, the design of a tool reflects an understanding of how to use that tool and what effect using it can make on the world.

Broadly speaking, a tool is some object that extends the abilities of its user. Thus, a tool might be an object held by an animal's claws or mouth that extends the animal's ability to reach, hit, and so on. This extension is also a change in the animal's movement and activity. It is interesting to note that tool use occurs in so few species; that is, it is the exception rather than the norm in animal behavior. The problem with defining *tool use* is that often there is little need to assume that the animal has a purpose in mind—it is perfectly feasible to assume that the animal is exhibiting a stereotyped pattern of behavior that is common across the species, or in other words, the animal has little choice *but* to act in this manner. As Benjamin Beck points out in *Animal Tool Use: The Use and Manufacture of Tools by Animals* (1980), it can be difficult to separate tool use from the myriad other activities that animals perform.

An obvious route around this dilemma is to consider the manner in which objects might be used to solve problems. One cannot write about tool use without mentioning the work of Wolfgang Köhler and his studies of captive chimpanzees. His studies are interesting for introducing *Einsicht* ("insight") into the psychological literature. In his work, the chimpanzees were confronted with problems, for example, a piece of fruit was placed just out of reach and the chimpanzee was given two sticks. Köhler's thesis was that, after a period of confusion, the chimpanzee had a sudden realization (or "insight") that joining the two sticks would allow him to reach the fruit. However, subsequent research suggested that a chimpanzee, given two sticks, will spontaneously attempt to join them, as part of exploring and playing with them. Thus, it is not clear whether the "insight" led the chimpanzee to decide to join the two sticks, or whether joining two sticks provided him with a longer stick that he recognized could reach the fruit. On the one hand, if "insight" was at work, then one could assume that the chimpanzee spent some time mulling over the problem until realizing a solution—that is, viewing the solution to the problem as requiring cognitive activity. On the other hand, the physical activity of joining two sticks (because it was possible) could lead to the creation of a new object, which could have new properties that the chimpanzee could recognize. This seems to raise questions of perceiving the affordance of objects (in the manner suggested by J. J. Gibson) rather than requiring representation of a model.

There has been growing evidence from the neuropsychological community that images of objects that support grasping evoke different neural responses from other images (in both humans and apes). This suggests that the brain responds to objects that afford particular responses, such as grasping. Research from patients with apraxia (disorders of movement) suggests that objects are coded in terms of their appearance and also in terms of the sequence of actions performed with an object—lesions in specific cortical regions can impair one or another of these codings. An implication of this is that an object can be recognized as supporting a particular activity (e.g., a shoe or a stone can serve as a hammer), and that practicing the use of the object can create coordinative structures for expert performance (e.g., comparing an experienced carpenter with a novice sawing a piece of wood). This suggests that the use of tools is a complex combination of psychomotor skill with cognitive abilities to recognize objects as potential tools and to determine sequences of use of these objects.

Research on the forming of stone tools by early hominids often divides between theorists who suggest that the tools were being made to a template or model and those (more recently) who suggest that the tools could be fashioned by reacting to the appearance of the object as it was being shaped. This would be an extreme version of stone-tool creation in which the process of hammering the stone to produce a "tool" was repeated until something approaching a useful tool was produced. However, many surviving stone tools not only exhibit similar shapes, but also tend to exploit the properties of the stones being worked. This suggests that even if the toolmaker did not have a "template" of the final product, the activity was responsive to the gradually changing nature of the stone being worked. This suggests that the toolmaker was sufficiently dextrous to work the stone, and capable of recognizing the affordance of the stone as it was being worked. Consequently, rather than setting out to make a specific tool, the toolmaker might have selected a stone that would potentially yield a tool (thus, needing to recognize in an object not only the potential to be used as a tool, but also the potential to be worked into a tool) before beginning the process of working the stone. As this process unfolded, imperfections in the stone might result in unanticipated fractures that would cause the toolmaker to either abandon the stone or to modify the shape being worked. What is clear from analysis of early stone tools is that different tools were used for different purposes (often, collections of several different tools have been found on a site, implying the existence of a "tool kit" to support different activities).

If we accept that a tool, in any form, represents an extension of the user's abilities, cognitive tools can also be used to replace or at least redefine these abilities. What is interesting is that the substitution is not simply a matter of one set of activities replacing another, for example, a calculator replacing the ability to perform mental arithmetic by the ability to enter numbers on a keypad. Rather, the tool itself represents the problem that one is trying to solve, together with the manner in which to solve it. Thus, the calculator buttons invite entering numbers, even when the sum can be more quickly performed mentally. The conclusion is that a tool is not only a physical object but also the embodiment of the solution to a problem, and it also suggests the best way to approach activity.

SEE ALSO *Machinery; Production; Work*

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Christopher Baber

TOPOGRAPHY

Translated literally from its Greek roots of *topos* (place) and *graphein* (to write), *topography* means "the writing of place." In modern usage, however, the term has taken on more complex significance. As J. Hillis Miller notes (1995, p. 3), the term has come to refer to both the practice of accurate, scientific representation of particular places on the earth's surface and the actual configuration of those places. In social science, topographies (both representational and actual) are of interest to researchers investigating relationships between societies and local environments. Such studies are common within the disciplines of geography, anthropology, archaeology, and sociology, and are sometimes found within economics and political science. As the diversity of disciplines with topographical interests reveals, the term *topography* addresses a fundamental aspect of human experience (place) and thus serves as a foundational category around which social inquiry can be organized.

The dominant modern usage of the term has been in reference to the material configuration of places on the earth's surface, typically with an emphasis on physical geography rather than the built environment. As Robert Christopherson makes clear (2002, p. 338), topographical studies based upon this emphasis are marked by the observation and recording of landscape features such as hill and mountain relief (dramatic or modest), slope angles (shallow or steep), drainage patterns (wetlands and rivers), and terrain characteristics (rugged or smooth, vegetated or barren) for specific locales. The goal of such studies is to define regional topographies (in the material sense) and provide the environmental knowledge (through representation) needed to facilitate land use decisions appropriate to specific social and economic goals. For instance, as Scott Kirsch (2002) outlines in an essay on John Wesley Powell's (1834–1902) survey of the Colorado Plateau and surrounding area in the 1870s, in the late nineteenth century the U.S. government was keen to gain knowledge of the arid region of the American West so that land and resource use decisions could be made for an expanding nation. In particular, Powell was charged with ascertaining the irrigation potential of the region for agrarian settlement. Due to the undulating and arid topography, he argued, the grid system of land allotment typical of the Midwestern United States was not suited to the area. Instead, he recommended that all lots should abut water sources, even if that resulted in the alienation of land in irregular shapes. By observing and recording the characteristics of the physical geography of the region and combining the information for presentation in cartographic form, Powell's work provided distant decision makers with knowledge of local environmental conditions, thereby enabling the setting of social policies regarding land allocation and resource rights. Of course, this relationship between topographical information and land and resource use marks a variety of enterprises and activities. From hikers' use of maps to navigate mountain ranges to military officers' use of electronic geographical information to locate specific place-based threats and targets, understanding the material arrangement of the physical environment of certain locales is central to decision making and interaction with places.

While modern topographical studies have tended to focus on the material configuration of places on the earth's surface in order to facilitate land and resource use, this has not been an exclusive orientation. The term *topography* has been seized upon by a variety of researchers in the social sciences and humanities who are interested in place-based human experience. The humanistic geographer Yi-Fu Tuan (1974) has written about the centrality of place to human experience, the appreciation of which he terms

topophilia. Eugene V. Walter, in an attempt to formulate a more general understanding of humans' physiological attachment to place, has proposed the study of *topisitics* as a "framework to grasp the whole experience of space and place" (1988, p. 18). Asserting that "topostic inquiry seeks theories that represent and explain forces that make or break the integrity of located experience" (p. 18), Walter seeks to emphasize that places are more than the sum of their material components and that people's interactions with places form a central front in inquiries into both environments and the human mind. And, in his work on the relationship between literature, philosophy, and place, Miller (1995, p. 4) deploys the term *topography* to question how particular ways of knowing places have been inserted into modern Western epistemologies through language. Noting that in modern usage *topography* shifts between signifying representations of places and signifying actual characteristics of places, he highlights the connections between the production of knowledge about places and the experience of them. In different ways, then, these authors and others have moved understandings of topographies beyond concern for merely the material configuration of places and instead highlighted the multiplicity of ways in which humans become attached to and interact with places.

In an essay that brings together the human and physical aspects of place through a historical materialist approach, Cindi Katz argues for a conceptualization of *topography* as the sociomaterial terrain produced by an ever-globalizing capitalism. She insists that topographical studies "encompass the processes that produce landscapes as much as they do the landscapes themselves, making clear the social nature of nature and the material grounds of social life" (2001, p. 720). Further, Katz argues, the production of topographies "simultaneously turns on, reveals, and specifies the intricate relations among discrete places." As such, topographical studies "can provide literal and figurative grounds for developing a critique of the social and political-economic relations sedimented into space and for examining the range of social practices through which place is produced" (pp. 720–721). Ultimately, Katz points out that this framework enables the development of a series of *countertopographies*. She envisions these as "linking different places analytically in order to both develop the contours of common struggles and imagine a different kind of practical response to problems confronting them" (p. 722). In combination, Katz's conceptualization of topographies and countertopographies provides a resource for critical analyses of place that takes seriously the impacts of political and economic history in shaping local terrain.

As is evident from this survey, *topography* is a malleable and widely used term. With its focus on place and human understanding of it, the term and the studies organized around it are central to a comprehensive pursuit of social science. Whether material, social, or both, *topographies* (both representation and actual) mediate the lives people lead and help to define the places in which they are lived.

SEE ALSO *Anthropology; Archaeology; Architecture; Geography; Human Ecology; Irrigation; Natural Resources, Nonrenewable; Water Resources*

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David A. Rossiter

TOPOLOGY

In the social sciences, it is important to know if close-by models of human behavior and interaction entail close-by predictions. More precisely, the question is whether a sequence of models, which mirror reality in an increasingly accurate manner, yield predictions that converge to those that can be observed in the real world. *Topology* is a mathematical structure designed to express robustness, approximation, convergence, and continuity, and is thus useful in determining the relevance of a given social-science model.

For example, economies differ according to the endowments of individuals, the available production technologies, and the preferences of individuals over bundles of commodities. General Equilibrium Theory predicts the market prices that can emerge as a result of various combinations of these factors. The robustness of these predictions can then be tested through a consideration of a *topological space* of economies in which one can examine whether market prices change continuously with changes in the economies' characteristics.

Similarly, in Game Theory, Nash equilibrium is a prediction of the strategies that players will choose noncooperatively as a function of their preferences over the outcomes entailed by strategy profiles. When considering a topological space of games, one can check how Nash equilibria vary with the game specification. Alternatively, Social Choice Theory, based on normative considerations, prescribes a strategy profile that the players *should* choose collectively (rather than noncooperatively) in the social situation at hand. In a topological space of such social choice problems, one can check if close-by behavior is prescribed in close-by situations.

Formally, given a space X of model characteristics (or some other objects of interest), a topology is a system T of *open sets*, which are subsets of X with the following properties: (1) The union of any collection of open sets is open; (2) the intersection of a finite number of open sets is open; and (3) both the entire space and the empty set are open. The complement of an open set is called *close*. A space X equipped with a topology of open subsets T is called a *topological space*.

A pertinent example is the case in which the space is *metric*, i.e., when there exists a metric that defines the distance between any two objects in the space (such that the distance of an object to itself is zero; the distance from x to y is the same as the distance from y to x; and the distance from x to z is no larger than the distance from x to y plus the distance from y to z). In such a case, the unions of "open balls" constitute a topology (an open ball of radius r around a point x in the space is the set of points in the space whose distance to x is smaller than r). Moreover, a set v is open if and only if every point $x \in V$ has an open ball around it contained in V.

Hence, if for some property P of the model, the set V of characteristics at which P obtains is open, then the property P is *robust*: When a characteristic $x \in V$ is measured with a small enough error, the measurement will still have the property P.

The idea of robustness, as captured by open sets, carries over also to families of economic models whose topological structure is so rich it cannot always be compatible with a metric. Financial models of dynamic investment in continuous time, and stochastic uncertainty—over objective circumstances, as well as over others' uncertainties—are two important examples.

A sequence x_n of points in the space *converges* to the point x if for every open set V containing x there exists a stage N beyond which all points x_n, $n \geq N$ in the sequence belong to V.

This definition of convergence applies not only to sequences, but also to nets. In a *net* x_n, the indices n are not necessarily the natural numbers. Rather, they may form a *directed system*—a set where not every pair of distinct indices n, n' is characterized by one of the indices being larger than the other, but where there always exists another index n'' that is larger than them both.

Convergence of sequences and nets depends on the richness of the topology. In the *trivial topology*, containing only the empty set and the entire space X, every net converges to every point. At the other extreme, with the *discrete topology*, in which every subset is open (and, in particular, every subset containing a single point is open), a net x_n converges to x only if for some index N and onward $x_n = x$ for all $n \geq N$. Hence, the choice of topology expresses the extent to which the modeler views different points (or objects or model characteristics) in the space as distinct or similar. The more fine-detailed the distinctions are, the richer will be the topology, and fewer nets will be converging to any given point x.

When X and Y are topological spaces, we say that the function $f: X \to Y$ is *continuous at the point* $x \in X$ if for every net x_n converging to x, the net $f(x_n)$ converges to the point $f(x) \in Y$. We say that f is *continuous* if it is continuous at every point $x \in X$.

If X is a space of model characteristics and Y is a space of potential predictions, one would like the prediction function $f: X \to Y$ of the model to be continuous—otherwise a slight misspecification of the characteristics might yield wildly distinct predictions.

One can show that f is continuous if and only if for every open set $W \subseteq Y$, the set $f^{-1}(W) = \{x \in X: f(x) \in W\}$ is open in X. Thus, the richer is the topology of X and the poorer is the topology of Y, the more functions f from X to Y are continuous.

SEE ALSO *Manifolds*

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Aviad Heifetz

TORTURE

As media accounts and images of torture, trauma, disaster, and rape permeate our daily lives, it is difficult to ignore the impact such destruction wields on the social fabric in which we live. Individuals directly affected by this devastation, such as refugees, asylum seekers, IDPs (internally displaced people), and illegal immigrants, struggle to piece their lives back together after enduring unimagin-

able cruelty and violence. The cruel and violent acts witnessed and experienced by these individuals come in many forms, one of the most common being torture. Though the word *torture* is commonly used without restraint in everyday language, its use should be clearly differentiated from words for inhumane and degrading actions that may fail to match the true definition of "torture."

DEFINITIONS OF TORTURE

The two most frequently cited definitions of torture are the World Medical Association's (WMA) 1975 Declaration of Tokyo and the definition given by the 1984 United Nations Convention Against Torture.

The 1975 WMA Declaration defines torture as: "The deliberate, systematic, or wanton infliction of physical or mental suffering by one or more persons acting alone or on the orders of any authority, to force another person to yield information, to make a confession, or for any other reason." The 1984 United Nations Convention Against Torture expands upon this definition, distinguishing the legal and political components typically associated with torture:

> Any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from him or a third person information or a confession, punishing him for an act he or a third person has committed or is suspected of having committed, or intimidating or coercing him or a third person, or for any reason based on discrimination of any kind, when such pain or suffering is inflicted by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity.

Currently accepted definitions of torture have two essential elements: (1) Individuals are placed in captivity and subjected to extreme mental and physical suffering; and (2) the captors have a political goal or agenda. In this way, torture as a legal definition can be distinguished from criminal acts of violence.

TYPES AND PURPOSE OF TORTURE

The most common types of torture are summarized in Table 1. Torturers use these techniques to achieve several main goals. The most obvious intention of torture is breaking down an individual both physically and mentally (frequently for military or political purposes). Secondly, torturers seek to spread collective fear throughout a particular community or culture in which the victim lives. Finally, the torturer seeks to deeply humiliate the victim's society and community. The goal of torture is essentially to render the victim nonhuman.

Table 1. Most Common Forms of Torture.

Beating, kicking, striking with objects
Beating to the head
Threats, humiliation
Being chained or tied to others
Exposure to heat, sun, strong light
Exposure to rain, body immersion, cold
Being placed in a sack, box, or very small space
Drowning, submersion of head in water
Suffocation
Overexertion, hard labor
Exposure to unhygienic conditions conducive to infections and other diseases
Blindfolding
Isolation, solitary confinement
Mock execution
Being made to witness others being tortured
Starvation
Sleep deprivation
Suspension from a rod by hands and/or feet
Rape, mutilation of genitalia
Sexual humiliation
Burning
Beating to the soles of feet with rods
Blows to the ears
Forced standing
Having urine or feces thrown at one or being made to throw urine or feces at other prisoners
(Nontherapeutic) administration of medicine
Insertion of needles under toenails and fingernails
Being forced to write confessions numerous times
Being shocked repeatedly by electrical instrument

Table 1. Most Common Forms of Torture.

One important act of torture, for example, that has only recently been recognized as such is rape, a frequently used torture practice during periods of conflict and genocide. A group with a particular agenda often executes systematic or wanton rape and sexual violence knowing that the long-term effects of this experience will be devastating to both the individual and his or her community. However, rape was only recognized globally as an act of torture after the international appraisal of violence that occurred in Bosnia-Herzegovina and Rwanda.

PSYCHOLOGICAL AND PHYSICAL EFFECTS OF TORTURE

Knowledge of the types of torture described in Table 1 enables medical doctors, mental health professionals, and other health-care workers to assess the medical and psychological impact of torture and determine appropriate treatment. Until very recently, the psychological effects of

torture have remained largely invisible. This is because of the combined effects of the difficulty of assessing mental symptoms in culturally diverse populations, the unsuccessful search by human-rights organizations for a unique "torture syndrome," and the popular belief in some medical circles that extreme violence leads to the psychiatric diagnosis of post-traumatic stress disorder (PTSD). PTSD may be an appropriate diagnosis. However, this emphasis on PTSD has obscured the reality that the most common mental illness diagnosed in torture survivors is depression—often a serious and socially debilitating condition associated with serious medical consequences. While physical complaints in torture survivors are very common, usually these bodily complaints are the way people from various cultures express their pain and suffering.

Head injuries caused by beatings to the head with fists, clubs, or gun butts represent one of the most common physical effects of torture, leading to neuropsychological deficits that are rarely identified. Studies have shown that victims of all types of torture often experience persistent and pervasive sensory and memory deficits, cognitive impairment, chronic pain, and certain forms of motor impairment (as serious as paraplegia) as a result of their torture experience. Other more specific physical symptoms commonly reported include headaches, impaired hearing, gastrointestinal distress, and joint pain. Scars on the skin and bone dislocations and fractures are also typically observed.

Since sexual violence is a common form of torture, its effects, including increased risk for cervical cancer, human immunodeficiency virus (HIV) infection and AIDS, and a range of sexual dysfunction including impotence, must be identified and treated by medical professionals.

TREATMENT FOR VICTIMS OF TORTURE

Physicians and health-care providers throughout the world are frequently confronted with the need to identify and treat the physical and psychological impact of extreme violence and torture. It is estimated, for example, that 60 percent of individuals who seek asylum in the United States have been tortured, as have many refugees and migrant workers. A history of torture is common in various groups that have resettled in the United States and other countries during recent decades—Cambodians, Vietnamese "boat people," and former Vietnamese prisoners of war (POW) who arrived in the 1980s; Central Americans who immigrated in the 1980s and 1990s; and recent arrivals from sub-Saharan Africa, the Middle East, and eastern Europe. Many newcomers enter the United States not only to find economic opportunities but also to escape violence and political instability at home.

Despite routine exposure to the suffering of victims of human brutality, many health-care professionals tend to be apprehensive about confronting this reality in their clinical work. Globally, clinicians often avoid addressing torture-related symptoms of illness, believing they will not have the tools or the time to help torture survivors once they have elicited their history. As a result of this resistance, survivors and clinicians may conspire to create a relationship founded on the avoidance of all discussion of trauma.

The most effective care for torture survivors must begin with awareness. Persons who have been tortured generally do not want to be treated simply as torture survivors. Rather, they prefer a holistic approach that addresses their current reality in a culturally sensitive way. Many characteristics of the patient's background provide clues that torture may have occurred. As health-care practitioners become more empowered to ask questions such as, "Have you experienced extreme violence or torture?," it becomes easier to identify and treat the pathological symptoms of such trauma.

Torture survivors often do not recognize any relationship between the torture and current medical problems they may be experiencing. When asked about specific events, patients are usually grateful that the clinician is aware of what they have suffered, is interested in their history, and is encouraging them to talk about their story. Though clinicians often fear a patient's reaction to questions about torture, patients rarely become emotionally overwhelmed or lose control when such questions are asked. Some torture survivors, especially victims of sexual violence, may have been hiding their history out of feelings of shame or fear of stigmatization, and thus be grateful to talk to someone who cares. Others may come from cultures in which physicians are not expected to be interested in patient's personal history.

RECOVERY FOR SURVIVORS OF TORTURE

Many torture survivors recover from torture with the help of spiritual and religious practices, work, and altruistic activities that benefit themselves, their families, and their communities. These self-healing efforts need to be strongly supported by society and its health-care and mental health–care institutions. Human beings are incredibly resistant to even the most horrifying acts of human cruelty. While the majority of torture survivors recover without professional help, some do not. It has been shown that these individuals can greatly profit from proper medical and mental health care that will facilitate their return to a normal life.

A broad range of individual treatments exist that include primary health care, physical rehabilitation of tor-

ture-related disabilities, and psychological interventions aimed at eliminating traumatic memories, nightmares and chronic depression. Healing of torture survivors is also maximized when governments and the international community acknowledge the injustice they have suffered (e.g., the Truth and Reconciliation Commission in South Africa).

SEE ALSO *Guantánamo Bay; Interrogation; Justice; Post-Traumatic Stress; Refugees; Reparations; Resiliency; Restitution Principle; Sexual Harassment; Terrorism; Trauma; Traumatic Bonding; Violence; Vulnerability; War*

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TOTAL FACTOR PRODUCTIVITY

SEE *Growth Accounting.*

TOTALITARIANISM

Totalitarianism is a term employed by social scientists to describe a type of political regime that arose in the twentieth century. What is said to distinguish this type of regime from traditional forms of nondemocratic authority such as tyranny or dictatorship is the ability of the totalitarian state to establish and maintain a highly integrated social system that controls nearly every aspect of public and private life.

Social scientists have developed a theoretical model to delimit five essential features underlying this unique political system. First, the totalitarian state is organized around an all-encompassing ideology that subordinates all aspects of society to the logic of a teleological process that promises to culminate in the attainment of a perfect and final stage of humanity. In order to achieve the revolutionary goal, the totalitarian project systematically eliminates constraints on state power. In this manner, a totalitarian state aims to establish a permanent state of emergency (wherein the rule of law is suspended) as a legal norm, thus, in effect, codifying arbitrary power.

Second, totalitarianism destroys all social, legal, and political traditions that precede it. It transforms a pluralistic party system into the rule of a single mass party headed usually by a single dictator. The party aims to transform the ensemble of social relations into an integrated social totality by a process of perpetual revolution.

Third, if this "perpetual revolution" is to be carried out successfully, it must institutionalize a highly coordinated use of terror that shifts the epicenter of power from the army to the police. Totalitarian use of terror suppresses not only political opposition and all groups and ideas not subordinate to the substantive goals of the state, but also all social space traditionally beyond state control that exists among citizens. Such use of terror produces an environment within which individuals live with an extremely high level of uncertainty and unpredictability.

Fourth, such a regime monopolizes not only the armed forces, but all forms of mass communication as well. Seizing control over the means of communication allows the state to socialize and mobilize different segments of the population through the dissemination of mass propaganda. This mobilization entails the participation of individuals in state-sponsored social and political organizations that stage events and campaigns that often target an "enemy of the state," usually entire categories of citizens that must be eliminated. Finally, the totalitarian state seeks central control and direction of the economy.

The two outstanding historical examples of totalitarian states are Nazi Germany, particularly during the years of World War II (1939–1945), and Stalinist Russia (1927–1953). Although most commentators agree on the totalitarian nature of these two states, there is no general consensus on what other states can be declared totalitarian, but such a list could arguably include fascist Italy under Benito Mussolini (1922–1943); Communist China, particularly during the Cultural Revolution

(1966–1976); Khmer Rouge Cambodia (1975–1979); Augusto Pinochet's Chile (1973–1989); the Argentine military regime of the 1970s; and North Korea since 1953.

CAUSES OF TOTALITARIANISM

There are a number of possible causes of the rise of totalitarian states. An historically specific explanation has it that the political and economic chaos in Europe that followed World War I (1914–1918) created a climate of fear and resentment that some popular governments and movements exploited in order to seize or consolidate state power. Fascist totalitarian regimes (Mussolini's Italy and Nazi Germany) aimed at diverting attention from class conflict by ruthlessly repressing political strife and labor unrest and promoting a form of nationalism in the name of interclass solidarity. Communist systems, on the other hand, sought to end class struggle and inaugurate a classless utopia by repressing those opinions and actions deemed antithetical to a workers' state.

Another argument holds that industrialization eroded traditional social values and familial, social, and professional bonds, thereby creating a gap that was then filled by the development of a modern mass society; the latter came to be distinguished by a uniform style of life reinforced by propaganda, advertising, and mass entertainment. In such a society, individuals severed from tradition become alienated and highly susceptible to totalitarian manipulation.

An explanation popular with libertarian theorists argues that the roots of totalitarianism can be found in the gradual growth of socialism in all industrial societies. Such theorists argue that because socialism requires states to direct and control the economy, it lays the groundwork for the eventual subordination, regulation, and domination of all aspects of public and private life.

Another explanation sees a connection between the rise of totalitarianism and the influence exerted by certain traditions in political philosophy that promote a theoretical justification for the creation and preservation of an ideal state. Jean-Jacques Rousseau's concept of a "general will" and G. W. F. Hegel's exposition of "absolute spirit" in the state are often included in a larger historical narrative that isolates the origins of totalitarianism in the Enlightenment philosophers' equation of reason with the transformative powers of technology. An alternative explanation views the rise of totalitarianism as part and parcel of European imperialism and racism.

Totalitarianism differs from its equally nondemocratic and modern counterpart, authoritarianism. Whereas the former is concerned with revolutionizing the entirety of social relations, the latter is principally concerned only with exercising and maintaining direct political control. Authoritarian states do not reach into the private sphere, at least to the same extent as their totalitarian counterparts. Authoritarian states thus allow elements of civil society such as religious organizations, schools, private nonpolitical associations, and the press to retain a relative degree of autonomy. Seeking above all to ensure their own political survival, authoritarian states have neither the will nor the resources to control all aspects of social, economic, and individual life. It should be noted, however, that the theoretical distinction between these two kinds of states tends to falter when applied to actual countries. However, the inadequacy of the distinction in this context does often serve to illuminate the extent to which its use is primarily determined by the political perspective of the analyst. For example, during the cold war, conservative commentators were likely to see left-wing dictatorships as "totalitarian" and their right-wing counterparts as "authoritarian." Analyses of the right-wing military regimes of South America's Southern Cone have since questioned this easy demarcation.

HISTORY OF THE CONCEPT

Although the term *totalitarian* was first coined by the Italian fascist philosopher Giovanni Gentile in 1925, it did not come into widespread use in the social sciences until the 1940s. During this period Hannah Arendt, Carl Friedrich, and Zbigniew Brezinski were primarily responsible for expanding the use of the term so that it could serve as a means of understanding the excessive repression associated with Nazi Germany and Stalinist Russia. During the cold war the concept played a pivotal role in the formation of U.S. containment policy directed toward the Soviet Union and other communist and/or socialist states. It then fell into disuse during the 1960s, particularly among Western Sovietologists, either because it was seen as lacking conceptual rigor or, more likely, because it was viewed as more an ideological than an analytical form of typology. Nevertheless, the term was revived a decade later by neoconservative theorist Jeane Kirkpatrick, who sought to influence U.S. foreign policy makers by arguing that although totalitarian states were incapable of transforming themselves into democracies, their authoritarian counterparts could be refashioned into liberal democracies—or at least into nonthreatening realpolitik allies in the U.S. attempt to contain global communism. The appositeness of this argument abruptly expired in the wake of the unanticipated implosions of the Soviet Union and its Eastern bloc allies in the late twentieth century.

In the opening years of the twenty-first century, however, the term was redefined yet again, this time by leftist theorists who pointed to the encroachment of capitalist markets into an increasing number of sectors of liberal democratic states. This growing depoliticization of

public space is viewed as indicative of a new kind of totalitarianism.

Some critics charge that the concept of totalitarianism does not account for the different forms of social totality that may exist, not all of which are tyrannical; that is, that the concept tends to conflate all forms of social totality (the expansion of the public sphere into the private) with *statist* totality (one where the state controls all aspects of life). However, other forms of social totality, such as communitarianism (in which individuals tend to see in the public realm the fulfillment of their private interests) and involuntary totality (one where pluralistic compromise requires public power to seep into the private realm, such as with the modern welfare state), enjoy widespread support. The conceptual weakness of the concept of totalitarianism lies in its reliance on the abstract liberal democratic bifurcation of society into public and private spheres, an analytical division that seems to grow less rather than more distinct when submitted to historical and theoretical scrutiny.

The concept of totalitarianism has also been faulted for overstating the monolithic nature of the regimes it explains. According to such critics, totalitarian states are more likely to resemble a "fragmented authoritarianism," where power is dispersed pluralistically among competing elites situated at various levels of government, instead of being derived from any single and totalizing source or idea. Viewed in this manner, totalitarianism no longer functions as an accurate or adequate tool to explain nondemocratic regimes. Some critics have also noted that the term readily lends itself to certain ideological and propagandistic programs; according to one argument, the concept of totalitarianism functions in liberal democratic societies as a way of preempting any theory or practice aimed at an egalitarian transformation of social and political relations. Known as the "blackmail of totalitarianism," this tactic holds that any achievements associated with a sociopolitical movement with aspirations for expanding equality would inevitably usher in a new reign of terror. Critics note that this "blackmail" attempts to limit the very possibility of egalitarian politics by isolating it as antidemocratic.

Other scholarship also has called into question the traditional juxtaposition of totalitarianism to constitutional democracy. The latter limits the power and authority of the state in order to promote pluralism, whereas the former obliterates the distinction between the state and civil society in order to consolidate its power. However, upon closer inspection, certain similarities between totalitarianism and modern mass democracy are discernible. In both, the state possesses a monopoly of military and police force. Both control certain forms of mass communication and suppress dissent, particularly in times of crisis. Some theorists have noticed that by the early twenty-first century, democracies, not unlike their totalitarian counterparts, have invoked with increasing frequency the state of emergency as a means of preserving the legal norm. Also, as noted originally by Alexis de Tocqueville, modern democracies often engender a high level of conformity to repressive and irrational standards of social behavior—a feature also found in totalitarian states. What this suggests is that, in its own way, the modern mass democracy may be just as adept as totalitarianism at placing effective limits on individual freedom. In this sense, democracy and totalitarianism share certain features that have become hallmarks of a technically advanced mass society.

TOTALITARIANISM IN POPULAR CULTURE

By means of literature and cinema, totalitarianism has made its way into the popular imagination. An entire literary genre known as dystopian literature is dedicated to nightmarish representations of totalitarian systems. These depictions are crafted largely through the satirizing of certain trends in contemporary society. The major texts of this genre include Yevgeny Zamyatin's *We* (1922), Aldous Huxley's *Brave New World* (1931), and George Orwell's *1984* (1949). These three works vary in their views as to what elements in contemporary society are most totalitarian. Zamyatin criticizes the desire for technological efficiency and routine rooted in industrial societies by depicting the world as a single state dedicated to the static mathematical and technological routinization of all life. Huxley's novel targets the fetish of youth, the dangers of consumerism, and the manipulations of the human psyche built into commercial societies, especially the United States. Orwell's *1984* most directly targets Stalinist totalitarianism, but also includes satirical references to British capitalism. Orwell's novel is the most controversial of the three works, largely because of its mobilization during the cold war as a political attack on all utopian visions. Cinematic representations of totalitarianism include Bernardo Bertolucci's *Il Conformista* (*The Conformist*, 1970), Ridley Scott's *Blade Runner* (1982), and Terry Gilliam's *Brazil* (1985). Whereas Bertolucci and Gilliam, in quite different ways, tackle totalitarianism from the perspective of the individual's longing for escape, Scott depicts the loss of humanity in a world dominated politically by large, manipulative corporate interests. Cinematic representations of totalitarianism share the diversity and nightmarish elements of their literary cousins.

SEE ALSO *Authoritarianism; Mussolini, Benito; Repressive Tolerance; Tito (Josip Broz); Tyranny of the Majority; Union of Soviet Socialist Republics*

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TOTEMISM

Totemism has been the subject of much discussion within the social sciences, in particular within the discipline of social anthropology, concerning both what totemism means and whether it is a valid, cross-culturally descriptive term for the range of phenomena it is often used to describe. Various definitions of totemism exist, but it is usually agreed that the word *totem* is derived from the language of the Ojibwa, an Algonquin Native American ethnic group from north of the Great Lakes region in North America. Claude Lévi-Strauss, who has produced one of the most important works on the subject, *Totemism* (1962), describes how the Ojibwa expression *ototeman* means, approximately, "He (she) is a relative of mine" ([1962] 1991, p. 18). This is significant, for a useful and broad definition of *totemism* is that it refers to the use of plants or animals by social groups as guardians or emblems that are ritually celebrated. In such a system, different social groups are identified with different species.

There have been two phases in how totemism has been considered by anthropologists. Initially, it was presented by such scholars as Émile Durkheim (1858–1917) and James Frazer (1854–1941) within an evolutionary framework—that is, totemism was seen as a unified and universal phenomenon that was a required state of the religious belief through which all societies must proceed. The second, less simplistic view allows for variety in both the classificatory systems and the symbolism evident in totemism in different cultural contexts. The latter is best represented by the work of Lévi-Strauss. A third phase of thinking about totemism is sometimes apparent, in that totemism is at times now subsumed, usually erroneously, within the category of shamanism. As a result, the religious beliefs and practices of hunter-gatherer communities, for instance, might be referred to exclusively as those of *shamanism*, while *totemism* is suppressed or avoided. This third view might reflect the fads to which scholarship, like many other endeavors, is subject, for *shamanism* is academically fashionable at present, whereas *totemism* is not.

The archaeologist Steven Mithen has suggested that cognitive developments indicate that totemism and anthropomorphic thought developed as early as circa 100,000 years ago as a result of the integration of the domains of social and natural history intelligence (1996). This view is interesting, if difficult to prove, and the denotations of the earliest possible material indicators of totemism have been subject to debate. For example, recent interpreters of Upper Paleolithic rock art, which appeared around 40,000 years ago in Europe, see it as primarily shamanic rather than totemic. This interpretation is based upon the distribution of the images present in rock art. The species represented in a shamanic system will be widely depicted as guardians available to people in many different groups. In contrast, the species represented in totemic rock art are much more preferentially depicted within the group territory for which they serve as a totemic emblem. The later rock art of parts of Australia is usually described as totemic. The rock art of Wardaman country in the Northern Territory, for example, is linked with the "dreaming" (i.e., creation) and with totemism through the representation of painted dreaming beings such as emus, devil dogs, flying foxes, and nail-tail wallabies.

Bruno David has described the central role of totemism in various Australian aboriginal societies, as manifest in rock art but also in totemic centers and sacred objects, and their associated rituals, the whole creating "a socially meaningful, ordered world" (David 2002, p. 51). In the Australian examples, totemism is manifest across whole landscapes; in other societies, it may be prominently attested in different ways. The totem poles produced by various Native North American ethnic groups of the Pacific Northwest Coast, such as the Haida people of the Queen Charlotte Islands, provide an example of the variety that exists, affirming Lévi-Strauss's thesis, as well as the absence of a universal totemic "template." Totemism certainly continues today, in Australia and also among the Tallensi of northern Ghana, but as is usual, it forms one element of a set of religious beliefs and practices that cannot be defined as solely totemic. In fact, totemism has probably never been the sole element of any group religious practice and belief where totemism is found, but rather coexists alongside, for instance, animistic beliefs,

ancestral and earth cults, or shamanism. Among New Age groups where paganism, neoshamanism, and druidism are found, totemic beliefs, as understood by the definition given above, apparently do not exist. In the United Kingdom, for instance, where druidism, paganism, and neoshamanism all prevail, totemism rarely enters the relevant vocabulary, perhaps indicating its absence or a need to refine the definition of what totemism is.

SEE ALSO *Dreaming; Lay Theories; Levi-Strauss, Claude; Magic; Myth and Mythology; Religion; Rituals; Shamans; Supreme Being; Symbols; Visual Arts*

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Timothy Insoll

TOURÉ, SÉKOU

SEE *Socialism, African.*

TOURISM

Tourism is a complex phenomenon that can be conceptualized on several levels. It can be considered demographically, as the flow of temporary leisure migration across international boundaries (international tourism) or within the boundaries of a given country (domestic tourism). It can be thought of institutionally, as the system of enterprises (airlines, travel companies, touring agencies, hotels, resorts, guest houses, souvenir shops, restaurants, theme parks, and so on) and organizations (travel associations, local and national tourist authorities, and international tourist organizations) that process and serve that flow. Finally, it can be conceptualized socially, as the complex of attitudes, motivations, norms, and role models that regulate and shape that flow into a distinct institutional domain.

Traveling for leisure was common in many historical and premodern societies. Tourism as a socially recognized, separate institutional domain, however, emerged in western Europe only in the course of the nineteenth century.

HISTORY

There have been two major precursors of modern tourism: (1) *pilgrimages* to sacred places, which created basic services for travelers, such as hostelries, and formed routes that prefigured the itineraries of modern sightseeing tourism; (2) *spas*, or thermal springs, at which members of the European higher classes assembled to "take the waters," which prefigured popular modern vacationing tourism on seaside beaches.

The Grand Tour of the British nobility and upper classes between the late sixteenth and the early nineteenth centuries was a form of secular pilgrimage to the centers of European antiquity and culture. In its course, an expanding core of major attractions and amenities developed, which constituted the basis of the emergent modern tourist system.

The development of modern tourism was made possible by major technological innovations in transportation, such as the steamship and the train, and later the car and the airplane, which facilitated the establishment of regular transportation services for large numbers of people. The demand for tourist services, however, was provoked by the economic and social changes that followed the Industrial Revolution: Industrial pollution and urbanization separated people from as yet unspoiled nature; the strains of modern life created demands for rest and recreation; secularization and imperial conquests led to a broadened outlook on the world and a growing interest in remote lands and people. The prosperous middle classes increasingly disposed of discretionary income, which enabled them to bear the costs of traveling, while the introduction of social benefits, such as paid vacations, enabled ever broader social strata to travel. The introduction by Cook, in 1841, of the package tour, was followed by other innovations in the organization of travel, such as the formation of travel companies and touring agencies, airlines, and hotel chains, which made traveling fast and easy, even for people with limited cultural capital.

The principal expansion of tourism took place in the second part of the twentieth century, and especially from the 1970s onward, with the emergence of mass tourism to popular destinations. Most citizens of affluent Western countries at the end of the century took at least one annual vacation abroad, and many took two or even more. Tourism from the non-Western countries, especially Japan, and, more recently, India and China, expanded at an accelerating rate; experts predict that by 2010, one hundred million Chinese will be traveling abroad.

THE TOURIST INDUSTRY

Contemporary tourism is a massive phenomenon. According to the World Tourism Organization (UNTWO), there were 808 million international tourists in 2005, up from about 25 million in 1950. The scope of domestic tourism cannot be ascertained, but it is estimated to be three or four times larger than that of international tourism, totaling about 2.5 to 3.0 billion people per year.

Tourism is one of the leading components of world trade, accounting for about 6 percent of world exports of goods and services. In 2004 the total expenditures of international tourists amounted to $623 billion, up from about $2 billion in 1951. The great majority of international border crossings remain concentrated in Europe, a phenomenon ensuing partly from the relatively large number and small size of European countries. Six European countries are among the ten leading global destinations. France tops the list, with about 70 million visitors a year.

As of 2006 global tourism is growing at about 4 percent annually, but the rate of its expansion to non-Western destinations is significantly higher than it is in the old European core. This growth manifests a marked *heliotropic* tendency, a flow of tourists from the cold North to vacationing destinations in the warm South, particularly those around the Mediterranean, Caribbean, South Pacific, and Southeast Asian coasts.

Mass tourism is an important source of significant economic benefits, particularly to less-developed countries, but these are mostly unequally distributed. It has also generated undesirable and sometimes destructive environmental, social, and cultural consequences in popular destinations, which threaten the sustainability of local tourist industries. Small countries, particularly island states, in which tourism became the dominant industry while other sectors of the economy remained underdeveloped, are often utterly dependent on tourism, and thus often exposed to financial risks created by far-away political and economic crises.

In reaction to the problematic consequences of the hegemonic tourist industry, various kinds of "alternative tourisms" have emerged, such as "green" tourism, ecotourism, low-impact tourism, and "countercultural" tourism, the latter espoused in the ideology—but not necessarily in the practice—of contemporary backpackers. Most of these alternative tourisms, however, have been eventually absorbed by the tourist industry, which has adapted its services to the particular needs and preferences of alternative tourists.

More recently, rather than seeking alternatives to the industry, environmentalists and other concerned individuals have sought to collaborate with the industry to ascertain the sustainability of tourism development projects. They thus hope to prevent the environmental and social ravages that unconcerned and often speculative developments wrought in sensitive sites in the past.

SOCIOLOGICAL APPROACHES TO TOURISM

Sociologists have been slow in realizing the growing significance of tourism. Early commentators tended to disparage rather than analyze the phenomenon. Once its study was initiated, the principal issue of concern became the relationship between tourism and modernity (and, later on, postmodernity). Dean MacCannell (1973) proposed a distinctly sociological perspective on tourism, by conceiving of the tourist as a modern individual who, alienated from his own society, travels in quest of authentic experiences in other places and other times—in pristine nature, unspoiled, simple communities, or the traces of great civilizations of the past. In MacCannell's view, however, this quest is thwarted by the locals at the destinations, who stage "authentic" tourist settings for the visitors' consumption.

Though influential as a paradigm for the sociological study of modern tourism, MacCannell's approach was also much contested. Critics argued that he essentialized "the tourist," disregarding the empirical variety of touristic phenomena; while a quest for authenticity might be a modern cultural ideal, not all tourists are believed to pursue it to the same extent. Typologies of tourists and touristic experiences were proposed (Cohen 2004). Authenticity was shown to be a socially constructed concept, rather than a given fact. Ning Wang (2000) distinguished between three kinds of authenticity: objective, constructed, and existential—the latter being a state of exaltation, of "really living," virtually independent of the nature of the tourist's surroundings. Wang's concept may help explain the attractiveness of otherwise overtly contrived attractions, such as theme parks.

The emerging discourse of postmodern tourism, or the "post-tourist" (Urry 1990), moved away from MacCannell's paradigm. In a world allegedly devoid of originals, and dominated by simulacra (Baudrillard 1988), the quest for authenticity becomes senseless. The growing interpenetration of cultures in the twin processes of globalization and "glocalization" blurs the distinction between *home* and *away*, and between ordinary leisure and tourism. Sophisticated and reflective post-tourists are said to travel in quest of enjoyment of experiences that, while familiar, are of a higher quality, more abundant, more varied (and cheaper) than those available at home. They are particularly attracted to the "world cities," such as London, Paris, or New York, which are the pacesetters in contemporary music, art, fashions, and cuisine, but they may also derive fun from visits to such contrived attrac-

tions as technologically highly sophisticated theme parks, of which the Disneylands are the prototype. Some researchers argue that the alleged fragmentation of the postmodern worldview, and of individual identities, is reflected in the post-tourists' tendency to mix diverse experiences on the same trip (Uriely 2005), thus thwarting the possibility of constructing typologies of post-tourists.

In the contemporary world, tourism often merges with other institutional domains, such as education (study tours), religion (pilgrimage-tourism), sports (*extreme tourism*), and recently even medicine. *Medical tourism*, combining vacations with medical services, emerged in the last years of the twentieth century as a rapidly expanding phenomenon, with growing numbers of people from developed countries seeking a variety of treatments and checkups in developing ones. They are pushed by the escalating costs of private medicine, and the lengthening of waiting lists for socialized medical services, in their countries of origin, and attracted by the high quality and relatively low costs of treatments offered by top hospitals in several developing countries, such as Brazil, India, Malaysia, Singapore, Thailand, and Turkey. Popular vacationing destinations, such as the islands of southern Thailand, offer package tours, combining vacations with medical checkups, cosmetic treatments, and even surgery. The phenomenon has led to an internal brain drain of qualified physicians from local to foreigner-oriented medical establishments, but it has also encouraged some who emigrated to the developed West to return to their home countries.

THE FUTURE OF TOURISM

The alleged homogenization of the world under the impact of globalization is considered by some authorities as a disincentive for tourism; however, tourist numbers are in fact growing annually, and are projected to continue to grow even more strongly in the future, with much of the expected growth coming from newly prosperous non-Western countries. The tourist system has continually expanded into new regions, though large parts of sub-Saharan Africa, Central Asia, the South American interior, and Antarctica remain as yet relatively little penetrated by it. While it will probably yet expand into most of those regions, space is expected to become the new frontier of tourism in the twenty-first century. As yet affordable only to the extraordinarily rich, and facing apparently insurmountable technological, medical, and economic constraints, space tourism might remain restricted to only a few passengers into the foreseeable future; however, the current popularity of simulated space travel and of brief, commercial flights to the edge of space, offered to the general public, attest to a demand for the "real thing." If such a demand persists, and is no mere fad inspired by novelty, it might provide the incentive for the necessary scientific breakthroughs in the more remote future. Whether and when space travel will become affordable to broad social strata, however, remains an open question.

SEE ALSO *Cultural Tourism; Disney, Walt; Gaze, The; Leisure; Tourism Industry*

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TOURISM INDUSTRY

Leisure tourism has long been a pursuit of the wealthy, but it is only since the 1980s that the majority of the population has become involved, either as tourists or as workers catering for their needs—a phenomenon that has raised tourism to the position of one of the world's largest industries. Domestic tourism is estimated to be ten times greater in volume than international tourism, and yet relatively little is known about it; closer attention has been paid to international tourism. With developments in world trade, better means of transport and communications, intensive marketing, rises in disposable income, improvements in political ties, technological advances, and increased leisure time, international tourism has grown rapidly, as is reflected in the global trend of inbound tourist arrivals and receipts. The number of international arrivals rose from 25 million in 1950 to 763 million in 2004, and receipts rose from $2 billion to $623 billion during the same period (World Tourism Organisation 2006).

Globalization has also contributed to the rapid expansion of tourism, via such changes as deregulation of air transport. The growth of charter flights, low-cost airlines, and package-tour holidays provided a major boost to this expansion. International and domestic tourism

combined generate up to 10 percent of the world's gross domestic product (GDP) and a considerably higher share in many small nations and developing countries.

The tourism product comprises a combination of goods and services supplied by the tourism industry, as well as nonpriced features that motivate tourism, such as natural sites (such as beaches, mountains, and forests), historic sites, and cultural features. The welcome provided to tourists by industry employees and by the local population is also of fundamental importance. The tourism industry includes hospitality (e.g., accommodation, restaurants), transportation (e.g., airlines, car rental), travel facilitation and information (e.g., tour operators, travel agents, tourist information centers), and attractions and entertainment (e.g., heritage sites and theme, national, and wildlife parks). Thus the scope of tourism supply is wide-ranging and influenced by market conditions that affect the environment in which tourism businesses operate.

The market structures within which tourism businesses operate vary from highly competitive (akin to perfect competition) to monopoly. Key features indicating competitive status are the number and size of firms, degree of concentration, entry and exit conditions, pricing strategies, profit levels, product differentiation, cost structures and capacity, and interaction between firms (Sinclair and Stabler 1997). The classification of the supply components is not straightforward; for example, the transport and accommodation sectors are themselves divided into subcategories with different market structures.

The accommodation sector is dominated by large chains (e.g., Cendant Corporation, Bass Hotels, Marriott, Accor, Choice, Hilton), giving the impression of an oligopolistic structure, and each firm's strategy takes account of the past and predicted future strategies of the others. This sector also encompasses a large number of other establishments with diverse attributes, including hotels, motels, holiday centers, timeshares, and camping facilities, and the diversity of the products that they provide, and a degree of price control, indicate monopolistic competition. In contrast, a highly competitive market structure characterizes the sales of souvenirs and knickknacks by numerous small businesses, including street-based sellers, who have very limited control over the prices they can charge tourists.

Tour operators negotiate deals with hotels, airlines, and other service operators to assemble holiday packages primarily for the mass market, facilitating a link between suppliers and customers. The packages are retailed through travel agents or directly to the customer. In the United Kingdom, the inbound and outbound tour-operator organizations, UK Inbound and ABTA (Association of British Travel Agents), respectively, defend their interests. ABTA had 6,310 travel-agent office members and 1,052 tour-operator office members in 2005, generating a combined turnover of £26 billion. Eighty-five percent of all package holidays sold in the United Kingdom were sold through ABTA members. The four dominant tour operators in the United Kingdom are Thomson, First Choice, My Travel, and Thomas Cook. Large tour operators are primarily linked to the mass market, whereas specialized tour operators that cater for ecotourists, older tourists, and gay and lesbian travelers are growing rapidly. Although the large tour operator market structure is highly concentrated, suggesting an oligopolistic structure, there is relatively easy entry into and exit from the sector, so it has many of the characteristics of a competitive, contestable market. The fact that many tour operators tend to experience low profit margins also indicates a competitive structure. High sales volumes have enabled the large firms to achieve substantial economies of scale and scope, but they are experiencing intense competition from Internet travel sites.

Travel agents are, in effect, retailers providing travel services to customers for commission. Some are linked to tour operators, and others function independently. This intermediary sector has experienced substantial growth. In the United States there has been an almost fivefold increase in agency outlets since the early 1970s. In the early 1990s more than two-thirds were single-office agents, and just one-fifth were branches of multiple firms. This is in contrast with Europe, where single outlets account for no more than one-third of the total, with the major multiples owning just over one-quarter (Sinclair and Stabler 1997). Like the tour operators, travel agents are facing a major challenge from the rapidly growing Web-based companies that sell a wide range of holiday packages over the Internet.

Transport is a crucial factor in the growth of tourism. With the wide range of transport modes (air, rail, car, bus, coach, ferry), the market structure is diverse. Air travel is of key importance in terms of passengers carried and revenue generated. Since the 1960s air travel has grown tremendously, and with technological change the potential for growth has increased further. With deregulation, privatization, low-cost airlines, and globalization, competition in the air industry is fierce, although oligopolistic conditions and domestic monopoly still exist in some long-haul destinations, and airline alliances such as the Star Alliance and One World have facilitated collaboration. The structures of the bus, coach, ferry, and rail sectors are similar to the air sector's in that they have problems of high capital costs, fixed capacity, peaked demand, and the need for feeder routes to sustain profitable ones.

The source markets for international tourism are concentrated in the industrialized countries of Europe, the

Americas, and Asia and the Pacific. The main tourist-generating countries are in the world's industrial core: The United States and Germany are the major markets, followed by the United Kingdom, Japan, France, and Italy. With rising levels of disposable income many emerging economies, such as those of Central and Eastern European countries, have shown fast growth in recent decades, and China is becoming a major source market.

Europe remains the most visited of all regions of the world; since the new millennium it has received almost 60 percent of all international tourists and more than half of total tourism receipts. France is the most popular destination visited by tourists worldwide, followed by Spain, the United States, Italy, China, and the United Kingdom. In terms of international tourism receipts, the United States has been the major recipient, accounting for around 12 percent of the total, followed by Spain (8 percent) and France (7 percent).

Outbreaks of disease or political unrest or terrorist attacks have recently hit the tourism industry with some severe and unexpected downturns in demand. Examples include the Gulf War in the early 1990s, the terrorist attacks at Luxor in Egypt in 1997, the Kosovo conflict in 1999, foot-and-mouth disease in the United Kingdom in 2001, the September 11 terrorist attacks in the United States in 2001, and the tsunami in the South Pacific in 2004. All of these events had negative impacts on the number of international tourist arrivals. In 2003 world tourist arrivals were 691 million, compared with 703 million in 2002. Tourist arrivals from the United States fell from a high of 128 million in 2000 to 113 million in 2003. Despite the volatility in demand over the short term, the World Tourism Organization forecasts that international arrivals will reach more than 1.56 billion by the year 2020, with Europe being the top destination, followed by East Asia and the Pacific, the Americas, Africa and the Middle East, and South Asia.

The recent high growth in tourist arrivals and expenditures affects host destinations in various ways, contributing to higher exports of services, bringing in foreign currency, increasing the level of income, and generating tax revenue. Tourism also generates large numbers of jobs, although remuneration in many parts of the tourist industry is low compared with other industries. There is significant gender structuring in employment. For example, in the United Kingdom in 1995, 76 percent of jobs in the transport sector were filled by men, whereas 62 percent of those in accommodation and catering were undertaken by women (Purcell 1997). Furthermore, in the hospitality sector staff often live on premises and are expected to work long and "unsocial" hours. Many receive low pay, and there is a large proportion of young, female, and part-time and casual staff, as well as high staff turnover in many establishments.

Although the tourism industry has great potential for benefiting recipient countries, major criticisms have been leveled at its impact on the environment as well as on social norms and cultures. Construction of resort hotels and theme parks, for instance, has led to significant changes in the environment and some reduction in the biodiversity of native flora and fauna. Damage to coastal areas has been a cause for concern, with construction of marinas and other water-based activities. Other environmental issues relate to noise and air pollution (for example, from aircraft, vehicles, nightclubs) and to water contamination by discharges from hotels, boats, and cruise ships. These pose serious challenges for destination managers.

Industry problems, ranging from increasing competition between destinations to environmental concerns, have encouraged destinations to introduce structural changes and to think about sustainable tourism. Many destinations have stressed the importance of ecotourism. Tourism is a sensitive industry with respect to changes in economic, social, and political conditions, and tourism activities are hampered by disease, political unrest, and climatic changes. A further challenge for the tourism industry is to consider how to integrate tourism into society such that the economic benefits are equitably shared without significantly damaging the environment.

SEE ALSO *Colonialism; Development Economics; Gaze, Colonial; Gaze, Panoptic; Imperialism; Industry; Tourism; Travel and Travel Writing*

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TOUSSAINT-LOUVERTURE
1743–1803

Toussaint-Louverture was one of the most important leaders of the Haitian Revolution. He is generally considered

to be the father of Haitian independence although he did not survive to see Haiti become free, and during his lifetime he claimed to be loyal to France.

Much of Toussaint's early life is shrouded in mystery. He was probably born in 1743, a slave on the Bréda plantation at Haut-du-Cap near today's Cap Haitien. There he was known as Toussaint Bréda. He served the plantation as a caretaker of livestock and a coachman, and was obviously a valuable slave who was treated with some consideration by his masters. He was allowed to marry Suzanne Simone before 1776, and they had three children. The estate manager, Antoine Bayon de Libertat, granted him his freedom, probably around 1774. By the 1780s he owned land and slaves and was a small-scale planter. He also served in the colonial militia. Haitian tradition holds that he went to Savannah, Georgia with the French army to fight in the American Revolution.

Toussaint, who knew how to read and write, became secretary to Georges Biassou (d. 1801), one of the early leaders of the slave rebels in Saint-Domingue's north province shortly after the great uprising of August 1791. He brought military professionalism and ideological and political coherence to the slave rebels' cause. After Biassou's death, Toussaint became supreme commander and led his forces to victories over a wide variety of enemies. It was at this time that he took the surname Louverture. He first fought against the French revolutionary government alongside Spanish and French Royalist troops. When in 1794 the government in Paris abolished slavery, Toussaint switched sides, taking a good-sized Spanish force by surprise and wiping it out. Then, he fought British invaders and dissident Haitian rebels before taking control of the entire island by 1801.

As governor-general of the island, he set up a system of required labor service for the former slaves that tried to respect both the human rights of the agricultural laborers and the property rights of the land owners, and to ensure the supply of tropical produce for the French market. But his system was highly unpopular among the former slaves, who did not want to go back to working on sugar plantations after they had fought a terrible war for their freedom. They refused to work, and the Haitian army had difficulty forcing them. Production of sugar remained very low.

This setback led Napoléon Bonaparte (1769–1821), now the supreme leader in France, to decide that Toussaint's liberty was not worth the price. Napoléon's wife and brother-in-law both owned property in Haiti and wanted the old system restored, and Napoléon saw the abolition of slavery as one of the excesses of the radical revolutionaries that he was determined to reverse. When he sent an army in 1802 to overthrow Toussaint and restore the old system, Toussaint and a few of his soldiers fought the invaders, but most of his army obeyed Napoléon's orders. The few resisters put up a tough fight but were finally defeated. Toussaint was arrested and taken to France, where he died in prison. Even as he was breathing his last, his former generals were becoming aware of Napoléon's plans and plotting a new uprising. Jean-Jacques Dessalines, Toussaint's lieutenant, led them in a terrible life-or-death struggle and won Haitian liberty on January 1, 1804.

Toussaint-Louverture became a symbol of freedom for blacks throughout the African diaspora. He inspired an 1802 sonnet by William Wordsworth, "To Toussaint Louverture," which is considered one of the founding documents of English romanticism in literature as well as an inspiration to English abolitionists. He also inspired the African American artist Jacob Lawrence to make a famous series of portraits illustrating moments in Toussaint's life. Lawrence's art played a role in the great African American cultural renaissance of the 1930s and also inspired a re-evaluation of Toussaint in modern scholarship. With *The Black Jacobins* (1938) C. L. R. James attempted to make the Haitian Revolution fit the Marxist category of bourgeois revolution, but Toussaint somehow took over the book and became the idealized tragic hero. Subsequent scholarship refined James's view, both by illuminating the repressive nature of Toussaint's regime and by showing that Toussaint was a pre-revolutionary free colored plantation owner (and so more like the bourgeois James had signally failed to paint him as). However, modern scholars and Haitian national tradition still see him as a tragic, perhaps flawed, but essentially heroic figure who deserves to be considered alongside Martin Luther King Jr., Frederick Douglass, and Marcus Garvey as one of the great heroes of black liberation. Toussaint remains the tragic hero of the Haitian Revolution who wanted to make a just, multiracial society in the French empire and ended up inadvertently creating a black American republic, Haiti, which has been a dictatorship for most of its national existence.

SEE ALSO *Haitian Revolution; James, C. L. R.*

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TOWNS

Towns have usually accommodated great social diversity, making them places of magnificent human achievements as well as sometimes-violent struggles over resources and power. The words *town* and *city* are largely interchangeable, with the former used more in Britain than in the United States, where it is typically reserved for smaller settlements. The names are applied to places with substantial clusters of residents and buildings as well as complex social and economic structures. In some times and places, towns have been independent and self-governing; in others, they have been granted limited self-government.

The earliest towns emerged in the Middle East and are known only from archaeological evidence. Jericho is sometimes identified as the first town, around 7000 BCE, but many scholars believe that the first true towns were those that arose after the development of agriculture, beginning with Sumerian cities such as Ur, around 3000 BCE. At later dates, towns also developed in productive agricultural regions of Egypt, India, China, and Mesoamerica. Early towns were typically ceremonial centers, home to priests, soldiers, and administrators as well as skilled artisans who made luxury goods for members of the ruling class. Often the demand for luxuries stimulated long-distance trade, and some towns became centers of commerce, in which merchants were among the most wealthy and powerful residents. Coastal towns devoted to trade and commerce first flourished around the eastern Mediterranean in the Phoenician and Greek civilizations, which were later conquered by the Roman Empire. After Rome lost control of the Mediterranean around the fifth century CE, and Muslim invaders subsequently conquered much of the region, many Mediterranean towns became important Islamic administrative and commercial centers, whereas Christian Europe became a much more exclusively rural civilization. Although Italian commercial towns such as Venice and Amalfi revived by the tenth century, towns remained marginal to the rural and feudal society of medieval Europe. Partial exceptions were northern Italy and the Low Countries, where commercial towns ruled much of the countryside. These towns and regions dominated the European cultural revival known as the Renaissance, which began in the fourteenth century.

URBANIZATION AND INDUSTRIALIZATION

For several centuries more, Europe, like the rest of the world, remained a place where a tiny percentage of the population lived in towns, and economies as well as political power were rural-based, with the great majority of the population working in subsistence agriculture, producing a small surplus that supported priestly, warrior, and ruling elites. These elites were sometimes based in towns, and here and there cities grew to great size, for example ancient Rome, medieval Baghdad, Tenochtitlan in Mexico, and several Chinese capitals.

A fundamental change in the role of towns came with urbanization—that is, when larger percentages of a region's or nation's population came to live in them. This shift coincided with the growth of large-scale industry, beginning in eighteenth-century England and spreading across much of Europe, and beyond, in the nineteenth century. Many towns grew rapidly as rural migrants arrived in search of work in the new factories or in other trades stimulated by urban growth and industrial wealth. Around 1800 London became the first European city with a million inhabitants; a century later, at least eight more had crossed that threshold, and London's six million made it far larger than any city in history. Outside of Europe, North America experienced the most dramatic nineteenth-century urban growth. The twentieth century, especially its second half, saw rapid urbanization in other regions, notably East Asia. Whereas the world's population was still 70 percent rural in 1950, sometime around 2007, town dwellers became a majority. By then, twenty cities, most of them in Asia, had at least ten million inhabitants.

In many poor countries, urban growth has been concentrated in a single city, typically the capital, with floods of migrants drawn by rural overpopulation, political turmoil, and the collapse of agricultural or subsistence economies. In one respect this recent phase differs fundamentally from nineteenth-century Europe: This is often urbanization without industrialization. That had been the exception in nineteenth-century Europe, characteristic of only a few of Europe's poorest cities, such as Naples and Dublin. By the late twentieth century, however, as political and economic turmoil continued to push rural people toward large cities in their home countries or foreign ones, they arrived in places where there were few industrial jobs, and they joined a vast informal sector of intermittent, insecure, and often illegal work. Following a long tradition, these migrants see towns as places of opportunity, but most of them have little chance for security or prosperity.

SOCIAL AND SPATIAL STRUCTURES

From their earliest origins, towns have been associated with complex social structures and a diversity of occupations and roles. Far more than the countryside, towns have usually encompassed extremes of wealth and poverty, with rulers and wealthy merchants living near their slaves, servants, and laborers. As a result, towns have typically been centers of economic dynamism, cultural innovation, and social and political tensions. These urban phenomena have interested social scientists since the eighteenth century, when Adam Smith's theory of the division of labor explained the great economic potential inherent in the

occupational specialization found in towns. Many liberal theorists following Smith have also contended that towns fostered individual opportunity and individual identities, thus promoting economic growth as well as new doctrines of citizenship and human rights that challenged traditional barriers of caste and status. However, Karl Marx and other socialists (including Vladimir Lenin), observing the concentration of poverty and misery among urban factory workers and casual laborers, predicted that revolutionary change would begin in towns, where oppressed classes would forge bonds of solidarity.

The combination of urban growth and the breakdown of traditional hierarchies has encouraged the urban upper classes to live apart from their poorer neighbors. The modern town has thus been characterized by horizontal segregation, following two basic patterns that have developed in different times and places. In one, the prestigious town center, the traditional site of palaces and shrines, is reserved for the wealthy, and the poor live on the urban edge in suburbs or shantytowns. This arrangement became typical of many European cities (Paris is the best known) as well as former colonial cities in Asia and Latin America. Alternatively, in some places the city center became a stronghold of business and employment, not a prestigious residential district, and the wealthy moved out to suburbs. This pattern emerged in eighteenth-century England and became even more typical of the United States, where premodern urban traditions are scant. By the end of the twentieth century, suburbanization had become increasingly apparent elsewhere, as communications and transportation technology made it easy for elites to live far from their workplaces. The urban core may remain as an office center, but surrounding areas have become poor, even largely abandoned in the case of the most devastated U.S. cities. Many cities in the United States saw rapid change in the decades after World War II (1939–1945), as white working-class residents moved to the suburbs in large numbers, and industrial jobs either followed or left the area entirely. Left behind in the inner cities were concentrations of poverty, unemployment, and minority groups (mainly African Americans), with high crime rates and poor schools continuing to push upwardly mobile residents outward while making life more difficult for those left behind. By the end of the century, similar problems were becoming apparent in major cities of other wealthy countries, such as Britain and France, sometimes in poor suburbs rather than inner cities. At the same time, a countervailing trend has been the "gentrification" that has created or expanded enclaves of wealthy inner-city residents, sometimes dislodging but not necessarily reducing the concentrations of poverty.

SEE ALSO *Segregation, Residential; Sociology, Urban; Suburbs*

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TOWNSHIPS

A township is the land formally allocated to hosting the site of a town; the word *township* legally refers to both residential and industrial sites. Possibly the most famous townships are in South Africa and were a creation of the apartheid system and its predecessor regimes of white rule.

Apartheid was formally instituted as state policy in 1948, but dating from the white settlers' permanent landing at what is now Cape Town in 1652, racial segregation was formal practice. The townships were racially discriminatory in that "black" African, "colored" (mixed-race), and "Indian" people were ordered by the Land Act of 1913 and the Group Areas Act of 1950 to live separately. Even within black townships, ethnic groups were often segregated into separate areas for Zulus, Xhosas, Sothos, and others. These laws existed until the early 1990s, and since then there has been only gradual desegregation of formerly white, colored, and Indian areas.

In the area surrounding Johannesburg, South Africa's largest metropolis (founded with the discovery of gold in 1886), the best-known townships are Soweto (an acronym for "South Western Townships") and Alexandra. Others include Bosmont (largely colored), Daveyton, Diepsloot, Duduza, El Dorado Park (colored), Etwatwa, Evaton, Ivory Park, Kagiso, Katlehong, KwaThema, Lenasia (Indian), Orange Farm, Tembisa, Thokoza, Tsakane, Vosloorus, and Wattville. These stretch more than 30 miles (50 kilometers) east–west and north–south, and they fuse into other townships near Pretoria and the Vaal River. The area constitutes a vast peri-urban expanse with more than 10 million residents in Gauteng Province. Of the townships, which together host more than half the population, only Alexandra is relatively well located, and hour-long commutes from the distant townships to work are common.

Townships originated from South Africa's unique economic requirement for inexpensive migratory labor, and they were managed using brutal policing systems as

well as British municipal administrative traditions. Debates have raged between social scientists and policy advocates since the 1980s about whether to view townships through the lens of collective consumption (as do Jeffrey J. McCarthy and Daniel P. Smit, following Manuel Castells), the urban accumulation of capital (Patrick Bond, following David Harvey), administrative and spatial power (Jennifer Robinson, following Michel Foucault), or urban efficiency (the Urban Foundation, following the World Bank). Townships also give rise to debates about South African race and class (Harold Wolpe), activist political agency (Mzwanele Mayekiso), social history from below (Charles van Onselen), and gender relations (Belinda Bozzoli).

Although Cape Town and Port Elizabeth had townships dating to the early nineteenth century, the first modern, formal townships were in Kimberley, where migrant workers came to work in the mines following the discovery of diamonds in 1867. In these early townships were the infamous hostel systems that typically housed sixteen workers per sleeping room for eleven months of the year, with a one-month break to visit families in the Bantustan homelands. Indigenous black people were lured or often forcibly compelled to move from rural areas through a variety of means common to colonialism: the dispossession of good farmland, the expropriation of livestock, "hut taxes" forcibly paid through labor, periodic wars, and other forms of manipulation. Indian workers brought to the seaport city of Durban in the nineteenth century as indentured labor for the sugar estates gradually migrated to cities.

At the turn of the twentieth century, the South African War—also known as the Boer War—was responsible for uprooting large rural populations, including white Afrikaners (people of Dutch and French origin). After gold was discovered in Johannesburg in 1886, a "poor white problem" emerged in the area during the first three decades of the twentieth century. Housing shortages, sanitation crises, and public health epidemics such as an influenza outbreak fed into racial and moral panics about the proximity of black workers, who lived in the same urban neighborhoods as whites for a time. Water-borne sanitation was first introduced in Johannesburg around 1908, but the disposal of excrement for the entire city occurred close to the black locations.

There followed in 1922 a major labor revolt, the Rand Strike, by white gold miners concerned about the erosion of racial privileges as more black workers came to Johannesburg. (By 1946 blacks had become the majority urban residents.) As white workers and farmers gained increasing influence over government policy, more laws were passed to delineate the white cities from township sites for "temporary sojourners" (i.e., black migrant workers) who lived in urban areas so long as they had a job and a passbook to comply with the Pass Laws.

Real-estate property ownership by blacks was forbidden except in two townships near central Johannesburg that preceded the 1913 Land Act, Alexandra and Sophiatown. The latter, renamed Triomph, was destroyed in the 1950s, and residents were forcibly moved to Soweto. The Public Health Act of 1919 gave local administrative powers in some townships to the Department of Health. The Natives (Urban Areas) Act of 1923 provided for formal township (also known as "location") planning, and the Slums Act of 1934 provided for urban forced removals.

Townships sprouted across Johannesburg and the other main urban centers—Cape Town, Durban, Pretoria, Port Elizabeth, East London, the Vaal, Bloemfontein, and Pietersburg—as firms sought an unending stream of black workers during the high-growth era of the 1930s through the 1960s. Housing, transportation, and rudimentary health facilities were built by mining companies and other large employers.

In this process, several kinds of divisions endemic to South Africa and southern Africa were exacerbated, including class, race, gender, and rural-urban. In particular, women suffered in rural areas across the region by helping to inexpensively reproduce cheap labor through the Bantustan system and migrant labor. Women in these areas provided the kinds of child care, home schooling, home-based medical aid, and care for the elderly that ordinarily would have been provided by tax-based or benefit-based public and private educational, medical, and pension systems in a normal capitalist labor market. Because the women tended to remain in the rural areas caring for their families and communities, the townships had a much higher proportion of male dwellers, and firms were able to keep wages and employee benefits at inordinately low levels.

There were many important anti-apartheid protests in townships, including the famous 1955 Bus Boycott that required long walks by black workers into white towns. Many protests targeted living conditions. The typical township house was a "matchbox" of 430 square feet (40 square meters) with rudimentary plumbing but, until the 1980s, without electricity.

One reason for the adverse socioeconomic conditions was the inadequate tax base—often just beer-hall revenues—for the administratively distinct black townships. In contrast, black workers labored in white cities where employers paid taxes to white authorities, which offered first world amenities to white residents. In protest, community activists raised the demand, "One city, one tax base!" during the 1980s and insisted on integrated metropolitan authorities, in contrast to those who intended to

maintain geographical segregation using U.S.-style suburban planning techniques.

Although the June 16, 1976, Soweto uprising against Afrikaans language education in the schools was the iconic moment of township protest, the nationwide mass uprisings from 1984 to 1986 and from 1989 to 1993 finally gave rise to South Africa's democracy, born in 1994. The apartheid-era black councilors chosen by white provincial authorities, especially between 1983 and 1994, were universally considered puppet collaborators, and many were forced to resign by anti-apartheid activists. At the same time, late-apartheid policymakers turned to the World Bank and the pro-business Urban Foundation for central advice on privatization of urban-housing stock and services. Public-housing construction ground to a halt by the early 1980s in black townships.

Even after apartheid was overthrown, however, restrictive macroeconomic conditions and neoliberal microeconomic policies meant that living conditions remained uncomfortable in most black townships. Statistics South Africa released a report in October 2002 confirming that in real terms, the average black household income declined 19 percent from 1995 to 2000 while white household income increased 15 percent. The official measure of unemployment rose from 16 percent in 1995 to 31.5 percent in 2002. Add to that figure frustrated job seekers, and the percentage of unemployed people rose to 43 percent. Moreover, at least 10 million people had their water disconnected for nonpayment, and a similar number experienced disconnection for not paying electricity bills.

The first post-apartheid housing minister, Joe Slovo (1926–1995), adopted World Bank advice that included smaller housing subsidies than were necessary and more reliance upon banks for credit. The policy was to give developers $2,000 per unit, leaving scant funds for good building materials, sound construction, and full services. Ironically, due to such neoliberal policies, the new township housing provided by the government in the early 2000s was half as large and constructed with flimsier materials than during apartheid, was located even farther from jobs and community amenities, and had lower-grade state services, including rare rubbish collection, inhumane sanitation, dirt roads, and inadequate storm-water drainage.

By the early 2000s, there were more protests per person in South Africa than in any other country: more than 5,800 counted in one year by police, mostly in the townships. A new set of urban social movements arose in Durban, Johannesburg, and Cape Town that were reminiscent of the civic associations of the 1980s and 1990s.

SEE ALSO *Apartheid; Boer War; Coloreds (South Africa); Diamond Industry; Discrimination, Racial; Gold Industry; Migration; Mining Industry; Protest; Segregation, Residential; Separatism; Social Movements; White Supremacy; World Bank, The*

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Patrick Bond

TOXIC WASTE

The safe disposal of toxic waste has become a global challenge. Each year, world nations produce 440 million tons of toxic waste. This is a highly conservative estimate, given the clandestine nature of the enterprise and fluid definitions of what constitutes hazardous or toxic waste (the terms are used interchangeably). The U.S. Environmental Protection Agency defines hazardous waste as "a waste with properties that make it dangerous or potentially harmful to human health or the environment" (U.S. Environmental Protection Agency 2006). Hazardous waste can be liquids, solids, contained gases, sludge, by-

products of manufacturing processes, or simply discarded commercial products, like cleaning fluids or pesticides.

An international trade has arisen to transfer toxic waste from developed to developing nations. The United Kingdom exported spent mercury to South Africa throughout the 1990s, which claimed at least three lives at a mercury recycling plant, where mercury is removed from waste sludge for reuse. Similarly, the U.S. chemical firm Holtrachem Manufacturing attempted to export 260,000 pounds of spent mercury waste from its U.S. plant in Maine to India in September 2000. The U.S. government defined the spent mercury as a metal with trade value and exempted it from regulations on waste exports. Pressured by environmental advocacy groups, the Indian government refused the shipment and returned it to the United States.

LAWRENCE SUMMERS'S MEMO

Some leaders of global financial institutions have offered economic rationale for trade in toxic waste between developed and developing countries. On December 12, 1991, Lawrence Summers, who served as chief economist at the World Bank, wrote an internal memo that stated the World Bank should "be encouraging more migration of the dirty industries to the LDCs," referring to less developed countries (Vallette 1999). His argument was threefold: First, "a given amount of health impairing pollution should be done in the country with the lowest cost, which will be the country with the lowest wages." Second, as "under-populated countries in Africa are vastly under-polluted, their air quality is probably vastly inefficiently low compared to Los Angeles or Mexico City." Third, "the concern over an agent that causes a one in a million change in the odds of prostrate [sic] cancer is obviously going to be much higher in a country where people survive to get prostrate cancer than in a country where under 5 mortality is 200 per thousand" (Vallette 1999). After the memo became public in February 1992, Brazil's secretary of the environment, José Lutzenberger, wrote to Summers: "Your reasoning is perfectly logical but totally insane" (Vallette 1999). Lutzenberger was forced from office shortly afterward.

As indicated in Summers's memo, according to the Trade and Environment Database,

> poor African nations have served as the dumping ground for toxic hazardous waste materials, i.e. raw sewage, sludge, incinerated ashes, contaminated oils, chemical substances, acids, poisonous solvents ejected by chemical, pharmaceutical and fertilizer producing plants in the industrialized world.… Uncontrolled dumping of toxic wastes in Africa has been traced back to the early 1970s, when reports of clandestine deals between African countries and companies in the United States, France, Germany, the United Kingdom, Switzerland, Italy, and the former U.S.S.R. began surfacing (Trade and Environment Database 1996).

The worst victims of this waste shipment have been the African nations of Benin, Nigeria, and Somalia, which became a tempting target for cost-conscious waste traders. On average, the cost of processing toxic waste is as high as $3,000 per ton in industrialized countries, whereas it drops to $5 per ton in developing countries, according to the Trade and Environment Database. In 1987 the United Nations Environment Programme (UNEP) adopted the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Waste, which require toxic-waste exporters to ensure that disposal sites in waste-importing countries meet the safety requirements of national and international regulations.

BASEL CONVENTION AND BASEL BAN AMENDMENT

Two years after the UNEP adopted the Cairo Guidelines, the leaders of 118 governments met in the Swiss town of Basel in 1989 and signed the first-ever global treaty regarding toxic waste, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. As of November 2006, more than 165 countries had ratified it to become international law. The Basel Convention was resented by waste-exporting industries and world governments, however, and they tried to cripple its enforcement. To prevent such efforts, the Basel Convention was amended to ban the trade in toxic waste with immediate effect. In all, 83 countries signed on to the 1995 amendment to the Basel Convention, which is now known as the Basel Ban Amendment. This amendment criminalizes all toxic-waste exports from member nations of the Organization of Economic Cooperation and Development (OECD) to non-OECD countries, even for recycling. According to the Basel Action Network, more than 90 percent of toxic-waste exports from OECD to non-OECD countries were meant for recycling.

Interestingly, the United States, which is the single largest producer of toxic waste, has ratified neither the Basel Convention nor the Basel Ban Amendment. The country's refusal rests on the argument that U.S. laws effectively regulate toxic-waste exports. It is true that the United States has one of the toughest legal regimes to protect the environment, including the Atomic Energy Act of 1954, the Resource Conservation and Recovery Act of 1976, and the Comprehensive Environmental Response, Compensation, and Liability Act, or Superfund Act, of 1986. These legal regimes, however, ensure safe disposal of

toxic waste only within the United States, and their impact is diluted in regulating waste exports outside the country.

Even the Basel Convention and the Basel Ban Amendment are marred by several loopholes that allow the toxic-waste trade to continue. Some nations try to circumvent the ban on toxic-waste exports by resorting to bilateral agreements, which they argue fall outside the purview of the Basel Ban Amendment. Japan, which is the world's second-largest economy after the United States, signed bilateral economic partnership agreements (EPAs) in the early 2000s with Singapore, Malaysia, and the Philippines to evade the ban on toxic-waste exports. These EPAs list hazardous wastes as tariff barriers, which Japan believes need be eliminated. Japan is also using free trade agreements to promote free trade in hazardous wastes. Similarly, some governments and industries attempt to nullify the banned designations of toxic wastes under the Basel Convention under one pretext or another, or define them down to continue toxic-waste exporting. The ultimate enforcers, however, are individual governments that allow waste imports. They can defeat international legislation on toxic-waste trade by being lax in the enforcement of the Basel Ban Amendment for short-term economic gains. A vigorous civic engagement by national and international public interest groups is, therefore, crucial to hold the governments of waste-importing countries to their commitments to halt trade in toxic waste. More important, clean production, minimum waste generation, and waste management within the national limits of waste-producing countries can bring an end to the global trade in toxic waste.

SEE ALSO *Disease; Environmental Kuznets Curves; Love Canal; Public Health; Resources; World Bank, The*

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Tarique Niazi

TRACKING IN SCHOOLS

Educational tracking refers to the placement of students into different kinds of educational programs according to a defined criterion of similarity or dissimilarity, such as interest, ability, or achievement. There are various types of tracking in schools, including vocational tracks, college preparatory tracks, honors tracks, and the ability tracks of remedial and gifted and talented. Vocational tracks channel students into classes that develop the skills needed to enter the labor market directly after graduation from secondary school. College preparatory tracks channel students into classes that will prepare them to attend institutions of higher education. College preparatory tracks in American high schools also frequently offer advanced classes that provide opportunities for college credit before graduation. Honors tracks channel students into more rigorous classes for college preparation but also enhance these students' chances of attending the college of their choice by giving them opportunity to achieve honors distinction and a higher class ranking upon graduation. The ability tracks of remedial and gifted and talented channel students into programs of study designed to accommodate unusually low or high aptitudes, respectively.

Critics of tracking argue that the tracking process restricts the educational exposure of students in the lower tracks. The earlier tracking occurs, the greater the educational restrictions. The placement of students into vocational, college preparatory, or honors tracks usually occurs upon entrance to secondary school. Because these tracks significantly affect chances for higher education, the tracks restrict the range of future occupational choices as early as age twelve or thirteen. For students who are tracked according to ability, the impact on educational

exposure and future life opportunities is even greater. Ability tracking into remedial or gifted and talented classes often occurs in the primary school grades. In many ability tracking systems, those in the different tracks are exposed to differential amounts of knowledge. Students in remedial tracks are assumed to be slow learners, so they are exposed to less information within a school year than other students; students in gifted and talented tracks are assumed to be fast learners and so are exposed to more information. The longer students are ability tracked, therefore, the progressively greater are the gaps of knowledge between the tracked students and their peers and the fewer are the chances for remedial students to catch up with their peers. Conversely, the gifted and talented students progressively exceed their peers in knowledge, which increases their scores on standardized achievement tests, thereby enhancing their relative chances in future college placements and college career performance.

A more insidious effect of educational tracking that compounds the problem of differential knowledge is differential development of cognitive abilities by track. College preparatory, honors, and gifted and talented tracks provide greater opportunities to develop the higher-order skills of abstract, critical, and creative thinking. The ability to think and solve problems by abstract principles increases scores on college aptitude tests and contributes to successful performance in college classes. Abstract, critical, and creative thinking also contribute to success in professional careers and to effective decision-making in many areas of life, including consumer and voting choices. Students in remedial tracks, especially, have less opportunity to develop these higher-order thinking skills in a formal educational setting. This not only decreases their chances of college and occupational achievement, it reduces their logical capabilities to make successful life choices.

A profound effect of educational tracking is the labeling of students by track, which produces differential performance expectations and subsequent differences in self-images and behaviors. Children in remedial tracks, especially, are labeled negatively by their school administrators, teachers, peers, and, most significant, themselves. They consequently receive less encouragement to achieve, and their self-esteem is lowered. The latter contributes to a self-fulfilling prophecy in which the students expect to fail, so they do not make the effort necessary to succeed.

Another criticism of ability tracking is that it tends to be involuntary. In many societies, such as Japan, the assignment to a vocational or college preparatory track is based on standardized achievement test scores. Honors eligibility is determined by past academic achievement or scores in standardized achievement tests. Ability tracks are determined by students' performance on tests designed to measure their academic aptitudes.

Educational track placement is strongly correlated with socioeconomic status and race and ethnicity. Students of higher socioeconomic status are substantially more likely to be placed in college preparatory, honors, and gifted and talented tracks; children of lower socioeconomic status, in vocational and remedial tracks. Black children and, with the exception of Asian minorities, ethnic minorities are more likely to be placed in vocational and remedial tracks. The reasons for these differences are varied. Evidence indicates that school counselors are less likely to encourage lower-class and minority children to choose the college preparatory track. Evidence also suggests that class and minority group differences in cultural and social capital contribute to track placement. Parents of lower income children may be less aware of the importance of and opportunities for their children to pursue a college education. In addition, middle class or upper class students are more likely to be eligible for honors programs because they have parents who are able to help with schoolwork or secure tutors for their children. Perhaps the most pernicious effect of socioeconomic and cultural minority differences, however, is that the purported "ability tests" that determine ability track placement do not actually measure native aptitude but rather cultural exposure or, in the terms of the French sociologist Pierre Bourdieu (1930–2002), cultural capital. Students with less exposure to the majority group culture of the middle or higher classes are likely to score lower on the tests.

The consequences of these educational tracking differences by social class and racial and ethnic minority group status is that lower class and racial and ethnic minority students receive a more restricted education that reduces their level of knowledge, the development of their cognitive potential, and their opportunities to attain a high quality college education. Educational tracking thereby relegates a relatively high proportion of the lower classes and racial and ethnic minorities to lower level occupations. It also creates de facto racial or ethnic segregation within the schools, which in turn breeds false stereotypes and prejudice. Tracking in schools consequently serves to reproduce the socioeconomic and racial and ethnic inequalities that already exist in modern societies.

SEE ALSO *Achievement; Achievement Gap, Racial; Cognition; Curriculum; Education, Unequal; Education, USA; Equal Opportunity; Gifted and Talented; Inequality, Gender; Inequality, Racial; Inequality, Wealth; Pedagogy; Stratification*

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David Dietrich

TRADE

Trade is the exchange of goods between locations. For example, bananas from Honduras exchange for automobiles from the United States. International trade between locations in different nations receives far more attention than does domestic trade because nations discriminate against foreigners with international policies that are contested. For example, in 2005, the U.S. Congress ratified a Central American Free Trade Agreement in a hotly contested vote.

Trade also means the exchange of services of factors of production such as labor and capital. For example, Bangalore call centers provide telemarketing labor to U.S. marketers, while U.S. computer engineers maintain hardware and software in Bangalore. Trade in services is quantitatively important, but the distinction between trade in services and trade in goods is often not important. For many purposes, the distinction between international and intranational trade is similarly irrelevant. This essay uses the term *trade* to mean international trade in goods, but much of its content also applies to intranational trade in goods and services. The distinction is crucial when international trade policy—discrimination against foreigners—is important. (Domestic trade is affected by domestic policy, but seldom controversially.)

The key questions are: What explains the pattern of trade? Is liberal trade policy a good thing? The householder's answer to the first question is that nations import goods that are unavailable domestically or are cheaper than potential domestic substitutes and export goods that are unavailable or more expensive abroad. There are gains from this exchange, to answer the second question—voluntary transactions must be beneficial or they would not be made, once familiarity acquaints participants with exchange.

Economic analysis embeds the householder's insight in an equilibrium system. Crucially, householders take prices as given in their decisions. When all households together react to a new market opportunity, they will necessarily have an impact on prices. International trade theory provides an answer to what makes a nation's goods cheaper or more expensive in a world where the act of trade changes prices. It also provides an analysis of the gains from trade in complex, many-household production economies. Since all prices normally will change, some households will gain (for example, owners of property or specific skills in the expanding export sector of the economy) while others will lose (for example, owners of property or specific skills in the contracting import sector). Trade theory shows that the gains to the gainers must ordinarily be larger than the losses to the losers.

The answers convince the vast majority of economists about the desirability of trade, provided some compensation for losers from trade is made. But the explanation of how international trade affects the overall well-being of society is also subtle and sometimes misunderstood by a portion of the general population that tends to oppose liberal trade. Opposition to trade liberalization may also arise from well-informed opponents, including lobbies representing workers and firms that might be harmed by liberalization, as well as persons sympathetic to those workers and firms who are skeptical that fair compensation will be provided.

THE PATTERN OF TRADE

Imports are goods and services purchased by domestic households and firms from firms located in foreign countries. Exports are goods and services sold to foreign households and firms by domestic firms. Imports must be paid for by exports, so the market for a nation's imports is linked to the market for its exports. The price of imports cannot be isolated from the price of exports. Moreover, exports increase the demand for factors such as labor used to produce them, while imports reduce demand for factors used to produce import substitutes. Thus factor markets at home and abroad are linked through the mechanism of trade. (If exports pay for imports every year, trade is balanced. This simplification does no real harm to the analysis. Unbalanced trade has international borrowing or lending as a counterpart, and in this setting exports must pay for imports over time, in present discounted value terms.)

The balanced trade requirement implies that the relative price of exports, the terms of trade, is equal to the volume of imports divided by the volume of exports. Thus trade determines relative prices and, conversely, relative

prices determine trade. The cause of trade must be sought in relative price differences between countries. Indeed, with frictionless trade (that is, international trade without tariffs, quotas, or other barriers to trade), these must be the price differences that would prevail in the absence of trade (autarky).

Compare the relative price (of, for example, wine in terms of cheese) at home to the same relative price abroad in a prior equilibrium with no trade (autarky) or restricted trade. The country with the lower relative price of wine is said to have a comparative advantage in wine, while the other country has, symmetrically, a comparative advantage in cheese. Trade theory predicts that countries will export the good in which they have the comparative advantage. Krugman and Obstfeld (2005) cite a recent study showing that Japan's opening to trade in the 1850s reveals data consistent with the prediction.

Comparative-advantage differences between nations are explained in trade theory by differences between countries in either technology or factor supplies. Both are realistic—Canada exports grain because its large endowment of agricultural land makes land relatively cheap, but its better technology also provides an edge relative to land-abundant Ukraine. Notice that the mechanism run by relative price differences implies that economy-wide forces (exchange-rate manipulations, environmental or labor standards) that tend to cause uniform (over goods) national differences in costs will tend to cancel out and have no effect on trade patterns.

Absolute, or "competitive," advantage should be distinguished carefully from comparative advantage, as the former is the source of much fallacious reasoning. For example, suppose there are two countries considering whether they should trade with each other. Prior to the opening of trade, a naïve observer would compare the domestic prices or production costs in the two countries good by good and predict that the country with the lower cost, having an absolute or "competitive" advantage, will export the good. But economic theory establishes that this method fails whenever one country could undersell the other for all goods, since the importer could not pay for the imports by exporting. Instead, prices of goods and factors must change so that in the trade equilibrium each country is competitive in its export industry, in which it has a comparative advantage. In equilibrium, prices must clear markets for all goods and factors in the world economy, and exports must pay for imports.

Differences between countries can arise endogenously from their economic interaction, in contrast to the differences which are given prior to trade in the preceding account of comparative advantage. Differences which arise as a result of trade lead to theories of trade that do not necessarily imply comparative advantage—difference in relative prices in the absence of trade. One theory is based on economies of scale, whereby the wider markets brought by trade will confer a cost advantage on one of the countries. Another theory is based on monopolistic competition, whereby the wider markets brought by trade increase product variety as buyers seek the special characteristics of foreign brands.

GAINS FROM TRADE

There are gains from trade in all these models. Each nation can act through trade policy to take more, leading to destructive trade wars with mutual losses. International institutions such as the World Trade Organization (WTO) act to restrain the destructive tendencies of unilateral action.

Within national economies, some members of a nation must lose from trade. For example, factors of production used intensively in export sectors of the economy tend to gain disproportionately when trade expands, while factors used intensively in import competing sectors tend to lose disproportionately. This gives insight into the widespread political resistance to trade that occasionally erupts into protectionism. National institutions act to redistribute some of the gains (U.S. Trade Adjustment Assistance) or provide temporary relief from losses due to trade (antidumping, escape-clause protection). In equilibrium the gains must outweigh the losses; there are gains from trade on average. On the way to equilibrium, it is theoretically possible that losses may temporarily exceed gains, justifying temporary relief measures. Extensive investigation of U.S. cases suggests that losses from trade are small and of short duration and are swamped by the gains from trade.

Most professional economists support liberal trade because there must be gains on average. The average is a "typical" household. Suppose that in autarky equilibrium, the home (domestic) typical householder is willing to swap 2 units of cheese for 1 unit of wine. That is, he would be indifferent to moving his consumption and production a small distance to offer the market 2 cheese for 1 wine or 1 wine for 2 cheese. Suppose that a typical foreign country household in the autarky equilibrium is willing to swap 2 wine for 1 cheese. Now allow frictionless trade, and suppose that the new equilibrium price is equal to 1. Each home household offers cheese to foreign households. Formerly it cost 2 cheese for 1 wine, but now the 2 cheese will procure 2 wine, a gain from trade. Similarly, each foreign household can obtain 2 cheese for 2 wine, where formerly this would procure only 1 wine. Both households gain from trade.

What if losers are not compensated? A person must decide for or against liberal trade by weighing individual gains and losses. Ethical considerations give more weight

to the poor. The case for liberal trade is strengthened because the illiberal trade policies of rich countries hurt the poor disproportionately, as documented by Edward Gresser (2002). Poor countries have comparative advantage based on cheap low-skilled labor, hence discrimination against their exports harms the poor citizens of poor countries. At home in rich countries, protection makes food and clothing more expensive, a regressive tax on poor consumers. Among the poor, losers from protection surely outweigh gainers.

Much opposition to liberal trade is based on confusion and ignorance. The confusion of absolute advantage with a valid theory of trade sows fear that a nation must protect itself from overwhelming competition. Ignorance of the harm done to the world's poor by protection persuades many who favor income redistribution in rich countries to support protection of rich country import-competing workers, who tend to be relatively poor.

SEE ALSO *Barriers to Trade; Liberalization, Trade; North American Free Trade Agreement; Quotas, Trade; Tariffs; Trade, Anglo-Portuguese; Trade, Bilateral*

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TRADE, ANGLO-PORTUGUESE

Anglo-Portuguese trade figures prominently in seventeenth- and eighteenth-century economic literature because it was a central linkage in the Portugal–England–Americas triangular trade, which raised monetary issues ranging from workings of exchange rates and the balance of payments to the effects of money changes on domestic output. These issues overlap with the perennially relevant and wide-ranging questions of how slavery, trade, and European expansion contributed to economic growth and the Industrial Revolution.

England supported the Brazanga (or Bragança) house after the Duke of Bragança staged a palace coup and took the throne as João IV. Commercial-diplomatic relations evolved within the context of successive Anglo-Dutch and Anglo-French conflicts. England's trade with Portugal was largely an indirect trade with Brazil, which increased considerably in the late seventeenth century as exports of Brazilian sugar were augmented by gold from Minas Gerais and Portuguese fortified wine. In return, England exported light woolens, and at times grain, to Portugal and onwards.

Exempt from Portuguese prohibitions on the export of gold, English naval ships and packet boats carried Portugal's trade deficit back to London in gold. Richard Cantillon's "Essay on the Nature of Commerce in General" (in French, 1720s) illustrated the workings of the foreign-exchange market with the London rate of exchange against Portugal and argued that laws against the export of specie raised prices to Portuguese consumers. David Hume's *Political Discourses* (1752) reiterated aspects of Cantillon's position, but also emphasized that imported New World gold had increased output and employment in England.

Adam Smith steered clear of this in *The Wealth of Nations* (1776). Smith substituted national savings for the balance of trade as a causal factor behind economic growth and harshly criticized the 1703 Methuen Treaty with Portugal. The treaty lowered tariffs on English textiles, ending a brief period in which Portugal had protected manufacturing; in exchange, England guaranteed Portuguese wine a lower tariff than French—a policy Smith portrayed as likely to reduce savings and growth by increasing the cost of wine consumption.

Napoleon's 1808 invasion led the Portuguese royal house to flee to Brazil and ushered in direct British trade and investment. Nevertheless, David Ricardo famously chose to illustrate the gains from international trade in his *Principles of Political Economy* (1817) with an exchange of English cloth for Portuguese wine. In his example Ricardo supposed Portugal to be more efficient than England at producing both textiles and wine, but he demonstrated that trade could leave both nations better off—both could have cheaper commodities in greater abundance. Part of this gain would be devoted to savings and capital formation. This aspect of trade ran parallel to Ricardo's wider argument that British growth was suffering from diminishing returns to capital and labor in agriculture and would revive only if cheap grain were imported. Friedrich List highlighted the asymmetric aspects of this trade pattern in his *National System of Political Economy* (in German, 1841). In his view, Portugal had allowed itself to become trapped in the production of agricultural goods, whereas England enjoyed continuing technological progress and manufacturing supremacy.

SEE ALSO *Trade; Trade, Bilateral*

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TRADE, BILATERAL

Trade is the exchange of goods or services within market conditions. A synonymous term is *commerce*, which involves individuals, companies, or even governments and countries when they seek to buy or sell goods and services mainly for profit. Bilateral trade is a form of trade that takes place between two traders or two countries, or two trading blocks, or a trading block and a country.

Initially, people used a bilateral barter system of trade, that is, exchanging goods and services for other goods and services. Money was introduced as a means of exchange as trade developed over time. The development of trade was facilitated and promoted by money, which first took the form of coins and later banknotes, then checks, or bills of exchange, and finally "plastic money" (credit cards). There are many reasons why bilateral trade further expands. As time passes, labor is specialized and divided into discrete activities as people decide to concentrate on the production of a specific good or even a part of a good, and then sell it to purchase other goods. As well, countries differ in comparative advantage for the production and supply of goods or services. On the basis of the theory of comparative advantage proposed by David Ricardo (1817), international free trade is lucrative for all countries. Comparative advantage (relative cost advantage) as a basis for bilateral trade contrasts with Adam Smith's absolute advantage (absolute cost advantage), or the proximity effects associated with the gravity model. (The gravity model may predict bilateral trade flows based on distance, economic size, diplomatic relationships, income level, and trade policies between two countries, although the model could be subsumed under relative transportation costs.)

Bilateral trade has evolved through human history. As the most valuable of commodities, metals were a great incentive to trade. The extensive deposits of copper on Cyprus brought the island much wealth from about 3000 BCE. The first extensive trade routes were initially the long rivers (e.g., the Nile, the Tigris), which became the foundation of early civilizations. From the third millennium BCE there is evidence that long-range trade routes existed. The eastern Mediterranean was the first region to develop extensive maritime trade. The presence of Greeks in Mesopotamia and the eastern Mediterranean encouraged a new trade route. Goods were put on board ships after arriving in caravans from Mesopotamia. An ancient trade route existed between China and the Mediterranean Sea linking China with the Roman Empire—the Silk Road, which was not a trade route that existed solely for the purpose of trading in silk; many other commodities were also traded, from gold and ivory to exotic animals and plants. During the Dark Ages (500–1000 CE) trade almost collapsed. The Portuguese expeditions of the fifteenth century brought European ships for the first time into regular contact with sub-Saharan Africa. The Netherlands promoted the free movement of goods, and became the center of free trade in the sixteenth to eighteenth centuries, together with Spain and England. In 1776, the famous economist Adam Smith contributed to trade theory by arguing against mercantilism (that government should protect the economy from international trade through the use of tariffs to achieve a positive trade balance) by pointing out that economic specialization is as advantageous to nations as it is for firms. In 1799, the Dutch East India Company, the world's largest company at that time, became bankrupt, mainly due to increased competition in free international trade. By the nineteenth century the adoption of free trade was based on absolute advantage until David Ricardo in 1817 demonstrated that all countries can benefit from international trade based on the theory of comparative advantage. In the twentieth century, the Great Depression brought a considerable decrease in trade. The Bretton Woods Agreement, which was signed in 1944 by forty-four countries, aimed at the removal of national trade barriers. In 1947 twenty-three countries made an agreement, the General Agreement on Tariffs and Trade (GATT), to advance free trade. The World Trade Organization (WTO) was formed through the GATT Marrakech Agreement in 1994.

Bilateral trade is a part of each country's gross domestic product (GDP). A country's *balance of trade* is the amount of goods and services that the country exports minus the amount of goods and services that the country imports. The term *bilateral trade agreement* denotes an agreement on trade issues between two countries or two trading blocks (e.g., the European Union and Mercosur) or a trading block and a country (e.g., the EU and China). The main aim of a bilateral trade agreement is the elimination of barriers in trade and the facilitation of the movement of goods and services across the national or regional

borders to encourage expansion and diversification of trade. Other decisive goals of bilateral trade agreements can be the promotion of fair competition conditions; the substantial increase of investment opportunities; the provision of protective measures concerning intellectual property rights; and the creation of procedures that will secure the implementation and application of the bilateral agreement. All the abovementioned goals are achieved by the bilateral jointed administration of the agreement and the removal of disagreements, together with the establishment of a framework that will further trilateral, regional, and multilateral cooperation in order to promote the advantages of the bilateral trade agreement.

Throughout history bilateral trade has been standard practice. However, the importance it carries economically, socially, and politically has increased substantially recently. This is due to industrialization, advanced transportation, globalization, multinational corporations, and outsourcing (Bitzenis 2004). High tariffs, governmental quotas, and restrictions are usually used to regulate bilateral international trade. Although tariffs are usually imposed on imports, it is not unusual for a country with a protectionist policy to impose export tariffs or provide subsidies. Such restrictions are known as *trade barriers*; free trade exists in a situation where a government does not impose any trade barriers. Countries are sometimes punished economically by other nations through the implementation of trade sanctions against it. The term *embargo*—that is, externally imposed isolation that is severe—refers to the total absence of trade between the two countries. An example is the United States's trade embargo on Cuba, which has lasted for more than forty years.

A preferential trade agreement (PTA) may exist between two trading partners in a bilateral trade agreement, creating a preferential trading area. In this case, the two trading partners (the two countries or the two trading blocks, or one trading block and a country) reduce tariffs between each other, but do not necessarily abolish them completely; this is the weakest form of economic integration. States that are not party to the PTA do not usually benefit from such reductions. PTAs may have adverse effects on multilateral trade liberalization. Since the creation of the GATT and its successor, the WTO, 362 regional trade agreements have been reported to the WTO; of these, 211 were in force in mid-2006 (Lamy 2006). Agreements with services provisions are more and more common. Trade provisions in sectors not controlled multilaterally are a part of an increasing number of bilateral agreements. According to a World Bank study, Global Economic Prospects 2006: Economic Implications of Remittances and Migration (2005), the percentage of trade that takes place under preference treatment varies from 15 to 40 percent (Lamy 2006). The situation of trade under preference treatment undermines substantially the principle of the "most-favored nation," which is one of the cornerstones of the WTO.

SEE ALSO *Absolute and Comparative Advantage; Barriers to Trade; Free Trade; Liberalization, Trade; North American Free Trade Agreement; Quotas, Trade; Tariffs; Trade*

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TRADE, SLAVE

SEE *Slave Trade.*

TRADE CREATION

SEE *Customs Union.*

TRADE DEFICIT

A trade deficit—that, is, a deficit on flows of goods and services in a country's international balance of payments—occurs when a country imports more than it exports. Because the concept of the trade deficit depends intimately on its two component flows of exports and imports, what motivates these cross-border, that is, international, transactions? If a country buys more than it sells, how does it pay for the excess purchases? Does the concept of the trade deficit give a complete picture of a country's international relationships and flows?

People and firms trade because they want different things, have different skills and technologies, and earn different amounts of money. People and firms value goods and services differently, depending on their income, tastes, and needs. Countries are the aggregation of individual actions by firms and individuals. So, countries differ from

one another in terms of resources (such as land, minerals, and educated workers) and the techniques firms use to produce goods and services (such as how much information technology is used in the factory or office), and in terms of tastes and preferences for products (due to, for example, the presence of immigrants or to level of income). These differences are reflected across countries as differences in costs of production, and in prices for goods and services. Because costs and prices differ across countries, it makes sense for a country to trade some of what it holds less dear and produces most cheaply to people who want it more and for whom production is costly or even impossible. Although this is most obvious in the case of goods, the concept holds as well for services, and it is applicable to rich and poor, large and small countries alike.

When individuals and firms buy and sell from each other, international trade takes place. When a country, which is the aggregated activity of firms and individuals, sells goods and services across its international borders, these are termed *exports*. When a country buys goods and services from abroad, these are termed *imports*. A trade deficit occurs when the cost of imports exceeds the value of exports. A trade deficit can be measured either on a bilateral basis—when country A imports more from country B than it exports to country B—or on a global basis—when country A's total exports to all countries is less than country A's total imports from all countries.

What factors can lead to a trade deficit, where one country buys more from abroad than it sells? A country growing relatively more rapidly than other countries in the world tends to import more than it exports, particularly if the country tends to consume and invest a lot at home, if the price of imports is low compared to the domestic price of similar products, if the country's residents and firms have a particular taste for imported products, and if there are few barriers to inhibit the purchase of imports. A rapid pace of domestic consumption and investment tends to draw in goods and services from other countries in order to satisfy domestic demand. A relatively low price of imports compared to domestic goods and services (which may be a consequence of the international exchange value of a country's currency) makes it cheaper for residents and firms to buy the imported product than a similar one from the home producer. Some countries have large immigrant populations or intricate supply chains of production, which can boost imports, all else being equal (although these also can support more exports). Finally, as trade barriers fall, so do the cost of imported products.

Which of these factors is most important to increasing imports relative to exports depends on the particular country. For the United States, which has run a trade deficit for more than twenty-five years, the most important factor is its relatively faster growth of domestic consumption and investment. For some periods over this time span, the exchange value of the currency has further augmented imports and restrained exports.

If a country systematically buys more than it sells, it has to pay for the excess by selling financial assets of the country, or by borrowing. These financial inflows are one counterpart to the trade flows in the international balance of payments. But international financial flows also take place because investors want to diversify their wealth portfolios, increasing their rate of return and changing the IR risk profile. Just as countries differ in resources, technologies, and tastes (thus generating trade flows), countries differ in offerings of and preferences for risk and return on financial assets. So, not only are countries linked through international trade flows, they also are linked through international flows of financial assets.

Whereas a trade deficit implies that there must be some international financial inflow as a balancing entry in the international accounts, there are also large international flows of financial assets that are independent of the trade flows. For the United States, international capital flows both into and out of the country amount to trillions of dollars each year—far more than the cross-border trade flows. Moreover, even as the country as a whole borrows to finance the trade deficit, the inflow of financial capital generally exceeds the trade deficit, as foreign investors purchase U.S. assets and U.S. investors buy foreign assets.

A trade deficit that persists implies that borrowing also rises, as does foreign ownership of domestic financial assets. How long such a country can, or should, import more than it exports might be a policy concern. If the imports and net borrowing are invested in such a way as to increase the capacity of the economy to produce and therefore repay its international financial obligations, then there are few worries. However, if imports and financial inflows do not so augment the economy's capacity to produce, then there is less support for more imports and financial inflows. In such a situation, the country's ability to attract financial inflows is at risk, and economic forces such as a depreciation in the exchange value of the currency or a rise in interest rates in the domestic market work to change the growth in imports and exports and bring the trade deficit back into trade balance.

SEE ALSO *Mundell-Fleming Model; Trade Surplus*

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TRADE DIVERSION

SEE *Customs Union.*

TRADE SURPLUS

A trade surplus occurs when a country's trade balance is in surplus, or positive. The trade balance, which is also referred to as net exports, is the difference between the value of a country's exports of goods (EX) and services to other countries and the value of imports of goods and services from other countries (IM):

$$TB = EX - IM$$

Thus, the trade balance is in surplus when exports exceed imports.

The trade balance is part of a country's gross domestic product (GDP), which measures the market value of all final goods and services produced in a country. GDP is equal to the sum of the domestic residents' absorption, A (which is given by the sum of private consumption, private investment, and government consumption), and net exports, TB. This implies that the trade balance can also be described as the difference between a country's GDP and its domestic absorption:

$$TB = \text{GDP} - A$$

A country therefore runs a trade surplus when its gross domestic product exceeds its domestic absorption.

From an economic point of view, a trade surplus arises when the demand for a country's export goods is higher than the country's demand for import goods from the rest of the world. In the traditional, partial equilibrium view of trade flows, export demand depends positively on the economy's price competitiveness, approximated by the real exchange rate, which is given by the ratio of the price of foreign goods to domestic goods (in foreign currency), and positively on aggregate demand conditions, which are approximated by foreign income. The idea is that when export goods are relatively cheap (i.e., price competitiveness is high), the demand for them will be higher. And when the income of foreign consumers increases they will also consume more goods, which will also increase the demand for the domestic economy's export goods. By the same token, a country's import demand is assumed to depend negatively on its price competitiveness and positively on domestic income. A country's trade balance would therefore improve when a country experiences an improvement in its price competitiveness via a depreciation of its exchange rate or lower inflation than the rest of the world, or when domestic income expands at a slower pace relative to the rest of the world. Whether such developments will give rise to a trade surplus depends, of course, on how pronounced these developments are, on the strength of their effect on export and import demand, and on initial conditions.

Changes in domestic and foreign income and the exchange rate that influences the trade balance are in turn the result of macroeconomic fluctuations, such as a monetary policy or government expenditure shocks, which affect domestic and foreign economies. The textbook workhorse model for the analysis of the effects of such shocks is the Mundell-Fleming (MF) model (Mundell 1968; Fleming 1962). The model assumes that prices are fixed in the short run, so that short-run production is demand determined. As a result, shocks to aggregate demand affect aggregate income and the real exchange rate and thereby the trade balance via their effect on export and import demand as well as relative prices. The net effect of macroeconomic shocks on the trade balance in the MF model is not always clear-cut and also depends on the exchange rate regime in place. For a textbook exposition of the Mundell-Fleming model see Paul R. Krugman and Maurice Obstfeld (2006).

The more recent class of models of the so-called "New Open Economy Macroeconomics" (NOEM) also builds on the assumption of short-run price stickiness in the analyses of the effects of macroeconomic shocks on the dynamics of exchange rates, trade balances, and other macroeconomic variables. The NOEM models are based on a microfounded intertemporal optimising model framework (see Obstfeld and Rogoff 1995 and 1996 and for an overview of the NOEM framework Lane, 2001). In this setup, trade balance surpluses (deficits) arise because of consumption smoothing. The trade balance is essentially the buffer that allows a country to insulate consumption from short-run income fluctuations. While the assumption of short-run price rigidity is similar to the fix price assumption in the Mundell-Fleming model, the implications of the NOEM framework can differ substantially. The effect of macroeconomic shocks on the trade balance depends in these models on many factors, like the assumptions made regarding the pricing scheme of export firms, the degree of home bias in consumption, whether shocks have been expected or not, or whether they are expected to be transitory or permanent.

Movements of the trade balance are closely linked to financial flows between countries. This becomes clear when looking at the balance of payments identity. The balance of payments records all of a country's transactions with countries abroad and is equal to the current account balance (CA) plus the capital account balance (KA) less the change in a country's net foreign reserves (ΔFR) and is by definition equal to zero:

$$BP = CA + KA - \Delta FR = 0$$

The capital account balance records all of a country's capital transactions with countries abroad (sales and purchases of assets), and the change in foreign reserves is the change in a country's central bank holding of gold and foreign exchange. The current account balance records all of a country's current transactions with countries abroad including trade in goods and services and a country's net factor income from abroad; that is net factor income earned on the return on capital invested abroad and net international income receipts, NFI:

$$CA = TB + NFI.$$

The previous two equations show that, as part of the current account, the trade balance is an important determinant of a country's net foreign asset position, because the current account balance is equal to the change in its net foreign asset position, which is given by the change in foreign reserves less the capital account balance.

When a country exports more to the rest of the world than it imports (i.e., the country is a net exporter and runs a trade surplus), it produces more than it consumes and sells this production surplus to the rest of the world. In order to finance the transaction, the country is lending to the rest of the world and, as a consequence, improves its net foreign asset position by accumulating foreign assets or repaying outstanding debts that were received from the rest of the world in earlier periods.

The trade balance is an important determinant of a country's international solvency. The previous equation illustrates that the sum of a country's trade surplus and its net international income receipts equal the country's current account balance. This implies that if a country runs perpetual current account deficits, its net foreign asset position is negative and the country is a net debtor to the rest of the world. Thus, the country must generate trade balance surpluses in the future in order to service its foreign debt obligations. Therefore, the international solvency and creditworthiness of a country depends on its ability to meet its foreign debt obligation by generating trade balance surpluses in the future.

SEE ALSO *Balance of Payments; Balance of Trade; Exchange Rates; Macroeconomics; Mercantilism; Mundell-Fleming Model; Trade Deficit*

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TRADE UNIONS

SEE *Unions.*

TRADE-OFFS

Given finite resources and limited productive capacity, economies are inevitably constrained with respect to their production and consumption options, particularly in the short run, and consequently must choose among alternatives. These constraints apply both to private individuals in the allocation of their budgets and to the government in its decisions over the provision and financing of public goods. By choosing to have more of one good, an economic agent must be willing to accept less of something else, thus defining a trade-off between the two alternatives. An important challenge facing economic decision makers is to allocate resources efficiently subject to the constraints imposed by the trade-offs they face.

At the aggregate economy-wide level, the constraints imposed by fully utilized finite resources can be represented by a production possibility curve. In his pioneering 1958 textbook *Economics*, Paul Samuleson described this in terms of the choice between "guns" and "butter." An economy can have more butter only if it is willing to have fewer guns. The number of guns one forgoes in order to obtain an extra unit of butter is referred to as the "opportunity cost" of an extra unit of butter. Not only is this

trade-off negative, but it is generally assumed to be concave with respect to the origin. This implies that each extra marginal unit of butter requires the economy to forgo increasing quantities of guns and is known as the law of increasing costs. This is a consequence of the economy's factors of production being imperfect substitutes in the production of the two commodities. As resources are increasingly transferred from gun production to butter production, they are increasingly more suited for gun production and less efficient for producing butter.

THE PHILLIPS CURVE

The concept of trade-offs is generic, and some of the most important trade-offs relate to policy making. Among the most celebrated is the so-called Phillips curve, named after the New Zealand economist A. W. Phillips. In 1958 Phillips used British data to find a pronounced negative relationship between the rate of unemployment and the rate of (wage) inflation. This was interpreted as confronting policy makers with a trade-off between inflation and economic activity. Introducing an expansionary fiscal policy to reduce unemployment, according to Phillips, will also raise inflation, forcing the policy makers to choose some combination of these two responses.

In the 1960s and 1970s, as economists scrutinized the unemployment-inflation relationship in more detail, the nature of the trade-off was questioned. First, with rising inflation during that period the Phillips curve appeared to be unstable, shifting out over time. Several authors, most notably Milton Friedman in his 1968 article "The Role of Monetary Policy" and Edmund Phelps in his 1967 article "Money-Wage Dynamics and Labor-Market Equilibrium," argued that the Phillips curve should be augmented to include anticipated inflation. As a result the trade-off between current inflation and unemployment would still shift out over time as past inflation was increasingly incorporated in anticipated inflation. However, in the absence of "money illusion" (the tendency of people to evaluate their wages in nominal terms rather than in real terms), they argued that the trade-off was only temporary. In the long run expectations will be fully realized, and anticipated inflation will fully reflect actual inflation. Unemployment will converge to the "natural rate" of unemployment, a rate determined by the structural characteristics of the economy and independent of conventional monetary and fiscal policy instruments, so there is no long-run unemployment-inflation trade-off. The "rational expectations" revolution led to an even more drastic conclusion. If economic agents are smart and understand the structure of the economy, they will internalize government policy into their inflationary expectations and thus negate the trade-off even in the short run.

OTHER TYPES OF TRADE-OFFS

In contrast to the static (but possibility shifting) trade-offs associated with the Phillips curve, other trade-offs are fundamentally intertemporal or occur over time. The most basic of these is the relationship between investment and consumption. To increase current investment an economy needs to increase its current savings, and with fixed output this involves giving up current consumption. Over time, as the increase in investment augments the capital stock, the economy's productive capacity is increased, thus increasing future consumption; the trade-off is therefore between *current* consumption and *future* consumption. In deciding on the intertemporal allocation of resources, an economic agent needs to weigh the short-run consumption losses against the long-run consumption gains.

By its nature investment is also risky and therefore is associated with another important trade-off, that between risk and return, a crucial element in financial decision making. Assuming agents are risk averse, the riskier an investment the higher its return will need to be to compensate the investor for the additional risk. This trade-off between risk and return is the basis for the pricing of risky assets and is central to the theory of corporate finance.

Trade-offs exist in other dimensions as well. Almost all economic decisions have differential effects on different segments of the economy. Some groups inevitably benefit more than others, who may often be adversely affected. This is particularly true of trade policy. A tariff designed to stimulate an import-competing industry, through its effect on the real exchange rate, will affect other sectors of the economy adversely, again giving rise to a trade-off in benefits, this time across industries. Moreover in the presence of externalities, the social opportunity cost may differ from the private opportunity cost, in which case the social and private trade-offs will diverge.

Finally, some trade-offs are more controversial. Some economists argue that devoting resources to improve environmental standards will harm the productive capacity of the economy, implying a trade-off between economic performance and environmental quality. Others argue precisely the opposite; devoting resources to the environment will stimulate employment, increase the efficiency of the economy's productive inputs, and enhance economic performance, thus denying the presence of any trade-off in this case.

SEE ALSO *Choice; Phillips Curve; Production Frontier; Samuelson, Paul A.; Scarcity*

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TRADITION

A key term in the study of culture, *tradition* refers most often to the collective customs and knowledge of a group or society. Tradition is a source of basic learning, occurring even before formal education begins and continuing throughout life. Its usual connotation is a social process of "handing down" knowledge from generation to generation, especially by oral and customary means. It therefore is associated with precedent and culturally is linked often to a group's "heritage," although unlike referring to history, which suggests a time and place in the past, tradition carries a sense of social and cultural patterns—ways of doing things—that continuously occurred "before." The term has other meanings as well, referring to the substantive results of this process, such as a story or ritual, a custom given social importance through repeated practice, knowledge whose official source cannot be verified but is held widely, or a concept (i.e., a mode of thought or behavior) characteristic of people generally. Social sciences scholarship may therefore refer to *a tradition in a culture* as a specific song passed down in a group through time or *the tradition of a culture* more broadly as a way of thinking and acting.

Culture in the past was a reference to place, often to a language group bounded in space, whereas traditions were more variably social—possibly referring to family, age, and gender—and migratory. In academic circles, tradition is more broadly defined than is culture, as in the use of such terms as *Western tradition* and *Eastern tradition*; here *tradition* is used as a synonym for *pattern*. Culture, by contrast, is applied to all types of associations as well as bounded groups. The view persists that traditions define a culture, rather than the reverse, and the "science of tradition" in European American intellectual history—whose purpose is to objectify and organize tradition—has been associated with folklore and ethnological studies. As a result, many genres and groups labeled "folk" are often considered "traditional" or "tradition-oriented."

The reverence commonly afforded to tradition indicates that people follow it, willingly or not, and—significantly for social sciences—may define themselves or their group through its presence. Whether following tradition means unconsciously adhering to a severe form of cultural authority or choosing from a tradition that one finds appropriate can be a cause for dispute among social scientists. Implied in this difference is a questioning of whether tradition forces stability and conformity or fosters change and progress. Inherent in the concept is a duality that is constantly negotiated in society: tradition's reference on the one hand to precedent (as the source of knowledge and action) and on the other hand to the present (as living practice, often adapted and adjusted for particular needs and conditions).

MODERNITY AND CREATIVITY

For social scientists viewing tradition as providing the cultural authority of precedent, there is often an implication that tradition is a contrast to modernity, the latter characterized by individualism (with free will and choice), mobility, and progress. A tradition-oriented, or folk, society in anthropological and sociological scholarship (e.g., on groups such as the Amish, Japanese, Hutterites, and Bedouins) usually has the characteristics of valuing social interdependence, filial and ancestral piety, communitarian stability, and harmony or "group orientation." Many folklorists, however, theorize that the role of tradition is essential to everyday life in modern complex societies, often enacted through cued and framed speech, narrative, and custom to express social identities within a mass culture or to provide a sense of control for individuals (e.g., dressing and athletic rituals).

Another duality with tradition has been with creativity, particularly in studies of artistic traditions. It is often assumed that "traditional" or "folk" art means repetition or imitation of precedent by a community, whereas "fine" or "creative" art represents individuality and novelty. The former is viewed as primitive or ordinary, whereas the latter is elite and refined. A modern philosophy of the arts incorporating tradition since the twentieth century considers tradition and creativity as intertwined in the artistic process, viewable in everyday practice as well as expressive culture.

CONTESTED AND NATIONAL TRADITIONS

Rather than use tradition to describe national or hemispheric patterns, many social scientists apply it to minority cultures and small groups. Arguably, national traditions have been categorized as histories, whereas marginal groups have often been described in terms of tradition. In public or political discourse in the United States, tradition may be invoked in proposals for maintaining national or majority "traditional values" or preserving the

sanctity provided by tradition for institutions of the nuclear family and religion in daily life. Debates arose through the late twentieth century and into the twenty-first century over virtues that constituted the basis of U.S. culture. Associations such as the Traditional Values Coalition, Toward Tradition, and Citizens for Traditional Values took on the label of tradition to represent conservative religious groups in lobbying for prayer and religious programming in the schools, prohibitions on gay marriage, public support for parochial institutions, and school voucher programs. Although sounding secular and broad-based, *traditional* in the organizational titles came to stand for an orthodox morality upholding the centrality of religion in public life. It invoked the merit of traditional to describe national "values" proven worthy by time and by popular usage. The implication by advocates of traditional values is that rapid social change has undermined "mainstream" or national values, while opponents argue for establishment of new or multiple traditions that are culturally relative and legitimate even if they are different from the mainstream. Sometimes the culturally relative keyword of *multiculturalism*, implying that traditions are created anew in contemporary life, may be set against the concept of *culturalism*, connoting the stability of values passed from generation to generation. Both views, sometimes stated as sides in a U.S. "culture war," invoke tradition for social legitimacy.

In other countries facing rapid social change and diversity, tradition has been a publicly contested term for viewing different priorities of building national unity and multicultural community. Modifiers to tradition such as *national*, *ethnic*, *religious*, *folk*, *cultural*, *family*, and *local* have implied a need to place a feeling of social connectedness, a collective memory, in an identified niche within mass society. In the Netherlands, a society with a tradition of tolerance toward minorities, a rapid rise of ethnic and religious minorities (e.g., Muslims from Turkey and Morocco) starting in the late twentieth century caused social scientists to notice political and cultural responses to define and celebrate Dutch traditions (e.g., *Koninginnedag* [Queen's birthday], *Sinterklaas* or St. Nicholas Day) nationally as a way to mollify fears of losing "Dutchness." While creating a sense of cultural norming, applications of tradition have also been interpreted in social science as a process of "othering"—characterizing groups and individuals who do not conform. Subcultural difference can also be normed, as can be seen in the common Dutch social scientific attention to regional traditions of speech, architecture, and customs to show a type of cultural diversity, even within a small country.

The way that social scientists approach tradition can vary across national lines. It has often been argued that Japan and the United States, for example, provide contrasting views of tradition. In Japanese scholarship, tradition is associated with the reverence given to ancient customs and myths, the system of intimate group life established in hierarchical village social structures, and the everyday expressions of social relations based on rank and filial piety (e.g., different performances of respect to elders and superiors in bowing and speech). Tradition is considered the basis of a unified society, and the concept of modernization is integrated with tradition (technological progress and mobility while maintaining a group orientation). In the United States, tradition is tied to the recent past and is viewed as more varied, befitting a multicultural country. It is a more malleable, privatized concept, with less force of authority, and indeed is often seen as "threatened" or "nostalgic" in a postmodern society. Tradition in the United States is more often associated with religion than public life, although American social scientists frequently discuss organized efforts to "construct" tradition (e.g., folk revivals, ethnic and social movements, "roots" organizations, nationalistic movements).

ADAPTED AND INVENTED TRADITIONS

A binary has emerged in cross-cultural studies of tradition between the naturalistic associations of genuine/authentic and the artificial connotations of invented/organized. The concept of "invented tradition," defined by the social historian Eric Hobsbawm as "a set of practices, normally governed by overtly or tacitly accepted rules and of a ritual or symbolic nature, which seek to inculcate certain values and norms of behaviour by repetition, which automatically implies continuity with the past" (Hobsbawm 1983, p. 1), suggests a linkage of organizers'/inventors' motivations for creating practices that invoke tradition and instill senses of the past and of belonging, especially within national contexts concerned with the modern displacement of heritage and community. These invented traditions usually are of recent origin but appear or claim to be old. They also try to construct cultural meanings in the public marketplace, which can be contested, such as the ritual of national founding principles in the American Thanksgiving marked by a twentieth-century reenactment of "Pilgrims' Progress" celebrating the seventeenth-century settlement of the New World and protested by a simultaneously held "National Day of Mourning" sponsored by Native American groups starting in 1970.

Set against the background of change, tradition's role in the way people live and view the world commands renewed attention as new forms of communication arise. As industrialization and urbanization supposedly ushered in a "break with tradition" in the twentieth century, in the twenty-first century trends of computerization and globalization raise questions anew about the processes of tradi-

tion for individuals and the various groups with which they identify, many of which have emerged only recently with invented traditions to promote bonding and expression. Social science inquiry has thus taken up tradition as a concept of social existence relating to modernization, diversity, and identity.

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TRAGEDY OF THE COMMONS

In 1968 the ecologist Garrett Hardin (1915–2003) published the article "The Tragedy of the Commons," in which he argued that the problem raised by population growth had only a moral solution. His use of the word *tragedy* was meant to emphasize the inevitableness of destiny and the remorseless working of things. He used the celebrated example of a pasture open to all to illustrate what he considered to be a problem facing the human race in general.

Suppose that a pasture is used freely by herdsmen owning their cattle privately. Acting rationally and selfishly, each herdsman chooses the size of his herd so as to maximize his private gain. Adding one animal yields a positive component reflecting the proceeds from selling the animal. It also involves a cost: if pasture space is scarce, the additional animal results in overgrazing. However, that cost is shared by all herdsmen and is only minimally felt by the particular decision maker. The tragedy unfolds when all decision makers disregard the costs imposed on others, which leads all the herdsmen to own too many animals. Heavy overgrazing results, and the cattle are underfed and fetch low prices. In this scenario, herdsmen will add to their herd until they derive no benefit from the additional animal. This is called *rent dissipation*. With free access, the magic of Adam Smith's (1723–1790) invisible hand does not work.

In "The Economic Theory of a Common Property Resource: The Fishery" (1954), H. Scott Gordon provided a technical analysis of the problem well before Hardin gave it celebrity. Gordon described a situation in which a private fisherman does not benefit from restraining his activity: the fish he leaves in the water is likely to be caught by some other fisherman. As a result, valuable fish stocks are often overfished, and fishermen are often poor. The collapse of the North Atlantic cod fishery at the end of the twentieth century, as well as the collapse of the Chilean anchovy fishery two decades earlier, are just two dramatic examples.

The particular conditions inducing waste and rent dissipation that are typical of the tragedy of the commons arise either progressively when populations increase their pressure on a common-access resource, or more suddenly when a resource is discovered or when some technological breakthrough makes its exploitation easier. This is why some such tragedies appear as historical events. For example, whales were not endangered before the introduction of harpoon guns reduced the cost of catching them at the same time that they had become valuable for uses other than food for Inuit. In the early twentieth century, oil was discovered and exploited in common pools in the United States. This led to overextraction as one operator rushed to exploit a pool before others could deplete it. In "The Simple Economics of Easter Island" (1998), Jim Brander and M. Scott Taylor interpret the rise and collapse of that island's civilization as an instance of tragedy of the commons. Climate change is another example: emitters of greenhouse gases treat the atmosphere as an open-access resource, not taking into account the costs borne by present and future humans (not to mention other species).

While pervasive, is the tragedy of the commons inevitable, as implied by Hardin? Gordon's analysis identifies common property as the culprit. Were the fishery controlled by a single owner who decided how much fish should be caught, that single owner would bear the consequences of overfishing privately and would properly weigh such costs against the benefits of higher current catches. The outcome would be Pareto efficient under perfect competition.

There are many examples of private property rights solving the tragedy of the commons. The enclosures episode which witnessed the construction of fences

around previously open-access areas in eighteenth- and nineteenth-century England is a celebrated though disputed example. Coase's theorem indicates that any system of property rights, by defining a framework for bargaining, will solve externality problems provided costs of transactions are negligible. In *Governing the Commons* (1990), Elinor Ostrom analyzes many instances where societies have devised institutions other than private property and markets to secure or induce efficient resource use.

A simple look at the organization of economic and social life shows many potential tragedies being avoided thanks to property rights or other social rules: We accept that we must pay for food that we buy in a supermarket; most of the time, cars do not get robbed while parked on the street; we do not freely cut trees in forests for firewood.

Yet solutions or improvements are not easy to come by. The creation or enforcement of property rights, whether private or otherwise, may be institutionally or technologically difficult. Ideally, property rights must be designed in such a way that they cause decision makers to act in the interest of society as a whole in the use of the resource. In many situations, this is not possible either because the required information is not available at a reasonable cost, or because it will not be revealed to the regulator by decision makers, or because there is no authority with the power to impose the required behavior. In such cases, Coase's theorem does not apply because transaction costs are not negligible. Yet, stakeholders may be aware of the collective costs associated with the tragedy of the commons. They can try to improve the situation by signing contracts or treaties, sometimes involving cooperation. They will do so with due consideration for their position in the status quo as determined by their power.

SEE ALSO *Coase Theorem; Externality; Overfishing; Property, Private; Rent*

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TRAIL OF TEARS

Andrew Jackson's 1828 election as U.S. president presaged congressional approval of the Indian Removal Act, which initiated processes that led in the mid- and late 1830s to the notorious Trail of Tears. Although Jackson justified his actions in compelling relocation of southeastern Indian tribes to plains west of the Mississippi River as "a just, humane, liberal policy," implementation led to widespread suffering, cruel deprivation, and painful deaths for many. All told, perhaps 60,000 Choctaws, Chickasaws, Cherokees, Creeks, and Seminoles found themselves uprooted from traditional homes; the ordeal experienced by Cherokees stands out as emblematic of the policy's inhumanity.

Understanding of the Trail of Tears and its impact requires recognition of circumstances then prevalent in the United States and of the targets of Jackson's policy other than Native Americans. For example, beginning with the 1803 Louisiana Purchase certain national leaders including Thomas Jefferson and, later, John C. Calhoun had argued for relocation as the only "permanent solution" to "the Indian problem." Controversy greeted such calls, but national policy by the time of the Jackson presidency offered Native Americans a strictly limited number of options: acculturation, relocation, or extermination.

Meanwhile, egalitarian and antislavery tides of the American Revolutionary period had subsided in the wake of profound changes in American life. First, a rising tide of immigration had begun to swell the nation's northern cities. This created competition for livelihoods between the new arrivals, particularly the Irish, and free blacks at a time when Jackson and his allies courted the white immigrant vote. Extension of the "Cotton Kingdom" in the South coincidentally created huge demands for new lands and slave labor, as well as for enhanced governmental protections for chattel slavery. Further accelerating the processes at play were European intellectuals who formulated supposedly scientific theories regarding race, racial superiority, and racial inferiority. As a result, the nation found itself accepting new racist concepts that countenanced harsh and arbitrary treatment of Indians and black Americans.

Finally, Jackson's personal experiences contributed to the implementation of racist policy. He repeatedly had invaded Spanish Florida to suppress challenges to southern expansion posed by the defiance of Upper (or Red Stick) Creek warriors and of maroon fighters later called Black Seminoles. His troops had destroyed the Apalachicola River Negro Fort in 1816; battled maroons at the Suwannee River in 1818; and, through the agency of Lower Creek raiders, obliterated the Tampa Bay area sanctuary known as Angola in 1821. Having failed to subdue his nemeses, Jackson aimed early implementation of

the removal policy at Florida. By 1835 his actions led to the outbreak of the Second Seminole War, the longest Indian war and, arguably, the largest slave uprising in U.S. history. As noted by General Thomas Jesup, "[This is] a negro and not an Indian War." Eventually, the Black Seminoles accepted western relocation but mostly after negotiated surrender rather than by military defeat. Thus, the Trail of Tears saw African Americans, as well as Native Americans, paying dearly for political and social changes that had placed the nation on the road to Civil War.

SEE ALSO *American Indian Movement; Native Americans; Tribalism; Tribes*

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TRAIT INFERENCE

Does this person deserve my help? Why is she being so hostile? Should I trust that politician? Is he someone I would like to get involved with romantically? The answers to questions such as these that people ask themselves about others depend to a great extent on their beliefs about others' personal characteristics. In other words, trait inferences—judgments made about people's stable underlying characteristics, also referred to as stable dispositions—play an important role in interpersonal behavior. Social and personality psychologists have extensively investigated the trait inference process.

Research in the 1960s and 1970s started from the assumption that people make trait inferences both carefully and logically. Attribution theory predicted that in order to infer that a certain man is rude, one would have to gather information indicating that he is rude to people in general, is ruder than others, and has consistently behaved rudely over an extended period. Trait inferences are sometimes based on systematic thinking of this kind, but researchers recognized early on that trait inferences are messier and more biased than that. For example, people are often motivated to infer that individuals have certain traits and not others; one would probably more readily infer that a stranger is untrustworthy than that a good friend is. In addition, people are very quick to infer that others' behaviors are reflections of stable dispositions even when other obvious explanations exist for those behaviors (the correspondence bias). To illustrate, a nervous-looking woman might be perceived as being a generally anxious person even if she is in a situation that would clearly make anyone nervous.

People infer traits from others' behavior so readily that they often do so unintentionally and without even being aware of it. In other words, people infer traits effortlessly, spontaneously, and automatically when interacting with others. As a result, one is often unable to bring to mind any evidence to support one's beliefs about others' traits. Unfavorable traits (such as selfishness and unfriendliness) are inferred more quickly than favorable ones (such as generosity and friendliness). The reason for this seems to be that although favorable behaviors could reflect favorable traits, they could also have many other causes (such as a desire to make a good impression on other people). Unfavorable behaviors, it is assumed, are more likely to reflect people's true underlying natures.

Research conducted since the 1980s, however, indicates that the heavy emphasis on traits as causes of behavior is more characteristic of people in individualistic cultures (found primarily in North America and western Europe) than of people in collectivistic cultures (found in East Asia and South America, among other places). People in collectivistic cultures are more sensitive to the social and situational pressures that affect people's behavior.

Despite all of the biases that creep into the trait inference process, people's impressions of others' traits can still be very accurate. When researchers ask a number of a person's acquaintances to make judgments about that person's traits, they typically find high levels of agreement.

SEE ALSO *Attribution; Person-Situation Debate; Trait Theory*

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TRAIT THEORY

Personality traits describe individual differences in human beings' typical ways of perceiving, thinking, feeling, and behaving that are generally consistent over time and across situations. Three major research areas are central to trait psychology. First, trait psychologists have attempted to identify sets of basic traits that adequately describe between-person variation in human personality. Second, social scientists across disciplines use personality traits to predict behavior and life outcomes. Third, trait psychologists attempt to understand the nature of behavioral consistency and the coherence of the person in relation to situational influences.

DESCRIBING INDIVIDUAL DIFFERENCES: TRAIT STRUCTURE AND HERITABILITY

There are two prominent approaches to identifying the basic personality traits and their organizational structure (McCrae and John 1992). The *lexical approach* emphasizes the evaluation of personality trait adjectives in the natural language lexicon and assumes that those personality descriptors encoded in everyday language reflect important individual differences, particularly if they are found across languages. The *questionnaire approach* attempts to assess important traits derived from psychologically based and biologically based personality theories. Self- and peer-ratings on sets of lexically derived or theoretically derived traits have typically been subjected to factor analysis to develop hierarchical organizations of traits reflecting a small number of broad superordinate dimensions overarching a large number of narrow-band traits. At the superordinate level, contemporary trait structural models vary in the number of dimensions necessary to organize lower-order traits, ranging from two to sixteen. Each of these models can be assessed via self- and peer-report using reliable and well-validated questionnaires and rating forms.

In the most influential and widely used structural model, thirty traits are hierarchically organized into five broad bipolar dimensions, reflecting a convergence of the *Big Five* lexical traits (Goldberg 1990) and the questionnaire-based *five-factor model* (FFM; Costa and McCrae 1992). The Big Five/FFM dimensions are neuroticism, extraversion, openness, agreeableness, and conscientiousness. Adherents of the Big Five/FFM model assert that these dimensions can be found across languages and personality measures, providing a comprehensive and parsimonious account of individual differences in personality.

Contemporary research on the heritability of traits has focused on the Big Five/FFM dimensions. Behavioral genetic studies have found substantial heritability ranging from 41 percent to 61 percent for the broad dimensions, with little evidence of shared environmental effects (Jang, Livesley, and Vernon 1996). Heritability of the narrow-band traits of the FFM is more modest, ranging from 30 percent to 50 percent. It is widely believed that traits are influenced by multiple genes; molecular genetic studies, however, have not replicated results linking specific genes to personality traits. In addition to the genetic correlates of traits, promising new efforts by neuropsychologists using functional brain imaging and electroencephalogram (EEG) recordings have begun to reveal the neural basis for traits.

PREDICTING BEHAVIOR AND LIFE OUTCOMES

Personality trait theory has been used in almost every branch of social science and practice. Researchers in clinical psychology have effectively used trait theory to predict both symptom-based psychopathology and personality disorders. Trait theories have also been used in treatment planning, as well as for understanding psychotherapy processes and outcomes.

Beyond clinical psychology, trait theory has been applied to industrial/organization psychology where it has been used to predict employee satisfaction and job performance. Personality traits have also been of interest to forensic psychologists in predicting psychopathic and deviant behavior. Other areas in which traits have been successfully employed include: predicting mate selection as well as marital satisfaction, social psychology, counseling, studies of human development across the lifespan, cross-cultural studies, learning and educational outcomes, and health-related behaviors and outcomes.

THE PERSONALITY TRIAD: BEHAVIORAL CONSISTENCY, INDIVIDUAL COHERENCE, AND SITUATIONAL INFLUENCE

Trait theory implies that personality and behavior exhibit levels of temporal stability and cross-situational consistency. There is strong empirical support demonstrating that the rank order of individuals on various trait dimensions is stable (Roberts and DelVecchio 2000), as well as support that individuals' behavior is relatively consistent across situations (Funder and Colvin 1991). It is also quite evident, however, that situational influences also impact stability and variability of behavior. For many years, the "person–situation debate" generated significant advances in the study of behavioral consistency and variability (Kenrick and Funder 1988), leading to contemporary interactionist models.

Since the early 1990s, evidence has accumulated supporting conceptions of within-person behavioral variability as classes of stable individual differences at the level of

both psychological states and behaviors. While evidence of variability was first interpreted as support of situational influences, contemporary views propose a comfortable coexistence of large within-person variability and large between-person stability in the study of personality (Fleeson 2001; Fleeson and Leicht 2006; Funder 2006). This has recast the person–situation debate into an effort to integrate personality variability and stability.

These contemporary integrative models involve contextualization of within-person behavioral variability and between-person consistency within the situation and include the cognitive-affective personality system (Mischel and Shoda 1995), knowledge-and-appraisal personality architecture (Cervone 2004), the density distribution of states approach (Fleeson and Leicht 2006), and the latent state-trait theory (Steyer, Schmitt, and Eid 1999). At varying levels of specificity, these models all employ intrapersonal perceptual and meaning-making processes (e.g., explicit cognitive and affective subsystems are often proposed). As suggested by David C. Funder (2006), the future success of such approaches also requires identification of the psychologically salient aspects of situations.

SEE ALSO *Nature vs. Nurture; Personality; Person-Situation Debate; Temperament*

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TRAIT-SITUATION CONTROVERSY

SEE *Person-Situation Debate.*

TRANSACTION COST

Economists use the term *transaction cost* to refer to costs arising from actions that hinder the ability of two (or more) individuals to achieve mutually desirable objectives or resolve disputes. Originally conceived as the costs of conducting market transactions, recognition that exchange and cooperation also take place within firms (between employers and employees), within legislatures (among politicians trading votes over preferred legislation), and even within families has led to the broadening of the term to include costs incurred in interactions within any institutional or organizational setting.

Transaction costs have been described broadly as "the costs of running the economic system" (Arrow 1970) and have been compared to the frictions that occur in mechanical systems (Williamson 1985, p. 19). Examples include costs arising out of such activities as discovering or communicating opportunities for trade (information, search, and marketing costs), of reaching and describing agreements (bargaining and contracting costs), and of making sure that agreements are honored (monitoring and enforcement costs). The concept also includes costs of litigation (to enforce property rights or contracts or to determine liability for an accident, for example), lobbying (to influence legislation), and the management or administration of firms and government agencies. Although transaction costs are distinguishable from production costs, unnecessary or

excessive production costs incurred to improve one's bargaining position, or to protect oneself from losses that would result if a trading partner reneged on a deal, are also appropriately regarded as transaction costs.

The logic for focusing on transaction costs derives from an observation by 1991 Nobel laureate Ronald Coase (subsequently dubbed "the Coase theorem") that, were it not for transaction costs, all possible gains from trade and cooperation would be achieved through voluntary agreements regardless of the particular institutions, legal rules, or organizational forms in place. It follows that if institutions and organizational forms do matter, it must be because transaction costs are significant. And because transaction costs reduce the gains from trade and cooperation available to transactors, institutions and organizational forms that generate lower transaction costs will generally be preferred to alternatives with higher transaction costs.

Early use of transaction costs to explain observed institutional and organizational arrangements were often criticized on the grounds that because transaction costs can be difficult to measure—and cannot be observed at all for institutions and organization forms that are not adopted—claims that observed arrangements minimized transactions costs were easy to make and impossible to refute. If companies are observed producing their own inputs, it must be because the transaction costs of procuring those inputs on the market are too high; if legislators enact strict liability standards for product liability, it must be because a negligence rule would generate excessive transaction costs.

Beginning in the 1970s, economists, led by Oliver Williamson (1985), began to address this criticism by relating the size of transaction costs under different forms of organization to observable characteristics of transactions such as the complexity of the transaction and the degree to which transactions require investments that are "relationship specific," that is, are designed or located for use in a particular relationship and consequently have a lower value if used for some other purpose. Since then, transaction cost reasoning has been applied to a wide array of organizational forms and institutions. Although its most extensive development has occurred in the analysis of the boundaries of firms and the design of contracts, the theory of transaction costs has also been used to explain the evolution of political institutions and legal rules and the implications of those structures for the economic performance of nations (North, 1991).

SEE ALSO *Coase, Ronald; Coase Theorem; Economics, Institutional; Neoinstitutionalism; Organization Theory; Organizations; Transaction*

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TRANSACTION TAXES

Although transaction taxes can be taxes imposed on any transaction, the term generally refers to the taxes imposed on trading of currencies, stocks, and other financial instruments by economists.

One of the most influential transaction tax is the Tobin tax. After the United States's suspension of convertibility from U.S. dollars to gold and the collapse of the Bretton Woods system in the early 1970s, James Tobin, an economist who later won the Nobel Memorial Prize in Economics in 1981, proposed a charge on all exchange transactions between currencies in all countries. The proposed charge is called the "Tobin tax." The purpose of the Tobin tax is to discourage short-term speculation in global foreign-exchange markets and thus reduce the exchange-rate volatility, or, in Tobin's words, "to throw some sand in the wheels of our excessively efficient international money markets" (Tobin 1978, pp. 154–155). Because the Tobin tax is to be levied on all currency-exchange transactions worldwide, it has been suggested that an international organization such as the United Nations, the International Monetary Fund, or the World Bank would manage the Tobin tax, which would be used to stabilize the international economy and promote peace and reduce poverty. Opponents of the Tobin tax argue that such taxes would reduce the liquidity in the exchange markets and actually lead to more volatile exchange rates.

Another type of transaction taxes, securities transaction taxes (STT), has been proposed and implemented in many equity markets. STT are taxes imposed on the trading of stocks, bonds, futures contracts, and option contracts. Unlike the Tobin tax, the implementation of STT does not require international cooperation. Proponents of STT argue that in addition to generating revenues, these taxes may reduce excess volatility. However, opponents argue that the taxes may reduce market liquidity, decrease

market efficiency, and drive trading to other countries. G. William Schwert and Paul Seguin (1993) provided an overview of the costs and benefits of STT. John Campbell and Kenneth Froot (1994) reviewed some international experiences associated with securities transaction taxes and found that the behavioral responses from investors are large in the sense that investors move a significant portion of the trading to markets with lower STT. In the United States, the then House Speaker Jim Wright proposed a "stock transaction tax" in 1987. The 1994 Clinton budget proposal contained a fee of 14 cents for each contract bought and sold on an organized futures exchange. But such taxes have never been passed by Congress. Empirical evidence on the subject has been mixed. Some researchers found that a higher transaction tax leads to a more volatile stock market, contrary to what the proponents claim. The transaction tax can be viewed as part of the transaction costs, which may include broker fees and stamp duty, among other costs associated with trading of stocks, bonds, futures, and options.

SEE ALSO *Financial Markets; Speculation; Taxes; Tobin, James*

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Dong Li

TRANSACTIONS MOTIVE

SEE *Money, Demand for.*

TRANS-ATLANTIC SLAVE TRADE DATABASE

SEE *Slave Trade.*

TRANSCENDENTALISM

SEE *Buddhism.*

TRANSCULTURATION

SEE *Ortiz, Fernando.*

TRANSFER PRICING

Tax avoidance by multinational companies poses a serious problem for governments. Governments began to grow aware of eroding tax bases as multinational business expanded in the late 1960s. Since tax systems differ from country to country, multinational companies can reduce their tax burden by shifting profits to countries with relatively low tax rates.

Transfer pricing is one method of tax avoidance. A transfer price is a price used for transactions among affiliates. Multinational companies can move income among affiliates located in different countries by manipulating the transfer price used in intrafirm transactions. For example, suppose a parent company in the United States sells goods to a subsidiary in Germany. Suppose also that the corporate tax rate in the United States is higher than the corporate tax rate in Germany. Assuming that a multinational company maximizes joint after-tax profits earned in the two countries, the company reduces its tax payments by using a lower transfer price. A lower transfer price allocates less profit to the United States parent company and more profit to the German subsidiary. The transfer pricing benefits the company via increased after-tax profit. However, the U.S. government suffers a decrease in tax revenue.

Tax avoidance, as outlined above, has also been brought to the public's attention as an equity issue. Domestic companies are subject to higher effective corporate tax rates when compared to multinational companies. Domestic companies are not able to manipulate their profits, as multinational companies do, for tax-saving purposes.

Corporate tax laws address illegitimate income allocation among a company's related affiliates. For example, in the United States, Section 482 of the Internal Revenue Code regulates income allocation among affiliates. Many countries employ similar regulations on this type of transaction among affiliates. These regulations require companies to use the so-called arm's length price for the purpose of filing a tax return. The arm's length price is defined as the transfer price that would have been used if the intrafirm transaction took place between nonassociated

parties in the market. However, determining the arm's length price is not straightforward, especially when transactions involve intangibles and services.

In 1991 the Advanced Pricing Agreement (APA) was introduced by the U.S. Internal Revenue Service to resolve disputes associated with determining the arm's length price. The purpose of the APA is to allow taxpayers and tax authorities to reach a consensus regarding the arm's length price before taxpayers file a tax return. The APA has been extended to the Bilateral Advanced Pricing Agreement (BAPA), which aims to coordinate the confirmation of the arm's length price between two countries. The necessity of coordination results from efforts to eliminate international double taxation, which occurs when tax authorities in each jurisdiction apply a different arm's length price.

Transfer pricing can also occur when transactions between affiliates take place in the same country, though the term usually refers to tax evasion across national borders. The United States has a long history of regulating transfer prices, since transfer price manipulation allows companies to allocate income among affiliates located in different states. Regulation pertaining to interstate transaction dates back to 1928.

The U.S. government has been leading transfer pricing discussions in the Organisation for Economic Co-operation and Development (OECD), an international organization that coordinates tax policies across countries. The OECD has made several proposals for transfer pricing solutions, one being the Model Tax Convention on Income and on Capital. Providing an outline when two countries enter into a tax treaty, the Model is a suggestion and is not legally binding. The first draft was published in 1963, and the committee on fiscal affairs accepted it in 1977. Since then, the contents of the Model have been periodically updated.

Tax legislation for multinational businesses prompted numerous studies as it became one of the critical policy issues presented by economic globalization. The earlier literature of the 1970s and 1980s tried to provide a theoretical framework for the decision making of multinational companies under different tax rates across countries. The literature demonstrated that multinational companies could increase global income by shifting their profits to lower-taxed jurisdictions by transfer price manipulation. While it is clear that the mechanism of transfer pricing can serve as an arbitrage device to reduce the tax burden of companies, these studies treated tax policies as exogenous.

The literature of the 1990s studied policy planning as it applied to a less-informed government that was attempting to regulate tax evasion. Transfer pricing information is private and generally beyond government control. The literature proposed an analysis of mechanism design using a principal-agent model. The question posed was how to implement tax policies that induce appropriate transfer prices from multinational companies.

The policy concern became one of efficiency loss rather than information constraints after the introduction of the APA and BAPA. The literature in the early 2000s argues that the BAPA system causes efficiency losses since multinational companies, while integrated under common control, cannot internalize the costs of intrafirm transactions. The BAPA separates the profits earned by two different affiliates within the same company for the purposes of imposing taxes in each country. Corporate profits (and tax revenue) will, consequently, be lower.

SEE ALSO *Markup Pricing; Taxes; Transaction Taxes*

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Akinori Tomohara

TRANSFLECTIVE DISPLAYS

SEE *Symbols.*

TRANSFORMATION, STRUCTURAL

SEE *Structural Transformation.*

TRANSFORMATION PROBLEM

The so-called transformation problem has to do with an apparent contradiction between Marx's labor theory of value and the tendency of profit rates to equalize across industries. The labor theory of value, which assumes that labor is the source of both value and surplus value (or profit), seems to imply that "labor-intensive" industries would have a higher rate of profit than "capital-intensive" industries. Marx claimed to have resolved this apparent contradiction in Part 2 of Volume 3 of *Capital* with his

theory of prices of production, which may be very briefly summarized as follows:

1. The general rate of profit is determined by the ratio of the total surplus value to the total capital invested in the economy as a whole ($R = S / [C + V]$) (in Volume 1 of *Capital*, the total surplus value is determined by the labor theory of value).
2. The average profit in each industry is determined by the product of the general rate of profit and the capital invested in each industry ($\Pi_i = R [C_i + V_i]$).
3. The price of production for each industry is determined by the sum of the constant capital and variable capital in each industry and the average profit in each industry ($PP_i = C_i + V_i + \Pi_i$).

In this way, Marx claimed, each industry receives the same rate of profit in a way that is consistent with the labor theory of value.

A long-standing criticism of Marx's theory of prices of production is that he "failed to transform the inputs" of constant capital and variable capital from values to prices of production. According to this interpretation, constant capital and variable capital are derived from given physical quantities of means of production and means of subsistence (they are first determined as the values of these groups of commodities in Volume 1, and then determined as their prices of production in Volume 3). The criticism is that Marx failed to make this transformation of constant capital and variable capital in Volume 3, but instead left these inputs in value terms. Marx's theory is therefore logically incomplete and inconsistent: Output prices are prices of production, but input prices are values. It is further argued that Marx's mistake can be corrected, using a method first suggested by Ladislaus von Bortkeiwicz in 1905 and popularized by Paul Sweezy in 1942, but this correction has damaging consequences for Marx's theory. This is because Marx's two aggregate equalities (total price of production = total value, and total profit = total surplus value) cannot both be true simultaneously, and because the rate of profit changes (so that the "value rate of profit" $\neq$ "price rate of profit"). These results mean that individual prices and profits are not merely the redistribution of aggregate amounts of value and surplus value, as Marx claimed. This alleged logical inconsistency has been the main reason for the rejection of Marx's theory over the last century by mainstream economists and others. The Sraffian interpretation of Marx's theory (Steedman 1977) has reinforced these criticisms.

Most Marxists have largely accepted these criticisms of Marx's theory of prices of production (that he failed to transform the inputs, and that the two aggregate equalities cannot both be true at the same time), although they draw different conclusions. Marxists have generally argued that these are minor problems, requiring only minor modifications, and that they are not sufficient reason to reject Marx's theory, especially when compared to mainstream theories of profit, which have much more serious logical problems and much less explanatory power.

Since the 1980s, there have been several new reinterpretations of the transformation problem that have provided stronger defenses of Marx's theory. The best known and most influential of these new works on the transformation problem has been called the "new interpretation." It was presented originally, and independently, by Duncan Foley in 1982 and Gerard Duménil in 1983 and 1984. The main innovation of the new interpretation is that it argues that variable capital is not derived from a given quantity of means of subsistence, but is instead taken as given, as the actual quantity of money capital advanced to purchase labor power in the real capitalist economy, and that this is equal to the price of production of the means of subsistence, not the value of the means of subsistence. Furthermore, this same quantity of variable capital is taken both in the theory of value and in the theory of prices of production. In other words, variable capital does not change in the transformation of values into prices of production. It follows from this interpretation of variable capital that total profit is always equal to total surplus value. The new interpretation also redefines the aggregate price equality in terms of the "net price" of commodities, rather than the "gross price," and it assumes that this net-price equality is always true. Therefore, according to the new interpretation, both of Marx's two aggregate equalities, redefined in this way, are always true simultaneously. However, the new interpretation continues to accept the standard interpretation of constant capital, so that constant capital changes in the transformation of values into prices of production, and Marx's gross aggregate price equality is not satisfied (and the rate of profit also changes).

The "macro-monetary" interpretation presented by Fred Moseley in 2000 extends the new interpretation to constant capital as well as variable capital. Moseley argues that both variable capital and constant capital are taken as given, as the actual quantities of money capital advanced to purchase means of production and labor power in the real capitalist economy, and that these are equal to the price of production of the means of subsistence and the means of production, respectively. The crucial point is that these same quantities of constant capital and variable capital are taken as given in both the theory of value and the theory of prices of production. It follows from this interpretation of the initial givens in Marx's theory that both of Marx's two aggregate equalities are always true simultaneously, and also that the rate of profit does not change.

Similar interpretations have been presented by Richard Wolff, Antonio Callari, and Bruce Roberts (1984), and by Andrew Kliman and Ted McGlone (1988), although these interpretations are also different in some respects. It remains to be seen whether these recent reinterpretations will be accepted by the majority of Marxist economists and by the critics of Marx. But a new phase in the long debate has been opened up, which could lead to different conclusions concerning the logical consistency of Marx's theory.

SEE ALSO *Forces of Production; Labor Theory of Value; Value*

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Fred Moseley

TRANSGENDER

Transgender is an umbrella term that describes different ways in which people transgress the gender boundaries that are constituted within a society. Groups encompassed by this term include people who have an atypical gender expression, sex, sexual identity, or gender identity. An understanding of *transgender* requires an awareness of the difference between the terms *sex* and *gender*—terms that often are conflated.

Sex is a biological construct. It refers to a person's physical anatomy, usually determined by their genetics and exposure to hormones. While sex often is considered dichotomous, so that individuals are classified as *male* if they have a penis and as *female* if they have a vagina, *intersexed* persons are an exception to this dichotomy because they have features of both sexes (Fausto-Sterling 2000). The debate about the treatment of intersexed infants whose sex organs do not appear traditionally male or female has been heated. On one side, people feel that genital surgery should be performed early so that the infant has the genitalia of one sex and can be raised without confusion about their *sexual identity*—that is, without confusion about how they understand and label their own sex. On the other side, organizations of intersexed people, such as the Intersex Society of North America, have protested this practice on the grounds that the sex assigned to the child in surgery may not correspond with their sexual identity as they mature. Instead, they argue that intersexed children should be raised with their genitalia unaltered until they are old enough to determine if they would like genital surgery and, if so, to select which sex is a better fit for them.

Unlike sex, *gender* is a social construct. Within social groups, sets of traits are linked together come to form genders, such as *masculinity* and *femininity*, through repeated performance and symbolism. The set of traits may depend upon the culture and time, such that enacting femininity in one country may appear different from doing so within another country or within another era. While many cultures recognize two genders attributed to male or female physical sexes, other cultures have formed genders that are based upon a combination of the sexes and personalities of individuals. For instance, some Native American tribes recognized "two-spirit" people as having distinct genders with valued social roles—so "masculine women" might become warriors and "feminine men" healers (Feinberg 1996).

In most cultures, however, gender is thought to be dictated by one's physical sex, without any recognition of the cultural assignment of gender traits to one sex or another. When people fall outside the norms of gender transgression—that is, enacting traits that are attributed to the other sex—they may fall into one of the categories of transgender identity. People who adopt *gender expressions* (i.e., appearances that reflect gendered traits) that are not consistent with their sex by wearing clothing that is associated with the other sex may identify as *cross-dressers* or as *transvestites*. Because women are permitted a broader range of apparel in the West, male cross-dressers are more common and noticeable than female cross-dressers. Cross-dressing does not indicate a person's sexual orientation; in fact, most male cross-dressers identify as heterosexual (Docter and Prince 1997).

Transsexual people have a sexual identity that does not match their physical sex. While some desire sex-reas-

signment surgery so that their anatomy can match their sense of self, not all transsexuals want to change their bodies. Surgery is costly, and can have mixed results. Hormone therapy may be used as well, as a complement to surgery or independently, and is less costly. To receive services, many clinics require that transsexual people first meet the Harry Benjamin Standards of Care (Meyer et al. 2001), which detail a list of steps that people complete to show that they are ready for surgery—such as living for a year as the other sex. *Transmen* or *FTM* (female-to-male) and *transwomen* or *MTF* (male-to-female) are common labels to describe the sex of those who transition from one sex to the other.

Sexual orientation refers to one's emotional, physical, and sexual attraction to another person. Individuals who are attracted to the other sex are *heterosexual*, to the same sex are *homosexual,* and to both sexes are *bisexual*. While having a sexual orientation other than heterosexual does not necessitate a transgender sexual identity or gender expression, there are forms of gender or gender expression within some nonheterosexual communities that fall under a transgender rubric. For instance, being *in drag* is slang that connotes appearing and acting, for entertainment purposes, in a way that is typical for the other sex—with *drag queens* being men emulating women and *drag kings* being women emulating men (Volcano and Halberstam 1999). Within lesbian communities, terms like *butch* and *femme* describe the gender identities of women who display different sets of gendered traits. Although they often are misunderstood as mimicking heterosexual genders, these genders are composed of traits that do not fall neatly into masculine or feminine genders but have unique meanings within those communities (Levitt and Hiestand 2004).

People who are transgender tend to experience more discrimination and harassment than those who are not, even when compared to gay or lesbian people who are not transgender (Herek 1995; Levitt and Horne 2002). There is debate within the psychological community on how to understand transgender. A diagnosis for *gender identity disorder* remains listed in the 2000 edition of the *Diagnostic and Statistical Manual of Mental Disorders* of the American Psychiatric Association. Many mental health professionals believe that this diagnosis should be abolished because it is based upon a false understanding of gender and that treatment should focus on creating supportive environments for transgender youth rather than pathologizing them (Hiestand and Levitt 2005). At the same time, others believe that the diagnosis is necessary so people can obtain insurance coverage for treatments (Brown and Rounsley 1996), and still others persist in conceptualizing transgender as a mental disorder inherent to the individual.

Groups of transgender people have organized to fight for supportive legislation and medical and mental health treatments that meet their needs and respect diversity within gender experiences. Such organizations as the International Foundation for Gender Education and the National Center for Transgender Equality also work to educate the public about transgender issues and concerns.

SEE ALSO *Discrimination; Gender; Gender, Alternatives to Binary; Harassment; Sexual Orientation, Determinants of; Sexual Orientation, Social and Economic Consequences; Sexuality*

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Brandy L. Smith
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TRANSGRESSION

SEE *Sin.*

TRANSNATIONALISM

Although the idea of transnationalism is widely employed in the social sciences to describe long-distance networks, there is little agreement about its precise definition. The concept of transnationalism describes a situation in which nations and communications are connected, regardless of the geographical distances that separate them, typically by new communication technologies that facilitate flows and networks of people, goods, and services. Transnationalism is therefore also associated with such notions as "network society" (Castells 2000) and with international mobility (Urry 2000). Transnationalism can also be used simply as a substitute for the notion of globalization (Held et al. 1999). It is therefore important to distinguish between internationalism and transnationalism. The former refers to cooperation between nation states and encompasses the international relations between governments that are regulated by treaties and agreements. Transnationalism refers to global cooperation between people and can evolve into a global social movement that advocates harmony, multiculturalism, and cosmopolitanism.

Transnationalism is said to be manifest in certain characteristic social phenomena. These include preeminently the global development of ethnic diasporas as a consequence of the international flow of legal and illegal migrants. The growth of such networks of dispersed communities is also associated with the development of transnational crime and with terrorist networks. These cross-border activities involve not just the trade in capitalist goods and services but include drugs, weapons, contraband, and people. The trade in women as prostitutes is part of a larger pattern of global slavery. It is also claimed, primarily in cultural studies, that transnationalism has given rise to new forms of consciousness because migrants have multiple identities and hybrid cultures. The analysis of these global cultural flows is closely associated with the anthropological investigations of Arjun Appadurai (1996, 2001). These fragmented and multiple identities become part of a transnational imaginary that creates fictive communities of membership and belonging. Because these cultural identities and images are drawn from multiple sources, it is claimed by writers such as Homi Bhabha (1994) that many modern cultures are going through a process of hybridization.

Alongside cultural transnationalism, there is the emergence of economic transnationalism, which is manifest in the transnational corporation that produces and sells in global markets beyond the controls of the nation state. There is also, as a result, an international capitalist class that is highly mobile and a transnational working class whose remittances to countries like Pakistan and the Philippines represent a significant contribution to the national economy. These movements of labor now also include large numbers of women, resulting in both the feminization of migrant labor—for example the Filipino maids of Singapore and the Gulf states—and the growth of the transnational marriage (Yeoh et al. 2000). These migratory roots also become the sites of international business communities that can exploit these ethnic ties, however weak and dispersed, to create economic opportunities for global accumulation, as Aihwa Ong (1999) has demonstrated with respect to the diasporic Chinese business community.

Unsurprisingly, transnationalism is thought to have significant political consequences resulting, for example, in the global city as a site of power that can challenge the nation state, or giving rise to a global democracy and a global public sphere (Held 1995) or to new forms of citizenship or "mutations of citizenship" (Ong 2006) and "transnational citizenship" (Bauböck 1994). Transnational migration in creating guest workers and permanent residents has required a reassessment of the relevance of national citizenship to the rights of migrant workers and their families. The legal and political status of migrants as quasi citizens is often ambiguous, because national citizenship is based on both rights and duties. It is often unclear whether migrants, refugees, or asylum seekers should be expected to fulfill the duties of citizens, such as paying taxes or undertaking military service.

Transnationalism is also associated with the idea of cosmopolitanism, and it has been assumed that the porous boundaries of the modern state, along with international cooperation through such institutions as the United Nations, might fulfill Immanuel Kant's (1724–1804) dream of "perpetual peace" and international harmony (Kant [1795] 1991). However, with growing fear of terrorism after the attack on the World Trade Center in New York in 2001 and the increasing emphasis on domestic and international securitization, many governments are attempting to control the transnational flow of illegal people, goods, and services. One state response is to build walls to contain such flows—for example, between Mexico and the United States. In October 2006 U.S. president George W. Bush signed the Secure Fence Act, which anticipates the creation of a 700-mile barrier to deter illegal migrants. However, walls are also being constructed between Brazil and Paraguay, between Saudi Arabia and Iraq, and between Israel and its Palestinian neighbors. The city council of Padua in Italy has created a steel barrier to divide the respectable side of the city from the high-crime neighborhoods, which are said to be rife with illegal drugs associated with an influx of Nigerian and Tunisian

migrants. Sociologists have argued therefore that modern states, perceiving transnationalism as a threat to their sovereignty and security, have created an "immobility regime" and that increased surveillance and regulation of populations is resulting in an "enclave society" rather than transnational integration (Turner 2007).

SEE ALSO *Citizenship; Corporations; Cosmopolitanism; Cultural Studies; Globalization, Social and Economic Aspects of; Immigrants to North America; Immigration; Kant, Immanuel; Nationalism and Nationality; Networks*

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Bryan S. Turner

TRANSPARENCY

The use of the concept of transparency has become widespread across multiple fields and subfields in the social sciences. In most instances, it is used to describe the ability of one actor to access information from another actor. More simply, transparency can be understood as the opposite of secrecy. "Government transparency" refers to the ability of societal actors to access government-held information. Democratic theory has long emphasized that an accountable, truly democratic polity must make its decisions public to its citizens. Such arguments can be traced as far back as the writings of Jeremy Bentham (1748–1832), who used the concept of "publicity" rather than "transparency," and James Madison (1751–1836), who argued that "a popular government, without popular information, or the means of acquiring it, is but a prologue to a farce or a tragedy" (Madison 1973, p. 473).

Some authors differentiate between the "openness" of a political system and the transparency of the government. Openness is a reflection of the free flow of information *among* societal actors (e.g., through a free press). Transparency, on the other hand, reflects the flow of information *from* governments *to* society.

The need for government transparency has become part of the broader social science debates on the "principal-agent problem." Government officials are seen as "agents" who need to act on behalf of citizens (their "principals"). Their actions need to be known and approved by the public. The main opposition to government transparency comes from government bureaucrats, because greater public access to information about bureaucrats' work increases the likelihood for their mistakes to become visible. Also, lack of transparency sometimes allows government officials to reap "rents" by disclosing information only to individuals friendly to them or their organizations.

Transparency is closely related to the concept of accountability. Accountable governments need first to inform the public of their actions and intentions and, second, to offer mechanisms through which they can be punished for not being representative. Transparency is thus considered a necessary, albeit not sufficient, condition for accountability.

Transparent political systems are considered to be more effective economically and more stable politically; governments that are not transparent are generally more corrupt. Whether corruption is present or not, a secretive political system leads people to assume that government officials have something to hide, so lack of transparency reduces citizens' faith in the performance of democratic governments and slows down democratic consolidation. Lack of government transparency in many new democracies is one of the factors that can lead to incomplete consolidation or even reversals to authoritarianism.

Transparency is best assured through the adoption of "freedom of information" (FOI) laws. The few existing gauges of government transparency are in fact based on the existence and completeness of such laws. In 1766 Sweden was the first country to adopt freedom of information legislation, as part of its press freedom act. Finland (in the 1950s) and the United States (in the 1960s and 1970s) were the next countries to adopt such laws. In 1990 only fourteen countries had legislation pertaining to citizens' access to information. From 1991 to 2000, during what Thomas Blanton in "The World's Right to Know" (2002) called the "decade of transparency," that number more than doubled. While many of the countries adopting freedom of information laws in the 1990s were new democracies, some consolidated democracies such as the United Kingdom, Italy, and Japan also adopted FOI legislation.

The literature suggests two possible reasons for the increased transparency in the post–cold war era: the emergence of a general "norm of transparency" and technological advances such as the development of personal computers, word processing, photocopying, and, especially, the Internet. Such technologies have led to an increased ability to generate, store, and, more importantly, disseminate information to a large number of citizens. The costs of offering information to the public—one of the long-standing problems associated with government transparency—have been reduced substantially due to such new technologies. But even with the improvements brought by new information technology, many government agencies still struggle with the implementation of freedom of information legislation. In the United States, for example, more than half a million requests for information are made every year under the Freedom of Information Act (FOIA). The FOIA offices that deal with such requests in individual agencies do not have the necessary funds and staff to deal with them, and therefore become backlogged.

Transparency is limited not only because it is costly and time-consuming for government officials, but also because there are limits to the kinds of information that can be made available. Virtually all the countries that allow public access to government information have some restrictions on that access, such as exempting from scrutiny information that endangers national security or individual privacy. Yet a truly transparent government is one that

1. makes clear that access to information is the norm and exemptions are to be resorted to only in exceptional cases;
2. has legislation with precise definitions of the exemptions to the right of access;
3. provides for an independent review of denials of access to information; and
4. requires minimal or no fees for the requested information.

While the literature on transparency still focuses overwhelmingly on the relationship between governments and citizens, the concept is now also used increasingly to describe the ease with which information flows between other types of actors. For example, during international negotiations a state can be characterized as transparent if it offers information about its preferences and intentions to another state; a corporation is transparent when it allows investors access to financial data; an international organization is transparent if states or the public can access information about its workings. This implies that, when discussing transparency, one needs to specify the actor that is offering information *and* the one who is receiving such information.

The relationship between information and power has long been acknowledged. In the contemporary information age it is only natural that there is a growing interest in who controls information and how they control it. The increased focus on transparency is a reflection of such interests in multiple disciplines in the social sciences.

SEE ALSO *Accountability; Bureaucracy*

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Alexandru Grigorescu

TRANSPORTATION INDUSTRY

Transportation services move people or freight from one location to another. These services are a near necessity for successful operations of businesses and governments. Efficient transportation systems contribute to businesses fulfilling purchase orders in a timely fashion. They also increase residency options for employees because workers

are not restricted to living in close proximity to their jobs. Government services also benefit from the use of efficient transportation networks by enhancing governments' ability to respond to national emergencies.

Different modes of transportation are available to satisfy business, government, and commuter demands. Shipping volume and geography dictate the most efficient type of transportation service. For example, trucking, rail, and inland water barges generally transport freight within a country or region. Cost advantages from hauling relatively small shipments of 80,000 pounds or less are associated with trucking carriers primarily because such operations face small fixed costs. Often the major source of fixed costs for many trucking carriers is the leasing of trucks. The investment in more trucks and employment of more drivers to meet high volume demand at best is associated with unit costs remaining the same. In contrast, the unit costs of providing shipping service by rail and inland barges declines as volume increases due in large part to the high fixed costs of providing transport. For instance, fixed costs such as the cost of locomotives and barges are substantial and allow for additional freight volume beyond the typical 80,000-pound limit in trucking. Labor costs associated with operating such transport equipment increase less than proportionately with increasing volume given the large hauling capacity of trains and barges.

The shortcoming of trucking, barge, and rail is their inability to provide overseas service. As an alternative, international shippers rely on the services of ocean liners and air carriers. The introduction of containerized shipping by the American entrepreneur Malcom McLean in 1956 contributed to ocean liners' capacity advantage over aircraft when shipping large quantities of bulk products. In contrast, aircrafts typically transport small packages and parcels. Air transport service also offers the advantage of faster delivery compared to ocean liner service.

Excluding trucking, the major modes of freight transport also provide passenger service. This service constitutes a large share of air transport business. The ability to provide relatively fast transport across long distances makes this mode of travel a superior choice over rail and water passenger service. Light rail service is more cost effective than air transport for service within localities with high population density. Along with bus transport, rail provides an alternative to the use of private automobiles for local commutation. The benefits associated with rail and bus public transit in high-density areas are the easing of traffic congestion and the reduction of pollution emissions. Commuter demand for privacy and scheduling flexibility, however, makes the private use of automobiles a viable option for local commutes.

The economic significance of transportation services is further highlighted by its large share of national output. For instance, transportation's share of total trade of commercial import services varies from a low of 16.7 percent in North America to a high of 28.6 percent in Asia, according to World Trade Organization statistics published in 2004. Transportation services' share of total trade of commercial exports varies from a low of 22.3 percent in Western Europe to a high of 38.5 percent in Africa. The interest of governments in the development of transportation services is universally strong given that these services are a major source of economic growth. Hence, the remainder of this entry explores the twentieth-century history of governments' influence on the provision of efficient transportation services.

GOVERNMENT POLICY TOWARD TRANSPORTATION SERVICES

For the majority of the twentieth century, many countries provided state-owned transportation services. Ownership gave governments the power to offer universal service at affordable rates. Other countries such as the United States imposed economic regulation on private transportation operations. Local U.S. governments' role in the provision of public transit did resemble that of other countries. Typically U.S. municipalities owned and operated local rail and bus services.

U.S. regulation of transportation services from the 1920s to the mid-1970s restricted carrier competition and set rates along routes. The rationale for limiting competition in rail, air, and water transport was that their high fixed costs made them susceptible to destructive competition. Competition in this type of market leads to periods of carrier foreclosure as firms are unable to cover costs when facing competitive price pressures. Setting the terms for service rates gave rate-makers the opportunity to promote affordable service for a large group of potential customers. Regulation did contribute to reaching policymakers' goals of avoiding ruinous price competition and providing extensive network service at affordable prices. For example, minimum freight hauling rates were imposed on railroad carriers to help them avoid financial disaster. Entry restrictions, though, required these carriers to service nonlucrative routes to rural agricultural areas. Rate regulation for trucking and airline carriers were set as mark-ups over cost. Market pressure to keep costs low in trucking did not arise since entry restrictions significantly limited entry of potential rivals along routes. Indeed, potential entrants were often limited to offering service to newly formed routes, and even then incumbent carriers were given the initial opportunity to provide such service. This approach toward entry regulation gave established carriers the opportunity to reject servicing potentially

nonlucrative routes. A different regulatory approach was taken for airline carriers as they were required to service low demand locations at the rate charged for high demand locations. Compared to rate regulation in the transportation sectors previously mentioned, ocean liners experienced less government control over rates. Ocean liners were given antitrust immunity in negotiating port-to-port rates for lines involving U.S. foreign commerce.

State-owned operations achieved the goal of providing universal and affordable service by using government revenue to subsidize transit operations. Subsidization of commuter transit was not limited to publicly provided services as commuters using their own motor vehicles drive on roads constructed and maintained with significant financial support from government revenue.

TRANSPORTATION LABOR HISTORY IN A REGULATED BUSINESS ENVIRONMENT

While incumbent transportation carriers, consumers in rural areas, and commuters were the intended beneficiaries of regulation and state ownership, transportation workers also enjoyed significant benefits from these policies. Transportation labor markets became highly unionized following regulatory reform in the early part of the twentieth century. The restriction of competitive entry into transportation services contributed to a large share of these industries' work forces belonging to a union.

Three years following enactment of the 1935 Motor Carrier Act, the number of trucking employees belonging to the International Brotherhood of Teamsters rose to 370,000 compared to 75,000 in 1933, according to a 1986 report by Charles Perry. Union membership reached 920,000 by 1948. The Teamsters' membership was concentrated in the highly profitable intercity carriage sector, where 80 percent of workers in that sector belonged to the Teamsters by 1940. Representation of such a large group of workers contributed to the Teamsters ability to negotiate lucrative contracts for its members. Rate regulation that allowed trucking carriers to pass on costs to shippers further contributed to the Teamsters ability to negotiate high wages. Indeed, researchers reveal that union truck drivers received wages 30 to 50 percent above wages paid to nonunion drivers working in less lucrative sectors of the trucking industry.

Union growth in rail, airlines, and ocean shipping differed from trucking. Rather than a single dominant union representing the work force, workers belonged to several unions. Labor law guidelines of the 1926 Railroad Labor Act influenced union development in rail and airlines. This act prohibited rail and airline unions representing different occupational groups of workers employed by the same carrier. Most rail workers belonged to the United Transportation Union, the Brotherhood of Maintenance of Way Employees, and the Transportation Communications Union. Negotiating with several unions presented rail carriers with the opportunity to target the weakest union and use that settlement as a pattern for successful negotiations with other rail carriers. Rail unions addressed this problem in 1973 by collectively negotiating with a group of major carriers. Shifting to group negotiations contributed to union rail workers receiving lucrative contracts.

In contrast to rail, labor relations in the airlines were characterized by the proliferation of more than 100 bargaining units across industry carriers under the administration of the Railroad Labor Act. Such a large number of units made it difficult for airline unions to cooperate among each other. Even though the industrial relations environment for airline workers lessened the negotiation strength of the industry unions, workers were able to attain relatively high wages because the major occupations such as pilots and mechanics are vital to carrier operations and command lucrative compensation.

Philosophical differences among union leaders led to the 1937 development of two major U.S. ocean shipping unions. The International Longshore and Warehouse Union (ILWU) under the leadership of Harry Bridges split from the International Longshoreman's Association (ILA) and negotiated contracts primarily for workers on the West Coast. Both unions were able to negotiate high wages even though their members faced significant risk of job loss due to technological innovation. The ILA and ILWU's monopolistic control over the supply of workers on the coasts contributed to their ability to secure high wages for their members.

INEFFICIENCIES ASSOCIATED WITH TRANSPORTATION REGULATION

Using regulation and state ownership as government approaches to promote universal and affordable transportation services unintentionally helped create a business environment that fostered inefficient operations and poor financial performance. Faced with rate regulation that removed price competition, transportation carriers often engaged in costly nonprice competition. For example, airline carriers provided passengers the convenience of nonstop service with frequent daily departure times as a strategy for distinguishing their service from that of rivals. This type of nonprice competition reduced carriers' ability to fly with a significant number of seats filled per flight.

Rate regulation of ocean liners influenced carrier profitability by prohibiting them from directly negotiating low rates with inland transport carriers. Poor financial

performance was much more severe in rail and air transport as carriers in these industries were required to charge relatively high rates on high demand routes to subsidize servicing less profitable locations.

TRANSPORTATION SERVICES FOLLOWING DEREGULATION AND PRIVATIZATION

The potential for enhancing efficiency by promoting competition led to the deregulation and privatization of transportation sectors in the last quarter of the twentieth century. Deregulation gave carriers greater freedom to set rates and to enter markets previously restricted to incumbent carriers. This more competitive environment created a greater incentive for carriers to adopt cost-saving strategies across all transportation sectors. For instance, the introduction of the "hub-and-spoke" distribution system in the airlines industry resulted in a marked increase in the percentage of seats filled per flight. This type of system transports travelers from originating cities into a major airport, which is the airline's hub. From the hub travelers from different originating cities are grouped together to take connecting flights to a common destination.

Postderegulation efficiency gains in the railroad industry were achieved in part by consolidating operations through mergers and by abandoning low-use routes. Efficiency gains in rail were further enhanced by carriers' adoption of labor saving technologies such as electronic-based communications and information systems. New communications technologies in tandem with logistics software contributed to enhanced productivity in the trucking industry by allowing carriers to coordinate efficient delivery and pick-up schedules. Deregulation in the ocean liner sector facilitated efficiency gains by allowing these carriers to negotiate "door-to-door" rates. Such negotiations set rates for the international delivery of cargo to the final destination terminal inclusive of any inland transportation. These rates differ from the pre-deregulation requirement of "port-to port" negotiations that limit rate determination for transport freight from one port directly to another. Setting rates for the final destination allows liners to take advantage of economies of scale by choosing ports with the capacity to service large container ships and also provide intramodal service to the final destination point.

Privatization of public transit operations encourages cost savings by granting operating rights to low-bid service providers. Private providers are thought to have an advantage when competing for the provision of public services because managers in this sector are subject to more demanding incentives than those faced by their public sector counterparts. Evidence of public transit efficiency gains indicate cost savings in the range of 9 to 23 percent in the U.S., according to a 1988 report by Roger Teal. Similar cost savings from privatization are also reported for other countries.

SOCIAL IMPACT OF STEPPED-UP COMPETITION IN TRANSPORTATION

The labor market for transportation workers has been substantially influenced by the more competitive postderegulation and pro-privatization business environment. The pressure to lower costs led to declining work force sizes in U.S. rail and ocean shipping. The shift to greater efficiency and lower costs in ocean shipping also facilitated job loss in other countries. In 2006 James Peoples and colleagues reported that the introduction of new technology in the United Kingdom contributed to a 49 percent job reduction from 1989 to 1992. Ocean shipping jobs declined up to 66 percent at six major French ports following work rule reforms in 1992. Waterfront reforms introduced by the Australian government in 1989 contributed to a 42 percent reduction in stevedore jobs by 1991.

The approach toward labor cost savings did not result in a shrinking work force in U.S. trucking and airlines. Rather, the work force in these industry sectors grew over 70 percent in twenty years following deregulation, according to a 1998 report by Peoples. Declining labor costs in trucking and airlines were the result of eroding union wage premiums.

Transportation labor market changes influence other aspects of social welfare. For instance, the growing number of truck drivers on the road poses greater risk of environmental degradation from the emission of pollutants and greater risk of traffic accidents. Demand for quick service that places scheduling pressure on transportation operators further contributes to dangerous roads. Concerns over the social impact of increasing transportation demand promoted the enactment of several safety and environmental regulations following deregulation. In conjunction with safety-enhancing technologies, regulation limiting hours of operating service and regulations setting minimum standards for attaining driving permits helped the trucking industry avoid increasing injury rates following economic deregulation. Stiffer fuel efficiency standards and requirements for cleaner burning fuel have been enacted to help protect the environment from the debilitating health effects of emission pollutants.

In sum, the role of transportation services as an engine of economic growth will gain in importance during the twenty-first-century trend toward economic globalization. Those economies that are able to provide easy access to affordable services will enjoy a competitive advantage over other economies. In the future, such success will rely heavily on the ability to make efficient use of

non-renewable energy sources in addition to the ability to develop new energy alternatives.

SEE ALSO *Aviation Industry; Industry; Railway Industry; Shipping Industry*

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James Peoples

TRANSSEXUALS

SEE *Transgender.*

TRAUMA

Until the middle of the nineteenth century, the word *trauma* was used primarily to designate physiological injury emanating from an external event. Beginning in the 1860s, however, the term acquired additional significance when survivors and witnesses of industrial accidents began to show symptoms of trauma in the absence of any observable physical injury. These symptoms typically included mutism, amnesia, tics, paralysis, recurrent nightmares, and, in some extreme cases, psychic dissociation. Observing a pattern that linked exposure to an overwhelming event with forms of mental disorder, doctors coined the term *traumatic neurosis*.

One of the most remarked-upon features of this neurosis was the incapacity of the victim to recall the event that precipitated it, coupled with a simultaneous sensation

of its recurrence in the present. For this reason, trauma quickly became understood not merely as a psychic injury but also as a wound in the memory. It therefore demanded particular techniques of memory recovery, which ranged over the century from hypnosis to narcotic therapies.

FREUD AND HIS FOLLOWERS

The crisis of memory was variously understood as a function of repression and/or nonsymbolic apprehension of an event. In Austrian Sigmund Freud's (1856–1939) later writings, trauma was conceived as the result of extreme psychic excitement, in which the mind's consciousness—which he analogized as a protective shield—was traversed by overwhelming stimuli, which were then registered in a different part of the mind, namely its unconsciousness. Precisely because the traumatic event had never become an object of consciousness, Freud theorized, it was unavailable for narration, objective reflection, and the analytic distance of the kind that would secure the subject against its frightening effects. For this reason, treatment focused on the method of abreaction, an induced revival of the event in which a subject, working with the therapist, would be able to render it conscious. The abreaction was also intended to produce a discharge, which then relieved the patient of a crippling, nervous energy.

Whether the efficacy of the treatment lay in the revival and cognitive apprehension and contextualization of the event or in the simple emotional relief obtained from the process was a matter of some controversy. Some argued that any event, even a false or confabulated one, could serve the purpose of treatment if its recall relieved patients of their symptoms. In the 1980s and 1990s, debates about the dubious validity of the "recovered memories" used in cases of alleged satanic or mass sexual abuse in the United States can be traced to this history of confabulation, coupled with the centrality of hypnosis in the treatment of trauma. Freud and his followers nonetheless insisted that the purpose of treatment was an intellectual reconciliation with the truth of experience, and hence the cathartic function of abreaction was played down in favor of a synthetic narrative or "talking cure."

Freud and his followers developed their theories and treatments largely in response to two kinds of phenomena, namely female hysteria (initially believed by Freud to be caused by sexual seduction of the girl) and "war neuroses." In both cases, charges of dissimulation (fakery) were often leveled against sufferers, and it was for this reason that Freud argued so fervently against the therapeutic deployment of fiction.

During wartime, the possibility of dissimulated illness acquired additional salience because soldiers who manifested acute forms of traumatic neurosis were relieved of their military duties. It was, in fact, the proliferation of cases of war neuroses (or "shell shock") that led to the burgeoning study of trauma in the early twentieth century. The centrality of war in the development of trauma theory has continued unabated since then.

POST–WORLD WAR II DEVELOPMENTS

Since World War II (1939–1945), two major developments have affected trauma theory: the experience of mass or collective trauma, especially that associated with the Nazi death camps, and the recognition of delayed developments of traumatic symptoms, or post-traumatic stress disorder (PTSD). In the first instance, individual experience has become paradigmatic of a general historical condition, and a person's incapacity to represent traumatic events has been translated into a suspicion of historical narratives that claim to represent the truth of collective violence. In the second, a historically verifiable event has been used to liberate individuals for recognition, treatment, and material compensation.

In some cases, events of mass suffering—such as the Holocaust, the atomic bombing of Hiroshima and Nagasaki, the Middle Passage of slavery, or the rape camps of Bosnia—are deemed uniquely unrepresentable. This is an argument of scale, but an ethico-political injunction emanates from it, prohibiting or restricting efforts to represent such horrors on the grounds that their actuality would be betrayed or diminished in the process. In some versions of this argument, the question of scale is either linked to or substituted with one of structure, according to which all representation is deemed inadequate or incommensurate with actual historical events (Caruth 1996). For proponents of this position, the purpose of historical narration is the communication of traumatic effects to others—secondary witnesses and historical heirs—a process that is said to facilitate identification between those who have survived and those who have not. This argument has been widely criticized, however, because it fails to differentiate between those who suffered or witnessed events firsthand and those whose encounters with trauma were mediated by narratives of others who suffered them in actuality.

The question of PTSD has attracted similarly widespread debate. Observing that the syndrome was recognized only through advocacy on behalf of U.S. military veterans (PTSD was added to the *Diagnostic and Statistical Manual of Mental Disorders* of the American Psychiatric Association in 1980), some have suggested that presentation of symptoms and prevalence rates are influenced by the possibility of compensation for injuries. Moreover, as the authority of PTSD and American psychiatry has assumed international dimensions, new questions have arisen about the cross-cultural validity of the

concept of trauma. In Vietnam, for example, there is considerable resistance to the idea of veterans suffering from PTSD. In Japan the diagnosis was rarely made prior to the Kobe earthquake of 1995, despite the country's long experience of acute postwar ailments.

Two factors explain the differential diagnosis of PTSD on a global scale, one cultural, the other politico-economic. First, there are many culturally distinct vocabularies and methodologies for identifying and treating shock and its psychosomatic aftermath. In some Buddhist societies of Southeast Asia, a sudden fright or accident is said to cause a dissociation of the person's spiritual being and requires rituals that call back or rebind dislodged spiritual essences. In parts of Africa and in aboriginal America, shock may be adduced as a causal factor in some illnesses and is often said to precipitate birth crises. It may be treated with combinations of naturopathic and ritual methods.

Second, the widespread recognition of shock as a source of injury and the prevalence of ideas of dissociation that accompany vernacular knowledge about shock resonate strongly with Western medical concepts of trauma, though Western medicine increasingly attributes the disturbing symptoms of PTSD to chemical transformations of the brain, especially in the hippocampus, amygdala, and cerebral cortex. The diagnosis of PTSD, however conceived, has nonetheless been promoted by international humanitarian organizations as a mechanism for obtaining financial resources and mental health services for populations—displaced by war and natural disaster—that would otherwise lack them. Invoking PTSD as a basis for claiming human rights is not without risks, however. The inherent focus on traumatic events in its diagnosis (which requires that the symptoms of hyperarousal and/or withdrawal be linked to an originating event) often displaces concern for the structural sources of long-term social and psychic suffering, including that caused by homelessness, poverty, unemployment, or long-term political oppression. Moreover, the proliferating tendency to invoke trauma as a synonym for unpleasant experiences in popular media and public discourse threatens to dissipate the term's medical as well as its ethico-political force. Beyond the risks that it is subject to both trivialization and economic utilitarianism, however, most theorists agree that trauma is a phenomenon whose increasing occurrence is inextricably tied to the industrialization of war and the massifications of modernity.

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Rosalind C. Morris

TRAUMATIC BONDING

In contrast to normative bonds and attachments, which are characteristically affectionate and protective, traumatic bonding refers to a counterintuitive variation in which one member of the bonded pair intermittently victimizes or traumatizes the other person. The term *traumatic bonding* was first employed to describe a powerful and destructive bond that is sometimes observed between battered women and their abusers, or between maltreated children and their caregivers (Dutton and Painter 1981). It has since been applied more generally to describe strong emotional ties that may form between victims and their oppressors across a range of relationships and types of abuse (e.g., the Stockholm Syndrome; see Strentz 1980).

The necessary conditions for traumatic bonding are that one person must dominate the other and that the level of abuse chronically spikes and then subsides. The relationship is characterized by periods of permissive, compassionate, and even affectionate behavior from the dominant person, punctuated by intermittent episodes of intense abuse. To maintain the upper hand, the victimizer

manipulates the behavior of the victim and limits the victim's options so as to perpetuate the power imbalance. Any threat to the balance of dominance and submission may be met with an escalating cycle of punishment ranging from seething intimidation to intensely violent outbursts. The victimizer also isolates the victim from other sources of support, which reduces the likelihood of detection and intervention, impairs the victim's ability to receive countervailing self-referent feedback, and strengthens the sense of unilateral dependency.

The traumatic effects of these abusive relationships may include the impairment of the victim's capacity for accurate self-appraisal, leading to a sense of personal inadequacy and a subordinate sense of dependence upon the dominating person. Victims also may encounter a variety of unpleasant social and legal consequences of their emotional and behavioral affiliation with someone who perpetrated aggressive acts, even if they themselves were the recipients of the aggression.

Theoretical explanations for this phenomenon are divergent and controversial. Psychodynamic theorists have employed concepts such as masochism, repetition compulsion, and identification with the aggressor (van der Kolk 1989; Young and Gerson 1991) to explain how such seemingly self-destructive relationships can be formed. A central developmental tenet of this perspective is that a proclivity toward abusive relationships and traumatic bonds is rooted in the victim's traumatic childhood attachments. Attachment theory has also been applied to explain traumatic bonding as an unresolved form of insecure attachment (Saunders and Edelson 1999) in which the capacity for self-regulation has been impaired by the alternately abusive and protective actions of an attachment figure. Each of these perspectives has persuasive elements, but the explanatory mechanisms are difficult to operationalize and have therefore gone untested.

Learning theory offers an explanation based on the consistent finding that intermittent reinforcement schedules can strengthen and maintain behavior even during periods when the reinforcer is absent. In the cycle of relational behavior attributed to traumatic bonding, the victimizer applies intense punishment, then negatively reinforces compliant behavior from the victim by ceasing the punishment, and soon after shifts to lavishing the victim with various forms of noncontingent positive reinforcement. This pattern of punishment and reinforcement may constitute a particularly powerful form of double-bind or vicious cycle, especially given the victim's legitimate fear of being injured or killed in retaliation for any act of defiance.

Little empirical research has been published examining the individual and situational characteristics that predict the development and maintenance of traumatic bonding. Some support has been found both for the construct of traumatic bonding and for the importance of the intermittency element for predicting postrelationship distress among victims (Dutton and Painter 1993). But the most perplexing and counterintuitive aspect of traumatic bonding—the victim's feelings of affection and longing toward the victimizer following termination of the abusive relationship—has not been studied with the kind of rigor that would provide definitive findings, and the sociopolitical and philosophical aspects of this phenomenon make it particularly difficult to address from a scientific perspective.

SEE ALSO *Illness, Mental; Mental Health; Stress; Trauma*

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Gilbert Reyes

TRAUMATIC STRESS DISORDER

SEE *Post-Traumatic Stress; Traumatic Bonding; Trauma.*

TRAVEL AND TRAVEL WRITING

Modern notions of travel have their roots in a diverse history of developments; groups of people have moved across landscapes for the purposes of migration, pilgrimage,

trade, exploration, and colonization. For example, humans have migrated for resettlement for a million years, and for agricultural reasons for tens of thousands of years. Similarly, pilgrimages have been the cornerstone of most major religions: Just as the ancient Greeks sought the oracle at Delphi, Buddhists travel to the city of Buddha's birth, Muslims make the hajj to Mecca, and Christians visit Jerusalem. In another parallel flow of travel, trade routes flourished between Europe and China from the rise of Greek civilization to the fall of the Roman Empire.

MODES OF TRAVEL THROUGH HISTORY

The Mediterranean, which served as a vast network of people and places enriching communities for centuries, spurred commerce and exploration as twin historical processes—climaxing in the Age of Exploration between the fifteenth and seventeenth centuries. New technologies of cartography, navigation, warfare, and shipbuilding allowed travelers and traders to extend their reach beyond the Mediterranean—notably, Christopher Columbus's (1451–1506) arrival in the New World in 1492 and Vasco da Gama's (c. 1469–1524) trip around the Cape of Good Hope in 1498. Just as religion compelled pilgrimages, it has also inspired exploration and colonialism, either through evangelism or through groups fleeing religious persecution.

One of the first organized forms of travel that was neither explicitly religious nor commercial was the "grand tour." Beginning in the mid-1600s, it became fashionable for young British elites to take an expedition, as both a rite of passage and a duty. The grand tour was an extended journey through Europe, wherein a young man would travel in order to become more cultured and educated. Because of its courtly manners, high fashion, rich history, and sophisticated language, Paris was a common stop, but Italy, Switzerland, and Germany were also preferred destinations.

Industrialization, however, brought this trend to an end and ushered in a new era. Travel in the modern age can be traced to Thomas Cook (1808–1892), who would transport up to five hundred people at a time on train trips across England beginning in 1841. While tours from the ancient age through the grand tour tended to be a privilege of the rich, Cook's standardized tours aimed at mass appeal. Shadowing the ancient tradition, but also forecasting the powerhouse industry to come, Cook packaged trips to Egypt that followed the exact route the Romans traveled in 19 CE. Mass production of travelogues and improved transportation sparked the collective imagination and made travel more accessible to the masses.

The rise of cities brought about a newfound curiosity in urban life that also echoed more ancient times. Just like the Romans, nineteenth-century New Yorkers regularly toured their own city for entertainment, desiring brief, controlled exposure to "the other half," with its commoner struggles, immigrant communities, and what was seen as deviant sexual practices (which inspired slumming parties, wherein people would pay to rub elbows with Lower East Side homosexuals). Similarly, international visitors like Charles Dickens (1812–1870), Alexis de Tocqueville (1805–1859), and Frances Milton Trollope (1779–1863) were coming as early as the end of the American Revolution (1775–1783) to write travelogues of the national social experiment—with its racial and cultural mix, class inequalities, and vast geography.

Originally the purview of the elite, diplomats, and rugged explorers, travel since the 1960s has become widely available to working and middle-class people. By 2000, tourism and travel had become the world's largest industry, which, according to the World Travel and Tourism Council, produces up to 10 percent of the world's economic output and employment.

TRAVEL WRITING

Along with travel comes the parallel cultural production of travel writing. While Petrarch's (1304–1374) description of his ascent of Mount Ventoux in 1336 is often traced as a progenitor of travel writing, the practice blossomed with the consolidation of British hegemony in the 1800s, when expansion and empire matched eager public fascination as stories of Native Americans and the Opium Wars with China were produced for the masses. The impact of travel writing as a newfound form of nonfiction valorizing British economic and political values can be found in the works of writers such as Dickens, William Thackeray (1811–1863), Joseph Conrad (1857–1924), and Rudyard Kipling (1865–1936).

Perhaps no writing of that era was more dramatic, popular, and controversial as that of explorer, writer, poet, and diplomat Sir Richard F. Burton (1821–1890). Stirring public fascination with his adventures, Burton (who made the first English translations of *Arabian Nights* and the *Kama Sutra*) traveled disguised as an Afghani physician throughout the Middle East. "Passing" well enough to have entered Mecca, the heart of the Muslim world, in 1853, he gave the Western readers their first glimpse into that unknown land. Travel writing has always been particularly keyed toward the cultural translation of "unknowns," and Burton often displayed his dual roles of explorer and poet as he communicated the connections and differences between disparate cultures to his Victorian readers: "the pigeons of Mecca resemble those of Venice" (Burton [1855] 1964, p. 174).

The notion of cultural translation infuses problems of representation, and cultural theorists, ethnographers, and

postcolonial thinkers have questioned the colonizing and misguided gaze of the Western observer (Clifford and Marcus 1986). The dialectic of cross-cultural exchange has been criticized as being imbued with power relations that predominately favor the more dominant cultures. Burton, for example, had to serve the imperialist economic and political needs of the Royal Geographical Society and the British East India Company, as well as his own desires for exploration and translation. Missionaries of the British Empire were similarly wrought with tensions as they wrote of their travels: On the one hand, they attempted to fulfill their religious and moral duties as benevolent evangelicals, and on the other hand they had to maintain the interests of the crown.

Such pressures are found throughout travel writing, as authors aspire for objectivity yet struggle with their own subjective experiences and moral concerns—whether they toured Bali or New York's Bowery. This perspective is perhaps best evidenced in the scholarly realm by Claude Lévi-Strauss's ambiguous narratives of *Tristes Tropiques* (1955), a text often used by those wishing to criticize the colonizing power of ethnography and travel. Just as the grand tour served as a form of education and entertainment, those dual functions also play important roles for both the traveler and travel writing, in and out of the scholarly realm.

The contemporary moment is marred for many in the field, as they dread increasing "homogenization," "commodification," and "banalization" of culture—what some have called Disneyfication. While making travel and travel writing more accessible, industrialization and mass production have also caused some cultures to be carefully packaged in order to attract visitors, as tourism and culture scholars like Dean MacCannell (1976) have noted. Mass travel and travel writing, it is feared, summarizes culture and cities into "sets" of a few places and experiences that prejudice the visitor into particular expectations before arrival. This, however, is an ahistorical perspective, as even ancient Romans would feel contented to have seen the world so long as they had gazed upon each of the Seven Wonders—the original "best-of" list devised by an unknown scholar in the third century BCE. There was also Homer's *Iliad*, another form of writing that established a path around which a travel infrastructure could sprout: hotels and restaurants to fill basic needs, and droves of guides ready for hire to present the alleged armor of Trojan War heroes, the beach where Greek ships landed, or where Achilles and Ajax were buried. These antiquarians kept close to the beaten path, seeking out the perceived cornerstones of their own cultures (Casson 1974).

It is, perhaps, because of this juggernaut tourism and travel industry that travel writing has returned to the journeys of earlier epochs. Several popular press books trace the paths of Captain James Cook (1728–1779), antiquarian tourists, the Indian god Rama, and a Buddhist monk's seventh-century journey down the Silk Road. These travel writings match up contemporary journeys with those of their ancient forebears. Such a trend is evident in the social sciences as well: Indian anthropologist Amitav Ghosh (1993), for example, blends a contemporary narrative as he attends school in Alexandria, Egypt, with the story of a twelfth-century Jewish merchant and his Indian slave.

SEE ALSO *Colonialism; Columbus, Christopher; Cook, James; Cultural Tourism; Empire; Gaze, Colonial; Imperialism; Leisure; Levi-Strauss, Claude; Missionaries; Narratives; Other, The; Tourism; Vacations; White Supremacy*

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Jonathan R. Wynn

TREASURY VIEW, THE

In April 1929 the British chancellor of the exchequer, Winston Churchill (1874–1965), defended "the orthodox Treasury doctrine which has steadfastly held that, whatever might be the political and social advantages, very little additional employment, and no permanent additional employment can, in fact, and as a general rule, be created by state borrowing and state expenditure" (House of Commons 1929, p. 54). Churchill's comment, made during the 1929 general election campaign, was designed to blunt opposition proposals for large-scale public works to reduce unemployment. Churchill's view was reinforced the next month by a white paper restating the practical and doctrinal objections to public works. The issues were aired again in an examination by the economist John Maynard Keynes (1883–1946) of the senior Treasury official Sir Richard Hopkins (1880–1955) before the Committee on Finance and Industry (established by Labour prime minister Ramsay MacDonald [1866–1937]

in 1929 to examine the impact of the financial system on the economy).

Britain did not launch an expansionist policy against unemployment (comparable to that implemented in Sweden after 1936), and some have identified the "Treasury view" as the main obstacle. Histories of economic thought published during the "Keynesian era" (such as Michael Stewart's *Keynes and After* [1969]) blamed the grip of outmoded ideas on senior Treasury officials. The opening of Britain's public records brought a new agenda to the debate. A number of historians found in interwar Treasury papers little doctrinal argument but many practical administrative difficulties, most of which related to the Treasury's management of public finance. However, the (delayed) release of further Treasury papers to the Public Record Office in mid-1986 allowed Peter Clarke (1990) to create a more complex analysis. He demonstrated that in the early 1920s senior Treasury officials believed that British prosperity depended upon firm commitment to the liberal international order: the gold standard, free trade, and the balanced budget. This was the "knave-proof" fiscal constitution that senior British officials had deployed against the grandiose, expansionist ideas of cabinet ministers from 1918 to 1919. It held that the ultimate causes of unemployment lay in lagging exports and could be remedied by industrial modernization, lower unit labor costs, and higher foreign lending (within limits). Thus, diverting money into home investment would exacerbate the problem.

Personnel changes, growing recognition that the gold standard adjustments had not worked, and the impact of the return from Harvard University of the economist R. G. Hawtrey (1879–1975, a senior Treasury official but with limited day-to-day influence over policy) brought a new, more flexible approach from 1930. Hawtrey demonstrated the stickiness of the gold standard adjustment processes, underlined the possible effectiveness of reflationary finance, and encouraged Hopkins and others to think more creatively and flexibly about economic relationships. This paved the way for a still more productive interchange between Treasury officials and leading economists in the 1930s, as noted by Susan Howson and Donald Winch (1977).

Unfortunately, econometric work has suggested that "Keynesian" policies offered only a palliative to Britain's interwar unemployment problem. T. Thomas's macromodel (1981) of the interwar economy and Sean Glyn and Peter Howells's calculation (1980) of the interwar multiplier both pointed to the extreme improbability that unemployment could be reduced to "normal" levels by monetary and fiscal policy. Thus, one is left with the conclusion that the Treasury view may have acted as a barrier to independent, expansionist policies at a critical moment, but it was only one of a number of impediments, and the bold assumptions of Keynes and the Keynesians, both at the time and during the 1950s and 1960s, that there was an easy solution to unemployment were misplaced.

SEE ALSO *Keynes, John Maynard; Policy, Fiscal; Policy, Monetary; Unemployment*

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Alan Booth

TREATY FEDERALISM

Treaty federalism, also referred to as treaty constitutionalism, is a concept that explicitly identifies negotiated agreements between aboriginal people and other sovereign actors as constitutional documents. In this interpretation, treaties are considered founding political documents between two sovereign parties that at once establish a delegation of power or areas of shared responsibility as well as a retention of autonomy for each signatory. Treaties therefore establish a constitutional order that gives force to the central concept of federalism: a constitutionally guaranteed system of both shared and self-rule.

Using treaties or negotiated agreements as the primary mechanism for establishing and defining a political

relationship between sovereign parties has important historical precedents in both nonaboriginal and aboriginal contexts. In British North America, intra-aboriginal political relationships were thus established among the Mi'kmaq, the Iroquois, and the Blackfoot. The use of treaties to establish political relationships and to define land rights between the British Crown and aboriginal people found strong expression in King George III's Royal Proclamation, 1763. A period of historical treaty making continued in what are now former British colonies, with these periods concluding in the United States in 1871, Canada in 1923, and New Zealand in 1840. This historical practice was not universal, however, as British colonial powers did not recognize aboriginal rights in Australia and no treaty-making practice was there established. A contemporary round of negotiated agreement making was reestablished in Canada in 1973 and in New Zealand in 1989. Australia's Native Title Act, first enacted in 1993, establishes a statutory framework for negotiated agreement making, and there is ongoing political discussion regarding the meaning and effect of a treaty between Australian governments and aboriginal peoples.

The concept of treaty federalism pushes the standard interpretation of the founding constitutional order of many countries. It argues that treaties between aboriginal people and the states of the New World are the source of these states' constitutional legitimacy and territorial sovereignty. Following from this view, states are considered fundamentally illegitimate if treaties are not respected or inadequately implemented. It also follows that states that have not negotiated with the descendent communities of its prior occupants exercise state sovereignty on illegitimate grounds.

The arguments raised by the treaty constitutionalist position point to a very different conception of the appropriate constitutional and legislative relationship with aboriginal people. As historical treaties were largely limited documents and did not include provisions over many aspects of aboriginal life, territory, and governance, it is argued that those areas outside the treaties remain within the exclusive jurisdiction of aboriginal people. As they did not cede or delegate responsibility over many issues to colonial powers, a treaty constitutionalist position holds that the jurisdiction to address these areas remains with aboriginal people according to aboriginal laws. It also necessarily holds that state action in areas not mentioned within the treaties would be ultra vires, or outside its jurisdiction.

In states that are constitutionally federal—ones that are divided into two levels of government, each guaranteed a degree of autonomy—the treaty constitutionalist position argues that the assignment of constitutional responsibility for aboriginal affairs to either the federal or subnational level of government cannot be interpreted as an assignment of constitutional power or sovereignty *over* aboriginal people. For instance, it would deny that section 91(24) of Canada's Constitution Act, 1867, granted the Canadian federal government the power to legislate for "Indians, and Lands reserved for Indians" without their consent. Treaty constitutionalists argue instead that the scope of section 91(24) is constitutionally limited to those issues explicitly delegated under the treaties and that in no way would those issues include a complete delegation of aboriginal sovereignty. In this reading, section 91(24) merely identifies the federal government, not the provinces, as having the responsibility of implementing existing treaty obligations and negotiating future agreements with aboriginal people, as befitting a nation-to-nation political relationship.

A treaty constitutionalist position necessarily implies that the judicial review of existing and future treaties between aboriginal people and other governments should be governed by conventions of constitutional interpretation, a higher standard of interpretation than that regarding normal contract law.

SEE ALSO *Anticolonial Movements; Constitutions; Diplomacy; Federalism; Indigenous Rights; Land Claims; Native Americans; Natives; Settlement, Negotiated; Sovereignty*

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Christa Scholtz

TREATY OF TIENTSIEN

SEE *Opium Wars.*

TREATY OF VERSAILLES

SEE *Interwar Years.*

TRENDS

A trend is a relatively smooth and unidirectional pattern in data that arises from the accumulation of information over time. Many of the time series in economics and in other social sciences exhibit a smooth (upward or downward) tendency. In developed economies, the macro-socioeconomic time series, such as gross national product, consumption, income, and population, are characterized by an upward trend. Though in the short run the economy goes through expansions and recessions, in the long run there is growth. This is due to technological progress and/or population growth. The trend arises from the accumulation of socioeconomic activity from one period to the next. For instance, the time series of the U.S. population has an upward trend over time because the number of births exceeds the number of deaths and/or because the number of immigrants exceeds the number of emigrants.

From an econometric point of view there is a distinction between deterministic and stochastic trends, depending on whether the accumulation of information is due to a deterministic or to a random component. Suppose that an economic variable Y_t, for instance national product, can be represented by a model such as $Y_t = a + bt + \varepsilon_t$ for $t = 1,2,3,\ldots$ In this case, the trend is a line $a + bt$ with a as intercept and b as slope, which is also the growth rate. Because $t = 1,2,3,\ldots$ is purely deterministic, the trend is deterministic. An example of an exponential deterministic trend is the time series of the U.S. population. Conversely, a stochastic trend is generated by the accumulation of random components. An example of a model with a stochastic trend is $Y_t = \varepsilon_t + \varepsilon_{t-1} + \varepsilon_{t-2} + \ldots \varepsilon_1$ where $\{\varepsilon_t\}$ is a collection of normal random variables. An example of a stochastic trend is the time series of speculative prices such as stock prices or exchanges rates. The time series generated by deterministic trend models tend to be smoother than those generated by a stochastic trend.

Deterministic trends may have different shapes. Among these, the most common are linear, quadratic, exponential/logarithmic, and logistic. Only when the trend is linear is the growth rate constant. In any other specification, the growth rate will depend on the time period under study. Models with a deterministic trend are also known as trend-stationary models because all the unconditional moments, with the exception of the mean, are time-invariant. Their estimation and testing is straightforward because standard statistical results apply. In the linear trend model specified above, the parameters a and b can be estimated by Ordinary Least Squares (OLS), assuming that the error term is well-behaved. Hypothesis testing relies on tests that have standard asymptotic distributions, such as the t-ratio and F-tests.

Stochastic trends are more complicated than deterministic trends because they are non-stationary. Their statistical analysis requires the use of non-standard asymptotic distributions, which need to be obtained by simulation techniques. The model introduced above, $Y_t = \varepsilon_t + \varepsilon_{t-1} + \varepsilon_{t-2} + \ldots \varepsilon_1$, has the following equivalent representation $Y_t = Y_{t-1} + \varepsilon_t$, which is an autoregressive process of order one with an autoregressive parameter equal to one. This model is also known as a unit root process or random walk without drift. If the model includes a constant such as $Y_t = c + Y_{t-1} + \varepsilon_t$, one says that the process is a random walk with drift. The drift produces a smoother upward (or downward) tendency. Unit root processes are non-stationary because the unconditional moments (mean, variance, and covariances) are increasing functions of time. The autocorrelation function of a unit root is very characteristic with autocorrelation coefficients of any order asymptotically equal to one.

From an empirical perspective it is important to differentiate a deterministic trend model from a stochastic trend model. There are two main reasons for this: the need to conduct the correct statistical inference, and the construction and interpretation of the correct forecast. Consequently, the first step in empirical research is testing for unit root, which is a test of non-stationarity versus stationarity. In a model such as $Y_t = c + \varphi Y_{t-1} + \varepsilon_t$, the null hypothesis is set as H_0: $\varphi = 1$ (non-stationarity) versus an alternative H_1: $\varphi < 1$ (stationarity). Under the null, the standard t-ratio is not normally distributed but has a non-standard distribution, which is known as the Dickey-Fuller (DF) distribution. The DF critical values are tabulated by numerical simulation. A rejection of the null in favor of the alternative hypothesis means that the process does not have a stochastic trend. On the contrary, failure to reject the null hypothesis means that there is not enough evidence against the unit root process and a stochastic trend in the data should be entertained.

From a forecasting perspective, a deterministic trend model produces a forecast along the time trend specification. The uncertainty associated with the forecast is bounded regardless of how far into the future one wishes to predict. However, a forecast from a stochastic trend model has unbounded uncertainty as the variance of the forecast is an increasing function of time.

A pervasive problem in empirical research in the social sciences during the 1970s and 1980s is the case of spurious regression. Regression is spurious when two (or more) variables, Y_t and X_t, are found to be correlated but in fact they are not. This finding arises because Y_t and X_t are non-stationary (unit root processes) and a regression of Y_t on X_t does not take into account the stochastic trend. The diagnosis of spurious regression is relatively simple. If the R-squared of the regression is extremely high, around 0.90 and above, the t-statistics are exceptionally large, and the Durbin-Watson statistic is low, it is highly likely that

the regression of Y_t on X_t is spurious and, consequently, there is no correlation between them. The correct approach to analyze the correlation between Y_t and X_t is first to remove the stochastic trend and then to run the regression. By first-differencing the data, the stochastic trend is removed. For instance, if Y_t and X_t have a unit root, for example $Y_t = Y_{t-1} + \varepsilon_t$ and $X_t = X_{t-1} + \nu_t$, the first difference of Y_t is $\Delta Y_t = \varepsilon_t$ and the first difference of X_t is $\Delta X_t = \nu_t$. The proper regression is to regress ΔY_t on ΔX_t. However, if Y_t and X_t have a deterministic trend, the data should not be first-differenced but the regression of Y_t on X_t should contain a deterministic trend specification. There is only one instance in which a regression of Y_t on X_t, being both unit root processes, is meaningful. This is the case of cointegration, in which Y_t and X_t share the same stochastic trend. In this instance there is a long-run equilibrium between both processes.

SEE ALSO *Autoregressive Models; Least Squares, Ordinary; Random Walk; Regression Analysis; Time Series Regression; Unit Root and Cointegration Regression*

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TRIARCHIC THEORY OF INTELLIGENCE

SEE *Multiple Intelligences Theory; Intelligence.*

TRIBALISM

The concept of *tribalism*, like that of the *tribe*, is difficult to define precisely, as it is closely interwoven with the context in which it is used. Tribalism may be defined as the maintenance by a tribal society of its organization, ways, and autonomy in the face of change. But tribalism may be defined differently when a tribe's claim of identity has less to do with its primitivism or indigeneity than with its ethnic discreteness and cultural distinctiveness for gaining material or political advantages. In fact, tribalism does not exist in any objective sense—hence the problem in defining the concept.

Early ethnographic writings offer examples of "we-feeling" among the members of a particular tribe that set it apart from neighboring tribes. Ethnographers called this tribalism and linked it to the notion of ethnocentrism, but particularly associated with tribal people. For example, when the Zulu people of South Africa name themselves as *isizwe*, meaning a nation or a people different from other tribes, or the Birhor of India distinguish themselves as *hor* or people from *diku*, an explicit reference to tribalism is made. Therefore, tribalism is the manifestation of a collective group identity based on common natural impulses such as fear, desire, necessity, or ethnic distinctiveness.

Vine Deloria Jr. proposes in his 2003 book that, from the Native American perspective, tribalism has four dimensions: spatial, social, spiritual, and experiential. The spatial dimension connects the tribes with their land, which is for them a precious possession. The social dimension refers to the social cohesion that binds the members of the tribe together. The spiritual dimension refers to the idea of the people as a religious conception. The experiential dimension is the sharing of history, culture, rituals, and traditions. For Deloria tribalism has to be practiced; it is more than a philosophy, it is a way of life.

Since the late twentieth century, tribalism in the Middle East, Africa, and South and Southeast Asia has generated some dangerous and divisive tendencies. Tribalism is positive when the complete allegiance of a collectivity is geared toward the collective good—nation building, preserving the group identity as a single cohesive unit that fosters ethnic solidarity, seeking new dimensions of development. Contrarily, tribalism is negative when it generates ethnic hatred and war. The intertribal warfare and ethnic divide in Africa is tribalism's worst manifestation. Another example of negative tribalism is the disintegration of Yugoslavia in the early 1990s into smaller competing states. Whereas positive tribalism needs to be fostered for the sake of collective tribal identity, negative tribalism that threatens to give rise to terrorism and political turbulence must be thwarted. The genocide of nearly one half million Tutsis by the Hutu extremists in 1994 in Rwanda and the ethnic cleansing in the former Yugoslavia in the 1990s are painful commentaries on negative tribalism.

Given both its positive and negative manifestations, tribalism is closely related to ethnic solidarity and ethnocentrism. But it is one step ahead of racism, as the conflicts of the early twenty-first century in Somalia, India, Pakistan, Afghanistan, Sri Lanka, Turkey, and Indonesia are between ethnic groups or tribes rather than between the races.

In his 2006 article, Howard Campbell discusses two major approaches to tribalism that suggest revisions to anthropological notions of tribes and indigeneity from a Native American perspective. According to one approach,

"ethnic identity is never essential and … identity change is quite common" in tribal cultures; the second approach asserts that native tribes persist "by production of symbolic representations" rather than through the "performance of aboriginal traditions in everyday life" (Campbell 2006, p. 296). In view of the rising trend of neotribalism in India, with similarities to the Native American experience, "protective discrimination" has consolidated hitherto dispersed tribal groups into organized pressure groups to fight for their legitimate constitutional rights. In 2005 the Indian state of Sikkim recognized the Lepcha community as the "Most Primitive Tribe"—a distinction that signals the tribe's relatively high standard of living and confers status and privileges. Sometimes it becomes necessary for a tribe to reinvent itself, as in the case of the Ngati Kuri of New Zealand, whose name did not appear in the list of the country's recognized tribes. Tribalism, therefore, is a fluid concept with both positive and negative connotations that must be understood with reference to specific contexts.

SEE ALSO *Anthropology; Ethnicity; Ethnocentrism; Ethnography; Natives; Primitivism; Racism; Representation; Solidarity; Symbols; Tribe*

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TRIBE

Despite its popular as well as academic usage, *tribe* is a contentious concept. In popular imagination, *tribe* is associated with "primitivism" and "backwardness," clearly referring to non-Western or indigenous groups inhabiting the countries of Asia, Africa, and Latin America or to American Indian reservations. In 1951 the Royal Anthropological Institute defined the tribe as a "politically or socially coherent and autonomous group occupying or claiming a particular territory" (1951, p. 66). Scholars since then have contested the notions of coherence, autonomy, and territorial segregation as only ideal constructs, devoid of much empirical support. Although it is unlikely that this definition would apply perfectly to any single tribe, theoretically *tribe* is construed as a group or community sharing a common territory, speaking a common language or dialect, sharing a culture and religious tradition, united under a single political organization, and having a common economic pursuit. Therefore, as André Béteille (1981) observes, the existence of a tribe fitting any theoretical definition is at best an anthropological imagination.

Morton Fried suggests that what anthropologists study today is "tribe as a secondary sociopolitical phenomenon, brought about by the intercession of more complex ordered societies, states in particular.… The 'pristine tribe,' on the other hand, is a creation of myth and legend, pertaining either to the golden age of the noble savage or romantic barbarism" (1975, p. 114). As Archie Mafeje notes, in Africa "the indigenous population has no word for 'tribe'… Traditionally, people were identified by territory—'Whose [which Chief's] land do you come from' " (1971, p. 254). This is true also for India, where there is no lexical equivalence of the English word "tribe"; it began to be used by the British administrator-anthropologists only for administrative convenience.

In the United States and India, tribes today refer to the indigenous or autochthonous people, legally recognized groups that enjoy some degree of autonomy and state protection. In India, for example, the Constitution makes special provisions for the protection and welfare of its "Scheduled Tribes," a legal-administrative category within the nation.

HISTORY AND DEVELOPMENT OF THE CONCEPT

When European colonial expansion was at its peak during the sixteenth and seventeenth centuries, the writings of missionaries, traders, and adventurers resulted in the genre of ethnography of the peoples they encountered, whom they called tribes. The tribes were deceptively painted to be in the primal stage of human cultural evolution, the culmination of which was, in the minds of the Europeans, advanced European civilization. The legacy of this Eurocentric notion was inherited by the anthropologists of the eighteenth and nineteenth centuries. In the latter half of the nineteenth century, within the domain of anthropology, unilineal or classical evolutionists like Lewis H. Morgan (1818–1881) hypothesized tribe as a transient stage in the process of cultural evolution from early hunters and foragers to agrarian societies. With the collapse of classical evolutionism at the beginning of the

twentieth century and the consolidation of the field of anthropology in Great Britain, scholars like E. E. Evans-Pritchard used a structural definition of tribe, particularly in the context of segmentary societies like the Nuer of Sudan, which he discussed in his 1940 book. Later, Marshall Sahlins, in his 1968 study, characterized tribes with segmentary lineages that were different from centralized chiefdoms.

Taking cue from Wilson and Wilson, Lewis introduced the concept of "scale" in characterizing a tribe. He contended, "Ideally, tribal societies are small in scale, are restricted in the spatial and temporal range of their social, legal, and political relations, and possess a morality, religion, and world view of corresponding dimensions" (1968, p. 147). In the 1970s the Marxist anthropologist Maurice Godelier, while attempting a critique of the concept, cautioned that "tribe" was used as a tool by the powers who dominated the Third World and warned that "we cannot silently bury it with a mere death sentence, or stigmatize those who continue to use it with the epithet 'infamous' empiricism." Godelier argued that new concepts would not resolve the problem; thus the "concept of the 'tribe' will continue to be used in more or less refined forms and will deliver the same goods and the same kind of bad service" (1977, pp. 95–96). Despite Godelier's exhortation, in subsequent decades post-structuralist, postmodern, and feminist theorists such as Lila Abu-Lughod and Michael Gilsenan deconstructed the colonial legacy of the concept and pleaded for a more reflexive and dialogic ethnography. All these controversies notwithstanding, there is nothing wrong in using the term *tribe*, so long as it conveys the real sociopolitical formation and cultural distinctiveness of a group rather than myths, stereotypes, and prejudices. However, anthropologists have come to prefer the term *ethnic groups* over *tribes*.

For many, as Susana Devalle (1992) notes, tribe is understood as a "colonial category" to promote specific colonial interests and is largely associated with the Western colonial power structures and discourses. Yet Fried (1975) persuasively argues that in the past in many expansionist states, such as China, the relatively weaker peoples conquered by the stronger groups were given pejorative terms on a par with "tribe."

BASIC CHARACTERISTICS

In the absence of a clear-cut definition, it is useful to examine the ways in which tribes are characterized. A tribe is ideally designated as having a common territory, a common name and culture, speaking a common language, practicing endogamy, with an autonomous political organization and close-knit kinship ties, the members of which are believers of a common religion. The classical anthropological depiction of tribes, as put forward by Mafeje, as "self-contained, autonomous communities practicing subsistence economy with no or limited external trade" (1971, p. 257) is highly polemical, as ethnographies hardly support this utopian construction. Far from being autonomous or self-contained, tribal communities have more often fostered multitribal units that functioned as bigger kingdoms or confederacies. The Luapula Kingdom of Kazembe in Central Africa, the Zulu empire in South Africa, the Ashanti Confederacy in West Africa, and the Gond kingdoms of India are good examples of, in Mafeje's term, "super-tribes." Realistically, tribal communities as "little traditions" in the civilizational model of Robert Redfield (1956) have interacted politically, economically, and ritually with larger sociopolitical formations in their neighborhoods. The process of Sanskritization suggested by M. N. Srinivas (1966), Nirmal K. Bose's model of Hindu methods of tribal absorption (1967), and Surajit Sinha's case studies on state formation in tribal India (1987) are classical examples of the fact that neither in the past nor at present have tribes remained secluded or insulated either politically or culturally, despite having their own chiefs or heads, territorial affiliations, and customary laws.

Tribes also economically interact with other neighboring tribes and nontribes, and yet have their own means of subsistence. Many of them still practice hunting and foraging (the !Kung of Botswana and Namibia), pastoralism (the Masai of Kenya and the Nuer of Sudan), swidden agriculture (the Pgakenyaw and Lua of Thailand, Uma' Jalan of East Kalimantan), settled cultivation (the Kikuyu of Kenya and the Munda and Santal of India), or traditional crafts (the Uraali Kurumas of South India), or more realistically, a combination of them. Although tribal societies may not be stratified, primordial forms of social differentiation do exist in them, as noted by Kamal Misra (1991); and despite practicing many different faiths, animism still forms the bedrock of their religion.

SCHEDULED TRIBES IN INDIA

Approximately 8.2 percent of the total Indian population has been designated as "Scheduled Tribes" (STs), according to the Indian census of 2001. The official Web site of the Ministry of Tribal Affairs, Government of India, states that "the Scheduled Tribes are the tribes or tribal communities or part of or groups within these tribes and tribal communities which have been declared as such by the President through a public notification." The Indian government regards retention of "primitive" traits, geographical isolation, possessing distinct culture, shyness of contact with the community at large, and economic backwardness as the essential characteristics of Scheduled Tribes. However, most of these communities are in close proximity and constant interaction with the neighboring Hindu peasants. Some of the tribal groups are now almost

extinct—the Great Andamanese number only twenty persons—whereas others, like the Gonds, number more than five million. They are still at different stages of economy, from hunting and foraging to industrial labor and white-collar jobs. According to the census, the tribal literacy rate is 47.1 percent. The Government of India has designated seventy-five communities among the STs as Primitive Tribal Groups (PTGs), for whose development specific microprojects have been designed and implemented. Despite constitutional protection, Scheduled Tribes in India are still impoverished and marginalized.

TRIBES, INTERNATIONAL CONVENTIONS, AND HUMAN RIGHTS

Many tribes have come to symbolize the most victimized segments of societies. It is a strange paradox that although they inhabit the most resource-rich regions of the world, many of them are in a state of impoverishment. They are the most severely affected victims of induced development, such as the establishment of mega-hydroelectric projects, conservation through parks, sanctuaries and bio-reserves, mining and allied activities, urbanization and industrialization, ecotourism projects, and so on. As John Bodley notes in his 1988 study, these activities cause involuntary displacement, alienation from natural resources, cultural disorganization, and disengagement with the intense community life, eventually pushing them into abject poverty and squalor. Their problems are compounded by the penetrating regime of globalization and a competitive market economy. The Jarawa of the Andaman Islands, the Yanamami group of tribes of South America, and others are now vulnerable to new diseases like measles and mumps because of their exposure to the people outside their habitat.

Concern for the plight of the tribes and indigenous peoples is growing in many quarters, and efforts are being made to protect them and preserve their cultural heritage. The International Decade of the World's Indigenous People (1995–2004), declared by the United Nations; the International Labor Organization conventions 107 (1957) and 169 (1989); and the Convention on Biological Diversity (1992) have made special provisions for protecting the civil and political rights of the tribes and indigenous people. Tribal empowerment and participatory development have become buzzwords in the field of tribal development, and efforts are being made to reverse the trend of marginalization of tribes all over the world.

SEE ALSO *Animism; Colonialism; Darwinism, Social; Ethnicity; Ethnography; Evans-Pritchard, E. E.; Human Rights; Indigenous Rights; Marxism; Native Americans; Natives; Postmodernism; Poststructuralism; Sahlins, Marshall; Stratification; Third World; Tribalism*

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Kamal Misra

TRIGUEÑO

The term *trigueño* is derived from *trigo* (wheat) and literally means "wheat-colored." The term seems to have gained currency in twentieth-century Puerto Rico and

elsewhere in Spanish-speaking Latin America (Argentina, Bolivia, Cuba, the Dominican Republic, Ecuador, Mexico, Peru, and Venezuela) to describe people with a tan or brown skin tone (*piel morena*). However, its meaning and social uses contain the same ambiguities inherent in all so-called race-related concepts as *race* is not an objective fact of nature but what might be called a social fact, subject to power dynamics and the social hierarchies of racism. Thus, in the Hispanic Caribbean, *trigueño* is also deployed as a euphemism for *Negro* (black). This is to avoid the pejorative connotations derived from the association of *Negro* with slave status. This use of *trigueño* is similar to the more old-fashioned term *de color* (colored), which is also used euphemistically to refer to black people. However, *trigueño* can also be used in Puerto Rico and in Cuba to describe a light-skinned person with a slightly tanned complexion.

The term therefore covers a wide variety of skin-color types: black, lighter than black, or darker than white. Which meaning is ascribed will depend on factors such as who says it, in what context, in what country, and how the person's skin color is perceived in combination with other phenotypic markers. In Puerto Rico, for example, two individuals might have the same dark-brown skin, but if one has kinky hair and the other has straight hair, the person with straight hair will probably be called *Indio* (Indian) and the person with coiled hair *trigueño*.

The application of *trigueño* also can be influenced by the relationship between the person describing and the one who is being described and by their perception of blackness. For example, if two people do not know each other well, one person might describe a black person as a *trigueño(a)* for reasons of social etiquette. This "polite" euphemistic use presumes and does not challenge the negative connotations associated with *Negro*. People who proudly assert a black identity, therefore, might dislike other people using *trigueño* to describe them or others because it assumes their blackness should be hidden or whitened by this euphemistic expression.

In a different context, a person might use *trigueño* to describe someone considered neither black nor white. In such cases, applying *trigueño* is not necessarily informed by the belief that *Negro* is offensive. Rather, it shows an attempt to make an accurate description in a social context where *trigueño* is associated with a mixed-race individual and is set apart from other racial types that are understood as less hybrid, such as *blanco* or *Negro*.

Depending on who uses it, how, and to whom they apply it, therefore, the use of *trigueño* can be interpreted as a polite gesture, as the sign of a condescending attitude toward black people, or as a phenotypic marker of racial mixture that lies somewhere between the white and black poles of a racial continuum.

SEE ALSO *Blackness; Colorism; Moreno/a; Mulattos; Negro; Pardo; Phenotype; Preference, Color; Race; Racism; Stratification; Whiteness*

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Isar P. Godreau

TRILATERAL COMMISSION

Constituted of over three hundred leading politicians, businesspeople, and intellectuals from Western Europe, Japan, and North America, the Trilateral Commission was founded in 1973 by David Rockefeller, then chairman of Chase Manhattan Bank. Rockefeller had called for the establishment of the organization in a 1972 speech before the Bilderberg Group, a secretive post–World War II (1939–1945) discussion forum regularly attended by heads of state and other "influentials" from Europe and the United States.

In the wake of the collapse of the Bretton Woods system in the early 1970s, many members of the Bilderberg Group were concerned that the unilateralist foreign and economic policies of U.S. President Richard Nixon (1913–1994) were jeopardizing the cold war liberal order. Launched in 1946, the system was constituted by a set of multilaterally agreed-upon rules for regulating commercial and financial relations among the world's most powerful states. Given the rise of Japan and West Germany as economic powers and the decreased capacity of the U.S. state to direct world affairs, they feared a return to the "beggar-thy-neighbor" interstate rivalry that had characterized the interwar years. As such, they believed that the responsibility to lead would now have to be shared among the advanced nations.

The Trilateral Commission was established to bring together leading intellectuals and policymakers from the United States, Europe, and Japan in order to forge among them such consensus as necessary for the successful "collective management" of the world economy. The chairmen of the Commission detailed the group's philosophy of international cooperation in the foreword to a collection of the Commission's early Triangle Papers (task force reports). There they suggested that Trilateral cooperation

should be based not on "coercion and arm-twisting, but on the mutuality of interest and indeed on the longer-term interest of mankind" (Berthoin, Smith, and Watanabe 1977, p. viii).

The first public statement of the Trilateral Commission was issued in Tokyo in October 1973. It spoke of both the "new problems" confronting nation-states under conditions of complex interdependency and the "special responsibility" of the Trilateral countries for "developing effective cooperation, both in their own interests, and in those of the rest of the world." Moreover, it set out the agreed-upon rules and procedures to govern the official interactions between Trilateral countries. It stipulated that they should work with each other "on the basis of equality" and avoid any such unilateral interaction as would be "incompatible with their interdependence." In closing, it elaborated the "creative role" of the Commission in generating consensus among its constituent states through a "sustained process of consultation and mutual education" (Trilateral Commission 1973, pp. 1–2).

The highlight of the Trilateral Commission's year is its annual plenary meeting. These sessions are supposed to build collegiality among the members, allowing them to develop trust in each other and familiarity with each other's customs. Among the agenda items generally discussed at plenaries are the reports of special "task forces," directions in future research, and possible new members. The preparation of task force reports is an essential part of Commission activity. Task forces focus on a variety of topics, from such immediate concerns as currency market fluctuations and arms control, to more long-term issues like the impact of technological transformation on world affairs.

Founded as a nonpermanent organization, the Trilateral Commission must regularly meet to review its purposes and determine if it wishes to continue operation. Such reviews happen every three years (every "triennium," in the official jargon). The business of each region is steered by a chairperson, with daily activities managed by a director. An Executive Committee provides overall direction and initiates the Commission's policy studies. There is also a Program Advisory Board that advises the director and regional chairpersons on policy studies.

Criticisms of the Trilateral Commission have been issued from both the left and the right. Left-wing critics see the organization as a booster club for transnational elite interests. Stephen Gill (1990), for example, argues that the Commission is an "ideological apparatus" developed by a transnational capitalist class in response to the general crisis of American hegemony presented by the end of the Bretton Woods system.

Critics on the extreme right, like Lyndon LaRouche, argue that the Trilateral Commission is part of a global network of "Anglo-American Liberal Establishment" organizations that constitute the "shadow government" of the United States. In 1980 LaRouche accused George W. Bush of being an agent of the Trilateral Commission in order to help Ronald Reagan (1911–2004) win the Republican presidential nomination (see Berlet and Lyons 2000).

Large portions of the American delegations to the Trilateral Commission are often drawn from the political elite. Many of the original U.S. delegation went on to serve in the Jimmy Carter administration (1977–1981), including President Carter himself, Vice President Walter Mondale, security advisor Zbigniew Brzezinski, and Secretary of State Cyrus Vance (1917–2002). In 2007, Vice President Dick Cheney was also a member. Representatives of the U.S. delegation are often also members of the Council on Foreign Relations, an influential Washington, D.C., think tank.

SEE ALSO *Diplomacy; Multilateralism; Unilateralism*

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TRILATERALISM

Unlike related terms such as *multilateralism*, *internationalism*, or *unilateralism*, the term *trilateralism* carries with it little connotation of an underlying methodological or ideological approach to managing international disputes or negotiations, though this was not always the case. At its most basic level, trilateralism is simply a way to describe more specifically international interaction among three entities (usually nation-states) so as to differentiate between bilateral or multilateral formats when discussing trade, security, or other international policy issues. There are several examples of such arrangements, including the trilateral negotiation in the early 1990s over the North American Free Trade Agreement (NAFTA) by the United

States, Canada, and Mexico, and a formal series of meetings by South Korea, Japan, and the United States over four years ending in 2003 regarding foreign policy coordination vis-à-vis North Korea (known as the Trilateral Coordination and Oversight Group, or TCOG).

The use of the term *trilateral* to describe a specific subset of multilateral events essentially began in the 1970s, due primarily to the establishment of the Trilateral Commission by citizens of North America (United States and Canada), Western Europe, and Japan. At this time, *trilateralism* did have an ideological connotation, as it became closely associated with the commission's core emphasis on reaching beyond the established trans-Atlantic relationships to draw Japan into a three-region coalition of so-called industrial democracies whose political and corporate elite would work together to promote liberalism, open markets, and economic interdependence. To critics, these trilateralists were trying to dominate the global economy and to exploit weaker nations, whereas proponents viewed this as a well-intentioned effort to develop a broader coalition of leaders focused on mitigating international conflict and isolationism by promoting common interests and values.

As economic interdependence accelerated and blossomed into globalization throughout the 1980s and 1990s, however, many new potential coalition partners emerged, such as South Korea, Mexico, Singapore, and Taiwan, thereby introducing greater complexity and diluting the broader triangular image. The collapse of the Soviet Union in 1991 accelerated this trend. Trilateralism lost its ideological flavor, but it endured as a convenient way to describe a variety of new three-way interactions. An early post-Soviet example is the so-called Weimar Triangle, launched in Weimar, Germany, in 1991 by the foreign ministers of Germany, France, and Poland as a loose alliance to promote Poland's emergence from Communist rule.

Trilateralism coexists with other dialogue formats because it offers some advantages in certain situations. For international trade negotiations, such as NAFTA, three-way agreements can be easier for governments to navigate compared to broader multilateral initiatives that must reconcile the nations' conflicting interests and proposals; yet they can offer greater benefits or efficiency than a collective set of three bilateral agreements. In addition to formal negotiating forums, trilateralism can describe less structured gatherings of national representatives dedicated to issues of common concern. The Weimar Triangle is one example, but there are many other groups of countries that promote trilateral dialogue about such issues as trade, investment, immigration, transportation, environment, and security, including the Trilateral Wadden Sea Cooperation group involving the Netherlands, Germany, and Denmark (starting in 1978), as well as tripartite cooperation by Japan, South Korea, and China, starting around 1999, which promotes a broad agenda of regional economic, social, and political initiatives. Small multilateral gatherings of more than three entities (but usually not more than five or six) can be considered *minilateral* meetings and offer some of the same advantages as trilateral forums.

Occasionally these trilateral meetings become institutionalized and self-sustaining; other trilateral experiments are more beholden to particular founding individuals or diplomatic moods and consequently their relevance fluctuates over time (or they disappear altogether). The TCOG, for example, was an active forum for policy coordination vis-à-vis North Korea for almost four years, but it essentially dissolved when the policy approaches of three countries diverged too widely following leadership changes.

Another use of trilateralism is as an attempt by three states or other entities to present a united front on a given issue of collective concern or to otherwise form a de facto caucus within a larger multilateral organization. Macedonia, Croatia, and Albania, for example, began formal collaboration in 2003 to promote their collective entry into the North Atlantic Treaty Organization (NATO) and the European Union (EU). Finally, trilateral meetings are also sometimes arranged as a means of formal dispute resolution, whereby one participant acts as a mediator or facilitator between two conflicting parties. A well-known example is the negotiation of the Camp David Accords in 1978 by U.S. President Jimmy Carter, Egyptian President Anwar Sadat, and Israeli Prime Minister Menachem Begin.

SEE ALSO *Alliances; Bilateralism; Coalition; Internationalism; Multilateralism; Trilateral Commission; Unilateralism*

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TRIUMPHALISM

Triumphalism consists of the warrantless assertions that the decline or defeat of an adversary is caused by an antagonist and that the antagonist's success is a sign of superior virtue. In the post–World War II period, for instance, the

political and economic collapse of the Soviet empire is often attributed to a competitive loss to Western European and North American capitalist powers. The fall of the Soviet Union is alleged proof of the superiority of those economic and political institutions over their Soviet counterparts.

Triumphalism is a combination of two mistaken assertions. The first assertion, that the defeat of one is due to the effort of another, is what classical rhetoricians since Aristotle have called a fallible sign. Not only is the assertion open to refutation, but its certainty can never be reliably established beyond doubt. The second assertion, that the adversary's defeat establishes the virtue of the victor, is a value judgment. As such, no credible facts can be derived from the perspectives of the victor or the loser that are not tainted by their interests. Thus facts cannot validate values, only facts.

The German sociologist and economist Max Weber is perhaps most responsible in the social sciences for stressing the ultimate dependence of the constitution and relevance of facts on values. His student, the Hungarian sociologist Karl Mannheim, showed how class interests were particularly important in forming worldviews whereby both values and facts attained cultural significance. In modern philosophy the American Thomas Kuhn's argument that knowledge is normative and writer Hilary Putnam's (b. 1926) insistence on the inseparability of judgments about facts and values have contributed additional support to a more general view that there can be no such thing as a *value-free* estimation of the world and its virtues. This position would view triumphalism as logically untenable.

If one starts with individual values, some difficulties can be avoided. Take the phenomenon of increased economic inequality in post-Soviet Russia. A believer in competitive capitalism valuing individual freedom in economic pursuits, for instance, would find growing economic inequality in post-Soviet Russia perhaps a necessary condition for the success of an enterprising minority. A socialist from the Soviet era, in contrast, would find the growth in economic inequality in post-Soviet society iniquitous. Thus in this case the *fact* of increased economic inequality in post-Soviet Russia takes on a differential significance, based upon one's basic values.

There are, however, more difficult scenarios. Suppose two persons or groups claim to agree on basic values but do not count as significant the same facts. In the United States people for and against therapeutic abortions value the sanctity of human life. The antiabortionists count fetal deaths as the indispensable marker for valuing human life. The pro-abortionists count the health of the pregnant woman as the vital measure of human well-being. Neither accepts the facts of the other as valid counters in valuing the sanctity of human life.

These two instances do not exhaust the logical possibilities of the problems entailed in assessing facts via values and vice versa. They do suggest, however, how triumphalism as a theoretical practice is undercut by its reliance on unwarranted assertions on both sides of a given fact-value equation.

SEE ALSO *Abortion; Capitalism; Civilizations, Clash of; Cold War; Idealism; Kuhn, Thomas; Mannheim, Karl; Popper, Karl; Socialism; Weber, Max*

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Michael Blim

TROTSKY, LEON
1879–1940

Leon Trotsky (Lev Davidovich Trotskii [Bronshtein]) was a leading Russian revolutionary. Born into a Jewish farming family in present-day Ukraine, Trotsky became a Marxist publicist and organizer in the 1890s. During

Russia's 1905 Revolution, he became chairman of the St. Petersburg Soviet of Workers' Deputies just before its suppression by the tsarist government. Forced to flee Russia, he spent the next several years as a journalist in Europe.

After 1917's February Revolution overthrew the tsarist regime, Trotsky returned to Russia. Despite fifteen years of disputes with Vladimir Lenin, Trotsky now found their views congruent, and joined Lenin's Bolsheviks to help lead the October coup d'état that overthrew Russia's provisional government. Trotsky served briefly as Soviet foreign minister before shifting in spring 1918 to building the Soviet military to fight the Russian civil war. After the Red Army's 1920 victory, Trotsky struggled against other Bolsheviks to take the ailing Lenin's place as head of the Soviet Union. For some historically conscious Bolsheviks, Trotsky's talent, military authority, and arrogance raised the specter of a new Bonaparte; a coalition of enemies, led by Joseph Stalin, first removed him from power then exiled him in 1929.

Trotsky produced a remarkable amount of work, including history, military theory, and even literary criticism, but his key contribution is his concept of *permanent revolution* (perhaps more aptly termed *uninterrupted revolution*). According to classical Marxism, proletarian revolution can take place only after a successful bourgeois revolution and the consequent long-term development of capitalism create material abundance, socioeconomic polarization, and a self-conscious working class. After the 1905 Revolution, however, Trotsky suggested that in Russia, the bourgeoisie alone was too weak to overthrow the autocracy and establish bourgeois capitalism. This created an opportunity for the proletariat to hijack the bourgeois revolution, by collaborating with the bourgeoisie to overthrow the tsarist regime, then immediately destroying the bourgeoisie and establishing a proletarian government—precisely what Lenin and Trotsky later did in 1917. Though Trotsky's theory had a specifically Russian context, he noted its applicability to other backward societies.

Russian backwardness was, however, a double-edged sword. While it allowed direct transition from bourgeois to proletarian revolution, it produced a socialist regime in an underdeveloped country. Without accompanying revolutions in industrially advanced countries, the new Soviet state was vulnerable. This led Trotsky after 1917 to promote revolution abroad to protect Soviet Russia, a stance Stalin distorted. Painting Trotsky as pessimistic about Soviet prospects, Stalin used nascent Soviet nationalism against him. Soviet backwardness also led Trotsky to push industrialization, if necessary at the peasantry's expense. Though Stalin attacked this policy during the struggle for power, he adopted it upon consolidating victory.

Trotsky's theoretical work continued in exile. Trotsky did not attribute his defeat to Stalin, who he dismissed as a nonentity, but instead to Russian backwardness. Material want and a scarcity of class-conscious workers, Trotsky argued, created the conditions for the ascendance of the Soviet bureaucracy, which employed Stalin as a tool to solidify its own position. In analyzing the bureaucracy, Trotsky anticipated later criticisms that suggested that Marxist revolutions merely substituted a new exploitative ruling class for the old one. Trotsky, however, did not see the Soviet bureaucracy as a class, for that would mean that Russia's proletarian revolution had failed. Though deformed and twisted by the bureaucracy, the Soviet Union remained for Trotsky a genuine workers' state, the fruit of a true proletarian revolution.

Trotsky's opposition to Stalin led to his assassination in 1940 by a Stalinist agent in Mexico City. He was a nonperson for the rest of the Soviet Union's existence, his achievements expunged from the historical record. Elsewhere, however, his charisma, anti-Stalinism, rhetorical flair, and reputation as the *ne plus ultra* of the revolutionary left ensured that Trotskyism remained an important force on the far left.

SEE ALSO *Bolshevism; Bureaucracy; Communism; Industrialization; Lenin, Vladimir Ilitch; Marxism; Revolution; Socialism; Stalin, Joseph; Stalinism; Union of Soviet Socialist Republics*

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David R. Stone

TROTSKYISTS

SEE *Neoconservatism; Trotsky, Leon.*

TROUBLES, THE

SEE *Irish Republican Army.*

TROUILLOT, MICHEL-ROLPH

1949–

Few scholars actually practice the discursively much-touted interdisciplinarity of early-twenty-first-century social science. Michel-Rolph Trouillot, an anthropologist whose intellectual homes are history and philosophy, is one. Haitian by birth and in sensibility, he came to the United States by chance but chose to become a Caribbeanist. His work on Dominica and Haiti, though steeped in the details of time, place, event, and person that some carelessly dub *local color*, embraces the Americas and the world through a radical yet discerning critique of the West and capitalism. Some fifty publications, in three languages and spanning the usual text types, display Trouillot's unusual capacities for sophisticated, politically engaged theorizing and careful empirical observation. Trouillot's conference presentations, undergraduate courses, graduate seminars, editing of scholarly book series or journals, and informal conversations have also been important pathways for his critique's cumulative movements.

FAMILY HISTORY AND EDUCATION

Since Haiti's independence in 1804, many Haitian families have had black and mulatto wings with rural or urban staves in the peasantry, the middle and working classes, and the elite. By the mid-twentieth century, the black middle class Trouillots of Port-au-Prince included intellectually inquisitive and politically active professionals. Trouillot's father, attorney Ernest Trouillot (1922–1987), deftly practiced the historian's craft as an avocation. His paternal uncle, Hénock Trouillot (1923–1988), arguably Haiti's most prolific, subtle, and influential *Noiriste* historian, was a professor and for many years director of the Archives Nationales d'Haïti. Michel-Rolph, born on November 26, 1949, the second of four children, grew up in a household full of ideas and lively argument about things of this world—literature, science, art, economics, music, politics—and about how the past shapes those things in the present.

At age five, Trouillot enrolled in Port-au-Prince's Petit Séminaire Collège Saint-Martial and, under the tutelage of its progressive Pères du Saint-Esprit, completed the Baccalaureate II (Philosophy) in 1968. In the same year, he began courses at L'École Normale Supérieure. However, the Duvalier dictatorship's escalating repression of student activists compelled Trouillot to join hundreds of young compatriots who sought refuge in New York City, which was then host to the Haitian Diaspora's largest population. Trouillot received a bachelor's degree (BA) in Caribbean history and culture at Brooklyn College, City University of New York (CUNY) in 1978, driving cabs to pay for his education and support his wife and children. He devoted spare time (not *free*, he would emphasize) to reading, Haitian Diaspora politics, and writing poetry and journalism. In 1977 he completed his first book, *Ti difé boulé sou istoua Ayiti*, an incisive Marxist analysis of the Haitian Revolution and politico-ideological developments immediately after Haitian independence, presented in the playful style of Haitian Creole dialogues. At the same time, he initiated research for two papers on coffee production in Saint-Domingue/Haiti that would alter Caribbeanists' thinking about the sociology, economics, and politics of slavery and freedom around the turn of the nineteenth century.

In 1978, anthropologists Sidney W. Mintz and Richard Price recruited Trouillot for the Johns Hopkins University Program in Atlantic History and Culture, and he completed a PhD in anthropology in 1985. By that time, Trouillot was already an assistant professor at Duke University (1983–1988), working closely with colleagues in other departments to establish the University's Caribbean Studies program and planning revisions of his dissertation, which became his second book, *Peasants and Capital* (1988), a detailed ethnographic and historical study of how Dominica's peasantry copes with the global banana industry. Trouillot subsequently returned to Johns Hopkins, first as associate professor, then as Krieger/Eisenhower Professor of Anthropology and founding director of the Institute for Global Studies in Culture, History, and Power. Since 1998, he has been professor of anthropology at The University of Chicago.

WORK AND INFLUENCE

Haitian relatives and intellectuals aside, Karl Marx is Trouillot's main source of inspiration in the study of world history. However, his work also reflects lessons learned from an international, multidisciplinary cohort of predecessors including Mintz, Eric R. Wolf, Price, David W. Cohen, Immanuel Wallerstein, Fernand Braudel, C. L. R. James, Antonio Gramsci, Jean-François Lyotard, Michel de Certeau, and Hayden White. This list omits Trouillot's contemporaries, diversely self-identified interlocutors in the social sciences and philosophy whose influences he generously acknowledges in books and articles. He also constructively appraises their scholarship in reviews or review essays, and subjects it to illuminating commentary in symposia and workshops.

Synthesizing diverse lineages of ideas, Trouillot routinely unsettles taken-for-granted dichotomies concerning concepts and data in research on political economy, society, and culture by historicizing and contextualizing them. Nevertheless, three binary oppositions establish a purchase for understanding the scope and depth of his work:

stasis/movement or flow, agency/contingency, and articulation/separation or plural integration. Trouillot relentlessly zigzags across the boundaries of these concepts to gauge relations of dominance and determination between the canalizing effects of material conditions and the creative potential of structures and processes of signification.

Polemics against empiricism, parochialism (e.g., exceptionalism, individualism, and subjectivism) and idealist or realist cultural approaches to symbolism (including identity politics) animate Trouillot's work. He is especially critical of the common, though naïve, assumption that the purposes of study, objects of observation (or units of description and analysis), and sites of inquiry are homologous. Carefully crafted operational definitions of concepts and categories for a research project, one imagines, might overcome naïveté. Yet Trouillot rejects operational definitions, insisting that they fetter serious investigation of the play of concepts and categories, and the search for relevant evidence.

These two moves puzzle methodologically oriented scholars who view theory as an indispensable guide to empirical research, but do not consider theory construction its sole or primary goal. The point holds even for core subject matters of Trouillot's best-known works. One example is the concept of the State, particularly in countries once called third world or peripheral but now forming the Global South. Another is the productivity of varied forms of power in history that precipitates privileged narrators along with mentions and silences in narratives about selected information from the past. Likewise, Trouillot had probed the savage slot by placing the presuppositions, propositions, and consequences of anthropology's mission to study "primitive" peoples, cultures, and societies in a world-historical context. Therefore, he responds with a knowing smile to the malaise among anthropologists concerning epistemology, ethnographic authority, and incursions into their traditional turf, fieldwork. As disciplinary boundaries crumble and global flows accelerate, Trouillot laconically proclaims that academic disciplines are what their practitioners do.

The dust jacket of *Silencing the Past* (1995) dubs Trouillot "one of the most prominent Haitian scholars in the United States." Although true, the statement conceals as much as it reveals. All scholars will find in Trouillot's work buoys on troubled waters—the intellectual demimonde's fitful struggle to make interdisciplinarity yield knowledge and understanding of the late-modern world's historicity. Since 2003, Trouillot has been recuperating from aneurysms; this has unfortunately interrupted his ambitious research projects, conscientious training of doctoral candidates, and wise contributions as a board member or editor to scholarly organizations and publications. Scholars who have learned from his work await its next movements.

SEE ALSO *Anthropology; Behaviorism; Caribbean, The; Causality; Coffee Industry; Collective Memory; Critical Theory; Durkheim, Émile; Empiricism; Freud, Sigmund; Gramsci, Antonio; Haitian Revolution; Hull, Clark; James, C. L. R.; Marx, Karl; Marxism; Memory; Methodology; Mulattos; Naturalism; Norms; Parsons, Talcott; Philosophy; Philosophy of Science; Popper, Karl; Positive Social Science; Positivism; Power; Prediction; Probability; Psychology; Samuelson, Paul A.; Science; Social Science; State, The; Wallerstein, Immanuel; Wolf, Eric*

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TRUDEAU, PIERRE ELLIOT

SEE *Quebecois Movement.*

TRUMAN, HARRY S.

1884–1972

Harry S. Truman was the thirty-third president of the United States of America. He was born on May 8, 1884, in Lamar, Missouri, and died on December 26, 1972, in Kansas City, Missouri. His middle initial, *S*, does not begin a middle name because of a family disagreement over whether his middle name should be "Solomon" or "Shipp(e)." Truman's family moved to Independence, Missouri, in 1890. After graduating from high school in 1901, Truman worked at several clerical jobs and in 1905 joined the Missouri National Guard. He worked at his family's farm from 1906 until 1916.

During World War I, Truman served as an artillery captain in France. Truman was respected by his troops for his bravery in combat and leadership ability. After he returned to Missouri, Truman married Elizabeth "Bess" Wallace. Truman and an army friend, Edward Jacobson, opened a haberdashery in Kansas City. It was a popular place for veterans to socialize, but the business suffered during the 1921–1922 recession and went bankrupt.

James Pendergast, a veteran of Truman's artillery unit, persuaded his uncle, machine boss Tom Pendergast, to ask Truman to run for a seat on the county "court," actually a public works commission. With the support of the Pendergast machine, Truman was elected as a Democrat to the Jackson County court in 1922, 1926, and 1930. Despite his affiliation with the Pendergast machine, Truman earned a reputation for honesty and efficiency, especially in the construction of new roads and a new courthouse. He accepted Tom Pendergast's offer to run for the U.S. Senate and was elected in 1934.

Upon his arrival in the Senate in 1935, Truman was initially dismissed by his colleagues as the "Senator from Pendergast" because of his association with the notorious political machine. Truman was frustrated and disappointed by President Franklin D. Roosevelt's apparent indifference and occasional hostility toward him. While generally supporting New Deal legislation, Truman also backed Roosevelt's failed, controversial "court-packing" bill, higher defense spending, military aid to Great Britain, and military conscription before the United States entered World War II. At Truman's suggestion, the Senate created a special committee to investigate waste, fraud, and mismanagement in defense contracts and appointed Truman as its chairman. The Truman Committee saved $11 billion in defense spending and made Truman a respected national political figure.

By 1944 a growing number of Democratic politicians and campaign contributors wanted Roosevelt to replace Vice President Henry A. Wallace with Truman as his running mate in the 1944 presidential election. Truman reluctantly accepted Roosevelt's offer to be his running mate. During and after the 1944 election, Truman was concerned that the ailing Roosevelt rarely consulted him and did not confer with him about major war policies and postwar plans. Truman's brief vice presidency ended with Roosevelt's death on April 12, 1945.

TRUMAN'S PRESIDENCY

Truman's first few months as president were a whirlwind of major world events and presidential decisions. Germany surrendered on May 7, 1945. From July 17 until August 2, Truman conferred with Winston Churchill and Joseph Stalin in Potsdam to determine the postwar occupation of Germany and the trial arrangements for Nazi war criminals. One week later, Truman ordered the dropping of atomic bombs on Japan. Japan formally surrendered on September 2. On September 8, Truman ordered American troops to be stationed in South Korea.

During his first year as president, Truman also confronted labor disputes, inflation, and public demands for a more rapid demobilization of troops and reconversion to a civilian economy. Truman became known for his blunt rhetoric and unequivocal decision-making style, epitomized by the catchphrases "The Buck Stops Here" and "Give 'em Hell." Nonetheless, Truman's declining public approval ratings and the public perception of his inferiority to Roosevelt helped the Republicans to win control of Congress in 1946.

With regard to foreign and defense policies, Truman had a fairly productive and effective relationship with the Republican-controlled 80th Congress. Truman and Congress enacted the Marshall Plan for the economic reconstruction of Western Europe and a similar plan for Japan, sent military and economic aid for the Greek and Turkish governments fighting communist aggression, reorganized the Department of Defense, and established the foundation of the North Atlantic Treaty Organization (NATO) for the collective security of Western Europe.

In the area of domestic policy, however, Truman often had disagreements with Republicans and conservative Southern Democrats in Congress. In 1947 the Taft-Hartley Act, which reduced the legal powers and privileges of labor unions, became law over Truman's veto. Southern Democrats and some Republicans rejected Truman's civil rights legislation for African Americans.

Most Republicans in Congress disagreed with Truman on tax, housing, price control, and agricultural issues.

Truman's campaign in the 1948 presidential election repeatedly denounced the "do-nothing Republican 80th Congress" on domestic issues and implicitly linked it to Governor Thomas E. Dewey of New York, the moderately liberal Republican presidential nominee. Friendly crowds encouraged Truman to "give 'em hell." Meanwhile, the Democratic Party splintered further. The most anti-civil rights Southern Democrats supported Governor J. Strom Thurmond of South Carolina as the presidential nominee of the States Rights Democrats, or "Dixiecrat" party. Anti-cold war liberals and leftists supported the Progressive Party's presidential nominee, Henry A. Wallace.

With a comfortable lead in public opinion polls, Dewey avoided sounding antagonistic toward Truman and addressing specific issues that might reveal his differences with more conservative Republicans in Congress. Major newspapers and magazines predicted Dewey's victory and speculated on his future policies and cabinet appointments. The *Chicago Tribune*'s top headline on Election Day famously announced, "Dewey Defeats Truman." Nonetheless, Truman won an upset victory. The Democrats also won control of Congress.

In his 1949 message to Congress, Truman proposed what he called "a Fair Deal for all Americans." His major policy proposals included civil rights, national health insurance, and repeal of the Taft-Hartley Act. Except for the Housing Act of 1949, Congress rejected all of the major Fair Deal legislation.

Republicans charged that the Truman and Roosevelt administrations had failed or refused to uncover and prevent communist influence on American foreign and defense policies; in response, Truman created loyalty review boards to find communists in the federal government, especially the state department. The Truman administration's reputation was also tarnished by congressional and media investigations of corruption on the part of some officials. These issues were overshadowed, however, by the communist takeover of mainland China in 1949, the Soviet detonation of an atomic bomb, and the outbreak of the Korean War in 1950.

Truman secured a decision from the United Nations (UN) authorizing the United States and other UN members to support South Korea. He appointed General Douglas MacArthur commander of the American and other UN forces in Korea. After MacArthur publicly defied Truman's strategy of limiting the war to Korea and avoiding a war with China, Truman removed MacArthur from command. Truman's removal of MacArthur and the ensuing stalemate in the Korean War proved to be unpopular. Truman spent the remainder of his presidency defending his policies in Korea and supporting the Democratic presidential campaign of Illinois governor Adlai Stevenson in 1952.

After Republican presidential nominee Dwight D. Eisenhower easily defeated Stevenson, Truman spent the early years of his retirement supervising his presidential library in Independence, Missouri, and writing his memoirs. On December 26, 1972, Truman died of complications from pneumonia in a Kansas City hospital. During his retirement and after his death, Truman's historical reputation steadily improved, especially for his integrity and major foreign policy decisions.

SEE ALSO *Dixiecrats; Eisenhower, Dwight D.; Korean War; Roosevelt, Franklin D.; Thurmond, Strom; World War II*

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Sean J. Savage

TRUST

Trust, the general sense of well-being in relation to one's self and toward others, is an essential attribute of human character as well as of interpersonal interaction. The attainment of a sense of trust has long been thought by ego psychologists to be the first human developmental task and is based largely on the infant's growing expectation that the mothering figure will become a constant source of nurturing and satisfaction in the individual's life. Good nurturing thus disposes the individual to anticipate positive encounters with the environment and with other persons.

There is common agreement that trust is an essential factor in successful social environments and interactions. Persons need to feel secure in their expectations for good outcomes as they go about their daily lives. For instance, they need to assume that an elevator is functioning normally, that they will be understood linguistically if they cry for help, and that a medical professional will try to do them good rather than harm. So important is what could be called "background trust" that experimentally breaching it, as sociologist Harold Garfinkel has shown, by speaking nonsense when a person asks for directions or help, causes subjects to become extremely angry and anxious. If one has a flat tire, and the experimenter replies to

a call for help by asking what a tire is, rage on the subject's part is sure to follow. Hence there is strong reason to think that trust is an interaction imperative, up to and including dealing with one's enemies, as the history of the cold war suggests.

The greater the degree of trust in social transactions, it is believed, the more optimal are the satisfactions for participants. Relations between members of households and kin networks, for instance, are typically characterized as high in trust, and it is notable how solutions to the most difficult problems of human dependency, such as infancy, old age, and disability, are undertaken at great sacrifice within their confines. Trustworthy expectations also flow through social networks such that they are an important source of economic opportunities such as job finding and job getting.

Trust and exchange, used here in the broadest sense, are intimately related. Exchange creates trust, and trust facilitates exchange. Among members of small-scale societies, gift giving creates the necessity of reciprocity and generates in the giver the expectation of being a receiver and thus a beneficiary of a gift in a future transaction. Bonds of mutual expectation are formed and can often support the exchange of purely economic goods, as the classic investigation of anthropologist Bronislaw Malinowski (1884–1942) among the Trobriand Islanders of the Pacific a century ago showed.

The depth of trust among participants also affects exchanges in markets. At minimum, most economists recognize trust as a helpful externality: that is, trust is a noneconomic element that improves economic efficiency by increasing the speed of transaction and limiting the need for costly conditions to ensure mutual compliance. Its absence increases economic risk and may foster opportunism among buyers and sellers that limits the scope of market transactions. Lack of trust between producers and suppliers has been argued as a primary motivation for the growth of large, vertically integrated industrial firms. If firms cannot trust their suppliers to deliver quality goods in a timely and cost-effective fashion, they reason it is better to produce the goods internally or purchase the supplying firm outright.

On the other hand, trust, it has been argued, can be misplaced. Exclusive trust in kin or in personal and social networks often signifies lack of trust in other persons, networks, and institutions outside their purview. This diffidence toward others can create economic and political troubles. Politically, Robert D. Putnam has argued, for instance, that trust is an indispensable good for building a successful civil society and, by implication, a functioning democracy. In a world economy dominated by large corporations, the temporary advantages afforded by a high degree of internal trust found among families and kin groups that stimulate high levels of personal dedication, income pooling, and personal sacrifice can become overwhelmed by such problems as small firm size, stunted organizational growth, and lack of access to capital markets for expansion. If mistrust in the face of outsiders in markets leads to out-and-out hostility, deviant economic combinations, such as the mafia and what Max Weber (1864–1920) called "pariah capitalism," can arise. A market where neither the expectation nor the reality of fair treatment, both reliant on background trust, is met tends to founder and shrink. Moreover, exploitation of others outside the bounds of exclusive trust becomes highly likely.

Exclusive bonds of trust need not be overtly hostile to be exploitative. Cartels and trusts, historic fetters on economic efficiency, are precisely the products of relations of trust developed among nominally competing firms. Through the reciprocal exchange of information, favors, and market opportunities, they effectively charge a tax on their transactions with other buyers and sellers outside their circle.

As world society and the world economy become more integrated, *globalized* in a word, the need for, as well as evidence of, a more generalized interpersonal trust have been noted. Mass travel and migration, unprecedented collective reliance on large bureaucratic organizations for all kinds of commodities and services, and the rise of communication and information technologies necessitate increased contact with impersonal, anonymous persons, providers, and interlocutors. The sense of well-being and the expectation of gratification embodied in the concept of trust take on even greater importance. There are many instances in which this sense of globalized background trust can be observed, from the casual use of the credit card to the ease with which one can trade, borrow, and travel in ever grander geographical and social spaces. Inside large organizations, the same expectations of good interactions are created through rewards and training, though employee trust can be lost easily through the abuses of hierarchy and corporate economic power.

SEE ALSO *Reciprocity*

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Michael Blim

TRUTH, SOJOURNER

c. 1797–1883

Sojourner Truth was born a slave in Ulster County, New York. Her masters at birth were the Hardenburgh family, descendents of Dutch "patroon" planters, and she was named Isabella Baumfree at birth. During her lifetime she was sold several times, married Thomas Dumont, another slave, and had at least four children with him. In 1827 New York freed all remaining slaves, but Isabella had already left her owners. After the abolition of slavery, she successfully sued her former owners to obtain the freedom of one of her children, whom they had transferred to Alabama.

The 1830s were a time of great religious ferment, called the Second Great Awakening. Isabella was caught up in the movement, and she traveled around the northeast and settled in several religious communes. It was about this time that she began calling herself Sojourner Truth and became an itinerant preacher.

In the 1840s she became active in the abolitionist movement, and she worked with many abolitionist leaders such as Frederick Douglass (1817–1895) and William Lloyd Garrison (1805–1879). She was in great demand as a speaker, and her memoir *The Narrative of Sojourner Truth, a Northern Slave*, was dictated to and edited by abolitionist author Harriet Beecher Stowe (1811–1896).

Sojourner Truth also became involved in women's rights issues. Like many abolitionists, she saw a connection between the issues of women's liberation and freedom for blacks. Her most famous speech, "Ain't I A Woman?," was delivered at a women's rights conference in 1851. The speech was transcribed by another woman abolitionist, Frances Gage, who published it almost thirty years later. Gage's text is the only record of Sojourner Truth's oratorical style, and it is written in nonstandard English. It is unclear if that is really the way Sojourner Truth spoke. Contemporaries, both black and white, always described her as a riveting speaker, and nobody ever suggested that her English was poor or difficult to understand. Nonetheless, the speech as transcribed shows some of the power of Sojourner Truth's oratory: the biblical or theological arguments mixed with homely, rural simile, the chatty tone, the repetition of "and ain't I a woman?" and other rhetorical elements that have made this speech a classic of early feminism.

When the Civil War (1861–1865) broke out, Sojourner Truth worked for better conditions for blacks in the Union military and against segregation in northern cities. After the war she called for the establishment of a "Negro state" in the west. She also supported the Freedman's Bureau and tried to help black war refugees and the newly freed people in the South find jobs and housing. She continued to work for women's rights, civil rights for blacks, and temperance (laws restricting alcohol consumption) until her death in 1883.

Sojourner Truth is important because she helped set the terms of reference for the debate over slavery, civil rights for blacks after the Civil War, and women's rights in the United States in the mid-nineteenth century. She is probably as important a figure as any of the other well-known abolitionists—Douglass, Garrison, Beecher Stowe—especially because as a black woman she has inherent credibility on both black and women's issues. She is also important as an example of a little-appreciated phenomenon, the link between Protestant evangelical Christianity, abolitionism, and women's liberation. It is important to realize that in the middle of the 1800s, evangelical Christians were more likely to be radicals than conservatives. Finally, she deserves attention because of her lively speaking style. There is a reason that she stood out as a speaker and sold many books in that era, so well provided with great speakers and writers.

SEE ALSO *Civil Rights; Feminism; Fundamentalism; Fundamentalism, Christian; Slavery; Social Movements; Suffrage Movement, Women's; U.S. Civil War*

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TRUTH AND RECONCILIATION COMMISSIONS

Many countries with histories of widespread human rights abuses in the past have turned to truth and reconciliation commissions as an institutional solution to the problem of

transitional justice and attempted democratization. Although these commissions take many forms—and are assigned a variety of mandates—each is charged with investigating the truth of past events with the hope that knowing about the truth will contribute to "reconciliation." Roughly two dozen such commissions have been created (including one in Greensboro, North Carolina, charged with discovering the truth of what happened during a political riot in 1979). Many more such tribunals are being considered in countries trying to confront their troubled pasts (e.g., Iraq).

Nearly all truth commissions have the aim of creating a collective memory about the past. This ranges from official versions of "who did what to whom" to macrohistorical treatises (e.g., what role did religious organizations play in the maintenance of apartheid in South Africa?). The objective of truth commissions is to get widespread acceptance of a historical narrative, typically under the assumption that battling continually over whether historical injustices actually took place (e.g., Holocaust deniers) is not productive.

Some truth commissions are empowered to grant amnesty to gross human rights violators. The theory is that, with amnesty, perpetrators will come forward and admit their crimes, allowing a collective memory to be constructed. Amnesty schemes are controversial because by definition they create a retributive justice deficit. Amnesty provisions vary widely, from individual to blanket amnesties, and are often accompanied by selective prosecutions of those not qualifying for amnesty (e.g., those who committed their crimes without political motives). Many social scientists believe that amnesties play a valuable role in democratization processes by allowing the forces of the ancien régime to retire from politics and to refrain from acting as "spoilers" of the transition. Others, however, point to the failure to achieve retribution as a crucial flaw in amnesty programs and argue that, without the punishment of wrongdoers, little deterrent to future human rights abuses exists.

Reconciliation is a more complicated concept, in part because some would limit reconciliation to the relationship between victims and perpetrators, whereas others treat the concept as referring to entire societies. The South African Truth and Reconciliation Commission, for instance, was charged with transforming South African society—which, of course, was overwhelmingly comprised of bystanders, not victims and perpetrators of gross human rights violations. Generally, reconciliation requires that people of disparate political views tolerate one another and agree to limit political competition to peaceful and democratic means.

The form that truth commissions take—their structure, functions, and powers—is typically hotly contested by competing political factions, which makes such tribunals hard to establish in the first place. A key issue in such disputes concerns the evenhandedness of the commission's activities, and in particular whether all sides in political struggles should be held accountable to the same human rights standards. Some distinguish between "victor's justice" and "transitional justice," with the latter being characterized by a willingness to cast blame for human rights atrocities broadly across all combatants. With truth commissions crucially situated to shape political transitions on a broad scale, it is no wonder that getting agreement from those formerly at war with each other is difficult, and in many instances impossible.

By almost universal agreement, the most successful truth commission in the world is that of South Africa. Led by the cleric and anti-apartheid activist Desmond Tutu, and fully backed by Nelson Mandela, the first president of the country to be elected after the end of apartheid (but not backed by the governing political party, the African National Congress), South Africa's TRC adopted societal transformation as one of its most important objectives. Although widely known (and often criticized) for granting amnesties to some of the apartheid regime's worst assassins and criminals, the TRC held hearings throughout the country involving enormous numbers of citizens, produced a massive documentary history of apartheid and human rights abuses, fought the battle to provide compensation to victims, and generally contributed to tolerance and reconciliation in the country. Consequently, the South African TRC is widely copied by those seeking to move beyond the past toward a more democratic future. Reconciliation and democracy are not synonymous, but without some degree of reconciliation, it is difficult for countries to put the violent conflicts in the past and agree that political competition will be limited to peaceful and democratic means.

SEE ALSO *African National Congress; Apartheid; Collective Memory; Genocide; Human Rights; Justice; Justice, Social; Reparations; Slavery; Terror; Violence*

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James L. Gibson

TRYPTOPHAN

SEE *Serotonin.*

TSE-TUNG, MAO

SEE *Mao Zedong.*

T-STATISTIC

SEE *Student's T-Statistic.*

TSUNAMI

SEE *Disaster Management; Natural Disasters.*

TUBMAN, HARRIET

1822–1913

Born Araminta "Minty" Ross on the plantation of Anthony Thompson, in Dorchester County, Maryland, in 1822, Harriet Tubman was one of nine enslaved children of Harriet "Rit" Green and Benjamin Ross, both slaves. During the mid-1820s, Thompson's stepson, Edward Brodess, took Rit and the children ten miles away to his own farm in Bucktown after he inherited them from his deceased mother. Over the next twenty-five years, Tubman endured painful separations from her family while being hired out to cruel masters who beat and starved her. Brodess sold several of her sisters, permanently tearing apart her family.

While working as a field hand as a young teen, Tubman was severely wounded by a blow to her head from an iron weight thrown by an angry overseer at another fleeing slave. This left her suffering from headaches and epileptic seizures that affected her for the rest of her life. About 1844 she married a local free black named John Tubman, shedding her childhood name in favor of Harriet.

Upon Brodess's death in 1849, Tubman determined to take her own liberty rather than risk being sold to settle Brodess's debts. She tapped into an Underground Railroad network operating on the Eastern Shore of Maryland: Using the North Star and assistance from white and black helpers, she found her way to freedom in Philadelphia. Once safely there, Tubman worked as a domestic to support herself and save enough money to help family and friends escape from the Eastern Shore of Maryland.

Through a variety of familial, social, and abolitionist networks, Tubman was able to exploit secret and reliable communication and support systems and craft her own Underground Railroad networks to freedom. These networks included many free and enslaved African Americans and antislavery whites who lived and worked near crucial access points to food, transportation, and shelter in Maryland, Delaware, Pennsylvania, and New York. Unable to read or write, Tubman also used a variety of disguises and ruses to affect her multiple escape missions. In spite of debilitating seizures, Tubman returned about thirteen times during the 1850s, bringing away roughly seventy friends and family members, while giving instructions to scores more who found their way to freedom independently. Miraculously, Tubman was never betrayed and never "lost a passenger."

The Fugitive Slave Act of 1850 left many runaway slaves vulnerable to recapture. Tubman brought numerous freedom seekers to safety in St. Catharines, Ontario, Canada, where they became part of a growing community of refugees from slavery. Her dangerous missions won her the biblical name "Moses" and the admiration of abolitionists throughout the North, including Frederick Douglass, William Lloyd Garrison, Lucretia Mott, Gerrit Smith, and Susan B. Anthony, among others, who supported her and sought her counsel. Tubman collaborated with the legendary John Brown as he planned for an attack on Harpers Ferry, West Virginia, in 1859.

During the Civil War (1861–1865), Tubman traveled to Port Royal, South Carolina, to support Union activities. She nursed wounded black soldiers and conducted important spying missions behind Confederate lines. She became the first woman to command an armed military expedition when she guided Colonel James Montgomery and his black troops on a successful raid in June 1863.

After the war, Tubman moved to Auburn, New York, where William Henry Seward, President Abraham Lincoln's secretary of state, had sold her a home and where she had settled her aged parents and other family members. There, she intensified her fight for women's rights and civil rights for African Americans. After John Tubman died in Maryland, Harriet Tubman married Nelson Davis, a veteran, in 1869. She struggled financially the rest of her life. Denied her own military pension, she eventually

received a widow's pension and, later, a Civil War nurse's pension.

Rising above social, economic, and physical adversity, Tubman continued her humanitarian work with the opening of the Harriet Tubman Home for the Aged in 1908 in Auburn. She continued to appear at local and national suffrage conventions until the early 1900s. She died at the age of ninety-one on March 10, 1913, in Auburn.

Since her death, Tubman has been memorialized and commemorated in many ways, including the naming of schools, roads, nonprofit social-service organizations, and state days of recognition. In 1944 the U.S. Maritime Commission launched the Liberty ship SS *Harriet Tubman*, and in 1978 and again in 1995 the U.S. Post Office issued postage stamps in her honor. Tubman has earned international acclaim as a symbol of the struggle for freedom, equality, and justice from oppression and discrimination, and has become one of America's most enduring historical figures.

SEE ALSO *Slavery*

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Kate Clifford Larson

TULIP MANIA

SEE *Great Tulip Mania, The.*

TULSA RIOT

On the evening of May 31, 1921, a mob of people appeared at the Tulsa County Courthouse in Tulsa, Oklahoma. They were drawn by rumors afoot in the community that Dick Rowland, a nineteen-year-old black man, would be lynched. Those rumors, in turn, were started by a story on the front page of the *Tulsa Tribune* that Rowland had been arrested for attempting to assault an orphaned white girl in an elevator in a building in downtown Tulsa the day before. Rumors of lynching drew black men, veterans of World War I (1914–1918), to the courthouse as well. They hoped to prevent what they feared would be a lynching of Rowland. In the late evening hours, around 10 p.m., the black men who had shown up to prevent the lynching clashed with police and the mob. And the riot began. By the time it ended around noon the next day, thirty-five blocks of the prosperous black section of Tulsa had been burned, leaving thousands homeless and thousands of black people in custody.

Tulsa was the last of the terrible World War I–era riots that began in East Saint Louis, Illinois, in 1917 and continued in Chicago and many other cities in 1919. The Tulsa riot was also likely the worst in terms of loss of life. Like the other riots of the era, Tulsa had its origins in the rising prosperity of the black community, as well as its rising aspirations, which caused the black community to come into conflict with the white community. People in Greenwood, as the black section of Tulsa was known, were doing well; there was a weekly newspaper, churches, rooming houses, schools, stores, even two movie theaters. And many of the Greenwood residents were men who had fought in World War I. They had traveled the world and seen that life might be organized differently from how it was in Tulsa. They returned, as one newspaper said in the riot's aftermath, "from the war in France with exaggerated notions of social equality and thinking [they could] whip the world" (*Tulsa Tribune* 1921). Thus, people in Greenwood participated in the national renaissance of black culture and pride. They read the vehicles of the renaissance, like W. E. B. Du Bois's *The Crisis* and the sensational *Chicago Defender*. When they heard that Rowland was in danger, they acted to protect his life. And in doing so they put in motion events that led to the destruction of their own community.

After the riot began, the Tulsa police department acted to put down what was called at the time a "negro uprising." The police chief deputized hundreds of men and told them to get a gun and "get a nigger." The police department worked in conjunction with local units of the National Guard to disarm Greenwood residents and take them to what newspapers called "concentration camps" around the city. Those who refused to give up their weapons peacefully were shot. The arrests and fighting continued throughout the night, but around dawn of June 1, the deputies, working in conjunction with a mob and the police and National Guard, swept through Greenwood. First, residents were arrested and disarmed; then looters followed and, once they had taken everything of value, homes and businesses were burned.

In the aftermath of the riot, virtually every African American resident of Tulsa was left homeless. Thousands left the city, never to return. Others vowed to rebuild, even in the face of opposition from the city. The mayor wanted to relocate the black section of Tulsa farther away from the city and to convert the burned area into an industrial and railroad center. "I'll keep what I have until I get what I lost" was the rallying cry of many in

Greenwood. And, despite receiving little assistance from the city, Greenwood was rebuilt. Meanwhile, an all-white grand jury blamed the riot on African Americans. About the same time as the riot, the Ku Klux Klan was gaining membership throughout the state. Riot victims could not hope for justice through the courts at the time.

The Tulsa riot has received renewed attention due to the Oklahoma legislature's Tulsa Riot Commission, which in 2001 recommended that the surviving victims receive reparations from the state. In 2003 a team of lawyers led by Harvard Law School Professor Charles Ogletree filed a federal lawsuit on behalf of riot victims, which was dismissed in 2004. The few remaining Tulsa riot victims and their lawyers continue to seek compensation from the state legislature and elsewhere.

SEE ALSO *Racism; Reparations; Riots; Wilmington Riot of 1898*

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Alfred L. Brophy

TURGOT, JACQUES
1727–1781

Born in 1727 in Paris, economist Anne-Robert-Jacques Turgot, Baron de l'Aulne, received a thorough education, especially in philosophy, and then studied theology at the Sorbonne. In 1750 he was elected to the office of prior. In the same year, he published his *Philosophical Review of the Successive Advances of the Human Mind*, which contained a four-stage theory of human development. After the death of his father in 1751, Turgot began an administrative career. In the late 1750s he contributed several entries to the *Encyclopédie* edited by Denis Diderot (1713–1784). His friendship with the Marquis de Gournay (1712–1759), a French economist, merchant, and government official, had a lasting impact on Turgot's interests and acquainted him with contemporary English political economy. In the late 1750s Turgot met with the head of the physiocratic school, François Quesnay (1694–1774), whose work he admired. He also became friendly with another leading member of that school, Pierre-Samuel du Pont de Nemours (1793–1817), and with Voltaire (1694–1778) and the mathematician and philosopher J. A. N. Caritat de Condorcet (1743–1794).

In 1761 Turgot was appointed intendant of Limoges, a post he held until 1774. He was in charge of the collection of direct taxes, justice, economic and social policy, infrastructure, and so forth. In this period, he composed what may be called his magnum opus, *Reflections on the Production and Distribution of Wealth*, which was not published until 1769 and 1770 in serial form in the *Ephémerides*. In addition, he wrote essays on several economic themes, including taxation, public administration, mines and quarries, the grain trade, and the rate of interest. During his visits to Paris he met, among others, David Hume (1711–1776) and Adam Smith (1723–1790).

With Louis XVI's (1754–1793) succession to the throne in 1774, Turgot was appointed minister of finance. He carried out a number of reforms, including the restoration of domestic free trade of grain, an act that caused the grain riots of early 1775, and the abolition of other constraints on trade (Faccarello 1994). A retrenchment of the influence of the guilds and a replacement of the corvée with a more general land tax followed in January 1776. These measures met with fierce opposition, causing Turgot's dismissal in May 1776. In 1778 he was elected president of the Académie des Inscriptions et Belles Lettres. He died in Paris in 1781.

Turgot was arguably one of the most important economists of the eighteenth century. In important respects, he developed the physiocratic doctrine and anticipated some of the ideas subsequently elaborated by the English classical economists from Adam Smith to David Ricardo (1772–1823). In the *Reflections*, he expounded central economic concepts, including the idea that in conditions of free competition the rate of return on capital tends to uniformity across all employments. In his view, self-interest constrained by competitive conditions can be expected to yield desirable economic outcomes. He therefore advocated laissez-faire and is considered a "patron saint" of the French liberal economics tradition of the middle of the nineteenth century (Groenewegen 1977). His writings had an impact on a number of economists, including the Austrian Eugen von Böhm-Bawerk (1851–1914). Joseph A. Schumpeter's (1883–1950) contention that Turgot

anticipated in important respects the so-called marginal revolution is, however, difficult to sustain.

SEE ALSO *Austrian Economics; Laissez Faire; Liberalism; Physiocracy; Quesnay, Francois; Ricardo, David; Smith, Adam*

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Heinz D. Kurz

TURNER, NAT

c. 1800–1831

Abolitionist and rebel Nat Turner was born circa October 2, 1800, on the Virginia plantation of Benjamin Turner, the child of an enslaved woman named Nancy (the name of Nat's father is unknown). Little is known about either parent. Family tradition holds that Nancy landed in Norfolk five years before in 1795, the slave of a refugee fleeing the revolt in Saint Domingue. Evidence indicates that after being purchased by Turner, Nancy was used as a domestic servant. Later in life, Nat Turner insisted that his father ran away when he was still a boy.

Early on, blacks and whites alike came to regard Nat as unusually gifted. Upon being given a book, the boy quickly learned how to read, "a source of wonder to all in the neighborhood" (Greenberg 1996, p. 45). As a devout Methodist, Benjamin Turner was not only aware of Nat's literacy, he even encouraged him to read the Bible, as did his paternal grandmother, Old Bridget, who Nat later said was "very religious, and to whom I was much attached" (p. 44). Even assuming that some of what Nat later told to attorney Thomas R. Gray was exaggerated bravado—or that the white lawyer's editorial hand helped shape the pamphlet published as *The Confessions of Nat Turner* (Baltimore, 1831)—there is little reason to doubt Nat's assertion that he spent every possible childhood moment "either in prayer" (p. 45) or in reading books purchased for white children on nearby Southampton County farms and estates.

Aware of his unique abilities, young Nat "wrapped [himself] in mystery" (Greenberg 1996, p. 45). When not doing light work in the fields, Nat kept to himself and "studiously avoided mixing in society" (Greenberg 1996, pp. 44–45). Unlike other enslaved boys, he neither played practical pranks on others nor touched liquor. Told by both his mother and grandmother that he was "intended for some great purpose," the unusually serious child devoted his limited leisure moments to "fasting and prayer" (Greenberg 1996, pp. 44–45). As was later said of abolitionist Frederick Douglass, whites spoke of Nat as being too clever to be raised in bondage, and Benjamin Turner once remarked that the boy "would never be of service to anyone as a slave" (Greenberg 1996, p. 44).

In 1809, Benjamin Turner's oldest son Samuel purchased 360 acres two miles away. Nancy, Nat, Old Bridget, and five other slaves were loaned to Samuel to help him establish his cotton plantation, a move that became permanent the following year when Benjamin died during a typhoid epidemic. It may have been at this point that Nat adopted the surname of Turner as a way of linking himself to his ancestral homeplace rather than as an act of homage to the deceased Benjamin Turner. Although the evidence for a spouse is circumstantial, the Richmond *Constitutional Whig* later reported that Turner married a young slave woman; this may have been Cherry, who in 1822 was sold to Giles Reese when Samuel died and his estate was liquidated. Turner was sold to Thomas Moore for $400, an indication he was regarded as a prime field hand. Despite being short of stature and a little knock-kneed, Turner's shoulders were broad and well muscled from more than a decade of hard labor.

Embittered by the forced separation from his wife, Turner turned to fasting and prayer. He avoided large spiritual gatherings on Sundays, but at night in the quarters he willingly described what he had discovered during his solitary readings of the Bible. Sometime in 1825, while working in the fields, Turner had his first vision. "I saw white spirits and black spirits engaged in battle," he later recalled, "and the sun was darkened—the thunder rolled in the Heavens, and blood flowed in streams" (Greenberg 1996, p. 46). Certain that he was ordained to bring about Judgment Day, Turner began to conduct religious services at Barnes's Church near the North Carolina border. Most whites scoffed, but at least one man, Etheldred T. Brantley, an alcoholic overseer on a nearby plantation, asked Turner to baptize him before an interracial crowd at Pearson's Mill Pond.

On May 12, 1828, Turner experienced his most epochal vision to date. "I heard a loud noise in the heavens," he remembered, "and the Spirit instantly appeared

to me" (Greenberg 1996, p. 46). The voice instructed Turner to take up the "yoke" of Christ, "for the time was fast approaching when the first should be last and the last should be first" (Greenberg 1996, p. 47). Warned not to act until given a further sign by God, Turner was instructed to continue teaching but not to breathe a word of his plans to his family or friends.

Several months later, Thomas Moore died, and Turner became the property of Thomas's nine-year-old son Putnam. When the boy's mother remarried to Joseph Travis, a local wheelwright, Turner and the other sixteen slaves on the Moore plantation found themselves under the supervision of yet another new master. When an eclipse of the sun took place in February 1831, Turner concluded that the time was near to act. He recruited four trusted lieutenants, Hark Travis, Nelson Williams, Henry Porter, and Sam Francis. Turner had known Travis for years, as he was also a slave on the Moore plantation and now under the supervision of Joseph Travis. The five initially established July 4 as the date of the uprising, but Turner fell ill, due perhaps to fasting, and the target day passed. Since evidence exists that Turner was merely part of a much larger, two-state revolt, it is also possible that he was waiting for bondmen across the border to rise first.

Turner's precise goals remain unclear. He may have planned to establish a maroon colony within the Dismal Swamp, or the black evangelical may have preferred to leave the next step in his plan to God's will. But once the town of Jerusalem was within the grasp of his army, he could either fortify the hamlet and wait for word of the rising to spread across the countryside or retreat into the swamp and establish a guerrilla base in the interior. According to the *Norfolk Herald* , Turner later confessed that he planned to conquer "the county of Southampton [just] as the white people did in the revolution" (Greenberg 1996, p. 48).

The rebels began around 2:00 A.M. on Monday, August 22. Turner struck the first blow, but failed to kill Joseph Travis with his hatchet. Hark finished the work, while others killed the four other whites in the house, including the Travis baby in its cradle. By noon the slave army had grown to roughly seventy armed and mounted men. They had sacked fifteen houses and killed sixty whites; Turner killed only Margaret Whitehead. As they neared Jerusalem, a column of eighteen volunteers attacked the insurgents. Turner's men waded into the group, but the tide turned when reinforcements arrived. During the fighting, six of Turner's men were wounded, and several others, too drunk to continue, abandoned the army and made their way back to the quarters. By Tuesday, only twenty rebels remained. In hopes of bolstering their numbers, Turner rode for the plantation of Dr. Simon Blunt, who owned sixty bondpeople. Understanding that the revolt had failed, Blunt's slaves cast their lots with the winning side. When they attacked the rebels with clubs and pitchforks, Turner's army collapsed. Among those badly wounded was Hark Travis, who survived only to be hanged on September 9.

The conventional wisdom that Turner was mentally unstable began immediately following his death on November 11, 1831. Southampton authorities refused to dignify his theology with the term "religion" and instead insisted that his desire to be free was "instigated by the wildest superstition and fanaticism." At the height of the Jim Crow era, area whites still spoke of seeing Turner's skull, which was retained as a curiosity. Most described it as abnormal. The publication of William Styron's Pulitzer Prize–winning fiction, *The Confessions of Nat Turner* (1994), only contributed to the modern characterization of the slave general as a dangerously irrational rebel. But rural Americans in the antebellum years would have had an equally difficult time understanding the rationalist tone of Styron's world. During the Jacksonian era, many Americans, white and black, devoutly believed that the end of time was near, and that Christ would soon return to rule his earthly kingdom. To that extent, Turner was well within the popular millenarian religious tradition of the period and was hardly abnormal for his time.

SEE ALSO *Gabriel (Prosser); Mysticism; Religion; Slave Resistance; Slavery; Vesey, Denmark*

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Douglas R. Egerton

TURNER, VICTOR
1920–1983

One of the most influential and respected anthropologists of the mid- to late twentieth century, Victor Turner made his name as an ethnographer of south-central Africa, and in doing so, became known as a theorist on social structure and process, with particular emphasis on ritual, symbol, and performance. In more than a dozen books and

numerous articles he authored, co-authored, or edited, he concentrated on topics including social drama, social fields, symbolic action, symbolic multivocality (or compression), transition, liminality, *communitas*, and structure and anti-structure (a term he coined).

Born May 28, 1920, in Glasgow, Scotland, to a stage acting mother and an electronic engineer father, Victor Witter Turner attended Bournemouth Grammar School in England and did undergraduate study in modern and classic literature at University College, London (1938–1941). His studies were interrupted by war, in which, as a conscientious objector, he served as a noncombatant soldier in London. During the war, in 1943, he married Edith Lucy Brocklesby Davis Turner, with whom he would build a lifelong working partnership and parent six children between 1944 and 1963—five to reach adulthood. Drawn to anthropology from about the time of the war's end in 1945, Victor Turner studied in London under Daryll Forde and other leaders in the discipline, proceeding for his doctorate as part of the University of Manchester department coalescing around the South African-born Max Gluckman. This study took him to Africa as a Research Fellow of the Rhodes-Livingstone Institute and back to Manchester, where, upon receiving his doctorate in 1955, he stayed to write and lecture in anthropology for several years.

During this period he dropped and added some important affiliations. Having been active in the Communist Party of Great Britain in youth, he withdrew, disaffected, by his mid-thirties, or by about 1956, when the Soviet military crushed dissidence in Hungary, upsetting pacifists abroad. Between then and 1958, he and Edith joined the Roman Catholic Church in Stockport, near Manchester. In Catholicism they found ritual, and evidently faith, to fill a void left after leaving those to which they had become exposed in Africa. (Some other leading British anthropologists, notably Edward Evans-Pritchard and Godfrey Lienhardt, were similarly drawn to Catholicism after studying African cultures and their religious dimensions.) In their new faith and practice, the Turners also found solace after the death of their afflicted fourth child, Lucy, in her infancy in 1959. Identifying with Catholicism, however, cost Victor Turner the favor of some of his Manchester colleagues.

After a year's research fellowship at Stanford University (from 1961) and a return to Manchester, the Turners moved to the United States, where Victor wrote more than half of his books and Edith several more. There Victor served consecutively as professor of anthropology at Cornell (from 1964), professor of anthropology and social thought at the University of Chicago (from 1968), and professor of anthropology and religion at the University of Virginia (from 1977 until his death in 1983).

Intellectual influences on Turner were diverse. Most centrally they included his parents (especially his mother, on drama and performance); his wife Edith; Max Gluckman (on social structure and process, and on the ritual expression and resolution of conflict); and Arnold van Gennep (whose work on rites of passage became a keystone for his own on that topic and related ones). He also gained inspiration from anthropologist Clifford Geertz, sociologist Kurt Lewin, psychoanalysts Sigmund Freud and Carl Jung, philosopher Wilhelm Dilthey, and drama scholar Richard Schechner. Not least, Turner gained intellectual guidance from informants and guides in Africa, including individuals he identified as Samutamba, Sakazao, Kajima, Windson Kashinakaji, Muchona, and Ikelenge—some of whose lives and interactions he wove into his writing.

RESEARCH IN AFRICA

Turner's career was built upon his studies in Northern Rhodesia (later Zambia), which he carried out as a Research Officer of the Rhodes-Livingstone Institute toward the end of the period of British colonial rule. With Edith he conducted ethnographic research by interview, participant-observation, and other means among the Ndembu (part of the larger Lunda population—all classed as Bantu-speaking). This they did from December 1950 to February 1952 and from May 1953 to June 1954, mainly in Mukanza village, Mwinilunga District. About the Ndembu people he wrote, over many years and with much help from Edith, a chain of overlapping, theoretically innovative ethnographies that together comprised one of the most detailed and integrated records then available on any small society living in Africa south of the Sahara.

The roughly 17,000 Ndembu people practiced shifting agriculture, hunting, and gathering in forests and clearings, and some lived in mining and trading towns. Their plateau homeland lies within the so-called matrilineal belt that crosses the southern middle of Africa. Among rural Ndembu, Turner construed matriliny (tracing descent through the female line) and virilocality (wives' moving to their husbands' homes upon marriage) as together causing social stresses and strains. He found, for instance, fathers' loyalties torn between their sisters' offspring (their own known biological kin) and their wives' offspring (less surely so). As the Ndembu and others in the Lunda region had been involved in a series of regional conquests and colonizings, including by the British, he supposed Ndembu patterns of kinship and leadership might be in a period of transition.

But it was their immediate lifeways, and especially their rituals, that captured his attention. To Turner they represented social drama, but not just that. Periods of cri-

sis, he saw, brought social and micropolitical tensions into the open, forcing rifts or reconciliations. Typically, he found, the process had four phases: breach, crisis, redressive action, and reintegration. His doctoral thesis, published in 1957 as *Schism and Continuity in an African Society*, built on Gluckman's work on ritual-political process; but to it he added elements of willful decision making and contingency, including what he came to call purposive "symbolic action."

Social ills tie into other ills, too, Ndembu people showed the Turners. Divination, healing, and exposure rituals (rituals of affliction) conducted on an ad hoc basis, contrasted with the more predictable, elaborate, and formulaic life-crisis rituals (a kind of rite of passage)—for instance, among Ndembu, the *nkang'a*, a girls' puberty ritual and celebration of matriliny. Affliction rituals address bodily malfunctions, psychological troubles, and social schisms, or indeed all these at once. Turner argued in *The Drums of Affliction* (1968) that in a society surrounded by dangers and disease—and one that is also disrupted by seemingly arbitrary, indirect colonial rule—rituals provide security, reconciliation, emotional catharsis, and also some sense of transcendence over uncertainty. Rituals have reason, he argued. They serve current needs, not just dead traditions. No ethnographer had analyzed social structure and process with closer attention to emotion.

RITUAL PROCESS AND SYMBOLIC ACTION

Following van Gennep's broadly comparative work in a more geographically limited but topically holistic way, Turner perceived in rites of passage three stages or subtypes: separation, margin (or limen—a threshold "like a tunnel" of transition), and reaggregation. In his most influential book, *The Ritual Process* (1969)—a collection of essays—he elaborated van Gennep's concept of liminality: a condition of limbo, of suspension betwixt and between, sometimes following symbolic death and preceding symbolic rebirth, and sometimes occurring in seclusion or on a journey. He contrasted social structure (a more ordinary condition of hierarchies and dividedness) with what he named anti-structure (a more amorphous condition of flux, equality, and potential growth) that he discerned in liminal conditions. Often in the latter he perceived what he called *communitas*: the temporary condition and feeling of unity, submission, and liberation existing in times and places where usual social barriers were brought down and internal differences of rank and status were erased.

As Turner saw things, symbols work in ways more complex than mere signs. In *The Forest of Symbols* (1967) and other works, he described ritual and religious symbols as "multivocal" or polysemous—that is, as being given many meanings and interpretations. Sometimes they are phased with a single ritual—but they can refer to more than one thing simultaneously, evoking what may not be clearly known or consciously perceived. The color triad of white, red, and black, given prominence in sacred or religious rituals around the world, also, in Turner's view, carried local, culturally specific meanings, interpretable only in terms of each other and of other local values. For instance, to Ndembu people, the *mudyi* tree with its white latex, figuring in girls' puberty rites (*nkang'a*), stood for breast, milk, matriliny, feminine distinctiveness and solidarity, continuity of tribal custom, and unified opposition, among other things. But some of its meanings were activated only in relation to other objects, colors, words, or acts. Symbols crystallize polarities and unify disparate significata (by metaphorically linking different domains of experience). Individuals manipulate symbols and their meanings in rituals. Understanding of how this happens can require insiders' (both expert and lay) perspectives for "exegetic meaning," an outsider's perspective for "operational" meaning (for instance, in terms of social structure), and a broad outlook for "positional" meaning—for instance as part of a system of objects, actions, and understandings.

Turner's later works led him beyond contemporary Ndembu into world history and into broad public culture. Turner was struck by commonalities between the liminal phases of ritual in small-scale societies and religious pilgrimages, as periods of submission on the way to greater status or power. But he also noted instances of more enduring liminality in monasteries, convents, and communes. In *Dramas, Fields, and Metaphors* (1974), as in *The Ritual Process* before, he likened crisis episodes in the nascent periods of many world religious movements to the transient conditions giving rise to the rock counterculture and antiwar protests in larger movements during the 1960s and early 1970s. In such diverse movements he noted criticism of broader society and its hierarchies and inequities, as well as a potential for willful social change. But whereas in smaller, tribal societies' initiation rites a liminal phase or condition was obligatory, in larger-scale ones, participation in dramas such as concerts and theater plays—other sites of potential criticism from which change might originate—was more optional, and hence not strictly liminal yet still limin*oid*. Although he generalized rather more and made bolder leaps of association in his later works than in his earlier ones, it was the books on Ndembu and Africa that remained the focal points of his renown.

SCOPE OF INFLUENCE

Victor Turner defies easy classification. Never was he just an empiricist or a theorist, but always something of both.

As an anthropologist he drew upon a closely focused and fieldwork-intensive British functionalist approach that remained important from about the early 1920s until the 1960s, as well as upon a broadly comparative French structuralist approach influential in the 1960s and 1970s. But he devoted more attention to diachronic process, individual choice, and emotion than either functionalists or structuralists typically did. His work tied French, English, and American schools of thought to African realities, integrating more than compromising. All this moved him from the liminal status of fieldworker to the prominent posts he held in major centers of the anthropological profession. Even when involved in party politics in youth, and in church religion in adulthood, Turner sometimes tested authority and contravened orthodoxy, as if both needing hierarchic structure and wanting a way of release from it. In any case Turner remained a political idealist throughout his career, and something of a spiritualist. He hoped for a more unified and just society, arguing for recognition of the sense and dignity of tropical African lifeways, including their symbolic and religious elements, and tracking the hopeful elements of popular political and religious movements. Turner's colleagues (who usually called him Vic) and his students generally deemed him nurturing, peaceable, and conciliatory. In these ways he represented to them something like what one of his favorite symbols, the milk of the *mudyi* tree, represented to Ndembu.

Even social and cultural anthropology's great breadth of topics could scarcely contain the range of his eclectic interests, from ancient history to experimental drama to brain science (these last two traceable to his parents' seemingly disparate interests). His musings, late in life, that the complementary functions of the brain's hemispheres might relate somehow to the symbolic polarization he had long observed in ritual and aesthetic life remained hypothetical, untested, and unsung. Arguably his neuropsychological interest was ahead of his time, but he was hardly alone in his quest to conjoin, or at least reconcile, the arts and the sciences.

Turner's legacy can be taken as a whole or in parts, and construed as the product of a lifetime, a marriage, or a transcontinental collaboration. While strong waves of critical political-economic scholarship on race, class, gender, and international linkages nearly submerged his early work on micropolitics from the early 1970s on, other aspects of his work proved more buoyant in the shifting currents. He re-explained them while widening his comparisons in his later works, and in those his widow Edith continued editing and publishing after his death in 1983. In his work on ritual process, liminality, communitas, and symbols with multiple meanings, his influence extends far beyond African and Euro-American studies, and beyond anthropology into psychology, sociology, comparative religion, public health, and other fields.

SEE ALSO *African Studies; Anthropology; Anthropology, British; Communism; Community Power Studies; Ethnography; Neuroscience; Observation, Participant; Religion; Rituals; Symbols*

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TUSKEGEE SYPHILIS STUDY

From 1932 to 1972, the U.S. Public Health Service (USPHS) sponsored an observational study of syphilis in black men in Macon County, Alabama. This trial has come to be known as the Tuskegee syphilis study. Six hundred black men, 399 with syphilis and 201 without, were observed for forty years to chart the effects of untreated syphilis. Perhaps the most famous example of unethical modern medical research in the United States, three features of the Tuskegee syphilis study are instructive: its racism, its perseverance, and its lack of scientific value.

RACISM

The racism of the Tuskegee syphilis study is evident in its design, its justification, and its implications. The misguided popularity of social Darwinism at the turn of the twentieth century is perhaps the most generous explanation available for the views expressed by Joseph Earle Moore (1892–1957), one of the nation's leading venereologists, and Taliaferro Clark (1867–1948), chief of the USPHS Venereal Disease Division. Previously, Moore had argued for the treatment of syphilis to (1) diminish its effects on the patient and (2) limit its possible spread. In reviewing the design for the Tuskegee syphilis study, he suggested, surprisingly, that it would be a laudable study. Perhaps to mollify any concerns about the racist nature of the design, Moore suggested that syphilis in the black male would be an almost entirely different disease than syphilis in the white male. It is unclear why he made this claim, but even if it were true, it would not diminish the effects on the patient or eliminate the spread of the disease, primarily, of course, to other blacks. In the buildup to the syphilis study, Clark offered a more overtly racist justification for the experiment. He argued that the low intelligence of blacks meant that they would not seek treatment for syphilis. Observing, and not treating, was justified because these men would not choose to be treated anyway.

Offering dubious or overtly racist justifications, the Tuskegee syphilis study condemned these black men and their sexual partners to continual exposure to syphilis and its painful effects. The study also condemned Macon County, a primarily black county, to a robust population of syphilitic men and thereby guaranteed the continued presence and spread of the disease.

PERSEVERANCE

The Tuskegee syphilis study faced a number of obstacles and setbacks that could have easily ended the study. For starters, it was difficult to entice subjects to be tested and, once tested, to return for other exams. Ironically, the researchers successfully enticed subjects to enter the trial by offering them treatment. This, of course, is a surprising turn because (1) treatment was the very thing that the investigators had predicted the black population would not seek, and (2) it was a lie—there was no plan to treat these men for syphilis.

The covert nature of the experiment precluded telling the men that getting treated elsewhere would be detrimental to the study. Accordingly, there was also a constant risk that these men would get treatment through other sources. To eliminate this possibility, the USPHS secured the agreements of local doctors, the Alabama Health Department, and the U.S. Army. Each group agreed to exclude subjects of the study from the antisyphilitic treatments they offered (or, in the case of the Army, required of) others. In the 1950s, penicillin became the standard treatment for syphilis. Though it cannot undo previous complications, penicillin does prevent the disease from producing further complications. By and large, though, subjects failed to procure adequate doses of penicillin during the course of the study.

This study was also under the purview of the Center for Disease Control and could have been cancelled at any given review point. In 1965 the study was reviewed, and the reviewers concluded that it should continue and that the "race issue," if it were brought up at a later date, could be deflected.

SCIENTIFIC VALUE

The scientific value of the Tuskegee syphilis study was limited by its aim, its execution, and its origin. At the time the study was planned, there already existed some modestly effective treatments for syphilis. This, at the very least, raises serious questions about the value of an observational study. Without any clear benefits for the subjects or the possibility of promising scientific knowledge, the aim of the trial is unclear. That no improvement on existing diagnostic or treatment options was being pursued is further confirmed by the researchers' response to the introduction of a highly effective treatment for syphilis (penicillin)—they did all they could to keep the subjects from taking it.

During the execution of the trial, control subjects, who started the study without evidence of syphilitic infection, were transferred to the study group if, at a later date, they were positively diagnosed with syphilis. As any student of science can attest, transferring subjects from the control group to the study group is sure to muddy the results.

The origins of the Tuskegee syphilis study are as significant as any other limit on its ultimate scientific value. The planning of the study depended upon a particularly racist version of social Darwinism. Without critiquing this

view, one can still note that the trial continued even after this view was no longer accepted in the scientific community. Designed around a problematic and ultimately untenable perspective, the results of the study lack any scientific or medical value.

A LESSON FOR RESEARCH ETHICS

In courses on medical ethics and research ethics around the country (and perhaps even further), the Tuskegee syphilis study, alongside the Nazi experiments during World War II (1939–1945) and the Willowbrook studies of hepatitis in mentally disabled children from 1956 to 1971, is used as an example of medical research gone wrong. The difference is that the Nazi experiments and the Willowbrook studies both produced useful knowledge (the Nazi experiments produced a wide array of knowledge about the physiological workings and limits of the human body, and the Willowbrook studies correctly identified the distinction and the possibility of inoculation for hepatitis A and B), while the syphilis study produced nothing of value. The Tuskegee syphilis study reminds us that medical research can use ethically impermissible methods to achieve many things, but medical research can also fail to accomplish anything more than an expression of the worst of our social views.

SEE ALSO *Disease; Ethics in Experimentation; Ethnoepidemiological Methodology; Experiments, Human; Informed Consent; Racism*

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TUTU, DESMOND

SEE *Apartheid; Mandela, Winnie; Truth and Reconciliation Commissions.*

TVERSKY, AMOS

SEE *Rationality.*

TWIN STUDIES

In the social sciences, the twin study has become an important source of information about the contribution of "nature" to human traits and dispositions. Twin studies are particularly used in clinical and psychological research aimed at attempting to find the genetic component of certain disorders, such as schizophrenia, as well as of intelligence and various personality traits. The British scientist Francis Galton (1822–1911) was the first to suggest that the study of twins might unlock the mysteries of nature. In the 1870s Galton, who sought a methodology that could conclusively show the primacy of hereditary factors in human nature, suggested that the life histories of twins could be used to weigh the relative powers of both nature and nurture. However, Galton cannot be credited with the invention of what is now known as the *classical twin study* because he merely collected life histories from twin pairs in England through the use of self-report surveys.

The first two classical twin studies, published in 1924, were conducted in Germany and the United States. In the context of understanding the pathologies of races, families, and twins, the German dermatologist Hermann W. Siemens (1891–1969) suggested comparing the correlations (r) of identical or monozygotic (MZ) twins on a given trait to correlations of fraternal or dizygotic (DZ) twins on the same trait. The American psychologist Curtis Merriman (1875–1975), who at this time still needed to convince his readership that two distinct types of twins actually existed, reported correlations of identical and fraternal twins on a number of attributes, with the former showing higher correlations than the latter. Several statistical calculations for estimating the *heritability coefficient* have been reported, the most basic being 2 ($r_{Mx} - r_{Dz}$). This formula provides an estimate of the total variance of a given trait that may be attributed to genetic variance.

Twin studies are used to estimate the heritability of a trait, although the concept of heritability is often misunderstood. It was first described in 1936 by Jay Lush (1896–1982), a professor of animal breeding. Lush distinguished between two types of heritability: *broad* (H^2) and *narrow* (h^2). Narrow heritability is of most interest to the social sciences. The heritability coefficient obtained through the classical twin study is an estimate of h^2. Narrow heritability can be understood as the proportion of the variance in a given population on a given trait that can be attributed to genetic variance.

This definition encompasses the following important points. (1) Heritability refers to variance within a population; it does not describe the relative importance of genetic factors at an individual level. (2) Heritability is an estimate of genetic variance in a specific population, at a specific point in time, under specific environmental conditions; these estimates are variable over time, location,

and population. (3) Estimates of heritability describe the genetic variance within a given population; they are not valid for comparisons between different populations. (4) Environmental conditions may improve the strength of the heritability estimates. (5) Heritability does not necessarily measure the genetic contribution to a trait. Suppose, for example, a researcher is interested in using the classical twin-study method to find a heritability estimate for the condition of having two eyes. The researcher would find that, in most cases, all of their MZ and DZ participants have two eyes, thereby expressing no variance, and resulting in a heritability estimate of zero.

Calculating h^2 from classical twin studies rests on an important premise: the *equal environment assumption* (EEA). Since MZ twins share 100 percent of their genetic material, and DZ twins share on average only 50 percent, one might assume that any observed differences between the two types of twins are due to genetic variance. However, in order to calculate h^2 from classical twin studies, researchers must first assume that MZ twins and DZ twins share the same environment, thus allowing researchers to isolate the magnitude of genetic influences on a trait without environmental confounds. Critics of twin studies have long pointed out that MZ twins generally experience environmental conditions and treatment that are more similar than that experienced by DZ twins, particularly if the DZ twins are of different genders.

In response to such criticism, twin-study proponents reformulated the EEA into the *equal trait-relevant environment assumption* (trait-relevant EEA), which assumes that MZ and DZ twins have equal exposure to only those environmental influences of known relevance to the trait under study. But critics of the trait-relevant EEA argue that MZ twins spend more time together, are more likely to engage in similar activities, are similarly treated by others, and are more likely to have similar friends than DZ twins. Therefore, since MZ twins experience a more similar environment than DZ twins overall, they are also more likely to have greater exposure to environmental influences that affect a given trait than DZ twins.

In addition to the classical twin study, other methodologies are available for comparing the differences between twins. The *co-twin control method* is the only twin-study design that attempts to manipulate environmental influences. In this type of study, the genetic component is held constant, and the researcher manipulates the environment. Only MZ twins can be used in such a study. One twin becomes the control participant, while the other is given an environmental intervention. Scores on the trait of interest are measured before and after environmental manipulation. The correlation between the twin pairs before the intervention is measured against the correlation in their scores afterward. The resulting coefficient is a measure of the effects of the environment on the trait under study. This method, however, has largely been discontinued due to its history of misuse, most notably in the twin studies conducted by Nazi doctor Josef Mengele (1911–1979) at the Auschwitz concentration camp during World War II (1939–1945).

Adoption studies are often referred to as *twins-reared-apart studies*, since one or both of the twins is separated from the biological parents and placed with a relative or an adoptive or foster family. Typically, MZ twins who are reared apart (MZA) are compared to MZ twins reared together (MZT). In adoption studies, correlations of MZAs on a given trait are compared to MZTs. Occasionally, DZ twins reared apart are used as well. In most cases, researchers are interested in establishing trait similarity across a number of different measures. The underlying assumption of adoption studies is that twins have been placed randomly into homes, with minimal or no contact with each other. Although this assumption is almost never accurate, the results from twins-reared-apart studies have been very influential in the social sciences.

The most significant twin-study findings resulted from two large-scale systematic adoption studies: the Minnesota Study of Twins Reared Apart (beginning in 1983) and the Swedish Adoption/Twin Study of Aging (beginning in 1984). These studies reported medium to high correlations between MZAs and MZTs on a number of variables, including IQ, physical traits, and a long list of personality traits. In addition, the Swedish Adoption/Twin Study found moderate to high correlations for processes specifically related to aging, such as memory decline. The conclusion reached in these studies is that genetics are responsible for trait similarity, and that environmental factors have little influence. Critics of these results have pointed to researcher bias, vague or missing data, the denial of access to collected raw data, and the dubious separation of the twins involved in the studies.

Genetics research has at times generated heated ethical and political debates. For example, some authors have commented that studying the genetic components of traits will lead to a resurgence in the eugenics movement and, in particular, the misuse of heritability research on intelligence by some proponents of genetic engineering. Despite these concerns, twin studies and the field of behavioral genetics have had an undeniable impact in the sciences and culture. The progress of this field of research has helped to shift the public discourse on genetic research in favorable directions. With advances in microgenetic research and the continuing development of genomic sciences—particularly as they relate to health promotion and disease prevention—twin studies are likely to become a less-prominent technique for estimating genetic effects than they have been in the past. In any case, because of the

methodological shortcomings of twin studies, the estimates that such studies provide for the heritability of attributes and processes should be analyzed carefully and critically.

SEE ALSO *Determinism, Biological; Determinism, Environmental; Eugenics; Genomics; Heredity; IQ Controversy; Nature vs. Nurture; Sibling Relationships; Social Science; Trait Inference; Trait Theory*

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TWINS

SEE *Multiple Births.*

TWO-SECTOR MODELS

Broadly speaking, the two-sector model is an analytical framework that embodies stylized dynamic economies with two production processes. Each sector is devoted to the production of a unique good, and there are usually two factors of production that can freely move across sectors. This analytical framework abandons the rather limiting restriction of the one-sector model, in which the same aggregate good is devoted to both consumption and capital. The two-sector framework allows for the study of dynamic effects of economic policies on each sector and the possible interactions between the two sectors. These effects can also be studied in models with several sectors of production, though in these latter models the analysis may not be tractable. Two-sector models are found in many areas of economics. In international economics, the two-sector framework arises naturally in economies with tradable and non-tradable goods. In analyses of economic growth, the distinction is usually between consumption and capital. More recent research has focused on other pairings: physical and human capital, physical production and R&D, home and market goods, and cash and credit goods.

John R. Hicks (1937) introduced a two-sector model for examinations of consumption and investment, as a way to compare the predictions of newly developed Keynesian theories with what he then viewed as the "typical classical theory." In this model, there are two production processes that are represented by two production functions. Each production function contains only one factor, labor, which can be shifted at no cost from one sector to the other. There is a given relative price at which the consumption good can be exchanged for investment. This relative price is determined by the functional forms of the two production functions. The value of output or aggregate production is then the sum of the values of consumption and investment. Similarly, Santi K. Chakrabarti (1979) argues that Keynes's theories should be studied in a two-sector framework and reformulated in terms of wage units.

Hicks's model is concerned with short periods of time, because the quantity of physical capital available in the economy is taken as fixed. James E. Meade (1961) and Hirofumi Uzawa (1963) provide early analyses of the dynamics of two-sector models examining consumption and capital. Another two-sector model is considered by James Tobin (1965). In Tobin's model, one sector produces the physical good, which can be consumed or invested. The other sector is a monetary asset issued by the government to finance public spending. The creation of money affects the capital-labor ratio in the economy. This ratio varies with the rate of inflation. In this second group of models the economy is assumed to save a fixed proportion of income. A further step is taken by Duncan K. Foley and Miguel Sidrauski (1971), who postulate a nonconstant saving rate—according to them, the propensity to save may depend on the interest rate and total income. Still, this saving function is *ad hoc* in that it is not derived as the solution of a behavioral maximization process. The formulation of the optimal amount of savings was posed by Frank P. Ramsey (1928) as a one-sector planning problem. This approach was later extended to two-sector models. Thus, at each moment in time a representative individual may decide on the level of consumption and investment, and the optimal amounts of production in the two sectors.

There are three main types of production functions that have been used to describe the production processes in two-sector models. The first models used von Neumann linear production function in which output is proportional to the amount of labor and capital used. A

second generation of models used Harrod-Domar production functions, where the two factors of production are perfect complements, and therefore the amounts of capital and labor needed to produce a unit of output must be in a fixed proportion. The third type of production function is the neoclassical production function, which drops the assumption of a fixed capital-labor ratio to produce a unit of output and assumes that the same amount of output can be produced with different combinations of the production factors. The neoclassical production function also exhibits constant returns to scale, which implies that if we double the amounts of production factors then output produced is also doubled. This production function has been extensively used in growth theory and many other areas of economics, and it is a centerpiece of current research. However, it has been criticized because of the difficulty of measuring the capital stock. This is known as the *Cambridge capital controversy*: If the assumption of one single good is abandoned, then aggregate capital cannot be measured independently of the interest rate. There is therefore a circularity in the determination of aggregate capital and the interest rate; moreover, the demand for capital may not be downward sloping.

The early 1990s witnessed a new surge of growth models intended to analyze why some countries are richer than others or why they may grow faster. This new generation of so-called endogenous growth models considers one sector devoted to physical capital and consumption and a second sector devoted to education or human capital accumulation. The available non-leisure time can be spent either to produce physical good or on education. The time spent on education increases the productivity of labor in the future. Therefore, the tradeoff for non-leisure time is between producing physical good today or increasing future labor productivity. The main feature of this model is that it endogenizes technological progress, and hence the growth rate of the economy. Another way to endogenize the growth rate of the economy is to include an R&D sector instead of an educational sector. There are also hybrid models of endogenous and exogenous growth. Endogenous growth may make sense when we consider the world as a whole. However, a small country may take the growth of productivity in the world economy as exogenous, and search for an optimal allocation of production across sectors to increase its total value of output.

Recent research has also analyzed models with heterogeneous agents, external effects from physical and human capital, market frictions, and government interventions. The predictions of these models are generally explored by both mathematical analysis and scientific computing. The progressive development of numerical methods has allowed researchers to investigate quantitative properties of optimal allocations and effects of economic policies. Several recent studies have been concerned with effects of fiscal variables (i.e., public expenditure, taxes on capital, labor and consumption, and subsidies to education) on economic aggregates such as output growth, consumption, capital accumulation, and worked hours. The two-sector model also appears in several recent papers on monetary theory, exchange rates, and asset pricing.

SEE ALSO *Cambridge Capital Controversy; Economic Model; Economics, Keynesian; Optimal Growth; Production Function*

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TWO-STATE SOLUTION

The two-state solution refers to the idea that the most practical solution to the Palestinian-Israeli conflict is one that divides the land historically called *Palestine* between a Jewish and a Palestinian Arab state. Part or all of the West Bank, the Gaza Strip, and East Jerusalem, which were captured by Israel in the 1967 Six-Day War, would become the Palestinian state. Israel, which has existed since 1948, could see its borders adjusted to fit a new reality. Such an arrangement could effectively end the state of war that has existed between Israel and its Arab neighbors since Israel's establishment and bring a degree of stability to a region that has suffered four major Arab-Israeli wars, two Palestinian uprisings, cross-border raids and instability, as well as the continuing cycle of violence fed by suicide bombings and targeted assassinations.

HISTORY

The first two-state solution proposal was made in 1937 by the Peel Commission, sent by the British, who then ruled the area, to investigate the motives for Arab unrest. Jewish

immigration from Europe, driven by anti-Semitic violence and seemingly backed by the British, provoked Arab fears of Jewish dominance in historical Palestine, which was overwhelmingly populated by Arabs. The Peel Commission Report claimed that Arab-Jewish coexistence in a single state was impossible because of the unyielding mutual hostility and the conflicting demands for statehood made by the two communities. The report proposed the creation of a Jewish and an Arab state, but the plan was never implemented due to continued Arab rioting.

In 1947 the United Nations voted to partition Palestine into Jewish and Arab states and to internationalize Jerusalem. The Jewish state would comprise 56 percent of Palestine, although Jews only comprised 31 percent of the population, at most, and owned only 20 percent of the land designated for the Jewish state, a fact that caused the Arabs to angrily reject the plan. Zionists, however, argued that many Jews had recently escaped extermination in Europe and had no place to go, and the long history of violent anti-Semitism had demonstrated the need for a Jewish state. The Zionists, therefore, accepted the UN partition plan, if somewhat reluctantly, since they had hoped for more territory.

The 1947 UN partition plan was not fully implemented since no peacekeeping troops enforced the decision. Instead, from 1947 to 1949, war determined the outcome on the ground. In what is called in Israel the War of Independence and by Palestinians the Nakba (Disaster), Zionist forces managed to fight back Palestinian irregulars and military contingents sent by six Arab states to capture more territory than that allotted by the 1947 UN plan. The territory allotted to the Palestinians was taken over by Jordan and Egypt, so no Palestinian state was created. Over half of the Palestinian people fled their homes, creating a massive refugee crisis.

A long stalemate endured until 1967, when Israel captured the remaining parts of historical Palestine from Jordan and Egypt, as well as the Golan Heights from Syria and Sinai from Egypt in the Six-Day War. This war marked a turning point in the history of the two-state solution. Henceforth, the conflict was primarily over the recovery of lands taken in 1967, rather than attempting to reverse the effects of the 1947–1949 war. This turning point became much more apparent in the political arena during the 1980s. The Palestinian leadership gathered in Algiers, Algeria, in November 1988 to both formally recognize Israel and symbolically proclaim a Palestinian state in the West Bank and Gaza, the first time that the two-state solution was officially accepted by the Palestinians. Since this time, efforts to solve the conflict on the basis of the two-state solution have been undermined by violent extremists on both sides, as well as diplomatic quibbling over the details of an agreement.

The Oslo Accords of 1993 represented another attempt to solve the conflict based on the principle of "land for peace," the concept that underlies the two-state solution; however, Oslo was an interim agreement and did not explicitly make provisions for a Palestinian state. Nevertheless, it was widely expected that the final status arrangements that were to be concluded by 1998 would result in the establishment of a Palestinian state. Negotiations broke down before the final status agreement could be concluded. In July 2000 Israeli prime minister Ehud Barak and Palestinian president Yasser Arafat (1929–2004) attempted to reach a peace agreement at a summit held at the U.S. presidential retreat in Camp David, Maryland, with the mediation of U.S. president Bill Clinton. Although many far-reaching proposals were considered, the negotiations were ultimately unsuccessful.

LATER DEVELOPMENTS

International efforts to solve the conflict have revolved around the "Road Map," a plan sponsored by the United States, the United Nations, the European Union, and Russia. According to the plan, if the Palestinians cease violence against Israelis and reform their political system, a Palestinian state will be created with provisional borders, to be adjusted during later negotiations. For their part, the Israelis must stop settlement activity in Palestinian lands. As of 2006, the Road Map had not resulted in a peace agreement. Nevertheless, Prime Minister Ariel Sharon's unilateral "disengagement" from Gaza, in which Israel withdrew its forces from the Gaza Strip and evacuated Israeli settlements there, reinvigorated interest in peace efforts such as the Road Map.

The 1990s saw the rise of a challenge to the two-state solution in the binational (one-state) principle. There is more than one version of the one-state solution, but common to all is the vision of both Palestinians and Israelis sharing the entire land of Palestine as equal citizens, rather than dividing it between them into two states. The binational solution has risen in popularity, particularly among Palestinians and some leftist Israelis due to the increasing difficulties of implementing the two-state solution. Because the growing number of Israeli settlements on Palestinian land, including Arab East Jerusalem, as well as the "separation barrier" that Israel began constructing in 2002, may drastically reduce the territory available for a Palestinian state, proponents argue that the two-state solution is no longer viable and a shared state is preferable. Such a solution would eliminate the Jewish character of the state, since its Jewish majority would soon disappear under Palestinian demographic pressure, a problematic proposition from an Israeli standpoint. The binational solution does not have the significant international or domestic support that the two-state solution currently

enjoys, but it increases in popularity with each failure of the two-state solution.

SEE ALSO *Arab-Israeli War of 1967; Palestinians*

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Sherry R. Lowrance

TYRANNY OF THE MAJORITY

Although the specter of an unwise and unrestrained majority has haunted the democratic imagination since the trial of Socrates (c. 470–399 BCE) in ancient Greece, the concept of majority tyranny dates to the modern age of democratic revolutions. The emergence of large groups of individuals from the "lower" classes of society as political actors in the English civil wars of the seventeenth century prompted philosopher John Locke (1632–1704) to articulate the first conception of majority rule in his *Two Treatises of Government* (1690). A century later, the revolutionary experiences in America in 1776 and France in 1789 cast the prospect of rule by "the people" in a new, more threatening, light. The phrase "tyranny of the majority," first coined by French historian and political theorist Alexis de Tocqueville (1805–1859) in his seminal two-volume study *Democracy in America* (1835–1840) and memorialized by John Stuart Mill (1806–1873) in his classic 1859 treatise *On Liberty*, represented to this generation the fear and deep distrust of rule by an uneducated democratic mob.

Democracies were thought vulnerable to two distinct forms of majority tyranny. The first is political or legal tyranny that operates through the formal procedures of majoritarian rule. Where all aspects of government, from public opinion and juries to the legislature, the executive, and even some judges, are a function of the majority, its power is absolute. As Tocqueville put it in the first volume of *Democracy in America* (1835), "politically speaking, the people have a right to do anything" ([1835–1840] 1990, p. 259). This political tyranny was the primary concern of American founder James Madison (1751–1836) in *The Federalist Papers* (1788), especially No. 10, in which he famously sought to quell anxieties that a majority "faction" would impose its biddings on an enlightened minority by calling attention to the natural obstacle of the diversity of opinions in a large republic.

The second type is the moral or social tyranny the majority exercises through custom and the power of public opinion. "As long as the majority is still silent," Tocqueville observed, "discussion is carried on; but as soon as its decision is irrevocably pronounced, everyone is silent." More insidious than the overt tyranny long practiced by monarchs and despots, which was physically brutal but powerless to inhibit the exercise of thought, under this new form of "democratic despotism," as Tocqueville would come to call it, "the body is left free, and the soul is enslaved" ([1835–1840] 1990, pp. 263–264).

In *On Liberty* (1859), his famous defense of individual freedom, Mill deepened Tocqueville's diagnosis of this second type of tyranny by warning against the "despotism of custom" and "collective mediocrity" endemic to egalitarian societies, while defending expressions of individuality not in harmony with the "tyranny of prevailing opinion and feeling" ([1859] 1982, pp. 136, 131, 63). Yet Mill had reviewed each volume of *Democracy in America* as they appeared in English translation two decades earlier, and he emendated Tocqueville's account in important ways. While very sympathetic on the whole, in his review of volume two Mill suggested that Tocqueville had overgeneralized by associating all the causes of this new form of majority tyranny with the rise of democracy. Drawing on insights from his own 1836 essay "Civilization," composed after reviewing Tocqueville's first volume the year before, Mill argued that the "growing insignificance of individuals in comparison with the mass" was less the result of a transition from aristocracy to democracy than of the progressive growth of wealth and industry he termed "Civilization." The ills identified by Tocqueville emanated not from an omnipotent democratic majority per se but from an emergent commercial class. "The most serious danger to the future prospects of mankind," Mill concluded, "is in the unbalanced influence of the commercial spirit" ([1840] 1962, p. 155).

As far as Tocqueville could see, there were no barriers against the absolute sovereignty of the majority. None, at least, that naturally would attend it; "precautions" needed to be actively pursued. Still, despite the omnipresence of majority power, Tocqueville believed the "secondary affairs of society" in the "townships, municipal bodies, and counties" were outside its reach. More specifically, the class of lawyers, rendered "very hostile to the revolutionary spirit and the unreflecting passions of the multitude" by the rigors of their legal training, are offered as a bulwark to the tyranny of majority opinion, along with the educating influence of jury service, which cultivated in citizens a capacity for judgment and a notion of right

([1835–1840] 1990, vol. 1, pp. 271–273). In his *Considerations on Representative Government* (1861), Mill advocated reforms like educational qualifications, proportional representation, plural voting, and an open ballot to preempt majority political tyranny.

Against tyranny of the second type, which was entirely "an affair of the mind," remedies were more complicated. Here the problem was less one of political procedure than a question of the formation of individual character. Dropping the language both of majority and tyranny, Tocqueville despaired in volume two of *Democracy in America* of not having an appropriate term to describe the new "species of oppression." In chapter 6 of book 4, he wrote powerfully of "an immense and tutelary power" that "compresses, enervates, extinguishes, and stupefies" rather than tyrannizes, reducing each nation to "nothing better than a flock of timid and industrious animals, of which the government is the shepherd." The "rare and brief exercise" of free choice offered by periodic elections would not be enough to prevent citizens "from gradually losing the faculties of thinking, feeling, and acting for themselves, and thus gradually falling below the level of humanity" ([1835–1840] 1990, pp. 318–321). Sharing this diagnosis, Mill sought, most memorably in *On Liberty*, to remedy the deficiency of "personal impulses and preferences" by fostering an environment of diverse, conflicting opinions where more robust individual characters could grow. In addition, he insisted upon support for a "contrary spirit" to check the dominant commercialism, which he found in the agricultural, leisured, and learned classes of society.

Because they perceived that in the United States the majority did not, as European aristocrats had feared, use their political sovereignty to make laws against the rich, Tocqueville and Mill saw the second kind of tyranny as the far greater threat. Other than the wealthy, they believed, all other political minorities were fluctuating; therefore, "he who is in the majority today is in the minority tomorrow," ([1835] 1962, p. 205) as Mill put it, though he did point out that the antipathies of race and religion were an exception. The racially divided society of twentieth-century America has given the first type of tyranny of majority a renewed relevance. Legal scholar Lani Guinier (1994) has written eloquently about the problem of permanent and fixed minorities. Though fair in principle, the procedures of winner-take-all majority rule ensure in practice that ethnic or racial minorities will be perpetually powerless. Guinier has outlined a more cooperative style of decision making based on the "principle of taking turns," which alleviates political tyranny by compelling majorities to confer with minority groups in the hope of generating a more inclusionary politics that is not a zero-sum game.

SEE ALSO *Civil Liberties; Freedom; Liberty; Mill, John Stuart; Pluralism; Society; Tocqueville, Alexis de*

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Christopher Voparil

U

UBERMENSCH

SEE *Nietzsche, Friedrich.*

U-CURVES, ENVIRONMENTAL

SEE *Environmental Kuznets Curves.*

UJAMAA, VILLAGIZATION

SEE *Socialism, African.*

UNCERTAINTY

In neoclassical theory, markets are portrayed as stable economic systems, with changes in variables having their desired effects: There is a strong tendency for the economic system to converge toward a position of equilibrium. Economic agents are assumed to have all reliable information for decision making, and the future is known with certainty. Any "uncertainty" regarding future events or outcomes is reduced to a probabilistic distribution.

In heterodox economics, and in post-Keynesian theory in particular, however, markets and economic systems are chaotic and unpredictable (Moore 2006). The economic system is set in what is called "historical time"; that is, the past is known and cannot be changed, but the future is unknown and cannot be predicted. This also suggests that we do not simply move from one position of equilibrium to another: The passage of time implies that during the interval when we are shifting, other variables may also be changing, such that a final position of equilibrium is difficult to predict and may never even exist. In other words, the economy is path-dependent: It is continuously moving such that there is no final position of rest.

The source of this instability is the uncertain future and how it affects motives and the decision making of all agents. Indeed, fundamental uncertainty is a central argument of post-Keynesian theory. It is defined as a situation in which agents do not know the future: It is the pure absence of knowledge. This was a central feature in Keynes's theory of effective demand (see also Knight 1921; Shackle 1967). As Keynes tells us in this memorable passage (1973, p. 113):

> We have, as a rule, only the vaguest idea of any but the most direct consequences of our acts.… By "uncertain" knowledge, let me explain, I do not mean merely to distinguish what is known for certain from what is only probable. The game of roulette is not subject, in this sense, to uncertainty.… The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence.… About these matters there is no scientific basis on which to form any calculable probability whatever. We simply do not know.

As Keynes makes clear, uncertainty is not the same as risk. In such a situation, outcomes are usually known, or

at least the probability of possible outcomes known with certainty. But let us be clear: Uncertainty is not a situation in which agents cannot compute possible outcomes or probabilities or do not have sufficient information. Gathering more information does not make the future less uncertain.

Uncertainty affects decision making in many ways. For instance, if firms do not know the future or cannot predict future levels of effective demand or growth rates, how can they take a rational decision regarding investment? If central banks cannot know with certainty future levels of inflation or output, how can they correctly take decisions about interest rates? Similarly, how can banks lend to potential borrowers if they do not know whether they will be able to repay their loans, given the uncertain levels of effective demand in the future? The presence of uncertainty also leads to the emergence of power and hierarchical relationships: Faced with uncertainty, agents will try to capture the biggest share of wealth by exerting power over other individuals and social groups (Monvoisin and Rochon 2006).

Despite the pervasive nature of uncertainty, it does not lead to nihilism. Post-Keynesians have developed theories and policies that incorporate uncertainty (see Rochon 2006). Indeed, even when faced with uncertainty, agents, of course, still make decisions. Agents rely on "rules of thumb": They will rely on past decisions, assume the near future is relatively similar to the present, follow the decisions taken by others, or simply postpone taking a decision.

SEE ALSO *Economics; Economics, Post Keynesian; Expectations; Risk; Subjectivity: Analysis*

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Louis-Philippe Rochon

UNCLE TOM

Uncle Tom is associated with negative, self-denigrating attributes. An Uncle Tom is a black person who is submissive, docile, self-effacing, a race traitor, and psychologically dependent on, nonthreatening to, and always anxious to please, and gain the validation of, whites. Though Uncle Tom is associated with negative qualities, its history is much more complex. Its origin is traced to two major works. The first is the 1849 autobiography of a black slave, Josiah Henson, whose experiences and personality supposedly inspired the second, Harriet Beecher Stowe's 1852 novel *Uncle Tom's Cabin.* Henson was a slave on a plantation in Montgomery, Maryland, owned by Amos Riley. His autobiography catalogued the cruelties of slavery. He escaped to Canada in 1830, settling in Dresden, Ontario, Canada, where he started the Dawn Settlement, which provided opportunities for fugitives to learn skills. He also assisted in establishing the British American Institute, an industrial school for the education of fugitives.

Written in angry response to the Fugitive Slave Act of 1850, which authorized the capture and re-enslavement of fugitives, Stowe's novel was a scathing indictment of slavery. The central character, Tom, is spiritually and morally superior to his white owners. Tom's life revealed, in horrific details, the atrocities of slavery. He was repeatedly whipped for refusing his owner's order to whip fellow slaves. He was sold several times, his last owner beating him to death for refusing to divulge the whereabouts of two fugitive slaves. Even as he lay dying, Tom prayed for, and forgave, his owner.

Stowe came from a white New England abolitionist family and lived in Cincinnati, Ohio, in the 1830s, across the bridge from slaveholding Kentucky. She taught at a school for former slave children and witnessed the atrocities of slavery. Returning to New England in 1850, she decided to write a book detailing her thoughts about slavery. Her depiction of Tom and of other black characters in the book as people who confronted degradation with submission became the source of the concept of Uncle Tom. Tom's humility, Christian character, and forgiving nature led to the modern association of his name with attributes of compromise and self-denigration.

The paradox of Uncle Tom, however, is that neither of the two characters with which the concept is associated

embodied such negative qualities. Stowe's Tom resisted, albeit in a passive way. He disobeyed orders he deemed inhumane and refused to betray fellow slaves even at the risk of punishment and death. He once risked his life to save a drowning little white girl. Henson's life reflected similar heroism and nobility. Riley was so incompetent that Henson was left in charge of the operations of the farms. Threatened with seizure by creditors, Riley entrusted Henson with transferring his slaves to Kentucky for safekeeping. For Henson, personal freedom was not an end. He worked hard to help others not only become free but also acquire the skills to make freedom meaningful. These qualities of courage and nobility conflict with the use of Uncle Tom as an epithet for blacks who betrayed their own race or who are deemed submissive and deferential to whites. During the civil rights movement, Malcolm X frequently referred to Martin Luther King Jr. and other civil rights leaders as Uncle Toms. Black officials who oppose affirmative action or race-based policies are tagged Uncle Toms. In 2002 the *American Directory of Certified Uncle Toms* was published. It ranked over fifty black leaders according to a five-star Uncle Tom rating. Uncle Tom thus became a means of cultural policing to determine who is authentically black.

There are two modern versions of Uncle Tom. The first is the docile, loyal, contented person who accommodates lowly status. The second is the ambitious black person who seems willing to be subordinate to whites in order to achieve a more favorable status. Both characters overtly identify with whites either because of fear or opportunism. It is important, however, to distinguish between Uncle Tom the character and Uncle Tom the concept. Neither the historical (Henson), nor literary (Tom) Uncle Tom was a betrayer or compromiser. Their lives demonstrated courage, rebellion, and nobility. They both resisted. Henson escaped and created the institutions that helped other fugitives adjust to life in freedom. Tom disobeyed orders he deemed inhumane and sacrificed his life rather than betray fellow slaves. Critics have nevertheless mistaken their peaceful strategies and nobility for meekness and compromise. Hence, while the concept Uncle Tom might be negative, depicting a coward and compromiser, the characters from whom it originated did not fit into such negative constructions. Furthermore, the "Tom" epithet is not necessarily a negation of the person's blackness. It disparages behavioral and idiosyncratic dispositions that contradict perceived collective interests of blacks.

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Tunde Adeleke

UNCONSCIOUS, THE

SEE *Psychoanalytic Theory; Psychotherapy.*

UNCONSCIOUSNESS

SEE *Psychoanalytic Theory; Psychotherapy.*

UNDERACHIEVERS

In general underachievement is defined as a discrepancy between potential (what a student ought to be able to do) and actual performance (what a student is demonstrating). However, there is little consensus about how best to define underachievement, particularly among gifted students. In some instances an underachieving gifted student is defined broadly, in others cases it is defined as limited to specific criteria. One definition of the underachieving gifted student, for example, is when a gap exists between a student's achievement test scores or academic grades and intelligence test scores. Such a broad delineation would result in a comparatively large number of students identified as gifted. In contrast, a more specific definition of the underachieving gifted student is one who has a Stanford-Binet (IQ test) score of 132 or above and a percentile ranking of 75 or below on the California Test of Basic Skill. This definition limits the underachieving gifted student to only a handful of students.

Professionals whose responsibility it is to identify underachieving gifted students (UGS) for intervention must keep in mind that whatever definition is decided upon will determine the instruments and types of selection procedures used. The definitions, instruments, and selection procedures will ultimately determine who receives special education programs and who does not.

IDENTIFICATION PROCESS

Typical methods of identifying UGSs rely on standardized measures (for example, IQ tests, achievement tests), teacher perceptions (for example, checklists, grades, assessment of motivation, assessment of daily work, comparisons with other students), and self-perceptions (for example, personal information and insight, comparisons with peers). The most common method of identifying UGSs in the early twenty-first century involve examining the difference between achievement test scores and intelligence test scores. According to the psychologist Anne Anastasi (1976), the statistical nature of achievement and intelligence tests "assures" a percentage of underachievers. Anastasi claims that categorizing students by comparing achievement scores with intelligence scores is a misuse of the test results, since no two tests correlate perfectly (Dowdall and Colangelo 1982). The psychometrician Robert L. Thorndike (1963) further discounted the use of intelligence tests for identifying gifted students, warning that IQ scores should not be used to assume a particular level of performance (Dowdall and Colangelo 1982).

Another method of identifying UGSs is teacher observations. A teacher's judgments and grades have the advantage of being based upon direct experience with the student. The disadvantage of these measures is that they are often biased. The discrepancy between potential and classroom achievement as measured by teacher assessments often reflects nonachievement factors, such as neatness, good behavior, motivation, and teacher attitudes, rather than pure academic ability. Research has consistently found that teachers tend to rate students who are most similar to themselves in social, racial, and economic background as more desirable and successful compared to students who are dissimilar to the teachers. Another problem with the identification process is an indiscriminate use of the tests to identify the "prototypical gifted student." This practice is based on the assumption that gifted students are a homogeneous group, all of whom can profit equally from a common curriculum.

Some scholars point out that a more beneficial approach may be to use the information gleaned from achievement and intelligence tests to diagnostically determine the strengths and needs of the individual student, regardless to how the student is classified. With individualized information, curricular modules and activities could be developed that address the particular strengths and weaknesses of each student.

GIFTED UNDERACHIEVERS' TRAITS

Overall the literature consistently reports positive qualities of interpersonal effectiveness, independence, and self-assurance for academically gifted students and the reverse for UGSs. UGSs appear to have more in common with underachieving average students than with gifted students. Both UGSs and underachieving average students tend to be male and exhibit more social immaturity, more antisocial behavior, and lower self-esteem than gifted students. In addition UGSs and underachieving average students are also more likely to come from unstable, lower income, single-parented homes. The only consistent difference between UGSs and underachieving average students is the high scores of UGSs on standardized IQ and achievement tests.

UNDERACHIEVEMENT CAUSES

A variety of factors contribute to the underachievement of high ability students, including emotional and social problems, lack of an appropriate curriculum, and learning and self-regulation difficulties. The attitudes of teachers and counselors toward a child may also be responsible for the gap occurring between student potential and performance.

Other researchers contend that the underachieving gifted problems are deeply rooted in family interaction patterns or attitudes toward education. Educational psychologists have suggested that underachievement for gifted students is a choice, a form of social self-defense because of strong cultural or peer identification. This phenomenon of "deliberate underachievement" has been found to be particularly evident among gifted adolescent females, as a response to perceived sex-role expectations, and among African American gifted students involved in the process of adolescent impression management, as an attempt to control the perceptions other people form of them.

Other scholars contend that for UGSs it is not an issue involving attitudes so much as one of skills (more precisely, the lack of such) or creativity. Given the wide variety of factors contributing to underachievement in high ability students, it is understandable the students thus affected may demonstrate unique learning needs.

INTERVENTION APPROACHES

Published research on intervention with UGSs can be grouped into two conventional areas. The first group focuses on intensive counseling to address problems of low self-image and feelings of inferiority, while the second group focuses on manipulating the classroom environment.

An overview of the counseling intervention with UGSs indicates that such procedures have not been shown to be consistent or effective. A 1979 study that did report limited success concluded that intensive counseling can be effective only when: (a) counselors are specifically selected and trained, (b) a small number of students are treated, (c) objectives are clearly delineated, and (d) methodology is carefully developed.

Research on the second type of intervention—focusing on altering or modifying the classroom environment—also reported limited success. Critics of these interventions point out that generally such interventions have not begun until high school, although the most crucial time to intervene is during the elementary years. Critics also state that while classroom sizes and ability grouping have been manipulated, teaching strategies, expectations, and curriculum content have not been altered.

Programs that have taken an individualized holistic approach have reported promising results. One such intervention, Joseph Renzulli's Enrichment Triad Model, is an active process in which students choose to learn. In order to facilitate students becoming creative producers, this model capitalizes on the student's potential by using an interest-based curriculum, bringing together the student's ability, interest, learning styles, and a supportive student-teacher relationship.

Given that professionals cannot agree on a definition or the antecedents of underachievement, the adoption of one common intervention is unrealistic. Effective interventions are those that are designed to address the uniqueness of the UGS student in a holistic fashion.

SEE ALSO *Anxiety; Depression, Psychological; Neuroticism; Overachievers; Self-Presentation; Stereotype Threat*

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Carolyn B. Murray

UNDERCLASS

The term *underclass* was used by Charles Murray in 1984 to describe a permanent or persistent poverty population whose lower-income status passes from one generation to the next because of intrinsically dysfunctional behaviors. This social class is described by Ken Auletta (1982) as a group, largely concentrated in urban areas, that is cut off from society, marginalized, and lacks the skills or the behaviors needed in order to find jobs in the modern economy. William Julius Wilson (1985) defines the underclass as those who lack training or skills, are out of the labor force or long-term unemployed, and who engage in deviant behavior. Wilson also incorporates in his definition family instability and welfare dependency. Erol Ricketts and Isabel Sawhill (1988) produce an empirically operational definition of an underclass area where a census tract has rates of high school dropouts, male labor-force nonattachment, welfare recipiency, and female-family headship one standard deviation above the mean for the country as a whole. A person who lives in such a census tract and who engages in socially deviant behavior is considered by Ricketts and Sawhill to be in the underclass.

These definitions of the underclass share many of the features of earlier conceptualizations of populations at the lowest rungs of the social and economic ladder. Karl Marx described the *lumpenproletariat* as "the lowest sediment of the relative surplus population," an unproductive and regressive portion of the population unable or unwilling to work (Darity et al. 1994, p. 16). The underclass, in this sense, is "the continuously deprived fraction of the working class … comprised of the persons most frequently relegated to the 'disposable reserve army,' often found without work even during times of accelerated capitalist accumulation" (Darity 1982, p. 135).

Ken Auletta, referring to a 1980 report by the Manpower Development Research Corporation, writes that:

> These people have been excluded from the regular labor market and find, at most, sporadic employment. Though relatively few in number, they have become a considerable burden to themselves and the public—as long-term recipients of welfare, and as the source of much violent crime and drug addition.… There is nothing new about such a social class. There have always been pirates, beggars, vagrants, paupers, illiterates, street criminals and helplessly, sometimes hopelessly, damaged individuals. (Auletta 1982, p. 25)

A key element of the underclass definition is the superfluous nature of the population and its status as permanently unemployed, underemployed, or unemployable (Myrdal 1963, 1970). The underclass, in this sense, is the stagnant portion of the relative surplus population (Darity 1982, p. 135). Darity writes, furthermore, that in the managerial society the underclass is more comprehensively viewed as superfluous by the dominant social class

than is the case under capitalism. The surplus population serves a function under capitalism; it serves no function in managerial society (Darity, 1990, pp. 248–249).

CAUSES

Two broad sets of causal factors have been offered to explain the existence, size, and growth of the underclass. One set of factors involves behavioral and attitudinal deficits. These include decisions to bear children out of wedlock; participation in illegitimate activities—often destructive, violent activities; and inability or unwillingness to work or obtain the necessary skills in order to become productive members of the labor force. Another set of causal factors offered to explain the underclass are termed *structural factors*. These include residential segregation that produces concentrations of poverty and pathology, deindustrialization, and the shift of jobs from the inner city to the suburbs (Wilson 1987; Darity et al. 1994). Both the structural and behavioral explanations predict pathological behaviors.

For Murray (1984), the responsibility for criminal involvement, children born out of wedlock, joblessness, and dependency on welfare rests upon the shoulders of members of the underclass themselves. The underclass reproduces its behavior from one generation to the next, just as it perpetually reproduces itself, through excessive unwanted births to teenage mothers and unemployed or unemployable fathers.

For Wilson (1987), the underlying causes are more broadly found in the larger context of structural transformations in the economy. Joblessness in the inner city arises in part from the flight of low-skilled and semiskilled jobs from their historic location in central cities. Social isolation and concentration of poverty are but consequences of these structural transformations. Other structural factors suggested in the literature include sentencing reforms during the 1980s and the rising use of imprisonment as a vehicle for reducing labor surpluses (Darity et al. 1994; Myers and Sabol 1987).

SIZE OF THE UNDERCLASS

One view is that the size of the underclass in the United States is relatively small. The underclass population, in this view, ranged from less than one million in 1970 to somewhere between 2.5 and 3.5 million in 1990. By 2000, using the Ricketts-Sawhill empirically driven definition of underclass, Paul Jargowsky and Sawhill estimate that only about 2.2 million persons lived in underclass areas. They write:

> The underclass areas are disproportionately minority, and concentrated primarily in large urban areas, especially in the mid-Atlantic and Midwest areas of the country.… The underclass grew dramatically in the 1970s, edged up further in the 1980s and declined sharply in the 1990s (although not to its 1970 level.) The immediate reasons for the decline were reductions in the number of census tracts with high levels of dropping out of high school and high levels of public assistance receipt. (Jargowsky and Sawhill 2006)

The sharp drop in the relatively small numbers of underclass persons is attributed to welfare reforms during the 1990s that resulted in significant declines in welfare rolls and to inner-city education reforms that helped to fuel graduation rates.

Charles Murray (1999) disputes these conclusions. He feels that the underclass grew during the 1990s. Murray tracks data on persons under correctional supervision, labor-force dropouts, and illegitimacy ratios. There were 1.8 million persons under correctional supervision in 1980 in the United States. By 1997 this number had risen to 5.7 million. In 1985, 5.2 percent of black adults were under correctional supervision. By the end of 1996, there were 9 percent of black adults under correctional supervision. Murray points to statistics showing an increase in the share of black males who are labor-force dropouts and the share of all black births that are illegitimate to underscore his claim that the underclass continued to grow throughout the 1990s. For example, he reports that in 1982, 58 percent of black children were born out of wedlock. In 1997, 69 percent of black children were born out of wedlock. Murray's earlier concept of underclass as arising from poverty and the perverse incentives associated with welfare is later replaced with the concept of intergenerationally and genetically determined transmittal of poverty status. (Herrnstein and Murray, 1994). Murray's change in conceptualization of underclass helps him reconcile how the black underclass could grow even during a period of welfare retrenchment.

RACE AND THE UNDERCLASS

Inextricably intertwined with the definition of the underclass is race. Using 1980 U.S. census data, Ricketts and Sawhill (1988) calculate that 59 percent of persons in underclass areas were black. Ricketts and Mincy (1990) compute that this share dropped from 77 percent in 1970. Murray's definition of underclass points to the disproportionate share of blacks who meet the criteria selected for inclusion.

Even though pains are often taken to clarify that not all underclass areas are black or even poor, it is generally understood that underclass areas are disproportionately poor and black. Indeed, the term *black underclass* is often used synonymously with the term *underclass*. This is so

because blacks are disproportionately found among each of the key definitional components of the underclass: concentrations of poverty and labor-force withdrawal; high rates of criminality; and high rates of female-family headship.

Race is highly correlated with place. Low social capital and deviant behavior can be thought of as a manifestation of place or a concentration of pathology in particular neighborhoods. Location in particular neighborhoods, though, could be traced to redlining, mortgage discrimination, and other housing barriers that can be seen as manifestations of race (Wilson 1987; Stoll 2005; Massey and Denton 1993; Jargowsky 1997).

HOW THE UNDERCLASS HAS SHAPED PUBLIC POLICY

Much of the debate about the causes and consequences of the growth of the underclass surrounds the impacts of culture, or shared values, attitudes, and beliefs on the perpetuation of poverty and dependency on welfare. This debate is reminiscent of the culture-of-poverty debates, wherein the behaviors and attitudes of the poor themselves cause their poverty. This notion that the intergenerational transmission of poverty rests in the culture of poverty populations has direct implications for what to do about poverty.

Writing on behalf of the Committee for Research on the Underclass of the Social Science Research Council, Michael Katz summarizes how the term *underclass* evolved into a metaphor for discussions about inner-city crises and the attendant policy responses. The destructive violence, the threats to law-abiding citizens, and the substantial social costs associated with teenage pregnancies and dependency on welfare invoke the image of a group, mostly blacks, permanently stuck in concentrations of poverty in inner-city areas. The eruption of riots, the dependency on drugs, the distance from conventional morals, and the apparent inability of this population to lift itself out of poverty evoke concerns about policy responses and the social transformations that accompany these changes. According to Katz, "the underclass is a metaphor of social transformation. It asserts the emergence of a new social grouping within America's inner cities" (1993, p. 22). The term *underclass* itself evokes images of the undeserving poor, those whose behaviors contribute to their own distress. And, thus, the underclass designation signals a significant turn toward policies designed to eliminate the incentives to reproduce undesirable behaviors.

Policy prescriptions that presume that underlying behaviors respond to incentives and disincentives—the core of the microeconomic-behavioral model of the underclass—suggest that welfare restrictions and increased deterrence through law enforcement and imprisonment will reduce the size of the underclass population. Policy prescriptions that presume that the underlying problems rest in structural transformation require greater reliance on the matching of jobs and residences, reductions in housing segregation, and the breakup of concentrations of low-income and public housing in affected areas. But, both the aforementioned behavioral and structural explanations assume that the underclass is not functionally necessary. An alternative view is that the underclass is permanent in part because of its centrality in maintaining the managerial society (Darity et al. 1994).

SEE ALSO *Benign Neglect; Class; Crime and Criminology; Culture of Poverty; Determinism; Determinism, Genetic; Deterrence; Ghetto; Lumpenproletariat; Marx, Karl; Microeconomics; Pathology, Social; Prison Industry; Prisons; Public Policy; Race; Surplus; Surplus Population; Unemployable; Unemployment; Welfare; Wilson, William Julius*

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UNDERCONSUMPTION

Underconsumption is a macroeconomic phenomenon of deficient aggregate demand resulting from the failure of consumption expenditure to keep pace with rising output. It might equally be described as oversaving. Most (but not all) theorists of underconsumption explain it by reference to a parallel failure of real wages to keep pace with rising labor productivity, so that the wage share in national income tends to decline. Because non-wage-earners save much of their income—unlike wage-earners, who spend all (or nearly all) of their incomes on consumer goods—the ratio of consumption expenditure to total income also declines.

This "low-wage" version of underconsumption theory can be traced back to J. C. L. Simonde de Sismondi and Robert Owen in the 1820s; the slightly earlier theories of Robert Malthus and the Earl of Lauderdale are rather different. It is generally agreed that low-wage underconsumption formed part of Karl Marx's complex and poorly articulated theory of capitalist crisis. The doctrine certainly reappeared in the writings of his followers, from Karl Kautsky and Rosa Luxemburg before 1914 through to the theory of "monopoly capital" developed by Paul Baran and Paul Sweezy in the 1960s. A slightly different version of underconsumption theory was energetically propagated in the 1920s by the American writers William T. Foster and Waddill Catchings.

In the Marxist tradition underconsumption is seen as a fundamental contradiction of capitalism and a root cause of the Great Depression. It can be overcome only when capitalism itself is transcended through socialist revolution. Many Marxists, however, remain skeptical about underconsumption and emphasize other causes of economic crises, especially capital-intensive technological change that reduces the rate of profit but also (in certain circumstances) militant labor pressure on the profit share.

There is a reformist variant of underconsumption theory, associated with J. A. Hobson, in which it is argued that underconsumption can be avoided through comprehensive measures of social reform. Beginning in the 1890s, New Liberals and social democrats advocated redistribution of income through the tax system, labor market regulation to raise real wages, and the development of a comprehensive welfare state. Hobson and his coauthor Alfred Mummery (1889) had already argued that underconsumption was the principal cause of trade depression, which seriously damaged the interests of the workers, and supported a range of measures to increase real wages (including emigration, trade unionism, and a statutory eight-hour day). Subsequently Hobson argued that the consequences of failure to reform the system might be severe. He believed that capitalist imperialism was very largely a response to underconsumption: Colonial territories offered market opportunities that were unavailable at home because of the restricted purchasing power of the mass of the population. Hobson's ideas had a profound influence on Lenin and other Marxian theorists of imperialism.

Underconsumption has always been rejected by orthodox macroeconomists on the grounds that the economy has powerful adjustment mechanisms that remove any tendency toward chronic demand deficiency. Say's Law was originally formulated, by Jean-Baptiste Say himself and by James Mill, largely in response to early advocates of underconsumption, and the law formed the analytical core of pre-Keynesian macroeconomics. Any tendency toward underconsumption, or oversaving, would in this view be eliminated through the inevitable reduction in the rate of interest that would occur; this would induce people to save less and thus to consume more. In equilibrium, output and employment are constrained by supply considerations and not by aggregate demand.

John Maynard Keynes denied that such a self-correcting mechanism could be relied upon because saving depends on income rather than on the interest rate and total output is normally constrained by demand. Not surprisingly, therefore, Keynes had considerable sympathy with underconsumptionist ideas, though he emphasized deficient investment rather than excessive saving and was therefore inclined to believe that increased investment expenditure could (at least in principle) generate enough effective demand to maintain full employment. The Keynesian growth theorists Roy Harrod and Evsey Domar denied this possibility because the capital stock cannot profitably be continually increased relative to consump-

tion expenditure. This criticism is implied by the accelerator principle, which links investment to the growth of consumption; thus, the accelerator is closely linked to underconsumptionist ideas.

Another important heterodox economist with links to underconsumption theory was Michał Kalecki, who famously identified "the tragedy of investment." Investment adds both to aggregate demand and to productive capacity, but in a capitalist economy, where there is no planning or coordination of investment decisions, it is only by accident that investment spending will be in exactly the correct proportion to consumption expenditure. Kalecki's version of underconsumption has affinities with both the Marxist and the Keynesian schools.

The revival of pre-Keynesian macroeconomics since 1970, however, has restored belief in Say's Law and pushed underconsumptionist ideas back into the theoretical undergrowth. Today mainstream macroeconomists regard underconsumption as a faintly ludicrous radical heresy.

SEE ALSO *Consumption; Overproduction; Stagnation*

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J. E. King

UNDERDEVELOPMENT

The theory of "underdevelopment" became popular during the 1970s within development studies, an important subfield within the social sciences. It addresses the question of why economic growth has been elusive in postcolonial countries. Is it primarily because of *internal* factors, such as local culture, religion, lack of skills, lack of institutions, corruption, and patrimonial relations? Or is it primarily the result of *external* factors, particularly the power relations within a world capitalist system dominated by a core of industrialized countries exploiting a periphery of poor countries in a form of "neocolonialism"?

Before the 1970s it was common within the modernization school of thought, which arose out of Western Keynesian and neoclassical economic thinking, to regard colonial and postcolonial countries as being "*un*developed." In this perspective, internal factors were emphasized, and these countries were encouraged to follow particular stages of economic growth in order to catch up and "develop" in a manner similar to that of the Western industrialized countries. The more postcolonial countries integrated within the world capitalist system, it was argued, the more they would reap the benefits through increased aid, trade, and investment.

In contrast, a school of thought emerged which argued that the colonized world was actively *under*developed by its contact with imperial powers. According to the underdevelopment perspective, which has close links to the dependency and world-systems perspectives, the economies of colonized countries were distorted to meet the needs of emerging capitalism in Western Europe. This was particularly so during the phase of industrialization, when capitalist firms in competition with each other needed cheap labor, raw materials, and new markets for their products. The colonial and postcolonial regions became satellites (or peripheries) of the industrialized countries that formed the metropoles (or centers) of a world system of capitalist expansion, through relations of economic dependency.

The theory of underdevelopment arose within Marxism but as a departure from the classical Marxist view that capitalism, while it exploits and destroys, also develops. As Karl Marx (1818–1883) said in *Capital* (Vol. 1): "The country that is more developed industrially only shows, to the less developed, the image of its own future" (1954, p. 19). The Russian-born American economist Paul A. Baran (1910–1964) wrote in 1957 that, on the contrary, postcolonial societies were blocked from development by the peculiar manner in which they came into contact with industrialized countries. For Baran, the origins of underdevelopment can be traced back to the plunder and enforced trade of the seventeenth and eighteenth centuries. This was a time, he argued, when Western European colonization of the rest of the world began on behalf of merchant capitalists, to be later followed by producer capitalism. Imperialism, as famously stated by V. I. Lenin (1870–1924), is the "highest stage of capitalism," as it grows out of the inevitable tendency toward the creation of monopolies. Competition among capitalist firms eventually results in the more successful firms destroying or swallowing the less successful.

Baran argued, however, that monopoly capitalism faced a crisis of overproduction due to the lack of effective demand in the capitalists' home countries. The economic surplus generated had to be productively absorbed by the

capitalism system if a crisis was to be avoided. Parts of this surplus were absorbed through military expansion, state expenditure (for example, building a welfare state to prevent the working class at home from revolting), and technological innovation. However, this was not sufficient to absorb the massive surplus and create the conditions for the continued accumulation of capital, which is the motor force of capitalism (i.e., accumulation for the sake of accumulation). Capitalism had to conquer new markets and create new investment opportunities, argued Baran, and this could only be achieved through expansion into new territories in the form of colonialism (political and economic dominance) and neocolonialism (economic dominance over politically "independent" countries).

According to Baran, the class interests that came to dominate within these countries, foreign and local, benefited from this state of dependency in various ways. These beneficiaries included domestic landowners, merchants and monopoly capitalists, and the foreign capitalists—none of whom had any real interest in the development of a domestic market that would generate a developmental dynamic within the satellites. Foreign capital in particular was mainly interested in primary resource extraction, where profits are repatriated to the metropoles. This resulted in the development of modern enclaves to serve a very small domestic market composed of expatriates and domestic elites, who aspire to mimic the consumption patterns of the metropolis. The rest of the periphery was composed of an expanding "reserve army of cheap labor" living in poverty in the countryside and in urban slums.

The theory of cumulative causation developed by the Swedish economist and sociologist Gunnar Myrdal (1898–1987) also arose during the 1950s and covered similar ground but from a non-Marxist perspective. Myrdal (1957) laid emphasis on the cumulative development path of industrial countries that had made breakthroughs in science, technology, and industrial production. These countries had large domestic markets with a high demand for goods and services, thus attracting capital into their economies. Poor countries, on the other hand, fell into a downward spiral of stagnation and impoverishment due to, among other things, low savings, small domestic markets, and the low skills and poor health of the work force. Low tax revenue meant that the governments of poor countries could not invest in social and economic infrastructure, except in small export enclaves that benefit foreign capital. These conditions lead to rising intranational as well as international inequality, thus perpetuating the underdevelopment of the periphery.

While Baran favored Soviet style state planning to overcome underdevelopment, Myrdal saw the solution in state-led industrialization and market regulation, where infant industries are protected from foreign competition. These ideas were popularized and refined by a number of neo-Marxist thinkers, such as Andre Gunder Frank (1967), Samir Amin (1970), and Walter Rodney (1971), who argued that the development of Europe rested on the underdevelopment of Africa. This perspective found a ready audience among revolutionary nationalist leaders in the postcolonial world who were not necessarily Marxists. To mitigate the negative impact of neocolonialism and dependency, many countries used the postcolonial state as an active agent of development, with policies ranging from import substitution to a relative delinking from the world capitalist system in the pursuit of self-reliant development.

These strategies during the 1960s and 1970s did achieve some success in growing a domestic market, achieving respectable growth rates, and improving health and education services in many African, Latin American, and Asian countries. However, these achievements were also accompanied by an overreliance on increasingly authoritarian, corrupt, and unaccountable states, and massive borrowing that resulted in an unsustainable debt crisis beginning in the 1980s. This, and the declining fortunes of Soviet state socialism, helped pave the way for the ideology of "free market" neoliberalism to penetrate the periphery.

This period saw the resurgence of modernization theory, albeit couched in the language of "globalization." During the 1990s, development studies seemed to be in crisis, as globalization theory, whether from the Right or the Left, posited that a "global village" of open economies was being created. National boundaries, it was argued, were being eroded; the state was being replaced by "the market" (i.e., private firms) as a key agent of development, and there was no longer an industrialized core in the "first world" and an impoverished periphery in a "third world." Instead, global inequality was becoming "deterritorialized" as investment and jobs flowed increasingly to the periphery, leading to increased economic growth and employment, while the industrialized countries experienced greater unemployment and inequality. The only exception is much of sub-Saharan Africa, which remained marginalized from the process of global integration.

The 1997 East Asian economic crisis and subsequent crises elsewhere in the world exposed the vulnerability of the newly industrializing economies, forcing a retreat from neoliberal policies, and the reemergence of the state as a critical actor in development. Writers such as Samir Amin insist that the core-periphery model remains valid. Only two countries, namely South Korea and Taiwan, have risen out of their periphery status, largely because of the privileges they received as U.S. allies during the cold war. For the rest, including fast-developing China and India, rapid industrial growth has followed the pattern of

enclave development. These countries are still reservoirs of cheap labor and seas of extreme poverty. On the other hand, the industrialized "triad" of the United States and Canada, the European Union, and Japan continues to dominate the world economy at the core, with the United States performing the hegemonic role with the help of the World Trade Organization, the International Monetary Fund, and the World Bank. These institutions impose rules on underdeveloped countries that undermine efforts at domestic development, in the interests of transnational corporations that remain firmly based in industrialized countries.

There is now increased recognition that both internal and external factors are responsible for the inability of poor countries to rise out of their conditions of underdevelopment. Poor countries are challenged to democratize internally, develop local capacities, and spread the benefits of economic growth to all citizens. At the same time, they need to act in concert with other countries and civil society organizations to reap the benefits of globalization. Some emphasize regulating capitalism at a global level through transformed global institutions that are reoriented toward the needs of poor countries. Others urge a focus on strategic delinking, especially from the financial markets dominated by the financial institutions of the triad, in pursuit of a "polycentric negotiated globalization" that is governed by democracy, disarmament, and a new system of international law that respects national and regional autonomies.

SEE ALSO *Caribbean, The; Colonialism; Dependency; Development Economics; Globalization, Social and Economic Aspects of; Imperialism; Neocolonialism; North-South Models; Poverty; South, The (USA)*

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Devan Pillay

UNDEREATING

Undereating is a relative term. It refers to a negative energy imbalance that results when energy intake is less than energy that is expended. This negative energy imbalance can occur as a consequence of social conditions (e.g., poverty), medical conditions (e.g., cystic fibrosis), or psychological conditions (e.g., depression). It can also occur during any developmental period, such as in *failure-to-thrive* infants and in the elderly, who can suffer fat loss as part of normal aging processes. In these instances, undereating is considered to be involuntary because it is attributable to impecuniousness, nutrient malabsorption, or loss of appetite. Undereating, however, can also be intentional, as in self-starvation. Most notably, intentional undereating is pathognomonic in the eating disorder *anorexia nervosa*.

Anorexia nervosa is characterized by refusal to maintain at least 85 percent of normal body weight for one's age, height, and gender; fear of weight gain; disturbance in body perception; and self-worth based on body weight and shape. These core symptoms cause the individual to relentlessly pursue caloric restriction through behaviors such as dieting, fasting, excessive exercise, and vomiting. Anorexia can also include purging after binge-eating. It is often comorbid with other psychopathology such as depression and substance abuse. Other adverse medical consequences of undereating include emaciation, anemia, tooth decay, hair loss, bone loss, heart and kidney failure, and even death.

As of 2007, the lifetime prevalence rate of anorexia nervosa is estimated to be approximately 1 percent. It is most prevalent in adolescents and young adults who are white, female, and of mid-to-upper socioeconomic status. It is, however, increasingly being diagnosed at younger ages, in males, across U.S. ethnic minorities, and at all levels of socioeconomic status. The research, though limited, suggests that self-starvation is more prevalent in Western countries but that it is on the rise in non-Western countries.

The apparent general increase in prevalence of anorexia across groups and cultures likely reflects the strong influence of regnant sociocultural values. With globalization, the Western media exert a powerful and pervasive influence, conveying explicit and implicit messages that uphold the thin body as the ideal to which many females feel they should aspire. Although sociocultural explanations of anorexia are compelling, studies show that a predisposition to anorexia may be genetically based. Psychological factors such as early trauma (e.g., abuse), a major negative life event (e.g., parental divorce), or a critical transition (e.g., college) may then precipitate disease onset in individuals who are susceptible. It has been suggested that, although maladaptive, the ability to

tightly control one's caloric intake may serve to restore an individual's sense of power over his or her life.

Anorexia is viewed as both a medical and psychological condition and is notoriously intractable to treatment, with relapse common. A multidisciplinary approach is recommended. When patients are very underweight, hospital or day-program treatment is required, consisting of psychological counseling, nutritional education, and a supervised diet of from 2,000 to 4,000 calories per day. Cognitive-behavioral therapy and family-systems therapy appear to be the most widely used psychotherapeutic approaches. Research is needed, however, to identify the approach that is most effective. Psychopharmacotherapy to treat anorexia has so far met with little success, but research is ongoing in this regard.

SEE ALSO *Body Image; Disease; Food; Malnutrition; Obesity; Overeating; Self-Esteem*

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UNDEREMPLOYMENT

The labor force concept of *underemployment* can be defined as a comprehensive way to identify and measure the underutilization of labor resources. In this sense, it goes beyond plain unemployment—being jobless while looking for work—to further include different forms of inadequate employment, such as being discouraged or subemployed, or employed involuntarily in part-time and low-income jobs with marginal or unstable labor market attachments.

The globalization of the world economy and the corresponding industrial restructuring of developed countries—away from manufacturing and towards services—have had a considerable impact on the composition and characteristics of the labor market. While labor force participation has increased, it has also resulted in an important rise in employment hardship with the emergence, among a considerable portion of the labor force, of unstable, poorly paid, and often involuntarily part-time jobs. This new situation has led labor-market researchers to point out the need for a new term (beyond *unemployment*) to better capture all meaningful forms of employment hardship.

Interestingly, the origin of this researchers' concern can be traced back to the 1930s in the work of British economist Joan Robinson (1903–1983). At that time, she wisely argued that in a society where no regular system of unemployment benefits exists and where poor households are unlikely to be supported by social institutions (i.e., a social welfare system), individuals who are out of work and who cannot find a job fitting their skills will naturally employ their time as usefully as they possibly can.

> Thus, except under peculiar conditions, a decline in effective labor demand which reduces the amount of employment offered in the general run of industries will not lead to unemployment in the sense of complete idleness, but this surplus of labor will rather get employment into a number of occupations still open to them … [where] their productivity is less than in the occupations that they have left. (Robinson 1936, p. 226)

Robinson referred to this phenomenon as *disguised unemployment*. Other researchers later drew attention to the existence of such disguised unemployment in certain economic sectors (e.g., agriculture), particularly in the economies of developing countries (Moore 1953; Lewis 1954) where the presence of an unlimited supply of labor makes its marginal productivity negligible, zero, or even negative.

Sponsored by the International Labor Organization, labor statisticians have gathered on numerous occasions to discuss and develop concrete measures of underemployment. In this ongoing discussion, American sociologist Philip Hauser (1909–1994) made an important contribution by developing what became widely known as the *labor utilization framework* (LUF) to capture a more accurate picture of employment, acknowledging both the official forms of unemployment, as well as different categories of economically inadequate employment based on hours (involuntarily part-time work) and wages (poverty-level pay) (Hauser 1974). The LUF has evolved through time and now has both a substantial literature and a more elaborated set of subcategories (Clogg 1979; Sullivan 1978) to better capture the employment situation and to adapt more efficiently to datasets other than the U.S. *Current Population Survey* (CPS, compiled monthly by the U.S. Census Bureau for the Bureau of Labor Statistics), where all the original empirical work came from.

Nevertheless, the operational definitions of states of underemployment typically used by researchers can be summarized as follows, from the most to the least severe:

Subunemployed is a proxy for "discouraged workers" and includes individuals who are not currently working and who did not look for work during the previous four weeks because they felt no jobs were available.

Unemployed follows the official definition and includes those not working but who (1) have looked for work during the previous four weeks, or (2) are currently on layoff.

Underemployed by low hours (or involuntary part-time employment) parallels the official definition of those who are working "part-time for economic reasons" and includes those who are working less than thirty-five hours per week because they cannot find full-time employment.

Underemployed by low income (or *working poor*) includes those whose labor market earnings during the previous year, adjusted for weeks and hours worked, were less than 125 percent of the official poverty threshold for an individual living alone.

Underemployed by occupational mismatch (or overeducated) includes those whose educational level (measured as years of schooling) is greater than one standard deviation above the mean education for workers with the same occupation.

All other workers are defined as *adequately employed*, while those who are not working and do not want to be working are defined as *not in the labor force*.

Of course, no standardized measure of any important concept will be perfect, and underemployment is not without flaws. Some of these deficiencies are related to problems with the operationalization itself (e.g., using poverty thresholds that ignore cost-of-living differences), while others have to do with other related forms of employment hardship, such as job security, which are not included in the definition. Notwithstanding, these criticisms are minor since underemployment provides a useful way to analyze trends over time, as well as inequality between groups in the prevalence of employment hardship.

In all years, these trends are unequivocally countercyclical, a phenomenon reflected in the fact that underemployment rose and then fell over the 1990s owing to the recession early in the decade and subsequent economic expansion. Inequality between groups in the risk of underemployment is often striking and should be an issue of great policy concern. Women, minorities, the young, and those with low educational attainment are all especially vulnerable to underemployment. Moreover, these vulnerabilities are often particularly acute among residents of rural areas and central cities. As a result, economists continue research (both theoretical and empirical) on the topic to further contribute to the understanding of these trends in employment hardship over time and between groups.

SEE ALSO *Unemployable; Unemployment*

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Esperanza Vera-Toscano

UNDEREMPLOYMENT RATE

Underemployment generally refers to one of several situations that result in employment in an economically inadequate position. In this context the underemployment rate refers to the fraction of those employed who are "underemployed." Some scholars utilize an alternative version of this definition by considering some nonemployed individuals as underemployed. Regardless of the definition of underemployment, the concept evolved from inadequacies in the unemployment rate in capturing work-related hardships (Jensen and Slack 2003, p. 25).

Ignoring for now the definition of underemployment that includes nonemployed individuals, the underemployed work while incurring some form of employment-related hardship. This includes individuals working in occupations with an insufficient number of hours, individuals working in positions with insufficient pay, individuals working in occupations below their levels of educational attainment, and individuals working in positions involving some combination of the above scenarios. Because they have employment they are not considered to

be unemployed according to the standard definition of unemployment.

First, underemployment refers to a situation where employees work fewer hours than they desire. Such an event may occur because of real-world labor-market rigidities such as a fixed-hour workweek. For example, workers desiring a thirty-hour workweek at a job that requires forty hours for full-time employees or twenty hours for part-time employees will be considered underemployed if they accept the part-time position. A similar case occurs when workers accept part-time employment without choice, often referred to as "involuntary part-time." This is the most widely cited reference to the underemployment rate, perhaps because it is easier to measure than the other types of underemployment. John Ham (1982) estimates that in the United States in 1970 over a quarter of the labor force was either unemployed or underemployed according to the hours worked measurement of underemployment.

Alternatively, workers may accept positions that offer the desired workweek but with low pay. In this case workers will be considered underemployed when their expected wages—based on personal (i.e., educational attainment, experience) and job-specific characteristics—are higher than their actual wages. This type of underemployment may occur within the context of either full-time or part-time employment. In a sense, workers accept such employment rather than become unemployed. Measuring the underemployment rate by this definition is difficult due to the need for an empirical estimation of one's expected wage.

Some scholars consider all working-poor individuals to be underemployed, thereby eliminating the need for wage estimates. Such scholars would likely categorize a full-time employee earning the minimum wage as underemployed. Other researchers note that this need not be the case if the earnings of low-wage individuals are consistent with their level of human capital. Among those who consider all working poor as underemployed, a debate exists as to what the threshold level of income should be. Frequently a percentage of the official poverty threshold (either 100% or 125%) or a fraction of the median wage (from one-third to two-thirds) is utilized. Critics contend that such levels are arbitrarily determined.

Moreover, some workers are in occupations with an adequate workweek and pay but are not using all of their human capital, most notably by not fully using their educational qualifications. For example, individuals with a bachelor's degree working in positions requiring only a high-school diploma are considered underemployed when compared to degree holders with higher-level jobs. As noted by Stephen Rubb (2005), the same individuals are considered "overeducated" when compared to others in their own occupational category. Measuring the underemployment rate by this definition is difficult due to the need for an estimation of the required level of education (and other human capital characteristics) for various occupations. Implicit in such a calculation of an "occupational mismatch" is the idea that all jobs within an occupational category are homogenous and that educational quality is uniform. Many scholars find such assumptions objectionable. Due to such complexities, researchers tend to focus on underemployment from other categories. A similar concept is "disguised unemployment" introduced by Joan Robinson (1937, p. 84) "where workers' productivity is less than in the occupation they have left," presumably because the worker's new occupation does not make full use of their human capital.

It should be noted that many scholars (e.g., Jensen and Slack 2003) use underemployment to capture *all* forms of employment hardship, including those associated with nonemployment. As such, their definition of underemployment includes both discouraged and unemployed workers in addition to those employed in inadequate situations. For such scholars, the underemployment rate is the fraction of the labor force that is "underemployed" with a slight adjustment to include "discouraged workers" as part of the labor force. Discouraged workers are individuals who are neither employed nor looking for work, and typically they are not counted as part of the labor force. Using such a definition, Jensen and Slack find that in the United States in 2000 the overall underemployment rate was 13.5 percent, and that it was notably higher during the global recession in the early 1990s. In their model the most common type of underemployment is the working poor. This is followed by unemployment, insufficient hours, and discouraged workers as the second, third, and least common types of underemployment. They do not estimate the level of occupational mismatches in their calculation of the underemployment rate. Researchers who include nonemployed workers in their estimates of the underemployment rate tend to also automatically include working-poor individuals in their calculation. In general, their work tends to focus on issues involving the equitable distribution of income. Other researchers disagree with the inclusion of discouraged and unemployed workers in the estimates of the underemployment rate, contending that underemployment implicitly infers employment.

SEE ALSO *Natural Rate of Unemployment; Unemployment*

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Stephen Rubb

UNDERGROUND ECONOMY

SEE *Informal Economy.*

UNDERREPRESENTATION

Underrepresentation occurs when members of discernible groups are not consistently present in representative bodies and among measures of well-being in numbers roughly proportionate to their numbers within the population. These underrepresented groups are discernable based on a shared history and an ongoing legacy of disenfranchisement, usually marked by gender, race, ethnicity, class, sexuality, and religion. Underrepresentation in basic social and economic measures, such as adequate housing, income, education, and physical health, generally coincides with a history of disregard, deprivation, and even violence. Access to these basic social goods is necessary to pursue a dignified life and is a prerequisite for the enjoyment of the political liberties of democratic citizenship. When access to these goods coincides with markers of social and political marginalization or exclusion, the exercise of political rights and obligations and the opportunity to achieve a good life, however defined, is severely compromised.

The dimensions of underrepresentation in any society coincide with the access to and exercise of power. Historically, those with power use their influence to define full membership in the polity to include themselves and similar subjects while excluding those they designate as different. This "difference" is not without judgment but is defined as inferior to the privileged groups and as corrosive to the community. In some instances, groups want to assert their social difference but seek to change how a community values it. This is often the case with ethnicity, where an ethnic group wishes to maintain its cultural way of life but demands fair recognition and accommodation of its existence from the state and other members of the polity. However, in other instances members of disadvantaged social groups regard their "group" status as illegitimate altogether and strive to dismantle its very meaning and any associated punishments. The goal in this regard is elimination of their status as a "group." Some consider gender to be an appropriate example of this perspective.

Fair political representation in democratic societies is essential because it is a key democratic activity geared toward generating legitimacy, setting agendas, and establishing the practices and policies under which people live. When identifiable groups of citizens are not present in representative bodies in adequate numbers over time, their interests and concerns tend to be absent, and thus a state of underrepresentation exists. A situation in which women and racial, ethnic, religious, and sexual minorities are overrepresented on the lowest ends of most measures of social and political well-being, while remaining underrepresented on the higher measures, raises the specter of *structural inequality*. Structural inequality occurs when measures of a good life and indicators of deprivation are visibly and measurably stratified along these lines.

One of the most potent ways to address structural inequality is through political participation and representative government. Yet women and minorities are politically underrepresented across the globe—both in terms of their presence in representative bodies and the interests those bodies address. Some scholars argue that to create more inclusive representative bodies, democratic societies should adopt a semiproportional electoral system that utilizes cumulative voting (Guinier 1994). Others advocate proportional representation through the single transferable vote (as in Ireland and Malta), party-list quotas for women and minorities (Phillips 1995), reserved seats in legislatures for marginalized groups (as in India and Tanzania), and public funding for minorities to organize and select their own slates of candidates (Christiano 1996).

Is it fair to consider an individual's race, class, gender, or sexuality when deciding on the allocation of scarce goods or opportunities? Is it fair not to? If it is fair, then how should social difference be considered, and what weight should it be accorded? Who decides? If societies maintain that the distribution of goods should be solely based on merit, then how should they determine what is "meritorious" achievement; how should they address what is sure to be an increase in the existing inequality between, for example, whites and nonwhites, men and women, and the economically privileged and the struggling; and who should make these determinations?

If social difference cannot be ignored without serious deleterious consequences but according it too much weight, or too little, is associated with even more negative outcomes than not considering it at all, then the stakes are very high for arriving at any conclusion. At the same time,

answering these complex questions regarding difference and disagreement is a matter of democratic judgment. That judgment cannot be truly democratic or just, however, unless all relevant members of the polity are fully included at all stages of deliberation and decision making.

Experiments with policies aimed at achieving a greater presence of members of historically marginalized groups in representative bodies show promise in India on local councils and in Scandinavian countries on national legislatures. In the United States, experiments at local and state levels, as well as within the national party structures, have produced policies, expanded agendas, and altered the very terms of the debate, which likely would have otherwise remained unchanged. How to go about increasing the presence of marginalized groups, however, is a highly complex endeavor fraught with potential, but very real, dangers.

Hannah Pitkin writes, "We show a government to be representative not by demonstrating its control over its subjects but just the reverse, by demonstrating that its subjects have control over what it does" (1967, p. 232). But this statement begs the questions of *who* or *what* is to be represented, and under *what conditions* representation can be understood as democratic, or even just? All political representation is about the representation of some group; to some degree, whatever proxy is used for the interests (be it geography, party, identity, or some other indicator), one runs the risk of subverting intragroup disagreement and even cementing differences. It is not enough to argue that a particular approach to representation holds the capacity to freeze differences because, to varying degrees, they all do. Any system in which a part stands for the (often heterogeneous) whole is assured to get it wrong on occasion. The challenge is for the part to represent the whole as faithfully and justly as can be made possible through fair and inclusive procedures and processes.

SEE ALSO *Electoral Systems; Gerrymandering; Representation; Tyranny of the Majority*

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Angela D. Ledford

UNEMPLOYABLE

A person is said to be unemployable if he or she is unsuitable for any job. More precisely, someone is unemployable if there exists an absolute mismatch between his or her personal characteristics or attributes (including, for example, education, skills, experience, or physical fitness) and those currently demanded by employers. Unemployable persons are either chronically unemployed or else do not participate in the labor force at all.

Three important features of the contemporary view of unemployability can be associated with the definition given above. First, as is obvious from the definition, being unemployable is identified with the inability to secure any employment. Second, it is commonplace to focus on acquired characteristics (that are amenable to change) rather than innate characteristics (that are taken as given) when accounting for an individual's status as unemployable. Third, following from the previous point, unemployability is viewed as a state that can and should be remedied by means of appropriate policy interventions. Unemployability has not always been viewed in this way, however. Historically, it has been associated with the ability to gain *some* employment, but for material reward that is insufficient to support an "adequate" standard of living. Moreover, there has, in the past, been a greater emphasis on innate rather than acquired characteristics when explaining the state of unemployable persons. This, in turn, encouraged a view of the unemployable as morally repugnant persons who needed to be dissociated from the "mainstream" labor force. These sentiments are evident to some degree even in the writings of radical or reform-minded critics of capitalism, such as Karl Marx, William Beveridge, and Beatrice and Sydney Webb.

Because unemployable persons are defined as lacking the attributes desired by employers—and in particular, the sort of human capital firms require—the inevitable tendency is to focus on individual choice and behavior as the ultimate cause of unemployability. However, it is possible that events beyond an individual's control induce personal characteristics that make the individual unemployable. For example, the family environment and/or schooling that contribute to early childhood development may be responsible for making some individuals unemployable. Alternatively, chronic unemployment may cause skills to atrophy or even come to be regarded by employers as, in and of itself, a negative credential. This can result in an unemployed person eventually becoming unemployable. In this case, rather than unemployability resulting in chronic unemployment, it is chronic unemployment that causes a person to become unemployable—a process anticipated by Beveridge that is now associated with modern views of hysteresis in the labor market. Finally, the mismatch between individual attributes and employers'

requirements characteristic of unemployability may not arise because of any literal deficiency of individual attributes at all. Consider, for example, the effects of the geography of deindustrialization coupled with the relative geographical immobility of labor. It is possible for the skill set in which a geographically concentrated group of workers has invested to be rendered redundant by the decline or relocation of a regionally concentrated industry. This leaves workers with the wrong skills rather than no skills—too few for some remaining jobs, but too many for others—and thus suffering the absolute mismatch between individual attributes and employers' requirements that renders them unsuitable for any job (at least within a regional context).

Whatever its causes, unemployability can be associated with a variety of social problems. Most obviously, since most individuals depend on the labor market for most of their income, unemployable persons may suffer severe material hardship. Since work also lends meaning and definition to the lives of most people, isolation from work caused by unemployability can lead to dissociative, antisocial behaviors such as violence and crime. It is not surprising, then, that numerous policy measures have been proposed to address the problem of unemployability. Some of these—such as welfare (or workfare) programs and earnings subsidies—are essentially permanent income maintenance schemes designed to *offset* the condition of unemployability. Other policies, however, seek to *remedy* the condition itself. For example, the strong association between unemployability and human capital deficiencies means that training schemes are a prominent feature of policy proposals to reduce the number of unemployable persons. If, however, former workers are made unemployable by geographically concentrated structural change as described earlier, broader regional development policies that focus not only on changing individual attributes (through retraining, for example) but also on the level and variety of economic activity in a region may have a role to play in redressing the problem of unemployability.

SEE ALSO *Underemployment; Unemployment*

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Mark Setterfield

UNEMPLOYED, HARD CORE

SEE *Hard-core Unemployed.*

UNEMPLOYMENT

A person is unemployed when he or she is willing and able to work given the prevailing terms and conditions of employment but does not currently have a job. Depending on its causes, unemployment can pose severe problems for both individuals and societies alike. For example, since most households derive most of their income from participation in the paid labor market, unemployment can be a source of considerable material hardship and distress. Furthermore, unemployment can challenge the sense of identity and self-worth that individuals derive from their jobs. Finally, unemployment represents, in the aggregate, a waste of productive resources: society as a whole would be better off if the unemployed were engaged in productive activity.

MEASUREMENT OF AND VARIATIONS IN UNEMPLOYMENT

Because of its importance, economists have long had an interest in the accurate measurement of unemployment. But unemployment statistics are subject to several measurement problems. For example, official statistics usually measure unemployment by requiring that a person's willingness to work be demonstrated by evidence that they are actively searching for a job. Some economists, however, identify *discouraged workers*—those who are willing and able to work, but have ceased to search for work because they do not believe that jobs are available—as being unemployed. Despite this, discouraged workers are not included in official measures of unemployment because they are not actively looking for work. They are instead categorized (along with full-time students, retirees, and others) as not participating in the labor force.

Another measurement problem is associated with *disguised unemployment*. This was originally identified as a condition afflicting developing countries, wherein individuals might engage in very low-productivity work in the agricultural sector for want of a job that would more fully utilize their productive potential. But some economists

now identify involuntary part-time or temporary work—that is, part-time or temporary work performed by those who would prefer a full-time, year-round job—as a form of disguised unemployment. Once again, disguised unemployment is not reflected in official measures of unemployment. This is because all those who have jobs are automatically categorized as employed, regardless of whether or not the jobs they perform fully utilize their productive potentials or satisfy their preferences with respect to the number of hours of paid work they perform.

Whatever their potential flaws, official unemployment statistics reveal a number of important stylized facts about unemployment. First, it has long been established that unemployment varies over the course of the business cycle, rising when the economy enters a recession and falling during a boom. Second, a more recently established stylized fact is that unemployment varies over time between lengthy "episodes" of higher or lower unemployment. For example, average annual unemployment rates in the major industrialized economies were much lower during the 1950–1973 period than they were during the preceding interwar period (1918–1939) or than they have been since 1973. Third, unemployment rates differ across countries at any particular point in time and during the episodes of high or low unemployment referred to above. Prior to 1973, for instance, it was commonly observed that unemployment in the United States was higher than that in Europe. Since the 1980s, however, the United States has tended to experience unemployment below the average rates witnessed in Europe. Finally, unemployment rates differ by age, sex, and race. Unemployment is typically highest among the young (ages sixteen to twenty-five) and members of racial or ethnic minorities. Older workers and women also frequently experience more unemployment than prime-age males, although since the 1970s, unemployment rates for women have become comparable to those for men in some of the major industrialized economies.

EXPLANATIONS FOR UNEMPLOYMENT

What factors cause unemployment and so explain the stylized facts described above? According to some economists, the labor market operates like any commodity market, with variations in the level of wages serving to "clear" the market—that is, equate the supply of and demand for labor. But even when the labor market clears in this fashion, unemployment will exist. This *frictional unemployment* is often associated with the normal workings of the labor market. It arises because even if the number of jobs available is exactly sufficient for the number of job seekers at currently prevailing wages, the process of matching employers with employees takes time. It is therefore possible for some workers to be without jobs at any point in time. The amount of frictional unemployment is affected by a variety of factors, including the choices of workers themselves. For example, a currently unemployed person might decline to accept an offer of employment in anticipation of a superior subsequent offer. Unemployment that is the product of individual choice in this fashion is termed *voluntary*.

Other economists, however, claim that labor market clearing is a special case, sometimes called *full employment* (although not all economists who use the term *full employment* would agree that it is best conceptualized in terms of labor market clearing). These economists claim that observed unemployment is largely involuntary. According to the conventional definition, *involuntary unemployment* occurs when the labor market does not clear but is instead characterized by a surfeit of job seekers relative to the number of jobs available at currently prevailing wages. In this situation of "too many workers chasing too few jobs," the unemployed are without work not by virtue of individual choice but as a result of a constraint that exists on their ability to sell labor. Some economists locate the source of this constraint on the supply side of the economy. For example, there may be impediments to the workings of the price mechanism that prevent wages from varying in the manner required to equate the demand for and supply of labor. Or alternatively, the stock of capital accumulated by firms may be insufficient to warrant the employment of all those willing to work, given the number of workers that need to be combined with a single unit of capital to produce a unit of output.

Other economists, however, locate the source of involuntary unemployment on the demand side of the economy. They argue that the demand for labor (and hence the quantity of employment offered by firms) is derived from the quantity of goods that firms can profitably produce and sell, so that the aggregate demand for goods is the ultimate determinant of employment and unemployment. According to this view, even when wages are free to vary and output can be produced by different combinations of capital and labor inputs (so that the existing stock of capital does not determine the level of employment that can be achieved), it is possible for an insufficient aggregate demand for goods to give rise to an insufficient derived demand for labor relative to the number of persons who wish to work at currently prevailing wages. This is the theory of employment and unemployment originally developed by John Maynard Keynes (1883–1946). Its most important feature is that it identifies as the source of involuntary unemployment a deficient demand for goods, rather than any problems with the functioning of the aggregate labor market that might prevent the latter from clearing.

The distinction between supply-side and demand-side theories of involuntary unemployment leads to a further distinction between classical and Keynesian unemployment. Classical unemployment—which includes frictional unemployment and supply-side involuntary unemployment—is determined on the supply side of the economy and is unresponsive to variations in aggregate demand. Classical unemployment is often associated with the concept of a natural rate of unemployment or a nonaccelerating inflation rate of unemployment (NAIRU). Keynesian unemployment, meanwhile, is determined on the demand side of the economy and does respond to variations in aggregate demand.

It is possible in principle for voluntary and involuntary or classical and Keynesian unemployment to exist within the same economy. However, economists disagree as to what extent observed unemployment is voluntary, involuntary, classical, or Keynesian, and hence on the extent to which these categories, and the theories of unemployment associated with them, are useful for explaining the stylized facts outlined earlier.

POLICY IMPLICATIONS

The policy implications of unemployment depend greatly on the theorized causes of unemployment. For example, if unemployment is a product of individual choice (i.e., a voluntary condition), it would not appear that any form of policy intervention is merited. Even if unemployment is entirely frictional, however, it may be prudent to use public policy to reduce unemployment—including voluntary unemployment—by improving the process whereby employers and employees are matched. In this case, supply-side, microeconomic policies designed to affect the choices or attributes of job seekers are appropriate. Unemployment insurance programs might be altered to influence the propensity of those searching for work to accept job offers, or training programs might be established in an effort to imbue the unemployed with the sorts of skills required by currently vacant jobs. If unemployment is involuntary and Keynesian, however, an altogether different approach to policy intervention is required. In this case, macroeconomic policies (such as a reduction in interest rates or an increase in government spending) are needed to raise aggregate demand in order to remedy the deficient demand for goods and hence the deficient derived demand for labor that is the ultimate cause of unemployment. As with the theories of unemployment from which these policy interventions derive, the appropriate policy response to unemployment is—and will likely remain—a subject of controversy among economists.

SEE ALSO *Keynes, John Maynard; Lucas, Robert E.; Marx, Karl; Natural Rate of Unemployment; Underemployment; Voluntary Unemployment*

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UNEMPLOYMENT, DISCOURAGED

SEE *Discouraged Workers.*

UNEMPLOYMENT, INVOLUNTARY

SEE *Involuntary Unemployment.*

UNEMPLOYMENT, NATURAL RATE OF

SEE *Natural Rate of Unemployment.*

UNEMPLOYMENT RATE

There are two dimensions of the unemployment rate that sit uneasily with each other. First, national statisticians produce the "official" unemployment rate that policy makers, lobby groups, and media commentators use to summarize the state of the labor market. Second, economists attempt to explain the unemployment rate using

microeconomic and macroeconomic models, which do not correspond directly with the statisticians' framework. The various explanations of unemployment remain highly contested.

DEFINING AND CALCULATING THE UNEMPLOYMENT RATE

Prior to the Great Depression, limited efforts were made to collect labor market data. For example, the gainful worker framework in the United States used the ten-year census to enumerate employment activities with little attention being paid to unemployment. A worker was defined as "a person who works for money" (Smuts 1960, p. 71).

The mass unemployment in the 1930s created a demand for a broader enumeration system, and the modern concept of the labor force framework emerged after World War II (1939–1945) in response. This framework is made operational through the International Labour Organization (ILO) and the conference of International Labour Statisticians. These conferences develop procedures (definitions) for generating national labor force data (see http://laborsta.ilo.org/ for sources and methods). National statistical agencies implement these definitions in periodic sample surveys (usually monthly) and publish labor force estimates. The application of these definitions varies from country to country.

Figure 1 sketches the labor force framework. The labor force concept has two components: (a) criteria defining activity—specifically, willingness and search; and (b) a time period for assessing activity. The working-age population (persons above fifteen years, although some countries exclude those above sixty-five years) dichotomizes into active (the labor force) and nonactive (not in the labor force). The labor force divides between employment and unemployment. A person is considered employed if he or she works at least an hour during the survey week. A person not working and actively searching for and willing to work is classified as being unemployed.

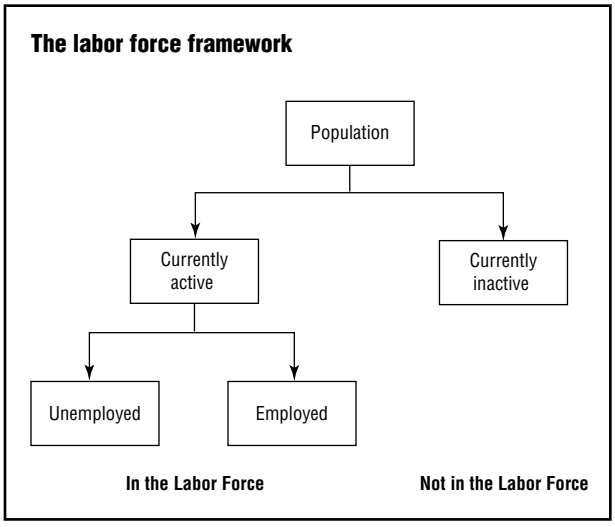

Figure 1

The official unemployment rate is the number of unemployed persons as a percentage of the labor force. While a rising rate usually indicates the economy is wasting resources and sacrificing income by not utilizing willing labor, it may also reflect a strengthening economy if the labor force is growing faster than employment.

International comparisons are difficult because countries vary the ILO definitions. However, the Organization for Economic Cooperation and Development (OECD) publishes standardized unemployment rates that reflect common definitions, and the U.S. Bureau of Labor Statistics publishes labor force statistics that convert foreign aggregates into estimates consistent with U.S. definitions.

HOW USEFUL IS THE OFFICIAL UNEMPLOYMENT RATE?

The official unemployment rate's ability to portray accurately the condition of the labor market is challenged because it is a narrow measure of labor underutilization. Critics call for broader measures to be published. There are many issues relating to the labor force concept itself, including whether unpaid workers should be included in the labor force and whether defense personnel and persons who are institutionalized should be included in the working-age population. Decisions made by national statistical agencies with respect to these cohorts influence the size of the labor force estimate and in turn the unemployment rate estimate.

In this section we concentrate on the issues arising from marginal workers and underemployment. Total labor underutilization (wastage) of willing labor resources arises for a number of reasons that can be divided between two broad functional categories: (a) unemployment or its near equivalent, which includes the official unemployed under ILO criteria and those classified as being not in the labor force on search criteria (discouraged workers), availability criteria (other marginal workers), and more broadly still, those who take disability and other pensions as an alternative to unemployment (forced pension recipients). These workers share the characteristic that they are jobless and desire work if vacancies were available. They are, however, separated by the statistician on other grounds; (b) suboptimal employment relations, where workers are classified as being employed but suffer "time-related underemployment," such that there are insufficient hours of work. Suboptimal employment also arises from an "inadequacy of the employment situation" when

skills are wasted, income opportunities denied, and/or workers are forced to work longer than they desire.

The official unemployment rate captures only a portion of this wastage. Broadening the concept of labor wastage involves recognizing other cohorts within the working-age population that share some similarities with the official unemployed.

First, focus on the rise of underemployment in many countries is increasing. While both sources of underemployment ("time-related" and "inadequacy of the employment situation") are possible to measure, in practice, estimates of time-related (or visible) underemployment are more easily obtained. Involuntary part-time workers face constraints similar to those confronting the unemployed. As estimated underemployment has risen around the globe, the official unemployment rate measured as the percentage of persons in the labor force not employed underestimates the extent of labor wastage. Governments that extol the virtues of employment growth generated under their watch rarely express it in terms of full-time equivalents and thus rarely admit that, in part, people are shifting from unemployment to underemployment.

Second, workers who are not working but have abandoned active search because they perceive there are insufficient job opportunities are classified as not in the labor force. These "hidden unemployed" or discouraged workers are similar to the official unemployed because they would accept a job offer immediately. They are also unlike others who are not in the labor force such as retirees.

A broad rule of thumb is that the true labor underutilization rate (including underemployment and hidden unemployment) is estimated by doubling the official unemployment rate.

We can consider two other working-age population cohorts that are less attached to the labor force but who nonetheless, by their size, provide some guide to the potential labor resources available to any country. First, persons who desire work but are unable to start immediately and are not actively searching are called marginal workers and are excluded from the labor force. But with some institutional changes (such as improved child or aged care) this cohort would accept immediate offers of employment. Second, in many countries the number of disability pension recipients has increased. These persons are excluded from the labor force on activity grounds. The increasing trend is arguably the result of health professionals and/or governments easing their interpretations of what constitute a disability when job prospects are low. Given that many of these persons are at the bottom of the labor queue (especially older males), pushing them out of the labor force reduces the unemployment rate and is thus politically beneficial in times of recession. In recent years, in strong employment-growth countries (for example, Australia) new measures have been introduced to induce this cohort back into the labor force in recognition that their disabilities may not preclude some capacity to work.

The justification for considering the broader underutilization concepts relates to the concept of labor efficiency. An economy that cannot provide enough hours of work to match the preferences of the available labor supply and/or institutional structures to maximize the participation of its potential labor resources is less efficient than one that can achieve these goals.

THE COSTS OF UNEMPLOYMENT

Is high unemployment a problem? Involuntary unemployment imposes heavy costs on the economy in the form of forgone output of goods and services and associated income. Economists typically ignore the social costs of unemployment. Unemployment also exacerbates social ills such as crime, family breakdown, and physical and mental health problems. Human capital (skills) atrophies when unemployment persists.

Strong spatial impacts reinforce the loss of income that accompanies unemployment. As a region's unemployment rate rises, more mobile workers (the youth and educated) leave such that skills are lost, making it hard to attract new business investment.

Many economists (mostly those who advocate a voluntarist conception) claim that unemployment is not a significant policy problem because it reflects the normal functioning of the labor market whereby job seekers use spells of unemployment to search for information about the career prospects that are available to them before settling into a career path. They specifically note that high youth unemployment is merely information-seeking behavior.

Focusing on short unemployment spells may be misleading given that many workers drop out of the labor force when they cannot find a job. Further, the transition by youth from a sequence of casual jobs to a higher paying career-oriented job is largely confined to those who combined schooling with casual employment while they acquire the skills necessary to satisfy entry into the chosen career path. While the casual work may have provided them with generic skills such as punctuality and grooming, the issue remains that those locked into the casual labor market and not combining work with schooling do not make such career transitions. Instead they sequence through a range of dead-end, low-paying jobs interspersed with spells of unemployment. For them unemployment provides no information.

WHAT CAUSES UNEMPLOYMENT?

Economists have used various taxonomies to help explain unemployment but remain in deep disagreement about its

causes. A major debate during the Great Depression centered on the extent to which unemployed individuals were acting voluntarily (classical position) or whether macroeconomic spending deficiencies imposed systemic constraints (lack of jobs) on individuals who become involuntarily unemployed (Keynesian position). Marx had earlier provided analysis supporting the demand-deficient explanation. In his 1936 *General Theory*, Keynes turned this idea into a full-blooded rejection of classical employment theory, and Keynesian theory subsequently dominated macroeconomics until the mid-1970s. It provides the most accessible unemployment taxonomy for the layperson by distinguishing between frictional, structural, and cyclical unemployment.

Jobs are continuously being created and destroyed as industries grow and wane, and these processes generate huge flows of workers moving between jobs. So even when demand for goods and services is strong, there will be a coincidence of unfilled vacancies and unemployed persons. This unemployment is called frictional because it arises from frictions that accompany job turnover. Workers take time to find and move to new jobs, and firms take time to locate required labor. While it clearly represents an irreducible minimum level, there is some confusion between this level of unemployment, which is likely to be low, and the concept of natural rate of unemployment, which is explained below. Both have been referred to as the irreducible level of unemployment.

Keynesian theory considers firms' supply output and hires workers in response to the demand for goods and services. Demand-deficient or cyclical unemployment arises when the demand for labor overall (indicated by unfilled vacancies) drops below the number of workers who desire employment. The lack of jobs is experienced across all regions and industries. Cyclical unemployment reflects a systemic failure, with individuals powerless to improve their job prospects. Most economists agree that cyclical fluctuations in unemployment are caused by changes in the demand for labor rather than shifts in workers' attitudes to work. As a result, most would agree that mass unemployment is involuntary. The policy solution to demand-deficient unemployment is to use expansionary fiscal and/or monetary policy.

The concept of structural unemployment sits uneasily within this framework. It reflects a mismatch between the requirements of available jobs and the characteristics of job seekers and arises even if there is no overall demand deficiency. This mismatch could be in terms of skills and/or locations and is of concern because the retraining and relocation of labor take time and resources. Structural mismatch may arise as changes in industry composition, reflecting changing consumer spending patterns, cause regional dislocation as growing industries seek new labor skills and declining industries shed skills. Adjustment is slow because the social settlement (where people live) is less mobile than the economic settlement (where jobs are created).

Technological change also creates skill obsolescence and a demand for new skills. A particular variant of this idea is found in the emergence in the 1970s of the deindustrialization literature, which focused on manufacturing decline (and to some extent the decline of mining) and the simultaneous rise of services. The amorphous concept of globalization is interwoven into these discussions to explain job loss in particular regions and industries as a result of employment being "exported" to lower cost regions and countries. If there is structural unemployment, expansionary policies will come up against bottlenecks and invoke inflationary impulses. Instead, training and mobility incentives are required to ease the mismatch. In this sense, structural unemployment is a microeconomic problem.

However, the boundaries between cyclical and structural causes are blurred. For example, theories of hysteresis conclude that the current state of the economy reflects where it has been. Accordingly, cyclical fluctuations create structural imbalances, which can be reversed through macroeconomic expansion. For example, recession generates skill obsolescence as old capital is scrapped and/or long-term unemployment causes skills to atrophy. This structural problem is reversed as the economy resumes growth because firms lower their hiring standards and provide training opportunities as a way around perceived skill shortages.

Clearly, the idea that individuals can experience involuntary outcomes underpins this taxonomy and overlaps with the voluntary/involuntary taxonomy that was central to the "Keynes versus Classics" debates in the 1930s and persists today. The Great Depression spawned macroeconomics as a new and distinct field of study, and center stage was the concept of involuntary unemployment, which challenged the neoclassical orthodoxy. The neoclassical competitive model postulated that the equilibrium unemployment rate is determined by the intersection of labor supply and demand, both functions of the real wage. As labor supply reflects workers' preferences between labor and leisure (real wage is the opportunity cost of leisure) and labor demand reflects the marginal productivity of labor (profit-maximizing firms equilibrate the real wage with the marginal product), flexible real wages guarantee full employment. At the full employment real wage, any firm can find a suitable worker and any worker can find a suitable job. Any observed unemployment is deemed voluntary (worker preference for leisure). When the real wage is above the full employment level, the resulting unemployment is caused by real wage rigidi-

ties such as excessive legislated minimum wages and trade unions wage setting power.

This type of unemployment is termed classical and is solved by real wage cuts to restore the equilibrium level where labor demand equals labor supply. During the Great Depression, the government tried neoclassical remedies without success. In the 1930s, Kalecki and Keynes, building on the earlier work of Marx, challenged this dominant view. They saw mass unemployment as a systemic failure in demand for goods and services—that is, cyclical. Deficient effective demand causes firms to lay off workers. Neoclassical remedies would exacerbate this Keynesian unemployment because real wage cuts reduce worker incomes, further eroding effective demand. As firms adjusted to the lower activity by producing and employing less, an exogenous force in the form of expansionary fiscal and/or monetary policy was needed to push the economy toward higher activity levels.

Keynesian unemployment is involuntary because an individual unemployed worker cannot improve his or her job prospects in the face of employment rations imposed by deficient effective demand. This concept challenges the centerpiece of neoclassical theory known as Say's law, which holds that aggregate demand always absorbs production, given price flexibility. Keynes showed that even with flexible prices, unemployment would persist until the deficient demand was eliminated. This observation underpinned the so-called Keynesian revolution that dominated the next thirty years of policy making. The period of full employment up until the mid-1970s gave policy makers confidence that the business cycle had been tamed.

Neoclassical economists argue that the concept of involuntary unemployment is implausible because it implies irrational behavior by individuals. Why would workers not simply accept lower real wages? Keynesians respond by arguing that workers prefer higher money wages at each real wage level because they have large nominal commitments (such as mortgages). Resisting a money wage cut was rational even if real wages were falling (via general price-level rises) because nominal commitments could be maintained. Keynesians also argue that workers are unable to engineer a real wage cut by accepting a lower money wage because the lower costs would lead to competitive price-cutting with no guarantee of a lower real wage. But this was moot because even if real wages fell, firms would still not hire if the cheaper labor produced goods and services that could not be sold (given deficient demand).

The major policy challenge for Keynesians in a period of full employment was inflation as economies approached full capacity. A vast literature has emerged since the late 1950s examining the relationship between the unemployment rate and inflation—the so-called Phillips curve (Phillips 1958). Policy makers came to believe that they faced a stable trade-off between the twin evils of unemployment and inflation and sought to choose the combination that maximized social welfare.

The challenge to the Keynesian macroeconomic consensus was ignited by the "monetarist" contributions of Friedman (1968) and Phelps (1967). They disputed the existence of a stable Phillips curve that could be exploited using aggregate demand policy. For example, the misperceptions hypothesis (Friedman 1968) considers that workers possess less short-run information than employers about the relationship between relative and absolute price levels. Accordingly, workers can be induced to supply more labor than is optimal given their preferences for as long as they are confused about their real wage level. They thus believe that a nominal wage rise is a real wage rise and supply more labor accordingly. Once they learn the truth, they withdraw this supply and equilibrium is restored. So any policy-induced reductions in the unemployment rate bought by tricking workers into supplying more labor than was optimal would evaporate. The long-term implication was that there is a "natural" unemployment rate that reflects the underlying microeconomic structure of labor supply and labor demand, and any attempts by fiscal and monetary authorities to drive unemployment below this equilibrium generate ever increasing rates of inflation.

The essence of all supply-side explanations is that workers quit when times are bad despite all evidence to the contrary. The pro-cyclicality of quitting challenges the very core of the neoclassical labor market model.

However, the rising inflation associated with the Vietnam War and the oil price hikes in the early 1970s provided a fortuitous empirical backdrop to the growing backlash against Keynesian demand management policies. While there was scant empirical support to associate rising inflation with the mechanisms that underpinned the natural rate hypothesis, the revival of Say's law was broadly accepted by economists and policy makers.

Keynesians such as Clower (1965) and Leijonhufvud (1968) provided resistance to the natural rate hypothesis by showing that no market signals accompanied mass unemployment such that firms would hire more workers, even though these workers had notional demands for their products. The problem was that without income these demands were not effective. The market coordination implicit in Say's law failed in these situations, leaving the economy stuck in an under-full-employment equilibrium.

By the 1970s, the "new labor economics" reinstated neoclassical notions of voluntarism in explaining unemployment, a view that still dominates labor market policy today. Accordingly, unemployment arises from workers'

need to search for new jobs and jobless spells are voluntary, maximizing strategies in pursuit of career improvement. Workers balance the costs of search (time and forgone earnings) with the gains in future earnings that emerge from successful search. Importantly, welfare benefits are seen as subsidizing search and encouraging long-term unemployment.

The reality is that while most job search activity is done on the job, many unemployed workers experience frequent spells of unemployment interspersed with low-skill, low-paid employment. Segmented labor market theory uses this observation to argue that structural rigidities, principally due to hiring policies of employers, discriminate against disadvantaged groups and confine them to marginal jobs and status (Doeringer and Piore 1971).

MODERN DEBATES ABOUT CAUSES OF AND REMEDIES FOR UNEMPLOYMENT

The breadth of the acceptance of the new labor economics by economists and policy makers was expressed in the influential 1994 OECD Jobs Study, which provided a policy blueprint for economic policy reform aimed at reducing unemployment following the deep recession in 1991. Its theoretical foundations can be found, for example, in Layard, Nickell, and Jackman (1991), LNJ for short. While, economists such as LNJ mimicked the traditional neoclassical concern about trade union power and legislated minimum wages, they also focused on welfare payments as a cause of persistent unemployment. They argued that the provision of unemployment assistance subsidized inactivity by reducing the intensity and effectiveness of job search. As a result of this subsidy, the wage necessary to induce the worker to abandon unemployment and accept work (the so-called reservation wage) is higher. Further, various government charges on employment (such as superannuation and termination payments) drive a wedge between what the worker receives and what the firm pays, which discourages firms from increasing employment. It was also argued that the long-term unemployed had deficient skills and required retraining to improve their employability.

The Jobs Study concluded that long-term unemployment was the outcome of government intervention, other institutions (such as trade unions), and/or negative attitudes to work of the unemployed that created rigidities in labor supply. The Jobs Study advocated extensive supply-side reform with a particular focus on the labor market to eliminate rigidities that were inhibiting the capacity of economies to adjust, innovate, and be creative. Governments variously adopted the reform agenda. It was typically accompanied by a narrowing of the focus of monetary policy to inflation control, which used unemployment as an instrument to achieve price stability rather than as a policy target. Further, governments adopted fiscal conservatism (for example, the Stability and Growth Pact in Europe) to passively support their inflation-first monetary policy emphasis. Policy makers believed that disinflation policy would allow the economy, after an adjustment phase, to settle at the natural rate optimum, and as a consequence they did not worry about any alleged "short-run" negative impacts of disinflation on unemployment. They considered that the micro focus of the Jobs Study would ensure there were no impediments to reaching this supposed natural rate.

However, high unemployment persisted in many countries during the 1990s, which prompted critics of the OECD position to say that governments had been encouraged to abandon full employment in favor of full employability. The critics said that unemployment existed long before unions had grown and welfare transfers operated. They also said that it was implausible to interpret the mass unemployment of the Great Depression as a sudden labor supply withdrawal.

In recent years, partly in response to the reality that active labor market policies have not solved unemployment and have instead created problems of poverty and urban inequality, some notable shifts in perspectives are evident among supporters of the OECD approach. Various econometric studies sought to establish the empirical veracity of the OECD Job Study relationships between unemployment, real wages, welfare payments, and the like. They also sought to evaluate the effectiveness of active labor market program spending. Many construct their analyses in ways that are most favorable to the null that the OECD view is valid. The overwhelming conclusion to be drawn from this literature is that there is no consensus view (see Freeman 2005; Baker, Glyn, Howell, and Schmitt 2005).

In the face of the mounting criticism and empirical argument, the OECD has now significantly shifted its position. In the 2004 *OECD Employment Outlook*, it admitted that the evidence underpinning the neoclassical relationship between real wages and unemployment was fragile. In the 2006 *OECD Employment Outlook*, which followed a comprehensive econometric study of employment outcomes across twenty OECD countries between 1983 and 2003, the OECD (2006) found that:

- There is no significant correlation between unemployment and employment protection legislation;
- The level of the minimum wage has no significant direct impact on unemployment; and
- Highly centralized wage bargaining significantly reduces unemployment.

These conclusions undermine the basic causality in the Jobs Study. They also confound those who have relied on the OECD's previous work, including the Jobs Study, to push through harsh labor market reforms, retrenched welfare entitlements, and policies aimed at reducing the role of trade unions.

Internationally, sentiment is growing that paid employment measures must be a part of the employment policy mix if unemployment is to be reduced. The lack of consideration given to job creation strategies in the unemployment debate stands as a major oversight. Recognition is growing that programs to promote employability cannot, alone, restore full employment and that the national business cycle is the key determinant of regional employment outcomes (Mitchell 2001; Peck 2001).

SEE ALSO *Business Cycles, Real; Natural Rate of Unemployment; Underemployment; Unemployable; Unemployment*

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William Mitchell

UNEMPLOYMENT, VOLUNTARY

SEE *Voluntary Unemployment.*

UNEQUAL DEVELOPMENT

SEE *Unequal Exchange.*

UNEQUAL EXCHANGE

The liberal theory of free trade based mainly on the theory of comparative advantage is regarded as a win-win situation without any limitations. During the 1950s, however, development theorists presented a challenge to this well-established neoclassical theory. The theory of *unequal exchange* is a reaction to the naïve theory of comparative advantage. It provides a Marxist notion of the exploitation that is embedded in the comparative advantage theory.

The development of the theory of unequal exchange has followed several directions. First, some writers, including Andre Gunder Frank in *Capitalism and Underdevelopment in Latin America* (1967), argued that comparative advantage is not a natural endowment; rather, it is created by historical power relations through the exploitation of nations.

Second, some researchers examined the distributional inequalities of trade. Thus, the Prebisch-Singer thesis reveals that the terms of trade work against developing countries. This well-known issue of dependency theory was systematically developed in the 1950s (Ghosh 2001).

Third, on the basis of assumptions of the restricted mobility of labor and the perfect mobility of capital, Arghiri Emmanuel (1969) formally developed the theory

of unequal exchange. He argued that under a situation of perfect competition, trade between developed and developing countries involves a transfer of surplus from the latter countries. In a situation of equal productivity in developed countries (DCs) and less developed countries (LDCs), but lower wages in the LDCs, high-priced products of the DCs are exchanged for low-priced products of the LDCs. Hence, the exchange is unequal. Emmanuel noted that since wages are institutionally determined, they are exogenous to the model. However, in DCs, trade unions have a critical role in raising wages. But this is not the case in LDCs. In the process of unequal exchange, there is a transfer of value from a country with low capital intensity (often a developing country) to a country with high capital intensity in production (as in a typical developed country).

Emmanuel, an Italian Marxist, has used the Marxian theory of transformation of value into prices to show that LDCs are compelled to sell their goods at prices below their value and to purchase goods from DCs at prices above their value. In the process, the advanced countries appropriate more labor time than they generate in production. In other words, DCs can get commodities from LDCs at lower prices than would have been available in their own countries. In this process of exchange, LDCs stand as losers, and DCs as gainers.

Emmanuel's analysis has been subjected to severe criticism by many scholars, including Paul Samuelson, who tried to demonstrate that the argument developed by Emmanuel is preposterous. According to Samuelson, Emmanuel concentrated simply on the circulation sphere and failed to recognize the productivity differentials between core and peripheral countries. Emmanuel is also criticized on the grounds that he treated wages as an exogenous variable.

Samir Amin (1970) presented a new version of unequal exchange by considering wages as an endogenous variable, and he showed that unequal exchange allowed capitalist countries to protect profits. To him, the dominance of foreign capital in LDCs means distorted export activity and the hypertrophy of the tertiary sector. Peripheral countries thus incur heavy debts to core countries, become necessarily dependent on them, and become linked with the world capitalist system.

In the new world order, trade is organized largely by powerful multinational companies without any regard for small peasants and poor workers. The social cost of trade in terms of damage to the environment and human rights is much greater in LDCs. Even in a situation of trade based on comparative advantage, the gains from trade are not equally distributed. Because of the many structural differences between the LDCs and the DCs, factor price equalization is not possible. Domestic wages are falling in LDCs due to the *race to the bottom* and the informalization of labor markets (Ghosh and Guven 2006). The advantage of productivity gains through higher wages has never trickled down to LDCs through the channel of trade. Unequal competition and dissimilar bargaining powers between these two groups of countries make the theory of unequal exchange still relevant.

SEE ALSO *Amin, Samir; Marx, Karl; Prebisch, Raúl; Prebisch-Singer Hypothesis; Samuelson, Paul A.; Singer, Hans; Terms of Trade; Trade*

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B. N. Ghosh

UNICAMERALISM

SEE *Bicameralism.*

UNIDENTIFIED FLYING OBJECTS

Any discussion of unidentified flying objects (UFOs) invokes multiple, often contradictory, meanings. In popular culture the UFO is an emblem of atomic-age anxiety and desire. Nonetheless, there were unidentified airship sightings in late nineteenth century America and scholars have documented striking parallels between UFO encounters and traditional fairy lore. Some UFO believers describe UFOs as prophetic missives from spiritual realms while other equally passionate believers locate UFOs in scientific and political quests.

An aura of marginality is an essential feature of UFO believers. Simultaneously, however, fascination with UFOs is mainstream. A 2002 Roper poll sponsored by the Science Fiction Channel suggested that a majority of

Americans believe in the existence of UFOs. Groups based on interest in UFOs (such as the research oriented Mutual UFO Network; support groups for alien abductees; and Internet communities) encompass multiple aesthetic and epistemological affinities spanning generational, class, racial, and geographic boundaries. Interpretations of UFOs are made to fit into larger patterns of belief ranging from anti-government conspiracies to Christian eschatology (i.e., the end of the world). UFOs are said to be involved in unknown phenomena such as mysterious patterns appearing in grain fields—crop circles—and cattle mutilation. Perhaps the only fixed feature of the UFO is its openness as a symbol; always remaining "unidentified" has made the UFO an icon for uncanny elements of life in a rationalized age.

A major theme in UFO discourse is the paucity of official scientific research into extraterrestrial visitation. (UFOlogy is the study of UFOs.) Reports of UFO encounters have been studied through official venues, though these results tend to further the division between UFOlogy practiced by amateurs and authoritative forms of power and knowledge. In 1947 the Army Air Force began one of three investigative studies into reported UFO sightings. The final investigation, Project Blue Book, ended in 1969 with the conclusion that natural phenomena accounted for most UFO sightings. As with many UFO-related conclusions, however, this one remained open. One of its own participants, astrophysicist J. Alen Hynek, was dismayed by the investigation's lack of scientific rigor and open-mindedness, especially regarding ambiguous reports that could not be explained as natural phenomena ([1972] 1998). Hynek assumed the rationality of most UFO witnesses and renounced his initial skepticism to become a major figure of UFOlogy.

In social science UFO belief has been studied for insights into religion, memory, psychology, and culture. Scholars of "new religions" make no claim as to the reality or falsity of UFOs but track religions or "cults" that arise out of the belief. In recent studies in psychology and memory at Harvard, researchers found abduction memories were linked to common brain states between sleeping and waking (Clancy 2005). Scholars in anthropology and cultural studies have also studied UFOs in the context of larger social and cultural meanings (Dean 1998, Battaglia 2005). Beginning with psychologist Carl Jung (1875–1961) to the beginning of modern UFO belief in the mid-twentieth century, scholars of psychology, religion, and culture emphasized the mythic elements of UFO belief. UFO history itself is organized through large stories of events that come to function like origin myths. Such narratives include the "first sighting," the "first crash" and the "first abduction."

THE "FIRSTS": ORIGIN NARRATIVES

UFOs are often said to enter American life through Kenneth Arnold, a respectable businessman and pilot who was flying solo in Washington State on a clear afternoon, on June 24, 1947. After Arnold saw nine unidentifiable objects flying over the Cascade Mountains he told a reporter the objects moved in the sky like saucers, thus coining a lasting term. Although other strange flying objects had been reported in the year before Arnold's sighting, his sighting became the originary narrative of UFO culture and was the impetus for the military's first UFO investigations. In the U.S. government, there was worry about both extraterrestrials and a possible secret weapon in development. From this beginning, UFOs were entangled with technological military development.

Weeks after Arnold's sighting a crashed flying saucer was reported from Roswell, New Mexico, the only military base with an atomic bomb unit. A rancher named Mac Brazel had discovered mysterious wreckage scattered over the countryside, including pieces covered in what appeared to be hieroglyphics. Sometime in the next few days, amid the excitement of flying saucer talk around America, Brazel reported his find to the local sheriff, who in turn reported it to the Army Air Field's (AAF) intelligence officer, Jesse Marcel. The AAF issued a press release that led the Roswell *Daily Record* to report on July 8 that a flying saucer had been captured by the Air Force near Roswell. But within a day, Brigadier General Roger Ramey called the press, changing the UFO explanation to that of a crashed high-altitude weather balloon.

STORIES OF CONSPIRACY

The incident receded. Its uncanny and conspiratorial elements emerged in the late 1970s when Stanton Friedman, a UFO researcher with a background in nuclear physics, happened to meet Marcel and began to investigate the case. Friedman claimed that the government had been hiding evidence of this crashed UFO for decades. In subsequent research by Friedman and other researchers, one part of the story grew especially salient: Alien bodies had been recovered and hidden by the government for research. Reports grew of the military threatening witnesses. Friedman used testimony from a recently-emerged witness to propose that two extraterrestrial crafts had crashed in the area, and the government had secreted the crafts along with the alien bodies. In another twist, a former Pentagon official and army colonel named Philip Corso claimed not only that he had seen alien bodies from the Roswell crash but that the United States had developed modern technology, such as the integrated circuit and the laser, by studying the extraterrestrial craft. There was speculation that the UFOs had made their way to

Area 51, a top-secret high technology military base bordering the Nevada nuclear test site.

In 1994 Representative Steven Schiff of New Mexico requested the release of government files on Roswell under the Freedom of Information Act. To Schiff, the files were unsatisfactory, containing scant and redacted pages. Finally, however, Schiff's appeals to the Congressional General Accounting Office led to revelations about a secret cold war program in 1947 called Project Mogul. Scientists from New York University had launched balloons in New Mexico carrying devices meant to track nuclear tests by the Soviet Union. One of these had disappeared near Roswell during the appropriate time period. The balloons had some of the physical qualities described by witnesses fifty years earlier, such as tape containing symbols that could have been mistaken for alien hieroglyphics. This explanation has created controversy among UFO researchers, some of whom are convinced and some of whom still believe in the extraterrestrial hypothesis.

The original story of the first abduction contained themes that set a pattern for subsequent cases. In September 1961 a couple from New Hampshire named Betty and Barney Hill experienced "missing time" while driving in the White Mountains. Strange dreams and Barney's anxiety prompted them to seek out hypnotherapy, which revealed memories of having been abducted. According to the Hills, the couple had seen a UFO approaching and their car engine had failed. Like most alleged abductees, the Hills described a medical violation of their bodies, especially their sexual organs.

ABDUCTION PATTERNS

Since the case of the Hills, many abduction narratives have followed a similar pattern of clinical experimentation and violation based on human reproduction. Some people recall seeing "hybrids," offspring between humans and extraterrestrials.

Budd Hopkins (1981) and David Jacobs (1992) have been at the forefront of this narrative's circulation for twenty years, often relying on hypnosis to elicit traumatic abduction memories. Symptoms of abduction that might lead one to seek hypnotic regression include missing time, unexplained marks on the body, unexplained mechanical failures, strange dreams, and "screen memories" of things representing extraterrestrials. In one famous case, logger Travis Walton says he was abducted from Arizona by extraterrestrials for several days. In most instances documented by Hopkins and Jacobs, however, the missing time is hours, not days, and there are rarely witnesses.

While many people who claim to be abductees portray abductions as terrifying, it is often more complex. A belief in benevolent spiritual extraterrestrials, prevalent in the mid-twentieth century, became an ambivalent, complex discourse of personal transformation. The process of post-traumatic spiritual enlightenment undergone by "alien abductees" is best known from the work of two men: Whitley Strieber, who in the 1980s turned from writing best-selling science fiction and fantasy novels to writing a nonfiction account of his own encounters with extraterrestrials; and John Mack, a Harvard psychiatrist who, late in a distinguished academic and clinical career, began working with people who said they had memories of alien abduction and experienced great spiritual growth.

SEE ALSO *Cults; Ethnology and Folklore; Lay Theories; Myth and Mythology; Popular Culture; Science Fiction*

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Susan Lepselter

UNIFORM BERTRAND'S PARADOX

SEE *Distribution, Uniform.*

UNILATERALISM

The term *unilateralism* describes an approach toward conducting foreign policy in which a country does not subordinate its aims or actions to the wishes of other countries or the constraints of international agreements. While few would advocate discarding all multilateral commitments, there is disagreement over the degree to which a country (and especially, a hegemon like the United States) ought to pursue its foreign policy in a unilateral fashion.

Although the debate over unilateralism became heated during the administration of President George W. Bush, the concept has a long history in U.S. foreign policy. In his 1796 farewell address, President George Washington (1732–1799) urged the United States to "steer clear of permanent alliances with any portion of the foreign world, so far … as we are now at liberty to do it." Advocates of unilateralism emphasize that such a policy does not imply isolationism. Nor does it imply that the ends sought by a country are narrowly defined or that they neglect the interests of other countries. Indeed, Charles Krauthammer celebrates a "new unilateralism" that, he argues, "is clear in its determination to self-consciously and confidently deploy American power in pursuit of … global ends" (2002/2003, p. 14), such as promoting democracy and maintaining peace and stability. In this view, the hegemon has unique responsibilities in managing the international system that other states may not share or even support.

Countries with less power naturally seek to restrain the hegemon. Robert Kagan, for instance, argues that "Europe's military weakness has produced a perfectly understandable aversion to the exercise of military power" (2002, p. 10). Ideology, economic interests, domestic politics, or honest disagreement about the wisdom of a particular policy may also lead smaller powers to oppose the hegemon's unilateralism. As a result, there may simply be little the hegemon can do to assuage smaller countries. Furthermore, American unilateralists argue that the United States should not, as President Bush remarked in his 2004 State of the Union address, "seek a permission slip to defend the security of our country."

A unilateral approach does not shun allies, but it counsels against adjusting one's policies to accommodate the views of other states. As U.S. Secretary of Defense Donald Rumsfeld said in 2002: "The mission must determine the coalition, and the coalition must not determine the mission. If it does, the mission will be dumbed down to the lowest common denominator, and we can't afford that." According to Rumsfeld, exercising strong leadership will eventually bring countries on board. As Krauthammer argues, "no one wants to be left at the dock when the hegemon is sailing" (2002/2003, p. 17).

By contrast, critics argue that acting unilaterally reduces a country's ability to achieve its interests and increases the associated costs of its foreign policy. Part of the reason why unilateralism is such an inefficient way to achieve national goals lies in its lack of legitimacy. As a result, other states will be less likely to support or cooperate with such policies, reducing the probability of success. Power is less costly to exercise when it takes the form of authority, combining power with consent from others. Moreover, other countries find a hegemon's unilateralism threatening and are thus more likely to balance against it. By contrast, multilateralism signals that a state is taking the interests of other countries into account in formulating its own foreign policy; this poses less of a threat to other countries and reduces the chances that they will align against the hegemon. Although there is much debate over whether such counterbalancing occurs, survey evidence makes clear that the United States is perceived by much of the world as acting unilaterally and that this has generated widespread resentment since the late 1990s.

Advocates of unilateralism answer critics by pointing out that while there may be costs to unilateralism, there are also costs to multilateralism. John Bolton, the U.S. ambassador to the United Nations during George W. Bush's second term, argued that "the costs [of multilater-

alism] to the United States—reduced constitutional autonomy, impaired popular sovereignty, reduction of our international power, and limitations on our domestic and foreign policy options and solutions—are too great, and the current understanding of these costs far too limited to be acceptable" (Bolton 2000, p. 221). Similarly, in an overview of the case against unilateralism from the standpoint of international relations theory, Stephen G. Brooks and William C. Wohlforth (2005) argue that most scholars oppose unilateralism on substance grounds and have provided only weak theoretical reasons to criticize the approach on more general procedural grounds.

In economic relations, the term *unilateralism* is used more specifically to refer to trade policies, frequently carried out by the United States during the 1980s and 1990s, that involve imposing sanctions on countries whose markets are deemed to be closed to foreign products. Proponents of this approach argue that only this pressure can pry open previously closed markets; thus, unilateralism could increase the total amount of international trade and improve world welfare. In particular, they argue that countries such as Japan that are characterized by structural or informal trade barriers often do not respond to multilateral rules and thus require more forceful measures—such as results-oriented managed trade—to break into their markets.

Critics of so-called aggressive unilateralism, such as Jagdish Bhagwati (1990) and Douglas A. Irwin (1994), respond by questioning whether in fact these countries are really acting "unfairly." To the extent that powerful countries, responding to domestic pressure, threaten sanctions against allegedly closed markets, the targeted state might respond by satisfying the complaining state, thereby diverting trade from countries with less political clout. The result would thus not be more trade, but rather discrimination in favor of the powerful. Within the target country, the power of bureaucrats would be expanded rather than reduced—an effect that would slow down the country's integration into the world trading system. Most seriously, when powerful countries determine for themselves whether other states are acting unfairly, the rule of law in the international trading system is undermined. As Bhagwati writes, "the world trading regime should not be built on the assumption that any one player, no matter how dominant, can impose its own rules, unilaterally claiming social legitimacy for them" (1990, p. 36). In fact, the spread of this policy was an important factor in building support for the creation of a stronger World Trade Organization (WTO). Since the creation of the WTO, such resorts to unilateralism have declined. Nonetheless, as the controversy over antidumping duties suggests, the issue has by no means disappeared.

SEE ALSO *Bilateralism; Internationalism; Multilateralism; Trilateralism; United Nations*

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Jonathan Crystal

UNION OF SOVIET SOCIALIST REPUBLICS

The Soviet Union was the world's first Communist state, the West's principal adversary during the cold war, and a dominant force in international affairs until its collapse in 1991. Moreover, the Soviet Union was the world's largest country stretching from the Baltic and Black Seas to the Pacific Ocean. It also had over one-hundred distinct nationalities living within its borders, making it extremely diverse. Thus, it is not surprising that almost every social science subfield devoted much time and effort to studying various aspects of the Soviet Union. This makes the amount of social science research produced on it almost impossible to quantify.

The history of the Soviet Union begins with the Russian Revolution of 1917. In February of that year the wartime decay of Russia's economy and morale triggered a

spontaneous popular uprising in Petrograd. This culminated in the imperial government of Czar Nicholas II (1868–1918) being overthrown. After the formation of a provisional government, workers councils, known as soviets, began to sprout up throughout the country to protect the rights of the working class. This allowed the Bolsheviks (Communists) to arouse widespread interest in a socialist revolution. Eventually, in November 1917, the Bolsheviks, led by Vladimir Lenin (1870–1924), seized power from the provisional government and established the world's first Communist government.

Immediately after the Bolsheviks came to power a civil war erupted between the Communist Red Army and the loosely allied anti-Communist White Army. Despite struggling for survival throughout the bitterly fought civil war, there was no doubt that the Communists would emerge victorious by the end of 1920. Finally, after securing power, the Bolsheviks officially established the Soviet Union in December 1922. Lenin, as head of the party, became the de facto ruler of the country.

Under Lenin, the new government centralized its control over the political, economic, social, and cultural lives of the Soviet people by prohibiting other political organizations and inaugurating one-party rule. However, Lenin realized that a radical approach to communism did not suit existing conditions and jeopardized the survival of his regime. In turn, under the program that came to be known as the New Economic Policy, the state sanctioned partial decentralization of the economy; market forces and the monetary system regained their importance, but heavy industry remained under state control.

As the Communist Party continued to consolidate its authority throughout the country, it became a monolithic presence. However, in May 1922 after Lenin became temporarily incapacitated by a stroke, the unity of the Communist Party fractured. This facilitated Joseph Stalin's (1879–1953) rise to power, and he became general secretary in April 1922. Lenin's death in January 1924 cemented Stalin's dominance over the Politburo, the executive committee of the Communist Party.

THE STALIN ERA

Transformation and terror best characterize the first decade of Stalin's rule. Beginning in the late 1920s, Stalin began carrying out a program of intensive socialist construction by rapidly industrializing the economy and nationalizing all industry and services. At the same time, Stalin began purging from the Communist Party all leaders and their followers deemed disloyal. The most prominent leader was Leon Trotsky (1879–1940), a Bolshevik revolutionary and a founding member of the Politburo.

Soviet foreign policy also underwent a series of changes. Lenin realized that the Soviet government required normal relations with the Western world for it to survive. Stalin, by contrast, aimed to exasperate social tensions in Europe to produce conditions favorable to Communist revolution. Nevertheless, the dynamics of Soviet foreign relations changed drastically after Stalin recognized the danger Nazi Germany posed. In turn, to constrain Germany, the Soviet Union built coalitions that were hostile to fascism. Furthermore, it gave assistance to antifascists in the Spanish Civil War (1936–1939).

After France and Britain acquiesced to Adolph Hitler's (1889–1945) demands for Czechoslovak territory at Munich, Germany, in 1938, Soviet foreign policy shifted again; Stalin decided to come to an understanding with Germany. This culminated in the Nazi-Soviet Nonaggression Pact of August 23, 1939, which called for absolute neutrality in the event one of the parties became involved in war. However, after World War II (1939–1945) broke out, Hitler began preparing for war against the Soviet Union. Germany finally declared war on the Soviet Union in June 1941. Although the Great Patriotic War, as World War II was referred to in the Soviet Union, began inauspiciously for the Soviet Union, the war with Germany ended triumphantly for the Soviets.

The Soviet Union rebuilt its economy during the immediate postwar period and continued to maintain strict centralized control over state and society. It also emerged from the war as a world superpower along with the United States. In turn the Soviet Union began taking an active role in the United Nations as well as in other major international and regional organizations. However, as it turned many Eastern European countries into satellite states and set up the Warsaw Pact and Comecon (economic and military organizations of Central and Eastern European Communist states), the Soviet Union's relations with the West became extremely tense. This led to the protracted geopolitical, ideological, and economic struggle between capitalism and communism known as the cold war.

FROM STALIN'S DEATH TO GORBACHEV'S REFORM

Stalin died on March 5, 1953. Since Stalin did not name an heir, a factional power struggle broke out within the party. After the succession struggle abated, Nikita Khrushchev (1894–1971) emerged as first secretary. By the beginning of 1956, Khrushchev was the most important figure within the Soviet leadership. Khrushchev even denounced Stalin and launched a campaign to ease the repressive controls over party and society. But, Khrushchev did face significant opposition in the Presidium, or Politburo, which threatened much needed economic reform and the de-Stalinization campaign. The

Presidium even voted Khrushchev out of office in June 1957, but the Central Committee (the highest body of the Communist Party of the Soviet Union to which the Politburo reported to) overturned the decision and expelled Khrushchev's opponents. After becoming prime minister in March 1958, Khrushchev's position in the state and party was solidified.

Khrushchev attempted to carry out domestic reform in a range of fields, but economic difficulties and political disarray remained. At the same time, events such as the suppression of democratic uprisings in Hungary and Poland in 1956 hurt the Soviet Union's international stature. Furthermore, Khrushchev's efforts to improve relations with the West suffered many setbacks, especially after the Cuban Missile Crisis (a cold war conflict between the United States and the Soviet Union regarding a Soviet buildup of nuclear missiles in Cuba). These events highlighted the fact that Khrushchev never exercised the high level of authority that Stalin did.

In October 1964 the Presidium voted Khrushchev out of office again. Khrushchev's removal from office was followed by another period of rule by collective leadership. During this time, the Soviet leadership experimented with economic reform and several individuals contended for power. This situation lasted until Leonid Brezhnev (1906–1982), who attained the post of first secretary in 1964, became the most important figure within the Soviet leadership in 1971. During Brezhnev's sixteen years as first secretary, economic and political reform was nonexistent. The Soviet Union also stepped up its repression against political dissidents and even tolerated popular expressions of anti-Semitism.

Soviet relations with the West first improved in the years after Khrushchev, which led to *détente*, or a relaxing of strained relations, in the early 1970s. Although the international community viewed this as a positive development, the use of force in Eastern Europe to suppress reform movements, attempts to broaden its influence in the Middle East, and its expanding influence in the developing world in accordance with the strategy of non-alignment caused improved relations to be short-lived. Finally, détente appeared dead when Brezhnev sent armed forces into Afghanistan in December 1979 to shore up the Communist government there. This along with economic stagnation proved to be formidable challenges for the Soviet leadership after Brezhnev's death in 1982.

After the rapid succession of Yuri Andropov (1914–1984) and Konstantin Chernenko (1911–1985), the reform minded Mikhail Gorbachev (b. 1931) became general secretary in March 1985. To fix the crumbling Soviet political and economic structures, Gorbachev implemented the *perestroika* program to improve living standards and worker productivity and *glasnost*, which freed public access to information after decades of government regulations. This reinvigorated détente allowed Gorbachev to develop a strong relationship with President Ronald Reagan (1911–2004) of the United States. However, the impact the policies had on the Soviet Union's political and economic structures was not so positive.

THE SOVIET UNION'S DEMISE

Although there is debate over what exactly caused the Soviet Union's demise, it is clear that the policies of *perestroika* and *glasnost* led to unintended consequences that greatly contributed to this. This is because the relaxation of censorship on the media brought to light many of the severe social and economic problems the Soviet government claimed did not exist; events such as the ongoing war in Afghanistan and the Chernobyl nuclear power plant disaster in 1986 exasperated this. These negative aspects of Soviet life, in turn, undermined the faith of the people in the Soviet system and eroded the Soviet Union's identity and integrity. Moreover, improved relations with the West infuriated Soviet hardliners.

This led to upheaval throughout the Soviet Union and in its Eastern European satellite states. In the late 1980s nationalism was rising throughout the Soviet republics, which reawakened ethnic tensions throughout the Union thereby discrediting the idea of a unified Soviet people. The Soviet Union, in turn, lost all control over economic conditions. At the same time, Moscow disowned the Brezhnev Doctrine in favor of nonintervention in the internal affairs of its Warsaw Pact allies. This was significant given that the Brezhnev Doctrine had modeled Soviet foreign policy since 1968; the Brezhnev doctrine stated that if any hostile force tried to turn the development of any socialist country towards capitalism, it would become the problem and concern of all socialist countries. Eventually, many Soviet satellite states began asserting sovereignty over their territories with some even declaring independence. By 1991 revolution had swept through Eastern Europe bringing down several Communist governments.

In February 1990 the unintended consequences of Gorbachev's reforms forced the Central Committee of the Soviet Union to give up its monopoly of power. Even though the Communists were not going down without a fight, a unionwide referendum saw approximately 78 percent of voters approve the retention of the Soviet Union in an altered form. Presidential elections followed in June; Boris Yeltsin defeated the Gorbachev-backed Nikolai Ryzhkov.

Gorbachev attempted to restructure the Soviet system into a less centralized state. But in August 1991, the vice president, prime minister, defense minister, KGB (the Soviet security agency) chief, and other senior officials

acted to prevent the signing of the union treaty. The coup organizers put Gorbachev under house arrest at his vacation home in the Crimea and attempted to restore the Union to its former state. However, public sympathy for their actions was largely against them and the coup ultimately failed. After the coup the Soviet republics accelerated their process toward independence. Finally, on December 8, 1991, Soviet leaders decided to dissolve the Union and established the Commonwealth of Independent States, which is an alliance that is open to all former Soviet republics. The Soviet Union ceased to exist by the end of December.

BEYOND THE SOVIET IMPERIUM

The dissolution of the Soviet Union led to numerous political, economic, and social changes within the region. Democratization and economic liberalization began throughout the post-Soviet sphere. However, the transition from communism in the former Soviet Union only sometimes led to democracy; some states abandoned communism for democracy, while others turned to authoritarian rule. Many of the post-Soviet republics also saw their economies collapse during the transition to capitalism. Corruption, weak property rights protection, and political instability were just a few of the reasons for this. Russia, in particular, struggled in its transition to a market economy. This precipitated a return to more interventionist economic policies by the government. Further, numerous ethnic and religious conflicts erupted. There are a number of de facto, but internationally unrecognized, states as a result of this.

Several global changes that have occurred since the Soviet Union's demise are also worthy of note. There are no longer two clear-cut superpowers dominating international political life. Nuclear disarmament and reconfigured security arrangements are the salient themes in this "new world order." Economic interdependence and political integration are also being seen everywhere. However, the most important global change since the Soviet Union's demise is the ever-increasing threat of terrorism, especially Islamic fundamentalism. The events of September 11, 2001, indicate that this has officially replaced nuclear war as the greatest threat to peace.

There is no doubt that the Soviet Union was one of the most powerful countries in the world during its period of existence, especially from 1945 to 1991. At its peak it consisted of fifteen republics making it one of the most strongly centralized federal unions in the history of the world. Furthermore, the Soviet Union became a primary model for future Communist states; some states, such as Cuba, exemplify the Soviet tradition. All of this suggests that it is likely that few topics will generate as much social science research as the Soviet Union did.

SEE ALSO *Berlin Wall; Bolshevism; Castro, Fidel; Cold War; Communism; Confederations; Cuban Missile Crisis; Cuban Revolution; Decentralization; Deterrence, Mutual; Economies, Transitional; Glasnost; Gorbachev, Mikhail; Hitler, Adolf; Industrialization; Khrushchev, Nikita; Lenin, Nikolai; Lenin, Vladimir Ilitch; Leninism; Nationalism and Nationality; Nationalization; Nation-State; Nonalignment; Reagan, Ronald; Russian Revolution; Socialism; Stalin, Joseph; Third World; Trotsky, Leon; United Nations; Weaponry, Nuclear; World War II; Yeltsin, Boris*

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David Mastro

UNION SHOP

SEE *Labor Law.*

UNIONS

Unions are organizations of wage earners designed to better working conditions and give laborers a collective voice in the contract bargaining procedure.

Unions emerged from the early trade associations built by workers confronting the effects of the industrial revolution. In 1790, New York City was a center of commerce, but not yet an industrial city. It was also a city

divided by class, property, and power. On the one hand, a wealthy class of traders and financiers had developed during the pre-revolutionary period and controlled the city's international commerce. They were merchant capitalists who made their money through import and export, buying commodities cheaply in Europe, Asia, Africa, and the Americas, and selling them dearly in the United States; or they bought native-made products and exported them for profit to the rest of the world. Through this process they accumulated wealth, or capital, that they then reinvested in their businesses.

On the other hand, there were artisans, skilled craftsmen (including printers, blacksmiths, brick-layers, and carpenters) who produced many of the commodities necessary for early urban life. These artisans inhabited a world of tradition inherited from the guild systems of Europe. Rather than hiring employees, the master craftsmen took on apprentices who worked for a given period of years (usually six or seven), receiving room and board as recompense rather than a wage or salary. After the apprenticeship ended, workers became journeymen. After several years of wage labor, the journeymen, in turn, expected to become master craftsmen. Finally, there were unskilled laborers who worked for a wage. During this early republican period, craft workers created trade associations. Carpenters organized together, print-makers, and bricklayers. These early trade associations included masters, journeymen, and apprentices; and all three groups of skilled workers felt a unity of purpose, a community of art, and a common social bond. But these associations were not yet trade unions.

EMERGENCE OF TRADE UNIONS

Modern trade unions emerged only after the industrial revolution began to take shape. Because of New York's pivotal place as a trading center in the world economy, the merchant class began to accumulate capital. With their coffers enriched by the import-export trade, some of these merchants began to set up their own workshops to manufacture the goods usually made by skilled craftsmen. These workshops proved to be efficient and highly profitable. Thus, some of the wealthier artisans followed suit, transforming their own tradition-bound workshops into early modern versions of the manufacturing plant. While in the older craft workshops, the apprentice and the journeyman were bound to the master by traditional ties and communal associations, in these new proto-industrial workshops, the relationship between the master and the journeyman or apprentice was increasingly governed by a wage. The master hired the men he needed, paid them by the hour, and dismissed them if they were unnecessary. As masters became increasingly wealthy, the social and economic space between masters and journeymen likewise increased. Soon the journeymen were organizing their own associations; and by the 1820s, journeymen associations began to strike against their masters for higher wages, better working conditions, and rudimentary social benefits. From these early journeymen associations, the modern trade union movement was born.

At the same time, as a direct result of these new economic forces, poverty increased, male laborers found their livelihoods increasingly precarious, and women began to enter the formal workforce. Excluded from the all-male craft associations, New York women worked in occupations generally associated with the household labor that they had done for centuries. They became street corner vendors, provisioners selling prepared foods, prostitutes, midwives, nurses, and seamstresses. As the workshop system advanced, and as technological change and new machines transformed textile labor, women textile laborers increasingly worked in early factories. In New York, in Baltimore, in Philadelphia, and in Massachusetts, women in various trades began organizing their own trade unions. And in 1825, New York seamstresses organized the first all-women's strike in the United States.

At first, these women trade unionists enjoyed considerable support from male wageworkers and male dominated trade unions. But that soon changed. Between 1834 and 1836, one of the first attempts to affiliate all trade unions within the borders of the United States took place with the conventions of the National Trades' Union (NTU). The NTU addressed the issue of women wage earners. While many of the conventions' delegates were labor radicals who advocated the abolition of the wage system and a rudimentary notion of economic democracy, these male trade unionists also objected to the "degradation" of women in factory work. Constructing a discourse based upon what one labor historian has called "a species of radical paternalism," the NTU delegates sought to "protect" women from the ravages of capitalism. But that "protection" amounted to nothing less than an exclusion of women from union activity, except in a supporting or auxiliary role, as the wives, mothers, and daughters of good union men. The brief moment of inter-gender trade union cooperation ended and would not reappear in full force for another hundred years.

THE KNIGHTS OF LABOR

Despite early attempts at a national organization, such as the NTU, it was not until 1869 that laborers were able to come together in a truly effective national trade union, the Knights of Labor. During this period, employers and the state attempted to repress union organization through legal and extralegal means, including blacklisting, court injunctions, labor spies, and firings. Thus the Knights were originally a quasi-secret organization. But by the

1880s, with almost one million members, the Knights shed much of their secrecy and became one of the most influential labor organizations of the late nineteenth century. The Knights actively recruited women, African American, and Hispanic workers. They fought for and helped effect the abolition of child labor, the eight-hour workday, equal pay for equal work, women's rights, and the Labor Day holiday. They advocated combining all craft associations into one big union that would protect the rights of all working people.

The power of the Knights of Labor ended in 1886, during the Haymarket Affair. After the Knights helped organize a general strike in Chicago, police fired into a large protest rally held by workers, killing four people. The next day, a group of anarchists held a rally in Haymarket Square protesting police actions. Someone—it is still unclear whether it was a police spy or an anarchist protester—threw a bomb into a group of police officers, killing eight. In turn, the police fired into the crowd of protesters, killing another eight and wounding more than one hundred others. In the following days, radicals, anarchists, and unionists were rounded up by state and local authorities; some were indicted and tried for conspiracy. The age of the Knights of Labor came to an end with one of the first "Red Scares" in American history. This was a pattern that would be repeated over and again for the next sixty years.

THE AFL AND THE IWW

As the twentieth century approached, the Knights of Labor left an ambiguous legacy for the American labor movement. On the one hand, their repression by the government led to the moderate craft unionism of the American Federation of Labor (AFL). On the other hand, the forms of radical solidarity promoted by the Knights found a new life in the syndicalism of the Industrial Workers of the World (IWW), known as Wobblies.

Samuel Gompers founded the American Federation of Labor in 1886 as a craft union federation that organized skilled workers. In other words, the AFL attempted to protect the privileges of a small segment of the American working class, often at the expense of less privileged, unskilled wage-workers. When the First World War began, the AFL issued a no-strike pledge, promising to keep industry working for the war effort. In return, the Woodrow Wilson administration began to actively support union organizing efforts. Between 1915 and 1920, union membership in the United States doubled. But the AFL's increasing reliance upon governmental support further encouraged the moderate, responsible unionism that already distinguished this organization from the more radical efforts of the Knight of Labor.

In contrast, the Industrial Workers of the World (IWW), founded in 1905 by a group of radical activists and Socialist Party leaders, had a vision of unionization far different from the moderate program advanced by Gompers's AFL. While the AFL sought to organize and protect the privileges of skilled craft workers, the Wobblies promoted the organization of all industrial workers, skilled and unskilled, into one big union. Further, the Wobblies were influenced by the European syndicalist tradition. A close cousin of anarchism, syndicalism was a set of political ideologies that sought to transform capitalism through direct action at the point of production. With slow-downs, work-to-rules actions, sabotage and strikes, syndicalists argued that workers themselves could challenge the control of industry by capitalists. And for the syndicalists in the IWW, unions that utilized these tactics were a means toward the broader end of social transformation. While the AFL sought to win higher wages and benefits for its members, the IWW attempted to overthrow capitalism itself. Although the IWW participated in or led important strikes in Lawrence, Massachusetts; Patterson, New Jersey; and throughout the lumber camps of the Northwest, it never had the influence or power of the American Federation of Labor. Because of its radical politics and unconventional tactics, the IWW was a target for constant surveillance and repression and was eventually destroyed by the forces arrayed against it.

But in the political environment of the early twentieth century, even the moderate AFL was a target of state-sanctioned repression. Because of government support, the AFL came out of the First World War stronger than ever before. And after the war ended, workers who had sacrificed much for the national effort sought some recompense for their troubles. During the summer of 1919 a strike wave washed across the United States, paralyzing industry on a national scale. Beginning just two years after the Bolshevik Revolution in Russia, what became known as the American Red Summer provoked profound fears among American capitalists and within the U.S. government. This Red Summer led directly into a new red scare. After his house was bombed, he claimed, by anarchists, U.S. Attorney General Alexander Palmer ordered the round-up and arrest of thousands of immigrant unionists. What followed was a series of legal and extralegal forms of political repression and in the years directly following 1919, there was a 30 percent drop in overall union membership.

THE CIO

The union movement went into retreat. But that changed after the stock market crash of 1929 and the beginning of the Great Depression. Because of its moderate, craft ori-

entation, the AFL proved incapable of taking advantage of the economic downturn to expand its base of support. A series of general strikes (in San Francisco, Toledo, and Minneapolis), a national textile strike, militant street actions, rent strikes, and general protests led the Roosevelt administration to enact the National Labor Relations Act (or Wagner Act) in 1935. This law gave legal support to labor's right to organize and bargain collectively. Buoyed by new legislative openings, John L. Lewis, Philip Murray, Sidney Hillman, and other labor leaders already dissatisfied with the limits of the AFL's craft unionism founded the Congress of Industrial Unions (CIO). Like the Knights of Labor and the IWW before it, the CIO set out to organize workers along industrial lines and had early success unionizing the steel and rubber industries. The early phase of this movement culminated in a 1936–1937 wave of sit-down strikes, beginning at the General Motors plant in Flint, Michigan. At the GM plant and elsewhere across the country, unionists sat down at their machines and occupied factory floors.

Following the sit-down wave, the CIO became increasingly close to the Roosevelt administration. When the United States entered the Second World War, the CIO offered a no-strike pledge in return for continued support from the government apparatus. While this no-strike pledge could not stop the many wartime wildcat work actions, it did have the effect of alienating the more militant and energetic local workers and leaders from the national CIO. If the government apparatus were to continue to support union efforts, the militancy of the early CIO had to be surrendered to the quest for industrial order. In place of class conflict, the CIO had to pursue a path of business-government-labor cooperation. This path, however, necessarily led to the decline of internal democracy, as unions increasingly became mechanisms for disciplining the shop floor. As one contemporary observer, C. Wright Mills, put it in his *The New Men of Power*, unions increasingly became "shock-absorbers" for both management and workers (p. 224).

After the war, workers and returning soldiers had confidence in their union strength and a sense of entitlement derived from having sacrificed so much for the national cause. This led to another postwar strike wave. In a now familiar pattern, this postwar strike wave was followed by a new red scare, political repression, and, most importantly for labor, the passage of the 1947 Taft-Hartley law. Taft-Hartley bureaucratized union grievance procedures, outlawed secondary boycotts, and required all union leaders to sign an oath that they were not Communists. This last provision forced the federation to expel many militant and radical organizers and to disaffiliate radical unions. Taft-Hartley made the militant actions that characterized the early days of the CIO extremely difficult.

THE IMPACT OF GLOBALIZATION

Despite this latest wave of government-sponsored repression, almost 35 percent of the American industrial workforce was unionized by mid-century. Because the new, moderate unionism of the CIO no longer differed in character from the AFL, the two unions affiliated in 1955. The AFL-CIO had considerable power between 1955 and 1973, making possible the formation of an American blue-collar middle class. Union workers bought houses, automobiles, and sent their children to college. And union prosperity benefited many American workers left out of direct unionization campaigns through pattern bargaining and by setting an ideal American standard of living that pressured non-union firms to provide better pay and benefits to their employees. But often, this American standard of living came at the expense of non-American workers. Now integrated into the government apparatus, the AFL-CIO supported American anticommunism around the world, working with the CIA to undermine radical unions in the Third World and helping to prop up right-wing dictators.

Beginning in the 1970s, new laws and new trade agreements that made capital increasingly mobile ushered in the age of globalization. In order to remain competitive with international firms, American companies increasingly sought out cheaper labor sources, moved production operations to the Third World, and, when they remained within the United States, demanded concessions and givebacks from their union workers. American unions were decimated, declining to the point that in 2007 approximately 8 percent of American workers were in a union. Although the AFL-CIO attempted to deal with this setback through a new emphasis upon organizing communities of previously unorganized workers in the service sector (janitors, hotel staff, and restaurant workers), its lack of success resulted in another split in the movement. Led by the Service Employees International Union (SEIU), a group of dissatisfied labor organizations formed a new federation, the Change To Win (CTW) coalition. Like the AFL-CIO, CTW promised a new emphasis upon organizing and militant action; and, most significantly, it has set out to organize Wal-Mart workers. To date, CTW has shown little progress in that direction, but its efforts continue.

At the same time, as American corporations increasingly outsourced production, they produced industrial zones in formerly underdeveloped nations. For instance, throughout the twentieth century RCA sought sources of cheaper labor. When its plant in Camden, New Jersey, organized, RCA opened a new production center in the non-union town of Bloomington, Indiana. When the Bloomington plant unionized, RCA opened a new manufacturing facility in the open-shop town of Memphis,

Tennessee. When the Memphis plant organized, RCA outsourced production to Ciudad Juarez, in Mexico. Soon afterward, the Juarez plant began organizing. In each case, as production relocated, unionization movements followed. In the early twenty-first century, many Third World countries became hotbeds of union activity. And in 2002, a former union leader, Luiz Ignatio "Lula" DeSilva, was elected president of one of the largest democracies in the Americas, Brazil. In these industrializing nations, union movements have successfully adopted tactics similar to those used by unions in the United States and Europe. But one important constraint on union activity remains. In these new industrial regions, unions have prospered under democratically elected governments. But authoritarian regimes continue to repress union activity through imprisonment, the murder and torture of union activists, and various other state-sanctioned methods. Consequently, the future of the international union movement may well hinge on the ability of activists and organizers to penetrate rapidly industrializing authoritarian countries such as China; and whether such a possibility exists under current political conditions is an open question.

SEE ALSO *Blue Collar and White Collar; Capitalism; Class Conflict; Great Depression; Industrialization; Labor; Labor Demand; Labor Supply; Labor Union; Middle Class; Organizations; Social Movements; Socialism; Syndicalism; Wages; Work; Work Week; Working Class; Working Day, Length of*

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Graham Cassano

UNIT ROOT AND COINTEGRATION REGRESSION

The study of the evolution through time of a variable or group of variables has existed since the dawn of empirical analysis in the mid-seventeenth century. The formulation of explicit statistical models for a time series process $\{y_t\}$ is typically in the form of an *autoregressive moving average model*

$$y_t - a_1 y_{t-1} - \ldots - a_p y_{t-p} = b + \epsilon_t + \theta_1 \epsilon_{t-1} + \ldots + \theta_q \epsilon_{t-q} \quad (1)$$

where the *innovation* or *shock* ε_t is assumed independently, identically distributed with mean zero and variance σ^2.

When the roots of $1 - \sum_{j=1}^{p} a_j z^j = 0$ lie outside the unit circle, the process $\{y_t\}$ is *stationary* in the sense that y_t has a fixed mean and variance for all t, and the covariance between any pair of values depends only on their distance apart in time, not on their absolute location. When the roots lie inside the unit circle, the process $\{y_t\}$ is *explosive* in the sense that it quickly becomes unbounded as t increases. If there are d unit roots for the solution $1 - \sum_{j=1}^{p} a_j z^j = 0$, and others are outside the unit circle, the process is called *integrated of order d*, $I(d)$, because the process can be interpreted as a d-fold partial sum of stationary process $y_{d,t} = \sum_{s=1}^{t} y_{d-1,s}$, for $d = 1, \ldots$, where $y_{d-1,t} = (1 - L)^d y_t$, L denotes the backward shift operator, $L^s y_t = y_{t-s}$ (Box and Jenkins 1970). When there is only one unit root ($d = 1$), it is called an *I(1) process* or a *unit root*

process; thus when all the roots are outside the unit circle, it is also called an *I(0) process*.

Unit root process is intermediate between stationary and explosive process. Nelson and Plosser (1982) have found that many economic and financial time series are $I(1)$ or $I(2)$. There are many reasons that a time series of a variable is integrated. For instance, real business-cycle models predict that many real economic variables would contain a unit root. There is also the efficient market hypothesis in which the best predictor of tomorrow's price y_{t+1} is today's price y_t (Fama 1970).

When $y_{t+1} = y_t + \varepsilon_t$, it is commonly referred to as a *random walk process*. Hall's consumption function theory (1978) implies that, under a simple version of the permanent income hypothesis, future changes in consumption are unpredictable, so consumption follows a random walk. The predictions of these theories often extend to multivariate relations. For example, if income has a unit root, then consumption as a function of income will also have a unit root. The residuals that can be viewed as a linear combination of consumption and income will not have a unit root. When some linear combination of $I(d)$ variables has a lower order of integration, these variables are *cointegrated*, in Engle and Granger's terminology (1987).

UNIT ROOT PROCESS

If a variable, say y_t, has a unit root, the shock to the variable never dies out. A unit root process can be written as the sum of past shocks plus an $I(0)$ current shock. Because the sum of past shock is a dominant term in y_t, this permanent component constitutes a *stochastic trend*. Information on the degree of persistence in a time series and, in particular, on its order of integration, can help to guide the construction or testing of economic theories.

Box and Jenkins (1970) proposed an informal data-analytic basis for the choice of d. Formal testing of a unit root is usually conducted by fitting a p-th order autoregressive form

$$y_t = \sum_{j=1}^{p} a_j y_{t-j} + \varepsilon_t, \qquad (2)$$

or its *error-correction* representation,

$$\Delta y_t = \rho y_{t-p} + \sum_{j=1}^{p-1} a_j^* \Delta y_{t-j} + \varepsilon_t, \qquad (3)$$

where $\delta = (1 - L)$, and $a_j^* = \sum_{i=1}^{j} a_i - 1$. The null that $\Sigma a_j = 1$ is equivalent to the null $\rho = 0$.

Time series regressions that include integrated variables have statistical properties that are very different from the time series regressions with stationary variables. The least squares estimator of ρ when the regressor is $I(1)$ converges to its true value 0 at the speed T, not at speed $T^{1/2}$, and has a limiting distribution that is a functional of Brownian motion (Chan and Wei 1988). Dickey and Fuller (1979) derive the t-statistics for the null hypothesis $\rho = 0$ by considering the limiting behavior of quadratic forms. The distribution of Dickey-Fuller t-statistic is tabulated by Dickey (1976).

Applying Dickey-Fuller procedure to the first difference of y_t provides a test of $I(2)$ against $I(1)$. When the process $\{y_t\}$ may possess two or more unit roots, Dickey and Pantula (1987) recommend a "downward," sequential t-test procedure starting with the greatest suspected number of unit roots, d (i.e., transform (2) into equivalent formulation (3) in terms of $\delta^d y_t$), because the "upward" testing procedure starting with a test for a single unit root is an inconsistent test. Pantula (1989) proves that the distribution of the relevant t-statistic under each null has the standard Dickey-Fuller (1979) distribution.

From the perspective of empirical work, (2) may be overly restrictive. The process $\{y_t\}$ may also be a function of trend and serially correlated $I(0)$ errors. Moreover, $\{y_t\}$ may be subject to trend breaks or structural breaks with unknown breakdays, or trend may be misspecified (Perron 1989). The bulk of the large literature on tests for unit roots has been to propose tests that (1) are asymptotically similar under the general $I(1)$ null, in the sense that the null distribution depends neither on the parameters of the trend process nor the parameters describing the short-run dynamics of ε_t (Phillips and Perron 1988); (2) have good power in large samples; and (3) exhibit small size distortions. Although the asymptotic size and power vary greatly across the proposed test statistics, the Monte Carlo findings for finite sample yield similar conclusions: The proposed tests have relatively low power against $I(0)$ alternatives, and there are substantial size distortions for the tests. For instance, with 100 stationary observations, the one-sided 5 percent significance level Dickey-Fuller t-test has a power of only 0.19. On the other hand, processes that are $I(1)$ but which have moderate negative autocorrelation in first difference are incorrectly rejected with high probability. (For detail, see Stock 1994).

COINTEGRATION REGRESSION

Multivariate time series methods are widely used by empirical economists. One important implication of economic theory is that certain ratios are stable. For instance, in response to growth in productivity and population, neoclassical growth models (King, Plosser, and Rebelo 1988) predict that output (y), consumption (c), and investment (i) will grow in a balanced way. That is, even though y_t, c_t, and i_t increase permanently in response to

increases in productivity and population, there are not permanent shifts in $c_t - y_t$ or $i_t - y_t$. In other words, these variables are *cointegrated*.

For ease of exposition, here we shall only focus on the classical analysis of $I(1)$ and $I(0)$ systems. Let $\{\underline{w}_t\}$ be a sequence of $m \times 1$ vector of $I(1)$ time series observations. Vector autoregressive model (VAR) of the form

$$w_t = \Pi_1 w_{t-1} + \ldots + \Pi_p w_{t-p} + \upsilon_t \qquad (4)$$

provides a flexible and tractable framework for analyzing $\underline{w}_t$ (as in Hsiao 1979 and Sims 1980). Transforming (4) into an *error-correction* form provides a framework for analyzing both long-run and short-run economic relations

$$\Delta w_t = \sum_{j=1}^{p-1} \Pi_j^* \Delta w_{t-1} + \Pi_p^* w_{t-p} + \upsilon_t \qquad (5)$$

where $\Pi_j^* = \sum_{i=1}^{j} \Pi_j - I_m$, $j = 1, \ldots, p$, and I_m denotes the m-rowed identity matrix. If there are m unit roots, $\Pi_p^* \equiv \underline{0}$, each series in the system is governed by a different stochastic trend. When there are fewer than m unit roots in (4), say n, then rank $(\Pi_p^*) = r$, $r = m - n$, $1 \leq n \leq m$. When rank $(\Pi_p^*) = r$, one can write $\Pi_p^* = \underline{\alpha}\underline{\beta}'$ where $\underline{\alpha}$ and $\underline{\beta}$ are $m \times r$ full column rank matrices. Since $\underline{w}_t$ is $I(1)$, $\delta \underline{w}_t$ is $I(0)$, $\underline{\beta}'\underline{w}_{t-p}$ must be $I(0)$ to ensure compatibility between the left-hand and right-hand side of (5). Therefore, the matrix $\underline{\beta}'$ is called the *cointegrating matrix* that describes "equilibrium" or "long-run" relations within a fully dynamic framework. The matrix $\underline{\alpha}$ transmits the deviations from the long-run relations, $\underline{e}_t = \underline{\beta}'\underline{w}_t$, into respective elements of $\underline{w}_t$. The matrix Π_j^*, $j = 1, \ldots, p-1$, describes the short-run adjustment pattern that provides information on how soon the "long-run equilibrium" is restored after any of the variables in the system are perturbed by a shock. In economics, the existence of long-run relations and the strength of attraction to such a state depends on the actions of a market or on government intervention. The concept of *cointegration* has been applied in a variety of economic models including the relationship between capital and output, real wages and labor productivity, and so on (King, Plosser, Stock, and Watson).

Several issues arise from the cointegration analysis. First, because $\underline{\beta}'\underline{w}_t$ is $I(0)$, $\underline{w}_t$ must be driven by some common trends. In other words, cointegration signifies comovements among trending variables. However, only the rank of cointegration can be uniquely determined. The cointegrating matrix $\underline{\beta}'$ is not uniquely defined. Any linear combination of cointegrating vector is a cointegrating vector or $\Pi_p^* = \underline{\alpha}C^{-1}C\underline{\beta}'$ for any $r \times r$ nonsingular constant matrix C. (Therefore, the maximum number of linearly independent cointegrating vectors in a system of m $I(1)$ variable, is $(m-1)$). Normalization rule for the unique determination of the cointegrating matrix has to be used.

Second, although the least squares estimator with integrated regressor is consistent, it has very different statistical properties from the least squares estimator with stationary regressors (Chan and Wei 1988; Phillips and Durlauf 1986). Some of the estimated coefficients of (4) converge to the true values at speed $T^{1/2}$ and are asymptotically normally distributed; some converge to the true values at speed T and have non-normal asymptotic distributions (Sims, Stock, and Watson 1990). This raises the issue of statistical inference because in some instances the usual test statistics can be approximated by chi-square distributions while in other circumstances, they cannot.

Third, to overcome the miscentering and skewness of the usual test statistics because of the issues of unit root distribution, one can either condition on the innovations driving the common stochastic trends of the system (Phillips 1991) or use the *reduced rank* regression technique (Johansen 1988; 1991). In a system of m $I(1)$ variables, the possible common trends vary between 1 and m. However, the knowledge of the rank of cointegration or nonstationarity (location of unit roots) is not generally known *a priori*. Johansen (1991) proposes likelihood-based tests for the rank of cointegration by considering the likelihood function of (5), whereas Stock and Watson (1988) propose a rank test for $\frac{1}{T^2}\sum_{t=1}^{T} w_t w_t'$ based on the fact that if there are r linearly independent cointegrating relations, then $\underline{w}_t$ are driven by $m - r$ common trends, hence the sum of cross-products of $\underline{w}_t$ divided by T^2 can only have rank $m - r$. Unfortunately, neither method provides reliable inference in finite sample. Many Monte Carlo studies show that there are serious size and power distortions (Ho and Soresen 1996; Gonzalo and Pitarakis 1999).

The literature on unit root and cointegration analysis has greatly enhanced our understanding of dynamic econometric modeling of economic time series and provides a useful repertoire of tools for empirical analysis. However, unit root tests and cointegration analysis also raise serious finite sample issues. Tests with better finite sample size and power remain to be developed. More attention to economic theory and integrating economic analysis with time series analysis could also be fruitful.

SEE ALSO *White Noise*

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Cheng Hsiao

UNITED ARAB REPUBLIC

The United Arab Republic (UAR) was founded in 1958 as a political union between Syria and Egypt. The union reflected a sense of Arab nationalism and solidarity (Pan-Arabism). It was largely driven by a desire to overcome dividing borders viewed by many as an artificial creation of European colonial powers. However, the union eventually collapsed in 1961 due to widespread sentiments in Syria that it had become a vehicle for furthering Egyptian hegemony.

PAN-ARABISM

A major driving force behind the formation of the UAR was Pan-Arabism. Sentiments of collective Arab nationalism had already emerged in the Middle East in the early twentieth century. These attitudes were largely motivated by a desire to shake off the corrupt, inefficient, and alien rule of the Ottoman Empire. Shared experience coupled with a common language and culture engendered collec-

tive sentiments that spread throughout the Arab-speaking Middle East.

After conquering the Middle East during World War I (1914–1918), the colonial powers divided the Arabs by drawing previously nonexistent political frontiers. Among other things, segmentation enabled the victorious Europeans to reward friendly Arab leaders with a state that they could govern. Thus, local leaders, whose support for the Europeans during the war was initially driven by encompassing Arabism and the desire to rid themselves of the foreign Ottoman rule, now had an incentive to continue cooperating with the Europeans and encourage loyalties to the smaller, newly created states. In almost every Arab country, schemes for regional Arab unity were countervailed with efforts to instill a sense of patriotic solidarity and identification with the new state through the creation of a national flag, an anthem, and other local symbols. Nonetheless, modern technology, mobility, and newspapers and other printed materials enhanced the sense of collective Arabism that transcended the new political boundaries. Furthermore, the new regimes found that by appealing to sentiments of Arabism, they could increase local support and further their legitimacy.

Attempts to balance the tension-laden tendencies of Pan-Arabism and local regime interests continued to shape Arab politics and society well into the decades that followed. The foundation of the UAR and its demise were a product of such dynamics.

PRINCIPLE ACTORS OF THE UNION

The principle actors behind the union were the Ba'thists and Nasserites in Syria and President Gamal Abdel Nasser (1918–1970) of Egypt. When Syria became a democracy in 1954, mass public support for a new, all-encompassing Arab state got reflected in the platforms of rival political parties. Both the Communists and the Muslim Brotherhood supported transcending frontiers, although the Communists preferred closer ties with the Soviet Union. The growing merchant class in Syria saw economic opportunities in the abolition of borders and, thus, also viewed a union favorably. These domestic dynamics led the powerful Syrian Ba'th Party, headed by Michel 'Aflaq (1910–1989) and Akram Hourani (1912–1996), to propose the idea of a united republic with Egypt. In particular, the Ba'thists, espousing an ideological platform that combined Arab nationalism, socialism, and secularism, found itself in domestic struggles for power against the strengthening Communists. The party hoped that the union would lead to the collapse of its competitors.

In Egypt, meanwhile, the "Officers' Coup" in 1952 saw Colonel Nasser seize power from King Farouk (1920–1965) and emerge as the new Egyptian president. Nasser's firm stance against the British presence in the Suez and the nationalization of foreign property had made him an admired leader throughout the Arab world. After surviving the Anglo-French and Israeli invasion of 1956, Nasser was depicted as a great, modern-day Arab hero capable of defending the interests of the Arab world against the imperialist powers. His popularity made him an agreed-upon candidate for leading the union, although Nasser himself was initially reluctant to merge the two countries. He feared problems associated with merging the two very different economic systems and with unifying the civil and military institutions. The Ba'thists in Syria, on the other hand, were optimistic. They believed Nasser would entrust them with the governance of Syria. Ultimately, they managed to convince him of the feasibility of the union.

THE RISE AND DEMISE OF THE UNION

In February 1958 President Nasser of Egypt and President Shukri al-Kuwatli (1891–1967) of Syria signed the unification treaty. Following a referendum held simultaneously in both countries, the two countries were integrated and the UAR was born with a new federal constitution, with Cairo as its capital, and with Nasser as its president. Separate Egyptian and Syrian citizenship was abolished. The UAR adopted the Egyptian flag with an addition of two stars to represent the two members of the union. The birth of the union was greeted with such enthusiasm throughout the Middle East that it was followed by a series of attempts by pan-Arabists elsewhere to overthrow regimes perceived as pro-Western. Indeed, following a coup d'état in 1958, Iraq declared its intent to join the UAR. That same year, the United Arab States, a loose federation of the UAR and Yemen, was also established.

Although the union was initially received with immense enthusiasm in both of the UAR's member countries, disillusionment soon took over popular attitudes in Syria. The disparity of power between Egypt and Syria made the former the undisputable hegemonic force, despite the formal federal structure of the new republic. The authority bestowed on the president made Nasser extraordinarily powerful and allowed him to impose unpopular economic and social policies in Syria. Even though the Ba'thist Hourani was named one of four vice presidents, he was practically powerless and resigned in protest as early as December 1959. Egypt's political superiority left very little room for Syrian input in administering the affairs of the union. Leading figures from the Syrian regime, particularly the military, were transferred to Cairo. This way, Nasser could ensure they were isolated

from their power bases. Officials and military personnel from Egypt were reassigned to Syria, where they in practice took control of the Syrian bureaucracy and security forces.

In addition, the Ba'th Party dissolved itself in compliance with the ban on all political parties other than Nasser's Arab Socialist Union, a condition that Nasser presented before consenting to the merger and which the Ba'thists accepted under the misguided assumption that Syria would preserve a degree of autonomy in the new institutional framework. The Communists and the Muslim Brotherhood, meanwhile, were brutally repressed as the Egyptians increasingly asserted their authority. Similarly, the Syrian press was seized by the new regime. Furthermore, attempts to impose Egypt's socialist policies in Syria left the Syrian merchant class not only without access to Egyptian markets but also facing stiff limitations on its ability to maneuver within the Syrian part of the UAR. Likewise, land reforms made large landowners unhappy. In short, Syrians of all political and social streams were left disenchanted and feeling as though they were ruled by outsiders.

A 1961 coup d'état in Syria led to its withdrawal from the union and a renewed assertion of its independence. A short time later, the United Arab States was abolished following Yemenite criticism of Nasser's heavily socialist policies. Witnessing the Syrian experience, the Iraqi regime too decided to stay out of the union, despite its initial vow of commitment to join. Egypt retained the name of UAR until 1971.

Following yet another coup d'état in 1963 in Syria, unity talks were again undertaken, but without results. The failure of the UAR left many leaders in Syria and the rest of the Arab world determined never to allow their country to be pushed into such a subordinate position. Thus, despite continuing widespread sentiments of Arabism, the demise of the UAR brought about an end to any real chance of integrating Arab countries into a single state. And by the end of the 1980s, notions of pan-Arab unity had all but disappeared.

SEE ALSO *Cold War; Communism; Coup d'Etat; Gulf States; Nation-State; Stability, Political; Union of Soviet Socialist Republics*

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UNITED NATIONS

The United Nations (UN) is a global organization of states that aims to find cooperative solutions for international security, economic, and social problems. The first formal use of the term *United Nations* appeared in the Declaration by the United Nations (January 1, 1942), in which twenty-six Allied countries pledged to defeat the Axis Powers and subscribed to the principles of the Atlantic Charter (August 14, 1941) during World War II (1939–1945). These principles included "the establishment of a wider and permanent system of general security."

From August to October 1944, delegates from the United States, the Soviet Union, the United Kingdom, and the Republic of China met at the Dumbarton Oaks estate in Washington, D.C., to negotiate the formation of a new organization to replace the League of Nations. Most of the outstanding issues were settled at the Yalta Conference (February 4–11, 1945) among the leaders of the "Big Three" nations: U.S. president Franklin D. Roosevelt (1882–1945), British prime minister Winston Churchill (1874–1965), and Soviet general secretary Joseph Stalin (1879–1953). Shortly thereafter, delegates of fifty nations met in San Francisco to finalize the negotiations, culminating in the signing of the UN Charter on June 26, 1945. On August 8, 1945, the United States became the first country to ratify the Charter. The United Nations Organization came into being on October 24 (celebrated since 1948 as United Nations Day) when the majority of original signers, including the great powers (the four Dumbarton Oaks conveners and France), had ratified the Charter.

STRUCTURE

Although the UN Charter opens with the famous phrase "We the peoples of the United Nations," the United Nations is primarily an organization of sovereign states. Membership is open to all "peace-loving states" (Article 4), but disputes over the admission of new members fell victim after World War II to the cold war conflict. In 1955 the United States and the Soviet Union reached a compromise that allowed for the admission of sixteen new members. Still, controversy persisted over the membership status of the partitioned states of Germany, Korea,

Vietnam, and China. Both German states were admitted in 1973 and both Korean states in 1991. Vietnam entered as a single state in 1977. Nationalist China (Taiwan) represented China until November 1971, when the United States ended its objection to the membership of the People's Republic of China. In 2006 the United Nations had 191 member states.

The UN Charter also established the six "principal organs" of the United Nations: the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the Secretariat. The General Assembly is the United Nations' plenary body. Aside from occasional special sessions, it meets in annual sessions that usually start in September and last for three months. The General Assembly oversees subsidiary bodies, calls international conferences, approves the budget, and adopts nonbinding resolutions on a wide variety of issues. General Assembly decisions are taken by majority vote based on a one-state–one-vote principle. Since 1987, after lobbying by the United States, critical votes on the budget are taken by unanimity rule (instead of the historical two-thirds majority) in an effort to curtail large annual budget increases. Budget assessments are made on a capacity-to-pay basis. As of 2005, the United States was responsible for 24 percent of the UN budget, followed by Japan (19 percent) and Germany (8 percent). Countries do not always meet their budget obligations in a timely manner: In September 2005 member states owed the United Nations $3 billion in outstanding peacekeeping and regular budget payments ($1.2 billion from the United States alone).

The Security Council has primary responsibility for the maintenance of international peace and security. Under chapter VII of the UN Charter, the Security Council can adopt coercive measures, including economic sanctions and the use of force, which are binding on individual member states. The Security Council has five permanent members (China, France, the Russian Federation, the United Kingdom, and the United States) and ten nonpermanent members that are elected for two-year, nonrenewable terms by the General Assembly. (Until 1965, the Security Council only had six nonpermanent members.) Security Council resolutions require an affirmative vote of nine members, including the five permanent members. By 2005 the permanent members had exercised their veto right 244 times, but on only twenty occasions since 1990. The veto threat is, however, still a powerful tool to block unwanted resolutions.

The Economic and Social Council coordinates and supervises the work of numerous commissions and expert bodies on economic and social matters, including human rights. Members are elected for three-year terms by the General Assembly. The Economic and Social Council's membership has gradually expanded from eighteen to fifty-four. The Economic and Social Council has limited powers other than its ability to submit recommendations to the General Assembly (by majority vote). Formally, the Economic and Social Council coordinates the activities of various specialized agencies, including the World Bank Group and the International Monetary Fund (IMF). Developing countries have long, and unsuccessfully, pushed for a greater role for the Economic and Social Council vis-à-vis these organizations. Other specialized UN agencies, each with its own budget, membership, and charter, include the International Labor Organization (ILO), the Food and Agriculture Organization (FAO), the United Nations Educational, Scientific, and Cultural Organization (UNESCO), and the World Health Organization (WHO).

The Trusteeship Council was set up to monitor UN trust territories that were not designated as strategic by their administrating powers (strategic trust areas were the Security Council's responsibility). The Trusteeship Council ceased its operations on November 1, 1994, when the last remaining trust territory (Palau) became independent.

The International Court of Justice, located in The Hague, Netherlands, issues advisory opinions on legal questions brought to it by other UN organs and settles legal disputes submitted to it by member states. Its fifteen judges are elected for nine-year terms by the General Assembly and Security Council. By 2005 the International Court of Justice had delivered twenty-five advisory opinions and eighty-seven judgments on contentious cases, primarily on border and maritime disputes. The binding nature of International Court of Justice opinions depends on whether state parties have previously agreed to its compulsory jurisdiction.

The Secretariat is the United Nations' bureaucracy. In 2005 it employed around nine thousand international civil servants who answer to the United Nations alone for their activities. While most civil servants are stationed at the UN headquarters in New York, the United Nations also maintains staffed offices elsewhere. The Secretariat is headed by the secretary-general, a prestigious post that has been occupied by Trygve Lie (Norway, 1946–1952), Dag Hammarskjöld (Sweden, 1953–1961), U Thant (Burma [Myanmar], 1961–1971), Kurt Waldheim (Austria, 1972–1981), Javier Pérez de Cuéllar (Peru, 1982–1991), Boutros Boutros-Ghali (Egypt, 1992–1996), Kofi Annan (Ghana, 1997–2006), and Ban Ki-moon (South Korea) who was sworn in on December 14, 2006, and began serving on January 1, 2007. Critics have charged that the demands of being the world's primary diplomat sometimes undermine the secretary-general's ability to also be an effective manager of a large bureaucracy.

PEACE AND SECURITY

When states sign the UN Charter, they agree not to use or threaten force "against the territorial integrity or political independence of any state, or in any manner inconsistent with the Purposes of the United Nations" (Article 2). There are two circumstances under which force is consistent with the United Nations' purposes: when it is exercised in self-defense (Article 51) and when the Security Council approves a collective action under chapter VII. The first important authorization of a collective action occurred in 1950 (July 7), when the Security Council authorized the United States to install a central command under the UN flag to restore peace and security following the armed attack by the Democratic People's Republic of Korea (North Korea) against the Republic of Korea (South Korea).

UN action in Korea was possible only because the Soviet Union had temporarily vacated its Security Council seat in protest against nationalist China's representation. After the Soviet delegate returned, the General Assembly adopted the "Uniting for Peace" resolution, which allowed the General Assembly to circumvent a deadlocked Security Council through special emergency sessions. This procedure has been invoked ten times, most notably in 1956 to order the French and British to end their military intervention in the Suez Canal and to create the UN Emergency Force (UNEF I) to provide a buffer between Egyptian and Israeli forces.

UNEF I was the first large-scale example of *peacekeeping*, an activity not mentioned in the Charter. During the cold war, peacekeeping missions were generally limited to providing a buffer between warring parties at the invitation of those parties, prime examples being the longstanding UN forces in Cyprus and Lebanon. An exception was the more ambitious 20,000-person force employed in the Congo between 1960 and 1964. This operation failed to achieve its main objectives, led to a protracted conflict about peacekeeping financing, and cost respected Secretary-General Hammarskjöld his life when his plane crashed in the Congo on September 18, 1961.

UN activity in international security was reinvigorated with the end of the cold war. In 1988 and 1989, for the first time in a decade, the Security Council authorized new peacekeeping missions that were sent to cold war hotspots such as Afghanistan, Angola, Namibia, and Nicaragua. A transformation in UN collective security occurred with the adoption of Security Council Resolution 678 on November 29, 1990, which authorized the use of "all necessary means" if Iraq would not vacate Kuwait by January 15, 1991. The resolution conferred legitimacy on the use of force against Iraq by a U.S.-led coalition. Since then, the Security Council has granted similar authorizations to (groups of) states in eleven cases, including East Timor (with Australia as the leading state) and Haiti (with the United States as leader).

A second significant shift occurred in 1992, when the Security Council authorized the deployment of large peacekeeping forces to end civil wars in Cambodia and Yugoslavia. This was merely the prelude to increased UN involvement in domestic conflicts across the globe. Between 1991 and 2005, the Security Council authorized forty-eight peacekeeping and other multinational uses of force, almost all concerning civil conflicts rather than interstate wars. These efforts were not without risk: more than two thousand UN peacekeepers have lost their lives, most since 1991. The United Nations has also become actively involved in postwar reconstruction and has even run transitional administrations, most notably in East Timor and Kosovo. Moreover, it has created international tribunals to try war crimes in Rwanda, Sierra Leone, and the former Yugoslavia.

Despite its active record since the cold war's end, the United Nations' contribution to the preservation of peace and security has come under serious scrutiny. First, the United Nations has been unable to prevent genocides in Rwanda (1994) and the Sudan (2005). Second, the Security Council has been deadlocked on important cases and has not been able to prevent states or coalitions of states from going it alone in the absence of UN authorization, as illustrated by the intervention of the North Atlantic Treaty Organization (NATO) in Kosovo in 1999 and the U.S.-led invasion of Iraq in 2003. Third, weak and understaffed UN missions have occasionally done more harm than good, as illustrated by the United Nations' failure to maintain the promised safe haven of Srebrenica (1995). Fourth, UN-imposed sanctions on Iraq caused much suffering among the Iraqi population while failing to resolve the conflict. Moreover, the UN "Oil for Food" office allowed massive fraud to occur in the administration of the sanctions.

Some critics justifiably lament UN bureaucratic and peacekeeping practices, as acknowledged by the United Nations' remarkable Brahimi Report (2000). Yet, the United Nations ultimately remains an organization of states. The United Nations can be a useful vehicle for cooperation on those issues where states are committed, but it has few means beyond persuasion to compel states to make committed efforts. In all, most analysts believe that the United Nations has had a modest but significant positive impact, especially on the resolution of civil wars.

OTHER ISSUES

The United Nations has played an active role on a large range of other issues. The United Nations was an important arena for the transformation of former colonies into sovereign states. To many new states, UN membership

served as the affirmation of their sovereignty. Moreover, General Assembly Resolution 1514 (December 14, 1960) became the most influential political declaration of the existence of a right to self-determination and the illegitimacy of colonial rule.

The 1948 Universal Declaration of Human Rights provides the foundation for the treatment of human rights in the United Nations. The United Nations administers other global human-rights instruments, such as the Convention Against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment (1987), and organizes global conferences, such as the Beijing Women's Conference (1995), that set the normative debate on human rights. It has, however, few enforcement mechanisms other than public shaming through the Human Rights Commission, which critics charge is political and selective.

The United Nations has also provided a forum for arms control negotiations and administers important disarmament treaties. An independent agency, the International Atomic Energy Agency (IAEA), monitors observance of nuclear treaties and can refer violators to the Security Council, which can then decide on coercive measures.

The United Nations also plays an important role in economic development and humanitarian relief, primarily through special programs and funds, such as the UN Children's Fund (UNICEF), the UN Development program (UNDP), and the Office of the UN High Commissioner for Refugees (UNHCR). UNHCR provides a crucial coordinating role in providing relief to the world's refugees (around twenty million in 2005). UNDP is most active in the development and monitoring of the UN Millennium Development goals: an ambitious set of development targets to be achieved by 2015.

The most difficult issue for the United Nations continues to be the Middle East. The United Nations was instrumental in creating the state of Israel and in resolving the 1956 Suez crisis. Yet, its ability to play a constructive role has been compromised by increased politicization. Israel and its defenders charge that the United Nations regularly adopts inflammatory resolutions that unfairly target Israel. For example, between 1975 and 1991, the General Assembly annually adopted a resolution that equated Zionism with racism, a charge that resurfaced at the World Conference Against Racism, Racial Discrimination, Xenophobia, and Related Intolerance, held in Durban, South Africa, in 2001. Defenders of Palestine contend that Israel has repeatedly ignored General Assembly and Security Council resolutions, as well as International Court of Justice rulings.

Reform is also perennially on the United Nations' agenda. Reform attempts generally involve the creation of a blue-ribbon committee, including the High-Level Panel on Threats, Challenges, and Change, established in 2003. The recommendations of these committees rarely lead to fundamental changes. Instead, the United Nations regularly reinvents itself in response to major events and the ensuing new demands on the organization.

SEE ALSO *League of Nations; Multilateralism; Peace; Peace Process; World War II*

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UNITED NATIONS MILLENIUM DEVELOPMENT GOALS

SEE *Gender and Development; Health in Developing Countries.*

UNIVARIATE AUTOREGRESSIVE PROCESSES

SEE *Time Series Regression.*

UNIVERSAL DECLARATION OF HUMAN RIGHTS

SEE *Civil Rights; Human Rights; Suffrage, Women's.*

UNIVERSALISM

Universalism is the proposition that there exist single objective standards, independent of culture, by which moral and epistemological questions are each correctly judged. Broad universalism includes any concept or doctrine that applies to the totality of the relevant set, such as human beings. Some religions have doctrines that are believed to apply to all humanity.

Moral universalism posits a unique ethic that applies to all human beings and is comprehensive for all human action, including action that affects nonhumans. Because the universal ethic is independent of culture, it cannot derive from the beliefs of any culture or any generalization from practices and actions. A universal moral standard can be derived only from premises that apply to all human beings, such as human nature. Moral universalism is implied in the concept of human rights and such documents as the United Nations 1948 Universal Declaration of Human Rights.

The concept of a universal ethic or "natural moral law" in European philosophy was developed by the ancient Greek Platonists and Stoics. German philosopher Immanuel Kant based his moral philosophy on the concept that rules can be universalized. Utilitarian moral philosophy, based on what is best for society, is also intended to apply universally. Universalism is also present in the philosophy of natural rights and associated with natural moral law as a standard for judging legislation.

Philosopher John Locke described natural moral law in his work on political philosophy, *Two Treatises of Government* ([1690] 1947). In the *Second Treatise*, Locke states as his premise for the "law of nature," or natural law, that human beings are all equal and independent.

Human beings are biologically independent, for feeling and thinking and choosing take place individually. Equality means that the capacity for reason and choice is common to the human species and that there is no biological basis for one set of humans to be regarded as superior to others. Nihilists, relativists, and supremacists deny the equality premise, while those with a holistic philosophy dispute the independence premise.

Locke's "law of nature" prescribes that it is morally evil to harm others in their lives, health, liberty, or possessions. The existence of such a universal ethic can be claimed by setting criteria for the ethic and then arguing that if a derived ethic fits the criteria, then it exists, just as we can set criteria for the existence of airplanes, and then if a machine fits the criteria, we must conclude that airplanes exist. The criteria could be the following four propositions:

1. The ethic is universal to all humanity.
2. The ethic is comprehensive, applying to all human action.
3. The ethic is logically consistent.
4. The ethic is not arbitrary, not merely based on the whims or beliefs of one or more persons.

Another strand of natural moral law is based on the ethical philosophy of Aristotle, which has been revised by libertarian scholars such as Murray Rothbard and by Objectivist philosophers starting with Ayn Rand. They posit some natural end inherent in human nature such that actions that are inconsistent with this end are immoral. Other philosophers, such as Jürgen Habermas, base universalist concepts on communicative action or a dialectical process, through which a consensus can be achieved by dialogue.

Epistemological universalism posits the existence of objective knowledge that human beings are able to learn. Objectivists and realists in epistemology claim that human beings have the cognitive ability to observe and explain the universe as it actually is rather than merely forming subjective interpretive beliefs. In contrast, hermeneutics, relativists, and particularists such as Michel Foucault claim that human minds have bounded cognition, not just making errors but necessarily interpreting observations using prior beliefs, making absolute objectivity impossible. Some philosophers seek a middle ground between relativism and objectivism, such as the belief that human beings can achieve knowledge but that it is not certain or comprehensive. Universalists can argue that the proposition that there are no universals is itself either universal or not; if so, the proposition is self-contradictory, and if not, then it has no general impact.

Universalists have explained the human capacity to obtain objective knowledge from evolution, which selected for beings whose survival depends on beliefs consistent with their environmental reality. Knowledge can come from a priori insights such as the concept of cause and effect, and from the capacity to reason, using logic and evidence from observation. Most scientists evidently believe in epistemological universalism, in being able to discover theories that explain reality.

Economics, for example, presumes premises that apply universally to all humanity. Economic axioms include diminishing marginal utility, economizing to maximize benefits or minimize costs, and the physical

constraint of scarce resources. If economics as a social science is founded on these premises, then it must be possible to know these premises and their implications, and such knowledge must consist of shared beliefs that can be learned. Moral universalism is connected to epistemological universalism in that if human beings can know science, there is no reason to exclude moral philosophy from what can be objectively known.

Subjectivism and objectivism are not necessarily opposites in moral philosophy. In economics, we can posit that the values placed on goods are purely subjective, based on individual interests. Yet these values result in bids and offers in a market, which create objective prices and, together with other premises such as scarcity, form the basis of an objective theory of prices. Likewise in ethics, we can accept that each person has subjective values about human action and situations but that these values form the basis of an objective ethic if we also have premises such as that all human beings have an equal moral worth or that their values have an equal moral standing.

SEE ALSO *Aristotle; Cosmopolitanism; Epistemology; Ethics; Habermas, Jürgen; Hermeneutics; Libertarianism; Locke, John; Morality; Natural Rights; Objectivism; Philosophy; Realism; Religion; Utilitarianism*

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Fred Foldvary

UNIVERSITY OF OXFORD

In company with the other twelfth-century universities of Paris and Bologna, Oxford can claim to be among the oldest of the European universities. Its foundation date, often a matter of fantastic speculation, remains unclear. All that can be said is that Oxford recognizably became a university between 1192 and 1200. Located in a river valley fed by tributaries of the Thames River, the town and the university were named for the river crossing (oxen-ford). Since no new university was established in England (although four or five in Scotland) until the formation of the University of London in the 1820s, Oxford and Cambridge (collectively termed Oxbridge or less frequently Camford) long held a duopoly on the education and training of leading politicians, Roman Catholic and afterward Church of England clergy and bishops, civil service administrators at home and abroad, and representatives of the arts and sciences. Even the Scots, with their own fine university traditions, attended the ancient universities in order to take advantage of their connections and networks.

Oxford in the twenty-first century remains one of a handful of world universities correctly described as *collegiate*. It is a federation of some seven permanent private halls and thirty-nine self-governing and endowed colleges scattered about the city of Oxford. A good number of these are twentieth-century foundations, updating ancient traditions to take advantage of new subjects and new kinds of students. The first colleges appeared in the thirteenth century, but most were founded later. Historically associated with teaching and student residence, the first college to actually admit undergraduates was New College in the fourteenth century. Women's colleges date from the 1860s. Infamously, however, women did not receive degrees until 1920 (or 1948 at Cambridge). Only Saint Hilda's College, founded in 1893, is restricted to women.

Responsibility for teaching and scholarship is divided between colleges and the university, between tutors (called *dons* from the Latin *dominum* or master) and professors, but from the sixteenth century (the early modern period) until recently the colleges were dominant. That was mainly, if not entirely, a consequence of the Protestant Reformation, expanded royal government, and international trade and rivalry. Loyal and well-educated administrators were required for service in church and state. The small size of the colleges and their systems of personal instruction and discipline in a residential setting were well suited for the education of potential leaders. The new elites were heavily drawn from established families. The collegiate university primarily bestowed its blessings on those already favored; in particular, the scions of landed society influenced the tone of the university by their often careless but also glamorous habits well into the nineteenth century.

In recent decades, considerable scholarly attention has been directed to the social composition of Oxford through the ages, a reflection of current concerns about access to higher education. However, owing to the absence

of university matriculation records, estimates of the social composition of Oxford are harder to provide for the period before 1565. Entries afterward are listed by hierarchical status rankings, rather than by social or occupational groupings, as is present practice, and historians disagree on how to interpret them. The earlier records kept by colleges are often incomplete or confusing.

In the broadest terms, it can be said that until very recently wealth and privilege were always accorded a warm reception at Oxford. The numbers of recruits from the poorer sections of English society, meaning the children of farm laborers in the earliest centuries or industrial workers in the later ones, were generally in short supply. To give an example from Lincoln College from 1680 to 1799, of 972 admits, over half came from landed or gentlemanly families and another 266 from clergy, to include the higher ranks. Only 155 were listed as *plebeian*, a catchall category difficult to refine. A more complete analysis of the entire university for the 1901–1975 period, comprising 3,512 entries, more clearly indicates the changes. Professional families accounted for 1,564 admits; 1,059 were from commerce, finance, and industry, and 217 from white-collar families. Only 182 can be called skilled workers, and only several dozen fit the description of unskilled or manual workers.

As a generalization, it can be ventured that Oxford's social transformation from a university serving mainly the sons of landed and clerical families began to shift from about 1850, when professional and business families started to become dominant. This was the pattern that could be expected of most elite institutions. Gradually but firmly Oxford ceased to be a university of the traditionally privileged and became instead the destination of new generations of outstanding undergraduates from middle-income families, befitting the economic transformations that had occurred as a result of industrialism and the expansion of the urban professions.

As a center of learning and scholarship, Oxford's reputation declined in the Age of the Enlightenment. Enrollments fell, teaching was neglected, and one famous undergraduate, the future historian Edward Gibbon (1737–1794), characterized the dons of his day as addicted to "port and prejudice." More recently, historians have uncovered evidence for greater intellectual vitality than previously supposed. Yet it is the case that a serious and almost total educational transformation of the university and its colleges did not occur until the next century. The first step around 1800 was a demanding and subsequently famous honors examination in the subject of *literae humaniores* (called "Greats"). Composed of classical languages, philosophy, and history, it became the prototype of later competitive examinations. For a long while, "Greats" was regarded as the leading subject, attracting the best and most success-minded students. To begin with, improvements in teaching and examining were internal reforms, but criticisms persisted that the university and its colleges tolerated weak students, gave scholarships to the unworthy, failed to impose needed discipline, were slow in furthering the advance of modern and scientific subjects, and misused plentiful endowments. Oligopoly control of the colleges and central administration was attacked. By the middle of the nineteenth century, public opinion demanded radical reforms. For some twenty years thereafter, royal and other commissions recommended, and Parliament introduced, changes affecting all aspects of governance, financing, and the curriculum. Research was added to teaching as an academic mission, and professorial chairs were created in new subjects. If Cambridge led the way in the mathematical sciences, Oxford excelled in classical languages, ethical philosophy, and medieval history. At present, Oxford is well represented in all fields of intellectual inquiry.

Repeal of two inherited restrictions in the Victorian period furthered the process of renewal and scholarly excellence. Celibacy was abolished as a condition of holding college teaching appointments, a major step in the formation of professional academic careers; and non-Anglican undergraduates were admitted without being required to take an oath of allegiance to the Thirty-Nine Articles of the Church of England. Since half the kingdom adhered to other denominations, the pool of worthy candidates widened. However, a certain element of snobbery persisted well into the Edwardian period, not only toward the few working-class undergraduates in attendance but also toward students of Jewish origin or from India and Africa.

In the nineteenth and twentieth centuries, Oxford was also renowned as the training ground of *proconsuls*, the distinguished imperial administrators in the heyday of the British Empire. Under Benjamin Jowett (1817–1893), its legendary master, Victorian Balliol College acquired a reputation as the nursery of prime ministers, but the great William Gladstone (1809–1898), who became prime minister in 1868, had studied at Christ Church, the most aristocratic of the colleges, although he was not descended from landed gentlemen.

Protesting a growing secularism and religious tolerance, John Henry Newman (1801–1890), a fellow of Oriel College, left Oxford in 1842 and converted to Roman Catholicism. His subsequent reflections and lectures, published under the heading of *The Idea of a University* (1853), became among the most influential and lasting books ever written on the purpose of a liberal education. But Newman was right. Oxford had indeed changed. Once described as the "home of lost causes," a reference to the university's sometime attachments to

deposed monarchs and High Church principles, or, romantically, as a place of "dreaming spires," an allusion to its distance from social realities, Oxford was once again at the center of the transformed educational and intellectual life of a modern Britain. Oxford dons helped establish new universities, such as Bristol, and fully participated in outreach or extension movements. Rhodes Scholarships, a bequest by the imperialist Cecil Rhodes (1853–1902) at the turn of the twentieth century, brought overseas students to the university, as did the introduction of advanced research degrees. Oxford's influence spread throughout the English-speaking world, indeed, everywhere.

The list of distinguished men and women who studied or taught at Oxford is endless. In the fourteenth century, William of Ockham (c. 1285–1349) added to the luster of the university's fame in logic. In the same century, John Wycliffe (c. 1330–1384), master of Balliol, challenged the papacy by advocating a Bible in the vernacular. The seminal philosopher John Locke (1632–1704) was at Oxford in the late seventeenth century. In the following century, Edmund Halley (1656–1742) gave his name to a comet, and starting in 1729 John Wesley (1703–1791) and Charles Wesley (1707–1788) initiated practices that resulted in the birth of Methodism. Romantic poets like Percy B. Shelley (1792–1822, expelled for atheism) and Matthew Arnold (1822–1888) were at Oxford in the nineteenth century. Two celebrated twentieth-century graduates were Lord Curzon (1859–1925), viceroy of India and chancellor of the university, and Vera Brittain (1893–1970), who studied at Somerville College (founded in 1879) and became a leader of the women's emancipation movement. Closer to the present, A. H. Halsey put sociology on the Oxford map. The political philosopher Isaiah Berlin (1909–1997) was one of the most respected and admired Oxford personalities of the twentieth century.

The British Isles (to include Ulster) currently possess well over a hundred institutions denominated *universities* and numerous polytechnics, specialized schools, and further education colleges. Yet despite competition, Oxford's superior reputation remains. Its long history, endowments, magnificent libraries and collections of art, exquisite gardens, splendid architecture, and distinguished graduates at home and abroad provide advantages that guarantee its continued presence among the top five or ten research universities in the world as measured by peer approval.

In the twenty-first century Oxford recruits more broadly than ever before. The collegiate system is intact but less dominant. High technology, laboratory science, medicine, and postgraduate research are more closely associated with the professors than with the tutors, and with the university more than with the colleges. New market-based initiatives for financing have enhanced the importance of the central administration. However, as the bulk of Oxford's income is derived from the government, institutional independence and academic freedom are serious issues for the twenty-first century. Universities everywhere are being called upon to address multiple social problems, generate wealth, and improve national efficiency in a global environment. However challenging these conditions, it is abundantly clear that contemporary Oxford has little interest in becoming a home for lost causes.

SEE ALSO *Cambridge University; University, The*

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UNIVERSITY OF TEXAS INEQUALITY PROJECT

A new body of empirical literature on economic inequality emerged in the early- and mid-1990s that sought to establish cross-country and timewise analysis of the relationship between economic growth, income levels, and income distribution. At a fundamental level, this literature was concerned with exploring questions posed by Simon Kuznets in the mid-1950s about the relationship between income and inequality levels. His hypothesis was that if one were to plot inequality levels against income levels over the long run, this relationship could be described by an inverted U curve. As countries grew from an agricultural to an industrial economy, inequality would go up

initially, with few people working in the high-productivity and high-income industrial sector. As more and more people transitioned from agriculture to industry, the increase in inequality would decelerate, stop, and eventually reverse when the majority of the population worked in the industrial sector.

The new empirical studies of the early 1990s related to the Kuznets hypothesis but also to newer conjectures that predicted either positive or negative relationships between inequality and growth. Some theories, such as those of Alberto Alesina and Dani Rodrik, were based on political economy arguments, while others, such as the work of Abhijit Banerjee and Andrew Newman, were based on the effect of inequality in impeding access to credit.

This work generated a large demand for data on inequality that were internationally comparable and that spanned as long a time series as possible. While such data had long been available for income and growth, there was a paucity of global data on income distribution. Klaus Deininger and Lyn Squire, then at the World Bank, were pioneers in setting up and making available a compilation of inequality measures that were broadly comparable across countries and over time. Their dataset, based on household surveys, reported Gini coefficients—a summary measure of income inequality that ranges from 0, for perfect equality, to 100, when all income goes to a single individual, which is the most unequal of all possible distributions of income. Other similar, more comprehensive efforts followed, including that by the United Nations University's World Institute for Development Economics Research (WIDER) center.

As Andrea Bradonlini and Anthony Atkinson noted in the late 1990s, these comprehensive datasets had promise but also pitfalls. Some of the main shortcomings involved the lack of long and dense time series of inequality for many countries, especially developing countries. Cross-country comparability was also an issue. These factors made empirical work using these datasets difficult. Under the leadership of James K. Galbraith, the University of Texas Inequality Project (UTIP) was created initially as an effort to offer other sources of measures of inequality that addressed some of the shortcomings of these datasets.

UTIP's initial proposal was to derive measures of within-country inequality using internationally comparable pay data, collected for industrial statistics released by the United Nations Industrial Development Organization (UNIDO). An issue with this dataset was that pay data were reported only at the industry level, and thus the within-industry distribution was unknown. Thus the use of the Theil index—the most widely used measure of a family of inequality measures that are perfectly decomposable into a within-group and between-group distribution—emerged as the most natural choice. For between-industry pay, the Theil index generated long and dense measures of inequality that were broadly comparable across countries.

In addition to releasing this global dataset, the work of UTIP involved exploring the methodological issues associated with the chosen measure of inequality. Using this dataset as well as data from national sources, Galbraith led innovative work on the interactions between inequality and several economic and political issues, ranging from conflict to financial crises. In fact, the use of the Theil index was expanded beyond global measures of interindustry inequality pay into other fields where issues of aggregation made the Theil index the natural measure to use. For example, when income or pay data are available at several levels of geographic aggregation (as in the United States, for example, at the national, state, and county levels), the Theil index enables the construction of decomposable aggregate measures into the contributions of the lower levels of aggregation. Insights into the dynamics of the contributions to aggregate inequality from lower levels of aggregation can then be established. Galbraith and colleagues at UTIP did pioneering work in using the Theil index to "aggregate upward." For example, while inequality in the United States is often compared with that of other countries, it has rarely been compared with inequality in, say, Europe or European Union countries. By aggregating national measures of inequality upward, it is possible to construct a European-wide measure of inequality that may be more analytically appropriate to use in comparisons with the United States than that of individual countries.

More recently the UTIP-UNIDO measures of manufacturing-pay inequality were used, with other information, to estimate measures of household income inequality. This was accomplished by taking advantage of the systematic relationship between the UTIP-UNIDO estimates and those of Deininger and Squire. The residuals from this exercise provided a map to problematic estimates in the Deininger and Squire data, and the estimated coefficients enabled the construction of a new panel dataset of estimated household income inequality.

SEE ALSO *Deininger and Squire World Bank Inequality Database; Income Distribution; Inequality, Income; Kuznets Hypothesis; Theil Index*

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Pedro Conceição

UNIVERSITY, THE

The modern social sciences, as well as all other forms of knowledge, are primarily studied and taught in universities. Not all the social sciences disciplines can trace their origins directly back to the twelfth century when universities first appeared. Many evolved indirectly from subjects taught at the original universities, such as law, logic, philosophy, and medicine. But the university's main role in the development of the social sciences is primarily the result of manifold changes occurring in the second half of the nineteenth century. Demographic and urban growth, industrialization, democracy, and religious pluralism provided new arenas for academic inquiry and problem-solving and produced the array of disciplines commonly united under the heading of the social sciences. Economics, sociology, anthropology, demography, psychology, city planning, and scientific history came of age as autonomous university-based disciplines.

ORIGINS, CURRICULUM, AND SPREAD OF UNIVERSITIES

As a special type of educational institution, universities emerged almost unnoticed in three locations: Bologna, Paris, and Oxford. The circumstances were propitious. Trade had improved, cities were expanding, and municipal, imperial, and ecclesiastical authorities were in need of trained talent. Cities provided the necessary population, the facilities, the markets, and the career opportunities. Student fees, gifts, and ecclesiastical resources supported teaching, and universities were expected to help define and encourage religious belief. Until approximately the nineteenth century, most graduates of universities entered clerical careers, and most academics were ordained priests and ministers. Secularism and pluralism called into question many religious assumptions. At the same time universities embraced new forms of critical and scientific thinking, and as a consequence theology became just another subject rather than a primary focus, even within faith-based colleges.

In the beginning, the intellectual, philosophical, and scientific starting point of all teaching and learning was the corpus of encyclopedic writings mainly but not solely derived from Aristotle, preserved by Arabic scholars and transmitted to Italy in what historians have called the Renaissance of the Twelfth Century. This was the first of two revivals of ancient Greek and Latin learning in the Western world, the second commencing with the Italian Renaissance of the late fourteenth and fifteenth centuries. The medieval curriculum itself derived from the seven Roman liberal arts of logic, rhetoric, grammar, dialectic, astronomy, music, geometry, and arithmetic, but these were regarded as preparation for the professions of medicine, law (civil and canonical), and divinity rather than subjects in their own right. All were grouped into administrative structures called "faculties." Although at first glance the seven liberal arts appear to be limited to mathematical and language studies, the process of teaching and expounding them furthered their development as multifaceted disciplines.

By the early modern period hundreds of universities had been founded in Europe by both secular and religious authorities, spreading from the Atlantic to Russia. During the ages of exploration Spain and Portugal established universities in their New World colonial territories, primarily to train imperial administrators and priests. Further north, the British settlements, beginning with Massachusetts, established university colleges to provide the colonies with an educated class. The first university in Japan came at the end of the nineteenth century, and in China in the twentieth. By the nineteenth century the utility of universities and college alternatives was so clearly accepted that governing elites associated their existence with the health of a modern bureaucratic state and economy.

NEW KNOWLEDGE AND STRUCTURES

There is a popular tendency to regard universities as conservative institutions and resistant to change. Academic costumes, rituals, and ceremonies provide an impression of unbroken tradition through the ages, as do the forms of teaching. But the conservatism of universities is merely

apparent. Sometimes deliberately, but often accidentally, the pursuit of learning by its very nature yields new conceptions, methods of inquiry, and startling intellectual movements. Two of the most closely studied are the scientific revolution of the sixteenth and seventeenth centuries and the transformation of the liberal arts during the Italian Renaissance.

In both cases examples can be found of innovations that grew out of the scholarly methods taught at universities. But there was also internal resistance. The heliocentric universe described by the Polish astronomer Copernicus (1473–1543) and publicized by the Italian physicist Galileo (1564–1642) undermined theological assumptions about the purpose, scale, and physical laws governing the cosmos. As a consequence, subsequent generations of scientists gravitated to newly establish royal societies where they could work unimpeded. In the same way, humanistic scholars using new critical methods of historical analysis founded academies where the liberal arts could be taught from a different perspective. Ruling elites were in favor. They desired education more closely focused on statecraft and better suited to the growing individualist cultures of the Renaissance. Yet intellectual cooperation between universities and the outside world never altogether ceased.

Disciplines alter over time, but so does the organization of teaching. Within a century or two of the founding of universities, colleges joined faculties as centers of instruction, improved discipline, and residence for students and instructors. Colleges were either freestanding or connected to existing universities, and among the most academically enterprising and successful were the Jesuit foundations of the Counter-Reformation. By the nineteenth century, however, colleges had largely disappeared from Europe, except for Oxford and Cambridge, where they remain, or in America with its distinct family of liberal arts colleges. Other examples of new administrative and teaching structures that arose, especially in the later centuries, are disciplinary departments, scientific laboratories, botanical gardens, observatories, art museums, marine biological stations, and ethnographical institutes. Libraries continued to buttress all pedagogical efforts.

Eventually the radical curricular changes associated with the early modern period were fully embraced by universities. As a consequence, the thrust of universities changed from places that mainly preserved and disseminated inherited learning, however modified in practice, to places devoted to discovering new knowledge. Research as the primary missions of universities is usually said to have started in Germany with the foundation of the University of Berlin in 1809; there were, however, earlier manifestations. Yet universal adoption of the research ethic was a phenomenon of the second half of the century, burgeoning in the century that followed.

ACADEMIC FREEDOM

The universities of the Middle Ages were genuinely international. The curriculum was similar, and the language of instruction was Latin. Students migrated to the leading centers from all corners of Europe. But the spread and popularity of vernacular languages, combined with political and religious divisions in the early modern period, altered the patterns of student mobility. Universities became more conspicuously national. Regarded as extensions of state power, the political loyalty of academics was under continual scrutiny.

Academic commitment to religious orthodoxy was also closely watched during the early modern period. The wars between Protestants and Roman Catholics created church and state alliances unknown in the centuries of a universal Christendom. But no matter how threatening the new conditions to academic freedom and institutional autonomy were, they did not compare to the calamities inflicted on universities, teaching, and freedom of inquiry by totalitarian regimes and nondemocratic governments of the twentieth century and afterward. The historical lessons clearly show that knowledge growth requires both external and internal freedom. Although universities originally developed as self-governing institutions with the right to own and dispose of property, they are only as free and independent as their societies and governments allow. And they are only as tolerant and open-minded in teaching and learning as are the devotion to those ideals of professors and students.

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UNLIMITED SUPPLIES OF LABOR

SEE *Labor, Surplus: Conventional Economics; Lewis, W. Arthur.*

UNRESTRICTED STOCKS

SEE *Stocks, Restricted and Unrestricted.*

UNTOUCHABLES

SEE *Dalits.*

UPWARD MOBILITY

Upward mobility is the experience of moving up into a more privileged economic position in society. Social scientists study the rates of upward mobility across different groups and societies because upward mobility is associated with notions of meritocracy and equality of opportunity. In a meritocratic or "open" society, all that is required for upward mobility is an education and hard work. Success in this type of society is determined by individual achievement rather than family background. In closed societies, on the other hand, there is little or no upward mobility. For example, children from working-class parents are likely to end up in working-class occupations themselves, and one's educational attainment is determined in large part by the educational achievements of one's parents.

There are two general types of upward mobility: *intragenerational* and *intergenerational* mobility. Upward mobility across generations, or intergenerational mobility, is commonly studied and often used as an indicator of a society's openness or fluidity. People also often experience upward mobility over the course of their own careers, which is known as intragenerational mobility. For example, someone may start out working in a low-paying job and then move up into a higher-paying job within the same company after a few years. In addition, a person may go back to school in midcareer to earn a college or graduate degree in order to move into a higher-status occupation, such as a professional or manager.

MEASURING UPWARD MOBILITY

Social scientists measure upward mobility in surveys in a variety of ways. In order to measure upward mobility, the researcher must decide on a measure of economic well-being or status. Several common measures of economic status include: individual earnings, family income, wealth, educational attainment, occupational status or prestige, and social class. Economists often measure the degree of mobility as the strength of the association between the income or earnings of fathers and their sons. A *strong* association between fathers' and sons' income indicates a *low* rate of upward mobility. On the other hand, a *weak* association indicates a *high* rate of upward mobility because children are not limited in their future economic success by the success of their parents. While these studies of intergenerational income mobility are informative, they are also limited in a few respects. First, focusing on income or earnings ignores other aspects of economic success, such as educational attainment and occupational prestige or status. Second, these studies also tend to ignore racial differences in upward mobility, which scholars such as Dalton Conley and Tom Hertz have pointed out.

Sociologists tend to measure upward mobility in terms of occupational or class "origins" and "destinations." While the definition of class is contested in the literature, several definitions involve the nature of the employment relationship and the degree of skill, autonomy, and ownership someone has. This definition is similar to the one developed by Robert Erikson and John Goldthorpe in their book, *The Constant Flux* (1992). Sociologists within the status attainment tradition examine the importance of class origins in determining class destinations. Class origin, often measured by the father's occupation, is taken as an indicator of the degree of *ascription* or inherited success, whereas educational attainment is taken as an indicator of *achievement* or earned success. The relative importance of earned versus inherited economic status reveals the amount of potential there is for upward mobility. An increase in the importance of individual achievement regardless of class origin should translate into an increased rate of upward mobility. However, there is also the potential for downward mobility in an open society, which may be the result of economic downturns and organizational restructuring or individual decisions regarding education and different career paths.

UPWARD MOBILITY ACROSS COUNTRIES

Rates of upward mobility vary across countries. Under the rule of Mao Zedong (1893–1976) in China from 1949 to 1976, there was very little social mobility of any kind. As Yanjie Bian notes in his article in the *Annual Review of Sociology*, "it was rare to change an individual's social position in Mao's status hierarchy because of the rigid institutional walls" (2002, p. 104). In such a closed society, one is born into a particular economic status and destined to remain in that status group. However, with the economic reforms in China since 1978, social mobility is now possible and educational attainment is beginning to play an important role in determining occupational status.

The changing pattern of upward mobility in China highlights the importance of political and economic systems in explaining differences in mobility across countries. In general, advanced capitalist countries have greater potential for upward (and downward) mobility than socialist countries. Several formerly socialist countries in central and eastern Europe have begun to experience increasing mobility and inequality since the revolutions between 1989 and 1991. However, the transition from socialism to capitalism does not necessarily mean that the potential for upward mobility will increase. As Theodore Gerber and Michael Hout discuss in their 2004 article in the *American Sociological Review*, there is evidence that social mobility actually declined during Russia's market transition in the 1990s. Gerber and Hout found that the association between class origins and destinations strengthened during the transition to a capitalist economy in part because the deregulation of the state labor market allowed elites to pass on benefits to their children with greater ease (2004, p. 696).

There are other scholars, such as Erikson and Goldthorpe, who contend that advanced industrial countries with similar occupational structures will have similar rates of social mobility. According to this view, all modern societies will display some association between class origin and class destination. This does not suggest that upward mobility does not exist. However, it is limited by certain laws, customs, and norms that serve to reproduce systems of stratification across generations. Despite these similarities across countries, many scholars agree that countries such as Sweden exhibit a higher degree of social mobility than the average country, and others, such as the United States, exhibit lower degrees of mobility (Solon 2002). However, the reasons behind these differences are still not clear, and the issue is complicated even further by measurement differences across countries. A substantial amount of research remains to be done on the topic of country differences in upward mobility.

RACE AND UPWARD MOBILITY

Rates of upward mobility also vary substantially across different social groups within countries. Different racial and ethnic groups in the United States have dramatically different experiences with upward mobility. In his study of race and economic mobility, Tom Hertz finds that the association between parents' and children's income "is driven to a large extent by black families' especially low rate of upward mobility from the bottom of the income distribution" (2005, p. 165). The "rags to riches" transition popularized by the Horatio Alger novels is twice as likely for whites as it is for African Americans in the United States. Being born into a family in the bottom income bracket has very different implications for whites and African Americans. For African Americans, it means that one is likely to end up living in a low-income household as an adult as well. However, whites have a fair chance of moving up into at least the middle of the income distribution later in life. Therefore, the United States is a fluid and open society for whites with a lot of potential for upward mobility. However, for African Americans, it is often a rigid and closed society with little potential for mobility.

Explanations for racial differences in social mobility in the United States range from racial discrimination in the educational system and the labor market to differences in individual aspirations and abilities. In his book, *Being Black, Living in the Red* (1999), Dalton Conley examines racial differences in several indicators, such as income, education, and family structure. Conley's major conclusion is that racial differences in income and wealth are primarily due to the dramatically different class backgrounds of whites and African Americans. In particular, differences in wealth between white and African American families are responsible for subsequent racial differences in the labor market. As Conley notes, it is easier to pass on wealth across generations than income or education (1999, p. 14). Solutions to the problem do not center on increasing access to educational institutions. According to Conley, what is needed is a race-based asset policy that promotes property ownership for African Americans (p. 138).

Research on upward mobility has benefited from recent studies that incorporate racial differences. However, there are several limitations to these studies. The most important limitation is the absence of any discussion of the mobility patterns of Asians, Latinos, and other racial and ethnic groups. Latinos are now the largest racial or ethnic minority group in the United States, and an investigation of the potential barriers they face to upward mobility is needed.

UPWARD MOBILITY OVER TIME

Upward mobility also changes over time. However, there is a debate in the literature about how much change has occurred and why. According to the liberal theory of industrialism, rates of social mobility should converge over time across countries as they reach similar levels of industrialization. Richard Breen and Jan Jonsson observe in their 2005 article in the *Annual Review of Sociology* that there is evidence of at least modest increases in mobility in several different countries since the 1970s. Additionally, the relationship between class origins and destinations may be weakening over time in several countries, which suggests greater potential for upward mobility in the future based solely on individual achievements. However, other scholars, such as Erikson and Goldthorpe, see temporal changes in social mobility as short-term fluctuations rather than long-term trends (1992, p. 36).

The trajectory for upward mobility in the future is complicated by several different factors. First, the strength of the association between class origins and destinations will play an important role. Despite the popularity of the "rags to riches" stories from Horatio Alger novels in the late 1800s and the image of most modern societies as meritocracies, family background continues to have a strong influence on one's economic success today. Growing up in a wealthy family with educated parents puts children in an advantaged position because of the resources and values that are passed down, which children from economically disadvantaged backgrounds often do not receive. Therefore, as long as class inequality persists, so too will the limits on upward mobility.

However, there is also reason to believe that rates of upward mobility may increase in the future in several countries. Education is increasingly important in the postindustrial world, and the worldwide expansion of educational opportunity may help to provide opportunities for people to move up into higher-status occupations regardless of their social origins. Even in Communist countries such as China, educational attainment is increasingly responsible for what type of job someone works in and the income they receive. Although equalizing access to education would increase the potential for upward mobility, it would not lead to completely open or fluid societies. Equality of opportunity does not guarantee an equal or "just" society. It merely guarantees "an equal chance to leave the less fortunate behind in the personal quest for influence and social position" (Rawls 1999, p. 91). Inequalities of condition, such as wealth inequality, are likely to persist and limit the potential for upward mobility. Only policies aimed explicitly at limiting the degree of inequality in property and assets, such as redistributive taxes on wealth, are likely to make a significant difference.

SEE ALSO *Achievement; Achievement Gap, Racial; Alger, Horatio; Blau, Peter M.; Class; Discrimination; Duncan, Otis Dudley; Equal Opportunity; Equality; Hierarchy; Inequality, Income; Inequality, Wealth; Intergenerational Transmission; Meritocracy; Rawls, John; Stratification*

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URBAN ECOLOGY

SEE *Human Ecology.*

URBAN FOUNDATION

SEE *Townships.*

URBAN LEGENDS

SEE *Rumors.*

URBAN POVERTY

SEE *Poverty, Urban.*

URBAN RENEWAL

Urban renewal is a cooperative effort by public officials and private interests to improve a city's structural, economic, and social quality. Major American cities were economically and socially devastated by the stock market crash of 1929 and the ensuing Great Depression of the 1930s. Most cities had narrow tax bases that relied excessively on property tax revenues, which sharply declined because of widespread business failures and mortgage foreclosures. High rates of unemployment, poverty, and homelessness overwhelmed scarce local resources and contributed to a decline in essential local services, such as public schools and police protection.

The urban-centered New Deal programs of President Franklin D. Roosevelt (served 1933–1945) addressed the immediate economic crisis of American cities instead of their long-term improvement. In particular, New Deal programs such as the Works Progress Administration (WPA) and Public Works Administration (PWA) used public-works jobs to reduce unemployment, stimulate local economies, and subsidize state and local relief for the unemployable poor. The Social Security Act of 1935 included unemployment insurance and Aid to Dependent Children (ADC). Nonetheless, these New Deal programs did cause some major long-term changes in the structure and design of major cities, such as the construction of the Triborough Bridge in New York City and a new city hall for Houston, Texas.

The Housing Act of 1934 created the Federal Housing Authority (FHA), and the U.S. Housing Authority was established in 1937. These federal agencies eventually became the major bureaucratic components of the U.S. Department of Housing and Urban Development (HUD), created in 1965. Influenced by the perspectives of local banking, real estate, and construction interests, the FHA encouraged and solidified the practice of redlining, in which poor African Americans and Latinos were segregated in federally subsidized public housing projects and experienced discrimination in the sale and rental of private housing in white neighborhoods.

During World War II (1938–1945), major cities experienced severe housing shortages and strains on local public services and infrastructure. There was a sharp increase in the number of poor and working-class residents, especially African Americans from the South and whites from rural areas, who moved there to work in defense industries. There also existed a scarcity of materials and labor for civilian construction needs.

The Housing Act of 1949 was the first act of Congress that included federal funds and guidance for urban renewal in addition to providing federal funds and regulations for building more affordable private and public housing and clearing slums. This law also had the effect of continuing and expanding the practice of redlining as more whites, assisted by federally subsidized home mortgages for veterans, moved from cities to suburbs and a larger percentage of urban populations consisted of low-income African Americans and Latinos.

During the 1950s, other federal policies, especially the interstate highway program, accelerated the economic and social decline of major cities, especially in the Northeast and Midwest, as more middle-class homeowners lived in suburbs and commuted to cities for work or moved to growing metropolitan areas of the South and West. Under President Dwight D. Eisenhower (served 1953–1961), the federal government financed a limited number of competitive block grants to help cities revitalize their downtown business districts and clear slums. Led by Mayor Richard Lee, the ambitious urban renewal project of New Haven, Connecticut, was a prominent beneficiary of this federal aid. Toward the end of his presidency, however, Eisenhower vetoed Democratic legislation intended to economically revitalize chronically depressed cities and rural areas on a more expensive, comprehensive basis.

By the 1960s, major urban renewal projects had been completed in Pittsburgh, Boston, and New Haven. Under the leadership of parks commissioner Robert Moses, New York City continued to construct new highways, expressways, bridges, tunnels, office buildings, and public housing and to force the migration and dispersal of residents and small businesses from working-class and poor neighborhoods. Jane Jacobs's 1961 book, *The Death and Life of Great American Cities*, galvanized greater public opposition to urban renewal policies, especially in New York City. Jacobs argued that comprehensive, aggressive urban renewal policies, like those of Moses, often destroyed the social cohesion and quality of life of urban neighborhoods. Critics of urban renewal referred to it as "Negro removal" for adversely affecting urban black neighborhoods in particular. Poor and elderly blacks were forced to move to public housing projects while middle-class black professionals and business owners often moved to suburbs.

Partially influenced by Jacobs, some of the Great Society programs of President Lyndon B. Johnson (served 1963–1969) tried to ameliorate the social problems

caused or worsened by urban renewal. Programs such as Model Cities, Head Start, Community Action, Legal Services, and Job Corps were intended to help urban residents, especially low-income African Americans and Latinos, to improve their social, economic, and educational conditions and redress their grievances against local officials and businesses. The Fair Housing Act of 1968 addressed the increasing residential segregation of poor African Americans and Latinos in major cities by prohibiting racial discrimination in the sale and rental of both public and private housing. Nonetheless, major race-related urban riots occurred during the 1960s.

The Republican administrations of presidents Richard M. Nixon (served 1969–1974) and Gerald R. Ford (served 1974–1977) eliminated or reduced funding for the most urban-oriented Great Society programs. However, they increased total federal aid to cities by introducing General Revenue Sharing (GRS) and Community Development Block Grants (CDBG). GRS and CDBG increased federal aid to cities while reducing federal control, and CDBG gave local business interests greater discretion in using CDBG funds for urban renewal. By the 1980s, the percentage of local government budgets consisting of federal aid peaked at 30 percent.

Determined to reduce federal spending and intervention in urban affairs, President Ronald W. Reagan (served 1981–1989) eliminated GRS by 1987 and reduced the number of block grants. Instead, the Republican administrations of Reagan and President George H. W. Bush (served 1989–1993) emphasized the use of tax credits and other market-based incentives to encourage the ownership of public housing units by their residents and to subsidize the construction of affordable private housing through HUD grants. By 1990 the percentage of local government budgets derived from federal aid declined to 17 percent.

With a Republican-controlled Congress during most of his administration, Democratic president William J. Clinton (served 1993–2001) did not introduce a major new role for the federal government in urban renewal. Instead, Clinton's policies sought to improve the quality of life for the urban working poor, especially racial and ethnic minorities, through earned income tax credits, the Welfare Reform Act of 1996, greater access to Head Start and public health services for poor, urban children, and more federal aid for law enforcement and public safety. By 2000 federal aid as a percentage of local government budgets had modestly increased to 20 percent. With steady economic growth during most of the 1990s and early twenty-first century, "gentrification" became the primary objective of urban renewal as local officials and business interests sought to attract young, affluent professionals as new residents and more tourists, conventions, and cultural activities to downtown areas.

SEE ALSO *Cities; Community Power Studies; Dahl, Robert Alan; Gentrification; Ghetto; Jacobs, Jane; Johnson, Lyndon B.; Moses, Robert; Neighborhoods; Planning; Segregation; Segregation, Residential; Urban Riots; Urban Studies; Urbanization*

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URBAN RIOTS

A riot happens whenever a crowd engages in collective violence such as beatings, murder, looting, or arson. Riots are far more likely to occur in urban than in rural areas because the density of population increases the supply of potential participants, as well as targets of attack. The state's role in a riot ordinarily is to squash it using police or military force, but in some instances the police or government officials may provoke a riot for political ends. Generally, countries have laws against rioting, as well as rules of engagement that govern the use of deadly force to quell a disturbance. A riot may spread through media reports or if rioters contact their compatriots in other cities, urging them to start a disturbance. The odds of rioting may be increased or decreased by nature: A hot summer night may cause tempers to flare, whereas a thunderstorm may disperse a crowd otherwise bent on mayhem.

Riots have underlying and proximate causes. The underlying causes are grievances, real or perceived, that rioters hold against social or political institutions, usually (but not always) where the riot occurs; or against other groups of people on racial, ethnic, or religious grounds. The proximate cause can almost always be identified after the fact—an incident of police brutality or a racial, ethnic, or religious slur. Riots may have economic, social, or political consequences. A riot of a majority against a minority may cause the latter to move away from particular neighborhoods in a city or to different cities. A riot

may change expectations of future economic growth in a city, causing capital to be allocated elsewhere.

Urban riots have been widespread throughout modern history and across countries. Riots over food shortages were common in seventeenth- and eighteenth-century Europe. Riots fueled by religious conflict have occurred quite regularly in the Middle East, India, and the Far East. As discussed below, racial rioting erupted at unprecedented levels in the United States in the 1960s. In the 1980s urban riots broke out in England. In the early twenty-first century, rioting by disaffected minority youth was particularly violent in suburban areas of French cities.

Governments react to the aftermath of riots in diverse ways. A dictator may react by repressing the dissenting minority harshly, although this may entail a subsequent risk of revolution. In democracies rioting may also influence the course of national politics by enhancing the political clout of politicians on the left or right. In the United States, for example, Spiro Agnew, a conservative Republican from the state of Maryland, came to prominence on a "law and order" platform in the aftermath of riots in Baltimore in the 1960s. Democratic governments may also react by creating special commissions to study the causes of the rioting such as the famous *Kerner Commission Report* (Kerner et. al. 1968), which studied the causes of the 1960s riots in the United States. Ameliorative policies may be adopted in the hope of stemming future violence. Richard Nixon's so-called "Black Capitalism" agenda (Weems and Randolph 2001) and expansion of affirmative action in the early 1970s can be seen in this light.

1960s RIOTS: THE UNITED STATES

The United States possesses a long, terrible history of racial rioting. Until World War II, the vast majority of urban riots involved white-on-black violence. Perhaps the most infamous example during the nineteenth century was the 1863 riot in New York City, during which immigrants angry over the Civil War draft in the North attacked and killed scores of African Americans. As African Americans left the rural South and moved to Northern cities they increasingly competed with whites for housing and jobs. Racial tension sometimes escalated into white-on-black riots such as those in St. Louis and Chicago in 1919. In 1943 riots broke out in Newark and Detroit that in character bear a resemblance to those that occurred in the 1960s, including clashes between African Americans and police, as well as looting and arson of businesses in African American neighborhoods. Even when viewed against the backdrop of the 1940s riots, those occurring in the 1960s were without historical precedent. From the early 1960s through the early 1970s, hundreds of riots originating in African American neighborhoods broke out in American cities. Since the 1960s the United States has not been completely immune to racial riots, as examples in Miami (1980), Los Angeles (1992), Cincinnati (2001), and Benton Harbor, Michigan (2003), attest.

The standard academic definition of a 1960s race-related riot, as originally put forth by Spilerman (1970, 1971), was a "spontaneous" occurrence with a minimum of thirty participants, some black, that resulted in violent outcomes, such as arson, looting, or death. With this definition in mind, social scientists have collected information on the location, timing, and severity of the 1960s riots. Currently, the most comprehensive data set is that collected by Carter (1986), which covers the period 1964 to 1971 and includes the dates and locations of more than 700 civil disturbances, as well as numbers of deaths, injuries, arrests, and occurrences of arson. The peak years of riot activity were 1967 to 1969, especially 1968 in the aftermath of the assassination of Martin Luther King Jr. Most riots were not severe, in the sense of widespread loss of life or property destruction, but a small number were extraordinarily violent. By far the deadliest riots were those in Detroit in July 1967 (43 deaths), Los Angeles in August 1965 (34 deaths), and Newark in July 1967 (24 deaths).

Social scientists have long tried to identify city-level factors associated with the incidence and severity of the 1960s riots. In general, after accounting for each city's black population size in 1960 and for region, little or no variation in incidence and severity can be accounted for by pre-riot city-level measures of African Americans' absolute or relative (black-to-white) economic status. The point is not that the 1960s riots had no underlying causes but rather, if the black population in a given city was of a sufficient size, a riot could happen at almost any time in the mid-to-late 1960s if there was an appropriate spark. Most sparks were local—for example, in the Watts, Los Angeles, riot in 1965, the arrest of an intoxicated black motorist led to a wider altercation with neighborhood residents and eventually a huge riot. By contrast, the King assassination was a national spark that had the potential to incite rioting across the country.

The King riots figure importantly in two recent studies of the economic impact of the 1960s riots in urban areas (Collins and Margo 2004a, 2004b; King 2003). In the several weeks following that assassination, more than 100 riots erupted. However, riots did not occur everywhere, and a key factor in determining the likelihood and severity of a post-King riot was the level of rainfall. A high level of rainfall in April 1968 significantly reduced rioting and is a source of exogenous variation across cities. Using predicted severity based on rainfall, Collins and Margo show that the various economic outcomes for African

Americans—for example, median household income, employment rates, and the value of owner-occupied housing—declined sharply between 1960 and 1970 in cities that experienced severe riots. Moreover, these declines persisted and in some cases worsened in the 1970s. Collins and Smith (2007) extend the cross-city analysis to a case study of Cleveland, showing that black neighborhoods that bore the brunt of the rioting experienced economically significant and persistent declines in property values and population that were not continuations of trends in place prior to the violence.

THE FRENCH RIOTS OF 2005

In the United States the poor tend to live in the central cities of metropolitan areas, but in France (as in other western European countries) the poor are concentrated in suburban rings around a wealthy core. Since the 1970s French suburbs have been increasingly populated by immigrants from North Africa (the Maghreb), sub-Saharan West Africa, and the French West Indies. Most immigrants live in public housing built in the 1950s and 1960s. Their list of grievances is long—high unemployment, racism, police brutality, and inadequate educational opportunities.

In the fall of 2005, serious rioting broke out in the town of Clichy-sous-Bois in suburban Paris. The spark that caused the riot was the accidental electrocution of two minority youths who were fleeing the police. News of the electrocution spread quickly, and rioting commenced. The principal form of violence was arson, primarily directed against automobiles, but also some schools, day care centers, and businesses. As news of the violence was broadcast on French television (indeed, throughout the world) and by the Parisian rioters using the Internet and other electronic media, rioting spread to the suburban peripheries of other French cities. Nationwide, the rioting lasted for two weeks before finally petering out. On the first anniversary of the riots there were sporadic outbreaks of violence, but no full-scale reoccurrence of rioting.

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Robert A. Margo

URBAN SPRAWL

Urban sprawl may be defined as the low-density, haphazard housing development that spreads out around modern towns and cities. The terms *sprawl* and *suburbia* are often used interchangeably and pejoratively to describe inferior forms of development, compared, presumably, with the ideal model of the compact urban form of the historical European city. Urban sprawl is typified as "bad," physically because it is so spread out with a lack of local facilities; socially because of boredom among residents and a lack of community identity; economically because of residents' dependency on the motorcar and thus upon politically sensitive international oil supplies; and environmentally because of the impact on agriculture and native habitats and the increased generation of pollution and urban waste.

Until the nineteenth century, towns and cities were generally limited in extent because local facilities and employment had to be within walking distance of home, while longer journeys utilizing horse transport were time-consuming and often dangerous. The coming of the railways enabled people to "escape" the city and live further from their workplace. But residential density and expansion were still constrained by accessibility to the nearest train station. The development of the motorcar, and the growth of public transport omnibus routes, meant that transport was no longer limited to fixed-track systems. Potentially, people could live anywhere. Factors that hastened suburban sprawl included cheap vehicle fuel and mass production of motorcars, mass commercial housebuilding, cheap mortgages, weak urban-planning control, a cultural desire to have "a home of one's own," and the

trend for aspiring households to abandon the inner city and move "up and out."

While suburban development was rapid, extensive, and encouraged in North America, Western European governments were anxious to control expansion because their countries are so much smaller and there is simply not the space to expand or to give the motorcar and road-building projects unfettered freedom. For example, the land area of the British Isles fits into Texas alone six times, and France fits four times. By the 1930s, regulations were being introduced to control urban sprawl, to protect farmland, and to prevent the tentacles of "ribbon development" house-building alongside intercity highways, invading the countryside. Retaining enough agricultural land to be self-sufficient in food was recognized as vital following World War II (1939–1945) shipping blockades of the British Isles. In the postwar period, strict spatial-planning legislation was introduced to prevent the town from engulfing the countryside. For example, "green belts" were designated around major cities to act as cordons to prevent further outward development.

Recognition of "urban sprawl" as a problem is relative, depending on the size of a country's population and its land area. Some countries have maintained a laissez-faire approach toward urban sprawl. In New Zealand, a country of comparable size to Britain but with only four million inhabitants (in contrast to Britain's fifty-nine million), large tracts of low-density, single-story "bungalow" development surround the major cities, and new "subdivided" residential developments have mushroomed with little apparent planning control within scenic rural areas. Although there may be lots of space to expand, environmental considerations now have to be taken into account under resource-management planning legislation. Likewise, in Australia there are increasing demands to protect koala bear habitats from encroachment by house builders. Houses built on the edges of cities alongside wilderness areas are in danger of being destroyed by forest fires, which can take hold rapidly during the dry season, as has been witnessed in recent years on the outskirts of Sydney, Australia; San Diego, California; and also in southern France and Portugal.

The low-density, spread-out nature of suburban sprawl, creates many practical problems too. Residents are completely dependent upon the motorcar to get from one land-use and amenity to another. Distances are often too great to contemplate walking to school or work. Retail provision is likely to be in an out-of-town shopping mall (Kunstler 1994), rather than along a "Main Street" (as fondly re-created by the Disney Company in the town of Celebration, Florida). Some North American housing developments are designed with no footpaths or sidewalks alongside the roads, making it impossible for residents to walk around their area. Land-use zoning regulations, introduced to protect the quality of an area, often result in miles and miles of nothing but housing with no other uses allowed. Socially, such areas are just "dormitory suburbs," which people leave each day to commute downtown to work. Many sociological studies, including feminist research (Hayden 2002), have shown that housewives, mothers, children, young teenagers, and the elderly may feel trapped in the suburbs, with little chance of accessing the outside world. There is little room for social diversity and minority considerations (Reeves 2005). Environmentally, urban sprawl is not sustainable either. Major infrastructural investment is required to provide roads, water, sewerage, drainage, garbage disposal, power, and other utilities and services to dispersed housing developments. Water shortages and power outages, exacerbated by climate change as a result of global warming, have become a common feature of some such residential areas (Lees 2004).

Urbanization and suburbanization are major global trends (Greed 2002). The rate of growth is far greater in the developing world, where a less affluent but pervasive form of urban sprawl is taking place: namely, the shanty town, as found, for example, in Latin America, where both Mexico City and São Paolo, Brazil, have populations of over twenty million. Unregulated development may cover a larger land area than the existing city, as people move in from the countryside to seek jobs in the town. Unlike affluent Western urbanization, third-world sprawl is generally high-density, socially deprived, lacking infrastructure, and relatively carless. But, unlike Western suburbanites, barrio dwellers may have a strong sense of community and local neighborhood identity, albeit brought about by shared adversity.

What are the alternatives to urban sprawl? There is a need to create cities that are more environmentally, economically, and socially sustainable. European planners have suggested the ideal of "the city of everyday life," which would be based on higher densities, multiple functional local centers, walking distances, and public transport (Greed 2002). Likewise, the postmodern "new urbanism" in North America promotes a greater sense of community and a more human scale of design (Ellin 1999). Meanwhile planners stress the importance of urban renewal, infill, and higher densities. But the Anglo-American urban cultural tradition still favors low-rise, low-density housing solutions, in contrast to the European tradition of high-density apartment living and Asian high-rise solutions. The majority of the populations of the United States, the United Kingdom, Canada, Australia, and New Zealand live in the suburbs. The reality is that ordinary people with families want to live in the suburbs, and are willing to put up with long congested commutes to work to do so. But suburban sprawl is not a

sustainable option. The challenge for the future is to create more compact cities, which are nevertheless pleasant and acceptable places to live, work, and relax.

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Clara Greed

URBAN STUDIES

Urban studies is the umbrella for several disciplines engaged in studies of the city, including sociology, geography, economics, political science, anthropology, urban planning, architecture, and urban design. Practitioners of these linked disciplines study urbanization and issues surrounding metropolitan dynamics, the process that links cities with the wider economy, their governance, and their spatial structure and change expressed in physical, economic, social, and cultural dimensions. These disciplines use distinctive epistemologies in understanding the city, but the issues they address typically cut across disciplines.

APPROACHES, CONCERNS, AND DISCIPLINES

The major traditions or approaches in urban studies are locational analysis, spatial network analysis in the management of cities, and sociocultural, institutional, political economy, and postmodern methods (Paddison 2001). Locational analysis, identified primarily with the work of urban economists and urban geographers, is concerned with intraurban spatial patterns of urban land use and the accessibility of central business districts. William Alonso (1964) developed the seminal bid-rent theory for urban land markets. Network studies examine the spatial distribution of systems of cities and their specialization and development. Walter Christaller's ([1933] 1966) central place theory and subsequent works by August Lösch ([1944] 1954) and Walter Isard (1956) are the key early works in this urban studies thread. More recent studies of spatial networks focus on the formulation of linkages in the world economy, urban economic restructuring, and globalization (Friedmann and Wolff 1982; Sassen 1991).

Sociocultural and institutional approaches have been developed by urban sociologists, urban anthropologists, and political scientists. Key elements of these approaches are understanding the meaning of urban social life, grasping human ecology, analyzing social areas, using techniques of factorial ecology, and conducting empirical studies on "ways of life." Early social scientists contributing to these trends included Ferdinand Tönnies ([1883] 1995), who defined community and society ideal-types; Max Weber (1905), who identified ideal city-types as loci of civilization and historical change; and Lewis Mumford (1938), who pioneered the study of urban culture.

The Chicago School, the first school of urban analysis, was established in the 1920s in the Sociology Department of the University of Chicago. It was uniquely concerned with urban life and developed the human ecology approach to describe the structure and processes of urban ethnic neighborhood change. Robert Park (1916, 1952) derived principles of competition, succession, and invasion by which groups use or dominate city spaces. Members of the Chicago School studied Chicago as an urban laboratory. Along with Ernest W. Burgess and Roderick D. McKenzie, Park (1925) explored social patterning and the concentric patterning of urban growth. Louis Wirth (1938) formulated principles of size, density, and heterogeneity and defined *urbanism* as a way of life. Eshref Shevky and Wendell Bell (1955) contributed to the development of social analysis by linking urban industrialism to sociospatial differentiation. Duncan Timms (1971) applied factorial ecology techniques to identify sociospatial patterning.

Ethnographic studies include research on the distinctive "ways of life" of different urban marginal groups (including hobos, gangs, and immigrants), the techniques of self-reporting life histories (Thomas and Znaniecki 1918–1920), and the utilization of official data, including census reports and housing/welfare records, to create maps of the location and range of such urban problems as crime, poverty, and juvenile delinquency. W. E. B. Du Bois (1899) pioneered the use of direct surveys, while E. Franklin Frazier (1932) charted new ground in understanding the dynamics of urban social classes. Later ethnographic studies on gangs and immigrant groups in Boston and Chicago are well-known examples of the application of the participant-observer methodology developed by the Chicago School (Anderson 1978, 1990; Whyte 1943). These techniques have now become standard in various urban studies fields, the former in economics and geogra-

phy and the latter in sociology and anthropology. Jane Addams's (1910) fieldwork on immigrants and on the living conditions of African Americans in segregated cities added considerable voice to the movement for direct policies for urban reform.

The institutional approach explores community life, community power, and urban power. Research on the development of communities includes the detailed empirical studies of community life and community power by Robert Lynd and Helen Lynd (1929, 1937). Focused community studies by Michael Young and Peter Willmott (1957) and the early community/urban power studies of the 1960s, Floyd Hunter's (1952) study of local elites, and Robert Dahl's (1961) formulation of dispersed/pluralist sources of power established the core of metropolitan governance studies. John Rex and Robert Moore (1967) researched the role of institutions and agency in influencing social outcomes. R. E. Pahl (1970) formulated urban managerialism/gatekeeping as control mechanisms for access to key resources. Clarence Stone's (1989) regime analysis argued that the operation of metropolitan politics in the Atlanta area was based on political networks among the fragmented metropolitan governments and that managing these networks had become the essence of governance. Addressing class stratification in urban areas with this approach is indirect; if cities succeed in the global marketplace through well-developed urban management, the theory argues, prosperity will trickle down to the urban poor.

The political economy tradition links urban challenges to underlying inequalities in power and property in the process of urban development. Marxist analysis of urban issues and development (Engels [1844] 1973; Harvey 1973; Gordon 1978), the analysis of urban government as a local state (Cockburn 1977), evaluations of urban ideology and collective consumption conflicts (Castells 1977), and applications of dependency theory to urban problems are examples of this vital trend in urban studies. This approach generally argues that the rigid stratification in cities is a reflection of the broader class structures in society and that revolutionizing national and international class relations is a requirement for significant urban transformation.

Researchers from urban planning, urban design, and architecture focus their concerns on the management and structure of cities. Modernist visions of the city were applied in the New York Regional Plan (1922) and Greater London Plan (1944). William Whyte (1955) studied public use of urban parks and plazas to identify the types of architecture and spatial design that promote a certain pattern of behavior. "New Urbanism" considered American small towns as imagined urban models, where busy and lively sidewalks help cities thrive as safe and healthy places. According to Jane Jacobs's (1961) "vibrant city" concept, lively street life supports a creative and diverse economic base, but rigid planning smothers urban social life and entrepreneurialism. Where planners have called for detailed planning processes, usually engaging the affected communities, economists have argued for a greater role for market forces in determining the location and density of activities. Both generally accept existing patterns of class stratification.

Postmodern approaches confront the assumptions of positivism and the theory of modernist planning and study different aspects of city life. Postmodernists have analyzed cities as centers of consumption (Mort 1996), centers of recreation (Hannigan 1998), and centers of image (Gottdiener 1995). Jane M. Jacobs (1996) developed the concept of "representational cities," where messages encoded in the environment can be read as texts. Postmodernists, however, offer few concrete suggestions on ameliorating the conditions of the poor; increasing diversity and participation in social life, they believe, would be an important component of enhancing the quality of life for all city dwellers.

DIFFERENTIATION, DISPLACEMENT, EXCLUSION, AND GLOBALIZATION

Urban scholars today are tackling the issue of globalization's impact on urban spaces and populations from many perspectives, building on the field's past insights into such urban processes as the differentiation of urban populations due to social and economic inequalities, the displacement of the less affluent, and the exclusion of the poor from public amenities. Many urban scholars now feel that the ever-growing world-wide mobility of capital and labor—globalization—is causing populations to sort themselves into rigidly segregated global class hierarchies.

Cities have been in the process of constant economic restructuring since the beginning of industrialization. John Kain's (1968) "mismatch hypothesis" and William J. Wilson's works (1987, 1996) on "the underclass" provided frameworks within which to understand suburbanization (in both economic and sociologic dimensions) as a process that increases differentiation and exclusion. The emergence of employment centers or "edge cities" (Garreau 1991) in the suburbs showed that the loss of low-skill jobs in the central cities is not easily reversible. Globalization, driven by international flows of capital and information, has created a new system of city networks (Castells 1989; Sassen 1991).

Thomas Sugrue (1996) documented how economic restructuring in Detroit has been extremely painful and dislocating for African Americans who lost their middle-class jobs in the automotive industry. Lack of economic

opportunities increased the size of the underclass in Detroit. Saskia Sassen (1991), H. V. Savitch and Ronald Vogel (1996), and John Mollenkoph and Manuel Castells (1991) showed that New York City has become a "dual city," where skilled workers work in the specialized industries and immigrant workers take lower-paying service jobs and live in distinctly separate urban environments. Globalization coupled with urban renewal programs resulted in gentrification or displacement of some poor inner-city urban residents by higher income groups. Mike Davis (1990) argued that globalization has also opened urban land markets to global capital. Los Angeles, for example, restructured its industrial base and maintained its prosperity through participation in the Pacific Rim postindustrial order (Scott and Soja 1996), but the associated flood of capital from Asian countries increased land prices and made housing unaffordable for virtually all middle-class residents in Los Angeles. Globalization and privatization of public space in Los Angeles have excluded the lower and middle classes from most of the urban space.

Urban studies today continues to grapple with such challenges. Economists urge a reliance on market forces for improvements, while planners call for detailed "smart growth" plans. Political scientists focus on enhancing and democratizing governance as the pathway to progress, while institutionalists urge the federal government, not just the locality, to address the underlying social ills confronting the poor in cities. Similarly and more radically, political economists argue that urban challenges cannot be successfully addressed as long as the national class structure maintains an unequal, exploitative regime. Taken as a whole, then, urban studies is a terrain of contention among schools of thought, with many alternative policy recommendations to address the challenges of the city.

SEE ALSO *Sociology, Urban; Stratification; Urbanization*

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URBANITY

Over the course of the nineteenth century in Europe and North America, urbanity came to be conceived as a personality trait. According to Richard Sennett (1974), public experience outside the private sphere of the home became an obligation for the self-development of men. Conversing in cafés or walking the busy streets, just like traveling, was a means to acquire sophistication and to become comfortable with diversity. Urbanity, cosmopolitanism, and sophistication were almost synonymous. For women, on the other hand, exploring the public sphere was considered immoral. Moving about the city alone and freely was associated with loose sexual behavior. It was in the sphere of the bourgeois home in the city that women acquired the manners and accent of urbanity. Present-day standards of politeness, such as the notion that each person has the right to be left alone when in public or norms on proper English and proper dress, were derived from the social control of the urban bourgeois home.

Indeed, urbanity is often conceived as the cultural capital of higher social classes. As a personality trait, it is used for exclusion in jobs and for residential segregation. For instance, the speaking accent of youth living in the French *banlieue* (suburbs) acts as a serious barrier to employment in a discriminatory environment. In addition to their relegation in housing projects outside cities, these youths are not seen as endowed with enough urbanity and sophistication to work and they are often tagged with a lack of civility.

For Pierre Bourdieu (1979), cultural capital provides people with a structure of predispositions transmitted by their family; urban, white, middle-class youth would thus be better equipped to succeed than their poor, suburban counterparts. There are three forms of cultural capital, each of them closely associated with the notion of urbanity. Firstly, embodied capital refers to investments in self-improvement; it is thus focused on urbanity as a personality trait that can be developed. Secondly, objectified cultural capital is represented by material objects such as a nice car or a house in a trendy neighborhood; it is thus closely related to the politics of space (who has the right to be in the city?). Thirdly, institutionalized cultural capital provides certain people with access to decision-making powers affecting everyday life in the city.

White, middle-class, urban dwellers endowed with these three forms of cultural capital have a discriminatory and exclusionary impact on other city dwellers. They can shape the city to their own image. Derelict landscapes in central cities are regenerated, pushing away poorer residents for processes of gentrification. The revamping of Times Square in New York City, for instance, is an example of what Neil Smith (1996) calls *revanchist* urbanity, whereby the white middle-class appropriates spaces in the city for their own pleasure and the fulfillment of their own urbanity. In the name of economic growth and safety, former New York mayor Rudy Giuliani went on with this model of what Sharon Zukin has called "pacification by cappuccino" (1995, p. 28), eliminating greasy mom-and-pop joints and other venues that were not attractive to the white middle class.

As a personality trait enhanced by spatial practices and institutional power, urbanity is used as a means of exclusion. However, more and more voices are rising to claim other forms of urbanity that would not be linked to class and ethnicized cultural capital. This became particularly visible in the wake of the worldwide urban revolts of the late 1960s. Henri Lefebvre (1968) wrote then about the rights to the city—that is, the right to be in the city and to have decent living conditions, but also the right to define the codes and norms of social life in a manner closer to everyday practices than to technocratic power.

In fact, according to Lefebvre (1970), after the agricultural, mercantilist, and industrial ages, we are now going through an urban revolution. This does not only mean that more than half of the world population lives in cities that cover more and more land, but also and mostly that the way we conceive of the world has become urban. For Lefebvre, personalities, economic behavior, spiritual beliefs, modes of social interaction, all aspects of human life have become urban. Urbanity, in this second definition, is not confined to a personality trait of the white middle class but is a general characteristic of the world since the 1970s. Even for peasants in a country of the "global south," Lefebvre would argue, urbanity is part of their life, their values, and their mental schemes.

In this sense, urbanity can be defined by a set of distinctive social characteristics, regardless of geographical location. Diversity of people, beliefs, and histories is the most important of these characteristics. Whether it is celebrated, commercialized, tolerated, or oppressed, diversity is a trait of urbanity that is very different from rurality (which is often associated with homogeneity). Other related characteristics of urbanity are speed, flows of people, information, and goods, and mobility, as well as concentration and density. Combined, these traits are sometimes seen as having pervasive effects, such as deviant behavior or alienation. Yet, the tenuous social bonds and anonymity often associated with urbanity in contrast to rurality are caused not so much by life in cities as by what Lefebvre calls *technocratic control*. Obsession with rational planning, rather than privileging the spontaneity and diversity of everyday life, has individualization and alienation effects.

SEE ALSO *Culture, Low and High*

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URBANIZATION

Urbanization—the transformation of social life from rural to urban settings—is the seminal process in defining the course of civilization. Urban life evolved approximately ten thousand years ago as a result of sophisticated agricultural innovations that led to a food supply of sufficient magnitude to support both the cultivators and a new class of urban residents. These agricultural innovations, mainly irrigation-based public works, required a more complex social order than that of an agrarian village. Urbanization at its base is thus distinguished from the settled agrarian life that preceded it in two important respects: it embodies a multifaceted social hierarchy and relies on sophisticated technologies to support the activities of daily living (Childe 1936). These uniquely urban characteristics consistently define both urbanization and civilization from the past to the present.

Just as civilization emerged from urbanization in the past, so too does the future course of civilization hinge on our ability to incorporate the reality of contemporary urbanization into our responses to twenty-first-century challenges that include climate change, the elimination of severe poverty, ecological balance, the conquest of communicable diseases, and other pressing social and environmental problems. This is the case because since 2007 more than half of the world's population resides in urban settings—a historic first.

Urban life can be defined, following Louis Wirth (1938), as life in permanent dense settlements with socially diverse populations. According to Lewis Mumford (1937), the city plays a critical role in the creation and maintenance of culture and civilization. Finally, following Henri Pirenne (1925), the crucial role of trade and production should be stressed. Thus urbanization involves an ongoing threefold process: (1) urbanization geographically and spatially spreads the number and density of permanent settlements; (2) settlements become comprised of populations that are socially and ethnically differentiated; and (3) these urban populations thrive through the production and exchange of a diverse array of manufactured and cultural products.

THE CONTEMPORARY SPREAD OF URBANIZATION

Although city life extends back at least ten millennia, the shape and size of modern urban settlements have roots that extend back only about 250 years to the Industrial Revolution, which marked a significant transformation in the role of cities as loci of critical productive activity and not just as cultural and political centers for a surrounding agrarian countryside. The present characterization of the world as predominantly urban is the cumulative result of this urbanization-industrialization trend. Industrial urbanization emerged first in the countries of the West, then in the countries of Latin America and the Caribbean, and is now strongly evident in Asia and Africa (Garau et al. 2005).

According to United Nations projections, by 2030 the increase of 2.06 billion in net global population will occur in urban areas. Over 94 percent of that urban total (1.96 billion) will be in the world's less-developed regions (UN Population Division 2004). This means that virtually all of the additional needs of the world's future population will have to be addressed in the urban areas of the poorest countries.

UN-Habitat, the United Nations agency responsible for promoting sustainable urban development, estimates that roughly one-third of the current urban population of about three billion live in places that can be characterized as slums. The UN classification schema for slums is a fivefold measure: lack of access to safe drinking water, lack of access to sanitation, inadequate shelter, overcrowding, and lack of security of tenure. If a place of residence meets any one of these measures, it is classified as a slum. By the year 2030, if nothing is done, the proportion of the urban population living in slums will rise to 43 percent (1.7 billion in an urban population of 3.93 billion). All of these people will be living in the urban slums of countries in the developing world, mainly in sub-Saharan Africa and Southeast Asia (UN-HABITAT and Global Urban Observatory 2003).

DENSITY, DIVERSITY, AND URBANIZATION

Urbanization is most powerfully observed through physical density (comparatively large numbers of people living in comparatively small areas). The ratio of population size to land area is the standard metric for evaluating density. It is a precise measurement that is not easily interpreted because neither the numerator (population size) nor the denominator (land area) is static. Political boundaries are only marginally helpful in defining the effective size of an urban settlement because at any moment changes in communications and transport technology alter the size of the relevant space over which urban residents live and work. Until the end of the eighteenth century, cities were spatially compact places with a radius of about one to two miles—the distance an individual could comfortably walk in carrying out daily activities. With the arrival of industrialization, effective urban size spread rapidly through the nineteenth and twentieth centuries. Contemporary urban or, more properly, *metropolitan* settlements easily encompass radii of 50 miles or more. This is a result of the continual improvement in rapid overland and even air travel modes and digital and wireless communications technology. The exact spatial configuration of any metropolitan settlement is a compromise between activities that must remain within walking distance and those for which residents are willing to travel (Schaeffer and Sclar 1980).

These spatially widening metropolises are not uniform in terms of their residential population densities. Hence density measurements alone tell us little about the quality of urban life. This quality can vary widely within the comparatively small confines of any metropolitan area. It is especially important to understand that high density per se is not an indicator of compromised living conditions. Metropolitan New York, which includes both the central city and the surrounding suburbs, has an average population density of over 5,300 people per square mile (ppm^2), but the wealthiest part of the region, Manhattan Island, has a density that exceeds 66,000 ppm^2. By way of comparison Nairobi, Kenya, has a citywide density of over 1,400 ppm^2, but its centrally located slum, Kibera, considered the largest in Africa, has an estimated population density of at least 100,000 ppm^2. While Kibera's density significantly exceeds Manhattan's, the major determinant of the differences in quality of life relate to the quality of shelter and the ancillary urban services, such as water, sanitation, public safety, and most importantly transportation. Very poor urban residents must exchange life in high-density, poorly serviced places for the ability to walk to the places in the urban center where they earn a livelihood.

The major urban challenge of the twenty-first century concerns the ability of governments to effectively provide

adequate shelter and to plan and deliver services for metropolitan-wide areas in developing countries. The difficulty in meeting the challenge is rooted in part in the fact that the historical political boundaries of the central city and suburban (i.e., satellite city) subunits of government typically derive from an earlier century, before contemporary transport and communications technology redefined effective spatial relationships. The urban economies of modern metropolises now run beyond the legal jurisdictions of the subunits of government responsible for infrastructure and public services. The insistence of international financial agencies and donors on governmental decentralization in developing countries has only served to exacerbate this problem because it has left these governmental subunits with the responsibility but without either the technical ability or revenue sources. The result is that necessary regional planning and infrastructure investment to address the challenges of urbanization are often stymied.

Urban population growth is largely migration driven. On one side there is the push of rural poverty and on the other the pull of urban opportunity. This migration-driven growth is further exacerbated by natural rates of urban population increase (birth rates that exceed death rates). Social life in urban settlements is thus more complex than its village counterpart. The transactions of daily living in villages are governed by a social economy where goods and services are exchanged on the basis of social roles and rules of reciprocity rooted in longstanding customs and religious observances. The transactions of urbanization that confront the new arrivals are, in whole or in part, defined by the impersonal exchange relationships typical of a market economy. This transition is never a simple one-for-one exchange.

Because urban populations are continually in flux and often simultaneously expanding, they are often characterized by a multiplicity of informal and formal social relationships and institutions in a similar state of flux. The variations among an informal social economy and a formal market economy in any city at any moment in time are highly reflective of the larger external forces, such as globalization and migration, that are continually redefining the roles of different cities in a world of complex trading and production relationships. In the slum of Kibera, many of the activities of daily life, including the provision of vital public services such as water, sanitation, and public safety, are governed by an informal local, but powerful, social economy (Lowenthal 1975). In contrast, life in the working-class neighborhoods of cities in developed countries is typically an amalgam of informal social institutions imbedded in formal mechanisms of municipal public-service delivery. For the wealthiest residents of these same cities, virtually all the services they consume are provided via the formal institutions of government or market exchanges.

URBANISM AND THE GLOBAL ENVIRONMENT

Many of the patterns of contemporary urban development are extensions of those set in place in the nineteenth and twentieth centuries. These patterns were based on three assumptions: (1) energy was relatively inexpensive; (2) safe drinking water was abundant; and (3) the environment could absorb all the waste products of urbanization. None of these assumptions is any longer valid. Consequently, urbanization in the twenty-first century will have to be reconceived in both social and environmental terms. The world cannot afford the political instability and social costs of massive pockets of urban slum dwellers, nor can it accommodate urban growth through a further spatial spread that relies on urban transport powered by carbon-based energy sources and the discharge of waste products into both the local and global atmosphere. A healthy and vibrant environment is now a scarce but vital good.

Environmental problems are principally generated by the disorderly sprawl of urban settlements into the surrounding countryside. In the developed world, metropolitan areas organized around private automobile travel among low-density suburbs and tied to a central business district generate high volumes of automobile travel in the absence of tight land-use regulation and good public transport. This development pattern has led to increased mobile source pollution within the metropolitan areas and significant greenhouse gas emissions that endanger the whole planet. Sprawl requires an ever-increasing spread of impermeable (i.e., paved) ground surfaces. This in turn leads to the runoff of polluted waters into the groundwater supplies. The paved surfaces absorb heat from the sun and create urban heat islands that require more energy consumption and the emission of pollution and greenhouse gases to cool homes and offices. In addition, there are inadequate landfills to collect all the refuse of these high-consumption urban centers.

In the developing world, the problems are similar but more acute in their direct manifestation. The high rates of population growth lead to a pattern in which urban settlement runs ahead of infrastructure improvement. This leads to the establishment of informal settlements (i.e., slums) characterized by an absolute lack of safe drinking water and sanitation. The lack of adequate public transport and public health protection systems leads to a congestion of private cars and informal transports in the center of cities, which exacerbates the air quality problems and greenhouse gas emissions. The social costs of the lack of these services fall disproportionately on the poorest residents of these burgeoning metropolitan areas. These costs take the form of excessive mortality and morbidity rates, low rates of labor productivity, and the reinforcement of an ongoing trap of urban poverty.

Climate change generated by greenhouse gas emissions adds yet another layer of special urgency to these pressing social problems. It is the very concentrated nature of cities—their population densities and their centrality in social functioning—that makes them and their residents so vulnerable to the hazards and stresses that climate change is inducing. Rising sea levels and warming water make serious climatic assaults on cities more frequent. Devastating storms and floods that hit once in a century now occur in far shorter cycles. The impacts are not equitably distributed. The poorest urban residents tend to live in the riskiest portions of the urban environments—flood plains, unstable slopes, river basins, and coastal areas.

Although the challenges of urbanization are formidable, the technical knowledge for their solutions exists. The question for the twenty-first century involves the ability of the international community, nations, and local governments to create institutions of urban planning and democratic governance that can effectively apply these solutions at a sufficiently broad scale that they can make a measurable difference.

SEE ALSO *Cities*

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URUGUAY ROUND

The Uruguay Round, which took place between September 20, 1986, and December 15, 1993, was the eighth round of multilateral trade negotiations conducted under the General Agreement on Tariffs and Trade (GATT). The "Final Act Embodying the Results of the Uruguay Round" was signed by 124 governments and the European Communities on March 15, 1994, at a ministerial conference in Marrakesh, Morocco. The act expanded the multilateral trade regime by establishing rules for the further liberalization of trade in goods, introducing new rules for services and intellectual property rights and establishing the World Trade Organization (WTO).

Prior to the Uruguay Round, seven rounds of multilateral trade negotiations that progressively lowered tariffs on goods were held between 1947 and 1979 under the auspices of the GATT, a provisional treaty. By the early 1980s, changing trade practices, increases in trade in services, the need for stronger intellectual property rights, and a growing membership of developed and developing countries made the weaknesses of the GATT apparent. A ministerial conference held in Geneva, Switzerland, from November 24 to 29, 1982, failed to launch a new round of trade negotiations as planned but initiated the process of agenda setting.

The Uruguay Round was launched at a ministerial conference held in Punta del Este, Uruguay, from September 15 to 20, 1986. The ambitious agenda included tariffs, nontariff barriers, agriculture, textiles, services, intellectual property rights, investment, and dispute settlement (see Table 1).

The Uruguay Round negotiations encountered significant delays, due in part to the political and economic sensitivity of the issues for developed and developing member governments. A ministerial conference held in Montreal, Canada, from December 5 to 9, 1988, was suspended after a deadlock developed between the United States and the European Communities over the liberalization of agriculture. Nonetheless, this meeting resulted in concessions on tropical products, revisions to dispute-settlement provisions, and the establishment of a trade policy review mechanism. The collapse of a ministerial conference held in Brussels, Belgium, from December 3 to 7, 1990, over the issue of agriculture jeopardized the Uruguay Round negotiations.

Following nearly a year of further technical preparation within the various working groups, GATT director-general Arthur Dunkel (1932–2005), a Swiss diplomat, tabled a draft of the "Final Act" on December 20, 1991. The draft was used as a basis for continuing the negotiations. The United States and the European Communities resolved their differences over agriculture with the Blair

Fifteen negotiating sectors of the Uruguay Round.

tariffs	services	dispute-settlement provisions
nontariff measures	intellectual property rights	GATT system
agriculture	investment measures	GATT articles
tropical products	natural resource protection	antidumping measures
textiles and clothing	subsidies	Tokyo Round codes

Figure 1

House Accord of December 20, 1992. A meeting of the Quad (the trade ministers from the United States, the European Communities, Canada, and Japan) resulted in an agreement on a critical market-access package on July 7, 1993. Progress continued under the leadership of the next GATT director-general, Irish diplomat Peter Sutherland. In early December 1993, the United States and the European Communities compromised on antidumping measures and "agreed to disagree" for the time being on their remaining differences on audiovisual, financial, and shipping services, as well as subsidies. On December 15, 1993, although minor issues remained to be finalized, the member governments of the GATT agreed to conclude the Uruguay Round negotiations.

Following the ratification of the Uruguay Round agreements, a permanent WTO was established on January 1, 1995. The organization incorporated stronger dispute-settlement procedures and regular trade policy reviews of its members. The WTO governs the implementation of revised GATT multilateral rules on goods, including agricultural goods, and new rules covering services and intellectual property rights; manages the work program as outlined in some of the Uruguay Round agreements; and serves as a forum for multilateral trade negotiations.

SEE ALSO *General Agreement on Tariffs and Trade; Multilateralism; World Trade Organization*

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U.S. CIVIL WAR

The Civil War (1861–1865) broke out in the early hours of April 12, 1861, when Confederate cannons opened fire on Fort Sumter in South Carolina's Charleston Harbor. The battle over the fort, which had become a symbol for both North and South, was both an end and a beginning. The assault marked the conclusion of years of spiraling hostility and suspicions between the North and South and of a series of escalating political, legal, and even physical altercations over the question of slavery. Slavery had been a point of contention since the inception of the United States, with the founders arguing over it in the debates over both the Declaration of Independence and the Constitution. In the interest of building the nation, however, they agreed to compromises that left the question of what to do about slavery to another generation. From that point until the 1840s, the matter stood, simmering, on the back burner.

REASONS FOR THE CIVIL WAR

The Mexican War gave the subject new urgency. Defeated, Mexico in 1848 ceded half a million square miles of territory to the United States (including the present-day states of California, Nevada, and Utah; most of New Mexico and Arizona; and parts of Colorado, Oklahoma, and Wyoming). Now the nation would have to decide whether—or what parts of—this new territory would be free or slave. Aside from the abolitionists, who were considered a radical fringe group, few people in the North disputed slavery in the states where it already existed because the Constitution protected the peculiar institution there. Congress, however, had the power to dictate whether the territories would be free or slave.

Thus the 1850s became a time of increasing hostility and suspicion between North and South as the nation wrestled with the issue of slavery in the territories. A new party, the Republicans, formed on the platform of opposing the expansion of slavery into the territories. By the time Abraham Lincoln won the presidency in 1860, the sectional divisions had grown so great that many Southerners refused to believe the president-elect when he said that he was interested in eliminating slavery only in the territories. Seven Southern states seceded in the months after Lincoln's election and declared themselves the Confederate States of America. Four more would leave the Union and complete the Confederacy after the attack on Fort Sumter.

Over the years, historians have blamed a number of forces for secession—including the industrializing North versus the rural South, cultural differences between the sections, and myopic and self-serving political leadership—but since the 1960s most historians have come to

agree that while those factors may have contributed to secession, the fundamental cause was slavery.

BLOODY BATTLES

After the attack on Fort Sumter, people on both sides of the Mason-Dixon line enthusiastically greeted the news of war. The common belief on both sides was that this would be a 90-day war. The first notable battle came July 21, 1861, at Manassas, Virginia, about 20 miles west of Washington, D.C. The battle was a Confederate rout that sent picnicking observers from the capital and green Union troops alike flying back to Washington. This loss would haunt most of the upper command of the Army of the Potomac for the rest of the war, imbuing them with a defeatist attitude that only Ulysses S. Grant was able to shake in 1864.

General Grant first came to the fore in early 1862 with major wins at Forts Henry and Donelson in Tennessee. His victory at Shiloh, Tennessee, in April was the first harbinger of how costly the war was going to be, however. After nearly losing the field on April 6, Grant battled back the next day. Casualties (killed, wounded, missing, and captured) on both sides approached 24,000. The toll was the highest in the history of the hemisphere, but by the end of the war Shiloh would rank as only the seventh bloodiest battle.

Robert E. Lee was appointed commander of the Virginia forces in June 1862 after General Joseph E. Johnston was seriously wounded at the Battle of Seven Pines. Lee quickly took control of what he now called the Army of Northern Virginia and unleashed it on the Army of the Potomac in the Seven Days' Battles. Two months later he again scored a searing victory against the Northerners at a second encounter at Manassas (also known as Second Bull Run). From there, Lee began to move into Maryland. He saw this as an opportunity to pull the occupying enemy out of Virginia and to allow his hungry troops to live off the Northern countryside. He clashed again with the Yankees on September 17 at Antietam, a ferocious battle that remains the single bloodiest day in American history, with about 23,000 casualties.

Antietam was a draw, but Lincoln claimed it as a victory—one that gave him an opportunity to issue the preliminary Emancipation Proclamation that had been sitting in his desk drawer since July. For the first year of the war, Lincoln believed the South held a significant number of Unionists who would rise up against the government of Confederate president Jefferson Davis. As the war proceeded, however, Lincoln learned he was wrong. Unwilling to abolish slavery early in the war, Lincoln came to see emancipation as a way to strike at the heart of the Confederacy: Freedom for the slaves would deprive the South of its labor force and give the North an additional pool from which to draw soldiers and laborers for its own armies. Moreover, emancipation promised to keep the European powers, France and England, from formally recognizing the Confederacy and therefore kept them out of the war. It is impossible to know how European intervention might have affected the war's outcome, but the assistance the French provided the Patriots during the American Revolution suggests that neutrality in this war was an important development in favor of the North. The Emancipation Proclamation, issued as a war measure, went into effect January 1, 1863. Slavery would be permanently abolished in 1865 with the ratification of the Thirteenth Amendment.

The winter of 1862–1863 was a dismal one for the Union. Lee crushed the Yankees at Fredericksburg in December. A month later the Army of the Potomac tried to move around Lee but got stuck in the mud and had to turn back. Grant's efforts to gain Vicksburg, Mississippi, "the Gibraltar of the West," were fruitless. The one bright spot for the Union was the Battle of Stones River, at Murfreesboro, Tennessee, over the New Year's holiday.

Lee had more in store for the bluecoats. In early May 1863, he staged his most audacious victory, at Chancellorsville, Virginia, defeating a Union army nearly twice the size of his own. This success came with tremendous cost for the rebels, however. After a night reconnaissance, General Thomas "Stonewall" Jackson—more beloved in the South even than Lee at that time—was shot by his own jittery troops as he approached his lines. He died eight days later.

TIDE TURNS AGAINST CONFEDERATES

Lee took advantage of his win at Chancellorsville to move into the North again, this time into Pennsylvania. This again would be a chance to move the Union army out of Virginia and allow his own men to forage off the North's bounty. It is not known where Lee intended to go, but when an advance column on July 1 bumped into Union cavalry on the west side of Gettysburg, Lee decided to fight. His decision on the third day of the battle to send thousands of men across about 1,300 yards of open ground against an entrenched enemy was suicidal. In fifty minutes, Lee suffered about 50 percent casualties, including three brigadier generals (James L. Kemper, Lewis A. Armistead, and Richard B. Garnett). Major General Isaac R. Trimble was badly wounded and had his leg amputated. The three days of battle would be the most costly of the war, claiming 51,000 casualties, and Lee, who favored offensive warfare, would spend the rest of the war on defense.

More bad news came for the Confederacy. On July 4, the day after Gettysburg ended, Grant finally succeeded in

taking Vicksburg. Now the Mississippi River was entirely open to the Federals, and the Confederacy was cut in half.

Grant had emerged as the North's long-sought hero general, and when Lincoln promoted him to command all the armies in March 1864, many in the war-weary North thought that victory was certain and would come soon. They were wrong. Grant went on the attack, engaging Lee in a series of bloody battles in the spring of 1864, losing 64,000 men in six weeks. The fighting came to a halt at Petersburg, Virginia, where the two sides settled in for a siege that would last nine months.

Public sentiment turned on Grant and soured on Lincoln, too, as General William T. Sherman stalled outside of Atlanta and General Nathaniel Banks was turned back from an effort to move into Texas. Many people in the North were "wild for peace," as one Republican politico said. Lincoln would not accept peace without the dual conditions of reunion and emancipation. Davis had just one requirement: independence. The two leaders were at loggerheads.

In the South, food shortages had plagued the Confederacy since 1862, and people at home began to starve the following year. Desertion became a problem for the Southern armies as men drifted home to help their families. By the summer of 1864, when Lincoln's political fortunes tanked, many Southerners pinned their hopes for victory less on their armies' winning than on Lincoln losing in the fall elections.

BEGINNING OF THE END

Like many others in the North—Republicans and Democrats—Lincoln was certain his bid for re-election would fail. Buoyant Democrats met at the end of August, pronounced the war a failure, and called for an immediate cessation of hostilities. But two days after the convention ended, Sherman took Atlanta, and Northerners were suddenly convinced the war was nearly won. Riding the tide of good feeling, Lincoln won by a landslide.

Just after the election, Sherman set out on his march across Georgia. His goal was to destroy the Southern civilians' continuing will to wage war. Moving to Savannah in a 60-mile-wide swath, he succeeded. Meanwhile, the rebel army that had been in Atlanta moved toward Nashville, hoping to draw Sherman north. The effort failed disastrously when the Federals decimated the army on November 30 at Franklin, Tennessee. From this point on, Lee's was the only viable army remaining in the Confederacy.

From Savannah, Sherman turned north in January 1865 and began a devastating march through South Carolina. Union soldiers unleashed their wrath on the people they held responsible for starting the war. Sherman continued to move north, ultimately intending to hook up with Grant and squeeze Lee in a pincer movement. Grant, meanwhile, was busy cutting all of Lee's supply lines. On April 2, Lee decided to move to the west. Deprived of its military protection, Richmond, the capital, quickly fell.

With Grant in pursuit, Lee's starving, ragged, and depleted army headed southwest. The chase lasted a week, until Grant cut Lee off at Appomattox Court House. There the two men signed a surrender that for all practical purposes ended the war that had claimed 620,000 lives (although fighting would go on for several weeks thereafter in other theaters). Clearly, Union victory was not inevitable. Lincoln's tenacious commitment to victory, even if it cost him the presidency, was a key factor in the North's success. Another critical factor was the willingness of generals such as Sherman, Phil Sheridan, and especially Grant to press the war ruthlessly on Confederate armies and civilians, even—in Grant's case—at the cost of their own men's lives. While one cannot discount the industrial, financial, and manpower advantages the North had over the South, ultimately the men in blue defeated the men in gray.

The last casualty of the war was Lincoln, who was shot in a theater on April 14—Good Friday—by John Wilkes Booth, an actor and Confederate sympathizer. Lincoln died the next morning. Standing at his bedside, his secretary of war said, "Now he belongs to the ages."

SEE ALSO *Confederate States of America; Grant, Ulysses S.; Lee, Robert E.; Lincoln, Abraham; Slavery*

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USER COST

User cost refers to the expenses borne by the owner or renter of a capital asset resulting from the use of the asset for a given period of time. The user cost of capital also is sometimes referred to as the "implicit rental price" or the

"price of capital services." A capital asset in theory can be any asset that is long-lived, which typically means it has a service life of more than one year. Durable goods such as machinery, factories, automobiles, computers, and even houses are examples of "tangible" capital assets. There are also "intangible" capital assets such as a business's technological knowledge base built up by past research and development (R&D) activity or the value of its brand(s) built up by past marketing efforts.

Along with labor input, the service flows from capital assets are used by businesses to generate revenue. For many applications in economic research, such as measuring "multifactor" productivity or evaluating the potential effect on investment of changes in tax policy, one needs to measure the prices of capital and labor services. For labor, measuring this price is easy: It is simply the wage. For capital, though, measuring the price of a unit of service, that is, the user cost, can be much more complicated. If the firm leases a car for a year, for example, then, as with "renting" labor, the user cost is simply the rental price. This rent compensates the car's owner for "wear and tear" (depreciation) inflicted on the car over the year, taxes on the rental income, the decline in its market (e.g., "blue book") value over the year, and the foregone interest the owner could have earned if she had instead sold the car and invested those funds. Most capital assets used by a firm, however, are owned by the firm. Nonetheless, one can think of the firm as renting these assets to itself at an "implicit" rental price, equal to what the firm would get if it rented these assets out to other firms. In fact, government statistical agencies and others attempting to measure the user costs of specific capital assets often measure them by the prices observed in rental markets.

Most types of capital, however, do not have active rental markets. In these cases, the user cost is often measured by appealing to the neoclassical model and the seminal work of Robert Hall and Dale Jorgenson (1967). Hall and Jorgenson derived the formula for the user cost based on the neoclassical model's proposition that the price of a capital asset should be equal to the present value of the rental income stream generated by the asset net of taxes and depreciation. From this equation, one can solve for the rental income per period, that is, the user cost, as a function of the price of the capital asset, the expected change in its price over the period, the interest rate, the depreciation rate, and taxes. Because these values are either known or can be estimated reasonably well, the user cost can be calculated using this formula.

It should be noted that this neoclassical concept of user cost is distinct from Keynes's concept of user cost, which, roughly speaking, is the total cost to a firm of using capital in production (whereas the neoclassical user cost can be thought of as the price of a unit of services from that capital). The Keynesian user cost captures the value of capital that is "used up" or "consumed" in the production process. In Keynes's production framework, the sum of labor ("factor") cost and user cost equals the total ("prime") cost of production (see chapter 6, Keynes 1936).

SEE ALSO *Keynes, John Maynard*

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Daniel J. Wilson

USE VALUE

SEE *Exchange Value.*

UTILITARIANISM

Utilitarianism is an intellectual movement in the social sciences and in philosophy. It is founded on the principle that individual actions, as well as laws, economic decisions, and social policies should promote the "greatest happiness." Jeremy Bentham (1748–1832), an English legal theorist and political reformer, first outlined the utilitarian theory in his *Introduction to the Principles of Morals and Legislation* (1789). Human beings are governed, according to Bentham, by "two sovereign masters, pain and pleasure." Actions are to be judged by their utility—that is, by a "felicific calculus," or reckoning of the benefits and harms they produce. Bentham held that such a calculus must take into account the number of persons whose interests are affected, as well as the intensity, duration, and degree of certainty of the expected pleasure or pain. In addition, one should take into account the nearness or remoteness in time, as well as the likelihood that an initial pleasure will be followed by pain, or a pain by pleasure. Whether an action or the adoption of a social policy is judged to be "good" or "bad" depends on the result of this calculation.

Bentham built on the work of thinkers such as John Locke (1632–1704), Claude-Adrien Helvétius (1715–1771), and Adam Smith (1723–1790), and himself became the center of a group of intellectuals and social reformers that included James Mill (1773–1836), William Godwin (1756–1836), and the economists David Ricardo (1722–1823) and Thomas Malthus (1776–1834). On the

grounds of social benefit, "radical" utilitarian reformers called for changes to the laws governing parliamentary elections, the prison system, treatment of the poor, and other matters. Early utilitarians aimed at abolishing unnecessary suffering and promoting individual happiness through the rational study of the long-term consequences of policies and actions. For example, they believed it necessary to control the procreative impulses that can lead to rampant population growth. Because of their unsentimental approach to questions of moral and social life, utilitarians gained a popular reputation as lacking spontaneity, emotion, and artistic sensitivity. Charles Dickens's *Hard Times* (1854) includes a memorable portrayal of utilitarianism in the character of Thomas Gradgrind, whose insistence on educating his children only in "facts" rather than "fancy" (imagination) leads to unhappiness for all concerned.

John Stuart Mill (1806–1873) was the son of Bentham's associate James Mill. J. S. Mill's early education was based on Benthamite principles, and in his *Autobiography* (1873) he criticized his upbringing for its overemphasis on developing the analytic powers at the expense of educating the emotions. Despite these reservations about his own education, Mill adopted utilitarian principles and became the movement's most articulate spokesperson, developing the theory in works such as the *Principles of Political Economy* (1848). In *On Liberty* (1859) Mill defended the importance of individual freedom of thought and action, arguing that the individual is the best judge of his or her own good and that society benefits from the experimentation that occurs in an atmosphere of liberty. In *Utilitarianism* (1863) he went beyond Bentham's famous statement in *The Rationale of Reward* (1825) that "Prejudice apart, the game of push-pin is of equal value with the arts and sciences of music and poetry. If the game of push-pin furnish more pleasure, it is more valuable than either" (p. 253). In contrast to Bentham, Mill argued that there are qualitative differences among pleasures that affect their value. In *The Subjection of Women* (1869) Mill evidenced the radical bent of utilitarianism, challenging deeply held prejudices against women's capacity for intellectual development and self-governance. He argued that it is impossible to know whether women are innately less capable than men without giving women the same educational opportunities that men have.

Among the well-known later defenders of utilitarian philosophy were the English philosophers Henry Sidgwick (1838–1900) and George Edward Moore (1873–1958). In the late twentieth century utilitarian ethics was further developed by philosophers including J. J. C. Smart (b. 1920) and Peter Singer (b. 1946). Singer's contributions include highlighting the utilitarian concern for the interests of nonhuman animals. He used the term *speciesism* to refer to the view (which he opposes) that nonhuman animals deserve less consideration than human beings solely on the basis of species membership.

VARIETIES OF UTILITARIANISM

Utilitarianism is still the most prominent form of *consequentialism*, the view that actions should be morally judged on the basis of their good or bad results, rather than on their intrinsic rightness or wrongness. Within utilitarianism, different schools of thought have arisen in response to debates over the implications of the basic theory. *Act utilitarians* argue that each individual action should be judged by its beneficial or harmful results, so, for example, it may be morally permissible or even morally necessary to tell a lie in order to save an innocent life. *Rule utilitarians*, in contrast, evaluate not individual actions but social rules or types of actions. For a rule utilitarian, because telling lies generally results in more harm than benefit, lying is generally prohibited. In addition to the act versus rule debate, utilitarians have disagreed over whether utilitarianism is based on an empirical description of human motivation or a vision of how individuals ought to be motivated, and also over the question of how far the interests of individuals and those of social groups can and should be harmonized. The various versions of utilitarianism agree, however, on the need for impartial and equal consideration of the interests of all those affected by any decision.

OBJECTIONS TO UTILITARIANISM

Utilitarianism has met with numerous objections. First, some object that utilitarianism is unconcerned with how benefits and harms are to be distributed, as long as the maximum amount of total satisfaction is achieved and as long as no individual's interests are weighed more heavily than anyone else's. Utilitarianism seems more concerned with how the aggregate of individuals fares, even if a minority must suffer undeservedly in order to provide satisfaction to the majority. A related criticism was made by economist Amartya Sen in *On Economic Inequality* (1973). Sen argued that, despite the fact that utilitarianism is often believed to lead to economic egalitarianism, or an equal distribution of income, under certain circumstances it leads to just the opposite. If person A, for example, derives greater utility than person B from the same amount of income (perhaps because person B suffers from a chronic illness or a disability and person A does not), utilitarianism seems to lead to the paradoxical conclusion that person A should be given more resources than person B, in order to increase the amount of utility of the group as a whole. It is because utilitarianism concerns itself with the good of the aggregate, also known as sum-ranking, that it leads to paradoxical results in this and similar cases.

The utilitarian commitment to equal consideration of individuals' interests thus appears to be in tension with its practice of judging the goodness of a particular situation by measuring the aggregate of individual utilities.

A second objection is that utilitarians make ethical decisions based on the satisfaction of human preferences. Preferences are notoriously subjective and malleable, and they differ according to the circumstances to which individuals are accustomed. For example, someone who is used to great wealth may experience a sense of deprivation under circumstances that would seem acceptable or even luxurious to someone accustomed to severe poverty. Moreover, because preferences are of many different types, it may not be possible or appropriate to treat them as commensurable (measurable by a single standard). For example, it may not be possible to weigh the happiness gained from friendship against the happiness gained from having good health. Third, some object that utilitarianism demands excessive sacrifices from its adherents. For example, it appears that in order to bring about the greatest happiness for all people, those who are relatively well-off would be obliged to sacrifice their own material well-being, and that of their dependents, to the point at which they attain a level of satisfaction equal to that of the least well-off person who could be assisted by such a sacrifice. A fourth objection is that utilitarianism allows or even requires the performance of certain actions that are ordinarily considered unethical, such as breaking a promise, making a false accusation, or even killing an innocent person, if that action could bring about a benefit sufficiently great to outweigh its harmful effects.

Despite these and other criticisms, utilitarianism continues to exert an influence on ethics and social policy. Whenever a cost-benefit analysis is performed in order to assess the worth of a particular course of action, utilitarian thinking is at work. The appeal of utilitarianism lies in its affirmation of individual equality and its view that the goal of both personal ethics and public policy is to bring about a preponderance of benefit over harm to all who are affected by human actions.

SEE ALSO *Democracy; Social Contract*

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Paulette Kidder

UTILITY FUNCTION

"Economics is the science which studies human behavior as a relationship between given ends and scarce means which have alternative uses." This definition of economics, stated by Lionel Robbins in his landmark work *An Essay on the Nature and Significance of Economic Science* (1932), established the fundamental nature of economics. Given a population with seemingly unlimited wants and needs, the questions of how goods and services are consumed, produced, and distributed are the primary ones to be answered. As a consequence, the amount of satisfaction or happiness derived from consuming resources is of particular interest. Are goods and services being distributed and consumed so as to provide the greatest amount of happiness to individuals and society as a whole? To address this problem, economists require some way of measuring the happiness that is attained from consumption. *Utility* can be defined as the amount of usefulness or satisfaction or happiness gained by consuming goods and services. Utility is dependent on the bundles of goods consumed by an individual, with greater quantities of goods representing greater levels of happiness or utility. Thus, we can define a utility function as a positive relationship between the consumption of goods and services and the amount of utility received from that consumption. If a utility function can be clearly defined, then it is possible to address the question of maximizing an individual's utility, based on the size of their consumption bundle. Comparisons can also be made between different bundles, and we can make conclusions regarding individual's preferences, based on their ranking of various bundles. A well-defined utility function is also relevant when considering the welfare of an entire society. It enables social planners to determine how to distribute goods to individuals so as to maximize the total utility of a society.

The concept of utility and the doctrine of utilitarianism are rooted in Jeremy Bentham's *Principles of Morals and Legislation* (1789). In that work's introduction, Bentham declares that humans are placed "under the governance of two sovereign masters, pain and pleasure" and that the "principle of utility recognizes this subjection, and assumes it for the foundation of that system, the

object of which is to rear the fabric of felicity by the hands of reason and of law" (p. 1). Bentham's "felicific calculus" was an attempt to construct a measure of utility, based on the following dimensions of pleasure and pain: intensity, duration, certainty or uncertainty, and propinquity or remoteness. The difficulties associated with such measurements were enormous, however. There was no clear way to compare feelings that were qualitatively unlike each other, nor any way to measure the intensity of feelings, much less make any comparison between the feelings of different individuals. Nonetheless, by the 1870s utility theory had come to be widely accepted, due to the independent contributions of William Jevons, Carl Menger, and Léon Walras, the leaders of the so-called Marginalist Revolution. Their works initiated a movement away from the classical theory of value set forth by Adam Smith and David Ricardo, among others, which held that the value of a product was based on its production costs. Following Jevons, Menger, and Walras, the emphasis came to be placed on the perceived value of a good and the utility a consumer would receive from the consumption of the good. The existence of utility was accepted by all three; however, the problem of the measurability of utility and the issue of defining the exact form of the utility function remained. None of the three explicitly addressed the problem of measurability; they either merely assumed the existence of such measurements, or stated that utility was measurable but not at the present time.

There were, however, attempts to develop the utility function, which is based on the quantities of the goods consumed. For the goods x_1, x_2, x_3, … an individual's utility was written as a function of those goods that represented ordinal utility: $\varphi\ (x_1, x_2, x_3, \ldots)$. This generalized form was proposed by Vilfredo Pareto, who called it an *index function*, and then also later on by Francis Edgeworth. Greater levels of consumption were believed to provide greater levels of utility. Consumers were assumed to have rationally ordered preferences and to choose a consumption bundle so as to maximize utility. Utility was also assumed to diminish with each additional unit consumed of each good. Additional units consumed of a good will increase an individual's total utility, but at a diminishing rate. In the works of several economists, including William Lloyd, N. W. Senior, and Richard Jennings, clear statements of diminishing marginal utility were given. By using the concept of diminishing marginal utility, Adam Smith's water/diamonds paradox—water is necessary for life and diamonds are not, but the price of diamonds is many times higher—could now be resolved. The relative abundance of water versus the relative scarcity of diamonds is the key here, along with the marginal utility of the last unit consumed of each good. Water is abundant enough that the marginal utility obtained from the last gallon consumed is rather low, compared to the marginal utility of the last diamond consumed.

The concept of diminishing marginal utility led in turn to the concept of the downward sloping demand curve. Walras successfully established the link between utility and demand, by using equations expressing maximum satisfaction for an individual. For some given number of m commodities, he derived the demand function as a relationship between the quantity and price of a commodity and the prices of all the other commodities, *ceteris paribus*—that is, with all other variables (such as money income and tastes) held constant. In 1892 Pareto rigorously showed that diminishing marginal utility directly implied negatively sloped demand curves. Alfred Marshall's *Principles of Economics*, first published in 1890, also formally constructed a demand curve based on utility and marginal utility. Marshall stated that "[t]here is then one law and only one law which is common to all demand schedules[,] … that the greater the amount to be sold, the smaller will be the price at which it will find purchasers" (pp. 159–160)—a conclusion he drew from the concept of diminishing marginal utility. Eugen Slutsky and John Hicks, both working with the assumptions that the utility function was additive and that consumers faced the diminishing marginal utility of consumption, also derived the downward sloping demand curve. The total change in demand for a good could be decomposed into two elements: the substitution effect and the income effect. For instance, if the price of a good increases the substitution effect dictates that a consumer will substitute consumption for a cheaper good in place of the now more expensive good. The income effect dictates that due to the price increase, a consumer effectively has less real income to spend, and will therefore consume less of both goods. For a normal good, this means that a price increase will mean a decrease in quantity demanded, and thus the demand curve will be downward sloping.

Another important extension of the utility function is the *indifference curve*, devised initially by Edgeworth. Consider a case involving two goods, and the levels of utility gained from consuming various combinations of the goods. A three-dimensional graph of this function, with two coordinates representing quantities of the two goods, and the third coordinate representing utility level, will give a *utility surface*, which rises with increasing quantities of the two goods consumed. For varying levels of utility, an indifference curve can be represented by "slices" of the utility surface that are parallel to the plane of the two commodities. An indifference curve is a two-dimensional graph of all the possible combinations of two goods that will give a consumer a given amount of utility. The downward slope of an indifference curve indicates the rate of tradeoff between the two goods, known as the *marginal rate of substitution*. Because a consumer is assumed to

experience diminishing marginal utility for each additional unit consumed, decreasing consumption of one good must be offset by increasingly greater consumption of the other good, if the same level of utility is to be maintained. This fact gives rise to the shape of the indifference curve, which is convex to the origin. A graph of indifference curves for varying levels of utility is known as an *indifference map*. Consumers prefer to be on higher indifference curves, because these represent greater levels of consumption bundles and therefore greater levels of utility. Paul Samuelson's revealed preference theory was another area of work that described consumer behavior. Instead of assuming the existence of a utility function and establishing its properties, Samuelson stated that consumers revealed their preferences by what goods they purchased. From observing consumer behavior, preference relationships between bundles of goods could be established, and downward sloping indifference curves could be constructed, based on diminishing marginal utility associated with increasing consumption.

The advent of modern utility theory came with the publication of John von Neumann and Oskar Morgenstern's *Theory of Games and Economic Behavior* in 1947. In this work, it was established that individual agents make decisions so as to maximize the expected amount of utility they received from their choice of a consumption bundle. Because these choices are assigned probabilistic outcomes, utility theory could be considered to have a game theoretic framework that includes risk and an individual's attitudes toward risk-taking. Decisions regarding utility-maximization are influenced by the probabilities of outcomes. If a consumer's utility is assumed to be based on consumption as a whole and not just on one good, measures of risk aversion can be written in the form developed by economists Kenneth Arrow and John Pratt. Measurements of risk aversion are of particular importance in analyzing the behavior of consumers who make investment decisions under conditions of uncertainty.

In addition to examining economic activity as it is, without value judgment, the discipline of economics also attempts to establish normative guidelines, based on how things ought to be. Welfare economics considers the normative aspects of economic outcomes and analyzes whether these outcomes can be improved through benevolent social planning. Thus, the question of maximizing social utility becomes relevant. Edgeworth and Marshall, among others, assumed that utility was *cardinal*—that is, measurable in absolute terms—and that it was possible to make interpersonal comparisons of individual utility functions. This led to their conclusion that a social welfare function could be constructed based on a summing of all individual utility functions. Pareto, Hicks, and Nicholas Kaldor took a different approach, using an *ordinal utility*, which considers only the rankings of different bundles of goods. Social welfare was analyzed on the basis of *Pareto efficiency*, the principle that a society's condition was optimal if no further improvements in the allocation of goods could be made without making someone worse off. *Kaldor-Hicks efficiency* was an extension of Pareto efficiency. In this model, an outcome could be improved if the individuals who would be made better off by a reallocation of goods compensated those who would be made worse off.

SEE ALSO *Bentham, Jeremy; Expected Utility Theory; Marginalism; Objective Function; Pareto, Vilfredo; Preferences; Preferences, Interdependent; Principal-Agent Models; Representative Agent; Ricardo, David; Risk; Smith, Adam; Social Welfare Functions; Utilitarianism; Utility, Objective; Utility, Subjective; Utility, Von Neumann-Morgenstern; Von Neumann, John; Walras, Léon*

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UTILITY, OBJECTIVE

Utility is value. *Objective utility* is nonrelative value. It may attach to a good for a person without being relative to the person's attitudes. For example, a baby's health has high objective utility although the baby is too young to value health.

Utilitarian moral theorists such as Jeremy Bentham ([1789] 1996) and John Stuart Mill ([1861] 2006) formulated accounts of objective utility. According to Bentham it is pleasure, and according to Mill it is happiness. Some contemporary utilitarians such as Fred Feldman (1986) accommodate pluralism about values. They recognize nonhedonistic basic values such as justice.

Objective utility contrasts with *subjective utility*. Subjective utility is a person's rational strength of desire at any time. It varies from person to person because of differences in goals and information. John von Neumann and Oskar Morgenstern (1944) define subjective utility in terms of coherent preferences concerning gambles. Such preferences ground quantitative comparisons of a person's attitudes toward the gambles' possible outcomes.

The relation between objective utility and subjective utility is twofold. First, subjective utility is a component of objective utility. It is good that a person satisfy sensible desires. Second, a person should desire the good and have an aversion to the bad. If an event is good, then a person has a reason to desire its occurrence. Objective utility influences subjective utility.

Information and rationality make subjective utility respond to objective utility. Consider the role of information. A person's desires depend on her information. Giving a person full information moves her subjective utility assignment closer to an objective utility assignment. Next, consider the role of rationality. Rationality regulates basic preferences and information's generation of derived preferences. It imposes structural constraints such as consistency of preferences, procedural constraints such as the requirement to taste flavors before forming preferences among them, and substantive constraints such as the requirement to prefer happiness to unhappiness, other things being equal. An informed, rational, cognitively ideal agent whose basic goals are intrinsic goods has a subjective utility assignment that matches an objective utility assignment.

Fields such as welfare economics use objective utility to evaluate public policies. As W. Kip Viscusi (1998) explains, government regulatory agencies seek cost-effective means of reducing risks of injury and death. A good regulation increases objective utility by promoting the public's interests rather than by catering to the public's wishes. For example, consumers want labeling of genetically modified food. Nonetheless, the U.S. Food and Drug Administration does not require labeling because its benefits do not compensate for its costs. Objective utility guides regulation.

Applications of objective utility often use a function that assigns numbers to objects evaluated. The higher the number is, the more value the object has. In some cases numbers assigned represent only a ranking, but in other cases they represent quantitative comparisons. The value of saving two lives may not only be greater than but may also be twice as great as the value of saving one life.

Measures of objective utility vary. One measure uses contribution to realization of basic goods. Life is a basic good. Water is necessary for life. So water has high objective utility using this measure. Market-value is another measure of objective utility. That people want an object is a sign that it has value. Market-value may not indicate contribution to basic goods, however. Water has low market-value because it is plentiful. The labor invested in a product is a common measure of objective utility. According to this measure, a handwoven rug has more objective utility than a gold spoon if more labor went into its fabrication. These methods of measuring objective utility have limited ranges of application and yield only approximate results. To formulate an account of objective utility, Amartya Sen (1985) uses capabilities to function and Daniel Kahneman (2000) uses momentary pleasurable experiences.

According to some theorists, objective utility attaches to physical objects such as land. A parcel of land's objective value depends on factors such as fertility. According to other theorists, objective utility attaches to realization of a proposition's truth, that is, an event or a state of affairs. The objective utility of a person's owning a parcel of land may replace the objective utility of the parcel of land. Because the value of a peasant's owning a parcel of land differs from the value of a land baron's owning the same parcel, attributing objective utilities to states of affairs involving the land's ownership makes objective utility sensitive to the variety of factors affecting value.

Value theory distinguishes intrinsic and extrinsic value, as Michael Zimmerman (2001) explains. An object with intrinsic value is good for its own sake. An object with extrinsic value is good because it leads to objects with intrinsic value. Intrinsic value is basic, and extrinsic value derives from intrinsic value. Traditional examples of intrinsic values are pleasure, justice, liberty, knowledge, beauty, and achievement. Traditional examples of extrinsic values are money, time, and power. A proposition's realization has intrinsic value in virtue of features that the proposition's realization entails rather than features its realization causes. Objective utility depends on both intrinsic and extrinsic value.

Being good for a person is not the same as being good according to a person. Health is good for a person even if he is indifferent to his health. Promoting a person's interest, well-being, or welfare is good for the person. Some accounts of objective value claim that it rests exclusively

on value for sentient beings. Hedonism supports this view because all pleasure resides in a sentient being. Pluralism accommodates objective value that is independent of value for sentient beings. For example, social equality may have objective value without being good for any person.

A common criticism of objective utility is that nonrelative value does not exist, or is unknowable. Persistent disagreements about values are grounds for this criticism. Another criticism is that some values are nonquantitative and incomparable so that a quantitative representation of all values is impossible. For example, one person's delight in music may not be comparable to another person's recovery from a cold. Then objective utility's interpersonal comparisons of value lack a foundation. Objective utility, despite criticisms, maintains a role in moral theory and the social sciences.

SEE ALSO *Bentham, Jeremy; Expected Utility Theory; Mill, John Stuart; Needs, Basic; Rationality; Regulation; Sen, Amartya Kumar; Utilitarianism; Utility, Subjective; Utility, Von Neumann-Morgenstern; Value; Welfare Economics*

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UTILITY, SUBJECTIVE

In economic theory, subjective utility is the satisfaction a consumer perceives to have received from consuming a product. Subjective utility is usually referred to simply as "utility." The early economists Jeremy Bentham and John Stuart Mill maintained that the goal of society is to maximize the total utility of its members. In the early twenty-first century economists refer to this as *welfare maximization*. Utility theory begins with assumptions as to individuals' preferences. When a consumer is willing to trade off one product or product attribute for another (for example, less engine power in exchange for improved gas mileage), it is said that the person has *compensatory* preferences. When a consumer is unwilling to trade off one product or product attribute for another regardless of the quantity of the second product offered (for example, a family of six needs a car with six seats no matter what the other attributes of the car are), it is said that the person has *non-compensatory* preferences. Economists typically assume compensatory preferences because they are intuitively justifiable, are easier to represent mathematically, and reflect the vast majority of true preferences. Preferences are typically represented by utility functions, which map consumption to utility.

Utility can be regarded as *ordinal* or *cardinal*. Cardinal utility is a numeric measure of utility, where units of utility are called *utils*. Ordinal utility is an ordering of objects according to utility. For example, an ordinal utility function might show a consumer deriving more utility from apples versus oranges, while a cardinal utility function might show a consumer deriving 100 units of utility from apples versus 80 units from oranges. Thus while ordinal utility is more realistic than cardinal utility in that it is difficult to measure utility numerically, cardinal utility can describe differing strengths of preference that ordinal utility cannot. Economists who use cardinal utility to describe consumer preferences note that, while consumers do not actually measure utility numerically, consumers behave (in the aggregate) as if such a measure were possible.

While utility cannot be directly measured, it is possible to obtain indirect measures by determining how much money a person must be given to compensate that person for the loss of a unit of product. For example, in an experiment a subject who has not eaten breakfast and who knows he or she will not eat dinner is given three slices of pizza for lunch. The person is then offered successively greater amounts of money in exchange for giving up one slice of pizza. The minimum amount of money the subject is willing to accept in exchange for the pizza is the dollar equivalent of the utility the subject expects to obtain from the slice of pizza.

Central to consumer theory is the idea of *declining marginal utility*. *Marginal utility* is the additional utility a consumer obtains from consuming one more unit of a product. Marginal utility is assumed to decline as more units of a product are consumed. For example, to a hun-

gry person the first slice of pizza eaten yields significant marginal utility. The second slice yields less marginal utility, because the person has already consumed one slice of pizza and so is less hungry than he or she was prior to consuming the first slice. After consuming the second slice of pizza, the person's total utility is the marginal utility he or she received from the first slice plus the marginal utility he or she received from the second slice. The third slice of pizza yields less marginal utility than the second because the person is even less hungry than he or she was prior to the second slice. Eventually the person will have had enough slices of pizza that he or she does not want any more, even if the pizza is free. At this point the person's marginal utility has declined to zero (or may even be negative), consuming an additional slice of pizza will not increase the person's utility.

The phenomenon of declining marginal utility can be said to occur because consumers obtain utility from two sources: the good consumed and the *variety* the good represents. The level of variety measures how different the good is from other goods the consumer has consumed recently. For example, someone who is eating potato chips may stop eating not because he or she is full but because he or she is "tired" of potato chips and now seeks something different (like a soft drink). Without having had a drink, as the person eats more and more potato chips, the marginal utility of an additional potato chip falls because an additional potato chip is more and more like what the person has already consumed. Meanwhile the marginal utility of a soft drink rises because an additional soft drink is less and less like what the person has already consumed. Utility from variety explains why consumers tend to like to consume together things that are markedly different: beer and pizza, hot apple pie and cold ice cream, hot peppers in a sweet sauce.

If consumers can consume at no charge, they will seek out the goods that yield the greatest marginal utility. When consumers must pay for what they consume, they seek out the goods that yield the greatest *marginal utility per dollar*. This is the phenomenon that results in beer drinkers suddenly becoming scotch drinkers when the drinks are on the house. The consumer obtains greater marginal utility from a scotch than from a beer. But the difference in marginal utilities between the two drinks does not compensate for the difference in price between the two drinks. The consumer is said to attain the *optimal consumption combination* when the marginal utility per dollar for each of the goods the consumer is consuming is the same. For example, suppose a consumer obtains a marginal utility of 10 from 1 more cup of coffee and a marginal utility of 6 from 1 more bagel. If the bagel costs \$2 and the cup of coffee costs \$1, the consumer will purchase the bagel because the marginal utility per dollar for the bagel (6 / 1 = 6) is greater than that for the coffee (10 / 2 = 5). But having consumed the bagel, the consumer's marginal utility for another bagel falls to (for example) 4. Now the marginal utility per dollar for the bagel (4 / 1 = 4) is less than that for the coffee (10 / 2 = 5). So the consumer buys a cup of coffee. Whenever the marginal utility per dollar for one good exceeds that of another good, the consumer consumes more of that good. In the extreme the consumer spreads his or her consumption dollars among many goods such that the marginal utility per dollar is the same for all the goods.

In the presence of uncertainty, consumers are said to maximize *expected utility*. Expected utility is the level of utility the consumer expects to obtain following resolution of the uncertainty. For example, suppose a person is offered a choice between \$50 cash and a lottery ticket that carries a 50 percent chance to win \$100 and a 50 percent chance to win nothing. The *expected value* of the lottery ticket is \$50 (\$50 = 0.5 × \$100 + 0.5 × \$0). The expected value of the lottery ticket is the same as the value of the cash. However, some consumers will choose the lottery ticket, while others will choose the cash. The consumers who choose the lottery ticket can be said to expect more utility from the lottery ticket than from the \$50 cash. These consumers are called *risk preferential* or *risk lovers* because, apart from the utility they would receive from the money, they receive additional utility from the existence of uncertainty. More formally, the utility the risk preferential consumer expects to get from the lottery ticket exceeds the utility the consumer would get from what he or she expects to win. A risk preferential person will tend to seek out risks even when there is a negative expected return associated with the risk. Similarly a *risk averse* consumer is one who, apart from the utility he or she would receive from the money, receives disutility from the existence of uncertainty. A risk averse person will tend to avoid risks even when there is a positive expected return associated with the risk. A *risk neutral* consumer is one who receives neither utility nor disutility from risk. A risk neutral person will neither seek out nor avoid risk for its own sake but will consider only the expected return associated with the risk. If the expected return is positive, the risk neutral person will undertake the risk. If the expected return is negative, the risk neutral person will avoid the risk.

Evidence suggests that people's attitudes toward risk change depending on the size of the uncertainty relative to their wealth and whether the uncertainty involves gains or losses. On average, the less a person's wealth, the more risk preferential the person tends to be. Also people tend to be more risk preferential with respect to potential gains but risk averse with respect to potential losses. Hence, the same person may both play the lottery (an activity that increases risk but involves potential gain) and purchase

insurance (an activity that decreases risk but involves a reduction in potential loss).

SEE ALSO *Expected Utility Theory; Marginalism; Ordinality; Risk; Risk Neutrality; Risk Takers; Uncertainty; Utility Function; Utility, Objective; Utility, Von Neumann-Morgenstern*

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UTILITY, VON NEUMANN-MORGENSTERN

Von Neumann–Morgenstern utility considers decision making under risk. It concerns choice when the probabilities of the possible outcomes of that choice are objectively known. This decision framework differs from decision making under certainty and decision making when probability is subjective. John von Neumann and Oskar Morgenstern (1947) follow a behavioral framework analogous to the revealed preference framework developed by Paul A. Samuelson (1938 and 1947). Quasi-operational experiments are envisioned where people's behavior is held to satisfy key behavioral axioms.

The formal treatment of expected utility began with Daniel Bernoulli (1738) in his formulation of the St. Petersburg Paradox. In this paradox, a game is considered that has an infinite expected value. The paradox is that people will not pay a large sum to play this game. The game is one in which a fair coin (equal probability of a heads or tails) is tossed. If a head occurs the coin is tossed again and again until a tail occurs. Once a tail occurs the game is over. The payoff from playing the game depends on the number of consecutive heads that occurs. The pay off for H heads is defined as $\sum_{i=1}^{H} 2^i$. That is, if one head occurs, \$2 is paid; if two heads occur, \$2 + \$4 = \$6 is paid; and so forth. The probability of at least one head is ½, the probability of at least two consecutive heads is ¼, and so forth. Consequently, the expected value of the game is $\sum_{i=1}^{\infty} 2^i \cdot (1/2)^i = \sum_{i=1}^{\infty} 1 = \infty$.

Despite the infinite expected payoff, few would pay large sums to play this game. Bernoulli provided an answer to this paradox in terms of diminishing marginal utility. He argued that it is the utility of the gains and not the monetary gains from the game that are relevant to the person's decision whether or not to play the game. With diminishing marginal utility, the gains from the game could be finite and small.

Von Neumann–Morgenstern utility can be illustrated by considering lotteries with two possible prizes, A and B, and a cost for playing the lottery, Y, with $A \prec Y \prec B$. Let P be the probability of the most favorable prize, B, and $(1 - P)$ be the probability of the less favorable prize, A. Six key assumptions (Luce and Raiffa 1957) will assure that a utility function can be defined from the revealed preferences of players. These assumptions assure that a probability can be found for every lottery where the decision maker is indifferent between the price of the lottery ticket and the lottery. In other words,

$$U(Y) = (1 - P)U(A) + PU(B), \text{ or}$$
$$U(Y) = U(A) + (U(B) - U(A))P.$$

Suppose we rank every possible outcome of any lottery from W, the worst possible, to B, the best possible and assign an ordinal number to $U(W)$ and $U(B)$ representing this ranking. Then $U(Y)$ for any Y can be found as a linear transformation of these two extreme outcomes. Hence, Von Neumann–Morgenstern utility is cardinal but only because it represents a linear transformation of the probabilities in the lotteries. It is not cardinal utility in any other context.

SEE ALSO *Expected Utility Theory; Gambling; Revealed Preference; Utility, Objective; Utility, Subjective; Von Neumann, John*

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Michael P. Shields

UTOPIANISM

Utopianism refers simultaneously to social issues and to questions of the imagination. In fact, utopianism can be seen in action anytime the imagination is put to the use of remaking social life. The term describes a tendency to think of the world as a place to be made more perfect. The utopian impulse in history can be understood as posing the question of how else humans might organize themselves. It is generally agreed that the first utopian society in Western thought is to be found in Plato's *Republic* (c. 400 BCE), a realm where philosopher-kings govern. The term *utopia* was coined by Sir Thomas More (1478–1535) in *Utopia*, first published in 1516. The writing of More's *Utopia* corresponds to the period of discovery by Europeans of what was called the New World, with all that it ushered in to Europe's political economies and social imagination.

Ambiguous from the outset, the term *utopia* could be read as a joining of the Greek prefix *ou* with the word *topos* (place), which would translate as "no place." The first syllable could equally be understood as the Greek prefix *eu*, rendering utopia the "good place." Later writers, notably William Morris (1834–1896) in England, who titled his utopian fiction *News from Nowhere* (1891), recognized that the improved society they envisioned is, in principle, impossible to find or perhaps even to construct. However, this problem has never stopped utopian thinkers from casting their visions in print and in fact. Utopian societies or communities, though usually short-lived, have been founded in countries across the globe, especially in times of revolutionary change. And utopian manifestos and programs have been written and promulgated in such times as well.

Whether cast as prelapsarian or millenarian, the tense of the utopian narrative is inevitably the future and the mood is subjunctive, as utopians speculate about what may come to be. Even Edward Bellamy's (1850–1898) *Looking Backward* (1888), the most popular late nineteenth-century utopian novel, describes the imaginary future through a fictionalized past. Throughout the nineteenth century, utopian movements arose that looked forward to how lives might be improved by the Industrial Revolution. Other such movements looked backward with nostalgia for ways of life that had been lost due to the same irrevocable changes. Labor was no longer primarily agricultural but industrial, and cities were rapidly growing, making the lost pastoral a focus of cultural longing. By the mid-twentieth century, such impulses toward the "good place" had been brought up short by world events, leading to a period of *dystopian* thinking. Two key texts representing this perspective are *Brave New World* (1932) by Aldous Huxley (1894–1963) and *1984* (1949) by George Orwell (1903–1950).

A strategic moment in the history of utopianism is the shift from early nineteenth-century thinkers such as Charles Fourier (1772–1837) in France and Robert Owen (1771–1858) in England, who proposed a form of utopian socialism, to the writings of Karl Marx (1818–1883) and Friedrich Engels (1820–1895), who differentiated their ideas as scientific socialism. This conceptual divide leads some to see utopianism as a way of thinking that is impossibly idealistic. Of course, utopianism was, in some sense, never intended to be of this world; hence the weakness of many utopian communities, whether those of the Levelers or Diggers of mid-seventeenth-century England or the Branch Davidians of the late twentieth-century United States. Just as visions of possible futures arose out of political thought, numerous vibrant utopian experiments often emerged from religious splinter groups, whose promise of a better life both in the here and now and in the hereafter drew multiple generations of adherents. Examples of such groups are as different as the eighteenth-century Shakers (with their doctrine of celibacy) and the Church of Latter-Day Saints or Mormons (whose beliefs included plural marriage). Millenarian beliefs are common in utopian thinking, linking utopianism both to revolutionary and reactionary forms.

Between the hopeful utopianism of the nineteenth century and its opposite, the dreadful dystopianism of the mid-twentieth century, it is crucial to note a new form of utopian thinking and writing that arose during the first wave of feminist political struggle for suffrage at the turn of the nineteenth century. *Herland* (1915), a utopian fiction by the American reformer Charlotte Perkins Gilman (1860–1935), is a key text of this period of numerous writings by women that imagine a better place. However, it was the reissue of Gilman's novel in 1979 that connected the first wave of feminist activism and imagination to the second wave of the later twentieth century. A noteworthy publication phenomenon of the 1970s and into the 1980s was the outpouring from mainstream and alternative presses of feminist utopian fictions. One of the best known is Marge Piercy's *Woman on the Edge of Time* (1976).

The most important utopian thinker of the twentieth century is the German philosopher Ernst Bloch (1885–1977), whose magnum opus, *The Principle of Hope* (1954–1959), is a three-volume study of how hope her-

alds the new and the "not-yet" as it emerges in political and imaginary realms. Given the speculative nature of utopianism, it is not surprising that such thinking continues to evolve in the realm of political criticism and in genre writing, especially science fiction. An effort to keep up with utopianism and utopian criticism is maintained by the Society for Utopian Studies, which has been in existence since 1975. The society publishes a journal and a newsletter, sponsors an annual conference, and recognizes that utopianism emanates from disciplines as diverse as engineering, architecture, literature, and economics.

SEE ALSO *Marxism*

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Frances Bartkowski

UZAWA, HIROFUMI
1928–

Hirofumi Uzawa was a native of Yonago, northwest Tottori Prefecture, on Honshu. His father was a schoolteacher. At the age of four, Uzawa and his brother moved with their parents to Tokyo, where they grew up. In 1948 he enrolled in the Department of Mathematics at the University of Tokyo, where he was chosen as a Special Research Fellow in the department. He received the BS degree in mathematics at the age of twenty-three in 1951, having majored in algebraic number theory. After receiving the BS Uzawa entered graduate school and taught mathematics at the University of Tokyo for five years.

To fully appreciate Uzawa's formative years, one must keep in mind that when he was born the ruling power in Japan was the militaristic Meiji dynasty. This dynasty engineered the Japanese defeat of Russia in 1904, Japanese control of South Korea and Taiwan through League of Nations mandates after World War I (1914–1918), and Japan's attack on Pearl Harbor in 1941. After Japan's defeat, the U.S. military occupied the country from 1945 until 1952, and Japan was ruled by a military governor during that period. Japan's September 1945 surrender resulted in its loss of control of South Korea and Taiwan, both of which then were occupied by U.S. troops. During its occupation of Japan, the United States engaged in a war in Korea, across the Sea of Japan from Uzawa's birthplace. These events are implied in Uzawa's autobiographical sketch, especially in his discussion of poverty, starvation, and underdevelopment in Japan.

While studying undergraduate mathematics and seeking to become a professional mathematician, Uzawa was led by the postwar poverty of Japan to study economics. He and several others began a systematic reading of Marxian economics. He contemplated joining the Japanese Communist Party but was advised by a friend who was already a member that he could not pass the entrance examination given to prospective members. He therefore decided to quit mathematics and study economics so that he could learn enough to pass the examination. But he did continue studying mathematics until he earned a degree.

After Uzawa graduated in 1951, he secured a job with the Institute of Statistical Mathematics at the Ministry of Education, and subsequently as a statistician with a life insurance company. During 1955 and 1956, he published four articles in the institute's quarterly publication. The first two were purely statistical theory. The third was on Leontieff input-output models. The last was "A Note on Preferences and Axioms of Choice." Three years later, he published "Preference and Rational Choice in the Theory of Consumption."

During the early 1950s, Uzawa remained actively affiliated with the University of Tokyo. He joined a small group of economists in the Faculty of Economics and read Keynes's *General Theory of Employment, Interest and Money* and Kenneth J. Arrow's *Social Choice and Individual Values*. He worked for six months in 1954 as an assistant to Everett E. Hagen (1906–1993) of MIT, who was in Japan with a mission of the World Bank. Hagen was in charge of macroeconomic analysis, and on this project, Uzawa first learned about Keynesian economic policy administration. In the summer of 1954, he also attended the annual joint University of Tokyo–Stanford University seminar conducted by Dutch economist Hendrik Houtakker (b. 1924) of Stanford on demand analysis. In this seminar, Uzawa was reintroduced to the work of Arrow of Stanford, and this time read everything he could by Arrow, including especially his work with Leonid Hurwicz on the feasibility and stability of the "allocative mechanism" of a socialist economy.

In economics, Uzawa studied under Hyoe Ouch (1888–1980), who led the fight to resuscitate the Ohara Institute for Social Research after World War II (1939–1945). This institute studied labor economics, Marxian economics, and social issues and published the

Journal of the Ohara Institute for Social Research, the *Labor Yearbook*, pamphlets, and a publications series. Keynesian economics in Japan began with Keynes's *The Economic Consequences of the Peace*, and *A Treatise on Money*.

In 1955, through Houthakker, Uzawa reviewed the unpublished manuscript of Kenneth J. Arrow and Leonid Hurwicz's article on local stability. Expanding on this article on his own, Uzawa wrote "Gradient Method for Concave Programming II: Global Stability in the Strictly Convex Case." His manuscript led to the receipt in 1955 of an invitation from Arrow to work with him at Stanford. Having become interested in pursuing a career in economics rather than mathematics, in 1956 he applied for and received a Fulbright Fellowship to finance the Arrow enterprise. He was a research assistant at Stanford from 1956 to 1964. Here, he was exposed to a rigorous mathematical treatment of neoclassical economics, Keynesian theory, and general equilibrium theory rather than Marxist economics. Uzawa published at least three papers in the Technical Reports series of the Stanford economics department between 1956 and 1958. Two of these papers contributed to the Houthakker research program in consumer economics, specifically his interest in preference functions.

In 1958 Uzawa, Arrow, and Hurwicz published *Studies in Linear and Non-Linear Programming* with the support of the U.S. Office of Naval Research. In this book, Uzawa presented a general mathematical theory. This book was concerned with deriving existence proofs for solutions to programs in linear topological spaces. These proofs involved the theory of convex polyhedral cones (CPC) in point-set topology, which are treated algebraically by means of analytical geometry. Using set theory and linear algebra, Uzawa presented the theory of topology on which the editors based the application to programming in the remainder of the book. Uzawa defined CPC conventionally as "the intersection of a finite number of half-spaces," that is, affine spaces bounded by hyperplanes. In the linear programming problem, the intersection of half-spaces creates a pyramid. The linear constraints of the problem constitute the edges of the polyhedron. The intersections of these edges constitute the vertices of the polyhedron. The solution algorithm evaluates each vertex in turn to find the one constituting the maximum or minimum. In the case of the pyramid, or three-dimensional polyhedron, four or five vertices must be evaluated, depending upon whether the base is a triangle or a square.

The gradient [slope] method is defined as the solution set to a system of differential or difference equations. The gradient is the ratio of the change in the slope of the plane triangle constituting one side of the pyramid. Further, the gradient method is applied to several particular problems, including economic development and growth. It is found that it is slower than the simplex method because it calculates all surface vectors to a linear programming problem, while the simplex method calculates only the optimum vectors, that is, only vertices. A simplex is the simplest form that can be constructed between points in a given space.

Uzawa remained away from Japan for thirteen years, serving on the faculties of the University of California at Berkeley (1960–1961), Stanford (1961–1964), Cambridge (1964–1965), and the University of Chicago (1965–1969). He was thoroughly immersed in the project to mathematize neoclassical economic theory. He left Stanford to attain intellectual independence. By 1960, he was married to his wife, Hiroko, and had children.

In 1968 Uzawa returned to the University of Tokyo as professor of economics until retiring to emeritus status in 1993. In 1973 and 1976, his interest shifted to the short-run fluctuations of a capitalist economy, or business cycles, and he published papers on Keynesian theory. In 1976, he served as president of the Econometric Society. Beginning around 1970, and continuing to the present, he has been senior advisor to the Research Institute of Capital Formation of the Development Bank of Japan. He also taught at Niigata University, Chuo University, United Nations University, and Doshisha University. From about 2003 to 2005, he was director of Doshisha University's Research Center of Social Overhead Capital.

Uzawa's general equilibrium analysis concluded that Walrasian *tâtonnement* mechanism is globally stable. This again was part of the project to study the nature of equilibrium mathematically but also of the project to renew general equilibrium analysis. Uzawa is most renowned, though, for the development of two-sector neoclassical endogenous growth models, and for a theory of economic growth. His method was taken from Marx's two-department model of simple reproduction in volume 1 of *Das Kapital*. The language and categories employed, however, were those of neoclassical economics. In these growth articles, he was disaggregating the one-sector models of Robert M. Solow (b. 1924) and T. W. Swan (1918–1989). The two sectors were a consumption sector and an investment sector, each using labor and capital to produce an output. The investment sector produced a capital good, and the consumption sector produced a consumption good. The production functions for each sector exhibited diminishing returns to scale. Technological change was not included in the Solow-Swan model, and so was exogenous. Uzawa included terms for technology in his model, thus endogenizing technological change. His articles stimulated an explosion of research into growth models in the 1960s, but this interest subsided thereafter. The practical motivation

driving his interest in growth was the underdeveloped state of the Japanese economy as he perceived it.

SEE ALSO *Economic Growth; Economics; Economics, Keynesian; Industrialization; Lucas, Robert E., Jr.; Mathematical Economics; McFadden, Daniel L.; Solow, Robert M.; Underdevelopment; World War II*

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Julian Ellison

V

VACATIONS

The term *vacation* describes a moment of rest and recreation during sacred and secular holidays or a period of leisure time away from routine domestic responsibilities, school, or work, as allowed by present-day laws and labor regulations. The modern idea of vacationing is often linked to making a pleasure journey away from home, ranging from a simple daytrip nearby to a voyage around the world. In many countries, the notion is used interchangeably with the concept of holidays. As suggested in the volume edited by Graham Dann *The Tourist As a Metaphor of the Social World* (2002), understanding contemporary vacationing practices provides insight in the value systems of the modern world.

The notion of having a vacation is not universal. Even in industrialized societies, it did not exist until the 1850s, when the concept arose in response to time-regulated forms of labor. The clear bounding of work time was the product of victories by workers pressing for shorter workdays and scattered vacation days. The English entrepreneur Thomas Cook was the first to commercialize inexpensive package tours, designed for the short vacation time of the working class. From the 1930s, and accelerating in the postwar period, paid vacations in most European countries had been politically secured and came to be understood as a right of citizenship and part of a new social contract. In the United States modern vacations developed as a privilege accorded to workers as part of their employment package. During the 1970s and 1980s disposable incomes and annual days of vacation rose in developed countries, while the cost of travel remained more or less constant in real terms. This consequently led to a phenomenal rise in international tourism.

Legislation granting yearly vacation periods with pay and collective agreements providing for such holidays is increasingly common worldwide. Moreover, as standards of living improve, there is a marked tendency for the minimum annual vacation to be increased. The actual length of time is dependent on the length of service and provisions of the collective agreement. It can range from only a couple of days to more than six weeks. The rise in the number of international tourists from Asia—mainly the newly industrialized countries—illustrates the exportability of the vacation model to those countries where certain minimum requirements are met in terms of the availability and distribution of disposable income.

What people do during their vacation has changed over time, just as it has varied from country to country. Although vacationing has been democratized, vacations are still separate functions of differentials in income, social class, race, occupation, gender, and education. As Pierre Bourdieu described in great detail in his *Distinction: A Social Critique of the Judgment of Taste* (1984), there are substantial disparities in leisure consumption between people from different socioeconomic backgrounds. While working-class people often choose cheaply packaged mass tourism activities, the higher-class elites try to distinguish themselves by opting for expensive, individually tailored tours. Even if there is a clear global convergence in certain kinds of vacation consumerism, great local differences remain.

Vacationing is often thought of as a temporary reversal of everyday activities. It is a no-work, no-care, no-thrift

situation. However, in itself it is believed to be devoid of deeper meaning: It is a vacation; that is, vacant time. In a way, time is suspended (or put in parentheses) and many people believe to live a kind of absolute break of their habitual time. Conspicuous vacation is meant to be non-productive consumption of time, an indication of distance from environmental and productive needs, and thus a sign of wealth. The growing frequency of vacation travel in the developed world has ensured that vacation time is increasingly recognized as one of the experiences that people value in terms of quality of life.

The annual vacation trip in industrialized countries is a repetitive, predictable, timed break that allows people recreation and marks the progress of cyclical time. Therefore, vacations can also be characterized as a kind of ritual process that reflect a society's deeply held values about health, freedom, nature, and self-improvement. In this view, vacations can be interpreted as the modern equivalent for secular societies of the annual and lifelong sequences of festivals and pilgrimages in more traditional, religious societies. Fundamental is the contrast between the ordinary/compulsory work state spent at home and the non-ordinary/voluntary (sacred) state away from home.

According to Orvar Löfgren in *On Holiday: A History of Vacationing* (1999), vacationing frequently involves temporal tensions and relations between past, present, and future. Traveling across space is frequently experienced as a movement across time to relive mythical periods of history, or former ways of life, or past stages from our life. Thus, it is not surprising that getting back to nature, to a more simple life, or to childhood—in other words freezing time—are common utopias of vacationers. Löfgren sees the world of vacationing as a place where tourists are able "to use the important cultural skills of daydreaming and mindtraveling … [in] an arena in which fantasy [is] an important social practice" (p. 7). The perceptions of vacationers are thus closely related to fictional worlds and, for the same reasons, to the world of dreams. The colloquial expression "dream vacation" did not appear without precedent.

Members of industrialized societies define their lives not only through their work but also increasingly through their consumption of vacations. The latter serve as a form of escape from the stresses, pressures, and demands of everyday life. People believe that the promise of personal freedom, one of the most expansive modern myths, can be fulfilled much more on vacation than in everyday life. Vacations become the ideal moment of self-realization in which people construct their own world according to their individual preferences. However, throughout the relatively short history of leisure travel, people have quickly learned how to be vacationers and to move, often according to social dictate, through different types of artificially created vacation worlds like theme parks and beach resorts. In many countries, a system of social sanctions is in place that variously codifies vacationing as "normal" or even expected behavior.

SEE ALSO *Leisure; Travel and Travel Writing*

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Noel B. Salazar

VAGABONDS

The English term *vagabond* derives from Latin and Anglo-Latin sources. The word literally meant to wander from bondage, but more idiomatically to escape from bondage. The etymology of *bondage* is also significant. Historically, forms of bondage in the West included slavery; serfdom, a system of partially unfree labor in rural societies; apprenticeship, which regulated entrance into and the practice of trades in towns; and systems of domestic service. To depart from any of these work situations without an employer's permission was to risk charges of "vagabondage." The Latin noun *vagabundus* appears in late medieval English manorial records, and according to the *Oxford English Dictionary* the English terms *vagabond* and *vagrant* date from the early 1400s. Since the fifteenth century, the same source shows, these words have been employed to describe anyone who was without fixed abode, unemployed, itinerant, or in an unlicensed trade. Of course, the terms *vagabond* and *vagrant* have also been used as terms of abuse, as have the synonyms *beggar*, *bum*, *hobo*, *loafer*, and *tramp*.

There are varying interpretations of vagabondage. One can be called the realist position, because it postulates that vagabondage reflected real economic and social causes, that the numbers of vagabonds were great and growing, that they were an underworld organized in gangs that engaged in professional crime, and that they posed genuine threats to the social and political order. A second interpretation emphasizes the power of the normative, especially notions about moralism and patriarchalism vis-à-vis dependents, including workers, which led to a growth of state intervention to enforce those norms. This position stressed the distinctions between the worthy and the

unworthy poor and contained an impetus to reform the latter group. This normative interpretation, in turn, readily accommodates theories of law and criminality that maintain that some offenses, including vagrancy, are products of governmental initiatives leading to "status criminality" and "social control." The third view of vagabondage, which is the one favored here, is that the phenomenon was a combination of the real and the normative.

At the core of the concept of vagabondage were two key elements—voluntary unemployment and itinerancy—both of which, historically, were connected with labor and residence obligations of medieval serfdom. It cannot be a coincidence that European governments first began acting against vagabonds in the 1350s after the Black Death severely cut the population and made it possible for laborers to reject the obligations of serfdom. When population levels recovered after 1500, western European governments continued to enforce policies against vagabondage, which they found were useful weapons in the control of a workforce now largely liberated from serfdom. To police the labor force, vagrancy laws, Bridewells (houses of correction), and later workhouses were instituted from the sixteenth through the eighteenth century. These institutions lasted into the nineteenth century and were exported overseas to European colonies.

The policies against vagabonds also reflected a normative shift that desanctified the poor. Before this change the prevalent notion of the poor, inspired by the powerful example of St. Francis, idealized them as representing holiness, and Christians were encouraged to live like them. But in the thirteenth century some canon lawyers began to question whether the voluntary poor should be given relief. After 1350, moreover, Renaissance humanists argued for the positive benefits of wealth, which they argued allowed one to be a benefactor to one's community. They also attacked the notion that poverty was a holy condition, pointing to the sins, disorders, and diseases that it fostered. They derided the hypocrisy of friars living in luxury and pilgrims wallowing in dissipation and called for the moral reform of the undeserving poor through institutionalization, including punishment and work-regimes.

Homelessness is obviously a less value-laden term than *vagabond* and is appropriate in a society in which the poor without permanent residences are no longer quite so demonized as they once were, but we should remember that *homeless* is a neologism that, like *vagabond*, requires analysis. In this respect, the term *vagabond* is more historically relevant during the approximately six hundred years of world history when it was applied to a great variety of people leading itinerant lives. The significance of the word lies in its rhetorical power and its suggestion of subversion of the social order. Ultimately, its power is its explicitness about the fact that governments criminalized and punished itinerants, who faced a two-fold challenge—homelessness to be sure, but also official demonizing and harassment.

What of the vagabonds themselves? They were not the simple equivalent of the homeless poor of the twenty-first century. Rather they resembled the "underclass" in society, in part because the authorities believed they had a distinctive culture that was opposed to respectable society. There were elements of a counterculture among vagabonds, including their use of slang, or cant, and some of them took part in organized crime. But for the most part their key characteristics arose from the structure of the economy and the labor system, particularly high unemployment and underemployment. Not all vagabonds were unemployed and begging, however; many practiced trades that were banned or subject to licensing, including unlicensed actors, itinerant healers, musicians, peddlers, practitioners of white magic, and sailors and soldiers. Overall, the key element in the lives of vagabonds was insecurity, which Olwen Hufton neatly summed up as living in an "economy of makeshifts." Like gangs in modern cities, they were overwhelmingly young males, which frightened governments wary of violence and disorder. While foreign-born Romanies or "gypsies" were sometimes singled out in anti-vagrancy laws, the overwhelming majority of vagabonds were native-born.

SEE ALSO *Hobos*

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A. L. Beier

VAISYAS

An upper class in the Hindu tradition, the Vaisyas are the lowest level of the "twice-born" (*dvijas*). They are commoners, but not a servant group. They undergo the sacred thread ceremony (*Yajnopavita*), as do the Brahmins and

Kshatriyas. But while male Vaisyas "take the thread," it is made of a fiber different from that of the two castes above them (Brahmins and Kshatriyas). As part of the cosmic order of dharma, they have been assigned the role of merchants and craftspeople.

Vaisyas are described in the *Laws of Manu* (a Hindu sacred book) as being given at creation the duties to tend cattle, bestow gifts, offer sacrifices, trade, lend money, cultivate land, and study the Vedas. It is sacrilegious for a Vaisya to refuse to keep cattle. In trading it is the duty of Vaisyas to know the value of pearls, coral, metals, and other commodities.

The *Laws of Manu* charge Vaisyas with acquiring skills in good management of those they employ. They need to know languages, proper wages, and how to operate a business so that goods are properly stored and traded. These tasks are also to be done with exertion so that the wealth of the Vaisyas can increase, but in a righteous manner. It is also a Vaisya duty to give food to all creatures. Additionally, the *Laws of Manu* includes rules for accepting the testimony of Vaisyas and for their purification or their punishment in cases of adultery, murder, or other crimes.

Within the Vaisya caste there are subcastes of bakers, sheepherders, cowherders, agriculturalists, musicians, metal workers, and as well as traders and businessmen. All are people with a skill, trade, or profession.

In the myth of Purusha the Vaisyas were made from the god's stomach. The Vaisyas resemble the Platonic people of bronze who are the people of the "belly." They are the farmers, herders, merchants, and businesspeople who produce and distribute food and other needed goods to society.

The Bhagavad Gita assigned the Vaisyas the duties of farming, protecting the cows of India, and conducting business. Their way of life demands labor, study, sacrifice, and the giving of alms. On special days, giving to the Brahmin is a common practice. According to the Bhagavad Gita, Vaisyas are such an essential element in society that it cannot survive without them.

Vaisyas were expected to be specialists in the trading of jewelry, precious metals, spices, or other goods. They were often vegetarians and very devout practitioners of their religion. Many are devotes of Laksmi, wife of Vishnu and the goddess of wealth.

An important Vaisya subcaste are the Mahuri Vaisyas. They are believed to have emigrated from around the city of Mathura as well as from Vrindavan and Gokul to the Bengal area during the time of the Mughal Empire (1526–1827). They also comprise a religious community worshipping Mata Mathurashani Devi, an incarnation of the goddess Shakti.

Some of the Mahuri claim that they originated from the creative work of Krishna who made them as *gopas* and *gopis* (cowherders), but then gave them the task of earning their living from trading. Their surnames are derived from the names of the forest villages where they were originally placed. These surnames include Athaghara, Badgaway, Barahapuriya, Bhadani, Charanpahari, Ekghara, Gowardhan, Kandhaway, Kapasimey, Krishan-kunda, Kutariyaar, Lohani, Pawanchaudaha, Seth, Tarway, and Vaishakhiyar. Each clan has legendary stories that tell of their origins in remote areas where in some cases there are still temples dedicated to cows. Besides folklore, however, there is little that can be substantiated about them that is more than four hundred years old.

Around 1750, many Vaisyas migrated to the Chota Nagpur Plateau where they still maintain villages. Others are now located in western Bengal and Orissa. Many are also traders in New Delhi, Chennai, and Mumbai (Bombay). Small numbers are located around the world.

Modern Vaisyas practice business and agriculture but with ethical practices in keeping with the modern global society. They practice environmentally sound agriculture that entails protecting the environment rather than exploiting it. This is an application of their role as cow protectors.

SEE ALSO *Brahmins; Business; Caste; Caste, Anthropology of; Dalits; Hierarchy; Hinduism; Kshatriyas; Sudras*

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Andrew J. Waskey

VAJPAYEE, ATAL BIHARI
1924–

Former Indian prime minister Atal Bihari Vajpayee is renowned for his political, literary, and professional achievements both in India and internationally. His major noteworthy accomplishments, prior to more than four decades of political participation and dynamic leadership, include his education at Victoria College (now Laxmibai)

in Gwalior and DAV College in Uttar Pradesh, editing of several Indian periodicals, and composition of a variety of literary works. Vajpayee holds a Master of Arts degree in political science. He served as editor of the monthly *Rashtra-Dharma*, the weekly *Panchajanya*, and the daily *Swadesh* and *Veer Arjun* periodicals. His own major publications, including *Lok Sabha Mein Atalji*, *Mrityu Ya Hatya*, *Amar Balidan*, *Kaidi Kavirai Ki Kundalian*, *New Dimensions of India's Foreign Policy*, *Jana Sangh Aur Musalman*, *Three Decades in Parliament*, *Amar Aag Hai*, *Meri Ekyavan Kavitayen*, and *Four Decades in Parliament,* range from books to collections of poems and compilations of speeches.

Vajpayee was born on December 25, 1924, in Gwalior, in what is now Madhya Pradesh, India. In the early 1940s he first became interested in the Indian independence movement. His first party affiliation was as a member of the Quit India Movement, which was lobbying for the end of British control of India. A devout Hindu, in 1951 he was a founding member of the Bharatiya Jana Sangh (BJS) Parliamentary Party, and because of his dynamic pro-Hindu, right-wing political leadership, he led the party for over two decades, from 1957 to 1977. He was briefly imprisoned during the Indian Emergency of 1975 to 1977 because of opposing Prime Minister Indira Gandhi's state of emergency. After the BJS was merged into the Janata Party, Vajpayee was elected minister of external affairs. In 1980 he was elected president of the Bharatiya Janata Party (BJP), another Hindu fundamentalist party, a post he held until 1986. He then rose to become the leader of the National Democratic Alliance (NDA), which from 1998 through 2004 was the ruling coalition of India, and from this position he was named prime minister. In addition to championing the cause of Hindu nationalism, Vajpayee has also actively worked on behalf of women and children's welfare, and the elevation of lower caste and tribal people. His advocacy in these areas might seem paradoxical and contradictory if only seen within his attachment to the BJP, but one should consider that, more than anything else, Vajpayee was a popular intellectual leader seeking to expand his political power. So his advocacy for social justice can be viewed in part within his larger effort to advance both his political power and the BJP's influence. His advocacy in these areas might seem paradoxical and contradictory if only seen within his attachment to BJP, but one should consider that, more than anything else, Vajpayee was a popular intellectual leader seeking to expand his political power. Undermining 50 percent of the Indian population would have jeopardized both his power and BJP's rising influence. This paradox can also be seen in the case of Indira Gandhi, who was a well known left winger female leader, but with much less practical sympathy for women's welfare and social justice.

In addition to serving twice as prime minister of India, Vajpayee is the only person to have been elected nine times to the Lok Sabha, or Indian House of the People. He was first elected to the second Lok Sabha in 1957, and most recently to the thirteenth Lok Sabha in 1999. Twice he was elected to the Rajya Sabha, or House of the States. He was the only leader besides Pandit Jawaharlal Nehru to be elected prime minister by three consecutive terms in office (in 1996, 1998, and 1999). During his tenure as prime minister, he successfully managed the political fragmentation that has typically plagued the Indian government. Under his leadership, in spite of an economic recession, India logged impressive growth in various economic indicators, including foreign exchange reserves, agricultural production, and gross domestic product.

Vajpayee has participated in numerous parliamentary committees, social and cultural associations, and Indian delegations to the European Parliament, the UN General Assembly, Human Rights Commissions, and other international conferences.

In December 2005, Atal Bihari Vajpayee expressed a decision to entrust the future of Indian politics to other capable leaders, formally announcing his retirement from electoral politics.

SEE ALSO *Affirmative Action; Caste; Fundamentalism; Hinduism; Janata Party; Nehru, Jawaharlal; Right Wing*

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Jalil Roshandel

VALIDATION

Before social scientists can study the feelings, thoughts, behaviors, and performance of individuals, and before practitioners (such as therapists, case managers, or school staff) can respond to clients' problems in those areas, they

must be able to measure the phenomena in question. Measurement tools include measures, instruments, scales, indices, questionnaires, and surveys. Complex social constructs such as "depression," "worker satisfaction," or "reading achievement" cannot be assessed with one question. A depression scale, for example, requires multiple questions (or items) to fully capture depression's affective, cognitive, and physical dimensions. An individual's responses to multiple items on a scale are typically combined (e.g., averaged or summed) to give one composite score. Measurement validation is the process of demonstrating the quality of a measure, the scores obtained with the measure, or the interpretation of those scores. Validation is necessary because scores from measures may be inaccurate. Respondents may misunderstand items, deliberately provide inaccurate responses, or simply lack the knowledge or ability to provide accurate responses. Specific items or the scale as a whole may not accurately reflect the target construct.

A common textbook definition of validity focuses on how accurately and completely a measure captures its target construct. From this perspective, measures can be sufficiently validated based on evidence of content validity, criterion validity, and/or construct validity (see Table 1). Validity is considered a characteristic of measures and is a demonstrable goal. For example, a scale developer might claim that a new worker-satisfaction scale is valid after presenting results of analyses of content and criterion validity.

This approach to validation as it is commonly applied has a number of shortcomings. First, it focuses narrowly on item content and score performance. Second, as elaborated by Kenneth A. Bollen (1989), it ignores potential problems with traditional correlational analyses, including the possibly erroneous assumption that scores from the existing measures used for comparison are valid. Third, it relies on indirect methods of assessing whether respondents interpreted items and response options as intended.

A broader view of validation defines it as an ongoing process of building a case that (1) scores obtained with a measure accurately reflect the target construct and (2) scores obtained with the measure can be interpreted and used as intended. This view implies that validation is an unending, multifaceted process and that it applies to the interpretations of scores obtained with a measure, not the measure itself. It also suggests that evaluating how scores are interpreted and used is essential to the validation process. This last point implies a legitimate role for values and ethics in the evaluation of measures. Proponents of elements of this broader view include measurement scholars from numerous social science disciplines—for example, Robert Adcock and David Collier (2001), Kenneth A. Bollen (1989), Lee J. Cronbach (1988), Samuel Messick (1988), and Howard Wainer and Henry I. Braun (1988), as well as a trio of social science professional organizations: the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education (American Educational Research Association et al. 1999). From this broad view of validation and validity, the approach to validation presented in Table 1 is inadequate.

Table 2 presents components of a broad view of measurement validation. The components of Table 1 are present (in rows 1 and 2), but other evidence is considered necessary to validate the interpretation and use of scores. Additional statistical procedures that are often used in scale development but less often presented as evidence of validity are also included (in rows 1 and 3). Corresponding categories of validation evidence described in the *Standards for Educational and Psychological Testing* (1999) are listed

Narrow view of validation

	Definition	Source of evidence	Example
Content validity	Items on a measure capture all major dimensions of a construct	Examination of existing literature and measures, and expert feedback	A depression scale contains items related to the cognitive, affective, and physical aspects of depression
Criterion validity	Scores obtained with a measure are related to scores from existing measures of the same construct	Analysis of scores obtained from the measure and scores from one or more existing measures of the same construct	SAT scores are correlated with high school grades (concurrent) and college grades (predictive)
Construct validity	Scores obtained with a measure are related to scores from existing measures of other constructs, as expected based on theory and prior research	Analysis of scores obtained from the measure and scores from one or more existing measures of other constructs	Scores on a measure of worker satisfaction are correlated with scores on a measure of worker productivity

Other assumptions commonly associated with this view: Measures are validated; validity can be "proven"; there are different types of validity.

Table 1

Broad view of validation*

	Evidence	Source of evidence
1. Content validation "Evidence based on test content" "Evidence based on internal structure"	Items on a measure capture all major dimensions of a construct Established dimensions of the construct are supported by statistical relations among items	Examination of existing literature and measures, and expert feedback Factor analysis of scores
2. Score performance validation "Evidence based on relations to other variables"	Scores obtained with a measure are related to scores from existing measures of the same construct and scores from other constructs as expected by theory and prior research	Analysis of scores obtained from the measure and scores from one or more existing measures of the same construct and other constructs
3. Respondent-related validation "Evidence based on response processes" "Evidence based on internal structure"	The content and format of the measure are appropriate for intended respondents' abilities and experiences The statistical qualities of the measure apply to all intended respondent groups	Analysis of direct feedback from and observation of test subjects who are similar to intended respondents Multiple-group factor analysis of scores
4. Practice-related validation Partly "evidence based on consequences of testing"	Scores fill a knowledge gap of users, are relevant to the outcomes of interest in the setting, and are related to the intervention strategies available in the setting Use of scores benefit respondents	Analysis of qualitative or quantitative data from intended users of the measure, and of outcome data on respondents

Other assumptions commonly associated with this view: Score interpretations are validated; validation is a process that is never finished; evidence of validity can be presented, but validity cannot be "proven"; instead of types of validity there are types of validation or validation evidence.

*The table is not meant to be an exhaustive list of types of validation evidence.

Table 2

under the terms in the first column. It is unlikely that any validation process will include all elements in the table, but the more sources and methods used, the stronger the case for validation will be.

RESPONDENT-RELATED VALIDATION

A direct method of assessing whether a scale measures what it is intended to measure is to interview pilot test subjects about their interpretation of items. Gordon B. Willis (2005) and Stanley Presser et al. (2004) provide detail on cognitive interviewing techniques. Data collected can be analyzed (usually qualitatively) to identify problem words or concepts and evidence that items or response options were misunderstood. Establishing that respondents interpret original or revised items as intended can contribute significantly to the validation case for a measure's score interpretations.

Demonstrating that respondents understand, interpret, and respond to items as intended is evidence of what Kevin Corcoran (1995, p. 1946) has referred to as the "suitability and acceptability" of a measure for its intended population. More specifically, it may constitute evidence of developmental validity (the content and format of a scale are appropriate for the cognitive, attentional, and other abilities of individuals). Natasha K. Bowen, Gary L. Bowen, and Michael E. Woolley (2004) and Michael E. Woolley, Natasha K. Bowen, and Gary L. Bowen (2004) discuss the concept of developmental validity and a sequence of scale-development steps that promote it. The process may also generate evidence of cultural validity (the content and format of a scale are appropriate in relation to the experiences of individuals that may vary based on language, nationality, race/ethnicity, economic status, education level, religion and other characteristics). Although these examples are presented as types of validity, they are easily reframed as evidence of validation that supports confidence in the interpretation of scores obtained from respondents with different characteristics.

Certain statistical analyses of scores obtained with a measure, such as multiple group factor analysis, can also support respondent-related validation. The analyses may provide statistical evidence that scores obtained from members of different groups (e.g., males, females; members of different cultural groups) can be interpreted the same way.

PRACTICE-RELATED VALIDATION

Some measurement scholars, such as Cronbach (1988) and Messick (1988), stress that the uses and consequences of scores must be considered in the validation process. Messick states: "The key validity issues are the inter-

pretability, relevance, and utility of scores, the import or value implications of scores as a basis for action, and the functional worth of scores in terms of social consequences of their use" (p. 33). Practice-related validation requires researchers to examine the context in which a measure is to be used—the setting, the users, and the intended uses of the measure. As demonstrated by Natasha K. Bowen and Joelle D. Powers (2005), practice-related validation of a school-based assessment might include evidence that the construct measured is related to achievement, evidence that school staff who will use the scores currently lack (and want) the information provided by the measure, and evidence that resources exist at the school for addressing the threats to achievement revealed in the obtained scores.

As pointed out by Cronbach (1988), evaluation of the context and consequences of score interpretations necessarily involves a consideration of values. The consequences of decisions based on scores may determine "who gets what in society" (p. 5). Standardized school test scores, college entrance exams scores, and mental health screening scores, for example, may be used to determine, respectively, who gets what instructional resources, who goes to college, and who receives mental health services. Given how the use of scores from social science measures affects the distribution of resources and the opportunities of individuals to succeed, a broad, thorough, ongoing approach to the validation process is an ethical necessity for social scientists.

SEE ALSO *Mechanism Design; Psychometrics; Reliability, Statistical*

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Natasha K. Bowen

VALIDITY, STATISTICAL

A study is valid when it actually measures what it claims to measure and when there are no logical errors in the drawing of conclusions from the data. There are many labels for different types of validity, but all concern threats that undermine the meaningfulness of research. Some early writers simply equated validity with establishing that a construct's scale correlated with a dependent variable in the intended manner, and, indeed, a scale might be considered valid as a measure of anything with which it correlated (Guilford 1946). Types of validity were codified in 1954 by the American Psychological Association (APA), which identified four categories: *content* validity, *construct* validity, *concurrent* validity, and *predictive* validity. Each type corresponded to a different research purpose: Content validity had to do with subject-matter content testing; construct validity with measuring abstract concepts like IQ; concurrent validity with devising new scales or tests to replace existing ones; and predictive validity with devising indicators of future performance. A 1966 update to the APA typology combined the last two types under the label *criterion-related* validity. Later, Lorrie Shepard (1993) was among those who argued that both criterion and content validity were subtypes of construct validity, leaving only one type of validity.

The unified view of validity supported the notion that only rarely could a researcher establish validity with

reference to a single earlier type. Moreover, Lee Cronbach's (1971, p. 447) earlier argument that validity could not be established for a test or a scale, but only for interpretations that researchers might make from a test or a scale, also became widely accepted in the current era. Some researchers, such as Samuel Messick (1989), accept construct validity as the only type of validity, but argue for multiple standards for assessing it, including relevant content based on sound theory or rationale, internally consistent items, external correlation with related measures, generalizability across populations and time, and explicitness in social consequences (e.g., racial bias). In a nutshell, since about the mid-twentieth century, the concept of validation has evolved from the establishing of correlation with a dependent variable to the idea that researchers must validate each interpretation of each scale, test, or instrument, and do so in multiple ways that taken together form the whole of what validity testing is about.

The outline below largely accepts the unified view of validity, centering on construct validity, but adds to it separate coverage in three areas: (1) content validity, focusing on the labeling of constructs; (2) internal validity, focusing on research design bias; and (3) statistical validity, focusing on meeting the assumptions of empirical procedures. While all three might be (and by some are) considered subtypes of construct validity, they do not fall neatly in its two major subdomains—convergent and discriminant validity—and so have been treated here separately.

CONSTRUCT VALIDITY

Under construct validity (or *factorial* validity), a good construct has a theoretical basis that is translated through clear operational definitions involving measurable indicators. A poor construct may be characterized by lack of theoretical agreement on content, or by flawed operationalization such that its indicators may be construed as measuring one thing by one researcher and another thing by a second researcher. To the extent that a proposed construct is at odds with the existing literature on related hypothesized relationships using other measures, its construct validity is suspect. The more a construct is used, in more settings with more outcomes consistent with theory, the more its construct validity.

Convergent Validity Researchers should establish both of the two main types of construct validity: convergent and discriminant. Convergent validity is assessed by the correlation among items that make up the scale or the instrument measuring a construct (*internal-consistency* validity); by the correlation of the given scale with measures of the same construct using scales and instruments proposed by other researchers and, preferably, already accepted in the field (*criterion* validity); and by the correlation of relationships involving the given scale across samples (e.g., racial tolerance using subject data versus spousal data) or across methods (e.g., survey data versus archival data).

Internal-consistency validity seeks to establish at least moderate correlation among the indicators for a concept. Cronbach's alpha is commonly used, with .60 considered acceptable for exploratory purposes, .70 adequate for confirmatory purposes, and .80 good for confirmatory purposes. Other tests used to demonstrate convergent validity include demonstrating a simple factor structure, employing the one-parameter logistic models developed by Georg Rasch (1960), or using the average variance extracted (AVE) method developed by Claus Fornell and David Larcker (1981).

Criterion validity (or *concurrent* validity) has to do with the correlation between measurement items and accepted measures. Ideally, the criteria are direct, objective measures of what is being assessed (e.g., how well does survey-reported voting correlate with actual voting in voting records?), but correlation with well-accepted related scales is an alternative criterion.

External validity has to do with possible bias in the process of generalizing conclusions from a sample to a population, to other subject populations, to other settings, or to other time periods. The questions raised include: "Are findings using the construct scale consistent across samples?" and "To what population does the researcher wish to generalize conclusions, and is there something unique about the study sample's subjects—the place where they lived and worked, the setting in which they were involved, the times of the study—that would prevent valid generalization?" When a sample is nonrandom in unknown ways, the likelihood of external validity is low, as in the case of convenience samples. External validity may be increased by cross-validation, where the researcher develops the instrument on a calibration sample and then tests it on an independent validation sample.

Discriminant Validity Discriminant validity, the second major type of construct validity, refers to the principle that the indicators for different constructs should not be so highly correlated as to lead one to conclude that they measure the same thing. This could happen if there is definitional overlap between constructs.

Discriminant validity analysis may include correlational methods, factor methods (Straub 1989), the AVE method, and structural equation modeling (SEM) approaches. In confirmatory factor analysis within SEM, if goodness-of-fit measures for the measurement model are adequate, the researcher concludes that the constructs in the model differ. A more rigorous and widely accepted SEM-based alternative is to run the model unconstrained and also constraining the correlation between constructs

to 1.0. If the two models do not differ significantly on a chi-square difference test, the researcher will fail to conclude that the constructs differ (Bagozzi et al. 1991).

CONTENT VALIDITY

Content validity (or *face* validity) exists when items measure the full domain indicated by their label and description. A *naming fallacy* exists when indicators display construct validity, yet the label attached to the concept is inappropriate (e.g., satisfaction with outcomes is measured but is labeled as effectiveness of outcomes). A *domain fallacy* exists when indicators are restricted in value (e.g., "monetary incentives" may be the label of an indicator in a small group simulation, but the indicator would be more accurately labeled "small monetary incentives" due to restricted range; the label "large monetary incentives" may have a very different effect).

INTERNAL VALIDITY

Internal validity concerns defending against sources of bias arising in research design. When there is lack of internal validity, variables other than the independent(s) being studied may be responsible for part or all of the observed effect on the dependent variable(s). If there is no causal phenomenon under study, internal validity is not at issue.

Common issues related to internal validity are:

Hawthorne effect (experimenter expectation): The expectations or actions of the investigator may contaminate the outcomes.

Mortality bias : Attrition of subjects later in the research process may render the final sample no longer representative.

Selection bias : The subjects may not reflect a random sample, and when multiple groups are studied, there can be differential selection of the groups associated with differential biases with regard to history, maturation, testing, mortality, regression, and instrumentation (i.e., selection may combine differentially with other threats to validity).

Evaluation apprehension : Study sponsorship, phrasing of the questions, and other steps taken by the researcher may not suffice to mitigate the natural apprehension of subjects, encouraging a bias toward responses the researcher is thought to want to hear.

Special problems involving control groups include:

Control awareness : If the control group is aware it is not receiving the experimental treatment, it may exhibit compensatory rivalry, resentful demoralization, or other traits that may contaminate study results.

Compensatory equalization of treatments : Researchers may compensate for the control group's lack of benefit from treatment by providing some other benefit, such as alternative experiences, thereby introducing unmeasured variables.

Unintended treatments : Researcher attention, the status of the testing locale, and other testing experiences may constitute unmeasured variables.

Likewise, special problems exist for before-after and time series studies:

Instrumentation change : Measurement of variables may shift in before-after studies, as when the observers, through experience, become more adept at measurement.

History : Intervening events that are not part of the study may occur between measurement intervals, affecting results.

Maturation : Invalid inferences may be made when the maturation of subjects between intervals has an effect.

Regression toward the mean : If subjects are chosen because they are above or below the mean, there is a statistical tendency that they will be closer to the mean on remeasurement, regardless of the intervention.

Test experience : The before-study impacts the after-study in its own right, or multiple measurement of a concept leads to familiarity with the items and hence a history or fatigue effect.

STATISTICAL VALIDITY

Statistical validity concerns basing conclusions on a proper use of statistics, and in particular whether the assumptions of statistical procedures are met (e.g., normality, homoscedasticity, independence, and other traits may be required). Statistical invalidity also occurs when the researcher has not properly specified the model, has not taken interaction and nonlinear effects into account, or has misinterpreted the causal direction of relationships.

When significance tests are employed, they may be invalid if data are not randomly sampled, if an inappropriate alpha level has been selected (e.g., .05 is common in social science but is too liberal for medical research), if the test has an inadequate power level, or if a post hoc "shotgun" approach is used in which large numbers of relationships are examined without taking into account that multiple a posteriori tests require a higher operational alpha significance level to achieve the same nominal level.

SEE ALSO *Regression Analysis; Regression Towards the Mean; Sample Attrition; Scales; Selection Bias; Structural Equation Models; Test Statistics*

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VALIDITY IN PSYCHOLOGY

SEE *Validity, Statistical.*

VALIUM

SEE *Psychotropic Drugs.*

VALUE

In the work of Karl Marx the term *value* is defined as the labor embodied in the production of commodities, where commodities are goods produced for sale on the market. The concept of value applies only to commodity-producing economies, and the value of any particular commodity is the amount of labor required for its production according to the prevailing technological standards, assuming that the total output level is appropriate to market demand for the good. The embodied labor that defines the values of commodities includes that required to produce the intermediate goods needed in the production of these commodities as well as the direct labor inputs involved. Thus machines are regarded as passing on the labor embodied in them during their own production to what they themselves help produce. Different forms of direct labor are reduced to a common standard by applying a similar principle in calculating the amount of labor required to produce the various skills of different types of labor. More highly skilled labor therefore contributes more value to the production of commodities than does less skilled labor.

It follows that the value of any commodity can be divided into two parts: the dead labor inherent in the intermediate goods employed in production, and the living labor arising from the use of workers of various levels of skill. Marx also subdivides the value contributed by direct labor into a magnitude equal to the value of the commodities contained in the wages received by workers, and a residual magnitude called surplus value which, he believed, constituted the basis of nonwage incomes in capitalism: profits, interest, and rents.

Marx's concept of value is distinct from any notion of use-value, or utility. He knew that commodities are useful in production or consumption, but he believed that their usefulness has nothing to do with their value, which is determined solely by their conditions of production. Value as Marx defined it is also distinct from exchange value, or price. However, Marx used his value categories to provide a theory of prices in competitive capitalism. He made no claim that values directly determine prices, in the sense of being equal to, or even proportionate to, the prices of the commodities in question. The determination is more complex, and the prices Marx was concerned to explain are only long-period equilibrium prices. These are the prices that prevail in a situation where supplies are fully adjusted to demands in all lines of production, and the rate of payment of all inputs of the same type is equal

in all lines of production. He conceived of long-period equilibria as centers of gravitation to which market prices tend, and in doing so Marx placed himself in a long tradition of economic thought that took labor costs to be the key to a proper understanding of such prices, including Adam Smith in the late eighteenth century and David Ricardo in the early nineteenth. This history is examined in great detail and with considerable lucidity by Ronald Meek in his *Studies in the Labor Theory of Value* (1976). However, Marx also argued that the concept of value and derivative concepts, like surplus value, provided the basis for the correct understanding of much more than equilibrium prices.

In the three volumes of *Capital*, written in the 1860s, he also made the following three claims. First, surplus value represents exploited (unpaid) labor and all forms of property income in capitalism derived from this. Second, capitalism is therefore an economic system based upon the extraction of unpaid labor from producers by nonproducing classes and, thus, is analogous to systems of production based on slavery and serfdom. Third, as a result, the conflict between workers and property-owners has a structural foundation comparable to the class conflicts of earlier modes of production that had helped to destroy them. Marx argued for these three propositions at considerable length and with great sophistication. But the basic message is straightforward: While capitalism appears to be very different from other types of economy in being grounded in free contract rather than coerced labor, the reality is less dissimilar. Capitalism, too, has an exploitative character and generates conflicts that will contribute to its transcendence.

Like Smith and Ricardo before him, Marx was well aware that values could not account for prices in any simple way. Outside of special circumstances, all three theorists recognized that equilibrium prices would not be equal to values. Smith believed that when property incomes (profits, interest, and rents) existed, values could not provide any explanation of prices whatsoever; they were relevant for understanding prices only in so-called "early and rude" societies where property had not been privatized. However, Smith continued to believe (in some unspecified sense) that labor was the only "true" cost of production, and he sometimes measured prices by the labor they could command in exchange. He was followed here by Thomas Malthus. David Ricardo proved more insightful, refuting Smith's claim that the very existence of property incomes undermined the capacity of values to explain equilibrium prices. But outside of special circumstances he, too, recognized that values would not be equal to, or proportional to, prices. Some commodity prices would exceed their values and some would fall short of their values, since in equilibrium an equal rate of profit on capital is paid in all lines of activity and the equilibrium price has to be sufficient to allow payment of this rate of profit whatever the capital-intensity of production. It followed from this that the surplus value generated in any line of production would not typically correspond to the property incomes derived from that line of production. Marx sought to resolve this problem by showing that, for capitalism as a whole, prices are transformed values and property incomes are transformed surplus values. Values and surplus values are reallocated between lines of production according to the requirements of long-period equilibrium. So, he maintained, for the capitalist system as a whole, values and surplus values really do determine prices and property incomes. This was the basis for his social and historical claims concerning the exploitative and conflictual nature of capitalism.

CRITICISMS

Marx's arguments for the illuminating power of value theory have not proved to be robust, although the central analytical difficulties came to light only in the 1960s, and most earlier criticisms have turned out to be rather weak in comparison. Marx himself was unable to specify rigorously the exact relationship between value magnitudes and price and income magnitudes. His critics, beginning with Ladislaus von Bortkiewicz in 1907, were much more successful. On the basis of reasonable assumptions about technology (as judged by the standards then prevailing in economics), Bortkiewicz and others proved that Marx's claims with regard to the transformed nature of prices and incomes can be justified. In their *The Political Economy of Marx* (1988) authors Michael C. Howard and John E. King have outlined the technicalities of the proofs; and they have explained the proofs' historical development in their two-volume *A History of Marxian Economics* (1989 and 1992). Despite this, Marx's claims are true only under restrictive assumptions. Most particularly, when technologies involve joint production, in which more than one type of output results from a production process, or when there are alternative techniques for producing any particular commodity, there may be no sensible way in which commodity values can be computed. Furthermore Ian Steedman, in his work *Marx After Sraffa* (1977), showed that even when commodity values can be determined, they may not be able to provide a coherent theory of exploitation in terms of surplus value, so that property incomes and class conflicts cannot be explained in the way Marx believed.

It might reasonably be expected that the flaws in a theory as grand as Marx's value theory would only succumb to something equally grand, not to the mundane fact commodities can be produced jointly in a single process, or that there are alternative processes in which they can be produced. But Marx was not alone in this.

Many of the propositions in Smith's economics, and even more in that of Ricardo, are also undermined. Similarly, Austrian capital theory and aggregate versions of neoclassical economics do not survive unscathed, as is proved with great economy and elegance in *Production of Commodities by Means of Commodities* (1960) by Piero Sraffa. Scholars of all schools made the huge mistake of believing that the complexities inherent in joint production and alternative production processes would not undermine results deduced from analyzing simpler and less realistic technologies. An element of irony is also present. Von Bortkiewicz and others who attempted to show rigorously that prices were transformed values, and property incomes were transformed surplus values, were not supporters of the political project of Marxism, while those who elucidated the destructive consequences of joint production technologies and alternative techniques of production were much more sympathetic to socialist politics.

However, the weakness of Marx's value theory does not fatally undermine Marxism as an intellectual force. Some scholars have continued to defend modified impressive versions of Marx's account of equilibrium prices, exploitation, and conflict, but without utilizing the concepts of value or surplus value. Three versions are Heinz Kurz and Neri Salvadori's *Theory of Production: A Long Period Analysis* (1995); John Roemer's *A General Theory of Exploitation and Class* (1982); and Gerry Cohen's *Karl Marx's Theory of History: A Defense* (2000). The ideas presented in these books and other works in the same vein are discussed in the second volume of *A History of Marxian Economics* by Howard and King. Also Marx's account of capitalist development and crises can be formulated in terms that are entirely independent of his theory of value and is thus unaffected by the difficulties that this theory has encountered.

SEE ALSO *Exchange Value; Labor Theory of Value; Surplus Value; Transformation Problem*

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VALUE ELICITATION

SEE *Value, Subjective.*

VALUE, OBJECTIVE

Within the social sciences, the concept of *value* was initially associated with the discourses of classical political economy, modern economics, and the Marxist critique of capitalism, and was later extended to refer to ideas of what is morally or ethically "right" or "important" in social life and in individual behavior. Thus, *value* can refer to both "economic values" and "cultural values"—that is, to the valuation of goods and services being bought and sold in the market, as well as to the ideals, principles, and goals that people define for themselves as they pursue the "good life" and the "good society." An *objective value* is a value that has a universal, transhistorical, or transcultural foundation. As such, it is a concept in opposition to the notion that values are always subjective and relative, and reflect the predilections, choices, and preferences of individual social or economic actors.

OBJECTIVE VALUE IN ECONOMIC THEORY

The idea that a good or service produced for sale in the market possesses a value that is distinct from its price is fundamental to all theories of economic value. All such theories proceed from the assumption that a commodity's value is in some sense the "center of gravity" around which its price generally oscillates. For the physiocrats, this center of gravity was the productivity of agricultural labor; for the Smith-Ricardo classical school, the labor expended in the commodity's production; for Marx, the abstract labor required for the commodity's reproduction as measured by socially necessary labor time; for John Stuart Mill, the commodity's costs of production; and for the marginalists, its marginal utility to a prospective buyer.

Prior to the marginalist revolution in modern economic thought, the concept of value was treated invariably as an "objective" one. The value of a commodity was conceived as the sum of the value of the objective inputs to its production (living labor, raw materials, energy, and fixed capital depreciation). Sometimes these inputs were

subsumed under one or another version of the "labor theory of value" and sometimes under a "cost of production" theory. But it was generally taken for granted that an intimate connection existed between the "objective value" represented by, or embodied in, a commodity and its market price.

The most important theorist of objective economic value was Karl Marx, who recognized the revolutionary implications of the idea that value exists as a definite (objective) quantitative magnitude that sets parametric limits on prices, profits, and wages. Transforming the classical labor theory of value, Marx argued that living labor was the sole source of new value and that the contradictions inherent in the "law of value" were at the heart of the "laws of motion" of the capitalist mode of production. As living labor is displaced from commodity production as a result of technological innovation and capitalist competition, the capitalist system deprives itself of the "social substance" (labor value) that is its lifeblood, and the rate of profit falls, setting the stage for capitalist crisis and ultimately social revolution. Hence, Marx's understanding of the "objectivity" of economic value as rooted in historically specific relations of production is integral to his account of the decline of capitalism and its supersession by a new socialist society that will be liberated from the tyranny of the law of value.

If Marx's theory represented the logical outcome of the classical school's commitment to a theory of objective economic value, it is unsurprising that economists committed to the perpetuation, reform, or fine-tuning of modern capitalism were eager to abandon it. The marginalist school of Carl Menger, William Stanley Jevons, and Léon Walras transformed the concept of economic value into an essentially subjective one, insisting that a good's value is determined solely by its marginal utility and that value is merely a psychological relation between a commodity and a potential purchaser.

OBJECTIVE VALUE AS A CULTURAL PHENOMENON

Friedrich Nietzsche was the first modern thinker to project the concept of value outside the sphere of economics (and mathematics) to the sphere of culture, arguing that individuals were motivated less by the "virtues" celebrated by classical philosophy than by "values" that reflected their own interests, proclivities, and tastes. His subjective concept of value was to deeply influence the social theory of Max Weber, for whom the subjective value orientation of individual social actors was a fundamental starting point of sociological analysis.

The concept of objective cultural or moral values developed in reaction to the relativism and subjectivism of Nietzschian philosophy and Weberian social theory. Both liberal-democratic and Marxist-socialist versions of the concept have been elaborated, but they are united by the idea that some core human values transcend location, time, and culture and that these values therefore possess an "objective" character.

SEE ALSO *Economics, Classical; Labor Theory of Value; Marginalism; Marx, Karl; Mill, John Stuart; Ricardo, David; Smith, Adam; Value; Value, Subjective*

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Murray Smith

VALUE, SUBJECTIVE

The concept of subjective value is that each individual has their own preferences for objects or actions. This concept is applied by economists to understand behavior and operates "behind the scenes" of observed behavior. That is, preferences are part of a theoretical structure to explain behavior that is latent and are assumed to model the observed behavior. Thus it is common for economists to make statements such as "the individual is assumed to behave as if he or she has subjective preferences and values for this outcome" and then test the implications of that assumption. It is not the case that one can directly observe subjective preferences or subjective value. Instead, auxiliary assumptions are needed to infer subjective preferences or value.

The justification for subjective value is primarily a priori. It is easy to just imagine that people have different preferences for the same goods or actions; for example, one person likes red wine with most food, and another likes beer with most food.

What leads to the assumption of subjective value is that people seem to make different consumption decisions, even when the circumstances are otherwise the same. Imagine people deciding between two types of cars but having the same incomes and facing the same car prices. If we observe people choosing different cars or one

person not buying a car at all, how do we explain this outcome? We could claim that there are some unobserved differences in people's constraints—for example, one person might live close to good public transport. Should one always ascribe differences in behavior to differences in subjective value or, instead, assume constraints that are specific to the decision maker but not observable to others? The answer to this question is one of the practical considerations that comes up repeatedly in theoretical and empirical work in economics (e.g., Stigler and Becker 1977; Becker 1993).

The concept of subjective value has direct implications for the manner in which we determine what valuations people have. This is the area of subjective value elicitation. It also has implications for how we design policy. The concept of consumer sovereignty flows naturally from thinking about subjective value: We value what is a good wine by seeing what people are willing to pay for it. But there are two concerns with the notion of consumer sovereignty that flows from thinking of values as subjects. First, what if those values are "constructed" by others, such as marketing, or the addiction that comes from some drugs? Second, it is possible, and indeed likely in some settings, that subjective value is not based on a complete processing of all of the relevant information about the consequences of actions. Hence society may want to adopt valuations that differ from those that individuals would adopt.

WHY ELICIT SUBJECTIVE VALUES?

Economists are interested in eliciting subjective values at the level of the individual because market values do not provide the information needed to measure consumer surplus, value new products, or value goods that have no market. Why do we need to elicit values? The prices observed on a market reflect, on a good competitive day, the equilibrium of marginal valuations and costs. They do not quantitatively reflect the infra-marginal or extra-marginal values, other than in a severely censored sense. We know that infra-marginal values are weakly higher and extra-marginal values are weakly lower, but beyond that one must rely on functional forms for utility or demand to extrapolate. For policy purposes this is generally insufficient to undertake cost-benefit calculations.

When producers are contemplating a new product or innovation, they have to make some judgment about the value that will be placed on it. New drugs, and the research and development underlying them, provide an important example. Unless one can heroically tie the new product to existing products in terms of shared characteristics and somehow elicit values on those characteristics, there is no way to know what price the market will bear. Value elicitation experiments can help fill that void, complementing traditional marketing techniques (see Hoffman et al. 1993).

Many goods and services effectively have no market, either because they exhibit characteristics of public goods or because it is impossible to credibly deliver them on an individual basis. These nonmarket goods have traditionally been valued using surveys, where people are asked to state a valuation "contingent on a market existing for the good." The problem is that these surveys are hypothetical, in terms of the deliverability of the good and the economic consequences of the response, and this understandably generates controversy about their reliability (Harrison 2006).

It does not follow that subjective values are those that society should use for decisions that have public consequences. For example, when public goods are being provided, the subjective value that is elicited may entail "free riding," which occurs when one person rationally understates his or her private valuation for the good in the expectation that others, in aggregate, will be willing to pay it. In this case subjective values will understate true values, and society would end up with too little investment in public goods if it relied on consumer sovereignty. We are interested in understanding when the subjective values we elicit are biased in relation to true subjective values. In such settings we may adjust the elicited subjective values in some way.

A related example might be the subjective values that an addict would place on some drug. Even if we elicit the value reliably, it is not obvious that we should use that value when deciding on policy on the drug. In this case society may take a longer-term perspective on the subjective value of the drug, even its subjective value to the addict (e.g., Becker and Murphy 1988). Or it might consider the effects of the addict's consumption of the drug on others, such as the addict's family or society as a whole. Consumer sovereignty should not be abandoned lightly, because it constrains politicians and bureaucrats from asserting value in the absence of any "market test."

PROCEDURES FOR MEASURING SUBJECTIVE VALUES

Direct methods for value elicitation include auctions, auction-like procedures, and "multiple price lists." Sealed-bid auctions require the individual to state a valuation for the product in a private manner and then award the product following certain rules. For single-object auctions, the second-price (or Vickrey) auction awards the product to the highest bidder but sets the price equal to the highest rejected bid. It is easy to show, to students of economics at least, that the bidder has a dominant strategy to bid his or her true value: Any bid higher or lower can only end up hurting the bidder in expectation. But these incentives are not obvious to inexperienced subjects.

A real-time counterpart of the second-price auction is the English (ascending bid) auction, in which an auctioneer starts the price out low and then bidders increase the price to become the winner of the product. Bidders seem to realize the dominant strategy property of the English auction more quickly than in comparable second-price sealed-bid auctions, no doubt due to the real-time feedback on the opportunity costs of deviations from that strategy (see Rutström 1998; Harstad 2000). Familiarity with the institution is also surely a factor in the superior performance of the English auction: First encounters with the second-price auction rules lead many noneconomists to assume that there must be some "trick."

Related schemes collapse the logic of the second-price auction into an auction-like procedure due to Gordon Becker, Morris DeGroot, and Jacob Marschak (1964). The basic idea is to endow the subject with the product and to ask for a "selling price." The subject is told that a "buying price" will be picked at random and that if the buying price that is picked exceeds the stated selling price, the product will be sold at that price and the subject will receive that buying price. If the buying price is equal to or lower than the selling price, the subject keeps the lottery and plays it out. Again it is relatively transparent to economists that this auction procedure provides a formal incentive for the subject to truthfully reveal the certainty equivalent of the lottery. One must ensure that the buy-out range exceeds the highest price that the subject would reasonably state, but this is not normally a major problem. One must also ensure that the subject realizes that the choice of a buying price does not depend on the stated selling price; a surprising number of respondents appear not to understand this independence, even if they are told that a physical randomizing device is being used.

Multiple price lists present individuals with an ordered menu of prices at which they may choose to buy the product or not. In this manner the list resembles a menu, akin to the price comparison Web sites available online for many products. For any given price, the choice is a simple "take it or leave it" posted offer, familiar from retail markets. The set of responses for the entire list is incentivized by picking one at random for implementation, so the subject can readily see that misrepresentation can only hurt for the usual revealed preference reasons. Refinements to the intervals of prices can be implemented to improve the accuracy of the values elicited (see Andersen et al. 2006). These methods have been used widely to elicit risk preferences and discount rates as well as values for products (see Holt and Laury 2002; Harrison et al. 2002; Andersen et al. 2007).

Indirect methods work by presenting individuals with simple choices and using a latent structural model to infer valuations. The canonical example comes from the theory of revealed preference and confronts the decision maker with a series of purchase opportunities from a budget line and asks them to pick one. By varying the budget lines one can "trap" latent indifference curves and place nonparametric or parametric bounds on valuations. The same methods extend naturally to variations in the nonprice characteristics of products and merge with the marketing literature on "conjoint choice" (e.g., Louviere et al. 2000; Lusk and Schroeder 2004). Access to scanner data from the massive volume of retail transactions made every day promises rich characterizations of underlying utility functions, particularly when merged with experimental methods that introduce exogenous variation in characteristics in order to statistically condition and "enrich" the data (Hensher et al. 1999). One of the attractions of indirect methods is that one can employ choice tasks that are familiar to the subject, such as binary "take it or leave it" choices or rank orderings. The lack of precision in that type of qualitative data requires some latent structure before one can infer values, but behavioral responses are much easier to explain and motivate for respondents.

One major advantage of undertaking structural estimation of a latent choice model is that valuations can be elicited in a more fundamental manner, explicitly recognizing the decision process underlying a stated valuation. A structural model can control for risk attitudes when choices are being made in a stochastic setting, which is almost always the case in practical settings. Thus one can hope to tease apart the underlying deterministic valuation from the assessment of risk. Likewise nonstandard models of choice posit a myriad of alternative factors that might confound inference about valuation: Respondents might distort preferences from their true values, they might exhibit loss aversion in certain frames, and they might bring their own homegrown reference points or aspiration levels to the valuation task. Only with a structural model can one hope to identify these potential confounds to the valuation process. Quite apart from wanting to identify the primitives of the underlying valuation free of confounds, normative applications will often require that some of these distortions be corrected for. That is only possible if one has a complete structural model of the valuation process.

A structural model also provides an antidote to claims that valuations are so contextual as to be an unreliable will-o'-the-wisp. If someone is concerned about framing, endowment effects, loss aversion, preference distortions, social preferences, and any number of related behavioral notions, it is impossible to generate a scientific dialogue without being able to write out a structural model and jointly estimate it.

SEE ALSO *Addiction; Auctions; Consumer; Demand; Economics, Neoclassical; Free Rider; Marginalization;*

Markets; Maximization; Opportunity Cost; Preferences; Prices; Public Goods; Structural Equation Models; Utility Function; Value, Objective; Variables, Latent

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Glenn W. Harrison

VALUES

The word *value* appears in two forms. The first is as a noun meaning core ideals and norms, as in, for example, "independence is a core value in contemporary U.S. society." The second form of value is a verb meaning the process by which things acquire importance or economic price, which is sometimes understood as valuation, as in, for example, "the ball was valued at $1.29 for quick resale" or "group members value her participation." Most social theory has focused on values as nouns that represent key ideas for a given culture, perform certain functions for society, or figure in ideological systems of power. However, an additional consideration of valuation can bring into focus issues of value change and the relationships between cultural and economic values.

Émile Durkheim (1858–1917) articulated a model of society in which social norms and values arose from the increasing specialization of social roles and labor in the emerging industrial societies of the time. Values and norms of behavior provide the social integration that allows individuals to function in society (Durkheim [1893] 1997), providing cohesiveness, trust, and stability. Durkheim's model of integration provided the background for Talcott Parsons's mid-twentieth century theory of society, which emphasized the functionality of values and rules, particularly in maintaining the equilibrium and stability of society (see especially Parsons 1951). Culture and a system of values form one of four dimensions of society, the others being social structure, relation to environment, and achievement of goals. For Parsons, the value system must be integrated into people's personalities and will then guide appropriate behavior. For example, competitiveness and autonomy, or individualism, are key values that are important for people to adopt to be successful in a capitalist economy, and much effort in schooling and media is spent on inculcating those ideals.

This view of values is easily critiqued for its prioritization of system stability over the possibility of social change, and for reducing the scope of agency for individuals who are seemingly programmed by social institutions to adhere to norms and uphold values. While Durkheim's work on values clearly contributed to the functionalism of Parsons, Durkheim took a view of crime and criminality

(*On the Normality of Crime*, 1895) that prefigures more critical approaches to values and norms, particularly what has been known as labeling theory (Becker [1963] 1997), and also critical approaches to deviance, such as those of Michel Foucault (1977). Labeling theory argues that acts are not inherently deviant but are labeled deviant by others, particularly powerful groups that articulate normative systems to protect social stability and their interests. For example, civic unrest may be treated by the state as sign of the deviance of protestors. But unrest may nonetheless hold value as a release for social tension and further may indicate that systematic injustice on the part of the state requires response and remediation and that alternative or neglected values should be given consideration.

Values are thus a part of systems of social power, providing the ideological frame that shapes public discourse about how the social world is operating and how it should operate. For example, when individualism as a value is prevalent, explanations for social troubles are often laid upon the shoulders of individuals: Joblessness is taken as a sign of individual lack of effort rather than diminished regional economy; mental illness as weakness or individual pathology rather than as outcome of stress and conflicting social expectations. Values are associated with and defined by those with the greatest social power. For example, in Western contexts rationality and authority are associated with masculinity, while emotionality and dependence are stereotypically associated with femininity. This means that, for example, female professors may have more difficulty in establishing authority in a classroom: If they engage in conduct considered normal for a male professor, they are seen as breaking gender norms and dismissed as cold or shrill, whereas if their behavior adheres to stereotypically feminine norms of conduct, they are not taken seriously as experts. Other social stereotypes and the values attributed to ascribed characteristics such as race, gender, or attractiveness lead to forms of discrimination both subtle and obvious.

The differential effects of values are thus an issue for formal politics and public policy as well as informal arrangements of social power. While technocracy (rule by experts) has its appeal as a seemingly neutral form of governance, it cannot itself define social priorities and thus still relies upon values to direct the efforts of the state. For example, while scientists may be able to describe the phenomenon known as global warming with mathematical tools with no obvious bias or values, it is still a matter of values to identify the potential social and environmental changes as harmful to human objectives.

Values also intersect with public policy in that negative values used to portray social groups may lead to discrimination and impede more useful ways of addressing problems. For example, groups that value social solidarity and tradition over competitiveness (whether Native American, Amish, or urban African American) come to be seen as having a "culture of poverty" and are blamed for their "backwardness" and lack of economic achievement. Recent research suggests that while values and attitudes are relevant factors, socioeconomic or class background is far more important in shaping potential success in education and work. Specifically, African American families do not possess some pathological set of values that prevents their economic achievement: Income and educational disparities can be attributed to both mechanisms of social reproduction that make it difficult for poor people of any race to achieve intergenerational social mobility and to ongoing processes of racial discrimination that result in lower wages for persons with similar qualifications (Mason 2007).

Because the media continues to circulate social stereotypes and uncritically reflects normative ideologies of value, it has a large role in supporting existing structures of power at the expense of productive social and value change. Whether relying on racial stereotypes or on common narratives of "the self-made man," television programming reinforces value systems. Media may use representations of deviance to titillate and sell, but this is done with the sense that the actions or characters represented are not normal, and sometimes to make specific points about morality. Most police dramas, whether fictional or "reality"-based, play on this process. Of course, advertisements sell products based on their value, both in the sense of monetary cost and utility, and as representations of larger ideas: Car commercials sell freedom and individualism, household cleaners sell cleanliness and domestic harmony. People in the United States will apparently buy anything that is marketed as "convenient" even if it really is not, or even if it undermines other values such as environmental sustainability or community (Tierney 1993).

As markets continue to globalize, both products and values will travel to new areas. To do this, products need to be legible to consumers. John Evans (1998) argues that processes that simplify and standardize everything, from units of land and property laws, to sizes of clothing and other units of measure, can either be products of state regulation or of capitalist needs for stability and regularity. Values, too, will travel as people learn to want to participate in global economies as producers and consumers. George Ritzer (2004) argues that the need to remove anything controversial and to reduce the identity of consumer products to their "lowest common denominator" to ensure the widest possible sales will strip away all but the most trivial of meanings from commodities and cultural products.

Legibility is a property of things to be read and measured. Its establishment involves a set of processes by which units and systems of notation are formulated and provide metrics for the evaluation of things. These processes also connect issues of law and custom as the economic values of things interact with moral or cultural values. What is the value of a human life and how is it to be measured? Or of a sacred site, or an animal species? Legibility is a form of valuation, which may be tied to economic scales of value established by assessing costs and profits, but also to processes whereby variations in human lifestyles are labeled worthwhile, normal, or deviant. Alternative lifestyles are illegible and perceived as deviant by the mainstream, as unable to be understood or valued, and are not protected by law (Butler 1993). Legibility and economic valuation are ways of establishing and reading value and measure and are closely intertwined, suggesting that production and consumption and social or cultural reproduction and economic reproduction are more closely intertwined than traditional theories of political economy have suggested (Joseph 1998).

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VALUES, FAMILY

SEE *Family Values.*

VANILLA INDUSTRY

Natural vanilla flavoring is a product of the fruity pods of the vanilla vine, a tropical plant of the genus *vanilla* of the orchid family (*orchidaceae*). There are many varieties, *v. planifolia*, *v. pompona*, and *v. tahiiensis* being the most common. Initially native to the forested highlands of Mexico, vanilla was found in other tropical areas of the globe after its transport to European colonies in Africa and Asia in the sixteenth century by explorers, botanists, priests, and colonial administrators.

The global world market for natural vanilla is approximately 1,000 metric tons, of which the United States is the largest consumer. However, the market for vanilla from vanilla beans is dwarfed by the use of synthetic vanilla, which is well over 95 percent of the total tonnage used in the global flavorings industry and approximately one hundredth of the cost of vanilla from beans. Synthetic vanillin is extracted from cloves and coal tars as well as lignin from paper processing. Although it is a safe flavoring product, vanillin as the signature component of vanilla lacks the subtlety and complexity of natural vanilla, which has additional flavor components and is much prized by home cooks, gourmet chefs, and food processors for which the designation of "real" is important to brand identity.

Vanilla orchids in their native Mexico are pollinated by hummingbirds and a species of small bee. In its other production contexts, this has led to vanilla being one of the most labor-intensive crops in the world, as the orchid flowers must be hand-pollinated to produce beans. Because the flowers last for only one day, farmers must daily tend to their vanilla vines, which are generally looped upon trees that provide shade and protection. Upward of 70,000 small farmers in Madagascar make at least part of their living managing vanilla vines, which can grow to be nearly thirty-five meters in length. There is a three- to five-year time period from transplanting vanilla cuttings or seedlings until the first fruiting, and the healthy maturity of vanilla vines requires effective climbing or trellising supports that provide some shade, adequate rainwater (approximately one meter per year), stable and rich soils, and temperatures remaining above fifty degrees Fahrenheit even at the coldest part of the year. The beans take several months to develop after pollination. They are harvested while green and after harvesting are processed to mature and stabilize the flavors. This ripening process generally takes several months, and the beans are carefully tended by hand.

Until the mid-1980s Madagascar and the islands of Reunion and Cormoros off the eastern coast of Africa held a virtual monopoly on natural vanilla production. Mexico's vanilla market collapsed at the end of the nineteenth century, with political turmoil disrupting produc-

tion, and only began to reorganize in the late twentieth century. The Madagascar cartel controlled an extremely inflated price on the open world market, which provided significant revenues for the government and for exporters. Price controls included export restrictions and the occasional destruction of tons of crops to keep the market price high (as high as US$500 per kilogram). Natural vanilla is a high value–low volume crop, which makes it attractive for biotechnology innovations. Attempts to reproduce natural vanilla through tissue cloning of ripened bean cells seemed to be making progress until new producers, particularly Indonesia and China but also smaller producers such as Uganda, Thailand, Tahiti, and Kenya, broke the monopoly of the Madagascar-based cartel and drove the world market price of vanilla to low levels (as low as US$20 per kilogram). Madagascar remains the largest exporter of vanilla. The world price continues to fluctuate as weather and the emergence of other producing nations interacts with changing demand, but it generally brings about US$50 per kilogram.

The control that the flavor industry maintains in grading and certifying vanilla as real versus synthetic, in labeling laws, and in consumer preferences for natural products are all part of the vanilla industry's complexity. When natural vanilla prices have been consistently high, there are many more attempts at using biotechnology to produce substitutes, old-fashioned attempts to cut or dilute real vanilla with synthetic vanilla, and ventures for new natural production. Like other botanical products from developing nations, vanilla plants have been a focus of bioprospecting, from taking cuttings out of the country to mapping the genome of valued plants.

Consumer interest in products for which the global commodity chain is used to demonstrate authenticity is part of the new market for vanilla. Knowledge of the origins of a given crop with a particular farmer, through a documented set of links between processors and distributors, adds both cachet and value to vanilla products. Because the small farmers who labor to grow vanilla bear nearly all of the risks of failed crops, decreasing demand, or bad weather yet receive the smallest part of the profits collected by exporters and distributors, there is also a growing interest in fair-trade vanilla. The vanilla orchid is such an environmentally sensitive plant that it fits well into models of ecologically sustainable development. With attention to issues of fair trade and the distribution of risks and profits from vanilla sales, vanilla is sometimes seen as a model for an integrated social and environmentally sustainable production. However, the emergence of multiple small producers in tropical nations that hope to provide revenues for small farmers threatens to again lower the market value of natural vanilla.

SEE ALSO *Agricultural Industry; Food; Industry; Monopoly; Trade*

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VANITY

SEE *Narcissism.*

VARIABILITY

Variation is one of the most important concepts in quantitative social science research. Associated terms include *statistical variation*, *statistical variability*, and *dispersion*. A dataset containing identical measurements has no variation, whereas a set containing widely dispersed measurements has high variation. There are several different summary statistics that describe, using a single value, the magnitude of the variation (variability) in a set of measurements. In other words, the summary statistics provide a synopsis of the degree to which a set of measurements lacks uniformity.

Among the most popular measures of variation are the *range*, the *mean absolute deviation*, the *variance*, and the *standard deviation*. Scholars use one or more of these measures to parsimoniously summarize the uniformity of a dataset rather than presenting the set in its entirety because presenting the entire set typically would require too much space and would be inconvenient to examine, particularly when the dataset is large. The disadvantage to using one or more of these summary statistics rather than presenting the entire set is the loss of information. The information loss occurs because summary statistics can be equal across datasets that contain different sequences of numbers. Each summary method attempts to provide important information about the degree to which the set lacks uniformity while minimizing the amount of information lost by not presenting the entire set of measurements. In general, the methods used to describe variability that present more information are more difficult to interpret for those without statistical training.

The measure of variability that most people consider the easiest to interpret is the *range*, which textbooks often define as the highest number in the set minus the lowest number. More commonly, scholars describe the range as the spread of numbers between the lowest and highest values. The set of numbers {1, 2, 8, 12, 15}, for example, has a range of 14, although many scholars would report the range as 1 through 15. Although the range is easy to understand, it is determined only by the two extreme values in each dataset, one or both of which may simply be errors in data entry. For this reason, the range contains less information than alternative variability measures.

Other methods that summarize the degree of variation in a set of measurements provide more information than the range but are more difficult to interpret. These alternatives describe in slightly different ways how far away each number in the set is from the mean of the measurements. The *mean absolute deviation* (or average absolute deviation) is one such summary statistic. After the range, it is the easiest to calculate and understand. The first step in calculating the mean absolute deviation is to subtract each number in the set from the set's mean. As the name implies, the absolute value of each deviation from the mean is subsequently summed, and the sum is then divided by the number of measurements to produce an average. In the example set {1, 2, 8, 12, 15}, the mean absolute deviation is 4.88.

The *variance* is a slightly more complex summary of variability. The preliminary step to calculating the variance is the same as calculating the mean absolute deviation—determine the distance of each measurement in the set from the set's mean. Subsequently, each deviation is then squared, and the sum of the squared deviation scores is then averaged. The variance of the example number set {1, 2, 8, 12, 15} is 29.8. When compared to the mean absolute deviation, the variance places more weight on values further from the mean, while not being as decidedly affected only by the two extreme values that are used to calculate the range. Scholars typically modify the variance formula when attempting to estimate the variance of a population of values based upon the variability of a sample of values drawn from the population. Instead of dividing the sum of deviation scores by the number of values in the sample, the sum of the scores is divided by the number of values minus one. This alteration provides a better estimate of the population's variance, because the variation observed in a sample of measurements is often less than the variation in the population from which the sample is drawn. For a large set of measurements, however, this added complexity makes little difference. Using this modified formula, the variance of the example number set is 37.3.

The most commonly used measure of variability in scholarly writing is the *standard deviation*, which is simply the square root of the variance. The standard deviation is typically denoted by the Greek letter sigma (σ) or the abbreviation *SD*. The standard deviation of the example set {1, 2, 8, 12, 15} is 6.1 when the modified formula noted above is used.

Scholars often attempt to explain the variability of one set of measurements (the dependent variable) by considering additional measurements (the independent variables) through the use of more complex statistical methods. For example, we can explain a proportion of the variation in human height by understanding that humans differ in biological sex. This can be visualized by considering that if we calculated the standard deviation of men and women separately, the variability of either group would be less than the overall variability in heights when we do not take gender into account. In other words, because we know that men tend to be taller than women, we can partially explain why the heights of individuals differ. If we wanted to understand more about the variability in human height, we would want to consider factors in addition to biological sex that are associated with height, such as age, parental height, ethnicity, and nutrition. When these explanatory (or independent) variables are found, we say that consideration of the independent variable(s) reduces the *unexplained* variation in the dependent variable.

Scholars rarely are able to explain all of the variation in any set of measurements, particularly in the social sciences. In fact, in the social sciences it is uncommon to explain more than half of the variation in any variable of interest.

SEE ALSO *Mean, The; Measurement; Mode, The; Regression Analysis; Social Science; Standard Deviation; Variance; Variation*

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VARIABLES, LATENT

Latent variables are commonly used in the social sciences. Whether it is psychological measures such as depression, or sociological concepts such as socioeconomic status, many variables cannot be directly measured. Factor analysis, latent class analysis, structural-equation models, error-in-variable models, and item-response theory illustrate models that incorporate latent variables.

The basic statistical concept of latent variables analysis is simple. These variables refer to an abstract level of analysis that cannot be directly observed and measured. In order to estimate the numerical values of the parameters from empirical data, we must use observable indicators to link the unobservable conceptual variables. An example of a formative model, the measurement model for socioeconomic status (SES), may make clearer this distinction between conceptually abstract and observable levels of analysis. A researcher may observe the variables income, educational level, and neighborhood as indicators (manifest variables) of SES (latent variable). Latent variable models provide a means to parse out measurement errors by combining across observed variables (using correlations among variables), and they allow for the estimation of complex causal models. Those measurement errors may include faulty respondent memory or systematic errors made in the survey process.

Latent variable analysis is parallel to factor analysis. In modern test-theory models, the relation between the latent variable and the observed score (item responses) is mathematically explicit. The form for the relation is a generalized regression function of the observed scores on the latent variable. This regression function may differ in form—a linear pattern for the factor models and a logistic one for the probabilistic models (Mellenbergh 1994). Researchers should decide whether to treat the underlying latent variable(s) as continuous or discrete. Further discussion can be found in Tom Heinen's demonstrations (1996).

In psychological studies, researchers may adopt a reflective model rather than a formative model because it is the standard conceptualization of measurement in psychology. This model specifies a pattern of covariation between the indicators, which can be fully explained by a regression on the latent variable. That is, the indicators are independent after conditioning on the latent variable (this is the assumption of local independence). An example of a reflective model in the latent variable of depression may use item responses on items like, "I am sad all the time," "I often feel helpless," and "I often feel my life is empty." In the reflective model of depression, it implies that a depressed person will be more inclined to answer the question affirmatively than a mentally healthy person. In ordinary language interpretation, depression comes first and "leads to" the item responses. In the mathematical term, it implies a regression of the indicators on the latent variable, while in the SES model (a formative model), the relationship between indicators and the latent variable is reversed. In other words, variation in the SES indicators now precedes variation in the latent variable; SES changes as a result of an increase in income and/or education and not the other way around.

In sum, latent variable theory signifies both realism and constructivism. Latent variables of the formative model are more a summary of the observed variables, while a reflective model implies entity realism about the latent variable. A causal implication between observable indicators and the latent variable thus is not a strong assumption. It is suggested that researchers be cautious when interpreting the relation in empirical studies (Borsboom et al. 2003).

SEE ALSO *Depression, Psychological; Factor Analysis; Realism; Regression Analysis; Social Science; Sociology; Structural Equation Models; Variables, Random*

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VARIABLES, PREDETERMINED

This entry explains when a variable is a predetermined variable and how identification and inference require a variable to be predetermined. In social science, researchers often try to explain a phenomenon or an event using one or more explanatory variables. For example, how much an individual earns can be explained (to some degree) by his or her education level, and how much an individual consumes can be explained by his or her income and wealth. In many cases, a social scientist will formulate a model in which one variable is a function of another variable. For example, the following is a model that relates consumption to income and wealth:

$$\text{Consumption} = c_0 + c_1 \cdot \text{income} + c_2 \cdot \text{wealth}$$

where c_0, c_1, and c_2 are numbers. For example, c_0 = \$10,000, $c_1 = 0.7$, and $c_2 = 0.05$. This model implies that a one-dollar increase of income causes consumption to

increase by $\$c_1$ (that is, consumption increases by seventy cents if income increases by one dollar). In order to estimate this model, we need to extend the model with an error term. This error term captures variables other than income or wealth. Let

$$\text{Consumption} = c_0 + c_1 \cdot \text{income} + c_2 \cdot \text{wealth} + \varepsilon$$

where the error term ε is assumed to be uncorrelated with income and wealth. If ε is assumed to be uncorrelated with income and wealth, then income and wealth are exogenous variables. No correlation means that we cannot use the regressors to predict the error term, that is, $E(\varepsilon|\text{income, wealth}) = 0$. If all the explanatory variables are exogenous variables, then the coefficients can be given a causal interpretation. Suppose that a social science researcher does not have access to data on wealth and, therefore, estimates the model

$$\text{Consumption} = d_0 + d_1 \cdot \text{income} + u.$$

Note that the new error term u consists of the old error term ε plus $c_2 \cdot$ wealth. Wealth and income are correlated so that income is correlated with u. Therefore, we cannot give a causal interpretation to d_1. In particular, an estimate of d_1 is likely to overstate the effect of income on consumption. Suppose that we have data on consumption and income for N individuals, $\{\text{Consumption}_i, \text{income}_i\}$ where $i = 1, \ldots, N$. Consider the least squares estimator for d_1. This estimator minimizes $\Sigma_i(\text{Consumption}_i - d_0 - d_1 \cdot \text{income}_i)^2$ with respect to d_0 and d_1. The least squares estimator for d_1 has the following form,

$$\begin{aligned}\hat{d}_1 &= \frac{\Sigma_i (\text{income}_i - \overline{\text{income}}) \cdot \text{Consumption}_i}{\Sigma_i (\text{income}_i - \overline{\text{income}})^2} \\ &= d_1 + \frac{\Sigma_i (\text{income}_i - \overline{\text{income}}) \cdot u_i}{\Sigma_i (\text{income}_i - \overline{\text{income}})^2}\end{aligned}$$

where $\overline{\text{income}}$ denotes the mean of income, $\overline{\text{income}} = \frac{1}{N}\sum_i \text{income}_i$. If income and the error term u are uncorrelated, then (1) the expectation of the last term, $\frac{\sum_i (\text{income}_i - \overline{\text{income}}) \cdot u_i}{\sum_i (\text{income}_i - \overline{\text{income}})^2}$, is zero so that $E(\hat{d}_1) = d_1$, and (2) this last term is very small for large N (the technical term is that $\frac{\sum_i (\text{income}_i - \overline{\text{income}}) \cdot u_i}{\sum_i (\text{income}_i - \overline{\text{income}})^2}$ converges in probability to zero so that $\hat{d}_1$ is a consistent estimator for d_1). However, in this example, the error term u_i depends on wealth. Wealth and income are correlated so that the assumption exogeneity (i.e., that all regressors are uncorrelated with the error term) is violated. As a result, the estimate for d_1 cannot be given a causal interpretation. In particular, the expectation of the estimator, $E\hat{d}_1$, will be larger than 0.7 because of the positive correlation between income and wealth.

The exogeneity assumption is very strong and can be relaxed somewhat. Consider the following model that describes the squared daily return of a stockmarket (e.g., the daily return of the Standard & Poor's 500 index),

$$\text{Squared Return}_t = f_0 + f_1 \cdot \text{Squared Return}_{t-1}.$$

As before, this model can be extended to include an error term,

$$\text{Squared Return}_t = f_0 + f_1 \cdot \text{Squared Return}_{t-1} + v_t.$$

Suppose there are T data points so that $t = 1, 2, \ldots, T$. Rather than assuming that the correlation between the squared return and the error term is zero, that is, that $E(v_t|\text{Squared Return}_1, \ldots, \text{Squared Return}_T) = 0$ for all t, we now make the weaker assumption that, given the past values of the squared return, the expectation of the error term is zero, that is, $E(v_t|\text{Squared Return}_1, \ldots, \text{Squared Return}_{t-1}) = 0$ for all t. Note that the past values of the squared return for error term v_t consist of the squared return of the first period, Squared Return_1, through period t – 1, $\text{Squared Return}_{t-1}$. Regressors that have the property that the error term has zero expectation given past values of the regressor are called *predetermined regressors* or *predetermined variables*. Consider the least squares regressor again to see how predeterminedness helps the estimator,

$$\begin{aligned}\hat{f}_1 &= \frac{\Sigma_t (\text{Squared Return}_{t-1} - \overline{\text{Squared Return}}) \cdot \text{Consumption}_t}{\Sigma_t (\text{Squared Return}_{t-1} - \overline{\text{Squared Return}})^2} \\ &= f_1 + \frac{\Sigma_t \text{Squared Return}_{t-1} \cdot v_t - \overline{\text{Squared Return}}\,\Sigma_t v_t}{\Sigma_t (\text{Squared Return}_{t-1} - \overline{\text{Squared Return}})^2} \\ &= f_1 + \frac{T}{\Sigma_t (\text{Squared Return}_{t-1} - \overline{\text{Squared Return}})^2} \frac{\Sigma_t \text{Squared Return}_{t-1} \cdot v_t}{T} \\ &\quad - \frac{T}{\Sigma_t (\text{Squared Return}_{t-1} - \overline{\text{Squared Return}})^2} \frac{\overline{\text{Squared Return}}\,\Sigma_t v_t}{T}.\end{aligned}$$

The term $\frac{\sum_t \text{Squared Return}_{t-1} \cdot v_t}{T}$ is zero in expectation since $E(v_t|\text{Squared Return}_1, \ldots, \text{Squared Return}_{t-1}) = 0$. Moreover, for large T, this term, as well as $\frac{\overline{\text{Squared Return}} \sum_t v^t}{T}$, will be small so that the estimate $\hat{f}_1$ is close to the true value f_1. This model of squared returns is an ARCH (auto regressive conditional heteroscedasticity) model and can be used to study volatility. In particular, a large decline of the stockmarket in period $t - 1$ means that the stockmarket will be more volatile in period t. Tim Bollerslev, Robert Engle, and Daniel Nelson (1994) discuss other ARCH models.

An endogenous regressor has the property that $E(v_t|\text{Squared Return}_1, \ldots, \text{Squared Return}_{t-1}) \neq 0$. Thus, an endogenous regressor cannot be a predetermined regressor. Endogeneity (i.e., having an endogenous regressor) occurs if there is a third unobserved variable that affects both the regressor and the error term. For example,

how much an individual earns can be partly explained by his or her education. Data on earnings and education levels are not hard to collect, but reliable data on intelligence are difficult to obtain. For this reason, earnings are usually regressed on the education so that intelligence is part of the error term. However, intelligence will also affect education levels so that the regressor education and the error term are correlated. In other words, there is an unobserved variable that affects both the regressor and the error term so that $E(v_t|\text{Squared Return}_1, \ldots, \text{Squared Return}_{t-1}) \neq 0$. Therefore, least squares cannot be used to estimate the effect of education on income. Econometricians have developed another technique, namely, two-stage least squares.

In nonlinear models, a slightly different definition of exogeneity and predeterminedness is sometimes used. In particular, the regressors are exogenous if the regressors and the error term are statistically independently distributed. That is, if the density of the error term conditional on the regressors, p(error term|regressors) is the same as the unconditional density of the error term, p(error term). Similarly, the regressors are predetermined if the density of the error term of period t conditional on the past regressors, $p(\text{error term}_t|\text{regressors}_1, \ldots, \text{regressor}_{t-1})$, is the same as the unconditional density of the error term, $p(\text{error term}_t)$ for all t. Robert De Jong and Tiemen Woutersen (2006) use these definitions when they estimate a model to predict monetary policy.

SEE ALSO *Autoregressive Models; Causality; Econometric Decomposition; Identification Problem; Probability; Regression; Regression Analysis; Statistics*

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Tiemen Woutersen

VARIABLES, RANDOM

A *random variable* is a real-valued function that maps a sample space into the real line. The sample space, denoted by $\Omega = \{\omega\}$, is the set of possible outcomes of some chance phenomenon (e.g., acts of individuals, an experiment). To illustrate, consider the familiar example of tossing a coin. There are only two possible outcomes; hence $\Omega = \{H, T\}$. Here, the symbols H and T are used to denote the outcomes "head" and "tails." A random variable Y can be defined by setting $Y = 1$ if H occurs, or $Y = 0$ if T occurs. The use of the word *if* here is important; if a coin is actually tossed, "heads" is observed, and $Y = 1$ is recorded, then this value is a realization of the random variable Y. The number 1 is not random but is simply a number. The variable Y is considered random unless it is observed. If the coin is "fair," then the probability that $Y = 1$ (on a toss that has not been observed yet) equals the probability that $Y = 0$; both probabilities equal 0.5. Alternatively, one could also define a random variable X, equal to –1 if heads occurs, and equal to 1 if tails occurs; in fact, any pair of distinct values could be used to define a random variable describing the outcome of a coin toss.

The concept of random variables was introduced by Pafnuty Chebyshev (1821–1894), who in the mid-nineteenth century defined a random variable as "a real variable which can assume different values with different probabilities" (Spanos 1999, p. 35). The concept is closely tied to the theory of probability, which has been studied since the seventeenth century. However, the modern understanding of random variables and their relation to probability arrived more recently, dating to the work by Andrey Kolmogorov (1933).

Random variables may be either discrete or continuous. In the discrete case, the elements of Ω are countable, although perhaps infinite in number. In the continuous case, elements of Ω are not countable, implying that there are infinitely many elements. The elements ω_j of Ω are called *elementary* events; collections of the elementary events are called simply *events*.

To formalize the definition of random variables, first consider the case where Ω contains a finite number of elements. An event A is a subset of Ω, that is, $A \subseteq \Omega$. The complement of A (with respect to Ω) is defined by $\bar{A} = \Omega - A$. Then Ω is the certain event, while $\emptyset = \bar{\Omega}$ is the impossible, or null event. Let $\mathfrak{F}$ be the set of all events (including Ω and $\emptyset$) defined on the sample space $\Omega = \{\omega_1, \ldots, \omega_m\}$; $\mathfrak{F}$ is a *field* in the sense that it is closed under the formation of unions and complements (i.e., if $A, B \in \mathfrak{F}$ then $A \cup B \in \mathfrak{F}$; if $A \in \mathfrak{F}$ then $\bar{A} \in \mathfrak{F}$). Then the probability of the event $A \in \mathfrak{F}$, denoted $P(A)$, is a set function onto the closed interval [0,1] satisfying

i. $0 \leq P(A) \leq 1$ for all $A \in \mathfrak{F}$;

ii. $P(\Omega) = 1$; and

iii. $P(A \cup B) = P(A) + P(B)$ if $A \cap B = \emptyset$.

The triple $(\Omega, \mathfrak{F}, P)$ is called a *probability space*.

If Ω contains infinitely many elements (either countable or non-countable), $\mathfrak{F}$ is required to be a σ-field, meaning that $\mathfrak{F}$ is closed under the formation of complements and unions of *countably* many events. In addition, the set function P must be *countably additive* so that condition (iii) above becomes

iii. If $A_1, A_2, \ldots$ are disjoint members of the σ-field $\mathfrak{F}$, then $P(\bigcup_{j=1}^{\infty} A_j) = \sum_{j=1}^{\infty} P(A_j)$.

With the preceding concepts, a formal definition is possible. Suppose $(\Omega, \mathfrak{F}, P)$ is a probability space in which Ω is not necessarily countable. Then a random variable Y defined on this space is a function mapping Ω into the real line such that the set $\{\omega \mid Y(\omega) \leq y\} \in \mathfrak{F}$ for every real y. Hence for each $\omega \in \Omega$, $Y(\omega)$ is a real number.

Many examples of random variables appear in the social sciences. Linear regressions involve an attempt to explain the meaning of a continuous random variable; the error term in such equations is a random variable with 0 mean, reflecting statistical noise. Schmidt and Witte (1989) considered the (random, continuous) time that elapses between a criminal's release from prison and his subsequent conviction for another crime. Nakosteen and Zimmer (1980) examined not only workers' incomes (continuous) but also their decisions to move to a location or to stay at their current location (discrete). Others have considered counts of durable goods purchased by households; decisions of graduating high-school students to continue their education in college, enlist in the military, or enter the labor force; and other issues.

SEE ALSO *Probability; Statistical Noise*

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Paul W. Wilson

VARIANCE

The variance is a measure of variability among scores. In describing any set of data, one uses three characteristics: the form of the distribution, the mean or central tendency, and the variability. All three are required because they are generally independent of one another. In other words, the mean indicates nothing about the variability.

Variability is a characteristic of all measures. In the social sciences the people or groups that are studied may be exposed to the same treatment or conditions but will show different responses to that treatment or those conditions. In other words, all the scores of the people would be different. The goal of the scientist is to explain why the scores are different. One can think of a score as having two parts: the mean and a deviation from the mean (Hays 1973). If everyone were exactly the same, the variability among scores (deviations from the mean) would be zero.

In manipulating conditions or treatments it is possible to explain different scores between groups by looking at the variability between the groups and also within each group. If the groups are different enough, it is said that they are statistically significantly different. Statistical significance is determined by looking at the probability (odds) that a difference could have occurred by chance. One analyzes the data by looking at the variability of the data and breaking down that variability into its component parts.

There are several methods for measuring variability among scores. The range is the difference between the highest and lowest scores and is limited because it is based on only two scores. It is not very useful because it is influenced easily by extremes among the scores. The mean deviation score sometimes is used as a measure of variability but also is limited in terms of its usefulness in additional mathematical calculations. The standard deviation is used commonly; it is simply the square root of the variance.

The variance is the most useful of these methods. It is defined as the sum of the squared deviations from the mean divided by the number of squared deviations. The equation for the variance is $var = \frac{\Sigma(X - M)^2}{N}$, where var is the variance, X is a raw score, M is the mean of the scores, X–M represents the deviation of a score from the mean, and N is the number of scores. Many different symbols have been used to represent the elements of this equation, but in all cases the variance is the average of the squared deviations from the mean.

A simple numerical example can illustrate the variance. There is a small set of five scores: 8, 7, 6, 5, and 4. The sum of those scores is 30, and the mean is 6. The numerator in the variance equation is called the sum of the deviation scores squared (often abbreviated SS for sum

of squares). One takes each score and subtracts the mean (i.e., 8 – 6 = 2; 7 – 6 = 1; 6 – 6 = 0; 5 – 6 = –1; and 4 – 6 = –2). Next, the deviation scores are squared to eliminate the minus signs ($2^2 = 4$; $1^2 = 1$; $0^2 = 0$; $-1^2 = 1$; and $-2^2 = 4$). Then one simply adds the deviation scores squared (4; 1; 0; 1; and 4) to get the SS, which is equal to 10. Finally, the variance is calculated by dividing the SS by the number of scores (N), which in this example is 10/5 = 2. The variance for this small set of five scores is 2.

This example illustrates an important point: The variance is not a clear indicator of variability. Consider the scores in the example above as inches. The variance is 2 squared inches. How would one make sense out of a variability of squared inches? In the social sciences how would one interpret a variability of squared IQ, conformity, opportunity costs, and so on? The variance has no simple or particularly useful explanation in everyday language or in the technical jargon of the social sciences.

However, the variance is an essential mathematical step in describing parametric variability. The variance has the advantage of being additive, something that is not true for its square root, the standard deviation (Games and Klare 1967). This means that in working with more than one group and looking for a measure of pooled or average variability among the groups, one can add variances. This is done in many inferential parametric statistical tests.

The variance is an essential element of much social science data analysis but is not easily interpretable. The standard deviation, which is the square root of the variance, is used commonly to provide a more readily understandable indicator of variability.

SEE ALSO *Regression; Regression Analysis; Standard Deviation; Statistics; Test Statistics; Variation*

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VARIANCE-COVARIANCE MATRIX

The variance-covariance matrix is a convenient expression of statistics in data describing patterns of variability and covariation. The variance-covariance matrix is widely used both as a summary statistic of data and as the basis for key concepts in many multivariate statistical models.

VERBAL DEFINITION

The variance-covariance matrix, often referred to as Cov(), is an average cross-products matrix of the columns of a data matrix in deviation score form. A deviation score matrix is a rectangular arrangement of data from a study in which the column average taken across rows is zero. The variance-covariance matrix expresses patterns of variability as well as covariation across the columns of the data matrix. In most contexts the (vertical) columns of the data matrix consist of variables under consideration in a study and the (horizontal) rows represent individual records. Variance-covariance matrices may, however, be calculated from any pairwise combination of individuals, measurement occasions, or variables. Even this by no means exhausts the possible covariance matrices that may be considered for a statistical model (see Cattell [1988] for an extensive list of the possibilities involving several dimensions).

MATHEMATICAL DEFINITION

If k variables are assumed in a study and letting X denote a raw score version of the data matrix and μ_k a vector of means for the variables under consideration, the covariance matrix is defined as $E(X'X) - \mu_k'\mu_k$, where $E()$ denotes the expectation operator. If the columns of X are centered to a mean of 0, the variance-covariance matrix is more conveniently expressed as $E(x'x)$. Within linear algebra, covariance matrices belong to the class of matrices known as nonnegative-definite symmetric matrices.

CALCULATION

The sample covariance matrix can be calculated as $1/n^*1_k^*(X'X - \bar{\mu}_k'\bar{\mu}_k)$ if raw score matrix X is used, $\bar{\mu}_k$ denotes a vector of sample means, and where ' denotes the transpose operator. If data are expressed in column-centered form, $x = (X - \bar{X})$, Cov(x) is calculated as $1/n^*1_k^*x'x$, where 1_k denotes a k-column vector of 1s and n denotes the number of observations. The sample variance-covariance matrix, although efficient, is a biased estimate of population variability. As a result, the estimated population covariance matrix divides by the reciprocal of $n - 1$ of n. If the x matrix is further transformed to have a variance of 1 (usually termed Z_x), the resulting sample Cov() matrix is known as a *correlation matrix*. If the X matrix is retained in raw score form and an additional unit column is added to the data, $1/n^*1_k^*X'X$ is referred to as an *average sum of squares* and *cross-products* matrix, a data summary convenient for models in which overall elevation as well as patterns of covariation are of interest, as often occurs in longitudinal studies of growth.

PROPERTIES

The Cov() matrix has as many rows and columns as the columns of X and is symmetric (meaning that the value associated with the j th row and k th column in Cov() is equal to the value in the k th row and j th column). Diagonal elements of Cov() represent the variances of the column variables; off-diagonal elements represent covariances or, if based on Z_x, correlation coefficients.

ADDITIONAL MATHEMATICAL PROPERTIES

Covariance of a sum: Assuming three matrices $x1$, $x2$, and y,

$$\text{Cov}(x1 + x2, y) = \text{Cov}(x1,y) + \text{Cov}(x2,y).$$

Covariances involving matrix products: Assuming two conformable matrices A and B,

$\text{Cov}(AX,BX) = A\,\text{Cov}(X,X)\,B'$ where ' denotes the transpose operator.

USES

As mentioned before, covariance matrices, by themselves, are compact summaries of the variability and covariation present in data. More generally, the covariance matrix and vector of means constitute sufficient statistics for models that assume a multivariate normal distribution. As such, the covariance matrix may be used in lieu of the raw data in calculating a number of multivariate statistical models, such as confirmatory and exploratory factor analysis (assuming the diagonal of the matrix is appropriately adjusted by the estimated communality), path analysis, or other general linear models, including the special cases of multiple regression, analysis of variance, and repeated measures analysis of variance or MANOVA. In many statistical models, finding an optimal basis for representing the covariance matrix in a compact fashion is of primary interest. Such reduced or optimal bases are referred to as *principal components analysis* (PCA), or in image processing as the *Karhunen-Loève transform*, which has time series applications within psychology (Molenaar and Boomsma 1987). Covariance matrices alone are not sufficient statistics for other more sophisticated models, such as those involving weighted least squares, sampling weights, or other categorical or distributional adjustments to reflect the dichotomous, polytomous, or other distributional characteristics of the variables under consideration.

SEE ALSO *Classical Statistical Analysis; Covariance; Econometric Decomposition; Inverse Matrix; Least Squares, Ordinary; Matrix Algebra; Ordinary Least Squares Regression; Path Analysis; Regression; Regression Analysis; Statistics*

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VARIATION

Variation refers to the degree of dispersion, diversity, or inequality in a distribution: the extent to which observations of an attribute are similar to or different from one another. Applications of variation in the social sciences include income inequality, the degree to which incomes are concentrated among a few households or spread broadly across a population, and religious diversity, which describes whether a single religion dominates the cultural landscape or multiple religions exist side by side.

COMPONENTS AND MEASURES OF VARIATION

Popular quantitative measures of variation include the following:

Range : The difference between extreme values.

Variance : The sum of the squared distances from each observation to the mean divided by the number of observations (for a population) or divided by one less than the number of observations (for a sample).

Standard deviation : The square root of the variance. The standard deviation is the average distance between a set of observations and the mean.

Coefficient of variation : The standard deviation divided by the mean. Graphically the coefficient of variation describes the peakedness of a unimodal frequency distribution. Because the coefficient of variation scales to the mean, this measure often is used in comparative analysis.

Gini coefficient : Bounded by zero and one, where lower values correspond to greater equality, the Gini coefficient is defined as twice the area between the Lorenz curve and an equality diagonal. (To construct a Lorenz curve, one ranks the observations from lowest to highest on the variable of interest and then plots the cumulative

proportion of the population against the cumulative proportion of the variable of interest.)

Theil's T statistic : Particularly appropriate for hierarchical, nested, or aggregate data, Theil's T statistic is the product of the population share of each observation, the quotient of the observation and the population average, and the natural logarithm of the quotient of the observation and the population average, summed over all observations. Unlike the Gini coefficient and the coefficient of variation, Theil's T statistic is sensitive to the number of underlying observations.

In addition to these widely used metrics, researchers sometimes create original measures to isolate a particular type of variation. For example, in *American Apartheid* (1993), Douglas Massey and Nancy Denton develop five dimensions of variation to identify racial "hypersegregation" in U.S. metropolitan areas.

Whereas measures of central tendency, such as the mean, median, and mode, describe the center of gravity of a distribution, measures of variation express how concentrated the observations are around the average. Both types of measures are necessary to describe most social science data sets. For instance, with regard to the test scores in a school, the median expresses the score of a typical student. Schools desire high median scores. However, a high level of variation in test scores indicates that some students excel, while others lag behind their peers. This could suggest differences among students in family resources, native intelligence, or other characteristics over which a school has little control, but high variation also can result from inconsistent teacher quality or administrative choices to overallocate resources to high-achieving students and/or underallocate resources to low-achieving students.

The ease of computing variation can hide the difficulties in its interpretation. Although variation reflects differences among individuals, it is a property of a group, not an individual. Correlation between variation and another group-level variable does not imply a corresponding relationship across individuals; improperly asserting that it does is an instance of the ecological fallacy. Similarly variation is relative. A measure of variation can only be described as high or low in comparison to the variation of another group, the same group in a different time period, or a predefined standard value.

USE OF VARIATION IN SOCIAL SCIENCES

Whether variation in a particular attribute is preferred is an issue of context and perspective. A high degree of variation may be preferable, as in the case of racial diversity within communities, in which variation may imply integration rather than segregation. A low degree of variation may be preferable; for instance, a good medical intervention consistently will improve the health of those who receive treatment and have few side effects. Alternatively, preference for high or low variation may depend on one's theoretical or ethical perspective. For instance, one view of income inequality is that higher levels of variation reflect a more efficient economic system that rewards hard work (or talent) and punishes laziness (or ineptitude). An alternative view is that income inequality suggests nondemocratic use of monopoly power or outright oppression of the poor.

One way to reduce subjective judgment is to view variation as a predictor variable rather than an outcome variable. An example of such an application is research that relates economic inequality to population health. In a 1975 article Samuel Preston popularized this issue by pointing out an inherent nonlinearity in the relationship of health to income. For individuals with low incomes, an increase in economic resources will be accompanied by significant health gains, but as an individual's income rises to the top of the distribution, subsequent increases in income will yield diminishing returns in terms of health. Thus at least among nations with high average incomes, lower variation of incomes should be associated with better health. Although subsequent scholarship seemed to confirm this correlation, there is debate over causation. Some scholars assert that inequality leads to stress and stress leads to poor health. Other researchers point to mediating factors, such as race and access to care, to explain the correlation between inequality and health.

Individuals with low incomes are more likely to have poor health, and individuals with high incomes are more likely to have good health, on average. Thus the suggestion that an increase in inequality that results from the poor getting poorer would decrease population health seems reasonable. However, advocates of the inequality hypothesis also must explain why an inequality increase that occurs when the rich get richer also would reduce health. Until they address this seeming paradox, the burden of proof lies with those who claim that income variation is an operative factor for health. This exemplifies the central challenge in using variation in social science analysis; to be a useful tool, variation must be both measurable and meaningful.

SEE ALSO *Gini Coefficient; Standard Deviation*

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J. Travis Hale

VASECTOMY

SEE *Sterilization, Human.*

VATICAN, THE

The term *Vatican*, like the word *Washington*, has multiple meanings. Geographically, it is one of the Seven Hills of Rome, located west of the Tiber River. Politically, it is an independent state within the city of Rome. Ecclesiologically, it is the bureaucracy that serves the pope in governing the Catholic Church.

With the collapse of the Roman Empire in the West, the people of Italy turned to the Church for leadership when Constantinople was unable to defend them against the barbarian invasions. Even before the Papal States formally existed, popes were raising armies, maintaining public order, and providing government services. By 590, Gregory the Great was the de facto ruler of Italy. With Lombards attacking from the north and a weak and unsympathetic imperial government in the south, Pope Zacharias backed Pepin as king of the Franks. In exchange, Pepin defended Rome and presented the pope with the Papal States in 773. His son, Charlemagne, was crowned in Rome by Pope Leo III in 800, establishing the Church as a major source of political legitimacy in Europe.

For the next 1,100 years, through diplomacy and war, the popes fought to preserve or expand the Papal States, which they saw as the only way to maintain the political and financial independence of the Church in a precapitalistic agrarian society. The power and wealth of the Papal States, however, corrupted the papacy as much as it protected it. The loss of the Papal States in 1870 proved to be an unanticipated blessing for the Church because it freed the papacy to pursue its spiritual goals without having to worry about governing 16,000 square miles of Italy. The normalization of relations between the Vatican and Italy in 1929 left the pope with 108.7 acres.

Under international law, the Vatican is a sovereign state headed by the pope, who has supreme legislative, executive, and judicial authority. It has its own army (Swiss Guard), flag, passports, stamps, post office, Internet domain extension (.va, as in vatican.va.), and the right to mint a limited number of coins. Criminals are normally turned over to Italy for prosecution and punishment. Citizenship is given on a temporary basis to about 500 people working for the Vatican, about half of whom are members of the Vatican diplomatic service. Another 100 are members of the Swiss Guard. The governance of Vatican City is delegated to the Pontifical Commission for the Vatican State (five cardinals), which is headed by a cardinal president appointed by the pope. Under the president, a lay delegate acts as a city manager and runs the day-to-day affairs of Vatican City, which employs about 1,300 people for administration, maintenance, police, stores, and its world-class museums. The Vatican City budget is normally in the black even though it has no taxes because of income from the museums, post office, supermarket, gasoline station, and other stores.

Located in the Vatican is the Instituto per le Opere di Religione, commonly known as the IOR or Vatican Bank, founded in 1887 after the fall of the Papal States as a way of keeping Vatican finances independent of Italian control. Its depositors are now limited to the Vatican agencies, Vatican employees, dioceses, religious orders, and other Church entities. Although in the past some depositors used it to launder money, since 1993 the bank has cooperated with police investigations. Like any bank, it invests its deposits; the profits are used at the discretion of the pope. Its involvement in one investment scandal caused it to pay $244 million to Banco Ambrosiano creditors. This scandal led to the reform of the bank, which is now governed by a committee of cardinals whose principal function is to select a supervisory council of financial experts from around the world to supervise the bank and hire its lay director-general. No financial report is made public.

The Vatican Curia is the bureaucracy that helps the pope in his ministry as head of the Catholic Church (he has a separate bureaucracy for the diocese of Rome). The oldest bureaucracy in the world, it is shaped more by history than organizational theory and still has many of the trappings of a medieval court. It has about 2,500 employees. The professional staff (mostly priests) is recruited from all over the world, but the support staff is mostly Italian. It is financed by donations and income from investments. The official language is Latin, but the working language is Italian. Most offices have people who can communicate in the other major European languages.

The top official under the pope is the secretary of state, who is more like a prime minister than a U.S. secretary of state. The secretary of state has two offices: the

First Section for General Affairs, headed by the *sostituto* (substitute), and the Second Section for Relations with States, headed by the secretary for relations with states. Although there are numerous exceptions, the principal work of the First Section is internal Church affairs, while the Second Section deals with international issues. Both sections are relatively small; for example, the Second Section has only about forty people.

The First Section is divided into language desks, with the *sostituto* acting as the pope's chief of staff. Practically all paper going to and from the pope goes through this office, making the *sostituto* one of the most powerful men in the Vatican, although he is not a cardinal.

The Second Section, divided into country desks, is the Vatican's foreign ministry, with the secretary acting as the foreign minister. Practically every nation in the world sends an ambassador to the Holy See (the major exception is China). The Vatican stresses (and legal scholars agree) that diplomatic relations are with the Holy See and that the pope would have the right to them under international law even if the State of Vatican City (*Stato della Città del Vaticano*) ceased to exist. Vatican foreign policy has supported international cooperation through the United Nations, the peaceful resolution of international disputes, human rights, disarmament, and aid to refugees and poor countries, while opposing international financing of abortion. But its principal concern is the promotion of religious freedom and the good of the Church. Historically it has attempted to protect the rights of local churches through international treaties (concordats) with countries.

Other dicasteries (offices) of the curia are organized as congregations or councils. They are committees of prelates (some working in Rome, others heading dioceses around the world), which meet under the leadership of a prefect (for congregations) or president (for councils). The prefects and presidents also head the staffs of their congregations and councils, which do the day-to-day work of the curia. The older congregations tend to deal with internal Church affairs: doctrine, liturgy, Eastern (non-Latin) Catholic churches, canonization of saints, appointment of bishops, evangelization, clergy, members of religious orders, and Catholic education. The newer councils are a mixed bag of offices dealing with issues that have concerned the Church since Vatican II: laity, ecumenism, family, justice and peace, health-care workers, canon law, communications, culture, and interreligious dialogue. Most staffs are quite small. They relate to Catholic dioceses around the world either directly or through the Vatican diplomatic representatives (nuncios) in each country.

The Congregation for the Doctrine of the Faith (formerly the Inquisition) is the most powerful office. It must review and approve the doctrinal content of documents from other offices before publication. It also attempts to control the teaching and writing done by Catholic theologians around the world. The congregations for bishops and evangelization of peoples propose names to the pope for episcopal appointments around the world, in a process that screens for orthodoxy and loyalty to the pope.

From at least the time of Constantine, the papacy has been an instrument of political legitimacy in Europe. This has given the Church political power, which it often used for good—to mediate disputes, insist on the observance of law, and protect the powerless—but sometimes used for evil—to suppress heresy and enrich itself. This power and wealth, however, made it a target of political intervention, whether imperial, feudal, or totalitarian. Beginning with Leo XIII in the nineteenth century, the Church began developing a social teaching that was more appropriate for a pluralistic democratic world. The contemporary political role of the papacy was epitomized in John Paul II (1920–2005), who through his support of Solidarity and the Polish freedom movement began the landslide that wiped out communism in Eastern Europe and ultimately the Soviet Union. He was also an outspoken defender of religious freedom, human rights, refugees, migrants, the environment, and the unborn. He spoke of the responsibility of the rich to help the poor and advocated forgiveness of Third World debt. He opposed both Persian Gulf wars. He was critical of unbridled capitalism and a culture of individualism, greed, and consumerism. Although lacking the political skills of John Paul, Benedict XVI (b. 1927) has not strayed far from his foreign policy positions.

Papal opposition to birth control and abortion have been controversial. While most Catholic moral theologians oppose abortion, a number consider making it illegal a debatable issue. John Paul did not shrink from giving Communion to pro-choice Italian politicians, although this became an issue for a few U.S. bishops in 2004. Most theologians, priests, laypeople, and even some bishops do not accept the pope's teaching on birth control, with the result that many Catholic countries such as Italy and Spain now have falling birthrates. Also controversial both inside and outside the Church has been the questioning of condoms as a means of fighting AIDS. This dissent on Church teaching led the Vatican to investigate, reprimand, and silence many priest theologians. It also led to the appointment of bishops known for their loyalty and support for Church teaching. But with the exception of abortion, birth control, and condoms, the Vatican's position of international issues has been far to the left of most American politicians.

SEE ALSO *Politics; Religion; Roman Catholic Church*

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VEBLEN, THORSTEIN
1857–1929

Thorstein Bunde Veblen, an economist and sociologist (social critic and social and cultural theorist), was born to a Norwegian immigrant couple and grew up in rural Minnesota. He attended Yale University for graduate work in philosophy, where he met the sociologist William Graham Sumner (1840–1910). Upon graduation Veblen was not able to find academic employment. He eventually went to Cornell University to study economics, then taught at the University of Chicago (1891), later moving to Stanford University (1906), the University of Missouri (1911), and the New School for Social Research (1919). Veblen's troubles with university administrations stemmed from his disregard for the norms of dress for "proper professors," his uncommon living conditions (he lived in a shack of his own construction at one point), his classroom presentations (he often spoke softly in monotone or displayed unorthodox behavior), and his unconcealed extramarital affairs. At one point in his career he taught a class entirely in the Icelandic language to make the point that modern education was useless. Veblen saw himself as outside both Norwegian and American cultures and specifically asked those who knew him not to write his biography after his death.

Veblen posited certain human instinctual drives (mediated by cultural norms) that allow for technological and social advance, social organization, and social evolution: the instinct of workmanship, which is the most productive instinct for well-being, being an underlying creative impulse to manipulate the world with productive labor; the instinct of parenting, which leads to a concern for the well-being of others and an identification with community; and the instinct of idle curiosity, which leads to the development of knowledge. His use of the word *instinct* does not correspond to standard understandings from biology. Rather, he used *instincts* as socially refracted modifications of desire (Veblen 1914).

SOCIETY

Influenced by Darwin's theory of evolution, Veblen was interested in the historical and evolutionary development of society and argued that humans interpret the world using categories based in biographic and historically shaped "habits of the mind," which in turn are the basis for cultural norms passed on through socialization. Activities formed around these norms Veblen called "institutions," with changes in productive activity leading to changes in society (Veblen 1914).

Veblen formulated a scale of three evolutionary stages of society based on changes in material forms of production: "savagery" (a peaceable, isolated, and stable society); "barbarianism" (a warlike and conquest-oriented society, hierarchical and dominated by religion, with distinct predatory and industrious classes and a surplus of wealth); and "civilization" (a modern, economically developed society that is rational and instrumental, with machine technology, mass production, and a high division of labor). For Veblen, the business class in modern society is "predatory" in that its livelihood is based on the acquisition of personal wealth and competitive capitalist profit making (Veblen 1914). In other words, Veblen labeled modernity as a form of latter-day barbarism.

Veblen is most famous for his book *The Theory of the Leisure Class* (1899), which some view as a satire of American elite society but others interpret as a "coded" social criticism that was a product of his marginal social status (Riesman 1995). In either case, it establishes Veblen's commitment to the idea that culture shapes economics, and as opposite from Marxist-derived, where Marx thought economics shaped society, it is an alternate analysis of society based on an understanding of production and consumption, material life, and economic stratification. In it Veblen shows the social and cultural causes and effects of economic changes (or economic evolution) and includes class, gender, and ethnicity in his economic analysis. He uses a materialistic approach in that he analyzes the changes in habit of productive activity.

Veblen's social analysis draws a distinction between two classes of people. The first, the privileged, elite class of businesspeople and captains of industry, survive through the parasitic exploitation of the productive class and engage in pecuniary activities that detract from the further evolution of society. This is his critique of capitalism, which includes an attack on industrialists he labeled as "robber barons." Veblen viewed this class as militant and

predatory because its members do not engage in productive work; instead, they live off of the innovations of other people. The second class, made up of industrious workers, engineers, and inventors, produces both the wealth and useful goods for society. This class is focused on the well-being of society as a whole and includes women. Veblen tended to associate predatory culture with patriarchy and peaceful, productive culture with women—in this sense, David Riesman regards Veblen as an early feminist. In a capitalistic society within an economic price system, individuals are rewarded not for creative entrepreneurship but for ideals of competition, which for Veblen leads to "sabotage" rather than the advancement of the ideals of production (Veblen 1921). Hence Veblen critiques modernity as latter-day barbarism because of the wastefulness of capitalistic production (Veblen 1904).

For Veblen, competition exists within society due to individuals' fear of loss of self-esteem. Patterns of consumption and conduct are seen as having symbolic significance and the latent function of enhancing status—Robert K. Merton (1910–2003) drew upon Veblen when writing about manifest and latent functions (Merton 1957). Veblen provides a theory about how individuals symbolize their own social status in the struggle for competitive advantage. Heightened self-evaluation comes with conspicuous consumption, conspicuous leisure, conspicuous waste, and conspicuous display of symbols that indicate high status, all of which are used to communicate social position and improve social standing. Conspicuous leisure indicates elite status and must be expensive because it is a symbolic message that one is above laboring. Conspicuous consumption and waste, demonstrated by the socially visible consumption and display of expensive items, fashion, exotic pets, and so on, also sends the message that one does not participate in productive labor; thus the more wasteful a person is, the more prestige he or she has. Lower-status groups emulate higher-status practices in an attempt to increase their own status, and Veblen calls these habits of competitive display and consumerism wasteful.

Veblen argued that women are exploited by men through *vicarious* conspicuous consumption, waste, and leisure; that is, the conspicuous activity is performed by the female to benefit the status of the male. Ideals of feminine beauty (e.g., frailty, weakness, and paleness, indicating inability to labor), certain restrictive fashions that prevent laboring, and the removal of women from socially visible, productive labor enhance the status of the male and the good name of the household and its master.

ECONOMICS

In *The Theory of Business Enterprise* (1904) Veblen gives an account of the business enterprises of the 1900s, with a theoretical analysis of the large-scale corporation and the institutions of U.S. capitalism. This analysis highlights the associations of business and industry, the making of money and the making of goods, ownership and technology, pecuniary and industrial employment, and the roles of those who perform social functions versus those whose behavior leads to waste. Veblen highlights the individual businessperson, the powers he or she holds and what he or she can accomplish with those powers, and his or her effect on the economic and social community as a whole. Veblen looks at the world community as it enters into the industrial age, which is dominated by what he calls the "machine process," and shows the importance of machines and their relation to business enterprise. This discussion is important for modernization theory. Interestingly, *The Theory of Business Enterprise* links stock market valuation to aggregate investment in the economy, prefiguring James Tobin's Q model.

In *Absentee Ownership* (1923) Veblen attempted to explain U.S. business after World War I (1914–1918) and before the Great Depression, providing a theoretical analysis of absentee ownership and credit and the economic circumstances associated with economic growth and change through the late nineteenth century. He discussed the rise and fall of the captains of industry and the notion of sabotage associated with entrepreneurs.

Finally, in his essays on education Veblen argues that universities, colleges, and even elementary schools increasingly fall under the spell of predatory habits drawn from the business world. Even in the era in which he lived, he found trends such as the increase of administrative expense over funds devoted to teaching, competition and rating among teachers based upon business models of productivity, the rivalry among universities as if they were corporations based upon the profit motive, and so on. He regarded all these trends as the opposite of what education should represent, namely, "idle curiosity"—interest in knowledge for its own sake, not for profit.

WAR, PEACE, AND NATIONALISM

In *The Nature of Peace* (1917) Veblen looked at the material conditions necessary to induce modern warfare as well as the varied meanings of patriotism within modern society. He saw militarism, nationalism, and patriotism as "predatory" in that they do not benefit the well-being of society as a whole, and he was concerned about military conflict and the patriotic exploitation of the industrious class.

In both *Imperial Germany and the Industrial Revolution* (1915) and *The Nature of Peace* (1917) Veblen developed the ideal-type of the "dynastic state" to describe Germany's and Japan's hierarchical organization and identification combined with the subservience of their underlying populations. This situation, he argued, results in militant aggressive nationalism and finally war; indeed, he

criticized nationalism itself because it involves honor and prestige and is therefore barbaric. Veblen used a historical comparison of Germany and Great Britain before, during, and after the Industrial Revolution to show the difference in their developments due to history and context that focused on material causes as well as social-psychological states, and he claimed that when a culture industrializes more rapidly, the country will use this industrialization to produce weapons because of the honor and prestige in being warlike. Militarism is barbaric because it enforces the values of obedience and is obsessed with honor and prestige. Hence if a nation becomes militaristic, this is a sign that it is crossing the border to barbarianism, where war is a natural outcome.

VEBLEN AS CULTURAL THEORIST

Veblen has been interpreted as a cultural theorist, most recently by Stjepan G. Mestrovic (2003) in his analysis of narcissism as central to understanding the unifying strand in Veblen's approach to culture. Others have used Veblen's ideas in cultural theory as well. For example, Riesman integrated Veblen's thought with his own concept of marginal differentiation by the other-directed type and the striving for status by the inner-directed type (Riesman 1953). Riesman and Jean Baudrillard are influenced by Veblen's idea that all forms of waste must be "conspicuous," which is to say reflected in the opinions of the mass media and the peer group. These insights led to Riesman's concept of "fake sincerity," performed to gain approval from others, and eventually to Baudrillard's notion of simulacra. The doctrine of separate spheres widely used in feminist theory, the notion of public versus private, was challenged by Veblen's connection of social spheres through consumerism and status, reflecting a cultural whole with causally linked underlying economic and social class realities (e.g., domination, production, and consumption). Thus Veblen provided an opportunity to understand culture in terms of economics and vice versa. Perceived status and hierarchical social distinctions make status comparisons and symbolic representations central to Veblen's theorizing.

Veblen had a particular influence in the social sciences with his symbolic representation of social class and social position, use of modernization theory, and analyses of economics (production, consumption, technology, business and industry, and economic growth and change). Veblen's influence is wide-ranging. C. Wright Mills used Veblen's work to develop his own ideas about leisure and social status in *White Collar* (1956) and updated Veblen's theory of the dominant sociopolitical elite (the predatory business class) in *The Power Elite* (1956). Chris Rojek incorporated Veblen's work into leisure studies with his analysis of leisure as taking on the characteristics of work (Rojek 1994), and Theodor Adorno used Veblen when discussing the aesthetics of ostentatious display. The French postmodern Baudrillard developed his own consumption theory concerning the significance of objects and images of consumption in designating prestige, where consumption and leisure should not be understood only as pleasure but also as a ranking and classification system of status itself.

SEE ALSO *Business; Business Cycles, Real; Capitalism; Class, Leisure; Conspicuous Consumption; Economics; Modernity; Stratification; Tobin's Q*

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VECTOR AUTOREGRESSION

Vector autoregression (VAR) models were introduced by the macroeconometrician Christopher Sims (1980) to model the joint dynamics and causal relations among a set of macroeconomic variables. VAR models are useful for forecasting. Consider a univariate autoregressive model—for example, an AR(1) $Y_t = \alpha + \beta Y_{t-1} + \varepsilon_t$—which describes the dynamics of just one random variable Y_t (i.e., national income) as a linear function of its own past. Based on this model, the forecast of national income will depend just on its past history. However, economic variables such as national income, employment, prices, money supply, interest rates, and so on interact with each other. For instance, movements in interest rates affect the level of employment, which in turn affects the level of national income. In this multivariate setting, the forecast of national income will be a function of a larger *information set* that combines not only the history of national income but also the histories of many other variables, such as interest rates and employment. A VAR is the generalization of the univariate autoregressive model to a vector of economic variables.

DEFINITION

An n-variable vector autoregression of order p, VAR(p), is a system of n linear equations, with each equation describing the dynamics of one variable as a linear function of the previous p lags of every variable in the system, including its own p lags. A simple case is a VAR(2) ($p = 2$) for a vector of two variables ($n = 2$), say $\{Y_t, X_t\}$:

$$\begin{aligned} Y_t &= \alpha + \beta_{11} Y_{t-1} + \beta_{12} Y_{t-2} \\ &\quad + \gamma_{11} X_{t-1} + \gamma_{12} X_{t-2} + \varepsilon_{1t} \\ X_t &= \alpha_2 + \beta_{21} Y_{t-1} + \beta_{22} Y_{t-2} \\ &\quad + \gamma_{21} X_{t-1} + \gamma_{22} X_{t-2} + \varepsilon_{2t} \end{aligned} \qquad (1)$$

The *innovations* are assumed to be zero-mean random variables, $E(\varepsilon_{1t}) = E(\varepsilon_{2t}) = 0$, with constant variance, $\text{var}(\varepsilon_{1t}) = \sigma_1^2$ $\text{var}(\varepsilon_{2t}) = \sigma_2^2$, possibly correlated, $\text{cov}(\varepsilon_{1t}, \varepsilon_{2t}) = \sigma_{12} \neq 0$, and with normal *probability density functions*.

The components of the definition are:

1. The n-dimension of the vector: number of variables to model, which is equal to the number of equations in the system.
2. The p-lag structure: identical number of lags for each of the n variables in the right-hand side of each equation.
3. The *linear* autoregressive specification.
4. The assumptions on the statistical properties of the innovations.

The joint dynamics are captured in two ways: (1) each variable is explained by the past history of every variable—Y_t is a function of its own past and the past of the other variables in the system $\{Y_{t-1}, Y_{t-2}, \ldots Y_{t-p}, X_{t-2}, \ldots X_{t-p}, \ldots\}$; and (2) the innovations may be contemporaneously correlated, that is, $\sigma_{12} \neq 0$.

ADVANTAGES

Easy implementation. Since every equation in the VAR has the same number of variables on the right-hand side, the coefficients $\{\alpha_1, \alpha_2, \ldots, \beta_{11}, \beta_{21}, \ldots, \gamma_{11}, \gamma_{21}, \ldots\}$ of the overall system are easily estimated by applying *ordinary least squares* (OLS) to each equation individually. The OLS estimator has the standard asymptotic properties. In large samples, the OLS estimator is *consistent* and *asymptotically normal* distributed.

Classical inference. Since the OLS estimator has standard asymptotic properties, it is possible to test any linear restriction, either in one equation or across equations, with the standard t and F statistics. Suppose that one is interested in whether the second lag is relevant in the first equation. One writes the null hypothesis as H_0: $\beta_{12} = \gamma_{12} = 0$. This is a restriction involving only the first equation. It is also possible to test for restrictions involving more than one equation. Suppose that one is interested in whether the coefficients corresponding to Y_{t-2} are identical across equations, that is, H_0: $\beta_{12} = \beta_{22}$. In both cases, an F-statistic will be appropriate.

The lag length p is also chosen by statistical testing or by minimizing some *information criteria*. Suppose that one starts by assuming $p = 2$. One writes the null hypothesis as H_0: $p = 2$ against an alternative hypothesis $p > 2$, say H_1: $p = 3$. The VAR model is estimated under the null and under the alternative, and testing is carried out by constructing either the F-statistic (based on the comparison of the sum of squared residuals for the restricted and unrestricted specifications) or an *asymptotic likelihood test* (based on the comparison of the value of the likelihood function for the restricted and unrestricted specifications).

Testing for Granger causality. It is of interest to know whether one or more variables have predictive content to forecast the variable(s) of interest. For instance, in system (1) one could ask whether X is helpful in predicting Y. The corresponding null hypothesis is that all the coefficients on the lags of X are zero, that is, H_0: $\gamma_{11} = \gamma_{12} = 0$. If these coefficients are statistically zero, one says that X does not Granger-cause Y or, equivalently, X does not have any predictive content to forecast Y. The null hypothesis can be tested with a standard F-statistic.

Impulse-response function and variance decomposition. An important use of VAR is to quantify the effects over time of economic policy. Suppose that the monetary authority shocks interest rates. The questions become: When, for how long, and how much does the shock to interest rates impact employment and output? Impulse-response functions are designed to answer these questions. An impulse-response function describes the response over time of each variable in the VAR to a one-time shock in any given variable while keeping all others constant. For the system described in (1), one has four impulse-response functions: the impact and future effects on Y and on X of a unit shock to ε_1, and the impact and future effects on Y and on X of a unit shock to ε_2.

Closely associated with the impulse-response function is the *variance decomposition*. This decomposition refers to the contribution of each innovation to the variance of the forecast error associated with the forecast of each variable in the VAR. Standard time series software provides both impulse-response functions and variance decomposition.

SHORTCOMINGS

Ad hoc specification. VAR models are criticized because they do not shed any light on the underlying structure of the economy. Though this criticism is not important when the purpose of VAR is forecasting, it is relevant when the objective is to find causal relations among the macroeconomic variables. A *structural* VAR is a system of *simultaneous equations* that aim to analyze causal relations. For each variable in the system, there is an equation that accounts for simultaneous as well as dynamic interactions among the full set of variables. A structural VAR(2) for $\{Y_t, X_t\}$ corresponding to the system described in (1) looks like:

$$\begin{aligned} Y_t &= a_1 + b_1 X_t + \phi_{11} Y_{t-1} + \phi_{12} Y_{t-2} \\ &\quad + \varphi_{11} X_{t-1} + \varphi_{12} X_{t-2} + \nu_{1t} \\ X_t &= a_2 + b_2 Y_t + \phi_{21} Y_{t-1} + \phi_{22} Y_{t-2} \\ &\quad + \varphi_{21} X_{t-1} + \varphi_{22} X_{t-2} + \nu_{2t} \end{aligned} \qquad (2)$$

where v_1 and v_2 are known as the structural innovations. With matrix algebra, it is possible to solve for $\{Y_t, X_t\}$ in the structural VAR. The solution is known as the *reduced form*, which is the VAR in (1) subject to some parameter restrictions. The question becomes: Is it possible to recover the structural parameters from the estimated parameters of the reduced form? This is known as the *identification* problem. The structural VAR in (2) has fourteen parameters (twelve coefficients and the variances of the two innovations, assuming that the covariance is zero), while the VAR in (1) has thirteen parameters (ten coefficients, two variances, and one covariance of the innovations). To uniquely identify the structural parameters, the investigator needs one restriction on the structural VAR. Which restriction should be used?

Identifying restrictions. This is a point of debate in structural VAR modeling. The ideal view is that economic theory should dictate which restrictions to impose. However, Sims argued that economic theory was not informative about the appropriate identifying restrictions, and therefore the estimation of the reduced form was the most that one could accomplish. Some researchers impose restrictions on the coefficients of the contemporaneous variables (Sims 1980). Others impose restrictions on the covariance of the structural innovations (Hausman, Newey, and Taylor 1987), or on the long-run multipliers (Blanchard and Quah 1989).

The most popular identifying restriction is the *recursive parameterization* or *lower triangularization* of the matrix of contemporaneous coefficients. In the structural VAR(2) described in (2), this restriction is $b_1 = 0$, which implies that exogenous shocks to X will not contemporaneously affect Y. If X is money and Y is output, the restriction $b_1 = 0$ means that a shock to the money supply will not affect output instantaneously, though it will affect output with some delay depending upon the dynamics specified in the VAR model. The lower triangularization is the most popular restriction in the time series computer packages.

Ordering of the variables. When the innovations $\{\varepsilon_{1t}, \varepsilon_{2t}\}$ are contemporaneously correlated, the impulse-response functions will depend on the ordering of the variables. A common solution is to transform the innovations (for instance, using the *Cholesky decomposition*) such that the transformed innovations are uncorrelated. The implication is that now one can trace the response of the system to an innovation shock in isolation without disturbing the rest of the innovations. The transformation also has implications for the specification of the system because now the first equation will have only one current innovation, the second equation will have two current innovations, the third equation will have three, and so on. Therefore, the ordering of the variables matters. There are no rules on how to choose the ordering of the variables. Economic theory may shed some light, but eventually the choice of the ordering will depend on the questions that the forecaster aims to answer.

SEE ALSO *Cholesky Decomposition; Lags, Distributed; Linear Systems; Properties of Estimators (Asymptotic and Exact); Regression; Specification Tests; Student's T-Statistic; Test Statistics*

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Gloria González-Rivera

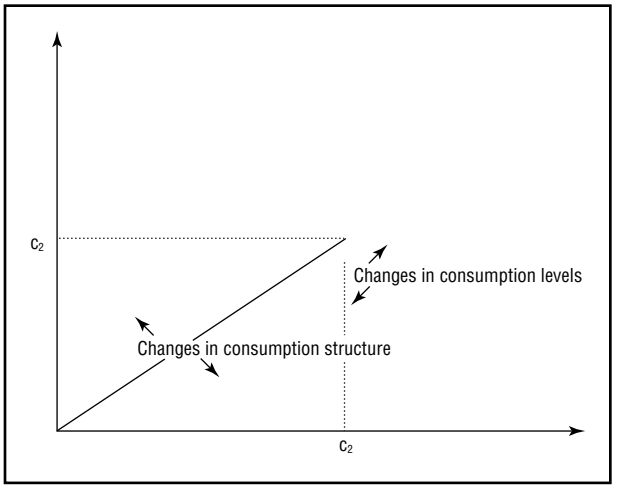

Figure 1

VECTOR ERROR CORRECTION MODEL

SEE *Unit Root and Cointegration Regression.*

VECTORS

It is well known that any point in the plane can be represented by a pair of numbers, its *coordinates*. If one draws a horizontal axis, labeled the *x* axis, and a vertical axis, labeled the *y* axis, then one can represent any point uniquely by giving its *x* coordinate and its *y* coordinate *in order*. Point (*a*, *b*) is the point that lies directly on a vertical passing by the point marked *a* on the *x* axis and on level with the point marked *b* on the *y* axis. Naturally, *a* or *b* can be negative. Note that the *order* of the coordinates is important. Points represented by (*a*, *b*) and (*b*, *a*) are *not* the same (unless $a = b$).

There is a complete correspondence between geometrical objects, namely, points of the plane, and purely algebraic objects, namely, ordered pair of numbers. Such algebraic objects that correspond exactly to points are called *vectors*. Thus a vector is a pair of any numbers (*x*, *y*). More precisely, one should call such pairs *two-dimensional vectors* because the concept can be easily generalized to *n-dimensional vectors*, geometrical representation being of course limited to three-dimensional space; nonetheless, the illustrations herein are limited to two-dimensional space.

Economic applications of vectors are quite important and numerous. The presentation herein deals with consumption first, production and activity analysis second, and then finally, temporal processes.

Consumption structures can be easily presented using vectors. The consumption of consumer C_i consists of n different quantities or bundles of different commodities (meat, bread, beer, tea …), represented by $C_i = (c_{i1}, c_{i2}, \ldots (c_{in})$. When for simplicity of presentation one deals with two commodities, then $n = 2$ and $C_i = (c_{i1}, c_{i2})$, which can be represented with quantities consumed on relevant axes, as in Figure 1. The length of the vector represents the level of consumption, and its slope represents the structure of composition. Level changes of the "consumption basket" will be represented by an increase or a decrease of the vector length; changes in structure, depending on consumer preferences, revenue, and market prices, will modify the vector slope.

Vector analysis can also be useful to present problems of accumulation with heterogeneous capital goods, a technique dating as far back as Karl Marx's analysis of "reproduction schemes" found in the second volume (1885) of *Das Kapital*. John von Neumann (1946) and Wassily W. Leontief (1941) have contributed important modern examples of this technique.

For an example of a production analysis, one might begin by defining an "activity," "process," or "production method" representing production of one commodity, say "corn," using labor, iron, and corn (for seed needs). For one unit of labor time (one hour, one day, or labor time available in the economy), one can obtain a given amount of corn, called b_{11}, using a_{11} amount of corn and a_{21} of iron. Consequently, activity can be represented by vector $\vec{OM}_1$ (see Figure 2). The first coordinate of M_1 is $b_{11} - a_{11}$, representing "net" production of corn, that is, "gross" production of corn (b_{11}) less intermediate consumption of corn (a_{11})—the seeds; the second coordinate, a_{21}, represents the intermediate consumption of iron; vector $\vec{OM}_1$,

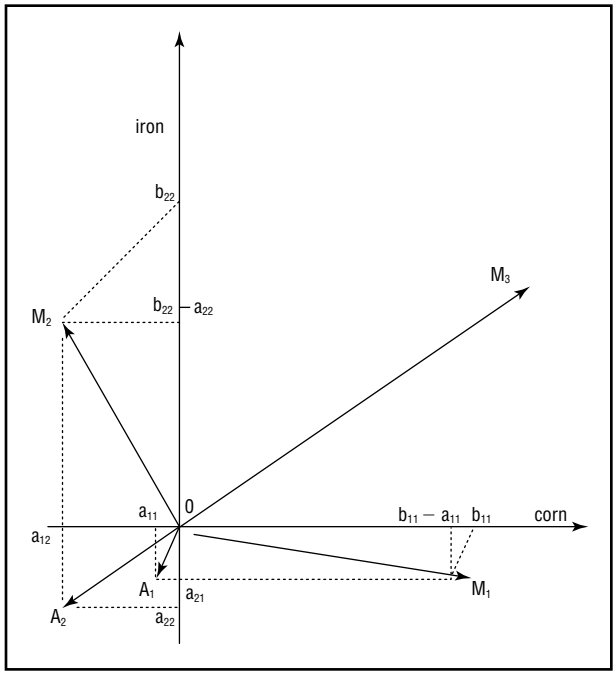

Figure 2

representing the "net product" of activity (1), can be easily constructed by vectoral summation of, first, gross production of corn represented by vector $O\bar{b}_{11}$ and second, D, vector $O\bar{A}_1$, itself sum of inputs of corn and iron.

In a similar way, let iron be produced by another activity producing b_{22} units (tons …) of iron using a_{22} units of iron, a_{12} units of the other commodity (corn here in this very simplified model), and one unit of labor. Vector $O\bar{M}_2$ represents the "net product" of this activity.

One may note that $O\bar{M}_1$ and $O\bar{M}_2$ have just one positive component, both activities being "specialized" in the production of one and only one commodity. Such a case is called "simple production"; but one may have a different case in which one activity produces two commodities simultaneously (say, wool and milk); in such a case, named "joint production," both coordinates of M_3 may be positive, as indicated in Figure 2 (this vector is shown only for mathematical illustration as it is quite difficult to imagine a method producing jointly iron and corn).

When both activities are specialized, one comes to matrix representations such as:

$$A = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \quad B = \begin{bmatrix} b_{11} & 0 \\ 0 & b_{22} \end{bmatrix}$$

which are square matrixes largely used in *input-output* systems, or Leontief models—2×2 in the simplified model used here, but $n \times n$ in a more general treatment. The $i^{ème}$ column vector represents conditions of production of the $i^{ème}$ commodity (production of b_{11} units of commodity i necessitates intermediate consumption of a_{11} units of itself and a_{21} units of second commodity, and so on); the $i^{ème}$ line vector represents utilization of the $i^{ème}$ commodity by the entire system, as intermediate consumption (a_{11} representing intermediate consumption of first commodity by the first production process, a_{12} intermediate consumption of the same commodity by the second production process, and so on).

Von Neumann models are more complicated and more general. First, there is the possibility of joint production. Second, the matrix may be rectangular because there is the possibility of production systems with un-equality between the numbers of processes (line vectors) and commodities (column vectors).

It should be noted that when economic systems can be characterized by a "square matrix," one can define and characterize eigenvectors that have a special structure associated with matrix characteristics. Such vectors play a special role in economic analysis because they can be useful to characterize, on the one hand, special accumulation regimes—with maximum uniform growth rates—and, on the other hand, special price systems—with minimum uniform interest rates.

Vectors can also be useful in presenting and generalizing about temporal interdependencies. Simple "autoregressive" models involve the dependence of variable x on the anterior value of the same variable, for instance, $x_t = f(x_t - 1)$, with any kind of relevant function.

Vector autoregressive (VAR) models are a generalization of such simple autoregressive models. Consider two stationary variables x_{1t} and x_{2t}; each variable depends on its own past values but also on the present and past values of the other one. VAR models are very important in contemporary econometrics. They have been introduced by Christopher A. Sims (1980) as an alternative to macroeconometric models with a Keynesian flavor.

SEE ALSO *Eigen-Values and Eigen-Vectors, Perron-Frobenius Theorem: Economic Applications; Input-Output Matrix; Linear Systems; Matrix Algebra*

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Gilbert Abraham-Frois

VEDA

SEE *Brahmins.*

VEIL, IN AFRICAN AMERICAN CULTURE

The veil in African American culture is a mystical dimension of a spiritual belief system that traveled with slaves on the Middle Passage. An infant "born with a veil" of fetal membrane enveloping the head was interpreted as supernaturally gifted with a second sight, an ability to see into the future. Likewise, the seventh child of a seventh child would also be gifted with spiritual powers. The veil, also called a caul, like roots, charms, and conjurers, is a vivid aspect of African American spiritual, literary, and folklore tradition.

Moving beyond the mystical, African American sociologist W. E. B. Du Bois explored the notion of the veil from a societal perspective, using the metaphor of being "born with a veil" to describe black life in America, particularly the plight of the black American experience and the challenges facing African American culture. In his 1903 masterpiece *The Souls of Black Folk*, Du Bois articulates with poetic beauty and poignant accuracy the pain and confusion felt by an entire race of people as it sought self-understanding.

A sense of duality surrounds Du Bois's veil metaphor: First is the physical delineation of blackness and whiteness, that semipermeable border that separates black and white cultures and forces blacks to learn to function in both worlds. Second is white people's inability to view blacks as worthy Americans. Du Bois often felt despised by whites and was regularly asked, indirectly, "How does it feel to be a problem?" (1903, p. 1). This obstruction of vision is twofold, for the veil also refers to black people's inability to see themselves beyond the prescipted image projected onto them by whites. Realizing his racial identity, Du Bois states, "Then it dawned upon me with a certain suddenness that I was different from the others; … shut out from their world by a vast veil. I had thereafter no desire to tear down that veil, to creep through" (p. 2).

Faced with this problematic veil that separated the two worlds of black and white, blacks were forced to create a "twoness" or "double-consciousness."

> The Negro is a sort of seventh son, born with a veil, and gifted with second-sight in this American world—a world which yields him no true self-consciousness, but … this double-consciousness, this sense of always looking at one's self through the eyes of others… One ever feels his twoness,—an American, a Negro; two souls, two thoughts, two unreconciled strivings; two warring ideals in one dark body. (p. 3)

But also drawing upon the positive spiritual qualities of the veil, Du Bois notes that a black person seeks "to merge his double self into a better and truer self" (p. 3).

A century later, Du Bois's metaphor veil lives on in *Behind the Veil: Documenting African American Life in the Jim Crow South*, a comprehensive research project associated with the Center for Documentary Studies at Duke University. Historians conducted nearly 1,300 oral interviews with everyday men and women from the Jim Crow era, resulting in a book and audio documentary titled *Remembering Jim Crow: African Americans Tell about Life in the Segregated South* (2001). Much like the dualism of *The Souls of Black Folk*, *Behind the Veil* has its own dualism: to convey the oppression experienced by African Americans during Jim Crow but also their incredible hope and monumental efforts.

SEE ALSO *African Americans; Du Bois, W. E. B.; Ethnography; Inequality, Racial; Jim Crow; Mysticism*

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Judy L. Isaksen

VEIL, IN MIDDLE EASTERN AND NORTH AFRICAN CULTURES

The veil—or *hijab*—is attire that is said to be women's religious duty as well as a cultural requirement of personal modesty. Across the Muslim countries of the Middle East and North Africa, the veil takes varied forms: the headscarf, loose jacket, and long skirt ensemble seen in Egypt; the black cloak (*chador*) in Iran; the brightly-patterned silk scarf and long coat worn by Islamic women in Turkey; and the full *niqab* that covers the face and hands, which is worn by women affiliated with Islamist movements as well as many women in the Gulf countries. Not all Muslim women veil, and governments have taken different positions on veiling. For example, veiling in government agencies and universities is forbidden in Turkey and Tunisia but is compulsory in Iran and Saudi Arabia. Still, polemics surrounding *hijab* abound in every country, and scholars have written about the increasing observance of

the veil in the Middle Eastern and North African countries. Immigrant communities in Europe and North America also have seen veiling, leading to national debates and policy formulations. Commentaries and popular images depict the veil variously as symbolizing women's oppression or as a Muslim woman's cultural right.

During the era of early modernization and postcolonial nation-building, when national progress and the emancipation of women were considered synonymous, the veil was associated with national backwardness and with female illiteracy and subjugation. This viewpoint entailed discouragement of the veil and encouragement of schooling for girls. At certain times in Middle Eastern modern history the veil has been convenient to militants and political activists. In the Algerian war for independence against the French in the 1950s and the Iranian revolt against the shah in 1978, women used the veil to hide political leaflets and arms. But a paradox of the 1980s was that more and more educated women, including university students and working women, donned the veil. In Egypt, *hijab* included both modest dress and the more extreme *niqab* (Badran 1994).

Observers have raised a number of questions about veiling. Is veiling merely a matter of convenience and individual choice, or does social pressure play a part? If veiling is a "voluntary" identity marker of "The Muslim Woman," what larger message does it send about women's bodies and hair? What is the relationship between veiling/reveiling, the growth of Islamist movements, and the policies of Islamist states? In the case of compulsory veiling, veiling is clearly tied to state policy and its patriarchal gender regime. But what of the expansion of veiling in Algeria, Egypt, Turkey, and among the Palestinians, where veiling is not mandated by the state?

One response has been to emphasize Muslim women's "agency" in the decision to veil (El-Guindi 1981; Hoodfar 1991). In this view, veiling permits public roles for women from conservative families that would otherwise not allow "their women" access to higher education or employment. *Hijab* is a form of "protection" that allows the educated, professional woman to participate in public life and be both modern and Islamic. There is also some evidence that voluntary veiling is not always an expression of affiliation with or support for an Islamist political movement; it could represent rejection of parental and patriarchal authority among rebellious young women. Some young women from nontraditional families who adhere to *hijab* aspire to personal autonomy and a more serious mien, especially at coeducational colleges.

Others have argued that the response of some women who are compelled to work for low wages has been an intensification of traditional modesty markers, such as veiling. Reluctantly working outside the home, and thus "exposed," middle-class and low-income women must use every symbolic means at their disposal to signify that they continue to be "respectable" and worthy of protection. Arlene MacLeod (1991) called this "accommodating protest."

The expansion of Islamist movements and the ideology of political Islam have led to increased veiling in at least three ways. First, Islamism places a high premium on sex segregation, a preference for the confinement of women to the private sphere of the family, male guardianship over women, and the veiling of women in public or before men who are not closely related—norms that Islamists in power have legislated. The wives, daughters, sisters, and other women supporters of Islamist movements all have been veiling. Second, the ideological exhortation that to be an authentic Muslim woman is to veil has created a political environment and cultural climate that have compelled many non-Islamist women to veil. The insistent message that veiling is a moral and religious requirement constitutes an effective ideological pressure. Third, in some instances Islamists have used intimidation and physical force against unveiled women—this has occurred in Algeria and among the Palestinians (Moghadam 2003).

Veiling reflects and encourages notions of women's vulnerability, of their "difference," and of the presumed dangers of the female body. Fatima Mernissi has pointed out that women's bodies and their sexuality are regarded as potential sources of *fitna* (moral or social decay) and as such, veiling is meant to protect men, not women. In the same way that many feminists have decried the underdressing of women in Western contexts (Hollywood, the fashion industry, MTV, and so on) because of the way that this reduces a woman to her sexuality, so feminists regard the veil as reinforcing the idea of women's bodies as sexual, dangerous, and a source of temptation (Mernissi 1987; Sabbah 1983).

Other scholars have noted that women's bodies are the site of contestation over religious, national, and cultural identity (Kandiyoti 1991; Moghadam 1994). Islamists in Algeria, Iran, Jordan, Palestine, and elsewhere have exhorted women to veil, to have more children, and to steer clear of "alien" ideologies. Women who do otherwise are branded as cultural traitors, morally repugnant, and religiously damned. The concept of *gharbzadegi*—widely used in postrevolutionary Iran and variously translated as "Westoxication" or "Westitis"—illustrates this point. Through those members who are "struck by the West," notably women, imperialism can penetrate the society and wreak havoc on the culture. The claim was made that by depriving women of chastity, modesty, and honor through notions of autonomy, sex appeal, and so on, colonialists and imperialists had been able to weaken

Muslim cultures. This is said to have happened in Algeria under French colonialism and in Iran during the rule of the pro-American shah. It follows that the main antidote to the virus of *gharbzadegi* is the veil. Furthermore, veiling must be compulsory in order to protect the cultural identity and integrity of the group and of its female members (Najmabadi 1991; Tohidi 1994). A similar exhortation was made by the Ikhwan Muslemin (Muslim Brothers) of Jordan: "How can God's victory prevail when women adorn themselves openly and mix with men, and when defiance of God's law continues day and night? The enemy relies on you, my sister, to strike at this nation from within, as if the stabs we receive from the outside were not enough" (Taraki 1995, p. 660).

Faegheh Shirazi (2001) notes that veiling is heavy with meaning; it has been a symbol of cultural identity, religious assertion, gender oppression, and sexual mystery. The "fetishism of the veil" is found among Westerners and Islamists alike. She argues that while the veil has "semantic versatility" it often serves political agendas. In Iranian politics, and especially during the war with Iraq in the 1980s, the connection between *hijab* and jihad was maintained through the strategic use of postage stamps, posters, banners, billboards, and other print material depicting veiled women as strong supporters of the war. She also describes the preoccupation with *bad-hijabi* (malveiling) on the part of the Islamic authorities in Iran.

In its most innocuous form, veiling is a sign of piety and a form of protection against the male gaze. Increasingly, it is the line of demarcation between the Islamist/Islamic community and non-Muslim communities, a shield against the slings and arrows of imperialists, and protection against the dangers of female sexuality. Veiling can symbolize the imposition of identity and "morality." In the Islamic Republic of Iran, even non-Muslim citizens—Christian, Jewish, and Zoroastrian women—have been forced to veil in public. Whether compulsory or "encouraged," veiling has been a mechanism of social control: the regulation of women.

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Valentine M. Moghadam

VEIL OF IGNORANCE

SEE *Rawls, John.*

VELOCITY OF CIRCULATION

SEE *Quantity Theory of Money.*

VELOCITY OF MONEY

SEE *Money, Demand for.*

VENTURE CAPITAL

Venture capital (VC) is capital used by private equity funds to support the creation and growth of businesses; it is characterized by a tradeoff between high risk and high rates of return. Most VC has been invested in technology-

oriented companies and projects. Because it is independent and professionally managed, VC is a crucial equity type of external financing for privately held companies that seek to grow rapidly. As a result, VC investments play a critical role in economic development.

Newly created firms that are expected to grow quickly into big companies often do not have sufficient funds to finance their projects and thus need outside financing. These firms are subject to potential capital constraints; that is, they have difficulty receiving bank loans and other types of standard financing because of a limited track record and uncertain future prospects. VC is a professionally managed pool of money raised for the specific purpose of making equity investments in such companies. In addition to providing new capital during critical stages of development, professional management adds value to expansion through screening, monitoring, and aiding in decision-making. A typical VC firm receives many proposals per year, but only approves a very small percentage.

The first formal private equity fund was formed in 1946 in Boston to provide financing to several companies that had developed new technologies during World War II (1939–1945). The first VC limited partnership was formed in 1958. Even though several other VC companies were established later on, the total average annual VC investment did not exceed a few hundred million dollars until the end of the 1970s. During the 1980s, VC firms provided capital to the most successful high-technology companies, such as Cisco Systems and Microsoft. Since then, the private equity industry has been experiencing tremendous growth in the United States, both in terms of the amount of capital invested and in terms of returns. VC market growth also spread abroad, first to the U.K. and then to continental Europe and beyond. Differences in the nature of financial markets from country to country are the main reasons for the varying maturity of VC markets. For instance, there is a clear institutional separation between investment banks and the VC industry in the United States, but in countries with relatively young financial markets, the functions of VC firms are often performed by major investment banks as well as private equity partners. Whereas VC firms provide funds to firms at early stages of their development in the United States, in Europe and in developing countries VC companies prefer firms that have already developed and started marketing their products.

The supply of VC is determined by investors' willingness to provide funds to venture firms. This willingness depends on the expected rate of return on investments. High-tech companies with the potential to grow rapidly are also highly risky investments. VC firms that become major equity owners in such new firms are only willing to finance high-reward investment proposals because they also have responsibilities to several other funding sources, such as individual investors, investment bankers, subsidiaries of banks, and other corporations. In order to make money on their investments, a VC fund needs to turn the illiquid stakes in private companies into realized return, for example by taking a company public. The most profitable exit opportunity for VC firms is an initial public offering (IPO). In an IPO, the VC fund assists the company in issuing shares to the public for the first time. The exit is an important aspect of the VC business because investors in a VC need a way to evaluate the performance of VC funds in order to decide whether to provide further capital. On the stock exchange, the success of existing strategy is demonstrated by lower underpricing (the difference between offer price and first-day trading price) and by high long-term performance (measured against certain benchmark investments). Empirical research shows that VC backing reduces the degree of IPO underpricing, and that the long-term stock returns (up to five years) of companies backed by VC funds are substantially better than those of companies without VC.

SEE ALSO *Cooperatives; Firm; Investment; Risk Takers; Risk-Return Tradeoff; Stock Exchanges*

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Halit Gonenc

VER

SEE *Import Penetration.*

VERBA, SIDNEY

1932–

Sidney Verba is Carl H. Pforzheimer University Professor of Government at Harvard University and was director of the University Library from 1984 to 2007. Professor Verba has held many important positions in the discipline of political science, including chairman of the American Political Science Association and coordinator of national research committees. Verba is also a fellow of a number of

academies and learned societies and has received numerous prizes, including the 2002 Johan Skytte Prize in Political Science at Uppsala University in Sweden.

Verba is one of the leading scholars in the field of political behavior. Since the mid-twentieth century, this branch has become so internalized in the way political scientists conduct their research that they no longer think of it as a special subdiscipline. Verba's textbook, *Designing Social Inquiry* (1994), authored with Gary King and Robert Keohane, beautifully summarizes how research problems in political science should be formulated, how variables are identified, how data is collected, and how hypotheses are tested and conclusions drawn.

Verba's contribution to political science is basically of a substantive nature. In one of his most famous books, the prize-winning *Participation in America* (1972), written with Norman H. Nie, Verba stresses that participation constitutes the very core of democracy—the more participation, the more democracy. Participation widens citizens' horizons and teaches them responsibility for others. Participation has consequences—for power and influence and for what issues are pursued and decided upon. However, participation is not equally distributed between social groups. Socioeconomic status is the best explanation for the variation in participation—the SES (socioeconomic status) model. There is a conflict between participation and representation. When new channels are opened up for political participation, those citizens who have time and money increase their influence further. The well-to-do are thus overrepresented in political parties and organizations, and they are especially among the most active in the Republican Party. But there are also countervailing powers. Verba underscores the political consciousness of black citizens, which he saw in the 1970s as an important political potential.

The level of political inequality also varies between countries. It is especially striking in the United States, whereas the correlation between social status and participation is much less marked in such countries as Great Britain, Italy, Mexico, and Germany. These nations were included in Verba's *The Civic Culture* (1963), a book that took a pathbreaking classificatory approach to the comparative study of political systems, published by Verba in cooperation with political scientist Gabriel Almond (1911–2002). In Europe, the political mobilization of the underprivileged by the labor movement has leveled out but not obliterated differences in participation; the SES model is still valid.

Verba's ongoing interest in political equality is reflected in the titles of many of his books: *Participation and Political Equality* (1978), *Equality in America* (1985), and *Voice and Equality* (1995). In *The Private Roots of Public Action* (2001), written with Nancy Burns and Kay Lehman Schlozman, Verba draws attention to another important source for the variation in political participation—the lack of equality between the sexes.

SEE ALSO *Almond, Gabriel A.; Behaviorism; Culture; Democracy; Democracy, Representative and Participatory; Inequality, Gender; Inequality, Political; Participation, Political; Political Science, Behavioral*

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Leif Lewin

VERDOORN'S LAW

Productivity growth is the key to economic development. The continuous increase in labor productivity, defined either as the output per worker or the output per hour worked, is what allows human societies to experience a rise in their per capita income even in face of a growing population. Productivity growth is usually associated with technological innovations, but since the beginning of the Industrial Revolution in the eighteenth century, it became clear to social scientists that economic growth itself may foster productivity growth through the division of labor, as pointed out by Adam Smith in 1776. However, despite the direct evidence that productivity rises with the level of output in manufacturing, the concept of increasing returns was ignored through most of the nineteenth century in the mainstream economic literature because the hypotheses of decreasing marginal returns to capital and

labor and constant returns to the scale of production became preponderant in neoclassical economic theory.

The importance of increasing returns for economic growth was revitalized only in the early twentieth century by Allyn A. Young (1928), who emphasized not only the reduction in the average cost of production brought by output growth in manufacturing but also the product diversification that characterizes an increase in the division of labor. Verdoorn's law, an attempt to quantify this relationship, is named after the Dutch economist P. J. Verdoorn, who published a paper in 1949 in which he measured the impact of economic growth on labor-productivity growth in manufacturing for a group of countries in the late nineteenth century and early twentieth century.

In general terms, Verdoorn's law implies the existence of a stable and positive causal relationship from the growth rate of output to the growth rate of productivity in manufacturing in the long run. More formally, let p and q represent the growth rates of labor productivity and output in manufacturing, measured in logarithmic terms. Verdoorn's law was originally estimated as $p = a + bq$, where b is a positive parameter that measures the elasticity of labor productivity to output. The estimate of b, known as the "Verdoorn coefficient," in most empirical studies takes a value around 0.5. The intuitive meaning of this result is that an additional one percentage point increase in the growth rate of output leads to a half percentage point increase in productivity in manufacturing. Since $p = q - n$, where n is the growth rate of employment in manufacturing, Verdoorn's law can also be estimated as $n = -a + (1 - b)q$.

The theoretical foundation of Verdoorn's law is the existence of economies of scale in manufacturing, that is, the fact that the average cost of production falls with an increase in the amount of goods produced. The sources of economies of scale within a firm or industry are usually divided into two categories: static or dynamic. Static economies of scale come from the fact that most processes of production incur a fixed cost, that is, a cost that has to be paid no matter whether anything is produced. As a result, the higher the level of production, the lower the average fixed cost per unit produced and consequently the higher the economy of scale. It should be noted that static economies of scale are reversible because, if production is reduced, the average fixed cost rises. Dynamic economies of scale come from the productivity gains associated with innovations brought about by the increase in production. The intuition here is that the dynamic economies arise from learning by doing and as such are irreversible. Even if the level of production falls, the new knowledge acquired from experience does not vanish.

Verdoorn's (1949) study of productivity growth was published in Italian and went unnoticed by the majority of the economic profession until Nicholas Kaldor (1966) drew attention to it. As summarized by Anthony P. Thirlwall (1983), Kaldor proposed that three growth laws characterized economic development: (1) the higher the growth rate of output in manufacturing, the higher the growth rate of gross domestic product (GDP); (2) the higher the growth rate of output in manufacturing, the higher the growth rate of labor productivity in manufacturing, as proposed by Verdoorn; and (3) the higher the growth rate of output in manufacturing, the higher the growth rate of labor productivity outside manufacturing.

In its broadest sense, Verdoorn's law implies the possibility of endogenous or induced technical change, which forms the basis of theories of economic growth based on increasing returns. In neoclassical theories economic growth is usually explained from the supply side, and Verdoorn's law tends to appear as a learning function that links the growth rate of labor or multifactor productivity to the growth rate of the stock of human and physical capital. In nonmainstream theories of Keynesian inspiration, economic growth is usually determined from the demand side, and therefore Verdoorn's law tends to appear as the explanation of how demand problems can result in uneven development, that is, in permanent growth divergences across countries or regions.

The logic of demand-driven growth divergences is clear and intuitive. If productivity growth is a positive function of economic growth, then an initial increase in aggregate demand can set off a cumulative process along the lines proposed by Gunnar Myrdal (1957), in which productivity gains increase profits and wages, which in its turn leads to another round of demand expansion and so on. The main economic implication of Verdoorn's law is therefore that growth may be self-reinforcing, especially if we bring international trade into the analysis. The basic idea here is that fast-growing economies may be able to maintain their international competitiveness because of the fast productivity growth induced by income growth itself. By analogy, slow-growing economies may not be able to break out from their situation because of the slow productivity growth induced by their very own poor growth performance.

Since its revitalization by Kaldor, Verdoorn's law has been the object of many studies, and the empirical debate tends to revolve around four main issues. First, if productivity growth is exogenous across regions, Verdoorn's law may be spurious because it may be productivity that drives output instead of the other way around. The solution for this possible reverse causation is to investigate whether Verdoorn's law holds across regions that share the same

technology. Second, it may also be the case that productivity growth depends on the level of capital per worker, so that Verdoorn's law finds an influence of output growth on productivity growth because the former functions as a proxy of capital growth. The solution for this problem is to include the capital per worker as a separate explaining variable when estimating Verdoorn's law. Third, Verdoorn's law may actually be a misspecified labor demand function, that is, a demand function that ignores the impact of the real wage in the determination of employment. The obvious solution for this problem is to include the real wage as a separate explaining variable when estimating Verdoorn's law. Finally, because firms do not adjust employment as fast as output in the face of demand fluctuations, productivity tends to increase during upswings and fall during downswings because of labor hoarding. If that is the case, Verdoorn's law may actually be just a short-run phenomenon resulting from business fluctuations, known as Okun's law in economics. The natural solution to this problem is to control for changes in the business cycle when estimating Verdoorn's law.

As usually happens in economics, after decades of empirical studies there is evidence both in favor of and against Verdoorn's law. From the many studies on North America and Europe surveyed by John McCombie, Maurizio Pugno, and Bruno Soro (2002), the balance seems to confirm Verdoorn's law. When we consider developing economies, Vaishali Mamgain (1999) finds evidence in favor of Verdoorn's law only in one of six newly industrializing countries of East Asia, whereas Thirlwall and Heather Wells (2003) find evidence in support of Verdoorn's law for a sample of forty-five African countries. In Latin America, E. Luis Lemos Marinho, Cláudio André Gondim Nogueira, and Antonio Lisboa Teles da Rosa (2002) find mixed evidence for Brazil. It will probably take some time until the increasing number of applied studies on developing economies tend one way or another.

SEE ALSO *Cumulative Causation; Development Economics; Economic Growth; Industrialization; Industry; Myrdal, Gunnar; Productivity; Returns, Increasing*

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Nelson H. Barbosa-Filho

VERIFICATION

SEE *Validation.*

VESEY, DENMARK

c. 1767–1822

The man later known as Denmark Vesey was born around 1767, probably on the Caribbean island of Saint Thomas. Joseph Vesey, a Carolina-based slaver, purchased the boy in 1781 as part of a cargo of 390 bondpeople. During the passage to the French colony of Saint-Domingue (Haiti), Vesey noticed the child's "beauty, alertness, and intelligence" and employed him as a cabin boy. But when the ship reached Cap François, the captain "had no use for the boy" and turned him over to his colonial agents. Either traumatized by his new life in Saint-Domingue or feigning illness, the child began to display "epileptic fits." Returned to the docks, a physician "certified that the lad" was unwell, which cancelled the sale. When Joseph Vesey returned to Cap François on April 23, 1782, with a new cargo of Gold Coast slaves, he was forced to take the child back. The fits promptly ceased, and Vesey decided to keep him as a servant.

Charleston authorities later described the child as a person of "superior power of mind & the more dangerous for it." The captain saw only the value of a tall, muscular boy already conversant in two languages. Vesey gave the boy a new name, Telemaque, after the son of Homer's Odysseus; over time, Carolina bondmen either punned or

corrupted the name into Denmak, and then finally Denmark.

In the spring of 1783, following the British evacuation of South Carolina, Joseph Vesey settled into Charleston as a ship chandler. At some point during this period, Denmark married an enslaved woman named Beck. Beck had several masters over the course of her life, but she remained married to Denmark long enough to give birth to at least three of his children. Two of his sons were named Polydore and Robert; a third, Sandy, would be the only child to be implicated in his 1822 plot. Toward the end of his life, Denmark Vesey married again. His last wife, Susan, was born a slave around 1795. She was the only woman to carry his surname. Some historians have speculated that Vesey practiced polygamy, although no evidence exists to support the theory.

On September 30, 1799, Denmark happened upon a handbill announcing the "East-Bay Lottery," and bought a ticket. In November, Charleston newspapers declared his ticket the winner. The prize was $1,500, a princely sum that slaves who hired their time would take ten years to acquire. Joseph Vesey agreed to sell Denmark his freedom for $600; the contract was signed on December 31, 1799. After seventeen years as a Charleston slave, the thirty-three-year-old Denmark was free.

Chained to the South by family ties, Denmark remained in the city and apprenticed himself to a carpenter, an easy trade to learn and a lucrative business as Charleston expanded up the peninsula. At the same time, he adopted Vesey as a surname, probably as a linguistic tie to an established businessman whose name could help to secure clients. Vesey threw his enormous energies into his business, and according to one former slave, Denmark labored "every day at de trade of carpenter" and "soon became much [re]spected" and "esteem[ed] by de white folks." But because of competition from white carpenters, free mulattoes (whose fathers provided business contacts), and enslaved craftsmen (who lived with their masters and paid no rent), Vesey barely maintained a modest income. Despite published claims made in 1822 that he died a rich man worth nearly $8,000, there is no evidence that Vesey ever owned a single piece of property.

Around 1818 Vesey joined the city's new African Methodist Episcopal congregation, the center of Charleston's enslaved community. Sandy Vesey also joined, as did four of Vesey's closest friends: Peter Poyas, a literate ship carpenter; Monday Gell, an African-born Ibo who labored as a harness maker; Rolla Bennett, the manservant of Governor Thomas Bennett; and "Gullah" Jack Pritchard, an East African priest and woodworker purchased in Zinguebar in 1806. The temporary closure of the church by city authorities in June 1818 and the arrest of 140 congregants, one of them presumably Vesey, reinforced the determination of black Carolinians to maintain a place of independent worship and established the motivation for Vesey's conspiracy. In 1820 several "Negroes was taken up" for holding a late-night service at the church, and city authorities warned that they would not tolerate class leaders conducting instructional "schools for slaves," as "the education of such persons was forbidden by law." The "African Church was the people," Gell replied. He and Pritchard had considered insurrection in 1818, "and now they had begun again to try it."

At the age of fifty-one, Vesey briefly thought about emigrating to the English colony of Sierra Leone. But as Beck's children remained slaves, Vesey resolved instead to orchestrate a rebellion, followed by a mass exodus from Charleston to Haiti. President Jean-Pierre Boyer had recently encouraged black Americans to bring their skills and capital to his beleaguered republic. Vesey did not intend to tarry in Charleston long enough for white military power to present an effective counterassault. "As soon as they could get the money from the Banks, and the goods from the stores," Rolla insisted, "they should hoist sail" for Saint-Domingue and live as free men.

Vesey planned the escape for nearly four years. His chief lieutenants included Poyas, Gell, Rolla Bennett, and "Gullah" Jack Pritchard. Although there are no reliable figures for the number of recruits, Charleston alone was home to 12,652 slaves. Pritchard, probably with some exaggeration, boasted that he had 6,600 recruits on the plantations across the Cooper and Ashley rivers. The plan called for Vesey's followers to rise at midnight on Sunday, July 14—Bastille Day—slay their masters, and sail for Haiti and freedom. As one southern editor later conceded: "The plot seems to have been well devised, and its operation was extensive."

The plot unraveled in June 1822 when two slaves revealed the plan to their owners. Mayor James Hamilton called up the city militia and convened a special court to try the captured insurgents. Vesey was captured at Beck's home on June 21 and hanged on July 2, together with Rolla, Poyas, and three other rebels. In all, thirty-five slaves were executed. Forty-two others, including Sandy Vesey, were sold outside the United States; some, if not all, became slaves in Spanish Cuba. Robert Vesey lived to rebuild the African Church in the fall of 1865.

SEE ALSO *Slavery*

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Douglas R. Egerton

VETO

The veto is the power to block or reject a proposed decision. In Latin, the word *veto* literally means "I forbid." The veto is generally an executive prerogative, as in the power of a chief executive to reject a bill or resolution that is proposed by the legislature. This power may also extend to an official authority or body, such as an international organization (e.g., the United Nations). While executive veto power is often discussed in conjunction with the authority granted to governors or presidents in the United States, it is a hallmark of a variety of separation-of-powers systems in other countries. The veto provides an important check on the power of the legislature in the lawmaking process.

In the United States, veto power is given to the chief executive by the U.S. Constitution. Even though this executive power has existed since America's founding, its use was often construed narrowly. Prior to the administration of President Andrew Jackson (1829–1837), the veto was not used by presidents to object to legislation that was viewed as questionable on policy grounds. Rather, legitimate use of the executive veto involved objecting to legislation that was either poorly drafted or clearly unconstitutional. Following Jackson's presidency, however, this practice changed, and modern U.S. presidents routinely veto legislation to which they object for political reasons. In contemporary American politics, the incidence of presidential vetoes is almost always greater under divided government, where the executive is controlled by one political party and (at least one chamber of) the legislature by the other.

Although vetoes occur relatively rarely in the legislative process, scholars are drawn to study them because vetoes carry clear policy implications. Indeed, the use of the veto by an executive is an ideal example of negative agenda control. The veto creates an opportunity to block legislative action, but it does not give the executive the power to alter proposed legislation after the fact. Nonetheless, Charles Cameron (2000) asserts that chief executives regularly engage in bargaining with legislators in an attempt to shape legislative outcomes at various stages of the process. In many respects, a credible veto threat may be sufficient to force compliance on the part of reluctant legislators who would prefer not to prolong a legislative battle over a controversial bill or resolution. To avoid "losing" to the president, one or both chambers of the legislature may be willing to make concessions if the price of passage necessitates it.

Although veto power is usually associated with the executive office, legislatures may hold veto power as well. In a bicameral legislature where both chambers must pass legislation in identical form before it is sent to the executive for approval, for instance, either chamber can block legislation, which is the equivalent of a veto. Moreover, a veto does not always require action on the part of an executive to effectively block legislation. If the U.S. Congress sends a bill to the president and adjourns prior to the ten days given to the president to sign or veto the measure, the bill essentially dies through what is known as a *pocket veto*. Conversely, the measure will automatically become law without the president's signature if Congress remains in session past the ten-day limit. Thus, inaction on the part of the executive still can have tangible legislative consequences, contingent on the behavior of the legislature.

Veto power is by no means absolute. Consistent with the notion of both shared and separated powers, the legislature is typically given the opportunity to override an executive veto if members can garner the necessary votes. The override authority granted to legislatures provides an opportunity for offsetting an executive veto in an attempt to alter policy outcomes. In many cases, a legislative override requires a supermajority. In the U.S. Congress, for instance, two-thirds of both chambers must successfully vote to override an executive veto. While most override attempts fail as a result of the supermajority requirement, David Rohde and Dennis Simon (1985) maintain that the uncertainty associated with a potentially successful override provides an important check on unilateral power on the part of the executive.

SEE ALSO *Constitution, U.S.; Monarchy, Constitutional; Power; Presidency, The; Separation of Powers; United Nations*

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VIDEO GAMES

The very mention of video games conjures a myriad of different thoughts, emotions, and concerns. Originally, video games were released for the Atari gaming system in 1973, and for the Apple 2c (1984) and Apple 2gs (1986). Coin-operated gaming machines surfaced in shopping malls and in various stores during the late 1970s and early 1980s. Nintendo debuted video games as early as 1976. Although games have appeared on computer systems in the past and continue to flourish today, the two major gaming systems that paved the way for today's famous systems were the original Sega and the Nintendo gaming system. Nintendo is the oldest of the game systems companies and is currently the leader in handheld console sales. Sega offered the GameGear handheld during the 1990s. Nintendo's first offering had been Game Boy, and as of 2007 the graphically intense DS was for sale at retail outlets. The original Nintendo saw games in production from 1983 to 1994, Super Nintendo remained in production from 1990 to 2000, Nintendo 64 from 1996 to 2002, and GameCube from 2001 to 2007.

The games released may seem primitive relative to those on the market in 2007, but for the players they represented something prodigious. Games such as Pac-Man, Galaga, Pong, Budokan, Ultima, Might and Magic, Zillion, Rocky, The Adventures of Zelda, Donkey Kong, and the cult favorite, Super Mario Brothers, have entertained and delighted millions around the world. Donkey Kong was released exclusively for the Nintendo system in 1981, and the prototype for future Super Mario Brothers games appeared on the market in 1983. The Legend of Zelda became another instant classic after its arrival in early 1986.

The cult favorite game Mike Tyson's Punch-Out arrived to much fanfare in 1987. Even family restaurants welcomed the coin-machine version of the game into their establishments. The very mention of Mike Tyson in association with a video game proved to be a brilliant advertising mechanism. Meanwhile, Nintendo's Super Mario Brothers games, a smash hit when they arrived in 1985, have been criticized because they contain violent images. The objective is to slay the evil serpentine "end-guys" at the end of each level and jump on the mushroom men. To achieve this goal a player searches for special character upgrades such as the chance to wield fireballs, to be able to fly, and the like. Meanwhile, Nintendo's competitor Sega flooded the market with games as early as 1981. Developed originally as a prototype for U.S. servicemen stationed overseas, it too achieved popularity. Although many of the games offered for the Sega system did not receive as much acclaim as those invented by Nintendo, many gamers have heralded its superior game play and controllers. Sega's smash video game hits included Rocky (1987), Zillion (1987), Phantasy Star II (1989), and the ultimate game of strategy and surprise, Herzog Zwei (1990).

Nintendo's second smash hit system, Super Nintendo, was even more successful. Super Nintendo offered Super Mario Land, an adaptation and graphically superior version of its prototype. Recently, Nintendo has capitalized on the success of these games by introducing Super Mario Brothers for their handheld system, the Nintendo DS. Additionally, Nintendo's third hit system, the Nintendo 64, offered a variety of Mario Brothers games in 3-D.

The inundation of the market with video consoles has not come without scrutiny from various sectors of society. One area of concern is that young males favor video game play more than females do. Critics and watchdog groups believe this leads to aggression and violent impulses in men. As early as the late 1980s studies showed that male characters vastly outnumbered female protagonists or heroines. Conversely, scholars have recently argued that those who grew up playing video games may actually fare better in the workplace, having gained valuable knowledge and insight into cognitive behavior and how to socialize with coworkers. As technology has advanced, so have the messages propounded in the games themselves. With the ability to command ostensibly real-life armies and to dictate bombing campaigns and infantry showdowns, skilled game players may act as mock generals. Although this may lead to an artificially enhanced sense of self-power, it can also serve as a lesson about the viciousness of warfare, the consequences of failure, and the large number of casualties experienced during a heated battle. Sports games such as NBA Live, Madden NFL, Smackdown! vs. RAW, and NHL are interactive and promote athletes as supermen and role models, and game players often aspire to become professional entertainers as a result.

As early as 2000, video games had finally become mainstreamed in society. Teenage boys are not the only group interested in acquiring and playing the big three: Microsoft's Xbox 360, Sony's PlayStation 3, or Nintendo's newest console, the Wii. The competition is on for these companies to produce high-definition-ready systems and games to correspond with this capability. Regardless, the popularity of these systems has been a cause for concern for social and civil rights groups. The most infamous game

in the market has continued to be the series Grand Theft Auto, a lucrative series developed by Rockstar Games. A player may purchase prostitutes, destroy private property, wreck other people's automobiles, and essentially wreak havoc on the streets of a major city. This has captured the attention of city councils, Congress, and any number of outraged advocacy groups. As portrayed in the game, mimicking and glorifying gang behavior is disruptive and dangerous. Two staff writers for the *Washington Post,* Eric M. Weiss and Jose Antonio Vargas, have pointed out that these games are often sold or rented to children (2005). Although the revenue for game sales may be extraordinary, the social consequences are regarded by some as dire. Psychologist Craig Anderson has published findings asserting that adolescents playing violent video games experience accelerated heart rates and adrenaline rushes that may translate into violent behavior in real life.

Many of the most educational games are offered as PC games and are frequently priced lower than those created exclusively for one of the big three systems. Games such as Battle Chess or Chessmaster offer tutorials in how to improve one's chess skills. Colonization and Civilization are examples of intellectually stimulating games that have been offered in the past. Players of these games learn about world history, world leaders, inventions, architecture, the development of civilizations, and how to defeat an opponent by exercising the mind.

Clearly, video games raise awareness of the level of violence and crude sexuality that exist in contemporary society. However, it must not be ignored that these games serve several important purposes. Video games display images that brighten the imaginations of children, many are educational, and the old cliché about hand and eye coordination being sharpened through repeated game play is scientifically valid. When examining and engaging in discourse about societal problems, video games deserve to be discussed in a balanced manner and with the full spectrum of perspectives in order to recognize their positive impact on society as a whole.

SEE ALSO *Adolescent Psychology; Cultural Studies; Entertainment Industry; Leisure; Microelectronics Industry; Popular Culture; Sexuality; Sports; Sports Industry; Violence*

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Jonathan Jacobs

VIE

SEE *Import Penetration.*

VIET MINH

SEE *Ho Chi Minh.*

VIETNAM WAR

The Vietnam War has been permanently singed into the American consciousness, and its impact will be felt for years to come in foreign policy debates. The conflict produced four million killed or wounded Vietnamese—one-tenth of the combined population of North and South Vietnam at the onset of the war—and ranks as the United States' longest and costliest overseas conflict, with the loss of 57,939 American lives and $150 billion in U.S. military spending. Moreover, Vietnam was a critical issue in the foreign policy of six successive U.S. presidential administrations.

BACKGROUND

A thorough understanding of the Vietnam War must begin with the end of World War II (1939–1945) and the onset of the cold war. To be sure, Communist Vietnam and the United States had interacted before 1946, notably when Ho Chi Minh requested Vietnamese self-determination at the 1918 Versailles Peace Conference ending World War I (1914–1918) and when he made his 1945 independence speech, which quoted the U.S. Declaration of Independence as a band played the "Star Spangled Banner." But it was the specter of a strengthened Soviet Union threatening Asia that spurred U.S. involvement in Indochina, the French colonial holdings that comprised present-day Vietnam, Cambodia, and Laos. In 1945 France had petitioned for the return of Indochina, which it had surrendered to the Japanese earlier in World War II. A year earlier, U.S. president Franklin Roosevelt, a fervent anticolonialist, had written to the British ambassador that he believed "Indochina should not go back to the French,

but that it should be administered by international trusteeship."

But by the summer of 1950, four years into the French Indochina War, Roosevelt was long dead, Harry Truman had assumed office, and the geopolitical landscape looked remarkably different: the Soviet Union had detonated an atomic bomb, Chinese communists had completed their conquest of the mainland, Senator Joseph McCarthy had initiated his now infamous campaign against "softness" toward communism, and the United States was involved in a full-scale war against a Soviet satellite in Korea. In such a political climate the United States regarded Ho Chi Minh and his organization the *Viet Minh* (the abbreviation for the Vietnam Independence League, formed in 1941) as part of a wider communist threat. The image of France in U.S. policy circles also had evolved with the changing times; the country was no longer a nation of greedy imperialists, but a stalwart opponent of the spread of the "red menace" in Asia. Thus, in much the same spirit as the Berlin airlift (1948–1949) and the postwar provision of monetary assistance to Greece and Turkey, the United States offered financial support to France in its quest for repossession of Vietnam. The allotment in 1950 started at $10 million, but it rapidly grew to $1.06 billion by 1954. In fact, a full 80 percent of the French war effort was paid for by the United States.

Despite the substantial U.S. support, the French were unable to prevail, and they eventually withdrew entirely after the battle of Dien Bien Phu in spring 1954. The resounding defeat (13,200 of the 16,000 French soldiers were either killed or captured) drove both sides to the bargaining table (along with, among others, the United States, China, and Soviet Union) at the 1954 Geneva Conference, where an agreement was reached to temporarily partition the country at the seventeenth parallel. A demilitarized zone (DMZ) now divided two governments: the communist North (the Democratic Republic of Vietnam) led by the Viet Minh, and the anticommunist South (the Republic of Vietnam) under the emperor Bao Dai.

The seeds of war were sown in the very language of the Geneva Accords, which called for an election to take place in July 1956 to choose the government of a reunified Vietnam. There was considerable consternation that a Communist government could prevail in a democratic election: Ho Chi Minh had become a popular revolutionary figure throughout Vietnam and, more importantly, no southern leaders had emerged with the charisma to best him in an election. Certainly, few Vietnamese would be willing to support an emperor who owed his very position to French colonialism. A Communist win would pose a setback to Eisenhower's global strategy of "rolling back" the Communist threat, and U.S. officials warned that the loss of Vietnam would cause a chain reaction, much like the falling of dominoes, as other Southeast Asian nations succumbed to Communist pressures. Recent scholarship has refuted this "domino theory" by arguing that the United States' military advantage over the Soviet Union at that time demonstrates that important U.S. policymakers such as Secretary of State John Foster Dulles were less afraid of fending off Communist insurgencies and more interested in projecting U.S. power in the region.

Eventually the United States chose to throw its support behind Ngo Dinh Diem, the prime minister of South Vietnam, who was nominated in 1954 by Emperor Bao Dai in the midst of the Geneva Conference. Although he possessed staunch anticommunist credentials, Diem was handicapped by his Catholicism (a religion shared by only 15% of the country's population), his residence in the United States during the war against the French (which prevented him from capitalizing on the nationalist fervor), and his lack of many political allies other than his own powerful family. He needed help to build a political base and popular support before he could possibly succeed in an election. The United States was willing to offer that assistance, in part because of Diem's cultivation of important political figures such as intelligence officer Colonel Edward G. Lansdale, and it began channeling aid through Diem, informing all potential rivals that future assistance hinged on Diem's position at the helm. The gamble to support Diem until he could consolidate power and institute democratic reforms was the means by which the United States found itself inextricably linked to the southern regime.

THE POLICE ACTION

The issue of which side first violated the Geneva Accords will forever remain the fault line dividing historians of the war. Did South Vietnam violate the accords by postponing the elections, claiming (with U.S. support) that free and fair elections could never take place under a Communist government? Or did North Vietnam violate the terms of the accords through its military assistance to Communist guerrillas in the South, the National Liberation Front (NLF)? Although some have claimed that the NLF (also called the *Vietcong*) was always composed of northern agents and controlled by Hanoi, and not an indigenous popular movement of the South, there was no clear political relationship between the northern government and the growing insurgency in the South until northern leaders decided in May 1959 that they needed to take control of the movement.

Whatever the answer, the South found itself embroiled in a deadly conflict with the NLF, which had entrenched itself in the Mekong Delta as early as 1957 and in the central highlands by 1958. Afraid that Diem's

power might be threatened by the conflict, the United States almost immediately lent him military assistance. The first deaths recorded on the U.S. Vietnam War Memorial are from 1957, but for the most part the U.S. military's role remained minor until May 1959, when U.S. military advisors were placed with South Vietnamese regiments as part of a police action. Although the United States described this move as aiding an anti-Communist ally, North Vietnam interpreted the assistance as a continuation of the Western colonialism begun by the French.

The U.S. commitment to Vietnam expanded under the Kennedy administration at the end of 1961 after a series of incidents (most notably the Bay of Pigs) allowed the Republican opposition to portray him as soft on Communism. Consequently, Kennedy chose to take a hard line against the advance of Communism in Southeast Asia, expanding the number of military advisers from 900 to 3,200 by the end of 1961 and then to 11,300 by the end of 1962. Despite these large increases in advisers and despite optimistic Defense Department reports to the contrary, little progress was being made in quelling the insurgency. Prominent U.S. officials began to blame this failure on Diem, claiming that rampant corruption by his friends and family, lack of progress on land reform, and, above all else, an anti-Buddhist policy, were causing him to lose favor with Vietnamese citizens. Diem's relationship with Buddhists was highlighted by a May 1963 incident in Hue when a deputy provincial chief gave orders to fire on 20,000 Buddhists at a religious celebration. Nine people were killed, and the Buddhist monk Quang Duc was prompted to burn himself a month later, calling for Diem to "show charity and compassion to all religions." Photographs of his self-immolation appeared in U.S. newspapers and were thought to undermine support for the war effort. Small-scale opposition to the war, mainly on U.S. college campuses, erupted not long after the incident.

Putting pressure on Diem, the United States called for South Vietnamese military leaders to act against Diem's excesses. How much the United States knew of the southern military's true plans is a matter of intense debate, but on November 2, 1963, Diem was overthrown in a coup and executed, and General Duong Van Minh (or Big Minh) came to power. (Minh lasted less than two months before another military coup installed Nguyen Khanh.) The overthrow of Diem was followed by an announcement on November 15 that the United States would begin withdrawing 1,000 troops. The withdrawal never happened because a week later Kennedy was assassinated and Vice President Lyndon Johnson assumed the presidency. More optimistic about the potential for U.S. victory, Johnson increased the number of U.S. advisers to 21,000.

THE ONSET OF WAR

The Gulf of Tonkin incident served as the catalyst to full U.S. military involvement in Vietnam. On August 2, 1964 the USS *Maddox* was conducting a routine reconnaissance mission in the gulf when it was fired on by North Vietnamese coastal defense forces. The *Maddox* easily repelled the attack with air support from the nearby USS *Ticonderoga*, destroying one torpedo boat in the encounter. President Johnson, who was mired in a tough election campaign, chose a firm but restrained response, rejecting reprisals against the North but warning Hanoi that "grave consequences" would result from further unprovoked military attacks. Then, on August 4, the *Maddox* and USS *Turner Joy* picked up radar signals of an apparent torpedo attack from North Vietnamese vessels, and for two hours the ships responded with a torrent of fire against radar targets and took a series of evasive actions. Johnson ordered retaliatory air strikes on North Vietnamese targets and used the event to persuade Congress to pass the August 7 Gulf of Tonkin resolution that authorized the president "to take all necessary steps, including the use of armed force."

Recent scholarship has examined whether the North Vietnamese ever actually attacked during the Tonkin incident. *Maddox* captain John J. Herrick conceded that the radar signal may have been nothing more than an "overeager sonar man" who "was hearing the ship's own propeller beat." The National Security Agency admitted to translation errors in intercepted Vietnamese transmissions that were used as grounds for the second attack. Senator William Fulbright confessed that he felt hoodwinked by the information presented in the 40-minute Senate debate. Most importantly, the scholar Gareth Porter in *Perils of Dominance* (2005) claimed that important information that cast doubt on the attack may have been concealed from Lyndon Johnson by Robert McNamara, his own secretary of defense.

Thus began the Vietnam War. The United States convinced Australia and New Zealand to contribute troops and material support, and in March 1965 began a series of bombing raids on North Vietnam known as "Rolling Thunder," with the intention of bringing the Hanoi leadership to the bargaining table. An initial 3,500 ground troops were designated for combat rather than advisory duty in Vietnam; through incremental escalation, the number of U.S. troops in Vietnam grew to 184,000 by the end of 1965 and to 429,000 by the end of 1966.

As the United States geared up for war, young Americans sensed that there would be a return to the draft lottery. The National Committee to the End the War in Vietnam staged the first burning of a draft card in the United States in October 1965. After the Tonkin incident there was also turmoil in South Vietnam, where Nguyen

Khanh tried to exploit the new situation with a series of repressive decrees that led to riots in the street and a series of plots and counterplots until Nguyen Van Thieu and Nguyen Cao Ky grabbed power in the spring of 1965.

North Vietnam attempted to match the U.S. escalation with incursions by its regular army into the central highlands, but a setback with the battle of Ia Drang Valley in November 1965 curtailed the use of their regular army in favor of guerrilla tactics. Even so, at Ia Drang 240 Americans were killed and 450 wounded, sending a shocking signal to the United States that the war would not be won easily or on the cheap.

Most U.S./South Vietnam military activity after Ia Drang focused on three areas. First, search and destroy missions, a favorite of General Westmoreland, the head of U.S. forces in the country, were part of his attrition strategy to kill and capture Vietcong forces in the South. Second, "pacification" was the securing of the South Vietnamese countryside by means of a combination of military protection and development assistance. Finally, efforts were made to cut the Vietcong's supply line that came down the Ho Chi Minh Trail, a dense network of forest paths running through Laos into South Vietnam. Although the CIA began to pick up evidence of enemy activity along the trail as early as 1959, the route was of limited value to the North until 1963, when at the behest of Colonel Bui Tin it was expanded to accommodate trucks and large movements of North Vietnamese regulars. The original intention of Rolling Thunder was to disrupt traffic on the trail, but the bombing raids did not have the desired effect because the North Vietnamese showed remarkable ingenuity in repairing damaged roads and bridges. Moreover, the United States' use of toxic chemical defoliants such as napalm and Agent Orange along the trail and in other areas to cut back the dense brush and expose Northern forces had devastating effects on Vietnamese civilians; news of this bolstered the antiwar movement in the United States, and protesters and police clashed violently at the University of Wisconsin in October 1967.

The United States attempted again to disrupt the supply network in January 1968 by setting up a fire base along the Laotian border near the town of Khe Sanh. The U.S. marines at the base soon found themselves under heavy attack from North Vietnamese regulars. Only in April did the siege finally end, after an incessant barrage of U.S. artillery and air strikes equivalent to five Hiroshima-sized atomic bombs. Khe Sanh served to distract U.S. attention from North Vietnam's preparations for its largest and best coordinated operation of the war, lasting from January 1968 to July 1969. Known as the Tet Offensive because it occurred during the *Tet Nguyen Dan* (the Vietnamese name for the Chinese New Year), the operation had North Vietnamese troops driving to the center of South Vietnam's seven largest cities and attacking thirty provincial capitals from the deep South to the DMZ. The goal of the attacks was to ignite a popular uprising that would result in the overthrow of the South Vietnamese government and withdrawal of U.S. forces. In the first days of the offensive several cities were overrun and a nineteen-man suicide squad managed to seize the U.S. embassy in Saigon for six hours before they were routed. In most areas the U.S. and South Vietnamese forces repulsed the attacks immediately, but in Saigon the fighting lasted almost a week and in Hue bloody house-to-house combat consumed the two sides for over a month. Eventually, Hue was recovered, and Westmoreland declared that allied forces had killed more enemy troops in the last seven days of fighting than the United States had lost since the beginning of the war.

Although North Vietnam's military objectives had not been achieved in the Tet Offensive, the psychological impact on the American home front was considerable. Many U.S. citizens who had supported the war were shocked by the ferocity of the attack and concluded that the government was misleading them. Members of Johnson's own cabinet began to turn against the war and resisted calls for more troops. Soon Westmoreland was replaced in Vietnam by Creighton Adams, and that same year, 1968, Johnson announced an "October surprise"—a complete cessation of all air, naval, and artillery bombardment of North Vietnam north of the twentieth parallel as a symbolic gesture to encourage the peace talks taking place in Paris. The Paris talks broke down eventually, as did Johnson's fortitude. He chose not to run for president in the 1968 election, which was marred by intense antiwar protests at the Democratic Convention in Chicago, and eventually won by the Republican candidate Richard Nixon, in part because of his "secret plan" to remove the United States from the war with honor.

THE WIND DOWN

Nixon's secret plan rested on two pillars. First, "Vietnamization" consisted of the gradual strengthening of the South Vietnamese military until they could hold their own against the NLF and North Vietnamese Army. It was hoped that reducing the combat load of U.S. troops would lessen popular opposition to the war stateside. Second, Nixon's foreign policy of rapprochement with both China and the Soviet Union, in the midst of the Sino-Soviet split, had the effect of limiting their assistance to North Vietnam.

The diplomatic success was undermined by the negative publicity surrounding two notorious events: the 1968 My Lai massacre, which occurred when a platoon led by William Calley killed several hundred Vietnamese women and children and burned a small town to the

ground; and the bombing of Cambodia in 1969, which was intended to destroy NLF sanctuaries and supplies hidden along the Cambodian border. The latter action prompted more protests on U.S. college campuses—four students were shot and killed by National Guard troops during demonstrations at Kent State University in Ohio. On the warfront, one unintended effect of the bombing campaign was to push Communist forces deeper into Cambodia, which destabilized the country and in turn may have encouraged the rise of the Khmer Rouge, who seized power in 1975.

In an effort to help assuage opposition to the war, Nixon announced on October 12, 1970 that the United States would withdraw 40,000 more troops before Christmas. But on October 30th, the worst monsoon to hit Vietnam in six years caused large floods, killed close to 300, left 200,000 Vietnamese homeless, and brought the war effort to a standstill. On January 15, 1973, citing progress in peace negotiations, President Nixon suspended offensive operations in North Vietnam, then followed with a unilateral withdrawal of U.S. troops from Vietnam. The Paris Peace Accords were signed on January 27, 1973, officially ending U.S. involvement in the Vietnam conflict. For their efforts, Secretary of State Henry Kissinger and North Vietnamese lead negotiator Le Duc Tho were awarded the Nobel Peace Prize. But the fighting in Vietnam continued unabated. In December 1974 the U.S. Congress passed the Foreign Assistance Act of 1974, thereby cutting off all military funding to the Saigon government and rendering the peace terms negotiated by Kissinger unenforceable. By 1975 the South Vietnamese army stood alone against the powerful North Vietnamese, and Saigon famously fell on April 30, 1975 when two tanks crashed through the gates of the presidential palace as South Vietnamese who had cooperated with the United States desperately tried to flee the country.

THE AFTERMATH

Vietnam became a unified nation after the war, but at a great cost in terms of human lives and infrastructure, and in 1975 it was one of the world's poorest countries. Although the population still suffers effects of Agent Orange and unexploded ordinance, economic reform (*Doi Moi*) begun in 1986 has drastically reduced poverty from over 70 percent of the population to less than 20 percent and spurred impressive long-term growth throughout the nation. Foreign investment also has played a major role in Vietnam's economic upturn, with an increasing amount coming from the United States after the normalization of relations in 1995. For South Vietnamese connected with the former regime, the end of the war was a time of fear and resentment. Many highly skilled and educated South Vietnamese fled the country at the fall of Saigon and for years after, severely depleting the nation's human capital. The new Communist government promptly sent connected South Vietnamese to hard-labor camps for "reeducation," many for several years. Persecution and poverty prompted an additional two million people to flee Vietnam as "boat people" over the fifteen years following unification. To deal with the severe refugee crisis in the 1980s and 1990s, the United Nations established refugee camps in neighboring countries to process them. Many of these refugees resettled in the United States, forming large Vietnamese American emigrant communities with a decidedly anticommunist viewpoint.

In the United States the war had profound psychological effects, dividing the American public over the contentious issues of the humiliating withdrawal, perceived inequities in the draft, the schism in society created by the antiwar movement, knowledge of the devastation wrought on an impoverished country, and, most importantly, a profound sense of distrust in government, as many Americans believed their elected officials had not been forthcoming about the difficulties of the encounter while young citizens died in unprecedented numbers. Civil military relations were damaged because many soldiers and officers believed a winnable war had been undermined by civilian leadership and politics, and politicians felt that a runaway military had supplied it with misleading reports about the success of operations (particularly pacification). Finally, the role of the media was forever altered by reporters, photographers, and television crews who delivered coverage of the war into American living rooms. Some would hold the media up as heroic truth-tellers; others would blame it for supplying fodder to unpatriotic war protesters.

SEE ALSO *Anticolonial Movements; Bay of Pigs; Communism; Coup d'Etat; Domino Theory; Guerrilla Warfare; Imperialism; Johnson, Lyndon B.; Kennedy, John F; Khrushchev, Nikita; Minh, Ho Chi; Peace; Union of Soviet Socialist Republics*

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Edmund J. Malesky

VILLA, FRANCISCO (PANCHO)

1878–1923

The memory of Francisco (Pancho) Villa evokes contradicting sentiments. Villa has been extolled as a trustworthy revolutionary. He has also been vilified as a cruel, dishonest bandit. Nevertheless, Villa remains a significant figure in Mexican history. His memory remains alive through Mexican ballads known as *corriodos*, poetry, and film. This article examines the life of Villa—the bandit and the revolutionary—and his contributions to Mexican political history.

Villa was born José Doroteo Arango Arámbula on June 5, 1878, in the northern state of Durango. (In *The Life and Times of Pancho Villa*, Friedrich Katz states that baptism records show he was baptized as Doroteo Arango, while Francisco Caudet Yarza claims in *Pancho Villa* that he was baptized as José Doroteo.) Villa came from a poor background. His parents, Agustín Arango and Micaele Arambula, worked as sharecroppers on one of the largest haciendas in Durango. Villa's father died when Villa was young. Consequently, Villa, the oldest of five children, had to work to support the family at the expense of a formal education.

Villa was a bandit by the 1890s. The reason he decided to live the harsh life of a bandit in the mountains of Durango is unknown. In his memoirs Villa recounts that he fled into the mountains of Durango when he was sixteen years old out of fear that he would be incarcerated for shooting and injuring Agustín López Negrete, the owner of the hacienda on which he lived and worked (Katz 1998, p. 3). Villa allegedly shot the owner to protect the honor of one of his younger sisters.

However, some biographers question whether or not Villa's attack on the hacienda owner actually took place (Braddy 1948, p. 349; Garfias, 1985, p. 15; Katz 1998, p. 65). Celia Herrera, whose relatives had been killed by Villa, recorded that he became a bandit upon murdering a friend during an altercation (Katz 1998, p. 6). Regardless of its validity, the incident remains a part of Villa's story.

Doroteo changed his name to Francisco, or Pancho, Villa as an outlaw. The new name was probably an adoption of the name of his biological grandfather, Jesús Villa, and changed to evade the federal army and state authorities in Durango. Legendary tales impart that Villa adopted the name of a famous bandit, Francisco Villa, who died after being severely injured during an attack by local citizens in the mountains of Durango.

The description of Villa's life during this time has varied. Some individuals viewed him solely as a violent, ruthless bandit. Celia Herrera's *Francisco Villa ante la historia* describes Villa as one who led a life of crime and vengeance in which he killed friends, beat women, and tortured those who refused to cooperate when he demanded their money (Katz 1998, p. 6). Villa admitted to killing many men in his memoirs but denied being a cold-blooded murderer. Rather, the men were killed in self-defense or out of retaliation for betrayal (Katz 1998, p. 5).

On the other hand, Villa has been perceived as a benevolent champion of the poor. His memoirs reveal that he had stolen money and given it to the poor, including family members. These altruistic acts earned him the label of "Robin Hood of the Mexicans" (Brandt 1964, p. 153; Caudet 1998, p. 35; Katz 1998, p. 7).

By 1910 Villa had transformed from a bandit into a revolutionary. Abraham González, the leader of the Anti-Reelectionist Party in Chihuahua, recruited Villa and a military leader, Pascual Orozco, into the revolutionary movement against President Porfirio Díaz (Katz 1998, p. 73). González's decision to recruit an outlaw to support the revolutionary efforts of Francisco Madero remains questionable. Regardless, the revolution was successful. President Díaz was forced to resign after thirty years of dictatorial rule, and Madero became the president of Mexico. Villa earned a promotion to honorary general, and he fought against the counterrevolutionaries, led by Orozco, in 1912.

Villa was also an important figure in U.S.-Mexican relations. His relationship with the United States was initially amicable. The United States allowed arms to be smuggled to Villa in January 1914, and President Woodrow Wilson ended the U.S. arms embargo against Mexico shortly thereafter, which allowed Villa to buy ammunition legally from the United States (Katz 1998, p. 250). President Wilson even offered Villa political asylum in the United States in 1915 (Katz 1998, p. 535). These actions illustrated the United States' confidence in Villa's abilities as a leader.

The positive relationship between Villa and the United States took a turn for the worse by 1916, when Villa attacked Columbus, New Mexico. The reasons for Villa's attack remain under debate. A letter from Villa indicates that the attack was meant as revenge for an act of betrayal by President Wilson during his war against the troops of President Venustiano Carranza of Mexico (Katz 1998, p. 552). Whatever the reason, the attack caused Wilson to send American troops to Mexico to capture Villa and destroy his forces (Sandos 1981, p. 303).

Villa was murdered on July 20, 1923, while driving to a village in Chihuahua. Two weeks after Villa's assassination, Jesús Salas Barraza claimed sole responsibility for Villa's murder. He said he killed Villa on behalf of the many people in his district, El Oro, who had been victimized by Villa (Katz 1998, p. 773). Salas was sentenced to twenty years in prison on September 13 but was pardoned and released a few months later. No one else was accused or arrested for Villa's murder.

An examination of Villa's life reveals that he probably was neither the devil nor the angel that many chose to label him. Instead, he is a complex figure whose memory continues to flourish in both Mexico and the United States.

SEE ALSO *Mexican Revolution (1910–1920); Revolution; Social Movements; Zapata, Emiliano*

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Sarita D. Jackson

VINDICATION

"Vindication" describes a style of political and intellectual discourse that motivates certain social movements. Adherents of vindicationist movements believe that their group is undervalued by the broader society, and they seek to rehabilitate and elevate their collective reputation. Vindicationist rhetoric argues that the minority group possesses qualities and abilities that are equal to or superior to those of the dominant group and that the dominant group's prejudice against the minority is thus based on false premises. Vindicationism functions to motivate potential followers of the movement while simultaneously scolding the dominant group for failing to appreciate the admirable character and qualities of the people for whom the movement is advocating. Vindicationism is most commonly found in the ideologies of feminist movements and racial-ethnic nationalist movements.

An early example is Mary Wollstonecraft's *A Vindication of the Rights of Woman* (1792), a pioneering feminist treatise. Mary Wollstonecraft argued on behalf of women's natural talents and abilities and held that women should not be measured according to essentially male standards. She asserted that men needed to change in order to end women's oppression. Many of the ideological roots of twentieth-century liberal feminism trace back to Wollstonecraft.

A significant strain of vindicationism emerges in early African American political thought. Black abolitionist David Walker's famous "Appeal" (1829) argued for the humanity and inherent rights of African Americans. Walker traces African American heritage back to ancient Egypt, whose cultural achievements demonstrate racial abilities equal or superior to those of whites.

The vindicationist sentiment found in nineteenth-century African American political writing influenced the anticolonial ideologies of twentieth-century Africa. Not surprisingly, vindicationism appeared first in Sierra Leone and Liberia, the two West African countries most heavily populated by freed slaves from North America. A contemporary influence on African anticolonialist vindicationism was American author W. E. B. Du Bois's *The World and Africa: An Inquiry into the Part That Africa Has Played in World History* (1947).

Vindicationist ideology is also central to white Southern nationalism in the United States. Immediately following the Civil War, Confederate apologists began to recast the causes of the war, in what became known as the "Lost Cause" narrative. This narrative denies the role of proslavery ideology as a significant motive behind secession. Instead, it argues that "state's rights" were the primary instigating factor. This permits Confederate apologists to situate the secession not as a rebellion but instead as advocacy of core American values as expressed in the Constitution. The other major component of Lost Cause vindicationism is the argument that the South lost the Civil War because of the North's overwhelming numbers and resources, and not because of Northern soldiers' superior bravery or tactical skill. Thus, for Southern

nationalists invested in the Lost Cause narrative, the Confederacy can be honored in historical memory not as a rebellion motivated by a dishonorable motive, not as a military failure, but as a noble Lost Cause whose ultimate purpose was to uphold the best of American values.

Lost Cause vindicationism found an organizational home around the turn of the twentieth century with the establishment of the United Daughters of the Confederacy (UDC). The UDC embarked on a number of educational and symbolic campaigns to cement the Lost Cause ideology in American historical memory. The early 1990s saw the foundation of the League of the South (LoS), an explicitly separatist southern nationalist movement. By 2005, the neo-Confederate nationalism of the LoS had also suffused the Sons of Confederate Veterans, a much older, larger, and wealthier organization.

Many vindicationist ideologies develop elements of supremacism. This rhetorical move begins with an essentialist argument, holding that we—the vindicated group—are essentially different from the dominant group. The argument then asserts that the differences between the dominant group and the vindicated minority demonstrate the minority's superiority to the dominant group. The essentialist strain in contemporary feminism at its extremist fringes verges into female supremacism. The lesbian separatist feminism that emerged in the 1970s is the most prominent example.

The early black abolitionist David Walker argued that blacks "never were half so avaricious, deceitful and unmerciful as the whites" (1829). In the mid-twentieth century, Elijah Muhammad (1897–1975) preached to African Americans that they are divine, while whites are a race of devils that were created by an evil black scientist. Muhammad's arguments persist today in the theology of the Nation of Islam. The group's current leader, Louis Farrakhan, has said that "White people are potential humans…they haven't evolved yet" (Raghavan 2000, p. B1).

The use of "vindication" among social scientists to refer to a particular expression of minority grievances begins with Wollstonecraft's feminism. The most common application of the "vindication" adjective has historically been to describe African American political writings of the nineteenth and early twentieth centuries. However, a recent shift has emerged in the social science community's use of the concept. Political scientists now apply the term "vindicationism" to attempts by the United States to remake the world to conform to American values. This body of research locates the origins of American vindicationism in the Spanish-American War of 1898 and traces it through subsequent foreign interventions by the United States during the twentieth century. The vindicationist approach to foreign policy reached a peak with the wars in Afghanistan and Iraq, as advocated and prosecuted by the George W. Bush administration and its neoconservative advisors (McCartney, 2004).

SEE ALSO *Bush, George W.; Confederate States of America; Feminism; Ideology; Iraq-U.S. War; Nationalism and Nationality; Social Movements; U.S. Civil War; White Supremacy*

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Thomas F. Brown

VINTAGE MODELS

Capital goods that are constructed at different moments in time embody the state of technology at the moment of their construction, thus giving rise to the notion of individual vintages of capital goods. These vintages differ in intrinsic "productive quality" because of ongoing technological progress, just like different vintages of wine can differ in quality. The basic idea underlying a vintage model is that the potential of *technical change* as an idea can only be realized in practice by first incorporating that idea in a piece of machinery and subsequently using that machinery to produce output. Because technical change is therefore *embodied* in individual pieces of machinery and equipment, vintage models emphasize the fact that complementary investment has to take place in order to realize the productivity promises of new ideas. There is also technical change not linked to investment that comes in the form of new ideas about the organization of production; this is called *disembodied* technical change in a vintage context. By contrast, an *aggregate production function*, which is still the most popular way of representing tech-

nology in large-scale macroeconomic models, assumes that capital is homogeneous and that the process of technical change can be represented as a continuous shift of the per capita production function that is independent of the rate of investment. Hence, all technical change is thought of as disembodied, and technology-induced reductions in unit production costs are therefore assumed to be independent of the actual level of investment.

The main focus of a vintage model is on the *diffusion* of technical change as opposed to endogenous growth theory that focuses on the source of technical change. The embodiment of technical change results in a capital stock that is heterogeneous in terms of the factor-productivity (hence the unit operating cost) associated with individual vintages. Depending on the type of vintage model on hand, the arrival of new superior technologies may render the old ones obsolete, leading to the *economic scrapping* of inferior equipment. It is through investment and disinvestment at both ends of the vintage spectrum that the average productivity characteristics of the capital stock can be made to change, though only relatively gradually.

Since the arrival of vintage models in the late 1950s and 1960s (see, for example, Johansen 1959; Salter 1960; Solow 1960; Phelps 1962, 1963; Jorgenson 1966; Solow et al. 1966), they have been used by economists interested in the connection between technical change and economic growth, because they highlight a number of important insights regarding the complementarity between productivity growth and investment. Firstly, productivity growth is positively influenced by gross investment. In the aggregate production function approach, labor productivity growth is as much the result of the growth in capital per capita (and is therefore linked to net investment per capita rather than gross investment) as it is the result of (labor-saving) technical change itself. Secondly, vintage models stress the idea that technical change has to be bought and paid for, rather than falling freely like "manna from heaven." Consequently, anything that reduces incentives to invest in new machinery—for example, increasing uncertainty or a higher *user cost of capital*—will reduce the speed of diffusion of technical change. Thirdly, under the embodiment assumption, the average productivity characteristics of the total capital stock will change only gradually as new capital goods fill the gaps left by the *technical decay* and *economic scrapping* of old capital goods. Hence, if one wanted to change the average characteristics of capital stock in a noticeable way, one would either have to engage in nonmarginal replacement investment, or start promoting investment in new technologies sooner rather than later.

There are different types of vintage models, ranging from *putty-putty* (Solow 1960; Phelps 1962), to *putty-clay* (Johansen 1959; Salter 1960; Phelps 1963), to *clay-clay* models (Kaldor and Mirrlees 1962; Solow et al. 1966). Even *putty-semi-putty* models exist (Fuss 1978). The somewhat far-fetched names come from the world of pottery (Phelps 1963). The term *putty* refers to clay that is still soft enough to change shape, whereas *clay* refers to the hard-baked state of that shape that cannot be changed anymore without breaking it. When applied to a technology, *putty-ness* describes a state in which there are many different techniques associated with a specific technology that one could choose to implement, whereas *clay-ness* implies that there is just one implementation of a technology available, and that it is impossible to change it without "breaking" it (and, thus, effectively discarding it). The first word (*putty* or *clay*) in the name of a vintage model refers to the size of the set of potentially available techniques before the moment that the actual hardware embodying the technique is installed (i.e., *ex ante*), and the second word (*putty* or *clay*) refers to the set of techniques still left after installation (i.e., *ex post*). A putty-clay model, therefore, covers a situation with (infinitely) many choices *ex ante*, and just one *ex post* (i.e., the one technique that has actually been implemented after making a choice from many techniques *ex ante*). Putty-putty models have infinitely many choices *ex ante* and *ex post*. A clay-clay model has just one technique to choose from, both *ex ante* and *ex post*. The putty-clay model is generally considered to be the most realistic vintage model because it recognizes that one generally has several production techniques to choose from, but also that once the machinery has been built and installed the choice for that technique can not be undone. E*x post* "clay-ness" therefore represents the impossibility of reversing decisions made *ex ante*.

This irreversibility of investment *ex post* implies that one would have to try to forecast changes in factor prices *ex ante*, and incorporate these forecasts into the factor proportions that are to be embodied in the new vintage under consideration. For example, a rise in wages not properly foreseen would result in a labor intensity of production *ex ante* that is *too* high (with hindsight), and that would lead to an *economic lifetime* that is consequently too short (the economic lifetime of a vintage is equal to the duration of the period over which it would be most profitable to operate that vintage; see Malcomson 1975). In putty-putty models, such lifetime effects of forecasting errors do not exist, as one can continuously and costlessly adjust factor proportions (i.e., production techniques) to the current factor price situation on every vintage installed, from the newest to those installed in the distant past. Obviously, the latter situation is less relevant in practice, even though elegant in theory.

From a policy point of view, the irreversibility of investment is important, as it implies that humanity's trust in technical change to solve some of its problems—

for example, global warming—may involve high investment costs. The latter are routinely ignored in an aggregate production function setting, as technical change is assumed to take place regardless of the level of investment. Consequently, an aggregate production function approach would tend to underestimate the real cost of technical change while neglecting the positive link between the effective pace of technical change (insofar as the latter is embodied in machinery and equipment), and the rate of investment. In a putty-clay setting, on the other hand, a large volume of replacement investment would be required to change the energy consumption characteristics of the aggregate capital stock in a nonmarginal way. Thus, either one would be forced to bear very large (just-in-time) adjustment costs, or, from a risk-diversification point of view, one would have to promote investment in new energy-saving technologies sooner rather than later. Interestingly, Schumpeterian endogenous growth theory (see, for example, Aghion and Howitt 1998) points out that the expectation of new technological breakthroughs that might or might not arrive just in time may actually have the opposite effect—namely, the postponement of investment. In any case, the embodiment of technical change in combination with the irreversibility of investment underlines the potential role of policymakers in reducing adjustment costs and smoothing transition shocks that are largely ignored in aggregate production function settings.

SEE ALSO *Investment; Machinery; Production Function; Schumpeter, Joseph; Solow, Robert M.; Technological Progress, Economic Growth; User Cost*

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Adriaan H. van Zon

VINYL RECORDINGS

Vinyl is more than simply a material used to make disc records; the term is shorthand for a culture, a lifestyle, a set of attitudes about music technology, even an object of obsession and addiction. Vinyl, specifically polyvinyl chloride (PVC), became the standard material in the manufacture of records with the introduction of 33 1/3 and 45 RPM discs in 1948, replacing the shellac 78 RPM records that had been in use since the 1890s. The vinyl record remained standard until the 1980s and early 1990s, when it was largely replaced by the compact disc (CD).

Although relegated to the margins, vinyl continues to hold a special place for a certain segment of listeners and performers in the twenty-first century. Listeners value vinyl records both for their sound and as objects to be collected. Many audiophiles claim that the "warm" analog sound of a pristine record played on a fine turntable is superior to the "cold" digital perfection of any compact disc. The appeal of records, however, is perhaps more a function of their materiality than their actual sound. With the invention of the record came the advent of record collecting, and soon after came the obsessive collector who seeks rare or unusual records with extreme devotion. In the 1920s the "disease" known as "gramomania" (derived from "gramophone," the British term for phonograph) was facetiously identified, and "vinyl addicts" continued to figure in the popular imagination throughout the century (e.g., in Nick Hornby's 1995 novel *High Fidelity* and its eponymous film adaptation in 2000). Although such "addicts" represent a small fraction of those who collect records, their example reveals that there is more to vinyl than simply music. Record collecting is about the thrill of the hunt, the accumulation of expertise, the display of wealth, the visual and tactile sensation of artifacts, and the creation and cataloging of memories.

A certain type of musician—the disc jockey (DJ)—also values vinyl, not simply as a means for reproducing existing sounds, but for creating new music. DJs are often thought to do little more than play records, but the ways in which many hip-hop and electronic dance music (EDM) DJs in particular manipulate records elevate them to the status of musicians. DJs may combine the sounds of multiple records, alternate between discs in complex counterpoint, or "scratch" them (move them back and forth underneath the stylus), all of which can create new sounds not contained on any single one of the manipulated discs. EDM DJs often combine dozens of individual songs into a seamless musical flow that may last several hours, while hip-hop DJs (also known as turntablists), may take a single passage from a record and manipulate it into an extended composition.

The standard equipment for most DJs has been two turntables and a mixer (a machine that regulates the signal being sent from the two machines to the speakers). In the 1990s, however, various companies began developing and refining CD turntables. The advantages of these players are clear. It is a much simpler matter to find, repeat, and shape particular recorded passages than with traditional turntables, and one need not worry about replacing cartridges or wearing out records. (With digital turntables, the DJ manipulates a simulated record platter, whose movements—even scratching—are converted into signals that transform the sound of the CD.) Moreover, with inexpensive CD burners, DJs can easily compile their own individualized records from other CDs or from digital files, such as MP3s.

Despite these advantages many DJs have resisted the incursion of CD turntables. This resistance is strongest among hip-hop DJs, and can be explained with a single word: vinyl. Because vinyl was present at, and largely responsible for, the birth of hip-hop (which developed around the art of the DJ), it is considered a precious substance, one that carries with it the whole history, the DNA, of hip-hop. Moreover, with traditional turntables, the DJ handles the sound directly, essentially touching the music; CD players remove the immediacy and tactility of vinyl. Nevertheless, as CD turntables continued to improve in the early 2000s, DJs increasingly began turning to digital machines. Some have argued that DJing transcends vinyl and must evolve with changing technologies.

In the early years of the new millennium, vinyl finds itself both cherished and embattled. It continues to be collected and manipulated, and coexists, sometimes uneasily, with digital technologies. Although it plays an important role in the lives of many listeners and performers, its place in the musical life of the future is uncertain.

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Mark Katz

VIOLENCE

Though violence has been characterized as the use of force by and against one or more social subjects with the intention to inflict bodily harm, the study of violent processes over the past three decades has broadened the concept by underscoring its varying forms, which emerge from the struggle for power between modern states, elites and subalterns, and recently formed communities. Interstate war, discourse and the coercive apparatuses of the state, epistemic violence, ethnic conflict, collective recovery, and terrorism represent intellectual signposts in the scholarship on violence, although they emerge from different trajectories of inquiry that do not belong to a single genealogical tradition or discipline.

WAR, THE STATE, AND COERCION

Violence is identified as an effect of competitive war-making in early modern Europe, which produced a bureaucratic apparatus that could secure the material and human resources required for managing warfare. Such bureaucratic apparatuses would form the institutional skeleton of modern national states from the seventeenth century onward (Tilly 1990). The link between war, the state, and violence is reflected in Max Weber's remark that a striking feature of the modern state is, ideally, its "monopoly of the legitimate use of physical force" and, therefore, its ability to sanction the use of force (Gerth and Mills 1946, p. 78). However, this is not to say that modern states only seek to stem forms of unsanctioned violence, especially those that appear to threaten its authority. Michel Foucault's

inquiries (1963, 1966, 1975) reveal that modern welfare states also strive to redefine, regulate, and channel the use of force in order to achieve social order. This insight marked a watershed in the study of violence and shifted the focus of research on the phenomenon from interstate war to the subtle manners in which coercion and the "measured" use of force are deployed by state agencies in order to shape the social identities of individuals.

Foucault's studies of institutions of criminal punishment and rehabilitation, schools and hospitals, and the spaces of economic production underscore the discourses that organize these institutions, in order to socially produce docile subjects whose utility would, ostensibly, advance societal welfare and maintain order. Competing legal, penal, medical, and academic disciplines converge to define, discursively, what forms of violence are criminal, why they are socially immoral or harmful, and how their perpetrators should be punished or rehabilitated. Far from remaining ideological platitudes that are applicable only to those labeled as "criminals" or "insane," these social meanings of deviance are authoritative because they are articulated as categories of objective knowledge, and they become a metric by which to measure—and curb—our own deviant and violent tendencies. Foucault not only demonstrates how social control is achieved from above, he also reveals the political utility of microdimensions of violence, which enable the reproduction of a predictable social order by conditioning individuals to coerce themselves through conformity to institutionally sanctioned categories of "normal behavior."

Ironically, the very institutional apparatuses and discourses that seek to discipline subjects can also be the source from which to innovate new strategies for resisting violent and coercive regimes. Studies of collective violence associated with popular revolution in western Europe, for example, reveal that tactics employed by protesters borrowed heavily from the police forces' own methods of employing violence to suppress collective protest. Similarly, these investigations also point to the manner in which episodes of collective violence directed against monarchical power were morally legitimated by perpetrators through the appropriation and redeployment of political concepts like *popular sovereignty*. Anthropologists, historians, and sociologists attentive to the discursive dimensions of collective movements enrich the meaning of the concept of violence by tracing the manner in which knowledge, as a means of exercising social power, can animate and constrain collective forms of resistance that employ the use of force.

EPISTEMIC VIOLENCE

Inquiries into the creation of social order under European colonization identify epistemic forms of violence that radically essentialized social identities and dismantled previously existing social solidarities. This body of literature marks a departure from a previous form of anthropological study that accepted the "traditional culture" of non-Western societies as an essentially differentiating feature and one that necessitated methods of exhaustive description as a form of analysis. Anthropologists and historians interrogating the cultural objects of "tradition" demonstrate that in the name of crafting effective procedures of political rule, colonial administrators set about to objectify "native traditions." Such a project involved the production of systematized bodies of objectified knowledge that documented the "cultures and traditions" of colonial subjects; rather than learning about their dynamism, the European project reduced their complexity and then enabled their ossification (Cohn, 1987, 1996; Dirks, 1987, 2001; Chatterjee, 1986, 1993). Working with Orientalist assumptions about "the traditional East," these bodies of knowledge taxonomically classified categories and practices of social identity in new and singular relationships with Western notions of religion, ethnicity, or clan. Importantly, the concept of violence in this domain of research is considered a historical process that involved supplanting the previously existing "fuzzy" character of social identity, which was shaped by numerous sources of competitive influence, with rigid conceptions of identity (Kaviraj 1992, p. 20).

Having epistemologically fixed such "traditions" as the primary source of native identity, colonial rulers applied these taxonomies to form key state undertakings spanning law and policing, education, urban planning, the fine arts, and census-taking operations. State projects aimed to stabilize the colonial state's task of maintaining social order, creating the conditions for profitable and taxable economic production, while representing—ostensibly—only a latent imposition on the social and cultural practices of colonial subjects. In fact, these brutal processes of colonial rule would engender more violent social transformations and political conflicts.

COMMUNAL AND ETHNIC CONFLICT

Institutionalizing such rigid conceptions of identity in the state's operations created the conditions for political forms of violence by sharpening—and rendering incommensurable—the perceived cultural differences between novel "traditional" communities that consequently began to form. This was especially palpable in the context of emerging native leaders who were able to cultivate new supportive constituencies, in terms of their imagined traditional commonalities, and call for the state to arbitrate when conflicts with rival communities arose. As historians of colonial Asia and Africa demonstrate, despite the state's

quest to maintain social order, communal and "tribal" conflict became a bloody and conspicuously recurring phenomena in this era.

The emergence of competing traditional communities became a mobilizational resource—and source of tension—when native elites began to organize collective resistance to colonialism. Such communities were rallied behind the call for national sovereignty through movements of cultural nationalism. For native elites, political independence was a corresponding entitlement of these traditional communities who now aspired to the status of nationhood. Of course, such cultural forms of nationalism were riddled with tensions, often manifesting in violent internal conflict. Though statehood was eventually achieved for most colonies, the process was often characterized by territorial partition, bitter campaigns of violence, and the unprecedented displacement of people (as in the case of India and Pakistan). In other instances, the hollowness of constitutional arrangements based on "multiculturalism" was exposed when domestic politics spiraled into intense ethnic violence or agonistic competition over political and economic resources. Such violence emerges historically out of—and through—the commission of epistemic forms of violence.

COLLECTIVE INJURY AND TERRORISM

The study of violence associated with contemporary episodes of ethnic cleansing and genocide has revealed much about the dynamics of collective recovery. Scholars in this subfield have shown how testimonies relating to experiences with violence are often shaped by an implicit requirement that frayed ethnic or national solidarities be restored. Testimonials are burdened with the tasks of reestablishing familial-communal honor, identifying perpetrators, and securing state resources for communal rehabilitation. Strikingly, the analysis of collective memory and recovery points to the difficulty of articulating pain as an experience and how the depth of it is necessarily reduced when it is articulated as a collective and social form of suffering (Das 1997).

The theme of collective injury is also salient to discussions of more recent forms of violence associated with terrorist groups, particularly those movements that seem to be morally organized by a religious ethos. Scholars have shown that the moral justifications employed by such movements draw upon earlier forms of cultural nationalism that challenged foreign occupation and imperialism, as well as "heretical" regimes and moral "waywardness." Many current-day militant movements draw their moral authority from religious reform movements from the colonial era that placed an emphasis on the correct observance of religious rituals. The Taliban, for example, trace their genealogy to the Deoband movement in late-colonial-era India, which initiated and institutionalized the *madrassa*-based study of Islamic law and the upholding of Muslim ritual practices (dress, morality, and regular prayer) as a means to achieve a virtuous way of life.

Tellingly, the focus of such religious reform movements was transformed during the Cold War period when "insurgents" were recruited, trained, and armed by alliances of Western states and their clients to fight "communism." Militant and globally dispersed movements that turn noncombatants into targets of political violence are the products of proxy wars that were waged between the superpowers in Asia, Africa, and Latin America.

In summary, the study of culture and ideology has transformed the meanings of *violence* by shifting away from an emphasis on interstate war and physical harm to an exploration of the more insidious ways in which highly regulated forms of violence and coercion—presented as socially productive methods of reform and development—are sanctioned by the state in order to govern the actions of individuals. Examinations of the formation of discourses, as loci in which social power is exercised through claims to disciplinary knowledge and truth, reveal how epistemic forms of violence reduce the complexity of social identity and, in the colonial sphere, artificially classify non-Western societies as premodern. Ironically, the history of nationalist and political movements from the end of European colonial rule through the Cold War and afterward is marked by forms of communal and ethnic conflict that reinforce the social and political salience of tradition. Terrorism—and the predominantly Orientalist public debate surrounding it—is a contemporary example of the ways in which religion and politics can come to be mutually dependent and, moreover, of how many of the most dynamic cultural and logistical strategies that organize violence rest outside the domain of the state.

SEE ALSO *Anticolonial Movements; Colonialism; Decolonization; Foucault, Michel; Genocide; Orientalism; Terrorism*

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VIOLENCE, FRANTZ FANON ON

According to the Martinican author and political theorist Frantz Fanon (1925–1961), violence fundamentally defined the meaning and practice of colonialism, and as such violence was central to the effort to resist and overthrow colonial rule. For Fanon, violence was both the poison of colonialism and its antidote.

Fanon arrived at this view on violence largely through his work as a psychiatrist. He was born in Martinique and trained in France, later working in a hospital in Algiers, the capital of Algeria, under the auspices of the French colonial administration. Most of his psychiatric patients were native Algerians, many suffering from the mental and physical turmoil of colonial degradation, including the experience of torture at the hands of French interrogators. Some of these French torturers were also his patients, and by working with them Fanon learned how the "disease" of colonialism also infected the mind of the colonizer. Beyond the hospital walls, Fanon saw how the constant presence of French police stations and military barracks conveyed to the Algerians the clear message that they were little more than animals, to be beaten, dehumanized, and contained for the sake of colonial interests. He thus gained first-hand knowledge of the damage that colonialism inflicted on the minds and bodies of African people.

On November 1, 1954, leaders of the embryonic Algerian national movement, known as the Front de Libération Nationale (FLN), began the armed struggle for independence with violent attacks against French military

and civilian targets, thereby rejecting the path of negotiation and compromise that had been followed to this point. His experiences treating the sufferings of Algerians and witnessing this explosion of violent anticolonialism led Fanon to join the nationalist movement and advocate for the Algerian revolution as a militant activist and writer. He resigned his post at the hospital in 1957, unable to tolerate working for the colonial administration any longer.

Fanon's clearest and most thorough articulation of his views on colonialist and anticolonialist violence can be found in the chapter "Concerning Violence" in *The Wretched of the Earth*, published in 1961, his last work before his death. In it, Fanon argues that anticolonialism must be revolutionary rather than reformist. Colonialism, he explains, is "not a thinking machine, nor a body endowed with reasoning faculties. It is violence in its natural state, and it will only yield when confronted with greater violence" (Fanon 1963, p. 61). Since violence fundamentally defined the colonizing society's existence, only "absolute violence" could get the colonizers' attention. Absolute violence meant that no meaningful distinction was to be made between the French civilian settlers in Algeria and the French police and military forces. According to Fanon, they were all complicit in some way and thus all subject to anticolonial violence. This view of colonialism reflected Fanon's Manichean understanding of the relationship between the colonizers and the colonized. The two were as opposed as white and black; in fact, they were white and black, and no middle ground or negotiated withdrawal was possible if the colonized were to ever be truly liberated. True liberation could only arrive when the binary categories of white and black were destroyed, expunged from the earth.

Fanon believed that anticolonial violence was required in order to achieve two intimately connected objectives: the expulsion of the colonizer and the mental "decolonization" of native Algerians. To Fanon, this latter aim was fundamental because institutional independence from the colonizer would mean little if the people remained psychologically trapped within a self-image as colonized, dehumanized objects. Fanon observed that Algerians were indeed violent under colonial rule, but this violence was directed toward other Algerians as an expression of self-hatred in which "black-on-black" violence represented a futile effort to negate the dehumanized identity imposed upon them. In the movement, led by the FLN, to redirect this violence toward the colonizer, Fanon conceived of a way to construct and affirm a positive political identity infused with a national consciousness liberated from the colonized mindset: "At the level of individuals, violence is a cleansing force. It frees the native from his inferiority complex and from his despair and inaction; it makes him fearless and restores his self-respect" (Fanon 1963, p. 94).

Individually and collectively, anticolonial violence for Fanon was an act of rebirth—"the veritable creation of new men" (Fanon 1963, p. 36)—that simultaneously bound the people together in an expression of national solidarity in which all are implicated in the struggle. Thus, violence was to shape the Algerian national consciousness as the people became collectively responsible for, and thus asserted popular authority over, the anticolonial struggle itself and its immediate product, an independent nation built upon socialist principles and institutions. Fanon argued that this expression of solidarity should not end at the national borders; the anticolonial struggle united the African continent as a whole, as Africans looked forward to the unique and varied postcolonial contributions that they would make on the world stage.

SEE ALSO *Anticolonial Movements; Fanon, Frantz; Postcolonialism; Revolution; World War II*

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Kevin Bruyneel

VIOLENCE, ROLE IN RESOURCE ALLOCATION

Violence, or the threat of violence, is a source of political and economic power, a means of acquiring either assets, income, or influence over their use and distribution. It is, however, not the only source of power, though perhaps it is the most familiar.

Simple acts of violence, such as robbery, can achieve short-term gain, or they can achieve long-term gain by setting precedents to support future threats. Well-established threats are the basis for systems of tribute or "protection money." The difference between these two approaches is that robbery is typically furtive, making use of stealth to compensate for a lack of real superiority in force. In contrast, a tribute system is public to the extent

that the violent agent is confident of superiority in force, so that general knowledge of the threat offers little protection for others and instead increases income from collections. What the two approaches share in common is that violence can take the crudest forms and be effective, since the goal is to acquire finished goods without involvement in the production process.

If the use or threat of violence is to be involved in the actual process of production, matters get more complicated. The goal shifts from collection to coercion, and both the exercise and threat of violence need to be more carefully calibrated parts of a program of supervision, as in the case of slavery and other forced labor systems.

A great many societies until recent times, including most colonial regimes, have had economic arrangements centered on threats of violence in order either to collect finished goods and money as tribute or to coerce labor services.

In modern capitalist societies, violence continues to play a role in the defense of property and enforcement of contracts, but under normal conditions it remains in the background while the law occupies the foreground. Violence seems to have played a key role in the acquisition of property during the centuries preceding the modern era, a process sometimes referred to as "original accumulation." It still can play that role during periods of war or other severe crisis, but this use of violence is rarely acknowledged as a regular part of modern economic arrangements.

Critics of violence, in every social arrangement from ancient to modern, point to the suffering and destruction it causes. Some simply insist that no countervailing benefit could ever compensate for the horrors of violence, and they push at every juncture for its elimination. Others argue that both the destruction caused by violence and the parasitism of those who live off acts of violence constitute economic waste.

Apologists of violence usually claim that its elimination is an unachievable dream and that the best hope lies in channeling it instead, at least to minimize harm but possibly to do some good. To those who decry its economic wastefulness, they reply that this waste is more than compensated for, insofar as it leads to additional productive activity. In a world where most people are viewed as wasting time—and this is a view that many colonial rulers had of their subjects—apologists can argue that unless rulers' demands for tribute or labor are excessive, little more than this wasted time is actually lost, while production in the meantime is increased.

Perspectives on violence can depend somewhat on what theories people hold on how it arises. In classical economic theory, competition for scarce resources can give rise to violence in the form of wasteful strife and warfare. In this view it is desirable and efficient to develop a state structure with a monopoly on violence—as Thomas Hobbes most vividly advocated in *Leviathan* (1651)—and to use it to build a legal system of property rights and contract enforcement that encourages resource allocation through markets instead. Böhm-Bawerk (1914) painstakingly showed that once property rights are secure and contracts enforceable, introduction of additional force in an effort to control market dynamics was futile and wasteful, and this has been the neo-classical view ever since.

In certain political realist theories, such as those of Eugen Dühring (criticized by Friedrich Engels in *Anti-Dühring*, 1894) in the last century, violence arises more from its own profitability: The resources expended in a violent campaign to extract goods or labor yield a return as good as or better than from any other use. Because property rights and contracts are not here assumed to be firmly established, this in itself would not contradict the classical view, but political realists go further to argue that violence can be efficient also on the macro level, primarily because of its function in extracting productive labor from people that otherwise would not have been performed. According to those views, the state with its monopoly on violence contributes to economic activity by institutionalizing the labor extraction function, leaving to the market a decidedly secondary role of efficiently allocating resources thus extracted. Perhaps where land and resources are abundant and hard to dominate, a property system might be inferior to a tribute or slave system in terms of productivity.

Georges Sorel (1906) explored the potential for violence to liberate the oppressed, suggesting that the huge problem of organization could at least in principle be overcome by a general strike of all workers. According to him, the general strike, constructed as a myth as well as organized as much as possible in reality, represents the socialist answer to oppressive violence from above.

According to other theories, including certain psychological views, such as those expressed by Sigmund Freud in *Civilization and Its Discontents* (1930), most violence cannot be accounted for by either of the above economic theories. Roughly put, violence instead arises from protracted and intense frustration brought about by all kinds of social experience, such as role conflict or inhibition of biological impulses, and it is best understood as an expressive rather than instrumental phenomenon. In other words, in the view of these theories, rather than a rational act for gain, violence is a kind of lurch into irrationality engaged in by someone for whom no rational option appears.

Finally, some theories are inspired by biology, claiming that violent behavior that is irrational at the individual level might appear rational at the species level. The

survival prospects of the species are enhanced even though those of particular individuals appear not to be, and therefore some mechanism of natural selection might breed in a certain amount of violent tendencies that could not otherwise be accounted for.

SEE ALSO *Accumulation of Capital; Capitalism; Colonialism; Competition; Confiscation; Freud, Sigmund; Giddens, Anthony; Hobbes, Thomas; Imperialism; Primitive Accumulation; Property; Property Rights; Slavery; Urban Riots; Violence; War; Weber, Max*

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Michael J. Brun

VIOLENCE IN TERRORISM

While there are many definitions of terrorism and no single accepted one, the research literature assumes three main components: (1) use or threat of violence; (2) injury to noncombatants; and (3) a symbolic effect designed to attract attention. Violence is an integral part of terrorism and is present in every incident.

Several factors influence the decision to use violence within the terrorism framework: (1) violence must be faced by the target power, and the target power's response may violate its own values and draw criticism at home and abroad; (2) violence attracts attention to the terrorist organization's agenda, obliging the targeted regime to confront the problems raised and try to solve them; and (3) the use of violence arouses fear and horror in the civilian population. The perpetrators of the violence try to make the population pressure the regime into solving the terror problem, and sometimes even to meet the demands of the terrorist group.

Even though terror is considered the weapon of the weak, it should be stressed that the use of violence in the framework of terror is also common between sovereign states, and not only between illegal groups operating against certain other groups or states. State terrorism is terror perpetrated by states against their citizens or via specific groups that enjoy state support, whether covert or overt. Totalitarian regimes such as that of Augusto Pinochet in Chile or Saddam Hussein in Iraq used their own secret police forces to terrorize their citizens. These regimes operated against their own citizens, employing kidnappings, torture, and extrajudicial executions. Other regimes, mainly in South America, had armed militias that perpetrated acts of terror against their citizens and which were supported or tacitly approved by the state.

Despite this reality, there is disagreement regarding the inclusion of state-sanctioned acts of violence against citizens in the definition of terror. The main dispute concerns the fact that state violence instigated in its own territory is considered legitimate and justified in the struggle against hostile elements, and therefore cannot be defined as terror. The significance of this is that the definition of state-sanctioned acts as terror depends on the attitude of the international community toward the methods used by the state, the conditions under which the violence is used, whether in an armed conflict facing the state or during peacetime.

According to David Rappoport's 2003 work, there have been four separate waves in the use of terror since the 1880s. The first lasted about thirty years, from the 1880s to the 1920s. The groups active during this period espoused a revolutionary antimonarchy ideology, using force mainly in assassination attempts against representatives of the royalty; for example, the People's Will, Narodnaya Volya in Russia, or the Black Hand in Serbia. Notable among the events of this period were the assassinations of Czar Alexander II by Russian revolutionaries on March 13, 1881, and of Franz Ferdinand, heir to the Austrian throne, on June 28, 1914, the incident that sparked World War I.

The second wave continued from the 1920s to the 1960s. In this wave, terror was used mainly by ethnic groups in their struggles for independence from colonial powers—the EOKA in Cyprus and the Etzel and Lehi, Hebrew acronyms for National Military Organization and Fighters for Israel's Liberty, respectively, in British Mandate Palestine. The activities in this second wave differed from those in the first wave in that their targets were

military and government installations, similar to the guerrilla warfare of the Force de Libération Nationale (FLN) in Algeria in the mid-1950s.

The third wave was concentrated in the 1960s and 1970s and was employed by ideological groups on the radical left trying to change the ruling regimes in their own countries, like the Red Brigades in Italy. For the first time, these groups were active in countries other than their own. They cooperated with like-minded foreign organizations and for the first time launched international terrorist activities, such as when the Palestine Liberation Organization (PLO) cooperated with the Japanese Red Brigade in Jordan, Lebanon, Israel, and Libya, among other countries.

The fourth wave began in the 1980s. The political ideology of the 1960s and 1970s has been largely replaced by religion as a background for acts of violent terrorism and its targets. Most perpetrators come from Islamic countries, although today's terrorism is not unique to Islam. The main tactics are kidnappings and suicide attacks in numbers that rose from 40 in the 1980s to 125 in the 1990s, and dozens of attacks per year since 2000. The most notable terrorist group is Al-Qaeda, which recruits and operates worldwide. Its network-based structure and use of the Internet for communication between cells in different countries make it completely different from the typical groups of previous decades.

In the early twenty-first century accelerated technological development and computerization throughout the world have increased terror that is less conspicuously violent, such as cyber-terrorism. This involves attacks against a country's computer systems and civilian and military communications. As such, researchers are not in agreement as to whether this is actually terrorism, since it does not involve violence.

SEE ALSO *Al-Qaeda; Guerrilla Warfare; Terrorism; Violence*

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VIRGIN OF GUADALUPE

SEE *Symbols.*

VIRGINS

Virgins are individuals of both sexes who have never had sexual intercourse, most commonly defined as vaginal penetration. Historically, virginity—particularly female—has been important in many cultures. The virginity of a bride has often been regarded as a mark of her purity, a sign of her family's honor, and as a means of guaranteeing the passage of her husband's bloodlines to her children. For Christians, male and female virginity has long been associated with spiritual purity, and most Christian religions today still place a high value on premarital virginity, even in societies where the vast majority of individuals do not remain virgins until marriage. In many contemporary societies, particularly in Africa and the Middle East, premarital female virginity still has tremendous cultural significance. In other cultures, especially North American and European societies, it is uncommon for people to remain virgins much past late adolescence. However, in such societies, there remains a double standard that encourages women to remain virgins longer than men.

In the United States, contemporary definitions of virginity are fluid. Some regard any sexual activity short of vaginal penetration as compatible with maintaining virginity, whereas others believe that participation in oral or anal sex constitutes a loss of virginity. Although heterosexuals are more likely to link virginity to vaginal penetration, most homosexuals do not consider those who have engaged in oral or anal sex to be virgins. For some, whether one gives or receives oral sex affects the potential loss of virginity. Similarly, in the case of anal sex between two men, there is sometimes debate as to whether one must penetrate or be penetrated in order to lose one's virginity.

In most cases one's status as a virgin is linked to lack of experience with certain sexual activities. In some instances, however, virginity is more closely tied to emotional or spiritual definitions. Some men and women, including many victims of rape, do not believe that nonconsensual sexual intercourse can be counted as losing one's virginity. Certain Christians who, after losing their virginity, decide to abstain from sex before marriage, consider themselves to have regained their virginity, becoming "born-again virgins" and thereby tying the notion of virginity to a personal spiritual state rather than a physical act.

In the United States today, loss of virginity is much less likely to be considered medically than emotionally or physically. In many cultures (and in earlier U.S. history), however, loss of virginity has been associated with the breaking of the hymen, a ring of tissue partially occluding the vagina. Though there is no necessary correlation between virginity and an intact hymen, some women have opted to undergo vaginal reconstruction surgery, which repairs or replaces the hymen. Although some do equate

this procedure with a restoration of virginity, many others believe that restoring the hymen cannot make one a virgin.

Female virginity has long been of great importance to many cultures. Anthropologists suggest that a society's attitude toward virginity is an indication of the social roles of men and women: In traditional, patriarchal societies a woman's virginity is often considered a commodity that enhances a woman's desirability, enables a prestigious marriage, cements interfamily alliances, and ensures the legitimacy of heirs. In the Kanuri society of Africa virginal brides were considered more prestigious than older, divorced women because they were believed to be more submissive to their husbands. In China, well into the twentieth century, a bride's virginity was thought to be something owed to her husband; a man would consider it beneath his dignity and honor to wed a woman who was not a virgin.

In societies that place a high value on virginity, ritual verification of a bride's virginity were common; such tests persist in some traditional cultures. In many cultures throughout the world the virginity of a woman was verified on or before her wedding night. As late as the 1950s the bedsheets of Kurdish brides were examined after the wedding night, and a handkerchief smeared with hymenal blood was presented to the groom's mother as evidence of the bride's virginity. A bride who failed to prove her virginity was returned to her family, where she was killed. African Amhara women who were discovered to not be virgins on their wedding nights were returned to their families to be beaten. Brides among the Bulgarian Gypsies and the African Twi were required to present proof of virginity, in the form of stained bedclothes, to their husbands' families after the wedding night. Bedouin men tested their brides' virginity with togas wrapped around their forefingers. Though such rituals of virginity verification are rare in North American and European societies and disappearing in other areas of the world, some cultures, particularly in Africa and the Middle East, continue to practice them.

SEE ALSO *Gender; Human Sacrifice*

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Maureen Lauder

VISUAL ARTS

Art comes from the Latin word *ars*, meaning skill, thus the term *visual arts* describes those skills that are visible to the human eye, including drawing, painting, sculpture, architecture, graphic art, decoration, and later photography and film. The visual arts are the expression of human creativity, a visualization of the way we see life and the world around us. Standing midway between what is perceived and what is believed, they stem from a need to make sense of human existence and explain it, both internally and externally.

One of the earliest forms of communication, the visual arts form a language through which humans speak about the world. This language is tempered by the society from which it springs, conditioned by its beliefs, its rituals, and its social codes. Pablo Picasso's painting *Guernica* (1937), for example, can be fully understood only when related to the environment of the Spanish civil war (1936–1939). Likewise, every work of art has to be rooted in its own context, which is what gives it shape, function, and relevance—only then is it truly alive. During World War II (1939–1945) a Nazi officer showed Picasso a reproduction and asked, "Is it you who did that?" Picasso is said to have replied, "No, it is you."

HISTORY

It is believed that the history of the visual arts begins with sculpture, the creation of a three-dimensional form. One of the earliest examples was the Lion-Human of Hohlenstein-Stadel, Germany (c. 30,000 BCE), a fantastic form carved from mammoth ivory. Half human and half beast, it marks the meeting of external reality with internal reality, and it is at this juncture that visual art occurs.

The decorative arts have always served both an ornamental and a functional purpose. Originating with the daubing of the body, it was an impulse that led to the fashioning of jewelry, pottery, glassware, textiles, and furniture. By 7000 BCE ceramic ware was already in use, and as decoration became more skilled and sophisticated different types of materials were adopted to create all kinds of objects. One of the most skilled and intricate early pieces was the Great Lyre from Mesopotamia (c. 2550–2400 BCE), which was created in the form of a bull's head. Combining gold, silver, lapis, shell, and wood, it was both functional and beautiful.

Some of the most important elements of the visual arts are drawing, the creation of an image, and painting, the application of color to a surface. At Chauvet, in southwestern France, there are caves full of early drawings and paintings of animals (dating from 25,000 to 17,000 BCE). A visual expression of the world in which early humans lived, these pictures depict the beasts that were hunted and worshipped, and whose bones provided tools and

weapons. Located far away from the living area, in the darkest part of the caves, these paintings evidently had a ritual and symbolic purpose. It is clear that both images and pictures were once things of power and that art itself played an important role in the everyday struggle of living; only today has it been relegated to a purely aesthetic role.

Beginning with the cave, architecture—"the enclosure of spaces"—also dates back to prehistoric times. As skills developed and resources increased, architecture became a statement about religion, power, and spectacle. The giant pyramids of Giza (c. 2601–2515 BCE) were the forerunners of today's skyscrapers. Soaring toward the heavens, they proclaimed the divine status of the pharaohs and glorified the wealth, prestige, and stability of Egypt's rulers. At 792 feet high, the Woolworth Building in New York (1911–1913) is almost twice the height of the tallest pyramid, yet the message it sends out is much the same. Built not from brick, but from steel, glass, and concrete, like the pyramid, it dominates the skyline. Imposing a sense of order and control, it proclaimed the supremacy of the United States as the richest, most powerful, and most technologically advanced society on Earth.

Despite its importance, advanced or sophisticated technology was not an essential requirement for artistic achievement. Fewer resources did not mean lesser skill. Although they did not use iron or steel, the Moche people of ancient Peru (200 BCE–600 CE) were exceptional potters and metalworkers. The Moche potters were renowned for making vessels in the form of human heads. Many of these heads are strikingly true to nature, and they show a mastery of the human face.

This highlights the fact that the development of the visual arts is not primarily a story of technical progress but a story of changing ideas. Each culture had its own idea of the world. This was embodied in images and structures that were far more potent than words could ever be.

For a long time art reflected the domination of knowledge over vision. Based not on what artists could see at any given time, it was conditioned by what they knew was there. It was the Greeks who first began to use their eyes, as their sculptors, artists, and craftsmen began to rely more and more on what they could see, feeling free to represent nature and the human body the way they saw it. This transition from knowledge to the visual marked the beginning of innovation.

In Europe, it was during the Italian Renaissance (fourteenth through seventeenth centuries) that the visual arts really began to mirror a fragment of the real world. The adoption of scientific perspective, the knowledge of anatomy, and the rediscovery of the inheritance of Greece and Rome added to the armory of artists, helping them master the portrayal of nature and enabling them to represent the world around them. Led by Leonardo da Vinci (1452–1519), artists began to explore the visible world, experimenting and searching nature as a means of deepening their understanding.

CHINA

In China principles of theory and aesthetics were formulated as early as 500 CE by the scholar Xie He (500–c. 536). The emperor himself practiced painting, and schools were developed where art was taught as a subject. The first academy was established at the Song court in the early thirteenth century. The visual arts were thus placed on the same footing as the literary arts, and painters finally achieved a status equal to that of court officials.

The idea of art for art's sake was also well established in China, and a distinction was made between amateurs and professionals, between those who worked for money and those for whom personal expression mattered most. This philosophy was first articulated by Ni Zan (1301–1374), one of the most famous painters of the Yuan dynasty, who was the first to assert the independence of the artist: "What I call painting does not exceed the joy of careless sketching with a brush. I do not seek formal likeness but do it simply for my own amusement" (Bush and Shih 1985, p. 266).

POWER, PATRONAGE, AND PROPAGANDA

Artists had always worked for patrons and institutions who specified what they wanted and rewarded the artist accordingly. In eighteenth-century Europe the initiation of regular exhibitions where artists sold their work completely changed the traditional pattern. Instead of working for patrons, artists now relied on exhibitions to sell their work, appealing to critics, connoisseurs, and the general public. Artists could now go their own way and make their own choices.

In Mayan society (350 BCE–900 CE) artists had enjoyed high status because of their ability to record, and for most of its history the visual arts had played an essential role in supporting the status quo. Around 1840 the discovery of photography transformed the artist's position. Photography, the process of making pictures through the action of light, liberated the arts from the propagandist role that they had to play. There was now no need for painting to perform a task that a mechanical device could do far more effectively, and the camera took over as the principle means of recording, leaving artists free to criticize, comment, and give voice to their conscience and their creativity.

As a rule patrons and patronage systems did not encourage criticism of the existing social order. In societies

such as Soviet Russia (1917–1991), where the state was supreme, the arts were run by government organizations, and artistic freedom was curtailed in order to promote the new social order. Patronage and the status quo also played a critical role in freer, more democratic societies. In 1932 the Mexican artist Diego Rivera (1886–1957) was commissioned to paint a fresco for the Rockefeller Center in New York, one of the most ambitious urban designs of the century. Rivera, however, included a portrait of Vladimir Lenin, leading John D. Rockefeller (1839–1937) to cancel the commission and have the unfinished mural destroyed.

MATERIALISM

The advent of the Industrial Revolution had a profound impact on the decorative arts. The workshop gave way to the factory, while craftspersons and their individual skills succumbed to the machine and mass production. During the twentieth century, movements such as the Bauhaus (1919–1933) in Germany did their best to combat the effects of this trend. Combining the schools of art and craft, Bauhaus revived the creation of unique handmade objects. In an age driven by technology, the effect of these developments has been to place a premium on cost and time. This has made the possession of a handmade object even more desirable and even more exclusive than ever before.

As the expression of a living society, the nature of art was very closely tied to its material context. Economics often defined what artists could do, what they aspired to do, and the way in which their work was received. Centralization, urbanization, political stability, and control of resources were all key factors in this equation.

In Japan the growth of peace and prosperity during the Edo period (1603–1867 CE) fostered a vibrant cultural atmosphere. Literacy was widespread and the demand for art was so extensive that it could no longer be confined to a single group of patrons. This demand found its outlet in the affordable new medium of woodblock prints, which become the most popular art form of the day. Known as *ukiyo-e* (pictures of the floating world), they were filled with everyday subjects, reflecting the lives of the people who bought them. The two most famous series, Utagawa Hiroshige's *Fifty-three stages of the Tokaido* (1833) and Katsushika Hokusai's *Thirty-six Views of Mount Fuji* (c. 1826–1833), became the most popular sets of graphic art ever printed.

CHANGE

A striking characteristic of the visual arts is the way it often accompanies momentous changes in politics, economics, and science. The upheaval of the twentieth century led to revolutionary developments in art and culture. Photography had compelled artists to explore areas where the camera could not go, encouraging them to discard convention and experiment. Like the scientists who discovered penicillin and atomic power, and the inventors who created the telephone, the car, the airplane, and the computer, artists too committed themselves to a process of experimentation and discovery. As they did so, they questioned the nature of art itself.

Led by Paul Cézanne (1839–1906) and Vincent van Gogh (1853–1890), and then Picasso (1881–1973) and Georges Braque (1882–1963), artists deliberately abandoned the previous attitudes toward accurate representation. It was no longer important to represent what people see; humankind had gained such mastery over the appearance of reality that the only way forward lay in abstraction and nonrepresentation, the reality behind realism.

Visual art now aspired to create something more relevant, more meaningful, and more lasting than a copy of an object or a depiction of nature. In this cause new techniques and materials were adopted that resulted in the breakdown of the distinctions between art and everyday life. This search led to a new feeling for the arts of Africa, Australasia, and America, where art was charged with an almost magical power and had a living function in society.

"FOLK" PRACTICE AND "HIGH CULTURE"

In Nigeria, the Yoruba people still believe that a parent's love can reach a dead child through the medium of art. Nigeria has one of the highest rates of twin births in the world; when a Yoruba twin dies, a wooden image, *ere ibeji*, is carved and kept in the house by the parents. A symbol of hope for the future, the image is bathed and fed in the hope that the dead twin will bring the parents good luck. Described as "folk" practice, many of these art forms were the product of a community with a shared view of the world and a shared way of life. Rooted in tradition and less open to change, this art did not question but merely reflected the values of its society.

"Folk" art or practice was distinct from what was called *high culture*, a term that implies a more rarified culture with a greater level of luxury and sophistication and perhaps a different kind of patronage. Fostered by the state and the ruling elite for its own enjoyment, it also served to display power and glory. Unlike folk culture, high culture was not static or tied to tradition. Based on knowledge, experience, and understanding, it was, like art during the Italian Renaissance, in a constant state of evolution. This capacity to grow made it capable of change, and it was able to explore new issues and to question and break barriers. As the product of a community, many forms of folk art did not have a single author. High culture in contrast was often the product of individual dis-

covery and endeavor. However this apparent difference may have been more the result of poor records and historiographic bias. What we do know is that the "high art" of Renaissance Italy was the result of individual genius, the work of such men as Leonardo da Vinci, Michelangelo (1475–1564), and Raphael (1483–1520), and as such its many forms were different and distinctive. The ceilings of the Sistine Chapel (1508–1512) in Rome, for example, would not have been painted in the same fashion by any artist other than Michelangelo.

FILM

The social impact of the visual arts is best summed up through the metaphor of film, the art of the motion picture. The youngest of the arts, the motion picture represents the logical development of everything that has come before. It was produced by recording a series of images with cameras and then showing them in rapid succession, thus giving an illusion of motion. Since the first commercial motion picture was made in 1898, the addition of sound and then color have made film arguably the most potent and popular art form of all. More so than other visual arts, it has an almost universal power of communication, possessing an ability to entertain, educate, enlighten, and inspire across countries and cultures.

Through film, culture has become truly global. Today the Coca-Cola logo is recognizable the world over in numerous languages. The visual arts are no longer indigenous—the product of one particular culture or experience. A universal language has become or is in the process of becoming a universal experience.

SEE ALSO *Aesthetics; Cultural Relativism; Culture; Culture, Low and High; Distinctions, Social and Cultural; Film Industry*

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VODOU

Based primarily on an amalgamation of spirit and ancestor cults and healing traditions brought by African slaves to the New World, and secondarily on African and European forms of folk Catholicism, Vodou (Voodoo) is the most popular religion among Haiti's eight million citizens, most of whom are peasants. It is also practiced by a sizable minority of the two million Haitian immigrants (and a small number of converts of diverse ethnic backgrounds) in the Dominican Republic, the Bahamas, and North American cities like Miami, New York, and Montreal. The first Vodou practitioners in the United States were the African and Creole slaves of French plantation owners fleeing the violence of the Haitian Revolution (1791–1804), who settled mainly in New Orleans, where the religion remains part of the city's religious fabric, sometimes practiced in concert with Hoodoo, a form of African American folk spirituality that is also based on ancient African traditions. Like any religion, Vodou is a system of symbols, beliefs, and practices that provides its adherents, whether in Haitian or American society, with a sense of meaning and purpose in life, a means of communing with the sacred, moral guidelines, a source of personal identity and group solidarity, and the courage to face life's struggles.

Vodou emerged in the sixteenth century among enslaved Africans and their descendants in the western region of the Spanish Caribbean colony of Santo Domingo, which became the French colony of Saint-Domingue in 1697 and eventually the Republic of Haiti in 1804. Although possessing deep roots in West Africa and Central Africa, the religion is more correctly identified as *African-derived* or *African-based* rather than *African*, even if the term *vodou* (whose original meaning in the West African Fon language is "spiritual entity") was reappropriated by practitioners of traditional African religions in West Africa in the twentieth century to designate their own religion. Like Santería and other major African-derived religions in the Americas, Vodou is an example of *diffused monotheism*, meaning that the sacred power of a single creator god, called Bondye (Good God) or Granmèt (Great Master), is diffused through a pantheon of divinities, which in Vodou are called *lwa*, and throughout nature. As such, the *lwa* are deeply enmeshed in nature, and each *lwa* is associated with some natural force or feature, like rivers, rainbows, the earth, and the sea.

From the beginning of the sixteenth century to the end of the eighteenth century, a total of some 800,000 enslaved Africans were brought to Santo Domingo/Saint-Domingue, the majority from the West African Fon and Central African Kongo ethnic groups. Numbering relatively few and facing opposition by slaveholders, Catholic missionaries managed little success in evangelizing slaves beyond administering the legally required sacrament of

baptism. The syncretism that would thereafter characterize Vodou thus resulted, as Catholic saints merged with African spirits, and crosses, holy water, and rosaries joined spiritual forces with amulets that slaves refashioned from African traditions, which proved remarkably resilient in the face of the unspeakable oppression of slavery.

Prior to the Haitian Revolution, a multiplicity of African religious traditions thus persevered in Saint-Domingue, whose sugar plantations made it Europe's most lucrative colony. To speak of Vodou prior to the revolution is therefore somewhat anachronistic, as three of the religion's cornerstones were not laid until the second half of the eighteenth century and the first half of the nineteenth century: (1) the unity of purpose of the Haitian Revolution, as exemplified by the powerful ceremony at Bwa Kayman in August 1791, led by a prototypical Vodou priest named Boukman Dutty, which is widely credited with having sparked the revolution; (2) the integration of essential African religious traditions that were being practiced during the colonial era in clandestine maroon settlements of escaped slaves in the island's mountains and forests; and (3) the acceleration of the adoption of Catholic elements (especially hagiography) during the period of the "great schism" between Haiti and Rome from 1804 to 1860, when the Vatican refused to send Catholic priests to the young nation. After the schism, the Catholic Church, in alliance with the Haitian government, orchestrated several formal campaigns to suppress Vodou. These ultimately failed, however, and today the religion enjoys protection under the 1987 Haitian constitution, while in 2003 its baptisms and marriages gained legal recognition in Haiti.

Vodou has always been heterogeneous and decidedly uncentralized, relying on neither the teachings of a founder, nor scripture, nor formal doctrine. In some parts of Haiti, for example, the religion is primarily characterized by ancestor veneration, and elsewhere by cults of spirits of West African origins, such as Ezili, the female *lwa* of love, sensuality, and feminine power, and Ogou, the male *lwa* of iron and all powers associated with metals. The Vodou pantheon is divided into two principle rites: the *rada*, whose *lwa* are "cool" and serene; and the *petwo*, whose *lwa* are "hot" and feisty. Many *lwa* have manifestations in each rite. *Rada* and *petwo* cults are supplemented for most practitioners by the veneration of their ancestors (*zanset* or *lemò*, "the dead"). Collectively, the *lwa*, *zanset*, and *lemò*, along with angels and Catholic saints, are identified simply as the "mysteries" (*mistè*).

Principal forms of communication and contact with Vodou's *mistè* include prayer, praise, ablutions, offerings, spirit possession, drum and dance ceremonies, divination, and animal sacrifice. These rituals' overarching aim is to ensure, establish, or reestablish harmony between practitioners and the *mistè*, or to protect practitioners from sorcery (*wanga*). In the event of bad things happening, Vodouists consult with ritual specialists (female: *manbo*; male: *oungan*), who perform divination and orchestrate ceremonies (which most often take place either in temples (*ounfò*), family burial compounds, or public cemeteries) to provoke spirit possession and thereby enter into communication with the *mistè* in order to discover the cause of the underlying discord, disease, problem, or misfortune, and to determine and prescribe means of reestablishing harmony, healing, or achieving relevant solutions. Further drum ceremonies may be prescribed, while others are held according to a liturgical calendar derived from Catholicism.

Harmony between humans and the *mistè* and healing comprise Vodou's raison d'être. In general, such harmony requires the ritual appeasement of the *mistè*, whether through splendidly artistic communal drum and dance ceremonies, animal sacrifice, or more frequent personal devotions such as praising and feeding the *lwa*. Healing, meanwhile, often involves herbalism and ritual baths. Leaves, water, song, dance, drums, blood, healing, and communion with the sacred are thus what Vodou is truly about. It is a dignified and complex religion of survival, resistance, and African roots that is quite the opposite of the ignorant and racist stereotypes that malign Vodou in Western imagination and media.

SEE ALSO *Haitian Revolution; Peasantry; Religion; Rituals; Roman Catholic Church; Santeria; Slavery; Zombies*

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Terry Rey

VOICE AND LOYALTY

SEE *Exit, Voice, and Loyalty.*

VOLTAIRE

1694–1778

François Marie Arouet was born in Paris in fall 1694 and died there in spring 1778. "Voltaire," the name by which he

is most widely known today, was a pen name that François invented for himself, most likely in 1718. It is believed to be an anagram of the Latinized form—"Arovet le leune"—of his name "Arouet le jeune" ("Arouet the younger," because Voltaire's father, a notary, was also named François). Voltaire is the best known of the *philosophes* of the French Enlightenment, and there is an industry of modern scholarship on his life and thought, including hundreds of monographs, as well as the multiple-volume series *Studies on Voltaire and the Eighteenth Century* and the *Complete Works of Voltaire*, both published in Oxford by the Voltaire Foundation. A champion of religious tolerance and human reason, a "philosophical historian" and popularizer of social history, Voltaire was clearly one of the Age of Enlightenment's most influential contributors to what would become known as the social sciences.

Like many eighteenth-century men of letters, Voltaire wrote in several genres, in both prose and verse. When measured against the literary output of his enlightened contemporaries, Voltaire's staggering productivity—amounting to some 15 million words—stands out. Historians typically divide his life into five periods, or phases, based on his literary projects and his place of residence.

The first period of Voltaire's life is defined by his youth, his education at the hands of the Jesuits of the College of Louis-le-Grand, and the publication of his early poems and plays, including his first important publication, the tragic play *Œdipe* (1715). It was also a period that saw the young Voltaire imprisoned in the Bastille for eleven months for writing libelous verse insulting to the king. In his youth, and throughout his long life, Voltaire was plagued by poor health, and he complained so frequently to his correspondents that modern scholars have identified hypochondria as one of his conditions.

The second stage of Voltaire's life was determined by his fleeing to England in spring 1726. His "exile" was occasioned by his having traded insults with the chevalier de Rohan. In England he mixed with Henry St. John, Viscount Bolingbroke (1678–1751), whose literary talents he admired and who introduced Voltaire to other writers, including Alexander Pope (1688–1744) and Jonathan Swift (1667–1745). Voltaire also read the works of the fathers of the English Enlightenment—Francis Bacon (1561–1626), John Locke (1632–1704), and Isaac Newton (1642–1727), whose burial at Westminster Abbey he attended. Voltaire's *Lettres philosophiques sur les Anglais* [Letters concerning the English nation] (1733) came out of this period, and he would long admire the English for what he perceived as their religious toleration, their defense of liberty, and their support of men of letters, such as Newton. It was also while in exile in England that Voltaire began to give serious attention to historical writings. While in England he published *Essay Upon the Civil Wars of France* (1727) and, more importantly, was probably working on the manuscripts that would become his *Histoire de Charles XII* [History of Charles XII] (1731) and *Le Siècle de Louis XIV* [The Century of Louis XIV] (1752), and also thinking about the history of the English constitution. Those activities continued after he returned to France in 1729.

The third period of Voltaire's life was the time of his residence at Cirey-en-Champagne, the château of the marquise du Châtelet (1706–1749), Voltaire's learned and witty mistress. Living there from 1733, Voltaire wrote poetry and plays, biblical criticism, popularizations of science such as *Eléments de la philosophie de Newton* [Elements of Newton's philosophy] (1738), and fiction, including *Zadig* (1747). These were also years in which he was working on *Essai sur les moeurs et l'esprit des nations* [Essay on the manners and spirit of nations] (1756), and frequently traveling throughout France, but also to Brussels. Voltaire's career was on the rise. In 1745 he was appointed *historiographe du roi* (historian to the king), largely owing to the support of Madame de Pompadour (1721–1764), and in 1746 he was elected to the French Academy.

With Madame du Châtelet's death in 1749, Voltaire accepted an invitation to take up residence at the court of Frederick II (1712–1786), the Great of Prussia, with whom Voltaire had corresponded from the mid-1730s. Frederick once claimed of Voltaire, "this great man alone was worth an entire Academy" (quoted in Aldridge 1975, p. 411). This fourth phase of Voltaire's life saw the publication of Voltaire's *Le Siècle de Louis XIV* [The Century of Louis XIV], (1752), an account that praised the French king for his support of literature and art, and also work on his *Dictionnaire philosophique* [Philosophical Dictionary] (1764). Voltaire also was involved in shady business deals, arousing Frederick's anger and helping to bring his stay in Prussia to an end only three years after it had begun. This was not the first of Voltaire's financial schemes, nor would it be the last. As Ben Ray Redman puts it in his introduction to *The Portable Voltaire*, Voltaire's "fingers began to itch whenever he thought there were sous to be made" (1949, p. 19).

The final stage of Voltaire's literary career was spent in Geneva, where Voltaire moved in 1755, and at Ferney, an estate he purchased in France near the French-Swiss border, in 1758. During these years he wrote *The Lisbon Earthquake* (1755) and contributed to the greatest of the French Enlightenment publications, the *Encyclopédie* edited by Denis Diderot (1713–1784) and Jean le Rond d'Alembert (1717–1783). Voltaire also published his *Essai sur les moeurs* (1756), worked on his *History of the Russian Empire Under Peter the Great* (1759, 1763), and published *Candide* (1759), which is perhaps the best known of his works. It was during his years at Ferney that Voltaire

penned his famous cry *"écrasez l'infâme!"* ("crush the infamy!"), the precise meaning of which historians continue to debate. It was also during this period that Voltaire became more vocal in his deism and more involved in several public events, including the Calas affair, in which he used his pen to defend the reputation of Jean Calas, a Huguenot who was tortured and executed in 1762. In 1764 Voltaire published *Dictionnaire philosophique*. His literary reputation was growing in the 1760s and 1770s, and the aging Voltaire was often visited by guests from around the world. In winter 1778, when Voltaire was eighty-four, his play *Irène* (1776) was celebrated in Paris. He died soon afterwards, the most famous man of letters of the Age of Enlightenment.

Voltaire's social and political thought is found throughout his satires, pamphlets, and voluminous correspondence, but it is his historical writings that contain some of his most important contributions to the social sciences. As an historian, Voltaire was forward looking, and he saw himself to be presenting history in a new way. Writing with a critical spirit similar to those of Pierre Bayle (1647–1706), François Fénelon (1651–1715), Bernard le Bovier de Fontenelle (1657–1757), and Henri de Boulainvilliers (1658–1722), Voltaire was less credulous than the humanist historians of the seventeenth century, and it is largely for that reason that he is considered by some to be the forerunner of modern historiography. He aimed to incorporate more sources and a greater variety of sources than did most of his contemporaries, even though some, such as Edward Gibbon (1737–1794), thought Voltaire did not go far enough in this regard. In his efforts to expand the subject matter of history in the direction of social and cultural history, Voltaire shared a common concern with other great Enlightenment historians, such as David Hume (1711–1776). In his "An Essay on Universal History" (1756), for example, Voltaire dispensed with Christian structure to tell the story of the rise and fall of civilizations, beginning with the ancient Chinese and also including America. In that grand narrative and in other historical works Voltaire showed little concern with military events and the rule of princes, but he found a primary role for economics. As J. H. Brumfitt summarizes in *Voltaire: Historian*, "more than his predecessors, and more than many of his contemporaries, who are often involved in abstract political theorizing, he succeeds in giving to economic developments a place in the narrative of history not too far removed from that which they occupy today"(1958, p. 70). Again in a notably modern way, Voltaire aimed to go beyond history as the recital of disparate and unconnected events. In the *Siècle*, for example, he attempted to integrate economics, politics, and the arts and sciences, and to present all of that in a unified whole. Part of Voltaire's appeal as an historian, then and now, was his realist's approach to change over time. As the historian Peter Gay put it in *Voltaire's Politics: The Poet as Realist*, Voltaire was "a practical hard-headed political man" (1959, p. xi). Near the core of Voltaire's historical thought, as with his philosophical writing, was an unrelenting attempt to appeal to reason at the expense of fable, myth, superstition, and religion. That tendency, more than anything else, explains why Voltaire was, as Theodore Besterman summed up in *Voltaire*, "the most famous, the best loved and the most fanatically hated man in Europe" (1969, p. 528).

SEE ALSO *Civilization; Constitutions; Enlightenment; Hume, David; Locke, John; Realism*

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Mark G. Spencer

VOLUNTARY ASSOCIATIONS

SEE *Associations, Voluntary.*

VOLUNTARY UNEMPLOYMENT

In principle, a voluntarily unemployed person is a jobless worker refusing an available vacancy for which the wage is lower than a certain threshold known in the literature as

reservation wage. John Maynard Keynes, in his *The General Theory of Employment, Interest, and Money* (1936), when describing the classical view of unemployment, introduces the notion of voluntary unemployment as "a refusal or inability of a unit of labor […] to accept a reward corresponding to the value of the product attributable to its marginal productivity." According to this definition, frictional unemployment due to job searching would be voluntary, while unemployment determined by demand factors would be involuntary.

Robert E. Lucas Jr. criticizes this view, since "there is an involuntary element in all unemployment, in the sense that no one chooses bad luck over good; there is also a voluntary element in all unemployment, in the sense that however miserable one's current work options, one can always choose to accept them" ([1978] 1981). Unemployment should then always be viewed as voluntary, as alternative activities are always available in the economy. This interpretation is consistent with Ludwig von Mises that states, "Unemployment in the unhampered market is always voluntary. In the eyes of the unemployed man, unemployment is the minor of two evils between which he has to choose" (1949).

However, the question of voluntary versus involuntary unemployment should not be overemphasized. Indeed, for the majority of workers there is often a chance of being employed at a certain wage level. Nevertheless, even if a worker would refuse such a job offer, this does not seem to be enough to classify him as merely voluntarily unemployed.

Richard Layard, Stephen Nickell, and Richard Jackman (2005) make the example of the unskilled workers, for whom the number of well-paid jobs with good working conditions is far below the number of potential applicants. Therefore, the majority of the unskilled turn to jobs that pay less and are in general of worse quality. These jobs are easier to find and in some cases offer the possibility of immediate employment.

The labor market can then be divided into two sectors. One is identified as primary, where the best jobs are available, and the other is called secondary, where jobs are on average lower pay and of lower quality. In the secondary sector the labor market is said to clear, as vacancies are filled very quickly, the skills needed for the jobs are modest, and the wages are too low to appeal to a large number of applicants. In the primary sector the labor market does not clear, and job rationing results. Some of the workers excluded from the primary sector are subsequently employed in the secondary sector while others remain unemployed, according to the reservation wage of each individual.

Assuming that total labor force is equal to L and that all workers are willing to be employed in the primary sector, we can assume a negatively sloped labor-demand curve in the primary sector DD_1. The latter identifies the primary sector employment N_1 corresponding to the real wage W/P_1 resulting from union bargaining or firms' efficiency-wage policies. The number of workers available for secondary-sector jobs is then $L - N_1$. The positively sloped labor-supply curve in the secondary sector, SS_2, is determined by the reservation wages of these workers and is affected by the characteristics of the unemployment benefit system. The negatively sloped labor-demand curve in the secondary sector, DD_2, illustrates the demand of secondary-sector labor for any given level of real wage in that sector W/P_2. The market-clearing equilibrium is then reached when $SS_2 = DD_2$ and the employment level in the secondary sector N_2 is determined. The resulting unemployment level is then $U = L - N_1 - N_2$.

The nature of unemployment U is questionable. From one point of view, the workers in U are voluntarily unemployed because they are not willing to work in the secondary sector for a real wage that is below a certain threshold given by their reservation wage. However, they are also involuntarily unemployed because they are willing to work in the primary sector at the prevailing real wage but are not able to do so.

In a dynamic setting, the relative importance of the primary and the secondary sector varies according to aggregate as well as idiosyncratic shocks. Workers move within the three states (primary sector, secondary, and unemployed). Some of them will search for primary-sector jobs while unemployed, while others will become employed in the secondary sector.

It is the primary-sector real wage, which is the result of union bargaining or wage-efficiency policies, that will determine primary-sector employment, the crucial element in this representation. The entity and duration of unemployment will result from the general equilibrium of the economy.

SEE ALSO *Dual Economy; Involuntary Unemployment; Natural Rate of Unemployment; Underemployment; Unemployment*

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Luca Nunziata

VOLUNTEER PROGRAMS

According to the Corporation for National and Community Service (CNCS), 65.4 million Americans reported that they volunteered in 2005 (the latest year for which data are available), almost 30 percent (28.8 percent) of the U.S. population (CNCS 2006). In 2000 the substantial volume of time volunteered by Americans was the equivalent of 9.1 million full-time employees (based on 1,700 hours per year per employee). The total assigned dollar value of volunteer time in that year was 239.2 billion dollars, which grew to an estimated 280 billion dollars in 2005 (Independent Sector 2001).

Volunteering is, of course, not limited to the United States; although variations exist across countries (Salamon and Sokolowski 2001), volunteering has emerged as "an international phenomenon" (Anheir and Salamon 1999). According to Salamon and Sokolowski's research on volunteering in twenty-four countries (2001), volunteering constitutes 2.5 percent of non-agricultural employment on average. In their study, this percentage ranged from a low of 0.2 percent in Mexico to a high of 8.0 percent in Sweden.

In the past, volunteering was mainly regarded as work or activities contributed to private charitable or religious organizations. However, volunteers have become a crucial resource for various types of organizations not only in the nonprofit sector but also in the public sector. As an example, the 1992, 1990, and 1988 Gallup surveys on volunteering in the United States show that a significant portion of volunteer efforts went to government organizations (Brudney 1999).

Having such a large amount of time directed to volunteer work does not assure that desirable results are attained for host organizations or volunteers, or for the targets of their well-intentioned efforts. Different issues may arise depending on the types of volunteering activities or on the social and organizational context, and even the nation where volunteering occurs. A 2004 survey on volunteering policies and partnerships in the European Union, for example, suggests that volunteer regulations, policies, and laws differ substantially cross-nationally (Van Hal, Meijs, and Steenbergen 2004).

Attaining beneficial outcomes from volunteer involvement for participants, clients, organizations, and the community requires a programmatic structure. Below we explain how to provide this structure for volunteer programs. To do so, we elaborate and extend a model proposed by Young-joo Lee and Jeffrey L. Brudney (2006), based on the essential challenges that all volunteer programs must meet.

CHALLENGES CONFRONTING VOLUNTEER PROGRAMS

A volunteer program is a systematic effort to involve volunteers in the work, outputs, and outcomes of an organization. Several authors have proposed models to guide volunteer programs (Boyce 1971; Dolan 1969; Kwarteng et al 1988; Lenihan and Jackson 1984; Penrod 1991; Vineyard 1984). A review of these models shows that they are quite similar, being grounded in a set of core functions that these programs typically perform, such as selection, orientation, and job design. Rather than considering the activities conducted, the challenge model focuses on the goals that must be met to achieve successful performance with volunteers. Although research on the validity of volunteer program design models is scant, a study based on a heterogeneous sample of government volunteer programs suggests that various elements of the challenge model are related empirically to the perceived effectiveness of these programs (Hager and Brudney 2004; Brudney 1999).

Lee and Brudney's *A New Challenge Model of a Volunteer Program* (2006), developed originally to guide school volunteer programs, can be extended to the design of volunteer programs in general. These researchers outline six principal challenges that confront volunteer programs:

1. recruiting citizens for volunteer service;
2. engaging the community in the volunteer program;
3. gaining acceptance from organizational members;
4. maintaining accountability, to ensure that volunteers adhere to the values and goals of the organization;
5. managing the program effectively through structural design;
6. evaluating the program's processes and results.

Figure 1 presents the challenge model of a volunteer program. The article discusses, in turn, each challenge a volunteer program must meet.

Recruiting Citizens Perhaps the greatest challenge to an effective volunteer program is attracting people willing and able to donate their time and expertise. Volunteerism expert Susan Ellis (1996b, pp. 5–6) cautions that "recruitment is not the first step" in a program; a volunteer program must have a clear purpose or goal and meaningful work for volunteers to carry out. Yet, without sufficient volunteers, a program cannot be sustained.

It is important to provide potential volunteers with incentives to participate in the program. A powerful motivation for most volunteers is the idea that their efforts will provide a benefit to the recipients of volunteer service, which in turn will bring them a sense of fulfillment. Most

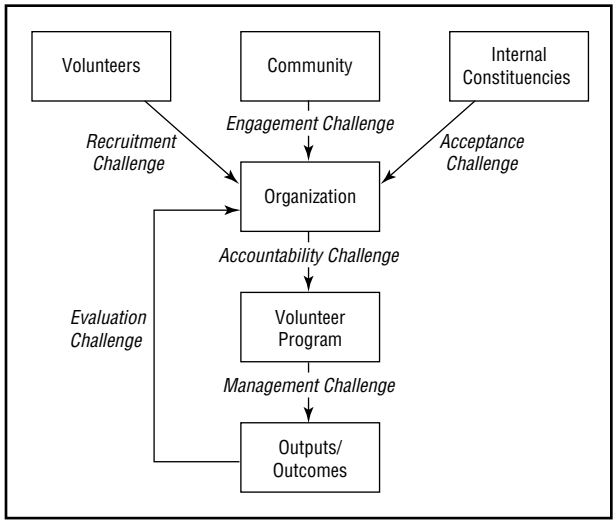

Figure 1. A New Challenge Model of a Volunteer Program (Lee and Brudney 2006)

volunteers say that they volunteer to "help other people" or "do something useful" (Brudney 2005, p. 329). Thus, an emphasis on the benefits of a volunteering program would likely prove an effective volunteer recruitment strategy. Another incentive is the benefit to volunteers themselves. Research has shown that there are positive effects of volunteering for volunteers, such as improved health, increased occupational skills, greater networking and social support, and enhanced self-confidence and self-esteem (Wilson and Musick 1999).

The most effective recruitment strategy is to *ask* people to volunteer. Research findings show that people volunteer far more frequently when they are asked to do so. For instance, the Independent Sector reported that 71.3 percent of the people who volunteered had been asked to volunteer, compared to just 28.7 percent of the non-volunteers (Independent Sector 2002, p. 68). To recruit volunteers, experts recommend targeting groups or organizations with a membership of potential volunteers. For instance, recruitment efforts can be made in workplaces, churches, and synagogues, and directed at neighborhood groups, civic associations, and other institutions in the community (Ellis 1996b).

Engaging the Community As more organizations, including nonprofit, government, and even for-profit, have implemented volunteer programs, an evolution has occurred in the traditional population of volunteers (Smith 1994). Volunteers are no longer predominantly middle-aged, middle-class white women. Instead, they embrace a much wider segment of the community, including males, youth, seniors, people of color, and so forth (CNCS 2006).

A significant consequence of the growth in the number of volunteer programs and an increasingly diverse volunteer pool is that host organizations must compete for volunteers with other nonprofit, government, and corporate volunteer programs. In order to attract volunteers, volunteer programs must emphasize the contribution or impact of a program, its uniqueness, and its connection to the community. Competition also requires volunteer programs to network with other organizations to gain resources and support, such as funding, legitimacy, volunteer opportunities, in-kind contributions, and publicity.

Gaining Acceptance As Brudney (1994) points out, satisfying an organization's internal constituencies is a prerequisite to setting up an effective volunteer program. Prior to establishing a program, proponents must gain acceptance from, among others, paid staff, board members, clients, and affiliated organizations, such as labor unions and professional associations (if they exist). Without the commitment and support of these stakeholders, the success of a volunteer program is questionable. The likelihood of gaining acceptance increases with the benefits the program may offer, not only to the clients of the program, but also to internal constituencies, volunteers, and the larger community. These benefits can be substantial and include: more attention to clients, greater opportunity for innovation, higher levels of service, increased fund-raising capability, enhanced cost-effectiveness, more satisfying and professional work opportunities, and greater community knowledge, feedback, and involvement (Brudney 2005).

Maintaining Accountability A host organization must make sure volunteers understand the work to be done and the authorized organizational methods and procedures for carrying it out. Accountability makes it possible to recognize and reinforce superior performance by volunteers and, correspondingly, to identify and make changes where performance is inferior or lacking.

In order to ensure accountability, organizational leadership should appoint or hire a volunteer administrator (or coordinator or director) responsible for the overall management and participation of volunteers (Brudney 1996; Ellis 1996, p. 55). The position is usually part-time or constitutes a portion of the duties of a full-time position. Studies find that organizational support for this position is strongly associated with the success of a program (Urban Institute 2004).

Establishing accountability for the volunteer program also includes having a program structure that organizes and integrates the volunteer effort. The program should have job descriptions for volunteer administrators as well

as for the volunteer positions to be filled (Brudney 1996). In the United States, the Volunteer Protection Act of 1997 (Public Law PL105–119) strongly encourages organizations to have job descriptions for their volunteers. In addition, written policies and procedures should be on file that specify the rules and regulations concerning volunteer involvement, including the rights and responsibilities of volunteers as well as appropriate behavior and norms on the job (for example, confidentiality, reliability, and attire).

Managing the Program As several authors have noted, managing volunteers is not the same as managing employees (Farmer and Fedor 1999; McCurley and Lynch 2006). For example, volunteers are far less dependent on the organization than paid employees and contribute far fewer hours. Given these differences, the volunteer administrator assumes a critical role in the program. Ideally, volunteer administrators should have the following qualifications (Ellis 1996b, p. 60):

1. background in volunteerism or volunteer administration;
2. ability and/or experience in management;
3. proficiency in job design and analysis;
4. skills in leadership;
5. understanding of the needs of those to be assisted through volunteer effort;
6. familiarity with community resources;
7. interest in outreach to the community.

The volunteer administrator's job typically includes recruiting, screening, orienting, training, placing, supervising, evaluating, and recognizing volunteers. This official also has to attend to risk management (Graff 2003). Liability with respect to volunteer programs applies to situations in which a volunteer is harmed while performing his or her duties, as well as when a third party is harmed by a volunteer (Lake 1997). Given the distinctive duties of volunteer administrators, the literature endorses specialized training and preparation for the volunteer administrator position (Ellis 1996b; McCurley and Lynch 2006).

Evaluating the Program Evaluation provides the ultimate justification for a volunteer program. Brudney (1996, p. 201) defines evaluation as "collecting systematic information on the processes and results of the volunteer program and applying these data toward program assessment and, hopefully, program improvement." To evaluate the effectiveness of volunteer involvement, Brudney recommends focusing on three target audiences: the clients or intended beneficiaries of the volunteer program, internal constituencies, and the volunteers themselves. A variety of methods exist for evaluation of volunteer programs (Gaskin 2003; Goulborne and Embuldeniya 2002).

Of all the challenges, evaluation apparently receives the lowest priority in volunteer programs (Brudney 1999), perhaps as a consequence of the donated nature of volunteer effort. Organizations may be wary of questioning the involvement or effectiveness of citizen volunteers. Nevertheless, just as with any systematic activity, organizations should assess volunteer programs and learn from the results. As Figure 1 shows, the information gained from evaluation should be fed back to the organization and used to improve the volunteer program.

CONCLUSION

A volunteer program requires an investment on the part of an organization, internal constituencies, and volunteers. Some may ask whether this investment is worth the effort. Indeed it is: Volunteerism benefits all parties involved. Benefits to clients include receiving needed services and the feeling that someone is interested in and cares about them. Benefits to organizations include increasing cost-effectiveness, expanding programs, and raising service quality. Benefits to communities include enhanced civic participation and awareness.

Research has shown that, with respect to the monetary return on investment, volunteer programs routinely yield more in dollar value than organizations expend on them (Gaskin 2003). For clients, volunteers, and communities, the social and psychic benefits are likely to be far greater.

SEE ALSO *National Service Programs; Philanthropy*

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VOLUNTEERISM

Volunteerism refers to a broad range of activities that benefit another person, group, or cause and that are carried out by individuals by their own choice and without pay. Individuals engaged in volunteerism are referred to as *volunteers*. Examples of volunteerism include serving on the board of a museum, organizing a protest meeting against environmental pollution, preparing food in a soup kitchen, caring for the elderly in a nursing home, looking after pets or mail for a neighbor, and the donation of blood at a blood center. However, also more controversial activities like distributing flyers for an extremist political party and providing shelter to illegal immigrants may qualify as examples of volunteerism.

A common distinction is made between *formal* and *informal* volunteerism. Formal volunteerism is carried out in an organization, usually a nonprofit organization. Informal volunteerism is not carried out in an organization and usually benefits specific individuals or groups with whom the volunteer has personal connections. Informal volunteerism is also called *social support* or *helping behavior*. Informal volunteerism that benefits colleagues or one's employer is called *organizational citizenship behavior*.

In sociology and political science volunteerism is considered a form of civic engagement and an expression of cohesion or social capital in society (Putnam 2000). Formal volunteerism has received more attention in these disciplines than informal volunteerism, although the two are related empirically (Wilson and Musick 1997). The

focus on formal volunteerism is apparent in the frequent measurement of engagement in voluntary associations in general household surveys. These surveys contain lists of types of organizations, for each of which the respondent answers to what extent he or she is engaged in the organization (not engaged, passive member, active member, volunteer). In some household surveys respondents report the frequency of informal helping behaviors. Informal volunteerism is commonly measured in questionnaires on social support networks. Respondents indicate whether they have people ("alters") available to them with whom they discuss important matters (emotional support) or who can assist them in practical matters like small repairs (practical support).

Volunteerism is more common among married persons, whites, the middle-aged and elderly, the higher educated, more frequent church attendees, rural residents, children of volunteers, and extraverted persons (Bekkers 2005, 2007; Penner et al. 2005; Putnam 2000; Wilson 2000). Differences between whites and blacks differ from study to study (contrasting findings in Wilson and Musick 1997 and Carson 1987). Among other things, volunteerism is more common among the higher educated because they have more civic skills, more knowledge, and a stronger feeling of efficacy (Brady et al. 1995; Nie et al. 1996). Individuals with more civic skills and knowledge are more able to understand arguments, to express their views, and to convince others. These are useful qualities that lower the cost and increase the expected benefit of volunteerism. Individuals with a stronger feeling of efficacy are more likely to think their volunteerism makes a difference for the beneficiary of their volunteerism, which increases its expected benefit. Formal volunteerism in turn enhances civic skills, knowledge, and self-efficacy. Beyond paid work, voluntary associations are an important context in which people gain experience in organizing meetings, learn to understand others, and gain confidence in their abilities.

Volunteerism is also linked with a variety of other benefits. Volunteers are known to live longer and to be healthier in old age than nonvolunteers. In addition volunteerism contributes to mental health and may contribute to success in paid labor in the long run (Penner et al. 2005; Wilson and Musick 2000). At the macro level voluntary associations strengthen civil society and democracy (Putnam 2000).

Because of these benefits, schools increasingly include service learning and community service programs in their curricula. Completing a service learning program, which itself is usually not a form of volunteerism because it is obligatory, may promote civic skills and volunteerism in the future, depending on several characteristics of the program. More beneficial programs have a moderate level of freedom for pupils in selecting service activities, require a higher level of reflection from pupils, and are supervised by more enthusiastic teachers (Metz and Youniss 2005). Voluntary programs do not have more beneficial effects than required programs (Schmidt et al. 2006). Voluntary programs draw an audience that consists mostly of young people with a social background that facilitates volunteerism: parents volunteer themselves, are religious, and have higher socioeconomic status (Metz and Youniss 2005). Given that required service learning programs also have beneficial effects among youths from less-favorable backgrounds and perhaps even more so than among youths from advantageous backgrounds, required service learning programs may reduce social inequality in volunteerism and civic engagement in the long run.

SEE ALSO *Altruism; Altruism and Prosocial Behavior; Associations, Voluntary; Civil Society; Nongovernmental Organizations (NGOs); Philanthropy; Prevention Science; Putnam, Robert; Social Capital; Verba, Sidney; Volunteer Programs*

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René Bekkers

VON NEUMANN, JOHN
1903–1957

John von Neumann (born December 28, 1903 in Hungary, died February 8, 1957 in Washington, D.C.) was a versatile scholar whose path-breaking ideas have enriched various disciplines. In social sciences his contributions to game theory, economic growth, and consumers' choice are of special importance.

Von Neumann's talents showed up early, and outstanding mathematicians tutored him individually. In 1923 he entered MSc chemistry studies in Zürich and at the same time studied for a doctoral degree in mathematics in Budapest. In 1926 and 1927, as an assistant to David Hilbert in Göttingen, he laid down the axiomatic foundations of quantum mechanics. His reputation grew rapidly, and he was invited to several universities. He visited Princeton University first in 1929 and became a professor of mathematics at its Institute for Advanced Study in 1933. He became a leading expert on shock and detonation waves, which became significant during World War II (1939–1945), when von Neumann became involved in important projects such as the Manhattan Project. It was mainly the complex nonlinear problems that emerged in these projects that made him realize the importance of computers, and he made key contributions to formulating the basic principles of computer science.

Von Neumann made major scientific contributions to the social sciences as well. As always, he was interested in comprehensive structures, and focused on the core problems in the field. He was the first to prove the existence of equilibrium for two-person zero-sum games in 1928, based on his famous minimax theorem. Using a similar mathematical structure he formulated a multisectoral model of balanced economic growth (first presented in 1932), which was a brilliant mathematical synthesis of some classical ideas concerning the production and price proportions of economic equilibrium. He was the first to employ a fixed-point theorem in the proof of existence of competitive equilibrium, on the one hand, and an explicit duality approach, recognizing the symmetry of the conditions that characterize the choice of optimal activities and the equilibrium price system sustaining it under the conditions of a competitive equilibrium, on the other. His model allows for different theoretical interpretations (classical, Marxist, neoclassical, etc.) indicating its general nature.

Although his model was a prototype of the highly abstract models used in modern economics, he cautioned often against the potential deterioration of such an approach into intellectual games. He saw this danger threatening not only the development of economics but also mathematics itself. He repeatedly criticized economists for not using more appropriate mathematics, and he emphasized the need for more comprehensive tools than those borrowed from classical physics.

Von Neumann set an excellent example for such a novel approach in his work with Oskar Morgenstern on game theory. In their book, *Theory of Games and Economic Behavior* (1944), they laid down the foundations of modern game theory and initiated a new discipline almost from scratch. It was in this connection that they developed the axiomatic theory of expected utility, which states that under certain conditions the preferences of a rational individual can be represented by a function of the expected utility form. The use of the von Neumann–Morgenstern expected utility function became universal in economics because it is analytically very convenient and its normative character may provide a valuable guide to rational actions. Although he darted only briefly into its domain, von Neumann's tremendous influence on the development of modern economics has been widely acknowledged.

SEE ALSO *Game Theory; Neoclassical Growth Model; Optimal Growth; Utility, Von Neumann-Morgenstern*

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Ernő Zalai

VOODOO

SEE *Vodou.*

VOTE, ALTERNATIVE

The alternative vote is an electoral method wherein voters rank candidates, and the winner is determined by a sequential count in which the weakest candidate is repeatedly eliminated until one candidate has secured a major-

ity of the vote. Electoral-law terminology is unfortunately nonuniform, but the alternative vote can be regarded as a special case of the "single-transferable vote" or the "preferential vote," with the conditions that only one candidate is elected per district, and election requires an absolute majority. Most real-world examples of this system come from Australia, but it has also seen use elsewhere.

An example from the 1952 election in the Canadian province of British Columbia (Table 1) clarifies how it works.

Voters could rank as many of the four candidates as they liked, and the "first count" column shows how many placed each candidate in first place. None of the four had the necessary majority (5,771) immediately, so the last-place candidate, the Progressive Conservative (P.C.), was eliminated. The second-count "transfer" column shows how the 1,690 ballots on which Wright was ranked first were then redistributed: 169 of those ballots had no further rankings, and were thus discarded; 937 of them had Turnbull ranked second; and so on. Following elimination of the candidate from the Co-operative Commonwealth Federation (C.C.F), the Social Credit (S.C.) candidate, Robert Sommers, ultimately won the seat on the third count.

Advocates of the alternative vote often stress that it tends to be more proportional than simple plurality election, wherein voters pick one preferred candidate and whichever candidate wins the most votes wins the seat. In other words, the proportions of votes and seats won by the parties are usually more nearly equal under the alternative vote system. Again, British Columbia illustrates. The 1952 and 1953 elections were held using the alternative vote ("vote" in Table 2 refers to first count), whereas later elections awarded seats by plurality.

Unlike proportional-representation electoral rules, which ensure very close equality between seat and vote shares, the alternative vote merely tends not to exaggerate the support for large parties when turning votes into seats as drastically as does plurality.

One criticism of the alternative vote is that getting higher rankings can actually cause a candidate to lose a seat. The example in Table 3, devised by Steven Brams and Peter Fishburn, demonstrates this surprising trait. Candidates A, B, C, and D are competing for the seat, and the voters fall into four types, according to their preference rankings.

The outcome is a win by candidate A, as shown in Table 4 (since all voters ranked all candidates, exhausted ballots play no role).

Now suppose that the Type-IV voters move A up from last place to first place, so that their rank ordering is A, D, C, B. If all other voters remain the same, the outcome is now shown in Table 5.

		second count		third count	
Candidate (Party)	**first count**	**transfer**	**result**	**transfer**	**result**
Turnbull (Liberal)	3,331	+937	4,268	+535	4,803
Wright (P.C.)	1,690	−1,690	—	—	—
Johnson (C.C.F.)	2,541	+259	2,800	−2,800	—
Sommers (S.C.)	3,979	+325	4,304	+1,613	5,917
exhausted ballots	—	169		652	
TOTAL (minus ex'd)	11,541		11,372		10,720
required majority	5,771		5,687		5,361

Table 1: Rossland-Trail Electoral District

	1952		1953		1956		1960	
	vote %	**seat %**	**vote %**	**seat %**	**vote %**	**seat %**	**vote %**	**seat %**
Conservatives	17	8	6	2	3	0	7	0
Liberals	24	13	24	8	22	4	21	8
C.C.F.	31	38	31	30	28	19	33	31
Social Credit	27	40	38	58	46	75	39	62
other	1	2	1	2	1	2	0	0

Table 2

	Type I (7)	**Type II (6)**	**Type III (5)**	**Type IV (3)**
rank 1st	A	B	C	D
rank 2nd	B	A	B	C
rank 3rd	C	C	A	B
rank 4th	D	D	D	A

Table 3

		second count		third count	
Candidate	**first count**	**transfer**	**result**	**transfer**	**result**
A	7		7	+6	13
B	6		6	−6	—
C	5	+3	8		8
D	3	−3	—		—

Table 4

		second count		third count	
Candidate	**first count**	**transfer**	**result**	**transfer**	**result**
A	10		10		10
B	6		6	+5	11
C	5		5	−5	—
D	0	−0	—		—

Table 5

Candidate B wins. Candidate A did worse (losing, not winning) because some voters gave him a *higher* ranking. If voters recognize the possibility of outcomes like this, they have incentives to misrepresent their preferences. Surprisingly, however, all electoral systems are vulnerable to such strategic voting.

SEE ALSO *Elections; Electoral Systems; Voting; Voting Schemes*

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Brian J. Gaines

VOTING

Voting is the central act of democracy, the method by which citizens influence the policy of the state by holding the leaders who represent them accountable for their decisions. It is also the means by which elected leaders make decisions in legislatures, and it is used outside government in businesses, civic organizations, social groups, and families in every modern society. This entry focuses on voting for elected offices because that type of voting defines democracy.

WHY DO PEOPLE VOTE?

Does voting make a difference? Almost all political scientists agree that political leaders in democracies respond to voters in a way that leaders in undemocratic, or "authoritarian," countries do not. Because representatives in democracies are accountable to voters, they are much more likely to do things that benefit large sectors of society (rather than their friends and families)—for example, providing public goods such as infrastructure, public safety, and education and adhering to the rule of law rather than relying on arbitrary decisions about who should have access to government resources.

Political leaders in authoritarian countries are not entirely unaccountable to ordinary citizens. They must provide at least minimal government services or they eventually will face revolt or at the very least citizens who express their displeasure by cheating the system, refusing to do what they are told when no one is watching, and engaging in other subtle forms of resistance. When politicians must compete against one another for votes, the degree of accountability to ordinary citizens is much higher, much as merchants in a competitive marketplace offer better prices and higher quality than does a seller with a monopoly.

Though voting is clearly important for society as a whole, the question of why individuals vote is more problematic: One vote among thousands seems to matter very little. This is a classic example of a collective action problem in which many people working together can produce something that benefits them all but any individual's contribution adds little to the whole and its absence will not be missed; as a result any particular person has little incentive to contribute. For the individual, then, voting appears to be irrational because one vote would not change the outcome but voters and nonvoters alike share the results.

In some political systems politicians solve this problem by trading money or favors to the citizens who are willing to vote for them, a practice known as patronage. Although this strategy motivates people to vote, most scholars believe it compromises the nature of democracy. Another strategy is to instill civic pride and responsibility in voters so that they see voting as an important part of their role in the community. This strategy also can work for dedicated groups within a larger society, such as labor unions, which often expend a great deal of effort encouraging their members to vote. Some societies even adopt compulsory voting, forcing citizens who do not vote to pay fines. Also, whatever people perceive the benefits of voting to be, they are more likely to vote if casting a vote is easy to do.

In part because politicians, parties, and governments in different countries have adopted different strategies to encourage citizens to vote and in part because of differences in political cultures among countries, levels of voter turnout vary dramatically from one country to the next and often change over time. The United States, for example, had lower voter turnout rates throughout the twentieth century than those of most other rich democracies, and that pattern continued into the twenty-first century; however, turnout rates in most Western European countries declined after the 1970s, whereas U.S. rates remained stable over that period among eligible voters (though the presence of increasing numbers of noncitizens and disenfranchised convicts in the population created the appearance of a decline in U.S. turnouts). Especially low turnouts can call the legitimacy of elections into question because actual voters may not be representative of society as whole. Because poorer and less educated voters are less likely to turn out than are their fellow citizens, low turnouts harm parties that draw more support from those voters.

THE HISTORY OF VOTING

Voting dates at least from ancient times, with well-known examples including the Greek city-state of Athens, the republic of Rome, and the direct ancestors of modern leg-

islatures: the assemblies, or parliaments, of medieval Europe. In all those cases the only people allowed to vote were males who held important social positions (members of the nobility or clergy) or owned a certain amount of property; the vast majority of adults, including women, could not vote.

The fight to create democratic government in Europe was therefore as much a fight over who got to vote as it was a fight over whether the king or the parliament would be supreme. Disenfranchised groups placed the right to vote at the forefront of their fights for equality both for its symbolic importance as the mark of full citizenship and because it gave them the political power to pursue other goals. During the nineteenth and early twentieth centuries pressure from the lower classes, often organized by labor unions, resulted in the lowering of property qualifications until finally universal male suffrage became the norm throughout Europe and the Americas. Beginning in the late nineteenth century, those countries witnessed a push to give women the right to vote, and by the late twentieth century nearly every country in the world had adopted universal suffrage.

As a result the right to vote ceased to be the true measure of democracy because authoritarians found ways to give people the right to vote without turning over real political power. One example was the American South, where the United States freed black slaves and gave them the right to vote after the Civil War ended in 1865. Strict requirements such as literacy tests and poll taxes (requirements usually waived for poor, uneducated whites) prevented blacks from voting until those measures were overturned by the Voting Rights Act of 1965. In the first decade of the twenty-first century laws in many U.S. states that prevented convicts and even ex-convicts from voting continued to affect blacks disproportionately.

A far more popular strategy has been to ban all political parties other than the ruling party or to make it difficult for other parties to organize and campaign. A more subtle method to reduce the power of the vote is the practice of patronage, or "machine" politics, in which politicians trade money or favors for votes; this practice was easier to implement before the secret ballot was adopted in most countries in the late nineteenth century, but politicians have devised numerous ways to reward loyalty and punish disloyalty even when votes are secret. Those politicians are accountable to voters, but there is little political competition; the politicians are political monopolists and are less responsive to voters than are politicians in a competitive system.

In a society with deep ethnic, racial, or national divisions, the members of each ethnic group typically vote only for politicians and parties of their own group. Some scholars consider ethnic solidarity in voting a reasonable exercise in self-determination, especially when minority groups attempt to oppose an oppressive majority. However, other scholars argue that not only does this situation produce a monopolistic relationship between leaders and voters that encourages patronage, but when the majority as well as the minority votes along ethnic lines, the majority wins every election and the minority has little reason to participate in the political system, a situation that leads to conflict that may turn violent.

In some countries legislators represent districts with unequal numbers of constituents, giving voters in smaller districts more power. This normally happens for historical reasons (for example, when people move from rural districts to urban ones), but parties with strong support in the smaller districts typically oppose any changes. In addition, officeholders sometimes "gerrymander" district boundaries, drawing them so that even if districts are equal in size, they tend to favor the election of one party or of incumbents in general.

Even when everyone has an equal right to vote and elections are competitive, casting votes may be difficult. In the United States citizens must register to vote before an election, and this requires extra time and effort. By contrast, in many countries all adult citizens are automatically eligible to vote. The actual act of voting may be problematic as well, especially when elections are held on working days or transportation to the polls is difficult to obtain. Low levels of education also may pose a barrier because people who cannot read or understand complex political concepts may have little ability to choose candidates wisely and little interest in doing so. Negative campaign ads and bad weather discourage many voters, strengthening the role of the most dedicated (and typically most extreme). Some scholars have argued that voters can grow apathetic as a result of "election fatigue" resulting from multiple elections within a specific period or multiple races at each election. The United States, with its many state and local as well as national elections, provides a clear example of this problem. Because many barriers to voting disproportionately affect the poor and less educated, efforts to raise or lower those barriers often become the objects of political dispute, with parties that draw more votes from the affected groups arguing for lower barriers.

At the other end of the spectrum the ability to provide campaign contributions or mobilize voters may give rich individuals and well-organized groups a more powerful voice in elections. Though all countries have restrictions on these sorts of activities, it seems unlikely that those advantages can be eliminated completely, and some scholars argue that private funding of political causes is necessary to provide true opposition to the government in power.

ELECTORAL SYSTEMS

Except in a few small communities where citizens vote directly on every issue, voters elect representatives to a legislature and, in some countries, executive offices such as the presidency. The first traditional method of electing legislatures is single-member districts (SMDs), in which the candidate who receives the most votes is elected; in countries with presidential systems presidents usually are elected this way. SMDs tend to produce two-party systems because parties with similar ideologies are more likely to win in each district by uniting. This system encourages direct accountability of representatives to a set of constituents, and this can make individual politicians more important than parties; however, the presence of only two parties gives voters a clear choice.

The other traditional form of voting is proportional representation (PR), in which each district elects many representatives and people vote for parties rather than individual candidates, with each party receiving a share of seats in the legislature proportional to its vote (in a rare variant known as the single transferable vote system [STV] voters actually vote for individual candidates, listing them in order of preference, but the system nonetheless produces proportional representation of parties). PR produces multiparty systems, requiring parties to form coalitions to rule. Because people vote for parties in PR systems, parties are usually strong and have clear platforms. In addition, voters never fear that their votes will be wasted as a result of their living in districts where their parties are always in the minority.

Because of this, it is thought that PR systems favor minorities whose members are spread evenly across geographical districts: In an SMD system a minority that is a minority in every district will win no seats, whereas in a PR system it will win a percentage equal to its share of the population. In practice, however, a minority that would lose every seat in an SMD system would end up with a minority in a PR system and thus, despite having symbolically important seats in the legislature, would be unable to pass legislation unless it could take part in a coalition (and a coalition would work equally well to gain a majority in SMDs), though in most legislatures a sizable minority may be able to block certain legislation or at least prevent constitutional amendments.

This concern applies most clearly when an electoral minority is a permanent one, as is the case in an ethnically divided country. In a competitive democracy, whether SMD or PR, the greatest barrier to "tyranny of the majority" is that no majority is permanent and therefore the members of the current majority have incentives both to treat potential future allies in the current minority well and to institutionalize respect for the minority because they themselves will be in the minority eventually.

Some countries have adopted other systems in an attempt to combine the best features of SMDs and PR. An open-list PR system allows voters to choose specific candidates within each party. An SMD system with a primary election allows voters to choose among competing candidates with similar ideologies in the primary. This narrows the choice in the general election to a clear one between two (or at most a few) candidates; holding a runoff if no candidate wins a majority in an election works in much the same way. Multiple voting allows each voter to vote for several different candidates in one district; each voter receives a number of votes equal to the number of offices to be filled, with all candidates competing against one another. An SMD system with alternative voting lets voters rank candidates in order of preference, allowing someone to support a first-choice party without hurting the chances of a second-choice party to win out over parties the voter dislikes; like STV, this is a rare variant. A few countries have adopted a mixed system in which some representatives are chosen in SMDs and others are elected by PR.

Older democracies tend to use one system or another for historical reasons. Newer democracies and those that have undergone major constitutional reforms are more likely to use systems like those of neighboring countries or their former colonial rulers (SMDs in the Americas and PR in Europe, for example) or to use one of the new systems.

In addition to electing representatives and executive officers such as presidents, voters sometimes vote directly on important issues, especially constitutions or constitutional amendments. This practice, called a referendum, was pioneered by Switzerland and has become increasingly common throughout the world.

ELECTORAL SYSTEMS IN LEGISLATURES AND OUTSIDE GOVERNMENT

Voting is also important within legislatures: Governments and laws must be approved by a majority of representatives. Secret ballots are uncommon in legislatures because they make it difficult for constituents to hold legislators accountable. In addition, when parties are strong, legislators almost always vote as their party leaders direct. The result is that a government in a system with strong parties wins nearly every vote, especially in the typical parliamentary system, where a government must have a majority of the seats in the legislature to take power in the first place.

The electoral systems used outside government often mimic governmental systems. For example, the members of a large club usually elect a board of directors and a president and other executive officers. However, there may be important differences. For example, many organizations

use open voting rather than a secret ballot, and in corporations the shareholders have as many votes as they own shares rather than one vote each.

HOW DO PEOPLE DECIDE WHOM TO VOTE FOR?

Many factors enter into citizens' decisions about how to vote, and with the exception of ethnicity in an ethnically divided country no single factor overshadows the rest. Profession and economic class, religion, gender, region, the values instilled by parents, and longtime identification with a party can all play a role, as can events during the lifetime of a voter, such as the Great Depression and the 9/11 attacks. This complexity is probably for the best because having voters pulled in many different directions by cross-pressures tends to moderate conflicts and forces politicians to compete for votes.

Researchers generally agree, however, that except in patronage systems, voters rarely vote on the basis of narrow self-interest; they are more likely to vote on the basis of the interests of a large social group or the country as a whole. Citizens also tend to vote retrospectively, rewarding or punishing incumbents for the results of previous years, especially economic results, rather than guessing how candidates may perform in the future.

SEE ALSO *Compulsory Voting; Democracy; Elections; Electoral Systems; Party Systems, Competitive; Political Parties; Suffrage, Women's; Vote, Alternative; Voting Patterns; Voting Rights Act; Voting Schemes; Women's Movement*

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VOTING, COMPULSORY

SEE *Compulsory Voting.*

VOTING, MAJORITY

SEE *Majority Voting.*

VOTING, PARADOX OF

SEE *Paradox of Voting.*

VOTING PATTERNS

Political scientists often study voting patterns to determine partisan preferences among selected voter groups. Voter groups, such as those based on income levels, education levels, gender, age, regional location, religion, race, or ethnicity, have historically changed their partisan preferences at times in a process called realignment.

Political scientist V. O. Key Jr., in "A Theory of Critical Elections" (1955), defined realignment as occurring when cross-cutting issues tear apart old partisan alliances and create new ones during an election cycle. For instance, in the 1930s, American president Franklin Roosevelt's New Deal policies of union rights, government jobs programs, and social welfare caused large groups of voters who had previously voted Republican to switch to the Democrats.

Political scientist Walter Dean Burnham (1970) elaborated on the critical election theory of American politics, finding a cyclical pattern of every thirty to forty years for such a phenomenon and stating that such elections tend to create a new majority political party for decades afterward.

Because no critical election has been apparent in modern American politics, more recent political science studies of voting patterns tend to focus on the more gradual realignment processes that appear to have occurred since the 1950s or on the concept of dealignment, a belief that partisan attachments among voters are in decline. Studies of modern voting patterns outside of the United States also usually examine long-term realigning processes or a decline of long-term partisan attachments among voters.

Throughout history, democratic elections and partisan divisions around the world have often been organized along regional, ethnic, and religious lines. Class distinctions in voting patterns became important in many countries in the late nineteenth and early twentieth centuries. And by the end of the twentieth century, partisan voting differences related to race, educational level, age, and gender also became apparent in many countries.

While specific issues are important in explaining some of the partisan divisions and voting patterns, shared cultural attitudes toward government, society, and other groups often provide a stronger explanation. Examples are plenty among democracies of one group in society favoring a political party while another group in historical, social, or political opposition to the first group favors another political party.

AMERICAN HISTORICAL VOTING PATTERNS

In the United States, regional divisions became strong immediately prior to and after the Civil War of 1861–1865. Following the war, many northern parts of the United States, which had favored the abolition of slavery, supported the new Republican Party, while most white voters in the southern United States, who had opposed abolition, favored the Democrats. While the South also had a large African American population, most of that population was prevented from voting through intimidation and legal measures for much of the period between 1877 and 1965.

These regional divisions strengthened in the 1890s when a Populist agrarian and fundamentalist Christian movement took over the Democratic Party, and most Catholic immigrant populations in the northern United States joined northern Protestants in voting solidly Republican for the following forty years. However, Catholic voters in New York City remained mostly Democratic, and by the 1910s and 1920s, the majority Republican Party had split between a conservative wing and a progressive wing.

During the years of the Great Depression in the 1930s, Democratic president Franklin Roosevelt put together a "New Deal coalition" of support for the now majority Democratic Party by supporting new social welfare programs and union rights for working-class Americans, including Catholics, Jews, and African Americans in the North, as well as government reforms to appeal to progressive, educated voters and infrastructure spending to continue the support from southern white voters.

However, a party that tried to create a coalition of northern progressive voters, African Americans, and southern white conservative voters in the United States was doomed not to last, and by the 1960s, the Democratic New Deal coalition fell apart over such issues as equal rights for African Americans, the Vietnam War, environmental and consumer regulations, religious and family values, and gun control and responses to crime.

Prior to the 1960s, both the Democrats and the Republicans in the United States were catchall parties containing members and politicians from all ideological persuasions. But the realignment that began in the 1960s made the Republicans into a clearly conservative party favoring less government regulation, more military spending, imposition of the death penalty for violent crimes, opposition to limits on gun ownership, and support for traditional cultural values such as prayer in schools and opposition to gay marriage. Much of this shift in Republican ideology came from the strengthened role of southern politicians and voters in the party. The Democrats took stances opposite to the Republicans on most of those issues. Moderates did remain in each party, however, sometimes taking positions closer to the majority from the other party.

MODERN AMERICAN VOTING PATTERNS

This change in U.S. voting patterns has led to what many in the American media labeled the division of the "red states and the blue states," named for a color-coded map used in the 2000 presidential election showing which states voted for the Republican presidential candidate and which voted for the Democratic candidate. On this map, Republican states were red, with Democratic states blue.

American voting patterns had evolved in the early twenty-first century to the regional opposite of what they had been a hundred years earlier. In the four presidential elections occurring between 1992 and 2004, the Democratic Party swept almost entirely the states of the Northeast and Pacific Coast areas as well as the states bordering on the Great Lakes in the Midwest region. The Republican Party during those elections swept almost entirely the states of the South and of the center of the country west from the Great Lakes through the Rocky Mountain region.

Strong racial and religious voting patterns also emerged in the United States over the period after the 1950s, with African Americans and Jewish Americans overwhelmingly supporting the Democrats, and the most religious white Americans strongly favoring Republicans.

While a majority of higher income U.S. voters continued to support the Republican Party in the early twenty-first century because of the party's stance on low taxes, voting patterns based on educational levels began to change after the 1950s. Over the following fifty years, while the voters with the lowest educational levels and lowest incomes tended to remain as Democratic supporters, the voters with the highest educational levels, with graduate degrees, also became more Democratic, making the party to some extent a coalition of the most educated and least educated. The Republicans were at their strongest among those who had completed some years of university but had not finished.

A gender gap also opened up in the United States during the 1980s and continued into the twenty-first century. In every presidential election from 1988 to 2004, women preferred the Democratic presidential candidate, while men preferred the Republican presidential candidate, according to polls.

The presidential election of 2004 also showed the beginning of a possible new generation gap in American voting patterns, with voters under age thirty preferring the Democratic candidate for president, and older voters preferring the Republican.

MODERN VOTING PATTERNS AROUND THE WORLD

Such voting patterns and divisions of voter groups can be found in most other countries with democratic elections. Traditional economic class divisions between working-class voter support for left-wing parties and middle- and upper-class support for right-wing parties in Europe were common for much of the twentieth century, but many of those divisions began to blur by the end of the century as some voters focused more on noneconomic issues.

Regional divisions in voting patterns have been strong in many countries. In Canada, the Conservative Party dominated in the western part of the country in the early twenty-first century, while the Liberal Party dominated the most populous province of Ontario, and parties advocating independence for Quebec tended to dominate politics in that province.

In the United Kingdom, the Conservative Party in the early twenty-first century had trouble winning any parliamentary seats in the northern part of England, and in Scotland and Wales, limiting its ability to form a new majority in the House of Commons. Voting patterns in many other European countries showed a strong regional basis in the early twenty-first century, with a former Communist party winning many votes in the former East Germany in German elections, a Northern League regional party in Italy participating in government coalitions, and Basque and Catalan regional nationalist parties winning a number of seats in the Spanish Cortes Generales.

VOTER TURNOUT

Voter turnout is a political phenomenon related to voting patterns, with voter turnout usually being defined as the percentage of the voting-age population who participate in an election, though the exact method by which turnout is measured can vary by country. In general, the United States and Switzerland have long had the lowest voter turnout among economically advanced countries, in part because of the frequency and complexity of elections in those countries. In the United States, only about half of adults were voting in presidential elections by the end of the twentieth century, with far lower numbers for other types of elections.

While turnout in other economically advanced democracies was generally much higher than in the United States during the 1900s, the trend in most countries has been toward declining turnout closer to the American tradition, with younger and less educated voters in particular among the least likely to participate in elections. Such a global decline in voter turnout may also have implications for changes in voting patterns throughout the twenty-first century.

SEE ALSO *Conservative Party (Britain); Democratic Party, U.S.; Elections; Electoral Systems; Gender Gap; Great Depression; Jim Crow; New Deal, The; Politics, Black; Politics, Southern; Reconstruction Era (U.S.); Republican Party; Slavery; Voting*

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Robert W. Speel

VOTING RIGHTS ACT

On July 27, 2006, President George W. Bush signed the Fannie Lou Hamer, Rosa Parks, and Coretta Scott King Voting Rights Reauthorization and Amendments Act of 2006 into law. That act extended several key but nonpermanent parts of the Voting Rights Act (VRA) of 1965 and its subsequent amendments.

The renewal was preceded by debates about whether the VRA was still necessary. The VRA is and has been one

of the most important laws in American history. Aimed at eradicating systematic discrimination against minorities and specifically at securing their voting rights, the VRA enabled the federal government to take affirmative steps toward ensuring racial equality and political fairness. Nonetheless, the renewal and extension of the VRA in July 2006 indicated that the battle to achieve nationwide political fairness was not over.

BACKGROUND AND GENESIS

The Voting Rights Act was signed into law by President Lyndon Johnson on August 6, 1965. The act was passed essentially to enforce the provisions of the Fifteenth Amendment, which states, "The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color or previous condition of servitude." Despite the passage of the Fifteenth Amendment, along with the Thirteenth and Fourteenth Amendments to the Constitution, blacks systematically had been denied access to the franchise and the free exercise of their constitutional rights for the better part of a century.

The president's determination to introduce the VRA was crystallized by the events of February and March 1965. The Reverend Martin Luther King had been arrested in Selma, Alabama. Peaceful protest marches ensued as King and other civil rights workers attempted to organize resistance to the institutionalized system of racial discrimination known as Jim Crow. The peaceful marches were met and dispersed by police violence. Clergy and other marchers were beaten and in some cases killed.

On March 7 marchers seeking to march from Selma to Montgomery were stopped on the Edmund Pettus Bridge leading out of Selma. There the marchers were beaten in another outbreak of police violence. This time, however, the violence was broadcast on national television.

On March 15, 1965, President Johnson spoke to a special joint session of Congress. In that speech he acknowledged that despite the passage of the Fifteenth Amendment black voters had been prevented systematically from exercising the franchise: "Experience has shown that the existing processes of law cannot overcome systematic and ingenious discrimination. No law that we now have on the books—and I have helped to put three of them there—can ensure the right to vote when local officials are determined to deny it" (Johnson 1965).

THE VOTING RIGHTS ACT OF 1965

The key provisions of the VRA were as follows:

- Section 2 of the act essentially restated the Fifteenth Amendment: "No voting qualification or prerequisite to voting, or standard, practice, or procedure shall be imposed or applied by any State or political subdivision to deny or abridge the right of any citizen of the United States to vote on account of race or color."
- Section 4 explicitly forbade the use of literacy tests or other devices to deny citizens access to the franchise or the polling booths.
- Section 5 imposed "preclearance requirements" on any state or political subdivision that as of November 1, 1964, had used literacy tests and in which less than 50 percent of the voting-age population was registered to vote or in which less than 50 percent of registered voters voted in the presidential election of 1964.

In any political subdivision that met those criteria Section 5 required that the government submit any change to a "voting qualification or prerequisite to voting, or standard, practice, or procedure with respect to voting different from that in force or effect on November 1, 1964" to the United States District Court for the District of Columbia or the United States Department of Justice for approval. Section 5 thus was designed to prevent surreptitious or invidious attempts by local or state governments to continue to disenfranchise minority voters despite the intent of the VRA.

CONTROVERSIES

Several controversies arose as a result of the VRA, and all of them led to Supreme Court litigation. The first dealt with the scope of the act. What actually constituted a "voting qualification or prerequisite to voting, or standard, practice, or procedure with respect to voting"? Local officials who tried to resist the VRA took advantage of that ambiguity to craft subtle but effective practices that would limit the capacity of minorities to vote. As Abigail Thernstrom noted in 1987, "By 1969 public officials in Mississippi and elsewhere had made all too plain their readiness to alter the electoral environment by instituting, for instance, county-wide voting, eliminating the single member districts from which some blacks were likely to get elected" (Thernstrom 1987, p. 4).

In 1969 in *Allen v. State Board of Elections* the Supreme Court heard challenges to such laws passed by several southern states. The states argued that because the changes had no impact on black voters' access to the polls, they were not covered by the VRA. However, in striking down those laws, the Supreme Court ruled that the franchise entailed more than mere access to the polls. The challenged laws included the following:

- A 1966 Mississippi law that allowed counties to change the manner in which their boards

supervisors were elected. Instead of using districts, they could use at-large elections.

- Another Mississippi law that allowed the boards of education in eleven counties to appoint the superintendent of education (instead of electing the superintendent).
- A Mississippi law that changed the requirements for independent candidates running in general elections.
- A Virginia law that changed the requirements for casting write-in ballots.

In striking down those laws, the Court ruled:

> The Voting Rights Act was aimed at the subtle, as well as the obvious, state regulations, which have the effect of denying citizens their right to vote because of their race. Moreover, compatible with the decisions of this Court, the Act gives a broad interpretation to the right to vote, recognizing that voting includes "all action necessary to make a vote effective." We are convinced that in passing the Voting Rights Act, Congress intended that state enactments such as those involved in the instant cases be subject to the 5 approval requirements. (*Allen v. State Board of Elections*, 565–566, internal citations omitted)

Thus, the Court expanded the scope and definition of the franchise to protect it from pernicious attempts to constrain its exercise.

Another major controversy arose in 1982. As it originally was written, the VRA could have been interpreted to require plaintiffs to forbid only those electoral arrangements which had been passed with the *intent* of diluting minority voting power. In 1982 Congress rewrote Section 2 to require only a demonstration that a challenged law had the *effect* of diluting minority voting strength. Legislative intent did not matter.

In *Thornburg v. Gingles* (1986) the Supreme Court sustained the new effects standard. *Gingles* thus placed a great deal of pressure on the states. It led to extensive efforts by the Justice Department to require states to draw legislative and congressional districts in a manner that would allow minority voters to constitute an electoral majority. That practice led to the creation of so-called majority-minority districts with truly bizarre shapes and gave rise to another controversy: If districts drawn to shut minority voters out of politics were unconstitutional, could districts drawn to ensure their chances of election survive constitutional scrutiny?

In *Shaw v. Reno* (1993) the Court ruled that a redistricting scheme that was "unexplainable" on grounds other than race would violate the equal protection clause of the Fourteenth Amendment. If the record indicated that racial considerations had played a determining role in the construction of a challenged district *and* if the district's shape indicated that the legislature had forsaken "traditional districting principles" to such an extent that its outline was "highly irregular," "bizarre," and "irrational on its face" (*Shaw*, 648), the redistricting plan would run afoul of the equal protection clause of the Fourteenth Amendment.

Shaw rewrote the rules of the districting process. *Gingles* had indicated that if states did not draw districts to enhance minority representational opportunities, they were guilty of vote dilution in violation of Section 2 of the VRA. According to *Shaw*, if they went too far in drawing majority-minority districts, particularly in states that did not have large demographic concentrations of African American voters, they risked a Fourteenth Amendment challenge.

SHAW AND THE DOUBLE STANDARD OF VOTING RIGHTS

After *Shaw* voting rights law was based on a double standard. Districts drawn to harm minority voters were unconstitutional, but districts drawn to help them were also unconstitutional even though it was constitutionally permissible to draw them to help other groups, such as incumbents, urban and rural voters, Democrats and Republicans, and other ethnic groups. In subsequent rulings the Supreme Court resolved that double standard by modifying its stand against racial gerrymandering.

In *Miller v. Johnson* the Court declared congressional districts in Georgia unconstitutional because the legislative record clearly demonstrated that they had been drawn with the explicit intent of maximizing the number of majority-minority districts. In her concurrence, however, Justice O'Connor indicated that the double standard in *Shaw* was problematic:

> The standard [for assessing the constitutionality of districts] would be no different if a legislature had drawn the boundaries to favor some other ethnic group; certainly the standard does not treat efforts to create majority-minority districts *less* favorably than similar efforts on behalf of other groups.… Application of the Court's standard does not throw into doubt the vast majority of the Nation's 435 congressional districts, where presumably the States have drawn the boundaries in accordance with their customary districting principles. That is so even though race may well have been considered in the redistricting process. (*Miller*, 928–929, O'Connor, J., concurring)

O'Connor thus acknowledged that factors such as race and ethnicity are part of the redistricting process.

But, she said, the *Shaw* standard at least allowed the Court to police "extreme instances of gerrymandering."

ERADICATING *SHAW*'S DOUBLE STANDARD

A majority of the Court finally acknowledged the tensions in its voting rights jurisprudence. In *Easley v. Cromartie* (2001) the Court declared majority-minority congressional districts in North Carolina constitutional despite their bizarre shapes because they were the product of a multitude of factors only one of which was race. In so doing, the Court set forth a standard of proof that made it easier for states to avert a *Shaw* challenge while simultaneously upholding the goals of the VRA.

So long as states could demonstrate that some other factor besides race played an important role in the drafting of legislative district lines, they could defend a districting scheme by explaining that race did not "predominate" (*Easley*, 258). The Court thus drew upon a statement made by Justice O'Connor in *Bush v. Vera*: "If district lines merely correlate with race because they are drawn on the basis of political affiliation, which correlates with race, there is no racial classification to justify" (*Bush v. Vera*, 968). Thus, the Court explained that "the Constitution does not place an *affirmative* obligation upon the legislature to avoid creating districts that turn out to be heavily, even majority, minority. It simply imposes an obligation not to create such districts for predominantly racial, as opposed to political or traditional, districting motivations" (*Easley*, 248).

Easley allowed courts to look at a racially remedial gerrymander and declare it nothing more than a partisan or incumbent one. By declaring that race had to be the predominant factor in a redistricting plan, the Court enabled states to defend their plans by offering a plausible partisan alternative explanation for their districting decisions. In this respect the states could cloak a racial gerrymander in partisan clothing and move on.

RETROGRESSION AND PRECLEARANCE

Although the line of cases from *Shaw* to *Cromartie* addressed the manner in which states and the Justice Department could remedy claims of vote dilution, the Supreme Court also had to address key issues concerning the preclearance provision in Section 5. Specifically, the Court had to determine the scope and definition of "retrogression." In *Georgia v. Ashcroft* (2003) the Supreme Court ruled that a reduction in the number of majority-minority districts in a covered jurisdiction did not necessarily amount to a retrogression in minority voting power. In some cases states could draw so-called minority "influence" districts. In those districts, it was argued, minority candidates could win even though the districts were not composed of a majority of minority voters.

The development of this strategy for enhancing minority voting strength was a reaction to the *Shaw* line of cases. Scholars such as Sam Hirsch (2002) had demonstrated that minority candidates could win elections in minority influence districts if their campaigns were crafted carefully. Insofar as such districts were not drawn to ensure that minority voters constituted a majority of the population, they did not run afoul of the standard set forth in *Shaw*. Speaking for the Court, Justice O'Connor stated:

> a court should not focus solely on the comparative ability of a minority group to elect a candidate of its choice. While this factor is an important one in the § 5 retrogression inquiry, it cannot be dispositive or exclusive … to maximize the electoral success of a minority group, a State may choose to create a certain number of "safe" districts, in which it is highly likely that minority voters will be able to elect the candidate of their choice. Alternatively, a State may choose to create a greater number of districts in which it is likely—although perhaps not quite as likely as under the benchmark plan—that minority voters will be able to elect candidates of their choice. (*Ashcroft*, 480)

She concluded: "Section 5 gives States the flexibility to choose one theory of effective representation over the other" (*Ashcroft*, 482).

IMPLICATIONS AND FEARS

In some aspects the decisions in *Easley v. Cromartie* and *Georgia v. Ashcroft* represent a great victory and resonate with the spirit of the VRA. They permit the practice of drawing districts to help racial and ethnic minority voters gain representation that has benefited other groups of voters throughout American history. However, they do so in a manner that prevents unabashed attempts to draw electoral districts that are guaranteed to produce a particular result. In this respect they manifest a bizarre irony: The battle to end discrimination against minority voters by gerrymandering electoral districts has been won by giving minorities the same chance as every other political group to gerrymander electoral districts in their favor.

The controversy surrounding ways to define and prevent minority vote dilution and retrogression remains a key focus of the VRA. However, although academic debates about the superiority of majority-minority districts or minority influence districts endure, they demonstrate the positive impact of the VRA. Instead of fighting to protect minority voting rights, scholars and practitioners now debate how best to protect the franchise.

Despite these advances the possibility that some parts of the VRA might have expired in 2007 generated contro-

versy and debate. Studies by many organizations ranging from the American Civil Liberties Union to the National Commission on the Voting Rights Act demonstrated that in many ways many Americans still were unable to exercise the franchise freely.

The renewal of the language provisions manifested the scope and complexity of expanding voting rights protections further. As the election of 2000 and the passage of the Help America Vote Act demonstrated, many obstacles to the truly free exercise of the franchise have continued to exist. They range from making sure that non–English speakers are able to register and vote to ensuring that voting procedures are not confusing and that voting machines function properly.

Thus, although the VRA and the ensuing Supreme Court decisions have resulted in a fairer process of drawing voting districts and a means by which the federal government can be called on to oversee changes in local election laws, the renewal of the nonpermanent provisions of the act in 2007 demonstrates the need to continue policing the electoral process and the renewed national commitment to preserving the integrity of American democracy.

SEE ALSO *Gerrymandering; Jim Crow; King, Martin Luther, Jr.; Politics, Black; Politics, Southern; Protest; Race; Racism; Supreme Court, U.S.; Violence*

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Mark Rush

VOTING SCHEMES

Voting schemes are methods of combining individual preferences to arrive at the aggregate preferences of the group. The study of the effects of different voting schemes is called *social choice theory*. Perhaps the seminal work in the modern study of voting schemes is Kenneth Arrow's *Social Choice and Individual Values* (1951). In that work, Arrow lays out five attributes that ought to exist in any fair and just voting scheme, then goes on to say that no scheme can simultaneously incorporate all five attributes.

Arrow's *impossibility theorem* implies that there is no one best voting scheme. To that end, democracies have experimented with a number of different voting schemes. The question of which voting scheme to use is not merely trivia, because the type of voting scheme that is adopted almost certainly has effects on electoral outcomes. For example, consider the following election with three candidates, one hundred voters, and three types of voters:

- There are thirty-five type-one voters who prefer candidate A most, then candidate B, then candidate C.
- There are thirty-three type-two voters who prefer candidate C most, then candidate B, then candidate A.
- There are thirty-two type-three voters who prefer candidate B most, then candidate C, then candidate A.

It is easy to see that the election above is not decisive under majority voting, since no candidate garners a majority of votes. Two very popular voting schemes are *plurality rule*, whereby the candidate who receives the most votes wins, and *majority rule with runoff*, whereby the top two vote-getters in the first election compete in a second election to determine the winner. Under plurality rule, which is used in countries such as Great Britain and Canada, candidate A would win with 35 percent of the vote. Under majority rule with runoff, which is used in countries such as France and Brazil, candidates A and C would go to the runoff election, where candidate C would win with 65 percent of the vote (since all type-three voters would join with type-two voters in supporting candidate C).

One important determinant of the voting scheme is the country's type of regime. Democracies can differ on a number of variables. For example, in *unitary* systems, the country is governed in a single unit, often the parliament, which elects a prime minister to serve as an executive. Great Britain, Israel, and Chile are examples of unitary states. At the same time, other countries are *federal* systems, whereby governing authority is held in different locations. Often, states or provinces share governing authority with a national government. Examples of federations include the United States, Russia, and Brazil. Smaller countries often tend to be unitary systems, whereas larger ones are more likely to be federations, although there are exceptions. For example, Switzerland is a relatively small country, but has a federal system.

Many unitary countries use *proportional representation* (PR) electoral systems, although Great Britain and other Westminster systems are notable exceptions. In PR systems, parties receive representation in the nation's legislature that is proportionate to the percentage of votes the party received in the last election. In these systems, parties prepare lists of candidates. In *open-list* systems, such as those of Chile and Sweden, voters can choose individual candidates from the parties' lists. In contrast, voters in *closed-list* systems, such as that of Israel, select only the party, and the choice of the candidates is left up to party leaders. PR systems tend to have very disciplined parties within their legislatures, meaning that party members virtually always vote the same way on legislative proposals. This is because parties control the lists, and can therefore punish rogue representatives by keeping them off the lists.

On the other hand, many federal systems and some unitary systems use *winner-take-all* elections, whereby one candidate wins an election to represent the people living in a particular geographic area. This is how elections work in, for example, the United States and Great Britain. According to Duverger's law (1963), systems that use winner-take-all elections, sometimes called *first-past-the-post* elections, tend to have only two parties. This is because such systems provide no incentive for coming in second place. In winner-take-all systems, a candidate who receives 45 percent of the vote wins nothing, whereas such a candidate would receive about 45 percent of the legislative seats in a PR system. For this reason, politicians are better off coalescing into two parties prior to an election in winner-take-all systems, but do not face that same incentive in PR systems. As a result, PR systems tend to have many small parties, whereas winner-take-all systems tend to have only two.

Furthermore, political activists often advocate for implementing new voting schemes because the voting scheme selected has such a strong effect on the political landscape of a democracy. For example, we saw above that voting schemes affect the number of parties in an electoral system. Other systems are advocated because they could increase the amount of representation minority groups receive. For example, *cumulative voting* is a voting scheme in which voters elect several representatives, and have the same number of votes as there are empty seats to fill. Voters may opt to use those votes to vote for different candidates, or they may cumulate their votes onto one candidate whom they most prefer. In this way, advocates argue, members of minority groups can cumulate their votes onto one candidate, thereby increasing the chances that their one candidate will win. At the same time, advocates of *approval voting* argue that their system encourages voters to accurately report their true preferences, rather than misstating them in an effort to gain some strategic advantage. In this type of system, voters deem each candidate either "approved" or "not approved," and the candidate with the most "approved" votes wins. Furthermore, advocates of *single transferable voting*, often called *instant runoff voting*, argue that their system discourages negative campaigning and provides incentives for sincere voting. In this system, voters provide a ranking of candidates from most to least favored. Counting votes entails adding up all of the most-favored votes and dropping the candidates with the lowest number of votes. Then, the votes of all those who ranked the dropped candidate first transfer to their next-most-preferred candidate, and the process continues until a winner is determined.

SEE ALSO *Elections; Electoral Systems; Vote, Alternative; Voting; Voting Patterns*

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Kristin Kanthak

VOUCHERS, SCHOOL

SEE *School Vouchers.*

VULNERABILITY

The concept of vulnerability is derived from the Latin *vulnus* or "wound." Its etymology signifies the human potential to be wounded, that is, to experience physical trauma. In modern usage, the notion refers to both physical and psychological harm: It indicates human exposure to psychological harm, moral damage, or spiritual threat. *Vulnerability* more generally includes our ability to suffer psychologically, morally, and spiritually rather than simply a physical capacity for pain from our exposure to the physical world. Our common human vulnerability as illustrated by our morbidity and mortality can be regarded as the basis for shared human rights, such as the right to life itself. Modern revulsion against torture in international legal codes illustrates the common theme of vulnerability running through human rights declarations.

In referring to hazards and disasters, the notion of vulnerability draws attention to the risky relationship between people and their natural environments. Various major disasters in modern times—Hurricane Katrina (2005), the tsunami disaster (2004), the earthquake in Kobe, Japan (1995), and severe droughts across Africa—have encouraged governments and international agencies to seek improved measures of risks and vulnerabilities.

More recently, vulnerability refers in computer sciences to weaknesses in a system that permit an attacker to compromise the integrity, security, and confidentiality of the system, its data, and its applications. Computer vulnerability of a construct exists when many program faults can be traced to it. One important task of computer software programs is to devise appropriate tools that can assist in the discovery and removal of such vulnerabilities as input validation errors.

Various attempts have been made to create standardized measurement systems to provide accurate information on risks and vulnerability. For example, in the realm of information technology security, the U.S. National Infrastructure Advisory Council has promoted the Common Vulnerability Scoring System, which provides universal standard ratings of vulnerabilities. The challenge is to get these measurement criteria universally accepted. In 1973 the United Nations University was created and now incorporates the Institute for Environment and Human Security (UNU-EHS), which exists to study acute environmental hazards. Its journal, *SOURCE*, has published research that attempts to provide coherent and unified criteria for understanding hazards.

Vulnerability research covers a range of complex fields, such as political ecology, security studies, and disaster and risk management. This research is important for organizations trying to reduce vulnerability. Major research questions are concerned with measuring, assessing, and preventing vulnerability. Although much of this research is concerned with assessing environmental risk, social vulnerability is an important branch of vulnerability research. In this context, vulnerability research considers how different social groups are exposed to natural hazards and major social disruptions. One example is research on the vulnerability of isolated elderly men in the inner-city areas of Chicago who were found to suffer an "excess" of fatalities (as compared to other social groups in the city) during the heat wave of July 1995.

Social risk management (SRM) is a developing academic field associated with attempts to limit poverty and analyze the causes of poverty, including the interaction between empowerment, security, opportunity, and poverty. The threat of SARS (severe acute respiratory syndrome) and avian influenza has illustrated the vulnerability of modern societies, especially in the developing world, to the globalization of acute infections, to which traditional quarantine techniques are inadequate policy responses. There is a close relationship between SRM and world development programs that attempt to predict poverty and address its causes. These developments now fall under the general heading of *prevention science*, which applies the social sciences to a broad range of modern crises on the model that has been developed by public health strategies.

Risk assessment of vulnerable groups plays an important role in public health programs. An early illustration can be taken from the research of George Brown and Tirril Harris (1978) into the social causes of depression among young women in London. They found that the "vulnerability factors" included the loss of a mother before the age of eleven, lack of employment, and three or more children at home under the age of fourteen. The most significant protection against depression was the presence of an intimate friend. An effective social network lowers the risk of clinical depression. Adolescent children are at risk, and suicides among young people have in recent years increased dramatically. In the United States, suicide is the

third leading cause of death for twenty-four-year-olds and the sixth leading cause of death for children between the ages of five and fourteen. Various agencies—the American Psychological Association, Usenet newsgroups, and the National Clearinghouse on Child Abuse and Neglect Information—provide checklists to assess behavioral changes in young people that might indicate increasing risk of self harm, including suicide, such as a change in eating and sleeping habits, withdrawal from friends, violent behavior, and drug use. The Behavioral Risk Factor Surveillance System (BRFSS) is the world's largest ongoing telephone health survey system tracking health conditions and risk behavior in the United States through fifty state health departments.

With the aging of populations in developed societies, the leading causes of death have changed from infectious disease in infants to geriatric conditions—stroke, heart attack, and cancer—among the elderly. For example, the American Heart Association has identified several risk factors associated with heart disease, such as increasing age, male sex, and hereditary. There are also lifestyle factors that make people vulnerable, such as smoking, physical inactivity, obesity, and diabetes mellitus. Starting with research in the 1950s, psychologists argued that there was an "executive disease" among white-collar employees in the corporate world. American cardiologists claimed that *type-A* men were competitive and ambitious, and their corporate lifestyle made them vulnerable to heart attack as a consequence of high levels of stress. Medical debate has concentrated on assessing whether vulnerability to disease is produced by environmental factors (such as pollution) that can be modified by legislation and political intervention, or whether the primary causes are genetic, where medical intervention (such as genetic counseling for Huntington's disease) involves long-term strategies. The evidence suggests that disease is a product of both environmental and genetic causes, and requires appropriate strategies to address both social and genetic dimensions.

The growth of prevention sciences (for consistency with above changes) can be seen as a response to the common perception that the world is becoming increasingly risky. The economic and social assessment of risk arose from attempts to calculate profit and loss in the growing international trade in the sixteenth and seventeenth centuries. With modernization, there is greater interconnectivity between societies, making the rapid spread of infectious disease more problematic. With technological development, the risks of industrial pollution and hazard are much greater. With growing sophistication in military technology, the risk of intended and unintended military disaster is also much greater. In short, with modern social change, human vulnerability and institutional precariousness increase.

These social and technological changes were summarized by sociologist Ulrich Beck in his *Risk Society*, which was originally published in Germany 1986. The concept of a "risk society" greatly stimulated social science research into uncertainty, risk, and hazard. Beck developed a sociological perspective to show why disasters such as the chemical leak at Bhopal (1984), accidents at the nuclear power plants at Three Mile Island (1979) and Chernobyl (1986), and global warming were products of modernization, involving the intensive application of technology to transform the environment to satisfy human needs. Such risks were the unintended consequences of technological modernization. The modern growth of "green" political parties and their electoral successes can also be treated as an indication that the general public is aware of modern vulnerabilities, of which the prospect of global warming is probably the most significant.

SEE ALSO *Coping; Death and Dying; Depression, Psychological; Disaster Management; Disease; Global Warming; Mental Illness; Morbidity and Mortality; Obesity; Personality, Type A/Type B; Pollution; Prevention Science; Resiliency; Risk; Smoking; Stress*

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WAGE AND PRICE CONTROLS

Examples of rulers and governments attempting to control prices and wages can be found in distant history, but comprehensive wage-price controls or similar voluntary programs for anti-inflation purposes are really a twentieth-century development. Simple microeconomic analysis suggests that controls that set prices and wages too low will create product or labor shortages. However, under wartime circumstances, governments have sometimes been willing to allow shortages and rationing. And in peacetime, the rationale for wage-price controls was for many years centered on the idea that prices and wages, especially the latter, could be administered.

In the United States and other countries, wage-price controls were enforced to varying degrees during the two world wars. The United States also imposed controls during the Korean and Vietnam wars. Voluntary wage-price programs were initiated during the Kennedy-Johnson and Carter administrations. After World War II, various European countries adopted "incomes policies" similar to the voluntary programs later installed in the United States. Controls during the two world wars and the Korean War were part of larger schemes aimed at diverting resources for military purposes. Beginning in the 1960s, attempts to influence or control wages and prices had a more general macroeconomic justification.

American participation in World War I was relatively brief but involved a diversion to military purposes of perhaps a fifth of the nation's gross domestic product (GDP). Large corporations had developed by that time, so control administrators could interact with the heads of these firms. The idea developed that controls could be achieved by involving a few key captains of industry. Just as successful corporations engaged in internal planning, so too could the national economy be planned and—in wartime or other emergencies—controlled. As might be expected, in competitive industries—such as foodstuffs and coal—World War I controls did produce temporary shortages. However, formal ticket-based consumer-rationing schemes were not adopted and reliance instead was placed on patriotic appeals to reduce demand. Unions expanded during the war, and government pushed for industrial peace and production uninterrupted by strikes. In some instances, notably involving the railroads, the authorities seized enterprises when labor strife was threatened.

The World War I experience with controls on wages, prices, and resource allocation tended to reinforce notions of the practicality and virtue of national economic planning. These ideas carried over into the New Deal during the Great Depression and—when World War II arrived—into a cadre of individuals to staff wartime economic planning agencies and, in particular, wage-price control programs. Because of its duration and scale, World War II controls were more extensive than in World War I. Military expenditures exceeded 40 percent of GDP at the peak of the war.

Agencies were established to control prices, wages, and more general resource allocation. Formal ticket-based rationing of consumer goods applied to food, gasoline, and other products. The result was a retarding of officially measured inflation. In some cases, however, black markets developed for goods in short supply. The economic meaning of price indexes based on official prices at which goods were not freely available can be debated. However, the

overall system of controls was justified on the basis of fairness, wartime resource needs, and appeals to patriotism.

Unions had already become powerful during the New Deal, and a pattern arose that carried on into the postwar wage-price programs. Specifically, the wage authorities—the War Labor Board in World War II—established a standard for pay, albeit one laden with exceptions. Price controls—under the Office of Price Administration—were then largely based on markups over costs. In a relatively closed economy, interindustry goods purchases and their costs largely net out, making labor a major cost element. During World War II, the pay standard was based on the "Little Steel Formula," a wage settlement reached with smaller steel firms. When strikes occurred during World War II for pay above the standard, enterprises were sometimes seized and workers were sometimes threatened with conscription. Inflation and labor disputes were repressed sufficiently so that when the war ended and decontrol commenced, there was a wave of strikes and a burst of measured inflation.

Although federal controls ended, local rent controls lingered in some local jurisdictions, notably New York City. The wage authorities during World War II had tended to allow exceptions to the standard for fringe benefits such as pensions. As a result, pensions and health insurance gained a foothold at the employer level, which expanded after the war into a company-based system of social insurance.

The World War II experience led to public expectations that wars meant consumer goods shortages. Hence, when the Korean War began in 1950, a surge in consumer buying and hoarding led to a jump in inflation and, eventually, a reinstatement of wage-price and resource allocation controls by the Truman administration. In broad terms, the controls followed the World War II model, with a price authority and a wage authority. The program was again generally based on control of pay, with price controls largely to be achieved by allowable markups over costs. However, the overall program was less extensive than before, partly because peak military expenditures during the Korean War were about 15 percent of GDP, a substantially lower ratio than in the earlier conflict.

Presidential authority during the Korean War was also more limited than in World War II. An attempt by President Truman to seize the steel industry during a labor dispute was rebuffed by the U.S. Supreme Court. When President Eisenhower took office in early 1953, the Truman-era wage-price controls were quickly dismantled. Decontrol did not lead to a sharp surge in inflation, in part because the anticipatory price surge had occurred before controls were imposed. Under Eisenhower, activity in the wage-price area was largely limited to exhortations aimed at moderate wage settlements and price behavior.

In the period after the Korean War, a theoretical base developed in academia for wage-price interventions, encouraged in part by the observation of European incomes policies. Such European policies typically involved centralized wage settlements though a tripartite negotiation between employer federations, union federations, and government. With unions at their peak in the United States, notions developed of wage-push inflation and resulting wage-price spirals. These concepts were combined with empirical studies of the "Phillips curve," which depicted an unpleasant trade-off between wage inflation (and therefore price inflation) and the unemployment rate.

Essentially, the idea was that if wages could be made less "pushy" through some form of governmental intervention, the nasty trade-off of the Phillips curve could be repositioned to allow lower unemployment at a given inflation rate. Later, when the idea of a permanent Phillips curve was replaced by that of a non-accelerating inflation rate of unemployment (NAIRU), the same argument could still be advanced. Intervention aimed at making wages less pushy could lower the NAIRU. There were notions of "key" union pay settlements, which were then imitated elsewhere in the union sector and which spilled over into nonunion pay adjustments. If the key union settlements could be moderated, pay setting would be less inflationary.

The incoming Kennedy administration—whose economists were Keynesians with a focus on lowering unemployment—was particularly receptive to this concept. Under the Bretton Woods fixed exchange-rate system, the United States was committed to maintaining the value of the dollar relative to other currencies and the value of gold relative to the dollar. By the early 1960s, there was a dollar surplus and concern about the dwindling gold stock. Holding down inflation was seen as needed to defend the dollar by maintaining American cost competitiveness in world markets. But absent some other policy instrument, inflation moderation was also seen as requiring a higher level of unemployment than President Kennedy wanted. As a result, the Council of Economic Advisors under Kennedy (and later Johnson) put forward voluntary wage-price "guideposts," with its wage standard to be based on the trend rate of productivity (seen as a little over 3 percent per annum) and prices to be based on markups.

Steel was again the center of a major dispute. The Kennedy administration intervened in a steel labor negotiation and achieved what it believed was a moderate pay settlement. When the industry subsequently raised its prices, President Kennedy demanded and ultimately received a price rollback. The guidepost program became more elaborate as time went on. But it eventually was

overcome by demand pressures in the labor market and union demands for wage increases above the standard, and it basically faded away.

Inflation became a political issue in the early years of the Nixon administration. In August 1971, President Nixon announced an end to the Bretton Woods system, disengaged the dollar from gold, and imposed a ninety-day wage-price freeze. Thereafter, mandatory controls on wages and prices were imposed, which then passed though a series of phases of varying intensity. The most elaborate was Phase II, which featured a tripartite Pay Board and a Price Commission. This model was subsequently imitated in Britain and Canada.

Although the Vietnam War was in progress, the Nixon controls were not part of a larger scheme to redirect resources to the military. Indeed, the peak ratio of military expenditures to GDP during the Vietnam War was about 10 percent—and that peak had already occurred under Johnson. Moreover, because of earlier ongoing cold war military spending, the ramp-up of such spending to accommodate the Vietnam War was less dramatic than in prior wartime situations.

The initial pay standard after the freeze was based on productivity plus an allowable rate of inflation, with price controls built—as before—on permissible cost markups. Some shortages occurred during the Nixon controls, notably involving meat and gasoline. The Nixon program was largely ended under President Ford in the spring of 1974, except for elaborate controls on oil prices. Ford replaced formal wage-price controls with a program of anti-inflation exhortation coordinated by a Council on Wage and Price Stability (COWPS). This program featured promotion of much-ridiculed WIN buttons ("Whip Inflation Now") and various announced "inflation alerts."

President Carter continued COWPS and returned in 1978 to a Kennedy-Johnson-type program of voluntary wage-price restraints, termed "guidelines" rather than guideposts. A wage standard of 7 percent was announced with various exceptions. Academics in the 1970s had toyed with using the tax code to reward employers and/or workers for complying with such pay standards or penalizing those who did not. Reflecting this academic work, the Carter administration proposed an elaborate (and probably unworkable) program of "real wage insurance," which would have used tax rebates to protect complying workers from inflation above 7 percent.

Subsequently, a tripartite Pay Advisory Committee was established with a vague charter to support the 7 percent target. Congress never enacted the Carter tax program, and the Reagan administration quickly abandoned wage-price interventions altogether, relying on tight monetary policy at the Federal Reserve to reduce inflation. The mandatory controls on oil prices that Carter had inherited from Nixon and Ford led to very unpopular gasoline shortages, contributing to Carter's defeat by Reagan in the 1980 presidential election.

Post-Korean wage-price interventions were based heavily on notions of wage-push and wage-price spirals. But starting in the mid-1950s, the union share of the workforce had begun to decline, a process that accelerated during the Reagan years and continued thereafter. In much of the developed world, similar union declines occurred. Thus, the intellectual rationale for wage-price interventions—mandatory or voluntary—largely has disappeared. In addition, wars after the Korean War have not entailed large shares of GDP. Absent the earlier military or macroeconomic justifications, it is unlikely that such programs will be used in the future.

The era of wage-price controls, guideposts, and guidelines, with its accompanying notions of dangerous wage-push pressures and wage-price spirals that needed to be restrained, has left a mark on macroeconomics. Contemporary economists often explain the concept of the NAIRU in language from the era of extensive unionization and collective bargaining. Low unemployment is often said to lead workers to "demand" higher wages or refuse to "accept" wage offers by employers. In fact, the conversion of labor markets to nonbargained pay determination has created what past proponents of mandatory or voluntary wage-price programs had once hoped to achieve. The U.S. economy in the 1990s and thereafter operated with a relatively low NAIRU and without the inflationary tilt feared to exist in the period beginning in the 1950s. Given this institutional change, it is likely that the rhetorical legacy of mandatory and voluntary wage-price programs will eventually also disappear.

SEE ALSO *Carter, Jimmy; Cold War; Deregulation; Economic Crises; Eisenhower, Dwight D.; Great Depression; Inflation; Johnson, Lyndon B.; Kennedy, John F.; Korean War; Monetarism; Natural Rate of Unemployment; New Deal, The; Nixon, Richard M.; Phillips Curve; Prices; Regulation; Rent Control; Statism; Supreme Court, U.S.; Truman, Harry S.; Unions; Vietnam War; World War I; World War II*

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Daniel J. B. Mitchell

WAGES

Wages are remuneration for labor services, in the form of either cash or some other mechanism of compensation. Wages have been the subject of extensive empirical and theoretical inquiry, the focus of which has included causes and consequences of wage variation, implications of evolving labor market conditions, and the effects of wage increases on productivity and growth. Generally, these studies approach such questions through the prism of two alternative labor market circumstances: perfectly competitive markets, in which consumers and producers have no market power to affect prices, and imperfectly competitive markets.

THE LABOR MARKET UNDER PERFECT COMPETITION

Traditionally, economic analysis is predicated on the assumption that labor markets are perfectly competitive. For this to be reasonable, three criteria must hold: There must be no barriers to entry; agents must have complete information; firm and labor mobility must be costless. When these conditions obtain, wage rates of a given quality are determined by the intersection of the labor supply and demand curves. The labor demand curve reflects the marginal productivity of labor confronting profit-maximizing firms. The labor supply curve reveals the willingness of utility-maximizing individuals to supply labor at each conceivable wage. The intersection of these two curves determines the market clearing wage rate, at which all persons willing and able to work will find employment. In this framework, the wage rate is a market price that effectively allocates labor across alternative (and competing) uses.

One vein of the empirical work mentioned above is essentially rooted in this perfectly competitive framework. For instance, there is a tradition of fairly straightforward examination of inter-temporal wage patterns implicitly interpreted through the lens of perfect competition. Katz and Autor (1999) examine longitudinal wage data in the United States, revealing several interesting patterns. The ratio of wages of those in the ninetieth percentile of workers to those in the tenth percentile has grown substantially in recent decades. Large wage disparities have also been detected by education and experience levels. Nonetheless, wage gaps between white and black males and males and females overall have narrowed.

There is, however, no consensus regarding the causes of these structural changes. An often-cited theory explains wage differentials as a result of investments in human capital (e.g., through education, health, or training). Becker (1964) formalized this idea by demonstrating that greater human capital expenditures could account for empirically observed patterns of wage variation via their impact on the marginal revenue product of labor. This theory received empirical support from Mincer (1974), whose estimates of the returns to education were positive and increasingly significant with controls for years of experience in the labor market.

Numerous studies question this explanation of observed wage differences. For instance, Pritchett (2001) shows that education has contributed very little to economic growth. He speculates that, among other possibilities, this might reflect the irrelevance of knowledge transmitted through formal schooling (in terms of the skills actually required in the workplace). From a slightly different perspective, some (e.g., Spence [1974]) have argued that education contributes little directly to labor market productivity, but instead serves as a kind of signal for ability that allows employers to sort high and low ability workers.

Another avenue for wage variation generally approached through the framework of perfect competition is immigration. LaLonde and Topel (1991) consider

the impact of newly arrived immigrants on the wages of workers born in the United States as well as those who had immigrated to the United States earlier. They find that immigration has a negative, but small, impact on the wages of earlier immigrants and native-born workers who represent close substitutes (i.e., low skilled workers) for these more recent arrivals. This relationship attenuates as the tenure of earlier immigrants in the United States increases. Others (e.g., Borjas [2003]) have disputed these findings, claiming that they stem from the failure to control for the migration of native-born Americans to other cities and states.

A DEPARTURE FROM A PERFECTLY COMPETITIVE LABOR MARKET

The other major theoretical and empirical tradition focuses on possible market failure resulting in involuntary unemployment (a situation where workers willing to work at the prevailing market wage rate cannot find employment). Efforts to explain such failures have centered on two major theoretical possibilities: market failure rooted in the purposeful decisions of optimizing agents and failure as a consequence of government intervention.

The former possibility (failure stemming from the actions of optimizing agents) has received considerable research attention. To begin with, there is the obvious potential for a "menu costs" type situation: Firms may resist adjusting wages to a new equilibrium level if the transaction costs associated with doing so are sufficiently high. Another possibility that has attracted more interest is commonly referred to as "efficiency wages" (e.g., Akerlof and Yellen [1986]). This is the idea that wages might be set above market equilibrium for the purpose of inducing higher worker productivity and efficiency.

Several specific motivations for efficiency wages have been suggested. First, they might reduce shirking and increase the financial penalty associated with termination. Shapiro and Stiglitz (1984) demonstrate that in the face of limited monitoring resources firms are willing to pay efficiency wages for these reasons. Efficiency wages might also lessen turnover costs by rendering workers less likely to quit their jobs (more experienced workers tend to be more productive than new employees, whose training can also be costly). Particularly in the setting of lower income countries, higher wages can improve the health and overall well-being of workers (through greater food and health consumption), potentially raising their productivity. Finally, efficiency wages can help firms avoid adverse selection by encouraging more skilled (and thus more productive) workers to apply for jobs.

Another potential source of market failure comes from the timing of wage contracts. In essence, contracts offer a specified wage payment over some fixed interval of time during which there might be shifts in labor supply or demand (and hence in the fundamental equilibrium wage that would prevail in an unfettered market). However, such contractual agreements can prevent adjustment in wages toward these new equilibrium conditions (a situation referred to as "wage stickiness").

State intervention is another major reason that equilibrium conditions in the labor market may fail to obtain. For instance, a legally mandated minimum wage (a kind of price floor) may result in labor market disequilibrium if that minimum wage level is binding in the sense that it exceeds the equilibrium level that would emerge in its absence. Most empirical and theoretical work on the subject suggests that minimum wages that are binding in this sense yield, ceteris paribus, lower employment levels. However, a few studies (e.g., Card and Krueger [1994]) have received a great deal of attention for reaching the opposite conclusion. Card and Krueger (1994) examine the effects of an April 1992 minimum wage increase (from $4.25 to $5.05 an hour) by exploiting the fact that the increase was implemented earlier in some states than others. Employment levels before and after the change showed no signs of the decline anticipated in the face of an increase in the minimum wage: Employment levels actually increased. However, Card and Krueger (1994) have received a great deal of methodological criticism.

SEE ALSO *Becker, Gary; Employment; Labor Demand; Labor Force Participation; Labor Market; Labor Supply; Signals*

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WAGES, COMPENSATING

Adam Smith was the first to suggest that persons in dangerous or unpleasant jobs should be paid a high wage. His example was extreme: public executioner. Smith reasoned that despite the black hood that conceals the executioner's identity, people would not want that job unless they were paid additional compensation above the average wage for the community. Economists have since used the term *compensating wages* to refer to this additional compensation. The compensating wage hypothesis holds that compensating wages are generated in competitive labor markets to equalize the net benefit (wage minus risk) workers derive from safe and dangerous jobs. If true, the hypothesis and corresponding empirical estimates of the amount of compensating wages for different levels of risk have implications for occupational safety and health policy, workers' compensation, and statistical estimates of the value of life.

Evidence for compensating wages is undeniable in high-profile and dangerous jobs such as iron workers constructing tall buildings, airline pilots, bounty hunters, ocean fishers, and coal miners. But these jobs comprise only a fraction of all jobs, and the associated risks are obvious. It is not clear that compensating wages are generated across all dangerous jobs throughout the economy. (See Mason 1995 for a critique of compensating wage differentials.)

The hypothesis requires that workers be mobile, informed about job hazards, rational, and risk averse. Most debate about the hypothesis has to do with mobility and information. Job attachment increases with age, marriage, and children in the family, but jobs can become more or less dangerous over time, and attached workers may not change jobs. In addition, some workers, especially poor ones, may not have much mobility if the only choice is between a dangerous job or none at all. Information is also problematic. Vehicle crashes and assaults are frequently overlooked by the public as likely job hazards, yet together they are responsible for 40 percent of all fatal injuries. The frequency of vehicle crashes helps explain why relatively low-wage occupations such as gardeners, construction laborers, traveling sales workers, pizza delivery drivers, garbage collectors, and farm workers face excessively high death rates. The rate of assaults helps explain why clerks in convenience stores and fast-food restaurants, as well as gas-station attendants, also face high death rates. In addition, even the strongest advocates for the hypothesis acknowledge that due to lack of information, compensating wages are unlikely to be paid for occupational diseases, yet job-related diseases cause roughly 60,000 deaths per year in the United States, compared to 5,000 injury deaths.

The empirical evidence with large data sets is mixed. The best evidence supporting the hypothesis derives from U.S. Bureau of Labor Statistics data on fatality rates across industries. But these industry data conflate blue-collar with white-collar jobs, and death rates across industries are correlated with historical interindustry wage differentials. For more than 100 years and within many developed countries, wages for blue-collar workers have been high in transportation, construction, and manufacturing, and low in services, wholesale, and retail trade, independent of job hazards. Studies suggest that when interindustry wage differentials are accounted for, evidence supporting the hypothesis evaporates.

Despite the controversy, virtually all economists agree on one point: More information regarding job hazards would help "the market" generate compensating wages. One idea would require firms to include hazard information and fatality rates on job application forms the same way food manufacturers list fat content on packaged food.

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J. Paul Leigh

WAGES, NOMINAL

SEE *Nominal Wages.*

WAGNER'S LAW

SEE *Public Sector.*

WALD TEST

SEE *Specification Tests.*

WALDEN

SEE *Thoreau, Henry David.*

WALKER, ALICE

SEE *Womanism.*

WALL STREET

Wall Street refers to the geographical concentration of financial service providers that constitutes New York's financial district. Its heart is the narrow thoroughfare of the same name in Lower Manhattan that is home to the New York Stock Exchange. The term carries a wide spectrum of meanings that intersect geography, finance, and political economy.

The origins of Wall Street can be traced to the brushwood barricade erected by Peter Stuyvesant along the northern boundary of the New Amsterdam community of Dutch settlers in Lower Manhattan in 1653. The "wall" was meant to protect the early settlers against attack from Lenape Indians, New England colonists, and the British (who dismantled it in 1699). The subsequent growth and lore of local merchants and financiers imbued this simple geographic setting with its modern significance—the story of the formation of a world financial center, the powerful headquarters of U.S. financial capital.

THE RISE OF A FINANCIAL CENTER: FINANCE AND GEOGRAPHY

Wall Street's early history as a financial market began with gatherings of securities and commodities traders during the Revolutionary War. These curbstone and coffeehouse traders first developed financial techniques for loans and shares out of the needs of mercantile trade, a rudimentary copy of the 1600s Dutch exchanges. The consolidation of the New York exchange accelerated with U.S. government demands for new sources of capital to bail out securities issued to finance the Revolutionary War. The first Continental Congresses in New York issued $80 million in government bonds under Alexander Hamilton to redeem war debts at face value. Speculators seeking to profit on leaked news of the bailout plan set up operations at the east end of the street to broker insider trading of the government paper.

Wall Street's development during the eighteenth century was shaped by trade in government debt and state-licensed monopolies. During the nineteenth century, railroad shares and bonds fueled the market and its proliferation of trading instruments. Early institutional development was characterized by the monopolization of trading activity that excluded informal curb participants and curtailed the growth of rival exchanges. On May 17, 1792, twenty-four stockbrokers signed the "Buttonwood Agreement" (so named for the sycamore tree on Wall Street under which the signing is said to have taken place). The accord restricted membership and formalized rules for the loosely associated "Brokers for the Purchase and Sale of Public Stock" who conducted their exchange auctions out of the Tontine Coffee House. The financial turbulence of the War of 1812 prompted creation of the New York Stock and Exchange Board (NYSEB) in 1817. The board turned a handsome profit by financing the Erie Canal. It further restricted membership, enforced full commissions and secrecy, and moved member brokers into rented office space. The measures served to snuff out competition from rival curbstone exchanges, such as the 1835 Commercial Exchange Association.

The 1840s to the 1860s produced growth in securities issues associated with railroad stock (first listed in 1830). A major speculative boom driven by Civil War finance (1861–1865) spawned demand for new manufacture and mining and a swelling trade in government debt. This activity fueled persistent attempts to establish rival exchanges to the NYSEB, which culminated in the formation of the Open Regular Board in 1864. Unable to remove the Open Board from the trading arena, the NYSEB was forced to merge with it in 1869. This merger created the New York Stock Exchange as it is now known, with its 1,060 founding members. Subsequent challenges by rival exchanges, such as the Consolidated Stock and Petroleum Exchange (CSPE) founded in 1885, provoked aggressive response by the NYSE, which outlawed CSPE dealings and in 1900 ordered Western Union to stop supplying quotation services to all rival exchanges in New York City (Doede 1967, p. 14).

Financial turbulence in conjunction with the growing concentration of wealth on Wall Street prompted congressional reaction with the Pujo hearings in 1907. Wall Street was implicated in the monopolistic practices of the money trusts that facilitated industrial concentration under the control of a small number of corporations. During the

1920s, Wall Street flourished as a financial center, promoting the rise of large corporations with dispersed ownership and professional management along with a dramatic concentration of capital.

The fragile foundation of this accumulation of financial claims became apparent with the Black Thursday stock market crash of October 24, 1929, and the Black Tuesday sell-off panic that began on October 29. The collapse in equity prices came at the height of Wall Street's reputation and prompted a wave of regulatory legislation, from the 1933 Bank Act to the creation of the Securities and Exchange Commission in 1934. In the world of finance, Wall Street's characteristic business activity had produced a speculative financial frenzy that put short-term capital gains before enterprise, setting the stage for a debt-deflation crisis that brought down more than nine thousand banks and triggered the onset of the Great Depression in the 1930s. From this historical episode, major debates ensued about the role of financial markets in the development process.

Viewed from the perspective of the efficient markets hypothesis, Wall Street is the archetype of a highly competitive, efficient capital market whose prices reflect all relevant information. It is impossible to beat the market, and capital is optimally allocated to productive firms. Viewed from the financial instability school of thought, however, Wall Street is predisposed to speculative excess, where the larger constellation of private credit-creating institutions serve the interests of financial accumulation, distorting the allocation of productive capital in debilitating waves of crisis and bankruptcy. Contemporary reference to the "Wall Street View," coined by Hyman Minsky, derives from this interpretation of the Great Depression's speculative overleveraging and collapse in world capital markets. Laissez-faire finance, absent regulation and supervision, produces destabilizing real economic performance.

Throughout the 1930s Wall Street exchanges shrunk from losses. Trading during the post–World War II golden age was lackluster until the end of the 1950s. In perspective, NYSE trading for all of 1950 was 525 million shares, which was equivalent to just two hours of an average day's trading volume in 2005. Wall Street emerged by securing its geographic and financial monopoly over U.S. capital markets. The dense area of real estate demarked by Wall and Broad Streets came to include the New York and American stock exchanges, member firms, over-the-counter firms, government securities dealers, major banks and trust companies, the New York Federal Reserve Bank, and countless insurance, utility, mercantile, and commodity exchanges. The NYSE became the symbolic hub for U.S. financial capital. The amount of new capital Wall Street actually provisioned for "Main Street," however, proved to be quite low—less than 1 percent of gross domestic product (GDP). It is not new capital but retrading existing capital that defines Wall Street's key development role. Following the 1970s, speculative financial leveraging of accumulation returned to Wall Street, exploding trading volumes, where the banking system was engaged to secure profits on capital gains from asset price run-ups on financial claims. The resulting market volatility made more observers receptive to the financial instability hypothesis.

THE POLITICAL ECONOMY OF FINANCE CAPITAL

In the world of political economy, Wall Street signifies the epicenter of U.S. and global financial capital. In the tradition of imperialist extension, Wall Street is seen as having the power to create or undermine nations in accordance with U.S. national interest. Wall Street speculators, most notably J. P. Morgan, played a decisive role in Panama's secession from Colombia and its birth as a nation in 1903 to ensure huge profits from the construction of the Panama Canal and U.S. controlling interest in the Canal Zone (Diaz Espinoza 2001). Morgan's Wall Street partnership bought up the worthless stock of the failed French Canal Company in 1900 and dispatched Nelson Cromwell to convince the U.S. government to purchase the company's rights and equipment at an exorbitant price. When Colombia's refusal to ratify the Hay-Herran Treaty threatened Washington's rights to build the canal, Wall Street financiers funded an uprising by Panamanian nationalists, causing President Theodore Roosevelt to deploy U.S. troops to the region.

Nineteenth-century political critique faulted Wall Street for advancing the monopoly powers of national capital and imperialist extension. Modern variants of this viewpoint examine in greater detail the evolving technology of financial institutions in promoting "accumulation by dispossession" (Harvey 2003, p. 147), where predatory asset redistributions are produced in the context of speculation-induced economic crises. Attention concentrates on the wave of financialization that occurred after 1973. Transactions involved stock promotions, Ponzi schemes, international debt-pushing and repayment servitude alongside speculative raiding conducted by hedge funds. The global reach of Wall Street's agenda and contribution to financial instability is captured in the reference to the "Wall Street–Treasury–IMF complex." This highlights the desire of large brokerage firms to have access to capital markets throughout the world through enforcement of complete capital account convertibility, while the International Monetary Fund (IMF) asserts its role as an international lender of last resort in the wake of impending crises.

The destruction of Manhattan's World Trade Towers on September 11, 2001, made evident that Wall Street's financial nexus had assumed symbolic dimensions as the center of U.S. financial power and was vulnerable to attack. A previous episode had occurred on September 6, 1920, when a bomb was exploded outside the NYSE building, killing thirty-three people. The post 9/11 geography of money produced a diaspora of the financial industry out of its concentrated center in Lower Manhattan. The disaster dislocated fifty thousand financial service employees to new office space in Midtown Manhattan and nineteen thousand across the river to New Jersey. Over thirteen million square feet of class A office space were completely destroyed, and insurance industry claims from property and life topped $40 billion.

Wall Street's financial dominance continues despite encroaching competition by rival exchanges trading with new electronic technologies. In 2006 the NYSE acquired Archipelago Holdings, a rival exchange based entirely on electronically traded funds. The resultant public corporation, NYSE Group, took on the all-electronic NASDAQ to consolidate its control in the Internet trading world, where member "seats" and "trading floor" no longer signify geographic reference when accounting for revenue streams. The NYSE Group's subsequent merger with Euronext produced the first transatlantic bourse.

SEE ALSO *Casino Capitalism; Corporations; Economic Crises; Efficient Market Hypothesis; Federal Reserve System, U.S.; Financial Instability Hypothesis; Financial Markets; Great Depression; Hedging; Investment; Market Fundamentals; Random Walk; Regulation; September 11, 2001; Speculation; Stocks; Transaction Taxes*

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WALLERSTEIN, IMMANUEL

1930–

Immanuel Wallerstein has been one of the most influential and prolific American sociologists in the post–World War II (1939–1945) period. He obtained his B.A. (1951), M.A. (1954), and PhD (1959) from Columbia University in New York City. In his early years as an assistant professor of sociology there, Wallerstein was primarily a political sociologist. His expertise in Africa's independence movements led to his meeting social theorist Frantz Fanon (1925–1961) while doing fieldwork in the region. The political and revolutionary activity sweeping the African continent in the late 1950s and early 1960s caused Wallerstein to question the traditional focus on the nation-state as a meaningful unit of analysis, particularly in those areas of the world where such entities were an obvious byproduct of prolonged colonialism and imperialism. In the late 1960s, Wallerstein politically sided with students in their anti–Vietnam War (1957–1975) protests against university administrators, a confrontation that resulted in his book *University in Turmoil* (1969) and his decision to leave Columbia to join the Department of Sociology at McGill University in Montreal. It was during his tenure there, and inspired by French economic historian Fernand Braudel's (1902–1985) long-term vision of historical processes, that he published the first volume of *The Modern World-System* (1974), which has been translated into thirteen languages. In combination with Volume 2 (1980) and Volume 3 (1989), the trilogy has had a significant impact in the fields of sociology, political economy, history, geography, and more recently, anthropology and comparative literature.

Wallerstein's main thesis in these and other studies is that capitalism is a specific socioeconomic system, characterized by an axial division of labor resulting from intense yet unequal bulk trade linkages between different zones, which he labeled the *core*, *periphery*, and *semiperiphery*. This capitalist world-system emerged in sixteenth-century Europe and subsequently expanded to incorporate more

areas (e.g., various minisystems and world empires not characterized by the same primacy of ceaseless capital accumulation). In the context of the colonialism and imperialism that unfolded from 1492 until the early twentieth century, the entire world became interlinked through these trade patterns constitutive of unequal exchange. The latter was also a major concern of the Latin American dependency school, which in the 1960s argued that the unequal power relationships reproduced through world trade mechanisms in the context of imperialism were the result of the relationship between *metropolis* and *periphery*. By stressing the importance of economic cycles and the commodity chains of leading sectors, however, Wallerstein espoused the idea that the upward and downward social mobility of specific polities was possible (as demonstrated, for example, by Spain, South Korea, and Taiwan).

Wallerstein also argued against the modernization or developmentalist school, dominant in the 1960s, which assumed that every country could achieve upward social mobility as long as it implemented the correct policies. For Wallerstein, the growth of world trade does not alter the fact that it is essentially a polarizing zero-sum game, reproducing and expanding poverty and inequality on a world scale. The crucial Wallersteinian concept of semiperiphery was introduced to clarify this idea theoretically: the three zones in which different political entities (nation-states, principalities, etc.) are located contain divergent practices (in terms of life expectancy, standard of living, labor control, production of items for sale on the world market, and political regimes) precisely because of their hierarchical location within the capitalist world-economy.

Unlike the orthodox Marxists' focus on the nation-state, Wallerstein and other world-system analysts (e.g., Samir Amin) conceptually regard free labor and slavery as coexisting within the same mode of production. Using the world-economy as the sole unit of analysis, Wallerstein insists that labor control and production for trade are historically, relationally, and therefore mutually constitutive: only because wage remuneration in the periphery, which mostly exports raw materials for the world market, is so low, is wage remuneration so relatively high in the core, where value-added products are exported.

After joining the Sociology Department at the State University of New York at Binghamton, Wallerstein created the *Fernand Braudel Center for the Study of Economies, Historical Systems, and Civilizations* in 1976 and its scholarly journal, *Review*. There he systematically wrote on cycles and trends of the world-economy, commodity chains, hegemony, antisystemic movements, households, racism and sexism, and the geoculture from a world-system perspective. One key historical event was the 1848 world revolution, in which spontaneous antisystemic (especially socialist and nationalist) movements organized themselves politically in order to obtain state power. Their eventual success in turn led to the 1968 world revolution, engineered by different antisystemic movements from the New Left. Wallerstein claims that 1968 put an end to faith in universal progress and related classical liberal paradigms, which coincided with the beginning of American decline because of its loss of significant economic superiority to Western Europe and Japan and its political-military defeat in Vietnam.

Beginning in the 1980s, Wallerstein argued that the United States was from 1945 onward in de facto collusion with the Soviet Union, and he characterized the latter not as a communist experiment but as a typical powerful semiperipheral state that embraced protectionism (as opposed to the typical state located in the core in favor of free trade). Similarly, World War I (1914–1918) and World War II are interpreted as one major war to determine which state would succeed England as hegemon, the primus inter pares in the core zone that temporarily benefits from unprecedented financial, political, and ideological capital. From the late 1980s onward, Wallerstein predicted ever more crisis in the world-system due to a gradually falling rate of profit linked to increasing pressures from antisystemic movements, environmental constraints, democratization, and wage increases concurrent with urbanization. In this period he agreed with most of the studies written by his colleague, Andre Gunder Frank. But in the early 1990s, Frank, who was attempting to trace world-system economic cycles to as far back as 5000 BCE, began to criticize his former collaborator as being Eurocentrist. He also argued, contra Wallerstein, that the modern world-system was not so much in terminal crisis as experiencing yet another transition towards East Asian hegemony.

Starting in the 1990s, Wallerstein's writings focused more on the changing geoculture of the modern world-system. Since his term as president of the International Sociological Association (1994–1998), his scholarly contributions have been particularly geared towards unthinking nineteenth-century paradigms and critically reflecting upon the structures of knowledge production in the academic realm of the world-system. These efforts are best illustrated by his chairing of the Gulbenkian Commission on the Restructuring of the Social Sciences (1993–1995) and his publishing of *The End of the World as We Know It* (1999) and *The Uncertainties of Knowledge* (2004). Not unlike the later years of sociologist Pierre Bourdieu (1930–2002), Wallerstein's increased scholarly recognition—reflected in his move to Yale University in 2000—coincided with an increasing engagement in the political field. Evidence of this can be found in his public interventions at the World Social Forum with regard to potential strategies that progressive movements may consider (see

Utopistics [1998]) and in his desire to engage with a broader audience through public lectures and various biweekly commentaries (posted on the Internet as of October 1998). One of his lasting contributions has been the creation of the Political Economy of the World System Section of the American Sociological Association, which has continually increased its membership over the years and for which he is often the keynote speaker.

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Eric Mielants

WALRAS, LÉON
1834–1910

Marie Esprit Walras was born on December 16, 1834, in Évreux (Upper Normandy, France) to Auguste (1801–1866) and Louise-Aline Sainte-Beuve (1811–1893). Despite having no university degree, Léon Walras was offered a professorship at the University of Lausanne on November 12, 1870. He officially occupied the chair of political economy from October 20, 1871 to 1892, when he retired early for health reasons. His political and social economy is best examined through the trilogy of works titled *Éléments d'économie politique pure* (*Elements of Pure Economics or the Theory of Social Wealth*, 1874–1877, 1889, 1896, 1900), *Études d'économie sociale* (*Studies in Social Economics or the Theory of Distribution of Social Wealth*, 1896), and *Études d'économie politique appliquée* (*Studies in Applied Economics or the Theory of Production of Social Wealth*, 1898). Walras died at his home in Clarens (Vaud, Switzerland) on January 5, 1910.

Founder of the School of Lausanne, Walras is one of the economists whose contributions have decisively influenced the development of economic theory. Almost simultaneously with, but independently from, Carl Menger (1840–1921) and Stanley Jevons (1835–1882), Walras introduced the concept of marginal utility (*rareté*) and took an important step toward the mathematization of economics. In his view, mathematics is not only one of the possible forms of expressing economics but also is the form necessarily required for a rigorous formulation of economic laws.

However, Walras's most original and important contribution is the analysis of price determination by means of the interactions between the various markets that make up an economy. The modern analysis of the existence, uniqueness, and stability of general equilibrium had been inspired by Walras's *Pure Economics*. In the 1950s modern theorists, with the use of advanced mathematics, specified the hypotheses enabling them to rigorously prove the existence of a price system equalizing supply and demand on each market—that is, the existence of a general equilibrium. In this perspective, the Walrasian *tâtonnement* (groping) was interpreted as a process of convergence of prices towards equilibrium, a representation of how markets actually work. Nevertheless, in the early 1970s enthusiasm chilled. It was proven that in a general equilibrium framework aggregate excess demand functions have an arbitrary nature, while specific assumption must be made to obtain uniqueness and stability results. To simplify matters rather drastically, as every change in the price system affects one's income and purchasing power, the aggregate excess demand functions that result behave capriciously. In others words, income effects prevent the groping process from leading to equilibrium. So, the correspondence between the hypothesis of the *homo oeconomicus* and the convergence towards equilibrium does not hold, and the *tâtonnement* process cannot be interpreted as the process that allows economic equilibrium to be reached.

Modern developments of general equilibrium have been inspired by Walras's theory of value in exchange (pure economics), while his theories of production and distribution of social wealth (applied and social economics) have been neglected. But from the perspective of the history of economic thought it is not possible to assert that pure economics is separable from the other two parts of the Walrasian triptych (applied economics and social economics) or that pure economics only is worthy of scientific consideration. Thanks to the publication of Walras's collected writings (1987–2005), historians of economic thought now rarely discuss Walras's works referring only

to pure economics, even though there is still no consensus on the relationships between these three components of Walras's political and social economy.

Nevertheless, the actual and fundamental controversy about Walras's writings involves the meaning of general equilibrium theory and what it is supposed to refer to. Most scholars considered Walras's general equilibrium theory as an attempt to represent the actual working of nineteenth-century capitalism, even though they disagreed on its heuristic value. For most critics, the general equilibrium theory is simply inadequate for this task, both in Walras's and in modern versions. Others instead find in Walras's writing some elements pertinent for the understanding of real markets. Finally, some argue that one can learn more from the differences between model and reality than from their alleged similarities.

However, if one takes Walras's philosophy of science seriously, a different point of view emerges: general equilibrium does not refer to actual market working or other economic facts but to the social wealth considered in itself. Pure economics does not aim at representing, in a more or less faithful and simplified manner, the contingent reality but rather at grasping the essence of the reality which does not yet completely exist, a reality in its becoming. For Walras, general equilibrium is the perfect, ideal form, towards which economic systems are evolving but are not yet realized. This ideal form is described in Walras's *Elements of Pure Economics*, but in his other writings he often referred to the economic and social phenomena that were right before his eyes: one might cite the essays on money and credit, monopolies, and railroads, but also on salaries, tax system, and real estate. These studies are definitely far from being an apology of the market as a self-driven and self-regulating mechanism. Instead, they represent a long list of cases requiring State intervention. The State has to organize the economy in order to approach the ideal form represented by general equilibrium but it is also destined to produce as a monopolist where too much competition kills competition.

Finally, three different Léon Walras have to be considered. The first is a neoclassical icon, the founder of neowalrasian economics, but known by economists at best as the author of *Elements of Pure Economics* only. The second is the founder of the School of Lausanne and the father of general equilibrium as a formalized invisible hand. The third, unknown to economists and only recently discovered by historians of thought, is a critic not only of the capitalism of his time, but of market economy in itself.

SEE ALSO *Economics, Neoclassical; Equilibrium in Economics; General Equilibrium; Lausanne, School of; Marginalism; Mathematical Economics; Stability in Economics;* Tâtonnement; *Walras' Law*

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WALRAS' LAW

Walras' law is a powerful modeling tool that is used by economists when they undertake general equilibrium analysis. It captures the interdependence between markets implied by the budgetary constraint that all individual transactors (i.e., a single person, a household, a firm, or the government) must take into account when they formulate purchase and sales plans.

It is assumed that no individual transactor in a market economy is so misguided as to suppose that he or she can acquire something for nothing. This being the case, the plan to purchase (or sell) something necessarily implies the plan to sell (or purchase) something of equal value. In the language of economics, each individual must satisfy his or her budget constraint. Consequently, for each individual the total value of the planned supply must exactly equal the total value of the planned demand. This means that there can be neither an excess of demand over supply (excess demand) nor an excess of supply over demand (excess supply) at the level of the individual.

It follows by simple aggregation that there can be no excess demand or excess supply in the aggregate whether one is summing over the individuals as individuals or as participants in various markets, and this must be true whether or not prevailing market prices are such as to equate demand with supply for each specific commodity. In other words, the aggregate market value of supply equals the aggregate market value of demand for any set of prices, not just the equilibrium set of prices. This proposition sometimes is called Walras' law but more commonly is known as Walras' identity.

Walras' identity implies that if there is ever an excess of demand over supply for any single commodity, there must be a corresponding excess of supply over demand for at least one other commodity; otherwise the aggregate value of commodities that agents wish to supply could not be equal to the aggregate value of commodities that agents wish to demand. Another way to put this is to say that the aggregate value of the excess demands and the excess supplies over all the markets must equal zero and that this applies whether or not all the markets are in equilibrium.

This proposition is one of a number of logical implications of Walras' identity that is given the name *Walras' law*. Léon Walras explicitly formulated and drew upon this proposition in his attempt to explain how general economic equilibrium may be established in a market economy (Walras [1926] 1954).

Walras' law is a statement that refers to all markets taken together (that is, it refers to the aggregation of the markets for final goods and services along with the markets for raw materials, labor, money, and bonds) and should not be confused with a proposition known as Say's law, or at least one version of it (Sowell 1972), which claims that there never can be an excess supply of final goods and services taken alone. Although Walras' law asserts the logical impossibility of oversupply in all markets taken together, it does not rule out the possibility of there being an oversupply in a particular market, such as the market for final goods and services, taken alone.

Walras' identity and Walras' law are valid whether or not market prices equate demand with supply for each and every commodity, and because of this they have implications for both equilibrium and disequilibrium situations. Those implications are of such fundamental importance in modeling interdependence between markets that they often have been used by writers to define Walras' law.

Equilibrium in a market is a situation in which the price of the commodity is such that the supply of the commodity is equal to the demand for it. Now, suppose a set of prices has been established that will equate demand with supply in every market except the nth market. Because there can be neither excess supply nor excess demand in the aggregate, it follows that if all but one of the markets in an economy are in equilibrium, that other market also must be in equilibrium. Thus, to demonstrate that a situation of general equilibrium holds, it suffices to show that $n - 1$ markets are in equilibrium. This implication of Walras' law plays an important role in models of markets and models of asset portfolios.

In regard to the implications of Walras' law for disequilibrium, the law implies that regardless of the price that is set, the aggregate value of excess demands in the system equals the aggregate value of excess supplies. This carries the implication that an excess supply in any one market must be matched by an equal value of excess demand in some other market or markets. To put this statement slightly differently, if there is a disequilibrium in any one market, at least one other market must also be in disequilibrium.

This implication of Walras' law leads many to be concerned about the theoretical grounding of John Maynard Keynes's theory of unemployment, which seems to suggest that the labor market can be in disequilibrium even if all other markets are in equilibrium. An important contribution to this debate was made in 1965 by Robert Clower, who pointed out that in Walrasian analysis the excess demands and supplies are measured as differences between planned or "notional" demands and supplies, not between actual or "effective" demands and supplies. Clower suggested that Walrasian analysis is not appropriate for modeling situations in which there is involuntary unemployment (an excess supply of labor) because this excess supply in the labor market will result in household incomes that are lower than what the households were counting on when they formulated their expenditure plans. As a result the excess supply in the labor market will be matched by only a notional and not an effective excess demand for commodities.

Although in this situation certain prices will be at disequilibrium levels, no process of bidding them away from those inappropriate levels may get started, and so it can be argued that unemployment persists because the market signals that are presupposed in much general equilibrium analysis are not transmitted. Consideration of issues such as these has led to the development of non-Walrasian approaches to economics. In particular, in 1971 and 1976 Robert Barro and Herschel Grossman formalized the ideas of Clower and others and laid the foundations for a non-Walrasian macroeconomics.

SEE ALSO *Barro-Grossman Model; Economics, New Classical; Economics, New Keynesian; General Equilibrium; Macroeconomics; Market Clearing; Prices;* Tâtonnement; *Walras, Léon*

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Robert Dixon

WALTZ, KENNETH

1924–

Kenneth Neal Waltz, born and raised in Ann Arbor, Michigan, is best known for developing the *neorealist* or *structural realist* approach to the study of international relations. A central figure in the development of international relations scholarship in the post–World War II (1939–1945) era, Waltz has also made notable contributions to the understanding of nuclear weapons proliferation and its consequences. Waltz received his bachelor's degree from Oberlin College in 1948 and his graduate degrees from Columbia University in the 1950s. He retired from teaching in the mid-1990s and, as of 2005, was serving as Emeritus Ford Professor of Political Science at the University of California at Berkeley and as an adjunct professor of political science at Columbia University.

Waltz's earliest contribution, presented in *Man, the State, and War: A Theoretical Analysis* (1954), organizes the primary causes of war into three distinct *images* or levels of analysis. The first image considers human nature and whether it can be developed and constrained in such a way as to minimize the likelihood of war. The second image emphasizes domestic political factors as the source of interstate conflicts. Finally, the third image identifies as the key causes of war the structure of the international system and, in particular, the absence of any centralized arbiter to settle disputes among countries, a condition known in international relations as *anarchy*. Through these levels of analysis, Waltz seeks to isolate and therefore better understand the root causes of conflict among countries.

Waltz's most influential work is *Theory of International Politics* (1979), in which he elaborates the principal tenets and predictions of *neorealism*. Sometimes called *structural realism*, neorealism emphasizes third-level causes of conflict among countries. As a result of anarchy, states can trust only themselves to secure their survival. Therefore, they must always be suspicious of others, making cooperation with other countries limited and infrequent. In Waltz's view, even though states must strive for security, they do not intrinsically seek boundless power or territory; therefore, once their security needs are met, most states will accept the status quo and avoid conflict with other states. States whose ambitions exceed these legitimate security needs can be contained by the systemic balance of power.

Beginning in the 1980s, Waltz's research turned increasingly to the implications of nuclear proliferation. The leading *nuclear optimist*, Waltz argues that, given the destruction any nuclear exchange would entail, an increase in the number of states with nuclear weapons makes the international system more stable and armed conflict less likely. In effect, nuclear proliferation obligates states to be more restrained and careful in their relations with other countries. *Nuclear pessimists*, on the other hand, contend that the proliferation of nuclear weapons destabilizes international relations. Together with Scott D. Sagan, Waltz coauthored *The Spread of Nuclear Weapons: A Debate* (1995), which elaborates the debate between nuclear pessimists and optimists in the context of the cold war's superpower nuclear standoff. Sagan and Waltz reissued their book in 2002 with an expanded discussion of proliferation in India and Pakistan, and of the threat of nuclear weapons being acquired by terrorists.

SEE ALSO *Casino Capitalism; International Relations; Market Fundamentals; Realism, Political*

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Gerald M. DiGiusto

WANT CREATION

Introductory economics textbooks assume consumers are sovereign in the market. The preferences of consumers are supposed to be authentic, self-generated. Consumers' preferences are supposed to determine what producers supply. But this is an age in which producers increasingly contest that sovereignty. With powerful corporations, costly information, pervasive advertising, and persuasive salesmanship, consumers are less independent, their preferences less authentic. Created wants do not arise spontaneously from individual preferences but from advertising and salesmanship. John Kenneth Galbraith described such want creation as "the revised sequence" (Galbraith 1967, p. 212).

Of course, the traditionally accepted sequence still operates. Information about what is wanted still flows from consumers to producers, from the demand side of the product market to the supply side. Not all wants are created by producers. Sovereign consumers have not lost their power. But they do have to share it. Producers no longer respond passively to consumer whim, if they ever wholly did. The sovereignty of the consumer is being challenged on a widening front. A significant flow of information is now going in the other direction. A revised sequence has been established in which information flows from producer to consumer, from the supply side of the product market to the demand side. Supply has begun to create demand. Consumer wants have begun to depend

on producer production. Galbraith coined the phrase "the dependence effect" to describe consumption that depends on production (Galbraith, 1969, p. 143).

THE SIGNIFICANCE OF WANT CREATION

Want creation reduces the authenticity and the urgency of consumer preferences. It undermines much of neoclassical economics. It cuts the hearts out of microeconomic and welfare theory, changes macroeconomic theory, and forces a reconsideration of the benefits of globalization. If taken seriously, want creation would revolutionize textbook economics, where it is still largely ignored.

In microeconomic theory, want creation means that the price mechanism is not the only way markets reach equilibrium. Excess supply of consumer goods may or may not be eliminated by a decline in the market price. It may also be eliminated by an increase in advertising and salesmanship and other alterations in the flow of information from producer to consumer—all intended to shift the demand curve to the right instead of moving downward along the demand curve toward a lower price and higher quantity demanded. Excess demand for consumer goods, likewise but in reverse, may or may not be eliminated by the price mechanism. That is, advertising, salesmanship, and information management may be adjusted downward, instead of price being adjusted upward, to clear the excess demand from the market. Want creation introduces indeterminacy and producer discretion into the market adjustment process (Waller and Robertson 1998).

In welfare theory, want creation destroys the presumption of market optimality. To the extent that wants are created so that producers can profit by supplying them, equilibrium in the product market does not represent optimal consumer utility in the form of consumer surplus. In fact, consumer surplus loses its meaning when consumer wants are created by producers. Furthermore, if workers supply their work in order to buy the products that meet the wants created by the producers who hire them, how can it be said that human welfare is served?

In macroeconomic theory, want creation replaces more orthodox consumption functions with the demonstration effect (Duesenberry 1949). When the desirability of new goods and services is demonstrated to consumers, short run consumption permanently shifts up to include the new item. This makes the average and marginal propensities to consume the same in the long run, even if the marginal propensity is less than the average propensity in the short run. Of course, in the United States, want creation has made the pressure to consume so intense that the marginal and average propensities are both close to unity.

When wants are created, it is questionable to what extent underdeveloped countries benefit from globalization when it opens them up to the advertising, salesmanship, and information management exercised by the powerful corporations of developed countries (Dugger 1998).

Applied to a wide range of economic doctrines, want creation is a subversive concept.

Among the economists seriously discussing want creation are Robert H. Frank, who is linking individual preferences to social emulation (Frank 1985, 1999), and Juliet B. Schor, whose work is more focused on manipulation by advertisers (Schor 1991, 1998).

SEE ALSO *Consumer; Consumer Protection; Consumerism; Consumption; Functionings; Galbraith, John Kenneth; Hidden Persuaders; Needs; Relative Income Hypothesis; Subliminal Suggestion; Wants; Welfare Economics*

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William M. Dugger

WANTS

In economics, the term *want* refers to a wish or desire to own goods and services that give satisfaction. More generally, the concept involves the endless succession of material wants exhibited by all human beings. Material wants are the desires of consumers to obtain and use various goods and services that provide utility. Usually, wants are backed by effective demand—ability and willingness to pay.

Nature has made lavish the distribution of its natural resources and this has brought about an endless desire for many things even though they may not necessarily be basic needs (food, clothing, and shelter). As basic needs and wants are satisfied, other wants will arise. For this reason, human wants are unlimited: The satisfaction of one want leads to another. At the same time, the means (natural, human, and manufactured) used in satisfying them are limited (scarce).

The study of economics begins with a consideration of scarcity. *Scarcity* refers to a situation in which goods and services are limited in supply, and thus the full demand for those goods and services cannot be met. Because people have unlimited wants—and thus want more than they have or can purchase with their incomes—what they have is never enough, even if they are wealthy. And given that people do not have everything they want, they must use their limited time and income to select those things they want most and forgo the rest. The choices they make and the manner in which the choices are made explain much of why the real world is what it is. A choice is simply a comparison of alternatives. When you choose one thing, the lost benefits of the next best alternative represent the *opportunity cost* of your choice.

The rapid introduction of new products whets our appetites and extensive advertising persuades us that we need countless items we might not otherwise buy. For instance, not too long ago, we did not want light beer, videocassette recorders, fax machines, or compact discs—because they did not exist. The overall objective of all economic activity is to attempt to satisfy material wants, both longstanding and newly created.

The wants of consumers (goods and services) become available through business activities. It is, then, business that produces the food, clothing, shelter, furniture, household utensils, and so on that we all need. It supplies us with all our means of transportation, from the simple bicycle to the sophisticated airliner. It provides all our entertainment, from children's comics to the television programs beamed to us from satellites in space.

Wants expressed as effective demand reflect major economic decisions by states, corporate institutions, and multilateral institutions, and are significantly affected by forces emanating from either the world market or domestic markets. For instance, domestic pricing mechanisms influence the investment decisions of individuals, as well as corporate economic factors. Examples can be found in the stock exchange process, in which decisions to buy or sell stocks are influenced by stock values.

In practical terms, wants for goods emanate from consumers, and thus producers produce what consumers need; if they do not, they may go out of business. Furthermore, if production is undertaken in order to supply the wants of mankind, then demand must be the basic force in economics. Every individual demands goods and services and when all the individual demands are put together, the resulting composite demand is what industry must meet if people are to achieve satisfaction. Demand for goods that are not to our personal taste, or are less fashionable or less well promoted through advertisement will be weaker. Tastes and preferences, as well as publicity, thus play some part in determining the total want for a commodity or service.

At the national level, the overall want of countries may differ, depending on their level of development (technological, human, and material), income, state of peace or war, and natural resources. For example, a war-torn country will have a constant need to import arms. Because nature has not equitably distributed its resources over the surface of the earth, nation-states depend on one another for those goods for which they have the least comparative cost advantage. The exchange between nations of such resources is an obvious solution to national shortages.

Nations may have diverse wants (perhaps reflected in development programs and projects), but few resources. This scarcity of resources comprises a huge constraint, and thus nations may be forced to drop some of their white elephant projects and arrange their programs in order of importance pending the availability of funds. With scarcity, which ensures that nations' wants exceed what they can actually produce, potential demand will obviously exceed potential supply. As a result, the shortfall in supply of a nation's wants will be made up by other nations.

More significantly, national wants determine the level of international trade and what categories of goods (wants) will be imported. For instance, for years the United States stockpiled its own oil resources for strategic reasons and instead used cheap supplies from Venezuela and the Middle East. Similarly, Great Britain has allowed its own cotton industry to run down in the face of competition from the newly industrialized countries of the Far East, whose cheap labor and skillful exploitation of new technology have made them more economical than Lancashire. This economic philosophy of wants has been criticized for being excessively laissez-faire.

Wants are driven by self-interest, and in most cases involve a clash of interests. For example, nations may go to war to protect their own "national interest" despite the obvious consequences. Another difficulty connected with the satisfaction of human wants is that people and nations are spread around the world in a very haphazard way, making it impossible to evenly satisfy human wants; furthermore, one person's wants may be another person's needs and vice versa. In addition, the means of fulfilling wants are inherently limited, as the world at any given

time can only produce a limited amount of goods and services due to the limited resources at its disposal.

Wants as an economic desire never cease; they grow in spiral-like movements of business activity. We engage in business activity so that we can satisfy human wants. When we do satisfy these wants, the very act of satisfaction consumes the useful goods or services created and we must start the process again in order to supply a further batch. The process goes from wants through enterprise, production, distribution, and marketing to consumption and satisfaction, and back to wants again.

SEE ALSO *Consumption; Demand; Functionings; Needs; Needs, Basic; Scarcity; Trade; Utility, Objective; Utility, Subjective; Want Creation*

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Cajetan Nnaocha

WAR

In general, war is the outbreak of armed hostilities within, between, or among states or other political groups and communities, in which strategic, political, economic, and other important outcomes are decided mainly by the use of military force. In international law, war is a legal condition of open and declared hostility between or among states, wherein diplomatic relations are automatically severed (if an official state of war is declared) and states may use any military force deemed appropriate or effective, subject only to the laws of war and perhaps to notions of "just war." According to the Bismarckian *realpolitik* ("realistic politics") school of international relations, war as organized political violence is the ultimate "self-help" device in the power politics of an anarchic world consisting of sovereign states. The "Iron Chancellor" Otto von Bismarck (1815–1898), architect of Germany's "reunification from above" during the nineteenth century, recognized the importance of war's nation-building function, declaring in the German Bundestag that "It is not by speeches and resolutions that the great questions of the time are decided … but by iron and blood" (Barash and Webel 2002, p. 58).

According to the most illustrious "philosopher of war," Carl von Clausewitz, a nineteenth-century Prussian army officer best known for his treatise *On War*, war is "not a mere act of policy, but a true political instrument, a continuation of political activity by other means" (Clausewitz [1832] 1976, p. 87). In other words, war is fundamentally a continuation of a country's peacetime diplomacy by other, more violent methods, rather than a complete break with it. It is not an act of senseless fury and violence, but an orchestrated military action with a particular strategic goal in mind—namely, disarming one's opponents to the point where they cannot resist one's demands. This conception of warfare as essentially political in nature is in accord with Clausewitz's general definition of war as "an act of force to compel the enemy to do our will." War, he wrote, is "nothing but a duel on a larger scale" ([1832] 1976, p. 75). In contrast, Marxist and neo-Marxist writers emphasize the socioeconomic causes of war, claiming that mankind has been historically in a state of almost perpetual warfare due to the economic interests of the dominant social classes. Since the rise of class-divided society in the Early Bronze Age (c. 3500–2000 B.C.E., war has been promoted by powerful members of the socially dominant classes who are seeking—out of sheer economic self-interest or imperialist ambition—to gain colonies, export markets, or natural resources abroad; political and economic spheres of influence; regional or global domination; and so on. The American Socialist leader Eugene Debs (1855–1926) told an antiwar rally in 1917: "Wars throughout history have been waged for conquest and plunder.… The master class has always declared the wars; the subject class has always fought the battles" (Zinn 2005, p. 27).

Quincy Wright (1890–1970), a pioneering peace and conflict researcher, considered a war to have taken place either when it was formally declared or when a certain number of troops—at least 50,000 as a minimum—were involved. Other writers have defined wars by the number of deaths incurred, focusing on a minimum of 1,000 combat-related fatalities—either per war or per year of the conflict (see Singer and Small 1972; Eckhardt 1991). Reality is, of course, much more complicated than such definitions of war. In the War of the Bavarian Succession (1778–1779), for instance, after an official state of war had been declared, the Prussian and Austrian armies marched against each other in the field, but not a single shot was fired in anger and, as a result, no one died. In contrast, during the Korean War (1950–1953), in which nearly 3 million people—mostly innocent civilians—were

killed, including more than 54,000 Americans, there was neither an official declaration of war nor the signing of a peace treaty, and the whole conflict was euphemistically labeled a "U.N. police action." In the First Gulf War (1990–1991), not only was an official state of war never declared, nor a peace treaty signed at the end of the hostilities, but diplomatic relations with Iraq were not severed by most of its adversaries.

The sheer wastefulness of warfare in terms of human, economic, environmental, and social losses has been appalling, even without the use of nuclear weapons. For example, during the Thirty Years' War (1618–1648) a third of Germany's population was killed. At least 9 million soldiers and more than 1 million civilians died during World War I (1914–1918), with approximately 20 million more people perishing during the war-driven influenza epidemic of 1918. During the Battle of the Sommes in 1916, the joint British-French forces tried for five months to break through German lines, gaining a mere 120 square miles at a cost of 420,000 British and nearly 200,000 French soldiers; the Germans lost 445,000. Military deaths in World War II (1939–1945), during which nuclear bombs were dropped on the Japanese cities of Hiroshima and Nagasaki, were about 17 million, but civilian deaths—at approximately 35 million—were many times greater than in World War I. Of the 2.9 million Americans who served in the military during the undeclared Vietnam War, more than 58,000 were killed, 3,000 became missing in action, and more than 300,000 were wounded or maimed. Yet these casualty figures convey very little of that war's horrors, both for those who fought in the war and especially for the peoples of Indochina. In Vietnam itself, the economy and natural environment were devastated, and well over 3 million Vietnamese were killed, more than two-thirds of them civilians. Overall, at least 3.5 billion people are believed to have died as a direct or indirect result of the more than 14,500 wars that have been waged during the 5,000 years since the dawn of human civilization (Beer 1981).

The direct and indirect costs of warfare, and especially the tragic loss of human life, have elicited harsh criticism of war throughout the ages. The ancient Greek historian Plutarch (46-120) complained in the first century C.E. that "the poor go to war, to fight and die for the delights, riches, and superfluities of others" (Plutarch 1948, p. 167) According to Benjamin Franklin (1706–1790), one of America's founding fathers, "there never was a good war or a bad peace" (quoted in Barash and Webel 2002, p. 12). Ernest Hemingway, a badly wounded World War I veteran and author of the famous antiwar novel *A Farewell to Arms*, agreed: "Never think that war, no matter how necessary, nor how justified, is not a crime" (Hemingway 2003, p. 233). And the famous British philosopher and pacifist Bertrand Russell warned at the beginning of the twentieth century that "either man will abolish war, or war will abolish man" (Russell 1915).

The march of technology has radically altered the scope and nature of war over the centuries. Technological progress has increased the need to mobilize the entire nation for military-industrial and other production in support of the war effort (the war's "home front"), but has also made civilian populations a legitimate target for the military in what is often referred to as "total war," a twentieth-century invention. The technological ability to use lethal weapons at a distance has escalated from primitive warfare's bow and arrow to today's supersonic jet and intercontinental ballistic missile, both of which can deliver deadly munitions at a speed of thousands of miles per hour and with pinpoint accuracy. This quantum leap has been matched by similar technological advances in destructive power, from the swords and spears of medieval combat to the massive explosive force of the thermonuclear bomb—measured in millions of tons (megatons) of TNT and capable of completely obliterating even the world's largest cities.

In the age of nuclear and other weapons of mass destruction, some commentators suggest that their sheer destructiveness has made war obsolete, because no rational goal could be achieved by using such doomsday weapons that are endangering the very existence of mankind and indeed the survival of all life on the planet. For example, the total U.S. nuclear arsenal in 1990 was about 3,200 megatons of TNT, whereas the entire explosive power detonated by all militaries in World War II was approximately three megatons—including the two atomic bombs dropped on Hiroshima and Nagasaki in August 1945, which had the explosive force of 12 and 20 kilotons, respectively. Some scholars believe that the detonation of as little as 100 megatons of TNT, a tiny fraction of the world's stockpiles of nuclear arms, could trigger a "nuclear winter"—the prolonged darkening and cooling of the planet (temperatures could plummet as much as 50 degrees Fahrenheit). After a nuclear exchange, the huge quantities of smoke and soot generated by the resulting firestorms would rise into the upper atmosphere and absorb incoming solar heat and light, thereby making the Earth cold, dark, and eventually uninhabitable (Sagan and Turco 1990). Even though wars are still taking place, causing immense destruction and misery, the threat of nuclear Armageddon has fostered powerful peace and antiwar movements that are not only deterring the nuclear-weapon powers from using or even testing their strategic arsenals, but also instilling the increasingly widespread belief that war is an illegitimate method for settling grievances.

SEE ALSO *Arms Control and Arms Race; Civil-Military Relation; Conflict; Deterrence; Deterrence, Mutual; Militarism; Military; Military Regimes; Military-Industrial Complex; Peace; Weapons Industry*

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Rossen Vassilev

WAR, SPANISH-AMERICAN

SEE *War of 1898.*

WAR AND PEACE

War and Peace by Leo Tolstoy (1828–1910) is arguably the world's greatest epic novel. Written and published in the monthly *Russkij Vestnik* from 1863 to 1869, the work depicts the years leading up to and including Russia's wars with Napoleon from 1805 to 1812. The novel immortalizes the quiet heroism and spiritual strength of the Russian people in a time of national crisis and historical transition. *War and Peace* began as a social novel called *The Decembrists* about a Russian Decembrist returning from Siberian exile in the 1850s. As Tolstoy worked he realized that in order to describe his hero he would first need to understand his formative years during the Napoleonic wars. A lasting trace of this original conception is the character of Pierre Bezukhov, the hero of the original novel (named Pyotr Labazov) and a main protagonist in *War and Peace*. What began as a contemporary social study grew into a vast, vivid tableau of early-nineteenth-century Russian life that goes beyond historical fact to capture the emotional, psychological, and moral fabric of the time.

TOLSTOYAN WISDOM IN *WAR AND PEACE*

War and Peace reflects the deep imprint of French culture on nineteenth-century Russian life, not least in the aristocratic characters' frequent use of French. And yet just as the vast Russian countryside in the novel engulfs the invading French army, so Tolstoy's massive literary landscape assimilates French and other cultural influences into a synthetic creation that encompasses all of life.

In *War and Peace* characters are born, they marry, they decay, and they die. These events occur on a clock that ticks on with slow, implacable calm. This has led some readers to sense in the novel a spirit of fatalism. But *War and Peace* is also a freshly inspiring vision of the world's physical plenitude and of the meaningful moral choices it offers. Many of the novel's greatest scenes, such as Natasha Rostova's first ball, the Rostovs' wolf hunt, and Prince Andrei's vision of the "lofty infinite sky" as he lay wounded on the battlefield at Austerlitz, are among the most enthralling moments in world literature.

Almost all of the main protagonists in *War and Peace* find happiness in a balanced, mature view of the world as a place where joy and tragedy, moral choice and providential design, are present in equal measure. These characters discover that their individual lives are both finite and full of possibility, both solitary and also part of an organic tapestry of human evolution and history. Only Prince Andrei is unable to reconcile his noble ideals with reality. He is the novel's one tragic hero.

If there is an overt ideological thesis in *War and Peace*, it is that great men do not move history but are its slaves and that free will is an illusion, albeit a necessary one to help us get through everyday life. Tolstoy takes particular aim at Napoleon, who arrogantly believes that he shapes events; at historians who accept the great man theory of historical evolution; and at all manner of strategists, military and otherwise, who believe that rational planning affects the outcome of events.

In Tolstoy's novel those characters who live spontaneously are wise and productive because they are in sync with the forces of history and nature. Kutuzov defeats Napoleon not because of strategic planning (he sleeps before the Battle of Austerlitz while his military strategists quibble) but because he instinctively senses the inevitable course of events. Pierre grows wise and finds happiness

after he gives up his Utopian schemes and accepts the world in its beautiful unpredictability.

THE NOVEL IN AN AGE OF SOCIAL UNREST

Tolstoy's initial work on *The Decembrists* and the early drafts of *War and Peace* occurred when he was growing concerned about the impending Great Reforms of Alexander II, begun in 1861. Tolstoy, an aristocrat, believed that the centuries-old system of aristocratic privilege and serfdom, while imperfect, was superior to the chaos—political, social, and spiritual—that the reforms would unleash. Tolstoy's social conservatism is evident in the work's idealized depiction of the landlord–peasant relationship at the beginning of the century. According to prominent Soviet scholar Viktor Shklovsky, Tolstoy distorts historical facts to further his ideological agenda. A prominent example of this described by Shklovsky is the author's suppression of the real reason that Princess Marya's peasants at Bogucharovo rebel in book three, part two, when she offers to take them with her to Bald Hills: because they believed that, by staying at Bogucharovo, they would be freed by Napoleon. Rather, Tolstoy's portrayal of the peasants gives the impression that their uprising was a senseless, isolated event, motivated by their eccentricity instead of their deep-seated dissatisfaction with the social status quo.

Although Shklovsky and some other scholars rightly discover strains of social conservatism in the novel, they reduce the great epic to a web of self-serving artistic illusions. A more likely source of Tolstoy's idealized portrayal of the peasant–landlord relationship is the author's lifelong attraction to the ideals of national unity, social harmony, and universal fellowship of human beings. We may read *War and Peace* as Tolstoy's heroic attempt to create for his discordant Russian society of the 1860s a mythical past in which Russians were secure in their collective identity and unified in their response to a national crisis.

FORM OF THE WORK

When it first appeared, *War and Peace* was a radical departure from the traditional form of the European novel. The work combines elements of the psychological novel, historical novel, family chronicle, epic, and Bildungsroman. It has astonished and confounded readers with its deluge of detail, its vast array of characters who seem to appear and disappear at random, and its inclusion of historico-philosophical essays throughout. Scholars differ about whether the work's idiosyncratic form was intended or "a splendid accident," as American writer and critic Henry James called it. Twentieth-century scholars suggest that the novel's unconventional form intends to show that real life, like history, does not unfold in neat, narrative patterns. Other scholars argue that despite its strangeness the work contains concealed artistic patterns and unifying aesthetic principles.

Despite its sprawling canvas (approximately 365 chapters, or 1,500 pages in the original publication), *War and Peace* focuses the reader's deepest sympathies on Pierre Bezukhov and the novel's other four main aristocratic protagonists: Prince Andrei Bolkonsky, Nikolai Rostov, Natasha Rostova, and Princess Marya Bolkonskaya. Tolstoy presents their journeys with extraordinary lifelike realism, and he describes how their personal destinies become intertwined with the encroaching forces of war and history.

So interconnected do the "peace" and "war" sections of the novel become that it appears virtually impossible to disentangle them. Power politics, schemes, and stratagems are as present in the St. Petersburg drawing rooms as on the battlefield, and characters are as apt to achieve spiritual illumination in the throes of war as in the joys of family life. The "peace" of the novel's title refers not only to peacetime but also to the spiritual tranquility characters seek amid the confusion of modern life.

FUTURE IMPACT

War and Peace has inspired generations of Russian writers and artists, who have tried to recreate Tolstoy's expansive vision and have regarded Tolstoy's masterpiece as a model for recording the unique destiny of the Russian people. Among the works that *War and Peace* has influenced are Mikhail Sholokhov's novel *The Quiet Don* (1928–1940), Boris Pasternak's *Doctor Zhivago* (1957), and Vasily Grossman's *Life and Fate* (1959). Sergei Prokofiev's operatic version of *War and Peace*, a masterpiece in its own right, beautifully transports to the stage the deep patriotic currents of Tolstoy's novel, as well as the majestic calm of Tolstoy's omniscient narrative voice. Tolstoy's novel remains required reading in Russian schools, and ordinary Russians frequently can recite by heart passages from their adored classic. Even Joseph Stalin, infamous for his ability to harness the power of art for political purposes, recognized the potency of *War and Peace* when he ordered the book to be included in a propaganda series called "Books for Victory" during World War II (1939–1945).

SEE ALSO *Aristocracy; Conservatism; Feudalism; Landlords; Monarchism; Napoléon Bonaparte; Naturalism; Peace; Peasantry; Planning; Stability, Political; Stalin, Joseph; Utopianism; War*

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Andrew D. Kaufman

WAR CRIMES

The notion of crimes of war has been known in the Western legal tradition since classical antiquity. For the ancient Greeks it was part of Hellenic customary law that provided some basic if ill-defined norms for the protection of civilians, suppliants, and prisoners in warfare between the Greek states. While this notion has persisted as the "laws and customs of war," it was only with the incipient development of a body of international law at the end of the nineteenth and beginning of the twentieth centuries that it began to take shape in its modern form as a central category in the body of norms whose aim is to regulate the violence of armed conflict. The "laws and customs of war," as the name indicates, apply only in the context of armed conflict. As the dual terminology "laws" *and* "customs" also implies, in the modern period these norms are regarded as having a dual basis. On the one hand, they are defined by the body of statutory law that has developed since the first Hague Conventions adopted around the beginning of the twentieth century. On the other hand, such conventions represent only one source of the international law of armed conflict. The codifications do not exhaust this body of law, which also arises from the customs and usages of warfare as reflected in the practices of nations.

Three major phases of development of the notion of war crimes in the modern period can be identified. The first begins with the adoption of the Hague Conventions of 1899 and 1907, regulating the conduct of hostilities and the employment of various kinds of weapons and modes of warfare. Most immediately relevant to war crimes is the 1907 Hague Convention IV on "The Laws and Customs of War on Land" and particularly its provisions defining the limits of military necessity and limiting the violence that may be employed against cities and other civilian targets (Articles 22–28). While the treatment of prisoners of war is addressed in the Hague Conventions, it was the Geneva Convention of 1929 that provided the basic legal framework for this subject in the pre–World War II (1939–1945) era. While the distinction between "Geneva law" and "Hague law" was widely regarded as fundamental in earlier periods, it has, as we will see, largely ceased to have any relevance in the contemporary period.

The experience of "total war" in the European and Asia-Pacific theaters in World War II involved the total destruction of major civilian centers, the displacement of entire populations, industrialized murder, civilian deaths in the tens of millions, and devastation on a scale hitherto unimagined. Total war led to a widespread recognition that the laws of war had to be revised so as to reflect the exigencies of a new age. The first major step in this direction was taken by the victorious Allies in the creation of two international criminal tribunals in Nuremberg and Tokyo to try German and Japanese military and civilian leaders for crimes against peace, war crimes, and crimes against humanity. The definition of "war crimes" in the Nuremberg Charter provided an important and expansive definition of the scope of such criminal conduct:

> Violations of the laws or customs of war. Such violations shall include, but not be limited to, murder, ill-treatment or deportation to slave labor or for any other purpose of civilian population of or in occupied territory, murder or ill-treatment of prisoners of war or persons on the seas, killing of hostages, plunder of public or private property, wanton destruction of cities, towns or villages, or devastation not justified by military necessity.

For the first time governmental and military leaders were held criminally responsible as individuals and punished by the Nuremberg and Tokyo tribunals for their roles in planning, instigating, ordering, or perpetrating such war crimes. In addition, building upon the Nuremberg and Tokyo Charters, the Allies created a legal framework for national war crimes tribunals that convicted thousands of Japanese and German war criminals of war crimes. This step marks the decisive move into the contemporary age of individual accountability for war crimes and other violations of international law regulating armed conflict.

During the same period in the aftermath of World War II, the four Geneva Conventions of 1949 and the Genocide Convention of 1948 also represent major landmarks in the development of the contemporary legal framework regulating armed conflict. The Geneva Conventions of 1949 greatly expanded and refined this framework and also made decisive contributions to the law of war crimes. Particularly

grave violations falling within the category of war crimes were designated as "grave breaches" of the conventions. These include: wilful killing; torture or inhuman treatment; biological experiments; unlawful deportation or transfer, taking of hostages, etc. (The 1977 Protocol 1 to the 1949 conventions greatly expands the category of grave breaches, particularly by including various limitations on the conditions under which civilian targets may be made the object of attack.) Further, for the first time the coverage of this body of law was extended to noninternational conflicts. That is, previously war crimes by definition involved violations committed in time of war or serious armed conflicts between nations. The hitherto seemingly inviolable principle of national sovereignty had protected governments from interference with what they did within their own territory to their own citizens. The development of the category of "crimes against humanity" represented one important prong in limiting this principle, and Article 3 of the 1949 Geneva Conventions represented another. The coverage of the 1949 conventions as to war crimes was extended further by the two 1977 protocols to the 1949 conventions, the first covering international conflicts the second internal ones.

Common Article 3, so called because it is found in all four of the 1949 conventions, extends basic minimum protections of international law to purely internal conflicts and thus brings the notion of war crimes into the sphere of the kinds of internal conflicts that have been so prevalent in the post–World War II era. Common Article 3 provides:

> In the case of armed conflict not of an international character occurring in the territory of one of the High Contracting Parties, each party to the conflict shall be bound to apply, as a minimum, the following provisions:
>
> 1. Persons taking no active part in the hostilities, including members of armed forces who have laid down their arms and those placed hors de combat by sickness, wounds, detention, or any other cause, shall in all circumstances be treated humanely, without any adverse distinction founded on race, colour, religion or faith, sex, birth or wealth, or any other similar criteria.
>
> To this end the following acts are and shall remain prohibited at any time and in any place whatsoever with respect to the above-mentioned persons:
>
> (a) Violence to life and person, in particular murder of all kinds, mutilation, cruel treatment and torture;
>
> (b) Taking of hostages;
>
> (c) Outrages upon personal dignity, in particular, humiliating and degrading treatment;
>
> (d) The passing of sentences and the carrying out of executions without previous judgment pronounced by a regularly constituted court affording all the judicial guarantees which are recognized as indispensable by civilized peoples.

The third phase in the development of the body of law defining and punishing war crimes began with the creation of the Ad Hoc International Criminal Tribunals for Rwanda and the former Yugoslavia (ICTR and ICTY) in 1993–1994. Whereas war crimes had not been punished by international tribunals since Nuremberg and Tokyo, the ICTY and ICTR ushered in an age of the institutionalization of such prosecutions, reaching fulfillment in the creation of the permanent International Criminal Court (ICC) in the Hague in 2002. All three of these bodies have made important contributions to the definition, jurisprudence, and punishment of war crimes, as have the so-called international "hybrid tribunals" in East Timor, Kosovo, Bosnia, Sierra Leone, and Cambodia.

The statutes of all three of these international criminal tribunals include war crimes as one of the major categories of violations of international law within the jurisdiction of these courts. (See, e.g., ICTY Statute Articles 2 and 3; ICC Statute Article 8.) The Appeals Chamber of the ICTY has clarified the relations between the categories of "grave breaches," other violations of the "laws and customs of war" defined by the Hague and Geneva Conventions, and common Article 3. It has ruled that all of these norms are war crimes and that the previous distinction between "Hague law" and "Geneva law" is no longer relevant. (See, e.g., the Tadic Jursidiction Decision, para. 87, and the Celebici Appeals Judgment, paras. 132–133.)

The statute of the ICC makes this clear in Article 8 by specifying that the category of war crimes includes grave breaches and "other serious violations of the laws and customs of war applicable in international armed conflict" as well as common Article 3 and other "serious violations of international law applicable in non-international armed conflict." The category of war crimes has thus expanded to encompass a very wide range of offenses committed in international or internal conflicts. These offenses have also become much more clearly defined than in previous eras. In particular, the jurisprudence of these courts has provided authoritative discussions and definitions of the elements of these offenses. This represents an important contribution to the interpretation and applications of such crimes because the post–World War II trials had left them largely undefined. Most recently, the ICC has promulgated the Elements of Crimes, which also includes definitions of each of the key components of all major crimes of war. As the ICC assumes an ever more prominent role in the application of international humanitarian law, its definitions of

the elements of war crimes is likely to prove to be of decisive influence.

SEE ALSO *Genocide; Holocaust, The; War; World War II*

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David Cohen

WAR OF 1898

The Spanish-American War of 1898 presented a series of opportunities and consequences for both nations. For example, Spanish historiographers have evaluated the war as a disaster after which Spain experienced decades of disarray and disorder. For Cuba, the Philippines, Hawaii, and Puerto Rico the year 1898 represented a transition from colony to nation status, although not without fierce opposition from resistance fighters such as Emilio Aguinaldo and leaders such as Queen Liliuokalani of Hawaii who fervently protested foreign encroachment on their sovereignty. Moreover, U.S. historians have debated whether to describe the war as an "accidental" conflict, a war for territorial expansion, or an inevitable war induced by public opinion. In the end, as "benevolent" victors, most Americans believed that they had acted as humanitarian benefactors on behalf of their neighbor Cuba.

A major cause of disarray on the island had been the appointment by Spain of Valeriano Weyler y Nicolau as the governor of Cuba in 1896, a period of heightened insurgency. His cruelty captured the attention of American newspapers dominated by William Randolph Hearst's sensationalist *New York Journal* (the Yellow Press). Governor Weyler disturbed humanitarian observers by establishing "reconcentration" camps that were designed to confine the peasants in detention facilities and thus isolate the insurgents, who theoretically would remain outside the quarantined areas. Although unintended, conditions in the camps caused the malnutrition of hundreds of thousands. The estimates of those who died from disease and hunger approach 321,934.

In 1898 a private letter written by the Spanish foreign minister, Enrique Dupuy de Lome, who was stationed in Washington, characterized U.S. President William McKinley as "a would be politician." Cuban revolutionaries intercepted the communiqué and offered it to the American print media. Portions of the infamous "de Lome letter" were published throughout the United States.

The primary event that justified going to war occurred in the middle of the controversy about Governor Weyler and the danger to American investments on the island. Americans labeled it "fiendish treachery" on February 15, 1898, when the American battleship *USS Maine* suddenly and without warning exploded in Havana Harbor. Out of a complement of 354 officers, 266 perished in the explosion. The *Maine* had been situated in what had been recognized as Spanish waters. The cause of the destruction of the *Maine* was uncertain. Nonetheless, on March 28 a report of the U.S. Naval Court of Inquiry determined that the explosion had been caused by a mine planted by Spanish operatives. On April 19, after a short period of deliberation, Congress voted for the immediate outbreak of hostilities against the Spanish forces in Cuba by a margin of 311 to 6 in the House and 42 to 35 in the Senate.

The first battle of the war occurred halfway across the world from Cuba, on the high seas in Manila Bay in the Philippines. The famous orders at Manila Bay to "fire when ready" were issued by the commander of the Asiatic Squadron, Commodore George Dewey. Dewey transferred the fleet from Hong Kong to the Philippines when briefings arrived on April 24. Dewey's strategy included the broadsiding of the Spanish fleet, which had been caught by surprise and ultimately proved obsolete compared with the U.S. fleet. In Cuba the American forces first landed at Guantánamo Bay and then at San Juan Hill (the site of Teddy Roosevelt's dangerous assault with the American volunteer force known as the Rough Riders), El Caney, and Santiago de Cuba. The Spanish surrendered at Santiago de Cuba on August 12. Overall, the United States lost 379 troops in combat and an estimated 5,000 as a result of disease and tropical conditions.

The war concluded with the Treaty of Paris, which was signed on December 10, 1898. The Cuban government was denied the opportunity or right to participate in the peace negotiations. Congress followed the cessation of hostilities with the Platt Amendment, guaranteeing the right of the United States to intervene militarily in Cuba any time internal disarray attracted its attention.

In the aftermath of the war the United States acquired Hawaii, Guam, the Philippines, Cuba, Puerto Rico, and the Wake Islands. Those territorial acquisitions allowed the United States to penetrate foreign markets, most importantly China, and end a decade of economic depression. The United States elected to maintain a naval station at Guantánamo Bay that proved to be a vital security installation. Securing Cuba had been a longtime priority because of its proximity to American shores and former control by a European government. President McKinley delivered the Imperial Gospel speech in 1899, in which he offered a justification for conquering foreign territories that seemed reasonable to business advocates,

the military, and imperialist patriots: "to uplift, civilize and Christianize them." Seemingly overnight America became a world colonial power.

SEE ALSO *Colonialism; Concentration Camps; Guantánamo Bay; Imperialism*

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Jonathan Jacobs

WAR ON DRUGS

SEE *Drug Traffic*.

WAR ON POVERTY

The war on poverty of the John F. Kennedy (1917–1963) and Lyndon B. Johnson (1908–1973) administrations grew out of the civil rights movement of the 1950s and continued from 1964 to 1981. It had antecedents, beginning with the 1941 state of the union address of President Franklin Delano Roosevelt (1882–1945), in which he enunciated "freedom from want" as one of four fundamental human rights. This pronouncement was taken as a program by Governor W. Averill Harriman (1891–1986) in New York state from 1954 to 1958.

A more direct antecedent had developed in New York City in 1946 at the Lafargue Psychiatric Clinic at the Saint Philip's Episcopal Church in Harlem, where Shelton Hale Bishop (1889–1962) served as rector. The clinic was named for Paul Lafargue (1842–1911), a medical doctor and the son-in-law of Karl Marx (1818–1883). Its director was psychiatrist Frederic Wertham (1895–1981). Thurgood Marshall (1908–1993) and Kenneth B. Clark (1914–2005) were members of this church. Wertham, Marshall, and Clark collaborated to help the NAACP win the 1954 U.S. Supreme Court case, *Brown v. Board of Education of Topeka*, which outlawed segregation in public schools.

MOBILIZATION FOR YOUTH

Three years later, an organization called Mobilization for Youth was incorporated on the Lower East Side of New York City by the Henry Street Settlement House with the collaboration of the Columbia University School of Social Work. In 1959 the National Institute of Mental Health (NIMH), which had just received increased allocations from Congress, provided a two-year planning grant, and Columbia sociologists Richard A. Cloward (1926–2001) and Lloyd Ohlin were retained as consultants. Cloward and Ohlin had developed an extension of Durkheim-Merton alienation/anomie opportunity theory in sociology, and in 1960 they published *Delinquency and Opportunity*, in which they argued that delinquents behaved in unapproved ways precisely because they had accepted approved social goals but found no socially approved means by which they could attain those goals, and so resorted to unapproved means. To motivate delinquents to adopt not only the goals but the approved means, opportunity must be provided. In support of this idea, Leonard S. Cottrell Jr. (1899–1985) of the Russell Sage Foundation testified on March 10, 1960, before a subcommittee of the House Appropriations Committee that delinquency was not so much a matter of curing sick individuals but of curing sick communities.

Mobilization for Youth's final planning report, "A Proposal for the Prevention and Control of Delinquency by Expanding Opportunity," was presented December 9, 1961, and was submitted to the NIMH for funding. The NIMH, the President's Committee on Juvenile Delinquency and Youth Crime (PCJDYC), the U.S. Department of Labor and other federal agencies, the New York City government, and the Ford Foundation subsequently funded Mobilization for Youth for $12.5 million for three more years. In April 1962 Mobilization for Youth submitted "Youth in the Ghetto: A Study of the Consequences of Powerlessness and a Blueprint for Change" to the PCJDYC review committee, headed by Cottrell. This committee recommended that one million dollars be granted to the program. The city of New York, under Mayor Robert Wagner (1910–1991), then allocated $3.5 million from its antipoverty funds. The Department of Labor under the Manpower Development and Training Act granted another half million dollars for job training aspects of the program. The initial directors were Cloward and George A. Brager (d. 2003).

In his first race for the office of New York City mayor in 1977, Edward Koch coined the terms *poverty pimp* and *povertician* to refer to Raymon Velez of the South Bronx. Velez, born in Puerto Rico in 1930, had developed beginning in 1968 a network of organizations in the South Bronx funded by the Office of Economic Opportunity (OEO). He had earned a BA in history and political science from Inter-American University of Puerto Rico, after which he became a school teacher. Immigrating to New York, Velez became a social worker. On the basis of his antipoverty network, which provided needed social services and jobs to residents of Puerto Rican neighborhoods,

he gained popularity and turned this social and economic success toward politics. Velez became the "boss" of South Bronx politics, securing the election of many Puerto Ricans to city, state, and federal office. In the 1980s he was elected to the New York City Council, a step downward in his estimation, and served only briefly. This evidently was a slap at Democratic primary opponent, Herman Badillo, whom Velez supported. The rise of Puerto Rican political power in the South Bronx was attained at the expense of Jewish politicians who previously had controlled the area. Changing demographics accounted for the transition.

THE FEDERAL ANTI-POVERTY PROGRAM OF THE KENNEDY-JOHNSON ADMINISTRATIONS

In the presidential election campaign of 1960, John F. Kennedy promised a "war against poverty and degradation" and "an economic drive on poverty" to address the high and persistent unemployment of the 1957–1958 and 1959–1960 recessions. His thought on this issue was based largely on John Kenneth Galbraith's (1908–2006) *The Affluent Society* (1958), especially chapter 23, "The New Position on Poverty." Upon Kennedy's election, the president's Council of Economic Advisors and the Budget Bureau immediately advocated a tax cut, accompanied by an increase in spending as a Keynesian economic remedy for the recession. The result would be a deliberate increase in the federal deficit. This was an attempt to establish Keynesian economic theory as a viable basis for government economic policy. The president accepted this advice.

The particular cabinet departments and programs involved in the spending increases and tax cuts were determined in other ways. In March 1961 Kennedy called a President's Conference on Juvenile Delinquency, chaired by his brother Robert F. Kennedy (1925–1968), the new attorney general. Based upon the recommendations of the March conference, the PCJDYC was established on May 11, 1961. The PCJDYC was to finance projects seeking a solution to juvenile delinquency. Robert Kennedy selected his friend David Hackett as executive director.

In September 1961 Congress passed the Juvenile Delinquency and Youth Offenses Act, which authorized demonstration and training programs in finding "the most effective ways of using total resources to combat juvenile delinquency in local communities." It authorized an expenditure of $10 million over three years for the program. In 1962 the committee gave planning grants to agencies in sixteen cities. The act also funded Mobilization for Youth in late 1961 to develop a plan of action to curb juvenile delinquency on New York's Lower East Side. Cloward then lent his principal assistant, sociologist James A. Jones (1932–1992), to Kenneth Clark to design a similar program for Harlem. Clark and Jones in 1962 established Harlem Youth Unlimited Inc. (HARYOU), of which Jones became research director. Harlem Congressman Reverend Adam Clayton Powell Jr. (1908–1972), the new chairman of the House Education and Labor Committee, formed a rival Harlem organization, Associated Community Teams (ACT). He then insisted that HARYOU be merged with ACT, and when this was accomplished, Clark resigned. He was replaced by ACT executive director Livingston Wingate (1916–1995), Powell's assistant.

In December 1962 President Kennedy asked his Council of Economic Advisors chairman, Walter W. Heller (1915–1987), to pull together all available information on the poverty issue. Heller assigned this task to council member Robert J. Lampman (1920–1997). He and Heller suggested that Kennedy read socialist Michael Harrington's (1928–1989) *The Other America: Poverty in the United States* (1962), along with Leon Keyserling's (1908–1987) *Poverty and Depression in the United States* (1962). Harrington was considered a "responsible radical," because he was a follower of former Trotskist Max Schactman, whose tactic was to "bore from within." This meant that instead of running Socialist Party candidates for elective office, the party would support Democratic Party candidates. Harrington, thus, had been a well-known worker for left and liberal organizations and journals throughout the 1950s. In July 1959, he wrote an article on poverty for *Commentary Magazine,* and it was from this article that the book *The Other America* grew. In an approving commentary of Galbraith's book *The Affluent Society* (1958), he noted the existence of 50 million impoverished people in the United States, about one quarter of the total population. Poverty persisted from generation to generation, helped by what Oscar Lewis called a "culture of poverty," a non-Marxist idea. It was precisely this idea that recommended him to the Kennedy administration, because it undercut left leadership of the anti-poverty struggle. Harrington's entire body of work thus led to an eager anticipation of the book, and accounted for the wide extent of its positive reception. That he had worked for Catholic organizations did not hurt his acceptance by the president, even though he had lapsed from the faith by then. After Lampman reported that the U.S. poverty rate was increasing, Kennedy directed Heller to include a "war on poverty" in the 1964 White House legislative package for Congress.

On the day after Kennedy's November 22, 1963, assassination in Dallas, Heller met with President Johnson and suggested to him that a war against poverty might be a good way to begin his presidency. Johnson agreed. In his 1964 state of the union address, titled "The War on Poverty," he called on Congress to enact a package of measures embodying programs that would eliminate

poverty "in our lifetimes." On February 1, 1964, Johnson appointed Kennedy's brother-in-law and Peace Corps director Sargent Shriver to head a Task Force on Poverty.

THE EQUAL OPPORTUNITY ACT

David Hackett and Richard Boone of PCJDYC suggested that their community action model should be the vehicle for this war on poverty. Other departments proposed programs over which they had jurisdiction. At this point, the Budget Bureau, headed by economists Kermit Gordon (1916–1976) and Charles L. Schultze, became involved. Budget Bureau staff member William B. Cannon wrote a memorandum suggesting that the community action program begin with ten demonstration areas across the country, and that a development corporation be established in each. Schultze suggested similarly that poverty funds be allocated to "pockets of poverty," rather than uniformly across the country. He also suggested using the term *action program*, from Cannon's memo, rather than *development corporation*. Someone added *community* to *action program*, and the community action title of the proposed legislation was born. The task force developed the plans for an organization to conduct the "war on poverty," and submitted them to the president on March 15, 1964; he then disbanded the group. The next day, on the basis of the task force report, Johnson delivered a message to Congress calling upon it to enact legislation creating such an agency. He stated that the program would not consist of top-down planning from Washington, but would involve the talents of people from all over the country, at every level of society. He also called for the establishment of an office of equal opportunity. In testimony before Congress in 1964, Shriver listed 137 people who had participated in writing the legislation. On August 29, 1964, Congress passed, and Johnson signed into law, the Equal Opportunity Act of 1964. The act created the OEO, and on August 30, 1964, Congress gave the OEO $947.7 million for ten programs.

The OEO was initially lodged in the Office of the President, but subsequently became an independent agency. Shriver was named director of the OEO and served until 1968. Economist and AFL-CIO lobbyist Hyman H. Bookbinder, a member of Shriver's 1964 task force, became associate director.

The Equal Opportunity Act also created an OEO Advisory Committee of fourteen, which was appointed by President Johnson on January 29, 1965. Perhaps the most important arm of the OEO administrative structure, although it had no program responsibilities, was the Office of Research, Plans, Programs, and Evaluation, which might be called the "war room" of the war on poverty. Here were placed those economists who had actual experience in administering economic planning. The first director of this office was Joseph A. Kershaw (1913–1978), who served from 1964 to 1966. He was succeeded by Robert A. Levine (1966), Robinson G. Hollister (1966–1968), and Walter Williams (1968–1969). Levine attempted to establish a five-year plan to end poverty that proposed a national negative income tax program to replace Aid to Families with Dependent Children (AFDC). The OEO funded the New Jersey Negative Income Tax demonstration project to estimate the cost of the program.

The war on poverty required for its success a definition of poverty and a means of measuring it. In March 1965, Kershaw and the Office of Research, Plans, Programs, and Evaluation used the work of economist Mollie Orshansky of the Social Security Administration to establish such a definition. Two months later, the OEO officially adopted the Orshansky poverty thresholds as a working definition of poverty.

The unique feature of the Equal Opportunity Act was Title II: the Rural and Urban Community Action Program. The OEO divided the country into seven to ten regions, each with a regional director. Fieldworkers in the Washington headquarters traveled to regions to help establish and monitor the operation of community action agencies located in the major cities of each region. In addition, the OEO funded national organizations to facilitate theoretical and empirical research on the issue of poverty. Chief among these were the Harvard-MIT Joint Center for Urban Studies, the National Association for Community Economic Development, the Institute for Research on Poverty, the Urban Institute, the Center for Community Economic Development, and the National Rural Center.

THE INSTITUTE FOR RESEARCH ON POVERTY

The Institute for Research on Poverty was established at the University of Wisconsin by Lampman, who was considered the leading expert on the economics of poverty. Its first director was Harold W. Watts (1966–1971). By 1985, with the OEO no longer in existence, oversight of the Institute for Research on Poverty had shifted to the assistant secretary of Health and Human Services for Planning and Evaluation. By 1996 the institute was no longer the national poverty center, but only one among several area poverty centers. The Center for Community Economic Development in Cambridge, Massachusetts, was codirected in 1971 by Geoffrey P. Faux, who had been director of the OEO Economic Development Division from 1967 to 1970. The National Rural Center was established in 1975, with F. Ray Marshall as president and director. When President Jimmy Carter named Marshall his secretary of labor in 1977, John M. Cornman replaced him.

Half of the OEO's community action program funds went to prepackaged national programs such as Head Start. The other half went to local initiative programs developed by the community action agencies themselves.

New York City, where the theory and operational model for the war on poverty had been developed, now received feedback from the federal government. In 1962 Mayor Wagner had created a Council on Poverty and an Anti-poverty Operations Board. Surgeon Arthur C. Logan (1909–1973) was the first chairman of the community action program under Wagner. Wagner was defeated in 1965 by former congressman John V. Lindsay (1921–2000), who in 1966 established a Mayor's Task Force on Poverty, headed by Mitchell Sviridoff (1918–2000). The task force recommended the establishment of a superagency comprised of all agencies having any responsibility for providing services to the poor. On September 15, 1966, Lindsay established the Human Resources Administration, which included the Community Development Agency and the Manpower and Career Development Agency, among other agencies. The Community Development Agency was designated the New York City community action agency under the OEO. Sviridoff served as head of the Human Resources Administration from 1966 to 1967.

New York's Community Development Agency was headed by George Nicolau from 1966 to 1967. He was replaced by Major Owens in 1968, and Owens served until 1973. In 1968 the agency wrote a grant proposal to NIMH for a Brownsville Community Council economic advocacy planning project. The NIMH funded the proposal, its first grant to a community action agency to conduct economic advocacy planning, and the Brownsville Advocacy Planning Agency was born. The agency's staff included graduate students in economics from Yale and Columbia universities.

A participant in the 1949 founding of the NIMH, and a member of its advisory board at the time of this grant, was Eli Ginzberg (1911–2002), director of the Conservation of Human Resources Project of Columbia Business School. His staff at Columbia in 1956 consisted of two economists and four psychologists and social psychologists. The grant to the Brownsville Community Council was a departure, as advocacy planning was developed largely by architects and city planners. Columbia's School of Architecture, for example, was responsible for the creation of the Architect's Renovation Committee of Harlem and the East Harlem Studio of the Real Great Society Uptown. In the 1950s the NIMH had established a unit to finance outside research. In response to Johnson's war on poverty, the NIMH established centers for minority group and urban mental health problems. It was the conjuncture of these institutions and forces that enabled the grant to the Brownsville Community Council in 1968.

Robert Kennedy resigned as attorney general and was elected senator from New York in 1964. In 1966 he and Jacob Javits (1904–1986), the senior senator from New York, introduced the Kennedy-Javits Amendment to the Equal Opportunity Act, creating a new Title I-D, the special impact program (SIP). This title caused a shift in the OEO toward community-controlled business development through community development corporations. The community development corporations were designed as community holding companies or community trusts. To administer the new program, the OEO established the Economic Development Division, under which the Bedford-Stuyvesant Restoration Corporation in Brooklyn, New York, and the Hough Area Development Corporation in Cleveland, Ohio, were funded in 1966 as the first two community development corporations in the nation.

In 1967 the Edith Green Amendment placed a ceiling of 33 percent for representatives of the poor on a city's community action agency. In the meantime, Kenneth Clark in 1967 founded the Metropolitan Applied Research Center and served as president until 1975. The Metropolitan Applied Research Center received a grant of $190,000 from the Field Foundation. In 1970 the center and Howard University, with an $860,000 Ford Foundation grant, established the Joint Center for Political Studies in Washington, D.C., with Howard law professor Frank D. Reeves (1916–1973) as director.

From 1968 to 1969, New York's community action program guidelines made advocacy planning the highest project-funding priority, leading to the funding of the Pratt Institute's Center for Community Development; Harlem Commonwealth Council's (HCC) Commonwealth Holding Company, Inc., a subsidiary, with the Black Economic Research Center in Harlem as a major consultant; and the Brownsville Advocacy Planning Agency. These organizations were intended to provide economic expertise and advocacy for their respective communities in dealing with the City Planning Commission and other relevant city, state, and federal agencies in developing and locating commercial, industrial, and service enterprises.

The Ford Foundation, a major partner of the federal and city governments in the war on poverty, provided grants for advocacy planning to the Black Economic Research Center from 1968 through 1980. The center developed the theory that the major economic problem of black Americans was not labor market inequality but capital market inequality, which included access to the major stock and commodity exchanges, as well as to the Treasury Department, which represented capital interests, on a communal basis. Current capital reallocation was necessary, and the first stage of such a transfer was social capi-

tal, including infrastructure, and educational facilities with financing for operations.

Current income redistribution was also deemed necessary, along with future nondiscrimination in markets to maintain the gains achieved. These developments were a direct confrontation of the theory upon which the war on poverty was based—that a change of unmeasurable internal states of being could result in a measurable diminution of poverty in a finite and short period. It also confronted the theories of economists Gary S. Becker, Theodore Schultz (1902–1998), and Milton Friedman (1912–2006), which defined lifetime earnings as capital stock, human capital, and focused on future income distribution and not current income redistribution. This polemic was one of the sources for the development of the reparations argument in the black community. Reparations as a large lump sum would enable the purchase of capital assets by the residents of black communities, and avoid the necessity for politically impossible capital expropriation. This concept, which had been a tenet of black nationalist doctrine since the 1920s, began to gain academic and social respectability at the Black Economic Development Conference in Detroit in 1969.

DEVELOPMENTS UNDER NIXON AND LATER ADMINISTRATIONS

The election of Richard M. Nixon (1913–1994) as president in 1968 heralded the demise of the OEO and the war on poverty. In April 1969, Donald H. Rumsfeld was appointed OEO director with the charge to dismantle the agency. He selected Richard B. Cheney as his assistant. Howard Phillips was appointed as OEO director in 1973 to succeed Rumsfeld. However, court decisions forced the administration to expend the funds appropriated, because the Equal Opportunity Act had a ten-year life by law. In 1970 amendments to the Equal Opportunity Act created SIP Title VII. Title VII funds went to, among other entities, the Federation of Southern Cooperatives, which created surplus-earning entities in rural areas of southern states. OEO programs were transferred to the Department of Health, Education, and Welfare, and to the Department of Labor. By the time Nixon resigned on August 8, 1974, the war on poverty was essentially over.

The coup de grâce occurred from 1974 to 1976 during the Gerald R. Ford (1913–2006) administration. Funding for OEO programs could now be legally cut, and the OEO was actually abolished by the Headstart, Economic Opportunity, and Community Partnership Act of January 4, 1975, which created the Community Services Administration (CSA), the name suggesting a retreat from community action by citizens to government provision of services to citizens in communities. For the horizontal relationships among equal citizens uniting to achieve a commonly determined purpose at the neighborhood level was substituted the old vertically hierarchical relationship between the rulers and the ruled.

From 1977 to 1981 the Carter administration attempted to resurrect the war on poverty by increasing funding for the CSA and enacting legislation expanding the SIP emphasis. Chief among the new institutions established by Congress was the National Consumer Cooperative Bank, signed into law in 1978 and opened for business in 1980, and the Rural Development Loan Fund, established in 1981. Both had boards of directors consisting of representatives elected by residents of low-income communities. The National Consumer Cooperative Bank made federally subsidized below-market-rate loans to consumer and producer cooperatives in largely urban areas. From the Community Economic Development Act of 1981, the Rural Development Loan Fund was to consist of all remaining funds from Part A of Title III of the Equal Opportunity Act and the funds from Title VII community development credit unions. It was located in the CSA, and provided one-percent interest rate loans for rural business purposes.

The OEO, the Rockefeller Brothers Fund, and the Ford Foundation had earlier financed the development of the idea for these financial institutions. Edward K. Hamilton and Belden Hull were hired as consultants by the National Rural Center and the Opportunity Funding Corporation (established in 1970) to design the bank as an experiment in development finance. The Opportunity Funding Corporation was an OEO demonstration project in community capital development, led by John Gloster, a former Atlanta insurance executive. The National Rural Center invited experts from Europe, Canada, and the United States to a conference at the University of Wisconsin to provide ideas on a design. The final design drew upon the Treasury Department's new Federal Financing Bank, established in 1973. This design was negotiated largely at the Treasury Department with an interagency task force appointed by President Carter.

With Carter's defeat by Ronald Reagan (1911–2004) after one term, however, the fate of the war on poverty was sealed. The Equal Opportunity Act was repealed on October 1, 1981. The Community Development Block Grant was established in 1981, ensuring that federal funds would not go directly to neighborhoods but would be filtered through established political groups at the state and municipal levels. Then CSA was abolished, although the Rural Development Loan Fund was allowed to remain.

Despite these developments, the national advocacy groups for community development corporations continued the battle against poverty, financed as before the war on poverty by religious organizations, universities, private foundations, and unsystematically by federal, state, and

local government. The war on poverty had degenerated from a massed frontal assault into a guerrilla war. In addition, the surpluses generated from the operation of community development corporations and cooperatives were plowed back into operations to help finance operations and expand capital equipment. And the national financial institutions still existed. As of 2005, at least 80 percent of counties in the United States still had community action agencies or community development corporations.

CONCLUSION

The war on poverty involved socially well-placed individuals using social science ideas to create new institutions in low-income communities, and at the national level to assist these local institutions. These individuals and institutions then engaged in actions that created historic events. The social science ideas reflected Keynesian economic theory, as well as opportunity theory in sociology and social psychology, and the political science theory of urban politics that maintained that urban neighborhood communities should be self-governing, independent political entities.

The new institutions created were, at the first level, community social service agencies in poor communities. The organizations responsible for these creations were private religious organizations, universities, and foundations. Using these community organizations as models, the federal, state, and local governments transformed their structures to replicate those of the private social service agencies for these functions, and wrote these changes into law. These practices thereby became obligatory for the nation as a whole and, importantly, became familiar to the large portion of the electorate who were neither poor nor involved in service to the poor.

SEE ALSO *Culture of Poverty; Great Society, The; Johnson, Lyndon B.; New Deal, The; Poverty; Poverty, Indices of; Roosevelt, Franklin D.; Welfare State*

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Julian Ellison

WARFARE, NUCLEAR

Nuclear warfare consists of armed conflict between states in which one or more sides employ nuclear weapons. Because no war since World War II has involved nuclear weapons, how such a conflict would be triggered and executed is largely a matter of theoretical speculation. Furthermore, the sophistication and destructive scale of the nuclear weapons used against Japan pale in comparison to modern weapons. A nuclear war between two nuclear states would result in the deaths of hundreds of thousands, if not millions, of people. The areas surrounding locations hit with nuclear weapons would be highly contaminated with radioactive fallout. In addition, depending on the number of weapons used, such a war could have long-term devastating effects on the earth's ecosystems and atmosphere. Because today only a few countries possess nuclear weapons, the number of conflicts that could conceivably escalate to nuclear war is limited. These countries include the United States, Russia, China, Great Britain, France, Israel, Pakistan, India, and most likely North Korea. Proliferation to additional countries remains a continual problem for international security.

The destructive power of nuclear weapons makes nuclear warfare fundamentally different from traditional conventional warfare. The single fifteen-kiloton bomb dropped on Hiroshima, for example, destroyed 80 percent of the city, immediately killing between 66,000 and 80,000 people and injuring roughly 70,000. As Wilfred Burchett (1945), the first journalist to report on the devastation, put it: "Hiroshima does not look like a bombed city. It looks as if a monster steamroller has passed over it and squashed it out of existence." The city of Hiroshima estimates that the total killed from the explosion and subsequent radiation poisoning is over 240,000. Nagasaki saw high casualties as well, with 39,000 immediately killed and 25,000 injured, and many others who later died due to radiation poisoning.

How nuclear weapons would be used in war, and whether a nuclear war between two nuclear powers could even be won, has been a central problem facing military strategists and planners. Because of the devastating effects of nuclear weapons, they are less useful in battle than conventional weapons. However, because such weapons exist and because no country can be sure of what another's

intentions would be in the event that they were to gain a dominant nuclear advantage, the major nuclear powers have continued to develop nuclear war strategies. That said, nuclear powers have shown extreme caution when conflict develops with other nuclear powers, out of fear that a minor crisis could escalate into an unwanted nuclear war; this was displayed during the 1962 Cuban missile crisis. Nuclear powers have also been reluctant to use their nuclear capabilities in conflicts against a non-nuclear power, as with the United States in Vietnam or Israel in its 1973 war with Egypt and Syria.

COUNTERFORCE, COUNTERVALUE, AND MUTUAL ASSURED DESTRUCTION

Nuclear strategy makes distinctions between *counterforce* and *countervalue*. Counterforce strategies are intended to affect an opponent's capabilities, whereas countervalue capabilities affect an opponent's will. Counterforce targets an opponent's armed forces and military-industrial installations, limiting the opponent's ability to retaliate in a counterattack. A country that struck first in a nuclear war would most likely employ a counterforce targeting strategy. Countervalue strategies target an opponent's cities—that is, things of human and emotional value. A country that feared a nuclear attack by an opponent would threaten a countervalue retaliation with the hope that even the possibility of its opponent losing one city would be enough to deter a nuclear first strike. Of course, for a countervalue deterrent to be effective, the country being deterred must believe that at least some of its opponent's nuclear arsenal would survive a first strike. It also must believe that the damage that that remaining arsenal could deliver would outweigh the benefits gained from striking first. With nuclear weapons it is oftentimes difficult to distinguish between what constitutes a counterforce and what constitutes a countervalue target. Military targets are often found in population centers and given the large radius of damage caused by a nuclear attack it is extremely difficult to target the one without hitting the other. For example, when U.S. war planners began looking for military-industrial targets across the Soviet Union after 1945, every sizeable Soviet city was deemed to contain military targets.

The logic behind counterforce and countervalue, as well as first-strike versus second-strike capabilities, is encompassed in the idea of *mutual assured destruction* (MAD). MAD describes a state of affairs in which both sides' nuclear forces are such that a sufficient percent would remain after an attack that it would still be possible to bring about the near total destruction of the attacking state. The hope of MAD was that this mutual suicide pact would prevent either side from ever being tempted to use nuclear weapons. In order for MAD to be viable, however, it required the United States and the Soviet Union to stockpile large quantities of nuclear weapons and to develop targeting lists of single targets that would be hit multiple times. In addition, U.S. and Soviet force structures were designed to survive a possible first strike. Achieving this involved spending on difficult-to-target nuclear forces, such as submarines, hardened missile silos, and continually in-flight bomber fleets.

MAINTAINING A STRATEGIC BALANCE

Those who wanted to maintain a strategic nuclear balance put emphasis on developing less-accurate, single large warheads that would be unable to hit anything smaller than area targets. Such missiles would be effective against countervalue targets, which do not require precise accuracy to be effective; but would be less effective hitting silos or airfields.

It was feared, however, that a number of innovations and weapons systems could disrupt this strategic balance. Such a disruption could lead one side to perceive a "window of opportunity" in which they would be tempted to launch a preventive war before new technological innovations either restored the balance or shifted first-strike advantage to the opponent. For example, declarations of "bomber gaps" or "missile gaps" by United States politicians, particularly in the late 1950s and early 1960s, led many to fear that (alleged) Soviet advantage could lead to a devastating first strike. The development of multiple independently targeted reentry vehicles (MIRVs), which are intercontinental ballistic missiles (ICBMs) carrying multiple warheads that can be individually programmed to hit separate targets, was also seen as destabilizing, as one missile could target multiple ICBM silos. This offensive advantage, it was feared, could tempt one country to launch a preemptive attack out of fear that it would suffer a debilitating blow if it were not the one to attack first.

Another potential innovation capable of disrupting strategic balance is some form of missile defense system. While an effective missile defense system could protect a country from nuclear annihilation, it would also provide it with an overwhelming first-strike advantage, as its opponent would be unable to retaliate, regardless of the number of surviving nuclear forces. There would also be an incentive to strike sooner rather than later, as military history has shown that all defenses are eventually penetrable.

Arms control agreements between the United States and the Soviet Union during the Cold War were primarily designed to stabilize the strategic balance between the two sides. By limiting each side's ability to gain first-strike advantage, the hope was that neither side would be tempted to carry out a preemptive first strike. The Anti-Ballistic Missile (ABM) Treaty, Strategic Arms Limitation Talks

(SALT I and II), the Strategic Arms Reduction Treaties (START I and II), and the Strategic Offensive Reduction Treaty (SORT) were all designed to provide a framework in which the United States and the Soviet Union (now Russia) could maintain a nuclear balance without engaging in a costly and potentially dangerous arms race.

CURRENT CONCERNS AND FEARS

Since the end of the Cold War, fears of a nuclear exchange between the United States and Russia have subsided. However, a number of concerns still remain. India and Pakistan, which both officially declared their nuclear status with a series of tests in 1997, have a long history of conflict, specifically over the contested Kashmir region. This history of conflict, their contingent border, and an underdeveloped command and control system, make a nuclear exchange (either intentional or accidental) a very real possibility.

It is also feared that a "rogue" state could develop a nuclear weapon and be able to hold the world hostage by threatening to use it against a major world city if its demands were not met. While the world could easily retaliate if such a threat were carried out, the question remains whether there would be a willingness to risk giving up an important city in the first place. It is this potentiality that has led world leaders to take aggressive stances (with mixed success) against such potential proliferators as North Korea, Iraq, Iran, and Libya.

The final fear is that a terrorist organization would be able to acquire a nuclear device by stealing, buying, or being given it from a country's arsenal. This is a particularly difficult scenario because normal countervalue threats would not have a very strong deterrent effect on a small, decentralized, apocalyptic terrorist organization.

SEE ALSO *Cold War; Defense; Defense, National; Deterrence, Mutual; Disarmament; Proliferation, Nuclear; World War II*

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David R. Andersen

WARREN, EARL
1891–1974

As the fourteenth Chief Justice of the United States, Earl Warren presided over a Supreme Court that handed down landmark rulings in the areas of race relations, school prayer, political representation, and criminal justice. Warren was born to Scandinavian immigrants in Los Angeles, California, on March 19, 1891. He was raised in Bakersfield, where his father worked for the Southern Pacific Railroad, and he himself worked a variety of summer jobs with the railroad. He put himself through school, earning both his undergraduate and law degrees at the University of California at Berkeley.

Warren began his political career as the district attorney of Alameda County, California. He went on to serve as California's attorney general, and in 1942 he was elected governor. During his state service, Warren supported the evacuation of persons of Japanese ancestry from the West Coast during World War II. Throughout the remainder of his political career, Warren publicly defended his action, which stands in stark contrast to his role as one of the staunchest civil libertarians ever to serve on the U.S. Supreme Court.

Warren sought the Republican presidential nomination in 1948 and 1952. In 1948 he was chosen as Thomas Dewey's running mate, but the Dewey–Warren ticket was defeated. In 1952, the Republican nomination, and the presidency, went to General Dwight D. Eisenhower. Following the unexpected death of Chief Justice Fred Vinson in the summer of 1953, President Eisenhower appointed Warren to fill the vacancy.

On the Supreme Court's docket for the 1953 term was *Brown v. Board of Education*, a group of cases challenging the racial segregation of public primary and secondary schools. At the time, one-third of the states and the District of Columbia maintained segregated schools by law, often with vast disparities in school funding and facilities for black and white students. The Warren Court handed down a unanimous ruling in the *Brown* cases in May 1954, declaring that "separate educational facilities are inherently unequal." A year later, in *Brown II*, the Court ordered that public schools be desegregated "with all deliberate speed." In subsequent decisions, the Warren Court struck down racial segregation in public buildings, transportation, housing, and recreational facilities. The

Brown decisions were not the only Warren Court rulings that impacted public education. In *Engel v. Vitale* (1962) and *Abington School District v. Schempp* (1963), the Court ruled that state-sponsored prayer and Bible reading in public schools were establishments of religion in violation of the Constitution.

During the 1960s the Warren Court instituted a constitutional revolution in criminal justice. In a series of decisions, the Court used the Fourteenth Amendment to apply many of the guarantees of the Bill of Rights—the protections against self-incrimination and double jeopardy, the right to counsel, the right to a jury trial and to confront witnesses—to the states. Some of these protections were encapsulated in what became known as the Miranda warnings. According to the Court's decision in *Miranda v. Arizona*, criminal suspects who are in custody must be informed of their constitutional rights, and they must waive those rights before any questioning may occur.

The Warren Court significantly altered the system of political representation in the United States as well. The first half of the twentieth century saw substantial population shifts from rural to urban areas, yet many state legislatures did not redraw representational districts to reflect these shifts. In a previous decision the Court had declined to address the apportionment issue, describing it as a "political thicket" that the Court should avoid. But in its 1962 ruling in *Baker v. Carr*, the Court rejected this reasoning, opening the door to a series of decisions establishing the "one person, one vote" principle for political representation and applying this principle at the congressional, state, and local levels. After leaving the Court, Warren described *Baker v. Carr* as the most important decision handed down during his tenure.

Warren resigned from the Court in 1969 and was replaced as Chief Justice by Warren E. Burger. He died on July 9, 1974, following a series of heart attacks, and was buried in Arlington National Cemetery.

SEE ALSO Brown v. Board of Education*, 1954;* Brown v. Board of Education*, 1955; Civil Liberties; Concentration Camps; Eisenhower, Dwight D.; Incarceration, Japanese American; Judicial Review; Supreme Court, U.S.; Warren Report*

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Malia Reddick

WARREN REPORT

Warren Report is the abbreviated, unofficial name of the Report of the President's Commission on the Assassination of President John F. Kennedy. This commission's unofficial, commonly used name is the Warren Commission because it was chaired by Earl Warren, chief justice of the U.S. Supreme Court. President Kennedy was assassinated in Dallas, Texas, on November 22, 1963. President Lyndon B. Johnson established the Warren Commission on November 29, 1963. The Warren Report was published on September 27, 1964.

Shortly after Kennedy's assassination, there was widespread speculation that Kennedy's assassination was the result of a conspiracy, probably involving the Communist governments of Cuba and/or the Soviet Union. President Johnson was concerned that widely held conspiracy beliefs might undermine the legitimacy of the American presidency and detrimentally affect American foreign policy. Johnson hoped that a presidential commission that carefully investigated Kennedy's assassination and published a well-researched conclusion would dismiss or discourage irresponsible, groundless, alternative explanations of Kennedy's assassination. He assumed that the public credibility of the Warren Commission's investigation and report depended on the objectivity, integrity, and expertise of the commission's members.

Consequently, Johnson appointed Democrats and Republicans, current or former members of all three branches of the U.S. government, and senators and representatives to the commission. With Chief Justice Warren as its chairman, the commission also included Democratic Representative Hale Boggs of Louisiana, Republican Representative Gerald R. Ford of Michigan, former World Bank president and Kennedy adviser John McCloy, former CIA director Allen W. Dulles, Democratic Senator Richard Russell of Georgia, and Republican Senator John Sherman Cooper of Kentucky. During its ten-month investigation, the Warren Commission received testimony from 552 witnesses, reports from the FBI, CIA, Secret Service, and other federal agencies, tests on ballistics, and information from officials in Texas.

The major finding of the Warren Report was that Kennedy's assassination was not the result of a conspiracy. The report found that Lee Harvey Oswald acted alone in killing Kennedy and wounding Governor John Connally of Texas. The report concluded that Oswald fired three bullets from the Texas School Book Depository. One bullet hit Kennedy in the back, went through his throat, and struck Connally. A second bullet fatally struck Kennedy in the head. A third bullet missed Kennedy's car entirely.

The Warren Report also stated that there was no evidence to prove that there was a second gunman who shot at the motorcade from a different location. The report

rejected the idea that Jack Ruby, who shot and killed Oswald shortly after Oswald's arrest, was part of a conspiracy to silence Oswald. Chapter 8 of the Warren Report detailed what the commission regarded as lax, inadequate, and outdated practices by the Secret Service in planning and protecting Kennedy's trip to Dallas. In particular, the report noted the Secret Service's use of its outdated security plan for Franklin D. Roosevelt's 1936 visit to Dallas as the basis for Kennedy's visit, its inadequate coordination with Dallas officials in planning and conducting security for Kennedy's visit, and the lack of a bulletproof cover for Kennedy's car in Dallas. The Secret Service also failed to thoroughly search all buildings, rooftops, and windows along the motorcade route before the motorcade began.

By the late 1960s, independent researchers and the American public increasingly doubted the findings of the Warren Report, especially its "lone gunman" and "single bullet" theories. The first two well-known books challenging the Warren Report were Edward J. Epstein's *Inquest* and Mark Lane's *Rush to Judgment*, both published in 1966. Lane's book was also made into a documentary. Epstein especially challenged the feasibility of the "single bullet" and "lone gunman" theories, and Lane asserted that Oswald did not assassinate Kennedy. In general, both books criticized the Warren Commission for intentionally ignoring or rejecting important evidence that threatened its anticonspiracy bias.

By the 1970s, with the Watergate scandals and Richard M. Nixon's forced resignation from the presidency, more Americans were willing to believe that government officials and agencies, especially the military, FBI, and CIA, engaged in conspiracies, cover-ups, and abuses of power. The congressional investigation of Watergate was followed by highly publicized congressional investigations of the FBI and CIA, including allegations that the CIA was connected to assassination conspiracies directed against foreign leaders. Most significantly, the 1979 report of the House Select Committee on Assassinations (HSCA) rejected part of the Warren Report and concluded that a total of four shots were fired, one of which was fired by a second gunman from Dealey Plaza's grassy knoll.

During the 1980s and 1990s, the number and variety of conspiracy theories rejecting the Warren Report increased. Some theorists claimed that Kennedy was killed by organized crime because gangsters were angry that Kennedy had betrayed them by allowing the Justice Department to vigorously prosecute them and by failing to overthrow Fidel Castro. Others asserted that wealthy, right-wing extremists in Texas hired assassins to kill the president. Oliver Stone's 1991 film *JFK*, based on Louisiana attorney James Garrison's investigation of Kennedy's assassination, implied that a government conspiracy that included the CIA, the military, and Johnson killed Kennedy.

Partially to refute this film, Gerald Posner researched and wrote *Case Closed: Lee Harvey Oswald and the Assassination of JFK* (1993). Posner criticized some of the Warren Commission's efforts as too hasty and incomplete, but he generally reaffirmed the Warren Report's conclusions, especially the "lone gunman" and "single bullet" theories. Shortly after Posner's book was published, Harold Weisberg countered with *Case Open: The Omissions, Distortions, and Falsifications of* Case Closed (1994), which rejected the Warren Report and Posner's defense of it. It is unlikely that there ever will be a definitive, widely shared public acceptance of the Warren Report.

SEE ALSO *Kennedy, John F.*

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WARS, CIVIL

SEE *Civil Wars.*

WARSAW PACT

The Warsaw Pact was signed on May 14, 1955, in order to create an organization of Central and East European Communist states. It is different from the Warsaw Convention, signed in 1929, which is an international convention regulating liability for commercial airlines transporting persons, luggage, or goods.

The formal name of the Warsaw Pact was the Treaty of Friendship, Co-operation, and Mutual Assistance. It was created for two reasons: first, to counter the threat from the North Atlantic Treaty Organization (NATO), an alliance established six years earlier; and second, in reaction to the admission of West Germany into NATO. The initial members of the Warsaw Pact were the Soviet

Union, Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Romania. Yugoslavia was the only Communist state not to sign the treaty. Albania withdrew from the pact in 1968. Despite being initially created to counter the threat of NATO, in practice the pact was a tool of the Soviet Union, used to strengthen its hold over its satellite countries. In contrast to NATO, the Warsaw Pact was completely subordinated to a single power. The pact allowed the Soviet Union to impose its military and political agenda on Central and East European countries through the use of both its military and economic power. The pact was supposed to last for only twenty years and become void if any of the members decided to drop out. Nonetheless, the agreement was renewed in 1975 for another ten years, despite Albania's unilateral withdrawal from it seven years earlier.

PRINCIPLES

The signatory parties of the Warsaw Pact agreed to abstain from violence or from the threat of violence in international relations. The treaty established the goals of the members, which included world peace and security, and global disarmament. Countries also had to confer with each other on matters of international affairs and agreed that in the event of outside aggression against one member, all member countries would defend the threatened country together. However, the Soviet Union also wanted to use the Warsaw Pact as a bargaining tool with non-Communist European countries. This is evidenced by the concluding article of the pact, which stipulated that the agreement would lapse in the event of an East-West collective security pact.

The treaty, signed in 1955, was supplemented by numerous bilateral treaties between the Soviet Union and satellite countries. Among other things, these treaties gave Soviet troops the right to be on the soil of signatory countries. Some countries, such as Poland, allowed the stationing of Soviet troops on their soil under the 1945 Potsdam Agreement and through a separate bilateral treaty. Hungary also had a bilateral agreement with the Soviet Union. Soviet troops prevented Hungary's 1956 attempt to secede from the organization and crushed liberal movements in Czechoslovakia that emerged in what came to be known as the "Prague Spring." Czechoslovakia only signed its bilateral treaty with the Soviet Union *after* the Soviet invasion and was essentially forced to accept the "Brezhnev Doctrine," which limited the sovereignty of the Communist states and granted the right of Soviet intervention.

The extent to which the Soviet Union maintained a military presence in the satellite countries depended on its assessment of each individual member's risk of defecting from the organization were it to be pressured to allow Soviet troops on its soil. Thus, when the bilateral agreement with Romania expired in 1958, it was not renewed, because of Romania's wish to avoid the presence of Soviet troops, even for temporary purposes such as maneuvers. Soviet troops were stationed in Bulgaria, on the other hand, though only for temporary purposes, such as military exercises.

Even though the Warsaw Pact allowed for military alliances outside the Communist-bloc countries and functioned as an instrument of Soviet policy, it had no provisions concerning activities outside the European continent.

ORGANIZATION

The Political Consultative Committee (PCC) was the highest governing body of the Warsaw Treaty Organization. Its permanent members were the Communist Party's first secretaries and the premiers and foreign ministers of member countries. The PCC had managerial authority over the cultural, political, and economic spheres of the entire organization. However, its most important function was deciding when a crisis met the criteria for executing the provisions of the military clauses. In practice, the PCC's power could be limited, as shown by the 1968 invasion of Czechoslovakia, which was not decided on by the PCC.

The secretary general of the organization was always a Soviet general or Soviet foreign ministry official and control was always held in Moscow. The Committee of Defense Ministers (CDM), which decided on directives communicated to national defense planners in member nations, was subordinate to the PCC and was also located in Moscow.

THE END OF AN ERA

Even though NATO and the Warsaw Pact were created to counter each other's dominance, the member countries never engaged each other in armed conflict, though they did engage in "proxy wars." In December 1988, Mikhail Gorbachev, then leader of the Soviet Union, declared that the Brezhnev Doctrine would be abandoned and that the Soviet Union's satellite countries could do as they wished. Soon after, a number of political changes swept across Central and Eastern Europe, leading to the end of Communism. After 1989 the Warsaw Pact started losing the support of its members. In January 1991, Czechoslovakia, Hungary, and Poland announced they would withdraw all support within six months. Bulgaria followed suit in February 1991. The Warsaw Pact was officially dissolved at a meeting in Prague on July 1, 1991.

SEE ALSO *Brezhnev, Leonid; North Atlantic Treaty Organization*

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Dagmar Radin

WASHINGTON, GEORGE
1732–1799

George Washington was the first president of the United States of America. He was born in Westmoreland County, Virginia, on February 22, 1732. Washington's father, Augustine Washington, died in 1743 and his older half brother, Lawrence Washington (1718–1752), was subsequently responsible for George Washington's upbringing and training as a surveyor and tobacco planter. Lawrence also nurtured Washington's interest in military service.

Partially because of his protégé relationship with Thomas Fairfax (1691–1782), a Virginia planter influential with British nobility, and his replacement of Lawrence as district adjutant in 1752, Washington was promoted to the rank of colonel in the Virginia militia in 1754. Shortly before the outbreak of the French and Indian War (1756–1763), Washington led a military expedition to the westernmost boundaries of Virginia because French troops and their Indian allies threatened British-claimed territory. He ordered his men to build Fort Necessity in this area but soon abandoned the fort because of superior French and Indian forces in 1754. After the arrival of British troops, Washington became an aide to British general Edward Braddock (1695–1755). Washington distinguished himself in combat, especially in the campaign against Fort Duquesne, and was elected to Virginia's House of Burgesses in 1758.

In 1759 Washington married Martha Custis (1731–1802), a wealthy widow, and increased his ownership of land and slaves. He was active in local politics, but he mostly focused on his agricultural and financial interests. Washington had admired Britain's army, aristocracy, and mixed system of government since childhood. But he gradually concluded during the 1760s and early 1770s that new British taxes and regulations reflected "taxation without representation" and their implementation by British troops and officials increasingly violated Americans' legal rights as British subjects. While he was occasionally disturbed by the more extreme rhetoric and behavior of revolutionary leaders in Boston, Washington eventually became committed to the cause of rebellion and then independence. He concluded that the American colonies must become a separate nation in order to protect their liberty, self-government, and economic interests.

In 1774 Washington was elected as a delegate to the first Continental Congress. John Adams (1735–1826), a delegate from Massachusetts, became acquainted with Washington. Adams was impressed by Washington's military service and political status in Virginia. Wanting to increase national, and especially southern, support for the American Revolution against Britain, Adams secured Washington's appointment as general and commander-in-chief of the Continental Army in 1775. Washington then traveled to Massachusetts and assumed command on July 3, 1775. After placing artillery to threaten British ships in Boston Harbor, Washington forced the British to evacuate Boston on March 17, 1776.

Until the British surrender at Yorktown, Virginia, in 1781, Washington's strategy was to continue the American military and political effort until the British government decided to end the war as too costly. Washington generally avoided large-scale, prolonged battles and relied on surprise attacks, like the Battle of Trenton (1776), and tactical retreats to limit American casualties. During the Revolutionary War, Washington gained a national reputation among Americans for his endurance, integrity, and strength of character in the cause for independence. He struggled to maintain discipline, order, and professional military standards among American troops. Although Washington was critical of Congress for not providing enough pay and supplies for his troops, he always yielded to Congress's civilian supremacy over his military command. After the Treaty of Paris officially ended the war in 1783, Washington voluntarily surrendered his commission as commander-in-chief to Congress and returned to Mount Vernon, his plantation in Virginia.

After the Revolutionary War, Washington struggled to improve his neglected finances. Like other planters, however, Washington suffered from the disruption of prewar trading relationships with the British Empire, high inflation, and trade barriers that states imposed against each other. The weak national government of the Articles of Confederation was unable to solve or alleviate these economic problems. Washington was also troubled by Shays's Rebellion in Massachusetts in 1786 and other events that indicated that the nation might dissolve into anarchy, disunity, and political radicalism.

In his personal life, Washington had no legally recognized children, although he may have fathered a child with Venus, his half brother's slave. He was an Anglican (or Episcopalian) but was not a frequent churchgoer. Like many upper-class Americans in the late eighteenth century, Washington was a deist who perceived God to be

impersonal and rational. Nevertheless, his private and public statements reveal his belief that God, or Providence, had a special destiny for the American nation. Later in his life, Washington expressed the need for religion to promote civic virtue.

Washington was known for treating his slaves more humanely than other slave owners. He encouraged marriage among his slaves and refused to break up slave families by selling them to other planters or investing in the "breeding" of slaves. As he became older, Washington became more troubled by the moral dilemma and economic burden of slave ownership. Nonetheless, Washington accepted the institution of slavery, and his wife inherited his slaves after his death.

Washington reluctantly returned to public life and was elected as a Virginia delegate to the Constitutional Convention in Philadelphia in 1787. Washington's fellow delegates unanimously elected him to preside at the convention. As president of the convention, Washington maintained order during the debates and rarely expressed his political opinions. Washington's judicious reticence further enhanced his reputation among delegates as a dignified, virtuous, self-restrained national leader who could be entrusted with executive power. Alexander Hamilton (1755/57–1804) was a delegate from New York who served as a staff officer for Washington during the war and revered him. Hamilton shrewdly promoted the common assumption that Washington would be the first president in order to gain delegate support and later ratification for the strong presidency that he explained and advocated in *The Federalist Papers*.

George Washington was unanimously elected president in 1789 and inaugurated in New York City, the nation's first capital under the Constitution. John Adams was elected vice president, and Washington's first cabinet included Thomas Jefferson (1743–1826) as secretary of state and Alexander Hamilton as secretary of the treasury. Washington was unanimously reelected in 1792 and inaugurated in Philadelphia in 1793. He disliked the growing partisan and policy conflicts between the Federalists and Anti-Federalists, especially between Hamilton and Jefferson, and warned the nation of the dangers of partisanship in his farewell address of 1796. Washington struggled to be nonpartisan during his first term but became a Federalist during his second term, partially because of the criticism of his presidency and policies from Anti-Federalist newspapers and politicians.

George Washington's interpretation and use of presidential powers established several important precedents for the American presidency. First, Washington established the belief that a president should limit himself to two terms of office, a practice that continued until President Franklin D. Roosevelt (1882–1945) was elected to a third term in 1940. The Constitution was amended in 1951 to formally limit a president to two elected terms. Washington had previously rejected the suggestion that he be appointed as a monarch or president with a life term of office. He later rejected a request that he run for a third term.

Second, Washington believed that a president should only veto bills that he regarded as unconstitutional. Consequently, he vetoed only two bills during his presidency. It was not until the presidency (1829–1837) of Andrew Jackson (1767–1845) that a president actively vetoed bills because of political or policy differences with Congress.

Third, while Washington believed that a president should be self-restrained and generally defer to Congress on domestic legislation, he also asserted that a president should exercise more discretionary and dominant power in foreign and defense policies. He interpreted the president's power to "receive Ambassadors" in Article II of the Constitution to mean that the president alone can decide whether to recognize a new foreign government as legitimate for a regular diplomatic relationship with the U.S. government. Fourth, after a frustrating experience with the Senate in negotiating a treaty with the Creek Indians, Washington began the precedent of a president initiating and conducting treaty negotiations and only seeking the Senate's "advice and consent" afterward for ratification. Likewise, he refused to provide diplomatic correspondence pertaining to the Jay Treaty to the House of Representatives because the Constitution did not require him to do so. This was an early example of *executive privilege*, that is, the president's limited, unwritten constitutional right to withhold information from Congress.

Washington also developed the president's symbolic role as the head of state who represents all Americans both nationally and internationally. He contributed to this role by occasionally visiting the various states and issuing proclamations. He proclaimed Thanksgiving as a national holiday in 1789. More importantly, he proclaimed American neutrality between the warring governments of Britain and France in 1793. Washington also insisted that all of his cabinet members publicly support his policies. For example, Washington forced the resignation of Secretary of State Edmund Randolph (1753–1813) in 1795 because he suspected Randolph of being pro-French, despite American neutrality.

Although Washington usually deferred to Congress on domestic legislation, he relied on Alexander Hamilton, his first secretary of the treasury and closest adviser, to formulate and promote legislative passage of his economic program, which included a national bank, a hard currency, and tariffs and excise taxes to liquidate Revolutionary War debts and provide adequate revenue to

maintain a national army. Because of Article II's "take care" clause, Washington believed that a president should exercise broad, discretionary powers to enforce federal laws. This belief was especially evident in Washington's firm, decisive suppression of the Whiskey Rebellion of 1794. Washington personally led troops during part of their expedition to western Pennsylvania to end mob violence against the collection of the federal excise tax on whiskey.

Despite the efforts of Hamilton to persuade Washington to remain in office, Washington publicized his farewell address on September 19, 1796. In addition to warning the public about how partisan conflict threatened liberty, order, civic virtue, and national unity, Washington stated that future American foreign policy must continue to avoid "permanent alliances" with foreign governments that endangered American independence, liberty, and peace. Shortly after John Adams was inaugurated as president on March 4, 1797, Washington returned to Mount Vernon.

During his retirement, Washington busied himself with improving his finances and repairing buildings on his plantation. In 1798 Washington accepted a commission as a lieutenant general from President Adams and the Senate. He avoided public statements on politics and refused to undermine Adams's authority as president. He was dismayed that the Federalist Party became bitterly divided between pro-Adams and pro-Hamilton factions and that war with France seemed more likely.

Washington returned home after inspecting his fields on December 12, 1799, and became ill with a severe cold. Further weakened by the use of bloodletting as a medical treatment, Washington died on December 14, 1799. General Henry Lee's (1756–1818) funeral oration, delivered before Congress on December 26, 1799, popularized Washington's historical and patriotic reputation as "the father of his country." The nation's new capital city was named after Washington, as were many towns, counties, schools, and a state. The most nationally prominent artistic dedications to George Washington include the Washington Monument in Washington, D.C., and an enormous sculpture of his face on Mount Rushmore in South Dakota. His birthday was celebrated as a separate national holiday but was more recently incorporated as part of Presidents' Day in February.

SEE ALSO *American Revolution; Constitution, U.S.; Presidency, The; Slavery*

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WASHINGTON CONSENSUS

The phrase *Washington Consensus* has come to refer to a neoliberal economic agenda for developing countries and carries the implication that the Washington, D.C.–based public organizations concerned with development agree on the appropriateness of this agenda. *Neoliberal* refers to the ideas about the virtues of free markets and small, regulatory states emanating from the Mont Pelerin Society and developed primarily by Milton Friedman and Friedrich von Hayek, and to some extent implemented by Ronald Reagan, Margaret Thatcher, Augusto Pinochet, and the New Zealand Labour government during the 1980s.

The phrase had more modest beginnings. It was coined in a 1990 article by the British economist John Williamson, who had spent years working in a Washington, D.C., think tank, the Institute for International Economics. Williamson noticed that during the second half of the 1980s Latin American countries experienced a major change in economic policy norms. Previously, Latin American governments tended to think that import substitution, state enterprises, and inflationary finance constituted the core of development strategy, and that macroeconomic stabilization, free trade, and a framework-providing state were only appropriate for the already-developed countries. In the wake of the 1980s debt crises, both Latin American governments and the Washington organizations "saw the light" and concluded that what was appropriate for the developed countries was also appropriate for them.

Williamson's list of what he considered to be generally accepted policy priorities in Washington and in Latin America by the late 1980s included the following:

1. Keep budget deficits small.
2. Shift public expenditure priorities from non-merit subsidies to expenditures that are pro-growth and pro-poor, like spending on basic health, education, and infrastructure.
3. Construct a tax system that combines a broad tax base with moderate marginal tax rates.

4. Liberalize interest rates (meaning that while independent central banks should fix the base rate, commercial lenders should be free to set whatever the market can bear on top of base rate).
5. Maintain a competitive exchange rate via an "intermediate" regime, between fixed and free-floating.
6. Liberalize trade.
7. Liberalize inward foreign direct investment—but without pursuing comprehensive capital account liberalization.
8. Privatize state enterprises.
9. Ease sectoral barriers to entry and exit.
10. Provide the informal sector with the ability to gain property rights at acceptable cost.

After Williamson published his list, champions of neoliberalism deployed the phrase *Washington Consensus* for their own purposes. They detached it from Williamson's policy list by adding elements like low taxes, a minimal state, and rapid liberalization of cross-border financial flows ("opening the capital account"). They also detached it from its regional origin, implying that it applied to all developing countries, including those "in transition" from socialism to capitalism. In this newly fundamentalist form it coursed through the echo chamber of the Washington-based organizations, including the International Monetary Fund, the World Bank, the U.S. Treasury, USAID, and think tanks; through transatlantic components including *The Financial Times*, *The Economist*, and the U.K. Treasury; and into finance and development ministries in many developing countries.

"Stabilize, deregulate, open up, and privatize" became the slogan of technocrats and political leaders through the 1980s, and it inspired a wave of reforms that had transformed the policy landscape of much of the developing world by the early 1990s. The common denominator was the drive to extend private property rights geographically and "vertically," to types of assets not previously privately owned, and in this way expand profit opportunities for global firms facing declining profits at home. The reforms accelerated the "financialization" of the world economy and the shrinkage of the economic sovereignty of the state. Yet economic performance of most developing countries remained disappointing. Many countries that adopted this approach to a high degree had worse performance than during the era of "bad" import-substituting industrialization, and worse performance than those that adopted it to a small degree. In particular, many countries that followed the neoliberal prescription of "economic growth with foreign savings"—which entailed opening the economy to free flows of finance—were hit by financial crises through the 1990s.

In response a new consensus, sometimes called the *Augmented Washington Consensus*, began to emerge by the mid-1990s (see Williamson 2003). It said that neoliberal policies would not have lasting effects where institutions were unfriendly to markets, an argument in line with the major thrust in development economics over the 1990s to assert the role of institutions in affecting transaction costs and thereby economic performance. "Get the prices right" had to be supplemented with "get the institutions right." The new "good governance" agenda called for reforms in the civil service (the budget office, the central bank, the customs bureaucracy), the judiciary, the financial sector (the accountancy profession, the rights of minority shareholders, credit registries), systems of primary education and primary healthcare, and microcredit.

The Augmented Washington Consensus retained the neoliberal premise that the state was the problem and the market the solution, and the aim was to make markets work better and to extend surrogate markets into the state. The word *reform* was reserved for changes in this direction. Many champions hoped that financial reforms would strengthen regulation sufficiently so that opening the capital account could again become a top global priority. Issues of equity, income distribution, technology, firm-level capabilities, and industrial policy remained firmly off the radar screen.

However by the late 1990s some parts of the "international development community," notably the United Nations' General Assembly and the United Nations Development Programme (UNDP), began to unite around an action agenda that emphasized poverty reduction and investment in primary health and primary education. This perspective was spelled out in the Millennium Declaration and in the Millennium Development Goals adopted by the UN in 2000. Critics of neoliberalism took advantage of the new discussion to declare that the Washington Consensus was dead and had been replaced by a "Post 'Washington Consensus' Consensus," which held that "countries should be given scope to experiment, to use their own judgment, to explore what might work best for them" (Stiglitz 2004, p. 12).

A more open-minded stance toward policy experimentation is surely a good thing. But pragmatism is not a strategy. At the operational levels of the Washington-based organizations and in the most powerful agencies in developing countries—finance ministries as distinct from development ministries—the Washington Consensus is far from dead, if only because nothing coherent has emerged to replace it. Development technocrats find it a huge advantage to be able to use the Washington Consensus one-size-fits-all approach; whatever the coun-

try, they know what the government should be doing. Certainly the Millennium Development Goals are an add-on rather than an alternative because they assume that the core microeconomic reforms of the Washington Consensus are necessary conditions for achieving the goals. In short, reports of the death of the Washington Consensus are greatly exaggerated, whether for better or for worse.

SEE ALSO *Neoliberalism*

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WATER RESOURCES

The planet Earth is inherently short of freshwater, the proportion of which is as little as 3 percent of all available water. The remaining 97 percent of water is saline and is stored in the oceans. Of the 3 percent of water that is freshwater, only 0.3 percent flows through surface water systems such as rivers and lakes; the remaining 2.97 percent is frozen in glaciers and ice caps or held in the ground.

This inherent scarcity has been worsened by the accelerated diversion of water for agricultural, commercial, industrial, and residential uses, which has increased greatly in response to a growing world population that reached 6.5 billion people in 2006. As much as 95 percent of that growth has taken place in the water-deficit developing world, predominantly in Asia and Africa. Among all human uses, agriculture tends to use 70 percent of the available freshwater. According to experts, 1 ton of grain requires 1,000 tons of water. As agriculture increasingly is becoming dependent on irrigation, especially in Asia, the most populous continent, the availability of water for industrial, commercial, and municipal uses has been shrinking.

WATER SCARCITY AND THE HUMAN CONDITION

The impact of dwindling water supplies on humankind is evident worldwide. According to a 2006 report by the United Nations Development Program, over 1 billion people are without clean drinking water and over 2.4 billion lack basic sanitation. Access to clean drinking water is lowest in Africa, and Asia has the largest number of people without basic sanitation. The human toll of the inaccessibility of water and sanitation runs as high as 2 million child deaths a year (United Nationals Development Program 2006). In all, in the early years of the twenty-first century 12 million people died each year from drinking contaminated water.

In 2003 the United Nations World Water Development Report estimated that $110 billion to $180 billion would be needed each year to provide safe drinking water to the poor in developing countries. Although an annual outlay of that size for water resource development seems prohibitive for low-income nations, the economic benefits of such an outlay would be two to three times as large. Recognizing those benefits, the United Nations Millennium Development Project planned to widen the access of the poor to safe drinking water by 50 percent by 2015. The economic benefits of increased access to safe drinking water in terms of health, longevity, and time saved in fetching water range from $300 billion to $400 billion a year.

PRICING AND PRIVATIZATION OF WATER

International development agencies such as the World Bank and the Asian Development Bank (ADB) plan to broaden the access of the poor to safe water by pricing water use and privatizing water resources. Water pricing means consumers will pay the fees, taxes, or charges for water supplies they use. It has been argued that water privatization can meet the water needs of the poor effectively. In 2005 Segerfeldt pointed out that public water systems in developing countries tend to serve wealthy and middle-class households, whereas the poor are left to draw from municipal water mains. However, 80 percent of the poorest parts of the population in fifteen developing countries are not served by municipal water supplies (Segerfeldt 2005). Although privatization is intended to bring the entire water supplies and treatment systems of developing countries into the private market, in the first decade of the twenty-first century only 3 percent of the poor worldwide were served by private-sector water supplies.

Critics see water privatization as a "global water grab" with disastrous outcomes in places such as Cochabamba, Bolivia. Between 1989 and 1999 the proportion of Bolivian households connected to the public water system

fell from 70 percent to 60 percent. Water was available only sporadically; 99 percent of the wealthier households were receiving the subsidized water, whereas in some poorer suburbs less than 4 percent were receiving water.

FATE OF PRIVATIZATION IN INDIA AND CHINA

In 2002 Vandana Shiva blamed the World Bank and the ADB for creating water markets to benefit multinational corporations (MNCs). Privatization, she argued, is preceded by a hike in water tariffs to "secure private sector investment in risky countries" (Shiva 2005). The tariff increase, Shiva asserted, exceeds by ten times the "full cost recovery," although this is rationalized by privatization supporters. Using the case of her native India, Shiva stated that private operators will harvest public investment of 1 trillion rupees for private gains through water privatization in India (Shiva 2005).

Pricing and privatization of water are intended to rationalize water use. In light of worldwide extreme income inequalities, however, it is feared that privatization will save water by diverting it from the poor to the rich and from rural areas to urban centers. In 2005 Shiva argued that the best way to conserve water is to make a radical shift from water-intensive chemical farming to organic farming, along with a reversal in export-led agricultural production, which amounts to exporting "virtual water" to the rich consumers of the North at the expense of the poor in the South.

Like India, China is poor in freshwater supplies, the per capita availability of which is one-fourth of the world average (Yu and Danqing 2006). The pollution of rivers and groundwater from industrialization and urbanization has exacerbated the water shortage. In the first decade of the twenty-first century, two-thirds of Chinese cities had an insufficient supply of freshwater and 110 of them had critically inadequate access to freshwater.

Beijing's plan to meet the water needs of urban centers angered Chinese rural residents. On July 6, 2000, thousands of farmers in the Yellow River Basin in eastern China clashed with police over a government plan to recapture runoff from a local reservoir for cities, industries, and other uses (Postel and Wolf 2001). The incident took place in Shandong, the last province through which the Yellow River runs before reaching the sea. Worldwide water disputes have been occurring in the downstream regions of overtapped river basins (Postel and Wolf 2001). The Yellow River has been running dry in its lower reaches on and off since 1972, and its dry spell grew to a record 226 days in 1997. As a result, per person use of water in China, which already was severely low, fell by 1.7 percent in seven years (Yu and Danqing 2006).

WATER CONFLICTS

The Indus Basin Intrastate water shortages have spilled over into interstate water conflicts. In the first decade of the twenty-first century India and Bangladesh were worrying about alleged Chinese attempts to divert the waters of Yarlung Zangbo River (which in India is called Brahmaputra, and in Bangladesh Jamuna) into the Yellow River. The Yarlung Zangbo passes through the Tibet Autonomous Region into the Indian states of Arunachal Pradesh and Assam and into Bangladesh. Even starker conflicts have been simmering between India and Bangladesh over the Ganges River and between India and Pakistan over the Jhelum River. In the 1960s and early 1970s India unilaterally constructed a barrage (dam) on the Ganges River at Farakka, near the border with Bangladesh, to divert more river water to the port of Calcutta (Postel and Wolf 2001). That diversion left Bangladesh with significantly less water for irrigation during the dry season, causing increased migration of its population across the border into the Indian states of West Bengal (Postel and Wolf 2001) and Assam. Although the Indus River Basin Treaty between India and Pakistan of the 1960s has held, the growing water and power needs of each nation are fueling the conflicts as never before. The major conflict between Islamabad and New Delhi has erupted over the controversial construction of Bhagliar Dam over the Jhelum River in the disputed territory of Jammu and Kashmir; that conflict was being arbitrated by the World Bank.

Euphrates and Jordan River Basins Euphrates and Jordan River Basin nations have long argued over their shared surface water systems. Syria and Iraq experienced a reduction of almost 50 percent in the average flow of the Euphrates after the 1970s (Allan 1998). Both countries have been anticipating additional reductions in the flow of Tigris as well. The Euphrates and Tigris rivers originate in Turkey, which has diverted their water by building dams. In the case of the Jordan basin, the river system rises in four tributaries (Lowi 1995): the Yarmouk in Syria, the Banias in Israeli-occupied Syria, the Hasbani in Lebanon, and the Dan in Israel. The Banias, Hasbani, and Dan meet in northern Israel to form the Upper Jordan River, which flows into Lake Tiberias, and then the Lower Jordan. Israel has become the upstream riparian basin on the Upper Jordan system, and Syria is upstream on the Yarmouk. Jordan and the Palestinians, as downstream riparian basins vis-à-vis both Israel and Syria, have remained in the worst positions in the basin (Lowi 1995).

About one-half of Israel's annual supply of groundwater and one-quarter of its total renewable supply of freshwater originate in two subterranean basins in the West Bank (Lowi 1995). By virtue of its occupation of the West

Bank, Israel has been controlling water in the territory. The result has been that approximately 80 percent of West Bank water is exploited in Israel and by Israeli settlers in the territory, leaving only 20 percent for the Palestinian population (Lowi 1995). Although Lowi does not think that water disputes alone could cause active conflict between Israel and the countries of the Jordan River Basin, Adel Darwish (2003) and John Bulloch and Darwish (1993) believe that water disputes underlie the political conflict in the region. King Hussein of Jordan and the late Egyptian President Anwar Sadat, each of whom signed peace treaties with Israel, vowed never to go to war with Israel except to protect water resources (Darwish 2003). Bulloch and Darwish (1993) claim that water was the hidden agenda for past conflicts and has been a major obstacle to a lasting peace in the region. The Six Day War, they argue, started because Syrian engineers were working to divert part of the water flow from Israel. The Israeli leader Ariel Sharon backed up their argument by saying: "People generally regard 5 June 1967 as the day the Six-day war began. That is the official date. But, in reality, it started two and a half years earlier, on the day Israel decided to act against the diversion of the Jordan" (quoted in Darwish 2003).

POSSIBLE SOLUTIONS

It is feared that global warming will cause further stress in the already water-short nations of Asia, Africa, and the Middle East. Although bilateral and multilateral water-sharing mechanisms are important to ensure critical water supplies, the significance of conservation and further development of water resources cannot be overemphasized. There are a number of technological means to augment water resources, including but not limited to cloud seeding, desalination, wastewater reuse, rain harvesting, and importing water from relatively wet zones (Postel and Wolf 2001). Of equal importance are a shift from water-intensive chemical farming to less water-intensive farming methods and a reversal in export-led agricultural production, which amounts to the export of virtual water from the water-short South to the water-surplus North (Shiva 2005).

SEE ALSO *Agricultural Industry; Arab-Israeli War of 1967; Gender; Global Warming; Inequality, Political; Irrigation; Needs; Nutrition; Poverty; Poverty, Indices of; Privatization; Public Health; Sharon, Ariel; Women and Politics*

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Tarique Niazi

WATERGATE

The Watergate scandal involved Richard M. Nixon (1913–1994) during his second term as president of the United States. The scandal led to his impeachment and resignation from office.

In June 1971 a former employee of the U.S. Department of Defense, Daniel Ellsberg, gave *The New York Times* a secret government history of the Vietnam War (1957–1975) known as the Pentagon Papers. These revealed, among other things, a secret bombing campaign against neutral Cambodia. The White House issued an injunction against publication on the grounds of national security, but the injunction was declared unconstitutional by the U.S. Supreme Court, which saw it as a form of prior restraint in violation of the First Amendment. In response, Nixon directed aides to find damaging information about his perceived political enemies. By September 1971, a special investigative group known as "the plumbers" was hired by Nixon's assistant for domestic affairs, John Erlichman, to burglarize the office of Ellsberg's psychiatrist, which was located in the Watergate office complex in Washington, D.C.

On the night of June 17, 1972, a security guard working at the Watergate Hotel noticed a piece of tape between the door of the basement and the parking garage. Upon investigation by the Washington police, five men were discovered and arrested for breaking into the headquarters of the Democratic National Committee, located in the Watergate complex, in a failed attempt to place listening devices and take photographs of committee documents. Later, one of the burglars, James W. McCord Jr., was found to be in possession of phone numbers belonging to E. Howard Hunt (1918–2007) and G. Gordon Liddy, former employees of Nixon's reelection committee. At his arraignment, McCord identified himself as a former employee of the Central Intelligence Agency.

In attendance on the day of McCord's arraignment were *Washington Post* reporters Bob Woodward and Carl Bernstein, who began what became one of the most significant journalistic investigations of the twentieth century. A then-unknown individual with close ties to the White House, dubbed Deep Throat by Woodward, provided the journalists with information and assistance that helped them follow the story from an insignificant burglary to a cover-up orchestrated by the Nixon administration. Thirty years later, Deep Throat's identity was revealed when former FBI agent Mark Felt admitted that he had been Woodward's source.

In 1972 the Federal Bureau of Investigation established that the Watergate Hotel break-in stemmed from a spying effort conducted on behalf of the Nixon reelection effort. Despite this finding, Nixon won reelection in a landslide over the Democratic candidate Senator George McGovern in November 1972. By January 1973, however, the original burglars, along with Hunt and Liddy, went to trial, pleading guilty in a failed attempt to shield those above them from further inquiry. When the presiding judge, John Sirica (1905–1992), threatened thirty-year sentences, the defendants began cooperating with the prosecution. As the investigation broadened, the U.S. Senate established a committee, chaired by Senator Sam Ervin (1896–1985), to investigate the Watergate break-in.

By May 1973 two of Nixon's White House aides, H. R. Haldeman (1926–1993) and John Ehrlichman (1925–1999), resigned amidst growing evidence of their knowledge of the events. Both would later go to prison for their role in the Watergate break-in and cover-up. The Watergate hearings were broadcast live on television from May to August 1973, and were immensely popular, with dire consequence for the Nixon administration's approval ratings. As a result of these investigations, it was revealed that Nixon had recorded all his phone calls and conversations in the Oval Office. When Congress requested these tapes as part of the investigation, the president refused to turn them over. In an attempt to save himself from further political embarrassment and possible criminal indictment, Nixon directed Attorney General Elliot Richardson (1920–1999) to instruct special counsel Archibald Cox (1912–2004) to drop the subpoena for the White House tapes. When Cox refused, Nixon ordered Richardson to fire Cox. When the attorney general refused, Nixon fired both Richardson and his deputy in what is now known as the "Saturday night massacre." A young solicitor with the attorney general's office, Robert Bork, assumed the role of attorney general. Bork then fired Cox, but was pressured to name another prosecutor, Leon Jaworski (1905–1982).

Citing executive privilege, Nixon refused to comply with the subpoena for the White House tapes, creating a constitutional conflict between the president and Congress. In July 1974 the U.S. Supreme Court unanimously ruled, in *United States v. Nixon*, that the president had to turn over the tapes to the committee. According to the Court, the president had no "unqualified" privilege of immunity. Less than one week later, a review of the tapes proved Nixon's role in the conspiracy to cover up the Watergate break-in. On one tape, Nixon and Haldeman, the White House chief of staff, directed the CIA to obstruct the FBI and the Justice Department's investigation into the break-in. It then became clear that the president and his aides had broken the law by orchestrating a cover-up, using the CIA to block the FBI investigation, lying to Congress, and destroying documents related to the investigation. Another scandal erupted when it was disclosed that an eighteen-minute gap had been found on one of Nixon's tapes. The gap was explained as an accident by Rose Mary Woods (1917–2005), Nixon's secretary.

In July 1974 the House Judiciary Committee passed the first of three articles of impeachment against the president for obstruction of justice, abuse of power, and contempt of Congress. Two additional articles of impeachment did not pass the committee: one for federal income tax evasion, and another for the authorization and subsequent concealment from Congress of American bombing operations in Cambodia. Throughout the ordeal, Nixon steadfastly proclaimed his innocence. On August 8, 1974, after consulting prominent members of Congress on the likelihood of the committee indictment being affirmed by the full House, Nixon became the first U.S. president to resign from office. Vice President Gerald R. Ford (1913–2006) assumed the presidency. Ford pardoned Nixon of all charges related to the Watergate break-in and cover-up on September 8, 1974.

In the aftermath of the Watergate affair, the media became more confident and aggressive in their coverage of Washington politics. Investigative journalists began looking into the public and private lives of politicians as never before. As a result, there have been numerous "gates" since Watergate, each referring to another scandal at the highest

levels of government. Additionally, Congress passed numerous "good government" bills in the years following the Watergate scandal. These addressed such issues as campaign finance reform, disclosure of campaign contributors and expenses to the Federal Election Commission, ethics in government, and a greater role for Congress in the appointment of independent counsels. Nixon continued to proclaim his innocence in the Watergate affair until his death in April 1994.

SEE ALSO *Democratic Party, U.S.; Government; Government, Federal; Impeachment; Nixon, Richard M.; Republican Party; Vietnam War*

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James Freeman

WATSON, JOHN B.

SEE *Behaviorism; Psychotherapy; Tolman, Edward.*

WAVES, LONG

SEE *Long Waves.*

WEAK AXIOM OF REVEALED PREFERENCE

SEE *Revealed Preference.*

WEAK SEPARABILITY

SEE *Separability.*

WEALTH

Throughout their history, human beings have been trying to improve the conditions of their existence. Ever since their early days, they sought to understand nature and dominate it. They discovered tools, salt, and fire, all of which made life better and easier. Possession of these "things" became a necessity. Wealth then meant all the things that are useful for satisfying needs and ensuring the well-being of their holder. This way of understanding wealth has not changed very much, for even today the *Merriam-Webster Collegiate Dictionary* defines wealth as "the stock of useful goods having economic value in existence at any one time," or to be more precise: "All property that has a money value or an exchangeable value." The modern definition reflects the popular understanding that wealth is synonymous with the acquisition and accumulation of real (physical) and financial assets. Material wealth, it seems, has always been important in the lives of individuals, from ancient to modern societies.

However, history of economic thought tells us that early civilizations in Mesopotamia, Egypt, and Greece had a positive attitude to knowledge, and many philosophers regarded it as the basis for wealth and empowerment. All the achievements in terms of progress (technical and other) were the result of the skills acquired through knowledge. The "light of fire" was a reflection of the "light of thought." Modern economic theory also recognizes what we call "human capital" (health, education, and knowledge in general) is an important element of wealth. The subtlety of the modern view is that wealth is not only created—it is also inherited. Because wealth can often be transferred from parents to heirs without impediments, some rich people may not be particularly knowledgeable and some great minds may not be particularly rich. People naturally reject poverty and have a desire to get rich and live comfortably. Therefore, not only will they question the unequal distribution of wealth, they will also try—by whatever means available—to change the status quo. Poverty makes people feel oppressed, disobedient, difficult to govern, and ready for revolt. The extremists would claim that a life of deprivation is not worth living. Tensions over the distribution of wealth existed even in ancient societies. Class struggle, according to Karl Marx ([1867–1910] 1956), is a dynamic force of change in all class societies.

ORIGIN AND EVOLUTION OF THE CONCEPT

In ancient societies, when human needs were basic and wealth meant getting the goods from nature to satisfy their "natural" needs, there were no quarrels about being or wanting to be rich. Increased wealth simply translated into increased consumption and improved well-being. Wealth was necessary and everyone approved of it. Social values encouraged the ability to gather and/or produce more goods. The consensus came to an end when the distinction could be made between what was necessary (natural) and what had become luxurious or superfluous

(artificial). Luxurious consumption, which could be afforded by only some people, was condemned on moral and religious grounds as waste, ostentation, or vanity. The desire for luxury, it was argued, has no limits and requires excessive riches. In turn, the pursuit of excessive wealth makes people selfish, greedy, dishonest, and morally corrupt. The rise of private property is justified by the need to ensure continuous control over the flow of resources or goods that satisfy these needs, whether natural or artificial. Greek philosophers such as Plato and Aristotle opposed both extreme poverty and excessive wealth. Poverty was considered by most as a debilitating state, whereas the desire for excessive wealth led to a state of unhappiness. To avoid these extremes, many philosophers recommended moderation. The ideal state of well-being is that where the individual learns how to control and limit his or her desires and needs. Wealth therefore became associated with wisdom and virtue. The same idea was later integrated into religious thought as "the wealth of the soul"; an inner dimension that can be achieved through moderate use of material wealth. (For an excellent review of the ancient thought on the subject, see Perrotta 2003.)

However, as pointed out by Cosimo Perrotta, even though many ancient thinkers praised modesty and the simple, natural lifestyle, most would still prefer wealth and reject poverty. Material wealth, after all, "contributes to the life according to nature" (Perrotta 2003, p. 210). The rejection of poverty is also found in ancient eastern civilizations. For instance, ancient Indian thinkers believed that life on earth was only a transitory state, but they still wanted it to be a good life; an opportunity to "perform good deeds" and achieve "prosperity on earth." According to Balbir Sihag, "[a]ncient thinkers in India put heavy emphasis on keeping a proper balance between spiritual health and material health" (2005, p. 2). Chanakya Kautilya, one of India's ancient thinkers and a contemporary of Aristotle, "considered poverty as a living death and concentrated on devising economic policies to achieve salvation from poverty without compromising with ethical values" (Sihag 2005, p. 1).

Islamic thought did not consecrate poverty either. It advocated the circulation of wealth through voluntary alms giving, *sadaqa*, and required giving, *zakat*, from the rich to the poor. In fact, Arabs, both before and after Islam, believed that wealth included a part that must be given away. In Islam, the poor and the needy have a claim on, a recognized right to, a portion of the property of the rich. The Qur'an refers to the community of the believers as "those upon whose wealth there is a recognized right for the beggar and the deprived" (surat 70: 24–25). Based on this philosophy, the Muslims sought to build a "community that regulates its flow of money and goods in the right direction … that practices generosity as reciprocation for God's bounty, that observes the haqq [i.e., the recognized right] inhering in the good things of this world, that purifies and maintains its wealth by giving up a portion of it in alms, and that takes ample account of the kinsman as well as … the poor stranger" (Bonner 2005, p. 404). The final goal is to achieve a virtuous life on earth—the moral well-being that the ancient Indian thinkers talked about.

MODERN VIEWS

The idea that wealth must be shared equitably was also expressed later by modern thinkers such as Adam Smith, Marx, and John Maynard Keynes. Smith, for instance, considered the unequal distribution of wealth as "the great and most universal cause of the corruption of our moral sentiments" ([1776] 1976b, p. 61). Smith defined wealth in terms of production of goods and services for the purpose of satisfying the needs of society as a whole. He argued that because workers are the main factor of production, they should have their fair share: "[n]o society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable. It is but equity, besides, that they who feed, cloath and lodge the whole body of the people, should have a share of the produce of their own labor as to be themselves tolerably well fed, cloathed and lodged" ([1776] 1976b, p. 96).

Keynes also was in favor of spreading wealth and against its concentration in the hands of the capitalist class. He considered scarcity, which is artificially created by the capitalist, to be "one of the chief social justifications of great inequality of wealth." (Keynes 1936, p.373). Therefore, he sought to eliminate "the cumulative oppressive power of the capitalist to exploit the scarcity-value of capital" because, he argued, "interest today rewards no genuine sacrifice, any more than does the rent of land. The owner of capital can obtain interest because capital is scare just as the owner of land can obtain rent because land is scarce. But whilst there may be intrinsic reasons for the scarcity of land, there are no intrinsic reasons for the scarcity of capital" (1936, p. 376).

The artificial scarcity preoccupied Marx as well, who argued that "[i]t is quite simply the private ownership of land, mines, water, etc. by certain people, which enables them to snatch, intercept and seize the excess surplus-value over and above profit … contained in the commodities of these particular spheres of production …" ([1867–1910] 1968, p. 37) In other spheres of production such as manufacturing, Marx rose against the exploitation of the working class and called for a community based on social justice.

Whereas Smith and early thinkers defined wealth either as production (of goods and services) or as consumption, Marx considered it as the creation of value and distinguished between use value (goods and services pro-

duced for own needs) and exchange value (goods and services produced for sale). Marx wrote:

> [a] commodity, such as iron, corn, or a diamond, is therefore … a use value, something useful. This property of a commodity is independent of the amount of labor required to appropriate its useful qualities. … Use values become a reality only by use or consumption: they also constitute the substance of all wealth, whatever may be the social form of that wealth. In the form of society we are about to consider, they are, in addition, the material depositories of exchange value. ([1867–1894] 1992, p. 44)

Exchange value, in contrast, exists only when the product is sold. As Marx put it, "a thing can be useful, and the product of human labor, without being a commodity. Whoever directly satisfies his wants with the produce of his own labor, creates, indeed, use values, but not commodities. In order to produce the latter, he must not only produce use values, but use values for others, social use values" ([1867–1894] 1992, p. 48).

If some authors have argued that all members of society should enjoy the benefits of increased wealth, others wanted to exclude the lower classes. In ancient times, the opposition to increased consumption was part of the general criticism of luxury, the desire to get rich, and selfishness. In modern times, the justification has been that consumption by lower classes takes away resources from investment—the key to accumulation. However, one must remember that consumption is what sets apart the different members of society. After all, as the popular adage says, "you are what you eat (consume)," that is, consumption sets your social status. Therefore, we should understand that "[t]he authors hostile to increased consumption … nearly always conceal (or reveal) a social motive: they are opposed to the rise of the lower classes and fear that their subordination may come to an end. They appear to be concerned about the destiny of the world, but are often concerned merely about the loss of their own privileges" (Perrotta 2003, p. 179).

Thorstein Veblen (1899) saw in the exclusion of the lower classes a means of guaranteeing the power and maintaining the social status of what he called the "leisure class," for it is through this power relationship that wealth is truly valorized. Preventing the poor from having access to increased consumption is important in the process of valorizing wealth. The logical step therefore is to prevent them from having access to increased wealth, that is, to keep wealth scarce and concentrated in the hands of the leisure class. This is done through what Veblen (1899) called "conspicuous consumption" and "industrial sabotage." Technology speeds up the production process and increases the total amount of goods and services, thus contributing to eliminate scarcity by gradually shifting luxury consumer goods from being exclusively consumed by the leisure class to being widely available to the lower classes. As pointed out by Charles Clarke,

> this tendency must be kept in check, and it is done so by the process Veblen labeled industrial sabotage. Industrial concentration and monopoly are necessary in order to keep profits high.… Thus at the micro level industrial concentration generates scarcity, while at the macro-economic level this is done by keeping the value of money higher than it need be, i.e., keeping interest rates too high. (2002, p. 419)

INTERNATIONALIZATION OF WEALTH AND POVERTY

Advocates of globalization, including the World Trade Organization (WTO), have been arguing that inequality will fall as economies become more integrated and flows of capital and commodities more liberalized. The conclusions of the globalization-equality thesis are based on the neoclassical economic theory according to which free trade (one aspect of globalization) will bring about convergence in commodity prices, whereas factor mobility (another aspect of globalization) will equalize factor incomes by raising the income of the abundant factor and lowering that of the scarce factor. In the context of trade between developed and developing countries, one should expect that incomes of the working poor (the abundant factor) will rise and that returns to capital or even the incomes of highly skilled workers (the scarce factor) will fall. Globalization, therefore, will reduce inequality.

However, this is in sharp contrast with what is observed on the ground. At the national level, available evidence indicates that inequality between the rich and the poor—whether measured by income or by wealth—has been rising in most cases. The United Nations Development Program (UNDP) found that "a study of 77 countries with 82% of the world's people shows that between 1950s and 1990s inequality rose in 45 of the countries and fell in 16.… In the remaining 16 countries either no clear trend emerged or income inequality initially declined, then levelled off" (2001, p. 17). At the international level, according to the UNDP, the average GDP per capita from various regions as a ratio to that of high-income OECD countries declined between 1960 and 1998, and "in sub-Saharan Africa the situation has worsened dramatically: Per capita income, around 1/9 of that in high-income OECD countries in 1960, deteriorated to around 1/18 by 1998" (UNDP 2001, p. 16). The UNDP summarized its results on world inequality by stating that the ratio of the income of the world's richest 10

percent to that of the poorest 10 percent has increased from 51:1 to 127:1 between 1970 and 1997.

A study by the World Institute for Development Economics and Research reported that

> [t]he figures for wealth shares show that the top 10 percent of adults own 85 percent of global household wealth, … [The corresponding figure for the top 1 percent of adults is 40 percent of global wealth]. This compares with the bottom half of the distribution which collectively owns barely 1 percent of global wealth. Thus the top 1 percent own almost forty times as much as the bottom 50 percent. The contrast with the bottom decile of wealth holders is even starker. The average member of the top decile has nearly 3,000 times the mean wealth of the bottom decile, and the average member of the top percentile is more than 13,000 times richer. (Davies et al. 2006, p. 26)

The unequal distribution of wealth between nations via trade flows was the main argument of the dependency theory in the 1950s. Raul Prebisch (1950) and others have documented this inequality as a transfer of wealth from developing to developed countries in the form of declining terms of trade. Others have argued that underdevelopment (and therefore poverty) is a by-product of the development of Europe and other industrial countries (Darity 1992; Rodney 1972). James Galbraith (2002), on the other hand, showed that the rise in inequality that began in the early 1980s coincided with a sharp increase in real interest rates, an event that had dramatic effects on poor countries, which were forced to adopt austere policies that resulted in more poverty.

Wealth and poverty are not mutually exclusive. They coexist in a dialectical manner; they are both the result of one thing: the unequal distribution of value created in all the stages of production. The mechanisms underlying this unequal distribution have to do with the power relationships leading to the appropriation of profits made from the production and sale of commodities, whether at the national or the global level. The market mechanism cannot bring about social justice. To achieve some form of democratic wealth, redistribution through public intervention is necessary.

SEE ALSO *Aristotle; Class Conflict; Economics, Stratification; Globalization, Social and Economic Aspects of; Human Capital; Inequality, Income; Inequality, Wealth; Inheritance; Interest Rates; Islam, Shia and Sunni; Justice, Social; Keynes, John Maynard; Markets; Marx, Karl; Plato; Poverty; Power; Prebisch-Singer Hypothesis; Profits; Property; Slavery; Smith, Adam; Surplus; Underdevelopment; Veblen, Thorstein; World Trade Organization*

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Hassan Bougrine

WEALTH OF NATIONS

SEE *Smith, Adam.*

WEAPONRY, NUCLEAR

The advent of the nuclear weapons age began on July 16, 1945, when the United States tested its first nuclear device in New Mexico at the Alamogordo Bombing Range, now

known as the White Sands Missile Range. The successful nuclear explosion, named Trinity, was the end result of the Manhattan Project, a three-year, $1.9 billion ($26.9 billion in 2005 dollars) effort that brought hundreds of the world's top scientists together to develop a weapon to be used in the United States' war efforts against Japan and Germany. Nuclear weapons have been used in warfare on two occasions: on Hiroshima, Japan, on August 6, 1945, and on Nagasaki, Japan, on August 9, 1945. Both bombs were dropped by the United States. As of 2006, eight nations were known to possess nuclear weapons: the United States, Russia, the United Kingdom, France, China, Israel, India, and Pakistan. It is possible that North Korea also possesses a nuclear weapon. In 2003 North Korea claimed to have had successfully developed nuclear weapons. While North Korea has not tested a device, most intelligence estimates believe it is likely that it has nuclear capabilities. South Africa once possessed nuclear weapons but dismantled them in 1993 (see Cirincione, Wolfsthal, and Rajkumar 2005).

Nuclear weapons require *fissionable* materials. When a fissionable atom absorbs a neutron, it will split and release additional neutrons. In a nuclear chain reaction, those neutrons are absorbed into other fissionable atoms that subsequently split and release additional neutrons into other atoms. Nuclear explosions are the result of the rapid release of energy that comes from an uncontrolled nuclear chain reaction.

The two fissionable elements used in nuclear weapons are uranium and plutonium. Uranium is found in nature, but the specific fissionable isotope, uranium-235, constitutes only 0.7 percent of all natural uranium. A nuclear weapon, however, requires uranium-235 to make up over 90 percent of the sample. In order to achieve such a high concentration, the uranium must go through an enrichment process that separates uranium-235 from the more common uranium-238 isotope. This has most commonly been achieved with centrifuges, but other methods, such as gaseous diffusion and electromagnetic isotope separation, have also been successful. Plutonium is not found in nature but is a product of the highly radioactive waste from a controlled chain reaction of uranium, usually performed in a nuclear reactor. To extract plutonium from this waste, a sophisticated chemical process is used. For a country seeking to establish a nuclear weapons program, these large-scale industrial and technical processes can be prohibitive.

Critical mass is the smallest amount of fissionable material that is needed to maintain a nuclear chain reaction. How much uranium or plutonium is needed to reach critical mass depends on various elements of weapon design, such as the shape of the fissile core (gun-type or sphere) or the effective use of reflectors to capture errant neutrons. Most estimates are that between 12 to 60 kilograms of weapons-grade uranium and 4 to 10 kilograms of plutonium are needed. In addition, the efficiency and yield of a weapon can be increased by adding a fusion fuel "booster," such as lithium-6, as found in thermonuclear weapons.

THE EFFECTS OF A NUCLEAR EXPLOSION

The effects of a nuclear explosion are devastating. The majority of damage is caused by three main elements: blast effects, thermal heat, and ionizing radiation. For example, the bomb that was dropped on Hiroshima, a uranium-type device known as Little Boy, had a yield of 12.5 kilotons of TNT. Of the 76,000 buildings in Hiroshima, 48,000 were completely destroyed and another 22,000 were damaged. According to one study of the Hiroshima bombing, the temperature at the site of the explosion reached 5,400 degrees Fahrenheit and "primary atomic bomb thermal injury was found in those exposed within [2 miles] of the hypocenter" (quoted in Rhodes 1986, p. 714). The heat was so intense that people within a half mile of the fireball were reduced to bundles of smoking char. The number of deaths in Hiroshima due to the bomb is estimated to be 140,000, with an additional 60,000 dying from radiation effects over the next five years.

Since these early devices, the yield of nuclear weapons has grown considerably. Although never deployed, on October 30, 1961, the largest nuclear bomb ever tested was the Soviet Union's "Tsar Bomba," which had a maximum yield of 100 megatons. More commonly, modern nuclear weapons have yields ranging between one and 5.5 megatons.

For a one-megaton device, the damage would be even more widespread than at Hiroshima and Nagasaki. According to Ansley J. Coale (1985), the shockwaves from a one-megaton blast would destroy modern multistory buildings within 2.9 miles and unreinforced brick and wood buildings within 4.2 miles of impact. Damage to brick and wood buildings would be substantial up to 8.5 miles from the blast. Heat would cause third-degree burns to exposed skin and set fire to clothing within 4.2 miles. The gamma rays produced from such a blast would be almost immediately lethal to any exposed person within 2.5 miles. People exposed at a slightly greater distance (2.7 miles) would have about a 50 percent mortality rate within a month of the explosion. Finally, a nuclear explosion that makes contact with the ground (as opposed to an airblast) would create tremendous amounts of radioactive fallout that could spread over an area as far as 1,000 square miles downwind from the explosion. Estimates of what percentage would be killed in a one-megaton blast on an urban population vary from 11 percent to 25 percent of

the total population, with an additional 16 to 25 percent injured. Of course, in a nuclear exchange between advanced nuclear weapons states, multiple bombs would likely be assigned to single targets, resulting in even higher levels of devastation.

DELIVERY METHODS

The three main methods of delivery involve ballistic missiles, aircraft, and submarines. Delivery methods are tied to larger strategic and tactical issues related to nuclear deterrence. Nuclear states, such as the United States and the Soviet Union during the cold war, are concerned that a first-strike nuclear attack from another country could be so damaging that it would successfully eliminate any possibility for retaliation. As a result, states design their nuclear forces in such a way that a sufficient number of weapons would remain to respond with a devastating second strike. Many argue that the sole purpose of any nuclear weapon is to deter other states from ever using one. Some also fear that a terrorist organization could gain possession of a nuclear weapon and smuggle it into a major urban center.

Intercontinental ballistic missiles (ICBMs) are launched from reinforced below-ground silos and have ranges of more than 8,000 miles. Often, ICBMs are equipped with multiple warheads—multiple, independently targeted reentry vehicles (MIRV)—capable of hitting multiple targets. Shorter-range ballistic missiles, which could more easily be used in tactical or battlefield scenarios, have largely been eliminated from the arsenals of major nuclear states.

The appeal of aircraft and submarines is their mobility, as well as an enemy's consequent difficulty in targeting them. Heavy-duty bombers, primarily equipped with up to twenty short-range attack missiles capable of hitting multiple targets, have the ability to penetrate enemy territory and withstand a great deal of abuse. Submarines carrying strategic nuclear missiles can remain below the surface for long periods and can launch missiles capable of hitting specific targets over distances of hundreds of miles. The possession of a nuclear-equipped submarine fleet gives a country a very credible second-strike deterrent.

Since the end of the cold war, both the United States and the former Soviet Union have worked to decrease their nuclear arsenals. However, many fear that tensions between other nuclear states, such as India and Pakistan, and the ongoing threat of further proliferation could result in the future use of nuclear weapons.

SEE ALSO *Defense; Defense, National; Deterrence, Mutual; Disarmament; Proliferation, Nuclear; World War II*

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David R. Andersen

WEAPONS INDUSTRY

The fusion of militarism and industrialism was made possible by the Industrial Revolution. In the early industrializing nations of Europe and North America, military leaders harnessed new sources of energy to facilitate transportation (e.g., steam-powered trains and ships) and new means of communication (e.g., the telegraph). This did not require a distinctly militarized industrial sector, only the ability to commandeer commercial goods to feed, clothe, and transport significantly larger military forces. Industrialism also gave rise to the invention of uniquely military end-items and the emergence of large industrial concerns, including defense firms and state-owned armories and shipyards, to produce them. In the twentieth century, this refinement of military goods would give rise to defense firms and the military-industrial complexes (van Creveld 1989).

The fusion of industrialism and militarism facilitated colonialism and conquest. European empires expanded dramatically in the latter half of the nineteenth century, and settler nations such as the United States, Australia, and South Africa completed the conquest of entire continents. Even as they conquered and displaced indigenous peoples, nations such as the United States did *not* become "warrior" societies. Rather, based on technological advantages afforded by industrialism, European powers and settler nations enjoyed distinct military advantages, often against much larger military forces. To compete on the international stage, military and political leaders in Germany, Japan, and Russia induced industrial develop-

ment in the late nineteenth and early twentieth centuries. These top-down industrialization programs, driven by military priorities, were among the least democratic totalitarian regimes of the twentieth century.

During World Wars I (1914–1918) and II (1939–1945), the industrial capacity of leading economic powers was harnessed to perpetrate an unprecedented slaughter of soldiers and civilians. This industrialization of warfare transformed the battlefield and military organization. Equally important was the social transformation. The mass industrial wars of the twentieth century demanded total mobilization of the armed forces and the economy. In the United States, the iconic Rosie the Riveter called attention to the large number of women contributing to the war effort during World War II, many of whom had not previously worked outside the home. A similar trend unfolded among the industrialized nations fighting industrialized wars. Although the World War II mobilization temporarily redefined the roles of men and women in factories and offices, gender segregation persisted during the war and was reasserted at the war's end (on the U.S. case, see Milkman 1987). These mass industrial wars also transformed the risks and casualties among civilians. Improved record keeping and social control allowed states to identify, transport, incarcerate, and in some cases, slaughter millions of civilians (the Holocaust being a spectacular example). For these wars, industrial targets in densely populated areas became prominent targets. World War II was especially lethal (Kolko 1994): Large portions of London and several Soviet cities were decimated by German attacks; Dresden and Tokyo were consumed in firestorms and Berlin reduced to rubble; and two Japanese cities (Hiroshima and Nagasaki) were destroyed by atomic bombs.

THE WEAPONS INDUSTRY IN THE COLD WAR ERA

In the course of the cold war (1948–1989), the United States and the Soviet Union built and maintained large weapons industries. The sustained fusion of industrialism and militarism in the postwar United States prompted President Eisenhower to warn the nation and the world about the dangers of the military-industrial complex (Eisenhower 1961). As Eisenhower had warned, the weapons industry distorted technological development and diverted scarce human and physical resources.

During the cold war, a "wall of separation" grew between the defense and civilian sectors of the economy (Markusen and Yudken 1992). Defense-oriented firms and diversified corporations that garnered defense contracts were among the fastest growing and most profitable firms. For the Soviet Union, overinvestment in the military was exacerbated by the war in Afghanistan and costly military and diplomatic commitments around the globe. These chronic fiscal strains contributed to the collapse of the Soviet Union—and with this collapse a dramatic reduction in the size and the scope of the military-industrial complex in successor states. In the twenty-first century, the U.S. arsenal is increasingly reliant on state-of-the-art science and technology. In addition to nuclear weapons, chemical and biological weapons are also produced through sophisticated scientific processes. Even "conventional" forces are being transformed by new sensing, computing, and communication devices being assembled to create an electronic battlefield. Space may become militarized as well. If satellites capable of destroying moving missiles or stationary targets are deployed, highly automated weapons far removed from earth would be at the center of the war and would pose the greatest threat to human life.

CONTEMPORARY DYNAMICS AND THREATS POSED BY THE WEAPONS INDUSTRY

The collapse of the Soviet Union and the end of the cold war raised hopes that the military-industrial complex would be dismantled. In the early 1990s, global military expenditures and arms sales fell as expected. But a resurgence in military spending began in the late 1990s, with the nations of the Middle East figuring prominently. The United States has also increased defense spending since the mid-1990s, to $475 billion in 2005 ($30 billion higher than in 1988). In 2005, the United States accounted for 48 percent of all military spending in the world, an unprecedented level of concentration (Stockholm International Peace Research Institute 2006a).

The resurgence of the military-industrial complex goes beyond the spike in arms production and sales. The changing organizational structure of the military-industrial complex is an equally important—perhaps more important—aspect of this resurgence. When defense spending declined in the 1990s, leading defense firms did not "beat swords into ploughshares." They redoubled efforts in the shrinking defense market. A round of mergers, acquisitions, and reorganizations occurred: The number of firms declined because of these mergers, and the surviving firms were much larger (see Markusen and Costigan 1999). Whereas the top five firms accounted for 22 percent of the world's arms sales in 1990, their share doubled (44%) by 2003. With the top five firms accounting for most of the increase, the top twenty firms commanded 57 percent in 1990, and their share of arm sales jumped to 74 percent by 2003 (Stockholm International Peace Research Institute 2006b). Not only are arms sales concentrated in fewer firms, but these firms are concentrated in the United States and a handful of nations.

The increased privatization of national security is also a cause for concern. Private firms have provided construction, logistics support, and so forth to military organizations for centuries. But the growth in the size and range of activities has been notable. The concentration of arms sales in a handful of enormous transnational corporations also concentrates scientific and technical expertise. Governments are growing reliant on corporations (often distant corporations) to plan and coordinate essential national security functions. In addition, corporate mercenaries have played a direct role in toppling governments and in the prisoner abuse committed by the United States during the wars in Afghanistan and Iraq (Isenberg 2004). These mercenaries and the corporations employing them rarely face criminal charges. They not only operate with impunity but also shield the government employing them from democratic scrutiny. In a world in which five firms control more than 40 percent of all arms sales and the top twenty firms account for nearly 75 percent, many governments have lost a measure of control over defense policies. The increased reliance on mercenaries further reduces democratic control and oversight.

Citizens forced to make sacrifices, serve in mass armies, and experience directly the horror of war often question the necessity of fighting. But citizens insulated from the horrors of war often cheer on technological marvels that kill thousands of people and destroy distant cities. Citizens of powerful nations often fail to empathize with the suffering caused by the highly scientific and distant slaughter perpetrated in their name. This callousness is reinforced by the role of major arms-producing corporations. These corporations sell military goods and defense planning to governments around the globe; they also supply mercenaries to fight on the battlefield and interrogate prisoners. By ceding so much control to the insulated corporations of the weapons industry, governments are more distant from their own people and contribute to removing military policies from public scrutiny and democratic oversight. At the dawn of the twenty-first century, our challenge is to restore democratic oversight in a realm dominated by enormous corporations and government bureaucracies.

SEE ALSO *Cold War; Deterrence, Mutual; Eisenhower, Dwight D.; Holocaust, The; Industrialization; Industry; Militarism; Military; Military Regimes; Military-Industrial Complex; Union of Soviet Socialist Republics; War; Weaponry, Nuclear; Weapons of Mass Destruction*

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Gregory Hooks

WEAPONS OF MASS DESTRUCTION

Weapons of mass destruction (WMD) have been used throughout history. While there are definitional ambiguities, all conceptions of WMD imply societally unacceptable levels or forms of destruction. Despite international efforts to curb their spread, concerns over WMD use have increased since the 1990s.

DEFINITIONS AND HISTORIC USES OF THE TERM

The term *weapons of mass destruction* was first used in a London *Times* article (December 28, 1937) in reference to the German aerial bombardment of Guernica, Spain, during the Spanish Civil War (1936–1939): "Who can think without horror of what another widespread war would mean, waged as it would be with all the new weapons of mass destruction?" (p. 9). While the Luftwaffe (the German air force) used only "conventional" weapons in the attack, subsequent definitions have emphasized weapons whose materials and effects violate a societal boundary of what is considered "acceptable" in wartime.

The United Nations Security Council Commission for Conventional Armaments (August 12, 1948) defined WMD as "atomic explosive weapons, radioactive material weapons, lethal chemical and biological weapons, and any weapons developed in the future which have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above." Since the Iraq War beginning in 2003, the United States has used the term to refer to chemical, biological, nuclear, and, increasingly, radiological (CBNR) weapons. This remains the most common use of the term, although sometimes it is defined more broadly to include any weapons, including conventional weapons, capable of inflicting mass casualties.

WEAPONS OF MASS DESTRUCTION AND WARFARE

Chemical weapons include such agents as mustard, sarin, and VX nerve gases, as well as chlorine, hydrogen cyanide, and carbon monoxide. Most chemical weapons are designed to attack the nervous system. They were first used in modern times during World War I (1914–1918) when the French used tear gas during the first month of the war, and during the Second Battle of Ypres (1915) when Germany used chlorine gas in its attack against French and Algerian troops. By the end of the war, more than one million casualties and ninety thousand deaths were attributed to chemical warfare use by all sides. During World War II (1939–1945) the Nazis used hydrogen cyanide and carbon monoxide in the extermination camps, killing millions. More recent chemical attacks include the U.S. use of Agent Orange during the Vietnam War (1957–1975); Iraqi president Saddam Hussein's use both of sarin gas against Iran during the Iran-Iraq War (1980–1988) and of multiple chemical agents against the Iraqi town of Halabja in 1988, killing up to five thousand Kurds; and Aum Shinrikyo's sarin gas attacks in Matsumoto (1994) and on the Tokyo subway (1995) in Japan.

Biological weapons are weapons of germ warfare; they include a large number of living agents such as anthrax, botulinum toxin, plague, ricin, smallpox, and typhus. A subclass of biological weapons that could be directed specifically at agriculture includes mad cow disease and swine fever. Although used throughout history, biological weapons have seen limited use in attacks in modern times due to difficulties in creating effective dispersal mechanisms. Exceptions include Japan's use of biological agents during the Sino-Japanese War (1937–1945) and World War II, including a 1943 attack on Changde, China, that involved an attempt to spread bubonic plague. In 1984 members of the Rajneeshee cult infected a salad bar with salmonella in The Dalles, Oregon, sickening nine hundred, and anthrax was disseminated through the U.S. postal system in 2001, killing five.

Nuclear weapons produce their destructive effects through nuclear fission from chain reactions involving uranium or plutonium or from nuclear fusion (the so-called hydrogen bomb). Considered the most destructive of all WMD, nuclear weapons have been used on two occasions, both at the end of World War II. The bombing of Hiroshima, Japan, on August 6, 1945, killed some 80,000 civilians immediately and another 60,000 from radiation by the end of the year. The attack on Nagasaki three days later ultimately killed 100,000.

Radiological weapons, unlike nuclear weapons, have no blast effect. They derive their destructive power from radiation alone and typically depend on an explosive device to disperse the radiation, although radioactive material could also be sprayed from crop duster planes. Radiological weapons have never been used, but Iraq is believed to have tested them in 1987 for possible use against Iran. The plan was abandoned after it was found that the radioactivity dissipated within a week of the weapon's manufacture.

WMD CONTROL

Due largely to their ability to indiscriminately kill and inflict harm on civilian populations even when the intended target is military, WMD, unlike conventional weapons, have traditionally encountered societal opprobrium. This has led to a number of international agreements to limit their development and use.

The Nuclear Non-Proliferation Treaty (1970) seeks to prevent the spread of nuclear weapons and weapons technology beyond the states already known to possess them. A total of 187 parties have joined the treaty. At least nine countries are known or suspected to possess nuclear weapons as of 2006 (the United States, Russia, Great Britain, France, China, India, Pakistan, Israel, and North Korea). The Comprehensive Nuclear-Test-Ban Treaty seeks to deter development of nuclear weapons by banning all nuclear explosions. The treaty was opened for signature in 1996. As of 2006, the treaty had 176 members but would not come into force until all forty-four nations conducting nuclear research or possessing nuclear power reactors signed and ratified the treaty; eleven ratifications were still necessary in 2006.

The 1925 Geneva Protocol bans the use of biological weapons, and the 1975 Biological and Toxin Weapons Convention bans their "development, production, stockpiling, acquisition, or retention" except for "prophylactic, protective or other peaceful" purposes. The convention has been signed by 162 countries. The United States, Russia, North Korea, and Syria are known or believed to possess biological weapons.

The Chemical Weapons Convention (1997) prohibits the "development, production, acquisition, stock-

piling, transfer, and use" of chemical weapons and requires all signatories to destroy their chemical weapons and chemical-weapons production facilities. The convention was signed by 140 nations; some seventeen nations are known or believed to maintain chemical weapons stockpiles.

Despite efforts to curb WMD proliferation, real concerns remain. One major concern involves their acquisition by rogue states or terrorist organizations. As of 2006, North Korea's and Iran's nuclear programs were deemed threatening, and the terrorist organization Al-Qaeda was believed to be seeking some level of WMD capability.

SEE ALSO *Hussein, Saddam; Iraq-U.S. War; Terrorism; Terrorists; Weaponry, Nuclear*

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Donna J. Nincic

WEAVER, ROBERT C.
1907–1997

Robert Clifton Weaver's career as economist and presidential advisor spanned the New Deal to the War on Poverty. He produced two major treatises on the economic status of African Americans, *Negro Labor* (1946) and *The Negro Ghetto* (1948), and an influential textbook in urban planning and policy, *The Urban Complex* (1964). Weaver was the first U.S. Secretary of Housing and Urban Development (HUD) and the first African American to hold a cabinet-level position.

Born in Washington, D.C., on December 29, 1907, Weaver earned his doctorate in economics in 1934 from Harvard University. From 1933 through 1944, he held a sequence of advisory positions in the administration of President Franklin D. Roosevelt, including Advisor on Negro Affairs to Secretary of the Interior Harold Ickes (1934–1938) and chief, Negro Manpower Service, War Manpower Commission (1942–1944). From 1961 to 1966, under Presidents John F. Kennedy and Lyndon B. Johnson, he was Administrator of the Housing and Home Finance Administration. President Johnson appointed Weaver the first secretary of HUD in 1966, a post he held until 1968.

Although most of his career was spent in government, Weaver was a consistent critic of government's failure to end—and occasional duplicity in—the subjugation and segregation of the black population. In *Negro Labor*, Weaver detailed the participation of government agencies and trade unions in the exclusion of black workers from defense industry jobs. In *The Negro Ghetto*, Weaver explained how the Federal Housing Authority's (FHA's) lending practices reinforced local efforts to exclude African Americans from moving into white communities. Weaver argued that segregation would result in deteriorating housing quality and, eventually, to anger, the degradation of social relationships, and increased violence. In essence, he predicted the urban uprisings of the 1960s in 1948.

Walter B. Hill, in "Finding Place for the Negro: Robert C. Weaver and the Groundwork for the Civil Rights Movement" (2005), and Charles and Dona Hamilton, in "Social Policies, Civil Rights and Poverty" (1986), credit Weaver with the creation of a forerunner of modern affirmative action—the minimum percentage clause. This clause, which was inserted into Public Works Administration contracts for low-cost housing, prohibited discrimination on the basis of race or religion and identified, as prima facie evidence of discrimination, a contractor's failure to hire a minimum percentage of black workers, based on the number of skilled black craftsmen in the locality.

Weaver outlined his vision of how to revitalize these urban centers in *The Urban Complex* and in *Dilemmas of Urban America* (1965). Weaver sought to revitalize urban centers through comprehensive, regional planning. Despite the black community's perception that urban renewal meant "Negro removal," Weaver remained an advocate of the use of eminent domain, government subsidies, and tax incentives to replace deteriorating, low-cost housing in urban centers. Weaver believed urban renewal projects created the opportunity to replace segregated ghettos with integrated communities. Later, in a 1985 article, "The First Twenty Years of HUD," Weaver acknowledged the difficulty of realizing this vision.

Following his tenure at HUD, Weaver served as president of Baruch College, City University of New York, and as a Distinguished Professor of Urban Affairs at Hunter College. He died in July 17, 1997, at the age of eighty-nine. In 1999, Congress renamed the HUD headquarters in his honor.

SEE ALSO *Discrimination, Racial; General Equilibrium; Ghetto; Johnson, Lyndon B.; Kennedy, John F.; New Deal, The; Poverty; Roosevelt, Franklin D.; Segregation; Segregation, Residential; Urban Renewal; Urban Studies*

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Cecilia Conrad

WEBB, BEATRICE AND SYDNEY

SEE *Fabianism.*

WEBER, MAX
1864–1920

Max Weber helped establish sociology as a social scientific discipline at the beginning of the twentieth century. In *Economy and Society: An Outline of Interpretive Sociology* (1920) he analyzed modern bureaucracies, the structure of stratification, origins of the city in the West, types of political domination, the genesis of modern legal systems, the importance of religion for social life, and other topics. Perhaps no sociologist, before or since, has displayed his intellectual range and sophistication.

EARLY YEARS

Weber was born on April 21, 1864, in Erfurt, Germany. A gifted child, Weber became politically astute at a young age. His father, a lawyer and politician, entertained prominent people in his salon and the young Weber participated in their discussions.

Weber's parents were mismatched. His father, a hedonist who enjoyed bourgeois living, ruled the household absolutely. His mother, while loving and affectionate, adhered to strict Calvinist standards of hard work, ascetic behavior, and personal morality. Weber's wife, Marianne, later reported that he believed he needed to choose between his parents. This dilemma became a source of emotional agony throughout his life. Indeed, his sociological writings may constitute an attempt at working through this inner conflict.

During the 1880s and 1890s, Weber became a successful lawyer and college professor. He had political aspirations. According to Marianne, a distant cousin whom he married in 1893, Weber lived an ascetic life, strictly regulated by the clock. On completing each task he immediately took on a new one. He was chronically overworked, which may have contributed to his eventual collapse.

In 1897 his mother planned a visit with Max and Marianne that his father opposed. Father and son clashed and parted without reconciliation. Shortly thereafter, the old man died. Within weeks, Weber suffered a complete nervous breakdown. At that time, before psychotherapy, the only treatment for such ailments was rest. Weber resigned his teaching position and remained incapacitated for five years. In 1903 Max and Marianne toured America, witnessing its vitality. The trip seemed to rekindle his ability to work.

MAJOR CONTRIBUTIONS

In 1904 Weber posed a simple question: "In what sense are there 'objectively valid truths' in those disciplines concerned with social and cultural phenomena?" ([1904] 1949, p. 51). His subsequent writings provide an answer to this query.

Weber's first goal was to show that objective social scientific research is possible, a controversial position at that time and one that remains divisive. He insisted that sociologists should not infuse research with their personal values, economic interests, or political agendas. As he put it, research should be value free, as unbiased and objective as possible.

This goal carries an important implication: Sociology should not be a politically committed discipline. Rather, Weber distinguished between "what ought to be," the sphere of values, and "what is," the sphere of science. Science, Weber said, cannot tell people either how to live or what public policies to adopt. Objective social scientific knowledge can, however, provide them with information necessary to make such decisions ([1904] 1949, p. 54).

In order to achieve this goal, Weber argued that sociologists should apply a "rational method" to their work; that is, they should use clear concepts and systematic observations and then make logical inferences ([1920] 1946a, p. 143; [1904] 1949, p. 105). But this task is difficult. After all, researchers participate in social life, which means they often approach topics with preconceived opinions. Moreover, any specific study only provides a partial picture, which can imply taking sides. The solution to these difficulties is for scholars to critically evaluate and replicate research. Although this practice is imperfect (since human beings are imperfect), it leads to a self-correcting process that produces research findings that are as objective as possible. Given accurate information, Weber argued, sociologists can sometimes suggest strategies for achieving policy goals and possible consequences. At that point, values intrude, since the problem becomes what is to be done. Weber addressed this issue in his essay "Politics as a Vocation," where he described politics as a process by which competing interest groups seek to affect public policies and the state as monopolizing the use of force in implementing them. The political problem of evaluating and applying scientific findings to practical matters is perennial in modern societies.

Another implication of Weber's argument for value-free sociology is that the new discipline reflected an ongoing historical process that he called rationalization, in which social life becomes methodically organized based on the use of reason and observation. Weber saw that this process permeates every sphere of modern life: education, work, law, economy, and family. The sciences, of course, including sociology, are the archetypal methodical disciplines. They provide new ways of understanding and controlling our environment, natural and social, opening up dizzying new possibilities. Industrialization, capitalism, democracy, and scientific advance are linked historically, leading to improved lives for most people. For example, they have straight teeth, better diets, and—the ultimate gift—longer lives. All reflect the process of rationalization. In modern societies, then, people look for explanations based on reliable knowledge. They seek solutions to problems rather than accepting fate. This orientation becomes generalized to every sphere: Anyone who uses modern technology learns to approach problems methodically, rather than by relying on magical thinking. But the impact can be disquieting, even frightening, because choices sometimes must be made between competing moral imperatives.

Weber, like many others, feared the impact of rationalization on social life. Knowledge based on reason and observation destroyed magical explanations that had provided meaning for people throughout history. In his essay "Science as a Vocation," he mused about the "disenchantment of the world" that characterizes modern societies ([1920] 1946a, p. 139). This evocative phrase suggests that humans have passed from an enchanted world of mystery and spirituality into one that is colder, more heartless, perhaps bereft of moral guidance. In a rationalized world, Weber lamented, there are no longer simple answers to the fundamental questions of human existence.

Weber's second goal was to understand the origin of modern societies. He confronted this issue in his most important book, *The Protestant Ethic and the Spirit of Capitalism* (1904–1905), and subsequent studies in the sociology of religion. They constitute an exercise in historical hypothesis testing in which Weber constructed a logical experiment using ideal types as conceptual tools.

Ideal types are concepts that identify the essential characteristics of a social phenomenon in the purest form possible. As he put it, they are designed "to be perfect on logical grounds," which has the "merit of clear understandability and lack of ambiguity" ([1920] 1968, p. 6). Empirical observations, of course, will deviate from the ideal (or pure form). By providing a common point of comparison, however, ideal types set up a logical experiment. They function like a control group in an experiment, and observed variations reflect the impact of causal forces (a stimulus in an experiment) that can be discovered.

In *The Protestant Ethic* and other studies, Weber explained why capitalism arose in Western Europe and helped to usher in modern life by using ideal types to systematically compare Western Europe in the seventeenth and eighteenth centuries with China and India. What distinguished Europe, he found, was not the level of technology, a free labor force, or other factors. Rather, the West became unique due to the rise of the culture (or spirit) of capitalism as an unintended consequence of the Protestant Reformation.

The Protestant Ethic opens with a then-common finding: "Wherever capitalism … has had a free hand" a relationship existed between Protestantism and economic success ([1904–1905] 1958a, p. 25). Why might this be so?

Weber began his answer by describing the "spirit of capitalism" as it existed in the eighteenth century: (1) work is an end in itself; (2) economic success reflects personal virtue; (3) a methodically organized life is inherently proper; and (4) immediate pleasure should be postponed in favor of future satisfaction. Although expressed as ideal types, these cultural values could be observed in the writ-

ings of Benjamin Franklin and others at that time, and can be observed today as well. Weber argued that such values became historically significant as religious asceticism (self-denial) emerged from the monastery and convent into everyday life. The modern world is rationalized (in Weber's sense) to the degree that ordinary people organize their lives in light of values like these.

Such values originated in the peculiar beliefs of the protesting faith groups. In *The Protestant Ethic*, Weber examined Puritanism as the ideal type. Puritan life was dominated by unusual ethical norms, which could be observed in pastoral directives: people should work hard, take a methodical approach to everyday life, and use their possessions for purposes that enhance the glory of God. The believers' underlying motive was purely religious: to ensure they were among the elect going to heaven. The unintended impact, however, was that many of those adhering to such norms became successful, even rich. Moreover, because these religious principles displayed what he called an "elective affinity" with other historical changes occurring at about the same time—the rise of science, democracy, and industrialization—they spread and became secular values. Together, Weber argued, these interrelated changes produced modern rationalized capitalist societies, with their improved lives and potential for disenchantment.

Weber's third goal was to develop a set of concepts that would be useful for describing and understanding modern societies. This conceptual map comprises the opening sections of *Economy and Society*.

The "types of social action" illustrate both his theoretical intent and his interpretation of the modern world. According to Weber, people's actions can be classified in four ways. *Instrumentally-rational action* occurs when means and ends relate to each other based on knowledge. The model for instrumentally-rational action is scientific knowledge. Because it is based on reason and observation, science avoids self-deception and thus becomes effective in solving problems. *Value-rational action* is based on values. It always involves demands that people believe compel them to act. Parents educating children; soldiers obeying orders; citizens supporting or opposing abortion; all behave rationally in being faithful to their values. As the examples imply, value-rational action constitutes an end in itself, not a reflection of economic interest. *Traditional action* is "determined by ingrained habituation" ([1920] 1968, p. 25). In contexts where people are subject to fate, they regulate behavior by custom, often religiously sanctified. *Affectual action* is determined by emotions, and it occurs in all times and places. The parent slapping a child and the basketball player punching an opponent are examples.

Weber argued that traditional action occurs typically in preindustrial societies, where choices are limited (because knowledge is limited) and people have little control over their lives or environment. In such situations, the family usually constitutes both a productive and a consumptive unit, which means that people make economic, legal, and most other decisions in the light of tradition. Tradition (or custom) nearly always precludes the logical evaluation of means and ends based on reason and observation.

Understanding modern societies, Weber said, requires the distinction between instrumentally-rational and value-rational action, although they are interrelated in practice. The pervasiveness of instrumentally-rational action reflects the process of rationalization. People use values, however, to channel behavior. For example, they emphasize increasing knowledge, individual autonomy, protecting life, and equal opportunity, among other fundamental moral guides. In such contexts, bureaucracies become the means of administration. Their common objective is to create and enforce rules efficiently, fairly, flexibly, and competently in order for government to operate in the public interest or companies to produce goods and services. In their pure (or ideal type) form, bureaucracies constitute a model of instrumentally-rational action. Ideally, administrators obtain positions based on qualifications, personal and official affairs are kept separate, decision-rules are based on reason and knowledge, and rules are applied uniformly.

In the real world, of course, human beings comprise bureaucracies, which means they do not meet these standards perfectly. For example, corruption occurs and rules are not always applied uniformly—who one knows often makes a difference. Moreover, bureaucratic procedures (following the rules) sometimes become more important than the goals they are designed to achieve—an irrational result. The ideal type, however, provides a point of comparison, a way of evaluating people's performance in bureaucratic organizations.

Still, Weber was pessimistic about the future. The ability to obtain "objectively valid truths" about both natural and social phenomena has radically increased human understanding and improved people's lives. But it also stripped the supernatural of its ability to explain the meaning of life. At the same time, Weber showed in *The Protestant Ethic* that while the religious roots of the spirit of capitalism have died out, Puritanism bequeathed to modern people "an amazingly good, we may even say a pharisaically good, conscience in the acquisition of money" ([1904–1905] 1958a, p. 176). The Puritan, he wrote, wanted to work hard for the glory of God; we are forced to do so. But for what reason? In a disenchanted world, this question becomes hard to answer. In this context, Weber feared, the culture of capitalism, combined with capitalist social, economic, and political institutions, would place people in a bureaucratic "iron cage" from which there

might be no escape and for which there is no longer a religious justification. This possibility led to Weber's last, sad lament: "specialists without spirit, sensualists without heart; this nullity imagines that it has attained a level of civilization never before achieved" (p. 183).

COMMENTARY

The problem of objectivity remains one of the most vexing in sociology. On the one hand, some reject the goal, arguing that sociology must be politically engaged. Among the classical theorists, both Karl Marx and Émile Durkheim embraced this position, although in quite different ways. Many early American sociologists also held this view and some continue to do so in the twenty-first century. The idea is that an activist discipline can be a force for good, liberating people from oppression. On the other hand, the logic of Weber's argument suggests that a discipline committed to political change would produce unreliable knowledge and, hence, become politically irrelevant. Many, perhaps most, sociologists agree that the goal of objectivity should animate the discipline, even though its achievement can be difficult.

The "Protestant Ethic" thesis became controversial immediately and remains so today. A typical criticism is that capitalism has existed in some form throughout history. This is correct, but not Weber's point. He distinguished between the traditional enterprises of a few "adventurer capitalists," who sought windfall profit sufficient to last a lifetime, and a modern rationalized capitalist economy, which is based on the mass production of consumer goods in an environment where everyone strives to make money as an ethical duty. A more accurate criticism is that Weber missed the existence of functional equivalents to the protestant ethic in other parts of the world, such as China and Japan. This assessment provides a simple example of how the social sciences can be self-correcting. *The Protestant Ethic* also became important because its logic suggested some of the limitations of Marx's analysis. Marx argued that political and economic interests guide action. Weber agreed but added that ideas and values function like railroad switchmen: They determine the tracks along which interests push action. For example, people sometimes vote against their economic interests because of their values. In fact, in today's rationalized world, people lead methodical lives and use reason buttressed by knowledge to achieve their values.

Weber and Marx constitute opposing poles among the classical sociologists. Both were structuralists, emphasizing the importance of understanding the context in which people make decisions. But while Marx posited the existence of historical laws of development in which feudalism led inevitably to capitalism and the latter to communism, Weber replied that history has no direction. Rather, as it occurs, history is messy and disorderly. Observers see patterns only in retrospect. Capitalism, he pointed out, arose in the West based on a series of unpredictable historical accidents, such as the Protestant Reformation. Both stressed the importance of human decision making, but again in different ways. Marx argued that inequality would increase to unsustainable levels in capitalist societies. In this context, he claimed, alienated people who did not own the means of production would rebel and usher in a new, communal society. Marx was wrong. Writing a half-century later, Weber saw that capitalism combined with industrialization to produce a middle class. He worried instead about the possibility of reason run amok: In a "disenchanted" world, "rationalized" bureaucracies would oppress people, creating conformists without a sense of ethical responsibility.

Although Weber may have been too pessimistic, the historical process of rationalization creates huge dilemmas that are not easily resolved. It is secularizing, thus frustrating a deeply felt human need for what Weber called "theodicies," ways of understanding and coping with suffering and evil. It is individuating, which leads to a paradox: People come to value both individual autonomy and communal bonds. And it is liberating, as so many areas previously determined by fate become opportunities for choice—by individuals, the state, or both. For example, one of the benefits of modernity is the gift of long life and an increasing ability to control the circumstances of death. In this context, what ethical criteria should individuals use in making end of life decisions? As interest groups offer their competing solutions, how should policy makers evaluate the political, economic, and ethical considerations surrounding this dilemma? The simple answer provided by tradition—thou shall not kill—becomes difficult to maintain when individuals' right to life must be balanced against their freedom and autonomy. Moral imperatives collide. Weber saw this essential feature of modern capitalist societies perhaps more clearly than any other classical sociologist.

Toward the end of his life, Weber seemed to find release from his psychic wounds.

Marianne reported that his ability to work became steadier and sleep more regular. He began teaching for the first time in more than twenty years, giving two of his most famous lectures: "Science as a Vocation" and "Politics as a Vocation." He also reworked his explanation of the origins of capitalism and began composing the conceptual map that frames the substantive portions of *Economy and Society*. During the summer of 1920 Max Weber developed pneumonia. He died on June 14; he was only fifty-six years old.

SEE ALSO *Capitalism; Protestant Ethic; Tawney, R. H.*

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WECHSLER INTELLIGENCE SCALE FOR CHILDREN (WISC)

SEE *Flynn Effect.*

WEDDINGS

SEE *Marriage.*

WEIGHT

Body weight is most commonly measured in kilograms or pounds. *Body mass index* (BMI) is a frequently used measure and serves as an index of weight-for-height calculated in kg/m^2. BMI is often used to stratify individuals into categories ranging from underweight to severely obese. One critique of BMI is that it does not distinguish between muscle and fat mass (Kraemer et al. 1990). Anthropomorphic measures (e.g., waist circumference) enhance measurement accuracy by examining distribution of excess weight around the abdominal region. Negative health consequences are associated with a waist circumference > 102 centimeters for men and > 88 centimeters for women (NIH 1998). Total body fat percentage is also used to measure excess weight and can be calculated by skin-fold caliper, hydrostatic weighing, or bioelectrical impedance testing.

Statistics compiled by the Centers for Disease Control and Prevention (CDC) indicate that in 2006 two-thirds of adults in the United States were overweight and 32.2 percent met the criteria for obesity. Moreover, obesity prevalence rates among children and adolescents have tripled since the mid-1980s (Ogden et al. 2003). Average BMI is increasing across demographic groups, and recent reports suggest that 45 percent of non-Hispanic black adults and 30 percent of non-Hispanic white adults are obese (CDC 2006). These trends are alarming because obesity is the second leading cause of preventable death and a risk factor for chronic illness, including type 2 diabetes, hypertension, and coronary heart disease.

Although the causes of obesity are not fully understood, it is viewed as a chronic disease influenced by genetic, environmental, behavioral, and cultural factors. Research suggests that genetic influences account for a significant amount of variability in BMI. Findings from twin studies suggest that up to 70 percent of variation in BMI can be accounted for by genetic factors, while adoption studies have produced more conservative heritability estimates of 20 to 30 percent (Bouchard 2002). However, genetic influences do not account for the dramatic and steady increase in the prevalence of obesity (Brownell 1994). Environmental factors, such as the widespread availability of calorie-dense foods and urban development not conducive to physical activity (e.g., lack of parks and busy intersections), also have contributed significantly to the rise in obesity.

SOCIAL CONSEQUENCES OF WEIGHT

A thin physique continues to be the accepted ideal in Western cultures despite a steady increase in the prevalence of overweight and obesity. Fashion models and popular cultural icons have become increasingly thin since the 1960s (Wolf 1991). Dissatisfaction with body weight has become the norm, especially for women (Rodin et al. 1985). In fact research suggests that 52 percent of men and 66 percent of women in the United States are dissatisfied with their weight (Garner 1997), and some women report dieting even when their weight is at or below normal (Rodin et al. 1985). However, there are racial differences on satisfaction with weight (Gluck and Geliebter 2002). Relative to white females, African American females report less concern about dieting and fatness (Rucker and Cash 1992). In addition, compared to overweight white females, overweight African American females are more satisfied with their bodies and feel more attractive (Stevens et al. 1994). While the overwhelming majority of women desire to lose weight, it is somewhat different for males. Although a substantial percentage (88%) of men who are dissatisfied with their weight do desire to lose weight, 22 percent of men who express dissatisfaction with their bodies actually wish to gain weight (Garner 1997). This is most likely due to the muscular ideals that are portrayed for male physiques (Drewnowski and Yee 1987; Frederick et al. 2005).

Weight-related stigmatization is prevalent in Western cultures, and data suggest that there has been an increase in weight bias since the mid-twentieth century (Latner and Stunkard 2003). Of the many conditions that are stigmatized in Western culture, it has been suggested that the stigma associated with being overweight may be the most debilitating and harmful (Sarlio-Lahteenkorva et al. 1995). Overweight individuals perceive stigmatization from co-workers, strangers, friends, and spouses (Friedman et al. 2005). Obesity also negatively affects employment (Rothblum et al. 1990) and socioeconomic status (Puhl and Brownell 2001). In addition data suggest that weight-based stigmatization negatively impacts the mental health of obese individuals (Friedman et al. 2005) and may contribute to overeating behaviors (Ashmore et al. 2007).

WEIGHT AND MENTAL HEALTH

Studies examining obesity and mental health have yielded mixed results. Earlier studies reported no significant mental health differences between community samples of obese and healthy-weight individuals (Wadden and Stunkard 1985). More recently, data from the National Health and Nutrition Examination Survey revealed a 1.5-fold higher risk for major depression among obese individuals relative to healthy-weight cohorts. Results suggested that severely obese individuals were at greatest risk for depression (Onyike et al. 2003). Several reviews suggest that the risk for major depression is particularly significant among the severely obese and those seeking surgical treatment for weight loss (see Wadden and Sarwer 2006), suggesting that extreme obesity is related to increased depression.

TREATMENT

Management of obesity is a major health-care challenge. There is a range of available treatments, including lifestyle modification, pharmacotherapy, and bariatric surgery. Typically, a step-care approach is taken with the least invasive intervention attempted first. Most treatments produce some initial weight loss; however, behavioral and pharmacological interventions have been largely unsuccessful in the long-term maintenance of weight loss among the severely obese (NIH 1998). Behavioral and pharmacological treatments for obesity typically result in a 5 to 15 percent weight reduction when successful, though patients often have higher weight-loss goals (Foster et al. 1997). According to the National Heart, Lung, and Blood Institute, surgical intervention is an option when BMI > 40 or > 35 in the presence of comorbid conditions (e.g., hypertension, diabetes). Follow-up studies of weight-loss surgery patients demonstrate 49 percent maintenance of excess weight loss over a fourteen-year period and resolution of many medical comorbidities (Pories 1995).

SEE ALSO *Anthropology; Anthropology, Biological; Body Image; Body Mass Index; Disease; Obese Externality; Obesity; Overeating; Self-Esteem; Undereating*

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WELFARE

Welfare is typically a term that denotes varying kinds of social spending allocated by governments following industrialization in nation-states. Prior to industrialization, most governments left assistance for the underprivileged to landlords in feudal systems, private organizations, and (primarily) the Catholic Church. Such "poor relief" became known as "welfare" following government intervention in such provisions.

The pairing of government and poor relief can be traced in part to responses to natural disasters—such as earthquakes, fires, and floods—that led monarchical governments to feed people and rebuild homes in order to preserve order. This definition of welfare—providing assistance to those who are otherwise unable to feed, house, or clothe themselves—remains the primary guide to most countries and scholars who study and implement welfare programs. Thus "welfare" is commonly considered to include redistributive policies and programs that enable the disadvantaged to reach some minimal level of existence within a nation-state.

Many nation-states now provide varying levels of housing assistance, income supplementation, in-kind goods and service provision, and public education as part of the welfare state. The programs and policies to provide these aspects of a minimal human existence can vary. For example, income supplementation can consist of cash payments, tax credits, or child-care subsidies. Similarly, in-kind goods and services can include vouchers for food, free or subsidized medical care, and free job training or referral services. Each nation (and in federal systems such as the United States, each state) makes decisions regarding: (1) the financial commitment to make to these programs; (2) the kinds of programs to provide to its poor; and (3) who is eligible to receive aid under the programs.

The comparative welfare-state literature and the public-policy literature have determined that several factors interact in producing fiscal outcomes and programmatic decisions made at the national level. Most of this work has focused on comparing European nations with other developed democracies such as Canada, Australia, and the United States. Other work has also compared Western

nations such as these with Asian democracies such as Japan and socialist states such as the former Soviet Union, Cuba, and China. The primary findings from these examinations focus on three types of variables to explain and predict both the level of funding and the kinds of programs that are developed: (1) the system of political institutions in place; (2) the attitudes among the citizenry and policymaking bodies toward the poor; and (3) the level of racial/ethnic heterogeneity within the polity.

The political system comparisons proceed at the national level and focus first upon whether federal systems or unitary systems tend to provide greater redistribution to the poor. In particular, the federal system of the United States has been frequently cited as one reason why the United States lags so far behind most other similarly situated nations in terms of social welfare provision. The United States stands alone among OECD (Organization for Economic Cooperation and Development) nations, for example, in its dependence on private health care as 35 percent of total health expenditures. Far smaller and less-developed nations in Europe and in Asia provide universal or near-universal public health coverage. In addition to these systemic differences, comparative welfare-state experts focus on the types of institutional arrangements that may produce different kinds of welfare program provision. For example, states with proportional representation systems have over the course of history had greater influence from left-of-center ideological parties working in coalition governments; winner-take-all electoral systems require far less coalition politics and therefore depress the influence of parties that would seek greater redistribution when they lose elections.

Both systems and institutional arrangements are shaped by the parties that enter power and whether they are required to respond to the electorate in their policymaking decisions. In cases where the electorate plays a significant role in determining the allocation of power, political parties reflect to a large degree mass public opinion regarding the views of the poor. In countries where the electorate views the poor as "trapped in poverty," more generous and comprehensive welfare programs exist. Where the majority of the electorate views the poor as "lazy," less generous and comprehensive welfare programs exist. Where moves toward less generous and comprehensive programs succeed, the burden continues to fall on private relief organizations (including religious organizations), as it did prior to industrialization. Although there is a direct correlation between public opinion and welfare policy, such a correlation is also shaped by both the institutional arrangements and the degree of racial/ethnic heterogeneity in the country.

In addition to institutional arrangements and mass public opinion, the degree of racial/ethnic heterogeneity plays a unique role in the provision of welfare benefits at the national level. Racial/ethnic animus has been examined at length in more diverse societies as a factor that depresses the likelihood of generous or comprehensive welfare policy. However, a strict breakdown between ethnically diverse countries and homogenous nations does not explain the variation. In fact, it is those countries with both racial/ethnic diversity and a concentration of poverty among the ethnic/racial minorities that leads to an "anti-solidarity" effect: Both the mass electorate and the parties that represent them are less likely to provide welfare benefits to a subset of the population that is perceived to be undeserving.

In the United States, for example, race- and income-based disparities in the provision of health-care coverage have existed since the founding of the American welfare state with the Social Security Act of 1935, which exempted select industrial sectors employing large numbers of African Americans from old-age salary replacement and medical coverage programs. While federal and state legislation has since outlawed the exclusion of citizens on the basis of race from such programs, race- and income-based disparities in program participation persist.

The cross-national analyses of welfare provision generally tend to focus on states that are capable of providing welfare benefits domestically, whether through capitalist or socialist economic systems. Much less attention has been given in such analyses to the role of international or global organizations that attenuate dire situations in countries that are incapable at the national or local level of providing such services. A separate literature contends with the role of international organizations such as the World Health Organization, the International Monetary Fund, and the United Nations in the provision of welfare benefits to developing nations. Future comparative research can and should integrate these literatures to comprehensively determine the relevant weights of the three factors identified above—the system of political institutions, mass public opinion, and racial/ethnic heterogeneity—to examine how the outcomes of welfare policymaking serve to further stabilize and strengthen democracy, or serve to undermine it.

SEE ALSO *Great Depression; Great Society, The; International Monetary Fund; National Health Insurance; New Deal, The; Racism; Socialism; United Nations; Welfare State; World Health Organization*

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Ange-Marie Hancock

WELFARE ANALYSIS

Welfare economics is the study of how a society can best use its scarce endowments—for example, its natural resources, technical know-how, stock of physical and human capital, and so forth—to maximize the well-being of its members. When the principles of welfare economics are used to evaluate a specific policy issue, it is known as *welfare analysis*. This entry describes the main features of welfare analysis, focusing on its intellectual foundations and practical challenges, as well as controversies surrounding its use.

Two policy examples will help clarify what welfare analysis is. First, psychologists have shown that the academic achievement of underprivileged children is significantly improved by enrollment in prekindergarten programs. These programs are, of course, expensive to run. Will society be better off if prekindergarten is freely and universally provided? Second, as of 2007, high gas prices have caused U.S. policymakers to consider opening the Arctic National Wildlife Refuge in Alaska for energy exploration. Would the benefits to society from the increase in domestic energy sources outweigh the environmental implications of this decision?

Neither of these questions has an obvious answer, although each can invoke varying opinions from different members of society. The task of welfare analysis is to assemble information to aid in determining whether the proposed policy action would on balance be beneficial to society. Economists use two fundamental concepts to aid in this process. The first is *consumer sovereignty*, which has its roots in the philosophy of individualism. Consumer sovereignty has two related consequences for welfare analysis: it implies that the individual is the best judge of what is good or bad for his or her well-being, and that a proposal can only be judged by examining the sum of its impacts on individuals. The latter gives rise to the second fundamental concept, the *compensation criterion*, as originally proposed by John Hicks (1939) and Nicholas Kaldor (1939). Almost any policy action will involve winners and losers. The compensation criterion suggests that a policy is desirable if those who gain from the action gain enough in aggregate that they would be able to compensate the losers for their losses. Thus welfare analysis is a matter of measuring changes in individuals' well-being as they see it as a result of a policy change, and determining whether the sum of the individual gains is greater than the sum of the individual losses.

This view of welfare analysis might more accurately be described as the neoclassical interpretation in that it is intentionally silent on issues of fairness, justice, and other notions of equity. Said another way, neoclassical welfare analysis focuses narrowly on maximizing the size of the well-being pie rather than providing prescriptions on how it should be divided. Implicitly, distributional questions are left to other mechanisms. A wider view of welfare analysis requires specific judgments on what is fair and just and hence is more difficult to implement. Nonetheless there have been efforts by political economists past and present to cast welfare analysis in a wider light. Prominent among these is the work of Amartya Sen, who advocates the use of mild interpersonal comparisons—based, for example, on the ability of people to freely choose their lifestyle—in conjunction with neoclassical criteria. The work of Sen and others notwithstanding, the narrow view of welfare analysis as described above has tended to dominate the operational use of the technique.

The operational challenge of neoclassical welfare analysis is to assess changes in well being from an action. Because a person's well being cannot be objectively measured, economists use money proxies in their stead. A prime example of this is *willingness to pay*, which measures how much money a person would pay out of their income to secure (or prevent) an action. This measure is valid and useful even if the payment is not actually made. The magnitude of the payment, if accurately assessed, provides a sense of the relative importance of the action under consideration. Techniques for measuring individuals' willingness to pay have a long history in economics, beginning with Alfred Marshall (1930) and including seminal works

by Robert Willig (1976), Michael Hanemann (1978), and Jerry Hausman (1981).

The principles of welfare analysis (if not always the techniques) are widely accepted by economists. Nonetheless, they can be controversial among noneconomists. Three of the main points of contention deserve mention in closing. First, some object on ethical grounds to the use of money measures to gauge the value of public policy issues related to, for example, human health and the environment. Second, based as it is on the notion of individualism, welfare analysis does not readily admit notions of collective responsibility. Finally, welfare analysis tends to be silent on the subject of income distribution. Nonetheless, welfare analysis is often the only means available to policymakers of organizing complex and conflicting points of view; as such, it will likely continue to play a role in policy decisions.

SEE ALSO *General Equilibrium; Hicks, John R.; Pareto, Vilfredo; Pareto Optimum; Rawls, John; Sen, Amartya Kumar; Social Welfare Functions; Theory of Second Best*

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Daniel J. Phaneuf

WELFARE ECONOMICS

Welfare economics is a normative branch of economic theory that attempts to assess the implications of laws and institutions, including market outcomes, for human well-being. Welfare economics begins with John Stuart Mill's "canons of taxation," in which he applies rule-utilitarian ethics to suggest guidelines for taxation that might reduce its bad impacts. Nevertheless, A. C. Pigou's *Economics of Welfare* (1920) can be thought of as the founding book of welfare economics. Among the propositions of welfare economics there would be a broad consensus, for example, that (1) in the absence of externalities, competitive equilibria are efficient, and (2) with few exceptions, taxes, monopoly power, and externalities tend to move the economy predictably away from an efficient allocation of resources.

THE UTILITARIANISM OF MILL AND PIGOU

The ideas of Mill and Pigou are utilitarian in the narrow sense that they assume the following:

1. Acts, laws, rules, and institutions should be evaluated on the basis of their consequences rather than on some intrinsic rightness or wrongness; that is, nothing is good unless it does somebody some good.
2. Good and bad subjective states of mind are the consequences that should be considered in the assessment.
3. For a particular individual, the degree to which good states of mind are attained, and bad states avoided, can be expressed by a number (called utility).
4. Moreover, this number can be compared between individuals and cumulated over the population; and so this cumulative number can be made the objective of public policy.

This narrow utilitarianism would imply, among other things, that efficiency depends on the distribution of income as well as the allocation of resources. Many economists found this undesirable, on the grounds that one ought to be able to assess the efficiency of resource allocation apart from the distribution of income, as indeed Mill had suggested. This led them to reject the fourth assumption. For this purpose, Vilfredo Pareto had proposed the criterion that bears his name: An allocation of resources is said to be "Pareto optimal" if no one person can be made better off without making another person worse off. Without interpersonal comparability of utility, however, no discrimination can be made among Pareto optimal allocations as to which is better or worse.

Moreover, to some, the third assumption also seemed implausible. In place of numerical or "cardinal" utility, they held that individual decisions and well-being are based on a system of *preferences*. The "good states of mind" are the ones that the person prefers (which may not correspond to pleasure and pain), and therefore the vectors of consumption goods and services that produce the states of mind can be placed in an order from better to worse, from that individual's point of view, but the ordering does not

correspond to any unique numerical measure. As Paul A. Samuelson (1948) observes, however, the preferences could in principle be reconstructed from ("revealed" by) the observed choices of the individuals. The revision of welfare economics without the last two assumptions is known as the "new welfare economics."

INDIFFERENCE CURVES

A preference system can be visualized by a map of "indifference curves." Beginning from a particular vector of consumer goods, such as "one coffee and two doughnuts," the indifference curve corresponding to that vector is the boundary between all of the vectors preferred to "one coffee and two doughnuts" and those to which "one coffee and two doughnuts" is preferred. If one assumes that this boundary is well-defined, it forms a curve with the property that, taking any two vectors along the curve, the individual feels no preference for one over the other. Thus, for example, if "one coffee and two doughnuts" and "two coffees and one doughnut" are on the same curve, then the individual can be said to be indifferent between the two, and accordingly the curve is called an indifference curve. The preference map can also be represented by any one of an infinite array of "utility indices," provided that, comparing two consumption vectors, the higher number is assigned to the one that is preferred. In this case, however, the only valid conclusions of the analysis are those that do not depend on the specific utility index numbers used.

Francis Ysidro Edgeworth addressed the efficiency of allocation of goods in a pure exchange economy using the indifference curve approach (1995). First, assume that the total quantities available of two goods, good *x* and good *y*, are *X* and *Y* as shown in Figure 1. If the coordinates of a point in the interior of the diagram are x_0, y_0, then those are the quantities of the two goods allocated to individual *j*, and the quantities allocated to individual *k* are $X - x_0$, $Y - y_0$. Thus, the indifference curves for individual *j* are oriented to the *x*, *y* axis and are shown by curves 1, 2, 3, while the indifference curves for individual *k* are inverted and are illustrated by curves *i*, *ii*, *iii*. The points of tangency of two indifference curves, shown by the *contract curve LM*, are all Pareto optimal allocations of the two goods between the two individuals. In general, then, there will be infinitely many Pareto optima. A shift from one Pareto optimum to another trades off one person's preferences against those of the other person.

To visualize this trade-off, one assigns a numerical index u_j to each indifference curve 1, 2, 3 and a numerical index u_k to each indifference curve *i*, *ii*, *iii*. One must keep in mind that these arbitrary indices of utility cannot be compared as between the two individuals nor added. Figure 2 shows a diagram with u_j on the horizontal axis and u_k on the vertical axis. Any combination of utility

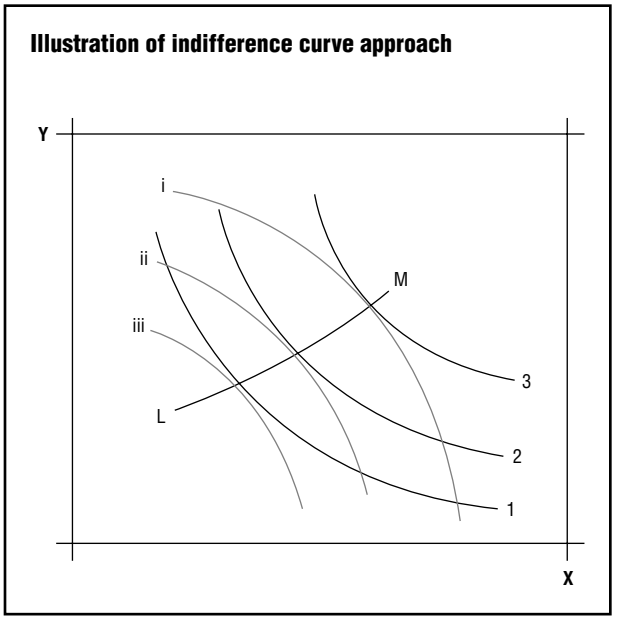

Figure 1

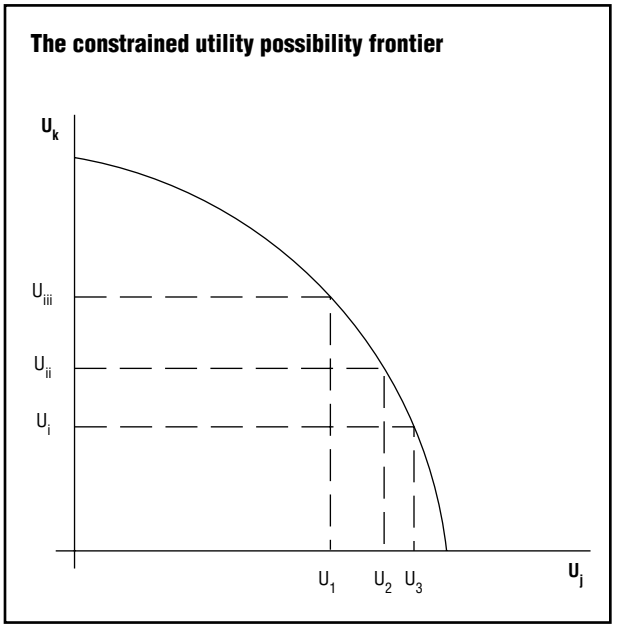

Figure 2.

indices (indifference curves) on or beneath this curve are attainable when *X* and *Y* are produced, while none of the combinations beyond the curve are attainable. This is called the *constrained utility possibility frontier* corresponding to the production of *X* and *Y*.

Suppose one carries out the same exercise for each technically efficient, feasible set of outputs *X*, *Y*. One

would then trace the outer limit of all of the constrained utility possibility frontiers obtained in this way. This outer limit is the grand utility possibility frontier or simply the *utility possibility frontier*. With an appropriate change in the definitions of u_1, u_2, … u_{iii}, one may take Figure 2 as illustrative of the utility possibility frontier. Every point on this frontier has the properties that (1) the two goods produced are allocated between the two persons in a Pareto optimal way; and (2) production is technically efficient—that is, no reallocation of resources can increase the production of one good without reducing the production of the other; and (3) therefore, production and allocation is Pareto optimal over all possible allocations of resources and consumer goods. With appropriate mathematical notation, this conception can be extended to very large numbers of distinct goods and services and a very large population of agents.

SELECTING ALLOCATIONS

Two issues remain in this analysis. First, how does one choose the "best" among the points on the frontier? Second, for many practical problems, one must choose between two allocations, at least one of which is not Pareto optimal. How may one do that?

Taking these questions in reverse order, the new welfare economics answers the second question with a cost–benefit analysis based on the "Kaldor-Hicks compensation test," named after Nicholas Kaldor (1939) and John R. Hicks (1939). One may illustrate this compensation test with an example of property on the banks of a river. John Doe owns land on the banks of Flowing River, while Richard Roe owns downstream property, including both banks. Roe builds a dam, entirely on his own property. The impoundment of Flowing River floods Doe's property. In this sequence, Roe is the gainer and Doe the loser in clear senses. But can one say that Roe's benefits exceed Doe's costs?

To answer this question, one considers whether Roe could allocate some of his benefits to compensate Doe and still be a gainer on net? This is the Kaldor-Hicks test, and if the answer is yes, then building the dam is a *potential Pareto improvement*. That is, if the dam is built, there is a distribution of income that would leave everyone in society better off than they were without the dam. But another, equally reasonable, compensation test asks: Could Doe compensate Roe for ceasing and desisting from dam building, so that Roe would be better off than he would be if the dam were built? This is the Scitovszky test—named after Tibor de Scitovszky (1941)—and if the answer is yes, the world without a dam is potentially Pareto superior to the world with the dam. The two tests would be equivalent if benefits and costs were independent of the distribution of wealth, but, as Hicks noted, they are not. If the dam is built, and compensation is not paid, then wealth is redistributed and a new situation created. From the new situation, it might be a potential Pareto improvement to return to the original position. In practice, there is likely to be little difference between the two, because the impacts of the shifting income distribution is likely to be small relative to the impact of a project, and the Kaldor-Hicks test is the one usually used.

THE SOCIAL WELFARE FUNCTION

Is it possible, then, to choose one among the allocations on the utility possibility frontier that is the optimum of optima? For example, some might prefer an allocation with a more equal distribution of income or one in which certain "basic needs" are more thoroughly met, or that satisfy other conditions. Ideally, one might hope to express some consensus of such conditions in a *social welfare function* that would indicate which allocations are socially preferable to other allocations independently of their technical feasibility. Visualizing this social welfare function as a set of *social indifference curves*, and superimposing it on the grand utility possibility frontier, results in Figure 3. In this figure, the grand optimum allocation of resources could be identified with point *V*. Further, following Samuelson (1956), the utility index could be made an index of real income. Remember that any numbers that correspond to indifference curves and assign larger numbers to the more highly preferred curves can be used as utility index numbers. In general, an index of real income will have this property. Therefore, suppose the axes meas-

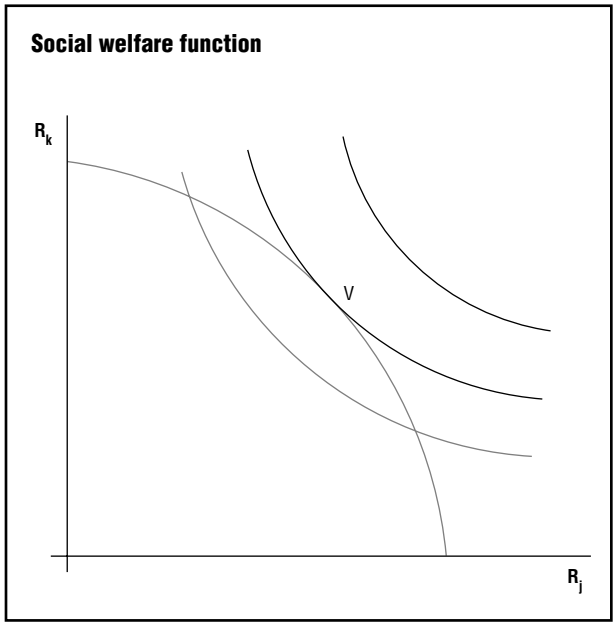

Figure 3

ure the real incomes, R_j and R_k, of the two individuals. With this interpretation, the curvature of the social indifference curves could express one's attitudes toward income equality, so that, for example, social indifference curves tightly curved around the 45-degree line would express a strong preference for equal incomes.

This ideal was set back by the Nobel laureate research of Kenneth J. Arrow (1951), in his general (im)possibility theorem. Arrow showed that, if we require some reasonable-seeming conditions on the social welfare function, such as the requirement that it generate transitive preferences, there could be no social welfare function that would satisfy them all. For a system of majority rule, for example, Arrow adapted a paradox attributed to the marquis de Condorcet (1972) to show that (imposing his other conditions) voting outcomes could always be cyclical rather than transitive. But Arrow also extended this to any (nonmajoritarian) social welfare rule, and in the context of his theorem, it is equally impossible to say that a market outcome defines a social welfare optimum.

Arrow's theorem has spawned a large literature of reconsideration. Sometimes the conditions he proposed for a social welfare function can seem less self-evidently appropriate on further consideration. For example, one of the conditions is "nondictatorship," mathematically expressed; but in some simple models of majority rule, the median person is a "dictator" in Arrow's mathematical sense, although not on a conventional understanding of dictatorship. Thus, much of the controversy has centered on the refinement of Arrow's conditions, and there is a large variety of possibility and impossibility theorems. All the same, Arrow's discussion raised enough doubts about the concept of a social welfare function that it has been little used since the mid-twentieth century.

NEW UTILITARIAN APPROACHES

The new welfare economics is utilitarian only in the broader sense in that it accepts assumptions (1) and (2) above. But the narrower utilitarian approach is not dead. Game and decision theorists reformulated utility theory so that an objective numerical measure of utility can be based on observations of risk-averse behavior. In social philosophy, John Rawls (1971) renewed the social-contract theory, arguing that public policy should promote the interests of the least-favored individual. One interpretation of this is that it demands interpersonal comparison of utility and supplies a social welfare function based on the minimax principle. Drawing on the reformulation of utility theory and Rawls's social-contract approach, John C. Harsanyi (1975) argued that social welfare could after all be based on a summation of individual utilities. Like Harsanyi, Amartya Sen (1985) admits interpersonally comparable utilities, at least as a logical possibility, and he has proposed conditions less limiting than Arrow's that allow the possibility of a consistent majoritarian social welfare function. Sen, however, rejects what he describes as the welfarism of both the old and the new welfare economics, by which he means the supposition that the goodness of a social system depends only on the welfares of individuals in those social systems. In addition, Sen would have data on the capacities and perhaps freedoms of individuals reflected in the normative evaluation of economic society.

For many welfare economists, inequality in the income distribution is something to be avoided, but that cannot be completely avoided because of the sacrifice of production that would result. But inequality is not a simple thing in itself. Anthony Atkinson has made important contributions to the measurement of inequality and incorporation of inequality in discussions of policy issues such as taxation and fiscal policy. In 2001, Atkinson addressed "The Strange Disappearance of Welfare Economics." Atkinson does not suggest that welfare judgments are disappearing from economics. Quite the contrary. For Atkinson, "welfare economics" comprises systematic and critical thinking in normative economics, and he notes with regret the de-emphasis of welfare economics from graduate programs and from the current research literature. The result, he suggests, is a proliferation of ill-considered value judgments in economic research, including a good deal of prejudice and confusion. Atkinson illustrates this with examples from recent macroeconomics, a field which perhaps has never been rich in careful thinking on value issues. For Atkinson, then, welfare economics has never been more needed, although this field of study receives far less attention than it did two generations ago. On the whole, nevertheless, welfare economics is a highly developed branch of economic theory that supplies tools for applications in cost–benefit analysis, but that also raises unsettled questions for future research.

SEE ALSO *Arrow Possibility Theorem; Arrow, Kenneth J.; Paradox of Voting; Pareto, Vilfredo; Pareto Optimum; Samuelson, Paul A.; Social Welfare Functions; Utilitarianism*

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WELFARE STATE

The welfare state is a set of government programs aimed at ensuring citizens' welfare in the face of the contingencies of life in modern, individualized, industrialized society. All welfare states provide direct state assistance to the poor in cash (e.g., social assistance) and in kind (e.g., housing and social services), as well as social insurance against the financial consequences of certain biological risks (illness, incapacity to work, childbirth, child-rearing, old age) and occupational risks (unemployment, accident, or injury). Whereas social assistance—in the United States popularly termed *welfare*—entails redistribution from the non-poor to the poor, social insurance rarely does so and instead can be understood primarily as redistribution across the individual life course, from periods of employment to periods of inability to work. (Prominent exceptions would be the U.S. public pension system, Social Security, and the German social health insurance scheme, both of which are moderately redistributive across classes.) Usually, this latter type of social protection is available only to persons who have been employed and hence contributed to the relevant social insurance scheme.

In most welfare states, substantial efforts are also made to mitigate socioeconomic inequalities in primary income distribution through secondary redistribution, that is, government spending on social programs funded by progressive income taxation together with tax expenditures (tax deductions for social-insurance or charity contributions, as well as negative income taxation for the working poor). Historically, such reductions in socioeconomic inequality have been pursued to achieve four objectives: (1) to reduce the costs of production for employers, especially through unemployment, health, and pension schemes; (2) to maintain social peace, that is, to forestall both radical unionism within the factory, primarily via accident insurance, as well as threats to private property from leftist or rightist political radicalism in society as a whole; (3) to secure equality of economic opportunity, seen as conducive both to social peace and to economic growth; and (4) to enrich the status of citizenship beyond civil and political equality by including a social dimension, as articulated by T. H. Marshall in 1950. Countries pursuing this goal of social citizenship—with the exception of the United States, virtually all members of the Organization for Economic Cooperation and Development (OECD)—consider equally funded and free public education to be an essential component of their pursuit of equality of opportunity and hence of their welfare state in a broader sense.

WELFARE REGIMES

Beyond these shared traits, welfare states differ in many dimensions. Early classification schemes of the 1960s and 1970s, such as that of Harold Wilensky, ranked welfare states in linear fashion according to their "generosity" measured in only one dimension, aggregate spending levels. In 1990 Gøsta Esping-Andersen's groundbreaking book *The Three Worlds of Welfare Capitalism* proposed a new typology based on essential differences among welfare states that are not quantitative but qualitative. He preferred the term *welfare regime*, which focuses the analysis on the patterns of interaction of institutions governing primary and secondary distribution in the context of a nation's historically rooted political economy, to the term *welfare state*, which is typically viewed as working against or independent of market forces. First, welfare regimes differ according to their degree of "decommodification," or "the degree to which individuals and families can uphold a socially acceptable standard of living independently of market participation" (p. 37); this dimension includes not only the benefit levels but also the eligibility terms and coverage levels of a country's social welfare schemes. Second, welfare regimes differ in terms of their

impact on social stratification, that is, their degree of redistribution, poverty reduction, and income equalization. Finally, they differ based on the priority given to the role of the state, market, and family respectively in protecting against welfare risks. Esping-Andersen's widely accepted typology distinguishes among three types of welfare regimes: liberal (e.g., the United Kingdom, the United States, Australia), social-democratic (e.g., Sweden, Norway, the Netherlands), or corporatist (e.g., Germany, Austria, Italy). Not only Esping-Andersen but also subsequent research on the "varieties of capitalism" by Peter Hall and David Soskice (2001) have demonstrated that a country's system of social protection forms an integral part of its political economy; thus a leading field of contemporary welfare research takes this holistic regime perspective, looking for institutional *elective affinities* between a country's variety of capitalism ("liberal," "coordinated," etc. [Hall and Soskice 2001]) and variety of welfare regime (e.g., Ebbinghaus and Manow 2001).

Liberal Regimes Of the three types of welfare regime, the liberal regimes redistributes income the least. Countries of this type provide minimum benefits to the poor and devote most of their expenditure to social-insurance schemes focused on the middle classes. The public schemes are not intended to be the beneficiaries' sole source of income in time of need, but instead to be a "safety net," or one pillar beside the second and third pillars of occupational plans and individual savings. In the liberal welfare world, individual performance in the *market* is considered to be the primary source of welfare, hence generous tax expenditures subsidize employee benefits and individual savings accounts in the pension and health areas. Citizens' welfare is *commodified*: they have weak or no constitutionally inscribed social rights, and high levels of socioeconomic inequality are tolerated. Citizens' welfare is best guaranteed, in the liberal worldview, through economic growth and opportunity rather than state provision; this is best achieved when minimal state taxation of private wealth fosters maximum investment and when minimal state benefits foster maximum self-reliance. Particularly in the United States, the more generous welfare states of Western Europe are viewed more as hammocks than safety nets, whereas the U.S. social net is seen by most Europeans as a sieve.

Conservative Regimes Conservative welfare regimes redistribute moderately, having as their main goals the preservation of social status achieved in the labor market and the realization of social citizenship rights. They provide equally funded and free public education, moderate benefits to the poor, and generous social-insurance schemes for employed persons, in which benefits are linked to contributions and both are linked to the income level attained. In the conservative welfare world, the *family* is considered to be the primary source of welfare. Hence both the tax system and social-insurance benefits are designed to support the family breadwinner.

Social-Democratic Regimes Social-democratic welfare regimes redistribute extensively and are by far the most successful in achieving long-term reductions in socioeconomic inequality, particularly across generations, as Walter Korpi and Joakim Palme demonstrate in their 1998 study. These regimes integrate antipoverty and social insurance programs in schemes open to all citizens. The schemes are designed to achieve decommodification, that is, to grant social citizenship—the right of meaningful participation in social life—independent of employment status. The *state* is responsible for achieving a considerable degree of distributional equality.

Although Esping-Andersen's typology still prevails in welfare state (or welfare regime) research, it has been criticized for overlooking certain dimensions. First, Ilona Ostner and Jane Lewis (1995) have pointed out that this hegemonic typology fails to account for gender discrimination in welfare states, most of which were based on the now-outdated male breadwinner model. Ann Orloff (1993) has developed a new welfare state typology based on the criterion of whether welfare states reinforce the traditional family system and women's inferior labor-force position or promote new, equal roles for both sexes. Second, in comparing Esping-Andersen's ideal-types to specific national experiences, many scholars have found the typology to be based too narrowly on the experiences of Britain, Germany, and Sweden and only partially applicable to other countries. In addition to ongoing debates about the classification of individual countries such as France, Ireland, or the Netherlands within Esping-Andersen's scheme, scholars have proposed supplementary ideal-types: Francis Castles and Castles and Deborah Mitchell (1993) distinguish an "antipodean" "wage-earners" welfare regime in Australia and New Zealand characterized by minimum wage legislation, compulsory arbitration and a protectionist consensus; Maurizio Ferrera (1996) and Giuliano Bonoli (1997) contend that a distinct Latin rim welfare regime (resembling the conservative one) exists in Italy, Spain, and Greece, where family and informal networks are important suppliers of welfare; Bob Deacon (2000), Nick Manning (2004), and Jolanta Aidukaite (2004) have documented the emergence of a postsocialist welfare regime (resembling the liberal one) in eastern Europe; and finally, some, such as Catherine Jones (1993) and Elmar Rieger and Stephan Leibfried (2003), have investigated and posited the existence of East Asian welfare regimes, based on "Confucian" values.

HISTORICAL ORIGINS

As the "logic of industrialization" school correctly observes, the historical origins of welfare state development lie in the consequences of the Industrial Revolution and attendant societal modernization—specifically, urbanization, industrialization, and economic liberalization—in the mid- to late nineteenth century. As Ferdinand Tönnies (2001) explains, these developments uprooted western Europe's inhabitants from premodern, static communities that had provided for mutualist social protection through the family, community, parish, feudal lord or guild, and thrust them into an individualized, comparatively anonymous urban society in which the satisfaction of basic needs was commodified, that is, had to be purchased with wages from employment. In the early decades of this societal modernization (from the late nineteenth century through World War I [1914–1918]), social unrest, epidemics, slum formation, violent labor conflicts, and radical political movements were rampant. Initially, bourgeois philanthropic associations attempted to mitigate this malaise but within a few decades realized they were overwhelmed. At the same time, the working classes' sacrifice and service to their states as soldiers in the two world wars earned them sociopolitical recognition and rights in many European countries.

As Walter Korpi (1983, 1993) among others have noted, three factors converged to move political coalitions of bourgeois and working-class parties across Europe to grant workers social and political rights and institute generous welfare-state programs during the period 1918–1949: (1) workers' newly won political power, organized in Social-Democratic and Labor parties and in some places accompanied by popular uprisings; (2) bourgeois elites' fear of the political radicalization of impoverished workers as had occurred in the revolutions in Russia (the Soviet Revolution of 1917) and Germany (Adolph Hitler's ascent to power in 1933)—a fear exacerbated by the Great Depression of 1929 to 1939 and by the witnessing of Hitler's destruction of the Continent during the five years thereafter; and (3) strong national identities in newly unified nation states, forged and strengthened in the two world wars. Benjamin Veghte (2004) notes that in the United States, where the first two factors were largely absent, the working-class movement was much weaker and unable to achieve social citizenship rights for a variety of reasons. An ambitious welfare state (the New Deal) was introduced during this period, in 1935, but not based on social rights; rather, it largely excluded most of the poor population, such as agricultural workers and southern African Americans. Theda Skocpol's research (1990) has revealed that the New Deal welfare state was not completely new, but rather followed in the footsteps of a generous Civil War pensions scheme that served millions of beneficiaries (Skocpol 1996). In Britain the Beveridge Report of 1942 highlighted the need for a welfare state to avoid the breakdown of society in the postwar period, and this became the blueprint for the welfare state introduced in postwar Britain.

PUBLIC-PRIVATE MIX

As noted above, prior to the formation of the modern nation-state, most types of social welfare were provided by collective, private forms of provision such as those offered by feudal hierarchies, guilds, and the church. In the course of urbanization, societal modernization, and the ascendance of liberal political and economic ideology since the late eighteenth century, free-market individualism undermined these traditional collectivist forms of private welfare provision, creating the modern "social question." After the mid-nineteenth century, modern collectivist private welfare solutions such as solidaristic union/professional initiatives as well as bourgeois or church-based charitable ventures filled the vacuum, followed by welfare *state* initiatives from the 1880s in Germany, Belgium, and—since World War I—in most other western nations. In most Western countries, then, since the mid-twentieth century the welfare *state* has been the primary instrument of welfare provision.

This has not been the case in many non-Western countries, however, nor in several liberal welfare regimes, most notably the United States. Interestingly, most countries with weak welfare states evince high rates of religiosity and associated church-based welfare provision and religiously inspired philanthropy. As Leibfried and Mau note,

> The history of religiosity in European and other countries which developed strong welfare states shows that the need for religious reassurance in one's social existence has become less pressing when greater security is provided by the secular institutions of public policy. In other parts of the world, however, where state power has remained weak, the social institutions of religions—for example Islamic charities in Arabic countries, Hinduist castes in India and familial networks in East and Southeast Asia—remained the main provider of social security. (2007, p. xxv)

Secular welfare states may thus be viewed as functional alternatives to religiously inspired and/or organized private welfare provision. Empirically, as Pippa Norris and Ronald Inglehart (2004), and Elmar Rieger (2005) have observed, the revival of evangelical Protestantism in recent decades strongly correlates with the erosion of social security guarantees through the welfare state.

Non-profit, religiously inspired forms of welfare provision are not the only form of private provision to survive and thrive complementarily to and in tension with the

modern welfare state. Profit-oriented, market-based provision has done so as well, most strongly in the liberal welfare regimes of Great Britain, Switzerland, the United States, and Australia. These countries were pioneers in private, insurance-based provision, both for individuals and employees. Such welfare provision differs markedly from public provision in both its distributive dynamics (redistributing not across income classes but across the individual life course from economically self-sufficient to risky/dependent life phases) and its financial logic (calculated on actuarial rather than solidarity principles). This realm of social provision, much of which is subsidized by the government in the form of tax deductions (from the government's perspective: "tax expenditures"), was overlooked in comparative welfare state research until the appearance of Martin Rein and Lee Rainwater's (1986) pathbreaking analysis of the interplay of public and private welfare provision in OECD countries. Still today, however, most comparative research does not interpret the state-subsidized employee and individual benefits sphere, even though—as Willem Adema (1999, p. 30) and Jacob Hacker (2002, p. 338) have documented—in some countries such as the United States it makes up one-third of (public and private) social spending. Even Esping-Andersen's (1990) research on the liberal welfare regime type, which theorizes the interaction between the state and the market, overlooks the magnitude and significance of private provision, thus misconstruing the U.S. system as "residual" and "means-tested." Adema (1998, 1999, 2005) and Hacker (2002) have corrected this misinterpretation, pointing out that if U.S. employee and individual benefits are included in social spending data, the U.S. welfare system evinces a share of GDP *roughly equal* to the OECD average. The key difference between public (direct) and private (tax expenditure) welfare state expenditure is that the former tends to be redistributive and focus on alleviating poverty, whereas the latter focuses on helping the middle classes provide for their own economically precarious life episodes.

THEORIES OF DEVELOPMENT

In the 1960s and early 1970s, the best comparative work on the welfare state found a country's prevailing political culture—often termed *national values*—to be causally significant in shaping its welfare state institutions and their degree of generosity (e.g., Rimlinger 1966, 1971). This ideational approach was displaced in the 1970s by functionalist and modernization theories, most prominently that of a "logic of industrialization" (Wilensky 1975). In light of the universal dissolution of pre-modern mechanisms of social protection—namely, the family, church, feudal hierarchy, guild and local community—all industrializing countries faced similar social problems, and hence developed similar modern instruments to secure a healthy and productive workforce. In this view, differences in welfare state spending levels are attributable not to political-cultural or other qualitative cross-national differences, but to a country's level of economic development as well as the age structure of its population and degree of maturation of its welfare state. Ultimately, the school claimed, all countries would converge toward an institutionally similar, generous welfare state. Since the 1980s, *power-resources* as well as polity-centered (and closely related *new-institutionalist*) explanations have proven more convincing. The power-resources approach, articulated by Korpi (1983) and Evelyne Huber and John Stephens (2001), argues that the social and political balance of power between labor and capital has determined the level of spending and in particular the degree of redistributiveness of welfare states. Research on the correlation between the partisan composition of governments and their levels of welfare state expenditure has largely corroborated the power-resources interpretation: Manfred G. Schmidt (1982, 1996), Castles and Herbert Obinger (2007), and indeed recently also Wilensky (2002) himself have found strong statistical evidence that where left-of-center ("social democratic," "labor" or "democratic") parties have ruled, levels of government social spending and redistribution have been much higher on average than in cases where right-of-center, free-market-liberal ("liberal," "conservative," or "republican") parties have reigned. This "parties matter" explanation enriches the power-resources interpretation, moreover, by showing that the left-right dichotomy does not explain partisan influence fully: Christian-democratic and center parties, historically common in continental Europe, correlate with moderate social spending, that is, more generous than the free-market-liberal parties and less generous than the leftist parties.

Willem Adema and Maxime Ladaique (2005) have demonstrated that when the tax system and private benefits are also taken into consideration, liberal welfare regime expenditure approximates that of the other two regime types. This suggests that Wilensky's "logic of industrialization" explanation of welfare state growth was correct, according to which a high level of economic development has driven all Western countries to converge toward a uniform, generous welfare state. Castles and Obinger (2007) rebut Adema and Ladaique, however, arguing that while the much greater private welfare spending of liberal welfare regimes often puts them on a par with conservative and social-democratic welfare regime expenditure, the latter are far more redistributive across income categories, making for a fundamentally different type of welfare state. Regarding the causes of welfare state development, they find that while the levels of economic development and economic growth best explain the increase in overall (public cum private) welfare spending,

power resources—measured in terms of partisan incumbency—best explains the growth in the more redistributive, direct *state* welfare spending.

The polity-centered and new-institutionalist approaches adamantly dispute the explanatory power of class. They attribute the scale and type of welfare state expansion and retrenchment to state-structural factors such as the nature of the party system and civil service and the influence of policy intellectuals and reformist associations on these, as in the work of Skocpol (1985); Margaret Weir, Orloff, and Skocpol (1988); and Dietrich Rueschemeyer and Skocpol (1996); the lack of constitutional "veto points," as in the work of Ellen Immergut (1989) and George Tsebelis (2002); and "feedback effects" of (pre-)existing institutions and policies, as in the work of Paul Pierson (1993).

Both theory and comparative data on public opinion on the welfare state have improved since the 1990s, giving ideational approaches an empirical basis and rendering them worthy of causal reconsideration alongside the power-resources and new-institutionalist explanatory approaches. Indeed, Clem Brooks and Jeff Manza (2006) have found that national social policy preferences exert a strong and measurable influence on welfare state spending as well as on cross-national variation therein, after controlling for other factors such as institutional feedback effects. Mau and Veghte (2007) find strong relationships between welfare regimes and social policy attitudes across OECD countries. Further, Veghte, Greg M. Shaw, and Robert Y. Shapiro (2007) have revealed that social policy preferences and issue prioritizations themselves are contingent and malleable in response to issue framing—for example, of military over social security—by political elites. Given the availability of new transnational datasets on both public opinion and party platforms, more research into public opinion on welfare state issues and its relation to the aforementioned causal factors, and incorporation of this dimension into welfare state theory, can be expected.

SOURCE OF FUNDING

Scholars used to distinguish between contribution-based (the Bismarckian, German model) and tax-based (the Beveridge, English model) funding of welfare state programs, but in practice these two models have converged, as most social-insurance schemes are funded by a mixture of employer/employee contributions and subsidies from general state revenues. Contribution-based schemes, which are funded and administered independent of the government budget and in which members have vested benefits, have historically tended to be more generous and less susceptible to retrenchment than tax-funded schemes, which legislators can cut back when tax revenues are scarce or an antiwelfare state party comes to power.

WELFARE STATE CRITIQUE AND REFORM

After expanding steadily during the "Golden Age" of welfare-state development in the 1960s and early 1970s, most Euro-American welfare states suffered a critical shock from the oil crises and recession of the mid-1970s and the deindustrialization and high unemployment rates that followed. Not only did these factors deprive the welfare state of its financial bases in both tax revenues and employer/employee contributions, the welfare state itself was widely considered to have contributed to the economic collapse by draining the economy of investment income and burdening it with bureaucratic regulations, as well as undermining individual initiative and the will to work through excessive benefits that fostered dependency. Further, the decline in industrial and the rise in service sector employment, as well as increasing individualization, disintegrated the working classes, which historically had directly or indirectly been the main driving force and constituency of welfare state development in all OECD countries except the United States. Overall, the rapid and sharp rise in the absolute and relative amount of government spending devoted to the welfare state, together with the declining popular support for the latter, led many observers by the mid- to late 1970s to perceive a "crisis of the welfare state" (Flora 1981; Offe 1984). If some degree of retrenchment were not implemented, the welfare state threatened to bring Western economies to a standstill. Conservatives won national elections in Britain (Margaret Thatcher), the United States (Ronald Reagan), and West Germany (Helmut Kohl), in the early 1980s and were reelected in the mid-1980s, all running on anti-welfare-state platforms. Ever since, conservatives in most other OECD countries have tried to scale back welfare-state benefits as well as restrict eligibility to those "truly in need." This has proven extremely difficult, given that in democratic systems, once citizens and/or interest groups have acquired benefits, they mobilize strongly to retain them. As Pierson observes, "Retrenchment is generally an exercise in blame avoidance rather than 'credit claiming.' First, the costs of retrenchment are concentrated, whereas the benefits are not. Second, there is considerable evidence that voters exhibit a 'negativity bias,' remembering losses more than gains. As a result, retrenchment initiatives are extremely treacherous" (1994, p. 18). Due to this "conservative welfare function" (Rieger and Leibfried 2003), benefits in most welfare states (with the exceptions of New Zealand and Switzerland) have been scaled back very little in OECD countries despite extended periods of neoliberal governance.

What welfare state reformers have been able to achieve is a tightening of eligibility criteria, moving away from the model of the welfare state as provider of benefits to persons unable to work and toward an *activating* wel-

fare state that provides an incentive to work by targeting benefits (and/or providing more generous benefits) to persons working or actively seeking employment, while further decreasing the number of inactive citizens by scaling back employment and wage regulation and postponing the retirement age.

Many scholars have also criticized the welfare state for its focus on the male breadwinner and the attendant discriminating effects on social groups long denied equal opportunity in the labor market, such as women, ethnic minorities, and the disabled. Feminist scholars have called attention to the fact that such welfare-state subsidizing of the higher earner (breadwinner) in a family, particularly pronounced in conservative welfare states, reinforces the gendered division of labor within the family. Others have criticized citizenship requirements in many welfare state programs for their discriminatory effects on noncitizens, who are in most cases ethnic minorities.

TRENDS IN THE EARLY TWENTY-FIRST CENTURY

The most important developments affecting welfare states are not their internal dynamics but changes in their fiscal, economic, and societal environments. Over the past quarter century, deindustrialization has brought about a dramatic and enduring decline in the proportion of skilled middle-class workers, transforming many of them from employees who pay into the system into long-term unemployment beneficiaries—especially in the conservative welfare regimes of continental Europe, with their generous unemployment schemes.

At the same time as these costs have risen, since the 1990s economic globalization has given new credibility to threats by the owners of capital to leave countries that tax corporations and/or wealthy individuals excessively (Genschel 2005), placing strong external restrictions on the national welfare states to finance themselves through taxation. Further, as Jef van Langendonck (1997), Esping-Andersen (1999), and Peter Taylor-Gooby (2004) have shown, the demographic challenges of population aging and a vast increase in single-parent families have created new social risks which the traditional welfare state—based on the male breadwinner—was not designed to handle. As a result of these developments, most welfare states have experienced a decline in contributions and an increase in demand for benefits, posing a formidable challenge to their sustainability and suggesting the need for welfare state reforms to adapt to these new social conditions.

The main response to this second crisis of the welfare state since the late twentieth century has been privatization. Such privatization entails three principle shifts: first, from publicly guaranteed outcomes to defined contributions; second, from mandatory to voluntary provision against future risks; and third, from the group solidarity to the individual actuarial principle. Such privatization promises to lessen the fiscal burdens incurred by public social insurance schemes for the health and pension needs of the imminently retiring baby boom generation by increasing copayments and restricting eligibility and benefits, while simultaneously offering all individuals the opportunity to save individually for their future security needs via tax-deductible contributions to publicly regulated, individual private pension plans. This should also lessen the burden on corporations posed by the non-wage labor costs entailed in employer and employee contributions to public social-insurance schemes, increasing the international economic competitiveness of Western economies in the era of globalization. The biggest disadvantage of such privatization is that it necessarily entails a shift from universal to partial coverage of the population in need, with a tendency to exclude precisely those who need social protection the most, because they lack the surplus income required to voluntarily save for their and their families' future risks. Finally, corporations, which have long provided tax-deductible employee benefit plans to their employees, have moved from defined benefit to defined contribution plans, i.e. from occupational pension plans which guaranteed a specific payout in retirement based on a formula for years of service and salary earned, to plans which collect employer and employee contributions in interest-bearing individual retirement accounts which are transferable from one job to the next, but may or may not suffice to meet—in combination with one's public pension—a person's retirement needs.

A final challenge to the welfare state at the outset of the twenty-first century is posed by immigration. As Wim van Oorschot (2000), Michael Bommes and Andrew Geddes (2000), Carsten Ullrich (2002), Knut Halvorsen (2007), and van Oorschot and Wilfred Uunk (2007) have shown, national solidarity communities that long provided the normative foundation for European welfare states are now being threatened by real and/or perceived increases in ethnic/national heterogeneity, as evidenced by political debates throughout western Europe in the first decade of the century. Regarding the United States, Korpi (1983), Martin Gilens (1999), and Veghte (2004) have argued that racial, ethnic and religious heterogeneity have always limited development of a solidarity community and hence a redistributive welfare state. Now, scholars such as Alberto Alesina and Edward L. Glaeser (2004) are asking if, as citizens increasingly tend to distinguish between "we" and "they," the welfare consensus and commitment to publicly institutionalized solidarity in western Europe is still sustainable. Keith Banting and Will Kymlicka (2004) have determined, however, that clear evidence of a negative association between the influx of migrants and support for the welfare state is lacking. The

structure of countries' political institutions mediates and conditions the effects of immigration on welfare state development, and at the cross-national level other factors are likely more decisive. Nevertheless, as Leibfried and Mau (2007) observe, politicians may use ethnic and sociocultural divisions within a society to position themselves in public debates about distributional conflicts, leading to restrictive effects on welfare state policies.

While the threats from increasing immigration seem formidable, most welfare states are showing signs of successful adaptation to the challenges posed by economic globalization. Comparative research by Fritz Scharpf and Vivien Schmidt (2000) on the effects of globalization on Western welfare state development has revealed that welfare regimes differ in their capacity to adjust to the fiscal and competitiveness constraints constituted by increasing global product and capital market integration. Social-Democratic and liberal welfare regimes in Scandinavian and Anglo-American countries respectively, though fundamentally different, have proven better suited to successful adaptation to the challenges of economic globalization than have the conservative welfare regimes of continental Europe.

Moreover, Elmar Rieger and Stephan Leibfried (2003) argue convincingly that strong welfare states will not only survive the era of globalization, but have themselves historically paved the way for it. Since World War II (1939–1945) and continuing under conditions of intensified economic globalization since the 1990s, strong welfare states have provided political leverage in capitalist democracies such as Germany for leaders to embrace exposure to the risks of international competition in foreign economic policy, whereas countries with weak welfare states such as the United States have tended toward protectionism. As Sven Steinmo (2002) has shown, the Swedish case in particular demonstrates that a generous welfare state, with some recalibration over the past decade, can co-exist over the long term with a thriving, open and internationally competitive national economy.

A half century ago, one of the fathers of modern social policy, the Swedish Nobel prize-winning economist Gunnar Myrdal (1898–1987) argued that a transition from the welfare state to a "welfare world" would eventually transpire. Today, a budding field of welfare state research—pioneered by Deacon, Michelle Hulse, and Paul Stubbs (1997); Nicola Yeates (2002); Lutz Leisering (2004); and John Meyer (2004); and pursued in the journal, *Global Social Policy* (launched in 2001)—traces the emergence of "global social policies" emanating from supranational and global nongovernmental organizations and governmental institutions such as the ILO, World Bank, World Trade Organization, or United Nations. At the crossroads of the "world society," international relations, welfare state and area studies literatures, this research examines how welfare concepts, programs, and models are becoming globalized.

Many eminent welfare state scholars, however, such as Abram de Swaan (1997), Claus Offe (2003), Fritz Scharpf (1999, 2002), and Wolfgang Streeck (1995, 2000), are skeptical concerning the prospects of transnational social policy. Historically, as Stein Rokkan elaborated in his seminal 1974 essay, welfare states have developed in the wake of processes of state-building, nation-building, and democratization, that is, in democratic nation-states. This process took several centuries to evolve and was a rocky road paved by multiple wars and, in many countries, revolutions. Transnational social policy is unlikely to develop until something equivalent to the public sphere and solidarity community of the nation-state evolves on the transnational level, that is, a shared willingness to redistribute income across national boundaries.

The closest thing to such a transnational polity and solidarity community on the horizon is the European Union, formerly the European Community. For the first four decades of its existence, the European Community pursued economic integration without political or social integration. Since the last decade of the twentieth century, however, the European Union is slowly but discernibly moving toward such political and social integration, yet, as Franz-Xaver Kaufmann (2001) has noted, continues to evince a strong reticence with regard to all issues of interpersonal income redistribution. Leibfried (2005) and Obinger, Leibfried, and Castles (2005) observe that rather than employing centrally administered, mandatory, redistributive "hard" social policies, as national welfare states had done, the European Union has relied thus far on courts and markets and on "soft policy," that is, governance measures with which compliance is not enforced by legal sanctions, but simply encouraged through the "open method of coordination." As Leibfried and Mau (2007) have observed, beyond its borders Europe is the leading advocate of transnational social policy as propagated by global institutions such as the WTO, the WHO, and ILO, and may one day serve as an organizational model inspiring for example the NAFTA, MERCOSUR and ASEAN countries to pursue transnational social policies in their respective regions. The debates on the evolution of European social policy can be followed above all in the *Journal of European Social Policy* (since 1991) and increasingly in the *Journal of European Public Policy* (since 1994), which explores the interaction between central and nation-state social policy in the European Union.

SEE ALSO *Beveridge Curve; Conservatism; Democracy; Family; Globalization, Social and Economic Aspects of; Great Depression; Hitler, Adolf; Income Distribution; Insurance; Liberalism; National Health*

Insurance; Nazism; Political Science; Recession; Risk; Socialism; Welfare; World War II

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Benjamin W. Veghte

WELFARE SYSTEM

SEE *Social Welfare System.*

WELLS-BARNETT, IDA B.

1862–1931

Ida Bell Wells-Barnett gained a national reputation in the 1890s as a pioneering crusader against lynching. Her long career spanned a wide variety of venues, including schoolroom, settlement house, municipal court, electoral politics, home, church, and social club. Journalism, however, was her calling. Her publications, many of them too militant or sharply worded to find a substantial receptive audience, remain her greatest legacy.

The eldest of eight children, Ida was born into slavery in Holly Springs, Mississippi, fifty miles southeast of Memphis. Her parents died in the yellow fever epidemic that swept through the Mississippi River Valley in 1878, leaving sixteen-year-old Ida to care for five siblings. She quickly secured a teaching position, made possible by her education at Shaw University in Holly Springs. Between 1880 and 1882 she relocated to Memphis, taking along two sisters and leaving her other siblings in the care of relatives.

Wells found her teaching career in Memphis unsatisfying, and she soon discovered a far more rewarding form of pedagogy: journalism. She published her first newspaper article in a church weekly in 1883, and began sending articles about black women to major African American publications in eastern cities. By 1885, writing as "Iola," she was among the few African American women writing about politics, and in 1889 she became co-owner of the Memphis *Free Speech and Headlight*. Her straightforward criticism in 1891 of the Memphis school board's neglect of black children and exploitation of black female teachers led to a decision not to renew her teaching appointment.

Wells's uncompromising journalism reflected her general approach to race relations. At the age of twenty-two, she sued a railroad after being thrown off the train for refusing to ride in a segregated car. In 1892 three Memphis black grocers were lynched after a conflict with a white competitor envious of their success. Wells later recalled that the event "changed the whole course of my life" (DeCosta-Willis 1995). Her unsigned attack on the lynching eschewed the cautious convention observed by southern black spokesmen who paired their criticism of lynching with ritualized reminders that the black community should not accept criminal behavior within its ranks. Wells understood that lynching was meant less to punish depravity (which white southerners expected from "their Negroes") than to punish the more dangerous sin of a black person not accepting his place.

Wells left Memphis immediately, probably expecting the mob attack on her newspaper the following day. She spent the next three years in eastern cities and Great Britain, lecturing and writing (now under the name "Exile"). Drawing on statistics compiled from careful research, she demonstrated that less than a third of lynching victims had even been accused of rape. Lynching, she argued, had less to do with the honor of white womanhood than "an excuse to get rid of Negroes who were acquiring wealth and property and thus keep the race terrorized and 'keep the nigger down' " (DeCosta-Willis 1995, p. xiii). Her charge that liaisons between white men and black women constituted the true threat to racial purity stirred even greater controversy.

Wells visited Chicago in 1893 to protest the exclusion of African Americans from the World's Columbian Exposition. Characteristically, she took a more militant position that most of her peers, advocating a boycott of the "Colored American Day" granted by the fair managers to placate the protesters. She relocated to Chicago permanently two years later, marrying prominent attorney Ferdinand Barnett. Over the next three decades she wrote less, putting her energies into the woman suffrage movement, local politics, and social work. In 1910 she founded the Negro Fellowship League as a venue for "missionary work" and "social work" on the city's South Side. Facing competition first from the city's black YMCA (1913) and then Urban League (1915), the Fellowship League shifted to a focus on politics and had only a minor presence by the time black southerners began moving to Chicago in large numbers in late 1916.

Wells-Barnett, who attended the founding meeting of the NAACP in 1910 in New York, never established herself as a major figure in African American institutional life. Although conventionally middle class in style, manners, and religious observance, she had limited patience with polite diplomacy during a generally cautious era of black politics.

Although she effectively mobilized black voters briefly through the Alpha Suffrage Club (established in 1913), Ida B. Wells was more adept at analytical and rhetorical provocation than organization. She understood in the 1890s what W. E. B. Du Bois (1868–1963) would famously enunciate four decades later in *Black Reconstruction* (1935): that African American success and dignity were less likely to win equal citizenship than to provoke the violence necessary to keep "the Negro" in his place.

SEE ALSO *Journalism; Lynchings; Militants; Resistance; White Supremacy*

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James Grossman

WELTANSCHAUUNG

Weltanschauung is a German word that often is translated as "worldview" or "world outlook" but just as frequently is treated as a calque or left untranslated. A Weltanschauung is a comprehensive conception or theory of the world and the place of humanity within it. It is an intellectual construct that provides both a unified method of analysis for and a set of solutions to the problems of existence. The concept of a Weltanschauung has played an important role in the development of psychoanalysis, critical theory, and nineteenth- and twentieth-century hermeneutics.

Weltanschauung is connected closely to the work of Wilhelm Dilthey (1833–1911), who wanted to provide for the human sciences what Immanuel Kant (1724–1804) had provided for the natural sciences. Kant had established the possibility of objective and certain knowledge for natural science (*Naturwissenschaft*) in his *Critique of Pure Reason* (1781). Dilthey intended to fashion a critique of reason on behalf of the historical human or cultural sciences (*Geisteswissenschaft*). For Dilthey the goal of natural science was causal explanation, whereas the goal of human sciences was to achieve understanding by means of interpretation. Every interpretation, he reasoned, takes place within a larger understanding of the world (i.e., a Weltanschauung), which itself is historically conditioned. Thus, interpreters of human history and culture must recognize their immersion in a particular historical situation and tradition and in that process come to terms with the finitude of their perspective. The irony of Dilthey's historicist conclusions lies in the fact that they undermine his original goal of establishing universal validity for judgment in the human sciences. This split or contradiction resulted in differing orientations to the concept of the Weltanschauung among thinkers such as Freud, Husserl, Heidegger, and Gadamer.

For Sigmund Freud (1856–1939) the age of modernity was the coming into being of the rational or scientific Weltanschauung and the subsequent decline or eclipse of alternative religious or philosophical Weltanschauungen. The scientific Weltanschauung sees both the natural world and the cultural world as being ultimately transparent to the power of human cognition. Therefore, it consciously supplants world outlooks that place certain phenomena beyond the reach of human understanding. In Freud's view psychoanalysis represented the last contribution to the criticism of nonscientific Weltanschauungen (for instance, by tracing the origin of religion to the persistence of the wishes and needs of childhood into maturity). The arrival of the scientific Weltanschauung, which Freud described as still being in its infancy, would resolve the paradox left behind by Dilthey. This was a historically conditioned view of the world, but because it represented the endpoint or terminus of human cognition, it could provide objective and certain knowledge for all human activities and endeavors.

A more direct successor to Dilthey was Edmund Husserl (1859–1938). In rejecting the strong claims of scientific rationalism, Husserl argued that objects are experienced by the observer only from within an intentional horizon of consciousness, or "life-world" (*Lebenswelt*). In other words, objects are not located in objective or autonomous space and time; they do not exist outside a detached observer who can come to know them objectively and finally. For Husserl meaning does not exist "out there" but resides only where subject and world meet. The goal is to strip away the preconceptions of history and science so that consciousness can understand the object as it really is.

Husserl, however, like Freud, ignored the historical nature of Dilthey's account. The very possibility of ahistorical meaning was challenged by Husserl's successors in phenomenology and hermeneutics, including Martin Heidegger (1889–1976) and Hans Georg Gadamer (1900–2002).

Heidegger emphasized the finitude of all historical and cultural interpretation at the expense of ahistorical accounts. For Heidegger hermeneutics, as the theory and practice of interpretation, must remain cognizant of different Weltanschauungs operating in certain historical contexts. One can know an object only from within one's peculiar and historically conditioned Weltanschauung or (Heidegger's favored term) *Weltbild* (world-picture). As interpreters of the world around them, people always find themselves within a particular language and culture. People cannot bracket the presuppositions of their Weltanschauung in order to explicate reality; in fact, those presuppositions become part of the very existence that demands explication.

Hans-Georg Gadamer, whose 1975 work *Truth and Method* represents the major thrust of contemporary hermeneutics, extended the Heideggerian critique of ahistorical interpretation in many ways. For Gadamer understanding involves an interpretive dialogue with the Weltanschauung in which one finds oneself. People's modes of understanding (their "methods") are at one and the same time the means of interpretation and objects that require interpretation. Gadamer reconnects to the historicist conclusions of Dilthey with his assertion that understanding can be achieved only with reference to the Weltanschauung in which that understanding is taking place. Unlike Dilthey and Heidegger, however, Gadamer posits that there can be no final interpretation of reality because new life-worlds or world pictures will cause future interpreters to see and experience the world differently.

SEE ALSO *Freud, Sigmund; Hermeneutics; Ideology; Philosophy; Political Theory*

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WEST BANK

SEE *Palestinians; Intifada, The.*

WEST INDIES

SEE *Caribbean, The.*

WESTERN COLLABORATIVE GROUP STUDY

SEE *Personality, Type A/Type B.*

WESTMINSTER MODEL

SEE *First-past-the-post.*

WHISTLE-BLOWERS

In a definition typical of those found in the research literature, Janet P. Near and Marcia P. Miceli in 1985 described whistle-blowers as organization employees, current or former, who report practices they consider unethical or illegal to someone with the power to take action. Although the public and many journalists may consider whistle-blowing to include only those cases in which the whistle-blower has alerted external audiences to the misconduct, for example, of someone in the media or in law enforcement, researchers in the field since the mid-1980s have tended to extend the definition to include both internal and external audiences. For example, an employee at a nuclear power plant might alert only a manager in a superior position in the authority hierarchy to a safety violation or concern. Researchers refer to this as "internal whistle-blowing." Alternatively, the individual employee could go directly to a mass-media outlet or to law enforcement with their observations. This is termed "external whistle-blowing." In the prototypical case, it has been found that employees with serious concerns tend to take them first to their superiors in the employing organization, and only when they find the senior managers to be inert or complicit in the perceived wrongdoing do they take the matter to external agencies that might be able to intercede (Glazer and Glazer 1989; Miethe and Rothschild 1994).

A GROWING PHENOMENON

In the late twentieth century and the early twenty-first century the extent of whistle-blowing grew greatly, with studies reporting substantial cases in Canada, Australia, South Africa, the United Kingdom, and Europe in addition to the United States, and worldwide attention paid to whistle-blowers in the mass media has been expanding. One analysis of previous research studies of whistle-blowing in the United States found that approximately 37 percent of employees observe in their workplaces some type of wrongdoing that troubles them (Miethe and Rothschild 1994). This rate, however, can vary considerably by occupational grouping. Among internal auditors, people who are trained to discover financial fraud and whose jobs require them to look for it, 82 percent say they have observed wrongdoing (Near and Miceli 1985). A large survey of federal employees found the rates of observing misconduct to range from 7 percent to 45 percent, depending upon the agency and the occupation involved (U.S. Merit Systems Protection Board 1993). The proportion of those who say they have observed serious misconduct in the workplace varies greatly by the opportunity for such observation in one's occupation.

Of those who do say they have observed misconduct, most remain silent, although this too can vary considerably by country, occupation, and type of employer. Across six U.S. studies of employers, the average rate of silence among those who said they did observe serious misconduct in their places of work was 58 percent (Miethe and Rothschild 1994), while a later international review of the research literature shows that the rate of those who remain silent can vary from 25 percent to 91 percent (Maria 2006). These numbers imply that there is considerable room for growth in this whistle-blowing phenomenon if more individuals felt free to voice their concerns. Undeniably, interviews with these silent observers indicate two main reasons so many employees hold back from voicing their concerns at work: (1) they fear retribution from their employer, and (2) they suspect that their reportage would not effect organizational change in any case (Rothschild and Miethe 1999).

THE WHISTLE-BLOWER'S EXPERIENCE

Research findings quite clearly show that observers of misconduct do put themselves in jeopardy by reporting or disclosing the misconduct, whether they stay inside the organization or go outside the organization with their disclosures. Indeed, employer retaliation against whistle-blowers is the rule, not the exception, and some whistle-blowers are so devastated by the reprisals they suffer that they cannot reclaim their lives (De Maria 1999; Alford 2001). A nationwide study of whistle-blowers from all occupations and regions of the United States found that among those employees who stayed within their employing organization, reporting their observations and concerns only to those above them in the organizational hierarchy, the following occurred as a result of their disclosures:

69 percent were fired or forced to retire from their jobs,

64 percent saw their job performance evaluations decline abruptly,

68 percent had their work more closely monitored by supervisors,

64 percent felt they had been blacklisted from getting another job within their field.

For each of these items, the rate of retaliation was 10 to 15 percentage points higher for those who went outside of the employing organization with their concerns (Rothschild and Miethe 1999). In many cases, the reprisals that follow the reportage are experienced as traumatic. Some 84 percent said the experience gave rise to "severe depression or anxiety," 78 percent said they learned from it "distrust of others," 69 percent said they suffered a "decline in physical health," 66 percent said they suffered "severe financial decline," and 53 percent said the experience harmed their "family relations." Many former whistle-blowers describe their experiences as giving rise to a political and personal transformation by which they now see themselves as exceedingly moral and their former employers (and in many cases, large organizations in general) as corrupt (Rothschild and Miethe 1999).

Statistical analysis of the data indicates that no special gender, age, educational attainment, years of employment, or method of reporting can insulate individuals from organizational retaliation should they choose to disclose the organizational misconduct. Validity of the claim also provides no insulation. Indeed, the data show that retaliation against whistle-blowers is most severe and certain when the observed wrongdoing is systemic and central to the way the organization conducts its business and accumulates its profit (Rothschild and Miethe 1999).

FEDERAL AND STATE LAWS

Federal and state laws that would protect whistle-blowers from retaliation and that would thereby encourage the disclosure of organizational practices that injure the public are not comprehensive, and even where they do seem to be applicable, they are frequently not enforced (see Government Accountability Project 1996 for a review of these). It is not easy for the whistle-blower, generally unemployed, to mount a successful legal claim against a former employer with vastly greater legal resources. The Sarbanes-Oxley Act of 2002 provides the most substantial legal protection for whistle-blowers, but it applies only to those who would disclose corporate misconduct that, if proven, would materially affect the valuation of a publicly traded company. The *qui tam* suits filed under the provisions of the False Claims Act have proven most effective at gaining large awards for whistle-blowers, but this act applies only to those employees whose employers were defrauding the federal government, again covering only a portion of the potential whistle-blowers.

As organizations grow larger in scope and more complex operationally, effective oversight from outside agencies becomes more difficult, and often the only people who are in a position to detect when the organization is defrauding or endangering the public are key employees themselves. The U.S. Congress has recognized the public's interest in protecting whistle-blowers so abuses of the law or the public trust can come to light, and parliaments in other nations have recognized the same. But the extent of persistent retaliation against whistle-blowers and the extent of employees who choose to remain silent in the face of abuses at work suggests that more needs to be done.

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Joyce Rothschild

WHITE, WALTER
1893–1955

Walter White, author and chief executive of the National Association for the Advancement of Colored People (NAACP) between 1929 and 1955, was born in Atlanta, Georgia. According to the *New York Times* obituary of March 22, 1955, "Mr. White, the nearest approach to a national leader of American Negroes since Booker T. Washington, was a Negro by choice" (p. 31). White had blond hair, blue eyes, and a complexion that was light enough to "pass" for white. But if ever White questioned his racial identity, the 1906 Atlanta race riot made clear to him that he was African American. During this pogrom, a white mob threatened to attack his family home, and at the age of thirteen he determined that he could never be part of a race that carried within it such a ghastly hatred. His aspect and the riot were central to his life and career as an advocate for race advancement.

Upon his graduation from Atlanta University in 1916, White helped to found the Atlanta branch of the NAACP. He joined the national staff in January of 1918, and for the next eight years his primary responsibility was conducting undercover investigations of lynchings and race riots. He investigated forty-one such instances. Passing for white, White tricked whites into giving him candid accounts of the recent violence, which the NAACP would then publicize. "I Investigate Lynchings," which appeared in the July 1929 issue of *American Mercury*, is White's account of his investigative exploits. *Rope and Faggot*, published in 1929 and still considered authoritative, is his detailed analysis of the extent and causes of lynching.

When James Weldon Johnson (1871–1938) retired from the NAACP in 1929, White was elevated to the position of secretary. During both the Franklin Roosevelt (1882–1945) and Harry Truman (1884–1972) administrations, White's style of working for political gain by rallying enlightened elites achieved stunning results. His close friendship with Eleanor Roosevelt (1884–1962), who joined the NAACP board of directors following her husband's death, gave him direct access to the White House. He orchestrated massive support in Congress for an antilynching law, which was defeated only by filibustering southern Democratic senators. White also organized Marian Anderson's (1897–1993) historic Easter 1939 concert at the Lincoln Memorial in Washington, D.C., including a sponsoring committee studded with New Deal officials. In 1941 White collaborated with A. Philip Randolph's (1889–1979) March on Washington movement, which pressured President Roosevelt into issuing Executive Order 8802 banning racial discrimination in defense industries. White persuaded President Truman to appoint a civil rights commission, which produced the report *To Secure These Rights* in 1947.

During White's tenure as NAACP secretary, the association launched a series of legal suits designed to ensure equality between the races in education. This effort culminated in the Supreme Court's 1954 *Brown v. Board of Education* decision, which declared unconstitutional the doctrine of "separate but equal."

During World War II (1939–1945), White promoted the idea that an allied victory should lead to both the dismantling of European colonialism and racial equality for African Americans. He pursued these goals in 1945 as one of three NAACP consultants to the U.S. delegation to the founding conference of the United Nations in San Francisco and again in 1948 as a consultant to the U.S. delegation to the UN General Assembly meeting in Paris. Yet his friendship with Eleanor Roosevelt and alliance with President Truman precluded White from advocating the more expansive definition of human rights favored by W. E. B. Du Bois (1868–1963) and Paul Robeson (1898–1976) that included economic and social as well as political rights.

White's twenty-six year marriage to Gladys Powell, an African American, ended in divorce in 1948. The following year he married Poppy Cannon, a white woman born in South Africa. Many in the NAACP objected and called for White's resignation. Eleanor Roosevelt threatened to resign from the board of directors should White be dismissed, thereby saving his position. He remained NAACP executive secretary until his death (he had been in declining health for several years) but with diminished powers.

Walter White's importance lay in his organizational skills and leadership style. His abilities to successfully cultivate ties with people of influence both in and out of government and to popularize and publicize the association and its program were instrumental to placing civil rights on the national agenda.

SEE ALSO *Harlem Renaissance; National Association for the Advancement of Colored People (NAACP)*

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Kenneth R. Janken

WHITE NOISE

There are uncertainties in dynamics of social and natural processes. Basic approaches of statistical analysis model these processes based on theoretical derivations or empirical observations. The primary goal in statistical modeling is to extract as much underlying information of the processes as possible and let the residuals approximate a realization of white noise. White noise is one of the fundamental stochastic processes in many fields. Mathematically, it has a constant spectrum, which is the same as the white light we observe through our eyes.

White noise has been utilized to mask distraction of undesirable sound in the environment. Financial analysts have applied white noise to model stock markets. In fact white noise has been used for audio synthesis, impulse response, art, sensory deprivation, sleeping aid, and more. White noise is a basic form of stochastic process that provides the foundation for almost all useful statistical models used in natural and social sciences.

Let $\{Z_t\}$ be an equally spaced time series (a sequence of random variables) with a mean of zero and finite autocovariance

$$\gamma(t, s) = E(Z_t Z_s), \tag{1}$$

where $E(X)$ is the expected value (mean) of random variable X and t, s donate the time. If $\{Z_t\}$ has a nonzero mean, without loss generality, it can be subtracted from the time series to get a time series with a zero mean. The expected value of a discrete random variable X is defined as

$$E(X) = \sum_{\text{all } x} xP(X = x), \tag{2}$$

where $P(X = x)$ is the probability mass function of X. For a continuous random variable, its expected value is

$$E(X) = \int_x x f(x)\, dx, \tag{3}$$

where $f(x)$ is the density function of X.

If the autocovariance function $\gamma(t, s)$ of time series $\{Z_t\}$ is only a function of $|t - s|$, then $\{Z_t\}$ is a (weak) stationary process. White noise is the simplest stationary process with

$$\gamma(t, s) = \begin{cases} \sigma^2 & t = s \\ 0 & t \neq s \end{cases} \tag{4}$$

where $\sigma^2 = E(Z_t^2)$ is the variance of Z_t.

White noise plays an important role not only in physical sciences such as in signal processing, but also in almost all statistical analysis of time series observed from social and economic activities. For example, according to George Box, Gwilym M. Jenkins, and Gregory C. Reinsel in their 1994 book *Time Series Analysis: Forecasting and Control*, the widely used Autoregressive and Integrated Moving Average (ARIMA(p,d,q)) models in time series analysis are generated by the white noise innovations $\{Z_t\}$ through the following expression:

$$\phi(B)(1 - B)^d Y_t = \theta(B) Z_t \tag{5}$$

where Y_t is the time series under study, $\varphi(B) = 1 - \sum_{l=1}^{p} \alpha_l B^l$, $\theta(B) = 1 + \sum_{j=1}^{q} \beta_j B^j$, B is the back shift operator defined as $BY_t = Y_t - Y_{t-1}$, d is an integer, and Z_t is the Gaussian white noise with mean zero and variance σ^2. From expression (5) we can see that Y_t of ARIMA(0,0,0) is the white noise.

ARIMA(0,1,0) denotes a random walk model, which is a model of unit root and widely used in modeling financial markets. ARIMA(p,0,0) becomes an autoregressive model of order p (AR(p)), ARIMA(0,0,q) is a moving average model of order q (MA(q)), and ARIMA(p,0,q) is ARMA(p,q). For a proper range of the parameters α_l and β_j, the Y_t in ARMA(p,q) is stationary and invertible (Box, Jenkins, and Reinsel 1994).

Many methods have been proposed to estimate the parameters in ARIMA models from observed time series. A crucial step in model diagnosis is to check, through a battery of tests and plots, if the residuals from the models are consistent with white noise (Box, Jenkins, and Reinsel 1994).

In general there are two types of techniques in analyzing time series. The first type is based on direct modeling such as ARIMA models, which are called time domain techniques (Box, Jenkins, and Reinsel 1994). The second type, according to M. B. Priestley in the 1981 publication *Spectral Analysis and Time Series*, is in the frequency

domain that utilizes the spectrum of a stationary process. The spectrum is defined as

$$f(\omega) = \sum_{k=-\infty}^{\infty} \gamma_k e^{-ikw} = \gamma_0 + 2\sum_{k=1}^{\infty} \gamma_k \cos(k\omega) \quad (6)$$

where $\gamma_k = \gamma(t, t + k)$ and $i = \sqrt{-1}$. For a stationary ARMA(p,q) process, the spectrum is $f(\omega) = \sigma^2|\theta(e^{-i\omega})|^2|\varphi(e^{-i\omega})|^{-2}$, where |.| is the norm of a complex number.

For white noise, its spectrum is

$$f(\omega) = \gamma_0 = \sigma^2, \quad (7)$$

a constant for all value of frequency ω. That is, the plot of the spectrum of white noise is flat against ω. The spectrum of white noise can be estimated through the periodogram of finite observations with length n. Let g_k be the sample autocovariance computed from the n observations of a stationary time series $\{Y_t\}$:

$$g_k = \sum_{t=k+1}^{n} (y_t - \bar{y})(y_{t-k} - \bar{y})/n, \quad (8)$$

where $\bar{y} = \Sigma_{t=1}^{n} y_t/n$. Then, the periodogram ordinates are

$$I(\omega) = g_0 + 2\sum_{k=1}^{n-1} g_k \cos(k\omega). \quad (9)$$

usually computed at the Fourier frequencies $\omega_j = 2\pi j/n$. The plot of the periodogram ordinates gives a visual examination of the underlying spectrum of the process. For a sample of white noise, its $I(\omega)$ is distributed as $\sigma^2\chi_2^2/2$, where χ_2^2 is a chi square random variable with 2 degrees of freedom. Note that $I(\omega)$ is an unbiased estimator of $f(\omega)$, but not consistent (Priestley 1981). Many techniques were proposed to construct unbiased and consistent estimators of $f(\omega)$ using functions of $I(\omega)$, and many tests on white noise can also be constructed via periodogram ordinates $I(\omega)$ (Priestley 1981).

White noise is not only the driving force for classic ARIMA models, it also plays a fundamental role in the popular Generalized Autoregressive and Conditional Heteroscedastic (GARCH) models in financial analysis, in vector cointegration models for economic time series, and in long memory time series models such as in Autoregressive Fractional Integrated Moving Average (ARFIMA(p,d,q)) models with d being a non-integer. White noise is the core of statistical analysis. However, some realizations of simple deterministic chaotic systems may exhibit white noise like sequences. The study of chaos requires new techniques and concepts that are beyond the classic approaches of time series analysis.

SEE ALSO *Autoregressive Models; Cointegration; Randomness; Regression; Regression Analysis; Residuals; Unit Root and Cointegration Regression*

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Dejian Lai

WHITE PRIMARY

Following Reconstruction (1865–1877), white southerners employed various tactics to minimize the economic, political, and social opportunities of former slaves and their descendents. The white primary, which limited blacks' political influence, was one. A primary is an election within a political party to select the party's nominees for public offices. Late in the 1800s states began to replace party conventions with primaries as nominating devices. The primary became a "white" primary as participation in it was denied to voters of color. Along with poll taxes and literacy tests, white primaries were "Jim Crow" laws, practices used in the South in the late 1800s and early 1900s to marginalize African Americans politically.

The white primary had significant discriminatory potential because the Democratic Party was virtually the only political institution involved in selecting public officials in the South. The Republican Party had virtually disappeared there; much of its numeric strength was contributed by black voters, whose numbers dwindled in the face of discriminatory voting laws and practices. By denying black voters the option of participating in Democratic Party nominations, they were left with few avenues for effective electoral involvement.

The creation of white primaries could be accomplished in several ways. First, the state could statutorily exclude African American voters from primaries. Alternatively, the Democratic Party itself could adopt rules that either denied the opportunity of party membership to black voters or prohibited black voters from casting ballots in primaries. White primaries could also be effectively created by using other discriminatory practices to disqualify black citizens from involvement in elections.

The black electorate was substantially reduced during this period by requiring prospective voters to pass literacy tests, pay poll taxes, and the like. Because most southern blacks had a rudimentary education at best and because of

the pervasive impoverished circumstances in which they lived, these policies were potent barriers to voting by black citizens. It was not particularly necessary to reinforce these devices with statutory white primaries. Moreover, some recognized that the Fourteenth and Fifteenth Amendments to the U.S. Constitution might prevent enforcement of laws that overtly denied to African Americans the right to vote.

Nonetheless, additional efforts to exclude black voters from nomination and election processes were desired by Southern whites. The Democratic Party at the county and state levels began to impose rules that prohibited participation of black voters in party affairs. Texas, however, took this further. There, as in some other southern locations, Democratic factions occasionally relied on black votes to gain and retain official power. A San Antonio faction sought to weaken one of its rivals that used that practice by convincing the state legislature to adopt a statute prohibiting black voter participation in primaries. The Texas legislature passed just such a law in 1923. Two years earlier the U.S. Supreme Court had decided *Newberry* v. *United States* (1921), which sprang from a Michigan election for a U.S. Senate seat. In *Newberry* the Court held that Congress could not regulate campaign spending in congressional primaries because primaries were not elections under Article I, Section 4 of the U.S. Constitution. Texas proponents of a statutory white primary thus reasoned that prohibitions of racial discrimination in the Fourteenth and Fifteenth Amendments would not apply to their primaries.

The equal protection clause of the Fourteenth Amendment requires that states offer "equal protection" to all persons in their jurisdictions; it is a prohibition against a state acting in discriminatory fashion. The Fifteenth Amendment simply provides that citizens may not be denied the right to vote on the basis of race, color, or previous status as slaves; it overtly guarantees African Americans the right to vote in elections. The Court's ruling in *Newberry* evaded these guarantees by holding that primaries were not a part of the electoral process.

Once the Texas statute was in place, a black El Paso doctor, L.A. Nixon, attempted to vote in a Democratic primary and was turned away. He sued Herndon, the election judge who prevented his voting, and claimed that his Fourteenth and Fifteenth Amendment rights had been violated. The U.S. Supreme Court decided *Nixon* v. *Herndon* in 1927, evaluating its issues solely within the context of the Fourteenth Amendment; the Texas law was held to clearly violate the equal protection clause. No consideration was given to the relevance of the Fifteenth Amendment to the case, nor was the question of whether federal laws applied to party primaries taken up.

Texas responded to the decision by repealing the offending statute and passing a new law permitting a party's state executive committee to determine the qualifications for political party membership. The Texas Democratic Party then passed a resolution affirming the right of qualified white Democratic voters to participate in the party's primaries, but no one else. In a subsequent primary Nixon again attempted to vote and was again turned away. He sued once more, and the Supreme Court took up his claim in the case of *Nixon* v. *Condon* (1932).

The logic of Texas's new law was that the Fourteenth Amendment specifically prohibited state action that is discriminatory, but the rule barring voting by black citizens was one adopted by the Texas Democratic Party, a private association. Since the rule was made and enforced by a private entity, proponents contended, the Fourteenth Amendment did not apply. The Court, however, disagreed, pointing out that the power to exclude black voters had been given to the party by the state and that the state was using the party to accomplish racial discrimination in voting, thereby violating the equal protection clause.

The Texas legislature then enacted a statute compelling political parties to employ the primary to nominate candidates and giving to parties complete responsibility for the actual conduct of the primary without state direction or supervision. When black voters were prevented from voting under this statute, yet another lawsuit resulted. This time the outcome was different. The Supreme Court ruled in *Grovey* v. *Townsend* (1935) that since operation of the primary was totally in the hands of a private entity and since political parties could be viewed as "voluntary associations for political action," a party might exclude African American voters without violating the equal protection clause. In these situations parties were not considered agents or instrumentalities of the state and could determine their own procedures as nonpublic institutions.

The Court's ruling in *Townsend* might have ended the debate as to the legal legitimacy of white primaries for some time; however, an unrelated Louisiana lawsuit revived the issue. Primary officials in New Orleans were charged with election fraud in the course of conducting an election for a seat in the U.S. House of Representatives, a violation of federal law. Because there was no competition for the seat in the general election, the primary outcome was tantamount to election. The embattled election officials defended themselves by invoking *Newberry* and asserting that federal law applied only to general elections. In *United States* v. *Classic* (1941), however, the Supreme Court held that the Constitution created a right to voter participation even in primaries when it gave to "the people in the several states" the authority to select their dele-

gates to the House of Representatives, provided that the primaries are an integral part of electoral procedure. *Classic* thus reversed the Court's position in *Newberry*, but it made no reference to *Grovey*.

Black voters, though, saw in *Classic* a stepping-stone to link white primaries to constitutional prohibitions against voter discrimination based upon race. A black Houston dentist, Lonnie E. Smith, had been refused a ballot in the 1940 primary by S. E. Allwright, an election judge. Smith sued and invoked the Court's finding in *Classic*, and the Court sided with him and overruled *Grovey* in so doing. The Court noted the state's authority to regulate political parties and primaries and concluded that primaries were thus a mechanism for electing public officeholders. *Smith* v. *Allwright* (1944) thereby struck down the white primary as an unconstitutional infringement of black voters' rights.

The impact of white primaries as a delimiter of black voting is not clear, for their specific effects must be disentangled from those of other discriminatory practices and laws. Although it is apparent that African American participation in elections declined during the period white primaries were operated, some analysts assert that literacy tests and poll taxes were principally responsible for the decline in black voting. Similarly, the impact of white primaries' demise is not obvious; some argue that eliminating the white primary did little to stimulate black voter participation. However, the percentage increase in black voter registration from 1940 to 1947, during which time the white primary was outlawed, is matched only by the increase in black voter registration from 1960 to 1969, when the Voting Rights Act of 1965 was first implemented.

Dismantling the complete array of discriminatory devices was necessary to stimulate widespread African American involvement in politics in the South. If nothing else, litigating the status of primaries in the framework of American elections was essential to making their public role apparent not only to the legal community and to political elites but also to private citizens. Given the almost universal adoption of primaries as nomination devices across the nation, these lessons were as important to nonsoutherners as they were to voters in the South.

SEE ALSO *Democratic Party, U.S.; Discrimination; Discrimination, Racial; Equal Protection; Jim Crow; Politics, Black; Politics, Southern; Poll Tax; Reconstruction Era (U.S.); South, The (USA)*

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James F. Sheffield Jr.

WHITE SUPREMACY

White supremacy—the belief in the superiority of the white race, especially in matters of intelligence and culture—achieved the height of its popularity during the period of European colonial expansion to the Western Hemisphere, Africa, and Asia stretching from the late 1800s to the first half of the twentieth century. White supremacists have based their ideas on a variety of theories and supposedly proven facts; the most prominent of these include the claims of pseudoscientific racist academic research that attempted to correlate inferiority and pathological behavior with categories of racial phenotypes, especially head size in the case of eugenics. White supremacist belief has also been justified by the Biblical Hamitic hypothesis, which viewed blacks as the descendants of Ham who would be cursed for life. There is a direct correlation between the rise of imperialism and colonialism and the expansion of white supremacist ideology justifying the changing international order, which increasingly saw Europeans assuming political control over peoples of darker skin color through military force and ideological means, such as religion and education. It is important to note that the range of those considered "white" expanded considerably in the twentieth century. For example, in the United States, not all ethnic groups with white skin were initially considered white. It was not until well into the

twentieth century that the Irish and Italians, for example, were considered white. By the end of that century, the United States federal government had also expanded its definition of whites to include Arabs.

Various groups and institutions have used varieties of white supremacist thinking to organize followers socially and politically, often with the purpose of policing racial barriers. This activism has included, but not been limited to, the physical elimination of nonwhite populations (especially through violence), preventing cross-racial marriage, and maintaining racial segregation. The most well known examples of institutionalized white supremacy were "Jim Crow" segregation in the United States, apartheid in southern Africa, and the Nazi German state under Adolph Hitler, which sought a "final solution" through the extermination in gas chambers of millions of Jews and gypsies, and under which various racial medical experiments were carried out.

The academic field of anthropology has been most closely associated with theories of racial difference, including white supremacy. As anthropology developed as a field in Europe and North America in the 1800s, its epistemological foundations actually provided scholarly legitimacy to the practice of categorizing human beings according to race. In the twentieth century it was also the field that amassed the primary evidence to refute white supremacist thinking. Of particular note as regards this latter phase was the work of Franz Boas, whose fieldwork among North American indigenous peoples provided evidence to refute ideas that races and cultures could be placed in hierarchies that ranged from primitive to sophisticated, with the white race at the top.

After World War II (1939–1945), and the carnage caused by Nazi racial ideology, effort was invested by social scientists to refute white supremacist ideology. Of particular note was the "Statement by Experts on Problems of Race" that the then new United Nations sponsored and had published in the early 1950s. The list of scholars who supported the document comprised the most prominent thinkers on issues related to race at the time, including E. Franklin Frazier, Claude Levi-Strauss, Julian S. Huxley, Gunnar Myrdal, Joseph Needham, and Theodosius Dobzhansky. The central point of the Statement was that race was not based on biological difference and was actually a social construction because all the supposedly different human races belonged to the same species of Homo sapiens.

Due to publications such as the Statement and the mapping of the human genome (which provided additional evidence that there are few significant genetic differences between races), biological justifications for white supremacy popular during the first half of the twentieth century declined in prevalence in the second half. Similarly, by the end of the century all states that had officially declared themselves to be white supremacist had been eliminated. However, white supremacist ideology was resuscitated by a number of social transformations that were particularly evident by the last decade of the twentieth century. These included the end of Communist states in eastern Europe, increased immigration to Europe and North America by nonwhite groups, and the growth of technologies to facilitate rapid transnational communication. White supremacy was deployed by various groups as an organizing tool. In eastern Europe, groups in the former Communist societies used it to create new identities in the wake of communism's demise, and eastern Europe quickly became the center of neo-Nazi activism. In the United States, groups such as the World Church of the Creator and so-called citizen militias invoked religious and nationalist mythology to rally their believers against the increased power of racialized groups and the presence of illegal immigrants from Latin America. The expansion of the Internet was useful to these hate groups because it facilitated the exchange of documents and enabled the organization of adherents over vast distances. It also allowed some European white supremacy activists to obviate European antiracist propaganda laws that had been enacted after World War II.

The persistence of white privilege, even in societies where nonwhites are the majority, has meant that white supremacy and its consequences have not ceased to be sources of social scientific research. A notable event in the growth of "white studies" was the conference "The Making and Unmaking of Whiteness," held at the University of California, Berkeley in April 1997. This yielded, four years later, a volume of the same name published by Duke University Press.

In the United States the legal scholar Cheryl Harris, the historian David Roediger, and the American Studies scholar George Lipsitz are among those whose work in white studies has been influential. Melissa Steyn, the South African, has also been a prominent thinker in the area.

White studies is best contextualized as another stage in the evolution of humanities and social science research on the functioning of social systems. One of the most prominent themes in the study of whiteness is identity formation. The argument for doing white studies, and putting it on par with other more established areas of ethnic studies such as black studies, is that the adoption of white identity and the related ideology of white supremacy confer privilege at the expense of others who cannot or will not invest in them.

SEE ALSO *Frazier, E. Franklin; Genomics; Hierarchy; Immigration; Inequality, Racial; Levi-Strauss, Claude; Myrdal, Gunnar; Nazism; Racism; Whiteness*

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Mark D. Alleyne

WHITENESS

Whiteness refers to the nature and social impact of white racial identity. "White" is best understood as a position in a racialized social structure; that is, it is a label that is meaningless outside of a social system where racial categories influence access to social, political, and economic resources and in the absence of other socially constructed identities such as "black" or "Asian."

Historically, the subject of whiteness was overlooked by mainstream social science in favor of an emphasis upon the "problems" of immigrants and minorities. When whiteness was taken into consideration, it was not as the focus of study, but as the mainstream or baseline against which other groups were compared. One significant exception to this line of thought was presented in African American sources such as the works of W. E. B. Du Bois and those compiled by the editors of *Ebony* magazine (1966) and David Roediger (1998). That this literature was overlooked is perhaps best understood as a reflection of the historical marginalization of the contribution of African American writers to the study of race relations.

Whiteness studies emerged in the late 1980s and early 1990s in such fields as history, sociology, critical legal studies, cultural studies, anthropology, and education. In sharp contrast to earlier work in the field of race and ethnic relations, whiteness studies involves an *explicit* focus upon the socially constructed nature of white racial identity and the role of whiteness in the reproduction of racism and racial inequality. This serves to emphasize that whites are an important racial collectivity and that it is important to understand how whites perform as racial actors (see Lewis 2004). Seminal early works included Roediger's *The Wages of Whiteness* (1991), Ruth Frankenberg's *White Women, Race Matters* (1993), and Peggy McIntosh's "White Privilege" (1988); these works were the vanguard of a large body of literature that flourished after 1995. Why whiteness studies emerged when it did is best explained by a combination of factors, including the continuing challenge to white supremacy in the post–Civil Rights era, the changing racial demography of the United States, the decline of white ethnic identities, and intellectual trends that emphasized the social construction of race and the examination of identities.

MAJOR CONTRIBUTIONS

Major ideas and concepts that emerged from the field of whiteness studies are (1) the importance of white racial invisibility and white privilege, (2) the social and political impact of whiteness, and (3) the historical evolution of whiteness. White racial invisibility is the observation that for most white Americans under most circumstances, white racial identity has little or no social meaning. This "hidden" nature of whiteness is closely connected to the fact that white understandings and practices have historically constituted the social and cultural mainstream of American society. In essence, to be white is to be not different, to be "just like everyone else." White invisibility is also linked by many writers to white privilege, the unearned and invisible benefits (e.g., being viewed as an individual) that whites experience in everyday life (McIntosh [1988] 2002).

A second core insight of whiteness studies has emphasized the effect of white invisibility on racial politics and the reproduction of racial inequality. The hidden nature of whiteness has made it more difficult for many whites to understand the experiences of racial minorities and the persistence of racial inequality. This has led to the emergence of what many writers have termed *color-blind racial ideology* (see Bonilla-Silva 2001), the claim that racism is a thing of the past and that race no longer matters in American society. From the color-blind perspective, racial inequality is due to the failure of individuals to take advantage of opportunities for mobility. Carried to an extreme, it even leads to the claim that white Americans experience significant race-based economic and cultural victimization (see McKinney 2005).

The social and political effects of whiteness have also been studied at the institutional level. As Cheryl Harris observed in "Whiteness as Property" (1993), whiteness can be viewed as "property" in that it has historically embodied social and economic benefits for whites. The historian Ira Katznelson, in *When Affirmative Action Was White* (2005), chronicled how New Deal and other mid-twentieth-century programs widened the economic gap between white Americans and peoples of color. Other writers have highlighted how the government's urban, housing, and fiscal policies have resulted in the systematic and unequal accumulation of wealth by white Americans.

A third focus of whiteness studies has been on the evolution of whiteness. Much of this analysis has been historical, as scholars such as David Roediger (2005), Noel

Ignatiev (1995), and Matthew Frye Jacobson (1998) have traced how immigrants from Ireland and southern and eastern Europe initially faced both discrimination and an uncertain racial status but later "became" white and were absorbed into the dominant racial group. This argument is not universally accepted, as other writers (e.g., Guglielmo 2003) have asserted that groups such as Italians were "white on arrival," and that their whiteness made it easier to be accepted into American society. What is less contentious is that European immigrants learned what it *meant* to be white in the United States, especially with respect to establishing themselves in contrast to African Americans.

Another element of the evolution of whiteness has involved the construction and reconfiguration of racial boundaries and the meaning of whiteness. As Ian Haney Lopez has documented in *White by Law* (1996), the question of who was (and who was not) white was socially contested and was frequently adjudicated by the courts. With the passage of time, white ethnic identities and intragroup boundaries have dissipated, leading to the emergence of a more generic white, European American identity (see Doane 1997). Future changes may continue to redefine whiteness. As Eduardo Bonilla-Silva asserted, social and demographic forces may lead to the expansion of "white" identity to include some Latino and Asian American groups, as well as persons claiming a multiracial identity (2003).

CRITIQUE AND FUTURE DIRECTIONS

While relatively new, whiteness studies is not without its critics. One charge leveled at whiteness studies, and at the study of racial groups and categories in general, is that the attention paid to whiteness tends to essentialize it as an objective and omnipotent social force. Whiteness studies has frequently been guilty of viewing whites as a homogeneous, monolithic social entity where certain qualities are ascribed to all whites. Clearly, while whiteness involves a shared social context that influences individual and group behavior, there are significant intragroup differences that determine how whiteness is perceived and experienced (see, for example, Hartigan 1999). In addition, as Margaret Andersen observed in "Whitewashing Race" (2003), authors writing on whiteness have tended to emphasize white identity and privilege while deflecting attention from key issues of power, inequality, and racism.

Whiteness studies faces many challenges in the future. Clearly, whiteness cannot be understood in isolation—apart from racism and racial inequality. It is also essential to study the complexity of whiteness; that is, to explore how variations in factors such as class and situation produce differences in the social role of whiteness. Equally important is the need to keep abreast of changes in the nature and expression of whiteness. Past studies have highlighted moments when whites, both individually and collectively, became racially self-conscious actors, especially as a defense in the face of perceived challenges or threats from other groups (e.g., anti–Civil Rights movement backlash, various anti-immigrant movements). As U.S. society and its institutions become more diverse, the social and political meaning of whiteness will continue to evolve. If the field of whiteness studies is to make a meaningful contribution to understanding race and ethnic relations, then it must successfully confront these issues.

SEE ALSO *Racialization; Racism; Whites*

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Ashley ("Woody") Doane

WHITENING

From the 1400s to the 1900s European colonialism and imperialism exported an ideology of white superiority throughout the world, rationalizing European ascendancy over indigenous, inferior-raced peoples fit for conquest, exploitation, and domination. From this history a white-dominated sociopolitical order has been constituted, normalized, and maintained. As a result whiteness and the process of "whitening" have emerged as both ideal and practice. Significantly whiteness as an ideal communicates ideas about superiority with respect to moral or intellectual and aesthetic worth. Although conceptually distinct, there is a psychological tendency to conflate the two, and attempts at whitening, by both individuals and nations, have sought to capitalize on a supposed white superiority in both respects.

WHITENING AS AN INDIVIDUAL IDEAL

The elevation of whiteness both justifies the material and psychological privileging of whiteness and reinforces the white ideal. Unsurprisingly this has encouraged individuals to adopt a variety of strategies aimed at whitening physical appearance. Skin lightening is a prominent example, and the United States is instructive in examining how this strategy emerged historically.

The institution of U.S. slavery was undergirded by powerful rules maintaining racial differentiation, including those regarding hypodescent. According to the "one-drop rule," individuals with any ascertainable "Negro blood" were considered black, a determination that served slaveholders' property interests in slaves while reinforcing the ideological fiction of white purity and superiority. Slaveholders also instigated tension between lighter- and darker-skinned blacks through colorism, differentiating among blacks to prevent their alliance in potential revolts. Lighter-skinned slaves were often "privileged" as house servants relative to darker "field" slaves, for example, receiving less-violent treatment and greater opportunities for education, skilled labor, and even manumission.

In this extreme racialized context, enslaved African Americans began applying lye and other harsh cleaning products to lighten their skin. Other household concoctions included applying lemon juice, bleach, and even urine to the skin and swallowing arsenic wafers. Advancements in modern medicine encouraged more scientifically "legitimate" methods, researched and developed by the medical community. Whitening products began appearing during the nineteenth century, and by the early twentieth century hundreds of unique brands were available.

In the early twenty-first century skin whitening is a global, multibillion-dollar industry that includes major cosmetics corporations, including L'Oreal, Maybelline New York, and Lancôme Paris. L'Oreal alone made $14 billion on skin whitening products in 2003. In the United States and elsewhere, consumers of whitening products include not only blacks but also other people of color and darker-complexioned whites. Typical products include soaps, creams, and ointments that often contain mercury, topical corticosteroids, or hydroquinone, each of which disrupts melanin production in the skin. Although touted as safe by regulators, side effects of such products range from permanent spots and splotchiness to disfigurement and even poisoning. Indeed whitening products are often made in third world countries, imported legally and illegally, and sold on Internet domains to avoid regulations and critical resistance.

Reinforced by popular media and persistent disparate treatment, marketing of the white beauty ideal extends beyond skin whitening to include hair straightening, hair weaving, and colored contact lenses. Increasingly popular are more permanent and medically intrusive procedures, such as plastic surgery. Consider, for example, the use of rhinoplasty among black and Jewish Americans and the growing prevalence of eyelid surgery among Asian Americans. Even strategies such as marrying "lighter" and distancing oneself from dark-skinned people and communities, both literally and through self-classification, are considered forms of whitening by some scholars.

WHITENING AS A NATIONAL PRACTICE

Significantly the whiteness ideal has not only influenced individuals but has also become the basis of large-scale state policies seeking to whiten national populations. Many Latin American countries in particular—including Brazil, Venezuela, Cuba, Argentina, Uruguay, and Colombia—enacted collective whitening strategies during the nineteenth and twentieth centuries. Such efforts typically revolved around promoting white European immigration (often while restricting immigrants of color) and encouraging "race mixing," or miscegenation, as a way of gradually lightening the total population. Brazil offers one of the best-examined cases of a whitening ideology influencing national goals.

Portugal colonized Brazil beginning in the sixteenth century, dominating the indigenous population and instituting the importation of 3.6 million enslaved Africans over three centuries. Brazil's racial composition was dramatically altered both directly via slavery and via the mixed-race children born of frequent unions (often violent and coerced) between Portuguese colonizers and African and indigenous women. By the end of the eighteenth century blacks and their descendants formed a majority of the Brazilian population.

Brazil's largely mixed-race population was problematized in the nineteenth century, as Europe's burgeoning race "science" reached the nation. Such theories validated the white political and economic domination characteristic of colonial nations by asserting the superiority of the white race, associated with progress and advancement, while deeming other, darker races as inferior and backward. The views of Count Arthur de Gobineau of France were exemplary of such thinking. For Gobineau, Brazil epitomized the perils of miscegenation, which in his view had produced a degenerate people, dooming the country to perpetual underdevelopment.

As a way out of such fatalistic predictions, Brazil turned to the project of whitening, or *blanqueamiento*, as a national solution. Brazilian eugenicists proposed a theory of "constructive miscegenation" based on the belief that white genes were stronger and would "dominate" and "purify" colored blood. Miscegenation was rearticulated as an assurance that Brazil could achieve a whitened population over several generations and the inferior features of African and indigenous ancestry overcome. To further hasten the process of national whitening, Brazil encouraged, recruited, and subsidized European immigration to fill postslavery labor needs while simultaneously prohibiting black (both African and American) and Asian immigration. The Brazilian government attempted to lure European immigrants, both directly and through landowners, by paying transportation costs, exempting tax payments and military service, and offering loans, grants, and other material incentives. European immigration promised to whiten the population both by literally increasing the number of whites in the country and through ensuing miscegenation.

While Brazil's first census in 1872 documented 37 percent of the population as white, by the 1890s more than 1.2 million Europeans had immigrated, bolstering the percentage to 44 percent. Mass European immigration halted with the onset of World War II, but by 1940 fully 64 percent of Brazil's population was white. From 1940 onward the brown, mixed-race population increased, while the black population steadily declined.

Of Latin American nations, Argentina was perhaps the most "successful" with respect to whitening, virtually eliminating the Afro-descendant racial group. Colombia offers a unique comparison. When European immigration proved unattainable, elites sought the next best thing—interregional migration as a means of whitening. For example, elites from the Colombian region of Cauca encouraged the migration of neighboring Antioqueños, emphasizing their European- and "Yankee-like" qualities and appearance.

Predominantly white countries, while not instituting explicit whitening policies, have attempted to maintain the national dominance of whiteness. For instance, the United States, Canada, and Australia all maintained discriminatory immigration policies, privileging white European immigrants and limiting or excluding immigrants of color until the late twentieth century. Historically the United States engaged in other legal efforts to firmly differentiate between whites and people of color, particularly blacks, including codifying racial designations through rules of hypodescent, limiting nonwhite citizenship, barring miscegenation, and enacting legalized segregation. Additionally, although some early immigrants, including the Irish and Italians, were originally discriminated against as nonwhite "races," white elites eventually extended what has come to be known as the "wage of whiteness" to such groups in an effort to manage changing demographics and diminish the likelihood of cross-racial coalitions. Clearly practices such as these serve to entrench the racial structure that privileges whiteness both nationally and globally.

In the early twenty-first century the ideology of white superiority persists, although its expression may be less explicit. Nonetheless, as long as whiteness is maintained as a privileged status, materially and psychologically, whitening, as both ideal and practice, will also persist.

SEE ALSO *Black Face; Blackness; Colorism; Preference, Color; Racism; Whiteness; Whites*

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WHITES

The issue of whiteness is intimately tied to the issue of social construction. Whiteness is a social construction that serves to empower some and disenfranchise others. The fact of the social construction is often masked as a referent to biological categories. As Grace Elizabeth Hale points out, "Long before they [whites] conceived of regional differences, early Americans linked skin color to the origins of peoples, using it to distinguish various nationalities and ethnicities of African, Native Americans, and Europeans" (Hale 1998, p. 4). David Roediger suggests that "the term *white* arose as a designation for European explorers, traders, and settlers who came into contact with Africans and the indigenous people of the Americas" (Roediger 1991, p. 21). The early uses of the term *white* were to distinguish Native Americans and Africans from Europeans.

According to Karyn McKinney, "Before it became popular to write of the 'social constructions of whiteness,' African American scholars, such as W. E. B. Dubois, James Baldwin, and Ralph Ellison had recognized race as a social rather than biological trait, and the fact that one 'becomes,' rather than is born, white." Ellison and other black scholars also highlighted the observation that the quickest way for an immigrant to "become" white, and thus feel "instantly American," was to learn to deride African Americans (McKinney 2005, p. 11).

The historical boundaries of whiteness continue to change over time. As Matthew Frye Jacobson (1998) has noted, the historical construction of whiteness was tied to the political notion of "fitness for government," and the process of defining who was or was not white occurred largely as a result of legal decisions in the determination of citizenship (Haney-López 1996). Furthermore, Joe Feagin, Hernán Vera, and Pinar Batur suggest:

> Those called "whites" in the United States and across the globe are really not white in skin color but rather are some shade of brown, tan, pink, or mixture thereof. These truer-to-life skin colors, however, are not generally associated with the qualities—such as purity, innocence, and privilege—to which "white" skin is often linked. White people do not exist in the flesh; they are a social construction. (Feagin et al. 2001, p. 2)

THE WAGE OF WHITENESS

W. E. B. Du Bois (1868–1963) considered the economic aspects of embracing the ideology of whiteness. He brilliantly developed a concept for analyzing class—the *psychological wages of whiteness.* This concept spearheaded contemporary scholarship on the process of immigrants embracing the category of white in America. The psychological wage of whiteness meant that:

> The white group of laborers, while they received a low wage, was compensated in part by a sort of public and psychological wage. They were given public deference and titles of courtesy because they were white. They were admitted freely with all classes of white people to public functions, public parks, and the best schools. The police were drawn from their ranks and the courts, dependent on their votes, treated them with leniency as to encourage lawlessness. Their vote selected public officials, and while this had small effect upon the economic situation, it had great effect upon their personal treatment and the deference shown them (DuBois [1935] 1969, pp. 700–701).

As Noel Ignatiev suggests:

> The hallmark of racial oppression [is the reduction of] all members of the oppressed group to one undifferentiated social status, a status beneath that of any member of any social class within the dominant group.… It follows, therefore, that the white race consists of those who partake of the privileges of the white skin in this society. Its most wretched members share a status higher, in certain respects, than that of the most exalted persons excluded from it. (Ignatiev 1995, p. 1)

McKinney further notes that "in the United States whiteness is so central a social reality, so 'normal,' that most whites of all ages rarely examine the reality of their white identities and privileges. For most whites, including scholars and commentators, even the term 'American' seems to conjure up the image of a white person" (McKinney 2005, p. xii).

HOW THE IRISH AND JEWS BECAME WHITE

The Irish became white, according to Ignatiev, when they immigrated to America "in the eighteenth and nineteenth centuries [because] they were fleeing caste oppression and a system of landlordism that made the material conditions of the Irish peasant comparable to those of an American slave" (Ignatiev 1995, p. 2). The Irish, upon arrival, found themselves thrown into the neighborhoods, status, and categorization of African Americans. They quickly discovered the importance of skin color and adopted the ideology of a racial hierarchy that was pervasive in America. The Irish made a conscious choice to enter the white race.

To the Irish, embracing the country's racial ideologies offered the benefit of a degree of privilege and citizenship that was not provided to African Americans. Becoming white meant that they were not restricted to working and selling their goods in segregated areas. "It meant that they were citizens of a democratic republic and they could vote, live where they wanted to live, and spend without racially imposed restrictions. In becoming white the Irish ceased to be Green" (Ignatiev 1995, p. 3).

The Irish did not just become white because they wanted to be white; Brodkin suggests that they were assisted and supported by Jacksonian Democrats and the white elite. The willingness of the Irish to participate in organized racial violence against African Americans also contributed to their being accepted into the white racial hierarchy (Brodkin 1998, p. 65). According to Roediger, the Irish worker embraced white supremacy and thus gained popularity in America: "The success of the Irish in being recognized as white resulted largely from the political power of Irish and other immigrant voters" (Roediger 1991, p. 137).

The techniques utilized by the Irish to become white resemble the ways in which American Jews became white. For the Jews, becoming white was based on the assistance of the federal government and their willingness to embrace the white racial hierarchy and ideology. According to Brodkin, who is Jewish, all the members of her family had to learn the ways of whiteness through years of socializing with whites. "The myth that Jews pulled themselves up by their own bootstraps ignores the fact that it took federal programs to create the conditions whereby the abilities of Jews and other European immigrants could be recognized and rewarded rather than denigrated and denied" (Brodkin 1998, p. 50). Jews embraced the country's racial hierarchy, and they received aid from federal programs set in place after World War II (1939–1945). Many of the programs were designed to discriminate against African Americans who had served in the war. Jews became white and enjoyed the benefits of federal programs such as the GI Bill, the Federal Housing Administration, and the Veterans Administration. These programs overlooked and denied benefits to African Americans. And like other white ethnic groups had done in the past, to prove their commitment to embracing their white status, Jews engaged in racial violence that targeted African Americans and other people of color.

CRITIQUING "WHITE"-NESS

Brodkin and Ignatiev attribute becoming white to acquiring political, social, and economic acceptance, as well as assimilating into the American lifestyle. However, Eduardo Bonilla-Silva points out, "When race emerged in human history, it formed a social structure (a racialized social system) that awarded systemic privileges to Europeans (the peoples who became 'white').… Since actors racialized as 'white'—or as members of the dominant race—receive material benefits from the racial order, they struggle (or passively receive the manifold wages of whiteness) to maintain their privileges" (Bonilla-Silva 2003, p. 9). Those who

have become white, such as the Irish, Jews, and some white Latinos, go on to embrace the white racial hierarchy and ideology of the dominant society.

Joe Feagin similarly points out:

> In its use for human groups, the word "white" was originally defined by the English colonist mainly in contrast with "black".… White defined who the European Americans were, and who they were not. Whiteness was indeed a major and terrible invention, one that solidified white thinking into an extensive and racialized either/or framework and that came to symbolize for whites the "ownership of the earth" and "civilization." (Feagin 2006, pp. 14–15)

"Moreover," according to Feagin, "whites are collectively so powerful that they pressure all new immigrants groups, including immigrants of color, to collude in the white-racist system by adopting not only general white ways of doing and speaking … but also the white racial frame and its view of the racial hierarchy of U.S. society" (Feagin 2006, p. 292). New immigrants who come into the United States strive to speak, dress, and act white based upon the white racial hierarchy that decides who is white and who is nonwhite. Furthermore, buying into the cultural attributes of whiteness includes internalizing and supporting antiblack sentiment.

Chris Cuomo and Kim Hall suggest that because of the role of whiteness "in justifying and maintaining racism and colonialism in the United States (and, now, most of the world), whiteness is uniquely located on the racial map. For whites to fail to consider whiteness as a historical, constructed, and dynamic category is to risk treating it as normal (rather than normalizing), uniform (not immeasurably variable), paradigmatic (instead of fundamental to racism), and given (rather than dutifully maintained)" (Cuomo and Hall 1999, p. 3). In the early years of the twenty-first century, the historical techniques of becoming white are being adopted by new Latino immigrants who, for the purpose of reaping the benefits of whiteness, classify themselves as white.

SEE ALSO *Race; Racism; Whiteness*

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WHOLESALE PRICE INDEX

The Wholesale Price Index (WPI) measures average price changes over time in the stage prior to the final demand, covering therefore the flow of goods and services from the wholesaler to the retailer. Available on a daily, weekly, monthly, or quarterly basis, this index supplies information constructed from the point of view of gross transactions at the purchaser's prices, information that is useful to understand, anticipate, or coordinate the economic activity, particularly in large-scale industrial economies. Because there is a short interval between the inquiries and the public release of the indexes (the norm being divulgation two weeks after the end of the month or the quarter), the information provided by the synthesis-numbers allows producers, traders, and government officials to gauge, at a glance, the current tendencies of economic evolution. This practical and utilitarian nature is further reinforced by the fact that the Wholesale Price Index captures price movements in advance to the retail level, and is likely to foreshadow subsequent changes in the price of goods and services purchased by consumers. In vertical, integrated markets this time advance tends to be shorter in circumstances of price increases and longer in price decreases.

Historically, the revolution in transportation and communications of the late nineteenth century paved the way for the appearance of this kind of aggregate measure-

ment of prices. The connection between the network of enterprises and businessmen working out in distant regions became reinforced through the public diffusion of economic statistics such as prices composites, aggregate index of commodities, and wholesale price indices published by several U.S. newspapers. At the beginning of the twentieth century important nongovernmental institutions also set up solid reputations in the release of weekly and daily series of index numbers. The first official initiatives came out almost simultaneously in the United States (1902) and in Europe (United Kingdom, 1903), in response to parliamentary investigations into the effects of laws and tariffs on domestic prices. Japan saw the establishment of a Wholesale Price Index of Tokyo City in 1897, through the initiative of the Bank of Japan.

A major drawback of these pioneer undertakings was the proliferation of methods for computing the average price of the commodities, and also the limited coverage given by price quotations. The introduction of a system of weighting, combined with an enlarged sample of goods taken from widely distributed markets, under the responsibility of the United States Bureau of Labor Statistics in 1914 marked a new phase in the credibility of governmental agencies. Up to the present time, the formula that closely approximates the computation procedures in use around the world for weighting the "basket of commodities" comprised in the Wholesale Price Index is some variant of the index formula suggested by Etienne Laspeyres in 1871. Thanks to these developments, the scope of the Wholesale Price Index is additionally extended from a micro benchmark indicator and a reference for escalating purchase and sales contracts to a macroeconomic indicator for the formulation of fiscal and monetary policies, and to a deflator used to adjust economic time series.

SEE ALSO *Inflation; Price Indices; Prices*

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WICKSELL EFFECTS

The term *Wicksell effects* was introduced by Joan Robinson (1953, p. 95) during a debate in the theory of capital (see Kurz and Salvadori 1995, chapter 14). There is a distinction between *price Wicksell effects* and *real Wicksell effects* (henceforth, PWE and RWE). A PWE relates to a change in relative prices corresponding to a change in income distribution, given the system of production in use. A RWE in addition takes into account the problem of the choice of technique. The "changes" under consideration refer to comparisons of long-period equilibria.

Knut Wicksell (1954; 1934, pp. 147–151) discussed these effects within an "Austrian" framework of the analysis, which conceives of production as a one-way avenue of finite length leading from the services of original factors of production, in particular labor, via some intermediate products to consumption goods. Before Wicksell they had been studied by the classical economists, especially David Ricardo (*Works* I, pp. 30–43), who wrote that relative prices depend on income distribution because of the "variety of circumstances under which commodities are actually produced" (*Works* IV, p. 368). This in conjunction with the fact that "profits [are] increasing at a compound rate … makes a great part of the difficulty" (*Works* IX, p. 387). Ricardo also tackled the problem of the dependence of the chosen technique on distribution in his disquisitions on rent and on machinery (1951–1973). The classical economists and Karl Marx typically conceived of production as a *circular flow* where commodities are produced by means of commodities.

The source of PWEs can be illustrated by expressing the ratio of the prices of two commodities, *A* and *B*, by means of their "reduction to dated quantities of labour" (Sraffa 1960, chapter VI). Call p_a and p_b the prices of one unit each of two commodities, w the wage rate per unit of labor (paid *post factum*), and r the rate of interest (or profits). Then we have

$$\frac{p_a}{p_b} = \frac{wl_{a0} + (1+r)wl_{a1}}{wl_{b0} + (1+r)wl_{b1}}$$

$$\frac{+ (1+r)^2 wl_{a2} + \ldots}{+ (1+r)^2 wl_{b2} + \ldots}$$

$$\frac{+ (1+r)^n wl_{an} + \ldots}{+ (1+r)^n wl_{bn} + \ldots}$$

(On the RHS of the equation w could be eliminated.) Obviously, l_{a0} (l_{b0}) gives the amount of labor expended directly on the last stage of producing one unit of commodity a (b); l_{a1} (l_{b1}) the amount expended directly on the last but one stage; and so on. Whereas with the Austrian concept each series is finite, with the classical circular flow concept it is infinite. Because for a given system of production the rate of interest and wages are inversely related (as has already been established, albeit imperfectly, at the

time of the classical economists), a change in distribution typically affects the prices of the two commodities differently: It all depends on how the total amounts of labor expended are distributed over time—whether or not relatively much labor is expended in early periods of time and little in later ones. Because with a rise of w and the corresponding fall of r the size of each term in each of the reduction equations (except the first one) is pulled in different directions, the overall effect of a change in distribution on relative prices depends on how the time patterns of the labor inputs compare with one another, with compound interest as a magnifier.

With a choice of technique, a change in the real wage rate may prompt cost-minimizing producers to change the methods of production to produce the various commodities. This brings us to the concept of RWE. In order to be able to compare the new situation with the original one, it has to be assumed that in both situations the same net output is produced; typically the economy is taken to be in a stationary state both before and after the change. The questions to be answered are: (1) which technique will be chosen in the new situation?; (2) what will then be the level of the other distributive variable and the set of normal prices?; and, most importantly, (3) is it possible to say anything definite about how the two situations compare with one another?

To illustrate RWEs, we may refer back to the equation above, but now A and B stand for two different processes of production of a *given* commodity available to producers. In competitive conditions the method chosen will be the one that allows one to produce the commodity at lower unit costs and thus a lower price.

Marginalist theory, of which Austrian theory is but a variant, maintains that both effects are positive. A *positive PWE* means that with a rise (fall) in the rate of interest, consumption goods will become relatively more (less) expensive compared with capital goods. The reason given is that consumption goods are said to be produced more capital intensively than are capital goods, because consumption goods emerge at the end of the production process, whereas capital goods are intermediate products that gradually "mature" towards the final product. The higher (lower) the rate of interest, the less (more) expensive the intermediate products in terms of a standard consisting of a (basket of) consumption good(s). At the macro level of a stationary economy (in which the net product contains only consumption goods), this implies that with a rise in the rate of interest, the value of the net social product rises relatively to the value of the aggregate of capital goods employed. Clearly, seen from the marginalist perspective, a positive PWE with regard to the relative price of the two aggregates under consideration involves a negative relationship between the aggregate capital-to-net output ratio on the one hand and the interest rate on the other. Let $K/Y = \mathbf{xp}(r)/\mathbf{yp}(r)$ designate the capital-output ratio, where $\mathbf{x}$ is the row vector of capital goods, $\mathbf{y}$ the row vector of net outputs, and $\mathbf{p}(r)$ the column vector of prices (in terms of the consumption vector) which depends on r); then the marginalist message is:

$$\frac{\partial(K/Y)}{\partial r} \leq 0 \qquad \text{(I)}$$

Because for a given system of production the amount of labor is constant irrespective of the level of the rate of interest, the ratio of the value of the capital goods and the amount of labor employed, or capital-labor ratio, K/L, would also tend to fall (rise) with a rise (fall) in the rate of interest:

$$\frac{\partial(K/Y)}{\partial r} \leq 0 \qquad \text{(II)}$$

This is the first claim marginalist authors put forward. The second is that RWEs are also positive. A *positive RWE* means that with a rise (fall) in the rate of interest, cost-minimizing producers switch to methods of production that generally exhibit higher (lower) labor intensities, "substituting" for the "factor of production" that has become more expensive—"capital" (labor)—the one that has become less expensive—labor ("capital"). Hence (II) is said to apply also in this case. The assumed positivity of the RWE underlies the marginalist concept of a demand function for labor (capital) that is inversely related to the real wage rate (rate of interest).

Careful scrutiny of the marginalist argument has shown that it cannot be sustained generally: There is no presumption that PWEs and RWEs are invariably positive. In fact, there is no presumption that techniques can be ordered monotonically with the rate of interest (Sraffa 1960). As Mas-Colell (1989) stressed, the relationship between K/L and r can have almost any shape. The finding that PWEs and RWEs need not be positive challenges the received doctrine of the working of the economic system as it is portrayed by conventional economic theory with its reference to the "forces" of demand and supply.

SEE ALSO *Cambridge Capital Controversy; Capital*

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Heinz D. Kurz

WIDOW'S CRUSE

The term *widow's cruse* was first used in economics by John Maynard Keynes (1930, p. 139) in the presentation of his fundamental equations. Keynes argued that enterprise macroeconomic profits, as he defined them there, or what we would now call "business retained earnings," moved up one-to-one with increases in investment and increases in consumption out of profits. Thus, Keynes argued that "however much of their profits entrepreneurs spend on consumption, the increment of wealth belonging to entrepreneurs remains the same as before. Thus profits, as a source of capital increment for entrepreneurs, are a widow's cruse which remains undepleted however much of them may be devoted to riotous living" (p. 139). Keynes was then making a reference to the Old Testament story (1 Kings 17) in which a widow was assured that her barrel of meat and jar of oil would never be depleted.

The analogy was later picked up by Nicholas Kaldor (1956), when he presented his Keynesian theory of income distribution and growth. Both Keynes (1930) and Kaldor (1956) assumed full employment. For both of them, lower propensities to save would lead to an increase in prices relative to costs, and this would entail higher profits in the static case of Keynes and higher profit share and profit rates in the dynamic case of Kaldor.

In the meantime, another version of the widow's cruse was put forward by Michał Kalecki (1942), without the full-employment assumption, based on adjustments through quantities (real output and employment) rather than prices. Kalecki's equation reads that *Profits* = *Investment* + *Consumption Out of Profits*, under the classical assumption that wages are all spent. Taking the public sector into account, government deficit should be added to the right-hand side. Kalecki's equation has given rise to the aphorism—attributed to Kalecki, but which can be found in Kaldor (1956, p. 96)—that "capitalists earn what they spend, and workers spend what they earn." This aphorism shows the asymmetry in capitalist relations: Capitalists can always decide to spend more (provided banks accept to finance additional investment), whereas workers cannot decide to earn more, because this depends on the employment they are offered by entrepreneurs. Modern versions of this quantity-adjusting theory can be found in the so-called Kaleckian models of growth, which show that a decrease in the propensity to save leads to higher rates of output growth and higher rates of profit.

The widow's cruse is the price-adjusting equivalent of the quantity-adjusting paradox of thrift. With output adjusting through the multiplier, the short-run version of the paradox of thrift asserts that individual efforts to increase saving will be useless, and that, instead, output will fall, as was outlined by Keynes in 1936. But this is simply the quantity analogue of the mechanisms he was describing in 1930 as the "Danaid jar," which can never be filled up, or the "banana parable," whereby a thrift campaign in a banana-producing economy will lead only to rotten bananas, heavy business losses, large unpaid bank loans, and destroyed wealth.

The widow's cruse is just as relevant now as it was at the eve of the Great Depression. Mainstream economists and right-wing think tanks are still chanting the virtues of household savings and government budget surpluses, without realizing that household expenditures have sustained the U.S. economic boom and that government deficits add to business profits. The issue of public pension-funds finance is also related to the widow's cruse, which implies that such funds can only be financed as a pay-as-you-go redistribution mechanism: If one attempts to save too much, the savings will vanish like the rotten bananas.

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Marc Lavoie

WILLIAMS, ERIC
1911–1981

Eric Eustace Williams was chief minister, premier, and prime minister respectively of Trinidad and Tobago from 1956 to 1981. He was also one of the Anglophone Caribbean's first professionally trained historians. Several outstanding self-trained historians preceded him. Edward

Wilmot Blyden (1832–1912) of Saint Thomas, J. J. Thomas (1840–1889) of Trinidad, J. A. Rogers (c. 1883–1966) of Jamaica, Theophilus A. Marryshow (1887–1958) of Grenada, C. L. R. James (1901–1989) and George Padmore (1903–1959) of Trinidad, and Norman Eustace Cameron (1903–1983) of Guyana were among his precursors and contemporaries. Most of these men had no university training or had studied subjects other than history. When Eric Williams graduated first among the firsts at Oxford University in 1935 and went on to obtain his D.Phil. there in 1938, he ushered in a new era in Anglophone Caribbean historical scholarship.

Williams grew up in Port of Spain, the son of a minor civil servant. He had a distinguished academic record from childhood and won an island scholarship, the ultimate achievement of high school excellence. This entitled him to a free university education, and he broke with tradition by choosing to read history, rather than the law or medicine favored by scholarship winners before and after him. Along the way Williams experienced an unusually eclectic array of influences. C. Augustin Petioni, later a pioneer of Marcus Garvey's (1887–1940) Universal Negro Improvement Association and a leader of the Caribbean independence movement in the United States, was a friend of his father. So was T. A. Marryshow, a pioneer journalist and the "father of West Indian federation." Williams's brilliance in elementary school brought him the long-standing patronage of Englishman J. O. Cutteridge, arguably the most important figure in the era of colonial education in Trinidad, but a man much disliked in nationalist circles. At Queens Royal College in Port of Spain, C. L. R. James, later one of the outstanding intellectual figures of his generation, was both Williams's teacher and a fellow member of the school's cricket team.

While at Oxford, Williams interacted extensively with James, Padmore, and their coterie of Pan-Africanist (and often Marxist) radicals. He interested himself in the affairs of various nationalist groups, including those of Indian students. As an Afro-Caribbean person in England he inevitably came into contact with racism.

In 1939 Williams began teaching at Howard University, America's most prestigious African American university at the time. Here he interacted with a cast of brilliant scholars, among them Alain Locke (1886–1954), Ralph Bunche (1886–1954), Rayford Logan (1897–1982), and E. Franklin Frazier (1894–1962). Williams distinguished himself even in this distinguished crowd. Two Rosenwald fellowships enabled him to pay research visits to the non-English speaking territories of the Greater Antilles. He won the *Journal of Negro History*'s prize for best article of 1940. His first book, *The Negro in the Caribbean*, appeared in 1942 in a series edited by Locke. His second, *The Economic Future of the Caribbean*, coedited with Frazier, was published in 1944. In 1944 his magnum opus, *Capitalism and Slavery*, was published by the University of North Carolina Press.

Capitalism and Slavery, a revised version of Williams's doctoral dissertation, assured him a position of preeminence in Caribbean historiography. It demonstrated in exhaustive detail how the unprecedented profits generated by the slave trade in Africans provided the economic wherewithal for the Industrial Revolution in England. Williams argued that the productive forces unleashed by the Industrial Revolution in turn eventually made slavery itself obsolete. For the new industrial and technological age, slavery had become an outmoded form of production and a brake on development. Slavery was abolished in the British Empire as a result of these economic forces. The abolitionist "saints" of British historiography were not primarily responsible for abolitionism. Theirs was a secondary role, which, happily for them, happened to coincide with the economic necessity of the time. *Capitalism and Slavery* was hailed as a masterpiece in some quarters and as an unwarranted attack on cherished orthodoxy in others. The battle over this book has never subsided.

Williams's book was doubtless influenced by his very unique attributes. Here was an Afro-Caribbean colonial who had beaten the best that the mother country had to offer, in the most prestigious of English universities. He had also indulged actively in the radical anticolonial activity of the time. He acknowledged C. L. R. James as the source of the thesis that underlay his book. James's *The Black Jacobins* (1938) had posited a similar idea for the French colonial empire, and Williams had helped James work on this book. Williams's years in the United States, while he revised his dissertation, were also a period of constant contact with Caribbean and African American radicals, as well as with such establishment institutions as the Anglo-American Caribbean Commission and the Organization for Strategic Services, a U.S. espionage agency (for both of which Williams worked). Williams was a full-time official for the Anglo-American Caribbean Commission (later the Caribbean Commission) from 1946 to 1955. In this capacity he crisscrossed the Caribbean and researched a huge swath of Caribbean economic and social life. This complemented his already deep knowledge of the area's history. There was probably no one else who could rival his historical and contemporary knowledge of the area.

The excellence of *Capitalism and Slavery* and Williams's many articles in scholarly journals did not open the door to major publishers. The University of North Carolina Press required him to pay a considerable subsidy, which he was able to raise only after several months of effort. It would be a quarter of a century before another major publisher would do the first printing on any of his

books. Various subsequent publishing proposals came to naught. His manuscript on *Education in the British West Indies* remained unpublished for years until he published it in Trinidad in 1950. Between 1944 and 1969 Williams nevertheless authored or edited nine important works, all published directly or indirectly through his own efforts. Some were published under the auspices of his Historical Society of Trinidad and Tobago. Some were published by the press of the Peoples National Movement (PNM), the political party that took him to political power in Trinidad in 1956. In 1969 André Deutsch published Williams's autobiography, *Inward Hunger*, the first of his books to be initially released by a major publisher in twenty-five years.

Williams wrote history with a passion matched by few professional historians. For him history was a tool of the anticolonial struggle and a stepping stone to politics. His *Historical Society of Trinidad and Tobago* brought history to the masses in the early 1950s. He spread the society's work with the same energy that had characterized his efforts to promote *Capitalism and Slavery*. (He bought copies from the publishers and resold them himself through a network of friends and helpers). His *Education in the British West Indies* (1950) was a manifesto for a Caribbean university. His *History of the People of Trinidad and Tobago* (1962) was an independence gift to his nation written, in between his political duties, in one month.

The professional Anglophone historians who followed Williams were often ambivalent toward his historical activism. Elsa Gouveia, the doyenne of the first generation of indigenous historians at the University of the West Indies, vitriolically denounced his *British Historians and the West Indies* (1964) for substituting "new shibboleths for old." Williams envisaged this work as an exposé of the "prejudices of metropolitan historians."

Williams's last major work, *From Columbus to Castro* (1970), was a survey textbook for university students. He had worked on it for years. It was vintage Williams, with a lively dogmatic style and a heavy bias toward economic history. It reflected his strengths in the colonial period, but was less detailed on the twentieth century.

Williams's many important works do not provide a complete picture of his historical activity. He published voluminously in academic and popular publications, and issued many of his political speeches as pamphlets. The *Caribbean Historical Review*, published under the auspices of his Historical Society of Trinidad and Tobago, released four issues between 1950 and 1954.

SEE ALSO *Anticolonial Movements; Capitalism; Industrialization; James, C. L. R.; Plantation; Plantation Economy Model; Slavery*

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Tony Martin

WILMINGTON RIOT OF 1898

American history is filled with violent racial conflict, oftentimes justified by the perpetrators as necessary to protect (or avenge) honor, life, or property. The Wilmington Riot of 1898 was not an act of spontaneous

violence. Rather, the events of November 10, 1898, were the culmination of a long-range plan by Democratic Party leaders to win control of the city of Wilmington and North Carolina. The party leadership used the concept of white supremacy to regain power lost as a result of a Populist and Republican coalition known as Fusion. Fusionists gained control of the General Assembly in 1894, and, in 1896, elected Daniel Russell as the state's first Republican governor since 1877. In 1897 Fusionists made sweeping changes to the city's charter and state government in favor of African Americans and middle-class whites. Wilmington, the state's largest city, sustained a complex, wealthy society for all races, with African Americans holding elected office and working in professional and mid-range occupations vital to the economy.

Furnifold Simmons led the State Democratic Party campaign of 1898. Josephus Daniels of the Raleigh *News and Observer* noted that Simmons used a three-prong attack to win the election: men who could write, speak, and "ride." Men who could write created propaganda for newspapers. Men such as Alfred M. Waddell gave fiery speeches to inflame white voters. Men who could ride, known as Red Shirts, intimidated blacks and forced whites to vote for Democratic Party candidates. Democrats from across the state took special interest in securing victory in Wilmington. A group of white businessmen, called the "Secret Nine," planned to retake control of the city and mapped out a citywide plan of action.

Further fueling the Democratic Party's agitation was an article by Alex Manly, editor of the *Wilmington Record*, the city's African American newspaper. Manly challenged white taboos regarding interracial sexual relationships, and his article became a tool used by Democrats to further anger whites. Democrats won the election, and the next day a group of whites passed a series of resolutions requiring Alex Manly to leave the city and close his paper, and called for the resignations of the mayor and chief of police. A committee of men led by Waddell was selected to implement the set of resolutions, called the White Declaration of Independence. The committee presented its demands to a Committee of Colored Citizens (CCC)—prominent local African Americans—and asked for compliance by the next morning, November 10, 1898.

Waddell met a crowd of men at the Wilmington Light Infantry (WLI) Armory at 8:00 a.m. on the tenth. Delayed response from the CCC and growing tensions led to a march by Waddell and as many as 2,000 whites to the *Record* printing office where they broke in and burned the building. By 11:00 a.m., violence had broken out across town at an intersection where groups of blacks and whites argued. Shots rang out and several black men fell dead or wounded—both sides claimed the other fired the first shot with two "witnesses" providing conflicting testimony. Governor Russell called out the WLI, a home guard militia unit, and they marched into Brooklyn to calm the riot where they participated in skirmishes and killed several black men.

During the riot, members of Waddell's committee plus George Rountree, John D. Bellamy, and others worked to facilitate a coup d'etat to overthrow the municipal government. By 4:00 p.m., elected officials were forced to resign under pressure and were replaced by men selected by leading Democrats. Waddell was elected mayor by the newly seated board of aldermen. Additionally, leading African Americans and white Republicans were banished from the city over the next days. Besides the primary target of Alex Manly, men selected for banishment fit into one of three categories: African American leaders who were open opponents to white supremacy, successful African American businessmen, and whites who benefited politically from African American voting support. No official count of dead can be ascertained due to a paucity of records. At least 14 and perhaps as many as 60 men were murdered.

State and federal leaders failed to react to the violence in Wilmington. No federal troops were sent because President William McKinley received no request for assistance from Governor Russell. The U.S. Attorney General's Office investigated, but the files were closed with no indictments in 1900. African Americans nationwide rallied to the cause of Wilmington's blacks and tried to pressure President McKinley into action. However, many leading blacks were split on the best solution to the "Negro problem" and no nationwide campaign materialized.

Democrats solidified their control over city government through a new city charter in January 1899. Waddell and the board of aldermen were officially elected in March 1899 with no Republican resistance. The new legislature enacted the state's first Jim Crow legislation regarding the separation of races in train passenger cars. A new suffrage amendment that disfranchised black voters was added to the state constitution by voters in 1900. The Democratic legislature overturned Fusion and placed control over county governments in Raleigh. New election laws limited Republican power in the 1900 election. Democrats controlled local and statewide affairs for the next seventy years after victory in 1898.

Inside Wilmington, out-migration following the violence negatively affected the ability of African Americans to recover. Black property owners were a minority of the overall black population before the riot, and property owners were more likely to remain in the city. An African American collective narrative developed to recall the riot and place limits on black/white relationships for future generations. White narratives claimed that the violence was necessary to restore order, and their narrative was perpetuated by most historians.

Wilmington marked a new epoch in the history of violent race relations in the U.S. Several other high profile riots followed Wilmington, most notably Atlanta (1906), Tulsa (1921), and Rosewood (1923). All four communities dealt with the aftermath of their riots differently. Whites in Tulsa and Atlanta addressed the causes and some effects of violence and destruction soon after their events; Wilmington whites provided compensation only for the loss of the building housing Manly's press.

SEE ALSO *Democratic Party, U.S.; Jim Crow; Race Relations; Race Riots, United States; Racism; Republican Party; Terror; Tulsa Riot; Violence; White Supremacy*

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LeRae S. Umfleet

WILSON, WILLIAM JULIUS
1935–

William Julius Wilson is an African American sociologist who is most noted for his work in urban sociology and his study of the black urban underclass. He was born December 20, 1935, in Derry Township, Pennsylvania, and he received a BA from Wilberforce University, an MA from Bowling Green State University, and a PhD from Washington State University. He began his professional career at the University of Massachusetts at Amherst, where he wrote his first book on the African American community. He continued his research and wrote his most influential treatise while a professor at the University of Chicago. As of the mid-2000s he was Lewis P. and Linda L. Geyser University Professor at Harvard University.

In his book *The Declining Significance of Race: Blacks and Changing American Institutions* (1980) Wilson posits that although past racial oppression created an urban black underclass, the black class structure is now parallel to that of whites. Therefore, blacks' life chances are now more a function of their economic class status than of race relations with whites. Consequently, race-specific programs such as affirmative action improve the life chances of middle-class blacks who are in the position to take advantage of the programs. Although Wilson does not deny the existence of racism, he suggests that programs designed to lessen the effects of poverty on all races, rather than race-specific policies, would better serve the needs of the urban black underclass, and are more likely to receive political acceptance.

Jack Niemonen (2002) argued that Wilson's historical analysis was underdeveloped, and that his concentration on aggregate labor market inequality underscores the effect of persistent racism and discrimination in the workplace. In addition, Wilson (1980) noted other reactions to his work. Political conservatives embraced Wilson's theory as evidence of social pathology in the black community and as support for discontinuance of affirmative action–type programs. They attributed problems of the inner city such as high crime rates, poverty, and high rates of female-headed families to underclass culture and welfare policies. Sociologists criticized Wilson for his disregard of racism when segregation in housing and education still hampered opportunities for blacks, as well as for the perceived public-policy implications of his treatise. They sought evidence to counter Wilson's claims of the existence of an underclass, and argued that social problems in the inner cities were caused by racism (summarized in Wilson 1980; 1987).

Wilson (1987) rejects liberal claims of racism and conservative claims of welfare policies and social pathology as the cause for inner-city social problems. Instead, he offers as explanation the economy-driven factors of urban black male unemployment, the male marriageable pool index (MMPI), social isolation, and negative concentration effects (negative consequences of the spatial and social isolation of impoverished African Americans). He also acknowledges some negative behaviors of ghetto inhabitants such as drug pushing and diminished work ethic, but continues to reject racism or social pathology as the cause (Wilson 1996). He posits that the global economy has a negative "domino effect" on the urban poor: When urban jobs are lost to suburbia and foreign countries, spatial and skills mismatch occurs, the tax base in the cities dwindle, public services such as education suffer, working- and middle-class blacks flee the city, and poorly educated blacks who possess no job skills eventually aban-

don their job searches for public assistance, and/or work in the illegal economy (Wilson 1996).

Critics argue that Wilson's application of John Kain's (1968) spatial mismatch hypothesis is limited for the following reasons: Residential segregation enhances the effect of spatial mismatch; employers' decisions determine black employment in local jobs; there are numerous methodological inconsistencies; and because of the lack of black human capital and the simultaneous existence of immigrant social capital (Niemonen 2002). Another researcher, Michael Stoll, points out that racial discrimination contributes to the disparity between employment rate of suburban black males who reside in close proximity to available jobs and that of comparably educated white males (Stoll 1998). Others explain that the diminished work ethic earlier noted is a function of the lack of structural opportunities available to the black inner-city poor (Gould 1999) and the negative perception of employers towards inner-city black men (Kirschenman and Neckerman 1991). Mark Gould contends that if educational and employment opportunities become more available to the urban underclass, their attitudes towards work are likely to change as well (1999).

Finally, Wilson (1999) addresses the growing schism between the elite class and the dwindling middle class. He maintains that the middle and working classes, regardless of racial group, fail to see that racial division not only worsens the conditions of the black urban poor, it also exacerbates the political and economic disparity between the elite and nonelite classes. He recommends a grassroots multiracial coalition and affirmative opportunity programs based on merit that are neither race nor class specific.

Overall, Wilson's major contribution to social science has been his illumination of the devastating effect that the global economy has had on the urban black community. Yet, his focus on class averts attention away from his agenda of improving the life chances of the ghetto inhabitants, as well as from the persistent racism and discrimination experienced by this group and other African Americans. Nevertheless, his scholarship redirected the academic community's attention to the plight of the black urban poor.

SEE ALSO *Poverty; Social Exclusion; Sociology, Urban; Spatial Theory; Underclass; Urban Studies*

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Yolanda Y. Johnson

WILSON, WOODROW
1856–1924

Thomas Woodrow Wilson was the twenty-eighth president of the United States of America. He served as president from March 4, 1913, until March 3, 1921. Wilson was born in Staunton, Virginia, on December 28, 1856, and died in Washington, D.C., on February 3, 1924.

Wilson was the son of a prominent Presbyterian minister and grew up in Georgia and South Carolina. Wilson attended Davidson College in North Carolina and was graduated from Princeton University in 1879. He studied law at the University of Virginia and earned a PhD in political science from Johns Hopkins in 1886. He later taught at Princeton and became its president in 1902.

Well-known for his support of progressive causes and his academic reforms at Princeton, Wilson was elected governor of New Jersey as a Democrat in 1910. Wilson attracted favorable national attention from progressive Democrats for his eloquence, integrity, and opposition to machine politics and from southern Democrats for his support of a "states' rights" position that argued that Southern states should be free to pursue their own policies

of racial segregation. Supported by former Democratic presidential nominee William Jennings Bryan, Wilson received the Democratic presidential nomination of 1912. Calling his progressive platform *the New Freedom*, Wilson emphasized a more competitive, decentralized economy, lower tariffs, and states' rights. Wilson was elected president with 42 percent of the popular vote when most voters divided their support between Republican president William H. Taft and Theodore Roosevelt, the Progressive Party's nominee and a former Republican president.

Wilson revolutionized the rhetorical role of the American president by personally addressing Congress about his legislative proposals and, later, conducting national speaking tours to promote his foreign policy. Wilson, however, also strengthened racial segregation in Washington, D.C., and admired the romanticized portrayal of the Ku Klux Klan in the silent film *Birth of a Nation*. In domestic policy, Wilson secured passage of major economic reform legislation. The Federal Reserve Act of 1913 decentralized and stabilized the national money supply by broadly distributing federal bank notes among several reserve banks. The Federal Trade Commission Act of 1914 promoted consumer protection and regulated interstate business behavior in order to eliminate, punish, and deter anticompetitive practices. Promoted by Wilson in order to prevent a national railroad strike, the Adamson Act of 1916 required an eight-hour workday for railroad workers.

Having adopted some of the Progressive Party's 1912 platform through his legislation, Wilson was narrowly reelected in 1916 after he secured California's electoral votes. His neutrality in World War I (1914–1918), summarized by the campaign slogan "He Kept Us Out of War," also helped his reelection. After Germany resumed unrestricted submarine warfare in 1917 and tried to form an anti-American alliance with Mexico, Wilson secured a declaration of war from Congress on April 6, 1917.

Wilson believed that U.S. military and diplomatic efforts should be devoted to making World War I the "war to end all wars" and the war "to make the world safe for democracy." In a speech to Congress on January 8, 1918, Wilson announced his Fourteen Points as the basis for establishing a just, lasting peace in Europe. These principles and objectives included national self-determination, freedom of the seas, and the creating of a League of Nations to enforce the peace after World War I. Unfortunately for Wilson, Britain and France opposed major elements of the Fourteen Points, especially national self-determination, which threatened their empires. Nonetheless, the League of Nations was included in the Treaty of Versailles of 1919, which officially ended World War I. For his diplomatic efforts, Wilson received the Nobel Peace Prize of 1919.

Some of Wilson's critics perceived his egotistical, self-righteous refusal to compromise with Republican senators, especially Henry Cabot Lodge, to be the primary reason why the Senate rejected an active role for the United States in the League of Nations. While conducting a national speaking tour to increase public support for the League of Nations, Wilson suffered a severe stroke on October 2, 1919. The extent and nature of Wilson's physical and mental disability were kept hidden from the vice president, cabinet, Congress, and the press by his second wife, Edith Wilson. As the Republicans prepared for landslide victories in the 1920 presidential and congressional elections, the nation experienced a Red Scare, labor disputes, and high inflation. After he left the White House in 1921, Wilson continued to live in Washington, D.C., until his death in 1924.

SEE ALSO *League of Nations; Nobel Peace Prize; United Nations; World War I*

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Sean J. Savage

WINNER-TAKE-ALL SOCIETY

In conventional labor markets, reward is proportional to absolute performance, which in turn is generally modeled as proportional to human capital—an amalgam of talent, experience, education, training, and other factors that affect productivity. Thus, in the classic piece-rate scheme, a worker who assembles 101 widgets in a week gets paid 1 percent more than a coworker who assembles only 100. In contrast, a winner-take-all market is one in which small differences in performance often translate into very large differences in economic reward.

The winner-take-all perspective urges us to look first to the nature of the positions people hold, rather than to their personal characteristics. An economist under the influence of the human capital metaphor might ask: Why not save money by hiring two mediocre people to fill an important position instead of paying the exorbitant salary required to attract someone unusually good? Although

that sort of substitution might work for jobs involving routinized tasks and flexible staffing arrangements, it often will not be feasible in the professions. Two average surgeons or CEOs or novelists or quarterbacks are often a poor substitute for a single gifted one. The result is that for positions for which additional talent has great value to the employer or the marketplace, there is no reason to expect that the market will compensate individuals in proportion to their human capital. For these positions—ones that confer the greatest leverage or "amplification" of human talent—small increments of talent have great value and may be greatly rewarded as a result of the normal competitive market process.

Technology has greatly extended the power and reach of the planet's most gifted performers. The printing press let a relatively few gifted storytellers displace millions of village raconteurs. Now that we listen mostly to recorded music, the world's best musicians can be everywhere at once. The electronic newswire has allowed a small number of syndicated columnists to displace a host of local journalists. And the proliferation of personal computers enabled a handful of software developers to replace thousands of tax accountants.

The dependence of economic reward on performance ranking is nothing new; what is new is the rapid erosion of the barriers that once prevented the top performers from serving broader markets. The global marketplace has been fostered by the reduction in trade barriers, vast improvements in information transmission and processing, the almost universal adoption of English as the language of business, and the emergence of a common popular culture.

Winner-take-all markets can be wasteful to the extent that they induce contestants for high rank to engage in costly and mutually offsetting investments to obtain positional advantage. In such cases, "positional arms control" schemes may reduce waste and improve economic efficiency. Such schemes range from market-specific policies, such as steroid bans for athletes and caps on the tax deductibility of executive compensation, to more general policies such as progressive income taxation.

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Robert H. Frank
Philip J. Cook

WINNER'S CURSE

The winner's curse story begins in 1971 when Edward Capen, Robert Clapp, and William Campbell, three petroleum engineers, wrote an article in which they claimed that oil companies suffered unexpectedly low returns "year after year" in early Outer Continental Shelf (OCS) oil lease auctions. OCS auctions are common value auctions where the value of the oil in the ground is essentially the same to all bidders. Bidders have their own estimate of the (unknown) value at the time that they bid. Even if these estimates are unbiased, bidders must account for the informational content inherent in winning the auction: the winner's estimate of the common value is (one of) the highest estimates. If bidders ignore this *adverse selection effect* inherent in winning the auction, it will result in below normal or even negative profits. The systematic failure to account for this adverse selection effect is referred to as the winner's curse: you win, you lose money, and you curse. (Unfortunately, many economists, particularly theorists, characterize the winner's curse as the difference between the expected value of the item conditional on the event of winning and the unconditional, naive expectation, using the term to refer to bidders fully accounting for this difference, rather than failing to do so and losing money as a consequence.)

Similar claims regarding a winner's curse have been made in a variety of other contexts: book publication rights, professional baseball's free agency market, corporate takeover battles, and real estate auctions (see chapter 1 in John H. Kagel and Dan Levin's 2002 book *Common Value Auctions and the Winner's Curse*). These claims have traditionally been greeted with a good deal of skepticism by economists as they imply that bidders repeatedly err, thus violating basic notions of economic rationality. It is exceedingly difficult to support claims of a winner's curse with field data because of data reliability problems and plausible alternative explanations.

The ambiguity inherent in interpreting field data, and the controversial nature of the winner's curse, provided the motivation for experimental investigations on the subject. Initial experiments conduced by Max H. Bazerman and William F. Samuelson in 1983 showed that inexperienced bidders are quite susceptible to the winner's curse in a corporate takeover game. John H. Kagel and Dan Levin found similar results in 1986 in first-price sealed-bid common value auctions. Subsequent experiments have focused on the robustness of the phenomena and features of the environment that might attenuate its effects. Does the commonly known presence of an "insider" who knows the true value of the item attenuate the winner's curse? (No, it does not.) Do open outcry (English) auctions in which bidders with higher value estimates gain information as a consequence of lower valued

bidders dropping out attenuate the winner's curse? (Yes, to some extent, but this experience does not transfer into doing better in sealed-bid auctions.) Are subjects who have learned to avoid the winner's curse in auctions with relatively few (four) bidders able to avoid it in auctions with larger numbers of rivals (seven) with its more severe adverse selection effect? (No, they are not.) Thus, although bidders are able to avoid the winner's curse with enough experience, this learning appears to be context specific, so that it does not easily generalize to related environments.

Research has also focused on key public policy issues. As theory predicts, public information that is correlated with the common value raises seller's revenue in first-price sealed-bid auctions in the absence of a winner's curse (i.e., for experienced bidders), but contrary to the theory lowers revenue for less experienced bidders who still suffer from a winner's curse. English auctions, where public information is released endogenously, have the same effect. Finally, there are striking parallels between laboratory outcomes and anomalous findings from field data, along with experiments in which experienced industry executives in the laboratory suffer to the same extent from the winner's curse as do student subjects, which lead most scholars and a number of other observers to believe that the winner's curse is alive and well both inside and outside the laboratory (Kagel and Levin, 2002).

SEE ALSO *Adverse Selection; Auctions; Economics, Experimental; Expected Utility Theory; Rationality*

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John H. Kagel
Dan Levin

WIZARD OF OZ

The book *The Wonderful Wizard of Oz* (1900) and its film adaptation *The Wizard of Oz* (1939) quickly became a foundational element in American popular culture with countless idiomatic allusions, cultural references, and pervasive merchandizing. Lyman Frank Baum wrote seventeen sequels comprising the Oz series, though none repeated or surpassed the popularity of the first book. The film launched actress Judy Garland's stardom; she won an Academy Award and made the song "Somewhere Over the Rainbow" popular and famous, earning it recognition as the number one song of the twentieth century. Since the 1950s, the film has aired continuously on network and cable television. These airings, with few exceptions, became an annual tradition and continued through 2002. Sidney Lumet directed an African American stage version in 1978; *The Wiz* starred pop-music icons Diana Ross and Michael Jackson as Dorothy and the Scarecrow, respectively. In 1998 *The Wizard of Oz* ranked sixth out of one hundred in an American Film Institute poll; it was the highest ranked musical in the genre of fantasy and family movies. Through the first half decade of the 2000s, it continued to generate academic and mainstream books, journal articles, CD music releases, videocassette releases, websites, blogs, merchandizing, and a remastered digital DVD release.

Baum was born on May 15, 1856, in Chittenango, New York. He suffered a stroke and died on May 5, 1919. Many biographies exist detailing his life and work. The success of the Oz books prompted a musical adaptation for the stage. *Oz* (1902) became very popular and toured for nine years. The film *The Wizard of Oz* was adapted from Baum's first book, other books in the series, and stage scripts.

The basic storyline details the adventures of a young girl named Dorothy as a tornado transports her and her dog to the magical land of Oz, where she encounters and befriends interesting characters and experiences a range of adventures, some of which are frightening, even gruesome, and others humorous. The characters most remembered are Dorothy; her dog Toto; the Munchkins; the Scarecrow; the Tin Man; the Cowardly Lion; the Wizard of Oz; Glinda, the Good Witch of the North (Glinda is from the South in the book); and the main villain, the Wicked Witch of the West. The film is mostly true to the original books, though one key difference is that the land of Oz and the Emerald City are real places in the books, but the film indicates that these places are fantasy and only exist in Dorothy's dream, which occurs as a result of a bump on the head. This notion is portrayed through the contrast of the dual-tone sepia segments, which depict real-life Kansas, and the Technicolor® segments, which depict the land of Oz. Also, the same actors who play the role of the farm hands play the roles of the major land of Oz characters.

The most noted dialogue that has worked its way into American popular culture includes the sayings: "Toto, I've

got a feeling we're not in Kansas anymore," "Follow the yellow brick road," and "Pay no attention to the man behind the curtain." The first line has appeared in many variations in movies, television sitcoms, and skits. One of the most famous yellow brick road references is pop singer Elton John's 1973 album *Goodbye Yellow Brick Road*. "The man behind the curtain" has been used in reference to conspiracy theories and political scandals, including the Kennedy assassinations, Watergate, Iran-Contra, and suspicions of voter fraud in the 2000 U.S. presidential election.

There have been several scholarly interpretations of the story and film, including Daniel Dervin's 1978 Freudian interpretation, in which Dorothy's journey is symbolic of a sexual coming of age; Darren John Main's 2000 Jungian interpretation, in which Dorothy's journey is emblematic of archetypal spiritual journeys; and Lynette Carpenter's 1985 analysis, which presents the film as embodying U.S. isolationist tendencies during the dawn of World War II. The most acclaimed interpretation is Henry M. Littlefield's 1964 view of the story as allegory for the gold versus silver standard debate, political populism, and William Jennings Bryan's presidential run. For Littlefield, "*The Wonderful Wizard of Oz* has provided unknowing generations with a gentle and friendly Midwestern critique of the Populist rationale.… [L]ed by naive innocence [Dorothy] and protected by good will [Glinda], the farmer [Scarecrow], the labourer [Tin Man] and the politician [Bryan in particular] approach the mystic holder of national power [the Wizard] to ask for personal fulfilment" (pp. 57–58).

Another Populist perspective exists between the film and the New Deal. The lyricist for all the songs in the film was E. Y. "Yip" Harburg (1896–1981), who wrote the Great Depression anthem "Brother, Can You Spare a Dime?" He also helped shape most of the story. Harburg claimed that the Emerald City represented the New Deal. In 1990 Francis MacDonnell extended this interpretation, stating that the Wizard represents New Deal president Franklin D. Roosevelt. In the same way that the Wizard shows Dorothy and her friends that they always had the qualities they were in search of, President Roosevelt demonstrated that the American people held the solutions to their problems and restored their self-confidence.

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Jeff Williams

WOLF, ERIC
1923–1999

Anthropologist Eric Robert Wolf was born in Vienna, Austria, in 1923 and died in Irvington, New York, in 1999. The son of an Austro-Russian marriage, Wolf passed a cosmopolitan childhood in Vienna and the Sudetenland before being sent to school in England as Adolf Hitler's (1889–1945) destruction loomed. After emigrating with his parents to New York, he served in World War II (1939–1945). After the war, Wolf completed his undergraduate degree at Queens College (1946) and a PhD at Columbia University (1951), both in anthropology. Along with returning veterans such as Morton Klass (1927–2001), Robert F. Murphy (1924–1990), Stanley Diamond (1922–1991), and others, Wolf formed the Mundial Upheaval Society to discuss the influence of classical social theory, especially Marxism, in the social sciences. During early fieldwork in Puerto Rico and Mexico, Wolf combined Marxian and Weberian frameworks with Middle European political-economic debates arising from the 1917 Russian Revolution, examining the praxis of grounded power relations. From this work emerged contributions to anthropologist Julian Steward's (1902–1972) *People of Puerto Rico* (1956), and Wolf's classic *Sons of the Shaking Earth* (1959), which synthesized archaeological and ethnohistorical knowledge of Mesoamerican civilization within a class-sensitive framework. Wolf also authored or coauthored groundbreaking articles that addressed the history and sociology of cultural forms—for example, the Virgin of Guadalupe, *compadrazgo*, corporate communities, and Santa Claus—as these forms build liens of redistribution across class, caste, and nation. In early publications as in later ones, Wolf

served as a translator of European social thought into American anthropology.

Over a long and distinguished teaching career at the universities of Illinois, Virginia, Chicago, and Michigan, and at Lehman College at the City University of New York Graduate Center, from which he retired in 1992, Wolf was a prolific and iconoclastic scholar, publishing more than one hundred articles, and editing many journal issues and books. In addition to *Sons of the Shaking Earth,* his books include: *Anthropology* (1964), *Peasants* (1966), *Peasant Wars of the 20th Century* (1969), *The Human Condition in Latin America* (1972, with Edward Hansen), *The Hidden Frontier* (1974, with John Cole), and the magisterial *Europe and the People Without History* (1982), followed by *Envisioning Power* (1999). *Pathways to Power*, edited with his wife, the anthropologist Sydel Silverman, appeared posthumously in 2001. All illustrate coherent themes central to his scholarship: connections between intellectual histories and social movements and broad political economic trends; ties binding specific cultural forms to class-inflected power relations; and embedded local class relations that play out articulations of global history. Thus, the daily political and social lives of family, community, faction, religious-ethnic group, state, and nation may appear as somewhat autonomous, but in Wolf's writings they all serve as termini of concrete international processes. His work underlines the historical depth of these interconnections within and across shifting national boundaries of modernity, and he insists on the historical incorporation of the small-scale societies anthropologists conventionally study into larger webs of power, exploitation, and occasionally resistance. It is Wolf's enduring achievement to have enabled individuals to understand such societies in new ways, as dependent on connections of political economy and culture.

In *Anthropology*, Wolf labeled his field "the most scientific of the humanities, the most humanist of the sciences" (1964, p. 88). Later texts carried humanist scientific study into the interstitial connections throughout modern history. His synthetic intelligence and highly comparative method enabled Wolf to produce books that remain beacons of social scientific clarity in anthropology. *Peasant Wars of the Twentieth Century* (1969) illuminated the limited, class-fragmented, and constrained agency of the peasants who helped to topple and transform regimes in Mexico, Russia, China, Vietnam, Algeria, and Cuba, too often at their own expense. *Europe and the People Without History* (1982) showed that the bands, tribes, and villages once considered classical anthropological subjects were actually products of the socioeconomics of the modern capitalist world. After its publication, anthropologists could never again work in the "ethnographic present." It was Wolf's accomplishment, as the subtitle of his last book forcefully proclaims, to have oriented his field toward *Building an Anthropology of the Modern World*.

SEE ALSO *Anthropology; Anthropology, U.S.; Culture; Humanism; Marxism; Mintz, Sidney W.; Peasantry; Politics; Revolution*

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Rayna Rapp

WOMANISM

An ongoing concern for black feminists has always been that their specific experiences have been elided within a discourse that is biased towards a white, Anglo-American perspective. It is a view clearly enunciated by Audre Lorde's essay "An Open Letter to Mary Daly" (1984) in which she castigates the radical feminist philosopher for her misrepresentation of black women in her book *Gyn/Ecology* (1978), which Lorde claimed, "dismissed my heritage and the heritage of all other noneuropean women" (69).

But in 1983, in which Lorde published her address to Daly, the writer Alice Walker published what was to prove an extremely influential essay, "In Search of Our Mothers' Gardens" (1983) in which her central concern was to formulate a definition of black feminism from within African American culture itself. Whereas Lorde argued that Daly portrayed black women only as victims, ignoring their power as active agents capable of combating their own oppression, Walker focused on precisely those positive aspects, developing a feminist terminology drawn from everyday discourse used in the black community.

Although the term *womanist* is now synonymous with Walker's essay and book by the same title, it was not new to the English language. According to the *Oxford English Dictionary*, the term *womanism* first appeared in 1863, indicating "advocacy of or enthusiasm for the rights, achievements, etc. of women." In the context of second wave feminism, however, "womanism" has become

more specifically aligned with the black feminist movement. Walker's use of the term "womanism" therefore etymologically relates directly not to its prior usage in the nineteenth century but to the colloquial term *womanish*, which Walker defines as "Opp. of 'girlish,' i.e., frivolous, irresponsible, not serious." A "womanish" girl is wilful, inquisitive, and wise beyond her years, refusing to accept rules and limitations imposed by others.

However, although Walker draws the concept of womanism from, and defines it through, a black cultural context, she intends it to be inclusive rather than exclusive, offering four increasingly poetic understandings of the word that stress its connectedness to wider experiences of feminism. Although she begins with the black folk usage of "womanish," her second description expands the term to designate any woman, of any color, whose primary identification is with other women, either sexually or nonsexually. Nevertheless, a womanist is not a separatist but someone who is a "universalist," committed to "wholeness of entire people, male *and* female" (xi). She thus harmonizes two contradictory subject positions: a dedication to personal freedom along with an acknowledgment of the innate interconnectedness of peoples and genders. Walker's third definition stresses this balance between separation and association, identifying a womanist as someone committed to sensual gratification but also political struggle; to herself and to the wider community within which she is situated.

It is for this reason that "womanism" has become a widely used term within feminist theory, for it allows black women to articulate their feminism without relinquishing an attachment to black culture and racial politics. The subtle distinction between feminism and womanism is best summed up by Walker's final definition: "Womanist is to feminist as purple to lavender" (xii), and is exemplified in a speech delivered over a hundred years earlier. When Sojourner Truth, speaking at the Women's Convention in Akron, Ohio in 1851, proclaimed 'ain't I a woman?,' she asserted her rights not only as a woman, but also as an African American, an ex-slave, and a political campaigner.

SEE ALSO *Feminism; Feminism, Second Wave; Inequality, Racial; Truth, Sojourner*

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Sarah Gamble

WOMB ENVY

SEE *Oedipus Complex.*

WOMEN

A definition of "woman" that applies cross-culturally, one that includes the definitions offered by societies that are not part of our own Western/industrial tradition, will inevitably include some allusions to female physiology and to cultural constructions that include women's reproductive role, spiritual role (or its absence), domestic role, work role, and role in the care of children, assigning varying degrees of importance to each. The definition of womanhood may or may not be related to a society's definition of manhood, and may or may not be related to other gender categories that a society might recognize—which can be as many as five.

Furthermore, the definition of "woman" and "womanhood," when viewed from a cross-cultural perspective, will vary depending upon three variables. The first variable is the society's recognition of the specific stages of the female life course. Societies differ in how they identify and define the physical and psychological maturational stages of a woman's individual development. Some stages that we may readily identify in our own society (such as getting a driver's license) do not exist or are ignored, while other developmental events are given exaggerated attention and some are of such importance that they are accorded ceremonial recognition. The second variable, the society into which the individual is born (or of which she may become a member by a choice made later in life), will provide a variety of cultural expectations, some of which every individual female member is expected to meet and some of which only a chosen few may achieve. The third variable consists of the time period in the history of a particular society in which the individual finds herself. These three variables are not necessarily independent but can interact with each other to provide the specific definition of what it means to be a "woman" for a female individual of a particular age, in a specific society, and at a particular moment in history.

THE FIRST VARIABLE: THE LIFE COURSE

In all societies, the infant's sex is noted at birth, and in some societies, a female identity may lead to immediate infanticide. Yet often the baby is viewed as virtually neuter, in contrast to our own society, in which even the tiniest infant garments are gendered. Recognition of the individual's gender can begin at various stages early in the life course, but by the time signs of adolescence appear, the individual has been assigned. Although some societies

did not particularly note menarche or other evidences of adolescence, in many traditional societies, mere girls could only "be made into women" by means of an elaborate ritual. In these societies, only the initiated conformed to the definition of "woman." Such ceremonies, sometimes celebrated individually at the time of menarche and sometimes celebrated for groups of girls at the approximate onset of their adolescence, took a variety of forms. Some were elaborate, involved considerable expense for the family of the girl, engaged the entire community, and took months to complete. In other societies, the observance was brief, involved only a few female relatives, and was somewhat private.

In the ceremony of the Bemba of east Africa as reported by Richards (1956), men actually had specific roles to perform in the initiation. In many other societies, men are banned from even seeing the ritual. Among the Bemba, there were tests of competence for the initiates, and it was believed that their roles as food providers would be performed with the appropriate, womanly attitude after the completion of the long, elaborate ceremony. (In contrast, our own educational system typically focuses on transmitting skills and tends to neglect training for the proper attitude toward work.) Several ceremonies performed in other traditional societies included a painful genital operation, but most female initiation rites provided instruction, often regarding sexual activity, as well as a period of seclusion during which the initiate had to observe a number of taboos. These rites were typically followed by feasting, receiving gifts and new clothes, and being declared beautiful and ready for marriage negotiations to begin.

The life course of women can be viewed as discontinuous even if no ritual activity creates a major change in what it means to be a woman. Thus the end of virginity, menarche, the arrival of children, and menopause are one and all irreversible phases of womanhood that are not only physical but also have psychological and cultural meaning. The recognition or lack of recognition a society provides for these physiologic milestones in the lives of women varies cross-culturally. Thus, for example, as reported by Meigs (1984), the Hua of Papua New Guinea were a society in which not only the physiological changes characteristic of the female life course but also culturally constructed changes without a biological basis created a fluid definition for Hua womanhood. The body of Hua women and girls were believed to be filled with a vital essence that was both polluting and to some degree dangerous to men and that was transmitted to men through each act of sexual intercourse and through the food that women handled, prepared, and served. The essence was drained from women's bodies in the act of childbirth. Thus an older woman, the mother of several children, became as pure as a man, while aging men became impure like women. Because many older women were pure like men, they could have access to the great men's house, which was forbidden to women and children. Unlike them, she might have participated in male activities and had access to secret male knowledge. Thus among the Hua, the meaning of womanhood was not based only on physiological changes that characterize the female life course but depended on the culturally constructed definitions assigned to these female life courses stages.

THE SECOND VARIABLE: SOCIETY

In many societies the definition of womanhood is shaped by the view that women are physically weaker and intellectually inferior to men, as well as spiritually underendowed. In some societies the definition must take account of the fact that women are viewed as naturally lecherous and wanton. Rape, wife abuse, and even murder are viewed as justifiable responses to these female tendencies. Women's sexual impulses are corrupting to men and constantly threaten the honor of the family, requiring the unremitting vigilance of a brother or a husband. Women of childbearing age in such societies must be restrained by perpetual chaperonage, by the alert supervision of elder female kin, and by confinement, an enforced claustration, lived in the company of other women.

In spite of the negative valuation that was part of the definition of women in many societies, there was also evidence of envy by men. Among the Inuit of the central Arctic, women's lives were confined to the igloo during the long winter. Unconfined, the men ranged freely from the camp to hunt and fish, yet they envied the shelter and warmth of the women's indoor life. An attempt to imitate women that may have been based on envy was the periodic self-inflicted bleeding practiced by the men of several Melanesian societies. In a private ritual, a man would scrape his penis to induce bleeding, an imitation of women's menstruation, which was believed to provide strength and well-being. An example of a positive valuation of women comes from the traditional Native American societies of the Gulf region, where there were separate languages for men and women and men felt the women's language was more beautiful than their own.

Women's Economic Role Whether or not the men of a particular society envy women, or whether or not the members of a society subscribe to a definition of womanhood that attributes inferiority to women, or whether or not members of a society have a more egalitarian view of the sexes, womanhood is inevitably defined in part by the work women perform (unlike our own society, where it would be unusual for a definition of womanhood to include references to specific vocations.) Thus among the traditional Iroquois of New York State, raising the crops

upon which the people's livelihood depended was the work of women. A man working in the gardens was either too old and too frail for male activity or he was a prisoner of war compelled to perform humiliating, inappropriate work. Thus, for example, the Iroquois "made women" out of the defeated Delaware by making them work in their gardens. Yet the productivity of the Iroquois women was revered. Female spiritual beings represented the crops, and ceremonial activity celebrated the cultivated foods provided by women, not the hunting and warfare of the men.

Competence in woman's work was valued so highly in many traditional societies that it overshadowed sexual attractiveness in the choice of a wife. Thus, among the Iroquois and the traditional Inuit, an older competent woman might be viewed as a desirable wife for a far younger man. Productivity, diligence, and highly developed female skills were among the qualities that were accorded the privilege of being a "manly hearted woman" among the North Piegan, a Canadian Blackfoot tribe, according to Lewis (1970). Although most married women in this society served as lower or "slave wives," the "manly hearted woman" was the "sit-by wife." She was not masculine, as the title might suggest; instead she excelled in women's work and was therefore an economic asset. She was the favorite wife, actively sexual and outspoken. Lower wives were beaten mercilessly for such behavior in traditional times.

As reported by Elam (1973), the traditional Hima, east African herders, further illustrate how the work women perform and their sex life define womanhood in a particular society. In traditional times, Hima girls joined the herders with their cattle outside the village. They acted as assistants to the men in activities such as milking. They were physically active and free to move about the landscape and were expected to be chaste until marriage. The wife, in contrast, was confined to the hut. Unlike girls, she was heavily clothed and her diet and lack of physical activity were intended to make her fat, which was viewed as sexually attractive. Fat and desirable, she was expected to grant sexual favors to numerous men, including her father-in-law. Unlike girls, she was forbidden to milk, bleed, or slaughter cattle. In her life as a woman, she was by definition confined, and her work consisted of making butter and curd and keeping the milk jugs clean.

Women's Spirituality In many societies, the definition of womanhood that pertains to most of a woman's life, the childbearing years, appears to exclude the possibility of spirituality. Thus among the traditional !Kung of southern Africa, pregnancy and lactation were viewed as incompatible with trance, since such spiritual activity could harm the unborn child or the nursing infant. In parts of North America, a woman could become a shaman, and a spiritual being would enable her to attain special powers. But in many societies only a man could be a shaman. Among the Navajo, it was believed that the evil powers of witchcraft were inaccessible to a woman of childbearing age. Thus the ability to exert spiritual power or the absence of this ability is noted in the definition of womanhood in many societies. In contrast, spiritual attributes are typically not part of a definition of womanhood in our own society.

THE THIRD VARIABLE: HISTORIC FACTORS

A society's definition of womanhood inevitably evolves to reflect historical changes. This is as true for our own society as it is cross-culturally. In the later twentieth century, historical changes have created a redefinition of womanhood in the Western/industrial world that is almost as dramatic as the redefinition of womanhood created by the end of colonialism and the spread of globalization in those parts of the world that are not part of our own tradition. An example of such changes is offered by Draper (1975) in her description of the !Kung of southern Africa. Their traditional way of life had continued into the mid-twentieth century, and although aware of the outside world (a world that mistakenly believed they were extinct), they had retained a traditional definition of womanhood. The women of the !Kung sustained the life of the small, migratory camps with their food-gathering activities. Each day that the women set out into the Kalahari Desert, they were successful in harvesting the vegetable foods that constituted the major portion of the !Kung diet. While collecting, the women also gathered information about the movement of animals, which they provided to the men to help them in their hunting. The hunting activities of the men, though less frequently successful than the gathering activities of the women, received a great deal of cultural attention and provided the food that was harder to obtain, made up less of the diet, and was more highly valued. Although the gathering activities of women were not accorded particular recognition, women had the right to be outspoken, and the relationship between men and women was markedly egalitarian. These traditional circumstances have been attributed to women's economic importance. And this in turn was made possible by a benign environment, in which women were not threatened by enemy neighbors or wild animals that might have made male protection necessary. Their autonomy made possible the traditional !Kung women's role as the "major breadwinners."

Dramatic and rapid changes occurred when the !Kung became sedentary, living on the outskirts of the villages of herders, who now controlled the region. !Kung women became housewives. The open camps were

replaced by huts which isolated women from relatives and neighbors. Their economic importance was a thing of the past, as was their autonomy. Wife abuse was now a problem. This vastly oversimplified history of the !Kung during the later twentieth century illustrates how a particular society's definition of womanhood can undergo dramatic change. Although still living in their homeland, their new circumstances totally altered how "woman" was defined.

CONCLUSION

The definition of "woman" is only partially based on the physical traits that differentiate the sexes. Superimposed on physiological reality is the possibility that a society may recognize more than two genders. In addition, the definition a culture constructs for the term "woman" may change during different stages of the life course, for example, by not including the category "uninitiated female adolescent" as part of the definition of "woman." Different societies also vary on which aspect of womanhood the culture stresses in its definition. Is it her economic role? Is it her maternal role? Is it her sexual role? Is it her domestic role? (For a review of the interrelationships of these factors, see Brown 1973.) Or perhaps it is her physical or mental inferiority and lack of spirituality compared to men. Historical changes can alter a society's definition. And all of these possible aspects of a society's definition of "woman" can be interdependent and influence each other. The cross-culturally applicable definition of any concept is inevitably complicated, but the necessary ingredients of the varied definitions can be identified.

SEE ALSO *Anthropology; Cultural Relativism; Femininity; Feminism; Feminism, Second Wave; Gender; Gender, Alternatives to Binary; Matriarchy; Patriarchy; Rites of Passage; Rituals; Womanism; Women and Politics; Women's Liberation; Women's Movement; Work and Women*

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Judith K. Brown

WOMEN AND DEVELOPMENT

SEE *Gender and Development.*

WOMEN AND POLITICS

From an international perspective, the scholarship of women and politics focuses on issues of women's participation and representation in governmental institutions, the legal right over decisions concerning reproduction and sexuality, and the effects of globalization on women's work and social movements.

POLITICAL PARTICIPATION AND REPRESENTATION

Issues of participation and representation of women in politics (political empowerment) are centered in the ideology of the Enlightenment period of the mid-eighteenth century and, therefore, the idea that equal political participation and representation of women in local, state, and federal governments will challenge gender inequality. American feminists were at the forefront of this movement arguing in the 1920s and then in the 1970s for suffrage and equal treatment, respectively. The United Nations (UN) promoted the importance of political empowerment for women as evidenced by the UN's observance of a Decade for Women (1976–1985); the UN's agenda for the political empowerment of women set forth in *The Beijing Declaration and Platform for Action* (1995); a UN treaty based on *The Universal Declaration of Human Rights* and embodied in Article 25 of *The International Covenant on Civil and Political Rights* (1976); and the convening of delegates at the *Convention on the Elimination of all Forms of Discrimination Against Women* (1967) to discuss the political rights of women around the world. The liberal political theory that informs the UN's politics embodies the ideas that (1) political systems are undermined and illegitimate when women are underrepresented; (2) the representation of women in politics contributes to an inherently more democratic multiparty system; (3) gender reform lies in legal reform; (4) "special treatment" (e.g., maternity leave) reproduces gender inequality; (5) a "critical mass" of women represented in governments ensures gender equality; (6) states should legally protect women from discrimination in all areas of

social life; and (7) women have a civil right to representation and their political participation serves as role model behavior and influences the status of women outside the political body.

Critics of the idea that representation and participation challenge gender equality argue that (1) women's participation and representation do not necessarily translate into a representation of women's interests, (2) feminist priorities need to be reinforced in structures and networks (with non-governmental organizations and women's committees within legislative bodies) in order for change to occur and (3) the presence of women in politics does not ensure a feminist political platform. All women, in other words, are not feminists. As a response to the underrepresentation of women in politics, quotas ensuring the participation of women have been suggested and imposed (e.g., France established party laws in 2000). In 2004, the Inter-Parliamentary Union reported that only 15.6 percent of governmental bodies around the world were represented by women. Women represented 6.8 percent in the Arab States, 18.6 percent in the United States, and 39.7 percent in the Nordic states.

RIGHTS OVER REPRODUCTION AND SEXUALITY

The political struggle over rights to abortion, contraception, and the female body has characterized feminist movement around the world. In the United States this is characteristically exemplified by the legalization of abortion in 1974 (*Roe v. Wade*). In the Middle East, North Africa, India, and parts of Southeast Asia, the political struggle over reproduction and sexuality is framed in discourses about the high incidents of female genital mutilation, honor crimes, sex trafficking, bride burning, marital rape, and sexual abuse.

In the Middle East and North Africa (MENA), feminists argue, family law (called in the region "personal status law"), as well as criminal law is informed by traditional and patriarchal cultural norms, thereby legitimizing the violation and control over women's bodies and rights. In neo-Islamic states, such as Iran, religious scholars are increasingly informing the legal code. Global feminists have argued that laws in MENA have allowed for violence against women, statutory discrimination, and disproportionate punishment for women. Women's movements in MENA are demanding political equality, the ability to contract and register their own marriages, a right to divorce, and justice in cases of rape or sexual abuse. Not only the state, but families and local communities have great control over women's sexuality and reproductive rights. "Honor killings"—the murder of a woman by a male family member for a violation of the social norms of sexuality—exemplify the control family has over the sexuality of daughters. Sometimes the families, including mothers, gather and plan the murder of a daughter. Feminists in the region, scholars of women in MENA, as well as global feminists recognize the role of family and community over the control of women and seek to criminalize behavior such as "honor killings" that are often treated as private rather than public matters.

GLOBALIZATION

The effect of globalization on the status of women is a central theme in the study of contemporary women worldwide. Globalization is defined as the movement toward global capitalism and culture. Scholars have explored the negative and positive effect of globalization on women cross-culturally. Critics of globalization point to policies that buttress the industrialized monetized sector of the economy, thereby favoring work performed by men at the expense of informal modes of work performed by women, particularly in the developing countries. According to this perspective, public subsidies that support social programs for women and children are diminished as nations struggle to pay off high interest loans to industrialized nations.

In Latin America, as a response to the weakening economic position of women, political collectivities of women have organized around the demand for greater provision of public services such as running water, electricity, transportation, day care and health services (all sorely lacking in squatter settlements in which poor women live). The women have also protested against the rising price of food. Often these women defend their right to a decent living on the basis of their status as "mothers," "housewives," or both. These types of social collectivities have been criticized by feminists who favor "equality" and "no special treatment" over supporting women in their traditional roles. Conversely, women activists engaged in informal social movements sometimes separate themselves, by way of identification, from woman activists who are more concerned with mainstream political participation and representation ("equality" and "no special treatment"). Since the period of advanced economic globalization, Latin American women have mobilized along with men in labor unions; yet, unions, it has been argued, continue to be regarded as a male sphere where women only serve as supplementary workers.

Other scholars believe there are positive effects to globalization such as women's political representation (in formal governmental institutions), the liberalization of traditional gender roles, and increased education. As a result of these positive effects, they argue, the political presence of women has increased dramatically in the beginning of the twenty-first century. For example, in January 2007 in Chile's presidential run-off Michelle

Bachelet was elected the first female president of Chile. Other Latin American women have made inroads into state power. The Brazilian constitution of 1988 formed The Council on the Condition of Women (subsequently named The National Council on Women's Rights), which implemented a family planning program; extended maternity leave; facilitated the establishment of a special police force to end sexual abuse and domestic violence; ended the prohibition of abortion; and successfully promoted a women's agenda.

The democratization and the rise of civil society often attributed to globalization further increased Latin American opposition groups. In 1988, Chilean women fought against President Augusto Pinochet's (1915–2006) military authoritarian rule and demanded the recognition of human rights. The Mothers of the Plaza del Mayo in Argentina played a decisive role in the defeat of the dictatorship there. On the basis of their status as mothers, sisters, daughters, The Mothers of the Plaza del Mayo protested the disappearance of their sons, brothers, and husbands.

The UN's Human Development Program has recognized the need for a broad understanding of gender that includes not only the role of politics, but economics and cultural interpretations of women's and men's roles on the lives of women throughout the world. Consequently, in 1995 they created the Gender Empowerment Measure, which measures gender equality/inequality on the basis of decision-making power, and political and economic participation.

SEE ALSO *Feminism; Feminism, Second Wave; Gender Gap; Inequality, Gender; Participation, Political; Poll Tax; Rape; Representation; Reproductive Rights;* Roe v. Wade; *Sexual Harassment; Sexuality; Suffrage, Women's; United Nations; Women; Women's Liberation; Women's Movement; Work and Women*

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Vaso V. Thomas

WOMEN'S LIBERATION

The term *women's liberation* in twentieth-century discourse has been used interchangeably with feminism, women's rights, and the women's movement. A more precise focus on the term *women's liberation* raises the question, "Liberation from what?" The response that feminists have offered is liberation from the oppressive practices of patriarchy and women's second-class social status that have been a part of the structure of traditional and modern societies. The concept of women's liberation was popularized by the early stages of the Second Wave of the women's movement, by the United Nations' (UN) decade of focus on women (1975 to 1985), and more recently by UN-sponsored events like the 1995 Beijing Conference on Women. Because women constitute 50 percent of the world's population, the potential for coalitions across nations, ethnicities, ages, classes, religions, and sexualities is significant for all people. These UN events, which included governmental and nongovernmental agency representatives, have offered opportunities for international networking to supporters of the women's movement. The term *liberation* draws insights from Marxist and liberal democratic theories, which argue that societies work best when all adult persons are free and able to participate fully in public life. But what counts as women's liberation shifts over time.

HISTORIC OVERVIEW

Historically, the women's movement can be divided into three waves, which begin with the issue of suffrage. Setting the stage for the First Wave were some key political writings in Western societies that articulated the centrality of individuals in the state. These include the eighteenth-century work of Mary Wollstonecraft (1759–1797), *A Vindication of the Rights of Woman*; the nineteenth-century work of John Stuart Mill (1806–1873) with Harriet Taylor (1807–1858), *On the Subjugation of Women*, which compares women's situations to slavery; and the work of the German socialist Friedrich Engels (1820–1895), *Origins of the Family, Private Property, and the State*, shaped by his work with the political philosopher Karl Marx (1818–1883), which argues that women's oppression begins with the division of labor in the family.

The women's movement has developed in a variety of world cultures in complex ways, but an understanding of the Western tradition offers a context from which to examine some of the key issues. For those influenced by U.S. politics, the First Wave began with the Seneca Falls Convention in New York in 1848, when activists involved in the abolition of slavery met to talk about women. It ended in 1920 with a U.S. constitutional amendment that granted women the vote. The Second Wave began with

the civil rights struggles in 1962 and included a push for an equal rights amendment, workplace equity, educational opportunities, and policies that supported women's participation in public life. During this period women's studies programs were established as challenges were made to traditional discipline-based theories and epistemologies. In the early 1980s the New Right began to gain momentum just as feminist goals were shifting from legal rights to cultural issues and as multiculturalism was gaining greater recognition. These developments gave rise to the Third Wave of feminism in the 1990s, which has gained momentum since the beginning of the twenty-first century.

The Seneca Falls Convention was organized by Lucretia Mott (1793–1880) and Elizabeth Cady Stanton (1815–1902), with the abolitionist Frederick Douglas (1817–1895) and various Quakers in attendance. The issues in the First Wave were laid out at the convention in the Declaration of Sentiments, which called for women to have access to education, to their own salaries, to courts, to property, to child custody, to employment, to professions, and to the right to vote, which was the most controversial resolution. It would take from 1848 to 1920 for this last resolution to be achieved in the United States. The struggles for women's equality in European societies followed similar historical paths.

THE SECOND WAVE

The Second Wave of American feminism grew out of the civil rights movement of the 1960s and the New Left. During the early stages activists readily employed the term *women's liberation* as a way of explaining that the problem women faced as a group was similar to that of other oppressed groups. Second Wave consciousness-raising groups helped women move from seeing themselves as ineffective individuals in a fair society to identifying the structural patterns of sex bias that turned women as a group into second-class citizens. Women were in need of liberation from patriarchy and the cultural, legal, and political practices that flowed from patriarchy to subjugate them. As the civil rights movement progressed and the women's movement gained supporters, four key categories became the base for critical analysis: race, class, gender, and sexuality. The removal of their accompanying social ills—racism, class privilege, sexism, and heterosexism—would liberate societies from oppressive practices and unjust institutional structures. Feminists argued that women's liberation would result in the liberation of men because gender roles would be more open and individuals could assume them according to their talents and tastes instead of the shape of their bodies.

The Second Wave of feminism was supported by a variety of local and national political organizations that pressed for such rights as to continue work while pregnant and to have access to information about birth control, to abortion, to health care for pregnant women, and to legal protection from domestic violence, rape, sexual harassment, and economic discrimination. Concerns over women's health, reproductive choices, and body image came to the foreground as the issues of health and medical practices were scrutinized for sex or gender bias. Groups used lobbying, demonstrations, community-based organizations, and litigation and were loosely linked together through national-level organizations like the National Organization for Women (NOW), founded in 1966.

Betty Friedan (1921–2006), one of the NOW founders, raised a key question about women's liberation in her book *The Feminine Mystique*: "Who knows what women can be when they are finally free to become themselves?" (Friedan 1963, p. 378). Her critical review of women's roles as housewives helped citizens see how women were restricted in their ability to develop into full persons. Coalitions between the women's movement and the New Left, the anti–Vietnam War campaigns, the black liberation movement, and the ecological movement produced a variety of feminist theories and analyses, each of which explained liberation differently. Liberal feminism sought legal rights on a par with men's rights; socialist and Marxist feminism sought economic equity; radical feminism sought liberation and recognition for women-based theories, cultures, and sexualities; eco-feminism sought to explain how the subjugation of women is connected to the subjugation and abuse of nature; and postmodern feminism sought linguistic equities.

As the Second Wave of the women's movement progressed, pejorative nicknames like *women's libber* emerged as some social groups began to resist the changes. While there were feminists who wore the label *libber* or *radical* proudly, embracing the popular adage that "feminism is the radical notion that women are people," others found that the labels hindered other types of political work. Feminists fought against the stereotype of themselves as man haters and humorless. While women as a group were oppressed, many also belonged to privileged groups: whites, elites, developed nations, majority religions, and heterosexual dyads. Since the term *liberation* could be understood as liberation from men or from slavery, other terms were employed to discourage these misunderstandings. Instead of using the term *women's liberation*, many political activists and scholars refer to this concept with the terms *feminism* or *gender equity*.

Groups within the feminist movement who focused on rights put their energies into legislation, gaining political office, protests, and litigation. Others were concerned with cultural transformations and focused on reframing language, what counted as the canon in art and literature,

everyday life activities, the division of labor in the household, and images of women presented in schools and the media.

"The personal is political" was a phrase that articulated the ways all women could be involved in this process of change, and personal choices were seen as manifestations of political commitments. The genuineness of a political commitment was indicated in the details of how one lived one's life. Those who were vegetarian were expected not to wear leather shoes. Those who believed women were equal to men were expected to refer to adult females as "women," not as "girls." Hence a notion of political connection between individual actions and political beliefs was advocated, and this led to a form of "political correctness" in that one's personal behavior was to match one's ethical commitments. Progressive activists would point out such inconsistencies in each others' actions in order to discourage patriarchal practices. Such actions examined and corrected speech practices to alert citizens to inconsistencies between political commitments and personal utterances. Calling adult women "girls" or referring to women as "chicks" could elicit public criticism. The Second Wave established inclusive speech practices for both genders that are now accepted in the society as a whole.

Affirmative action programs were put in place to recruit women and minorities into schools and the workplace, and watchdog agencies were created to be sure that such policies were followed. Sexism and racism were scrutinized, and citizens became aware that they needed to be careful about engaging in these types of behaviors. Some of these programs and the scrutiny associated with them have diminished with the rise of the New Right and its critiques of affirmative action, abortion policies, and other limits on corporate interests. The New Right resurrected the term *political correctness* to suggest that feminists and their allies had unduly politicized issues that were best left to individuals or corporations to work out as they thought best. Drawing from the ways in which *politics* has been treated as a negative term, the new use of *political correctness* permitted a quick negative label for social practices (especially related to affirmative action, protections for equal political and economic access for women and ethnic minorities, and inclusive language practices) that the political right wanted to eliminate from social policy.

Because rights in the United States are focused on limits to government action, U.S. politics has focused on how states have prevented women's access to contraceptives and abortion as well as preventing corporations from discrimination in employment and educational opportunities on the basis of gender or sex. The New Right in the United States has developed an antiabortion component to their political agenda with a "pro-life" argument based on the protection of what they call the unborn. This position builds on the general interests of the New Right in gender politics. Antifeminists have attempted to reduce women's liberation to women's individual opportunity and even to "bra burning" by making the claim that Second Wave feminists burned bras. However, the occurrence of this event cannot be found by those who study the movement even though it was reported in the media. Reducing a movement to "bra burning" was probably a confusion with the anti–Vietnam War movement that burned draft cards, an illegal activity that did serve as civil disobedience. While burning draft cards is illegal, there is no such law against burning bras; discussions about bra burning are designed to trivialize women's liberation. The central issues of the Second Wave movement were equal access to education, employment opportunities, and health care.

Internationally, gender issues have included a struggle over women's identities as wife and mother with a primary location in the modern private sector as opposed to women's identities as political citizens with economic roles in modern societies that include but are not limited to their roles within the family. Because the world economy depends on women's economic contributions to the economies of nations, the limitation of women to the private sector of the home has disappeared as an economic factor even though the issue remains alive as an emotional factor in some political ideologies or religious interpretations. These issues were debated at the 1995 UN Conference on Women in Beijing, China, where representatives from major religions, the political right and left, and other sectors discussed what is required to liberate women.

In an international context, the key issues for feminists remain women's access to educational opportunities, including educational levels comparable to those offered to men, employment and pay opportunities that afford a living wage and are comparable to the pay men receive, and access to health care. In some nations women continue to struggle for equality with men in suing for divorce and custody of their children. Government policies vary on reproduction regulation, including abortion. In some nations abortion is limited to early stages or conditions that depend on the life of the mother. In others, such as China with its one-child policy, abortion can be encouraged and supported up to later stages of pregnancy. While some would reduce women's liberation to access to reproductive health technologies, women's liberation depends on access to general health care, education, and wages that will reduce women's poverty and the devastation that comes when women are unable to provide for themselves, their families, and their children.

As the political climate developed in the 1980s and 1990s, feminists no longer had to contend with the prob-

lems of invisibility or of not being taken seriously. Nonetheless, while they were taken seriously in the 1990s, they were targeted by the New Right as a source of social ills. Internationally, a New Right, neoconservative feminism emerged that emphasized the role of women as wives and mothers. In the United States these activists are often part of the "pro-life" movement that has opposed abortion and worked to counter the effects of *Roe v. Wade*. They have argued that women did not need and would not benefit from the individual protection that could be granted through social and political rights that are the same as those granted to men. At the same time, among Western feminists, tighter alliances were built with the gay and lesbian movements, so issues of sex and reproduction remained important in the struggle over what counts as women's liberation.

THE THIRD WAVE

In the 1990s postmodern analyses came to the foreground with a focus on the politics of language and culture and an emphasis on everyday political transformations as well as notions of difference. These shifts placed greater emphasis on culture and language as mechanisms for change at local levels. As the children of the Second Wave of feminism began to reach adulthood, they became activists with a new agenda that embraced the postmodern turn to language and cultural issues but also focused on mentoring, leadership, art, and new articulations of feminine and feminist identities. Rebecca Walker, the daughter of the Second Wave activist and novelist Alice Walker (b. 1944), is an example of a Third Wave activist. Building on Second Wave feminism, these activists and academics raise new questions such as that found in Leslie Heywood and Jennifer Drake's *Third Wave Agenda*: "Which personal? And whose politics? How to think 'sisterhood' in terms of difference and hybridity?" (Heywood and Drake 1997, p. 23). Examinations of multiple identities, complex articulations of feminine and feminist, coalition politics, and everyday practices became even more important than party affiliations and legal reforms. Retaining a loyalty to womanist perspectives and multicultural understandings, feminists continued to argue that each woman must gain the opportunity to tell her own story and speak for herself.

As academic feminism moved from the Second Wave feminists, who had drawn on empirical evidence to substantiate gender bias, to Third Wave academics, who drew more from postmodern theoretical frameworks, linguistic playfulness became a form of politics. Third Wave feminists have focused on reinventing women's identities, languages, and symbols while framing their own articulations of feminist politics. In this context *women's liberation* means the freedom to select the context for political change, the ability to frame the issues in response to both contemporary and local contexts, and the means by which various surprising reversals, including linguistic turns, might liberate.

Women's liberation is a part of the women's movement, which includes access to education and political office; health care benefits, including reproductive health benefits; legal rights for women; employment access; protection from rape, domestic violence, and sexual harassment; access to professions and professional development; and protections from unwanted medical interventions and practices that put men in charge of women's lives. The democratization of nation-states depends on women's liberation because 50 percent of the population of a nation—women—cannot be denied equal participation and rights if a democracy is to emerge. Such denial undercuts democratization.

Women's liberation has come to mean liberation from patriarchal practices. However, the ways liberation might take place and what practices count as patriarchal are matters for political debate, and women, like men, differ in their assessment of their own needs. While there are similarities in women's situations, different contexts and values create different understandings of what women's liberation requires and how it might best be achieved. These differences offer important political insights for social justice and the development of strong democratic societies.

SEE ALSO *Affirmative Action; Civil Rights; Civil Rights Movement, U.S.; Feminism; Feminism, Second Wave; Gender; Gender Gap; Inequality, Gender; Left Wing; Liberation; Politics; Politics, Gender; Reproductive Politics; Reproductive Rights; Right Wing; Sexism; Social Movements; Vietnam War; Women and Politics; Women's Movement*

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WOMEN'S MOVEMENT

The women's movement has often been called one of the most important social movements of the twentieth century. Its most basic goals are to improve women's social, economic, and political conditions by facilitating personal transformations, introducing new ideas to public discourse, and exerting pressure on policymakers. In addition to voting, it has been a key form of women's political participation, joined only recently by greater numbers of women in political office. Beyond these basic features, however, there is considerable diversity among specific women's movements around the world.

First, not all types of political engagement by women would be considered a women's movement. As Karen Beckwith emphasizes, the term *women's movements* refers to any kind of systematic organizing by women, including that of a nonfeminist nature (Beckwith 2000). Women's movements are thus distinct from *women in social movements*, who are female participants in social movements that may or may not focus on gender issues. They are also a broader phenomenon that includes but is not equivalent to *feminist movements*, which engage women—and some men—through a more explicitly gendered lens that seeks to understand and overcome women's subordination.

Second, women's movements themselves vary enormously across countries and over time. They appear during different waves of feminism, originate in various kinds of other social movements, espouse a range of different issues of concern, and interact in numerous ways with global and regional trends. In addition, they are situated within a variety of social, economic, and political contexts that shape their emergence, development, and prospects for success. As such, many analysts are skeptical of universalizing claims about women's mobilization. When studying "the women's movement," therefore, they seek to understand the diverse conditions under which women organize as women—rather than with men—to achieve social, economic, and political change.

WAVES OF FEMINISM

Although women's movements are not synonymous with feminist movements, the two frequently overlap. As a result, one common starting point for analyzing women's movements is to position them in relation to waves of feminism. Due to important differences in context, the timing and character of these waves vary significantly across countries. In the western world, the "first wave" is generally associated with the mobilization of women's groups across many countries in the late nineteenth and early twentieth centuries. The main focus of these movements was to attain basic rights for women, including the right to vote, the right to employment, the right to receive equal pay, and the right to retain their own nationality upon marriage to men of other nationalities. Focused on equality, these campaigns largely sought to gain rights for women that were already guaranteed to men. However, in many cases these movements overlooked crucial issues of race and class, devoting most of their attention to rights for white and upper-class women.

The "second wave" of feminism, often dated in the West to the 1960s and 1970s, embraced a much wider range of theories and issues. Initially inspired by the need to dispel the "feminine mystique," or the idea that women found their life's fulfillment in being married and raising children, second-wave groups began to question women's roles in the private sphere and to point to the social construction of gender roles. Drawing on ideas introduced by writers such as Simone de Beauvoir, they made a distinction between the terms *sex* and *gender*, using *sex* to refer to biological differences between male and female and *gender* to denote social differences between masculine and feminine. Although sex and gender were related, second-wave feminists emphasized that the relationship was imperfect, as men could be feminine and women could be masculine. Women's groups developed these ideas in a number of different directions: Some stressed the universality of women's oppression, some sought to revalue the "feminine," and still others aimed to break down the distinction between the public and the private through slogans such as "the personal is political." Despite this diversity, the shared feature of all these efforts was to focus on women as women, rather than as individuals who aspired to a male standard.

The feminist project of defining the terms *women* and *women's issues*, however, was not without controversy. On the one hand, activists disagreed as to the coherence of "women" as a group. Many called attention to race- and class-based exclusions that were implicit in discourse on "universal" female oppression that in fact reflected the experiences of women from dominant racial and class groups. Others noted that accounts of the sexual division of labor, and especially women's experiences as mothers, tended to assume that all women were heterosexual, thus overlooking—and marginalizing—the experiences of lesbians. On the other hand, feminists prioritized a wide range of women's issues that implied distinct—and even conflicting—visions of the status quo and prescriptions

for change. Whereas some aimed to undermine patriarchy by promoting women's status in the public sphere, others sought to foster a "women's culture" by revaluing women's labor inside the home, raise awareness of women's experiences through consciousness-raising, and theorize patriarchy by pointing to the power that men exercised over women through violence and coercion.

The "third wave" is a more contested concept, existing in an uneasy relation to the term *postfeminism*. Both notions are generally taken to refer to ideas that emerged in the West in the 1990s and continue to develop through the present day. This wave is largely characterized by a focus on difference, both between women and men and among women themselves. At the same time, it aims to break down binary categories by emphasizing the fluid and relational aspects of identity and experience. As such, it questions traditional approaches to conceptualizing sex and gender by exploring intersections between race, class, and gender; uncovering the assumptions of heterosexuality that underpin analysis of women in relation to men; and probing the possibility that gender may cause sex rather than sex causing gender. In this sense, the third wave incorporates a number of ideas articulated by feminists of color, lesbian feminists, and postmodern feminists. However, because these theories stress the contradictions and multiplicities inherent in definitions of women and women's issues, they have paradoxical effects on women's movements: They help build coalitions with other movements for social justice, but also undermine the prospects for mobilizing by women as women for social, economic, and political change.

ORIGINS OF WOMEN'S MOVEMENTS

Many scholars draw on the wave analogy to identify major shifts in feminist theorizing and their relation to concentrated periods of mobilization by women's groups. This approach has its critics, however, who point out that women are active politically between waves and are not always inspired initially by feminist concerns. Indeed, despite the widespread belief that women's movements emerge in cycles as women become more educated and politically informed, evidence from around the world suggests that women's movements often have their origins in various other kinds of social movements. In these cases, women gain a shared sense of gender oppression through discrimination they experience in the course of their participation in other campaigns for social justice. These include movements for civil rights, revolution, nationalism, independence, and human rights. Similar consciousness-raising also occurs in authoritarian regimes, where the creation of state-led women's organizations aims to control women's political activity but sometimes provides an official platform for women's organizing. Many women's movements nonetheless hesitate to label themselves "feminist" on the grounds that the term has various negative associations as "bourgeois," "Western," "forced emancipation," and even "man-hating." Further, few movements succeed at incorporating all women due to differences among women that remain important, including nationality, race, class, religion, region, language, and sexual orientation.

ISSUES OF WOMEN'S MOVEMENTS

Given their distinct origins and relations to waves of feminism, women's movements around the world focus variously on a wide range of issues. These concerns fall into six broad categories: women's legal rights, violence against women, reproductive choice, sexual freedom, employment opportunities and discrimination, and women's political participation and representation. Legal rights include such issues as rights in marriage, the right to divorce, and the right to own and inherit property. Violence against women refers to practices such as rape, domestic abuse, female genital cutting, sexual slavery, and sex trafficking. Reproductive choice encompasses access to contraception, the right to abortion, and the right to not be subjected to forced sterilization. Sexual freedom involves the right to express one's own sexuality and claims for the same privileges conferred on heterosexual couples. Employment opportunities and discrimination include rights to equal pay, access to all jobs, provision of maternity leave, and freedom from sexual harassment. Women's political participation and representation, finally, comprise the rights to vote, join political parties, participate in civil society, and run for political office. Individual movements rarely cover all these issues, and specific movements address particular issues in a variety of different ways. In addition, some groups mobilize to preserve rather than undermine women's traditional status as mothers and inside the home.

GLOBAL AND REGIONAL WOMEN'S MOVEMENTS

Despite their emergence and development in specific contexts around the world, women's movements inform and reflect broader global and regional trends. Women's organizing has always had an international dimension, reaching back more than 100 years to the early suffrage campaigns and activism for world peace. In the last thirty years, however, women's movement activism has grown exponentially in relation to developments beyond national borders. At the global level, international conferences have placed new issues on national political agendas and facilitated networking among women's groups around the world, even as they have been marked in some

instances by sharp conflicts among women in developed and developing nations. At the regional level, transnational organizing has become increasingly important as a means for spreading new ideas across national borders, fostering policy diffusion and solidarity among politically marginalized groups. Despite their long history, women's movements are thus constantly being reborn, reinventing themselves, and taking on new forms in order to politicize women's concerns, however these are identified and defined.

SEE ALSO *Abortion Rights; Equality; Family Planning; Femininity; Feminism; Feminism, Second Wave; Gender Gap; Inequality, Gender; Interest Groups and Interests; Masculinity; Politics; Politics, Black; Politics, Gender; Politics, Gay, Lesbian, Transgender, and Bisexual; Reproductive Rights; Social Movements; Stepford Wives; Suffrage, Women's; Women and Politics; Women's Liberation*

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Mona Lena Krook

WOMEN'S RIGHTS MOVEMENT

SEE *Women's Movement.*

WOMEN'S STUDIES

Women's studies is an interdisciplinary academic field that concentrates on the experiences and aspirations of women. Although women's studies departments and programs in the United States and around the world are reflective of their locations within educational institutions and their larger social context, a common thread is the claim that women's experiences have been underrepresented or misrepresented in more traditional academic disciplines that claim to capture the human experience. This has been found by some critics to be the case in traditional disciplines that purport to speak about human nature but consider only the social location of men or take men as the universal subject, casting women as either substitute or inferior men.

WOMEN'S STUDIES AS CRITIQUE AND CORRECTIVE

Arguing that women are human too and that the academic is also political, women's studies is founded on critical terrain, offering critiques of traditional disciplines and correctives to their representations or exclusions of women. Thus, a women's studies program may offer courses in education, literature, history, political science, philosophy, psychology, ethnic studies, biology, medicine, religious studies, and international relations, among other fields, centralizing women and the theoretical frameworks of feminism within each of those fields. Further, the misrepresentation of women's experiences in academic disciplines is thought by some to reflect a generalized societal devaluation of women's experience and social roles and thus to be part of the oppression of women. In this way the purpose of women's studies is shaped by its relationship with women's movements inside and outside the academy. The field has developed around the idea that the personal is political, meaning that gender identity and the subjectivities of individuals are shaped through the political structures of a gendered social system.

In these ways the field of women's studies is a critique and a corrective as well as a self-reflexive and politically engaged discipline that functions with a commitment to social transformation within education and the wider society in which it exists. Since their inception women's studies programs have operated from the often contradictory position of educating for social change and existing within traditional academic institutions that tend to favor neutral and disinterested knowledge production.

EARLY COURSES AND PROGRAMS

The first women's studies courses were offered in the United States in 1965 at the New Orleans Free School, the University of Chicago, Barnard College, Spelman College, and the Free University of Seattle. The earliest women's studies program was established in 1970 at San Diego State University, and the Women's Resource and Research Center was established at Spelman in 1981. Influenced by the civil rights, women's, and New Left movements and the inception of African American,

American, and ethnic studies, early women's studies courses were guided by a vision of a world free from sexism, racism, class bias, ageism, and heterosexual bias.

The scope of the field has expanded continuously, increasing from 150 women's studies programs in the United States in the period 1970–1975 and three cross-disciplinary journals in 1972 to the growing number of courses, programs, departments, academic conferences, and journals of the first decade of the twenty-first century. In 2006 there were over seven hundred degree-granting women's studies departments in the United States with approximately seventeen doctoral programs, including the Africana Women's Studies program at Clark Atlanta, the Graduate Certificate Program at Howard University, and the earliest doctoral program at Emory University; more than two hundred fifty women's departments in sixty countries worldwide, with approximately twenty-five doctoral programs; and over forty scholarly journals and dozens of annual national and international conferences. The U.S. National Women's Studies Association (NWSA) was founded in 1977, and Women's Worlds: International Interdisciplinary Congress on Women was founded in 1981 with conferences held since that time in locations ranging from Haifa, Israel, to Seoul, South Korea.

METHODOLOGY AND STRATEGIES

The primary methodological approach of women's studies is derived from feminist analysis, a complex field of study that questions the foundations of traditional male-centered knowledge. Feminists have interrogated the masculine—also known as the patriarchal, androcentric, and phallocentric—biases and exclusions of prevailing social relations, institutions, and political structures to understand why women consistently experience gender-based oppressions that are manifested differently in accordance with the context. From home, to schools, to the workplace, to neighborhood streets, to war zones feminists have demonstrated the ways in which women, by virtue of being female, are barred disproportionately and systemically from the privileges enjoyed by men. At the same time feminist analysis documents women's political agency and resistance to oppressive circumstances. This has been particularly true of black feminist traditions.

To rectify structurally derived inequalities between men and women, one set of approaches feminists have offered consists of strategies to oppose existing masculine structures. Feminist oppositional solutions have taken a number of forms, from proposing equity in the workplace, government, and home to more profoundly transformative solutions of challenging masculinist epistemologies with feminist ways of knowing. Whereas man has dominated the social and human sciences, feminists have proposed woman as a replacement, a supplement, or the basis for structural transformation.

A number of concerns about the transformative potential of feminist oppositional strategies have been articulated within feminist debates. Proposing woman as an oppositional category immediately raises the question of whether gender is the primary identification of all women everywhere, casting doubt on the core of much of feminist politics. Racialized women, lesbians, disabled women, working-class and poor women, and women outside North America and Western Europe have been the most insistent voices against homogenizing women into hegemonic categories, thus contributing to the plurality of feminist analyses.

The long tradition of black feminist thought, for instance, has reconceptualized feminism by demanding attention to race, to diaspora communities, and to the construction of womanhood outside the United States. Debates about difference, or multipositionality, within women's studies programs continue, revolving around the ways in which race, class, nation, ability, age, and other social locations modify gender. Not only was the notion of woman challenged, the entire notion of a core focus or single identity was challenged by debates that demanded intersectional, plural, and culturally attentive approaches to feminism that are simultaneously antisexist and antiracist. For women's studies programs that primarily have focused on the experiences of white women the challenge is to integrate a racial analysis; for programs within historically black colleges and universities the challenge is to integrate a gender analysis into already established racial analyses.

DEBATES WITHIN WOMEN'S STUDIES

Starting from their initial questioning of man as the legitimate grounds of knowing, feminism and women's studies debate the proper subjects and objects of the field. In this sense feminist and women's studies debates are both reflective of and a challenge to broader debates within the social sciences about conventional criteria of knowledge production, disciplinary configurations of relevance, verifiability and falsifiability, the separation of subject from object, and the criteria of objectivity and universality as necessary features of legitimate knowledge production. With the "crisis of reason" comes the instability of feminist claims to know, and feminism is both oppositional to and implicated in conventional epistemological discourses. In fact, the very immersion of feminism in patriarchal practices is seen a factor in the critical effectiveness of feminism and thus the transformative potential of the field of women's studies.

These debates manifest themselves in a variety of ways in women's studies programs. Pedagogically, the field of women's studies has attempted to create inclusive, nonhierarchical, and open learning environments that do not privilege hegemonic voices or experiences. In this regard peer facilitation, experiential knowledge, and self-reflection are emphasized in many women's studies programs. Epistemologically, women's studies programs offer feminist theory and methodology courses in interdisciplinary and politically engaged knowledge production. This means that women's studies programs provide courses that centralize women's experiences as well as methods of reading the social through feminist theory. Normatively, women's studies courses tend to highlight the value biases of feminist theory and demonstrate the hidden values of knowledge that is said to be neutral and disinterested. Institutionally, women's studies programs are often in an uneasy alliance with academia, on the one hand attempting to offer transformative curricula and on the other hand finding it necessary to offer courses and programs that are recognizably legitimate in comparison with other liberal arts degree programs. Additionally, women's studies departments often seek models of departmental governance that maintain some of the ideals of feminist organizing while operating within the larger institutional framework. Finally, the field of women's studies continues to nurture its relationship with women's movements and community activism beyond the academy.

Beyond women's studies programs and departments, feminist analysis has found its way into many traditional disciplines and departmental appointments. In light of the mainstreaming of feminist analysis, the question arises whether women's studies as an autonomous field has outlived its utility in the academy. At the same time there are qualitative differences between working as a feminist scholar within a discipline that does not centralize the project of academic and social transformation and working within an interdisciplinary women's studies department that is intended to transform the entire educational experience from the classroom to departmental governance.

As women's studies programs have increased their legitimacy within the academy, acquired departmental status, increased their number of tenure-track appointments, and developed doctoral programs, the negotiations about remaining transformational and autonomous have continued. In that context the field of women's studies is dynamic, worldly, and continuously engaged with the central epistemological and normative debates that animate much of the social sciences.

SEE ALSO *Gender; Gender Gap; Gender Studies; Women; Women and Politics; Women's Liberation; Work and Women*

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Liz Philipose

WOODSTOCK

Although the Woodstock Music and Arts Festival is a celebrated symbol of the "hippie" counterculture, it did not initiate the counterculture, nor did it mark its end. Nevertheless, Woodstock is a useful reference point for discussions of this significant social phenomenon. By 1969, the "hippie" movement had emerged as a group of primarily young people, who not only were opposed to

the Vietnam War but also wore distinctive and colorful clothing, engaged in illegal drug use, and enjoyed rock and roll music.

In early 1969, business associates John Roberts and Joel Rosenman met record executive Artie Kornfield and festival promoter Michael Lang, and the four decided to produce the largest music festival to date. Although not fully immersed in the counterculture, they sought to produce a festival that would appeal to that group. To promote the festival they formed Woodstock Ventures, named after the town in Ulster County, New York, where Bob Dylan lived. Woodstock Ventures advertised the festival in the alternative and college media, hired a crew to assist with production, and booked the most significant bands of that era. Their most difficult concern was finding a site to hold a large, three-day music and art festival, which would also allow attendees to camp. Woodstock Ventures eventually found a site in Sullivan County, New York. They leased land from a local dairy farmer named Max Yasgur. Although Sullivan County residents expressed trepidation about the concert and especially the influx of "hippies," Yasgur resisted this pressure and allowed the festival to occur.

Woodstock started on Friday, August 15, 1969, and on that day, approximately 400,000 (some estimated closer to one million) people, many without tickets, arrived at the festival gate. Fans waited hours in line, and when they entered, it was clear that they were not prepared for three days of camping. To make matters worse, it had rained considerably during the weekend, soaking the festival grounds. The promoters also did not adequately prepare for the throngs of attendees, and eventually they agreed to waive admissions fees.

Woodstock is the quintessential symbol for the "hippie" counterculture. Illegal drug use was extensive and open. While most of the fans maintained control, a small percentage of them overindulged, though there was also a "freak-out tent" to calm them down. Woodstock included a self-contained market, in which fans sold food, artwork, jewelry, and clothing to one another. The artists, promoters, and fans were more concerned about music and art than about politics, but the undercurrent of progressive activism was inescapable. The musicians and fans expressed support for social justice and intense opposition to the Vietnam War.

Woodstock attracted considerable media attention, which brought the "hippie" counterculture into the mainstream, and, as a result, the festival became part of the American cultural imagination. Although the festival was only one of many crucial events during a time of social and cultural upheaval, intellectuals, the press, popular entertainment, and the advertising industry have made Woodstock into the symbol of the cultural and political ideals of the late 1960s. Supporters of the social changes brought about by the 1960s cite the ability of the festival to overcome tremendous obstacles as an example of the success of the "hippie" subculture and progressive politics. Conversely, opponents of these changes deride Woodstock as an example of the chaos and lawlessness the 1960s wrought on American society.

Although in the early 1970s many experts predicted the end of the "hippie" movement, the spirit of Woodstock has not disappeared from the American cultural scene. Throughout the 1970s, 1980s, and early 1990s, the Grateful Dead, which had been at the forefront of the "hippie" movement and performed at Woodstock, played thousands of shows throughout the United States. A new generation of fans, known as *Deadheads*, many of whom were not born when Woodstock occurred, followed the band to different cities. Like Woodstock, Grateful Dead concerts featured illegal drug use, expression of progressive views, and vibrant economic activity. This subculture was so significant that University of North Carolina, Greensboro, sociologist Rebecca Adams set out to study Deadheads by attending shows and conducting field research on the fans (Adams 1998). During the 1990s a second generation of musicians and fans maintained the Woodstock spirit. So-called *jam bands*, such as Phish, have developed their own followings, especially after the 1995 death of Grateful Dead band-leader and "hippie" icon Jerry Garcia. Since 2002, the Bonnaroo Music and Arts Festival has occurred every June in Manchester, Tennessee. Although this festival only attracts 90,000 to 100,000 people and is generally well organized, it is strikingly similar to Woodstock. An eclectic selection of bands entertains fans; there is widespread and open illegal drug use; progressive political views abound; and people sell food, art, and clothing.

SEE ALSO *Popular Music; Rock 'n' Roll; Youth Culture*

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Steven Tauber

WORK

It may seem that everyone knows what *work* means—most people have engaged in activities that they call *work*, and they know that institutions and social structures are

sustained through the work of large numbers of individuals in society. Yet, a closer examination reveals that the concept of work has a long and contested history. Peter David Anthony, for example, characterizes work as anything that gives people "moral responsibility" and "spiritual significance." He writes that "if life has any meaning, work has meaning because life is work" (1980, p. 419). Along the same lines, Sean Sayers notes that "the experience of being without a job is profoundly demoralizing and unfulfilling" (1988, p. 731). In contrast, Herbert Applebaum argues that "work in the modern world is purely instrumental. It is a mere means to gain a living, not an activity of value in itself, not a means of self-expression" (1992, p. 573). Paul Thompson (1983) characterizes work as a loss of autonomy and an experience of being confined by the scheduling and disciplining of others. As Nona Glazer summarizes, work is "a problematic concept" (1993, p. 33).

Common to the various debates on the meaning of *work*, however, is the recognition that in the contemporary social and economic system, work has an economic and moral function. As Arlene Kaplan Daniels notes, in modern industrialized society, "the most common understanding of the essential characteristic of work is that it is something for which we get paid" (1987, p. 403). In addition, the recognition of an activity as work gives it a "moral force and dignity": "To work and earn money is also to gain status as an adult" (p. 404).

Many of the ways in which we think about work in relation to pay and value have been influenced by the writings of Karl Marx (1818–1883). Marx noted that the process of exchange makes all the different types of labor homogeneous; this homogeneous labor, which produces commodities, is called *abstract labor*. Value is measured in terms of abstract labor, which in turn is measured in terms of the time necessary to produce a commodity vis-à-vis another commodity (Bottomore 1991a, p. 565). In this way, Marx described value as "not something intrinsic to a single commodity apart from its exchange from another" (Bottomore 1991a, p. 566). Marx constructs value as a *social relation* rather than a description of a thing (Rubin 1972, p. 70). Under capitalism, labor—or work—itself becomes a commodity that is bought and sold. One of the central ways that we organize our understanding of work is in terms of the jobs people do. Jobs are classified into sectors, such as agricultural, industrial, manufacturing, managerial, and service, according to the main activities involved. Around the world, jobs are deeply stratified by gender. For example, women tend to predominate in agricultural employment in Asia, sub-Saharan Africa, the Middle East, and North Africa. Women in most parts of the world hold many of the jobs in the service sector, such as community, social, and personal services, whereas men dominate in the business and financial sectors (Elder and Schmidt 2004).

Not all labor, or work, is valued equivalently. Work done by engineers, financiers, and managers is well paid, while the service jobs in which many women, people of color, and recent migrants are employed are precarious and poorly paid. According to the International Labour Organization (ILO), 1.39 billion people (almost 50 percent of the world's workers) do paid work but earn less than two dollars per day. These people form the *working poor*, who are employed yet simultaneously live below the poverty line (ILO 2004).

Many scholars have focused their analyses on how work is deeply stratified in terms of gender. Peta Tancred notes that it is often assumed that "women are born with certain 'natural' skills which require neither talent nor training, and which are merely part of their 'natural,' 'feminine' behaviour" (1995, p. 17). Jane Aronson and Sheila Neysmith document the experiences of home-care workers who do work that is similar to that which would otherwise have been assumed by female relatives. Although home-care workers are paid, their work is accorded little status and assumed to require little skill (Aronson and Neysmith 1996, p. 61).

Feminist theorists also provide vivid illustrations of the ways in which individuals are expected to re-create particular versions of masculinity and femininity as part of their jobs. Lisa Adkins, for example, discusses the jobs of catering assistants within a leisure park, where women are required to have the "right" appearance to be employed. This "right" appearance includes being "attractive and looking fresh" and not looking "weird" or "too butchy" (Adkins 1995, pp. 105–106). Adkins's study provides an illustration of the ways in which occupations are segregated not only by sex (i.e., biological femaleness or maleness) but more importantly by gender (i.e., appropriate manifestations of masculinity and femininity).

Jobs, and the organizations within which they are situated, do not just require individuals to conform to stereotypical notions of femininity and masculinity. As Jennifer Pierce notes, gendered structures shape "workers' practices at the same time that … workers participate—wittingly or not—in the reproduction of gender relations" (1995, pp. 2–3). Gender is a continual process, being actively created and resisted within organizational structures. The ways in which women and men both reproduce and re-create a variety of gender norms through their jobs is illuminated in Elaine Hall's analysis of interactions between table servers and customers. Hall demonstrates the ways in which expectations of behavior conforming to stereotypical notions of masculinity and femininity are not universally held, but rather are contextually developed. For example, both female and male table servers

think that the public expects waitresses to be more friendly than waiters and "cross-sex interactions to be more friendly than same-sex interactions" (Hall 1993, p. 460). Female customers, however, are seen only by the waiters, and not by waitresses, to be friendly. Friendliness is, in this case, not a component of femininity across contexts, but rather a gendered process developed within the particular work role assigned to waitresses (termed by Hall a *service script*) (1993, p. 461).

In addition to the gendered nature of work, only certain activities are labeled as *work* in the first place, depending on the social context. An activity such as sewing a shirt can be paid work, unpaid work, or leisure, depending on the context. This raises the questions of how certain activities get labeled as *work* and how some are deemed worthy of remuneration. Feminist theorists have noted that the strong economic orientation in conventional understandings of work fails to recognize much of the "work" that women do in our societies. Domestic chores and childcare are seldom recognized as work, even though they require more effort, commitment, and skill than many paid jobs. In fact, a lot of work is difficult to classify in terms of payment. Marjorie DeVault (1991) describes the work that goes into feeding a family, which involves not only cooking but also planning, provisioning, and being attentive to family members' nutritional needs and individual tastes. Many of these activities are not only unpaid, they *cannot* be paid for. For example, if one were to make a detailed list of the activities that are involved in finding a place to live in a new city, one would find that many of the activities (such as figuring out where like-minded people live; balancing such factors as the size, brightness, and proximity of the apartment; and reconciling the needs of various family members) cannot be done by others, even for pay. These activities require *emotion work* (Daniels 1987).

As Deanne Messias and colleagues argue, "attempts to define work in terms of economic activity are met with the problems of having to determine where noneconomic housework ends and economic activity begins" (1997, p. 307). Given that women more often than men assume primary responsibility for family work (Pierce 1995) and that women are significantly more likely to be employed in jobs requiring emotion work (Wharton 1993), much of women's work is not only unpaid, but also cannot be paid for. Writers have called these tasks *tailoring work* and note that it is such invisible work that sustains many of our social structures. Daniels, for example, argues that "the normative expectation in every industrialized society is that women will coordinate public and purchased services with the private requirements of their families [and] … this tailoring is … part of the invisible work in social life" (1987, p. 405). Glazer provides illustrations of the tailoring work that women do through her analysis of the growth of self-service and self-care in the American retail and health-care industries. Self-service in shopping, for example, translates into considerable work for the customer. This work, done by women, involves gaining knowledge about goods, locating and evaluating items, and transporting goods to the home. The tailoring work involved in shopping is constructed as leisure (Glazer 1993, pp. 49–102). In a similar way, cost-cutting measures in health care involve a "work transfer" where women learn and do high-technology health care at home, which includes providing food, changing linen, bathing, toileting, keeping detailed records, and administering medication. This care is treated as "routine housekeeping" rather than being recognized as skilled work integral to the U.S. health-care system (Glazer 1993, p. 179).

The discussion above illustrates the political nature of the concept of *work* and the ways in which different definitions of work signify gender, race, and class hierarchies within society. It can be seen that only certain activities are labeled as *work*, depending on the social context. William Ronco and Lisa Peattie, for example, ask what distinguishes *work* from a *hobby* and reveal the fuzziness of these categories. They conclude that "the distinction between 'work' and 'hobby' is thus not inherent in the activity; it lies in the social context in which the activity is carried out" (1983, pp. 13–18). The consequence of the social labeling of only certain activities as *work* is that these activities hold higher financial and normative status in contemporary society. Given the importance of unpaid, family, and emotion work, conventional definitions of work need to be constantly challenged.

SEE ALSO *Clock Time; Work and Women; Work Day*

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Kiran Mirchandani

WORK AND WOMEN

The term *work*, generally implying some sort of activity or achievements, acquired specific connotations due to the development of capitalist productive relations (Williams 1976), particularly since the Industrial Revolution in the late eighteenth and early nineteenth centuries in Britain. Under capitalism it is the payment of wages that makes clear the distinction between work and nonwork. The notion of work came to be associated with some sort of paid employment, so that time spent outside waged employment is not considered "work" but leisure time. For example, taking care of one's own household and children—a job typically done by women—is usually considered nonwork because it is a non-wage-generating activity. In fact, the dichotomy of work versus nonwork can be best understood if we look at how women's work has evolved through centuries in our society.

Though a single basis of comparison cannot be regarded as absolute in comparing historically what constitutes women's work across different cultures, studies have demonstrated that historically women in many so-called developed and developing countries have actively taken part in forms of work that are generally regarded as non-productive or non-income-generating. For example, women in Asia, Africa, and Latin and North America engaged in a wide variety of jobs (e.g., raising livestock, processing food, fetching water and fuel, sewing, selling homemade pottery, child rearing and housekeeping) that may not have always conformed to the clear-cut distinction of work and nonwork produced by the discourses of capitalism (Kessler-Harris 2003). Although in the gendered division of labor women generally had the bulk of domestic work, this was considered vital to the survival of the family and the society. In the wake of capitalist economy, while women continued to engage in various subsistence crafts or family labor systems, the emergence of a male-dominated waged workforce diminished women's visible role as productive workers. Women's housework gained a pejorative connotation and was seen as segregated from the public (i.e., male) capitalist economy. As many of women's traditional tasks (e.g., cloth manufacturing and spinning) became mechanized and production sites moved to factories, women's work increasingly became coterminous with nonproduction that cannot be evaluated in monetary terms. Women who did enter the wage labor market because of family responsibilities were either assembling goods at home for subcontractors or working in factory jobs that were considered low status and attributed less value in relation to work done by men.

Thus according to Deborah Simonton (1998), the advent of capitalism and industrialization resulted in creating a distinction between the public (men's) world and the private (women's) world. Household work came to be exclusively a women's activity, and the private world of home the ideal place for women. Women came to be identified more as mothers or caregivers and not as economic contributors to the family. As Elisabeth Prügl and Eileen Boris (1996) note, women, being identified with nurturing and caring, were separated from waged workers, and men

were considered the ideal waged workers and main breadwinners of their families. This role of women in society gained wider life even outside Europe, in many countries of Asia and Africa because of British colonization. However, this social role had different implications for middle-class and working-class women, and was gendered and racialized. For example, for women of the rising bourgeoisie in Victorian and Edwardian England, working outside the home was not considered "respectable," and home was considered a woman's proper place. However, working-class women were forced to work for financial reasons, although mainly as seamstresses, spinners, weavers, or domestic servants—jobs that are traditionally considered women's work. These jobs were perceived as less skilled and inferior to men's work and were paid less as well. Vis-à-vis class, the public/private divide had a racial dimension as well. For example, in the late nineteenth century, many African American women migrants who settled in the United States had no other option but to work as domestic servants in burgeoning urban middle-class families. Being racially excluded from most occupations, these women had to go out of their homes to earn a living for their families.

A major change in women's role in society in the United States, Britain, and continental Europe came with the two world wars (1914–1918 and 1939–1945). At the outset of each war, as men left their jobs to enlist, the supply of workers declined, resulting in labor shortages. The crisis of war unsettled the prescribed and dominant gender and class codes, and this, compounded by economic pressures, made possible the entry of women into the public workplace.

Women started entering into jobs that were previously considered men's domain, not only in manufacturing and agriculture, but also in banks and offices. Professions and careers also opened up in academia, medicine, law, and engineering. As women demonstrated their abilities to do skilled and highly mechanized work, they cast doubt on the dominant assumptions about women's physical abilities and social role. New work opportunities instilled in women a sense of confidence and individualism so that domestic work was no more the ultimate goal in their lives. For a significant number of women, paid work outside the home came to represent economic and social mobility, and they were ready to balance work and home without giving up one or the other.

Deborah Simonton (1998) notes that in spite of the significant achievements made in the workplace in the post–World War II era, attitudes toward women's roles at work and home have continued to be patriarchal and gendered. Household work and child rearing are still considered to be women's major role, and women's paid work is mostly seen as neglect of home and family. Marriage and the arrival of children thus mark an end to many women's prospering careers in countries around the world. At the same time, certain jobs such as nursing and teaching are stereotyped as "women's jobs" because they are assumed to be closely related to women's "natural" caring and mothering roles; predictably, these jobs do not enjoy the same high social status as other official or clerical jobs belonging to the domain of men. Coupled with this, women in the workplace are expected to be polite, docile, apolitical, hardworking, and contented with a lower wage. Women are seen as casual or temporary workers, a reserve army of labor to be drawn on when needed and sent back when not required.

Economic restructuring and globalization since the 1980s have made women's positions at home and in the labor market more gendered and unequal. As pointed out by Prügl and Boris (1996), women's unpaid work at home has increased, as they need to compensate for care that was previously provided by the state. At work, because of the limited options in the formal sectors that consist of regulated, organized economies and protected workers, more and more women are forced to take up jobs in the informal sectors, where jobs are unregulated, part-time, low-paid, with no benefits or social protection and highly contingent in nature. Women's share of informal sector employment thus remains high in many countries, through their involvement in self-employment, subcontracting production, family enterprises, and home-based labor. While these jobs contribute not only to families' survival but to national income as well, they often go unrecognized or are considered peripheral and a mere extension of household work. For instance, women carpet weavers in Turkey or home-based garment sewers in Bangladesh who sew sweatshirts at home for multinationals are hardly recognized as "workers," although their work provides important bases for national economic development.

The rise of sweatshops and home-based industrial labor in developing as well as industrialized countries has further disadvantaged women's role in the labor market, as they force women into particular niches, with low pay, low skills, and poor working conditions. Often this involves doing repetitive, highly routinized, and regulated jobs on assembly lines; some believe that women are well-suited to these jobs because of their supposed inherent docility and dexterity and ability to do monotonous and labor-intensive jobs. Many labor-intensive, light manufacturing industries such as the garment, footwear, and electronics industries employ women rather than men because they make higher profits with a female workforce.

A further impact of globalization can be felt through the process of racialization of women's work as well: Caribbean or Filipino women as domestic workers, Chinese or South Asian women as garment workers.

Indeed, studies indicate that a large number of women of color are clustered in low-income sectors in countries such as Canada or Britain (Sassen 1998; Jackson 2002). These women, especially immigrant women in developed countries, are low paid, receive no benefits, and are left with little in the way of social security, labor standards, or other state guarantees. Thus women of color are systemically excluded from the better paid, secure, and the more desirable jobs in the labor markets. Despite a major increase in women's labor-force participation, the intersectionalities of gender, class, and race continue to stereotype the women's labor force and affect the employment trajectories of women in the capitalist world economy.

SEE ALSO *Discrimination, Wage, by Gender; Gender; Gender Gap; Inequality, Gender; Inequality, Political*

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Srabani Maitra

WORK DAY

The current concept of the work day did not exist prior to the modern age. Before the Industrial Revolution work was an integral part of life. What we know today as leisure and work were mixed thoroughly. As late as the colonial period in American history daily work schedules were casual, set by custom rather than by contract, law, or the clock.

The work day in colonial America traditionally ran from dawn to dusk six days a week. However, meals and rest breaks customarily accounted for two and a half to three hours of that long day. In addition, the work day was casual, interspersed with non-work activities such as conversations, household chores, games, and simple idleness.

THE SEPARATION OF WORK AND LIFE

As the marketplace became increasingly rationalized and the factory system grew, competition forced labor to become more efficient. Work increasingly was purged of its nonproductive elements. The clear division between work and life fundamental to the modern definition of the work day emerged in the United States around the turn of the nineteenth century. Impersonal market forces transformed casual preindustrial work patterns. Wages replaced older kinds of traditional compensations such as masters' support of and guarantees given to apprentices and journeymen.

Having to pay daily wages, masters, managers, and contractors tried to increase profits by intensifying work effort and expanding the customary dawn-to-dusk work day to the limits of human endurance. By the 1830s traditional artisanal republican workshops were well on their way to being replaced by what commonly was called a "bastard system of production." As manufacturing was increasingly rationalized, what Karl Marx called in his *Communist Manifesto* the "motley feudal ties" ([1894] 1906) that had connected owner to operative fell away, replaced by impersonal market relations that often exploited workers in a kind of wage slavery that many, including Walt Whitman, likened to the experience of African Americans in the American South.

ATTEMPTS TO REDUCE THE WORK DAY

Initially workers struggled against the advent of modern work discipline. Gradually, though, as E. P. Thompson showed, workers accepted the division of work from life, but then began a new "fight … about" time (Thompson 1967, p. 85). For over a century workers attempted to reduce the working day, week, year, and life to reclaim in their leisure the conviviality, creativity, equality, independence, and citizenship that characterized the essential republican virtues that once had been part of their jobs. The historians David Roediger and Philip Foner conclude that "the length of the workdays … has historically been the central issue raised by the American labor movement" (Roediger and Foner 1989, p. vii).

William Heighton articulated a worker vision of *continual* work reduction that endured for over a century. In a pamphlet circulated during the 1827 carpenters' strike in Philadelphia for a ten-hour day, Heighton called for the work day to be reduced from "12 to 10, to 8, to 6, and so on" until "the development and progress of science have reduced human labor to its lowest terms" (Heighton 1827).

Organizing across craft lines and hoping to influence customary standards and new contracts, workers pressured politicians to pass ten-hour laws for government

employees. Various cities and states considered or passed such legislation. The process culminated in 1840 with President Martin Van Buren's executive order granting the ten-hour day to manual workers under government contract.

After the Civil War labor turned its attention to the eight-hour day. As Karl Marx observed, the issue "ran with the seven-leagued boots of the locomotive from the Atlantic to the Pacific, from New England to California" (Marx 1906, p. 329). The eight-hour day became an important political issue, finding a place in the Omaha platform of the Populists and the Bull Moose platform. The Democratic and Republican platforms in 1932 called for reductions in the work day to below eight hours. Some of the most dramatic and significant events in the history of labor, such as the strikes of 1886, the Haymarket disaster, and the steel strike of 1919, concerned the length of the work day. During Woodrow Wilson's administration, the eight-hour day became the national norm and Congress passed laws regulating the work day of children, women, and workers in hazardous occupations.

In the Great Depression, continuing their commitment to the "progressive shortening of the hours of labor," unions supported the introduction of the Black-Connery bill setting the work day at six hours as a remedy for unemployment. The bill nearly passed Congress in 1933 and continued to be a key political issue until it was refashioned as the Fair Labor Standards Act and passed in 1938. The Fair Labor Standard Act set the standard work day at eight hours instead of six. Since then no advance has been made. No new laws reducing the work day have been passed. Labor seems to have lost interest. Now there is some evidence that the work day is lengthening and the eight-hour norm giving way. Overtime is growing. Salaried employees' work days have lengthened. The work day in newly industrializing nations are at nineteenth-century U.S. levels (Hunnicutt 1996).

EXPLANATIONS OF THE LENGTH OF THE WORK DAY

Trying to account for the length of the work day historically through the use of traditional economic models of supply and demand is unrewarding. The oldest relevant economic model, dating back to the mercantilists of Thomas Jefferson's day, is an economic paradox. Unlike all other goods and services, the supply curve of labor was long understood to be "backward-bending." For generations economists predicted that above a certain wage rate workers would offer increasingly less of their time to work; the work day would shrink naturally as workers chose to "buy back" their lives instead of continuing to work to purchase new, less desirable (by comparison) goods and services.

That theory was a good fit with the declining work day of the nineteenth and early twentieth centuries. However, economists such as Lionel Charles Robbins tried to amend labor supply theory in the 1920s, arguing that the substitution effect of higher wages offsets the income effect: A wage raise increases the cost of an additional hour of leisure, making the workers' choice between additional, more expensive leisure and new purchases indeterminate. Whatever labor supply theory was tested for the remainder of the twentieth century, however, in most longitudinal studies the correlation between the work day and wages and unemployment (unemployment rates are understood as a proxy for the demand for labor) was found to be insignificant.

Indeed, in 1998 Dora Costa argued that the length of the work day has not decreased as much for the highest-paid workers as it has for the lowest-paid. Economists such as Juliet Schor (1991) agree, demonstrating that salaried employees' work days have lengthened well beyond eight hours in corporate cultures that pressure workers to expand the work day to extreme limits. Observing these developments, some might theorize with Karl Marx that the expanding work day reflects the capitalist tendency to maximize surplus value and hence profits by lengthening the work day. Others may understand the progressive shortening of the hours of labor as a fundamental threat to capitalism. As Herbert Marcuse observed in 1966:

> [A]utomation threatens to render possible the reversal of the relation between free time and working time: the possibility of working time becoming marginal and free time becoming full time. The result would be a radical transvaluation of values, and a mode of existence incompatible with the traditional culture. Advanced industrial society is in permanent mobilization against this possibility. (Marcuse 1966, p. vii)

For whatever reason, the century-old vision of industrial progress as consisting of both higher wages for the finer things in life and shorter work days to enjoy them seemed to have been lost at the turn of the twenty-first century.

SEE ALSO *Great Depression; Industrialization; Labor; Management; Mercantilism; Populism; Work; Work Week; Working Class; Working Day, Length of*

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Benjamin Hunnicutt

WORK WEEK

Annual hours of paid work increased substantially in much of the second half of the twentieth century due to more hours in a work week and more weeks worked. Economic sociologist Juliet Schor has sparked a national debate about work and time use with her best-selling books. For instance, in 1991 Schor reported that on average, men worked 43 weekly hours in 1969 and 43.8 hours in 1987. The corresponding increase for women was 35.2 to 37 hours. According to a study by Peter Kuhn and Fernando Lozano 18.5 percent of American men worked over 50 hours per week in 2001 (2005). In addition, with the increasing number of service sector jobs in the United States, "shift workers" have become more prevalent. A shift worker is at work during something other than a typical nine to five business day. According to numerous studies, workers keeping odd hours are more likely to have sleep difficulties and health problems.

The work week is also longer for many Americans due to urban expansion and increased commute times. In order to purchase larger houses in upscale neighborhoods with strong schools, many Americans have moved farther from their employer, therefore spending more time traveling to work each day. This trend suggests that Americans have less leisure time, and live with a rather frenetic pace of life. A number of surveys report that Americans would prefer shorter work weeks, but they do not want a lower standard of living. Increased time on the job generates income for the family, but a longer work week and commute further reduce the time workers have with their families.

Some statistics counter Schor's findings. The *Current Employment Statistics* compiled by the U.S. Department of Labor's Bureau of Labor Statistics reveal a decline in the length of the work week across all private sector jobs, from nearly thirty-nine hours in the mid-1960s to thirty-four hours in the early twenty-first century. This change is largely fueled by sharp decreases in average weekly hours in retail and services, sectors that have expanded substantially over the last half of the twentieth century, and that employ many part-time workers. In contrast, weekly hours worked in manufacturing have stayed fairly constant at forty-one hours during this time period. In addition, many professional and managerial employees are expected to work more hours than a standard full-time schedule.

Changes in the work week arise from a number of factors, including company policies. During recessions, firms regularly lay off workers (sometimes closing entire plants) to cut costs and manage inventories. The recession of the early 1980s saw many layoffs, but during the economic recovery that followed, firms did not rehire many workers. Instead, many firms added more overtime for existing workers. Indeed, there has been a general increasing trend in average manufacturing overtime from 2.5 hours in 1960 to 4.6 hours in 2000.

Largely due to higher health costs, benefits as a share of compensation have generally increased over time as well. According to the U.S. Department of Labor's Bureau of Labor Statistics' *National Compensation Survey*, at the beginning of the twenty-first century benefit costs comprised nearly 30 percent of total compensation. Benefits are fixed costs for employers, because they are paid once for each worker, and are not dependent upon how many hours an employee works. Therefore, high benefits costs deter businesses from adding workers.

Throughout the 1900s workers were increasingly paid on salary rather than with an hourly wage. This coincided with increased educational attainment, more professional occupations, and fewer manufacturing jobs. Salaried workers are required to work enough hours to keep their jobs, and the company culture reveals these expectations. For an employer, the cost of an additional hour of work from an hourly worker is the wage or the overtime wage. For salaried workers, the additional cost is zero. Salaried employees work longer hours in order to finish projects, to fit in the company culture, or to be productive enough to earn a promotion.

The structure of compensation has also changed, in that seniority-based pay is less common while pay for performance is more prevalent. Piece rates were the first form of incentive compensation, where employers tied pay to the amount a worker produced. Economist Edward Lazear presented the success of a piece rate system instituted at Safelite Glass, where both productivity and profit improved substantially. When workers face

schemes that tie their compensation to productivity, they have a clear incentive to put forth more effort and work longer hours (2000).

Government policies have also contributed to longer work weeks. For instance, caps on employer contributions to social security, unemployment insurance, and other business costs are based upon employee salary levels. In order to eliminate the funding gap for Social Security, it is possible employer contribution caps may be removed. But these sorts of tax caps clearly suggest that having fewer workers (even highly-paid workers) can lessen a company's tax burden. This is an incentive not to hire more workers, but to keep existing employees working more hours. In addition, the Fair Labor Standards Act dictates overtime pay eligibility. Around the turn of the twenty-first century, more occupations became ineligible for overtime pay. Exempt workers include computer professionals, administrative workers, and some salespersons—all are occupations that employ many American workers. Thus, the cost to a company for an additional hour of work is further reduced.

The structure of the work week has also changed as a standard nine to five schedule became less common in the twentieth century. Some employers offer "flex time," which is a schedule that involves some variable hours that workers can choose, according to their preferences. This is particularly valuable to employees with family commitments. Other nontraditional arrangements include the extended and compressed work week. The extended work week spreads the same amount of hours over more days, with shorter shifts. This is compared to the more common compressed work week, which includes longer shifts over fewer days. One particularly popular arrangement is four ten-hour days from Monday through Thursday, yielding an extended weekend. It seems that some employers understand workers' desires to have flexible leisure time without sacrificing their standard of living.

In order to increase earnings, many workers have more than one job. According to the Bureau of Labor Statistics (2002), 7.8 million Americans (5.7 percent of the labor force) had multiple jobs in 2001, and the most frequently cited reasons for this were to earn extra money (35.4 percent of respondents) and meet expenses or pay off debt (27.8 percent). Schor states that workers are caught in a cycle of ever more spending and ever more working to cover their expenses. Labor economic theory generally assumes that workers select their optimal number of hours, but Schor argues that this is not the case. Instead, employers set the hours they expect from workers and their employees adjust accordingly.

SEE ALSO *Labor; Leisure; Vacations; Work; Work Day; Working Day, Length of*

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Sherrilyn M. Billger

WORKING CLASS

The capitalist class structure consists of two main classes: the capitalist class, owners of means of production, and the working class, owners of labor power. The relations between these classes are complementary and contradictory. Complementary, because capitalists need workers to produce the wealth they accumulate, and workers' economic survival depends on capital investments: Lacking access to means of production, it is only through the sale of their labor power that workers and their families subsist. Their class interests are, however, inherently contradictory: It is in capitalists' interest to lower production costs—that is, wages, pensions, health plans, and so on—to increase profits and facilitate capital accumulation. It is in workers' interest not only to attain good wages and benefits but, eventually, to overthrow capitalism and take over the means of production, thus ending their exploitation by the capitalist class: The working classes are bound to become the capitalists' "gravediggers" (Marx and Engels [1848] 1998).

HISTORICAL CHANGES AND THE WORKING CLASS

Karl Marx (1818–1883) and Friedrich Engels (1820–1895) wrote in the nineteenth century, when class differences were stark and the large and growing working class was composed of manual, mostly male workers.

Since then and up to World War II (1939–1945), workers lived close to the factories, in dense working-class communities. These conditions facilitated workers' awareness of shared experiences and interests, and the formation of trade unions that enhanced workers' economic and political power (Marx [1847] 1969, pp. 172–173). The concentration of capital and emergence of large-scale industry resulted in the spacial concentration of workers, giving "this mass a common situation, common interests. This mass is thus already a class as against capital, but not yet for itself. In the struggle … this mass becomes united, and constitutes itself as a class for itself. The interests it defends become class interests. But the struggle of class against class is a political struggle" (p. 173).

During the nineteenth and the first half of the twentieth centuries there were in the United States and Europe numerous instances of violent class struggles and widespread working-class mobilization and organizing under socialist, Communist, and anarchist banners: "social and cultural identities were forged by the categories of class and strata; everyday life, aesthetic expressions, and cognitive mappings articulated with production relations" (Aronowitz 1992, p. 23). In 1917 successful revolution in Russia seemed to confirm Marx and Engels's prediction about the revolutionary role of the working class.

After World War II, however, the world's economic and political conditions changed, partly as a result of the cold war and anticapitalist struggles in Asia, Africa, and Latin America. In the advanced capitalist countries, the working classes abandoned anticapitalist politics in exchange for steady employment and a good standard of living. Changes in the forces of production altered the economic and the occupational structures, decreasing the proportion of manual, "blue-collar" workers employed on farms and in the industrial, manufacturing sector. The proportion of workers employed in the service sector and in nonmanual, "white-collar" clerical, professional, and managerial jobs increased, thus giving rise to theories that conceptualized the top echelons of such jobs as a new class. Typical of such views is the "professional managerial class" (PMC) thesis put forth by John and Barbara Ehrenreich (1979). The PMC owes its existence to "the expropriation of the skills and culture once indigenous to the working class" (p. 2) and acts, with some degree of class awareness, in ways detrimental to the working class, leading to, for example, "the reorganization of the productive process, the emergence of mass institutions of social control, and the commodity penetration of working class life" (p. 18). Although professionals and managers may make decisions adversely affecting the working class, it remains open to debate whether such decisions reflect their own antiworking class intentions, or the objectives of the capitalist employers for whom they work. More important is the contention that the PMC is guilty of expropriating the workers' skills and culture and that this expropriation constitutes a sufficient basis for considering them a social class. Historically, the development of capitalist industrialization has entailed the progressive deskilling of the working class and the emergence of a complex division of labor that includes deskilled masses of workers and layers of intermediate workers (foremen, managers, engineers, administrators, etc.), which embodied the power of capital and its ability to deskill and control the organization and pace of the labor process (see Braverman 1974 for a thorough analysis of these processes). The PMC is found not only in factories, of course, but also in all institutions where high-ranking salaried employees are the visible face of capitalist or of institutional power over rank-and-file workers. The view that the PMC is a "class for itself," acting autonomously against the working class, overlooks the significance of its intermediate location, as employees who carry out the mandates of their bosses. The PMC can be viewed more appropriately as a strata within the propertyless class, occupying a "contradictory class location" between the capitalist class and the proletariat—that is, foremen, technocrats, bottom and top managers, and so on—and between the petty bourgeoisie and the proletariat—that is, semiautonomous employees such as teachers, professors, scientists, and so on (Wright 1978, p. 84). In other words, the PMC occupies the top layers in the social stratification of the working population; it is not a class but a social strata within the working class, objectively defined as the class of relatively privileged propertyless workers whose power and economic resources depend on their continued employment. Loss of a job can reduce them to poverty or near poverty because, barring individual exceptions, the members of the PMC do not own capital and depend on their salaries for their economic survival (Gimenez 1978).

In the last twenty-five years the rise and widespread use of information technologies and the increasing mobility of capital resulting in deindustrialization, downsizing, and outsourcing have further changed the occupational composition of the working classes, as well as their conditions of employment: Stable, relatively well-paid blue-collar and white-collar employment is becoming scarce, while contingent and temporary employment is increasing among low-skilled and highly skilled professional workers. Long-standing racial, ethnic, and gender conflicts—which have excluded women and nonwhite workers from well-paid, stable jobs and led to disproportionate female and nonwhite poverty—eventually in the last decades of the twentieth century spurred social movements for civil rights and equal opportunity for all. The politics of class, particularly in the United States, was replaced by identity politics.

ISSUES IN WORKING-CLASS SCHOLARSHIP AND POLITICS

The changing occupational composition of the working class, the decline in workers' anticapitalist struggles and union membership, and the dominance of identity politics challenge the validity of the Marxist concept of the working class and its revolutionary potential. If narrowly defined as composed only of "productive workers," that is, blue-collar workers producing surplus value (Poulantzas 1973, pp. 30–31), it would seem the working class is dwindling away within advanced capitalist countries. Reducing the working class to only skilled, craft workers, André Gorz argues that organizational and technological changes that have practically abolished skilled work have rendered obsolete the working class as a class composed of knowledgeable workers capable of taking over control of the means and the process of production; we must, therefore, bid "farewell to the working class" (Gorz 1982, p 46). If broadly defined, in terms of political allegiances, the working class could include everyone mobilized in struggles against the state. Rosa Luxemburg (1871–1919), for example, celebrated the spontaneous rising of the laboring masses composed of factory workers, rural proletarians, policemen, military personnel, and bank employees (Luxemburg [1906] 2004, p. 180). Historian E. P. Thompson (1924–1993) offered a dialectical understanding of the working class. Emphasizing process and agency, and arguing that class is a historical phenomenon, not a structure or a category, he states that "the working class was present at his own making" (Thompson 1966, p. 9). It is in the midst of struggles, as people sharing similar experiences become aware of common interests and enemies, that the working class "makes itself," that "class happens" (p. 9). Thompson acknowledges, however, that common experiences, the basis for the emergence of class consciousness, are "determined by the productive relations into which men are born—or enter involuntarily. Class consciousness is the way in which these experiences are handled in cultural terms" (pp. 9–10). As culture (that is, institutions, value systems, beliefs, traditions, and so on) varies historically and cross-culturally, class consciousness, though it reflects an economically determined experience, is itself undetermined in its content; class struggles, it follows, can be fought under a variety of ideological legitimations.

Like Marx, who stressed the need to distinguish between changes at the level of production and the ideological ways in which individuals become conscious of those changes and engage in political struggles (Marx [1859] 1970, p. 21), Thompson differentiates between the determining role of productive relations and the contingent, cultural, or ideological forms that class consciousness might take. In Marx and Engels's *Communist Manifesto* (1848), however, class consciousness—that is, workers' awareness of their economic and political interests as a class that can succeed only by abolishing all classes, in the struggle to overthrow the economic and political power of the capitalist class—seems to flow unproblematically from the experiences of the working class. Capitalists require, in their economic and political struggles, the support of the working class; capitalists educate the proletariat and supply it with the political and economic know-how to fight and defend its interests as a class (pp. 18–19). Late-twentieth- and early-twenty-first-century capitalists, however, through the mass media and the democratization of consumption, seem to have established firm ideological control over workers' consciousness, an unsurprising development because "the ideas of the ruling class are in every epoch the ruling ideas" (Marx and Engels [1845–46] 1947, p. 39). The lack of working-class mobilization and revolutionary upheavals in advanced capitalist social formations, and the successes of globalized capitalism, have undermined, among some academics and most left-leaning activists, the traditional Marxist analysis of the working class as the only revolutionary class, the only class capable of challenging the rule of capital (Marx and Engels [1848] 1998, p. 20).

The working classes of the twenty-first century are far less class conscious (in the sense indicated in the *Manifesto*) than they were a century ago. Recent social movements, the effects of racial, ethnic, and gender oppression and exclusion, have centered around inequality rather than exploitation. In their work, African American, Latino, and feminist scholars have examined the connections between class, gender, and race and have expanded the concept of working-class politics to include issues related to racial, ethnic, and gender oppression and discrimination (see, for example, Collins 1993; Davis 1981). In the United States the impact of these social movements on the social sciences and on politics was profound. It led to a bifurcation in political practice and in scholarship between those who give primacy to working-class politics and class analysis, and those who prioritize identity politics and race, gender, and ethnicity as structures of inequality independent from social class, and as equally determinant of individuals' life chances as social class. A new social science perspective emerged in the late 1980s: the "race, gender, and class" trilogy, popularized by a journal originally called *Race, Sex & Class*. This perspective is enshrined in countless articles, anthologies, and books (see, for example, Landry 2007). Within this perspective, the role of class, ostensibly given equal visibility, is often minimized, for class is often reduced to income, and/or to another identity.

Another effect of the bifurcation in politics and scholarship mentioned above is the rise of cultural politics and the rejection of class politics and scholarship as forms of economic determinism or class reductionism. The cul-

turalization of politics can be traced in the new academic and political language: policies about diversity, multiculturalism, identity, inclusion of "diverse" (a euphemism for women and nonwhites) populations in educational institutions and the workplace, the value of "multiculturalism" and "cultural diversity," and so on have replaced, to a large extent, earlier concerns with the economic, racial, and gender discrimination. This discourse obfuscates the class divisions within the "diverse" populations, and the working-class basis of many of the grievances (for example, low wages, segregated labor markets and employment, exclusion from opportunities for upward mobility and access to higher education, etc.) that fueled the social movements of the late 1960s and early 1970s. The grounds for the emergence of political solidarity across gender and racial/ethnic differences remain as overlooked, in the context of cultural politics, as the poverty, powerlessness, and economic insecurity of white male workers. This is why, in the absence of a discourse on class that could contribute to undermine racial and gender antagonisms, "many Americans have displaced their resentments resulting from what Sennet and Cobb called the 'hidden injuries' of class, to patriotism … nationalism … racism and sexism" (Aronowitz 1992, p. 67).

The philosopher Charles Taylor explored the potential conflict between universalizing democratic politics, which equalize all citizens under the law, and the political affirmation of gender, racial, and ethnic differences as sources of dignity and claims for recognition, rather than second-class citizenship. A positive, rather than negative, public evaluation of difference is the objective of what Taylor calls "the politics of recognition" (Taylor 1992). The feminist philosopher Nancy Fraser offers a clear statement of these divisive issues:

> Demands for "recognition of difference" fuel struggles of groups mobilized under the banners of nationality, ethnicity, "race," gender and sexuality … group identity supplants class interest as the chief medium of political mobilization. Cultural domination supplants exploitation as the fundamental injustice. And cultural recognition displaces socioeconomic redistributions as the remedy for injustice and the goal of political struggle. (Fraser 1995, p. 64)

Arguing that justice requires both redistribution and recognition, Fraser identifies important problems inherent in the changes necessary to remedy these injustices, whether such remedies support or challenge the status quo. Measures that seek only to redistribute income to different groups require the preservation of group identities, thus provoking negative reactions from the excluded (for example, whites' critique of reverse discrimination). Though those groups may strive toward the public affirmation of their identities' worth and dignity, changes in the allocation of respect will remain superficial, because of the endemic struggles triggered by redistribution. But, transforming identities through deconstruction of the categories currently used to define difference would be just as problematic, for this would deprive groups of the identities that today mechanisms of redistribution and inclusion use to identify those who benefit from such policies (pp. 86–91). Although preserving the cultural and economic status quo is inherently problematic, "… the scenario that best finesses the redistribution-recognition dilemma is socialism in the economy plus deconstruction in the culture," which "to be psychologically and politically feasible requires that people be weaned from their attachments to current cultural constructions of their interests and identities" (p. 91). In reality, these struggles are intertwined, as the feminist philosopher Iris Young argues in her critique of Fraser's analysis: economic relations presuppose cultural understandings and cultural and political recognitions are a means toward economic and political justice (Young 1997, p. 148). But these struggles so far appear to be remarkably ineffective in mobilizing the U.S. working class as a class, despite its worsening economic situation. As long as workers tend to perceive themselves primarily in terms of group identities rather than common class location—a situation strengthened by the official political discourse, within which any mention of class and class interests is deemed undesirable, almost "un-American"—perhaps only mass unemployment and household bankruptcies on a scale not seen since the Great Depression might create the material conditions for the emergence of working-class political leaders, simultaneously with the rise in workers' receptiveness to their views.

Class struggles in Latin America, as in China and Vietnam, have included workers and peasants in political mobilizations under socialist and nationalist banners. For Chairman Mao Tse-tung (1893–1976), national struggles were class struggles; he set in opposition to the ruling classes the masses of "enlightened" workers, farmers, and intellectuals (Mao 1966, p. 10). Some scholars argue, however, that the proletarianization of the middle strata and peasantries has not happened, and that the working class has no privileged role to play. Anticapitalist struggles, in their view, encompass a variety of conflicts between capitalism and sectors of the population inside and outside the working class (for example, conflicts around war and peace, environmental pollution, land management, and so on) (Laclau and Mouffe 1987, pp. 103–104).

Marxist social scientists, however, continue to study the working class and the changes in its size, racial, gender, and occupational composition, giving equal importance to individuals' relationships to the means of production, skills and credentials, and location in the authority structure (Wright 1997, pp. 17–26). Examining

the transformation of the U.S. class structure between 1960 and 1990, Wright concludes that there has been a decline in the proportion of skilled workers (from 13.46% of the labor force in 1960 to 12.77% in 1990) and unskilled workers (from 44.59% to 41.38%). The working class as a whole, skilled and unskilled, declined from 58.05 percent to 54.15 percent (p. 99). In terms of race and gender, "by a large margin, the American working class now predominantly consists of women and racial minorities" (p. 69). Changes in the racial and gender composition of the working class contribute to the persistence of racial/ethnic and gender conflicts within the U.S. working class and the extent to which issues of racial, ethnic and gender oppression are the most salient and important aspect of workers' consciousness in the United States.

The meaning of the decline in the size of the working class in the United States and other advanced capitalist countries remains an unresolved and unresolvable issue in Marxist theory. For some (for example, Gorz 1980; Laclau and Mouffe 1987) it signals a reversal of the proletarianization process and an end to the revolutionary role of the working class. Others, however, point out that the proletarianization process worldwide proceeds unabated, and that as the size of the working class declines in the wealthy countries, proletarianization is intensifying in the rest of the world (Arrighi 1990; Wright 1997, pp. 109–110). Another issue subject to conflicting interpretations is the rise in the proportion of propertyless but expert, professional salaried workers, placed in "contradictory locations within class relations" (Wright 1997, p. 20). Is this an indicator of the future demise of the working class, the rise of a new class (for example, a "professional managerial class," according to Ehrenreich and Ehrenreich 1979), or of the rise of a new working class? On the basis of the analysis of the effects of capitalist development upon the characteristics of the labor force that Marx presents in the *Grundrisse* (Marx [1857–1868] 1953), Nicolaus (1973) reaches this conclusion: The working class fated to lead the revolution is not the impoverished, unskilled, and pauperized working class but the educated, expert, credentialed working class that develops as capitalists develop the forces of production to such an extent that

> the creation of real wealth comes to depend less on labor-time and on the quantity of labor expended, and more on the power of the instruments which are set in motion during labor-time, and whose powerful effectiveness itself is not related to the labor-time immediately expended in their production, but depends rather on the general state of science and the progress of technology. (Marx [1857–1868] 1953, cited in Nicolaus 1973, p. 328)

Marx depicts a time in which the development of the forces of production empowers workers, when

> the cornerstone of production and wealth is neither the labor which man directly expends, nor the time he spends at work, but rather the appropriation of its own collective productive power.… As soon as labor in its direct form has ceased to be the great wellspring of wealth, labor-time ceases and must cease to be its measure. (Marx [1857–1868] 1953 cited in Nicolaus 1973, p. 329)

Perhaps Nicolaus's inferences are correct, for it is possible today to observe a bifurcation in the development of the working class: on the one hand, growth in the exploited, poor, and relatively powerless proletariat whose labor fuels the industrialization of Asian and Latin American countries while being the source, through migration, of cheap manual labor and services in the wealthy countries; and on the other hand, growth in the numbers of "the well-fed proletarian, scientifically competent, to whom an eight hour day would presumably appear as a waste of time" (Nicolaus 1973, p. 329). These are issues that can be resolved only by the outcome of current and future political struggles, not by theoretical fiat or the exegesis of scholarly texts.

SEE ALSO *Bourgeoisie; Capitalism; Employment; Employment, White Collar; Lumpenproletariat; Proletariat; Underemployment; Unemployment*

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Martha E. Gimenez

WORKING DAY, LENGTH OF

In countries where hours of work are the subject of collective agreements, the pattern of reference for the length of the working day is often given by governmental legislation that limits working hours. The concept of "normal hours" or "legal hours" (France) is used to describe the limit beyond which overtime becomes payable. Although this legal, institutional, and focal time sets the basic rules for entrepreneurial activity, it does not provide an accurate indicator for the amount of time effectively supplied by individuals. The pervasiveness of practices such as overtime, part-time, moonlighting, sick leave, and remuneration systems such as piece rates, hourly wages, or monthly salary, all contribute towards extending or shrinking job hours across offices, shops, and manufacturers. If common sense generally recognizes the working day as something typical that can be calculated as the work time accomplished during a twenty-four-hour period or as the total work-time accomplished in one week, statistical analysis prefers instead to draw this measurement over the full cycle of the year to capture the global picture of work effort. Two main variables are generally considered: "average hours of work per person employed," which describes actual hours in the work-post, whether paid or unpaid; and "market hours," which describes hours at work, plus paid off-time (e.g., vacations, holidays, sick leave, and maternity leave).

In terms of free workers who receive payment, the peak of human effort seems to have been historically reached by the middle of the nineteenth century, a time when working hours attained an annual level of between 3,150 to 3,650 hours per year (61 to 70 hours per week). Such harsh conditions resulted from a long-term trend to cut leisure time in the form of breaks and holidays, and from a short-term tendency to expand work time in factory and cottage industries. In western Europe and the United States, men, women, and children experienced the repetition of a twelve-, fourteen-, or even sixteen-hour day, six days a week, fifty-two weeks a year. This was also a period of habituation to the economy of time revealed by mechanical clocks, supervisor's discipline, and fines.

From 1880 onwards, most workers saw the achievement of the ten-hour day, and only a few who worked in the more competitive industries such as textiles, leather, food-processing, paper, chemicals, and energy production exceeded this limit. In spite of these achievements the spark of industrial agitation and strikes continued thereafter ignited by the demand for higher pay and shorter hours, in what came to be known as the "eight-hour day movement." The bulk of unions' and workers' voluntary associations joined this demand, and both businessmen and governments were preemptively forced to review work schedules.

By 1920 the eight-hour day was recognized by law in the main industrialized countries. Further reductions in work time took the form of reducing the work week from six to five-and-a-half days, and later to five days. After that,

the downward trend continued through small incremental decreases instead of drastic changes. Thanks to the extension of vacations, holidays, sick days, personal leave, and earlier retirement, substantial improvements were added to the standard of living and the leisure time of workers. The decline in labor time became visible not only in the typical working day, but in all aspects of people's lives.

For much of the 1950s and 1960s, the primary beneficiaries of fewer working hours were the less educated and lower paid workers. Studies regarding American occupations revealed that individuals with a college education worked longer hours than people with a less formal education. To a lesser extent, those with larger incomes followed the same path of an extended working time. Hence, the upper echelons benefited from the productivity gains brought about by the golden age of economic development through increases in money instead of increases in leisure.

According to sociologist Juliet Schor (1991), the trade-off of more money for less leisure time, endemic of senior executives and professionals, soon filtered down to the less well-off segments of society, wedging millions of Americans into a work-and-spend cycle and an unremitting shortage of free time. Schor estimates that between 1969 and 1987, the average employed person was on the job for an additional 163 hours per year, the equivalent of an extra month. The additional month is attributable to both longer weekly schedules and to more weeks at work, revealing an overturn in the process of incremental decreases of the working day. The causes are twofold: On the supply side, people changed the extension of vacations, holidays, sick days, personal leave, and single jobs for more money; on the demand side, enterprises preferred to pay for overtime rather than increase the fringe benefits required by a larger staff. Schor then concludes that individual choices and economic constraints contributed to the contemporary outcome of the overworked American.

Recent studies have confirmed the tendency to augment working hours, even though this is a phenomenon restricted to a particular group of countries, such as the United States, Sweden, and Hungary. The main pattern of industrializing nations still runs in the direction of a shorter working time or through a stabilization of the average hours of work per person employed, which at present is between 1,500 and 2,000 hours per year.

The increased flexibility of working hours established by a number of arrangements has contradictory effects over the length of the working day: On the one hand, it contributes to the extent of full-time employment through overtime, evening, night, and weekend working; on the other hand, it contributes to shorter hours through the growth of part-time employment. While the United States currently matches the first case, the Japanese evolution fits well into the second.

SEE ALSO *Clock Time; Labor; Leisure; Regulation; Vacations; Work; Work Day; Work Week*

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Nuno Luís Madureira

WORKPLACE RELATIONS

In 1957 economist Gary Becker, in his seminal work on workplace discrimination, noted that employees may interact, and hence have professional workplace relations, with their managers and coworkers as well as customers of the firm. Workers and managers at a firm typically interact through institutions designed to assist firms in carrying out their objectives. These institutions govern performance evaluation, compensation, and discipline. The design and functioning of these systems is studied by human resource professionals and management scholars to evaluate a range of questions, including whether diverse workers are treated fairly and if a firm's compensation practices promote productivity and firm loyalty. In his 2003 work Paul Levy provided a thorough review of this literature. Marketing researchers and practitioners explore the link between customers and representatives of a firm. Their inquires are aimed at identifying the services customers expect from a firm's workforce, how they are best provided, and if customers prefer workers based on race, ethnicity, gender, and factors related to workplace efficiency, such as experience. Social scientists following the pioneering 1952 work of the psychologist Kurt Lewin study the nature of associations between persons in small groups to enrich their understanding of how coworkers interact and influence firm performance. This essay provides an overview of this area of inquiry with emphasis placed on the questions being explored and the insights fostered by prior research.

WHY WORK GROUPS

A worker's productivity, the output he or she generates per unit of time, depends on the skills and knowledge he or she possesses, called human capital, along with the technological resources available at the work site. Human capital can be acquired through additional schooling, improvements to health, and learning on the job owing to participation in formal job training programs and learning-by-doing through experience. Accumulation of human capital is often a costly and time-consuming process since more highly skilled workers command higher wages, educational materials and instructional time must be paid for, and learning time results in lost production. Nevertheless, firms are willing to finance acquisition of human capital for members of their workforce if the additional knowledge advances worker productivity enough to expand firm profits. However, the breadth of knowledge needed to successfully complete assignments in the workplace has increased since the late twentieth century due to advances in technology and greater globalization along with more complex legal and reporting requirements. Therefore managers have become increasingly uneasy with the prospects that an employee, in isolation, can meet the challenges of the modern workplace.

Managers can organize workers into work groups, also referred to as work teams, that are responsible for completing tasks for the firm rather than assigning duties to an individual. Work groups consist of individuals who are truly interdependent in that they must coordinate their efforts or work together to complete the tasks assigned to the team. Work groups are necessary because of the range of knowledge and talents needed to solve the problems that must be overcome to produce goods and services in a profitable manner. Managers recognize that workers possess different types of skills, talents, backgrounds, and experiences; that they are heterogeneous. The fundamental idea promoting the organization of workers into work groups is that employees with complementary skills can be clustered to enhance the productivity of the firm's workforce if they are willing to readily share skills and expertise. Thus the breadth of talents needed to complete work does not need to be embedded in a single worker but can be obtained across the members of a work group. A product development work team might be composed of researchers, market analysts, accountants, sales personnel, legal counsel, secretaries, and communications specialists. However, worker heterogeneity may present obstacles to effective work group functioning.

WORK GROUP DIVERSITY AND COWORKER RELATIONS

Managers often construct diverse work groups by selecting members with different demographic characteristics, including race, ethnicity, and gender. They believe that diverse groups will promote better work team performance by incorporating a wider range of ideas and perspectives into the decision-making process. However, when group members are dissimilar, conflicts among them are more likely to arise, weakening group cohesion, which harms skill sharing and productivity (see Patrick L. Mason's 1995 article for a discussion of the relationship between workplace diversity and discrimination). Social psychologists attribute this to work group members identifying with a subgroup of workers who share a particular demographic trait to a greater extent than to the entire work team. Social psychologists have developed a number of theories to explain why persons in a particular demographic group form such strong allegiances and engage in prejudiced behavior toward persons outside of their group. The litany of theories includes social identity theory (Tajfel and Turner 1986), realistic conflict theory (Sherif 1966), and group position theory (Blumer 1958). These theories hold that biased perceptions and poor treatment across groups is motivated by a desire to maintain or improve the standing of the group a person is affiliated with relative to other groups. Two decades of experimental research by psychologists reviewed by Marilynn Brewer and Rupert Brown in 1999 reveals that social identification with a group elicits liking, trust, and cooperation toward members of that group that are not extended to persons outside of their group.

In 1906 the anthropologist William Sumner coined the term *in-group* to describe a subgroup ascribed high social status in a society. In 1985 the Nobel Prize–winning economist Arthur Lewis asserted that high social status groups often maneuver and shape legal, political, and educational institutions to obtain economic status and privilege. He referred to subgroups with both social and economic power as dominant groups, while subaltern groups are composed of persons lacking economic privilege and social standing. Relations between coworkers associated with dominant and subaltern subgroups can be particularly troublesome for firms seeking to establish harmonious, highly productive work groups since dominant group members may feel little pressure to share skills with members of the subaltern group. Meanwhile members of the subaltern group may be compelled by their weak political and economic position to cooperate extensively with persons in the dominant group. Therefore status and power differentials may set in motion behaviors that foster economic inequality and tense workplace relations.

Gordon W. Allport's 1954 contact hypothesis theory and Leon Festinger's 1957 dissonance theory suggest that bringing diverse groups into greater contact with one another can be an effective way to reduce tensions, alter preconceived perceptions, and ultimately improve cross-group sharing, leading to better firm performance. Work

site policies to improve workplace relations between diverse subgroups are likely to be an expanding presence in the United States due to the growing diversity of the labor force.

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Arthur H. Goldsmith

WORLD BANK, THE

Conceived in 1944 at a meeting of the Allied powers in Bretton Woods, New Hampshire, the World Bank was created as a counterpart to the International Monetary Fund (IMF). Located side-by-side in Washington, D.C., the World Bank was designed to provide development assistance to countries in need, while the IMF was set up to serve as a lender-of-last-resort for countries struggling with balance-of-payment crises. Together, these twin entities have come to symbolize the kinds of post–World War II multilateralism and institution-building known as the Bretton Woods system. Both the World Bank and the IMF are owned and governed by 184 member countries, which make up the client base of each organization.

Formally, the World Bank is run by a board of governors and a board of directors, which jointly represent the views of all the member countries. The founders of the World Bank vested predominant ownership and control in the wealthier countries, as embodied in a weighted voting system that gives more power to those countries that contribute the most financial resources or quota, which is the amount each member pays according to a percentage of its gross national product (GNP). The World Bank is thus clearly divided between those countries that primarily give funds and those that mostly receive them. The formula used to determine country quotas is based on measurements of national income, foreign reserves, and international trade. Some technical changes in the formula have occurred through the years, while the most important revisions have come about as a result of fierce political negotiations.

Although the World Bank's early work centered on the reconstruction of war-torn Europe, over the years it has primarily focused on the welfare of developing countries. At the same time, it has evolved into a far more complex institution. The World Bank has acquired five main affiliates, which now operate under the banner of the World Bank Group: the International Bank for Reconstruction and Development (IBRD); the International Development Association (IDA); the International Finance Corporation (IFC); the Multilateral Investment Guarantee Agency (MIGA); and, the International Centre for Settlement of Investment Disputes (ICSID).

The IBRD focuses on middle-income and creditworthy developing countries, while the IDA targets poverty reduction in the poorest countries in the world economy. For example, the IDA provides interest-free loans and some grants for programs aimed at enabling poor countries to meet the United Nations' Millennium Development Goals (MDGs), which were adopted in 2000 in an effort to halve world poverty rates by the year 2015. The role of the IFC is to promote sustainable private-sector investment in developing countries, and MIGA's mission is to promote foreign direct investment (FDI) in developing countries. Finally, ICSID provides facilities for the arbitration of disputes between member countries and investors who qualify as nationals of other member countries. Recourse to ICSID conciliation and arbitration is entirely voluntary.

A common depiction of the World Bank nowadays is that of an international organization that is overstretched and undernourished, and one that faces several conflicting challenges. These include the general decline in resources available for official development assistance, a rapidly expanding development agenda, and increasing competition from private lenders and other bilateral and nongovernmental aid agencies. The World Bank has also been subject to mounting criticism from nonstate actors, who are demanding the adoption of new policies that would greatly increase transparency, accountability, and self-

evaluation. Much of this has to do with the marked changes that have occurred in the international political economy since the World Bank's inception more than sixty years ago.

FROM PROJECT LENDING TO STRUCTURAL ADJUSTMENT

Up until the late 1960s, the World Bank was largely committed to project lending, meaning that its loans were used for investment in physical assets and infrastructure. Such projects were concrete, finite, and usually tied to a given sector, such as hydroelectric energy or railroad transport. This all changed when Robert McNamara assumed the World Bank presidency in 1968. McNamara placed poverty alleviation and the development process itself at the top of his agenda. He shifted the World Bank's mission toward country programming and a region-by-region deployment of project work that was no longer tied to just one sector. It was also during this period that conditionality for World Bank lending was tied more closely to a given country's effort to promote the satisfaction of basic needs among the poorest segment of the population. One of McNamara's strongest legacies was a massive allocation of in-house financial support for development research.

By 1973, when he began his second term as president, McNamara had linked growth with poverty reduction and strongly supported a shift from project lending to loans that would enable the developing countries to undertake structural adjustment programs geared toward policy reform and export promotion. These structural adjustment loans (SALs) would offer incentives for reform progress, as well as disincentives for reformers that lagged. The coinciding of the SALs and the 1973 oil price shocks would delay their widespread implementation until the 1980s, however, because the oil shocks generated excess international liquidity and low-cost private lending alternatives for many developing countries. As a result of these alternative lending sources, the World Bank's client countries were less receptive to the policy coaching and reform guidance that were a condition for disbursement of the SALs. McNamara served as president of the World Bank until 1981.

The advent of the 1982 debt crisis revealed the excesses of the previous decade's borrowing spree, as well as the inability of the World Bank and the IMF to motivate debt-burdened developing countries to sustain the kinds of macroeconomic policy reforms that had been built into the SALs. With the end of the cold war in the late 1980s, and after a full decade lost to policy mismanagement and false starts on the reform front in Africa and Latin America, SALs became most important for these regions. The World Bank embraced a new wave of neoclassical economic orthodoxy and openly promoted the virtues of liberalization.

The 1989 Baker Plan for developing-country debt restructuring signaled another shift in which the World Bank would play a major role. The idea, which met with debatable success, was to use multilateral lending to encourage private international banks to offer fresh loans to those highly indebted middle-income countries that were prepared to undertake further policy reforms. This period also saw the expansion of the World Bank's mandate to include new issue areas like environmental protection, women and development, private-sector reform, and deeper involvement in social service delivery. In 1990 the World Bank's annual *World Development Report* focused on poverty reduction, reviving earlier commitments that had surfaced during the McNamara era.

THE GLASS IS STILL HALF EMPTY

On December 31, 1991, then World Bank president Lewis Preston inserted the following reminder into each staff member's Operational Manual: "Sustainable poverty reduction is the Bank's overarching objective." This became a main benchmark by which the World Bank was judged as it approached its fiftieth anniversary in 1994. For many critics, the World Bank's shortcomings on this count were more notable than its achievements. "Fifty years is enough" became one of the retorting slogans from within a tightly knit community of global nongovernmental organizations (NGOs) that had been monitoring the World Bank's track record. Even a former career economist at the World Bank, William Easterly, would go on to publish a highly critical best-selling book, *The Elusive Quest for Growth* (2002), a patently blunt analysis of the weak link between World Bank lending and positive developmental outcomes in client countries over the lifetime of the bank.

Apart from its lackluster record on sustainable poverty reduction, the World Bank's branching out into other issue areas has run up against measurement and financing constraints. On the question of measurement, with each passing decade it has become more difficult to firmly assess and hold the institution accountable for the multiplicity of goals that have been pursued. The need to prioritize policy preferences and establish reliable evaluation indicators is one part of this problem; the other lies on the side on internal leadership. Rather than directly tackle those institutional weaknesses that have long been identified as impeding the World Bank's performance, Paul Wolfowitz, who was appointed World Bank president in 2005, has narrowly focused on the elimination of corruption within client borrowers. In the meantime, although the 2015 deadline for reaching the Millennium Development Goals is rapidly approaching, the World

Bank risks lagging further behind in its ability to play a key poverty reduction role.

On the question of financing, the World Bank faces two main constraints. First, there is a growing divergence between voting rights and the contributions made to IBRD equity by shareholders, as the share of retained earnings has risen while the share of paid-in capital has declined over the years. In short, the major shareholders have used their control rights to allocate portions of IBRD net income in ways that serve their interests over those of the institution as a whole. Second, the continuation of a stagnating loan portfolio in nominal terms, and a declining one in inflation-adjusted terms, is likely to curtail the bank's net income from lending operations and make its profitability increasingly dependent on financial trading. Part of this is a generational shift, whereby the dependence of middle-income countries on official assistance has greatly declined, leaving the IBRD with a dwindling client base. An obvious but highly controversial solution would be to shift these funds to the IDA, where the borrowing demands from poorer country members are still on the rise. While the IBRD is still the most important institution of the World Bank Group, and while it is obviously reluctant to cede financial power, the IDA is gaining ground in a de facto manner.

In sum, since the 1980s, the work of the World Bank has mainly affected the poorer developing countries, yet the structure of representation on the board of directors has changed little since it was established at Bretton Woods in 1944. This imbalance raises crucial stakeholder issues, for the World Bank's own research suggests that policy reform commitments will be upheld when governments actively participate in the identification and formulation of these very programs. On these grounds alone, the argument favoring internal reform of the World Bank's governance structure is a compelling one.

DEVELOPMENT AGENCY VERSUS DEVELOPMENT BANK

For all its shortcomings, it is important to note that the World Bank has successfully changed its profile from that of a development bank proper to the world's leading development agency. This partly reflects the long-term payoff from the financing of development research. Indeed, the World Bank has become one of the most important sources of knowledge for development and poverty reduction. The influence of the policy research generated in-house by the World Bank is overwhelming, both in terms of quality and quantity. Lending and operations, loan proposals, and assessment of the outcomes are still an important part of the bank's daily workload, but it also undertakes research in over 150 countries and brings together the world's largest concentration of development specialists.

A key criticism nowadays is that the legitimacy and credibility of the World Bank's expertise is drawn through a circular process between the knowledge it produces and the audiences that legitimize this knowledge. The World Bank Institute (WBI), created in 1955 to train policymakers in development economics, has become increasingly influential. In 1999 the WBI created the Global Development Network (GDN) with the aim of building research capacities in the Global South. But the GDN's doubters point to its rationalist tendency, which portrays research as scientific and independent from its social context. This is captured by the GDN slogan: "Better Research, Better Policy, Better World." However, neither its ideas nor its research are neutral. Partnerships with the South have enabled the World Bank to pair up with institutions that share its core ideas while arguably excluding other viewpoints. At a time when critics are calling for a more open and inclusive debate about development strategy, the World Bank seems increasingly resistant to an open exchange of this nature.

SEE ALSO *Corruption; Developing Countries; Development; Development Economics; Globalization, Social and Economic Aspects of; International Monetary Fund; Loans; Needs, Basic; Poverty; Structural Adjustment; Transparency*

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Carol Wise

WORLD HEALTH ORGANIZATION

The World Health Organization (WHO) was established in 1948 when its constitution entered into force. WHO

was created to be the United Nations' specialized agency for health. The WHO's mission is "the attainment by all peoples of the highest possible level of health" (WHO Constitution, Article 1).

International health cooperation began in the mid-nineteenth century, and the need for an international health organization was discussed in the latter half of that century. The first half of the twentieth century witnessed the creation of various types of health organizations, both regional (e.g., Pan American Sanitary Bureau, 1902) and international (e.g., Office International de l'Hygiène Publique, 1907; Health Organization of the League of Nations, 1923). WHO's establishment consolidated international health activities in one organization, membership in which was open to all states. In 2005, 192 states were WHO members.

The WHO Constitution's preamble defines *health* as the "state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." This definition empowers WHO to work on virtually all aspects of communicable and noncommunicable diseases. The WHO Constitution also stipulates that the enjoyment of the highest attainable standard of health is a fundamental human right, and the concept of a "right to health" has helped shape WHO policies.

WHO has three governing organs—the World Health Assembly (WHA), Executive Board (EB), and Secretariat. The WHA is the supreme policy-making body and is made up of representatives from all WHO member states. It meets annually to establish policy for the organization and to make other decisions important to WHO's operations, such as approving the budget. The EB acts as the WHA's executive organ and is comprised of representatives from thirty-two WHO member states who are technically qualified in the health field. The Secretariat, headed by a director general appointed by the WHA, is responsible for the technical and administrative aspects of WHO policy implementation.

WHO's headquarters are in Geneva, Switzerland, but there are also regional offices in the Americas, Europe, the eastern Mediterranean, Africa, Southeast Asia, and the western Pacific. WHO representatives working at the country level provide support to WHO headquarters and regional offices.

Since its establishment, WHO has focused much of its effort on improving health conditions, systems, and policies in developing countries. WHO efforts in this regard have followed two basic approaches. First, WHO has implemented "vertical" programs targeting specific diseases, such as disease eradication efforts. The second approach involves "horizontal" strategies that seek to improve health-system capacities with respect to multiple threats that populations face. WHO's efforts to ensure universal access to primary health care services provide an example of a horizontal approach.

WHO achieved some success in both vertical and horizontal strategies during the first few decades of its existence. In the late 1970s WHO completed the worldwide eradication of smallpox, an achievement widely regarded as one of the most important public health successes of the twentieth century. WHO also helped developing countries increase childhood immunization rates. Vertical strategies did not, however, always work. For example, WHO's campaign to eradicate malaria, initially started in the 1950s, did not succeed.

At approximately the same time that WHO successfully eradicated smallpox, it launched the seminal Health for All by the Year 2000 initiative, a horizontal campaign to provide all people, especially those in developing countries, with access to primary health care services. In addition to advancing the concept of the "right to health," the Health for All effort increased attention to the social determinants of poor health (e.g., poverty, limited education, and racial and gender inequities), which cannot be managed through medical technologies, such as vaccines, but only through social policies linking health with the pursuit of broader social or distributive justice.

These achievements were followed in the 1980s and 1990s by crises that revealed the weaknesses of and problems in WHO. The 1980s witnessed the explosion of HIV/AIDS into a global health problem, particularly for developing countries and especially sub-Saharan Africa. Responsibility for the global response to HIV/AIDS was eventually taken from WHO's Global Programme on AIDS in 1996 and assigned to a newly created entity, the Joint United Nations Programme on AIDS (UNAIDS). Nevertheless, HIV/AIDS continued to spread globally and, according to UNAIDS, has become one of the worst pandemics in human history.

In the 1990s WHO struggled with the emergence and reemergence of many new and old communicable diseases, a phenomenon made more challenging by the acceleration of globalization that occurred after the end of the cold war. The 1990s also saw WHO trying to address increased morbidity and mortality in the developing world caused by noncommunicable diseases, especially those related to tobacco consumption. WHO's responses to these mounting global health threats were undermined by leadership and institutional problems at WHO headquarters and regional offices. The failure of WHO member states to achieve the goals of Health for All by the Year 2000 was painfully apparent as the twentieth century came to a close.

Efforts in the latter half of the 1990s and the early 2000s to renew and reinvigorate WHO and its mission have achieved some success, returning credibility and

influence to the organization. Key achievements include the successful WHO global response to the 2003 outbreak of severe acute respiratory syndrome (SARS); the adoption of the Framework Convention on Tobacco Control in 2003 as part of the global strategy to reduce tobacco-related diseases; and the adoption in 2005 of the new International Health Regulations, which represent a significant development for global health governance and for WHO's authority and responsibility concerning the international spread of disease. WHO has also been active in addressing the benefits and costs globalization presents to health policy, assessing potential synergies and conflicts between health and international trade law (especially within WHO), working with nongovernmental organizations in health-centered public-private partnerships, advancing health components of the UN's Millennium Development Goals, and pursuing disease eradication (e.g., Global Polio Eradication Initiative).

SEE ALSO *Health in Developing Countries; Public Health*

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David P. Fidler

WORLD HEALTH REPORT

SEE *Health in Developing Countries.*

WORLD INSTITUTE FOR DEVELOPMENT ECONOMIC RESEARCH (WIDER)

SEE *Deininger and Squire World Bank Inequality Database.*

WORLD MUSIC

The term "world music" was first circulated in ethnomusicology (the study of music in or as culture) and entered Western popular culture as a category of musical commodity in the 1980s. It is a packaging of music "from the outside" into popular music primarily intended for Western consumers. In this sense, world music generally connotes non-Western music traditions (e.g., singing-storytelling in Mali, *qawwali* in Pakistan, and Aboriginal music in Australian); music that combines Western and non-Western elements (e.g., Nigerian *jújù* and Afrobeat, Paul Simon's collaborations with South African musicians); and non-mainstream music from folk traditions or ethnic groups within Western societies (e.g., Irish folk music, salsa in New York, Indian *bhangra*—fusion of folk music with Western popular music—in London). The term is intended to exclude other marketing categories (e.g., classical, rock), but its boundaries have never been clearly delineated, and what is considered world music has changed over time, affected by shifting patterns of Western musical interests.

At least since the 1960s, ethnomusicologists have used the term world music to denote all music (e.g., folk, art, popular) of all the world's peoples. The "world" qualifier stresses the inclusion of non-Western music. In practice, studies of world music have tended not to include Western art (classical) music, so the term, as used in ethnomusicology, tends to refer more to music outside of that tradition.

Music scholar Timothy D. Taylor recounts the entry of world music into popular discourse in *Global Pop: World Music, World Markets* (1997). In response to growing sales of non-Western music recordings, representatives of independent record companies, broadcasters and concert promoters met in London in 1987 to discuss marketing the music. They determined that record stores were reluctant to stock the music because it was not clear under which heading it should be sold: The existing rubrics of folk, ethnic and international were not clearly defined, differentiated or adequately promoted. Following ethnomusicologists, the group decided to term the emerging niche *world music*. The term entered the music press and spread internationally. In 1990 *Billboard* magazine created a world music chart, and in the 1990s catalogues and guidebooks to world music appeared, such as *World Music: The Rough Guide*.

Whereas ethnomusicologists introduced the term world music as an inclusive term, in music promotion and distribution the term is used to distinguish it from other existing categories such as pop, rock, classical, and jazz. Yet the precise boundaries of the world music category are unclear and somewhat fluid, as the following examples illustrates. Filipina singer Banig sings in a Western pop

style with English lyrics, and as Timothy Taylor observes in *Global Pop*, she is classified as a world music artist. Swedish band Ace of Base, French Canadian Céline Dion, and German singer Nena are all categorized as pop music rather than world music, regardless of which language they use. World music is sometimes defined as "roots music," meaning that it is perceived as explicitly connecting with or continuing a people's tradition or heritage. Thus, while Nena and the German band Kraftwerk are not classified as world music, German Heimatmusik (music associated with the countryside) is categorized as world music. In addition, the content of world music racks in stores is shaped more by trends in Western music purchasing than a systematic attempt to represent all the world's music. The swelling of the Celtic music subcategory within world music in the 1990s was due to North Americans exploring their (vaguely defined) Celtic heritage and not, for example, a change in the overall makeup of the music of the world.

THE POPULARITY OF WORLD MUSIC IN WESTERN CULTURES

There has been Western interest in world music as far back as Westerners have encountered other cultures. For example, the Middle Eastern santur was a blueprint for the European pianoforte, and the banjo was descended from a Northwest African lute adapted by Africans in the Caribbean. During the twentieth century there was an acceleration of outside influences on music. Examples include the "Latin invasion" of the 1930s and 1940s (audible in the music of Duke Ellington and Dizzy Gillespie); the popularity of calypso in the 1940s and 1950s (the Andrew Sisters and Harry Belafonte); Brazilian *bossa nova* in the 1950s; and South African vocal music in the 1960s (The Tokens's "The Lion Sleeps Tonight").

During the 1960s and 1970s there was a surge in popularity of folk and folk-rock music, stimulating an unprecedented interest in world folk music recordings. Folkways Records and Elektra Records's Nonesuch Explorer Series began to meet this growing demand. Several British and American popular musicians incorporated world musical elements into their music, for example, George Harrison (Indian *sitar* and *ragas*), Led Zeppelin (Arabic melodies) and the Clash (reggae rhythm).

George Harrison, and Paul Simon later (with *Graceland*), not only incorporated world influences, but "curated" the music like ethnomusicologists. The musicians went into the field (Harrison to India, Simon to Africa), "discovered" the music, and presented it to the Europe and North American market, often performing with world musicians. World music was introduced to listeners by familiar musical personalities with star appeal. David Byrne, Peter Gabriel, and Mickey Hart followed in this vein. Ethnomusicologist Steven Feld argues that the Western experience of world music in the 1980s was largely shaped by "pop star collaboration and curation" (Feld 2000, p. 149). As world music grew in popularity, an increasing number of record labels started marketing it.

Pop-star collaboration and curation continued into the 1990s; however, other channels of distribution also emerged. In the late 1990s and 2000s the Internet became a leading means of distributing world music. With the Internet, the term world music is perhaps less crucial to marketing because consumers can also search online by country of origin, musician, or instrument. But the category shows no signs of disappearing. The world music category is prominently used in Web sites and sold in the cosmopolitan cities of Europe, North America, Australia, and elsewhere. Also, chain coffee shops increasingly sell recordings of world music, such as the Hear Music CDs in Starbucks.

SEE ALSO *Ethnology and Folklore; Ethnomusicology; Globalization, Anthropological Aspects of; Indigenismo; Internet; Music; Music, Psychology of; Popular Music*

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Paul D. Greene

WORLD TRADE ORGANIZATION

The World Trade Organization (WTO) is the international organization that oversees trade among member nations and acts as a forum for governments to negotiate trade agreements and settle trade disputes under a system of rules and procedures. Its aim is to increase world trade by lowering barriers to the international sale of goods and services, including intellectual property. The WTO was formed on January 1, 1995, replacing the postwar multilateral trading order under the General Agreement on Tariffs and Trade (GATT) with a more formal institutional arrangement. Headquartered in Geneva, Switzerland, the WTO as of November 2006 had 150 members, the latest addition being Vietnam. As of this date Russia was the largest state that was not yet a member. The governing principles of the WTO's global trading system were described by Director General Pascal Lamy in 2006: "Built up stone by stone over the past 50 years, this system is founded on the idea that prosperity depends on efficiency, stability, predictability, and equity in international trade" (Lamy 2006).

THE SUCCESSOR TO THE GATT

In some respects, the WTO is a new organization, growing out of globalization, but the idea of an international trade institution dates at least to the period immediately following World War II (1939–1945). The Bretton Woods Conference of 1944, near the end of World War II, proposed the creation of an International Trade Organization to complement the International Monetary Fund and Bank for Reconstruction and Development (World Bank) in order to stabilize the postwar world economy and promote trade. The member states of the United Nations (UN) agreed to the creation of the International Trade Organization (ITO) at the UN Conference on Trade and Employment in Havana, Cuba, in 1948. The ITO charter covered trade in goods and services and included rules on employment, commodity agreements, restrictive business practices, and investment. The organization failed to materialize, however, when the U.S. Senate rejected the implementing agreement.

GATT, a part of the proposed ITO, survived as a treaty agreement among twenty-three of the fifty signatory states of the ITO to set tariffs (or customs duties) to mutually agreed-upon levels without discrimination among members under a *generalized system of preferences*. This system called for treating goods from all countries on the same level as that of the *most-favored nation* (*MFN*) and allotted *national treatment* to both domestic and imported goods once they had entered the market. Certain exceptions to the *nondiscrimination principle* were allowed—for example, for regional trading arrangements or special access to developing countries—because these types of arrangements expanded regional trade and accorded with the goal of expanding global trade. These principles and exceptions were incorporated into the WTO. Tariff levels were agreed on through an intergovernmental negotiating forum facilitated by the small GATT secretariat, but the system did not provide for any enforcement mechanisms or dispute-settlement procedures, and it dealt almost entirely in trade in goods. Services and intellectual property were later addressed under separate agreements—the General Agreement on Trade in Services (GATS) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)—that were also incorporated into the WTO. GATT also contained provisions against unfair competitive practices, such as dumping and subsidies, that are also part of WTO fair-trade rules.

Two major industries were given special treatment under the postwar system—agriculture, which was not covered by GATT, and textiles and apparel, which was regulated under a quota system set up by a separate multilateral agreement, the Multifiber Agreement, until 2005. Eight rounds of multiyear trade negotiations were completed under GATT. The WTO was created at the conclusion of the eighth round, known as the Uruguay Round (1986–1995).

INSTITUTIONAL FRAMEWORK AND DISPUTE-RESOLUTION MECHANISMS

Unlike GATT, the WTO has an extensive institutional structure. It comprises the Ministerial Conference, the General Council, and a Secretariat with various bodies, committees, divisions, and working groups on specific issues. The General Council is the WTO's highest decision-making body and meets on a regular basis. Its members are official government representatives, the ambassadors to the WTO, from all member states. The Ministerial Conference comprises the trade or commerce ministers of the member states and meets approximately every two years; the Sixth WTO Ministerial Conference met in Hong Kong, China, on December 13–18, 2005. The Ministerial Conference issues declarations and decisions outlining the broad mandate of the WTO. A recurrent desire expressed in these declarations has been for greater cooperation and coherence between the IMF, World Bank, and WTO on global economic policy making and development.

The structure of the WTO was created by the legal texts of the Uruguay Round of trade negotiations, which include approximately sixty agreements, annexes, decisions, and understandings incorporating GATT, GATS, and TRIPS and covering trade in goods, services, intellec-

tual property, dispute settlement, and transparency through reviews of governments' trade policies. The agreements negotiated under GATT and the WTO provide the legal ground rules for international commerce, binding governments much like commercial contracts. Like any contract, disputes between parties are likely to arise, and for this reason a new dispute-settlement process was written into the WTO agreements and have become a central pillar of the global trading system. Within this system, a member country can file a dispute against another country or group of countries that it believes is violating a rule of the agreements or failing to live up to its obligations under the agreements.

The procedure resembles a court or tribunal, with formal consultations, mediation, and a panel set up to hear the arguments, examine the legal obligations of the parties, and prepare a report for the Dispute Settlement Body (consisting of all WTO members) to adopt or reject. It also includes an appeals process based on legal interpretation heard by a permanent Appellate Body composed of seven individuals of high legal standing without governmental affiliations. Members of the Appellate Body have four-year terms and can uphold, modify, or reverse the panel's legal findings or conclusions. Rulings are adopted by the Dispute Settlement Body automatically unless there is a consensus against the panel or appeals report (not a consensus in favor of the report) and are binding; if a state loses a dispute, it must comply with the report recommendations and state its intention to do so within thirty days. In cases of nonimplementation, the parties negotiate compensation pending full implementation. The Dispute Settlement Body monitors implementation of the report rulings and recommendations (if adopted) and has the power to authorize retaliatory action by the harmed country against the country violating its treaty obligations. By July 2005 a total of 332 cases had been brought before the WTO. A typical dispute may take up to sixty days for consultations, up to a year for panel review without an appeal, or a year and three months with an appeal. For any given dispute, the panel's report is normally presented to the parties within six months (or three months when the issue involves perishable goods).

THE DOHA ROUND

Trade negotiations among member states continue under the WTO, as under GATT, on a multiyear, multilateral basis. As of May 2007 the ninth round of global trade negotiations, the Doha Round, was still ongoing. Doha Round negotiations began in 2001 and are considered by many as much more difficult than earlier rounds. Several reasons are commonly used to explain this difficulty: (1) It goes deeper and farther than other rounds in addressing for the first time such issues as agricultural subsidies and bureaucratic border requirements and documentation, making for political complexity. (2) It makes greater attempts at fair trade by making economic development more central to the international trading system. (3) The membership has grown so much in size and socioeconomic diversity that negotiating outcomes based on the practice of consensus has become much more difficult. (4) It faces strong opposition to globalization by various nonprofit associations representing labor, the environment, and other constituencies. The WTO has been a focus of globalization debates among intellectuals and policy makers and a target of antiglobalization protests by civil society groups.

CONTROVERSY AND 1999 SEATTLE PROTESTS

The WTO has come to represent the institutionalization of globalization, with its positive trade expansion effects as well as its negative effects on communities, local industry, and human rights. The adverse effects of globalization have given rise to a global social movement with active published criticism and consistent protests by activists at WTO Ministerial meetings as well as the annual World Bank–IMF conferences. The first protest of significant size and impact took place at the WTO Ministerial meeting in Seattle from November 29, 1999, to December 3, 1999. An estimated 50,000 protesters from around the world included human rights groups, students, environmental groups, religious leaders, labor-rights activists, others demanding fair trade with less exploitation, and various protectionist groups demanding a nationalist response to maintain domestic industries and preserve communities without foreign influence. While the majority were nonviolent protestors, a small group clashed violently with police, leading the Seattle police and the National Guard to declare a state of emergency that included curfews, arrests, teargas, pepper spray, and rubber bullets fired at nonviolent protestors. Many found the violation of the right of free speech for the purpose of free trade and the ensuing police actions unacceptable. Enormous public protests ensued, ultimately causing the resignation of the Seattle police chief and succeeding in disrupting the meeting, which collapsed. Over 500 related events took place between February 18, 1999, the day the Ministerial location in Seattle was announced, and mid-December 1999, after the WTO had departed. Over 1,400 organizations signed a letter stating their opposition to the WTO. According to the text of the letter, protesting organizations accused the WTO of

> principally to pry open markets for the benefit of transnational corporations at the expense of national and local economies; workers, farmers, indigenous peoples, women and other social

> groups; health and safety; the environment; and animal welfare. In addition, the WTO system, rules and procedures are undemocratic, un-transparent and non-accountable and have operated to marginalize the majority of the world's people. (WTO History Project)

At the root of the protests are many fundamental differences in the perspectives of developing and industrialized nations, as well as labor unions and some domestic industry in developed countries, on the current reality of free trade and how it affects them. The protests have drawn attention to the democratic deficit within the WTO and to the social issues globalization can adversely impact. However, long-term legislative impact on the WTO itself remains unclear.

SEE ALSO *Diplomacy; Free Trade; General Agreement on Tariffs and Trade; Globalization, Social and Economic Aspects of; International Monetary Fund; Protest; Social Movements; Trade; Uruguay Round; World Bank, The*

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WORLD WAR I

World War I (1914–1918), known as "The Great War" at the time, marked a profound political, economic, and social shift in international relations. Historian Eric Hobsbawm has referred to 1914 as the *de facto* beginning of the twentieth century.

The triggering cause of the war was the assassination of Archduke Franz Ferdinand, the Habsburg heir, on June 28, 1914, in Sarajevo by Bosnian Serb nationalists. This matter might have stayed an internal dispute in Austria-Hungary, but other states quickly took sides. Germany, the Ottoman Empire, and Austria-Hungary made up the Central Powers. Russia stood up for the Serbs, and was joined by France and Great Britain in the Triple Entente.

According to one interpretation of World War I, a rigid alliance structure drew reluctant states into what would otherwise have been a localized conflict. Many of the belligerents did have alliances binding them to a particular side. For example, both Britain and France had pledged to defend Belgian neutrality, which was violated at the beginning of the war by German invasion. However, all of the belligerents also had compelling national interests for participating in World War I, including concerns about national insurgency and perceptions of the European balance of power.

Nationalism drew belligerents into World War I in two ways. Russia defended Serbia at least partly in the name of pan-Slavism, or solidarity among Slavic peoples. The Ottoman Empire had a different concern. Like its Habsburg counterpart, the Ottoman Empire comprised a variety of national groups, all ruled by a single dominant national group. The spread of democracy and other egalitarian movements in Europe challenged the legitimacy of the old empires. Over the course of the nineteenth century, the Ottoman Empire experienced various national uprisings, including those by Greeks, Serbs, Bulgarians, and Armenians. By helping the Habsburgs resist nationalist insurgency, the Ottomans hoped to avert future problems of their own.

In addition, many states were concerned about the changing European balance of power. The pentagonal balance created at the 1815 Congress of Vienna had been relatively successful, both in keeping European conflicts manageable and protecting the interests of Austria-Hungary, Britain, France, Germany (previously called Prussia), and Russia. By 1914, however, several of these states were not content with the existing balance of power.

For example, Germany was a latecomer to imperialism, a process dominated by France and Britain, and therefore perceived itself at a disadvantage in both power projection and resource extraction. Although overseas imperialism offered limited possibilities by the early 1900s, Germany began to pursue a policy (*Drang nach Osten*) of increased economic and political influence in eastern Europe, thus "colonizing" the region. German leaders argued that this would balance French and British power.

France and Britain, however, did not perceive themselves as at an advantage vis-à-vis Germany. Germany had benefited tremendously from the Industrial Revolution, especially since its natural resource base was well suited to industrial production. In 1870, Germany ranked third in industrial production behind Britain and France. By 1914, Germany led them both by a substantial margin. Britain and France feared that Germany's economic trajectory would soon render moot efforts at power balancing. To avoid German hegemony as a *fait accompli*, the other great powers would need to act quickly.

Russia, too, had balance-of-power concerns regarding Germany, with which it shared a tense history. The *Drang nach Osten* interfered with Russia's domestic economy and trade with its neighbors. Furthermore, Russia had been at an enduring geopolitical disadvantage because it lacked warm water ports (i.e., ones in which the water does not freeze), which limited its military and commercial expansion. Defeating the Central Powers could mean Russian access to Germany's Baltic ports and the Mediterranean Sea via Turkish straits.

THE WORLD AT WAR

Once the war began, its course was horrifyingly unique to European experience. Germany expanded the aggression outside of Austria-Hungary by implementing the Schlieffen Plan, a military strategy designed to prevent Germany from fighting on two fronts simultaneously. The existence of such a plan reflected the influence of prevailing social attitudes on military doctrine. The popularity of ideas such as Social Darwinism, a perversion of Charles Darwin's concept of natural selection then applied to human social interaction, bred a pan-European "cult of the offensive," or fanatical confidence in initial aggression as the guarantor of victory. Darwin argued that organisms with traits well suited to their environment would be the most likely to survive and reproduce. The Social Darwinist ideal twisted this commentary to argue that powerful groups had the ability, even the right, to dominate weaker ones and to mold human relations as they saw fit. As a result, states generated extremely aggressive military grand strategies—their overall plans for using the military instrument of foreign policy. For example, Germany's Schlieffen Plan called for the speedy conquest of France, via neutral Belgium, so German forces could then focus on an eastern front against Russia, which would mobilize relatively slowly for geographic and technological reasons.

The reality of World War I looked very little like the Schlieffen Plan. In early August 1914, Germany attacked Belgium. Reinforced by troops from Britain and France, Belgium tenaciously resisted German invasion. Russia, having anticipated conflict with Germany and availing itself of technological advances such as railroads, mobilized faster than Germany had anticipated. Within weeks, Germany found itself caught in a two-front war.

This conflict was unlike any Europe had seen before. A popular slogan claimed that soldiers marching off in August 1914 would be "home before the leaves fall from the trees," but even after months the two sides had made little progress toward their war aims. Various conditions of the war made territorial conquest difficult. In the west, the extremely flat terrain of Southwestern Belgium provided little natural shelter. This encouraged trench warfare, the digging of passageways open to the surface, from which soldiers could attack with at least minimal cover. The introduction of barbed wire assisted in this process and in holding territory. Capturing territory from the trenches was difficult. Instead, World War I became a war of attrition, in which victory would be defined by exhausting the enemy's resources rather than by superior mobility and territorial conquest. Military engagement frequently ended in deadlock, as when the 1916 German attack at Verdun preempted an Entente offensive on the Somme, but did not achieve the larger goal of crippling the French. Later that year, Britain launched its first major offensive of the war, at the Somme. In four months the Entente lost some 600,000 men while gaining only a few miles of territory. For years, neither side had an enduring battlefield advantage, although both expended unprecedented amounts of materiel and human lives. At least twenty million soldiers were killed or wounded during the war.

Military leaders introduced destructive new technologies, attempting to break the trench stalemate. Machine guns allowed for tremendous firepower and resulted in devastating casualties, as did tanks and submarines as new weapons platforms. Poison gas, introduced by Germany at Ypres in 1915, was difficult to control in deployment and undetectable until its effects were irreversible; gas caused pain, burns, other physical trauma, and death. These conditions eventually generated a sense of futility and ennui among many soldiers, and caused mutiny late in the war, such as that of the French army in 1917. One of the lasting consequences of these battle conditions was the emergence of "shell shock" (today known as post-traumatic stress disorder), which disabled thousands of soldiers who had survived the fighting.

On the eastern front, armies enjoyed greater mobility but suffered staggering casualties in the face of the technological innovations. In 1917 Russia withdrew from the conflict because of the Bolshevik Revolution. Britain and France appealed to the United States, which had been supplying their war effort for some time, to take Russia's place. Although President Woodrow Wilson (1856–1924) had campaigned on a no-war platform, the economic significance, in particular of Britain and France, finally persuaded him to change his position. With the declaration

of war by the U.S. Congress on April 6, 1917, the United States formally allied itself with Britain and France.

The new influx of American resources and personnel, beginning in earnest in the summer of 1918, was too much for Germany. Recognizing that Germany could not win a war of attrition against this energetic, well-supplied new enemy, the German navy mutinied, popular revolution led the Kaiser to abdicate, and the new government agreed to an armistice on the Entente's terms. The agreement was signed on November 11, 1918, at 11: 00 a.m. For many Germans, the Entente victory seemed illegitimate. Germany had not been outmaneuvered on the battlefield and victorious Entente troops did not capture Berlin. Rather, the Entente seemed to have won by calling in outsiders to the dispute; this said nothing about Germany's prowess vis-à-vis France and Britain.

Beginning in January 1919, the former belligerents met in Paris to formulate the peace treaty, known as the Treaty of Versailles after the palace in which it was signed. President Wilson attended the conference, to the surprise and consternation of many of his counterparts, making him the first sitting U.S. president to visit a foreign country. Two major goals of the treaty were to render Germany harmless and to avoid future problems with national insurgency. To achieve the first goal the victors implemented a number of programs targeting Germany, including reparation payments, disarmament, and neutralization of territory. To achieve the second goal, the victors promoted national self-determination for European ethnic groups, redrawing the map of eastern Europe so that the political boundaries more closely matched the homelands of ethnic groups.

SEE ALSO *Colonialism; Darwinism, Social; Genocide; Imperialism; Isolationism; Monarchy; Nationalism and Nationality; Ottoman Empire; Patriotism; Post-Traumatic Stress; Revolution; Russian Revolution; War; Wilson, Woodrow; World War II*

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WORLD WAR II

World War II was a military conflict from 1939 to 1945 that engulfed much of the globe. It is considered to have been the largest and deadliest war in world history, killing 62 million people on the battlefield, in massive bombings of civilians in cities, and by genocide. There were two hostile camps—the Axis Powers of Germany, Italy, Japan, Romania, Bulgaria, Hungary, Croatia, Slovakia, Finland (cobelligerent), Thailand, and others; and the Allied Powers of the British Empire and Commonwealth (including India, Canada, Australia and New Zealand), France, the United States, the Soviet Union, China, the Netherlands, Norway, Belgium, Poland, and others. The global reach of the empires of France, Italy, and Britain meant that non-European areas became directly involved with battles fought in Africa, the Middle East, Europe, and Asia. Organized civilian resistance movements in occupied countries (notably Yugoslavia, France, and Greece) made important contributions to the Allied war effort. The economic effects of the war have been estimated at $1 trillion in 1945 (approximately $10.5 trillion in 2005 terms). It is the only time in history that nuclear weapons were used (by the United States against Japan). The end of World War II resulted in the partitioning of Europe into East (ruled by Communist governments under the sphere of influence of the Soviet Union aligned under the Council for Mutual Economic Assistance, or Comecon, and the Warsaw Pact) and West (with democratic governments receiving economic reconstruction aid through the U.S. Marshall Plan aligned under NATO), the U.S. occupation of Japan, and new international organizations such as the United Nations, the International Monetary Fund, and the World Bank. The immediate postwar era also saw the rise of European integration efforts with the formation of the European Coal and Steel Community and the European Economic Community, which would develop into the European Union by the end of the century, and the beginning of the cold war between the United States and the Soviet Union that would mark the second half of the twentieth century.

EXPANSIONISM AND ECONOMIC CONDITIONS

Territorial expansion of Germany and Italy began before any military hostilities. The most noted example of territorial demands made by Hitler's Germany is Czechoslovakia (where Germans comprised one-third of the population), followed by German-speaking Austria. But the Reich sought further expansion. Many in Germany never accepted the creation of Poland following World War I, and they focused territorial demands on the Polish Corridor, a narrow strip of land separating East Prussia from Germany that allowed Poland access to the Baltic

Sea, but also sought broader territory that would expand Germany to a common border with Russia. In 1935 Germany regained the Saar region, in March 1936 it reoccupied the Rhineland, and in 1937 it achieved *Anschluss* (union) with Austria. Italy's fascist leader, Benito Mussolini, also hoped to acquire territory, particularly at the expense of France, Albania, and Greece, to create a New Roman Empire. In 1934 Italy moved against Abyssinia on the border of Italian Somaliland and Ethiopia. Territory was also an important factor in the war in Asia. One of the most often cited reasons for Japan's aggression in Asia is that nation's need for the raw materials naturally lacking in its own territory. Thus Japan, the only burgeoning industrial economy in Asia at the time, invaded first Manchuria, then other areas throughout the Asian mainland, and finally the Western Pacific in order to secure necessary natural resources such as oil and iron ore.

The economic effects of the Treaty of Versailles and the Great Depression were important factors in radicalizing German politics. In April 1921 Germany was presented with a reparations bill of $33 billion by the victorious allies of World War I. Reparations payments hobbled the weakened German economy, causing rapidly rising inflation and a dramatically depreciating currency. France refused Germany's request for a postponement, Germany defaulted on the war reparations in 1923, and the French army occupied part of the Ruhr (the German industrial zone). Hyperinflation ensued as the German currency, the mark, plummeted to 4 billion marks to the dollar (from 75 marks to the dollar in 1921 and 18,000 in January 1923), eliminating life savings and making salaries worthless. Groceries cost billions of marks (wheelbarrows of currency were needed for a single loaf of bread) and hunger riots broke out. In September 1923 the German government resumed reparations payments, inciting bitter popular resentment and paving the way for extremist political groups such as the Nazi Party (National Socialist Party).

IDEOLOGY, NATIONALISM, AND MILITARISM

Under the terms of the Treaty of Versailles, the German army was allowed to remain intact and was not forced to admit defeat by surrendering. The German general staff supported the idea that the army had not been defeated on the battlefield and could have fought on to victory were they not betrayed at home (the *Dolchstosslegende*, or "stab-in-the-back legend") by German politicians who signed the November 1918 armistice (the "November Criminals"). The theory became very popular among Germans: Adolf Hitler, a World War I veteran, became obsessed with this idea, laying blame firmly on Jews and Marxists for undermining Germany's war effort. The Nazi Party won 230 of 608 seats in the Reichstag (German parliament) in January 1933; within six months Hitler was elected chancellor. The Nazis pledged to first restore Germany to its rightful place in Europe, and then to seek world power.

Racism and anti-Semitism characterized the Nazi Party, which organized official boycotts of Jewish shops and professional men and the opening of the first concentration camp in Dachau, outside Munich, in March 1933. In September 1935 the Nuremberg Laws relegated Jews to separate, second-class status and prohibited intermarriage and sexual relations with Aryan Germans. In November 1938 Nazis orchestrated a nationwide pogrom on Jews following the murder of a German diplomatic assistant in the German embassy in Paris by a French Jew. Jewish homes, shops, and 191 synagogues were destroyed and 20,000 Jews were arrested on *Kristallnacht* ("Night of Broken Glass"). German anti-Semitism culminated in the Holocaust.

Although technically an absolute monarchy under Emperor Hirohito, Japan was politically dominated by a group of militaristic generals in charge of the most powerful army in Asia at the time. Japanese militarism was accompanied by racism, toward both Europeans and other Asians, especially Chinese and Koreans. Anyone who was not Japanese was considered inferior and treated as such. One example of Japanese violent racism is General Shiro Ishii's Unit 731 experiments in Pingfan in Harbin, China, in which as many as 10,000 Chinese, Korean, and Russian prisoners of war and civilians were subjected to brutal experiments in vivisection, germ warfare, and weapons testing.

APPEASEMENT

Britain and France followed an early policy of accommodation and compromise in Germany's favor in the hope of avoiding another war, known as the "policy of appeasement"; many thought the Treaty of Versailles imposed unreasonable demands on Germany. In June 1935 the Anglo-German Naval Agreement was signed, signaling Britain's unwillingness to defend the Versailles settlement. In March 1936 German military reoccupation of the Rhineland (demilitarized under the Versailles Treaty) met with no opposition from France and thus successfully challenged France's willingness to defend the Versailles settlement. In January 1937 Hitler publicly broke with the Treaty of Versailles.

Neville Chamberlain, the prime minister of Britain from 1937 to 1940, is known for adopting a policy of appeasement in an attempt to preserve the peace and buy time for any major rearmament. In September 1938 Britain, France, and Italy agreed at the Munich Conference to grant Czechoslovakia's Sudetenland to Germany. In

return, Hitler gave Chamberlain his personal word on future cooperation. The Munich Pact is considered the height of appeasement. On his return to London, Chamberlain stated: "We regard the agreement signed last night [Munich Pact] and the Anglo-German Naval Agreement as symbolic of the desire of our two peoples never to go to war with one another again.… My good friends, for the second time in our history, a British Prime Minister has returned from Germany bringing peace with honor. I believe it is peace for our time.… Go home and get a nice quiet sleep." Chamberlain resigned in 1940 and was replaced by Winston Churchill, who led Britain to the end of the war. The Molotov-Ribbentrop Pact of nonaggression signed by Germany and the Soviet Union in 1939 is also considered by some historians as an act of appeasement or as an attempt by Joseph Stalin to buy time to prepare for an impending German attack on the Soviet Union.

U.S. ENTRY INTO THE WAR

Since 1940 the United States had allowed the covert operation in China of the American Volunteer Group, or "Chennault's Flying Tigers," to assist the Chinese war effort. The Flying Tigers destroyed an estimated 115 Japanese aircraft, sunk numerous Japanese ships, and participated in the Burma land campaign. U.S. president Franklin D. Roosevelt cut exports of oil and scrap iron to Japan in 1941. Japan planned and executed a strike on Pearl Harbor, Hawaii, on Sunday, December 7, 1941, to cripple the U.S. Pacific fleet and consolidate oil fields in Southeast Asia. The attack on Pearl Harbor achieved military surprise and severely damaged the U.S. navy, and it remains the largest military attack on U.S. soil.

Following the Japanese attack on Pearl Harbor, Hitler declared war on the United States on December 11, 1941, in the hope that Japan would assist Germany by attacking the Soviet Union (it did not). Pearl Harbor, in conjunction with Hitler's declaration of war, gave Roosevelt the domestic support he needed to join the war in Europe and Asia without meaningful opposition from Congress. Many historians consider this an important turning point of the war in Europe, marking the formation of a grand alliance of powerful nations (the United Kingdom, the United States, and the Soviet Union) against Germany.

POSTWAR DIVISION, OCCUPATION, AND RECONSTRUCTION

After World War II, Europe was informally partitioned into Western Europe and Eastern Europe under the NATO and Warsaw Pact military alliances and the Marshall Plan and Comecon economic arrangements. Germany was formally divided into the states of the Federal Republic of Germany (F.D.R., or West Germany) and the German Democratic Republic (G.D.R., or East Germany). Allied troops remained in Germany for decades following the war. Following German reunification in October 1990, the new united Germany still had Soviet troops stationed in its eastern provinces.

The U.S. Marshall Plan intended to rebuild the European economy and promote European unity while thwarting the political appeal of communism. For Western Europe, economic aid ended the dollar shortage and stimulated private investment for postwar reconstruction. The Marshall Plan required European states to work together to utilize the funds, an obligation that later facilitated the formation of the European Economic Community.

The Council for Mutual Economic Assistance (COMECON, Comecon, CMEA, or CEMA) was formed in 1949 as an economic organization of Communist states. Its original members were the Soviet Union, Bulgaria, Romania, Hungary, Czechoslovakia, Albania, the German Democratic Republic, and Poland. Albania, Hungary, Czechoslovakia, Bulgaria, and Romania, which were allied with the Axis Powers during the war, came under the Soviet sphere of influence, with their Communist governments joining the Soviet-led Comecon economic and trade area, as did Poland. In 1950 East Germany joined Comecon. (Other members included Mongolia [1962], Cuba [1972], and Vietnam [1978]. Yugoslavia [1964] was an associate member; other Communist countries or Soviet-friendly governments were observers.) Comecon members had common approaches to state economic ownership and planned management, and political regimes that espoused the ideologies of Marxism-Leninism. In 1949 the ruling Communist parties of the founding states were also linked internationally through the Cominform, the Communist Information Bureau, which established information exchanges between members. The East European members of Comecon were also militarily allied with the Soviet Union in the Warsaw Pact.

In Asia, the U.S. military occupation of Japan led to Japan's democratization. China's civil war continued during and after World War II, culminating in the establishment of the Communist People's Republic of China. Europe's Asian colonies India, Indonesia, and Vietnam started toward independence.

LEGACY OF WORLD WAR II

One of the most important legacies of World War II was the creation of a set of international institutions to provide for international governance of global security and monetary relations. Postwar security and economic institutions were created exclusively by the victorious Allied Powers and reflected the postwar power structure. The term *United Nations* was first coined by Roosevelt during

the war to refer to the Allies. On January 1, 1942, the Declaration by the United Nations committed the Allies to the principles of the Atlantic Charter and pledged them not to seek a separate peace with the Axis Powers. Thereafter, the Allies used the term *United Nations Fighting Forces* to refer to their alliance. The United Nations institutions were created during the war itself to govern international relations after the war.

The initial ideas for a global security organization were first elaborated at wartime Allied conferences in Moscow, Cairo, and Tehran in 1943. During August to October 1944 representatives from France, Britain, the Soviet Union, China, and the United States met in Dumbarton Oaks in Washington, D.C., to prepare plans for an organization that would maintain peace and security, and economic and social cooperation. The formal monetary conference predated the security conference: The United Nations Monetary and Financial Conference of July 1 to 22, 1944 (called the Bretton Woods conference), took place in Bretton Woods, New Hampshire, with 730 delegates from 45 Allied countries. It established the Bretton Woods system of international exchange-rate management that remained in place until the mid-1970s, and it produced two separate institutions (called the Bretton Woods institutions) to monitor, regulate, and facilitate international monetary affairs and finance in the post–World War II era. The World Bank and the International Monetary Fund, both headquartered in Washington, D.C., have had lasting influence on the international political economy since their inception. The International Monetary Fund was entrusted with overseeing the global financial system by monitoring exchange rates and balance of payments, providing liquidity, and offering technical and financial assistance. The World Bank, or International Bank for Reconstruction and Development (IBRD), was entrusted with providing finance such as grants or loans at preferential rates, technical assistance, and advice to countries for the purpose of economic development and poverty reduction, and for encouraging and safeguarding international investment. Although the World Bank's activities have evolved to focus on developing countries, the first loan issued by the World Bank was approved on May 9, 1947, to France in the amount of $250 million for postwar reconstruction; this remains its largest loan to date in real terms. World Bank loans and grants provide financing to countries that have no access to international capital markets.

The United Nations Conference on International Organizations opened at the Fairmont Hotel in San Francisco on April 25, 1945, with fifty nations and some nongovernmental organizations represented. Initially referred to as the United Nations Organization, the UN was comprised of several administrative bodies (General Assembly, Secretariat, Economic and Social Council, Trusteeship Council, and the International Court of Justice to adjudicate disputes among nations), the most prominent of which is the Security Council, where members resolve action on issues of war and aggression. (For example, all UN peacekeeping operations must be approved by the Security Council.) The United Nations Charter was signed on June 26, 1945, and the UN, headquartered in New York City, came into existence in October 1945 after the charter had been ratified by the five permanent members of the Security Council and a majority of signatory states. It replaced the League of Nations, which had been founded after World War I and had proved ineffective at preventing war and securing peace and order. The structure of the UN reflected the World War II victory, with the most powerful Allies—the United Kingdom, France, the United States, the Soviet Union, and China—holding the only permanent seats in the UN Security Council with veto power over decisions. The World Bank and International Monetary Fund came into existence a few months after the UN, in December 1945 following international ratification of the Articles of Agreement (called the Bretton Woods agreements).

Another legacy of World War II saw the development and use of many new technologies, including long-range missiles, jet aircraft, radar, and atomic (nuclear) weapons. Nuclear weapons were created in the top-secret Manhattan Project in the United States (with assistance from the United Kingdom and Canada) by an international team that included émigré scientists from Central Europe, initially out of fear that Germany would develop them first. (The Soviet Union became the second nuclear power in 1949.) Nuclear weapons have only been used twice in the history of warfare, both in the closing days of World War II by the United States against Japan, the first on August 6, 1945, on the Japanese city of Hiroshima, and the second on August 9, 1945, on the Japanese city of Nagasaki. Each use comprised the dropping of a single airborne atomic bomb (atom bomb, A-bomb, or simply "the bomb"). The bombs killed an estimated 200,000 people (mostly civilians) instantly, and twice as many later through the effects of radiation. The advent of nuclear weapons came only weeks after the signing of the UN Charter, providing immediate impetus to concepts of arms limitation and disarmament. The first resolution of the first meeting of the UN General Assembly on January 24, 1946, was "The Establishment of a Commission to Deal with the Problems Raised by the Discovery of Atomic Energy," which called upon the commission to make specific proposals for "the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction."

World War II atrocities and genocide in both Europe and Asia led to a consensus that nations must work to prevent such tragedies in the future. Another early objective

of the United Nations was to create a legal framework for considering and acting on complaints about human rights violations. The UN Charter obliges all member nations to promote "universal respect for, and observance of, human rights" and to take "joint and separate action" to that end. The Universal Declaration of Human Rights was adopted by the UN General Assembly in 1948 as a common standard of achievement for all.

World War II resulted in a fundamental shift in global power from the weakened British Empire to the United States and the Soviet Union. Almost immediately following World War II, a protracted geopolitical, ideological, and economic struggle emerged between two of the most powerful Allied Powers—the United States and the Soviet Union. The struggle was called the cold war because it did not involve direct armed conflict between the United States and the Soviet Union, although each formed an opposing military alliance in Europe and engaged in the biggest arms race (including nuclear weapons) in history. The cold war lasted from about 1947 to the collapse of communism in the late 1980s, the fall of the Berlin Wall in 1989, and the dissolution of the Soviet Union in 1991.

The North Atlantic Treaty Organization (NATO, or the North Atlantic Alliance, Atlantic Alliance, or Western Alliance) was established with the signing of the North Atlantic Treaty on April 4, 1949, in Washington, D.C., for the purpose of collective security of the members, binding each to a military alliance with all the others. The treaty avoids identification of an enemy or concrete measures of common defense, but the implied adversary was the Soviet Union. This marked a significant change in the isolationist tendencies of the United States and signaled the lasting involvement of the United States in European security affairs. It also formally divided the World War II Allies in the West from the Soviet Union by creating a new military alliance composed largely of World War II Allied Powers. The original members of NATO were the United States, France, Britain, Belgium, Luxembourg, Netherlands, Portugal, Norway, Denmark, and Iceland (West Germany was not incorporated until 1955, after the formation of the Warsaw Pact).

In 1955 the Warsaw Pact (Warsaw Treaty, or Treaty of Friendship, Cooperation, and Mutual Assistance) was established as a military organization of Eastern and Central European Communist states to counter the threat perceived by NATO. Its members consisted of the Soviet Union, Bulgaria, Czechoslovakia, Hungary, Poland, Romania, East Germany (in 1956), and Albania (which withdrew in 1968). Similar to the NATO members, the Warsaw Pact signatories pledged to defend each other if one of them was attacked. It is noteworthy that the members of the Warsaw Pact consisted of Axis Powers as well as Allied Powers (the Soviet Union and Poland). The Warsaw Pact officially dissolved in 1991. Although not a member of NATO, the Axis Power Japan became allied with the United States. Although not a member of the Warsaw Pact, the Allied Power China was friendly to the Soviet Union. Countries such as Yugoslavia, Switzerland, Austria, India, Sweden, and Finland conspicuously maintained their neutrality by participation in the Non-Aligned Movement.

SEE ALSO *Defense; Deterrence, Mutual; Disarmament; Pearl Harbor; Warfare, Nuclear; Weaponry, Nuclear*

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Anastasia Xenias

WORLD-SYSTEM

The great French historian Fernand Braudel coined the term *économie-monde* (world-economy). The hyphen is important; it signifies that he did not mean that his "economy" covered the whole world, merely that it was effec-

tively *a* world. Braudel's major work, *The Mediterranean and the Mediterranean World in the Age of Philip II* (1972–1973) on the sixteenth century, inspired the American founder of "world-systems theory," Immanuel Wallerstein (b. 1930).

According to Wallerstein, if we exclude small-scale societies, which he calls mini-systems, where a complete economic division of labor is accompanied by a single culture, we have only *world*-systems. Of these there are just two variants. The *world-empire* has many cultures but a single political superstructure (and a division of labor). The *world-economy* possesses a single economic division of labor. Unlike the mini-system and the world-empire, it has both many cultures and many political units. The capitalist world-economy started in sixteenth-century northwestern Europe and has continued to exist ever since, unlike other (non-capitalist) world-economies and world-empires. Capitalism is a system given over to the unlimited accumulation of capital through exchange. It is driven by the search for profit. Profit comes from unequal exchange (a term pioneered in the Latin American context), whereby goods produced under monopolistic conditions in the core are traded for other goods produced in the periphery under competitive conditions; that is, non-monopolistic ones, in many countries. The former goods enjoy a cost advantage over the latter. This is because the sale price is high relative to the cost of production, whereas, in contrast, peripheral producers are forced to sell cheaply, close to or at the cost of production. (*Surplus value*, for Wallerstein, is the difference between cost of production and sale price of a product.) Goods produced under competitive conditions in the peripheral zones of the capitalist world-economy tend to flow to countries located in the core of the capitalist world-economy. Profits are highest to producers located in this core. The states located in the core are used by leading capitalists to prop up the system. Trade within this system, in which they enjoy a marked, historically unprecedented freedom of maneuver, benefits the latter unequally.

Wallerstein likens his interest in the historical development of the capitalist world-economy, seen as a single "unit of analysis," to that of the astronomers in the single planetary system, the laws of motion of which they set out to discover. It is the world-system as a whole that interests him. This overall system determines what goes on in any particular part. Nation-states are only one institution among others in the capitalist world-economy. What goes on in them is determined less by the character of a particular nation-state and far more by this state's position within the capitalist world-economy.

From 1540 the geographical area of northwestern Europe emerged as the "core." Eastern Europe and Iberian America were reduced to peripheral status in relation to this core. Mediterranean Europe settled into an intermediate position, becoming semiperipheral, midway between core and periphery within the system. Its trade, state structure, and forms of labor exploitation reflected this intermediate position, just as in the cases of the core and the periphery. Subsequent phases of development saw industrial capitalism appear in the core; the European world-economy spread to encompass the entire globe; and changes within the core, semiperiphery, and periphery. The periphery includes most of Asia and Africa, the semiperiphery at various times Japan, the United States, Germany, and Russia. After 1945 the United States assumed a leading role in the whole system, closely followed by, among others, Soviet Russia. The USSR, although nominally a socialist state, could not, in Wallerstein's judgment, possibly have been one. There is just one capitalist world-economy to date, and there can as yet be no socialist systems. Socialism awaits the qualitative change of the whole system, which, following deepening crises, will eventually assume the form of a world government. This revolution is preparing itself mainly in the periphery of the capitalist world-economy.

WORLD-SYSTEMS ANALYSIS

Capitalism requires a world economy. This is because it requires capitalists to be free of political interference—that is, free to accumulate; capitalists also require a large market, so cannot inhabit a mini-system. It is the continuous accumulation that has provided the system with its dynamism over five hundred years. Competition between capitalists is continuous. The division of labor, implying the exchange of basic goods and significant flows of capital and labor, alone binds the system together. It can do so because of the expansive properties of capitalism that have enabled capitalism to survive and grow continuously. (Noncapitalist world-economies have not survived.) Capitalists, to flourish, need to be able to evade states hostile to their interests and to pressure other states into pursuing policies favorable to those interests. They need a multistate world-system. Profit comes from state-supported quasi-monopolies. Capitalists in the core can charge high prices but producers in the periphery are in no position to do so.

Core countries are few. Peripheral ones are many. The semiperipheral countries (e.g., South Korea, India, and Brazil) aim to move up to the core and to avoid falling down into the periphery. They have a mix of activities—some are core-like, some are periphery-like—whereas in core and periphery countries, core and periphery activities are respectively preponderant. Surplus value flows in the core from the working class to the employers, but it also flows from the periphery to the core in world-system terms via trade. Analysts detect long cycles of expansion

and recession over about sixty-year periods (known as Kondratieff cycles). These occur as quasi-monopolies become exhausted. Recovery from recession does not bring the world-economy back to where it was before the cycle started. "Secular" or long-term trends are visible. Eventually these create problems for the system.

Cultural phenomena are interpreted by Wallerstein in terms of his world-system model. Subsequent to the publication of his historical-sociological trilogy (*The Modern World-System*, 1974, 1980, 1989), Wallerstein has treated these phenomena in response to the criticism that he had neglected them. The world-system, he argues, now has a "geoculture." Central to it is "centrist liberalism." Principles of universalism (equality of opportunity, meritocracy) applicable to the managerial cadres are offset and balanced by de facto particularisms—of race, nation, ethnicity, gender, and religion. These legitimate the various divisions within the capitalist world-system—for example, states promote "nations"; the core-periphery division encourages divisions of "race"; and households placed at a lower level in the world occupational hierarchy socialize their young into consciousness of ethnic identity and uphold the mainly unpaid labor of their female members through sexism. These particularistic definitions involve lines of social division that are drawn and redrawn in the workforce as divisions within the capitalist world-economy change: changes in the position of countries in the long-term cycles and in overall tendencies toward crisis, and adaptive responses to particular crises of the system as a whole. Semiproletarian households that predominate in the periphery today effectively subsidize capitalists in the core (where truly proletarian households fully supported by wage labor predominate). Such households permit workers and their families to survive through means of support other than wage labor, such as subsistence and petty trading, thus allowing wages to fall below what otherwise would be necessary to ensure the survival of the whole household.

Just as the modern world-system of today has a single culture, the content of which was initiated by the ideals of the French Revolution, so too it has an interstate system. Here again, this system follows in its workings the patterns visible in the world-economy to which it is bound of necessity. The actions of states influence the workings of the capitalist world-economy through their relations to their capitalists and to foreign states, especially in other "zones," and their relative strengths and weaknesses vis-à-vis each other are determined by their relative economic success as taxing and military entities.

Wallerstein and his colleague Terence K. Hopkins built a successful research school, the Fernand Braudel Research Center at the State University of New York, Binghamton. Fellow analysts include Samir Amin, Christopher Chase-Dunn, Giovanni Arrighi, Albert J. Bergesen, and, notably, André Gunder Frank, whose metropolis-satellite model was effectively replaced by the world-system. A list of former students produces a series of illustrious names in American social science, many of whom, with others who are not world-systems scholars, have attempted to synthesize the world-system approach with ideas from other traditions. World-systems analysis should not be seen in isolation.

World-systems analysis and orthodox Marxism overlap in many ways, despite significant differences. Marxists of the stature of Rosa Luxemburg (1871–1919) (see *The Accumulation of Capital*, [1913] 1951); V. I. Lenin (1870–1924), whose analysis bears some striking resemblances to Wallerstein's; and N. I. Bukharin (1888–1938) (see *Imperialism and the Accumulation of Capital*, [1924] 1972) struggled with the problem of imperialism, as did J. A. Hobson. (It should also be noted that the non-Marxist scholar Oliver Cromwell Cox's *The Foundations of Capitalism* (1959) anticipated Wallerstein's conception in certain noteworthy ways.)

The central issue dividing orthodox Marxism from world-systems theory is whether analysis should focus on class relations within a given national mode of production, pivoting on the wage contract. The defense of this position has been made by Robert Brenner (1977) and has led to the charge that Wallerstein's is a neo-Smithian Marxism—a charge with which other critics like Theda Skocpol (who argues for a degree of state autonomy allegedly denied by Wallerstein) have some sympathy (1977). Wallerstein's dating of the origins of the capitalist world-economy means that he cannot subscribe to these tenets, and his conception of the role of states in monopolies, of the world-system in which states are contained as the relevant totality, and of the historical variety of forms of labor control (not just wage labor) necessarily denies them too. The issue dividing Marxists from non-Marxists is the primacy to be accorded to economic relations: Are they primary or not? And how are states and culture to be understood relative to economic matters? Whatever the answers to these profound, complex questions, Wallerstein and his colleagues have opened up questions previously considered closed. In their scholarship, fact and theory are brought into a fruitful relationship, as in the days before modern social science replaced historical sociology with the abstract "science" of society.

SEE ALSO *Cox, Oliver C.; Imperialism; Skocpol, Theda; Wallerstein, Immanuel*

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Ian Varcoe

WORSHIP

The term *worship* refers to a complex of acts whereby humans express their devotion and reverence toward a deity (in theistic religions) or toward a transcendent yet nondivine being (in nontheistic religions). Arguably, as soon as human individuals become conscious of their utter dependence on a supernatural power and express their devotion to him, her, or it, worship is born. While this private worship is undoubtedly valid, conventionally *worship* refers to the public and corporate acts of devotion performed in an organized religion. Furthermore, the three pronouns—in the masculine, feminine, and neutral genders—used above to refer to the deity (alternatively, deities) or the transcendent but nondivine being(s) indicate the diverse ways they are conceived, either as personal (male and female) or impersonal, as singular (monotheistic) or as plural (polytheistic). This entry focuses on worship rendered to a personal deity, male or female, in theistic religions.

Studies of religion have shown that there is a reciprocal relationship between worship and belief and that in this relationship the former is prior to the latter. The first human reaction to the presence of the *tremendum et fascinans*—to use Rudolf Otto's (1869–1937) expression for the sacred—is not to formulate beliefs about it but to worship it in awe and devotion. This worship eventually gives rise to theological reflections and beliefs, which in turn shape and regulate the rituals in which worship is carried out.

One of the most fundamental forms of worship is sacrifice. These rituals are performed publicly, in the open air or in religious buildings, and privately, among family. Religious officials generally preside at public sacrifices, whereas the male head of the household often, but not always, presides over worship in family settings. In Daoism and Buddhism, for instance, worship, including sacrifices, may be undertaken by women as representatives of the family. Various objects are offered to the one God, gods, spirits, ancestors, demonic beings, or any other transcendent being. In *bloodless sacrifices*, food and drink, such as fruits, grains, and baked goods, milk and milk products, water, alcoholic beverages, and flowers, are offered. Inanimate objects are offered too, including clothing, jewelry, coins, precious stones, and precious metals. In *blood sacrifices*, domesticated animals and, less often, humans are ritually slain, and their blood is sprinkled on the altar or on the fields to maintain the cosmic order or promote fertility. The sacrificial rite may be a simple act of lifting up the offering, killing or burning the animal, and the libation of its blood. Eventually, the rite can become highly complicated, requiring performance by religious experts. The intentions of sacrificial worship are described as fourfold: praise, thanksgiving, supplication, and expiation. Sacrifices are offered regularly (daily, weekly, monthly, at the beginning of seasons, and yearly) and extraordinarily (for special joyful events or on dangerous occasions) and at various sacred sites, both natural (e.g., trees, mountains, rivers, and stones) and constructed (e.g., temples, pagodas, and churches).

Ritual worship varies greatly from religion to religion, from age to age, and from place to place. In Vedic practice and later Hinduism, the central sacrifice is the offering of fire, personified as the god Agni and the symbol connecting Vedic understandings of the person, society, and the cosmos. In addition, worship of deities through the offering of foods, service, and gestures of respect toward the deities (*pūjā*), later amalgamated into devotional (*bhakti*) Hinduism, is one of the most pervasive forms of Hindu worship. This worship takes a variety of forms, from simple gestures, such as offerings of water, foods, and flowers, recitation of mantras, singing of songs, and the waving of camphor before the image of the deity, to more elaborate gestures, such as offering hospitality to the god, invocations, bathing and dressing the image, and carrying the enthroned image in procession. Central to this *pūjā* is the experience of "auspicious seeing" (*darsana*), in which the devotee "sees" the god or goddess and is "seen" by those who are granted favors by the deity, symbolized by the returning of the sacred food (*prasāda*).

In ancient Israel, sacrifices at the Jerusalem Temple, officiated by the priestly class, played a pivotal role in the religious life of the people until the destruction of the Temple in 70 CE. In terms of ritual, in pre-Rabbinic Judaism a distinction is made between *burnt offerings* ("holocaust"), in which the sacrificial animal is totally burned up, and *peace* or *communion offerings*, in which only parts of the sacrificial animal are burned, with the animal's blood poured out or smeared on the altar and some parts of the animal consumed by the people in a sacrificial meal. In *expiatory sacrifices*, the sacrificial animal is burned up and no part of it is eaten. Ancient Israel also practiced bloodless sacrifices consisting of the offering of agricultural products. These sacrifices, blood and bloodless, were made daily and on solemn festivals, such as Passover, Shavu'ot, Yom Kippur, and Sukkot. With the destruction to the Temple, the whole Jewish sacrificial system came to an end, and new forms of worship arose with the emergence of the rabbis as spiritual leaders.

According to Christianity, the Jewish sacrificial system and worship reached their culmination in Jesus's death on the cross, which is seen as the perfect and definitive sacrifice, bringing about the redemption of the world. Jesus's life, ministry, death, and resurrection are made efficaciously present (not repeated) in the sacraments—there are seven of these in the teaching of the Roman Catholic Church. Of them, the highest is the Eucharist, the perfect sacrifice, in which Jesus's body and blood are believed to be physically and really present and the spiritual benefits of Jesus's sacrifice on the cross are imparted to his followers and constitute the church as his mystical body. Christian worship is often called *liturgy*, that is, the whole public worship of the mystical body of Jesus Christ, head and members.

Islam is in principle opposed to sacrifice. Consonant with its fundamental belief in the unity of God (*tawhīd*) and in Muhammad (c. 570–632) as the final prophet, Islam emphasizes worship as "service" (*'ibadah*) to God and veneration of the Prophet. This worship/service constitutes the so-called Five Pillars of Islam: the confession of faith (*shahada*), ritual prayer (*salat*), fasting (*sawm*) during the month of Ramadan, the pilgrimage (*hajj*) to Mecca, and almsgiving (*zakat*).

Whereas sacrifice occupies an important place in theistic religions, it is by no means the only form of worship. In all the religions examined above, the reading and studying of the scripture constitutes an essential part of worship. In Hinduism, the study of the sacred books is combined with ascetic (*tapas*) and meditation (*yoga*) practices. In Judaism, after the destruction of the Temple and in the subsequent Diaspora, a class of nonpriestly leaders called *rabbis* sought to construct a system of worship in which the study of the Torah is a central mode of honoring God. This Torah piety also provides insights into the commandments (*mitsvot*) that govern the lives of devout Jews. To replace the Temple sacrifices, the rabbis composed prayers for the use of their synagogues (such as the Prayer of Eighteen Blessings) and introduced the practice of reciting Deuteronomy 6:4–9 and 11:13–31 and Numbers 15:37–41 (the *sh'ma'*). Worship is conducted in the presence of the Torah scroll, and the leader of the worship stands in front of the ark housing it. Another innovation is the public reading of the Torah and exposition of scripture. In Christian liturgy, scriptural readings, from the Old and New Testaments, are incorporated into the liturgy and are often followed by a homily. In Islam, the Qur'an is the object of ubiquitous veneration and devotion. Wrapped in silk, it is stored as the most sacred object in the room and must not be handled in a state of ritual impurity.

The reading of sacred scripture also plays a key role in other religions, such as Sikhism and Buddhism. The Ādi-Granth, draped in silk and placed on a cot under an awning, is the central object of worship in every Sikh *gurdwārā*, and offerings of money, flowers, and food are made to it. On special occasions there is nonstop recitation by a relay of readers. In Buddhism, the simplest act of devotion is homage in front of the image, usually of the Buddha, accompanied by an offering of flowers, incense, and candles. In this ritual the devotee, particularly in the Theravada tradition, takes refuge in the *three jewels*, that is, the Buddha, the *dhamma* (teaching), and the *samgha* (community). Because of the emphasis on the Buddha's teaching, one important component of Buddhist liturgy is the recitation and chanting of the sacred texts, such as the *tipitaka*. In Tibetan Buddhism, the reading by a monk of a specific text, often a version of the *Prajñāpāramitā* in 100,000 verses or 8,000 verses, is done if possible once a year in each household to insure blessings for the family.

In addition to the official liturgy, other acts of worship, conventionally referred to as *popular religion* or *devotion*, play a no less important role in the piety of the faithful. Among these are fasting (e.g., during Ramadan for Muslims, during Lent for Christians, on certain festivals for Jews, and throughout the year for Buddhists), pilgrimage (e.g., the hajj for Muslims, circumambulation in Tibetan Buddhism, visits to sacred places for Hindus, Buddhists, and Christians), meditation (in yoga, Zen Buddhism, and Daoism), ancestor worship (in Confucianism) and the feeding of hungry ghosts (in Buddhism), veneration of saints (in Roman Catholicism and Orthodoxy), the cult of relics and images (in Roman Catholicism and Buddhism), life-cycle rituals (the *samskāra* in Hinduism and the sacraments in Christianity), the sanctification of time by means of the Liturgy of the Hours and the sacred calendar, the taking of vows, healing and exorcism, and so on.

Worship is the lifeblood of religion. Ever-changing and yet permanent, this universal phenomenon represents the response, both of the individual and the community, to the presence of God or a supernatural being. While historical and theological studies of worship have revealed much of its nature and developments, much still remains controversial, especially regarding the origins of worship and sacrifice, the relation between worship and ideology, the social dimensions of worship and devotion, the role of goddesses and women in worship, the relation between worship and personal cultivation in meditation, the relation between the local and translocal traditions of practice, and the impact of postmodernism and globalization on worship.

SEE ALSO *Buddha; Buddhism; Christianity; Church, The; Hinduism; Islam, Shia and Sunni; Jainism; Jesus Christ; Judaism; Lay Theories; Muhammad; Nation of Islam; Religion; Rituals; Sikhism; Supreme Being; Symbols*

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X

X-CRISE

X-Crise is an acronym for the Centre de Renseignements et d'Informations Sociales et Économiques, an association created by alumni of France's elite École Polytechnique; this association was later known as the Centre Polytechnicien d'Études Économiques (CPEE). X-Crise was formed in 1931 by Gérard Bardet, manager of the Bardet company, who became CPEE's general secretary; André Loizillon, whose career in industry spanned companies from Shneider to Shell and who was CPEE's treasurer for a while and a member of X-Crise's transport workshop; and John Nicoletis, a consulting engineer and manager specializing in less-developed countries. X-Crise's purpose was to examine the causes of the world economic crisis and propose possible solutions. From a membership of about twenty *Polytechniciens* in October 1931, it grew to close to two thousand members (not all *Polytechniciens*) in 1939, the year the association disbanded. As an open, tolerant, and scientific think tank, X-Crise gathered together liberals (in the French sense of the word; i.e., market-oriented economists) like Clément Colson, Jacques Rueff (both teachers at the Ecole Polytechnique), Alfred Sauvy, and Henri Michel; socialists personalities like John Nicoletis, the tireless Jean Coutrot, Jules Moch (a socialist deputy and close relative of Charles Spinasse's), and the French historian Marc Bloch; and centrists such as Gérard Bardet, Auguste Detoeuf (Alsthom's founder), and André Loizillon.

X-Crise was not a research center as one finds in universities. It was a network of *Polytechniciens*, graduates considered to be part of the elite of the French nation, together with some non-*Polytechniciens*, all united around a mission: to get France out of economic crisis through intervention both in government, as experts in macroeconomics, and in industry, as managers skilled in the scientific organization of work. But if some of these *Polytechniciens* had already applied the scientific organization of work to their own firms, none of them, initially, was expert in macroeconomics. Hence, X-Crise organized meetings and published working papers in the École Polytechnique's bulletin. Small workshops were created to focus on particular topics like econometrics (Fischman and Lendjel 2000b), transport, finance, foreign experiences, and the study of the present state of the economy. Their members were volunteers; while they published many reports in X-Crise's bulletin, they were never academic researchers trying to obtain intellectual fame in France and abroad. Yet because X-Crise's aim was also to help *Polytechniciens* become France's macroeconomics experts, X-Crise became a magnet for innovative economic studies.

Two bodies of economic work that were very innovative for France in the 1930s have to be mentioned here: Maurice Potron's (Abraham-Frois and Lendjel 2004), and the economic models of François and Georges Guillaume and François Moch (brother of the socialist deputy Jules Moch). Indeed, as early as 1911 Maurice Potron applied Perron-Frobenius's theorems to a Leontief-type model, in order to find the conditions for the existence of a "satisfactory economic regime." He also laid the foundations of input-output analysis in work published in 1912. The works of the Guillaume brothers and of François Moch provided one of the first economic models in France. The Guillaume brothers' model (Guillaume 1932; Fischman and Lendjel 2000a) can be considered a draft of the French

national accounting system. Moch's model (Moch 1933–1934; Fischman and Lendjel 1999), designed to explain the positive consequences of a cut in working hours on the level of economic activity, presented some Keynesian arguments. Firstly, it pointed out the important role of demand as an economic motor; secondly, it demonstrated the need for the state to intervene in order to get the economy out of a downward economic spiral; and, thirdly, it made an argument quite close to the acceleration principle of R. F. Kahn that Keynes used. Guillaume and Moch attempted also to test their theoretical models with statistical facts. This led Moch to elaborate an econometric "method" of interpreting economic cycles.

Even in X-Crise, these works did not have a large audience. But they have had a great impact on subsequent thinking, as have other X-Crise writings and debates. Indeed, as Michel Margairaz wrote, there is "no doubt X-Crise has eased Ecole Polytechnique's conversion to economics, as well as [that of] the State experts to macroeconomics, more or less explicitly inspired by Keynesianism" (Margairaz 1995, p. 181). In fact, before, during, and after World War II, some of X-Crise's members—such as Charles Spinasse, Georges Boris, Jacques Branger, Jean Coutrot, Georges Guillaume, Louis Rosenstock-Frank, Alfred Sauvy, Jean Ullmo, Robert Gibrat, Lucien Romier, Robert Loustau, Gérard Bardet, Auguste Detoeuf, Louis Vallon, and François Divisia—had high positions in the country's administration, especially in ministries in charge of economic matters. For example, X-Crise members served in the Ministry of National Economy (MEN in French)—a true instrument of political economy—in 1936; in the Vichy government in the public works department, in communications, and in the ministry of production; and, finally, in General De Gaulle's administration.

SEE ALSO *Economics, Keynesian; Potron, Maurice*

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XENOPHOBIA

Xenophobia is discrimination against and hatred of foreigners, targeting outsiders and strangers or more often those who are in effect part of one's own society but are perceived as incommensurably different from the majority population. The most pointed, long-term, and widely documented case of xenophobia is that of anti-Semitism, which culminated in the mass murder of six million European Jews and countless others during World War II (1939–1945). A new form of xenophobia that grew in western Europe and North America during the late twentieth century and early twenty-first century is Islamophobia, which targets migrant Muslim communities with or without citizenship.

CAUSES AND CHARACTERISTICS

Anti-Semitism and other forms of xenophobia often are said to be related to the innate characteristics of a given culture or a consequence of economic malaise and political turmoil in select societies. The typical example given for such an assertion is Germany. These explanations are not only insufficient, they also lead to normalization of the hatred and violence commonly associated with institutionalized practices of exclusion and discrimination. The problem of hatred of foreigners and intolerance for ethnic, religious, racial, and cultural difference must instead be put into the larger context of dominant political movements and ideologies with a transnational dimension.

There are observable links between migration, racism, discrimination, ethno-religious stereotyping, and xenophobia. Increased ethno-religious and racial diversity

in societies makes the reality of the heterogeneity of human communities more obvious. In the absence of political, legal, social, and economic mechanisms to ensure mutual respect and to mediate relations across differences, xenophobia and various related forms of racism become manifest. Particularly among European societies that received substantial numbers of immigrants after World War II both as workers and as asylum seekers, migrants with a different skin color or religion became the targets in violent internal disputes about authentic national identity. This indicates that despite the en masse elimination of Jews from Europe, xenophobia did not loosen its grip across the Continent. Still, xenophobia was by no means an exclusively European phenomenon. In an era when first nation-state politics and then neoliberalist policies increased societal and economic inequalities, and societies grappled with the changing realities of their multiethnic, multireligious, or multiracial makeup and often arbitrarily carved national borders, a marked increase was seen in discrimination and violence directed toward migrants, refugees, and minorities on a global scale.

XENOPHOBIA AND RACISM

Although racism and xenophobia are distinct phenomena, they are closely interrelated. Racism generally implies value-laden distinctions based on presumed or aggrandized differences in physical characteristics, such as skin coloration, hair type, facial features, and body type. Xenophobia, by contrast, is the perception that people and communities identified as "other"' are foreign to a given community or society, that they lack the capacity for integration, and that they can bring harm to the authentic identity of the majority. Racism is an ideological construct; it assigns a certain race or ethno-religious group a position of power and privilege on the basis of the group's physical and cultural attributes. It involves the establishment and sustenance of hierarchical relations in which the self-appointed superior race exercises domination and control over others. Xenophobia too refers to attitudes, prejudices, and behavior that reject, exclude, and vilify its targets based on the belief that they are perpetual outsiders who cannot be included or trusted. Consequently it is sometimes difficult to make a clear distinction between racism and xenophobia because they exhibit similar motivations for exclusive behavior designed to demean others and the exercise of political violence. However, there is one element missing in racism that is often present in xenophobia: religious identity. Manifestations of xenophobia occur not only against people with different physical characteristics but also against those of similar background who are believed to hold different and presumably dangerous and hostile religious convictions.

INITIATIVES AGAINST XENOPHOBIA

Even in societies with a long history of legalized discrimination, it is possible to take measures to alleviate or at least curtail the culture of hatred aimed at those deemed essentially unassimilable. The Roll Back Xenophobia campaign established in South Africa in 1998 is a succinct example of how political will and determination can produce a widely visible and national effort to confront systematic incidences of xenophobic hostility and violence. The campaign began as a joint initiative between national and international institutions: the South African Human Rights Commission, the National Consortium on Refugee Affairs, and the office of the United Nations High Commissioner for Refugees. It emphasized broad, multifaceted, and synchronized activities by the government, civil society organizations, and communications media, including information campaigns by national and local governments, retraining of the police force, strengthening of labor rights protections for migrant workers, sensitization of trade union officials, awareness raising by religious organizations, reinstitution of codes of conduct for civil servants, and the inclusion of migration- and refugee-related concerns in primary, secondary, and tertiary education. These measures, in the larger context of the antiapartheid movement in the country, were suggestive of a tidal wave of change in South Africa in terms of how its citizens began to deal with differences that had violently divided the society in the past.

Another example that points in a positive direction is reforms made in Canadian immigration policies beginning in the 1980s. Immigration and refugee policy discussions are rarely separable from general debates on racial, interethnic, and interreligious relations within host communities. Therefore strong border controls are often advocated as necessary for dealing with and controlling the status of racial, cultural, or ethno-religious minorities by the dominant culture. Still, while immigration controls have historically discriminated between nationalities, ethnicities, and religions, the Canadian example proved that it is possible to alleviate at least the overt marks of racism or xenophobia via institutional reforms and policy changes.

Xenophobia is clearly observable when immigration procedures target particular ethno-religious groups for exclusion or lack transparency or when the immigration process itself is made so grueling for select groups that it can act as a deterrent. With regard to refugee applications, for instance, the systematic use of detention often singles out specific nationalities or ethno-religious groups more than others. Meanwhile many refugees have no choice other than to use irregular entry, increasingly at the hands of smugglers. Thus they run the risk that their irregular

migration will be held against them in their asylum claim, and if they gain entry, they will be set apart from other minorities and mainstream society. This tension has been clearly observable in European Union (EU) policies regarding refugees and asylum seekers. In this regard the establishment of the European Monitoring Centre on Racism and Xenophobia (EUMC) in Vienna by the European Union in 1997 and the successive creation of the European Union Agency for Fundamental Rights on March 1, 2007, were important initiatives to develop regional institutional mechanisms for monitoring and countering xenophobia. They kept records of the racial and xenophobic discrimination and violence directed toward migrants and other ethno-religious minorities in Europe. They also identified and highlighted examples of good practices in challenging and remedying xenophobic policies.

The global nature of violence and discrimination against migrants, refugees, and settled ethno-religious minorities has also been increasingly acknowledged by the post–World War II international human rights community. By 2007 there had not yet been wide acceptance by signatory states of the basic rights and entitlements for unauthorized migrants recognized in the United Nations 1990 International Convention for the Protection of the Rights of All Migrant Workers and Members of Their Families. However, under the International Labor Organization Conventions related to migrant workers, undocumented migrants are entitled to equal treatment with respect to rights related to their present or past employment, including issues of remuneration, social security, and other benefits as well as trade union membership and exercise of trade union rights. The undocumented migrants and refugees remain especially vulnerable because they were either unwilling, out of fear of being deported, or unable to seek protection from authorities when confronted with xenophobic violence.

RESURGENCE OF RIGHT-WING POLITICS

Increasingly after the 1980s Europe witnessed growth in racism and xenophobia that began to swamp its politics. In June 2004 elections for the European Parliament, twenty-five representatives of ten neo-Nazi and extreme right-wing parties from seven member states won seats. Although xenophobia and the growth of neo-fascist and far-right parties in Europe had long been held in check by the memory of the atrocities of Adolf Hitler's Germany, subsequent developments suggested that the situation had started to change and new forms of counteraction needed to be developed. In Austria the radical right-wing Freedom Party, led by Jörg Haider, won an unprecedented 27 percent of the vote in national elections in 2001 and ascended to power. The EU, of which democratic Austria is a member, immediately imposed diplomatic sanctions, citing the Freedom Party's long history of xenophobia and Nazi sympathies. Meanwhile although the EU categorically denounced Haider's anti-immigration agenda, its own member nations also instituted policies that excluded nonwhite immigrants from entering the Continent. While Austria markedly tightened its immigration and asylum rules in the aftermath of the Yugoslav crisis, several European countries also introduced new legislation restricting immigration and asylum, citing the need to respond to growing xenophobia in European societies and thus inadvertently blaming the immigrants and refugees for the societal reaction against them. In addition although the rise of the right in British politics during the late 1990s and the early 2000s was not a revival of the classic fascism of the 1930s, the xenophobic and racist tendencies embodied by the new movement had similar characteristics. Furthermore skinheads, neo-Nazis, and other xenophobic movements that emerged in the aftermath of German unification exhibited a shift in anti-Semitic and antiforeigner violence and demonstrated an increasing connection to local and ideological networks with aggressive elements. These European movements found support in national politics to an extent that would have been unimaginable in the 1970s. Following Haider's success in Austria, in Italy's May 13, 2001, general election Umberto Bossi and his religious and xenophobic Northern League party became a full governing partner in the center-right coalition led by Silvio Berlusconi. The league was the party most loyal to Berlusconi's government until 2006, and it held the three ministries of Labor and Social Affairs, Justice, and Institutional Reforms and Devolution.

The increase in xenophobic sentiments toward migrant and refugee populations in European societies was examined by data compiled from four waves of Eurobarometer surveys in twelve countries between 1988 and 2000. The resultant analysis showed a substantial rise in antiforeigner, xenophobic sentiments and fears between 1988 and 2000 in all twelve core European countries. The analysis also proved that antiforeigner sentiment is much more pronounced in places with greater support for right-wing extremist parties and fascist movements. According to these findings, the impact of individual-level socioeconomic characteristics such as education remained stable over the years, but the effect of political ideology increased. In this context, formation of civil society organizations such as the European Coalition of Cities against Racism constituted an important step toward combating xenophobia in Europe. Linked with the International Coalition of Cities against Racism, an initiative launched by UNESCO in 2004 to establish a network of cities interested in sharing experiences in order to improve poli-

cies to curtail racism, discrimination, and xenophobia, a ten-point plan of action was formulated by the European coalition. These comprised areas such as increased competence of city authorities in education, housing, and employment as well as cultural and sport activities for combating racism and xenophobia and suggested practical policies that city authorities might develop. To the same end of combating xenophobia, the United Nations World Conference against Racism, Racial Discrimination, Xenophobia, and Related Intolerance (WCAR), held in September 2001 in Durban, South Africa, was a gathering that provided nongovernmental organizations (NGOs) representing minority populations and historically oppressed groups an opportunity to speak against their governments over human rights violations.

ISLAMOPHOBIA

After the World Trade Center bombings in the United States in 2001, there emerged an alarming surge in racism and xenophobic actions against people of Arab background and Muslim faith across Europe and North America. This phenomenon, called Islamophobia, denoting fear of Islam and Muslims, made life particularly difficult for Arab and Muslim Americans after the September 11 attacks. Many were harassed at work, had their property vandalized, and were subjected to regular security checks. Although public leaders, including President George W. Bush, called for tolerance, the Council for American-Islamic Relations (CAIR) in Washington, D.C., counted some 1,700 incidents of abuse against Muslims in just the 5 months following September 11. In response to these developments in 2004 the United Nations held a conference called Confronting Islamophobia: Education for Tolerance and Understanding at its New York headquarters. Attended by more than 600 delegates, the event was part of the progressive initiative organized by the United Nations Department of Public Information seeking to improve awareness of xenophobia.

Criticisms of Islam and anti-Muslim political rhetoric have been intertwined with cultural and ethnic hostility that extends even to secularized immigrants from traditionally Muslim societies. As early as 1997 the Runnymede Trust in the United Kingdom issued a report on Islamophobia, revealing widespread hatred of Islam and Muslims across all sections of British society. Similarly the November 2005 riots in which minority ethnic youths in France took part exposed a deeply entrenched racism in the country. Both the riots and the response to them, which involved the invocation of emergency law, the imposition of curfews, and the deployment of thousands of police, brought into the open the xenophobic aspects of France's secular republicanism. These events were followed by the debate over the publication of Danish cartoons of the Prophet Muhammad, based on the assumption that Muslims do not have any experience of freedom of speech or do not believe in the concept. In the United States and Canada the growing threat to civil liberties and the resultant alienation experienced by many Muslims or citizens of immigrant background from traditionally Muslim societies also constituted direct examples of xenophobia. In Britain the 2005 London bombings led to new antiterrorist legislation advanced by the government of Prime Minister Tony Blair, ultimately scapegoating past policies of multiculturalism and targeting Muslim communities as a whole.

Immigration has historically been associated with xenophobia. In periods of high unemployment and global dislocation, immigrants easily become the targets of political leaders who accuse them of criminality, lack of morals, making excessive demands on public services, and creating undue competition for scarce employment. Meanwhile the danger represented by the rebirth in eastern Europe of highly aggressive forms of nationalism; the growth of xenophobia in western Europe both as increased anti-Semitism and as Islamophobia and racism against people of Asian, African, and Caribbean background; and the increase in the strength of the extreme right and xenophobic politics in the United States suggest that xenophobia cannot be eradicated purely by procedural democracy or welfare state policies. Lack of respect for difference and of the political will for negotiating national identities in the face of change constitute challenges that feed reformulations of xenophobia even at the very bastions of pluralism and tolerance.

SEE ALSO *Anti-Semitism; Borders; Discrimination; Hate Crimes; Immigration; Islam, Shia and Sunni; Nativism; Phenotype; Prejudice; Racism; Religion; Third World; United Nations*

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Nergis Canefe

Y

YELTSIN, BORIS
1931–2007

Boris Nikolaevich Yeltsin was the founding father of the post-Communist Russian state, and the man responsible for giving shape to contemporary Russian democracy. His life reflected the sufferings and achievements of the Soviet era, and also came to symbolize the chaos and confused aspirations of the capitalist democracy that came after. Yeltsin was born on February 1, 1931, in the village of Butka some 250 miles east of Yekaterinburg (called Sverdlovsk at the time). In that year the region was engulfed by Stalin's savage struggle to force peasants off their individual plots and into collective farms. Yeltsin's family was comparatively prosperous and therefore, as *kulaks* (rich peasants), were exiled to the east. With the countryside in chaos, in 1932 Yeltsin's father, Nikolai Ignatevich, moved to work on a construction site in Kazan. Two years later Ignatevich was arrested as a "dekulakised kulak," or someone allegedly retaining the kulak mentality, and sentenced to three years hard labor, a fact that Yeltsin kept secret until 1994. The family moved to Berezniki in the Perm region to work on the construction of a giant potassium processing plant. The hard conditions worsened following Russia's entry into World War II in 1941, but the young Boris thrived at school, taking up numerous sports and excelling at volleyball.

In 1949 at the age of 18, Yeltsin became a student in the civil engineering department of the Urals Polytechnical Institute in Sverdlovsk, the city he made his home for the next 36 years. He divided his time between intense bouts of study and sporting activities, travelling the country as captain of the volleyball team. He met his future wife, Naina Girina from Orenburg, at this time. Yeltsin graduated in June 1955, and then gained practical experience on a building site. He was a hard but fair task master, imposing enormous demands on himself and fellow workers. In 1957, newly married, Yeltsin took charge of the construction of the Sverdlovsk Textile Kombinat, a major project that he completed on time. In 1959 Yeltsin joined the Communist Party of the Soviet Union (CPSU), but only in 1966 did he leave active civil engineering to head the Construction Department of the Regional Party Committee (Obkom, the acronym of the Oblast [Regional] Committee of the Communist Party). Yeltsin refused many of the perks that went with the job, but he was driven by his characteristic "obsessive ambition."

In November 1976 Yeltsin made it to the top, becoming Obkom First Secretary over a region with a population of nearly five million, covering an area the size of England. He was an innovative and demanding leader, but never strayed from Party orthodoxy. At the Twenty-Sixth Party Congress in March 1981 Yeltsin was elected a member of the Central Committee (CC).

In March 1985 Mikhail Gorbachev came to power committed to reform. In April 1985 Gorbachev brought Yeltsin to Moscow as head of the CC's Construction Department. In December of that year Yeltsin was appointed head of the Moscow Party Organization and with it, shortly afterwards, candidate membership of the Politburo, the Communist Party's highest body. Yeltsin ran Moscow in a confrontational manner, firing those whom he considered resistant to change, but his talk of "social justice" and condemnation of elite privileges and corruption won him enormous popularity.

At the CC plenum of October 21, 1987, Yeltsin criticized the slowness of reforms and Gorbachev personally, and announced that he would resign from the Politburo. Facing a barrage of condemnation, Yeltsin was removed from leadership of the Moscow Party but was appointed head of the state construction agency, Gosstroi. Cast out of the political establishment, Yeltsin placed himself at the head of the anti-Soviet revolution. He skillfully exploited the new democratic opportunities, being elected by acclaim in March 1990 a deputy from Moscow to the new Russian Congress of People's Deputies (CPD). On May 29th, he narrowly defeated orthodox contenders to become chair of the new Russian parliament. He sponsored Russia's declaration of state sovereignty on June 12, 1990, signaling the end of the Soviet Union and of Gorbachev's attempts to reform communism from within. Elected Russia's first president on June 12, 1991, Yeltsin exploited his democratic legitimacy to defeat the attempted hard-line coup of August 18 to 21, 1991. A meeting of the presidents of Ukraine, Belarus, and Russia near Minsk on December 8, 1991, announced the disintegration of the Union of Soviet Socialist Republics. Russia was now independent, and Yeltsin its leader.

Yeltsin's impetuous and determined character stamped the new state. Throughout his leadership he remained committed to market-oriented liberal, democratic, and Westernizing policies, although the way these policies were implemented was often at odds with the goal. In Yeltsin's typical campaigning style, economic "shock therapy" was launched in January 1992, allowing the liberalization of prices. His failure to build consensus with parliament led to a breakdown in relations that ended with the forced dissolution in September and violence in October 1993.

The new constitution of December 12, 1993, provided for a strong presidency with weak oversight powers by parliament and the courts. Yeltsin used his powers to drive through market reforms, including a crash privatization program that allowed a few to become very rich (the so-called oligarchs), while the mass of the population became much poorer. Yeltsin's decision to invade the breakaway republic of Chechnya in December 1994 caused untold suffering, and contravened several articles of the constitution. In federal relations, Yeltsin encouraged the development of segmented regionalism whereby regional leaders were able to enjoy an enormous devolution of authority as long as they remained loyal to him personally. Only by allying with the oligarchs was Yeltsin able to win a second term in 1996, but at the price of mortgaging the state to big business. The fall in oil prices precipitated the partial default of August 1998, provoked by the failure to collect enough taxes to service the growing budget deficit. On December 31, 1999, Yeltsin transferred power to his hand-picked successor, Vladimir Putin. He entered political retirement, offering critical support for the new president. Yeltsin left Russia a democratic, federal, market-oriented society, but all of these were deeply flawed in their operation. Yeltsin laid the foundations for a free society, but it would be up to his successors to build on what he had started.

SEE ALSO *Democracy; Democratization; Economies, Transitional; Gorbachev, Mikhail; Putin, Vladimir; Stalin, Joseph; Union of Soviet Socialist Republics*

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Richard Sakwa

YIELD

In economics and finance the word *yield* is used to describe the interest rate on a bond. In fact, the words *yield* and *interest rate* are used interchangeably and mean the same thing. There are several ways of calculating interest rates, with the most important being the *yield to maturity*, also known in many contexts as the *internal rate of return*. Economists consider the yield to maturity as the most accurate measure of the interest rate, and this is what they have in mind when they talk about interest rates.

The yield to maturity is the interest rate that equates the present value of payments received from a debt instrument with its cost (its value today). As an example, consider a simple, one-year loan. Assuming that you borrowed $1,000 for a year and you are required to repay the principal of $1,000 one year from now along with an interest payment of $100, then (according to the definition) the yield to maturity is given by

$$\$1000 = \frac{\$(1000 + 100)}{1 + i}, \qquad (1)$$

where \$1,000 is the value of the loan today and \$(1,000 + 100)/(1 + *i*) is the present value of the payments received from this instrument. Solving equation (1) for *i* yields *i* = 0.10 (or 10%). In this case, the yield to maturity is the same as the *simple interest rate*, the latter being calculated as the ratio of the interest payment to the principal, \$100/\$1,000.

Although for simple loans, the yield to maturity equals the simple interest rate, this is not the case for other debt instruments. To calculate the yield to maturity on an *n*-year coupon bond with market price *P*, coupon payment *C*, and face value *F*, the following formula is used (see Mishkin and Serletis 2007, Chapter 4, for more details):

$$P = \frac{C}{1 + i} + \frac{C}{(1 + i)^2} + \cdots + \frac{C}{(1 + i)^n} + \frac{F}{(1 + i)^n}. \qquad (2)$$

If *P*, *C*, *F*, and *n* are all known, then the above equation could be solved for the yield to maturity on the *n*-year bond (also known as the *n*-year interest rate), *i*. It should be noted that the yield to maturity is different from the coupon rate of interest, the latter being the ratio of the yearly coupon payment to the bond's face value, *C*/*F*. In fact, when the coupon bond sells at its face value ($P = F$), the yield to maturity is the same as the coupon rate; when the bond sells at a discount from face value ($P < F$), the yield to maturity is greater than the coupon rate; and when the bond sells at a premium from face value ($P > F$), the yield to maturity is less than the coupon rate. Equation (2) also shows that the yield to maturity and the price of a coupon bond are negatively related; when the yield to maturity increases, the price of the coupon bond falls, and when the yield to maturity falls, the price of the coupon bond rises.

As already noted, the yield to maturity can be calculated by solving equation (2) for *i*, if *P*, *C*, *F*, and *n* are known. But this equation is difficult to solve algebraically, especially for high values of *n*. However, the same answer can be obtained using a financial calculator. Consider, for example, an eight-year, 10 percent coupon bond, with a face value of \$1,000, selling for \$900. Set a Texas Instruments BA-35 solar calculator in FIN mode by pressing the MODE key until the word FIN appears on the screen, and clear it by pushing the 2nd key and then the CE/C key. To find the yield to maturity:

1. Enter 900 and push the PV key.
2. Enter 1000 and push the FV key.
3. Enter 8 and push the N key.
4. Enter 100 and push the PMT key.
5. Push the CPT key and then the %i key.

The answer is 12.01 (or 12.01%).

Because of difficulties in calculating the yield to maturity, other less accurate measures of the interest rate have also come into common use in economic and finance. Two such measures are the *current yield* and the *yield on a discount basis*. The current yield is calculated as the ratio of the bond's yearly coupon payment, *C*, to the bond's current market price, *P*. That is,

$$\text{Current yield} = \frac{C}{P}.$$

The current yield is the best approximation to the yield to maturity for coupon bonds, and changes in the current yield always signal changes in the same direction for the yield to maturity.

In the case of discount bonds, the interest rate is usually quoted as a *yield on a discount basis*. Discount bonds are bonds that sell at a discount from face value and involve no periodic coupon payments (this is why they are also known as zero-coupon bonds). Treasury bills and long-term zero-coupon bonds are examples of discount bonds. Consider, for example, a ninety-day Treasury bill with a face value *F* selling at a price *P*. The yield on a discount basis (also known as *discount yield*) is usually calculated as follows:

$$\text{Discount yield} = \frac{F - P}{F} \times \left(\frac{\text{Days in year}}{\text{Days to maturity}} \right).$$

A related concept is the *yield curve*. The yield curve, published in the financial pages of most newspapers, shows the yield to maturity, *i*, as a function of the term to maturity, *n*. When the yield curve is upward sloping (the most typical case), the yield to maturity on long-term bonds (or, equivalently, the long-term interest rate) is greater than the yield to maturity on short-term bonds (the short-term interest rate); when the yield curve is downward sloping (referred to as an inverted yield curve), the spread between long- and short-term interest rates is negative; and when the yield curve is flat, short- and long-term interest rates are the same.

Early investigations into the yield curve looked at whether the slope of the yield curve can help predict future short-term interest rates and the level of economic activity. It was found that the yield curve does not always help predict future short-term interest rates—see, for example, Shiller, Campbell, and Schoenholtz (1983) and Mankiw and Summers (1984). More recent research based on better testing procedures, however, supports the view that the slope of the yield curve contains useful information about future interest rates over the short run and the long run, but not over the intermediate term—see, for

example, Fama (1984) and Campbell and Shiller (1991). Moreover, research over the past twenty-five years has documented a relationship between the slope of the yield curve and the overall level of economic activity; it has been shown that the slope of the yield curve is a good predictor of future economic activity. More recently, Estrella and Trubin (2006) offer practical guidance regarding the use of the yield curve as a forecasting tool in real time.

SEE ALSO *Capital; Economics; Finance; Financial Instability Hypothesis; Financial Markets; Hedging; Interest Rates; Liquidity Premium; Loans; Overlending; Yield Curve*

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YIELD CURVE

The yield curve is a graph depicting the relationship between yield and the length of time to maturity for debt securities with comparable degrees of risk. The horizontal scale measures years to maturity, while the vertical axis presents yield to maturity. This relationship is also called the term structure of interest rates.

The shape of the yield curve plays a critical role in the decisions of individuals and corporations, and in the conduct of monetary policy by central banks, such as the U.S. Federal Reserve Bank. Individuals choosing between an adjustable and fixed-rate mortgage, and corporations deciding whether to issue short- or long-term debt, can make sensible decisions only if they understand the factors that shape the yield curve. Central banks, which operate in the short-term market, need to understand the likely effect of their activities on long rates.

Generally, the yield curve approximates one of three shapes. The curve may display the lowest yields on short-term issues, then rise and become relatively flat in the longest maturities, forming an ascending curve. Alternatively, yields may be highest on short-term securities, forming a descending (or inverted) curve. Sometimes, yields are the same for all maturities. Three economic theories—the expectations, liquidity-preference, and institutional or hedging pressure theories—explain the shape of the yield curve.

THE EXPECTATIONS THEORY

For expectations theorists, the shape of the yield curve is a reflection of investors' anticipations of future interest rates. Suppose that lower rates are likely in the future. Long-term bonds will appear more attractive than short-term ones if both maturities sell at equal yields. Long-term bonds allow an investor to earn a relatively high rate for a longer time period than shorter issues permit. Short-term bond investors risk having to reinvest their funds later at lower yields. Also, since bond prices move inversely to interest rates, buyers of long-term bonds realize capital appreciation if yields decline.

If investors act in accordance with these expectations, they will tend to bid up prices (force down the yields) of long-term bonds and sell short-term securities, causing their prices to fall (yields to rise). These operations will produce a descending yield curve with short-term issues yielding more than long-term bonds. Similarly, the expectations theory predicts the yield curve will be upward-sloping when investors expect interest rates to rise. The yield curve will be flat when no change is expected in rates.

THE LIQUIDITY-PREFERENCE THEORY

The liquidity-preference theory agrees that expectations are important but argues that short-term issues are more liquid and thus inherently more desirable to investors than longer-term bonds. Short-term issues can be converted into cash on short notice without appreciable loss in principal. Long-term issues tend to fluctuate in price with unanticipated changes in interest rates and hence ought to yield more than shorts by the amount of a risk premium.

If no premium were offered for holding long-term bonds, most individuals and institutions would prefer to hold short-term issues. Borrowers, however, prefer to issue long-term debt to assure themselves of a steady source of funds. This leaves an imbalance in the pattern of supply

and demand for the different maturities. Thus, even if interest rates are expected to remain unchanged, the yield curve should be upward-sloping, since the yields of long-term bonds will be augmented by risk premiums necessary to induce investors to hold them. The "normal relationship" is assumed to be an ascending yield curve.

THE INSTITUTIONAL OR HEDGING-PRESSURE THEORY

Liquidity is critical for some investors, but not for others. Commercial banks care about liquidity and prefer short-term issues, but liquidity is not important for life insurance companies and pension funds, which typically hedge against risk by purchasing long maturities.

That is precisely the thrust of the hedging-pressure argument. Different groups of investors have different maturity needs that lead them to concentrate their security purchases in restricted segments of the maturity spectrum. Flows of funds to particular investors, as well as changes in those preferences, will then influence the curve independent of expectations. So will the preference of international investors recycling Petro and Sino dollars. In 2005 foreigners invested over $350 billion in U.S. Treasury bonds while they were net sellers of Treasury bills, depressing the yields of long-term U.S. bonds.

EMPIRICAL STUDIES OF THE YIELD CURVE

Empirical studies of the yield curve suggest that all three theories have an influence on the shape of the yield curve. Expectations of future rates are important, but so are liquidity and institutional considerations. The average shape of the yield curve is ascending, suggesting that holders of long-term bonds do earn (il)liquidity premiums. The yield curve also appears to be a predictor of future economic activity. Inverted yield curves, while not invariably followed by a recession, have preceded all recessions experienced in the United States during the last forty years. Such a signal is consistent with the logic of the expectations theory. An inverted curve suggests that investors expect lower future rates. Recessions usually lower rates by lowering business loan demand and encouraging expansionary monetary policy.

SEE ALSO *Capital; Expectations; Financial Instability Hypothesis; Financial Markets; Hedging; Liquidity Premium; Loans; Overlending; Yield*

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YORUBA

SEE *Negro; Santería.*

YOUTH CULTURE

The term *youth culture* is used generally in reference to the ways adolescents set themselves apart from the adult culture. Although age-based cultural differences have existed since the beginnings of recorded history, it was only in the 1950s, after the crystallization of "teenagers" as distinct social personae with their own music, lifestyles, fads, and characteristic slang, that the concept of a "youth culture" as separate from adult culture materialized in North American and European society. Before then anyone reaching the age of puberty was expected to conform to the norms of the larger adult culture.

The emergence of an autonomous youth culture was heralded in fictional form by the American novelist J. D. Salinger (1919–) in his still popular and controversial novel *The Catcher in the Rye*, published in 1951. Salinger provided the first portrait of the new teenage persona—a portrait that was shortly thereafter enshrined in all kinds of media (magazines, songs, television programs, and movies), taking on a social life of its own. Since the mid-1950s youth culture has evolved independently and primarily through lifestyle designations associated primarily with youth-generated musical trends and styles (rock and roll, disco, punk, and rap). This is why cultural historians tend to characterize the evolving forms of youth culture with terms such as the *hippie era*, the *disco era*, the *punk era*, and the *hip-hop era*. Each era is in fact marked by its own pattern of symbolism, ritual, slang, and overall lifestyle (clothing and body decorations) derived from attendant musical styles.

The study of youth culture in the social and human sciences has become a major academic enterprise since the 1960s. Three major cultural theories have come forth relating specifically to youth, as separate from the psychology of adolescence. One of these posits that any youth trend is perceived initially by the adult culture as subversive or transgressive, constituting a sign of impending apocalyptic danger or threatening societal values, but which gradually dissipates and blends into the larger cultural mainstream. Known as "moral panic theory," the concept was proposed by Stanley Cohen (1972) in his

insightful study of mods and rockers in the mid-1960s. An early twenty-first century crystallization of moral panic surfaced as a result of the trend of many youths to "network socially" on the Internet at sites such as MySpace and Friendster.

Another main theory is that youth culture has become the default form of all North American and European culture, spreading throughout the social landscape independently of age. As the social critic Thomas Frank (1997) has skillfully argued, youth has become a social and economic commodity since the 1960s. Because youth sells, trends in the adolescent world quickly become the cultural norm, dictating look, taste in music, and fashion.

A third major theory of youth culture is that it constitutes a form of carnivalesque theater in which the sacred, perceived to be anything authoritative, rigid, or serious, is "profaned" or mocked simply for the sake of it. This theory has been inspired by the work of the social critic Mikhael Bakhtin (1986). It would explain why, for example, emerging youth forms of culture seem to fly in the face of the adult official "sacred world" while at the same time not posing any serious subversive political challenge to it.

SEE ALSO *Culture; Street Culture*

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Marcel Danesi

YOUTH RISK BEHAVIOR SURVEY

SEE *Research, Cross-Sectional.*

YOUTHS

SEE *Adolescent Psychology.*

YUGOSLAVIAN CIVIL WAR

The civil wars in Yugoslavia after 1991 involved the most severe violence in Europe since the Greek civil war (1946–1949), generating almost 70,000 battle-deaths and displacing many refugees. Many claimed that the cold war had contained nationalism in Europe, and that its end would unleash a wave of sectarian conflict. Paradoxically, this failed to materialize in most socialist states except for Yugoslavia, where the Soviet Union had only minimal direct influence, previously considered a relatively successful case of multi-ethnic political integration.

The Federal Republic of Yugoslavia was torn apart by demands for autonomy from the relatively more prosperous republics of Slovenia and Croatia and the increasing assertiveness of Serbia under Slobodan Milošević (1941–2006). Slovenia's declaration of independence in June 1991 led to a minor violent confrontation with the Yugoslav National Army (JNA) but was quickly settled. Whereas independence was relatively uncontroversial for the ethnically homogenous Slovenia with undisputed borders, Croatia was much more contentious due to its large Serb population. The increasingly Serb-dominated JNA seized control over much of Croatia, and violent conflict escalated with the siege of Vukovar in August-November 1991. A January 1992 United Nations' (UN) peace plan brought combat to an end but perpetuated Serb control over much of Croatia. Later that year violence erupted between Croats, Serbs, and the Muslim dominated central government in Bosnia, leading to a protracted war with many atrocities. An International Criminal Tribunal (ICT) was set up in 1993 to investigate allegations of war crimes in the former Yugoslavia. Although fighting in Bosnia formally was carried out by autonomous militias, the Milošević and Franjo Tuđman governments of Serbia and Croatia are believed to have provided extensive support, and the ICT has brought charges against official representatives of both.

The inability of the UN to contain the conflict in Bosnia led NATO and the United States to take a more active role in 1994. The United States brokered a settlement agreement between the Bosnian Croats and the central government and provided military assistance to Croatia. In a military offensive in mid-1995, Croatia reconquered most of the Serb-held areas, and NATO bombardment forced the Serbs to sign the Dayton peace agreement in late 1995. The growing inability of Milošević to control events outside Serbia proper in turn

promoted violence among the Albanian majority in the formerly autonomous Kosovo province. The main Albanian opposition leader Ibrahim Rugova (1944–2006) had advocated a strategy of nonviolent resistance, which had succeeded in keeping Kosovo quiet but brought few Serb concessions and did not prevent extensive repression.

Following an influx of arms during the chaos in Albania in 1997, the Kosovo Liberation Army (KLA) turned to violent confrontation. Although the KLA was militarily much weaker than the JNA and the immediate Serb response was increased repression, the escalating violence, with a large outflow of refugees and allegations of atrocities, prompted NATO to start bombing Serbia in March 1999. Faced with prospects of a ground invasion, Milošević agreed to NATO demands in June, and a UN protectorate was established in Kosovo. Although Milošević had survived previous mass demonstrations calling for his resignation in 1991 and 1996, he was finally forced to leave in October 2000 after attempts to dispute an opposition electoral victory, and Serbia has not engaged in conflict with its neighbors since his ouster. The perceived success of the KLA inspired an Albanian armed uprising in Macedonia in 2001, but outside involvement prevented the conflict from escalating.

SEE ALSO *Civil Wars; Croats; Genocide; Milosevic, Slobodan; Muslims; North Atlantic Treaty Organization; Serbs; Tito (Josip Broz); United Nations; War Crimes; Warsaw Pact; World War I*

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Kristian Skrede Gleditsch

YUNUS, MOHAMMED

SEE *Grameen Bank; Nobel Peace Prize.*

Z

ZAPATA, EMILIANO
1879–1919

Leader of the Mexican Revolution of the early twentieth century, Emiliano Zapata was born on August 8, 1879, in Anencuilco in the southern state of Morelos and died in an ambush on April 10, 1919. Zapata was the revolution's leading advocate of agrarian issues and one of Mexico's most renowned and mythological heroes. The iconic image of Zapata dressed in a broad sombrero with a black mustache and cartridge belts across his chest appears commonly across Mexico. Contemporaries and subsequent scholars have alternatively interpreted Zapata as a bandit or a social revolutionary. The division between rural supporters who viewed Zapata as their champion and urban dwellers who denounced him as the Attila of the South points to persistent social divisions that run through the country.

The Zapata family had long been privileged leaders of their community, but under the dictatorship of Porfirio Díaz they had begun to lose their lands and their class status eroded. Recognizing Zapata's organizing skills, his community elected him to a leadership position in 1909. When legal negotiations for land titles with landowners collapsed, Zapata led community members to occupy haciendas. He had become an armed revolutionary, and his followers were known as Zapatistas.

Zapata initially joined forces with Francisco Madero, who launched a revolution against Díaz in 1910. When Madero disposed the dictator in 1911, Zapata asked the new president to return communal lands. Madero, however, insisted on following institutional procedures and demanded that Zapata's Liberation Army of the South disarm. Zapata refused, arguing that they could gain their goals only through the pressure of armed force. This led Zapata to break from Madero and demand more radical reforms. On November 25, 1911, Zapata issued his Plan of Ayala (named after his local municipality), which denounced Madero as a tyrant and dictator worse than Díaz unwilling to make the necessary deep-seated changes that the revolutionaries demanded. Zapata called for a continued revolution to overthrow Madero.

The Plan of Ayala's most important thrust was a demand for agrarian reform, including a return of communal lands and expropriation of hacienda lands—without payment if the owners refused to accept the plan. The plan led to Zapata's most famous slogan "Tierra y Libertad" (Land and Liberty), which was borrowed from and reflected the ideological influence of the anarchist Ricardo Flores Magón. Over the next decade the plan became the guiding principle for Zapata's forces.

In February 1913, when General Victoriano Huerta assassinated Madero in a military coup, Zapata allied with Venustiano Carranza's Constitutionalist Army to defeat the new dictator. After Huerta's disposal, Zapata unified forces with Pancho Villa at a convention in Aguascalientes to continue the battle against the more moderate Carranza. Together, Zapata and Villa occupied Mexico City. Zapata, however, was more interested in local issues in Morelos than governing the country. His alliance with Villa quickly broke down, and Carranza recaptured the capital. Carranza convoked a constitutional assembly that elected him president. Even though he did not invite Zapata to the assembly, the latter's Plan of Ayala influenced Article 27 of the progressive 1917 constitution that codified an agrarian reform program. No significant dis-

tribution of land occurred, however, until Lázaro Cárdenas's populist government in the 1930s.

Zapata fought on despite overwhelming odds. With his prospects for victory declining and desperately short of weapons, Zapata was lured into an ambush on April 10, 1919, at the Chinameca hacienda in Morelos. Revealing their fear of Zapata's leadership and symbolism, government troops riddled his body with bullets and then dumped his corpse in Cuautla's town square. Supporters refused to accept Zapata's death, claiming that someone else had taken his place and that he had escaped to the mountains. With Zapata gone, the Liberation Army of the South began to fall apart.

After his martyrdom Zapata was incorporated into the pantheon of Mexican revolutionary leaders, even though he most certainly would oppose the policies of many subsequent political leaders. Although over the years Zapata's name was invoked for a variety of political causes, his name and image gained renewed interest in 1994 with the Zapatista Army of National Liberation (EZLN) uprising in Chiapas. Although Chiapas was isolated from the Mexican Revolution and Zapata never organized in that area, the neo-Zapatistas fought for many of the same issues that their namesake had almost a century earlier. Paralleling the situation in Morelos, indigenous communities in Chiapas had lost their lands to large landowners and faced a corrupt and repressive regime with a political stranglehold on local communities. Zapata's slogan "Land and Liberty" summarized their ongoing struggle and pointed to how few of Zapata's dreams had been realized.

SEE ALSO *Chiapas; Mexican Revolution (1910–1920); Villa, Francisco (Pancho)*

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Marc Becker

ZAPATISTAS

SEE *Zapata, Emiliano.*

Z-D MODEL

The Z-D model refers to the analysis contained in chapter 3, "The Principle of Effective Demand," of John Maynard Keynes's *The General Theory of Employment, Interest, and Money* (1936). It was in this early chapter that Keynes first unveiled what he considered a revolutionary new approach, defining the range of possible levels of employment that could (and in the West in the 1930s, did) characterize a market economy in equilibrium. At this early stage of his book, his task was to outline the path his argument was to take. He used what has since become known as the Z-D model to accomplish this task.

Keynes's model is based on the expectations of producers and demanders as to how much employment-generating aggregate activity they can profitably either engage in (the producers) or purchase the output of (the demanders) in the *short period*. The short period is defined by the time necessary to realize the results of the aggregate of producers' decisions (whether these were maximally profitable or not) for demand and supply. Crucially, demand for consumer goods can be known within this period, but the demand for investment goods cannot, since the value of such goods to demanders depends on an expectation of return over a longer time horizon than just the short period. In practice, this reduced to the assumption that the following are fixed: (1) the existing level of technology; (2) capital and labor; (3) the existing propensity to consume or save out of income; and (4) the expectations of the return on newly produced investment (what Keynes termed *long-period* expectations).

With this in mind, we can understand Keynes's basis for declaring—as he did many times after the *General Theory* was published—that his theory of short-period employment is most easily understood under the assumption that short-period expectations are always fulfilled; that is, given their assumptions, producers' output *is* the profit-maximizing one for each of them in this situation. Notice this leaves the state of long-term expectations, and so the level of investment, as given, and not necessarily at the level required for full employment.

A Z or *aggregate supply function* is then posited to capture producers' short-period expectations as to what level of production and employment will be profitable, given the relevant *ceteris paribus* conditions (above) and their expectations of demand (which can be assumed to be correct in equilibrium). Thus Z is a function of the proceeds producers expect, given the costs of producing a level of output. Hence: Let Z be the aggregate supply price of the output from employing N men, the relationship between Z and N being written $Z = \Phi(N)$, which can be called the *aggregate supply function* (Keynes 1936, p. 23).

Similarly, a D or *aggregate demand function* is posited to represent the sectoral demands, namely, the consump-

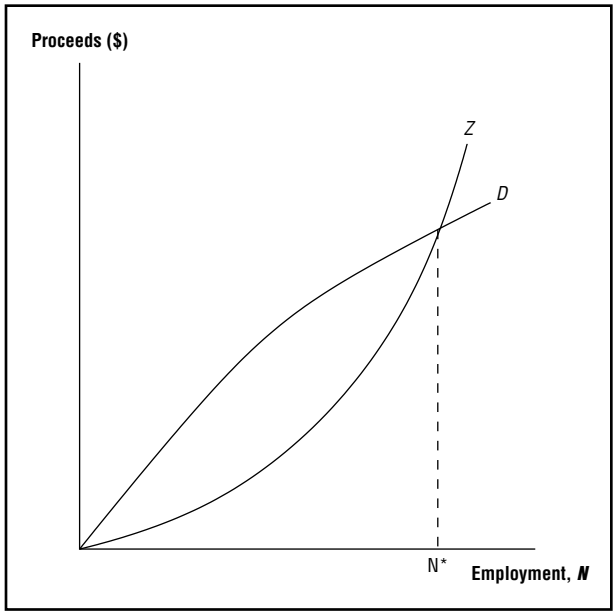

tion function for goods and services by households (later in the chapter, D_1), and the demand for newly produced capital by investors (D_2). Hence: Similarly, let D be the proceeds that entrepreneurs expect to receive from the employment of N men, the relationship between D and N being written $D = f(N)$, which can be called the *aggregate demand function* (Keynes 1936, p. 23).

Due to diminishing returns to employment, N, in the short period, we may expect the supply function, $\Phi(N)$, to rise at an increasing rate in N. We also expect D_1 to rise at a constant and eventually less-steep rate than $\Phi(N)$ as N increases (with growing output) because the household marginal propensity to consume (χ) is less than one (or, amounting to the same thing, the marginal propensity to save out of increased income is positive); and that D_2 is fixed by long-term expectations as to the amount a community is currently willing to spend on investment. Thus, where the increasingly rising Z function intersects a constantly rising total D function, employment will be determined.

This is the point of expected profit maximization. To the left of the intersection, producers can expect to make increased profits by employing more workers; to the right, the expected proceeds do not justify the additional expected cost.

"Hence the volume of employment in equilibrium depends on (i) the aggregate supply function, Φ, (ii) the propensity to consume, χ, and (iii) the volume of investment, D_2 . This is the essence of the General Theory of Employment" (Keynes 1936, p. 29).

Thus does Keynes stake out his question. Those factors that determine the marginal propensity to consume and the volume of investment become the keys to what level of employment a market economy will generate in short-period equilibrium (i.e., the time frame in which we live).

SEE ALSO *Aggregate Demand; Aggregate Demand and Supply Price; Aggregate Supply; Economics, Keynesian; Investment; Keynes, John Maynard; Long Period Analysis; Propensity to Consume, Marginal; Propensity to Save, Marginal; Returns, Diminishing; Short Period*

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ZEN

SEE *Buddhism.*

ZERO MARGINAL PRODUCT OF LABOR

SEE *Labor, Surplus: Conventional Economics; Lewis, W. Arthur.*

ZERO POPULATION GROWTH

The term *zero population growth* encompasses both an urgent call to reduce the number of human beings and a neutral description of anticipated future demographic conditions. In either case, social scientists have not debated whether the world will reach zero population growth but when, at what level, and with what costs or benefits along the way.

Population growth has periodically preoccupied theorists since ancient times, but fears of overpopulation emerged in earnest in response to the unprecedented demographic expansion that accompanied the post–1650 global agricultural revolution. (From 50 million in 1000 BCE, the earth's population increased slowly to 545 million in the year 1650, and then more than doubled to 1.2 bil-

lion in 1850 [Kremer 1990, p. 683]). At the turn of the nineteenth century, the British economist and pastor Thomas Malthus (1766–1834) famously argued, "Population, when unchecked, increases only in a geometrical (exponential) ratio. Subsistence (the food supply) increases only in an arithmetical ratio" (Malthus [1798] 1959, p. 5). During much of the nineteenth century, leading European classical economists, especially John Stuart Mill (1806–1873), incorporated Malthusian precepts and argued that population growth leads to diminishing economic returns as poorer land is brought under cultivation and an excess of workers drives down wages. Yet Thomas Jefferson (1743–1846) and other American intellectuals dismissed the notion of a population-resources problem as inapplicable to their imagined wide-open and egalitarian nation.

THE MALTHUSIAN ERA

The closing of the American frontier, as declared by the U.S. Census Bureau in 1890, engendered a Malthusian revival (that is, calls for immediate zero population growth). Moreover, as immigration to the United States surged and a pseudoscience of race matured, the desire to limit total population growth became intimately related to anxiety among many elite, white Americans that native-born Americans were having fewer children than nonwhite immigrants. A trans-Atlantic eugenics movement sought to breed a better population by encouraging more births among the genetically "fit" and discouraging them among the "unfit." The mixture of eugenics and Malthusianism contributed to the passage of restrictive immigration laws in the United States in the 1920s.

During the 1930s, Malthusian concerns abated. Birthrates in the industrialized world, in response to the Great Depression, continued to decline. For the first time, the prospect of zero population growth in the wealthy European and North American nations seemed a possibility. One group of economists, led by Great Britain's John Maynard Keynes, overturned the classical economists on the matter of population growth; they argued that population growth spurs economic progress by creating more consumers and economies of scale. Many economists and demographers, however, disagreed. They continued to espouse the traditional view that a smaller population would be good for the economy; in their view, the economy could grow through higher consumption per person rather than through a sheer increase in numbers.

After World War II (1939–1945), overpopulation concerns reemerged. A few social scientists and policymakers suggested that the war had been caused by population-resource pressures in the Axis nations. Many more became alarmed by the skyrocketing rates of population growth in the developing or Third World, which resulted from better hygiene and public health, and by the baby boom in the United States and other wealthy nations (from 1945 to 1964). Two best-selling books of 1948, Fairfield Osborn's *This Plundered Planet* and William Vogt's *Road to Survival*, briefly generated a revival of radical Malthusian ideas.

The postwar Malthusian resurgence was undercut somewhat by optimism that modern science would alleviate resource scarcity by better extracting natural resources and even creating new ones from scratch. In particular, atomic power and the Green Revolution in agriculture (the higher yields produced by crop breeding and pesticides) promised nearly unlimited energy and food supplies. In addition, while many postwar intellectuals concluded that population growth in the developed world caused aesthetic problems (e.g., more garbage and less parkland) as well as cultural concerns (e.g., more conformity and less privacy), they doubted whether it engendered true resource scarcity.

Still, in the 1950s and early 1960s, most social scientists continued to espouse a moderate anti-population-growth position, if not the strident Malthusians's goal of a rapid transformation to zero population growth. The dominant paradigm within the demography profession was *demographic transition theory*. This was the idea that industrialization and economic development first drive population increase because medical and sanitary improvements lower mortality well before cultural norms of (copious) childbearing shift. In the next stage, however, birthrates drop in response to the new gender and economic arrangements that accompany modernization. Eventually, population decreases. Demographers concluded, however, that waiting for modernization to run its course was not sufficient; population expanded too rapidly in the early stages and the resulting poverty actually blocked the further progress of modernization. They reached a consensus that direct intervention (e.g., family planning aid) was needed to induce the transition to lower birthrates. In a seminal 1958 study of India, two American economists, Ansley Coale and Edgar Hoover, predicted that lower birthrates would substantially increase incomes in that nation. The Coale-Hoover thesis informed efforts to invest in family planning programs for the developing world. In the 1950s, the American philanthropic sector (especially the Population Council, founded by John D. Rockefeller III [1906–1978] in 1952) took the lead in promoting such programs and fostering population-related research.

THE ZERO POPULATION GROWTH MOVEMENT PEAKS

The United States government did not articulate an official anti-population-growth policy, but it did incorporate

population-resource concerns into cold war geopolitical strategies. The idea that population growth generated conditions conducive to communism was fundamental to the development of foreign aid programs to the Third World as well as diplomatic efforts to promote international resource conservation. In the mid-1960s, the U.S. government began providing direct technical assistance and grants for family planning programs overseas and at home.

By the late 1960s, the peak of the annual global population growth rate (about 2.1 percent from 1965 to 1970; Cohen 1995, p. 54), famine in Africa, and burgeoning mass environmentalism propelled an organized zero population growth movement, the high-water mark of postwar Malthusianism. The fear now was that population growth—in both the developing and developed worlds—would ruin the world's ecological systems, not merely threaten the food supply. In 1969, the American biologist Paul Ehrlich (b. 1932), author of *The Population Bomb* (1968), spearheaded the creation of the group Zero Population Growth. This organization created widespread awareness of the putative population problem and generated significant publicity. *The Limits to Growth*, a widely debated 1972 study by a team of Massachusetts Institute of Technology (MIT) researchers, used a crude algorithm of resources, pollution, and population to predict the collapse of the world system in 100 years. Most proponents of zero population growth primarily emphasized education and the need for voluntary reductions in fertility (and to a lesser degree, promoted public policies such as the elimination of tax benefits for families and the legalization of abortion rights). A small but vocal minority, however, reduced the staying power of the population movement by calling for such radical measures as involuntary sterilizations of women after they had given birth to a certain number of children.

As the 1970s began, the U.S. government briefly accelerated its engagement with the population question beyond the question of funding for contraception, but ultimately abandoned the issue all together. President Richard Nixon offered a special message to Congress endorsing a gradual transition to zero population growth. In 1972, after meeting for two years, the Commission on Population Growth and the American Future, chaired by Rockefeller, called for several moderate measures to hasten the arrival of zero population growth in the United States. Nixon, however, immediately distanced himself from the commission's final report, and in particular its call for abortion rights (the Supreme Court would not decide the epochal case of *Roe v. Wade* until January 1973). Personally opposed to abortion, the president was also embracing a political strategy of appealing to Catholic and culturally conservative voters.

Wider forces than presidential politics ensured the rapid demise of the zero population growth movement. Ascendant conservatives, led by Julian Simon, celebrated the purported economic and cultural benefits of steady population growth (1990). In addition, the birthrate decreased noticeably in the early 1970s, which took some of the sting out of the zero population growth movement's critique. Many opponents of the zero population growth movement accused it—unfairly, for the most part—of seeking to primarily regulate the fertility of racial minorities. Other critics insisted that blaming population growth for environmental and social ills was a copout compared to attributing primacy to technology run amok and the inequalities of capitalism.

TOWARD ZERO POPULATION GROWTH

By the late 1970s, the Malthusian moment had passed in the United States. Domestic and overseas family planning policies had become institutionalized, but policymakers no longer seriously considered intervening to reduce the birthrate. The environmental movement largely abandoned its support for zero population growth due to an anti-immigration stigma increasingly attached to this position. China's adoption in 1979 of a one-child policy, which engendered myriad human rights violations (even though in many locales, especially the cities, the policy merely codified existing trends), further increased the stigma surrounding population policy. At the 1984 World Population Conference, the U.S. delegation famously declared that population growth was a neutral phenomenon. In the early twenty-first century a few Malthusians around the world continue to argue that population growth, especially in wealthy, high-consumption nations, is a major cause of global warming and will eventually have ruinous consequences for the worldwide standard of living and the environment. Some economists continue to argue that the transition to lower fertility leads to a *demographic dividend* for developing nations. But demands that world leaders act to slow down population growth are few and far between.

The United States has become something of a demographic outlier. Currently, the global population increases by about 80 million, or 1.2 percent, per year, but developing nations account for virtually all of that growth (*World Population Prospects: The 2006 Revision* 2007). Many industrialized nations such as Japan and Italy are headed toward zero population growth and should actually be in decline in fifty years. In contrast, in the United States, high levels of immigration and relatively high birthrates among immigrants and the U.S.-born alike have put the nation of 304 million (in 2007) on a path toward 570 million in 2100, according to the U.S. Census Bureau's

middle-range projections (*Methodology and Assumptions for the Population Projections of the United States: 1999 to 2100* 2000). Some experts fear the possible geopolitical consequences of this demographic trajectory, such as a further dependence on foreign oil. But most experts celebrate the supposed economic benefits of steady population growth. Perhaps the greatest demographic fear in the United States is of an aging crisis. That is, many social scientists worry that Americans are not having enough babies (future workers) to pay the imminent Social Security bill of the baby boom generation.

Assuming that fertility declines continue on their present course, the United Nations Population Division predicts the earth's population will reach 9.2 billion in 2050 (from nearly 7 billion in 2007) and then crest soon thereafter (*World Population Prospects: The 2006 Revision* 2007). Since the 1970s, the zero population growth movement has faded into near irrelevancy, but if early twenty-first-century trends hold, zero population growth will nonetheless be achieved in the not-too-distant future.

SEE ALSO *Abortion; Baby Boomers; Club of Rome; Cold War; Contraception; Demographic Transition; Demography; Eugenics; Famine; Green Revolution; Immigration; Jefferson, Thomas; Keynes, John Maynard; Limits of Growth; Malthus, Thomas Robert; Malthusian Trap; Overpopulation; Population Control; Productivity; Reproductive Politics;* Roe v. Wade; *Stationary State; Third World; Welfare State*

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Derek S. Hoff

ZERO-SUM GAME

"Zero-sum game" describes a situation in which two "players" with strictly opposed interests each make a decision that results in one player's winning equaling the opposing player's loss. Many recreational games, such as chess, poker, and tic-tac-toe, are zero-sum because for one player to win, the opposing player(s) must lose.

The notion of zero-sum games originated in a branch of applied mathematics known as game theory, which has enjoyed extensive application in the social sciences. John von Neumann (1903–1957), a mathematician, is usually credited with creating game theory, and he first explicated the theory of zero-sum games in his seminal work with Oskar Morgenstern, *Theory of Games and Economic Behavior* (1944). Game theory is essentially a study of conflict situations between two or more opponents or players. Each player in the game situation must decide on a course of action, or *strategy*, and the strategy each player chooses affects the outcome for all players in the game. The outcome, or solution, to a zero-sum game specifies how each player should move, and if each player moves accordingly, then the resulting payoff is known as the *value* of the game (Kelly 2003).

The easiest class of games to analyze is *two-person* zero-sum games, and these games typically receive the most scholarly attention among those who study zero-sum games. In *Theory of Games*, von Neumann and Morgenstern focus their attention on *two-person* zero-sum

games and show that in this type of game situation there always exists a solution that allows each player to avoid the worst possible outcome. To arrive at this solution, both players base their course of action on what they expect their opponent's action will probably be. Keeping their opponent's likely course of action in mind, both players attempt to minimize the opponent's maximum payoff, thereby maximizing their own minimum payoff. In doing so, the outcome of the game ends up being that both players obtain the best payoff they possibly can, given the nature of the game, and neither is able to do any better. This outcome is known as the *equilibrium* of the game, and this point can be thought of as the outcome in which neither player has any regrets about the course of action chosen. This method of play is known as the *minimax theorem*, and von Neumann and Morgenstern showed that all two-person zero-sum games have a minimax solution.

All zero-sum games can be classified as having either *perfect information* or *imperfect information*. In a game with perfect information, each player in the game is fully aware of all previous moves in the game, meaning that each player knows what actions the opponent has already taken. In tic-tac-toe, for example, after the "X" player's move, the "O" player knows exactly where the "X" player has placed an "X." In games of perfect information, there is always at least one optimal or best possible strategy for each player. However, the existence of a best possible strategy does not guarantee that a player will win or even be able to identify that strategy. Using the best possible strategy only guarantees that both players will minimize their losses, regardless of whether they win. But there may also be so many viable strategies to choose from that it becomes impossible to determine what the best strategy is.

When applying the minimax theorem to zero-sum games with perfect information, it is possible to achieve the equilibrium point, or the point that represents the outcome that results from both players using their best possible strategy, also known as the *saddle point*. All zero-sum games with perfect information have at least one saddle point, and the saddle points can be determined using the minimax theorem. However, on some occasions the minimax theorem does not necessarily have to be used to determine a game's saddle points. Occasionally, one player has strategies available that *dominate* the other strategies. A strategy is considered *dominant* if it yields a player a better outcome than any other strategy, despite the actions taken by the opponent. When a strategy is dominated by another, then the dominated strategy is said to be *inadmissible* because, if players are trying to get the best possible outcome, then it cannot make sense to choose a dominated strategy (Kelly 2003).

In games with imperfect information, the players are not fully aware of their opponent's prior moves. This means that each player must choose an action without knowing what action the opponent has taken or may be taking simultaneously. A simple example of this would be the game rock-paper-scissors. While there may not be one best possible strategy, it is still possible to find a minimax solution to two-person games of imperfect information. This solution can be obtained by using *mixed strategies*. Using a mixed strategy means that a player uses one strategy sometimes, another strategy at other times. The player assigns each strategy a particular probability of being used and chooses a strategy based on these probabilities. When mixed strategies are in equilibrium, meaning that neither player can do better by deviating from these strategies, the strategies are sometimes called *minimax mixed strategies* (Kelly 2003).

Analysis of zero-sum games has been applied to a variety of social science disciplines, but it has probably enjoyed most extensive application in the fields of economics and political science. In political science, for example, most elections can be thought of as zero-sum games given that for one candidate to win, the opposing candidate must lose. Also, when considering the distribution of political resources, some scholars believe that for one group to gain political resources, others must lose resources, thus implying a zero-sum nature to political competition. However, the application of zero-sum games to political and economic phenomena is necessarily limited given that most conflict situations are not zero-sum. In many conflict situations, competitors do not have strictly opposed interests; it is often possible for both players in a game to win, as sometimes is the case with economic competition, or for both players to lose, as can happen with pollution or arms races (McCain 2004). Because of the dearth of real-world zero-sum situations, and thus zero-sum's limited applicability, most game theoretic applications in the social sciences are not zero-sum.

SEE ALSO *Elections; Electoral Systems; First-past-the-post; Game Theory; Information, Asymmetric; Information, Economics of; Mixed Strategy; Politics; Social Science; Strategic Behavior; Strategic Games; Voting Schemes*

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Monique L. Lyle

ZIMBARDO, PHILIP
1933–

Few psychologists are as famous as Philip George Zimbardo. Zimbardo is known both for his flamboyant behavior (e.g., he is rumored to have worn a black cape decorated with a *Z*) and for his research, teaching, and promotion of psychology. His work has had a meaningful impact on the social sciences and the general public. Zimbardo received his PhD from Yale University in 1959. He became a professor at New York University in 1960 and in 1968 joined the faculty at Stanford University, where he remained until his retirement in 2003. This entry discusses just a few of Zimbardo's important contributions.

Zimbardo obtained fame in 1971, when he conducted what has become known as the Stanford Prison Experiment (SPE). Zimbardo randomly assigned twenty-four normal college students to the roles of prison guard and prison inmate in a mock prison set up in the basement of the Stanford psychology building. The experiment was to last two weeks but was terminated after six days because some participants became the role they were assigned to play; some guards acted sadistically and aggressively toward inmates, whereas some inmates exhibited depressive-like symptoms, anxiety, and extreme anger. Zimbardo's experiment led him to conclude that the behavior of guards and inmates in real prisons is created more by their roles than by their personalities.

Zimbardo's SPE is a classic in psychology. It revealed the power that situations and roles can have in shaping behavior. Zimbardo frequently speaks on this topic and has even pointed out parallels between his experiment and the 2004 Abu Ghraib prison abuse scandal. Zimbardo's experiment, however, is not without its critics. Some critics (including Zimbardo) contend that it was blatantly unethical because of the extreme stress placed on inmates, whereas other critics challenge the conclusions of the SPE because of its methodology (e.g., the data collection was limited; guards were given instructions on how to behave).

Although Zimbardo is most known for his SPE, he has contributed to psychology in other important ways. After the SPE, Zimbardo and colleagues embarked on a program to investigate debilitating shyness. His research led to over thirty publications on this topic alone and to the creation of a shyness clinic. Zimbardo is also an instrumental voice in promoting psychology to the general public. He has authored a popular introductory to psychology textbook, *Psychology and Life*, that was in its eighteenth edition in 2007. In 1990 he narrated the PBS television series *Discovering Psychology*, which discussed almost every area of psychology in an understandable and engaging format. This series introduced many people for the first time to the fascinating world of psychology. Its 2001 updated edition is frequently used in high schools and universities. The possible highlight of Zimbardo's career came in 2002, when he was elected president of the American Psychology Association, the largest worldwide association for psychologists with over 150,000 members.

Few psychologists are as well known as Zimbardo. The mere mention of his name to others in psychology might lead to stories of his flamboyant behavior or to an engaging discourse about the ethics and conclusions of the SPE. Regardless of what comes to mind when one thinks of Zimbardo, it is difficult to discount the positive impact his research, teaching, and promotion have had on psychology and society.

SEE ALSO *American Psychological Association; Ethics in Experimentation; Experiments; Experiments, Human; Hierarchy; Prisons; Psychology; Punishment; Role Theory; Shyness; Social Psychology*

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Brian P. Meier

ZIONISM

Zionism is the modern movement whose goal is the restoration of the Jewish people to the region on the eastern shore of the Mediterranean commonly known (at least until the establishment of the Jewish State of Israel in 1948) as Palestine or Zion. Not all of its adherents have been Jews. It draws, however, on ancient motifs sustained in Jewish collective memory, religion, and culture (and to some extent in the Christian West more generally), relating the telos of world-historical redemption and the com-

ing of the Messiah to the restoration of the Jews to their ancient homeland and the building of the third, and eternal, holy Temple in Jerusalem. Since its inception in the nineteenth century, Zionism has been an ideologically multifaceted and internally contentious movement, and its fortunes have changed in complex relation with European anti-Semitism and with colonialism beyond Europe's borders.

It is certainly difficult, and may be impossible, to present a summary account of Zionism, along with its bases of support and the sources of opposition to it, that is genuinely objective—not only because the movement continues to inspire intense passions, both positive and negative, but because its premises rest on accounts of history, geography, and nationality that are themselves fundamentally contested. Thus, Palestine refers to an ancient Roman province, to a British protectorate in the period of late European colonialism, and to the place claimed as a homeland by those residents of the region who have come to understand themselves as forming part of a non-Jewish, Palestinian nation. Speaking of the land as Zion reinforces the centrality of the region to Christian as well as Jewish sacred history and eschatological expectations. Even the notion that the Jewish people the world over constitute a single nation, central to Zionism and accepted as well by some competing Jewish movements prior to World War II (1939–1945), has not been universally accepted by Jews in the modern period.

ANCIENT AND MEDIEVAL ROOTS

Zionism draws on a rich and powerful repository of memorial resources preserved through Jewish generations, which profoundly inform ritual and expressions of religious yearning. Memorial literature that has been continuously studied since the destruction of the First and then the Second Temples in Jerusalem mourns their loss, enjoins their memory, and promises their restoration. The model of return from exile, as noble adventure and divinely sanctioned, is prefigured in the chronicles of the return from Babylonian exile led by Ezra and Nehemiah. Portions of the Babylonian Talmud detailing the correct procedures for fulfillment of commandments and strictures that relate only to times when the Jews live in Israel and the Temple stands continued to be studied, both in commemoration of the past and in anticipation of a redeemed future.

Nearly all this commemoration took place not only in the absence of Jewish sovereignty, but outside the land. At least since the destruction of the Second Temple in 70 CE, and continuing throughout the Christian era until the twentieth century, Jewish communities have been found overwhelmingly outside the imagined national homeland. This condition is itself subject to differing designations with various ideological implications. The Hebrew and Yiddish terms *galut* or *goles*, commonly translated as *exile*, stress the element of loss inherent in location outside the homeland. On the other hand, the scattered Jewish communities are also commonly described as being in *diaspora*, an ancient term originally applied to colonies of Greek settlers throughout the Mediterranean. A thriving Jewish diaspora existed prior to the destruction of the Second Temple, and some recent scholarship has stressed the sustainability and creativity of Jewish and other diasporas.

Along with the memory of the land, its reality was preserved throughout the Middle Ages by the reports of occasional pilgrims, including famous Jewish artists and thinkers, such as the twelfth-century philosopher-poet Judah HaLevi. Extremely pious Jews sought to die, or at least to be buried, in the soil of Zion. Small settlements of religious mystics were established in Jerusalem and the Galilee during the early modern period. During the late seventeenth century, the false messiah, Sabbatai Zevi (1626–1676), raised hopes of immediate restoration of the Jews to Zion; Jews across the Western world sold their worldly goods and prepared for the journey that never came.

MODERN ZIONISM

The modern movement of Zionism, understood in large part as a mobilization to "actualize" these ancient hopes and dreams, is inseparable from key aspects of modern European history, including the dissolution of the ancien régime; the rise of secularism and religious pluralism; and the effort to create one-to-one alignments between ethnic collective identities and territorially defined nation-states. As part of the first aspect, Jewish communities were simultaneously freed of historic restrictions on movement, settlement, and employment, and deprived of their historic self-governing character. As part of the second, the *haskalah*, or "Jewish Enlightenment," sparked a profound internal critique and resistance to traditional modes of communal authority, based as it was on patriarchy, family, and class prestige, and mastery of religious law and lore. Meanwhile, chauvinist nationalisms in Europe spawned the modern variety of Jew-hatred that went by the "scientific" name of *anti-Semitism*. This inspired Zionism as a response, claiming that the only possible place for the Jewish people in a modern world of nation-states was together, preferably in its own historical homeland.

Starting in the late nineteenth century, various Zionist manifestos appeared. In Eastern Europe, Leon Pinsker's (1821–1891) *Autoemancipation*, which was inspired by a wave of pogroms in 1881 and argued that the Jews would neither be safe nor free so long as they remained in an "abnormal" situation as guests and strangers, was published in 1882. In 1896 the Viennese

journalist Theodor Herzl (1860–1904), who came to be canonized as the founder of Zionism, published his *The Jewish State*, arguing that the Jews would never be free nor gain respect until they ceased being a scattered minority. Ahad Ha'am (1856–1927), who argued that Zion should serve as a spiritual center for the renewal of world Jewry, did not carry the day, but his vision may be seen as a remarkable prediction of the relation between Jewish Israel and the Jews of the diaspora at the start of the third millennium. Intellectuals such as Judah Magnes (1877–1948) and Martin Buber (1878–1965), concerned with the ethical demand to acknowledge the presence and humanity of the Arab inhabitants of Palestine, argued early in the twentieth century for a binational solution to what came increasingly to be understood as a conflict between two nationalist movements struggling for control of the same land. The Revisionists, led by Vladimir Jabotinsky (1880–1940), contended that such reconciliation was impossible and that the conflict might well be a fight to the death, one that the Jews must at all costs win. Meanwhile the most popular variant of Zionism as a popular movement was Socialist Zionism, itself subject to bitter contention, though all of its adherents believed both that the way to revive the Jewish people was through the renewal of Jewish labor in the Jewish land and that the Zionist effort was consistent with the worldwide movement of the working class. Zionist ideology emphasized the close attachment between the people and the land in modern practice, not only in historical memory; and Zionist strategy prior to World War II involved substantial efforts to purchase land in Palestine.

WORLD WAR II AND POSTCOLONIALISM

World War II affected the Zionist movement in profound ways: It seemed to offer convincing proof that there was no safe future for Jews in diaspora, and it led to mass immigration by refugees and survivors to what was, until the late 1940s, still commonly called *Palestine* even by Jews. The establishment of the State of Israel in 1948 and the ensuing war marked a new phase in the history of the movement and the controversies surrounding it. Many Zionists understood themselves as anticolonialists, both because the Jews worldwide whom they sought to redeem could plausibly be understood as being "internally colonized" by various powerful nations and empires, and because the Zionist pragmatic and military effort involved resistance as well as collusion with the British protectorate. Palestinians displaced during the 1948 war known in Israel as the War of Independence were neither allowed by Israel to return to their homes, nor absorbed into surrounding Arab countries, thus exacerbating and perpetuating the Israeli-Palestinian conflict. The Soviet Union, after initially voting in the United Nations for recognition of Israel, came to be aligned with the Arab States and with the Palestinian movement, while much of the world came to see Israel and Zionism as opposed to postcolonial liberation struggles.

Consistent both with the Zionist ideal of worldwide Jewish peoplehood and with the reality of vastly different Jewish communities in various parts of the world, the mass absorption of a large percentage of the world's Jews has been problematic and controversial. In the decades following World War II, the majority of the Jews of North Africa and the Middle East emigrated to Israel, as did a large percentage of the Jews of Eastern Europe and, somewhat later, the Soviet Union. Tensions arose and persist among these major immigrant groups. In the latter decades of the twentieth century, the secular Zionist goal of shaping the "new Jew," free of supposed religious obscurantism and the supposed neuroses of diaspora, was challenged both by movements to retain rather than jettison traditional Jewish cultures and by an increasingly popular and militant combination of Zionist-exclusive territorialism and fervent religious orthodoxy. Moreover, a number of scholars and commentators have argued that by the end of the twentieth century, the era of "post-Zionism" had come, meaning that the fundamental goal of establishing and securing a Jewish state had been achieved, but that it was no longer feasible or necessarily desirable to persist in the attempt to gather in all of the world's Jews.

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Jonathan Boyarin

ZOMBIES

The word *zombie* refers to the "living dead" and originally derives from Central Africa. In Kongo, the cadaver or spirit of a deceased person is called *nzambi*. But the belief in the existence of the "living dead" is widespread, and the term has also been subject to much cross-cultural appropriation, decontextualization, and recontextualization.

Popular discourses associate zombies with the Caribbean Voodoo religion. For example, Haitians believe that malevolent sorcerers sometimes gain control of the bodies of their victims by robbing them of the component of the soul that contains personality, character, and willpower (*tibon ange*) or by raising them from their graves. The sorcerers then lead their innocent victims in a comatose trance, under cover of night, to distant places where they must toil indefinitely as slaves. The Haitian conception has informed the image of zombies in mass-mediated popular culture as the macabre figure of a corpse in tattered rags, entirely subservient and beholden to the authority of some unknown master. Zombies are portrayed as docile, with glassy empty eyes, and as being without will, memory, and emotion.

A controversial theory by ethnobiologist Wade Davis (1988) suggests that there may well be an ethnobiological basis for reports of the zombie phenomenon in Haiti. He refers to a case of zombification that was verified by a team of physicians. In 1962 Clairvus Narcisse was pronounced dead at a hospital, and buried eight hours later. But Clairvus reappeared in 1980, claiming that his brother had made him a zombie because of a land dispute. Davis argues that Clairvus was mistakenly diagnosed as dead, buried alive, and taken from the grave. Clairvus claimed that following his resurrection from the grave, he was forced to work as a slave with other zombies. He escaped after two years and spent the next sixteen years wandering about the country, fearful of his vengeful brother. Among the various preparations used by Haitian sorcerers, Davis identified a fish containing tetrodotoxin, an extremely potent neurotoxin that induces a complete state of peripheral paralysis and imperceptibly low metabolic levels. Davis postulates that the Haitian belief in zombies could be based on rare instances where an individual receives the correct dosage of the poison and is misdiagnosed as dead. Davis describes zombification as a form of punishment imposed by Bizango secret societies. These societies are arbiters of social life, protect community resources such as land, and use poison and sorcery as weapons.

Other scholars regard the belief in zombies as purely mythical. From a neo-Marxian perspective, the image of zombies as people who are dehumanized and left only with the ability to work is seen as a symbolic commentary on the historical processes of enslavement, colonialization, and proletarianization.

In many parts of Africa, zombies are recognized as an integral aspect of witchcraft discourses, particularly where these address social inequalities. Throughout the Cameroon, nouveau riches are imagined as witches who no longer eat their victims but change them into zombies. For example, the concept of *nyongo* emerged amongst the Bakweri after German and British colonists arrogated their land, resettled them on reserves, and allowed strangers to profit from the new economic opportunities. The Bakweri suspected prosperous outsiders of forming witch associations, taking deceased kin from their graves, and transporting the zombie spirits by lorry to Mount Kupe, where they worked on invisible plantations. These beliefs are informed by traumatic memories of the slave trade and of forced labor, as well as by perceptions of wealthy absentee landlords.

In Malawi, witchcraft discourses constitute an argument about the morality of accumulation. Accumulation is endowed with moral adequacy when entrepreneurs make their constitutive relations visible by supporting their kin financially, and by redistributing wealth through patronage, gift giving, and feasting. It is perfectly legitimate when entrepreneurs, who are motivated by these concerns, use medicines to protect their businesses. By contrast, accumulation that is motivated by individualism and greed is morally despised. In this situation, entrepreneurs are said to achieve prosperity at the cost of human lives. Zombies are believed to reside with them, to protect their money, and to attract customers to their businesses. Zombies thus serve exactly the same purposes as medicines, but are an index of morally disreputable witchcraft.

In South Africa, images of witches and zombies have multiple symbolic meanings, but capture the desire to dominate and the fear of being dominated. These images resonate with those of elderly women who control the work of their daughters-in-law, and of white industrialists who employ black laborers. The deployment of zombies in a nocturnal "second world" echoes the daunting experiences of young brides who leave their natal households for those of their husband's family, and of migrants who leave the countryside for alien industrial and mining centers. The smallness of zombies alludes to the diminutive status of these persons, and the idea that their tongues are cut suggests unquestioning obedience.

SEE ALSO *Vodou*

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Isak Niehaus

Z-TEST

In scientific and social investigations, researchers may need to make decisions through statistical-hypothesis testing guided by underlying theory and empirical observa-

tions. The *Z*-test is one of the most popular techniques for statistical inference based on the assumption of normal distribution. Many social and natural phenomena follow the law of normal (Gaussian) distribution, which was discovered by Carl F. Gauss (1777–1855), a German mathematician, in the early nineteenth century. The normal distribution is one of the fundamental statistical distributions used in many fields of research, and it has a bell-shaped density function with μ (mean) representing the central location and σ^2 (variance) measuring the dispersion. The normal density function is

$$\frac{1}{\sqrt{2\pi}\,\sigma} e^{-\frac{1}{2}(x-\mu)^2/\sigma^2} \tag{1}$$

A general normal random variable X with a mean of μ and variance σ^2 can be rescaled into the standard normal random variable Z with mean 0 and variance 1 using

$$Z = \frac{X-\mu}{\sigma}, \tag{2}$$

where σ is the standard deviation of X. The observed value of Z is called the Z score. Almost all introductory statistics books provide the table for the probability of $\{Z \le c\}$ or its variants for many convenient values of c (Agresti and Finlay 1997). These values are available in all statistical software packages.

Statistical hypothesis testing and inference on the population mean are usually performed through a sample of random variables observed from the population. Let X_1, X_2, …, X_n be n independent and identically distributed normal random variables with a mean of μ and a variance of σ^2, such as the gas mileages of a particular type of vehicle, the annual average income of households in a city, or the vital signs of patients under various treatments.

Denote the sample mean $\sum_{i=1}^{n} X_i/n$ as $\bar{X}$. Then

$$Z = \frac{\bar{X}-\mu}{\sigma/\sqrt{n}} \tag{3}$$

is distributed as the standard normal random variable, where $\sigma/\sqrt{n}$ is the standard deviation of $\bar{X}$. This result provides the base for a one-sample Z-test on the mean (μ) of the study population when σ^2 is known. To test the null hypothesis H_0: $\mu = \mu_0$ (for example, to test if the mean gas mileage [μ] is 25 [μ_0] miles per gallon for a particular type of vehicle), one can form the Z-test statistic as

$$Z = \frac{\bar{X}-\mu_0}{\sigma/\sqrt{n}}. \tag{4}$$

One would reject the null hypothesis H_0 in favor of the alternative H_a: $\mu \neq \mu_0$ (the two-sided Z-test) when the observed value of Z is significantly different from 0. In many situations, one may be interested in a one-sided alternative (H_a: $\mu < \mu_0$ or H_a: $\mu > \mu_0$).

In rejecting or accepting the null hypothesis, one could commit two types of errors. The type I error (α) is the probability of rejecting the null hypothesis when it is true, and the type II error (β) is the probability of accepting the null hypothesis when it is false. The p-value is the probability of the test statistic as contradictory to H_0 as the observed Z value. A detailed study on statistical hypothesis testing is given by Erich Lehmann and Joseph P. Romano (2005). For the two-sided Z-test, one may reject $\mu = \mu_0$ in favor of $\mu \neq \mu_0$ if the observed Z value of the test statistic satisfies

$$|Z| = \left|\frac{\bar{X}-\mu_0}{\sigma/\sqrt{n}}\right| > 1.96. \tag{5}$$

The type I error for this test is less than 0.05. The upper bound of the type I error is called the *size*, and 1-β is called the *power* of the test. For a test, if the p-value is less than the size, one may reject the null hypothesis H_0. A commonly used size is 0.05. For the two-sided Z-test with size 0.05, the critical region is $\{|Z| > 1.96\}$. The Z-test is closely related to the constructing of confidence intervals. For example, the 95 percent confidence interval for the mean μ is

$$(\bar{X} - 1.96\sigma/\sqrt{n}, \bar{X} + 1.96\sigma/\sqrt{n}) \tag{6}$$

for the two-sided estimation. If X_1, X_2…, X_n are not independent and identically normally distributed, under some conditions, the central limit theorem shows that

$$Z = \frac{\bar{X} - \text{Mean}(\bar{X})}{\sqrt{\text{Var}(\bar{X})}} \tag{7}$$

is approximately standard normal when n is large (typically $n \ge 30$). That is, one can still use the Z-test when n is large.

In many applications, the standard deviation of the population is unknown. In these cases, one can replace σ with the sample standard deviation s and form a test statistic as

$$t = \frac{\bar{X}-\mu_0}{s/\sqrt{n}}, \tag{8}$$

where

$$s^2 = \frac{1}{n-1}\sum_{i=1}^{n}(X_i - \bar{X})^2 \tag{9}$$

is the sample variance. The test follows the t-distribution of n-1 degrees of freedom. As n increases, t converges to Z. Hence, even when the standard deviation is unknown, the Z-test can be used if n is large. In fact, the estimates of parameters from many parametric models, such as regres-

sion models, are approximately normally distributed. The *Z*-test is therefore applicable for statistical inference of these parameters. When comparing the means (μ_1 and μ_2) of two normally distributed populations, $N(\mu_1, \sigma_1^2)$ and $N(\mu_2,\sigma_2^2)$, one can construct a two-sample Z statistic for testing H_0: $\mu_1 - \mu_2 = \mu_0$:

$$Z = \frac{\bar{X} - \bar{Y} - \mu_0}{\sqrt{\sigma_1^2/n + \sigma_2^2/m}}, \tag{10}$$

where $\bar{X} = \sum_{i=1}^{n} X_i/n$, $\bar{Y} = \sum_{i=1}^{m} Y_i/m$ and X_i, Y_i are independent random samples from these two populations respectively.

The two-sample *Z*-test can be carried out in the same way as the one-sample *Z*-test. Similar to the case of the one-sample *Z*-test, the two-sample *Z*-test corresponds to the two-sample *t*-test when the population variances are replaced by their sample variances. However, when *n* and *m* are large, there is not much difference between the two-sample *Z*-test and the two-sample *t*-test. The two-sample *t*-test is a special case of Analysis of Variance (ANOVA), which compares the means of multiple populations. For a small sample size, it is preferable to use nonparametric methods instead of the *Z*-test, particularly when it is difficult to verify the assumption of normality.

SEE ALSO *Student's T-Statistic; Test Statistics*

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Dejian Lai

Bibliography

This annotated bibliography is the product of the efforts of the Board of Editors to identify works in the social sciences published from 1960 onward that have had a major academic or sociopolitical impact or that represent exceptional creativity and originality. By no means do the Board of Editors claim that this list encompasses all works of merit published in the social sciences since 1960. Additional article citations are listed under a separate heading in each subject section.

ANTHROPOLOGY AND ARCHAEOLOGY

Ali, Tariq. *The Clash of Fundamentalisms: Crusades, Jihads, and Modernity.* London: Verso, 2002. Responding to Huntington's argument in *Clash of Civilizations*, Ali presents a scathing indictment of U.S. imperialism and of fundamentalism in both Islam and the Christian right.

Appadurai, Arjun. *Modernity at Large: Cultural Dimensions of Globalization.* Minneapolis, MN: University of Minnesota Press, 1996. Appadurai, while engaged in an important meditation of the idea of "modern," examines the effects of globalization on identity, lifestyle, culture, and political thought.

Behar, Ruth. *Translated Woman: Crossing the Border with Esperanza's Story.* Boston: Beacon Press, 1993. Researching in Mexico, anthropologist Behar went to a cemetery near the town of Mexquitic and attempted to photograph a Mexican-Native American woman placing flowers on the graves of her children. The woman, to whom Behar assigned the name Esperanza, bargained with Behar. If Behar and her husband would serve as godparents to one of her living children, Esperanza would tell her story to Behar, providing intimate details of the life of women in Mexquitic. The result is Behar's moving portrait of suffering and abuse. This work crystallizes the possibilities associated with subject and observer being collaborators in ethnographic projects.

Behar, Ruth. *The Vulnerable Observer: Anthropology That Breaks Your Heart.* Boston: Beacon Press, 1996. Behar advocates a more personal approach to anthropology in which the line between observer and subject is not so easily drawn. She addresses the methodological issues inspired by her earlier study, *Translated Woman*, that pushed toward a more collaborative, negotiated relationship between subject and observer. She maintains that "anthropology that doesn't break your heart just isn't worth doing."

Davies, Charlotte Aull. *Reflexive Ethnography: A Guide to Researching Selves and Others.* London: Routledge, 1999. A comprehensive guide to the relationship between the theory and practice of ethnographic research emphasizing the necessity of a self-critical stance by the researcher. Reflexive ethnography pushes researchers to be open about their biases and perspectives and to recognize that their presence can have an impact on the events that they observe and record. It rejects the notion that it is possible to achieve absolute detachment and objectivity in conducting ethnographic research.

Diop, Cheikh Anta. *Civilization or Barbarism: An Authentic Anthropology.* Translated by Yaa-Lengi Meema Ngemi. Edited by Harold J. Salemson and Marjolijn de Jager. Chicago: Lawrence Hill Books, 1991. Diop presents archaeological and historical evidence to support his assertion that Egypt was a black civilization, and that Greek civilization is indebted to Egyptian learning and accomplishments. The study argues for the centrality of African cultural production in world history.

Dumont, Louis. *Homo Hierarchicus: An Essay on the Caste System.* Translated by Mark Sainsbury. Chicago: University of Chicago Press, 1966. In a now classic study, Dumont reviews ethnographic data and explores the structure of hierarchy embedded in Hindu religious texts that constitute the ideological foundations of the Indian caste system.

Freeman, Derek. *Margaret Mead and Samoa: The Making and Unmaking of an Anthropological Myth.* Cambridge, MA:

Harvard University Press, 1983. Freeman advances a provocative refutation of the conclusions reached by anthropologist Margaret Mead in her famous study of the transition from childhood to adulthood in Samoa.

Kleinman, Arthur. *Patients and Healers in the Context of Culture: An Exploration of the Borderland between Anthropology, Medicine, and Psychiatry*. Berkeley: University of California Press, 1981. Kleinman outlines what he calls "a theoretical framework for studying the relationship between medicine, psychiatry, and culture." He focuses on illness experiences, practitioner-patient interactions, and the healing process, seeking to demonstrate how biological and sociocultural aspects of human behavior interact to influence illness and health.

Lévi-Strauss, Claude. *La Pensee Sauvage*. Paris: Plon, 1962. The noted French anthropologist presents his theories of culture and mind and his thoughts on history and social change.

Lévi-Strauss, Claude. *Mythologiques*. 4 vols. Paris: Plon, 1964–1971. Lévi-Strauss's complex series of works provide a frame for the analysis of myths and explores their importance in understanding human thought and social relationships.

McClaurin, Irma. *Women of Belize: Gender and Change in Central America*. New Brunswick, NJ: Rutgers University Press, 1996. In a postcolonial critique of gender relations in Belize, McClaurin asks how women find unity to organize themselves for the purposes of self-improvement and collective social change. Across all ethnic groups in one village, an economic-sexual dynamic was uncovered, where female dependence on men restricted women's physical and social mobility. Focusing in depth on three Belizean women of different ethnicities, McClaurin found that participation in organizations focused on traditional women's concerns helped women overcome marginalization.

Mintz, Sidney. *Caribbean Transformations*. Chicago: Aldine, 1974. This volume collects in one place several of anthropologist Mintz's most important articles on Caribbean society. Tracing the history of the region, Mintz analyzes the long-term sociocultural impact of slavery and the plantation system.

Moore, Henrietta L. and Todd Sanders, eds. *Anthropology in Theory: Issues in Epistemology*. Malden, MA: Blackwell, 2006. Contains 57 articles centering on anthropological theory and epistemology in the twentieth century. The articles provide an overview of the resurgence of the study of anthropology, new directions within the discipline, and how anthropology contributes to debates and theory in other social sciences.

Ong, Aihwa and Donald E. Nonini, eds. *Ungrounded Empires: The Cultural Politics of Modern Chinese Transnationalism*. New York: Routledge, 1997. A collection of essays exploring modern Chinese transnational capitalism and the complexity of the Chinese experience of modernity, identity, and diaspora.

Prashad, Vijay. *Everybody Was Kung Fu Fighting: Afro-Asian Connections and the Myth of Cultural Purity*. Boston: Beacon Press, 2001. Prashad analyzes historical evidence of centuries of cultural and political interaction between blacks and Asians around the world, seeking to reject notions of multiculturalism and the primacy of a white majority in favor of a model of polyculturalism. Prashad also presents four ways of thinking about race, exploring ways in which race has been conceptualized in the past and conjecturing on implications for the future.

Prashad, Vijay. *The Karma of Brown Folk*. Minneapolis: University of Minnesota Press, 2000. Prashad discusses how some American political groups have pointed to the success of South Asian immigrants as an example of successful assimilation and proof that the U.S. offers a level playing field (i.e. South Asians as a "model minority"). Prashad counters this with an argument about America's selective immigration policy in the late twentieth century that focused on welcoming professionals from Asia.

Sahlins, Marshall. *Culture and Practical Reason*. Chicago: University of Chicago Press, 1976. Sahlins rejects the notion that, unlike other societies, Euro-American peoples can be understood strictly in terms of rational, utilitarian choices. He uses various examples to argue that a society cannot be understood without reference to symbols and meanings unique to its culture.

Sahlins, Marshall. *Stone Age Economics*. Chicago: Aldine-Atherton, 1972. By focusing on aboriginal, precolonial communities, Sahlins raises questions about the conditions of prosperity. He proposes that societies with low levels of material wants and the capacity to meet those wants while having substantial time for leisure are "the original affluent societies." Thus, Sahlins breaks the conventional link between affluence and consumerism in a major contribution to the field of economic anthropology.

Sheriff, Robin E. *Dreaming Equality: Color, Race, and Racism in Urban Brazil*. New Brunswick, NJ: Rutgers University Press, 2001. Sheriff lived in a primarily black ghetto in Rio de Janeiro for over a year compiling research on the lives of black Brazilians, exploring their perceptions about issues of race and racism in Brazil—a nation often formally described as a "racial democracy."

Said, Edward. *Orientalism*. New York: Pantheon, 1978. Perhaps Said's most influential work, *Orientalism* examines European and U.S. representations of the peoples and societies of the Middle East. The author argues that traditional Euro-American scholarship on the region has created a stereotype of its cultures as irrational, unchanging, violent, and morally degenerate. Such negative stereotypes of the Arab "Orient" and its peoples have long been exploited to justify Euro-American economic and political domination of the Middle East, and they continue to inform both popular attitudes and public policy toward the region.

Said, Edward. *Culture and Imperialism*. New York: Knopf, 1993. Said explores the relationship between imperialism and developments in popular culture that both reflected and reinforced the supremacist principals that supported imperialist projects.

Scott, David. *Conscripts of Modernity: The Tragedy of Colonial Enlightenment*. Durham, NC: Duke University Press, 2004. Scott argues for a need to reconceptualize the past in evaluating postcolonial history, viewing the transition from colonialism to postcolonialism not as "romance" but rather as tragedy, with important implications for the anticolonial utopias that have experienced conflict and disillusionment.

Singleton, Theresa A., ed. *"I, Too, am America": Archaeological Studies of African-American Life*. Charlottesville: University Press of Virginia, 1999. The volume consists of an important

set of essays that examines what has been learned about the lives of African Americans in the colonial period based upon archaeological findings.

Stocking, George W. *Race, Culture and Evolution: Essays in the History of Anthropology*. New York: Free Press, 1968. A collection of essays centering on issues of scientism, racism, and a history of the interaction between anthropology and other social science disciplines.

Trouillot, Michel-Rolph. *Silencing the Past: Power and the Production of History*. Boston: Beacon Press, 1995. A collection of five essays probing the meaning and interpretation of history, and considered an important contribution to the anthropology of history. Trouillot cites as one example the significance of the Haitian Revolution, which has not been widely accepted as one of the most important revolutions in world history. Yet, as Trouillot persuasively asserts, that revolution founded an independent black state at a time when the vast majority of blacks in the western hemisphere were enslaved. Trouillot concludes that those wielding power determine which accounts of history are considered authoritative.

Twine, France Winddance. *Racism in a Racial Democracy: The Maintenance of White Supremacy in Brazil*. New Brunswick, NJ: Rutgers University Press, 1997. Twine provides an important ethnographic study on race in Brazil, based on three years she spent in a Northern Brazilian town, that comprehensively challenges the notion that racism is of marginal importance there. She argues that Brazilians define racism with sufficient narrowness so that both everyday acts of racial indignity as well as general patterns of racial inequality often go unchallenged or are attributed to class disparity.

Wade, Peter. *Race and Ethnicity in Latin America*. London: Pluto Press, 1997. Wade's major study analyzes racial and ethnic systems of classification in Mexico, Central America, and South America.

Williams, Brackette. *Stains on My Name, War in My Veins: Guyana and the Politics of Cultural Struggle*. Durham: Duke University Press, 1991. Study of cultural, ethnic, and class conflict in Guyana. Since independence in 1966, the nation-building process in Guyana has shown how a colonial past shapes the way citizens think and act in the postcolonial context. Williams finds that political rivalry is ethnically entrenched, each group claiming superiorities over the other ethnic groups using Anglo-European standards.

Yelvington, Kelvin, editor. *Trinidad Ethnicity*. Knoxville: University of Tennessee Press, 1993. A collection of twelve essays exploring issues of ethnicity, class, color, and gender in Trinidad, one of the most demographically diverse nations in the world.

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Appadurai, Arjun. "Is Homo Hierarchicus?" *American Ethnologist* 13, no. 4 (1986): 745–761.

Appadurai, Arjun. "Disjuncture and Difference in the Global Cultural Economy." *Public Culture* 2, no. 2 (1990): 1–24.

Baker, Lee. "Franz Boas Out of the Ivory Tower." *Anthropological Theory* 4, no. 1 (2004): 29–51.

Blakey, Michael L. "The New York African Burial Ground Project: An Examination of Enslaved Lives, a Construction of Ancestral Ties." *Transforming Anthropology* 7, no. 1 (1998): 53–58.

Bochner, Arthur P. "Narratives Virtues." *Qualitative Inquiry* 7, no. 2 (2001): 131–157.

Caton, Hiram. "The Mead/Freeman Controversy is Over: A Retrospect." *Journal of Youth and Adolescence* 29, no. 5 (2000): 587–605.

Jarrett, Robin. "Growing Up Poor: The Family Experiences of Socially Mobile Youth in Low-Income African American Neighborhoods." *Journal of Adolescent Research* 10, no. 1 (1995): 111–135.

Jones, Rhett. "Black/Indian Relations: An Overview of Scholarship." *Transforming Anthropology* 10, no. 1 (2001): 2–16.

Lewis, Herbert. "Boas, Darwin, Science, and Anthropology." *Current Anthropology* 42, no. 3 (2001): 381–406.

Shankman, Paul. "The History of Samoan Sexual Conduct and the Mead-Freeman Controversy." *American Anthropologist* 98, no. 3 (1996): 555–567.

ARTS, MEDIA, AND POPULAR CULTURE

Bogle, Donald. *Toms, Coons, Mulattoes, Mammies, and Bucks: An Interpretive History of Blacks in American Films*. New York: Viking, 1973. Film historian Bogle's first book examines blacks in American films dating back to the era of silent movies. In analyzing their work, Bogle endeavors to reconstruct the cultural and social context of the day for each film produced. Throughout the study, he discusses the stereotypes that black actors were forced to perpetuate—noting, of course, that these films provided black actors with the opportunity for work.

Bourdieu, Pierre. *Distinction: A Social Critique of the Judgment of Taste*. Translated by Richard Nice. Cambridge, MA: Harvard University Press, 1994. Originally published as *La distinction: critique sociale du jugement*, 1979. Using evidence from a survey of more than 1,000 subjects from Paris and two other French towns, Bourdieu argues that taste functions to legitimize social differences and to orient individuals to their sense of social status and belonging. Class differences, Bourdieu asserts, can be discerned from tastes in food, including choice of food as well as preparation, presentation, and even understanding of the effects of that choice on matters of health and well-being. Bourdieu explores the relationship between economic and social conditions, arguing that people attempt to enhance class characteristics by imposing their own classifications and symbolism onto common social experiences.

Carby, Hazel V. *Reconstructing Womanhood: The Emergence of the Afro-American Woman Novelist*. New York: Oxford University Press, 1987. Carby seeks to reconstruct the social, political, and literary contexts in which the earliest novels by African American women writers were produced. She explores the marginalization of black women in history, as well as the racist undercurrents of the women's suffrage movement, in which white women saw themselves as the "ideal of true womanhood."

Frith, Simon. *Sound Effects: Youth, Leisure, and the Politics of Rock'n'Roll*. New York: Pantheon, 1981. Asserting that the

sociology of rock is the sociology of youth, Frith discusses rock music's meanings, production, and consumption.

Gans, Herbert J. *Popular Culture and High Culture: An Analysis and Evaluation of Taste*. New York: Basic Books, 1974, revised, 1999. Gans describes his study as "an argument for cultural democracy and an argument against the idea that only the cultural expert knows what is good for people and society." He discusses the multiplicity of "taste cultures" in America and opposes philosophies that suggest that such tastes can or should be improved.

Gilroy, Paul. *The Black Atlantic: Modernity and Double Consciousness*. Cambridge, MA: Harvard University Press, 1993. The black Atlantic is a space where a rich cultural synthesis has occurred in the aftermath of the disasporization of African peoples; the black Atlantan is a person forcibly removed from his home country but never fully accepted or absorbed in the new one. This displacement prompts the "double consciousness" described by W. E. B. Du Bois and acknowledged in Gilroy's title, with implications for an understanding of the work of black artists and intellectuals ranging from Frederick Douglass, Du Bois, and Richard Wright, to modern-day figures like rock musician Jimi Hendrix and novelist Toni Morrison. Gilroy argues for "an explicitly transnational and intercultural" approach to the study of black identity.

Hall, Stuart. *Encoding and Decoding in the Television Discourse*. Birmingham, UK: University of Birmingham, 1973. Analyzes media influence in relation to genre using the specific example of the Western television programming and violence. Hall argues: "[In] part what the production of the Western genre/code achieved was the transformation of a real historical west, selectively, into the symbolic of mythic 'West.'"

Hall, Stuart. *Representation: Cultural Representation and Signifying Practices*. Thousand Oaks, CA: Sage, 1997. Hall examines how visual images and language work as "systems of representation." He discusses the use of photography in national identity, the construction of masculine and feminine identity in popular culture and entertainment, and the popularization of radical movements in the mass media.

Hobsbawm, Eric J. and Terence O. Ranger, eds. *The Invention of Tradition*. Cambridge: Cambridge University Press, 1983. Six essays outline what Hobsbawm describes as the universal practice of inventing traditions during periods of rapid social change, largely for political purposes and for "the inculcation of beliefs, value systems and conventions of behavior."

hooks, bell. *Black Looks: Race and Representation*. Boston: South End Press, 1992. Twelve essays examine the black experience in America, exploring images of blacks promoted by advertisers and the media.

Jones, Le Roi (Amiri Baraka). *Blues People: Negro Music in White America*. New York: William Morrow, 1963. Baraka's classic history traces black music from slavery to contemporary jazz, noting the evolving consciousness of black identity as expressed in these works. The blues, a staple of black American music, grew out of the encounter between African and American cultures in the South to become an art form uniquely connected to both the African past and the American soil.

Lott, Eric. *Love and Theft: Blackface Minstrelsy and the American Working Class*. New York: Oxford University Press, 1993. Lott's important historical and cultural study examines the origins of blackface minstrelsy in America, focusing on its design as entertainment for white, male, working-class audiences. Lott asserts that minstrelsy helped to define and give voice to various working-class ideologies, centering his discussion on those involving race, class, and gender.

McLuhan, Marshall and Quentin Fiore. *The Medium Is the Massage: An Inventory of Effects*. New York: Bantam, 1967. With a title that offers a pun on McLuhan's famous statement "the medium is the message," this photomontage seeks to convey McLuhan's declared belief that instead of neutrally presenting content, "all media work us over completely. They are so pervasive in their personal, political, esthetic, psychological, moral, ethical, and social consequences that they leave no part of us untouched, unaffected, unaltered. The medium is the massage."

Rose, Tricia. *Black Noise: Rap Music and Black Culture in Contemporary America*. Middletown, CT: Wesleyan University Press, 1994. Rose received the American Book Award for this study, considered an outstanding treatment of rap music in its cultural contexts. The author examines the historical evolution of rap, its technological innovations, and the racial, cultural, and sexual politics of the genre.

Sollors, Werner. *Beyond Ethnicity: Consent and Descent in American Culture*. New York: Oxford University Press, 1986. Examines ethnicity in American literature and its implications for an understanding of American culture. Surveying a variety of works from all periods of American history, Sollors focuses on what he describes as the tension between "descent," the concern for one's heritage, and "consent," the desire to choose one's own life course and identity.

Szwed, John. *Space Is the Place: The Lives and Times of Sun Ra*. New York: Pantheon, 1997. A sympathetic portrayal of the twentieth-century jazz composer, musician, and orchestra leader Sun Ra (born Herman "Sonny" Blount), whose idiosyncratic temperament and wild claims of space travel were perplexing to many. Szwed explores Sun Ra's concerns with mysticism, Egyptology, and Afrocentrism, tracing his early career and artistry against the background of the emerging civil rights movement in the U.S.

Williams, Raymond. *Marxism and Literature*. Oxford: Oxford University Press, 1977. Williams insists that literature be analyzed in terms of the intentional choices of the writer at each stage of construction, and the grounding of those choices in the conflict of social forces then prevalent. The critic must reconstruct these dynamics and perceive the creative work as a production rather than a finished object.

Williams, Raymond. *Television: Technology and Cultural Form*. London: Fontana, 1974. Williams notes that television, with its centralized transmission for the purpose of a privatized reception, reinforces and extends particular cultural standards. Central to his study of technology and culture is an exploration of cultural assumptions regarding the use of television, and the political and economic structures that influence the creation and growth of new technologies.

ARTICLES

Gates Jr., Henry Louis. "Black London: After Three Generations Being Black Has Finally Become A Way of Being British." *The New Yorker* (28 April and 5 May 1997).

DEMOGRAPHY

Boserup, Ester. *Population and Technological Change: A Study of Long-Term Trends*. Chicago: University of Chicago Press, 1981. Boserup challenges Malthusian theories, positing that technological progress is induced by the pressure generated by population growth.

Croll, Elizabeth, Delia Davin, and Penny Kane, eds. *China's One-Child Family Policy*. New York: St. Martin's Press, 1985. A compilation of essays contributed by a number of well-known writers on Chinese social demography. The collection traces the origins of China's controversial one-child policy, assessing problems associated with the policy along with future prospects.

Mamdani, Mahmood. *The Myth of Population Control: Family, Caste and Class in an Indian Village*. New York: Monthly Review Press, 1972. Challenging the premise that poverty and underdevelopment in less affluent nations are the result of overpopulation, Mamdani analyzes the relationship between family size and family wealth in Manupur, India.

Schumacher, E. F. *Small is Beautiful: Economics as if People Mattered*. New York: Harper and Row, 1973. A collection of essays that rejects larger populations, larger scale, economic growth and mechanization as indicators of human social progress.

Simon, Julian L. *The Ultimate Resource*. Princeton, NJ: Princeton University Press, 1981. Simon responds to contemporary concerns about diminishing resources, environmental degradation and overpopulation with an optimistic treatise on what he describes as "the ultimate resource," human intelligence. He supports his arguments with an abundance of empirical data to highlight human resourcefulness in addressing a variety of serious problems.

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Anderton, Douglas L., Andy B. Anderson, John Michael Oakes, and Michael R. Fraser. "Environmental Equity: The Demographics of Dumping." *Demography* 31, no. 2 (1994): 229–248.

Arnold, Fred and Liu Zhaoxiang. "Sex Preferences, Fertility, and Family Planning in China." *Population and Development Review* 12, no. 2 (1986): 221–246.

Black, Dan, Gary Gates, Seth Sanders, and Lowell Taylor. "Demographics of the Gay and Lesbian Population in the United States: Evidence from Available Systematic Data Sources." *Demography* 37, no. 2 (2000): 139–154.

Bollen, Kennet A., David Guilkey and Thomas Mroz. "Binary Outcomes and Endogenous Explanatory Variables: Tests and Solutions with an Application to the Demand for Contraceptives in Tunisia." *Demography* 32, no. 1 (1995): 111–131.

Bumpass, Larry L. "What's Happening to the Family? Interactions Between Demographic and Institutional Change." *Demography* 27, no. 4 (1990): 483–490.

Das Gupta, Monica. "Selective Discrimination Against Female Children in Rural Punjab, India." *Population and Development Review* 13, no. 1 (1987): 77–100.

Lutz, Wolfgang, Warren Sanderson, and Sergei Sherbov. "The End of World Population Growth." *Nature* 412 (2001): 543–545.

Qian, Zhenchao. "Breaking the Racial Barriers: Variations in Interracial Marriage Between 1980 and 1990." *Demography* 34, no. 2 (1997): 263–276.

ECONOMETRICS AND STATISTICS

Anselin, Luc. *Spatial Econometrics: Methods and Models*. Boston: Kluwer, 1988. A significant textbook presenting Anselin's techniques for analyzing spatial processes.

Baltagi, Badi H. *Econometric Analysis of Panel Data*, 3rd edition. Hoboken, NJ: Wiley, 2005. A standard text on panel data written by one of the architects of this form of econometrics. Baltagi addresses basic issues in estimation and hypothesis testing.

Fisher, Franklin M. *The Identification Problem in Econometrics*. New York: McGraw-Hill, 1966. Includes Fisher's analysis of the concepts of block recursiveness and near identifiablility.

Granger, Clive W. *Modeling Nonlinear Economic Relationships*. New York: Oxford University Press, 1993. Granger provides a foundational work on specification and estimating systems of equations in economics that are characterized by nonlinearities, particularly in macroeconomics.

Granger, Clive W., and Paul Newbold. *Forecasting Economic Time Series*. New York: Academic Press, 1977. Granger and Newbold outline various models useful to economists analyzing and predicting time series. Their text is considered a classic in econometrics.

Johnston, J. J. *Econometric Methods*. New York, McGraw-Hill, 1963. A standard text on econometrics for undergraduate study, highlighted by what is considered a fine survey of matrix algebra for statistics. A fourth edition, with co-author John DiNardo (published 1996) updates methods and theory.

Pagan, Adrian and Aman Ullah. *Nonparametric Econometrics*. London: Cambridge University Press, 1999. Pagan and Ullah review a great deal of literature written over a period of five decades on the evolution of nonparametric and semi-parametric statistics. Their text breaks new ground in teaching and research methods.

Pindyck, Robert S. and Daniel L. Rubinfeld. *Econometric Models and Economic Forecasts*. New York: McGraw-Hill, 1976. Includes highly regarded sections on time series and forecast models.

Theil, Henri. *Principles of Econometrics*. New York: Wiley, 1971. Theil's classic study includes an explanation of his methods in applying index number theory to consumer demand.

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Blackwell, David. "Discounted Dynamic Programming." *Annals of Mathematical Statistics* 36, no. 1 (1965): 226–235.

Durbin, J. and G. S. Watson. "Testing for Serial Correlation in Least Squares Regression." *Biometrika* 58, no. 1 (1971): 1–19.

Hausman, Jerry A. and William E. Taylor. "Panel Data and Unobservable Individual Effects." *Econometrica* 49, no. 6 (1981): 1377–1398.

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Pagan, Adrian. "Three Econometric Methodologies: A Critical Appraisal." *Journal of Economic Surveys* 1, no. 1 (1987): 3–24.

Phillips, P. C. B. "Testing for a Unit Root in Time Series Regression." *Biometrika* 75, no. 2 (1988): 335–346.

Rao, C. Radhakrishna. "The Theory of Least Squares When the Parameters are Stochastic and its Application to the Analysis of Growth Curves." *Biometrika* 52, no. 3–4 (1965): 447–458.

ECONOMIC DEVELOPMENT

Amin, Samir. *Accumulation on a World Scale: A Critique of the Theory of Underdevelopment*. 2 vols. Translated by Brian Pearce. New York: Monthly Review Press, 1974. Amin contends that accumulation of capital within advanced capitalist countries impedes development within peripheral societies. Underdevelopment must therefore be considered historically as a part of a heterogeneous world system which is shaped by capitalism, such that "development is possible for the countries of the periphery only if they break out of the world market."

Barro, Robert J. and Xavier Sala-i-Martin. *Economic Growth*. Cambridge, MA: MIT Press, 2004. Barro and Sala-i-Martin provide a comprehensive guide to both recent developments in the theory of economic growth and the empirical conclusions about the growth process that can be drawn from large, cross-country data studies.

Boserup, Ester. *The Conditions of Agricultural Growth: The Economics of Agrarian Change Under Population Pressure*. Chicago: Aldine, 1965. Boserup outlines a theory of economic development in "primitive" (non-chemical, non-mechanized) food production centering on population pressure which prompts the adoption of more intensive methods and accompanying adjustments in land use and time allocation. She argues that the long-term effect of intensification is a dramatic rise in productivity in agriculture.

Boserup, Ester. *Women's Role in Economic Development*. New York: St. Martin's Press, 1970. Boserup examines work by women in developing countries of Latin America, Africa, and Asia, commenting on the declining role of women in agriculture, income and opportunity disparities among men and women in more "modern" sectors of the economy, and gendered competition for jobs. This is a foundational text for the field of gender and economic development.

Chenery, Hollis, Sherman Robinson, and Moshe Syrquin. *Industrialization and Growth: A Comparative Study*. New York: Oxford University Press, 1986. The authors explore the relationship between industrialization and economic growth, highlighting quantitatively and empirically the conditions or policies that are most likely to foster industrial development. Special attention is paid to the impact of the industrialization process on income distribution.

Elson, Diane, ed. *Male Bias in the Development Process*. Manchester: Manchester University Press, 1991. Important collection of essays centering on male bias in development theory and practice.

Emmanuel, Arghiri. *Unequal Exchange: A Study of the Imperialism of Trade*. Translated by Brian Pearce. London: Monthly Review Press, 1972. Emmanuel seeks to explain why terms of trade for developing countries are so consistently unfavorable, contending that inequality between nations in the international capitalist economy is maintained largely because capital is mobile and labor is immobile.

Goldsmith, Raymond W. *Financial Structure and Development*. New Haven, CT: Yale University Press, 1969. Ambitious study of the relationship between financial structure and economic growth and development in thirty-five nations.

McKinnon, Ronald. *Money and Capital in Economic Development*. Washington, DC: Brookings Institution, 1973. McKinnon's study on policy for economic development centers on distortion in the domestic capital markets of underdeveloped nations. His analysis centers on the phenomenon he labels "financial repression," government policies that keep interest rates banks offer to customers too low and rates they charge to borrowers too high.

Mishan, E. J. *The Costs of Economic Growth*. New York: Praeger, 1967. By focusing on the disamenities of economic growth—for example, increased pollution and increased congestion—Mishan contends, somewhat like Schumacher, that economic growth can be accompanied by declines in human welfare.

Nelson, Richard R. and Sidney G. Winter. *An Evolutionary Theory of Economic Change*. Cambridge, MA: Harvard University Press, 1982. The authors outline "an evolutionary theory of the capabilities and behavior of business firms operating in a market environment," constructing and analyzing models that track "the response of firms and the industry to changed market conditions, economic growth, and competition though innovation." Their study is a rare and creative extension of Joseph Schumpeter's framework for analyzing the process of economic development.

Sen, Amartya K. Y. *Development As Freedom*. New York: Anchor, 1999. The Nobel Prize–winning economist argues that the absence of material want, educational opportunity, and civil and political liberties are constituent aspects of his notion of freedom. Greater freedom is, for Sen, economic development which should be the social objective rather than mere economic growth, i.e. increases in per capita income.

Shaw, Edward S. *Financial Deepening in Economic Development*. New York: Oxford University Press, 1973. Shaw argues for a policy of financial liberalization in developing countries, urging for the importance of private savings and increased reliance on financial systems to spark economic development.

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Alesina, Alberto and Dani Rodrik. "Distributive Politics and Economic Growth." *Quarterly Journal of Economics* 109, no. 2 (1994): 465–490.

Acemoglu, Daron and Jaume Ventura. "The World Income Distribution." *Quarterly Journal of Economics* 117, no. 2 (2002): 659–694.

Besley, Timothy, Stephen Coate, and Glenn Loury. "The Economics of Rotating Savings and Credit Associations." *American Economic Review* 83, no. 4 (1993): 792–810.

Birdsall, Nancy, David Ross, and Richard Sabot. "Inequality and Growth Reconsidered: Lessons from East Asia." *The World Bank Economic Review* 9, no. 3 (1995): 477–508.

Easterly, William and Ross Levine. "What Have We Learned from a Decade of Empirical Research on Growth? It's Not Factor Accumulation: Stylized Facts and Growth Models." *The World Bank Economic Review* 15, no. 2 (2001): 177–219.

Fafchamps, Marcel. "Ethnicity and Credit in African Manufacturing." *Journal of Development Economics* 61, no. 1 (2000): 205–235.

Findlay, Ronald. "The Terms of Trade and Equilibrium Growth in the World Economy." *American Economic Review* 70, no. 3 (1980): 291–299.

Harris, John R. and Michael P. Todaro. "Migration, Unemployment and Development: A Two Sector Analysis." *American Economic Review* 60, no. 1 (1970): 126–142.

Kremer, Michael. "The O-Ring Theory of Development." *Quarterly Journal of Economics* 108, no. 3 (1993): 551–575.

Krugman, Paul. "Trade, Accumulation, and Uneven Development." *Journal of Development Economics* 8, no. 2 (1981): 149–161.

Krugman, Paul. "The Myth of Asia's Miracle." *Foreign Affairs* 73, no. 6 (November/December 1994): 62–78.

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ECONOMICS

Arrow, Kenneth J. and Frank Hahn. *General Competitive Analysis*. San Francisco, CA: Holden Day, 1971. The authors provide a definitive analysis of the model of general equilibrium in economics.

Baran, Paul A. and Paul M. Sweezy. *Monopoly Capital: An Essay on the American Social Order*. New York: Monthly Review Press, 1966. In an influential work that informed the New Left critique of the U.S. economy, the authors argue that American capitalism has entered a monopoly phase resulting in persistent overproduction and attendant social ills.

Barro, Robert J. and Herschel I. Grossman. *Money, Employment and Inflation*. Cambridge, UK: Cambridge University Press, 1976. The authors present their macroeconomic model where, in the absence of instantaneous price adjustments, a condition of general non-market clearing or "general disequilibrium" prevails. This enables them to provide a potential explanation for stagflation, the condition of simultaneously rising prices and unemployment.

Bates, Timothy. *Race, Self-Employment, and Upward Mobility: An Illusive American Dream*. Baltimore: Johns Hopkins University Press, 1997. Bates compares self-employment among Asian and African Americans, arguing that such employment and steadily rising economic success is open only to those who are highly educated and/or possess significant personal wealth and resources.

Bharadwaj, Krishna. *Classical Political Economy and the Rise to Dominance of Supply and Demand Theories*. Calcutta: Orient Longman, 1978. Bharadwaj provides a provocative analysis of the demise of classical political economy (CPE) and the coming to prominence of the marginalist school. She argues that the assumptions of context of CPE were too readily mobilized on behalf of the interests of labor to meet with ongoing acceptance by the defenders of capitalism and, hence, fell into disfavor with the emergence of the more politically palatable supply and demand theories.

Card, David and Alan Krueger. M*yth and Measurement: The New Economics of the Minimum Wage*. Princeton, NJ: Princeton University Press, 1995. Card and Krueger refute the notion that the minimum wage decreases job opportunities for members of the low-wage labor force.

Davidson, Paul. *Money and the Real World*. London: Macmillan, 1972. Davidson isolates and explicates the core of Keynes's monetary theory to argue against the notion of neutrality of money and against the idea that the macroeconomy self-adjusts to full employment.

Fine, Ben. *Social Capital Versus Social Theory: Political Economy and Social Science at the Turn of Century*. New York: Routledge, 2001. Fine offers a vigorous critique of social capital, discussing the relationship between economics and other social sciences.

Fine, Ben. *The World of Consumption: the Material and Cultural Revisited*. New York: Routledge, 2002. Fine analyzes how the study of consumption has grown exponentially over the past 20 years, and examines what he terms "economic imperialism," globalization, commodities markets, and the consumer society.

Folbre, Nancy. *The Invisible Heart: Economics and Family Values*. New York: New Press, 2001. Featuring a pun on Adam Smith's "Invisible Hand" theory, Folbre's *Invisible Heart* contends that free markets and corporate individualism greatly hinder the ability of society to look upon the less fortunate with compassion. The author takes government and the private sector to task for "regressive taxation" and a lack of social responsibility, arguing for a redistribution of wealth.

Foley, Duncan and Miguel Sidrauski. *Monetary and Fiscal Policy in a Growing Economy*. New York: Macmillan, 1971. The authors provide a comprehensive presentation of their two-sector monetary model of economic growth.

Frenkel, Jacob A. and Harry G. Johnson. *The Monetary Approach to the Balance of Payments*. Toronto: University of Toronto Press, 1976. The authors bring together documents of a research theory on the balance of payments and test them using empirical methods.

Friedman, James. *Oligopoly and the Theory of Games*. Amsterdam: North-Holland Publishing Co., 1977. Friedman applies game theory systematically to the problem of oligopoly, a small number of sellers in a market who must anticipate the reactions of their rivals in making their own decisions about how to price their product.

Fudenberg, Drew and David Levine. *The Theory of Learning in Games*. Cambridge, MA: MIT Press, 1998. The authors present an alternative to traditional thinking about game theory.

Fudenberg, Drew and Jean Tirole. *Game Theory*. Cambridge, MA: MIT Press, 1991. Provides an introduction to non-cooperative game theory, which studies the behavior of agents when confronted with the knowledge that each agent's best choice is dependent upon forecasting an opponent's choice. The authors apply their findings and theories to political science as well as economics.

Galbraith, John Kenneth. *The New Industrial State*. London: H. Hamilton, 1967. Galbraith advances his notion that the United States is no longer a free-enterprise economy or society, and that large corporations control a structured state that creates demand that was previously non-existent through advertising.

Harcourt, Geoffrey C. *Some Cambridge Controversies in the Theory of Capital*. Cambridge, UK: Cambridge University Press, 1972. An entertaining explication of the sometimes heated exchanges, originally centered on disputes over the theory of capital, that took place between faculty in the two Cambridges (University of Cambridge in England and Massachusetts Institute of Technology in the U.S.). At the base were two competing and somewhat incompatible views of the economic system. While clearly allied with the Cambridge, England side of the debate, Harcourt provides an accurate description of the positions taken by both sets of disputants and the issues at stake.

Helpman, Elhanan and Paul Krugman. *Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition, and the International Economy*. Cambridge, MA: MIT Press, 1987. Helpman and Krugman offer a theory of trade in market conditions that are less-than-perfect. The authors explore trade patterns, welfare, and the role of multinational corporations.

Kemp, Murray C. *The Pure Theory of International Trade*. Englewood Cliff, NJ: Prentice-Hall, 1964. Kemp's classic study analyzes numerous ramifications of non-monetary models of trade between nations, including several original results of his own.

Leijonhufvud, Axel. *On Keynesian Economics and the Economics of Keynes: A Study in Monetary Theory*. New York: Oxford University Press, 1968. Constructing an interpretation of Keynes's General Theory that may be legitimately called "Austro-Keynesianism," Leijonhufvud attributes to an intractable coordination problem the theoretical onus of the failure of macroeconomy to self-adjust to full-employment.

Lewis, W. Arthur. *Growth and Fluctuations 1870–1913*. Boston: Allen & Unwin, 1978. Lewis, the Nobel Prize winner in economics in 1979, presents evidence from the late 19th and early 20th centuries that growth in countries exporting primary products was dependent on their capacity to trade with countries that were centers of manufacturing activity.

Lewis, W. Arthur. *The Evolution of the International Economic Order*. Princeton, NJ: Princeton University Press, 1978. Lewis's Janeway lectures are the vehicle for his argument that the terms of trade operate to the disadvantage of "tropical" countries because of their comparatively low levels of productivity in agriculture.

Mills, Edwin. *Urban Economics*. Glenview, IL: Scott, Foresman, 1972. Mills utilizes economic theory to analyze urban difficulties and issues. An economic history of urban areas in the U.S. is offered, along with basic theoretical models that amplify the histories. Mills also discusses urban policy in the housing market, transportation, and within local government.

Newell, Allen and Herbert A. Simon. *Human Problem Solving*. Englewood Cliffs, NJ: Prentice-Hall, 1972. By examining the answers reached to problems with independently known optimal solutions by human subjects in laboratory settings, Newell and Simon construct a theory of actual human problem solving. The work explored here provides the foundation for Nobel Prize–winning economist Simon's further development of the notion of "satisficing" behavior and his investigations into the possible resemblance between human intelligence and artificial intelligence.

Olson, Mancur. *The Logic of Collective Action: Public Good and the Theory of Groups*. Cambridge, MA: Harvard University Press, 1965. Olson unveils his original theory of group and organizational behavior that can be applied across many social sciences. Olson contends that most organizations produce an output that is analogous to a public good and is available to all participants in the organization or the society, regardless of how much individual effort they have put into its making, the "free rider" problem.

Robinson, Joan. *Economic Philosophy*. Chicago: Aldine Press, 1962. Robinson reviews and analyzes the philosophical and ideological influences on economic theories and concepts, including in-depth critiques of value theory and utility theory.

Rosenberg, Nathan. *Inside the Black Box: Technology and Economics*. Cambridge University Press, 1983. Rosenberg attempts to unpackage precisely what economists mean by the concept of technology, its relationship to theories of economic growth and development, and the difficulties involved in assessing the eventual performance of new technological processes and their impact on productivity.

Schor, Juliet B. *The Overworked American: The Unexpected Decline in Leisure*. New York: Basic Books, 1993. Schor details data that show Americans spend increasingly more time at work and less time with families or at leisure. Schor blames both the pursuit of profits among corporations and the pursuit of higher pay and benefits among workers. Schor offers solutions in the form of a more minimal approach by workers and business operators.

Sen, Amartya K. Y. *Collective Choice and Social Welfare*. San Francisco: Holden-Day, 1970. A monograph discussing the

theory of social choice, which the author helped devise with Kenneth Arrow. Sen's work focuses upon the inequalities within individual rights and the availability of information relating to individual conditions. This text influenced researchers to look at basic welfare, at times apart from traditional economic models of analysis.

Sen, Amartya K. Y. *Inequality Reexamined*. Cambridge, MA: Harvard University Press, 1995. Sen discusses the importance of governments paying attention to their poorest citizens. Sen argues that governments have the capability to not only prolong the lives of the poor but can extend significant opportunities for their betterment. For such writing and other texts like it, Sen won the Nobel Prize for economics in 1998.

Sraffa, Piero. *Production of Commodities By Means of Commodities: Prelude to a Critique of Economic Theory*. Cambridge, UK: Cambridge University Press, 1960. This slim volume represents the culmination of Sraffa's attempt to develop a model that characterizes "general equilibrium" for an economy with the attributes of the system of classical political economy. This contrasts sharply with the general equilibrium features of a neoclassical economy of the type examined by Arrow and Debreu or Arrow and Hahn. Central to Sraffa's framework is the condition of a uniform rate of profit in all activities. Sraffa is the key figure in the resuscitation of classical political economy in theoretical economics and in the emergence of what has been labeled Neo-Ricardian economics.

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EDUCATION

Anderson, James. *Education of Blacks In the South, 1860–1935*. Chapel Hill: University of North Carolina Press, 1988. Anderson reviews the history of southern black education from Reconstruction to the Great Depression, shedding new light on, among other issues, the commitment of blacks to education, the importance of the Tuskegee experiment, and the role of philanthropies.

Bowen, William G. and Derek S. Bok. *The Shape of the River: Long-Term Consequences of Considering Race in College and University Admissions*. Princeton: Princeton University Press, 1998. A foundational work on the impact of affirmative action in college admissions. Bowen and Bok provide a detailed analysis that shows the benefits of the policy in terms of opportunities provided to large numbers of African Americans, and in terms of later benefits to society. The authors found that black students who completed highly selective colleges and universities are more likely than their white peers to attend graduate or professional school and to select careers where they can make direct contributions to their communities.

Bowles, Samuel and Herbert Gintis. *Schooling in Capitalist America: Educational Reform and the Contradiction of Economic Life*. New York: Basic Books, 1976. These frequent collaborators argue that the American system of formal education is designed to prepare young people to take their "appropriate" place in a hierarchical workplace and, hence, reinforces and perpetuates preexisting inequalities.

Coleman, James S. *The Adolescent Society: The Social Life of the Teenager and its Impact on Education*. Glencoe, IL: Free Press, 1961. Analysis of the culture and social systems of American high schools. Coleman's highly regarded study relies on the results of questionnaire surveys administered to students in ten high schools representative of varied social and economic strata of urban/suburban/rural Illinois in the late 1950s. It exposes adolescent isolation and recognizes that teens expect more from interactions with their peers than from relations with adults. Points to the need for educators to take into account teenagers' view of the importance of positive social status among their peers in the design and objectives of secondary-school education.

Coard, Bernard. *How the West Indian Child Is Made Educationally Subnormal in the British School System: The Scandal of the Black Child in Schools in Britain*. London: New Beacon for the Caribbean Education and Community Workers' Association, 1971. Long before his long-term imprisonment in Grenada in the aftermath of the collapse of the New Jewel Movement and the U.S. invasion, Bernard Coard employed interviews and statistical data to prepare a major study of discrimination against children of Caribbean origin in British schools in the 1960s. Coard found that children of West Indian origin were overrepresented systematically in slow learner and mentally handicapped classes.

Delpit, Lisa. *Other People's Children: Cultural Conflict in the Classroom*. New York: New Press, 1995. Nine essays focusing on learning issues faced by African-American students. Delpit challenges the assumption that good teaching looks the same in every context, explaining that poor cross-cultural communication has repeatedly caused teachers to mislabel the learning abilities and general attitudes of their students. Examples of different approaches are found in a study of Papua New Guinea village elementary schools; of cultural conflict in Alaska schools; and in a discussion of ways to reconcile curricula with local needs.

Fiske, Edward B. and Helen Ladd. *Elusive Equity: Education Reform in Post-Apartheid South Africa*. Washington, DC: Brookings Institution Press, 2004. Describes South Africa's "post-apartheid strategies for transforming its education system in the context of the nation's history," and evaluates

that country's success in "promoting a more racially equitable system." The study focuses on school governance, funding, and curriculum for the period 1994–2002.

Freire, Paolo. *Pedagogy of the Oppressed*. New York: Continuum, 1970. Freire proposes that oppressed peoples must be encouraged and taught to think more critically and to be persuaded to take action against their oppressors. He criticizes much of Western society (especially its system of public education) and capitalism, calling for a communal approach to liberation.

Jencks, Christopher, et. al. *Inequality: A Reassessment of the Effect of Family and Schooling in America*. New York: Basic Books, 1972. The analysis of "the dynamics of adult inequality" is at the core of this work and has to be seen in the historical context of the 1960s War on Poverty and its programs designed to guarantee equality of opportunity. For Jencks, the origins of inequality pervade America's economic, social, political, and cultural institutions; thus, reforming the educational system alone would not fix the problem. The authors demonstrate that there is no evidence that larger school budgets or racial integration reduce learning inequalities as they are tested and measured by standard tests of verbal ability, reading comprehension, and math skills. The failure of such programs, Jencks concluded, was due to an "inadequate conceptualization of equality," not lack of resources.

Jencks, Christopher and Meredith Phillips, editors. *The Black-White Test Score Gap*. Washington, DC: Brookings Institution Press, 1998. The Jencks and Phillips edited volume includes a set of 15 papers commissioned in preparation of a series of workshops convened to assess "general knowledge of cognitive skills and schooling." The studies revealed that test score gaps between blacks and whites contribute both to subsequent racial disparities in educational attainment and in income. The papers seek to explore comprehensively the reasons for the racial gap in test score performance and to arrive at solutions to close the gap.

Kane, Thomas J. *The Price of Admission: Rethinking How Americans Pay for College*. Washington, DC: Brookings Institution Press, 1999. Kane employs empirical data and analysis to review federal education policy designed to make college more accessible to students, arguing that removing certain barriers within the admissions process of institutions may have a more significant impact than merely increasing student financial aid.

Lewis, Amanda. *Race in the Schoolyard: Negotiating the Color Line in Classrooms and Communities*. New Brunswick, NJ: Rutgers University Press, 2003. Lewis examines how race is perceived among students, teachers, and parents in elementary schools. Lewis aims to show how racial classification in even the most seemingly mundane aspects of schooling can have a profound effect on students, and argues that cultural differences between black and white students are not seen neutrally.

Margo, Robert. *Race and Schooling in the South, 1880–1950: An Economic History*. Chicago: University of Chicago Press, 1990. Based on census data and school district records, the work describes and analyzes in eight chapters the experience of black men in the American economy. The author looks at a variety of economic factors, pointing to connections between investments in education and taxation, racial discrimination, and professional mobility to shed light on the costs of segregation.

Oakes, Jeannie. *Keeping Track: How Schools Structure Inequality*. New Haven, CT: Yale University Press, 2005. Described as one of the most influential works on American education, Oakes's study demonstrates that tracking (orienting and grouping students based on presumed ability) is a reflection of underlying social, ethnic/racial, and gender inequalities and perpetuates preexisiting disparities.

Silberman, Charles S. *Crisis in the Classroom: The Remaking of American Education*. New York: Vintage, 1971. In the author's own words, this book is about "the crisis in the classroom—the public school classroom, the college classroom, the national 'classroom' created by the mass media and by the operation of the American political system—as both a reflection of and a contributor to the larger crisis of American society."

Tatum, Beverly Daniel. *Why Are All the Black Kids Sitting Together in the Cafeteria?: A Psychologist Explains the Development of Racial Identity*. New York: Basic Books, 1997. Tatum explains why and how black students need to come together in an environment in which racial stereotypes are not necessarily overt. She implores white students to ignore the privilege of their skin color and work to combat racial injustice and intolerance.

Valencia, Richard R. (ed.). *The Evolution of Deficit Thinking: Educational Thought and Practice*. London: Falmer Press, 1997. Defines "deficit thinking" (blaming poor and minority students and their families for the students' school issues/failures while leaving unquestioned the role of educational institutions) and its consequences on policies and education practices.

Williams, Heather. *Self-Taught: African American Education in Slavery and Freedom*. Chapel Hill: University of North Carolina Press, 2005. Williams writes a comprehensive history of education among African Americans in the United States. She discusses the idea of "agency" among educated blacks, who partnered with others to advance the educational opportunities of their race in America.

Wolf, Alison. *Does Education Matter? Myths About Education and Economic Growth*. London: Penguin, 2002. Wolf presents an iconoclastic study in which she calls into question beliefs widely held by economists and other social scientists that increased educational attainment in a society raises the rate of economic growth. She explicitly addresses the paradoxical condition that increased education for individuals appears to increase their personal income prospects but increased education across a population does not seem to be associated with higher average per capita income.

ARTICLES

Behrman, Jere and Nancy Birdsall. "The Quality of Schooling: Quantity Alone is Misleading." *American Economic Review* 73, no. 5 (December 1983): 928–946.

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GEOGRAPHY

Feldman, Maryann P. *The Geography of Innovation*. Boston: Kluwer Academic, 1994. Feldman analyzes and theorizes about the tendency of technological innovations to occur in clusters both temporally and spatially.

Harvey, David. *Explanation in Geography*. London: Edward Arnold, 1969. Classic text in which Harvey explains the methodology and philosophy of geographical studies.

Harvey, David. *Social Justice and the City*. Baltimore, MD: Johns Hopkins University Press, 1973. Harvey argues that the field of geography must cease to remain neutral to urban poverty and other societal ills, contending that capitalism destroys living space to fuel its own growth. The book is an iconic example of the then-emerging field of "Marxist geography."

Massey, Doreen. *Spatial Divisions of Labor: Social Structures and the Geography of Production*. London: Macmillan, 1984. Massey argues that social inequality arises from the uneven nature of the capitalist system, which creates gross injustices and divisions between the affluent and the poor.

Rose, Gillian. *Feminism and Geography: The Limits of Geographical Knowledge*. Minneapolis, MN: University of Minnesota Press, 1993. Radical work arguing that capitalism represents the male species equating women with property. Rose also discusses her observations regarding bodies located in spaces and, subsequently, spaces mapped onto bodies.

ARTICLES

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Krugman, Paul. "Increasing Returns and Economic Geography." *Journal of Political Economy* 99, no. 3 (1991): 483–499.

HISTORY AND HISTORIOGRAPHY

Allen, Theodore W. *The Invention of the White Race: Racial Oppression and Social Control*. London: Verso, 1994. Compelling study of immigration, race, class, and privilege. Allen published a second volume in 1997, subtitled: "The Origin of Racial Oppression in Anglo-America."

Anderson, Perry. *Passages From Antiquity to Feudalism*. London: New Left Books, 1974. One of the foremost contemporary Marxist theorists, Anderson has been acknowledged as an authority on leftist politics and history. He charts the socio-political evolution of Europe and its economies from antiquity through the feudal system in this study.

Anderson, Perry. *Lineages of the Absolutist State*. London: New Left Books, 1974. Anderson continues the analysis developed in *Passages From Antiquity to Feudalism*, focusing on historical materialism as he traces the rise of the absolutist state.

Cantor, Norman F. *In the Wake of the Plague: The Black Death and the World It Made*. New York: Free Press, 2001. Cantor chronicles the advent of the plague with a biomedical survey, speculation as to its origins, and a record of the devastation it caused, including a mortality rate of 40 percent of the population. The author discusses fears of a Jewish conspiracy, the political effects on lineage and genealogy, and the possibility that a variety of anthrax was partly responsible for the large number of deaths.

Caro, Robert A. *The Power Brokers: Robert Moses and the Fall of New York*. New York: Knopf, 1974. Chronicles the career of New York's longtime public works commissioner Robert Moses. Caro details the building projects Moses planned, organized, and completed during his career. He also examines the enormous power that public authority commissions—which are funded by their own taxes and managed by unelected bureaucrats—have in the nation's big cities.

Carrington, Selwyn H. H. *The Sugar Industry and the Abolition of the Slave Trade, 1775–1810*. Gainesville: University of Florida Press, 2002. Drawing from a wealth of primary source material and statistical data, Carrington presents a detailed examination of the political economy of sugar production in the British West Indies. His analysis of an economic system in decline has important implications for

the debate about factors leading to Britain's abolition of the slave trade in 1807.

Constable, Pamela and Arturo Valenzuela. *A Nation of Enemies: Chile Under Pinochet.* New York: Norton, 1991. A social and political portrait of Chile from the middle of the 1960s to the early 1990s, examining the origins and results of the dictatorship under Pinochet that led to deep divisions in Chilean society and the "nation of enemies" alluded to in title.

Curtin, Philip D. *The Atlantic Slave Trade: A Census.* Madison: University of Wisconsin Press, 1969. Curtin's groundbreaking study assesses and analyzes the numerical dimensions of the Atlantic slave trade. The author surveyed existing literature, slave import figures, shipping records, and other primary documents to provide compelling new estimates of the number and distribution of slaves transported during a period of more than four centuries beginning in the 1400s.

Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Societies.* New York: Norton, 1997. Diamond's study, which won him the 1998 Pulitzer Prize in nonfiction, offers a thought-provoking theory of how the peoples of Europe and Asia were able to conquer those of the Americas, Africa, and Australia. His thesis is not that Europeans and Asians are genetically or otherwise superior but that immunological history (an "unequal germ exchange") proved decisive in shaping the international disparities in economic development that are present in the contemporary world.

Diop, Cheikh Anta. *The African Origin of Civilization: Myth or Reality?* Edited and translated by Mercer Cook. New York: Lawrence Hill, 1974. Classic study in which Diop presents historical, archaeological, and anthropological evidence to show that the ancient Egyptians were phenotypically black, and that the earliest forms of civilization can be traced to sub-Saharan Africa.

Diop, Cheikh Anta. *Precolonial Black Africa.* Translated by Harold Salemson. New York: Lawrence Hill Books, 1987. Diop offers a comparative analysis of the political and social systems of Europe and black Africa, tracing their development from antiquity to the formation of modern states.

Dirks, Nicholas B. *Castes of Mind: Colonialism and the Making of Modern India.* Princeton: Princeton University Press, 2001. Dirks maintains that the long-term British colonial rule of India required a deliberate and calculated manipulation of the Indian caste system, noting that Britain used the caste system as a means of organizing and controlling the various social groups and hierarchical layers of Indian society.

Fogel, Robert and Stanley Engerman. *Time on the Cross: The Economics of American Negro Slavery.* 2 vols. Boston: Little, Brown, 1974. Fogel (winner of the 1993 Nobel Prize in Economics) and Engerman contend that slavery was a robust economic institution prior to the Civil War and that the slaves themselves—on average—fared slightly better than free white farm laborers. The authors were careful to make clear that they were not passing a moral judgment on slavery, but rather analyzing the institution from an economic viewpoint.

Foucault, Michel. *Madness and Civilization: A History of Insanity in the Age of Reason.* Translated by Richard Howard. New York: Pantheon, 1965. In a study considered by many to be his masterpiece, Foucault traces the evolution of the human concept of madness from the middle ages through the eighteenth century.

Goldin, Claudia. *Understanding the Gender Gap: An Economic History of American Women.* New York: Oxford University Press, 1990. Seminal study of the economic history of working women in the United States.

Higman, Barry W. *Slave Populations of the British Caribbean 1807–1834.* Baltimore, MD: Johns Hopkins University Press, 1984. Important demographic study of slavery in the English-speaking Caribbean, examining economic, social, and environmental factors to establish, as Higman declared, "what was *typical* of the slave population after 1807 and also to establish the limits of the *possible*."

Hochschild, Adam. *King Leopold's Ghost: A Story of Greed, Terror and Heroism in Colonial Africa.* Boston: Houghton Mifflin, 1998. Often compared to Hitler and Stalin, King Leopold of Belgium exploited the Congo for personal gain in the rubber industry. Hochschild recounts Leopold's conquest of the Congo in 1885, noting that the barbaric war, and the violence with which Leopold ruled his colony, drew the outraged attention of the world.

Ignatiev, Noel. *How the Irish Became White.* New York: Routledge, 1995. A study of the change in status of Irish immigrants to the United States in the early 1800s. While the Irish were initially discriminated against, Ignatiev asserts that they became "white" in order to improve their position economically and politically in a competitive society. The Irish ousted blacks, sometimes using violence, from shared neighborhoods and from widely held lower-class jobs.

Inikori, Joseph. *Africans and the Industrial Revolution in England: A Study in International Trade and Economic Development.* NY: Cambridge University Press, 2002. Details the expansion of Atlantic commerce and its impact on the emergence of the industrial revolution in England, noting the pivotal role of Africans (especially enslaved Africans) in this history.

Jalal, Ayesha. *The Sole Spokesman: Jinnah, the Muslim League, and the Demand for Pakistan.* Cambridge, UK: Cambridge University Press, 1985. An important and provocative study of the factors leading to the creation of Pakistan in 1947, including the role of the leader of the Muslim League in India and first Prime Minister of Pakistan, Mohammed Ali Jinnah.

Lewis, David Levering. *When Harlem Was in Vogue: The Politics of the Arts in the Twenties and Thirties.* New York: Knopf, 1981. Lewis analyzes the phenomenon known as the Harlem Renaissance, detailing the social, cultural, and historical influences that shaped the artistic achievements for which this period and place have been celebrated. He seeks to reexamine the Renaissance from the perspective of a variety of important participants: not only the black authors, artists, and musicians whose works were "in vogue," as the title suggests, but also whites who were writers, artists, wealthy patrons, or otherwise influential in race matters.

Lewis, David Levering. *W. E. B. Du Bois: Biography of a Race, 1868–1919.* New York: Holt, 1994. Lewis won the Pulitzer Prize for this first part of a two–volume biography. In 2000, he completed the companion volume, *W. E. B. Du Bois: The Fight for Equality and the American Century, 1919–1963.*

Lipton, Merle. *Capitalism and Apartheid: South Africa 1910–1986*. Aldershot, U.K.: Wildwood House, 1986. Lipton explores the evolution of the relationship between economics and politics in South Africa, citing a growing divergence in the interests of capitalists and the policies of the apartheid state.

McDougall, W. A. *The Heavens and the Earth: A Political History of the Space Age*. New York: Basic Books, 1985. Exploring the space race from the end of World War II through the Apollo 11 moon landing in 1969, the author comments on the implications of this drive into space for public policy at various levels.

McGuire, James W. *Peronism Without Peron: Unions, Parties, and Democracy in Argentina*. Stanford: Stanford University Press, 1997. Substantial analysis of Peronism and democratic instability in twentieth-century Argentina.

Mintz, Sidney W. *Sweetness and Power: The Place of Sugar in Modern History*. New York: Viking Penguin, 1985. Arguing that sugar was both a part of, and an agent in, the rapid modernization of European life, Mintz speculates about the political, cultural, and social significance of sugar consumption. He reveals that sugar was used primarily by the wealthy as a spice, medicine, and decoration as late as the sixteenth century, and only later assumed its modern role as a sweetener and preservative.

Nove, Alec. *Economic History of the USSR*. London: Allen Lane, 1969. Nove presents an economic history of the Soviet Union, beginning with the state of the Russian economy in 1913 and tracing his analysis through Krushchev's fall.

Ortiz, Paul. *Emancipation Betrayed: The Hidden History of Black Organizing and White Violence in Florida From Reconstruction to the Bloody Election of 1920*. Berkeley: University of California Press, 2005. Ortiz provides the first major study of white political violence in the state of Florida in the early part of the 20th century as the central mechanism to disenfranchise the state's black electorate.

Parsa, Misagh. *Social Origins of the Iranian Revolution*. New Brunswick, NJ: Rutgers University Press, 1989. Sociologist Parsa analyzes events in Iran during the revolutionary period of 1977–1979, focusing on the major participants while seeking to construct what he calls "a broad theory of revolution and political conflict."

Post, Ken. *Arise Ye Starvelings: The Jamaican Labour Rebellion of 1938 and Its Aftermath*. The Hague, London: Institute of Social Studies Series, 1978. Post investigates the actions taken in 1938 by workers and peasants involved in the labor rebellion in Jamaica. The author declares that his aim is "to develop a Marxist concept of political practice by showing its necessary relations to material and mental production."

Prunier, Gerard. *The Rwanda Crisis: History of a Genocide*. New York: Columbia University Press, 1995. Prunier briefly traces the history of Rwanda from pre-colonial times, through German and Belgian colonial regimes, independence in the 1950s, to the political coup of 1973 and refugee crisis that followed, focusing his analysis and exploration on events leading to the tragic genocide of the 1990s.

Rodney, Walter. *How Europe Underdeveloped Africa*. London: Bogle-L'Ouverture, 1972. Rodney identifies European colonialism and its present-day repercussions as the fundamental cause of African economic underdevelopment.

Sheridan, Richard B. *Doctors and Slaves: A Medical and Demographic History of Slavery in the British West Indies, 1680–1834*. Cambridge: Cambridge University Press, 1985. Sheridan examines slavery in the British West Indies, analyzing the sharp differences between the slave workforce in the American south, which increased in number by natural means, and that in the Caribbean, where slaves could not reproduce or endure long enough to maintain a steady population.

Thompson, E. P. *The Making of the English Working Class*. New York: Pantheon Books, 1963. Highly regarded social history tracing the emergence of the modern industrial working class in England.

Wiencek, Henry. *An Imperfect God: George Washington, His Slaves, and the Creation of America*. New York: Farrar, Straus and Giroux, 2003. Wiencek explores the complex personality of the first president of the United States with a special focus on the evolution of Washington's response to the moral dilemma presented by slavery.

Williams, Eric. *From Columbus to Castro: The History of the Caribbean, 1492–1969*. London: Deutsch, 1970. Important study by historian Williams (first Prime Minister of Trinidad and Tobago), focusing on the history of sugar and its production in the Caribbean. Williams begins with Columbus, who brought sugarcane from the Canary Islands to the Caribbean on his second voyage to the New World, and ends his analysis with Fidel Castro and his rule of Cuba.

ARTICLES

Cuenca Esteban, Javier. "The Rising Share of British Industrial Exports in Industrial Output, 1700–1851." *Journal of Economic History* 57, no. 4 (1997): 879–906.

Cutler, David M., Edward L. Glaesar, and Jacob L.Vigdor. "The Rise and Decline of the American Ghetto." *Journal of Political Economy* 107, no. 3 (June 1999): 455–506.

Suzuki, Masao. "Success Story? Japanese Immigrant Economic Achievement and Return Migration, 1920–1930." *Journal of Economic History* 55, no. 4 (1995): 889–901.

Wynter, Sylvia. "Seville and the Conversion Experience of Bartolome de Las Casas." *Jamaica Journal* 17, no. 2 (1990): 25–32.

INTERNATIONAL RELATIONS, ORGANIZATION, AND LAW

Allison, Graham. *Essence of Decision: Explaining the Cuban Missile Crisis*. New York: Little, Brown, 1971. Allison's landmark work examines the 1962 nuclear weapons crisis between the United States and Soviet Union by applying the events of the situation to three decision-making models in order to help explain group behavior in organizations. This work introduced the term "groupthink" to the academic and mainstream lexicon and is required reading in many areas of study.

Anaya, S. James. *Indigenous Peoples in International Law*. New York: Oxford University Press, 1996. A highly regarded overview of the historical, contemporary and emerging international law related to indigenous peoples.

Barnet, Richard J. *Intervention and Revolution: The United States in the Third World*. New York: World Publishing Company,

1968. Barnet traces the history of United States covert intervention in foreign revolutions in the 20th century. In addition to discussing events ranging from Franklin D. Roosevelt's blocking of a proposed constitutional amendment requiring a national referendum on sending troops overseas to the Truman Doctrine and the war in Vietnam, Barnet gives detailed attention to the role taken by the U.S. Central Intelligence Agency in foreign political developments.

Birnie, Patricia and Alan E. Boyle. *International Law and the Environment*. New York: Oxford University Press, 1992. Authoritative study of the primary principles of international law concerning protection of the environment.

Bill, James A. *The Eagle and the Lion: The Tragedy of American-Iranian Relations*. New Haven: Yale University Press, 1988. Bill analyzes the slow erosion of diplomatic, political, and economic ties between the United States and Iran, beginning in 1835. His detailed study explains the complicated set of circumstances that yielded American hostage crises in Iran and Lebanon in the 1970s and 1980s, and the Iran-*contra* affair. Bill concludes that the strained relationship is a catastrophic foreign policy failure.

Buzan, Barry. *People, States and Fear: The National Security Problem in International Relations.* Chapel Hill: University of North Carolina Press, 1983. Buzan argues for a rethinking of political and military relations, so that security is seen as a quality of interdependence rather than as an attribute of individual nations.

Eatwell, John and Lance Taylor. *Global Finance at Risk: The Case for International Regulation.* New York: The New Press, 2000. Economists Eatwell and Taylor recap the reasons for and outcomes of a series of international economic crises dating to 1970, building a case for the establishment of a powerful regulatory agency called the World Financial Authority. The proposed agency would oversee international investment, implement policy, and act as an enforcement mechanism.

Galanter, Marc. *Competing Equalities: Law and the Backward Classes in India*. Berkeley: University of California Press, 1984. Galanter provides an extensive, empirically based study of India's affirmative action programs.

Gilpin, Robert E. *The Political Economy of International Relations*. Princeton, NJ: Princeton University Press, 1987. Gilpin examines the influence of politics on the international economy, advocating the need for a strong central power like the United States in fostering international economic cooperation.

Huntington, Samuel. *The Clash of Civilizations and Remaking of World Order*. New York: Simon & Schuster, 1996. Huntington argues that the world need not be viewed as a collection of states, but as a set of "zones" of civilizations that are destined for conflict based on clashes of identity. Huntington posits that western civilization should most worry about Islam and its theories of cultural superiority combined with the inferiority of their collective power on the world stage.

Mamdani, Mahmood. *Good Muslim, Bad Muslim: America, the Cold War, and the Roots of Terror.* New York: Pantheon, 2004. Mamdani discusses the way many Americans view Muslims, noting that Muslims who support the West are labeled secular and "good," while Muslims who disagree with Western policies are pejoratively considered fundamentalist and "bad." The tenets of terrorist organizations such as al-Qaeda, writes Mamdani, are based in politics and not religion, a critical difference ignored by the West. More importantly, Mamdani insists that Americans must understand the role of the U.S. government in creating some of these radical movements not only in the Middle East, but also in Africa and Asia.

Rueschemeyer, Dietrich, Evelyne Huber Stephens, and John D. Stephens. *Capitalist Development and Democracy*. Chicago: University of Chicago Press, 1992. Focusing on the economies and societies of advanced industrial countries and nations in Latin America and the Caribbean, the authors contend that capitalist development is associated with democracy because it transforms class structure, empowering the working and middle-classes and making it more difficult for elites to exclude them.

Roorda, Eric Paul. *The Dictator Next Door: The Good Neighbor Policy and the Trujillo Regime in the Dominican Republic*. Durham, NC: Duke University Press, 1998. Reviewing the optimistic 1930s American foreign policy of encouraging emerging nations in the Western Hemisphere to adopt the principles of self-government, Roorda explains and analyzes the rise of the brutal dictator Rafael Trujillo and its influence on other Latin American strongmen. Roorda's work concludes by examining the change in American policy in the 1950s and 1960s and Trujillo's ultimate demise.

ARTICLES

Barnett, Michael N. and Martha Finnemore. "The Politics, Power, and Pathologies of International Organization." *International Organization* 53, no. 4 (1999): 699–732.

Chan, Steve. "In Search of Democratic Peace: Problems and Promise." *Mershon International Studies Review* 41, no. 1 (1997): 59–91.

Cox, Robert W. "Ideologies and the New International Economic Order: Reflections on Some Recent Literature." *International Organization* 33, no. 2 (Spring 1979): 257–302.

Conway, Patrick. "IMF Lending Programs: Participation and Impact." *Journal of Development Economics* 45, no. 2 (1994): 365–391.

Haas, Peter. "Introduction: Epistemic Communities and International Policy Coordination." *International Organization* 46, no. 1 (1992): 1–35.

Krugman, Paul. "Competitiveness: A Dangerous Obsession." *Foreign Affairs* 73, no. 2 (July/August 1994).

Kuran, Timur. "Now Out of Never: The Element of Surprise in the East European Revolution of 1989." *World Politics* 44, no. 1 (1991): 7–48.

Nagar, Richa, Victoria Lawson, Linda McDowell, and Susan Hanson. "Locating Globalization: Feminist (Re)readings of the Subjects and Spaces of Globalization." *Economic Geography* 78, no. 3 (2002): 257–284.

LINGUISTICS

Chomsky, Noam. *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press, 1965. The noted linguist first reveals his controversial theories of language in this study, introducing such concepts as Deep Structure and Universal Grammar.

Chomsky also attempts to clarify the distinction between grammar and meaning.

Chomsky, Noam *Knowledge of Language: Its Nature, Origin, and Use*. New York: Praeger, 1985. Chomsky considers two major conceptual shifts in the study of language: the beginning of the modern study of generative grammar, and a theoretical process utilized to study contemporary perspective on traditional questions. Chomsky also posits that the study of language can offer universal insights to the workings of the human mind.

Derrida, Jacques. *Of Grammatology*. Translated by Gayatri Chakravorty Spivak. Baltimore, MD: Johns Hopkins University Press, 1976. Spivak translates Derrida's revolutionary theories about structuralism, psychoanalysis, and deconstruction. Derrida's ideas led students of the humanities, literature, and philosophy to reconsider traditional views of their areas of study.

Foucault, Michel. *Archaeology of Knowledge & the Discourse on Language*. Translated by Rupert Swyer. London: Tavistock, 1972. Challenging study of the connections between knowledge, language, and action, providing insight into Foucault's development of theories posited in previous books. An appendix reprints "The Discourse on Language," Foucault's investigation into the ways in which society manipulates language for purposes of politics and power.

Heidegger, Martin. *On the Way to Language*. Translated by Peter D. Hertz. New York: Harper and Row, 1971. Heidegger elaborates on his phrase "Language is the House of Being" by presenting a dialogue with a Japanese acquaintance followed by four lectures concentrating upon Heidegger's main themes of the importance and significance of linguistics in understanding the human mind.

Heidegger, Martin. *Poetry, Language, Thought*. Trans. Albert Hofstadter. New York: Harper & Row, 1971. This collection of seven essays by Heidegger examines his interest in poems, poetry, and poets (as well as painters and prose authors) not as an artistic or cultural critic, but from his particular point of view known as "ontological knowledge." Heidegger's aim is to focus on art as a guide in the "investigation of Being."

METHODOLOGY

Blaug, Marc. *The Methodology of Economics: Or, How Economists Explain*. Cambridge, UK: Cambridge University Press, 1980. Blaug's classic work on the nature of economic explanation and interpretation contains a review of methodology literature and an examination of the philosophy of science, followed by case studies of economic problems and questions. The author concludes with thoughts on the difficulties and opportunities presented by modern economics.

Caldwell, Bruce. *Beyond Positivism: Economic Methodology in the Twentieth Century*. London: Routledge, 1994. Caldwell provides an overview of philosophical theories and approaches within economics that is readily understood by non-specialists. Caldwell concludes by arguing for a new approach in studying economic philosophy called methodological pluralism.

Friedman, Milton. *Essays in Positive Economics*. Chicago: University of Chicago Press, 1966. The Nobel Prize–winning economist discusses various topics such as methodology of positive economics, price theory and monetary economics in this collection of essays. Friedman also touches on the relationship between welfare and taxes, exchange rates, and inflation.

Gleick, James. *Chaos: Making a New Science*. New York: Penguin, 1988. A former science writer for the *New York Times*, Gleick here engagingly writes about the complicated and often obtuse subject of chaos theory, the study of seemingly random patterns of science that make up natural phenomena. Gleick profiles dozens of scientists dedicated to the study of chaos theory, highlighting their ideas and research.

PHILOSOPHY OF SCIENCE

Althusser, Louis and Etienne Balibar. *Reading Capital*. Translated by Ben Brewster. London: New Left Books, 1970. The prominent French philosopher, Louis Althusser, offers a structuralist reading of Marx that rejects historicist and humanist readings of Capital.

Derrida, Jacques. *Specters of Marx: The State of the Debt, The Work of Mourning & the New International*. Translated by Peggy Kamuf. New York: Routledge, 1994. Derrida writes of the impact of the fall of the Berlin Wall on Marxism and economic theory's future in two expanded lectures. Derrida argues that phrases such as "new world order" and "the end of history" (which categorized the fall of Communism) are merely old debates attempting to extinguish the "spirit" of Marxism.

Foucault, Michel. *The Order of Things: An Archaeology of the Human Sciences*. New York: Pantheon, 1971. Foucault introduces his archaeological method, presenting the idea that "in any given culture and at any given moment there is only one *episteme* (a system of instinctual knowledge) that defines the conditions of possibility of all knowledge." Foucault then attempted "to dig up and display the 'archaeological' form or forms which would be common to all mental activity," tracing these forms throughout historic cultures.

Heidegger, Martin. *Being and Time*. Translated by John Macquarrie and Edward Robinson. London: Blackwell, 1962. Heidegger felt that it was man's primary duty to define the word "being." He was driven to "pose anew the question" in this study by his belief that man—in the classical Greek period—had hastily applied the assumption that truth was whatever was intellectually perceived as correct. For Heidegger, it was not enough to say simply that something existed. He devoted most of his lifetime to addressing this difficult problem of metaphysics. Heidegger's work is essential to studies of ontology.

Kuhn, Thomas. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press, 1962. One of the most important philosophical works of the mid-twentieth century, Kuhn's analysis of the research process utilized by scientific inquirers and their psychological make-up has influenced academic work and study in diverse fields since its publication. Kuhn may best be remembered for his use in this book of terms such as "paradigm shift" and "normal science."

Lakatos, Imre. *The Methodology of Scientific Research Programmes*. Edited by John Worrall and Gregory Currie. Cambridge,

UK: Cambridge University Press, 1978. A wide array of papers written by Lakatos are compiled into two primary sections: the first concentrating on the philosophy of the physical sciences, the second containing many previously unpublished essays on the philosophy of mathematics.

Popper, Karl. *The Logic of Scientific Discovery*. New York: Basic Books, 1959. A classic text on the scientific method. Introduces Popper's solution to the problem of induction, and articulates his view of "falsifiability" as the determining criterion of scientific knowledge.

Popper, Karl. *Objective Knowledge: An Evolutionary Approach*. Oxford, UK: Clarendon Press, 1972. Collection of essays attempting to define Popper's theories of epistemology and explain his realist's approach to such topics as logic, history, and physics.

Sartre, Jean-Paul. *Being and Nothingness: An Essay on Phenomenological Ontology*. Translated by Hazel E. Barnes. New York: Philosophical Library, 1956. The famed French existentialist examines man, the being who questions being, and concludes that he is both his body occupying a place in the world — that is, an object among objects — and a subject or a consciousness reflecting on objects. Sartre contends that all consciousness is consciousness of *something*. Since it is basically a negating — or distinguishing — function (saying that this chair, for instance, is *not* this table), consciousness produces the concept of nothingness; man is the being by whom negation is introduced into an otherwise complete world.

Sartre, Jean-Paul. *Search for a Method*. Translated by Hazel E. Barnes. New York: Knopf, 1963. Sartre contends that existentialism and a study of the individual's role in history is central to an understanding of Marxism.

POLITICAL SCIENCE

Aldrich, John Herbert. *Why Parties? The Origin and Transformation of Political Parties in America*. Chicago: University of Chicago Press, 1995. Aldrich examines the origins and development of political parties in America, noting how the party system offers a solution to three primary problems of democracy: limiting the number of candidates seeking office; mobilizing voters; and achieving consensus to accomplish political goals.

Almond, Gabriel A. and Sidney Verba. *The Civic Culture: Political Attitudes and Democracy in Five Nations*. Princeton, NJ: Princeton University Press, 1963. Writing during an era that saw the formation of several new democracies around the world, Almond and Verba argue that such governments thrive not only when their structures and institutions are democratic, but also when their ideals are supported by an egalitarian culture. The authors define this culture as one "based on communication and persuasion, a culture of consensus and diversity, a culture that permitted change but moderated it."

Bahro, Rudolf. *The Alternative in Eastern Europe*. Translated by David Fernbach. London: New Left Books, 1978. Bahro provides a class analysis of the hierarchical character of the "actually existing socialism" in Eastern Europe prior to the collapse of the Soviet Union. Some identify this work as the origin point for the eco-socialist movement in Germany.

Cohen, Cathy J. *The Boundaries of Blackness: AIDS and the Breakdown of Black Politics*.Chicago: University of Chicago Press, 1999. Cohen explores the impact of the AIDS epidemic on the African American community, analyzing the responses of black leaders to this crisis.

Dahl, Robert A. *Democracy and Its Critics*. New Haven, CT: Yale University Press, 1989. Dahl defends democracy against arguments that democratic government has elements of coercion and that true democracy is impossible due to the inevitable presence of a social elite. The author maintains that a wide distribution of wealth is necessary for meaningful political democracy and proposes greater civic participation by the random incorporation of groups of citizens within the structure of government.

Dahl, Robert A. *Polyarchy: Participation and Opposition*. New Haven, CT: Yale University Press, 1971. Dahl's study is concerned with two main variables of democracy: competition among various political individuals and forces, and participation among those citizens afforded the right to participate in the democratic process. Dahl argues that a "polyarchy," or a system including the greatest number of participants, should be the goal of the ideal society.

Dahl, Robert A. *Who Governs? Democracy and Power in an American City*. New Haven, CT: Yale University Press, 1961. Dahl examines the city of New Haven in this seminal study of political power dynamics in local government. This book is considered essential for those studying urban politics and/or political systems.

Dawson, Michael C. *Behind the Mule: Race and Class in African-American Politics*.Princeton, NJ: Princeton University Press, 1994. Examines the importance of race and class in shaping African American political opinion.

Hinich, Melvin J. and Michael C. Munger. *Ideology and the Theory of Political Choice*. Ann Arbor: University of Michigan Press, 1994. Important study of the relationship between ideology and voter behavior.

Hirschman, Albert O. *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, MA: Harvard University Press, 1970. Hirschman maintains that business corporations typically operate at merely a "satisfactory level," as opposed to maximum efficiency, which in turn leads to a deterioration in times of weaker competition. He outlines the concepts of "exit" and "voice" as consumer options when businesses operate at unsatisfactory levels, applying this same theory to the two-party political system in the United States.

Iyob, Ruth. *The Eritrean Struggle for Independence: Domination, Resistance, Nationalism, 1941–1993*. Cambridge, UK: Cambridge University Press, 1995. The first comprehensive analysis of Eritrea's political history in the aftermath of its difficult fight for independence from Ethiopia. Iyob traces the roots of Eritrean nationalism and, in the context of regional and global circumstances, analyzes competing political forces within the nation.

Kariel, Henry. *The Decline of American Pluralism*. Palo Alto, CA: Stanford University Press, 1961. Kariel uses Nietszche's idea of the impossibility of humans grasping final social and political truths as a base to argue that political scientists must work to question established truths about pluralism as well as to actively create a new democracy catering to all citizens.

Kariel, Henry. *Open Systems: Arenas for Public Action.* Itasca, IL: Peacock, 1969. Student protests against the Vietnam War, urban decay and violence, government scandals and a backlash against traditional reliance on established institutions inform Kariel's critique of traditional methods within the study of political science, and his argument of the need for a more egalitarian democracy.

Laclau, Ernesto. *Emancipation(s).* New York: Verso, 1996. Laclau's collection of essays focus on the postmodern political world and the various and competing interests that attempt to be heard, recognized, and rewarded in western democracies. The author argues that certain changes occurring in the twentieth century completely altered previous definitions of "emancipation."

Laclau, Ernesto and Chantal Mouffe. *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics.* New York: Verso, 1985. Laclau and Mouffe provide a Gramscian analysis and critique of socialism as actually practiced during the post–World War II period.

Lukes, Steven. *Power: A Radical View.* New York: Macmillan, 1974. Lukes offers a radical assessment on political power by examining its conceptual, empirical, and moral implications.

Mamdani, Mahmood. *Citizen and Subject: Contemporary Africa and the Legacy of Late Colonialism.* Princeton, NJ: Princeton University Press, 1996. Mamdani explains the unequal distribution of power that exists in many post-colonial African countries as legacies of a system that allowed urban residents, or "citizens," more rights and privileges than those people in rural areas, the "subjects." Eventually, as colonial governments withdrew, collapsed, or were overthrown, repressed "subjects" began struggling with the "citizens" for power, beginning conflicts throughout the African continent.

Mamdani, Mahmood. *When Victims Become Killers: Colonialism, Nativism, and the Genocide in Rwanda.* Princeton, NJ: Princeton University Press, 2001. Continues Mamdani's research into the aftermath of post-colonial systems of government in Africa. The author claims that the distinction made by the formerly ruling Belgians between the Tutsi and the Hutu was a fundamental reason for the eventual genocide in Rwanda.

Marcuse, Herbert. *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society.* Boston: Beacon Press, 1964. This work was a major influence upon many of the student movements of the mid-to-late 1960s in the United States and Europe. Marcuse synthesizes the works of Marx and Freud to argue that man lives in a deficient society dominated by capitalism. He gives particular attention to the military-industrial complex in the United States, which he criticizes as the cause of a wealth of unnecessary spending and irreparable environmental damage.

McClain, Paula D. and Joseph Stewart Jr. *"Can We All Get Along?": Racial and Ethnic Minorities in American Politics.* Boulder, CO: Westview Press, 1995. Comparative survey of the political status and experience of four major groups in the U.S.: African Americans, Latinos, Asian Americans, and American Indians.

Nkrumah, Kwame. *Neo-Colonialism: the Last Stage of Imperialism.* London: Nelson, 1965. Nkrumah's political and philosophical contributions to Pan-Africanism earned him the title "Greatest African." In this essay, Nkrumah discusses the effects of imperialism on the continent and the forces that might prevent a new freedom for Africans, particularly in Ghana.

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Fanon, Frantz. *The Wretched of the Earth.* 1961. Translated by Constance Farrington. New York: Grove, 1963. Fanon's now classic study of the meaning, necessity, and inevitability of violence in the process of liberation extends his exploration of the psychological impact of colonialism on the colonized and the colonist.

Flavell, John H. *The Developmental Psychology of Jean Piaget*. London: Van Nostrand, 1963. Explores Piaget's development system of analyzing intellectual growth. Flavell asserts that his purpose is to "speak clearly for Piaget to anyone who has reasons to listen to what he has to say who has some background and sophistication in psychology or related disciplines."

Gardner, Howard. *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books, 1983. Gardner argues that intelligence is a psychological construct, and that there are not just two basic forms of intelligence—math/music and verbal—but rather many forms, including linguistic, spatial, and bodily kinetic, which the author defines according to specific criteria.

Gilbert, Daniel T., Susan T. Fiske and Gardner Lindzey. *The Handbook of Social Psychology*. 4th edition. Boston: McGraw-Hill, 1998. Considered the standard reference work in the field of social psychology. The first edition of the Handbook, edited by Carl Murchison, was published in 1935. The Handbook explores development, socialization, intrapersonal process, self and identity, and language and social interaction, while showing the breadth and depth of social psychology as a discipline.

Gilligan, Carol. *In A Different Voice: Psychological Theory and Women's Development*. Cambridge, MA: Harvard University Press, 1982. Groundbreaking study in which Gilligan rejects the notion that women are inferior to men in the realm of moral reasoning. The author proposes that women's psychological development—especially their identity and moral development—have long been judged erroneously by standards set by and for men. Men and boys, the study argues, tend to define themselves as separate beings and solve moral problems in accordance with abstract principles, while women tend to describe themselves as living in connection with others, and to consider interpersonal relationships when resolving human problems. Gilligan argues that both separation and connection are human experiences, and that men and women tend to take different—and valid—approaches to defining and solving moral problems.

Grier, W. H. and P. M. Cobb. *Black Rage*. New York: Basic Books, 1968. Examines black life from the perspective of psychiatry. Addressing the heritage of slavery, psychiatrists Grier and Cobb analyze what they call the "inter-psychic dynamics of blacks in America that are traced to slavery."

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SOCIAL ISSUES AND POLICY

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Des Forges, Allison L. *Leave None to Tell the Story: Genocide in Rwanda*. New York: Human Rights Watch, 1999. Des Forges, the principal author, and her collaborators utilize government documents and other sources to detail an extensive and authoritative account of the Rwandan genocide.

Folbre, Nancy. *Who Pays for the Kids? Gender and the Structures of Constraint*. New York: Routledge, 1994. Feminist economist Folbre examines the unequal distribution of the "costs of caring" between men and women, analyzing individual choice within structures of constraint based on gender, age, sex, nation, race and class. She compares political movements, policies, and programs in the United States, Europe, and Latin America and the Caribbean.

Frank, Robert H. and Philip J. Cook. *The Winner-Take-All Society: Why the Few At the Top Get So Much More Than the Rest of Us*. New York: Penguin, 1996. Frank and Cook examine the market forces that combine to create great income disparity, with the spoils going to the ultimate "winner" in economic contests. The authors argue that this phenomenon is not confined to the fields of entertainment and professional athletics, but permeates almost every other endeavor.

Friedan, Betty. *The Feminine Mystique*. New York: Norton, 1963. Friedan's classic study helped launch the modern women's movement by debunking the myth of the post-war woman—a content homemaker who deferred her own ambitions and interests to take care of her family. Friedan was the first writer to analyze how the perpetration of this stereotype belied the complexity of most women's lives. With the publication of the book, she became one of the women's movement's most visible proponents, participating in the founding of the National Organization for Women (NOW) in 1966 and lobbying incessantly for such causes as the passage of the Equal Rights Amendment and legalization of abortion.

Galanter, Marc. *Competing Equalities: Law and the "Backward Classes" in India*. Berkeley, CA: University of California Press, 1984. Galanter critically reviews the government of India's policy of affirmative action toward scheduled castes (Dalits or "untouchables") and tribals.

Greer, Germaine. *Sex and Destiny: The Politics of Human Fertility*. New York: Harper and Row, 1984. Greer analyzes social institutions centering on human reproduction, commenting on the influence of European and American thought on fertility in the developing world. The noted and controversial feminist depicts sexual freedom as a step backward in modern society, informing the reader that the modern world is decidedly opposed to reproduction. Greer also objects to contemporary attitudes toward sex and children, asserting that children are treated as commodities.

Harrington, Michael. *The Other America: Poverty in the United States*. New York: Macmillan, 1962. Harrington's classic work has been called the seminal treatise on poverty in the United States. He argued that an underclass of poor existed in America and was neglected by the rest of society. This underclass lived in a "culture of poverty" that made it difficult for its members to escape their condition. Harrington's study drew the attention of President John F. Kennedy and led to the programs comprising the "War on Poverty."

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Hernnstein, Richard J. and Charles Murray. *The Bell Curve: Intelligence and Class Structure in American Life*. New York: The Free Press, 1994. Hernnstein and Murray argue that genetically determined intelligence—rather than economic background, family dynamics, discrimination, and so on—dictates academic levels of achievement, employment, income, and behavior, including patterns of criminality. The authors contend that social stratification increasingly is based upon levels of intelligence, which they also argue varies systematically by race and gender, with important implications for public policy.

Irelan, Lola M., ed. *Low-Income Life Styles.*Washington, DC: U.S. Department of Health, Education and Welfare, 1968. *Low-Income Life Styles* is a U.S. government document that epitomizes the influence and impact of Oscar Lewis's construction of the idea of the "culture of poverty" on social policy.

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Massey, Douglas S. and Nancy A. Denton. *American Apartheid: Segregation and the Making of the Underclass.* Cambridge, MA: Harvard University Press, 1993. The authors explore the persistence, causes, and consequences of residential segregation in American cities.

Nesiah, Devanasan. *Discrimination with Reason? The Policy of Reservations in the United States, India, and Malaysia*. Oxford, UK: Oxford University Press 1997. Nesiah provides a comparative analysis of government-mandated reservations (or affirmative action) policies on behalf of historically excluded groups in three nations.

Rainwater, Lee and W. L. Yancey, eds. *The Moynihan Report and the Politics of Controversy.* Cambridge, MA: MIT Press, 1967. Rainwater and Yancey's book includes the full text of Daniel Moynihan's controversial internal memorandum at the Department of Health, Education and Welfare, "The Negro Family: The Case for National Action," and documents representing the reaction to it.

Ryan, William. *Blaming the Victim.*New York: Pantheon, 1971. Ryan confronts and challenges conventional thinking about the root causes of poverty, particularly the "culture of poverty" hypothesis. Instead of viewing the poor as agents of their own social dysfunctionality, Ryan argues that their condition is due to structural factors that entrap them.

Schor, Juliet B. *The Overspent American: Upscaling, Downshifting and the New Consumer.* New York: Basic Books, 1998. Schor examines the spending patterns and motivations of American consumers, analyzing the influence of media and marketing on the modern American lifestyle. She also offers comparative profiles of individuals who purposely live as minimalists and reject popular culture.

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Skrentny, John David. *The Ironies of Affirmative Action: Politics, Culture, and Justice in America*. Chicago: University of Chicago Press, 1996. Important study of the development and evolution of affirmative action policies in the United States.

Stacey, Judith. *Brave New Families: Stories of Domestic Upheaval in Late Twentieth-Century America*. New York: Basic Books, 1990. Stacey studies the lives of two family networks in California's Silicon Valley to highlight the evolution of the modern nuclear family.

Struyk, Michael and Raymond J. Fix, eds. *Clear and Convincing Evidence: Measurement of Discrimination in America.*Washington DC: The Urban Institute Press, 1992. Contributors analyze the results of auditing (two individuals matched on all relevant characteristics except the one being tested) to measure discrimination in America.

Wilson, William Julius. *The Truly Disadvantaged: The Inner City, the Underclass and Public Policy*. Chicago: University of Chicago Press, 1987. Wilson's defining work argues that the rise of urban poverty in the latter half of the twentieth century can be traced to major shifts in the American economy during that same period.

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Cook, Philip J. and J. H. Laub. "The Unprecedented Epidemic in Youth Violence." *Crime and Justice* 24 (1998): 27–64.

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Bonilla-Silva, Eduardo. *Racism Without Racists: Color-Blind Racism and the Persistence of Racial Inequality in the United States*. Lanham, MD: Rowman and Littlefield, 2003. Short answer surveys and polling data indicate dramatic improvements in racial attitudes in the United States over the past half-century. Bonilla-Silva argues that such findings are plagued by "social desirability" effects and self-censorship on the part of respondents. Instead he undertakes a set of in-depth, open-ended interviews with college students at a major midwestern university conducted by same-race interviewers. He uncovers a set of beliefs that he refers to as "color-blind racism." Bonilla-Silva argues that, while explicit racism is taboo, it has been replaced by a perspective in which whites claim that their racial position places them at a social disadvantage.

Braverman, Harry. *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*. New York: Monthly Review Press, 1975. Braverman applies Marxist theory to argue that technology upgrades in industry are used by owners of capital to reduce the number of employees needed and to reduce the skill level (and value) of remaining employees.

Burawoy, Michael. *Manufacturing Consent: Changes in the Labor Process Under Monopoly Capitalism*. Chicago: University of Chicago Press, 1979. Burawoy's sociological study of industry seeks to determine why workers routinely submit to their own exploitation. The author's research included ten months of labor as a machine operator in a Chicago factory. Burawoy compares his findings with those of Donald Roy, who studied the same factory 30 years earlier.

Burawoy, Michael *The Politics of Production: Factory Regimes Under Capitalism and Socialism*. New York: Verso, 1985. Burawoy provides the major comparative sociological study of the conduct of factory production in capitalistic and socialistic societies.

Coleman, James S. *Foundations of Social Theory*. Cambridge, MA: Harvard University Press, 1990. Considered a landmark in sociological theory, Coleman's study provides a framework relating the behavior of individuals to organizational behavior and to society as a whole.

Collins, Patricia Hill. *Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment*. Boston: Unwin Hyman, 1990. Revised. New York: Routledge, 2000. Collins provides a history and outline of contemporary black feminist thought through the use of source material that includes music, literature, oral history, and academic research. Her work is built upon three main tenets: that oppressions are interconnected; that the need for self-definition has required women of color to create alternative worldviews; and that externalities such as standards of beauty and success have been racialized in favor of white women. She then examines how race intersects with gender to create narrowly defined roles for African American women.

Gans, Herbert J. *The Urban Villagers: Group and Class in the Life of Italian-Americans*. New York: Free Press of Glencoe, 1963. This is the classic sociological study of Italian Americans living in Boston's working-class West End in the late 1950s and early 1960s.

Gouldner, Alvin Ward. *The Future of Intellectuals and the Rise of the New Class*. New York: Seabury Press, 1979. Drawing on Marxist theory, Gouldner contends that the "New Class," the intellectuals and the intelligentsia, have risen to power by asserting cultural authority.

Hall, Stuart and Paul du Gay, eds. *Questions of Cultural Identity*. London: Sage, 1996. A collection of essays from various contributors on the implications of the decline in traditional patterns of social and cultural identity.

Hall, Stuart and Tony Jefferson, eds. *Resistance Through Rituals: Youth Subcultures in Post-War Britain*. London: Hutchinson, 1976. The authors advance an important sociological analysis of post-war youth subculture in urban Britain.

Harvey, David. *The Limits to Capital*. Chicago: University of Chicago Press, 1982. Harvey provides a highly regarded analysis and extension of Marx's critique of political economy in light of developments in the twentieth century.

Lieberson, Stanley. *A Piece of the Pie: Blacks and White Immigrants Since 1880*. Berkeley, CA: University of California Press, 1980. Lieberson is concerned with the origins of group-based inequality in America, which he dates back to the arrival of "new" European immigrants in the late nineteenth and early twentieth centuries. Both the European immigrants and American-born blacks were competing for "a piece of the pie," including housing and work, as they moved from rural to urban environments. Studying a number of explanations for the European immigrants' greater economic success since the Hayes-Tilden Compromise of 1876, he dismisses cultural explanations and discusses residential segregation, labor market discrimination, and the timing of migration to urban areas as critical factors.

Oliver, Melvin L. and Thomas M. Shapiro. *Black Wealth/White Wealth: A New Perspective on Racial Inequality*. New York: Routledge, 1995. An instant classic, Oliver and Shapiro's study of race, wealth, and inequality provides the empirical case that shows that wealth disparity—rather than income disparity—is central to understanding racial inequality in the United States.

Silberman, Charles. *A Certain People: American Jews and Their Lives Today*. New York: Summit, 1985. Silberman combines exhaustive research with personal interviews to study lifestyle patterns among Jewish Americans.

Steinberg, Stephen. *The Ethnic Myth: Race, Ethnicity and Class in America*. New York: Atheneum, 1981. Steinberg rejects the view that culture and ethnicity are the primary determinants of economic success for minority groups in America, contending that locality, class conflict, and other socio-economic factors are of much greater consequence.

Telles, Edward E. *Race in Another America: The Significance of Skin Color in Brazil*. Princeton, NJ: Princeton University Press, 2004. Telles presents a detailed sociological study and statistical analysis of race and color in Brazil, tracing the dimensions and mechanisms of discrimination while proposing a host of policy initiatives.

Walker, Pat, ed. *Between Labor and Capital*. Boston: South End Press, 1979. This anthology of essays centers on the theory of the emergence and potential rise to dominance of a third class in advanced capitalist society, the professional-managerial class.

Williams, Raymond. *Culture and Society, 1780–1950*. New York: Columbia University Press, 1958. Williams outlines the historical tension between definitions of culture as art and "culture as a whole way of life" and argues for the latter.

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Inglehart, Ronald and Wayne E. Baker. "Modernization, Cultural Change, and the Persistence of Traditional Values." *American Sociological Review* 65, no. 1 (2000): 19–51.

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